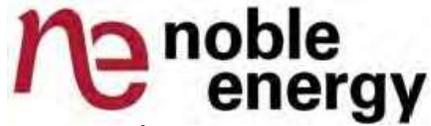


**FIRST QUARTER 2023 SITE MONITORING DATA**  
**HSR CHARLTON 08-20**

**COGCC SPILL TRACKING # 480746**  
**COGCC REMEDIATION # 19600**

Prepared for:



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



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

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**  
**NOBLE ENERGY, INC. - HSR CHARLTON 08-20**

Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	10/27/21	4786.35	10.70	1.63	ND	ND	4785.04
BH01	03/08/22	4786.35	10.45	3.36	ND	ND	4783.31
BH01	06/14/22	4786.35	10.42	1.75	ND	ND	4784.92
BH01	09/23/22	Not Sampled - Well Covered by Equipment					
BH01	12/29/22						
BH01	03/09/23	4786.35	10.42	2.80	ND	ND	4783.87
BH02	10/27/21	4786.51	10.32	1.98	ND	ND	4784.82
BH02	03/08/22	4786.51	10.30	3.75	ND	ND	4783.05
BH02	06/14/22	4786.51	10.24	2.12	ND	ND	4784.68
BH02	09/23/22	4786.51	10.17	1.95	ND	ND	4784.85
BH02	12/29/22	4786.51	10.16	3.59	ND	ND	4783.21
BH02	03/09/23	4786.51	9.96	3.21	ND	ND	4783.59
BH03	10/27/21	4786.75	11.92	1.80	ND	ND	4785.36
BH03	03/08/22	4786.75	11.71	3.57	ND	ND	4783.59
BH03	06/14/22	4786.75	11.68	1.86	ND	ND	4785.30
BH03	09/23/22	4786.75	11.58	1.77	ND	ND	4785.39
BH03	12/29/22	4786.75	11.45	3.49	ND	ND	4783.67
BH03	03/09/23	4786.75	11.40	2.94	ND	ND	4784.22
BH04	10/27/21	4786.98	13.55	1.96	ND	ND	4785.26
BH04	03/08/22	4786.98	13.29	3.68	ND	ND	4783.54
BH04	06/14/22	4786.98	12.72	2.05	ND	ND	4785.17
BH04	09/23/22	4786.98	12.45	1.98	ND	ND	4785.24
BH04	12/29/22	4786.98	12.38	3.58	ND	ND	4783.64
BH04	03/09/23	4786.98	12.04	3.07	ND	ND	4784.15
BH05	10/27/21	4786.32	10.38	1.94	ND	ND	4784.57
BH05	03/08/22	4786.32	10.45	3.58	ND	ND	4782.93
BH05	06/14/22	4786.32	10.44	2.09	ND	ND	4784.42
BH05	09/23/22	4786.32	10.52	1.94	ND	ND	4784.57
BH05	12/29/22	4786.32	10.49	3.49	ND	ND	4783.02
BH05	03/09/23	4786.32	10.34	3.08	ND	ND	4783.43

**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:

$$\text{Groundwater elevation} = (\text{TOC Elevation} - \text{Measured Depth to Water}) + (\text{LNAPL Thickness in Well} \times \text{LNAPL Relative Density})$$

LNAPL relative density was estimated to be approximately 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. - HSR CHARLTON 08-20

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	1-M (µg/L)	2-M (µg/L)	TDS (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
COGCC Groundwater Standard <sup>(1)</sup>													
GW01	09/13/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.1 <sup>(2)</sup>	3.6 <sup>(3)</sup>	<1.25 x Background	<1.25 x Background	<1.25 x Background
BH01	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	728	203	273
BH01	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	664	93.8	29.8
BH01	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,920	416	467
BH01	09/23/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
BH01	12/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	596	98.6	72.8
BH01	03/09/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	590	115	129
BH02	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	581	130	141
BH02	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,280	348	634
BH02	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	945	192	93.6
BH02	09/23/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	2,220	540	644
BH02	12/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,080	374	641
BH02	03/09/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	596	98.6	72.8
BH03 <sup>(1)</sup>	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,070	298	388
BH03 <sup>(1)</sup>	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,370	292	314
BH03 <sup>(1)</sup>	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	2,660	551	954
BH03 <sup>(1)</sup>	09/23/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	688	189	280
BH03 <sup>(1)</sup>	12/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	594	91.0	73.8
BH03 <sup>(1)</sup>	03/09/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	661	117	149
BH04	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	836	212	374
BH04	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	780	151	103
BH04	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,230	306	306
BH04	09/23/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	518	168	216
BH04	12/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	560	95.2	73.8
BH04	03/09/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	634	105	155
BH05	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	816	215	365
BH05	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	640	111	57.8
BH05	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	988	161	145
BH05	09/23/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	868	187	203
BH05	12/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	518	72.2	76.2
BH05	03/09/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	553	90.2	114

Not Sampled - Well Covered by Equipment

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

<sup>(2)</sup> Monitoring well used to determine background concentration levels

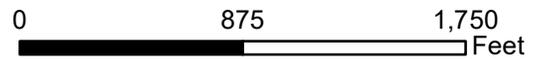
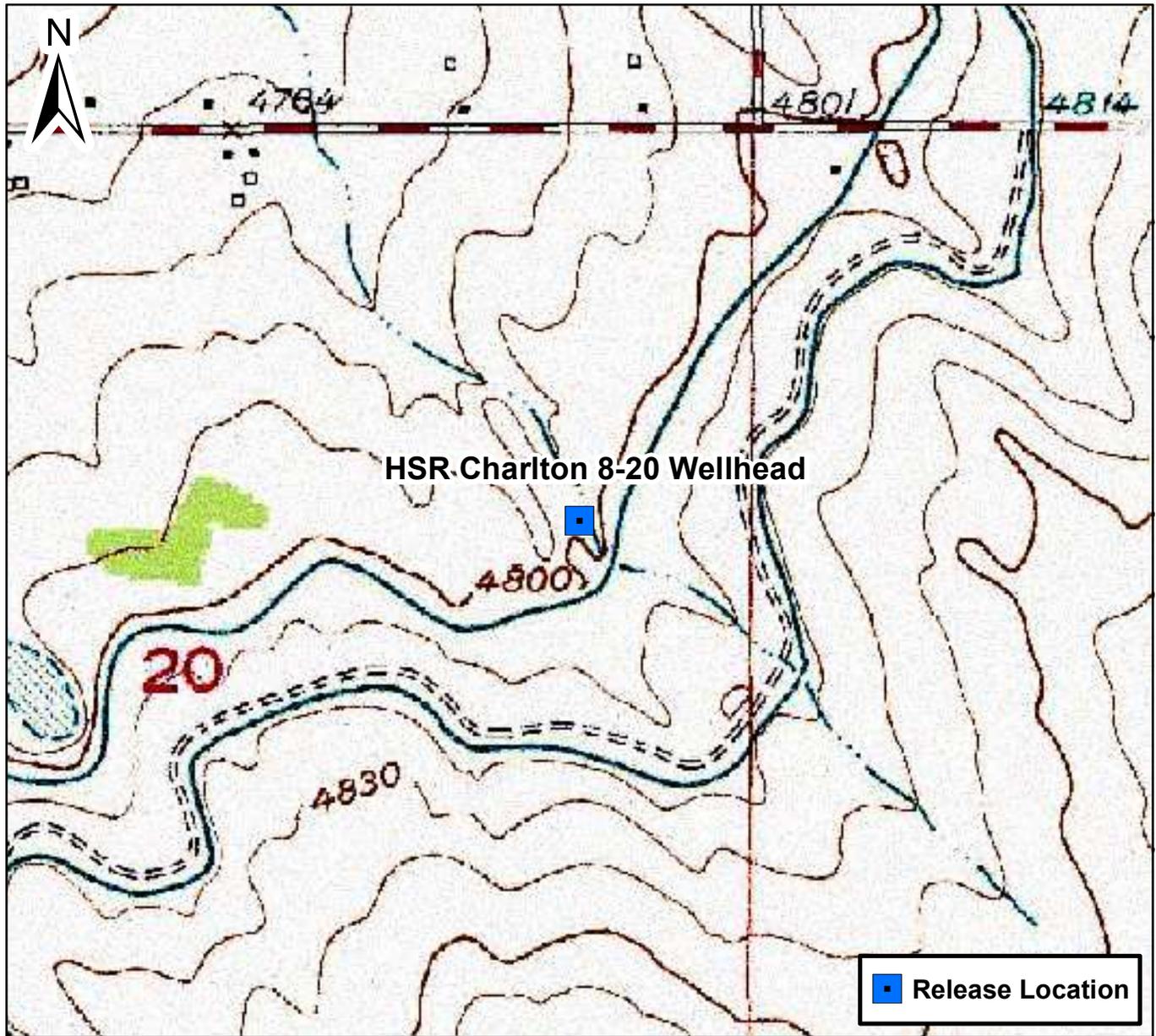
<sup>(3)</sup> Groundwater standards reference from USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=1E-06, HQ=0.1) November 2002

**Definitions:**

- < = Analytical result is less than the indicated laboratory reporting limit
- COGCC = Colorado Oil and Gas Conservation Commission
- µg/L = Micrograms per liter
- mg/L = Milligrams per liter
- NA = Not analyzed
- 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

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

**Bold results exceed the COGCC Table 915-1 standard for groundwater inorganic parameters, site-specific background assessment is on-going for groundwater inorganic constituents.**



### Figure 1

Site Location Map  
 HSR Charlton 8-20 Wellhead  
 SENE S20 T4N R65W  
 Weld County, Colorado





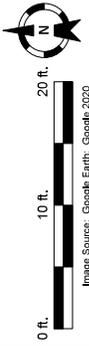
**Legend**

-  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



DATE: 07/20/2022

DESIGNED BY: JW

DRAWN BY: CA

**TASMAN**  
GEOSCIENCES

Tasman Geosciences, Inc.  
6865 W 119<sup>th</sup> Avenue  
Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
HSR Charlton 08-20 Wellhead  
SENE, Section 20, Township 4 North, Range 65 West  
Weld County, Colorado

Site Overview Map

FIGURE  
2



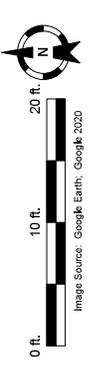
**Legend**

- x Release Location
- Monitoring Well (Collected via Trimble GPS)
- Groundwater Elevation Contour (Dashed Where Inferred)
- 4763.81** Measured Groundwater Elevation—ft. amsl
- Approximate Groundwater Flow Direction

**Notes**

- 1) All locations are approximate unless otherwise noted
- 2) Site Infrastructure has been removed, shown for illustrative purposes only.

GPS – Global Positioning System  
 ft. amsl – Feet above mean sea level  
 NS – Not Sampled



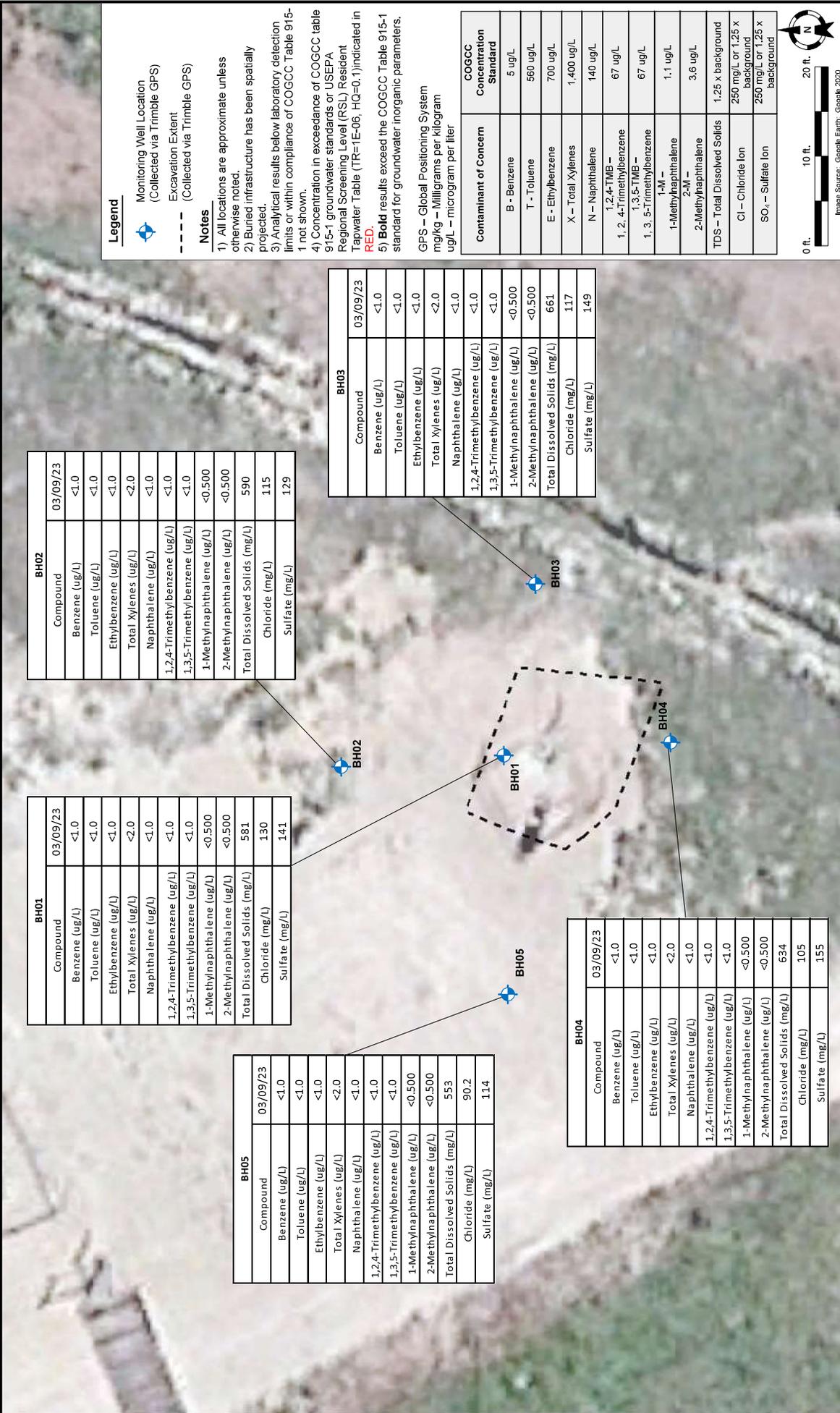
DATE: 03/20/2023  
 DESIGNED BY: JW  
 DRAWN BY: JC



**TASMAN**  
 Tasman Geosciences, Inc.  
 6855 W 149<sup>th</sup> Ave.  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
 HSR Chariton 08-20 Wellhead  
 SENE, Section 20, Township 4 North, Range 65 West  
 Weld County, Colorado

Groundwater Potentiometric  
 Surface Contour Map  
 (03/09/2023)



BH02	
Compound	03/09/23
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-Trimethylbenzene (ug/L)	<1.0
1,3,5-Trimethylbenzene (ug/L)	<1.0
1-Methylnaphthalene (ug/L)	<0.500
2-Methylnaphthalene (ug/L)	<0.500
Total Dissolved Solids (mg/L)	590
Chloride (mg/L)	115
Sulfate (mg/L)	129

BH01	
Compound	03/09/23
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-Trimethylbenzene (ug/L)	<1.0
1,3,5-Trimethylbenzene (ug/L)	<1.0
1-Methylnaphthalene (ug/L)	<0.500
2-Methylnaphthalene (ug/L)	<0.500
Total Dissolved Solids (mg/L)	581
Chloride (mg/L)	130
Sulfate (mg/L)	141

BH05	
Compound	03/09/23
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-Trimethylbenzene (ug/L)	<1.0
1,3,5-Trimethylbenzene (ug/L)	<1.0
1-Methylnaphthalene (ug/L)	<0.500
2-Methylnaphthalene (ug/L)	<0.500
Total Dissolved Solids (mg/L)	553
Chloride (mg/L)	90.2
Sulfate (mg/L)	114

BH03	
Compound	03/09/23
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-Trimethylbenzene (ug/L)	<1.0
1,3,5-Trimethylbenzene (ug/L)	<1.0
1-Methylnaphthalene (ug/L)	<0.500
2-Methylnaphthalene (ug/L)	<0.500
Total Dissolved Solids (mg/L)	661
Chloride (mg/L)	117
Sulfate (mg/L)	149

BH04	
Compound	03/09/23
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-Trimethylbenzene (ug/L)	<1.0
1,3,5-Trimethylbenzene (ug/L)	<1.0
1-Methylnaphthalene (ug/L)	<0.500
2-Methylnaphthalene (ug/L)	<0.500
Total Dissolved Solids (mg/L)	634
Chloride (mg/L)	105
Sulfate (mg/L)	155

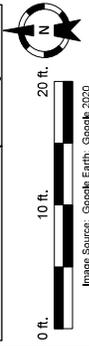
**Legend**

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

**Notes**

- All locations are approximate unless otherwise noted.
  - Buried infrastructure has been spatially projected.
  - Analytical results below laboratory detection limits or within compliance of COGCC Table 915-1 not shown.
  - Concentration in exceedance of COGCC table 915-1 groundwater standards or USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=TE-06; HQ=0; ) indicated in **RED**.
  - Bold** results exceed the COGCC Table 915-1 standard for groundwater inorganic parameters.
- GPS – Global Positioning System  
 mg/kg – Milligrams per kilogram  
 ug/L – microgram per liter

Contaminant of Concern	COGCC 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 -	67 ug/L
1,3,5-TMB -	67 ug/L
1-M -	1.1 ug/L
2-M -	3.6 ug/L
2-Methylnaphthalene	
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



DATE: 03/17/2023  
 DESIGNED BY: JW  
 DRAWN BY: HM

**TASMAN**  
 GEOSCIENCES

Tasman Geosciences, Inc.  
 6865 W 119th Avenue  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
 HSR Chariton 08-20 Wellhead  
 SENE, Section 20, Township 4 North, Range 65 West  
 Weld County, Colorado

Groundwater Analytical Results Map (03/09/2023)

**FIGURE 4**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 17, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - HSR Charlton 08-20

Work Order #2303241

Enclosed are the results of analyses for samples received by Summit Scientific on 03/09/23 18:06. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Ben Shrewsbury

Laboratory Manager



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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2303241-01	Water	03/09/23 10:34	03/09/23 18:06
BH02	2303241-02	Water	03/09/23 10:22	03/09/23 18:06
BH03	2303241-03	Water	03/09/23 10:20	03/09/23 18:06
BH04	2303241-04	Water	03/09/23 10:06	03/09/23 18:06
BH05	2303241-05	Water	03/09/23 10:04	03/09/23 18:06

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.*



S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2303241

Client: Noble Trasmann Client Project ID: HSR Charlton 08-20

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

[ ] [ ] [ ] [ ] [ ]

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

Temp (°C) 7.0 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			OK
If custody seals are present, are they intact? (1)	-			
Are samples due within 48 hours present?		-		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen			-	
Is a chain-of-custody (COC) form present and filled out Completely? (1)	-			
Is the COC properly relinquished by the client w/ date and time recorded? (1)	-			
Were all samples received intact? (1)	/			
Was adequate sample volume provided? (1)	/			
Does the COC agree with the number and type of sample bottles received? (1)	/			
Do the sample IDs on the bottle labels match the COC? (1)	/			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		/		
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	/			HCC
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.			/	
If dissolved metals are requested, were samples field filtered?			/	
Additional Comments (if any):				

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

[Signature] Custodian Printed Name

3/9/23 1806 Date/Time



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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH01**  
**2303241-01 (Water)**

**Summit Scientific**

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

Date Sampled: **03/09/23 10:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGC0360	03/13/23	03/14/23	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: **03/09/23 10:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	16.3	122 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.8	104 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %		21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/09/23 10:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGC0387	03/14/23	03/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **03/09/23 10:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.40	69.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	2.30	115 %		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 - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH01**  
**2303241-01 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **03/09/23 10:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>130</b>	12.0	mg/L	200	BGC0383	03/14/23	03/14/23	EPA 300.0	
Sulfate	<b>141</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **03/09/23 10:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Total Dissolved Solids</b>	<b>581</b>	10.0	mg/L	1	BGC0367	03/13/23	03/13/23	SM2540C	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH02**  
**2303241-02 (Water)**

**Summit Scientific**

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

Date Sampled: **03/09/23 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGC0360	03/13/23	03/14/23	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: **03/09/23 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	15.8	118 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.9	105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.7	103 %		21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/09/23 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGC0387	03/14/23	03/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **03/09/23 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.03	51.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.42	71.0 %		40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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6855 W. 119th Ave.  
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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH02**  
**2303241-02 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **03/09/23 10:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	115	12.0	mg/L	200	BGC0383	03/14/23	03/14/23	EPA 300.0	
Sulfate	129	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **03/09/23 10:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	590	10.0	mg/L	1	BGC0367	03/13/23	03/13/23	SM2540C	

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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH03**  
**2303241-03 (Water)**

**Summit Scientific**

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

Date Sampled: **03/09/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGC0360	03/13/23	03/14/23	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: **03/09/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	16.2	122 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.8	104 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.9	104 %		21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/09/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGC0387	03/14/23	03/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **03/09/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.18	59.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	2.09	105 %		40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH03**  
**2303241-03 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **03/09/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	117	12.0	mg/L	200	BGC0383	03/14/23	03/14/23	EPA 300.0	
Sulfate	149	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **03/09/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	661	10.0	mg/L	1	BGC0367	03/13/23	03/13/23	SM2540C	

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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH04**  
**2303241-04 (Water)**

**Summit Scientific**

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

Date Sampled: **03/09/23 10:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGC0360	03/13/23	03/14/23	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: **03/09/23 10:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	16.4	123 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.8	103 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.1	106 %		21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/09/23 10:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGC0387	03/14/23	03/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **03/09/23 10:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.14	57.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	2.02	101 %		40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH04**  
**2303241-04 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **03/09/23 10:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	<b>105</b>	12.0	mg/L	200	BGC0383	03/14/23	03/14/23	EPA 300.0	
Sulfate	<b>155</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **03/09/23 10:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Total Dissolved Solids</b>	<b>634</b>	10.0	mg/L	1	BGC0367	03/13/23	03/13/23	SM2540C	

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Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH05**  
**2303241-05 (Water)**

**Summit Scientific**

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

Date Sampled: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGC0360	03/13/23	03/14/23	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: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	16.1	121 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	14.0	105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %		21-167		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	ND	0.500		ug/l	1	BGC0387	03/14/23	03/15/23	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500		"	"	"	"	"	"	

Date Sampled: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.31	65.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.71	85.7 %		40-150		"	"	"	"	

**Anions by EPA Method 300.0**

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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**BH05**  
**2303241-05 (Water)**

**Summit Scientific**

**Anions by EPA Method 300.0**

Date Sampled: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	<b>90.2</b>	12.0		mg/L	200	BGC0383	03/14/23	03/14/23	EPA 300.0	
Sulfate	<b>114</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **03/09/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>553</b>	10.0		mg/L	1	BGC0367	03/13/23	03/13/23	SM2540C	

Summit Scientific

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Broomfield CO, 80020

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

### 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 BGC0360 - EPA 5030 Water MS

##### Blank (BGC0360-BLK1)

Prepared & Analyzed: 03/13/23

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>	15.9		"	13.3		119		23-173			
<i>Surrogate: Toluene-d8</i>	14.0		"	13.3		105		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.3		"	13.3		107		21-167			

##### LCS (BGC0360-BS1)

Prepared & Analyzed: 03/13/23

Benzene	43.6	1.0	ug/l	33.3		131		51-132			
Toluene	46.1	1.0	"	33.3		138		51-138			
Ethylbenzene	41.8	1.0	"	33.3		125		58-146			
m,p-Xylene	83.5	2.0	"	66.7		125		57-144			
o-Xylene	38.4	1.0	"	33.3		115		53-146			
Naphthalene	32.3	1.0	"	33.3		96.9		70-130			
1,2,4-Trimethylbenzene	40.1	1.0	"	33.3		120		70-130			
1,3,5-Trimethylbenzene	40.4	1.0	"	33.3		121		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	16.5		"	13.3		124		23-173			
<i>Surrogate: Toluene-d8</i>	14.3		"	13.3		107		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.6		"	13.3		102		21-167			

##### Matrix Spike (BGC0360-MS1)

Source: 2303232-01

Prepared & Analyzed: 03/13/23

Benzene	44.9	1.0	ug/l	33.3	ND	135		34-141			
Toluene	45.8	1.0	"	33.3	ND	137		27-151			
Ethylbenzene	58.8	1.0	"	33.3	16.9	126		29-160			
m,p-Xylene	140	2.0	"	66.7	53.7	130		20-166			
o-Xylene	45.6	1.0	"	33.3	5.73	119		33-159			
Naphthalene	37.8	1.0	"	33.3	5.92	95.6		70-130			
1,2,4-Trimethylbenzene	57.0	1.0	"	33.3	18.9	114		70-130			
1,3,5-Trimethylbenzene	51.6	1.0	"	33.3	13.4	114		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	16.9		"	13.3		127		23-173			
<i>Surrogate: Toluene-d8</i>	14.0		"	13.3		105		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.3		"	13.3		107		21-167			

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**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 BGC0360 - EPA 5030 Water MS**

Matrix Spike Dup (BGC0360-MSD1)	Source: 2303232-01			Prepared & Analyzed: 03/13/23							
Benzene	44.6	1.0	ug/l	33.3	ND	134	34-141	0.693	30		
Toluene	45.4	1.0	"	33.3	ND	136	27-151	0.878	30		
Ethylbenzene	55.5	1.0	"	33.3	16.9	116	29-160	5.71	30		
m,p-Xylene	130	2.0	"	66.7	53.7	114	20-166	8.01	30		
o-Xylene	44.3	1.0	"	33.3	5.73	116	33-159	2.69	30		
Naphthalene	39.6	1.0	"	33.3	5.92	101	70-130	4.65	30		
1,2,4-Trimethylbenzene	53.9	1.0	"	33.3	18.9	105	70-130	5.58	30		
1,3,5-Trimethylbenzene	47.8	1.0	"	33.3	13.4	103	70-130	7.51	30		
Surrogate: 1,2-Dichloroethane-d4	17.4		"	13.3		130	23-173				
Surrogate: Toluene-d8	14.0		"	13.3		105	20-170				
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	21-167				

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

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

**Summit Scientific**

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

**Batch BGC0387 - EPA 5030 Water MS**

**Blank (BGC0387-BLK1)**

Prepared & Analyzed: 03/14/23

Acenaphthene	ND	0.500	ug/l							
Acenaphthylene	ND	0.200	"							
Anthracene	ND	0.200	"							
Benzo (a) anthracene	ND	0.100	"							
Benzo (b) fluoranthene	ND	0.200	"							
Benzo (k) fluoranthene	ND	0.200	"							
Benzo (g,h,i) perylene	ND	0.200	"							
Benzo (a) pyrene	ND	0.200	"							
Chrysene	ND	0.200	"							
Dibenz (a,h) anthracene	ND	0.200	"							
Fluoranthene	ND	2.00	"							
Fluorene	ND	0.200	"							
Indeno (1,2,3-cd) pyrene	ND	0.300	"							
Phenanthrene	ND	0.500	"							
Pyrene	ND	1.00	"							
1-Methylnaphthalene	ND	0.500	"							
2-Methylnaphthalene	ND	0.500	"							
Surrogate: 2-Methylnaphthalene-d10	2.03		"	2.00		102	40-150			
Surrogate: Fluoranthene-d10	2.23		"	2.00		112	40-150			

**LCS (BGC0387-BS1)**

Prepared & Analyzed: 03/14/23

Acenaphthene	1.94	0.500	ug/l	2.00		97.0	30-120			
Acenaphthylene	1.84	0.200	"	2.00		92.0	30-120			
Anthracene	1.87	0.200	"	2.00		93.7	30-120			
Benzo (a) anthracene	1.71	0.100	"	2.00		85.4	30-120			
Benzo (b) fluoranthene	1.92	0.200	"	2.00		95.9	30-120			
Benzo (k) fluoranthene	2.21	0.200	"	2.00		110	30-120			
Benzo (g,h,i) perylene	1.62	0.200	"	2.00		81.0	30-120			
Benzo (a) pyrene	1.95	0.200	"	2.00		97.5	30-120			
Chrysene	1.87	0.200	"	2.00		93.3	30-120			
Dibenz (a,h) anthracene	1.64	0.200	"	2.00		81.8	30-120			
Fluoranthene	1.96	2.00	"	2.00		97.9	30-120			
Fluorene	1.92	0.200	"	2.00		96.1	30-120			
Indeno (1,2,3-cd) pyrene	1.64	0.300	"	2.00		81.9	30-120			
Phenanthrene	2.11	0.500	"	2.00		106	30-120			
Pyrene	2.17	1.00	"	2.00		108	30-120			
1-Methylnaphthalene	1.79	0.500	"	2.00		89.7	30-120			
2-Methylnaphthalene	1.70	0.500	"	2.00		85.0	0-200			

Summit Scientific

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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

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

**Summit Scientific**

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

**Batch BGC0387 - EPA 5030 Water MS**

**LCS (BGC0387-BS1)**

Prepared & Analyzed: 03/14/23

Surrogate: 2-Methylnaphthalene-d10	1.88		ug/l	2.00		93.8	40-150		
Surrogate: Fluoranthene-d10	2.21		"	2.00		111	40-150		

**LCS Dup (BGC0387-BSD1)**

Prepared & Analyzed: 03/14/23

Acenaphthene	1.95	0.500	ug/l	2.00		97.3	30-120	0.373	30
Acenaphthylene	1.83	0.200	"	2.00		91.5	30-120	0.562	30
Anthracene	1.73	0.200	"	2.00		86.5	30-120	8.08	30
Benzo (a) anthracene	1.67	0.100	"	2.00		83.6	30-120	2.05	30
Benzo (b) fluoranthene	1.90	0.200	"	2.00		95.0	30-120	0.988	30
Benzo (k) fluoranthene	2.22	0.200	"	2.00		111	30-120	0.679	30
Benzo (g,h,i) perylene	1.56	0.200	"	2.00		78.0	30-120	3.71	30
Benzo (a) pyrene	1.91	0.200	"	2.00		95.5	30-120	2.10	30
Chrysene	1.84	0.200	"	2.00		92.2	30-120	1.19	30
Dibenz (a,h) anthracene	1.54	0.200	"	2.00		76.9	30-120	6.16	30
Fluoranthene	1.88	2.00	"	2.00		94.2	30-120	3.85	30
Fluorene	1.92	0.200	"	2.00		96.2	30-120	0.0957	30
Indeno (1,2,3-cd) pyrene	1.51	0.300	"	2.00		75.6	30-120	8.00	30
Phenanthrene	2.01	0.500	"	2.00		101	30-120	4.79	30
Pyrene	2.13	1.00	"	2.00		107	30-120	1.70	30
1-Methylnaphthalene	1.79	0.500	"	2.00		89.3	30-120	0.536	30
2-Methylnaphthalene	1.76	0.500	"	2.00		87.8	0-200	3.28	200
Surrogate: 2-Methylnaphthalene-d10	1.80		"	2.00		90.2	40-150		
Surrogate: Fluoranthene-d10	2.11		"	2.00		105	40-150		

Summit Scientific

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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

**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 BGC0383 - General Preparation**

**Blank (BGC0383-BLK1)**

Prepared & Analyzed: 03/14/23

Chloride	ND	0.0600	mg/L							
Sulfate	ND	0.300	"							

**LCS (BGC0383-BS1)**

Prepared & Analyzed: 03/14/23

Chloride	3.03	0.0600	mg/L	3.00	101	90-110				
Sulfate	13.6	0.300	"	15.0	90.7	90-110				

**Duplicate (BGC0383-DUP1)**

Source: 2303233-03

Prepared & Analyzed: 03/14/23

Chloride	302	12.0	mg/L		354			15.8	20	
Sulfate	806	60.0	"		938			15.2	20	

**Matrix Spike (BGC0383-MS1)**

Source: 2303233-03

Prepared & Analyzed: 03/14/23

Chloride	965	12.0	mg/L	600	354	102	80-120			
Sulfate	3980	60.0	"	3000	938	101	80-120			

Summit Scientific

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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

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

**Summit Scientific**

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

**Batch BGC0367 - General Preparation**

**Blank (BGC0367-BLK1)**

Prepared & Analyzed: 03/13/23

Total Dissolved Solids      ND      10.0      mg/L

**Duplicate (BGC0367-DUP1)**

Source: 2303241-01

Prepared & Analyzed: 03/13/23

Total Dissolved Solids      593      10.0      mg/L      581      1.98      20

Summit Scientific

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

Project: Noble - HSR Charlton 08-20

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
03/17/23 10:46

### Notes and Definitions

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