

FRANK 2, 5, 6 CC7-19, 29

HISTORIC RELEASE

API #: 05-123-29603

Spill/Release Point ID #: 447515

Remediation Project #: 10113

SECOND QUARTER 2018

**Analytical Tables, Figures,
and Laboratory Reports**

June 6, 2018



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TABLE 1
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - FRANK 2, 5, 6, CC 7-19, 29
HISTORIC RELEASE



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	09/01/16	Sample Not Collected - 2.19 ft. LNAPL			
BH01	09/09/16	Sample Not Collected - 2.50 ft. LNAPL			
BH01	10/28/16	Well Destroyed During Excavation			
BH01R	02/08/17	<1.0	<1.0	<1.0	3.8
BH01R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH01R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH01R	11/09/17	32	<1.0	<1.0	<2.0
BH01R	02/07/18	1.2	<1.0	<1.0	<2.0
BH01R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH02	09/01/16	Sample Not Collected - 2.27 ft. LNAPL			
BH02	09/09/16	Sample Not Collected - 2.58 ft. LNAPL			
BH02	10/28/16	Well Destroyed During Excavation			
BH02R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH02R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH02R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH02R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH02R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH02R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH03	09/01/16	260	720	65	640
BH03	09/09/16	Sample Not Collected - 0.07 ft. LNAPL			
BH03	10/28/16	Well Destroyed During Excavation			
BH03R	02/08/17	<1.0	<1.0	<1.0	31
BH03R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH03R	08/30/17	<1.0	<1.0	<1.0	3.1
BH03R	11/09/17	180	13	51	82
BH03R	02/07/18	10	<1.0	1.1	<2.0
BH03R	05/10/18	6.7	<1.0	<1.0	<2.0
BH04	09/01/16	Sample Not Collected - 1.75 ft. LNAPL			
BH04	09/09/16	Sample Not Collected - 2.15 ft. LNAPL			
BH04	10/28/16	Well Destroyed During Excavation			
BH04R	02/08/17	<1.0	<1.0	<1.0	1.6
BH04R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH04R	08/30/17	2.4	<1.0	<1.0	<2.0
BH04R	11/09/17	62	36	18	75
BH04R	02/07/18	45	65	16	92
BH04R	05/10/18	13	7.6	5.2	33
BH05	09/01/16	19	29	2.2	20
BH05	09/09/16	6.3	12	1.3	14
BH05	10/28/16	Well Destroyed During Excavation			
BH05R	02/08/17	<1.0	1.8	<1.0	1.7
BH05R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH05R	08/30/17	1.2	<1.0	<1.0	<2.0
BH05R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH05R	02/07/18	<1.0	<1.0	<1.0	<2.0

TABLE 1
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Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
BH05R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH06	09/01/16	<1.0	<1.0	<1.0	<1.0
BH06	09/09/16	<1.0	<1.0	<1.0	<1.0
BH06	10/28/16	Well Destroyed During Excavation			
BH06R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH06R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH06R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH06R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH06R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH06R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH07	09/01/16	<1.0	1.3	<1.0	3.4
BH07	09/09/16	<1.0	<1.0	<1.0	<1.0
BH07	10/28/16	Well Destroyed During Excavation			
BH07R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH07R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH07R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH07R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH07R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH07R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH09	09/09/16	<1.0	1.0	<1.0	<1.0
BH09	10/28/16	Well Destroyed During Excavation			
BH09R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH09R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH09R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH09R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH09R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH09R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH10	09/09/16	<1.0	<1.0	8.4	39
BH10	02/08/17	<1.0	<1.0	18	150
BH10	05/17/17	<1.0	<1.0	<1.0	150
BH10	08/30/17	<1.0	<1.0	2.9	33
BH10	11/09/17	2.6	<1.0	66	260
BH10	02/07/18	<1.0	<1.0	62	260
BH10	05/10/18	<1.0	<1.0	94	470
BH11	09/09/16	130	20	4.6	27
BH11	10/28/16	Well Destroyed During Excavation			
BH11R	02/08/17	<1.0	<1.0	<1.0	6.6
BH11R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH11R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH11R	11/09/17	230	<1.0	4.3	45
BH11R	02/07/18	12	<1.0	<1.0	<2.0
BH11R	05/10/18	210	72	8.2	79
BH12	09/09/16	<1.0	<1.0	<1.0	<1.0
BH12	10/28/16	Well Destroyed During Excavation			

TABLE 1
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Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Standard		5	560	700	1,400
BH12R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH12R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH12R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH12R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH12R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH12R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH13	09/09/16	<1.0	<1.0	<1.0	<1.0
BH13	10/28/16	Well Destroyed During Excavation			
BH13R	02/08/17	<1.0	<1.0	<1.0	<1.0
BH13R	05/17/17	<1.0	<1.0	<1.0	<2.0
BH13R	08/30/17	<1.0	<1.0	<1.0	<2.0
BH13R	11/09/17	<1.0	<1.0	<1.0	<2.0
BH13R	02/07/18	<1.0	<1.0	<1.0	<2.0
BH13R	05/10/18	<1.0	<1.0	<1.0	<2.0
BH14	09/09/16	<1.0	<1.0	<1.0	<1.0
BH14	02/08/17	<1.0	<1.0	<1.0	<1.0
BH14	05/17/17	<1.0	<1.0	<1.0	<2.0
BH14	08/30/17	<1.0	<1.0	<1.0	<2.0
BH14	11/09/17	<1.0	<1.0	<1.0	<2.0
BH14	02/07/18	<1.0	<1.0	<1.0	<2.0
BH14	05/10/18	<1.0	<1.0	<1.0	<2.0
BH15	09/09/16	<1.0	<1.0	<1.0	<1.0
BH15	02/08/17	<1.0	<1.0	<1.0	<1.0
BH15	05/17/17	<1.0	<1.0	<1.0	<2.0
BH15	08/30/17	<1.0	<1.0	<1.0	<2.0
BH15	11/09/17	<1.0	<1.0	<1.0	<2.0
BH15	02/07/18	<1.0	<1.0	<1.0	<2.0
BH15	05/10/18	<1.0	<1.0	<1.0	<2.0
BH16	02/08/17	<1.0	<1.0	<1.0	<1.0
BH16	05/17/17	<1.0	<1.0	<1.0	<2.0
BH16	08/30/17	<1.0	<1.0	<1.0	<2.0
BH16	11/09/17	<1.0	<1.0	<1.0	<2.0
BH16	02/07/18	<1.0	<1.0	<1.0	<2.0
BH16	05/10/18	<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

LNAPL = Light non-aqueous phase liquid

Groundwater standards referenced from COGCC Table 910-1

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

TABLE 2
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - FRANK 2, 5, 6, CC 7-19, 29
HISTORIC RELEASE



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	09/01/16	4614.95	NM	13.23	11.04	2.19	4603.36
BH01	09/09/16	4614.95	NM	13.73	11.23	2.50	4603.10
BH01	10/28/16	Well Destroyed During Excavation					
BH01R	02/08/17	4615.93	19.80	14.61	ND	ND	4601.32
BH01R	05/17/17	4616.31	19.73	13.91	ND	ND	4602.40
BH01R	08/30/17	4616.31	19.63	12.37	ND	ND	4603.94
BH01R	11/09/17	4616.31	19.44	13.43	ND	ND	4602.88
BH01R	02/07/17	4616.31	19.64	14.81	ND	ND	4601.50
BH01R	05/10/18	4616.31	19.61	14.00	ND	ND	4602.31
BH02	09/01/16	4616.68	NM	15.07	12.80	2.27	4603.31
BH02	09/09/16	4616.68	NM	15.54	12.96	2.58	4603.08
BH02	10/28/16	Well Destroyed During Excavation					
BH02R	02/08/17	4615.85	19.83	14.52	ND	ND	4601.33
BH02R	05/17/17	4616.23	19.75	13.85	ND	ND	4602.38
BH02R	08/30/17	4616.23	19.77	12.30	ND	ND	4603.93
BH02R	11/09/17	4616.23	19.51	13.36	ND	ND	4602.87
BH02R	02/07/17	4616.23	19.80	14.72	ND	ND	4601.51
BH02R	05/10/18	4616.23	19.58	13.95	ND	ND	4602.28
BH03	09/01/16	4615.20	22.36	11.79	ND	ND	4603.41
BH03	09/09/16	4615.20	NM	12.08	12.01	0.07	4603.17
BH03	10/28/16	Well Destroyed During Excavation					
BH03R	02/08/17	4614.89	19.42	13.55	ND	ND	4601.34
BH03R	05/17/17	4615.27	19.38	12.98	ND	ND	4602.29
BH03R	08/30/17	4615.27	19.28	11.29	ND	ND	4603.98
BH03R	11/09/17	4615.27	19.25	12.39	ND	ND	4602.88
BH03R	02/07/17	4615.27	19.26	13.76	ND	ND	4601.51
BH03R	05/10/18	4615.27	19.22	12.93	ND	ND	4602.34
BH04	09/01/16	4615.54	NM	13.49	11.74	1.75	4603.36
BH04	09/09/16	4615.54	NM	14.04	11.89	2.15	4603.11
BH04	10/28/16	Well Destroyed During Excavation					
BH04R	02/08/17	4615.77	19.76	14.43	ND	ND	4601.34
BH04R	05/17/17	4616.15	19.69	13.72	ND	ND	4602.43
BH04R	08/30/17	4616.15	19.73	12.20	ND	ND	4603.95
BH04R	11/09/17	4616.15	19.65	13.25	ND	ND	4602.90
BH04R	02/07/17	4616.15	19.72	14.63	ND	ND	4601.52
BH04R	05/10/18	4616.15	19.65	13.84	ND	ND	4602.31
BH05	09/01/16	4616.26	21.19	12.86	ND	ND	4603.40
BH05	09/09/16	4616.26	21.05	13.10	ND	ND	4603.16
BH05	10/28/16	Well Destroyed During Excavation					
BH05R	02/08/17	4615.77	19.63	14.42	ND	ND	4601.35
BH05R	05/17/17	4616.15	19.60	13.71	ND	ND	4602.44
BH05R	08/30/17	4616.15	19.47	12.17	ND	ND	4603.98
BH05R	11/09/17	4616.15	19.43	13.25	ND	ND	4602.90
BH05R	02/07/17	4616.15	19.48	14.62	ND	ND	4601.53
BH05R	05/10/18	4616.15	19.40	13.79	ND	ND	4602.36
BH06	09/01/16	4614.99	21.45	11.58	ND	ND	4603.41

TABLE 2
GROUNDWATER ELEVATION DATA
NOBLE ENERGY, INC. - FRANK 2, 5, 6, CC 7-19, 29
HISTORIC RELEASE



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)
BH06	09/09/16	4614.99	21.00	11.80	ND	ND	4603.19
BH06	10/28/16	Well Destroyed During Excavation					
BH06R	02/08/17	4614.28	19.52	12.82	ND	ND	4601.46
BH06R	05/17/17	4614.66	19.48	12.15	ND	ND	4602.51
BH06R	08/30/17	4614.66	19.39	10.60	ND	ND	4604.06
BH06R	11/09/17	4614.66	19.27	11.68	ND	ND	4602.98
BH06R	02/07/17	4614.66	19.35	13.07	ND	ND	4601.59
BH06R	05/10/18	4614.66	19.41	12.23	ND	ND	4602.43
BH07	09/01/16	4615.03	22.51	11.56	ND	ND	4603.47
BH07	09/09/16	4615.03	22.43	11.81	ND	ND	4603.22
BH07	10/28/16	Well Destroyed During Excavation					
BH07R	02/08/17	4614.10	19.50	12.66	ND	ND	4601.44
BH07R	05/17/17	4614.48	19.31	12.01	ND	ND	4602.47
BH07R	08/30/17	4614.48	19.23	10.42	ND	ND	4604.06
BH07R	11/09/17	4614.48	19.08	11.48	ND	ND	4603.00
BH07R	02/07/17	4614.48	19.16	12.88	ND	ND	4601.60
BH07R	05/10/18	4614.48	19.18	12.05	ND	ND	4602.43
BH09	09/09/16	4615.12	17.20	12.03	ND	ND	4603.09
BH09	10/28/16	Well Destroyed During Excavation					
BH09R	02/08/17	4613.46	17.60	12.20	ND	ND	4601.26
BH09R	05/17/17	4613.84	17.49	11.50	ND	ND	4602.34
BH09R	08/30/17	4613.84	17.51	9.94	ND	ND	4603.90
BH09R	11/09/17	4613.84	17.48	11.01	ND	ND	4602.83
BH09R	02/07/17	4613.84	17.50	12.41	ND	ND	4601.43
BH09R	05/10/18	4613.84	17.50	11.59	ND	ND	4602.25
BH10	09/09/16	4615.46	17.26	12.35	ND	ND	4603.11
BH10	02/08/17	4615.46	17.20	14.19	ND	ND	4601.27
BH10	05/17/17	4615.46	16.25	13.51	ND	ND	4601.95
BH10	08/30/17	4615.46	17.12	11.93	ND	ND	4603.53
BH10	11/09/17	4615.46	17.05	12.99	ND	ND	4602.47
BH10	02/07/17	4615.46	17.17	14.38	ND	ND	4601.08
BH10	05/10/18	4615.46	17.30	13.59	ND	ND	4601.87
BH11	09/09/16	4615.54	16.92	12.47	ND	ND	4603.07
BH11	10/28/16	Well Destroyed During Excavation					
BH11R	02/08/17	4615.63	19.79	14.36	ND	ND	4601.27
BH11R	05/17/17	4616.01	19.71	13.63	ND	ND	4602.38
BH11R	08/30/17	4616.01	19.54	12.10	ND	ND	4603.91
BH11R	11/09/17	4616.01	19.41	13.18	ND	ND	4602.83
BH11R	02/07/17	4616.01	19.47	14.55	ND	ND	4601.46
BH11R	05/10/18	4616.01	19.40	13.74	ND	ND	4602.27
BH12	09/09/16	4615.25	17.24	12.09	ND	ND	4603.16
BH12	10/28/16	Well Destroyed During Excavation					
BH12R	02/08/17	4614.19	19.33	12.83	ND	ND	4601.36
BH12R	05/17/17	4614.57	19.21	12.15	ND	ND	4602.42
BH12R	08/30/17	4614.57	19.20	10.57	ND	ND	4604.00

TABLE 2
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HISTORIC RELEASE



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)
BH12R	11/09/17	4614.57	19.13	11.63	ND	ND	4602.94
BH12R	02/07/17	4614.57	19.20	13.04	ND	ND	4601.53
BH12R	05/10/18	4614.57	18.93	12.23	ND	ND	4602.34
BH13	09/09/16	4614.12	16.47	10.96	ND	ND	4603.16
BH13	10/28/16	Well Destroyed During Excavation					
BH13R	02/08/17	4614.65	19.63	13.21	ND	ND	4601.44
BH13R	05/17/17	4615.03	19.52	12.53	ND	ND	4602.50
BH13R	08/30/17	4615.03	19.47	11.00	ND	ND	4604.03
BH13R	11/09/17	4615.03	19.43	12.08	ND	ND	4602.95
BH13R	02/07/17	4615.03	19.52	13.45	ND	ND	4601.58
BH13R	05/10/18	4615.03	19.30	12.61	ND	ND	4602.42
BH14	09/09/16	4615.12	16.69	12.05	ND	ND	4603.07
BH14	02/08/17	4615.12	16.42	13.56	ND	ND	4601.56
BH14	05/17/17	4615.12	16.41	12.88	ND	ND	4602.24
BH14	08/30/17	4615.12	16.34	11.30	ND	ND	4603.82
BH14	11/09/17	4615.12	16.21	12.35	ND	ND	4602.77
BH14	02/07/17	4615.12	16.42	13.77	ND	ND	4601.35
BH14	05/10/18	4615.12	16.35	12.98	ND	ND	4602.14
BH15	09/09/16	4614.94	18.15	11.89	ND	ND	4603.05
BH15	02/08/17	4614.94	17.67	13.30	ND	ND	4601.64
BH15	05/17/17	4614.94	17.62	12.61	ND	ND	4602.33
BH15	08/30/17	4614.94	17.64	11.07	ND	ND	4603.87
BH15	11/09/17	4614.94	17.58	12.17	ND	ND	4602.77
BH15	02/07/17	4614.94	17.83	13.51	ND	ND	4601.43
BH15	05/10/18	4614.94	17.59	12.71	ND	ND	4602.23
BH16	02/08/17	4615.45	19.77	14.18	ND	ND	4601.27
BH16	05/17/17	4615.83	19.70	13.49	ND	ND	4602.34
BH16	08/30/17	4615.83	19.72	11.95	ND	ND	4603.88
BH16	11/09/17	4615.83	19.65	13.04	ND	ND	4602.79
BH16	02/07/17	4615.83	19.73	14.38	ND	ND	4601.45
BH16	05/10/18	4615.83	19.70	13.59	ND	ND	4602.24

ft. = Feet

AMSL = Above mean sea level

BTOC = Below top of casing

LNAPL = Light non-aqueous phase liquid

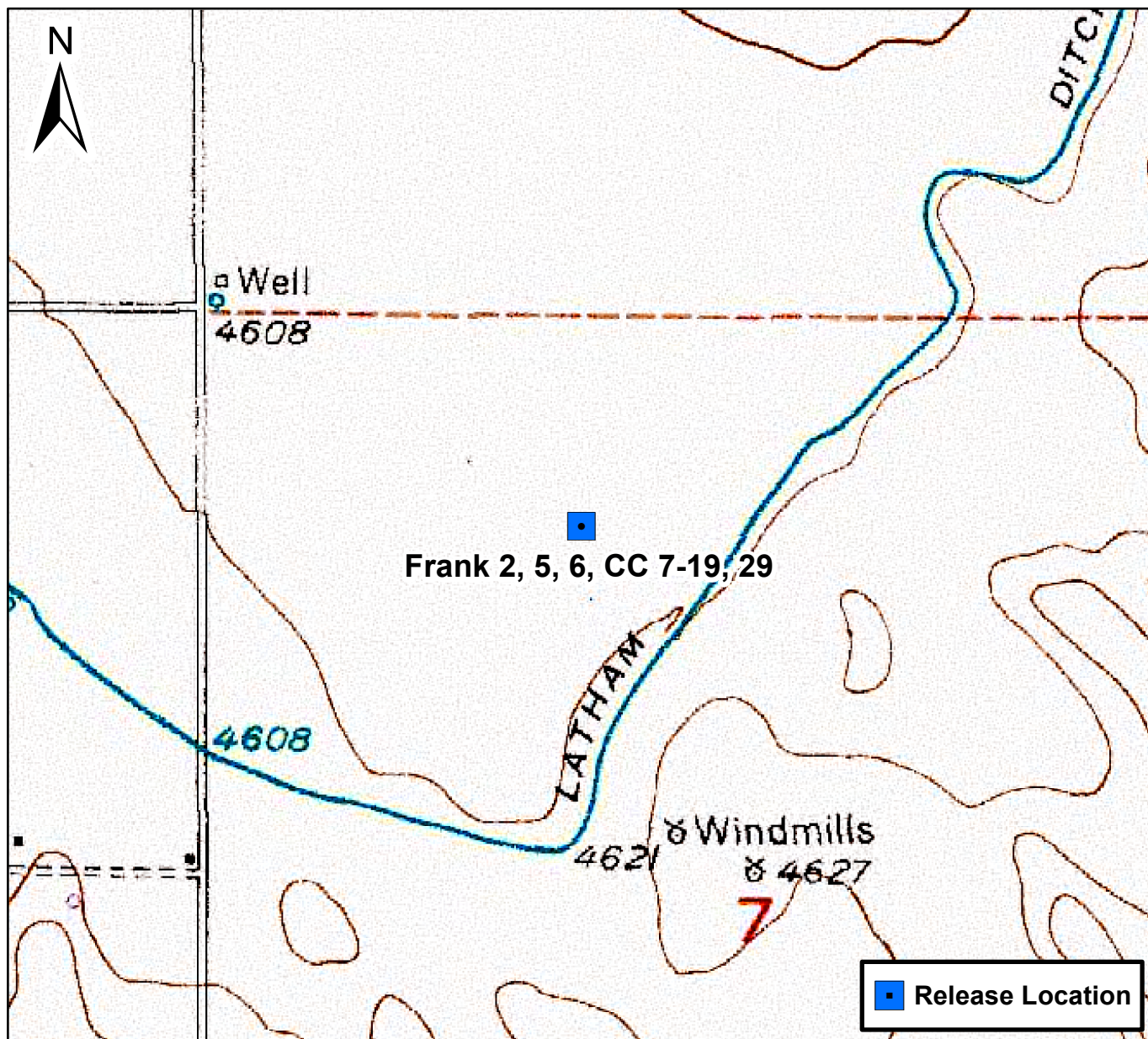
NM = Not measured

ND = No LNAPL detected

* Groundwater elevation was corrected for product thickness (when present) using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)

LNAPL relative density was estimated to be approximately 0.75




0 750 1,500 Feet

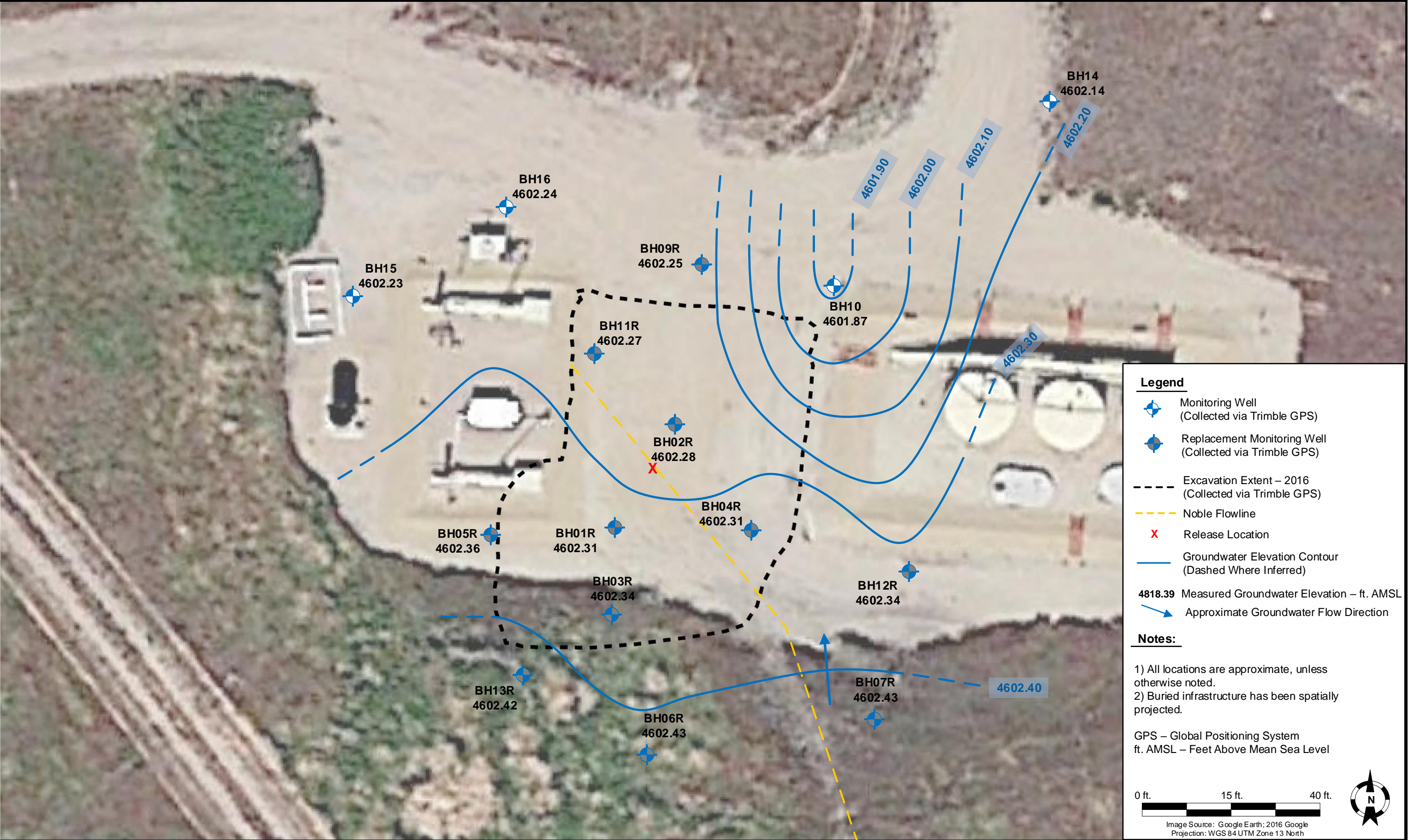
Figure 1

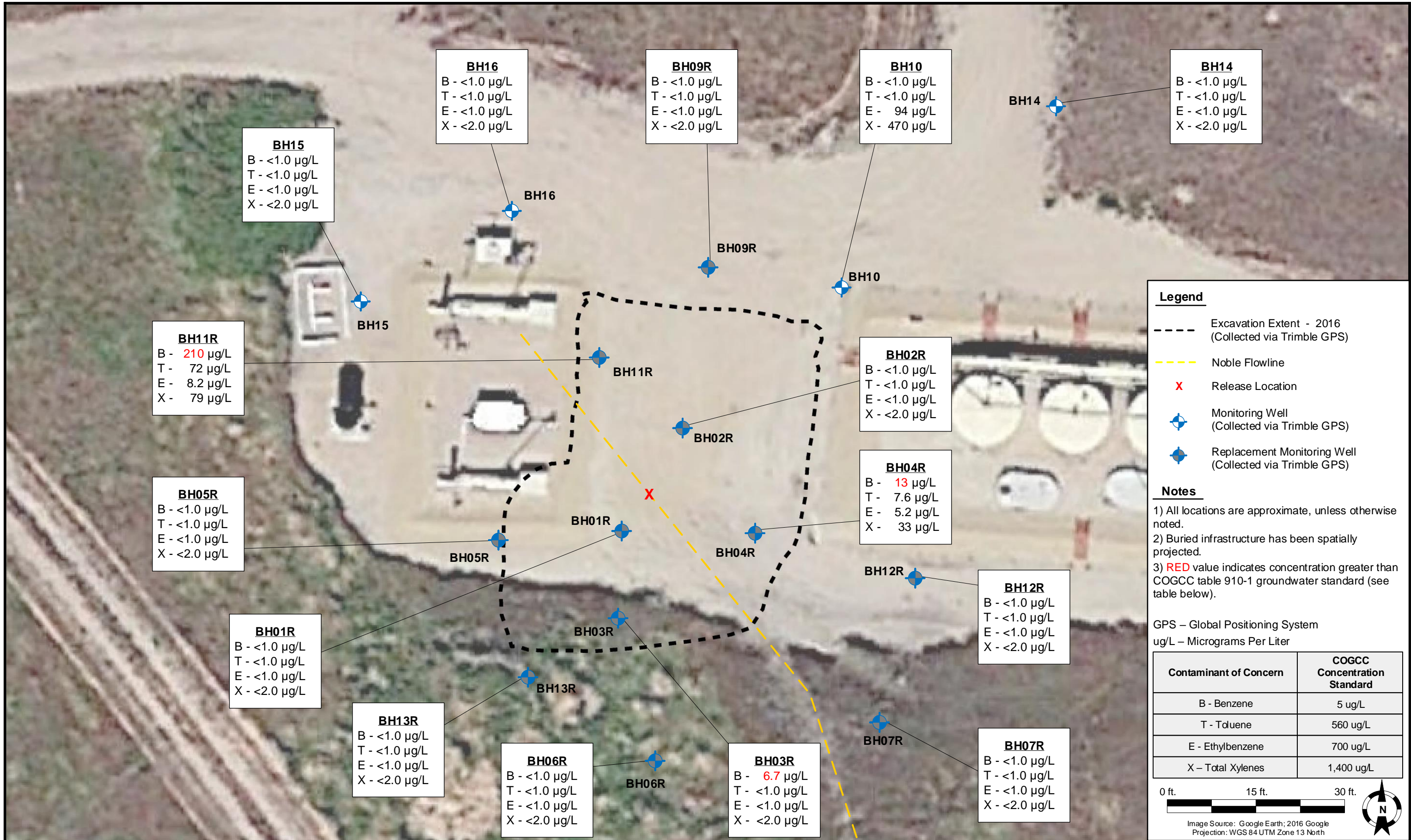
Site Location Map
 Frank 2, 5, 6, CC 7-19, 29
 Historic Release
 NENW S7 T4N R63W
 Weld County, Colorado





DATE: 09/13/2017	 <div>TASMAN GEOSCIENCES</div> <div>Tasman Geosciences, Inc. 6899 Pecos Street – Unit C Denver, CO 80221</div>	Noble Energy, Inc. – DJ Basin Frank 2, 5, 6, CC7-19, 29 Historic Release NENW, Section 7, Township 4 North, Range 63 West Weld County, Colorado	Site Overview Map	FIGURE 2
DESIGNED BY: JW				
DRAWN BY: JW				





Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 17, 2018

Brandon Bruns

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

RE: Noble - Frank 2,5,6 CC7-19,29

Enclosed are the results of analyses for samples received by Summit Scientific on 05/11/18 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R	1805154-01	Water	05/10/18 13:00	05/11/18 17:00
BH02R	1805154-02	Water	05/10/18 13:45	05/11/18 17:00
BH03R	1805154-03	Water	05/10/18 12:20	05/11/18 17:00
BH04R	1805154-04	Water	05/10/18 12:50	05/11/18 17:00
BH05R	1805154-05	Water	05/10/18 11:50	05/11/18 17:00
BH06R	1805154-06	Water	05/10/18 12:10	05/11/18 17:00
BH07R	1805154-07	Water	05/10/18 12:30	05/11/18 17:00
BH09R	1805154-08	Water	05/10/18 13:20	05/11/18 17:00
BH10	1805154-09	Water	05/10/18 13:30	05/11/18 17:00
BH11R	1805154-10	Water	05/10/18 13:10	05/11/18 17:00
BH12R	1805154-11	Water	05/10/18 12:40	05/11/18 17:00
BH13R	1805154-12	Water	05/10/18 11:40	05/11/18 17:00
BH14	1805154-13	Water	05/10/18 11:20	05/11/18 17:00
BH15	1805154-14	Water	05/10/18 11:10	05/11/18 17:00
BH16	1805154-15	Water	05/10/18 11:30	05/11/18 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

303-277-9310 ♦ 303-374-5933 Fax


Page 1 of 2

Fax:


Sampler Name: Max Dahlgren

Project Number: 7

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 (8260)															
BH01R	5/10/18	1300	3			X		X				X															
BH02R		1345																									
BH03R		1220																									
BH04R		1250																									
BH05R		1150																									
BH06R		1210																									
BH07R		1230																									
BH09R		1320																									
BH10		1330																									
BH11R		1310																									

Relinquished by: 

Date/Time: 5/10/18 17:00

Received by: 

Date/Time: 5-11-18 17:00

Turn Around Time (Check)

Same Day

24 Hours

48 Hours

72 Hours

Standard

Notes:

Relinquished by:

Date/Time:

Received by:

Date/Time:

Sample Integrity:

Temperature Upon Receipt: 2.8

Intact: Yes No

1805154-2

303-277-9310 ♦ 303-374-5933 Fax

Page 2 of 2

Project Manager: _____
E-Mail: _____
Project Name: Frank 2,5,6 CC7-19,29
Project Number: _____

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order: 1805754

Client: Noble / Tasman

Client Project ID: Frank 2,5,6 CC7-19,29

Shipped Via: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

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

Temp (°C)	<u>2.8</u>
-----------	------------

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

Additional Comments (if any):

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

Mur:
Custodian Printed Name or Initials

MA 5-11-18
Signature or Initials of Custodian

17:30
Date/Time



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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH01R
1805154-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.8 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		87.5 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH02R
1805154-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.1 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		87.2 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH03R
1805154-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	6.7	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.0 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		87.4 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	70-130		"	"	"	"	

Summit Scientific

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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH04R
1805154-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	13	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	7.6	1.0	"	"	"	"	"	"	
Ethylbenzene	5.2	1.0	"	"	"	"	"	"	
Xylenes (total)	33	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.9 %	70-130		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		88.7 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95.4 %	70-130		"	"	"	"	

Summit Scientific

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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH05R
1805154-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.7 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		86.3 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.7 %	70-130		"	"	"	"	

Summit Scientific

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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH06R
1805154-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.6 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		86.6 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	70-130		"	"	"	"	

Summit Scientific

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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH07R
1805154-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.3 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		86.0 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH09R
1805154-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.2 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		86.1 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH10
1805154-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	94	1.0	"	"	"	"	"	"	
Xylenes (total)	470	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.7 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		87.0 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH11R
1805154-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	210	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	72	1.0	"	"	"	"	"	"	
Ethylbenzene	8.2	1.0	"	"	"	"	"	"	
Xylenes (total)	79	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %	70-130		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92.6 %	70-130		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.9 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH12R
1805154-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.6 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		89.6 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH13R
1805154-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		90.6 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	70-130		"	"	"	"	

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 - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH14
1805154-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805164	05/14/18	05/15/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		91.3 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %	70-130		"	"	"	"	

Summit Scientific

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

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH15
1805154-14 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805165	05/14/18	05/16/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		95.3 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	70-130		"	"	"	"	

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Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

BH16
1805154-15 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/10/18 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1805165	05/14/18	05/16/18	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/10/18 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	70-130		"	"	"	"	

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Denver CO, 80221

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

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 1805164 - EPA 5030 Water MS

Blank (1805164-BLK1)

Prepared: 05/14/18 Analyzed: 05/15/18

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2		96.6	70-130			
Surrogate: Toluene-d8	11.8		"	13.3		88.7	70-130			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.6	70-130			

LCS (1805164-BS1)

Prepared: 05/14/18 Analyzed: 05/15/18

Benzene	27.4	1.0	ug/l	33.3		82.2	70-130			
Toluene	29.9	1.0	"	33.3		89.7	70-130			
Ethylbenzene	37.6	1.0	"	33.3		113	70-130			
m,p-Xylene	77.4	2.0	"	66.7		116	70-130			
o-Xylene	38.2	1.0	"	33.3		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		99.6	70-130			
Surrogate: Toluene-d8	11.6		"	13.3		87.3	70-130			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.2	70-130			

Matrix Spike (1805164-MS1)

Source: 1805153-01

Prepared: 05/14/18 Analyzed: 05/15/18

Benzene	27.3	1.0	ug/l	33.3		81.8	70-130			
Toluene	30.2	1.0	"	33.3		90.6	70-130			
Ethylbenzene	37.9	1.0	"	33.3		114	70-130			
m,p-Xylene	77.6	2.0	"	66.7		116	70-130			
o-Xylene	38.0	1.0	"	33.3		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2		97.1	70-130			
Surrogate: Toluene-d8	11.6		"	13.3		86.8	70-130			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.9	70-130			

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6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

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 1805164 - EPA 5030 Water MS

Matrix Spike Dup (1805164-MSD1)				Source: 1805153-01		Prepared: 05/14/18		Analyzed: 05/15/18		
Benzene	27.9	1.0	ug/l	33.3		83.6	70-130	2.10	30	
Toluene	30.6	1.0	"	33.3		91.9	70-130	1.38	30	
Ethylbenzene	37.5	1.0	"	33.3		112	70-130	1.17	30	
m,p-Xylene	77.3	2.0	"	66.7		116	70-130	0.349	30	
o-Xylene	38.1	1.0	"	33.3		114	70-130	0.499	30	
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.2		99.3	70-130			
Surrogate: Toluene-d8	11.8		"	13.3		88.2	70-130			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.2	70-130			

Batch 1805165 - EPA 5030 Water MS

Blank (1805165-BLK1)				Prepared: 05/14/18		Analyzed: 05/15/18				
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.6		"	13.2		118	70-130			
Surrogate: Toluene-d8	13.1		"	13.3		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	70-130			
LCS (1805165-BS1)				Prepared: 05/14/18		Analyzed: 05/15/18				
Benzene	30.8	1.0	ug/l	33.3		92.5	70-130			
Toluene	33.6	1.0	"	33.3		101	70-130			
Ethylbenzene	38.6	1.0	"	33.3		116	70-130			
m,p-Xylene	73.4	2.0	"	66.7		110	70-130			
o-Xylene	34.6	1.0	"	33.3		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.2		122	70-130			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.7	70-130			

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6899 Pecos St, Unit C
Denver CO, 80221

Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

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 1805165 - EPA 5030 Water MS

Matrix Spike (1805165-MS1)		Source: 1805135-01			Prepared: 05/14/18		Analyzed: 05/15/18			
Benzene	30.7	1.0	ug/l	33.3	ND	92.0	70-130			
Toluene	33.0	1.0	"	33.3	ND	98.9	70-130			
Ethylbenzene	38.4	1.0	"	33.3	ND	115	70-130			
m,p-Xylene	72.3	2.0	"	66.7	ND	108	70-130			
o-Xylene	34.3	1.0	"	33.3	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	15.7		"	13.2		119	70-130			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5	70-130			

Matrix Spike Dup (1805165-MSD1)		Source: 1805135-01			Prepared: 05/14/18		Analyzed: 05/15/18			
Benzene	30.7	1.0	ug/l	33.3	ND	92.2	70-130	0.261	30	
Toluene	32.6	1.0	"	33.3	ND	97.8	70-130	1.16	30	
Ethylbenzene	38.2	1.0	"	33.3	ND	115	70-130	0.548	30	
m,p-Xylene	71.2	2.0	"	66.7	ND	107	70-130	1.46	30	
o-Xylene	34.4	1.0	"	33.3	ND	103	70-130	0.320	30	
Surrogate: 1,2-Dichloroethane-d4	17.0		"	13.2		129	70-130			
Surrogate: Toluene-d8	13.0		"	13.3		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	70-130			

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Project: Noble - Frank 2,5,6 CC7-19,29

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/17/18 07:36

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