

# **THIRD QUARTER 2023 SITE MONITORING DATA**

## **THOMPSON 28-10**

ECMC SPILL TRACKING # 483966  
ECMC REMEDIATION # 25228

Prepared for:



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



6855 W. 119<sup>th</sup> Ave  
Broomfield, CO 80020

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**  
**NOBLE ENERGY, INC. - THOMPSON 28-10**

Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) <sup>(1)</sup>	Depth to LNAPL (ft.) <sup>(1)</sup>	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	06/19/23	4741.45	19.21	9.30	ND	ND	4732.28
BH01	09/01/23	4741.45	19.18	8.83	ND	ND	4732.75
BH02	06/19/23	4742.57	18.92	9.97	ND	ND	4732.86
BH02	09/01/23	4742.57	18.90	9.76	ND	ND	4733.07
BH03	06/19/23	4740.56	18.83	8.76	ND	ND	4731.97
BH03	09/01/23	4740.56	18.51	8.08	ND	ND	4732.65
BH04	06/19/23	4740.18	18.66	8.52	ND	ND	4731.82
BH04	09/01/23	4740.18	18.61	7.95	ND	ND	4732.39
BH05	06/19/23	4741.49	19.22	9.02	ND	ND	4732.63
BH05	09/01/23	4741.49	19.20	8.40	ND	ND	4733.25
BH06	06/19/23	4740.28	18.33	8.36	ND	ND	4732.15
BH06	09/01/23	4740.28	18.25	7.78	ND	ND	4732.73

**Notes:**

<sup>(1)</sup> Depth to water measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

\* Groundwater elevation was corrected for product thickness (when present) using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)

LNAPL relative density was estimated to be 0.75

**Definitions:**

ft. = Feet  
 AMSL = Above mean sea level  
 BTOC = Below top of casing  
 BGS = Below ground surface  
 LNAPL = Light non-aqueous phase liquid  
 ND = No LNAPL detected

**TABLE 2**  
**GROUNDWATER ANALYTICAL DATA**  
**NOBLE ENERGY, INC. - THOMPSON 28-10**

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	1-M (µg/L)	2-M (µg/L)	TDS (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
COGCC Standard		5	560	700	1,400	140	67	67	1.1 <sup>(2)</sup>	3.6 <sup>(2)</sup>	<1.25 x Background	250 or <1.25 x Background	250 or <1.25 x Background
BH01	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	993	246	266
BH01	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,260	257	208
<sup>(3)</sup> BH02	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	1,020	289	270
<sup>(3)</sup> BH02	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,630	345	328
BH03	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	855	204	241
BH03	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,120	260	156
BH04	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	804	210	236
BH04	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,180	256	168
BH05	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	991	291	270
BH05	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,210	232	214
BH06	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	<0.500	1,020	280	299
BH06	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,300	243	263

**Notes:**

<sup>(1)</sup> Groundwater standards referenced from 2 CCR 404-1, Table 915-1 (January 15, 2021).

<sup>(2)</sup> Groundwater standards referenced from USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=1E-06, HQ=0.1) November 2022.

<sup>(3)</sup> Monitoring well used for inorganic background levels.

**Definitions:**

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

ECMC = Energy and Carbon Management Commission

mg/L = Milligrams per liter

NS = No standard

µg/L = Micrograms per liter

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

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

Benz(a) = Benzanthracene

1-M = 1-Methylnaphthalene

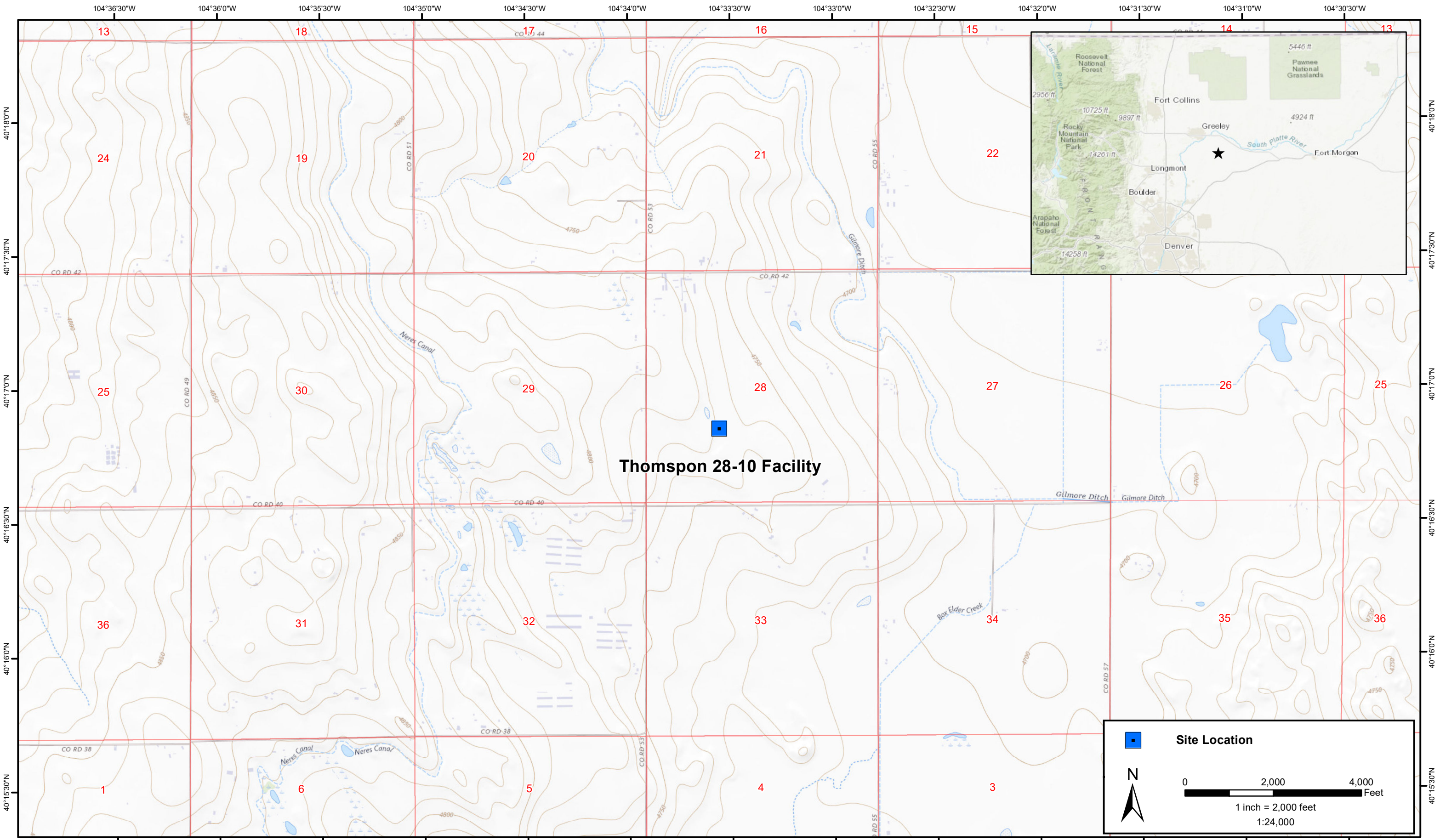
2-M = 2-Methylnaphthalene

TDS = Total Dissolved Solids

NA = Not Analyzed

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

The site-specific background assessment is on-going for groundwater inorganic constituents.



DATE:	March 2023
DESIGNED BY:	S. Vogt
DRAWN BY:	L. Reed



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


Noble Energy, Inc - DJ Basin  
Thomson 28-10 Facility  
NESW Sec 28 T4N-R64W  
Weld County, Colorado

Site Location Map

Figure  
1



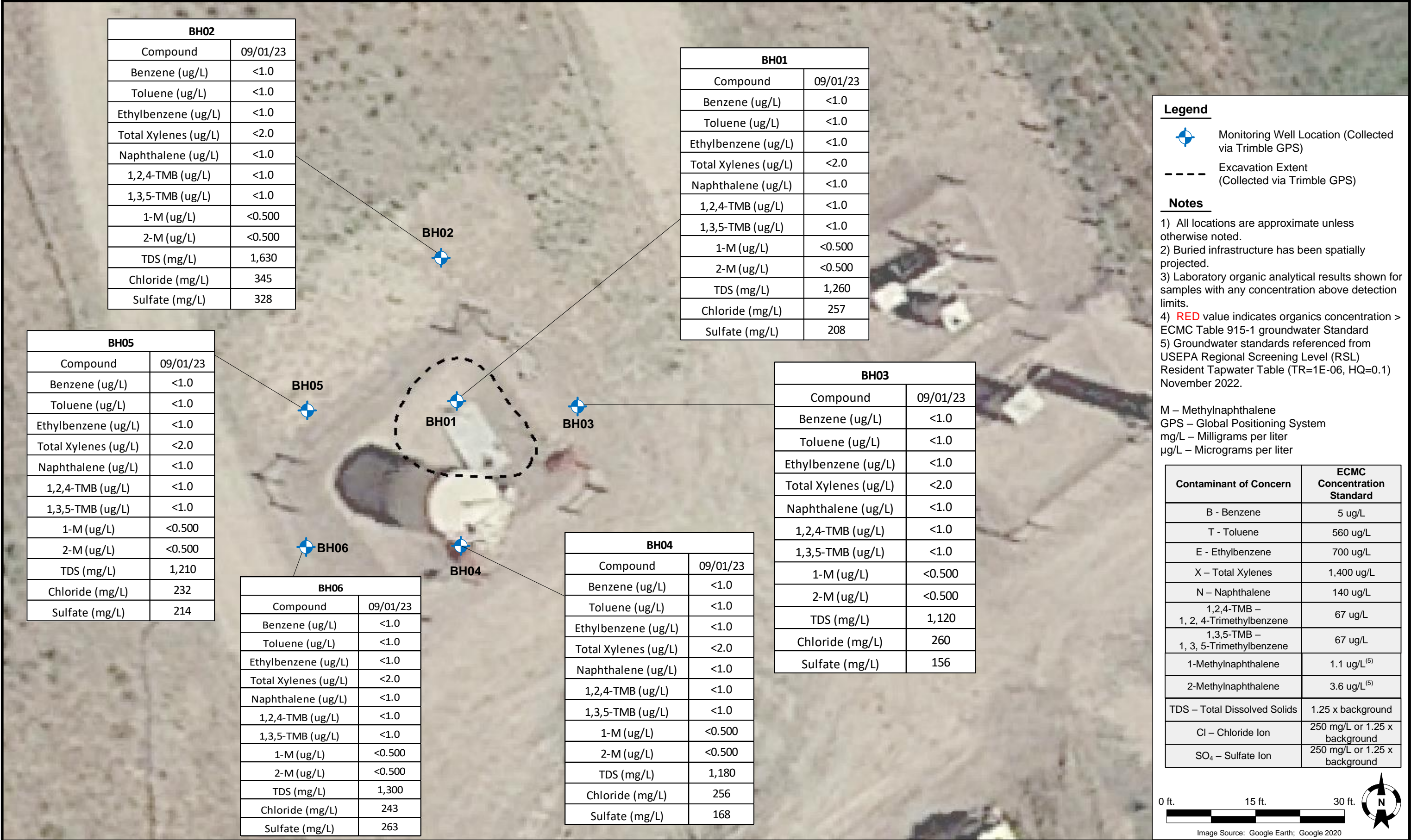


DATE: 07/26/2023	<div data-bbox="562 1820 997 1927"> <b>TASMAN</b></div> <div data-bbox="1028 1848 1320 1927">Tasman Geosciences, Inc. 6855 W 119<sup>th</sup> Avenue Broomfield, CO 80020</div>	<div data-bbox="1470 1800 2209 1943"><b>Noble Energy, Inc. – DJ Basin</b> <b>Thompson 28-10 FAC</b> NESW, Section 28, Township 4 North, Range 64 West Weld County, Colorado</div>	Site Overview Map	FIGURE 2
DESIGNED BY: JW				
DRAWN BY: HM				









# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 14, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Thompson 28-10

Work Order #2309020

Enclosed are the results of analyses for samples received by Summit Scientific on 09/01/23 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood 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:**  
09/14/23 11:07

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2309020-01	Water	09/01/23 09:57	09/01/23 17:41
BH02	2309020-02	Water	09/01/23 09:35	09/01/23 17:41
BH03	2309020-03	Water	09/01/23 09:36	09/01/23 17:41
BH04	2309020-04	Water	09/01/23 09:46	09/01/23 17:41
BH05	2309020-05	Water	09/01/23 09:46	09/01/23 17:41
BH06	2309020-06	Water	09/01/23 09:57	09/01/23 17:41

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.*

<b>Client:</b> Noble/Tasman		<b>Send Data To:</b>		<b>Send Invoice To:</b>	
<b>Address:</b> 6855 W. 119th Ave.		<b>Project Manager:</b> Jake Whritenour		<b>Company:</b> Noble	
<b>City/State/Zip:</b> Broomfield/CO/ 80020		<b>E-Mail:</b> Jwhritenour@tasman-geo.com		<b>Project Name/Location:</b> Thompson 28-10	
<b>Phone:</b> 602-881-5716		<b>Project Name:</b> Thompson 28-10		<b>AFE#:</b>	
<b>Sampler Name:</b> McKenzie Reynolds		<b>Project Number:</b> N/A		<b>PO/Billing Codes:</b>	
				<b>Contact:</b>	

				Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX	Napthalene	1,2,4 TMB	1,3,5 TMB	TDS	Chlorine	Sulfate	Mn <sup>2+</sup> , Mn <sup>3+</sup>	
1	BH01	9/11/23	09:57	6	3		3		X				X	X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	BH02	↓	09:35	↓	↓		↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	
3	BH03	↓	09:36	↓	↓		↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	
4	BH04	↓	09:46	↓	↓		↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	
5	BH05	↓	09:46	↓	↓		↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	
6	BH06	↓	09:57	↓	↓		↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: Aiden Franklin Aiden Quinn	Date/Time: 9/11/23 14:14	Received by: Tasman Lock Box	Date/Time: 9/11/23 14:14	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
Tasman Lock Box	9/12/23 1741	[Signature]	9/12/23 1741	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 13.1		Corrected Temperature: 0		IR gun #: 1		HNO3 lot #:



S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2309020Client: Noble Frisman Client Project ID: Thompson 28-10Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:                     

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 13.1Thermometer # 1

	Yes	No	N/A	Comments (If any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Second amber not completely labeled
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
AS  
Custodian Printed Name

9/1/23  
Date/Time

4444



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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH01**  
**2309020-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	12.0	89.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.0	105 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/05/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	1.60	80.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.54	77.2 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

Summit Scientific

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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH01**  
**2309020-01 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>257</b>	12.0		mg/L	200	BGI0268	09/11/23	09/12/23	EPA 300.0	
<b>Sulfate</b>	<b>208</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1260</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

Summit Scientific

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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH02**  
**2309020-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	12.6	94.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.9	104 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/05/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.33	66.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.09	54.6 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

Summit Scientific

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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH02**  
**2309020-02 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>345</b>	12.0		mg/L	200	BGI0268	09/11/23	09/13/23	EPA 300.0	
<b>Sulfate</b>	<b>328</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1630</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

Summit Scientific

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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH03**  
**2309020-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	12.5	93.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.9	104 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/05/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.57	78.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.48	73.8 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

Summit Scientific

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

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH03**  
**2309020-03 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>260</b>	12.0		mg/L	200	BGI0268	09/11/23	09/13/23	EPA 300.0	
<b>Sulfate</b>	<b>156</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1120</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

Summit Scientific

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Tasman Geosciences  
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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH04**  
**2309020-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	12.2	91.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.5	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.6	102 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/05/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.46	72.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.48	74.2 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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6855 W. 119th Ave.  
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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH04**  
**2309020-04 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>256</b>	12.0		mg/L	200	BGI0268	09/11/23	09/13/23	EPA 300.0	
<b>Sulfate</b>	<b>168</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1180</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH05**  
**2309020-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	12.3	92.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/05/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.44	72.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.50	75.1 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH05**  
**2309020-05 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>232</b>	12.0		mg/L	200	BGI0268	09/11/23	09/13/23	EPA 300.0	
<b>Sulfate</b>	<b>214</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1210</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH06**  
**2309020-06 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGI0093	09/05/23	09/06/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	12.5	93.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.8	103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.0	105 %	21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGI0075	09/05/23	09/06/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.43	71.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.33	66.6 %	40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**BH06**  
**2309020-06 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>243</b>	12.0		mg/L	200	BGI0268	09/11/23	09/13/23	EPA 300.0	
<b>Sulfate</b>	<b>263</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **09/01/23 09:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1300</b>	10.0		mg/L	1	BGI0083	09/05/23	09/05/23	SM2540C	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BGI0093 - EPA 5030 Water MS

##### Blank (BGI0093-BLK1)

Prepared & Analyzed: 09/05/23

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.3		95.4	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	21-167			

##### LCS (BGI0093-BS1)

Prepared & Analyzed: 09/05/23

Benzene	58.9	1.0	ug/l	50.0		118	51-132			
Toluene	63.3	1.0	"	50.0		127	51-138			
Ethylbenzene	57.3	1.0	"	50.0		115	58-146			
m,p-Xylene	111	2.0	"	100		111	57-144			
o-Xylene	57.0	1.0	"	50.0		114	53-146			
Naphthalene	47.4	1.0	"	50.0		94.7	70-130			
1,2,4-Trimethylbenzene	52.7	1.0	"	50.0		105	70-130			
1,3,5-Trimethylbenzene	53.2	1.0	"	50.0		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.3		94.7	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	21-167			

##### Matrix Spike (BGI0093-MS1)

Source: 2308694-01

Prepared & Analyzed: 09/05/23

Benzene	43.2	1.0	ug/l	50.0	ND	86.4	34-141			
Toluene	47.9	1.0	"	50.0	ND	95.8	27-151			
Ethylbenzene	41.5	1.0	"	50.0	ND	83.0	29-160			
m,p-Xylene	121	2.0	"	100	ND	121	20-166			
o-Xylene	42.1	1.0	"	50.0	ND	84.1	33-159			
Naphthalene	45.8	1.0	"	50.0	ND	91.7	70-130			
1,2,4-Trimethylbenzene	46.6	1.0	"	50.0	ND	93.1	70-130			
1,3,5-Trimethylbenzene	47.6	1.0	"	50.0	ND	95.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.0	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	21-167			

Summit Scientific

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

Project: Noble - Thompson 28-10

Project Number: UWRWE-A2396-ABN

Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BGI0093 - EPA 5030 Water MS

##### Matrix Spike Dup (BGI0093-MSD1)

Source: 2308694-01

Prepared & Analyzed: 09/05/23

Benzene	44.2	1.0	ug/l	50.0	ND	88.4	34-141	2.29	30	
Toluene	47.3	1.0	"	50.0	ND	94.6	27-151	1.24	30	
Ethylbenzene	43.9	1.0	"	50.0	ND	87.8	29-160	5.60	30	
m,p-Xylene	125	2.0	"	100	ND	125	20-166	2.95	30	
o-Xylene	43.7	1.0	"	50.0	ND	87.4	33-159	3.78	30	
Naphthalene	44.2	1.0	"	50.0	ND	88.3	70-130	3.73	30	
1,2,4-Trimethylbenzene	40.5	1.0	"	50.0	ND	80.9	70-130	14.0	30	
1,3,5-Trimethylbenzene	41.0	1.0	"	50.0	ND	82.0	70-130	14.8	30	
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		106	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		106	21-167			

Summit Scientific

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6855 W. 119th Ave.  
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Project: Noble - Thompson 28-10  
Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**PAH by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch BGI0075 - EPA 5030 Water MS**

**Blank (BGI0075-BLK1)**

Prepared & Analyzed: 09/05/23

1-Methylnaphthalene	ND	0.500	ug/l							
2-Methylnaphthalene	ND	0.500	"							
Surrogate: 2-Methylnaphthalene-d10	2.00		"	2.00		100	40-150			
Surrogate: Fluoranthene-d10	2.27		"	2.00		113	40-150			

**LCS (BGI0075-BS1)**

Prepared & Analyzed: 09/05/23

1-Methylnaphthalene	1.80	0.500	ug/l	2.00		90.2	30-120			
2-Methylnaphthalene	1.84	0.500	"	2.00		92.1	0-200			
Surrogate: 2-Methylnaphthalene-d10	1.88		"	2.00		94.2	40-150			
Surrogate: Fluoranthene-d10	1.75		"	2.00		87.3	40-150			

**LCS Dup (BGI0075-BSD1)**

Prepared & Analyzed: 09/05/23

1-Methylnaphthalene	1.94	0.500	ug/l	2.00		97.0	30-120	7.27	30	
2-Methylnaphthalene	1.97	0.500	"	2.00		98.6	0-200	6.79	200	
Surrogate: 2-Methylnaphthalene-d10	1.98		"	2.00		99.2	40-150			
Surrogate: Fluoranthene-d10	1.77		"	2.00		88.4	40-150			

Summit Scientific

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

Project: Noble - Thompson 28-10

Project Number: UWRWE-A2396-ABN

Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

### Anions by EPA Method 300.0 - Quality Control

#### Summit Scientific

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

#### Batch BGI0268 - General Preparation

##### Blank (BGI0268-BLK1)

Prepared: 09/11/23 Analyzed: 09/12/23

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

##### LCS (BGI0268-BS1)

Prepared: 09/11/23 Analyzed: 09/12/23

Chloride	2.88	0.0600	mg/L	3.00	96.0	90-110
Sulfate	13.9	0.300	"	15.0	92.5	90-110

##### Duplicate (BGI0268-DUP1)

Source: 2309015-01

Prepared: 09/11/23 Analyzed: 09/12/23

Chloride	51.2	12.0	mg/L	57.0	10.7	20
Sulfate	529	60.0	"	567	6.90	20

##### Matrix Spike (BGI0268-MS1)

Source: 2309015-01

Prepared: 09/11/23 Analyzed: 09/12/23

Chloride	618	12.0	mg/L	600	57.0	93.6	80-120
Sulfate	3440	60.0	"	3000	567	95.7	80-120

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Thompson 28-10

Project Number: UWRWE-A2396-ABN

Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

**Total Dissolved Solids by SM2540C - Quality Control**

**Summit Scientific**

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

**Batch BGI0083 - General Preparation**

**Blank (BGI0083-BLK1)**

Prepared & Analyzed: 09/05/23

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (BGI0083-DUP1)**

**Source: 2308694-01**

Prepared & Analyzed: 09/05/23

Total Dissolved Solids 1650 10.0 mg/L 1540 6.59 20

Summit Scientific

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

Project: Noble - Thompson 28-10

Project Number: UWRWE-A2396-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
09/14/23 11:07

### Notes and Definitions

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