

FOURTH QUARTER 2023 SITE MONITORING DATA

THOMPSON D20-31D

ECMC SPILL TRACKING # 483919
ECMC REMEDIATION # 26337

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W. 119th Ave
Broomfield, CO 80020

TABLE 1
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - THOMPSON D20-31D FACILITY



Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽¹⁾	Depth to LNAPL (ft.) ⁽¹⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	06/19/23	4737.51	14.40	4.92	ND	ND	4733.01
BH01	09/01/23	4737.51	14.42	4.43	ND	ND	4733.50
BH01	12/06/23	4737.51	14.34	6.39	ND	ND	4731.54
BH02	06/19/23	4738.31	14.57	5.62	ND	ND	4732.98
BH02	09/01/23	4738.31	14.57	5.39	ND	ND	4733.21
BH02	12/06/23	4738.31	14.58	7.07	ND	ND	4731.53
BH03	06/19/23	4737.75	14.88	5.01	ND	ND	4733.07
BH03	09/01/23	4737.75	14.87	4.66	ND	ND	4733.42
BH03	12/06/23	4737.75	14.85	6.50	ND	ND	4731.58
BH04	06/19/23	4738.35	14.77	5.74	ND	ND	4733.00
BH04	09/01/23	4738.35	14.70	5.38	ND	ND	4733.36
BH04	12/06/23	4738.35	14.71	7.17	ND	ND	4731.57
BH05	06/19/23	4737.21	14.85	5.89	ND	ND	4732.76
BH05	09/01/23	4737.21	14.91	5.76	ND	ND	4732.89
BH05	12/06/23	4737.21	14.91	7.19	ND	ND	4731.46
BH06	06/19/23	4737.67	14.73	5.30	ND	ND	4732.83
BH06	09/01/23	4737.67	14.76	4.93	ND	ND	4733.20
BH06	12/06/23	4737.67	14.53	6.63	ND	ND	4731.50
BH07	06/19/23	4737.73	14.74	5.40	ND	ND	4732.70
BH07	09/01/23	4737.73	14.69	5.32	ND	ND	4732.78
BH07	12/06/23	4737.73	14.66	8.69	ND	ND	4729.41
BH08	06/19/23	4738.15	14.41	5.63	ND	ND	4732.77
BH08	09/01/23	4738.15	14.68	5.43	ND	ND	4732.97
BH08	12/06/23	4738.15	14.40	6.93	ND	ND	4731.47
BH09	06/19/23	4738.15	15.02	5.66	ND	ND	4732.88
BH09	09/01/23	4738.15	15.07	5.41	ND	ND	4733.13
BH09	12/06/23	4738.15	14.98	7.07	ND	ND	4731.47
BH10	06/19/23	4742.54	18.61	5.66	ND	ND	4732.76
BH10	09/01/23	4742.54	18.65	5.52	ND	ND	4732.90
BH10	12/06/23	4742.54	18.81	3.22	ND	ND	4735.20
BH11	06/19/23	4738.51	15.01	5.87	ND	ND	4732.81
BH11	09/01/23	4738.51	14.99	5.71	ND	ND	4732.97
BH11	12/06/23	4738.51	15.00	7.22	ND	ND	4731.46
BH12	06/19/23	4737.90	14.97	5.30	ND	ND	4732.89
BH12	09/01/23	4737.90	14.96	5.16	ND	ND	4733.03
BH12	12/06/23	4737.90	14.81	6.68	ND	ND	4731.51
BH13	06/19/23	4742.50	18.56	5.82	ND	ND	4732.95
BH13	09/01/23	4742.50	18.56	5.71	ND	ND	4733.06
BH13	12/06/23	4742.50	18.01	3.75	ND	ND	4735.02

TABLE 1
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - THOMPSON D20-31D FACILITY



Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽¹⁾	Depth to LNAPL (ft.) ⁽¹⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
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Notes:

⁽¹⁾ 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 D20-31D FACILITY



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)
ECMC Standard ⁽¹⁾		5	560	700	1,400	140	67	67	1.1 ⁽²⁾	3.6 ⁽²⁾	<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	<0.500	<0.500	683	21.4	171
BH01	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,560	156	511
BH01	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,600	241	880
BH02	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,530	333	1,420
BH02	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,300	260	681
BH02	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,470	237	719
BH03	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,280	326	1,220
BH03	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,030	244	684
BH03	12/06/26	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,580	252	849
BH04	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,350	295	1,270
BH04	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,600	284	935
BH04	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,820	287	987
BH05	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,110	89.0	377
BH05	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,780	178	582
BH05	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,350	145	555
BH06	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,400	319	1,400
BH06	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,350	264	870
BH06	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,670	248	927
BH07	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,080	53.2	239
BH07	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,730	149	542
BH07	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,460	198	719
BH08	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,430	330	1,300
BH08	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,170	211	735
BH08	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,750	270	992
BH09	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,340	314	1,500
BH09	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,000	232	710
BH09	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,120	414	1,210
BH10	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,750	388	1,610
BH10	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,840	203	618
BH10	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,290	465	1,250
⁽³⁾ BH11	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,270	347	1,290
⁽³⁾ BH11	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,160	232	777
⁽³⁾ BH11	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,410	476	1,440
BH12	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,260	297	1,220
BH12	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,930	241	682
BH12	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,390	479	1,460
BH13	06/19/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,710	382	1,560
BH13	09/01/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,940	237	714
BH13	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	2,520	538	1,460

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - THOMPSON D20-31D FACILITY

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)
ECMC Standard ⁽¹⁾		5	560	700	1,400	140	67	67	1.1 ⁽²⁾	3.6 ⁽²⁾	<1.25 x Background	250 or <1.25 x Background	250 or <1.25 x Background

Notes:

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

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

⁽³⁾ Monitoring well used for inorganic background levels.

Definitions:

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

ECMC = Colorado Energy and Carbon Management Commission

mg/L = Milligrams per liter

µg/L = Micrograms per liter

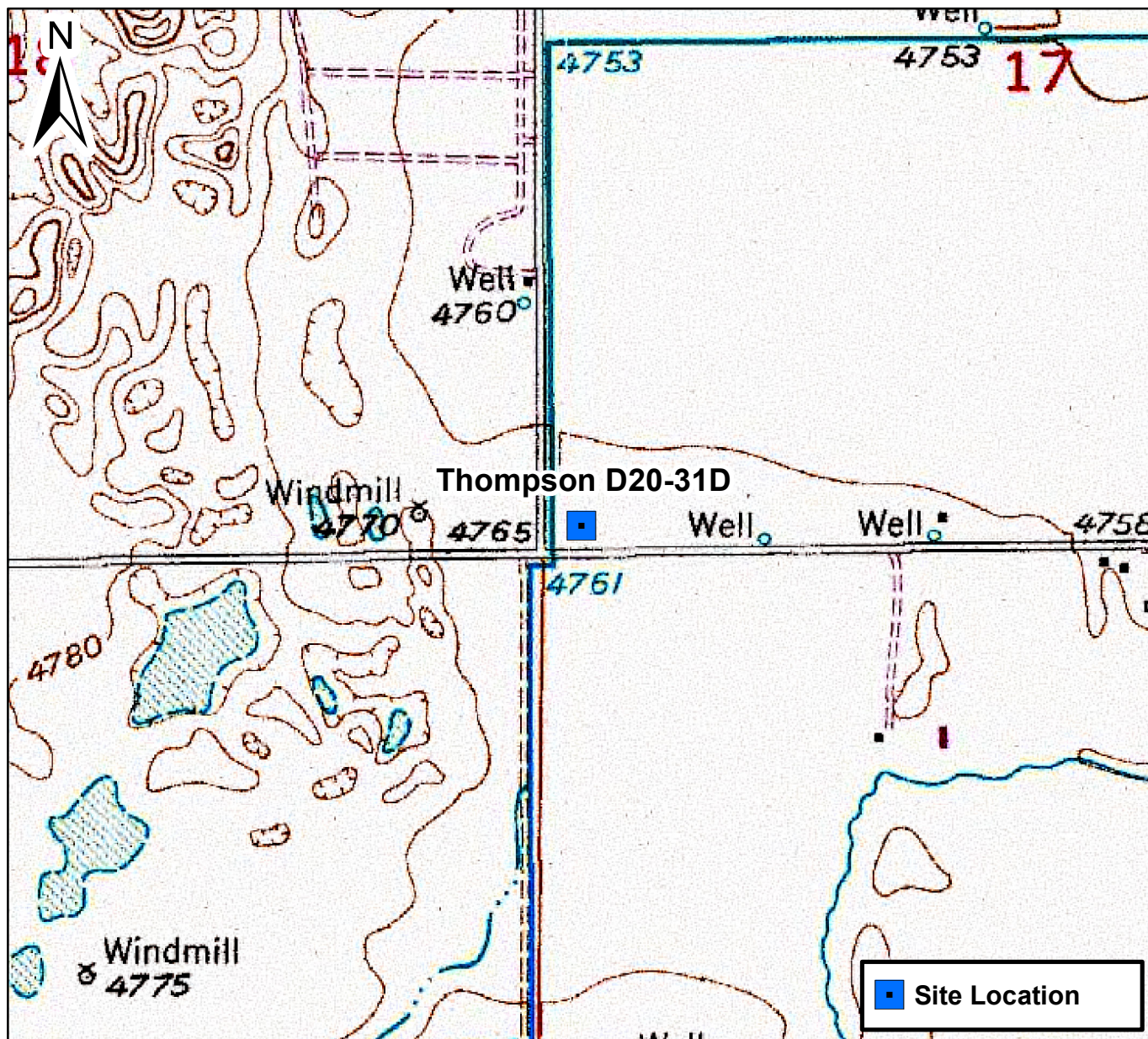
1,2,4 - TMB = 1,2,4 Trimethylbenzene

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

1-M = 1-Methylnaphthalene

2-M = 2-Methylnaphthalene

TDS = Total Dissolved Solids




0 1,000 2,000 Feet

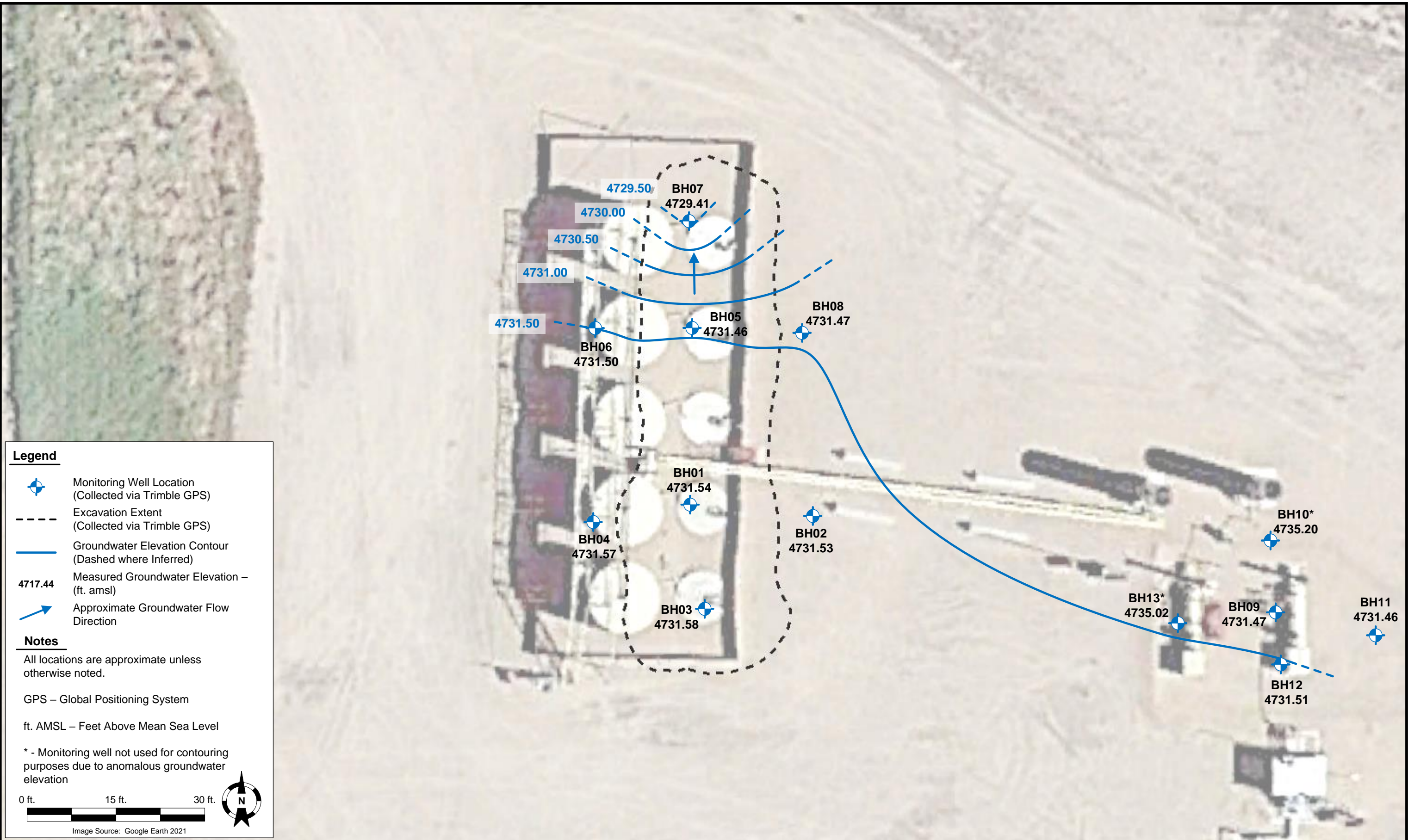
Figure 1

Site Location Map
Thompson D20-31D
SWSW S17 T3N R64W
Weld County, Colorado





DATE: 07/26/2023	<div data-bbox="562 1822 997 1931"> TASMAN</div> <div data-bbox="1028 1848 1271 1931">Tasman, Inc. 6855 W 119th Avenue Broomfield, CO 80020</div>	<div data-bbox="1466 1802 2212 1945">Noble Energy, Inc. – DJ Basin Thompson D20-31D FAC SWSW, Section 17, Township 3 North, Range 64 West Weld County, Colorado</div>	Site Overview Map	FIGURE 2
DESIGNED BY: JW				
DRAWN BY: HM				



DATE:	12/28/2023
DESIGNED BY:	JW
DRAWN BY:	LR

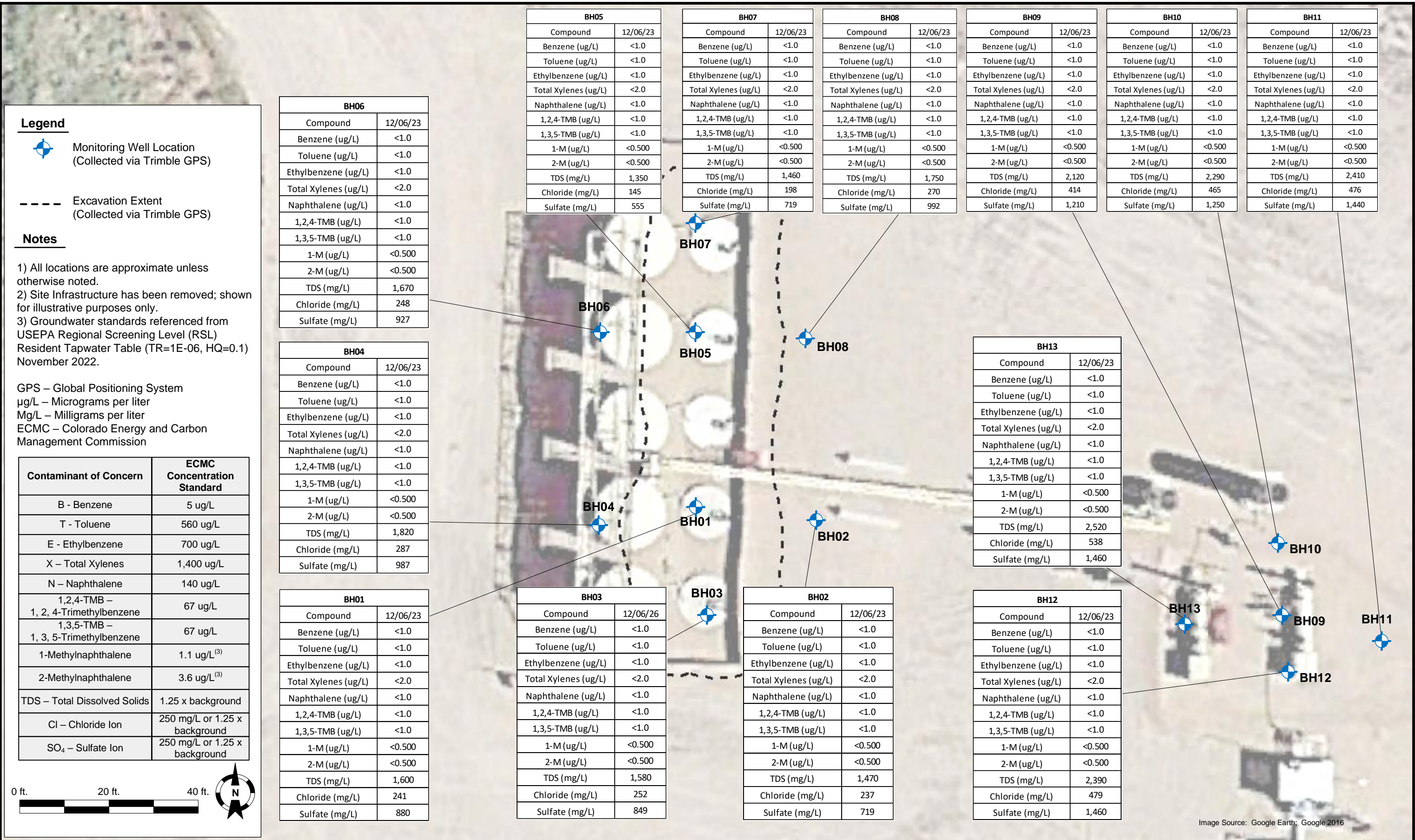


Tasman, Inc.
6855 W 119th Avenue
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Thompson D20-31D FAC
SWSW, Section 17, Township 3 North, Range 64 West
Weld County, Colorado

Groundwater Potentiometric
Surface Map
(12/06/2023)

FIGURE
3



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 15, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Thompson D20-31D

Work Order #2312114

Enclosed are the results of analyses for samples received by Summit Scientific on 12/06/23 17:57. 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 D20-31D

Project Number: UWRWE-A2800-ABN

Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2312114-01	Water	12/06/23 12:51	12/06/23 17:57
BH02	2312114-02	Water	12/06/23 11:50	12/06/23 17:57
BH03	2312114-03	Water	12/06/23 11:52	12/06/23 17:57
BH04	2312114-04	Water	12/06/23 12:05	12/06/23 17:57
BH05	2312114-05	Water	12/06/23 13:07	12/06/23 17:57
BH06	2312114-06	Water	12/06/23 12:07	12/06/23 17:57
BH07	2312114-07	Water	12/06/23 11:37	12/06/23 17:57
BH08	2312114-08	Water	12/06/23 11:37	12/06/23 17:57
BH09	2312114-09	Water	12/06/23 12:51	12/06/23 17:57
BH10	2312114-10	Water	12/06/23 12:20	12/06/23 17:57
BH11	2312114-11	Water	12/06/23 12:35	12/06/23 17:57
BH12	2312114-12	Water	12/06/23 12:36	12/06/23 17:57
BH13	2312114-13	Water	12/06/23 12:18	12/06/23 17:57

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.

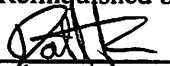

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2312114	

Send Data To:		Send Invoice To:
Client: Noble / Tasman Inc.	Project Manager: Jake Whritenour	Company: Noble Energy, Inc.
Address: 6855 W. 119th. Ave.	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Thompson D20-310
City/State/Zip: Broomfield / CO / 80020		AFE#:
Phone: 303-487-1228	Project Name: Thompson D20-310	PO/Billing Codes:
Sampler Name: Dalton Hagen	Project Number: N/A	Contact: Dan Peterson

					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	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate	PAH	** 1-M, 2-M
1	BH01	12/6/23	1251	6	3				X				X	X	X	X	X	X	X	X	
2	BH02		1150																		
3	BH03		1152																		
4	BH04		1205																		
5	BH05		1307																		
6	BH06		1207																		
7	BH07		1137																		
8	BH08		1137																		
9	BH09		1251																		
10	BH10		1220																		
11	BH11		1235																		
12	BH12		1236																		
13	BH13		1218																		
14																					
15																					

Relinquished by: 	Date/Time: 12/6/23 1500	Received by: Tasman Lockbox	Date/Time: 12/6/23 1500	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 12/6/23 1757	Received by: 	Date/Time: 12/6/23 1757	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 8.8	Corrected Temperature: 6	IR gun #:		HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 231214Client: Noble + Norman Client Project ID: Thompson D20-310Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

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

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 8.8Thermometer # 1

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

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name12/6/23
Date/Time



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

Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH01
2312114-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGL0399	12/11/23	12/11/23	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: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.4	108 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.1	106 %		21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.37	68.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.23	61.5 %		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 D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH01
2312114-01 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	241	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	880	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1600	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH02
2312114-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/11/23	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: **12/06/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.4	108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.8	96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.8	103 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.55	77.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.58	78.8 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH02
2312114-02 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	237	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	719	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1470	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH03
2312114-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/11/23	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: **12/06/23 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.5	109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.2	106 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 11:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.59	79.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.56	77.9 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH03
2312114-03 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 11:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	252	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	849	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 11:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1580	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH04
2312114-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.7	110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.0	105 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.75	87.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.56	77.9 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH04
2312114-04 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	287	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	987	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1820	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH05
2312114-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 13:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	15.1	113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.2	107 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 13:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 13:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.60	80.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.39	69.4 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH05
2312114-05 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	145	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	555	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1350	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH06
2312114-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.9	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.8	104 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.45	72.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.29	64.5 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH06
2312114-06 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	248	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	927	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1670	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH07
2312114-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.2	106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.7	95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.60	79.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.39	69.4 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH07
2312114-07 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	198	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	719	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1460	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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

Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH08
2312114-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.5	109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.9	96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.9	105 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.62	80.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.42	70.8 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH08
2312114-08 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	270	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	992	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 11:37**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1750	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH09
2312114-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.6	110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.8	95.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	102 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.65	82.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.40	69.9 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH09
2312114-09 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	414	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	1210	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2120	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH10
2312114-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.6	109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.4	93.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	102 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.48	73.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.40	70.0 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Tasman Geosciences
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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH10
2312114-10 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	465	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	1250	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2290	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH11
2312114-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.2	107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.1	106 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.58	78.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.35	67.3 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH11
2312114-11 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	476	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	1440	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2410	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH12
2312114-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.3	107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:36**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.65	82.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.59	79.5 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH12
2312114-12 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	479	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	1460	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2390	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH13
2312114-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0399	12/11/23	12/12/23	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: **12/06/23 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.5	109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/06/23 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BGL0529	12/14/23	12/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/06/23 12:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.49	74.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.37	68.7 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

BH13
2312114-13 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/06/23 12:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	538	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	1460	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 12:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2520	10.0		mg/L	1	BGL0450	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

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 BGL0399 - EPA 5030 Water MS

Blank (BGL0399-BLK1)

Prepared & Analyzed: 12/11/23

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	15.0		"	13.3		112	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		108	21-167			

LCS (BGL0399-BS1)

Prepared & Analyzed: 12/11/23

Benzene	51.0	1.0	ug/l	50.0		102	51-132			
Toluene	49.0	1.0	"	50.0		98.0	51-138			
Ethylbenzene	53.0	1.0	"	50.0		106	58-146			
m,p-Xylene	98.8	2.0	"	100		98.8	57-144			
o-Xylene	47.6	1.0	"	50.0		95.2	53-146			
Naphthalene	44.2	1.0	"	50.0		88.5	70-130			
1,2,4-Trimethylbenzene	51.7	1.0	"	50.0		103	70-130			
1,3,5-Trimethylbenzene	51.7	1.0	"	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.8	21-167			

Matrix Spike (BGL0399-MS1)

Source: 2312061-01

Prepared & Analyzed: 12/11/23

Benzene	42.6	1.0	ug/l	50.0	ND	85.3	34-141			
Toluene	40.8	1.0	"	50.0	ND	81.5	27-151			
Ethylbenzene	44.2	1.0	"	50.0	ND	88.3	29-160			
m,p-Xylene	82.6	2.0	"	100	ND	82.6	20-166			
o-Xylene	40.0	1.0	"	50.0	ND	80.1	33-159			
Naphthalene	30.0	1.0	"	50.0	ND	60.0	70-130			QM-07
1,2,4-Trimethylbenzene	43.6	1.0	"	50.0	ND	87.2	70-130			
1,3,5-Trimethylbenzene	43.5	1.0	"	50.0	ND	87.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.3		106	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.4	20-170			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.6	21-167			

Summit Scientific

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

Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

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 BGL0399 - EPA 5030 Water MS

Matrix Spike Dup (BGL0399-MSD1)	Source: 2312061-01			Prepared & Analyzed: 12/11/23						
Benzene	43.0	1.0	ug/l	50.0	ND	86.1	34-141	0.910	30	QM-07
Toluene	41.1	1.0	"	50.0	ND	82.3	27-151	0.903	30	
Ethylbenzene	43.8	1.0	"	50.0	ND	87.6	29-160	0.841	30	
m,p-Xylene	82.3	2.0	"	100	ND	82.3	20-166	0.291	30	
o-Xylene	39.9	1.0	"	50.0	ND	79.8	33-159	0.350	30	
Naphthalene	34.9	1.0	"	50.0	ND	69.7	70-130	15.0	30	
1,2,4-Trimethylbenzene	50.4	1.0	"	50.0	ND	101	70-130	14.5	30	
1,3,5-Trimethylbenzene	50.3	1.0	"	50.0	ND	101	70-130	14.4	30	
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.7	21-167			

Summit Scientific

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Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGL0529 - EPA 5030 Water MS

Blank (BGL0529-BLK1)

Prepared: 12/14/23 Analyzed: 12/15/23

1-Methylnaphthalene	ND	0.500	ug/l							
2-Methylnaphthalene	ND	0.500	"							
Surrogate: 2-Methylnaphthalene-d10	1.83		"	2.00		91.5	40-150			
Surrogate: Fluoranthene-d10	1.94		"	2.00		96.8	40-150			

LCS (BGL0529-BS1)

Prepared: 12/14/23 Analyzed: 12/15/23

1-Methylnaphthalene	2.35	0.500	ug/l	2.00		118	30-120			
2-Methylnaphthalene	2.18	0.500	"	2.00		109	0-200			
Surrogate: 2-Methylnaphthalene-d10	2.12		"	2.00		106	40-150			
Surrogate: Fluoranthene-d10	1.70		"	2.00		85.1	40-150			

LCS Dup (BGL0529-BSD1)

Prepared: 12/14/23 Analyzed: 12/15/23

1-Methylnaphthalene	2.34	0.500	ug/l	2.00		117	30-120	0.598	30	
2-Methylnaphthalene	2.35	0.500	"	2.00		118	0-200	7.52	200	
Surrogate: 2-Methylnaphthalene-d10	2.28		"	2.00		114	40-150			
Surrogate: Fluoranthene-d10	1.82		"	2.00		91.2	40-150			

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

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 BGL0382 - General Preparation

Blank (BGL0382-BLK1)

Prepared & Analyzed: 12/11/23

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BGL0382-BS1)

Prepared & Analyzed: 12/11/23

Chloride	3.14	0.0600	mg/L	3.00	105	90-110
Sulfate	15.7	0.300	"	15.0	105	90-110

Duplicate (BGL0382-DUP1)

Source: 2312069-01

Prepared & Analyzed: 12/11/23

Chloride	40.4	12.0	mg/L	40.2	0.496	20
Sulfate	350	60.0	"	355	1.19	20

Matrix Spike (BGL0382-MS1)

Source: 2312069-01

Prepared & Analyzed: 12/11/23

Chloride	600	12.0	mg/L	600	40.2	93.2	80-120
Sulfate	3140	60.0	"	3000	355	92.8	80-120

Summit Scientific

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Project: Noble - Thompson D20-31D
Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BGL0450 - General Preparation

Blank (BGL0450-BLK1)

Prepared & Analyzed: 12/12/23

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BGL0450-DUP1)

Source: 2312114-01

Prepared & Analyzed: 12/12/23

Total Dissolved Solids 1600 10.0 mg/L 1600 0.0625 20

Summit Scientific

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

Project: Noble - Thompson D20-31D

Project Number: UWRWE-A2800-ABN
Project Manager: Jacob Whritenour

Reported:
12/15/23 14:22

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference