

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**CIVITAS RESOURCES**  
**GRANT BROS 43-23, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-050**

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
SB-1 8 Ft	3/15/2023	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

\* Indicates laboratory minimum detection limit in excess of SSL

\*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
CIVITAS RESOURCES  
GRANT BROS 43-23, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C023-050

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SB-1 8 Ft	3/15/2023	8	<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

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

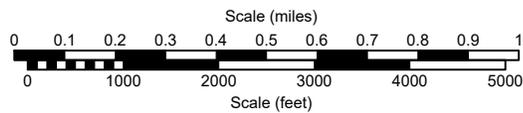
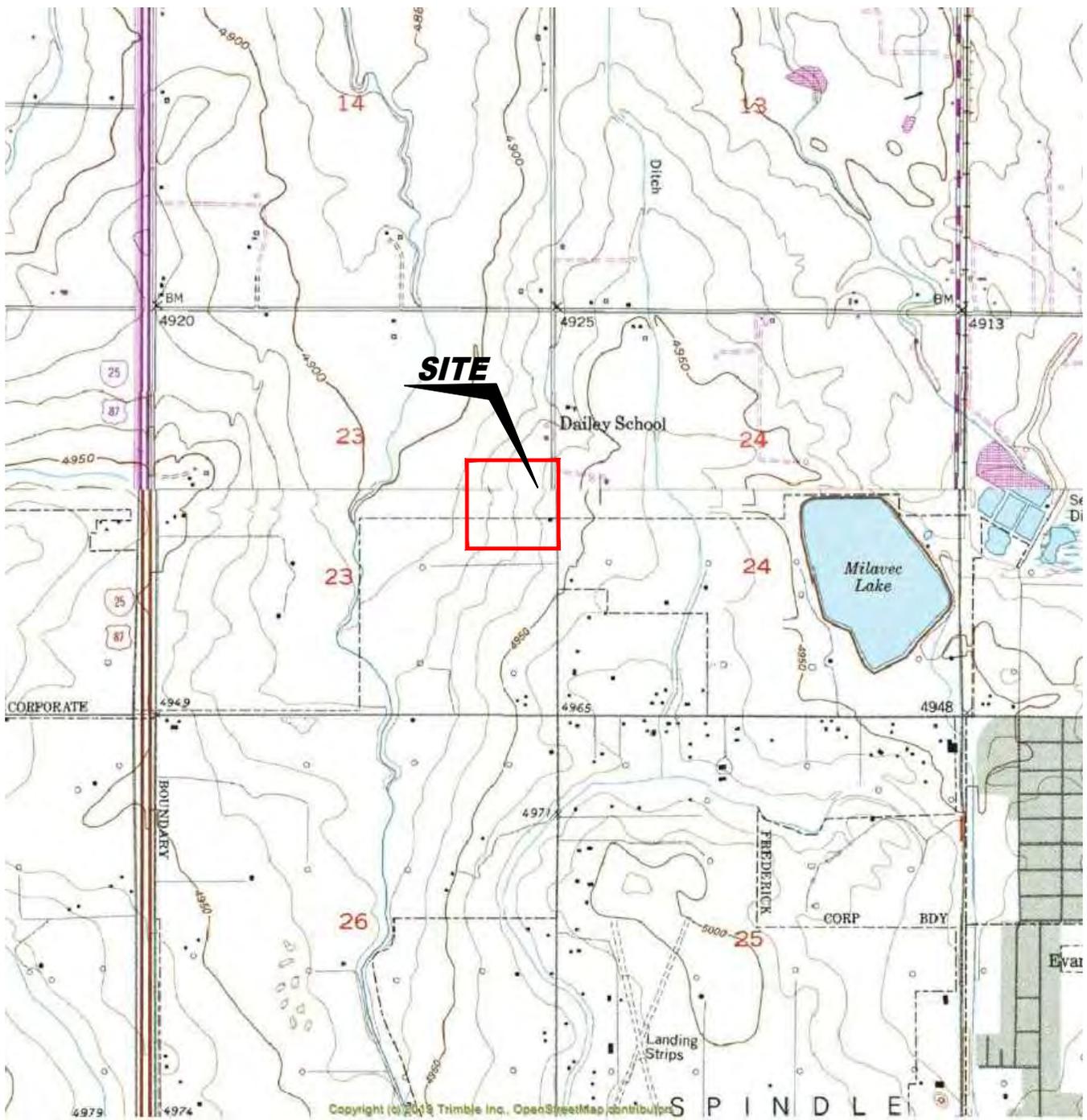
\* Indicates laboratory minimum detection limit in excess of SSL

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**CIVITAS RESOURCES**  
**GRANT BROS 43-23, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-050**

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Site Specific Background Concentration/Value						
SB-1 8 Ft	3/15/2023	8	7.96	0.342	0.149	0.348

Bold faced values exceed the COGCC Table 915-1 concentrations

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



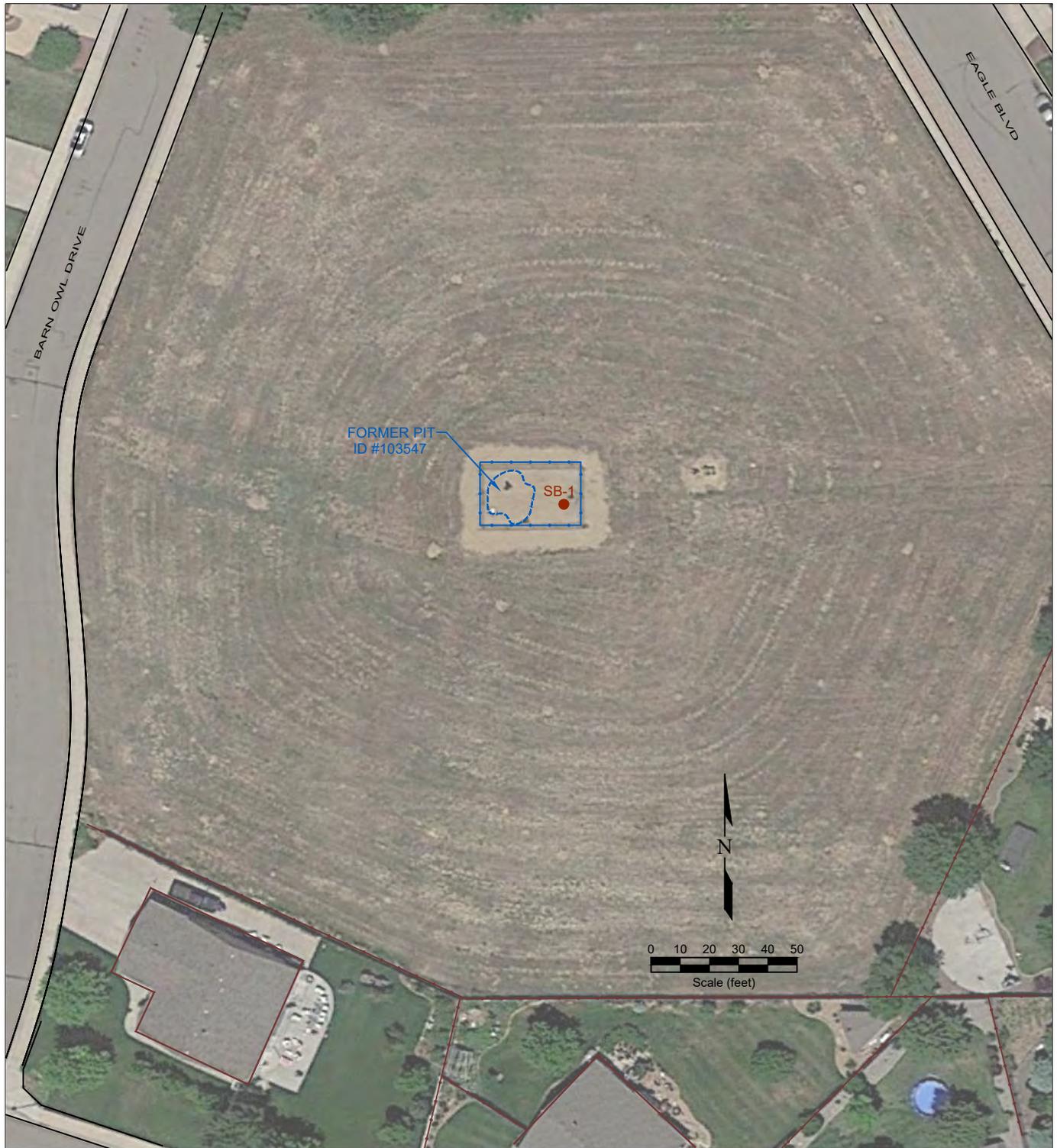
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
SITE LOCATION MAP

**CIVITAS RESOURCES ~ GRANT BROTHERS 43-23**  
NESE Sec. 23, T2N, R68W, 6th PM  
Weld County, Colorado  
40.122317°, -104.963465°

Project # <b>C023-050</b>	API # <b>05-123-07814</b>	Facility # <b>103547</b>
Date <b>4/8/23</b>	Remediation # <b>27677</b>	Filename <b>23050T</b>





**LEGEND**

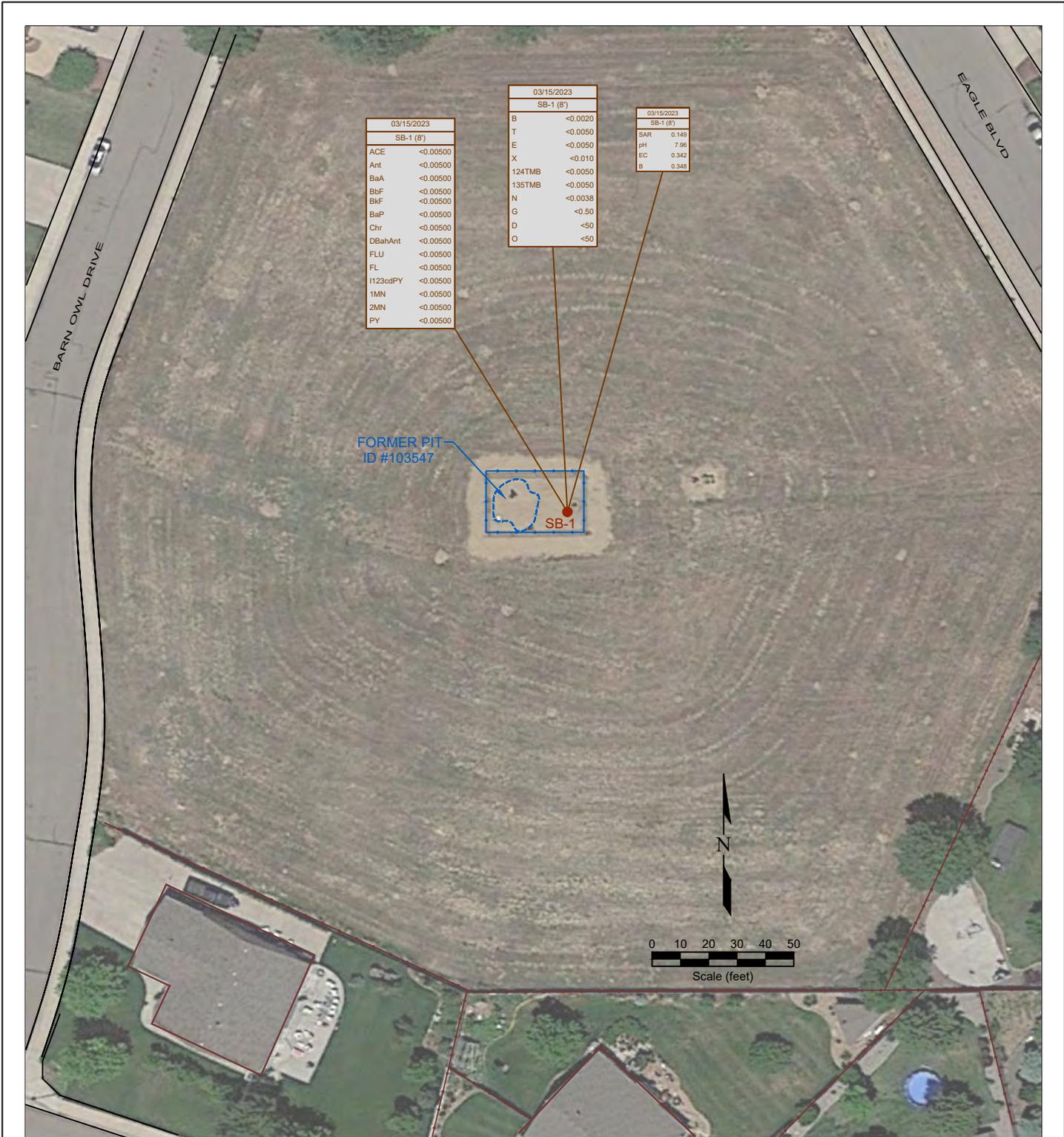
- SOIL BORING LOCATION
- FORMER FACILITY FORMER FACILITY
- BUILDING BUILDING
- FENCE LINE

**Figure 2  
SITE MAP**

**CIVITAS RESOURCES ~ GRANT BROTHERS 43-23**  
 NESE Sec. 23, T2N, R68W, 6th PM  
 Weld County, Colorado  
 40.122317°, -104.963465°

Project No. <b>C023-050</b>	API # <b>05-123-07814</b>	Facility # <b>103547</b>
Date <b>4/8/23</b>	Remediation # <b>27677</b>	Filename <b>23050Q</b>





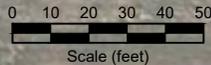
03/15/2023	
SB-1 (ft)	
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BbF	<0.00500
BkF	<0.00500
BaP	<0.00500
Chr	<0.00500
DBahAnt	<0.00500
FLU	<0.00500
FL	<0.00500
H123cdPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

03/15/2023	
SB-1 (ft)	
B	<0.0020
T	<0.0050
E	<0.0050
X	<0.010
124TMB	<0.0050
135TMB	<0.0050
N	<0.0038
G	<0.50
D	<50
O	<50

03/15/2023	
SB-1 (ft)	
SAR	0.149
pH	7.96
EC	0.342
B	0.348

FORMER PIT  
ID #103547

SB-1



**LEGEND**

- SOIL BORING LOCATION
- FORMER FACILITY FORMER FACILITY
- BUILDING BUILDING
- FENCE LINE

03/15/2023	
DATE SAMPLED	
SAMPLE ID and DEPTH (ft)	
SB-1 (ft)	
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BbF	<0.00500
BkF	<0.00500
BaP	<0.00500
Chr	<0.00500
DBahAnt	<0.00500
FLU	<0.00500
FL	<0.00500
H123cdPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

03/15/2023	
DATE SAMPLED	
SAMPLE ID and DEPTH (ft)	
SB-1 (ft)	
B	<0.0020
T	<0.0050
E	<0.0050
X	<0.010
124TMB	<0.0050
135TMB	<0.0050
N	<0.0038
G	<0.50
D	<50
O	<50

03/15/2023	
DATE SAMPLED	
SAMPLE ID and DEPTH (ft)	
SB-1 (ft)	
SAR	0.149
pH	7.96
EC	0.342
B	0.348

Figure 3  
**SOIL CHEMISTRY MAP**

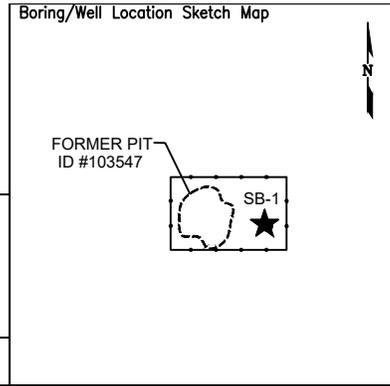
**CIVITAS RESOURCES ~ GRANT BROTHERS 43-23**  
NESE Sec. 23, T2N, R68W, 6th PM  
Weld County, Colorado  
40.122317°, -104.963465°

Project No. <b>C023-050</b>	API # <b>05-123-07814</b>	Facility # <b>103547</b>
Date <b>4/8/23</b>	Remediation # <b>27677</b>	Filename <b>23050Q</b>





# BORING/WELL CONSTRUCTION LOG



Page 1 of 1

Boring/Well No. <b>SB-1</b>		Total Depth <b>17'</b>	Location <b>Civitas Resources Grant Brothers 43-23 NESE Section 23, T2N, R68W Weld County, Colorado</b>			
Project No./Name <b>Grant Brothers 43-23</b>		Drilling Contractor/Driller <b>DrillPro</b>				
Geologist/Office <b>Paul Henehan / Fremont Environmental, Inc.</b>		Approved By				
Drilling Equipment/Method <b>Geoprobe</b>		Size/Type of Bit <b>2.5" direct push</b>	Sampling Method <b>direct push</b>	Start/Finish Date <b>3/15/23</b>		
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. <b>PVC/2"</b>	Screen: Type <b>Slotted</b>   Mtrl. <b>PVC</b>   Length <b>10'</b>   Dia. <b>2"</b>   Slot Size <b>0.010"</b>			
Elevation of: (ft. above datum)		Ground Surface -	Top of Well Casing -	Top of Screen -	Bottom of Screen -	Ground Water Surface/Date Measured <b>16.27</b> <b>3/15/23</b>

DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
			<b>ML</b>	Topsoil ~ 3" Silty fine to medium sand, brown, moist, no stain, no odor				
	Bentonite	1" Blank						
5			<b>SM</b>	Silty sand to 5', then firm sandy silt, brown, no stain, no odor			0	
	#10-20 Silica Sand	1" Screen						
10			<b>ML</b>	Sandy silt, firm, dry, brown to 11', then silty sand with rust streaks, no stain, no odor			0	
			<b>SM</b>					
			<b>ML</b>	Sandy silt, firm, brown to 14', then silty fine to medium sand, dry, no stain, no odor, firm			0	
15			<b>ML</b>					
			<b>ML</b>	Refusal at 17' Sandy silt to 15.5', then silty fine to medium sand, packing into rods caused refusal, set a well			0	
			<b>ML</b>					
20				TD 17' Refusal at 17';			0	

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 23, 2023

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549

RE: Civitas - Grant Bros 43-23

Work Order #2303404

Enclosed are the results of analyses for samples received by Summit Scientific on 03/15/23 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 8FT	2303404-01	Soil	03/15/23 00:00	03/15/23 17:00

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.*

2303404

# Summit Scientific

S<sub>2</sub>

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

Page 1 of 1

Client: Fremont Environmental Inc.

Project Manager: Paul Henehan

Address:

E-Mail:

City/State/Zip:

CIVITAS - JACOB EVANS

Phone:

Project Name: GRANT BROS 43-23

Sampler Name: HENEHAN

Project Number: CO23-050

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions				
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN+TMBs	DRO,RRO	PAHs	pH, EC, SAR	Boron	9/15-1 metals	Arsenic		BTEXN + TMBs	TDS, Cl, Su		
1	SB-1 8RT	3/15/23		2			✓			✓				✓	✓	✓	✓	✓						
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Relinquished by: GAH/FE Date/Time: 3/15/23 1700

Received by: [Signature] Date/Time: 3/15/23 1700

Turn Around Time (Check)  
Same Day  72 hours   
24 hours  Standard   
48 hours

Notes:

Relinquished by: Date/Time:

Received by: Date/Time:

Sample Integrity:  
Temperature Upon Receipt: 8.8  
Samples Intact:  Yes  No

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2303408

Client: Fremont Client Project ID: Grant Bros 43-23

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

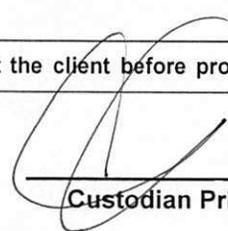
Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C)  Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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"/>	<u>on ice</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
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"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<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, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<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.

  
Custodian Printed Name

3-15-23  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

**SB-1 8FT**  
**2303404-01 (Soil)**

Summit Scientific

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0570	03/18/23	03/20/23	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: **03/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0510	128 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0440	110 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0573	03/18/23	03/22/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.6	93.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

**SB-1 8FT**  
**2303404-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0670	03/21/23	03/22/23	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: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0282	84.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0276	82.8 %	40-150		"	"	"	"	

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.348</b>	0.0100	mg/L	1	BGC0645	03/20/23	03/21/23	EPA 6020B	

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**SB-1 8FT**  
**2303404-01 (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	27.5	0.0583	mg/L dry	1	BGC0700	03/21/23	03/22/23	EPA 6020B	
Magnesium	20.2	0.0583	"	"	"	"	"	"	
Sodium	4.20	0.0583	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.149	0.00100	units	1	BGC0784	03/23/23	03/23/23	Calculation	

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BGC0684	03/21/23	03/21/23	Calculation	

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.342	0.0100	mmhos/cm	1	BGC0729	03/22/23	03/22/23	EPA 120.1	

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

Date Sampled: **03/15/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BGC0728	03/22/23	03/22/23	EPA 9045D	

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Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

### 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 BGC0570 - EPA 5030 Soil MS

##### Blank (BGC0570-BLK1)

Prepared: 03/18/23 Analyzed: 03/20/23

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>	0.0482		"	0.0400		121	50-150			
<i>Surrogate: Toluene-d8</i>	0.0384		"	0.0400		96.1	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0415		"	0.0400		104	50-150			

##### LCS (BGC0570-BS1)

Prepared: 03/18/23 Analyzed: 03/20/23

Benzene	0.0812	0.0020	mg/kg	0.100		81.2	70-130			
Toluene	0.0742	0.0050	"	0.100		74.2	70-130			
Ethylbenzene	0.0869	0.0050	"	0.100		86.9	70-130			
m,p-Xylene	0.177	0.010	"	0.200		88.4	70-130			
o-Xylene	0.0852	0.0050	"	0.100		85.2	70-130			
1,2,4-Trimethylbenzene	0.0814	0.0050	"	0.100		81.4	70-130			
1,3,5-Trimethylbenzene	0.0834	0.0050	"	0.100		83.4	70-130			
Naphthalene	0.0759	0.0038	"	0.100		75.9	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0430		"	0.0400		108	50-150			
<i>Surrogate: Toluene-d8</i>	0.0385		"	0.0400		96.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0414		"	0.0400		104	50-150			

##### Matrix Spike (BGC0570-MS1)

Source: 2303404-01

Prepared: 03/18/23 Analyzed: 03/20/23

Benzene	0.0825	0.0020	mg/kg	0.100	ND	82.5	70-130			
Toluene	0.0760	0.0050	"	0.100	ND	76.0	70-130			
Ethylbenzene	0.0916	0.0050	"	0.100	ND	91.6	70-130			
m,p-Xylene	0.184	0.010	"	0.200	ND	92.2	70-130			
o-Xylene	0.0868	0.0050	"	0.100	ND	86.8	70-130			
1,2,4-Trimethylbenzene	0.0837	0.0050	"	0.100	ND	83.7	70-130			
1,3,5-Trimethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130			
Naphthalene	0.0820	0.0038	"	0.100	ND	82.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0419		"	0.0400		105	50-150			
<i>Surrogate: Toluene-d8</i>	0.0383		"	0.0400		95.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0411		"	0.0400		103	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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 BGC0570 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGC0570-MSD1)</b>	<b>Source: 2303404-01</b>			<b>Prepared: 03/18/23 Analyzed: 03/20/23</b>						
Benzene	0.0842	0.0020	mg/kg	0.100	ND	84.2	70-130	2.05	30	
Toluene	0.0762	0.0050	"	0.100	ND	76.2	70-130	0.315	30	
Ethylbenzene	0.0880	0.0050	"	0.100	ND	88.0	70-130	4.01	30	
m,p-Xylene	0.179	0.010	"	0.200	ND	89.5	70-130	2.89	30	
o-Xylene	0.0859	0.0050	"	0.100	ND	85.9	70-130	1.11	30	
1,2,4-Trimethylbenzene	0.0837	0.0050	"	0.100	ND	83.7	70-130	0.0358	30	
1,3,5-Trimethylbenzene	0.0858	0.0050	"	0.100	ND	85.8	70-130	1.39	30	
Naphthalene	0.0835	0.0038	"	0.100	ND	83.5	70-130	1.78	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0447</i>		<i>"</i>	<i>0.0400</i>		<i>112</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			

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Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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 BGC0573 - EPA 3550A**

**Blank (BGC0573-BLK1)**

Prepared: 03/18/23 Analyzed: 03/22/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		100		30-150			

**LCS (BGC0573-BS1)**

Prepared: 03/18/23 Analyzed: 03/22/23

C10-C28 (DRO)	359	50	mg/kg	500		71.8		70-130			
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		99.7		30-150			

**Matrix Spike (BGC0573-MS1)**

Source: 2303404-01

Prepared: 03/18/23 Analyzed: 03/22/23

C10-C28 (DRO)	387	50	mg/kg	500	31.8	71.0		70-130			
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.8		30-150			

**Matrix Spike Dup (BGC0573-MSD1)**

Source: 2303404-01

Prepared: 03/18/23 Analyzed: 03/22/23

C10-C28 (DRO)	388	50	mg/kg	500	31.8	71.2		70-130	0.306	20	
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		93.0		30-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

**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 BGC0670 - EPA 5030 Soil MS**

**Blank (BGC0670-BLK1)**

Prepared: 03/21/23 Analyzed: 03/22/23

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>0.0285</i>		<i>"</i>	<i>0.0333</i>		<i>85.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0326</i>		<i>"</i>	<i>0.0333</i>		<i>97.8</i>	<i>40-150</i>			

**LCS (BGC0670-BS1)**

Prepared: 03/21/23 Analyzed: 03/22/23

Acenaphthene	0.0296	0.00500	mg/kg	0.0333		88.7	31-137			
Anthracene	0.0298	0.00500	"	0.0333		89.3	30-120			
Benzo (a) anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) pyrene	0.0306	0.00500	"	0.0333		91.7	30-120			
Benzo (b) fluoranthene	0.0283	0.00500	"	0.0333		84.8	30-120			
Benzo (k) fluoranthene	0.0279	0.00500	"	0.0333		83.6	30-120			
Chrysene	0.0248	0.00500	"	0.0333		74.5	30-120			
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333		84.9	30-120			
Fluoranthene	0.0284	0.00500	"	0.0333		85.2	30-120			
Fluorene	0.0302	0.00500	"	0.0333		90.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0264	0.00500	"	0.0333		79.1	30-120			
Pyrene	0.0295	0.00500	"	0.0333		88.6	35-142			
1-Methylnaphthalene	0.0273	0.00500	"	0.0333		81.8	35-142			
2-Methylnaphthalene	0.0275	0.00500	"	0.0333		82.5	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0273</i>		<i>"</i>	<i>0.0333</i>		<i>81.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0306</i>		<i>"</i>	<i>0.0333</i>		<i>91.8</i>	<i>40-150</i>			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

**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 BGC0670 - EPA 5030 Soil MS**

**Matrix Spike (BGC0670-MS1)**

Source: 2303361-01

Prepared: 03/21/23 Analyzed: 03/22/23

Acenaphthene	0.0228	0.00500	mg/kg	0.0333	ND	68.3	31-137			
Anthracene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Benzo (a) anthracene	0.0225	0.00500	"	0.0333	ND	67.5	30-120			
Benzo (a) pyrene	0.0226	0.00500	"	0.0333	ND	67.8	30-120			
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333	ND	63.1	30-120			
Benzo (k) fluoranthene	0.0213	0.00500	"	0.0333	ND	63.9	30-120			
Chrysene	0.0196	0.00500	"	0.0333	ND	58.8	30-120			
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	61.0	30-120			
Fluoranthene	0.0207	0.00500	"	0.0333	ND	62.2	30-120			
Fluorene	0.0229	0.00500	"	0.0333	ND	68.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0209	0.00500	"	0.0333	ND	62.6	30-120			
Pyrene	0.0240	0.00500	"	0.0333	ND	72.1	35-142			
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.1	15-130			
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0228		"	0.0333		68.3	40-150			
Surrogate: Fluoranthene-d10	0.0230		"	0.0333		68.9	40-150			

**Matrix Spike Dup (BGC0670-MSD1)**

Source: 2303361-01

Prepared: 03/21/23 Analyzed: 03/22/23

Acenaphthene	0.0238	0.00500	mg/kg	0.0333	ND	71.4	31-137	4.46	30
Anthracene	0.0227	0.00500	"	0.0333	ND	68.1	30-120	1.34	30
Benzo (a) anthracene	0.0230	0.00500	"	0.0333	ND	69.1	30-120	2.34	30
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	2.92	30
Benzo (b) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.3	30-120	3.54	30
Benzo (k) fluoranthene	0.0226	0.00500	"	0.0333	ND	67.8	30-120	6.02	30
Chrysene	0.0201	0.00500	"	0.0333	ND	60.2	30-120	2.35	30
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	9.53	30
Fluoranthene	0.0236	0.00500	"	0.0333	ND	70.7	30-120	12.8	30
Fluorene	0.0245	0.00500	"	0.0333	ND	73.4	30-120	6.70	30
Indeno (1,2,3-cd) pyrene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	3.63	30
Pyrene	0.0234	0.00500	"	0.0333	ND	70.3	35-142	2.53	30
1-Methylnaphthalene	0.0241	0.00500	"	0.0333	ND	72.4	15-130	13.8	50
2-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.6	15-130	9.65	50
Surrogate: 2-Methylnaphthalene-d10	0.0240		"	0.0333		72.0	40-150		
Surrogate: Fluoranthene-d10	0.0266		"	0.0333		79.9	40-150		

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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 BGC0645 - EPA 3050B**

**Blank (BGC0645-BLK1)**

Prepared: 03/20/23 Analyzed: 03/21/23

Boron ND 0.0100 mg/L

**LCS (BGC0645-BS1)**

Prepared: 03/20/23 Analyzed: 03/21/23

Boron 5.14 0.0100 mg/L 5.00 103 80-120

**Duplicate (BGC0645-DUP1)**

**Source: 2303374-01**

Prepared: 03/20/23 Analyzed: 03/21/23

Boron 0.0594 0.0100 mg/L 0.0652 9.26 20

**Matrix Spike (BGC0645-MS1)**

**Source: 2303374-01**

Prepared: 03/20/23 Analyzed: 03/21/23

Boron 4.79 0.0100 mg/L 5.00 0.0652 94.5 75-125

**Matrix Spike Dup (BGC0645-MSD1)**

**Source: 2303374-01**

Prepared: 03/20/23 Analyzed: 03/21/23

Boron 5.04 0.0100 mg/L 5.00 0.0652 99.6 75-125 5.19 25

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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 BGC0700 - General Preparation**

**Blank (BGC0700-BLK1)**

Prepared: 03/21/23 Analyzed: 03/22/23

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

**LCS (BGC0700-BS1)**

Prepared: 03/21/23 Analyzed: 03/22/23

Calcium	5.21	0.0500	mg/L wet	5.00		104	70-130			
Magnesium	4.95	0.0500	"	5.00		99.0	70-130			
Sodium	4.72	0.0500	"	5.00		94.3	70-130			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

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

**Summit Scientific**

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

**Batch BGC0684 - General Preparation**

**Duplicate (BGC0684-DUP1)**

**Source: 2303401-01**

Prepared & Analyzed: 03/21/23

% Solids	95.3		%		95.3			0.0166		20	
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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			Limit	RPD	Limit	RPD	

**Batch BGC0729 - General Preparation**

**Blank (BGC0729-BLK1)**

Prepared & Analyzed: 03/22/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGC0729-BS1)**

Prepared & Analyzed: 03/22/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

**Duplicate (BGC0729-DUP1)**

Source: 2303398-01

Prepared & Analyzed: 03/22/23

Specific Conductance (EC) 5.12 0.0100 mmhos/cm 5.28 3.11 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
 Project Manager: Paul Henchan

**Reported:**  
 03/23/23 15:58

**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 BGC0728 - General Preparation**

**LCS (BGC0728-BS1)**

Prepared & Analyzed: 03/22/23

pH	9.18	pH Units	9.18	100	95-105
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**Duplicate (BGC0728-DUP1)**

Source: 2303398-01

Prepared & Analyzed: 03/22/23

pH	7.34	pH Units	7.37	0.408	20
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Civitas - Grant Bros 43-23

Project Number: CO23-050  
Project Manager: Paul Henchan

**Reported:**  
03/23/23 15:58

### 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