

SECOND QUARTER 2022 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. 119th 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
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
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
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
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

Notes:

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

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

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

LNAPL relative density was estimated to be 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)	TDS (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
COGCC Groundwater Standard ⁽¹⁾		5	560	700	1,400	140	67	67	<1.25 x Background	250 or <1.25 x Background	250 or <1.25 x Background
GW01	09/13/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	NA
BH01	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	728	203	273
BH01	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	664	93.8	29.8
BH01	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,920	416	467
BH02	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,280	348	634
BH02	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	945	192	93.6
BH02	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,220	540	644
BH03 ⁽²⁾	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,070	298	388
BH03 ⁽²⁾	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,370	292	314
BH03 ⁽²⁾	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,660	551	954
BH04	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	836	212	374
BH04	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	780	151	103
BH04	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,230	221	306
BH05	10/27/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	816	215	365
BH05	03/08/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	640	111	57.8
BH05	06/14/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	988	161	145

Notes:

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

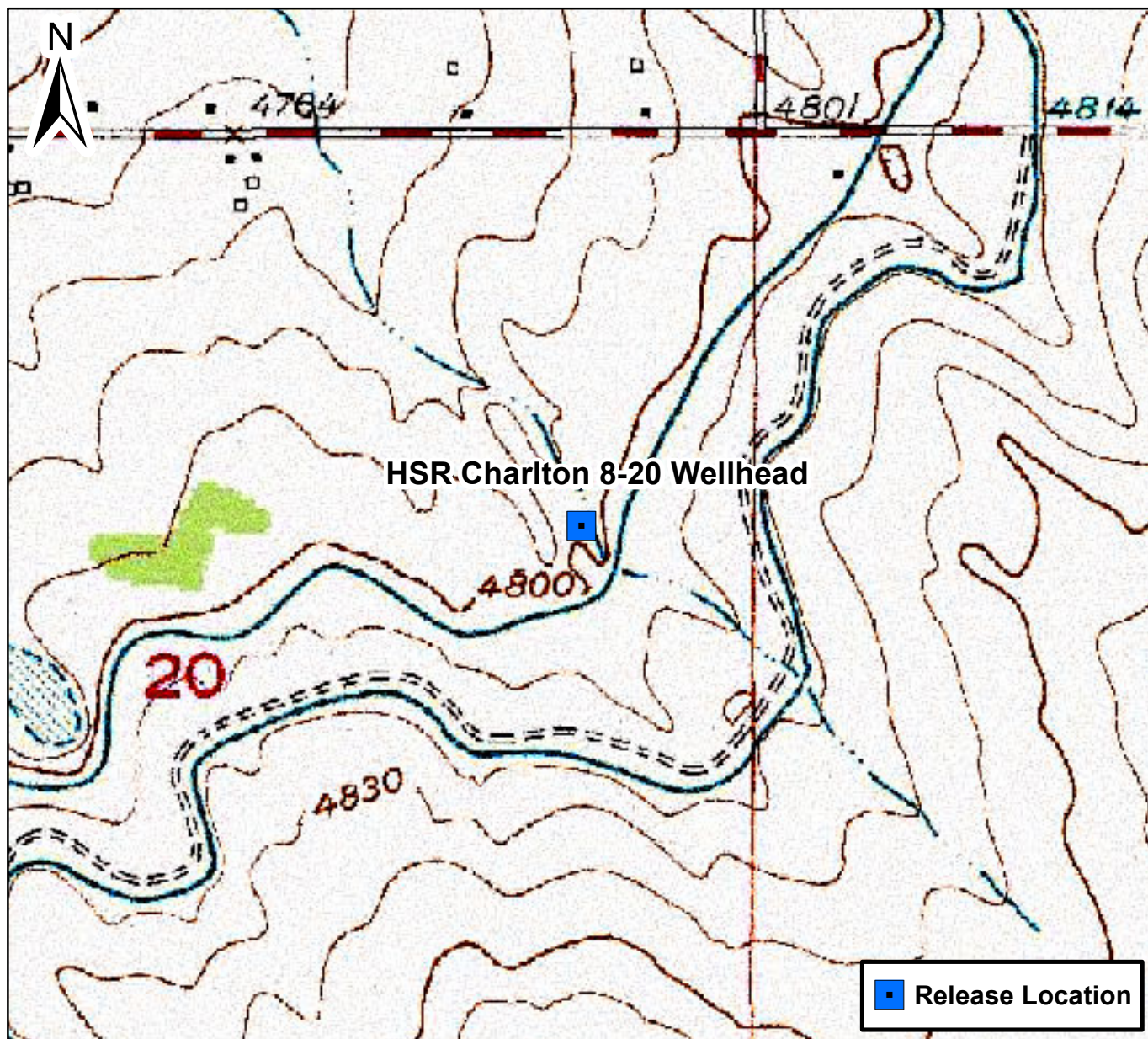
⁽²⁾ Monitoring well used to determine background concentration levels

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
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.



0 875 1,750 Feet

Figure 1

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





DATE:	07/20/2022
DESIGNED BY:	JW
DRAWN BY:	CA



TASMAN
GEOSCIENCES


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

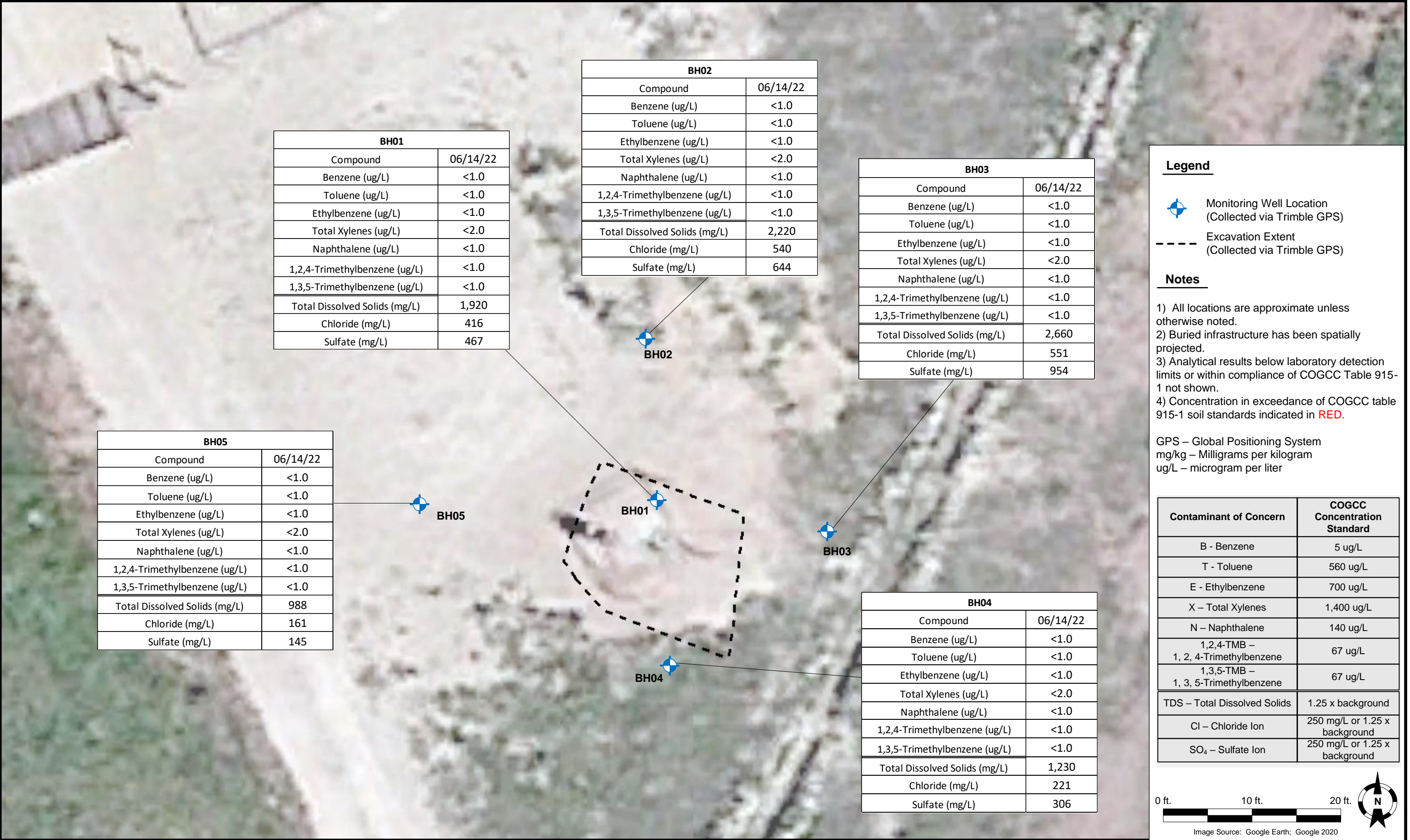
Noble Energy, Inc. – DJ Basin
HSR Charlton 08-20 Wellhead
SENE, Section 20, Township 4 North, Range 65 West
Weld County, Colorado

Site Overview Map

FIGURE
2



DATE:	06/28/2022	 TASMAN Tasman Geosciences, Inc. 6855 W 119 th Ave. 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	Groundwater Potentiometric Surface Contour Map (06/14/2022)	FIGURE 3
DESIGNED BY:	JW				
DRAWN BY:	JC				



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 04, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - HSR Charlton 08-20

Work Order #2206220

Enclosed are the results of analyses for samples received by Summit Scientific on 06/14/22 17:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - HSR Charlton 08-20

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/04/22 08:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2206220-01	Water	06/14/22 13:01	06/14/22 17:25
BH02	2206220-02	Water	06/14/22 12:48	06/14/22 17:25
BH03	2206220-03	Water	06/14/22 12:38	06/14/22 17:25
BH04	2206220-04	Water	06/14/22 12:53	06/14/22 17:25
BH05	2206220-05	Water	06/14/22 12:39	06/14/22 17:25

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2206220

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Noble /Tasman GeosciencesProject Manager: Jake Whritenour

Address: 6855 W. 119th St.

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield CO 80020

Phone: 303-487-1228

Project Name: HSR Charlton 8-20

Sampler Name: Aaron Otillar

Project Number: N/A

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	Napthalene	1,2,4 TMB	1,3,5 TMB	TDS	Chloride	Sulfate		
1	BH01	6/14/22	1301	4	3		1		x				x	x	x	x	x	x	x		
2	BH02		1248																		
3	BH03		1238																		
4	BH04		1253																		
5	BH05		1239																		
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>6/14/22 1500</u>	Received by: <u>TASMAN LOCKBOX</u>	Date/Time: <u>6/14/22 1500</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>49</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: <u>Tasman LockBox</u>	Date/Time: <u>6/14/22 1725</u>	Received by: <u>[Signature]</u>	Date/Time: <u>6/14/22 1725</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2206220

Client: Noble Tasmania Client Project ID: HSR Charlton 8-20

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

	-			
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Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 4.9Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on ice
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
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⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽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 ₂ SO ₄ , NaOH, HNO ₃ , etc.	-			HCl
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.


Custodian Printed Name

6/14/22

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:
08/04/22 08:37

BH01
2206220-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/14/22 13:01**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFF0420	06/15/22	06/17/22	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: **06/14/22 13:01**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		55.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.6 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/14/22 13:01**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	416	12.0	mg/L	200	BFF0482	06/17/22	06/17/22	EPA 300.0	
Sulfate	467	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/14/22 13:01**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	1920	10.0	mg/L	1	BFF0417	06/15/22	06/15/22	SM2540C	

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:
08/04/22 08:37

BH02
2206220-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/14/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0420	06/15/22	06/17/22	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: **06/14/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		55.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.2 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/14/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	540	12.0	mg/L	200	BFF0482	06/17/22	06/17/22	EPA 300.0	
Sulfate	644	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/14/22 12:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	2220	10.0	mg/L	1	BFF0417	06/15/22	06/15/22	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:
08/04/22 08:37

BH03
2206220-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/14/22 12:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0420	06/15/22	06/17/22	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: **06/14/22 12:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		56.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/14/22 12:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	551	12.0	mg/L	200	BFF0482	06/17/22	06/17/22	EPA 300.0	
Sulfate	954	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/14/22 12:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	2660	10.0	mg/L	1	BFF0417	06/15/22	06/15/22	SM2540C	

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:
08/04/22 08:37

BH04
2206220-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/14/22 12:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0420	06/15/22	06/17/22	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: **06/14/22 12:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		55.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.4 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/14/22 12:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	221	12.0	mg/L	200	BFF0482	06/17/22	06/17/22	EPA 300.0	
Sulfate	306	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/14/22 12:53**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1230	10.0	mg/L	1	BFF0417	06/15/22	06/15/22	SM2540C	

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:
08/04/22 08:37

BH05
2206220-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/14/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFF0420	06/15/22	06/17/22	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: **06/14/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		55.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.9 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/14/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	161	12.0	mg/L	200	BFF0482	06/17/22	06/17/22	EPA 300.0	
Sulfate	145	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/14/22 12:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	988	10.0	mg/L	1	BFF0417	06/15/22	06/15/22	SM2540C	

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:
08/04/22 08:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFF0420 - EPA 5030 Water MS

Blank (BFF0420-BLK1)

Prepared: 06/15/22 Analyzed: 06/16/22

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	6.46		"	13.3		48.5	23-173			
Surrogate: Toluene-d8	11.8		"	13.3		88.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.0	21-167			

LCS (BFF0420-BS1)

Prepared: 06/15/22 Analyzed: 06/16/22

Benzene	24.0	1.0	ug/l	33.3		72.0	51-132			
Toluene	27.8	1.0	"	33.3		83.6	51-138			
Ethylbenzene	32.3	1.0	"	33.3		97.0	58-146			
m,p-Xylene	70.9	2.0	"	66.7		106	57-144			
o-Xylene	36.1	1.0	"	33.3		108	53-146			
Naphthalene	25.0	1.0	"	33.3		74.9	70-130			
1,2,4-Trimethylbenzene	38.3	1.0	"	33.3		115	70-130			
1,3,5-Trimethylbenzene	37.6	1.0	"	33.3		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	7.97		"	13.3		59.8	23-173			
Surrogate: Toluene-d8	12.2		"	13.3		91.2	20-170			
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.7	21-167			

Matrix Spike (BFF0420-MS1)

Source: 2206203-01

Prepared: 06/15/22 Analyzed: 06/16/22

Benzene	24.6	1.0	ug/l	33.3	ND	73.8	34-141			
Toluene	28.6	1.0	"	33.3	ND	85.8	27-151			
Ethylbenzene	34.9	1.0	"	33.3	ND	105	29-160			
m,p-Xylene	74.8	2.0	"	66.7	ND	112	20-166			
o-Xylene	37.3	1.0	"	33.3	ND	112	33-159			
Naphthalene	29.0	1.0	"	33.3	ND	87.1	70-130			
1,2,4-Trimethylbenzene	40.6	1.0	"	33.3	ND	122	70-130			
1,3,5-Trimethylbenzene	39.4	1.0	"	33.3	ND	118	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.81		"	13.3		73.6	23-173			
Surrogate: Toluene-d8	12.1		"	13.3		90.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	21-167			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BFF0420 - EPA 5030 Water MS

Matrix Spike Dup (BFF0420-MSD1)	Source: 2206203-01			Prepared: 06/15/22 Analyzed: 06/16/22						
Benzene	24.1	1.0	ug/l	33.3	ND	72.2	34-141	2.10	30	
Toluene	28.4	1.0	"	33.3	ND	85.2	27-151	0.667	30	
Ethylbenzene	35.2	1.0	"	33.3	ND	106	29-160	0.969	30	
m,p-Xylene	75.9	2.0	"	66.7	ND	114	20-166	1.46	30	
o-Xylene	37.4	1.0	"	33.3	ND	112	33-159	0.214	30	
Naphthalene	29.6	1.0	"	33.3	ND	88.8	70-130	1.98	30	
1,2,4-Trimethylbenzene	41.3	1.0	"	33.3	ND	124	70-130	1.59	30	
1,3,5-Trimethylbenzene	40.1	1.0	"	33.3	ND	120	70-130	1.73	30	
Surrogate: 1,2-Dichloroethane-d4	8.58		"	13.3		64.4	23-173			
Surrogate: Toluene-d8	12.1		"	13.3		90.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

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Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BFF0482 - General Preparation

Blank (BFF0482-BLK1)

Prepared & Analyzed: 06/17/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFF0482-BS1)

Prepared & Analyzed: 06/17/22

Chloride	3.04	0.0600	mg/L	3.00	101	90-110
Sulfate	14.2	0.300	"	15.0	94.9	90-110

Duplicate (BFF0482-DUP1)

Source: 2206220-01

Prepared & Analyzed: 06/17/22

Chloride	400	12.0	mg/L	416	4.07	20
Sulfate	554	60.0	"	467	17.1	20

Matrix Spike (BFF0482-MS1)

Source: 2206220-01

Prepared & Analyzed: 06/17/22

Chloride	1020	12.0	mg/L	600	416	101	80-120
Sulfate	3420	60.0	"	3000	467	98.3	80-120

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Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BFF0417 - General Preparation

Blank (BFF0417-BLK1)

Prepared & Analyzed: 06/15/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFF0417-DUP1)

Source: 2206196-01

Prepared & Analyzed: 06/15/22

Total Dissolved Solids 13300 10.0 mg/L 14000 5.20 20

Summit Scientific

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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