

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - BOOTH C35-27 FAC

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@0.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@0.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST03@0.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS01@5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS02@4.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS03@5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-FL@2'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-DL@2.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP02-FL@2'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	0.00848	0.0110	0.00702	0.00981	<0.00500	0.00931	<0.00500	0.0283	<0.00500	0.00629	0.0232	<0.00500	<0.00500
SEP02-DL@2.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP03-FL@3'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP03-DL@3.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	0.0058	<0.00500	0.00546	<0.00500	<0.00500	<0.00500	0.0123	<0.00500	<0.00500	0.0113	<0.00500	<0.00500
SS02@2.5'	07/10/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH01@3'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	0.00523	<0.00500	0.00534	<0.00500	0.00775	<0.00500	<0.00500	0.00714	<0.00500	<0.00500
BH01@7'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH02@3'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH02@7'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH03@3'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH03@7'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH04@3'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH04@7'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH05@3'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH05@7'	09/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	07/10/23	8.12	0.0401	0.253	0.0485
AST02@0.5'	07/10/23	7.87	0.0434	0.271	0.0653
AST03@0.5'	07/10/23	7.89	0.406	0.339	0.0784
FS01@5'	07/10/23	8.08	0.161	0.273	0.0801
FS02@4.5'	07/10/23	7.72	0.0131	0.282	0.107
FS03@5'	07/10/23	7.73	0.0264	0.336	0.146
SEP01-FL@2'	07/10/23	7.81	0.0574	0.280	0.282
SEP01-DL@2.5'	07/10/23	7.73	0.0546	0.330	0.452
SEP02-FL@2'	07/10/23	7.51	0.189	0.713	0.175
SEP02-DL@2.5'	07/10/23	7.66	0.0732	0.448	0.250
SEP03-FL@3'	07/10/23	7.60	0.984	0.771	0.337
SEP03-DL@3.5'	07/10/23	7.65	0.0828	0.406	0.372
SS02@2.5'	07/10/23	7.85	0.0686	0.369	0.256
BH01@3'	09/05/23	8.21	0.164	0.248	0.359
BH01@7'	09/05/23	8.30	0.173	0.204	0.0682
BH02@3'	09/05/23	7.92	0.076	0.303	0.291
BH02@7'	09/05/23	8.18	0.0749	0.211	0.0731
BH03@3'	09/05/23	8.39	0.0616	0.172	0.056
BH03@7'	09/05/23	8.15	0.371	0.202	0.0456
BH04@3'	09/05/23	7.77	0.113	0.872	0.221
BH04@7'	09/05/23	8.08	0.166	0.405	0.0904
BH05@3'	09/05/23	8.12	0.0917	0.190	0.0623
BH05@7'	09/05/23	8.44	0.163	0.172	0.0623

Notes:

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

Definitions:

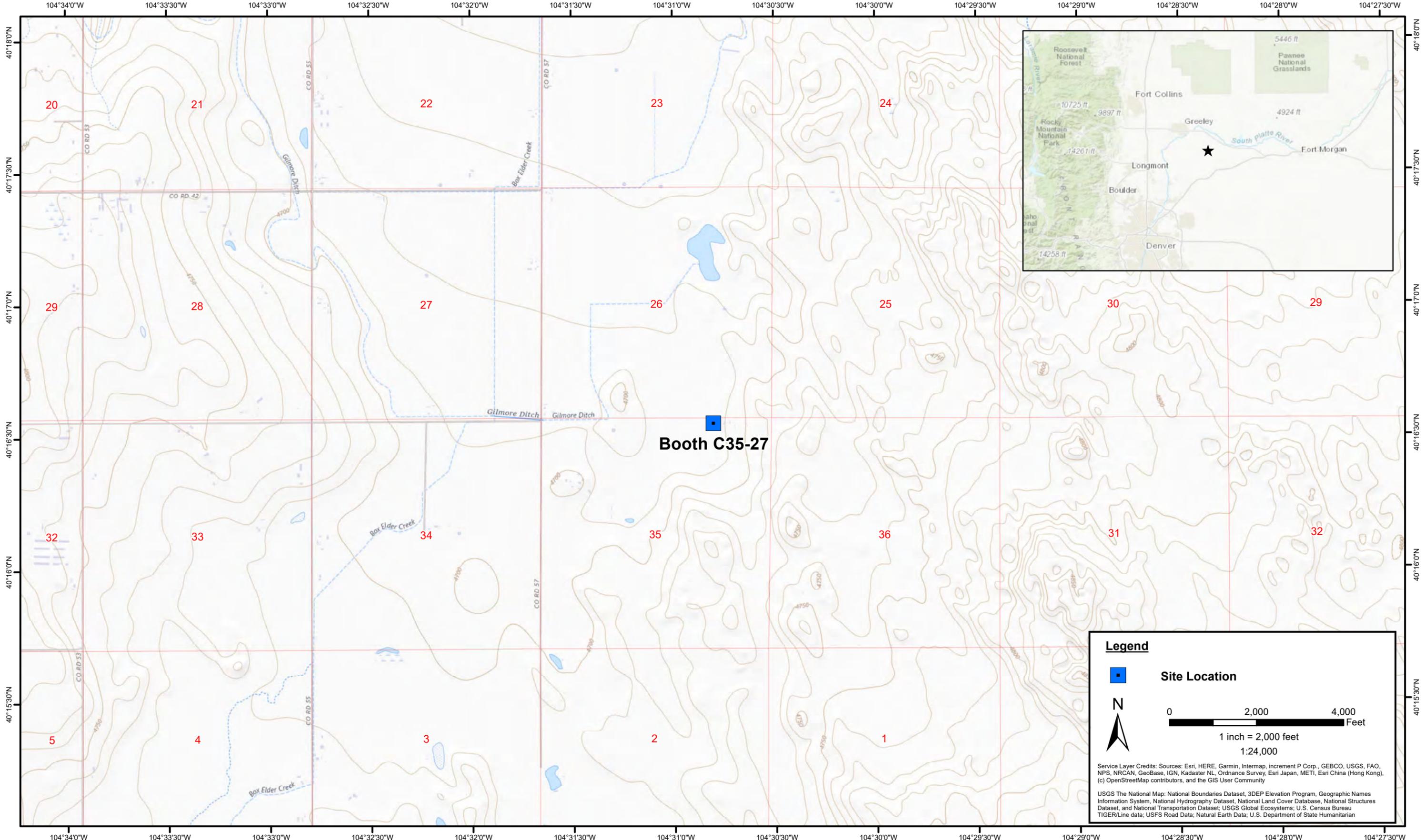
ECMC = Energy and Carbon Management Commission
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 SAR = Sodium Adsorption Ratio
 EC = Electrical Conductivity
 mmhos/cm = Millimhos per centimeter
 mg/L = Milligrams per liter

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

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

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

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



Legend

 **Site Location**

 N

 0 2,000 4,000 Feet

1 inch = 2,000 feet
1:24,000

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian

DATE:	July 2023
DESIGNED BY:	J. Whritenour
DRAWN BY:	L. Reed



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

Noble Energy, Inc - DJ Basin
Booth C35-27
NENE Sec. 35-T4N-R64W
Weld County, Colorado

Site Location Map

Figure
1



Legend

- Excavation Extent (Collected via Trimble GPS)
- ⊕ Soil Sample Location – Field Screen (Collected via Trimble GPS)
- ⊕ Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

Notes

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.
- 3) Analytical results below laboratory detection limits or within compliance of ECMC Table 915-1 not shown.
- 4) Concentration in exceedance of ECMC table 915-1 soil standards indicated in **RED**.

GPS – Global Positioning System
 mg/kg – Milligrams per kilogram
 PID – Photoionization Detector
 ppm – parts per million
 Benz(a) – Benzo(a)anthracene

0 ft. 30 ft. 60 ft.

Image Source: Google Earth; Google 2020

DATE: 10/24/2023

DESIGNED BY: JW

DRAWN BY: AE



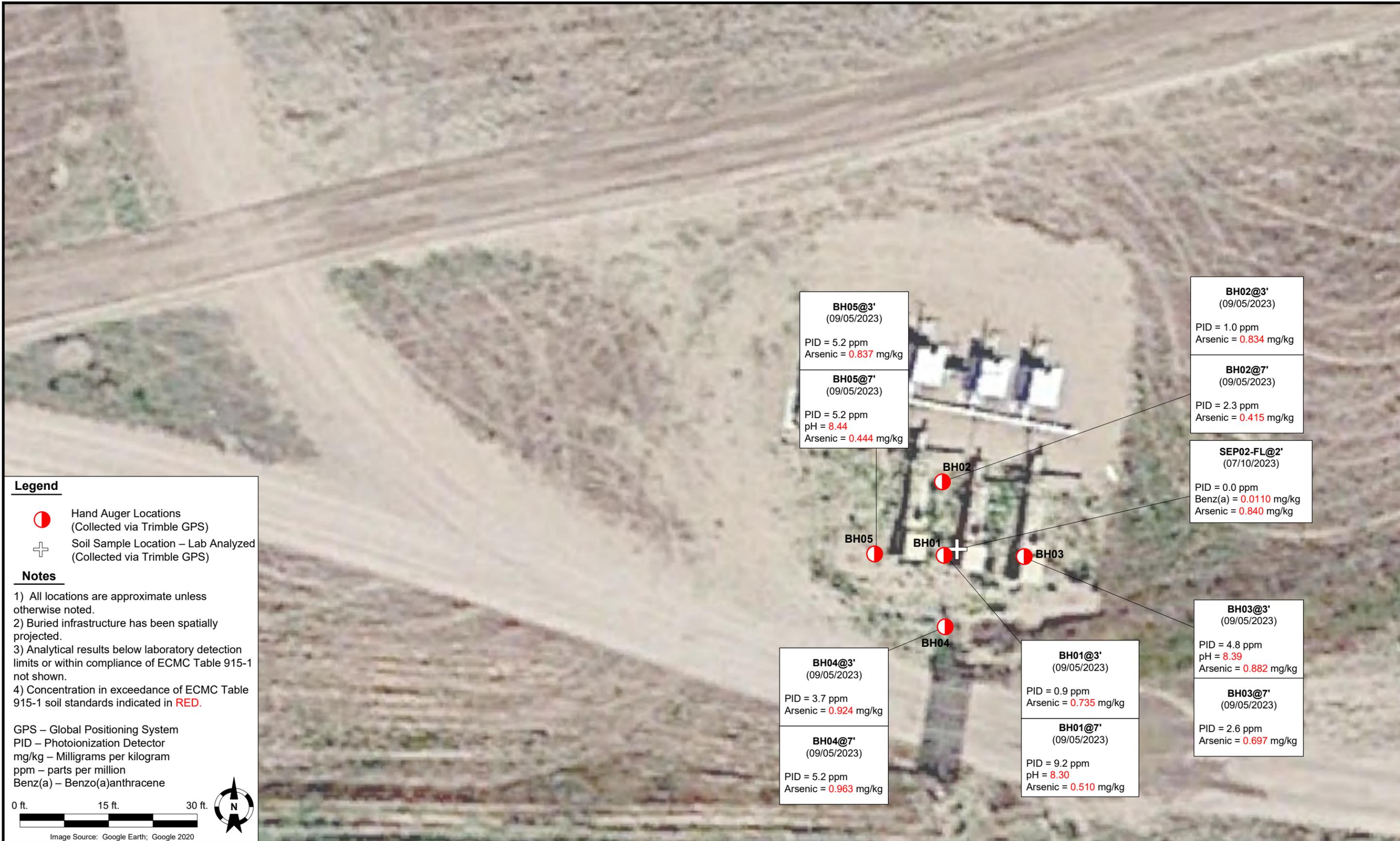
TASMAN
 GEOSCIENCES

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

Noble Energy, Inc. – DJ Basin
Booth C35-27
 NENE, Section 35, Township 4 North, Range 64 West
 Weld County, Colorado

Tank Battery Closure & Soil
 Analytical Results Map
 (07/10/2023)

FIGURE
 2



BH05@3'
(09/05/2023)
PID = 5.2 ppm
Arsenic = **0.837** mg/kg

BH05@7'
(09/05/2023)
PID = 5.2 ppm
pH = **8.44**
Arsenic = **0.444** mg/kg

BH02@3'
(09/05/2023)
PID = 1.0 ppm
Arsenic = **0.834** mg/kg

BH02@7'
(09/05/2023)
PID = 2.3 ppm
Arsenic = **0.415** mg/kg

SEP02-FL@2'
(07/10/2023)
PID = 0.0 ppm
Benz(a) = **0.0110** mg/kg
Arsenic = **0.840** mg/kg

BH04@3'
(09/05/2023)
PID = 3.7 ppm
Arsenic = **0.924** mg/kg

BH04@7'
(09/05/2023)
PID = 5.2 ppm
Arsenic = **0.963** mg/kg

BH01@3'
(09/05/2023)
PID = 0.9 ppm
Arsenic = **0.735** mg/kg

BH01@7'
(09/05/2023)
PID = 9.2 ppm
pH = **8.30**
Arsenic = **0.510** mg/kg

BH03@3'
(09/05/2023)
PID = 4.8 ppm
pH = **8.39**
Arsenic = **0.882** mg/kg

BH03@7'
(09/05/2023)
PID = 2.6 ppm
Arsenic = **0.697** mg/kg

DATE:	10/20/2023
DESIGNED BY:	JW
DRAWN BY:	AE

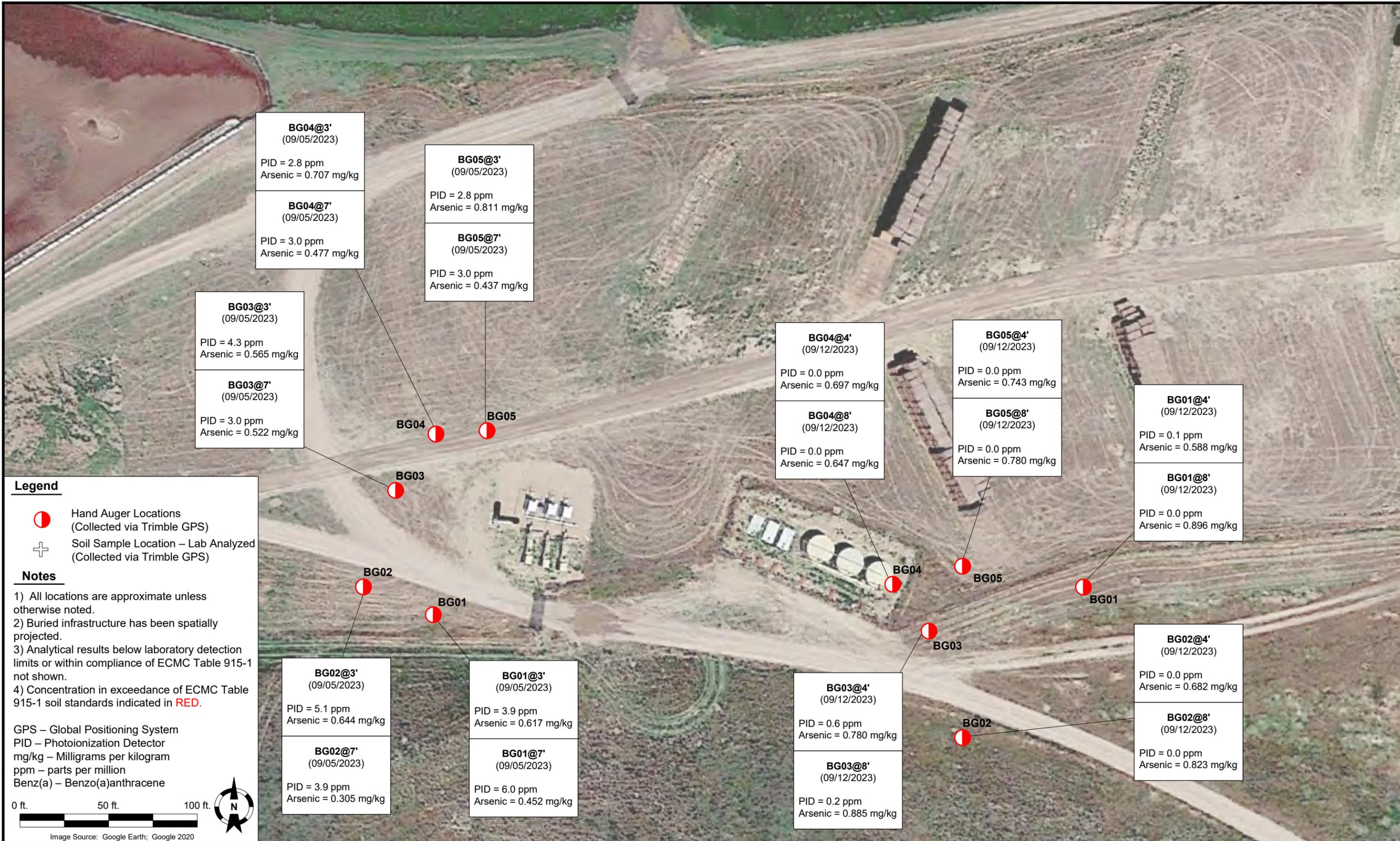
TASMAN
GEOSCIENCES

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6855 W 119th Avenue
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Booth C35-27 Tank Battery
 NENE, Section 35, Township 4 North, Range 64 West
 Weld County, Colorado

Hand Auger Analytical
 Results Map
 (07/10/2023 & 09/05/2023)

Figure 3



DATE:	10/20/2023
DESIGNED BY:	JW
DRAWN BY:	AE

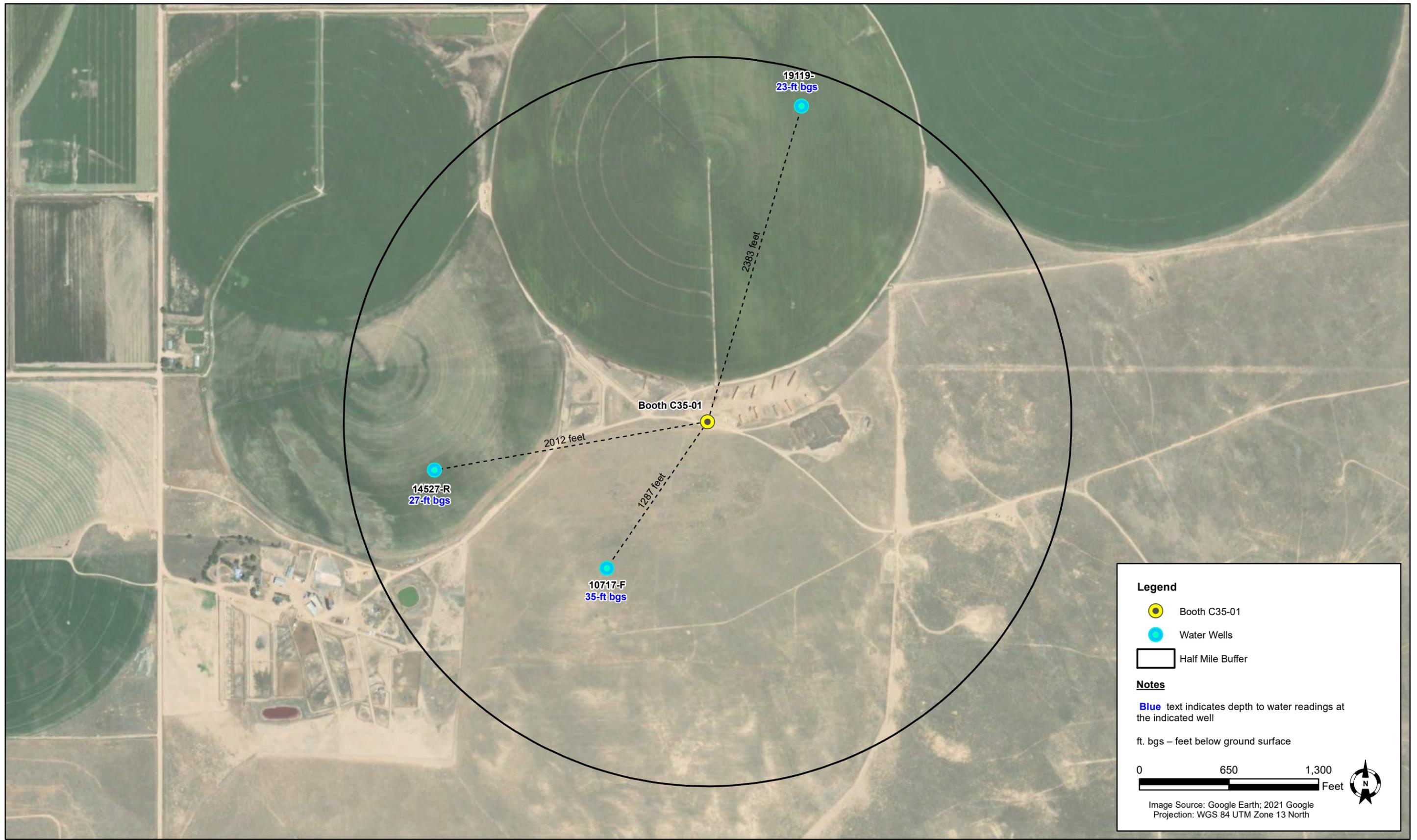
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GEOSCIENCES

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6855 W 119th Avenue
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Booth C35-27 Tank Battery
 NENE, Section 35, Township 4 North, Range 64 West
 Weld County, Colorado

Background Analytical
 Results Map
 (09/05/2023 & 09/12/2023)

Figure 4



Legend

- Booth C35-01
- Water Wells
- Half Mile Buffer

Notes

Blue text indicates depth to water readings at the indicated well

ft. bgs – feet below ground surface

0 650 1,300
 Feet

Image Source: Google Earth; 2021 Google
 Projection: WGS 84 UTM Zone 13 North

DATE:	August 2023
DESIGNED BY:	JW
DRAWN BY:	JC

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

Noble Energy, Inc. – DJ Basin
Booth C35-01 FL
 NENE, Section 35, Township 4 North, Range 64 West
 Weld County, Colorado

WATER WELL INVESTIGATION
 LOCATION MAP

Figure
 5

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 14, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

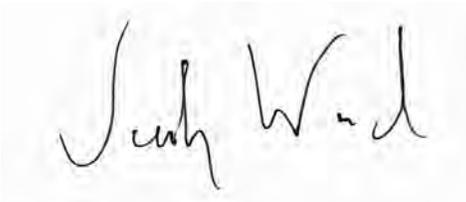
Broomfield, CO 80020

RE: Noble - Booth C35-27, Booth C35-01

Work Order #2309049

Enclosed are the results of analyses for samples received by Summit Scientific on 09/05/23 17:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and "W".

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@3'	2309049-01	Soil	09/05/23 10:31	09/05/23 17:18
BH01@7'	2309049-02	Soil	09/05/23 12:08	09/05/23 17:18
BH02@3'	2309049-03	Soil	09/05/23 10:34	09/05/23 17:18
BH02@7'	2309049-04	Soil	09/05/23 12:08	09/05/23 17:18
BH03@3'	2309049-05	Soil	09/05/23 10:50	09/05/23 17:18
BH03@7'	2309049-06	Soil	09/05/23 12:20	09/05/23 17:18
BH04@3'	2309049-07	Soil	09/05/23 10:47	09/05/23 17:18
BH04@7'	2309049-08	Soil	09/05/23 12:19	09/05/23 17:18
BH05@3'	2309049-09	Soil	09/05/23 11:04	09/05/23 17:18
BH05@7'	2309049-10	Soil	09/05/23 12:30	09/05/23 17:18
BG01@3'	2309049-11	Soil	09/05/23 11:04	09/05/23 17:18
BG01@7'	2309049-12	Soil	09/05/23 12:29	09/05/23 17:18
BG02@3'	2309049-13	Soil	09/05/23 11:19	09/05/23 17:18
BG02@7'	2309049-14	Soil	09/05/23 12:48	09/05/23 17:18
BG03@3'	2309049-15	Soil	09/05/23 11:26	09/05/23 17:18
BG03@7'	2309049-16	Soil	09/05/23 12:46	09/05/23 17:18
BG04@3'	2309049-17	Soil	09/05/23 11:41	09/05/23 17:18
BG04@7'	2309049-18	Soil	09/05/23 12:57	09/05/23 17:18
BG05@3'	2309049-19	Soil	09/05/23 11:37	09/05/23 17:18
BG05@7'	2309049-20	Soil	09/05/23 12:57	09/05/23 17:18

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.

Client: Noble/Tasman		Project Manager: Jake Whritenour		Company:	
Address: 6855 W. 119th Ave.		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location: Booth C35-27/Booth C35-01	
City/State/Zip: Broomfield/CO/ 80020				AFE#	
Phone: 937-554-5108		Project Name: Booth C35-27, Booth C35-01		PO/Billing Codes:	
Sampler Name: Molly Parks		Project Number:		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS	HOLD	Arsenic	
1	BH0K@3'	9-5-23	1031	2			X			X				X	X	X	X	X		X	SAR, EC, pH by saturated paste	
2	BH01@7'		1208																			
3	BH02@3'		1034																			
4	BH02@7'		1208																			
5	BH03@3'		1050																			
6	BH03@7'		1220																			
7	BH04@3'		1047																			
8	BH04@7'		1219																			
9	BH05@3'		1104																			
10	BH05@7'		1230																			
11																						
12																						
13																						
14																						
15																						

Relinquished by: MP	Date/Time: 9-5-23 1500	Received by: Tasman Lock Box	Date/Time: 9-5-23/1500	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 9-5-23 1718	Received by:	Date/Time: 9-5-23 1718	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 94	Corrected Temperature:	IR gun #: 1	HNO3 lot #:	Standard	X Field Turb.	

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2309049

Client: Noble Fraszman Client Project ID: Booth C35, 27, Booth C3501

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

[] [] [] []

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

Temp (°C) 24 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.	-			WJCE
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)	-			
Is the COC properly relinquished by the client w/ date and time recorded? (1)	-			
Were all samples received intact? (1)	✓			
Was adequate sample volume provided? (1)	✓			
Does the COC agree with the number and type of sample bottles received? (1)	✓			
Do the sample IDs on the bottle labels match the COC? (1)	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are 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.				

AS
Custodian Printed Name

9/5/23
Date/Time

4444



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@3'
2309049-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 10:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0327	81.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0358	89.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.9	111 %		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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@3'
2309049-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00523	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00534	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00775	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00714	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0209	62.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.359	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 10:31**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@3'
2309049-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.735	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	91.3	0.0553	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	7.36	0.0553	"	"	"	"	"	"	
Sodium	6.06	0.0553	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.164	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.5		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.248	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 10:31**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@3'
2309049-01 (Soil)

Summit Scientific

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

pH	8.21	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@7'
2309049-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0263	65.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.6	101 %		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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@7'
2309049-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	54.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0159	47.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0682	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:08**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH01@7'
2309049-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.510	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.2	0.0529	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	9.74	0.0529	"	"	"	"	"	"	
Sodium	3.63	0.0529	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.173	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.204	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 12:08**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH01@7'
2309049-02 (Soil)

Summit Scientific

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

pH	8.30	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@3'
2309049-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.9	111 %	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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@3'
2309049-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.291	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 10:34**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@3'
2309049-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.834	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.9	0.0546	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	7.69	0.0546	"	"	"	"	"	"	
Sodium	2.00	0.0546	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0760	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.303	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 10:34**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH02@3'
2309049-03 (Soil)

Summit Scientific

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

pH	7.92	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@7'
2309049-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0335	83.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.9	111 %	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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@7'
2309049-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0731	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:08**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH02@7'
2309049-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.415	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	18.6	0.0535	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	7.16	0.0535	"	"	"	"	"	"	
Sodium	1.50	0.0535	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0749	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.211	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 12:08**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH02@7'
2309049-04 (Soil)

Summit Scientific

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

pH	8.18	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@3'
2309049-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0310	77.6 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.0 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	13.6	108 %	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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@3'
2309049-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0163	48.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0173	51.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0560	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@3'
2309049-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.882	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.9	0.0536	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	4.89	0.0536	"	"	"	"	"	"	
Sodium	1.87	0.0536	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0616	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.3		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH03@3'
2309049-05 (Soil)

Summit Scientific

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

pH	8.39	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@7'
2309049-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0266	66.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.2	114 %		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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@7'
2309049-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0263	79.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0251	75.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0456	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH03@7'
2309049-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.697	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.8	0.0550	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	6.74	0.0550	"	"	"	"	"	"	
Sodium	7.50	0.0550	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.371	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.202	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH03@7'
2309049-06 (Soil)

Summit Scientific

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

pH	8.15	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@3'
2309049-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0368	92.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@3'
2309049-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/12/23	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: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0173	51.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.221	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 10:47**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@3'
2309049-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.924	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	89.1	0.0548	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	25.6	0.0548	"	"	"	"	"	"	
Sodium	4.71	0.0548	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.113	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.3		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.872	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 10:47**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH04@3'
2309049-07 (Soil)

Summit Scientific

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

pH	7.77	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@7'
2309049-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 12:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0290	72.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 12:19**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@7'
2309049-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/13/23	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: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0136	40.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0904	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:19**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH04@7'
2309049-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.963	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.0	0.0525	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	17.3	0.0525	"	"	"	"	"	"	
Sodium	4.50	0.0525	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.166	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 12:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.405	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 12:19**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH04@7'
2309049-08 (Soil)

Summit Scientific

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

pH	8.08	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@3'
2309049-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0306	76.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0368	92.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.6	109 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@3'
2309049-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/13/23	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: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0213	63.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0623	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:04**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@3'
2309049-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.837	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.7	0.0555	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	6.20	0.0555	"	"	"	"	"	"	
Sodium	1.91	0.0555	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0917	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.1		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.190	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 11:04**

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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH05@3'
2309049-09 (Soil)

Summit Scientific

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

pH	8.12	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@7'
2309049-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0118	09/06/23	09/07/23	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: **09/05/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0369	92.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0124	09/06/23	09/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.9	112 %		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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@7'
2309049-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0280	09/12/23	09/13/23	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: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0623	0.0100	mg/L	1	BGI0100	09/06/23	09/07/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BH05@7'
2309049-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.444	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.8	0.0533	mg/L dry	1	BGI0134	09/06/23	09/08/23	EPA 6020B	
Magnesium	8.16	0.0533	"	"	"	"	"	"	
Sodium	3.14	0.0533	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.163	0.00100	units	1	BGI0212	09/08/23	09/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.8		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/05/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BGI0150	09/07/23	09/07/23	EPA 120.1	

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

Date Sampled: **09/05/23 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 - Booth C35-27, Booth C35-01

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/14/23 15:10

BH05@7'
2309049-10 (Soil)

Summit Scientific

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

pH	8.44	pH Units	1	BGI0151	09/07/23	09/07/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG01@3'
2309049-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.617	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.8		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG01@7'
2309049-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:29**

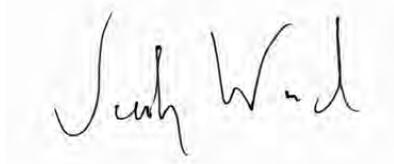
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.452	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:29**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.8		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG02@3'
2309049-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:19**

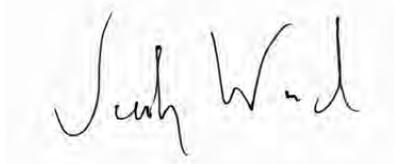
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.644	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.8		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG02@7'
2309049-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.305	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	98.1		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG03@3'
2309049-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:26**

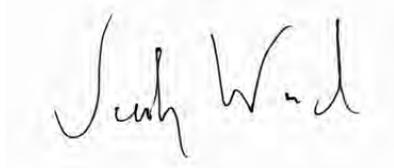
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.565	0.200		mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	94.0			%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG03@7'
2309049-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:46**

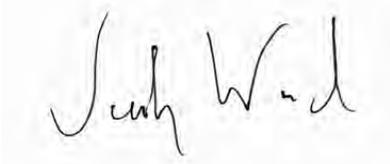
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.522	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.2		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG04@3'
2309049-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:41**

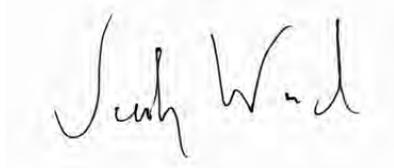
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.707	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.0		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG04@7'
2309049-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:57**

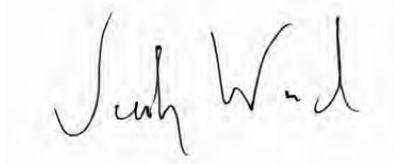
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.477	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.0		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG05@3'
2309049-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.811	0.200		mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	95.1			%	1	BGI0122	09/06/23	09/06/23	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 - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

BG05@7'
2309049-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/05/23 12:57**

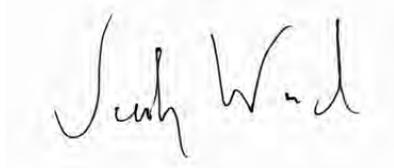
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.437	0.200	mg/kg dry	1	BGI0119	09/06/23	09/07/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/05/23 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.0		%	1	BGI0122	09/06/23	09/06/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGI0118 - EPA 5030 Soil MS

Blank (BGI0118-BLK1)

Prepared & Analyzed: 09/06/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0252		"	0.0400		62.9	50-150				
<i>Surrogate: Toluene-d8</i>	0.0423		"	0.0400		106	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0382		"	0.0400		95.5	50-150				

LCS (BGI0118-BS1)

Prepared & Analyzed: 09/06/23

Benzene	0.116	0.0020	mg/kg	0.100		116	70-130				
Toluene	0.116	0.0050	"	0.100		116	70-130				
Ethylbenzene	0.130	0.0050	"	0.100		130	70-130				
m,p-Xylene	0.249	0.010	"	0.200		124	70-130				
o-Xylene	0.113	0.0050	"	0.100		113	70-130				
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.100		121	70-130				
1,3,5-Trimethylbenzene	0.124	0.0050	"	0.100		124	70-130				
Naphthalene	0.0731	0.0038	"	0.100		73.1	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0275		"	0.0400		68.8	50-150				
<i>Surrogate: Toluene-d8</i>	0.0388		"	0.0400		97.0	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0384		"	0.0400		96.0	50-150				

Matrix Spike (BGI0118-MS1)

Source: 2309027-01

Prepared & Analyzed: 09/06/23

Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130				
Toluene	0.0996	0.0050	"	0.100	ND	99.6	70-130				
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130				
m,p-Xylene	0.192	0.010	"	0.200	ND	95.9	70-130				
o-Xylene	0.0895	0.0050	"	0.100	ND	89.5	70-130				
1,2,4-Trimethylbenzene	0.0880	0.0050	"	0.100	ND	88.0	70-130				
1,3,5-Trimethylbenzene	0.0954	0.0050	"	0.100	ND	95.4	70-130				
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0351		"	0.0400		87.7	50-150				
<i>Surrogate: Toluene-d8</i>	0.0418		"	0.0400		105	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0359		"	0.0400		89.7	50-150				

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGI0118 - EPA 5030 Soil MS

Matrix Spike Dup (BGI0118-MSD1)	Source: 2309027-01			Prepared & Analyzed: 09/06/23						
Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130	1.52	30	
Toluene	0.0941	0.0050	"	0.100	ND	94.1	70-130	5.67	30	
Ethylbenzene	0.0934	0.0050	"	0.100	ND	93.4	70-130	7.84	30	
m,p-Xylene	0.231	0.010	"	0.200	ND	115	70-130	18.4	30	
o-Xylene	0.108	0.0050	"	0.100	ND	108	70-130	18.6	30	
1,2,4-Trimethylbenzene	0.0970	0.0050	"	0.100	ND	97.0	70-130	9.76	30	
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130	22.5	30	
Naphthalene	0.100	0.0038	"	0.100	ND	100	70-130	7.33	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0318</i>		<i>"</i>	<i>0.0400</i>		<i>79.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0237</i>		<i>"</i>	<i>0.0400</i>		<i>59.3</i>	<i>50-150</i>			

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGI0124 - EPA 3550A

Blank (BGI0124-BLK1)

Prepared & Analyzed: 09/06/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5	109	30-150				

LCS (BGI0124-BS1)

Prepared & Analyzed: 09/06/23

C10-C28 (DRO)	525	50	mg/kg	500	105	70-130				
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.5	102	30-150				

Matrix Spike (BGI0124-MS1)

Source: 2309027-01

Prepared & Analyzed: 09/06/23

C10-C28 (DRO)	411	50	mg/kg	500	11.3	79.9	70-130			
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5	91.9	30-150				

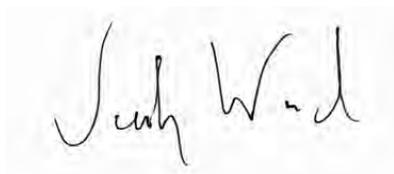
Matrix Spike Dup (BGI0124-MSD1)

Source: 2309027-01

Prepared & Analyzed: 09/06/23

C10-C28 (DRO)	426	50	mg/kg	500	11.3	82.9	70-130	3.69	20	
Surrogate: <i>o</i> -Terphenyl	12.7		"	12.5	101	30-150				

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0280 - EPA 5030 Soil MS

Blank (BGI0280-BLK1)

Prepared & Analyzed: 09/12/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0257</i>		"	<i>0.0333</i>		<i>77.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0315</i>		"	<i>0.0333</i>		<i>94.6</i>	<i>40-150</i>			

LCS (BGI0280-BS1)

Prepared & Analyzed: 09/12/23

Acenaphthene	0.0290	0.00500	mg/kg	0.0333		87.1	31-137			
Anthracene	0.0302	0.00500	"	0.0333		90.7	30-120			
Benzo (a) anthracene	0.0279	0.00500	"	0.0333		83.8	30-120			
Benzo (a) pyrene	0.0292	0.00500	"	0.0333		87.6	30-120			
Benzo (b) fluoranthene	0.0290	0.00500	"	0.0333		87.1	30-120			
Benzo (k) fluoranthene	0.0310	0.00500	"	0.0333		92.9	30-120			
Chrysene	0.0303	0.00500	"	0.0333		90.8	30-120			
Dibenz (a,h) anthracene	0.0123	0.00500	"	0.0333		36.9	30-120			
Fluoranthene	0.0295	0.00500	"	0.0333		88.6	30-120			
Fluorene	0.0293	0.00500	"	0.0333		87.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0216	0.00500	"	0.0333		64.8	30-120			
Pyrene	0.0280	0.00500	"	0.0333		84.0	35-142			
1-Methylnaphthalene	0.0268	0.00500	"	0.0333		80.4	35-142			
2-Methylnaphthalene	0.0310	0.00500	"	0.0333		92.9	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0279</i>		"	<i>0.0333</i>		<i>83.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		"	<i>0.0333</i>		<i>90.4</i>	<i>40-150</i>			

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0280 - EPA 5030 Soil MS

Matrix Spike (BGI0280-MS1)	Source: 2309005-01			Prepared & Analyzed: 09/12/23								
Acenaphthene	0.0181	0.00500	mg/kg	0.0333	ND	54.2	31-137					
Anthracene	0.0197	0.00500	"	0.0333	ND	59.0	30-120					
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	ND	56.5	30-120					
Benzo (a) pyrene	0.0172	0.00500	"	0.0333	ND	51.7	30-120					
Benzo (b) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.5	30-120					
Benzo (k) fluoranthene	0.0192	0.00500	"	0.0333	ND	57.5	30-120					
Chrysene	0.0184	0.00500	"	0.0333	ND	55.2	30-120					
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	57.0	30-120					
Fluoranthene	0.0187	0.00500	"	0.0333	ND	56.1	30-120					
Fluorene	0.0208	0.00500	"	0.0333	ND	62.4	30-120					
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	45.1	30-120					
Pyrene	0.0158	0.00500	"	0.0333	ND	47.4	35-142					
1-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.9	15-130					
2-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.1	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0214</i>		<i>"</i>	<i>0.0333</i>		<i>64.3</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0193</i>		<i>"</i>	<i>0.0333</i>		<i>58.0</i>	<i>40-150</i>					

Matrix Spike Dup (BGI0280-MSD1)	Source: 2309005-01			Prepared & Analyzed: 09/12/23								
Acenaphthene	0.0175	0.00500	mg/kg	0.0333	ND	52.5	31-137	3.04	30			
Anthracene	0.0159	0.00500	"	0.0333	ND	47.8	30-120	21.1	30			
Benzo (a) anthracene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	6.43	30			
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.8	30-120	2.09	30			
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120	2.01	30			
Benzo (k) fluoranthene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	0.852	30			
Chrysene	0.0181	0.00500	"	0.0333	ND	54.2	30-120	1.89	30			
Dibenz (a,h) anthracene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	11.8	30			
Fluoranthene	0.0176	0.00500	"	0.0333	ND	52.9	30-120	5.82	30			
Fluorene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	12.5	30			
Indeno (1,2,3-cd) pyrene	0.0202	0.00500	"	0.0333	ND	60.7	30-120	29.6	30			
Pyrene	0.0165	0.00500	"	0.0333	ND	49.4	35-142	4.02	30			
1-Methylnaphthalene	0.0190	0.00500	"	0.0333	ND	57.0	15-130	3.25	50			
2-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.9	15-130	23.4	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0178</i>		<i>"</i>	<i>0.0333</i>		<i>53.3</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0180</i>		<i>"</i>	<i>0.0333</i>		<i>54.0</i>	<i>40-150</i>					

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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

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

Batch BGI0100 - EPA 3050B

Blank (BGI0100-BLK1)

Prepared: 09/06/23 Analyzed: 09/07/23

Boron ND 0.0100 mg/L

LCS (BGI0100-BS1)

Prepared: 09/06/23 Analyzed: 09/07/23

Boron 4.71 0.0100 mg/L 5.00 94.2 80-120

Duplicate (BGI0100-DUP1)

Source: 2309033-01

Prepared: 09/06/23 Analyzed: 09/07/23

Boron 0.298 0.0100 mg/L 0.210 34.4 20 QR-04

Matrix Spike (BGI0100-MS1)

Source: 2309033-01

Prepared: 09/06/23 Analyzed: 09/07/23

Boron 4.83 0.0100 mg/L 5.00 0.210 92.4 75-125

Matrix Spike Dup (BGI0100-MSD1)

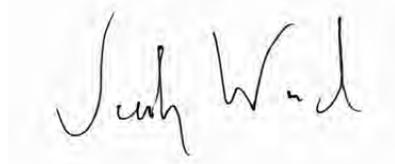
Source: 2309033-01

Prepared: 09/06/23 Analyzed: 09/07/23

Boron 4.96 0.0100 mg/L 5.00 0.210 95.0 75-125 2.59 25

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGI0119 - EPA 3050B

Blank (BGI0119-BLK1)

Prepared: 09/06/23 Analyzed: 09/07/23

Arsenic ND 0.200 mg/kg wet

LCS (BGI0119-BS1)

Prepared: 09/06/23 Analyzed: 09/07/23

Arsenic 4.44 0.200 mg/kg wet 4.00 111 80-120

Duplicate (BGI0119-DUP1)

Source: 2309049-01

Prepared: 09/06/23 Analyzed: 09/07/23

Arsenic 0.729 0.200 mg/kg dry 0.735 0.785 20

Matrix Spike (BGI0119-MS1)

Source: 2309049-01

Prepared: 09/06/23 Analyzed: 09/07/23

Arsenic 2.50 0.200 mg/kg dry 4.42 0.735 39.9 75-125 QM-01

Matrix Spike Dup (BGI0119-MSD1)

Source: 2309049-01

Prepared: 09/06/23 Analyzed: 09/07/23

Arsenic 2.43 0.200 mg/kg dry 4.42 0.735 38.4 75-125 2.62 25 QM-01

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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

Summit Scientific

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

Batch BGI0134 - General Preparation

Blank (BGI0134-BLK1)

Prepared: 09/06/23 Analyzed: 09/08/23

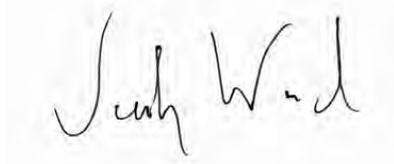
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGI0134-BS1)

Prepared: 09/06/23 Analyzed: 09/08/23

Calcium	4.58	0.0500	mg/L wet	5.00	91.7	70-130				
Magnesium	4.76	0.0500	"	5.00	95.2	70-130				
Sodium	4.49	0.0500	"	5.00	89.9	70-130				

Summit Scientific



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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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

Summit Scientific

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

Batch BGI0122 - General Preparation

Duplicate (BGI0122-DUP1)

Source: 2309049-01

Prepared & Analyzed: 09/06/23

% Solids	90.5	%		90.5		0.0516	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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

Summit Scientific

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

Batch BGI0150 - General Preparation

Blank (BGI0150-BLK1)

Prepared & Analyzed: 09/07/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGI0150-BS1)

Prepared & Analyzed: 09/07/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BGI0150-DUP1)

Source: 2309044-01

Prepared & Analyzed: 09/07/23

Specific Conductance (EC) 4.27 0.0100 mmhos/cm 4.27 0.0703 20

Summit Scientific

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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

Summit Scientific

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

Batch BGI0151 - General Preparation

LCS (BGI0151-BS1)

Prepared & Analyzed: 09/07/23

pH 9.06 pH Units 9.18 98.7 95-105

Duplicate (BGI0151-DUP1)

Source: 2309044-01

Prepared & Analyzed: 09/07/23

pH 7.89 pH Units 7.89 0.00 20

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

Project: Noble - Booth C35-27, Booth C35-01

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/14/23 15:10

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-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- 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

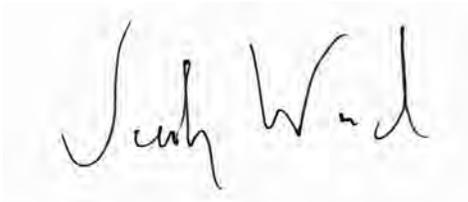
303.277.9310

September 20, 2023

Jacob Whritenour
Tasman Geosciences
6855 W. 119th Ave.
Broomfield, CO 80020
RE: Noble - Booth C35-01
Work Order #2309192

Enclosed are the results of analyses for samples received by Summit Scientific on 09/12/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and 'W'.

Jacob Wood For Paul Shrewsbury
President



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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN

Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH06@4'	2309192-01	Soil	09/12/23 09:30	09/12/23 16:30
BH06@8'	2309192-02	Soil	09/12/23 10:20	09/12/23 16:30
BH07@4'	2309192-03	Soil	09/12/23 09:40	09/12/23 16:30
BH07@8'	2309192-04	Soil	09/12/23 10:30	09/12/23 16:30
BH08@4'	2309192-05	Soil	09/12/23 09:50	09/12/23 16:30
BH08@8'	2309192-06	Soil	09/12/23 10:40	09/12/23 16:30
BH09@4'	2309192-07	Soil	09/12/23 10:00	09/12/23 16:30
BH09@8'	2309192-08	Soil	09/12/23 10:50	09/12/23 16:30
BH10@4'	2309192-09	Soil	09/12/23 10:10	09/12/23 16:30
BH10@8'	2309192-10	Soil	09/12/23 11:00	09/12/23 16:30
BG01@4'	2309192-11	Soil	09/12/23 11:30	09/12/23 16:30
BG01@8'	2309192-12	Soil	09/12/23 12:20	09/12/23 16:30
BG02@4'	2309192-13	Soil	09/12/23 11:40	09/12/23 16:30
BG02@8'	2309192-14	Soil	09/12/23 12:30	09/12/23 16:30
BG03@4'	2309192-15	Soil	09/12/23 11:50	09/12/23 16:30
BG03@8'	2309192-16	Soil	09/12/23 12:40	09/12/23 16:30
BG04@4'	2309192-17	Soil	09/12/23 12:00	09/12/23 16:30
BG04@8'	2309192-18	Soil	09/12/23 12:50	09/12/23 16:30
BG05@4'	2309192-19	Soil	09/12/23 12:10	09/12/23 16:30
BG05@8'	2309192-20	Soil	09/12/23 13:00	09/12/23 16:30

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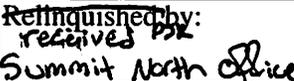
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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 2
2309192-1	

Send Data To:		Send Invoice To:	
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: <u>Chevron</u>	
Address: 6855 W. 119th Ave.	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: <u>Booth C35-01</u>	
City/State/Zip: Broomfield/CO/ 80020		AFE#:	
Phone: 970-402-0946	Project Name: <u>Booth C35-01</u>	PO/Billing Codes:	
Sampler Name: Patrick Kline	Project Number:	Contact: <u>Miguel Barron</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD		Arsenic
1	BH06C4'	9/12/23	0930	2			2			X				X	X	X	X	X	X	X	SAR, EC, pH by saturated paste
2	BH06E8'		1020																		
3	BH07C4'		0940																		
4	BH07E8'		1030																		
5	BH08C4'		0950																		
6	BH08E8'		1040																		
7	BH09C4'		1000																		
8	BH09E8'		1050																		
9	BH10C4'		1010																		
10	BH0E8'		1100																		
11	B601C4'		1130	1			1														
12	B601E8'		1220																		
13	B602C4'		1140																		
14	B602E8'		1230																		
15	B603C4'		1150																		

Relinquished by: 	Date/Time: 9/12/23 1545	Relinquished by: 	Date/Time: 9/12/23 1545	TAT Business Days	Field DO	Notes:
		received by: Summit North office		Same Day	Field EC	
Relinquished by: S2	Date/Time: 9/12/23 1630	Received by: 	Date/Time: 9/12/23 1630	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: 17.3	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:			

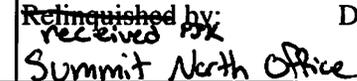
SUMMIT SCIENTIFIC

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

Lab ID	Page 2 of 2
2309192-2	

Send Data To:		Send Invoice To:	
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: Chevron	
Address: 6855 W. 119th Ave.	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Booth C35-01	
City/State/Zip: Broomfield/CO/ 80020		AFE#:	
Phone: 970-402-0946	Project Name: Booth C35-01	PO/Billing Codes:	
Sampler Name: Patrick Kline	Project Number:	Contact: Miguel Barron	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD	Arsenic	
1	B603e8'	9/12/23	1240	1			1				X										SAR, EC, pH by saturated paste	
2	B604e4'	I	1200	I			I				I											
3	B604e8'	I	1250	I			I				I											
4	B605e4'	I	1210	I			I				I											
5	B605e8'	I	1300	I			I				I											
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: 	Date/Time: 9/12/23 1545	Relinquished by: 	Date/Time: 9/12/23 1545	TAT Business Days	Field DO	Notes:
Relinquished by: SZ	Date/Time: 9/12/23 1630	Received by: 	Date/Time: 9/12/23 1630	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X Field Turb.	
Temperature Upon Receipt: 17.3	Corrected Temperature: 	IR gun #: 1	HNO3 lot #:			

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2309192

Client: Noble/Tarman Client Project ID: Booth C35-01

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

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

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BM-ZCE
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Josh
Custodian Printed Name

09-12-23
Date/Time

11/13



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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@4'
2309192-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0356	09/13/23	09/13/23	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: **09/12/23 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0435	109 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0421	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.9	103 %		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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@4'
2309192-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10440	09/15/23	09/16/23	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	0.00898	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00703	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0152	45.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.240	0.0100	mg/L	1	BG10412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@4'
2309192-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.768	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	86.1	0.0532	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	18.6	0.0532	"	"	"	"	"	"	
Sodium	18.7	0.0532	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.477	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.748	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@4'
2309192-01 (Soil)

Summit Scientific

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

pH	7.90	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@8'
2309192-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/13/23	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: **09/12/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0426	106 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.9	103 %	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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@8'
2309192-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10440	09/15/23	09/16/23	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: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0177	53.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.228	0.0100	mg/L	1	BG10412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 10:20**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@8'
2309192-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.12	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.8	0.0526	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	15.3	0.0526	"	"	"	"	"	"	
Sodium	27.8	0.0526	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.07	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.1		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.468	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 10:20**

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 - Booth C35-01

Project Number: UWRWE-A3162-ABN

Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH06@8'
2309192-02 (Soil)

Summit Scientific

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

pH	8.22	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@4'
2309192-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/13/23	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: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.2	106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@4'
2309192-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0440	09/15/23	09/16/23	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: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0200	59.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0188	56.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.317	0.0100	mg/L	1	BGI0412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 09:40**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@4'
2309192-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.632	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.1	0.0595	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	4.23	0.0595	"	"	"	"	"	"	
Sodium	2.94	0.0595	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.153	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.163	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A3162-ABN
 Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

BH07@4'
2309192-03 (Soil)

Summit Scientific

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

pH	7.96	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@8'
2309192-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/13/23	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: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0457	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.7	109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@8'
2309192-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0440	09/15/23	09/16/23	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: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0281	84.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.248	0.0100	mg/L	1	BGI0412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@8'
2309192-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.733	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.2	0.0513	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	13.7	0.0513	"	"	"	"	"	"	
Sodium	4.97	0.0513	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.198	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.6		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.338	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH07@8'
2309192-04 (Soil)

Summit Scientific

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

pH	7.49	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@4'
2309192-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/13/23	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: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0468	117 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	99.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.6	109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@4'
2309192-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10440	09/15/23	09/16/23	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: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0174	52.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.217	0.0100	mg/L	1	BG10412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 09:50**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@4'
2309192-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.828	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	216	0.0524	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	26.3	0.0524	"	"	"	"	"	"	
Sodium	8.91	0.0524	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.152	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.4		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.39	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 09:50**

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 - Booth C35-01

Project Number: UWRWE-A3162-ABN
 Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

BH08@4'
2309192-05 (Soil)

Summit Scientific

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

pH	7.68	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@8'
2309192-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0356	09/13/23	09/14/23	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: **09/12/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0430	108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0421	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.6	109 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@8'
2309192-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0481	09/18/23	09/18/23	EPA 8270D SIM	
Anthracene	0.0196	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0247	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0148	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0274	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00997	0.00500	"	"	"	"	"	"	
Chrysene	0.0273	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0822	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0120	0.00500	"	"	"	"	"	"	
Pyrene	0.0506	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0302	90.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0449	0.0100	mg/L	1	BGI0412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@8'
2309192-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.08	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	51.4	0.0524	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	30.6	0.0524	"	"	"	"	"	"	
Sodium	44.0	0.0524	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.20	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.4		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.782	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH08@8'
2309192-06 (Soil)

Summit Scientific

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

pH	8.25	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@4'
2309192-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/14/23	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: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.6	109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@4'
2309192-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0481	09/18/23	09/18/23	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: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0389	117 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	44.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.115	0.0100	mg/L	1	BGI0412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@4'
2309192-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.675	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	43.4	0.0593	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	15.0	0.0593	"	"	"	"	"	"	
Sodium	4.93	0.0593	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.164	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.3		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	61.7	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@4'
2309192-07 (Soil)

Summit Scientific

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

pH	7.82	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@8'
2309192-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/14/23	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: **09/12/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0425	106 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	13.7	109 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@8'
2309192-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10481	09/18/23	09/18/23	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: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0275	82.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0207	62.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.201	0.0100	mg/L	1	BG10412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 10:50**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH09@8'
2309192-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.04	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	12.9	0.0526	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	7.29	0.0526	"	"	"	"	"	"	
Sodium	10.0	0.0526	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.552	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.207	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 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 - Booth C35-01

Project Number: UWRWE-A3162-ABN
 Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

BH09@8'
2309192-08 (Soil)

Summit Scientific

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

pH	8.48	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@4'
2309192-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0356	09/13/23	09/14/23	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: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0425	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.7	109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@4'
2309192-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0481	09/18/23	09/18/23	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: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0283	85.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.181	0.0100	mg/L	1	BGI0412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 10:10**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@4'
2309192-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.718	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.8	0.0523	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	15.1	0.0523	"	"	"	"	"	"	
Sodium	3.61	0.0523	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.113	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.136	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 10:10**

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 - Booth C35-01

Project Number: UWRWE-A3162-ABN
 Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

BH10@4'
2309192-09 (Soil)

Summit Scientific

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

pH	8.63	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@8'
2309192-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0356	09/13/23	09/14/23	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: **09/12/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0425	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0358	09/13/23	09/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.9	103 %		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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@8'
2309192-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10481	09/18/23	09/18/23	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: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0171	51.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	50.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0728	0.0100	mg/L	1	BG10412	09/14/23	09/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/12/23 11:00**

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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BH10@8'
2309192-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	0.882	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B
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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	13.9	0.0524	mg/L dry	1	BGI0371	09/13/23	09/15/23	EPA 6020B	
Magnesium	5.15	0.0524	"	"	"	"	"	"	
Sodium	5.83	0.0524	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.339	0.00100	units	1	BGI0472	09/15/23	09/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.4		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/12/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.124	0.0100	mmhos/cm	1	BGI0375	09/13/23	09/14/23	EPA 120.1	

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

Date Sampled: **09/12/23 11:00**

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 - Booth C35-01

Project Number: UWRWE-A3162-ABN
 Project Manager: Jacob Whritenour

Reported:
 09/20/23 10:34

BH10@8'
2309192-10 (Soil)

Summit Scientific

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

pH	8.57	pH Units	1	BGI0376	09/13/23	09/14/23	EPA 9045D
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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 - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG01@4'
2309192-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 11:30**

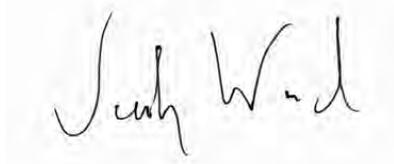
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.588	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.1		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG01@8'
2309192-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.896	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.3		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG02@4'
2309192-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 11:40**

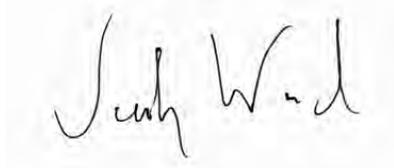
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.682	0.200		mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.7			%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG02@8'
2309192-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:30**

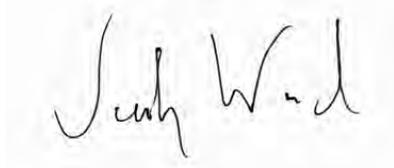
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.823	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.9		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG03@4'
2309192-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 11:50**

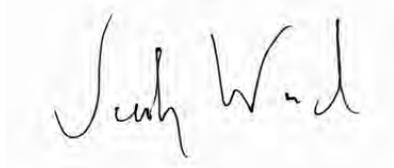
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.780	0.200		mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	95.5			%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific



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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG03@8'
2309192-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.885	0.200		mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	92.7			%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG04@4'
2309192-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.697	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BGI0361	09/13/23	09/13/23	Calculation	

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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG04@8'
2309192-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.647	0.200	mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BGI0361	09/13/23	09/13/23	Calculation	

Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG05@4'
2309192-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 12:10**

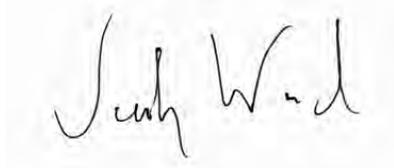
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.743	0.200		mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.8			%	1	BGI0361	09/13/23	09/13/23	Calculation	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN

Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

BG05@8'
2309192-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **09/12/23 13:00**

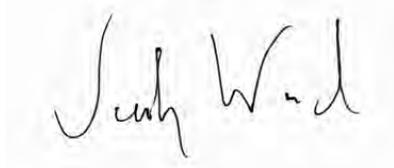
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.780	0.200		mg/kg dry	1	BGI0352	09/13/23	09/16/23	EPA 6020B	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/12/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	96.2			%	1	BGI0361	09/13/23	09/13/23	Calculation	

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Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGI0356 - EPA 5030 Soil MS

Blank (BGI0356-BLK1)

Prepared & Analyzed: 09/13/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0379		"	0.0400		94.8	50-150			
<i>Surrogate: Toluene-d8</i>	0.0416		"	0.0400		104	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0376		"	0.0400		94.1	50-150			

LCS (BGI0356-BS1)

Prepared & Analyzed: 09/13/23

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130			
Toluene	0.0884	0.0050	"	0.100		88.4	70-130			
Ethylbenzene	0.0868	0.0050	"	0.100		86.8	70-130			
m,p-Xylene	0.165	0.010	"	0.200		82.5	70-130			
o-Xylene	0.0794	0.0050	"	0.100		79.4	70-130			
1,2,4-Trimethylbenzene	0.0735	0.0050	"	0.100		73.5	70-130			
1,3,5-Trimethylbenzene	0.0740	0.0050	"	0.100		74.0	70-130			
Naphthalene	0.0765	0.0038	"	0.100		76.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0451		"	0.0400		113	50-150			
<i>Surrogate: Toluene-d8</i>	0.0412		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0419		"	0.0400		105	50-150			

Matrix Spike (BGI0356-MS1)

Source: 2309189-01

Prepared & Analyzed: 09/13/23

Benzene	0.121	0.0020	mg/kg	0.100	ND	121	70-130			
Toluene	0.105	0.0050	"	0.100	ND	105	70-130			
Ethylbenzene	0.0991	0.0050	"	0.100	ND	99.1	70-130			
m,p-Xylene	0.188	0.010	"	0.200	ND	94.2	70-130			
o-Xylene	0.0916	0.0050	"	0.100	ND	91.6	70-130			
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.100	ND	84.9	70-130			
1,3,5-Trimethylbenzene	0.0861	0.0050	"	0.100	ND	86.1	70-130			
Naphthalene	0.0764	0.0038	"	0.100	ND	76.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0433		"	0.0400		108	50-150			
<i>Surrogate: Toluene-d8</i>	0.0428		"	0.0400		107	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0419		"	0.0400		105	50-150			

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

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

Batch BGI0356 - EPA 5030 Soil MS

Matrix Spike Dup (BGI0356-MSD1)	Source: 2309189-01			Prepared & Analyzed: 09/13/23						
Benzene	0.118	0.0020	mg/kg	0.100	ND	118	70-130	3.06	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	0.632	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	5.65	30	
m,p-Xylene	0.201	0.010	"	0.200	ND	100	70-130	6.41	30	
o-Xylene	0.0950	0.0050	"	0.100	ND	95.0	70-130	3.54	30	
1,2,4-Trimethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130	10.6	30	
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100	ND	95.8	70-130	10.7	30	
Naphthalene	0.0856	0.0038	"	0.100	ND	85.6	70-130	11.3	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>93.9</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0417</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			

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Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGI0358 - EPA 3550A

Blank (BGI0358-BLK1)

Prepared & Analyzed: 09/13/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107		30-150			

LCS (BGI0358-BS1)

Prepared & Analyzed: 09/13/23

C10-C28 (DRO)	455	50	mg/kg	500		91.1		70-130			
Surrogate: <i>o</i> -Terphenyl	13.0		"	12.5		104		30-150			

Matrix Spike (BGI0358-MS1)

Source: 2309189-01

Prepared & Analyzed: 09/13/23

C10-C28 (DRO)	425	50	mg/kg	500	7.45	83.4		70-130			
Surrogate: <i>o</i> -Terphenyl	13.1		"	12.5		105		30-150			

Matrix Spike Dup (BGI0358-MSD1)

Source: 2309189-01

Prepared & Analyzed: 09/13/23

C10-C28 (DRO)	459	50	mg/kg	500	7.45	90.2		70-130	7.72	20	
Surrogate: <i>o</i> -Terphenyl	12.9		"	12.5		103		30-150			

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0440 - EPA 5030 Soil MS

Blank (BGI0440-BLK1)

Prepared: 09/15/23 Analyzed: 09/16/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0327		"	0.0333		98.1	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0367		"	0.0333		110	40-150			

LCS (BGI0440-BS1)

Prepared: 09/15/23 Analyzed: 09/16/23

Acenaphthene	0.0303	0.00500	mg/kg	0.0333		90.8	31-137			
Anthracene	0.0315	0.00500	"	0.0333		94.4	30-120			
Benzo (a) anthracene	0.0254	0.00500	"	0.0333		76.1	30-120			
Benzo (a) pyrene	0.0311	0.00500	"	0.0333		93.4	30-120			
Benzo (b) fluoranthene	0.0311	0.00500	"	0.0333		93.3	30-120			
Benzo (k) fluoranthene	0.0324	0.00500	"	0.0333		97.2	30-120			
Chrysene	0.0305	0.00500	"	0.0333		91.6	30-120			
Dibenz (a,h) anthracene	0.0272	0.00500	"	0.0333		81.7	30-120			
Fluoranthene	0.0291	0.00500	"	0.0333		87.4	30-120			
Fluorene	0.0300	0.00500	"	0.0333		90.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0390	0.00500	"	0.0333		117	30-120			
Pyrene	0.0328	0.00500	"	0.0333		98.3	35-142			
1-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.4	35-142			
2-Methylnaphthalene	0.0273	0.00500	"	0.0333		81.8	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0294		"	0.0333		88.2	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0297		"	0.0333		89.2	40-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0440 - EPA 5030 Soil MS

Matrix Spike (BGI0440-MS1)

Source: 2309187-01

Prepared: 09/15/23 Analyzed: 09/16/23

Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.4	31-137		
Anthracene	0.0174	0.00500	"	0.0333	ND	52.1	30-120		
Benzo (a) anthracene	0.0155	0.00500	"	0.0333	ND	46.6	30-120		
Benzo (a) pyrene	0.0190	0.00500	"	0.0333	ND	57.0	30-120		
Benzo (b) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.8	30-120		
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.0	30-120		
Chrysene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Dibenz (a,h) anthracene	0.0159	0.00500	"	0.0333	ND	47.7	30-120		
Fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120		
Fluorene	0.0175	0.00500	"	0.0333	ND	52.4	30-120		
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.4	30-120		
Pyrene	0.0179	0.00500	"	0.0333	ND	53.8	35-142		
1-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.8	15-130		
2-Methylnaphthalene	0.0163	0.00500	"	0.0333	ND	48.8	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0176		"	0.0333		52.8	40-150		
Surrogate: Fluoranthene-d10	0.0167		"	0.0333		50.2	40-150		

Matrix Spike Dup (BGI0440-MSD1)

Source: 2309187-01

Prepared: 09/15/23 Analyzed: 09/16/23

Acenaphthene	0.0209	0.00500	mg/kg	0.0333	ND	62.6	31-137	23.4	30
Anthracene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	23.3	30
Benzo (a) anthracene	0.0203	0.00500	"	0.0333	ND	60.9	30-120	26.8	30
Benzo (a) pyrene	0.0239	0.00500	"	0.0333	ND	71.7	30-120	22.9	30
Benzo (b) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.3	30-120	25.0	30
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	19.8	30
Chrysene	0.0203	0.00500	"	0.0333	ND	61.0	30-120	19.9	30
Dibenz (a,h) anthracene	0.0214	0.00500	"	0.0333	ND	64.2	30-120	29.6	30
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	24.9	30
Fluorene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	24.3	30
Indeno (1,2,3-cd) pyrene	0.0200	0.00500	"	0.0333	ND	60.0	30-120	25.5	30
Pyrene	0.0216	0.00500	"	0.0333	ND	64.8	35-142	18.6	30
1-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.8	15-130	7.78	50
2-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.5	15-130	30.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0209		"	0.0333		62.7	40-150		
Surrogate: Fluoranthene-d10	0.0213		"	0.0333		63.8	40-150		

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0481 - EPA 5030 Soil MS

Blank (BGI0481-BLK1)

Prepared & Analyzed: 09/18/23

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	0.0320		"	0.0333	95.9	40-150				
Surrogate: Fluoranthene-d10	0.0284		"	0.0333	85.1	40-150				

LCS (BGI0481-BS1)

Prepared & Analyzed: 09/18/23

Acenaphthene	0.0301	0.00500	mg/kg	0.0333	90.2	31-137				
Anthracene	0.0304	0.00500	"	0.0333	91.2	30-120				
Benzo (a) anthracene	0.0293	0.00500	"	0.0333	87.8	30-120				
Benzo (a) pyrene	0.0288	0.00500	"	0.0333	86.5	30-120				
Benzo (b) fluoranthene	0.0316	0.00500	"	0.0333	94.7	30-120				
Benzo (k) fluoranthene	0.0323	0.00500	"	0.0333	96.8	30-120				
Chrysene	0.0303	0.00500	"	0.0333	91.0	30-120				
Dibenz (a,h) anthracene	0.0297	0.00500	"	0.0333	89.0	30-120				
Fluoranthene	0.0294	0.00500	"	0.0333	88.1	30-120				
Fluorene	0.0309	0.00500	"	0.0333	92.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0202	0.00500	"	0.0333	60.7	30-120				
Pyrene	0.0246	0.00500	"	0.0333	73.9	35-142				
1-Methylnaphthalene	0.0243	0.00500	"	0.0333	72.8	35-142				
2-Methylnaphthalene	0.0282	0.00500	"	0.0333	84.7	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0371		"	0.0333	111	40-150				
Surrogate: Fluoranthene-d10	0.0329		"	0.0333	98.7	40-150				

Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

PAH by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch BGI0481 - EPA 5030 Soil MS

Matrix Spike (BGI0481-MS1)	Source: 2309192-07			Prepared & Analyzed: 09/18/23							
Acenaphthene	0.0211	0.00500	mg/kg	0.0333	ND	63.4	31-137				
Anthracene	0.0222	0.00500	"	0.0333	ND	66.6	30-120				
Benzo (a) anthracene	0.0235	0.00500	"	0.0333	ND	70.5	30-120				
Benzo (a) pyrene	0.0183	0.00500	"	0.0333	ND	54.8	30-120				
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	ND	77.8	30-120				
Benzo (k) fluoranthene	0.0247	0.00500	"	0.0333	ND	74.2	30-120				
Chrysene	0.0248	0.00500	"	0.0333	ND	74.3	30-120				
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333	ND	64.8	30-120				
Fluoranthene	0.0277	0.00500	"	0.0333	ND	83.0	30-120				
Fluorene	0.0222	0.00500	"	0.0333	ND	66.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0149	0.00500	"	0.0333	ND	44.6	30-120				
Pyrene	0.0218	0.00500	"	0.0333	ND	65.3	35-142				
1-Methylnaphthalene	0.0205	0.00500	"	0.0333	ND	61.6	15-130				
2-Methylnaphthalene	0.0200	0.00500	"	0.0333	ND	59.9	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0268</i>		<i>"</i>	<i>0.0333</i>		<i>80.3</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0219</i>		<i>"</i>	<i>0.0333</i>		<i>65.6</i>	<i>40-150</i>				

Matrix Spike Dup (BGI0481-MSD1)	Source: 2309192-07			Prepared & Analyzed: 09/18/23							
Acenaphthene	0.0190	0.00500	mg/kg	0.0333	ND	57.1	31-137	10.4	30		
Anthracene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	14.9	30		
Benzo (a) anthracene	0.0202	0.00500	"	0.0333	ND	60.6	30-120	15.1	30		
Benzo (a) pyrene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	3.49	30		
Benzo (b) fluoranthene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	14.6	30		
Benzo (k) fluoranthene	0.0226	0.00500	"	0.0333	ND	67.8	30-120	9.09	30		
Chrysene	0.0213	0.00500	"	0.0333	ND	63.9	30-120	15.0	30		
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	10.5	30		
Fluoranthene	0.0253	0.00500	"	0.0333	ND	76.0	30-120	8.80	30		
Fluorene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	12.9	30		
Indeno (1,2,3-cd) pyrene	0.0141	0.00500	"	0.0333	ND	42.3	30-120	5.52	30		
Pyrene	0.0227	0.00500	"	0.0333	ND	68.1	35-142	4.15	30		
1-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130	7.10	50		
2-Methylnaphthalene	0.0187	0.00500	"	0.0333	ND	56.1	15-130	6.61	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0247</i>		<i>"</i>	<i>0.0333</i>		<i>74.1</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0198</i>		<i>"</i>	<i>0.0333</i>		<i>59.5</i>	<i>40-150</i>				

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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

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

Batch BGI0412 - EPA 3050B

Blank (BGI0412-BLK1)

Prepared: 09/14/23 Analyzed: 09/16/23

Boron ND 0.0100 mg/L

LCS (BGI0412-BS1)

Prepared: 09/14/23 Analyzed: 09/16/23

Boron 4.98 0.0100 mg/L 5.00 99.5 80-120

Duplicate (BGI0412-DUP1)

Source: 2309165-01

Prepared: 09/14/23 Analyzed: 09/16/23

Boron 0.181 0.0100 mg/L 0.248 31.4 20 QR-04

Matrix Spike (BGI0412-MS1)

Source: 2309165-01

Prepared: 09/14/23 Analyzed: 09/16/23

Boron 4.75 0.0100 mg/L 5.00 0.248 90.0 75-125

Matrix Spike Dup (BGI0412-MSD1)

Source: 2309165-01

Prepared: 09/14/23 Analyzed: 09/16/23

Boron 5.19 0.0100 mg/L 5.00 0.248 98.8 75-125 8.89 25

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGI0352 - EPA 3050B

Blank (BGI0352-BLK1)

Prepared: 09/13/23 Analyzed: 09/16/23

Arsenic ND 0.200 mg/kg wet

LCS (BGI0352-BS1)

Prepared: 09/13/23 Analyzed: 09/16/23

Arsenic 42.0 0.200 mg/kg wet 40.0 105 80-120

Duplicate (BGI0352-DUP1)

Source: 2309192-01

Prepared: 09/13/23 Analyzed: 09/16/23

Arsenic 0.763 0.200 mg/kg dry 0.768 0.612 20

Matrix Spike (BGI0352-MS1)

Source: 2309192-01

Prepared: 09/13/23 Analyzed: 09/16/23

Arsenic 20.2 0.200 mg/kg dry 42.6 0.768 45.5 75-125 QM-01

Matrix Spike Dup (BGI0352-MSD1)

Source: 2309192-01

Prepared: 09/13/23 Analyzed: 09/16/23

Arsenic 20.2 0.200 mg/kg dry 42.6 0.768 45.7 75-125 0.240 25 QM-01

Summit Scientific

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

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

Summit Scientific

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

Batch BGI0371 - General Preparation

Blank (BGI0371-BLK1)

Prepared: 09/13/23 Analyzed: 09/15/23

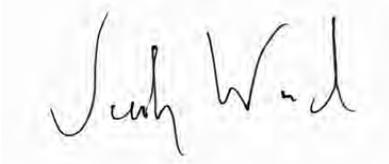
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGI0371-BS1)

Prepared: 09/13/23 Analyzed: 09/15/23

Calcium	4.61	0.0500	mg/L wet	5.00	92.3	70-130				
Magnesium	5.14	0.0500	"	5.00	103	70-130				
Sodium	5.04	0.0500	"	5.00	101	70-130				

Summit Scientific



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Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

Summit Scientific

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

Batch BGI0361 - General Preparation

Duplicate (BGI0361-DUP1)

Source: 2309192-01

Prepared & Analyzed: 09/13/23

% Solids	94.1	%		94.0		0.0964	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01
Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

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

Batch BGI0375 - General Preparation

Blank (BGI0375-BLK1)

Prepared: 09/13/23 Analyzed: 09/14/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGI0375-BS1)

Prepared: 09/13/23 Analyzed: 09/14/23

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.150 99.6 95-105

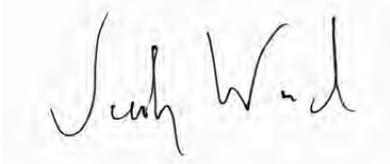
Duplicate (BGI0375-DUP1)

Source: 2309163-02

Prepared: 09/13/23 Analyzed: 09/14/23

Specific Conductance (EC) 0.241 0.0100 mmhos/cm 0.241 0.00 20

Summit Scientific



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

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN
Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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

Summit Scientific

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

Batch BGI0376 - General Preparation

LCS (BGI0376-BS1)

Prepared: 09/13/23 Analyzed: 09/14/23

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BGI0376-DUP1)

Source: 2309163-02

Prepared: 09/13/23 Analyzed: 09/14/23

pH	8.45	pH Units	8.45	0.00	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Booth C35-01

Project Number: UWRWE-A3162-ABN

Project Manager: Jacob Whritenour

Reported:
09/20/23 10:34

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-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- 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