



Beebe Draw 3-15 Location

©2010 Google™

Imagery Date: Oct 7, 2014

lat 40.231200° lon -104.658300° elev 4816 ft

Eye alt 6266 ft

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 17, 2015

Paul Henehan
Fremont Environmental
1630 South College Avenue
Ft. Collins, CO 80525
RE: Noble - Beebe Draw 3-15

Enclosed are the results of analyses for samples received by Summit Scientific on 07/16/15 18:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury
President



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

**South Wall FT
1507172-01 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1507192	07/16/15	07/17/15	8015M	

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1507191	07/16/15	07/16/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	21-167		"	"	"	"	

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

Date Sampled: 07/16/15 00:00

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

Summit Scientific

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



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

South Wall FT
1507172-01 (Soil)

Summit Scientific

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

Calcium	768	10.5 mg/kg dry	1	1507183	07/16/15	07/16/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	262	5.27	"	"	"	"	"
Sodium	113	5.27	"	"	"	"	"

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.900		units	"	1507195	07/17/15	07/17/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.31	0.0100	mmhos/cm	1	1507194	07/16/15	07/16/15	SM 2510B	

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08	0.100	pH Units	"	1507193	07/16/15	07/16/15	EPA 9045	

Date Sampled: 07/16/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.6		%	"	1507184	07/16/15	07/17/15	% calculation	

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.



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1507192 - EPA 3550A

Blank (1507192-BLK1)

Prepared & Analyzed: 07/16/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.6		"	12.2		104	30-150			

LCS (1507192-BS1)

Prepared & Analyzed: 07/16/15

C10-C28 (DRO)	483	50	mg/kg	501		96.4	73-134			
Surrogate: o-Terphenyl	12.9		"	12.2		105	30-150			

Matrix Spike (1507192-MS1)

Source: 1507169-02

Prepared & Analyzed: 07/16/15

C10-C28 (DRO)	431	50	mg/kg	477	ND	90.4	50-148			
Surrogate: o-Terphenyl	12.2		"	11.6		105	30-150			

Matrix Spike Dup (1507192-MSD1)

Source: 1507169-02

Prepared & Analyzed: 07/16/15

C10-C28 (DRO)	441	50	mg/kg	467	ND	94.4	50-148	2.25	13	
Surrogate: o-Terphenyl	12.8		"	11.4		112	30-150			

Summit Scientific

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



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1507191 - EPA 5030 Soil MS

Blank (1507191-BLK1)

Prepared & Analyzed: 07/16/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0396		99.3	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	21-167			

LCS (1507191-BS1)

Prepared & Analyzed: 07/16/15

Naphthalene	0.0101	0.010	mg/kg				66-138			
Benzene	0.109	0.0020	"	0.100		109	58-130			
Toluene	0.120	0.0050	"	0.100		120	61-134			
Ethylbenzene	0.134	0.0050	"	0.0992		135	74-139			
m,p-Xylene	0.278	0.010	"	0.200		139	73-137			
o-Xylene	0.135	0.0050	"	0.0984		137	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0396		103	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	21-167			

Matrix Spike (1507191-MS1)

Source: 1507169-06

Prepared & Analyzed: 07/16/15

Naphthalene	0.00703	0.010	mg/kg		0.00750		10-158			
Benzene	0.0977	0.0020	"	0.0904	ND	108	30-131			
Toluene	0.106	0.0050	"	0.0904	ND	117	30-134			
Ethylbenzene	0.122	0.0050	"	0.0897	ND	137	22-153			
m,p-Xylene	0.252	0.010	"	0.180	0.00497	137	10-159			
o-Xylene	0.125	0.0050	"	0.0890	0.00552	134	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0370		"	0.0358		103	23-173			
Surrogate: Toluene-d8	0.0356		"	0.0362		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0353		"	0.0362		97.7	21-167			

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.



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1507191 - EPA 5030 Soil MS

Matrix Spike Dup (1507191-MSD1)	Source: 1507169-06			Prepared & Analyzed: 07/16/15						
Naphthalene	0.00826	0.010	mg/kg		0.00750		10-158	16.2	42	
Benzene	0.106	0.0020	"	0.0960	ND	111	30-131	8.40	34	
Toluene	0.115	0.0050	"	0.0960	ND	119	30-134	7.68	30	
Ethylbenzene	0.134	0.0050	"	0.0952	ND	141	22-153	9.31	24	
m,p-Xylene	0.275	0.010	"	0.192	0.00497	141	10-159	8.77	68	
o-Xylene	0.139	0.0050	"	0.0944	0.00552	141	31-151	10.6	38	
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0380		102	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0384		97.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0384		94.4	21-167			

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.



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

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

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

Batch 1507183 - General Preparation

Blank (1507183-BLK1)

Prepared & Analyzed: 07/16/15

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

LCS (1507183-BS1)

Prepared & Analyzed: 07/16/15

Calcium	508	10.0	mg/kg wet	500	102	82.9-118
Magnesium	474	5.00	"	500	94.7	77.1-123
Sodium	495	5.00	"	500	99.0	71-129

Duplicate (1507183-DUP1)

Source: 1507165-01

Prepared & Analyzed: 07/16/15

Calcium	2760	7.34	mg/kg wet	4380	45.2	200
Magnesium	267	3.67	"	363	30.5	200
Sodium	598	3.67	"	569	4.94	200

Matrix Spike (1507183-MS1)

Source: 1507165-01

Prepared & Analyzed: 07/16/15

Calcium	3280	8.74	mg/kg wet	437	4380	NR	75-125	QM-07
Magnesium	718	4.37	"	437	363	81.2	75-125	
Sodium	1080	4.37	"	437	569	116	75-125	

Matrix Spike Dup (1507183-MSD1)

Source: 1507165-01

Prepared & Analyzed: 07/16/15

Calcium	3360	8.36	mg/kg wet	418	4380	NR	75-125	2.23	25	QM-07
Magnesium	662	4.18	"	418	363	71.6	75-125	8.04	25	QM-07
Sodium	1010	4.18	"	418	569	104	75-125	6.71	25	

Summit Scientific

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



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

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

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

Batch 1507184 - General Preparation

Duplicate (1507184-DUP1) **Source: 1507158-01** Prepared: 07/16/15 Analyzed: 07/17/15

% Solids	0.00		%		ND				20	
----------	------	--	---	--	----	--	--	--	----	--

Batch 1507193 - General Preparation

LCS (1507193-BS1) Prepared & Analyzed: 07/16/15

pH	8.03	0.100	pH Units	8.00	100	95-105				
----	------	-------	----------	------	-----	--------	--	--	--	--

Duplicate (1507193-DUP1) **Source: 1507172-01** Prepared & Analyzed: 07/16/15

pH	8.17	0.100	pH Units	8.08			1.11		20	
----	------	-------	----------	------	--	--	------	--	----	--

Batch 1507194 - General Preparation

Blank (1507194-BLK1) Prepared & Analyzed: 07/16/15

Specific Conductance (EC)	ND	0.0100	mmhos/cm							
---------------------------	----	--------	----------	--	--	--	--	--	--	--

LCS (1507194-BS1) Prepared & Analyzed: 07/16/15

Specific Conductance (EC)	490	0.0100	mmhos/cm	500	98.0	90-110				
---------------------------	-----	--------	----------	-----	------	--------	--	--	--	--

Duplicate (1507194-DUP1) **Source: 1507172-01** Prepared & Analyzed: 07/16/15

Specific Conductance (EC)	1.16	0.0100	mmhos/cm	1.31			12.0		20	
---------------------------	------	--------	----------	------	--	--	------	--	----	--

Summit Scientific

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



Fremont Environmental
1630 South College Avenue
Ft. Collins CO, 80525

Project: Noble - Beebe Draw 3-15

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/17/15 07:17

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

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.