

**FOURTH QUARTER 2023 SITE MONITORING DATA**  
**THOMPSON D20-31D**

**ECMC SPILL TRACKING # 483919**  
**ECMC REMEDIATION # 26337**

Prepared for:



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Prepared by:



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**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.) <sup>(1)</sup>	Depth to LNAPL (ft.) <sup>(1)</sup>	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.) <sup>(1)</sup>	Depth to LNAPL (ft.) <sup>(1)</sup>	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
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**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 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 <sup>(1)</sup>		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	<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
<sup>(3)</sup> 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
<sup>(3)</sup> 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
<sup>(3)</sup> 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 <sup>(1)</sup>		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

**Notes:**

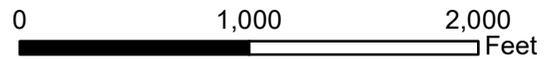
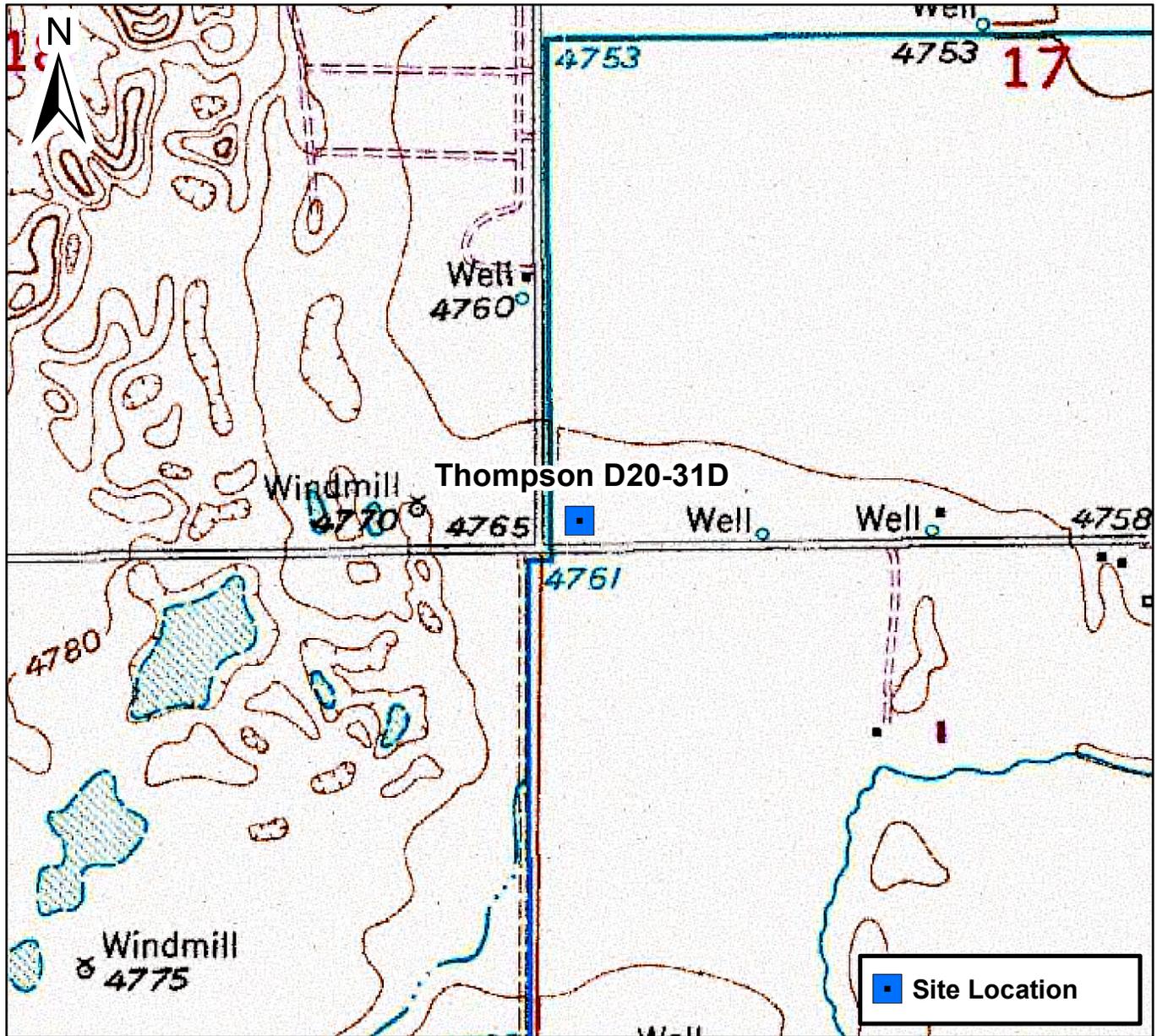
<sup>(1)</sup> Groundwater standards referenced from 2 CCR 404-1, Table 915-1 (January 15, 2021).

<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 = 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



### Figure 1

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





**Legend**

-  Monitoring Well Location  
(Collected via Trimble GPS)
-  Excavation Extent  
(Collected via Trimble GPS)

**Notes**

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.

GPS – Global Positioning System

0 ft.      15 ft.      30 ft.



Image Source: Google Earth 2021

DATE:	07/26/2023
DESIGNED BY:	JW
DRAWN BY:	HM

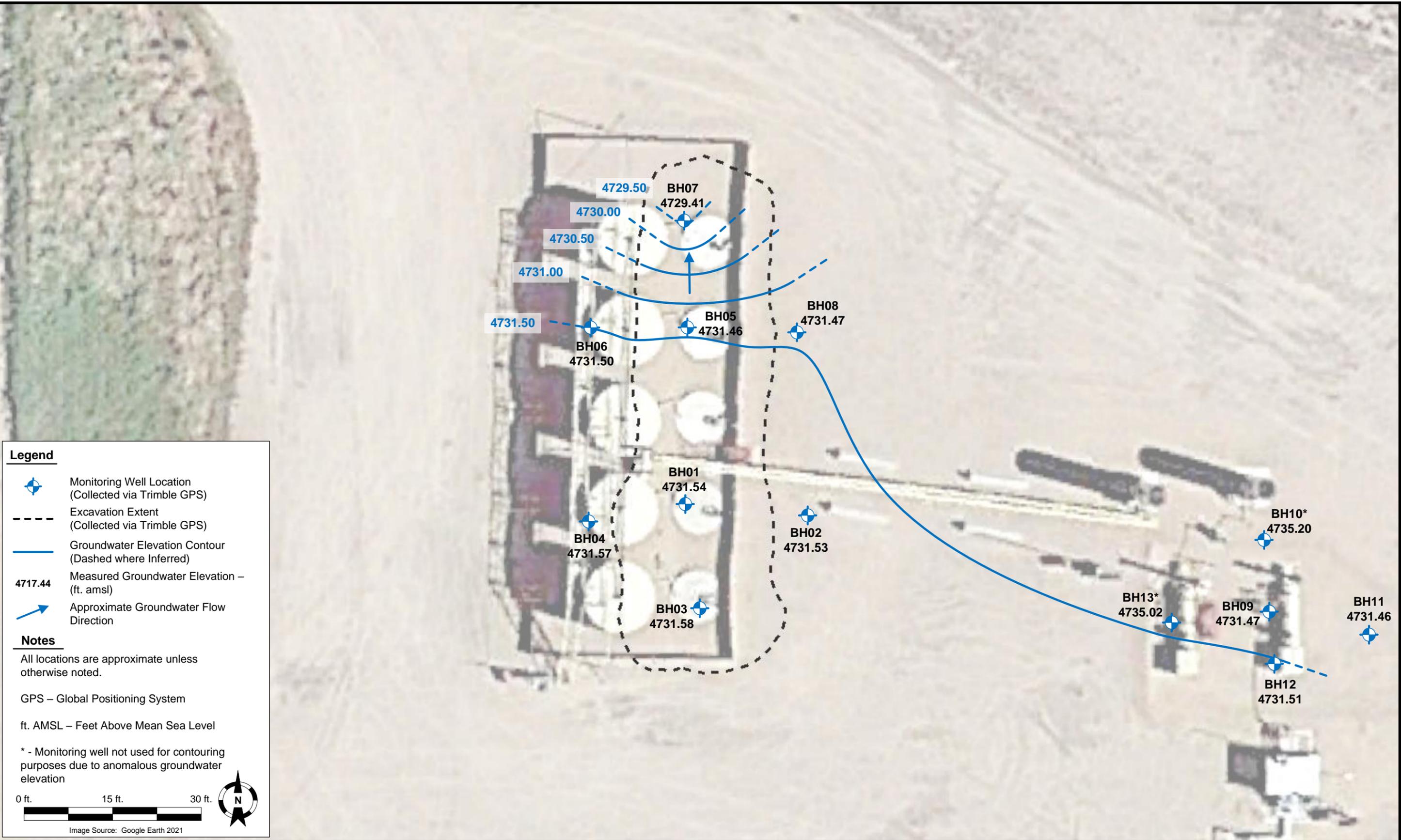


**Tasman, Inc.**  
6855 W 119<sup>th</sup> Avenue  
Broomfield, CO 80020

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

Site Overview Map

FIGURE  
2



**Legend**

- Monitoring Well Location (Collected via Trimble GPS)
- Excavation Extent (Collected via Trimble GPS)
- Groundwater Elevation Contour (Dashed where Inferred)

**Notes**

All locations are approximate unless otherwise noted.

GPS – Global Positioning System

ft. AMSL – Feet Above Mean Sea Level

\* - Monitoring well not used for contouring purposes due to anomalous groundwater elevation

0 ft. 15 ft. 30 ft.

Image Source: Google Earth 2021

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

**Tasman, Inc.**  
6855 W 119<sup>th</sup> 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

**Legend**

 Monitoring Well Location  
(Collected via Trimble GPS)

 Excavation Extent  
(Collected via Trimble GPS)

**Notes**

- 1) All locations are approximate unless otherwise noted.
- 2) Site Infrastructure has been removed; shown for illustrative purposes only.
- 3) Groundwater standards referenced from USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=1E-06, HQ=0.1) November 2022.

GPS – Global Positioning System  
 ug/L – Micrograms per liter  
 Mg/L – Milligrams per liter  
 ECMC – Colorado Energy and Carbon Management Commission

Contaminant of Concern	ECMC Concentration Standard
B - Benzene	5 ug/L
T - Toluene	560 ug/L
E - Ethylbenzene	700 ug/L
X – Total Xylenes	1,400 ug/L
N – Naphthalene	140 ug/L
1,2,4-TMB – 1, 2, 4-Trimethylbenzene	67 ug/L
1,3,5-TMB – 1, 3, 5-Trimethylbenzene	67 ug/L
1-Methylnaphthalene	1.1 ug/L <sup>(3)</sup>
2-Methylnaphthalene	3.6 ug/L <sup>(3)</sup>
TDS – Total Dissolved Solids	1.25 x background
Cl – Chloride Ion	250 mg/L or 1.25 x background
SO <sub>4</sub> – Sulfate Ion	250 mg/L or 1.25 x background

0 ft.      20 ft.      40 ft.



BH06	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,670
Chloride (mg/L)	248
Sulfate (mg/L)	927

BH04	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,820
Chloride (mg/L)	287
Sulfate (mg/L)	987

BH01	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,600
Chloride (mg/L)	241
Sulfate (mg/L)	880

BH05	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,350
Chloride (mg/L)	145
Sulfate (mg/L)	555

BH07	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,460
Chloride (mg/L)	198
Sulfate (mg/L)	719

BH08	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,750
Chloride (mg/L)	270
Sulfate (mg/L)	992

BH09	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	2,120
Chloride (mg/L)	414
Sulfate (mg/L)	1,210

BH10	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	2,290
Chloride (mg/L)	465
Sulfate (mg/L)	1,250

BH11	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	2,410
Chloride (mg/L)	476
Sulfate (mg/L)	1,440

BH13	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	2,520
Chloride (mg/L)	538
Sulfate (mg/L)	1,460

BH12	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	2,390
Chloride (mg/L)	479
Sulfate (mg/L)	1,460

BH03	
Compound	12/06/26
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,580
Chloride (mg/L)	252
Sulfate (mg/L)	849

BH02	
Compound	12/06/23
Benzene (ug/L)	<1.0
Toluene (ug/L)	<1.0
Ethylbenzene (ug/L)	<1.0
Total Xylenes (ug/L)	<2.0
Naphthalene (ug/L)	<1.0
1,2,4-TMB (ug/L)	<1.0
1,3,5-TMB (ug/L)	<1.0
1-M (ug/L)	<0.500
2-M (ug/L)	<0.500
TDS (mg/L)	1,470
Chloride (mg/L)	237
Sulfate (mg/L)	719

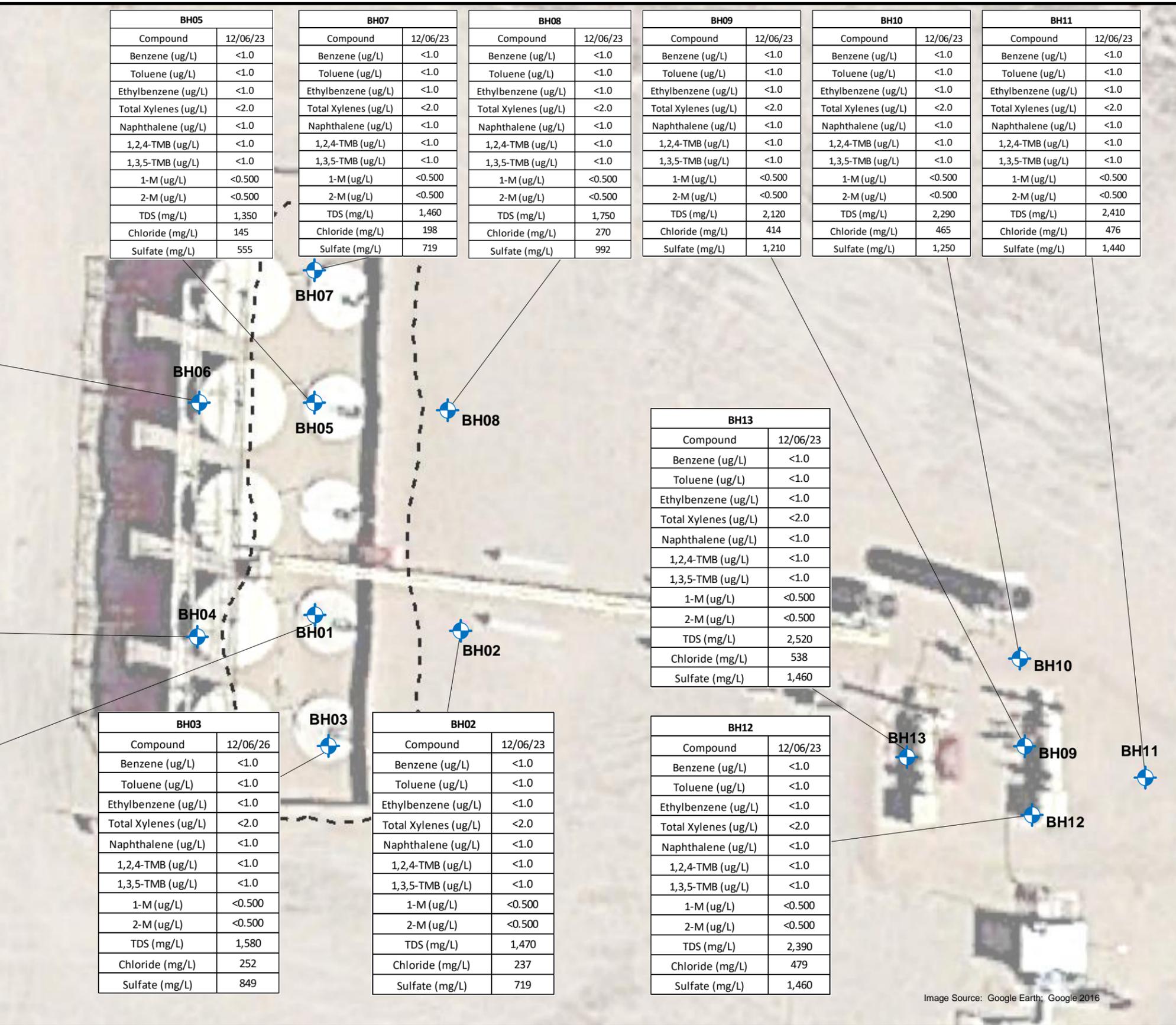


Image Source: Google Earth: Google 2016

DATE: 07/19/2023  
 DESIGNED BY: JW  
 DRAWN BY: JB



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

Groundwater Analytical  
 Results Map  
 (12/06/2023)

FIGURE  
 4

# Summit Scientific

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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 that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

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	

<b>Send Data To:</b>		<b>Send Invoice To:</b>
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

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate	
1	BH01	12/6/23	1251	6	X				X				X	X	X	X	X	X	X	** 1-M, 2-M
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: <i>[Signature]</i>	Date/Time: 12/6/23 1500	Received by: Tasman Lockbox	Date/Time: 12/6/23 1500	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 12/23 1757	Received by: <i>[Signature]</i>	Date/Time: 12/23 1757	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 8.8	Corrected Temperature: 6	IR gun #:	5	HNO3 lot #:		

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 231214

Client: Noble Johnson Client Project ID: Thompson D20-310

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

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

Temp (°C) 8.8 Thermometer # 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"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on file</u>
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 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)? <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"/>	<u>HCl</u>
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

12/6/23  
Date/Time

02 03 04



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

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 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	<b>241</b>	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	<b>880</b>	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								
<b>Total Dissolved Solids</b>	<b>1600</b>	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

**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**

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

**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	

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

**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**

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

**BH03**  
**2312114-03 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

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

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

**Total Dissolved Solids by SM2540C**

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

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

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 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**

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 D20-31D  
Project Number: UWRWE-A2800-ABN  
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>287</b>	12.0	mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	<b>987</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Total Dissolved Solids</b>	<b>1820</b>	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

**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**

Summit Scientific

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6855 W. 119th Ave.  
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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**

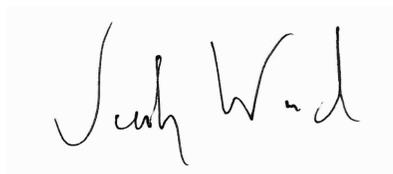
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>145</b>	12.0		mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
<b>Sulfate</b>	<b>555</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>1350</b>	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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>248</b>	12.0	mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	<b>927</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Total Dissolved Solids</b>	<b>1670</b>	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**

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**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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>198</b>	12.0	mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	<b>719</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

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

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

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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**

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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**

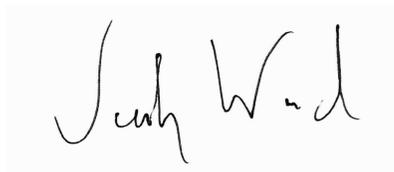
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>270</b>	12.0	mg/L	200	BGL0382	12/11/23	12/11/23	EPA 300.0	
Sulfate	<b>992</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

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

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

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**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**

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

**Total Dissolved Solids by SM2540C**

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

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

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

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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**

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

**BH11**  
**2312114-11 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

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

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

**Total Dissolved Solids by SM2540C**

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Total Dissolved Solids</b>	<b>2410</b>	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

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

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**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**

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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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

#### 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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	15.0		"	13.3		112		23-173			
<i>Surrogate: Toluene-d8</i>	13.1		"	13.3		98.5		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.2		"	13.3		107		23-173			
<i>Surrogate: Toluene-d8</i>	13.1		"	13.3		98.6		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.1		"	13.3		106		23-173			
<i>Surrogate: Toluene-d8</i>	13.0		"	13.3		97.4		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.2		"	13.3		91.6		21-167			

Summit Scientific

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

**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	
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	QM-07
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 Number: UWRWE-A2800-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
12/15/23 14:22

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

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

**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				

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**Reported:**  
12/15/23 14:22

**Anions by EPA Method 300.0 - Quality Control**  
**Summit Scientific**

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

**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		

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Project Number: UWRWE-A2800-ABN  
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**Reported:**  
12/15/23 14:22

**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 BGL0450 - General Preparation**

**Blank (BGL0450-BLK1)**

Prepared & Analyzed: 12/12/23

Total Dissolved Solids                      ND                      10.0                      mg/L

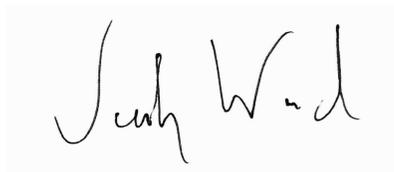
**Duplicate (BGL0450-DUP1)**

**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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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