

# FOURTH QUARTER 2020 SITE MONITORING DATA

## UPRC 33-4F, 5F, HUNT FEDERAL K 33-19

COGCC SPILL TRACKING # 464229  
COGCC REMEDIATION # 13785

Prepared for:



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



6855 West 119th Avenue  
Broomfield, Colorado, 80020

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**  
**NOBLE ENERGY, INC. - UPRC 33-4F, 5F, HUNT FEDERAL K 33-19**

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	07/22/19	4761.40	13.77	1.56	ND	ND	4757.34
BH01	10/24/19	4761.40	13.66	2.06	ND	ND	4756.84
BH01	01/21/20	4761.40	13.64	2.55	ND	ND	4756.35
BH01	04/08/20	4761.40	13.61	1.96	ND	ND	4756.94
BH01	07/17/20	4761.40	13.51	1.59	ND	ND	4757.31
BH01	10/19/20	4761.40	13.62	2.02	ND	ND	4756.88
BH02	07/22/19	4762.85	14.50	1.90	ND	ND	4757.59
BH02	10/24/19	4762.85	14.39	2.40	ND	ND	4757.09
BH02	01/21/20	4762.85	14.37	2.88	ND	ND	4756.61
BH02	04/08/20	4762.85	14.30	2.23	ND	ND	4757.26
BH02	07/17/20	4762.85	14.35	1.95	ND	ND	4757.54
BH02	10/19/20	4762.85	14.40	2.34	ND	ND	4757.15
BH03	07/22/19	4761.87	14.02	1.54	ND	ND	4757.23
BH03	10/24/19	4761.87	13.95	2.09	ND	ND	4756.68
BH03	01/21/20	4761.87	13.97	2.60	ND	ND	4756.17
BH03	04/08/20	4761.87	13.98	1.88	ND	ND	4756.89
BH03	07/17/20	4761.87	13.92	1.56	ND	ND	4757.21
BH03	10/19/20	4761.87	13.98	2.01	ND	ND	4756.76
BH04	07/22/19	4758.25	10.70	1.57	ND	ND	4756.97
BH04	10/24/19	4758.25	10.43	2.08	ND	ND	4756.46
BH04	01/21/20	4758.25	10.35	2.58	ND	ND	4755.96
BH04	04/08/20	4758.25	10.35	1.93	ND	ND	4756.61
BH04	07/17/20	4758.25	10.35	1.56	ND	ND	4756.98
BH04	10/19/20	4758.25	10.38	2.05	ND	ND	4756.49
BH05	07/22/19	4761.67	13.55	1.60	ND	ND	4757.39
BH05	10/24/19	4761.67	13.46	2.02	ND	ND	4756.97
BH05	01/21/20	4761.67	13.64	2.52	ND	ND	4756.47
BH05	04/08/20	4761.67	13.65	1.96	ND	ND	4757.03
BH05	07/17/20	4761.67	14.65	1.67	ND	ND	4757.32
BH05	10/19/20	4761.67	13.66	1.98	ND	ND	4757.01
BH06	07/22/19	4761.54	12.65	1.79	ND	ND	4757.61
BH06	10/24/19	4761.54	8.71	2.20	ND	ND	4757.20
BH06	01/21/20	4761.54	12.46	2.69	ND	ND	4756.71
BH06	04/08/20	4761.54	12.39	2.14	ND	ND	4757.26
BH06	07/17/20	4761.54	12.41	1.87	ND	ND	4757.53
BH06	10/19/20	4761.54	12.49	2.17	ND	ND	4757.23
BH07	07/22/19	4762.40	13.94	1.69	ND	ND	4757.40
BH07	10/24/19	4762.40	13.77	2.03	ND	ND	4757.06
BH07	01/21/20	4762.40	13.42	2.53	ND	ND	4756.56
BH07	04/08/20	4762.40	13.37	2.04	ND	ND	4757.05

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**  
**NOBLE ENERGY, INC. - UPRC 33-4F, 5F, HUNT FEDERAL K 33-19**

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)
BH07	07/17/20	4762.40	13.45	1.77	ND	ND	4757.32
BH07	10/19/20	4762.40	13.54	2.02	ND	ND	4757.07
BH08	07/22/19	4757.80	11.12	0.94	ND	ND	4757.20
BH08	10/24/19	4757.80	11.71	2.27	ND	ND	4755.87
BH08	01/21/20	4757.80	10.68	1.90	ND	ND	4756.24
BH08	04/08/20	4757.80	10.65	1.32	ND	ND	4756.82
BH08	07/17/20	4757.80	10.65	1.01	ND	ND	4757.13
BH08	10/19/20	4757.80	10.65	1.36	ND	ND	4756.78

**Notes:**

ft. = Feet

AMSL = Above mean sea level

BTOC = Below top of casing

LNAPL = Light non-aqueous phase liquid

ND = No LNAPL detected

\* 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

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

**TABLE 2**  
**GROUNDWATER ANALYTICAL DATA**  
**NOBLE ENERGY, INC. - UPRC 33-4F, 5F, HUNT FEDERAL K 33-19**

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>COGCC Standard</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>
GW01	04/18/19	<b>410</b>	340	68	<b>1,500</b>
GW02	07/02/19	<b>17</b>	<1.0	35	200
BH01	07/22/19	<1.0	<1.0	<1.0	<2.0
BH01	10/24/19	<1.0	<1.0	<1.0	<2.0
BH01	01/21/20	<1.0	<1.0	<1.0	<2.0
BH01	04/08/20	<1.0	<1.0	<1.0	<2.0
BH01	07/17/20	<1.0	<1.0	<1.0	<2.0
BH01	10/19/20	<1.0	<1.0	<1.0	<2.0
BH02	07/22/19	<1.0	<1.0	<1.0	<2.0
BH02	10/24/19	<1.0	<1.0	<1.0	<2.0
BH02	01/21/20	<1.0	<1.0	<1.0	<2.0
BH02	04/08/20	<1.0	<1.0	<1.0	<2.0
BH02	07/17/20	<1.0	<1.0	<1.0	<2.0
BH02	10/19/20	<1.0	<1.0	<1.0	<2.0
BH03	07/22/19	<1.0	<1.0	<1.0	<2.0
BH03	10/24/19	<1.0	<1.0	<1.0	<2.0
BH03	01/21/20	<1.0	<1.0	<1.0	<2.0
BH03	04/08/20	<1.0	<1.0	<1.0	<2.0
BH03	07/17/20	<1.0	<1.0	<1.0	<2.0
BH03	10/19/20	<1.0	<1.0	<1.0	<2.0
BH04	07/22/19	<1.0	<1.0	<1.0	<2.0
BH04	10/24/19	<1.0	<1.0	<1.0	<2.0
BH04	01/21/20	<1.0	<1.0	<1.0	<2.0
BH04	04/08/20	<1.0	<1.0	<1.0	<2.0
BH04	07/17/20	<1.0	<1.0	<1.0	<2.0
BH04	10/19/20	<1.0	<1.0	<1.0	<2.0
BH05	07/22/19	<1.0	<1.0	<1.0	<2.0
BH05	10/24/19	<b>10</b>	<1.0	5.6	28
BH05	01/21/20	<b>31</b>	<1.0	14	120
BH05	04/08/20	<b>42</b>	<1.0	25	130
BH05	07/17/20	<1.0	<1.0	<1.0	<2.0
BH05	10/19/20	<1.0	<1.0	<1.0	<2.0
BH06	07/22/19	<1.0	<1.0	<1.0	<2.0
BH06	10/24/19	<1.0	<1.0	<1.0	<2.0
BH06	01/21/20	<1.0	<1.0	<1.0	<2.0
BH06	04/08/20	<1.0	<1.0	<1.0	<2.0
BH06	07/17/20	<1.0	<1.0	<1.0	<2.0
BH06	10/19/20	<1.0	<1.0	<1.0	<2.0
BH07	07/22/19	<1.0	<1.0	<1.0	<2.0
BH07	10/24/19	<1.0	<1.0	<1.0	<2.0
BH07	01/21/20	<1.0	<1.0	<1.0	<2.0
BH07	04/08/20	<1.0	<1.0	<1.0	<2.0

**TABLE 2**  
**GROUNDWATER ANALYTICAL DATA**  
**NOBLE ENERGY, INC. - UPRC 33-4F, 5F, HUNT FEDERAL K 33-19**

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>COGCC Standard</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>
BH07	07/17/20	<1.0	<1.0	<1.0	<2.0
BH07	10/19/20	<1.0	<1.0	<1.0	<2.0
BH08	07/22/19	<1.0	<1.0	<1.0	<2.0
BH08	10/24/19	<1.0	<1.0	<1.0	<2.0
BH08	01/21/20	<1.0	<1.0	<1.0	<2.0
BH08	04/08/20	<1.0	<1.0	<1.0	<2.0
BH08	07/17/20	<1.0	<1.0	<1.0	<2.0
BH08	10/19/20	<1.0	<1.0	<1.0	<2.0

**Notes:**

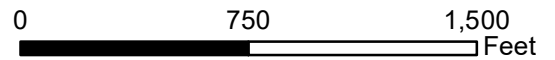
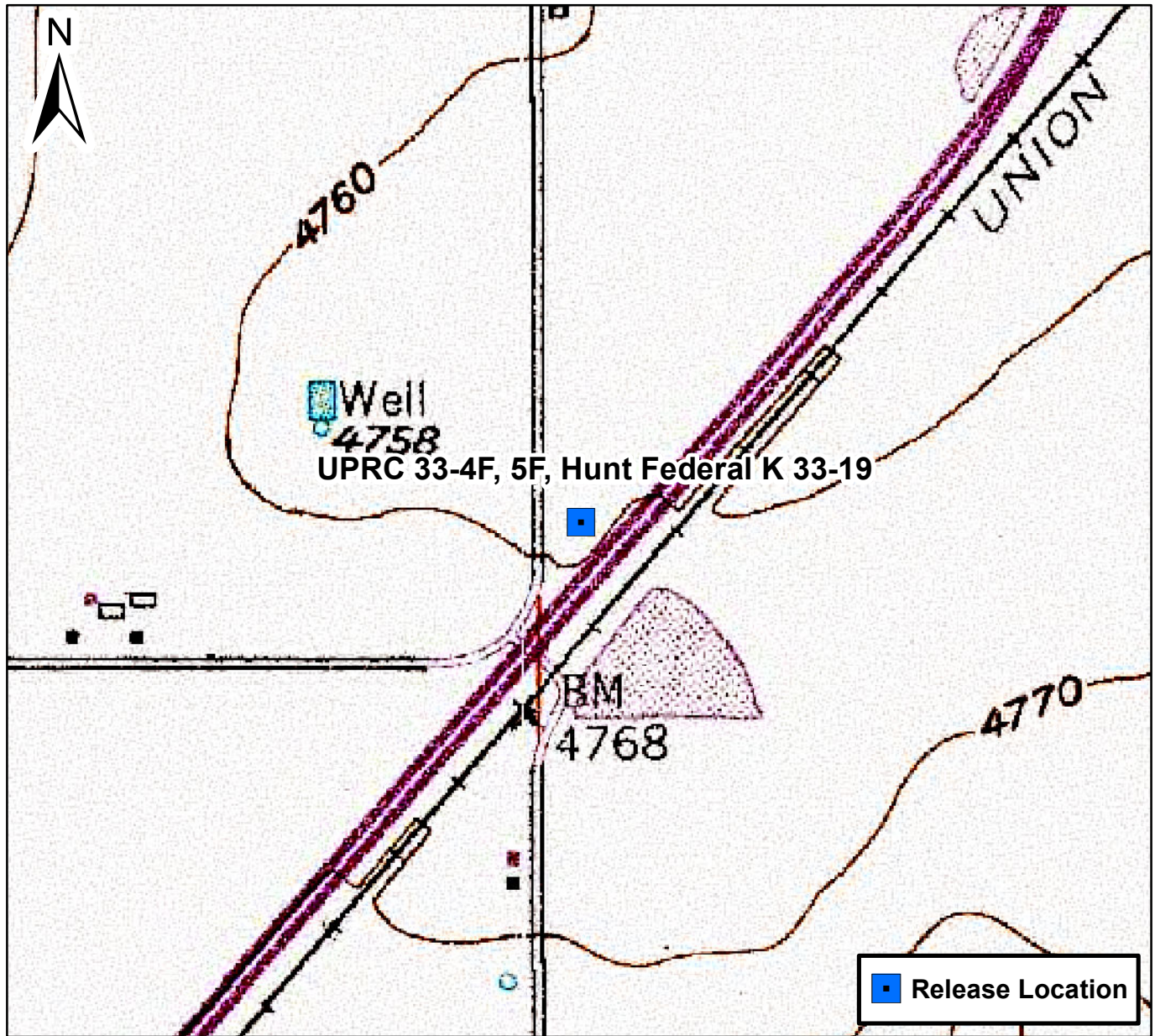
COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

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

Groundwater standards referenced from COGCC Table 910-1

**Highlighted results are equal to or exceed the COGCC Table 910-1 standard**










### Figure 1

Site Location Map  
 UPRC 33-4F, 5F, Hunt Federal K 33-19  
 SWNW S33 T4N R66W  
 Weld County, Colorado

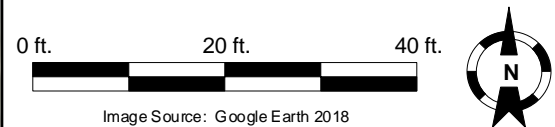




- Legend**
-  Monitoring Well  
(Collected via Trimble GPS)
  -  Fence  
(Collected via Trimble GPS)
  -  Release Location
  -  Excavation Extents - 2019  
(Collected via Trimble GPS)
  -  Noble Dump Line  
(Collected via Trimble GPS)
  -  Noble Flowline  
(Collected via Trimble GPS)
  -  DCP Line  
(Collected via Trimble GPS)

- Notes**
- 1) All locations are approximate unless otherwise noted.
  - 2) Buried infrastructure has been spatially projected.
  - 3) Site infrastructure has been removed; shown for illustrative purposes only

GPS – Global Positioning System



DATE:	04/17/2020
DESIGNED BY:	JW
DRAWN BY:	TC

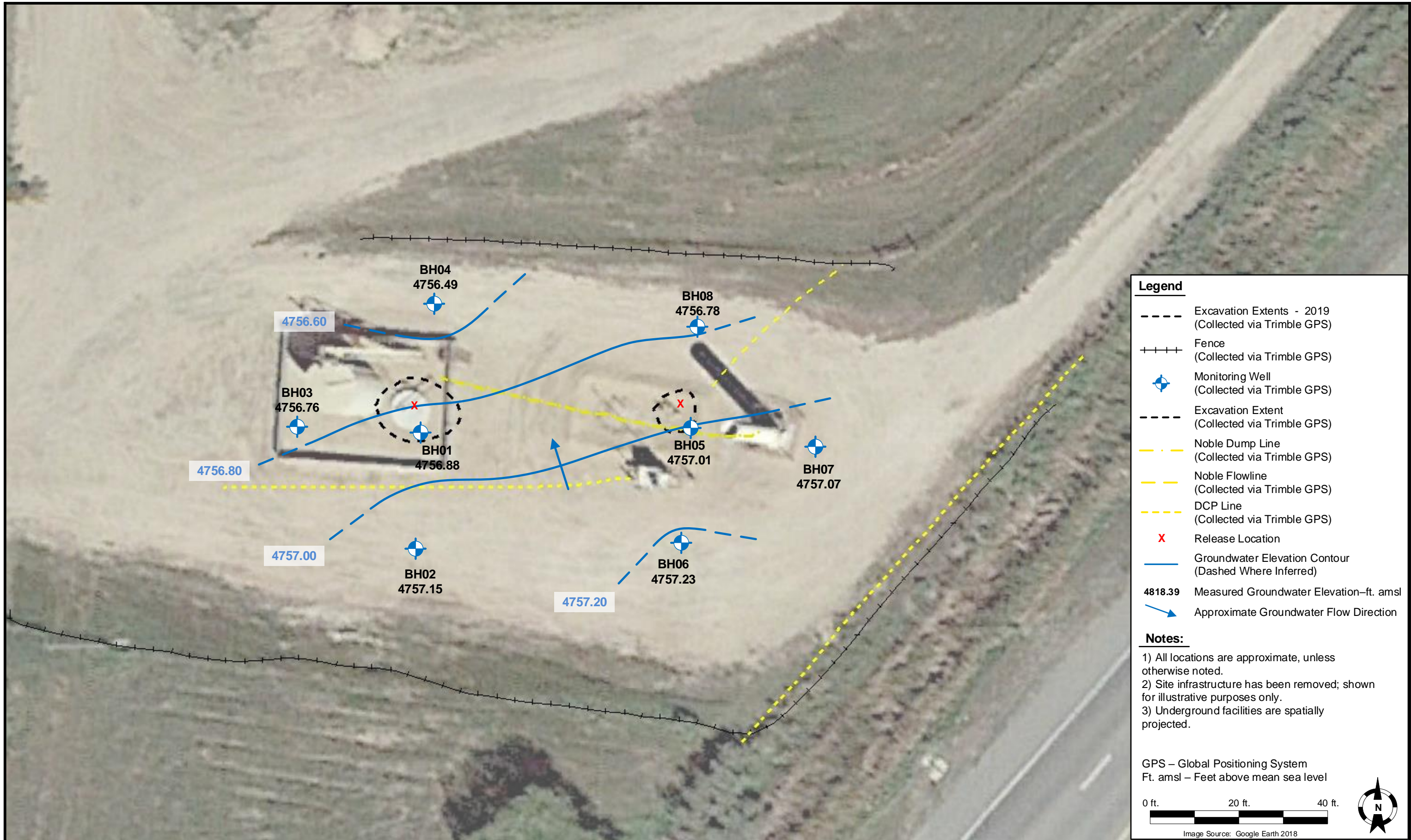


**Tasman Geosciences, Inc.**  
6855 W 119<sup>th</sup> Ave.  
Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**UPRC 33-4F, 5F, Hunt Federal K 33-19**  
 SWNW, Section 33, Township 4 North, Range 66 West  
 Weld County, Colorado

Site Overview Map

FIGURE  
2



DATE: 11/06/2020

DESIGNED BY: JW

DRAWN BY: TC



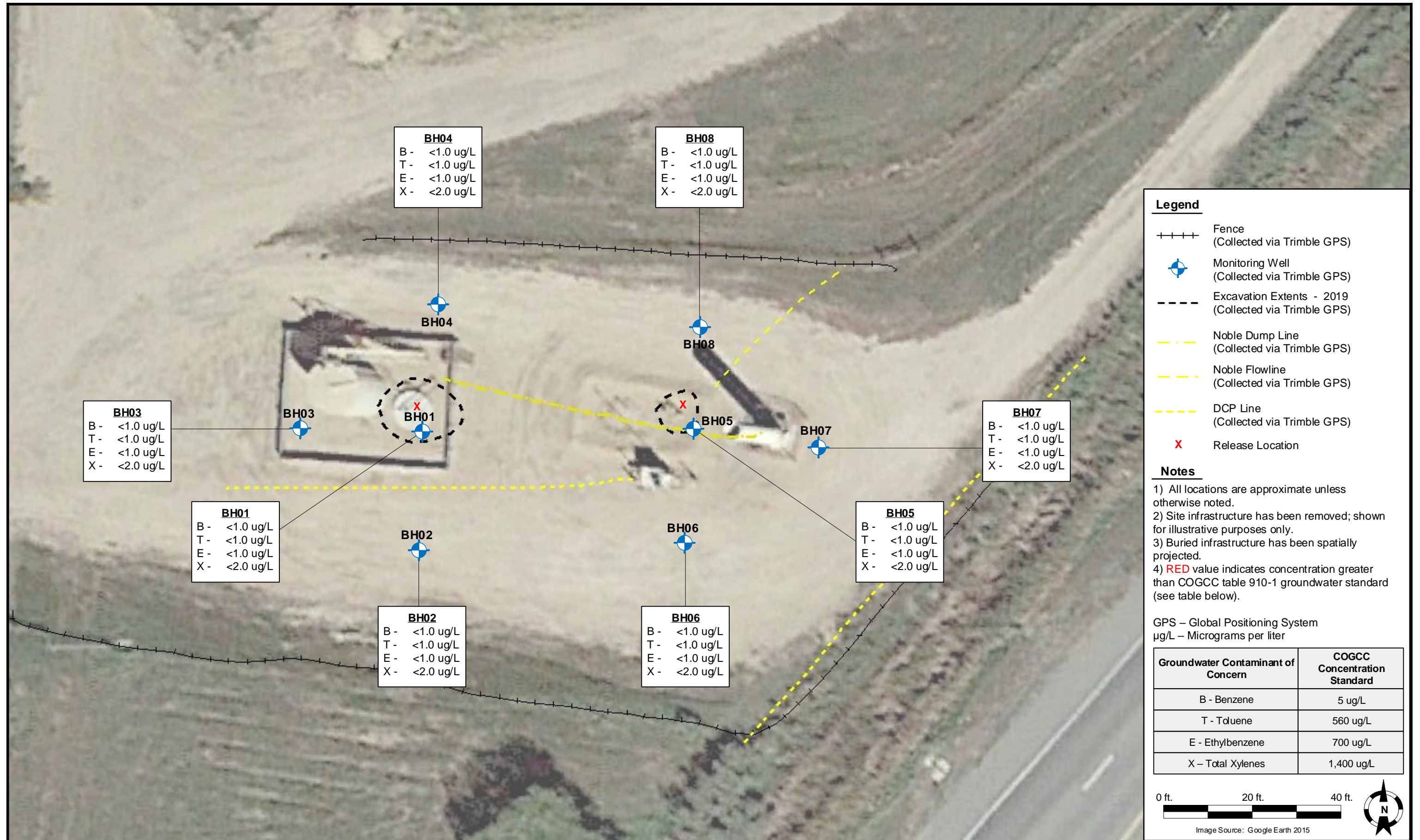
**TASMAN**  
GEOSCIENCES

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

**Noble Energy, Inc. – DJ Basin**  
**UPRC 33-4F, 5F, Hunt Federal K 33-19**  
SWNW, Section 33, Township 4 North, Range 66 West  
Weld County, Colorado

Groundwater Potentiometric  
Surface Contour Map  
(10/19/2020)

**FIGURE**  
3



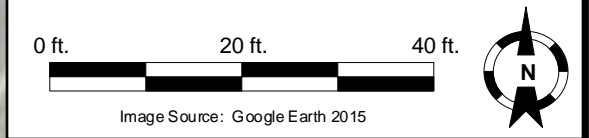
**Legend**

- ++++ Fence (Collected via Trimble GPS)
- Monitoring Well (Collected via Trimble GPS)
- Excavation Extents - 2019 (Collected via Trimble GPS)
- .-.- Noble Dump Line (Collected via Trimble GPS)
- .-.- Noble Flowline (Collected via Trimble GPS)
- .-.- DCP Line (Collected via Trimble GPS)
- X Release Location

- Notes**
- 1) All locations are approximate unless otherwise noted.
  - 2) Site infrastructure has been removed; shown for illustrative purposes only.
  - 3) Buried infrastructure has been spatially projected.
  - 4) RED value indicates concentration greater than COGCC table 910-1 groundwater standard (see table below).

GPS – Global Positioning System  
 µg/L – Micrograms per liter

Groundwater Contaminant of Concern	COGCC Concentration Standard
B - Benzene	5 µg/L
T - Toluene	560 µg/L
E - Ethylbenzene	700 µg/L
X – Total Xylenes	1,400 µg/L



DATE: 11/5/2020  
 DESIGNED BY: JW  
 DRAWN BY: MG

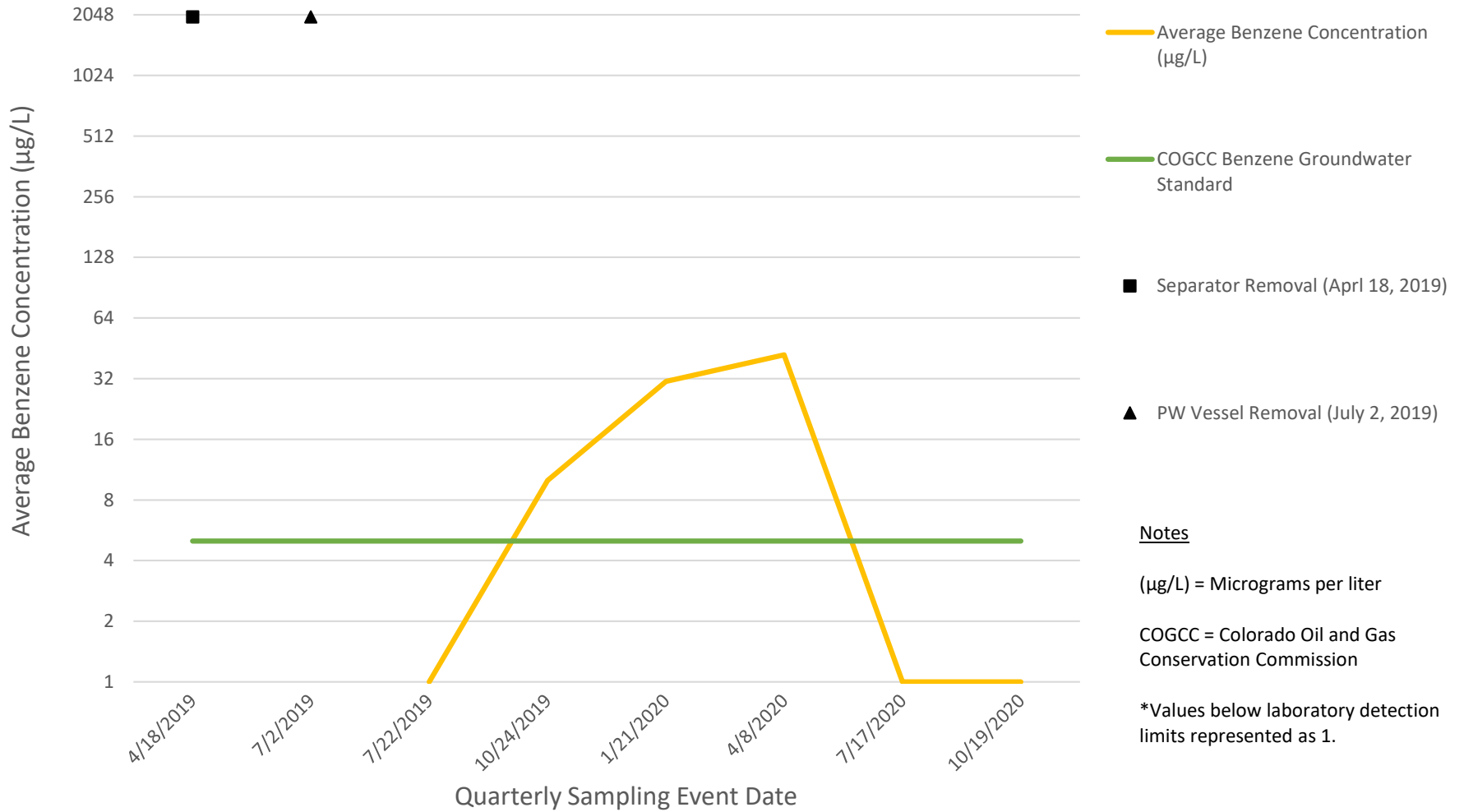
**TASMAN GEOSCIENCES**  
 Tasman Geosciences, Inc.  
 6855 W 119<sup>th</sup> Avenue  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**UPRC 33-4F, 5F, Hunt Federal K 33-19**  
 SWNW, Section 33, Township 4 North, Range 66 West  
 Weld County, Colorado

Groundwater Analytical  
 Results Map  
 (10/19/2020)

**FIGURE 4**

FIGURE 5  
 UPRC 33-4F, 5F, HUNT FEDERAL K 33-19  
 Average Quarterly Benzene Concentrations



Notes

(µg/L) = Micrograms per liter

COGCC = Colorado Oil and Gas Conservation Commission

\*Values below laboratory detection limits represented as 1.

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 26, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Work Order #2010229

Enclosed are the results of analyses for samples received by Summit Scientific on 10/19/20 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2010229-01	Water	10/19/20 12:17	10/19/20 17:30
BH02	2010229-02	Water	10/19/20 12:02	10/19/20 17:30
BH03	2010229-03	Water	10/19/20 11:54	10/19/20 17:30
BH04	2010229-04	Water	10/19/20 11:45	10/19/20 17:30
BH05	2010229-05	Water	10/19/20 12:08	10/19/20 17:30
BH06	2010229-06	Water	10/19/20 11:10	10/19/20 17:30
BH07	2010229-07	Water	10/19/20 11:23	10/19/20 17:30
BH08	2010229-08	Water	10/19/20 11:35	10/19/20 17:30

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.*

2010229

# Summit Scientific

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Noble / Tasman

Project Manager: Brandon Bruns, Invoice: Jacob Evans

Address: 6855 W 119<sup>th</sup> Ave.

E-Mail: bbruns @ tasman-geo.com

City/State/Zip: Broomfield, CO 80020

Phone: 303-487-1228


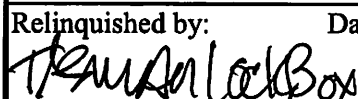

Project Name: UPRC 33-4F, Hunt Federal K33-19

Sampler Name: Y. Tsambis

Project Number: n/9

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	BTEX					
1	BH01	10/19/20	1217	3			X		X				X					
2	BH02		1202				X		X				X					
3	BH03		1154				X		X				X					
4	BH04		1145				X		X				X					
5	BH05		1208				X		X				X					
6	BH06		1110				X		X				X					
7	BH07		1123				X		X				X					
8	BH08		1135				X		X				X					
9																		
10																		

Relinquished by: 	Date/Time: 10/19/20 1630	Received by: Tasman Lock Box	Date/Time: 10/19/20 1630	Turn Around Time (Check)	Notes:
Relinquished by: 	Date/Time: 10/19/2020 1730	Received by: 	Date/Time: 10/19/2020 1730	Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt: 39
				Samples Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

**Sample Receipt Checklist**

S2 Work Order 2010229

Client: Noble/Tizman

Client Project ID: UPRC 33-4F, Hunt Federal

Shipped Via:  H.D.  P.U.  FedEx  UPS  USPS  Other

Airbill #: K33-19

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_ (Describe)

Temp (°C) 3.9

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<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"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input 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"/>	
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"/>	
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"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation <b>(excluding cooling)</b> <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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.

ET  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

10/19/2020  
Date/Time



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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
10/26/20 11:45

**BH01**  
**2010229-01 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 12:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **10/19/20 12:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH02**  
**2010229-02 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 12:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 12:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		94.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.5 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH03**  
**2010229-03 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 11:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 11:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.3 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.0 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH04**  
**2010229-04 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 11:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %		21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH05**  
**2010229-05 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 12:08**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		108 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.7 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH06**  
**2010229-06 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.4 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH07**  
**2010229-07 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		108 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.9 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

**BH08**  
**2010229-08 (Water)**

**Summit Scientific**

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

Date Sampled: **10/19/20 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BDJ0242	10/20/20	10/21/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/19/20 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.4 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
10/26/20 11:45

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

#### Summit Scientific

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

#### Batch BDJ0242 - EPA 5030 Water MS

##### Blank (BDJ0242-BLK1)

Prepared: 10/20/20 Analyzed: 10/21/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		104		23-173		
Surrogate: Toluene-d8	12.6		"	13.3		94.9		20-170		
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.7		21-167		

##### LCS (BDJ0242-BS1)

Prepared: 10/20/20 Analyzed: 10/21/20

Benzene	22.0	1.0	ug/l	33.3		65.9		51-132		
Toluene	29.5	1.0	"	33.3		88.4		51-138		
Ethylbenzene	36.5	1.0	"	33.3		110		58-146		
m,p-Xylene	74.9	2.0	"	66.7		112		57-144		
o-Xylene	37.0	1.0	"	33.3		111		53-146		
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.3		101		23-173		
Surrogate: Toluene-d8	12.7		"	13.3		95.3		20-170		
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.5		21-167		

##### Matrix Spike (BDJ0242-MS1)

Source: 2010229-01

Prepared: 10/20/20 Analyzed: 10/21/20

Benzene	22.6	1.0	ug/l	33.3	ND	67.8		34-141		
Toluene	30.5	1.0	"	33.3	ND	91.4		27-151		
Ethylbenzene	36.8	1.0	"	33.3	ND	110		29-160		
m,p-Xylene	74.5	2.0	"	66.7	ND	112		20-166		
o-Xylene	37.9	1.0	"	33.3	ND	114		33-159		
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108		23-173		
Surrogate: Toluene-d8	13.1		"	13.3		98.3		20-170		
Surrogate: 4-Bromofluorobenzene	15.2		"	13.3		114		21-167		

Summit Scientific

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

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
10/26/20 11:45

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

**Summit Scientific**

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

**Batch BDJ0242 - EPA 5030 Water MS**

**Matrix Spike Dup (BDJ0242-MSD1)**

Source: 2010229-01

Prepared: 10/20/20 Analyzed: 10/21/20

Benzene	22.5	1.0	ug/l	33.3	ND	67.6	34-141	0.266	30	
Toluene	30.5	1.0	"	33.3	ND	91.6	27-151	0.131	30	
Ethylbenzene	35.6	1.0	"	33.3	ND	107	29-160	3.20	30	
m,p-Xylene	72.0	2.0	"	66.7	ND	108	20-166	3.41	30	
o-Xylene	36.6	1.0	"	33.3	ND	110	33-159	3.44	30	
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.3		113	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		107	21-167			

Summit Scientific

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Broomfield CO, 80020

Project: Noble - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
10/26/20 11:45

### 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