

FOURTH QUARTER 2022 SITE MONITORING DATA

FRANK 1, 12-02, 7-4

ECMC REMEDIATION # 20156

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. - FRANK 1, 12-02, 7-4 FACILITY



Monitoring Well ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft. BTOC)	Depth to Water (ft.) ⁽¹⁾	Depth to LNAPL (ft.) ⁽¹⁾	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
BH01	06/02/22	4606.74	18.55	6.62	ND	ND	4598.50
BH01	09/12/22	4606.74	18.58	6.03	ND	ND	4599.09
BH01	12/01/22	4606.74	18.60	7.56	ND	ND	4597.56
BH02	06/02/22	4606.81	17.60	6.77	ND	ND	4598.49
BH02	09/12/22	4606.81	18.42	7.18	ND	ND	4598.08
BH02	12/01/22	4606.81	18.35	7.72	ND	ND	4597.54
BH03	06/02/22	4606.96	18.33	6.88	ND	ND	4598.52
BH03	09/12/22	4606.96	18.43	6.33	ND	ND	4599.07
BH03	12/01/22	4606.96	18.47	7.84	ND	ND	4597.56
BH04	06/02/22	4606.75	18.37	7.29	ND	ND	4597.60
BH04	09/12/22	4606.75	18.19	5.75	ND	ND	4599.14
BH04	12/01/22	4606.75	18.70	7.30	ND	ND	4597.59
BH05	06/02/22	4606.47	17.96	6.26	ND	ND	4598.54
BH05	09/12/22	4606.47	18.18	5.68	ND	ND	4599.12
BH05	12/01/22	4606.47	18.18	7.21	ND	ND	4597.59
BH06	12/01/22	4605.80	16.70	6.99	ND	ND	4597.45
BH07	12/01/22	4606.51	17.05	7.27	ND	ND	4597.38
BH08	12/01/22	4606.33	19.05	7.61	ND	ND	4597.40

Notes:

⁽¹⁾ Depth to water measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.

* Groundwater elevation is 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 0.75

Definitions:

ft. = Feet
 AMSL = Above mean sea level
 BTOC = Below top of casing
 BGS = Below ground surface
 LNAPL = Light non-aqueous phase liquid
 ND = No LNAPL detected

TABLE 2
GROUNDWATER ANALYTICAL DATA
NOBLE ENERGY, INC. - FRANK 1, 12-02, 7-4 FACILITY



Monitoring Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	1-M (µg/L)	2-M (µg/L)	TDS (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
ECMC Standard ⁽¹⁾		5	560	700	1,400	140	67	67	1.1 ⁽³⁾	3.6 ⁽³⁾	<1.25 x Background	250 or <1.25 x Background	250 or <1.25 x Background
BH01	06/02/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,600	206	555
BH01	09/12/22	2.9	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.935	<0.500	1,500	124	823
BH01	12/01/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.786	<0.500	1,210	168	568
BH02	06/02/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,910	255	596
BH02	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.989	0.556	1,760	168	737
BH02	12/01/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,530	209	521
BH03	06/02/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	1,540	213	489
BH03	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,410	115	591
BH03	12/01/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,210	153	74.6
BH04 ⁽²⁾	06/02/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	868	178	197
BH04 ⁽²⁾	09/12/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,600	166	840
BH04 ⁽²⁾	12/01/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.500	<0.500	1,180	189	486
BH05	06/02/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	NA	NA	2,280	344	779
BH05	09/12/22	<1.0	<1.0	<1.0	<2.0	4.0	<1.0	<1.0	3.22	<0.500	1,700	192	874
BH05	12/01/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	7.49	4.19	1,340	255	524
BH06	12/01/22	<1.0	<1.0	<1.0	<2.0	3.3	<1.0	<1.0	14.1	14.3	1,200	194	491
BH07	12/01/22	54	<1.0	<1.0	<2.0	6.5	<1.0	<1.0	<0.500	<0.500	1,500	250	750
BH08	12/01/22	<1.0	<1.0	<1.0	<2.0	3.0	<1.0	<1.0	3.65	5.25	1,620	151	693

Notes:

⁽¹⁾ Groundwater standards referenced from 2 CCR 404-1, Table 915-1 (January 15, 2021).

⁽²⁾ Monitoring well used for inorganic background levels.

⁽³⁾ Groundwater standards referenced from USEPA Regional Screening Level (RSL) Resident Tapwater Table (TR=1E-06, HQ=0.1) November 2022.

Definitions:

< = Analytical result is less than the indicated laboratory reporting limit

ECMC = Energy and Carbon Management Commission

mg/L = Milligrams per liter

NA = Not analyzed

µg/L = Micrograms per liter

1,2,4 - TMB = 1,2,4 Trimethylbenzene

1,3,5 - TMB = 1,3,5 Trimethylbenzene

1-M = 1-Methylnaphthalene

2-M = 2-Methylnaphthalene

TDS = Total Dissolved Solids

Highlighted results are equal to or exceed the ECMC Table 915-1 regulatory standard

Bold results indicate an exceedance of ECMC regulatory standards and greater than 1.25x background concentrations.

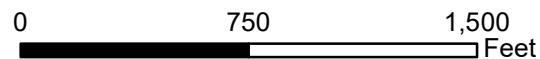
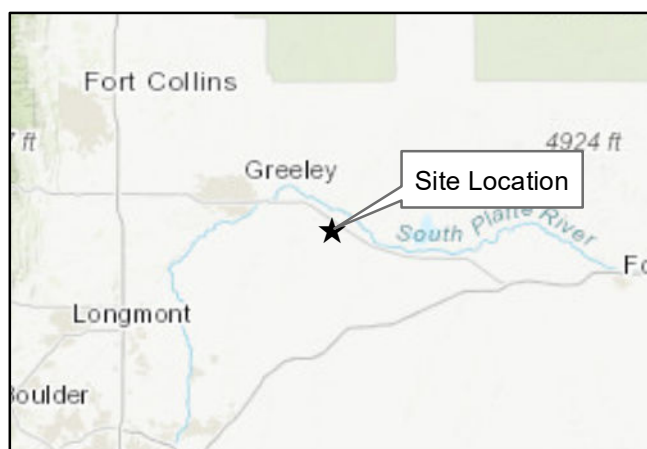
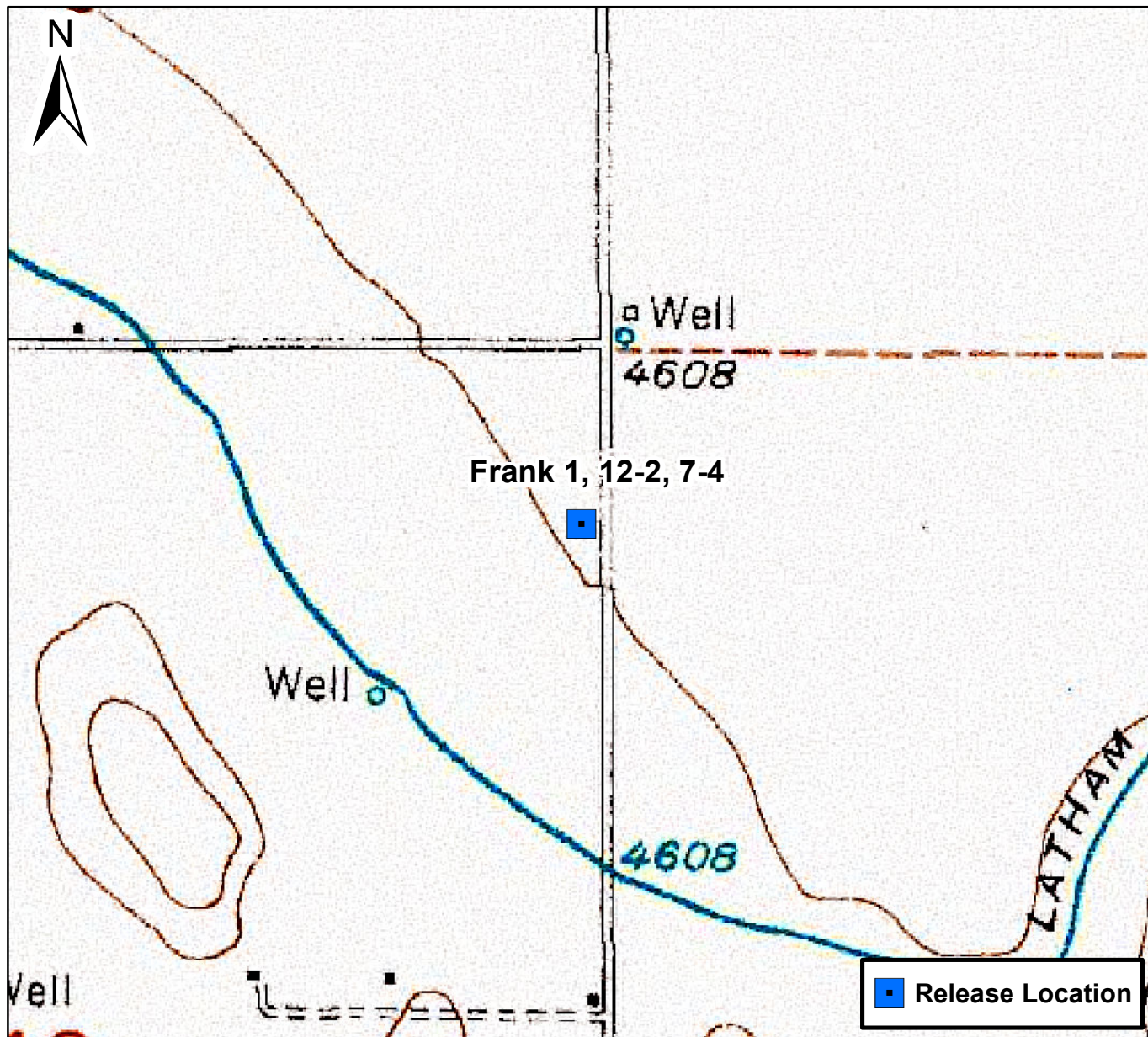



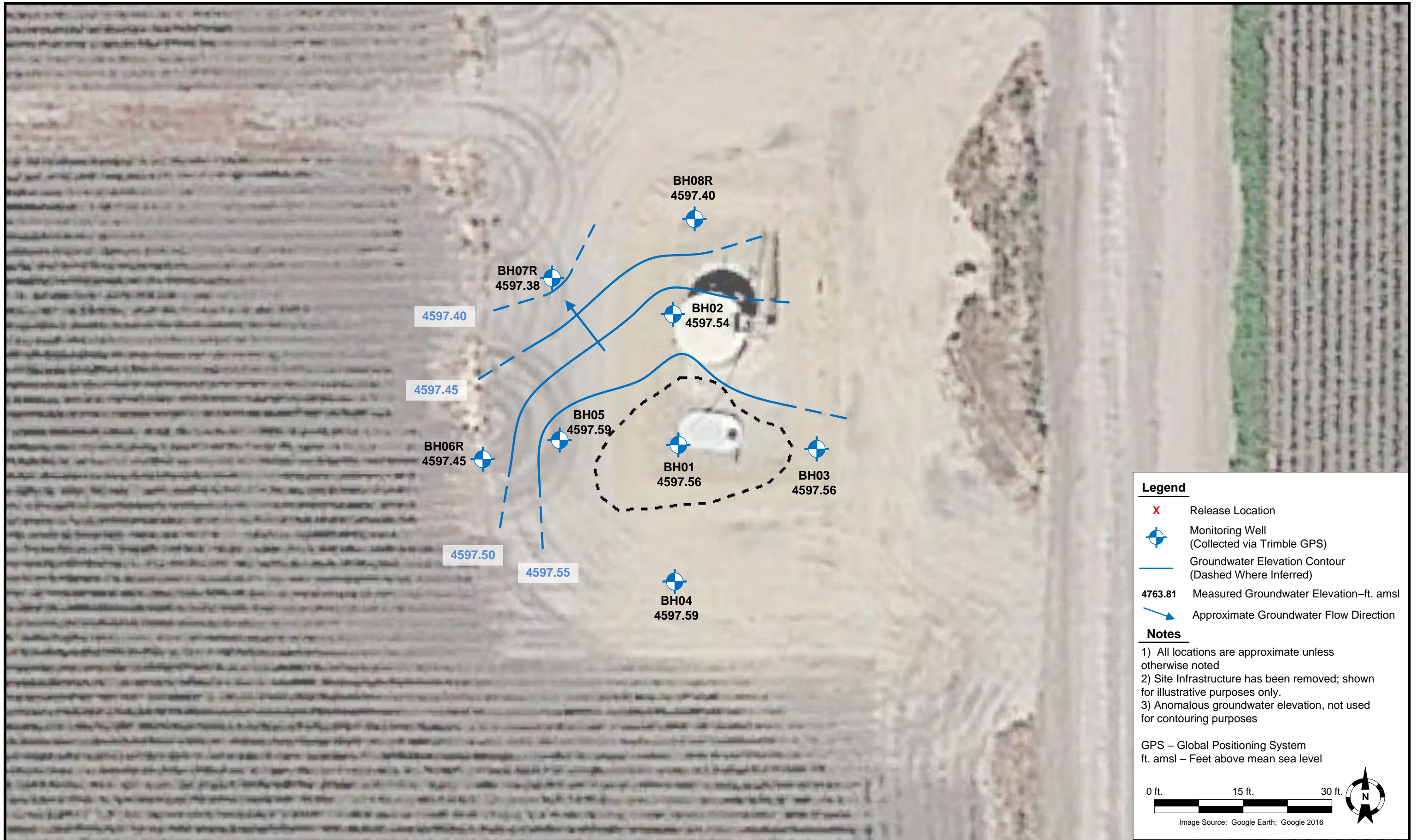
Figure 1


Site Location Map
 Frank 1, 12-2, 7-4
 NENE S12 T4N R64W
 Weld County, Colorado

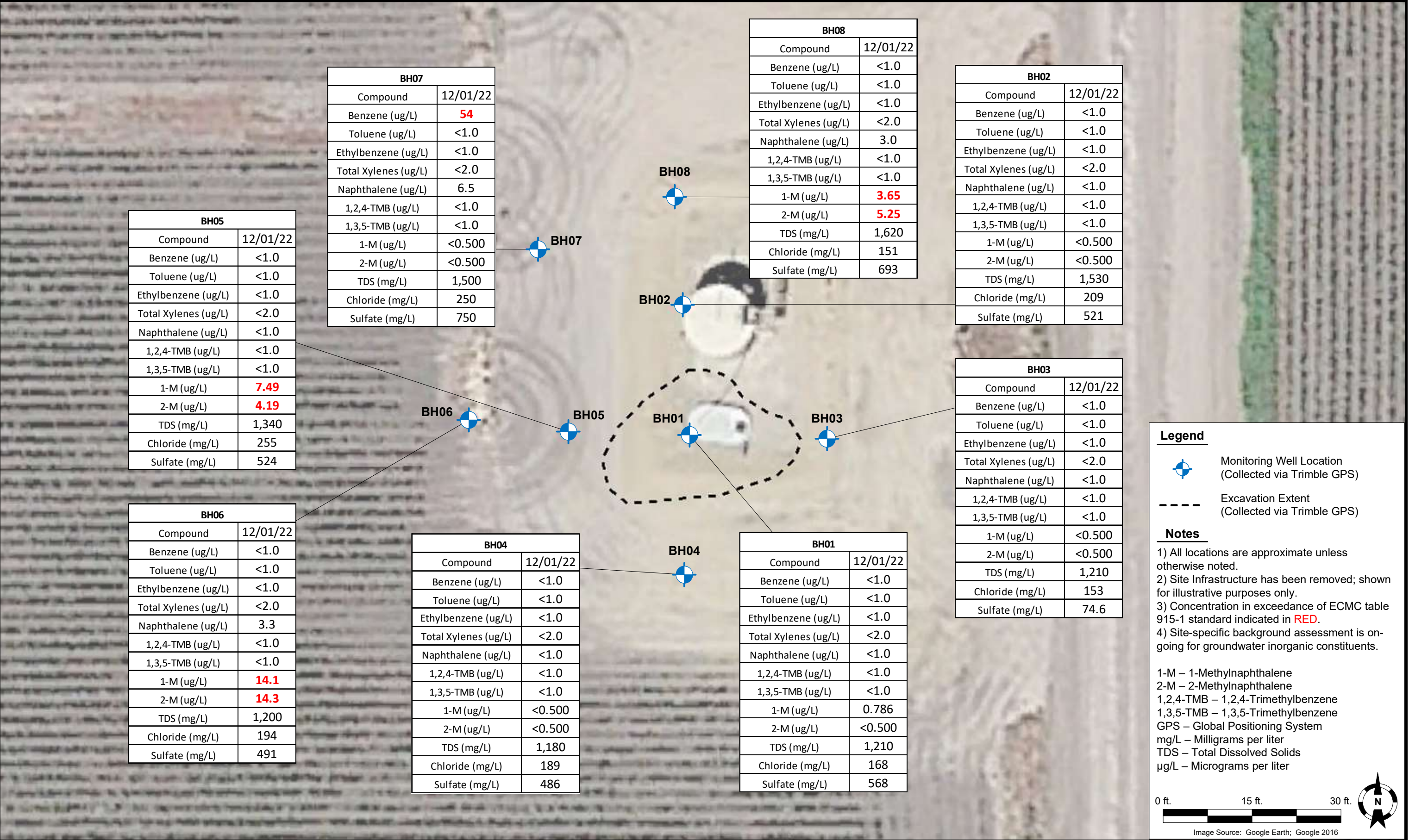




DATE:	03/27/2023	<div><div>Tasman, Inc. 6855 W 119th Ave. Broomfield, CO 80020</div></div>	Noble Energy, Inc. – DJ Basin Frank 1, 12-02, 7-4 Facility NENE, Section 12, Township 4 North, Range 64 West Weld County, Colorado	Site Overview Map	FIGURE 2
DESIGNED BY:	JW				
DRAWN BY:	HM				



DATE:	1/16/2023	 TASMAN Tasman, Inc. 6855 W 119 th Ave. Broomfield, CO 80020	Noble Energy, Inc. – DJ Basin Frank 1, 12-2, 7-4 NENE, Section 12, Township 4 North, Range 64 West Weld County, Colorado	Groundwater Potentiometric Surface Contour Map (12/1/2022)	FIGURE 3
DESIGNED BY:	JW				
DRAWN BY:	LR				



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 08, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Frank 1,12-02,7-4

Work Order #2212030

Enclosed are the results of analyses for samples received by Summit Scientific on 12/01/22 17:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2212030-01	Water	12/01/22 13:39	12/01/22 17:50
BH02	2212030-02	Water	12/01/22 13:34	12/01/22 17:50
BH03	2212030-03	Water	12/01/22 13:25	12/01/22 17:50
BH04	2212030-04	Water	12/01/22 13:21	12/01/22 17:50
BH05	2212030-05	Water	12/01/22 13:23	12/01/22 17:50
BH06	2212030-06	Water	12/01/22 13:44	12/01/22 17:50
BH07	2212030-07	Water	12/01/22 13:51	12/01/22 17:50
BH08	2212030-08	Water	12/01/22 13:51	12/01/22 17:50

Summit Scientific

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

Summit Scientific

S₂

2212030

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page (of 1

Client: Noble / Tasman

Project Manager: Jake Whritenour

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield, CO 80020

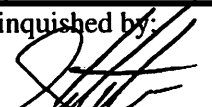

Phone: 303-487-1228

Project Name: FRANK 1, 12-02, 7-4

Sampler Name: COLETTE RAMEY

Project Number: N/A

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	BTEX	Naphthalene	1,2,4 - TMB	1,3,5 - TMB	TDS	Chloride	Sulfate	1-MN, 2-MN	
1	BH01	12/1/22	1339	5	3		2		✓				✓	✓	✓	✓	✓	✓	✓	✓	
2	BH02		1334	1			1														
3	BH03		1325	1			1														
4	BH04		1321	1			1														
5	BH05		1323	1			1														
6	BH06		1344	1			5														
7	BH07		1351	1	3		2														
8	BH08		1351	1	3		2														
9																					
10																					

Relinquished by: 	Date/Time: 12/1/22 1600	Received by: Tasman's Lock Box	Date/Time: 12/1/22 1600	Turn Around Time (Check) Same Day <input type="checkbox"/> 24 hours <input type="checkbox"/> 48 hours <input type="checkbox"/>	72 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 12/1/22 1750	Received by: 	Date/Time: 12/1/22 1750	Sample Integrity: Temperature Upon Receipt: 72		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No		

S₂

Sample Receipt Checklist

S2 Work Order# 2212030Client: Noble/Resman Client Project ID: Frankl, 12-02, 74Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☒ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 7.2Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<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"/>	
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"/>	
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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl HNO₃ (cl)
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.				

Custodian Printed Name

Date/Time

12.1.22



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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH01
2212030-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B		
Toluene	ND	1.0	"	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.6	110 %	23-173	"	"	"	"	"	"	
Surrogate: Toluene-d8	13.4	100 %	20-170	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.5	109 %	21-167	"	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
1-Methylnaphthalene	0.786	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM		
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	1.84	91.8 %	40-150	"	"	"	"	"	"	
Surrogate: Fluoranthene-d10	1.62	81.0 %	40-150	"	"	"	"	"	"	

Anions by EPA Method 300.0

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 - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH01
2212030-01 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	168	12.0		mg/L	200	BFL0082	12/05/22	12/06/22	EPA 300.0	
Sulfate	568	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1210	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH02
2212030-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	15.2	114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.6	109 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.81	90.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.52	76.2 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH02
2212030-02 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	209	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	521	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1530	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH03
2212030-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.7	110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.2	107 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.90	94.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.78	89.2 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH03
2212030-03 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	153	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	74.6	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1210	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH04
2212030-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.8	111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.1	106 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.26	63.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.976	48.8 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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6855 W. 119th Ave.
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Project: Noble - Frank 1,12-02,7-4

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH04
2212030-04 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	189	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	486	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:21**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1180	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH05
2212030-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	15.4	116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.8	111 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	7.49	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	4.19	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.96	97.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.63	81.7 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH05
2212030-05 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	255	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	524	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1340	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH06
2212030-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	3.3	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	16.5	124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.9	105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	15.7	118 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	14.1	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	E
2-Methylnaphthalene	14.3	0.500	"	"	"	"	"	"	E

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.45	72.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.84	92.1 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH06
2212030-06 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	194	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	491	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1200	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

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6855 W. 119th Ave.
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Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH07
2212030-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	54	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	6.5	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	15.9	119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.7	103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	15.2	114 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	ND	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	ND	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.62	80.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.52	76.0 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH07
2212030-07 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	250	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	750	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1500	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH08
2212030-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFL0118	12/05/22	12/06/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	3.0	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	16.1	121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.5	109 %	21-167		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
1-Methylnaphthalene	3.65	0.500	ug/l	1	BFL0133	12/06/22	12/06/22	EPA 8270D SIM	
2-Methylnaphthalene	5.25	0.500	"	"	"	"	"	"	

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	1.66	82.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	1.44	71.8 %	40-150		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

BH08
2212030-08 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	151	12.0		mg/L	200	BFL0082	12/05/22	12/07/22	EPA 300.0	
Sulfate	693	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/01/22 13:51**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1620	10.0		mg/L	1	BFL0070	12/02/22	12/04/22	SM2540C	

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

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 BFL0118 - EPA 5030 Water MS

Blank (BFL0118-BLK1)

Prepared: 12/05/22 Analyzed: 12/07/22

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		110	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		107	21-167			

LCS (BFL0118-BS1)

Prepared: 12/05/22 Analyzed: 12/07/22

Benzene	42.4	1.0	ug/l	41.7		102	51-132			
Toluene	41.0	1.0	"	41.7		98.3	51-138			
Ethylbenzene	44.0	1.0	"	41.7		106	58-146			
m,p-Xylene	85.4	2.0	"	83.3		103	57-144			
o-Xylene	41.4	1.0	"	41.7		99.5	53-146			
Naphthalene	34.0	1.0	"	41.7		81.5	70-130			
1,2,4-Trimethylbenzene	44.2	1.0	"	41.7		106	70-130			
1,3,5-Trimethylbenzene	45.9	1.0	"	41.7		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.1	20-170			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	21-167			

Matrix Spike (BFL0118-MS1)

Source: 2212030-01

Prepared: 12/05/22 Analyzed: 12/07/22

Benzene	43.4	1.0	ug/l	41.7	ND	104	34-141			
Toluene	42.1	1.0	"	41.7	ND	101	27-151			
Ethylbenzene	44.7	1.0	"	41.7	ND	107	29-160			
m,p-Xylene	87.0	2.0	"	83.3	ND	104	20-166			
o-Xylene	42.3	1.0	"	41.7	ND	102	33-159			
Naphthalene	35.8	1.0	"	41.7	ND	85.8	70-130			
1,2,4-Trimethylbenzene	44.4	1.0	"	41.7	ND	106	70-130			
1,3,5-Trimethylbenzene	46.0	1.0	"	41.7	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		110	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

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 BFL0118 - EPA 5030 Water MS

Matrix Spike Dup (BFL0118-MSD1)

Source: 2212030-01

Prepared: 12/05/22 Analyzed: 12/07/22

Benzene	42.5	1.0	ug/l	41.7	ND	102	34-141	2.12	30	
Toluene	41.5	1.0	"	41.7	ND	99.6	27-151	1.36	30	
Ethylbenzene	44.6	1.0	"	41.7	ND	107	29-160	0.202	30	
m,p-Xylene	85.8	2.0	"	83.3	ND	103	20-166	1.37	30	
o-Xylene	42.0	1.0	"	41.7	ND	101	33-159	0.807	30	
Naphthalene	34.2	1.0	"	41.7	ND	82.0	70-130	4.52	30	
1,2,4-Trimethylbenzene	44.3	1.0	"	41.7	ND	106	70-130	0.135	30	
1,3,5-Trimethylbenzene	45.8	1.0	"	41.7	ND	110	70-130	0.435	30	
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.7	20-170			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	21-167			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFL0133 - EPA 5030 Water MS

Blank (BFL0133-BLK1)

Prepared & Analyzed: 12/06/22

Acenaphthene	ND	0.500	ug/l								
Acenaphthylene	ND	0.200	"								
Anthracene	ND	0.200	"								
Benzo (a) anthracene	ND	0.100	"								
Benzo (b) fluoranthene	ND	0.200	"								
Benzo (k) fluoranthene	ND	0.200	"								
Benzo (g,h,i) perylene	ND	0.200	"								
Benzo (a) pyrene	ND	0.200	"								
Chrysene	ND	0.200	"								
Dibenz (a,h) anthracene	ND	0.200	"								
Fluoranthene	ND	2.00	"								
Fluorene	ND	0.200	"								
Indeno (1,2,3-cd) pyrene	ND	0.300	"								
Phenanthrene	ND	0.500	"								
Pyrene	ND	1.00	"								
1-Methylnaphthalene	ND	0.500	"								
2-Methylnaphthalene	ND	0.500	"								
Surrogate: 2-Methylnaphthalene-d10	1.95		"	2.00		97.6		40-150			
Surrogate: Fluoranthene-d10	1.94		"	2.00		97.0		40-150			

LCS (BFL0133-BS1)

Prepared & Analyzed: 12/06/22

Acenaphthene	1.89	0.500	ug/l	2.00		94.6		30-120			
Acenaphthylene	1.88	0.200	"	2.00		93.9		30-120			
Anthracene	1.85	0.200	"	2.00		92.5		30-120			
Benzo (a) anthracene	1.88	0.100	"	2.00		94.1		30-120			
Benzo (b) fluoranthene	1.81	0.200	"	2.00		90.7		30-120			
Benzo (k) fluoranthene	1.87	0.200	"	2.00		93.6		30-120			
Benzo (g,h,i) perylene	1.74	0.200	"	2.00		87.0		30-120			
Benzo (a) pyrene	1.80	0.200	"	2.00		89.8		30-120			
Chrysene	2.00	0.200	"	2.00		99.9		30-120			
Dibenz (a,h) anthracene	1.62	0.200	"	2.00		81.1		30-120			
Fluoranthene	1.82	2.00	"	2.00		90.9		30-120			
Fluorene	1.81	0.200	"	2.00		90.5		30-120			
Indeno (1,2,3-cd) pyrene	1.82	0.300	"	2.00		91.2		30-120			
Phenanthrene	2.08	0.500	"	2.00		104		30-120			
Pyrene	2.12	1.00	"	2.00		106		30-120			
1-Methylnaphthalene	1.74	0.500	"	2.00		86.9		30-120			
2-Methylnaphthalene	1.87	0.500	"	2.00		93.4		0-200			

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Broomfield CO, 80020

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BFL0133 - EPA 5030 Water MS

LCS (BFL0133-BS1)

Prepared & Analyzed: 12/06/22

Surrogate: 2-Methylnaphthalene-d10	1.80	ug/l	2.00	89.9	40-150
Surrogate: Fluoranthene-d10	1.88	"	2.00	94.2	40-150

LCS Dup (BFL0133-BSD1)

Prepared & Analyzed: 12/06/22

Acenaphthene	1.94	0.500	ug/l	2.00	96.9	30-120	2.41	30
Acenaphthylene	1.95	0.200	"	2.00	97.3	30-120	3.60	30
Anthracene	1.89	0.200	"	2.00	94.3	30-120	1.92	30
Benzo (a) anthracene	1.93	0.100	"	2.00	96.4	30-120	2.41	30
Benzo (b) fluoranthene	1.91	0.200	"	2.00	95.6	30-120	5.26	30
Benzo (k) fluoranthene	1.99	0.200	"	2.00	99.6	30-120	6.22	30
Benzo (g,h,i) perylene	1.81	0.200	"	2.00	90.5	30-120	3.90	30
Benzo (a) pyrene	1.92	0.200	"	2.00	95.9	30-120	6.56	30
Chrysene	2.07	0.200	"	2.00	103	30-120	3.39	30
Dibenz (a,h) anthracene	1.65	0.200	"	2.00	82.3	30-120	1.40	30
Fluoranthene	1.88	2.00	"	2.00	94.0	30-120	3.31	30
Fluorene	1.91	0.200	"	2.00	95.5	30-120	5.42	30
Indeno (1,2,3-cd) pyrene	1.93	0.300	"	2.00	96.7	30-120	5.82	30
Phenanthrene	2.17	0.500	"	2.00	108	30-120	3.96	30
Pyrene	2.16	1.00	"	2.00	108	30-120	1.78	30
1-Methylnaphthalene	1.95	0.500	"	2.00	97.6	30-120	11.6	30
2-Methylnaphthalene	2.03	0.500	"	2.00	102	0-200	8.36	200
Surrogate: 2-Methylnaphthalene-d10	1.80		"	2.00	89.8	40-150		
Surrogate: Fluoranthene-d10	1.93		"	2.00	96.5	40-150		

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BFL0082 - General Preparation

Blank (BFL0082-BLK1)

Prepared: 12/05/22 Analyzed: 12/06/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFL0082-BS1)

Prepared: 12/05/22 Analyzed: 12/06/22

Chloride	3.28	0.0600	mg/L	3.00	109	90-110
Sulfate	16.0	0.300	"	15.0	107	90-110

Duplicate (BFL0082-DUP1)

Source: 2212030-01

Prepared: 12/05/22 Analyzed: 12/06/22

Chloride	163	12.0	mg/L	168	2.90	20
Sulfate	581	60.0	"	568	2.26	20

Matrix Spike (BFL0082-MS1)

Source: 2212030-01

Prepared: 12/05/22 Analyzed: 12/06/22

Chloride	803	12.0	mg/L	600	168	106	80-120
Sulfate	3810	60.0	"	3000	568	108	80-120

Summit Scientific

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BFL0070 - General Preparation

Blank (BFL0070-BLK1)

Prepared: 12/02/22 Analyzed: 12/04/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFL0070-DUP1)

Source: 2212030-01

Prepared: 12/02/22 Analyzed: 12/04/22

Total Dissolved Solids 1280 10.0 mg/L 1210 5.62 20

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

Project: Noble - Frank 1,12-02,7-4

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/08/22 16:26

Notes and Definitions

E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
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