

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 07, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

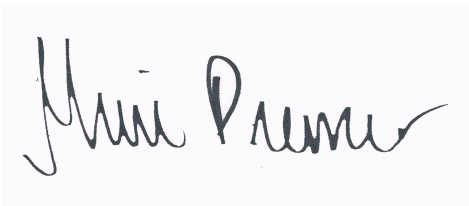
Broomfield, CO 80020

RE: Noble - Wells Ranch AA21-04

Work Order #2202084

Enclosed are the results of analyses for samples received by Summit Scientific on 02/08/22 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury

President



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2202084-01	Soil	02/08/22 09:40	02/08/22 13:00
SS02@2.5'	2202084-02	Soil	02/08/22 09:42	02/08/22 13:00
SS03@2.5'	2202084-03	Soil	02/08/22 09:44	02/08/22 13:00
SS04@2.5'	2202084-04	Soil	02/08/22 09:46	02/08/22 13:00
FS01@6'	2202084-05	Soil	02/08/22 09:48	02/08/22 13:00
FL01-A@4'	2202084-06	Soil	02/08/22 09:50	02/08/22 13:00
FS02@8'	2202084-07	Soil	02/08/22 10:20	02/08/22 13:00

Summit Scientific

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

Summit Scientific

2202084

S₂

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

City/State/Zip: Broomfield / CO / 80020

Phone: 3038290530 Project Name: Wells Ranch AA21-04

Sampler Name: Halina North Project Number: UWRNE-A1733-ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD		
1	SS01@2.5'	2/8/22	9:40	2			X			X				X	X	X	X	X	X	HOLD
2	SS02@2.5'		9:42	1															X	HOLD
3	SS03@2.5'		9:44	1															X	HOLD
4	SS04@2.5'		9:46	1															X	HOLD
5	FS01@0'		9:48	1																
6	FLO1-A@4'		9:50	1																
7	FS02@8'		10:20	1																
8																				
9																				
10																				

Relinquished by: <u>Halina North</u> Date/Time: <u>2/8/22 13:00</u>	Received by: <u>Tasman's Lock Box</u> Date/Time: <u>JM 2/8/22 13:00</u>	Turn Around Time (Check) <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"/> Sample Integrity: Temperature Upon Receipt: <u>8.4</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by: <u>Tasman's Lock Box</u> Date/Time:	Received by: <u>[Signature]</u> Date/Time: <u>2822 1300</u>		
Relinquished by: Date/Time:	Received by: Date/Time:		

S₂

2202084

Sample Receipt Checklist

S2 Work Order#

Client: Noble/Tasman Client Project ID: Wells Ranch AA 21-04

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

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

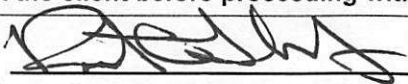
Temp (°C) 84

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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


Custodian Printed Name or Initials

2.8.22
Date/Time



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS01@2.5'
2202084-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFC0655	03/29/22	03/31/22	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	0.012	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		138 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %		50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFC0656	03/29/22	03/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: o-Terphenyl</i>		92.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS01@2.5'
2202084-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0625	03/28/22	03/30/22	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: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFD0003	04/01/22	04/03/22	EPA 6020B	

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

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS01@2.5'
2202084-01 (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	88.4	0.0561	mg/L dry	1	BFD0030	04/01/22	04/05/22	EPA 6020B	
Magnesium	23.2	0.0561	"	"	"	"	"	"	
Sodium	63.6	0.0561	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.56	0.00100	units	1	BFD0110	04/06/22	04/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BFC0749	03/31/22	04/01/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.34	0.0100	mmhos/cm	1	BFD0049	04/04/22	04/04/22	EPA 120.1	I-02

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

Date Sampled: **02/08/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.56		pH Units	1	BFD0050	04/04/22	04/04/22	EPA 9045D	I-02

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS02@2.5'
2202084-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFC0655	03/29/22	03/31/22	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	0.0044	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		147 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0656	03/29/22	03/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS02@2.5'
2202084-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0625	03/28/22	03/30/22	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: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		36.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		42.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFD0003	04/01/22	04/03/22	EPA 6020B	

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

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS02@2.5'
2202084-02 (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	86.1	0.0554	mg/L dry	1	BFD0030	04/01/22	04/05/22	EPA 6020B	
Magnesium	23.9	0.0554	"	"	"	"	"	"	
Sodium	66.7	0.0554	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.64	0.00100	units	1	BFD0110	04/06/22	04/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	BFC0749	03/31/22	04/01/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.36	0.0100	mmhos/cm	1	BFD0049	04/04/22	04/04/22	EPA 120.1	I-02

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

Date Sampled: **02/08/22 09:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFD0050	04/04/22	04/04/22	EPA 9045D	I-02

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS03@2.5'
2202084-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFC0655	03/29/22	03/31/22	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: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		140 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0656	03/29/22	03/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS03@2.5'
2202084-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0625	03/28/22	03/30/22	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: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		50.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFD0003	04/01/22	04/03/22	EPA 6020B	

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

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS03@2.5'
2202084-03 (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	84.0	0.0537	mg/L dry	1	BFD0030	04/01/22	04/05/22	EPA 6020B	
Magnesium	27.1	0.0537	"	"	"	"	"	"	
Sodium	24.4	0.0537	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.592	0.00100	units	1	BFD0110	04/06/22	04/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	BFC0749	03/31/22	04/01/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.16	0.0100	mmhos/cm	1	BFD0049	04/04/22	04/04/22	EPA 120.1	I-02

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

Date Sampled: **02/08/22 09:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFD0050	04/04/22	04/04/22	EPA 9045D	I-02

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS04@2.5'
2202084-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFC0655	03/29/22	03/31/22	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: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		142 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0656	03/29/22	03/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS04@2.5'
2202084-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0625	03/28/22	03/30/22	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: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		47.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		44.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFD0003	04/01/22	04/03/22	EPA 6020B	

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

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

SS04@2.5'
2202084-04 (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	88.8	0.0537	mg/L dry	1	BFD0030	04/01/22	04/05/22	EPA 6020B	
Magnesium	25.1	0.0537	"	"	"	"	"	"	
Sodium	35.3	0.0537	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.852	0.00100	units	1	BFD0110	04/06/22	04/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	BFC0749	03/31/22	04/01/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.14	0.0100	mmhos/cm	1	BFD0049	04/04/22	04/04/22	EPA 120.1	I-02

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

Date Sampled: **02/08/22 09:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFD0050	04/04/22	04/04/22	EPA 9045D	I-02

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS01@6'
2202084-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFB0085	02/09/22	02/10/22	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: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.5 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		106 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFB0087	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS01@6'
2202084-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0084	02/09/22	02/10/22	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: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		53.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.360	0.0100	mg/L	1	BFC0464	03/22/22	03/23/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS01@6'
2202084-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.88	0.227	mg/kg dry	1	BFC0687	04/01/22	04/06/22	EPA 6020B	
Barium	58.8	0.454	"	"	"	"	"	"	
Cadmium	ND	0.227	"	"	"	"	"	"	
Copper	5.83	0.454	"	"	"	"	"	"	
Lead	7.37	0.227	"	"	"	"	"	"	
Nickel	4.86	0.454	"	"	"	"	"	"	
Selenium	0.632	0.295	"	"	"	"	"	"	
Silver	0.0277	0.0227	"	"	"	"	"	"	
Zinc	22.4	0.454	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0126	04/06/22	04/06/22	EPA 7196A	I-02

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

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6.63	0.0567	mg/L dry	1	BFC0377	03/18/22	03/22/22	EPA 6020B	
Magnesium	2.46	0.0567	"	"	"	"	"	"	
Sodium	2.22	0.0567	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.187	0.00100	units	1	BFC0446	03/21/22	03/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS01@6'
2202084-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.2	%	1	BFB0083	02/09/22	02/09/22	Calculation
-----------------	-------------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.838	0.0100	mmhos/cm	1	BFC0401	03/18/22	03/18/22	EPA 120.1	

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

Date Sampled: **02/08/22 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BFC0400	03/18/22	03/18/22	EPA 9045D	

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FL01-A@4'
2202084-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFB0085	02/09/22	02/10/22	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.039	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.034	0.0050		"	"	"	"	"	"	
Naphthalene	0.0042	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		121 %		70-130		"	"	"	"	
Surrogate: Toluene-d8		116 %		70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		123 %		70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	100	50		mg/kg	1	BFB0087	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		88.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FL01-A@4'
2202084-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0084	02/09/22	02/10/22	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	0.00983	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0232	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.186	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.183	0.00500	"	"	"	"	"	"	

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		60.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0516	0.0100	mg/L	1	BFC0464	03/22/22	03/23/22	EPA 6020B	

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

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FL01-A@4'
2202084-06 (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	9.92	0.0553	mg/L dry	1	BFC0377	03/18/22	03/21/22	EPA 6020B	
Magnesium	2.42	0.0553	"	"	"	"	"	"	
Sodium	1.50	0.0553	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.111	0.00100	units	1	BFC0446	03/21/22	03/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.3		%	1	BFB0083	02/09/22	02/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.399	0.0100	mmhos/cm	1	BFC0401	03/18/22	03/18/22	EPA 120.1	

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

Date Sampled: **02/08/22 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BFC0400	03/18/22	03/18/22	EPA 9045D	

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS02@8'
2202084-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFB0085	02/09/22	02/10/22	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	0.016	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		117 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	200	50	mg/kg	1	BFB0087	02/09/22	02/10/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS02@8'
2202084-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFB0084	02/09/22	02/10/22	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	0.00938	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0171	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0819	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0326	0.00500	"	"	"	"	"	"	

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		51.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0912	0.0100	mg/L	1	BFC0464	03/22/22	03/23/22	EPA 6020B	

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

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

FS02@8'
2202084-07 (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	7.64	0.0556	mg/L dry	1	BFC0377	03/18/22	03/21/22	EPA 6020B	
Magnesium	1.80	0.0556	"	"	"	"	"	"	
Sodium	1.01	0.0556	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0854	0.00100	units	1	BFC0446	03/21/22	03/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BFB0083	02/09/22	02/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.713	0.0100	mmhos/cm	1	BFC0401	03/18/22	03/18/22	EPA 120.1	

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

Date Sampled: **02/08/22 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BFC0400	03/18/22	03/18/22	EPA 9045D	

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFB0085 - EPA 5030 Soil MS

Blank (BFB0085-BLK1)

Prepared & Analyzed: 02/09/22

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0423		"	0.0400		106	70-130			
<i>Surrogate: Toluene-d8</i>	0.0419		"	0.0400		105	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	70-130			

LCS (BFB0085-BS1)

Prepared & Analyzed: 02/09/22

Benzene	0.0725	0.0020	mg/kg	0.0750		96.7	70-130			
Toluene	0.0804	0.0050	"	0.0750		107	70-130			
Ethylbenzene	0.0774	0.0050	"	0.0750		103	70-130			
m,p-Xylene	0.160	0.010	"	0.150		106	70-130			
o-Xylene	0.0787	0.0050	"	0.0750		105	70-130			
1,2,4-Trimethylbenzene	0.0754	0.0050	"	0.0750		101	70-130			
1,3,5-Trimethylbenzene	0.0763	0.0050	"	0.0750		102	70-130			
Naphthalene	0.0859	0.0038	"	0.0750		115	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0430		"	0.0400		108	70-130			
<i>Surrogate: Toluene-d8</i>	0.0415		"	0.0400		104	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0404		"	0.0400		101	70-130			

Matrix Spike (BFB0085-MS1)

Source: 2202064-01

Prepared & Analyzed: 02/09/22

Benzene	0.0704	0.0020	mg/kg	0.0750	ND	93.9	70-130			
Toluene	0.0785	0.0050	"	0.0750	ND	105	70-130			
Ethylbenzene	0.0796	0.0050	"	0.0750	ND	106	70-130			
m,p-Xylene	0.163	0.010	"	0.150	ND	109	70-130			
o-Xylene	0.0780	0.0050	"	0.0750	ND	104	70-130			
1,2,4-Trimethylbenzene	0.0769	0.0050	"	0.0750	ND	103	70-130			
1,3,5-Trimethylbenzene	0.0782	0.0050	"	0.0750	ND	104	70-130			
Naphthalene	0.0935	0.0038	"	0.0750	ND	125	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0396		"	0.0400		99.1	70-130			
<i>Surrogate: Toluene-d8</i>	0.0404		"	0.0400		101	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		101	70-130			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFB0085 - EPA 5030 Soil MS

Matrix Spike Dup (BFB0085-MSD1)	Source: 2202064-01			Prepared & Analyzed: 02/09/22						
Benzene	0.0688	0.0020	mg/kg	0.0750	ND	91.8	70-130	2.33	30	
Toluene	0.0765	0.0050	"	0.0750	ND	102	70-130	2.63	30	
Ethylbenzene	0.0764	0.0050	"	0.0750	ND	102	70-130	4.04	30	
m,p-Xylene	0.157	0.010	"	0.150	ND	104	70-130	4.02	30	
o-Xylene	0.0758	0.0050	"	0.0750	ND	101	70-130	2.85	30	
1,2,4-Trimethylbenzene	0.0748	0.0050	"	0.0750	ND	99.8	70-130	2.73	30	
1,3,5-Trimethylbenzene	0.0753	0.0050	"	0.0750	ND	100	70-130	3.87	30	
Naphthalene	0.0935	0.0038	"	0.0750	ND	125	70-130	0.0321	30	
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	70-130			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	70-130			

Batch BFC0655 - EPA 5030 Soil MS

Blank (BFC0655-BLK1)	Prepared: 03/29/22 Analyzed: 03/31/22									
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	0.0586		"	0.0400		147	50-150			
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0439		"	0.0400		110	50-150			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0655 - EPA 5030 Soil MS

LCS (BFC0655-BS1)

Prepared: 03/29/22 Analyzed: 03/31/22

Benzene	0.0955	0.0020	mg/kg	0.100		95.5	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.0936	0.0050	"	0.100		93.6	70-130			
m,p-Xylene	0.192	0.010	"	0.200		95.9	70-130			
o-Xylene	0.0968	0.0050	"	0.100		96.8	70-130			
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100		104	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.122	0.0038	"	0.100		122	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0536		"	0.0400		134	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0445		"	0.0400		111	50-150			

Matrix Spike (BFC0655-MS1)

Source: 2202084-01

Prepared: 03/29/22 Analyzed: 03/31/22

Benzene	0.0977	0.0020	mg/kg	0.100	ND	97.7	70-130			
Toluene	0.106	0.0050	"	0.100	ND	106	70-130			
Ethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130			
m,p-Xylene	0.196	0.010	"	0.200	ND	98.2	70-130			
o-Xylene	0.0987	0.0050	"	0.100	ND	98.7	70-130			
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
Naphthalene	0.133	0.0038	"	0.100	0.0124	121	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0554		"	0.0400		139	50-150			
Surrogate: Toluene-d8	0.0418		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0452		"	0.0400		113	50-150			

Matrix Spike Dup (BFC0655-MSD1)

Source: 2202084-01

Prepared: 03/29/22 Analyzed: 03/31/22

Benzene	0.0965	0.0020	mg/kg	0.100	ND	96.5	70-130	1.27	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	3.81	30	
Ethylbenzene	0.0849	0.0050	"	0.100	ND	84.9	70-130	10.6	30	
m,p-Xylene	0.176	0.010	"	0.200	ND	88.0	70-130	10.9	30	
o-Xylene	0.0892	0.0050	"	0.100	ND	89.2	70-130	10.2	30	
1,2,4-Trimethylbenzene	0.0986	0.0050	"	0.100	ND	98.6	70-130	10.8	30	
1,3,5-Trimethylbenzene	0.0939	0.0050	"	0.100	ND	93.9	70-130	12.8	30	
Naphthalene	0.129	0.0038	"	0.100	0.0124	117	70-130	2.95	30	
Surrogate: 1,2-Dichloroethane-d4	0.0561		"	0.0400		140	50-150			
Surrogate: Toluene-d8	0.0422		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0473		"	0.0400		118	50-150			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04
Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFB0087 - EPA 3550A

Blank (BFB0087-BLK1)

Prepared: 02/09/22 Analyzed: 02/10/22

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

LCS (BFB0087-BS1)

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	480	50	mg/kg	500	95.9	70-130				
---------------	-----	----	-------	-----	------	--------	--	--	--	--

Matrix Spike (BFB0087-MS1)

Source: 2202064-01

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	459	50	mg/kg	500	32.5	85.2	70-130			
---------------	-----	----	-------	-----	------	------	--------	--	--	--

Matrix Spike Dup (BFB0087-MSD1)

Source: 2202064-01

Prepared: 02/09/22 Analyzed: 02/10/22

C10-C28 (DRO)	473	50	mg/kg	500	32.5	88.2	70-130	3.16	20	
---------------	-----	----	-------	-----	------	------	--------	------	----	--

Batch BFC0656 - EPA 3550A

Blank (BFC0656-BLK1)

Prepared & Analyzed: 03/29/22

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

LCS (BFC0656-BS1)

Prepared & Analyzed: 03/29/22

C10-C28 (DRO)	439	50	mg/kg	500	87.9	70-130				
---------------	-----	----	-------	-----	------	--------	--	--	--	--

Matrix Spike (BFC0656-MS1)

Source: 2202084-01

Prepared & Analyzed: 03/29/22

C10-C28 (DRO)	489	50	mg/kg	500	11.1	95.5	70-130			
---------------	-----	----	-------	-----	------	------	--------	--	--	--

Matrix Spike Dup (BFC0656-MSD1)

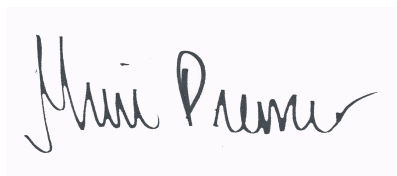
Source: 2202084-01

Prepared & Analyzed: 03/29/22

C10-C28 (DRO)	441	50	mg/kg	500	11.1	86.1	70-130	10.1	20	
---------------	-----	----	-------	-----	------	------	--------	------	----	--

Summit Scientific

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





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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFB0084 - EPA 5030 Soil MS

Blank (BFB0084-BLK1)

Prepared & Analyzed: 02/09/22

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0213</i>		"	<i>0.0333</i>		<i>63.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		"	<i>0.0333</i>		<i>63.4</i>	<i>40-150</i>			

LCS (BFB0084-BS1)

Prepared & Analyzed: 02/09/22

Acenaphthene	0.0176	0.00500	mg/kg	0.0333		52.9	31-137			
Anthracene	0.0188	0.00500	"	0.0333		56.4	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333		63.0	30-120			
Benzo (a) pyrene	0.0200	0.00500	"	0.0333		60.1	30-120			
Benzo (b) fluoranthene	0.0214	0.00500	"	0.0333		64.2	30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333		71.8	30-120			
Chrysene	0.0218	0.00500	"	0.0333		65.3	30-120			
Dibenz (a,h) anthracene	0.0237	0.00500	"	0.0333		71.1	30-120			
Fluoranthene	0.0198	0.00500	"	0.0333		59.5	30-120			
Fluorene	0.0187	0.00500	"	0.0333		56.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0289	0.00500	"	0.0333		86.7	30-120			
Pyrene	0.0234	0.00500	"	0.0333		70.3	35-142			
1-Methylnaphthalene	0.0135	0.00500	"	0.0333		40.4	35-142			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.6	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0186</i>		"	<i>0.0333</i>		<i>55.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0201</i>		"	<i>0.0333</i>		<i>60.2</i>	<i>40-150</i>			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFB0084 - EPA 5030 Soil MS

Matrix Spike (BFB0084-MS1)	Source: 2202064-01			Prepared & Analyzed: 02/09/22						
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.6	31-137			
Anthracene	0.0205	0.00500	"	0.0333	ND	61.4	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333	ND	63.1	30-120			
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	65.9	30-120			
Benzo (b) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120			
Benzo (k) fluoranthene	0.0239	0.00500	"	0.0333	ND	71.6	30-120			
Chrysene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	ND	62.7	30-120			
Fluoranthene	0.0205	0.00500	"	0.0333	ND	61.5	30-120			
Fluorene	0.0190	0.00500	"	0.0333	ND	57.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0258	0.00500	"	0.0333	ND	77.4	30-120			
Pyrene	0.0243	0.00500	"	0.0333	ND	72.8	35-142			
1-Methylnaphthalene	0.0171	0.00500	"	0.0333	ND	51.3	15-130			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.5	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0200</i>		<i>"</i>	<i>0.0333</i>		<i>60.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0212</i>		<i>"</i>	<i>0.0333</i>		<i>63.6</i>	<i>40-150</i>			

Matrix Spike Dup (BFB0084-MSD1)	Source: 2202064-01			Prepared & Analyzed: 02/09/22						
Acenaphthene	0.0193	0.00500	mg/kg	0.0333	ND	57.8	31-137	5.63	30	
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120	2.00	30	
Benzo (a) anthracene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	2.76	30	
Benzo (a) pyrene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	3.77	30	
Benzo (b) fluoranthene	0.0228	0.00500	"	0.0333	ND	68.4	30-120	4.36	30	
Benzo (k) fluoranthene	0.0238	0.00500	"	0.0333	ND	71.4	30-120	0.190	30	
Chrysene	0.0218	0.00500	"	0.0333	ND	65.4	30-120	0.607	30	
Dibenz (a,h) anthracene	0.0232	0.00500	"	0.0333	ND	69.7	30-120	10.6	30	
Fluoranthene	0.0203	0.00500	"	0.0333	ND	61.0	30-120	0.812	30	
Fluorene	0.0200	0.00500	"	0.0333	ND	60.1	30-120	5.32	30	
Indeno (1,2,3-cd) pyrene	0.0271	0.00500	"	0.0333	ND	81.2	30-120	4.87	30	
Pyrene	0.0243	0.00500	"	0.0333	ND	72.9	35-142	0.107	30	
1-Methylnaphthalene	0.0197	0.00500	"	0.0333	ND	59.0	15-130	13.9	50	
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	10.6	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0210</i>		<i>"</i>	<i>0.0333</i>		<i>63.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0217</i>		<i>"</i>	<i>0.0333</i>		<i>65.2</i>	<i>40-150</i>			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0625 - EPA 5030 Soil MS

Blank (BFC0625-BLK1)

Prepared: 03/28/22 Analyzed: 03/30/22

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0172</i>		"	<i>0.0333</i>		<i>51.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0174</i>		"	<i>0.0333</i>		<i>52.1</i>	<i>40-150</i>			

LCS (BFC0625-BS1)

Prepared: 03/28/22 Analyzed: 03/30/22

Acenaphthene	0.0201	0.00500	mg/kg	0.0333		60.2	31-137			
Anthracene	0.0262	0.00500	"	0.0333		78.7	30-120			
Benzo (a) anthracene	0.0232	0.00500	"	0.0333		69.5	30-120			
Benzo (a) pyrene	0.0251	0.00500	"	0.0333		75.4	30-120			
Benzo (b) fluoranthene	0.0253	0.00500	"	0.0333		75.8	30-120			
Benzo (k) fluoranthene	0.0146	0.00500	"	0.0333		43.8	30-120			
Chrysene	0.0254	0.00500	"	0.0333		76.2	30-120			
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333		57.4	30-120			
Fluoranthene	0.0267	0.00500	"	0.0333		80.1	30-120			
Fluorene	0.0230	0.00500	"	0.0333		68.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0243	0.00500	"	0.0333		72.9	30-120			
Pyrene	0.0266	0.00500	"	0.0333		79.8	35-142			
1-Methylnaphthalene	0.0237	0.00500	"	0.0333		71.0	35-142			
2-Methylnaphthalene	0.0248	0.00500	"	0.0333		74.4	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0258</i>		"	<i>0.0333</i>		<i>77.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0255</i>		"	<i>0.0333</i>		<i>76.6</i>	<i>40-150</i>			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0625 - EPA 5030 Soil MS

Matrix Spike (BFC0625-MS1)	Source: 2203427-01			Prepared: 03/28/22 Analyzed: 03/30/22						
Acenaphthene	0.0136	0.00500	mg/kg	0.0333	ND	40.7	31-137			
Anthracene	0.0205	0.00500	"	0.0333	ND	61.4	30-120			
Benzo (a) anthracene	0.0195	0.00500	"	0.0333	ND	58.6	30-120			
Benzo (a) pyrene	0.0209	0.00500	"	0.0333	ND	62.6	30-120			
Benzo (b) fluoranthene	0.0137	0.00500	"	0.0333	ND	41.0	30-120			
Benzo (k) fluoranthene	0.0191	0.00500	"	0.0333	ND	57.3	30-120			
Chrysene	0.0209	0.00500	"	0.0333	ND	62.7	30-120			
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120			
Fluoranthene	0.0220	0.00500	"	0.0333	ND	65.9	30-120			
Fluorene	0.0152	0.00500	"	0.0333	ND	45.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Pyrene	0.0213	0.00500	"	0.0333	ND	64.0	35-142			
1-Methylnaphthalene	0.0185	0.00500	"	0.0333	ND	55.4	15-130			
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.3	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0204</i>		<i>"</i>	<i>0.0333</i>		<i>61.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		<i>"</i>	<i>0.0333</i>		<i>63.3</i>	<i>40-150</i>			

Matrix Spike Dup (BFC0625-MSD1)	Source: 2203427-01			Prepared: 03/28/22 Analyzed: 03/30/22						
Acenaphthene	0.0151	0.00500	mg/kg	0.0333	ND	45.2	31-137	10.4	30	
Anthracene	0.0197	0.00500	"	0.0333	ND	59.2	30-120	3.63	30	
Benzo (a) anthracene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	1.24	30	
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.6	30-120	15.5	30	
Benzo (b) fluoranthene	0.0152	0.00500	"	0.0333	ND	45.5	30-120	10.5	30	
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	5.12	30	
Chrysene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	6.16	30	
Dibenz (a,h) anthracene	0.0186	0.00500	"	0.0333	ND	55.7	30-120	17.3	30	
Fluoranthene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	1.07	30	
Fluorene	0.0153	0.00500	"	0.0333	ND	46.0	30-120	1.03	30	
Indeno (1,2,3-cd) pyrene	0.0197	0.00500	"	0.0333	ND	59.0	30-120	6.33	30	
Pyrene	0.0222	0.00500	"	0.0333	ND	66.7	35-142	4.19	30	
1-Methylnaphthalene	0.0159	0.00500	"	0.0333	ND	47.7	15-130	15.0	50	
2-Methylnaphthalene	0.0340	0.00500	"	0.0333	ND	102	15-130	45.3	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0347</i>		<i>"</i>	<i>0.0333</i>		<i>104</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0356</i>		<i>"</i>	<i>0.0333</i>		<i>107</i>	<i>40-150</i>			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0464 - EPA 3050B

Blank (BFC0464-BLK1)

Prepared: 03/22/22 Analyzed: 03/23/22

Boron ND 0.0100 mg/L

LCS (BFC0464-BS1)

Prepared: 03/22/22 Analyzed: 03/23/22

Boron 4.76 0.0100 mg/L 5.00 95.2 80-120

Duplicate (BFC0464-DUP1)

Source: 2201356-01

Prepared: 03/22/22 Analyzed: 03/23/22

Boron 0.0934 0.0100 mg/L 0.0959 2.58 20

Matrix Spike (BFC0464-MS1)

Source: 2201356-01

Prepared: 03/22/22 Analyzed: 03/23/22

Boron 4.90 0.0100 mg/L 5.00 0.0959 96.2 75-125

Matrix Spike Dup (BFC0464-MSD1)

Source: 2201356-01

Prepared: 03/22/22 Analyzed: 03/23/22

Boron 4.85 0.0100 mg/L 5.00 0.0959 95.0 75-125 1.19 25

Batch BFD0003 - EPA 3050B

Blank (BFD0003-BLK1)

Prepared: 04/01/22 Analyzed: 04/03/22

Boron ND 0.0100 mg/L

LCS (BFD0003-BS1)

Prepared: 04/01/22 Analyzed: 04/03/22

Boron 4.74 0.0100 mg/L 5.00 94.9 80-120

Duplicate (BFD0003-DUP1)

Source: 2202084-01

Prepared: 04/01/22 Analyzed: 04/03/22

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BFD0003-MS1)

Source: 2202084-01

Prepared: 04/01/22 Analyzed: 04/03/22

Boron 4.85 0.0100 mg/L 5.00 ND 96.9 75-125

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BFD0003 - EPA 3050B

Matrix Spike Dup (BFD0003-MSD1)

Source: 2202084-01

Prepared: 04/01/22 Analyzed: 04/03/22

Boron	4.87	0.0100	mg/L	5.00	ND	97.4	75-125	0.559	25	
-------	------	--------	------	------	----	------	--------	-------	----	--

Summit Scientific



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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0687 - EPA 3050B

Blank (BFC0687-BLK1)

Prepared: 04/01/22 Analyzed: 04/05/22

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	"						
Selenium	ND	0.260	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						

LCS (BFC0687-BS1)

Prepared: 04/01/22 Analyzed: 04/05/22

Arsenic	38.8	0.200	mg/kg wet	40.0	97.1	80-120
Barium	37.5	0.400	"	40.0	93.8	80-120
Cadmium	1.91	0.200	"	2.00	95.5	80-120
Copper	36.1	0.400	"	40.0	90.3	80-120
Lead	18.5	0.200	"	20.0	92.6	80-120
Nickel	36.1	0.400	"	40.0	90.3	80-120
Selenium	3.70	0.260	"	4.00	92.5	80-120
Silver	1.84	0.0200	"	2.00	92.0	80-120
Zinc	40.4	0.400	"	40.0	101	80-120

Duplicate (BFC0687-DUP1)

Source: 2202213-05

Prepared: 04/01/22 Analyzed: 04/05/22

Arsenic	1.90	0.212	mg/kg dry	1.97	3.80	20
Barium	140	0.425	"	143	1.71	20
Cadmium	0.229	0.212	"	0.233	2.08	20
Copper	6.31	0.425	"	6.42	1.78	20
Lead	7.41	0.212	"	7.46	0.647	20
Nickel	6.09	0.425	"	6.19	1.64	20
Selenium	0.901	0.276	"	0.937	3.88	20
Silver	0.0399	0.0212	"	0.0411	2.94	20
Zinc	27.9	0.425	"	28.5	2.18	20

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0687 - EPA 3050B

Matrix Spike (BFC0687-MS1)	Source: 2202213-05			Prepared: 04/01/22 Analyzed: 04/05/22								
Arsenic	39.5	0.212	mg/kg dry	42.5	1.97	88.3	75-125					
Barium	178	0.425	"	42.5	143	83.6	75-125					
Cadmium	2.10	0.212	"	2.12	0.233	88.0	75-125					
Copper	40.2	0.425	"	42.5	6.42	79.6	75-125					
Lead	23.3	0.212	"	21.2	7.46	74.4	75-125					QM-05
Nickel	42.0	0.425	"	42.5	6.19	84.3	75-125					
Selenium	4.93	0.276	"	4.25	0.937	93.9	75-125					
Silver	1.76	0.0212	"	2.12	0.0411	80.7	75-125					
Zinc	68.4	0.425	"	42.5	28.5	93.9	75-125					

Matrix Spike Dup (BFC0687-MSD1)	Source: 2202213-05			Prepared: 04/01/22 Analyzed: 04/05/22								
Arsenic	41.4	0.212	mg/kg dry	42.5	1.97	92.9	75-125	4.86	25			
Barium	187	0.425	"	42.5	143	104	75-125	4.71	25			
Cadmium	2.19	0.212	"	2.12	0.233	91.9	75-125	3.85	25			
Copper	42.3	0.425	"	42.5	6.42	84.5	75-125	5.06	25			
Lead	24.3	0.212	"	21.2	7.46	79.3	75-125	4.31	25			
Nickel	44.5	0.425	"	42.5	6.19	90.1	75-125	5.65	25			
Selenium	4.30	0.276	"	4.25	0.937	79.1	75-125	13.6	25			
Silver	1.83	0.0212	"	2.12	0.0411	84.4	75-125	4.31	25			
Zinc	72.0	0.425	"	42.5	28.5	102	75-125	5.03	25			

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFD0126 - 3060A Mod

Blank (BFD0126-BLK1)

Prepared & Analyzed: 04/06/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFD0126-BS1)

Prepared & Analyzed: 04/06/22

Chromium, Hexavalent 26.1 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BFD0126-DUP1)

Source: 2202084-05

Prepared & Analyzed: 04/06/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFD0126-MS1)

Source: 2202084-05

Prepared & Analyzed: 04/06/22

Chromium, Hexavalent 30.4 0.30 mg/kg dry 28.4 ND 107 75-125

Matrix Spike Dup (BFD0126-MSD1)

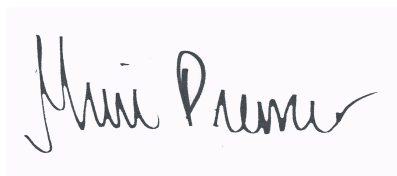
Source: 2202084-05

Prepared & Analyzed: 04/06/22

Chromium, Hexavalent 32.6 0.30 mg/kg dry 28.4 ND 115 75-125 6.85 20

Summit Scientific

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





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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0377 - General Preparation

Blank (BFC0377-BLK1)

Prepared: 03/18/22 Analyzed: 03/21/22

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

LCS (BFC0377-BS1)

Prepared: 03/18/22 Analyzed: 03/21/22

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.14	0.0500	"	5.00	103	70-130
Sodium	4.85	0.0500	"	5.00	97.0	70-130

Batch BFD0030 - General Preparation

Blank (BFD0030-BLK1)

Prepared: 04/01/22 Analyzed: 04/05/22

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

LCS (BFD0030-BS1)

Prepared: 04/01/22 Analyzed: 04/05/22

Calcium	5.47	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.30	0.0500	"	5.00	106	70-130
Sodium	5.21	0.0500	"	5.00	104	70-130

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch BFB0083 - General Preparation

Duplicate (BFB0083-DUP1)		Source: 2202064-01			Prepared & Analyzed: 02/09/22			
% Solids	93.6		%		93.9		0.344	20

Batch BFC0749 - General Preparation

Duplicate (BFC0749-DUP1)		Source: 2201334-10			Prepared: 03/31/22 Analyzed: 04/01/22			
% Solids	78.8		%		79.4		0.862	20

Summit Scientific



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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0401 - General Preparation

Blank (BFC0401-BLK1)

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFC0401-BS1)

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.8 95-105

Duplicate (BFC0401-DUP1)

Source: 2202066-02

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) 2.74 0.0100 mmhos/cm 2.74 0.219 20

Batch BFD0049 - General Preparation

Blank (BFD0049-BLK1)

Prepared & Analyzed: 04/04/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFD0049-BS1)

Prepared & Analyzed: 04/04/22

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BFD0049-DUP1)

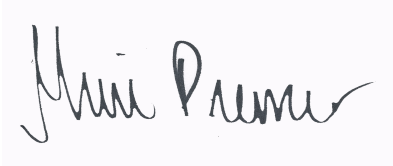
Source: 2202084-01

Prepared & Analyzed: 04/04/22

Specific Conductance (EC) 1.35 0.0100 mmhos/cm 1.34 0.890 20

Summit Scientific

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





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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

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 BFC0400 - General Preparation

LCS (BFC0400-BS1)		Prepared & Analyzed: 03/18/22								
pH	9.15		pH Units	9.18		99.7	95-105			
Duplicate (BFC0400-DUP1)		Source: 2202066-02		Prepared & Analyzed: 03/18/22						
pH	12.0		pH Units		12.0			0.0836	20	

Batch BFD0050 - General Preparation

LCS (BFD0050-BS1)		Prepared & Analyzed: 04/04/22								
pH	9.08		pH Units	9.18		98.9	95-105			
Duplicate (BFD0050-DUP1)		Source: 2202084-01		Prepared & Analyzed: 04/04/22						
pH	7.79		pH Units		7.56			3.00	20	

Summit Scientific

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



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

Project: Noble - Wells Ranch AA21-04

Project Number: UWRWE-A1733-ABN
Project Manager: Jacob Whritenour

Reported:
04/07/22 14:04

Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- I-02 This sample was analyzed outside of the recommended holding time.
- 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