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: Thompson 28-10	*Date:* 2/27/2023	*Remediation Project #:*
Associated Wells:	*Age of Site:*	*Number of Photos Attached:* 11
Location: *(GPS coordinates of southeaster berm)* 40.280792, -104.559335		*Estimated Facility Size (acres):*

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

Good, no visible sign of erosion and corrosion

USCS Soil Type: Well Graded Sand - SW	*Estimated Depth to Groundwater:* >5.5'

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

Tanks

Tank Contents	Produced Water	Crude Oil							
Size (barrels)									
Age									
Construction Material	Steel	Steel							
Tank type (AST/PBV, etc.)	PBV	AST							
Visual Integrity of Tank	Good	Good							
Condition of tank footprint	Good	Good							
PID Readings									
Soil impacts present at valves or hatches?	None observed	None observed							
PID Readings	0.4 - 1.0	0.0							
Sample taken? Location/ Sample ID#	yes, see below	yes, see below							
Photo Number(s)	7-11	6							

Other observations regarding tanks:
Samples taken on all 4 sidewalls and base of excavation (SS01-04@2.5', FS01@5.5'). Sample taken at base of AST, AST01@0.5'.

Separators

Separator size									
Vertical or Horizontal	Horizontal								
Age									
Soil impacts observed? If yes	None observed								
PID Readings	0.2								
Sample taken? Location/ Sample ID#	yes, see below								
Photo Number(s)	1, 5								

Other observations regarding separators:
Samples taken at Flowline and Dumpline ends of seperator (SEP01-FL@3.5' &SEP01-DL@4')

Third Party Equipment

Type									
Age									

Third Party Operator									
Removal Date									
Sample taken? Location/Sample									
PID Readings									
Photo Number(s)									

Other Facility Equipment

Equipment type	Meter House	Meter House	Flare		
Equipment Condition	Good	Good	Good		
Age					
Soil impacts observed during	None observed	None Observed	None Observed		
PID Readings	0.6	0.3	0.7		
Sample taken? Location/Sample	Yes, see below	Yes, see below	Yes, see below		
Photo Number(s)	2	3	4		

Other observations regarding other facility or third party equipment:

Summary

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

Total number of samples field screened: 11	*Total number of samples collected:* 8
Highest PID Reading: 1.0	*Total number of samples submitted to lab for analysis:* 8
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:	

TANK BATTERY DECOMMISSIONING

Photographic Log

Equipment ID: SEP01-FL@3.5'	**Equipment Type:** Separator		**Equipment ID:** MH01@0.5'	**Equipment Type:**	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water	**Material:**	**Volume:**	**Contents:**
Notes/Conditions:			**Notes/Conditions:**		

TANK BATTERY DECOMMISSIONING

Photographic Log

Equipment ID: SEP01-DL@4'	**Equipment Type:** Dump Line	
Material: Steel	**Volume:**	**Contents:** Produced Water
Notes/Conditions: Sample collected by Back hoe, poor soil grade		

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

TANK BATTERY DECOMMISSIONING

Photographic Log

Equipment ID: SS01@2.5'	**Equipment Type:** Partially Buried Vault	
Material: Concrete	**Volume:**	**Contents:** Produced Water
Notes/Conditions:		

Equipment ID: SS02@2.5'	**Equipment Type:** Partially Buried Vault	
Material: Concrete	**Volume:**	**Contents:** Produced Water
Notes/Conditions:		

TANK BATTERY DECOMMISSIONING

Photographic Log

Equipment ID: SS03@2.5'	**Equipment Type:** Partially Buried Vault	
Material: Concrete	**Volume:**	**Contents:** Produced Water
Notes/Conditions:		

Equipment ID: SS04@2.5'	**Equipment Type:** Partially Buried Vault	
Material: Concrete	**Volume:**	**Contents:** Produced Water
Notes/Conditions:		

TANK BATTERY DECOMMISSIONING

Photographic Log

Equipment ID: FS01@5.5'	**Equipment Type:** Partially Buried Vault		**Equipment ID:**	**Equipment Type:**	
Material: Concrete	**Volume:**	**Contents:** Produced Water	**Material:**	**Volume:**	**Contents:**
Notes/Conditions:			**Notes/Conditions:**		

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - THOMPSON 28-10 FAC

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude[1]	Longitude	PDOP
SEP01-FL@3.5'	02/27/23	0.2	No Staining	No Odor	Lab	40.2808032	-104.5593418	1.9
SEP01-DL@4'	02/27/23	0.2	No Staining	No Odor	Lab	40.2807648	-104.5593856	0.8
MH01@0.5'	02/27/23	0.6	No Staining	No Odor	Grab	40.2807335	-104.5592862	1.1
MH02@0.5'	02/27/23	0.3	No Staining	No Odor	Grab	40.2807676	-104.5593304	0.9
Flare01@0.5'	02/27/23	0.3	No Staining	No Odor	Grab	40.2807066	-104.5592242	0.9
AST01@0.5'	02/27/23	0.0	No Staining	No Odor	Lab	40.2806712	-104.5596889	2.1
SS01@2.5'	03/02/23	0.4	No Staining	No Odor	Lab	40.2807278	-104.5596322	0.9
SS02@2.5'	03/02/23	1.0	No Staining	No Odor	Lab	40.2807086	-104.5595922	0.9
SS03@2.5'	03/02/23	0.6	No Staining	No Odor	Lab	40.2806886	-104.5596275	0.8
SS04@2.5'	03/02/23	1.0	No Staining	No Odor	Lab	40.2807078	-104.5596582	0.8
FS01@5.5'	03/02/23	0.7	No Staining	No Odor	Lab	40.2807078	-104.5596302	1.1

Notes:
PID = Photo-ionization 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. - THOMPSON 28-10 FAC

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**
SEP01-FL@3.5'	02/27/23	<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-DL@4'	02/27/23	<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
AST01@0.5'	02/27/23	<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
SS01@2.5'	03/02/23	<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'	03/02/23	<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
SS03@2.5'	03/02/23	<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
SS04@2.5'	03/02/23	<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
FS01@5.5'	03/02/23	<0.0020	<0.0050	<0.0050	<0.010	**0.067**	**0.035**	<0.0038	1.9	<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	0.00510	**0.0192**

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL[2]		**6 - 8.3**	**<6**	**<4mmhos/cm**	**2**
SEP01-FL@3.5'	02/27/23	7.91	0.107	0.245	0.110
SEP01-DL@4'	02/27/23	7.23	0.274	0.215	0.0870
AST01@0.5'	02/27/23	**4.89**	0.0363	0.0665	0.0316
SS01@2.5'	03/02/23	7.90	0.100	0.0205	0.0922
SS02@2.5'	03/02/23	7.93	0.0658	0.211	0.141
SS03@2.5'	03/02/23	7.65	0.144	0.130	0.118
SS04@2.5'	03/02/23	7.64	0.0856	0.0190	0.0942
FS01@5.5'	03/02/23	7.85	0.295	0.262	0.128

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**
FS01@5.5'	03/02/23	**1.54**	34.2	0.0983	<0.30	2.92	3.02	2.39	<0.260	0.0119	9.5

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
RP = Results Pending

DATE:	03/09/2023
DESIGNED BY:	JW
DRAWN BY:	HM

TASMAN GEOSCIENCES

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

Noble Energy, Inc. – DJ Basin
Thompson 28-10 FAC
NESW, Section 28, Township 4 North, Range 64 West
Weld County, Colorado

Tank Battery Closure & Soil Analytical Results Map
(02/27/2023 & 03/02/2023)

FIGURE
2

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 16, 2023

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

RE: Noble - Thompson 28-10
Work Order #2303027

Enclosed are the results of analyses for samples received by Summit Scientific on 02/28/23 17:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Sheely For Paul Shrewsbury
President

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@3.5'	2303027-01	Soil	02/28/23 10:30	02/28/23 17:46
SEP01-DL@4'	2303027-02	Soil	02/28/23 10:32	02/28/23 17:46
AST01@0.5'	2303027-03	Soil	02/28/23 10:34	02/28/23 17:46

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
2303027	

	Send Data To:	Send Invoice To:
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: Noble
Address: 6855 W 119TH AVE	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Thompson 28-10
City/State/Zip: Broomfield CO 80020		AFE#:
Phone:503-915-3046	Project Name: Thompson 28-10	PO/Billing Codes: UWRWE-A2396-ABN
Sampler Name: Martin Medeiros	Project Number: UWRWE-A2396-ABN	Contact: Wade Firestien

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative: HCl	HNO3	None	Other ___	Matrix: Water	Soil	Air-Canister #	Other ___	Analysis Requested: VOC-915	TPH-915	PAH-915	pH, EC, SAR	Boron-HYDS				Special Instructions
1	SEP01-FL@3.5'	2/28/23	10:30	1			X			X			X	X	X	X	X				pH, EC, SAR by Saturated paste
2	SEP01-DL@4'	2/28/23	10:32	↓			↓			↓			↓	↓	↓	↓	↓				
3	AST01@0.5'	2/28/23	10:34	↓			↓			↓			↓	↓	↓	↓	↓				
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days		Field DO	
Martin Medeiros	2/28/23 15:30		2/28/23 15:30	Same Day		Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day		Field ORP	
Tasman Lockbox	22823 1746		22823 1746	2 Days		Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days		Field Temp.	
				Standard	X	Field Turb.	

Temperature Upon Receipt: 7.3 | Corrected Temperature: ⊖ | IR gun #: 1 | HNO3 lot #:

Notes:

S2

Sample Receipt Checklist

S2 Work Order# 2303027

Client: Noble/Tasman Client Project ID: Thompson 28-10

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

[ ] [–] [ ] [ ] [ ]

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

Temp (°C) 7.3 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.**

AS
Custodian Printed Name

2/28/23 1746
Date/Time

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-FL@3.5'
2303027-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGC0011	03/01/23	03/02/23	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: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0325	*81.3 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0389	*97.3 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	*95.0 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0012	03/01/23	03/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.65	*61.2 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-FL@3.5'
2303027-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0013	03/01/23	03/02/23	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: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0250	*75.0 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0297	*89.1 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.372**	0.0100	mg/L	1	BGC0049	03/02/23	03/02/23	EPA 6020B	

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

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-FL@3.5'
2303027-01 (Soil)

Summit Scientific

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

Calcium	**41.2**	0.0541	mg/L dry	1	BGC0086	03/03/23	03/07/23	EPA 6020B
Magnesium	**6.16**	0.0541	"	"	"	"	"	"
Sodium	**3.70**	0.0541	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.142**	0.00100	units	1	BGC0219	03/08/23	03/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.4**		%	1	BGC0026	03/01/23	03/01/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.238**	0.0100	mmhos/cm	1	BGC0117	03/05/23	03/05/23	EPA 120.1	

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

Date Sampled: **02/28/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.71**		pH Units	1	BGC0116	03/05/23	03/05/23	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 - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-DL@4'
2303027-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGC0011	03/01/23	03/02/23	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: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0301	*75.2 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0370	*92.6 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	*98.5 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0012	03/01/23	03/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.78	*62.2 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-DL@4'

2303027-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0013	03/01/23	03/02/23	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: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0221	*66.4 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0261	*78.3 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.263**	0.0100	mg/L	1	BGC0049	03/02/23	03/02/23	EPA 6020B	

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

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

SEP01-DL@4'

2303027-02 (Soil)

Summit Scientific

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

Calcium	**118**	0.0539	mg/L dry	1	BGC0086	03/03/23	03/07/23	EPA 6020B
Magnesium	**18.4**	0.0539	"	"	"	"	"	"
Sodium	**16.2**	0.0539	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.366**	0.00100	units	1	BGC0219	03/08/23	03/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.8**		%	1	BGC0026	03/01/23	03/01/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.268**	0.0100	mmhos/cm	1	BGC0117	03/05/23	03/05/23	EPA 120.1	

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

Date Sampled: **02/28/23 10:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.11**		pH Units	1	BGC0116	03/05/23	03/05/23	EPA 9045D	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

AST01@0.5'
2303027-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGC0011	03/01/23	03/02/23	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: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0292	*73.0 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0385	*96.3 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	*96.3 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0012	03/01/23	03/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.48	*43.8 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

AST01@0.5'

2303027-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0013	03/01/23	03/02/23	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: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	*67.5 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0247	*74.1 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.206**	0.0100	mg/L	1	BGC0049	03/02/23	03/02/23	EPA 6020B	

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

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

AST01@0.5'

2303027-03 (Soil)

Summit Scientific

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

Calcium	**24.7**	0.0519	mg/L dry	1	BGC0086	03/03/23	03/07/23	EPA 6020B
Magnesium	**8.82**	0.0519	"	"	"	"	"	"
Sodium	**7.67**	0.0519	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.337**	0.00100	units	1	BGC0219	03/08/23	03/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**96.4**		%	1	BGC0026	03/01/23	03/01/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.242**	0.0100	mmhos/cm	1	BGC0117	03/05/23	03/05/23	EPA 120.1	

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

Date Sampled: **02/28/23 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.89**		pH Units	1	BGC0116	03/05/23	03/05/23	EPA 9045D	

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0011 - EPA 5030 Soil MS										
Blank (BGC0011-BLK1)				Prepared & Analyzed: 03/01/23						
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	*0.0317*		*"*	*0.0400*		*79.3*	*50-150*			
Surrogate: Toluene-d8	*0.0386*		*"*	*0.0400*		*96.4*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0400*		*"*	*0.0400*		*100*	*50-150*			
LCS (BGC0011-BS1)				Prepared & Analyzed: 03/01/23						
Benzene	0.0942	0.0020	mg/kg	0.100		94.2	70-130			
Toluene	0.0877	0.0050	"	0.100		87.7	70-130			
Ethylbenzene	0.107	0.0050	"	0.100		107	70-130			
m,p-Xylene	0.213	0.010	"	0.200		106	70-130			
o-Xylene	0.0970	0.0050	"	0.100		97.0	70-130			
1,2,4-Trimethylbenzene	0.0976	0.0050	"	0.100		97.6	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.0890	0.0038	"	0.100		89.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0290*		*"*	*0.0400*		*72.5*	*50-150*			
Surrogate: Toluene-d8	*0.0371*		*"*	*0.0400*		*92.7*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0379*		*"*	*0.0400*		*94.7*	*50-150*			
Matrix Spike (BGC0011-MS1)		**Source: 2303015-01**		Prepared & Analyzed: 03/01/23						
Benzene	0.0889	0.0020	mg/kg	0.100	ND	88.9	70-130			
Toluene	0.0867	0.0050	"	0.100	ND	86.7	70-130			
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130			
m,p-Xylene	0.209	0.010	"	0.200	ND	104	70-130			
o-Xylene	0.0954	0.0050	"	0.100	ND	95.4	70-130			
1,2,4-Trimethylbenzene	0.0964	0.0050	"	0.100	ND	96.4	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
Naphthalene	0.0962	0.0038	"	0.100	ND	96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0294*		*"*	*0.0400*		*73.4*	*50-150*			
Surrogate: Toluene-d8	*0.0385*		*"*	*0.0400*		*96.2*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0380*		*"*	*0.0400*		*94.9*	*50-150*			

Summit Scientific

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

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0011 - EPA 5030 Soil MS										
Matrix Spike Dup (BGC0011-MSD1)		**Source: 2303015-01**		Prepared & Analyzed: 03/01/23						
Benzene	0.0899	0.0020	mg/kg	0.100	ND	89.9	70-130	1.11	30	
Toluene	0.0912	0.0050	"	0.100	ND	91.2	70-130	5.09	30	
Ethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130	3.19	30	
m,p-Xylene	0.217	0.010	"	0.200	ND	109	70-130	3.91	30	
o-Xylene	0.0998	0.0050	"	0.100	ND	99.8	70-130	4.43	30	
1,2,4-Trimethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	3.57	30	
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	3.93	30	
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130	4.14	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0291*		*"*	*0.0400*		*72.8*	*50-150*			
Surrogate: Toluene-d8	*0.0371*		*"*	*0.0400*		*92.7*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0382*		*"*	*0.0400*		*95.6*	*50-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0012 - EPA 3550A										
Blank (BGC0012-BLK1)				Prepared & Analyzed: 03/01/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*15.8*		*"*	*12.5*		*126*	*30-150*			
LCS (BGC0012-BS1)				Prepared & Analyzed: 03/01/23						
C10-C28 (DRO)	438	50	mg/kg	500		87.5	70-130			
Surrogate: o-Terphenyl	*13.1*		*"*	*12.5*		*105*	*30-150*			
Matrix Spike (BGC0012-MS1)		**Source: 2303015-01**		Prepared & Analyzed: 03/01/23						
C10-C28 (DRO)	472	50	mg/kg	500	11.2	92.2	70-130			
Surrogate: o-Terphenyl	*13.0*		*"*	*12.5*		*104*	*30-150*			
Matrix Spike Dup (BGC0012-MSD1)		**Source: 2303015-01**		Prepared & Analyzed: 03/01/23						
C10-C28 (DRO)	439	50	mg/kg	500	11.2	85.6	70-130	7.24	20	
Surrogate: o-Terphenyl	*13.1*		*"*	*12.5*		*105*	*30-150*			

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0013 - EPA 5030 Soil MS										
Blank (BGC0013-BLK1)				Prepared: 03/01/23 Analyzed: 03/02/23						
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	*0.0276*		*"*	*0.0333*		*82.9*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0373*		*"*	*0.0333*		*112*	*40-150*			
LCS (BGC0013-BS1)				Prepared: 03/01/23 Analyzed: 03/02/23						
Acenaphthene	0.0368	0.00500	mg/kg	0.0333		110	31-137			
Anthracene	0.0363	0.00500	"	0.0333		109	30-120			
Benzo (a) anthracene	0.0358	0.00500	"	0.0333		107	30-120			
Benzo (a) pyrene	0.0363	0.00500	"	0.0333		109	30-120			
Benzo (b) fluoranthene	0.0359	0.00500	"	0.0333		108	30-120			
Benzo (k) fluoranthene	0.0356	0.00500	"	0.0333		107	30-120			
Chrysene	0.0348	0.00500	"	0.0333		104	30-120			
Dibenz (a,h) anthracene	0.0324	0.00500	"	0.0333		97.2	30-120			
Fluoranthene	0.0328	0.00500	"	0.0333		98.5	30-120			
Fluorene	0.0361	0.00500	"	0.0333		108	30-120			
Indeno (1,2,3-cd) pyrene	0.0341	0.00500	"	0.0333		102	30-120			
Pyrene	0.0302	0.00500	"	0.0333		90.6	35-142			
1-Methylnaphthalene	0.0355	0.00500	"	0.0333		106	35-142			
2-Methylnaphthalene	0.0349	0.00500	"	0.0333		105	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0371*		*"*	*0.0333*		*111*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0373*		*"*	*0.0333*		*112*	*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 - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0013 - EPA 5030 Soil MS										
Matrix Spike (BGC0013-MS1)		**Source: 2303015-01**		Prepared: 03/01/23 Analyzed: 03/02/23						
Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.8	31-137			
Anthracene	0.0248	0.00500	"	0.0333	ND	74.3	30-120			
Benzo (a) anthracene	0.0235	0.00500	"	0.0333	ND	70.4	30-120			
Benzo (a) pyrene	0.0230	0.00500	"	0.0333	ND	69.0	30-120			
Benzo (b) fluoranthene	0.0240	0.00500	"	0.0333	ND	72.0	30-120			
Benzo (k) fluoranthene	0.0244	0.00500	"	0.0333	ND	73.3	30-120			
Chrysene	0.0235	0.00500	"	0.0333	ND	70.5	30-120			
Dibenz (a,h) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120			
Fluoranthene	0.0246	0.00500	"	0.0333	ND	73.9	30-120			
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0223	0.00500	"	0.0333	ND	67.0	30-120			
Pyrene	0.0237	0.00500	"	0.0333	ND	71.1	35-142			
1-Methylnaphthalene	0.0351	0.00500	"	0.0333	ND	105	15-130			
2-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.4	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0335*		*"*	*0.0333*		*100*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0257*		*"*	*0.0333*		*77.1*	*40-150*			
Matrix Spike Dup (BGC0013-MSD1)		**Source: 2303015-01**		Prepared: 03/01/23 Analyzed: 03/02/23						
Acenaphthene	0.0226	0.00500	mg/kg	0.0333	ND	67.8	31-137	5.68	30	
Anthracene	0.0220	0.00500	"	0.0333	ND	66.1	30-120	11.7	30	
Benzo (a) anthracene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	11.2	30	
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	11.6	30	
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	13.4	30	
Benzo (k) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.4	30-120	14.4	30	
Chrysene	0.0210	0.00500	"	0.0333	ND	63.1	30-120	11.1	30	
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	12.8	30	
Fluoranthene	0.0222	0.00500	"	0.0333	ND	66.5	30-120	10.5	30	
Fluorene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	7.29	30	
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	7.20	30	
Pyrene	0.0211	0.00500	"	0.0333	ND	63.2	35-142	11.7	30	
1-Methylnaphthalene	0.0343	0.00500	"	0.0333	ND	103	15-130	2.17	50	
2-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.5	15-130	14.8	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0294*		*"*	*0.0333*		*88.1*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0227*		*"*	*0.0333*		*68.1*	*40-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0049 - EPA 3050B										
Blank (BGC0049-BLK1)				Prepared & Analyzed: 03/02/23						
Boron	ND	0.0100	mg/L							
LCS (BGC0049-BS1)				Prepared & Analyzed: 03/02/23						
Boron	4.86	0.0100	mg/L	5.00		97.2	80-120			
Duplicate (BGC0049-DUP1)		**Source: 2302337-03**		Prepared & Analyzed: 03/02/23						
Boron	0.196	0.0100	mg/L		0.240			20.6	20	QR-04
Matrix Spike (BGC0049-MS1)		**Source: 2302337-03**		Prepared & Analyzed: 03/02/23						
Boron	4.78	0.0100	mg/L	5.00	0.240	90.7	75-125			
Matrix Spike Dup (BGC0049-MSD1)		**Source: 2302337-03**		Prepared & Analyzed: 03/02/23						
Boron	5.37	0.0100	mg/L	5.00	0.240	103	75-125	11.7	25	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0086 - General Preparation										
Blank (BGC0086-BLK1)				Prepared: 03/03/23 Analyzed: 03/07/23						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BGC0086-BS1)				Prepared: 03/03/23 Analyzed: 03/07/23						
Calcium	4.45	0.0500	mg/L wet	5.00		89.0	70-130			
Magnesium	4.82	0.0500	"	5.00		96.5	70-130			
Sodium	4.94	0.0500	"	5.00		98.8	70-130			

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 BGC0026 - General Preparation										
Duplicate (BGC0026-DUP1)		**Source: 2301216-30**		Prepared & Analyzed: 03/01/23						
% Solids	89.2		%		89.0			0.218	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:41

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 BGC0117 - General Preparation										
Blank (BGC0117-BLK1)				Prepared & Analyzed: 03/05/23						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BGC0117-BS1)				Prepared & Analyzed: 03/05/23						
Specific Conductance (EC)	0.150	0.0100	mmhos/cm	0.150		99.8	95-105			
Duplicate (BGC0117-DUP1)		**Source: 2302339-01**		Prepared & Analyzed: 03/05/23						
Specific Conductance (EC)	4.47	0.0100	mmhos/cm		4.49			0.446	20	

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 BGC0116 - General Preparation										
LCS (BGC0116-BS1)				Prepared & Analyzed: 03/05/23						
pH	9.15		pH Units	9.18		99.7	95-105			
Duplicate (BGC0116-DUP1)		**Source: 2302339-01**		Prepared & Analyzed: 03/05/23						
pH	7.50		pH Units		7.46			0.535	20	

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

March 16, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfeld, CO 80020

RE: Noble - Thompson 28-10

Work Order # 2303075

Enclosed are the results of analyses for samples received by Summit Scientific on 03/02/23 17:34. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Sheely For Paul Shrewsbury

President

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2303075-01	Soil	03/02/23 10:50	03/02/23 17:34
SS02@2.5'	2303075-02	Soil	03/02/23 10:52	03/02/23 17:34
SS03@2.5'	2303075-03	Soil	03/02/23 10:53	03/02/23 17:34
SS04@2.5'	2303075-04	Soil	03/02/23 10:55	03/02/23 17:34
FS01@5.5'	2303075-05	Soil	03/02/23 11:00	03/02/23 17:34

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
2303075	

	Send Data To:	Send Invoice To:
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: Noble
Address: 6855 W 119TH AVE	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Thompson 28-10
City/State/Zip: Broomfield CO 80020		AFE#:
Phone:503-915-3046	Project Name: Thompson 28-10	PO/Billing Codes: UWRWE-A2396-ABN
Sampler Name: Martin Medeiros	Project Number: UWRWE-A2396-ABN	Contact: Wade Firestien

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative: HCl	HNO3	None	Other ___	Matrix: Water	Soil	Air-Canister #	Other ___	Analysis Requested: VOC-915	TPH-915	PAH-915	pH,EC,SAR	Boron-HWS	HOLD			Special Instructions
1	SS01@2.5'	3/2/23	10:50	2			X			X			X	X	X	X	X	X			-pH,EC,SAR by saturated paste
2	SS02@2.5'	↓	10:52	↓			↓			↓			↓	↓	↓	↓	↓				
3	SS03@2.5'	↓	10:53	↓			↓			↓			↓	↓	↓	↓	↓	X			
4	SS04@2.5'	↓	10:55	↓			↓			↓			↓	↓	↓	↓	↓	X			
5	FS01@5.5'	↓	11:00	↓			↓			↓			↓	↓	↓	↓	↓				
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days		Field DO		Notes:
Martin Medeiros	3/2/23 15:30		3/2/23 15:30	Same Day		Field EC		
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day		Field ORP		
Tasman Lockbox	3223 1734		3223 1734	2 Days		Field pH		
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days		Field Temp.		
				Standard	X	Field Turb.		

Temperature Upon Receipt: 8.5 | Corrected Temperature: | IR gun #: 1 | HNO3 lot #:

S2

S2 Work Order# 2303075

Sample Receipt Checklist

Client: Noble Tasman **Client Project ID:** Thompson 28-10

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

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

Temp (°C) 8.5 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.**

AS
Custodian Printed Name

3/2/23
Date/Time

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS01@2.5'
2303075-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGC0284	03/09/23	03/10/23	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: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*64.9 %*		*50-150*		"	"	"	"	
Surrogate: Toluene-d8		*84.8 %*		*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.0 %*		*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0285	03/09/23	03/10/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*78.8 %*		*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS01@2.5'

2303075-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGC0300	03/10/23	03/13/23	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: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		*48.4 %*		*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10		*69.6 %*		*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0922**	0.0100		mg/L	1	BGC0327	03/12/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/02/23 10:50**

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

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS01@2.5'
2303075-01 (Soil)

Summit Scientific

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

Calcium	**200**	0.0524	mg/L dry	1	BGC0273	03/09/23	03/14/23	EPA 6020B
Magnesium	**28.9**	0.0524	"	"	"	"	"	"
Sodium	**1.17**	0.0524	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.0205**	0.00100		units	1	BGC0379	03/14/23	03/14/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**95.5**			%	1	BGC0308	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.100**	0.0100		mmhos/cm	1	BGC0303	03/10/23	03/10/23	EPA 120.1	

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

Date Sampled: **03/02/23 10:50**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.90**			pH Units	1	BGC0304	03/10/23	03/10/23	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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS02@2.5'
2303075-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGC0088	03/03/23	03/04/23	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: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*91.2 %*		*50-150*		"	"	"	"	
Surrogate: Toluene-d8		*96.2 %*		*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.6 %*		*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0090	03/03/23	03/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*30.4 %*		*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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS02@2.5'

2303075-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGC0082	03/03/23	03/04/23	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: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		*77.4 %*		*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10		*75.4 %*		*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.141**	0.0100		mg/L	1	BGC0145	03/06/23	03/08/23	EPA 6020B	

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

Date Sampled: **03/02/23 10:52**

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

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS02@2.5'

2303075-02 (Soil)

Summit Scientific

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

Calcium	**136**	0.0537	mg/L dry	1	BGC0143	03/06/23	03/08/23	EPA 6020B
Magnesium	**24.4**	0.0537	"	"	"	"	"	"
Sodium	**3.17**	0.0537	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.0658**	0.00100		units	1	BGC0221	03/08/23	03/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**93.1**			%	1	BGC0196	03/07/23	03/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.211**	0.0100		mmhos/cm	1	BGC0195	03/07/23	03/07/23	EPA 120.1	

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

Date Sampled: **03/02/23 10:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.93**			pH Units	1	BGC0194	03/07/23	03/07/23	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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS03@2.5'
2303075-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGC0284	03/09/23	03/10/23	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: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*65.8 %*		*50-150*		"	"	"	"	
Surrogate: Toluene-d8		*84.0 %*		*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.1 %*		*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0285	03/09/23	03/10/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*82.6 %*		*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS03@2.5'

2303075-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGC0300	03/10/23	03/13/23	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: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		*54.2 %*		*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10		*77.3 %*		*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.118**	0.0100		mg/L	1	BGC0327	03/12/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/02/23 10:53**

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

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS03@2.5'
2303075-03 (Soil)

Summit Scientific

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

Calcium	**31.3**	0.0525	mg/L dry	1	BGC0273	03/09/23	03/14/23	EPA 6020B
Magnesium	**7.30**	0.0525	"	"	"	"	"	"
Sodium	**3.11**	0.0525	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.130**	0.00100		units	1	BGC0379	03/14/23	03/14/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**95.3**			%	1	BGC0308	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.144**	0.0100		mmhos/cm	1	BGC0303	03/10/23	03/10/23	EPA 120.1	

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

Date Sampled: **03/02/23 10:53**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.65**			pH Units	1	BGC0304	03/10/23	03/10/23	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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS04@2.5'
2303075-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGC0284	03/09/23	03/10/23	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: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*65.8 %*		*50-150*		"	"	"	"	
Surrogate: Toluene-d8		*84.4 %*		*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*84.4 %*		*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0285	03/09/23	03/10/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*75.6 %*		*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS04@2.5'
2303075-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGC0300	03/10/23	03/13/23	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: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		*61.8 %*		*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10		*86.7 %*		*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0942**	0.0100		mg/L	1	BGC0327	03/12/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/02/23 10:55**

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

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

SS04@2.5'
2303075-04 (Soil)

Summit Scientific

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

Calcium	**122**	0.0530	mg/L dry	1	BGC0273	03/09/23	03/14/23	EPA 6020B
Magnesium	**25.0**	0.0530	"	"	"	"	"	"
Sodium	**0.881**	0.0530	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.0190**	0.00100		units	1	BGC0379	03/14/23	03/14/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**94.3**			%	1	BGC0308	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.0856**	0.0100		mmhos/cm	1	BGC0303	03/10/23	03/10/23	EPA 120.1	

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

Date Sampled: **03/02/23 10:55**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.64**			pH Units	1	BGC0304	03/10/23	03/10/23	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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

FS01@5.5'
2303075-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGC0088	03/03/23	03/04/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**0.067**	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**0.035**	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**1.9**	0.50		"	"	"	"	"	"	

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*92.2 %*		*50-150*		"	"	"	"	
Surrogate: Toluene-d8		*97.0 %*		*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0090	03/03/23	03/04/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*53.9 %*		*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

FS01@5.5'
2303075-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGC0082	03/03/23	03/04/23	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	**0.00510**	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	**0.0192**	0.00500		"	"	"	"	"	"	

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		*99.6 %*		*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10		*81.3 %*		*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.128**	0.0100		mg/L	1	BGC0145	03/06/23	03/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **03/02/23 11:00**

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

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

FS01@5.5'
2303075-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	**1.54**	0.213	0.179	mg/kg dry	1	BGC0317	03/11/23	03/14/23	EPA 6020B
Barium	**34.2**	0.426	0.336	"	"	"	"	"	"
Cadmium	**0.0983**	0.213	0.00766	"	"	"	"	"	"
Copper	**2.92**	0.426	0.0222	"	"	"	"	"	"
Lead	**3.02**	0.213	0.0585	"	"	"	"	"	"
Nickel	**2.39**	0.426	0.0649	"	"	"	"	"	"
Selenium	ND	0.260	0.175	"	"	"	"	"	"
Silver	**0.0119**	0.0213	0.00284	"	"	"	"	"	"
Zinc	**9.50**	0.426	0.283	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGC0328	03/12/23	03/13/23	EPA 7196A	

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

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**46.0**	0.0532		mg/L dry	1	BGC0143	03/06/23	03/08/23	EPA 6020B	
Magnesium	**6.71**	0.0532		"	"	"	"	"	"	
Sodium	**8.08**	0.0532		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.295**	0.00100		units	1	BGC0221	03/08/23	03/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

FS01@5.5'

2303075-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**94.0**			%	1	BGC0196	03/07/23	03/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.262**	0.0100		mmhos/cm	1	BGC0195	03/07/23	03/07/23	EPA 120.1	

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

Date Sampled: **03/02/23 11:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**7.85**			pH Units	1	BGC0194	03/07/23	03/07/23	EPA 9045D	

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0088 - EPA 5030 Soil MS										
Blank (BGC0088-BLK1)				Prepared & Analyzed: 03/03/23						
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	*0.0389*		*"*	*0.0400*		*97.3*	*50-150*			
Surrogate: Toluene-d8	*0.0383*		*"*	*0.0400*		*95.7*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0401*		*"*	*0.0400*		*100*	*50-150*			
LCS (BGC0088-BS1)				Prepared & Analyzed: 03/03/23						
Benzene	0.0903	0.0020	mg/kg	0.125		72.2	70-130			
Toluene	0.117	0.0050	"	0.125		93.6	70-130			
Ethylbenzene	0.146	0.0050	"	0.125		116	70-130			
m,p-Xylene	0.292	0.010	"	0.250		117	70-130			
o-Xylene	0.135	0.0050	"	0.125		108	70-130			
1,2,4-Trimethylbenzene	0.145	0.0050	"	0.125		116	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125		121	70-130			
Naphthalene	0.0902	0.0038	"	0.125		72.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0378*		*"*	*0.0400*		*94.5*	*50-150*			
Surrogate: Toluene-d8	*0.0385*		*"*	*0.0400*		*96.3*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0376*		*"*	*0.0400*		*94.0*	*50-150*			
Matrix Spike (BGC0088-MS1)		**Source: 2303072-01**		Prepared & Analyzed: 03/03/23						
Benzene	0.0882	0.0020	mg/kg	0.125	ND	70.6	70-130			
Toluene	0.118	0.0050	"	0.125	ND	94.1	70-130			
Ethylbenzene	0.149	0.0050	"	0.125	ND	119	70-130			
m,p-Xylene	0.297	0.010	"	0.250	ND	119	70-130			
o-Xylene	0.138	0.0050	"	0.125	ND	111	70-130			
1,2,4-Trimethylbenzene	0.149	0.0050	"	0.125	ND	119	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125	ND	123	70-130			
Naphthalene	0.0976	0.0038	"	0.125	ND	78.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0396*		*"*	*0.0400*		*99.1*	*50-150*			
Surrogate: Toluene-d8	*0.0388*		*"*	*0.0400*		*97.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0396*		*"*	*0.0400*		*99.0*	*50-150*			

Summit Scientific

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

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 BGC0088 - EPA 5030 Soil MS										
Matrix Spike Dup (BGC0088-MSD1)		**Source: 2303072-01**		Prepared & Analyzed: 03/03/23						
Benzene	0.117	0.0020	mg/kg	0.125	ND	93.3	70-130	27.8	30	
Toluene	0.117	0.0050	"	0.125	ND	93.5	70-130	0.691	30	
Ethylbenzene	0.143	0.0050	"	0.125	ND	115	70-130	3.66	30	
m,p-Xylene	0.288	0.010	"	0.250	ND	115	70-130	3.05	30	
o-Xylene	0.137	0.0050	"	0.125	ND	110	70-130	0.807	30	
1,2,4-Trimethylbenzene	0.146	0.0050	"	0.125	ND	117	70-130	1.95	30	
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	121	70-130	1.70	30	
Naphthalene	0.0988	0.0038	"	0.125	ND	79.1	70-130	1.28	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0408*		*"*	*0.0400*		*102*	*50-150*			
Surrogate: Toluene-d8	*0.0391*		*"*	*0.0400*		*97.6*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0400*		*"*	*0.0400*		*100*	*50-150*			
Batch BGC0284 - EPA 5030 Soil MS										
Blank (BGC0284-BLK1)				Prepared: 03/09/23 Analyzed: 03/10/23						
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	*0.0466*		*"*	*0.0400*		*116*	*50-150*			
Surrogate: Toluene-d8	*0.0391*		*"*	*0.0400*		*97.6*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0419*		*"*	*0.0400*		*105*	*50-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0284 - EPA 5030 Soil MS										
Blank (BGC0284-BLK2)				Prepared: 03/09/23 Analyzed: 03/10/23						
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	*0.0269*		*"*	*0.0400*		*67.3*	*50-150*			
Surrogate: Toluene-d8	*0.0337*		*"*	*0.0400*		*84.3*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0338*		*"*	*0.0400*		*84.6*	*50-150*			
LCS (BGC0284-BS1)				Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.124	0.0020	mg/kg	0.100		124	70-130			
Toluene	0.127	0.0050	"	0.100		127	70-130			
Ethylbenzene	0.127	0.0050	"	0.100		127	70-130			
m,p-Xylene	0.252	0.010	"	0.200		126	70-130			
o-Xylene	0.117	0.0050	"	0.100		117	70-130			
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.100		121	70-130			
1,3,5-Trimethylbenzene	0.122	0.0050	"	0.100		122	70-130			
Naphthalene	0.0832	0.0038	"	0.100		83.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0463*		*"*	*0.0400*		*116*	*50-150*			
Surrogate: Toluene-d8	*0.0395*		*"*	*0.0400*		*98.7*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0410*		*"*	*0.0400*		*102*	*50-150*			
LCS (BGC0284-BS2)				Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.102	0.0020	mg/kg	0.100		102	70-130			
Toluene	0.100	0.0050	"	0.100		100	70-130			
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130			
m,p-Xylene	0.224	0.010	"	0.200		112	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130			
Naphthalene	0.0898	0.0038	"	0.100		89.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0389*		*"*	*0.0400*		*97.3*	*50-150*			
Surrogate: Toluene-d8	*0.0335*		*"*	*0.0400*		*83.8*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0309*		*"*	*0.0400*		*77.2*	*50-150*			

Summit Scientific

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

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0284 - EPA 5030 Soil MS										
Matrix Spike (BGC0284-MS1)		**Source: 2303224-01**		Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.124	0.0020	mg/kg	0.100	ND	124	70-130			
Toluene	0.128	0.0050	"	0.100	ND	128	70-130			
Ethylbenzene	0.129	0.0050	"	0.100	ND	129	70-130			
m,p-Xylene	0.255	0.010	"	0.200	ND	127	70-130			
o-Xylene	0.119	0.0050	"	0.100	ND	119	70-130			
1,2,4-Trimethylbenzene	0.123	0.0050	"	0.100	ND	123	70-130			
1,3,5-Trimethylbenzene	0.124	0.0050	"	0.100	ND	124	70-130			
Naphthalene	0.0892	0.0038	"	0.100	ND	89.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0449*		*"*	*0.0400*		*112*	*50-150*			
Surrogate: Toluene-d8	*0.0392*		*"*	*0.0400*		*98.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0417*		*"*	*0.0400*		*104*	*50-150*			
Matrix Spike (BGC0284-MS2)		**Source: 2303224-02**		Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.0992	0.0050	"	0.100	ND	99.2	70-130			
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
m,p-Xylene	0.217	0.010	"	0.200	ND	108	70-130			
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130			
1,2,4-Trimethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130			
Naphthalene	0.107	0.0038	"	0.100	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0366*		*"*	*0.0400*		*91.4*	*50-150*			
Surrogate: Toluene-d8	*0.0339*		*"*	*0.0400*		*84.8*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0311*		*"*	*0.0400*		*77.8*	*50-150*			
Matrix Spike Dup (BGC0284-MSD1)		**Source: 2303224-01**		Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.124	0.0020	mg/kg	0.100	ND	124	70-130	0.0483	30	
Toluene	0.128	0.0050	"	0.100	ND	128	70-130	0.140	30	
Ethylbenzene	0.127	0.0050	"	0.100	ND	127	70-130	1.29	30	
m,p-Xylene	0.254	0.010	"	0.200	ND	127	70-130	0.189	30	
o-Xylene	0.118	0.0050	"	0.100	ND	118	70-130	0.634	30	
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130	0.884	30	
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.100	ND	123	70-130	0.219	30	
Naphthalene	0.0940	0.0038	"	0.100	ND	94.0	70-130	5.27	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0476*		*"*	*0.0400*		*119*	*50-150*			
Surrogate: Toluene-d8	*0.0395*		*"*	*0.0400*		*98.8*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0415*		*"*	*0.0400*		*104*	*50-150*			

Summit Scientific

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

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0284 - EPA 5030 Soil MS										
Matrix Spike Dup (BGC0284-MSD2)		**Source: 2303224-02**		Prepared: 03/09/23 Analyzed: 03/10/23						
Benzene	0.100	0.0020	mg/kg	0.100	ND	100	70-130	0.747	30	
Toluene	0.0995	0.0050	"	0.100	ND	99.5	70-130	0.272	30	
Ethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	1.04	30	
m,p-Xylene	0.223	0.010	"	0.200	ND	112	70-130	2.84	30	
o-Xylene	0.108	0.0050	"	0.100	ND	108	70-130	2.70	30	
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100	ND	109	70-130	3.09	30	
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	3.68	30	
Naphthalene	0.110	0.0038	"	0.100	ND	110	70-130	2.54	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0373*		*"*	*0.0400*		*93.2*	*50-150*			
Surrogate: Toluene-d8	*0.0339*		*"*	*0.0400*		*84.8*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0314*		*"*	*0.0400*		*78.5*	*50-150*			

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 BGC0090 - EPA 3550A										
Blank (BGC0090-BLK1)				Prepared & Analyzed: 03/03/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*11.4*		*"*	*12.5*		*90.8*	*30-150*			
LCS (BGC0090-BS1)				Prepared & Analyzed: 03/03/23						
C10-C28 (DRO)	479	50	mg/kg	500		95.7	70-130			
Surrogate: o-Terphenyl	*11.6*		*"*	*12.5*		*92.8*	*30-150*			
Matrix Spike (BGC0090-MS1)		**Source: 2303072-01**		Prepared & Analyzed: 03/03/23						
C10-C28 (DRO)	441	50	mg/kg	500	14.1	85.3	70-130			
Surrogate: o-Terphenyl	*9.79*		*"*	*12.5*		*78.3*	*30-150*			
Matrix Spike Dup (BGC0090-MSD1)		**Source: 2303072-01**		Prepared & Analyzed: 03/03/23						
C10-C28 (DRO)	505	50	mg/kg	500	14.1	98.3	70-130	13.7	20	
Surrogate: o-Terphenyl	*9.08*		*"*	*12.5*		*72.6*	*30-150*			
Batch BGC0285 - EPA 3550A										
Blank (BGC0285-BLK1)				Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*7.80*		*"*	*12.5*		*62.4*	*30-150*			
Blank (BGC0285-BLK2)				Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*10.2*		*"*	*12.5*		*81.5*	*30-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0285 - EPA 3550A										
LCS (BGC0285-BS1)				Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	435	50	mg/kg	500		87.0	70-130			
Surrogate: o-Terphenyl	*11.2*		*"*	*12.5*		*89.5*	*30-150*			
LCS (BGC0285-BS2)				Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	464	50	mg/kg	500		92.8	70-130			
Surrogate: o-Terphenyl	*11.3*		*"*	*12.5*		*90.1*	*30-150*			
Matrix Spike (BGC0285-MS1)		**Source: 2303223-01**		Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	495	50	mg/kg	500	27.8	93.5	70-130			
Surrogate: o-Terphenyl	*10.6*		*"*	*12.5*		*84.4*	*30-150*			
Matrix Spike (BGC0285-MS2)		**Source: 2303223-02**		Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	492	50	mg/kg	500	23.0	93.7	70-130			
Surrogate: o-Terphenyl	*10.7*		*"*	*12.5*		*85.3*	*30-150*			
Matrix Spike Dup (BGC0285-MSD1)		**Source: 2303223-01**		Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	455	50	mg/kg	500	27.8	85.5	70-130	8.39	20	
Surrogate: o-Terphenyl	*10.3*		*"*	*12.5*		*82.2*	*30-150*			
Matrix Spike Dup (BGC0285-MSD2)		**Source: 2303223-02**		Prepared: 03/09/23 Analyzed: 03/10/23						
C10-C28 (DRO)	454	50	mg/kg	500	23.0	86.3	70-130	7.90	20	
Surrogate: o-Terphenyl	*10.5*		*"*	*12.5*		*83.8*	*30-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0082 - EPA 5030 Soil MS										
Blank (BGC0082-BLK1)				Prepared & Analyzed: 03/03/23						
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	*0.0280*		*"*	*0.0333*		*83.9*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0338*		*"*	*0.0333*		*101*	*40-150*			
LCS (BGC0082-BS1)				Prepared & Analyzed: 03/03/23						
Acenaphthene	0.0370	0.00500	mg/kg	0.0333		111	31-137			
Anthracene	0.0391	0.00500	"	0.0333		117	30-120			
Benzo (a) anthracene	0.0291	0.00500	"	0.0333		87.2	30-120			
Benzo (a) pyrene	0.0270	0.00500	"	0.0333		81.0	30-120			
Benzo (b) fluoranthene	0.0353	0.00500	"	0.0333		106	30-120			
Benzo (k) fluoranthene	0.0380	0.00500	"	0.0333		114	30-120			
Chrysene	0.0350	0.00500	"	0.0333		105	30-120			
Dibenz (a,h) anthracene	0.0324	0.00500	"	0.0333		97.3	30-120			
Fluoranthene	0.0368	0.00500	"	0.0333		111	30-120			
Fluorene	0.0400	0.00500	"	0.0333		120	30-120			
Indeno (1,2,3-cd) pyrene	0.0260	0.00500	"	0.0333		78.1	30-120			
Pyrene	0.0347	0.00500	"	0.0333		104	35-142			
1-Methylnaphthalene	0.0368	0.00500	"	0.0333		111	35-142			
2-Methylnaphthalene	0.0351	0.00500	"	0.0333		105	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0361*		*"*	*0.0333*		*108*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0349*		*"*	*0.0333*		*105*	*40-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0082 - EPA 5030 Soil MS										
Matrix Spike (BGC0082-MS1)		**Source: 2303072-01**		Prepared & Analyzed: 03/03/23						
Acenaphthene	0.0196	0.00500	mg/kg	0.0333	ND	58.9	31-137			
Anthracene	0.0198	0.00500	"	0.0333	ND	59.3	30-120			
Benzo (a) anthracene	0.0184	0.00500	"	0.0333	ND	55.3	30-120			
Benzo (a) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120			
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	0.00321	46.8	30-120			
Benzo (k) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.3	30-120			
Chrysene	0.0176	0.00500	"	0.0333	ND	52.8	30-120			
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.7	30-120			
Fluoranthene	0.0228	0.00500	"	0.0333	ND	68.5	30-120			
Fluorene	0.0231	0.00500	"	0.0333	ND	69.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120			
Pyrene	0.0204	0.00500	"	0.0333	0.00211	54.7	35-142			
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.7	15-130			
2-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.6	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0204*		*"*	*0.0333*		*61.1*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0201*		*"*	*0.0333*		*60.4*	*40-150*			
Matrix Spike Dup (BGC0082-MSD1)		**Source: 2303072-01**		Prepared: 03/03/23 Analyzed: 03/04/23						
Acenaphthene	0.0223	0.00500	mg/kg	0.0333	ND	66.9	31-137	12.8	30	
Anthracene	0.0266	0.00500	"	0.0333	ND	79.7	30-120	29.4	30	
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.4	30-120	28.0	30	
Benzo (a) pyrene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	19.2	30	
Benzo (b) fluoranthene	0.0260	0.00500	"	0.0333	0.00321	68.2	30-120	31.8	30	QR-02
Benzo (k) fluoranthene	0.0283	0.00500	"	0.0333	ND	84.9	30-120	26.2	30	
Chrysene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	24.0	30	
Dibenz (a,h) anthracene	0.0195	0.00500	"	0.0333	ND	58.5	30-120	22.3	30	
Fluoranthene	0.0283	0.00500	"	0.0333	ND	85.0	30-120	21.5	30	
Fluorene	0.0311	0.00500	"	0.0333	ND	93.2	30-120	29.4	30	
Indeno (1,2,3-cd) pyrene	0.0182	0.00500	"	0.0333	ND	54.6	30-120	5.11	30	
Pyrene	0.0269	0.00500	"	0.0333	0.00211	74.3	35-142	27.6	30	
1-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.2	15-130	28.9	50	
2-Methylnaphthalene	0.0274	0.00500	"	0.0333	ND	82.3	15-130	27.3	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0280*		*"*	*0.0333*		*84.0*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0268*		*"*	*0.0333*		*80.3*	*40-150*			

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 BGC0300 - EPA 5030 Soil MS										
Blank (BGC0300-BLK1)				Prepared: 03/10/23 Analyzed: 03/13/23						
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	*0.0254*		*"*	*0.0333*		*76.3*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0443*		*"*	*0.0333*		*133*	*40-150*			
LCS (BGC0300-BS1)				Prepared: 03/10/23 Analyzed: 03/13/23						
Acenaphthene	0.0357	0.00500	mg/kg	0.0333		107	31-137			
Anthracene	0.0344	0.00500	"	0.0333		103	30-120			
Benzo (a) anthracene	0.0325	0.00500	"	0.0333		97.6	30-120			
Benzo (a) pyrene	0.0300	0.00500	"	0.0333		89.9	30-120			
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333		101	30-120			
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333		109	30-120			
Chrysene	0.0314	0.00500	"	0.0333		94.3	30-120			
Dibenz (a,h) anthracene	0.0300	0.00500	"	0.0333		90.1	30-120			
Fluoranthene	0.0345	0.00500	"	0.0333		103	30-120			
Fluorene	0.0343	0.00500	"	0.0333		103	30-120			
Indeno (1,2,3-cd) pyrene	0.0306	0.00500	"	0.0333		91.8	30-120			
Pyrene	0.0363	0.00500	"	0.0333		109	35-142			
1-Methylnaphthalene	0.0344	0.00500	"	0.0333		103	35-142			
2-Methylnaphthalene	0.0225	0.00500	"	0.0333		67.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0393*		*"*	*0.0333*		*118*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0343*		*"*	*0.0333*		*103*	*40-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0300 - EPA 5030 Soil MS										
Matrix Spike (BGC0300-MS1)		**Source: 2303046-01**		Prepared: 03/10/23 Analyzed: 03/13/23						
Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137			
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120			
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120			
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.5	30-120			
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120			
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120			
Chrysene	0.0181	0.00500	"	0.0333	ND	54.3	30-120			
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120			
Fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120			
Fluorene	0.0208	0.00500	"	0.0333	ND	62.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120			
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142			
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130			
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0248*		*"*	*0.0333*		*74.4*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0249*		*"*	*0.0333*		*74.8*	*40-150*			
Matrix Spike Dup (BGC0300-MSD1)		**Source: 2303046-01**		Prepared: 03/10/23 Analyzed: 03/13/23						
Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137	0.0236	30	
Anthracene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	0.548	30	
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	0.0445	30	
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	13.9	30	
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	0.723	30	
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	0.399	30	
Chrysene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	1.07	30	
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	5.43	30	
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	2.57	30	
Fluorene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	0.351	30	
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	2.56	30	
Pyrene	0.0223	0.00500	"	0.0333	ND	67.0	35-142	3.05	30	
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130	13.3	50	
2-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	1.36	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0267*		*"*	*0.0333*		*80.1*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0245*		*"*	*0.0333*		*73.6*	*40-150*			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0145 - EPA 3050B										
Blank (BGC0145-BLK1)				Prepared: 03/06/23 Analyzed: 03/08/23						
Boron	ND	0.0100	mg/L							
LCS (BGC0145-BS1)				Prepared: 03/06/23 Analyzed: 03/08/23						
Boron	10.1	0.0100	mg/L	10.0		101	80-120			
Duplicate (BGC0145-DUP1)		**Source: 2303075-02**		Prepared: 03/06/23 Analyzed: 03/08/23						
Boron	0.128	0.0100	mg/L		0.141			9.93	20	
Matrix Spike (BGC0145-MS1)		**Source: 2303075-02**		Prepared: 03/06/23 Analyzed: 03/08/23						
Boron	10.1	0.0100	mg/L	10.0	0.141	99.6	75-125			
Matrix Spike Dup (BGC0145-MSD1)		**Source: 2303075-02**		Prepared: 03/06/23 Analyzed: 03/08/23						
Boron	10.1	0.0100	mg/L	10.0	0.141	99.3	75-125	0.286	25	
Batch BGC0327 - EPA 3050B										
Blank (BGC0327-BLK1)				Prepared: 03/12/23 Analyzed: 03/16/23						
Boron	ND	0.0100	mg/L							
LCS (BGC0327-BS1)				Prepared: 03/12/23 Analyzed: 03/16/23						
Boron	4.71	0.0100	mg/L	5.00		94.3	80-120			
Duplicate (BGC0327-DUP1)		**Source: 2303075-01**		Prepared: 03/12/23 Analyzed: 03/16/23						
Boron	0.0965	0.0100	mg/L		0.0922			4.56	20	
Matrix Spike (BGC0327-MS1)		**Source: 2303075-01**		Prepared: 03/12/23 Analyzed: 03/16/23						
Boron	4.83	0.0100	mg/L	5.00	0.0922	94.8	75-125			

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0327 - EPA 3050B										
Matrix Spike Dup (BGC0327-MSD1)		**Source: 2303075-01**		Prepared: 03/12/23 Analyzed: 03/16/23						
Boron	5.04	0.0100	mg/L	5.00	0.0922	99.0	75-125	4.21	25	

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGC0317 - EPA 3050B										
Blank (BGC0317-BLK1)				Prepared: 03/11/23 Analyzed: 03/14/23						
Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
LCS (BGC0317-BS1)				Prepared: 03/11/23 Analyzed: 03/14/23						
Arsenic	38.6	0.200	mg/kg wet	40.0		96.6	80-120			
Barium	39.0	0.400	"	40.0		97.6	80-120			
Cadmium	1.97	0.200	"	2.00		98.4	80-120			
Copper	40.7	0.400	"	40.0		102	80-120			
Lead	19.7	0.200	"	20.0		98.3	80-120			
Nickel	39.4	0.400	"	40.0		98.5	80-120			
Selenium	4.14	0.260	"	4.00		103	80-120			
Silver	1.93	0.0200	"	2.00		96.5	80-120			
Zinc	39.4	0.400	"	40.0		98.5	80-120			
Duplicate (BGC0317-DUP1)		**Source: 2303075-05**		Prepared: 03/11/23 Analyzed: 03/14/23						
Arsenic	1.20	0.213	mg/kg dry		1.54			24.6	20	QR-04
Barium	28.1	0.426	"		34.2			19.6	20	
Cadmium	0.0860	0.213	"		0.0983			13.4	20	
Copper	2.41	0.426	"		2.92			19.1	20	
Lead	2.96	0.213	"		3.02			2.05	20	
Nickel	2.08	0.426	"		2.39			14.0	20	
Selenium	ND	0.260	"		ND				20	
Silver	0.0102	0.0213	"		0.0119			15.4	20	
Zinc	8.61	0.426	"		9.50			9.78	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGC0317 - EPA 3050B										
Matrix Spike (BGC0317-MS1)		**Source: 2303075-05**		Prepared: 03/11/23 Analyzed: 03/14/23						
Arsenic	40.4	0.213	mg/kg dry	42.6	1.54	91.4	75-125			
Barium	69.4	0.426	"	42.6	34.2	82.8	75-125			
Cadmium	2.12	0.213	"	2.13	0.0983	95.1	75-125			
Copper	37.7	0.426	"	42.6	2.92	81.8	75-125			
Lead	23.3	0.213	"	21.3	3.02	95.4	75-125			
Nickel	35.9	0.426	"	42.6	2.39	78.7	75-125			
Selenium	4.37	0.260	"	4.26	ND	103	75-125			
Silver	1.56	0.0213	"	2.13	0.0119	72.9	75-125			QM-07
Zinc	43.6	0.426	"	42.6	9.50	80.1	75-125			
Matrix Spike Dup (BGC0317-MSD1)		**Source: 2303075-05**		Prepared: 03/11/23 Analyzed: 03/14/23						
Arsenic	40.2	0.213	mg/kg dry	42.6	1.54	90.8	75-125	0.695	25	
Barium	68.9	0.426	"	42.6	34.2	81.6	75-125	0.785	25	
Cadmium	2.12	0.213	"	2.13	0.0983	95.0	75-125	0.120	25	
Copper	37.9	0.426	"	42.6	2.92	82.2	75-125	0.398	25	
Lead	23.3	0.213	"	21.3	3.02	95.4	75-125	0.0128	25	
Nickel	36.1	0.426	"	42.6	2.39	79.3	75-125	0.665	25	
Selenium	4.13	0.260	"	4.26	ND	97.0	75-125	5.70	25	
Silver	1.57	0.0213	"	2.13	0.0119	73.1	75-125	0.272	25	QM-07
Zinc	43.7	0.426	"	42.6	9.50	80.4	75-125	0.344	25	

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGC0328 - 3060A_Mod										
Blank (BGC0328-BLK1)				Prepared: 03/12/23 Analyzed: 03/13/23						
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BGC0328-BS1)				Prepared: 03/12/23 Analyzed: 03/13/23						
Chromium, Hexavalent	23.8	0.30	mg/kg wet	25.0		95.2	80-120			
Duplicate (BGC0328-DUP1)		**Source: 2303075-05**		Prepared: 03/12/23 Analyzed: 03/13/23						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BGC0328-MS1)		**Source: 2303075-05**		Prepared: 03/12/23 Analyzed: 03/13/23						
Chromium, Hexavalent	23.7	0.30	mg/kg dry	26.6	ND	89.0	75-125			
Matrix Spike Dup (BGC0328-MSD1)		**Source: 2303075-05**		Prepared: 03/12/23 Analyzed: 03/13/23						
Chromium, Hexavalent	22.0	0.30	mg/kg dry	26.6	ND	82.6	75-125	7.46	20	

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 BGC0143 - General Preparation										
Blank (BGC0143-BLK1)				Prepared: 03/06/23 Analyzed: 03/08/23						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BGC0143-BS1)				Prepared: 03/06/23 Analyzed: 03/08/23						
Calcium	4.46	0.0500	mg/L wet	5.00		89.3	70-130			
Magnesium	4.35	0.0500	"	5.00		87.0	70-130			
Sodium	4.51	0.0500	"	5.00		90.2	70-130			
Batch BGC0273 - General Preparation										
Blank (BGC0273-BLK1)				Prepared: 03/09/23 Analyzed: 03/14/23						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BGC0273-BS1)				Prepared: 03/09/23 Analyzed: 03/14/23						
Calcium	5.40	0.0500	mg/L wet	5.00		108	70-130			
Magnesium	5.10	0.0500	"	5.00		102	70-130			
Sodium	4.97	0.0500	"	5.00		99.5	70-130			

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 BGC0196 - General Preparation										
Duplicate (BGC0196-DUP1)		**Source: 2302120-32**		Prepared: 03/07/23 Analyzed: 03/08/23						
% Solids	88.6		%		88.7			0.128	20	
Batch BGC0308 - General Preparation										
Duplicate (BGC0308-DUP1)		**Source: 2303075-01**		Prepared: 03/10/23 Analyzed: 03/13/23						
% Solids	95.3		%		95.5			0.210	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0195 - General Preparation										
Blank (BGC0195-BLK1)				Prepared & Analyzed: 03/07/23						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BGC0195-BS1)				Prepared & Analyzed: 03/07/23						
Specific Conductance (EC)	0.151	0.0100	mmhos/cm	0.150		101	95-105			
Duplicate (BGC0195-DUP1)		**Source: 2303045-01**		Prepared & Analyzed: 03/07/23						
Specific Conductance (EC)	0.962	0.0100	mmhos/cm		0.973			1.14	20	
Batch BGC0303 - General Preparation										
Blank (BGC0303-BLK1)				Prepared & Analyzed: 03/10/23						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BGC0303-BS1)				Prepared & Analyzed: 03/10/23						
Specific Conductance (EC)	0.150	0.0100	mmhos/cm	0.150		100	95-105			
Duplicate (BGC0303-DUP1)		**Source: 2303075-01**		Prepared & Analyzed: 03/10/23						
Specific Conductance (EC)	0.101	0.0100	mmhos/cm		0.100			0.199	20	

Tasman Geosciences 6855 W. 119th Ave. Broomfeld CO, 80020	Project: Noble - Thompson 28-10 Project Number: UWRWE-A2396-ABN Project Manager: Jacob Whritenour	**Reported:** 03/16/23 12:52

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 BGC0194 - General Preparation										
LCS (BGC0194-BS1)				Prepared & Analyzed: 03/07/23						
pH	9.17		pH Units	9.18		99.9	95-105			
Duplicate (BGC0194-DUP1)		**Source: 2303045-01**		Prepared & Analyzed: 03/07/23						
pH	7.82		pH Units		7.84			0.255	20	
Batch BGC0304 - General Preparation										
LCS (BGC0304-BS1)				Prepared & Analyzed: 03/10/23						
pH	9.21		pH Units	9.18		100	95-105			
Duplicate (BGC0304-DUP1)		**Source: 2303075-01**		Prepared & Analyzed: 03/10/23						
pH	7.80		pH Units		7.90			1.27	20	

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference