

SITE ASSESSMENT REPORT

CARPIO A26-05 FACILITY

COGCC SPILL TRACKING # 481904

COGCC REMEDIATION # 20996

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W. 119th Ave
Broomfield, CO 80020

TABLES

1 of 2

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



Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	03/11/22	7.90	1.17	0.592	0.0373
SS01@2.5'	03/11/22	7.68	1.21	0.528	0.0638
SS02@2.5'	03/11/22	8.00	0.720	0.317	0.0209
SS03@2.5'	03/11/22	7.73	1.16	0.599	0.0623
SS04@2.5'	03/11/22	7.80	1.80	1.10	0.0800
FS01@3.5'	03/11/22	7.94	1.41	0.659	0.0574
SEP01-DL01@3'	03/11/22	7.70	1.35	3.06	0.582
SEP01-FL01@3'	03/11/22	7.79	1.11	2.30	0.259
SEP02-DL02@3'	03/11/22	7.80	1.78	2.72	0.203
BH01@4-5'	06/16/22	7.82	0.609	0.989	0.0996
BH02@4-5'	06/16/22	7.79	0.536	0.976	0.110
BH03@3.5-6'	06/16/22	7.74	0.310	0.868	0.0633
BH04@4-5'	06/16/22	7.93	0.885	0.838	0.147
BH05@4-5'	06/16/22	7.48	0.341	1.48	0.0722
BH05@9-13'	06/16/22	7.77	0.207	0.881	0.0388
BH06@4'	09/21/22	7.57	1.40	3.51	0.234
BH06@10-12'	09/21/22	7.65	1.55	2.10	0.132
BH07@4'	09/21/22	7.71	1.97	4.52	0.738
BH07@6-8'	09/21/22	7.71	1.13	3.85	0.155
BH07@10-12'	09/21/22	7.82	1.44	2.02	0.104
BH08@2-4'	09/21/22	7.38	3.22	3.78	0.396
BH08@10-12'	09/21/22	7.70	1.26	1.96	0.125
BH09@4'	09/21/22	7.71	1.22	3.52	0.128
BH09@10-12'	09/21/22	7.89	1.44	1.76	0.156
BH10@4'	09/21/22	7.76	1.82	4.09	0.334
BH10@10-12'	09/21/22	7.87	1.27	1.99	0.136
BH11@4'	12/08/22	NA	NA	1.71	NA
BH11@10'	12/08/22	NA	NA	0.722	NA
BH12@4'	12/08/22	NA	NA	0.842	NA
BH12@10'	12/08/22	NA	NA	0.612	NA
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

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ²		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^{2,3}		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
BH01@4-5'	06/16/22	2.30	152	<0.251	<0.30	12.6	10.3	10.3	1.37	0.0552	54.7
BH02@4-5'	06/16/22	1.82	95.1	<0.233	<0.30	13.1	11.3	7.81	1.01	0.0824	48.1
BH03@3.5-6'	06/16/22	2.53	96.8	0.353	<0.30	15.2	14.8	7.92	0.922	0.142	53.9
BH04@4-5'	06/16/22	2.08	94.8	<0.235	<0.30	12.2	10.8	8.32	1.05	0.0759	51.5
BH05@4-5'	06/16/22	3.94	52.7	<0.254	<0.30	5.70	7.00	7.21	0.597	0.0258	32.8
BH05@9-13'	06/16/22	5.16	294	<0.242	<0.30	7.55	8.75	10.1	0.829	0.0462	37.9
BH06@4'	09/21/22	4.20	44.1	<0.215	<0.30	6.15	6.18	6.15	0.899	<0.0215	26.9
BH06@10-12'	09/21/22	4.07	93.2	<0.261	<0.30	9.86	8.27	10.4	1.36	0.0372	46.0
BH07@4'	09/21/22	5.04	61.3	<0.213	<0.30	7.00	6.35	7.66	0.928	0.0346	31.2
BH07@6-8'	09/21/22	4.52	58.5	<0.248	<0.30	7.24	7.15	8.10	0.960	0.0281	34.7
BH07@10-12'	09/21/22	4.34	41.7	<0.249	<0.30	7.06	6.71	7.19	0.993	<0.0249	34.3
BH08@2-4'	09/21/22	4.12	65.0	<0.240	<0.30	9.85	8.75	6.66	0.893	0.0317	34.8
BH08@10-12'	09/21/22	4.10	63.1	<0.260	<0.30	7.23	6.88	8.00	1.02	0.0313	35.5
BH09@4'	09/21/22	4.74	42.3	<0.239	<0.30	6.66	7.08	7.51	0.954	0.0260	33.6
BH09@10-12'	09/21/22	11.4	137	<0.268	<0.30	15.0	17.5	16.7	1.60	0.0864	77.0
BH10@4'	09/21/22	5.74	44.9	<0.222	<0.30	8.41	8.00	9.44	1.01	0.0465	37.3
BH10@10-12'	09/21/22	4.08	46.3	<0.248	<0.30	7.61	7.10	8.32	0.968	0.0313	39.2
BG01@4'	12/08/22	3.88	52.0	NA	NA	NA	5.61	NA	0.469	NA	NA
BG01@10'	12/08/22	6.55	31.7	NA	NA	NA	4.85	NA	0.508	NA	NA
BG02@4'	12/08/22	3.36	69.7	NA	NA	NA	5.90	NA	0.557	NA	NA
BG02@10'	12/08/22	4.23	319	NA	NA	NA	7.04	NA	0.968	NA	NA
BG03@4'	12/08/22	4.42	105	NA	NA	NA	6.60	NA	0.643	NA	NA
BG03@10'	12/08/22	3.34	38.1	NA	NA	NA	6.20	NA	0.696	NA	NA
BG04@4'	12/08/22	3.90	146	NA	NA	NA	5.37	NA	0.764	NA	NA
BG04@10'	12/08/22	3.96	38.3	NA	NA	NA	5.30	NA	0.626	NA	NA
BG05@4'	12/08/22	3.50	46.4	NA	NA	NA	5.24	NA	0.485	NA	NA
BG05@10'	12/08/22	2.74	39.0	NA	NA	NA	3.97	NA	0.480	NA	NA
BG06@5'	07/28/23	2.37	39.5	NA	NA	NA	8.90	NA	0.336	NA	NA
BG06@10'	07/28/23	1.48	54.4	NA	NA	NA	6.21	NA	<0.260	NA	NA
BG07@5'	07/28/23	1.25	49.7	NA	NA	NA	5.79	NA	<0.260	NA	NA
BG07@10'	07/28/23	1.84	27.6	NA	NA	NA	11.8	NA	0.359	NA	NA
BG08@5'	07/28/23	1.76	43.3	NA	NA	NA	13.7	NA	0.304	NA	NA
BG08@10'	07/28/23	1.40	25.1	NA	NA	NA	13.8	NA	0.197	NA	NA
BG09@5'	07/28/23	1.12	56.8	NA	NA	NA	4.97	NA	<0.260	NA	NA
BG09@10'	07/28/23	0.862	115	NA	NA	NA	7.27	NA	<0.260	NA	NA
BG10@5'	07/28/23	1.27	48.3	NA	NA	NA	7.40	NA	0.232	NA	NA
BG10@10'	07/28/23	1.51	24.9	NA	NA	NA	14.7	NA	0.340	NA	NA

Notes:

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

Definitions:

COGCC = Colorado Oil and Gas Conservation 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

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

1,2,4 - TMB = 1,2,4 Trimethylbenzene
1,3,5 - TMB = 1,3,5 Trimethylbenzene
Benz(a) = Benzanthracene
Benzo(b) = Benzofluoranthene
Benzo(k) = Benzofluoranthene
Benzo(a) = Benzopyrene
A,H = Dibenzoanthracene
1,2,3-CD = Indenopyrene
1-M = 1-methylnaphthalene
2-M = 2-methylnaphthalene
NA = Not analyzed

TABLE 2
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
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
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
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
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
BH06	11/16/22	4653.33	12.41	3.76	ND	ND	4649.63
BH07	11/16/22	4655.17	13.00	4.26	ND	ND	4648.91
BH08	11/16/22	4653.43	11.64	4.23	ND	ND	4649.20
BH09	11/16/22	4655.90	12.83	4.43	ND	ND	4649.16
BH10	11/16/22	4653.82	12.91	2.94	ND	ND	4648.52

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 3
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
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
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
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
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 ⁽²⁾	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,390	24.0	634
BH06	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,160	30.4	505
BH07	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,150	27.0	551
BH08	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,180	25.6	640
BH09	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,210	19.6	502
BH10	11/16/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,210	18.0	393

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

FIGURES

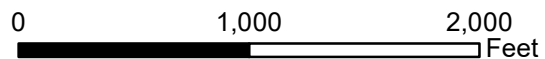
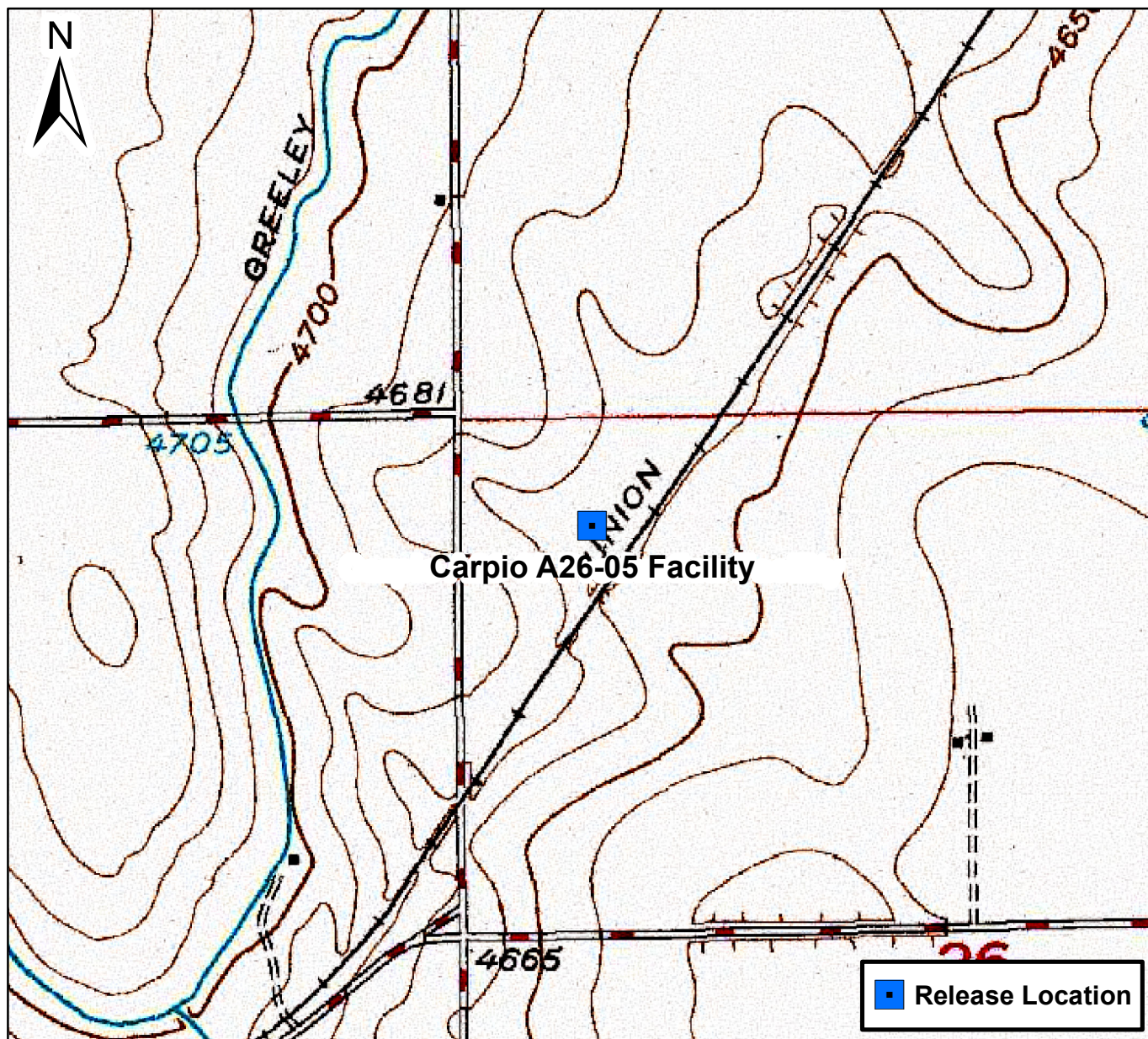
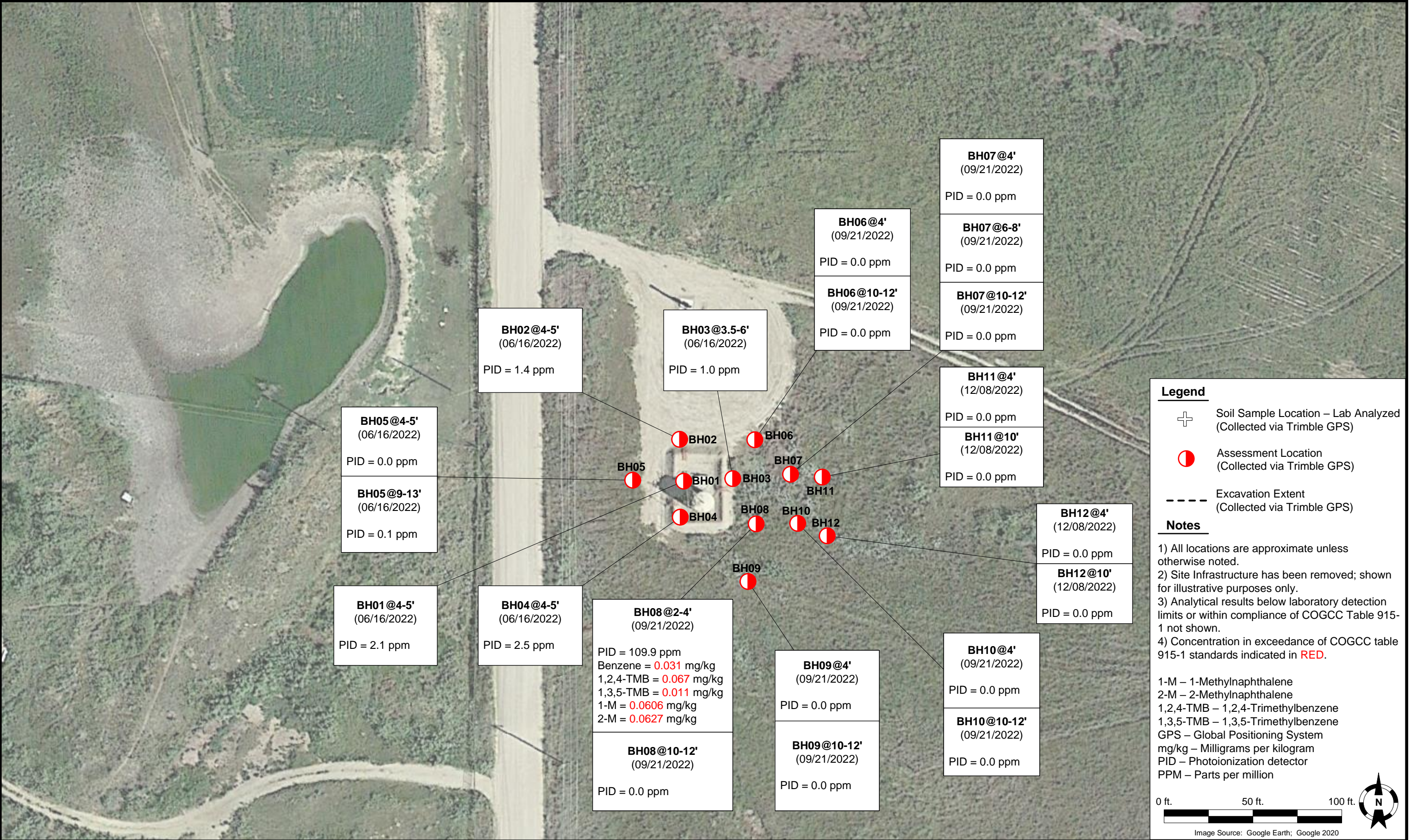
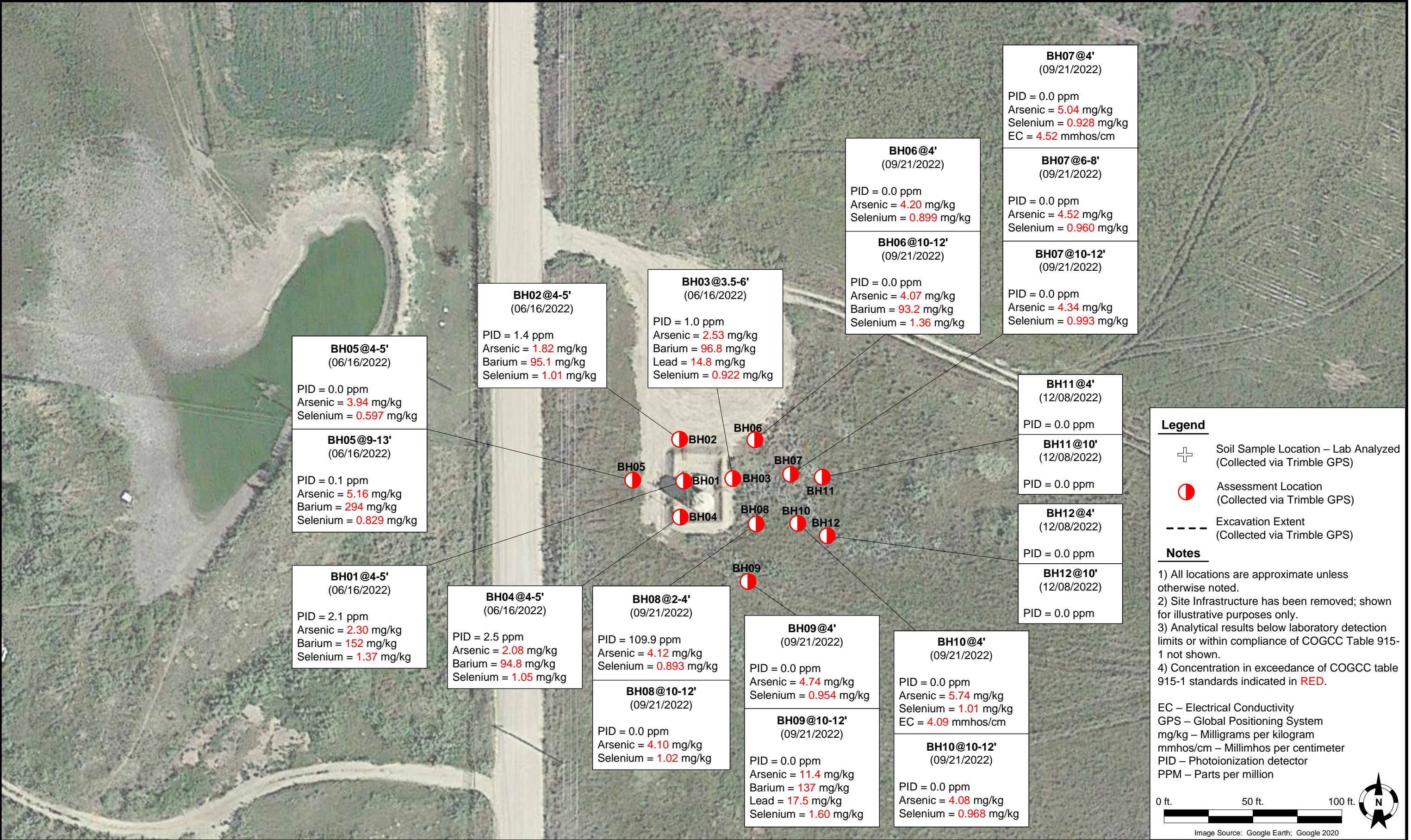



Figure 1

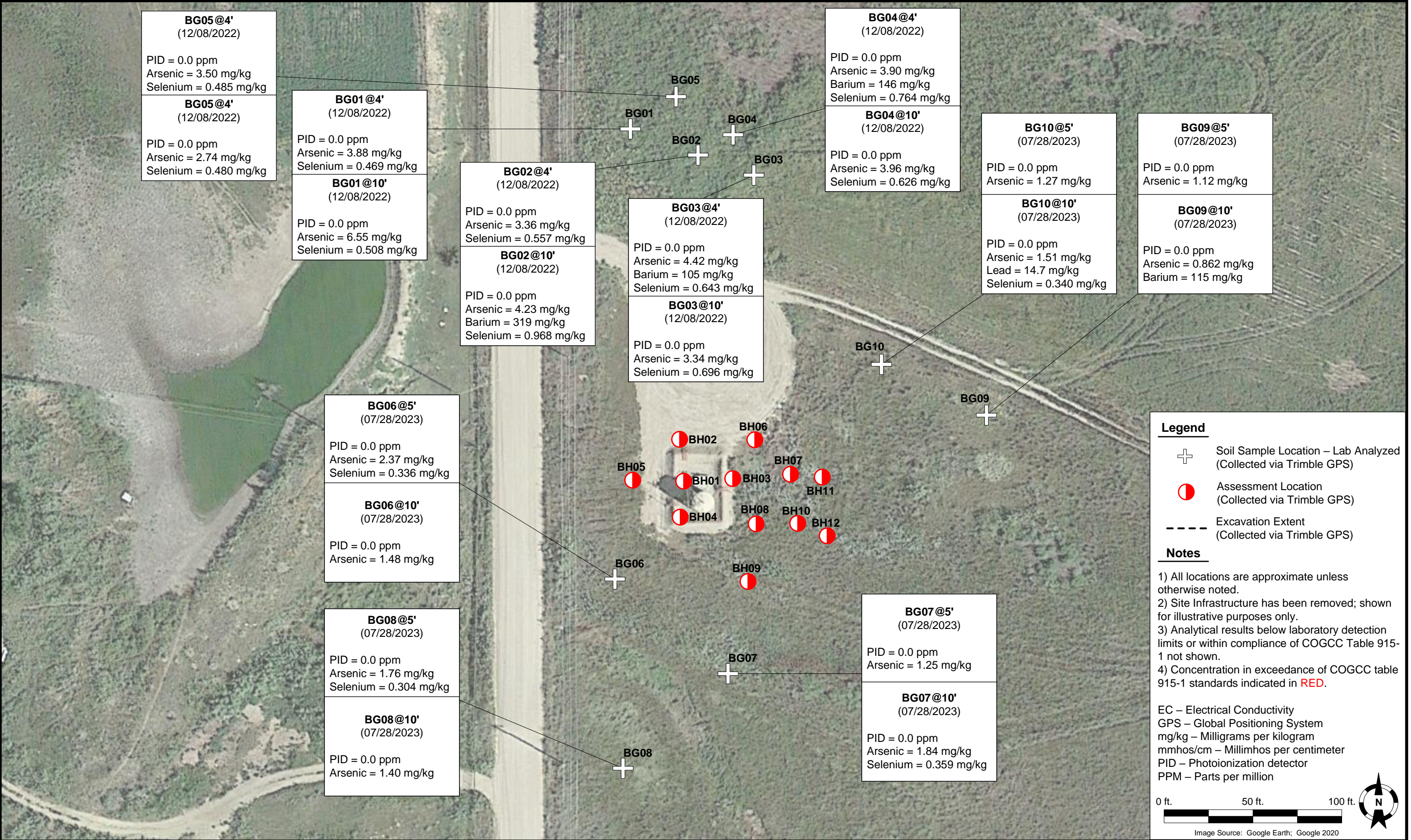
Site Location Map
 Carpio A26-05 Facility
 SWNE S26 T6N R64W
 Weld County, Colorado







DATE:	02/22/2023	 <div>Tasman, Inc. 6855 W 119th Avenue Broomfield, CO 80020</div>	Noble Energy, Inc. – DJ Basin Carpio A26-05 Facility SWNE, Section 26, Township 6 North, Range 64 West Weld County, Colorado	Soil Analytical Results Map - Inorganics (03/11/22, 06/16/22, 09/21/22 & 12/08/22)	FIGURE 3
DESIGNED BY:	JW				
DRAWN BY:	JB				





DATE:	12/06/2022
DESIGNED BY:	JW
DRAWN BY:	JC

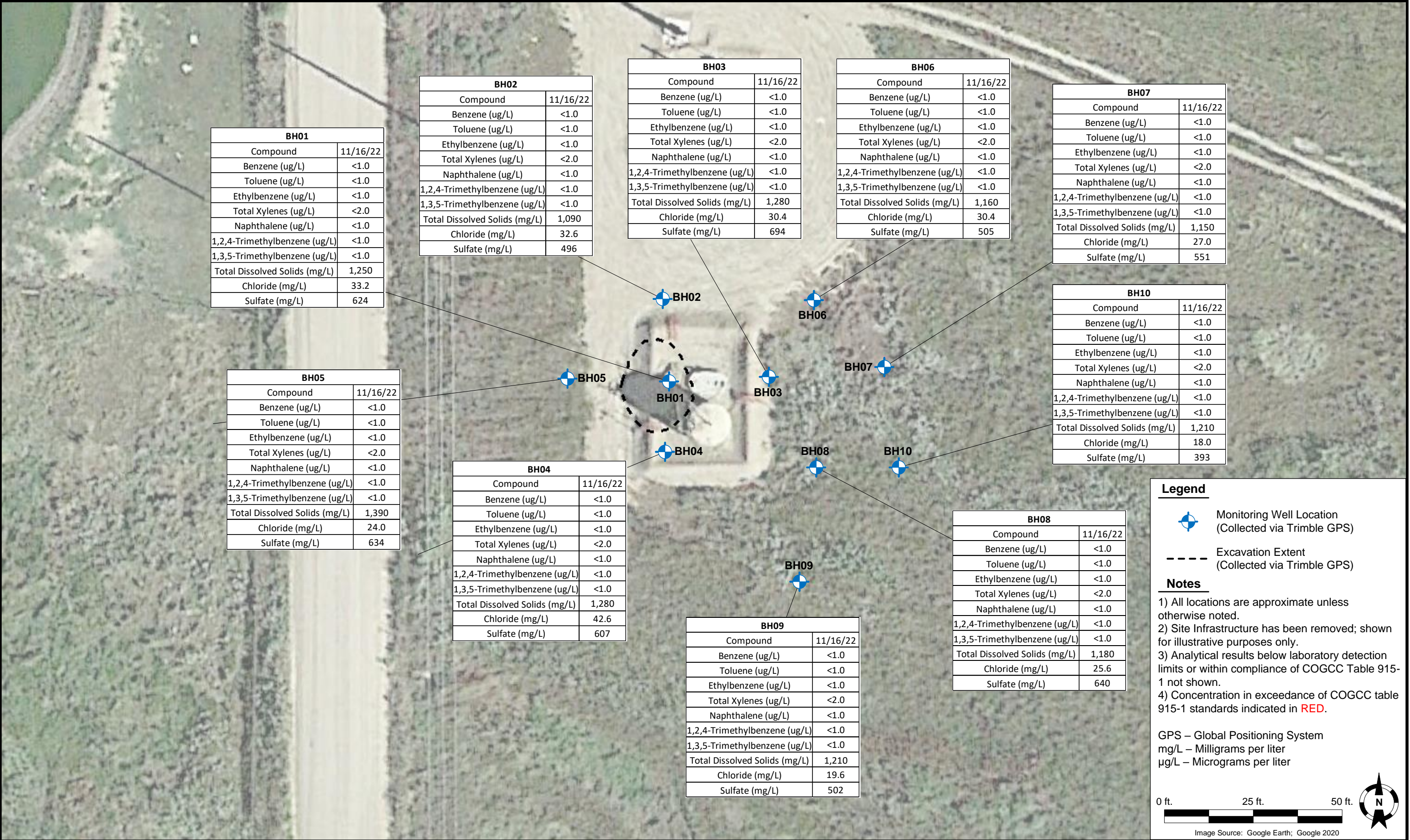


TASMAN
Tasman, Inc.
6855 W 119th Avenue
Broomfield, CO 80020

**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
(11/16/2022)

**FIGURE
5**



ATTACHMENT A
LABORATORY SOIL ANALYTICAL DATA REPORTS

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 12, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order #2203187

Enclosed are the results of analyses for samples received by Summit Scientific on 03/11/22 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



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

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

Reported:
04/12/22 13:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	2203187-01	Soil	03/11/22 12:20	03/11/22 15:15
SS01@2.5'	2203187-02	Soil	03/11/22 12:00	03/11/22 15:15
SS02@2.5'	2203187-03	Soil	03/11/22 12:02	03/11/22 15:15
SS03@2.5'	2203187-04	Soil	03/11/22 12:04	03/11/22 15:15
SS04@2.5'	2203187-05	Soil	03/11/22 12:06	03/11/22 15:15
FS01@3.5'	2203187-06	Soil	03/11/22 12:08	03/11/22 15:15
SEP01-DL01@3'	2203187-07	Soil	03/11/22 12:33	03/11/22 15:15
SEP01-FL01@3'	2203187-08	Soil	03/11/22 12:36	03/11/22 15:15
SEP02-DL02@3'	2203187-09	Soil	03/11/22 12:40	03/11/22 15:15
GW01@3.5'	2203187-11	Water	03/11/22 12:10	03/11/22 15:15

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

2203187.1

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

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

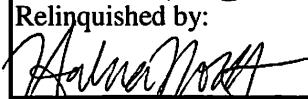
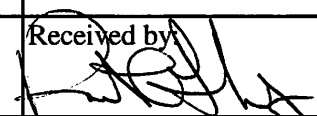
Phone: 303 829 0530 / 720 616 8383

Project Name: Carpio A26-05 FAC

Sampler Name: Halina North

Project Number: UWIRWE - A1698 - ABN

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	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD		
1	ASTO1@0.5'	3/11/22	12:20	2			X			X				X	X	X	X	X		
2	SSO1@2.5'		12:00															X	HOLD	
3	SSO2@2.5'		12:02																	
4	SSO3@2.5'		12:04															X	HOLD	
5	SSO4@2.5'		12:06															X	HOLD	
6	FSO1@3.5'		12:08																	
7	SEPO1-DLO1@3'		12:33																	
8	SEPO1-FL01@3'		12:36																	
9	SEPO2-DLO2@3'		12:40																	
10	B601@3'		12:50	1													X	X	X	HOLD

Relinquished by: 	Date/Time: 3/11/22 15:15	Received by: Tasman's Lock Box	Date/Time: 3/11/22 15:15	Turn Around Time (Check) ___ Same Day ___ 24 hours ___ 48 hours ___ 72 hours ___ Standard Sample Integrity: Temperature Upon Receipt: 3.2 Samples Intact: <u>Yes</u> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 3/11/22 15:15		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Summit Scientific

2203187.2

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 2 of 2

Client: Noble / Tasman Geosciences

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 A26-05 FAC

Sampler Name: Halina North

Project Number: UWRWE-A1698-ABN

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate		
1	GW01@35'	3/11/22	12:10	3	X				X				X	X	X	X	X	X	X		
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>Halina North</u>	Date/Time: <u>3/11/22 15:15</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>3/11/22 15:15</u>	Turn Around Time (Check) ___ Same Day ___ 72 hours ___ 24 hours <input checked="" type="checkbox"/> Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>3.2</u> Samples Intact: <input checked="" type="radio"/> Yes ___ No	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>3/11/22 15:15</u>	Received by: <u>[Signature]</u>	Date/Time: <u>3/11/22 15:15</u>		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

S₂2/2
Sample Receipt Checklist

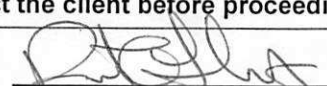
S2 Work Order# 2203187

Client: Noble-Tasman Client Project ID: Carpio A2C-03 FACShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)Temp (°C) 3.2

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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
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 or Initials
3-11-22
Date/Time



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

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

Reported:
04/12/22 13:34

AST01@0.5'
2203187-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.8 %	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 FAC
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/12/22 13:34

AST01@0.5'
2203187-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0373	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:20**

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

Reported:
04/12/22 13:34

AST01@0.5'
2203187-01 (Soil)

Summit Scientific

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

Calcium	39.5	0.0528	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	13.0	0.0528	"	"	"	"	"	"
Sodium	33.2	0.0528	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.17	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.592	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

Summit Scientific

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

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

Reported:
04/12/22 13:34

SS01@2.5'
2203187-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-02

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0074	04/05/22	04/07/22	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: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		129 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

I-02

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0075	04/05/22	04/06/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:00**

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

PAH by EPA Method 8270D SIM

I-02

Summit Scientific

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

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

Reported:
04/12/22 13:34

SS01@2.5'
2203187-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-02

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0077	04/05/22	04/05/22	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: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0638	0.0100	mg/L	1	BFD0148	04/07/22	04/12/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:00**

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

Reported:
04/12/22 13:34

SS01@2.5'
2203187-02 (Soil)

Summit Scientific

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

Calcium	30.1	0.0525	mg/L dry	1	BFD0109	04/06/22	04/09/22	EPA 6020B
Magnesium	9.83	0.0525	"	"	"	"	"	"
Sodium	29.8	0.0525	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.21	0.00100	units	1	BFD0182	04/10/22	04/10/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFD0162	04/08/22	04/08/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.528	0.0100	mmhos/cm	1	BFD0145	04/07/22	04/07/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.68		pH Units	1	BFD0143	04/07/22	04/07/22	EPA 9045D	I-02

Summit Scientific

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

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

Reported:
04/12/22 13:34

SS02@2.5'
2203187-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.3 %	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 FAC
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/12/22 13:34

SS02@2.5'
2203187-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		73.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0209	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:02**

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

Reported:
04/12/22 13:34

SS02@2.5'
2203187-03 (Soil)

Summit Scientific

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

Calcium	20.9	0.0525	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	6.77	0.0525	"	"	"	"	"	"
Sodium	14.8	0.0525	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.720	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.317	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

SS03@2.5'
2203187-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-02

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0074	04/05/22	04/08/22	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: **03/11/22 12:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		149 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

I-02

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0075	04/05/22	04/06/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		96.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

I-02

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Carpio A26-05 FAC
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/12/22 13:34

SS03@2.5'
2203187-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-02

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0077	04/05/22	04/05/22	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: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0623	0.0100	mg/L	1	BFD0148	04/07/22	04/12/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:04**

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

Reported:
04/12/22 13:34

SS03@2.5'
2203187-04 (Soil)

Summit Scientific

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

Calcium	36.8	0.0532	mg/L dry	1	BFD0109	04/06/22	04/09/22	EPA 6020B
Magnesium	11.4	0.0532	"	"	"	"	"	"
Sodium	31.4	0.0532	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.16	0.00100	units	1	BFD0182	04/10/22	04/10/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BFD0162	04/08/22	04/08/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.599	0.0100	mmhos/cm	1	BFD0145	04/07/22	04/07/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.73		pH Units	1	BFD0143	04/07/22	04/07/22	EPA 9045D	I-02

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

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

Reported:
04/12/22 13:34

SS04@2.5'
2203187-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-02

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0074	04/05/22	04/08/22	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: **03/11/22 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		145 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

I-02

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0075	04/05/22	04/06/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

I-02

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

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

Reported:
04/12/22 13:34

SS04@2.5'
2203187-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-02

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0077	04/05/22	04/05/22	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: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0800	0.0100	mg/L	1	BFD0148	04/07/22	04/12/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:06**

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

Reported:
04/12/22 13:34

SS04@2.5'
2203187-05 (Soil)

Summit Scientific

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

Calcium	65.8	0.0540	mg/L dry	1	BFD0109	04/06/22	04/09/22	EPA 6020B
Magnesium	25.2	0.0540	"	"	"	"	"	"
Sodium	67.9	0.0540	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.80	0.00100	units	1	BFD0182	04/10/22	04/10/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.5		%	1	BFD0162	04/08/22	04/08/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.10	0.0100	mmhos/cm	1	BFD0145	04/07/22	04/07/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BFD0143	04/07/22	04/07/22	EPA 9045D	I-02

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6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

FS01@3.5'
2203187-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		94.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

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

Reported:
04/12/22 13:34

FS01@3.5'
2203187-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0574	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:08**

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

Reported:
04/12/22 13:34

FS01@3.5'
2203187-06 (Soil)

Summit Scientific

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

Calcium	46.8	0.0590	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	16.6	0.0590	"	"	"	"	"	"
Sodium	44.0	0.0590	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.41	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.659	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

Summit Scientific

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

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

Reported:
04/12/22 13:34

SEP01-DL01@3'
2203187-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

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

Reported:
04/12/22 13:34

SEP01-DL01@3'
2203187-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		58.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.582	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:33**

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

Reported:
04/12/22 13:34

SEP01-DL01@3'
2203187-07 (Soil)

Summit Scientific

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

Calcium	319	0.0610	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	168	0.0610	"	"	"	"	"	"
Sodium	120	0.0610	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.35	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.0		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.06	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.70		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

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

Reported:
04/12/22 13:34

SEP01-FL01@3'
2203187-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Reported:
04/12/22 13:34

SEP01-FL01@3'
2203187-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.259	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:36**

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

Reported:
04/12/22 13:34

SEP01-FL01@3'
2203187-08 (Soil)

Summit Scientific

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

Calcium	268	0.0607	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	96.1	0.0607	"	"	"	"	"	"
Sodium	83.1	0.0607	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.11	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.30	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

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Broomfield CO, 80020

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

Reported:
04/12/22 13:34

SEP02-DL02@3'
2203187-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFC0238	03/14/22	03/15/22	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: **03/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		96.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0239	03/14/22	03/15/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		86.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Broomfield CO, 80020

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

Reported:
04/12/22 13:34

SEP02-DL02@3'
2203187-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0241	03/14/22	03/15/22	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: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.203	0.0100	mg/L	1	BFC0273	03/25/22	03/31/22	EPA 6020B	

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

Date Sampled: **03/11/22 12:40**

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

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

Reported:
04/12/22 13:34

SEP02-DL02@3'
2203187-09 (Soil)

Summit Scientific

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

Calcium	316	0.0607	mg/L dry	1	BFC0251	03/14/22	03/16/22	EPA 6020B
Magnesium	104	0.0607	"	"	"	"	"	"
Sodium	143	0.0607	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.78	0.00100	units	1	BFC0362	03/17/22	03/17/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BFC0343	03/17/22	03/17/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.72	0.0100	mmhos/cm	1	BFC0284	03/15/22	03/15/22	EPA 120.1	

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

Date Sampled: **03/11/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BFC0283	03/15/22	03/15/22	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

GW01@3.5'
2203187-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/11/22 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	21	1.0	ug/l	1	BFC0291	03/15/22	03/16/22	EPA 8260B	
Toluene	91	1.0	"	"	"	"	"	"	
Ethylbenzene	9.3	1.0	"	"	"	"	"	"	
Xylenes (total)	97	2.0	"	"	"	"	"	"	
Naphthalene	3.0	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	22	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	9.3	1.0	"	"	"	"	"	"	

Date Sampled: **03/11/22 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		125 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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

Reported:
04/12/22 13:34

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 BFC0238 - EPA 5030 Soil MS

Blank (BFC0238-BLK1)

Prepared: 03/14/22 Analyzed: 03/15/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.5	50-150			

LCS (BFC0238-BS1)

Prepared: 03/14/22 Analyzed: 03/15/22

Benzene	0.0573	0.0020	mg/kg	0.0750		76.4	70-130			
Toluene	0.0616	0.0050	"	0.0750		82.1	70-130			
Ethylbenzene	0.0586	0.0050	"	0.0750		78.2	70-130			
m,p-Xylene	0.125	0.010	"	0.150		83.2	70-130			
o-Xylene	0.0602	0.0050	"	0.0750		80.2	70-130			
1,2,4-Trimethylbenzene	0.0662	0.0050	"	0.0750		88.2	70-130			
1,3,5-Trimethylbenzene	0.0631	0.0050	"	0.0750		84.1	70-130			
Naphthalene	0.0604	0.0038	"	0.0750		80.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	50-150			

Matrix Spike (BFC0238-MS1)

Source: 2203187-01

Prepared: 03/14/22 Analyzed: 03/15/22

Benzene	0.0589	0.0020	mg/kg	0.0750	ND	78.5	70-130			
Toluene	0.0647	0.0050	"	0.0750	ND	86.3	70-130			
Ethylbenzene	0.0634	0.0050	"	0.0750	ND	84.6	70-130			
m,p-Xylene	0.135	0.010	"	0.150	ND	90.3	70-130			
o-Xylene	0.0661	0.0050	"	0.0750	ND	88.1	70-130			
1,2,4-Trimethylbenzene	0.0726	0.0050	"	0.0750	ND	96.8	70-130			
1,3,5-Trimethylbenzene	0.0696	0.0050	"	0.0750	ND	92.8	70-130			
Naphthalene	0.0736	0.0038	"	0.0750	ND	98.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.8	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150			

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

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

Reported:
04/12/22 13:34

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 BFC0238 - EPA 5030 Soil MS

Matrix Spike Dup (BFC0238-MSD1)

Source: 2203187-01

Prepared: 03/14/22 Analyzed: 03/15/22

Benzene	0.0603	0.0020	mg/kg	0.0750	ND	80.4	70-130	2.37	30	
Toluene	0.0647	0.0050	"	0.0750	ND	86.3	70-130	0.0464	30	
Ethylbenzene	0.0662	0.0050	"	0.0750	ND	88.3	70-130	4.35	30	
m,p-Xylene	0.142	0.010	"	0.150	ND	94.6	70-130	4.65	30	
o-Xylene	0.0683	0.0050	"	0.0750	ND	91.0	70-130	3.31	30	
1,2,4-Trimethylbenzene	0.0751	0.0050	"	0.0750	ND	100	70-130	3.33	30	
1,3,5-Trimethylbenzene	0.0715	0.0050	"	0.0750	ND	95.3	70-130	2.68	30	
Naphthalene	0.0848	0.0038	"	0.0750	ND	113	70-130	14.1	30	
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.8	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

Batch BFC0291 - EPA 5030 Water MS

Blank (BFC0291-BLK1)

Prepared & Analyzed: 03/15/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.3		88.6	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.3	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	21-167			

LCS (BFC0291-BS1)

Prepared & Analyzed: 03/15/22

Benzene	48.2	1.0	ug/l	50.0		96.3	51-132			
Toluene	43.1	1.0	"	50.0		86.2	51-138			
Ethylbenzene	43.5	1.0	"	50.0		86.9	58-146			
m,p-Xylene	86.9	2.0	"	100		86.9	57-144			
o-Xylene	46.8	1.0	"	50.0		93.6	53-146			
Naphthalene	45.3	1.0	"	50.0		90.5	70-130			
1,2,4-Trimethylbenzene	48.2	1.0	"	50.0		96.4	70-130			
1,3,5-Trimethylbenzene	51.4	1.0	"	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.0	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3		89.0	21-167			

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

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

Reported:
04/12/22 13:34

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 BFC0291 - EPA 5030 Water MS

Matrix Spike (BFC0291-MS1)

Source: 2203187-11

Prepared & Analyzed: 03/15/22

Benzene	66.4	1.0	ug/l	50.0	21.0	90.8	34-141			
Toluene	112	1.0	"	50.0	91.0	41.1	27-151			
Ethylbenzene	57.9	1.0	"	50.0	9.34	97.1	29-160			
m,p-Xylene	161	2.0	"	100	69.9	90.9	20-166			
o-Xylene	77.5	1.0	"	50.0	26.6	102	33-159			
Naphthalene	45.8	1.0	"	50.0	3.04	85.5	70-130			
1,2,4-Trimethylbenzene	76.4	1.0	"	50.0	21.7	109	70-130			
1,3,5-Trimethylbenzene	67.8	1.0	"	50.0	9.33	117	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.8		"	13.3		81.1	23-173			
Surrogate: Toluene-d8	12.8		"	13.3		96.4	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.0	21-167			

Matrix Spike Dup (BFC0291-MSD1)

Source: 2203187-11

Prepared & Analyzed: 03/15/22

Benzene	69.1	1.0	ug/l	50.0	21.0	96.2	34-141	3.97	30	
Toluene	80.4	1.0	"	50.0	91.0	NR	27-151	32.4	30	QM-07
Ethylbenzene	59.6	1.0	"	50.0	9.34	100	29-160	2.88	30	
m,p-Xylene	163	2.0	"	100	69.9	93.6	20-166	1.63	30	
o-Xylene	79.0	1.0	"	50.0	26.6	105	33-159	1.92	30	
Naphthalene	46.4	1.0	"	50.0	3.04	86.7	70-130	1.30	30	
1,2,4-Trimethylbenzene	78.0	1.0	"	50.0	21.7	112	70-130	2.02	30	
1,3,5-Trimethylbenzene	69.7	1.0	"	50.0	9.33	121	70-130	2.76	30	
Surrogate: 1,2-Dichloroethane-d4	11.2		"	13.3		84.2	23-173			
Surrogate: Toluene-d8	9.24		"	13.3		69.3	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.5	21-167			

Batch BFD0074 - EPA 5030 Soil MS

Blank (BFD0074-BLK1)

Prepared: 04/05/22 Analyzed: 04/07/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0560		"	0.0400		140	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			

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

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

Reported:
04/12/22 13:34

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 BFD0074 - EPA 5030 Soil MS

Blank (BFD0074-BLK1)

Prepared: 04/05/22 Analyzed: 04/07/22

Surrogate: 4-Bromofluorobenzene	0.0422		mg/kg	0.0400		105	50-150
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LCS (BFD0074-BS1)

Prepared: 04/05/22 Analyzed: 04/07/22

Benzene	0.0946	0.0020	mg/kg	0.100		94.6	70-130
Toluene	0.103	0.0050	"	0.100		103	70-130
Ethylbenzene	0.0901	0.0050	"	0.100		90.1	70-130
m,p-Xylene	0.189	0.010	"	0.200		94.6	70-130
o-Xylene	0.0952	0.0050	"	0.100		95.2	70-130
1,2,4-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130
1,3,5-Trimethylbenzene	0.0964	0.0050	"	0.100		96.4	70-130
Naphthalene	0.106	0.0038	"	0.100		106	70-130
Surrogate: 1,2-Dichloroethane-d4	0.0543		"	0.0400		136	50-150
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	50-150

Matrix Spike (BFD0074-MS1)

Source: 2204037-04

Prepared: 04/05/22 Analyzed: 04/07/22

Benzene	0.0846	0.0020	mg/kg	0.100	ND	84.6	70-130
Toluene	0.0933	0.0050	"	0.100	ND	93.3	70-130
Ethylbenzene	0.0801	0.0050	"	0.100	ND	80.1	70-130
m,p-Xylene	0.167	0.010	"	0.200	ND	83.3	70-130
o-Xylene	0.0859	0.0050	"	0.100	ND	85.9	70-130
1,2,4-Trimethylbenzene	0.0917	0.0050	"	0.100	ND	91.7	70-130
1,3,5-Trimethylbenzene	0.0880	0.0050	"	0.100	ND	88.0	70-130
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130
Surrogate: 1,2-Dichloroethane-d4	0.0535		"	0.0400		134	50-150
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	50-150

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

Reported:
04/12/22 13:34

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 BFD0074 - EPA 5030 Soil MS

Matrix Spike Dup (BFD0074-MSD1)		Source: 2204037-04			Prepared: 04/05/22 Analyzed: 04/07/22					
Benzene	0.0857	0.0020	mg/kg	0.100	ND	85.7	70-130	1.23	30	
Toluene	0.0955	0.0050	"	0.100	ND	95.5	70-130	2.32	30	
Ethylbenzene	0.0804	0.0050	"	0.100	ND	80.4	70-130	0.337	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	84.8	70-130	1.71	30	
o-Xylene	0.0865	0.0050	"	0.100	ND	86.5	70-130	0.766	30	
1,2,4-Trimethylbenzene	0.0935	0.0050	"	0.100	ND	93.5	70-130	1.94	30	
1,3,5-Trimethylbenzene	0.0876	0.0050	"	0.100	ND	87.6	70-130	0.410	30	
Naphthalene	0.112	0.0038	"	0.100	ND	112	70-130	9.14	30	
Surrogate: 1,2-Dichloroethane-d4		0.0544	"	0.0400		136	50-150			
Surrogate: Toluene-d8		0.0425	"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene		0.0418	"	0.0400		105	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFC0239 - EPA 3550A

Blank (BFC0239-BLK1)

Prepared: 03/14/22 Analyzed: 03/15/22

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

LCS (BFC0239-BS1)

Prepared: 03/14/22 Analyzed: 03/15/22

C10-C28 (DRO)	465	50	mg/kg	500	93.0	70-130
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Matrix Spike (BFC0239-MS1)

Source: 2203187-01

Prepared: 03/14/22 Analyzed: 03/15/22

C10-C28 (DRO)	460	50	mg/kg	500	19.5	88.1	70-130
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Matrix Spike Dup (BFC0239-MSD1)

Source: 2203187-01

Prepared: 03/14/22 Analyzed: 03/15/22

C10-C28 (DRO)	508	50	mg/kg	500	19.5	97.6	70-130	9.81	20
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Batch BFD0075 - EPA 3550A

Blank (BFD0075-BLK1)

Prepared & Analyzed: 04/05/22

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

LCS (BFD0075-BS1)

Prepared: 04/05/22 Analyzed: 04/06/22

C10-C28 (DRO)	438	50	mg/kg	500	87.6	70-130
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Matrix Spike (BFD0075-MS1)

Source: 2204037-04

Prepared: 04/05/22 Analyzed: 04/06/22

C10-C28 (DRO)	405	50	mg/kg	500	14.3	78.1	70-130
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Matrix Spike Dup (BFD0075-MSD1)

Source: 2204037-04

Prepared: 04/05/22 Analyzed: 04/06/22

C10-C28 (DRO)	430	50	mg/kg	500	14.3	83.2	70-130	6.14	20
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6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0241 - EPA 5030 Soil MS

Blank (BFC0241-BLK1)

Prepared & Analyzed: 03/14/22

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	0.0217		"	0.0333		65.0	40-150			
Surrogate: Fluoranthene-d10	0.0214		"	0.0333		64.1	40-150			

LCS (BFC0241-BS1)

Prepared & Analyzed: 03/14/22

Acenaphthene	0.0208	0.00500	mg/kg	0.0333		62.3	31-137			
Anthracene	0.0207	0.00500	"	0.0333		62.0	30-120			
Benzo (a) anthracene	0.0194	0.00500	"	0.0333		58.2	30-120			
Benzo (a) pyrene	0.0207	0.00500	"	0.0333		62.1	30-120			
Benzo (b) fluoranthene	0.0191	0.00500	"	0.0333		57.4	30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333		71.7	30-120			
Chrysene	0.0222	0.00500	"	0.0333		66.5	30-120			
Dibenz (a,h) anthracene	0.0259	0.00500	"	0.0333		77.7	30-120			
Fluoranthene	0.0224	0.00500	"	0.0333		67.2	30-120			
Fluorene	0.0215	0.00500	"	0.0333		64.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0319	0.00500	"	0.0333		95.7	30-120			
Pyrene	0.0225	0.00500	"	0.0333		67.6	35-142			
1-Methylnaphthalene	0.0189	0.00500	"	0.0333		56.6	35-142			
2-Methylnaphthalene	0.0219	0.00500	"	0.0333		65.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0215		"	0.0333		64.6	40-150			
Surrogate: Fluoranthene-d10	0.0232		"	0.0333		69.6	40-150			

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

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

Reported:
04/12/22 13:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0241 - EPA 5030 Soil MS

Matrix Spike (BFC0241-MS1)

Source: 2203182-01

Prepared: 03/14/22 Analyzed: 03/15/22

Acenaphthene	0.0303	0.00500	mg/kg	0.0333	ND	90.9	31-137			
Anthracene	0.0927	0.00500	"	0.0333	ND	278	30-120			QM-07
Benzo (a) anthracene	0.0108	0.00500	"	0.0333	ND	32.3	30-120			
Benzo (a) pyrene	0.00989	0.00500	"	0.0333	ND	29.7	30-120			QM-07
Benzo (b) fluoranthene	0.00752	0.00500	"	0.0333	ND	22.5	30-120			QM-07
Benzo (k) fluoranthene	0.00706	0.00500	"	0.0333	ND	21.2	30-120			QM-07
Chrysene	0.0185	0.00500	"	0.0333	0.00884	29.1	30-120			QM-07
Dibenz (a,h) anthracene	0.00849	0.00500	"	0.0333	ND	25.5	30-120			QM-07
Fluoranthene	0.0134	0.00500	"	0.0333	ND	40.1	30-120			
Fluorene	0.0658	0.00500	"	0.0333	0.0553	31.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0128	0.00500	"	0.0333	ND	38.5	30-120			
Pyrene	0.0121	0.00500	"	0.0333	ND	36.3	35-142			
1-Methylnaphthalene	0.187	0.00500	"	0.0333	0.310	NR	15-130			QM-07
2-Methylnaphthalene	0.503	0.00500	"	0.0333	0.552	NR	15-130			QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0124		"	0.0333		37.2	40-150			S-02
Surrogate: Fluoranthene-d10	0.0114		"	0.0333		34.2	40-150			S-02

Matrix Spike Dup (BFC0241-MSD1)

Source: 2203182-01

Prepared: 03/14/22 Analyzed: 03/15/22

Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.8	31-137	67.9	30	QM-07
Anthracene	0.0517	0.00500	"	0.0333	ND	155	30-120	56.8	30	QM-07
Benzo (a) anthracene	0.00802	0.00500	"	0.0333	ND	24.1	30-120	29.1	30	QM-07
Benzo (a) pyrene	0.00719	0.00500	"	0.0333	ND	21.6	30-120	31.5	30	QM-07
Benzo (b) fluoranthene	0.00525	0.00500	"	0.0333	ND	15.7	30-120	35.5	30	QM-07
Benzo (k) fluoranthene	0.00449	0.00500	"	0.0333	ND	13.5	30-120	44.5	30	QM-07
Chrysene	0.0145	0.00500	"	0.0333	0.00884	16.9	30-120	24.6	30	QM-07
Dibenz (a,h) anthracene	0.00536	0.00500	"	0.0333	ND	16.1	30-120	45.3	30	QM-07
Fluoranthene	0.00726	0.00500	"	0.0333	ND	21.8	30-120	59.1	30	QM-07
Fluorene	0.0316	0.00500	"	0.0333	0.0553	NR	30-120	70.1	30	QM-07
Indeno (1,2,3-cd) pyrene	0.00802	0.00500	"	0.0333	ND	24.1	30-120	46.2	30	QM-07
Pyrene	0.00841	0.00500	"	0.0333	ND	25.2	35-142	35.9	30	QM-07
1-Methylnaphthalene	0.0941	0.00500	"	0.0333	0.310	NR	15-130	65.9	50	QM-07
2-Methylnaphthalene	0.200	0.00500	"	0.0333	0.552	NR	15-130	86.2	50	QM-07
Surrogate: 2-Methylnaphthalene-d10	0.00818		"	0.0333		24.5	40-150			S-02
Surrogate: Fluoranthene-d10	0.00883		"	0.0333		26.5	40-150			S-02

Summit Scientific

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

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

Reported:
04/12/22 13:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0077 - EPA 5030 Soil MS

Blank (BFD0077-BLK1)

Prepared & Analyzed: 04/05/22

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	0.0206		"	0.0333		61.9	40-150			
Surrogate: Fluoranthene-d10	0.0180		"	0.0333		54.1	40-150			

LCS (BFD0077-BS1)

Prepared & Analyzed: 04/05/22

Acenaphthene	0.0176	0.00500	mg/kg	0.0333		52.9	31-137			
Anthracene	0.0179	0.00500	"	0.0333		53.8	30-120			
Benzo (a) anthracene	0.0167	0.00500	"	0.0333		50.2	30-120			
Benzo (a) pyrene	0.0197	0.00500	"	0.0333		59.0	30-120			
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333		58.3	30-120			
Benzo (k) fluoranthene	0.0215	0.00500	"	0.0333		64.4	30-120			
Chrysene	0.0179	0.00500	"	0.0333		53.6	30-120			
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333		57.4	30-120			
Fluoranthene	0.0202	0.00500	"	0.0333		60.5	30-120			
Fluorene	0.0169	0.00500	"	0.0333		50.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0123	0.00500	"	0.0333		36.8	30-120			
Pyrene	0.0158	0.00500	"	0.0333		47.4	35-142			
1-Methylnaphthalene	0.0242	0.00500	"	0.0333		72.6	35-142			
2-Methylnaphthalene	0.0221	0.00500	"	0.0333		66.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0244		"	0.0333		73.1	40-150			
Surrogate: Fluoranthene-d10	0.0205		"	0.0333		61.5	40-150			

Summit Scientific

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

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

Reported:
04/12/22 13:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0077 - EPA 5030 Soil MS

Matrix Spike (BFD0077-MS1)

Source: 2203187-02

Prepared & Analyzed: 04/05/22

Acenaphthene	0.0160	0.00500	mg/kg	0.0333	ND	48.0	31-137		
Anthracene	0.0164	0.00500	"	0.0333	ND	49.3	30-120		
Benzo (a) anthracene	0.0161	0.00500	"	0.0333	ND	48.2	30-120		
Benzo (a) pyrene	0.0187	0.00500	"	0.0333	ND	56.1	30-120		
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.7	30-120		
Benzo (k) fluoranthene	0.0203	0.00500	"	0.0333	ND	60.9	30-120		
Chrysene	0.0168	0.00500	"	0.0333	ND	50.3	30-120		
Dibenz (a,h) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120		
Fluoranthene	0.0190	0.00500	"	0.0333	ND	56.9	30-120		
Fluorene	0.0156	0.00500	"	0.0333	ND	46.9	30-120		
Indeno (1,2,3-cd) pyrene	0.0114	0.00500	"	0.0333	ND	34.3	30-120		
Pyrene	0.0160	0.00500	"	0.0333	ND	48.1	35-142		
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	ND	60.2	15-130		
2-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.4	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0197		"	0.0333		59.0	40-150		
Surrogate: Fluoranthene-d10	0.0192		"	0.0333		57.5	40-150		

Matrix Spike Dup (BFD0077-MSD1)

Source: 2203187-02

Prepared & Analyzed: 04/05/22

Acenaphthene	0.0161	0.00500	mg/kg	0.0333	ND	48.2	31-137	0.537	30
Anthracene	0.0160	0.00500	"	0.0333	ND	48.0	30-120	2.70	30
Benzo (a) anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	5.00	30
Benzo (a) pyrene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	6.88	30
Benzo (b) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	4.46	30
Benzo (k) fluoranthene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	5.15	30
Chrysene	0.0157	0.00500	"	0.0333	ND	47.1	30-120	6.53	30
Dibenz (a,h) anthracene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	3.55	30
Fluoranthene	0.0185	0.00500	"	0.0333	ND	55.4	30-120	2.60	30
Fluorene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	0.762	30
Indeno (1,2,3-cd) pyrene	0.0109	0.00500	"	0.0333	ND	32.7	30-120	4.99	30
Pyrene	0.0151	0.00500	"	0.0333	ND	45.4	35-142	5.93	30
1-Methylnaphthalene	0.0207	0.00500	"	0.0333	ND	62.2	15-130	3.21	50
2-Methylnaphthalene	0.0205	0.00500	"	0.0333	ND	61.5	15-130	8.72	50
Surrogate: 2-Methylnaphthalene-d10	0.0222		"	0.0333		66.5	40-150		
Surrogate: Fluoranthene-d10	0.0186		"	0.0333		55.8	40-150		

Summit Scientific

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

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

Reported:
04/12/22 13:34

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

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

Batch BFC0273 - EPA 3050B

Blank (BFC0273-BLK1)				Prepared: 03/25/22 Analyzed: 03/31/22						
Boron	ND	0.0100	mg/L							
LCS (BFC0273-BS1)				Prepared: 03/25/22 Analyzed: 03/31/22						
Boron	4.69	0.0100	mg/L	5.00		93.8	80-120			
Duplicate (BFC0273-DUP1)				Source: 2203162-04		Prepared: 03/25/22 Analyzed: 03/31/22				
Boron	0.609	0.0100	mg/L		0.587			3.65	20	
Matrix Spike (BFC0273-MS1)				Source: 2203162-04		Prepared: 03/25/22 Analyzed: 03/31/22				
Boron	5.42	0.0100	mg/L	5.00	0.587	96.6	75-125			
Matrix Spike Dup (BFC0273-MSD1)				Source: 2203162-04		Prepared: 03/25/22 Analyzed: 03/31/22				
Boron	5.71	0.0100	mg/L	5.00	0.587	102	75-125	5.24	25	

Batch BFD0148 - EPA 3050B

Blank (BFD0148-BLK1)				Prepared: 04/07/22 Analyzed: 04/12/22						
Boron	ND	0.0100	mg/L							
LCS (BFD0148-BS1)				Prepared: 04/07/22 Analyzed: 04/12/22						
Boron	5.07	0.0100	mg/L	5.00		101	80-120			
Duplicate (BFD0148-DUP1)				Source: 2203187-02		Prepared: 04/07/22 Analyzed: 04/12/22				
Boron	0.0553	0.0100	mg/L		0.0638			14.2	20	
Matrix Spike (BFD0148-MS1)				Source: 2203187-02		Prepared: 04/07/22 Analyzed: 04/12/22				
Boron	5.17	0.0100	mg/L	5.00	0.0638	102	75-125			

Summit Scientific

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

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

Reported:
04/12/22 13:34

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

Summit Scientific

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

Batch BFD0148 - EPA 3050B

Matrix Spike Dup (BFD0148-MSD1)

Source: 2203187-02

Prepared: 04/07/22 Analyzed: 04/12/22

Boron	5.20	0.0100	mg/L	5.00	0.0638	103	75-125	0.647	25
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

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

Reported:
04/12/22 13:34

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

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

Batch BFC0251 - General Preparation

Blank (BFC0251-BLK1)

Prepared: 03/14/22 Analyzed: 03/16/22

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

LCS (BFC0251-BS1)

Prepared: 03/14/22 Analyzed: 03/16/22

Calcium	5.21	0.0500	mg/L wet	5.00	104	70-130
Magnesium	5.47	0.0500	"	5.00	109	70-130
Sodium	5.17	0.0500	"	5.00	103	70-130

Batch BFD0109 - General Preparation

Blank (BFD0109-BLK1)

Prepared: 04/06/22 Analyzed: 04/09/22

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

LCS (BFD0109-BS1)

Prepared: 04/06/22 Analyzed: 04/09/22

Calcium	5.42	0.0500	mg/L wet	5.00	108	70-130
Magnesium	5.27	0.0500	"	5.00	105	70-130
Sodium	5.16	0.0500	"	5.00	103	70-130

Summit Scientific

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

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

Reported:
04/12/22 13:34

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

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

Batch BFC0343 - General Preparation

Duplicate (BFC0343-DUP1)		Source: 2202213-05			Prepared & Analyzed: 03/17/22					
% Solids	94.1		%		94.1			0.0248	20	

Batch BFD0162 - General Preparation

Duplicate (BFD0162-DUP1)		Source: 2203187-02			Prepared & Analyzed: 04/08/22					
% Solids	95.7		%		95.2			0.523	20	

Summit Scientific

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

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

Reported:
04/12/22 13:34

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

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

Batch BFC0284 - General Preparation

Blank (BFC0284-BLK1)

Prepared & Analyzed: 03/15/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFC0284-BS1)

Prepared & Analyzed: 03/15/22

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.7 95-105

Duplicate (BFC0284-DUP1)

Source: 2201167-06

Prepared & Analyzed: 03/15/22

Specific Conductance (EC) 0.494 0.0100 mmhos/cm 0.504 1.96 20

Batch BFD0145 - General Preparation

Blank (BFD0145-BLK1)

Prepared & Analyzed: 04/07/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFD0145-BS1)

Prepared & Analyzed: 04/07/22

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.150 99.2 95-105

Duplicate (BFD0145-DUP1)

Source: 2203187-02

Prepared & Analyzed: 04/07/22

Specific Conductance (EC) 0.529 0.0100 mmhos/cm 0.528 0.151 20

Summit Scientific

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

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

Reported:
04/12/22 13:34

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

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

Batch BFC0283 - General Preparation

LCS (BFC0283-BS1)

Prepared & Analyzed: 03/15/22

pH	9.07		pH Units	9.18	98.8	95-105
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Duplicate (BFC0283-DUP1)

Source: 2201167-06

Prepared & Analyzed: 03/15/22

pH	6.89		pH Units	6.74		2.20	20
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Batch BFD0143 - General Preparation

LCS (BFD0143-BS1)

Prepared & Analyzed: 04/07/22

pH	9.08		pH Units	9.18	98.9	95-105
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Duplicate (BFD0143-DUP1)

Source: 2203187-02

Prepared & Analyzed: 04/07/22

pH	7.66		pH Units	7.68		0.261	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 FAC

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

Reported:
04/12/22 13:34

Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
I-02	This sample was analyzed outside of the recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 24, 2022

Jacob Whritenour
Tasman Geosciences
6855 W. 119th Ave.
Broomfield, CO 80020
RE: Noble - Carpio A26-05
Work Order #2206257

Enclosed are the results of analyses for samples received by Summit Scientific on 06/16/22 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, flowing script.

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:
06/24/22 08:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@4-5'	2206257-01	Soil	06/16/22 10:00	06/16/22 15:00
BH02@4-5'	2206257-02	Soil	06/16/22 10:26	06/16/22 15:00
BH03@3.5-6'	2206257-03	Soil	06/16/22 12:26	06/16/22 15:00
BH04@4-5'	2206257-04	Soil	06/16/22 09:52	06/16/22 15:00
BH05@4-5'	2206257-05	Soil	06/16/22 09:30	06/16/22 15:00
BH05@9-13'	2206257-06	Soil	06/16/22 11:43	06/16/22 15:00

Summit Scientific

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

Summit Scientific

2206257

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

Page 1 of 1

Client: Nobk / Tasman

Project Manager: Take Whittenour

Address: 6855 W 119th Ave

E-Mail: jwhittenour@tasman-geo.com

City/State/Zip: Broomfield, CO 80020

Phone: 303-487-1228

Project Name: Carpio AZG-05 (FAC)

Sampler Name: Sarah Quattrochi

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	TPH -915	VOC -915	PAH -915	Metals -915	PH, EC, SAR	Boron		
1	BH01 @ 4-5'	6/16/22	1000	3			X			X				X	X	X	X	X	X	
2	BH02 @ 4-5'		1026	3			X			X										
3	BH03 @ 3.5-4'		1226	2			X			X										
4	BH04 @ 4-5'		952	3			X			X										
5	BH05 @ 4-5'		930	3			X			X										
6	BH05 @ 9-13'		1143	2			X			X										
7																				
8																				
9																				
10																				

Relinquished by: [Signature] Date/Time: 6/16/22 @ 1415

Relinquished by: _____ Date/Time: _____

Temperature Upon Receipt: 7.3

IR gun correction: 0

Received by: [Signature] Date/Time: 6/16/22 1500

Received by: _____ Date/Time: _____

Corrected Temperature 7.3

IR gun #: 1

Turn Around Time (Check)

Same Day _____ 72 hours _____

24 hours _____ Standard X

48 hours _____

Sample Integrity:

Samples Intact: Yes No

Notes:

S₂

2206257

Sample Receipt Checklist

S2 Work Order#

Client: Novel Tisman Client Project ID: Carpio A26-05(FAC)

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

	-			
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.3 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.	-			
Were all samples received intact ⁽¹⁾ ?	-			MIØ
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			✓	
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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				



Custodian Printed Name

6/16/22

Date/Time



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH01@4-5'
2206257-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.91	79.3 %	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH01@4-5'
2206257-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/21/22	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: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0295	88.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0198	59.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0996	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 10:00**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH01@4-5'
2206257-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.30	0.251	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	152	0.503	"	"	"	"	"	"
Cadmium	ND	0.251	"	"	"	"	"	"
Copper	12.6	0.503	"	"	"	"	"	"
Lead	10.3	0.251	"	"	"	"	"	"
Nickel	10.3	0.503	"	"	"	"	"	"
Selenium	1.37	0.327	"	"	"	"	"	"
Silver	0.0552	0.0251	"	"	"	"	"	"
Zinc	54.7	0.503	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1120	0.0628	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	765	0.0628	"	"	"	"	"	"	
Sodium	108	0.0628	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.609	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 10:00**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH01@4-5'
2206257-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	79.6	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.989	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH02@4-5'
2206257-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 10:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0342	85.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.8	110 %	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH02@4-5'
2206257-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/21/22	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: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0327	98.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.110	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 10:26**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH02@4-5'
2206257-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.82	0.233	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	95.1	0.467	"	"	"	"	"	"
Cadmium	ND	0.233	"	"	"	"	"	"
Copper	13.1	0.467	"	"	"	"	"	"
Lead	11.3	0.233	"	"	"	"	"	"
Nickel	7.81	0.467	"	"	"	"	"	"
Selenium	1.01	0.304	"	"	"	"	"	"
Silver	0.0824	0.0233	"	"	"	"	"	"
Zinc	48.1	0.467	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1330	0.0584	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	540	0.0584	"	"	"	"	"	"	
Sodium	91.7	0.0584	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.536	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 10:26**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH02@4-5'
2206257-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.7	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.976	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH03@3.5-6'
2206257-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.1 %	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH03@3.5-6'
2206257-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/21/22	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: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0633	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 12:26**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH03@3.5-6'
2206257-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.53	0.230	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	96.8	0.460	"	"	"	"	"	"
Cadmium	0.353	0.230	"	"	"	"	"	"
Copper	15.2	0.460	"	"	"	"	"	"
Lead	14.8	0.230	"	"	"	"	"	"
Nickel	7.92	0.460	"	"	"	"	"	"
Selenium	0.922	0.299	"	"	"	"	"	"
Silver	0.142	0.0230	"	"	"	"	"	"
Zinc	53.9	0.460	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1970	0.0575	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	502	0.0575	"	"	"	"	"	"	
Sodium	59.6	0.0575	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.310	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 12:26**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH03@3.5-6'
2206257-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.0	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.868	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

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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:
06/24/22 08:51

BH04@4-5'
2206257-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.5 %	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: [none]

Project Manager: Jacob Whritenour

Reported:

06/24/22 08:51

BH04@4-5'
2206257-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/22/22	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: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0246	73.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.147	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 09:52**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH04@4-5'
2206257-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.08	0.235	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	94.8	0.470	"	"	"	"	"	"
Cadmium	ND	0.235	"	"	"	"	"	"
Copper	12.2	0.470	"	"	"	"	"	"
Lead	10.8	0.235	"	"	"	"	"	"
Nickel	8.32	0.470	"	"	"	"	"	"
Selenium	1.05	0.306	"	"	"	"	"	"
Silver	0.0759	0.0235	"	"	"	"	"	"
Zinc	51.5	0.470	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1210	0.0588	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	536	0.0588	"	"	"	"	"	"	
Sodium	147	0.0588	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.885	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 09:52**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH04@4-5'
2206257-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.1	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.838	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 09:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

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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:
06/24/22 08:51

BH05@4-5'
2206257-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0304	76.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.7	93.8 %	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@4-5'
2206257-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/22/22	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: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0274	82.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0722	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 09:30**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@4-5'
2206257-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.94	0.254	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	52.7	0.508	"	"	"	"	"	"
Cadmium	ND	0.254	"	"	"	"	"	"
Copper	5.70	0.508	"	"	"	"	"	"
Lead	7.00	0.254	"	"	"	"	"	"
Nickel	7.21	0.508	"	"	"	"	"	"
Selenium	0.597	0.330	"	"	"	"	"	"
Silver	0.0258	0.0254	"	"	"	"	"	"
Zinc	32.8	0.508	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1780	0.0635	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	420	0.0635	"	"	"	"	"	"	
Sodium	61.5	0.0635	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.341	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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:
06/24/22 08:51

BH05@4-5'
2206257-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.8	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.48	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.48		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@9-13'
2206257-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFF0473	06/17/22	06/17/22	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: **06/16/22 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0474	06/17/22	06/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.8	102 %	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@9-13'
2206257-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0528	06/21/22	06/22/22	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: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0282	84.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0388	0.0100	mg/L	1	BFF0517	06/20/22	06/21/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/16/22 11:43**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@9-13'
2206257-06 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.16	0.242	mg/kg dry	1	BFF0549	06/21/22	06/23/22	EPA 6020B
Barium	294	0.484	"	"	"	"	"	"
Cadmium	ND	0.242	"	"	"	"	"	"
Copper	7.55	0.484	"	"	"	"	"	"
Lead	8.75	0.242	"	"	"	"	"	"
Nickel	10.1	0.484	"	"	"	"	"	"
Selenium	0.829	0.315	"	"	"	"	"	"
Silver	0.0462	0.0242	"	"	"	"	"	"
Zinc	37.9	0.484	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0512	06/20/22	06/20/22	EPA 7196A	

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

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	8080	0.0605	mg/L dry	1	BFF0484	06/17/22	06/19/22	EPA 6020B	
Magnesium	860	0.0605	"	"	"	"	"	"	
Sodium	73.1	0.0605	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.207	0.00100	units	1	BFF0513	06/20/22	06/21/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/16/22 11:43**

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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

BH05@9-13'
2206257-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.6	%	1	BFF0510	06/20/22	06/20/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.881	0.0100	mmhos/cm	1	BFF0485	06/17/22	06/20/22	EPA 120.1	

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

Date Sampled: **06/16/22 11:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFF0486	06/17/22	06/20/22	EPA 9045D	

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Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BFF0473 - EPA 5030 Soil MS

Blank (BFF0473-BLK1)

Prepared & Analyzed: 06/17/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

LCS (BFF0473-BS1)

Prepared & Analyzed: 06/17/22

Benzene	0.120	0.0020	mg/kg	0.125		96.0	70-130			
Toluene	0.0981	0.0050	"	0.125		78.5	70-130			
Ethylbenzene	0.148	0.0050	"	0.125		118	70-130			
m,p-Xylene	0.260	0.010	"	0.250		104	70-130			
o-Xylene	0.128	0.0050	"	0.125		102	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125		124	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125		123	70-130			
Naphthalene	0.146	0.0038	"	0.125		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.1	50-150			

Matrix Spike (BFF0473-MS1)

Source: 2206257-02

Prepared & Analyzed: 06/17/22

Benzene	0.0904	0.0020	mg/kg	0.125	ND	72.3	70-130			
Toluene	0.0996	0.0050	"	0.125	ND	79.7	70-130			
Ethylbenzene	0.148	0.0050	"	0.125	ND	119	70-130			
m,p-Xylene	0.264	0.010	"	0.250	ND	106	70-130			
o-Xylene	0.130	0.0050	"	0.125	ND	104	70-130			
1,2,4-Trimethylbenzene	0.153	0.0050	"	0.125	ND	122	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125	ND	121	70-130			
Naphthalene	0.155	0.0038	"	0.125	ND	124	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.0	50-150			

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Broomfield CO, 80020

Project: Noble - Carpio A26-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

06/24/22 08:51

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BFF0473 - EPA 5030 Soil MS

Matrix Spike Dup (BFF0473-MSD1)

Source: 2206257-02

Prepared & Analyzed: 06/17/22

Benzene	0.120	0.0020	mg/kg	0.125	ND	95.8	70-130	27.9	30	
Toluene	0.101	0.0050	"	0.125	ND	80.7	70-130	1.29	30	
Ethylbenzene	0.148	0.0050	"	0.125	ND	119	70-130	0.202	30	
m,p-Xylene	0.264	0.010	"	0.250	ND	106	70-130	0.0681	30	
o-Xylene	0.129	0.0050	"	0.125	ND	103	70-130	0.902	30	
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130	1.60	30	
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130	1.14	30	
Naphthalene	0.160	0.0038	"	0.125	ND	128	70-130	2.80	30	
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.6	50-150			

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Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFF0474 - EPA 3550A

Blank (BFF0474-BLK1)

Prepared & Analyzed: 06/17/22

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

LCS (BFF0474-BS1)

Prepared & Analyzed: 06/17/22

C10-C28 (DRO)	539	50	mg/kg	500	108	70-130
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Matrix Spike (BFF0474-MS1)

Source: 2206257-02

Prepared & Analyzed: 06/17/22

C10-C28 (DRO)	470	50	mg/kg	500	33.1	87.4	70-130
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Matrix Spike Dup (BFF0474-MSD1)

Source: 2206257-02

Prepared & Analyzed: 06/17/22

C10-C28 (DRO)	430	50	mg/kg	500	33.1	79.4	70-130	8.80	20
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Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFF0528 - EPA 5030 Soil MS

Blank (BFF0528-BLK1)

Prepared & Analyzed: 06/21/22

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	0.0351		"	0.0333		105	40-150			
Surrogate: Fluoranthene-d10	0.0242		"	0.0333		72.6	40-150			

LCS (BFF0528-BS1)

Prepared & Analyzed: 06/21/22

Acenaphthene	0.0288	0.00500	mg/kg	0.0333		86.5	31-137			
Anthracene	0.0302	0.00500	"	0.0333		90.7	30-120			
Benzo (a) anthracene	0.0262	0.00500	"	0.0333		78.6	30-120			
Benzo (a) pyrene	0.0276	0.00500	"	0.0333		82.7	30-120			
Benzo (b) fluoranthene	0.0236	0.00500	"	0.0333		70.8	30-120			
Benzo (k) fluoranthene	0.0258	0.00500	"	0.0333		77.3	30-120			
Chrysene	0.0295	0.00500	"	0.0333		88.6	30-120			
Dibenz (a,h) anthracene	0.0145	0.00500	"	0.0333		43.4	30-120			
Fluoranthene	0.0270	0.00500	"	0.0333		81.0	30-120			
Fluorene	0.0282	0.00500	"	0.0333		84.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0154	0.00500	"	0.0333		46.1	30-120			
Pyrene	0.0186	0.00500	"	0.0333		55.7	35-142			
1-Methylnaphthalene	0.0341	0.00500	"	0.0333		102	35-142			
2-Methylnaphthalene	0.0318	0.00500	"	0.0333		95.3	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0339		"	0.0333		102	40-150			
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150			

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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:
06/24/22 08:51

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BFF0528 - EPA 5030 Soil MS

Matrix Spike (BFF0528-MS1)

Source: 2206207-04

Prepared & Analyzed: 06/21/22

Acenaphthene	0.0219	0.00500	mg/kg	0.0333	ND	65.8	31-137		
Anthracene	0.0212	0.00500	"	0.0333	ND	63.7	30-120		
Benzo (a) anthracene	0.0230	0.00500	"	0.0333	ND	69.1	30-120		
Benzo (a) pyrene	0.0195	0.00500	"	0.0333	ND	58.6	30-120		
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	ND	90.9	30-120		
Benzo (k) fluoranthene	0.0276	0.00500	"	0.0333	ND	82.9	30-120		
Chrysene	0.0212	0.00500	"	0.0333	ND	63.5	30-120		
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	41.9	30-120		
Fluoranthene	0.0208	0.00500	"	0.0333	ND	62.2	30-120		
Fluorene	0.0211	0.00500	"	0.0333	ND	63.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0105	0.00500	"	0.0333	ND	31.4	30-120		
Pyrene	0.0349	0.00500	"	0.0333	0.00215	98.1	35-142		
1-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.4	15-130		
2-Methylnaphthalene	0.0232	0.00500	"	0.0333	ND	69.6	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0270		"	0.0333		81.1	40-150		
Surrogate: Fluoranthene-d10	0.0204		"	0.0333		61.1	40-150		

Matrix Spike Dup (BFF0528-MSD1)

Source: 2206207-04

Prepared & Analyzed: 06/21/22

Acenaphthene	0.0238	0.00500	mg/kg	0.0333	ND	71.4	31-137	8.17	30
Anthracene	0.0239	0.00500	"	0.0333	ND	71.7	30-120	11.8	30
Benzo (a) anthracene	0.0252	0.00500	"	0.0333	ND	75.5	30-120	8.78	30
Benzo (a) pyrene	0.0215	0.00500	"	0.0333	ND	64.5	30-120	9.57	30
Benzo (b) fluoranthene	0.0322	0.00500	"	0.0333	ND	96.6	30-120	6.11	30
Benzo (k) fluoranthene	0.0294	0.00500	"	0.0333	ND	88.3	30-120	6.39	30
Chrysene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	6.89	30
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	ND	53.9	30-120	25.1	30
Fluoranthene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	8.78	30
Fluorene	0.0225	0.00500	"	0.0333	ND	67.5	30-120	6.44	30
Indeno (1,2,3-cd) pyrene	0.0111	0.00500	"	0.0333	ND	33.2	30-120	5.45	30
Pyrene	0.0363	0.00500	"	0.0333	0.00215	102	35-142	3.95	30
1-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.4	15-130	14.9	50
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.1	15-130	2.18	50
Surrogate: 2-Methylnaphthalene-d10	0.0224		"	0.0333		67.1	40-150		
Surrogate: Fluoranthene-d10	0.0223		"	0.0333		66.9	40-150		

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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:
06/24/22 08:51

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
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Analyte	Result	Reporting			Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BFF0517 - EPA 3050B

Blank (BFF0517-BLK1)

Prepared: 06/20/22 Analyzed: 06/21/22

Boron ND 0.0100 mg/L

LCS (BFF0517-BS1)

Prepared: 06/20/22 Analyzed: 06/21/22

Boron 5.78 0.0100 mg/L 5.00 116 80-120

Duplicate (BFF0517-DUP1)

Source: 2206257-01

Prepared: 06/20/22 Analyzed: 06/21/22

Boron 0.107 0.0100 mg/L 0.0996 6.84 20

Matrix Spike (BFF0517-MS1)

Source: 2206257-01

Prepared: 06/20/22 Analyzed: 06/21/22

Boron 6.08 0.0100 mg/L 5.00 0.0996 120 75-125

Matrix Spike Dup (BFF0517-MSD1)

Source: 2206257-01

Prepared: 06/20/22 Analyzed: 06/21/22

Boron 6.09 0.0100 mg/L 5.00 0.0996 120 75-125 0.159 25

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Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BFF0549 - EPA 3050B

Blank (BFF0549-BLK1)

Prepared: 06/21/22 Analyzed: 06/23/22

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

LCS (BFF0549-BS1)

Prepared: 06/21/22 Analyzed: 06/23/22

Arsenic	42.5	0.200	mg/kg wet	40.0	106	80-120
Barium	41.4	0.400	"	40.0	103	80-120
Cadmium	2.16	0.200	"	2.00	108	80-120
Copper	42.6	0.400	"	40.0	106	80-120
Lead	20.9	0.200	"	20.0	104	80-120
Nickel	39.6	0.400	"	40.0	99.1	80-120
Selenium	3.95	0.260	"	4.00	98.9	80-120
Silver	2.12	0.0200	"	2.00	106	80-120
Zinc	43.3	0.400	"	40.0	108	80-120

Duplicate (BFF0549-DUP1)

Source: 2206253-31

Prepared: 06/21/22 Analyzed: 06/23/22

Arsenic	2.74	0.225	mg/kg dry	2.67	2.33	20
Barium	87.6	0.450	"	83.1	5.25	20
Cadmium	0.160	0.225	"	0.159	0.580	20
Copper	8.42	0.450	"	8.69	3.15	20
Lead	10.7	0.225	"	10.3	3.28	20
Nickel	7.44	0.450	"	7.74	3.96	20
Selenium	0.651	0.292	"	0.657	0.904	20
Silver	0.0407	0.0225	"	0.0407	0.0394	20
Zinc	35.3	0.450	"	37.4	6.02	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:
06/24/22 08:51

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFF0549 - EPA 3050B

Matrix Spike (BFF0549-MS1)		Source: 2206253-31			Prepared: 06/21/22 Analyzed: 06/23/22					
Arsenic	48.5	0.225	mg/kg dry	45.0	2.67	102	75-125			
Barium	140	0.450	"	45.0	83.1	126	75-125			QM-02
Cadmium	2.54	0.225	"	2.25	0.159	106	75-125			
Copper	51.4	0.450	"	45.0	8.69	95.1	75-125			
Lead	30.3	0.225	"	22.5	10.3	89.0	75-125			
Nickel	50.0	0.450	"	45.0	7.74	93.9	75-125			
Selenium	4.60	0.292	"	4.50	0.657	87.8	75-125			
Silver	2.31	0.0225	"	2.25	0.0407	101	75-125			
Zinc	81.0	0.450	"	45.0	37.4	96.8	75-125			

Matrix Spike Dup (BFF0549-MSD1)		Source: 2206253-31			Prepared: 06/21/22 Analyzed: 06/23/22					
Arsenic	49.0	0.225	mg/kg dry	45.0	2.67	103	75-125	1.00	25	
Barium	142	0.450	"	45.0	83.1	130	75-125	1.42	25	QM-02
Cadmium	2.57	0.225	"	2.25	0.159	107	75-125	1.35	25	
Copper	51.5	0.450	"	45.0	8.69	95.3	75-125	0.154	25	
Lead	31.3	0.225	"	22.5	10.3	93.2	75-125	3.10	25	
Nickel	50.1	0.450	"	45.0	7.74	94.1	75-125	0.222	25	
Selenium	4.56	0.292	"	4.50	0.657	86.7	75-125	1.05	25	
Silver	2.34	0.0225	"	2.25	0.0407	102	75-125	1.17	25	
Zinc	81.2	0.450	"	45.0	37.4	97.3	75-125	0.303	25	

Summit Scientific

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



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFF0512 - 3060A Mod

Blank (BFF0512-BLK1)

Prepared & Analyzed: 06/20/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFF0512-BS1)

Prepared & Analyzed: 06/20/22

Chromium, Hexavalent 29.2 0.30 mg/kg wet 25.0 117 80-120

Duplicate (BFF0512-DUP1)

Source: 2206227-01

Prepared & Analyzed: 06/20/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFF0512-MS1)

Source: 2206227-01

Prepared & Analyzed: 06/20/22

Chromium, Hexavalent 35.9 0.30 mg/kg dry 30.1 ND 119 75-125

Matrix Spike Dup (BFF0512-MSD1)

Source: 2206227-01

Prepared & Analyzed: 06/20/22

Chromium, Hexavalent 36.3 0.30 mg/kg dry 30.1 ND 120 75-125 1.00 20

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:

06/24/22 08:51

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

Summit Scientific

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

Batch BFF0484 - General Preparation

Blank (BFF0484-BLK1)

Prepared: 06/17/22 Analyzed: 06/19/22

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

LCS (BFF0484-BS1)

Prepared: 06/17/22 Analyzed: 06/19/22

Calcium	590	0.0500	mg/L wet	500	118	70-130
Magnesium	595	0.0500	"	500	119	70-130
Sodium	537	0.0500	"	500	107	70-130

Summit Scientific

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



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

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

Summit Scientific

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

Batch BFF0510 - General Preparation

Duplicate (BFF0510-DUP1)

Source: 2206244-01

Prepared & Analyzed: 06/20/22

% Solids	86.4	%	86.4	0.0340	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

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

Summit Scientific

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

Batch BFF0485 - General Preparation

Blank (BFF0485-BLK1)

Prepared: 06/17/22 Analyzed: 06/20/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFF0485-BS1)

Prepared: 06/17/22 Analyzed: 06/20/22

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BFF0485-DUP1)

Source: 2206257-01

Prepared: 06/17/22 Analyzed: 06/20/22

Specific Conductance (EC) 0.985 0.0100 mmhos/cm 0.989 0.415 20

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:

06/24/22 08:51

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

Summit Scientific

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

Batch BFF0486 - General Preparation

LCS (BFF0486-BS1)

Prepared: 06/17/22 Analyzed: 06/20/22

pH	9.16	pH Units	9.18	99.8	95-105
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Duplicate (BFF0486-DUP1)

Source: 2206257-01

Prepared: 06/17/22 Analyzed: 06/20/22

pH	7.83	pH Units	7.82	0.128	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: [none]
Project Manager: Jacob Whritenour

Reported:
06/24/22 08:51

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 05, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order #2209438

Enclosed are the results of analyses for samples received by Summit Scientific on 09/21/22 16:40. 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:
10/05/22 12:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH06@4'	2209438-01	Soil	09/21/22 10:10	09/21/22 16:40
BH06@10-12'	2209438-02	Soil	09/21/22 10:20	09/21/22 16:40
BH07@4'	2209438-03	Soil	09/21/22 10:40	09/21/22 16:40
BH07@6-8'	2209438-04	Soil	09/21/22 10:50	09/21/22 16:40
BH07@10-12'	2209438-05	Soil	09/21/22 11:00	09/21/22 16:40
BH08@2-4'	2209438-06	Soil	09/21/22 12:10	09/21/22 16:40
BH08@10-12'	2209438-07	Soil	09/21/22 12:30	09/21/22 16:40
BH09@4'	2209438-08	Soil	09/21/22 12:50	09/21/22 16:40
BH09@10-12'	2209438-09	Soil	09/21/22 13:00	09/21/22 16:40
BH10@4'	2209438-10	Soil	09/21/22 13:30	09/21/22 16:40
BH10@10-12'	2209438-11	Soil	09/21/22 13:40	09/21/22 16:40

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

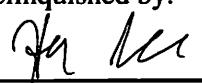
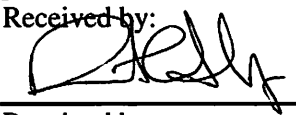
2209438.1

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

Page 1 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Erica Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 303-827-1511 Project Name: Carpio A26-05 FAC
Sampler Name: Hunter Merlo Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Metals - 915		pH, EC, SAR by saturated paste
1	BH06@4'	9/21/22	1010	3			X			X			X	X	X	X	X		X		
2	BH06@10-12'		1020																		
3	BH07@4'		1040																		
4	BH07@6-8'		1050																		
5	BH07@10-12'		1100																		
6	BH08@2-4'		1210																		
7	BH08@10-12'		1230																		
8	BH09@4'		1250																		
9	BH09@10-12'	✓	1300	✓			✓			✓			✓	✓	✓	✓	✓		✓		
10																					

Relinquished by: 	Date/Time: 9/21/22 1640	Received by: Tasman's Lock Box Summit	Date/Time: 9/21/22 1640	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____	Notes:
Relinquished by: Tasman's Lock Box Summit	Date/Time: 9/21/22 1640	Received by: 	Date/Time: 9/21/22 1640	Sample Integrity: Temperature Upon Receipt: 6.3 Samples Intact: Yes No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Summit Scientific

S₂


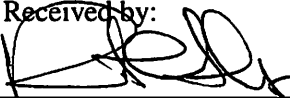
2209438.2

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

Page 2 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Erica Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 303-827-1511 Project Name: Carpio AZG-05 FAC
Sampler Name: Hunter Merlo Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Net L _s - 915		pH, EC, SAR by saturated paste
1	BH10@4'	9/21/22	1330	3			X			X			X	X	X	X	X		X		
2	BH10@10-12'	9/21/22	1340	3			X			X			X	X	X	X	X		X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 9/21/22 1640	Received by: Tasman's Lock Box Summit	Date/Time: 9/21/22 1640	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box Summit	Date/Time: 9/21/22 1640	Received by: 	Date/Time: 9/21/22 1640	Sample Integrity: Temperature Upon Receipt: 6.3	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

S₂2/2
Sample Receipt Checklist

S2 Work Order# 2209438

Client: NbultasmanClient Project ID: Carpio A26005 FACShipped 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)

6.3

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"/>	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

9-21-22 21:00
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:
10/05/22 12:55

BH06@4'
2209438-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 10:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		126 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

10/05/22 12:55

BH06@4'
2209438-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		76.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.234	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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:
10/05/22 12:55

BH06@4'
2209438-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.20	0.215	mg/kg dry	1	BF10761	09/29/22	10/04/22	EPA 6020B
Barium	44.1	0.429	"	"	"	"	"	"
Cadmium	ND	0.215	"	"	"	"	"	"
Copper	6.15	0.429	"	"	"	"	"	"
Lead	6.18	0.215	"	"	"	"	"	"
Nickel	6.15	0.429	"	"	"	"	"	"
Selenium	0.899	0.279	"	"	"	"	"	"
Silver	ND	0.0215	"	"	"	"	"	"
Zinc	26.9	0.429	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	380	0.0537	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	101	0.0537	"	"	"	"	"	"	
Sodium	119	0.0537	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.40	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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:
10/05/22 12:55

BH06@4'
2209438-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.2		%	1	BF10726	09/28/22	09/30/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.51	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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:
10/05/22 12:55

BH06@10-12'
2209438-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		147 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH06@10-12'
2209438-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		79.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.132	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 10:20**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH06@10-12'
2209438-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.07	0.261	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	93.2	0.522	"	"	"	"	"	"
Cadmium	ND	0.261	"	"	"	"	"	"
Copper	9.86	0.522	"	"	"	"	"	"
Lead	8.27	0.261	"	"	"	"	"	"
Nickel	10.4	0.522	"	"	"	"	"	"
Selenium	1.36	0.340	"	"	"	"	"	"
Silver	0.0372	0.0261	"	"	"	"	"	"
Zinc	46.0	0.522	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	194	0.0653	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	85.2	0.0653	"	"	"	"	"	"	
Sodium	103	0.0653	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.55	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 10:20**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH06@10-12'
2209438-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	76.6	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.10	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.65		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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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:
10/05/22 12:55

BH07@4'
2209438-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		145 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@4'
2209438-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		45.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.738	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 10:40**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@4'
2209438-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.04	0.213	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	61.3	0.427	"	"	"	"	"	"
Cadmium	ND	0.213	"	"	"	"	"	"
Copper	7.00	0.427	"	"	"	"	"	"
Lead	6.35	0.213	"	"	"	"	"	"
Nickel	7.66	0.427	"	"	"	"	"	"
Selenium	0.928	0.277	"	"	"	"	"	"
Silver	0.0346	0.0213	"	"	"	"	"	"
Zinc	31.2	0.427	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	384	0.0533	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	160	0.0533	"	"	"	"	"	"	
Sodium	182	0.0533	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.97	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 10:40**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@4'
2209438-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	93.8	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.52	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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:
10/05/22 12:55

BH07@6-8'
2209438-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		149 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

10/05/22 12:55

BH07@6-8'
2209438-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		47.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.155	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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:
10/05/22 12:55

BH07@6-8'
2209438-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.52	0.248	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	58.5	0.497	"	"	"	"	"	"
Cadmium	ND	0.248	"	"	"	"	"	"
Copper	7.24	0.497	"	"	"	"	"	"
Lead	7.15	0.248	"	"	"	"	"	"
Nickel	8.10	0.497	"	"	"	"	"	"
Selenium	0.960	0.323	"	"	"	"	"	"
Silver	0.0281	0.0248	"	"	"	"	"	"
Zinc	34.7	0.497	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	505	0.0621	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	142	0.0621	"	"	"	"	"	"	
Sodium	112	0.0621	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.13	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 10:50**

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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@6-8'
2209438-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.6	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.85	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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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:
10/05/22 12:55

BH07@10-12'
2209438-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		144 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@10-12'
2209438-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		41.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.104	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 11:00**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH07@10-12'
2209438-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.34	0.249	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	41.7	0.498	"	"	"	"	"	"
Cadmium	ND	0.249	"	"	"	"	"	"
Copper	7.06	0.498	"	"	"	"	"	"
Lead	6.71	0.249	"	"	"	"	"	"
Nickel	7.19	0.498	"	"	"	"	"	"
Selenium	0.993	0.324	"	"	"	"	"	"
Silver	ND	0.0249	"	"	"	"	"	"
Zinc	34.3	0.498	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	188	0.0623	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	74.4	0.0623	"	"	"	"	"	"	
Sodium	91.9	0.0623	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.44	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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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:
10/05/22 12:55

BH07@10-12'
2209438-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.3		%	1	BF10726	09/28/22	09/30/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.02	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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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:
10/05/22 12:55

BH08@2-4'
2209438-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	0.031	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0085	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.024	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.067	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.011	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		147 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH08@2-4'
2209438-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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	0.0606	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0627	0.00500	"	"	"	"	"	"	

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		50.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.396	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 12:10**

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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH08@2-4'
2209438-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.12	0.240	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	65.0	0.480	"	"	"	"	"	"
Cadmium	ND	0.240	"	"	"	"	"	"
Copper	9.85	0.480	"	"	"	"	"	"
Lead	8.75	0.240	"	"	"	"	"	"
Nickel	6.66	0.480	"	"	"	"	"	"
Selenium	0.893	0.312	"	"	"	"	"	"
Silver	0.0317	0.0240	"	"	"	"	"	"
Zinc	34.8	0.480	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	418	0.0601	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	56.5	0.0601	"	"	"	"	"	"	
Sodium	264	0.0601	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.22	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 12:10**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH08@2-4'
2209438-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.3	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.78	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.38		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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:
10/05/22 12:55

BH08@10-12'
2209438-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		144 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH08@10-12'
2209438-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		73.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.125	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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:
10/05/22 12:55

BH08@10-12'
2209438-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.10	0.260	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	63.1	0.520	"	"	"	"	"	"
Cadmium	ND	0.260	"	"	"	"	"	"
Copper	7.23	0.520	"	"	"	"	"	"
Lead	6.88	0.260	"	"	"	"	"	"
Nickel	8.00	0.520	"	"	"	"	"	"
Selenium	1.02	0.338	"	"	"	"	"	"
Silver	0.0313	0.0260	"	"	"	"	"	"
Zinc	35.5	0.520	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	218	0.0650	mg/L dry	1	BF10729	09/28/22	09/29/22	EPA 6020B	
Magnesium	66.1	0.0650	"	"	"	"	"	"	
Sodium	82.8	0.0650	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.26	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 12:30**

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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH08@10-12'
2209438-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	76.9	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.96	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.70		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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:
10/05/22 12:55

BH09@4'
2209438-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		135 %	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@4'
2209438-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		80.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		59.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.128	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 12:50**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@4'
2209438-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.74	0.239	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	42.3	0.478	"	"	"	"	"	"
Cadmium	ND	0.239	"	"	"	"	"	"
Copper	6.66	0.478	"	"	"	"	"	"
Lead	7.08	0.239	"	"	"	"	"	"
Nickel	7.51	0.478	"	"	"	"	"	"
Selenium	0.954	0.311	"	"	"	"	"	"
Silver	0.0260	0.0239	"	"	"	"	"	"
Zinc	33.6	0.478	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	381	0.0598	mg/L dry	1	BF10729	09/28/22	09/30/22	EPA 6020B	
Magnesium	131	0.0598	"	"	"	"	"	"	
Sodium	108	0.0598	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.22	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 12:50**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@4'
2209438-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.6	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.52	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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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:
10/05/22 12:55

BH09@10-12'
2209438-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		98.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		140 %	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@10-12'
2209438-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		79.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		60.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.156	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 13:00**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@10-12'
2209438-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	11.4	0.268	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	137	0.535	"	"	"	"	"	"
Cadmium	ND	0.268	"	"	"	"	"	"
Copper	15.0	0.535	"	"	"	"	"	"
Lead	17.5	0.268	"	"	"	"	"	"
Nickel	16.7	0.535	"	"	"	"	"	"
Selenium	1.60	0.348	"	"	"	"	"	"
Silver	0.0864	0.0268	"	"	"	"	"	"
Zinc	77.0	0.535	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	167	0.0669	mg/L dry	1	BF10729	09/28/22	09/30/22	EPA 6020B	
Magnesium	64.3	0.0669	"	"	"	"	"	"	
Sodium	86.4	0.0669	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.44	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 13:00**

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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH09@10-12'
2209438-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	74.7	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.76	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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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:
10/05/22 12:55

BH10@4'
2209438-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		131 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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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:
10/05/22 12:55

BH10@4'
2209438-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.334	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
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Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@4'
2209438-10 (Soil)

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Total Metals by EPA 6020B

Arsenic	5.74	0.222	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	44.9	0.443	"	"	"	"	"	"
Cadmium	ND	0.222	"	"	"	"	"	"
Copper	8.41	0.443	"	"	"	"	"	"
Lead	8.00	0.222	"	"	"	"	"	"
Nickel	9.44	0.443	"	"	"	"	"	"
Selenium	1.01	0.288	"	"	"	"	"	"
Silver	0.0465	0.0222	"	"	"	"	"	"
Zinc	37.3	0.443	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	386	0.0554	mg/L dry	1	BF10729	09/28/22	09/30/22	EPA 6020B	
Magnesium	136	0.0554	"	"	"	"	"	"	
Sodium	163	0.0554	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.82	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@4'
2209438-10 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	90.2	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.09	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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Project: Noble - Carpio A26-05 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@10-12'
2209438-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10587	09/22/22	09/23/22	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: **09/21/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		99.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10590	09/22/22	09/25/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		140 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
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Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@10-12'
2209438-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10641	09/26/22	09/27/22	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: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		80.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.136	0.0100	mg/L	1	BF10717	09/28/22	09/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@10-12'
2209438-11 (Soil)

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Total Metals by EPA 6020B

Arsenic	4.08	0.248	mg/kg dry	1	BF10761	09/29/22	10/05/22	EPA 6020B
Barium	46.3	0.496	"	"	"	"	"	"
Cadmium	ND	0.248	"	"	"	"	"	"
Copper	7.61	0.496	"	"	"	"	"	"
Lead	7.10	0.248	"	"	"	"	"	"
Nickel	8.32	0.496	"	"	"	"	"	"
Selenium	0.968	0.322	"	"	"	"	"	"
Silver	0.0313	0.0248	"	"	"	"	"	"
Zinc	39.2	0.496	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0070	10/04/22	10/04/22	EPA 7196A	

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

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	184	0.0620	mg/L dry	1	BF10729	09/28/22	09/30/22	EPA 6020B	
Magnesium	64.1	0.0620	"	"	"	"	"	"	
Sodium	78.7	0.0620	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.27	0.00100	units	1	BF10805	09/30/22	09/30/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

BH10@10-12'
2209438-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.7	%	1	BF10726	09/28/22	09/30/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.99	0.0100	mmhos/cm	1	BF10743	09/28/22	09/30/22	EPA 120.1	

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

Date Sampled: **09/21/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BF10744	09/28/22	09/30/22	EPA 9045D	

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Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

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 BFI0587 - EPA 5030 Soil MS

Blank (BFI0587-BLK1)

Prepared: 09/22/22 Analyzed: 09/23/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0423		"	0.0400		106	50-150			

LCS (BFI0587-BS1)

Prepared: 09/22/22 Analyzed: 09/23/22

Benzene	0.128	0.0020	mg/kg	0.125		102	70-130			
Toluene	0.140	0.0050	"	0.125		112	70-130			
Ethylbenzene	0.152	0.0050	"	0.125		122	70-130			
m,p-Xylene	0.301	0.010	"	0.250		120	70-130			
o-Xylene	0.137	0.0050	"	0.125		110	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125		124	70-130			
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125		125	70-130			
Naphthalene	0.122	0.0038	"	0.125		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

Matrix Spike (BFI0587-MS1)

Source: 2209414-01

Prepared: 09/22/22 Analyzed: 09/23/22

Benzene	0.128	0.0020	mg/kg	0.125	ND	102	70-130			
Toluene	0.141	0.0050	"	0.125	ND	113	70-130			
Ethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130			
m,p-Xylene	0.315	0.010	"	0.250	ND	126	70-130			
o-Xylene	0.142	0.0050	"	0.125	ND	114	70-130			
1,2,4-Trimethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130			
1,3,5-Trimethylbenzene	0.133	0.0050	"	0.125	ND	107	70-130			
Naphthalene	0.133	0.0038	"	0.125	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	50-150			

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Project: Noble - Carpio A26-05 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

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 BFI0587 - EPA 5030 Soil MS

Matrix Spike Dup (BFI0587-MSD1)

Source: 2209414-01

Prepared: 09/22/22 Analyzed: 09/23/22

Benzene	0.121	0.0020	mg/kg	0.125	ND	96.7	70-130	5.31	30	
Toluene	0.135	0.0050	"	0.125	ND	108	70-130	4.65	30	
Ethylbenzene	0.149	0.0050	"	0.125	ND	119	70-130	7.11	30	
m,p-Xylene	0.293	0.010	"	0.250	ND	117	70-130	7.09	30	
o-Xylene	0.135	0.0050	"	0.125	ND	108	70-130	5.46	30	
1,2,4-Trimethylbenzene	0.150	0.0050	"	0.125	ND	120	70-130	5.50	30	
1,3,5-Trimethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130	14.5	30	
Naphthalene	0.132	0.0038	"	0.125	ND	105	70-130	0.931	30	
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

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:
10/05/22 12:55

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFI0590 - EPA 3550A

Blank (BFI0590-BLK1)

Prepared: 09/22/22 Analyzed: 09/25/22

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

LCS (BFI0590-BS1)

Prepared: 09/22/22 Analyzed: 09/25/22

C10-C28 (DRO)	453	50	mg/kg	500	90.7	70-130
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Matrix Spike (BFI0590-MS1)

Source: 2209414-01

Prepared: 09/22/22 Analyzed: 09/25/22

C10-C28 (DRO)	464	50	mg/kg	500	13.4	90.0	70-130
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Matrix Spike Dup (BFI0590-MSD1)

Source: 2209414-01

Prepared: 09/22/22 Analyzed: 09/25/22

C10-C28 (DRO)	541	50	mg/kg	500	13.4	106	70-130	15.5	20
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05 FAC
Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFI0641 - EPA 5030 Soil MS

Blank (BFI0641-BLK1)

Prepared: 09/26/22 Analyzed: 09/27/22

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	0.0393		"	0.0333		118	40-150			
Surrogate: Fluoranthene-d10	0.0332		"	0.0333		99.6	40-150			

LCS (BFI0641-BS1)

Prepared: 09/26/22 Analyzed: 09/27/22

Acenaphthene	0.0259	0.00500	mg/kg	0.0333		77.7	31-137			
Anthracene	0.0310	0.00500	"	0.0333		92.9	30-120			
Benzo (a) anthracene	0.0292	0.00500	"	0.0333		87.7	30-120			
Benzo (a) pyrene	0.0333	0.00500	"	0.0333		100	30-120			
Benzo (b) fluoranthene	0.0352	0.00500	"	0.0333		106	30-120			
Benzo (k) fluoranthene	0.0347	0.00500	"	0.0333		104	30-120			
Chrysene	0.0230	0.00500	"	0.0333		69.1	30-120			
Dibenz (a,h) anthracene	0.0318	0.00500	"	0.0333		95.5	30-120			
Fluoranthene	0.0347	0.00500	"	0.0333		104	30-120			
Fluorene	0.0146	0.00500	"	0.0333		43.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0338	0.00500	"	0.0333		101	30-120			
Pyrene	0.0298	0.00500	"	0.0333		89.4	35-142			
1-Methylnaphthalene	0.0345	0.00500	"	0.0333		103	35-142			
2-Methylnaphthalene	0.0328	0.00500	"	0.0333		98.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0347		"	0.0333		104	40-150			
Surrogate: Fluoranthene-d10	0.0409		"	0.0333		123	40-150			

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:
10/05/22 12:55

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFI0641 - EPA 5030 Soil MS

Matrix Spike (BFI0641-MS1)

Source: 2209438-01

Prepared: 09/26/22 Analyzed: 09/27/22

Acenaphthene	0.0170	0.00500	mg/kg	0.0333	ND	50.8	31-137		
Anthracene	0.0202	0.00500	"	0.0333	ND	60.5	30-120		
Benzo (a) anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120		
Benzo (a) pyrene	0.0249	0.00500	"	0.0333	ND	74.6	30-120		
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.3	30-120		
Benzo (k) fluoranthene	0.0260	0.00500	"	0.0333	ND	78.1	30-120		
Chrysene	0.0174	0.00500	"	0.0333	ND	52.3	30-120		
Dibenz (a,h) anthracene	0.0231	0.00500	"	0.0333	ND	69.4	30-120		
Fluoranthene	0.0226	0.00500	"	0.0333	ND	67.7	30-120		
Fluorene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0248	0.00500	"	0.0333	ND	74.5	30-120		
Pyrene	0.0208	0.00500	"	0.0333	ND	62.4	35-142		
1-Methylnaphthalene	0.0211	0.00500	"	0.0333	ND	63.2	15-130		
2-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.7	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0220		"	0.0333		66.0	40-150		
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.2	40-150		

Matrix Spike Dup (BFI0641-MSD1)

Source: 2209438-01

Prepared: 09/26/22 Analyzed: 09/27/22

Acenaphthene	0.0181	0.00500	mg/kg	0.0333	ND	54.2	31-137	6.38	30
Anthracene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	0.392	30
Benzo (a) anthracene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	0.135	30
Benzo (a) pyrene	0.0248	0.00500	"	0.0333	ND	74.4	30-120	0.313	30
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	ND	77.8	30-120	1.94	30
Benzo (k) fluoranthene	0.0252	0.00500	"	0.0333	ND	75.6	30-120	3.28	30
Chrysene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	0.307	30
Dibenz (a,h) anthracene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	1.90	30
Fluoranthene	0.0234	0.00500	"	0.0333	ND	70.3	30-120	3.70	30
Fluorene	0.0184	0.00500	"	0.0333	ND	55.3	30-120	5.28	30
Indeno (1,2,3-cd) pyrene	0.0243	0.00500	"	0.0333	ND	73.0	30-120	2.06	30
Pyrene	0.0215	0.00500	"	0.0333	ND	64.5	35-142	3.25	30
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.6	15-130	2.15	50
2-Methylnaphthalene	0.0211	0.00500	"	0.0333	ND	63.3	15-130	4.16	50
Surrogate: 2-Methylnaphthalene-d10	0.0228		"	0.0333		68.4	40-150		
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		80.9	40-150		

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:
10/05/22 12:55

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

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

Batch BFI0717 - EPA 3050B

Blank (BFI0717-BLK1)

Prepared: 09/28/22 Analyzed: 09/30/22

Boron ND 0.0100 mg/L

LCS (BFI0717-BS1)

Prepared: 09/28/22 Analyzed: 09/30/22

Boron 4.74 0.0100 mg/L 5.00 94.8 80-120

Duplicate (BFI0717-DUP1)

Source: 2209411-01

Prepared: 09/28/22 Analyzed: 09/30/22

Boron 0.215 0.0100 mg/L 0.219 1.93 20

Matrix Spike (BFI0717-MS1)

Source: 2209411-01

Prepared: 09/28/22 Analyzed: 09/30/22

Boron 4.72 0.0100 mg/L 5.00 0.219 90.0 75-125

Matrix Spike Dup (BFI0717-MSD1)

Source: 2209411-01

Prepared: 09/28/22 Analyzed: 09/30/22

Boron 4.76 0.0100 mg/L 5.00 0.219 90.9 75-125 0.934 25

Summit Scientific

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



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BFI0761 - EPA 3050B

Blank (BFI0761-BLK1)

Prepared: 09/29/22 Analyzed: 10/04/22

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

LCS (BFI0761-BS1)

Prepared: 09/29/22 Analyzed: 10/04/22

Arsenic	38.8	0.200	mg/kg wet	40.0	97.1	80-120
Barium	36.6	0.400	"	40.0	91.5	80-120
Cadmium	1.81	0.200	"	2.00	90.5	80-120
Copper	37.4	0.400	"	40.0	93.6	80-120
Lead	18.2	0.200	"	20.0	90.9	80-120
Nickel	36.1	0.400	"	40.0	90.2	80-120
Selenium	4.19	0.260	"	4.00	105	80-120
Silver	1.78	0.0200	"	2.00	89.2	80-120
Zinc	38.7	0.400	"	40.0	96.8	80-120

Duplicate (BFI0761-DUP1)

Source: 2209438-01

Prepared: 09/29/22 Analyzed: 10/04/22

Arsenic	4.22	0.215	mg/kg dry	4.20	0.480	20
Barium	44.4	0.429	"	44.1	0.694	20
Cadmium	0.148	0.215	"	0.147	0.752	20
Copper	6.33	0.429	"	6.15	2.91	20
Lead	6.24	0.215	"	6.18	0.953	20
Nickel	6.08	0.429	"	6.15	1.07	20
Selenium	0.853	0.279	"	0.899	5.26	20
Silver	0.0200	0.0215	"	0.0205	2.36	20
Zinc	27.4	0.429	"	26.9	1.81	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:
10/05/22 12:55

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFI0761 - EPA 3050B

Matrix Spike (BFI0761-MS1)		Source: 2209438-01			Prepared: 09/29/22 Analyzed: 10/04/22					
Arsenic	48.5	0.215	mg/kg dry	42.9	4.20	103	75-125			
Barium	89.1	0.429	"	42.9	44.1	105	75-125			
Cadmium	2.41	0.215	"	2.15	0.147	105	75-125			
Copper	47.4	0.429	"	42.9	6.15	96.1	75-125			
Lead	26.9	0.215	"	21.5	6.18	96.3	75-125			
Nickel	46.4	0.429	"	42.9	6.15	93.8	75-125			
Selenium	5.15	0.279	"	4.29	0.899	99.0	75-125			
Silver	2.20	0.0215	"	2.15	0.0205	102	75-125			
Zinc	69.8	0.429	"	42.9	26.9	100	75-125			

Matrix Spike Dup (BFI0761-MSD1)		Source: 2209438-01			Prepared: 09/29/22 Analyzed: 10/04/22					
Arsenic	49.4	0.215	mg/kg dry	42.9	4.20	105	75-125	1.73	25	
Barium	87.7	0.429	"	42.9	44.1	102	75-125	1.64	25	
Cadmium	2.33	0.215	"	2.15	0.147	102	75-125	3.32	25	
Copper	48.3	0.429	"	42.9	6.15	98.1	75-125	1.75	25	
Lead	26.4	0.215	"	21.5	6.18	94.4	75-125	1.57	25	
Nickel	47.4	0.429	"	42.9	6.15	96.1	75-125	2.15	25	
Selenium	5.01	0.279	"	4.29	0.899	95.8	75-125	2.72	25	
Silver	2.15	0.0215	"	2.15	0.0205	99.3	75-125	2.21	25	
Zinc	71.1	0.429	"	42.9	26.9	103	75-125	1.87	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:
10/05/22 12:55

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFJ0070 - 3060A Mod

Blank (BFJ0070-BLK1)

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFJ0070-BS1)

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 23.2 0.30 mg/kg wet 25.0 92.6 80-120

Duplicate (BFJ0070-DUP1)

Source: 2209419-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFJ0070-MS1)

Source: 2209419-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 29.6 0.30 mg/kg dry 28.9 ND 102 75-125

Matrix Spike Dup (BFJ0070-MSD1)

Source: 2209419-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 34.0 0.30 mg/kg dry 28.9 ND 118 75-125 14.0 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:
10/05/22 12:55

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

Summit Scientific

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

Batch BFI0729 - General Preparation

Blank (BFI0729-BLK1)

Prepared: 09/28/22 Analyzed: 09/29/22

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

LCS (BFI0729-BS1)

Prepared: 09/28/22 Analyzed: 09/29/22

Calcium	6.34	0.0500	mg/L wet	5.00	127	70-130
Magnesium	6.10	0.0500	"	5.00	122	70-130
Sodium	5.91	0.0500	"	5.00	118	70-130

Summit Scientific

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



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

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

Summit Scientific

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

Batch BFI0726 - General Preparation

Duplicate (BFI0726-DUP1)

Source: 2209414-01

Prepared: 09/28/22 Analyzed: 09/30/22

% Solids	93.7	%	92.1	1.70	20
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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:
10/05/22 12:55

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

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

Batch BFI0743 - General Preparation

Blank (BFI0743-BLK1)

Prepared: 09/28/22 Analyzed: 09/30/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFI0743-BS1)

Prepared: 09/28/22 Analyzed: 09/30/22

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BFI0743-DUP1)

Source: 2209323-01

Prepared: 09/28/22 Analyzed: 09/30/22

Specific Conductance (EC) 0.394 0.0100 mmhos/cm 0.400 1.48 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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/05/22 12:55

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

Summit Scientific

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

Batch BFI0744 - General Preparation

LCS (BFI0744-BS1)

Prepared: 09/28/22 Analyzed: 09/30/22

pH	9.00	pH Units	9.18	98.0	95-105
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Duplicate (BFI0744-DUP1)

Source: 2209323-01

Prepared: 09/28/22 Analyzed: 09/30/22

pH	7.05	pH Units	7.02	0.426	20
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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:
10/05/22 12:55

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.

2212191.1

Page 1 of 2

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	As, EC, Pb	Boron - HWS	HOLD	Arsenic & Barium	Lead & Selenium			
1	BH11@4'	12-8-22	1010	1						X							X						
2	BH11@10'		1040	1													X						
3	BH12@4'		1105	1													X						
4	BH12@10'		1130	1													X						
5	B601@4'		1240	1													X			X	X		
6	B601@10'		1300	1													X			X	X		
7	B602@4'		1305	1													X			X	X		
8	B602@10'		1315	1													X			X	X		
9	B603@4'		1325	1													X			X	X		
10	B603@10'		1340	1													X			X	X		

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 <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 12822 1722	Received by: 	Date/Time: 12822 1722	Sample Integrity: Temperature Upon Receipt: 7.9 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Summit Scientific

S₂

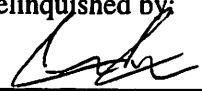

2212191.2

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

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	EC, EC ₂	Boron - HWS	HOLD	Arsenic & Cadmium	Lead & Selenium	pH, EC, SAR by saturated paste
1	B604@4'	12-8-22	1350	1						X						X			X	X	
2	B604@10'	↓	1410	↓						↓						X			X	X	
3	B605@4'	↓	1415	↓						↓						X			X	X	
4	B605@10'	↓	1425	↓						↓						X			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 — 72 hours 24 hours — Standard <input checked="" type="checkbox"/> 48 hours —	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 12-8-22 1722	Received by: 	Date/Time: 12-8-22 1722	Sample Integrity: Temperature Upon Receipt: 7.9	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes No	

S₂

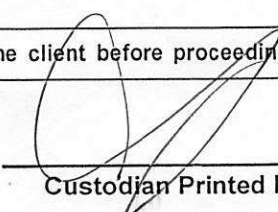
2/2
Sample Receipt Checklist

S2 Work Order# 2212191Client: Noble/Tasman Client Project ID: Carpio AZG-05 FACShipped 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) 7.9Thermometer # 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"/>	curtice
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

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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

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch 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 Level	Source		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

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	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

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

August 08, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

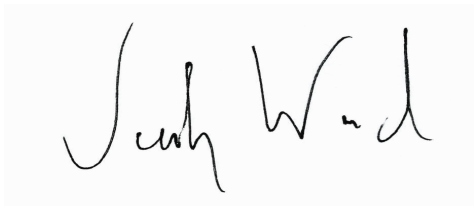
Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order #2307567

Enclosed are the results of analyses for samples received by Summit Scientific on 07/28/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



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

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

Reported:
08/08/23 15:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG06@5'	2307567-01	Soil	07/28/23 11:05	07/28/23 16:30
BG06@10'	2307567-02	Soil	07/28/23 11:10	07/28/23 16:30
BG07@5'	2307567-03	Soil	07/28/23 10:39	07/28/23 16:30
BG07@10'	2307567-04	Soil	07/28/23 10:45	07/28/23 16:30
BG08@5'	2307567-05	Soil	07/28/23 10:20	07/28/23 16:30
BG08@10'	2307567-06	Soil	07/28/23 10:25	07/28/23 16:30
BG09@5'	2307567-07	Soil	07/28/23 09:17	07/28/23 16:30
BG09@10'	2307567-08	Soil	07/28/23 09:37	07/28/23 16:30
BG10@5'	2307567-09	Soil	07/28/23 09:04	07/28/23 16:30
BG10@10'	2307567-10	Soil	07/28/23 09:10	07/28/23 16:30

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

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

Lab ID	Page 1 of 1
2307567	

Client: <u>Tasman/Noble</u>		Send Data To:		Send Invoice To:	
Address: <u>6855 W 119th Ave</u>		Project Manager: <u>Jake Whritenour</u>		Company:	
City/State/Zip: <u>Broomfield, CO 80020</u>		E-Mail: <u>jwhritenour@tasman-geo.com</u>		Project Name/Location:	
Phone: <u>602-881-5716</u>		Project Name: <u>Carpio Aze-05 FAC</u>		AFE#:	
Sampler Name: <u>Sarah Quattrochi</u>		Project Number:		PO/Billing Codes:	
				Contact:	

					Preservative				Matrix				Analysis Requested						Special Instructions							
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	PAH-915	VOC-915	TPH	EC, SAR, pH	Boron	Metals-915								
1	BG06@5'	7/28/23	1105	2			X			X									X				*Metals 915 = Arsenic, barium, Selenium, lead ONLY			
2	BG06@10'	↓	1110	↓			↓			↓								↓								
3	BG07@5'		1039																							
4	BG07@10'		1045																							
5	BG08@5'		1020																							
6	BG08@10'		1025																							
7	BG09@5'		917																							
8	BG09@10'		937																							
9	BG10@5'		904																							
10	BG10@10'		↓		910	↓					↓			↓											↓	
11																										
12																										
13																										
14																										
15																										

Relinquished by: <u>SQ</u>	Date/Time: <u>7/28/23</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/28/23</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>SZ</u>	Date/Time: <u>7/28/23</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/28/23</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: <u>11.2</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2307567Client: Tasman/Ndile Client Project ID: Carpio A26-05 FACShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

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

Matrix (Check all that apply) Air ☐ Soil ☒ Solid ☐ Water ☐ Other ☐Temp (°C) 11.2Thermometer # 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"/>	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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input type="checkbox"/>	<input checked="" 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

1/28/23
Date/Time



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

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

Reported:
08/08/23 15:15

BG06@5'
2307567-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.37	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	39.5	0.400	"	"	"	"	"	"	
Lead	8.90	0.200	"	"	"	"	"	"	
Selenium	0.336	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	80.2		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG06@10'
2307567-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.48	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	54.4	0.400	"	"	"	"	"	"	
Lead	6.21	0.200	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	77.5		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG07@5'
2307567-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 10:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.25	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	49.7	0.400	"	"	"	"	"	"	
Lead	5.79	0.200	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 10:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.1		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG07@10'
2307567-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.84	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	27.6	0.400	"	"	"	"	"	"	
Lead	11.8	0.200	"	"	"	"	"	"	
Selenium	0.359	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.3		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG08@5'
2307567-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.76	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	43.3	0.400	"	"	"	"	"	"	
Lead	13.7	0.200	"	"	"	"	"	"	
Selenium	0.304	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.6		%	1	BGG1038	07/31/23	07/31/23	Calculation	

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

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

Reported:
08/08/23 15:15

BG08@10'
2307567-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 10:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.40	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	25.1	0.400	"	"	"	"	"	"	
Lead	13.8	0.200	"	"	"	"	"	"	
Selenium	0.197	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 10:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.4		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG09@5'
2307567-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 09:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.12	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	56.8	0.400	"	"	"	"	"	"	
Lead	4.97	0.200	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 09:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	79.3		%	1	BGG1038	07/31/23	07/31/23	Calculation	

Summit Scientific

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

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

Reported:
08/08/23 15:15

BG09@10'
2307567-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 09:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.862	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	115	0.400	"	"	"	"	"	"	
Lead	7.27	0.200	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 09:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	75.2		%	1	BGG1038	07/31/23	07/31/23	Calculation	

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: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
08/08/23 15:15

BG10@5'
2307567-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.27	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	48.3	0.400	"	"	"	"	"	"	
Lead	7.40	0.200	"	"	"	"	"	"	
Selenium	0.232	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 09:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	76.5		%	1	BGG1038	07/31/23	07/31/23	Calculation	

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: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
08/08/23 15:15

BG10@10'
2307567-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/28/23 09:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.51	0.200	mg/kg dry	1	BGG0994	07/31/23	08/04/23	EPA 6020B	
Barium	24.9	0.400	"	"	"	"	"	"	
Lead	14.7	0.200	"	"	"	"	"	"	
Selenium	0.340	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/28/23 09:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	79.4		%	1	BGG1038	07/31/23	07/31/23	Calculation	

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: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
08/08/23 15:15

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BGG0994 - EPA 3050B

Blank (BGG0994-BLK1)

Prepared: 07/31/23 Analyzed: 08/04/23

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

LCS (BGG0994-BS1)

Prepared: 07/31/23 Analyzed: 08/04/23

Arsenic	37.4	0.200	mg/kg wet	40.0	93.5	80-120
Barium	40.4	0.400	"	40.0	101	80-120
Lead	20.6	0.200	"	20.0	103	80-120
Selenium	3.64	0.260	"	4.00	91.0	80-120

Duplicate (BGG0994-DUP1)

Source: 2307565-01

Prepared: 07/31/23 Analyzed: 08/04/23

Arsenic	0.961	0.200	mg/kg dry	1.17	20.0	20	QR-04
Barium	165	0.400	"	246	39.3	20	
Lead	11.8	0.200	"	9.98	17.0	20	
Selenium	ND	0.260	"	ND		20	

Matrix Spike (BGG0994-MS1)

Source: 2307565-01

Prepared: 07/31/23 Analyzed: 08/04/23

Arsenic	9.81	0.200	mg/kg dry	47.5	1.17	18.2	75-125	QM-07
Barium	196	0.400	"	47.5	246	NR	75-125	
Lead	29.1	0.200	"	23.8	9.98	80.3	75-125	QM-07
Selenium	3.81	0.260	"	4.75	ND	80.2	75-125	

Matrix Spike Dup (BGG0994-MSD1)

Source: 2307565-01

Prepared: 07/31/23 Analyzed: 08/04/23

Arsenic	9.77	0.200	mg/kg dry	47.5	1.17	18.1	75-125	0.452	25	QM-07
Barium	222	0.400	"	47.5	246	NR	75-125	12.6	25	QM-07
Lead	32.1	0.200	"	23.8	9.98	92.9	75-125	9.78	25	
Selenium	4.27	0.260	"	4.75	ND	89.9	75-125	11.5	25	

Summit Scientific

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



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

Project: Noble - Carpio A26-05 FAC

Project Number: UWRWE-A1698-ABN

Project Manager: Jacob Whritenour

Reported:
08/08/23 15:15

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

Summit Scientific

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

Batch BGG1038 - General Preparation

Duplicate (BGG1038-DUP1)

Source: 2307564-01

Prepared & Analyzed: 07/31/23

% Solids	95.4	%	95.3	0.116	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 FAC

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

Reported:
08/08/23 15:15

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Sarah Quattrochi

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 6/16/22 - 6/16/22

TOTAL WELL DEPTH (FT. BGS): 13

DEPTH TO WATER (FT. BGS): 2.5

Carpio A26-05 Facility

BORING / WELL ID: BH01

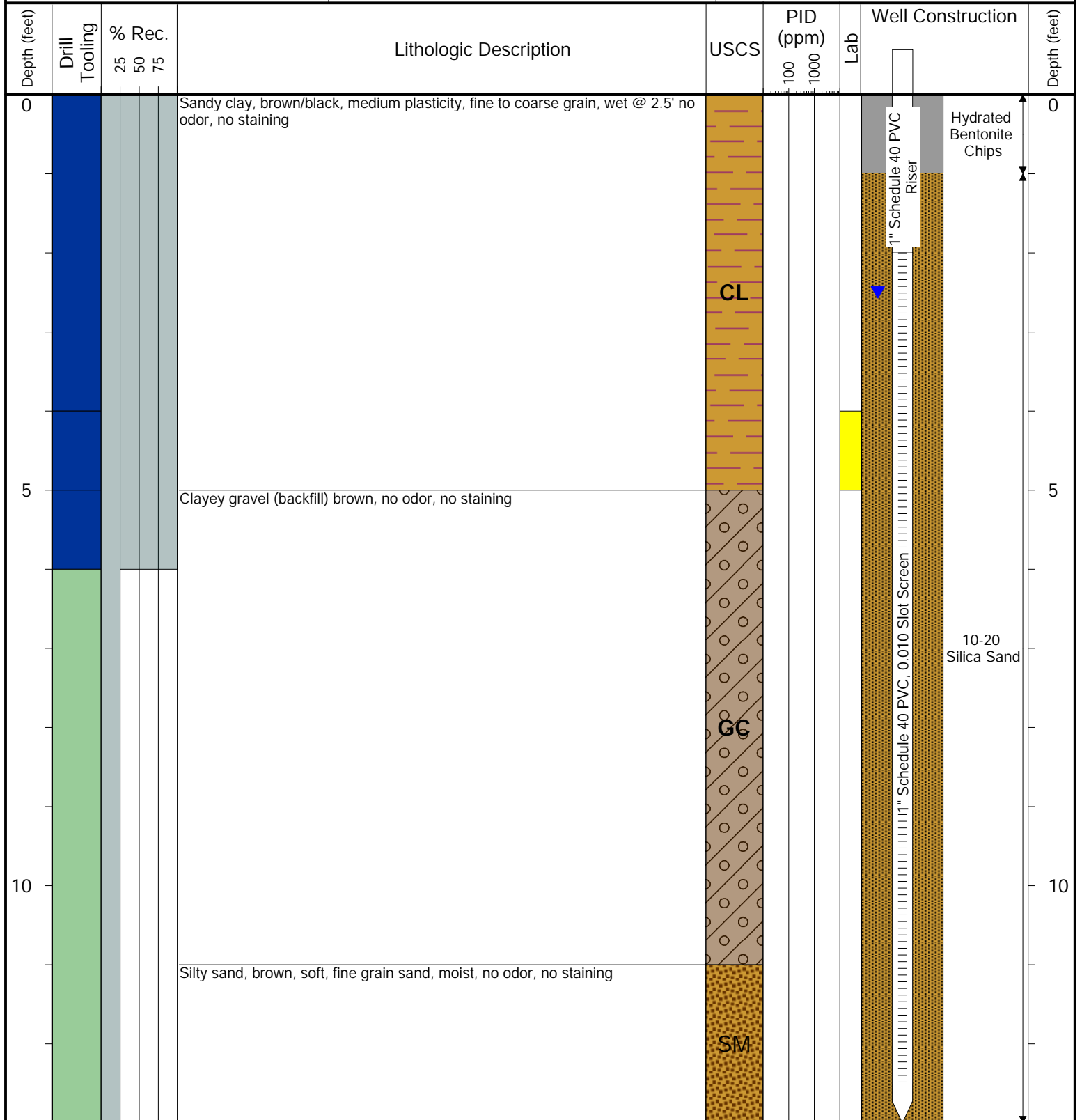
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458764588

LONGITUDE (WGS 84): -104.52647349

CASING ELEVATION (FT. AMSL): 4654.835

GROUND ELEVATION (FT. AMSL): 4654.895



Drilling / Sample Method:

Macro-Core

Solid Stem Auger

Hollow Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Sarah Quattrochi

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 6/16/22 - 6/16/22

TOTAL WELL DEPTH (FT. BGS): 13

DEPTH TO WATER (FT. BGS): 3

Carpio A26-05 Facility

BORING / WELL ID: BH02

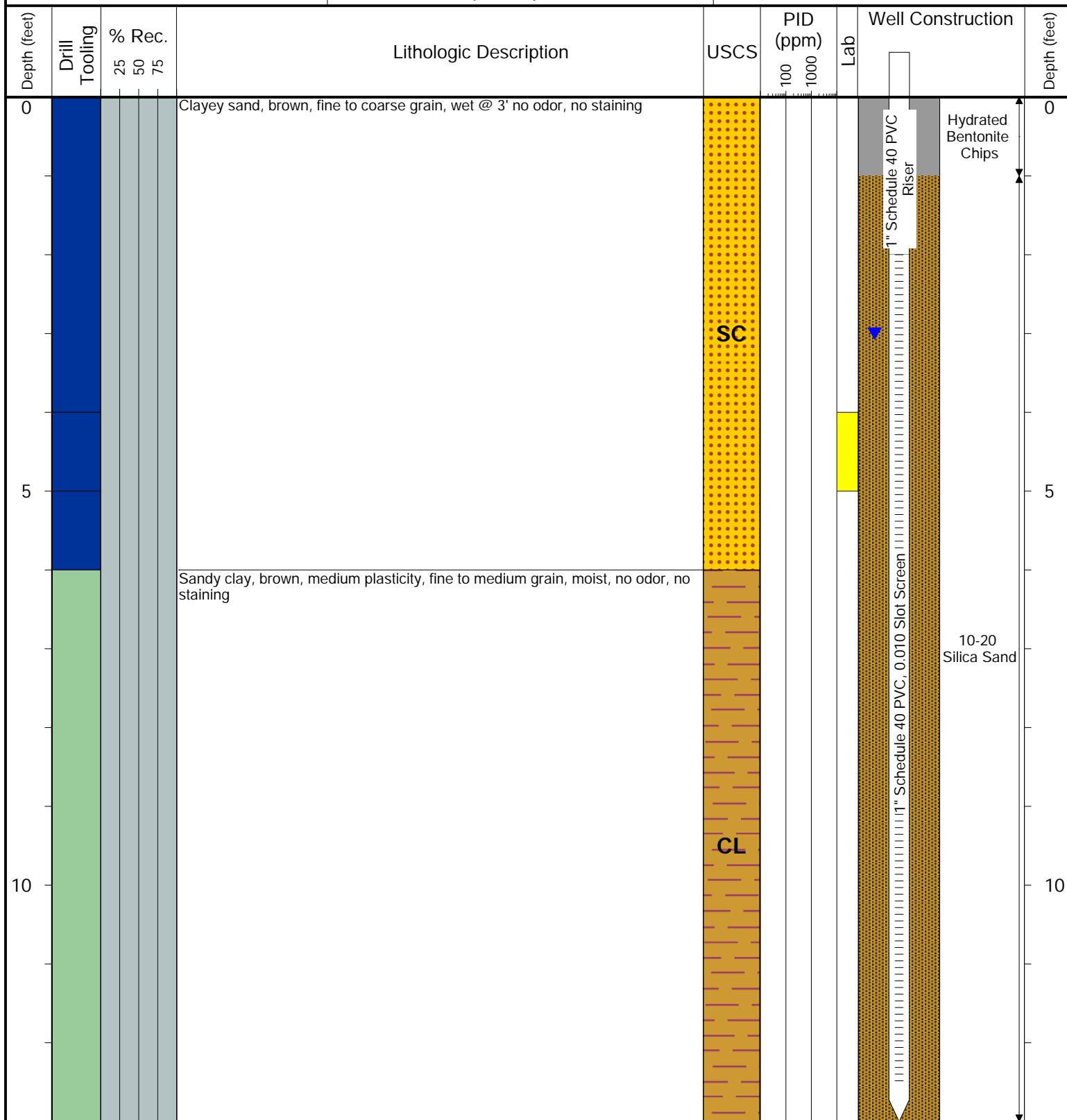
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458829672

LONGITUDE (WGS 84): -104.526479565

CASING ELEVATION (FT. AMSL): 4654.425

GROUND ELEVATION (FT. AMSL): 4654.485



Drilling / Sample Method:

Macro-Core

Solid Stem Auger

Hollow Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Sarah Quattrochi

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 6/16/22 - 6/16/22

TOTAL WELL DEPTH (FT. BGS): 13

DEPTH TO WATER (FT. BGS): 3

Carpio A26-05 Facility

BORING / WELL ID: BH03

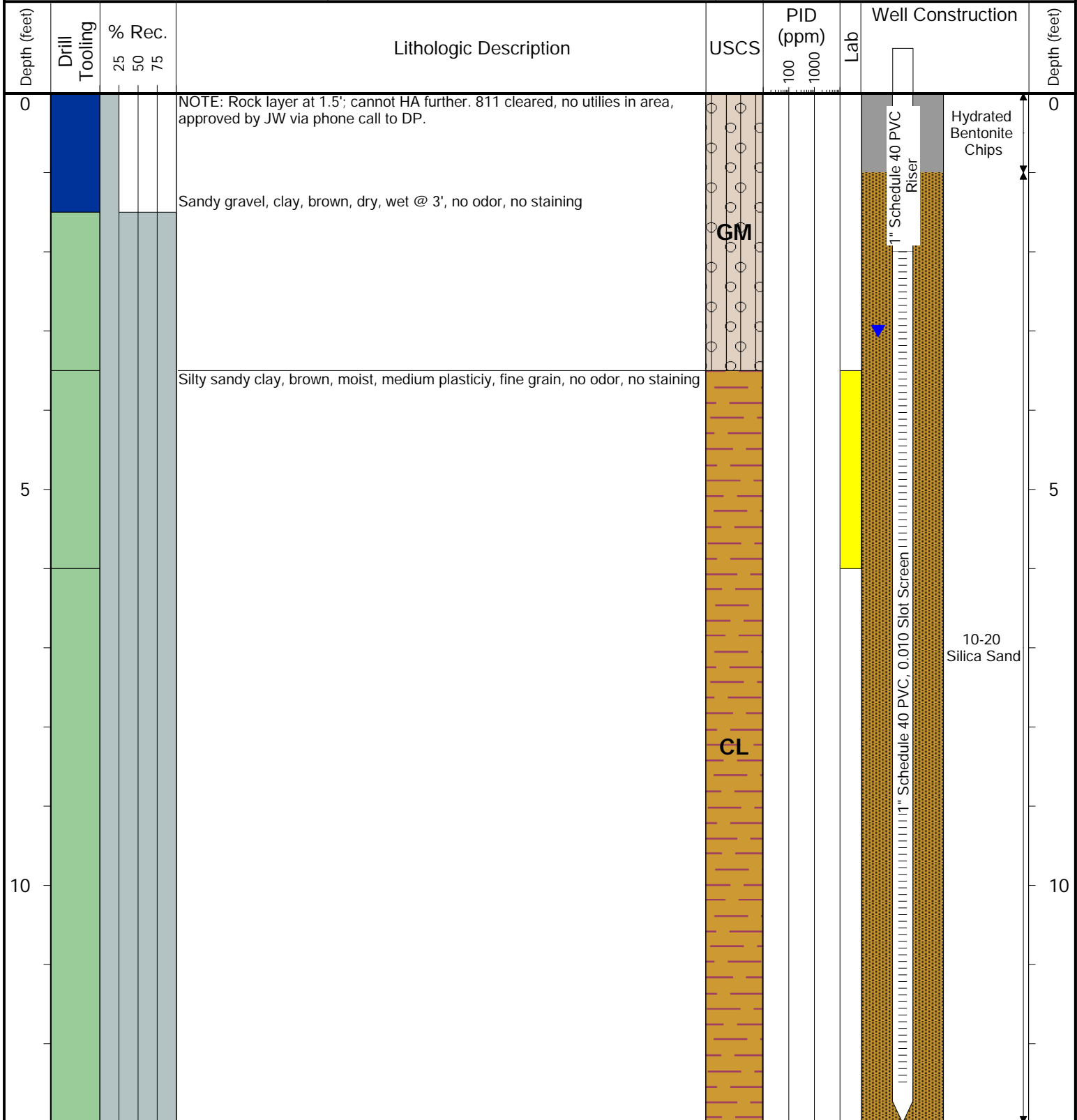
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458768563

LONGITUDE (WGS 84): -104.526372691

CASING ELEVATION (FT. AMSL): 4653.555

GROUND ELEVATION (FT. AMSL): 4653.685



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Sarah Quattrochi

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 6/16/22 - 6/16/22

TOTAL WELL DEPTH (FT. BGS): 13

DEPTH TO WATER (FT. BGS): 3

Carpio A26-05 Facility

BORING / WELL ID: BH04

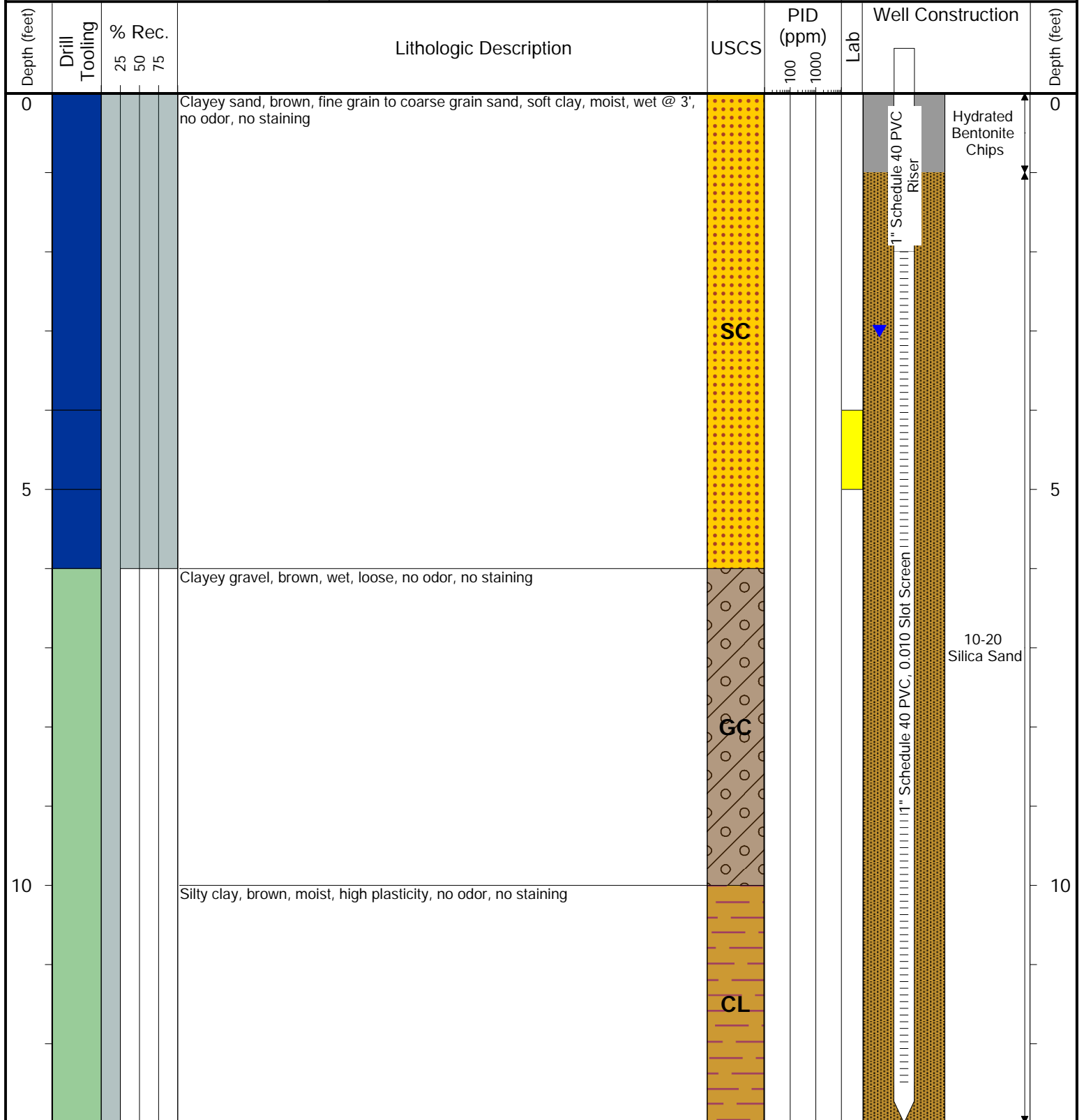
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458710886

LONGITUDE (WGS 84): -104.526478905

CASING ELEVATION (FT. AMSL): 4654.895

GROUND ELEVATION (FT. AMSL): 4654.955



Drilling / Sample Method:

Macro-Core

Solid Stem Auger

Hollow Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Sarah Quattrochi

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 6/16/22 - 6/16/22

TOTAL WELL DEPTH (FT. BGS): 13

DEPTH TO WATER (FT. BGS): 2

Carpio A26-05 Facility

BORING / WELL ID: BH05

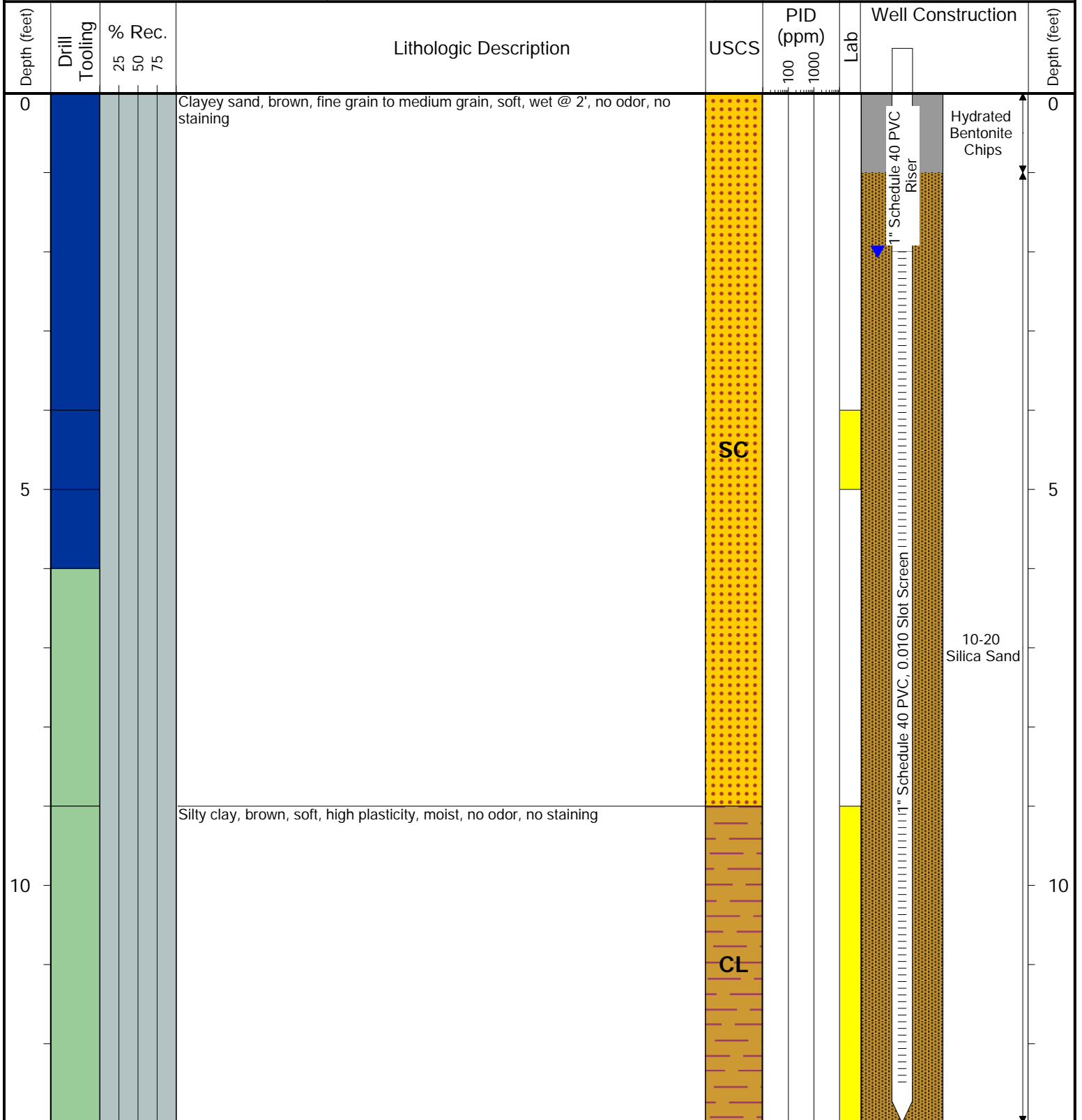
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458767577

LONGITUDE (WGS 84): -104.526576264

CASING ELEVATION (FT. AMSL): 4655.155

GROUND ELEVATION (FT. AMSL): 4655.315



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Hunter Merlo

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 9/21/22 - 9/21/22

TOTAL WELL DEPTH (FT. BGS): 12

DEPTH TO WATER (FT. BGS): 4

Carpio A26-05 Facility

BORING / WELL ID: BH06

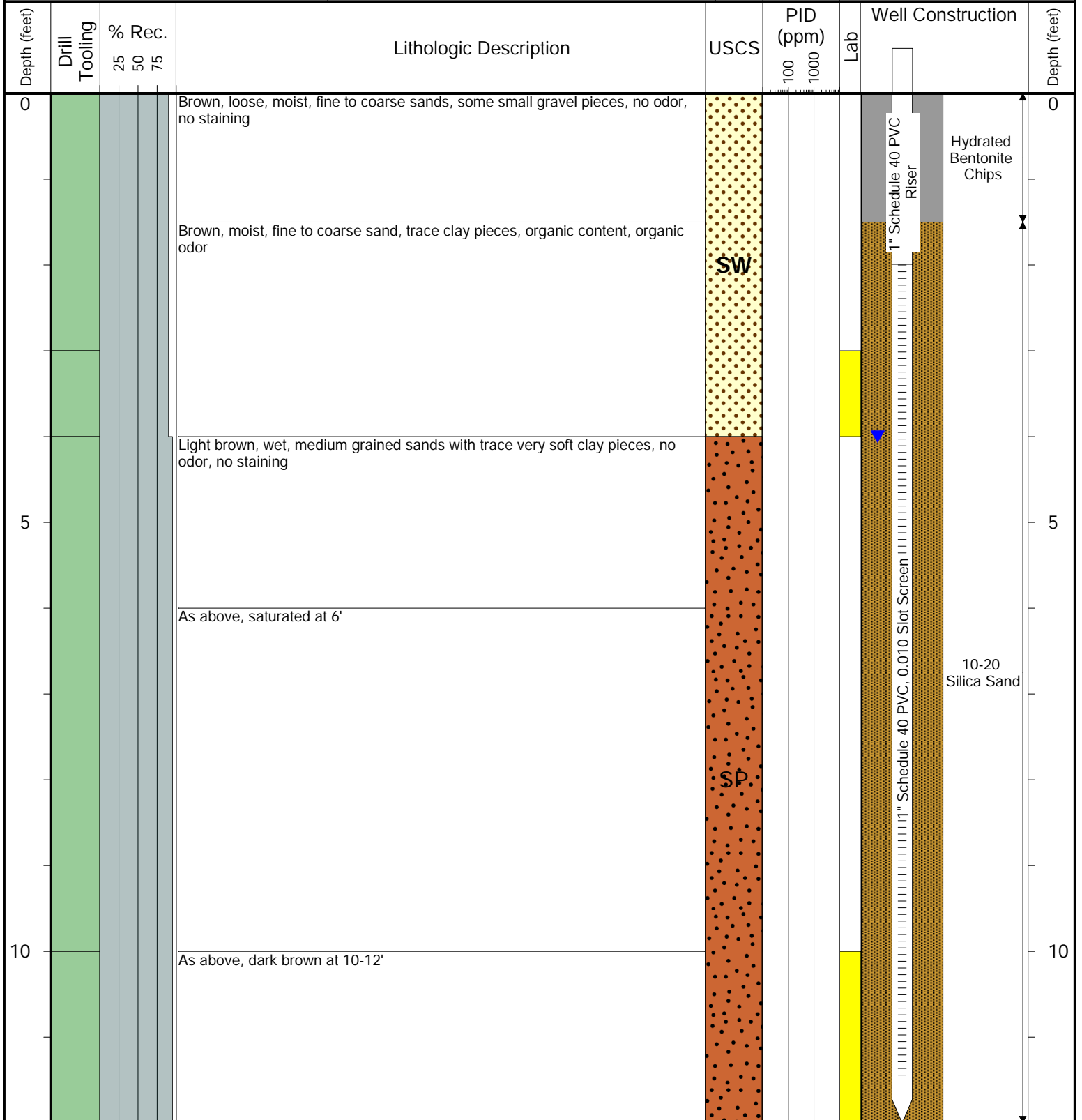
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458827975

LONGITUDE (WGS 84): -104.526327015

CASING ELEVATION (FT. AMSL): 4653.325

GROUND ELEVATION (FT. AMSL): 4653.385



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Hunter Merlo

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 9/21/22 - 9/21/22

TOTAL WELL DEPTH (FT. BGS): 12

DEPTH TO WATER (FT. BGS): 4

Carpio A26-05 Facility

BORING / WELL ID: BH07

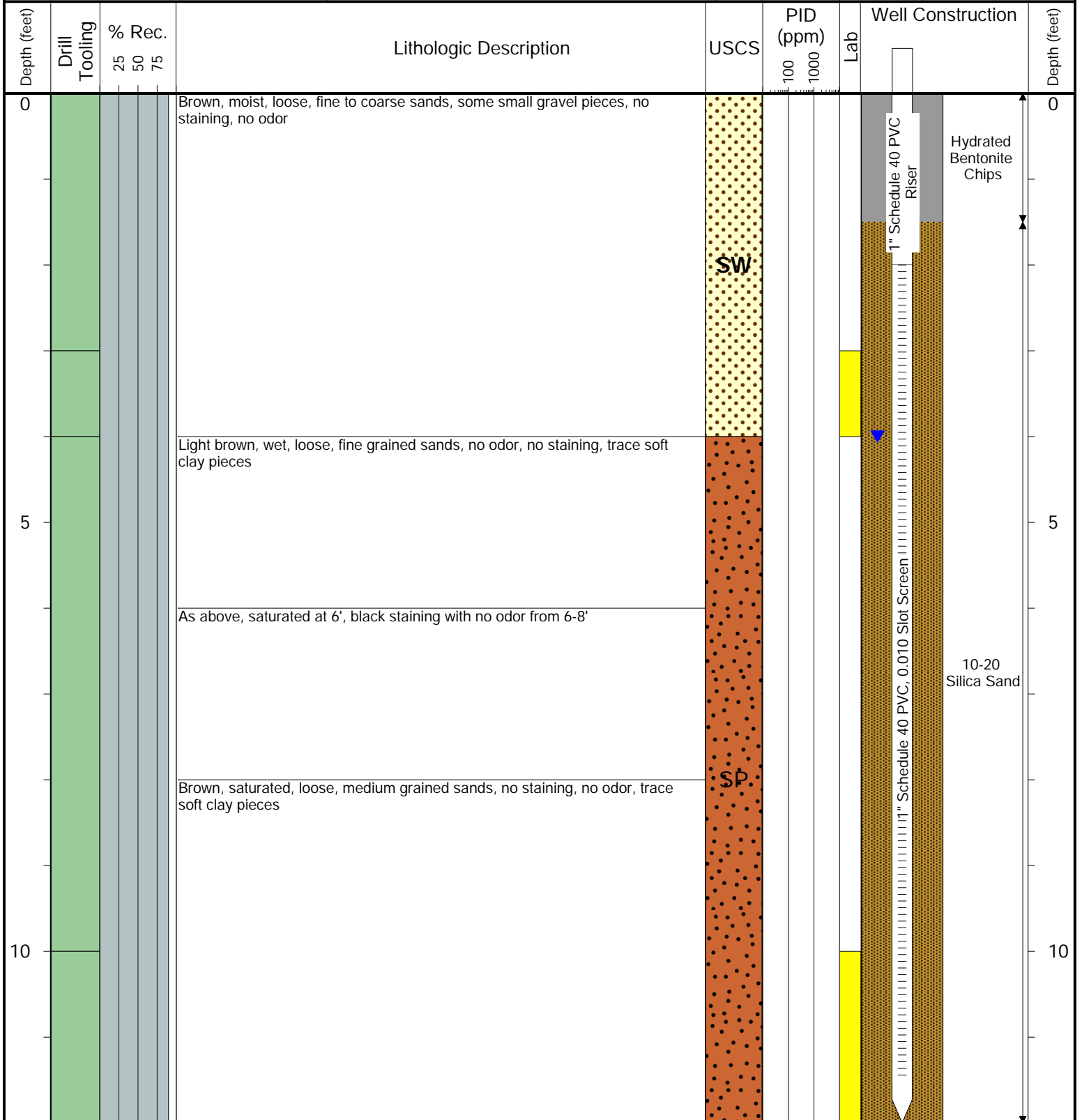
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458775193

LONGITUDE (WGS 84): -104.52625581

CASING ELEVATION (FT. AMSL): 4655.165

GROUND ELEVATION (FT. AMSL): 4653.165



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Hunter Merlo

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 9/21/22 - 9/21/22

TOTAL WELL DEPTH (FT. BGS): 12

DEPTH TO WATER (FT. BGS): 4

Carpio A26-05 Facility

BORING / WELL ID: BH08

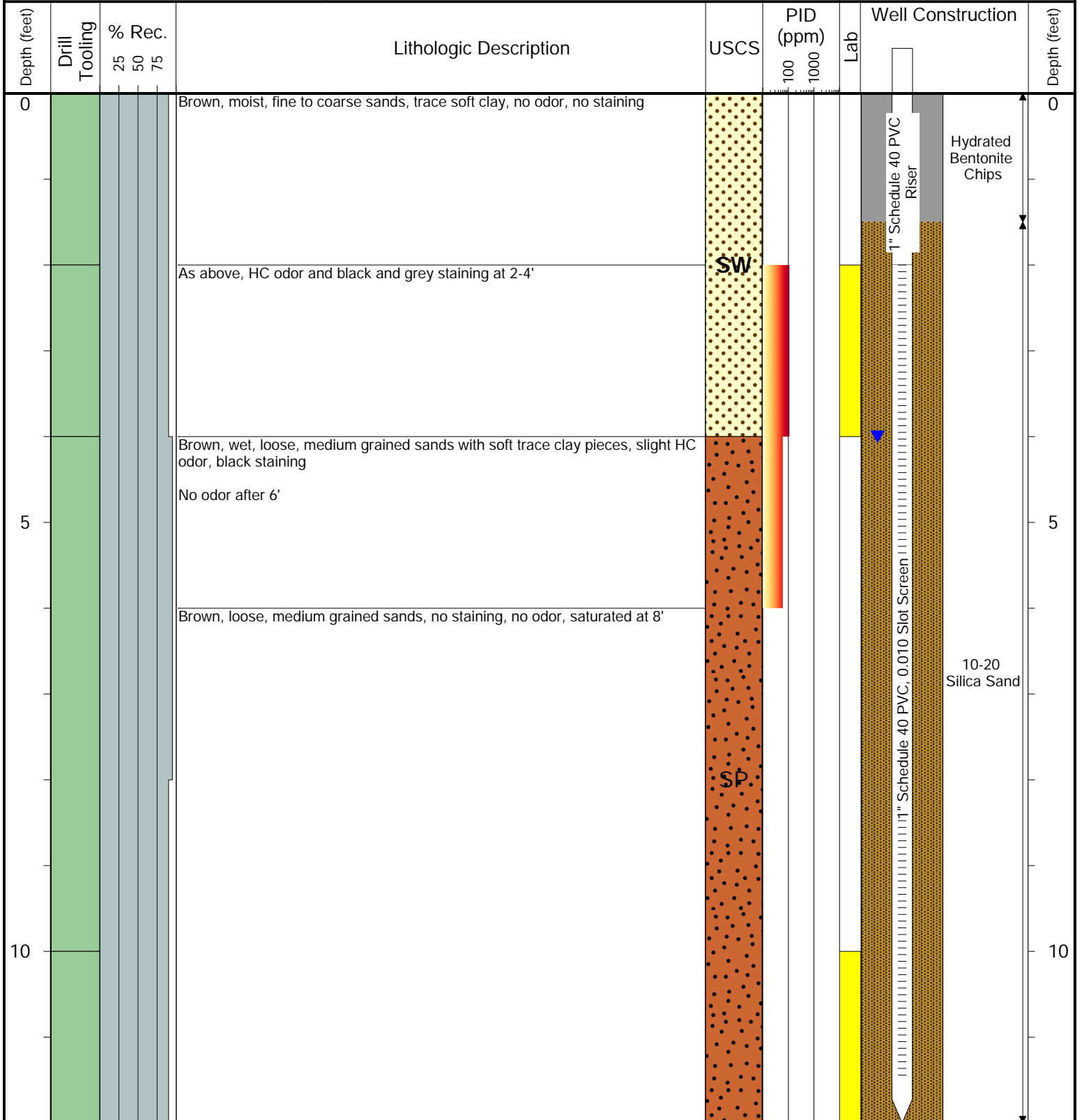
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458697929

LONGITUDE (WGS 84): -104.526325132

CASING ELEVATION (FT. AMSL): 4653.425

GROUND ELEVATION (FT. AMSL): 4653.425



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab



Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Hunter Merlo

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 9/21/22 - 9/21/22

TOTAL WELL DEPTH (FT. BGS): 12

DEPTH TO WATER (FT. BGS): 5

Carpio A26-05 Facility

BORING / WELL ID: BH09

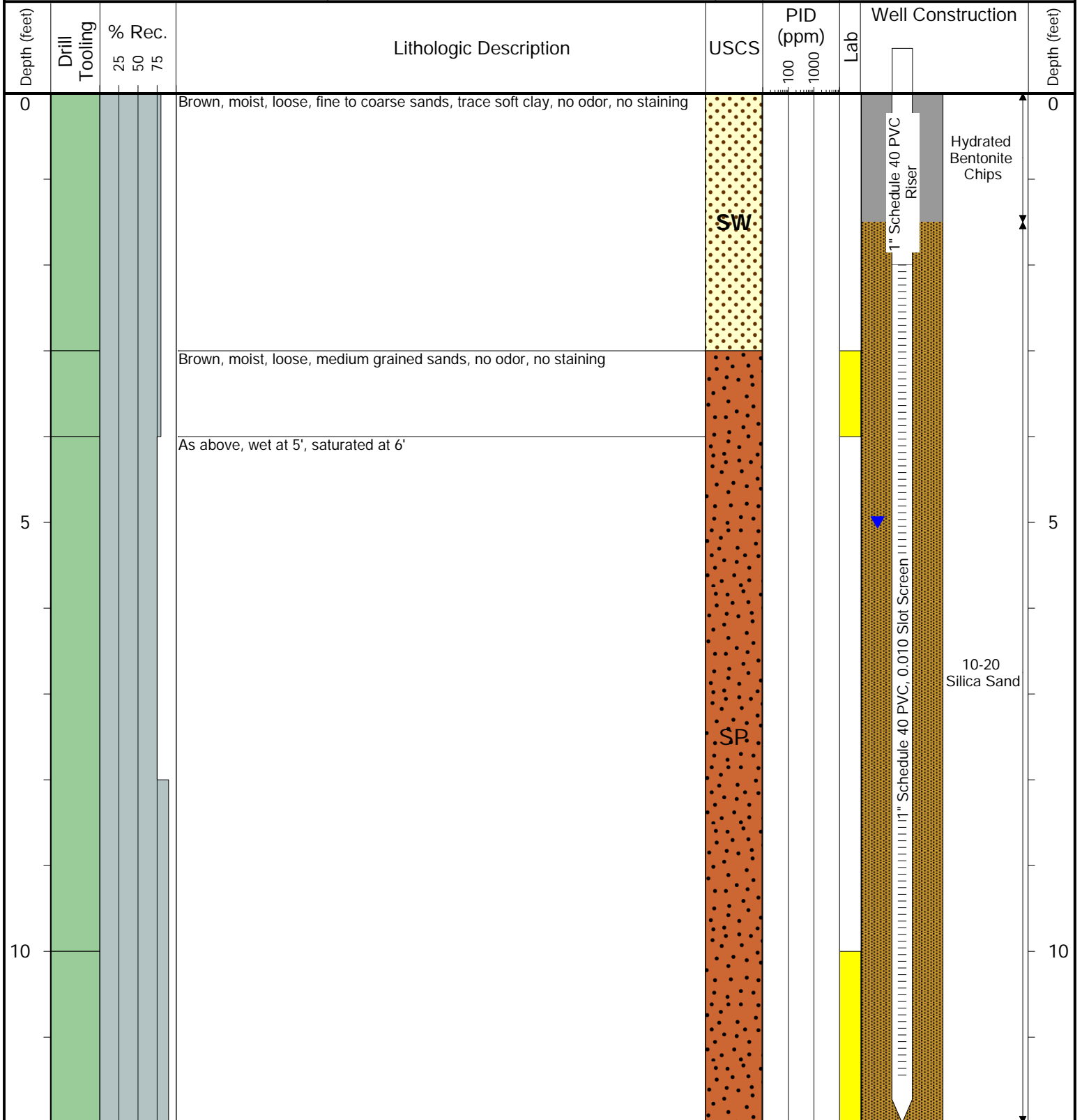
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458609746

LONGITUDE (WGS 84): -104.52634244

CASING ELEVATION (FT. AMSL): 4655.895

GROUND ELEVATION (FT. AMSL): 4653.585



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Hunter Merlo

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: AMS Powerprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 9/21/22 - 9/21/22

TOTAL WELL DEPTH (FT. BGS): 12

DEPTH TO WATER (FT. BGS): 4

Carpio A26-05 Facility

BORING / WELL ID: BH10

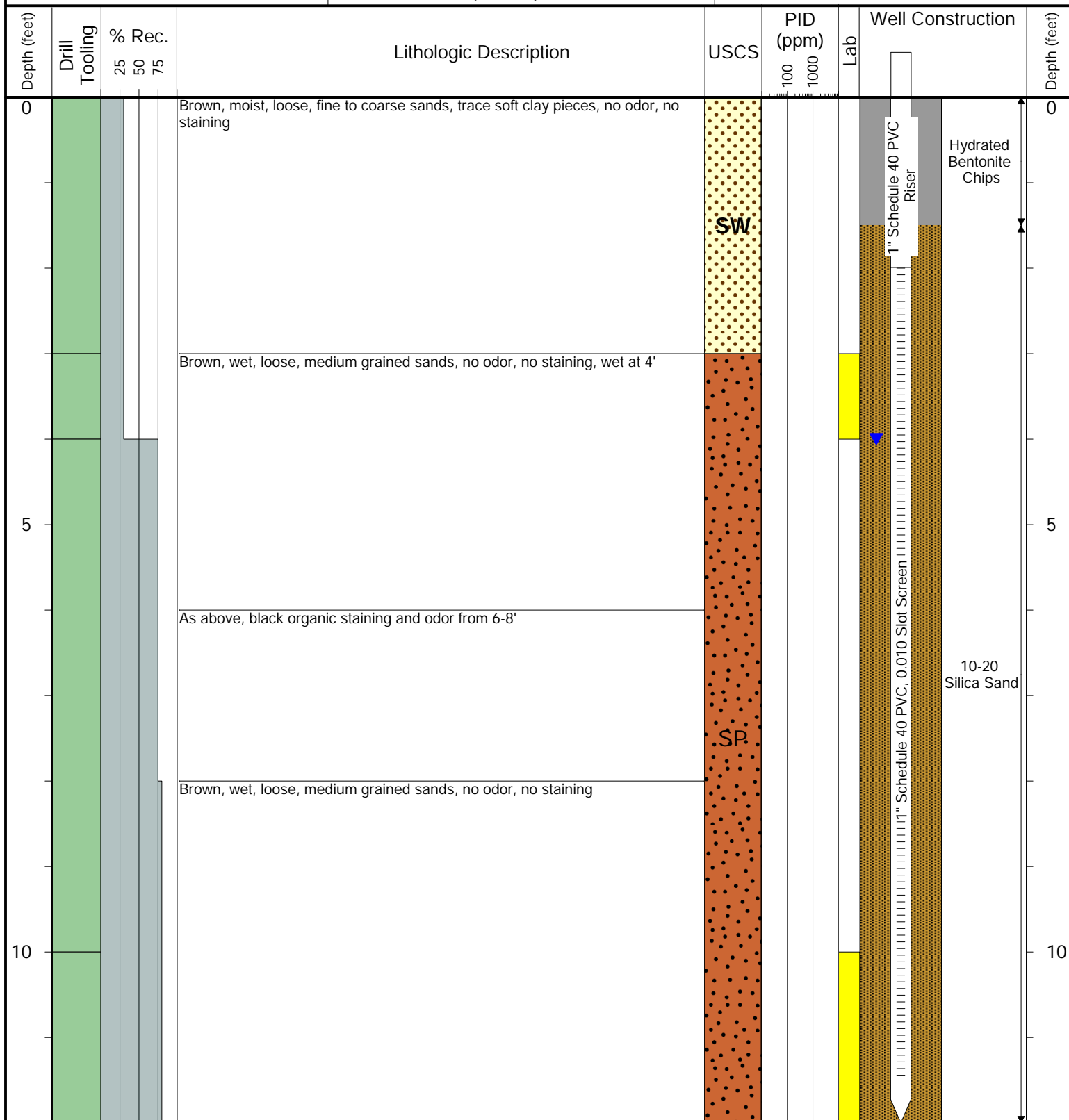
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458698149

LONGITUDE (WGS 84): -104.526241451

CASING ELEVATION (FT. AMSL): 4653.815

GROUND ELEVATION (FT. AMSL): 4651.455



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab



Geotechnical & Analytical Chemistry Lab



TASMAN

6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Chris Chapman

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: Hand Auger

DRILL BIT SIZE (INCHES): 3"

DATE STARTED - COMPLETED: 12/08/22 - 12/08/22

TOTAL WELL DEPTH (FT. BGS): 10

DEPTH TO WATER (FT. BGS): 3

Carpio A26-05 Facility

BORING ID: BH11

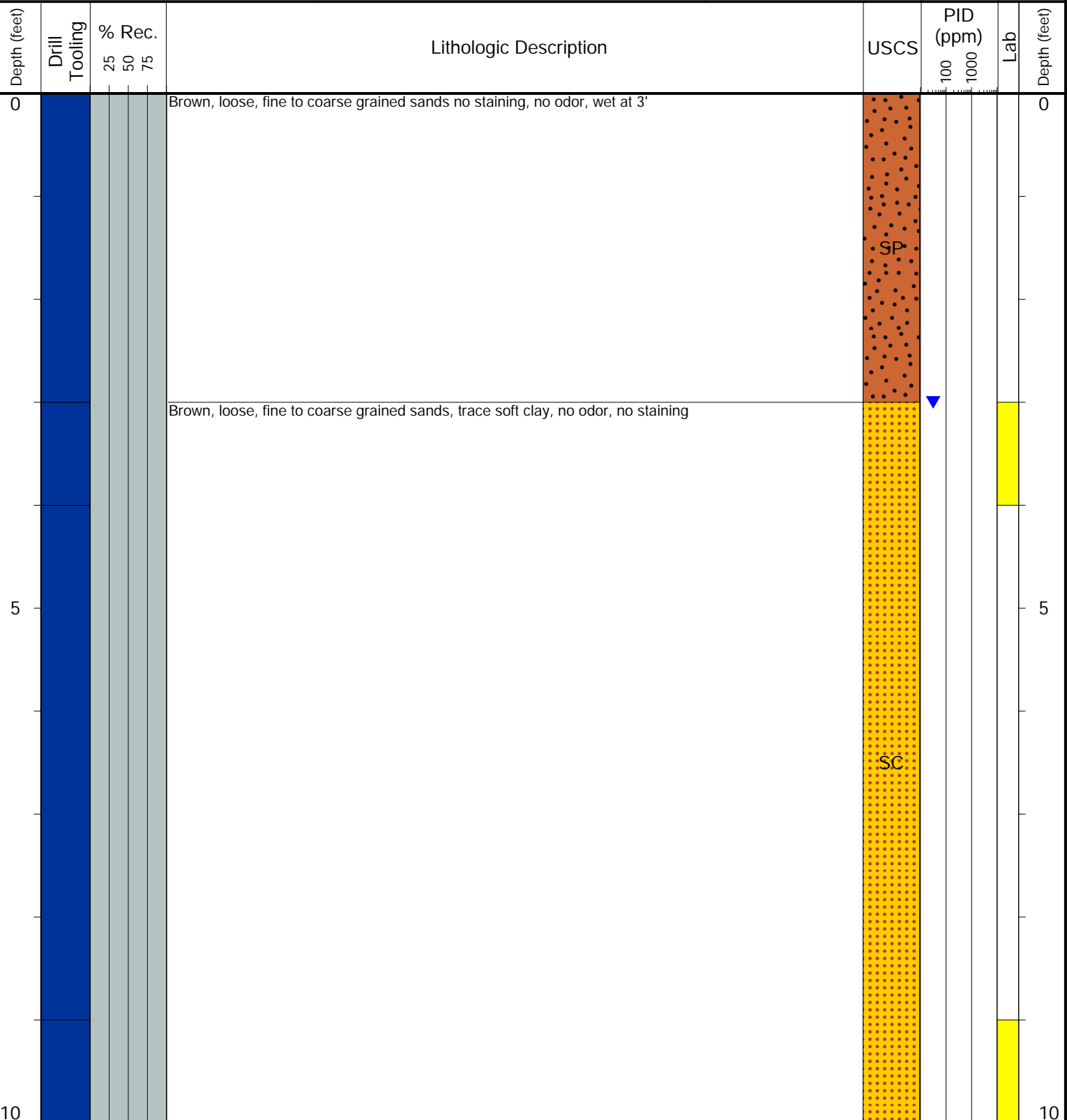
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458770377804

LONGITUDE (WGS 84): -104.5261914662

GROUND ELEVATION (FT. AMSL): NM

ABANDONMENT METHOD: Bentonite



Drilling / Sample Method:

Macro-Core

Solid Stem Auger

Hollow Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Chris Chapman

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: Hand Auger

DRILL BIT SIZE (INCHES): 3"

DATE STARTED - COMPLETED: 12/08/22 - 12/08/22

TOTAL WELL DEPTH (FT. BGS): 10

DEPTH TO WATER (FT. BGS): 3

Carpio A26-05 Facility

BORING ID: BH12

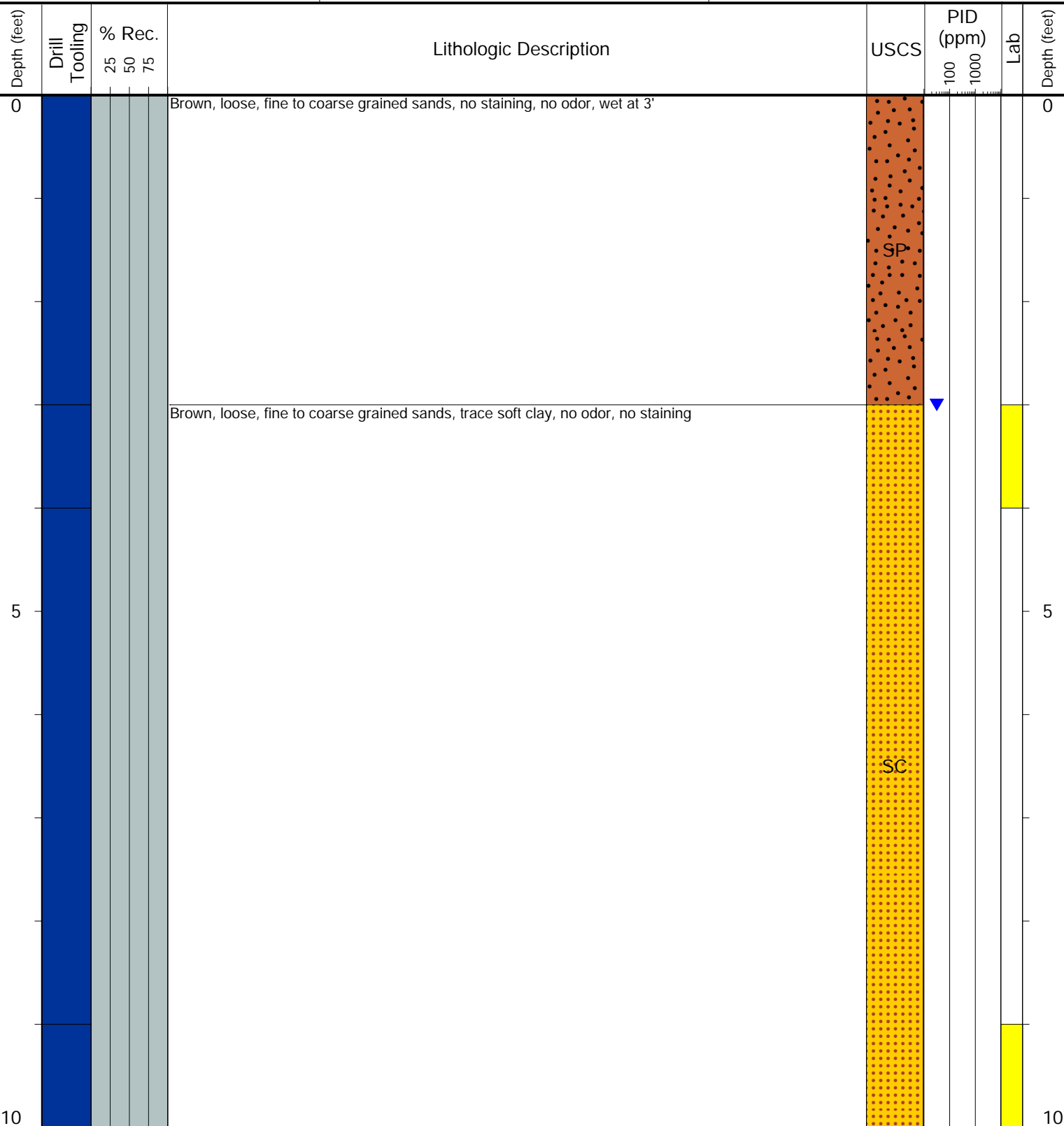
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.458678802389

LONGITUDE (WGS 84): -104.52618087539

GROUND ELEVATION (FT. AMSL): NM

ABANDONMENT METHOD: Bentonite



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



Borehole Logging Form

Boring/Well ID # 25 BG06		SITE NAME: Carpio AZG-05		CLIENT NAME: Noble			
Date Started: 7/28/23		Location: Weld County					
Date Completed: 7/28/23		TOC Elevation: -		DTW: 5'			
Type of Drill: Geo Probe		Geologist: SA/MP					
Bit Size: 3.25"		Project Manager: JW					
Drilling Company: Tasman							
Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1	n. well installed	DP	50	0.0		SM	Silty SAND, trace coarse sand, brown, dry, loose, no ST/O
2				0.0			
3				0.0			
4				0.0	BG06 @ 5' 1105	CL	lean clay w/ sand, fg sand, brn. soft, moist, no ST/O
5				0.0		CL	as above, wet
6		DP	50	0.0			
7				0.0			
8				0.0			
9				0.0	BG06 @ 10' 1110		
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: <u>BG07</u>		SITE NAME: <u>Carpio ALG-05</u>		CLIENT NAME: <u>Noble</u>	
Date Started: <u>7/22/23</u>		Location: <u>Weld County</u>			
Date Completed: <u>7/22/23</u>		TOC Elevation: <u>-</u>		DTW: <u>3'</u> N/A	
Type of Drill: <u>Geo Probe</u>		Geologist: <u>SC/MP</u>			
Bit Size: <u>2.25"</u>		Project Manager: <u>JW</u>			
Drilling Company: <u>Tasman</u>					

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1	NO Well installed	DP	60	0.0		SM	silty sand, brown, Dry-moist, loose - Dense Trace iron
2				0.0			
3				0.0			
4				0.0			
5					<u>BG07 @ 5' 1039</u>		
6				0.0			clay, brown, moist - Dry lean
7		DP	100%	0.0		CL	lean clay w/ fine grained sand, brown, moist - Dry low plasticity, soft trace iron
8		0.0					
9		0.0					
10				0.0	<u>BG07 @ 10' 1045</u>		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: <u>BG08</u>		SITE NAME: <u>Carpio AZG-05</u>		CLIENT NAME: <u>Noble</u>			
Date Started: <u>7/28/23</u>		Location: <u>Weld County</u>					
Date Completed: <u>7/28/23</u>		TOC Elevation: <u>—</u>		DTW: <u>—</u>			
Type of Drill: <u>GeoProbe</u>		Geologist: <u>S&MP</u>					
Bit Size: <u>3.25"</u>		Project Manager: <u>JW</u>					
Drilling Company: <u>Tasman</u>							
Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1	<u>NO Well installed</u>	<u>DP</u>	<u>90</u>	<u>0.0</u>		<u>SM</u>	<u>Silty SAND, brn, dense, f_g sand, dry, no ST/0</u>
2							
3				<u>0.0</u>			
4				<u>0.0</u>			
5				<u>0.0</u>	<u>BG08 @ 5' 1020</u>		
6				<u>0.0</u>		<u>SM</u>	<u>as above</u>
7		<u>DP</u>	<u>100</u>				
8				<u>0.0</u>		<u>CL</u>	<u>lean clay, brn, dry, medium stiff, non-plastic, no ST/0</u>
9				<u>0.0</u>			
10				<u>0.0</u>	<u>BG10 @ 10' 1025</u>		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: BH09 0609	SITE NAME: Carpio Ag 05	CLIENT NAME: Noble
Date Started: 7/28/23	Location: Weld County	
Date Completed: 7/28/23	TOC Elevation: —	DTW: ~3'
Type of Drill: PA Geo Probe	Geologist: SA/MP	
Bit Size: 3.25"	Project Manager: JW	

Drilling Company: Tasman

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1	No Well installed	HA	100	0.0		CL	lean sandy clay, brn. soft, wet @ 3' no ST 10', fg sand
2							
3				0.0	BH09 @ 5' 917		
4							
5							Wet from 3-9' moist from 9-10'
6							
7		DP	30	0.0	BH09 @ 10' 937	CL	
8							lean sandy clay, brown soft, moist NO ST/O
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Borehole Logging Form

Boring/Well ID #: BH10 BG10		SITE NAME: Carpio AZ6-05 PAC		CLIENT NAME: Noble	
Date Started: 7/28/23		Location: Weld County			
Date Completed: 7/28/23		TOC Elevation: -		DTW: ~3'	
Type of Drill: Geoprobe		Geologist: SQ/MP			
Bit Size: 3.25"		Project Manager: JW			
Drilling Company: Tasman					

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description	
1	NO well installed	HTA	100	0.0			lean SANDY CLAY, brown, wet, soft, no ST/O fg sand	
2								
3								wet from 3-8'
4								
5				0.0	BH10@ 5' 704			
6				0.0			lean SANDY CLAY, brown, moist, medium-stiff medium plasticity NO ST/O	
7		DP	50	0.0				
8	0.0							
9	0.0							
10				0.0	BH10@ 10' 910			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

ATTACHMENT C

LABORATORY GROUNDWATER ANALYTICAL REPORTS

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 28, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05

Work Order #2206367

Enclosed are the results of analyses for samples received by Summit Scientific on 06/22/22 17:25. 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

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/28/22 09:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2206367-01	Water	06/22/22 11:02	06/22/22 17:25
BH02	2206367-02	Water	06/22/22 10:37	06/22/22 17:25
BH03	2206367-03	Water	06/22/22 10:41	06/22/22 17:25
BH04	2206367-04	Water	06/22/22 10:48	06/22/22 17:25
BH05	2206367-05	Water	06/22/22 11:00	06/22/22 17:25

Summit Scientific

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

Summit Scientific

S₂

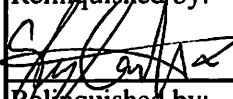
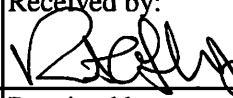
2206367

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

Page 1 of 1

Client: Noble / Tasman Project Manager: Jake Whritenour, Invoice: Erica Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303-261-6247 Project Name: Carpio A26-05 FAC
Sampler Name: Stanley Gilbert Project Number:

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	\$260B BTEX	Naphthalene	1,2,4-trimethylbenzene	1,3,5 trimethylbenzene	TDS, chloride ion, sulfate ion	
1	BH01	6/22/22	11:02	4	X				X				X	X	X	X	X	
2	BH02		10:37															
3	BH03		10:41															
4	BH04		10:48															
5	BH05		11:00															
6																		
7																		
8																		
9																		
10																		

Relinquished by: 	Date/Time: 6/22/22 15:30	Received by: Tasman's Lock Box	Date/Time: 6/22/22 15:30	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 0.9 Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 6/22/22 1725	Received by: 	Date/Time: 6/22/22 1725		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order#

2206367

Client: Noble/TasmanClient Project ID: Carpio A2C6-05 FAC

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

Airbill #:

	-			
--	---	--	--	--

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☒

Other

☐

Temp (°C)

0.9

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.	-			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 due within 48 hours present?		-		
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			-	
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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	-			HCl
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.


Custodian Printed Name

02222

Date/Time



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

Project: Noble - Carpio A26-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
06/28/22 09:51

BH01
2206367-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/22/22 11:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFF0648	06/24/22	06/27/22	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: **06/22/22 11:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		131 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.7 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/22/22 11:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	67.8	12.0	mg/L	200	BFF0655	06/25/22	06/25/22	EPA 300.0	
Sulfate	1510	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/22/22 11:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	1730	10.0	mg/L	1	BFF0617	06/23/22	06/23/22	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:
06/28/22 09:51

BH02
2206367-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/22/22 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0648	06/24/22	06/27/22	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: **06/22/22 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		130 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.6 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/22/22 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	34.8	12.0	mg/L	200	BFF0655	06/25/22	06/25/22	EPA 300.0	
Sulfate	1280	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/22/22 10:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1350	10.0	mg/L	1	BFF0617	06/23/22	06/23/22	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:
06/28/22 09:51

BH03
2206367-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/22/22 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	100	1.0	ug/l	1	BFF0648	06/24/22	06/27/22	EPA 8260B	
Toluene	110	1.0	"	"	"	"	"	"	
Ethylbenzene	92	1.0	"	"	"	"	"	"	
Xylenes (total)	5600	20	"	10	"	"	"	"	
Naphthalene	9.6	1.0	"	1	"	"	"	"	
1,2,4-Trimethylbenzene	170	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	74	1.0	"	"	"	"	"	"	

Date Sampled: **06/22/22 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96.5 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/22/22 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	64.6	12.0	mg/L	200	BFF0655	06/25/22	06/25/22	EPA 300.0	
Sulfate	1290	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/22/22 10:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1620	10.0	mg/L	1	BFF0617	06/23/22	06/23/22	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:
06/28/22 09:51

BH04
2206367-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/22/22 10:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0648	06/24/22	06/27/22	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: **06/22/22 10:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/22/22 10:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	69.0	12.0	mg/L	200	BFF0655	06/25/22	06/25/22	EPA 300.0	
Sulfate	1460	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/22/22 10:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1700	10.0	mg/L	1	BFF0617	06/23/22	06/23/22	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:
06/28/22 09:51

BH05
2206367-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/22/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0648	06/24/22	06/27/22	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: **06/22/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		133 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.7 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/22/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	37.0	12.0	mg/L	200	BFF0655	06/25/22	06/25/22	EPA 300.0	
Sulfate	1660	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/22/22 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1730	10.0	mg/L	1	BFF0617	06/23/22	06/23/22	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:
06/28/22 09:51

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 BFF0648 - EPA 5030 Water MS

Blank (BFF0648-BLK1)

Prepared: 06/24/22 Analyzed: 06/27/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	15.4		"	13.3		115	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	21-167			

LCS (BFF0648-BS1)

Prepared: 06/24/22 Analyzed: 06/27/22

Benzene	33.9	1.0	ug/l	41.7		81.3	51-132			
Toluene	31.9	1.0	"	41.7		76.5	51-138			
Ethylbenzene	50.4	1.0	"	41.7		121	58-146			
m,p-Xylene	90.8	2.0	"	83.3		109	57-144			
o-Xylene	45.5	1.0	"	41.7		109	53-146			
Naphthalene	44.2	1.0	"	41.7		106	70-130			
1,2,4-Trimethylbenzene	46.4	1.0	"	41.7		111	70-130			
1,3,5-Trimethylbenzene	45.7	1.0	"	41.7		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.3		113	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

Matrix Spike (BFF0648-MS1)

Source: 2206371-01

Prepared: 06/24/22 Analyzed: 06/27/22

Benzene	33.0	1.0	ug/l	41.7	ND	79.1	34-141			
Toluene	30.2	1.0	"	41.7	ND	72.4	27-151			
Ethylbenzene	48.9	1.0	"	41.7	ND	117	29-160			
m,p-Xylene	87.7	2.0	"	83.3	ND	105	20-166			
o-Xylene	44.4	1.0	"	41.7	ND	107	33-159			
Naphthalene	48.4	1.0	"	41.7	ND	116	70-130			
1,2,4-Trimethylbenzene	44.9	1.0	"	41.7	ND	108	70-130			
1,3,5-Trimethylbenzene	44.5	1.0	"	41.7	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	15.7		"	13.3		118	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

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:
06/28/22 09:51

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 BFF0648 - EPA 5030 Water MS

Matrix Spike Dup (BFF0648-MSD1)

Source: 2206371-01

Prepared: 06/24/22 Analyzed: 06/27/22

Benzene	32.6	1.0	ug/l	41.7	ND	78.3	34-141	0.976	30	
Toluene	30.4	1.0	"	41.7	ND	72.9	27-151	0.693	30	
Ethylbenzene	50.2	1.0	"	41.7	ND	121	29-160	2.72	30	
m,p-Xylene	90.2	2.0	"	83.3	ND	108	20-166	2.78	30	
o-Xylene	45.3	1.0	"	41.7	ND	109	33-159	2.01	30	
Naphthalene	54.2	1.0	"	41.7	ND	130	70-130	11.4	30	
1,2,4-Trimethylbenzene	47.1	1.0	"	41.7	ND	113	70-130	4.91	30	
1,3,5-Trimethylbenzene	46.5	1.0	"	41.7	ND	112	70-130	4.38	30	
Surrogate: 1,2-Dichloroethane-d4	16.4		"	13.3		123	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	21-167			

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:
06/28/22 09:51

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 BFF0655 - General Preparation

Blank (BFF0655-BLK1)

Prepared & Analyzed: 06/25/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFF0655-BS1)

Prepared & Analyzed: 06/25/22

Chloride	3.25	0.0600	mg/L	3.00	108	90-110
Sulfate	16.2	0.300	"	15.0	108	90-110

Duplicate (BFF0655-DUP1)

Source: 2206367-01

Prepared & Analyzed: 06/25/22

Chloride	68.2	12.0	mg/L	67.8	0.588	20
Sulfate	1500	60.0	"	1510	1.25	20

Matrix Spike (BFF0655-MS1)

Source: 2206367-01

Prepared & Analyzed: 06/25/22

Chloride	664	12.0	mg/L	600	67.8	99.4	80-120
Sulfate	4700	60.0	"	3000	1510	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:

06/28/22 09:51

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BFF0617 - General Preparation

Blank (BFF0617-BLK1)

Prepared & Analyzed: 06/23/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFF0617-DUP1)

Source: 2206335-01

Prepared & Analyzed: 06/23/22

Total Dissolved Solids 2040 10.0 mg/L 1970 3.49 20

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:
06/28/22 09:51

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

September 19, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order #2209224

Enclosed are the results of analyses for samples received by Summit Scientific on 09/12/22 17:03. 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:
09/19/22 15:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2209224-01	Water	09/12/22 14:44	09/12/22 17:03
BH02	2209224-02	Water	09/12/22 14:30	09/12/22 17:03
BH03	2209224-03	Water	09/12/22 14:53	09/12/22 17:03
BH04	2209224-04	Water	09/12/22 14:32	09/12/22 17:03
BH05	2209224-05	Water	09/12/22 14:42	09/12/22 17:03

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

2209224

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

Page | of |

Client: Noble / Tasman

Project Manager: Jacob Whritenour

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

Phone: 503-915-3046

Project Name: Carpio A26-05 FAC

Sampler Name: Martin Medeiros

Project Number:

					Preservative				Matrix				Analysis Requested						Special Instructions			
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	8260B BTEX	Napthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS, chlorides, sulfates					
1	BH01	9/12/22	14:44	4	3		1		X				X	X	X	X	X					
2	BH02	↓	14:30	↓	↓		↓		↓				↓	↓	↓	↓	↓					
3	BH03		14:53																			
4	BH04		14:32																			
5	BH05		14:42	↓	↓		↓		↓					↓	↓	↓	↓	↓				
6																						
7																						
8																						
9																						
10																						

Relinquished by: <i>Martin Medeiros</i> Date/Time: 9/12/22 15:30 Martin Medeiros	Received by: Tasman's Lock Box Date/Time:	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 53 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box Date/Time: 9/12/22 1703	Received by: <i>[Signature]</i> Date/Time: 1703		
Relinquished by:	Received by:		

S₂

Sample Receipt Checklist

S2 Work Order#

2209224

Client: Noble Frisman

Client Project ID:

Carpio Azc-05 DAC

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

Airbill #:

--	--	--	--	--

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☒

Other

☐

Temp (°C)

5.3

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"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
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

Date/Time

9.12.22

19:00



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/19/22 15:27

BH01
2209224-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/22 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BF10351	09/14/22	09/14/22	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: **09/12/22 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.1 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/12/22 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	31.0	12.0	mg/L	200	BF10371	09/15/22	09/15/22	EPA 300.0	
Sulfate	1820	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/12/22 14:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	1920	10.0	mg/L	1	BF10327	09/14/22	09/14/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/19/22 15:27

BH02
2209224-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/22 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BF10351	09/14/22	09/14/22	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: **09/12/22 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/12/22 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	29.4	12.0		mg/L	200	BF10371	09/15/22	09/15/22	EPA 300.0	
Sulfate	1250	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/12/22 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1290	10.0		mg/L	1	BF10327	09/14/22	09/14/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/19/22 15:27

BH03
2209224-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/22 14:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	34	1.0		ug/l	1	BF10351	09/14/22	09/15/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	1.3	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	3.9	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/12/22 14:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/12/22 14:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	27.8	12.0		mg/L	200	BF10371	09/15/22	09/15/22	EPA 300.0	
Sulfate	1540	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/12/22 14:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1580	10.0		mg/L	1	BF10327	09/14/22	09/14/22	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 FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

09/19/22 15:27

BH04

2209224-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/22 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BF10351	09/14/22	09/14/22	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: **09/12/22 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		97.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/12/22 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	37.4	12.0		mg/L	200	BF10371	09/15/22	09/15/22	EPA 300.0	
Sulfate	1560	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/12/22 14:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1620	10.0		mg/L	1	BF10327	09/14/22	09/14/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/19/22 15:27

BH05
2209224-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/22 14:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BF10351	09/14/22	09/14/22	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: **09/12/22 14:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.5 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/12/22 14:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	34.0	12.0	mg/L	200	BF10371	09/15/22	09/15/22	EPA 300.0	
Sulfate	1590	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/12/22 14:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1640	10.0	mg/L	1	BF10327	09/14/22	09/14/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/19/22 15:27

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 BFI0351 - EPA 5030 Water MS

Blank (BFI0351-BLK1)

Prepared & Analyzed: 09/14/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.8	21-167			

LCS (BFI0351-BS1)

Prepared & Analyzed: 09/14/22

Benzene	53.5	1.0	ug/l	41.7		128	51-132			
Toluene	40.0	1.0	"	41.7		96.0	51-138			
Ethylbenzene	45.8	1.0	"	41.7		110	58-146			
m,p-Xylene	94.6	2.0	"	83.3		114	57-144			
o-Xylene	45.4	1.0	"	41.7		109	53-146			
Naphthalene	45.0	1.0	"	41.7		108	70-130			
1,2,4-Trimethylbenzene	48.1	1.0	"	41.7		115	70-130			
1,3,5-Trimethylbenzene	47.3	1.0	"	41.7		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	18.9		"	13.3		142	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.5	21-167			

Matrix Spike (BFI0351-MS1)

Source: 2209224-01

Prepared & Analyzed: 09/14/22

Benzene	40.0	1.0	ug/l	41.7	ND	95.9	34-141			
Toluene	40.2	1.0	"	41.7	ND	96.4	27-151			
Ethylbenzene	46.7	1.0	"	41.7	ND	112	29-160			
m,p-Xylene	95.4	2.0	"	83.3	ND	115	20-166			
o-Xylene	45.8	1.0	"	41.7	ND	110	33-159			
Naphthalene	50.6	1.0	"	41.7	ND	122	70-130			
1,2,4-Trimethylbenzene	48.5	1.0	"	41.7	ND	116	70-130			
1,3,5-Trimethylbenzene	47.7	1.0	"	41.7	ND	114	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

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:
09/19/22 15:27

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 BFI0351 - EPA 5030 Water MS

Matrix Spike Dup (BFI0351-MSD1)

Source: 2209224-01

Prepared & Analyzed: 09/14/22

Benzene	39.6	1.0	ug/l	41.7	ND	95.1	34-141	0.854	30	
Toluene	39.1	1.0	"	41.7	ND	93.7	27-151	2.78	30	
Ethylbenzene	46.8	1.0	"	41.7	ND	112	29-160	0.0428	30	
m,p-Xylene	95.2	2.0	"	83.3	ND	114	20-166	0.199	30	
o-Xylene	44.8	1.0	"	41.7	ND	108	33-159	2.03	30	
Naphthalene	46.8	1.0	"	41.7	ND	112	70-130	7.97	30	
1,2,4-Trimethylbenzene	49.4	1.0	"	41.7	ND	118	70-130	1.78	30	
1,3,5-Trimethylbenzene	48.2	1.0	"	41.7	ND	116	70-130	1.13	30	
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		96.7	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	21-167			

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:
09/19/22 15:27

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 BFI0371 - General Preparation

Blank (BFI0371-BLK1)

Prepared & Analyzed: 09/15/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFI0371-BS1)

Prepared & Analyzed: 09/15/22

Chloride	3.19	0.0600	mg/L	3.00	106	90-110
Sulfate	15.7	0.300	"	15.0	105	90-110

Duplicate (BFI0371-DUP1)

Source: 2209206-01

Prepared & Analyzed: 09/15/22

Chloride	430	12.0	mg/L	476	10.1	20
Sulfate	1840	60.0	"	1980	7.11	20

Matrix Spike (BFI0371-MS1)

Source: 2209206-01

Prepared & Analyzed: 09/15/22

Chloride	1080	12.0	mg/L	600	476	100	80-120
Sulfate	5430	60.0	"	3000	1980	115	80-120

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:
09/19/22 15:27

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BFI0327 - General Preparation

Blank (BFI0327-BLK1)

Prepared & Analyzed: 09/14/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFI0327-DUP1)

Source: 2209199-01

Prepared & Analyzed: 09/14/22

Total Dissolved Solids 469 10.0 mg/L 518 10.0 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:
09/19/22 15:27

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

November 28, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order #2211299

Enclosed are the results of analyses for samples received by Summit Scientific on 11/16/22 17:08. 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:
11/28/22 14:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2211299-01	Water	11/16/22 11:05	11/16/22 17:08
BH02	2211299-02	Water	11/16/22 10:31	11/16/22 17:08
BH03	2211299-03	Water	11/16/22 11:58	11/16/22 17:08
BH04	2211299-04	Water	11/16/22 10:57	11/16/22 17:08
BH05	2211299-05	Water	11/16/22 10:44	11/16/22 17:08
BH06	2211299-06	Water	11/16/22 11:15	11/16/22 17:08
BH07	2211299-07	Water	11/16/22 11:50	11/16/22 17:08
BH08	2211299-08	Water	11/16/22 11:23	11/16/22 17:08
BH09	2211299-09	Water	11/16/22 11:32	11/16/22 17:08
BH10	2211299-10	Water	11/16/22 11:41	11/16/22 17:08

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

2211299

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


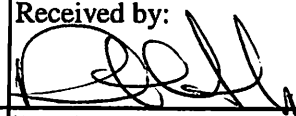
Phone: 303-487-1228

Project Name: Carpio AZG-05 (FAC)

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	11/16/22	1105	4	3					X				X	X	X	X	X	X		
2	BH02		1031																		
3	BH03		1158																		
4	BH04		1057																		
5	BH05		1044																		
6	BH06		1115																		
7	BH07		1150																		
8	BH08		1123																		
9	BH09		1132																		
10	BH10		1141																		

Relinquished by: 	Date/Time: 11/16/22 1400	Received by: Tasman's Lock Box	Date/Time: 11/16/22 1400	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 11/16/22 1708	Received by: 	Date/Time: 11/16/22 1708	Sample Integrity: Temperature Upon Receipt: 64	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: (Yes) No	

S₂

Sample Receipt Checklist

S2 Work Order# 22 11299Client: Nobie/Trasman Client Project ID: Carpio A20-05(FAC)Shipped 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) 6.4Thermometer # 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"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	all OK
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
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

Date/Time

11-16-22 1708



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
11/28/22 14:54

BH01
2211299-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		91.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		146 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	33.2	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	624	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	1250	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH02
2211299-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	32.6	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	496	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1090	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH03
2211299-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	30.4	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	694	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1280	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH04
2211299-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 10:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 10:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 10:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	42.6	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	607	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 10:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1280	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
11/28/22 14:54

BH05
2211299-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	24.0	12.0		mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	634	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1390	10.0		mg/L	1	BFK0489	11/18/22	11/18/22	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 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
11/28/22 14:54

BH06
2211299-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	30.4	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	505	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1160	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH07
2211299-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	27.0	12.0		mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	551	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1150	10.0		mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH08
2211299-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	25.6	12.0		mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	640	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1180	10.0		mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:

11/28/22 14:54

BH09

2211299-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	19.6	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	502	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1210	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

BH10
2211299-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/16/22 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFK0509	11/21/22	11/22/22	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: **11/16/22 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/16/22 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	18.0	12.0	mg/L	200	BFK0530	11/19/22	11/19/22	EPA 300.0	
Sulfate	393	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/16/22 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1210	10.0	mg/L	1	BFK0489	11/18/22	11/18/22	SM2540C	

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:
11/28/22 14:54

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 BFK0509 - EPA 5030 Water MS

Blank (BFK0509-BLK1)

Prepared: 11/21/22 Analyzed: 11/22/22

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	"							
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.3		101	23-173			
Surrogate: Toluene-d8	15.6		"	13.3		117	20-170			
Surrogate: 4-Bromofluorobenzene	18.8		"	13.3		141	21-167			

LCS (BFK0509-BS1)

Prepared: 11/21/22 Analyzed: 11/22/22

Benzene	22.8	1.0	ug/l	33.3		68.4	51-132			
Toluene	25.2	1.0	"	33.3		75.6	51-138			
Ethylbenzene	31.7	1.0	"	33.3		95.1	58-146			
m,p-Xylene	63.2	2.0	"	66.7		94.8	57-144			
o-Xylene	32.2	1.0	"	33.3		96.5	53-146			
Naphthalene	41.0	1.0	"	33.3		123	70-130			
1,2,4-Trimethylbenzene	32.2	1.0	"	33.3		96.7	70-130			
1,3,5-Trimethylbenzene	34.0	1.0	"	33.3		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.4	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		97.0	20-170			
Surrogate: 4-Bromofluorobenzene	14.9		"	13.3		112	21-167			

Matrix Spike (BFK0509-MS1)

Source: 2211299-01

Prepared: 11/21/22 Analyzed: 11/22/22

Benzene	27.3	1.0	ug/l	33.3	ND	81.9	34-141			
Toluene	31.0	1.0	"	33.3	ND	93.0	27-151			
Ethylbenzene	45.2	1.0	"	33.3	ND	136	29-160			
m,p-Xylene	92.7	2.0	"	66.7	ND	139	20-166			
o-Xylene	45.4	1.0	"	33.3	ND	136	33-159			
Naphthalene	39.5	1.0	"	33.3	ND	119	70-130			
1,2,4-Trimethylbenzene	36.7	1.0	"	33.3	ND	110	70-130			
1,3,5-Trimethylbenzene	37.0	1.0	"	33.3	ND	111	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.1	23-173			
Surrogate: Toluene-d8	16.7		"	13.3		125	20-170			
Surrogate: 4-Bromofluorobenzene	21.4		"	13.3		160	21-167			

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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:
11/28/22 14:54

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 BFK0509 - EPA 5030 Water MS

Matrix Spike Dup (BFK0509-MSD1)	Source: 2211299-01			Prepared: 11/21/22 Analyzed: 11/22/22						
Benzene	23.8	1.0	ug/l	33.3	ND	71.3	34-141	13.8	30	
Toluene	26.2	1.0	"	33.3	ND	78.5	27-151	16.9	30	
Ethylbenzene	34.4	1.0	"	33.3	ND	103	29-160	27.0	30	
m,p-Xylene	70.2	2.0	"	66.7	ND	105	20-166	27.7	30	
o-Xylene	35.8	1.0	"	33.3	ND	107	33-159	23.7	30	
Naphthalene	38.5	1.0	"	33.3	ND	115	70-130	2.77	30	
1,2,4-Trimethylbenzene	36.5	1.0	"	33.3	ND	110	70-130	0.546	30	
1,3,5-Trimethylbenzene	36.2	1.0	"	33.3	ND	108	70-130	2.40	30	
Surrogate: 1,2-Dichloroethane-d4	10.5		"	13.3		78.7	23-173			
Surrogate: Toluene-d8	13.9		"	13.3		104	20-170			
Surrogate: 4-Bromofluorobenzene	17.7		"	13.3		133	21-167			

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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:
11/28/22 14:54

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 BFK0530 - General Preparation

Blank (BFK0530-BLK1)

Prepared & Analyzed: 11/19/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFK0530-BS1)

Prepared & Analyzed: 11/19/22

Chloride	3.07	0.0600	mg/L	3.00	102	90-110
Sulfate	13.5	0.300	"	15.0	90.0	90-110

Duplicate (BFK0530-DUP1)

Source: 2211299-01

Prepared & Analyzed: 11/19/22

Chloride	34.2	12.0	mg/L	33.2	2.97	20
Sulfate	627	60.0	"	624	0.448	20

Matrix Spike (BFK0530-MS1)

Source: 2211299-01

Prepared & Analyzed: 11/19/22

Chloride	548	12.0	mg/L	600	33.2	85.9	80-120
Sulfate	3460	60.0	"	3000	624	94.6	80-120

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:
11/28/22 14:54

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BFK0489 - General Preparation

Blank (BFK0489-BLK1)

Prepared & Analyzed: 11/18/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFK0489-DUP1)

Source: 2211299-01

Prepared & Analyzed: 11/18/22

Total Dissolved Solids 1280 10.0 mg/L 1250 2.69 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:
11/28/22 14:54

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