

FIRST QUARTER 2020 SITE MONITORING DATA
BEEBE DRAW RG 26-9, 23

COGCC SPILL TRACKING # 455231
COGCC REMEDIATION # 11925

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. - BEEBE DRAW RG 26-9, 23

Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽²⁾	Depth to LNAPL (ft.) ⁽²⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	10/22/18	4774.24	NM	12.33	ND	ND	4761.91
BH01	01/10/19	4774.24	27.75	12.57	ND	ND	4761.67
BH01	04/18/19	4774.24	27.52	12.84	ND	ND	4761.40
BH01	07/10/19	4774.24	27.19	11.12	ND	ND	4763.12
BH01	10/02/19	4774.24	26.80	6.61	ND	ND	4764.76
BH01	01/07/20	4774.24	26.78	7.21	ND	ND	4764.16
BH02	10/22/18	4772.28	NM	11.83	ND	ND	4760.45
BH02	01/10/19	4772.28	32.65	11.88	ND	ND	4760.40
BH02	04/18/19	4772.28	32.64	12.27	ND	ND	4760.01
BH02	07/10/19	4772.28	32.64	10.68	ND	ND	4761.60
BH02 ⁽³⁾	10/02/19	NM	15.55	NM	ND	ND	NM
BH02 ⁽⁵⁾	01/07/20	NM	24.06	NM	ND	ND	NM
BH03	10/22/18	4770.72	NM	11.76	ND	ND	4758.96
BH03	01/10/19	4770.72	31.41	11.44	ND	ND	4759.28
BH03	04/18/19	4770.72	27.95	11.69	ND	ND	4759.03
BH03	07/10/19	4770.72	31.91	10.31	ND	ND	4760.41
BH03	10/02/19	4770.72	32.24	6.22	ND	ND	4761.52
BH03 ⁽⁵⁾	01/07/20	NM	28.47	NM	ND	ND	NM
BH04	10/22/18	4773.76	NM	14.11	ND	ND	4759.65
BH04	01/10/19	4773.76	29.58	14.19	ND	ND	4759.57
BH04	04/18/19	4773.76	29.14	14.38	ND	ND	4759.38
BH04	07/10/19	4773.76	29.06	13.15	ND	ND	4760.61
BH04	10/02/19	4773.76	28.75	10.34	ND	ND	4761.53
BH04	01/07/20	4773.76	28.58	10.41	ND	ND	4761.46
BH05	10/22/18	4770.06	NM	11.55	ND	ND	4758.51
BH05	01/10/19	4770.06	27.91	11.17	ND	ND	4758.89
BH05	04/18/19	4770.06	27.57	11.21	ND	ND	4758.85
BH05	07/10/19	4770.06	27.56	9.92	ND	ND	4760.14
BH05 ⁽³⁾	10/02/19	NM	26.94	NM	ND	ND	NM
BH05 ⁽⁵⁾	01/07/20	NM	26.38	NM	ND	ND	NM
BH06	10/22/18	4772.62	NM	14.42	ND	ND	4758.20
BH06	01/10/19	4772.62	33.62	14.33	ND	ND	4758.29
BH06	04/18/19	4772.62	33.59	14.53	ND	ND	4758.09
BH06	07/10/19	4772.62	33.61	13.29	ND	ND	4759.33
BH06	10/02/19	Unable to locate - Well Destroyed					
BH06R	01/07/20	4772.60	27.47	9.33	ND	ND	4760.12
BH07	10/22/18	4768.79	NM	10.60	ND	ND	4758.19
BH07	01/10/19	4768.79	27.85	10.89	ND	ND	4757.90
BH07	04/18/19	4768.79	27.83	10.92	ND	ND	4757.87
BH07	07/10/19	4768.79	27.84	9.56	ND	ND	4759.23
BH07	10/02/19	4768.79	26.86	5.24	ND	ND	4760.49

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Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽²⁾	Depth to LNAPL (ft.) ⁽²⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH07	01/07/20	4768.79	27.35	NM	ND	ND	4759.99
BH08	10/22/18	4769.60	NM	9.68	ND	ND	4759.92
BH08	01/10/19	4769.60	21.63	9.95	ND	ND	4759.65
BH08	04/18/19	4769.60	21.12	9.68	ND	ND	4759.92
BH08	07/10/19	4769.60	20.79	8.70	ND	ND	4760.90
BH08	10/02/19	4769.60	19.65	3.85	ND	ND	4762.66
BH08	01/07/20	4769.60	19.37	NM	ND	ND	4762.03
BH09	10/22/18	4771.81	NM	9.95	ND	ND	4761.86
BH09	01/10/19	4771.81	22.97	10.52	ND	ND	4761.29
BH09	04/18/19	4771.81	22.39	10.34	ND	ND	4761.47
BH09	07/10/19	4771.81	22.16	8.92	ND	ND	4762.89
BH09	10/02/19	4771.81	22.08	3.80	ND	ND	4764.94
BH09	01/07/20	4771.81	21.88	NM	ND	ND	4763.90
BH10	11/06/18	4775.10	27.30	12.42	ND	ND	4762.68
BH10	01/10/19	4775.10	27.15	12.89	ND	ND	4762.21
BH10	04/18/19	4775.10	26.71	13.22	ND	ND	4761.88
BH10	07/10/19	4775.10	26.66	11.25	ND	ND	4763.85
BH10	10/02/19	4775.10	26.21	6.78	ND	ND	4765.34
BH10	01/07/20	4775.10	26.09	NM	ND	ND	4764.78
BH11	11/06/18	4775.53	27.21	14.04	ND	ND	4761.49
BH11	01/10/19	4775.53	26.94	14.27	ND	ND	4761.26
BH11	04/18/19	4775.53	26.44	14.60	ND	ND	4760.93
BH11	07/10/19	4775.53	26.05	13.04	ND	ND	4762.49
BH11 ⁽³⁾	10/02/19	NM	12.20	NM	ND	ND	NM
BH11	01/07/20	Unable to locate					
BH12	11/06/18	4775.39	27.50	13.06	ND	ND	4762.33
BH12	01/10/19	4775.39	27.10	13.34	ND	ND	4762.05
BH12	04/18/19	4775.39	26.62	13.73	ND	ND	4761.66
BH12	07/10/19	4775.39	26.52	11.95	ND	ND	4763.44
BH12	10/02/19	4775.39	25.88	7.80	ND	ND	4765.07
BH12	01/07/20	4775.39	25.81	8.31	ND	ND	4764.56
BH13	11/06/18	4775.22	25.60	14.72	ND	ND	4760.50
BH13	01/10/19	4775.22	24.87	15.02	ND	ND	4760.20
BH13	04/18/19	4775.22	24.48	15.24	ND	ND	4759.98
BH13	07/10/19	4775.22	24.38	14.00	ND	ND	4761.22
BH13	10/02/19	4775.22	23.68	10.07	ND	ND	4762.07
BH13	01/07/20	4775.22	23.51	10.07	ND	ND	4762.07
BH14	11/06/18	4774.89	26.00	15.80	ND	ND	4759.09
BH14	01/10/19	4774.89	25.66	15.89	ND	ND	4759.00
BH14	04/18/19	4774.89	24.94	16.02	ND	ND	4758.87
BH14 ⁽¹⁾	07/10/19	4774.89	24.80	14.82	ND	ND	4760.07

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Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽²⁾	Depth to LNAPL (ft.) ⁽²⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH14 ⁽⁵⁾	10/02/19	NM	22.08	NM	ND	ND	NM
BH14 ^(4, 5)	01/07/20	NM	20.84	NM	ND	ND	NM
BH15	01/10/19	4773.89	25.00	11.49	ND	ND	4762.40
BH15	04/18/19	4773.89	24.55	11.64	ND	ND	4762.25
BH15	07/10/19	4773.89	24.34	9.67	ND	ND	4764.22
BH15	10/02/19	4773.89	19.93	5.84	ND	ND	4765.96
BH15	01/07/20	4773.89	23.98	6.70	ND	ND	4765.10
BH16	01/10/19	4776.93	27.87	13.94	ND	ND	4762.99
BH16	04/18/19	4776.93	26.75	14.56	ND	ND	4762.37
BH16	07/10/19	4776.93	26.80	12.38	ND	ND	4764.55
BH16	10/02/19	4776.93	26.18	7.69	ND	ND	4766.11
BH16	01/07/20	4776.93	26.14	8.30	ND	ND	4765.50
BH17	01/10/19	4778.81	28.27	15.24	ND	ND	4763.57
BH17	04/18/19	4778.81	27.99	15.94	ND	ND	4762.87
BH17	07/10/19	4778.81	27.91	13.44	ND	ND	4765.37
BH17	10/02/19	4778.81	27.82	8.70	ND	ND	4766.88
BH17	01/07/20	4778.81	27.71	9.37	ND	ND	4766.21
BH18	01/10/19	4777.44	30.00	15.72	ND	ND	4761.72
BH18	04/18/19	4777.44	29.18	16.15	ND	ND	4761.29
BH18	07/10/19	4777.44	29.02	14.58	ND	ND	4762.86
BH18	10/02/19	4777.44	28.69	11.00	ND	ND	4764.30
BH18	01/07/20	4777.44	28.50	11.20	ND	ND	4764.10
BH19	01/07/20	4775.05	27.72	11.67	ND	ND	4759.98
BH20	01/07/20	4776.72	27.34	11.33	ND	ND	4761.64
BH21	01/07/20	4778.10	26.92	11.65	ND	ND	4763.36

Notes:

ft. = Feet

AMSL = Above mean sea level

BTOC = Below top of casing

LNAPL = Light non-aqueous phase liquid

ND = No LNAPL detected

NM = Not Measured

1. Trace LNAPL observed

2. Depth to water measurements collected prior to third quarter 2019 were measured from top of well casing. Subsequent measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

3. Well casing was damaged and wells were sampled before casing repair, therefore elevation control lost

4. LNAPL observed in bailer at start of purge. Three volumes plus one gallon was purged from well before sample collected. LNAPL was not observed in sample bottle.

5. Well casing damaged, therefore elevation control lost.

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Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽²⁾	Depth to LNAPL (ft.) ⁽²⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
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* 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

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - BEEBE DRAW RG 26-9,23

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
BH01	10/22/18	210	1.5	240	3,300
BH01	01/10/19	140	<1.0	380	3,500
BH01	04/18/19	96	<1.0	140	1,900
BH01	07/10/19	78	<1.0	200	2,300
BH01	10/02/19	28	<1.0	<1.0	130
BH01	01/07/20	35	<1.0	73	170
BH02	10/22/18	<1.0	<1.0	1.1	7.9
BH02	01/10/19	<1.0	<1.0	<1.0	<2.0
BH02	04/18/19	<1.0	<1.0	<1.0	<2.0
BH02	07/10/19	<1.0	<1.0	<1.0	<2.0
BH02	10/02/19	<1.0	<1.0	<1.0	<2.0
BH02	01/07/20	<1.0	<1.0	<1.0	<2.0
BH03	10/22/18	<1.0	<1.0	<1.0	<2.0
BH03	01/10/19	<1.0	<1.0	<1.0	<2.0
BH03	04/18/19	<1.0	<1.0	<1.0	<2.0
BH03	07/10/19	<1.0	<1.0	<1.0	<2.0
BH03	10/02/19	<1.0	<1.0	<1.0	<2.0
BH03	01/07/20	<1.0	<1.0	<1.0	<2.0
BH04	10/22/18	48	<1.0	150	590
BH04	01/10/19	16	<1.0	21	130
BH04	04/18/19	3.6	<1.0	3.5	26
BH04	07/10/19	17	<1.0	28	170
BH04	10/02/19	2.6	<1.0	<1.0	62
BH04	01/07/20	23	<1.0	31	200
BH05	10/22/18	<1.0	<1.0	<1.0	2.9
BH05	01/10/19	<1.0	<1.0	<1.0	<2.0
BH05	04/18/19	<1.0	<1.0	<1.0	<2.0
BH05	07/10/19	<1.0	<1.0	<1.0	<2.0
BH05	10/02/19	<1.0	<1.0	<1.0	<2.0
BH05	01/07/20	<1.0	<1.0	<1.0	<2.0
BH06	10/22/18	<1.0	<1.0	6.1	19.0
BH06	01/10/19	<1.0	<1.0	<1.0	<2.0
BH06	04/18/19	<1.0	<1.0	1.9	<2.0
BH06	07/10/19	<1.0	<1.0	<1.0	<2.0
BH06	10/02/19	Unable to locate - Well Destroyed			
BH06R	01/07/20	2.0	<1.0	67	25
BH07	10/22/18	<1.0	<1.0	<1.0	<2.0
BH07	01/10/19	<1.0	<1.0	<1.0	<2.0
BH07	04/18/19	<1.0	<1.0	<1.0	<2.0
BH07	07/10/19	<1.0	<1.0	<1.0	<2.0
BH07	10/02/19	<1.0	<1.0	<1.0	<2.0

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - BEEBE DRAW RG 26-9,23

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
BH07	01/07/20	<1.0	<1.0	<1.0	<2.0
BH08	10/22/18	<1.0	<1.0	<1.0	<2.0
BH08	01/10/19	<1.0	<1.0	<1.0	<2.0
BH08	04/18/19	<1.0	<1.0	<1.0	<2.0
BH08	07/10/19	<1.0	<1.0	<1.0	<2.0
BH08	10/02/19	<1.0	<1.0	<1.0	<2.0
BH08	01/07/20	<1.0	<1.0	<1.0	<2.0
BH09	10/22/18	<1.0	<1.0	16	130
BH09	01/10/19	<1.0	<1.0	<1.0	<2.0
BH09	04/18/19	<1.0	<1.0	<1.0	<2.0
BH09	07/10/19	<1.0	<1.0	<1.0	<2.0
BH09	10/02/19	<1.0	<1.0	<1.0	<2.0
BH09	01/07/20	<1.0	<1.0	<1.0	<2.0
BH10	11/06/18	8.6	<1.0	120	990
BH10	01/10/19	1.3	<1.0	1.8	16
BH10	04/18/19	1.2	<1.0	1.6	13
BH10	07/10/19	2.9	<1.0	11	120
BH10	10/02/19	<1.0	<1.0	<1.0	<2.0
BH10	01/07/20	2.5	<1.0	4.1	46
BH11	11/06/18	9.4	<1.0	23	110
BH11	01/10/19	9.7	<1.0	18	77
BH11	04/18/19	11	<1.0	23	98
BH11	07/10/19	17	<1.0	39	180
BH11	10/02/19	<1.0	<1.0	<1.0	<2.0
BH11	01/07/20	Unable to locate - Well Destroyed			
BH12	11/06/18	4.2	<1.0	51	250
BH12	01/10/19	1.6	<1.0	<1.0	<2.0
BH12	04/18/19	2.5	<1.0	1.8	11
BH12	07/10/19	1.6	<1.0	<1.0	<2.0
BH12	10/02/19	<1.0	<1.0	<1.0	<2.0
BH12	01/07/20	1.1	<1.0	1.1	8.6
BH13	11/06/18	<1.0	<1.0	<1.0	<2.0
BH13	01/10/19	<1.0	<1.0	<1.0	<2.0
BH13	04/18/19	<1.0	<1.0	<1.0	<2.0
BH13	07/10/19	<1.0	<1.0	<1.0	<2.0
BH13	10/02/19	<1.0	<1.0	<1.0	<2.0
BH13	01/07/20	<1.0	<1.0	<1.0	<2.0
BH14	11/06/18	<1.0	<1.0	42	220
BH14	01/10/19	<1.0	<1.0	<1.0	21
BH14	04/18/19	<1.0	<1.0	130	3.2
BH14	07/10/19	2.4	<1.0	130	1,300

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NOBLE ENERGY, INC. - BEEBE DRAW RG 26-9,23

Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
BH14	10/02/19	1.3	<1.0	1.9	300
BH14	01/07/20	3.2	<1.0	55	950
BH15	01/10/19	<1.0	<1.0	<1.0	<2.0
BH15	04/18/19	<1.0	<1.0	<1.0	<2.0
BH15	07/10/19	<1.0	<1.0	<1.0	<2.0
BH15	10/02/19	<1.0	<1.0	<1.0	<2.0
BH15	01/07/20	<1.0	<1.0	<1.0	5.6
BH16	01/10/19	2.2	<1.0	22	150
BH16	04/18/19	1.4	<1.0	<1.0	5.6
BH16	07/10/19	<1.0	<1.0	<1.0	<2.0
BH16	10/02/19	<1.0	<1.0	<1.0	<2.0
BH16	01/07/20	1.6	<1.0	<1.0	<2.0
BH17	01/10/19	<1.0	<1.0	<1.0	<2.0
BH17	04/18/19	<1.0	<1.0	<1.0	<2.0
BH17	07/10/19	<1.0	<1.0	<1.0	<2.0
BH17	10/02/19	<1.0	<1.0	<1.0	<2.0
BH17	01/07/20	<1.0	<1.0	<1.0	<2.0
BH18	01/10/19	58	<1.0	25	350
BH18	04/18/19	2.4	<1.0	<1.0	<2.0
BH18	07/10/19	16	<1.0	<1.0	<2.0
BH18	10/02/19	<1.0	<1.0	<1.0	<2.0
BH18	01/07/20	<1.0	<1.0	<1.0	<2.0
BH19	01/07/20	3.5	<1.0	200	1,600
BH20	01/07/20	1.9	<1.0	<1.0	18
BH21	01/07/20	<1.0	<1.0	<1.0	<2.0

Notes:

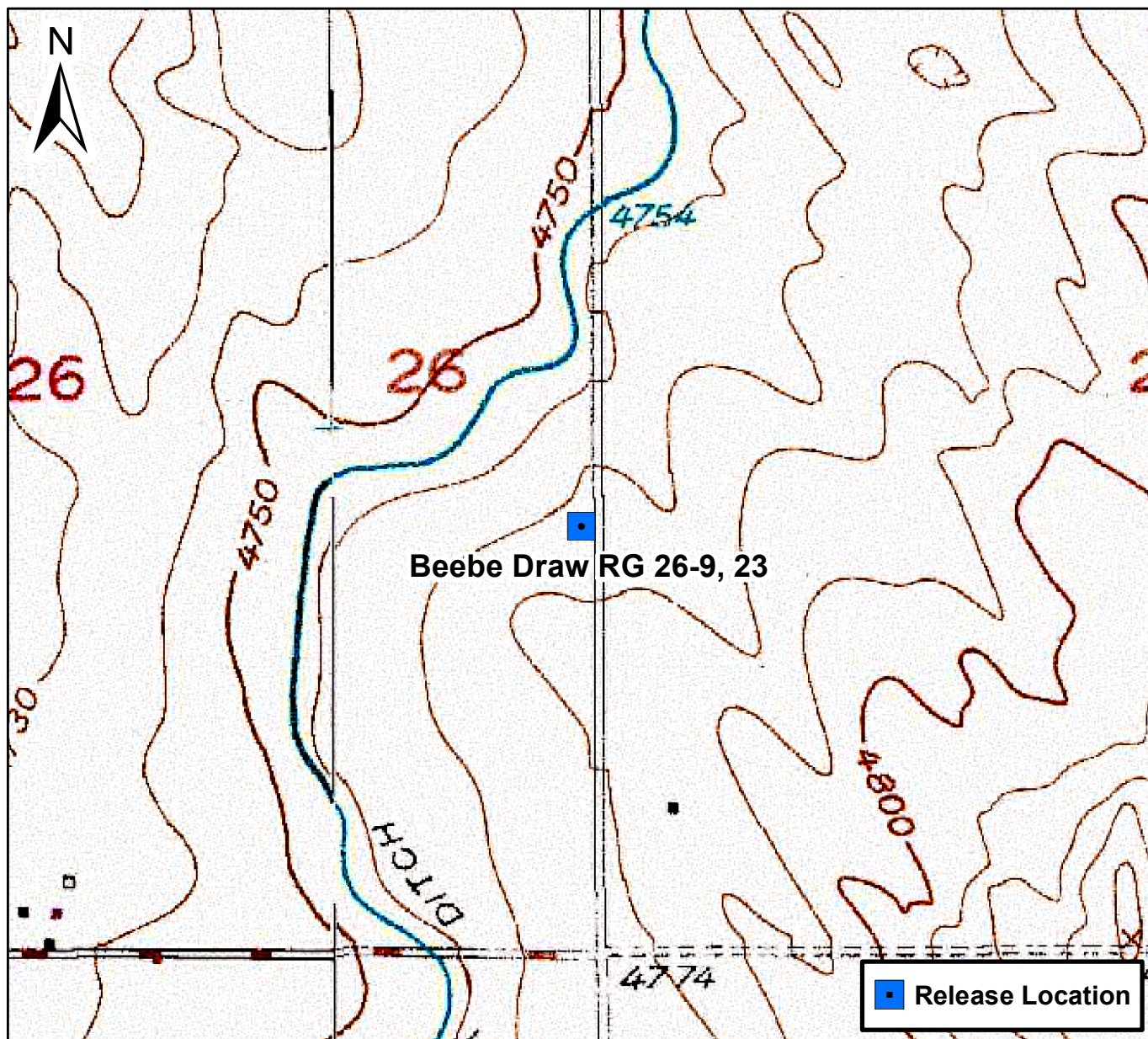
COGCC = Colorado Oil and Gas Conservation Commission

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




0 750 1,500 Feet

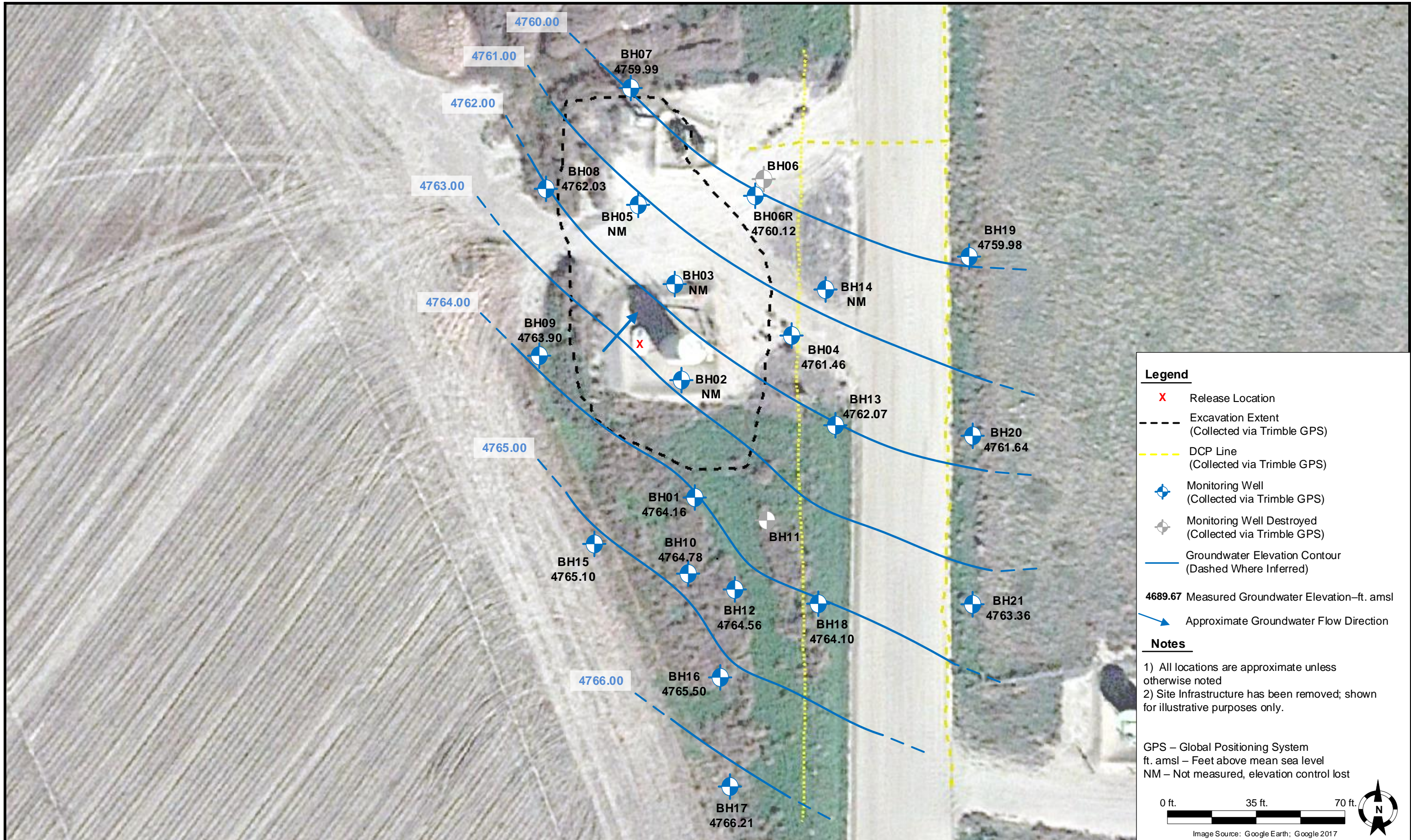
Figure 1

Site Location Map
Beebe Draw RG 26-9, 23
NESE Sec. 26-T4N-R65W
Weld County, Colorado





DATE:	01/30/2020	 TASMAN GEOSCIENCES	Tasman Geosciences, Inc. 6855 W 119 th Ave. Broomfield, CO 80020	Noble Energy, Inc. – DJ Basin Beebe Draw RG 26-9, 23 NESE, Section 26, Township 4 North, Range 65 West Weld County, Colorado	Site Overview Map	FIGURE 2
DESIGNED BY:	JW					
DRAWN BY:	KC					



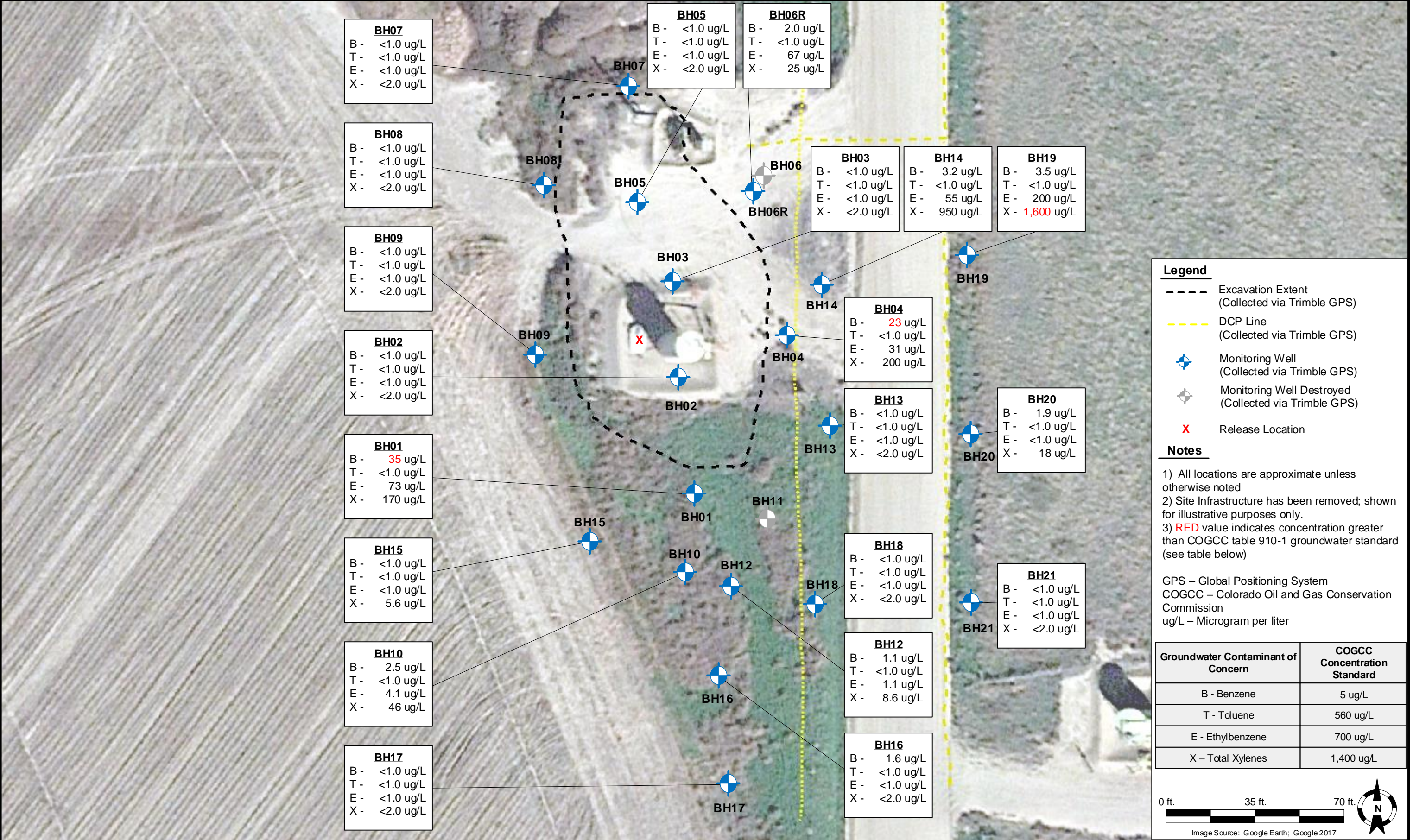
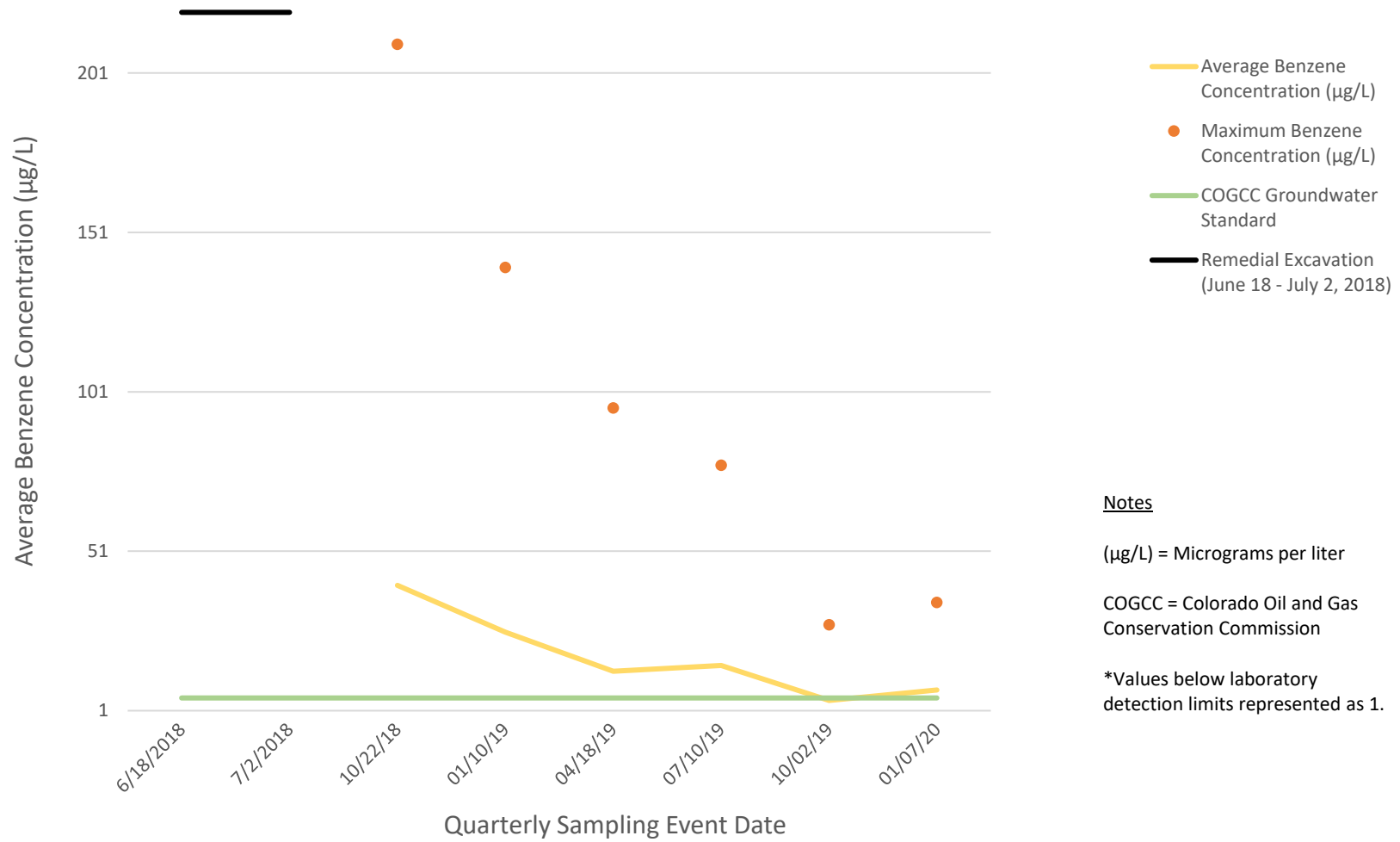


Figure 5
Beebe Draw RG 26-9, 23
Quarterly Benzene Concentrations



ATTACHMENT A

BORING AND WELL COMPLETION LOGS



6855 W 119th Avenue
Broomfield, Colorado 80020

CLIENT: Noble

LOGGED BY: Graham Basecke

PROJECT MANAGER: Brandon Bruns

DRILLING CONTRACTOR: Tasman Geosciences

DRILLING EQUIPMENT: Power Probe

DRILL BIT SIZE (INCHES): 4

DATE STARTED - COMPLETED: 11/05/19 - 11/05/19

TOTAL WELL DEPTH (FT. BGS): 25

DEPTH TO WATER (FT. BGS): 15

Beebe Draw RG 26-9, 23

BORING / WELL ID: BH06R

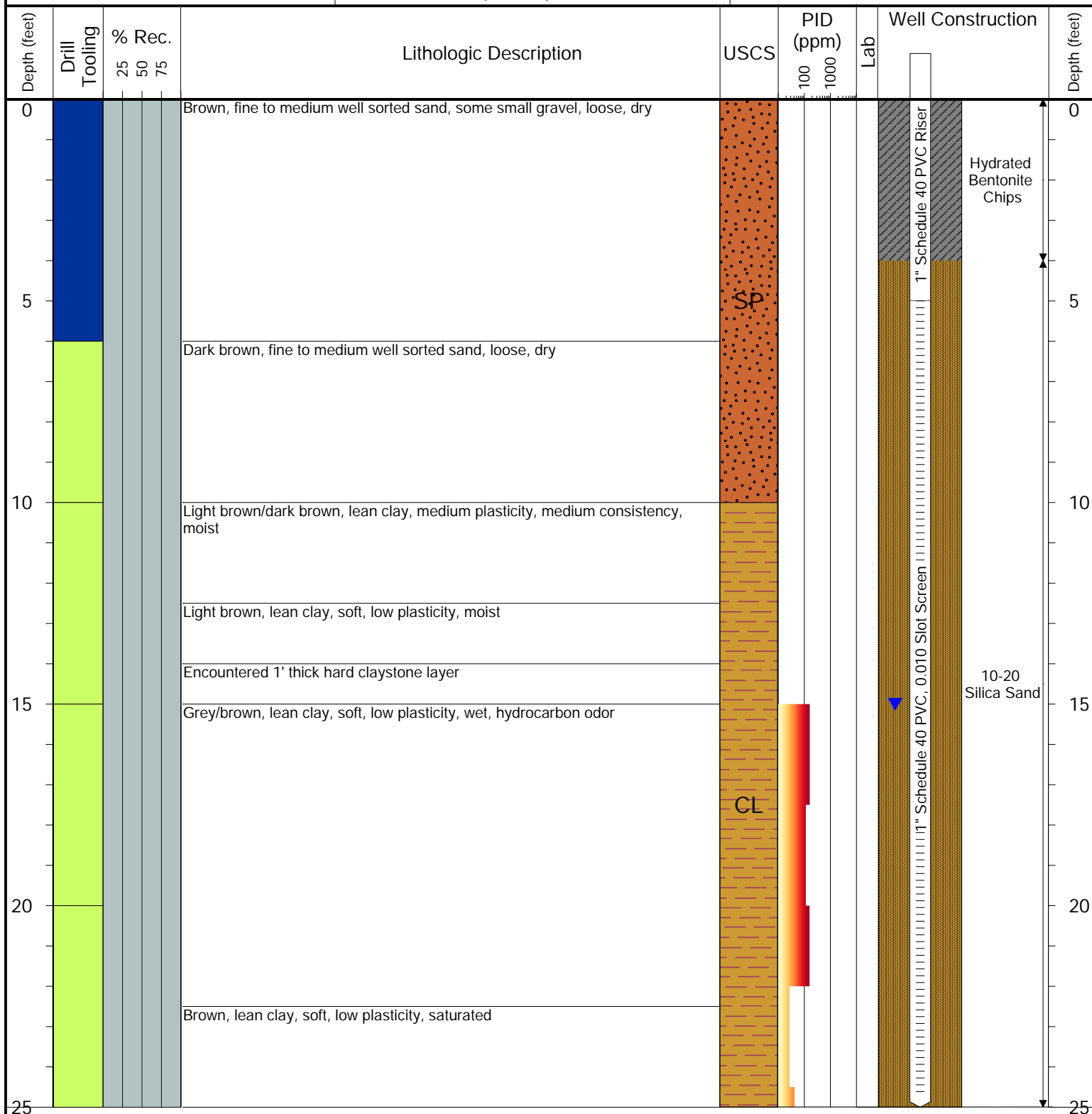
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.281473849

LONGITUDE (WGS 84): -104.621313301

CASING ELEVATION (FT. AMSL): 4772.6

GROUND ELEVATION (FT. AMSL): 4769.45



Drilling / Sample Method:

Macro-Core

Solid Stem Auger

Hollow Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W 119th Avenue
Broomfield, Colorado 80020

CLIENT: Noble

LOGGED BY: Graham Basecke

PROJECT MANAGER: Brandon Brun

DRILLING CONTRACTOR: Tasman Geosciences

DRILLING EQUIPMENT: Power Probe

DRILL BIT SIZE (INCHES): 4

DATE STARTED - COMPLETED: 11/05/19 - 11/05/19

TOTAL WELL DEPTH (FT. BGS): 25

DEPTH TO WATER (FT. BGS): 16

Beebe Draw RG 26-9, 23

BORING / WELL ID: BH19

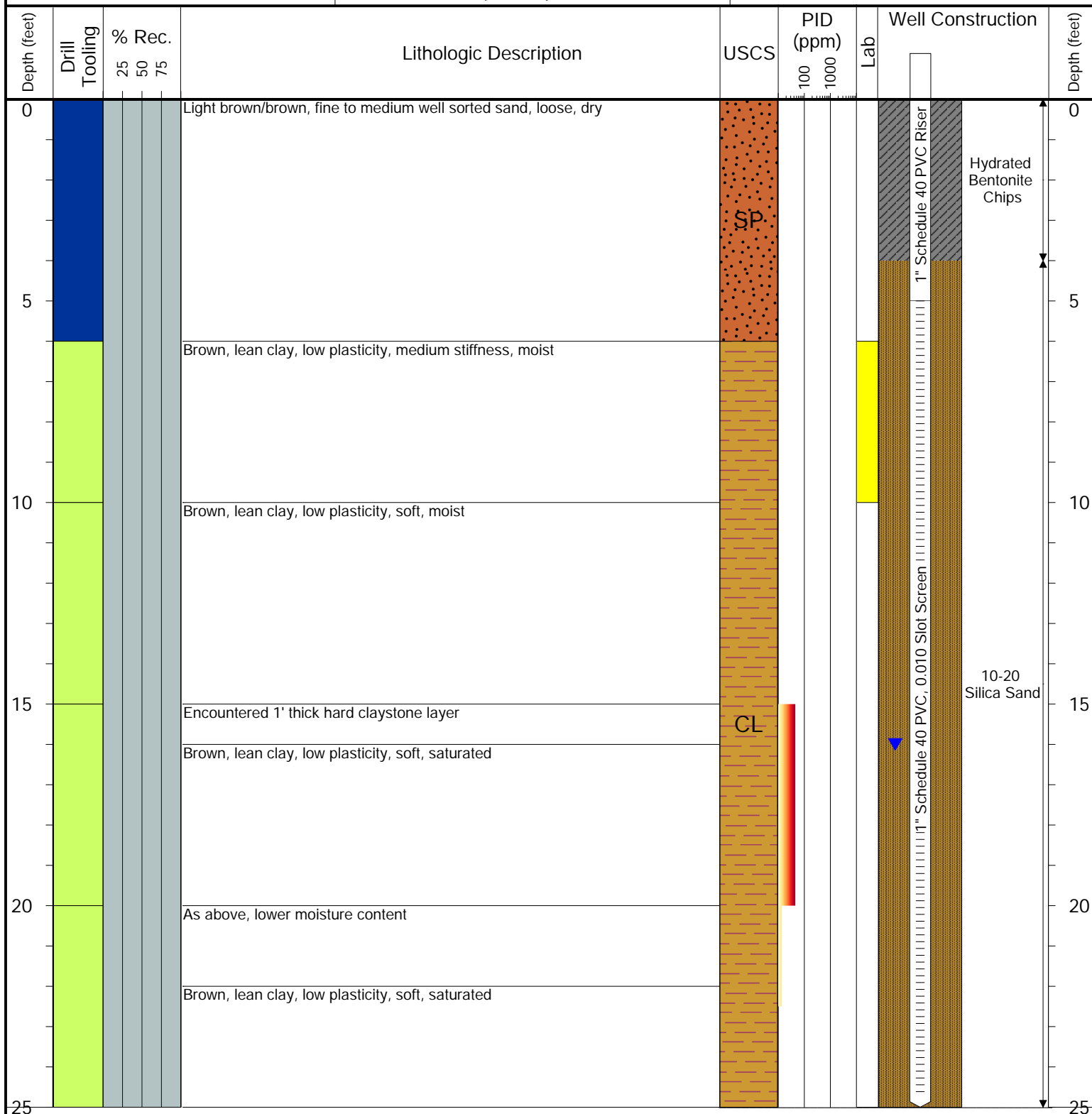
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.281401858

LONGITUDE (WGS 84): -104.621020894

CASING ELEVATION (FT. AMSL): 4775.05

GROUND ELEVATION (FT. AMSL): 4771.65



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W 119th Avenue
Broomfield, Colorado 80020

CLIENT: Noble

LOGGED BY: Graham Basecke

PROJECT MANAGER: Brandon Bruns

DRILLING CONTRACTOR: Tasman Geosciences

DRILLING EQUIPMENT: Power Probe

DRILL BIT SIZE (INCHES): 4

DATE STARTED - COMPLETED: 11/05/19 - 11/05/19

TOTAL WELL DEPTH (FT. BGS): 25

DEPTH TO WATER (FT. BGS): 15

Beebe Draw RG 26-9, 23

BORING / WELL ID: BH20

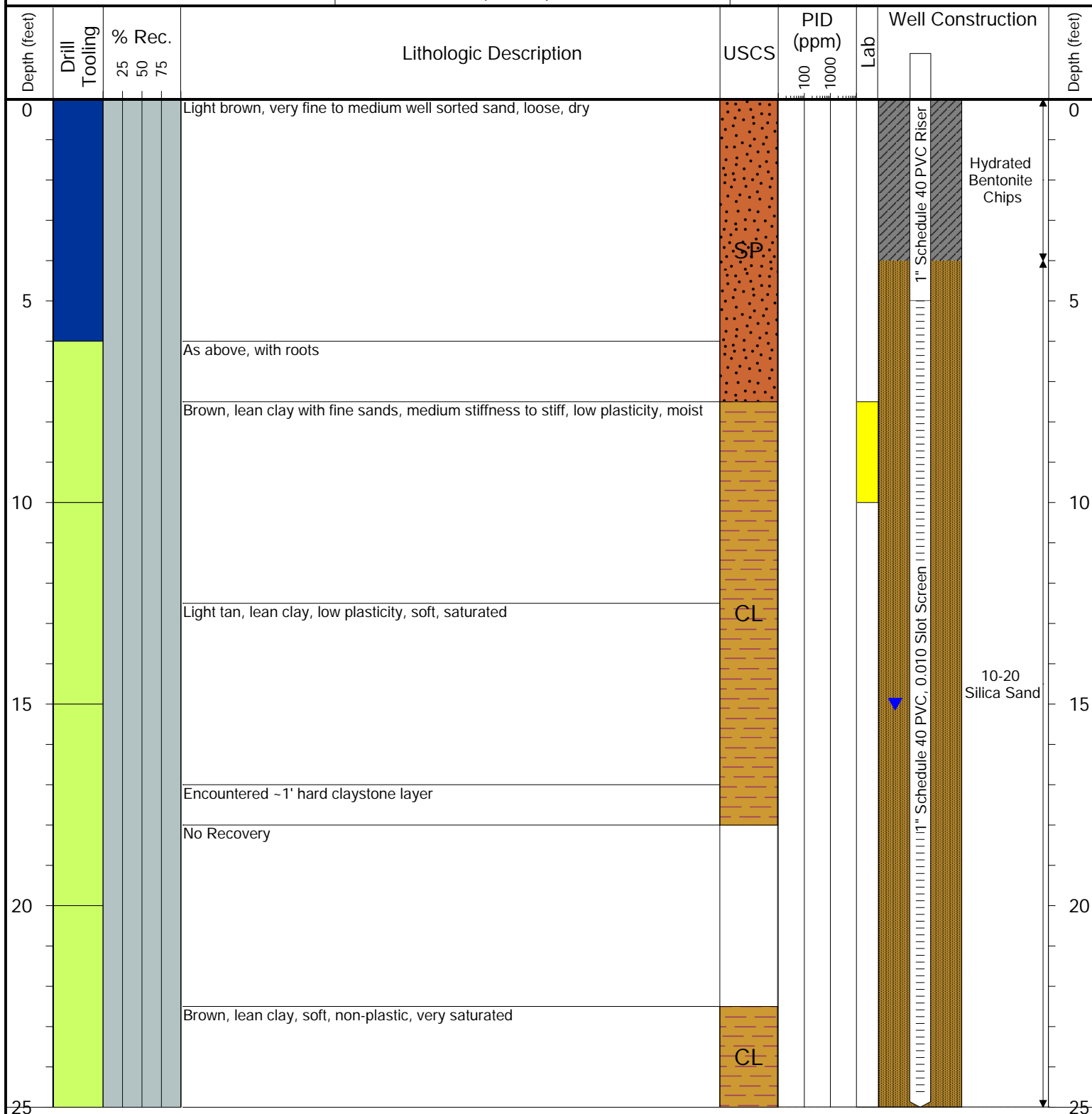
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.281210148

LONGITUDE (WGS 84): -104.621017518

CASING ELEVATION (FT. AMSL): 4776.72

GROUND ELEVATION (FT. AMSL): 4772.97



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W 119th Avenue
Broomfield, Colorado 80020

CLIENT: Noble

LOGGED BY: Graham Basecke

PROJECT MANAGER: Brandon Bruns

DRILLING CONTRACTOR: Tasman Geosciences

DRILLING EQUIPMENT: Power Probe

DRILL BIT SIZE (INCHES): 4

DATE STARTED - COMPLETED: 11/05/19 - 11/05/19

TOTAL WELL DEPTH (FT. BGS): 25

DEPTH TO WATER (FT. BGS): 16

Beebe Draw RG 26-9, 23

BORING / WELL ID: BH21

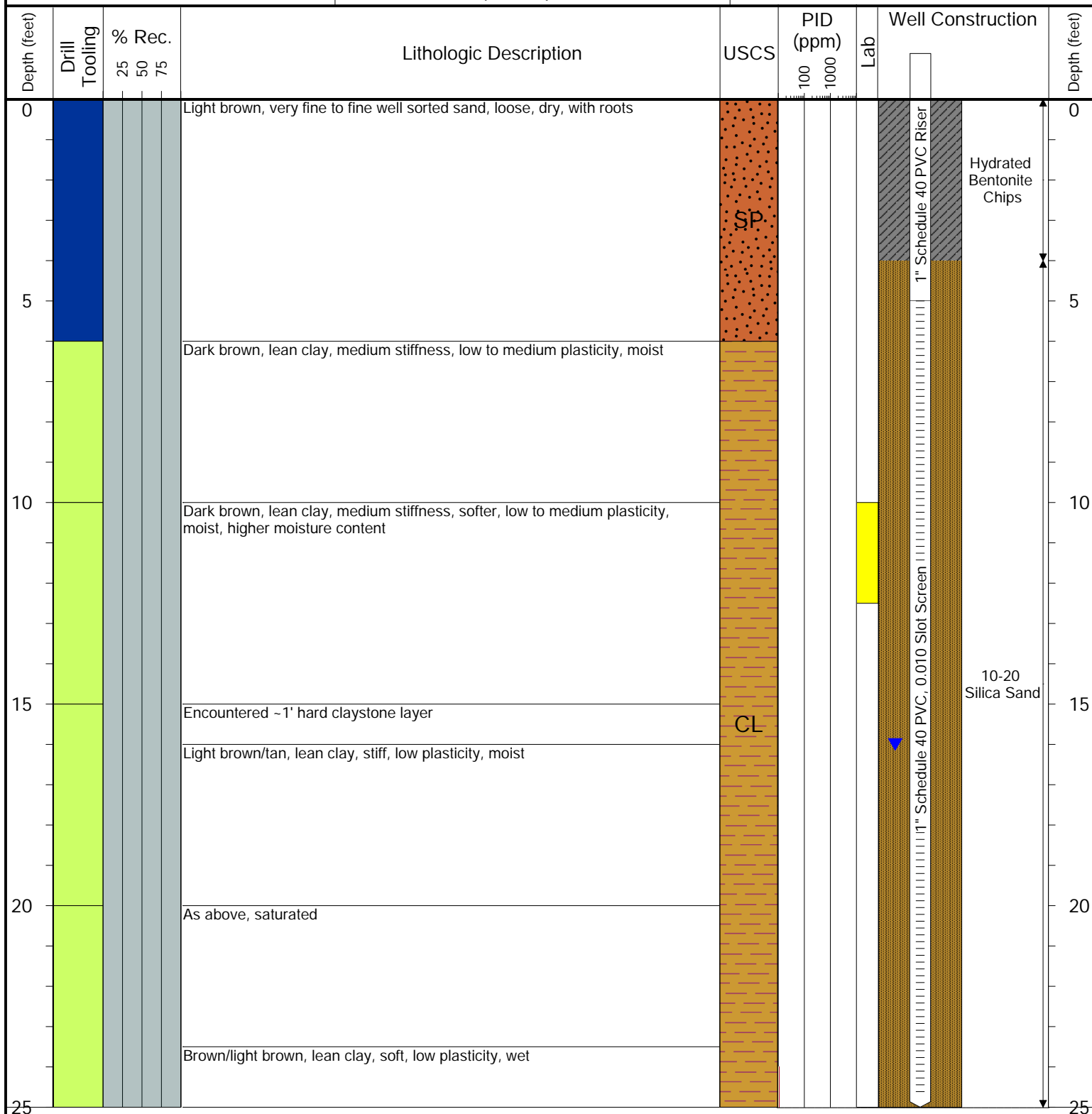
LOCATION: Weld County, Colorado

LATITUDE (WGS 84): 40.281024355

LONGITUDE (WGS 84): -104.621016636

CASING ELEVATION (FT. AMSL): 4778.1

GROUND ELEVATION (FT. AMSL): 4775.01



Drilling / Sample Method:

Macro-Core

Hollow Stem Auger

Solid Stem Auger

Hand Auger

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab

ATTACHMENT B

LABORATORY ANALYTICAL DATA REPORTS

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 12, 2019

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Beebe Draw RG 26-9,23

Work Order # 1911039

Enclosed are the results of analyses for samples received by Summit Scientific on 11/05/19 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH19@6-10'	1911039-01	Soil	11/05/19 11:00	11/05/19 17:30
BH20@7.5-10'	1911039-04	Soil	11/05/19 12:20	11/05/19 17:30
BH21@10-12.5'	1911039-05	Soil	11/05/19 13:30	11/05/19 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.

19 110 39

Summit Scientific

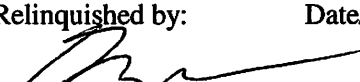

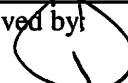
S₂

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

Page 1 of 1

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: Jacob Evans
Address: 6855 119th St E-Mail: Bbruns@tasman-geo.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: Beebe Draw RG 2G-9, 23
Sampler Name: G3 Project Number: -

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR	140LD		
1	BH19 @ 6-10'	11/5/19	1100	1			X			X				X	X				
2	BH19 @ 15-20'		1115	1												X			
3	BH19 @ 22.5-25'		1130	1												X			
4	BH20 @ 7.5-10'		1220	1															
5	BH21 @ 10-12.5'		1330	1															
6																			
7																			
8																			
9																			
10																			

Relinquished by: 	Date/Time: 11/5/19 1540	Received by: Tasman's Lock Box	Date/Time: 11/5/19 1540	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 11/05/19 1730	Received by: 	Date/Time: 11/05/19 1730	Sample Integrity:	
Relinquished by:	Date/Time:	Received by: 	Date/Time:	Temperature Upon Receipt: 3.8 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

Sample Receipt Checklist

S2 Work Order

1911039

Client: NOBLE / TASMAN

Client Project ID: BEEBE DRAW RG 26-9 ,23

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

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air

☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Temp (°C)	3.8
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
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.

RZ

Custodian Printed Name or Initials

Rz

Signature of Custodian

11/5/19

Date/Time



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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

BH19@6-10'
1911039-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1911056	11/06/19	11/08/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1911057	"	11/07/19	EPA 8015M	

Date Sampled: **11/05/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		122 %	30-150		"	"	"	"	

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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

BH20@7.5-10'
1911039-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1911056	11/06/19	11/08/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1911057	"	11/07/19	EPA 8015M	

Date Sampled: **11/05/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

BH21@10-12.5'
1911039-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/05/19 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1911056	11/06/19	11/08/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **11/05/19 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.3 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/05/19 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	1911057	"	11/07/19	EPA 8015M	

Date Sampled: **11/05/19 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		123 %	30-150		"	"	"	"	

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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
11/12/19 11:36

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1911056 - EPA 5030 Soil MS

Blank (1911056-BLK1)

Prepared: 11/06/19 Analyzed: 11/07/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0479		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	20-170			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		104	21-167			

LCS (1911056-BS1)

Prepared: 11/06/19 Analyzed: 11/07/19

Benzene	0.0815	0.0020	mg/kg	0.100		81.5	70-130			
Toluene	0.0870	0.0050	"	0.100		87.0	70-130			
Ethylbenzene	0.0928	0.0050	"	0.100		92.8	70-130			
m,p-Xylene	0.180	0.010	"	0.200		90.1	70-130			
o-Xylene	0.0912	0.0050	"	0.100		91.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0466		"	0.0400		117	23-173			
Surrogate: Toluene-d8	0.0415		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	21-167			

Matrix Spike (1911056-MS1)

Source: 1911038-01

Prepared: 11/06/19 Analyzed: 11/07/19

Benzene	0.140	0.0020	mg/kg	0.100	0.0824	57.7	70-130			QM-07
Toluene	0.348	0.0050	"	0.100	0.339	8.46	70-130			QM-07
Ethylbenzene	0.112	0.0050	"	0.100	0.0205	91.3	70-130			
m,p-Xylene	0.233	0.010	"	0.200	0.0522	90.5	70-130			
o-Xylene	0.113	0.0050	"	0.100	0.0239	89.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0475		"	0.0400		119	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

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 1911056 - EPA 5030 Soil MS

Matrix Spike Dup (1911056-MSD1)		Source: 1911038-01			Prepared: 11/06/19 Analyzed: 11/07/19					
Benzene	0.203	0.0020	mg/kg	0.100	0.0824	120	70-130	36.5	30	QM-07
Toluene	0.415	0.0050	"	0.100	0.339	75.9	70-130	17.7	30	
Ethylbenzene	0.112	0.0050	"	0.100	0.0205	91.4	70-130	0.161	30	
m,p-Xylene	0.220	0.010	"	0.200	0.0522	84.0	70-130	5.73	30	
o-Xylene	0.110	0.0050	"	0.100	0.0239	85.9	70-130	3.28	30	
Surrogate: 1,2-Dichloroethane-d4		0.0481	"	0.0400		120	23-173			
Surrogate: Toluene-d8		0.0413	"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene		0.0414	"	0.0400		103	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
11/12/19 11:36

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1911057 - EPA 3550A

Blank (1911057-BLK1)

Prepared: 11/06/19 Analyzed: 11/07/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1911057-BS1)

Prepared: 11/06/19 Analyzed: 11/07/19

C10-C28 (DRO) 438 50 mg/kg 500 87.6 70-130

Matrix Spike (1911057-MS1)

Source: 1911038-01

Prepared: 11/06/19 Analyzed: 11/07/19

C10-C28 (DRO) 491 50 mg/kg 500 60.6 86.1 70-130

Matrix Spike Dup (1911057-MSD1)

Source: 1911038-01

Prepared: 11/06/19 Analyzed: 11/07/19

C10-C28 (DRO) 474 50 mg/kg 500 60.6 82.6 70-130 3.61 20

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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
11/12/19 11:36

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 14, 2020

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

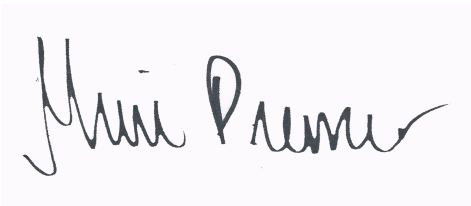
Broomfield, CO 80020

RE: Noble - Beebe Draw RG 26-9,23

Work Order #2001048

Enclosed are the results of analyses for samples received by Summit Scientific on 01/07/20 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/14/20 10:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2001048-01	Water	01/07/20 13:29	01/07/20 17:30
BH02	2001048-02	Water	01/07/20 12:05	01/07/20 17:30
BH03	2001048-03	Water	01/07/20 11:28	01/07/20 17:30
BH04	2001048-04	Water	01/07/20 13:14	01/07/20 17:30
BH05	2001048-05	Water	01/07/20 11:06	01/07/20 17:30
BH06R	2001048-06	Water	01/07/20 12:40	01/07/20 17:30
BH07	2001048-07	Water	01/07/20 10:29	01/07/20 17:30
BH08	2001048-08	Water	01/07/20 10:44	01/07/20 17:30
BH09	2001048-09	Water	01/07/20 11:42	01/07/20 17:30
BH10	2001048-10	Water	01/07/20 11:40	01/07/20 17:30
BH12	2001048-11	Water	01/07/20 11:23	01/07/20 17:30
BH13	2001048-12	Water	01/07/20 12:17	01/07/20 17:30
BH14	2001048-13	Water	01/07/20 13:08	01/07/20 17:30
BH15	2001048-14	Water	01/07/20 11:57	01/07/20 17:30
BH16	2001048-15	Water	01/07/20 10:42	01/07/20 17:30
BH17	2001048-16	Water	01/07/20 10:24	01/07/20 17:30
BH18	2001048-17	Water	01/07/20 11:00	01/07/20 17:30
BH19	2001048-18	Water	01/07/20 13:16	01/07/20 17:30
BH20	2001048-19	Water	01/07/20 13:02	01/07/20 17:30
BH21	2001048-20	Water	01/07/20 12:14	01/07/20 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.

2001048-1

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Noble/Tasman
Address: 6855 W 119th Ave
City/State/Zip: Broomfield CO 80020
Phone: 303-487-1228 Fax: _____
Sampler Name: J Marcus

Project Manager: Brandon Bruns, Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Beebe Draw 26-9, 23
Project Number: n/a

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:										Special Instructions				
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTX													
BH01	01/07/20	1329	3	X				X				X													
BH02	01/07/20	1205	3			X		X				X													
BH03	01/07/20	1128	3	X				X				X													
BH04	01/07/20	1314	3	X				X				X													
BH05	01/07/20	1106	3			X		X				X													
BH06R	01/07/20	1240	3	X				X				X													
BH07	01/07/20	1029	3			X		X				X													
BH08	01/07/20	1044	3	X				X				X													
BH09	01/07/20	1142	3	X				X				X													
BH10	01/07/20	1140	3	X				X				X													
Relinquished by: <u>[Signature]</u> Date/Time: <u>1/7/20 1450</u>				Received by: <u>Tasman Lock Box</u> Date/Time: <u>1/7/20 1450</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"/>										Notes:							
Relinquished by: <u>TASMAN/LOCK BOX</u> Date/Time: <u>01/07/2020 1730</u>				Received by: <u>[Signature]</u> Date/Time: <u>01/07/2020 1730</u>				Sample Integrity: Temperature Upon Receipt: <u>4.7</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																	
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																					

Summit Scientific

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 2 of 2

Client: Noble/Tasman
Address: 6855 W 119th Ave
City/State/Zip: Broomfield CO 80020
Phone: 303-487-1228 Fax: _____
Sampler Name: J Marcus

Project Manager: Brandon Bruns Invoice: Jacob Evans
E-Mail: Bbruns@tasman-geo.com
Project Name: Beebe Draw RG 26-9, 23
Project Number: n/a

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:										Special Instructions					
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX														
BH12	01/07/20	1123	3	X				X				X														
BH13	01/07/20	1217	3	X				X				X														
BH14	01/07/20	1308	3	X				X				X														
BH15	01/07/20	1157	3	X				X				X														
BH16	01/07/20	1042	3	X				X				X														
BH17	01/07/20	1024	3	X				X				X														
BH18	01/07/20	1100	3	X				X				X														
BH19	01/07/20	1316	3	X				X				X														
BH20	01/07/20	1302	3	X				X				X														
BH21	01/07/20	1214	3	X				X				X														

Relinquished by: <u>[Signature]</u>	Date/Time: <u>1/7/20 1450</u>	Received by: <u>Tasman Lock Box</u>	Date/Time: <u>1/7/20 1450</u>	Turn Around Time (Check)	Notes:
				Same Day <input type="checkbox"/>	
				24 Hours <input type="checkbox"/>	
Relinquished by: <u>TASMAN Lock Box</u>	Date/Time: <u>01/07/2020 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>01/07/2020 1730</u>	48 Hours <input type="checkbox"/>	
Relinquished by: _____	Date/Time: _____	Received in Lab by: _____	Date/Time: _____	Sample Integrity: <u>4.7</u>	
				Temperature Upon Receipt: <u>4.7</u>	
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Sample Receipt Checklist

S2 Work Order 2001048

Client: NOBLE / TASMAN

Client Project ID: BEEBE DRAW RG 26-9,23

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

☐ ☒ ☐ ☐ ☐

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

Temp (°C)	4.7
-----------	-----

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCL
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.

RZ
Custodian Printed Name or Initials

RZ
Signature of Custodian

1/7/20
Date/Time



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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
01/14/20 10:44

BH01
2001048-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 13:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	35	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	73	1.0		"	"	"	"	"	"	
Xylenes (total)	170	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 13:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %		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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH02
2001048-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH03
2001048-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		96.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH04
2001048-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 13:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	23	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	31	1.0	"	"	"	"	"	"	
Xylenes (total)	200	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 13:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH05
2001048-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 11:06**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		96.5 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH06R
2001048-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	2.0	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	67	1.0		"	"	"	"	"	"	
Xylenes (total)	25	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		112 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		140 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH07
2001048-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 10:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 10:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		92.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH08
2001048-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 10:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		94.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH09
2001048-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 11:42**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		95.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH10
2001048-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	2.5	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	4.1	1.0	"	"	"	"	"	"	
Xylenes (total)	46	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %	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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH12
2001048-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.1	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	1.1	1.0		"	"	"	"	"	"	
Xylenes (total)	8.6	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 11:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		90.6 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %		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 - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH13
2001048-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 12:17**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH14
2001048-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	3.2	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	55	1.0	"	"	"	"	"	"	
Xylenes (total)	950	200	"	100	"	"	"	"	

Date Sampled: **01/07/20 13:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		149 %	21-167		"	"	"	"	

Summit Scientific

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH15
2001048-14 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	5.6	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 11:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %		21-167		"	"	"	"	

Summit Scientific

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH16
2001048-15 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.6	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		96.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %		21-167		"	"	"	"	

Summit Scientific

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH17
2001048-16 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 10:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		98.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH18
2001048-17 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

Summit Scientific

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Broomfield CO, 80020

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH19
2001048-18 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	3.5	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	200	1.0	"	"	"	"	"	"	
Xylenes (total)	1600	200	"	100	"	"	"	"	

Date Sampled: **01/07/20 13:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		107 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %		21-167	"	"	"	"	

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH20
2001048-19 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 13:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	1.9	1.0		ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	18	2.0		"	"	"	"	"	"	

Date Sampled: **01/07/20 13:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		97.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %		21-167		"	"	"	"	

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brun

Reported:
01/14/20 10:44

BH21
2001048-20 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/20 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2001089	01/08/20	01/09/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/20 12:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

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Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/14/20 10:44

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 2001089 - EPA 5030 Water MS

Blank (2001089-BLK1)

Prepared: 01/08/20 Analyzed: 01/09/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.3		93.2	23-173			
Surrogate: Toluene-d8	13.9		"	13.3		104	20-170			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	21-167			

LCS (2001089-BS1)

Prepared: 01/08/20 Analyzed: 01/09/20

Benzene	37.8	1.0	ug/l	33.3		113	51-132			
Toluene	43.3	1.0	"	33.3		130	51-138			
Ethylbenzene	34.8	1.0	"	33.3		104	58-146			
m,p-Xylene	71.9	2.0	"	66.7		108	57-144			
o-Xylene	32.0	1.0	"	33.3		95.9	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.0	23-173			
Surrogate: Toluene-d8	14.3		"	13.3		107	20-170			
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3		104	21-167			

Matrix Spike (2001089-MS1)

Source: 2001048-02

Prepared: 01/08/20 Analyzed: 01/09/20

Benzene	38.3	1.0	ug/l	33.3	ND	115	34-141			
Toluene	42.8	1.0	"	33.3	ND	128	27-151			
Ethylbenzene	35.6	1.0	"	33.3	ND	107	29-160			
m,p-Xylene	72.8	2.0	"	66.7	ND	109	20-166			
o-Xylene	32.0	1.0	"	33.3	ND	95.9	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		96.2	23-173			
Surrogate: Toluene-d8	14.1		"	13.3		106	20-170			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	21-167			

Summit Scientific

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Broomfield CO, 80020

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/14/20 10:44

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 2001089 - EPA 5030 Water MS

Matrix Spike Dup (2001089-MSD1)		Source: 2001048-02			Prepared: 01/08/20 Analyzed: 01/09/20					
Benzene	37.8	1.0	ug/l	33.3	ND	113	34-141	1.39	30	
Toluene	41.8	1.0	"	33.3	ND	125	27-151	2.29	30	
Ethylbenzene	36.1	1.0	"	33.3	ND	108	29-160	1.31	30	
m,p-Xylene	74.3	2.0	"	66.7	ND	111	20-166	1.93	30	
o-Xylene	32.3	1.0	"	33.3	ND	96.8	33-159	0.996	30	
Surrogate: 1,2-Dichloroethane-d4	12.5		"	13.3		93.7	23-173			
Surrogate: Toluene-d8	14.2		"	13.3		107	20-170			
Surrogate: 4-Bromofluorobenzene	14.5		"	13.3		109	21-167			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Beebe Draw RG 26-9,23

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
01/14/20 10:44

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