

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 28, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Wells Ranch AA21-04

Work Order #2206300

Enclosed are the results of analyses for samples received by Summit Scientific on 06/20/22 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-B@3'	2206300-01	Soil	06/20/22 13:00	06/20/22 15:00

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

2206300

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

Page 1 of 1

Client: Noble / Tasman Geosciences Project Manager: Jake Whritenour, Invoice: Jeff White  
Address: 6855 W. 119th Ave. E-Mail: jwhritenour@tasman-geo.com/ Noble Group  
City/State/Zip: Broomfield / CO/ 80020  
Phone: 303-827-1511 Project Name: Wells Ranch AA21-04  
Sampler Name: Hunter Merlo Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	\$260 BTEX	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS		
1	Flood B e3'	6/20/22	1300	2			X			X				X	X	X	X	X		pH, EC, SAR by saturated paste
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by: <i>[Signature]</i>	Date/Time: 6/20/22 1430	Received by: Summit	Date/Time: 6/20/22 1430	<b>Turn Around Time (Check)</b> <input type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> <b>Sample Integrity:</b> Temperature Upon Receipt: 7.2 Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Notes:</b>
Relinquished by: Summit	Date/Time: 6/20/22 1500	Received by: <i>[Signature]</i>	Date/Time: 6/20/22 1500		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S<sub>2</sub>

S2 Work Order# 2206300

Sample Receipt Checklist

Client: Noble/Tasman Client Project ID: Wells Ranch AA21-04

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

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Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C)  Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C <sup>(1)</sup> ? <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on ICE
Were all samples received intact <sup>(1)</sup> ?	-			
Was adequate sample volume provided <sup>(1)</sup> ?	-			
If custody seals are present, are they intact <sup>(1)</sup> ?	-			
Are samples due within 48 hours present?		-		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen			-	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	-			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	-			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	-			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	-			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>			-	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
<u>Additional Comments (if any):</u>  				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

  
Custodian Printed Name

6/20/22  
Date/Time



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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**FL01-B@3'**  
**2206300-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFF0621	06/23/22	06/26/22	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: **06/20/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		98.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		89.6 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Number: [none]  
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06/28/22 09:07

**FL01-B@3'**  
**2206300-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	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: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		103 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.7 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0600</b>	0.0100	mg/L	1	BFF0556	06/21/22	06/23/22	EPA 6020B	

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

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**FL01-B@3'**  
**2206300-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2420	0.0581	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	423	0.0581	"	"	"	"	"	"	
Sodium	13.0	0.0581	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0641	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BFF0536	06/21/22	06/21/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.250	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

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06/28/22 09:07

### 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 BFF0621 - EPA 5030 Soil MS

##### Blank (BFF0621-BLK1)

Prepared: 06/23/22 Analyzed: 06/26/22

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	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

##### LCS (BFF0621-BS1)

Prepared: 06/23/22 Analyzed: 06/26/22

Benzene	0.0755	0.0020	mg/kg	0.0750		101	70-130			
Toluene	0.0773	0.0050	"	0.0750		103	70-130			
Ethylbenzene	0.0771	0.0050	"	0.0750		103	70-130			
m,p-Xylene	0.167	0.010	"	0.150		112	70-130			
o-Xylene	0.0735	0.0050	"	0.0750		98.0	70-130			
1,2,4-Trimethylbenzene	0.0781	0.0050	"	0.0750		104	70-130			
1,3,5-Trimethylbenzene	0.0778	0.0050	"	0.0750		104	70-130			
Naphthalene	0.0746	0.0038	"	0.0750		99.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.0	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		105	50-150			

##### Matrix Spike (BFF0621-MS1)

Source: 2206300-01

Prepared: 06/23/22 Analyzed: 06/26/22

Benzene	0.0783	0.0020	mg/kg	0.0750	ND	104	70-130			
Toluene	0.0771	0.0050	"	0.0750	ND	103	70-130			
Ethylbenzene	0.0778	0.0050	"	0.0750	ND	104	70-130			
m,p-Xylene	0.156	0.010	"	0.150	ND	104	70-130			
o-Xylene	0.0741	0.0050	"	0.0750	ND	98.8	70-130			
1,2,4-Trimethylbenzene	0.0724	0.0050	"	0.0750	ND	96.5	70-130			
1,3,5-Trimethylbenzene	0.0758	0.0050	"	0.0750	ND	101	70-130			
Naphthalene	0.0770	0.0038	"	0.0750	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0345		"	0.0400		86.2	50-150			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

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06/28/22 09:07

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch BFF0621 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BFF0621-MSD1)</b>	<b>Source: 2206300-01</b>			Prepared: 06/23/22 Analyzed: 06/26/22					
Benzene	0.0806	0.0020	mg/kg	0.0750	ND	108	70-130	2.94	30
Toluene	0.0841	0.0050	"	0.0750	ND	112	70-130	8.63	30
Ethylbenzene	0.0800	0.0050	"	0.0750	ND	107	70-130	2.78	30
m,p-Xylene	0.168	0.010	"	0.150	ND	112	70-130	7.24	30
o-Xylene	0.0799	0.0050	"	0.0750	ND	106	70-130	7.52	30
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.0750	ND	113	70-130	15.9	30
1,3,5-Trimethylbenzene	0.0854	0.0050	"	0.0750	ND	114	70-130	12.0	30
Naphthalene	0.0755	0.0038	"	0.0750	ND	101	70-130	2.05	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0418</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>50-150</i>		

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Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BFF0622 - EPA 3550A**

**Blank (BFF0622-BLK1)**

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							

**LCS (BFF0622-BS1)**

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	405	50	mg/kg	500	80.9	70-130				
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**Matrix Spike (BFF0622-MS1)**

Source: 2206300-01

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	409	50	mg/kg	500	9.56	79.9	70-130			
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**Matrix Spike Dup (BFF0622-MSD1)**

Source: 2206300-01

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	439	50	mg/kg	500	9.56	85.8	70-130	6.96	20	
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Project Number: [none]  
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**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 BFF0603 - EPA 5030 Soil MS**

**Blank (BFF0603-BLK1)**

Prepared: 06/23/22 Analyzed: 06/24/22

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	0.0262		"	0.0333		78.6	40-150			
Surrogate: Fluoranthene-d10	0.0338		"	0.0333		101	40-150			

**LCS (BFF0603-BS1)**

Prepared: 06/23/22 Analyzed: 06/25/22

Acenaphthene	0.0332	0.00500	mg/kg	0.0333		99.6	31-137			
Anthracene	0.0399	0.00500	"	0.0333		120	30-120			
Benzo (a) anthracene	0.0351	0.00500	"	0.0333		105	30-120			
Benzo (a) pyrene	0.0342	0.00500	"	0.0333		102	30-120			
Benzo (b) fluoranthene	0.0343	0.00500	"	0.0333		103	30-120			
Benzo (k) fluoranthene	0.0362	0.00500	"	0.0333		109	30-120			
Chrysene	0.0331	0.00500	"	0.0333		99.2	30-120			
Dibenz (a,h) anthracene	0.0351	0.00500	"	0.0333		105	30-120			
Fluoranthene	0.0330	0.00500	"	0.0333		99.0	30-120			
Fluorene	0.0352	0.00500	"	0.0333		105	30-120			
Indeno (1,2,3-cd) pyrene	0.0332	0.00500	"	0.0333		99.6	30-120			
Pyrene	0.0319	0.00500	"	0.0333		95.8	35-142			
1-Methylnaphthalene	0.0187	0.00500	"	0.0333		56.2	35-142			
2-Methylnaphthalene	0.0283	0.00500	"	0.0333		85.0	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0333		"	0.0333		99.9	40-150			
Surrogate: Fluoranthene-d10	0.0347		"	0.0333		104	40-150			

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Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**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 BFF0603 - EPA 5030 Soil MS**

<b>Matrix Spike (BFF0603-MS1)</b>	<b>Source: 2206245-02</b>			<b>Prepared: 06/23/22 Analyzed: 06/25/22</b>						
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	0.00253	42.1	31-137			
Anthracene	0.0146	0.00500	"	0.0333	ND	43.9	30-120			
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	51.0	30-120			
Benzo (a) pyrene	0.0123	0.00500	"	0.0333	ND	36.9	30-120			
Benzo (b) fluoranthene	0.0115	0.00500	"	0.0333	ND	34.4	30-120			
Benzo (k) fluoranthene	0.0108	0.00500	"	0.0333	ND	32.5	30-120			
Chrysene	0.0129	0.00500	"	0.0333	ND	38.6	30-120			
Dibenz (a,h) anthracene	0.0113	0.00500	"	0.0333	ND	34.0	30-120			
Fluoranthene	0.0131	0.00500	"	0.0333	ND	39.2	30-120			
Fluorene	0.0197	0.00500	"	0.0333	0.00345	48.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0119	0.00500	"	0.0333	ND	35.8	30-120			
Pyrene	0.0139	0.00500	"	0.0333	ND	41.7	35-142			
1-Methylnaphthalene	0.0125	0.00500	"	0.0333	ND	37.4	15-130			
2-Methylnaphthalene	0.0173	0.00500	"	0.0333	0.00484	37.4	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0145</i>		<i>"</i>	<i>0.0333</i>		<i>43.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0177</i>		<i>"</i>	<i>0.0333</i>		<i>53.1</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BFF0603-MSD1)</b>	<b>Source: 2206245-02</b>			<b>Prepared: 06/23/22 Analyzed: 06/25/22</b>						
Acenaphthene	0.0152	0.00500	mg/kg	0.0333	0.00253	38.0	31-137	8.70	30	
Anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	1.22	30	
Benzo (a) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	2.76	30	
Benzo (a) pyrene	0.0132	0.00500	"	0.0333	ND	39.5	30-120	6.90	30	
Benzo (b) fluoranthene	0.0121	0.00500	"	0.0333	ND	36.4	30-120	5.76	30	
Benzo (k) fluoranthene	0.0112	0.00500	"	0.0333	ND	33.7	30-120	3.61	30	
Chrysene	0.0132	0.00500	"	0.0333	ND	39.7	30-120	2.73	30	
Dibenz (a,h) anthracene	0.0124	0.00500	"	0.0333	ND	37.2	30-120	9.02	30	
Fluoranthene	0.0133	0.00500	"	0.0333	ND	39.9	30-120	1.65	30	
Fluorene	0.0182	0.00500	"	0.0333	0.00345	44.2	30-120	7.72	30	
Indeno (1,2,3-cd) pyrene	0.0146	0.00500	"	0.0333	ND	43.7	30-120	20.0	30	
Pyrene	0.0142	0.00500	"	0.0333	ND	42.5	35-142	1.71	30	
1-Methylnaphthalene	0.00945	0.00500	"	0.0333	ND	28.4	15-130	27.6	50	
2-Methylnaphthalene	0.0154	0.00500	"	0.0333	0.00484	31.6	15-130	11.8	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0163</i>		<i>"</i>	<i>0.0333</i>		<i>48.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0182</i>		<i>"</i>	<i>0.0333</i>		<i>54.7</i>	<i>40-150</i>			

Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**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 BFF0556 - EPA 3050B**

**Blank (BFF0556-BLK1)**

Prepared: 06/21/22 Analyzed: 06/23/22

Boron ND 0.0100 mg/L

**LCS (BFF0556-BS1)**

Prepared: 06/21/22 Analyzed: 06/23/22

Boron 5.88 0.0100 mg/L 5.00 118 80-120

**Duplicate (BFF0556-DUP1)**

Source: 2206285-01

Prepared: 06/21/22 Analyzed: 06/23/22

Boron 0.0615 0.0100 mg/L 0.0645 4.80 20

**Matrix Spike (BFF0556-MS1)**

Source: 2206285-01

Prepared: 06/21/22 Analyzed: 06/23/22

Boron 5.84 0.0100 mg/L 5.00 0.0645 116 75-125

**Matrix Spike Dup (BFF0556-MSD1)**

Source: 2206285-01

Prepared: 06/21/22 Analyzed: 06/23/22

Boron 5.84 0.0100 mg/L 5.00 0.0645 115 75-125 0.0811 25

Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

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

**Summit Scientific**

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

**Batch BFF0584 - General Preparation**

**Blank (BFF0584-BLK1)**

Prepared: 06/22/22 Analyzed: 06/23/22

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BFF0584-BS1)**

Prepared: 06/22/22 Analyzed: 06/23/22

Calcium	589	0.0500	mg/L wet	500	118	70-130				
Magnesium	615	0.0500	"	500	123	70-130				
Sodium	561	0.0500	"	500	112	70-130				

Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
 Project Manager: Jacob Whritenour

**Reported:**  
 06/28/22 09:07

**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 BFF0536 - General Preparation**

**Duplicate (BFF0536-DUP1)**

**Source: 2206277-01**

**Prepared & Analyzed: 06/21/22**

% Solids	85.1		%		84.7			0.537	20	
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Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BFF0586 - General Preparation**

**Blank (BFF0586-BLK1)**

Prepared & Analyzed: 06/22/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFF0586-BS1)**

Prepared & Analyzed: 06/22/22

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

**Duplicate (BFF0586-DUP1)**

Source: 2206285-01

Prepared & Analyzed: 06/22/22

Specific Conductance (EC) 0.772 0.0100 mmhos/cm 0.773 0.0647 20

Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

**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 BFF0585 - General Preparation**

**LCS (BFF0585-BS1)**

Prepared & Analyzed: 06/22/22

pH 9.11 pH Units 9.18 99.2 95-105

**Duplicate (BFF0585-DUP1)**

Source: 2206285-01

Prepared & Analyzed: 06/22/22

pH 8.06 pH Units 8.04 0.248 20

Summit Scientific

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

Project: Noble - Wells Ranch AA21-04

Project Number: [none]  
Project Manager: Jacob Whritenour

**Reported:**  
06/28/22 09:07

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference