

FIRST QUARTER 2023 SITE MONITORING DATA
CARPIO A26-05 Facility

COGCC REMEDIATION # 20996

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W. 119th Ave
Broomfield, CO 80020

TABLE 1
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - CARPIO A26-05 FACILITY



Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽¹⁾	Depth to LNAPL (ft.) ⁽¹⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	06/22/22	4654.84	11.49	3.26	ND	ND	4651.64
BH01	09/12/22	4654.84	11.48	5.18	ND	ND	4649.72
BH01	11/16/22	4654.84	11.34	4.05	ND	ND	4650.85
BH01	02/02/23	4654.84	11.27	2.68	ND	ND	4652.22
BH02	06/22/22	4654.43	12.12	2.85	ND	ND	4651.64
BH02	09/12/22	4654.43	12.05	4.76	ND	ND	4649.73
BH02	11/16/22	4654.43	12.03	3.64	ND	ND	4650.85
BH02	02/02/23	4654.43	12.03	2.26	ND	ND	4652.23
BH03	06/22/22	4653.56	11.71	2.07	ND	ND	4651.62
BH03	09/12/22	4653.56	11.45	4.15	ND	ND	4649.54
BH03	11/16/22	4653.56	11.43	2.84	ND	ND	4650.85
BH03	02/02/23	4653.56	11.40	1.48	ND	ND	4652.21
BH04	06/22/22	4654.90	11.36	3.32	ND	ND	4651.64
BH04	09/12/22	4654.90	11.37	5.24	ND	ND	4649.72
BH04	11/16/22	4654.90	11.36	4.11	ND	ND	4650.85
BH04	02/02/23	4654.90	11.28	2.73	ND	ND	4652.23
BH05	06/22/22	4655.16	10.00	2.22	ND	ND	4653.10
BH05	09/12/22	4655.16	9.85	4.69	ND	ND	4650.63
BH05	11/16/22	4655.16	9.90	3.22	ND	ND	4652.10
BH05	02/02/23	4655.16	9.75	1.87	ND	ND	4653.45
BH06	11/16/22	4653.33	12.41	3.76	ND	ND	4649.63
BH06	02/02/23	4653.33	12.32	2.46	ND	ND	4650.93
BH07	11/16/22	4655.17	13.00	4.26	ND	ND	4648.91
BH07	02/02/23	4655.17	12.93	2.87	ND	ND	4650.30
BH08	11/16/22	4653.43	11.64	4.23	ND	ND	4649.20
BH08	02/02/23	4653.43	12.91	3.89	ND	ND	4649.54
BH09	11/16/22	4655.90	12.83	4.43	ND	ND	4649.16
BH09	02/02/23	4655.90	12.28	2.76	ND	ND	4650.83
BH10	11/16/22	4653.82	12.91	2.94	ND	ND	4648.52
BH10	02/02/23	4653.82	11.62	0.39	ND	ND	4651.07

Notes:

⁽¹⁾ Depth to water measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

* Groundwater elevation was corrected for product thickness (when present) using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)

LNAPL relative density was estimated to be 0.75

Definitions:

ft. = Feet
 AMSL = Above mean sea level
 BTOC = Below top of casing
 BGS = Below ground surface
 LNAPL = Light non-aqueous phase liquid
 ND = No LNAPL detected

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - CARPIO A26-05 FACILITY



Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	TDS (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
COGCC Standard		5	560	700	1,400	140	67	67	<1.25 x Background	250 or <1.25 x Background	250 or <1.25 x Background
GW01@3.5'	03/11/22	21	91	9.3	97	3.0	22	9.3	NA	NA	NA
BH01	06/22/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,730	67.8	1,510
BH01	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,920	31.0	1,820
BH01	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,250	33.2	624
BH01	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,490	38.2	899
BH02	06/22/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,350	34.8	1,280
BH02	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,290	29.4	1,250
BH02	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,090	32.6	496
BH02	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,160	37.2	657
BH03	06/22/22	100	110	92	5,600	9.6	170	74	1,620	64.6	1,290
BH03	09/12/22	34	<1.0	1.3	<2.0	<1.0	3.9	<1.0	1,580	27.8	1,540
BH03	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,280	30.4	694
BH03	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,330	37.4	804
BH04	06/22/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,700	69.0	1,460
BH04	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,620	37.4	1,560
BH04	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,280	42.6	607
BH04	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,400	39.6	864
BH05	06/22/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,730	37.0	1,660
BH05	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,640	34.0	1,590
BH05	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,390	24.0	634
BH05 ⁽²⁾	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,610	42.4	1010
BH06	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,160	30.4	505
BH06	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,260	33.2	805
BH07	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,150	27.0	551
BH07	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,340	36.0	844
BH08	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,180	25.6	640
BH08	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,440	38.4	879
BH09	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,210	19.6	502
BH09	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,360	34.6	849
BH10	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,210	18.0	393
BH10	02/02/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,500	39.4	958

Notes:

⁽¹⁾ Groundwater standards referenced from 2 CCR 404-1, Table 915-1 (January 15, 2021).

⁽²⁾ Monitoring well used for inorganic background levels.

Definitions:

< = Analytical result is less than the indicated laboratory reporting limit

COGCC = Colorado Oil and Gas Conservation Commission

mg/L = Milligrams per liter

µg/L = Micrograms per liter

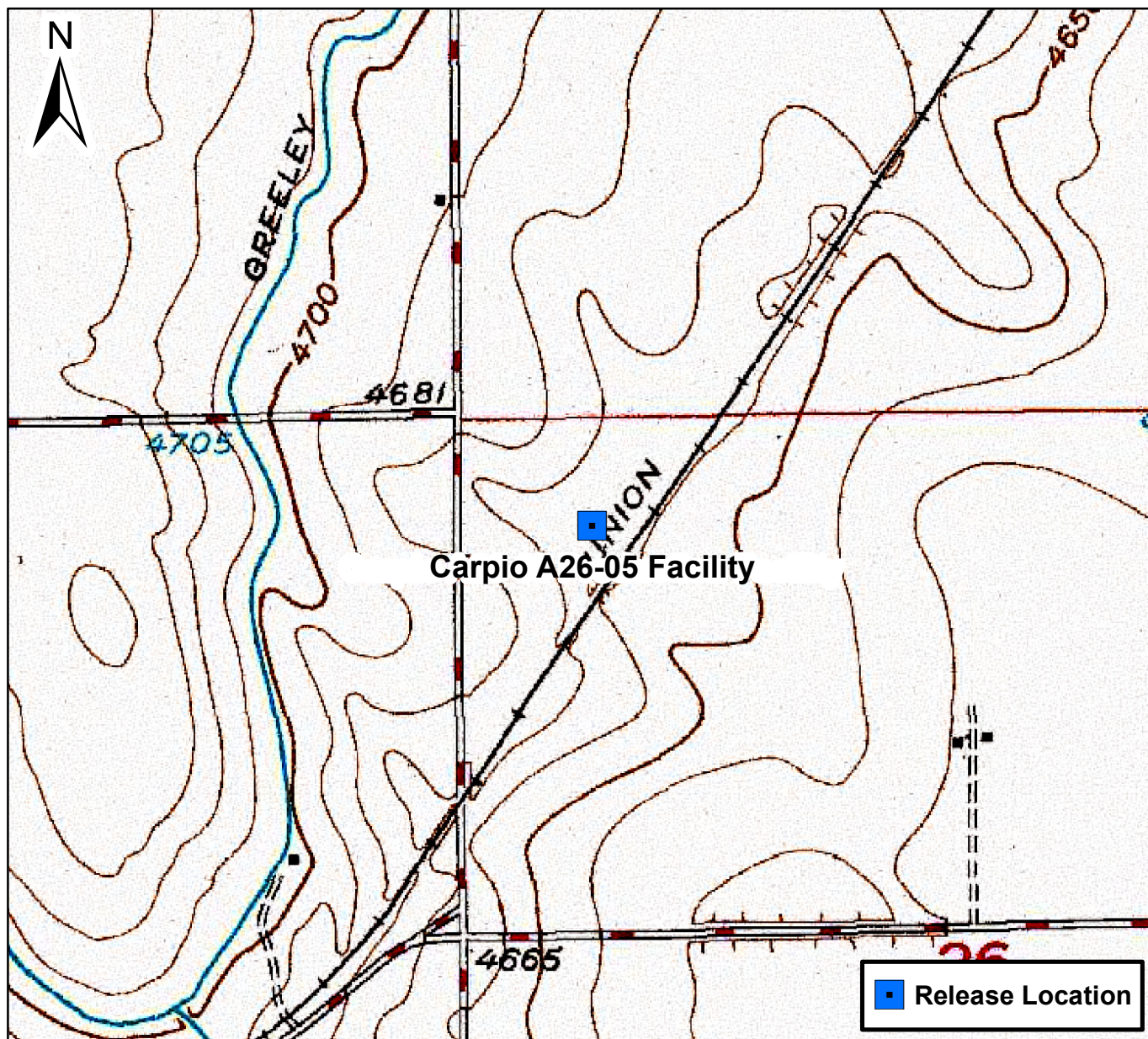
1,2,4 - TMB = 1,2,4 Trimethylbenzene

1,3,5 - TMB = 1,3,5 Trimethylbenzene

TDS = Total Dissolved Solids

NA = Not analyzed

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



0 1,000 2,000 Feet

Figure 1

Site Location Map
Carpio A26-05 Facility
SWNE S26 T6N R64W
Weld County, Colorado





DATE:	03/27/2023
DESIGNED BY:	JW
DRAWN BY:	HM



TASMAN

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

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

Site Overview Map

FIGURE
2



DATE:	03/06/2023
DESIGNED BY:	JW
DRAWN BY:	JC

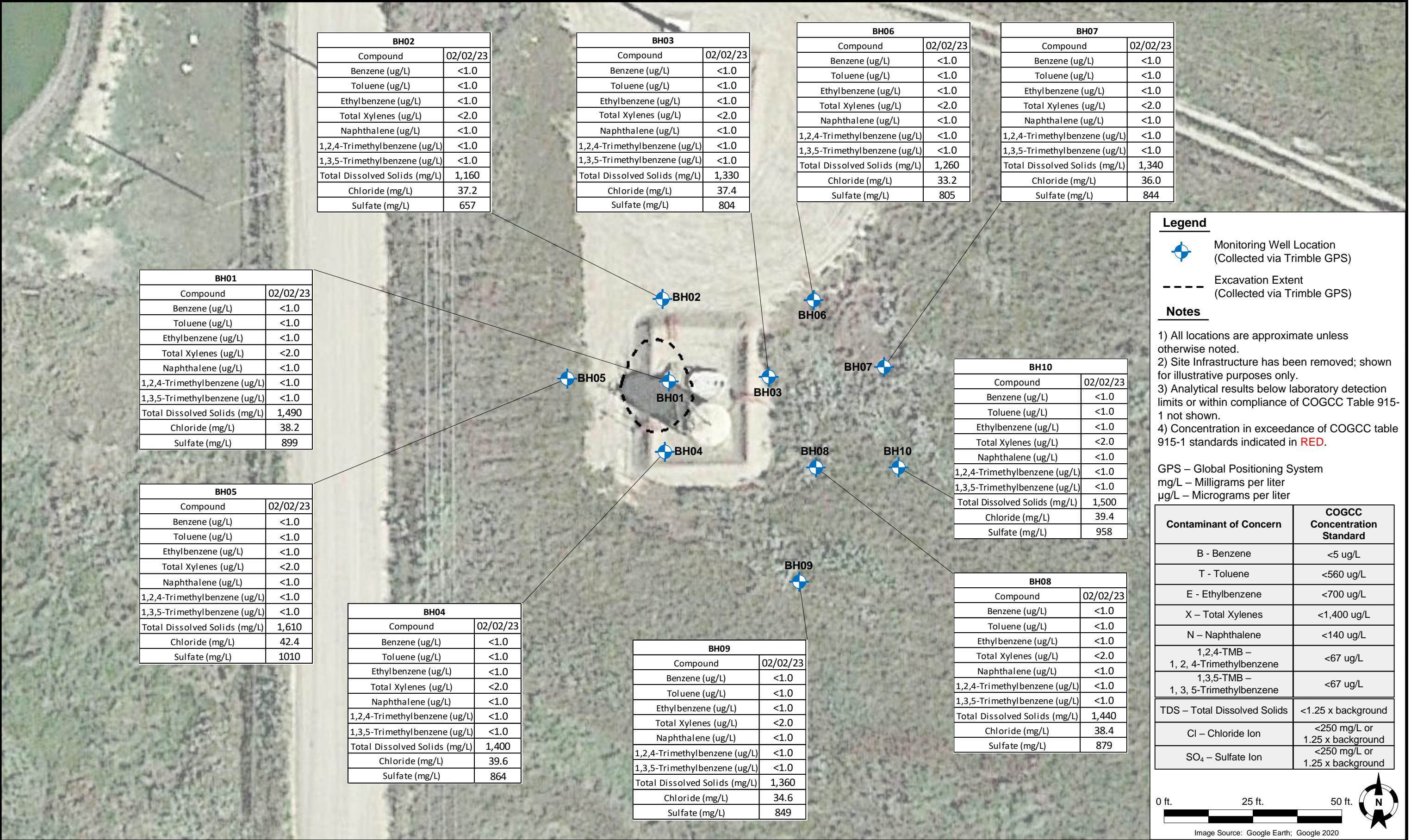


TASMAN
Tasman, Inc.
6855 W 119th Avenue
Broomfield, CO 80020

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

Site Assessment
Groundwater Potentiometric
Surface Contour Map
(02/02/2023)

**FIGURE
3**



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 08, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05

Work Order #2302046

Enclosed are the results of analyses for samples received by Summit Scientific on 02/02/23 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sheely".

Scott Sheely For Paul Shrewsbury
President



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2302046-01	Water	02/02/23 13:20	02/02/23 17:55
BH02	2302046-02	Water	02/02/23 13:19	02/02/23 17:55
BH03	2302046-03	Water	02/02/23 13:05	02/02/23 17:55
BH04	2302046-04	Water	02/02/23 13:05	02/02/23 17:55
BH05	2302046-05	Water	02/02/23 12:52	02/02/23 17:55
BH06	2302046-06	Water	02/02/23 12:41	02/02/23 17:55
BH07	2302046-07	Water	02/02/23 12:39	02/02/23 17:55
BH08	2302046-08	Water	02/02/23 12:50	02/02/23 17:55
BH09	2302046-09	Water	02/02/23 12:21	02/02/23 17:55
BH10	2302046-10	Water	02/02/23 12:20	02/02/23 17:55

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

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Noble / Tasman Geoscience

Project Manager: Jake Whritenour

Address: 6855 W. 119th Ave.

E-Mail: Jwhritenour@tasman-geo.com

City/State/Zip: Broomfield / CO / 80020


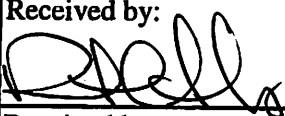
Phone: 303-487-1228

Project Name: Carpio AZG-05

Sampler Name: Patrick Kline

Project Number: N/A

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate	
1	BH01	2/2/23	1320	4	3					X				X	X	X	X	X	X	
2	BH02		1319																	
3	BH03		1305																	
4	BH04		1305																	
5	BH05		1252																	
6	BH06		1241																	
7	BH07		1239																	
8	BH08		1250																	
9	BH09		1221																	
10	BH10		1220																	

Relinquished by: 	Date/Time: 2/2/23 1500	Received by: Tasman's Lock Box	Date/Time: 2/2/23 1500	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"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 2/2/23 1755	Received by: 	Date/Time: 2/2/23 1755	Sample Integrity: Temperature Upon Receipt: 6.7 Samples Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 230246Client: Noble/hasmemClient Project ID: Carpio Azc-05Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐Airbill #:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air ☐Soil/Solid ☐☒ Water ☐Other ☐

Temp (°C)

6.7

Thermometer #

1

	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"/>	<u>ON ICE</u>
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 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, 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

2/2/23
Date/Time



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH01
2302046-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/07/23	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: **02/02/23 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	13.8	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	38.2	12.0	mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	899	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	1490	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

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

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH02
2302046-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 13:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGB0138	02/06/23	02/07/23	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: **02/02/23 13:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.2	99.3 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 13:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	37.2	12.0		mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	657	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 13:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1160	10.0		mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH03
2302046-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.5	108 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.9	96.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.1 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	37.4	12.0		mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	804	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1330	10.0		mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH04
2302046-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.7	110 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.6 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	39.6	12.0		mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	864	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1400	10.0		mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH05
2302046-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.1	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.5	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	42.4	12.0	mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	1010	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1610	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH06
2302046-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.9	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	99.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.4	100 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	33.2	12.0	mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	805	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1260	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH07
2302046-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.6	102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	99.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	36.0	12.0		mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	844	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1340	10.0		mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH08
2302046-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.6	102 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	38.4	12.0	mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	879	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1440	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH09
2302046-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.9	104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.3	99.5 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	34.6	12.0	mg/L	200	BGB0109	02/05/23	02/05/23	EPA 300.0	
Sulfate	849	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1360	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

BH10
2302046-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGB0138	02/06/23	02/08/23	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: **02/02/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	102 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/02/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	39.4	12.0	mg/L	200	BGB0109	02/05/23	02/06/23	EPA 300.0	
Sulfate	958	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/02/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1500	10.0	mg/L	1	BGB0128	02/06/23	02/06/23	SM2540C	

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGB0138 - EPA 5030 Water MS

Blank (BGB0138-BLK1)

Prepared: 02/06/23 Analyzed: 02/07/23

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	"							
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3		100	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.7	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.9	21-167			

LCS (BGB0138-BS1)

Prepared: 02/06/23 Analyzed: 02/07/23

Benzene	38.8	1.0	ug/l	33.3		116	51-132			
Toluene	37.5	1.0	"	33.3		112	51-138			
Ethylbenzene	38.5	1.0	"	33.3		116	58-146			
m,p-Xylene	74.9	2.0	"	66.7		112	57-144			
o-Xylene	35.2	1.0	"	33.3		106	53-146			
Naphthalene	25.2	1.0	"	33.3		75.8	70-130			
1,2,4-Trimethylbenzene	37.2	1.0	"	33.3		112	70-130			
1,3,5-Trimethylbenzene	38.6	1.0	"	33.3		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.9	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	21-167			

Matrix Spike (BGB0138-MS1)

Source: 2302046-01

Prepared: 02/06/23 Analyzed: 02/07/23

Benzene	39.3	1.0	ug/l	33.3	ND	118	34-141			
Toluene	37.8	1.0	"	33.3	ND	114	27-151			
Ethylbenzene	39.1	1.0	"	33.3	ND	117	29-160			
m,p-Xylene	77.0	2.0	"	66.7	ND	115	20-166			
o-Xylene	36.6	1.0	"	33.3	ND	110	33-159			
Naphthalene	28.6	1.0	"	33.3	ND	85.7	70-130			
1,2,4-Trimethylbenzene	37.5	1.0	"	33.3	ND	113	70-130			
1,3,5-Trimethylbenzene	39.4	1.0	"	33.3	ND	118	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.9	21-167			

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGB0138 - EPA 5030 Water MS

Matrix Spike Dup (BGB0138-MSD1)	Source: 2302046-01			Prepared: 02/06/23 Analyzed: 02/07/23						
Benzene	38.8	1.0	ug/l	33.3	ND	116	34-141	1.43	30	
Toluene	37.1	1.0	"	33.3	ND	111	27-151	1.97	30	
Ethylbenzene	38.7	1.0	"	33.3	ND	116	29-160	1.16	30	
m,p-Xylene	75.2	2.0	"	66.7	ND	113	20-166	2.27	30	
o-Xylene	35.8	1.0	"	33.3	ND	107	33-159	2.27	30	
Naphthalene	30.9	1.0	"	33.3	ND	92.7	70-130	7.87	30	
1,2,4-Trimethylbenzene	37.1	1.0	"	33.3	ND	111	70-130	1.07	30	
1,3,5-Trimethylbenzene	38.8	1.0	"	33.3	ND	117	70-130	1.51	30	
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		109	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	21-167			

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BGB0109 - General Preparation

Blank (BGB0109-BLK1)

Prepared & Analyzed: 02/05/23

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BGB0109-BS1)

Prepared & Analyzed: 02/05/23

Chloride	2.71	0.0600	mg/L	3.00	90.2	90-110
Sulfate	13.8	0.300	"	15.0	92.1	90-110

Duplicate (BGB0109-DUP1)

Source: 2302015-01

Prepared & Analyzed: 02/05/23

Chloride	282	12.0	mg/L	372	27.3	20	QM-02
Sulfate	377	60.0	"	389	2.92	20	

Matrix Spike (BGB0109-MS1)

Source: 2302015-01

Prepared & Analyzed: 02/05/23

Chloride	903	12.0	mg/L	600	372	88.5	80-120
Sulfate	3580	60.0	"	3000	389	106	80-120

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

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

02/08/23 14:44

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BGB0128 - General Preparation

Blank (BGB0128-BLK1)

Prepared & Analyzed: 02/06/23

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BGB0128-DUP1)

Source: 2302046-01

Prepared & Analyzed: 02/06/23

Total Dissolved Solids 1490 10.0 mg/L 1490 0.403 20

Summit Scientific

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



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
02/08/23 14:44

Notes and Definitions

QM-02	The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference