

# Wellhead Closure Checklist

## COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):	Pit Closure	Tank Battery Closure	Flowline Closure	Partially Buried Vault Closure
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Site Name & COGCC Facility Number: <b>Dale, Ivan 2</b>	Date: <b>6/10/21</b>	Remediation Project #: <b>-</b>
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Associated Wells: <b>-</b>	Age of Site: <b>-</b>	Number of Photos Attached: <b>7</b>
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Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) <b>40.1346591, -104.5233682</b>	Estimated Facility Size (acres): <b>-</b>
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General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  
**Generally good Condition**

USCS Soil Type: <b>SM - silty Sand</b>	Estimated Depth to Groundwater: <b>&gt;6'</b>
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**none observed**

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**none observed**

Wellhead(s)					
Well API	05-123-10404				
Age	-				
Condition of surface around wellhead	Good				
PID Readings	N/A				
Condition of subsurface (staining present)	no odor no staining				
PID Readings	0.0-0.7				
Sample taken? Location/Sample ID#	see below				
Photo Number(s)					

Other observations regarding wellheads: **samples taken on all 4 sidewalls, base of excavation, under flowline, and 2 background samples (SS01 @ 2.5', SS04 @ 2.5', FS01 @ 6', F101 @ 4', BG01 @ 4'; 6')**

### Summary

Was impacted soil identified?		
<input checked="" type="radio"/> No	Yes - less than 10 cubic yards	Yes - more than 10 cubic yards
Total number of samples field screened:	<b>6</b>	Total number of samples collected:
		<b>8</b>
Highest PID Reading:	<b>0.7</b>	Total number of samples submitted to lab for analysis:
		<b>2</b>
If more than 10 cubic yards of impacted soil were observed:		
Vertical extent:	Estimated spill volume:	
Lateral extent:	Volume of soil removed:	
Is additional investigation required?		
Was groundwater encountered during the investigation?		
<input type="radio"/> No	Yes - not impacted or in contact with impacted soils	Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater:	Was remedial groundwater removal conducted?    Yes    No	
Date Groundwater was encountered:	Commencement date of removal:	
Sheen on groundwater?    Yes    No	Volume of groundwater removed prior to sampling:	
Free product observed?    Yes    No	Volume of groundwater removed post sampling:	
Total number of samples collected:	Total Volume of groundwater removed:	
Total number of samples submitted to lab for analysis:		

**Photographic Log**



**Equipment ID:**SS01      **Equipment Type:** Wellhead

**Material:** Steel      **Volume:**NA      **Contents:** Oil/Gas/Water

**Notes/Conditions:** Photo of SS01 @2.5', Dale, Ivan 2

**Equipment ID:**SS02      **Equipment Type:** Wellhead

**Material:** Steel      **Volume:**NA      **Contents:** Oil/Gas/Water

**Notes/Conditions:** Photo of SS02 @2.5', Dale, Ivan 2

**Photographic Log**



<b>Equipment ID:</b> SS03		<b>Equipment Type:</b> Wellhead			<b>Equipment ID:</b> SS04		<b>Equipment Type:</b> Wellhead		
<b>Material:</b> Steel		<b>Volume:</b> NA	<b>Contents:</b> Oil/Gas/Water		<b>Material:</b> Steel		<b>Volume:</b> NA	<b>Contents:</b> Oil/Gas/Water	
<b>Notes/Conditions:</b> Photo of SS03@2.5', Dale, Ivan 2					<b>Notes/Conditions:</b> Photo of SS04@2.5', Dale, Ivan 2				

**Photographic Log**



<b>Equipment ID:</b> FS01		<b>Equipment Type:</b> Wellhead	
<b>Material:</b> Steel	<b>Volume:</b> NA	<b>Contents:</b> Oil/Gas/Water	
<b>Notes/Conditions:</b> Photo of FS01 @4', Dale, Ivan 2			

<b>Equipment ID:</b> FL01		<b>Equipment Type:</b> Flowline	
<b>Material:</b> Steel	<b>Volume:</b> NA	<b>Contents:</b> Oil/Gas/Water	
<b>Notes/Conditions:</b> Photo of FL01 @6', Dale, Ivan 2			

**Photographic Log**



<b>Equipment ID:</b> BG01		<b>Equipment Type:</b> NA		<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b> NA		<b>Volume:</b> NA		<b>Material:</b>		<b>Volume:</b>	
<b>Contents:</b> NA				<b>Contents:</b>			
<b>Notes/Conditions:</b> Photo of BG01 @ 4&6', Dale, Ivan 2				<b>Notes/Conditions:</b>			

**TABLE 1**  
**SOIL SAMPLE LOCATIONS**  
**NOBLE ENERGY, INC. - DALE, IVAN 2**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude <sup>1</sup>	Longitude	PDOP
SS01@2.5'	06/10/21	0.0	No Staining	No Odor	Lab	40.13477437	-104.5234353	1.2
SS02@2.5'	06/10/21	0.0	No Staining	No Odor	Grab	40.13477080	-104.5233929	1.1
SS03@2.5'	06/10/21	0.0	No Staining	No Odor	Grab	40.13475072	-104.5233971	1.1
SS04@2.5'	06/10/21	0.0	No Staining	No Odor	Grab	40.13474820	-104.5234365	1.1
FS01@6'	06/10/21	0.0	No Staining	No Odor	Lab	40.13475989	-104.5234011	1.1
FL01@4'	06/10/21	0.7	No Staining	No Odor	Lab	40.13475151	-104.5234222	1.3
BG01@4'	06/10/21	NM	No Staining	No Odor	Lab	40.13465038	-104.5234200	1.0
BG01@6'	06/10/21	NM	No Staining	No Odor	Lab	40.13465038	-104.5234200	1.0

Notes:

PID = Photo-ionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

NM = Not Measured

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum ("NAD") of 1983

TABLE 2  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. - DALE, IVAN 2

Soil Sample ID	Date	<sup>1</sup> Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL <sup>2</sup>		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL <sup>2,3</sup>		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FS01@6'	06/10/21	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01@4'	06/10/21	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL <sup>2</sup>		6 - 8.3	<6	<4mmhos/cm	2
FS01@6'	06/10/21	8.33	0.836	0.181	0.0971
FL01@4'	06/10/21	8.11	0.826	0.183	0.104
BG01@6'	06/10/21	8.59	NA	NA	NA

Notes:

1. Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.

Definitions:

COGCC = Colorado Oil and Gas Conservation Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

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

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

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

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

Benz(a) = Benzantracene

Benzo(b) = Benzo(a)fluoranthene

Benzo(k) = Benzo(a)fluoranthene

Benzo(a) = Benzopyrene

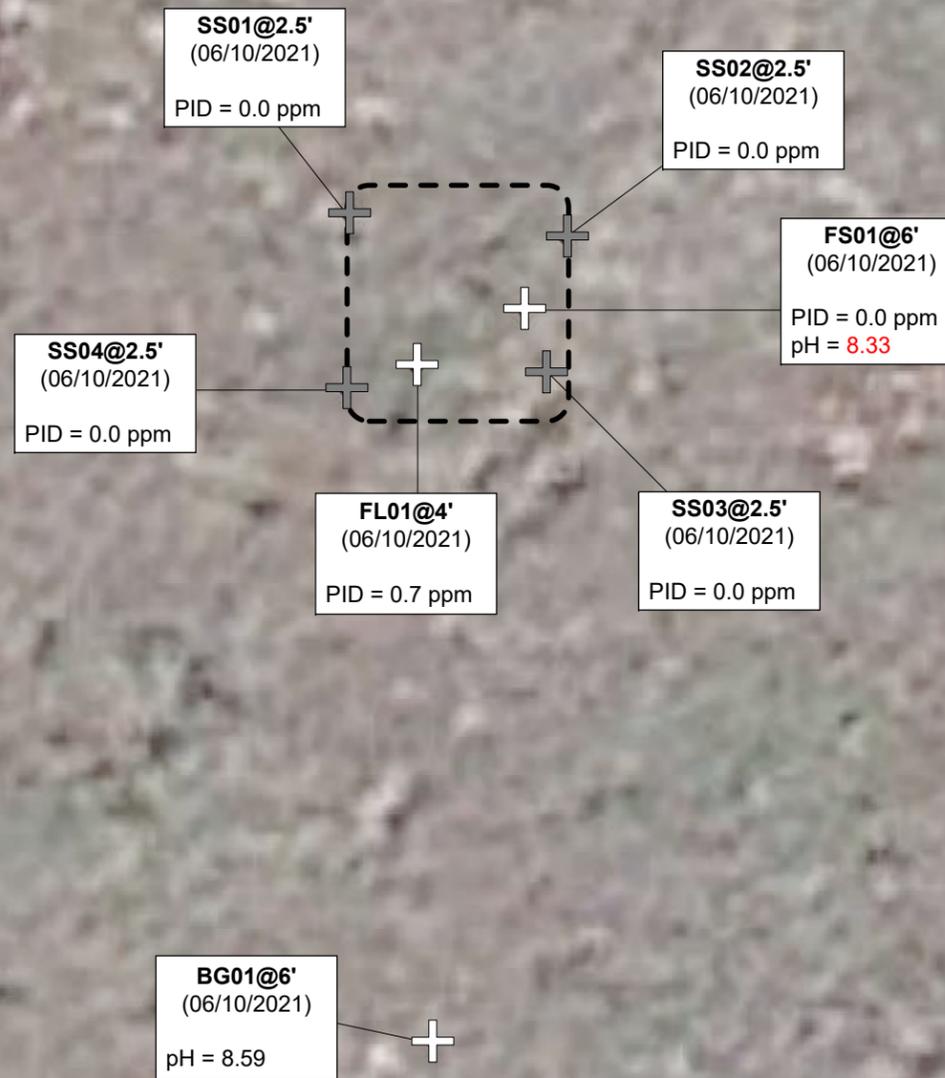
A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene

NA = Not Analyzed



**Legend**

- Excavation Extent
- + Soil Sample Location – Field Screen (Collected via Trimble GPS)
- + Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

**Notes**

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.
- 3) Analytical results below laboratory detection limits or within compliance of COGCC Table 915-1 not shown.
- 4) Concentration in exceedance of COGCC table 915-1 soil standards indicated in **RED**.

GPS – Global Positioning System  
mg/kg – Milligrams per kilogram

0 ft. 10 ft. 20 ft.

Image Source: Google Earth; Google 2020

DATE:	6/11/2021
DESIGNED BY:	JW
DRAWN BY:	AD

**TASMAN**  
GEOSCIENCES

Tasman Geosciences, Inc.  
6855 W 119<sup>th</sup> Avenue  
Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**Dale, Ivan 2**  
SWSW, Section 14, Township 2 North, Range 64 West  
Weld County, Colorado

Wellhead Closure & Soil  
Analytical Results Map  
(06/10/2021)

FIGURE  
1

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 28, 2021

Brandon Bruns

Tasman Geosciences

6855 W. 119th Ave.

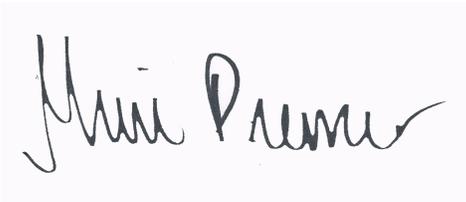
Broomfield, CO 80020

RE: Noble - Dale, Ivan 2

Work Order #2106228

Enclosed are the results of analyses for samples received by Summit Scientific on 06/10/21 18:00. 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 - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS01@6'	2106228-02	Soil	06/10/21 15:10	06/10/21 18:00
FL01@4'	2106228-03	Soil	06/10/21 15:15	06/10/21 18:00
BG01@6'	2106228-05	Soil	06/10/21 15:45	06/10/21 18:00

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.*



2106228

Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: Noble / Tasman Client Project ID: Dale, Iran 2

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>10</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 <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>On ice.</u>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>JB</u>
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) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):				
<sup>(1)</sup> 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

6/10/21  
Date/Time



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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**FS01@6'**  
**2106228-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BEF0309	06/14/21	06/16/21	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %		21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BEF0308	06/14/21	06/24/21	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		105 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
07/28/21 10:31

**FS01@6'**  
**2106228-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0077	07/06/21	07/08/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		43.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		46.3 %	40-150		"	"	"	"	

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0971</b>	0.0100	mg/L	1	BEF0328	06/15/21	06/17/21	EPA 6020B	

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**FS01@6'**  
**2106228-02 (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	17.9	0.0557	mg/L dry	1	BEF0351	06/16/21	06/17/21	EPA 6020B	
Magnesium	6.43	0.0557	"	"	"	"	"	"	
Sodium	16.2	0.0557	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.836	0.00100	units	1	BEF0409	06/18/21	06/18/21	Calculation	

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	BEF0273	06/11/21	06/14/21	Calculation	

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.181	0.0100	mmhos/cm	1	BEF0379	06/17/21	06/17/21	EPA 120.1	

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

Date Sampled: **06/10/21 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BEF0378	06/17/21	06/17/21	EPA 9045D	

Summit Scientific

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**FL01@4'**  
**2106228-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEF0309	06/14/21	06/16/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEF0308	06/14/21	06/24/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
07/28/21 10:31

**FL01@4'**  
**2106228-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEG0077	07/06/21	07/08/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		48.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		49.8 %	40-150		"	"	"	"	

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.104</b>	0.0100	mg/L	1	BEF0328	06/15/21	06/17/21	EPA 6020B	

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**FL01@4'**  
**2106228-03 (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	16.1	0.0511	mg/L dry	1	BEF0351	06/16/21	06/17/21	EPA 6020B	
Magnesium	5.80	0.0511	"	"	"	"	"	"	
Sodium	15.2	0.0511	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.826	0.00100	units	1	BEF0409	06/18/21	06/18/21	Calculation	

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.8		%	1	BEF0273	06/11/21	06/14/21	Calculation	

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.183	0.0100	mmhos/cm	1	BEF0379	06/17/21	06/17/21	EPA 120.1	

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

Date Sampled: **06/10/21 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BEF0378	06/17/21	06/17/21	EPA 9045D	

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 Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
 Project Manager: Brandon Bruns

**Reported:**  
 07/28/21 10:31

**BG01@6'**  
**2106228-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/10/21 15:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.59</b>		pH Units	1	BEG0369	07/21/21	07/22/21	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
07/28/21 10:31

### 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 BEF0309 - EPA 5030 Soil MS

##### Blank (BEF0309-BLK1)

Prepared: 06/14/21 Analyzed: 06/16/21

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0620		"	0.0400		155	23-173			
Surrogate: Toluene-d8	0.0450		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

##### LCS (BEF0309-BS1)

Prepared: 06/14/21 Analyzed: 06/16/21

Benzene	0.116	0.0020	mg/kg	0.150		77.1	70-130			
Toluene	0.164	0.0050	"	0.150		109	70-130			
Ethylbenzene	0.169	0.0050	"	0.150		113	70-130			
m,p-Xylene	0.335	0.010	"	0.300		112	70-130			
o-Xylene	0.168	0.0050	"	0.150		112	70-130			
1,2,4-Trimethylbenzene	0.176	0.0050	"	0.150		117	70-130			
1,3,5-Trimethylbenzene	0.173	0.0050	"	0.150		115	70-130			
Naphthalene	0.160	0.0038	"	0.150		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0537		"	0.0400		134	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	21-167			

##### Matrix Spike (BEF0309-MS1)

Source: 2106226-01

Prepared: 06/14/21 Analyzed: 06/16/21

Benzene	0.116	0.0020	mg/kg	0.150	ND	77.4	70-130			
Toluene	0.163	0.0050	"	0.150	ND	109	70-130			
Ethylbenzene	0.173	0.0050	"	0.150	ND	115	70-130			
m,p-Xylene	0.340	0.010	"	0.300	0.00339	112	70-130			
o-Xylene	0.169	0.0050	"	0.150	ND	113	70-130			
1,2,4-Trimethylbenzene	0.168	0.0050	"	0.150	ND	112	70-130			
1,3,5-Trimethylbenzene	0.163	0.0050	"	0.150	ND	109	70-130			
Naphthalene	0.163	0.0038	"	0.150	ND	108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0545		"	0.0400		136	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

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Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brun

**Reported:**  
07/28/21 10:31

**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 BEF0309 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BEF0309-MSD1)</b>	<b>Source: 2106226-01</b>			<b>Prepared: 06/14/21 Analyzed: 06/16/21</b>						
Benzene	0.116	0.0020	mg/kg	0.150	ND	77.3	70-130	0.0517	30	
Toluene	0.162	0.0050	"	0.150	ND	108	70-130	0.702	30	
Ethylbenzene	0.165	0.0050	"	0.150	ND	110	70-130	4.26	30	
m,p-Xylene	0.328	0.010	"	0.300	0.00339	108	70-130	3.68	30	
o-Xylene	0.162	0.0050	"	0.150	ND	108	70-130	4.53	30	
1,2,4-Trimethylbenzene	0.166	0.0050	"	0.150	ND	111	70-130	1.02	30	
1,3,5-Trimethylbenzene	0.163	0.0050	"	0.150	ND	108	70-130	0.368	30	
Naphthalene	0.182	0.0038	"	0.150	ND	121	70-130	11.0	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0550</i>		<i>"</i>	<i>0.0400</i>		<i>137</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0425</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0385</i>		<i>"</i>	<i>0.0400</i>		<i>96.3</i>	<i>21-167</i>			

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Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
07/28/21 10:31

**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 BEF0308 - EPA 3550A**

**Blank (BEF0308-BLK1)**

Prepared: 06/14/21 Analyzed: 06/23/21

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

**LCS (BEF0308-BS1)**

Prepared: 06/14/21 Analyzed: 06/24/21

C10-C28 (DRO)	512	50	mg/kg	500	102	70-130				
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**Matrix Spike (BEF0308-MS1)**

Source: 2106212-01

Prepared: 06/14/21 Analyzed: 06/24/21

C10-C28 (DRO)	518	50	mg/kg	500	23.9	98.8	70-130			
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**Matrix Spike Dup (BEF0308-MSD1)**

Source: 2106212-01

Prepared: 06/14/21 Analyzed: 06/24/21

C10-C28 (DRO)	451	50	mg/kg	500	23.9	85.4	70-130	13.9	20	
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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Brunns

**Reported:**  
07/28/21 10:31

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BEG0077 - EPA 5030 Soil MS**

**Blank (BEG0077-BLK1)**

Prepared: 07/06/21 Analyzed: 07/07/21

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>0.0154</i>		"	<i>0.0333</i>		<i>46.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0177</i>		"	<i>0.0333</i>		<i>53.2</i>	<i>40-150</i>			

**LCS (BEG0077-BS1)**

Prepared: 07/06/21 Analyzed: 07/07/21

Acenaphthene	0.0300	0.00500	mg/kg	0.0333		89.9	31-137			
Anthracene	0.0294	0.00500	"	0.0333		88.2	30-120			
Benzo (a) anthracene	0.0283	0.00500	"	0.0333		85.0	30-120			
Benzo (a) pyrene	0.0292	0.00500	"	0.0333		87.6	30-120			
Benzo (b) fluoranthene	0.0241	0.00500	"	0.0333		72.2	30-120			
Benzo (k) fluoranthene	0.0279	0.00500	"	0.0333		83.6	30-120			
Chrysene	0.0290	0.00500	"	0.0333		86.9	30-120			
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333		52.7	30-120			
Fluoranthene	0.0315	0.00500	"	0.0333		94.5	30-120			
Fluorene	0.0310	0.00500	"	0.0333		93.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333		46.6	30-120			
Pyrene	0.0317	0.00500	"	0.0333		95.2	35-142			
1-Methylnaphthalene	0.0308	0.00500	"	0.0333		92.3	35-142			
2-Methylnaphthalene	0.0312	0.00500	"	0.0333		93.5	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0308</i>		"	<i>0.0333</i>		<i>92.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0309</i>		"	<i>0.0333</i>		<i>92.8</i>	<i>40-150</i>			

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**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 BEG0077 - EPA 5030 Soil MS**

<b>Matrix Spike (BEG0077-MS1)</b>	<b>Source: 2106087-01</b>			Prepared: 07/06/21 Analyzed: 07/07/21					
Acenaphthene	0.0224	0.00500	mg/kg	0.0333	ND	67.2	31-137		
Anthracene	0.0230	0.00500	"	0.0333	ND	69.1	30-120		
Benzo (a) anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120		
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	66.0	30-120		
Benzo (b) fluoranthene	0.0274	0.00500	"	0.0333	ND	82.3	30-120		
Benzo (k) fluoranthene	0.0299	0.00500	"	0.0333	ND	89.8	30-120		
Chrysene	0.0248	0.00500	"	0.0333	ND	74.3	30-120		
Dibenz (a,h) anthracene	0.0133	0.00500	"	0.0333	ND	40.0	30-120		
Fluoranthene	0.0223	0.00500	"	0.0333	ND	66.8	30-120		
Fluorene	0.0232	0.00500	"	0.0333	ND	69.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0124	0.00500	"	0.0333	ND	37.1	30-120		
Pyrene	0.0280	0.00500	"	0.0333	ND	84.1	35-142		
1-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.7	15-130		
2-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.6	15-130		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0443</i>		"	<i>0.0333</i>		<i>133</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0392</i>		"	<i>0.0333</i>		<i>117</i>	<i>40-150</i>		

<b>Matrix Spike Dup (BEG0077-MSD1)</b>	<b>Source: 2106087-01</b>			Prepared: 07/06/21 Analyzed: 07/07/21					
Acenaphthene	0.0252	0.00500	mg/kg	0.0333	ND	75.7	31-137	11.9	30
Anthracene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	18.7	30
Benzo (a) anthracene	0.0273	0.00500	"	0.0333	ND	81.8	30-120	18.7	30
Benzo (a) pyrene	0.0253	0.00500	"	0.0333	ND	75.9	30-120	14.1	30
Benzo (b) fluoranthene	0.0323	0.00500	"	0.0333	ND	96.9	30-120	16.4	30
Benzo (k) fluoranthene	0.0344	0.00500	"	0.0333	ND	103	30-120	14.0	30
Chrysene	0.0297	0.00500	"	0.0333	ND	89.0	30-120	17.9	30
Dibenz (a,h) anthracene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	14.4	30
Fluoranthene	0.0236	0.00500	"	0.0333	ND	70.9	30-120	5.93	30
Fluorene	0.0264	0.00500	"	0.0333	ND	79.2	30-120	13.1	30
Indeno (1,2,3-cd) pyrene	0.0136	0.00500	"	0.0333	ND	40.7	30-120	9.40	30
Pyrene	0.0340	0.00500	"	0.0333	ND	102	35-142	19.2	30
1-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.6	15-130	12.2	50
2-Methylnaphthalene	0.0268	0.00500	"	0.0333	ND	80.5	15-130	13.1	50
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0475</i>		"	<i>0.0333</i>		<i>143</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0410</i>		"	<i>0.0333</i>		<i>123</i>	<i>40-150</i>		

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

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

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

**Batch BEF0328 - EPA 3050B**

**Blank (BEF0328-BLK1)**

Prepared: 06/15/21 Analyzed: 06/17/21

Boron ND 0.0100 mg/L

**LCS (BEF0328-BS1)**

Prepared: 06/15/21 Analyzed: 06/17/21

Boron 5.21 0.0100 mg/L 5.00 104 80-120

**Duplicate (BEF0328-DUP1)**

**Source: 2106201-01**

Prepared: 06/15/21 Analyzed: 06/17/21

Boron 0.189 0.0100 mg/L 0.213 12.3 20

**Matrix Spike (BEF0328-MS1)**

**Source: 2106201-01**

Prepared: 06/15/21 Analyzed: 06/17/21

Boron 5.42 0.0100 mg/L 5.00 0.213 104 75-125

**Matrix Spike Dup (BEF0328-MSD1)**

**Source: 2106201-01**

Prepared: 06/15/21 Analyzed: 06/17/21

Boron 5.34 0.0100 mg/L 5.00 0.213 103 75-125 1.56 25

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

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

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

**Summit Scientific**

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

**Batch BEF0351 - General Preparation**

**Blank (BEF0351-BLK1)**

Prepared: 06/16/21 Analyzed: 06/17/21

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

**LCS (BEF0351-BS1)**

Prepared: 06/16/21 Analyzed: 06/17/21

Calcium	5.48	0.0500	mg/L wet	5.00		110	70-130			
Magnesium	5.85	0.0500	"	5.00		117	70-130			
Sodium	5.28	0.0500	"	5.00		106	70-130			

Summit Scientific

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**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 BEF0273 - General Preparation**

**Duplicate (BEF0273-DUP1)**

**Source: 2105335-09**

Prepared: 06/11/21 Analyzed: 06/14/21

% Solids	87.0		%		84.9			2.38		20	
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Summit Scientific

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Tasman Geosciences  
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Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**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 BEF0379 - General Preparation**

**Blank (BEF0379-BLK1)**

Prepared & Analyzed: 06/17/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BEF0379-BS1)**

Prepared & Analyzed: 06/17/21

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.5 90-110

**Duplicate (BEF0379-DUP1)**

Source: 2106228-02

Prepared & Analyzed: 06/17/21

Specific Conductance (EC) 0.181 0.0100 mmhos/cm 0.181 0.0552 20

Summit Scientific

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Tasman Geosciences  
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Broomfield CO, 80020

Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

**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 BEF0378 - General Preparation**

<b>LCS (BEF0378-BS1)</b>		Prepared & Analyzed: 06/17/21								
pH	9.24		pH Units	9.21		100		95-105		
<b>Duplicate (BEF0378-DUP1)</b>		<b>Source: 2106099-04</b>		Prepared & Analyzed: 06/17/21						
pH	7.86		pH Units			7.86			0.00	20

**Batch BEG0369 - General Preparation**

<b>LCS (BEG0369-BS1)</b>		Prepared: 07/21/21 Analyzed: 07/22/21								
pH	9.31		pH Units	9.21		101		95-105		
<b>Duplicate (BEG0369-DUP1)</b>		<b>Source: 2106228-05</b>		Prepared: 07/21/21 Analyzed: 07/22/21						
pH	8.60		pH Units			8.59			0.116	20

Summit Scientific

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Project: Noble - Dale, Ivan 2

Project Number: [none]  
Project Manager: Brandon Bruns

**Reported:**  
07/28/21 10:31

### Notes and Definitions

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