State of New Mexico
Oil Conservation Division

Incident ID	nAPP2325141309
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?	>115 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ 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)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ 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?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2325141309
District RP	
Facility ID	
Application ID	

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: 10/27/2023

email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: Shelly Wells Date: 10/27/2023

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2325141309
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Connor Walker Title: Sr. Engineer

Signature:  Date: 10/27/2023

email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: Shelly Wells Date: 10/27/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Scott Rodgers Date: 01/09/2024

Printed Name: Scott Rodgers Title: Environmental Specialist Adv.

Remediation Summary & Soil Closure Request

Mewbourne Oil Company
ARWMS Deer Booster 82623
Lea County, New Mexico
Unit Letter "O", Section 21, Township 23 South, Range 34 East
Latitude 32.283680° North, Longitude 103.472709° West
NMOCD Reference No. nAPP2325141309

Prepared By:

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

Ben J. Arguijo

Lance Crenshaw

ETECH Environmental & Safety Solutions, Inc.

Midland • San Antonio • Lubbock • Hobbs • Lafayette

TABLE OF CONTENTS

1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the ARWMS Deer Booster 82623. Details of the release are summarized below:

Location of Release Source

Latitude: 32.283680° Longitude: -103.472709°

Provided GPS are in WGS84 format.

Site Name:	ARWMS Deer Booster 82623	Site Type:	Pipeline
Date Release Discovered:	8/23/2023	API # (if applicable):	N/A

Unit Letter	Section	Township	Range	County
"O"	21	23S	34E	Lea

Surface Owner: [ ] State [ ] Federal [ ] Tribal [X] Private (Name Limestone Basin Prop Ranch, LLC)

Nature and Volume of Release

[ ] Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
[X] Produced Water	Volume Released (bbls) 57	Volume Recovered (bbls) 30
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	[X] Yes [ ] No [ ] N/A
[ ] Condensate	Volume Released (bbls)	Volume Recovered (bbls)
[ ] Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
[ ] Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:
A 2” poly transition developed a hole.

Initial Response

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

Previously submitted portions of the New Mexico Oil Conservation Division (NMOCD) Form C-141 are available in 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 ARWMS Deer Booster 82623 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?	>115'			
Did the release impact groundwater or surface water?	☐	Yes	☒	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐	Yes	☒	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?	☐	Yes	☒	No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	☐	Yes	☒	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?	☐	Yes	☒	No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐	Yes	☒	No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	☐	Yes	☒	No
Are the lateral extents of the release within 300 feet of a wetland?	☐	Yes	☒	No
Are the lateral extents of the release overlying a subsurface mine?	☐	Yes	☒	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐	Yes	☒	No
Are the lateral extents of the release within a 100-year floodplain?	☐	Yes	☒	No
Did the release impact areas not on an exploration, development, production or storage site?	☒	Yes	☐	No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & 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 ARWMS Deer Booster 82623 release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
>115'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	20,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	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 REMEDIATION ACTIVITIES SUMMARY

On September 5, 2023, remediation activities commenced at the ARWMS Deer Booster 82623 release site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. Olfactory/visual senses and/or a chloride test kit were utilized to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. The sidewalls and floors of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis.

On September 7, 2023, Etech collected six (6) confirmation soil samples (EW 1, SW 1, WW 1, FL #1 @ 3 Ft, FL #2 @ 4 Ft, and FL #3 @ 2 Ft) from the sidewalls and floor of the excavated area. The soil samples were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from 64.0 mg/kg in soil samples EW 1 and SW 1 to 592 mg/kg in soil sample FL #1 @ 3 Ft.

On September 8, 2023, Etech collected nine (9) confirmation soil samples (EW 2, WW 2, and FL #4 @ 3 Ft through FL #10 @ 4 Ft) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from 32.0 mg/kg in soil sample FL #5 @ 2 Ft to 272 mg/kg in soil sample EW 2.

On September 11, 2023, Etech collected six (6) confirmation soil samples (NW 1, NW 2, EW 3, SW 2, WW 3, and FL #11 @ 3 Ft) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil sample EW 3 to 224 mg/kg in soil sample FL #11 @ 3 Ft.

On September 13, 2023, Etech collected 11 confirmation soil samples (NW 3, SW 3, and FL 12 @ 1 through FL 20 @ 1 1/2) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from 160 mg/kg in soil samples SW 3 and FL 12 @ 1 to 240 mg/kg in soil sample FL 19 @ 1 1/2.

The final dimensions of the excavated area were approximately 474 feet in length, six (6) to 58 feet in width, and one (1) to four (4) feet in depth. During the course of remediation activities, Etech transported approximately 580 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 580 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

Soil sample locations and the extent of the excavated area are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data is provided in Appendix B. General photographs of the site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix E.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was 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.

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with NMOCD regulatory guidelines. Impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards was excavated and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from confirmation soil samples indicate in-situ concentrations of BTEX, TPH, and chloride are below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Mewbourne Oil Company provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the ARWMS Deer Booster 82623 release site.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* 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.

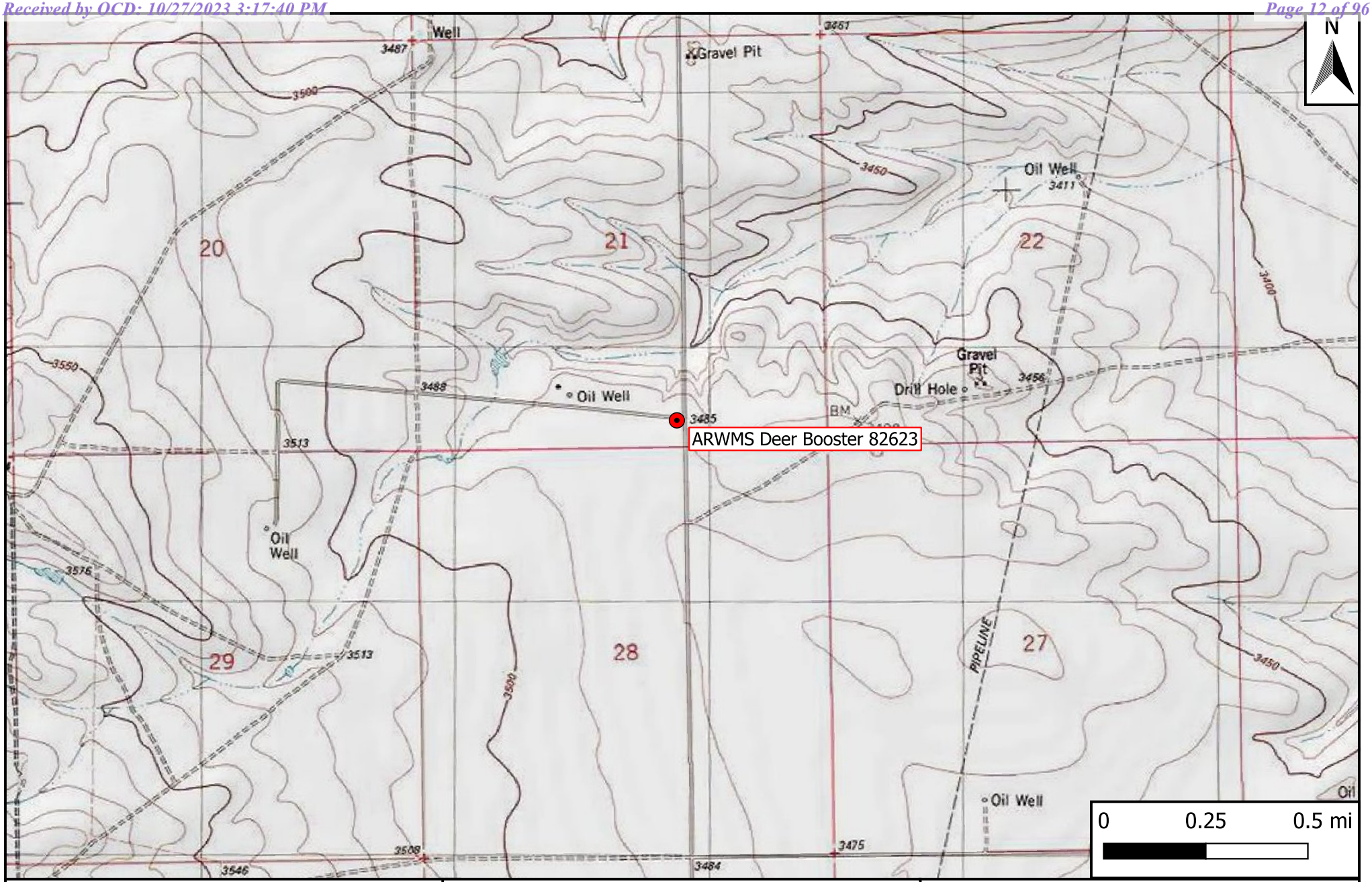
8.0 DISTRIBUTION

Mewbourne Oil Company
4801 Business Park Blvd.
Hobbs, NM 88240

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1220 South St. Francis Drive
Santa Fe, NM 87505

(Electronic Submission)

Figure 1
Topographic Map



Legend

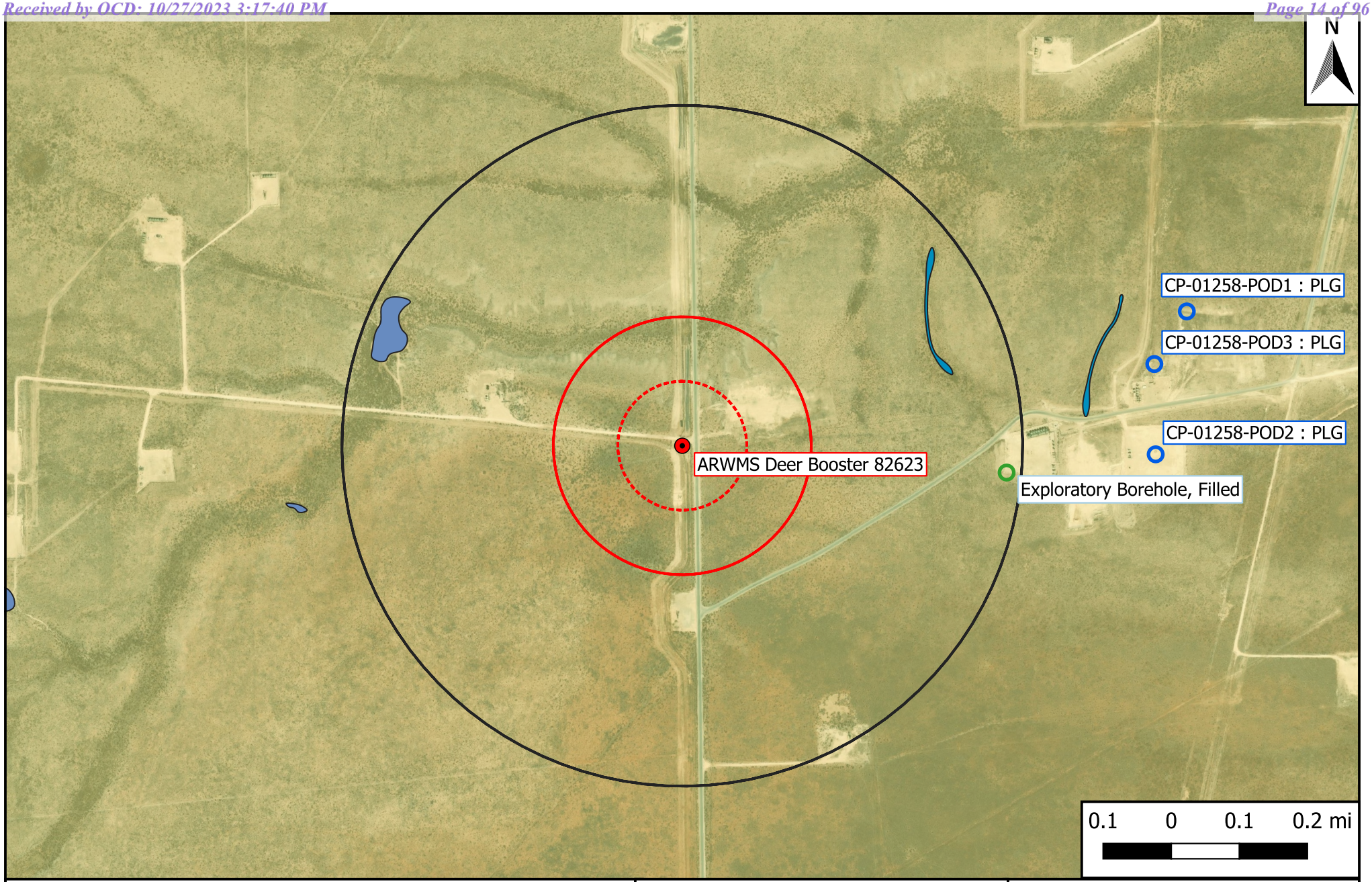
- Site Location

Figure 1
Topographic Map
Mewbourne Oil Company
ARWMS Deer Booster 82623
GPS: 32.283680,-103.472709
Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: lc Date: 9/7/23

Figure 2
Site Characterization Map



Legend

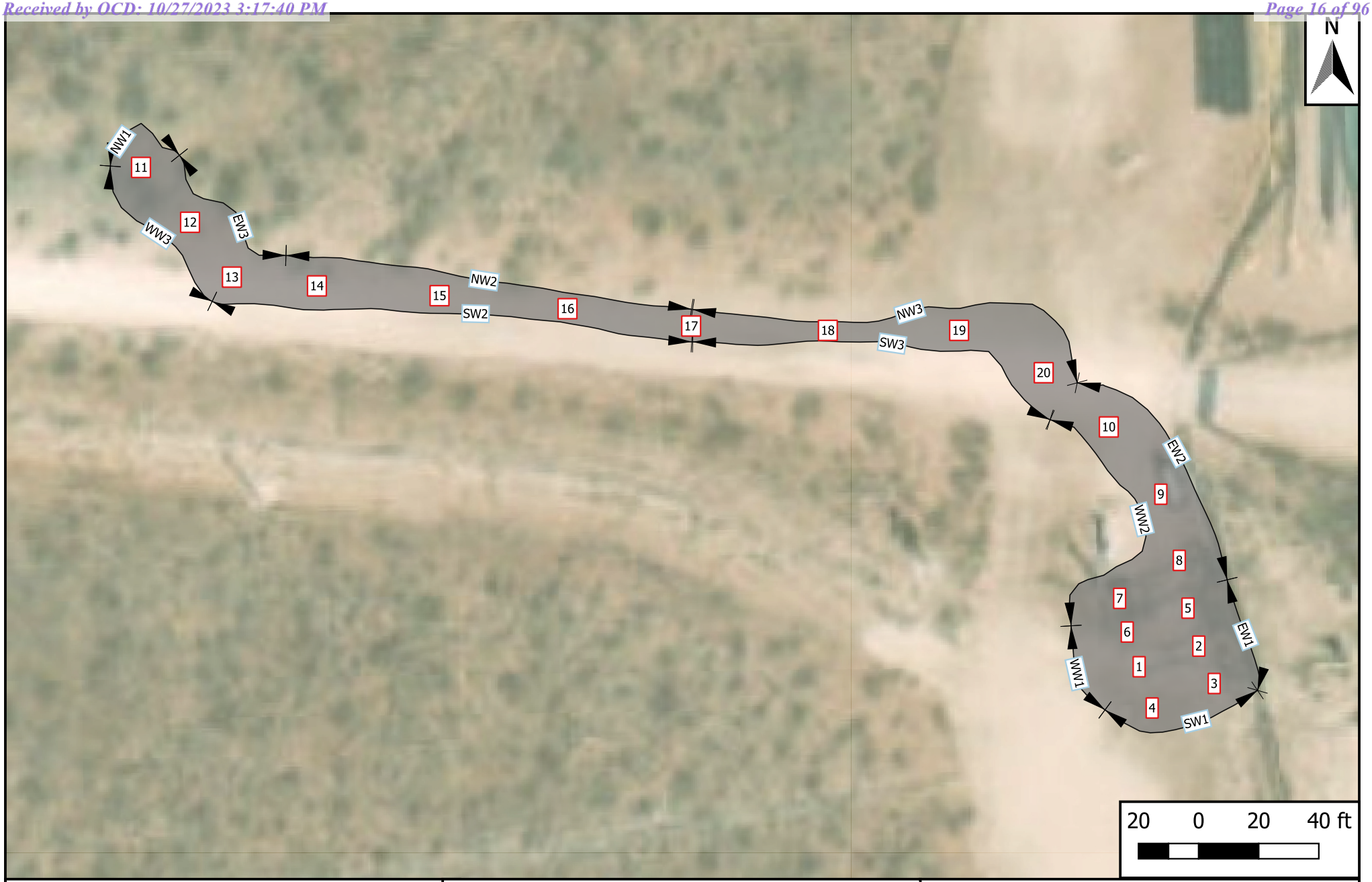
- Site Location
- Well - NMOSE
- Well - USGS
- Well - Exploratory/Monitor
- Potash Mine Workings
- 1% Annual Flood Chance
- Emergent/Forested Wetlands
- Freshwater Pond/Lake
- Karst Potential (Low/Med./High)
- Riverine
- 500-Ft Radius
- 1,000-Ft Radius
- 0.5-Mi Radius
- Municipal Boundary

Figure 2
Site Characterization Map
Mewbourne Oil Company
Chicago 9/8 Battery SWD Line
GPS: 32.2317671, -104.085100
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: lc Date: 9/7/23

Figure 3
Site & Sample Location Map



Legend

- Excavation Extent
- Composite Floor Sample
- Composite Wall Sample

Figure 3
Site & Sample Location Map
Mewbourne Oil Company
ARWMS Deer Booster 82623
GPS: 32.283680,-103.472709
Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: lc Date: 9/29/23

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1
Concentrations of BTEX, TPH & Chloride in Soil
Mewbourne Oil Company
ARWMS Deer Booster 82623
NMOCD Ref. #: nAPP2325141309

NMOCD Closure Criteria				**10**	**50**	**N/A**	**N/A**	**1,000**	**N/A**	**2,500**	**20,000**
NMOCD Reclamation Standard				**10**	**50**	**N/A**	**N/A**	**N/A**	**N/A**	**100**	**600**
				SW 846 8021B		**SW 846 8015M Ext.**					**4500 Cl**
Sample ID	**Date**	**Depth (Feet)**	**Soil Status**	**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)**
NW 1	9/11/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW 2	9/11/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW 3	9/13/2023	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
EW 1	9/7/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
EW 2	9/8/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
EW 3	9/11/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW 1	9/7/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW 2	9/11/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
SW 3	9/13/2023	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
WW 1	9/7/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
WW 2	9/8/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
WW 3	9/11/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL #1 @ 3 Ft	9/7/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
FL #2 @ 4 Ft	9/7/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	432
FL #3 @ 2 Ft	9/7/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FL #4 @ 3 Ft	9/8/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL #5 @ 2 Ft	9/8/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL #6 @ 3 Ft	9/8/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL #7 @ 1 Ft	9/8/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL #8 @ 2 1/2 Ft	9/8/2023	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL #9 @ 2 Ft	9/8/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL #10 @ 4 Ft	9/8/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL #11 @ 3 Ft	9/11/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FL 12 @ 1	9/13/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FL 13 @ 1	9/13/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FL 14 @ 3	9/13/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
FL 15 @ 1	9/13/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
FL 16 @ 1 1/2	9/13/2023	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FL 17 @ 1 1/2	9/13/2023	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FL 18 @ 1	9/13/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
FL 19 @ 1 1/2	9/13/2023	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
FL 20 @ 1 1/2	9/13/2023	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208

Dash (-): Sample not analyzed for that constituent.
Bold: NMOCD Closure Criteria exceedance.
Red: NMOCD Reclamation Standard exceedance.

Appendix A
Depth to Groundwater Information

Environmental & Safety Solutions, Inc.

Soil Boring/Temporary Monitor Well SB-1

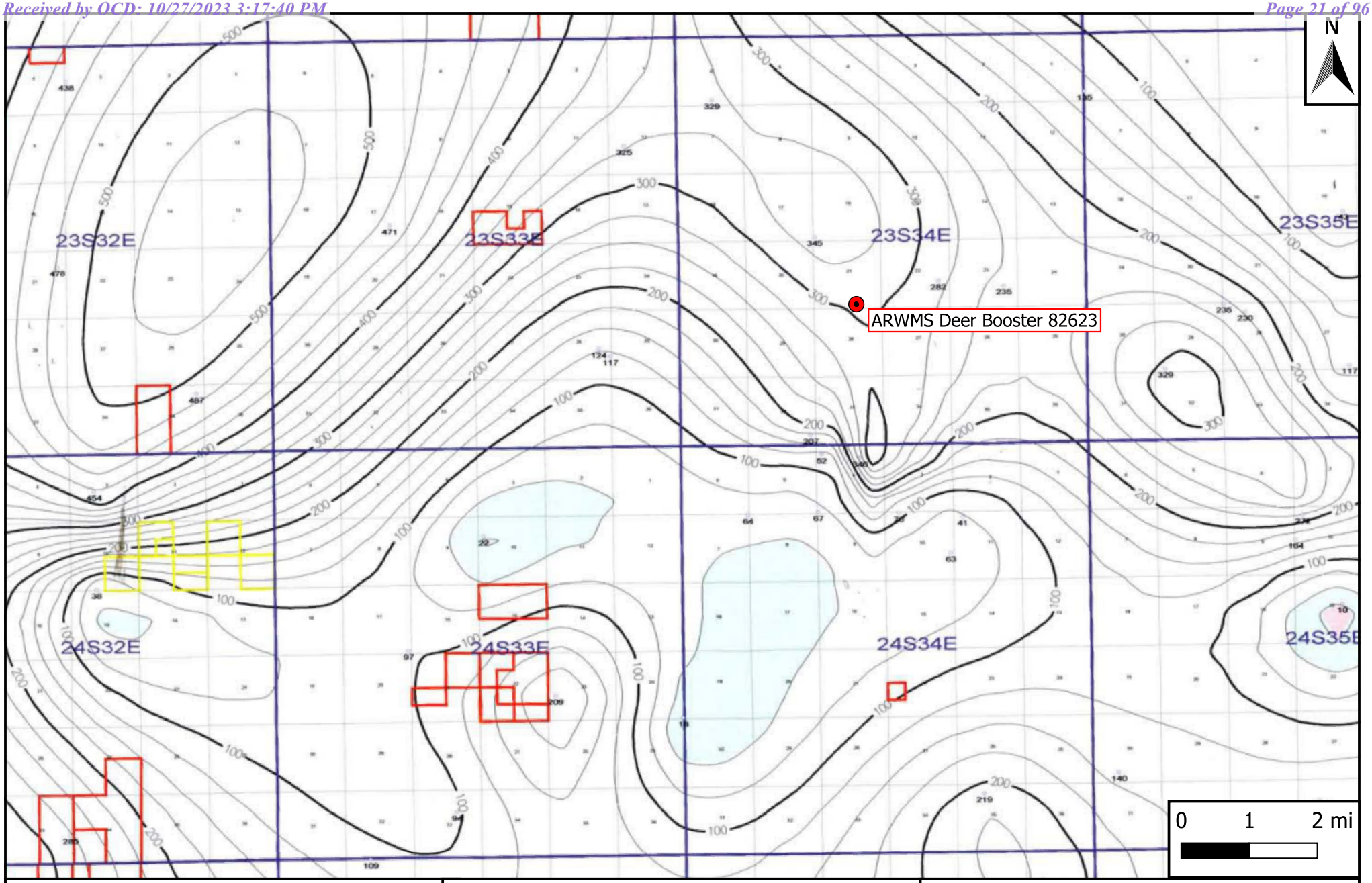
Client: Mewbourne Oil Company	**Well/Borehole ID:** SB-1	**Drilling Company:** Ready Drill, LLC
Site: ARWMS Deer Booster	**Coordinates (NAD 83):** 32.28301,-103.46458	**Driller:** Ready Drill, LLC
NMOCD Reference #: nAPP2236030437	**Drilling Date:** 1/19/2023	**Drilling Method:** Air Rotary
Location: Lea Co., NM	**Depth of Boring (ft):** 115	**Logged By:** Ready Drill, LLC
PLSS: U/L "O", Sec. 21, T23S, R34E	**Depth to Groundwater (ft):** N/A	**Drafted By:** B.J. Arguijo

Completion: N/A **Casing:** N/A **Screen:** N/A

Comments: Soil boring was advanced in the southwest corner of the nearby Gazelle 22 B3MD Federal Com #001H/002H location.

Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction
0			Caliche	-	-	-	Open hole. No casing installed
10				-	-	-	
20				-	-	-	
30			Sand	-	-	-	
40				-	-	-	
50			Caliche	-	-	-	
60				-	-	-	
70			Sand	-	-	-	
80				-	-	-	
90				-	-	-	
100			Soft sandstone	-	-	-	
110				-	-	-	
120			Notes: • Total Depth = 115 feet below ground surface (bgs) • Lines between material types represent approximate boundaries. Actual transitions may be gradual. • Due to the non-cohesive nature of the soil at lower depths, water was injected beginning at approximately 22 feet bgs to prevent collapse of the borehole.				
130							
140							

Disclaimer This bore log is intended for environmental not geotechnical purposes.



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
Mewbourne Oil Company
ARWMS Deer Booster 82623
GPS: 32.283680,-103.472709
Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: lc Date: 9/7/23

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	Water Column
CP 01258 POD2		CP	LE	1	4	3	22	23S	34E	644941	3572883	1119	65		
CP 01258 POD3		CP	LE	1	4	3	22	23S	34E	644938	3573097	1132	25		
CP 01258 POD1		CP	LE	1	4	3	22	23S	34E	645015	3573221	1234	25		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 643822.23 **Northing (Y):** 3572904.16 **Radius:** 1610

9/29/23 3:25 PM

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
	CP 01258 POD1	1	4	3	22	23S	34E	645015	3573221

Driller License:	1711	**Driller Company:**	STRAUB CORPORATION		
Driller Name:	BRYAN, EDWARD (LD)				
Drill Start Date:	12/04/2013	**Drill Finish Date:**	12/04/2013	**Plug Date:**	
Log File Date:	12/23/2013	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	25 feet	**Depth Water:**	

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
2023 DEC 23 P 1:27

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): (POD1) SIANA CURRY FED #2 SWD SB-1	OSE FILE NUMBER(S): CP-1258
WELL OWNER NAME(S): SIANA OIL AND GAS CO,LLC	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 601 N MARIENFELD, SUITE 300	CITY: MIDLAND STATE: TX ZIP: 79701

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	17	11	N
LONGITUDE	103	27	36	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1711	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-4-13	12-4-13	0	25'	N/A

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	25'	5"	N/A	N/A	N/A	N/A	N/A

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	2'	5"	.5 OF CONCRETE		TOPLOAD
2'	25'	5"	6 BAGS OF 3/8 HOLEPLUG		TOPLOAD

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1258	POD NUMBER	1	TRN NUMBER	536581
LOCATION	Mon	23S.34E.22.341			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3'	3'	TAN VERY FINE SAND - CLAICHE - CEMENT SANDSTONE	○ Y ◉ N	N/A
3'	25'	22'	TAN VERY FINE WELL SORTED SAND	○ Y ◉ N	N/A
TD	25'			○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

SOIL BORING ONLY - SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING.
LEA COUNTY, NM.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Edward Bryan — 12-18-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	CP 01258 POD2	1	4	3	22	23S	34E	644941	3572883

Driller License:	1711	**Driller Company:**	STRAUB CORPORATION		
Driller Name:	HEYAN, EDWARD (LD)				
Drill Start Date:	12/04/2013	**Drill Finish Date:**	12/04/2013	**Plug Date:**	
Log File Date:	12/23/2013	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	65 feet	**Depth Water:**	

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER'S OFFICE
23 DEC 23 P 1:35

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): (POD2) SIANA CURRY FED #2 SWD SB-2	OSE FILE NUMBER(S): CP-1258
WELL OWNER NAME(S): SIANA OIL AND GAS CO,LLC	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 601 N MARIENFELD, SUITE 300	CITY: MIDLAND STATE: TX ZIP: 79701

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	17	07	N
LONGITUDE	103	27	39	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1711	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-4-13	12-4-13	0	65'	N/A

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES - SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER - SPECIFY

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	65'	5"	N/A	N/A	N/A	N/A	N/A

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	2'	5"	.5 OF CONCRETE		TOPLOAD
2'	65'	5"	5 BAGS OF 3/8 HOLEPLUG		TOPLOAD

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1258	POD NUMBER	2	TRN NUMBER	~~536581~~
LOCATION	mon	23S.34E.22.341			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3'	3'	CALICHE - TAN VERY FINE SAND - SANDSTONE	○ Y ◉ N	N/A
3'	7'	4'	TAN VERY FINE SAND - CEMENT SANDSTONE	○ Y ◉ N	N/A
7'	65'	58'	TAN VERY FINE WELL SORTED SAND	○ Y ◉ N	N/A
TD	65'			○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

SOIL BORING ONLY - SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING.
LEA COUNTY, NM.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

[signature] EDWARD BRYAN — 12-18-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	CP 01258 POD3	1	4	3	22	25S	34E	644938	3573097

Driller License:	1711	**Driller Company:**	STRAUB CORPORATION		
Driller Name:	HEYAN, EDWARD (LD)				
Drill Start Date:	12/04/2013	**Drill Finish Date:**	12/04/2013	**Plug Date:**	
Log File Date:	12/23/2013	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	25 feet	**Depth Water:**	

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE

23 DEC 23 P 1:35

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): (POD3) SIANA CURRY FED #2 SWD SB-3	OSE FILE NUMBER(S): CP-1258
WELL OWNER NAME(S): SIANA OIL AND GAS CO,LLC	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 601 N MARIENFELD, SUITE 300	CITY: MIDLAND STATE: TX ZIP: 79701

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	17	07	N
LONGITUDE	103	27	39	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1711	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12-4-13	12-4-13	0	25'	N/A

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	25'	5"	N/A	N/A	N/A	N/A	N/A

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	2'	5"	.5 OF CONCRETE		TOPLOAD
2'	25'	5"	6 BAGS OF 3/8 HOLEPLUG		TOPLOAD

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1258	POD NUMBER	3	TRN NUMBER	~~536581~~
LOCATION	MON	23S.34E.22.341			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	9'	9'	TAN FINE SAND - CALICHE - CEMENT SANDSTONE	○ Y ◉ N	N/A
9'	25'	16'	TAN VERY FINE WELL SORTED SAND	○ Y ◉ N	N/A
TD	25'			○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION

SOIL BORING ONLY - SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING.
LEA COUNTY, NM.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

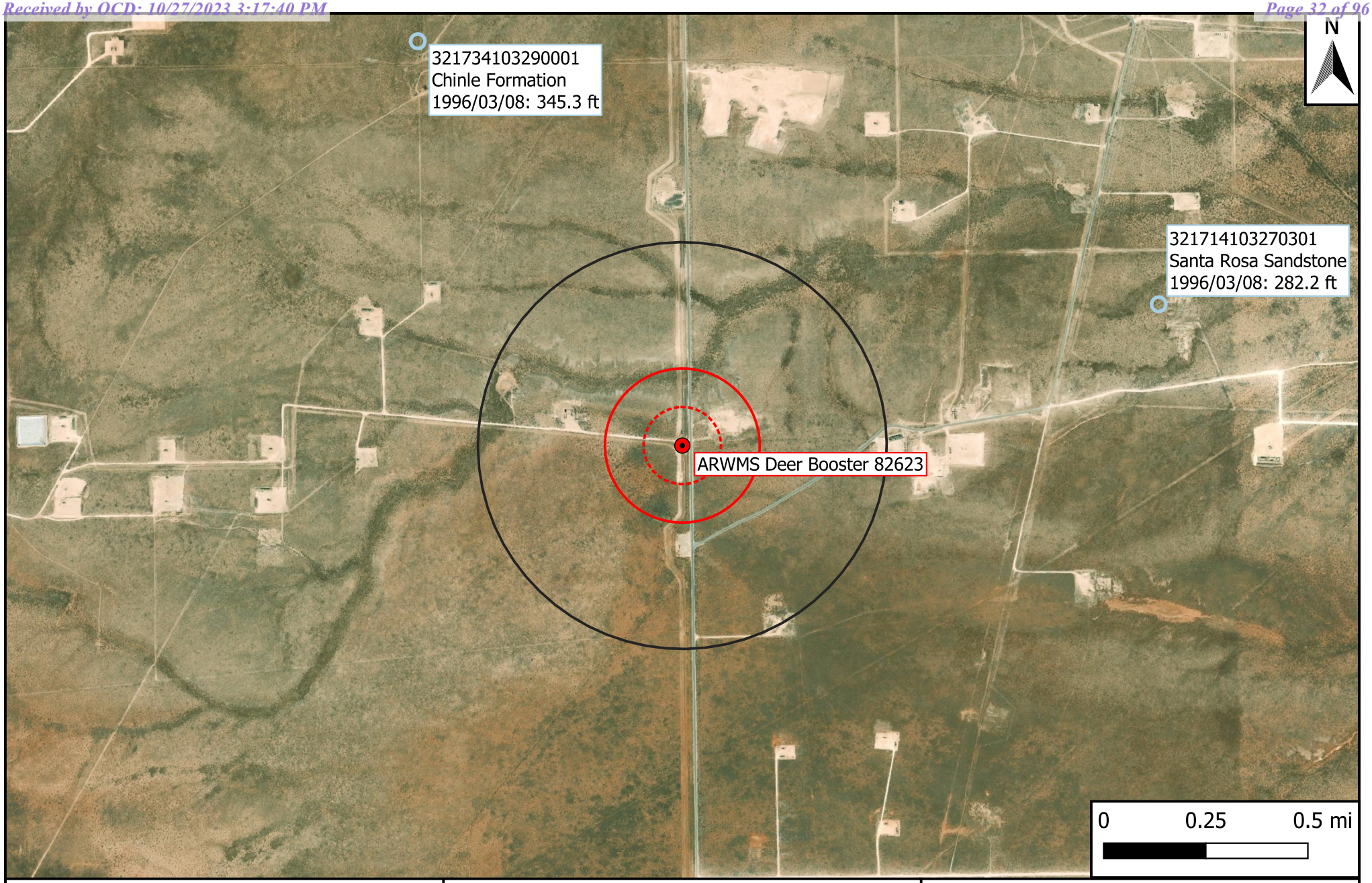
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING.

[signature] Edward Drapp — 12-18-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2



Legend
- Site Location
- Well - USGS
- 500-Ft Radius
- 1,000-Ft Radius
- 0.5-Mi Radius

Figure 5
USGS Well Proximity Map
Mewbourne Oil Company
ARWMS Deer Booster 82623
GPS: 32.283680,-103.472709
Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: lc Date: 9/7/23

Click forNews Bulletins

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321714103270301

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321714103270301 23S.34E.22.421434

Lea County, New Mexico
Latitude 32°17'18", Longitude 103°27'08" NAD27
Land-surface elevation 3,420.00 feet above NGVD29
The depth of the well is 428 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1981-03-30		D	72019	284.11			1	Z			A
1986-03-21		D	72019	283.97			1	Z			A
1991-05-30		D	72019	282.28			1	Z			A
1996-03-08		D	72019	282.20			1	S			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Click forNews Bulletins

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321734103290001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321734103290001 23S.34E.16.333312

Lea County, New Mexico
Latitude 32°17'53", Longitude 103°28'59" NAD27
Land-surface elevation 3,478.00 feet above NGVD29
The depth of the well is 400 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1971-01-13		D	72019	344.05			1	Z			A
1976-12-16		D	72019	347.38			1	Z			A
1981-03-30		D	72019	345.40			1	Z			A
1986-03-21		D	72019	347.80			1	Z			A
1996-03-08		D	72019	345.30			1	S			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Appendix B
Field Data

Appendix C
Photographic Log

Photographic Log

Photo Number: 1	
Photo Direction: North	
Photo Description: View of the affected area.	

Photo Number: 2	
Photo Direction: Northwest	
Photo Description: View of the affected area.	

Photographic Log

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

Photo Number: 4	
Photo Direction: West-Northwest	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 5	
Photo Direction: West	
Photo Description: View of the affected area.	

Photo Number: 6	
Photo Direction: North-Northwest	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 7	
Photo Direction: West-Northwest	
Coordinates: 32.283521,-103.472652	
Photo Description: View of the excavated area.	

Photo Number: 8	
Photo Direction: Northwest	
Coordinates: 32.283769,-103.472741	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 9	
Photo Direction: West	
Coordinates: 32.283921,-103.472891	
Photo Description: View of the excavated area.	

Photo Number: 10	
Photo Direction: West	
Coordinates: 32.283887,-103.473128	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 11	
Photo Direction: West	
Coordinates: 32.283917,-103.473506	
Photo Description: View of the excavated area.	

Photo Number: 12	
Photo Direction: Northwest	
Coordinates: 32.283907,-103.473780	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 13	
Photo Direction: South-Southeast	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 14	
Photo Direction: Northwest	
Photo Description: View of the remediated area after backfill and regrading.	

Photographic Log

Photo Number: 15	
Photo Direction: West-Northwest	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 16	
Photo Direction: Northwest	
Photo Description: View of the remediated area after backfill and regrading.	

Appendix D
Laboratory Analytical Reports

CARDINAL Laboratories

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

September 12, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARWMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 09/07/23 16:12.

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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL #1. @ 3FT (H234866-01)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *112 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL #2. @ 4FT (H234866-02)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *83.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL #3. @ 2FT (H234866-03)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *94.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: SW 1. (H234866-04)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *90.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: WW 1. (H234866-05)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/07/2023	Sampling Date:	09/07/2023
Reported:	09/12/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: EW 1. (H234866-06)

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	09/08/2023	ND	1.98	99.2	2.00	3.78	
Toluene*	<0.050	0.050	09/08/2023	ND	2.24	112	2.00	1.35	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.30	115	2.00	1.95	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.95	116	6.00	3.18	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/08/2023	ND	432	108	400	7.69	

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	09/08/2023	ND	207	103	200	6.76	
DRO >C10-C28*	<10.0	10.0	09/08/2023	ND	211	106	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	09/08/2023	ND					

Surrogate: 1-Chlorooctane *90.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Etech Environmental	**BILL TO**	
Project Manager:	Lance Crenshaw	**P.O. #:**	
Address:	2617 W Marland Blvd	**Company:**	Mewbourne
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Connor Walker
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	
Project #:	18684 **Project Owner:** Mewbourne Oil Company	**City:**	
Project Name:	ARWMS Deer Booster	**State:** **Zip:**	
Project Location:	UL "O" Sec 21 T23S - R34E	**Phone #:**	
Sampler Name:	Aaron Rios	**Fax #:**	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chloride	TPH	BTEX 8021
H234866																	
1	FL #1. @ 3Ft	X				✓					✓		9-7-23		X	X	X
2	FL #2. @ 4Ft	X				X					X				X	X	X
3	FL #3. @ 2Ft	X				X					X				X	X	X
4	SW1.	X				X					X				X	X	X
5	WW1.	X				X					X				X	X	X
6	EW1.	X				X					X		9-7-23		X	X	X

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 consequental 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: Aaron Rios	**Date:** 9-7-23 **Time:** 1612	**Received By:** Tamara Oldaker	
Relinquished By:	**Date:** **Time:**	**Received By:**	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	#140 3.4°C	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)** YO

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS: Email results to lance@etechenv.com

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

CARDINAL Laboratories

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

September 13, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARWMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 09/08/23 16:13.

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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 4 @ 3FT (H234893-01)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *87.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 5 @ 2FT (H234893-02)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *87.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 6 @ 3FT (H234893-03)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *89.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 7 @ 1FT (H234893-04)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *85.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 8 @ 2 1/2FT (H234893-05)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *91.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 9 @ 2FT (H234893-06)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *86.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: EW 2 (H234893-07)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *93.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: WW 2 (H234893-08)

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	09/12/2023	ND	1.90	95.0	2.00	3.75	
Toluene*	<0.050	0.050	09/12/2023	ND	2.13	106	2.00	7.25	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.26	113	2.00	7.76	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.79	113	6.00	6.02	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *82.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/08/2023	Sampling Date:	09/08/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL # 10 @ 4FT (H234893-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	2.04	102	2.00	1.68	
Toluene*	<0.050	0.050	09/12/2023	ND	2.05	102	2.00	2.27	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.00	99.8	2.00	2.39	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.98	99.7	6.00	2.94	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/13/2023	ND	448	112	400	3.64	

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	09/12/2023	ND	190	94.8	200	5.41	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	184	92.0	200	8.05	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *87.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Etech Environmental	**BILL TO**	
Project Manager:	Lance Crenshaw	**P.O. #:**	
Address:	2617 W Marland Blvd	**Company:**	Mewbourne
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Connor Walker
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	
Project #:	18684 **Project Owner:** Mewbourne Oil Company	**City:**	
Project Name:	ARWMS Deer Booster	**State:** **Zip:**	
Project Location:	UL "O" Sec 21 T23S - R34E	**Phone #:**	
Sampler Name:	Aaron Rios	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
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	Chloride	TPH	BTEX 8021
H234893																	
1	FL # 4. @ 3Ft	X				X					X		9/8/23		X	X	X
2	FL # 5. @ 2Ft	X				X					X				X	X	X
3	FL # 6. @ 3Ft	X				X					X				X	X	X
4	FL # 7. @ 1Ft	X				X					X				X	X	X
5	FL # 8. @ 2½Ft	X				X					X				X	X	X
6	FL # 9. @ 2Ft	X				X					X				X	X	X
7	EW 2	X				X					X				X	X	X
8	WW 2	X				X					X				X	X	X
9	FL # 10 @ 4Ft	X				X					X		9/8/23		X	X	X

Relinquished By:	**Date:** 9/8/23	**Received By:**	
Aaron Rios	**Time:** 1613		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Delivered By: (Circle One) 31°
Sampler - UPS - Bus - Other:

Sample Condition	CHECKED BY: (Initials)
Cool ☐ Yes ☐ No	Intact ☑ Yes ☐ No

Phone Result:	☐ Yes	☐ No	**Add'l Phone #:**
Fax Result:	☐ Yes	☐ No	**Add'l Fax #:**

REMARKS: Email results to lance@etechenv.com

#140

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

CARDINAL Laboratories

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

September 14, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARWMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 09/11/23 16:06.

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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: NW 1. (H234906-01)

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	09/12/2023	ND	1.92	96.2	2.00	0.485	
Toluene*	<0.050	0.050	09/12/2023	ND	1.92	96.2	2.00	0.168	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	2.04	102	2.00	0.114	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	6.11	102	6.00	0.522	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *117 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: NW 2. (H234906-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *109 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *121 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: EW 3. (H234906-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *134 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *148 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: WW 3. (H234906-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *95.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: SW 2. (H234906-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *83.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/11/2023	Sampling Date:	09/11/2023
Reported:	09/14/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL #11 @ 3FT (H234906-06)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/13/2023	ND	432	108	400	0.00	

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	09/12/2023	ND	218	109	200	0.933	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	208	104	200	2.27	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane *82.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Etech Environmental	**BILL TO**	
Project Manager:	Lance Crenshaw	**P.O. #:**	
Address:	2617 W Marland Blvd	**Company:**	Mewbourne
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Connor Walker
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	
Project #:	18684 **Project Owner:** Mewbourne Oil Company	**City:**	
Project Name:	ARWMS Deer Booster	**State:** **Zip:**	
Project Location:	UL/ "O" Sec 21 T23S - R34E	**Phone #:**	
Sampler Name:	Aaron Rios	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
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	Chloride	TPH	BTEX 8021
H234906																	
1	NW 1.	X				X					X		9/11/23		X	X	X
2	NW 2.	X				X					X				X	X	X
3	EW 3.	X				X					X				X	X	X
4	WW 3.	X				X					X				X	X	X
5	SW 2.	X				X					X				X	X	X
6	FL # 11 @ 3Ft	X				X					X				X	X	X

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:	**Date:** 9/11/23	**Received By:**	
Aaron Rios	**Time:** 16:00		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS: Email results to lance@etechenv.com

Delivered By: (Circle One) 4.9°C
Sampler - UPS - Bus - Other:

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☑ Yes ☐ No	☑ Yes ☐ No	

#140

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

CARDINAL Laboratories

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

September 18, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARWMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 09/13/23 16:16.

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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 12 @ 1 (H234958-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *84.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 13 @ 1 (H234958-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *79.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *83.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 14 @ 3 (H234958-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *84.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 15 @ 1 (H234958-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *85.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 16 @ 1 1/2 (H234958-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *77.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 17 @ 1 1/2 (H234958-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/14/2023	ND	432	108	400	3.77	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *79.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 18 @ 1 (H234958-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	09/14/2023	ND	432	108	400	7.14	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *87.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 19 @ 1 1/2 (H234958-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	09/14/2023	ND	432	108	400	7.14	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *78.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: FL 20 @ 1 1/2 (H234958-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/14/2023	ND	432	108	400	7.14	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *84.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: NW 3 (H234958-10)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	09/14/2023	ND	432	108	400	7.14	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *79.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *83.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	09/13/2023	Sampling Date:	09/13/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	ARWMS DEER BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	18684	Sample Received By:	Dionica Hinojos
Project Location:	MEWBOURNE UL/"O" SEC21 T23S-R34E		

Sample ID: SW 3 (H234958-11)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.7	2.00	0.347	
Toluene*	<0.050	0.050	09/15/2023	ND	1.90	95.2	2.00	1.41	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.92	96.1	2.00	0.237	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.58	93.0	6.00	0.631	
Total BTEX	<0.300	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	09/14/2023	ND	432	108	400	7.14	

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	09/14/2023	ND	199	99.3	200	0.410	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	136	68.2	200	40.0	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane *89.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

1 of 2

Company Name:	Etech Environmental	**BILL TO**	
Project Manager:	Lance Crenshaw	**P.O. #:**	Mewbourn
Address:	2617 W Marland Blvd	**Company:**	[redacted]
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Connor Walker
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	
Project #:	18684 **Project Owner:** Mewbourne Oil Company	**City:**	Hobbs
Project Name:	ARWMS Deer Booster	**State:** NM **Zip:**	88240
Project Location:	UL/ "O" Sec 21 T23S - R34E	**Phone #:**	
Sampler Name:	Dominic Cassaer	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
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	Chloride	TPH	BTEX 8021
H234958																	
DC 1	FL 12 @ 1	C	1			✓					✓		9-12		✓	✓	✓
2	FL 13 @ 1																
3	FL 14 @ 3																
4	FL 15 @ 1																
5	FL 16 @ 1½																
6	FL 17 @ 1½																
7	FL 18 @ 1																
8	FL 19 @ 1½																
9	FL 20 @ 1½																
10	NW 3	✓	✓			✓					✓		✓		✓	✓	✓

Relinquished By:	Date: 9-13	**Received By:**		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 16:16			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	**Received By:**		**REMARKS:** Email results to lance@etechenv.com	
	Time:				
Delivered By: (Circle One) 3.8°c		**Sample Condition** Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	**CHECKED BY: (Initials)**	#140	
Sampler - UPS - Bus - Other:					

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

2 of 2

Company Name:	Etech Environmental	**BILL TO**	
Project Manager:	Lance Crenshaw	**P.O. #:**	Mewbourn
Address:	2617 W Marland Blvd	**Company:**	[redacted]
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	Connor Walker
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	
Project #:	18684 **Project Owner:** Mewbourne Oil Company	**City:**	Hobbs
Project Name:	ARWMS Deer Booster	**State:** NM **Zip:**	88240
Project Location:	UL/ "O" Sec 21 T23S - R34E	**Phone #:**	
Sampler Name:	Dominic Casavez	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
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	Chloride	TPH	BTEX 8021
H234458																	
DC	SW3	C	1			✓					✓		9-13		✓	✓	✓

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:	**Date:** 9.13	**Received By:**	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:16		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	**Date:**	**Received By:**	**REMARKS:** Email results to lance@etechenv.com
	Time:		

Delivered By: (Circle One) -3.8°C
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☐ Yes ☐ No / Intact ☐ Yes ☐ No

CHECKED BY: (Initials) DH

#140

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

Appendix E
Regulatory Correspondence

From: Tamarah Kendrick <tamarah@etechenv.com>
Sent: Friday, September 8, 2023 3:21 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Lance Crenshaw <lance@etechenv.com>
Subject: [EXTERNAL] nAPP2325141309 - Mewbourne - ARWMS Deer Booster - Reportable Release Site - Sampling Notification

This email serves as notice Etech intends to conduct confirmation soil sampling for the following reportable release site beginning 09/11/2023.

nAPP2325141309 - ARWMS Deer Booster

If you have any questions or need any additional information, please feel free to contact Lance Crenshaw by phone or email.

Lance Crenshaw
Etech Environmental
Phone 575-631-1064
lance@etechenv.com

Tamarah Kendrick
Project Coordinator
ETech - Environmental and Safety Solutions
2617 W. Marland Blvd
Hobbs, NM 88240

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Friday, September 8, 2023 4:28:10 PM
To: Tamarah Kendrick <tamarah@etechenv.com>
Cc: Lance Crenshaw <lance@etechenv.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] nAPP2325141309 - Mewbourne - ARWMS Deer Booster - Reportable Release Site - Sampling Notification

Hi Tamarah,

The OCD has received your notification. Notification requirements are **two full business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Sincerely,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

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 280466

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 280466
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	None	1/9/2024