August 11, 2025

EMNRD – Oil Conservation Division
506 W. Texas
Artesia, New Mexico 88210

SUBJECT: Liner Inspection and Closure Report for Big Cat 9 CTB 2 – July 16, 2025 Site Visit

Incident ID: nAPP2514723014
Facility ID (Name): fAPP2329744254 (BIG CAT 9 CTB 2)
Facility Location: Unit B of Section 9, Township 23 South, Range 32 East, New Mexico
Facility GPS Coordinates: 32.323442, -103.677896
Lea County, New Mexico

Introduction

KLJ Engineering (KLJ) has prepared this report on behalf of Devon Energy Production Company, LP (Devon) to detail the recent liner inspection conducted at the Big Cat 9 CTB 2 (Site) on July 16, 2025, following the release of produced water that occurred on May 26, 2025.

Site Information and Background

The Site is located approximately 24.09 miles northeast of Loving, New Mexico, on Bureau of Land Management (BLM) federal property. The Site lies within Unit B, Section 9, Township 23 South, Range 32 East, in Lea County. KLJ conducted a liner inspection and associated site characterization in accordance with 19.15.29.11 and 19.15.29.12 of the New Mexico Administrative Code (NMAC) to assess the integrity of the containment system and evaluate any potential environmental impacts resulting from a release.

Release Description and Immediate Response

On May 26, 2025, a Devon lease operator discovered a water transfer pump sledge leaking inside the secondary containment, resulting in the release of approximately 15 barrels (bbls) of produced water. Initial response actions were conducted by the operator and included source elimination, photographic documentation of the affected area, volume estimation, and an attempt to recover released fluids. Photographic documentation of the secondary containment, liner, tanks, and equipment where the release occurred is included in the Liner Inspection Field Notes & Photolog Report (**Appendix A**).

On May 27, 2025, Devon Energy submitted the initial Notice of Release (NOR) to the New Mexico Energy, Minerals, and Natural Resources Department – Oil Conservation Division (NMOCD) via the Operator's Electronic Permitting and Payment Portal. A Form C-141 was subsequently submitted to the portal on May 31, 2025, in accordance with the requirements of NMAC 19.15.29.

Site Characterization Summary

The Site lies within Qe/Qp – Holocene to late Pleistocene, with a physiographic setting characteristic of southern High Plains Margin, reflecting alternating episodes of fluvial and aeolian deposition. These unconsolidated deposits include silt, fine sand, clay, and localized gravel accumulations (New Mexico Bureau of Geology and Mineral Resources). Terrain for the Site and immediate surrounding area includes

fan piedmonts, alluvial fans, and dunes at elevations ranging from 2,800 to 5,000 feet above mean sea level (amsl). Parent material consists of mixed alluvium and/or eolian sands derived from sedimentary rock. Soils are characterized as petrocalcic, petrogypsic, or gypsum horizon deep soils, with 8 to 13 inches of average annual precipitation. Soil within the Site tends to be well-drained, with negligible runoff and low water-holding capacity.

The USDA – Web Soil Survey (WSS) identifies the predominant soil type at the Site as the Pyote and Maljamar fine sands that is moderately deep or very deep, with surface textures ranging from 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 lass than 15 percent carbonates. Substratum includes 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.

Vegetation reflects a grassland community, consisting of black grama, dropseeds, and bluestems with scattered broom snakeweed, sand sage, shinnery oak, and mesquite. The vegetation reflects a drought-tolerant, arid-adapted community, with grass cover varying based on grazing intensity and precipitation patterns. The site supports a mix of warm-season perennials adapted to sandy soils and shallow rooting depths, forming a stable plant community under proper grazing management.

No surface water features were identified within 300 feet of the Site. The nearest significant watercourse is 2.8 miles northeast; the closest playa lake is 4.61 miles northwest, and the nearest wetland is 3.68 miles northeast (USFWS NWI, 2025). These distances comply with the requirements of 19.15.29.12(C)(4) NMAC.

Per the New Mexico Office of the State Engineer (NMOSE) Points of Diversion (POD) Map, the nearest POD is C-04703-POD1, located 0.99 miles southwest of the Site. The POD is identified as a temporary borehole used to determine depth to groundwater. The well record indicates that the temporary borehole was drilled to a depth of 55 ft bgs, and no groundwater was encountered. The nearest freshwater well used for stock watering purposes, POD C-02349-POD1, is located 0.97 miles northeast of the Site.

The Site is not located within a designated karst potential zone. The nearest potential karst zone, identified as a medium karst zone, is located 7.65 miles to the west. The Site is in a FEMA flood hazard area identified as FEMA Zone D (undetermined hazard); the nearest identified FEMA flood hazard area, classified as Zone A, is 11 miles to the southwest.

Additional information detailing the results of the Site characterization findings can be found in **Appendix B**.

Closure Criteria

Table 1 summarizes key Site and Incident information relevant to closure evaluation, as required under 19.15.29.12 NMAC. This includes details such as release source, location, containment status, and site-specific features that may influence closure requirements. While contamination thresholds, sampling depths, and applicable concentration limits are not listed in this table, the information provided supports regulatory assessment of whether the release meets criteria for closure. In accordance with NMAC

19.15.29.11(A)(5)(b), if the release occurred within lined, impermeable secondary containment with no evidence of escape, it may qualify for reduced remediation requirements or a No Further Action (NFA) determination.

Because the Site has no depth to ground water determination wells within a ½ mile radius, it is subject to closure criteria applicable to areas with a DTGW of less than 50 ft bgs.

Table 1: Release Information and Closure Criteria Limits			
Depth to Ground Water Determination: < 50 feet bgs			
Site Name	Big Cat 9 CTB 2	Company	Devon Energy Production Company, LP
Facility ID/API Number	fAPP2329744254	PLSS GPS	B-09-23S-32E 32.323442, -103.677896
Lease ID	NMNM126065	Land Status	Federal
Incident ID	nAPP2514723014	Date Of Release	5/26/2025
Source of Release	Swedge failed on WTP inside containment	Volume Released/Recovered	15 bbls/15 bbls pw
Specific Features	No DTGW wells within ½ mile radius, no Karst Potential, no surface water within proximity, and FEMA Zone D		

Liner Inspection Activities

KLJ Environmental Specialists conducted a site visit on July 16, 2025, to perform a liner inspection. During the visit, KLJ personnel completed a visual inspection of the secondary containment to verify liner integrity. The liner was observed to be intact, with no visible signs of compromise. The inspection included assessments for perforations, rips, tears, or signs of weathering that could impact containment integrity. No issues were noted that would warrant repair or replacement. Photographic documentation is provided in the Liner Inspection Field Notes & Photolog Report (**Appendix A**).

Prior to the inspection, notification was provided to Devon via email on June 23, 2025, with official notification submitted through the Operator's Electronic Permitting and Payment Portal on the same day, in accordance with NMAC 19.15.29.11(A)(5)(a)(iii). On June 26, 2025, a follow-up notification was submitted indicating that the inspection could not be completed. The scheduled inspection was canceled due to inclement weather, which resulted in standing water within the containment area, making inspection conditions unsuitable.

Notification of the cancellation was submitted to the New Mexico Oil Conservation Division (NMOCD) via email on June 26, 2025, and a copy is included in **Appendix C**.

A second official notification was submitted to the portal on July 14, 2025, for the successful inspection conducted on July 16, 2025. A copy of this notification is also provided in **Appendix C**.

Conclusion

Based on the findings of the liner inspection, KLJ concludes that liner integrity is adequate to contain fluids and there are no further actions required in relation to incident nAPP2514723014.

Based on the site assessment and activities conducted, Devon respectfully requests closure of incident nAPP2514723014 with a No Further Action (NFA) determination.

Submitted and prepared by:
KLJ Engineering

Written By
Name: Monica Peppin
Title: Environmental Specialist II
Signature: _____

Reviewed By
Name: Will Harmon, P.G.
Title: Environmental Project Manager
Signature: _____

Included Appendices
Appendix A – LINER INSPECTION FIELD NOTES & PHOTOLOG REPORT
Appendix B – CLOSURE CRITERIA RESEARCH
Appendix C – CORRESPONDENCE

APPENDIX A

LINER INSPECTION FIELD NOTES & PHOTOLOG REPORT

Environmental Liner Inspection Field Notes & Photolog Report

Site & Incident Information

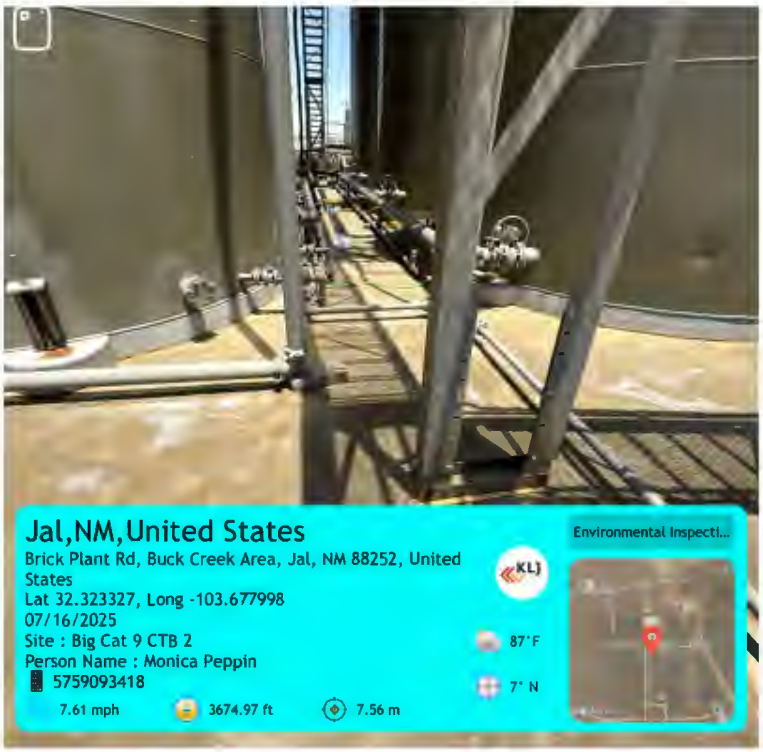
Client:	Devon Energy	**Date:**	7.16.2025
Site:	Big Cat 9 CTB 2	**Arrival Time:**	10:30 AM
Incident ID:	nAPP2514723014		
Client Contact:	Jim Raley		
Land Status:	BLM		
County:	Lea		
Lease ID:	NMNM126065		
Facility ID:	fAPP2329744254		
32.323442, -103.677896			

Photo of Lease Sign

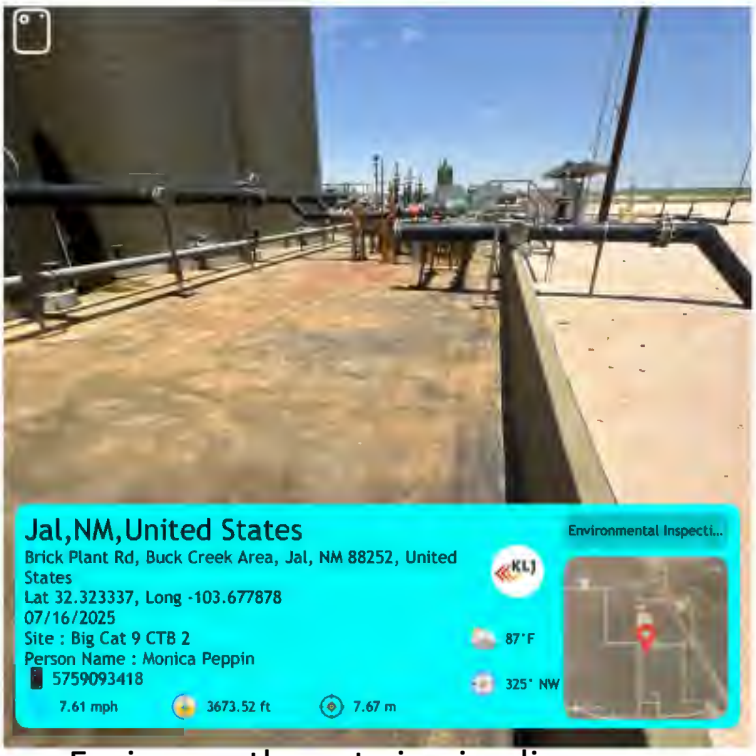
Observations and Field Notes

- 10:12 AM - Arrive on site, observe area conditions for potential hazards, and fill out safety paperwork.
- 10:18 AM - Review correspondence emails from contractor and client, verify containment to inspect, liner has been pressure washed and ready for inspection.
- 10:20 AM - Start inspection of liner from outside of containment and complete 360 walk around.
- 10:23 AM - Inspect liner walls and base for any signs of abrasions or obvious wear.
- 10:28 AM - Liner surface appears structurally sound - no visible perforations, tears, or areas of concern.
- 10:40 AM - Seams are intact and no visual signs of stress.
- 10:45 AM - Complete inspection, photos taken from all cardinal directions, in between tanks, and different angles of equipment.

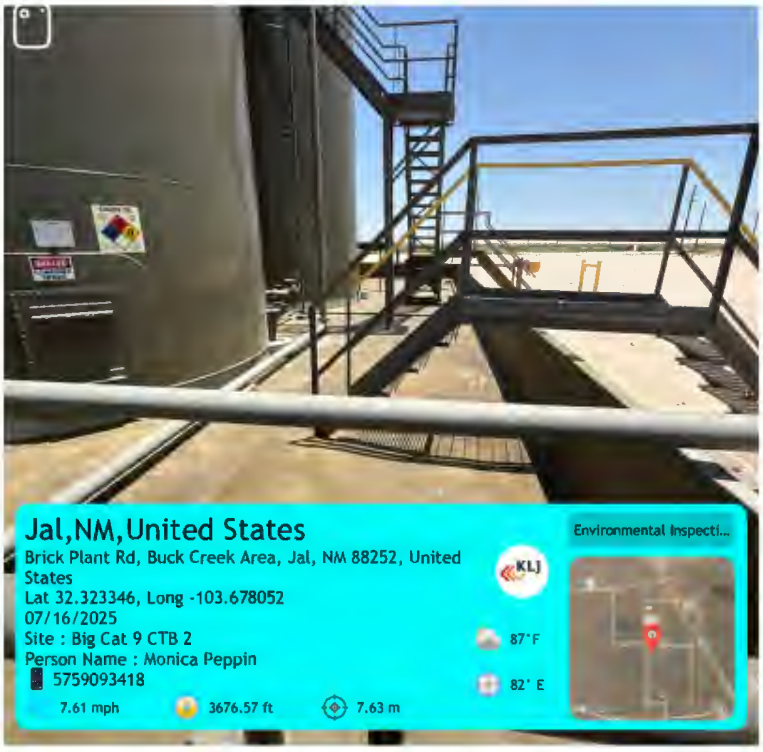
Photolog



Liner between tanks facing north from south side.



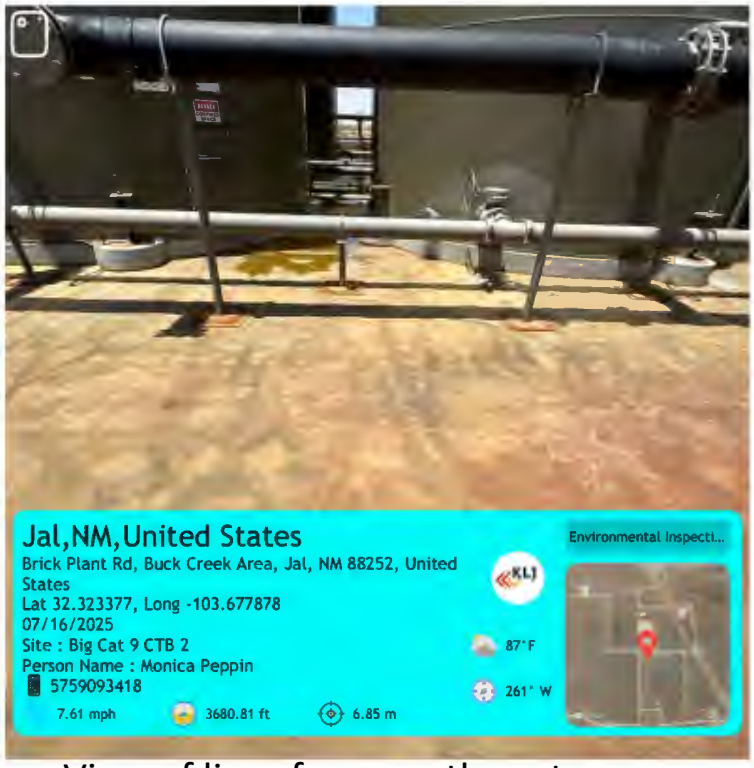
Facing northwest viewing liner near transfer pumps and tanks.



Liner on south side facing east from southwest corner.

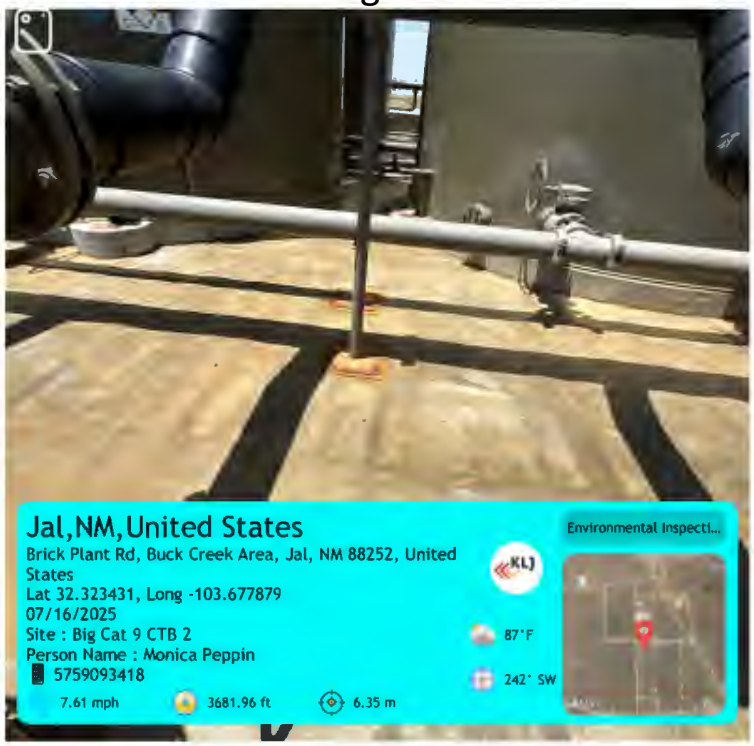
Facing north from southwest corner viewing west side.

Photolog



View of liner from southwest corner facing east.

Liner between tanks on northern end facing west.



Liner between tanks on south end facing east.

Liner between tanks facing west from east side.

Photolog

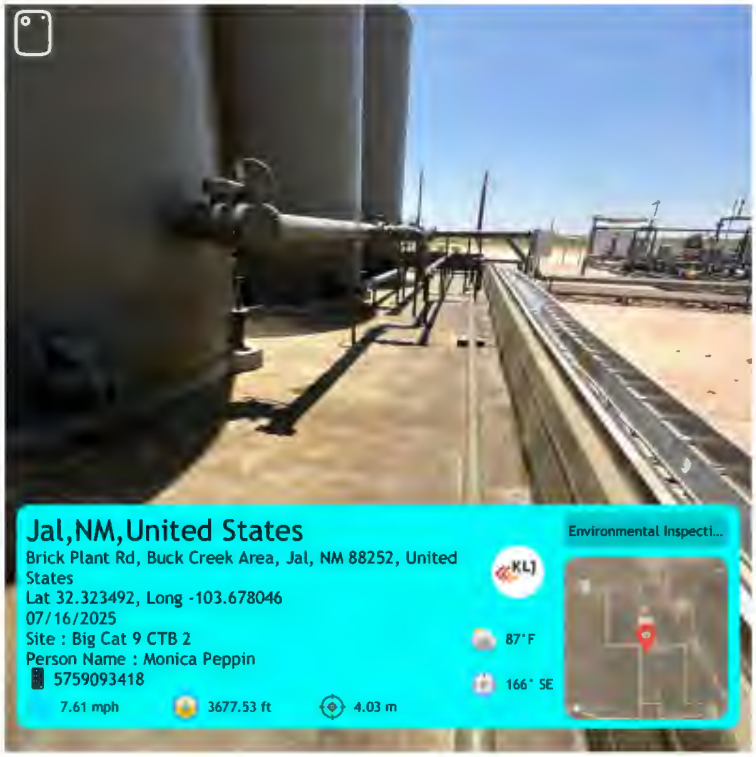
Facing east between tanks of liner under transfer pumps.

Viewing liner of northeast corner from near tanks.

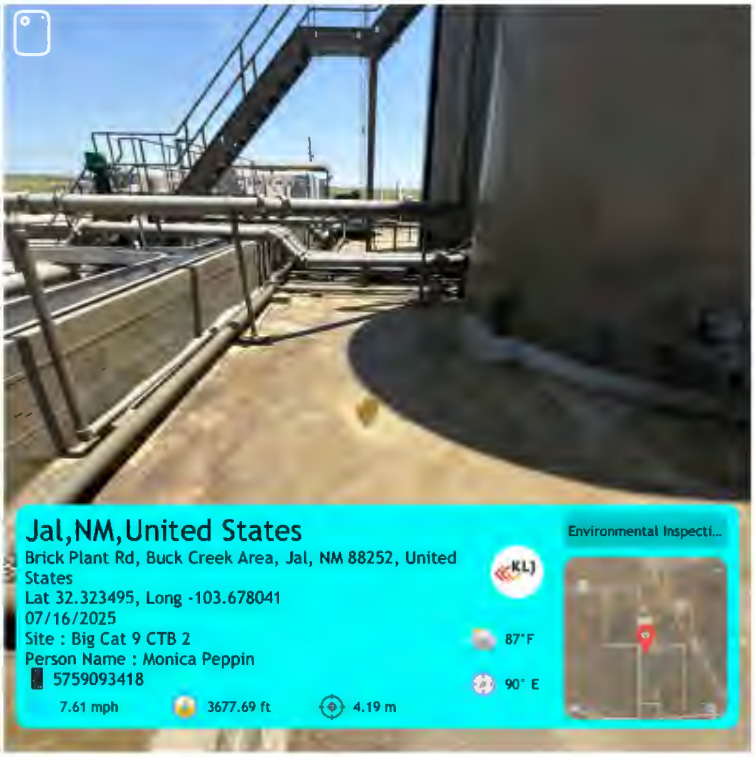
Liner between tanks from west side facing east.

Liner view under transfer pumps facing south from northeast corner.

Photolog



Facing west from east side viewing liner on north end.



North view from west side facing east.

Facing south from north end of containment between tanks.

Additional Notes & Recommendations

- Visual observation supported with photo documentation.
- No issues identified; liner integrity confirmed and meets closure criteria.
- Upload documents and complete liner inspection closure report.
- Submit report for approval to applicable regulatory agencies.

Acknowledgement & Signature

Technician:	Monica Peppin	**Date:**	July 16, 2025
Signature:		**Departure Time:**	3:16 PM

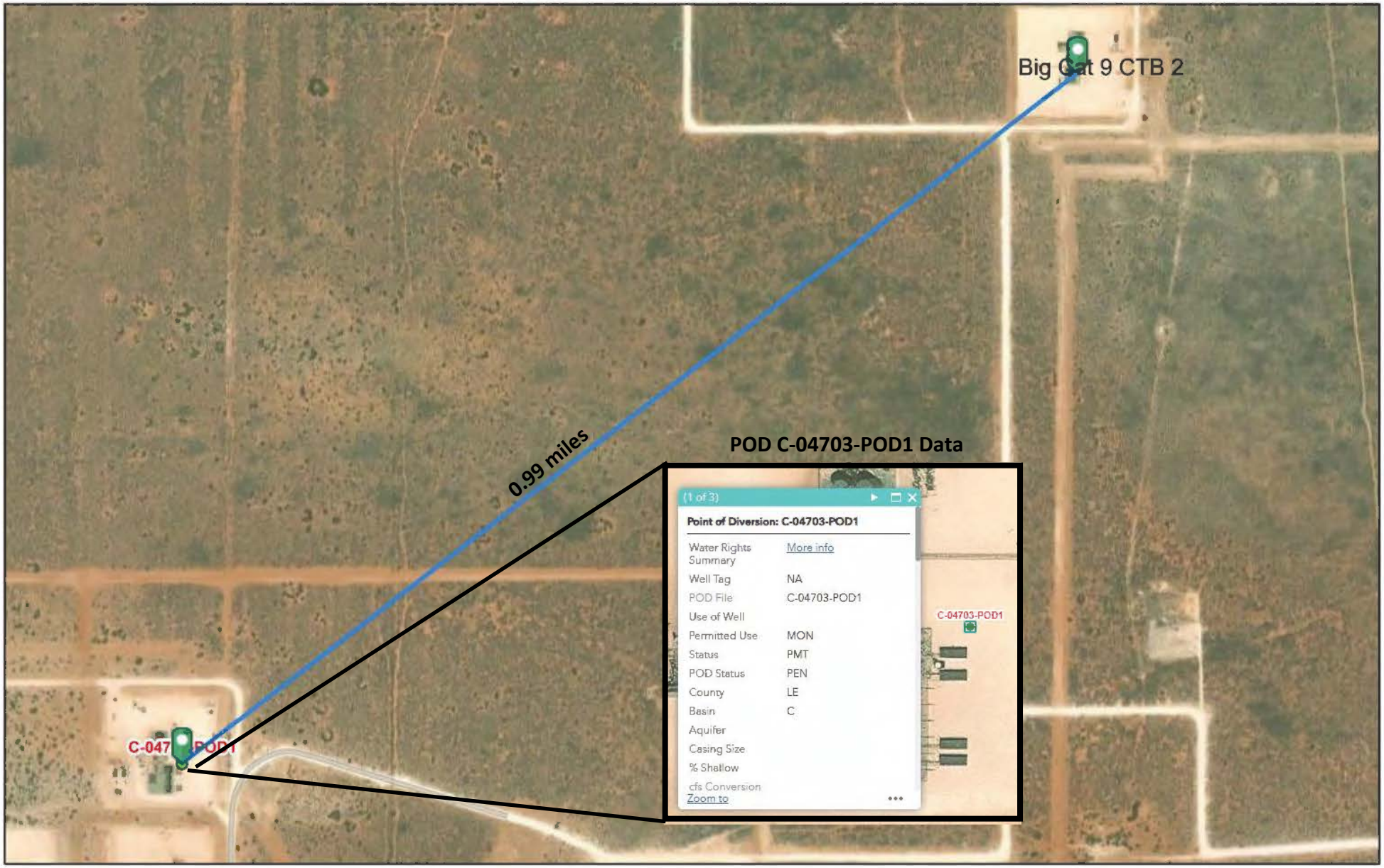
APPENDIX B

CLOSURE CRITERIA RESEARCH

Big Cat 9 CTB 2

Incident ID: nAPP2514723014
Coordinates: 32.323442, -103.677896
Approx. Containment Area: 5,461 sq ft

Big Cat 9 CTB 2 - Nearest DTGW OSE Pod Map



7/25/2025, 3:38:29 PM

Override 1

GIS WATERS PODs

Pending

OSE District Boundary

NM Simplified Geology

C Basin Fill

Nearest OSE Pod
C-04703-POD1
Distance
0.99 miles

Well Type
Temporary Borehole
Well Depth
55 ft bgs

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, Maxar

Monica Peppin

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

File No. C-04703 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:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☒ Other(Describe): Groundwater Determination
☐ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 12/27/2022 Requested End Date: 01/20/2023

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Devon Energy Production Company	Name:
Contact or Agent: check here if Agent ☐ Dale Woodall	Contact or Agent: check here if Agent ☐
Mailing Address: 333 W Sheridan Ave	Mailing Address:
City: Oklahoma City	City:
State: OK Zip Code: 73102	State: Zip Code:
Phone: (405) 552-4660 ☐ Home ☐ Cell Phone (Work):	Phone ☐ Home ☐ Cell Phone (Work):
E-mail (optional): dale.woodall@dvn.com	E-mail (optional):

OSE DII DEC 14 2022 PM2:03

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 11/17/16

File No.: C-04703	Trn. No.: 741900	Receipt No.: 2-45304
Trans Description (optional):		
Sub-Basin: CUB	PCW/LOG Due Date: 2/3/24	

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)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
C-04703 POD1	-103.6912877	32.314716	SE 1/4, SE 1/4, SECTION 8, T23S, R32E

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:
STRAY CAT 8 5 FED COM #214H

Well is on land owned by: BLM

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
Driller Name: Vision Resources, Jason Maley	Driller License Number: 1833

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

An exploratory soil boring will be installed up to a depth of 55 feet below ground surface (ft bgs). Temporary PVC well material will be placed to a depth of the boring and secured at the surface. The temporary well will be in place for a minimum of 72 hours at which time the well will be gauged for the presence of water. If water is encountered at any point during the boring installation, the soil boring will be plugged using 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, the boring will be plugged using hydrated bentonite with drill cuttings to plug the upper 10 ft. bgs.

OSE DII DEC 14 2022 PM2:03

FOR OSE INTERNAL USE Application for Permit, Form WR-07

File No.: C-04703 POD1	Trn No.: 741900

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:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ☐ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ 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.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), DALE WOODALL
Print Name(s)

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

Applicant Signature

Applicant Signature

OSE DIT DEC 14 2022 PM 2:03

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 3rd day of February 20 23, for the State Engineer,

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

By: K. Parekh
Signature

Kashyap Parekh
Print

Title: Water Resource Manager I
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: C-04703	Trn No.: 741900

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.

17-1B Depth of the well shall not exceed the thickness of the Ogallala formation.

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 04703 POD1 File Number: C 04703
Trn Number: 741900

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 04703 POD1 File Number: C 04703
Trn Number: 741900

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04703 POD1 must be completed and the Well Log filed on or before 02/03/2024.

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: 12/14/2022 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 03 day of Feb A.D., 2023

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

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04703 POD1 File Number: C 04703
Trn Number: 741900

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220-6292

In Reply Refer To:
3162.4 (NM-080)
NMNM-98826

January 26, 2023

NM Office of the State Engineer
1900 W. Second St.
Roswell, NM 88201

Re: Stray Cat 8 5 Fed Com 214H
Section 8, T23S-R32E
30-025-44601
Lea County, New Mexico

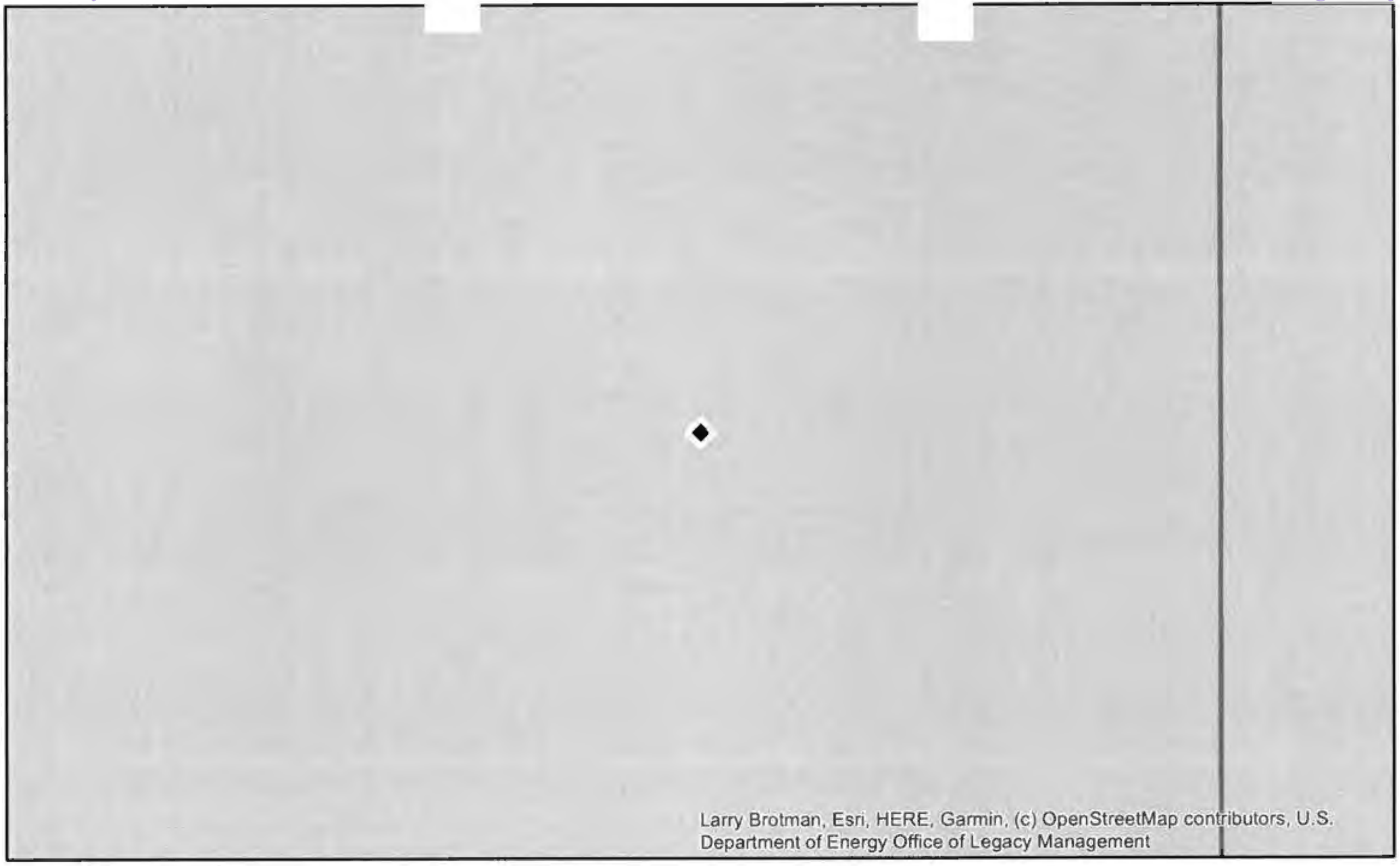
To Whom It May Concern:

The above well location and the immediate area mentioned above requires advanced soil boring to take place at approximately 55 feet below ground surface. The boring will be secured and left open for 72 hours at which time Devon Energy Production Company will assess for the presence or absence of groundwater. Temporary PVC well material will be placed to total depth of the boring and secured at the surface. If water is encountered at any point during the boring, installation of the soil boring will be plugged using Portland Type I/II neat cement less than 6.0 gallons of water per 94lb sack. If no water is encountered, then the soil boring will be plugged. The Bureau of Land Management (landowner) authorizes the access of the area to accomplish depth to groundwater determination of this site.

If you have any questions contact Crisha Morgan, at 575-234-5987.

Sincerely,

Crisha A. Morgan
Certified Environmental Protection Specialist



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting 623196.266

Northing 3576072.078

State Plane - NAD 83 (f) - Zone E

Easting 739685.793

Northing 478818.170

Degrees Minutes Seconds

Latitude 32 : 18 : 52.977600

Longitude -103 : 41 : 28.635720

Location pulled from Coordinate Search

NEW MEXICO OFFICE OF THE STATE ENGINEER

1:4,514

ft

0 90 180 360

N

1/4/2023

Spatial Information

County: Lea

Groundwater Basin: Carlsbad

Abstract Area: Carlsbad 72-12-1

Land Grant: Non Land Grant Carlsbad Underground Basin

Restrictions:

PLSS Description

NENWSESE Qtr of Sec 08 of 023S 032E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

Parcel Information

UPC/DocNum:

Parcel Owner:

Address: null null null

Legal:

POD Information

Owner:

File Number:

POD Status: NoData

Permit Status: NoData

Permit Use: NoData

Purpose:

◆ Coord Search Location

Water Rights Regulations

Closure Area

OSE District Boundary

Bernalillo County Parcels 2022

Catron County Parcels 2022

Chaves County Parcels 2022

Cibola County Parcels 2022

Colfax County Parcels 2022

Curry County Parcels 2022

De Baca County Parcels 2022

Doña Ana County Parcels 2022

Eddy County Parcels 2022

Grant County Parcels 2022

Harding County Parcels 2022

Hidalgo County Parcels 2022

Guadalupe County Parcels 2022

Lea County Parcels 2022

Lincoln County Parcels 2022

Los Alamos County Parcels 2022

Luna County Parcels 2022

McKinley County Parcels 2022

Mora County Parcels 2022

Otero County Parcels 2022

Quay County Parcels 2022

Rio Arriba County Parcels 2022

Roosevelt County Parcels 2022

Sandoval County Parcels 2022

San Juan County Parcels 2022

San Miguel County Parcels 2022

Santa Fe County Parcels 2022

Sierra County Parcels 2022

Socorro County Parcels 2022

Taos County Parcels 2022

Torrance County Parcels 2022

Union County Parcels 2022

Valencia County Parcels 2022

SiteBoundaries

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: 741900
File Nbr: C 04703

Feb. 03, 2023

DALE WOODALL
DEVON ENERGY PRODUCTION CO.
333 W SHERIDAN AVE
OKLAHOMA CITY, OK 73102

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.

Sincerely,

Rodolfo Chavez
(575)622-6521

Enclosure

explore

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☑ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: C-4703-POD1

Name of well owner: Devon Energy Resources

Mailing address: 64888 Seven Rivers HWY County: EDDY

City: Artesia State: NM Zip code: 88210

Phone number: 405-318-4697 E-mail: Dale.Woodall@DVN.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Vision Resources , Jason Mayley

New Mexico Well Driller License No.: 1833 Expiration Date: 10/07/2023

IV. WELL INFORMATION: ☑ **Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.**

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: _____deg, _____ min, _____ sec
Longitude: _____deg, _____min, _____sec, NAD 83

2) Reason(s) for plugging well(s):

No water found

3) Was well used for any type of monitoring program? no If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? no If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: no water feet below land surface / feet above land surface (circle one)

6) Depth of the well: 55 feet

OSE DII JAN 25 2023 PM2:17

7) Inside diameter of innermost casing: 2 ____inches.

8) Casing material: PVC _____ _____

9) The well was constructed with:

☐ an open-hole production interval, state the open interval: _____

☒ a well screen or perforated pipe, state the screened interval(s): 50-55 Feet

10) What annular interval surrounding the artesian casing of this well is cement-grouted? None _____

11) Was the well built with surface casing? no If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe:

12) Has all pumping equipment and associated piping been removed from the well? Yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

☐ **If plugging method differs between multiple wells on same site, a separate form must be completed for each method.**

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

Temporary PVC casing will be removed and approximately 4.7 Cubic feet bentonite chips will be placed in well.

2) Will well head be cut-off below land surface after plugging? no well head will be installed.

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: _____

4) Type of Cement proposed: _____ _____

5) Proposed cement grout mix: _____gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____batch-mixed and delivered to the site

_____ mixed on site

7) Grout additives requested, and percent by dry weight relative to cement:

8) Additional notes and calculations:

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

VIII. SIGNATURE:

I, _____, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Dale Woodall Digitally signed by Dale Woodall Date: 2023.01.23 13:49:10 -07'00'

Signature of Applicant Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

X Approved subject to the attached conditions.
_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 31st day of January, 2023

Mike A. Hamman P.E., New Mexico State Engineer

By: K Parekh
KASHYAP PAREKH
W.R.M. I

WD-08 Well Plugging Plan
Version: March 07, 2022
Page 3 of 5

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			
Bottom of proposed interval of grout placement (ft bgl)			
Theoretical volume of grout required per interval (gallons)			
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			
Mixed on-site or batch-mixed and delivered?			
Grout additive 1 requested			
Additive 1 percent by dry weight relative to cement			
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	55 feet		Zero feet below grade.
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

OCD 01 JAN 25 2023 PM2:10

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623- 8559

Applicant has identified a well, listed below, to be plugged. Vision Resources (David Maley) (WD-1833) will perform the plugging.

Permittee: Devon Energy Resources
NMOSE Permit Number: C-4703

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4703	2.0	55.0	Dry	32.3147°	103.69128°

Specific Plugging Conditions of Approval for Well located in Lea County.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Theoretical volume of sealant required for abandonment of the 2.0 inch diameter (I.D.) casing is approximately 9.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 55.0 feet below ground surface (b.g.s.).

3. Bentonite chips (Baroid Quick Grout/Baroid Hole Plug) is the approved sealant. When bentonite chips are added above static water level, a minimum of 5-gallons of fresh water shall be added to the borehole per 50-lb of bentonite chips.

4. Placement of the sealant within the wells shall be by tremie pipe extending to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces the standing water column. The tremie shall be incrementally removed to retain the tremie bottom a limited distance above the top of the rising column of chips throughout the plugging process.

5. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental

concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

6. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

7. NMOSE witnessing of the plugging of the non-artesian well will not be required.

8. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

9. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 31st day of January 2023

Mike A. Hamman, P.E. State Engineer

By: K. Parekh

Kashyap Parekh
Water Resources Manager I

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Mike A. Hamman, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

January 31, 2023

Devon Energy Resources
6488 Seven Rivers Hwy
Artesia, NM 88210

RE: Well Plugging Plan of Operations for **C-4703-POD1**

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer, subject to the attached Conditions of Approval.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

K. Parekh

Kashyap Parekh
Water Resources Manager I

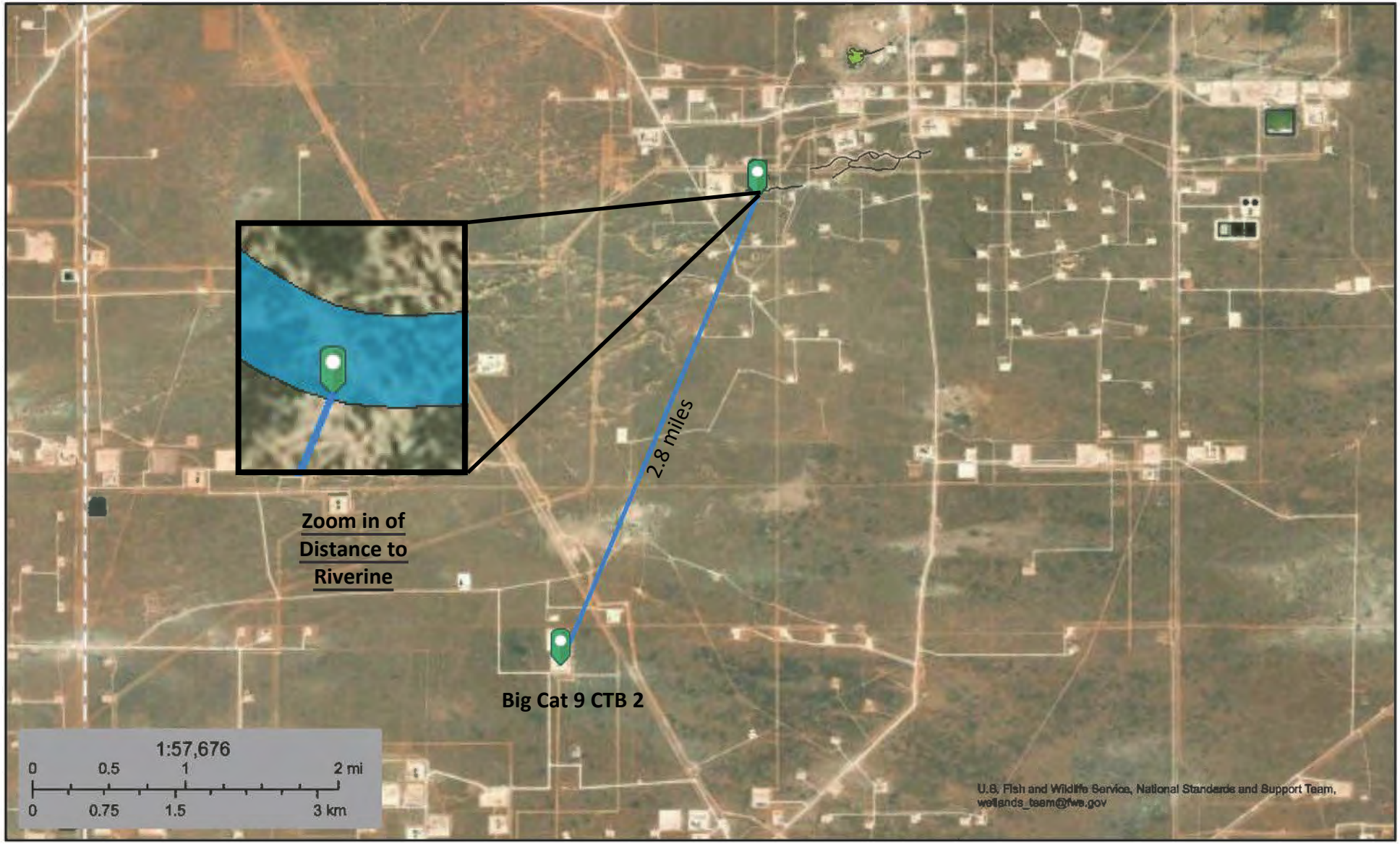
U.S. Fish and Wildlife Service

National Wetlands Inventory

Big Cat 9 CTB 2

Nearest Significant Watercourse: Riverine

Distance: 2.8 miles



July 25, 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.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service

National Wetlands Inventory

Big Cat 9 CTB 2

Nearest Playa Lake

Distance: 4.61 miles

July 25, 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.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Big Cat 9 CTB 2

Distance to Nearest Residence: 7.77 miles

Legend

- Big Cat 9 CTB 2
- Distance to Residence

Residence

7.77 miles

Big Cat 9 CTB 2

Zoom in of Distance to Residence

Google Earth

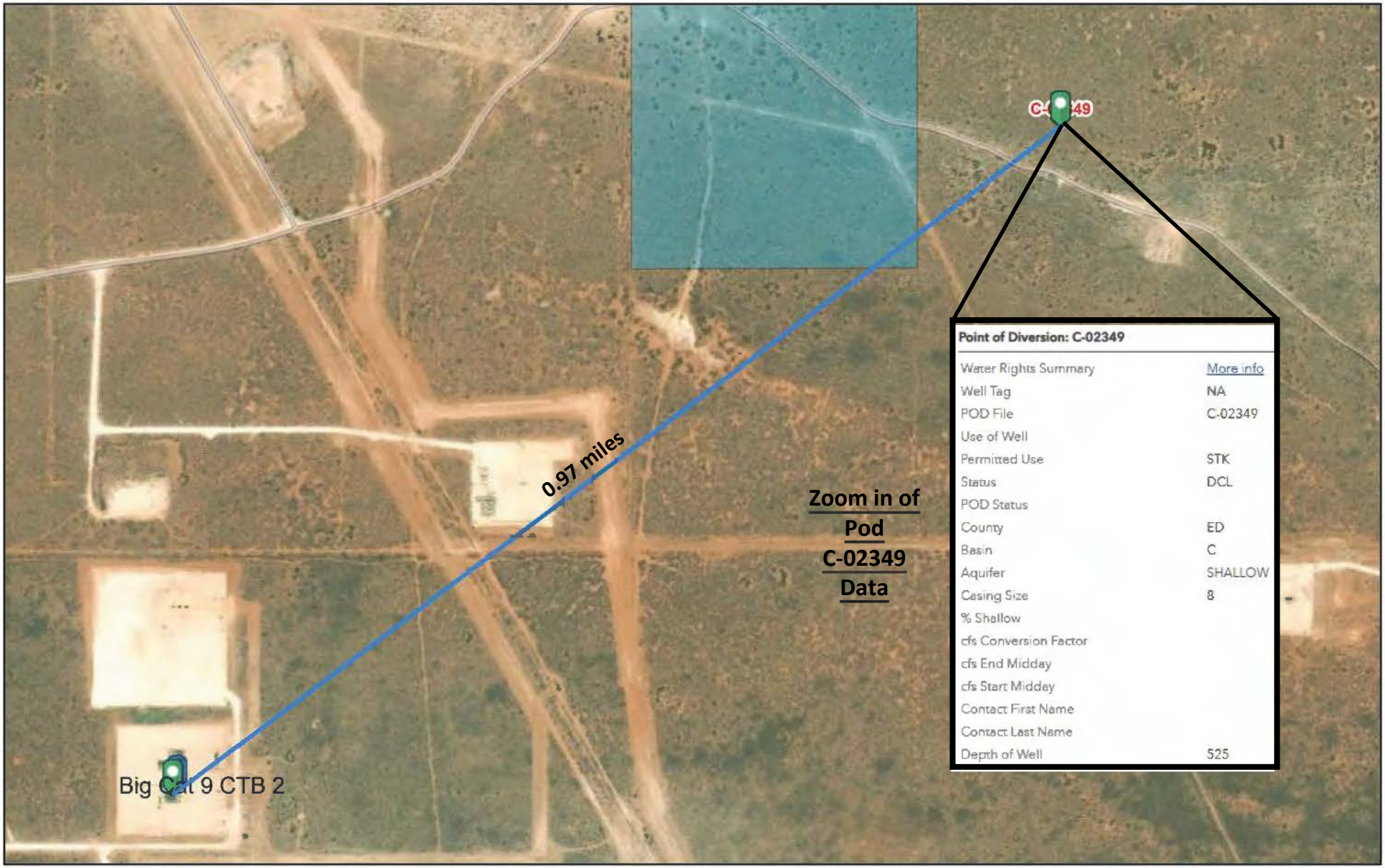
Image Landsat / Copernicus

Image © 2025 Airbus

N

3 mi

Big Cat 9 CTB 2 - Nearest Freshwater Well Map



7/25/2025, 3:50:14 PM

Override 1

GIS WATERS PODs

GIS WATERS PODs

OSE District Boundary

New Mexico State Trust Lands

Nearest Freshwater Pod
C-02349
Well Type
Stock Watering
Distance
0.97 miles

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, Maxar

Monica Peppin

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

Big Cat 9 CTB 2

Nearest Municipal Boundary: Loving, New Mexico
Distance: 24.09 miles

Legend

- Big Cat 9 CTB 2
- Distance to Municipal Boundary
- Loving Municipal Boundary

Big Cat 9 CTB 2

24.09 miles

Loving

Malaga

285

285

Zoom in of Distance to Municipal Boundary

Google Earth

Image © 2025 Airbus
Image Landsat / Copernicus

N

10 mi

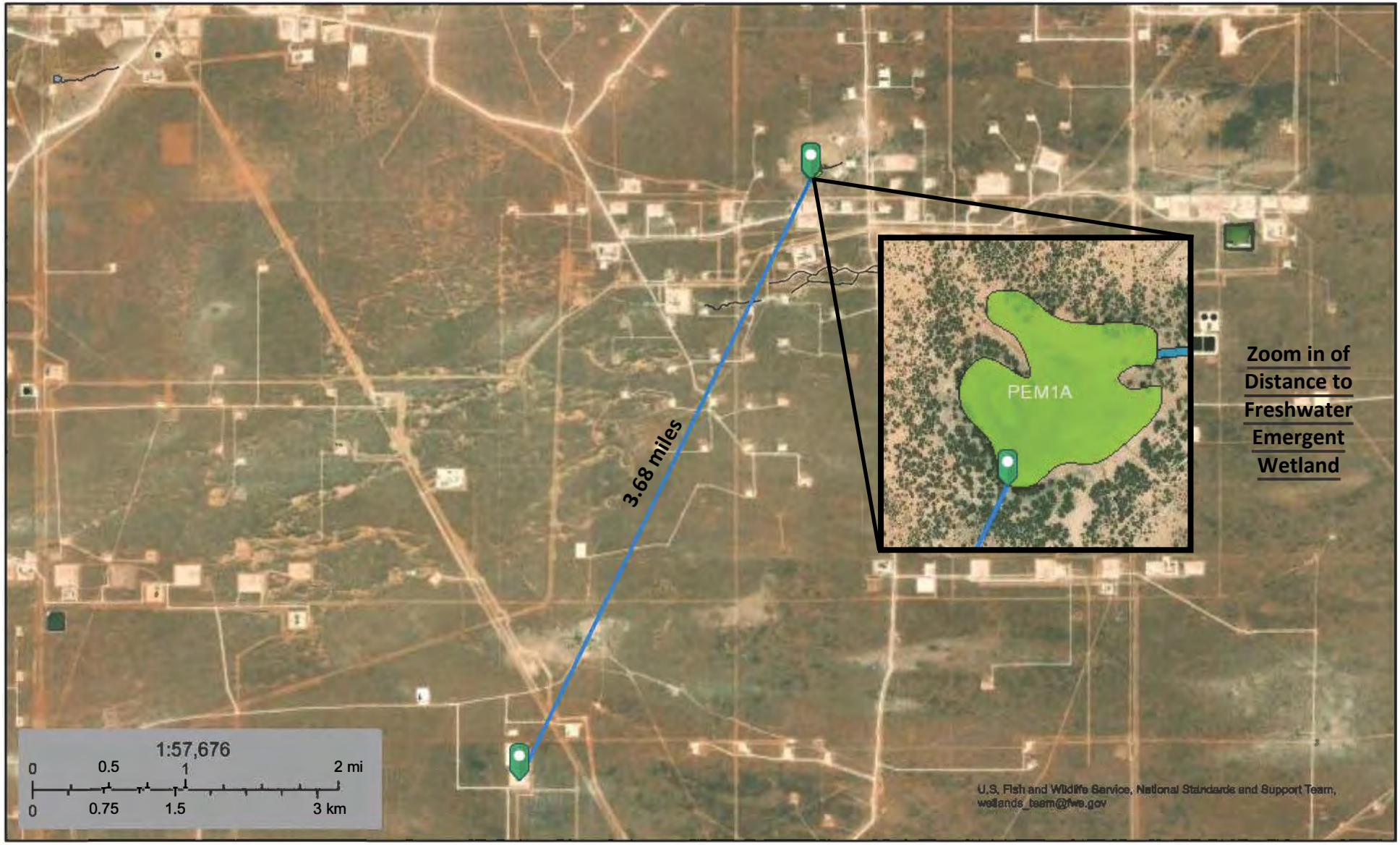
U.S. Fish and Wildlife Service

National Wetlands Inventory

Big Cat 9 CTB 2

Nearest Wetland: Freshwater Emergent Wetland

Distance: 3.68 miles



July 24, 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.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Big Cat 9 CTB 2

8/13/2025, 11:42:45 AM

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

Registered Mines

- Aggregate, Stone etc.
- Aggregate, Stone etc.

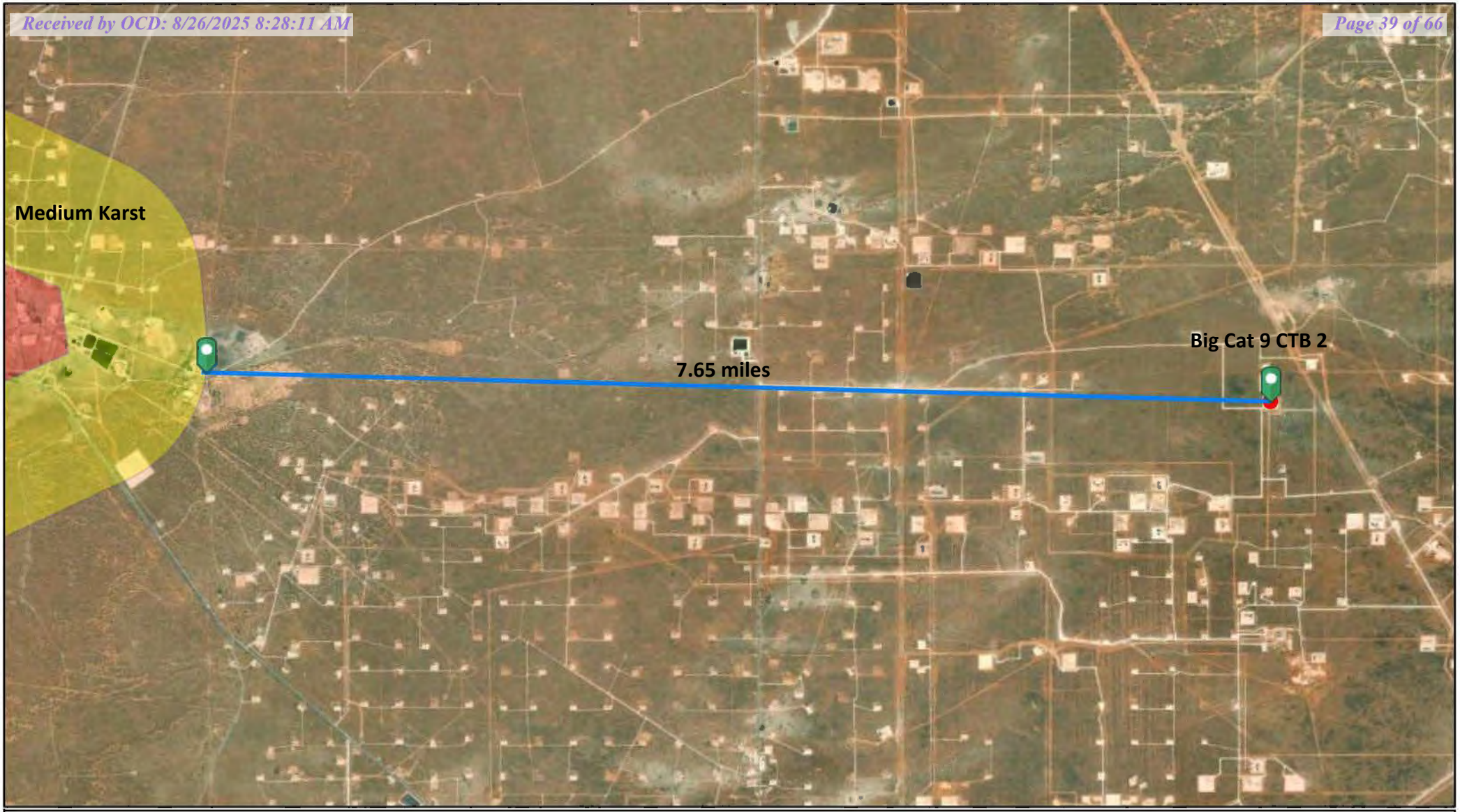
Land Ownership

- BLM
- P
- S

U.S. BLM, Esri, HERE, Garmin, Earthstar Geographics

EMNRD MMD GIS Coordinator

New Mexico Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)



Big Cat 9 CTB 2 - Karst Potential Map

0 0.42 0.85 1.7 mi

N

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.

Map Created: 7/25/2025

User drawn points

Karst_Potential_NM

Potential

Critical

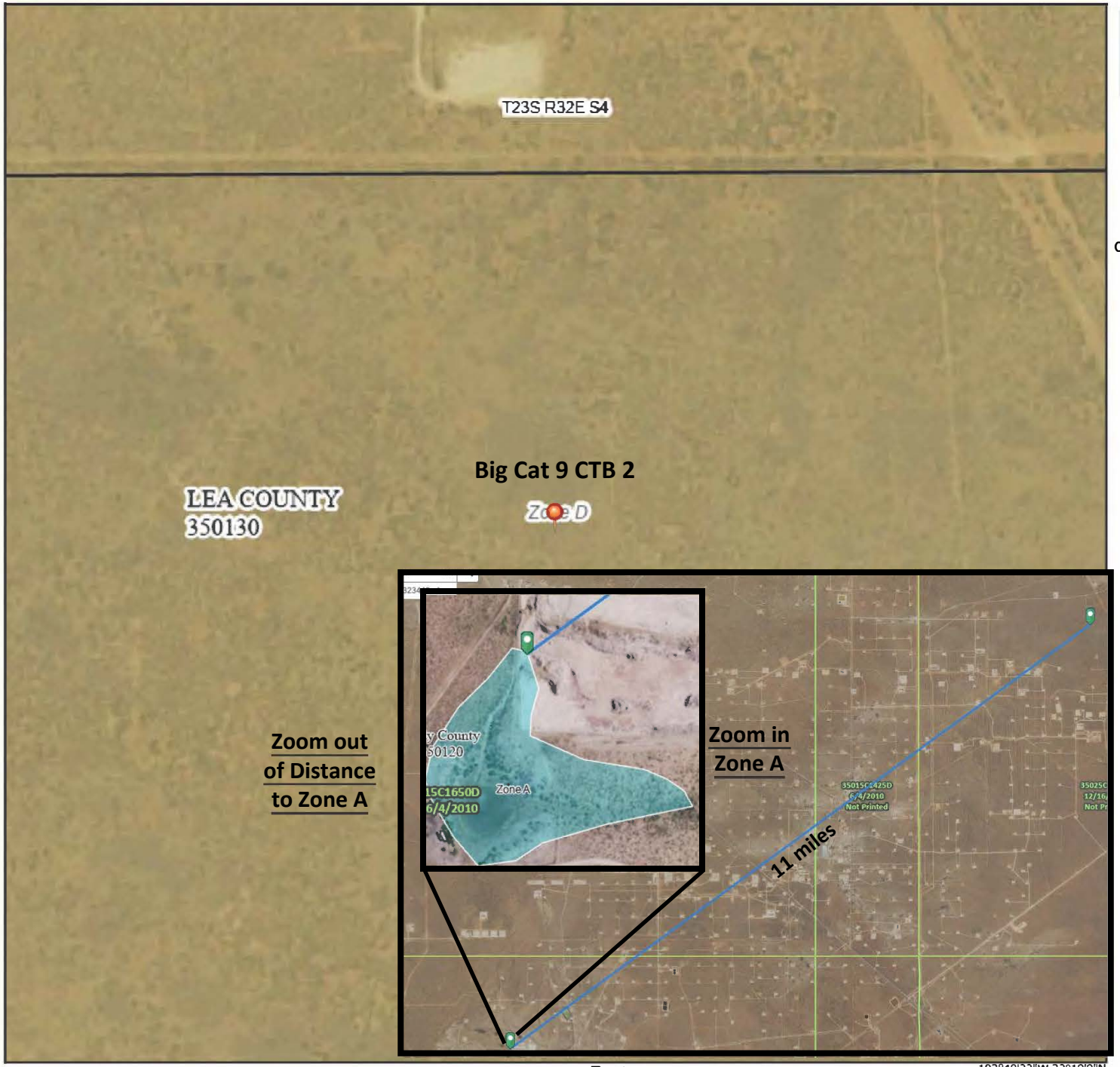
High

Medium

National Flood Hazard Layer FIRMette

FEMA

103°40'59"W 32°19'40"N



103°40'22"W 32°19'9"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 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*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 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
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

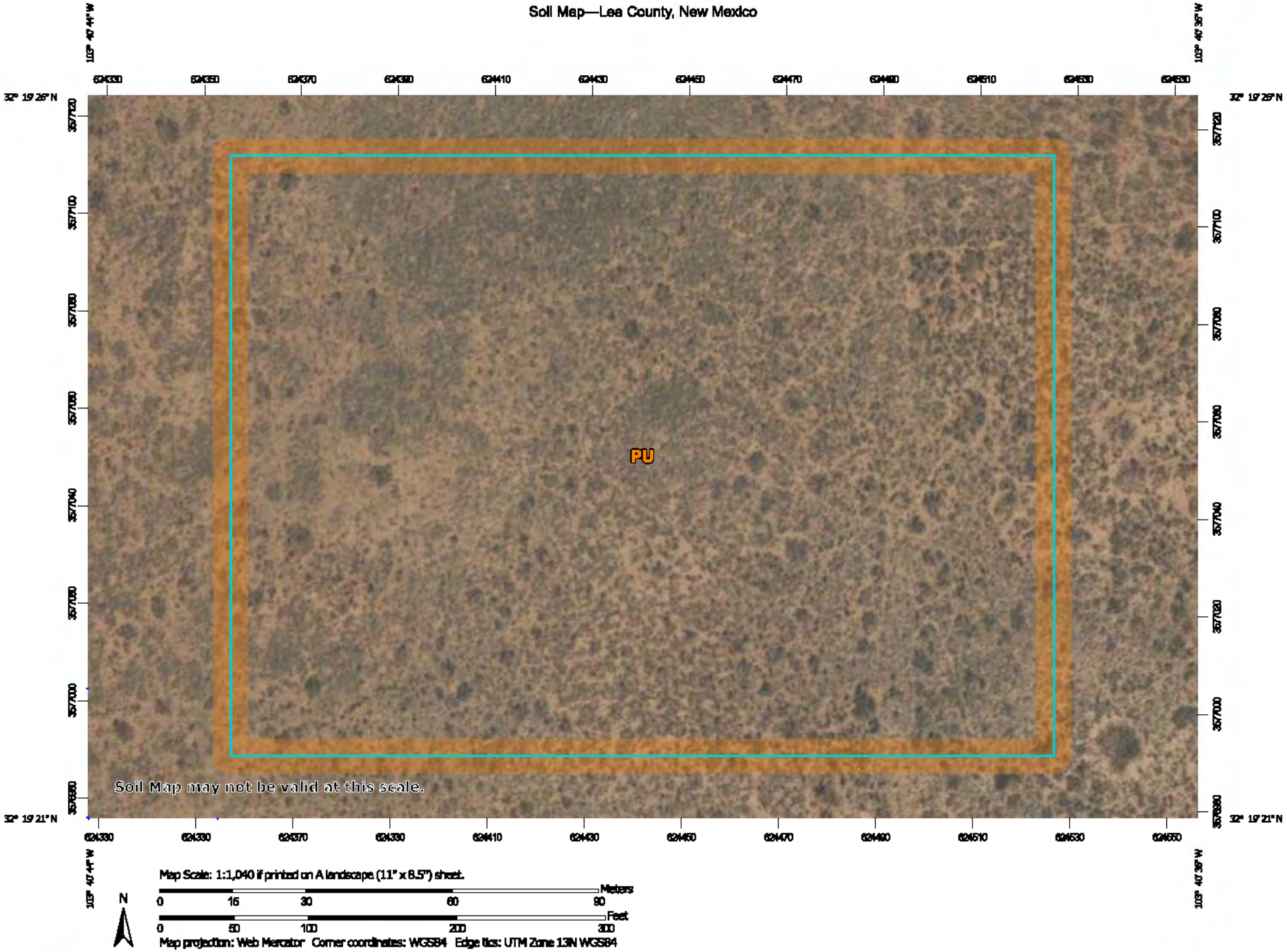
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 7/16/2025 at 11:22 PM 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.

Soil Map—Lea County, 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 araa. 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: Lea County, New Mexico
Survey Area Data: Version 21, 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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PU	Pyote and Maljamar fine sands	5.2	100.0%
Totals for Area of Interest		**5.2**	**100.0%**

Lea County, New Mexico

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Pyote and similar soils: 46 percent
Maljamar and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand
Bt - 30 to 60 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: Negligible
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: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e

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

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 10 percent
Ecological site: R070BC022NM - Sandhills

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 21, Sep 3, 2024

USDA Natural Resources Conservation Service

Ecological site R070BD003NM
Loamy Sand

Accessed: 07/01/2025

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	**Sandy** Sandy
R070BD005NM	**Deep Sand** 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 (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	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 averege frost-free season is 207 to 220 days. The last killing frost being lata March or early April and the first killing frost being in later October or early November.

Temperature and reinfall both favor warm season perennial plant growth. In yeers 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

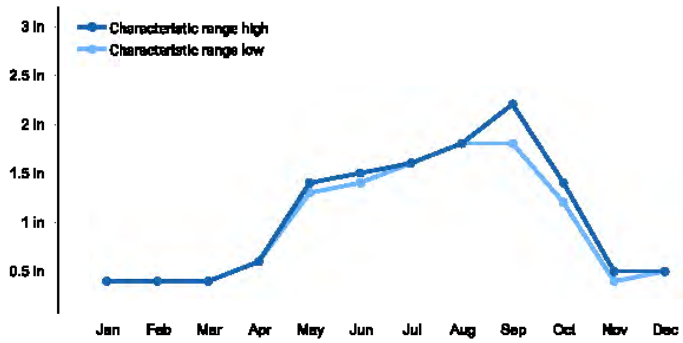


Figure 2. Monthly precipitation range

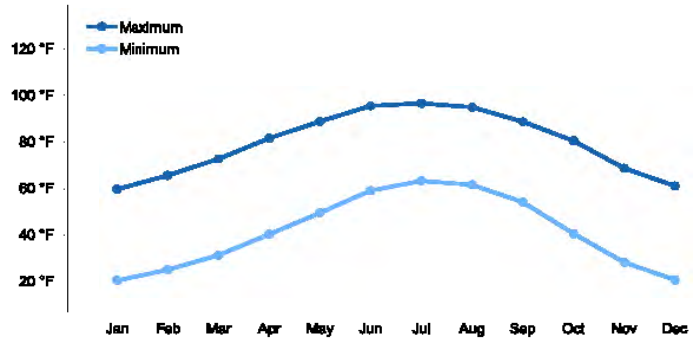


Figure 3. Monthly average minimum and maximum temperature

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 (2) Fine sandy loam (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"	10%
Surface fragment cover >3"	Not specified
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)	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)	Not specified

Ecological dynamics

Overview

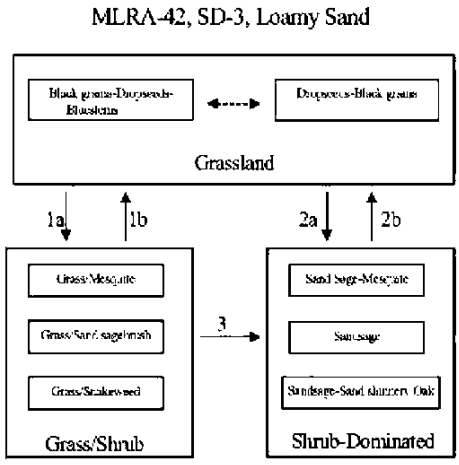
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (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
Total	**650**	**1225**	**1800**

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%

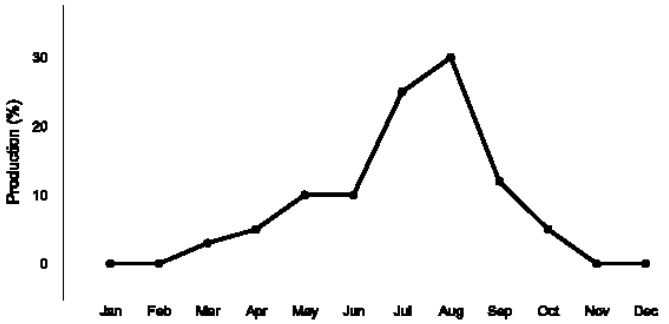


Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

Stata 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 (McDanial 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/threeawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threeawn 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 (%)
Grass/Grasslike					
1	**Warm Season**			61–123	
	little bluestem	SCSC	*Schizachyrium scoparium*	61–123	–
2	**Warm Season**			37–61	
	sand bluestem	ANHA	*Andropogon hallii*	37–61	–
3	**Warm Season**			37–61	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	37–61	–
	silver bluestem	BOSA	*Bothriochloa saccharoides*	37–61	–
4	**Warm Season**			123–184	
	black grama	BOER4	*Bouteloua eriopoda*	123–184	–
	bush muhly	MUPO2	*Muhlenbergia porteri*	123–184	–
5	**Warm Season**			123–184	
	thin paspalum	PASE5	*Paspalum setaceum*	123–184	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	123–184	–
	fringed signalgrass	URCI	*Urochloa ciliatissima*	123–184	–
6	**Warm Season**			123–184	
	spike dropseed	SPCO4	*Sporobolus contractus*	123–184	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	123–184	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	123–184	–
7	**Warm Season**			61–123	
	hooded windmill grass	CHCU2	*Chloris cucullata*	61–123	–
	Arizona cottontop	DICA8	*Digitaria californica*	61–123	–
9	**Other Perennial Grasses**			37–61	
	Grass, perennial	2GP	*Grass, perennial*	37–61	–
Shrub/Vine					
8	**Warm Season**			37–61	
	New Mexico feathergrass	HENE5	*Hesperostipa neomexicana*	37–61	–
	giant dropseed	SPGI	*Sporobolus giganteus*	37–61	–
10	**Shrub**			61–123	
	sand sagebrush	ARFI2	*Artemisia filifolia*	61–123	–
	Havard oak	QUHA3	*Quercus havardii*	61–123	–
11	**Shrub**			34–61	
	fourwing saltbush	ATCA2	*Atriplex canescens*	37–61	–
	featherplume	DAFO	*Dalea formosa*	37–61	–
12	**Shrub**			37–61	
	jointfir	EPHED	*Ephedra*	37–61	–
	littleleaf ratany	KRER	*Krameria erecta*	37–61	–
13	**Other Shrubs**			37–61	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	37–61	–
Forb					
14	**Forb**			61–123	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	61–123	–
	Indian blanket	GAPU	*Gaillardia pulchella*	61–123	–

	globemallow	SPHAE	*Sphaeralcea*	61–123	–
15	**Forb**			12–37	
	woolly groundsel	PACA15	*Packera cana*	12–37	–
16	**Forb**			61–123	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	61–123	–
	woolly plantain	PLPA2	*Plantago patagonica*	61–123	–
17	**Other Forbs**			37–61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	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, borseback 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

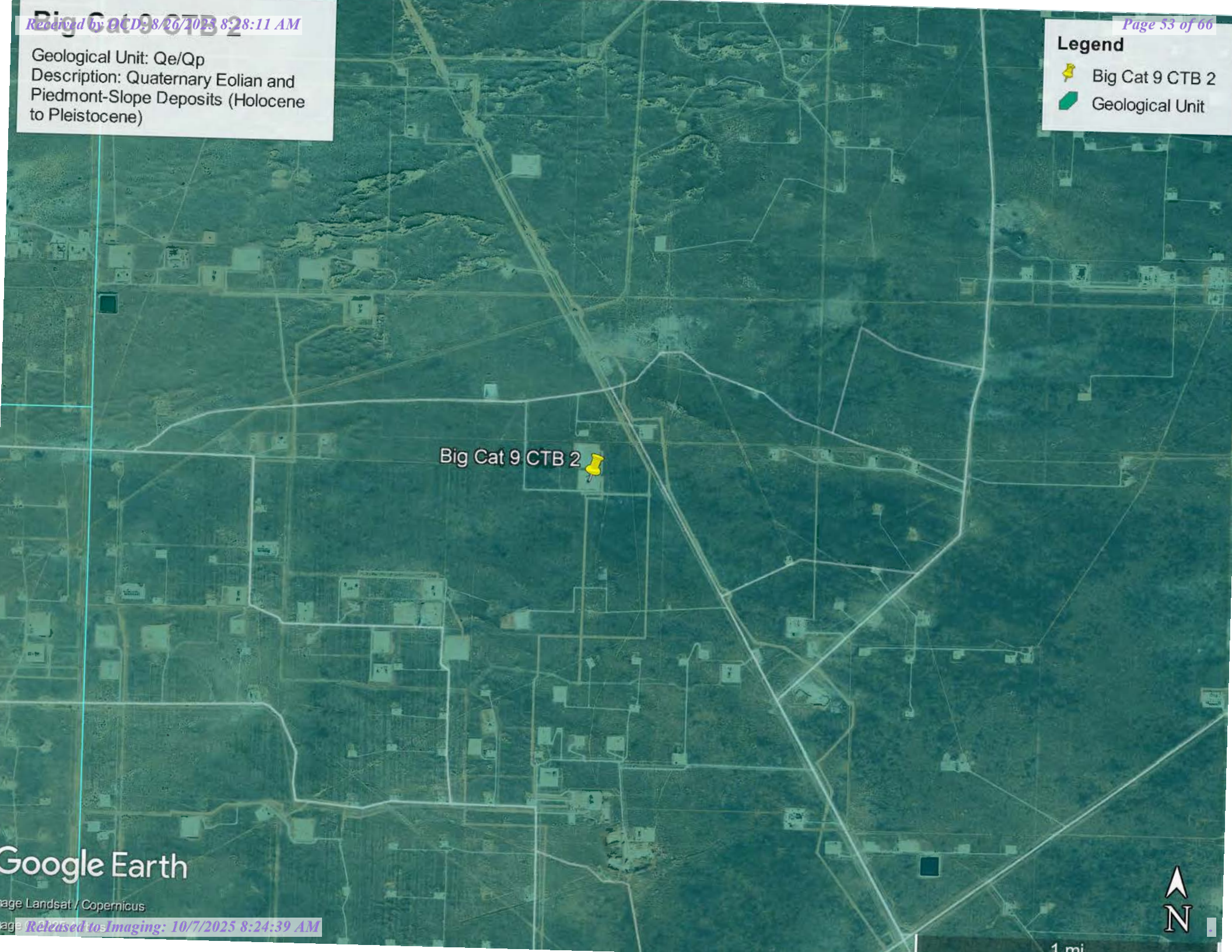
This site has no potential for wood products.

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, blsck 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, shinery 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 +


Big Cat 9 CTB 2
Geological Unit: Qe/Qp
Description: Quaternary Eolian and Piedmont-Slope Deposits (Holocene to Pleistocene)
Legend
Big Cat 9 CTB 2
Geological Unit
Big Cat 9 CTB 2
Google Earth
N

APPENDIX C

CORRESPONDENCE

Outlook

RE: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Inspection Notification

From Raley, Jim <Jim.Raley@dvn.com>
Date Mon 2025-06-23 10:16 AM
To Monica Peppin <Monica.Peppin@kljeng.com>
Cc Will Harmon <will.harmon@kljeng.com>

Submitted 6/23

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

devon

From: Monica Peppin <Monica.Peppin@kljeng.com>
Sent: Monday, June 23, 2025 8:48 AM
To: Raley, Jim <Jim.Raley@dvn.com>
Cc: Will Harmon <will.harmon@kljeng.com>
Subject: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Inspection Notification

Jim,

Below is the liner notification for the Big Cat 9 CTB 2. Let me know if you have any questions or changes to the date and time.

Liner Inspection Notification	
Site Name	Big Cat 9 CTB 2
Incident ID	nAPP2514723014
Containment Surface Area (Square Feet)	5461
All impacted materials have been removed from liner?	Yes
Liner Inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	6/26/2025
Inspection Time	11:30 AM

Contact info of technician for observers	Monica Peppin 575.909.3418
Navigation to site (Lat/Long)	32.323442, -103.677896

Thank you,
Monica

Monica Peppin, A.S.
Environmental Specialist II

575-213-9010 Direct
575-909-3418 Cell
Carlsbad, NM 88220
kljeng.com

Book time to meet with me

Outlook

RE: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Notification Reschedule

From Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Date Thu 2025-06-26 3:19 PM
To Monica Peppin <Monica.Peppin@kljeng.com>
Cc Raley, Jim <jim.raley@dvn.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>

Good afternoon Monica,

Thank you for updating the OCD regarding the liner inspection that had to be cancelled due to weather today. This has been noted under the Incident Events in Permitting. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Kind regards,

Shelly

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

From: Monica Peppin <Monica.Peppin@kljeng.com>
Sent: Thursday, June 26, 2025 2:43 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Raley, Jim <jim.raley@dvn.com>
Subject: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Notification Reschedule

To Whom it May Concern:

I am providing an update to the scheduling of the liner inspection originally planned for today at the Devon Energy - Big Cat 9 CTB 2 related to incident ID nAPP2514723014. Due to weather conditions

and accumulation of rainfall inside the secondary containment, standing water is currently present and prevents proper inspection of the liner surface.

An updated notification will be submitted through OCD permitting on the Operator's Electronic Permitting and Payment Portal.

If you have any questions or concerns, feel free to contact me.

Thank you,
Monica

Monica Peppin, A.S.
Environmental Specialist II
KLJ
575-213-9010 Direct
575-909-3418 Cell
Carlsbad, NM 88220
kljeng.com

Book time to meet with me

Outlook

RE: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Inspection Notification

From Raley, Jim <Jim.Raley@dvn.com>
Date Mon 2025-07-14 12:56 PM
To Monica Peppin <Monica.Peppin@kljeng.com>
Cc Will Harmon <will.harmon@kljeng.com>

Submitted 7/14

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

devon

From: Monica Peppin <Monica.Peppin@kljeng.com>
Sent: Friday, July 11, 2025 4:31 PM
To: Raley, Jim <Jim.Raley@dvn.com>
Cc: Will Harmon <will.harmon@kljeng.com>
Subject: [EXTERNAL] nAPP2514723014 Big Cat 9 CTB 2 Liner Inspection Notification

Jim,

Here is the liner notice for the Big Cat. Just let me know if there are any adjustments needed to the date and time. I pushed it out to wednesday in case you are unable to get to it until monday. Have a good weekend!

Liner Inspection Notification	
Site Name	Big Cat 9 CTB 2
Incident ID	nAPP2514723014
Containment Surface Area (Square Feet)	5461
All impacted materials have been removed from liner?	Yes
Liner Inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	7/16/2025
Inspection Time	11:00 AM

Contact info of technician for observers	Monica Peppin 575.909.3418
Navigation to site (Lat/Long)	32.323442, -103.677896

Thank you,
MP

Monica Peppin, A.S.
Environmental Specialist II
KLJ
575-213-9010 Direct
575-909-3418 Cell
Carlsbad, NM 88220
kljeng.com

Book time to meet with me

Sante Fe Main Office
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 499227

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 499227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2514723014**
Incident Name	**NAPP2514723014 BIG CAT 9 CTB 2 @ FAPP2329744254**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2329744254] BIG CAT 9 CTB 2**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BIG CAT 9 CTB 2
Date Release Discovered	05/26/2025
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
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

Nature and Volume of Release	
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.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Pump | Produced Water | Released: 15 BBL | Recovered: 15 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)	Transfer pump swedge developed leak allowing fluids to be released to lined secondary containment and fully contained.

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 499227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
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 Title: EHS Professional Email: jim.raley@dvn.com Date: 08/26/2025

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QUESTIONS (continued)

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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	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
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)	Between 1 and 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 ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (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	Low
A 100-year floodplain	Greater than 5 (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
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.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	Yes
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.	
On what estimated date will the remediation commence	07/14/2025
On what date will (or did) the final sampling or liner inspection occur	07/16/2025
On what date will (or was) the remediation complete(d)	07/16/2025
What is the estimated surface area (in square feet) that will be remediated	5461
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 (continued)

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QUESTIONS

Remediation Plan (continued)	
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.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
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.*
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 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 Title: EHS Professional Email: jim.raley@dvn.com Date: 08/26/2025
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 (continued)

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	Action Number: 499227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Liner Inspection Information	
Last liner inspection notification (C-141L) recorded	**484583**
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	**07/16/2025**
Was all the impacted materials removed from the liner	**Yes**
What was the liner inspection surface area in square feet	**5461**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
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	5461
What was the total volume (cubic yards) remediated	0
Summarize any additional remediation activities not included by answers (above)	0

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 Title: EHS Professional Email: jim.raley@dvn.com Date: 08/26/2025

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CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 499227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #nAPP2514723014 BIG CAT 9 CTB 2, thank you. This Remediation Closure Report is approved.	10/7/2025