

# **THIRD QUARTER 2019 SITE MONITORING REPORT**

## **BEEBE DRAW RG 26-9, 23**

COGCC SPILL TRACKING # 455231  
COGCC REMEDIATION # 11925

Prepared for:



2115 117th Avenue  
Greeley, CO 80631

Prepared by:



6899 North Pecos Street, Unit C  
Denver, CO 80221

**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. BTOC)	Depth to LNAPL (ft. BTOC)	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	11/06/18	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
BH02	11/06/18	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
BH03	11/06/18	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
BH04	11/06/18	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
BH05	11/06/18	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
BH06	11/06/18	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
BH07	11/06/18	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
BH08	11/06/18	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
BH09	11/06/18	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
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
BH11	11/06/18	4775.53	27.21	14.04	ND	ND	4761.49

**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. BTOC)	Depth to LNAPL (ft. BTOC)	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
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
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
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
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 <sup>1</sup>	07/10/19	4774.89	24.80	14.82	ND	ND	4760.07
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
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
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
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

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

\* 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)
<b>COGCC Standard</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>
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
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
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
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
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
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
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
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
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
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

**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)
<b>COGCC Standard</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>
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
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
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
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
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
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
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
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

Notes:

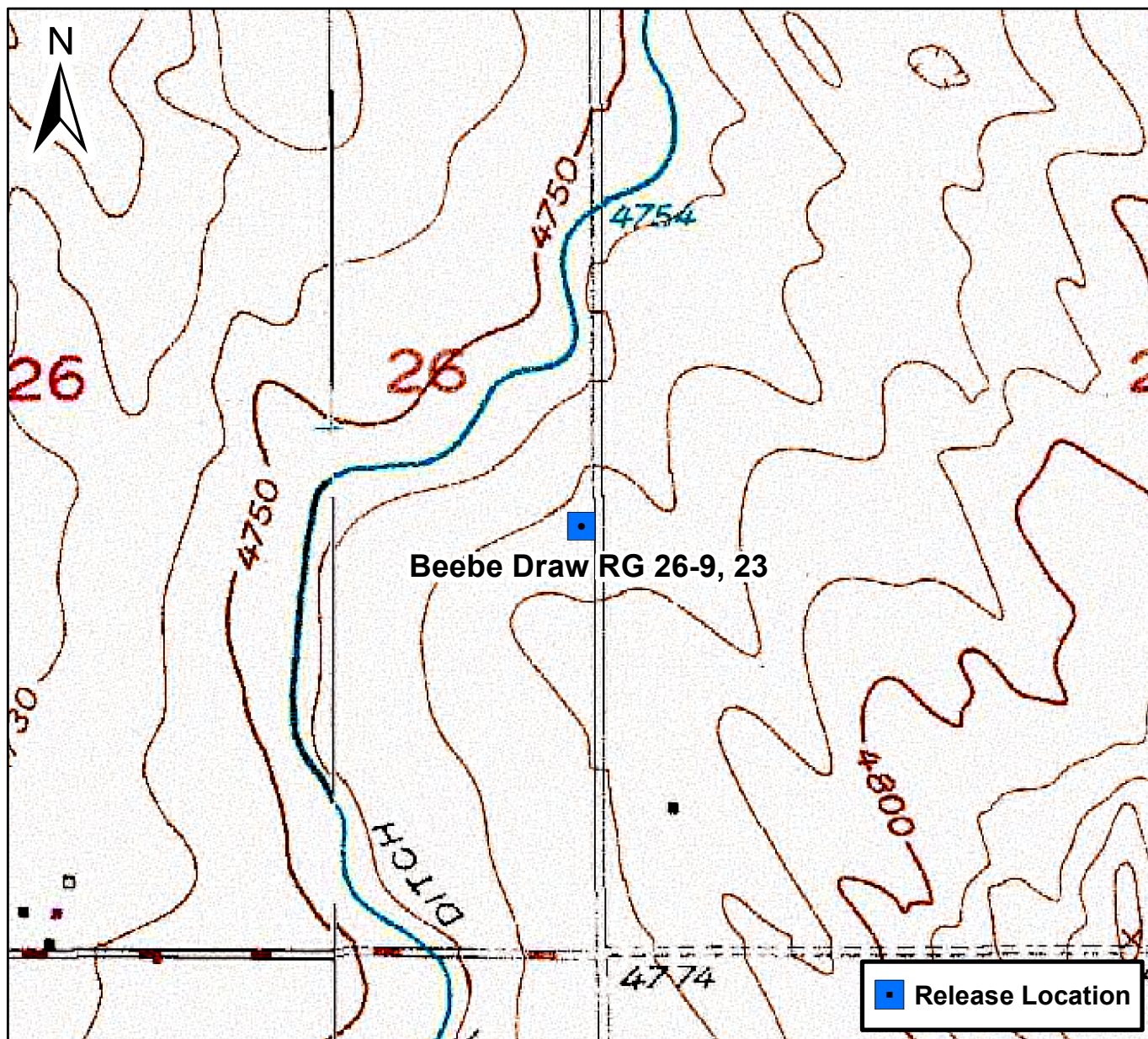
COGCC = Colorado Oil and Gas Conservation Commission

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:	01/25/2019	 <div>Tasman Geosciences, Inc. 6899 Pecos Street – Unit C Denver, CO 80221</div>	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	Figure 2
DESIGNED BY:	JW				
DRAWN BY:	TL				







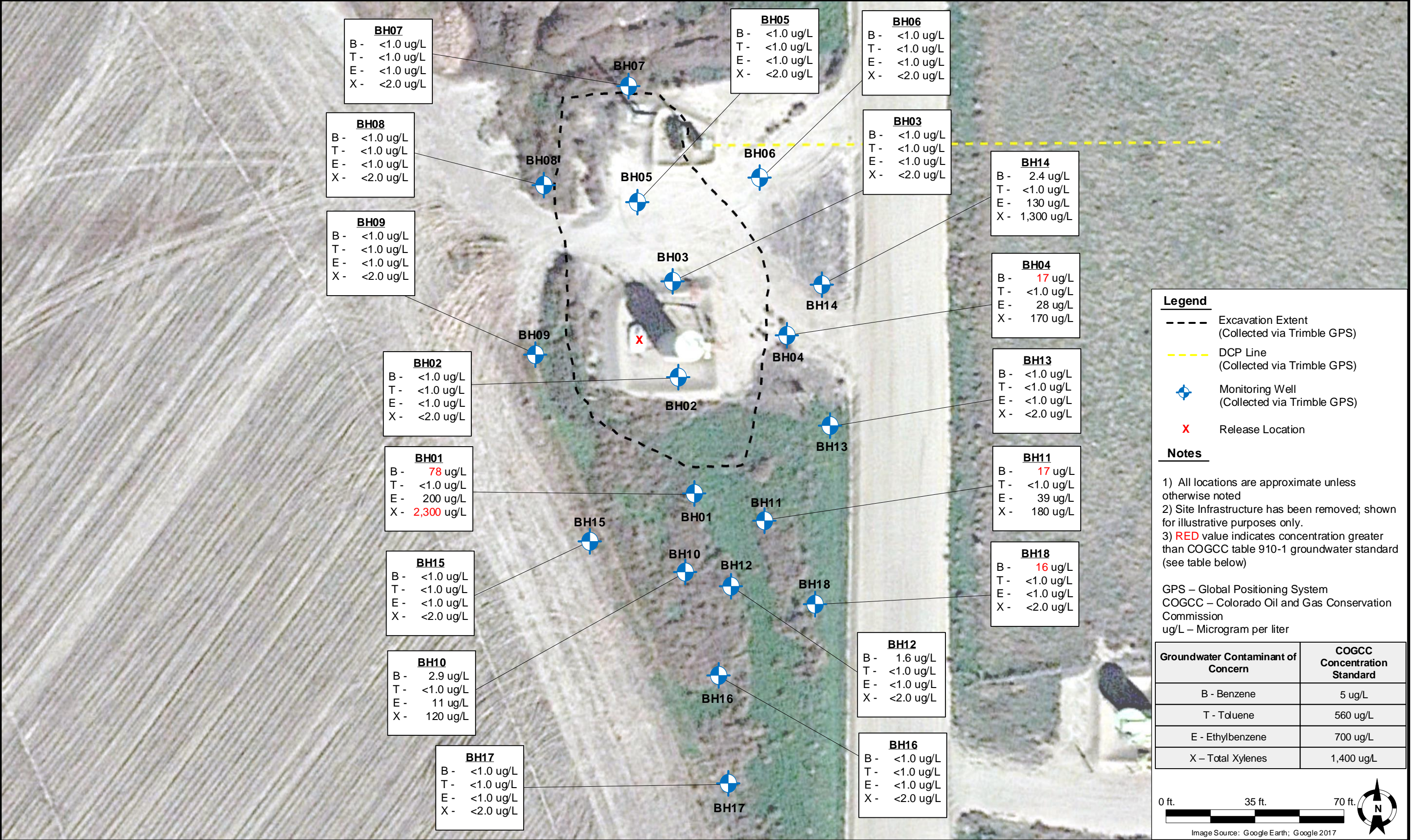
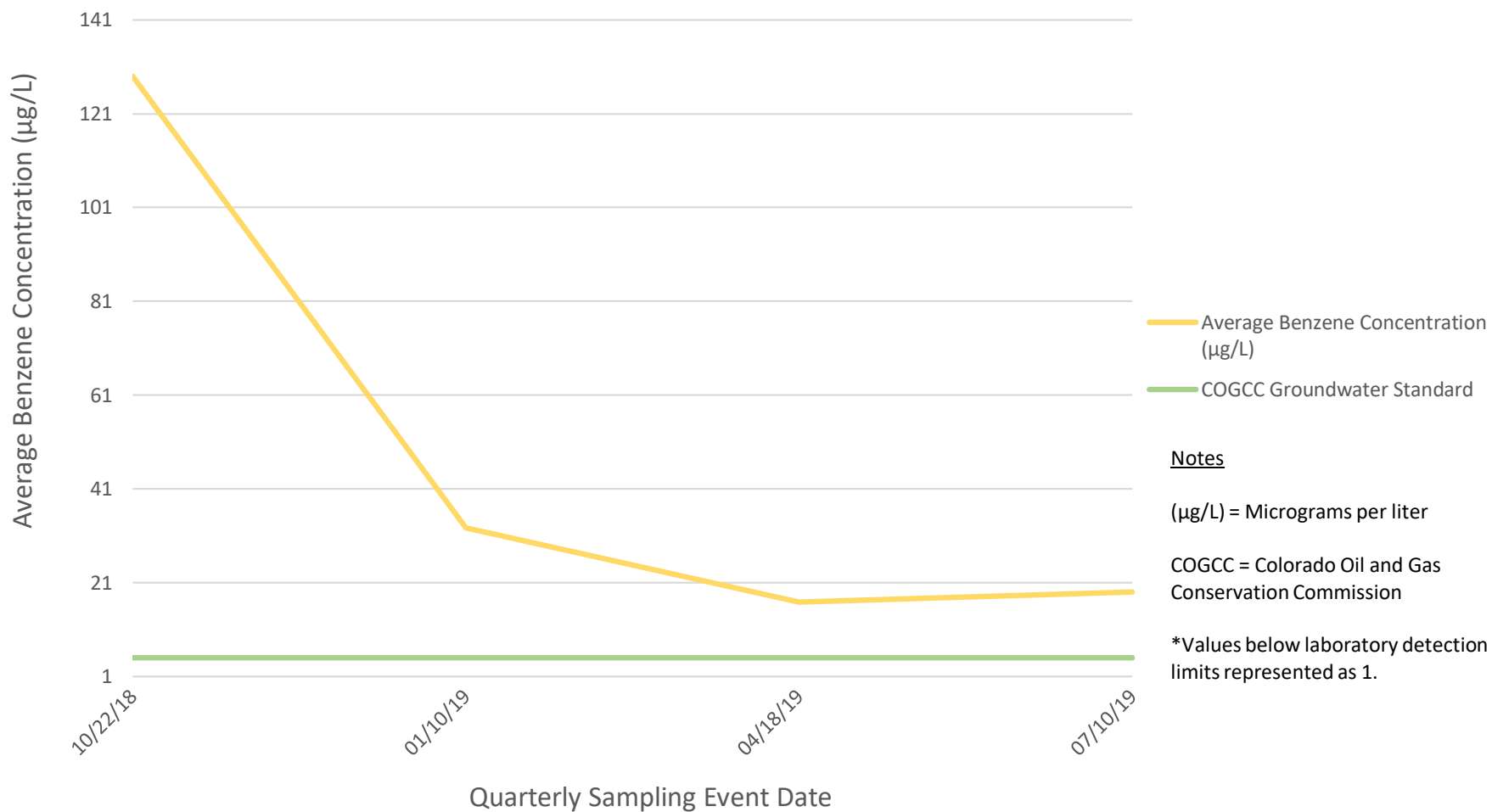




Figure 5  
Beebe Draw RG 26-9, 23  
Average Benzene Concentration VS Quarterly Sampling Event Date





# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 17, 2019

Brandon Bruns

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

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

Work Order # 1907109

Enclosed are the results of analyses for samples received by Summit Scientific on 07/10/19 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 blue background.

Muri Premier For Ben Shrewsbury

Laboratory Manager



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	1907109-01	Water	07/10/19 13:48	07/10/19 17:30
BH02	1907109-02	Water	07/10/19 13:03	07/10/19 17:30
BH03	1907109-03	Water	07/10/19 12:45	07/10/19 17:30
BH04	1907109-04	Water	07/10/19 12:33	07/10/19 17:30
BH05	1907109-05	Water	07/10/19 12:12	07/10/19 17:30
BH06	1907109-06	Water	07/10/19 12:27	07/10/19 17:30
BH07	1907109-07	Water	07/10/19 11:43	07/10/19 17:30
BH08	1907109-08	Water	07/10/19 11:55	07/10/19 17:30
BH09	1907109-09	Water	07/10/19 13:37	07/10/19 17:30
BH10	1907109-10	Water	07/10/19 11:54	07/10/19 17:30
BH11	1907109-11	Water	07/10/19 13:54	07/10/19 17:30
BH12	1907109-12	Water	07/10/19 12:53	07/10/19 17:30
BH13	1907109-13	Water	07/10/19 13:12	07/10/19 17:30
BH14	1907109-14	Water	07/10/19 13:22	07/10/19 17:30
BH15	1907109-15	Water	07/10/19 11:41	07/10/19 17:30
BH16	1907109-16	Water	07/10/19 12:05	07/10/19 17:30
BH17	1907109-17	Water	07/10/19 12:20	07/10/19 17:30
BH18	1907109-18	Water	07/10/19 12:36	07/10/19 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.*



19071091

# Summit Scientific

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 2

Client: Noble / Tasman

Project Manager: Brandon Bruns, Invoice: Jacob Evans

Address: 6899 Pecos Street

E-Mail: Bbruns@tasman-geo.com

City/State/Zip: Denver / CO/ 80221

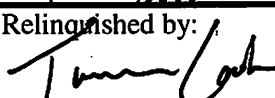
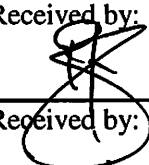
Phone: 303-487-1228

Project Name: Beebe Draw RG 26-9, 23

Sampler Name: Morgan S. Turner C.

Project Number: n/a

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR		
1	BH01	7/10/19	1348	3	X				X					X				
2	BH02		1303															
3	BH03		1245															
4	BH04		1233															
5	BH05		1212															
6	BH06		1227															
7	BH07		1143															
8	BH08		1155															
9	BH09		1337															
10	BH10		1154															

Relinquished by: 	Date/Time: 7/10/19 1500	Received by: Tasman's Lock Box	Date/Time: 7/10/19 1500	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: Tasman's Lock Box	Date/Time: 07/10/19 1730	Received by: 	Date/Time: 07/10/19 1730	Sample Integrity: Temperature Upon Receipt: 3.2 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

1907109.2

# Summit Scientific

S<sub>2</sub>

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

Page 2 of 2

Client: Noble / Tasman Project Manager: Brandon Bruns, Invoice: Jacob Evans  
Address: 6899 Pecos Street E-Mail: Bbruns@tasman-geo.com  
City/State/Zip: Denver / CO/ 80221  
Phone: 303-487-1228 Project Name: Beebe Draw HG 26-9, 23  
Sampler Name: Morgan S. Tanned C. Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	\$260 BTEX	\$260B GBTEXN	\$015 DRO		pH, EC, SAR
1	BH11	7/10/19	1354	3	X				X				X				
2	BH12		1253														
3	BH13		1312														
4	BH14		1322														
5	BH15		1141														
6	BH16		1205														
7	BH17		1220														
8	BH18		1236														
9																	
10																	

Relinquished by: <i>[Signature]</i> Date/Time: 7/10/19 1500	Received by: Tasman's Lock Box Date/Time: 7/10/19 1500	Turn Around Time (Check) Same Day — 72 hours — 24 hours — Standard <i>X</i> 48 hours —	Notes:
Relinquished by: Tasman's Lock Box Date/Time: 07/10/19 1730	Received by: <i>[Signature]</i> Date/Time: 07/10/19 1730	Sample Integrity: Temperature Upon Receipt: 3.9	
Relinquished by:	Received by:	Samples Intact: Yes <i>(X)</i> No	



# Sample Receipt Checklist

S2 Work Order 1907109

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 X Water \_\_\_\_\_ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	3.9
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	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? If yes, contact client and note in narrative.		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> ?			X	
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.

Custodian Printed Name or Initials

Signature of Custodian

Date/Time 07/10/19 10:14



Tasman Geosciences  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH01**  
**1907109-01 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Benzene</b>	<b>78</b>	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>200</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2300</b>	200	"	100	"	"	"	"	

Date Sampled: **07/10/19 13:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.5 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH02**  
**1907109-02 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 13:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		89.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH03**  
**1907109-03 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		92.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.7 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
07/17/19 16:44

**BH04**  
**1907109-04 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>17</b>	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>28</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>170</b>	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:33**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		99.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH05**  
**1907109-05 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		92.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH06**  
**1907109-06 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:27**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH07**  
**1907109-07 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 11:43**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		94.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.8 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH08**  
**1907109-08 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		93.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH09**  
**1907109-09 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 13:37**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH10**  
**1907109-10 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>2.9</b>	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>11</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>120</b>	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 11:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH11**  
**1907109-11 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>17</b>	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>39</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>180</b>	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 13:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH12**  
**1907109-12 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>1.6</b>	1.0		ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/10/19 12:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %		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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH13**  
**1907109-13 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 13:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		95.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.3 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
07/17/19 16:44

**BH14**  
**1907109-14 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 13:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Benzene</b>	<b>2.4</b>	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>130</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1300</b>	200	"	100	"	"	"	"	

Date Sampled: **07/10/19 13:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.4 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH15**  
**1907109-15 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 11:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		90.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH16**  
**1907109-16 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		95.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.4 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

**BH17**  
**1907109-17 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/10/19 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		92.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
07/17/19 16:44

**BH18**  
**1907109-18 (Water)**

**Summit Scientific**

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

Date Sampled: **07/10/19 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>16</b>	1.0		ug/l	1	1907142	07/11/19	07/12/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/10/19 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		95.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		94.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %		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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

## 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 1907142 - EPA 5030 Water MS

##### Blank (1907142-BLK1)

Prepared: 07/11/19 Analyzed: 07/12/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.4	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.8	21-167			

##### LCS (1907142-BS1)

Prepared: 07/11/19 Analyzed: 07/12/19

Benzene	26.2	1.0	ug/l	33.3		78.5	51-132			
Toluene	29.1	1.0	"	33.3		87.3	51-138			
Ethylbenzene	31.1	1.0	"	33.3		93.3	58-146			
m,p-Xylene	62.3	2.0	"	66.7		93.5	57-144			
o-Xylene	30.2	1.0	"	33.3		90.8	53-146			
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		92.5	23-173			
Surrogate: Toluene-d8	12.7		"	13.3		95.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	21-167			

##### Matrix Spike (1907142-MS1)

Source: 1907109-01

Prepared: 07/11/19 Analyzed: 07/12/19

Benzene	113	1.0	ug/l	33.3	77.9	106	34-141			
Toluene	29.9	1.0	"	33.3	ND	89.7	27-151			
Ethylbenzene	284	1.0	"	33.3	203	242	29-160			QM-07
m,p-Xylene	1480	2.0	"	66.7	2270	NR	20-166			QM-07
o-Xylene	30.4	1.0	"	33.3	ND	91.4	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	23-173			
Surrogate: Toluene-d8	12.7		"	13.3		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
07/17/19 16:44

**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 1907142 - EPA 5030 Water MS**

Matrix Spike Dup (1907142-MSD1)		Source: 1907109-01			Prepared: 07/11/19 Analyzed: 07/12/19					
Benzene	105	1.0	ug/l	33.3	77.9	80.1	34-141	7.87	30	
Toluene	29.6	1.0	"	33.3	ND	88.9	27-151	0.874	30	
Ethylbenzene	265	1.0	"	33.3	203	185	29-160	6.94	30	QM-07
m,p-Xylene	1440	2.0	"	66.7	2270	NR	20-166	3.00	30	QM-07
o-Xylene	30.8	1.0	"	33.3	ND	92.3	33-159	0.980	30	
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		103	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		92.9	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		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  
6899 Pecos St, Unit C  
Denver CO, 80221

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

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/17/19 16:44

### 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