

FIRST QUARTER 2021 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.)¹	Depth to LNAPL (ft.)¹	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
BH01	01/04/21	4761.40	12.98	3.47	ND	ND	4755.43
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
BH02	01/04/21	4762.85	14.41	3.76	ND	ND	4755.73
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
BH03	01/04/21	4761.87	14.01	3.48	ND	ND	4755.29
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
BH04	01/04/21	4758.25	10.60	3.65	ND	ND	4754.89
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
BH05	01/04/21	4761.67	13.68	3.32	ND	ND	4755.67
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

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.) ¹	Depth to LNAPL (ft.) ¹	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH06	10/19/20	4761.54	12.49	2.17	ND	ND	4757.23
BH06	01/04/21	4761.54	12.48	3.52	ND	ND	4755.88
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
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
BH07	01/04/21	4762.40	13.52	3.27	ND	ND	4755.82
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
BH08	01/04/21	4757.80	10.69	2.68	ND	ND	4755.46

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)
COGCC Standard		5	560	700	1,400
GW01	04/18/19	410	340	68	1,500
GW02	07/02/19	17	<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
BH01	01/04/21	<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
BH02	01/04/21	<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
BH03	01/04/21	<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
BH04	01/04/21	<1.0	<1.0	<1.0	<2.0
BH05	07/22/19	<1.0	<1.0	<1.0	<2.0
BH05	10/24/19	10	<1.0	5.6	28
BH05	01/21/20	31	<1.0	14	120
BH05	04/08/20	42	<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
BH05	01/04/21	<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

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)
COGCC Standard		5	560	700	1,400
BH06	10/19/20	<1.0	<1.0	<1.0	<2.0
BH06	01/04/21	<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
BH07	07/17/20	<1.0	<1.0	<1.0	<2.0
BH07	10/19/20	<1.0	<1.0	<1.0	<2.0
BH07	01/04/21	<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
BH08	01/04/21	<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

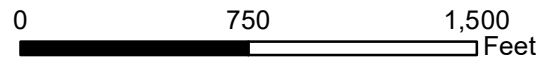
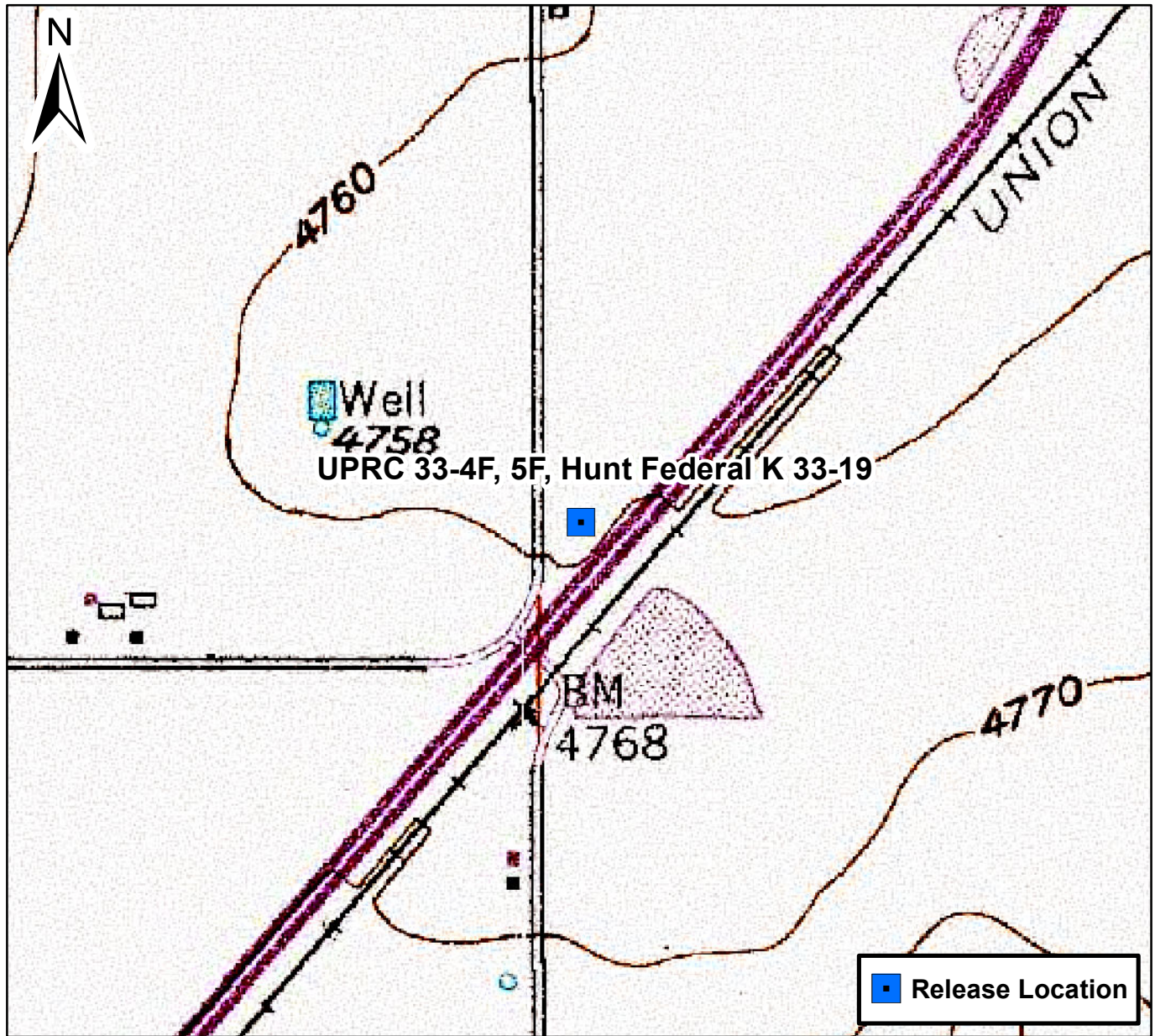


Figure 1

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

0 ft. 20 ft. 40 ft.

Image Source: Google Earth 2018

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

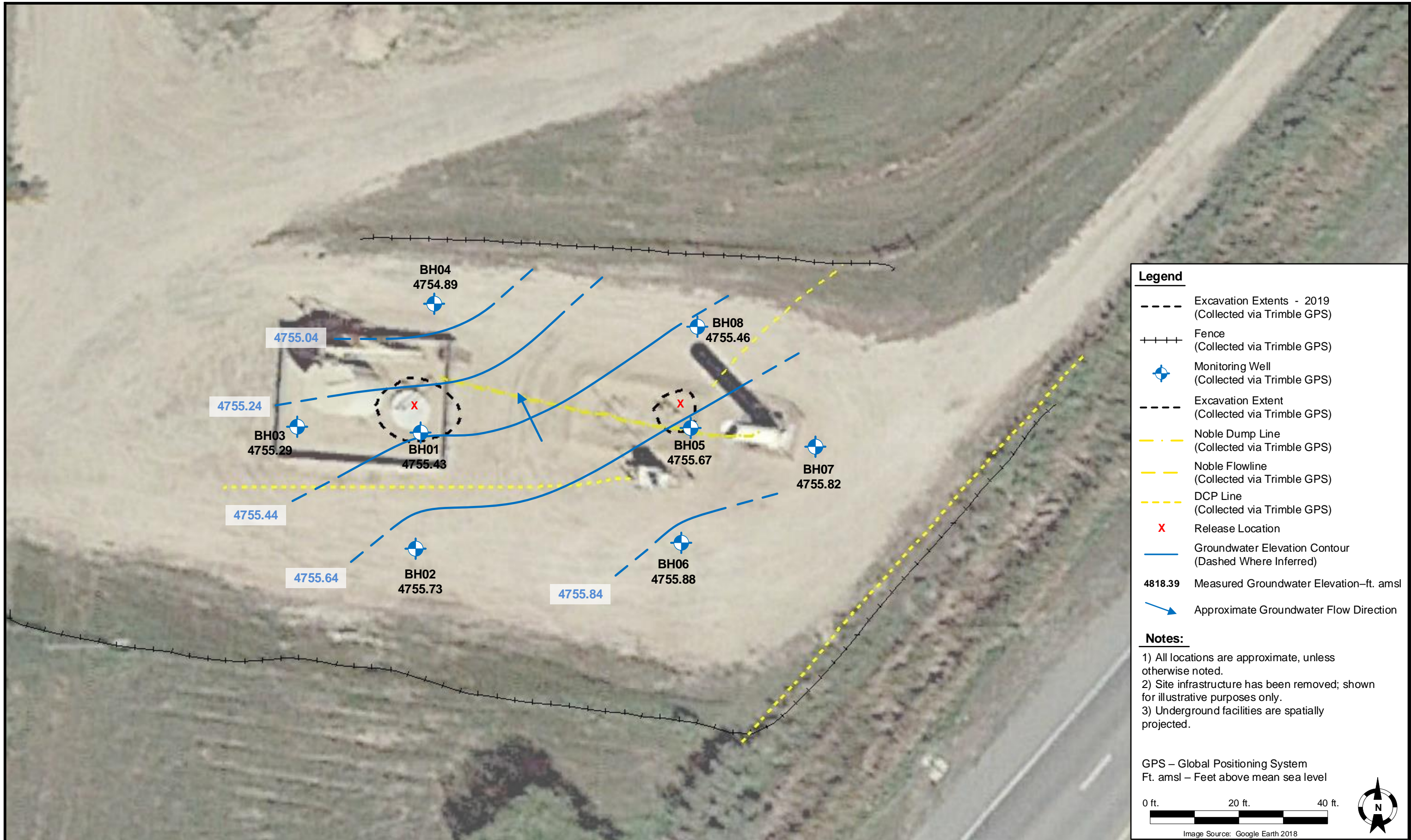
TASMAN
GEOSCIENCES

Tasman Geosciences, Inc.
6855 W 119th 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



- 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

0 ft. 20 ft. 40 ft.

Image Source: Google Earth 2018

DATE: 01/21/2021

DESIGNED BY: JW

DRAWN BY: TC



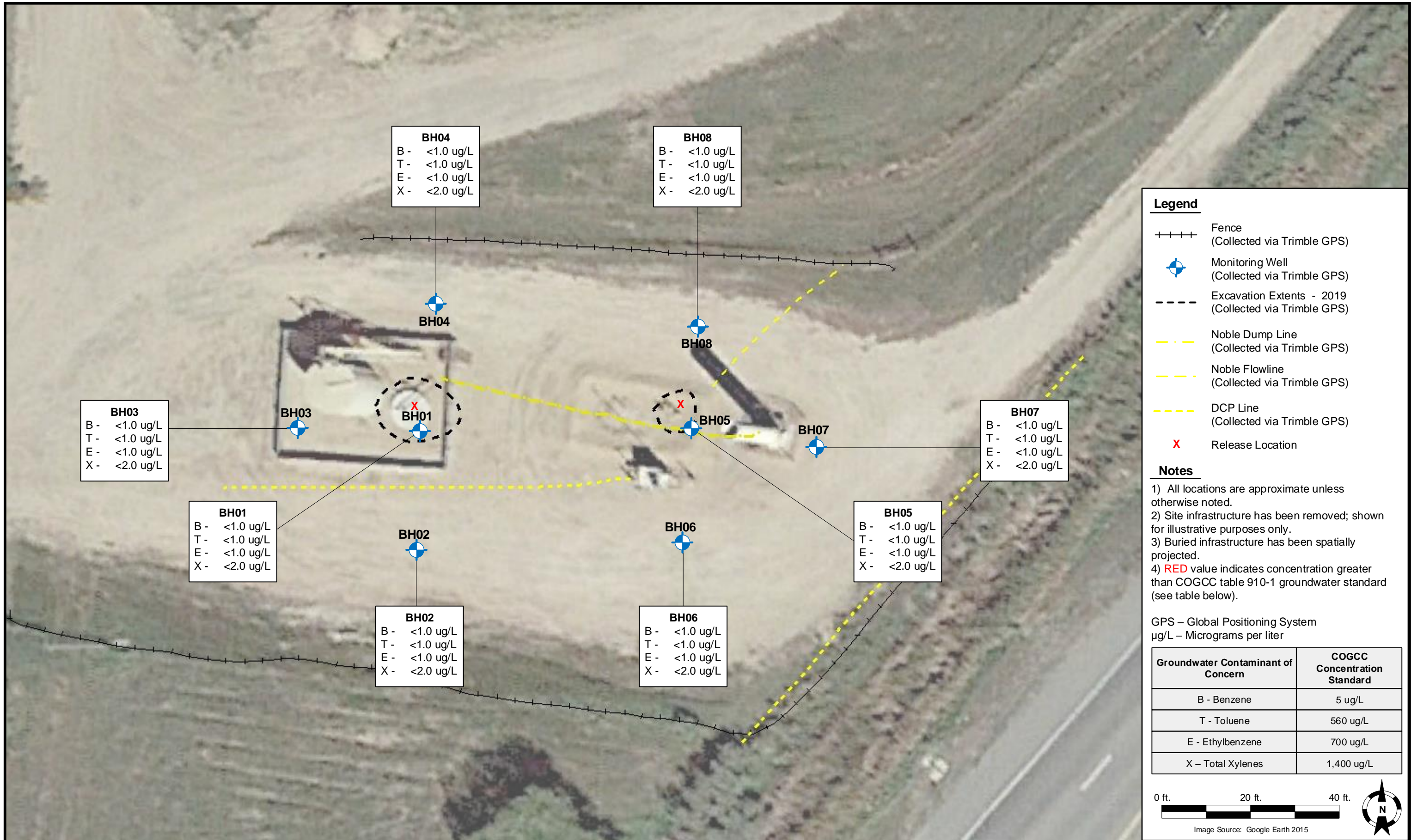
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 GEOSCIENCES

Tasman Geosciences, Inc.
 6855 W 119th 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
 (01/04/2021)

FIGURE
 3



Legend

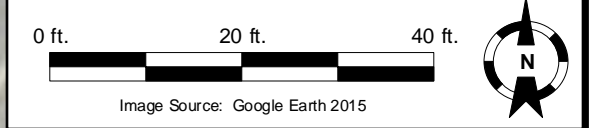
- ++++ Fence (Collected via Trimble GPS)
- Monitoring Well (Collected via Trimble GPS)
- Excavation Extents - 2019 (Collected via Trimble GPS)
- .-.- Noble Dump Line (Collected via Trimble GPS)
- .-.- Noble Flowline (Collected via Trimble GPS)
- .-.- DCP Line (Collected via Trimble GPS)
- X Release Location

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
 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



DATE: 1/18/2021

DESIGNED BY: JW

DRAWN BY: MG

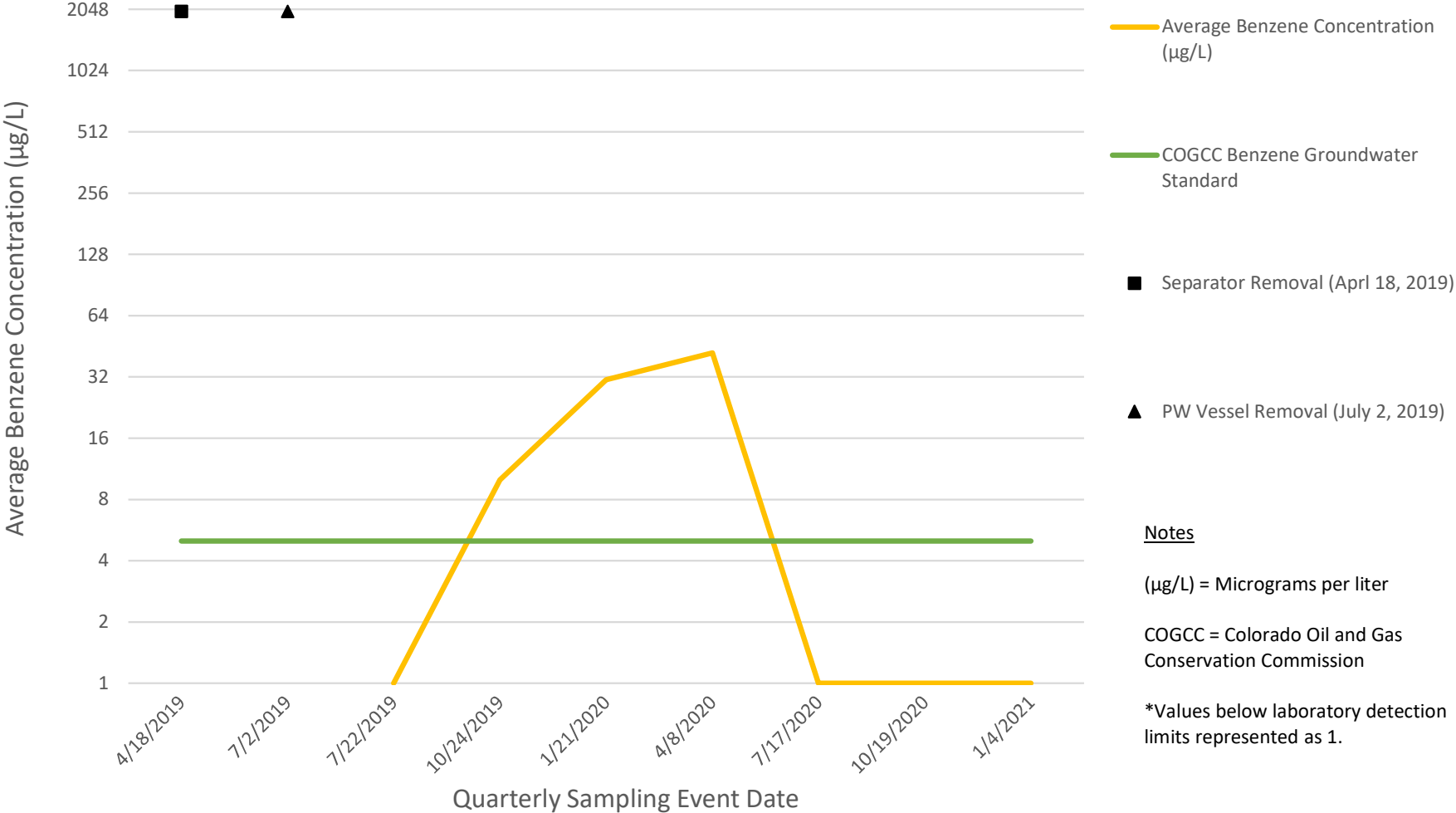
TASMAN GEOSCIENCES
 Tasman Geosciences, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

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
 (01/04/2021)

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

January 11, 2021

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

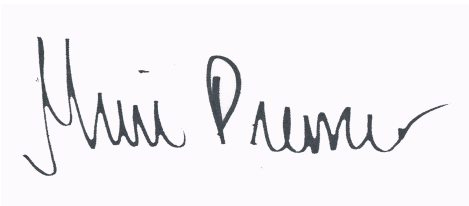
Broomfield, CO 80020

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

Work Order #2101008

Enclosed are the results of analyses for samples received by Summit Scientific on 01/04/21 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury
President



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

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2101008-01	Water	01/04/21 11:11	01/04/21 16:50
BH02	2101008-02	Water	01/04/21 11:17	01/04/21 16:50
BH03	2101008-03	Water	01/04/21 11:04	01/04/21 16:50
BH04	2101008-04	Water	01/04/21 11:53	01/04/21 16:50
BH05	2101008-05	Water	01/04/21 11:38	01/04/21 16:50
BH06	2101008-06	Water	01/04/21 11:24	01/04/21 16:50
BH07	2101008-07	Water	01/04/21 11:31	01/04/21 16:50
BH08	2101008-08	Water	01/04/21 11:44	01/04/21 16:50

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.

2101008

Sample Receipt Checklist

S2 Work Order _____

Client: Noble/Tasman

Client Project ID: UPRC 33-4F, HUNT FEDERAL K33-19

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

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

Temp (°C)	2.2
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? 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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<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 checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? 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 ⁽¹⁾ ? 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):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

MP
Custodian Printed Name or Initials

Muri Premer
Signature of Custodian

1/4/21
Date/Time



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

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH01
2101008-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/06/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		74.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		90.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %		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, Hunt Federal K33-19

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH02
2101008-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/06/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		87.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %		21-167		"	"	"	"	

Summit Scientific

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

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH03
2101008-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/06/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		82.5 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %		21-167		"	"	"	"	

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Broomfield CO, 80020

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH04
2101008-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		82.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %		21-167		"	"	"	"	

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH05
2101008-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		85.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %		21-167		"	"	"	"	

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH06
2101008-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		81.8 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.3 %		21-167		"	"	"	"	

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH07
2101008-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		83.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %		21-167		"	"	"	"	

Summit Scientific

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

BH08
2101008-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/04/21 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEA0051	01/06/21	01/07/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/04/21 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		83.6 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.7 %		21-167		"	"	"	"	

Summit Scientific

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

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

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 BEA0051 - EPA 5030 Water MS

Blank (BEA0051-BLK1)

Prepared & Analyzed: 01/06/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.3		98.3	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.6	21-167			

LCS (BEA0051-BS1)

Prepared & Analyzed: 01/06/21

Benzene	26.7	1.0	ug/l	33.3		80.1	51-132			
Toluene	25.2	1.0	"	33.3		75.5	51-138			
Ethylbenzene	32.7	1.0	"	33.3		98.2	58-146			
m,p-Xylene	61.4	2.0	"	66.7		92.1	57-144			
o-Xylene	29.6	1.0	"	33.3		88.8	53-146			
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.6	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	21-167			

Matrix Spike (BEA0051-MS1)

Source: 2101039-01

Prepared & Analyzed: 01/06/21

Benzene	27.2	1.0	ug/l	33.3	ND	81.5	34-141			
Toluene	26.2	1.0	"	33.3	ND	78.6	27-151			
Ethylbenzene	33.8	1.0	"	33.3	ND	102	29-160			
m,p-Xylene	64.6	2.0	"	66.7	ND	96.9	20-166			
o-Xylene	31.0	1.0	"	33.3	ND	93.0	33-159			
Surrogate: 1,2-Dichloroethane-d4	10.6		"	13.3		79.9	23-173			
Surrogate: Toluene-d8	12.7		"	13.3		95.1	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	21-167			

Summit Scientific

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEA0051 - EPA 5030 Water MS

Matrix Spike Dup (BEA0051-MSD1)	Source: 2101039-01			Prepared & Analyzed: 01/06/21						
Benzene	27.5	1.0	ug/l	33.3	ND	82.5	34-141	1.28	30	
Toluene	28.6	1.0	"	33.3	ND	85.9	27-151	8.83	30	
Ethylbenzene	33.7	1.0	"	33.3	ND	101	29-160	0.474	30	
m,p-Xylene	64.6	2.0	"	66.7	ND	96.9	20-166	0.0310	30	
o-Xylene	31.6	1.0	"	33.3	ND	94.9	33-159	1.98	30	
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.0	23-173			
Surrogate: Toluene-d8	13.8		"	13.3		104	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	21-167			

Summit Scientific

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Broomfield CO, 80020

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

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/11/21 10:19

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