

Incident ID	nAPP2222982853
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>120</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Connor Walker Title: Sr. EngineerSignature:  Date: 10/20/2022email: cwalker@mewbourne.com Telephone: (806)202-5281**OCD Only**Received by: Jocelyn Harimon Date: 10/20/2022

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Remediation Plan


Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Connor Walker Title: Sr. Engineer
Signature:  Date: 10/20/2022
email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: Jocelyn Harimon Date: 10/20/2022

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 01/19/2023

The Remediation Plan is Conditionally Approved. This release is in a high karst area and will need to be remediated to the strictest closure criteria of <50' depth to groundwater from Table 1 of the spill rule. If rock refusal is encountered, use hydrovac to clean contaminated soil off rock. Use rotary drill to drill 18"-24" hole into the rock, pull sample and do lab analysis. If clean, layer clean rock with microbial strains to digest organics and hydrocarbons. Back-fill with clean material. Please make sure the edges/sidewalls are delineated to 600 mg/kg for chlorides and 100 mg/kg TPH.

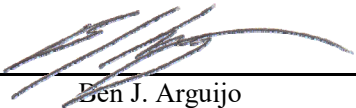
Site Assessment Report & Proposed Remediation Plan

Mewbourne Oil Company Silver Bullet Frac Booster

Eddy County, New Mexico
Unit Letter "D", Section 15, Township 26 South, Range 29 East
Latitude 32.049479 North, Longitude 103.978286 West
NMOCD Reference No. nAPP2222982853

Prepared By:

Etech Environmental & Safety Solutions, Inc.
6309 Indiana Ave, Ste. D
Lubbock, Texas 79413


Ben J. Arguijo


Lance Crenshaw



Midland • San Antonio • Lubbock • Hobbs • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this *Site Assessment Report & Proposed Remediation Plan* for the release site known as the Silver Bullet Frac Booster (henceforth, "Silver Bullet"). Details of the release are summarized below:

Location of Release Source

Latitude: 32.049479 Longitude: -103.978286

Provided GPS are in WGS84 format.

Site Name:	Silver Bullet Frac Booster	Site Type:	Pipeline
Date Release Discovered:	8/2/2022	API # (if applicable):	N/A

Unit Letter	Section	Township	Range	County
"D"	15	26S	29E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name)

Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 177	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:

A high-pressure discharge hose failed.

Initial Response

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Silver Bullet release site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	120'	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish and Wildlife Services (FWS) shapefiles, topographic maps, NMOSE and USGS databases, and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Silver Bullet release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
120'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	600	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	100	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	N/A	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 INITIAL SITE ASSESSMENT

On October 12, 2022, Etech conducted an initial site assessment. During the initial site assessment, five (5) hand-augered soil bores (SP1 through SP5) were advanced within the release margins in an effort to determine the vertical extent of impacted soil. In addition, four (4) hand-augered soil bores (NH1, EH1, SH1, and WH1) were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of impacted soil. During the advancement of the hand-augered soil bores, soil samples were collected and field-screened for the presence of Volatile Organic Compounds (VOCs) utilizing olfactory/visual senses and/or concentrations of chloride utilizing a Hach Quantab® chloride test kit. The soil bores were advanced in one (1) foot increments until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

Based on field observations and field test data, a total of 18 delineation soil samples (NH1 @ Surface, NH1 @ 1', EH1 @ Surface, EH1 @ 1', SH1 @ Surface, SH1 @ 1', WH1 @ Surface, WH1 @ 1', SP1 @ Surface, SP1 @ 3', SP2 @ Surface, SP2 @ 3', SP3 @ Surface, SP3 @ 2', SP4 @ Surface, SP4 @ 1', SP5 @ Surface, and SP5 @ 3') were submitted to a certified, commercial laboratory for analysis of BTEX, TPH, and chloride. Based on laboratory analytical results, the horizontal and vertical extent of impacted soil was adequately defined. Depths of soil impacts ranged from one (1) foot below ground surface (bgs) in the area characterized by sample point SP4 to three (3) feet bgs in the areas characterized by sample points SP1, SP2, and SP5.

The extent of the affected area and the locations of the hand-augered soil bores are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data and a soil profile log are provided in Appendix B. Laboratory analytical reports are provided in Appendix C. General photographs of the release site are provided in Appendix D.

5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, Mewbourne Oil Company proposes the following remediation activities designed to advance the Silver Bullet release site toward regulatory closure:

- Utilizing mechanical equipment, excavate impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards as follows:
 - Approximately one (1) foot bgs in the area characterized by sample point SP4.
 - Approximately two (2) feet bgs in the area characterized by sample point SP3.
 - Approximately three (3) feet bgs in the areas characterized by sample points SP1, SP2, and SP5.
- Advance the sidewalls of the excavated area until laboratory analytical results indicate BTEX, TPH, and chloride concentrations are below the NMOCD Closure Criteria and NMOCD Reclamation Standards.
- Transport excavated soil to an NMOCD-permitted surface waste facility for disposal.
- Upon receiving laboratory analytical results from confirmation soil samples, backfill the excavated area with locally sourced, non-impacted, "like" material.
- Upon completion of remediation activities, prepare a *Remediation Summary & Soil Closure Request* detailing field activities and laboratory analytical results from confirmation soil samples.

6.0 SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than 50 linear feet. A minimum of one (1) representative five-point composite confirmation soil sample will be collected from the base of the excavated area representing every 200 square feet. Additional, discrete grab samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.

7.0 TIMELINE & ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed within 90 days of receiving necessary approval(s) of the *Site Assessment Summary and Proposed Remediation Plan*. Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, it is estimated that approximately 1,500 cubic yards of impacted soil is in need of removal.

8.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area will be compacted and contoured to achieve erosion control, stability, and preservation of surface water flow, to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture during the first favorable growing season following closure of the site.

9.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Site Assessment Report & Proposed Remediation Plan* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Mewbourne Oil Company. Use of the information contained in this report is prohibited without the consent of Etech and/or Mewbourne Oil Company.

10.0 DISTRIBUTION

Mewbourne Oil Company

4801 Business Park Blvd.

Hobbs, NM 88240

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 2

811 S. First Street

Artesia, NM 88210

United States Department of the Interior

Bureau of Land Management

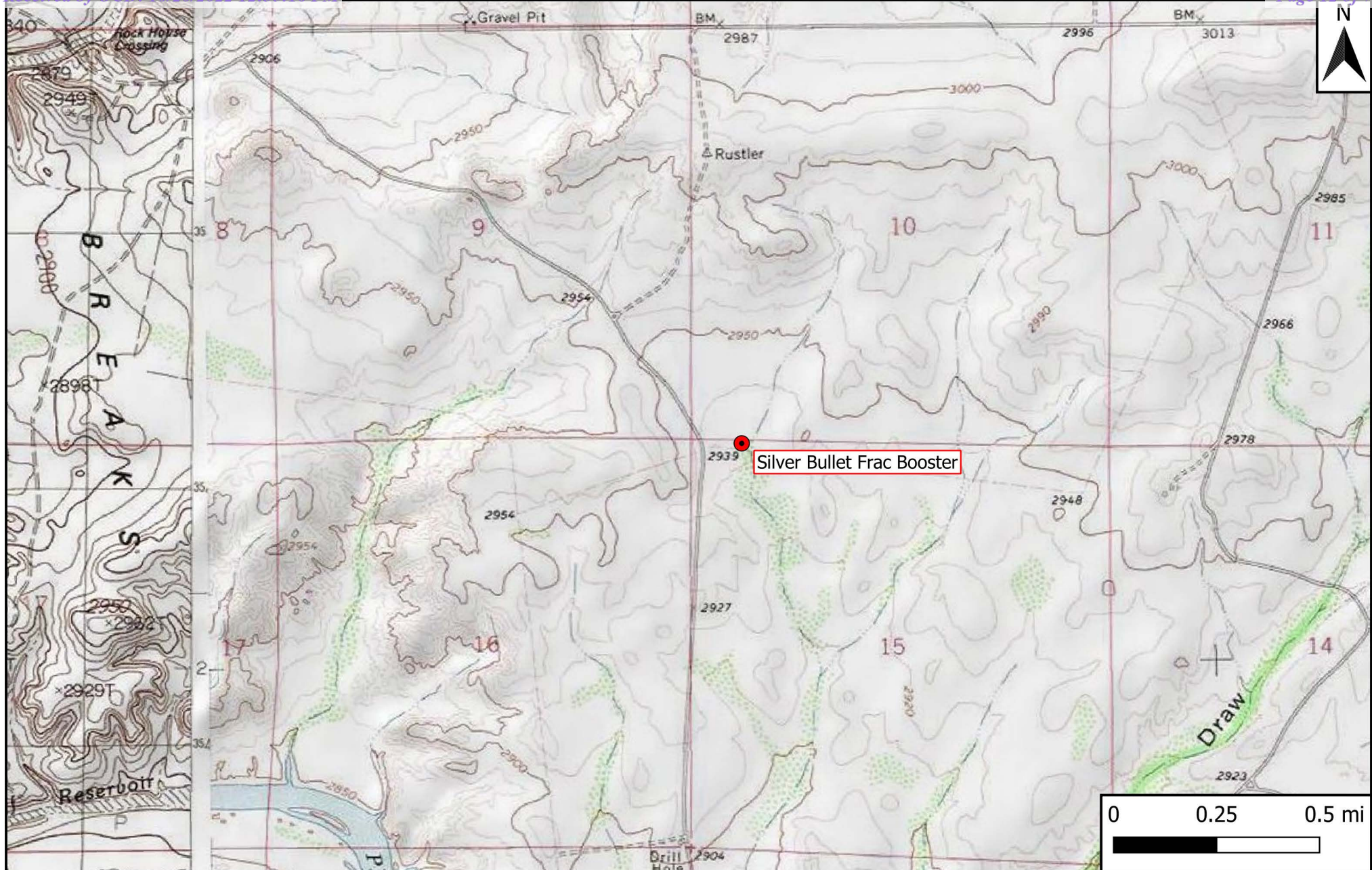
620 E. Greene Street

Carlsbad, NM 88220

(Electronic Submission)

Figure 1

Topographic Map



Legend

- Site Location

Figure 1

Topographic Map
 Mewbourne Oil Company
 Silver Bullet Frac Booster
 32.049479, -103.978286
 Eddy County



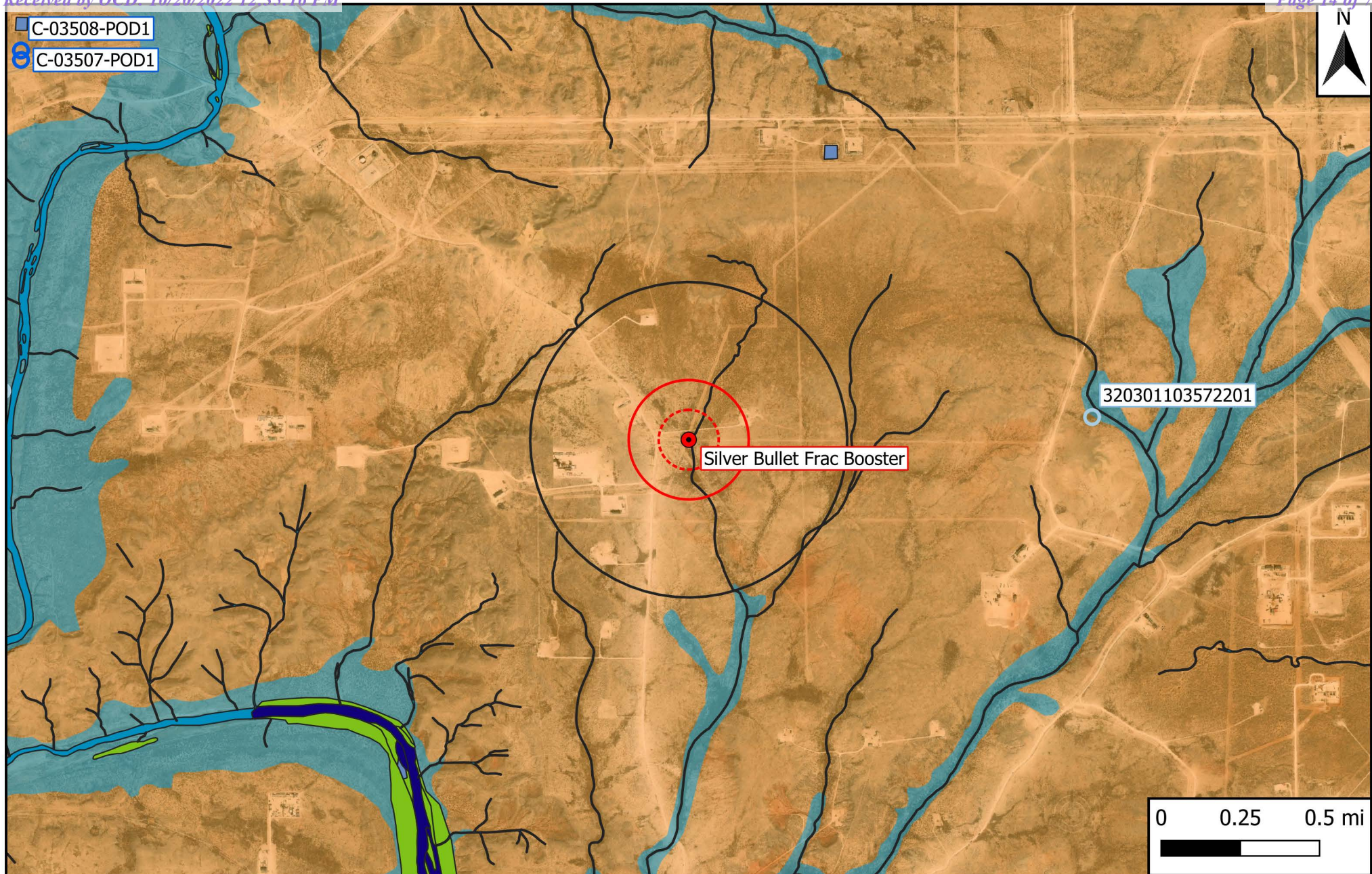
Drafted: bja

Checked: lc

Date: 10/13/22

Figure 2

Site Characterization Map



Legend

- | | | |
|------------------------------|---------------------------------|--------------------|
| ● Site Location | 1% Annual Flood Chance | 500-Ft Radius |
| ○ Well - NMOSE | Emergent/Forested Wetlands | 1,000-Ft Radius |
| ○ Well - USGS | Freshwater Pond/Lake | 0.5-Mi Radius |
| ○ Well - Exploratory/Monitor | Karst Potential (Low/Med./High) | Municipal Boundary |
| — Potash Mine Workings | Riverine | |

Figure 2

Site Characterization Map
 Mewbourne Oil Company
 Silver Bullet Frac Booster
 32.049479, -103.978286
 Eddy County



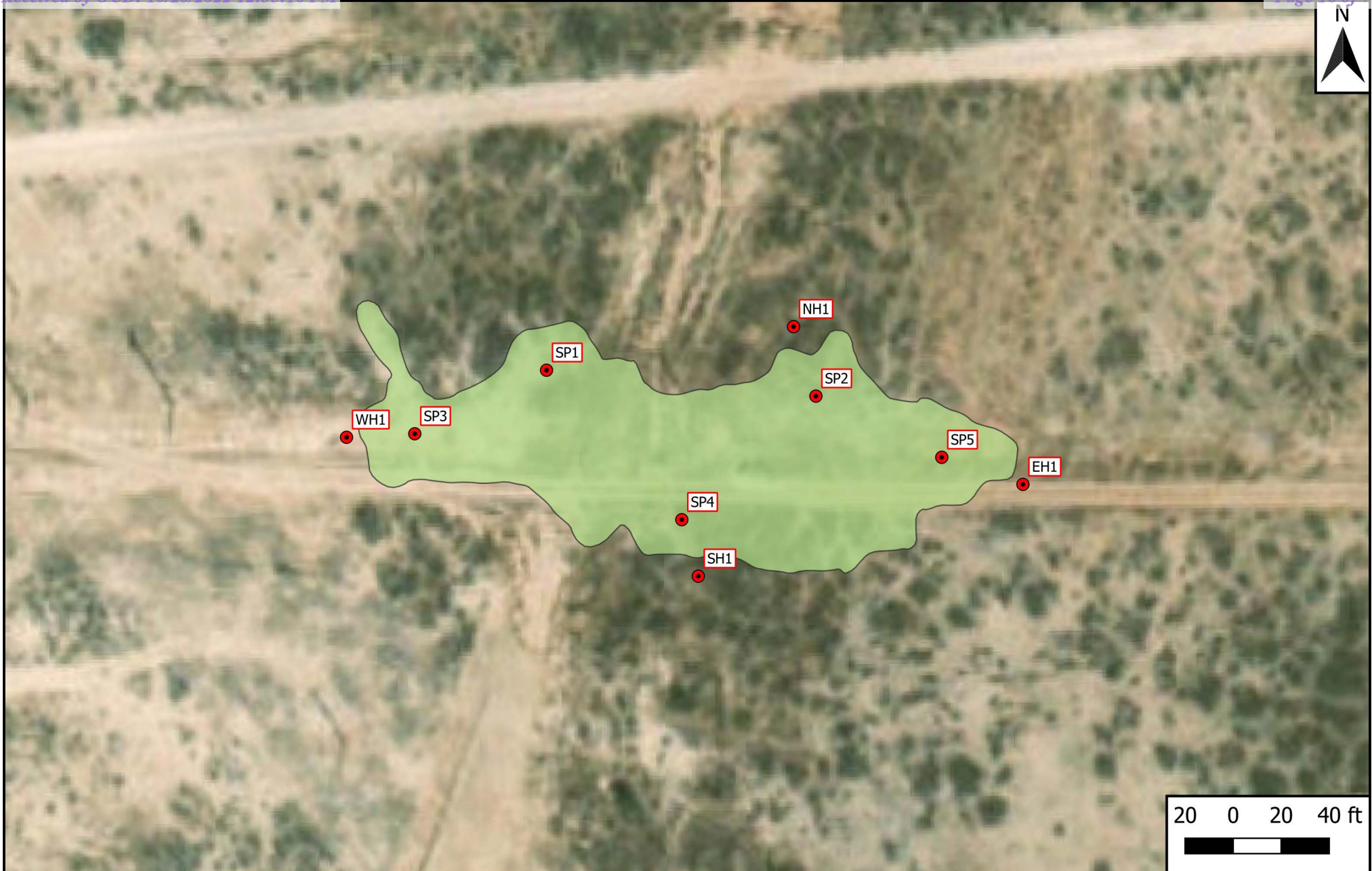
Drafted: bja

Checked: lc

Date: 10/13/22

Figure 3

Site & Sample Location Map

**Legend**

- Affected Area ($\approx 17,130 \text{ ft}^2$)
- Delineation Sample Location

Figure 3

Site & Sample Location Map
Mewbourne Oil Company
Silver Bullet Frac Booster
32.049479, -103.978286
Eddy County



Drafted: bja

Checked: lc

Date: 10/19/22

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

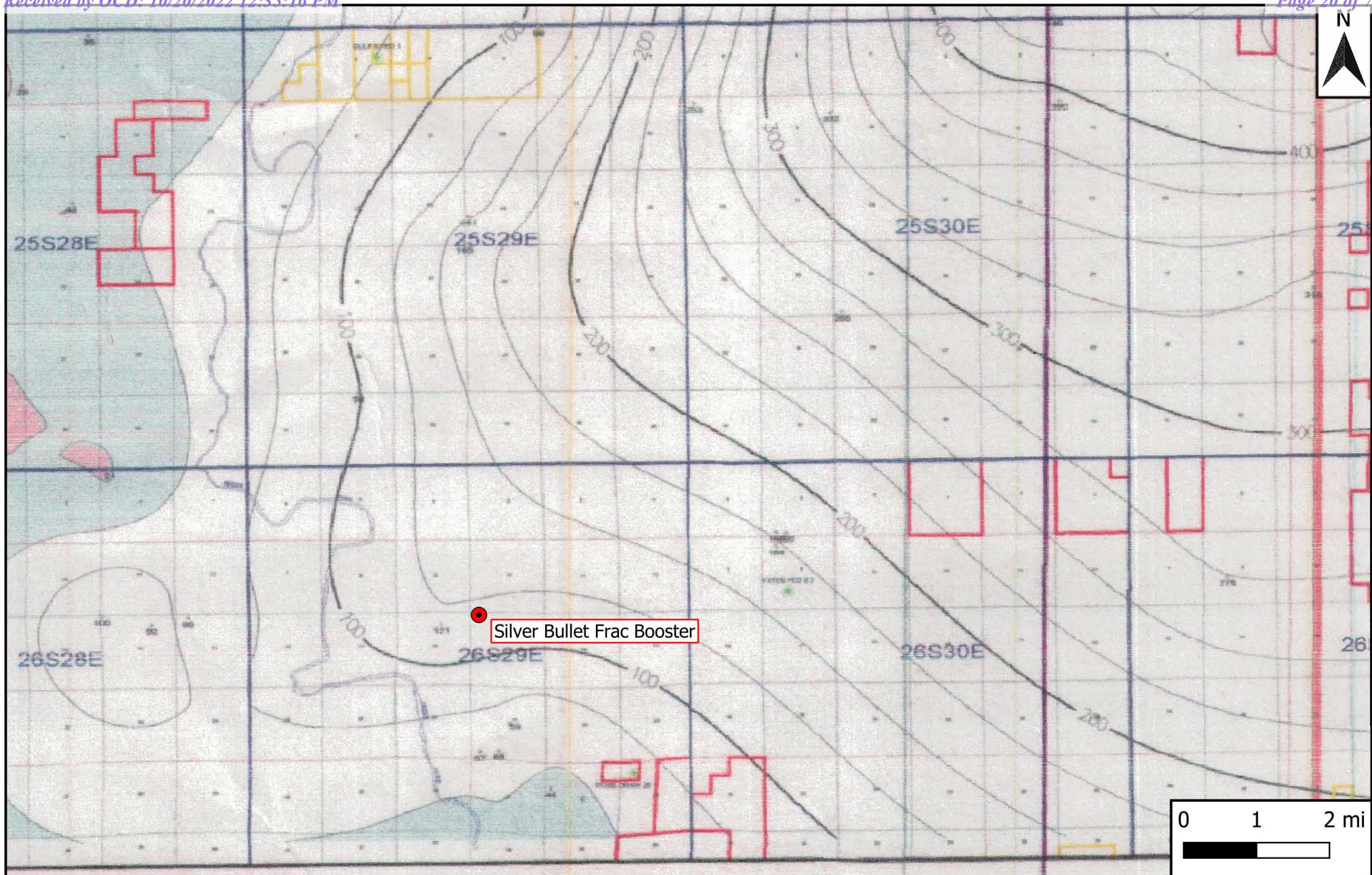
Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company Silver Bullet Frac Booster NMOCD Ref. #: nAPP2222982853											
NMOCD Closure Criteria				10	50	N/A	N/A	N/A	N/A	100	600
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
NH1 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	82.8	82.8	<10.0	82.8	32.0
NH1 @ 1'	10/12/2022	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EH1 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	10.6	10.6	<10.0	10.6	48.0
EH1 @ 1'	10/12/2022	1	In-Situ	<0.050	<0.300	11.9	28.5	40.4	<10.0	40.4	80.0
SH1 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	16.8	16.8	<10.0	16.8	32.0
SH1 @ 1'	10/12/2022	1	In-Situ	<0.050	<0.300	<10.0	36.4	36.4	<10.0	36.4	32.0
WH1 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	10.8	10.8	<10.0	10.8	<16.0
WH1 @ 1'	10/12/2022	1	In-Situ	<0.050	<0.300	<10.0	12.4	12.4	<10.0	12.4	32.0
SP1 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	576
SP1 @ 3'	10/12/2022	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SP2 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	145	145	<10.0	145	14,300
SP2 @ 3'	10/12/2022	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
SP3 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	944
SP3 @ 2'	10/12/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SP4 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	608
SP4 @ 1'	10/12/2022	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
SP5 @ Surface	10/12/2022	0	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	19,000
SP5 @ 3'	10/12/2022	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320

Dash (-): Sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.**Red:** NMOCD Reclamation Standard exceedance.

Appendix A

Depth to Groundwater Information



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 Mewbourne Oil Company
 Silver Bullet Frac Booster
 32.049479,-103.978286
 Eddy County



Drafted: bja

Checked: lc

Date: 10/13/22



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water Column
C_04630 POD1		CUB	ED	3	4	3	22	26S	29E	596792	3543275	3126				
C_01354 X-3		CUB	ED	2	1	3	23	26S	29E	598323	3543837	3157		170		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 596454.97

Northing (Y): 3546383.46

Radius: 3220

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.


10/14/22 7:58 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)					(NAD83 UTM in meters)		
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	01354 X-3	2	1	3	23	26S	29E	598323	3543837 

x

Driller License: 500 **Driller Company:** HOLDER, TOM A.

Driller Name: HOLDER, TOM A.

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 16.00 **Depth Well:** 170 feet **Depth Water:**

x

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.


10/14/22 7:58 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
NA	C 04630 POD1	3	4	3	22	26S	29E	596792	3543275 
<hr/>									
Driller License: 1249		Driller Company:				ATKINS ENGINEERING ASSOC. INC.			
Driller Name:		ATKINS, JACKIE D.UELENER							
<hr/>									
Drill Start Date: 06/15/2022		Drill Finish Date:				06/15/2022		Plug Date:	
Log File Date: 07/15/2022		PCW Rcv Date:				Source:			
Pump Type:		Pipe Discharge Size:				Estimated Yield: 0 GPM			
Casing Size:		Depth Well:				Depth Water:			
<hr/>									

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/14/22 7:58 AM

POINT OF DIVERSION SUMMARY



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4630

Well owner: Devon Energy

Phone No.: 575-748-1838

Mailing address: 6488 7 Rivers Hwy

City: Artesia

State: New Mexico

Zip code: 88210

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge, Cameron Pruitt
- 4) Date well plugging began: 7/13/2022 Date well plugging concluded: 7/13/2022
- 5) GPS Well Location: Latitude: 32 deg, 1 min, 17.32 sec
Longitude: 103 deg, 58 min, 30.17 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 51 ft below ground level (bgl),
by the following manner: water level probe
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 5/23/2022
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Version: September 8, 2009

Page 1 of 2

OSE DT JUL 15 2022 AM 11:34

- For each interval plugged, describe within the following columns:**

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0-10'	Hydrated Bentonite	Approx. 15 gallons	15 gallons	Augers	
10'-55'	Drill Cuttings	Approx. 71 gallons	71 gallons	Boring	

MULTIPLY		BY	AND OBTAIN	
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

I, Jackie D. Atkins , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

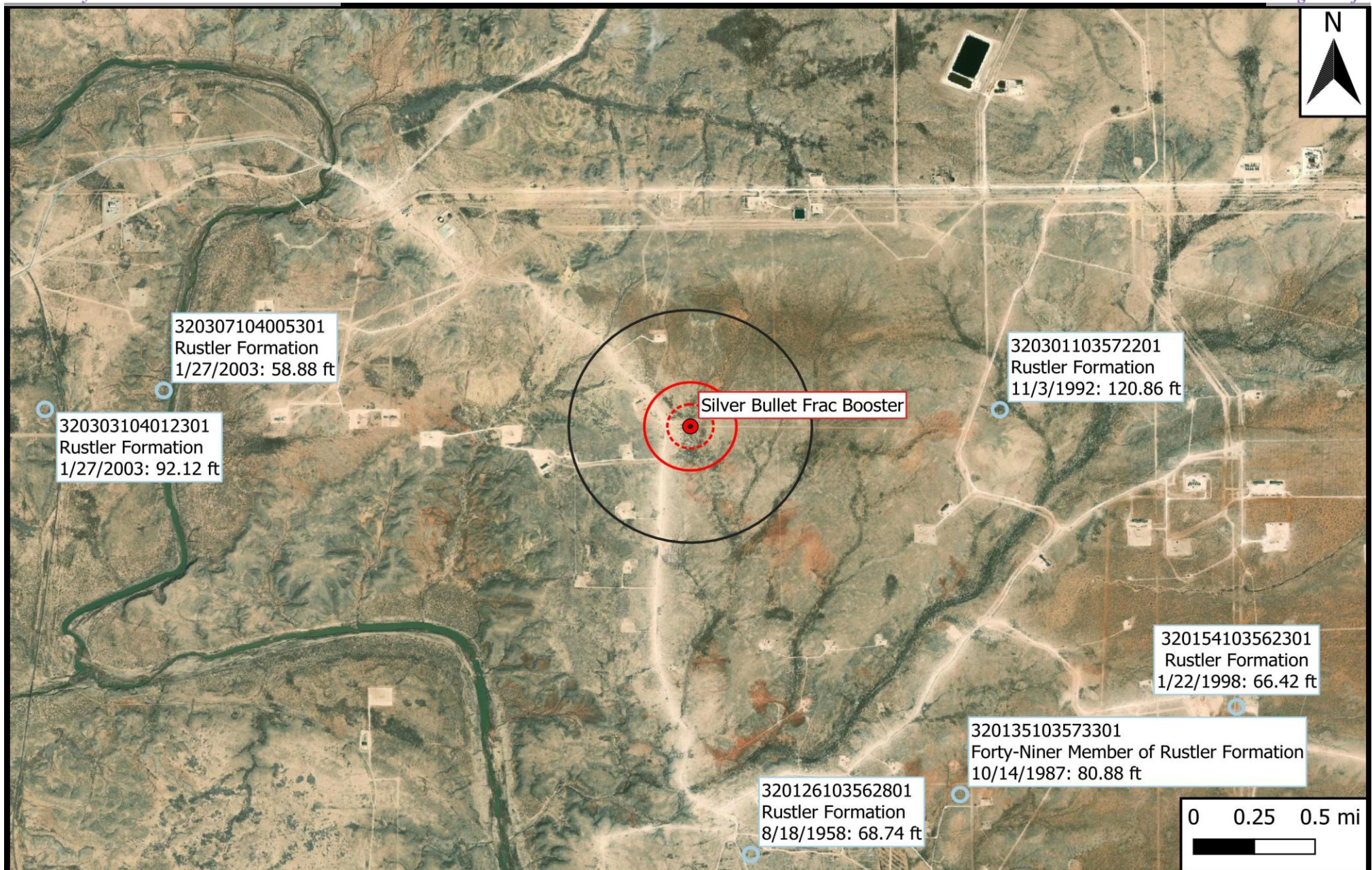
Jack Atkins

7/15/2022

Signature of Well Driller

Date _____

05E DTJ JUL 15 2022 AM 11:34

**Legend**

- Site Location
- Well - USGS
- 500 Ft Radius
- 1000 Ft Radius
- 0.5 Mi Radius

Figure 5


USGS Well Proximity Map
 Mewbourne Oil Company
 Silver Bullet Frac Booster
 GPS: 32.049542, -103.978304
 Eddy County



Drafted: mag

Checked: jwl

Date: 10/14/22

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MENU



26S.29E.22.340

IMPORTANT [Inventory Page](#) 

Monitoring location 320126103562801 is associated with a WELL in EDDY COUNTY, NEW MEXICO.
Water data back to 1958 are available online.

- ☐ 1 year ☐ 10 years
☒ Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

68.74 ft - Aug 18, 1958 12:00:00 AM GMT-7



drag handlers to change timeframe



Field visit: ☒ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1958-08-18 to 1958-08-18 ^

☒ **Depth to water level, ft below land surface**

1958-08-18 to 1958-08-18 v

☐ **Groundwater level above NAVD 1988, ft**

1958-08-18 to 1958-08-18 v

☐ **Groundwater level above NGVD 1929, feet**

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).

Summary of All Available Data


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26S.29E.23.31220



IMPORTANT [Inventory Page](#) 

Monitoring location 320135103573301 is associated with a WELL in EDDY COUNTY, NEW MEXICO.
Water data back to 1987 are available online.

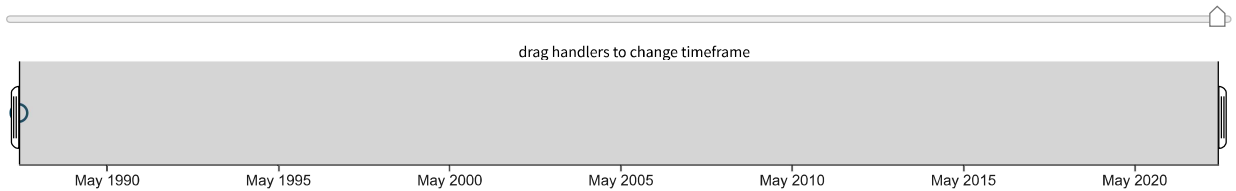
- ☐ 1 year ☐ 10 years
☒ Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

80.88 ft - Oct 14, 1987 12:00:00 AM MDT



Field visit: ☒ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1987-10-14 to 1987-10-14 ^

☒ **Depth to water level, ft below land surface**

1987-10-14 to 1987-10-14 v

☐ **Groundwater level above NAVD 1988, ft**

1987-10-14 to 1987-10-14 v

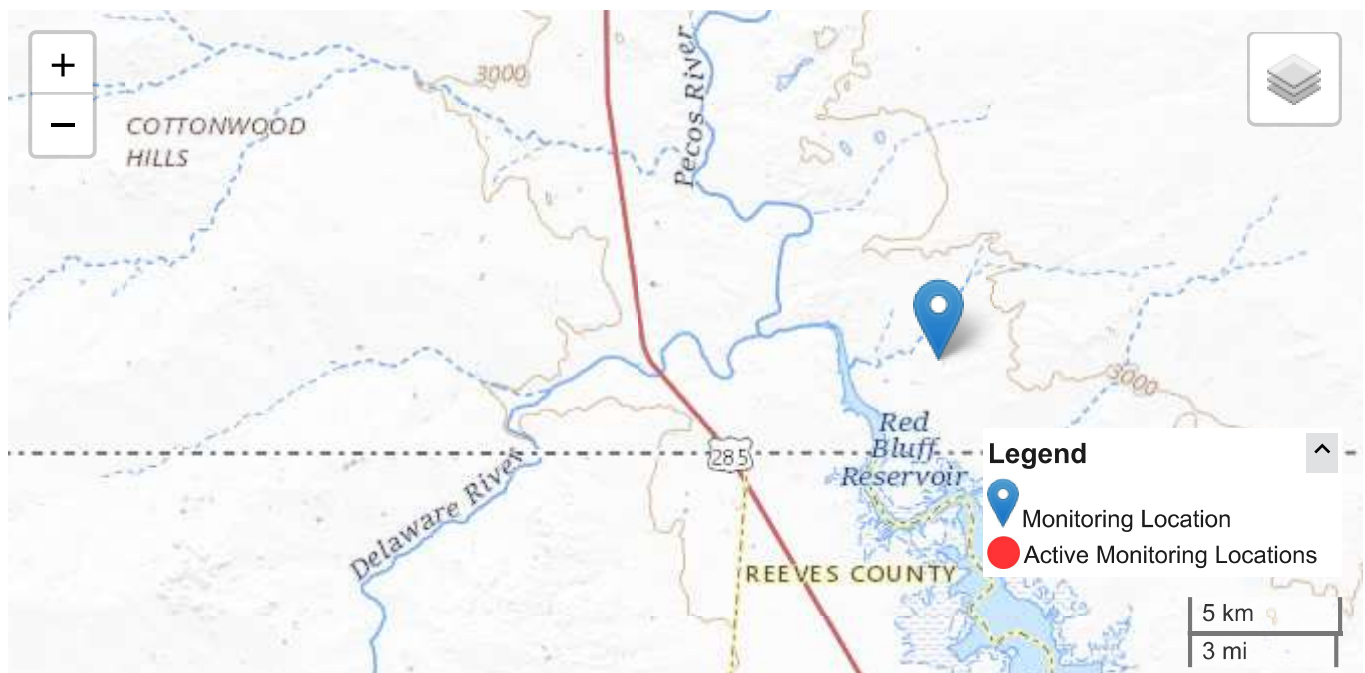
☐ **Groundwater level above NGVD 1929, feet**

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



ie National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National ...

Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).

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26S.29E.22.23341


IMPORTANT

Inventory Page



Monitoring location 320154103562301 is associated with a WELL in EDDY COUNTY, NEW MEXICO. Water data back to 1975 are available online.

☐ 1 year ☐ 10 years

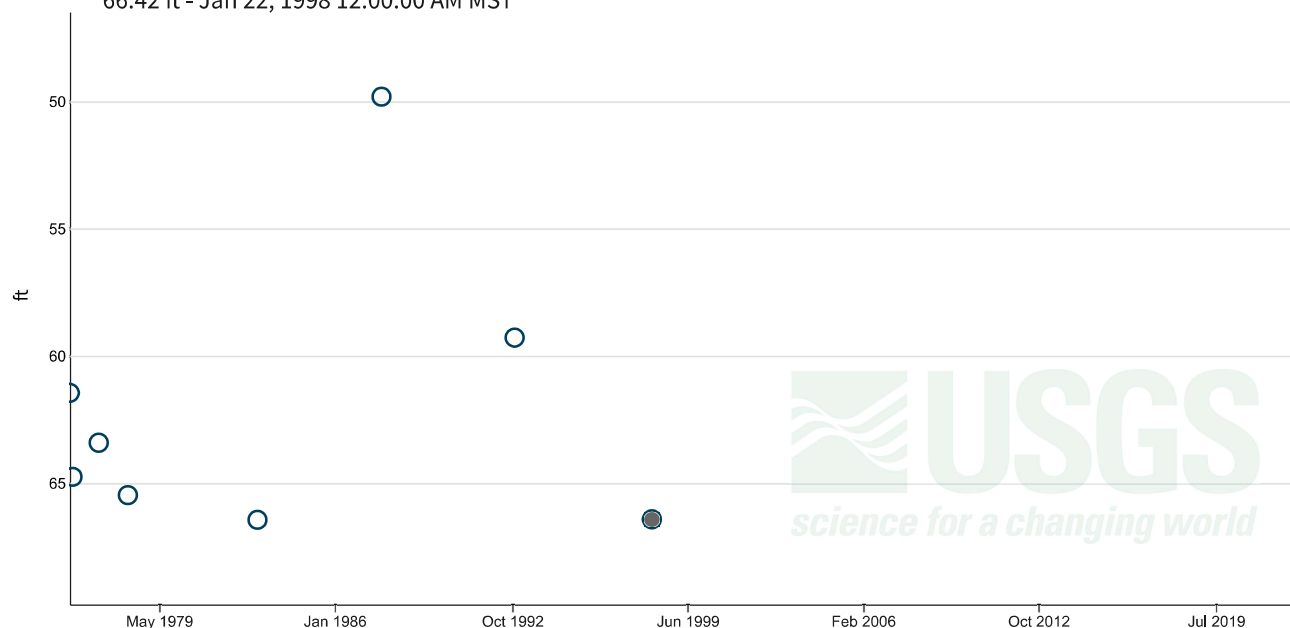
 Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

66.42 ft - Jan 22, 1998 12:00:00 AM MST



drag handlers to change timeframe



Field visit: ☐ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1975-12-09 to 1998-01-22 ^

☒ **Depth to water level, ft below land surface**

1975-12-09 to 1998-01-22 v

☐ **Groundwater level above NAVD 1988, ft**

1975-12-09 to 1998-01-22 v

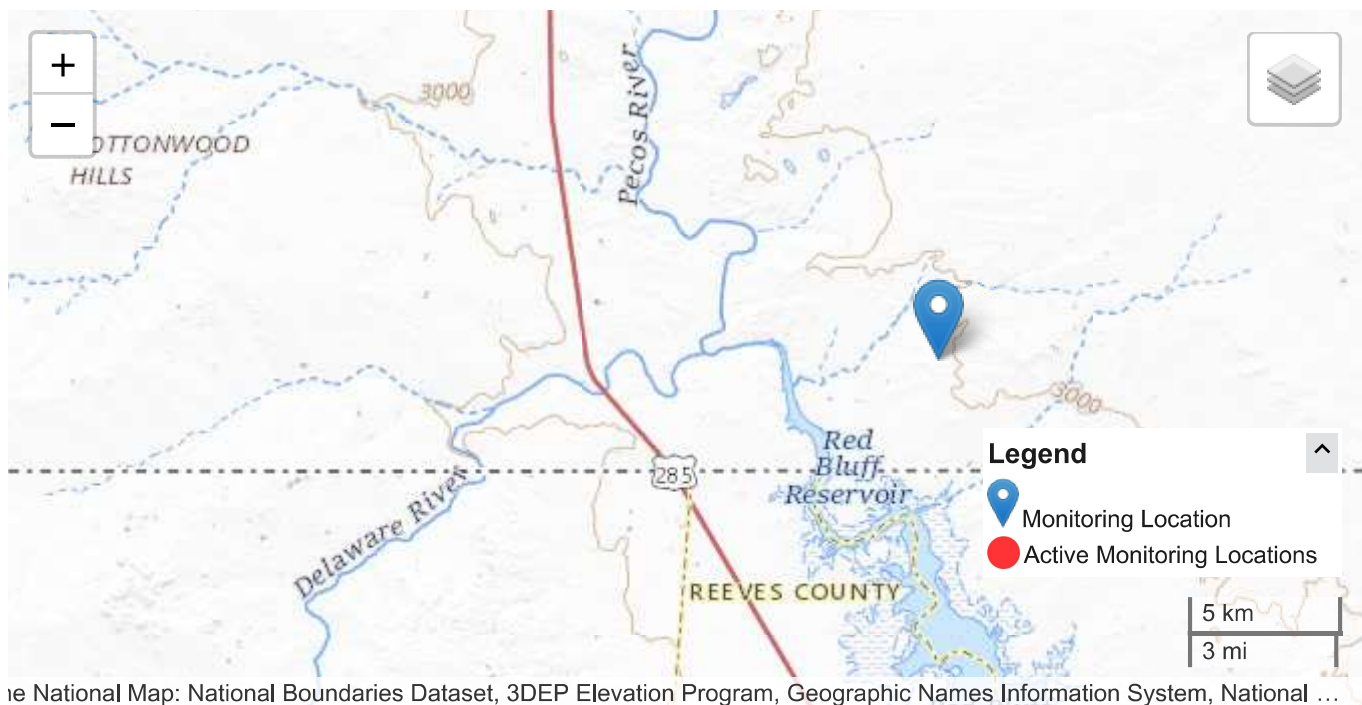
☐ **Groundwater level above NGVD 1929, feet**

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).


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26S.29E.16.213241



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Monitoring location 320301103572201 is associated with a WELL in EDDY COUNTY, NEW MEXICO.
Water data back to 1949 are available online.

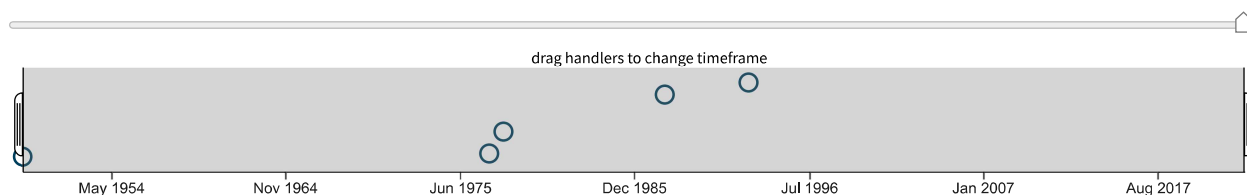
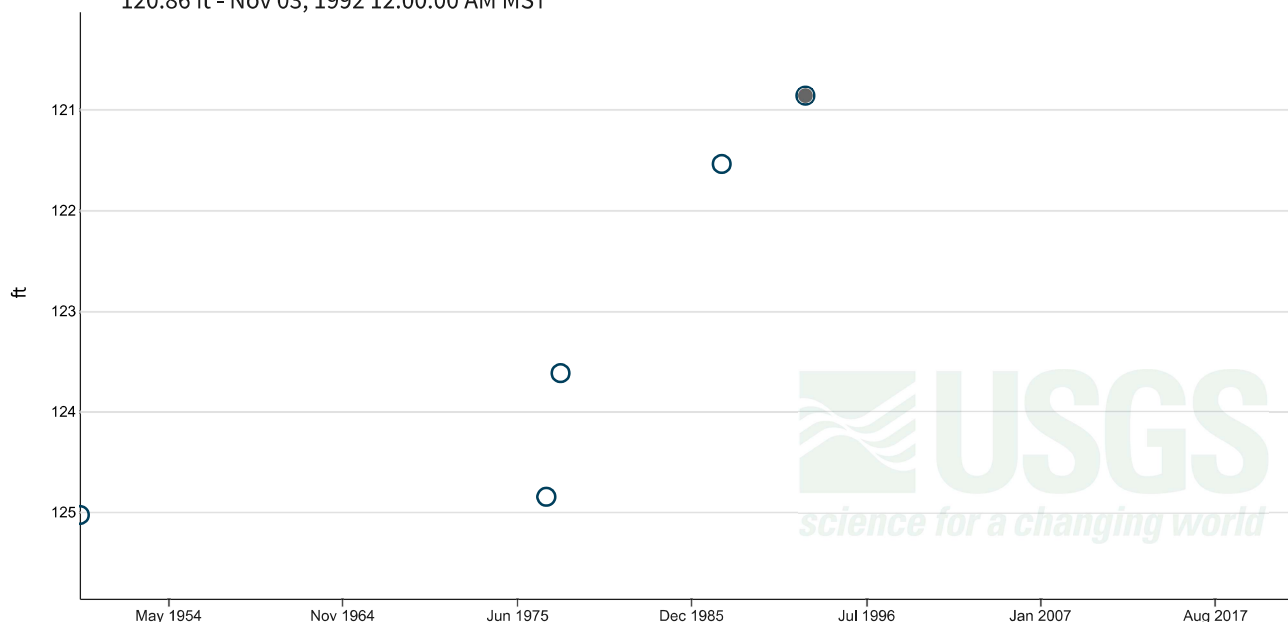
- ☐ 1 year ☐ 10 years
☒ Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

120.86 ft - Nov 03, 1992 12:00:00 AM MST



Field visit: ☒ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

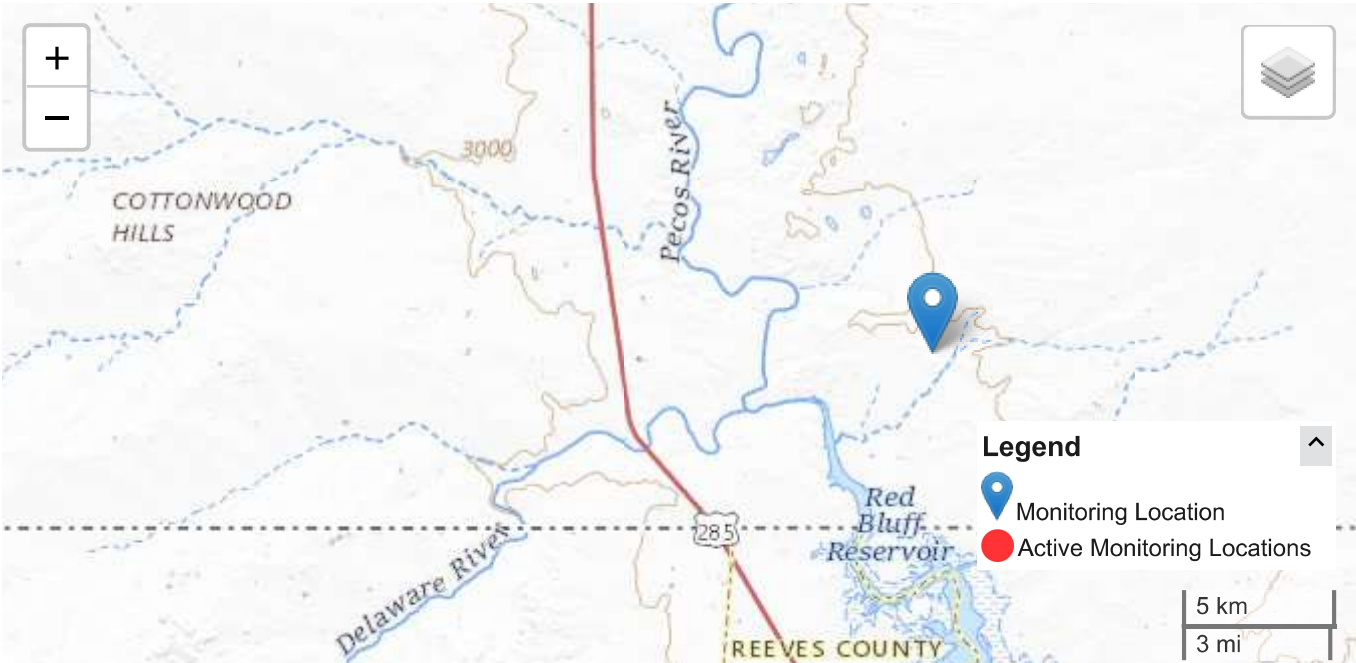
1949-01-03 to 1992-11-03	^
<input checked="" type="radio"/> Depth to water level, ft below land surface	
1949-01-03 to 1992-11-03	v
<input type="radio"/> Groundwater level above NAVD 1988, ft	
1949-01-03 to 1992-11-03	v
<input type="radio"/> Groundwater level above NGVD 1929, feet	

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).


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26S.28E.14.21412



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Monitoring location 320303104012301 is associated with a WELL in EDDY COUNTY, NEW MEXICO.
Water data back to 1978 are available online.

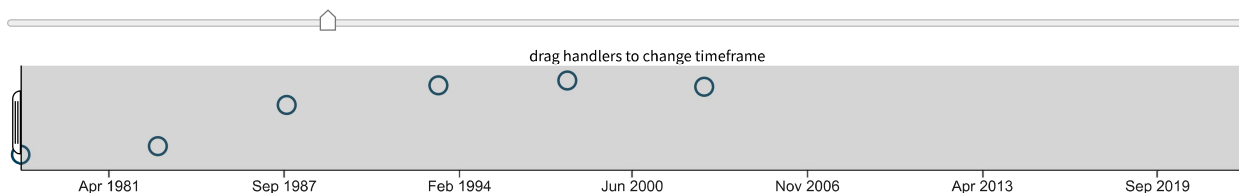
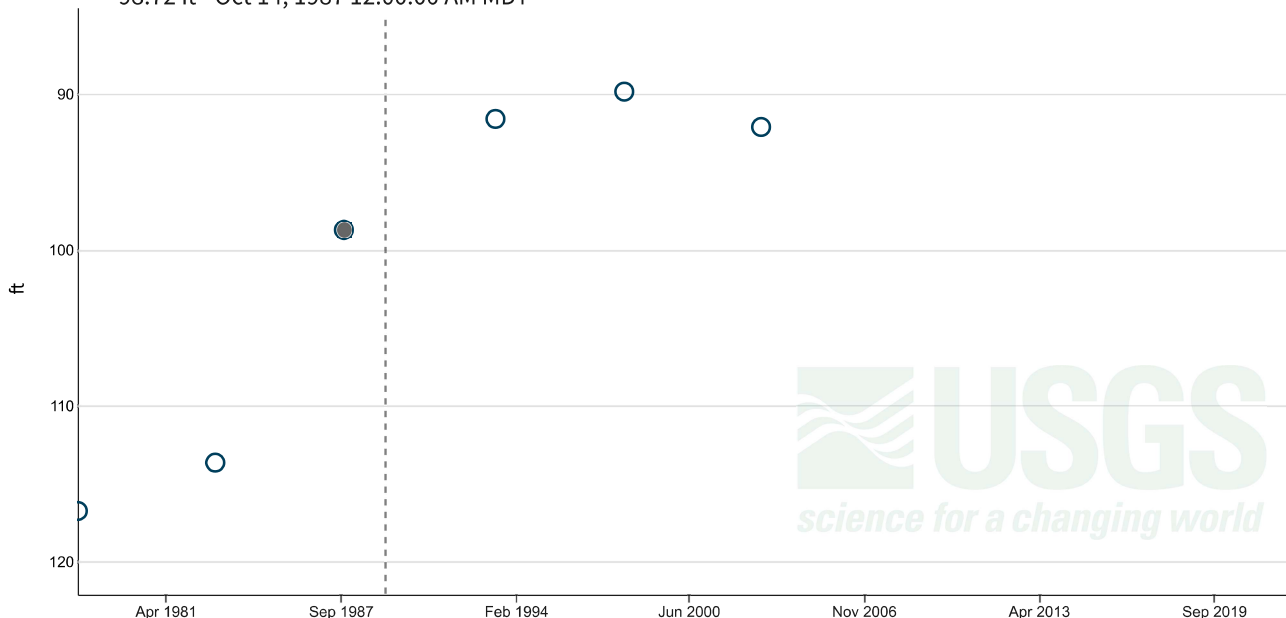
- ☐ 1 year ☐ 10 years
☒ Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

98.72 ft - Oct 14, 1987 12:00:00 AM MDT



Field visit: ☒ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1978-01-13 to 2003-01-27	^
<input checked="" type="radio"/> Depth to water level, ft below land surface	
1978-01-13 to 2003-01-27	v
<input type="radio"/> Groundwater level above NAVD 1988, ft	
1978-01-13 to 2003-01-27	v
<input type="radio"/> Groundwater level above NGVD 1929, feet	

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



ie National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National ...

Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).


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26S.28E.13.11214



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Monitoring location 320307104005301 is associated with a WELL in EDDY COUNTY, NEW MEXICO.
Water data back to 1948 are available online.

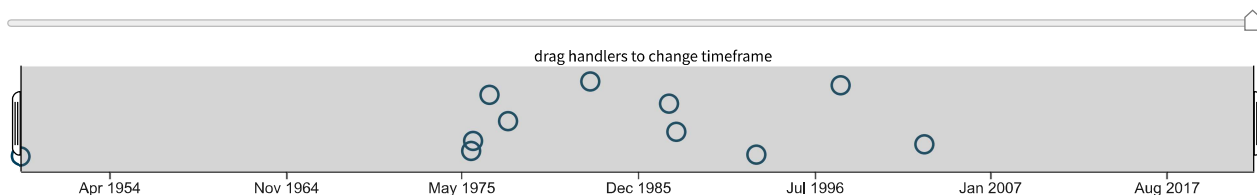
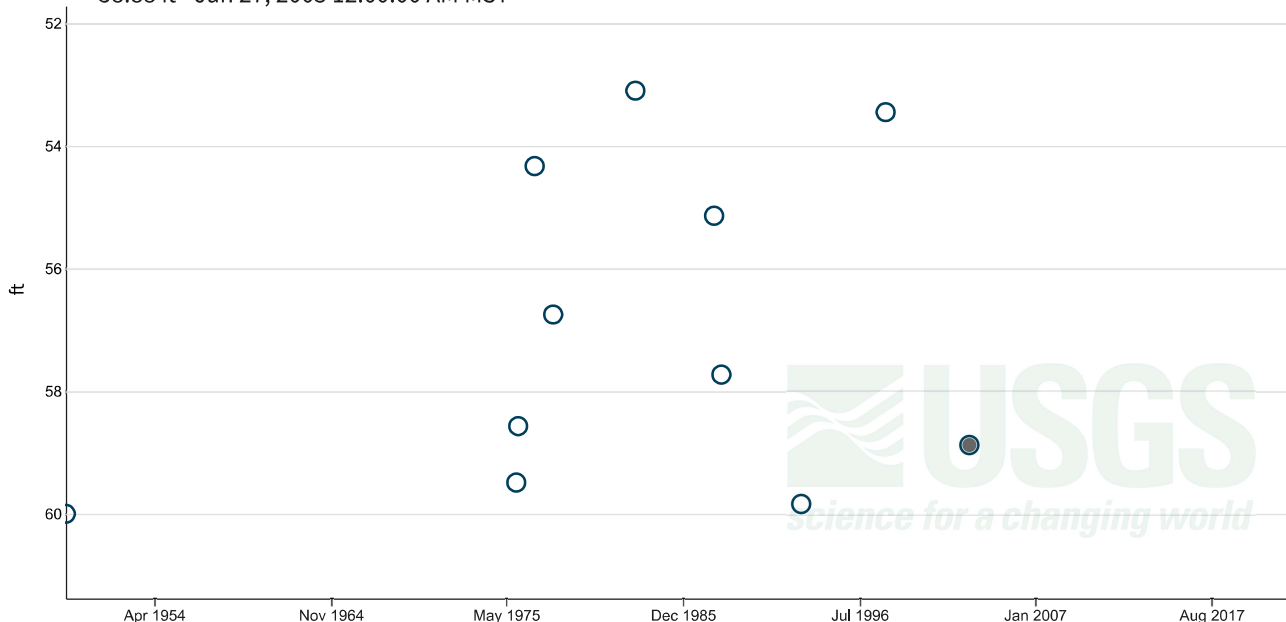
- ☐ 1 year ☐ 10 years
☒ Period of record

Change time span

Retrieve data

Depth to water level, ft below land surface

58.88 ft - Jan 27, 2003 12:00:00 AM MST



Field visit: ☒ Approved

Questions or Comments

☐ Compare to last year

☐ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1948-12-15 to 2003-01-27 ^

☒ **Depth to water level, ft below land surface**

1948-12-15 to 2003-01-27 v

☐ **Groundwater level above NAVD 1988, ft**

1948-12-15 to 2003-01-27 v

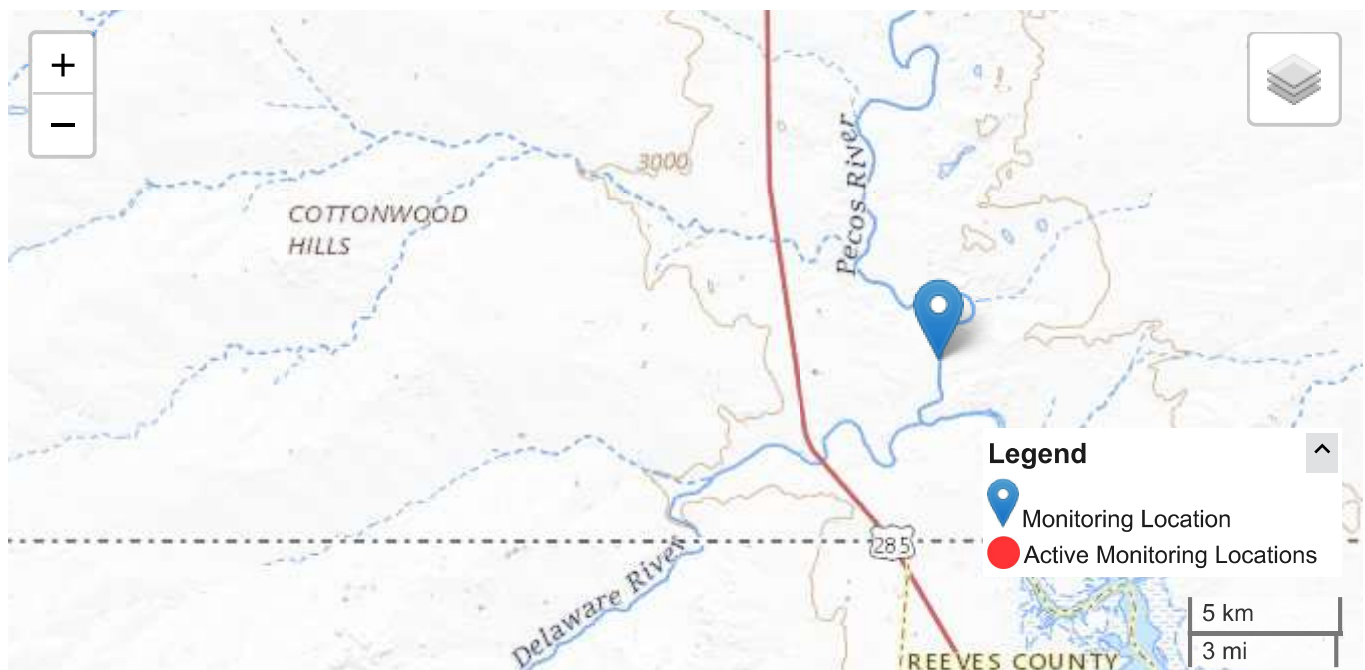
☐ **Groundwater level above NGVD 1929, feet**

Hydrograph data table(s)

Groundwater Data BETA

Why don't I see a groundwater graph?

No groundwater level statistical daily data has been reported for this location.



ie National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National ...

Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).

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Appendix B

Field Data & Soil Profile Logs

Sample Log

Date: 10/12/22

Project: Silver Bullet Frac Booster

Project Number: pending

Latitude: 32.049542

Longitude: -103.978304

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



Soil Profile

Date: _____

Project: Silver Bullet Frac Booster

Project Number: _____ pending _____ Latitude: 32.049542 Longitude: -103.978304

Depth (ft. bgs)	Description
1 Caliche	Soft Caliche / Top soil mix
2 ↓	↓
3	
4	
5	
6	
7	
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40	

Appendix C

Laboratory Analytical Reports



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 18, 2022

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: SILVER BULLET FRAC BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 10/12/22 16:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: NH 1 @ SURFACE (H224804-01)

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	82.8	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 96.3 % 45.3-161

Surrogate: 1-Chlorooctadecane 111 % 46.3-178

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: NH 1 @ 1' (H224804-02)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 110 % 46.3-178

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: EH 1 @ SURFACE (H224804-03)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	10.6	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 108 % 45.3-161

Surrogate: 1-Chlorooctadecane 114 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: EH 1 @ 1' (H224804-04)

BTEx 8021B			mg/kg							
			Analyzed By: JH/							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	11.9	10.0	10/14/2022	ND	207	104	200	0.594		
DRO >C10-C28*	28.5	10.0	10/14/2022	ND	224	112	200	0.373		
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND						

Surrogate: 1-Chlorooctane 109 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SH 1 @ SURFACE (H224804-05)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	16.8	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 113 % 45.3-161

Surrogate: 1-Chlorooctadecane 119 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SH 1 @ 1' (H224804-06)

BTEx 8021B			mg/kg							
			Analyzed By: JH/							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594		
DRO >C10-C28*	36.4	10.0	10/14/2022	ND	224	112	200	0.373		
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND						

Surrogate: 1-Chlorooctane 115 % 45.3-161

Surrogate: 1-Chlorooctadecane 119 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: WH 1 @ SURFACE (H224804-07)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEx	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	10.8	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 93.7 % 45.3-161

Surrogate: 1-Chlorooctadecane 95.4 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: WH 1 @ 1' (H224804-08)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	12.4	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 112 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ SURFACE (H224804-09)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 119 % 45.3-161

Surrogate: 1-Chlorooctadecane 124 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ 3' (H224804-10)

BTX 8021B			mg/kg							
			Analyzed By: JH/							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594		
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	224	112	200	0.373		
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND						

Surrogate: 1-Chlorooctane 99.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 102 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 2 @ SURFACE (H224804-11)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14300	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	145	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 108 % 45.3-161

Surrogate: 1-Chlorooctadecane 114 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 2 @ 3' (H224804-12)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEx	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	207	104	200	0.594	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	224	112	200	0.373	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 110 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 3 @ SURFACE (H224804-13)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.84	92.2	2.00	13.2		
Toluene*	<0.050	0.050	10/15/2022	ND	1.83	91.5	2.00	12.9		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.80	90.2	2.00	12.6		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.51	91.8	6.00	12.3		
Total BTEx	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	944	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 111 % 45.3-161

Surrogate: 1-Chlorooctadecane 133 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 3 @ 2' (H224804-14)

BTEx 8021B			mg/kg							
			Analyzed By: JH/							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.77	88.5	2.00	17.9		
Toluene*	<0.050	0.050	10/15/2022	ND	1.74	86.8	2.00	17.7		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.72	85.8	2.00	17.9		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.27	87.8	6.00	17.9		
Total BTEX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38		
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95		
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND						

Surrogate: 1-Chlorooctane 104 % 45.3-161

Surrogate: 1-Chlorooctadecane 125 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 4 @ SURFACE (H224804-15)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.77	88.5	2.00	17.9		
Toluene*	<0.050	0.050	10/15/2022	ND	1.74	86.8	2.00	17.7		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.72	85.8	2.00	17.9		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.27	87.8	6.00	17.9		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 120 % 45.3-161

Surrogate: 1-Chlorooctadecane 145 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 4 @ 1' (H224804-16)

BTX 8021B			mg/kg							
			Analyzed By: JH/							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.77	88.5	2.00	17.9		
Toluene*	<0.050	0.050	10/15/2022	ND	1.74	86.8	2.00	17.7		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.72	85.8	2.00	17.9		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.27	87.8	6.00	17.9		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38		
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95		
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND						

Surrogate: 1-Chlorooctane 113 % 45.3-161

Surrogate: 1-Chlorooctadecane 135 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 5 @ SURFACE (H224804-17)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.77	88.5	2.00	17.9		
Toluene*	<0.050	0.050	10/15/2022	ND	1.74	86.8	2.00	17.7		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.72	85.8	2.00	17.9		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.27	87.8	6.00	17.9		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	19000	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 77.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 92.2 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 10/12/2022
 Reported: 10/18/2022
 Project Name: SILVER BULLET FRAC BOOSTER
 Project Number: 16913
 Project Location: MEWBOURNE - RURAL EDDY CO., NM

Sampling Date: 10/12/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 5 @ 3' (H224804-18)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/15/2022	ND	1.77	88.5	2.00	17.9		
Toluene*	<0.050	0.050	10/15/2022	ND	1.74	86.8	2.00	17.7		
Ethylbenzene*	<0.050	0.050	10/15/2022	ND	1.72	85.8	2.00	17.9		
Total Xylenes*	<0.150	0.150	10/15/2022	ND	5.27	87.8	6.00	17.9		
Total BTX	<0.300	0.300	10/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	10/14/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/14/2022	ND	214	107	200	2.38	
DRO >C10-C28*	<10.0	10.0	10/14/2022	ND	209	104	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	10/14/2022	ND					

Surrogate: 1-Chlorooctane 102 % 45.3-161

Surrogate: 1-Chlorooctadecane 122 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/2

Company Name: Etech Environmental & Safety Solutions Project Manager: Joel Lowry Address: 2617 W. Marland City: Hobbs State: N.M. Zip: 88240 Phone #: 575-264-9884 Fax #: / Project #: 16913 Project Owner: Mawbourne Project Name: Silver Bullet Frac Booster Project Location: Rival Eddy Co., NM Sampler Name: Miguel Purnirez				BILL TO P.O. #: Company: Mawbourne Attn: Address: City: State: Zip: Phone #: Fax #:				ANALYSIS REQUEST																			
FOR LAB USE ONLY				MATRIX				PRESERV.		SAMPLING																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	BTEX	TPH										
1624804																											
11	SP2 @ surface	G	1			Y							10/12/12		X	X	X										
12	SP2 @ 3'																										
13	SP3 @ surface																										
14	SP3 @ 2'																										
15	SP4 @ surface																										
16	SP4 @ 1'																										
17	SP5 @ surface																										
18	SP5 @ 3'																										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Relinquished By:		Date: 10-12-22 Time: 1639 Date: Time:		Received By: Received By:		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C 6.12 Corrected Temp. °C 5.52		Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials)	
Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID #113 Correction Factor -0.6°C		Observed Temp. °C Corrected Temp. °C	

FORM-006 R 3.3 07/18/12

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Appendix D

Photographic Log

Photographic Log




Photo Number: 1	 <p>Oct 11, 2022 at 12:16:38 PM +32.049506,-103.977824</p>
Photo Direction: West	
Photo Description: View of the affected area.	

Photo Number: 2	 <p>Oct 11, 2022 at 12:16:40 PM +32.049506,-103.977824</p>
Photo Direction: West	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 3	
Photo Direction: Northwest	
Photo Description: View of the affected area.	

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 152351

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 152351
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	The Remediation Plan is Conditionally Approved. This release is in a high karst area and will need to be remediated to the strictest closure criteria of <50' depth to groundwater from Table 1 of the spill rule. If rock refusal is encountered, use hydrovac to clean contaminated soil off rock. Use rotary drill to drill 18"-24" hole into the rock, pull sample and do lab analysis. If clean, layer clean rock with microbial strains to digest organics and hydrocarbons. Back-fill with clean material. Please make sure the edges/sidewalls are delineated to 600 mg/kg for chlorides and 100 mg/kg TPH.	1/19/2023