Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure

Site Name & COGCC Facility Number: State C 36-4	*Date:* 5/5/23	*Remediation Project #:* 26979
Associated Wells:	*Age of Site:*	*Number of Photos Attached:* 6

Starting point: *(GPS coordinates and descriptions)*
40.273254, -104.505493

End point: *(GPS coordinates and descriptions)*
40.274485, -104.507046

USCS Soil Type: SW	*Estimated Depth to Groundwater:* > 4ft

Hydrocarbon Impacted Soils / Spills: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*
None observed

Salt Crusted Soils or Impacted Vegetation: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*
None observed

Flowlines

Flowline type	Oil/Gas/Water							
Depth	4ft.							
Age								
Length	657 ft							
Construction Material	Steel							
Were flowlines pulled?	Partially							
Visual Integrity of lines	Good							
Visual impacts if trenched	None							
PID Readings if trenched	1.1 - 22.2							
Sample taken? Location/Sample ID#	Yes							
Photo Number(s)	1-6							

Other observations regarding on loction flowlines:
The flowline was abandoned-in-place from FL01-B@4' to FL01-F@4' due to intersection with an active facility.

Summary

Was impacted soil identified?
No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 6	*Total number of samples collected:* 6
Highest PID Reading: 22.2	*Total number of samples submitted to lab for analysis:* 3
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	*Estimated spill volume:*
Lateral extent:	*Volume of soil removed:*
Is additional investigation required?	

Was groundwater encountered during the investigation?
No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater:	*Was remedial groundwater removal conducted?* Yes No
Date Groundwater was encountered:	*Commencement date of removal:*
Sheen on groundwater? Yes No	*Volume of groundwater removed prior to sampling:*
Free product observed? Yes No	*Volume of groundwater removed post sampling:*
Total number of samples collected:	*Total Volume of groundwater removed:*
Total number of samples submitted to lab for analysis:	

Photographic Log

Equipment ID: FL01-A@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing northwest		

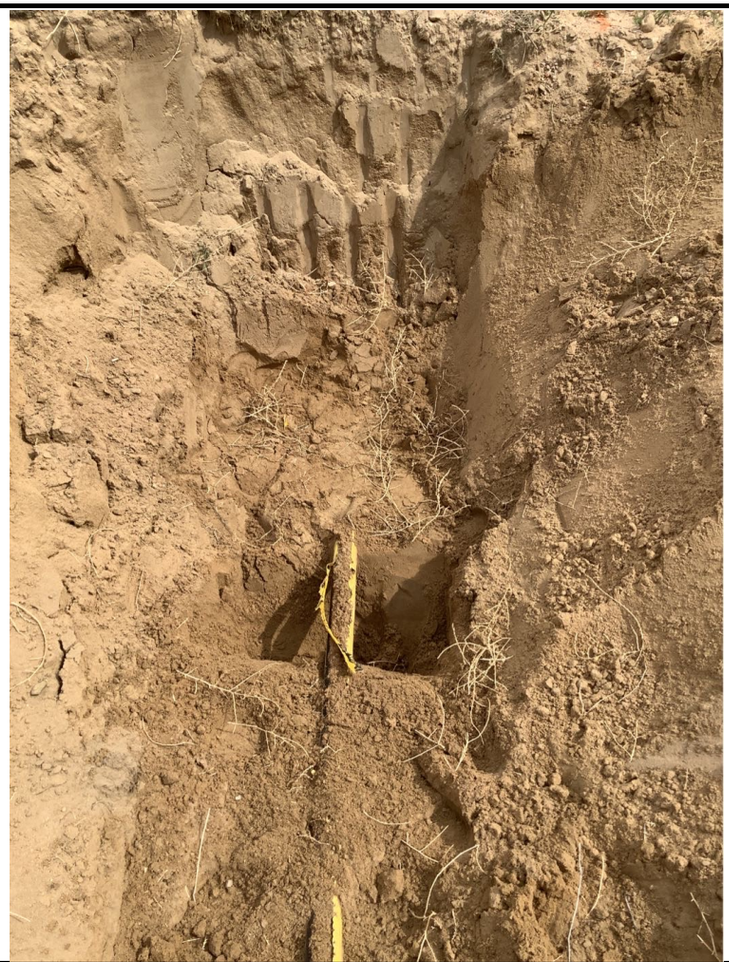
Equipment ID: FL01-C@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing northwest		

Photographic Log

Equipment ID: FL01-D@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing northwest		

Equipment ID: FL01-E@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing northwest		

Photographic Log



Equipment ID: FL01-F@4'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing southeast/ABIP		

Equipment ID: FL01-B@4'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing south		

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - STATE C 36-4

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude[1]	Longitude	PDOP
FL01-A@3'	05/05/23	22.2	No Staining	No Odor	Lab	40.27448705	-104.5070574	1.0
FL01-B@4'	05/05/23	5.1	No Staining	No Odor	Lab	40.27326301	-104.5055107	0.8
FL01-C@3'	05/05/23	2.5	No Staining	No Odor	Grab	40.27428374	-104.5067104	0.9
FL01-D@3'	05/05/23	1.7	No Staining	No Odor	Grab	40.27412230	-104.5064579	0.9
FL01-E@3'	05/05/23	1.1	No Staining	No Odor	Grab	40.27387110	-104.5061544	0.9
FL01-F@4'	05/05/23	1.2	No Staining	No Odor	Lab	40.27360238	-104.5056922	1.0

Notes:
PID = Photoionization detector
ppm = parts per million
PDOP = Position dilution of precision
HC = Hydrocarbon
1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum (“NAD”) of 1983

TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - STATE C36-4

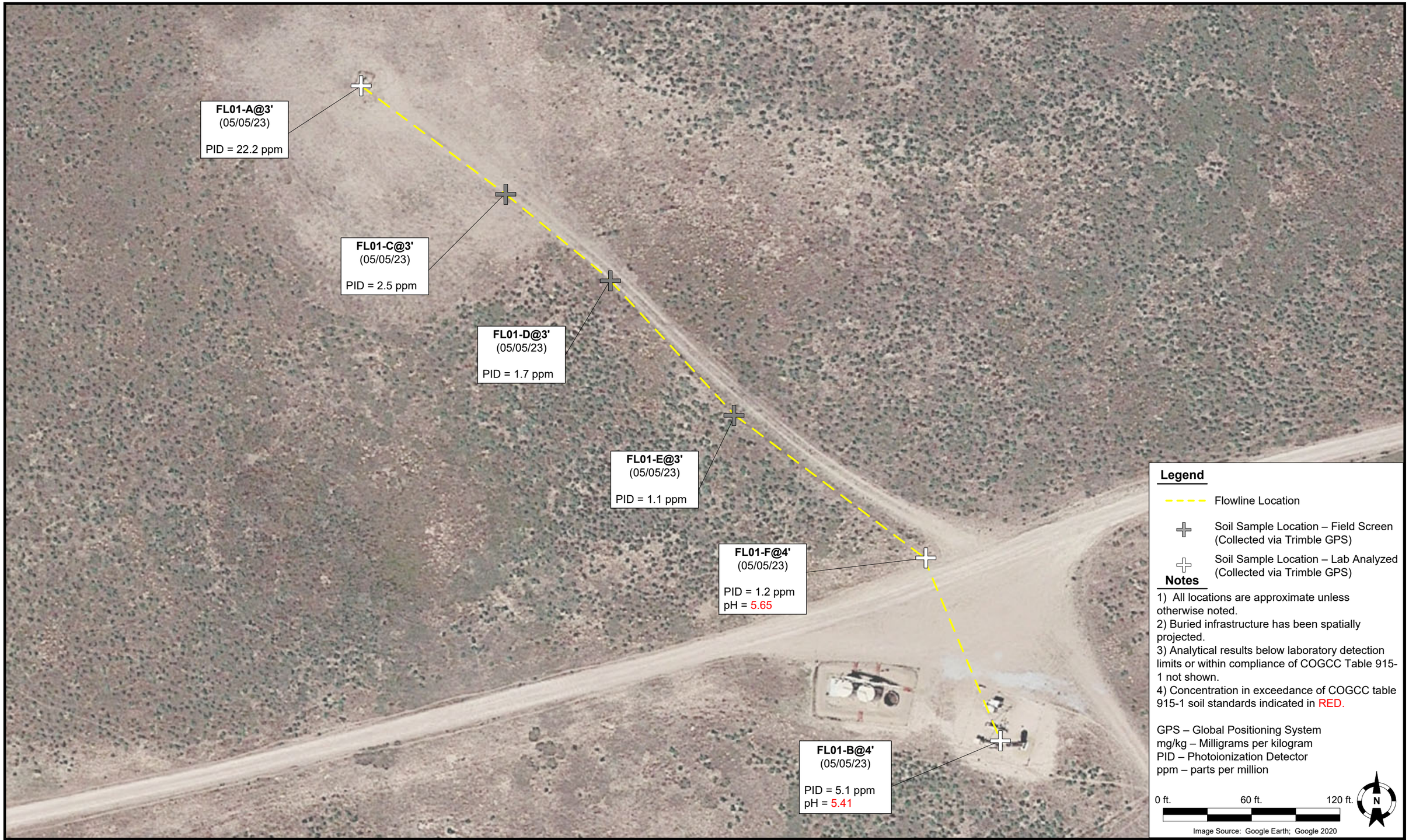
Soil Sample ID	Date	[1]Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL[2]		**1.2**	**490**	**5.8**	**58**	**30**	**27**	**2**	**500**			**360**	**1,800**	**1.1**	**0.11**	**1.1**	**11**	**110**	**0.11**	**240**	**240**	**1.1**	**180**	**18**	**24**
Protection of Groundwater SSL[2,3]		**0.0026**	**0.69**	**0.78**	**9.9**	**0.0081**	**0.0087**	**0.0038**	**500**			**0.55**	**6**	**0.011**	**0.24**	**0.3**	**2.9**	**9**	**0.096**	**8.9**	**0.54**	**0.98**	**1.3**	**0.006**	**0.019**
FL01-A@3'	05/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-B@4'	05/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-F@4'	05/05/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL[2]		**6 - 8.3**	**<6**	**<4mmhos/cm**	**2**
FL01-A@3'	05/05/23	7.49	0.186	0.424	0.213
FL01-B@4'	05/05/23	**5.41**	0.100	0.0534	0.142
FL01-F@4'	05/05/23	**5.65**	0.0257	0.0342	0.0614

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

Definitions:
COGCC = Colorado Oil and Gas Conservation Commission
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
SAR = Sodium Adsorption Ratio
EC = Electrical Conductivity
mmhos/cm = Millmhos per centimeter
mg/L = Milligrams per liter
< = Analytical result is less than the indicated laboratory reporting limit
Highlighted results are equal to or exceed the COGCC Table 915-1 standard

1,2,4 - TMB = 1,2,4 Trimethylbenzene
1,3,5 - TMB = 1,3,5 Trimethylbenzene
Benz(a) = Benzanthracene
Benzo(b) = Benzofluoranthene
Benzo(k) = Benzofluoranthene
Benzo(a) = Benzopyrene
A,H = Dibenzoanthracene
1,2,3-CD = Indenopyrene
1-M = 1-methylnaphthalene
2-M = 2-methylnaphthalene



DATE:	08/16/2023
DESIGNED BY:	JW
DRAWN BY:	HM

TASMAN GEOSCIENCES

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

Noble Energy, Inc. – DJ Basin
State C 36-4
NWNW, Section 36, Township 4 North, Range 64 West
Weld County, Colorado

Flowline Closure & Soil Analytical Results Map (05/05/23)

FIGURE 1

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 25, 2023

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

RE: Noble - State C36-4
Work Order #2305174

Enclosed are the results of analyses for samples received by Summit Scientific on 05/05/23 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Sheely For Paul Shrewsbury
President

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-A@3'	2305174-01	Soil	05/05/23 15:27	05/05/23 17:56
FL01-B@4'	2305174-02	Soil	05/05/23 14:44	05/05/23 17:56
FL01-F@4'	2305174-03	Soil	05/05/23 15:40	05/05/23 17:56

Summit Scientific

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

SUMMIT SCIENTIFIC

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

Lab ID: 2305174

Page 1 of 1

	Send Data To:	Send Invoice To:
Client: Noble / Tasman	Project Manager: Jake Whritenour	Company: Chevron
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: State C 36-4
City/State/Zip: Broomfield, CO 80020		AFE#: UWRWE-A3096-ABN
Phone: 303-903-5168	Project Name: State C 36-4	PO/Billing Codes:
Sampler Name: Dalton Hagen	Project Number:	Contact: Jeff White

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other ___	Water	Soil	Air-Canister #	Other ___	VOC - 915	TPH - 915	PAH - 915	pH,EC,SAR	Boron - HWS	Metals - 915	HOLD		pH, EC, SAR by saturated paste
1	FL01-A@3'	5/5/23	1527	2			X			X			X	X	X	X	X				
2	FL01-B@4'	〃	1444	〃			〃			〃			〃	〃	〃	〃	〃				
3	FL01-F@4'	〃	1540	〃			〃			〃			〃	〃	〃	〃	〃				
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time:	Received by:	Date/Time:
Dalton	5/5/23 1740	Tasman Lockbox	5/5/23 1740
Relinquished by:	Date/Time:	Received by:	Date/Time:
Tasman Lockbox	5523 1750		5523 1750
Relinquished by:	Date/Time:	Received by:	Date/Time:

TAT Business Days		Field DO	
Same Day		Field EC	
1 Day		Field ORP	
2 Days		Field pH	
3 Days		Field Temp.	
Standard	X	Field Turb.	

Notes:

Temperature Upon Receipt: 10.0 | Corrected Temperature: C | IR gun #: 1 | HNO3 lot #:

S2

Sample Receipt Checklist

S2 Work Order# 2305174

Client: Wade Trasman Client Project ID: State C 36-4

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

[ ] [~] [ ] [ ] [ ]

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

Temp (°C) [10.0] Thermometer # [1]

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) **NOTE:** If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	–			ON ICE
If custody seals are present, are they intact? (1)	–			
Are samples due within 48 hours present?		–		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe^{2+}), Hexavalent Chromium (Cr^{6+}, Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen		–		
Is a chain-of-custody (COC) form present and filled out Completely? (1)	–			
Is the COC properly relinquished by the client w/ date and time recorded? (1)	–			
Were all samples received intact? (1)	✓			
Was adequate sample volume provided? (1)	✓			
Does the COC agree with the number and type of sample bottles received? (1)	✓			
Do the sample IDs on the bottle labels match the COC? (1)	✓			
For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.**			✓	
Are samples preserved that require preservation **(excluding cooling)?** (1) Note the type of preservative in the comments column – HCl, H_2SO_4, NaOH, HNO_3, etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				
(1) **If NO, then contact the client before proceeding with analysis and note in case narrative.**				

AB
Custodian Printed Name

5/5/23
Date/Time

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-A@3'

2305174-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGE0305	05/09/23	05/10/23	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: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0397	*99.2 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0398	*99.6 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	*103 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0306	05/09/23	05/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.2	*105 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-A@3'

2305174-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0282	05/09/23	05/09/23	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: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	*67.6 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	*69.4 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.213**	0.0100	mg/L	1	BGE0458	05/13/23	05/19/23	EPA 6020B	

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

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-A@3'

2305174-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**102**	0.0542	mg/L dry	1	BGE0392	05/11/23	05/19/23	EPA 6020B	
Magnesium	**39.9**	0.0542	"	"	"	"	"	"	
Sodium	**8.77**	0.0542	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.186**	0.00100	units	1	BGE0678	05/19/23	05/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.3**		%	1	BGE0430	05/12/23	05/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.424**	0.0100	mmhos/cm	1	BGE0418	05/12/23	05/12/23	EPA 120.1	

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

Date Sampled: **05/05/23 15:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.49**		pH Units	1	BGE0419	05/12/23	05/12/23	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.

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-B@4'

2305174-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGE0305	05/09/23	05/10/23	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: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0398	*99.5 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0391	*97.7 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	*101 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0306	05/09/23	05/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.7	*101 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-B@4'

2305174-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0282	05/09/23	05/09/23	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: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	*64.8 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0272	*81.7 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.142**	0.0100	mg/L	1	BGE0458	05/13/23	05/19/23	EPA 6020B	

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

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-B@4'

2305174-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**78.2**	0.0542	mg/L dry	1	BGE0392	05/11/23	05/19/23	EPA 6020B	
Magnesium	**26.0**	0.0542	"	"	"	"	"	"	
Sodium	**4.01**	0.0542	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.100**	0.00100	units	1	BGE0678	05/19/23	05/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.3**		%	1	BGE0430	05/12/23	05/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.0534**	0.0100	mmhos/cm	1	BGE0418	05/12/23	05/12/23	EPA 120.1	

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

Date Sampled: **05/05/23 14:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**5.41**		pH Units	1	BGE0419	05/12/23	05/12/23	EPA 9045D	

Summit Scientific

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-F@4'

2305174-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGE0305	05/09/23	05/10/23	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: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0433	*108 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0386	*96.6 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	*105 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0306	05/09/23	05/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.6	*108 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-F@4'

2305174-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0282	05/09/23	05/09/23	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: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0229	*68.8 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0253	*76.0 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/05/23 15:40**

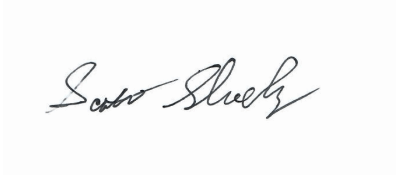
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0614**	0.0100	mg/L	1	BGE0458	05/13/23	05/19/23	EPA 6020B	

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

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific



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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

FL01-F@4'

2305174-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**69.8**	0.0536	mg/L dry	1	BGE0392	05/11/23	05/19/23	EPA 6020B	
Magnesium	**25.7**	0.0536	"	"	"	"	"	"	
Sodium	**0.990**	0.0536	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.0257**	0.00100	units	1	BGE0678	05/19/23	05/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**93.2**		%	1	BGE0430	05/12/23	05/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.0342**	0.0100	mmhos/cm	1	BGE0418	05/12/23	05/12/23	EPA 120.1	

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

Date Sampled: **05/05/23 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**5.65**		pH Units	1	BGE0419	05/12/23	05/12/23	EPA 9045D	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0305 - EPA 5030 Soil MS										
Blank (BGE0305-BLK1)				Prepared: 05/09/23 Analyzed: 05/10/23						
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	*0.0386*		*"*	*0.0400*		*96.5*	*50-150*			
Surrogate: Toluene-d8	*0.0391*		*"*	*0.0400*		*97.6*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0415*		*"*	*0.0400*		*104*	*50-150*			
LCS (BGE0305-BS1)				Prepared: 05/09/23 Analyzed: 05/10/23						
Benzene	0.0795	0.0020	mg/kg	0.100		79.5	70-130			
Toluene	0.0941	0.0050	"	0.100		94.1	70-130			
Ethylbenzene	0.107	0.0050	"	0.100		107	70-130			
m,p-Xylene	0.216	0.010	"	0.200		108	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100		113	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
Naphthalene	0.0775	0.0038	"	0.100		77.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0353*		*"*	*0.0400*		*88.4*	*50-150*			
Surrogate: Toluene-d8	*0.0394*		*"*	*0.0400*		*98.5*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0376*		*"*	*0.0400*		*94.0*	*50-150*			
Matrix Spike (BGE0305-MS1)	**Source: 2305174-01**			Prepared: 05/09/23 Analyzed: 05/10/23						
Benzene	0.0710	0.0020	mg/kg	0.100	ND	71.0	70-130			
Toluene	0.0929	0.0050	"	0.100	ND	92.9	70-130			
Ethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
m,p-Xylene	0.224	0.010	"	0.200	ND	112	70-130			
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130			
Naphthalene	0.0860	0.0038	"	0.100	ND	86.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0316*		*"*	*0.0400*		*79.0*	*50-150*			
Surrogate: Toluene-d8	*0.0382*		*"*	*0.0400*		*95.5*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0385*		*"*	*0.0400*		*96.3*	*50-150*			

Summit Scientific

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0305 - EPA 5030 Soil MS										
Matrix Spike Dup (BGE0305-MSD1)	**Source: 2305174-01**			Prepared: 05/09/23 Analyzed: 05/10/23						
Benzene	0.0770	0.0020	mg/kg	0.100	ND	77.0	70-130	8.10	30	
Toluene	0.0898	0.0050	"	0.100	ND	89.8	70-130	3.42	30	
Ethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130	0.0274	30	
m,p-Xylene	0.224	0.010	"	0.200	ND	112	70-130	0.0134	30	
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	0.834	30	
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	3.89	30	
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130	0.908	30	
Naphthalene	0.0945	0.0038	"	0.100	ND	94.5	70-130	9.34	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0327*		"	*0.0400*		*81.7*	*50-150*			
Surrogate: Toluene-d8	*0.0380*		"	*0.0400*		*95.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0376*		"	*0.0400*		*94.1*	*50-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0306 - EPA 3550A										
Blank (BGE0306-BLK1)				Prepared & Analyzed: 05/09/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*13.9*		*"*	*12.5*		*111*	*30-150*			
LCS (BGE0306-BS1)				Prepared & Analyzed: 05/09/23						
C10-C28 (DRO)	439	50	mg/kg	500		87.7	70-130			
Surrogate: o-Terphenyl	*12.7*		*"*	*12.5*		*102*	*30-150*			
Matrix Spike (BGE0306-MS1)	**Source: 2305174-01**			Prepared & Analyzed: 05/09/23						
C10-C28 (DRO)	444	50	mg/kg	500	36.9	81.4	70-130			
Surrogate: o-Terphenyl	*14.4*		*"*	*12.5*		*115*	*30-150*			
Matrix Spike Dup (BGE0306-MSD1)	**Source: 2305174-01**			Prepared & Analyzed: 05/09/23						
C10-C28 (DRO)	419	50	mg/kg	500	36.9	76.3	70-130	5.86	20	
Surrogate: o-Terphenyl	*13.9*		*"*	*12.5*		*111*	*30-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0282 - EPA 5030 Soil MS										
Blank (BGE0282-BLK1)				Prepared & Analyzed: 05/09/23						
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	*0.0377*		*"*	*0.0333*		*113*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0358*		*"*	*0.0333*		*107*	*40-150*			
LCS (BGE0282-BS1)				Prepared & Analyzed: 05/09/23						
Acenaphthene	0.0332	0.00500	mg/kg	0.0333		99.6	31-137			
Anthracene	0.0332	0.00500	"	0.0333		99.5	30-120			
Benzo (a) anthracene	0.0281	0.00500	"	0.0333		84.3	30-120			
Benzo (a) pyrene	0.0268	0.00500	"	0.0333		80.3	30-120			
Benzo (b) fluoranthene	0.0243	0.00500	"	0.0333		73.0	30-120			
Benzo (k) fluoranthene	0.0310	0.00500	"	0.0333		93.1	30-120			
Chrysene	0.0355	0.00500	"	0.0333		106	30-120			
Dibenz (a,h) anthracene	0.0238	0.00500	"	0.0333		71.5	30-120			
Fluoranthene	0.0326	0.00500	"	0.0333		97.9	30-120			
Fluorene	0.0320	0.00500	"	0.0333		95.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0228	0.00500	"	0.0333		68.3	30-120			
Pyrene	0.0340	0.00500	"	0.0333		102	35-142			
1-Methylnaphthalene	0.0188	0.00500	"	0.0333		56.5	35-142			
2-Methylnaphthalene	0.0328	0.00500	"	0.0333		98.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0308*		*"*	*0.0333*		*92.4*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0333*		*"*	*0.0333*		*99.9*	*40-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0282 - EPA 5030 Soil MS										
Matrix Spike (BGE0282-MS1)	**Source: 2305086-07**			Prepared & Analyzed: 05/09/23						
Acenaphthene	0.0228	0.00500	mg/kg	0.0333	ND	68.5	31-137			
Anthracene	0.0236	0.00500	"	0.0333	ND	70.8	30-120			
Benzo (a) anthracene	0.0260	0.00500	"	0.0333	ND	78.1	30-120			
Benzo (a) pyrene	0.0215	0.00500	"	0.0333	ND	64.4	30-120			
Benzo (b) fluoranthene	0.0183	0.00500	"	0.0333	ND	54.9	30-120			
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.7	30-120			
Chrysene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.7	30-120			
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.4	30-120			
Fluorene	0.0233	0.00500	"	0.0333	ND	69.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0174	0.00500	"	0.0333	ND	52.2	30-120			
Pyrene	0.0248	0.00500	"	0.0333	0.00124	70.6	35-142			
1-Methylnaphthalene	0.0183	0.00500	"	0.0333	0.00185	54.8	15-130			
2-Methylnaphthalene	0.0211	0.00500	"	0.0333	ND	63.4	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0205*		*"*	*0.0333*		*61.6*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0285*		*"*	*0.0333*		*85.6*	*40-150*			
Matrix Spike Dup (BGE0282-MSD1)	**Source: 2305086-07**			Prepared & Analyzed: 05/09/23						
Acenaphthene	0.0236	0.00500	mg/kg	0.0333	ND	70.7	31-137	3.14	30	
Anthracene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	3.25	30	
Benzo (a) anthracene	0.0267	0.00500	"	0.0333	ND	80.2	30-120	2.68	30	
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.3	30-120	5.91	30	
Benzo (b) fluoranthene	0.0199	0.00500	"	0.0333	ND	59.7	30-120	8.47	30	
Benzo (k) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	2.89	30	
Chrysene	0.0244	0.00500	"	0.0333	ND	73.1	30-120	4.65	30	
Dibenz (a,h) anthracene	0.0215	0.00500	"	0.0333	ND	64.6	30-120	26.0	30	
Fluoranthene	0.0230	0.00500	"	0.0333	ND	68.9	30-120	7.72	30	
Fluorene	0.0238	0.00500	"	0.0333	ND	71.4	30-120	2.25	30	
Indeno (1,2,3-cd) pyrene	0.0207	0.00500	"	0.0333	ND	62.2	30-120	17.5	30	
Pyrene	0.0249	0.00500	"	0.0333	0.00124	70.9	35-142	0.470	30	
1-Methylnaphthalene	0.0181	0.00500	"	0.0333	0.00185	54.4	15-130	0.674	50	
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.6	15-130	1.95	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0219*		*"*	*0.0333*		*65.6*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0264*		*"*	*0.0333*		*79.3*	*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 - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0458 - EPA 3050B										
Blank (BGE0458-BLK1)				Prepared: 05/13/23 Analyzed: 05/18/23						
Boron	ND	0.0100	mg/L							
LCS (BGE0458-BS1)				Prepared: 05/13/23 Analyzed: 05/18/23						
Boron	5.44	0.0100	mg/L	5.00		109	80-120			
Duplicate (BGE0458-DUP1)		**Source: 2305146-01**		Prepared: 05/13/23 Analyzed: 05/18/23						
Boron	0.346	0.0100	mg/L		0.377			8.32	20	
Matrix Spike (BGE0458-MS1)		**Source: 2305146-01**		Prepared: 05/13/23 Analyzed: 05/18/23						
Boron	3.76	0.0100	mg/L	5.00	0.377	67.8	75-125			QM-07
Matrix Spike Dup (BGE0458-MSD1)		**Source: 2305146-01**		Prepared: 05/13/23 Analyzed: 05/18/23						
Boron	3.91	0.0100	mg/L	5.00	0.377	70.6	75-125	3.74	25	QM-07

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0392 - General Preparation										
Blank (BGE0392-BLK1)				Prepared: 05/11/23 Analyzed: 05/19/23						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BGE0392-BS1)				Prepared: 05/11/23 Analyzed: 05/19/23						
Calcium	3.96	0.0500	mg/L wet	5.00		79.2	70-130			
Magnesium	4.89	0.0500	"	5.00		97.8	70-130			
Sodium	5.04	0.0500	"	5.00		101	70-130			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0430 - General Preparation										
Duplicate (BGE0430-DUP1)		**Source: 2305146-01**		Prepared & Analyzed: 05/12/23						
% Solids	85.9		%		84.4			1.67	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0418 - General Preparation										
Blank (BGE0418-BLK1)				Prepared & Analyzed: 05/12/23						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BGE0418-BS1)				Prepared & Analyzed: 05/12/23						
Specific Conductance (EC)	0.152	0.0100	mmhos/cm	0.150		101	95-105			
Duplicate (BGE0418-DUP1)		**Source: 2305086-07**		Prepared & Analyzed: 05/12/23						
Specific Conductance (EC)	3.99	0.0100	mmhos/cm		3.99			0.0752	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0419 - General Preparation										
LCS (BGE0419-BS1)				Prepared & Analyzed: 05/12/23						
pH	8.94		pH Units	9.18		97.4	95-105			
Duplicate (BGE0419-DUP1)		**Source: 2305086-07**		Prepared & Analyzed: 05/12/23						
pH	7.39		pH Units		7.33			0.815	20	

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - State C36-4 Project Number: [none] Project Manager: Jacob Whritenour	**Reported:** 05/25/23 10:45

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