

FREMONT ENVIRONMENTAL INC.

March 28, 2023

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Ave,
Greeley, CO 80634

Subject: **Excavation Report**
 Beeler 22-12, 13
 API# 05-123-20054
 NWNE Sec. 22, T4N, R67W
 Weld County, Colorado
 Fremont Project No. C022-013
 Facility #331032, Remediation #21781

Dear Mr. Peterson:

Enclosed please find a copy of the above referenced Excavation Report for the Beeler 22-12, 13 release site in Weld County, Colorado. The enclosed report describes excavation and sampling efforts to remediate impacted soil at the site.

Since excavation has confirmed the removal of subsurface petroleum impacts, Noble Energy Inc. should request that a No Further Action (NFA) determination be provided by the COGCC for this site.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henahan, P.E.
Senior Consultant

Enclosure

EXCAVATION REPORT

NOBLE ENERGY INC.

BEELER 22-12, 13

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C022-013

FACILITY #331032, REMEDIATION #21781

**Prepared by:
Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
(303) 956-8714**

March 28, 2023

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 BACKGROUND INFORMATION	1
2.1 Site Location	1
2.2 Site History	1
3.0 FIELD ACTIVITIES	2
3.1 Soil Excavation and Sampling.....	2
4.0 DISCUSSION	4
5.0 REMARKS.....	4

Tables

Table 1:	Summary of Volatile Organic Soil Chemistry Data
Table 2:	Summary of Polycyclic Aromatic Hydrocarbon Soil Chemistry Data
Table 3:	Summary of Inorganics in Soil Chemistry Data
Table 4:	Summary of Metals on Soil Chemistry Data

Figures

Figure 1:	Site Location Map
Figure 2:	Site Map
Figure 3:	Soil Chemistry Map

Appendices

Appendix A:	Photo Log
Appendix B:	Laboratory Documentation

EXCAVATION REPORT
NOBLE ENERGY INC.
BEELER 22-12, 13
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-013
FACILITY #331032, REMEDIATION #21781

1.0 INTRODUCTION

The purpose of this document is to present information collected during the multi-day excavation of petroleum-impacted soil at the Beeler 22-12, 13 (Beeler) tank battery location in Weld County, Colorado. This excavation project was completed on January 17, 2023.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Beeler 22-12, 13 tank battery is located approximately four miles south of Milliken, Colorado in Weld County as shown on Figure 1. The site is located in a rural and agricultural area approximately 2.3 miles south of the intersection of County Road 44 and County Road 21. The location is further described as the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 22, Township 4N, Range 67W.

2.2 Site History

The site consisted of the Beeler 22-12, 13 (Beeler) tank battery which serviced the Beeler 22-12 and Beeler 22-13 natural gas wells. The Beeler 22-12 natural gas well was drilled in 2001 to a depth of approximately 7,398 feet.

Historical releases were discovered beneath multiple pieces of equipment at the Beeler tank battery during decommissioning activities in March of 2022. On May 3, 2022, a comprehensive site investigation was undertaken to define the magnitude and extent of

soil impacts which were subsequently removed via excavation. Groundwater was not encountered at that time.

3.0 FIELD ACTIVITIES

3.1 Soil Excavation and Sampling

Soil remediation efforts consisted of two separate excavations of petroleum impacted soil directly beneath, and adjacent to the former Beeler above ground storage tank (AST), produced water vault (PWV) and separators. The combined excavation extent at the area of the AST and PWV measured approximately 17 feet x 31 feet, with a maximum depth varying from seven feet to 7.5 feet deep. The excavation extent at the separators measured approximately 19 feet x 23 feet, with a maximum depth of seven feet. The soil consisted of clay, which extended to six feet deep; then transitioned to a sandy-clay maximum depth of approximately 7.5 feet. Groundwater was not encountered in either excavation. The excavation extents are illustrated on Figures 2 and 3.

The multi-day excavation of impacts at the former Beeler tank battery was completed on January 17, 2023. Soil samples were collected, as grab samples, from each excavation's sidewalls at six feet and in the floor each excavation between seven feet and 7.5 feet below ground surface.

The soil samples were analyzed by Summit Scientific, Inc. in Golden, Colorado for benzene, toluene, ethylbenzene and total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene (TMB), total petroleum hydrocarbons – gasoline range organics (TPH-GRO) by EPA method 8260B, TPH – diesel range organics (TPH-DRO), extended range organics (TPH-ORO) by EPA method 8015, polycyclic aromatic hydrocarbons (PAH) acenaphthene, anthracene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, chrysene, dibenz (a,h) anthracene, fluoranthene, fluorene, indeno (1,2,3-cd) pyrene, pyrene, 1-methylnaphthalene, 2-methylnaphthalene

by EPA method 8270D, specific conductance (EC) by EPA Method 120.1 saturated paste extraction, saturated paste extraction of soluble nutrients by EPA method 6020/USDA60 6(2) for calculated analysis of sodium absorption ratio (SAR), pH by saturated paste extraction APHA/ASTM/EPA methods, Total Metals by EPA method 6020B, and Hexavalent Chromium by EPA method 7196. The laboratory reports and chain-of-custody documentation are included in Appendix B.

A summary of the soil laboratory data is included in Tables 1 through 4. The laboratory analyses indicate that organic petroleum constituents in soil samples collected from the sidewalls and floor of each excavation achieved the COGCC Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSLs). One sample exceeded COGCC Table 915-1 soil screening levels for SAR and pH. These exceedances are present below the root zone at seven feet.

Several samples exceeded COGCC Table 915-1 PGSSLs for arsenic, barium, and selenium. A local background sample collected east of the Beeler 22-12, 13 pad, in native soil at similar depth, also exceeded the COGCC Table 915-1 standards for arsenic, barium, and selenium. Therefore, it is proposed that these exceedances be attributed to native soil conditions.

A total of approximately 504 tons (~ 360 cubic yards) of petroleum impacted soil was removed from the location via excavation by 4X Industrial, LLC during remediation efforts. Impacted soil was disposed of at Buffalo Ridge Landfill in Keenesburg, Colorado as non-hazardous waste, and each excavation was backfilled using clean imported fill.

4.0 DISCUSSION

As demonstrated by the soil sampling, petroleum impacted soil was removed from the Beeler 22-12, 13 tank battery by two separate excavations. This was confirmed by analysis of soil samples collected from the exterior sidewalls and floor of each performed on-site excavation. Exceedances in arsenic, barium and selenium are proposed to be attributed to native soil conditions, based concentrations observed in a local background sample collected adjacent to the former Beeler tank battery. Approximately 360 cubic yards of impacted soil were removed and transported to the landfill. The soil data for each excavation is illustrated and summarized in the attached tables and figures.

Based on their depth of two feet to 3.5 feet below the root zone, Noble proposes to leave soils exceeding the COGCC Table 915-1 soil screening levels for SAR and pH in situ. An impenetrable layer of fine grained, hard pan soil exists at the base of the excavation preventing communication with potential impacts and groundwater measured at approximately 40 below ground surface in the nearest down gradient well, a monitoring hole (Permit No. 45042-MH) 5,508 feet northeast of the Beeler excavation. Additionally, water has never been observed over the life span of this year-long project in the 8.8 acre freshwater pond directly north of the former Beeler facility. Given that surface and groundwater were never encountered at or adjacent to the site no further action designation based on the COGCC Table 915-1 Residential Soil Screening Levels is being requested for the Beeler 22-12, 13 site.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**

Prepared By:



3/28/23

Date_____

Jeff T. Griggs

Geologist

Reviewed by:



3/28/23

Date_____

Ethan D. Black, P.G.

Geologist

TABLES

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BEELER 22-12,13, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-013

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500		
B01@7.0'	1/13/2023	7.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NW01@6.0'	1/13/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NE01@6.0'	1/13/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SE01@6.0'	1/13/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
B02@7.0'	1/16/2023	7.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NW02@6.0'	1/16/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SE02@6.0'	1/16/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SW01@6.0'	1/16/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
B03@7.0'	1/17/2023	7.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
B04@7.0'	1/17/2023	7.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NW03@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NW04@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NE02@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SW02@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SE03@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SE04@6.0'	1/17/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BEELER 22-12,13, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-013

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
B01@7.0'	1/13/2023	7.0 Ft	<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
NW01@6.0'	1/13/2023	6.0 Ft	<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
NE01@6.0'	1/13/2023	6.0 Ft	<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
SE01@6.0'	1/13/2023	6.0 Ft	<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
B02@7.0'	1/16/2023	7.0 Ft	<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
NW02@6.0'	1/16/2023	6.0 Ft	<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
SE02@6.0'	1/16/2023	6.0 Ft	<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
SW01@6.0'	1/16/2023	6.0 Ft	<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
B03@7.0'	1/17/2023	7.0 Ft	<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
B04@7.0'	1/17/2023	7.0 Ft	<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
NW03@6.0'	1/17/2023	6.0 Ft	<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
NW04@6.0'	1/17/2023	6.0 Ft	<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
NE02@6.0'	1/17/2023	6.0 Ft	<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
SW02@6.0'	1/17/2023	6.0 Ft	<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
SE03@6.0'	1/17/2023	6.0 Ft	<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
SE04@6.0'	1/17/2023	6.0 Ft	<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

Bold faced values exceed the COGCC Table 915-1 concentrations
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

TABLE 3
SUMMARY OF INORGANICS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BEELER 22-12,13, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-013

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Site Specific Background Concentration/Value			7.76	4.98	2.72	0.558
B01@7.0'	1/13/2023	7.0 Ft	7.68	1.73	0.478	0.0637
NW01@6.0'	1/13/2023	6.0 Ft	7.98	0.279	0.0349	0.0327
NE01@6.0'	1/13/2023	6.0 Ft	7.82	0.407	0.200	0.0912
SE01@6.0'	1/13/2023	6.0 Ft	7.75	0.524	0.0774	0.0855
B02@7.0'	1/16/2023	7.0 Ft	8.72	1.25	23.9	0.689
NW02@6.0'	1/16/2023	6.0 Ft	7.56	2.87	0.296	0.222
SE02@6.0'	1/16/2023	6.0 Ft	7.56	1.34	0.232	0.229
SW01@6.0'	1/16/2023	6.0 Ft	7.49	2.70	0.243	0.0830
B03@7.0'	1/17/2023	7.0 Ft	7.88	1.73	2.67	0.218
B04@7.0'	1/17/2023	7.0 Ft	7.49	3.28	0.954	0.308
NW03@6.0'	1/17/2023	6.0 Ft	7.74	1.64	0.826	0.0645
NW04@6.0'	1/17/2023	6.0 Ft	7.55	3.66	0.441	0.188
NE02@6.0'	1/17/2023	6.0 Ft	7.55	3.89	0.223	0.183
SW02@6.0'	1/17/2023	6.0 Ft	7.64	3.39	2.60	0.525
SE03@6.0'	1/17/2023	6.0 Ft	7.52	3.43	0.293	0.201
SE04@6.0'	1/17/2023	6.0 Ft	7.96	0.769	0.291	0.464
BKG01@7.0'	1/16/2023	7.0 Ft	7.76	4.98	2.72	0.558

Bold faced values exceed the COGCC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BEELER 22-12,13, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-013

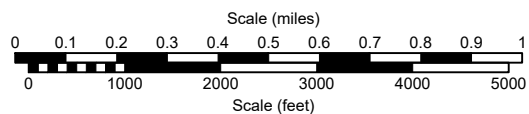
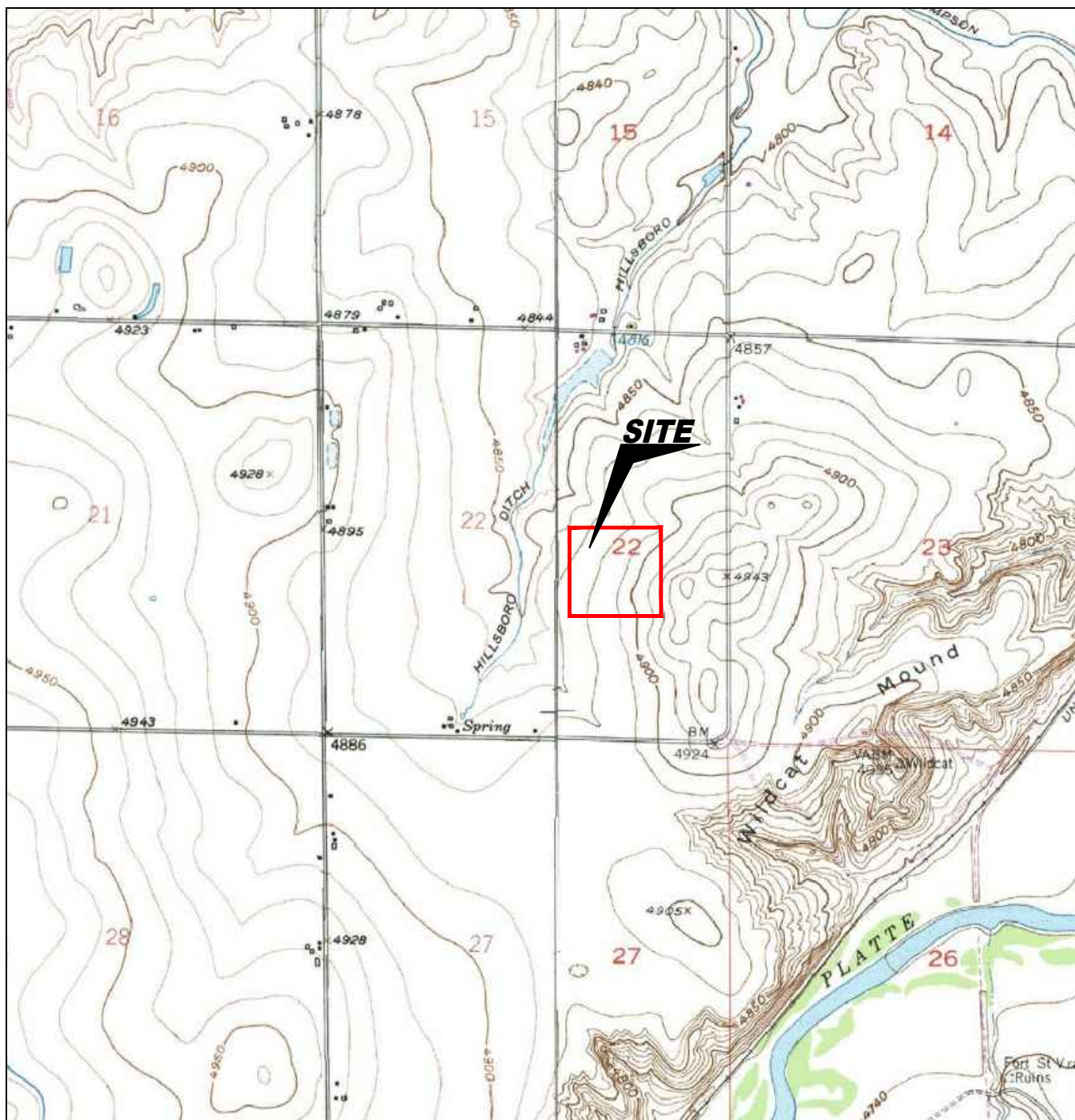
Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
B01@7.0'	1/13/2023	7.0 Ft	1.48	16.7	0.0874	<0.30	5.13	6.18	6.29	0.850	0.0228	37.1
NW01@6.0'	1/13/2023	6.0 Ft	2.55	49.9	0.0498	<0.30	6.69	6.49	7.32	0.849	0.0366	35.4
NE01@6.0'	1/13/2023	6.0 Ft	2.79	43.4	0.0511	<0.30	4.38	6.16	6.49	1.07	0.0377	31.8
SE01@6.0'	1/13/2023	6.0 Ft	2.03	84.5	0.0379	<0.30	4.77	6.04	6.33	0.793	0.0290	38.2
B02@7.0'	1/16/2023	7.0 Ft	1.69	18.6	0.0256	<0.30	5.22	5.90	6.54	0.481	0.0174	37.1
NW02@6.0'	1/16/2023	6.0 Ft	2.31	47.4	0.0364	<0.30	4.99	5.92	6.69	0.659	0.0183	33.1
SE02@6.0'	1/16/2023	6.0 Ft	3.38	72.7	0.0358	<0.30	4.03	5.12	5.79	0.461	0.0230	30.1
SW01@6.0'	1/16/2023	6.0 Ft	2.77	36.1	0.0383	<0.30	4.41	5.48	6.50	0.527	0.0214	28.9
B03@7.0'	1/17/2023	7.0 Ft	3.70	9.90	0.0951	<0.30	4.28	6.42	4.69	<0.312	0.0125	22.2
B04@7.0'	1/17/2023	7.0 Ft	10.1	19.6	0.153	<0.30	6.88	10.2	6.83	<0.319	0.0339	31.4
NW03@6.0'	1/17/2023	6.0 Ft	5.34	107	0.139	<0.30	4.03	8.73	5.83	<0.295	0.0322	22.9
NW04@6.0'	1/17/2023	6.0 Ft	3.92	14.3	0.0956	<0.30	4.10	6.28	5.38	<0.311	0.0167	27.1
NE02@6.0'	1/17/2023	6.0 Ft	5.77	37.2	0.115	<0.30	5.75	8.76	5.05	<0.313	0.0304	36.3
SW02@6.0'	1/17/2023	6.0 Ft	11.9	34.3	0.123	<0.30	6.75	9.53	6.60	<0.325	0.0295	27.6
SE03@6.0'	1/17/2023	6.0 Ft	14.7	44.6	0.166	<0.30	11.1	15.3	8.00	<0.317	0.0332	36.8
SE04@6.0'	1/17/2023	6.0 Ft	9.08	59.5	0.162	<0.30	7.87	11.6	6.67	0.220	0.0407	32.8
BKG01@7.0'	1/16/2023	7.0 Ft	6.81	123	0.128	<0.30	11.4	6.14	47.7	0.615	0.0275	30.4

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

NA - Not analyzed

FIGURES



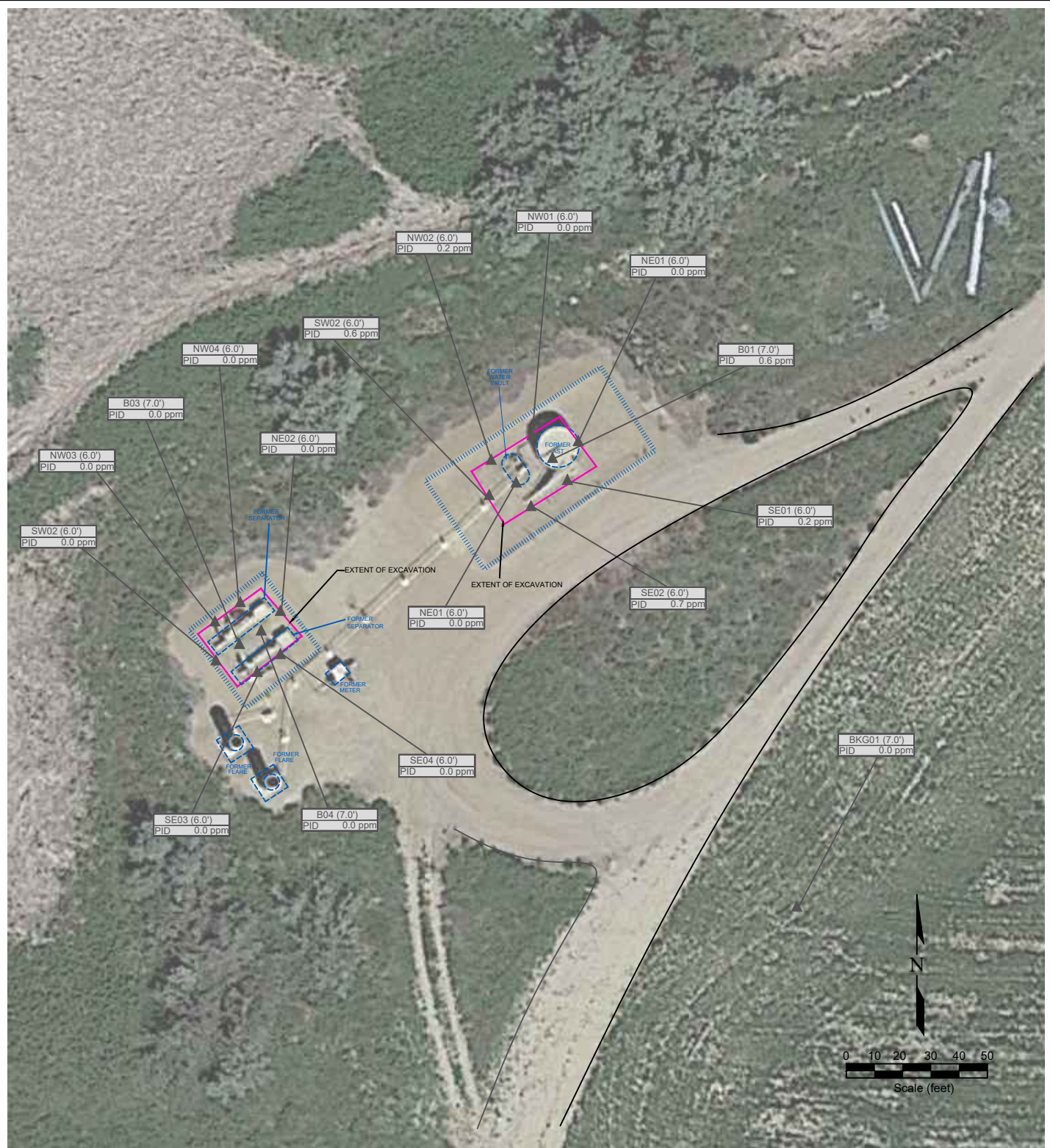
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Beeler 22-12, 13
 NWNE Sec. 22, T4N, R67W, 6th PM
 Weld County, Colorado
 40.303521°, -104.873342°

Project # C022-013	API # 05-123-20054	Facility # 331032
Date 2/25/23	Remediation # 21781	Filename 22013T





LEGEND

 ABOVE GROUND STORAGE TANK
 FORMER FORMER FACILITY
 CONTAINMENT BERM
 EXTENT OF EXCAVATION

▲ PID READING LOCATION

AST01 (1.0')
PID = 483.4 ppm PHOTO IONIZATION DETECTION READING (ppm)
 PID = photo ionization detection / PPM = parts per million

**Figure 2
SITE MAP**

Noble Energy, Inc. ~ Beeler 22-12, 13
 NWNE Sec. 22, T4N, R67W, 6th PM
 Weld County, Colorado
 40.303662°, -104.873344°

Project No. C022-013	API # 05-123-20054	Facility # 331032
Date 2/25/23	Remediation # 21781	Filename 22013Q1



APPENDIX A

PHOTO LOG

Photo Log



Description:

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Photo Log



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Photo Log



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Photo Log



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APPENDIX B

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 18, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Beeler 22-12, 13

Work Order #2301247

Enclosed are the results of analyses for samples received by Summit Scientific on 01/13/23 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@7.0'	2301247-01	Soil	01/13/23 00:00	01/13/23 17:00
NW01@6.0'	2301247-02	Soil	01/13/23 00:00	01/13/23 17:00
NE01@6.0'	2301247-03	Soil	01/13/23 00:00	01/13/23 17:00
SE01@6.0'	2301247-04	Soil	01/13/23 00:00	01/13/23 17:00

Summit Scientific

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

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

2301247

Page 1 of 1

Client: Fremont Env

Project Manager: Paul Henahan

Address:

E-Mail: Paulh@Fremontenv.com jeffg@Fremontenv.com

City/State/Zip:

Ethanb@Fremontenv.com

Phone:

Project Name: Beeler 22-12, 13

Sampler Name: JG

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBs(915)	GR0,OR0,DR0	PAHs(915)	EC,PH,SAR Baron	Metals(915)			
1	B01@7.0'	01/13/23		2			X			X				X	X	X	X	X	X		
2	NW01@6.0'	↓		↓			↓			↓				↓	↓	↓	↓	↓	↓		
3	NE01@6.0'																				
4	SE01@6.0'	↓		↓			↓			↓				↓	↓	↓	↓	↓	↓		
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>01/13/23</u>	Received by: <u>[Signature]</u>	Date/Time: <u>11323</u> <u>1700</u>	Turn Around Time (Check)	Notes: <u>Bill to Noble</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <u>X</u> 72 hours	
				24 hours Standard	
Temperature Upon Receipt: <u>8.7</u>	Corrected Temperature: <u>[Signature]</u>	HNO3 lot #	Sample Integrity:	Samples Intact: <u>Yes</u> No	
IR gun correction: <u>[Signature]</u>	IR gun #:				

S₂

Sample Receipt Checklist

S2 Work Order# 230/247Client: Fremont Client Project ID: Beeler 22-12,13Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☐ Other ☐Temp (°C) 8.7 Thermometer # 1

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

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

Custodian Printed Name

Date/Time

1.13.23



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

B01@7.0'
2301247-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0322	01/13/23	01/13/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0443	111 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0419	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0310	77.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0323	01/13/23	01/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	16.1	129 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

B01@7.0'
2301247-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0342	01/16/23	01/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	79.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0637	0.0100	mg/L	1	BGA0330	01/15/23	01/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/13/23 00:00**

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

B01@7.0'
2301247-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.48	0.237	mg/kg dry	1	BGA0332	01/15/23	01/16/23	EPA 6020B	
Barium	16.7	0.474	"	"	"	"	"	"	
Cadmium	0.0874	0.237	"	"	"	"	"	"	
Copper	5.13	0.474	"	"	"	"	"	"	
Lead	6.18	0.237	"	"	"	"	"	"	
Nickel	6.29	0.474	"	"	"	"	"	"	
Selenium	0.850	0.308	"	"	"	"	"	"	
Silver	0.0228	0.0237	"	"	"	"	"	"	
Zinc	37.1	0.474	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/13/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0360	01/16/23	01/16/23	EPA 7196A	

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

Date Sampled: 01/13/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	150	0.0592	mg/L dry	1	BGA0327	01/15/23	01/17/23	EPA 6020B	
Magnesium	101	0.0592	"	"	"	"	"	"	
Sodium	30.9	0.0592	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/13/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.478	0.00100	units	1	BGA0395	01/17/23	01/17/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/13/23 00:00

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

B01@7.0'
2301247-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.4	%	1	BGA0326	01/15/23	01/15/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.73	0.0100	mmhos/cm	1	BGA0351	01/16/23	01/16/23	EPA 120.1	

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

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.68		pH Units	1	BGA0352	01/16/23	01/16/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NW01@6.0'
2301247-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0322	01/13/23	01/13/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0440	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0407	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0328	82.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0323	01/13/23	01/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.5	116 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/18/23 13:41

NW01@6.0'
2301247-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0342	01/16/23	01/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0195	58.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0243	72.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0327	0.0100	mg/L	1	BGA0330	01/15/23	01/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/13/23 00:00**

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NW01@6.0'
2301247-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.55	0.232	mg/kg dry	1	BGA0332	01/15/23	01/16/23	EPA 6020B	
Barium	49.9	0.464	"	"	"	"	"	"	
Cadmium	0.0498	0.232	"	"	"	"	"	"	
Copper	6.69	0.464	"	"	"	"	"	"	
Lead	6.49	0.232	"	"	"	"	"	"	
Nickel	7.32	0.464	"	"	"	"	"	"	
Selenium	0.849	0.302	"	"	"	"	"	"	
Silver	0.0366	0.0232	"	"	"	"	"	"	
Zinc	35.4	0.464	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0360	01/16/23	01/16/23	EPA 7196A	

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

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.8	0.0580	mg/L dry	1	BGA0327	01/15/23	01/17/23	EPA 6020B	
Magnesium	9.63	0.0580	"	"	"	"	"	"	
Sodium	0.827	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0349	0.00100	units	1	BGA0395	01/17/23	01/17/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/13/23 00:00

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NW01@6.0'
2301247-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.1	%	1	BGA0326	01/15/23	01/15/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.279	0.0100	mmhos/cm	1	BGA0351	01/16/23	01/16/23	EPA 120.1	

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

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.98		pH Units	1	BGA0352	01/16/23	01/16/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NE01@6.0'
2301247-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0322	01/13/23	01/13/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0443	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0325	81.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0323	01/13/23	01/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.9	94.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NE01@6.0'
2301247-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0342	01/16/23	01/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0912	0.0100	mg/L	1	BGA0330	01/15/23	01/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/13/23 00:00**

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

NE01@6.0'
2301247-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.79	0.232	mg/kg dry	1	BGA0332	01/15/23	01/16/23	EPA 6020B	
Barium	43.4	0.464	"	"	"	"	"	"	
Cadmium	0.0511	0.232	"	"	"	"	"	"	
Copper	4.38	0.464	"	"	"	"	"	"	
Lead	6.16	0.232	"	"	"	"	"	"	
Nickel	6.49	0.464	"	"	"	"	"	"	
Selenium	1.07	0.302	"	"	"	"	"	"	
Silver	0.0377	0.0232	"	"	"	"	"	"	
Zinc	31.8	0.464	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0360	01/16/23	01/16/23	EPA 7196A	

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

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	45.6	0.0580	mg/L dry	1	BGA0327	01/15/23	01/17/23	EPA 6020B	
Magnesium	11.4	0.0580	"	"	"	"	"	"	
Sodium	5.84	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.200	0.00100	units	1	BGA0395	01/17/23	01/17/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/13/23 00:00

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/18/23 13:41

NE01@6.0'
2301247-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.2	%	1	BGA0326	01/15/23	01/15/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.407	0.0100	mmhos/cm	1	BGA0351	01/16/23	01/16/23	EPA 120.1	

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

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BGA0352	01/16/23	01/16/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

SE01@6.0'
2301247-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0322	01/13/23	01/13/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0331	82.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0323	01/13/23	01/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.5	116 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

SE01@6.0'
2301247-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0342	01/16/23	01/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0208	62.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0855	0.0100	mg/L	1	BGA0330	01/15/23	01/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

SE01@6.0'
2301247-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.03	0.234	mg/kg dry	1	BGA0332	01/15/23	01/16/23	EPA 6020B	
Barium	84.5	0.468	"	"	"	"	"	"	
Cadmium	0.0379	0.234	"	"	"	"	"	"	
Copper	4.77	0.468	"	"	"	"	"	"	
Lead	6.04	0.234	"	"	"	"	"	"	
Nickel	6.33	0.468	"	"	"	"	"	"	
Selenium	0.793	0.304	"	"	"	"	"	"	
Silver	0.0290	0.0234	"	"	"	"	"	"	
Zinc	38.2	0.468	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0360	01/16/23	01/16/23	EPA 7196A	

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

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	63.5	0.0584	mg/L dry	1	BGA0327	01/15/23	01/17/23	EPA 6020B	
Magnesium	16.2	0.0584	"	"	"	"	"	"	
Sodium	2.67	0.0584	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/13/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0774	0.00100	units	1	BGA0395	01/17/23	01/17/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/13/23 00:00

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

SE01@6.0'
2301247-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.5	%	1	BGA0326	01/15/23	01/15/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.524	0.0100	mmhos/cm	1	BGA0351	01/16/23	01/16/23	EPA 120.1	

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

Date Sampled: **01/13/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BGA0352	01/16/23	01/16/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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 BGA0322 - EPA 5030 Soil MS

Blank (BGA0322-BLK1)

Prepared & Analyzed: 01/13/23

Benzene	ND	0.0020	mg/kg
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
1,2,4-Trimethylbenzene	ND	0.0050	"
1,3,5-Trimethylbenzene	ND	0.0050	"
Naphthalene	ND	0.0038	"
Gasoline Range Hydrocarbons	ND	0.50	"

Surrogate: 1,2-Dichloroethane-d4	0.0420	"	0.0400	105	50-150
Surrogate: Toluene-d8	0.0395	"	0.0400	98.7	50-150
Surrogate: 4-Bromofluorobenzene	0.0300	"	0.0400	75.0	50-150

LCS (BGA0322-BS1)

Prepared & Analyzed: 01/13/23

Benzene	0.0950	0.0020	mg/kg	0.100	95.0	70-130
Toluene	0.0991	0.0050	"	0.100	99.1	70-130
Ethylbenzene	0.0917	0.0050	"	0.100	91.7	70-130
m,p-Xylene	0.189	0.010	"	0.200	94.7	70-130
o-Xylene	0.0866	0.0050	"	0.100	86.6	70-130
1,2,4-Trimethylbenzene	0.0952	0.0050	"	0.100	95.2	70-130
1,3,5-Trimethylbenzene	0.0994	0.0050	"	0.100	99.4	70-130
Naphthalene	0.0910	0.0038	"	0.100	91.0	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0440	"	0.0400	110	50-150
Surrogate: Toluene-d8	0.0363	"	0.0400	90.8	50-150
Surrogate: 4-Bromofluorobenzene	0.0322	"	0.0400	80.5	50-150

Matrix Spike (BGA0322-MS1)

Source: 2301247-01

Prepared & Analyzed: 01/13/23

Benzene	0.0986	0.0020	mg/kg	0.100	ND	98.6	70-130
Toluene	0.103	0.0050	"	0.100	ND	103	70-130
Ethylbenzene	0.0869	0.0050	"	0.100	ND	86.9	70-130
m,p-Xylene	0.184	0.010	"	0.200	ND	92.2	70-130
o-Xylene	0.0851	0.0050	"	0.100	ND	85.1	70-130
1,2,4-Trimethylbenzene	0.0922	0.0050	"	0.100	ND	92.2	70-130
1,3,5-Trimethylbenzene	0.0978	0.0050	"	0.100	ND	97.8	70-130
Naphthalene	0.104	0.0038	"	0.100	ND	104	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0440	"	0.0400	110	50-150
Surrogate: Toluene-d8	0.0393	"	0.0400	98.2	50-150
Surrogate: 4-Bromofluorobenzene	0.0286	"	0.0400	71.5	50-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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 BGA0322 - EPA 5030 Soil MS

Matrix Spike Dup (BGA0322-MSD1)	Source: 2301247-01			Prepared & Analyzed: 01/13/23						
Benzene	0.0930	0.0020	mg/kg	0.100	ND	93.0	70-130	5.82	30	
Toluene	0.0978	0.0050	"	0.100	ND	97.8	70-130	5.46	30	
Ethylbenzene	0.0868	0.0050	"	0.100	ND	86.8	70-130	0.138	30	
m,p-Xylene	0.181	0.010	"	0.200	ND	90.5	70-130	1.91	30	
o-Xylene	0.0855	0.0050	"	0.100	ND	85.5	70-130	0.492	30	
1,2,4-Trimethylbenzene	0.0943	0.0050	"	0.100	ND	94.3	70-130	2.19	30	
1,3,5-Trimethylbenzene	0.0965	0.0050	"	0.100	ND	96.5	70-130	1.36	30	
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130	1.04	30	
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0297		"	0.0400		74.3	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGA0323 - EPA 3550A

Blank (BGA0323-BLK1)

Prepared & Analyzed: 01/13/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	5.34		"	12.5		42.7	30-150			

LCS (BGA0323-BS1)

Prepared & Analyzed: 01/13/23

C10-C28 (DRO)	475	50	mg/kg	500		95.1	70-130			
Surrogate: o-Terphenyl	16.5		"	12.5		132	30-150			

Matrix Spike (BGA0323-MS1)

Source: 2301247-01

Prepared & Analyzed: 01/13/23

C10-C28 (DRO)	432	50	mg/kg	500	24.4	81.5	70-130			
Surrogate: o-Terphenyl	14.2		"	12.5		113	30-150			

Matrix Spike Dup (BGA0323-MSD1)

Source: 2301247-01

Prepared & Analyzed: 01/13/23

C10-C28 (DRO)	448	50	mg/kg	500	24.4	84.8	70-130	3.77	20	
Surrogate: o-Terphenyl	13.7		"	12.5		110	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGA0342 - EPA 5030 Soil MS

Blank (BGA0342-BLK1)

Prepared & Analyzed: 01/16/23

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Pyrene	ND	0.00500	"
1-Methylnaphthalene	ND	0.00500	"
2-Methylnaphthalene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0251	"	0.0333	75.3	40-150
Surrogate: Fluoranthene-d10	0.0377	"	0.0333	113	40-150

LCS (BGA0342-BS1)

Prepared & Analyzed: 01/16/23

Acenaphthene	0.0354	0.00500	mg/kg	0.0333	106	31-137
Anthracene	0.0348	0.00500	"	0.0333	104	30-120
Benzo (a) anthracene	0.0323	0.00500	"	0.0333	96.9	30-120
Benzo (a) pyrene	0.0330	0.00500	"	0.0333	99.1	30-120
Benzo (b) fluoranthene	0.0328	0.00500	"	0.0333	98.3	30-120
Benzo (k) fluoranthene	0.0342	0.00500	"	0.0333	103	30-120
Chrysene	0.0330	0.00500	"	0.0333	99.0	30-120
Dibenz (a,h) anthracene	0.0290	0.00500	"	0.0333	87.1	30-120
Fluoranthene	0.0355	0.00500	"	0.0333	107	30-120
Fluorene	0.0346	0.00500	"	0.0333	104	30-120
Indeno (1,2,3-cd) pyrene	0.0313	0.00500	"	0.0333	93.8	30-120
Pyrene	0.0351	0.00500	"	0.0333	105	35-142
1-Methylnaphthalene	0.0364	0.00500	"	0.0333	109	35-142
2-Methylnaphthalene	0.0338	0.00500	"	0.0333	101	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0306	"	0.0333	91.7	40-150
Surrogate: Fluoranthene-d10	0.0359	"	0.0333	108	40-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGA0342 - EPA 5030 Soil MS

Matrix Spike (BGA0342-MS1)

Source: 2301247-01

Prepared & Analyzed: 01/16/23

Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.5	31-137		
Anthracene	0.0225	0.00500	"	0.0333	ND	67.5	30-120		
Benzo (a) anthracene	0.0218	0.00500	"	0.0333	ND	65.4	30-120		
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.4	30-120		
Benzo (b) fluoranthene	0.0206	0.00500	"	0.0333	ND	61.8	30-120		
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.5	30-120		
Chrysene	0.0207	0.00500	"	0.0333	ND	62.1	30-120		
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.2	30-120		
Fluoranthene	0.0232	0.00500	"	0.0333	ND	69.5	30-120		
Fluorene	0.0230	0.00500	"	0.0333	ND	68.9	30-120		
Indeno (1,2,3-cd) pyrene	0.0189	0.00500	"	0.0333	ND	56.7	30-120		
Pyrene	0.0220	0.00500	"	0.0333	ND	65.9	35-142		
1-Methylnaphthalene	0.0252	0.00500	"	0.0333	ND	75.7	15-130		
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.6	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0225		"	0.0333		67.5	40-150		
Surrogate: Fluoranthene-d10	0.0230		"	0.0333		68.9	40-150		

Matrix Spike Dup (BGA0342-MSD1)

Source: 2301247-01

Prepared & Analyzed: 01/16/23

Acenaphthene	0.0252	0.00500	mg/kg	0.0333	ND	75.5	31-137	8.24	30
Anthracene	0.0251	0.00500	"	0.0333	ND	75.3	30-120	10.9	30
Benzo (a) anthracene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	9.37	30
Benzo (a) pyrene	0.0234	0.00500	"	0.0333	ND	70.1	30-120	13.2	30
Benzo (b) fluoranthene	0.0232	0.00500	"	0.0333	ND	69.5	30-120	11.8	30
Benzo (k) fluoranthene	0.0236	0.00500	"	0.0333	ND	70.8	30-120	12.4	30
Chrysene	0.0229	0.00500	"	0.0333	ND	68.6	30-120	9.98	30
Dibenz (a,h) anthracene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	15.7	30
Fluoranthene	0.0258	0.00500	"	0.0333	ND	77.5	30-120	10.8	30
Fluorene	0.0252	0.00500	"	0.0333	ND	75.5	30-120	9.18	30
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333	ND	67.7	30-120	17.7	30
Pyrene	0.0240	0.00500	"	0.0333	ND	72.0	35-142	8.92	30
1-Methylnaphthalene	0.0237	0.00500	"	0.0333	ND	71.1	15-130	6.27	50
2-Methylnaphthalene	0.0266	0.00500	"	0.0333	ND	79.7	15-130	15.0	50
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.2	40-150		
Surrogate: Fluoranthene-d10	0.0257		"	0.0333		77.2	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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

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

Batch BGA0330 - EPA 3050B

Blank (BGA0330-BLK1)

Prepared: 01/15/23 Analyzed: 01/16/23

Boron ND 0.0100 mg/L

LCS (BGA0330-BS1)

Prepared: 01/15/23 Analyzed: 01/16/23

Boron 5.16 0.0100 mg/L 5.00 103 80-120

Duplicate (BGA0330-DUP1)

Source: 2301180-03

Prepared: 01/15/23 Analyzed: 01/16/23

Boron 0.208 0.0100 mg/L 0.206 0.774 20

Matrix Spike (BGA0330-MS1)

Source: 2301180-03

Prepared: 01/15/23 Analyzed: 01/16/23

Boron 5.91 0.0100 mg/L 5.00 0.206 114 75-125

Matrix Spike Dup (BGA0330-MSD1)

Source: 2301180-03

Prepared: 01/15/23 Analyzed: 01/16/23

Boron 6.47 0.0100 mg/L 5.00 0.206 125 75-125 9.08 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0332 - EPA 3050B

Blank (BGA0332-BLK1)

Prepared: 01/15/23 Analyzed: 01/16/23

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 (BGA0332-BS1)

Prepared: 01/15/23 Analyzed: 01/16/23

Arsenic	47.1	0.200	mg/kg wet	40.0	118	80-120
Barium	43.8	0.400	"	40.0	110	80-120
Cadmium	2.02	0.200	"	2.00	101	80-120
Copper	47.9	0.400	"	40.0	120	80-120
Lead	22.9	0.200	"	20.0	115	80-120
Nickel	47.8	0.400	"	40.0	119	80-120
Selenium	4.54	0.260	"	4.00	114	80-120
Silver	2.40	0.0200	"	2.00	120	80-120
Zinc	46.5	0.400	"	40.0	116	80-120

Duplicate (BGA0332-DUP1)

Source: 2301247-01

Prepared: 01/15/23 Analyzed: 01/16/23

Arsenic	1.33	0.237	mg/kg dry	1.48	10.9	20
Barium	15.9	0.474	"	16.7	5.02	20
Cadmium	0.0826	0.237	"	0.0874	5.63	20
Copper	4.39	0.474	"	5.13	15.5	20
Lead	5.58	0.237	"	6.18	10.2	20
Nickel	5.93	0.474	"	6.29	5.83	20
Selenium	0.820	0.308	"	0.850	3.59	20
Silver	0.0227	0.0237	"	0.0228	0.644	20
Zinc	33.9	0.474	"	37.1	9.01	20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0332 - EPA 3050B

Matrix Spike (BGA0332-MS1)

Source: 2301247-01

Prepared: 01/15/23 Analyzed: 01/16/23

Arsenic	54.6	0.237	mg/kg dry	47.4	1.48	112	75-125
Barium	66.5	0.474	"	47.4	16.7	105	75-125
Cadmium	2.65	0.237	"	2.37	0.0874	108	75-125
Copper	52.3	0.474	"	47.4	5.13	99.6	75-125
Lead	28.0	0.237	"	23.7	6.18	92.1	75-125
Nickel	55.0	0.474	"	47.4	6.29	103	75-125
Selenium	5.38	0.308	"	4.74	0.850	95.7	75-125
Silver	2.43	0.0237	"	2.37	0.0228	102	75-125
Zinc	85.2	0.474	"	47.4	37.1	102	75-125

Matrix Spike Dup (BGA0332-MSD1)

Source: 2301247-01

Prepared: 01/15/23 Analyzed: 01/16/23

Arsenic	61.4	0.237	mg/kg dry	47.4	1.48	126	75-125	11.6	25	QM-07
Barium	101	0.474	"	47.4	16.7	178	75-125	41.3	25	QM-07
Cadmium	3.01	0.237	"	2.37	0.0874	124	75-125	13.0	25	
Copper	59.5	0.474	"	47.4	5.13	115	75-125	12.9	25	
Lead	31.7	0.237	"	23.7	6.18	108	75-125	12.4	25	
Nickel	62.0	0.474	"	47.4	6.29	118	75-125	12.0	25	
Selenium	5.95	0.308	"	4.74	0.850	108	75-125	10.1	25	
Silver	2.78	0.0237	"	2.37	0.0228	116	75-125	13.2	25	
Zinc	94.5	0.474	"	47.4	37.1	121	75-125	10.3	25	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGA0360 - 3060A Mod

Blank (BGA0360-BLK1)

Prepared & Analyzed: 01/16/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGA0360-BS1)

Prepared & Analyzed: 01/16/23

Chromium, Hexavalent 24.1 0.30 mg/kg wet 25.0 96.4 80-120

Duplicate (BGA0360-DUP1)

Source: 2301257-01

Prepared & Analyzed: 01/16/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGA0360-MS1)

Source: 2301257-01

Prepared & Analyzed: 01/16/23

Chromium, Hexavalent 26.6 0.30 mg/kg dry 27.6 ND 96.4 75-125

Matrix Spike Dup (BGA0360-MSD1)

Source: 2301257-01

Prepared & Analyzed: 01/16/23

Chromium, Hexavalent 23.1 0.30 mg/kg dry 27.6 ND 83.8 75-125 14.0 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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

Summit Scientific

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

Batch BGA0327 - General Preparation

Blank (BGA0327-BLK1)

Prepared: 01/15/23 Analyzed: 01/17/23

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

LCS (BGA0327-BS1)

Prepared: 01/15/23 Analyzed: 01/17/23

Calcium	5.15	0.0500	mg/L wet	5.00	103	70-130
Magnesium	5.34	0.0500	"	5.00	107	70-130
Sodium	4.93	0.0500	"	5.00	98.6	70-130

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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

Summit Scientific

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

Batch BGA0326 - General Preparation

Duplicate (BGA0326-DUP1)

Source: 2301247-01

Prepared & Analyzed: 01/15/23

% Solids	84.6	%	84.4	0.233	20
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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

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

Batch BGA0351 - General Preparation

Blank (BGA0351-BLK1)

Prepared & Analyzed: 01/16/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGA0351-BS1)

Prepared & Analyzed: 01/16/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGA0351-DUP1)

Source: 2301153-05

Prepared & Analyzed: 01/16/23

Specific Conductance (EC) 0.801 0.0100 mmhos/cm 0.789 1.43 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

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

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

Batch BGA0352 - General Preparation

LCS (BGA0352-BS1)

Prepared & Analyzed: 01/16/23

pH	9.06	pH Units	9.18	98.7	95-105
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Duplicate (BGA0352-DUP1)

Source: 2301153-05

Prepared & Analyzed: 01/16/23

pH	7.71	pH Units	7.77	0.775	20
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/18/23 13:41

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Beeler 22-12, 13

Work Order #2301274

Enclosed are the results of analyses for samples received by Summit Scientific on 01/16/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B02@7.5'	2301274-01	Soil	01/16/23 00:00	01/16/23 16:30
NW02@6.0'	2301274-02	Soil	01/16/23 00:00	01/16/23 16:30
SE02@6.0'	2301274-03	Soil	01/16/23 00:00	01/16/23 16:30
SW01@6.0'	2301274-04	Soil	01/16/23 00:00	01/16/23 16:30
BKG01@7.0	2301274-05	Soil	01/16/23 00:00	01/16/23 16:30

Summit Scientific

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2301274

Summit Scientific

S₂

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

Page 1 of 1

Client: Fremont EnvProject Manager: Paul Henenan

Address:

E-Mail: Paulh@fremontenv.com jeffg@fremontenv.com

City/State/Zip:

Ethanb@fremontenv.com

Phone:

Project Name: Beeler 22-12,13Sampler Name: JG

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBs (915)	GR0, PRO, PRO	PAHs (915)	EC, PH, SAR Goren	Metals (915)		
1	B02@7.5'	01/16/23		2			X			X				X	X	X	X	X		
2	NW02@6.0'	↓		1			↓			↓				↓	↓	↓	↓	↓		
3	SE02@6.0'	↓		1			↓			↓				↓	↓	↓	↓	↓		
4	SW01@6.0'	↓		2			↓			↓				X	X	X	X	↓		
5	BK601@7.0'	↓		1			↓			↓							X	X		
6																				
7																				
8																				
9																				
10																				

Relinquished by: <u>[Signature]</u>	Date/Time: <u>01/16/23</u>	Received by: <u>SZ</u>	Date/Time: <u>1/16/23</u>	Turn Around Time (Check)	Notes: <u>Bill to Noble</u>
Relinquished by: <u>SZ</u>	Date/Time: <u>1/16/23</u> <u>1030</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/16/23</u> <u>1030</u>	Same Day <u>X</u> 72 hours <u>—</u>	
				24 hours <u>—</u> Standard <u>—</u>	
				48 hours <u>—</u>	
Temperature Upon Receipt: <u>8.6</u>		Corrected Temperature: <u>—</u>		HNO ₃ lot # <u>—</u>	Sample Integrity: Samples Intact: <u>Yes</u> No
IR gun correction: <u>—</u>		IR gun #: <u>1</u>			

S₂

Sample Receipt Checklist

S2 Work Order# 2301274Client: FramontClient Project ID: Becker 22-12,13Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐Airbill #:
☐ ☒ ☐ ☐ ☐

Matrix (Check all that apply)

Air ☐Soil/Solid ☒Water ☐Other ☐

Temp (°C)

8.6

Thermometer #

1

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

Custodian Printed Name

Date/Time

1-16-23



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

B02@7.5'
2301274-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0370	01/16/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0531	133 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0371	01/16/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.9	111 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 10:15

B02@7.5'
2301274-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGA0373	01/17/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.689	0.0100	mg/L	1	BGA0386	01/17/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

B02@7.5'
2301274-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.69	0.240	mg/kg dry	1	BGA0417	01/17/23	01/20/23	EPA 6020B	
Barium	18.6	0.480	"	"	"	"	"	"	
Cadmium	0.0256	0.240	"	"	"	"	"	"	
Copper	5.22	0.480	"	"	"	"	"	"	
Lead	5.90	0.240	"	"	"	"	"	"	
Nickel	6.54	0.480	"	"	"	"	"	"	
Selenium	0.481	0.312	"	"	"	"	"	"	
Silver	0.0174	0.0240	"	"	"	"	"	"	
Zinc	37.1	0.480	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/16/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0392	01/17/23	01/17/23	EPA 7196A	

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

Date Sampled: 01/16/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4.06	0.0600	mg/L dry	1	BGA0372	01/16/23	01/18/23	EPA 6020B	
Magnesium	4.15	0.0600	"	"	"	"	"	"	
Sodium	287	0.0600	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/16/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	23.9	0.00100	units	1	BGA0447	01/18/23	01/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/16/23 00:00

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

B02@7.5'
2301274-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.3	%	1	BGA0390	01/17/23	01/17/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.25	0.0100	mmhos/cm	1	BGA0388	01/17/23	01/17/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.72		pH Units	1	BGA0389	01/17/23	01/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

NW02@6.0'
2301274-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0370	01/16/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0530	132 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0371	01/16/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.9	119 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:15

NW02@6.0'
2301274-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0373	01/17/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.222	0.0100	mg/L	1	BGA0386	01/17/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/16/23 00:00**

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

NW02@6.0'
2301274-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.31	0.232	mg/kg dry	1	BGA0417	01/17/23	01/20/23	EPA 6020B	
Barium	47.4	0.464	"	"	"	"	"	"	
Cadmium	0.0364	0.232	"	"	"	"	"	"	
Copper	4.99	0.464	"	"	"	"	"	"	
Lead	5.92	0.232	"	"	"	"	"	"	
Nickel	6.69	0.464	"	"	"	"	"	"	
Selenium	0.659	0.302	"	"	"	"	"	"	
Silver	0.0183	0.0232	"	"	"	"	"	"	
Zinc	33.1	0.464	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/16/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0392	01/17/23	01/17/23	EPA 7196A	

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

Date Sampled: 01/16/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	458	0.0580	mg/L dry	1	BGA0372	01/16/23	01/18/23	EPA 6020B	
Magnesium	141	0.0580	"	"	"	"	"	"	
Sodium	28.2	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/16/23 00:00

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.296	0.00100	units	1	BGA0447	01/18/23	01/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/16/23 00:00

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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

NW02@6.0'
2301274-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.2	%	1	BGA0390	01/17/23	01/17/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.87	0.0100	mmhos/cm	1	BGA0388	01/17/23	01/17/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.56		pH Units	1	BGA0389	01/17/23	01/17/23	EPA 9045D	

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SE02@6.0'
2301274-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0370	01/16/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0542	135 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0371	01/16/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.4	98.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SE02@6.0'
2301274-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0373	01/17/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0186	55.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0226	67.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.229	0.0100	mg/L	1	BGA0386	01/17/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SE02@6.0'
2301274-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.38	0.241	mg/kg dry	1	BGA0417	01/17/23	01/20/23	EPA 6020B
Barium	72.7	0.483	"	"	"	"	"	"
Cadmium	0.0358	0.241	"	"	"	"	"	"
Copper	4.03	0.483	"	"	"	"	"	"
Lead	5.12	0.241	"	"	"	"	"	"
Nickel	5.79	0.483	"	"	"	"	"	"
Selenium	0.461	0.314	"	"	"	"	"	"
Silver	0.0230	0.0241	"	"	"	"	"	"
Zinc	30.1	0.483	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0392	01/17/23	01/17/23	EPA 7196A	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	188	0.0603	mg/L dry	1	BGA0372	01/16/23	01/18/23	EPA 6020B	
Magnesium	36.7	0.0603	"	"	"	"	"	"	
Sodium	13.3	0.0603	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.232	0.00100	units	1	BGA0447	01/18/23	01/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SE02@6.0'
2301274-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.9	%	1	BGA0390	01/17/23	01/17/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.34	0.0100	mmhos/cm	1	BGA0388	01/17/23	01/17/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.56		pH Units	1	BGA0389	01/17/23	01/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SW01@6.0'
2301274-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0370	01/16/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0546	136 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0371	01/16/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.0	88.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 10:15

SW01@6.0'
2301274-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0373	01/17/23	01/17/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0171	51.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0830	0.0100	mg/L	1	BGA0386	01/17/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SW01@6.0'
2301274-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.77	0.234	mg/kg dry	1	BGA0417	01/17/23	01/20/23	EPA 6020B	
Barium	36.1	0.468	"	"	"	"	"	"	
Cadmium	0.0383	0.234	"	"	"	"	"	"	
Copper	4.41	0.468	"	"	"	"	"	"	
Lead	5.48	0.234	"	"	"	"	"	"	
Nickel	6.50	0.468	"	"	"	"	"	"	
Selenium	0.527	0.304	"	"	"	"	"	"	
Silver	0.0214	0.0234	"	"	"	"	"	"	
Zinc	28.9	0.468	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/16/23 00:00**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0392	01/17/23	01/17/23	EPA 7196A	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	509	0.0584	mg/L dry	1	BGA0372	01/16/23	01/18/23	EPA 6020B	
Magnesium	79.6	0.0584	"	"	"	"	"	"	
Sodium	22.3	0.0584	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.243	0.00100	units	1	BGA0447	01/18/23	01/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

SW01@6.0'
2301274-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.6	%	1	BGA0390	01/17/23	01/17/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.70	0.0100	mmhos/cm	1	BGA0388	01/17/23	01/17/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.49		pH Units	1	BGA0389	01/17/23	01/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

BKG01@7.0
2301274-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.558	0.0100	mg/L	1	BGA0386	01/17/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	6.81	0.216	mg/kg dry	1	BGA0417	01/17/23	01/20/23	EPA 6020B	
Barium	123	0.433	"	"	"	"	"	"	
Cadmium	0.128	0.216	"	"	"	"	"	"	
Copper	11.4	0.433	"	"	"	"	"	"	
Lead	6.14	0.216	"	"	"	"	"	"	
Nickel	47.7	0.433	"	"	"	"	"	"	
Selenium	0.615	0.281	"	"	"	"	"	"	
Silver	0.0275	0.0216	"	"	"	"	"	"	
Zinc	30.4	0.433	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0392	01/17/23	01/17/23	EPA 7196A	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	403	0.0541	mg/L dry	1	BGA0372	01/16/23	01/18/23	EPA 6020B	
Magnesium	365	0.0541	"	"	"	"	"	"	
Sodium	313	0.0541	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 10:15

BKG01@7.0
2301274-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.72	0.00100	units	1	BGA0447	01/18/23	01/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BGA0390	01/17/23	01/17/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.98	0.0100	mmhos/cm	1	BGA0388	01/17/23	01/17/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BGA0389	01/17/23	01/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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 BGA0370 - EPA 5030 Soil MS

Blank (BGA0370-BLK1)

Prepared: 01/16/23 Analyzed: 01/17/23

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0527		"	0.0400		132	50-150			
Surrogate: Toluene-d8	0.0378		"	0.0400		94.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	50-150			

LCS (BGA0370-BS1)

Prepared: 01/16/23 Analyzed: 01/17/23

Benzene	0.0835	0.0020	mg/kg	0.100		83.5	70-130			
Toluene	0.0811	0.0050	"	0.100		81.1	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.204	0.010	"	0.200		102	70-130			
o-Xylene	0.102	0.0050	"	0.100		102	70-130			
1,2,4-Trimethylbenzene	0.0977	0.0050	"	0.100		97.7	70-130			
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100		95.8	70-130			
Naphthalene	0.108	0.0038	"	0.100		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0530		"	0.0400		133	50-150			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		95.9	50-150			

Matrix Spike (BGA0370-MS1)

Source: 2301278-01

Prepared: 01/16/23 Analyzed: 01/17/23

Benzene	0.0839	0.0020	mg/kg	0.100	ND	83.9	70-130			
Toluene	0.0828	0.0050	"	0.100	ND	82.8	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.208	0.010	"	0.200	ND	104	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.0967	0.0050	"	0.100	ND	96.7	70-130			
1,3,5-Trimethylbenzene	0.0936	0.0050	"	0.100	ND	93.6	70-130			
Naphthalene	0.0996	0.0038	"	0.100	ND	99.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0539		"	0.0400		135	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.1	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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 BGA0370 - EPA 5030 Soil MS

Matrix Spike Dup (BGA0370-MSD1)	Source: 2301278-01			Prepared: 01/16/23 Analyzed: 01/17/23						
Benzene	0.0847	0.0020	mg/kg	0.100	ND	84.7	70-130	0.925	30	
Toluene	0.0842	0.0050	"	0.100	ND	84.2	70-130	1.65	30	
Ethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	5.32	30	
m,p-Xylene	0.242	0.010	"	0.200	ND	121	70-130	15.4	30	
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130	3.56	30	
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130	22.5	30	
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.100	ND	123	70-130	27.0	30	
Naphthalene	0.123	0.0038	"	0.100	ND	123	70-130	20.7	30	
Surrogate: 1,2-Dichloroethane-d4	0.0560		"	0.0400		140	50-150			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150			

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGA0371 - EPA 3550A

Blank (BGA0371-BLK1)

Prepared: 01/16/23 Analyzed: 01/17/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	7.96		"	12.5		63.7	30-150			

LCS (BGA0371-BS1)

Prepared: 01/16/23 Analyzed: 01/17/23

C10-C28 (DRO)	415	50	mg/kg	500		83.0	70-130			
Surrogate: o-Terphenyl	7.45		"	12.5		59.6	30-150			

Matrix Spike (BGA0371-MS1)

Source: 2301278-01

Prepared: 01/16/23 Analyzed: 01/17/23

C10-C28 (DRO)	398	50	mg/kg	500	ND	79.6	70-130			
Surrogate: o-Terphenyl	8.16		"	12.5		65.3	30-150			

Matrix Spike Dup (BGA0371-MSD1)

Source: 2301278-01

Prepared: 01/16/23 Analyzed: 01/17/23

C10-C28 (DRO)	423	50	mg/kg	500	ND	84.6	70-130	6.04	20	
Surrogate: o-Terphenyl	7.70		"	12.5		61.6	30-150			

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGA0373 - EPA 5030 Soil MS

Blank (BGA0373-BLK1)

Prepared & Analyzed: 01/17/23

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	0.0315		"	0.0333		94.5	40-150			
Surrogate: Fluoranthene-d10	0.0349		"	0.0333		105	40-150			

LCS (BGA0373-BS1)

Prepared & Analyzed: 01/17/23

Acenaphthene	0.0375	0.00500	mg/kg	0.0333	112	31-137
Anthracene	0.0371	0.00500	"	0.0333	111	30-120
Benzo (a) anthracene	0.0345	0.00500	"	0.0333	104	30-120
Benzo (a) pyrene	0.0354	0.00500	"	0.0333	106	30-120
Benzo (b) fluoranthene	0.0363	0.00500	"	0.0333	109	30-120
Benzo (k) fluoranthene	0.0372	0.00500	"	0.0333	112	30-120
Chrysene	0.0356	0.00500	"	0.0333	107	30-120
Dibenz (a,h) anthracene	0.0328	0.00500	"	0.0333	98.5	30-120
Fluoranthene	0.0318	0.00500	"	0.0333	95.3	30-120
Fluorene	0.0374	0.00500	"	0.0333	112	30-120
Indeno (1,2,3-cd) pyrene	0.0354	0.00500	"	0.0333	106	30-120
Pyrene	0.0264	0.00500	"	0.0333	79.3	35-142
1-Methylnaphthalene	0.0369	0.00500	"	0.0333	111	35-142
2-Methylnaphthalene	0.0366	0.00500	"	0.0333	110	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0304		"	0.0333	91.2	40-150
Surrogate: Fluoranthene-d10	0.0387		"	0.0333	116	40-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGA0373 - EPA 5030 Soil MS

Matrix Spike (BGA0373-MS1)

Source: 2301241-01

Prepared & Analyzed: 01/17/23

Acenaphthene	0.0237	0.00500	mg/kg	0.0333	ND	71.1	31-137		
Anthracene	0.0239	0.00500	"	0.0333	ND	71.6	30-120		
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.5	30-120		
Benzo (a) pyrene	0.0249	0.00500	"	0.0333	0.00186	69.0	30-120		
Benzo (b) fluoranthene	0.0262	0.00500	"	0.0333	ND	78.7	30-120		
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333	0.00206	65.7	30-120		
Chrysene	0.0244	0.00500	"	0.0333	ND	73.2	30-120		
Dibenz (a,h) anthracene	0.0187	0.00500	"	0.0333	ND	56.1	30-120		
Fluoranthene	0.0207	0.00500	"	0.0333	ND	62.0	30-120		
Fluorene	0.0237	0.00500	"	0.0333	ND	71.1	30-120		
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	0.0333	0.00197	65.5	30-120		
Pyrene	0.0188	0.00500	"	0.0333	ND	56.3	35-142		
1-Methylnaphthalene	0.0257	0.00500	"	0.0333	ND	77.1	15-130		
2-Methylnaphthalene	0.0273	0.00500	"	0.0333	ND	81.8	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.6	40-150		
Surrogate: Fluoranthene-d10	0.0252		"	0.0333		75.5	40-150		

Matrix Spike Dup (BGA0373-MSD1)

Source: 2301241-01

Prepared & Analyzed: 01/17/23

Acenaphthene	0.0236	0.00500	mg/kg	0.0333	ND	70.9	31-137	0.282	30
Anthracene	0.0233	0.00500	"	0.0333	ND	69.8	30-120	2.54	30
Benzo (a) anthracene	0.0247	0.00500	"	0.0333	ND	74.1	30-120	0.809	30
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	0.00186	64.8	30-120	5.71	30
Benzo (b) fluoranthene	0.0251	0.00500	"	0.0333	ND	75.2	30-120	4.57	30
Benzo (k) fluoranthene	0.0234	0.00500	"	0.0333	0.00206	64.0	30-120	2.29	30
Chrysene	0.0244	0.00500	"	0.0333	ND	73.2	30-120	0.0464	30
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333	ND	55.2	30-120	1.57	30
Fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120	5.48	30
Fluorene	0.0237	0.00500	"	0.0333	ND	71.0	30-120	0.186	30
Indeno (1,2,3-cd) pyrene	0.0229	0.00500	"	0.0333	0.00197	62.8	30-120	3.89	30
Pyrene	0.0187	0.00500	"	0.0333	ND	56.0	35-142	0.693	30
1-Methylnaphthalene	0.0242	0.00500	"	0.0333	ND	72.7	15-130	5.89	50
2-Methylnaphthalene	0.0261	0.00500	"	0.0333	ND	78.2	15-130	4.58	50
Surrogate: 2-Methylnaphthalene-d10	0.0217		"	0.0333		65.2	40-150		
Surrogate: Fluoranthene-d10	0.0254		"	0.0333		76.3	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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

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

Batch BGA0386 - EPA 3050B

Blank (BGA0386-BLK1)

Prepared: 01/17/23 Analyzed: 01/20/23

Boron ND 0.0100 mg/L

LCS (BGA0386-BS1)

Prepared: 01/17/23 Analyzed: 01/20/23

Boron 5.83 0.0100 mg/L 5.00 117 80-120

Duplicate (BGA0386-DUP1)

Source: 2301274-01

Prepared: 01/17/23 Analyzed: 01/20/23

Boron 0.709 0.0100 mg/L 0.689 2.76 20

Matrix Spike (BGA0386-MS1)

Source: 2301274-01

Prepared: 01/17/23 Analyzed: 01/20/23

Boron 5.16 0.0100 mg/L 5.00 0.689 89.5 75-125

Matrix Spike Dup (BGA0386-MSD1)

Source: 2301274-01

Prepared: 01/17/23 Analyzed: 01/20/23

Boron 5.08 0.0100 mg/L 5.00 0.689 87.8 75-125 1.64 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0417 - EPA 3050B

Blank (BGA0417-BLK1)

Prepared: 01/17/23 Analyzed: 01/20/23

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	0.108	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Selenium	ND	0.260	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"

LCS (BGA0417-BS1)

Prepared: 01/17/23 Analyzed: 01/20/23

Arsenic	47.0	0.200	mg/kg wet	40.0	118	80-120
Barium	42.8	0.400	"	40.0	107	80-120
Cadmium	2.13	0.200	"	2.00	107	80-120
Copper	43.0	0.400	"	40.0	107	80-120
Lead	19.8	0.200	"	20.0	99.1	80-120
Nickel	42.9	0.400	"	40.0	107	80-120
Selenium	4.38	0.260	"	4.00	109	80-120
Silver	2.10	0.0200	"	2.00	105	80-120
Zinc	44.3	0.400	"	40.0	111	80-120

Duplicate (BGA0417-DUP1)

Source: 2301217-06

Prepared: 01/17/23 Analyzed: 01/20/23

Arsenic	0.270	0.208	mg/kg dry	0.399	38.5	20	QR-03
Barium	11.6	0.416	"	14.1	19.7	20	
Cadmium	0.0200	0.208	"	0.0253	23.6	20	QR-01
Copper	1.46	0.416	"	2.37	47.4	20	QR-03
Lead	1.38	0.208	"	2.01	37.3	20	QR-03
Nickel	0.996	0.416	"	1.18	17.1	20	
Selenium	0.187	0.271	"	0.219	16.0	20	
Silver	0.00834	0.0208	"	0.0108	25.3	20	QR-01
Zinc	5.94	0.416	"	7.73	26.2	20	QR-03

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0417 - EPA 3050B

Matrix Spike (BGA0417-MS1)

Source: 2301217-06

Prepared: 01/17/23 Analyzed: 01/20/23

Arsenic	51.9	0.208	mg/kg dry	41.6	0.399	124	75-125		
Barium	59.4	0.416	"	41.6	14.1	109	75-125		
Cadmium	2.37	0.208	"	2.08	0.0253	113	75-125		
Copper	47.8	0.416	"	41.6	2.37	109	75-125		
Lead	23.0	0.208	"	20.8	2.01	101	75-125		
Nickel	47.8	0.416	"	41.6	1.18	112	75-125		
Selenium	4.97	0.271	"	4.16	0.219	114	75-125		
Silver	2.28	0.0208	"	2.08	0.0108	109	75-125		
Zinc	55.1	0.416	"	41.6	7.73	114	75-125		

Matrix Spike Dup (BGA0417-MSD1)

Source: 2301217-06

Prepared: 01/17/23 Analyzed: 01/20/23

Arsenic	50.7	0.208	mg/kg dry	41.6	0.399	121	75-125	2.28	25
Barium	60.7	0.416	"	41.6	14.1	112	75-125	2.20	25
Cadmium	2.33	0.208	"	2.08	0.0253	111	75-125	1.87	25
Copper	47.1	0.416	"	41.6	2.37	107	75-125	1.41	25
Lead	22.6	0.208	"	20.8	2.01	98.7	75-125	1.98	25
Nickel	47.1	0.416	"	41.6	1.18	110	75-125	1.46	25
Selenium	4.62	0.271	"	4.16	0.219	106	75-125	7.25	25
Silver	2.27	0.0208	"	2.08	0.0108	109	75-125	0.483	25
Zinc	53.5	0.416	"	41.6	7.73	110	75-125	2.85	25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGA0392 - 3060A Mod

Blank (BGA0392-BLK1)

Prepared & Analyzed: 01/17/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGA0392-BS1)

Prepared & Analyzed: 01/17/23

Chromium, Hexavalent 20.8 0.30 mg/kg wet 25.0 83.0 80-120

Duplicate (BGA0392-DUP1)

Source: 2301274-02

Prepared & Analyzed: 01/17/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGA0392-MS1)

Source: 2301274-02

Prepared & Analyzed: 01/17/23

Chromium, Hexavalent 25.4 0.30 mg/kg dry 29.0 ND 87.4 75-125

Matrix Spike Dup (BGA0392-MSD1)

Source: 2301274-02

Prepared & Analyzed: 01/17/23

Chromium, Hexavalent 27.5 0.30 mg/kg dry 29.0 ND 94.8 75-125 8.12 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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

Summit Scientific

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

Batch BGA0372 - General Preparation

Blank (BGA0372-BLK1)

Prepared: 01/16/23 Analyzed: 01/18/23

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

LCS (BGA0372-BS1)

Prepared: 01/16/23 Analyzed: 01/18/23

Calcium	4.82	0.0500	mg/L wet	5.00	96.3	70-130
Magnesium	5.65	0.0500	"	5.00	113	70-130
Sodium	5.78	0.0500	"	5.00	116	70-130

Summit Scientific

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



Fremont Environmental	Project: Noble - Beeler 22-12, 13	
PO Box 1289	Project Number: [none]	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	01/23/23 10:15

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

Summit Scientific

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

Batch BGA0390 - General Preparation

Duplicate (BGA0390-DUP1)	Source: 2301274-01	Prepared & Analyzed: 01/17/23
% Solids	83.0	% 83.3 0.319 20

Summit Scientific



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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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

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

Batch BGA0388 - General Preparation

Blank (BGA0388-BLK1)

Prepared & Analyzed: 01/17/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGA0388-BS1)

Prepared & Analyzed: 01/17/23

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGA0388-DUP1)

Source: 2301274-01

Prepared & Analyzed: 01/17/23

Specific Conductance (EC) 1.22 0.0100 mmhos/cm 1.25 2.51 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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

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

Batch BGA0389 - General Preparation

LCS (BGA0389-BS1)

Prepared & Analyzed: 01/17/23

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BGA0389-DUP1)

Source: 2301274-01

Prepared & Analyzed: 01/17/23

pH	8.47	pH Units	8.72	2.91	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:15

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-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Beeler 22-12, 13

Work Order #2301292

Enclosed are the results of analyses for samples received by Summit Scientific on 01/17/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03@7.0'	2301292-01	Soil	01/17/23 00:00	01/17/23 16:30
B04@7.0'	2301292-02	Soil	01/17/23 00:00	01/17/23 16:30
NW03@6.0'	2301292-03	Soil	01/17/23 00:00	01/17/23 16:30
NW04@6.0'	2301292-04	Soil	01/17/23 00:00	01/17/23 16:30
NE02@6.0'	2301292-05	Soil	01/17/23 00:00	01/17/23 16:30
SW02@6.0'	2301292-06	Soil	01/17/23 00:00	01/17/23 16:30
SE03@6.0'	2301292-07	Soil	01/17/23 00:00	01/17/23 16:30
SE04@6.0'	2301292-08	Soil	01/17/23 00:00	01/17/23 16:30

Summit Scientific

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

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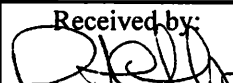

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID

Page 1 of 1

2301292

Client: Fremont Env				Send Data To:				Send Invoice To:											
Address:				Project Manager: Paul Henchan				Company: Noble											
City/State/Zip:				E-Mail: Paulh@fremontenv.com				Project Name/Location:											
Phone:				jeffg@fremontenv.com Ethanb@fremontenv.com				AFE#:											
Sampler Name: J6				Project Name: Beeler 22-12,13				PO/Billing Codes:											
Project Number:				Contact:															
				Preservative				Matrix				Analysis Requested				Special Instructions			
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBS (915)	DRO,ORO,6RO	PAHs (915)	EC,PH,SAR Cation	Metals (915)	
1	B03@7.0'	01/17/23		2			X			X			X	X	X	X	X	X	
2	B04@7.0'																		
3	NW03@6.0'																		
4	NW04@6.0'																		
5	NE02@6.0'																		
6	SW03@6.0'																		
7	SE03@6.0'																		
8	SE04@6.0'																		
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: 	Date/Time: 01/17/23	Received by: SZ	Date/Time: 11723	TAT Business Days	Field DO	Notes: Bill to Noble
Relinquished by: SZ	Date/Time: 11723 1630	Received by: 	Date/Time: 11723 11030	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb.	
Temperature Upon Receipt: 7.0	Corrected Temperature: 	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2301292Client: Fremont Client Project ID: Beecher 22-12,13Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☐ Other ☐Temp (°C) 7.8 Thermometer # 1

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

Additional Comments (if any):

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

Custodian Printed Name

Date/Time

1-17-23



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B03@7.0'
2301292-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0528	132 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.8	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:19

B03@7.0'
2301292-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.218	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B03@7.0'
2301292-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.70	0.240	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	9.90	0.481	"	"	"	"	"	"
Cadmium	0.0951	0.240	"	"	"	"	"	"
Copper	4.28	0.481	"	"	"	"	"	"
Lead	6.42	0.240	"	"	"	"	"	"
Nickel	4.69	0.481	"	"	"	"	"	"
Selenium	ND	0.312	"	"	"	"	"	"
Silver	0.0125	0.0240	"	"	"	"	"	"
Zinc	22.2	0.481	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.3	0.0601	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	109	0.0601	"	"	"	"	"	"	
Sodium	151	0.0601	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.67	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B03@7.0'
2301292-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.2	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.73	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B04@7.0'
2301292-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0530	133 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.2	122 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B04@7.0'
2301292-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.308	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B04@7.0'
2301292-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	10.1	0.245	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	19.6	0.491	"	"	"	"	"	"
Cadmium	0.153	0.245	"	"	"	"	"	"
Copper	6.88	0.491	"	"	"	"	"	"
Lead	10.2	0.245	"	"	"	"	"	"
Nickel	6.83	0.491	"	"	"	"	"	"
Selenium	ND	0.319	"	"	"	"	"	"
Silver	0.0339	0.0245	"	"	"	"	"	"
Zinc	31.4	0.491	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	357	0.0613	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	216	0.0613	"	"	"	"	"	"	
Sodium	92.5	0.0613	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.954	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

B04@7.0'
2301292-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.5	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.28	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.49		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW03@6.0'
2301292-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0547	137 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.5	124 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW03@6.0'
2301292-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	41.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	51.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0645	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW03@6.0'
2301292-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.34	0.227	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	107	0.454	"	"	"	"	"	"
Cadmium	0.139	0.227	"	"	"	"	"	"
Copper	4.03	0.454	"	"	"	"	"	"
Lead	8.73	0.227	"	"	"	"	"	"
Nickel	5.83	0.454	"	"	"	"	"	"
Selenium	ND	0.295	"	"	"	"	"	"
Silver	0.0322	0.0227	"	"	"	"	"	"
Zinc	22.9	0.454	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	149	0.0567	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	86.2	0.0567	"	"	"	"	"	"	
Sodium	51.2	0.0567	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.826	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW03@6.0'
2301292-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.2	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.64	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW04@6.0'
2301292-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0555	139 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	94.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:19

NW04@6.0'
2301292-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.188	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW04@6.0'
2301292-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.92	0.239	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	14.3	0.478	"	"	"	"	"	"
Cadmium	0.0956	0.239	"	"	"	"	"	"
Copper	4.10	0.478	"	"	"	"	"	"
Lead	6.28	0.239	"	"	"	"	"	"
Nickel	5.38	0.478	"	"	"	"	"	"
Selenium	ND	0.311	"	"	"	"	"	"
Silver	0.0167	0.0239	"	"	"	"	"	"
Zinc	27.1	0.478	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	478	0.0598	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	234	0.0598	"	"	"	"	"	"	
Sodium	47.0	0.0598	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.441	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NW04@6.0'
2301292-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.7	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.66	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.55		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:19

NE02@6.0'
2301292-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0547	137 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.9	119 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:19

NE02@6.0'
2301292-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.183	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NE02@6.0'
2301292-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.77	0.241	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	37.2	0.482	"	"	"	"	"	"
Cadmium	0.115	0.241	"	"	"	"	"	"
Copper	5.75	0.482	"	"	"	"	"	"
Lead	8.76	0.241	"	"	"	"	"	"
Nickel	5.05	0.482	"	"	"	"	"	"
Selenium	ND	0.313	"	"	"	"	"	"
Silver	0.0304	0.0241	"	"	"	"	"	"
Zinc	36.3	0.482	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	501	0.0603	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	295	0.0603	"	"	"	"	"	"	
Sodium	25.5	0.0603	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.223	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

NE02@6.0'
2301292-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.0	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.86	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.55		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SW02@6.0'
2301292-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0540	135 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.6	124 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 10:19

SW02@6.0'
2301292-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0265	79.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.525	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SW02@6.0'
2301292-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	11.9	0.250	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	34.3	0.499	"	"	"	"	"	"
Cadmium	0.123	0.250	"	"	"	"	"	"
Copper	6.75	0.499	"	"	"	"	"	"
Lead	9.53	0.250	"	"	"	"	"	"
Nickel	6.60	0.499	"	"	"	"	"	"
Selenium	ND	0.325	"	"	"	"	"	"
Silver	0.0295	0.0250	"	"	"	"	"	"
Zinc	27.6	0.499	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	191	0.0624	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	234	0.0624	"	"	"	"	"	"	
Sodium	227	0.0624	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.60	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SW02@6.0'
2301292-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.1	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.39	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.64		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE03@6.0'
2301292-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0532	133 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.4	123 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE03@6.0'
2301292-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	42.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.201	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE03@6.0'
2301292-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	14.7	0.244	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	44.6	0.488	"	"	"	"	"	"
Cadmium	0.166	0.244	"	"	"	"	"	"
Copper	11.1	0.488	"	"	"	"	"	"
Lead	15.3	0.244	"	"	"	"	"	"
Nickel	8.00	0.488	"	"	"	"	"	"
Selenium	ND	0.317	"	"	"	"	"	"
Silver	0.0332	0.0244	"	"	"	"	"	"
Zinc	36.8	0.488	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	416	0.0610	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	276	0.0610	"	"	"	"	"	"	
Sodium	31.3	0.0610	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.293	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289
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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE03@6.0'
2301292-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.0	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.43	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE04@6.0'
2301292-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	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: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0553	138 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.9	119 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE04@6.0'
2301292-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.464	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE04@6.0'
2301292-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	9.08	0.248	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	59.5	0.497	"	"	"	"	"	"	
Cadmium	0.162	0.248	"	"	"	"	"	"	
Copper	7.87	0.497	"	"	"	"	"	"	
Lead	11.6	0.248	"	"	"	"	"	"	
Nickel	6.67	0.497	"	"	"	"	"	"	
Selenium	0.220	0.323	"	"	"	"	"	"	
Silver	0.0407	0.0248	"	"	"	"	"	"	
Zinc	32.8	0.497	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.7	0.0621	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	66.9	0.0621	"	"	"	"	"	"	
Sodium	12.9	0.0621	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.291	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

SE04@6.0'
2301292-08 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	80.6	%	1	BGA0441	01/18/23	01/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.769	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGA0418 - EPA 5030 Soil MS

Blank (BGA0418-BLK1)

Prepared: 01/17/23 Analyzed: 01/18/23

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0510		"	0.0400		128	50-150			
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

LCS (BGA0418-BS1)

Prepared: 01/17/23 Analyzed: 01/18/23

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130			
Toluene	0.114	0.0050	"	0.100		114	70-130			
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130			
m,p-Xylene	0.211	0.010	"	0.200		105	70-130			
o-Xylene	0.104	0.0050	"	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.0988	0.0050	"	0.100		98.8	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.111	0.0038	"	0.100		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0497		"	0.0400		124	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Matrix Spike (BGA0418-MS1)

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

Benzene	0.114	0.0020	mg/kg	0.100	ND	114	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.209	0.010	"	0.200	ND	105	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
1,3,5-Trimethylbenzene	0.0996	0.0050	"	0.100	ND	99.6	70-130			
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0521		"	0.0400		130	50-150			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0400		104	50-150			

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGA0418 - EPA 5030 Soil MS

Matrix Spike Dup (BGA0418-MSD1)	Source: 2301292-01			Prepared: 01/17/23 Analyzed: 01/18/23						
Benzene	0.115	0.0020	mg/kg	0.100	ND	115	70-130	0.210	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	0.843	30	
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	3.87	30	
m,p-Xylene	0.211	0.010	"	0.200	ND	105	70-130	0.614	30	
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130	2.28	30	
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	4.17	30	
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	2.65	30	
Naphthalene	0.0994	0.0038	"	0.100	ND	99.4	70-130	6.06	30	
Surrogate: 1,2-Dichloroethane-d4	0.0519		"	0.0400		130	50-150			
Surrogate: Toluene-d8	0.0380		"	0.0400		94.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	50-150			

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGA0419 - EPA 3550A

Blank (BGA0419-BLK1)

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.0		"	12.5		104	30-150			

LCS (BGA0419-BS1)

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	506	50	mg/kg	500		101	70-130			
Surrogate: o-Terphenyl	12.7		"	12.5		102	30-150			

Matrix Spike (BGA0419-MS1)

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	480	50	mg/kg	500	10.8	93.7	70-130			
Surrogate: o-Terphenyl	12.7		"	12.5		101	30-150			

Matrix Spike Dup (BGA0419-MSD1)

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	454	50	mg/kg	500	10.8	88.6	70-130	5.49	20	
Surrogate: o-Terphenyl	12.3		"	12.5		98.5	30-150			

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

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PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGA0422 - EPA 5030 Soil MS

Blank (BGA0422-BLK1)

Prepared & Analyzed: 01/18/23

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Pyrene	ND	0.00500	"
1-Methylnaphthalene	ND	0.00500	"
2-Methylnaphthalene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0224	"	0.0333	67.3	40-150
Surrogate: Fluoranthene-d10	0.0388	"	0.0333	116	40-150

LCS (BGA0422-BS1)

Prepared & Analyzed: 01/18/23

Acenaphthene	0.0364	0.00500	mg/kg	0.0333	109	31-137
Anthracene	0.0350	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0299	0.00500	"	0.0333	89.7	30-120
Benzo (a) pyrene	0.0306	0.00500	"	0.0333	91.7	30-120
Benzo (b) fluoranthene	0.0323	0.00500	"	0.0333	96.8	30-120
Benzo (k) fluoranthene	0.0368	0.00500	"	0.0333	110	30-120
Chrysene	0.0364	0.00500	"	0.0333	109	30-120
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333	84.9	30-120
Fluoranthene	0.0357	0.00500	"	0.0333	107	30-120
Fluorene	0.0360	0.00500	"	0.0333	108	30-120
Indeno (1,2,3-cd) pyrene	0.0309	0.00500	"	0.0333	92.8	30-120
Pyrene	0.0345	0.00500	"	0.0333	104	35-142
1-Methylnaphthalene	0.0285	0.00500	"	0.0333	85.5	35-142
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	68.6	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0306	"	0.0333	91.7	40-150
Surrogate: Fluoranthene-d10	0.0364	"	0.0333	109	40-150

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGA0422 - EPA 5030 Soil MS

Matrix Spike (BGA0422-MS1)

Source: 2301193-07

Prepared & Analyzed: 01/18/23

Acenaphthene	0.0223	0.00500	mg/kg	0.0333	ND	66.9	31-137		
Anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120		
Benzo (a) anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120		
Benzo (a) pyrene	0.0199	0.00500	"	0.0333	ND	59.6	30-120		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120		
Benzo (k) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120		
Chrysene	0.0221	0.00500	"	0.0333	ND	66.3	30-120		
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120		
Fluoranthene	0.0230	0.00500	"	0.0333	ND	69.0	30-120		
Fluorene	0.0227	0.00500	"	0.0333	ND	68.2	30-120		
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.3	30-120		
Pyrene	0.0232	0.00500	"	0.0333	ND	69.7	35-142		
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.5	15-130		
2-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0233		"	0.0333		69.9	40-150		
Surrogate: Fluoranthene-d10	0.0248		"	0.0333		74.4	40-150		

Matrix Spike Dup (BGA0422-MSD1)

Source: 2301193-07

Prepared & Analyzed: 01/18/23

Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.2	31-137	22.8	30	
Anthracene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	25.8	30	
Benzo (a) anthracene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	27.3	30	
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	5.01	30	
Benzo (b) fluoranthene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	27.0	30	
Benzo (k) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	27.5	30	
Chrysene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	26.0	30	
Dibenz (a,h) anthracene	0.0146	0.00500	"	0.0333	ND	43.8	30-120	31.1	30	QR-02
Fluoranthene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	24.4	30	
Fluorene	0.0178	0.00500	"	0.0333	ND	53.5	30-120	24.2	30	
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333	ND	46.7	30-120	28.7	30	
Pyrene	0.0174	0.00500	"	0.0333	ND	52.1	35-142	28.9	30	
1-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.6	15-130	16.7	50	
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.8	15-130	6.38	50	
Surrogate: 2-Methylnaphthalene-d10	0.0185		"	0.0333		55.5	40-150			
Surrogate: Fluoranthene-d10	0.0186		"	0.0333		55.7	40-150			

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

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

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

Batch BGA0428 - EPA 3050B

Blank (BGA0428-BLK1)

Prepared: 01/18/23 Analyzed: 01/20/23

Boron ND 0.0100 mg/L

LCS (BGA0428-BS1)

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 5.83 0.0100 mg/L 5.00 117 80-120

Duplicate (BGA0428-DUP1)

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 0.154 0.0100 mg/L 0.164 6.57 20

Matrix Spike (BGA0428-MS1)

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 6.31 0.0100 mg/L 5.00 0.164 123 75-125

Matrix Spike Dup (BGA0428-MSD1)

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 6.20 0.0100 mg/L 5.00 0.164 121 75-125 1.83 25

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0430 - EPA 3050B

Blank (BGA0430-BLK1)

Prepared: 01/18/23 Analyzed: 01/20/23

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 (BGA0430-BS1)

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	32.2	0.200	mg/kg wet	40.0	80.4	80-120
Barium	33.5	0.400	"	40.0	83.7	80-120
Cadmium	2.00	0.200	"	2.00	99.9	80-120
Copper	33.3	0.400	"	40.0	83.1	80-120
Lead	19.7	0.200	"	20.0	98.3	80-120
Nickel	32.8	0.400	"	40.0	82.0	80-120
Selenium	4.50	0.260	"	4.00	112	80-120
Silver	1.62	0.0200	"	2.00	81.0	80-120
Zinc	32.4	0.400	"	40.0	81.0	80-120

Duplicate (BGA0430-DUP1)

Source: 2301292-01

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	3.79	0.240	mg/kg dry	3.70	2.49	20
Barium	9.65	0.481	"	9.90	2.55	20
Cadmium	0.0923	0.240	"	0.0951	3.08	20
Copper	4.32	0.481	"	4.28	0.938	20
Lead	5.96	0.240	"	6.42	7.30	20
Nickel	8.73	0.481	"	4.69	60.3	20
Selenium	ND	0.312	"	ND		20
Silver	0.0125	0.0240	"	0.0125	0.00	20
Zinc	22.4	0.481	"	22.2	1.03	20

QR-03

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
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Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGA0430 - EPA 3050B

Matrix Spike (BGA0430-MS1)		Source: 2301292-01			Prepared: 01/18/23		Analyzed: 01/20/23			
Arsenic	46.6	0.240	mg/kg dry	48.1	3.70	89.2	75-125			
Barium	58.7	0.481	"	48.1	9.90	102	75-125			
Cadmium	1.98	0.240	"	2.40	0.0951	78.4	75-125			
Copper	31.4	0.481	"	48.1	4.28	56.3	75-125			QM-05
Lead	26.2	0.240	"	24.0	6.42	82.1	75-125			
Nickel	31.7	0.481	"	48.1	4.69	56.2	75-125			QM-05
Selenium	5.88	0.312	"	4.81	ND	122	75-125			
Silver	1.89	0.0240	"	2.40	0.0125	78.3	75-125			
Zinc	50.9	0.481	"	48.1	22.2	59.7	75-125			QM-05

Matrix Spike Dup (BGA0430-MSD1)		Source: 2301292-01			Prepared: 01/18/23		Analyzed: 01/20/23			
Arsenic	47.5	0.240	mg/kg dry	48.1	3.70	91.2	75-125	2.06	25	
Barium	63.5	0.481	"	48.1	9.90	112	75-125	7.89	25	
Cadmium	2.19	0.240	"	2.40	0.0951	87.2	75-125	10.1	25	
Copper	32.1	0.481	"	48.1	4.28	57.8	75-125	2.27	25	QM-05
Lead	28.5	0.240	"	24.0	6.42	91.8	75-125	8.48	25	
Nickel	32.4	0.481	"	48.1	4.69	57.7	75-125	2.20	25	QM-05
Selenium	5.74	0.312	"	4.81	ND	119	75-125	2.46	25	
Silver	2.09	0.0240	"	2.40	0.0125	86.4	75-125	9.82	25	
Zinc	51.7	0.481	"	48.1	22.2	61.3	75-125	1.51	25	QM-05

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Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGA0467 - 3060A Mod

Blank (BGA0467-BLK1)

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGA0467-BS1)

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent 20.2 0.30 mg/kg wet 25.0 80.6 80-120

Duplicate (BGA0467-DUP1)

Source: 2301292-01

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGA0467-MS1)

Source: 2301292-01

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent 24.9 0.30 mg/kg dry 30.0 ND 82.8 75-125

Matrix Spike Dup (BGA0467-MSD1)

Source: 2301292-01

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent 25.5 0.30 mg/kg dry 30.0 ND 85.0 75-125 2.62 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

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

Summit Scientific

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

Batch BGA0420 - General Preparation

Blank (BGA0420-BLK1)

Prepared: 01/17/23 Analyzed: 01/19/23

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

LCS (BGA0420-BS1)

Prepared: 01/17/23 Analyzed: 01/19/23

Calcium	5.21	0.0500	mg/L wet	5.00	104	70-130
Magnesium	4.78	0.0500	"	5.00	95.5	70-130
Sodium	5.05	0.0500	"	5.00	101	70-130

Summit Scientific

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Fremont Environmental	Project: Noble - Beeler 22-12, 13	
PO Box 1289	Project Number: [none]	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	01/23/23 10:19

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

Summit Scientific

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

Batch BGA0441 - General Preparation

Duplicate (BGA0441-DUP1)	Source: 2301292-01	Prepared & Analyzed: 01/18/23
% Solids	82.7	% 83.2 0.677 20

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

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

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

Batch BGA0446 - General Preparation

Blank (BGA0446-BLK1)

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGA0446-BS1)

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.150 97.3 95-105

Duplicate (BGA0446-DUP1)

Source: 2301292-01

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) 1.72 0.0100 mmhos/cm 1.73 0.406 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 10:19

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

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

Batch BGA0445 - General Preparation

LCS (BGA0445-BS1)

Prepared & Analyzed: 01/18/23

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BGA0445-DUP1)

Source: 2301292-01

Prepared & Analyzed: 01/18/23

pH	7.99	pH Units	7.88	1.39	20
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 10:19

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-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
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