

# SECOND 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, CO 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
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
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
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
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
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
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
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

**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
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
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
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
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
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
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
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

**Notes:**

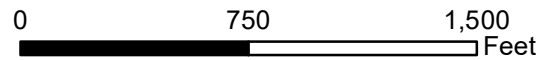
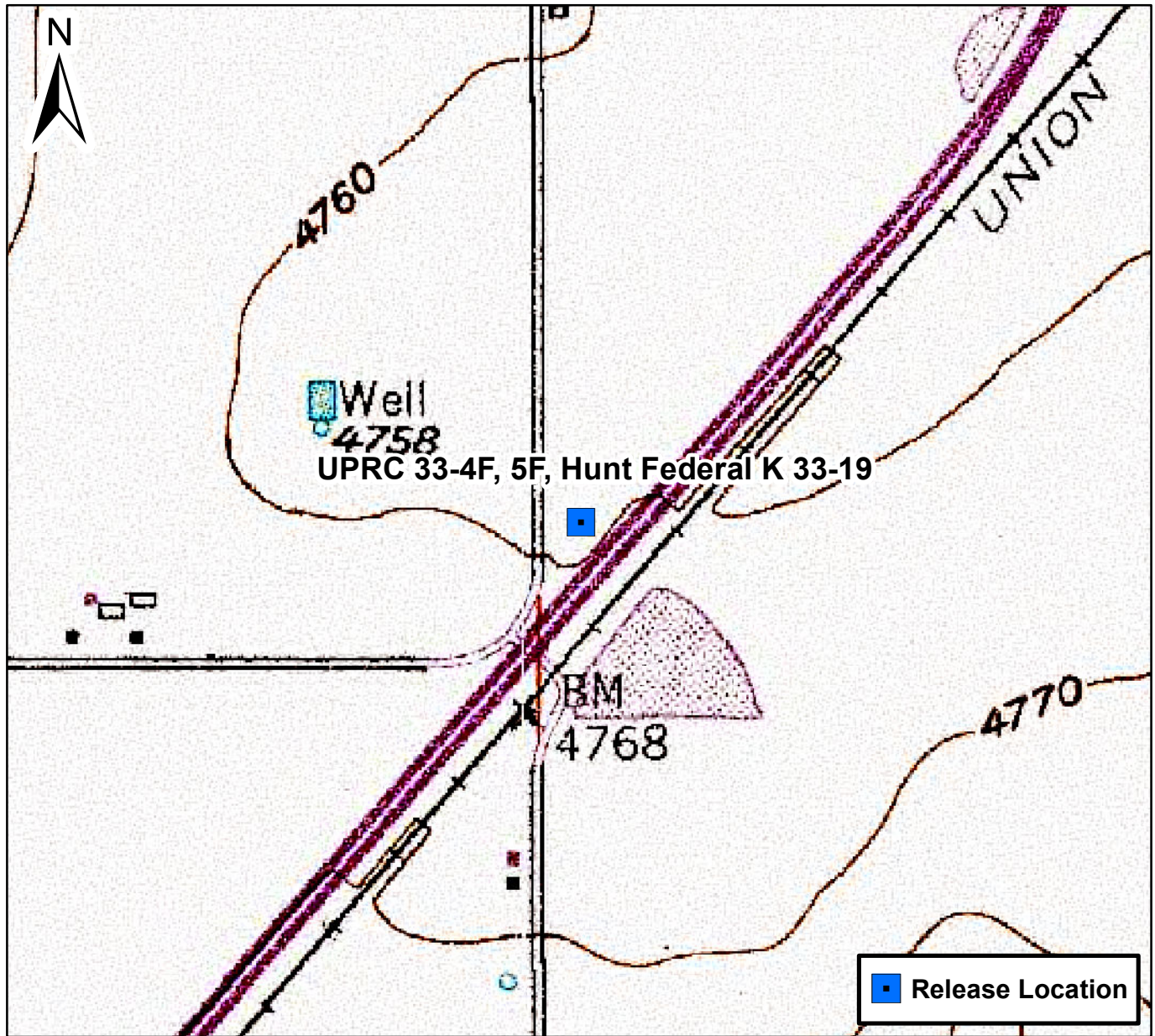
COGCC = Colorado Oil and Gas Conservation Commission

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

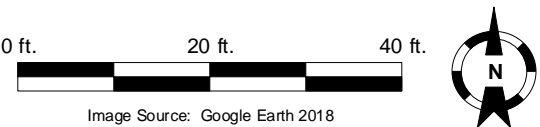


Image Source: Google Earth 2018

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



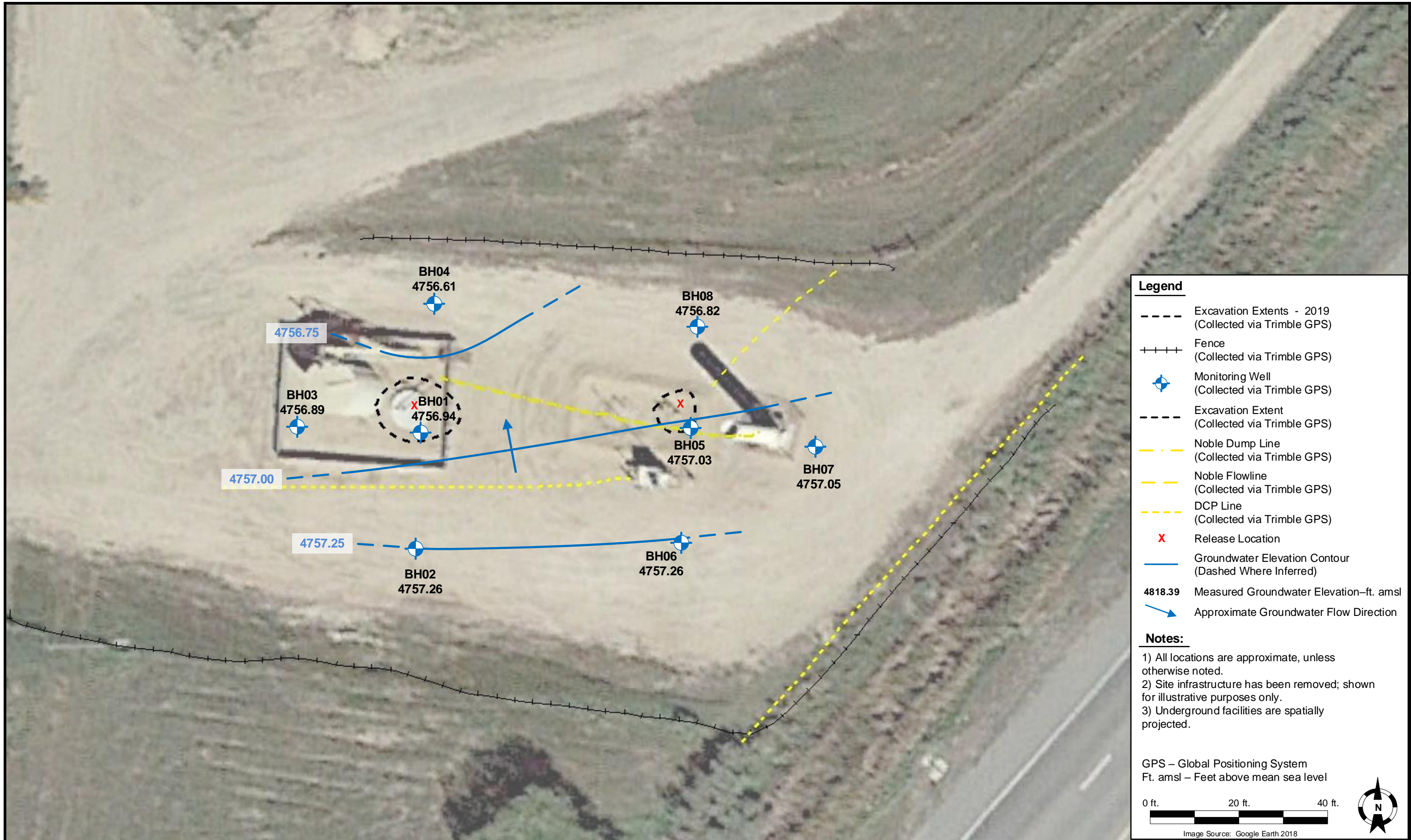
**TASMAN**  
GEOSCIENCES

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

Site Overview Map

FIGURE  
2



**Legend**

- Excavation Extents - 2019  
(Collected via Trimble GPS)
- + + + + Fence  
(Collected via Trimble GPS)
- ⊕ Monitoring Well  
(Collected via Trimble GPS)
- - - Excavation Extent  
(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
- - - Groundwater Elevation Contour  
(Dashed Where Inferred)
- 4818.39 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.
- 3) Underground facilities are spatially projected.

GPS – Global Positioning System  
Ft. amsl – Feet above mean sea level

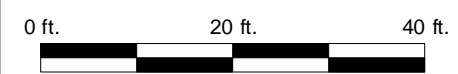


Image Source: Google Earth 2018

DATE:	04/13/2020
DESIGNED BY:	JW
DRAWN BY:	TC



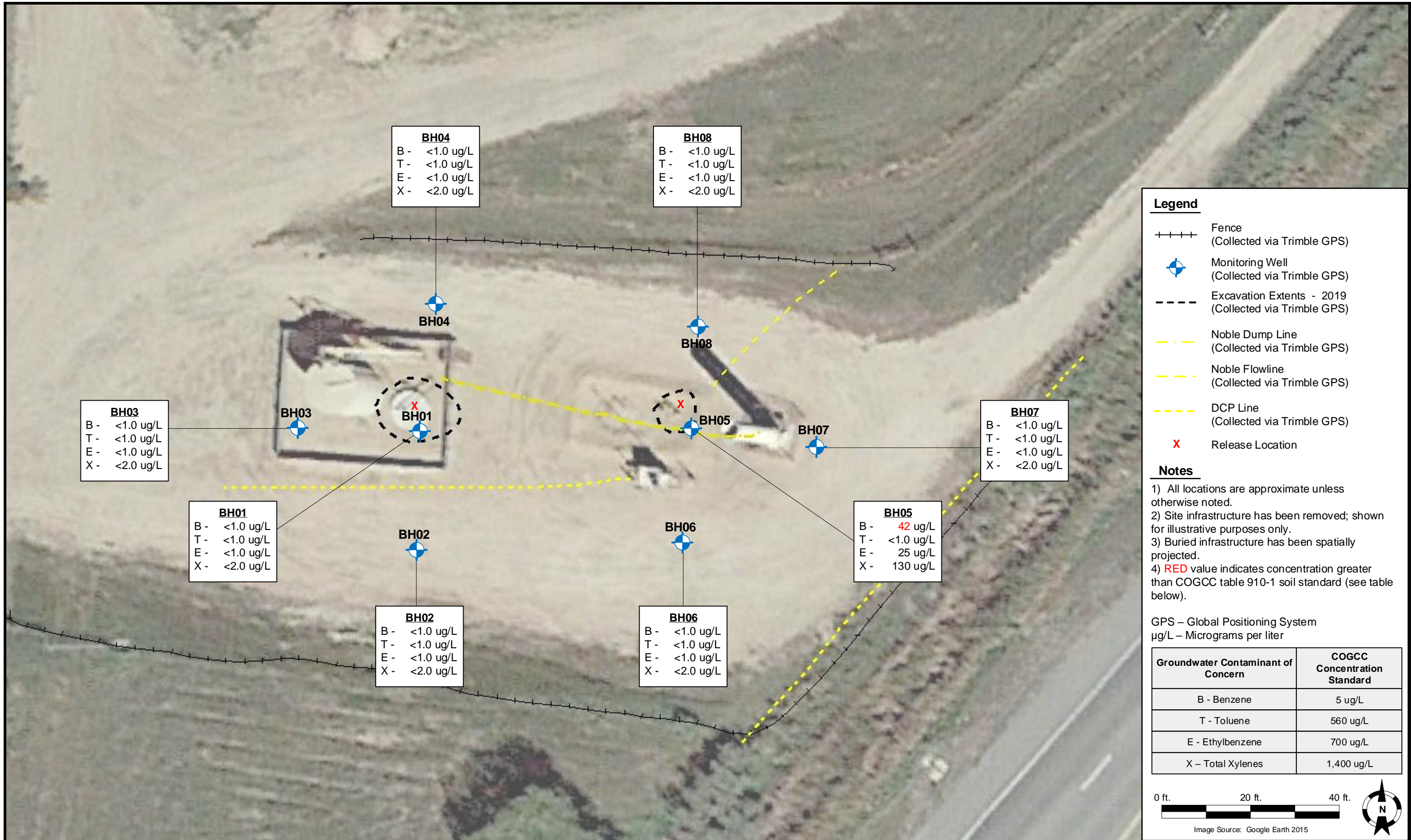
**TASMAN**  
GEOSCIENCES

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  
 (04/08/2020)

**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 soil standard (see table below).

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

Groundwater 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

0 ft. 20 ft. 40 ft.

Image Source: Google Earth 2015

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

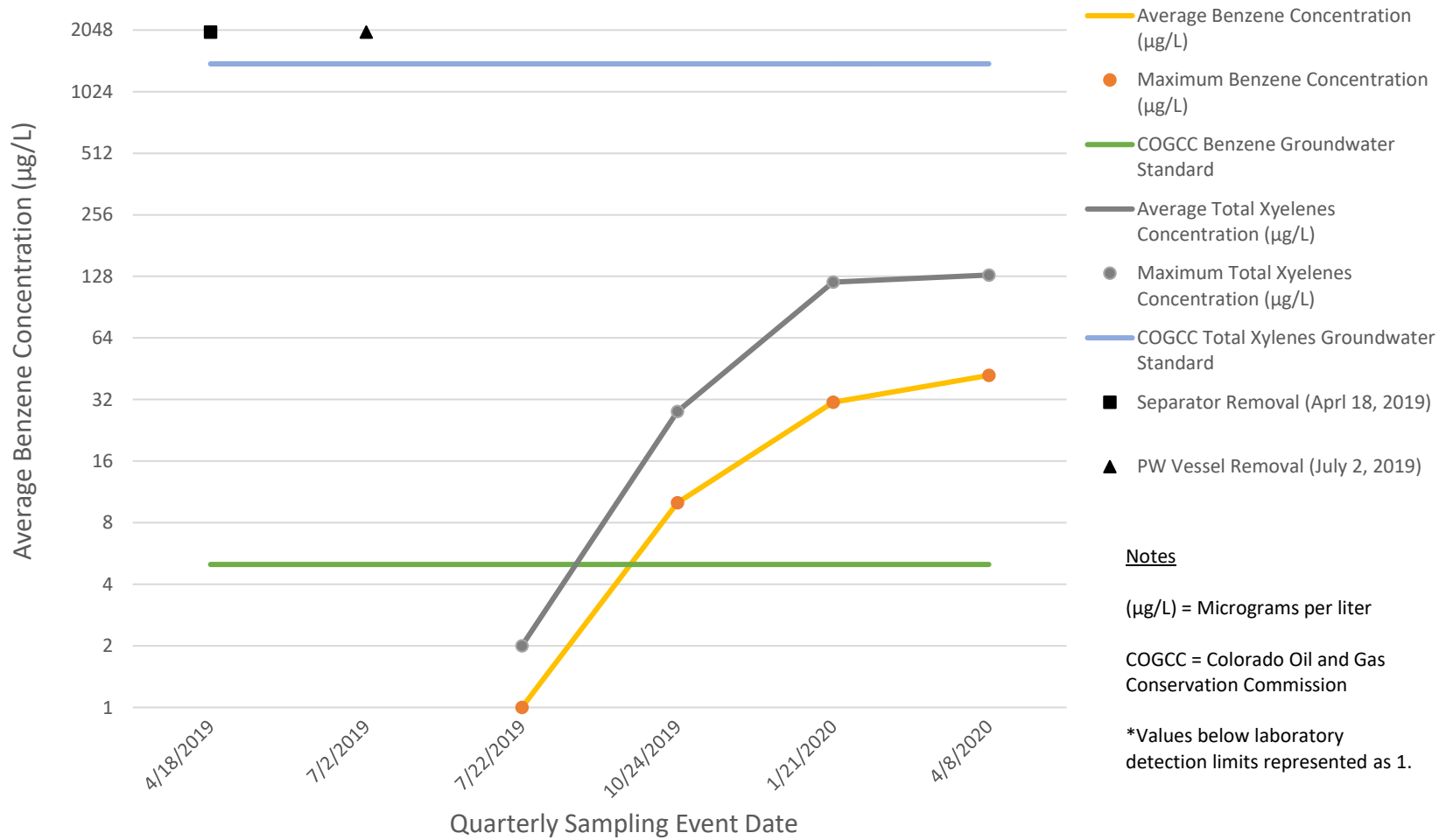
**TASMAN GEOSCIENCES**  
 Tasman Geosciences, Inc.  
 6855 W 119<sup>th</sup> Avenue  
 Broomfield, CO 80020

**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 Analytical  
 Results Map  
 (04/08/2020)

**FIGURE 4**

Figure 5  
 UPRC 33-4F, 5F, HUNT FEDERAL K 33-19  
 Average Concentration VS Quarterly Sampling Event Date



# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 14, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

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

Work Order #2004105

Enclosed are the results of analyses for samples received by Summit Scientific on 04/08/20 17:15. 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:**  
04/14/20 10:30

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2004105-01	Water	04/08/20 13:30	04/08/20 17:15
BH02	2004105-02	Water	04/08/20 13:40	04/08/20 17:15
BH03	2004105-03	Water	04/08/20 13:50	04/08/20 17:15
BH04	2004105-04	Water	04/08/20 14:00	04/08/20 17:15
BH05	2004105-05	Water	04/08/20 13:45	04/08/20 17:15
BH06	2004105-06	Water	04/08/20 13:35	04/08/20 17:15
BH07	2004105-07	Water	04/08/20 13:25	04/08/20 17:15
BH08	2004105-08	Water	04/08/20 13:20	04/08/20 17:15

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

S<sub>2</sub>

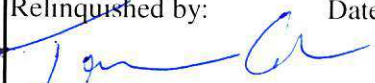

2004105

4653 Table Mountain Drive ♦ Golden, Colorado 80403  
303-277-9310

Page 1 of 1

Client: Noble / Tasman Geosciences Project Manager: Brandon Bruns, Invoice: Jacob Evans  
Address: 6855 W. 119th Ave. E-Mail: Bbruns@tasman-geo.com  
City/State/Zip: Broomfield / CO/ 80020  
Phone: 303-487-1228 Project Name: UPRC 33-4F, 5F, Hunt Federal K 33-19  
Sampler Name: Tanner Cook Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR		
1	BH01	4/8/20	1330	3	X				X				X					
2	BH02		1340															
3	BH03		1350															
4	BH04		1400															
5	BH05		1345															
6	BH06		1335															
7	BH07		1325															
8	BH08		1320															
9																		
10																		

Relinquished by:  Date/Time: 4/8/20 1500	Received by: Tasman's Lock Box Date/Time: 4/8/20 1500	<b>Turn Around Time</b> (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ <b>Sample Integrity:</b> Temperature Upon Receipt: 2.8 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	<b>Notes:</b>
Relinquished by: Tasman's Lock Box Date/Time: 04-08-2020 17:15	Received by:  Date/Time: 04-08-2020 17:15		
Relinquished by:	Received by:		

2004105

Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: TASMAN / NOBLE Client Project ID: UPRC 33-4F, 5F, HUNT FEDERAL K 33-19

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

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

Temp (°C)	2.8
-----------	-----

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.	X			
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
If custody seals are present, are they intact <sup>(1)</sup> ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>		X		
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	X			HCl
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	

Additional Comments (if any):

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

Muri P.  
Custodian Printed Name or Initials

[Signature]  
Signature of Custodian

04-08-2020  
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 Bruns

**Reported:**  
04/14/20 10:30

**BH01**  
**2004105-01 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2004131	04/09/20	04/10/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **04/08/20 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		130 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	21-167		"	"	"	"	

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 - UPRC 33-4F, 5F, Hunt Federal K33-19

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
04/14/20 10:30

**BH02**  
**2004105-02 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		141 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		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:**  
04/14/20 10:30

**BH03**  
**2004105-03 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		131 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		109 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		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:**  
04/14/20 10:30

**BH04**  
**2004105-04 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		133 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		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:**  
04/14/20 10:30

**BH05**  
**2004105-05 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>42</b>	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>25</b>	1.0		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>130</b>	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		127 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %		21-167		"	"	"	"	

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/14/20 10:30

**BH06**  
**2004105-06 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		130 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

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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:**  
04/14/20 10:30

**BH07**  
**2004105-07 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		125 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		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:**  
04/14/20 10:30

**BH08**  
**2004105-08 (Water)**

**Summit Scientific**

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

Date Sampled: **04/08/20 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2004131	04/09/20	04/11/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **04/08/20 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		132 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Summit Scientific

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

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
04/14/20 10:30

### 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 2004131 - EPA 5030 Water MS

##### Blank (2004131-BLK1)

Prepared: 04/09/20 Analyzed: 04/10/20

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Surrogate: 1,2-Dichloroethane-d4	16.8		"	13.3		126	23-173				
Surrogate: Toluene-d8	14.7		"	13.3		110	20-170				
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	21-167				

##### LCS (2004131-BS1)

Prepared: 04/09/20 Analyzed: 04/10/20

Benzene	36.6	1.0	ug/l	33.3		110	51-132				
Toluene	38.5	1.0	"	33.3		116	51-138				
Ethylbenzene	39.5	1.0	"	33.3		118	58-146				
m,p-Xylene	73.0	2.0	"	66.7		110	57-144				
o-Xylene	34.9	1.0	"	33.3		105	53-146				
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.3		120	23-173				
Surrogate: Toluene-d8	15.4		"	13.3		116	20-170				
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	21-167				

##### Matrix Spike (2004131-MS1)

Source: 2004105-01

Prepared: 04/09/20 Analyzed: 04/10/20

Benzene	36.4	1.0	ug/l	33.3	ND	109	34-141				
Toluene	36.7	1.0	"	33.3	ND	110	27-151				
Ethylbenzene	40.1	1.0	"	33.3	ND	120	29-160				
m,p-Xylene	73.5	2.0	"	66.7	ND	110	20-166				
o-Xylene	35.6	1.0	"	33.3	ND	107	33-159				
Surrogate: 1,2-Dichloroethane-d4	16.4		"	13.3		123	23-173				
Surrogate: Toluene-d8	14.6		"	13.3		110	20-170				
Surrogate: 4-Bromofluorobenzene	14.9		"	13.3		112	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:**  
04/14/20 10:30

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

**Summit Scientific**

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

**Batch 2004131 - EPA 5030 Water MS**

**Matrix Spike Dup (2004131-MSD1)**

Source: 2004105-01

Prepared: 04/09/20 Analyzed: 04/10/20

Benzene	38.0	1.0	ug/l	33.3	ND	114	34-141	4.27	30	
Toluene	39.3	1.0	"	33.3	ND	118	27-151	6.97	30	
Ethylbenzene	44.1	1.0	"	33.3	ND	132	29-160	9.55	30	
m,p-Xylene	80.5	2.0	"	66.7	ND	121	20-166	9.07	30	
o-Xylene	38.1	1.0	"	33.3	ND	114	33-159	6.81	30	
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.3		120	23-173			
Surrogate: Toluene-d8	14.4		"	13.3		108	20-170			
Surrogate: 4-Bromofluorobenzene	14.8		"	13.3		111	21-167			

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
04/14/20 10:30

### 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