



February 21, 2025

5E33088 BG#19

EMNRD – Oil Conservation Division  
506 W. Texas Ave  
Artesia, NM 88210

**SUBJECT:** Closure Request Report for the Lusitano 27 CTB 6, Incident ID # nAPP2434726285, Facility ID fAB194056916, Eddy County, New Mexico.

**1.0 Introduction**

On behalf of Devon Energy Production Company, LP (Devon), Souder, Miller & Associates (SMA) has prepared this Closure Request Report. This report describes the corrective actions for a produced water incident related to oil and gas production activities at the Lusitano 27 CTB 6 (Lusitano), Incident ID nAPP2434726285, that occurred on December 11, 2024. The spill area is located at latitude N 32.105913 and longitude W -103.759338.

Devon completed a release notification to the New Mexico Energy, Minerals, and Natural Resources Department – Oil Conservation Division (OCD) via Operators Electronic Permitting and Payment Portal on December 12, 2024, for the submission of Notice of Release (NOR), followed by the submission of the Form C-141, Release Notification on December 18, 2024. This letter provides a description of the spill assessment and includes a request for spill closure.

| Table 1: Release Information and Closure Criteria |  |                  |                                     |
|---|--|------------------|-------------------------------------|
| Name  | Lusitano 27 CTB 6  | Company          | Devon Energy Production Company, LP |
| Facility ID                                       | fAB194056916   | PLSS             | A-27-25S-31E                        |
| Incident Number                                   | nAPP2434726285   | GPS              | N 32.105913, W -103.759338          |
| Lease ID  | NMNM128360   | County           | Eddy                                |
| Date of Release                                   | November 30, 2024  | Land Status      | Bureau of Land Management           |
| Source of Release                                 | Discharge polyline on transfer pump developed leak                                     |                  |                                     |
| Released Volume                                   | 7 bbls   | Recovered Volume | 7 bbls                              |
| NMOCD Closure Criteria                            | Depth to groundwater <50 feet below ground surface (bgs) due to medium karst potential |                  |                                     |

**2.0 Background**

On December 11, 2024, a polyline connected to the discharge side of a transfer pump developed a leak resulting in a fluid release into the secondary lined containment. The total volume of released fluids was 7 barrels (bbls) of produced water. Initial response activities were conducted by the operator, including source elimination, photographs of standing fluids, recovery of approximately 7 bbls of produced water, and verification that the affected area was properly exposed and cleaned for visual observation. Photos of

the facility layout including tanks, liner, and secondary containment are shown in the Site Assessment Photolog (Attachment 1).

### **3.0 Site Geology and Vegetation**

The Geologic Map of New Mexico by New Mexico Bureau of Geology and Mineral Resources indicates the surface geology at the incident location area is comprised of primarily Qep – Eolian and piedmont deposits (Holocene to middle Pleistocene) – interlayered eolian sands to piedmont slope deposits.

The surrounding geography and terrain are associated with uplands, plains, dunes, fan piedmonts, and interdunal areas at elevations between 2,800 and 5,000 feet above mean sea level (amsl). The annual average rainfall and precipitation ranges between 8 to 13 inches. The soil tends to be well drained with low runoff and moderate available water supply.

The primary soil type on the location is Berino complex. Soil features consist of being moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand, or gravelly sandy loam.

Subsurface is loamy fine sand, coarse sandy loam, fine sandy loam, or loam that averages less than 18 percent clay and less than 15 percent carbonates while substratum is fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Layers high in lime or with caliche fragments may occur at depth of 20 to 30 inches.

The ecological setting is vegetation of a grassland aspect dominated by black grama, dropseeds, and bluestems with scattered shinnery oak and sand sage. Sand sage and shinnery oak tend to be evenly dispersed due to the coarse soil surface. Perennial and annual forbs are reflective of rainfall. The grass/shrub state is composed of grasses/honey mesquite, grasses/broom snakeweed, or grasses/sand sage.

### **4.0 Site Information and Closure Criteria**

The Lusitano is located approximately 22.6 miles southeast of Loving, New Mexico, on Bureau of Land Management Land (BLM) at an elevation of approximately 3,335 feet amsl. SMA completed site assessment/characterization pursuant to 19.5.29.11-12 NMAC to determine potential environmental impacts and closure criteria. Site assessment and characterization results are included in Attachments 1 and 2.

There is no surface water located on site or within 300 feet of the site. The nearest significant watercourse is a riverine located approximately 1.96 miles to the south, a playa lake located 7.82 miles southeast, and a freshwater emergent wetland located 1.72 miles southeast of Lusitano as defined in 19.15.17.7.P NMAC (U.S. Fish and Wildlife Service, National Wetlands Inventory, 2024). There are no continuous flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features within the specified search distances outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Depth to ground water was determined using New Mexico Office of the State Engineer (NMOSE) Water Rights Pod Location: ArcGIS Interactive Online Map. The nearest registered well is Pod C-04619-POD1, a temporary borehole used for groundwater determination located 0.2 miles northwest of Lusitano. The

temporary borehole was drilled to a depth of 55 feet bgs, where no water-bearing zones were discovered. A private well used for livestock watering, Pod C-02250, is located 1.42 miles northwest of Lusitano.

Karst potential for the area that Lusitano is medium and is 0.3 miles southwest of a low karst feature and 10.6 miles northeast of a high karst feature, based on the New Mexico State Land Office Land Status Interactive Map (NMSLO).

According to FEMA's National Flood Hazard Layer, the Lusitano is located in Zone X, an area of minimal flood hazard (>500-year flood zone). The nearest mapped 100-year floodplain (Zone A) is located 0.19 miles southwest of the site.

The closure criteria for the site are the constituent concentration limits associated with less than 50 feet depth to groundwater (DTGW), since karst potential for the area is medium, as stated in Table I of 19.15.29.12 NMAC.

Documentation of site characterization, including surface water features, depth to groundwater, nearest residence, unstable areas, and flood zone, is included in Attachment 2.

## **5.0 Remediation Activities**

Notification of the liner inspection, scheduled for January 16, 2025, was provided to Devon through email by SMA personnel on January 13, 2025. Devon provided notification to NMOCD through the ENMRD Electronic Permitting and Payment Portal for Operators on January 13, 2025. Notification documentation is included in Attachment 3.

On January 16, 2025, SMA personnel performed an on-site visual inspection of the secondary containment to verify liner integrity as outlined in Paragraph (5)(a) of Subsection A of 19.15.29.11 NMAC.

Visual observation of the liner included a complete inspection of all sidewalls and the base of the containment, around equipment, and all seams of the liner. The inspection included looking for any potential perforations in the liner that could lead to a breach of the secondary containment. Observations concluded no signs of any cuts, rips, tears, or weathering of the liner condition which need repairs or replacement. Liner integrity was confirmed. Photographs of the liner were taken at all cardinal directions including additional positions between equipment and around the containment. Photo documentation of the liner inspection is in the Site Assessment Photolog (Attachment 1).

## **6.0 Conclusions and Recommendations**

Based on the liner inspection and assessment, SMA concludes the liner integrity is adequate to contain the release related to incident nAPP2434726285. There is no evidence of a release to the environment. Based on the professional activities and site assessment, Devon Energy Production Company respectfully requests closure of the incident that occurred at Lusitano 27 CTB 6.

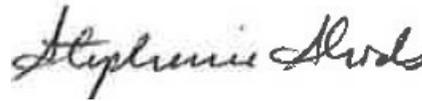
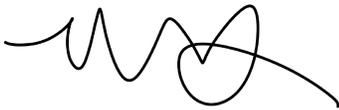
## **7.0 Scope and Limitations**

The scope of our services included: visual inspection for liner integrity; regulatory liaison; and preparing this report. All work has been performed in accordance with accepted professional environmental consulting practices for oil and gas incidents in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact Stephanie Hinds at (505) 302-1127 or Monica Peppin at (575) 909-3418.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Monica Peppin, A.S.  
Project Manager

Stephanie Hinds, P.E.  
Senior Engineer

**REFERENCES:**

New Mexico Office of the State Engineer (NMOSE) online water well database

[Http://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](Http://gis.ose.state.nm.us/gisapps/ose_pod_locations/)

USGS National Water Information System: Web interface online water well database

[https://nwis.waterdata.usgs.gov/nwis/gwlevels?site\\_no=321205103544701&agency\\_cd=USGS&format=html](https://nwis.waterdata.usgs.gov/nwis/gwlevels?site_no=321205103544701&agency_cd=USGS&format=html)

U.S. Fish and Wildlife Service: National Wetlands Inventory

[Wetlands Mapper | U.S. Fish & Wildlife Service](#)

New Mexico State Land Office: Land Status

[NMSLO Land Status](#)

United States Department of Agriculture: Natural Resources Conservation Service: Web Soil Survey

<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

USDA, USGS The National Map: Orthoimagry: FEMA's National Flood Hazard Layer (NFHL) Viewer

<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>

**ATTACHMENTS:**

Attachment 1: Site Assessment Photolog

Attachment 2: Closure Criteria Determination Research

Attachment 3: Correspondence

# ATTACHMENT 1: SITE ASSESSMENT PHOTOLOG

# Site Assessment Photolog



Stronger Communities by Design

Client: Devon Energy Corporation

Incident ID: nAPP2434726285

Site Name: Lusitano 27 CTB 6

Project Manager: Monica Peppin

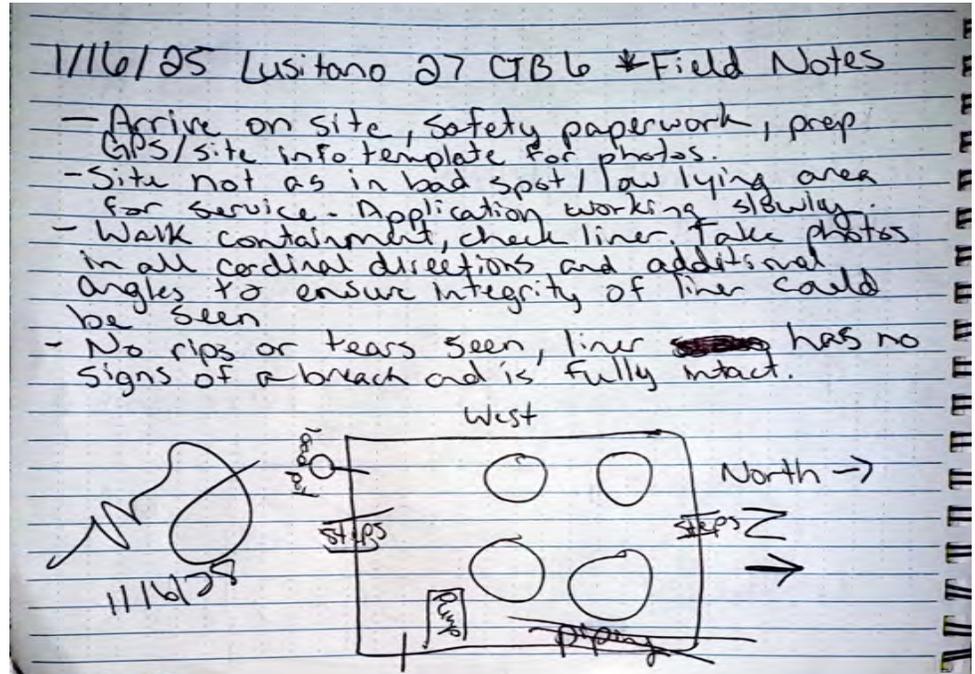
Facility ID: fAB194056916

Project Owner: Jim Raley

## Field Notes

January 16, 2025

Hand written notes from site visit during completion of liner inspection



## Next Steps/Recommendations

- Upload field report
- Complete Closure Report and submit for approval

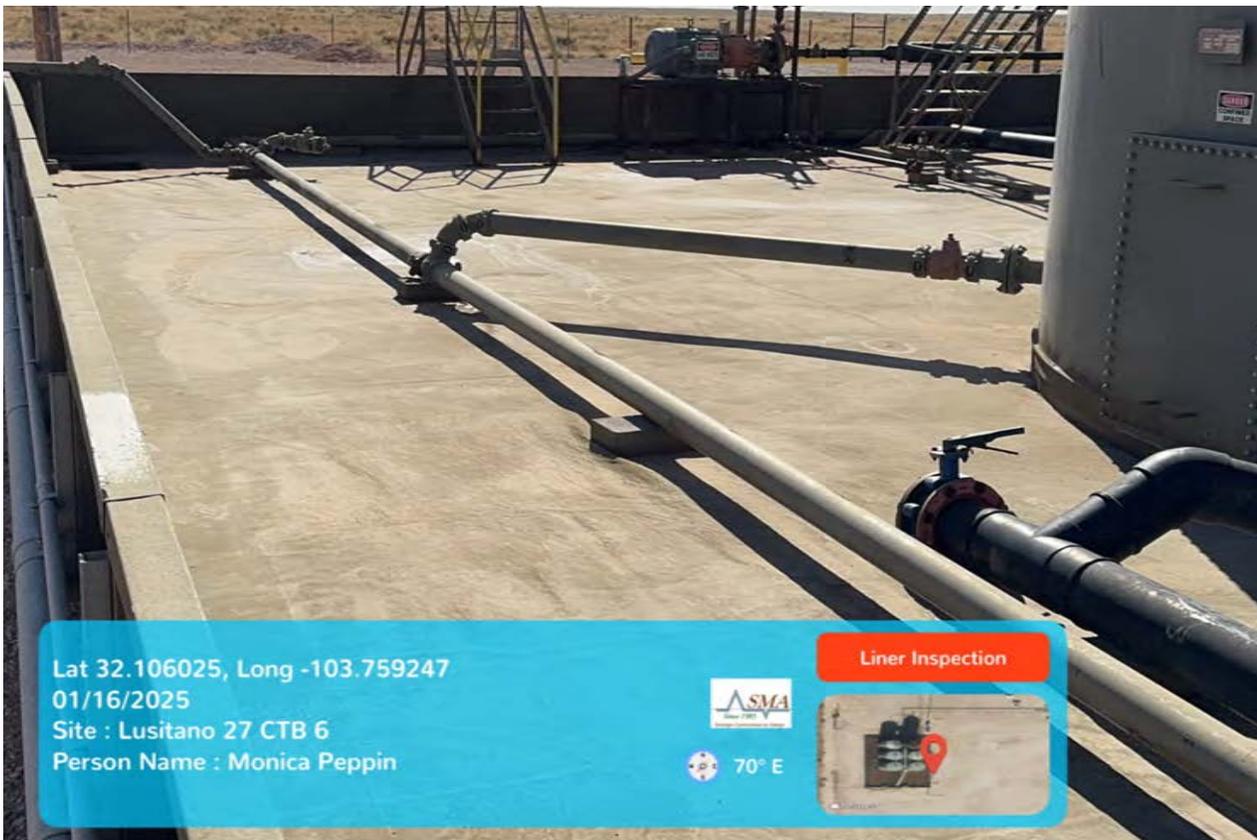
## Photograph Log

Photograph #1: Lease sign with site information.





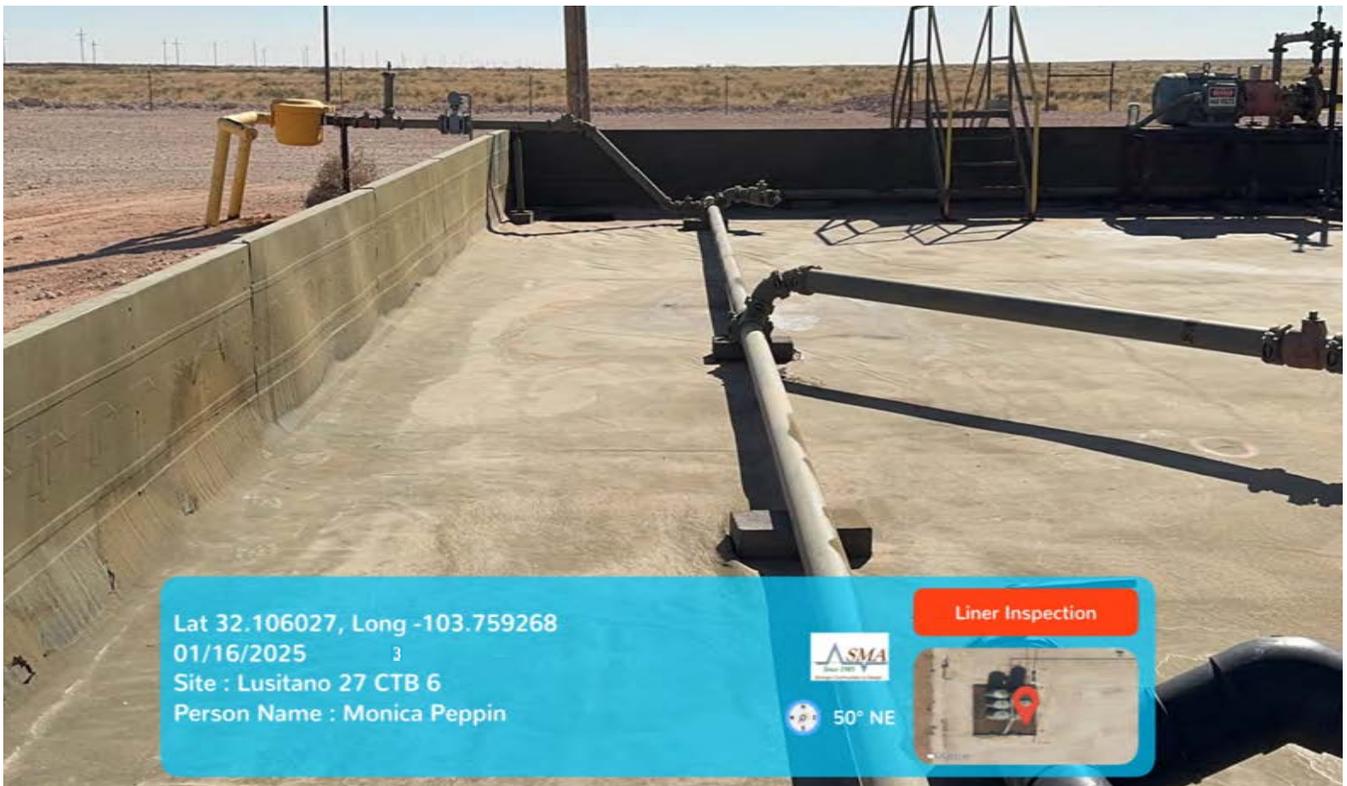
Photograph #2: Between tanks facing west.



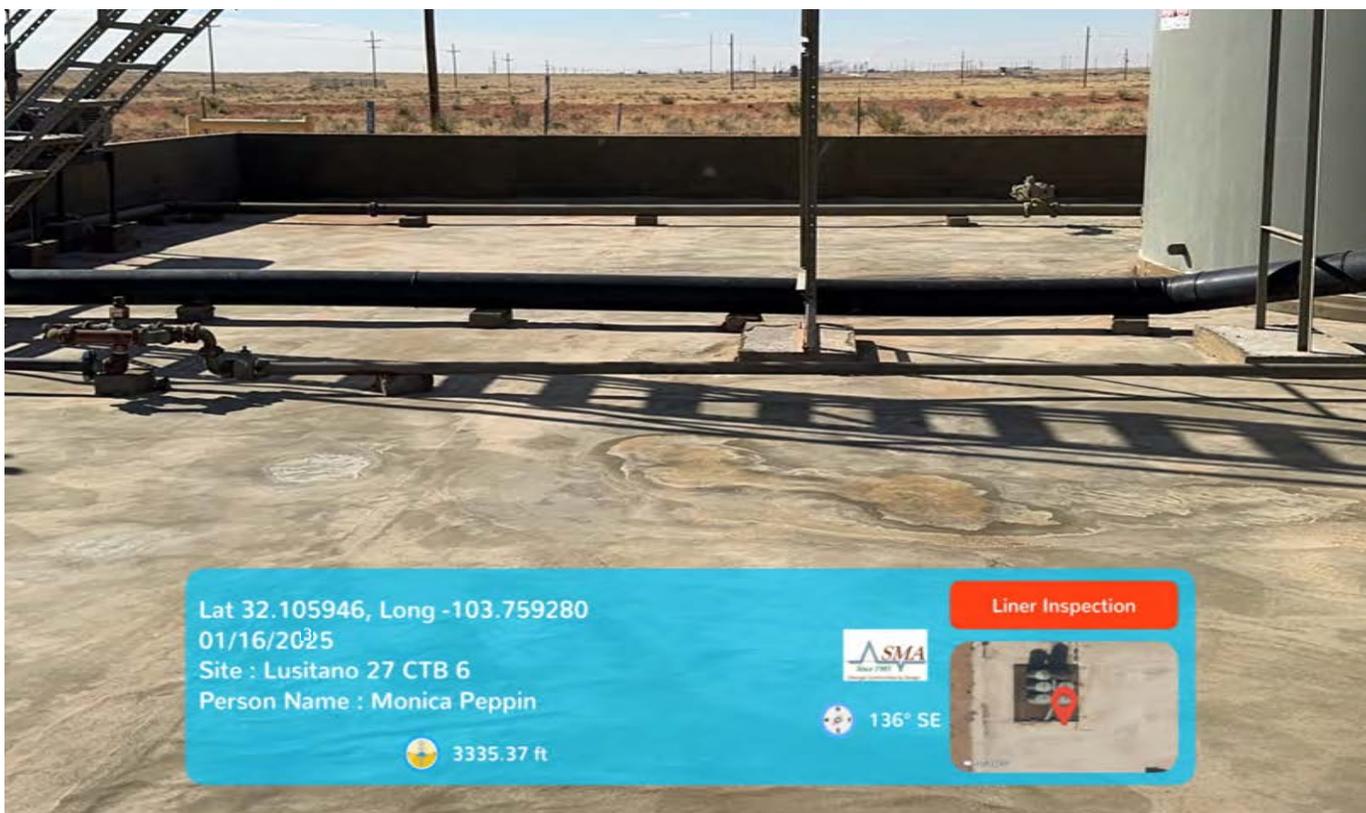
Photograph #3: East wall towards south side from middle point.



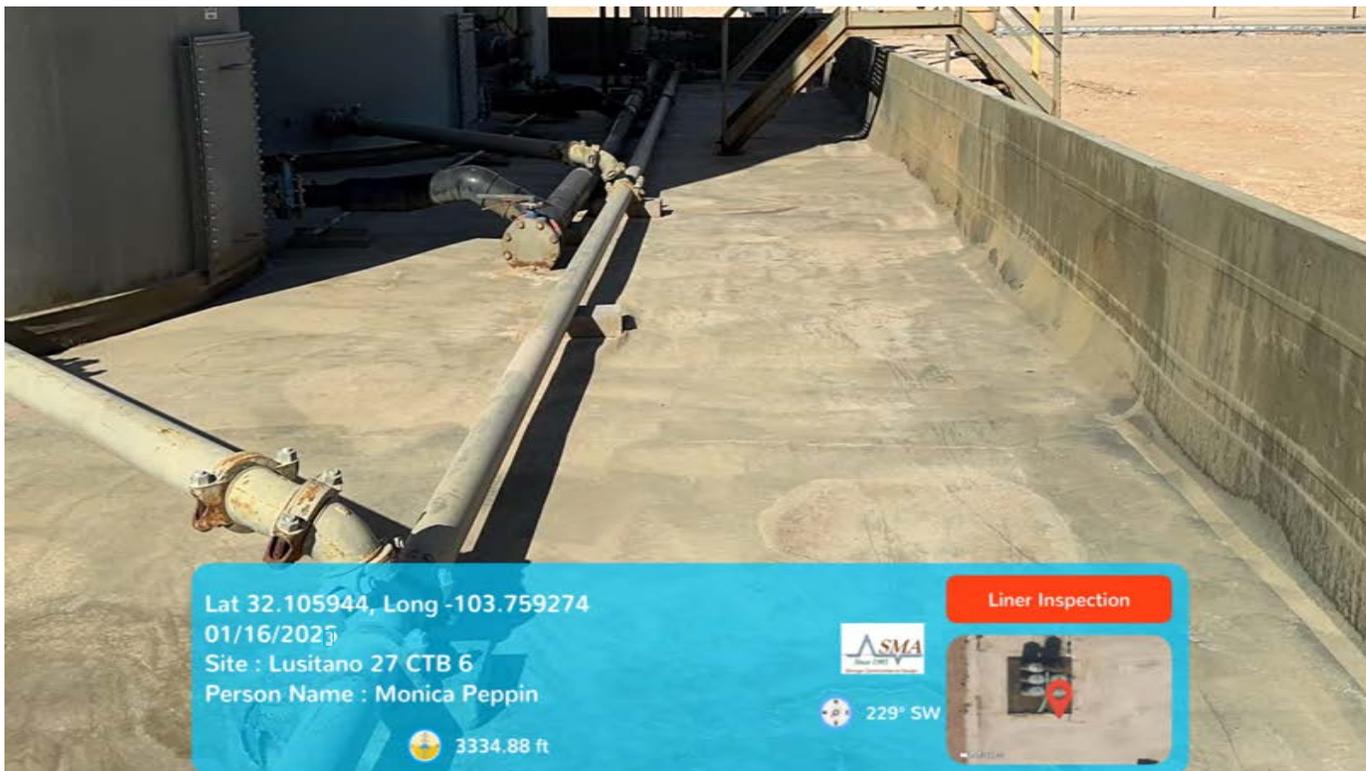
Photograph #4: Facing north showing east wall area.



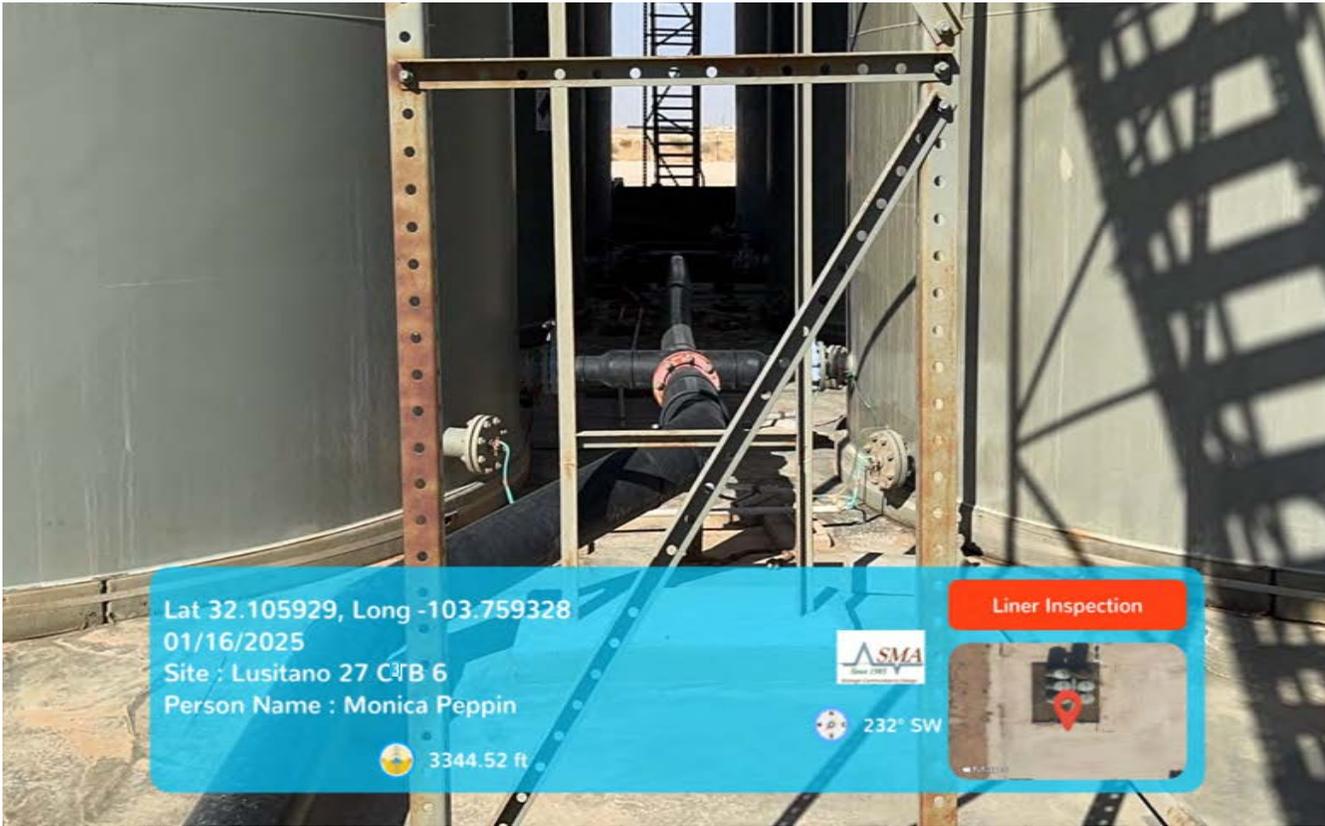
Photograph #5: Facing south showing east wall area.



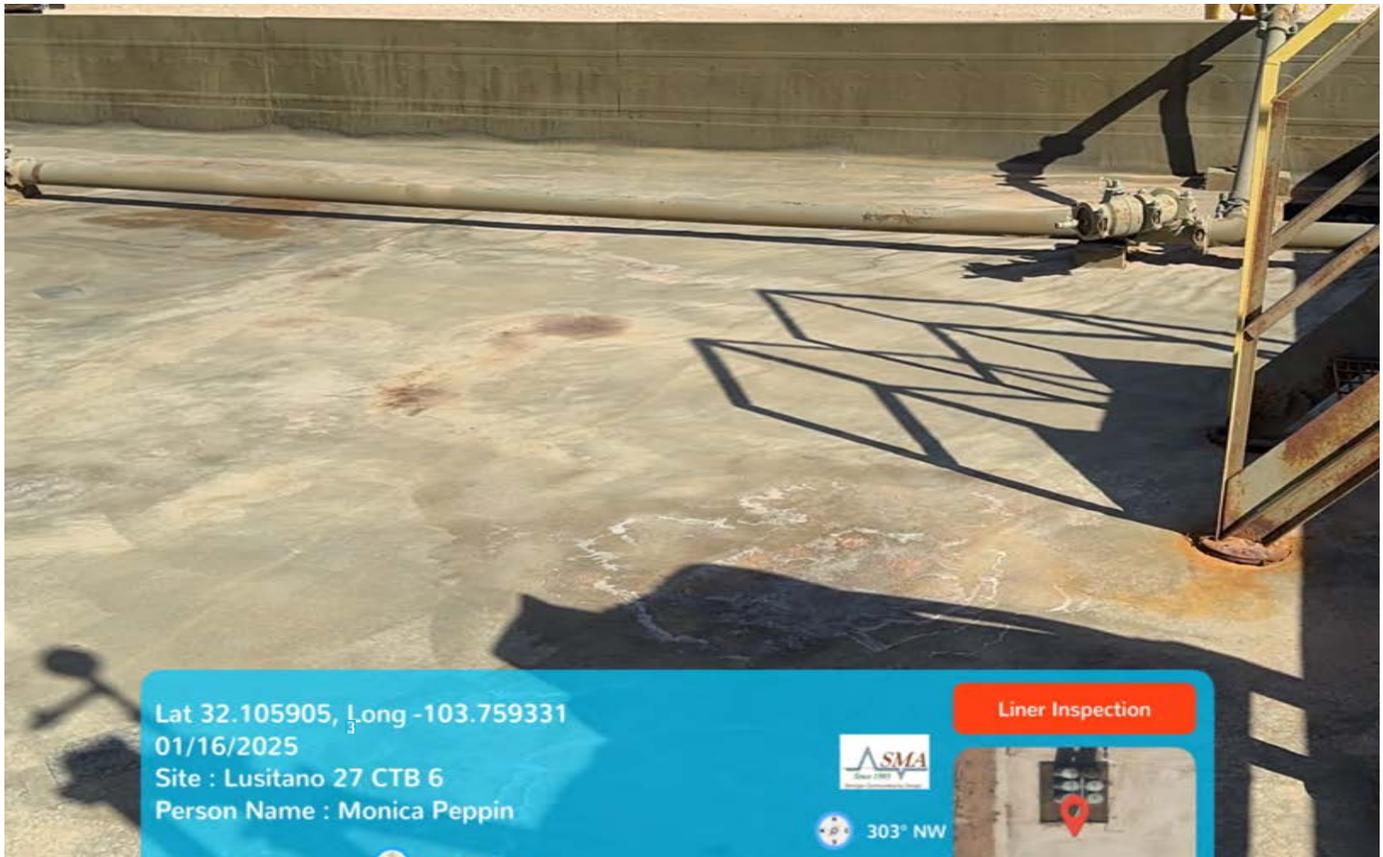
Photograph #6: Viewing liner from east side facing west of open area on south side.



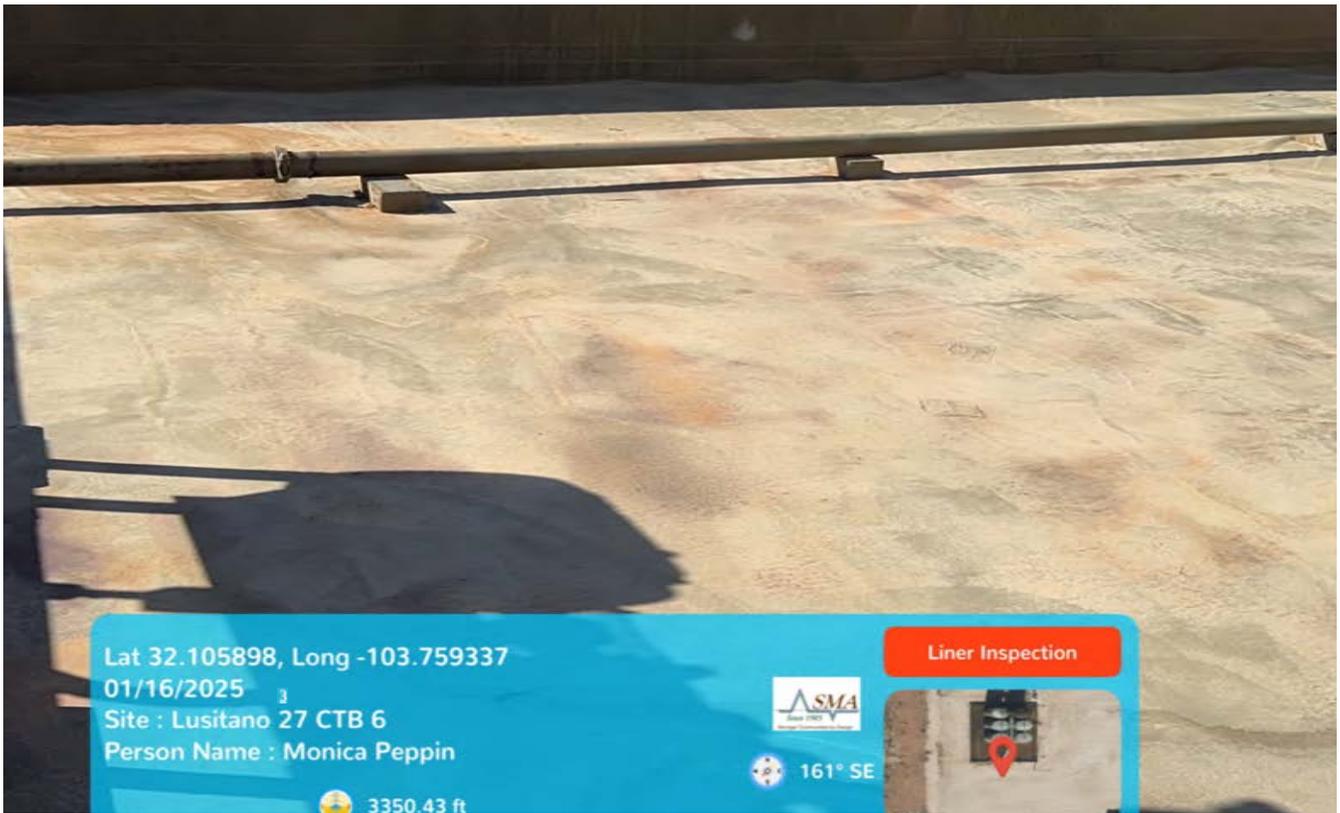
Photograph #7: Facing north viewing east area of containment.



Photograph #8: Facing south to show between tanks.



Photograph #9: Facing east showing southeast area from west side.



Photograph #10: Facing west from middle area on south wall of containment.



Photograph #11: Facing north viewing west side of containment from south wall.



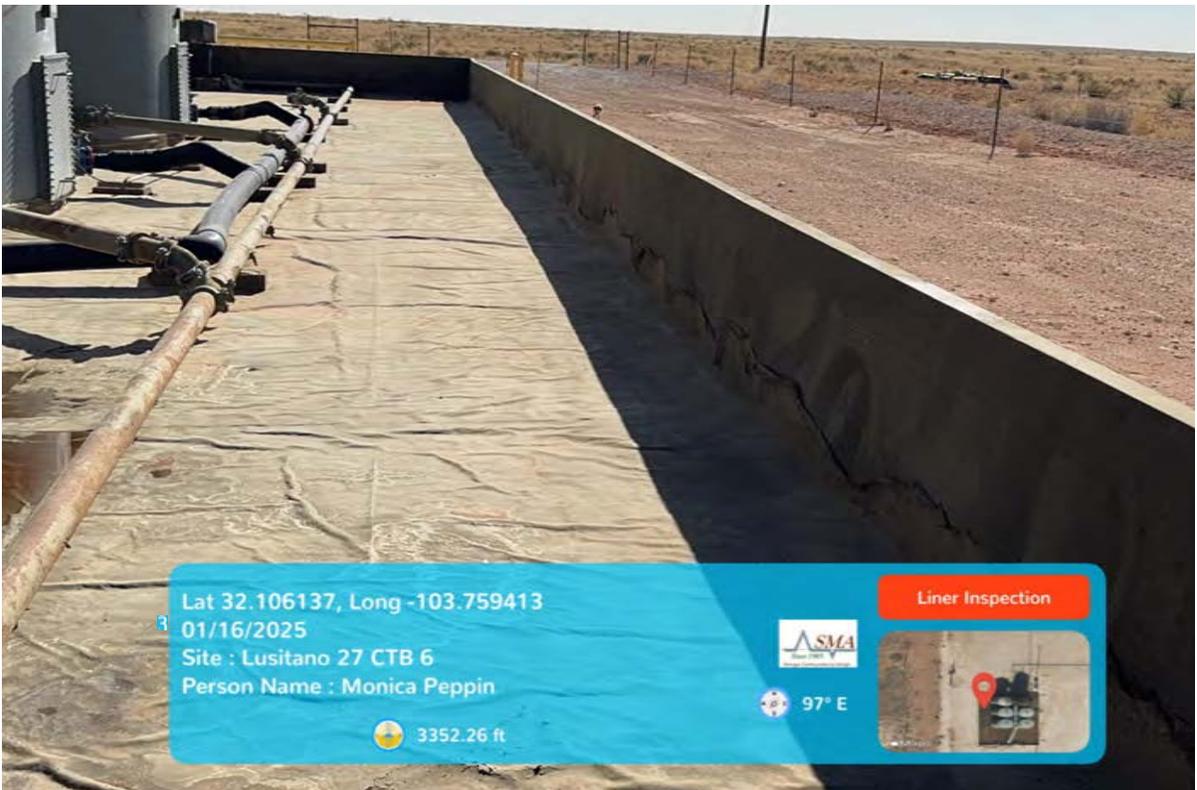
Photograph #12: Facing south showing liner between tanks.



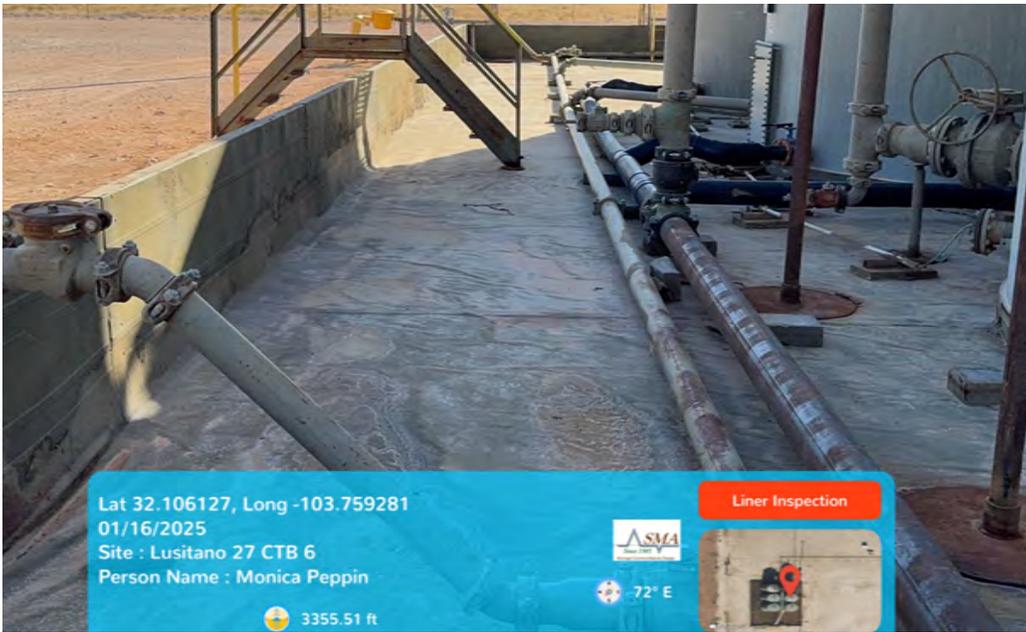
Photograph #13: Facing south viewing liner from middle area of west wall.



Photograph #14: Facing east showing liner on north side of containment.



Photograph #15: West side of containment facing south from north wall.



Photograph #16: Looking south showing east side of containment.

Photograph #17: North wall of containment area from east side.



Technician: Monica Peppin

Date: 1/16/2025

Signature: \_\_\_\_\_

# ATTACHMENT 2: CLOSURE CRITERIA DETERMINATION RESEARCH

# Lusitano 27 CTB 6

Site Coordinates: 32.105913, -103.759338

Containment Area: Approximately 5,505 square feet

## Legend

-  Containment Area
-  Lusitano 27 CTB 6



Lusitano 27 CTB 6



# Lusitano 27 CTB 6 - 0.5-Mile Radius & Nearest Active Pod - DTGW



1/11/2025, 7:49:01 PM

— Override 1

Points



Override 1

GIS WATERS PODs



Active

## OSE Pod C-04619-Pod1

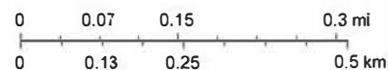
**Distance**

0.2 miles/1,063 feet

**Temp BH Depth**

55 feet

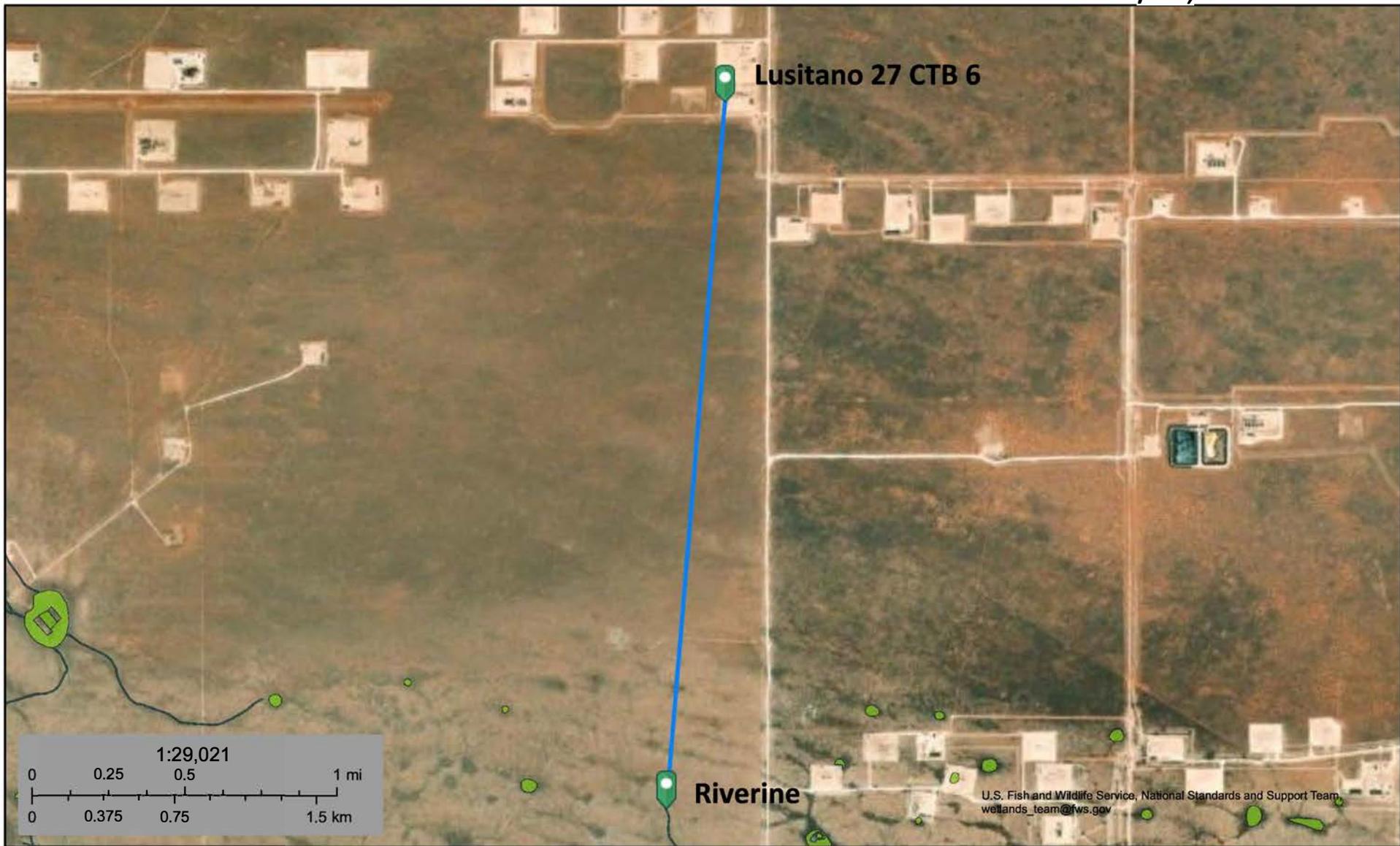
1:9,028



Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar



**Lusitano 27 CTB 6**  
**Nearest Significant Watercourse: Riverine**  
**Distance: 1.96 miles/10,334 feet**



February 11, 2025

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# Lusitano 27 CTB 6

Nearest Playa Lake: 7.82 miles/41,279 feet



U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

February 11, 2025

### Wetlands

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# Lusitano 27 CTB 6

Distance to Residence: 7.88 miles/41,621 feet  
Distance to Loving Municipal Boundary: 22.6 miles/119,405 feet

Residence

## Legend

-  Distance to Municipal Boundary
-  Distance to Residence
-  Loving Municipal Boundary
-  Residence

Residence

Loving

Malaga

Residence

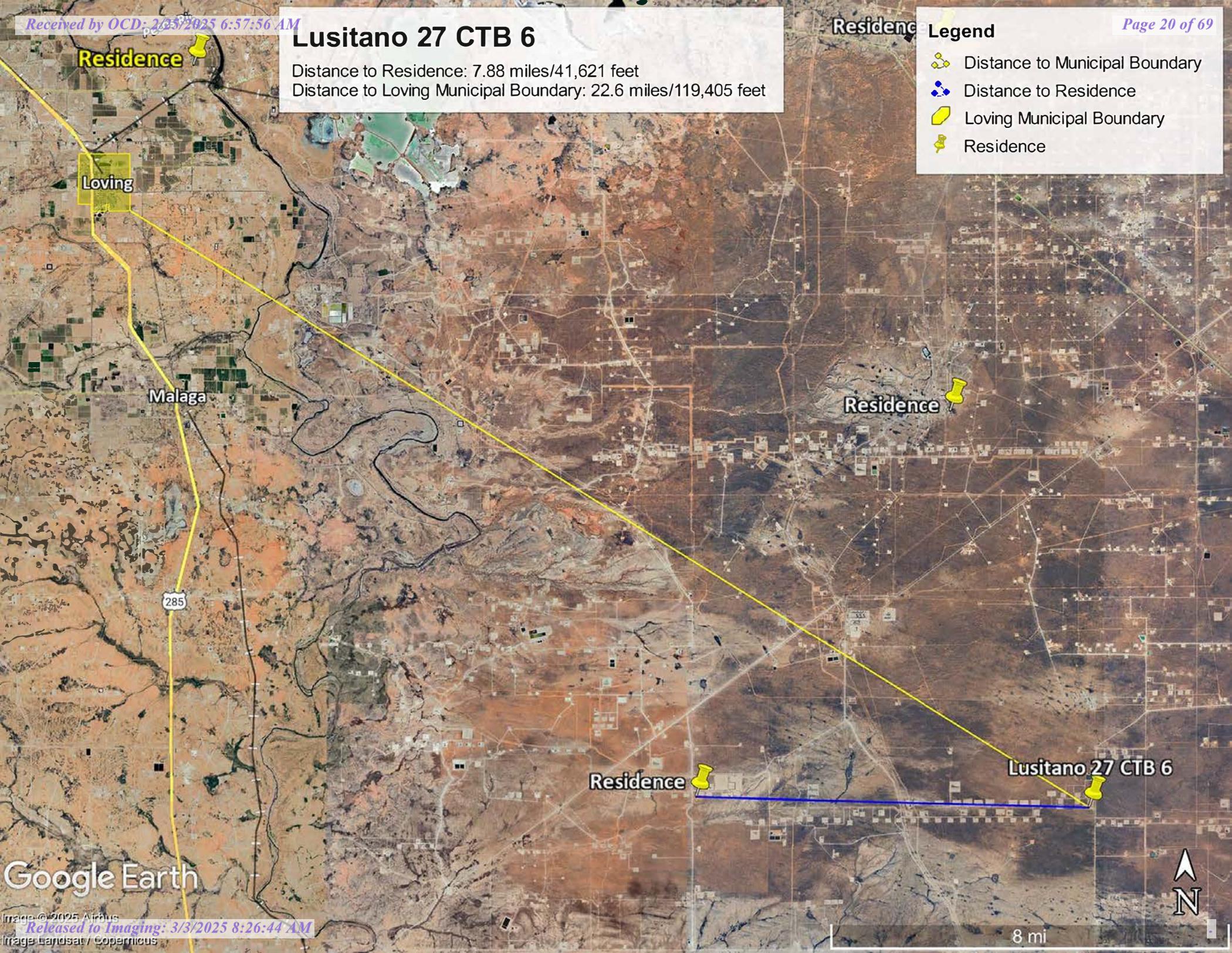
Residence

Lusitano 27 CTB 6

285

Google Earth

8 mi



# Lusitano 27 CTB 6

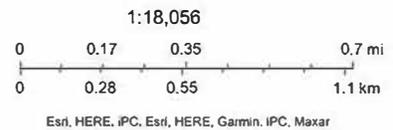
Nearest Freshwater Well: Pod C-02250

Distance: 1.42 miles/7,476 feet



1/11/2025, 7:54:12 PM

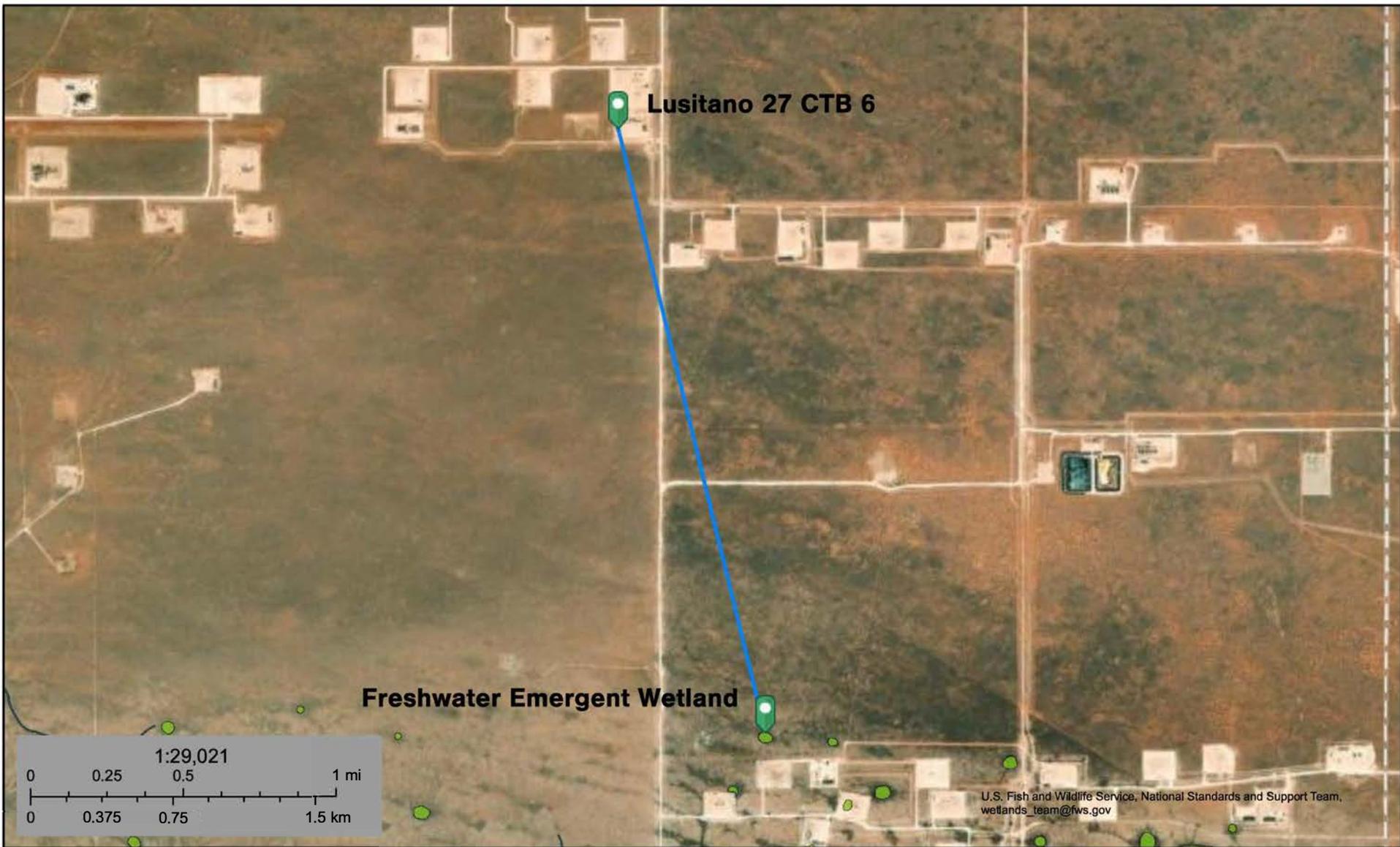
- Override 1
- Override 2
- GIS WATERS PODs
- Active
- Plugged
- New Mexico State Trust Lands
- Both Estates
- NHD Flowlines
- Stream River



Online web user  
This is an unofficial map from the OSE's online application.

### Lusitano 27 CTB 6

**Nearest Wetland: Freshwater Emergent Wetland**  
**Distance: 1.72 miles/9,060 feet**



U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

February 11, 2025

**Wetlands**

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland

-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond

-  Lake
-  Other
-  Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

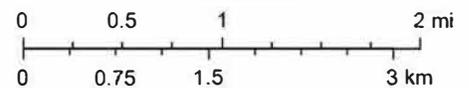
# Lusitano 27 CTB 6 Subsurface Mines Map



2/10/2025, 10:56:09 PM

1:72,224

- Industrial Minerals mining districts
- Potash\_Leasing\_Areas
- Coal Fields
- Mining\_Ghost\_Towns
- Counties
- REE\_Districts
- Fe skarn, carbonate-hosted Pb-Zn
- REE-Th-U veins, fluorite veins

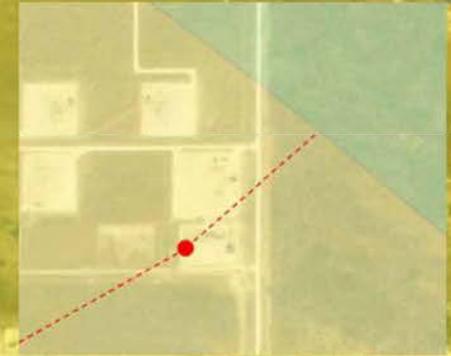


New Mexico Bureau of Geology and Mineral Resources, New Mexico Bureau of Geology & Mineral Resources, Earthstar Geographics, NMBGMR

ArcGIS Web AppBuilder

Karst

Lusitano 27 CTB 6



Zoom in distance to low karst

High Karst

### Lusitano 27 CTB 6 Medium Karst Potential & Distance to Low Karst/High Karst



New Mexico State Land Office

Disclaimer: The New Mexico State Land Office assumes no responsibility or liability for, or in connection with the accuracy, reliability or use of the information provided herein with respect to State Land Office data or data from other sources.

Data pertaining to New Mexico State Trust Lands are provisional and subject to revision, and do not constitute an official record of title. Official records may be reviewed at the New Mexico State Land Office in Santa Fe, New Mexico.

Released to Imaging: 3/3/2025 8:26:44 AM  
Map Created: 2/10/2025

- User drawn lines
- User drawn points

Karst\_Potential\_NM

Potential

High

Medium

Low

Critical\_Karst\_Zone\_NM

#### Distance

Low Karst 0.30 miles/1,564 feet  
High Karst 11.1 miles/58,706 feet



# National Flood Hazard Layer FIRMMette



103°45'52"W 32°6'37"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                                    |                      |   |
|------------------------------------|----------------------|---|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  |                      | Without Base Flood Elevation (BFE)<br>Zone A, V, A99  |
|                                    |                      | With BFE or Depth Zone AE, AO, AH, VE, AR   |
|                                    |                      | Regulatory Floodway   |
| <b>OTHER AREAS OF FLOOD HAZARD</b> |                      | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                                    |                      | Future Conditions 1% Annual Chance Flood Hazard Zone X  |
|                                    |                      | Area with Reduced Flood Risk due to Levee. See Notes. Zone X  |
|                                    |                      | Area with Flood Risk due to Levee Zone D  |
| <b>OTHER AREAS</b>                 |                      | NO SCREEN Area of Minimal Flood Hazard Zone X   |
|                                    |                      | Effective LOMRs   |
|                                    |                      | Area of Undetermined Flood Hazard Zone D  |
| <b>GENERAL STRUCTURES</b>          |                      | Channel, Culvert, or Storm Sewer  |
|                                    |                      | Levee, Dike, or Floodwall   |
| <b>OTHER FEATURES</b>              |                      | 20.2 Cross Sections with 1% Annual Chance   |
|                                    |                      | 17.5 Water Surface Elevation  |
|                                    |                      | Coastal Transect  |
|                                    |                      | Base Flood Elevation Line (BFE)   |
|                                    |                      | Limit of Study  |
|                                    |                      | Jurisdiction Boundary   |
|                                    |                      | Coastal Transect Baseline   |
|                                    | Profile Baseline     |   |
|                                    | Hydrographic Feature |   |
| <b>MAP PANELS</b>                  |                      | Digital Data Available  |
|                                    |                      | No Digital Data Available   |
|                                    |                      | Unmapped  |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/20/2025 at 5:33 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

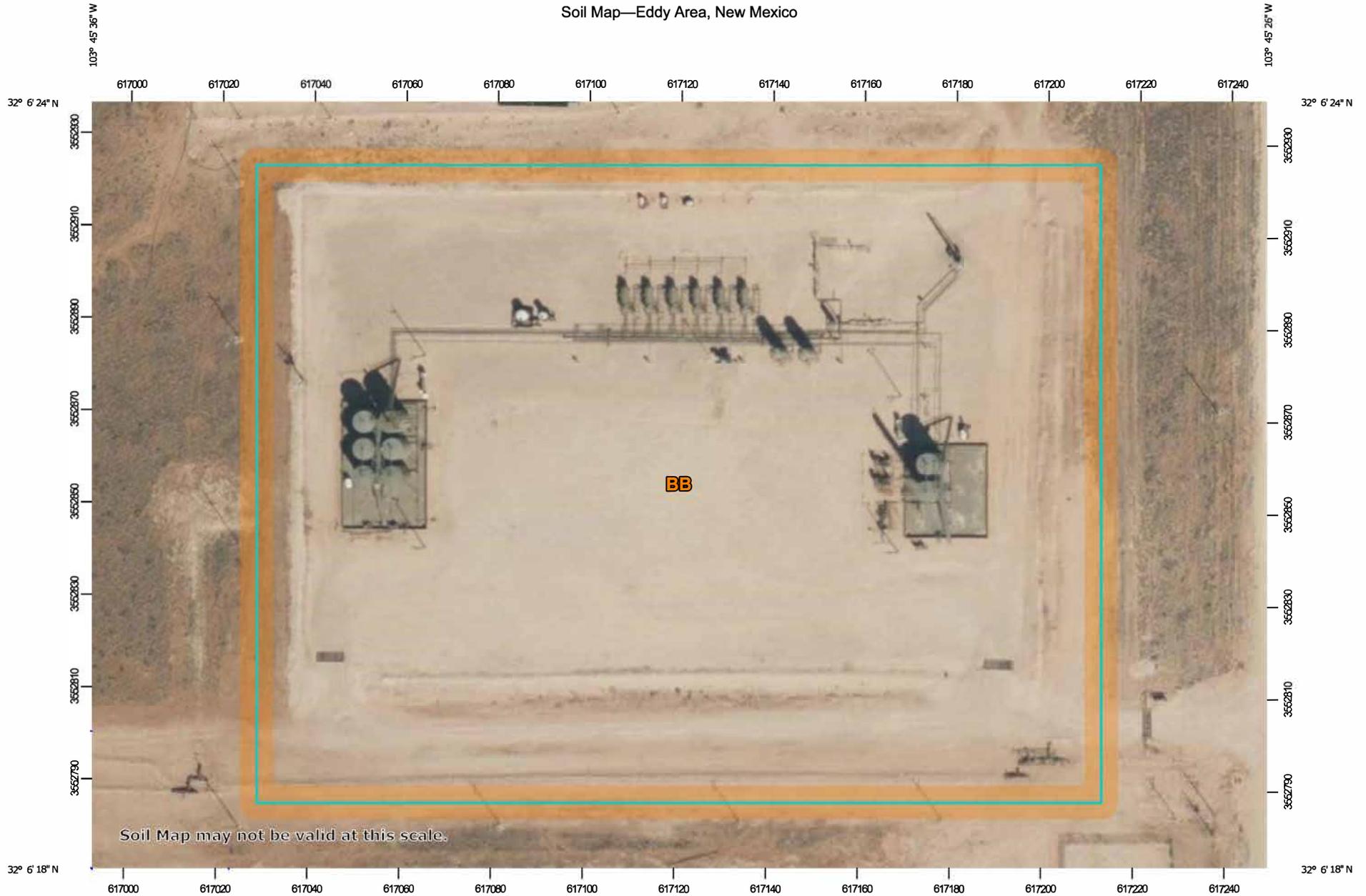
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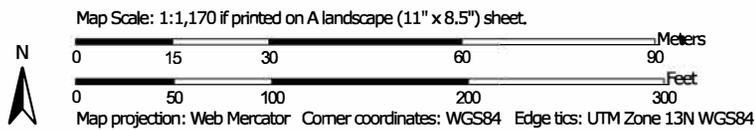
103°45'15"W 32°6'6"N

Basemap Imagery Source: USGS National Map 2023

### Soil Map—Eddy Area, New Mexico



Soil Map may not be valid at this scale.



Soil Map—Eddy Area, New Mexico

**MAP LEGEND**

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico  
 Survey Area Data: Version 20, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

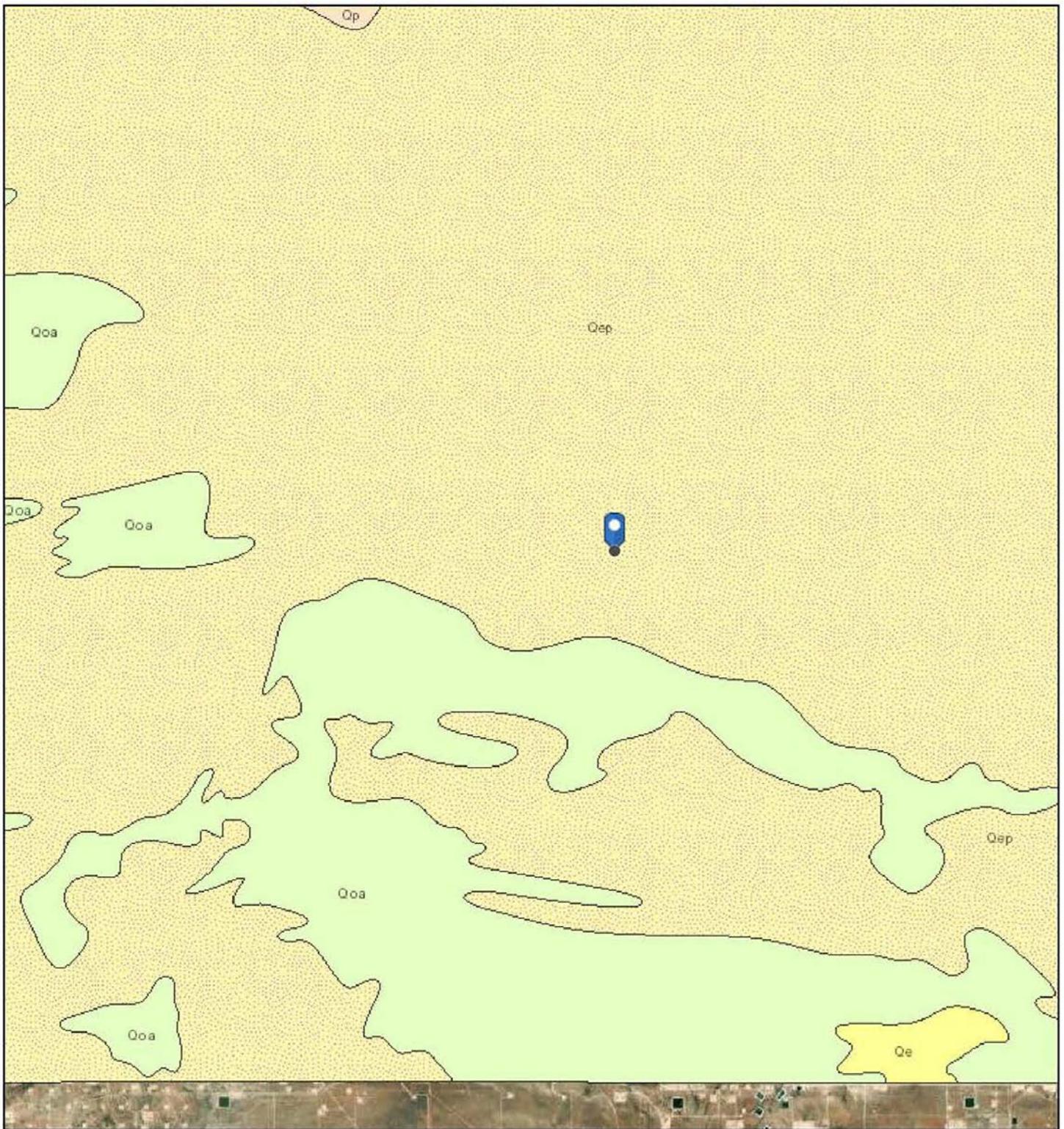
Soil Map—Eddy Area, New Mexico

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## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                 | Acres in AOI | Percent of AOI |
|------------------------------------|---|--------------|----------------|
| BB                                 | Berino complex, 0 to 3 percent slopes, eroded | 6.3          | 100.0%         |
| <b>Totals for Area of Interest</b> |   | <b>6.3</b>   | <b>100.0%</b>  |

# Lusitano 27 CTB 6 Geological Map

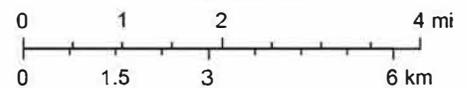


2/10/2025, 10:20:45 PM

1:144,448

### Lithologic Units

- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perennial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)



Earthstar Geographics, NMBGMR

File No. C-4619 POD1



## NEW MEXICO OFFICE OF THE STATE ENGINEER



### WR-07 APPLICATION FOR PERMIT TO DRILL A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: <http://www.ose.state.nm.us/>

|   |  |  |
|---|--|--|
| Purpose:  | <input type="checkbox"/> Pollution Control And/Or Recovery         | <input type="checkbox"/> Ground Source Heat Pump                               |
| <input type="checkbox"/> Exploratory Well (Pump test)   | <input type="checkbox"/> Construction Site/Public Works Dewatering | <input checked="" type="checkbox"/> Other(Describe): Groundwater Determination |
| <input type="checkbox"/> Monitoring Well  | <input type="checkbox"/> Mine Dewatering                           |  |
| A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive. |  |  |
| <input type="checkbox"/> Temporary Request - Requested Start Date:  |  | Requested End Date:  |
| Plugging Plan of Operations Submitted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No              |  |  |

#### 1. APPLICANT(S)

|   |   |
|---|---|
| Name:<br>Devon Energy   | Name:   |
| Contact or Agent: <span style="float: right;">check here if Agent <input type="checkbox"/></span>                             | Contact or Agent: <span style="float: right;">check here if Agent <input type="checkbox"/></span>     |
| Dale Woodall  |   |
| Mailing Address:<br>6488 7 Rivers Hwy   | Mailing Address:  |
| City:<br>Artesia  | City:   |
| State: <span style="float: right;">Zip Code:</span><br>NM <span style="float: right;">88210</span>                            | State: <span style="float: right;">Zip Code:</span>   |
| Phone: 575-748-1838 <span style="float: right;"><input type="checkbox"/> Home <input checked="" type="checkbox"/> Cell</span> | Phone: <span style="float: right;"><input type="checkbox"/> Home <input type="checkbox"/> Cell</span> |
| Phone (Work):   | Phone (Work):   |
| E-mail (optional):<br>Dale.Woodall@dvn.com  | E-mail (optional):  |

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FOR OSE INTERNAL USE

Application for Permit, Form WR-07, Rev 11/17/16

|  |                                  |                            |
|--|----------------------------------|----------------------------|
| File No.: <u>C-4619</u>                  | Trn. No.: <u>725954</u>          | Receipt No.: <u>244561</u> |
| Trans Description (optional): <u>MON</u> |                                  |                            |
| Sub-Basin: <u>CUB</u>                    | PCW/LOG Due Date: <u>5/19/23</u> |                            |

**2. WELL(S)** Describe the well(s) applicable to this application.

**Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84). District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.**

NM State Plane (NAD83) (Feet)       UTM (NAD83) (Meters)       Lat/Long (WGS84) (to the nearest 1/10<sup>th</sup> of second)

NM West Zone       Zone 12N  
 NM East Zone       Zone 13N  
 NM Central Zone

| Well Number (if known): | X or Easting or Longitude: | Y or Northing or Latitude: | Provide if known:<br>-Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR<br>- Hydrographic Survey Map & Tract; OR<br>- Lot, Block & Subdivision; OR<br>- Land Grant Name |
|-------------------------|----------------------------|----------------------------|--|
| 4619 POD1(TW-1)         | -103°45'45.26"             | 32°6'24.94"                | NE NW NE Sec.27 T25S R31S NMPM   |
|                         |                            |                            |  |
|                         |                            |                            |  |
|                         |                            |                            |  |
|                         |                            |                            |  |

**NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)**  
 Additional well descriptions are attached:  Yes  No      If yes, how many \_\_\_\_\_

Other description relating well to common landmarks, streets, or other:  
 Site ID:24  
 Location Name:Lusitano 27 34 Fed Com 734

Well is on land owned by: Bureau of Land Management

**Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached?**  Yes  No  
 If yes, how many \_\_\_\_\_

|                                      |  |
|--------------------------------------|--|
| Approximate depth of well (feet): 55 | Outside diameter of well casing (inches): 2.375 or 1.315 |
| Driller Name: Jackie D. Atkins       | Driller License Number: 1249                             |

**3. ADDITIONAL STATEMENTS OR EXPLANATIONS**

A Soil Boring to determine depth up to 55 feet. Temporary PVC well material will be placed to total depth and secured at surface. Temporary well will be in place for minimum of 72 hours. If ground water is encountered the boring will be plugged immediately using augers as tremie to land a slurry of Portland TYPE I/II Neat cement less than 6.0 gallons of water per 94 lb. sack. If no water is encountered then drill cuttings will be used to (10) ten feet of land surface and plugged using hydrated bentonite.

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FOR OSE INTERNAL USE

Application for Permit, Form WR-07

|                  |                 |
|------------------|-----------------|
| File No.: C-4619 | Trn No.: 725954 |
|------------------|-----------------|

**4. SPECIFIC REQUIREMENTS:** The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

|  |   |   |   |
|--|---|---|---|
| <p><b>Exploratory:</b><br/> <input type="checkbox"/> Include a description of any proposed pump test, if applicable.</p>   | <p><b>Pollution Control and/or Recovery:</b><br/> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following:<br/> <input type="checkbox"/> A description of the need for the pollution control or recovery operation.<br/> <input type="checkbox"/> The estimated maximum period of time for completion of the operation.<br/> <input type="checkbox"/> The annual diversion amount.<br/> <input type="checkbox"/> The annual consumptive use amount.<br/> <input type="checkbox"/> The maximum amount of water to be diverted and injected for the duration of the operation.<br/> <input type="checkbox"/> The method and place of discharge.<br/> <input type="checkbox"/> The method of measurement of water produced and discharged.</p> | <p><b>Construction De-Watering:</b><br/> <input type="checkbox"/> Include a description of the proposed dewatering operation,<br/> <input type="checkbox"/> The estimated duration of the operation,<br/> <input type="checkbox"/> The maximum amount of water to be diverted,<br/> <input type="checkbox"/> A description of the need for the dewatering operation, and,<br/> <input type="checkbox"/> A description of how the diverted water will be disposed of.</p>  | <p><b>Mine De-Watering:</b><br/> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following:<br/> <input type="checkbox"/> A description of the need for mine dewatering.<br/> <input type="checkbox"/> The estimated maximum period of time for completion of the operation.<br/> <input type="checkbox"/> The source(s) of the water to be diverted.<br/> <input type="checkbox"/> The geohydrologic characteristics of the aquifer(s).<br/> <input type="checkbox"/> The maximum amount of water to be diverted per annum.<br/> <input type="checkbox"/> The maximum amount of water to be diverted for the duration of the operation.<br/> <input type="checkbox"/> The quality of the water.<br/> <input type="checkbox"/> The method of measurement of water diverted.</p> |
| <p><b>Monitoring:</b><br/> <input type="checkbox"/> Include the reason for the monitoring well, and,<br/> <input type="checkbox"/> The duration of the planned monitoring.</p> | <p><input type="checkbox"/> The method of measurement of water injected.<br/> <input type="checkbox"/> The characteristics of the aquifer.<br/> <input type="checkbox"/> The method of determining the resulting annual consumptive use of water and depletion from any related stream system.<br/> <input type="checkbox"/> Proof of any permit required from the New Mexico Environment Department.<br/> <input type="checkbox"/> An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.</p>   | <p><b>Ground Source Heat Pump:</b><br/> <input type="checkbox"/> Include a description of the geothermal heat exchange project,<br/> <input type="checkbox"/> The number of boreholes for the completed project and required depths.<br/> <input type="checkbox"/> The time frame for constructing the geothermal heat exchange project, and,<br/> <input type="checkbox"/> The duration of the project.<br/> <input type="checkbox"/> Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.</p> | <p><input type="checkbox"/> The recharge of water to the aquifer.<br/> <input type="checkbox"/> Description of the estimated area of hydrologic effect of the project.<br/> <input type="checkbox"/> The method and place of discharge.<br/> <input type="checkbox"/> An estimation of the effects on surface water rights and underground water rights from the mine dewatering project.<br/> <input type="checkbox"/> A description of the methods employed to estimate effects on surface water rights and underground water rights.<br/> <input type="checkbox"/> Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.</p>  |

**ACKNOWLEDGEMENT**

I, We (name of applicant(s)), Dale Woodall (Devon Energy)  
 Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Dale Woodall  
Dale Woodall (Apr 25, 2022 11:09 MDT)  
 Applicant Signature

Applicant Signature

**ACTION OF THE STATE ENGINEER**

This application is:

- approved       partially approved       denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 19th day of May 20 22, for the State Engineer,

Mike A. Hamman, P.E. State Engineer

By: K. Parekh  
 Signature

Kashyap Parekh  
 Print

Title: Water Resources Manager I  
 Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

|                         |                        |
|-------------------------|------------------------|
| File No.: <u>C-4619</u> | Trn No.: <u>725954</u> |
|-------------------------|------------------------|

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL**

- 17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.
- 17-1A Depth of the well shall not exceed the thickness of the valley fill.
- 17-4 No water shall be appropriated and beneficially used under this permit.
- 17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: C 04619 POD1

File Number: C 04619

Trn Number: 725954

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL (Continued)**

- 17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- 17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.
- 17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record. The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.
- 17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.
- 17-Q The State Engineer retains jurisdiction over this permit.
- 17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

Trn Desc: C 04619 POD1

File Number: C 04619

Trn Number: 725954

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL (Continued)**

LOG The Point of Diversion C 04619 POD1 must be completed and the Well Log filed on or before 05/19/2023.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

**ACTION OF STATE ENGINEER**

Notice of Intention Rcvd: Date Rcvd. Corrected:  
Formal Application Rcvd: 05/11/2022 Pub. of Notice Ordered:  
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 19 day of May A.D., 2022

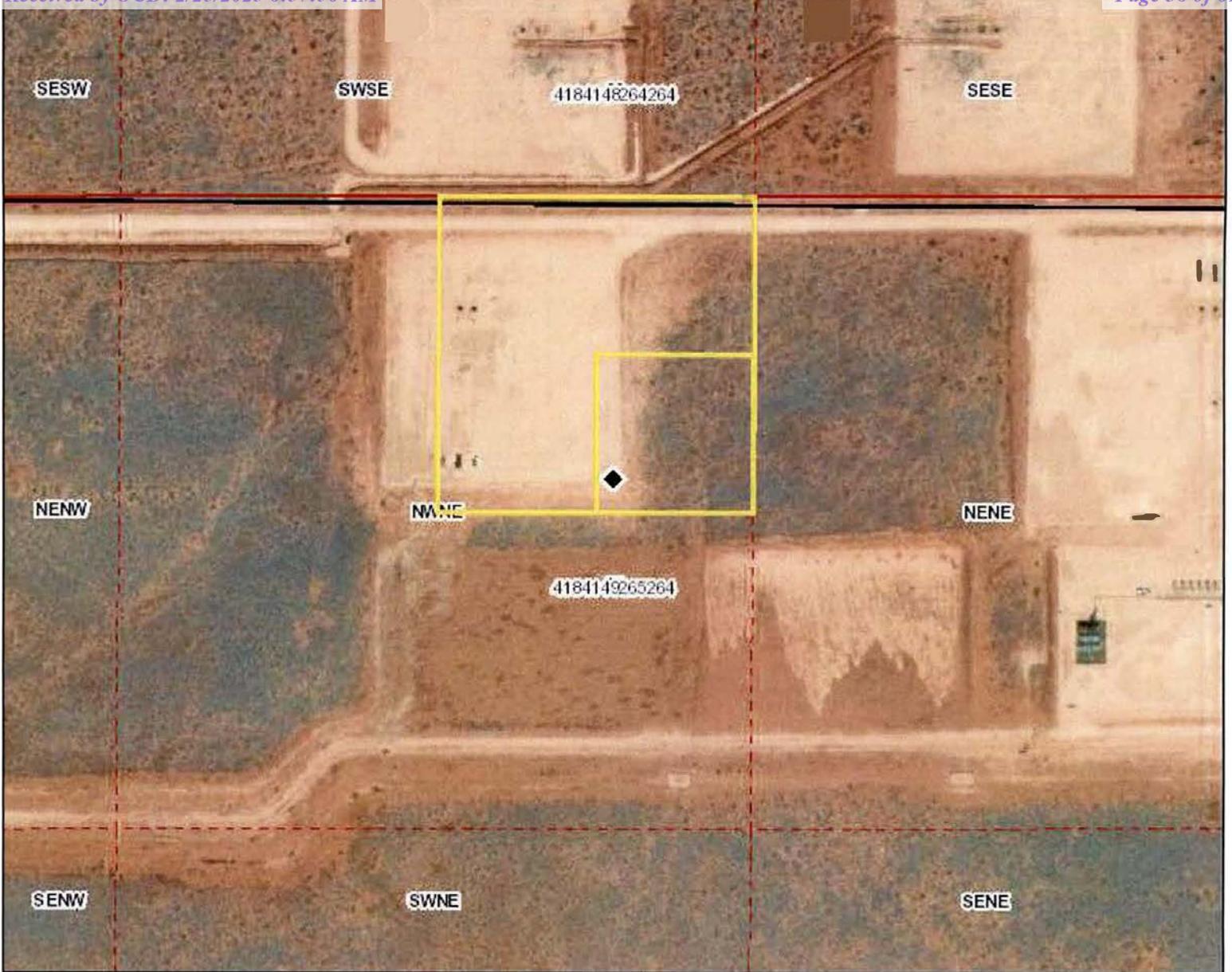
Mike A. Hamman, P.E. \_\_\_\_\_, State Engineer

By: K. Parekh  
KASHYAP PAREKH

Trn Desc: C 04619 POD1

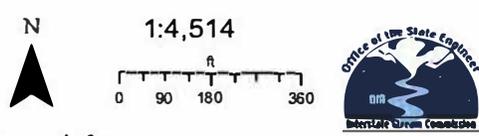
File Number: C 04619

Trn Number: 725954



**Coordinates**  
UTM - NAD 83 (m) - Zone 13  
 Easting 616750.669  
 Northing 3552957.497  
State Plane - NAD 83 (ft) - Zone E  
 Easting 718065.122  
 Northing 403102.710  
Degrees Minutes Seconds  
 Latitude 32 : 6 : 24.940000  
 Longitude -103 : 45 : 45.260000  
 Location pulled from Coordinate Search

NEW MEXICO OFFICE  
 OF THE  
 STATE ENGINEER



**Image Info**  
 Source: Maxar  
 Date: 5/16/2021  
 Resolution (m): 0.5  
 Accuracy (m): 5

**Spatial Information**  
 OSE Administrative Area: Eddy  
 County: Eddy  
 Groundwater Basin: Carlsbad  
 Abstract Area: Carlsbad 72-12-1  
 Carlsbad Underground Basin  
 Sub-Basin: Lower Pecos-Red Bluff Reservoir  
 Land Grant: Not in Land Grant  
 Restrictions:  
 NA  
**PLSS Description**  
 SENENWNE Qtr of Sec 27 of 025S 031E  
 Derived from CADNSDI- Qtr Sec. locations are  
 calculated and are only approximations

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| <input type="checkbox"/> Calculated PLSS                | <input type="checkbox"/> Cibola County Parcels 2021   | <input type="checkbox"/> Harding County Parcels 2021    | <input type="checkbox"/> McKinley County Parcels 2021   | <input type="checkbox"/> Sandoval County Parcels 2021   | <input type="checkbox"/> Taos County Parcels 2021     |
| <input type="checkbox"/> Coord Search Location          | <input type="checkbox"/> Cofax County Parcels 2021    | <input type="checkbox"/> Hidalgo County Parcels 2021    | <input type="checkbox"/> Mora County Parcels 2021       | <input type="checkbox"/> San Juan County Parcels 2021   | <input type="checkbox"/> Torrance County Parcels 2021 |
| <input type="checkbox"/> OSE District Boundary          | <input type="checkbox"/> Curry County Parcels 2021    | <input type="checkbox"/> Guadalupe County Parcels 2021  | <input type="checkbox"/> Otero County Parcels 2021      | <input type="checkbox"/> San Miguel County Parcels 2021 | <input type="checkbox"/> Union County Parcels 2021    |
| <input type="checkbox"/> Federal Lands                  | <input type="checkbox"/> De Baca County Parcels 2021  | <input type="checkbox"/> Lea County Parcels 2021        | <input type="checkbox"/> Quay County Parcels 2021       | <input type="checkbox"/> Santa Fe County Parcels 2021   | <input type="checkbox"/> Valencia County Parcels 2021 |
| <input type="checkbox"/> Counties                       | <input type="checkbox"/> Dona Ana County Parcels 2021 | <input type="checkbox"/> Lincoln County Parcels 2021    | <input type="checkbox"/> Rio Arriba County Parcels 2021 | <input type="checkbox"/> Sierra County Parcels 2021     |   |
| <input type="checkbox"/> Bernalillo County Parcels 2021 | <input type="checkbox"/> Eddy County Parcels 2021     | <input type="checkbox"/> Los Alamos County Parcels 2021 | <input type="checkbox"/> Roosevelt County Parcels 2021  | <input type="checkbox"/> Socorro County Parcels 2021    |   |
| <input type="checkbox"/> Catron County Parcels 2021     | <input type="checkbox"/> Grant County Parcels 2021    | <input type="checkbox"/> Luna County Parcels 2021       |   |   |   |
| <input type="checkbox"/> Chaves County Parcels 2021     |   |   |   |   |   |

**POD Information**  
 Owner:  
 File Number:  
 POD Status: NoData  
 Permit Status: NoData  
 Permit Use: NoData  
 Purpose:

5/17/20

The accuracy of this data is not guaranteed. The user shall be responsible for verifying the accuracy of the data. The user shall be responsible for obtaining all necessary permits and approvals. The user shall be responsible for all costs associated with this data.

Mike A. Hamman, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 725954  
File Nbr: C 04619

May. 19, 2022

DALE WOODALL  
DEVON ENERGY  
6488 7 RIVERS HWY  
ARTESIA, NM 88210

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

- \* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.
- \* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.
- \* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.
- \* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website [www.ose.state.nm.us](http://www.ose.state.nm.us).

Sincerely,

A handwritten signature in blue ink, appearing to read "Azucena Ramirez".

Azucena Ramirez  
(575) 622-6521

Enclosure

explore



# PLUGGING RECORD



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

**I. GENERAL / WELL OWNERSHIP:**

State Engineer Well Number: C-4619  
Well owner: Devon Energy Phone No.: 575-748-1838  
Mailing address: 6488 7 Rivers Hwy  
City: Artesia State: New Mexico Zip code: 88210

**II. WELL PLUGGING INFORMATION:**

- 1) Name of well drilling company that plugged well: Jackie D. Atkins ( Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge, Cameron Pruitt
- 4) Date well plugging began: 6/6/2022 Date well plugging concluded: 6/6/2022
- 5) GPS Well Location: Latitude: 32 deg, 6 min, 24.94 sec  
Longitude: 103 deg, 45 min, 45.26 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl),  
by the following manner: water level probe
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 5/19/2022
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

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

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

**III. SIGNATURE:**

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

*Jack Atkins*

6/9/2022

Signature of Well Driller

Date

Form 3100-11  
(October 2008)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Serial Number  
NMNM128360

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), the Attorney General's Opinion of April 2, 1941 (40 Op. Atty. Gen 41), or the Combined Hydrocarbon Leasing Act of 1981(95 Stat 1070).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name DEVON ENE PROD CO LP  
Street 20 N BROADWAY STE 1500  
City, State, Zip Code OKLAHOMA CITY, OK 73102

2. This application/offer/lease is for: (Check Only One)  PUBLIC DOMAIN LANDS  ACQUIRED LANDS (percent U.S. interest \_\_\_\_\_)

Surface managing agency if other than Bureau of Land Management (BLM): \_\_\_\_\_ Unit/Project \_\_\_\_\_

Legal description of land requested: \*Parcel No.: \_\_\_\_\_ \*Sale Date (mm/dd/yyyy): \_\_\_\_\_

\*See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.

T. \_\_\_\_\_ R. \_\_\_\_\_ Meridian \_\_\_\_\_ State \_\_\_\_\_ County \_\_\_\_\_

Amount remitted: Filing fee \$ \_\_\_\_\_ Rental fee \$ \_\_\_\_\_ Total acres applied for \_\_\_\_\_  
Total \$ \_\_\_\_\_

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T. 0250S R. 0310E Meridian NMPM State NM County Eddy  
Sec. 026 S2SW;  
027 SESE;

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Total acres in lease 120.00  
Rental retained \$ 180.00

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid form submitted under 43 CFR 3120 and is subject to the provisions of that bid and those specified on this form.

Type and primary term:

Noncompetitive lease (ten years)

THE UNITED STATES OF AMERICA  
by [Signature]  
(BLM)  
LAND LAW EXAMINER, FLUIDS ADJUDICATION TEAM JAN 18 2012  
(Title) (Date)

Competitive lease (ten years)

Other \_\_\_\_\_ EFFECTIVE DATE OF LEASE JUL 01 2012

(Continued on page 2)

30-3001786-000

4. (a) Undersigned certifies that (1) offeror is a citizen of the United States; an association of such citizens; a municipality, or a corporation organized under the laws of the United States or of any State or Territory thereof, (2) all parties holding an interest in the offer are in compliance with 43 CFR 3100 and the leasing authorities; (3) offeror's chargeable interests, direct and indirect, in each public domain and acquired lands separately in the same State, do not exceed 246,080 acres in oil and gas leases (of which up to 200,000 acres may be in oil and gas options or 300,000 acres in leases in each leasing District in Alaska of which up to 200,000 acres may be in options), (4) offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located; (5) offeror is in compliance with qualifications concerning Federal coal lease holdings provided in sec. 2(a)2(A) of the Mineral Leasing Act; (6) offeror is in compliance with reclamation requirements for all Federal oil and gas lease holdings as required by sec. 17(g) of the Mineral Leasing Act; and (7) offeror is not in violation of sec. 41 of the Act. (b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms conditions, and stipulations of which offeror has been given notice, and any amendment or separate lease that may include any land described in this offer open to leasing at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or in part unless the withdrawal is received by the proper BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

This offer will be rejected and will afford offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments.

Duly executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_  
 \_\_\_\_\_  
 (Signature of Lessee or Attorney-in-fact)

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Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any person knowingly and willfully to make to any department or Agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

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LEASE TERMS

USE UNTIL MAY 11 2022 AMB: 45

Sec. 1. Rentals--Rentals must be paid to proper office of lessor in advance of each lease year. Annual rental rates per acre or fraction thereof are:

- (a) Noncompetitive lease, \$1.50 for the first 5 years; thereafter \$2.00;
- (b) Competitive lease, \$1.50; for the first 5 years; thereafter \$2.00;
- (c) Other, see attachment, or

as specified in regulations at the time this lease is issued.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a well capable of producing leased resources, and the plan contains a provision for allocation of production, royalties must be paid on the production allocated to this lease. However, annual rentals must continue to be due at the rate specified in (a), (b), or (c) rentals for those lands not within a participating area.

Failure to pay annual rental, if due, on or before the anniversary date of this lease (or next official working day if office is closed) must automatically terminate this lease by operation of law. Rentals may be waived, reduced, or suspended by the Secretary upon a sufficient showing by lessee.

Sec. 2. Royalties--Royalties must be paid to proper office of lessor. Royalties must be computed in accordance with regulations on production removed or sold. Royalty rates are:

- (a) Noncompetitive lease, 12 1/2%;
- (b) Competitive lease, 12 1/2 %;
- (c) Other, see attachment; or

as specified in regulations at the time this lease is issued.

Lessor reserves the right to specify whether royalty is to be paid in value or in kind, and the right to establish reasonable minimum values on products after giving lessee notice and an opportunity to be heard. When paid in value, royalties must be due and payable on the last day of the month following the month in which production occurred. When paid in kind, production must be delivered, unless otherwise agreed to by lessor, in merchantable condition on the premises where produced without cost to lessor. Lessee must not be required to hold such production in storage beyond the last day of the month following the month in which production occurred, nor must lessee be held liable for loss or destruction of royalty oil or other products in storage from causes beyond the reasonable control of lessee.

Minimum royalty in lieu of rental of not less than the rental which otherwise would be required for that lease year must be payable at the end of each lease year beginning on or after a discovery in paying quantities. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced, for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

An interest charge will be assessed on late royalty payments or underpayments in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) (30 U.S.C. 1701). Lessee must be liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator, or due to the failure to comply with any rule, regulation, order, or citation issued under FOGRMA or the leasing authority.

(Continued on page 3)

(Form 3100-11, page 2)

Sec. 3. Bonds - A bond must be filed and maintained for lease operations as required under regulations.

Sec. 4. Diligence, rate of development, unitization, and drainage - Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan, within 30 days of notice, if deemed necessary for proper development and operation of area, field, or pool embracing these leased lands. Lessee must drill and produce wells necessary to protect leased lands from drainage or pay compensatory royalty for drainage in amount determined by lessor.

Sec. 5. Documents, evidence, and inspection - Lessee must file with proper office of lessor, not later than 30 days after effective date thereof, any contract or evidence of other arrangement for sale or disposal of production. At such times and in such form as lessor may prescribe, lessee must furnish detailed statements showing amounts and quality of all products removed and sold, proceeds therefrom, and amount used for production purposes or unavoidably lost. Lessee may be required to provide plats and schematic diagrams showing development work and improvements, and reports with respect to parties in interest, expenditures, and depreciation costs. In the form prescribed by lessor, lessee must keep a daily drilling record, a log, information on well surveys and tests, and a record of subsurface investigations and furnish copies to lessor when required. Lessee must keep open at all reasonable times for inspection by any representative of lessor, the leased premises and all wells, improvements, machinery, and fixtures thereon, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or in the leased lands. Lessee must maintain copies of all contracts, sales agreements, accounting records, and documentation such as billings, invoices, or similar documentation that supports costs claimed as manufacturing, preparation, and/or transportation costs. All such records must be maintained in lessee's accounting offices for future audit by lessor. Lessee must maintain required records for 6 years after they are generated or, if an audit or investigation is underway, until released of the obligation to maintain such records by lessor.

During existence of this lease, information obtained under this section will be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 6. Conduct of operations - Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses must be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee must contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee must immediately contact lessor. Lessee must cease any operations that would result in the destruction of such species or objects.

Sec. 7. Mining operations - To the extent that impacts from mining operations would be substantially different or greater than those associated with normal drilling operations, lessor reserves the right to deny approval of such operations.

Sec. 8. Extraction of helium - Lessor reserves the option of extracting or having extracted helium from gas production in a manner specified and by means provided by lessor at no expense or loss to lessee or owner of the gas. Lessee must include in any contract of sale of gas the provisions of this section.

Sec. 9. Damages to property - Lessee must pay lessor for damage to lessor's improvements, and must save and hold lessor harmless from all claims for damage or harm to persons or property as a result of lease operations.

Sec. 10. Protection of diverse interests and equal opportunity - Lessee must pay, when due, all taxes legally assessed and levied under laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; and take measures necessary to protect the health and safety of the public.

Lessor reserves the right to ensure that production is sold at reasonable prices and to prevent monopoly. If lessee operates a pipeline, or owns controlling interest in a pipeline or a company operating a pipeline, which may be operated accessible to oil derived from these leased lands, lessee must comply with section 28 of the Mineral Leasing Act of 1920.

Lessee must comply with Executive Order No. 11246 of September 24, 1965, as amended, and regulations and relevant orders of the Secretary of Labor issued pursuant thereto. Neither lessee nor lessee's subcontractors must maintain segregated facilities.

Sec. 11. Transfer of lease interests and relinquishment of lease - As required by regulations, lessee must file with lessor any assignment or other transfer of an interest in this lease. Lessee may relinquish this lease or any legal subdivision by filing in the proper office a written relinquishment, which will be effective as of the date of filing, subject to the continued obligation of the lessee and surety to pay all accrued rentals and royalties.

Sec. 12. Delivery of premises - At such time as all or portions of this lease are returned to lessor, lessee must place affected wells in condition for suspension or abandonment, reclaim the land as specified by lessor and, within a reasonable period of time, remove equipment and improvements not deemed necessary by lessor for preservation of producible wells.

Sec. 13. Proceedings in case of default - If lessee fails to comply with any provisions of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease will be subject to cancellation unless or until the leasehold contains a well capable of production of oil or gas in paying quantities, or the lease is committed to an approved cooperative or unit plan or communitization agreement which contains a well capable of production of unitized substances in paying quantities. This provision will not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver will not prevent later cancellation for the same default occurring at any other time. Lessee will be subject to applicable provisions and penalties of FOGRMA (30 U.S.C. 1701).

Sec. 14. Heirs and successors-in-interest - Each obligation of this lease will extend to and be binding upon, and every benefit hereof will inure to the heirs, executors, administrators, successors, beneficiaries, or assignees of the respective parties hereto.

(Continued on page 4)

(Form 3100-11, page 3)

**A. General:**

1. Page 1 of this form is to be completed only by parties filing for a noncompetitive lease. The BLM will complete page 1 of the form for all other types of leases.
2. Entries must be typed or printed plainly in ink. Offeror must sign Item 4 in ink.
3. An original and two copies of this offer must be prepared and filed in the proper BLM State Office. See regulations at 43 CFR 1821.2-1 for office locations.
4. If more space is needed, additional sheets must be attached to each copy of the form submitted.

**B. Special:**

Item 1 - Enter offeror's name and billing address.

Item 2 - Identify the mineral status and, if acquired lands, percentage of Federal ownership of applied for minerals. Indicate the agency controlling the surface of the land and the name of the unit or project which the land is a part. The same offer may not include both Public

Domain and Acquired lands. Offeror also may provide other information that will assist in establishing title for minerals. The description of land must conform to 43 CFR 3110. A single parcel number and Sale Date will be the only acceptable description during the period from the first day following the end of a competitive process until the end of that same month, using the parcel number on the List of Lands Available for Competitive Nominations or the Notice of Competitive Lease Sale, whichever is appropriate.

Payments: The amount remitted must include the filing fee and the first year's rental at the rate of \$1.50 per acre or fraction thereof. The full rental based on the total acreage applied for must accompany an offer even if the mineral interest of the United States is less than 100 percent. The filing fee will be retained as a service charge even if the offer is completely rejected or withdrawn. To protect priority, it is important that the rental submitted be sufficient to cover all the land requested. If the land requested includes lots or irregular quarter-quarter sections, the exact area of which is not known to the offeror, rental should be submitted on the basis of each such lot or quarter-quarter section containing 40 acres. If the offer is withdrawn or rejected in whole or in part before a lease issues, the rental remitted for the parts withdrawn or rejected will be returned.

Item 3 - This space will be completed by the United States.

**NOTICES**

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information in connection with information required by this oil and gas lease offer.

**AUTHORITY:** 30 U.S.C. 181 et seq.; 30 U.S.C 351-359.

**PRINCIPAL PURPOSE:** The information is to be used to process oil and gas offers and leases.

**ROUTINE USES:** (1) The adjudication of the lessee's rights to the land or resources. (2) Documentation for public information in support of notations made on land status records for the management, disposal, and use of public lands and resources. (3) Transfer to appropriate Federal agencies when consent or concurrence is required prior to granting a right in public lands or resources. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

**EFFECT OF NOT PROVIDING INFORMATION:** If all the information is not provided, the offer may be rejected. See regulations at 43 CFR 3100.

NM-11 LN

**SPECIAL CULTURAL RESOURCE**  
**LEASE NOTICE**

All development activities proposed under the authority of this lease are subject to compliance with Section 106 of the NHPA and Executive Order 13007. The lease area may contain historic properties, traditional cultural properties (TCP's), and/or sacred sites currently unknown to the BLM that were not identified in the Resource Management Plan or during the lease parcel review process. Depending on the nature of the lease developments being proposed and the cultural resources potentially affected, compliance with Section 106 of the National Historic Preservation Act and Executive Order 13007 could require intensive cultural resource inventories, Native American consultation, and mitigation measures to avoid adverse effects—the costs for which will be borne by the lessee. The BLM may require modifications to or disapprove proposed activities that are likely to adversely affect TCP's or sacred sites for which no mitigation measures are possible. This could result in extended time frames for processing authorizations for development activities, as well as changes in the ways in which developments are implemented.

USE OFF MAY 11 2022 AM 8:49

**Bureau of Land Management  
New Mexico State Office**

**NM-11-LN  
February 9, 2004**

SENM-S-22

**CONTROLLED SURFACE USE**  
**LESSER PRAIRIE-CHICKENS**

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to the operation and maintenance of production facilities.

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in lesser prairie-chicken habitat during the period of March 1 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise. Exceptions to these requirements will be considered for areas of no or low lesser prairie-chicken booming activity, or unoccupied habitat, including leks, as determined at the time of permitting, or in emergency situations.

For the purpose of: Protecting Lesser Prairie-Chickens

OSE OIT MAY 11 2022 AM 8:49

Bureau of Land Management  
Pecos District Offices

SENM-S-22  
Revised July 2010

## Transaction Summary

DCL Declaration of a Water Right

**Transaction Number:** 198471      **Transaction Desc:** C 02250      **File Date:** 1992-03-16

**Primary Status:** DCL Declared

**Secondary Status:** PRC Processed

**Person Assigned:** \*\*\*\*\*

**Applicant:** BUCK JACKSON TRUST

**Contact:** LARUE JACKSON

### Events

| Event Images | Date       | Type | Description                   | Comment | Processed By |
|--------------|------------|------|-------------------------------|---------|--------------|
|              | 1992-03-16 | APP  | Application Received          | *       | *****        |
|              | 1992-03-16 | FTN  | Finalize non-published Trans. |         | *****        |
|              | 2002-03-05 | QAT  | Quality Assurance Completed   |         | *****        |

### Water Right Information

| WR File Nbr | Acres | Diversion | Consumptive | Purpose of Use                 |
|-------------|-------|-----------|-------------|--------------------------------|
| C 02250     | 0.000 | 3.000     |             | STK 72-12-1 LIVESTOCK WATERING |

### Point of Diversion

| POD Nbr | Easting  | Northing    | Map   | Grant |
|---------|----------|-------------|---|-------|
| C 02250 | 614912.0 | 3553620.0 * |  |       |

\* UTM location was derived from PLSS - see Help

### Place of Use

| Q256 | Q64 | Q16 | Q4 | Sec | Tws | Rng | Acres | Diversion | Consumptive | Use | Priority | Status | Other Loc Desc         |
|------|-----|-----|----|-----|-----|-----|-------|-----------|-------------|-----|----------|--------|------------------------|
|      |     |     |    |     |     |     | 0.000 | 3.000     |             | STK |          | DCL    | NO PLACE OF USE GIVEN. |

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

Map Unit Description: Berino complex, 0 to 3 percent slopes, eroded---Eddy Area, New Mexico

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## Eddy Area, New Mexico

### BB—Berino complex, 0 to 3 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 1w43  
*Elevation:* 2,000 to 5,700 feet  
*Mean annual precipitation:* 5 to 15 inches  
*Mean annual air temperature:* 57 to 70 degrees F  
*Frost-free period:* 180 to 260 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Berino and similar soils:* 60 percent  
*Pajarito and similar soils:* 25 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Berino

##### Setting

*Landform:* Plains, fan piedmonts  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

##### Typical profile

*H1 - 0 to 17 inches:* fine sand  
*H2 - 17 to 58 inches:* sandy clay loam  
*H3 - 58 to 60 inches:* loamy sand

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

Map Unit Description: Berino complex, 0 to 3 percent slopes, eroded---Eddy Area, New Mexico

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*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: B*  
*Ecological site: R070BD003NM - Loamy Sand*  
*Hydric soil rating: No*

### **Description of Pajarito**

#### **Setting**

*Landform: Dunes, plains, interdunes*  
*Landform position (three-dimensional): Side slope*  
*Down-slope shape: Convex, linear*  
*Across-slope shape: Convex, linear*  
*Parent material: Mixed alluvium and/or eolian sands*

#### **Typical profile**

*H1 - 0 to 9 inches: loamy fine sand*  
*H2 - 9 to 72 inches: fine sandy loam*

#### **Properties and qualities**

*Slope: 0 to 3 percent*  
*Depth to restrictive feature: More than 80 inches*  
*Drainage class: Well drained*  
*Runoff class: Very low*  
*Capacity of the most limiting layer to transmit water (Ksat): High*  
*(2.00 to 6.00 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*  
*Frequency of ponding: None*  
*Calcium carbonate, maximum content: 40 percent*  
*Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)*  
*Sodium adsorption ratio, maximum: 1.0*  
*Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)*

#### **Interpretive groups**

*Land capability classification (irrigated): 2e*  
*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: A*  
*Ecological site: R070BD003NM - Loamy Sand*  
*Hydric soil rating: No*

### **Minor Components**

#### **Pajarito**

*Percent of map unit: 4 percent*  
*Ecological site: R070BD003NM - Loamy Sand*  
*Hydric soil rating: No*

#### **Wink**

*Percent of map unit: 4 percent*  
*Ecological site: R070BD003NM - Loamy Sand*  
*Hydric soil rating: No*

#### **Cacique**

*Percent of map unit: 4 percent*

Map Unit Description: Berino complex, 0 to 3 percent slopes, eroded---Eddy Area, New Mexico

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*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No

**Kermit**

*Percent of map unit:* 3 percent  
*Ecological site:* R070BD005NM - Deep Sand  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 20, Sep 3, 2024

## Ecological site R070BD003NM Loamy Sand

Accessed: 11/14/2024

### General information

**Provisional.** A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

#### Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

### Associated sites

|             |                               |
|-------------|-------------------------------|
| R070BD004NM | <b>Sandy</b><br>Sandy         |
| R070BD005NM | <b>Deep Sand</b><br>Deep Sand |

**Table 1. Dominant plant species**

|            |               |
|------------|---------------|
| Tree       | Not specified |
| Shrub      | Not specified |
| Herbaceous | Not specified |

### Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

**Table 2. Representative physiographic features**

|           |  |
|-----------|--|
| Landforms | (1) Fan piedmont<br>(2) Alluvial fan<br>(3) Dune |
| Elevation | 2,800–5,000 ft                                   |
| Slope     | 0–9%   |
| Aspect    | Aspect is not a significant factor               |

### Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes.

The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost being late March or early April and the first killing frost being in later October or early November.

Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest from January through June, which accelerates soil drying during a critical period for cool season plant growth.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

**Table 3. Representative climatic features**

|                               |          |
|-------------------------------|----------|
| Frost-free period (average)   | 221 days |
| Freeze-free period (average)  | 240 days |
| Precipitation total (average) | 13 in    |

### Influencing water features

This site is not influenced from water from wetlands or streams.

### Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:

- Maljamar
- Berino
- Parjarito
- Palomas
- Wink
- Pyote

**Table 4. Representative soil features**

|                      |   |
|----------------------|---|
| Surface texture      | (1) Fine sand<br>(2) Fine sandy loam<br>(3) Loamy fine sand |
| Family particle size | (1) Sandy   |
| Drainage class       | Well drained to somewhat excessively drained                |
| Permeability class   | Moderate to moderately rapid                                |

|  |              |
|--|--------------|
| Soil depth   | 40–72 in     |
| Surface fragment cover ≤3"                           | 0–10%        |
| Surface fragment cover >3"                           | 0%           |
| Available water capacity (0–40in)                    | 5–7 in       |
| Calcium carbonate equivalent (0–40in)                | 3–40%        |
| Electrical conductivity (0–40in)                     | 2–4 mmhos/cm |
| Sodium adsorption ratio (0–40in)                     | 0–2          |
| Soil reaction (1:1 water) (0–40in)                   | 6.6–8.4      |
| Subsurface fragment volume ≤3" (Depth not specified) | 4–12%        |
| Subsurface fragment volume >3" (Depth not specified) | 0%           |

## Ecological dynamics

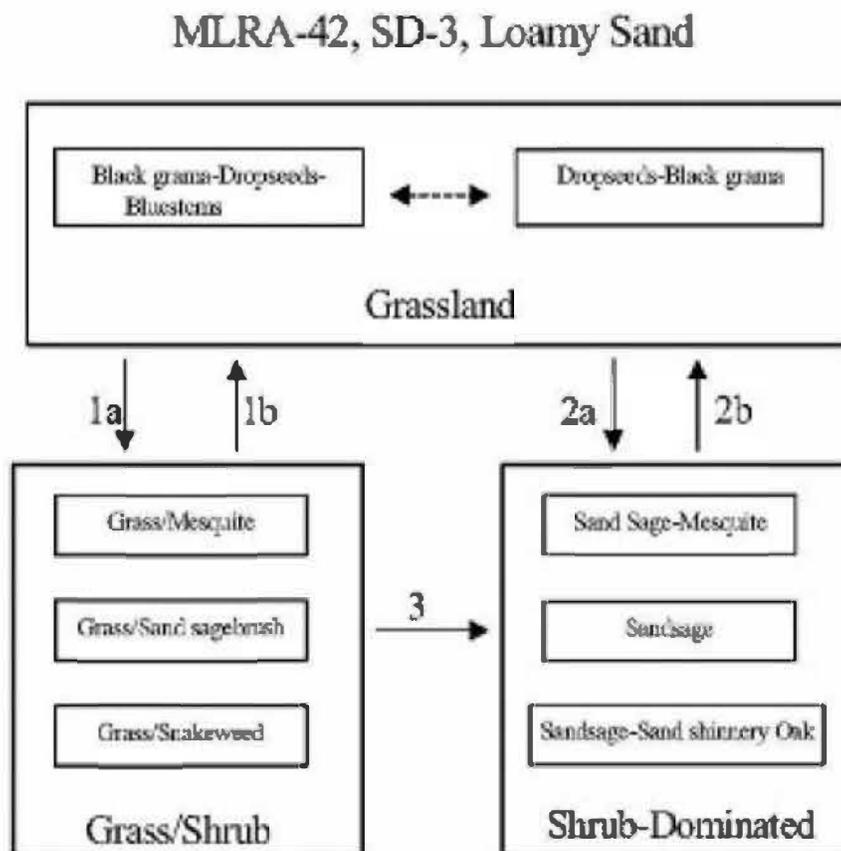
### Overview

The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-dominated historic plant community.

### State and transition model

**Plant Communities and Transitional Pathways (diagram):**



- 1a. Drought, over grazing, fire suppression.
- 1b. Brush control, prescribed grazing
  
- 2.a Severe loss of grass cover, fire suppression, erosion.
- 2b. Brush control, seeding, prescribed grazing.
  
- 3. Continued loss of grass cover, erosion.

**State 1  
Historic Climax Plant Community**

**Community 1.1  
Historic Climax Plant Community**

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil

surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species. Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

**Table 5. Annual production by plant type**

| Plant Type      | Low (Lb/Acre) | Representative Value (Lb/Acre) | High (Lb/Acre) |
|-----------------|---------------|--------------------------------|----------------|
| Grass/Grasslike | 442           | 833                            | 1224           |
| Forb            | 110           | 208                            | 306            |
| Shrub/Vine      | 98            | 184                            | 270            |
| <b>Total</b>    | <b>650</b>    | <b>1225</b>                    | <b>1800</b>    |

**Table 6. Ground cover**

|                                   |     |
|-----------------------------------|-----|
| Tree foliar cover                 | 0%  |
| Shrub/vine/liana foliar cover     | 0%  |
| Grass/grasslike foliar cover      | 28% |
| Forb foliar cover                 | 0%  |
| Non-vascular plants               | 0%  |
| Biological crusts                 | 0%  |
| Litter                            | 50% |
| Surface fragments >0.25" and <=3" | 0%  |
| Surface fragments >3"             | 0%  |
| Bedrock                           | 0%  |
| Water                             | 0%  |
| Bare ground                       | 22% |

**Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0   | 0   | 3   | 5   | 10  | 10  | 25  | 30  | 12  | 5   | 0   | 0   |

**State 2  
Grass/Shrub**

**Community 2.1  
Grass/Shrub**



**Grass/Shrub State:** The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971). **Diagnosis:** This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution. **Transition to Grass/Shrub State (1a):** The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984). **Key indicators of approach to transition:** • Loss of black grama cover • Surface soil erosion • Bare patch expansion • Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances **Transition to Historic Plant Community (1b):** Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

### **State 3 Shrub Dominated**

#### **Community 3.1 Shrub Dominated**

**Shrub-Dominated State:** The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an

aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state. Key indicators of approach to transition: • Severe loss of grass species cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite abundance Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state. Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite. Key indicators of approach to transition: • Continual loss of dropseeds/threawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threawn and mesquite/snakeweed abundance

### Additional community tables

Table 7. Community 1.1 plant community composition

| Group                  | Common Name                    | Symbol | Scientific Name                  | Annual Production (Lb/Acre) | Foliar Cover (%) |
|------------------------|--------------------------------|--------|----------------------------------|-----------------------------|------------------|
| <b>Grass/Grasslike</b> |                                |        |                                  |                             |                  |
| 1                      | <b>Warm Season</b>             |        |                                  | 61–123                      |                  |
|                        | little bluestem                | SCSC   | <i>Schizachyrium scoparium</i>   | 61–123                      | –                |
| 2                      | <b>Warm Season</b>             |        |                                  | 37–61                       |                  |
|                        | sand bluestem                  | ANHA   | <i>Andropogon hallii</i>         | 37–61                       | –                |
| 3                      | <b>Warm Season</b>             |        |                                  | 37–61                       |                  |
|                        | cane bluestem                  | BOBA3  | <i>Bothriochloa barbinodis</i>   | 37–61                       | –                |
|                        | silver bluestem                | BOSA   | <i>Bothriochloa saccharoides</i> | 37–61                       | –                |
| 4                      | <b>Warm Season</b>             |        |                                  | 123–184                     |                  |
|                        | black grama                    | BOER4  | <i>Bouteloua eriopoda</i>        | 123–184                     | –                |
|                        | bush muhly                     | MUPO2  | <i>Muhlenbergia porteri</i>      | 123–184                     | –                |
| 5                      | <b>Warm Season</b>             |        |                                  | 123–184                     |                  |
|                        | thin paspalum                  | PASE5  | <i>Paspalum setaceum</i>         | 123–184                     | –                |
|                        | plains bristlegrass            | SEVU2  | <i>Setaria vulpiseta</i>         | 123–184                     | –                |
|                        | fringed signalgrass            | URCI   | <i>Urochloa ciliatissima</i>     | 123–184                     | –                |
| 6                      | <b>Warm Season</b>             |        |                                  | 123–184                     |                  |
|                        | spike dropseed                 | SPCO4  | <i>Sporobolus contractus</i>     | 123–184                     | –                |
|                        | sand dropseed                  | SPCR   | <i>Sporobolus cryptandrus</i>    | 123–184                     | –                |
|                        | mesa dropseed                  | SPFL2  | <i>Sporobolus flexuosus</i>      | 123–184                     | –                |
| 7                      | <b>Warm Season</b>             |        |                                  | 61–123                      |                  |
|                        | hooded windmill grass          | CHCU2  | <i>Chloris cucullata</i>         | 61–123                      | –                |
|                        | Arizona cottontop              | DICA8  | <i>Digitaria californica</i>     | 61–123                      | –                |
| 9                      | <b>Other Perennial Grasses</b> |        |                                  | 37–61                       |                  |
|                        | Grass, perennial               | 2GP    | <i>Grass, perennial</i>          | 37–61                       | –                |
| <b>Shrub/Vine</b>      |                                |        |                                  |                             |                  |
| 8                      | <b>Warm Season</b>             |        |                                  | 37–61                       |                  |
|                        | New Mexico feathergrass        | HENE5  | <i>Hesperostipa neomexicana</i>  | 37–61                       | –                |
|                        | giant dropseed                 | SPGI   | <i>Sporobolus giganteus</i>      | 37–61                       | –                |
| 10                     | <b>Shrub</b>                   |        |                                  | 61–123                      |                  |

|             |   |        |  |        |   |
|-------------|---|--------|--|--------|---|
|             | sand sagebrush                              | ARFI2  | <i>Artemisia filifolia</i>                         | 61-123 | - |
|             | Havard oak                                  | QUHA3  | <i>Quercus havardii</i>                            | 61-123 | - |
| 11          | <b>Shrub</b>                                |        |  | 34-61  |   |
|             | fourwing saltbush                           | ATCA2  | <i>Atriplex canescens</i>                          | 37-61  | - |
|             | featherplume                                | DAFO   | <i>Dalea formosa</i>                               | 37-61  | - |
| 12          | <b>Shrub</b>                                |        |  | 37-61  |   |
|             | jointfir                                    | EPHED  | <i>Ephedra</i>                                     | 37-61  | - |
|             | littleleaf ratany                           | KRER   | <i>Krameria erecta</i>                             | 37-61  | - |
| 13          | <b>Other Shrubs</b>                         |        |  | 37-61  |   |
|             | Shrub (>.5m)                                | 2SHRUB | <i>Shrub (&gt;.5m)</i>                             | 37-61  | - |
| <b>Forb</b> |   |        |  |        |   |
| 14          | <b>Forb</b>                                 |        |  | 61-123 |   |
|             | leatherweed                                 | CRPOP  | <i>Croton pottsii var. pottsii</i>                 | 61-123 | - |
|             | Indian blanket                              | GAPU   | <i>Gaillardia pulchella</i>                        | 61-123 | - |
|             | globemallow                                 | SPHAE  | <i>Sphaeralcea</i>                                 | 61-123 | - |
| 15          | <b>Forb</b>                                 |        |  | 12-37  |   |
|             | woolly groundsel                            | PACA15 | <i>Packera cana</i>                                | 12-37  | - |
| 16          | <b>Forb</b>                                 |        |  | 61-123 |   |
|             | touristplant                                | DIWI2  | <i>Dimorphocarpa wislizeni</i>                     | 61-123 | - |
|             | woolly plantain                             | PLPA2  | <i>Plantago patagonica</i>                         | 61-123 | - |
| 17          | <b>Other Forbs</b>                          |        |  | 37-61  |   |
|             | Forb (herbaceous, not grass nor grass-like) | 2FORB  | <i>Forb (herbaceous, not grass nor grass-like)</i> | 37-61  | - |

## Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.

Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

## Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series Hydrologic Group

Berino B

Kinco A

Maljamar B

Pajarito B

Palomas B

Wink B

Pyote A

## Recreational uses

This site offers recreation potential for hiking, horseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

### Wood products

This site has no potential for wood products.

### Other products

This site is suitable for grazing by all kinds and classes of livestock at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, black grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shiner oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well to a system of management that rotates the season of use.

### Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

100 - 76 2.3 – 3.5

75 – 51 3.0 – 4.5

50 – 26 4.6 – 9.0

25 – 0 9.1 +

### Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

### Other references

Literature Cited:

Ansley, R. J.; Jacoby, P. W. 1998. Manipulation of fire intensity to achieve mesquite management goals in north Texas. In: Pruden, Teresa L.; Brennan, Leonard A., eds. Fire in ecosystem management: shifting the paradigm from suppression to prescription: Proceedings, Tall Timbers fire ecology conference; 1996 May 7-10; Boise, ID. No. 20. Tallahassee, FL: Tall Timbers Research Station: 195-204.

Ansley, R. J.; Jones, D. L.; Tunnell, T. R.; [and others]. 1998. Honey mesquite canopy responses to single winter fires: relation to herbaceous fuel, weather and fire temperature. *International Journal of Wildland Fire* 8(4):241-252.

Britton, Carlton M.; Wright, Henry A. 1971. Correlation of weather and fuel variables to mesquite damage by fire. *Journal of Range Management* 24:136-141.

Davis, Joseph H., III and Bonham, Charles D. 1979. Interference of sand sagebrush canopy with needleandthread. *Journal of Range Management* 32(5):384-386.

Herbel, C. H, Steger, R, Gould, W. L. 1974. Managing semidesert ranges of the Southwest Circular 456. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 48 p.

McDaniel, Kirk C.; Pieper, Rex D.; Loomis, Lyn E.; Osman, Abdelgader A. 1984. Taxonomy and ecology of perennial snakeweeds in New Mexico. Bulletin 711. Las Cruces, NM: New Mexico State University, Agricultural Experiment Station. 34 p.

McPherson, Guy R. 1995. The role of fire in the desert grasslands. In: McClaran, Mitchel P.; Van Devender, Thomas R., eds. The desert grassland. Tucson, AZ: The University of Arizona Press: 130-151.

Pettit, Russell D. 1986. Sand shinnery oak: control and management. Management Note 8. Lubbock, TX: Texas Tech University, College of Agricultural Sciences, Department of Range and Wildlife Management. 5 p.

**Contributors**

Don Sylvester  
Quinn Hodgson

**Rangeland health reference sheet**

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

|   |                   |
|---|-------------------|
| Author(s)/participant(s)                    |                   |
| Contact for lead author                     |                   |
| Date  |                   |
| Approved by                                 |                   |
| Approval date                               |                   |
| Composition (Indicators 10 and 12) based on | Annual Production |

**Indicators**

1. **Number and extent of rills:**

---

2. **Presence of water flow patterns:**

---

3. **Number and height of erosional pedestals or terracettes:**

---

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

---

5. **Number of gullies and erosion associated with gullies:**

---

6. **Extent of wind scoured, blowouts and/or depositional areas:**

---

7. Amount of litter movement (describe size and distance expected to travel):

---

8. Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):

---

9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):

---

10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:

---

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):

---

12. Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):

Dominant:

Sub-dominant:

Other:

Additional:

---

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):

---

14. Average percent litter cover (%) and depth ( in):

---

15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):

---

16. Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:

---

# ATTACHMENT 3: CORRESPONDENCE



nAPP2434726285 Lusitano 27 CTB 6 Liner Notification

From Monica Peppin <Monica.Peppin@soudermiller.com>  
 Date Mon 1/13/2025 6:00 AM  
 To Raley, Jim <jim.ralej@dmv.com>  
 Cc ocd.enviro@emnrd.nm.gov <OCD.Enviro@emnrd.nm.gov>; BLM Spill Email <blm\_nm\_cfo\_spill@blm.gov>

**SMA anticipates conducting liner inspection activities at the following site on January 16, 2025 at approximately 12:30 PM.**

**Details Below:**

|   |  |
|---|--|
| <b>Proposed Date:</b>   | Thursday, January 16, 2025   |
| <b>Time Frame:</b>  | 12:00 PM - 1:00 PM   |
| <b>Site Name:</b>   | Lusitano 27 CTB 6  |
| <b>Incident ID:</b>   | nAPP2434726285   |
| <b>API/Facility ID:</b>   | fAB1914056916  |
| <b>Liner Inspection Notification</b>  |  |
| <b>Incident ID and Site Name:</b>   | nAPP2434726285/Lusitano 27 CTB 6   |
| <b>API # and Corresponding Agency:</b>  | fAB1914056916/NMOCD & BLM  |
| <b>Question</b>   | <b>Answer (Fill In)</b>  |
| What is the liner inspection surface area in square feet (secondary containmet):  | Approximately 5,505 square feet  |
| Have all the impacted materials been removed from the liner and cleaned?  | Yes  |
| Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC: 48 HOURS PRIOR TO INSPECTION | 1.16.2025/January 16, 2025   |
| Time liner inspection will commence:  | 12:30 PM   |
| Please provide any information necessary for observers to contact inspector: (Name and Number)  | Monica Peppin 575.909.3418   |
| Please provide any information necessary for navigation to liner inspection site and coordinates (Lat/Long)                           | Intersection of 128/C1 (Orla RD) travel south for 6.3 miles, turn right on Monsanto Lane travel west for 0.8 miles, turn left travel south for 1.3 miles, turn right travel north for 2.8 miles, turn left travel west for 2.3 miles, turn left travel south for 1.21 miles, tuirn right travel west for 0.13 miles, turn right travel North 0.02 miles and end on location 32.10601, -103.75904 |



Monica Peppin, A.S.  
 Project Manager  
 Direct/Mobile: 575.909.3418

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Carlsbad, NM 88220

Corporate Registrations: AZ Engineering/Geology/Surveying Firm (14070), FL Engineering Firm (34203), ID Engineering/Surveying Firm (C-3564), ND Engineering Firm (28545PE), OK Engineering Firm (8498), SD Surveying Firm (C-7436), TX Engineering Firm (8877), TX Geology Firm (50254), TX Surveying Firm (10162200), WY Engineering/Surveying Firm (S-1704)

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Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 434900

**QUESTIONS**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Prerequisites</b> |                                      |
| Incident ID (n#)     | nAPP2434726285                       |
| Incident Name        | NAPP2434726285 LUSITANO 27 CTB 6 @ 0 |
| Incident Type        | Produced Water Release               |
| Incident Status      | Remediation Closure Report Received  |
| Incident Facility    | [fAB1914056916] LUSITANO 27 CTB 6    |

|   |                   |
|---|-------------------|
| <b>Location of Release Source</b>                     |                   |
| <i>Please answer all the questions in this group.</i> |                   |
| Site Name   | LUSITANO 27 CTB 6 |
| Date Release Discovered                               | 12/11/2024        |
| Surface Owner   | Federal           |

|  |                        |
|--|------------------------|
| <b>Incident Details</b>  |                        |
| <i>Please answer all the questions in this group.</i>  |                        |
| Incident Type  | Produced Water Release |
| Did this release result in a fire or is the result of a fire   | No                     |
| Did this release result in any injuries  | No                     |
| Has this release reached or does it have a reasonable probability of reaching a watercourse          | No                     |
| Has this release endangered or does it have a reasonable probability of endangering public health    | No                     |
| Has this release substantially damaged or will it substantially damage property or the environment   | No                     |
| Is this release of a volume that is or may with reasonable probability be detrimental to fresh water | No                     |

|   |  |
|---|--|
| <b>Nature and Volume of Release</b>   |  |
| <i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i> |  |
| Crude Oil Released (bbls) Details   | Not answered.  |
| Produced Water Released (bbls) Details  | Cause: Equipment Failure   Flow Line - Production   Produced Water   Released: 7 BBL   Recovered: 7 BBL   Lost: 0 BBL.   |
| Is the concentration of chloride in the produced water >10,000 mg/l   | Yes  |
| Condensate Released (bbls) Details  | Not answered.  |
| Natural Gas Vented (Mcf) Details  | Not answered.  |
| Natural Gas Flared (Mcf) Details  | Not answered.  |
| Other Released Details  | Not answered.  |
| Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)  | Poly line on discharge side of transfer pump developed a leak. Allowing 7 bbls produced water to be released to lined secondary containment. Fluids fully recovered. |

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

QUESTIONS, Page 2

Action 434900

**QUESTIONS (continued)**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

|   |  |
|---|--|
| <b>Nature and Volume of Release (continued)</b>   |  |
| Is this a gas only submission (i.e. only significant Mcf values reported)               | <b>No, according to supplied volumes this does not appear to be a "gas only" report.</b> |
| Was this a major release as defined by Subsection A of 19.15.29.7 NMAC                  | <b>No</b>  |
| Reasons why this would be considered a submission for a notification of a major release | <i>Unavailable.</i>  |

*With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.*

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.*

|  |                      |
|--|----------------------|
| The source of the release has been stopped   | <b>True</b>          |
| The impacted area has been secured to protect human health and the environment                                     | <b>True</b>          |
| Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices | <b>True</b>          |
| All free liquids and recoverable materials have been removed and managed appropriately                             | <b>True</b>          |
| If all the actions described above have not been undertaken, explain why   | <i>Not answered.</i> |

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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.

|  |  |
|--|--|
| I hereby agree and sign off to the above statement | Name: James Raley<br>Title: EHS Professional<br>Email: jim.raley@dvn.com<br>Date: 02/25/2025 |
|--|--|

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

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

QUESTIONS, Page 3

Action 434900

**QUESTIONS (continued)**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs) | Between 51 and 75 (ft.)        |
| What method was used to determine the depth to ground water  | NM OSE iWaters Database Search |
| Did this release impact groundwater or surface water   | Yes                            |
| <b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>   |                                |
| A continuously flowing watercourse or any other significant watercourse  | Between 1 and 5 (mi.)          |
| Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)  | Greater than 5 (mi.)           |
| An occupied permanent residence, school, hospital, institution, or church  | Greater than 5 (mi.)           |
| A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes  | Between 1 and 5 (mi.)          |
| Any other fresh water well or spring   | Between 1 and 5 (mi.)          |
| Incorporated municipal boundaries or a defined municipal fresh water well field  | Greater than 5 (mi.)           |
| A wetland  | Between 1 and 5 (mi.)          |
| A subsurface mine  | Greater than 5 (mi.)           |
| An (non-karst) unstable area   | Greater than 5 (mi.)           |
| Categorize the risk of this well / site being in a karst geology   | Medium                         |
| A 100-year floodplain  | Between 1000 (ft.) and ½ (mi.) |
| Did the release impact areas not on an exploration, development, production, or storage site                               | No                             |

**Remediation Plan**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

|  |            |
|--|------------|
| Requesting a remediation plan approval with this submission  | Yes        |
| <i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>   |            |
| Have the lateral and vertical extents of contamination been fully delineated   | Yes        |
| Was this release entirely contained within a lined containment area  | Yes        |
| <i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i> |            |
| On what estimated date will the remediation commence   | 12/16/2024 |
| On what date will (or did) the final sampling or liner inspection occur  | 01/16/2025 |
| On what date will (or was) the remediation complete(d)   | 01/16/2025 |
| What is the estimated surface area (in square feet) that will be remediated  | 5505       |
| What is the estimated volume (in cubic yards) that will be remediated  | 0          |

*These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed. The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*

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QUESTIONS, Page 4

Action 434900

**QUESTIONS (continued)**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

|  |   |
|--|---|
| <b>Remediation Plan (continued)</b>  |   |
| <i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>   |   |
| <b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>   |   |
| <i>(Select all answers below that apply.)</i>  |   |
| Is (or was) there affected material present needing to be removed  | Yes   |
| Is (or was) there a power wash of the lined containment area (to be) performed   | Yes   |
| OTHER (Non-listed remedial process)  | Not answered.   |
| <i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>   |   |
| 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. |   |
| I hereby agree and sign off to the above statement   | Name: James Raley<br>Title: EHS Professional<br>Email: jim.raley@dvsn.com<br>Date: 02/25/2025 |
| <i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>  |   |

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QUESTIONS, Page 6

Action 434900

**QUESTIONS (continued)**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**QUESTIONS**

|   |            |
|---|------------|
| <b>Liner Inspection Information</b>   |            |
| Last liner inspection notification (C-141L) recorded  | 419731     |
| Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC | 01/16/2025 |
| Was all the impacted materials removed from the liner   | Yes        |
| What was the liner inspection surface area in square feet   | 5505       |

|   |   |
|---|---|
| <b>Remediation Closure Request</b>  |   |
| <i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i> |   |
| Requesting a remediation closure approval with this submission  | Yes   |
| Have the lateral and vertical extents of contamination been fully delineated  | Yes   |
| Was this release entirely contained within a lined containment area   | Yes   |
| What was the total surface area (in square feet) remediated   | 5505  |
| What was the total volume (cubic yards) remediated  | 0   |
| Summarize any additional remediation activities not included by answers (above)   | Secondary Containment inspection completed. No breach through liner |

*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 (in .pdf format) 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.*

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.

|  |  |
|--|--|
| I hereby agree and sign off to the above statement | Name: James Raley<br>Title: EHS Professional<br>Email: jim.ralej@dvn.com<br>Date: 02/25/2025 |
|--|--|

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CONDITIONS

Action 434900

**CONDITIONS**

|   |   |
|---|---|
| Operator:<br>DEVON ENERGY PRODUCTION COMPANY, LP<br>333 West Sheridan Ave.<br>Oklahoma City, OK 73102 | OGRID:<br>6137  |
|   | Action Number:<br>434900  |
|   | Action Type:<br>[C-141] Remediation Closure Request C-141 (C-141-v-Closure) |

**CONDITIONS**

| Created By | Condition                                    | Condition Date |
|------------|--|----------------|
| nvez       | Liner inspection approved, release resolved. | 3/3/2025       |