

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 08, 2025

Andy Sagen

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: Noble - Hagemeister USX

Work Order #2502113

Enclosed are the results of analyses for samples received by Summit Scientific on 02/06/25 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@0.5-1.5'	2502113-01	Soil	02/06/25 09:31	02/06/25 17:55
BH01@5-6'	2502113-02	Soil	02/06/25 09:33	02/06/25 17:55
BH01@10-11'	2502113-03	Soil	02/06/25 09:35	02/06/25 17:55
BH01@12-13'	2502113-04	Soil	02/06/25 09:37	02/06/25 17:55
BH02@0.5-1.5'	2502113-05	Soil	02/06/25 09:51	02/06/25 17:55
BH02@5-6'	2502113-06	Soil	02/06/25 09:53	02/06/25 17:55
BH02@10-11'	2502113-07	Soil	02/06/25 09:55	02/06/25 17:55
BH02@14-15'	2502113-08	Soil	02/06/25 09:57	02/06/25 17:55
BH03@0.5-1.5'	2502113-09	Soil	02/06/25 10:07	02/06/25 17:55
BH03@5-6'	2502113-10	Soil	02/06/25 10:09	02/06/25 17:55
BH03@10-11'	2502113-11	Soil	02/06/25 10:11	02/06/25 17:55
BH03@14-15'	2502113-12	Soil	02/06/25 10:13	02/06/25 17:55
BH04@0.5-1.5'	2502113-13	Soil	02/06/25 10:27	02/06/25 17:55
BH04@7-8'	2502113-14	Soil	02/06/25 10:31	02/06/25 17:55
BH04@10-11'	2502113-15	Soil	02/06/25 10:33	02/06/25 17:55
BH04@14-15'	2502113-16	Soil	02/06/25 10:35	02/06/25 17:55
BH05@0.5-1.5'	2502113-17	Soil	02/06/25 10:38	02/06/25 17:55
BH05@5-6'	2502113-18	Soil	02/06/25 10:40	02/06/25 17:55
BH05@10-11'	2502113-19	Soil	02/06/25 10:42	02/06/25 17:55
BH05@14-15'	2502113-20	Soil	02/06/25 10:44	02/06/25 17:55
BKG02@0.5-1.5'	2502113-21	Soil	02/06/25 13:05	02/06/25 17:55
BKG02@5-6'	2502113-22	Soil	02/06/25 13:07	02/06/25 17:55
BKG02@10-11'	2502113-23	Soil	02/06/25 13:09	02/06/25 17:55
BKG02@13-14'	2502113-24	Soil	02/06/25 13:11	02/06/25 17:55
BKG03@0.5-1.5'	2502113-25	Soil	02/06/25 13:16	02/06/25 17:55
BKG03@5-6'	2502113-26	Soil	02/06/25 13:18	02/06/25 17:55
BKG03@10-11'	2502113-27	Soil	02/06/25 13:20	02/06/25 17:55

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG03@14-15'	2502113-28	Soil	02/06/25 13:22	02/06/25 17:55
BKG04@0.5-1.5'	2502113-29	Soil	02/06/25 11:13	02/06/25 17:55
BKG04@5-6'	2502113-30	Soil	02/06/25 11:15	02/06/25 17:55
BKG04@10-11'	2502113-31	Soil	02/06/25 11:17	02/06/25 17:55
BKG04@14-15'	2502113-32	Soil	02/06/25 11:19	02/06/25 17:55
BKG05@0.5-1.5'	2502113-33	Soil	02/06/25 11:21	02/06/25 17:55
BKG05@5-6'	2502113-34	Soil	02/06/25 11:23	02/06/25 17:55
BKG05@10-11'	2502113-35	Soil	02/06/25 11:25	02/06/25 17:55
BKG05@14-15'	2502113-36	Soil	02/06/25 11:27	02/06/25 17:55
BKG06@0.5-1.5'	2502113-37	Soil	02/06/25 11:42	02/06/25 17:55
BKG06@5-6'	2502113-38	Soil	02/06/25 11:44	02/06/25 17:55
BKG06@10-11'	2502113-39	Soil	02/06/25 11:46	02/06/25 17:55
BKG06@14-15'	2502113-40	Soil	02/06/25 11:48	02/06/25 17:55

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Client: Chevron ^{MC} <i>Noble</i>	Send Data To: Project Manager: Andy Sagen	Send Invoice To: Company: Chevron ^{MC} <i>Noble</i>
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-1@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield/CO/ 80020	<i>RJUEVFLT@chevron.com</i>	AFE#:
Phone: <i>303-668-5268</i>	Project Name: <i>Hagemeister UST</i>	PO/Billing Codes:
Sampler Name: <i>Natalie Crozier</i>	Project Number:	Contact: Dan Peterson

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS	HOLD
1	BH01@0.5-1.5'	2/6/25	0931	2			X			X			X	X	X	X	X	X		
2	BH01@5-6'		0933	2																
3	BH01@10-11'		0935																	
4	BH01@12-13'		0937																	
5	BH02@0.5-1.5'		0951																	
6	BH02@5-6'		0953																	
7	BH02@10-11'		0955																	
8	BH02@14-15'		0957																	
9	BH03@0.5-1.5'		1007																	
10	BH03@5-6'		1009																	
11	BH03@10-11'		1011																	
12	BH03@14-15'		1013																	
13	BH04@0.5-1.5'		1027																	
14	BH04@5-6' ^{MC} 7-8'		1031																	
15	BH04@10-11'		1033																	

Relinquished by: <i>Natalie Crozier</i>	Date/Time: 2/6/25 1621	Received by: Tasman Lock Box	Date/Time: 2/6/25 1621	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lock Box</i>	Date/Time: 2025 1755	Received by: <i>[Signature]</i>	Date/Time: 2025 1755	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 3.1	Corrected Temperature: <i>6</i>	IR gun #: 1	HNO3 lot #:			

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 2 of 3
2502113.2	

Client: <i>Chevron ^{MC} Noble</i>	Send Data To: Project Manager: Andy Sagen	Send Invoice To: Company: <i>Chevron ^{MC} Noble</i>
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-1@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield/CO/ 80020	<i>RBUEUF27@chevron.com</i>	AFE#:
Phone: <i>303-668-9268</i>	Project Name: <i>Hagemeister USX</i>	PO/Billing Codes:
Sampler Name: <i>Natalie Crozier</i>	Project Number:	Contact: Dan Peterson

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	BH04 @ 14-15'	2/6/25	1039	2			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	BH05 @ 0.5-1.5'	↓	1038	↓			↓						↓	↓	↓	↓	↓	↓		
3	BH05 @ 5-6'	↓	1040	↓			↓						↓	↓	↓	↓	↓	↓		
4	BH05 @ 10-11'	↓	1042	↓			↓						↓	↓	↓	↓	↓	↓		
5	BH05 @ 14-15'	↓	1044	↓			↓						↓	↓	↓	↓	↓	↓		
6	BK602 @ 0.5-1.5'	↓	1305	↓									X				X	X		
7	BK602 @ 5-6'	↓	1307	↓									↓				↓	↓		
8	BK602 @ 10-11'	↓	1309	↓									↓				↓	↓		
9	BK602 @ 13-14'	↓	1311	↓									↓				↓	↓		
10	BK603 @ 0.5-1.5'	↓	1316	↓									↓				↓	↓		
11	BK603 @ 5-6'	↓	1318	↓									↓				↓	↓		
12	BK603 @ 10-11'	↓	1320	↓									↓				↓	↓		
13	BK603 @ 14-15'	↓	1322	↓									↓				↓	↓		
14	BK604 @ 0.5-1.5'	↓	1113	↓									↓				↓	↓		
15	BK604 @ 5-6'	↓	1115	↓									↓				↓	↓		

Relinquished by: <i>Held Cup</i>	Date/Time: 2/6/25 1621	Received by: <i>Tasman Lock Box</i>	Date/Time: 2/6/25 1621	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman Lock Box</i>	Date/Time: 2/6/25 1755	Received by: <i>[Signature]</i>	Date/Time: 2/6/25 1755	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb. <input checked="" type="checkbox"/>	
Temperature Upon Receipt: 3.1	Corrected Temperature: \emptyset	IR gun #:	HNO3 lot #:			

Client: Chevron^{MC} Noble	Send Data To: Project Manager: Andy Sagen	Send Invoice To: Company: Chevron^{MC} Noble
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-1@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield/CO/ 80020	RBUEVFLT@chevron.com	AFE#:
Phone: 303-668-5268	Project Name: Hagemeister USX	PO/Billing Codes:
Sampler Name: Natalie Cruzier	Project Number:	Contact: Dan Peterson

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD	
1	BK604 @ 10-11'	2/6/25	1117	1			X			X							X	X			SAR, EC, pH by saturated paste
2	BK604 @ 14-15'	↓	1119	↓			↓			↓							↓	↓			
3	BK605 @ 0.5-1.5'	↓	1121	↓			↓			↓							↓	↓			
4	BK605 @ 5-6'	↓	1123	↓			↓			↓							↓	↓			
5	BK605 @ 10-11'	↓	1125	↓			↓			↓							↓	↓			
6	BK605 @ 14-15'	↓	1127	↓			↓			↓							↓	↓			
7	BK606 @ 0.5-1.5'	↓	1142	↓			↓			↓							↓	↓			
8	BK606 @ 5-6'	↓	1144	↓			↓			↓							↓	↓			
9	BK606 @ 10-11'	↓	1146	↓			↓			↓							↓	↓			
10	BK606 @ 14-15'	↓	1148	↓			↓			↓							↓	↓			
11																					
12																					
13																					
14																					
15																					

Relinquished by: Natalie Cruzier Date/Time: 2/6/25 1621	Received by: Tasman Lock Box Date/Time: 2/6/25 1621	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: Tasman Lock Box Date/Time: 2/6/25 1755	Received by: [Signature] Date/Time: 2/6/25 1755	1 Day	Field ORP	
		2 Days	Field pH	
		3 Days	Field Temp.	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 3.1	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:	

S₂

3/3

S2 Work Order# 2502113

Sample Receipt Checklist

Client: Noble Gasman Client Project ID: Hagemeister USX

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

Matrix (Circle all that apply) Air/Soil/Water/Other Temp (°C) 3.1 Thermometer # 1

Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other

	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.	-			on 2/15
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours?		-		
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, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾		✓		sent extra sample
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any): BH04 @ 5-6, 10:29				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Control Form #: SRC-001

AS

Custodian Printed Name

2/10/25
Date/Time



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@0.5-1.5'
2502113-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	99.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.4	83.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

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BH01@0.5-1.5'
2502113-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0114	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0136	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0168	50.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@0.5-1.5'
2502113-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.67	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B
Barium	55.9	0.400	"	"	"	"	"	"
Cadmium	0.273	0.200	"	"	"	"	"	"
Copper	1.86	0.400	"	"	"	"	"	"
Lead	9.59	0.200	"	"	"	"	"	"
Nickel	1.39	0.400	"	"	"	"	"	"
Silver	0.0240	0.0200	"	"	"	"	"	"
Zinc	7.44	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.3	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	7.05	0.0500	"	"	"	"	"	"	
Sodium	41.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.66	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

BH01@0.5-1.5'
2502113-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.5	%	1	BIB1004	02/18/25	02/20/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.372	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.13		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@5-6'
2502113-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	0.085	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.16	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.079	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.19	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	28	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0410	102 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0366	91.5 %		50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0530	133 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	130	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: o-Terphenyl</i>	8.88	71.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@5-6'
2502113-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0221	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.144	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.232	0.00500	"	"	"	"	"	"	E

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.2 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@5-6'
2502113-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.800	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	50.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.29	0.400	"	"	"	"	"	"	
Lead	4.77	0.200	"	"	"	"	"	"	
Nickel	1.37	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.17	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.6	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	8.75	0.0500	"	"	"	"	"	"	
Sodium	285	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	14.3	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@5-6'
2502113-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.40	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@10-11'
2502113-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.02	64.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@10-11'
2502113-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/27/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0205	61.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0216	64.8 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@10-11'
2502113-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.756	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	50.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.951	0.400	"	"	"	"	"	"	
Lead	3.87	0.200	"	"	"	"	"	"	
Nickel	1.12	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.72	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	928	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	86.5	0.0500	"	"	"	"	"	"	
Sodium	132	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.11	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@10-11'
2502113-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.3		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.526	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.28		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@12-13'
2502113-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0430	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.1	88.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@12-13'
2502113-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0148	44.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.9 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@12-13'
2502113-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.876	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	39.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.17	0.400	"	"	"	"	"	"	
Lead	5.23	0.200	"	"	"	"	"	"	
Nickel	1.36	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.74	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	30.3	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	16.5	0.0500	"	"	"	"	"	"	
Sodium	238	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.64	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH01@12-13'
2502113-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.04	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.32		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@0.5-1.5'
2502113-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0433	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.50	52.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@0.5-1.5'
2502113-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.9 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@0.5-1.5'
2502113-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.721	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	36.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.41	0.400	"	"	"	"	"	"	
Lead	6.41	0.200	"	"	"	"	"	"	
Nickel	1.21	0.400	"	"	"	"	"	"	
Silver	0.0208	0.0200	"	"	"	"	"	"	
Zinc	8.43	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	49.2	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	13.0	0.0500	"	"	"	"	"	"	
Sodium	54.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.80	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@0.5-1.5'
2502113-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.5		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.662	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.32		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@5-6'
2502113-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.64	69.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@5-6'
2502113-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.00982	29.5 %	40-140		"	"	"	"	S-02
Surrogate: Fluoranthene-d10	0.00982	29.4 %	40-140		"	"	"	"	S-02

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	2.07	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@5-6'
2502113-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.664	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	57.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.35	0.400	"	"	"	"	"	"	
Lead	5.31	0.200	"	"	"	"	"	"	
Nickel	1.42	0.400	"	"	"	"	"	"	
Silver	0.0357	0.0200	"	"	"	"	"	"	
Zinc	5.97	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	223	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	93.1	0.0500	"	"	"	"	"	"	
Sodium	339	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.81	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@5-6'
2502113-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.5			%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.705	0.0100		mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:53**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.69			pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@10-11'
2502113-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0464	116 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.46	59.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@10-11'
2502113-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.2 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0147	44.1 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0229	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@10-11'
2502113-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.573	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	41.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.953	0.400	"	"	"	"	"	"	
Lead	4.70	0.200	"	"	"	"	"	"	
Nickel	1.09	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.70	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.4	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	7.26	0.0500	"	"	"	"	"	"	
Sodium	112	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.90	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@10-11'
2502113-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.2			%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.570	0.0100		mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.85			pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@14-15'
2502113-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0442	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.53	60.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@14-15'
2502113-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	54.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	57.8 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@14-15'
2502113-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.11	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	24.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.09	0.400	"	"	"	"	"	"	
Lead	3.19	0.200	"	"	"	"	"	"	
Nickel	1.17	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.71	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.2	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	14.4	0.0500	"	"	"	"	"	"	
Sodium	141	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.55	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH02@14-15'
2502113-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.1		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.825	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 09:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@0.5-1.5'
2502113-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.84	70.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@0.5-1.5'
2502113-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0157	47.1 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@0.5-1.5'
2502113-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.869	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	58.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.07	0.400	"	"	"	"	"	"	
Lead	4.49	0.200	"	"	"	"	"	"	
Nickel	1.25	0.400	"	"	"	"	"	"	
Silver	0.0201	0.0200	"	"	"	"	"	"	
Zinc	5.05	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	180	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	35.4	0.0500	"	"	"	"	"	"	
Sodium	2.81	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0501	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@0.5-1.5'
2502113-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0701	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.41		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@5-6'
2502113-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0440	110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	85	50		mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	53	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.57	60.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@5-6'
2502113-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0190	57.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.0 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@5-6'
2502113-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.771	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	38.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.891	0.400	"	"	"	"	"	"	
Lead	4.25	0.200	"	"	"	"	"	"	
Nickel	1.16	0.400	"	"	"	"	"	"	
Silver	0.0251	0.0200	"	"	"	"	"	"	
Zinc	4.23	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.8	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	4.75	0.0500	"	"	"	"	"	"	
Sodium	3.27	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.140	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@5-6'
2502113-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.154	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@10-11'
2502113-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.44	67.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@10-11'
2502113-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.00883	26.5 %	40-140		"	"	"	"	S-02
Surrogate: Fluoranthene-d10	0.00853	25.6 %	40-140		"	"	"	"	S-02

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@10-11'
2502113-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.916	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	30.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.13	0.400	"	"	"	"	"	"	
Lead	4.21	0.200	"	"	"	"	"	"	
Nickel	1.14	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.97	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.4	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.7	0.0500	"	"	"	"	"	"	
Sodium	159	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.92	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@10-11'
2502113-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.7			%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.848	0.0100		mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.47			pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@14-15'
2502113-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0444	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/26/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.64	61.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@14-15'
2502113-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0194	58.2 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.4 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH03@14-15'
2502113-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.720	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	27.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.16	0.400	"	"	"	"	"	"	
Lead	4.67	0.200	"	"	"	"	"	"	
Nickel	1.10	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.36	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	270	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	68.3	0.0500	"	"	"	"	"	"	
Sodium	104	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.46	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

BH03@14-15'
2502113-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.377	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.54		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@0.5-1.5'
2502113-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.38	67.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@0.5-1.5'
2502113-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.2 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@0.5-1.5'
2502113-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.704	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	40.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.35	0.400	"	"	"	"	"	"	
Lead	5.81	0.200	"	"	"	"	"	"	
Nickel	1.14	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.28	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.6	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	4.37	0.0500	"	"	"	"	"	"	
Sodium	7.04	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.262	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

BH04@0.5-1.5'
2502113-13 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.154	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.51		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@7-8'
2502113-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0094	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.020	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.51	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.37	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.25	0.0050	"	"	"	"	"	"	
Naphthalene	0.11	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	32	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0448	112 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0404	101 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0539	135 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	130	50	mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>	10.7	85.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@7-8'
2502113-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0110	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00885	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0956	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.236	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	0.461	0.00500	"	"	"	"	"	"	E

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0115	34.4 %	40-140		"	"	"	"	S-04
Surrogate: Fluoranthene-d10	0.0185	55.6 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@7-8'
2502113-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.896	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	63.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.16	0.400	"	"	"	"	"	"	
Lead	4.57	0.200	"	"	"	"	"	"	
Nickel	1.35	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.84	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.5	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	24.0	0.0500	"	"	"	"	"	"	
Sodium	88.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.01	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@7-8'
2502113-14 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.753	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@10-11'
2502113-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0456	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.27	66.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@10-11'
2502113-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0155	46.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.2 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@10-11'
2502113-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.827	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	16.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.12	0.400	"	"	"	"	"	"	
Lead	5.12	0.200	"	"	"	"	"	"	
Nickel	1.29	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.97	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.7	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	9.02	0.0500	"	"	"	"	"	"	
Sodium	94.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.34	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

BH04@10-11'
2502113-15 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.561	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.76		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@14-15'
2502113-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0476	119 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.01	64.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@14-15'
2502113-16 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0124	37.2 %	40-140		"	"	"	"	S-02
Surrogate: Fluoranthene-d10	0.0119	35.6 %	40-140		"	"	"	"	S-02

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@14-15'
2502113-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.566	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	58.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.982	0.400	"	"	"	"	"	"	
Lead	4.71	0.200	"	"	"	"	"	"	
Nickel	1.37	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.33	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	283	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	118	0.0500	"	"	"	"	"	"	
Sodium	138	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.74	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH04@14-15'
2502113-16 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.402	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.56		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@0.5-1.5'
2502113-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0480	120 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.67	53.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@0.5-1.5'
2502113-17 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0123	36.9 %	40-140		"	"	"	"	S-02
Surrogate: Fluoranthene-d10	0.0149	44.7 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@0.5-1.5'
2502113-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.668	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	48.0	0.400	"	"	"	"	"	"	
Cadmium	0.298	0.200	"	"	"	"	"	"	
Copper	2.03	0.400	"	"	"	"	"	"	
Lead	14.5	0.200	"	"	"	"	"	"	
Nickel	1.32	0.400	"	"	"	"	"	"	
Silver	0.0718	0.0200	"	"	"	"	"	"	
Zinc	8.06	0.400	"	"	"	"	"	"	
Selenium	0.272	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	56.5	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.7	0.0500	"	"	"	"	"	"	
Sodium	27.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.886	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

BH05@0.5-1.5'
2502113-17 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.5	%	1	BIB1004	02/18/25	02/20/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.265	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@5-6'
2502113-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0476	119 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.85	78.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@5-6'
2502113-18 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.2 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@5-6'
2502113-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.720	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	51.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.35	0.400	"	"	"	"	"	"	
Lead	4.94	0.200	"	"	"	"	"	"	
Nickel	1.39	0.400	"	"	"	"	"	"	
Silver	0.0272	0.0200	"	"	"	"	"	"	
Zinc	5.94	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.4	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	8.69	0.0500	"	"	"	"	"	"	
Sodium	195	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.74	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@5-6'
2502113-18 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.4		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.953	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@10-11'
2502113-19 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0487	122 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	82.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@10-11'
2502113-19 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/28/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0131	39.4 %	40-140		"	"	"	"	S-02
Surrogate: Fluoranthene-d10	0.0127	38.0 %	40-140		"	"	"	"	S-02

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@10-11'
2502113-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.08	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B
Barium	145	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.55	0.400	"	"	"	"	"	"
Lead	9.27	0.200	"	"	"	"	"	"
Nickel	2.76	0.400	"	"	"	"	"	"
Silver	0.0267	0.0200	"	"	"	"	"	"
Zinc	10.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.7	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	6.08	0.0500	"	"	"	"	"	"	
Sodium	153	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.47	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
4725 Independence St.
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Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@10-11'
2502113-19 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	78.9			%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.690	0.0100		mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.21			pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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4725 Independence St.
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Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@14-15'
2502113-20 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB0971	02/18/25	02/24/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0485	121 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB0976	02/18/25	02/27/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.4	83.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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4725 Independence St.
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Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@14-15'
2502113-20 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0962	02/18/25	02/22/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.6 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@14-15'
2502113-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.54	0.200	mg/kg dry	1	BIC1097	03/19/25	04/01/25	EPA 6020B	
Barium	26.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.57	0.400	"	"	"	"	"	"	
Lead	7.65	0.200	"	"	"	"	"	"	
Nickel	1.56	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.06	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0874	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	13.6	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	8.52	0.0500	"	"	"	"	"	"	
Sodium	86.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.53	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BH05@14-15'
2502113-20 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.447	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 10:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@0.5-1.5'
2502113-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.37	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	43.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.89	0.400	"	"	"	"	"	"	
Lead	4.57	0.200	"	"	"	"	"	"	
Nickel	2.30	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	130	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	22.1	0.0500	"	"	"	"	"	"	
Sodium	6.97	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@0.5-1.5'
2502113-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.149	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.134	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@5-6'
2502113-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.18	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	56.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.51	0.400	"	"	"	"	"	"	
Lead	3.34	0.200	"	"	"	"	"	"	
Nickel	2.00	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	19.0	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.2	0.0500	"	"	"	"	"	"	
Sodium	354	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@5-6'
2502113-22 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	16.3	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.87	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.92		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@10-11'
2502113-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.44	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	82.7	0.400	"	"	"	"	"	"	
Cadmium	0.233	0.200	"	"	"	"	"	"	
Copper	5.54	0.400	"	"	"	"	"	"	
Lead	5.70	0.200	"	"	"	"	"	"	
Nickel	5.12	0.400	"	"	"	"	"	"	
Silver	0.0281	0.0200	"	"	"	"	"	"	
Zinc	16.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	26.2	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.8	0.0500	"	"	"	"	"	"	
Sodium	73.4	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@10-11'
2502113-23 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.05	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.4		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.500	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.50		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@13-14'
2502113-24 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.57	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	169	0.400	"	"	"	"	"	"	
Cadmium	0.265	0.200	"	"	"	"	"	"	
Copper	3.00	0.400	"	"	"	"	"	"	
Lead	5.94	0.200	"	"	"	"	"	"	
Nickel	3.34	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	21.5	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.4	0.0500	"	"	"	"	"	"	
Sodium	62.2	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG02@13-14'
2502113-24 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.76	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.407	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@0.5-1.5'
2502113-25 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.43	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	45.3	0.400	"	"	"	"	"	"	
Cadmium	0.261	0.200	"	"	"	"	"	"	
Copper	4.12	0.400	"	"	"	"	"	"	
Lead	7.86	0.200	"	"	"	"	"	"	
Nickel	2.74	0.400	"	"	"	"	"	"	
Silver	0.0217	0.0200	"	"	"	"	"	"	
Zinc	16.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	53.7	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	8.96	0.0500	"	"	"	"	"	"	
Sodium	10.2	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@0.5-1.5'
2502113-25 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.339	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.428	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@5-6'
2502113-26 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.46	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	29.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.91	0.400	"	"	"	"	"	"	
Lead	4.16	0.200	"	"	"	"	"	"	
Nickel	2.51	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.0	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	8.64	0.0500	"	"	"	"	"	"	
Sodium	494	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@5-6'
2502113-26 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	22.3	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.6		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.42	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.00		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@10-11'
2502113-27 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0230	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.29	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	18.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.86	0.400	"	"	"	"	"	"	
Lead	4.26	0.200	"	"	"	"	"	"	
Nickel	2.46	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	36.2	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	10.9	0.0500	"	"	"	"	"	"	
Sodium	73.0	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@10-11'
2502113-27 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.73	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.421	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.72		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@14-15'
2502113-28 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.21	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	26.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.65	0.400	"	"	"	"	"	"	
Lead	4.16	0.200	"	"	"	"	"	"	
Nickel	2.27	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	31.8	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	12.5	0.0500	"	"	"	"	"	"	
Sodium	89.1	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG03@14-15'
2502113-28 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.39	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.607	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@0.5-1.5'
2502113-29 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.85	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	41.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.69	0.400	"	"	"	"	"	"	
Lead	4.55	0.200	"	"	"	"	"	"	
Nickel	2.63	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	91.5	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	20.1	0.0500	"	"	"	"	"	"	
Sodium	5.84	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@0.5-1.5'
2502113-29 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.144	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.8		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@5-6'
2502113-30 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.41	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	51.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.45	0.400	"	"	"	"	"	"	
Lead	4.55	0.200	"	"	"	"	"	"	
Nickel	2.44	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	142	0.0500	mg/L dry	1	BIC0155	03/04/25	03/15/25	EPA 6020B	
Magnesium	97.0	0.0500	"	"	"	"	"	"	
Sodium	630	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@5-6'
2502113-30 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.98	0.00100	units	1	BIC0903	03/15/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.7		%	1	BIB1004	02/18/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.03	0.0100	mmhos/cm	1	BIC0157	03/04/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BIC0156	03/04/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@10-11'
2502113-31 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.89	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	24.2	0.400	"	"	"	"	"	"	
Cadmium	0.231	0.200	"	"	"	"	"	"	
Copper	5.40	0.400	"	"	"	"	"	"	
Lead	6.26	0.200	"	"	"	"	"	"	
Nickel	5.16	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	29.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	13.7	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	4.36	0.0500	"	"	"	"	"	"	
Sodium	131	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@10-11'
2502113-31 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.89	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.8		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.633	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@14-15'
2502113-32 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.95	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	505	0.400	"	"	"	"	"	"	
Cadmium	0.286	0.200	"	"	"	"	"	"	
Copper	6.79	0.400	"	"	"	"	"	"	
Lead	11.0	0.200	"	"	"	"	"	"	
Nickel	6.65	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	26.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	75.9	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	12.8	0.0500	"	"	"	"	"	"	
Sodium	3.22	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG04@14-15'
2502113-32 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0900	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.650	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.95		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@0.5-1.5'
2502113-33 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.04	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	45.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.31	0.400	"	"	"	"	"	"	
Lead	4.79	0.200	"	"	"	"	"	"	
Nickel	3.23	0.400	"	"	"	"	"	"	
Silver	0.0231	0.0200	"	"	"	"	"	"	
Zinc	15.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14.1	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	5.09	0.0500	"	"	"	"	"	"	
Sodium	375	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@0.5-1.5'
2502113-33 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	21.8	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0700	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@5-6'
2502113-34 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.37	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	49.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.48	0.400	"	"	"	"	"	"	
Lead	3.77	0.200	"	"	"	"	"	"	
Nickel	2.81	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	15.0	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	5.19	0.0500	"	"	"	"	"	"	
Sodium	366	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@5-6'
2502113-34 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	20.8	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.0		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.84	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.09		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@10-11'
2502113-35 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.93	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	182	0.400	"	"	"	"	"	"	
Cadmium	0.224	0.200	"	"	"	"	"	"	
Copper	3.45	0.400	"	"	"	"	"	"	
Lead	5.57	0.200	"	"	"	"	"	"	
Nickel	3.49	0.400	"	"	"	"	"	"	
Silver	0.0675	0.0200	"	"	"	"	"	"	
Zinc	13.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	22.7	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	6.76	0.0500	"	"	"	"	"	"	
Sodium	86.5	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@10-11'
2502113-35 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.09	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.501	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@14-15'
2502113-36 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.42	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	78.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.08	0.400	"	"	"	"	"	"	
Lead	5.11	0.200	"	"	"	"	"	"	
Nickel	2.91	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	15.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	34.7	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	13.7	0.0500	"	"	"	"	"	"	
Sodium	136	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG05@14-15'
2502113-36 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.95	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.2		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.779	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.05		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@0.5-1.5'
2502113-37 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.88	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	29.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.25	0.400	"	"	"	"	"	"	
Lead	5.15	0.200	"	"	"	"	"	"	
Nickel	2.09	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	97.5	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	23.0	0.0500	"	"	"	"	"	"	
Sodium	36.7	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@0.5-1.5'
2502113-37 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.868	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.3		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.435	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.99		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@5-6'
2502113-38 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.03	0.200	mg/kg dry	1	BIC1098	03/19/25	03/30/25	EPA 6020B	
Barium	65.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.17	0.400	"	"	"	"	"	"	
Lead	4.99	0.200	"	"	"	"	"	"	
Nickel	2.69	0.400	"	"	"	"	"	"	
Silver	0.0214	0.0200	"	"	"	"	"	"	
Zinc	16.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14.2	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	5.56	0.0500	"	"	"	"	"	"	
Sodium	371	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@5-6'
2502113-38 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	21.1	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.9		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.67	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@10-11'
2502113-39 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.81	0.200	mg/kg dry	1	BIC1098	03/19/25	03/31/25	EPA 6020B	
Barium	56.7	0.400	"	"	"	"	"	"	
Cadmium	0.240	0.200	"	"	"	"	"	"	
Copper	3.46	0.400	"	"	"	"	"	"	
Lead	6.33	0.200	"	"	"	"	"	"	
Nickel	3.82	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	16.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	143	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	29.2	0.0500	"	"	"	"	"	"	
Sodium	173	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@10-11'
2502113-39 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.45	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.878	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.80		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@14-15'
2502113-40 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0231	03/05/25	03/17/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.42	0.200	mg/kg dry	1	BIC1098	03/19/25	03/31/25	EPA 6020B	
Barium	18.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.60	0.400	"	"	"	"	"	"	
Lead	3.52	0.200	"	"	"	"	"	"	
Nickel	2.46	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0875	02/17/25	02/18/25	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	28.1	0.0500	mg/L dry	1	BIC0088	03/03/25	03/15/25	EPA 6020B	
Magnesium	13.9	0.0500	"	"	"	"	"	"	
Sodium	186	0.0500	"	"	"	"	"	"	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

BKG06@14-15'
2502113-40 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.17	0.00100	units	1	BIC0945	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.8		%	1	BIB0999	02/18/25	02/19/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.927	0.0100	mmhos/cm	1	BIC0091	03/03/25	03/06/25	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/06/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BIC0090	03/03/25	03/06/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BIB0971 - EPA 5030 Soil MS

Blank (BIB0971-BLK1)

Prepared: 02/18/25 Analyzed: 02/24/25

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

LCS (BIB0971-BS1)

Prepared: 02/18/25 Analyzed: 02/24/25

Benzene	0.0945	0.0020	mg/kg	0.100		94.5	70-130			
Toluene	0.0951	0.0050	"	0.100		95.1	70-130			
Ethylbenzene	0.0889	0.0050	"	0.100		88.9	70-130			
m,p-Xylene	0.177	0.010	"	0.200		88.6	70-130			
o-Xylene	0.0910	0.0050	"	0.100		91.0	70-130			
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.100		84.9	70-130			
1,3,5-Trimethylbenzene	0.0848	0.0050	"	0.100		84.8	70-130			
Naphthalene	0.0960	0.0038	"	0.100		96.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0446		"	0.0400		111	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

Matrix Spike (BIB0971-MS1)

Source: 2502113-01

Prepared: 02/18/25 Analyzed: 02/24/25

QM-01

Benzene	0.0374	0.0020	mg/kg	0.100	ND	37.4	70-130			
Toluene	0.0135	0.0050	"	0.100	ND	13.5	70-130			
Ethylbenzene	0.00888	0.0050	"	0.100	ND	8.88	70-130			
m,p-Xylene	0.0143	0.010	"	0.200	ND	7.16	70-130			
o-Xylene	0.0626	0.0050	"	0.100	ND	62.6	70-130			
1,2,4-Trimethylbenzene	0.00606	0.0050	"	0.100	ND	6.06	70-130			
1,3,5-Trimethylbenzene	0.0576	0.0050	"	0.100	ND	57.6	70-130			
Naphthalene	0.0247	0.0038	"	0.100	ND	24.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BIB0971 - EPA 5030 Soil MS

Matrix Spike Dup (BIB0971-MSD1)	Source: 2502113-01			Prepared: 02/18/25	Analyzed: 02/24/25	QM-01				
Benzene	0.0478	0.0020	mg/kg	0.100	ND	47.8	70-130	24.5	30	
Toluene	0.0165	0.0050	"	0.100	ND	16.5	70-130	20.2	30	
Ethylbenzene	0.0133	0.0050	"	0.100	ND	13.3	70-130	39.6	30	
m,p-Xylene	0.0157	0.010	"	0.200	ND	7.84	70-130	9.20	30	
o-Xylene	0.0686	0.0050	"	0.100	ND	68.6	70-130	9.14	30	
1,2,4-Trimethylbenzene	0.00552	0.0050	"	0.100	ND	5.52	70-130	9.33	30	
1,3,5-Trimethylbenzene	0.0611	0.0050	"	0.100	ND	61.1	70-130	5.86	30	
Naphthalene	0.0232	0.0038	"	0.100	ND	23.2	70-130	6.14	30	
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		111	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BIB0976 - EPA 3550A

Blank (BIB0976-BLK1)

Prepared: 02/18/25 Analyzed: 02/26/25

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	15.6		"	12.5		125	30-150			

LCS (BIB0976-BS1)

Prepared: 02/18/25 Analyzed: 02/26/25

C10-C28 (DRO)	581	50	mg/kg	500		116	70-130			
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.9	30-150			

Matrix Spike (BIB0976-MS1)

Source: 2502113-01

Prepared: 02/18/25 Analyzed: 02/26/25

C10-C28 (DRO)	535	50	mg/kg	500	15.8	104	70-130			
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.4	30-150			

Matrix Spike Dup (BIB0976-MSD1)

Source: 2502113-01

Prepared: 02/18/25 Analyzed: 02/26/25

C10-C28 (DRO)	606	50	mg/kg	500	15.8	118	70-130	12.4	20	
Surrogate: <i>o</i> -Terphenyl	10.1		"	12.5		80.8	30-150			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BIB0962 - EPA 5030 Soil MS

Blank (BIB0962-BLK1)

Prepared: 02/18/25 Analyzed: 02/22/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0194		"	0.0333		58.3	40-140			
Surrogate: Fluoranthene-d10	0.0202		"	0.0333		60.7	40-140			

LCS (BIB0962-BS1)

Prepared: 02/18/25 Analyzed: 02/22/25

Acenaphthene	0.0214	0.00500	mg/kg	0.0333		64.1	40-140			
Anthracene	0.0212	0.00500	"	0.0333		63.6	40-140			
Benzo (a) anthracene	0.0220	0.00500	"	0.0333		66.0	40-140			
Benzo (a) pyrene	0.0203	0.00500	"	0.0333		60.8	40-140			
Benzo (b) fluoranthene	0.0220	0.00500	"	0.0333		66.0	40-140			
Benzo (k) fluoranthene	0.0218	0.00500	"	0.0333		65.3	40-140			
Chrysene	0.0218	0.00500	"	0.0333		65.4	40-140			
Dibenz (a,h) anthracene	0.0201	0.00500	"	0.0333		60.3	40-140			
Fluoranthene	0.0210	0.00500	"	0.0333		63.1	40-140			
Fluorene	0.0218	0.00500	"	0.0333		65.5	40-140			
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333		41.0	40-140			
Pyrene	0.0240	0.00500	"	0.0333		72.0	40-140			
1-Methylnaphthalene	0.0251	0.00500	"	0.0333		75.3	40-140			
2-Methylnaphthalene	0.0234	0.00500	"	0.0333		70.3	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0238		"	0.0333		71.5	40-140			
Surrogate: Fluoranthene-d10	0.0221		"	0.0333		66.4	40-140			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemester USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BIB0962 - EPA 5030 Soil MS

Matrix Spike (BIB0962-MS1)	Source: 2502113-01			Prepared: 02/18/25 Analyzed: 02/22/25						
Acenaphthene	0.0194	0.00500	mg/kg	0.0333	ND	58.1	40-140			
Anthracene	0.0226	0.00500	"	0.0333	ND	67.7	40-140			
Benzo (a) anthracene	0.0507	0.00500	"	0.0333	ND	152	40-140			QM-05
Benzo (a) pyrene	0.0434	0.00500	"	0.0333	ND	130	40-140			
Benzo (b) fluoranthene	0.0646	0.00500	"	0.0333	ND	194	40-140			QM-05
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333	ND	109	40-140			
Chrysene	0.0574	0.00500	"	0.0333	ND	172	40-140			QM-05
Dibenz (a,h) anthracene	0.0187	0.00500	"	0.0333	ND	56.2	40-140			
Fluoranthene	0.104	0.00500	"	0.0333	ND	312	40-140			QM-05
Fluorene	0.0184	0.00500	"	0.0333	ND	55.1	40-140			
Indeno (1,2,3-cd) pyrene	0.0432	0.00500	"	0.0333	ND	130	40-140			
Pyrene	0.125	0.00500	"	0.0333	ND	374	40-140			QM-05
1-Methylnaphthalene	0.0214	0.00500	"	0.0333	0.0114	30.1	40-140			QM-05
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	0.0136	20.9	40-140			QM-05
Surrogate: 2-Methylnaphthalene-d10	0.0180		"	0.0333		54.0	40-140			
Surrogate: Fluoranthene-d10	0.0197		"	0.0333		59.1	40-140			

Matrix Spike Dup (BIB0962-MSD1)	Source: 2502113-01			Prepared: 02/18/25 Analyzed: 02/22/25						
Acenaphthene	0.0169	0.00500	mg/kg	0.0333	ND	50.7	40-140	13.7	30	
Anthracene	0.0173	0.00500	"	0.0333	ND	52.0	40-140	26.3	30	
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.2	40-140	86.6	30	QM-05
Benzo (a) pyrene	0.0167	0.00500	"	0.0333	ND	50.0	40-140	89.1	30	QM-05
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.7	40-140	111	30	QM-05
Benzo (k) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.2	40-140	74.1	30	QM-05
Chrysene	0.0201	0.00500	"	0.0333	ND	60.2	40-140	96.4	30	QM-05
Dibenz (a,h) anthracene	0.0174	0.00500	"	0.0333	ND	52.1	40-140	7.61	30	
Fluoranthene	0.0202	0.00500	"	0.0333	ND	60.7	40-140	135	30	QM-05
Fluorene	0.0171	0.00500	"	0.0333	ND	51.3	40-140	7.29	30	
Indeno (1,2,3-cd) pyrene	0.0198	0.00500	"	0.0333	ND	59.3	40-140	74.5	30	QM-05
Pyrene	0.0263	0.00500	"	0.0333	ND	79.0	40-140	130	30	QM-05
1-Methylnaphthalene	0.0242	0.00500	"	0.0333	0.0114	38.4	40-140	12.1	30	QM-05
2-Methylnaphthalene	0.0233	0.00500	"	0.0333	0.0136	29.2	40-140	12.6	30	QM-05
Surrogate: 2-Methylnaphthalene-d10	0.0188		"	0.0333		56.3	40-140			
Surrogate: Fluoranthene-d10	0.0191		"	0.0333		57.3	40-140			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BIC0229 - EPA 3050B

Blank (BIC0229-BLK1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron ND 2.00 mg/L

LCS (BIC0229-BS1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 4.72 2.00 mg/L 5.00 94.3 80-120

Duplicate (BIC0229-DUP1)

Source: 2502101-01

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 0.142 2.00 mg/L 0.139 1.86 20

Matrix Spike (BIC0229-MS1)

Source: 2502101-01

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 4.99 2.00 mg/L 5.00 0.139 97.0 75-125

Matrix Spike Dup (BIC0229-MSD1)

Source: 2502101-01

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 4.99 2.00 mg/L 5.00 0.139 97.0 75-125 0.0285 25

Batch BIC0230 - EPA 3050B

Blank (BIC0230-BLK1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron ND 2.00 mg/L

LCS (BIC0230-BS1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 4.84 2.00 mg/L 5.00 96.8 80-120

Duplicate (BIC0230-DUP1)

Source: 2502113-08

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 0.143 2.00 mg/L 0.152 6.04 20

Matrix Spike (BIC0230-MS1)

Source: 2502113-08

Prepared: 03/05/25 Analyzed: 03/17/25

Boron 4.92 2.00 mg/L 5.00 0.152 95.4 75-125

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BIC0230 - EPA 3050B

Matrix Spike Dup (BIC0230-MSD1)

Source: 2502113-08

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	4.91	2.00	mg/L	5.00	0.152	95.1	75-125	0.355	25	
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Batch BIC0231 - EPA 3050B

Blank (BIC0231-BLK1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	ND	2.00	mg/L							
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LCS (BIC0231-BS1)

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	4.92	2.00	mg/L	5.00		98.5	80-120			
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Duplicate (BIC0231-DUP1)

Source: 2502113-28

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	0.0999	2.00	mg/L		0.114			12.8	20	
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Matrix Spike (BIC0231-MS1)

Source: 2502113-28

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	4.95	2.00	mg/L	5.00	0.114	96.7	75-125			
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Matrix Spike Dup (BIC0231-MSD1)

Source: 2502113-28

Prepared: 03/05/25 Analyzed: 03/17/25

Boron	4.92	2.00	mg/L	5.00	0.114	96.2	75-125	0.480	25	
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIC1097 - EPA 3050B

Blank (BIC1097-BLK1)

Prepared: 03/19/25 Analyzed: 04/02/25

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BIC1097-BS1)

Prepared: 03/19/25 Analyzed: 04/01/25

Arsenic	36.2	0.200	mg/kg wet	39.4	92.0	80-120
Barium	35.0	0.400	"	39.4	88.8	80-120
Cadmium	1.69	0.200	"	1.97	85.9	80-120
Copper	37.1	0.400	"	39.4	94.3	80-120
Lead	18.2	0.200	"	19.7	92.5	80-120
Nickel	36.9	0.400	"	39.4	93.8	80-120
Silver	1.71	0.0200	"	1.97	86.8	80-120
Zinc	36.9	0.400	"	39.4	93.7	80-120
Selenium	4.16	0.260	"	3.94	106	80-120

Duplicate (BIC1097-DUP1)

Source: 2502113-01

Prepared: 03/19/25 Analyzed: 04/01/25

Arsenic	0.724	0.200	mg/kg dry	1.67	79.0	20	QR-04
Barium	161	0.400	"	55.9	97.0	20	QR-04
Cadmium	0.188	0.200	"	0.273	36.8	20	QR-01
Copper	1.96	0.400	"	1.86	5.03	20	
Lead	13.3	0.200	"	9.59	32.6	20	QR-04
Nickel	1.31	0.400	"	1.39	5.60	20	
Silver	0.0200	0.0200	"	0.0240	18.1	20	
Zinc	6.69	0.400	"	7.44	10.7	20	
Selenium	ND	0.260	"	0.186	200	20	QR-01

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemester USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIC1097 - EPA 3050B

Matrix Spike (BIC1097-MS1)	Source: 2502113-01			Prepared: 03/19/25 Analyzed: 04/01/25								
Arsenic	13.1	0.200	mg/kg dry	48.1	1.67	23.9	75-125					QM-05
Barium	92.1	0.400	"	48.1	55.9	75.2	75-125					
Cadmium	2.45	0.200	"	2.40	0.273	90.5	75-125					
Copper	14.4	0.400	"	48.1	1.86	26.0	75-125					QM-05
Lead	30.1	0.200	"	24.0	9.59	85.1	75-125					
Nickel	13.8	0.400	"	48.1	1.39	25.8	75-125					QM-05
Silver	2.23	0.0200	"	2.40	0.0240	91.9	75-125					
Zinc	19.9	0.400	"	48.1	7.44	26.0	75-125					QM-05
Selenium	4.49	0.260	"	4.81	0.186	89.4	75-125					

Matrix Spike Dup (BIC1097-MSD1)	Source: 2502113-01			Prepared: 03/19/25 Analyzed: 04/01/25								
Arsenic	13.4	0.200	mg/kg dry	48.9	1.67	23.9	75-125	1.70	25			QM-05
Barium	100	0.400	"	48.9	55.9	90.6	75-125	8.46	25			
Cadmium	2.73	0.200	"	2.44	0.273	100	75-125	10.8	25			
Copper	14.6	0.400	"	48.9	1.86	26.1	75-125	1.77	25			QM-05
Lead	33.5	0.200	"	24.4	9.59	97.9	75-125	10.9	25			
Nickel	14.3	0.400	"	48.9	1.39	26.4	75-125	3.34	25			QM-05
Silver	2.42	0.0200	"	2.44	0.0240	98.2	75-125	8.11	25			
Zinc	21.0	0.400	"	48.9	7.44	27.7	75-125	5.23	25			QM-05
Selenium	4.52	0.260	"	4.89	0.186	88.8	75-125	0.868	25			

Batch BIC1098 - EPA 3050B

Blank (BIC1098-BLK1)	Prepared: 03/19/25 Analyzed: 04/01/25											
Arsenic	ND	0.200	mg/kg wet									
Barium	ND	0.400	"									
Cadmium	ND	0.200	"									
Copper	ND	0.400	"									
Lead	ND	0.200	"									
Nickel	ND	0.400	"									
Silver	ND	0.0200	"									
Zinc	ND	0.400	"									
Selenium	ND	0.260	"									

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIC1098 - EPA 3050B

LCS (BIC1098-BS1)

Prepared: 03/19/25 Analyzed: 03/30/25

Arsenic	37.5	0.200	mg/kg wet	41.7		90.0	80-120			
Barium	40.1	0.400	"	41.7		96.3	80-120			
Cadmium	1.92	0.200	"	2.08		92.2	80-120			
Copper	40.9	0.400	"	41.7		98.2	80-120			
Lead	19.3	0.200	"	20.8		92.6	80-120			
Nickel	40.2	0.400	"	41.7		96.4	80-120			
Silver	1.93	0.0200	"	2.08		92.8	80-120			
Zinc	41.2	0.400	"	41.7		98.9	80-120			
Selenium	3.52	0.260	"	4.17		84.5	80-120			

Duplicate (BIC1098-DUP1)

Source: 2502113-21

Prepared: 03/19/25 Analyzed: 03/30/25

Arsenic	3.95	0.200	mg/kg dry		2.37			50.1	20	QR-04
Barium	46.3	0.400	"		43.0			7.31	20	
Cadmium	0.174	0.200	"		0.140			21.9	20	QR-01
Copper	3.61	0.400	"		2.89			22.2	20	QR-04
Lead	5.34	0.200	"		4.57			15.5	20	
Nickel	3.22	0.400	"		2.30			33.3	20	QR-04
Silver	0.0190	0.0200	"		0.0199			4.31	20	
Zinc	14.3	0.400	"		12.5			13.3	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BIC1098-MS1)

Source: 2502113-21

Prepared: 03/19/25 Analyzed: 03/30/25

Arsenic	42.0	0.200	mg/kg dry	45.0	2.37	88.1	75-125			
Barium	86.7	0.400	"	45.0	43.0	97.2	75-125			
Cadmium	2.26	0.200	"	2.25	0.140	94.2	75-125			
Copper	35.4	0.400	"	45.0	2.89	72.2	75-125			QM-05
Lead	25.4	0.200	"	22.5	4.57	92.8	75-125			
Nickel	35.3	0.400	"	45.0	2.30	73.4	75-125			QM-05
Silver	2.07	0.0200	"	2.25	0.0199	91.1	75-125			
Zinc	46.8	0.400	"	45.0	12.5	76.3	75-125			
Selenium	4.00	0.260	"	4.50	ND	88.9	75-125			

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BIC1098 - EPA 3050B

Matrix Spike Dup (BIC1098-MSD1)	Source: 2502113-21			Prepared: 03/19/25 Analyzed: 03/30/25						
Arsenic	42.9	0.200	mg/kg dry	43.2	2.37	93.8	75-125	2.01	25	
Barium	91.7	0.400	"	43.2	43.0	113	75-125	5.62	25	
Cadmium	2.34	0.200	"	2.16	0.140	102	75-125	3.34	25	
Copper	34.7	0.400	"	43.2	2.89	73.6	75-125	2.01	25	QM-05
Lead	26.7	0.200	"	21.6	4.57	102	75-125	4.65	25	
Nickel	34.2	0.400	"	43.2	2.30	73.9	75-125	3.16	25	QM-05
Silver	2.11	0.0200	"	2.16	0.0199	96.9	75-125	2.16	25	
Zinc	47.2	0.400	"	43.2	12.5	80.2	75-125	0.742	25	
Selenium	3.97	0.260	"	4.32	ND	91.8	75-125	0.784	25	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BIB0874 - 3060A Mod

Blank (BIB0874-BLK1)											
											Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BIB0874-BS1)											
											Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	24.9	0.30	mg/kg wet	24.8		100	80-120				
Duplicate (BIB0874-DUP1)											
											Source: 2502113-01 Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BIB0874-MS1)											
											Source: 2502113-01 Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	32.4	0.30	mg/kg dry	31.6	ND	103	75-125				
Matrix Spike Dup (BIB0874-MSD1)											
											Source: 2502113-01 Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	30.6	0.30	mg/kg dry	29.7	ND	103	75-125	5.67		20	

Batch BIB0875 - 3060A Mod

Blank (BIB0875-BLK1)											
											Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BIB0875-BS1)											
											Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	27.0	0.30	mg/kg wet	25.3		107	80-120				
Duplicate (BIB0875-DUP1)											
											Source: 2502113-21 Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BIB0875-MS1)											
											Source: 2502113-21 Prepared: 02/17/25 Analyzed: 02/18/25
Chromium, Hexavalent	27.7	0.30	mg/kg dry	27.5	ND	100	75-125				

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

Batch BIB0875 - 3060A Mod

Matrix Spike Dup (BIB0875-MSD1)

Source: 2502113-21

Prepared: 02/17/25 Analyzed: 02/18/25

Chromium, Hexavalent	27.9	0.30	mg/kg dry	28.1	ND	99.2	75-125	0.860	20	
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BIC0088 - General Preparation

Blank (BIC0088-BLK1)

Prepared: 03/03/25 Analyzed: 03/15/25

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BIC0088-BS1)

Prepared: 03/03/25 Analyzed: 03/15/25

Calcium	6.52	0.0500	mg/L wet	5.00	130	70-130
Magnesium	4.85	0.0500	"	5.00	96.9	70-130
Sodium	5.28	0.0500	"	5.00	106	70-130

Batch BIC0155 - General Preparation

Blank (BIC0155-BLK1)

Prepared: 03/04/25 Analyzed: 03/15/25

Calcium	ND	0.0500	mg/L wet			
Magnesium	ND	0.0500	"			
Sodium	ND	0.0500	"			

LCS (BIC0155-BS1)

Prepared: 03/04/25 Analyzed: 03/15/25

Calcium	5.96	0.0500	mg/L wet	5.00	119	70-130
Magnesium	4.70	0.0500	"	5.00	94.1	70-130
Sodium	4.85	0.0500	"	5.00	97.1	70-130

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BIB0999 - General Preparation

Duplicate (BIB0999-DUP1)	Source: 2502113-31	Prepared: 02/18/25	Analyzed: 02/19/25		
% Solids	86.1	%	86.8	0.828	20

Batch BIB1004 - General Preparation

Duplicate (BIB1004-DUP1)	Source: 2502113-01	Prepared: 02/18/25	Analyzed: 02/20/25		
% Solids	84.6	%	82.5	2.55	20

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BIC0091 - General Preparation

Blank (BIC0091-BLK1)		Prepared: 03/03/25 Analyzed: 03/06/25								
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BIC0091-BS1)		Prepared: 03/03/25 Analyzed: 03/06/25								
Specific Conductance (EC)	1.39	0.0100	mmhos/cm	1.41		98.6	95-105			
Duplicate (BIC0091-DUP1)		Source: 2502106-01		Prepared: 03/03/25 Analyzed: 03/06/25						
Specific Conductance (EC)	0.141	0.0100	mmhos/cm		0.140			0.634	20	

Batch BIC0157 - General Preparation

Blank (BIC0157-BLK1)		Prepared: 03/04/25 Analyzed: 03/06/25								
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BIC0157-BS1)		Prepared: 03/04/25 Analyzed: 03/06/25								
Specific Conductance (EC)	1.38	0.0100	mmhos/cm	1.41		98.2	95-105			
Duplicate (BIC0157-DUP1)		Source: 2502113-01		Prepared: 03/04/25 Analyzed: 03/06/25						
Specific Conductance (EC)	0.371	0.0100	mmhos/cm		0.372			0.266	20	

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 04/08/25 12:32

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BIC0090 - General Preparation

LCS (BIC0090-BS1)										
					Prepared: 03/03/25 Analyzed: 03/06/25					
pH	9.17		pH Units	9.18	99.8	95-105				
Duplicate (BIC0090-DUP1)										
					Source: 2502106-01 Prepared: 03/03/25 Analyzed: 03/06/25					
pH	8.65		pH Units	8.58	0.742	20				

Batch BIC0156 - General Preparation

LCS (BIC0156-BS1)										
					Prepared: 03/04/25 Analyzed: 03/06/25					
pH	9.17		pH Units	9.18	99.9	95-105				
Duplicate (BIC0156-DUP1)										
					Source: 2502113-01 Prepared: 03/04/25 Analyzed: 03/06/25					
pH	8.12		pH Units	8.13	0.0997	20				

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Hagemeister USX

Project Number: [none]
Project Manager: Andy Sagen

Reported:
04/08/25 12:32

Notes and Definitions

- S-04 A sample matrix effect prevented complete surrogate recovery.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to matrix interference. Matrix interference was verified via reanalysis.
- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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