

# **SITE ASSESSMENT REPORT**

## **LILLI UNIT 16-7**

**COGCC SPILL TRACKING # 481760**

**COGCC REMEDIATION # 21705**

Prepared for:



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



6855 W. 119<sup>th</sup> Ave  
Broomfield, CO 80020

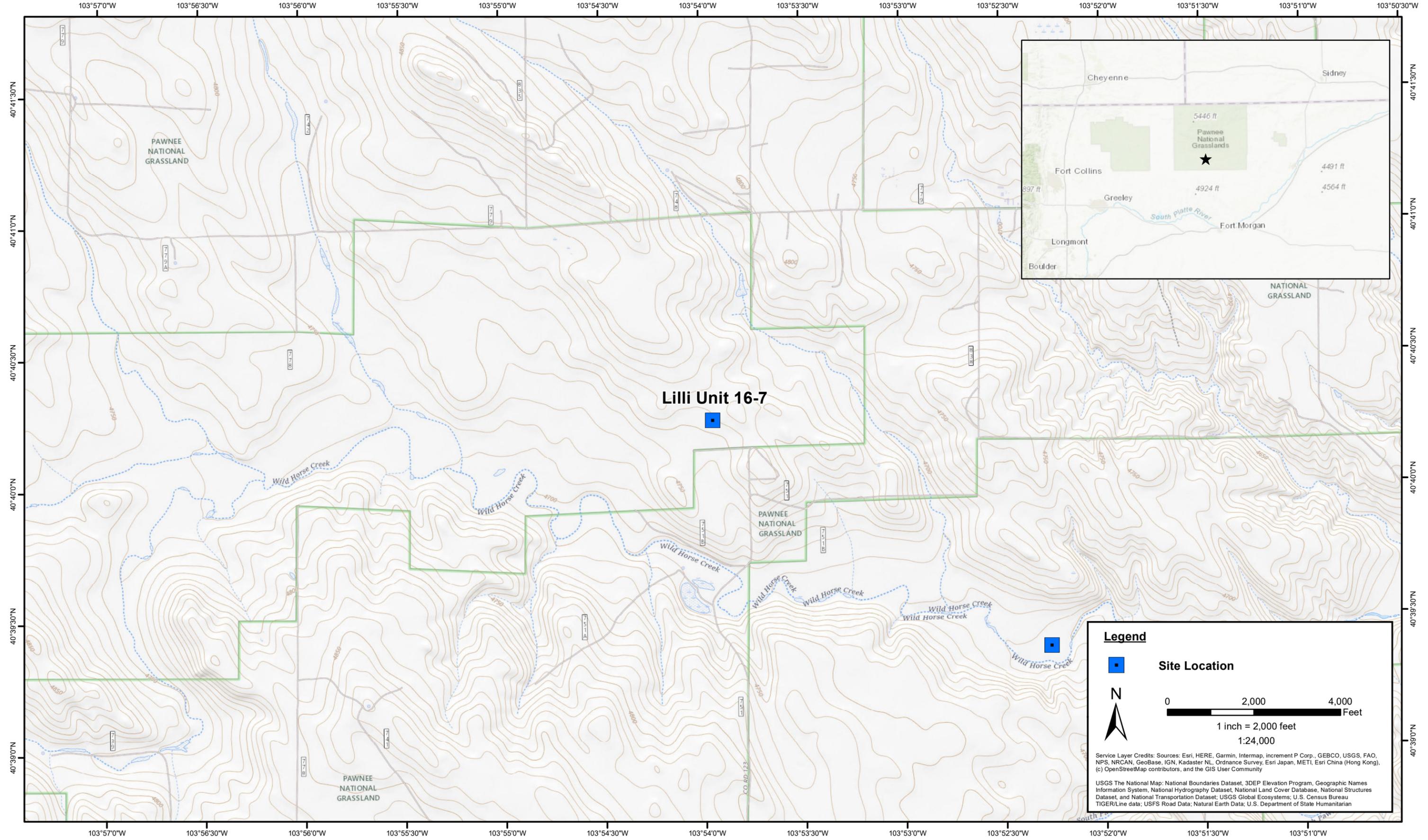
## **TABLES**

TABLE 1  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. - LILLI UNIT 16-7

Soil Sample ID	Date	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 <sup>2</sup>		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
WH-FS-01@6 <sup>(4)</sup>	03/02/22	<0.00200	<0.00200	<0.00200	0.0118	0.0111	0.0069	0.00308	0.294	<25.0	<100	0.000702	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	0.00367	<0.00067	<0.00067	0.00172	<0.00067	0.00152	0.00896	0.00541
WH-SS-01@5'	03/02/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00138	<0.200	<25.0	<100	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	0.00114	<0.00067	<0.00067	0.00076	<0.00067	<0.00067	0.00305	0.00287
WH-SS-02@5'	03/02/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00067	<0.200	<25.0	<100	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
WH-SS-03@5'	03/02/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00258	0.000808	<0.200	<25.0	<100	0.000361	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	0.00121	<0.00067	<0.00067	0.000601	<0.00067	0.00125	0.00361	0.00217
WH-SS-04@5'	03/02/22	<0.00200	<0.00200	<0.00200	0.206	0.0979	0.0895	0.0133	2.28	<25.0	<100	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	0.0105	<0.00067	<0.00067	0.0139	<0.00067	<0.00067	0.039
WH-FS-01@7 <sup>(5)</sup>	03/30/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00067	<0.200	<25.0	<100	<0.00335	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
WH-SS-04@6'	03/30/22	<0.00200	<0.00200	<0.00200	<0.00200	0.00892	<0.00200	0.00729	0.809	167	129	<0.00335	<0.00335	<0.00335	0.00301	0.00576	<0.00335	0.0391	<0.00335	0.00274	0.055	<0.00335	0.0179	0.106	0.0653
WH-SS-05@5'	03/30/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00335	<0.200	47.4	<100	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	0.00319	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335
WH-SS-06@5'	03/30/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00067	<0.200	<25.0	<100	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
WH-SS-07@5'	03/30/22	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00067	<0.200	<25.0	<100	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067	<0.00067
BH01@5-6'	04/21/23	<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
BH01@11-12'	04/21/23	<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@5-6'	04/21/23	<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
BH02R@8-9'	04/21/23	<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@5-6'	04/21/23	<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@11-12'	04/21/23	<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@5-6'	04/21/23	<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@11-12'	04/21/23	<0.0020	<0.0050	<0.0050	<0.010	0.0055	<0.0050	<0.0038	0.61	<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@15-16'	04/21/23	0.021	<0.0050	0.087	0.087	0.034	0.0080	<0.0038	6.4	<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@22-23.5'	04/21/23	<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@5-6'	04/21/23	<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@15-16'	04/21/23	<0.0020	<0.0050	0.12	0.087	1.1	0.11	0.086	19	80	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0423	0.0603	
BH05@18-19'	04/21/23	<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
BH06@5-6'	04/21/23	<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
BH06@15-16'	04/21/23	<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
BH06@17.5-18.5'	04/21/23	<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
BH08@5-6'	04/21/23	<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
BH08@15-16'	04/21/23	<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
BH08@17-18'	04/21/23	<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 <sup>2</sup>		6 - 8.3	<6	<4mmhos/cm	2
WH-FS-01@6'	03/02/22	8.03	0.614	2.91	0.237
WH-SS-01@5'	03/02/22	8.26	0.566	5.08	0.218
WH-SS-02@5'	03/02/22	8.19	0.638	5.57	0.178
WH-SS-03@5'	03/02/22	8.02	1.37	5.17	0.16
WH-SS-04@5'	03/02/22	7.98	0.672	2.26	0.317
WH-FS-01@7'	03/30/22	7.77	1.66	5.72	0.161
WH-SS-04@6'	03/30/22	8.35	0.555	4.29	0.262
WH-SS-05@5'	03/30/22	7.74	0.702	2.39	0.18
WH-SS-06@5'	03/30/22	7.97	1.40	6.22	0.139
WH-SS-07@5'	03/30/22	7.93	0.63	3.36	0.323
BG01@5'	03/30/22	7.65	NA	NA	NA
BH01@5-6'	04/21/23	7.93	6.05	0.792	0.0619
BH01@11-12'	04/21/23	8.13	5.70	0.407	0.144
BH02@5-6'	04/21/23	8.17	4.85	0.463	0.0795
BH02R@8-9'	04/21/23	7.58	3.17	3.88	0.0732
BH03@5-6'	04/21/23	7.79	6.68	0.804	0.127
BH03@11-12'	04/21/23	7.36	6.48	1.46	0.158
BH04@5-6'	04/21/23	8.21	6.93	0.688	0.0237
BH04@11-12'	04/21/23	8.17	3.37	0.401	<0.0100
BH04@15-16'	04/21/23	8.41	5.18	0.516	0.0206
BH04@22-23.5'	04/21/23	7.77	7.11	0.903	0.114
BH05@5-6'	04/21/23	7.60	6.28	1.44	0.156
BH05@15-16'	04/21/23	8.			

## **FIGURES**



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


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

**Noble Energy, Inc - DJ Basin**  
**Lilli Unit 16-7**  
 SESE, Section 7, Township 8 North, Range 58 West  
 Weld County, Colorado

Site Location Map

Figure  
 1



DATE:	12/18/2023
DESIGNED BY:	JW
DRAWN BY:	AE



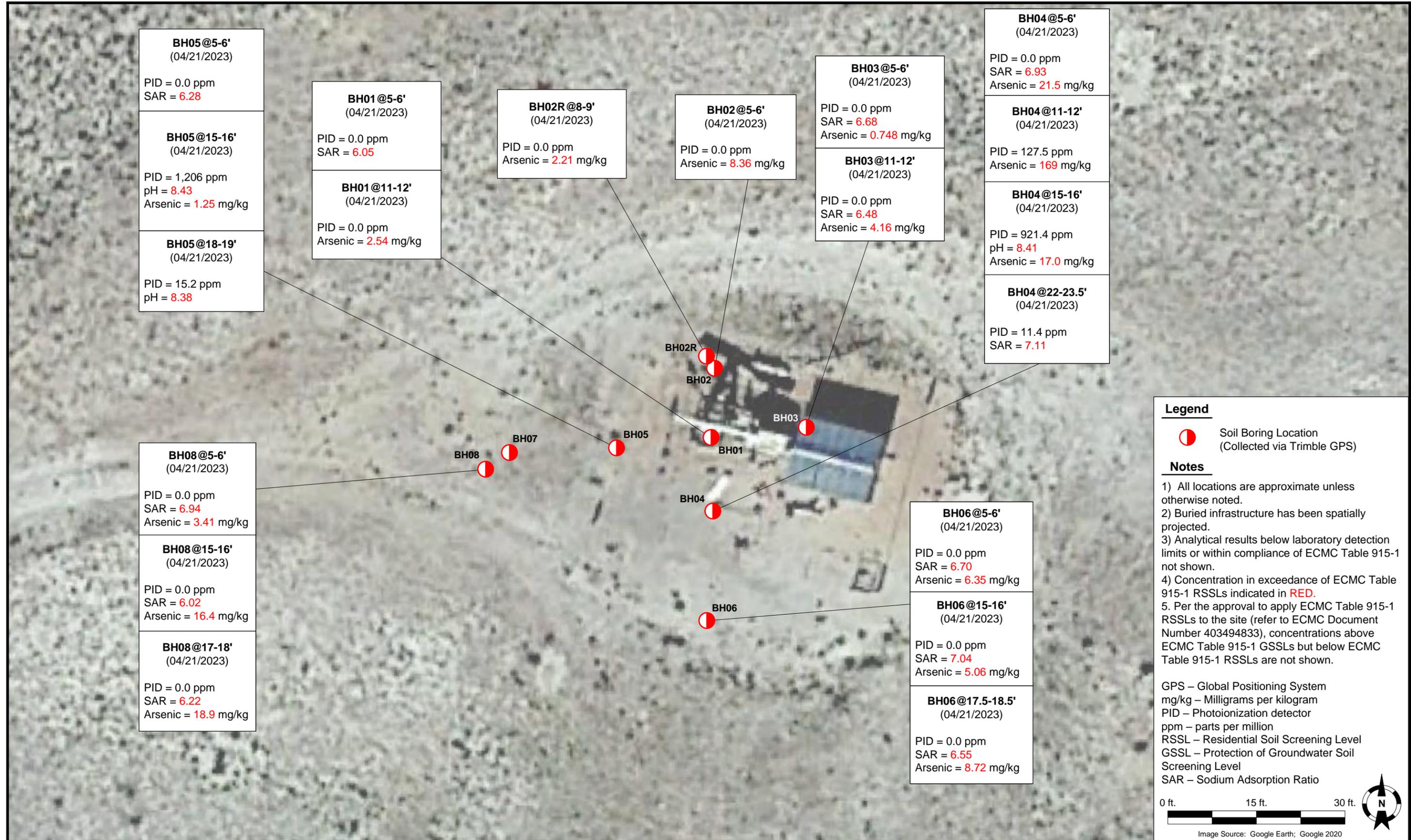
**TASMAN**  
GEOSCIENCES

Tasman Geosciences, Inc.  
6855 W 119<sup>th</sup> Avenue  
Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**Lilli Unit 16-7**  
SESE, Section 7, Township 8 North, Range 58 West  
Weld County, Colorado

Decommissioning and Site  
Assessment Soil Analytical  
Results Map  
(03/02/2022 & 03/30/2022)

Figure 2



**BH05@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.28**

**BH05@15-16'**  
(04/21/2023)  
PID = 1,206 ppm  
pH = **8.43**  
Arsenic = **1.25** mg/kg

**BH05@18-19'**  
(04/21/2023)  
PID = 15.2 ppm  
pH = **8.38**

**BH01@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.05**

**BH01@11-12'**  
(04/21/2023)  
PID = 0.0 ppm  
Arsenic = **2.54** mg/kg

**BH02R@8-9'**  
(04/21/2023)  
PID = 0.0 ppm  
Arsenic = **2.21** mg/kg

**BH02@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
Arsenic = **8.36** mg/kg

**BH03@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.68**  
Arsenic = **0.748** mg/kg

**BH03@11-12'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.48**  
Arsenic = **4.16** mg/kg

**BH04@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.93**  
Arsenic = **21.5** mg/kg

**BH04@11-12'**  
(04/21/2023)  
PID = 127.5 ppm  
Arsenic = **169** mg/kg

**BH04@15-16'**  
(04/21/2023)  
PID = 921.4 ppm  
pH = **8.41**  
Arsenic = **17.0** mg/kg

**BH04@22-23.5'**  
(04/21/2023)  
PID = 11.4 ppm  
SAR = **7.11**

**BH08@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.94**  
Arsenic = **3.41** mg/kg

**BH08@15-16'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.02**  
Arsenic = **16.4** mg/kg

**BH08@17-18'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.22**  
Arsenic = **18.9** mg/kg

**BH06@5-6'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.70**  
Arsenic = **6.35** mg/kg

**BH06@15-16'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **7.04**  
Arsenic = **5.06** mg/kg

**BH06@17.5-18.5'**  
(04/21/2023)  
PID = 0.0 ppm  
SAR = **6.55**  
Arsenic = **8.72** mg/kg

DATE:	12/18/2023
DESIGNED BY:	JW
DRAWN BY:	AE

**TASMAN GEOSCIENCES**  
 Tasman Geosciences, Inc.  
 6855 W 119<sup>th</sup> Avenue  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**Lilli Unit 16-7**  
 SESE, Section 7, Township 8 North, Range 58 West  
 Weld County, Colorado

Site Assessment Soil  
 Analytical Results Map  
 (04/21/2023)

Figure 3

**ATTACHMENT A**  
**LABORATORY SOIL ANALYTICAL DATA REPORTS**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

May 24, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfeld, CO 80020

RE: Noble - Lilli Unit 16-7

Work Order # 2304494

Enclosed are the results of analyses for samples received by Summit Scientific on 04/21/23 17:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/24/23 10:42

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@5-6'	2304494-01	Soil	04/21/23 09:45	04/21/23 17:43
BH01@11-12'	2304494-02	Soil	04/21/23 09:50	04/21/23 17:43
BH02@5-6'	2304494-03	Soil	04/21/23 10:00	04/21/23 17:43
BH02R@8-9'	2304494-04	Soil	04/21/23 14:30	04/21/23 17:43
BH03@5-6'	2304494-05	Soil	04/21/23 10:10	04/21/23 17:43
BH03@11-12'	2304494-06	Soil	04/21/23 10:15	04/21/23 17:43
BH04@5-6'	2304494-07	Soil	04/21/23 10:25	04/21/23 17:43
BH04@11-12'	2304494-08	Soil	04/21/23 10:30	04/21/23 17:43
BH04@15-16'	2304494-09	Soil	04/21/23 10:40	04/21/23 17:43
BH04@22-23.5'	2304494-10	Soil	04/21/23 11:10	04/21/23 17:43
BH05@5-6'	2304494-11	Soil	04/21/23 11:30	04/21/23 17:43
BH05@15-16'	2304494-12	Soil	04/21/23 11:43	04/21/23 17:43
BH05@18-19'	2304494-13	Soil	04/21/23 11:50	04/21/23 17:43
BH06@5-6'	2304494-14	Soil	04/21/23 12:50	04/21/23 17:43
BH06@15-16'	2304494-15	Soil	04/21/23 13:00	04/21/23 17:43
BH06@17.5-18.5'	2304494-16	Soil	04/21/23 13:10	04/21/23 17:43
BH08@5-6'	2304494-17	Soil	04/21/23 14:00	04/21/23 17:43
BH08@15-16'	2304494-18	Soil	04/21/23 14:05	04/21/23 17:43
BH08@17-18'	2304494-19	Soil	04/21/23 14:10	04/21/23 17:43

Summit Scientific

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

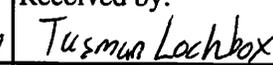
# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 2
2304494.1	

<b>Send Data To:</b>		<b>Send Invoice To:</b>	
Client: Noble / Tasman	Project Manager: Jake Whritenour	Company: Chevron	
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location:	
City/State/Zip: Broomfield, CO 80020		AFE#:	
Phone: <del>303-261-6246</del> 303-808-3515	Project Name: Lilli Unit 16-7	PO/Billing Codes:	
Sampler Name: <del>Spencer Miller</del> Allan Engelhardt	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	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915		HOLD
1	BH01@5-6'	4/21/23	0943	2			X			X			X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	BH02@11-12'		0950																	
3	BH02@5-6'		1000																	
4	BH02R@8-9'		1430																	
5	BH03@5-6'		1010																	
6	BH03@11-12'		1015																	
7	BH04@5-6'		1025																	
8	BH04@11-12'		1030																	
9	BH04@15-16'		1040																	
10	BH04@22-23.5'		<del>1110</del>																	
11	BH05@5-6'		1130																	
12	BH05@15-16'		1143																	
13	BH05@18-19'		1150																	
14	BH06@5-6'		1250																	
15	BH06@15-16'	↓	1300	↓																

Relinquished by: 	Date/Time: 4/21/23 <del>1710</del>	Received by: 	Date/Time: 4/21/23	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: 	Date/Time: 4/21/23 1743	Received by: 	Date/Time: 4/21/23 1743	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 24	Corrected Temperature: 	IR gun #:		HNO3 lot #:		

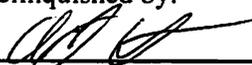
# SUMMIT SCIENTIFIC

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

Lab ID	Page 2 of 2
280449 4.2	

<b>Send Data To:</b>		<b>Send Invoice To:</b>	
Client: Noble / Tasman	Project Manager: Jake Whritenour	Company: Chevron	
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location:	
City/State/Zip: Broomfield, CO 80020		AFE#:	
Phone: <del>303-261-6246</del> 303-808-3315	Project Name: Lilli Unit 16-7	PO/Billing Codes:	
Sampler Name: <del>Stanley Gilbert</del> AS Engelhardt	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	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915		HOLD		
1	BH06@17.5-18.5'	4/21/23	1310	2			X			X			X	X	X	X	X	X	X		pH, EC, SAR by saturated paste	
2	BH08@5-6'	↓	1400	↓			↓			↓			↓	↓	↓	↓	↓	↓	↓			
3	BH08@15-16'	↓	1405	↓			↓			↓			↓	↓	↓	↓	↓	↓	↓			
4	BH08@17-18'	↓	1410	↓			↓			↓			↓	↓	↓	↓	↓	↓	↓			
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: 	Date/Time: 4/21/23 1710	Received by: Tasmin Lochner	Date/Time:	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasmin Lochner	Date/Time: 4/21/23 1743	Received by: 	Date/Time: 4/21/23 1743	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	Field Turb. <input checked="" type="checkbox"/>	

S<sub>2</sub>

2/2

S2 Work Order# 2304494

Sample Receipt Checklist

Client: Noble Gasman Client Project ID: Lithium 7 16-T

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? <sup>(1)</sup> NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):

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

AS

Custodian Printed Name

4/21/23

Date/Time



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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@5-6'**  
**2304494-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		120 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		82.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@5-6'**  
**2304494-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		74.8 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		77.0 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.0619</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@5-6'**  
**2304494-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.246		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
<b>Barium</b>	<b>2.48</b>	0.493		"	"	"	"	"	"	
Cadmium	ND	0.246		"	"	"	"	"	"	
Copper	ND	0.493		"	"	"	"	"	"	
Lead	ND	0.246		"	"	"	"	"	"	
Nickel	ND	0.493		"	"	"	"	"	"	
<b>Selenium</b>	<b>2.39</b>	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0246		"	"	"	"	"	"	
Zinc	ND	0.493		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>20.7</b>	0.0616		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
<b>Magnesium</b>	<b>6.48</b>	0.0616		"	"	"	"	"	"	
<b>Sodium</b>	<b>123</b>	0.0616		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>6.05</b>	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@5-6'**  
**2304494-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.2			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.792	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 09:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.93			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@11-12'**  
**2304494-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		111 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		119 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@11-12'**  
**2304494-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.3 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.144</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	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 - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@11-12'**  
**2304494-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.54	0.289		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	3.18	0.579		"	"	"	"	"	"	
Cadmium	ND	0.289		"	"	"	"	"	"	
Copper	1.98	0.579		"	"	"	"	"	"	
Lead	2.32	0.289		"	"	"	"	"	"	
Nickel	ND	0.579		"	"	"	"	"	"	
Selenium	0.447	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0289		"	"	"	"	"	"	
Zinc	1.75	0.579		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.2	0.0723		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	3.62	0.0723		"	"	"	"	"	"	
Sodium	83.3	0.0723		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.70	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH01@11-12'**  
**2304494-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	69.1			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.407	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.13			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02@5-6'**  
**2304494-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		96.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		136 %		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 - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02@5-6'**  
**2304494-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.1 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10		75.5 %		40-150		"	"	"	"	"

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0795</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:00**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02@5-6'**  
**2304494-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.36	0.229		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	0.506	0.457		"	"	"	"	"	"	
Cadmium	ND	0.229		"	"	"	"	"	"	
Copper	ND	0.457		"	"	"	"	"	"	
Lead	ND	0.229		"	"	"	"	"	"	
Nickel	ND	0.457		"	"	"	"	"	"	
Selenium	0.216	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0229		"	"	"	"	"	"	
Zinc	ND	0.457		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9.78	0.0571		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	3.64	0.0571		"	"	"	"	"	"	
Sodium	70.0	0.0571		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.85	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02@5-6'**  
**2304494-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	87.5			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.463	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.17			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02R@8-9'**  
**2304494-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		97.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02R@8-9'**  
**2304494-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		68.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.6 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0732</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 14:30**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02R@8-9'**  
**2304494-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.21	0.240		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	0.828	0.481		"	"	"	"	"	"	
Cadmium	ND	0.240		"	"	"	"	"	"	
Copper	ND	0.481		"	"	"	"	"	"	
Lead	ND	0.240		"	"	"	"	"	"	
Nickel	ND	0.481		"	"	"	"	"	"	
Selenium	1.33	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0240		"	"	"	"	"	"	
Zinc	ND	0.481		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	547	0.0601		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	112	0.0601		"	"	"	"	"	"	
Sodium	311	0.0601		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.17	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH02R@8-9'**  
**2304494-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	83.2			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	3.88	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 14:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.58			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@5-6'**  
**2304494-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		111 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		130 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@5-6'**  
**2304494-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		69.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.6 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.127</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@5-6'**  
**2304494-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.748	0.295		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.590		"	"	"	"	"	"	
Cadmium	ND	0.295		"	"	"	"	"	"	
Copper	ND	0.590		"	"	"	"	"	"	
Lead	ND	0.295		"	"	"	"	"	"	
Nickel	ND	0.590		"	"	"	"	"	"	
Selenium	12.8	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0295		"	"	"	"	"	"	
Zinc	ND	0.590		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.4	0.0737		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	8.45	0.0737		"	"	"	"	"	"	
Sodium	156	0.0737		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.68	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@5-6'**  
**2304494-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	67.9			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.804	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.79			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@11-12'**  
**2304494-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		96.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		88.5 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@11-12'**  
**2304494-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.9 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.158</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:15**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@11-12'**  
**2304494-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.16	0.292		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	1.22	0.583		"	"	"	"	"	"	
Cadmium	ND	0.292		"	"	"	"	"	"	
Copper	ND	0.583		"	"	"	"	"	"	
Lead	ND	0.292		"	"	"	"	"	"	
Nickel	ND	0.583		"	"	"	"	"	"	
Selenium	1.61	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0292		"	"	"	"	"	"	
Zinc	ND	0.583		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	73.6	0.0729		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	21.6	0.0729		"	"	"	"	"	"	
Sodium	246	0.0729		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.48	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH03@11-12'**  
**2304494-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	68.6			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.46	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.36			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@5-6'**  
**2304494-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		99.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		91.5 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@5-6'**  
**2304494-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		64.6 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10		67.2 %		40-150		"	"	"	"	"

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.0237</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@5-6'**  
**2304494-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	21.5	0.298		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	4.70	0.597		"	"	"	"	"	"	
Cadmium	ND	0.298		"	"	"	"	"	"	
Copper	1.65	0.597		"	"	"	"	"	"	
Lead	0.431	0.298		"	"	"	"	"	"	
Nickel	ND	0.597		"	"	"	"	"	"	
Selenium	1.80	0.260	0.175	"	"	"	"	"	"	
Silver	0.0818	0.0298		"	"	"	"	"	"	
Zinc	ND	0.597		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.4	0.0746		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	6.34	0.0746		"	"	"	"	"	"	
Sodium	142	0.0746		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.93	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@5-6'**  
**2304494-07 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	67.0			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.688	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.21			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@11-12'**  
**2304494-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.0055</b>	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.61</b>	0.50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		109 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		135 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@11-12'**  
**2304494-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.1 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:30**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@11-12'**  
**2304494-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	169	0.293		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	14.5	0.586		"	"	"	"	"	"	
Cadmium	ND	0.293		"	"	"	"	"	"	
Copper	5.12	0.586		"	"	"	"	"	"	
Lead	7.36	0.293		"	"	"	"	"	"	
Nickel	ND	0.586		"	"	"	"	"	"	
Selenium	0.284	0.260	0.175	"	"	"	"	"	"	
Silver	0.113	0.0293		"	"	"	"	"	"	
Zinc	1.65	0.586		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.7	0.0733		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	9.66	0.0733		"	"	"	"	"	"	
Sodium	79.8	0.0733		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.37	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@11-12'**  
**2304494-08 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>68.2</b>			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>0.401</b>	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>8.17</b>			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@15-16'**  
**2304494-09 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.021</b>	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.087</b>	0.0050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.087</b>	0.010		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.034</b>	0.0050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.0080</b>	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>6.4</b>	0.50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	96.7 %			50-150		"	"	"	"	
Surrogate: Toluene-d8	122 %			50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %			50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	136 %			30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@15-16'**  
**2304494-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		81.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		94.1 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0206</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 10:40**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@15-16'**  
**2304494-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	17.0	0.289		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	21.2	0.579		"	"	"	"	"	"	
Cadmium	ND	0.289		"	"	"	"	"	"	
Copper	20.0	0.579		"	"	"	"	"	"	
Lead	4.19	0.289		"	"	"	"	"	"	
Nickel	ND	0.579		"	"	"	"	"	"	
Selenium	2.75	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0289		"	"	"	"	"	"	
Zinc	ND	0.579		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.0	0.0724		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	8.25	0.0724		"	"	"	"	"	"	
Sodium	104	0.0724		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.18	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@15-16'**  
**2304494-09 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	69.1			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.516	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.41			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@22-23.5'**  
**2304494-10 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		118 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		89.3 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@22-23.5'**  
**2304494-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		100 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		125 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.114</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 11:10**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@22-23.5'**  
**2304494-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.423	0.272		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.544		"	"	"	"	"	"	
Cadmium	ND	0.272		"	"	"	"	"	"	
Copper	ND	0.544		"	"	"	"	"	"	
Lead	ND	0.272		"	"	"	"	"	"	
Nickel	ND	0.544		"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0272		"	"	"	"	"	"	
Zinc	ND	0.544		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.0	0.0680		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	7.59	0.0680		"	"	"	"	"	"	
Sodium	156	0.0680		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.11	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH04@22-23.5'**  
**2304494-10 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	73.5			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.903	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.77			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@5-6'**  
**2304494-11 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/27/23	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: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		101 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		93.6 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@5-6'**  
**2304494-11 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		77.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		101 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.156</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@5-6'**  
**2304494-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.359	0.304		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	1.61	0.608		"	"	"	"	"	"	
Cadmium	ND	0.304		"	"	"	"	"	"	
Copper	ND	0.608		"	"	"	"	"	"	
Lead	ND	0.304		"	"	"	"	"	"	
Nickel	ND	0.608		"	"	"	"	"	"	
Selenium	5.79	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0304		"	"	"	"	"	"	
Zinc	ND	0.608		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	83.0	0.0760		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	22.6	0.0760		"	"	"	"	"	"	
Sodium	250	0.0760		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.28	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@5-6'**  
**2304494-11 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	65.8			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.44	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.60			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@15-16'**  
**2304494-12 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.12</b>	0.0050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.087</b>	0.010		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1.1</b>	0.0050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.11</b>	0.0050		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.086</b>	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>19</b>	0.50		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		119 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		131 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>80</b>	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		130 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@15-16'**  
**2304494-12 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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		"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0423</b>	0.00500		"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0603</b>	0.00500		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		112 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		134 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.287</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@15-16'**  
**2304494-12 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.25	0.284		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	15.9	0.567		"	"	"	"	"	"	
Cadmium	ND	0.284		"	"	"	"	"	"	
Copper	6.15	0.567		"	"	"	"	"	"	
Lead	5.07	0.284		"	"	"	"	"	"	
Nickel	ND	0.567		"	"	"	"	"	"	
Selenium	1.20	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0284		"	"	"	"	"	"	
Zinc	1.26	0.567		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.9	0.0709		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	14.8	0.0709		"	"	"	"	"	"	
Sodium	121	0.0709		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.52	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@15-16'**  
**2304494-12 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>70.5</b>			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>0.406</b>	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 11:43**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>8.43</b>			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@18-19'**  
**2304494-13 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		131 %		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 - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@18-19'**  
**2304494-13 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 11:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		115 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		124 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.260</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 11:50**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@18-19'**  
**2304494-13 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.644	0.277		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	2.10	0.553		"	"	"	"	"	"	
Cadmium	ND	0.277		"	"	"	"	"	"	
Copper	17.1	0.553		"	"	"	"	"	"	
Lead	6.40	0.277		"	"	"	"	"	"	
Nickel	ND	0.553		"	"	"	"	"	"	
Selenium	0.624	0.260	0.175	"	"	"	"	"	"	
Silver	0.0398	0.0277		"	"	"	"	"	"	
Zinc	ND	0.553		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 04/21/23 11:50

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0970	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: 04/21/23 11:50

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.7	0.0691		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	3.96	0.0691		"	"	"	"	"	"	
Sodium	77.9	0.0691		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 04/21/23 11:50

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.17	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH05@18-19'**  
**2304494-13 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	72.3			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.397	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	8.38			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@5-6'**  
**2304494-14 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		101 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		82.7 %		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 - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@5-6'**  
**2304494-14 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		93.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		129 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.123</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@5-6'**  
**2304494-14 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.35	0.308		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	1.43	0.616		"	"	"	"	"	"	
Cadmium	ND	0.308		"	"	"	"	"	"	
Copper	2.73	0.616		"	"	"	"	"	"	
Lead	ND	0.308		"	"	"	"	"	"	
Nickel	ND	0.616		"	"	"	"	"	"	
Selenium	8.55	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0308		"	"	"	"	"	"	
Zinc	ND	0.616		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	44.5	0.0770		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	14.4	0.0770		"	"	"	"	"	"	
Sodium	201	0.0770		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.70	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@5-6'**  
**2304494-14 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>64.9</b>			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>1.08</b>	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>8.11</b>			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@15-16'**  
**2304494-15 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.1 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		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 - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@15-16'**  
**2304494-15 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		90.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		98.8 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0298</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 13:00**

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

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@15-16'**  
**2304494-15 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>5.06</b>	0.289		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.579		"	"	"	"	"	"	
Cadmium	ND	0.289		"	"	"	"	"	"	
<b>Copper</b>	<b>1.16</b>	0.579		"	"	"	"	"	"	
Lead	ND	0.289		"	"	"	"	"	"	
Nickel	ND	0.579		"	"	"	"	"	"	
<b>Selenium</b>	<b>1.35</b>	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0289		"	"	"	"	"	"	
Zinc	ND	0.579		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>34.2</b>	0.0724		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
<b>Magnesium</b>	<b>12.8</b>	0.0724		"	"	"	"	"	"	
<b>Sodium</b>	<b>190</b>	0.0724		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>7.04</b>	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@15-16'**  
**2304494-15 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	69.1			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.08	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.75			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@17.5-18.5'**  
**2304494-16 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		135 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@17.5-18.5'**  
**2304494-16 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		71.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		79.2 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100		mg/L	1	BGD0914	04/27/23	05/02/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 13:10**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@17.5-18.5'**  
**2304494-16 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.72	0.277		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.555		"	"	"	"	"	"	
Cadmium	ND	0.277		"	"	"	"	"	"	
Copper	ND	0.555		"	"	"	"	"	"	
Lead	ND	0.277		"	"	"	"	"	"	
Nickel	ND	0.555		"	"	"	"	"	"	
Selenium	0.506	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0277		"	"	"	"	"	"	
Zinc	ND	0.555		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.2	0.0694		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	9.24	0.0694		"	"	"	"	"	"	
Sodium	153	0.0694		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.55	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH06@17.5-18.5'**  
**2304494-16 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	72.1			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.902	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.72			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@5-6'**  
**2304494-17 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		96.9 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@5-6'**  
**2304494-17 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.5 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0963</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/03/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 14:00**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@5-6'**  
**2304494-17 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.41	0.293		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.585		"	"	"	"	"	"	
Cadmium	ND	0.293		"	"	"	"	"	"	
Copper	ND	0.585		"	"	"	"	"	"	
Lead	ND	0.293		"	"	"	"	"	"	
Nickel	ND	0.585		"	"	"	"	"	"	
Selenium	28.6	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0293		"	"	"	"	"	"	
Zinc	ND	0.585		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	79.8	0.0731		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	23.8	0.0731		"	"	"	"	"	"	
Sodium	275	0.0731		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.94	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@5-6'**  
**2304494-17 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	68.4			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.62	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.82			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@15-16'**  
**2304494-18 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		92.3 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@15-16'**  
**2304494-18 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.4 %		40-150		"	"	"	"	"
Surrogate: Fluoranthene-d10		74.5 %		40-150		"	"	"	"	"

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0812</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/03/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 14:05**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@15-16'**  
**2304494-18 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	16.4	0.286		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	ND	0.572		"	"	"	"	"	"	
Cadmium	ND	0.286		"	"	"	"	"	"	
Copper	ND	0.572		"	"	"	"	"	"	
Lead	ND	0.286		"	"	"	"	"	"	
Nickel	ND	0.572		"	"	"	"	"	"	
Selenium	0.387	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0286		"	"	"	"	"	"	
Zinc	ND	0.572		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	99.3	0.0715		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	30.9	0.0715		"	"	"	"	"	"	
Sodium	268	0.0715		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.02	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@15-16'**  
**2304494-18 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	70.0			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.72	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.71			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@17-18'**  
**2304494-19 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGD0934	04/27/23	04/28/23	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: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		100 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGD0935	04/27/23	04/28/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		149 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@17-18'**  
**2304494-19 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGD0813	04/25/23	04/27/23	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: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.4 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0740</b>	0.0100		mg/L	1	BGD0914	04/27/23	05/03/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **04/21/23 14:10**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@17-18'**  
**2304494-19 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	18.9	0.282		mg/kg dry	1	BGD0901	04/26/23	05/03/23	EPA 6020B	
Barium	1.44	0.564		"	"	"	"	"	"	
Cadmium	ND	0.282		"	"	"	"	"	"	
Copper	ND	0.564		"	"	"	"	"	"	
Lead	ND	0.282		"	"	"	"	"	"	
Nickel	ND	0.564		"	"	"	"	"	"	
Selenium	3.27	0.260	0.175	"	"	"	"	"	"	
Silver	ND	0.0282		"	"	"	"	"	"	
Zinc	ND	0.564		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGD0972	04/28/23	04/28/23	EPA 7196A	

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

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	89.9	0.0705		mg/L dry	1	BGD0943	04/27/23	05/03/23	EPA 6020B	
Magnesium	28.4	0.0705		"	"	"	"	"	"	
Sodium	264	0.0705		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.22	0.00100		units	1	BGE0822	05/23/23	05/23/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**BH08@17-18'**  
**2304494-19 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>70.9</b>			%	1	BGD0840	04/25/23	04/26/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>1.68</b>	0.0100		mmhos/cm	1	BGD0984	04/28/23	04/28/23	EPA 120.1	

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

Date Sampled: **04/21/23 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>7.92</b>			pH Units	1	BGD0983	04/28/23	04/28/23	EPA 9045D	

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6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

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

#### Batch BGD0934 - EPA 5030 Soil MS

##### Blank (BGD0934-BLK1)

Prepared & Analyzed: 04/27/23

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>	0.0374		"	0.0400		93.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0414		"	0.0400		104	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0380		"	0.0400		95.0	50-150			

##### LCS (BGD0934-BS1)

Prepared & Analyzed: 04/27/23

Benzene	0.0786	0.0020	mg/kg	0.100		78.6	70-130			
Toluene	0.0904	0.0050	"	0.100		90.4	70-130			
Ethylbenzene	0.113	0.0050	"	0.100		113	70-130			
m,p-Xylene	0.211	0.010	"	0.200		105	70-130			
o-Xylene	0.100	0.0050	"	0.100		100	70-130			
1,2,4-Trimethylbenzene	0.119	0.0050	"	0.100		119	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100		115	70-130			
Naphthalene	0.0822	0.0038	"	0.100		82.2	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0307		"	0.0400		76.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0344		"	0.0400		86.0	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		96.9	50-150			

##### Matrix Spike (BGD0934-MS1)

Source: 2304494-01

Prepared & Analyzed: 04/27/23

Benzene	0.0843	0.0020	mg/kg	0.100	ND	84.3	70-130			
Toluene	0.0938	0.0050	"	0.100	ND	93.8	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.199	0.010	"	0.200	ND	99.4	70-130			
o-Xylene	0.0946	0.0050	"	0.100	ND	94.6	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
Naphthalene	0.0888	0.0038	"	0.100	ND	88.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0360		"	0.0400		90.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0402		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0377		"	0.0400		94.2	50-150			

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

### 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 BGD0934 - EPA 5030 Soil MS

Matrix Spike Dup (BGD0934-MSD1)	Source: 2304494-01			Prepared & Analyzed: 04/27/23						
Benzene	0.0836	0.0020	mg/kg	0.100	ND	83.6	70-130	0.822	30	
Toluene	0.0928	0.0050	"	0.100	ND	92.8	70-130	1.06	30	
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	2.06	30	
m,p-Xylene	0.198	0.010	"	0.200	ND	99.0	70-130	0.484	30	
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130	6.12	30	
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	1.33	30	
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	4.48	30	
Naphthalene	0.0791	0.0038	"	0.100	ND	79.1	70-130	11.6	30	
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.5	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	50-150			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**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 BGD0935 - EPA 3550A**

**Blank (BGD0935-BLK1)**

Prepared & Analyzed: 04/27/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5	100	30-150					

**LCS (BGD0935-BS1)**

Prepared & Analyzed: 04/27/23

C10-C28 (DRO)	466	50	mg/kg	500	93.2	70-130					
Surrogate: <i>o</i> -Terphenyl	17.6		"	12.5	141	30-150					

**Matrix Spike (BGD0935-MS1)**

Source: 2304494-01

Prepared & Analyzed: 04/27/23

C10-C28 (DRO)	399	50	mg/kg	500	14.8	76.8	70-130				
Surrogate: <i>o</i> -Terphenyl	13.6		"	12.5	109	30-150					

**Matrix Spike Dup (BGD0935-MSD1)**

Source: 2304494-01

Prepared & Analyzed: 04/27/23

C10-C28 (DRO)	385	50	mg/kg	500	14.8	74.1	70-130	3.40	20		
Surrogate: <i>o</i> -Terphenyl	14.6		"	12.5	117	30-150					

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

Reported:  
05/24/23 10:42

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGD0813 - EPA 5030 Soil MS

Blank (BGD0813-BLK1)

Prepared: 04/25/23 Analyzed: 04/27/23

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	0.0318		"	0.0333		95.5		40-150			
Surrogate: Fluoranthene-d10	0.0348		"	0.0333		104		40-150			

LCS (BGD0813-BS1)

Prepared: 04/25/23 Analyzed: 04/27/23

Acenaphthene	0.0270	0.00500	mg/kg	0.0333		80.9		31-137			
Anthracene	0.0342	0.00500	"	0.0333		103		30-120			
Benzo (a) anthracene	0.0379	0.00500	"	0.0333		114		30-120			
Benzo (a) pyrene	0.0348	0.00500	"	0.0333		104		30-120			
Benzo (b) fluoranthene	0.0309	0.00500	"	0.0333		92.6		30-120			
Benzo (k) fluoranthene	0.0263	0.00500	"	0.0333		78.9		30-120			
Chrysene	0.0374	0.00500	"	0.0333		112		30-120			
Dibenz (a,h) anthracene	0.0368	0.00500	"	0.0333		110		30-120			
Fluoranthene	0.0314	0.00500	"	0.0333		94.2		30-120			
Fluorene	0.0248	0.00500	"	0.0333		74.5		30-120			
Indeno (1,2,3-cd) pyrene	0.0344	0.00500	"	0.0333		103		30-120			
Pyrene	0.0438	0.00500	"	0.0333		131		35-142			
1-Methylnaphthalene	0.0286	0.00500	"	0.0333		85.7		35-142			
2-Methylnaphthalene	0.0278	0.00500	"	0.0333		83.3		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0292		"	0.0333		87.6		40-150			
Surrogate: Fluoranthene-d10	0.0339		"	0.0333		102		40-150			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

Reported:  
05/24/23 10:42

**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 BGD0813 - EPA 5030 Soil MS**

<b>Matrix Spike (BGD0813-MS1)</b>	<b>Source: 2304494-01</b>			<b>Prepared: 04/25/23 Analyzed: 04/27/23</b>								
Acenaphthene	0.0237	0.00500	mg/kg	0.0333	ND	71.2	31-137					
Anthracene	0.0221	0.00500	"	0.0333	ND	66.2	30-120					
Benzo (a) anthracene	0.0315	0.00500	"	0.0333	ND	94.6	30-120					
Benzo (a) pyrene	0.0212	0.00500	"	0.0333	ND	63.5	30-120					
Benzo (b) fluoranthene	0.0198	0.00500	"	0.0333	ND	59.4	30-120					
Benzo (k) fluoranthene	0.0190	0.00500	"	0.0333	ND	57.0	30-120					
Chrysene	0.0274	0.00500	"	0.0333	ND	82.3	30-120					
Dibenz (a,h) anthracene	0.0222	0.00500	"	0.0333	ND	66.5	30-120					
Fluoranthene	0.0215	0.00500	"	0.0333	ND	64.5	30-120					
Fluorene	0.0236	0.00500	"	0.0333	ND	70.7	30-120					
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333	ND	67.7	30-120					
Pyrene	0.0297	0.00500	"	0.0333	ND	89.1	35-142					
1-Methylnaphthalene	0.0174	0.00500	"	0.0333	ND	52.3	15-130					
2-Methylnaphthalene	0.0185	0.00500	"	0.0333	ND	55.4	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0190</i>		<i>"</i>	<i>0.0333</i>		<i>56.9</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0238</i>		<i>"</i>	<i>0.0333</i>		<i>71.3</i>	<i>40-150</i>					

<b>Matrix Spike Dup (BGD0813-MSD1)</b>	<b>Source: 2304494-01</b>			<b>Prepared: 04/25/23 Analyzed: 04/27/23</b>								
Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.2	31-137	28.9	30			
Anthracene	0.0180	0.00500	"	0.0333	ND	53.9	30-120	20.6	30			
Benzo (a) anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	21.0	30			
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.5	30-120	17.0	30			
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.1	30-120	13.1	30			
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	9.96	30			
Chrysene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	13.3	30			
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	34.7	30			QR-02
Fluoranthene	0.0170	0.00500	"	0.0333	ND	51.2	30-120	23.0	30			
Fluorene	0.0174	0.00500	"	0.0333	ND	52.2	30-120	30.1	30			QR-02
Indeno (1,2,3-cd) pyrene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	4.23	30			
Pyrene	0.0249	0.00500	"	0.0333	ND	74.6	35-142	17.7	30			
1-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.3	15-130	9.92	50			
2-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.9	15-130	18.8	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0176</i>		<i>"</i>	<i>0.0333</i>		<i>52.7</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0189</i>		<i>"</i>	<i>0.0333</i>		<i>56.8</i>	<i>40-150</i>					

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

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

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

**Batch BGD0914 - EPA 3050B**

**Blank (BGD0914-BLK1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Boron ND 0.0100 mg/L

**LCS (BGD0914-BS1)**

Prepared: 04/27/23 Analyzed: 05/02/23

Boron 5.68 0.0100 mg/L 5.00 114 80-120

**Duplicate (BGD0914-DUP1)**

**Source: 2304494-01**

Prepared: 04/27/23 Analyzed: 05/02/23

Boron 0.0590 0.0100 mg/L 0.0619 4.78 20

**Matrix Spike (BGD0914-MS1)**

**Source: 2304494-01**

Prepared: 04/27/23 Analyzed: 05/02/23

Boron 5.21 0.0100 mg/L 5.00 0.0619 103 75-125

**Matrix Spike Dup (BGD0914-MSD1)**

**Source: 2304494-01**

Prepared: 04/27/23 Analyzed: 05/02/23

Boron 5.28 0.0100 mg/L 5.00 0.0619 104 75-125 1.27 25

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGD0901 - EPA 3050B**

**Blank (BGD0901-BLK1)**

Prepared: 04/26/23 Analyzed: 05/03/23

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

**LCS (BGD0901-BS1)**

Prepared: 04/26/23 Analyzed: 05/03/23

Arsenic	39.5	0.200	mg/kg wet	40.0	98.8	80-120
Barium	38.7	0.400	"	40.0	96.6	80-120
Cadmium	1.88	0.200	"	2.00	93.9	80-120
Copper	36.4	0.400	"	40.0	90.9	80-120
Lead	20.4	0.200	"	20.0	102	80-120
Nickel	34.4	0.400	"	40.0	86.0	80-120
Selenium	4.68	0.260	"	4.00	117	80-120
Silver	1.82	0.0200	"	2.00	91.1	80-120
Zinc	36.4	0.400	"	40.0	90.9	80-120

**Duplicate (BGD0901-DUP1)**

Source: 2304494-01

Prepared: 04/26/23 Analyzed: 05/03/23

Arsenic	1.98	0.246	mg/kg dry	0.224	159	20	QR-03
Barium	62.8	0.493	"	2.48	185	20	QR-03
Cadmium	0.179	0.246	"	ND	200	20	QR-03
Copper	2.12	0.493	"	0.0793	186	20	QR-03
Lead	2.03	0.246	"	ND	200	20	QR-03
Nickel	1.24	0.493	"	ND	200	20	QR-03
Selenium	ND	0.260	"	2.39	200	20	QR-03
Silver	0.00739	0.0246	"	ND	200	20	QR-03
Zinc	11.0	0.493	"	ND	200	20	QR-03

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGD0901 - EPA 3050B**

**Matrix Spike (BGD0901-MS1)**

Source: 2304494-01

Prepared: 04/26/23 Analyzed: 05/03/23

Arsenic	45.3	0.246	mg/kg dry	49.3	0.224	91.5	75-125			
Barium	111	0.493	"	49.3	2.48	220	75-125			QM-07
Cadmium	2.20	0.246	"	2.46	ND	89.3	75-125			
Copper	28.5	0.493	"	49.3	0.0793	57.7	75-125			QM-07
Lead	22.3	0.246	"	24.6	ND	90.5	75-125			
Nickel	28.0	0.493	"	49.3	ND	56.9	75-125			QM-07
Selenium	4.94	0.260	"	4.93	2.39	51.7	75-125			QM-07
Silver	1.94	0.0246	"	2.46	ND	78.9	75-125			
Zinc	38.2	0.493	"	49.3	ND	77.5	75-125			

**Matrix Spike Dup (BGD0901-MSD1)**

Source: 2304494-01

Prepared: 04/26/23 Analyzed: 05/03/23

Arsenic	44.1	0.246	mg/kg dry	49.3	0.224	89.1	75-125	2.61	25	
Barium	110	0.493	"	49.3	2.48	218	75-125	0.827	25	QM-07
Cadmium	2.16	0.246	"	2.46	ND	87.8	75-125	1.74	25	
Copper	28.0	0.493	"	49.3	0.0793	56.6	75-125	1.79	25	QM-07
Lead	22.3	0.246	"	24.6	ND	90.5	75-125	0.0796	25	
Nickel	27.4	0.493	"	49.3	ND	55.7	75-125	2.05	25	QM-07
Selenium	4.76	0.260	"	4.93	2.39	48.2	75-125	3.62	25	QM-07
Silver	1.96	0.0246	"	2.46	ND	79.7	75-125	1.08	25	
Zinc	37.4	0.493	"	49.3	ND	76.0	75-125	2.01	25	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

### Hexavalent Chromium by EPA Method 7196 - Quality Control

#### Summit Scientific

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

#### Batch BGD0970 - 3060A Mod

<b>Blank (BGD0970-BLK1)</b>											
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BGD0970-BS1)</b>											
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	23.9	0.30	mg/kg wet	25.0	95.6	80-120					
<b>Duplicate (BGD0970-DUP1)</b>											
											Source: 2304494-01
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BGD0970-MS1)</b>											
											Source: 2304494-01
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	27.7	0.30	mg/kg dry	30.8	ND	89.8	75-125				
<b>Matrix Spike Dup (BGD0970-MSD1)</b>											
											Source: 2304494-01
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	27.1	0.30	mg/kg dry	30.8	ND	88.0	75-125	2.02		20	

#### Batch BGD0972 - 3060A Mod

<b>Blank (BGD0972-BLK1)</b>											
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BGD0972-BS1)</b>											
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	20.4	0.30	mg/kg wet	25.0	81.8	80-120					
<b>Duplicate (BGD0972-DUP1)</b>											
											Source: 2304494-14
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BGD0972-MS1)</b>											
											Source: 2304494-14
											Prepared & Analyzed: 04/28/23
Chromium, Hexavalent	34.4	0.30	mg/kg dry	38.5	ND	89.4	75-125				

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 6855 W. 119th Ave.  
 Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/24/23 10:42

**Hexavalent Chromium by EPA Method 7196 - Quality Control**

**Summit Scientific**

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

**Batch BGD0972 - 3060A Mod**

**Matrix Spike Dup (BGD0972-MSD1)**

Source: 2304494-14

Prepared & Analyzed: 04/28/23

Chromium, Hexavalent	32.7	0.30	mg/kg dry	38.5	ND	85.0	75-125	5.05	20	
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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

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

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

**Batch BGD0943 - General Preparation**

**Blank (BGD0943-BLK1)**

Prepared: 04/27/23 Analyzed: 05/03/23

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

**LCS (BGD0943-BS1)**

Prepared: 04/27/23 Analyzed: 05/03/23

Calcium	6.07	0.0500	mg/L wet	5.00		121	70-130			
Magnesium	5.66	0.0500	"	5.00		113	70-130			
Sodium	5.70	0.0500	"	5.00		114	70-130			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

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

**Summit Scientific**

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

**Batch BGD0840 - General Preparation**

Duplicate (BGD0840-DUP1)	Source: 2304215-06		Prepared: 04/25/23 Analyzed: 04/26/23	
% Solids	87.7	%	87.4	0.310 20

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

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

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

**Batch BGD0984 - General Preparation**

**Blank (BGD0984-BLK1)**

Prepared & Analyzed: 04/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGD0984-BS1)**

Prepared & Analyzed: 04/28/23

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 104 95-105

**Duplicate (BGD0984-DUP1)**

**Source: 2304494-01**

Prepared & Analyzed: 04/28/23

Specific Conductance (EC) 0.764 0.0100 mmhos/cm 0.792 3.52 20

Summit Scientific

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

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 05/24/23 10:42

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

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

**Batch BGD0983 - General Preparation**

**LCS (BGD0983-BS1)**

Prepared & Analyzed: 04/28/23

pH	9.10	pH Units	9.18	99.1	95-105
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**Duplicate (BGD0983-DUP1)**

Source: 2304494-01

Prepared & Analyzed: 04/28/23

pH	7.96	pH Units	7.93	0.378	20
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 16-7

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
05/24/23 10:42

### Notes and Definitions

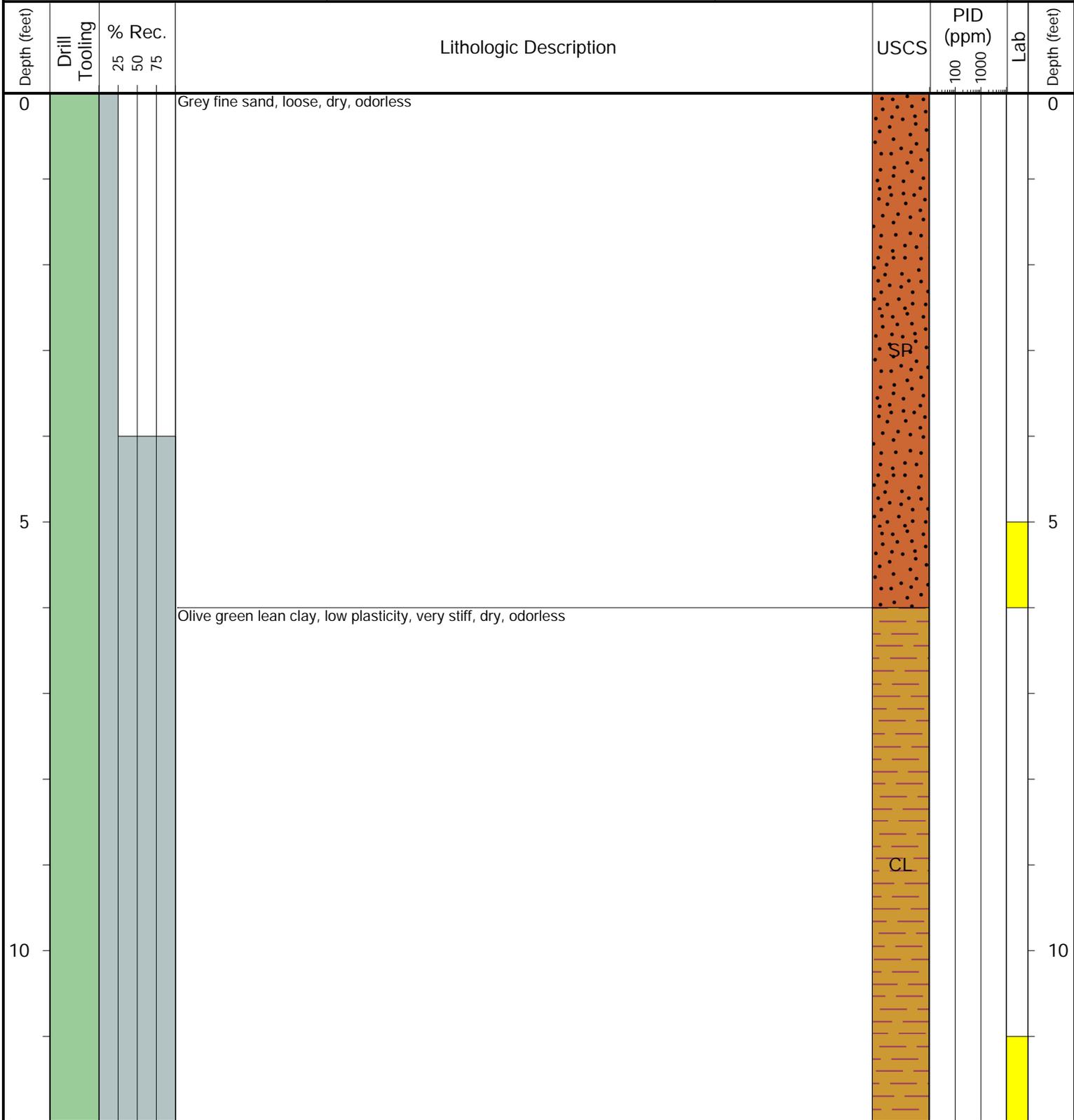
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

**ATTACHMENT B**  
**BORING LOGS**



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH01
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670862017326
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89911909912
TOTAL WELL DEPTH (FT. BGS): 12	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



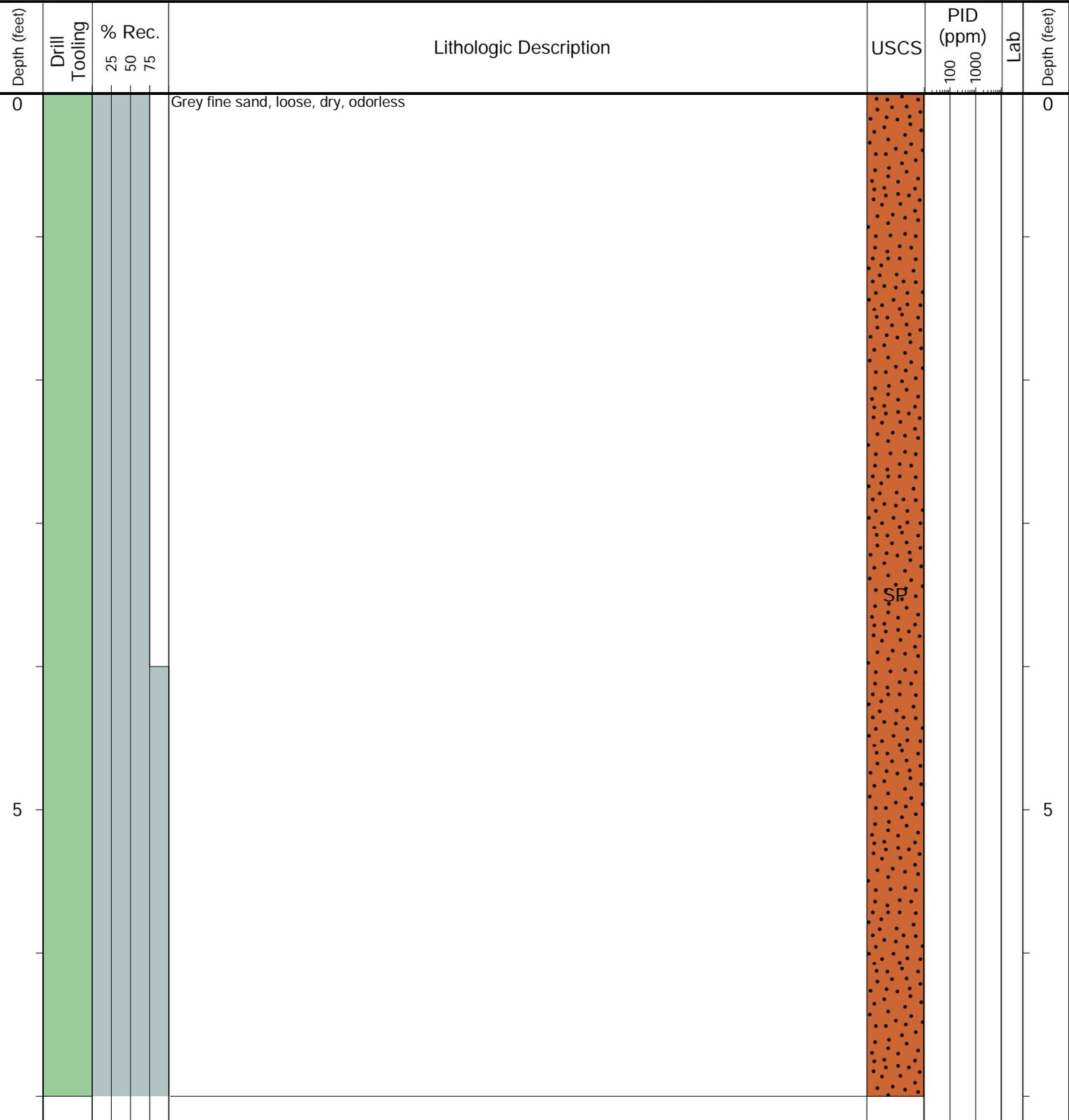
**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Geotechnical Lab
- Analytical Chemistry Lab
- Expendable Well Tip
- Hydrovacuumed
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH02
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670894326752
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89911594623
TOTAL WELL DEPTH (FT. BGS): 7	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

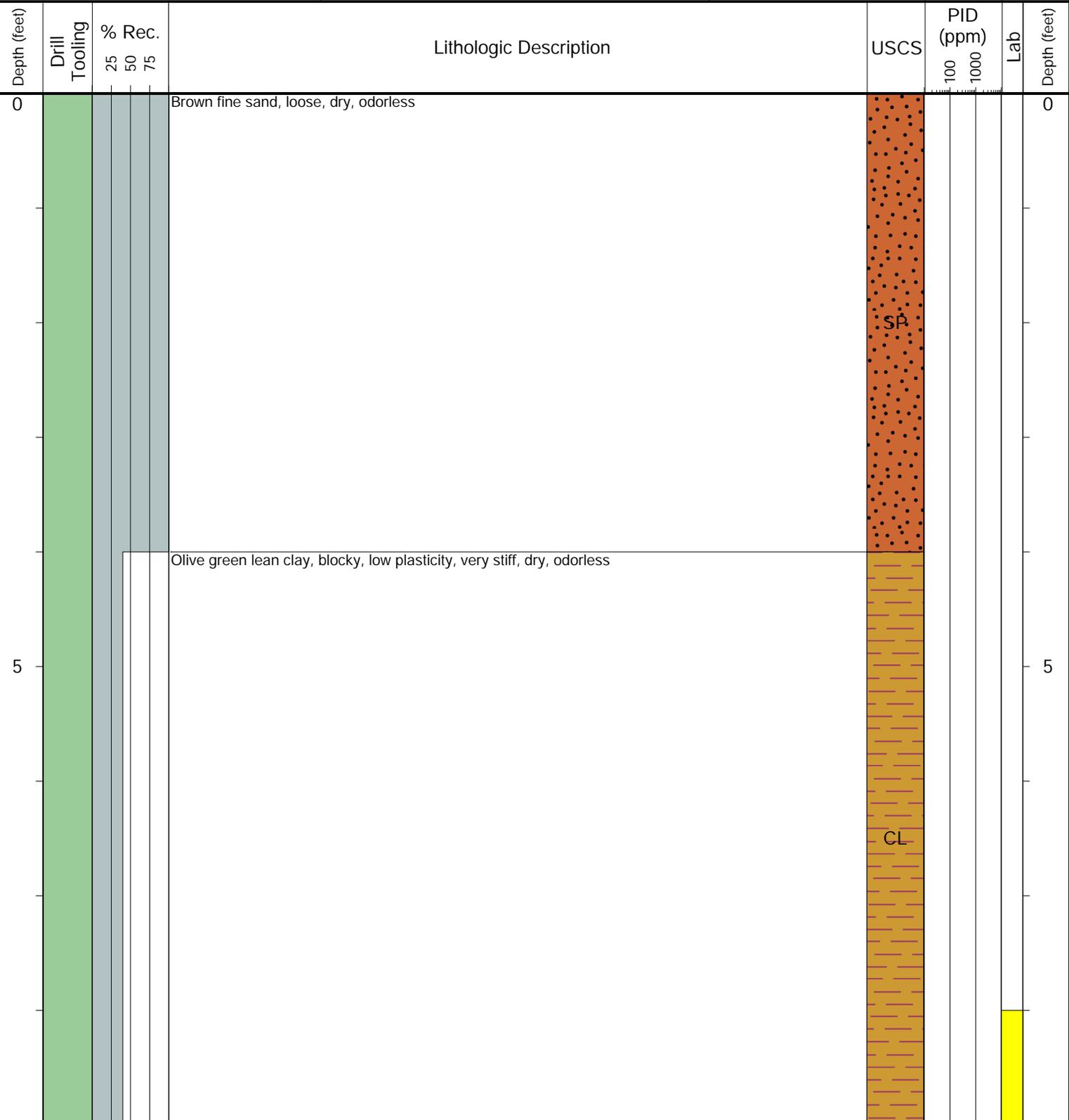
**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH02R
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670899779929
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89912072093
TOTAL WELL DEPTH (FT. BGS): 9	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

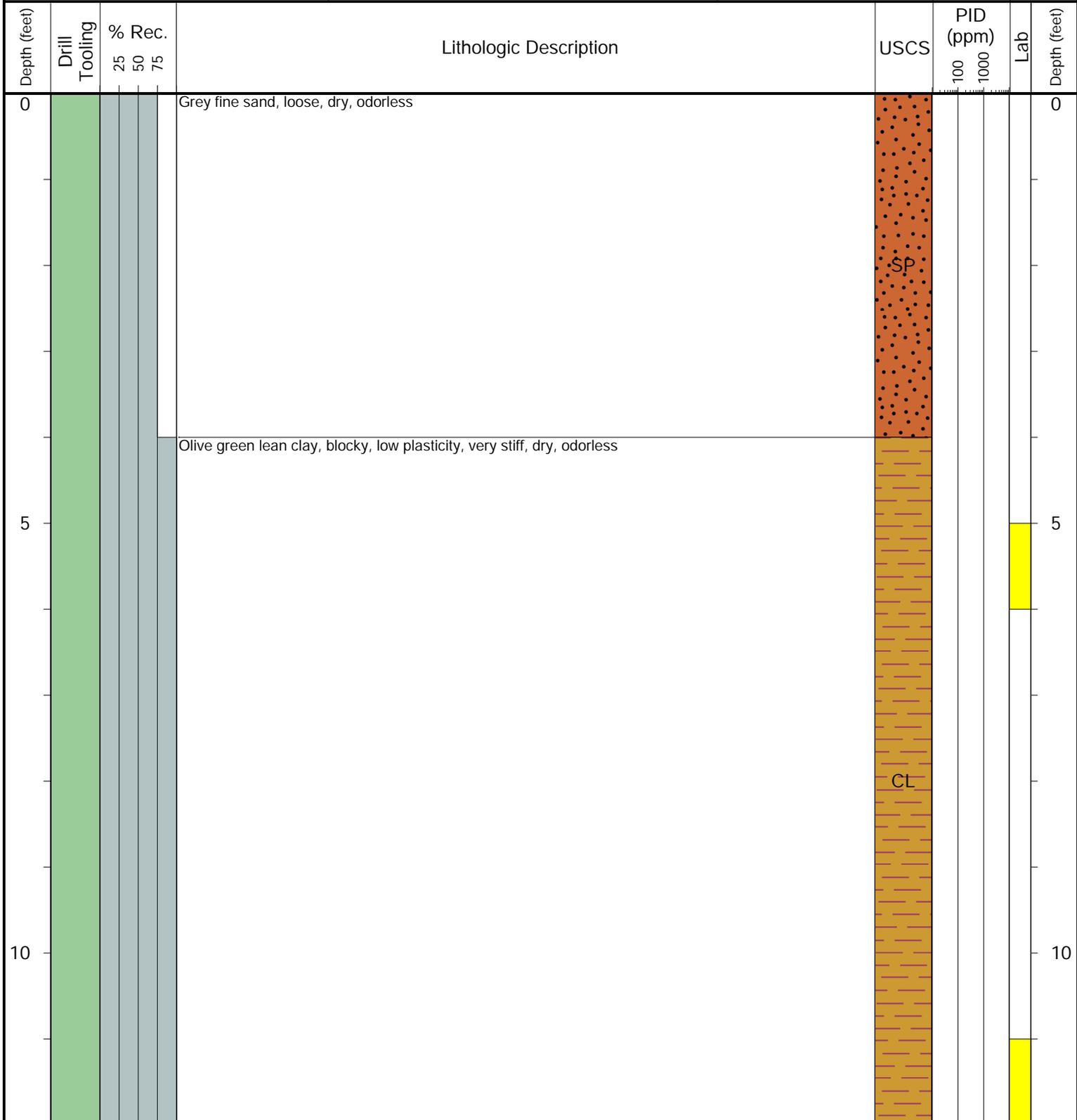
**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH03
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670866007553
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89906076597
TOTAL WELL DEPTH (FT. BGS): 12	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble

LOGGED BY: Allan Engelhardt

PROJECT MANAGER: Jake Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: Geoprobe

DRILL BIT SIZE (INCHES): 2.375"

DATE STARTED - COMPLETED: 4/21/23 - 4/21/23

TOTAL WELL DEPTH (FT. BGS): 23.5

DEPTH WATER ENCOUNTERED (FT. BGS): NM

Lilli Unit 16-7

BORING ID: BH04

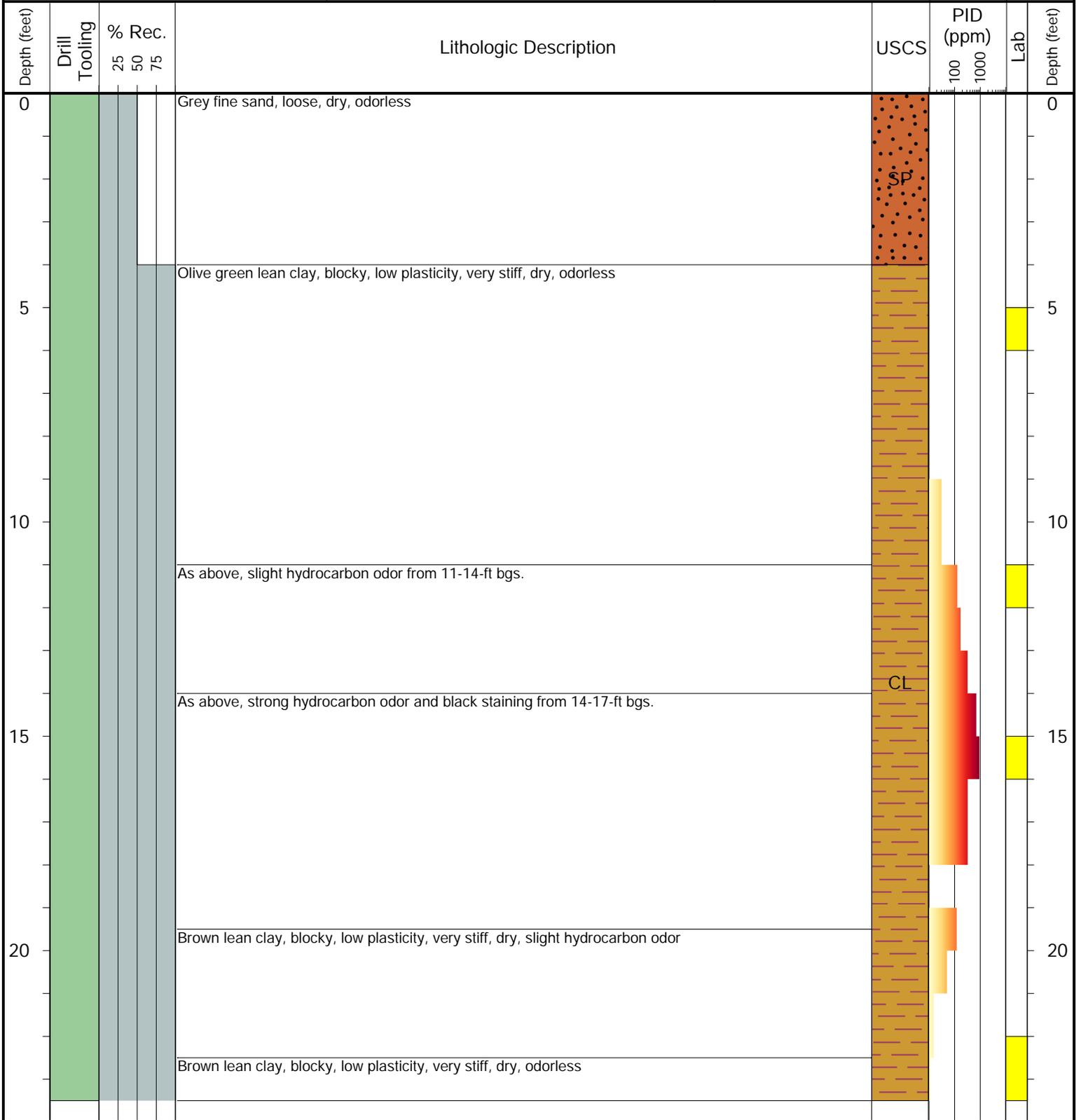
LOCATION: Weld County, Colorado

LATITUDE (NAD 83): 40.670828184553

LONGITUDE (NAD 83): -103.89911832597

GROUND ELEVATION (FT. AMSL): NM

ABANDONMENT METHOD: Bentonite



Drilling / Sample Method:

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

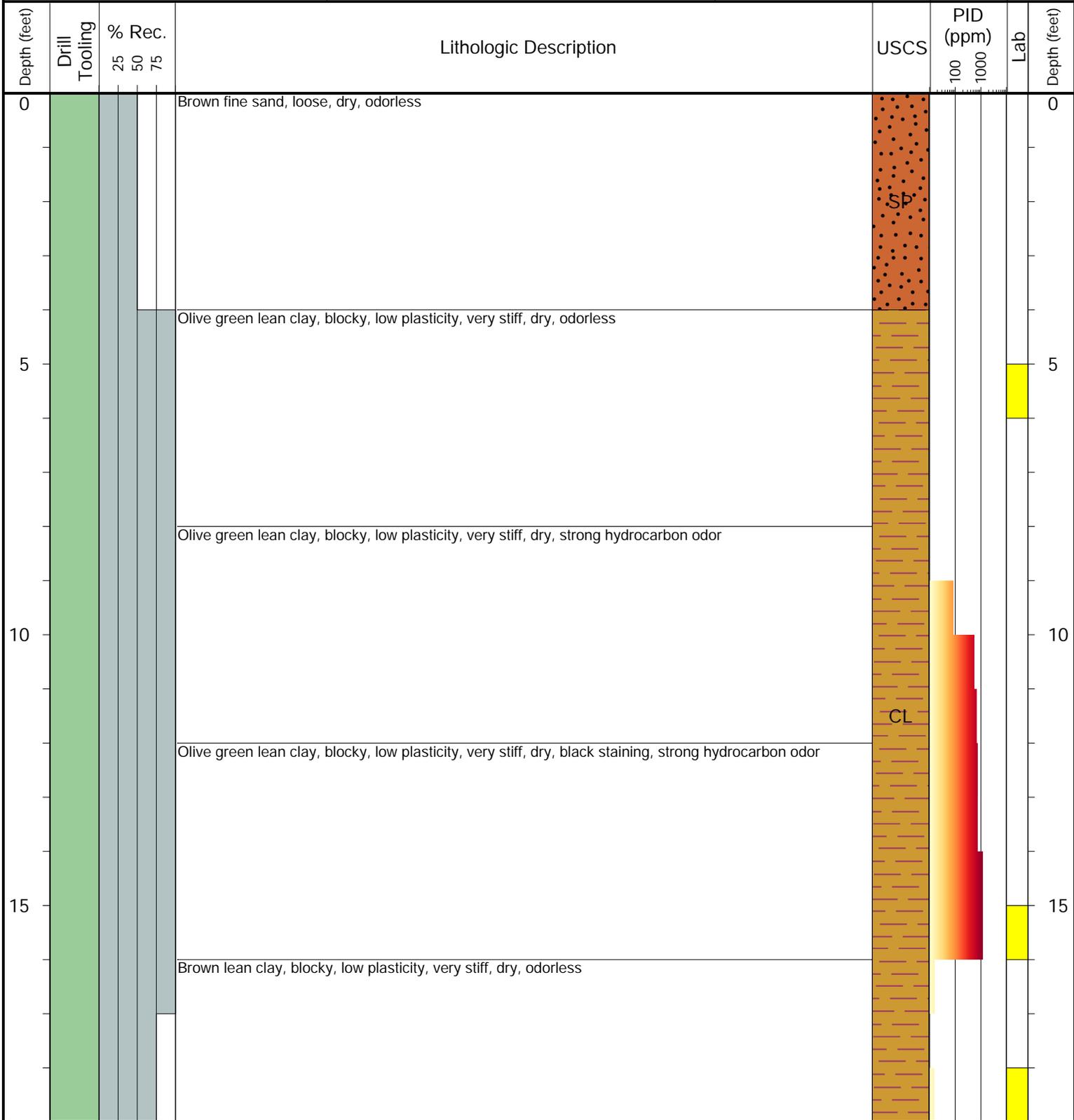
Laboratory Sample Types:

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH05
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670858032069
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89917701894
TOTAL WELL DEPTH (FT. BGS): 19	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



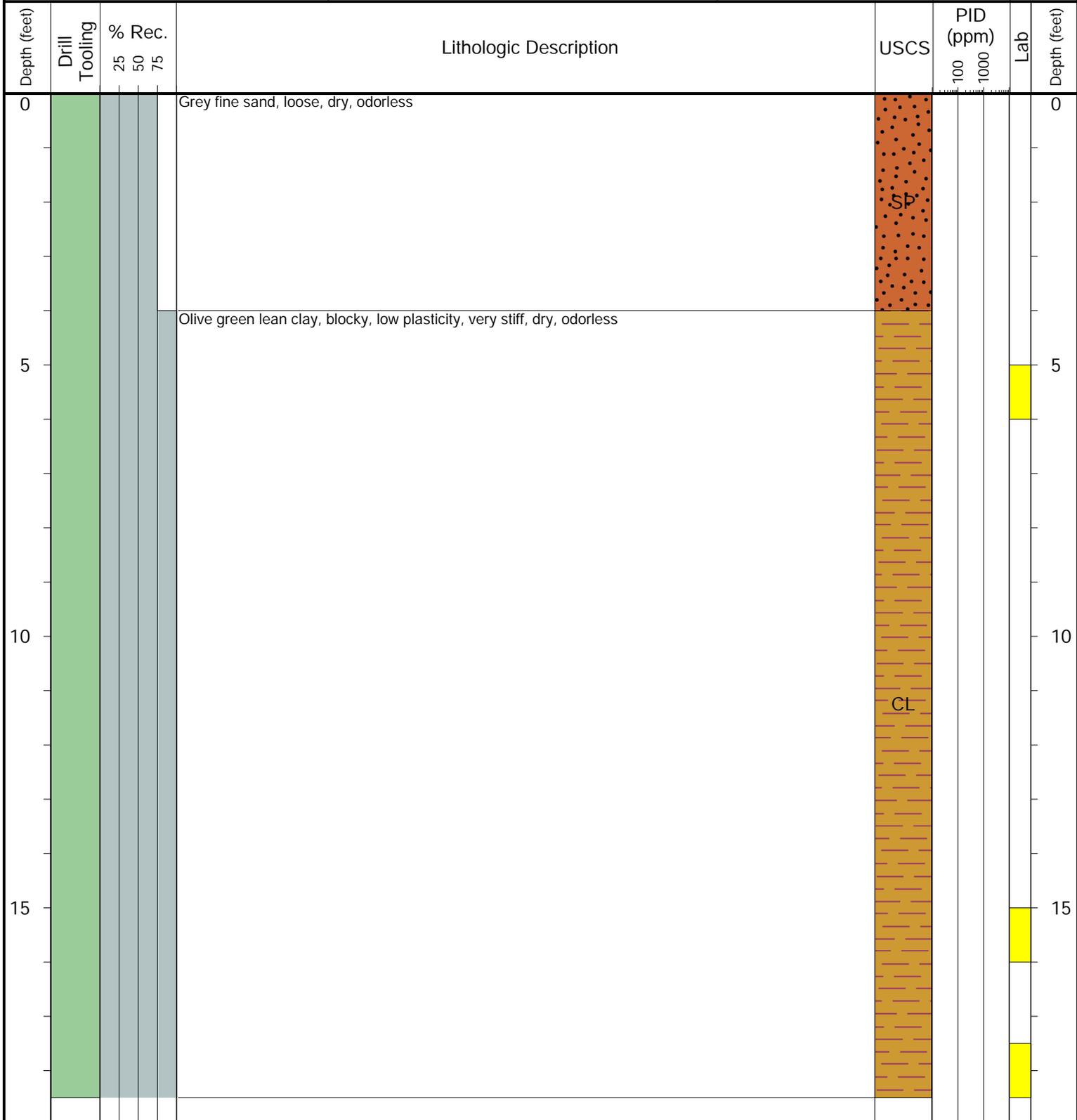
**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Geotechnical Lab
- Analytical Chemistry Lab
- Expendable Well Tip
- Hydrovacuumed
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH06
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670777321467
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89912317465
TOTAL WELL DEPTH (FT. BGS): 18.5	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

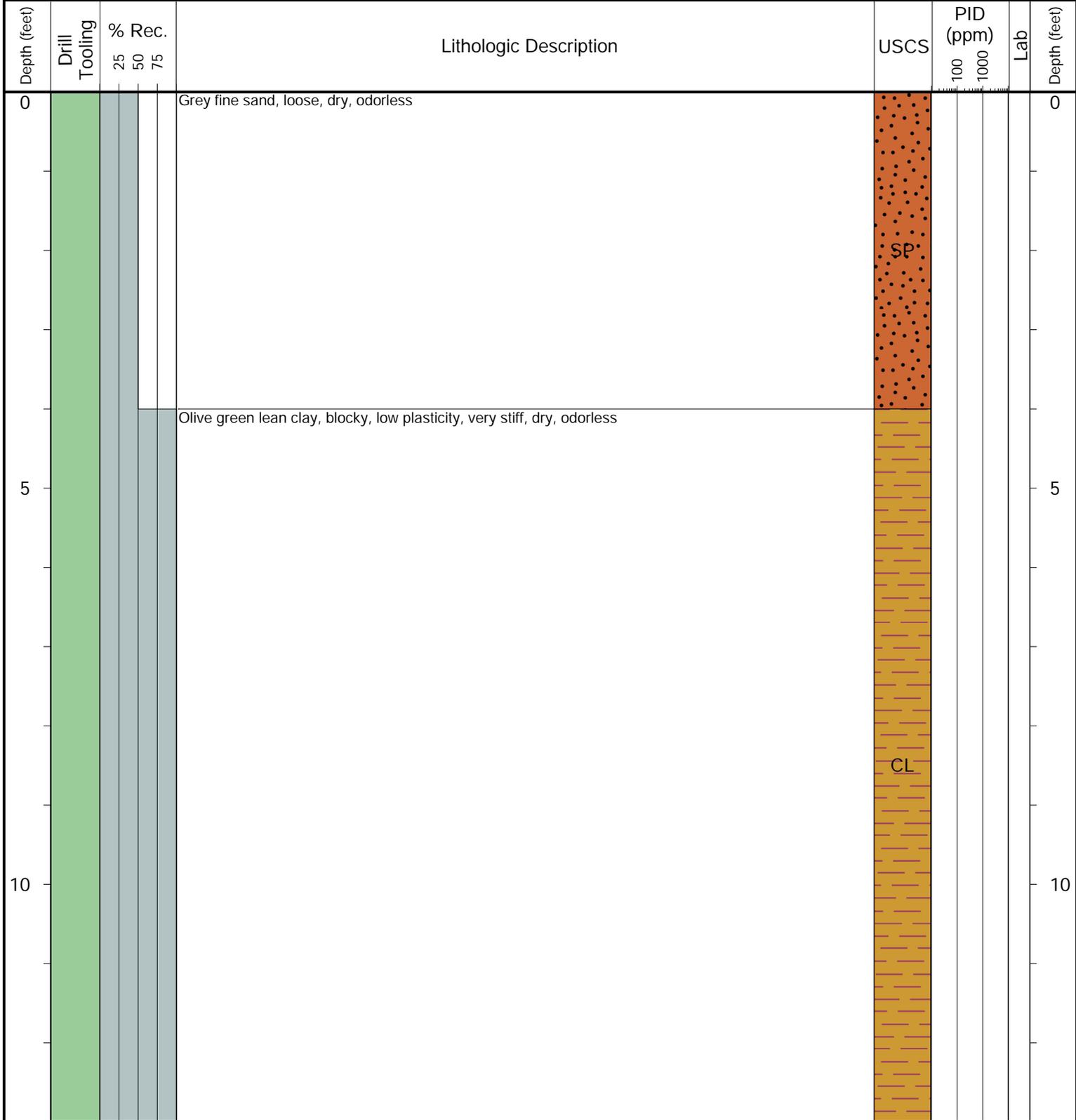
**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH07
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670856321313
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89924239391
TOTAL WELL DEPTH (FT. BGS): 13	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

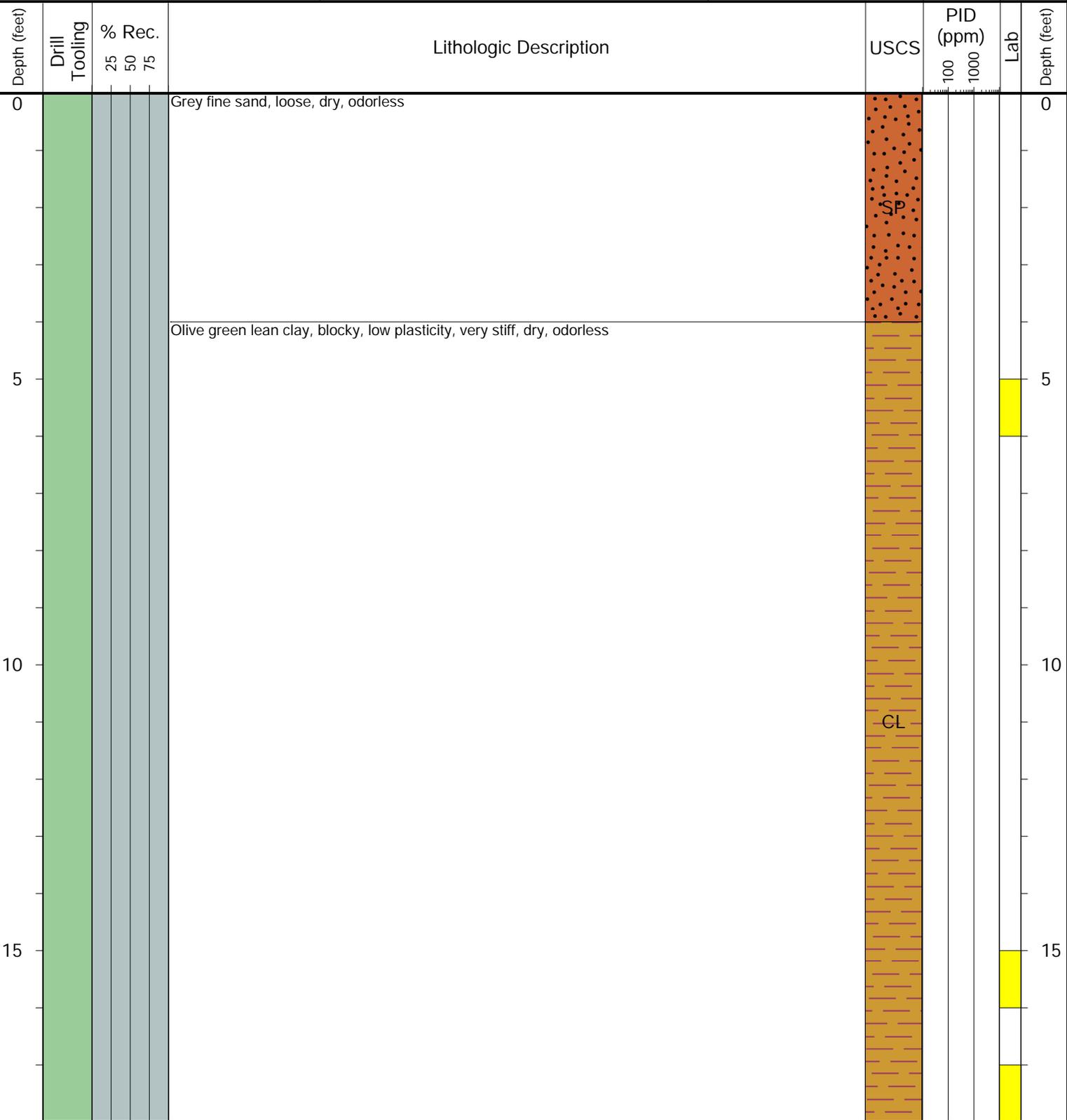
**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.  
Broomfield, CO 80020

CLIENT: Noble	Lilli Unit 16-7
LOGGED BY: Allan Engelhardt	
PROJECT MANAGER: Jake Whritenour	BORING ID: BH08
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Geoprobe	LOCATION: Weld County, Colorado
DRILL BIT SIZE (INCHES): 2.375"	LATITUDE (NAD 83): 40.670848338726
DATE STARTED - COMPLETED: 4/21/23 - 4/21/23	LONGITUDE (NAD 83): -103.89925641633
TOTAL WELL DEPTH (FT. BGS): 18	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Bentonite



**Drilling / Sample Method:**

- Macro-Core
- Hand Auger
- Expendable Well Tip
- Hydrovacuumed

**Laboratory Sample Types:**

- Geotechnical Lab
- Analytical Chemistry Lab
- Geotechnical & Analytical Chemistry Lab