

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 10, 2021

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

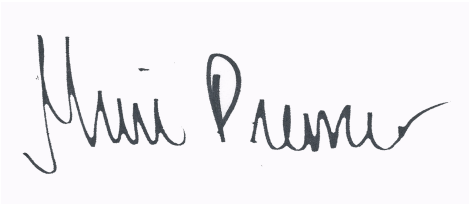
Broomfield, CO 80020

RE: Noble - Kastner 41-03

Work Order # 2104476

Enclosed are the results of analyses for samples received by Summit Scientific on 04/29/21 16:00. 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 - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/10/21 12:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-B@4'	2104476-01	Soil	04/28/21 09:35	04/29/21 16:00

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.

2104476

Summit Scientific

S₂

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

Client: Noble / Tasman Geosciences Project Manager: Brandon Bruns, Invoice: Wade Firmin
Address: 6855 W. 119th Ave. E-Mail: Bbruns@tasman-geo.com
City/State/Zip: Broomfield / CO/ 80020
Phone: 303-487-1228 Project Name: Kastner 41-03
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	SAR, EC, pH	Boron - HWS		HOLD	
1	F101-B @ 4'	4/28/21	0935	2			X			X				X	X	X	X	X			pH, EC, SAR by saturated Paste
2	B601 @ 4'	4/28/21	0940	1			X			X								X			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>Hunter Merlo</i> Date/Time: 4/28/21 1645	Received by: Tasman's Lock Box Date/Time: 4/29/21 1600	Turn Around Time (Check) ___ Same Day ___ 72 hours ___ 24 hours <input checked="" type="checkbox"/> Standard ___ 48 hours ___ Sample Integrity: Temperature Upon Receipt: <u>3</u> Samples Intact: <input checked="" type="radio"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box Date/Time: 4/29/21 1600	Received by: <i>Josh Brun</i> Date/Time: 4/29/21 1600		
Relinquished by:	Received by:		

Sample Receipt Checklist

S2 Work Order 2104476
 Client: Noble / Tasman Client Project ID Kastner 41-03

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

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

Temp (°C)	<u>3</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	✓			<u>On ice.</u>
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

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

JB
 Custodian Printed Name or Initials

[Signature]
 Signature of Custodian

4/29/21 1600
 Date/Time



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

Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brun

Reported:
05/10/21 12:50

FL01-B@4'
2104476-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BEE0065	05/05/21	05/06/21	EPA 8260B	
Toluene	0.0063	0.0050		"	"	"	"	"	"	
Ethylbenzene	0.0085	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.15	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.013	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.26	0.0050		"	"	"	"	"	"	
Naphthalene	0.0049	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	21	0.50		"	"	"	"	"	"	

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		80.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		190 %		21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	96	50		mg/kg	1	BEE0047	05/04/21	05/05/21	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		110 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brun

Reported:
05/10/21 12:50

FL01-B@4'
2104476-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEE0078	05/05/21	05/07/21	EPA 8270D SIM	
Anthracene	0.0273	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	0.00559	0.00500	"	"	"	"	"	"	
Fluorene	0.0112	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00506	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0286	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0600	0.00500	"	"	"	"	"	"	

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		99.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0683	0.0100	mg/L	1	BEE0042	05/04/21	05/04/21	EPA 6020B	

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

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/10/21 12:50

FL01-B@4'
2104476-01 (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	55.0	0.0601	mg/L dry	1	BEE0044	05/04/21	05/06/21	EPA 6020B	
Magnesium	11.3	0.0601	"	"	"	"	"	"	
Sodium	9.25	0.0601	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.297	0.00100	units	1	BEE0101	05/06/21	05/06/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.2		%	1	BEE0040	05/04/21	05/04/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.576	0.0100	mmhos/cm	1	BEE0079	05/05/21	05/05/21	EPA 120.1	

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

Date Sampled: **04/28/21 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BEE0080	05/05/21	05/05/21	EPA 9045D	

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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
05/10/21 12:50

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 BEE0065 - EPA 5030 Soil MS

Blank (BEE0065-BLK1)

Prepared & Analyzed: 05/05/21

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>	0.0319		"	0.0400		79.7	23-173			
<i>Surrogate: Toluene-d8</i>	0.0400		"	0.0400		100	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0459		"	0.0400		115	21-167			

LCS (BEE0065-BS1)

Prepared: 05/05/21 Analyzed: 05/06/21

Benzene	0.0826	0.0020	mg/kg	0.100		82.6	70-130			
Toluene	0.107	0.0050	"	0.100		107	70-130			
Ethylbenzene	0.0930	0.0050	"	0.100		93.0	70-130			
m,p-Xylene	0.189	0.010	"	0.200		94.5	70-130			
o-Xylene	0.0964	0.0050	"	0.100		96.4	70-130			
1,2,4-Trimethylbenzene	0.0974	0.0050	"	0.100		97.4	70-130			
1,3,5-Trimethylbenzene	0.0952	0.0050	"	0.100		95.2	70-130			
Naphthalene	0.0972	0.0038	"	0.100		97.2	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0316		"	0.0400		79.1	23-173			
<i>Surrogate: Toluene-d8</i>	0.0480		"	0.0400		120	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0482		"	0.0400		121	21-167			

Matrix Spike (BEE0065-MS1)

Source: 2104473-02

Prepared: 05/05/21 Analyzed: 05/06/21

Benzene	0.0844	0.0020	mg/kg	0.100	ND	84.4	70-130			
Toluene	0.0931	0.0050	"	0.100	ND	93.1	70-130			
Ethylbenzene	0.0946	0.0050	"	0.100	ND	94.6	70-130			
m,p-Xylene	0.194	0.010	"	0.200	ND	96.9	70-130			
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130			
1,2,4-Trimethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
Naphthalene	0.0825	0.0038	"	0.100	ND	82.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0357		"	0.0400		89.3	23-173			
<i>Surrogate: Toluene-d8</i>	0.0436		"	0.0400		109	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0513		"	0.0400		128	21-167			

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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
05/10/21 12:50

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 BEE0065 - EPA 5030 Soil MS

Matrix Spike Dup (BEE0065-MSD1)	Source: 2104473-02			Prepared: 05/05/21 Analyzed: 05/06/21						
Benzene	0.0853	0.0020	mg/kg	0.100	ND	85.3	70-130	1.02	30	
Toluene	0.124	0.0050	"	0.100	ND	124	70-130	28.4	30	
Ethylbenzene	0.0950	0.0050	"	0.100	ND	95.0	70-130	0.411	30	
m,p-Xylene	0.190	0.010	"	0.200	ND	94.8	70-130	2.22	30	
o-Xylene	0.0986	0.0050	"	0.100	ND	98.6	70-130	1.42	30	
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	1.26	30	
1,3,5-Trimethylbenzene	0.0993	0.0050	"	0.100	ND	99.3	70-130	1.77	30	
Naphthalene	0.0739	0.0038	"	0.100	ND	73.9	70-130	11.1	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0351</i>		<i>"</i>	<i>0.0400</i>		<i>87.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0434</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0482</i>		<i>"</i>	<i>0.0400</i>		<i>120</i>	<i>21-167</i>			

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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brun

Reported:
05/10/21 12:50

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 BEE0047 - EPA 3550A

Blank (BEE0047-BLK1)

Prepared & Analyzed: 05/04/21

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

LCS (BEE0047-BS1)

Prepared & Analyzed: 05/04/21

C10-C28 (DRO)	510	50	mg/kg	500	102	70-130				
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Matrix Spike (BEE0047-MS1)

Source: 2104443-04

Prepared & Analyzed: 05/04/21

C10-C28 (DRO)	553	50	mg/kg	500	27.1	105	70-130			
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Matrix Spike Dup (BEE0047-MSD1)

Source: 2104443-04

Prepared & Analyzed: 05/04/21

C10-C28 (DRO)	577	50	mg/kg	500	27.1	110	70-130	4.24	20	
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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brun

Reported:
05/10/21 12:50

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 BEE0078 - EPA 5030 Soil MS

Blank (BEE0078-BLK1)

Prepared & Analyzed: 05/05/21

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>0.0264</i>		"	<i>0.0333</i>		<i>79.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0323</i>		"	<i>0.0333</i>		<i>97.0</i>	<i>40-150</i>			

LCS (BEE0078-BS1)

Prepared & Analyzed: 05/05/21

Acenaphthene	0.0279	0.00500	mg/kg	0.0333		83.7	31-137			
Anthracene	0.0281	0.00500	"	0.0333		84.4	30-120			
Benzo (a) anthracene	0.0287	0.00500	"	0.0333		86.1	30-120			
Benzo (a) pyrene	0.0284	0.00500	"	0.0333		85.3	30-120			
Benzo (b) fluoranthene	0.0284	0.00500	"	0.0333		85.3	30-120			
Benzo (k) fluoranthene	0.0265	0.00500	"	0.0333		79.4	30-120			
Chrysene	0.0276	0.00500	"	0.0333		82.7	30-120			
Dibenz (a,h) anthracene	0.0344	0.00500	"	0.0333		103	30-120			
Fluoranthene	0.0220	0.00500	"	0.0333		66.1	30-120			
Fluorene	0.0302	0.00500	"	0.0333		90.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0330	0.00500	"	0.0333		99.0	30-120			
Pyrene	0.0245	0.00500	"	0.0333		73.5	35-142			
1-Methylnaphthalene	0.0322	0.00500	"	0.0333		96.7	35-142			
2-Methylnaphthalene	0.0308	0.00500	"	0.0333		92.4	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0290</i>		"	<i>0.0333</i>		<i>86.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0351</i>		"	<i>0.0333</i>		<i>105</i>	<i>40-150</i>			

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Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Brunns

Reported:
05/10/21 12:50

PAH by EPA Method 8270D SIM - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BEE0078 - EPA 5030 Soil MS

Matrix Spike (BEE0078-MS1)	Source: 2104375-01			Prepared & Analyzed: 05/05/21							
Acenaphthene	0.0280	0.00500	mg/kg	0.0333	ND	84.0	31-137				
Anthracene	0.0272	0.00500	"	0.0333	ND	81.7	30-120				
Benzo (a) anthracene	0.0291	0.00500	"	0.0333	ND	87.4	30-120				
Benzo (a) pyrene	0.0283	0.00500	"	0.0333	ND	85.0	30-120				
Benzo (b) fluoranthene	0.0288	0.00500	"	0.0333	ND	86.3	30-120				
Benzo (k) fluoranthene	0.0265	0.00500	"	0.0333	ND	79.6	30-120				
Chrysene	0.0276	0.00500	"	0.0333	ND	82.9	30-120				
Dibenz (a,h) anthracene	0.0339	0.00500	"	0.0333	ND	102	30-120				
Fluoranthene	0.0221	0.00500	"	0.0333	ND	66.2	30-120				
Fluorene	0.0305	0.00500	"	0.0333	ND	91.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0323	0.00500	"	0.0333	ND	97.0	30-120				
Pyrene	0.0253	0.00500	"	0.0333	ND	75.8	35-142				
1-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.5	15-130				
2-Methylnaphthalene	0.0309	0.00500	"	0.0333	ND	92.7	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0267</i>		<i>"</i>	<i>0.0333</i>		<i>80.0</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0324</i>		<i>"</i>	<i>0.0333</i>		<i>97.1</i>	<i>40-150</i>				

Matrix Spike Dup (BEE0078-MSD1)	Source: 2104375-01			Prepared & Analyzed: 05/05/21							
Acenaphthene	0.0281	0.00500	mg/kg	0.0333	ND	84.3	31-137	0.374	30		
Anthracene	0.0292	0.00500	"	0.0333	ND	87.5	30-120	6.95	30		
Benzo (a) anthracene	0.0299	0.00500	"	0.0333	ND	89.6	30-120	2.50	30		
Benzo (a) pyrene	0.0288	0.00500	"	0.0333	ND	86.5	30-120	1.75	30		
Benzo (b) fluoranthene	0.0287	0.00500	"	0.0333	ND	86.2	30-120	0.196	30		
Benzo (k) fluoranthene	0.0265	0.00500	"	0.0333	ND	79.4	30-120	0.210	30		
Chrysene	0.0281	0.00500	"	0.0333	ND	84.2	30-120	1.55	30		
Dibenz (a,h) anthracene	0.0345	0.00500	"	0.0333	ND	103	30-120	1.56	30		
Fluoranthene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	4.66	30		
Fluorene	0.0288	0.00500	"	0.0333	ND	86.3	30-120	5.99	30		
Indeno (1,2,3-cd) pyrene	0.0333	0.00500	"	0.0333	ND	99.8	30-120	2.85	30		
Pyrene	0.0250	0.00500	"	0.0333	ND	75.1	35-142	0.883	30		
1-Methylnaphthalene	0.0341	0.00500	"	0.0333	ND	102	15-130	6.81	50		
2-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.3	15-130	2.75	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0286</i>		<i>"</i>	<i>0.0333</i>		<i>85.9</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0368</i>		<i>"</i>	<i>0.0333</i>		<i>110</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 - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/10/21 12:50

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 BEE0042 - EPA 3050B

Blank (BEE0042-BLK1)

Prepared & Analyzed: 05/04/21

Boron ND 0.0100 mg/L

LCS (BEE0042-BS1)

Prepared & Analyzed: 05/04/21

Boron 5.23 0.0100 mg/L 5.00 105 80-120

Duplicate (BEE0042-DUP1)

Source: 2104471-01

Prepared & Analyzed: 05/04/21

Boron 0.186 0.0100 mg/L 0.219 16.8 20

Matrix Spike (BEE0042-MS1)

Source: 2104471-01

Prepared & Analyzed: 05/04/21

Boron 5.64 0.0100 mg/L 5.00 0.219 108 75-125

Matrix Spike Dup (BEE0042-MSD1)

Source: 2104471-01

Prepared & Analyzed: 05/04/21

Boron 5.31 0.0100 mg/L 5.00 0.219 102 75-125 6.04 25

Summit Scientific

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

Project: Noble - Kastner 41-03

Project Number: [none]
 Project Manager: Brandon Bruns

Reported:
 05/10/21 12:50

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 BEE0044 - General Preparation

Blank (BEE0044-BLK1)

Prepared: 05/04/21 Analyzed: 05/06/21

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

LCS (BEE0044-BS1)

Prepared: 05/04/21 Analyzed: 05/06/21

Calcium	5.69	0.0500	mg/L wet	5.00	114	70-130
Magnesium	5.28	0.0500	"	5.00	106	70-130
Sodium	5.49	0.0500	"	5.00	110	70-130

Summit Scientific

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

Project: Noble - Kastner 41-03

Project Number: [none]
 Project Manager: Brandon Bruns

Reported:
 05/10/21 12:50

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 BEE0040 - General Preparation

Duplicate (BEE0040-DUP1)	Source: 2104323-03			Prepared & Analyzed: 05/04/21							
% Solids	95.2		%		95.3				0.104	20	

Summit Scientific

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

Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/10/21 12:50

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

Summit Scientific

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

Batch BEE0079 - General Preparation

Blank (BEE0079-BLK1)

Prepared & Analyzed: 05/05/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEE0079-BS1)

Prepared & Analyzed: 05/05/21

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 90-110

Duplicate (BEE0079-DUP1)

Source: 2104473-02

Prepared & Analyzed: 05/05/21

Specific Conductance (EC) 0.970 0.0100 mmhos/cm 0.961 0.860 20

Summit Scientific

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

Project: Noble - Kastner 41-03

Project Number: [none]
 Project Manager: Brandon Bruns

Reported:
 05/10/21 12:50

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 BEE0080 - General Preparation

LCS (BEE0080-BS1)

Prepared & Analyzed: 05/05/21

pH	9.25	pH Units	9.21	100	95-105
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Duplicate (BEE0080-DUP1)

Source: 2104473-02

Prepared & Analyzed: 05/05/21

pH	9.96	pH Units	9.96	0.00	20
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Summit Scientific

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

Project: Noble - Kastner 41-03

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
05/10/21 12:50

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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