

USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ ODLE-65N63W 19NESW
 NESW Sec. 19, T5N, R63W, 6th PM
 Weld County, Colorado
 40.384849°, -104.488323°

Project # C022-103	API #	Facility # 328087
Date 7/18/23	Remediation # 23224	Filename 22103T3



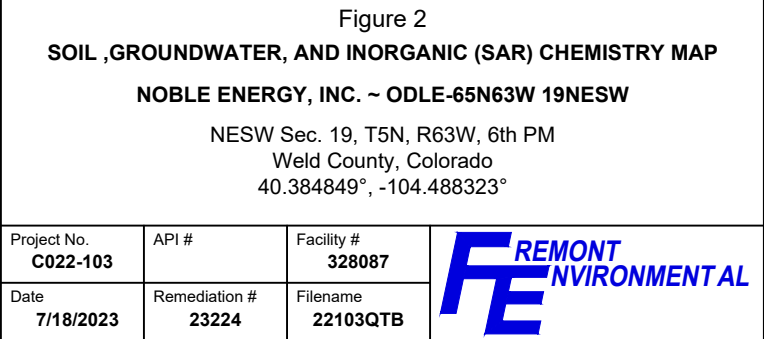
TABLE 1
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST Load Out-Surface	08/16/2022	0	7.44	0.249	0.163	0.102
PWV - E Wall 2ft	08/16/2022	2	7.79	0.661	2.57	0.248
PWV - Floor 3ft	08/16/2022	3	7.85	1.29	9.34	0.58
Sep - E Wall 2ft	08/16/2022	2	7.36	0.832	1.79	0.275
PWV FLOOR 3ft (2)	07/18/2023	3	NA	NA	0.841	NA
PWV FLOOR 4ft	07/18/2023	4	NA	NA	0.695	NA
SS-E 3ft	07/18/2023	3	NA	NA	1.24	NA
SS-N 3ft	07/18/2023	3	NA	NA	0.795	NA
SS-S 3ft	07/18/2023	3	NA	NA	3.29	NA
SS-W 3ft	07/18/2023	3	NA	NA	0.399	NA

Bold faced values exceed the ECMC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

NA - Not analyzed



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 25, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

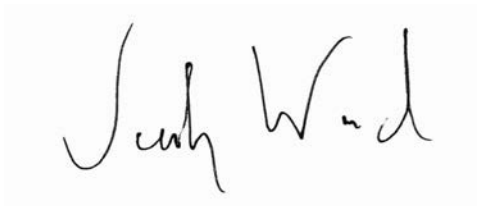
Wellington, CO 80549

RE: Noble - Odle Tank Battery

Work Order #2307332

Enclosed are the results of analyses for samples received by Summit Scientific on 07/18/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV FLOOR 3ft (2)	2307332-01	Soil	07/18/23 00:00	07/18/23 16:30
PWV FLOOR 4ft	2307332-02	Soil	07/18/23 00:00	07/18/23 16:30
SS-N 3ft	2307332-03	Soil	07/18/23 00:00	07/18/23 16:30
SS-S 3ft	2307332-04	Soil	07/18/23 00:00	07/18/23 16:30
SS-E 3ft	2307332-05	Soil	07/18/23 00:00	07/18/23 16:30
SS-W 3ft	2307332-06	Soil	07/18/23 00:00	07/18/23 16:30

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

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

Lab ID	Page 1 of 1
2307332	

Client: Fremont Environmental, Inc.				Send Data To:				Send Invoice To:										
Address: 8305 6th St.,				Project Manager:				Company: Chevron										
City/State/Zip: Wellington, CO, 80549				E-Mail: Fremont Distribution List				Project Name/Location:										
Phone: 603-477-6907				Project Name: Noble - Odle Tank Battery				AFE#:										
Sampler Name: Ethan Black				Project Number:				PO/Billing Codes: UWRWE-A2567-ABN										
Contact: Dan Peterson																		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative	Matrix	Analysis Requested	Special Instructions										
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, Naphthalene, TMBs	TPH (C6-C36)	PAH	SAR, EC, pH, Boron	TDS, Chloride, Sulfate	Metals (915-1)
1	PWV FLOOR 3FT (2)	7/18/23		2			X			X						X		
2	PWV FLOOR 4FT																	
3	SS-N 3FT																	
4	SS-S 3FT																	
5	SS-E 3FT																	
6	SS-W 3FT																	
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: Ethan Black	Date/Time: 7/18/23 1440	Received by: S2	Date/Time: 7/18/23 1440	TAT Business Days	Field DO	Notes:
Relinquished by: S2	Date/Time: 7/18/23 1630	Received by: [Signature]	Date/Time: 7/18/23 1630	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 12.3	Corrected Temperature: [Signature]	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2307332Client: FremontClient Project ID: Noble-Ode Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

12.3

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<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"/>	all OK
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
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"/>	
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.
AS
Custodian Printed Name

7/18/23
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

PWV FLOOR 3ft (2)
2307332-01 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	60.9	0.0534	mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	8.08	0.0534	"	"	"	"	"	"	
Sodium	26.3	0.0534	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.841	0.00100	units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.7		%	1	BGG0596	07/19/23	07/19/23	Calculation	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

PWV FLOOR 4ft
2307332-02 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	51.7	0.0634		mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	14.7	0.0634		"	"	"	"	"	"	
Sodium	22.0	0.0634		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.695	0.00100		units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	78.9			%	1	BGG0596	07/19/23	07/19/23	Calculation	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

SS-N 3ft
2307332-03 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	79.3	0.0591	mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	16.1	0.0591	"	"	"	"	"	"	
Sodium	29.7	0.0591	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.795	0.00100	units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.6		%	1	BGG0596	07/19/23	07/19/23	Calculation	

Summit Scientific

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Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

SS-S 3ft
2307332-04 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	56.6	0.0554		mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	14.3	0.0554		"	"	"	"	"	"	
Sodium	107	0.0554		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	3.29	0.00100		units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	90.3			%	1	BGG0596	07/19/23	07/19/23	Calculation	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

SS-E 3ft
2307332-05 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	64.3	0.0551	mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	13.2	0.0551	"	"	"	"	"	"	
Sodium	41.8	0.0551	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.24	0.00100	units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.7		%	1	BGG0596	07/19/23	07/19/23	Calculation	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

SS-W 3ft
2307332-06 (Soil)

Summit Scientific

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

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	69.6	0.0622		mg/L dry	1	BGG0586	07/19/23	07/24/23	EPA 6020B	
Magnesium	13.7	0.0622		"	"	"	"	"	"	
Sodium	13.9	0.0622		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.399	0.00100		units	1	BGG0794	07/25/23	07/25/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.4			%	1	BGG0596	07/19/23	07/19/23	Calculation	

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Odle Tank Battery

Project Number: UWRWE-A2567-ABN

Project Manager: Paul Henchan

Reported:
07/25/23 16:13

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

Summit Scientific

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

Batch BGG0586 - General Preparation

Blank (BGG0586-BLK1)

Prepared: 07/19/23 Analyzed: 07/24/23

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

LCS (BGG0586-BS1)

Prepared: 07/19/23 Analyzed: 07/25/23

Calcium	5.63	0.0500	mg/L wet	5.00	113	70-130
Magnesium	4.86	0.0500	"	5.00	97.2	70-130
Sodium	5.04	0.0500	"	5.00	101	70-130

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Wellington CO, 80549

Project: Noble - Odle Tank Battery

Project Number: UWRWE-A2567-ABN

Project Manager: Paul Henchan

Reported:
07/25/23 16:13

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

Summit Scientific

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

Batch BGG0596 - General Preparation

Duplicate (BGG0596-DUP1)

Source: 2307331-07

Prepared & Analyzed: 07/19/23

% Solids	88.7	%		89.8		1.28	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle Tank Battery
Project Number: UWRWE-A2567-ABN
Project Manager: Paul Henchan

Reported:
07/25/23 16:13

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