

November 28, 2023

Mr. Dan Peterson
Environmental Specialist
Chevron Rockies Business Unit
2115 117th Avenue
Greeley, CO 80631

Subject: **Remedial Excavation Report**
 Cody White D03-02 Flowline
 Spill/Release Point ID #: 482952
 Remediation Project #: 22156
 SENE S3 T3N R64W
 Weld County, Colorado

Dear Mr. Peterson:

Below please find a copy of the above referenced Remedial Excavation Report (Report) for the Cody White D03-02 Flowline (Site) in Weld County, Colorado. The text below describes the environmental assessment and associated soil sampling conducted at the Site between September 1, 2022 (Decommissioning) and August 30, 2023 (Excavation) by Tasman, Inc. (Tasman), on behalf of Noble Energy, Inc. (Noble).

Introduction

The purpose of this document is to describe the remedial excavation, and associated sampling activities. The activities described below were performed in response to the discovery of suspected impacted material along the flowline during decommissioning on September 1, 2022 to September 6, 2022.

Facility Background

The Site is located approximately 9.19 miles southeast of the town of Kersey in Weld County, Colorado, as shown on Figure 1. The Site is surrounded by pastureland, and the legal description is the southeast quarter of the northeast quarter of Section 3, Township 3 North, Range 64 West, 6th Principal Meridian. The Site is on level land, at latitude 40.257082° and longitude -104.530477° [North American Datum of 1983(NAD83)]. The site is approximately 1.3 miles south-southwest from the intersection of Weld County Road 57 and Weld County Road 40. The Site location map is included as Figure 1.

Tasman was retained by Noble on September 1, 2022, to complete soil sampling and documentation during decommissioning and abandonment activities at the former Cody White D03-02 Flowline. During decommissioning and abandonment activities at the Site historic impacts were discovered adjacent to the flowline and confirmed on September 16, 2022. A Form 19 was submitted to the Energy and Carbon Management Commission (ECMC) on September 16, 2022. The ECMC subsequently issued Spill/Release Point ID Number 482952 for this event and the Site was

decommissioned. The ECMC issued Remediation Number 22156 for this project. The Initial Site investigation was reported in the *Supplemental Form 27* (ECMC Document # 403276572) that was submitted to the ECMC on December 31, 2022.

Field Activities- Remedial Excavation

Remedial excavation activities were conducted at two locations along the flowline on August 14, 2023, to remove impacted soil in the area of flowline soil samples FL01-P@2.5' and FL01-S@2.5'. Additional expansion and soil sampling of the FL01-S release location excavation was conducted on August 30, 2023, based on the sidewall and floor soil sample exceedances. The excavations were guided in the field using a photoionization detector (PID) and standard headspace sampling techniques. A total of four excavation sidewall soil samples were collected from the final perimeter of the excavation associated with the FL01-P flowline release along with one excavation floor sample collected from the terminal depth. A total of five excavation sidewall soil samples were collected from the final perimeter of the excavation associated with the FL01-S flowline release along with one excavation floor sample collected from the terminal depth. All soil samples were submitted to Summit Scientific (Summit) in Golden, Colorado for laboratory analysis of the ECMC Table 915-1 list of organic compounds in soil using United States Environmental Protection Agency (USEPA) Methods 8260B and 8270D, and total petroleum hydrocarbons (TPH) using USEPA Methods 8260B and 8015D per the ECMC approved amended sampling plan (ECMC Document # 403276572). Groundwater was not encountered during the excavation. Soil analytical data from initial flowline decommissioning, hand augering, and the soil analytical results from the remedial excavation are summarized in Table 1. The remedial excavation extent, sample locations, and analytical results are illustrated on Figures 2 and 3, and the laboratory analytical reports are included as Attachment A.

A total of approximately 33 cubic yards of impacted material were removed for off-Site disposal at the Buffalo Ridge Waste Management Landfill in Keenesburg, Colorado under signed Noble waste manifests. A total of approximately 33 cubic yards of imported clean fill was used to backfill the excavations. The final remedial excavation extents from the FL01-P release location and the FL01-S release location measured approximately 10 ft. by 10 ft. by 4 feet below ground surface (ft bgs) and 10 ft. by 10 ft. by 5 ft bgs, respectively.

Results

Laboratory analytical results indicate that all the remedial excavation soil samples were compliant with ECMC Table 915-1 Protection of Groundwater Screening Levels (GSSL) for organic compounds, with the exception of one floor soil sample from FL01-S release location which had a concentration of benzo(a)anthracene greater than the ECMC Table 915-1 GSSL.

Groundwater was not encountered during decommissioning, site assessment, or remedial excavation activities at the Site. As such, a desktop review of Colorado's Division of Water Resources (DWR) Well Permit Research Mapper was performed to determine the depth to water below ground surface in permitted water wells within a 0.5-mile radius of the Site. For a visual representation of the results of this inquiry refer to Figure 4. Three permitted water wells (permit IDs 1832-, 107509-, and 500-) were identified within the 0.5-mile radius, at roughly the same ground surface elevation as the Site. According to the permit records, the static groundwater level in the region of the site is 27 ft bgs. Since

groundwater is recorded to be 27 ft bgs in the region of the Site, and since soil impacts at the Site are limited to less than 6 ft bgs, there is no pathway for contaminant migration to the groundwater table. As such, Noble proposes to utilize ECMC Table 915-1 Residential Soil Screening Levels (RSSL) when evaluating soil sample analytical results. The application of ECMG Table 915-1 RSSLs eliminates the benzo(a)anthracene identified in floor sample FS02@5' as a contaminant of concern.

Conclusions

Based upon field and laboratory data collected during remedial excavation activities, soils impacted with hydrocarbon compounds at concentrations above ECMC Table 915-1 RSSLs in the area of the two releases have been successfully removed. Based on a lack of pathway to groundwater identified at the Site, Noble proposes to apply ECMC Table 915-1 RSSLs to the Site, which eliminates the benzo(a)anthracene concentration at FS02@5' above ECMC Table 915-1 GSSLs but below ECMC Table 915-1 RSSLs as a contaminant of concern. If the ECMC approves the application of Table 915-1 RSSLs, Noble requests a No Further Action (NFA) designation for the Site and proposes to leave soils with compounds at concentrations below ECMC Table 915-1 RSSLs in place.

Remarks

The discussion and conclusions contained in this report represent the professional opinions of Tasman Geosciences, Inc. These opinions are based on currently available information and are arrived at in accordance with currently accepted geologic and engineering practices.

Please contact me at (720) 616-8383 or at jwhritenour@tasman-geo.com if you require additional information.

Sincerely,
Tasman Geosciences, Inc.



Jake Whritenour, Program Manager

Attachments:

Table 1 – Soil Analytical Data

Figure 1 – Site Location Map

Figure 2 – FL01-P Excavation Soil Analytical Results Map (09/02/2022 & 08/14/2023)

Figure 3 – FL01-S Excavation Soil Analytical Results Map (09/02/2022, 08/14/2023 & 08/30/2023)

Figure 4 – Water Well Investigation Location Map

Attachment A – Laboratory Analytical Data Report

TABLES

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - CODY WHITE D03-02 FLOWLINE

Soil Sample ID	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	0.3	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01-A@3'	08/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-B@3'	08/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-I@2.5'	08/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-K@3'	08/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-P@2.5'	09/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	0.0312	0.0877	0.161	0.129	0.183	0.0854	0.161	<0.00500	0.619	0.0502	0.0433	0.313	<0.00500	<0.00500
FL01-S@2.5'	09/02/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	0.0102	0.0290	0.0235	0.0444	0.0148	0.0278	<0.00500	0.101	0.00578	0.00755	0.0742	<0.00500	<0.00500
BH01@4'	11/07/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH01@6'	11/07/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH02@4'	11/08/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
BH02@6'	11/08/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS01@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS02@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	180	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS03@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS04@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS01@4'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS05@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00836	<0.00500	<0.00500	0.007	<0.00500	<0.00500
SS06@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS07@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS08@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	0.00964	0.0210	0.0492	0.0328	0.0480	0.017	0.0439	<0.00500	0.143	0.0132	0.0218	0.0979	<0.00500	<0.00500
FS02@4'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	0.0119	0.00835	0.0119	<0.00500	0.0112	<0.00500	0.0291	<0.00500	0.00589	0.0241	<0.00500	<0.00500
SS08@4'	08/30/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS02@5'	08/30/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<0.50	<0.50	<0.00500	0.00835	0.0181	0.0144	0.0233	0.00774	0.0214	<0.00500	0.0543	<0.00500	0.0107	0.0381	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ¹		6 - 8.3	<6	<4mmhos/cm	2
FL01-A@3'	08/02/22	8.03	17.3	7.88	1.71
FL01-B@3'	08/02/22	7.94	0.114	0.275	0.125
FL01-I@2.5'	08/02/22	8.12	16.7	6.72	1.54
FL01-K@3'	08/02/22	8.15	8.50	3.55	1.81
FL01-P@2.5'	09/02/22	7.96	23.5	7.52	1.99
FL01-S@2.5'	09/02/22	7.97	9.84	6.46	1.79
BH01@4'	11/07/22	8.11	10.7	3.91	0.311
BH01@6'	11/07/22	8.21	17.2	6.39	0.339
BH02@4'	11/08/22	8.17	18.3	9.49	0.653
BH02@6'	11/08/22	8.14	7.13	3.96	0.333
BG01@3'	11/07/22	NA	5.40	3.31	NA
BG01@6'	11/07/22	NA	4.80	3.57	NA
BG02@3'	11/07/22	NA	12.5	5.52	NA
BG02@6'	11/07/22	NA	11.9	5.99	NA
BG03@3'	11/07/22	NA	17.3	6.28	NA
BG03@6'	11/07/22	NA	17.9	7.40	NA
BG04@3'	11/07/22	NA	20.8	2.81	NA
BG04@6'	11/07/22	NA	14.7	1.05	NA
BG05@3'	11/07/22	NA	15.6	4.72	NA
BG05@6'	11/07/22	NA	10.0	0.851	NA
BG06@3'	11/07/22	NA	20.3	2.45	NA
BG06@6'	11/07/22	NA	10.5	0.725	NA
BG07@3'	11/07/22	NA	30.5	0.116	NA
BG07@6'	11/07/22	NA	20.5	4.88	NA
BG08@3'	11/07/22	NA	27.6	0.321	NA
BG08@6'	11/07/22	NA	21.0	4.60	NA
BG09@3'	11/07/22	NA	29.4	4.28	NA
BG09@6'	11/07/22	NA	21.4	5.45	NA
BG10@3'	11/08/22	NA	27.9	2.56	NA
BG10@6'	11/08/22	NA	10.2	2.07	NA
BG11@3'	11/08/22	NA	20.6	9.01	NA
BG11@6'	11/08/22	NA	9.43	1.24	NA
BG12@3'	11/08/22	NA	17.1	9.11	NA
BG12@6'	11/08/22	NA	7.68	4.63	NA
BG13@3'	11/08/22	NA	27.1	10.4	NA
BG13@6'	11/08/22	NA	20.5	3.86	NA
BG14@3'	11/08/22	NA	38.8	10.4	NA
BG14@6'	11/08/22	NA	29.9	9.79	NA
BG15@3'	11/08/22	NA	33.5	18.9	NA
BG15@6'	11/08/22	NA	34.6	14.3	NA

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ¹		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^{2,3}		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01-P@2.5'	09/02/										

FIGURES

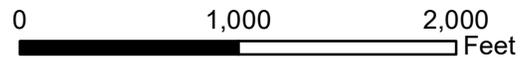
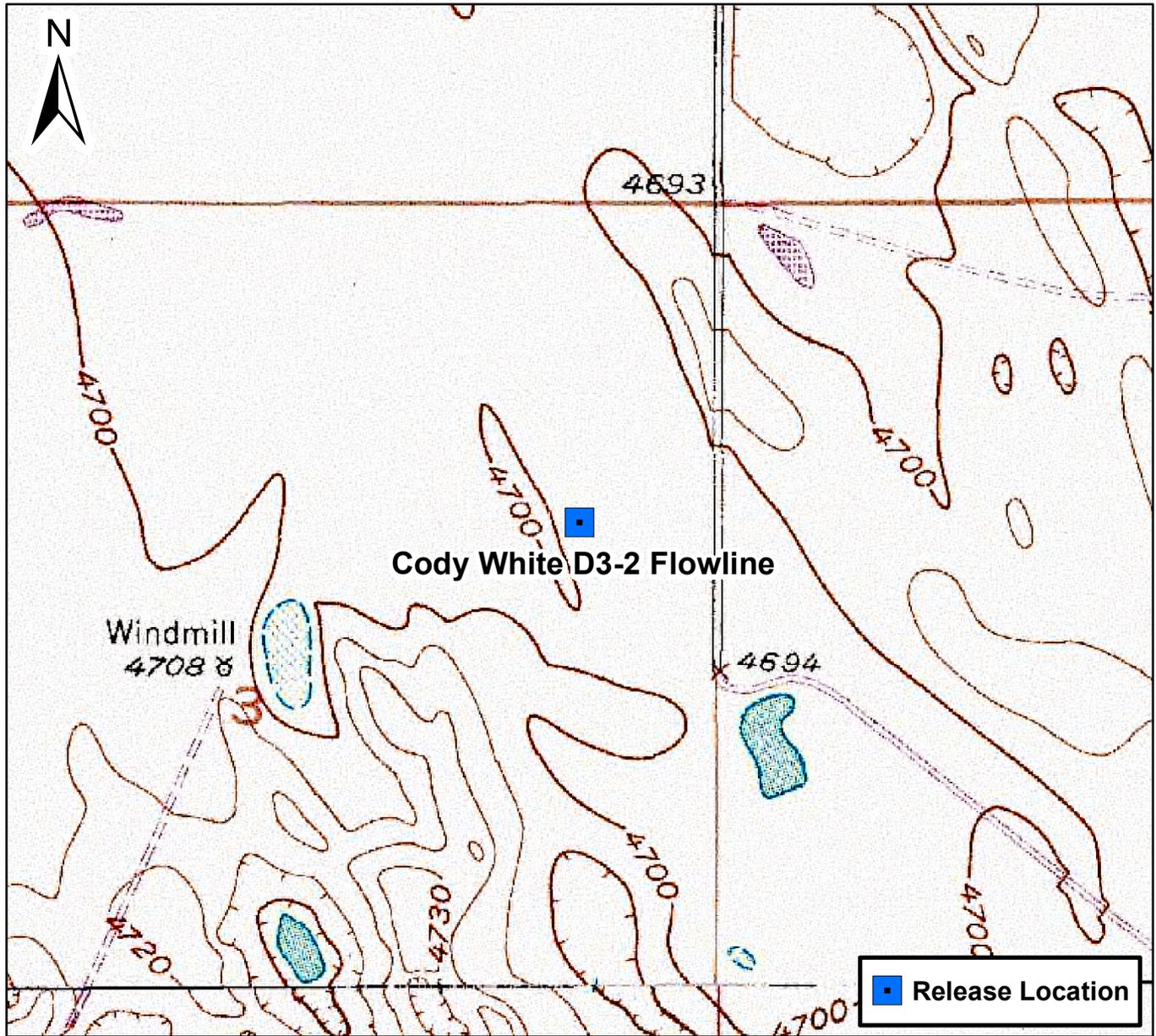


Figure 1

Site Location Map
 Cody White D3-2 Flowline
 SENE S3 T3N R64W
 Weld County, Colorado



FL01-P@2.5'
(09/02/2022)

PID = 0.2 ppm
 Benzo(a)anthracene = **0.161** mg/kg
 Benzo(a)pyrene = **0.129** mg/kg
 Arsenic = **7.92** mg/kg
 Barium = **198** mg/kg
 Cadmium = **0.432** mg/kg
 Lead = **17.2** mg/kg
 Selenium = **2.74** mg/kg
 SAR = **23.5**
 EC = **7.52** mmhos/cm

BH01@4'
(11/07/2022)

PID = 0.0 ppm
 SAR = **10.7**
 Arsenic = **2.10** mg/kg
 Barium = **121** mg/kg
 Selenium = **0.836** mg/kg

BH01@6'
(11/07/2022)

PID = 0.0 ppm
 SAR = **17.2**
 EC = **6.39** mmhos/cm
 Arsenic = **3.87** mg/kg
 Barium = **95.4** mg/kg
 Selenium = **0.995** mg/kg

SS01@3'
(08/14/2023)

PID = 0.2 ppm

SS04@3'
(08/14/2023)

PID = 1.0 ppm

SS02@3'
(08/14/2023)

PID = 0.9 ppm

SS03@3'
(08/14/2023)

PID = 0.0 ppm

FS01@4'
(08/14/2023)

PID = 0.6 ppm

Legend

-  Soil Boring Location (Collected via Trimble GPS)
-  Excavation Extent (Collected via Trimble GPS)
-  Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

Notes

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

GPS – Global Positioning System
 mg/kg – Milligrams per kilogram
 PID – Photo-ionization Detector
 ppm – parts per million
 SAR – Sodium adsorption rate
 EC – Electrical Conductivity
 mmhos/cm – millimhos per centimeter

0 ft. 10 ft. 20 ft.

Image Source: Google Earth; Google 2020

DATE:	08/17/2023
DESIGNED BY:	JW
DRAWN BY:	DG



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

Noble Energy, Inc. – DJ Basin
Cody White D3-02 Flowline
 SENE, Section 3, Township 3 North, Range 64 West
 Weld County, Colorado

FL01-P Excavation Soil
 Analytical Results Map
 (09/02/2022 & 08/14/2023)

Figure 2



DATE: 09/06/2023

DESIGNED BY: JW

DRAWN BY: HM

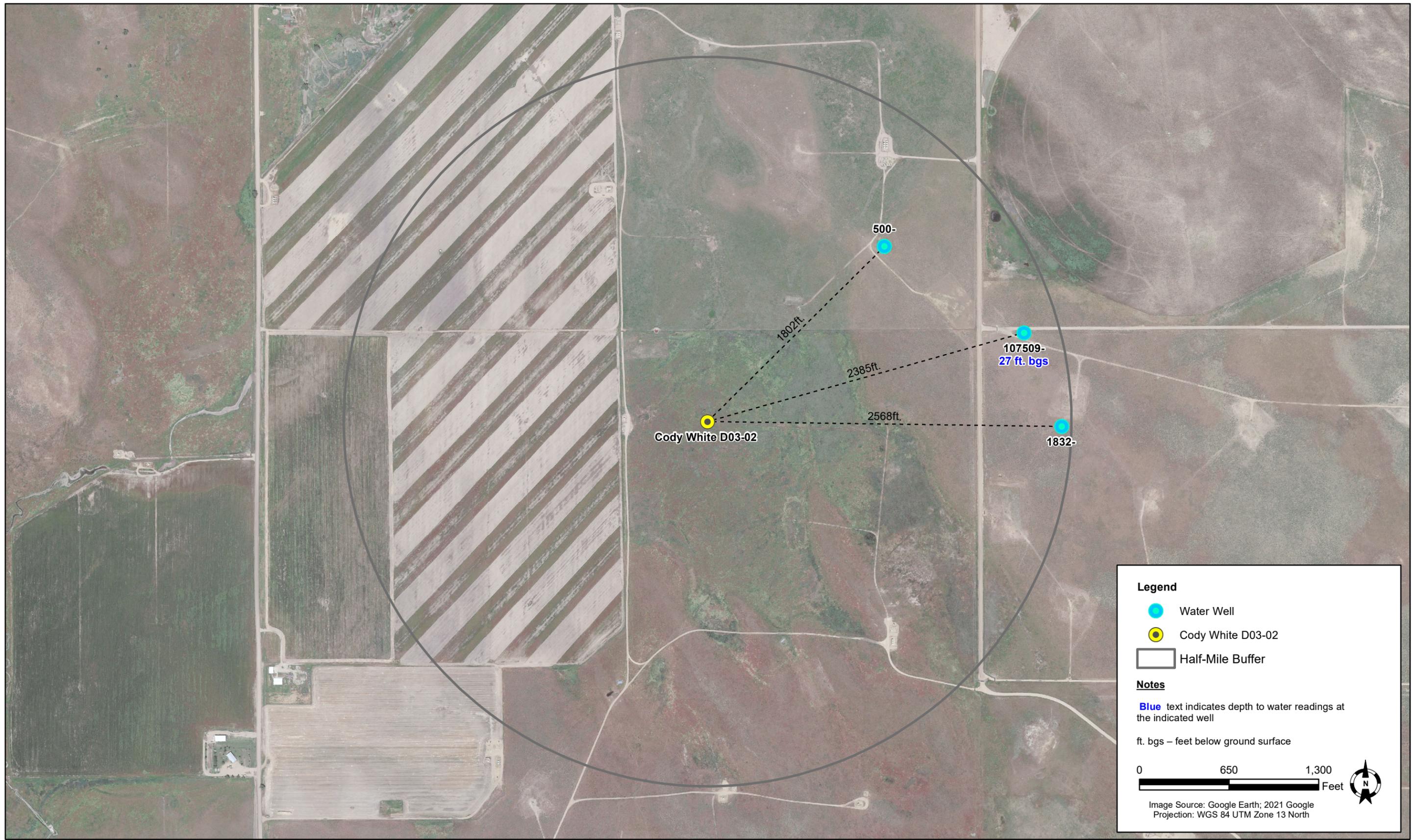


Tasman, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Cody White D3-02 Flowline
 SENE, Section 3, Township 3 North, Range 64 West
 Weld County, Colorado

FL01-S Excavation Soil
 Analytical Results Map
 (09/02/2022, 08/14/2023,
 & 08/30/2023)

Figure 3



Legend

- Water Well
- Cody White D03-02
- Half-Mile Buffer

Notes

Blue text indicates depth to water readings at the indicated well

ft. bgs – feet below ground surface

0 650 1,300
 Feet

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

DATE:	November 2023
DESIGNED BY:	JW
DRAWN BY:	LR



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

Noble Energy, Inc. – DJ Basin
Cody White D03-02
 SENE, Section 3, Township 3 North, Range 64 West
 Weld County, Colorado

WATER WELL INVESTIGATION
 LOCATION MAP

Figure
 4

ATTACHMENT A

LABORATORY ANALYTICAL DATA REPORT

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 25, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Cody White D3-2

Work Order #2308289

Enclosed are the results of analyses for samples received by Summit Scientific on 08/14/23 17:44. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@3'	2308289-01	Soil	08/14/23 12:07	08/14/23 17:44
SS02@3'	2308289-02	Soil	08/14/23 12:06	08/14/23 17:44
SS03@3'	2308289-03	Soil	08/14/23 11:59	08/14/23 17:44
SS04@3'	2308289-04	Soil	08/14/23 12:05	08/14/23 17:44
FS01@4'	2308289-05	Soil	08/14/23 11:52	08/14/23 17:44
SS05@3'	2308289-06	Soil	08/14/23 13:30	08/14/23 17:44
SS06@3'	2308289-07	Soil	08/14/23 13:35	08/14/23 17:44
SS07@3'	2308289-08	Soil	08/14/23 13:40	08/14/23 17:44
SS08@3'	2308289-09	Soil	08/14/23 13:45	08/14/23 17:44
FS02@4'	2308289-10	Soil	08/14/23 13:50	08/14/23 17:44

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.

S₂

Sample Receipt Checklist

S2 Work Order # 2308289

Client: None/Trasman Client Project ID: Cody White D3-2

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

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

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Josh
Custodian Printed Name
8/14/23
Date/Time

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS01@3'
2308289-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **08/14/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0536	134 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/14/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.6	84.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS01@3'
2308289-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 12:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 12:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0175	52.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS02@3'
2308289-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0579	145 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.66	77.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS02@3'
2308289-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS03@3'
2308289-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0563	141 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	99.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS03@3'
2308289-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 11:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.7 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS04@3'
2308289-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0558	139 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0368	92.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.72	77.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS04@3'
2308289-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0179	53.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0151	45.3 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

FS01@4'
2308289-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0537	134 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0379	94.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

FS01@4'
2308289-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.2 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS05@3'
2308289-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0489	122 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0366	91.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.5	84.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS05@3'
2308289-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00836	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00716	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/14/23 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0216	64.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS06@3'
2308289-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/14/23 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0524	131 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0369	92.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0560	08/14/23	08/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.5	83.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS06@3'
2308289-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.9 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS07@3'
2308289-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0559	08/14/23	08/14/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0496	124 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0363	90.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0560	08/14/23	08/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.0	80.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS07@3'
2308289-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	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: **08/14/23 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.4 %	40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS08@3'
2308289-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0559	08/14/23	08/15/23	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: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0513	128 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0364	91.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0560	08/14/23	08/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

SS08@3'
2308289-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.00964	0.00500	mg/kg	1	BGH0577	08/15/23	08/16/23	EPA 8270D SIM	
Anthracene	0.0210	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0492	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0328	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0480	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0172	0.00500	"	"	"	"	"	"	
Chrysene	0.0439	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.143	0.00500	"	"	"	"	"	"	
Fluorene	0.0132	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0218	0.00500	"	"	"	"	"	"	
Pyrene	0.0979	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/14/23 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0172	51.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0148	44.5 %	40-150		"	"	"	"	

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.



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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

FS02@4'
2308289-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0559	08/14/23	08/15/23	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: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0520	130 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0371	92.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0560	08/14/23	08/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.1	81.2 %		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.



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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

FS02@4'
2308289-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BGH0577	08/15/23	08/16/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	0.0119	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	0.00835	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0119	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	0.0112	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	0.0291	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00589	0.00500		"	"	"	"	"	"	
Pyrene	0.0241	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0209	62.7 %		40-150		"	"	"	"	

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH0559 - EPA 5030 Soil MS

Blank (BGH0559-BLK1)

Prepared: 08/14/23 Analyzed: 08/15/23

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	0.0343		"	0.0400		85.6	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

LCS (BGH0559-BS1)

Prepared: 08/14/23 Analyzed: 08/15/23

Benzene	0.0991	0.0020	mg/kg	0.100		99.1	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.0980	0.0050	"	0.100		98.0	70-130			
m,p-Xylene	0.196	0.010	"	0.200		98.2	70-130			
o-Xylene	0.0934	0.0050	"	0.100		93.4	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.0949	0.0050	"	0.100		94.9	70-130			
Naphthalene	0.0761	0.0038	"	0.100		76.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	50-150			

Matrix Spike (BGH0559-MS1)

Source: 2308286-01

Prepared: 08/14/23 Analyzed: 08/15/23

Benzene	0.0859	0.0020	mg/kg	0.100	ND	85.9	70-130			
Toluene	0.0731	0.0050	"	0.100	ND	73.1	70-130			
Ethylbenzene	0.0798	0.0050	"	0.100	ND	79.8	70-130			
m,p-Xylene	0.150	0.010	"	0.200	ND	75.0	70-130			
o-Xylene	0.0755	0.0050	"	0.100	ND	75.5	70-130			
1,2,4-Trimethylbenzene	0.0823	0.0050	"	0.100	ND	82.3	70-130			
1,3,5-Trimethylbenzene	0.0772	0.0050	"	0.100	ND	77.2	70-130			
Naphthalene	0.0860	0.0038	"	0.100	ND	86.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0534		"	0.0400		133	50-150			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	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.



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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH0559 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0559-MSD1)	Source: 2308286-01			Prepared: 08/14/23 Analyzed: 08/15/23						
Benzene	0.0820	0.0020	mg/kg	0.100	ND	82.0	70-130	4.61	30	
Toluene	0.0712	0.0050	"	0.100	ND	71.2	70-130	2.66	30	
Ethylbenzene	0.0770	0.0050	"	0.100	ND	77.0	70-130	3.52	30	
m,p-Xylene	0.145	0.010	"	0.200	ND	72.6	70-130	3.19	30	
o-Xylene	0.0739	0.0050	"	0.100	ND	73.9	70-130	2.25	30	
1,2,4-Trimethylbenzene	0.0817	0.0050	"	0.100	ND	81.7	70-130	0.732	30	
1,3,5-Trimethylbenzene	0.0758	0.0050	"	0.100	ND	75.8	70-130	1.96	30	
Naphthalene	0.0918	0.0038	"	0.100	ND	91.8	70-130	6.55	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0528</i>		<i>"</i>	<i>0.0400</i>		<i>132</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.6</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGH0560 - EPA 3550A

Blank (BGH0560-BLK1)

Prepared: 08/14/23 Analyzed: 08/15/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		81.4	30-150				

LCS (BGH0560-BS1)

Prepared: 08/14/23 Analyzed: 08/15/23

C10-C28 (DRO)	413	50	mg/kg	500		82.6	70-130				
Surrogate: <i>o</i> -Terphenyl	10.5		"	12.5		84.2	30-150				

Matrix Spike (BGH0560-MS1)

Source: 2308286-01

Prepared: 08/14/23 Analyzed: 08/15/23

C10-C28 (DRO)	462	50	mg/kg	500	5.97	91.2	70-130				
Surrogate: <i>o</i> -Terphenyl	9.36		"	12.5		74.9	30-150				

Matrix Spike Dup (BGH0560-MSD1)

Source: 2308286-01

Prepared: 08/14/23 Analyzed: 08/15/23

C10-C28 (DRO)	482	50	mg/kg	500	5.97	95.3	70-130	4.26	20		
Surrogate: <i>o</i> -Terphenyl	9.50		"	12.5		76.0	30-150				

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH0577 - EPA 5030 Soil MS

Blank (BGH0577-BLK1)

Prepared: 08/15/23 Analyzed: 08/16/23

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	0.0270		"	0.0333		80.9	40-150			
Surrogate: Fluoranthene-d10	0.0262		"	0.0333		78.6	40-150			

LCS (BGH0577-BS1)

Prepared: 08/15/23 Analyzed: 08/16/23

Acenaphthene	0.0307	0.00500	mg/kg	0.0333		92.0	31-137			
Anthracene	0.0300	0.00500	"	0.0333		89.9	30-120			
Benzo (a) anthracene	0.0270	0.00500	"	0.0333		80.9	30-120			
Benzo (a) pyrene	0.0306	0.00500	"	0.0333		91.9	30-120			
Benzo (b) fluoranthene	0.0317	0.00500	"	0.0333		95.1	30-120			
Benzo (k) fluoranthene	0.0334	0.00500	"	0.0333		100	30-120			
Chrysene	0.0317	0.00500	"	0.0333		95.0	30-120			
Dibenz (a,h) anthracene	0.0332	0.00500	"	0.0333		99.5	30-120			
Fluoranthene	0.0284	0.00500	"	0.0333		85.2	30-120			
Fluorene	0.0297	0.00500	"	0.0333		89.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0327	0.00500	"	0.0333		98.0	30-120			
Pyrene	0.0337	0.00500	"	0.0333		101	35-142			
1-Methylnaphthalene	0.0281	0.00500	"	0.0333		84.3	35-142			
2-Methylnaphthalene	0.0328	0.00500	"	0.0333		98.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0287		"	0.0333		86.2	40-150			
Surrogate: Fluoranthene-d10	0.0294		"	0.0333		88.3	40-150			

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH0577 - EPA 5030 Soil MS

Matrix Spike (BGH0577-MS1)

Source: 2308249-01

Prepared: 08/15/23 Analyzed: 08/16/23

Acenaphthene	0.0257	0.00500	mg/kg	0.0333	ND	77.1	31-137			
Anthracene	0.0231	0.00500	"	0.0333	ND	69.3	30-120			
Benzo (a) anthracene	0.0258	0.00500	"	0.0333	ND	77.3	30-120			
Benzo (a) pyrene	0.0268	0.00500	"	0.0333	ND	80.4	30-120			
Benzo (b) fluoranthene	0.0282	0.00500	"	0.0333	ND	84.7	30-120			
Benzo (k) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.9	30-120			
Chrysene	0.0260	0.00500	"	0.0333	ND	77.9	30-120			
Dibenz (a,h) anthracene	0.0237	0.00500	"	0.0333	ND	71.0	30-120			
Fluoranthene	0.0245	0.00500	"	0.0333	ND	73.4	30-120			
Fluorene	0.0254	0.00500	"	0.0333	ND	76.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0272	0.00500	"	0.0333	ND	81.5	30-120			
Pyrene	0.0259	0.00500	"	0.0333	ND	77.8	35-142			
1-Methylnaphthalene	0.0242	0.00500	"	0.0333	ND	72.6	15-130			
2-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0245		"	0.0333		73.5	40-150			
Surrogate: Fluoranthene-d10	0.0236		"	0.0333		70.8	40-150			

Matrix Spike Dup (BGH0577-MSD1)

Source: 2308249-01

Prepared: 08/15/23 Analyzed: 08/16/23

Acenaphthene	0.0241	0.00500	mg/kg	0.0333	ND	72.3	31-137	6.52	30	
Anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	3.23	30	
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	ND	76.3	30-120	1.32	30	
Benzo (a) pyrene	0.0250	0.00500	"	0.0333	ND	74.9	30-120	7.17	30	
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	6.02	30	
Benzo (k) fluoranthene	0.0223	0.00500	"	0.0333	ND	67.0	30-120	17.6	30	
Chrysene	0.0249	0.00500	"	0.0333	ND	74.7	30-120	4.29	30	
Dibenz (a,h) anthracene	0.0223	0.00500	"	0.0333	ND	67.0	30-120	5.80	30	
Fluoranthene	0.0245	0.00500	"	0.0333	ND	73.4	30-120	0.0231	30	
Fluorene	0.0243	0.00500	"	0.0333	ND	72.9	30-120	4.65	30	
Indeno (1,2,3-cd) pyrene	0.0280	0.00500	"	0.0333	ND	84.1	30-120	3.14	30	
Pyrene	0.0254	0.00500	"	0.0333	ND	76.3	35-142	1.93	30	
1-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.3	15-130	9.17	50	
2-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	15-130	17.7	50	
Surrogate: 2-Methylnaphthalene-d10	0.0235		"	0.0333		70.6	40-150			
Surrogate: Fluoranthene-d10	0.0235		"	0.0333		70.6	40-150			

Summit Scientific

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

Project: Noble - Cody White D3-2

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/23 07:23

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 05, 2023

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

RE: Noble - Cody White D03-02

Work Order #2308686

Enclosed are the results of analyses for samples received by Summit Scientific on 08/30/23 17:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury
President



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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS08@4'	2308686-01	Soil	08/30/23 10:20	08/30/23 17:37
FS02@5'	2308686-02	Soil	08/30/23 10:15	08/30/23 17:37

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.

		Send Data To:	Send Invoice To:
Client: Noble/Tasman	Project Manager: Jake Whritenour		Company: <u>Noble/Chertron</u>
Address: 6855 W. 119th Ave.	E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location:
City/State/Zip: Broomfield/CO/ 80020			AFE#:
Phone: 503-915-3046	Project Name: <u>Cody White D03-02</u>		PO/Billing Codes:
Sampler Name: Martin Medeiros	Project Number:		Contact:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD		
1	SS08 @ 4'	8/30/23	10:20	2			/			/			/	/	/						SAR, EC, pH by saturated paste	
2	FS02 @ 5'	8/30/23	10:15	2			/			/			/	/	/							
3																						
4																						
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11																						
12																						
13																						
14																						
15																						

Relinquished by: <u>Martin Medeiros</u> Date/Time: <u>8/30/23 16:00</u>	Received by: <u>Tasman Lock Box</u> Date/Time: _____	TAT Business Days	Field DO	Notes:
		Same Day <input checked="" type="checkbox"/>	Field EC	
		1 Day <input type="checkbox"/>	Field ORP	
		2 Days <input type="checkbox"/>	Field pH	
Relinquished by: <u>Tasman Lock Box</u> Date/Time: <u>8/30/23 1737</u>	Received by: <u>[Signature]</u> Date/Time: <u>8/30/23 1737</u>	3 Days <input type="checkbox"/>	Field Temp.	
		Standard <input type="checkbox"/>	Field Turb.	
Temperature Upon Receipt: <u>8.9</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #: _____	

S₂

Sample Receipt Checklist

S2 Work Order# 2308086

Client: Nabe Kasman Client Project ID: Cody White D03-02

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

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

Temp (°C) 8.9 Thermometer # 1

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

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

AS

Custodian Printed Name

8/30/23

Date/Time

1111



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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

SS08@4'
2308686-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/30/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH1235	08/30/23	08/30/23	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: **08/30/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0264	66.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0366	91.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0309	77.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/30/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1236	"	08/31/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/30/23 10:20**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

SS08@4'
2308686-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/30/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BGH1248	08/31/23	08/31/23	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: **08/30/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	49.0 %	40-150		"	"	"	"	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

FS02@5'
2308686-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH1235	08/30/23	08/30/23	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: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0269	67.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0361	90.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0304	76.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1236	"	08/31/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.5	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

FS02@5'
2308686-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH1248	08/31/23	08/31/23	EPA 8270D SIM	
Anthracene	0.00835	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0181	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0144	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0233	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00774	0.00500	"	"	"	"	"	"	
Chrysene	0.0214	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0543	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0107	0.00500	"	"	"	"	"	"	
Pyrene	0.0381	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/30/23 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0227	68.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0145	43.4 %	40-150		"	"	"	"	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH1235 - EPA 5030 Soil MS

Blank (BGH1235-BLK1)

Prepared: 08/30/23 Analyzed: 08/31/23

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	0.0261		"	0.0400		65.2	50-150				
Surrogate: Toluene-d8	0.0359		"	0.0400		89.7	50-150				
Surrogate: 4-Bromofluorobenzene	0.0306		"	0.0400		76.4	50-150				

LCS (BGH1235-BS1)

Prepared: 08/30/23 Analyzed: 08/31/23

Benzene	0.0873	0.0020	mg/kg	0.100		87.3	70-130				
Toluene	0.0895	0.0050	"	0.100		89.5	70-130				
Ethylbenzene	0.0955	0.0050	"	0.100		95.5	70-130				
m,p-Xylene	0.174	0.010	"	0.200		87.1	70-130				
o-Xylene	0.0711	0.0050	"	0.100		71.1	70-130				
1,2,4-Trimethylbenzene	0.0770	0.0050	"	0.100		77.0	70-130				
1,3,5-Trimethylbenzene	0.0700	0.0050	"	0.100		70.0	70-130				
Naphthalene	0.102	0.0038	"	0.100		102	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0272		"	0.0400		67.9	50-150				
Surrogate: Toluene-d8	0.0379		"	0.0400		94.7	50-150				
Surrogate: 4-Bromofluorobenzene	0.0311		"	0.0400		77.8	50-150				

Matrix Spike (BGH1235-MS1)

Source: 2308682-01

Prepared: 08/30/23 Analyzed: 08/31/23

Benzene	0.713	0.0020	mg/kg	0.100	ND	713	70-130				QM-07
Toluene	0.0808	0.0050	"	0.100	ND	80.8	70-130				
Ethylbenzene	0.538	0.0050	"	0.100	ND	538	70-130				QM-07
m,p-Xylene	1.54	0.010	"	0.200	ND	770	70-130				QM-07
o-Xylene	0.297	0.0050	"	0.100	ND	297	70-130				QM-07
1,2,4-Trimethylbenzene	0.282	0.0050	"	0.100	ND	282	70-130				QM-07
1,3,5-Trimethylbenzene	0.180	0.0050	"	0.100	ND	180	70-130				QM-07
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0362		"	0.0400		90.4	50-150				
Surrogate: Toluene-d8	0.0419		"	0.0400		105	50-150				
Surrogate: 4-Bromofluorobenzene	0.0349		"	0.0400		87.2	50-150				

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Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH1235 - EPA 5030 Soil MS

Matrix Spike Dup (BGH1235-MSD1)	Source: 2308682-01			Prepared: 08/30/23 Analyzed: 08/31/23						
Benzene	0.772	0.0020	mg/kg	0.100	ND	772	70-130	7.85	30	QM-07
Toluene	0.0835	0.0050	"	0.100	ND	83.5	70-130	3.25	30	
Ethylbenzene	0.634	0.0050	"	0.100	ND	634	70-130	16.4	30	QM-07
m,p-Xylene	1.78	0.010	"	0.200	ND	891	70-130	14.6	30	QM-07
o-Xylene	0.353	0.0050	"	0.100	ND	353	70-130	17.0	30	QM-07
1,2,4-Trimethylbenzene	0.332	0.0050	"	0.100	ND	332	70-130	16.2	30	QM-07
1,3,5-Trimethylbenzene	0.207	0.0050	"	0.100	ND	207	70-130	13.6	30	QM-07
Naphthalene	0.116	0.0038	"	0.100	ND	116	70-130	7.02	30	
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0400		91.1	50-150			
Surrogate: Toluene-d8	0.0426		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0352		"	0.0400		88.0	50-150			

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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGH1236 - EPA 3550A

Blank (BGH1236-BLK1)

Prepared: 08/30/23 Analyzed: 08/31/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		110		30-150			

LCS (BGH1236-BS1)

Prepared: 08/30/23 Analyzed: 08/31/23

C10-C28 (DRO)	512	50	mg/kg	500		102		70-130			
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110		30-150			

Matrix Spike (BGH1236-MS1)

Source: 2308679-01

Prepared: 08/30/23 Analyzed: 08/31/23

C10-C28 (DRO)	498	50	mg/kg	500	6.41	98.4		70-130			
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106		30-150			

Matrix Spike Dup (BGH1236-MSD1)

Source: 2308679-01

Prepared: 08/30/23 Analyzed: 08/31/23

C10-C28 (DRO)	497	50	mg/kg	500	6.41	98.2		70-130	0.242	20	
Surrogate: <i>o</i> -Terphenyl	13.4		"	12.5		107		30-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH1248 - EPA 5030 Soil MS

Blank (BGH1248-BLK1)

Prepared & Analyzed: 08/31/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0372		"	0.0333	111	40-150				
<i>Surrogate: Fluoranthene-d10</i>	0.0322		"	0.0333	96.5	40-150				

LCS (BGH1248-BS1)

Prepared & Analyzed: 08/31/23

Acenaphthene	0.0314	0.00500	mg/kg	0.0333	94.2	31-137				
Anthracene	0.0319	0.00500	"	0.0333	95.6	30-120				
Benzo (a) anthracene	0.0308	0.00500	"	0.0333	92.6	30-120				
Benzo (a) pyrene	0.0307	0.00500	"	0.0333	92.1	30-120				
Benzo (b) fluoranthene	0.0329	0.00500	"	0.0333	98.7	30-120				
Benzo (k) fluoranthene	0.0329	0.00500	"	0.0333	98.8	30-120				
Chrysene	0.0313	0.00500	"	0.0333	94.0	30-120				
Dibenz (a,h) anthracene	0.0291	0.00500	"	0.0333	87.4	30-120				
Fluoranthene	0.0330	0.00500	"	0.0333	98.9	30-120				
Fluorene	0.0327	0.00500	"	0.0333	98.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0235	0.00500	"	0.0333	70.6	30-120				
Pyrene	0.0316	0.00500	"	0.0333	94.8	35-142				
1-Methylnaphthalene	0.0272	0.00500	"	0.0333	81.6	35-142				
2-Methylnaphthalene	0.0316	0.00500	"	0.0333	94.8	35-142				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0356		"	0.0333	107	40-150				
<i>Surrogate: Fluoranthene-d10</i>	0.0334		"	0.0333	100	40-150				

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

Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH1248 - EPA 5030 Soil MS

Matrix Spike (BGH1248-MS1)

Source: 2308620-01

Prepared & Analyzed: 08/31/23

Acenaphthene	0.0196	0.00500	mg/kg	0.0333	ND	58.9	31-137		
Anthracene	0.0186	0.00500	"	0.0333	ND	55.8	30-120		
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	51.1	30-120		
Benzo (a) pyrene	0.0163	0.00500	"	0.0333	ND	48.8	30-120		
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120		
Benzo (k) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.1	30-120		
Chrysene	0.0182	0.00500	"	0.0333	ND	54.6	30-120		
Dibenz (a,h) anthracene	0.0152	0.00500	"	0.0333	ND	45.7	30-120		
Fluoranthene	0.0185	0.00500	"	0.0333	ND	55.6	30-120		
Fluorene	0.0204	0.00500	"	0.0333	ND	61.1	30-120		
Indeno (1,2,3-cd) pyrene	0.0153	0.00500	"	0.0333	ND	46.0	30-120		
Pyrene	0.0194	0.00500	"	0.0333	ND	58.3	35-142		
1-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.6	15-130		
2-Methylnaphthalene	0.0203	0.00500	"	0.0333	ND	60.9	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0235		"	0.0333		70.6	40-150		
Surrogate: Fluoranthene-d10	0.0176		"	0.0333		52.8	40-150		

Matrix Spike Dup (BGH1248-MSD1)

Source: 2308620-01

Prepared & Analyzed: 08/31/23

Acenaphthene	0.0208	0.00500	mg/kg	0.0333	ND	62.5	31-137	5.88	30
Anthracene	0.0198	0.00500	"	0.0333	ND	59.5	30-120	6.52	30
Benzo (a) anthracene	0.0195	0.00500	"	0.0333	ND	58.4	30-120	13.3	30
Benzo (a) pyrene	0.0190	0.00500	"	0.0333	ND	56.9	30-120	15.4	30
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	13.3	30
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	12.4	30
Chrysene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	10.1	30
Dibenz (a,h) anthracene	0.0177	0.00500	"	0.0333	ND	53.1	30-120	15.0	30
Fluoranthene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	6.89	30
Fluorene	0.0213	0.00500	"	0.0333	ND	63.9	30-120	4.49	30
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	11.5	30
Pyrene	0.0210	0.00500	"	0.0333	ND	63.1	35-142	7.96	30
1-Methylnaphthalene	0.0193	0.00500	"	0.0333	ND	57.9	15-130	4.54	50
2-Methylnaphthalene	0.0205	0.00500	"	0.0333	ND	61.6	15-130	1.05	50
Surrogate: 2-Methylnaphthalene-d10	0.0231		"	0.0333		69.2	40-150		
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		58.0	40-150		

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.



Tasman Geosciences
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Project: Noble - Cody White D03-02

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/05/23 15:03

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