

Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: BRNAK 34-28, #302371		Date: 9/22/2023			Remediation Project #: 29712			
Associated Wells: BRNAK 34-28		Age of Site:			Number of Photos Attached: 9			
Location: (GPS coordinates of southeaster berm) 40.102639, -104.551726						Estimated Facility Size (acres):		

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)
Site in good condition.

USCS Soil Type: SW	Estimated Depth to Groundwater: >5'
--------------------	-------------------------------------

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
N/A

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
N/A

Tanks

Tank Contents	Crude oil	Produced water					
Size (barrels)							
Age							
Construction	Steel	Fiberglass					
Tank type	AST	PBV					
Visual Integrity	Good condition	Good condition					
Condition of tank	Good condition	Good condition					
PID Readings							
Soil impacts present at valves or hatches?	None observed	None observed					
PID Readings	4.5	4.6 - 38.1					
Sample taken? Location/ Sample ID#	Yes, see below	Yes, see below					
Photo Number(s)	1	2 - 6					

Other observations regarding tanks:
6 samples were collected, AST01@0.5', SS01@2.5' - SS04@2.5' & FS01@5'.

Separators

Separator size							
Vertical or	Horizontal						
Age							
Soil impacts	None observed						
PID Readings	0.5 - 1.1						
Sample taken? Location/ Sample ID#	Yes, see below						
Photo Number(s)	7 - 8						

Other observations regarding separators:
2 samples were collected, SEP01-FL@3' & SEP01-DL@3'. B point for flowline was taken from SEP01-DL@3'.

Third Party Equipment									
Type									
Age									
Third Party									
Removal Date									
Sample taken?									
PID Readings									
Photo Number(s)									
Other Facility Equipment									
Equipment type	Meter House								
Equipment	Emission Control Device								
Age									
Soil impacts	None observed								
PID Readings	1100								
Sample taken?	Yes, see below								
Photo Number(s)	9								
Other observations regarding other facility or third party equipment: 1 sample collected MH01 @ 1'. Sample came back with high PID readings so sample was submitted to the lab for testing.									
Summary									
Was impacted soil identified? No									
Total number of samples field screened: 9					Total number of samples collected: 9				
Highest PID Reading:					Total number of samples submitted to lab for analysis: 9				
If more than 10 cubic yards of impacted soil were observed: No									
Vertical extent: None					Estimated spill volume: None				
Lateral extent: None					Volume of soil removed: None				
Is additional investigation required? No									
Was groundwater encountered during the investigation? No									
Measured depth to groundwater: >5'					Was remedial groundwater removal conducted? No				
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater? No					Volume of groundwater removed prior to sampling: None				
Free product observed? No					Volume of groundwater removed post sampling: None				
Total number of samples collected: None					Total Volume of groundwater removed: None				
Total number of samples submitted to lab for analysis: None									

Photographic Log



Equipment ID: AST01 @0.5'	Equipment Type: Above Ground Storage Tank	
Material: Steel	Volume:	Contents: Crude Oil
Notes/Conditions: Facing north		

Equipment ID: SS01 @2.5'	Equipment Type: Partially Buried Vault	
Material: Fiberglass	Volume:	Contents: Produced Water
Notes/Conditions: Facing north		

Photographic Log



Equipment ID: SS02@2.5' **Equipment Type:** Partially Buried Vault

Material: Fiberglass **Volume:** **Contents:** Produced Water

Notes/Conditions: Facing east



Equipment ID: SS03@2.5' **Equipment Type:** Partially Buried Vault

Material: Fiberglass **Volume:** **Contents:** Produced Water

Notes/Conditions: Facing south

Photographic Log



Equipment ID: SS04@2.5'	Equipment Type: Partially Buried Vault	
Material: Fiberglass	Volume:	Contents: Produced Water
Notes/Conditions: Facing west		

Equipment ID: FS01@5'4	Equipment Type: Partially Buried Vault	
Material: Fiberglass	Volume:	Contents: Produced Water
Notes/Conditions: Facing west		

Photographic Log



Equipment ID: SEP01-DL@3'		Equipment Type: Separator		Equipment ID: SEP01-FL@3'		Equipment Type: Separator	
Material: Steel	Volume:	Contents: Production Fluids		Material: Steel	Volume:	Contents: Oil/Gas/Water	
Notes/Conditions: Facing west				Notes/Conditions: Facing west			

Photographic Log



Equipment ID: MH01@1'		Equipment Type: Emission Control Device		Equipment ID:		Equipment Type:	
Material: Steel		Volume:		Material:		Volume:	
Contents: Oil/Gas/Water		Notes/Conditions: Facing west		Material:		Volume:	
Notes/Conditions:		Notes/Conditions:		Material:		Contents:	

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - BRNAK 34-28

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
AST01@0.5'	09/22/23	4.5	No Staining	No Odor	Lab	40.10238351	-104.5517075	1.0
FS01@5'	09/22/23	6.8	No Staining	No Odor	Lab	40.10243715	-104.5516931	1.1
MH01@1'	09/22/23	1,100	No Staining	Strong HC Odor	Lab	40.10263853	-104.5516507	0.7
SEP01-DL@3'	09/22/23	0.5	No Staining	No Odor	Lab	40.10259937	-104.5516965	0.7
SEP01-FL@3'	09/22/23	1.1	No Staining	No Odor	Lab	40.10263450	-104.5517136	0.7
SS01@2.5'	09/22/23	4.6	No Staining	No Odor	Grab	40.10245642	-104.5516787	1.0
SS02@2.5'	09/22/23	38.1	No Staining	Slight HC Odor	Lab	40.10243088	-104.5516611	1.0
SS03@2.5'	09/22/23	4.9	No Staining	No Odor	Grab	40.10241197	-104.5516997	1.0
SS04@2.4'	09/22/23	4.9	No Staining	No Odor	Grab	40.10244118	-104.5517233	1.1

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. - BRNAK 34-28

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@0.5'	09/22/23	<0.0020	0.0063	<0.0050	0.038	RP	0.0052	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.0100	<0.00500	<0.0100	<0.0100
FS01@5'	09/22/23	<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
MH01@1'	09/22/23	0.031	0.75	0.80	9.9	1.7	0.72	0.13	92	130	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00628	<0.00500	<0.00500	0.121	0.279
SEP01-DL@3'	09/22/23	<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
SEP01-FL@3'	09/22/23	<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
SS02@2.5'	09/22/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	09/22/23	7.94	0.693	0.561	0.0941
FS01@5'	09/22/23	8.01	15.0	8.28	0.795
MH01@1'	09/22/23	8.36	0.187	0.140	0.0482
SEP01-DL@3'	09/22/23	8.39	0.609	0.256	0.301
SEP01-FL@3'	09/22/23	8.14	2.18	0.647	0.312
SS02@2.5'	09/22/23	8.09	0.231	0.255	0.208

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ²		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^{2,3}		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@0.5'	09/22/23	1.09	69.2	<0.200	<0.30	2.29	4.97	2.05	<0.260	0.0316	6.69
FS01@5'	09/22/23	1.08	136	<0.200	<0.30	2.30	6.96	2.78	0.292	0.0352	10.2
MH01@1'	09/22/23	0.850	48.0	<0.200	<0.30	2.43	3.78	1.98	<0.260	<0.0200	7.51
SEP01-DL@3'	09/22/23	1.15	211	0.238	<0.30	2.22	9.34	3.00	<0.260	0.0448	9.65
SEP01-FL@3'	09/22/23	1.08	153	0.238	<0.30	2.39	8.49	2.81	<0.260	0.0486	9.11
SS02@2.5'	09/22/23	1.39	174	0.300	<0.30	3.22	11.0	3.26	0.316	0.0841	10.5

Notes:

- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- 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 = Millimhos per centimeter

mg/L = Milligrams per liter

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

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

1,2,4 - TMB = 1,2,4 Trimethylbenzene

1,3,5 - TMB = 1,3,5 Trimethylbenzene

Benzo(a) = Benzo(a)anthracene

Benzo(b) = Benzo(b)fluoranthene

Benzo(k) = Benzo(k)fluoranthene

Benzo(a) = Benzo(a)pyrene

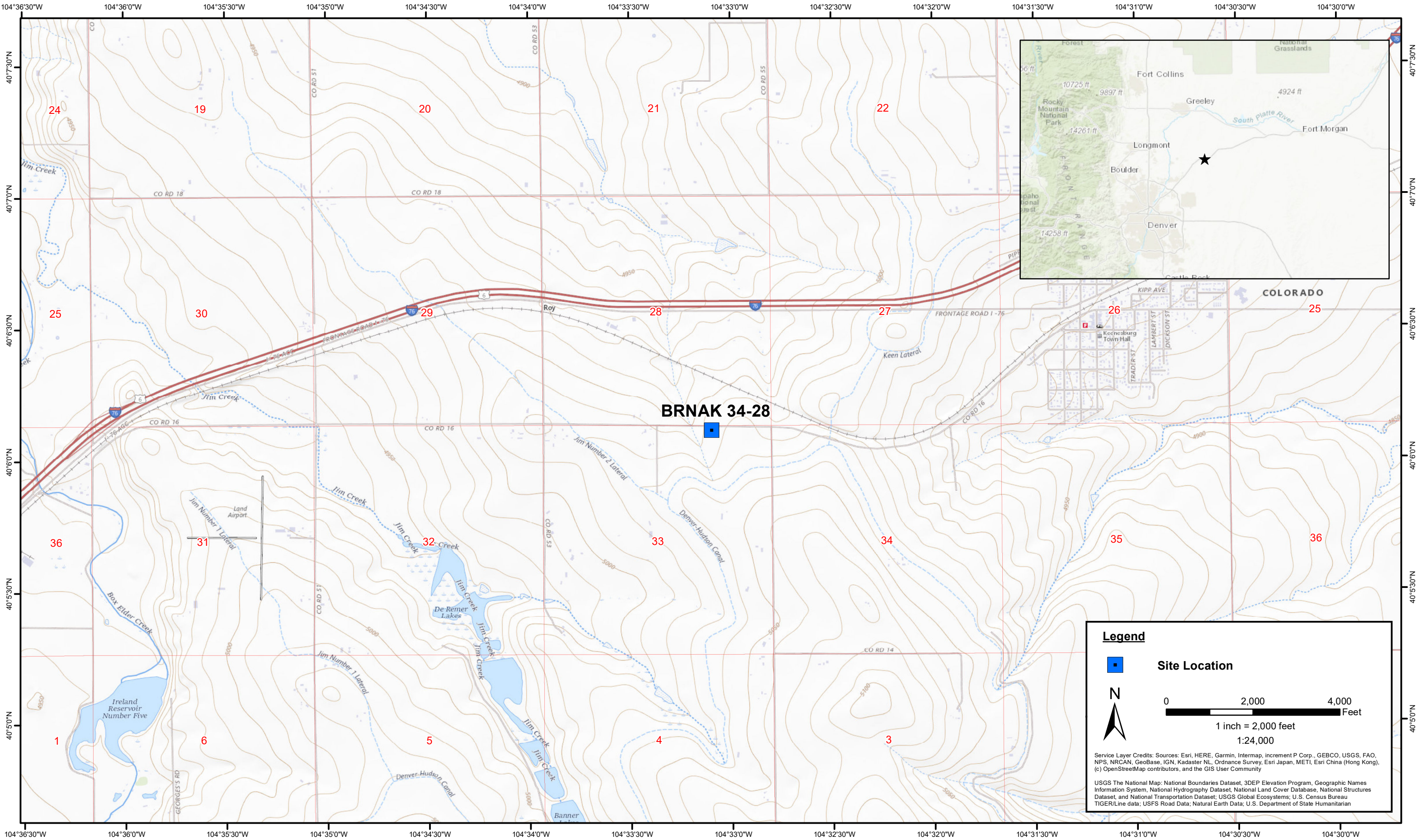
A,H = Dibenzo(a,h)anthracene

1,2,3-CD = Indeno(1,2,3-cd)pyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene

RP = Results Pending



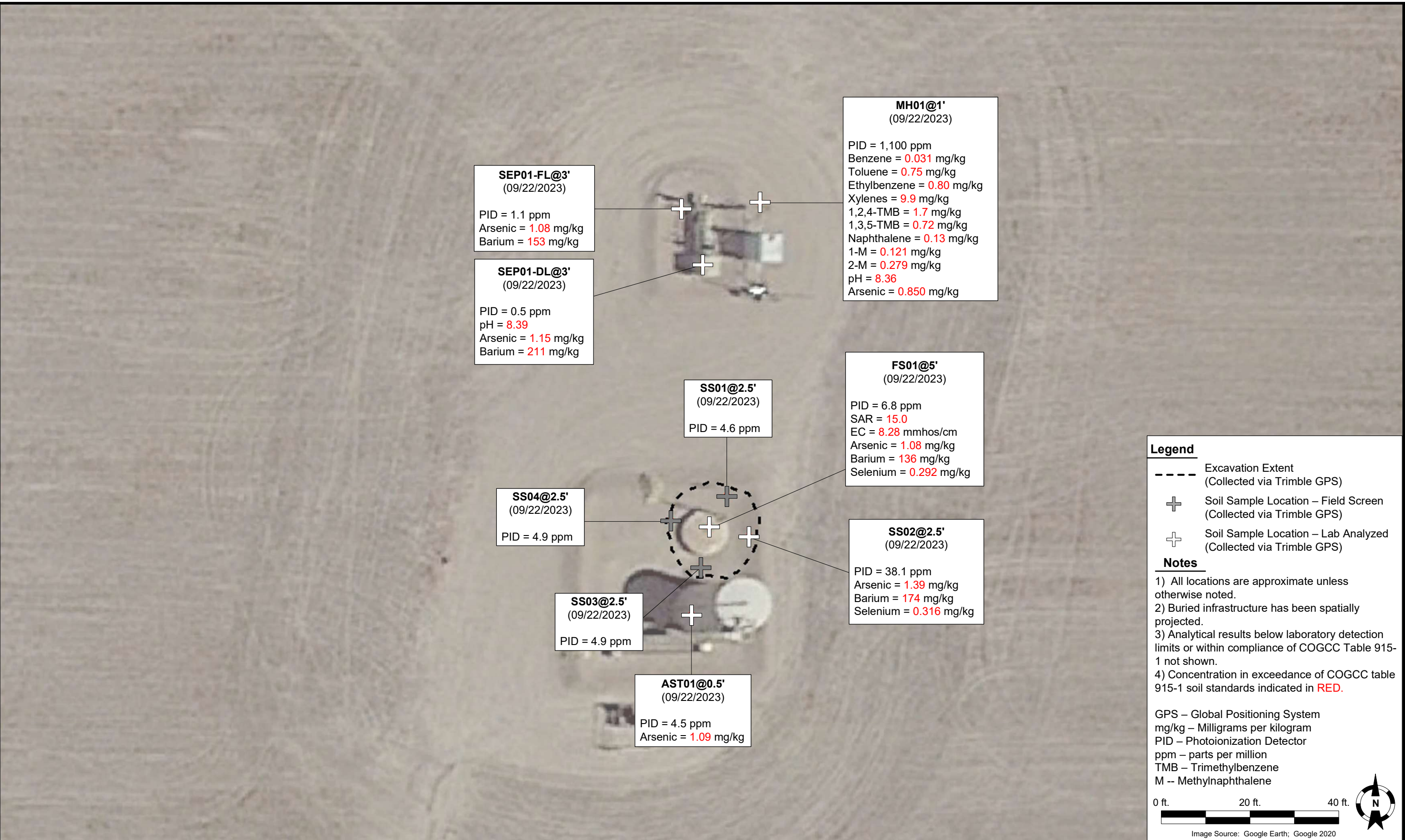
DATE:	October 2023
DESIGNED BY:	J. Whritenour
DRAWN BY:	J. Clonts


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

Noble Energy, Inc - DJ Basin
BRNAK 34-28
 SWSE, Section 28, Township 2 North, Range 64 West
 Weld County, Colorado

Site Location Map

Figure
1



DATE: 10/02/2023

DESIGNED BY: JW

DRAWN BY: HM



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

Noble Energy, Inc. – DJ Basin
Brnak 34-28
 SWSE, Section 28, Township 2 North, Range 64 West
 Weld County, Colorado

Tank Battery Closure & Soil
 Analytical Results Map
 (09/22/2023)

FIGURE
 2

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 12, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

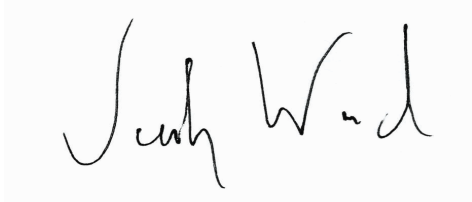
Broomfield, CO 80020

RE: Noble - BRNAK 34-28

Work Order #2309434

Enclosed are the results of analyses for samples received by Summit Scientific on 09/22/23 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	2309434-01	Soil	09/22/23 09:50	09/22/23 17:30
SS02@2.5'	2309434-03	Soil	09/22/23 10:40	09/22/23 17:30
FS01@5'	2309434-06	Soil	09/22/23 11:00	09/22/23 17:30
SEP01-DL@3'	2309434-07	Soil	09/22/23 11:35	09/22/23 17:30
SEP01-FL@3'	2309434-08	Soil	09/22/23 11:30	09/22/23 17:30
MH01@1	2309434-09	Soil	09/22/23 11:05	09/22/23 17:30

Summit Scientific

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

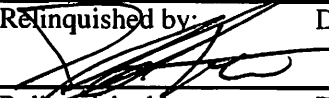
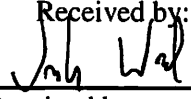
SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2309434	

Client: Noble/Tasman		Project Manager: Jake Whritenour		Company: <u>Chevron</u>	
Address: 6855 W. 119th Ave.		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location: <u>BRANK 34-28</u>	
City/State/Zip: Broomfield/CO/ 80020		Project Name: <u>BRANK 34-28</u>		AFE#:	
Phone: 970-402-0946		Project Number:		PO/Billing Codes:	
Sampler Name: Patrick Kline		Project Number:		Contact: <u>Miguel Barron</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS	HOLD
1	AST01E0.5'	9/22/23	0950	3			3			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	SS01E2.5'		1035																X	
3	SS02E2.5'		1040										X	X	X	X	X	X		
4	SS03E2.5'		1045																X	
5	SS04E2.5'		1050																X	
6	ESS1E5'		1100										X	X	X	X	X	X		
7	SEPO1-DLE3'		1135																	
8	SEPO1-FLE3'		1130																	
9	MHOLE1'		1105																	
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: 	Date/Time: 9/22/23 1400	Received by: ^{PSK} Tasman lockbox	Date/Time: 9/22/23 1400	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 9/22/23 17:30	Received by: 	Date/Time: 9/22/23 17:30	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 0.9	Corrected Temperature:	IR gun #: 2	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2309434

Client: Noble Tisman Client Project ID: BRANK 34-28

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

[] [X] [] [] []

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

Temp (°C) 0.9

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.	X			on file
If custody seals are present, are they intact? ⁽¹⁾	X			
Are samples due within 48 hours present?		X		
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			X	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	X			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	X			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

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

AS
Custodian Printed Name

9/22/03
Date/Time



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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

AST01@0.5'
2309434-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	0.0063	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.038	0.010		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.0052	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.59	68.7 %		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 - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

AST01@0.5'
2309434-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0253	75.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0941	0.0100	mg/L	1	BG10802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 09:50**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

AST01@0.5'
2309434-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.09	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B
Barium	69.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.29	0.400	"	"	"	"	"	"
Lead	4.97	0.200	"	"	"	"	"	"
Nickel	2.05	0.400	"	"	"	"	"	"
Silver	0.0316	0.0200	"	"	"	"	"	"
Zinc	6.69	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.2	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	10.8	0.0500	"	"	"	"	"	"	
Sodium	22.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.693	0.00100	units	1	BGI0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

AST01@0.5'
2309434-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BGI0883	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.561	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

AST01@0.5'
2309434-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B


Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg	1	BGJ0255	09/25/23	10/07/23	EPA 8260B	

Date Sampled: **09/22/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0422	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.3 %	50-150		"	"	"	"	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SS02@2.5'
2309434-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0344	86.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.75	78.0 %		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 - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SS02@2.5'
2309434-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.208	0.0100	mg/L	1	BGI0802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 10:40**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SS02@2.5'
2309434-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.39	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B
Barium	174	0.400	"	"	"	"	"	"
Cadmium	0.300	0.200	"	"	"	"	"	"
Copper	3.22	0.400	"	"	"	"	"	"
Lead	11.0	0.200	"	"	"	"	"	"
Nickel	3.26	0.400	"	"	"	"	"	"
Silver	0.0841	0.0200	"	"	"	"	"	"
Zinc	10.5	0.400	"	"	"	"	"	"
Selenium	0.316	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	66.2	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	12.0	0.0500	"	"	"	"	"	"	
Sodium	7.77	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.231	0.00100	units	1	BGI0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 10:40**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SS02@2.5'
2309434-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.8	%	1	BGI0883	09/28/23	09/28/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 10:40**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.255	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

FS01@5'
2309434-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.35	66.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

FS01@5'
2309434-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0196	58.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	66.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.795	0.0100	mg/L	1	BGI0802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 11:00**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

FS01@5'
2309434-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.08	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B
Barium	136	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.30	0.400	"	"	"	"	"	"
Lead	6.96	0.200	"	"	"	"	"	"
Nickel	2.78	0.400	"	"	"	"	"	"
Silver	0.0352	0.0200	"	"	"	"	"	"
Zinc	10.2	0.400	"	"	"	"	"	"
Selenium	0.292	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	529	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	246	0.0500	"	"	"	"	"	"	
Sodium	1660	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	15.0	0.00100	units	1	BGJ0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

FS01@5'
2309434-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.8	%	1	BGI0883	09/28/23	09/28/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 11:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	8.28	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.01		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-DL@3'
2309434-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0377	94.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0363	90.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.02	64.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-DL@3'
2309434-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0238	71.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0289	86.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.301	0.0100	mg/L	1	BG10802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 11:35**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-DL@3'
2309434-07 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.15	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B
Barium	211	0.400	"	"	"	"	"	"
Cadmium	0.238	0.200	"	"	"	"	"	"
Copper	2.22	0.400	"	"	"	"	"	"
Lead	9.34	0.200	"	"	"	"	"	"
Nickel	3.00	0.400	"	"	"	"	"	"
Silver	0.0448	0.0200	"	"	"	"	"	"
Zinc	9.65	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.5	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	16.3	0.0500	"	"	"	"	"	"	
Sodium	16.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.609	0.00100	units	1	BGJ0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 11:35**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-DL@3'
2309434-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.1	%	1	BGI0883	09/28/23	09/28/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 11:35**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.256	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.39		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-FL@3'
2309434-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0366	91.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0378	94.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.62	69.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
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Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-FL@3'
2309434-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0230	69.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0266	79.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.312	0.0100	mg/L	1	BG10802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 11:30**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-FL@3'
2309434-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.08	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B
Barium	153	0.400	"	"	"	"	"	"
Cadmium	0.238	0.200	"	"	"	"	"	"
Copper	2.39	0.400	"	"	"	"	"	"
Lead	8.49	0.200	"	"	"	"	"	"
Nickel	2.81	0.400	"	"	"	"	"	"
Silver	0.0486	0.0200	"	"	"	"	"	"
Zinc	9.11	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.0	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	23.2	0.0500	"	"	"	"	"	"	
Sodium	72.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.18	0.00100	units	1	BGJ0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 11:30**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

SEP01-FL@3'
2309434-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.0	%	1	BGI0883	09/28/23	09/28/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.647	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

MH01@1
2309434-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.031	0.0020	mg/kg	1	BGI0767	09/25/23	09/26/23	EPA 8260B	
Toluene	0.75	0.050	"	10	"	"	09/26/23	"	
Ethylbenzene	0.80	0.050	"	"	"	"	"	"	
Xylenes (total)	9.9	0.10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	1.7	0.050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.72	0.0050	"	1	"	"	09/26/23	"	
Naphthalene	0.13	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	92	5.0	"	10	"	"	09/26/23	"	

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.4 %	50-150		"	"	09/26/23	"	
Surrogate: Toluene-d8	0.161	403 %	50-150		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene	0.111	278 %	50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	130	50	mg/kg	1	BGI0768	09/25/23	09/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.5	84.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

MH01@1
2309434-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.00628	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.121	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.279	0.00500	"	"	"	"	"	"	E

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0240	71.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0277	83.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0482	0.0100	mg/L	1	BGI0802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/22/23 11:05**

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

MH01@1
2309434-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.850	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B	
Barium	48.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.43	0.400	"	"	"	"	"	"	
Lead	3.78	0.200	"	"	"	"	"	"	
Nickel	1.98	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	7.51	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0744	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.9	0.0500	mg/L dry	1	BGI0854	09/27/23	09/30/23	EPA 6020B	
Magnesium	3.49	0.0500	"	"	"	"	"	"	
Sodium	3.50	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.187	0.00100	units	1	BGJ0004	10/01/23	10/01/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

MH01@1
2309434-09 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BGI0883	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.140	0.0100	mmhos/cm	1	BGI0888	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BGI0887	09/28/23	09/28/23	EPA 9045D	

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Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGI0767 - EPA 5030 Soil MS

Blank (BGI0767-BLK1)

Prepared: 09/25/23 Analyzed: 09/26/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0387		"	0.0400		96.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0401		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0373		"	0.0400		93.2	50-150			

LCS (BGI0767-BS1)

Prepared: 09/25/23 Analyzed: 09/26/23

Benzene	0.0828	0.0020	mg/kg	0.100		82.8	70-130			
Toluene	0.0838	0.0050	"	0.100		83.8	70-130			
Ethylbenzene	0.0852	0.0050	"	0.100		85.2	70-130			
m,p-Xylene	0.166	0.010	"	0.200		82.9	70-130			
o-Xylene	0.0806	0.0050	"	0.100		80.6	70-130			
1,2,4-Trimethylbenzene	0.0766	0.0050	"	0.100		76.6	70-130			
1,3,5-Trimethylbenzene	0.0798	0.0050	"	0.100		79.8	70-130			
Naphthalene	0.0966	0.0038	"	0.100		96.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0350		"	0.0400		87.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0390		"	0.0400		97.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0412		"	0.0400		103	50-150			

Matrix Spike (BGI0767-MS1)

Source: 2309434-01

Prepared: 09/25/23 Analyzed: 09/26/23

Benzene	0.0849	0.0020	mg/kg	0.100	ND	84.9	70-130			
Toluene	0.0862	0.0050	"	0.100	0.00627	79.9	70-130			
Ethylbenzene	0.0804	0.0050	"	0.100	0.00417	76.2	70-130			
m,p-Xylene	0.169	0.010	"	0.200	0.0257	71.5	70-130			
o-Xylene	0.0822	0.0050	"	0.100	0.0123	70.0	70-130			
1,2,4-Trimethylbenzene	0.0871	0.0050	"	0.100	0.00873	78.3	70-130			
1,3,5-Trimethylbenzene	0.0860	0.0050	"	0.100	0.00522	80.8	70-130			
Naphthalene	0.0856	0.0038	"	0.100	ND	85.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0350		"	0.0400		87.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		97.0	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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 BGI0767 - EPA 5030 Soil MS

Matrix Spike Dup (BGI0767-MSD1)

Source: 2309434-01

Prepared: 09/25/23 Analyzed: 09/26/23

Benzene	0.0793	0.0020	mg/kg	0.100	ND	79.3	70-130	6.83	30	
Toluene	0.0810	0.0050	"	0.100	0.00627	74.7	70-130	6.17	30	
Ethylbenzene	0.0759	0.0050	"	0.100	0.00417	71.7	70-130	5.80	30	
m,p-Xylene	0.171	0.010	"	0.200	0.0257	72.5	70-130	1.19	30	
o-Xylene	0.0891	0.0050	"	0.100	0.0123	76.8	70-130	8.02	30	
1,2,4-Trimethylbenzene	0.0997	0.0050	"	0.100	0.00873	91.0	70-130	13.6	30	
1,3,5-Trimethylbenzene	0.0974	0.0050	"	0.100	0.00522	92.2	70-130	12.5	30	
Naphthalene	0.111	0.0038	"	0.100	ND	111	70-130	25.8	30	
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.8	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

Batch BGJ0255 - EPA 5030 Soil MS

Blank (BGJ0255-BLK1)

Prepared: 10/06/23 Analyzed: 10/07/23

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	0.0367		"	0.0400		91.6	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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 BGJ0255 - EPA 5030 Soil MS

LCS (BGJ0255-BS1)

Prepared: 10/06/23 Analyzed: 10/07/23

Benzene	0.0841	0.0020	mg/kg	0.100		84.1	70-130			
Toluene	0.0866	0.0050	"	0.100		86.6	70-130			
Ethylbenzene	0.0890	0.0050	"	0.100		89.0	70-130			
m,p-Xylene	0.178	0.010	"	0.200		89.1	70-130			
o-Xylene	0.0864	0.0050	"	0.100		86.4	70-130			
1,2,4-Trimethylbenzene	0.0859	0.0050	"	0.100		85.9	70-130			
1,3,5-Trimethylbenzene	0.0877	0.0050	"	0.100		87.7	70-130			
Naphthalene	0.0965	0.0038	"	0.100		96.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.3</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>99.9</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>50-150</i>			

Matrix Spike (BGJ0255-MS1)

Source: 2310106-01

Prepared: 10/06/23 Analyzed: 10/07/23

Benzene	0.0790	0.0020	mg/kg	0.100	ND	79.0	70-130			
Toluene	0.0787	0.0050	"	0.100	ND	78.7	70-130			
Ethylbenzene	0.0760	0.0050	"	0.100	ND	76.0	70-130			
m,p-Xylene	0.150	0.010	"	0.200	ND	74.8	70-130			
o-Xylene	0.0748	0.0050	"	0.100	ND	74.8	70-130			
1,2,4-Trimethylbenzene	0.0992	0.0050	"	0.100	ND	99.2	70-130			
1,3,5-Trimethylbenzene	0.0710	0.0050	"	0.100	ND	71.0	70-130			
Naphthalene	0.0976	0.0038	"	0.100	ND	97.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>50-150</i>			

Matrix Spike Dup (BGJ0255-MSD1)

Source: 2310106-01

Prepared: 10/06/23 Analyzed: 10/07/23

Benzene	0.0735	0.0020	mg/kg	0.100	ND	73.5	70-130	7.12	30	
Toluene	0.0727	0.0050	"	0.100	ND	72.7	70-130	7.89	30	
Ethylbenzene	0.0748	0.0050	"	0.100	ND	74.8	70-130	1.59	30	
m,p-Xylene	0.149	0.010	"	0.200	ND	74.7	70-130	0.0803	30	
o-Xylene	0.0741	0.0050	"	0.100	ND	74.1	70-130	0.967	30	
1,2,4-Trimethylbenzene	0.0995	0.0050	"	0.100	ND	99.5	70-130	0.332	30	
1,3,5-Trimethylbenzene	0.0713	0.0050	"	0.100	ND	71.3	70-130	0.380	30	
Naphthalene	0.0927	0.0038	"	0.100	ND	92.7	70-130	5.14	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.7</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>50-150</i>			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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 BGI0768 - EPA 3550A

Blank (BGI0768-BLK1)

Prepared & Analyzed: 09/25/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	15.6		"	12.5		125	30-150				

LCS (BGI0768-BS1)

Prepared & Analyzed: 09/25/23

C10-C28 (DRO)	500	50	mg/kg	500		100	70-130				
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.6	30-150				

Matrix Spike (BGI0768-MS1)

Source: 2309434-01

Prepared & Analyzed: 09/25/23

C10-C28 (DRO)	472	50	mg/kg	500	37.0	87.0	70-130				
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.5	30-150				

Matrix Spike Dup (BGI0768-MSD1)

Source: 2309434-01

Prepared & Analyzed: 09/25/23

C10-C28 (DRO)	471	50	mg/kg	500	37.0	86.8	70-130	0.113	20		
Surrogate: <i>o</i> -Terphenyl	10.8		"	12.5		86.3	30-150				

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Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGI0780 - EPA 5030 Soil MS

Blank (BGI0780-BLK1)

Prepared: 09/26/23 Analyzed: 09/27/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0325</i>		"	<i>0.0333</i>		<i>97.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0400</i>		"	<i>0.0333</i>		<i>120</i>	<i>40-150</i>			

LCS (BGI0780-BS1)

Prepared: 09/26/23 Analyzed: 09/27/23

Acenaphthene	0.0175	0.00500	mg/kg	0.0333	52.4	31-137
Anthracene	0.0308	0.00500	"	0.0333	92.3	30-120
Benzo (a) anthracene	0.0302	0.00500	"	0.0333	90.6	30-120
Benzo (a) pyrene	0.0293	0.00500	"	0.0333	87.8	30-120
Benzo (b) fluoranthene	0.0353	0.00500	"	0.0333	106	30-120
Benzo (k) fluoranthene	0.0355	0.00500	"	0.0333	107	30-120
Chrysene	0.0296	0.00500	"	0.0333	88.8	30-120
Dibenz (a,h) anthracene	0.0159	0.00500	"	0.0333	47.6	30-120
Fluoranthene	0.0301	0.00500	"	0.0333	90.4	30-120
Fluorene	0.0169	0.00500	"	0.0333	50.8	30-120
Indeno (1,2,3-cd) pyrene	0.0218	0.00500	"	0.0333	65.4	30-120
Pyrene	0.0364	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0309	0.00500	"	0.0333	92.8	35-142
2-Methylnaphthalene	0.0305	0.00500	"	0.0333	91.4	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0248</i>		"	<i>0.0333</i>	<i>74.4</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0308</i>		"	<i>0.0333</i>	<i>92.3</i>	<i>40-150</i>

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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 BGI0780 - EPA 5030 Soil MS

Matrix Spike (BGI0780-MS1)	Source: 2309432-01			Prepared: 09/26/23 Analyzed: 09/27/23						
Acenaphthene	0.0161	0.00500	mg/kg	0.0333	ND	48.4	31-137			
Anthracene	0.0251	0.00500	"	0.0333	ND	75.4	30-120			
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	74.9	30-120			
Benzo (a) pyrene	0.0234	0.00500	"	0.0333	ND	70.1	30-120			
Benzo (b) fluoranthene	0.0273	0.00500	"	0.0333	ND	81.9	30-120			
Benzo (k) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120			
Chrysene	0.0236	0.00500	"	0.0333	ND	70.7	30-120			
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120			
Fluoranthene	0.0238	0.00500	"	0.0333	ND	71.5	30-120			
Fluorene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.5	30-120			
Pyrene	0.0291	0.00500	"	0.0333	ND	87.3	35-142			
1-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.5	15-130			
2-Methylnaphthalene	0.0262	0.00500	"	0.0333	ND	78.7	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0193</i>		<i>"</i>	<i>0.0333</i>		<i>57.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0252</i>		<i>"</i>	<i>0.0333</i>		<i>75.7</i>	<i>40-150</i>			

Matrix Spike Dup (BGI0780-MSD1)	Source: 2309432-01			Prepared: 09/26/23 Analyzed: 09/27/23						
Acenaphthene	0.0192	0.00500	mg/kg	0.0333	ND	57.6	31-137	17.4	30	
Anthracene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	1.29	30	
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	1.64	30	
Benzo (a) pyrene	0.0237	0.00500	"	0.0333	ND	71.0	30-120	1.25	30	
Benzo (b) fluoranthene	0.0281	0.00500	"	0.0333	ND	84.4	30-120	2.93	30	
Benzo (k) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	3.33	30	
Chrysene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	2.05	30	
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.6	30-120	4.03	30	
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.3	30-120	3.85	30	
Fluorene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	13.2	30	
Indeno (1,2,3-cd) pyrene	0.0199	0.00500	"	0.0333	ND	59.7	30-120	4.57	30	
Pyrene	0.0297	0.00500	"	0.0333	ND	89.1	35-142	2.00	30	
1-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.6	15-130	4.29	50	
2-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.5	15-130	6.83	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0191</i>		<i>"</i>	<i>0.0333</i>		<i>57.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0259</i>		<i>"</i>	<i>0.0333</i>		<i>77.8</i>	<i>40-150</i>			

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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

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

Batch BGI0802 - EPA 3050B

Blank (BGI0802-BLK1)

Prepared: 09/26/23 Analyzed: 09/28/23

Boron ND 0.0100 mg/L

LCS (BGI0802-BS1)

Prepared: 09/26/23 Analyzed: 09/28/23

Boron 4.91 0.0100 mg/L 5.00 98.2 80-120

Duplicate (BGI0802-DUP1)

Source: 2309401-01

Prepared: 09/26/23 Analyzed: 09/28/23

Boron 0.0620 0.0100 mg/L 0.107 53.3 20 QR-01

Matrix Spike (BGI0802-MS1)

Source: 2309401-01

Prepared: 09/26/23 Analyzed: 09/28/23

Boron 4.85 0.0100 mg/L 5.00 0.107 94.9 75-125

Matrix Spike Dup (BGI0802-MSD1)

Source: 2309401-01

Prepared: 09/26/23 Analyzed: 09/28/23

Boron 4.98 0.0100 mg/L 5.00 0.107 97.5 75-125 2.69 25

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGI0900 - EPA 3050B

Blank (BGI0900-BLK1)

Prepared: 09/28/23 Analyzed: 09/30/23

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

LCS (BGI0900-BS1)

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	47.7	0.200	mg/kg wet	40.0		119	80-120
Barium	39.8	0.400	"	40.0		99.5	80-120
Cadmium	2.21	0.200	"	2.00		110	80-120
Copper	47.0	0.400	"	40.0		117	80-120
Lead	21.2	0.200	"	20.0		106	80-120
Nickel	48.1	0.400	"	40.0		120	80-120
Silver	2.10	0.0200	"	2.00		105	80-120
Zinc	47.3	0.400	"	40.0		118	80-120

Duplicate (BGI0900-DUP1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	0.692	0.200	mg/kg dry	0.649		6.36	20
Barium	47.7	0.400	"	51.4		7.36	20
Cadmium	0.106	0.200	"	0.120		12.2	20
Copper	0.922	0.400	"	1.00		8.34	20
Lead	4.98	0.200	"	5.46		9.26	20
Nickel	1.38	0.400	"	1.22		12.1	20
Silver	0.0125	0.0200	"	0.0125		0.00	20
Zinc	4.03	0.400	"	4.14		2.70	20
Selenium	ND	0.260	"	ND			200

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGI0900 - EPA 3050B

Matrix Spike (BGI0900-MS1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	13.4	0.200	mg/kg dry	41.8	0.649	30.5	75-125			QM-07
Barium	107	0.400	"	41.8	51.4	134	75-125			QM-07
Cadmium	2.40	0.200	"	2.09	0.120	109	75-125			
Copper	13.9	0.400	"	41.8	1.00	30.8	75-125			QM-07
Lead	25.5	0.200	"	20.9	5.46	95.9	75-125			
Nickel	14.9	0.400	"	41.8	1.22	32.7	75-125			QM-07
Silver	2.08	0.0200	"	2.09	0.0125	98.8	75-125			
Zinc	17.4	0.400	"	41.8	4.14	31.7	75-125			QM-07

Matrix Spike Dup (BGI0900-MSD1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	13.8	0.200	mg/kg dry	41.8	0.649	31.6	75-125	3.14	25	QM-07
Barium	109	0.400	"	41.8	51.4	138	75-125	1.82	25	QM-07
Cadmium	2.48	0.200	"	2.09	0.120	113	75-125	3.12	25	
Copper	14.4	0.400	"	41.8	1.00	32.1	75-125	4.01	25	QM-07
Lead	26.7	0.200	"	20.9	5.46	102	75-125	4.55	25	
Nickel	15.3	0.400	"	41.8	1.22	33.8	75-125	3.16	25	QM-07
Silver	2.19	0.0200	"	2.09	0.0125	104	75-125	5.29	25	
Zinc	17.5	0.400	"	41.8	4.14	32.1	75-125	1.02	25	QM-07

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGI0744 - 3060A Mod

Blank (BGI0744-BLK1)

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGI0744-BS1)

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BGI0744-DUP1)

Source: 2309431-21

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGI0744-MS1)

Source: 2309431-21

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent 27.1 0.30 mg/kg dry 25.3 ND 107 75-125

Matrix Spike Dup (BGI0744-MSD1)

Source: 2309431-21

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent 27.0 0.30 mg/kg dry 25.3 ND 107 75-125 0.187 20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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

Summit Scientific

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

Batch BGI0854 - General Preparation

Blank (BGI0854-BLK1)

Prepared: 09/27/23 Analyzed: 09/30/23

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

LCS (BGI0854-BS1)

Prepared: 09/27/23 Analyzed: 09/30/23

Calcium	5.62	0.0500	mg/L wet	5.00		112	70-130			
Magnesium	5.47	0.0500	"	5.00		109	70-130			
Sodium	5.54	0.0500	"	5.00		111	70-130			

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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

Summit Scientific

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

Batch BGI0883 - General Preparation


Duplicate (BGI0883-DUP1)

Source: 2309368-01

Prepared & Analyzed: 09/28/23

% Solids	86.4		%		86.7			0.378	20	
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6855 W. 119th Ave.
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Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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

Summit Scientific

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

Batch BGI0888 - General Preparation

Blank (BGI0888-BLK1)

Prepared & Analyzed: 09/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGI0888-BS1)

Prepared & Analyzed: 09/28/23

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

Duplicate (BGI0888-DUP1)

Source: 2309433-01

Prepared & Analyzed: 09/28/23

Specific Conductance (EC) 4.92 0.0100 mmhos/cm 4.92 0.00 20

Summit Scientific

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

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

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

Summit Scientific

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

Batch BGI0887 - General Preparation

LCS (BGI0887-BS1)

Prepared & Analyzed: 09/28/23

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BGI0887-DUP1)

Source: 2309433-01

Prepared & Analyzed: 09/28/23

pH	7.80	pH Units	7.80	0.00	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - BRNAK 34-28

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/12/23 14:39

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- 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.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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