



LEGEND

-  SOIL SAMPLE LOCATION
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  FENCE LINE
-  CONTAINMENT BERM
-  CONTAINMENT WALL

9/26/18		DATE SAMPLED
Floor@7'		LOCATION and DEPTH (ft)
B	<0.002	BENZENE (mg/kg)
T	<0.005	TOLUENE (mg/kg)
E	<0.005	ETHYLBENZENE (mg/kg)
X	<0.005	TOTAL XYLENES (mg/kg)
N	<0.010	NAPHTHALENE (mg/kg)
G	<0.50	TPH-GRO (mg/kg)
D	<50	TPH-DRO (mg/kg)
EC	NA	EC mmhos/cm
pH	NA	pH Units
SAR	NA	SAR Units

NA NOT ANALYZED

**Figure 1
SITE PLAN**

Noble Eaton Cattle 19-21
 Facility ID - 331202
 NENW Sec 19, T4N, R66W - 40.30397°N -104.82154°W
 Weld County, Colorado

API No. 05-123-20305	Prepared by PH	Drawn by TDA
Date 10/24/18	Reviewed by PH	Filename V302A



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 08, 2018

Paul Henehan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Eaton Cattle 19-21

Enclosed are the results of analyses for samples received by Summit Scientific on 10/01/18 16:02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/08/18 15:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. WALL 3FT	1810017-01	Soil	09/26/18 00:00	10/01/18 16:02
FLOOR 7FT	1810017-02	Soil	09/26/18 00:00	10/01/18 16:02

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.

1810017

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Client: Fremont Environmental	Project Manager: Paul Henehan
Address: P.O Box 1289	E-Mail: paulh@fremontenv.com, kenr@fremontenv.com
City/State/Zip: Wellington, CO 80549	Bill to: <u>HOWARD</u>
Phone: 303-956-8714	Project Name: <u>NORSE-EATON CATTLE 19-21</u>
Sampler Name: <u>HENEHAN</u>	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	GNBTEX	DRO	pH, EC	SAR		
1	N. Wall 3 FT	9/26/18		1			✓			✓				✓	✓	✓	✓	
2	FLOOR 7 FT			1			✓			✓				✓	✓			
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<u>PHILIPPE</u>	<u>10/1/18 16:20</u>		<u>10.1.18 16:20</u>	Same Day _____ 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours _____	Sample Integrity:
				Temperature Upon Receipt: <u>18.5</u>	
				Samples Intact: Yes No	

Sample Receipt Checklist

S2 Work Order: 1810017

Client: Fremont Client Project ID: Noble Eaton Cattle 19-21

Shipped Via: Hand Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Temp (°C)	<u>18.9</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⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 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 ⁽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⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
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.

UP
 Custodian Printed Name or Initials

[Signature]
 Signature or Initials of Custodian

10.1.18 1815
 Date/Time



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

N. WALL 3FT
1810017-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1810031	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1810032	10/02/18	10/03/18	EPA 8015M	

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.5 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	822	10.3	mg/kg dry	1	1810094	10/05/18	10/05/18	EPA 6020B	

Summit Scientific

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Fremont Environmental
 PO Box 1289
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Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

N. WALL 3FT
1810017-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	220	5.14	mg/kg dry	1	1810094	10/05/18	10/05/18	EPA 6020B	
Sodium	28.4	5.14	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.227	0.100	units	1	1810107	10/08/18	10/08/18	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.3		%	1	1810076	10/04/18	10/04/18	Calculation	
pH	7.41		pH Units	"	1810044	10/03/18	10/04/18	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.246	0.0100	mmhos/cm	1	1810097	10/05/18	10/05/18	EPA 120.1	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

FLOOR 7FT
1810017-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1810031	10/02/18	10/04/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1810032	10/02/18	10/03/18	EPA 8015M	

Date Sampled: **09/26/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.6 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/08/18 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1810031 - EPA 5030 Soil MS

Blank (1810031-BLK1)

Prepared: 10/02/18 Analyzed: 10/03/18

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.3	21-167			

LCS (1810031-BS1)

Prepared: 10/02/18 Analyzed: 10/03/18

Benzene	0.0866	0.0020	mg/kg	0.100		86.6	70-130			
Toluene	0.0994	0.0050	"	0.100		99.4	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.215	0.010	"	0.200		107	70-130			
o-Xylene	0.107	0.0050	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0396		101	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	21-167			

Matrix Spike (1810031-MS1)

Source: 1809389-01

Prepared: 10/02/18 Analyzed: 10/03/18

Benzene	0.0915	0.0020	mg/kg	0.100	ND	91.5	70-130			
Toluene	0.104	0.0050	"	0.100	ND	104	70-130			
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130			
m,p-Xylene	0.228	0.010	"	0.200	ND	114	70-130			
o-Xylene	0.113	0.0050	"	0.100	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0396		105	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.4	21-167			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1810031 - EPA 5030 Soil MS

Matrix Spike Dup (1810031-MSD1)

Source: 1809389-01

Prepared: 10/02/18 Analyzed: 10/03/18

Benzene	0.0889	0.0020	mg/kg	0.100	ND	88.9	70-130	2.93	30
Toluene	0.101	0.0050	"	0.100	ND	101	70-130	3.33	30
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	4.62	30
m,p-Xylene	0.218	0.010	"	0.200	ND	109	70-130	4.57	30
o-Xylene	0.109	0.0050	"	0.100	ND	109	70-130	4.25	30
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0396		104	23-173		
Surrogate: Toluene-d8	0.0394		"	0.0400		98.5	20-170		
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.2	21-167		

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Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

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 1810032 - EPA 3550A

Blank (1810032-BLK1)

Prepared: 10/02/18 Analyzed: 10/03/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1810032-BS1)

Prepared: 10/02/18 Analyzed: 10/03/18

C10-C28 (DRO) 479 50 mg/kg 500 95.8 70-130

Matrix Spike (1810032-MS1)

Source: 1810010-01

Prepared: 10/02/18 Analyzed: 10/03/18

C10-C28 (DRO) 500 50 mg/kg 500 103 79.3 70-130

Matrix Spike Dup (1810032-MSD1)

Source: 1810010-01

Prepared: 10/02/18 Analyzed: 10/03/18

C10-C28 (DRO) 503 50 mg/kg 500 103 80.1 70-130 0.745 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

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

Batch 1810094 - General Preparation

Blank (1810094-BLK1)

Prepared & Analyzed: 10/05/18

Calcium	ND	10.0	mg/kg wet						
Magnesium	ND	5.00	"						
Sodium	ND	5.00	"						

LCS (1810094-BS1)

Prepared & Analyzed: 10/05/18

Calcium	491	10.0	mg/kg wet	500	93.0	98.3	70-130		
Magnesium	471	5.00	"	500	94.2	94.2	70-130		
Sodium	456	5.00	"	500	91.2	91.2	70-130		

Duplicate (1810094-DUP1)

Source: 1809438-04

Prepared & Analyzed: 10/05/18

Calcium	10000	12.9	mg/kg dry	9390	93.9	6.63	20		
Magnesium	774	6.43	"	850	93.7	9.37	20		
Sodium	93.9	6.43	"	98.9	98.9	5.16	20		

Matrix Spike (1810094-MS1)

Source: 1809438-04

Prepared & Analyzed: 10/05/18

Calcium	10000	12.9	mg/kg dry	643	9390	93.8	70-130		
Magnesium	1360	6.43	"	643	850	80.1	70-130		
Sodium	735	6.43	"	643	98.9	99.0	70-130		

Matrix Spike Dup (1810094-MSD1)

Source: 1809438-04

Prepared & Analyzed: 10/05/18

Calcium	10000	12.9	mg/kg dry	643	9390	96.6	70-130	0.179	25
Magnesium	1450	6.43	"	643	850	93.7	70-130	6.17	25
Sodium	905	6.43	"	643	98.9	125	70-130	20.7	25

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

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

Summit Scientific

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

Batch 1810044 - General Preparation

LCS (1810044-BS1)

Prepared: 10/03/18 Analyzed: 10/04/18

pH	9.2		pH Units	9.18		99.7	95-105		
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Duplicate (1810044-DUP1)

Source: 1809379-03

Prepared: 10/03/18 Analyzed: 10/04/18

pH	8.7		pH Units		8.6			0.578	20
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Batch 1810076 - General Preparation

Duplicate (1810076-DUP1)

Source: 1809408-02

Prepared & Analyzed: 10/04/18

% Solids	96.2		%		96.4			0.208	20
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Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/08/18 15:07

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1810097 - General Preparation

Blank (1810097-BLK1)

Prepared & Analyzed: 10/05/18

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1810097-BS1)

Prepared & Analyzed: 10/05/18

Specific Conductance (EC) 0.792 0.0100 mmhos/cm 0.750 106 90-110

Duplicate (1810097-DUP1)

Source: 1809438-04

Prepared & Analyzed: 10/05/18

Specific Conductance (EC) 0.778 0.0100 mmhos/cm 0.811 4.03 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Eaton Cattle 19-21

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/08/18 15:07

Notes and Definitions

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