Souder, Miller & Associates ♦ 201 S. Halagueno St.♦ Carlsbad, NM 88220
(575) 689-8801

January 27, 2025 5E33088 BG22

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

SUBJECT: Closure Request Report for the Exotic Cat 5 CTB 2, Incident IDs # nAPP2428730359 and nAPP2431931028, and nAPP2433729249 Eddy County, New Mexico.

1.0 Introduction

On behalf of Devon Energy Production Company, LP (Devon), Souder, Miller & Associates (SMA) has prepared this Closure Request Report. This report describes the corrective actions for multiple produced water incidents related to oil and gas production activities at the Exotic Cat 5 CTB 2 (Exotic Cat), Incident IDs: nAPP2428730359 that occurred on October 12, 2024, nAPP2431931028 on November 14, 2024, and nAPP2433729249 on November 30, 2024. The release area is located at latitude N 32.335969 and longitude W -103.698928.

Devon completed release notifications to the New Mexico Energy, Minerals, and Natural Resources Department – Oil Conservation Division (OCD) via Operators Electronic Permitting and Payment Portal on October 13, 2024, incident nAPP2428730359, for the submission of Notice of Release (NOR), followed by the submission of the Form C-141, Release Notification on November 4, 2024. For incident ID nAPP2431931028 the NOR and Form C-141 were submitted on November 14, 2024, and for incident ID nAPP2433729249, the NOR submitted on December 2, 2024, and Form C-141 submitted on December 5, 2024. This letter provides a description of the spill assessment and includes a request for spill closure.

Table 1: Release Information and Closure Criteria

Name	Exotic Cat 5 CTB 2	Company	Devon Energy Production Company, LP
Facility ID	fAPP2308735100	Location	F-05-23S-32E N 32.335969, W -103.698928
Incident Numbers	nAPP2428730359 nAPP2431931028 nAPP2433729249	Land Status	Federal
Date of Release	October 12, 2024 November 14, 2024 November 30, 2024	Lease Number	NMNM63994
Source of Release	Pinhole formed on load line connection at water tank Leak on dump line Pinhole leak in flowline to production tank		
Released Volume	20 bbls 18 bbls 9 bbls	Recovered Volume	20 bbls 18 bbls 9 bbls
NMOCD Closure Criteria	Depth to groundwater <50 feet below ground surface (bgs)		

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2.0 Background

nAPP2428730359
On October 12, 2024, a pinhole formed on the load line connection on the produced water storage tank resulting in a release into the secondary lined containment. The total volume of released fluids was 20 barrels (bbls) of produced water and approximately 20 bbls of the released fluids were recovered from the containment.

nAPP2431931028
On November 14, 2024, a leak on the water dump line developed resulting in a release into the secondary lined containment. The total volume of released fluids was 18 bbls of produced water and approximately 18 bbls of released fluids were recovered from the containment.

nAPP2433729249
On November 30, 2024, a water transfer pump failed resulting in a fluid release. The total volume of released fluids was 9 bbls of produced water and approximately 9 bbls of released fluids were recovered from the secondary lined containment.

Initial response activities were conducted by the operator, including source elimination, photographs of standing fluids, recovery of the released fluids, and verification that the affected area was properly exposed and cleaned for visual observation for each of the releases. Documentation of the liner inspection, including photographs, is provided in the Site Assessment Report in Attachment 1.

3.0 Site Geology and Vegetation

The Geologic Map of New Mexico by New Mexico Bureau of Geology and Mineral Resources indicates the surface geology at the incident location area is comprised of primarily Qep – Eolian and piedmont deposits (Holocene to middle Pleistocene) interlayed eolian sands and piedmont-slope deposits. The soil is calcareous sandy eolian deposits derived from sedimentary rock.

The surrounding geography and terrain are associated with plains, hills, and dunes, at elevations between 2,842 and 4,500 feet above mean sea level (amsl). The annual average rainfall and precipitation ranges between 8 to 13 inches. Soil features of this site are deep and very deep.

The primary surficial soil type on the location is Kermit soils and Dune land. Subsurface features consist of fine sand or loamy fine sand while subsoils is fine sand or loamy fine sand with less than 10 percent clay content. This soil is subject to severe wind erosion and tend to be excessively drained, with very low runoff, low available water supply, and is not prime farmland.

The ecological setting of Sandhills integrated with Deep Sand with historic vegetation consisting of a mixture of grasses, shrubs, and forbs, with tall grasses dominating. Sand bluestem and giant dropseed are dominant grasses with Havard panicum and dropseeds as sub-dominants with remnants of plains bristlegrass, sand paspalum, and fourwing saltbrush. Sand shinnery oak and soapweed yucca, mesa dropseed, and threeawns can be found dispersed fairly uniform. Large natural bare areas or blowouts are a common feature in less stable areas.

4.0 Site Information and Closure Criteria

The Exotic Cat is located approximately 23.09 miles northeast of Malaga, New Mexico, on BLM land at an elevation of approximately 3,370 feet amsl. SMA personnel completed site assessment/characterization pursuant to 19.5.29.11-12 NMAC to determine potential environmental impacts and closure criteria. Site assessment and characterization results are included in Attachments 1 and 2.

There is no surface water located on site or within closure criteria parameters of the site. The nearest significant watercourse and wetlands, as defined in 19.15.17.7.P NMAC, is a riverine located approximately 2.86 miles northeast and a playa lake, Red Tank, located 3.26 miles northwest (U.S. Fish and Wildlife Service, National Wetlands Inventory, 2024). There are no continuous flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features within the defined distances, as outlined in Paragraph (4) of Subsection C of 19.15.29.11 NMAC.

Depth to ground water was determined using New Mexico Office of the State Engineer (NMOSE) Water Rights Pod Location: ArcGIS Interactive Online Map. The nearest active pod is Pod C-04862-Pod1, a temporary borehole used for depth to groundwater determination, located 0.81 miles northeast from Exotic Cat. The temporary borehole was drilled to a depth of 105 feet bgs, where groundwater was discovered at a depth of 78 feet bgs. A freshwater well, Pod C-02349, located southeast of Exotic Cat is described as the nearest domestic well used for stock watering purposes 2.02 miles away.

Karst potential for the area that Exotic Cat is low and is 6.43 miles east of a medium karst feature, based on the New Mexico State Land Office Land Status Interactive Map (NMSLO).

Documentation of site characterization, including depth to groundwater, nearest domestic freshwater well, surface water features, and karst potential, is included in Attachment 2.

Based on data included in the closure criteria determination worksheet, the incident at Exotic Cat is not subject to the requirements of 19.15.29.11.A.4 NMAC. Due to insufficient data of depth to groundwater determination within a 0.5-mile radius, closure criteria for the site are the constituent concentration limits associated with less than 50 feet depth to groundwater (DTGW), as stated in Table I of 19.15.29.12 NMAC.

5.0 Remediation Activities

Notification of the liner inspection, scheduled for December 21, 2024, was provided to Devon and Bureau of Land Management (BLM) through email by SMA personnel on December 19, 2024. Devon provided notification to NMOCD through the ENMRD Electronic Permitting and Payment Portal for Operators on December 19, 2024. Notification documentation is included in Attachment 3.

On December 21, 2024, SMA personnel performed an on-site visual inspection of the secondary containment to verify liner integrity as outlined in Paragraph (5)(a) of Subsection A of 19.15.29.11 NMAC.

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

An extension request was submitted by Devon on January 9, 2025 to allow time to complete the closure report for all three releases associated with Exotic Cat. The extension request was approved by NMOCD on January 9, 2025, allowing an additional 30 days for submission of the final closure report. The new deadline is February 10, 2025. Documentation of correspondence between Devon and NMOCD is included with Attachment 3.

6.0 Conclusions and Recommendations

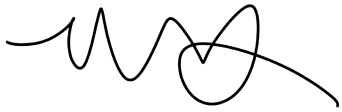
Based on the liner inspection and assessment, SMA concludes the liner integrity is adequate to contain the releases related to incidents nAPP2428730359, nAPP2431931028, and nAPP2433729249. There is no evidence of a release to the environment. Based on the professional activities and site assessment, Devon Energy Production Company respectfully requests closure of the incidents that occurred at Exotic Cat 5 CTB 2.

7.0 Scope and Limitations

The scope of our services included: visual inspection for liner integrity; regulatory liaison; and preparing this report. All work has been performed in accordance set forth in Subsection E of 19.15.29.12 NMAC with accepted professional environmental consulting practices for oil and gas incidents in the Permian Basin in New Mexico.

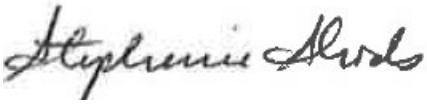
If there are any questions regarding this report, please contact Stephanie Hinds at (505) 302-1127 or Monica Peppin at (575) 909-3418.

Submitted by:
SOUDER, MILLER & ASSOCIATES



Monica Peppin, A.S.
Project Manager

Reviewed by:



Stephanie Hinds, P.E.
Senior Engineer

REFERENCES:

New Mexico Office of the State Engineer (NMOSE) online water well database
Httpe://gis.ose.state.nm.us/gisapps/ose_pod_locations/

USGS National Water Information System: Web interface online water well database
https://nwis.waterdata.usgs.gov/nwis/gwlevels?site_no=321205103544701&agency_cd=USGS&format=html

U.S. Fish and Wildlife Service: National Wetlands Inventory
Wetlands Mapper | U.S. Fish & Wildlife Service

New Mexico State Land Office: Land Status
NMSLO Land Status

United States Department of Agriculture: Natural Resources Conservation Service: Web Soil Survey
https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

USDA, USGS The National Map: Orthoimagry: FEMA's National Flood Hazard Layer (NFHL) Viewer
https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

ATTACHMENTS:

Attachment 1: Site Assessment Photolog
Attachment 2: Closure Criteria Determination Research
Attachment 3: Correspondence

ATTACHMENT 1: SITE ASSESSMENT PHOTOLOG

Site Inspection Report

Client: Devon Energy Corporation
Site Name: Exotic Cat 5 CTB 2
API: fAPP2308735100
Lease #: NMNM63994

Incident ID: nAPP2428730359, nAPP2431931028, & nAPP2433729249
Project Manager: Monica Peppin
Project Owner: Jim Raley

SMA Since 1985
Stronger Communities by Design

Field Notes

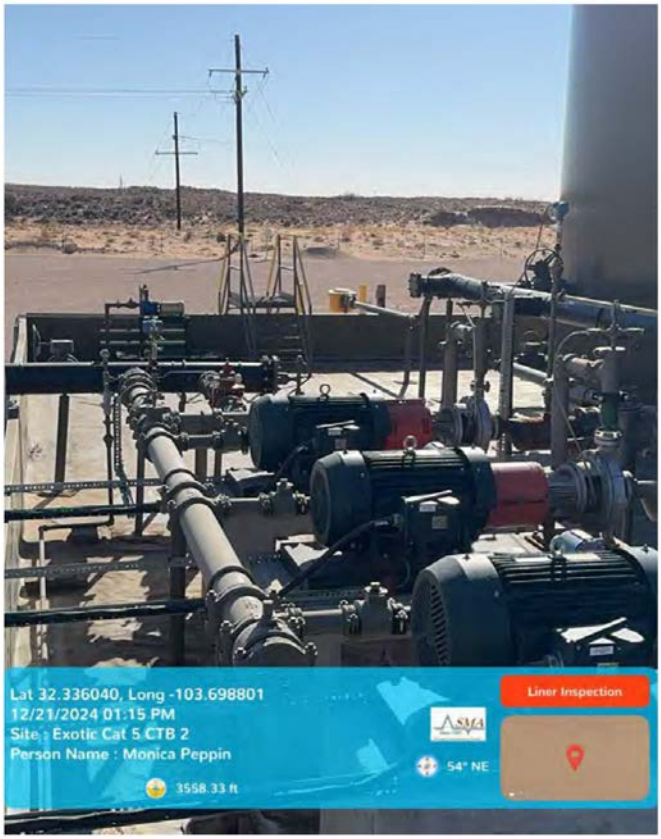
December 21, 2024, at 12:45 PM

- Arrive on location, fill out paperwork for notes and safety check/JSA-JHA, updated site information for GPS stamp, begin visual inspection of secondary containment, and collect photos for proof of liner integrity. Inspected for any visible perforations, cuts, rips, tears, or substantial weathering that could lead to the potential breach through the liner.
- The liner inspection activity concluded that the secondary containment contained all fluids that were released when the incident occured. Three incidents are being covered for this site visit and notice was given for each incident separately.
- No fluid released had any breach past the liner and all stayed within the containment. Liner integrity has been confirmed and photos for proof of liner integrity are located within this field report.

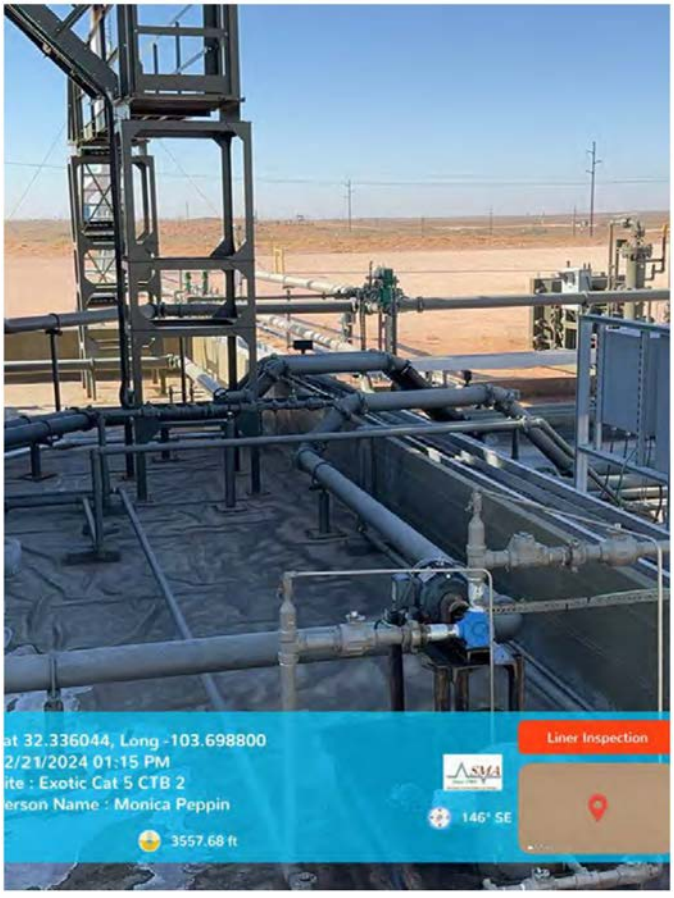
Visual documentation

Photograph #1: Lease Information

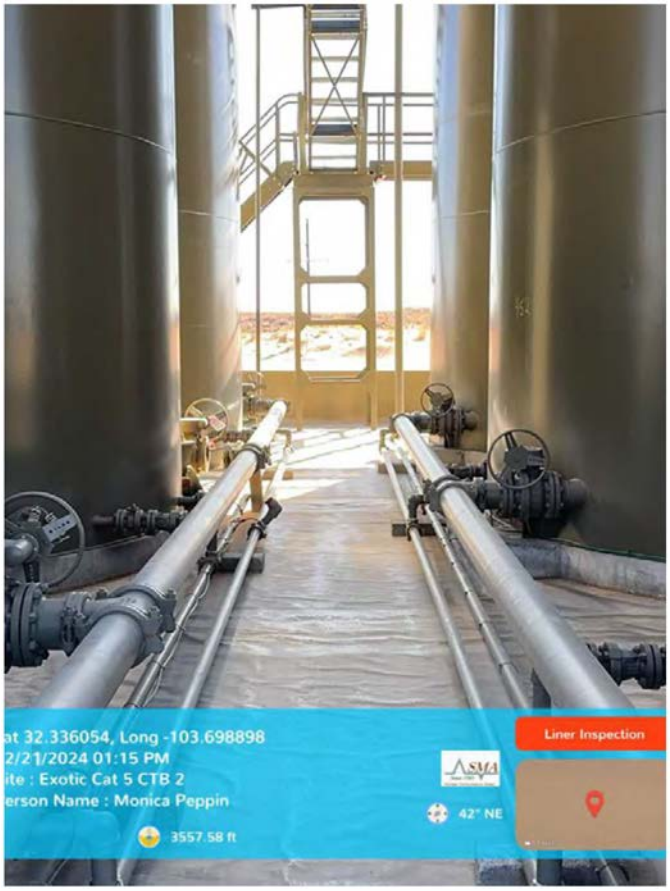
Photograph #2: North side of tank containment



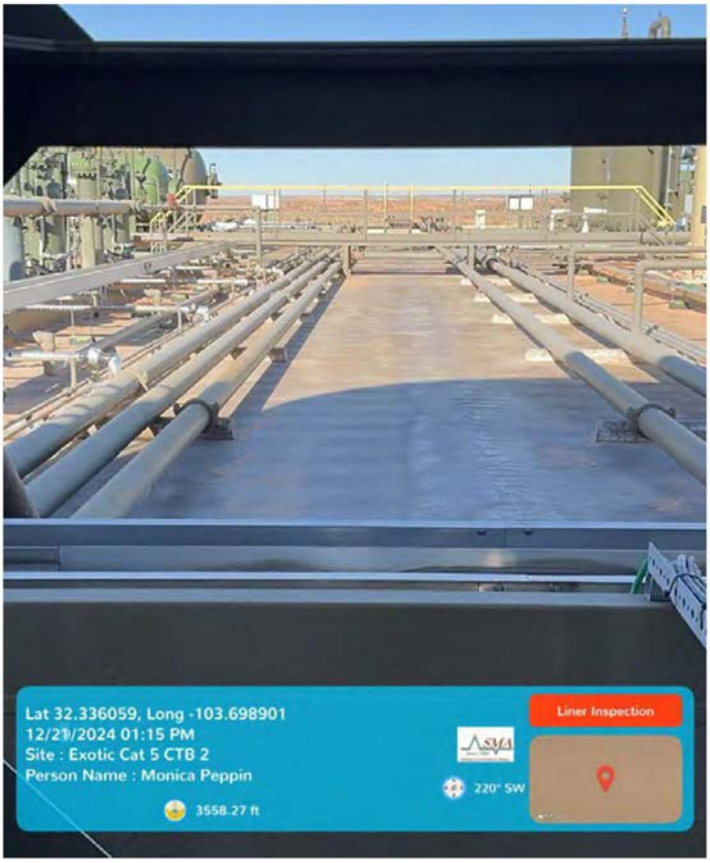
Photograph #3: East side of tank containment



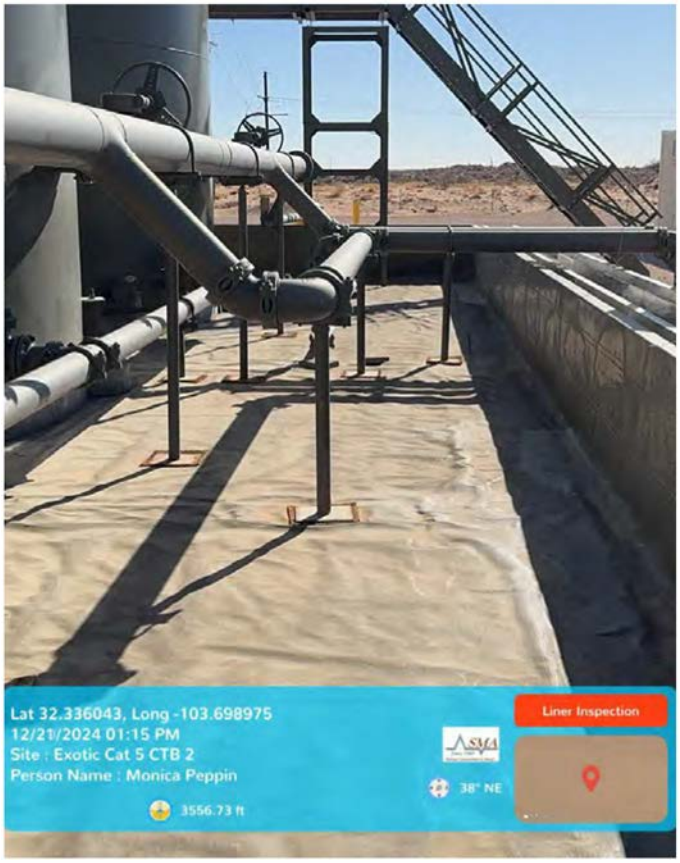
Photograph #4: liner in tank containment from east side



Photograph #5: Liner between tanks



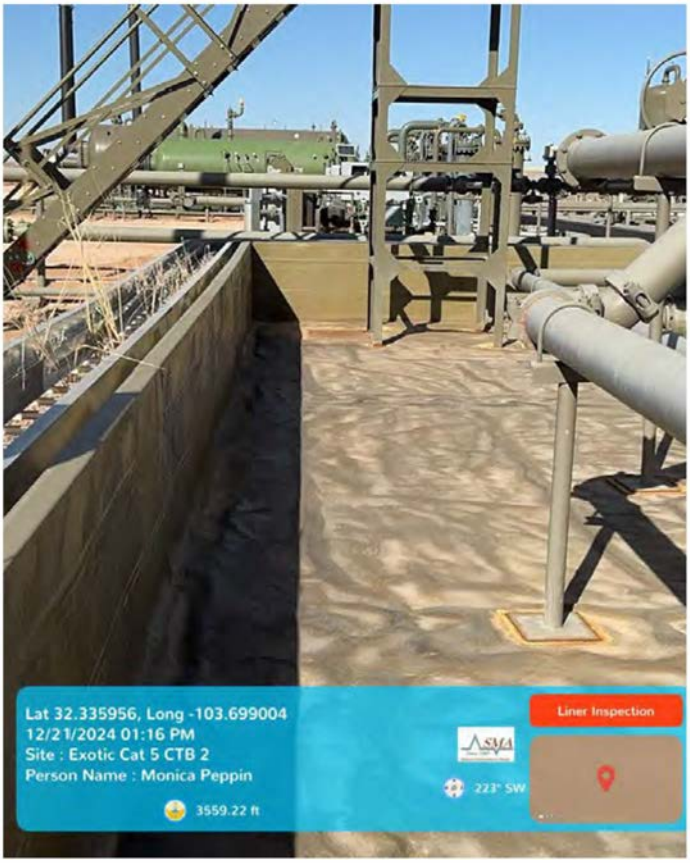
Photograph #6: Facing north showing liner from south end



Photograph #7: Facing east from west middle area of containment

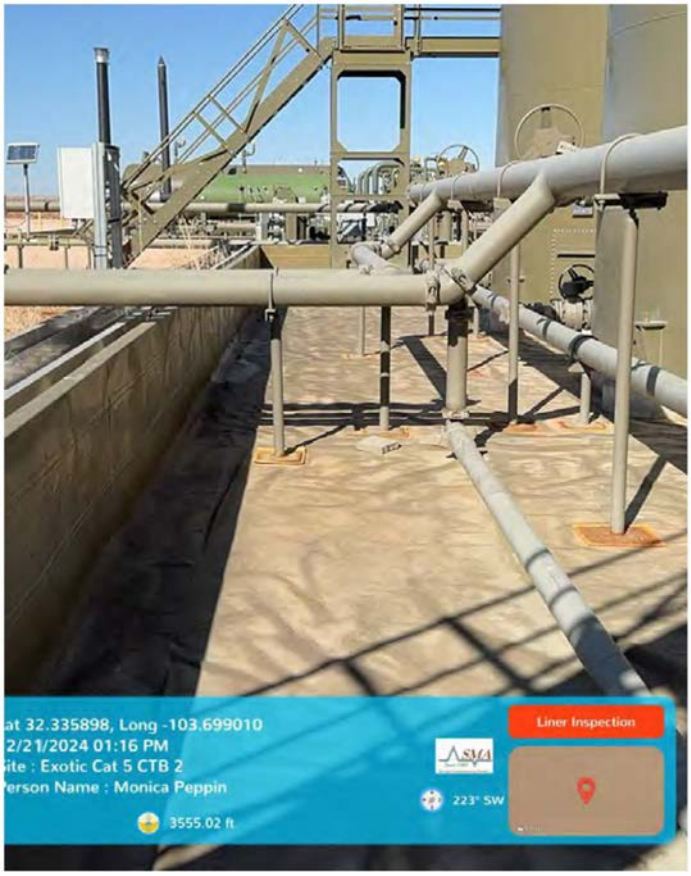
Photograph #8: Facing east from west/northwest side

Photograph #9: Facing south from north west corner

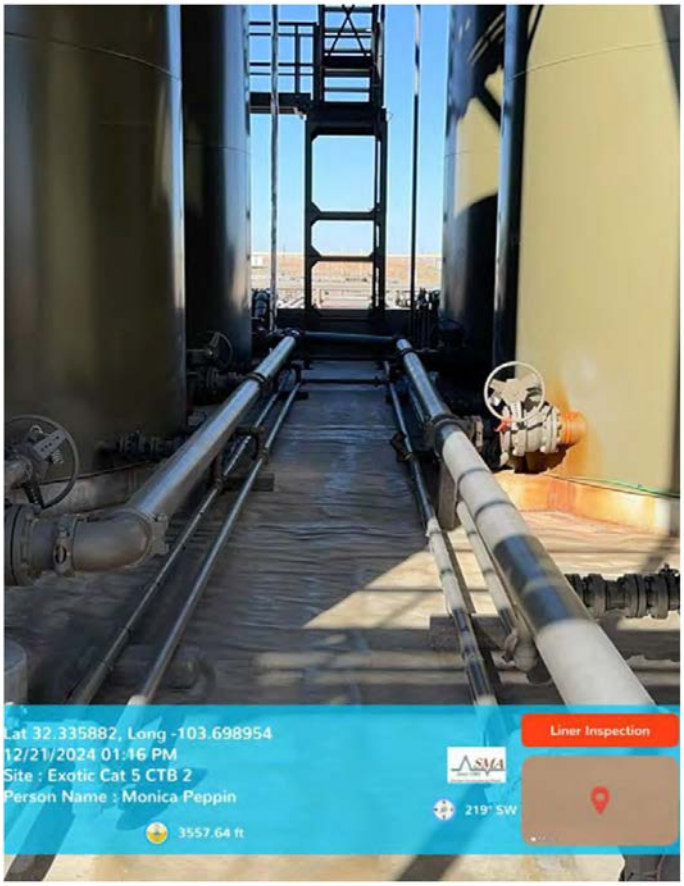


Photograph #10: Facing west showing middle area between tanks

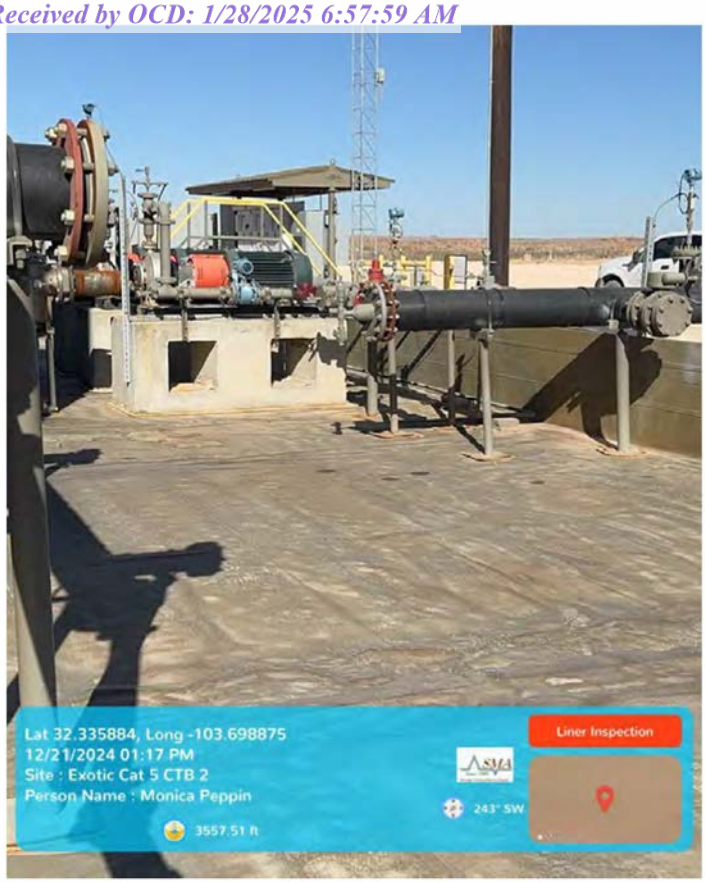
Photograph #11: Facing east from west middle area of containment



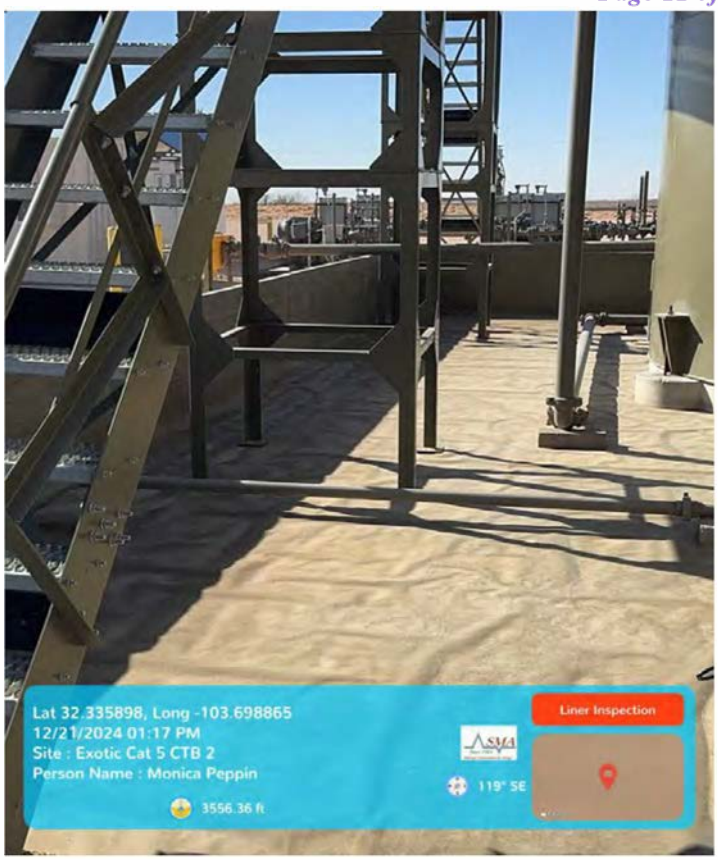
Photograph #12: Facing east from west/northwest side



Photograph #13: Facing south from north west corner

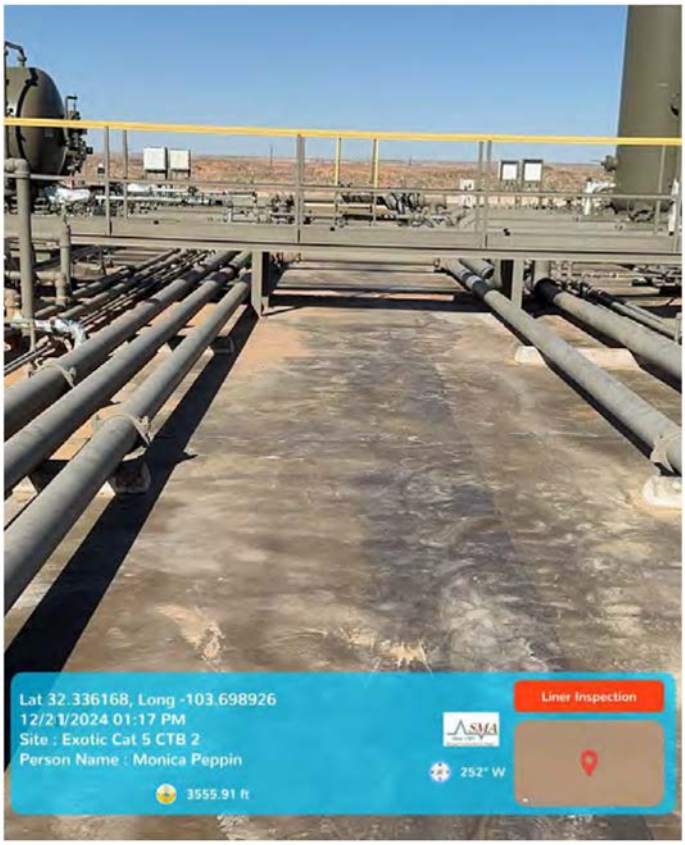


Photograph #14: Facing south from northwest corner



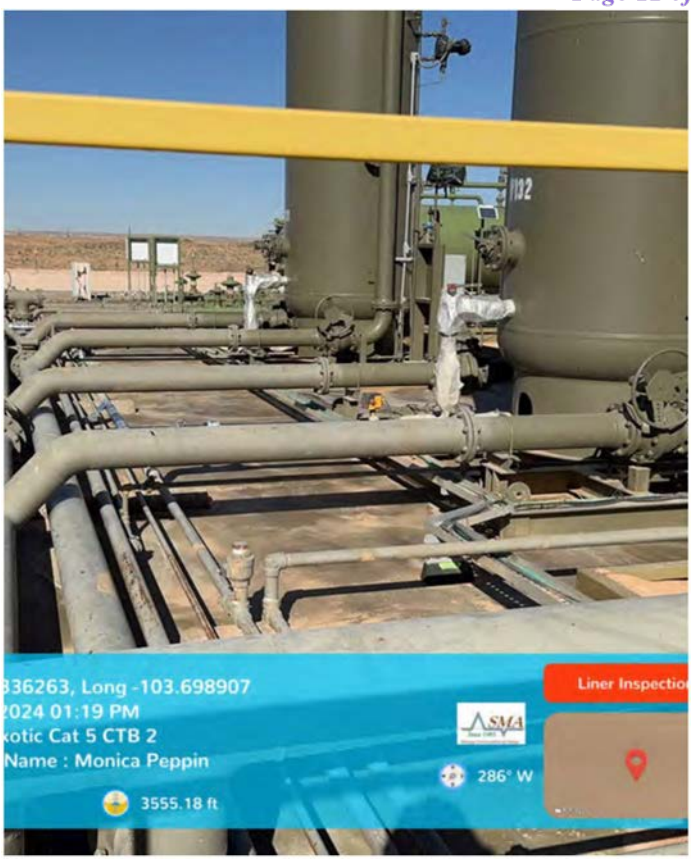
Photograph #15: Facing south from northeast side of containment

Photograph #16: north end of containment facing west



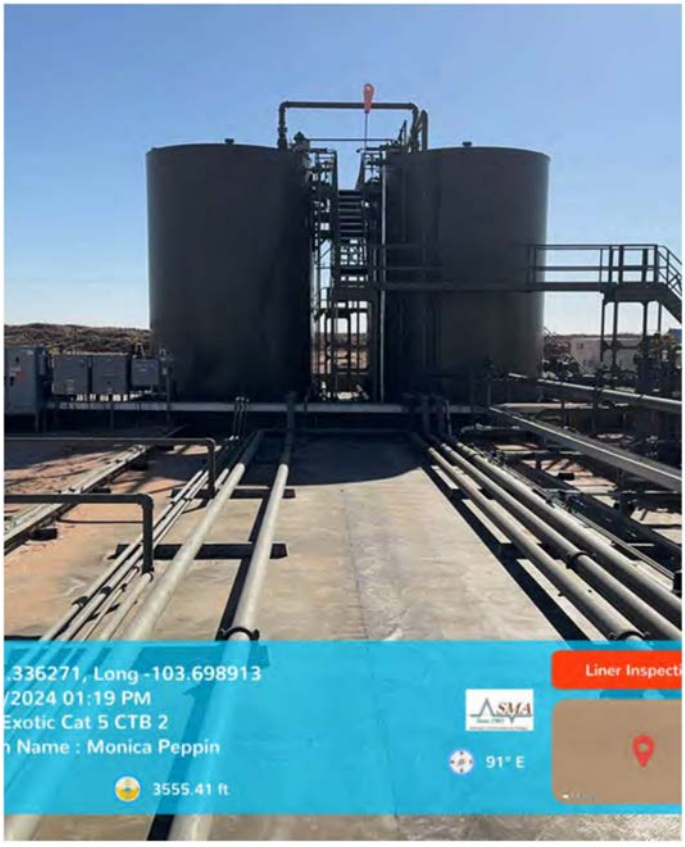
Photograph #17: Facing west/southwest from mid area on east side

Photograph #18: View of liner towards steps facing north



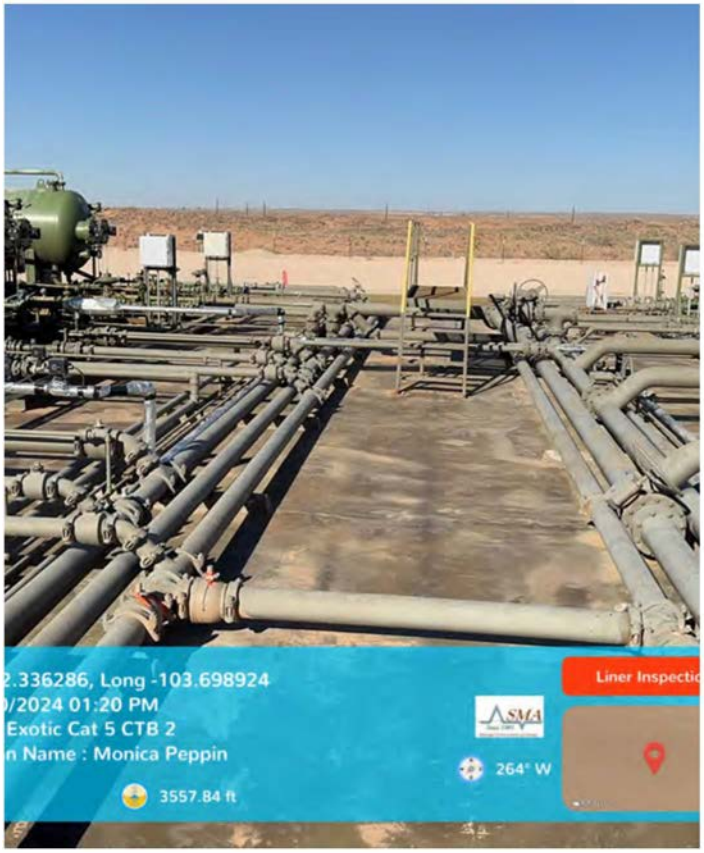
Photograph #19: Liner under piping and equipment in northeast corner

Photograph #20: Liner from steps in middle area

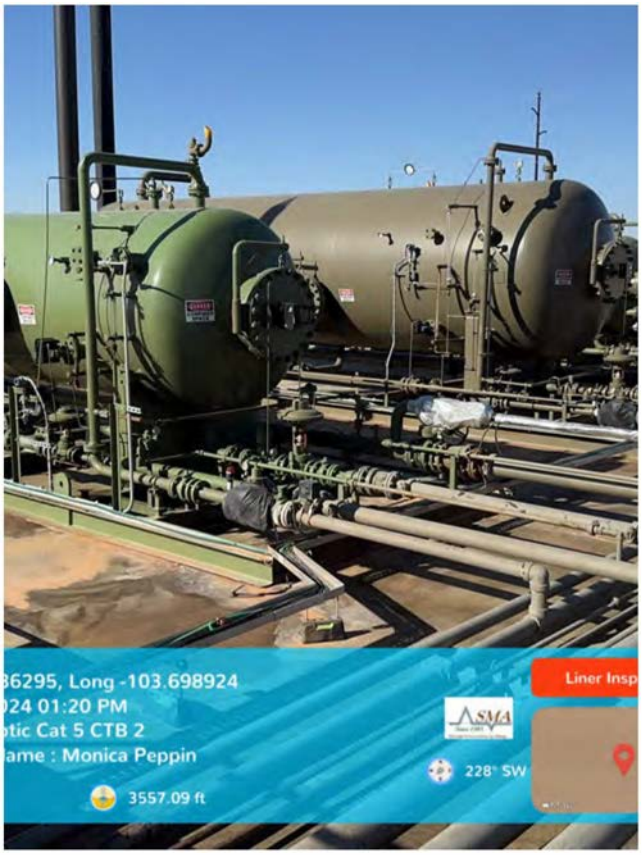


Photograph #21: Liner in mid area facing south towards tank containment

Photograph #22: View of liner around heater treaters and under piping



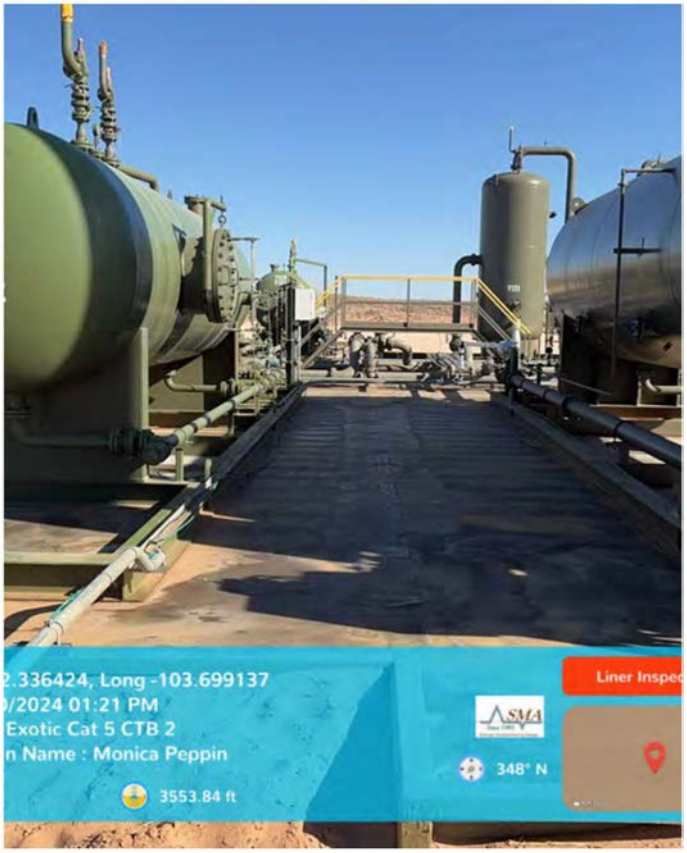
Photograph #23: Liner view in middle portion of containment on north end



Photograph #24: View of liner underneath piping

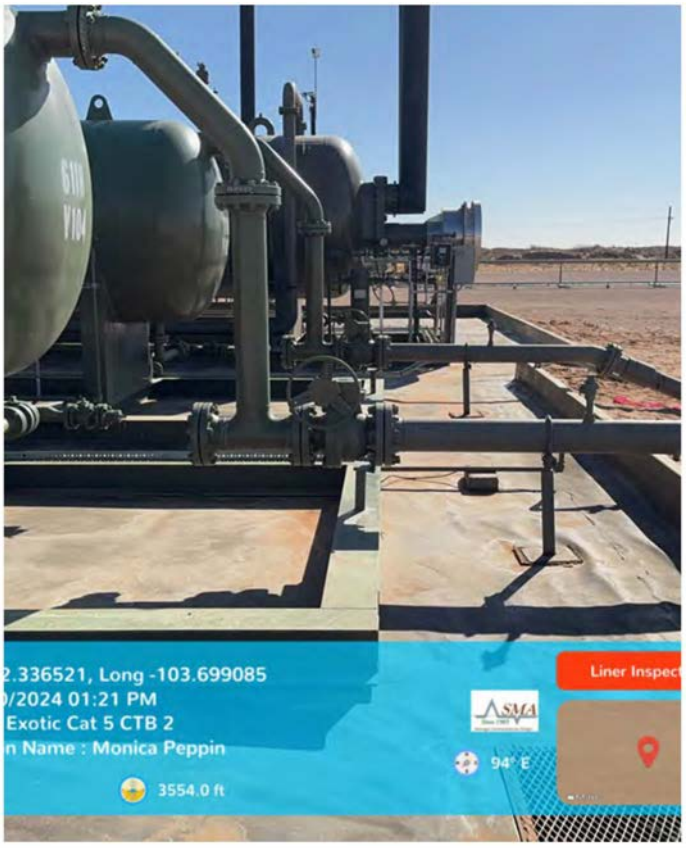
Photograph #25: Middle area of equipment

Photograph #26: West side of separators facing east

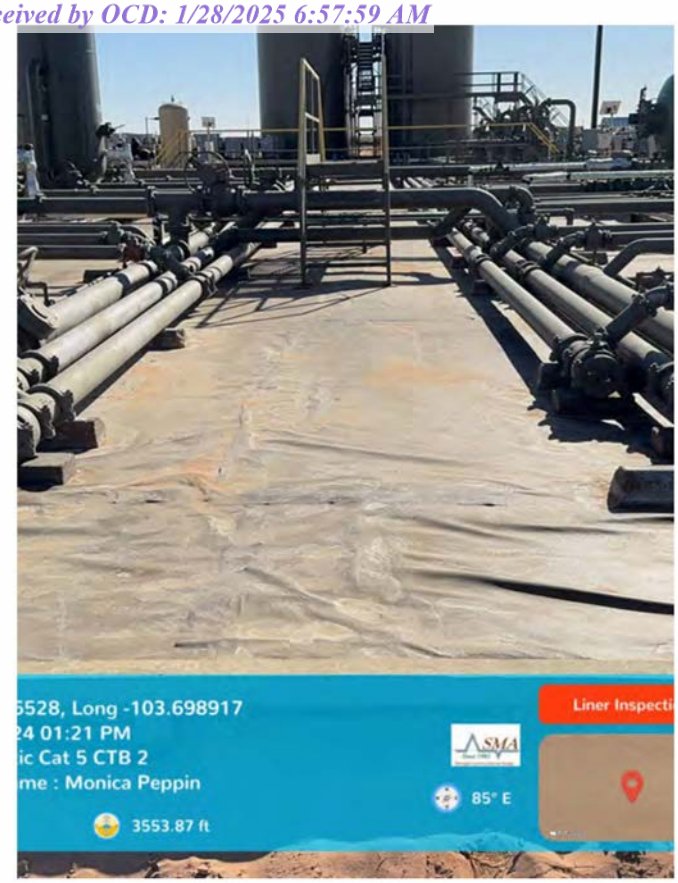


Photograph #27: Middle area between separators facing north

Photograph #28: north end of containment facing west

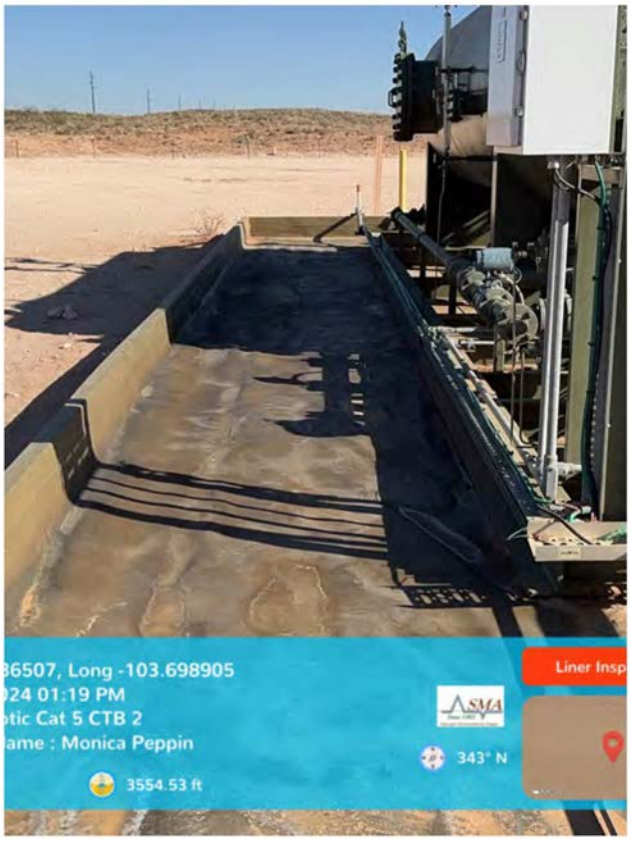


Photograph #29: Containment area on east side of separators

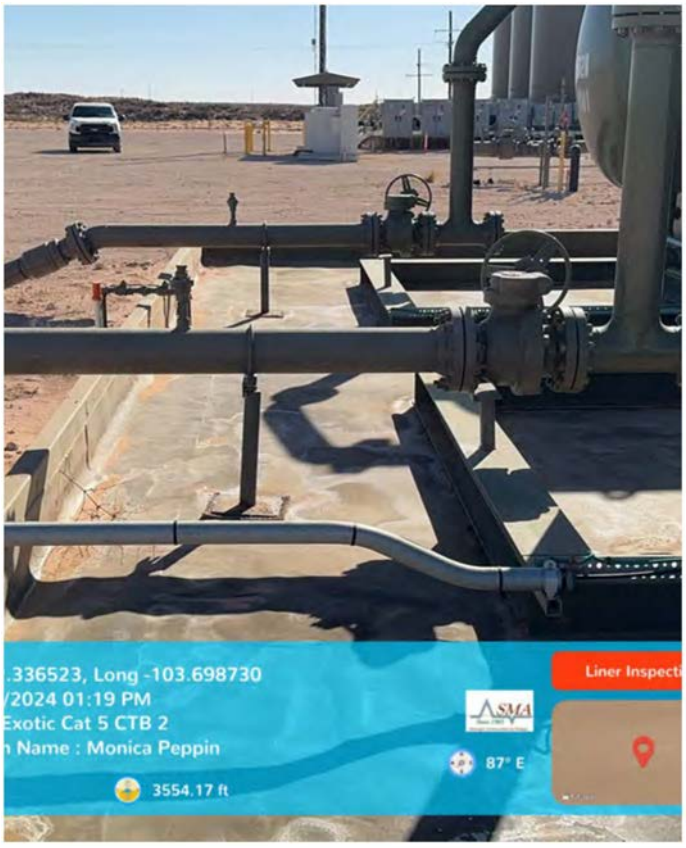


Photograph #30: Middle area where heater treaters are located

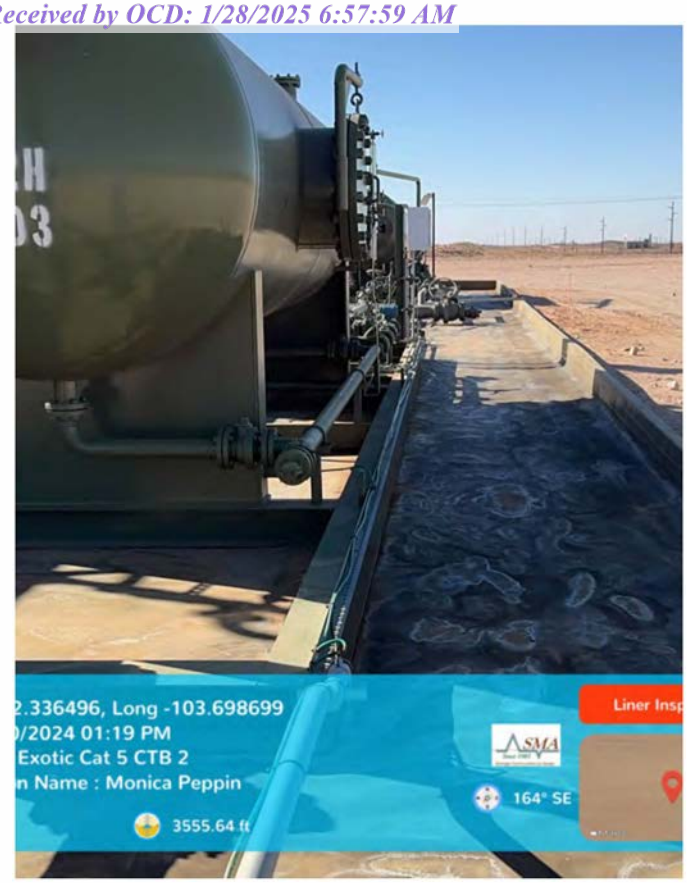
Photograph #31: Facing west on north end of containment near separators



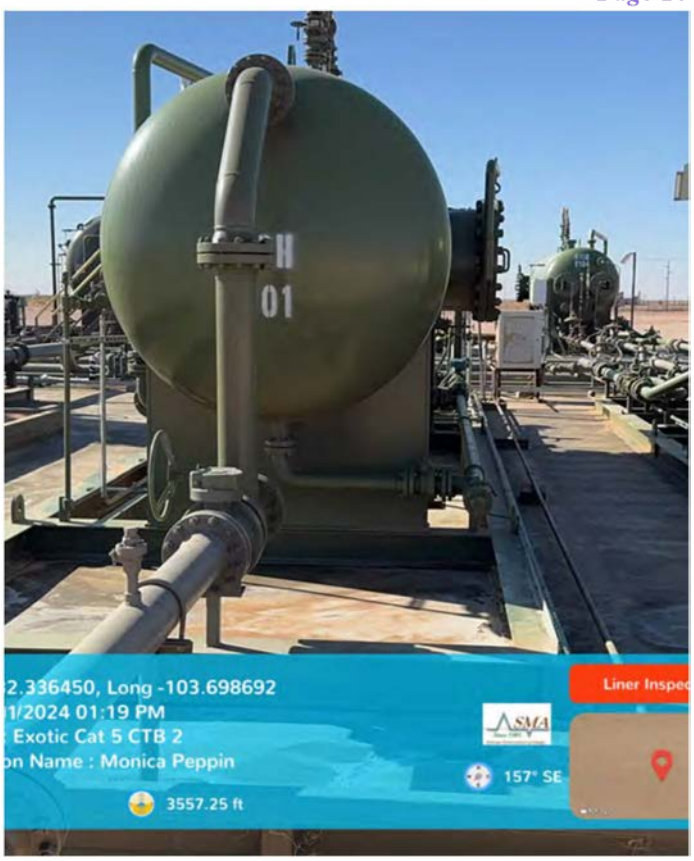
Photograph #32: north end of separators facing east



Photograph #33: east side of separators facing south

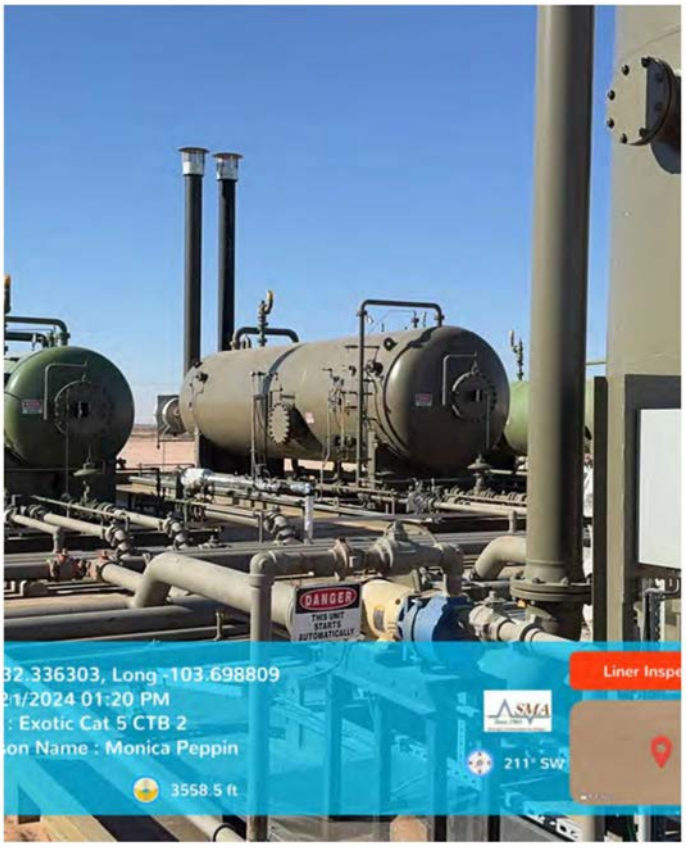


Photograph #34: Facing south from northwest corner



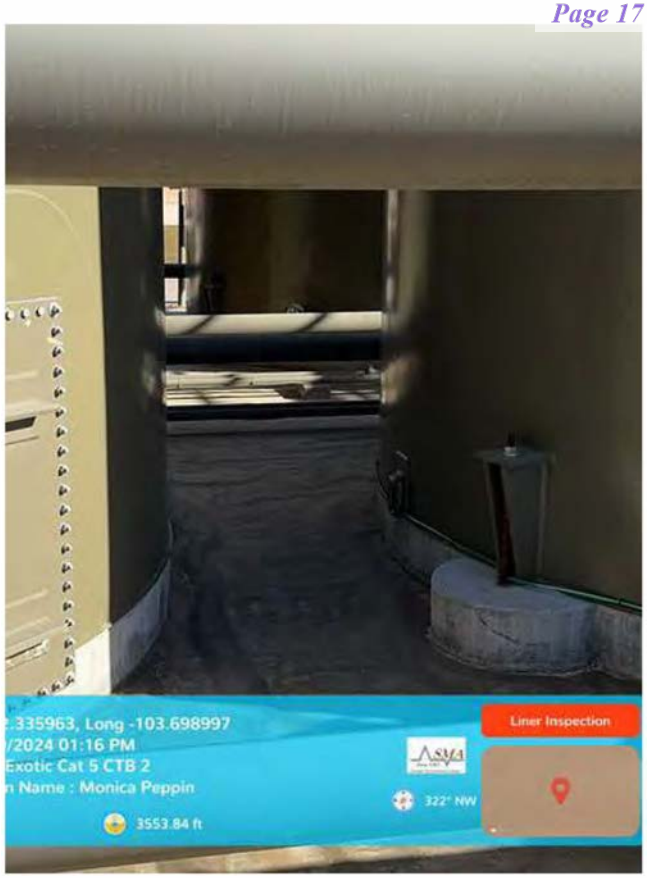
Photograph #35: Facing south from northeast side of containment

Photograph #36: north end of containment where separators and heaters are located



Photograph #37: Facing west/southwest from mid area on east side

Photograph #38: Facing south from northwest corner



Photograph #39: Facing south from northeast side of containment

Technician: Monica Peppin Date: 12/21/2024

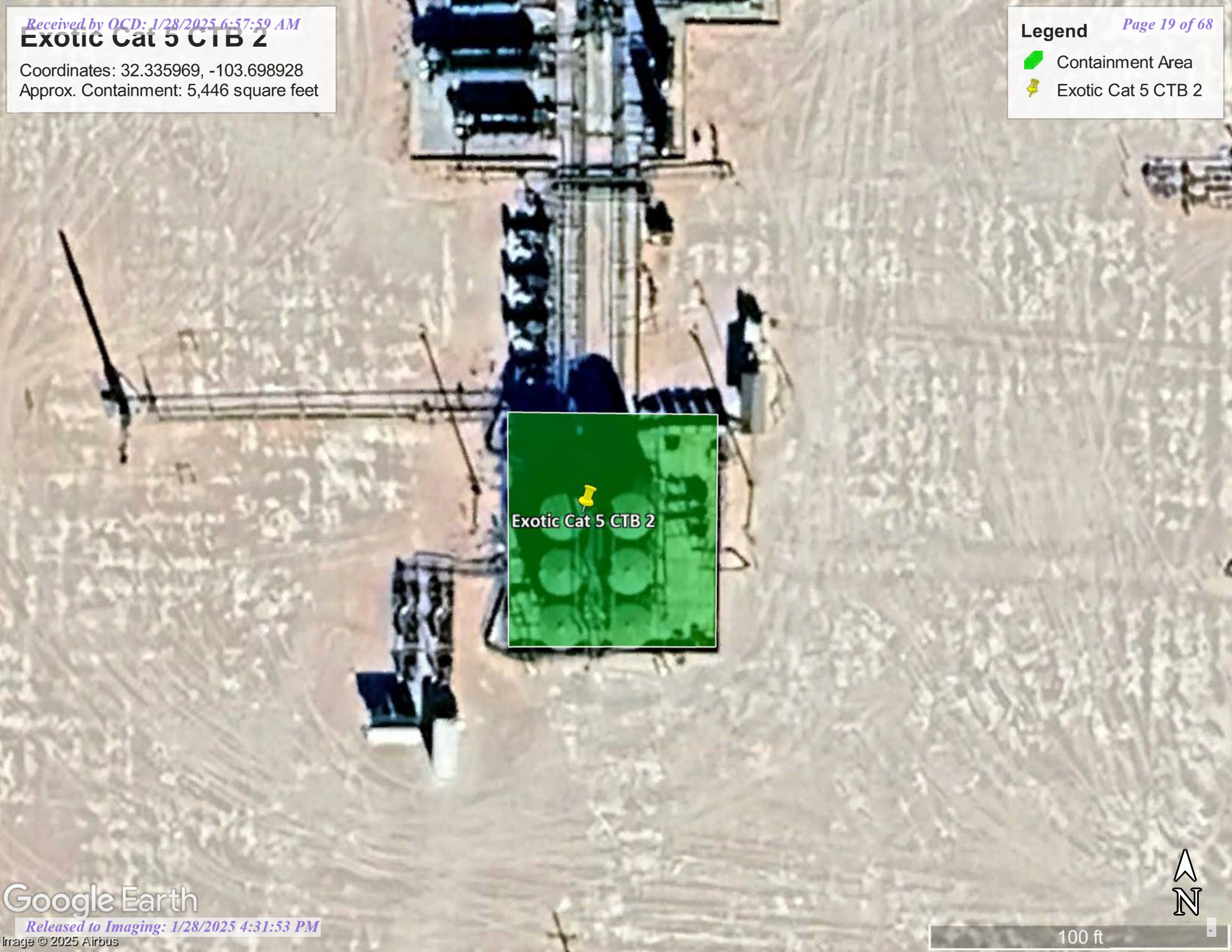
Signature: _____

ATTACHMENT 2: CLOSURE CRITERIA DETERMINATION RESEARCH

Received by OCD: 1/28/2025 6:57:59 AM

Exotic Cat 5 CTB 2

Coordinates: 32.335969, -103.698928
Approx. Containment: 5,446 square feet



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Exotic Cat 5 CTB 2 - 0.5-Mile Radius & Nearest DTGW Pod

1/16/2025, 7:53:47 AM

Override 1

GIS WATERS PODs

Plugged

OSE District Boundary

Distance to C-04862-Pod1- 0.81 miles
DTGW - 78 feet

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

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

File No. C-4862

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable boxes):

For fees, see State Engineer website: https://www.ose.nm.gov/

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.

*New Mexico Environment Department-Drinking Water Bureau (NMED-DWB) will be notified if a proposed exploratory well is used for public water supply.

☐ Check here if the borehole is anything other than vertifical (directional boring or angle boring) and include a schematic of your design.

☒ Temporary Request - Requested Start Date: 7/15/24 Requested End Date: 7/15/25

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

Note: if there is known artesian conditions, contamination or high mineral content at the drilling location, include the borehole log or a well log from an existing well at that location. If this information is not submitted, check box and attach form WD-09 to this form. ☐

1. APPLICANT(S)

Name: Cimarex Energy CO./Coterra	Name:
Contact or Agent: check here if Agent ☒ H&R Enterprises, LLC/James Hawley	Contact or Agent: check here if Agent ☐
Mailing Address: PO 3641	Mailing Address:
City: Hobbs	City:
State: NM Zip Code: 88241	State: Zip Code:
Phone: (575) 605-3471 ☐ Home ☐ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): jhawley@h-r-enterprises.com	E-mail (optional):

OSE DIT JUL 22 2024 AM 10:24

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 07/10/2024

File No.: C-4862	Tm. No.: 764584	Receipt No.: 247115
Trans Description (optional): EXPL		
Sub-Basin: CUB	PCW/LOG Due Date: 8-5-2025	

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), District V (Aztec) 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:	-Public Land Survey System (PLSS) (QQQSection, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name	Well Depth in feet	Casing Diameter (OD)
C-4862 Pod1	-103.685720	32.339516	NWNW S4 T23S R32E	105	2"

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:

3.2 miles East of CR 29

Well is on land owned by: BLM

Well Information: NOTE: If casings telescope or involve nested casing, please provide diagram. Attached? ☐ Yes ☒ No

Approximate depth to water (feet): Uknown	
Driller Name: James Hawley	Driller License Number: WD-1862

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

One 6" borehole will be advanced to determine the depth of groundwater at the Cimarex Energy CO./Coterra Red Tank 4 Fed #1 remediation site. The Borehole will be advanced until groundwater is reached or a maximum depth of 105' BGS, two inch casing will be installed into the borehole and left for 72 hours. After casing is gauged, it will be pulled and the borehole will be plugged pursuant to NMOSE guidelines. No pump will be installed.

OCC DIR JUL 22 2024 PM 1:07:25

FOR OSE INTERNAL USE Application for Permit, Form WR-07 Version 07/10/2024

File No.: C-4862	Trn No.: 764584

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:**
Is proposed well a future public water supply well? ☐ Yes ☒ NO If Yes, an application must be filed with NMED-DWB, concurrently. ☒ Include a description of any proposed pump test, if applicable. **Monitoring*:** ☒ Include the reason for the monitoring well, and, ☒ The duration of the planned monitoring.	☐ 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. ☐ 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.	☐ 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. **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.	☐ 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.

(* if exploration or monitoring drilling activity is required by NMED, then you must also submit the NMED Work Plan)

ACKNOWLEDGEMENT

I, We (name of applicant(s)), James Hawley

Print Name(s)

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

[signature]

Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

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

Witness my hand and seal this 5th day of August 20 24, for the State Engineer,

OSE DII JUL 22 2024 AM10:25

______________________, State Engineer

By: K.Parekh
Signature

Kashyap Parekh
Print

Title: Water Resources Manager I
Print

FOR OSE INTERNAL USE Application for Permit, Form WR-07 Version 07/10/2024

File No.: C-4862	Trn No.: 764584

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: C 04862 POD1

File Number: C 04862
Trn Number: 764584

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-C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before , unless a permit to use water from this well is acquired from the Office of the State Engineer.

17-G If artesian water is encountered, the well driller shall comply with all rules and regulations pertaining to the drilling and casing of artesian wells.

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.

Trn Desc: C 04862 POD1 File Number: C 04862
Trn Number: 764584

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

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.

LOG The Point of Diversion C 04862 POD1 must be completed and the Well Log filed on or before 08/05/2025.

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: 07/22/2024 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 05 day of Aug A.D., 2024

_____, State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04862 POD1 File Number: C 04862
Trn Number: 764584

State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 764584
File Nbr: C 04862

Aug. 05, 2024

JAMES HAWLEY
CIMAREX ENERGY C O COTERRA
P.O. BOX 3641
HOBBS, NM 88241

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.

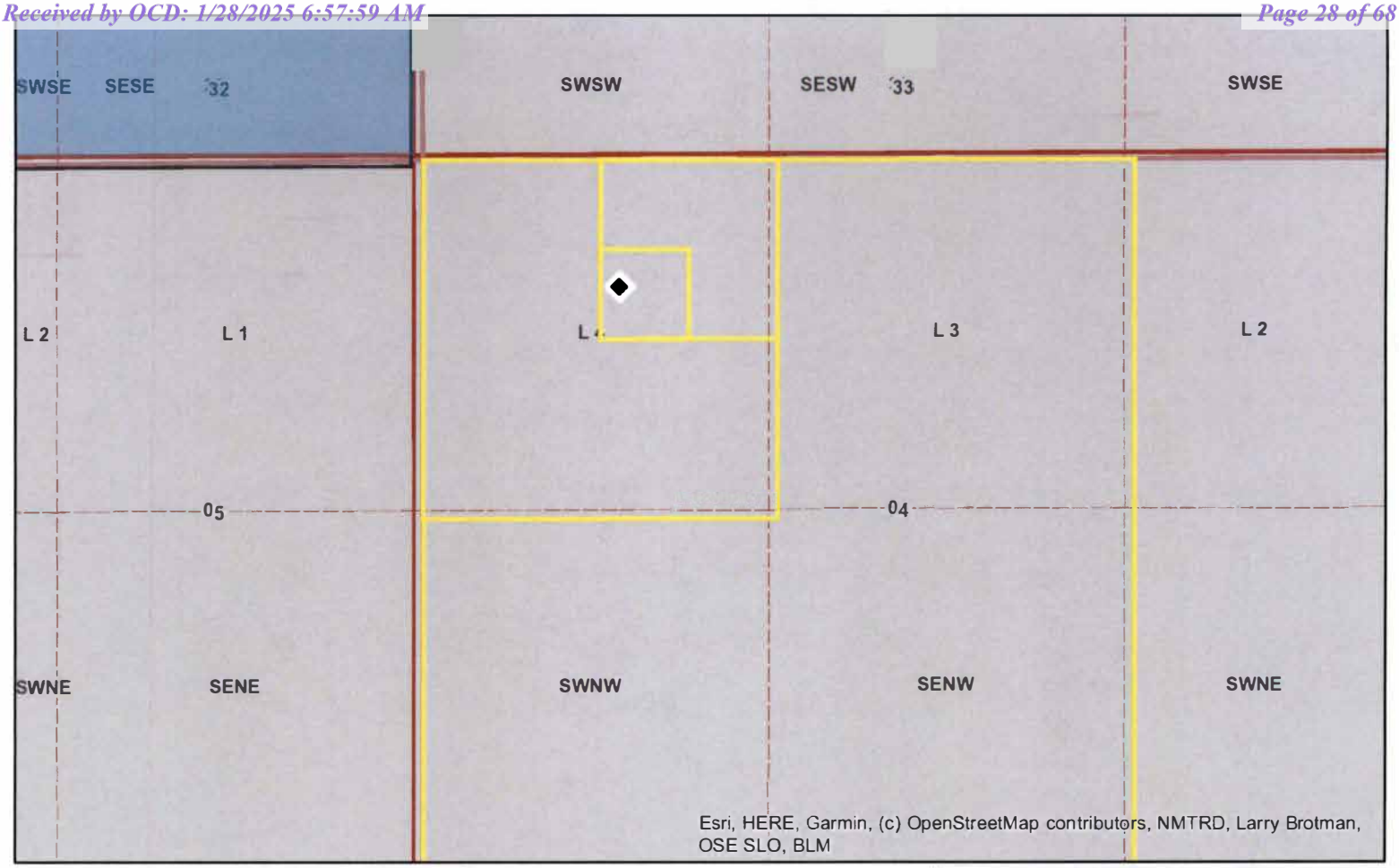
Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting 623686.689

Northing 3578827.839

State Plane - NAD 83 (f) - Zone E

Easting 741351.304

Northing 487850.681

Degrees Minutes Seconds

Latitude 32 : 20 : 22.257600

Longitude -103 : 41 : 8.592000

Location pulled from Coordinate Search

NEW MEXICO OFFICE OF THE STATE ENGINEER

1:9,028

N

8/5/2024

Office of the State Engineer
nm
Interstate Stream Commission

Reasonable efforts have been made by the New Mexico Office of the State Engineer (OSE) to verify that these maps accurately interprets the source data used in their preparation, however, a degree of error is inherent in all maps, and these maps may contain omissions and errors in scale, resolution, rectification, positional accuracy, development methodology, interpretation of source data, and other circumstances.
These maps are distributed "as is" without warranty of any kind.

Spatial Information

Land Grant: Not in Land Grant

County: Lea

Groundwater Basin: Carlsbad

Abstract Area:
Carlsbad 72-12-1

Carlsbad Underground Basin

Regulation Area:

Carlsbad/Capitan/Lea Closure

PLSS Description

SW NE NW NW Qtr of Sec 4 of 23S 32E

Derived from Projected PLSS- 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:

Calculated PLSS

Coord Search Location

Water Right Regulations

Closure Area

Artesian Planning Area

OSE District Boundary

New Mexico State Trust Lands

Both Estates

Bernalillo County Parcels 2023

Catron County Parcels 2023

Chaves County Parcels 2023

Cibola County Parcels 2023

Colfax County Parcels 2023

Curry County Parcels 2023

De Baca County Parcels 2023

Doña Ana County Parcels 2023

Eddy County Parcels 2023

Grant County Parcels 2023

Guadalupe County Parcels 2023

Harding County Parcels 2023

Hidalgo County Parcel 2023

Lea County Parcels 2023

Lincoln County Parcels 2023

Los Alamos County Parcels 2023

Luna County Parcels 2023

McKinley County Parcels 2023

Mora County Parcels 2023

Otero County Parcels 2023

Quay County Parcels 2023

Rio Arriba County Parcels 2023

Roosevelt County Parcels 2023

Sandoval County Parcels 2023

San Juan County Parcels 2023

San Miguel County Parcels 2023

Santa Fe County Parcels 2023

Sierra County Parcels 2023

Socorro County Parcels 2023

Taos County Parcels 2023

Torrance County Parcels 2023

Union County Parcels 2023

Valencia County Parcels 2023

Sections

U.S. Department of the Int
BUREAU OF LAND MANAGEMENT

Sundry Print Report

07/17/2024

Well Name: RED TANK 4 FEDERAL	**Well Location:** T23S / R32E / SEC 4 / NWNW / 32.3395163 / -103.6857202	**County or Parish/State:** LEA / NM
Well Number: 1	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM126065	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 3002540534	**Operator:** CIMAREX ENERGY COMPANY	

Notice of Intent

Sundry ID: 2798382

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 07/01/2024

Time Sundry Submitted: 01:13

Date proposed operation will begin: 07/08/2024

Procedure Description: The Red Tank 4 Federal 1 at D-04-23S-32E, Lea County, NM, GPS coordinates 32.33921, -103.68561, and the immediate area requires advanced soil boring to take place at approximately (105') feet below ground surface to remediate release (NMOCD Spill incident Number nAPP2412576675). The boring will be secured and left open for (72) hours at which time (Cimarex Energy Co. of Colorado) 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 1/11 neat cement less than 6.0 gallons of water per 94lb sack. If no water is encountered, then the soil boring will be plugged.

Surface Disturbance

Is any additional surface disturbance proposed?: No

CONFIDENTIAL

OCD DIT JUL 22 2024 AM 10:25

Well Name: RED TANK ERAL

Well Location: T23S / R32E / SEC 4 / NWNW / 32.3395163 / -103.6857202

nty or Parish/State: LEA /

Well Number: 1

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM126065

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002540534

Operator: CIMAREX ENERGY COMPANY

Conditions of Approval

Additional

20240715_RED_TANK_4_FEDERAL_1___St_Engineer_Office_drilling_approval_20240716091236.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: LACI LUIG

Signed on: JUL 01, 2024 01:12 PM

Name: CIMAREX ENERGY COMPANY

Title: EHS Specialist

Street Address: 6001 DEAUVILLE BLVD SUITE 300N

City: MIDLAND **State:** TX

Phone: (432) 208-3035

Email address: LACI.LUIG@COTERRA.COM

Field

Representative Name: Laci Luig

Street Address: 6001 Deauville Blvd.

City: Midland **State:** TX **Zip:** 79706

Phone: (432)208-3035

Email address: laci.luig@coterra.com

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 07/16/2024

Signature: Chris Walls

OCD Hobbs JUL 22 2024 #10025

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)

July 15, 2024

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

Re: RED TANK 4 FEDERAL 1
Sec 4, TS 23S, RE 32E
Lea County, New Mexico
32.33921, -103.68561

To Whom It May Concern:

The above well location and the immediate area mentioned above requires advanced soil boring to take place at approximately 105 feet below ground surface. The boring will be secured and left open for 72 hours at which time CIMAREX ENERGY 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 1/11 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. BLM DFI JUL 22 2024 AM 10:25

Sincerely,

CRISHA MORGAN Digitally signed by CRISHA MORGAN
Date: 2024.07.15 10:21:57 -06'00'

Crisha A. Morgan
Certified Environmental Protection Specialist

Point of Diversion Summary

quarters are 1=NW 2=NE 3=SW 4=SE
quarters are smallest to largest NAD83 UTM in meters

Well Tag	POD Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
NA	C 04862 POD1	NE	NW	NW	04	23S	32E	623697.0	3578798.5	

*** UTM location was derived from PLSS - see Help**

Driller License:	1862	**Driller Company:**	H&R ENTERPRISES, LLC		
Driller Name:	HAWLEY, JAMES CODYELALL OFF				
Drill Start Date:	2024-08-14	**Drill Finish Date:**	2024-08-14	**Plug Date:**	2024-08-22
Log File Date:	2024-08-30	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	105	**Depth Water:**	78

Water Bearing Stratifications:

Top	Bottom	Description
40	85	Shale/Mudstone/Siltstone

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

1/16/25 8:02 AM MST **Point of Diversion Summary**

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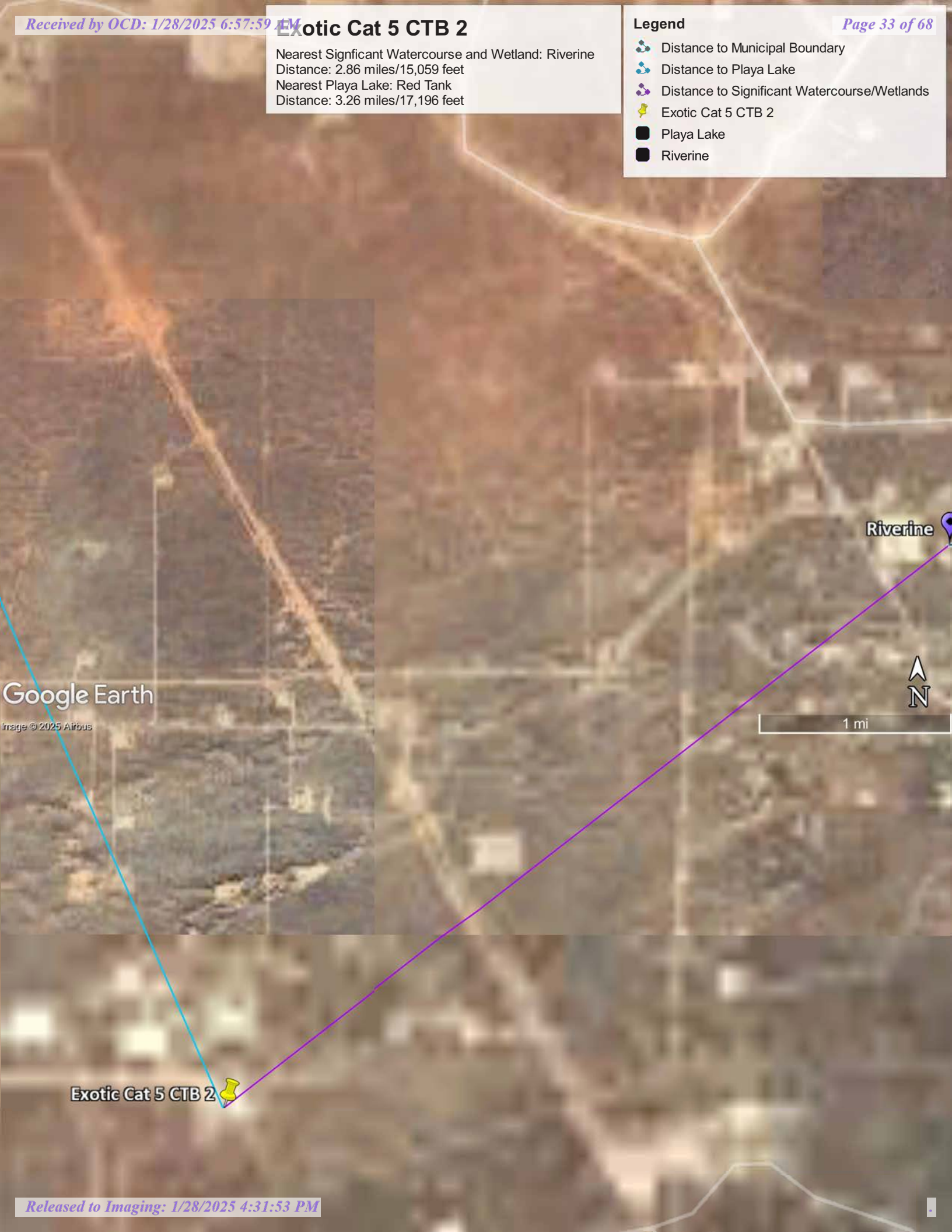
Exotic Cat 5 CTB 2

Nearest Signficant Watercourse and Wetland: Riverine
Distance: 2.86 miles/15,059 feet
Nearest Playa Lake: Red Tank
Distance: 3.26 miles/17,196 feet

Legend

- Distance to Municipal Boundary
- Distance to Playa Lake
- Distance to Significant Watercourse/Wetlands
- Exotic Cat 5 CTB 2
- Playa Lake
- Riverine



Exotic Cat 5 CTB 2

Nearest Residence: 6.57 miles (34,663 feet)

Legend

- Distance to Residence
- Exotic Cat 5 CTB 2

Residence

Exotic Cat 5 CTB 2

128

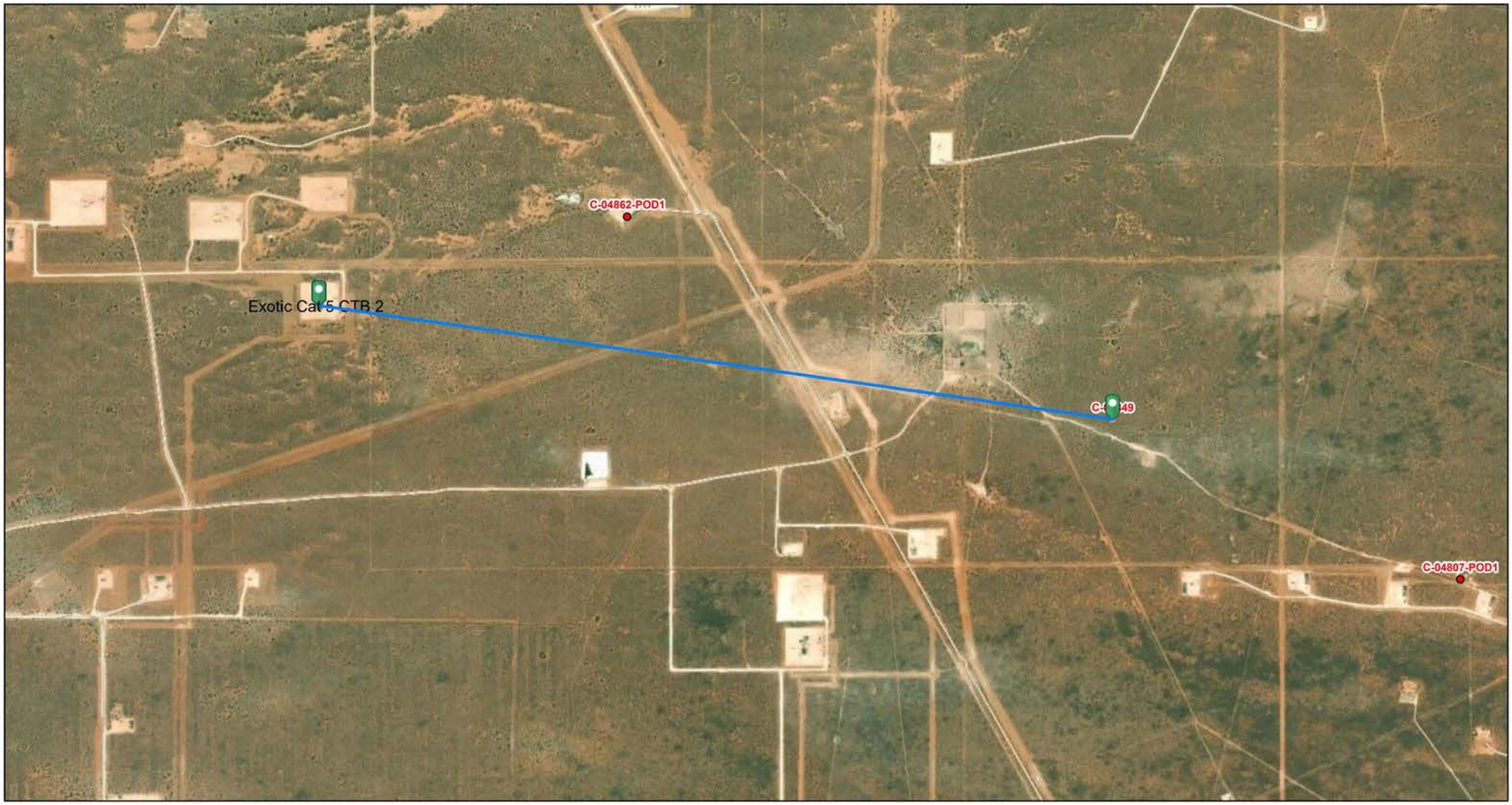
Google Earth

Image © 2025 Airbus

N

2 mi

Exotic Cat 5 CTB 2 - Pod C-02349 Stock Watering



1/16/2025, 8:40:29 AM

Override 1

GIS WATERS PODs

Plugged

OSE District Boundary

Distance to Stock Watering Pod - 2.02 miles/33,943 feet

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

Online web user

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

Water Right Summary

get image list

WR File Number:	C 02349	**Subbasin:**	CUB	**Cross Reference:**
Primary Purpose:	STK 72-12-1 LIVESTOCK WATERING			
Primary Status:	DCL Declaration			
Total Acres:	0.000	**Subfile:**		**Header:**
Total Diversion:	3.000	**Cause/Case:**		
Owner:	CHARLES F. JAMES	**Owner Class:**	Owner	

Documents on File

(acr

Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Divers
	154820	DCL	1998-09-09	DCL	PRC	C 02349	T	0.000	3.000

Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
C 02349	NA		SE	NE	SW	03	23S	32E	625677.9	3578003.4		

*** UTM location was derived from PLSS - see Help**

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

1/16/25 8:36 AM MST **Water Rights Summary**

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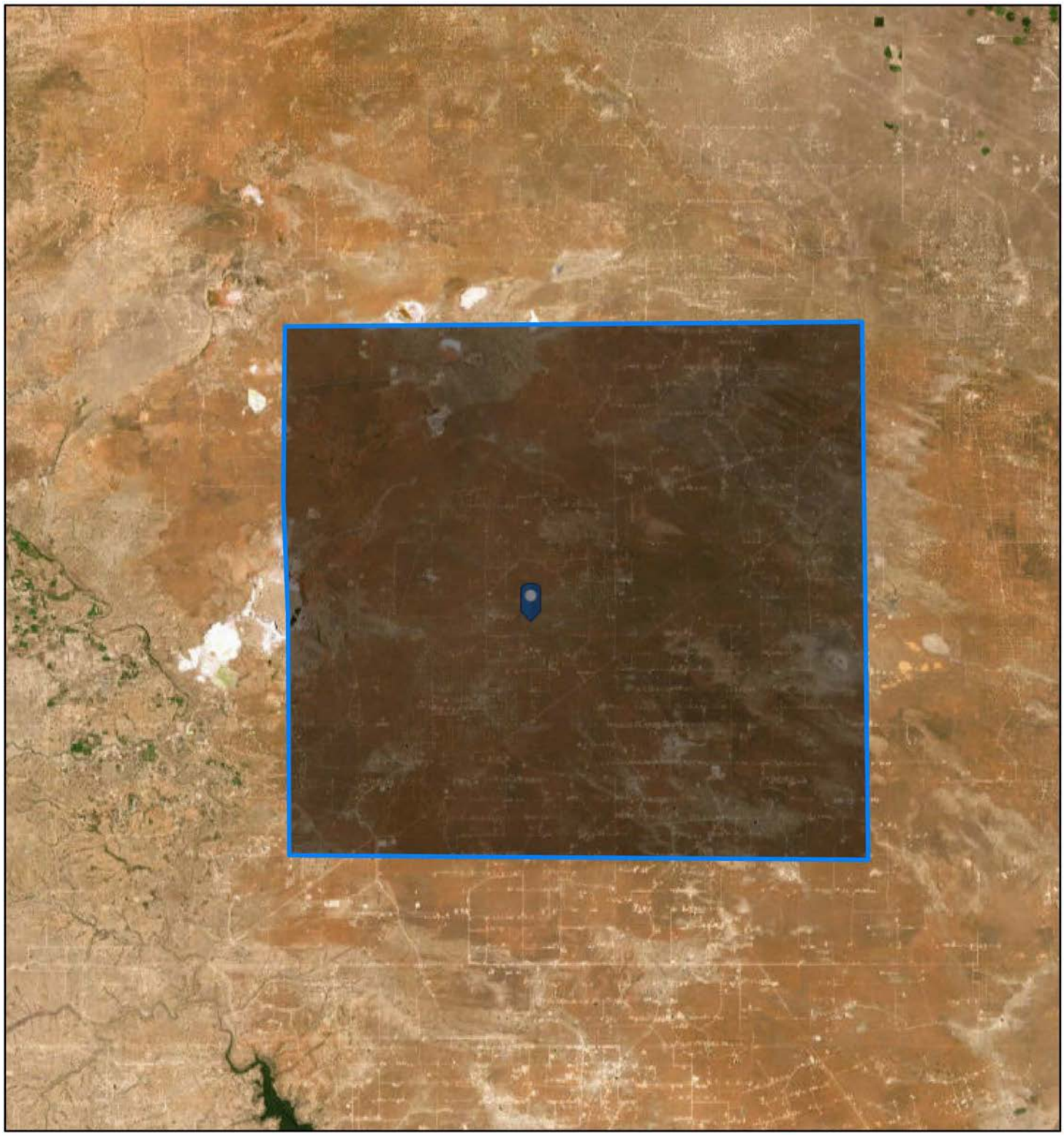
Exotic Cat 5 CTB 2 - Subsurface Mines with 922 Sq Mile Buffer



1/17/2025, 8:26:22 PM

1:577,791

0 4.25 8.5 17 mi

0 5 10 20 km

Earthstar Geographics, NM Coal Mine Reclamation Program, NM EMNRD

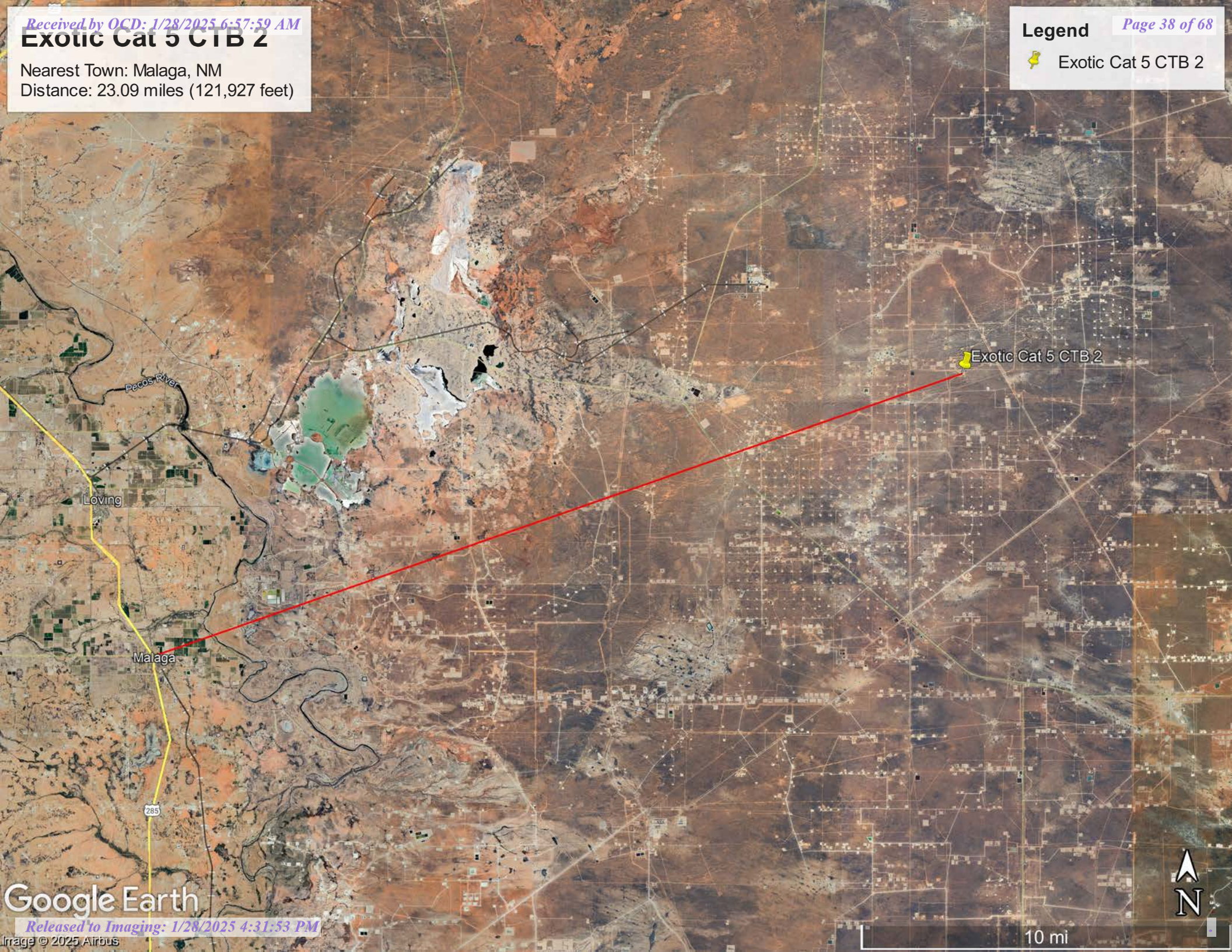
EMNRD MMD GIS Coordinator

New Mexico Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappbuilder/index.html?id=7ebfa3c432db42978d66c99a9cc8311a)

Received by OCD: 1/28/2025 6:57:59 AM

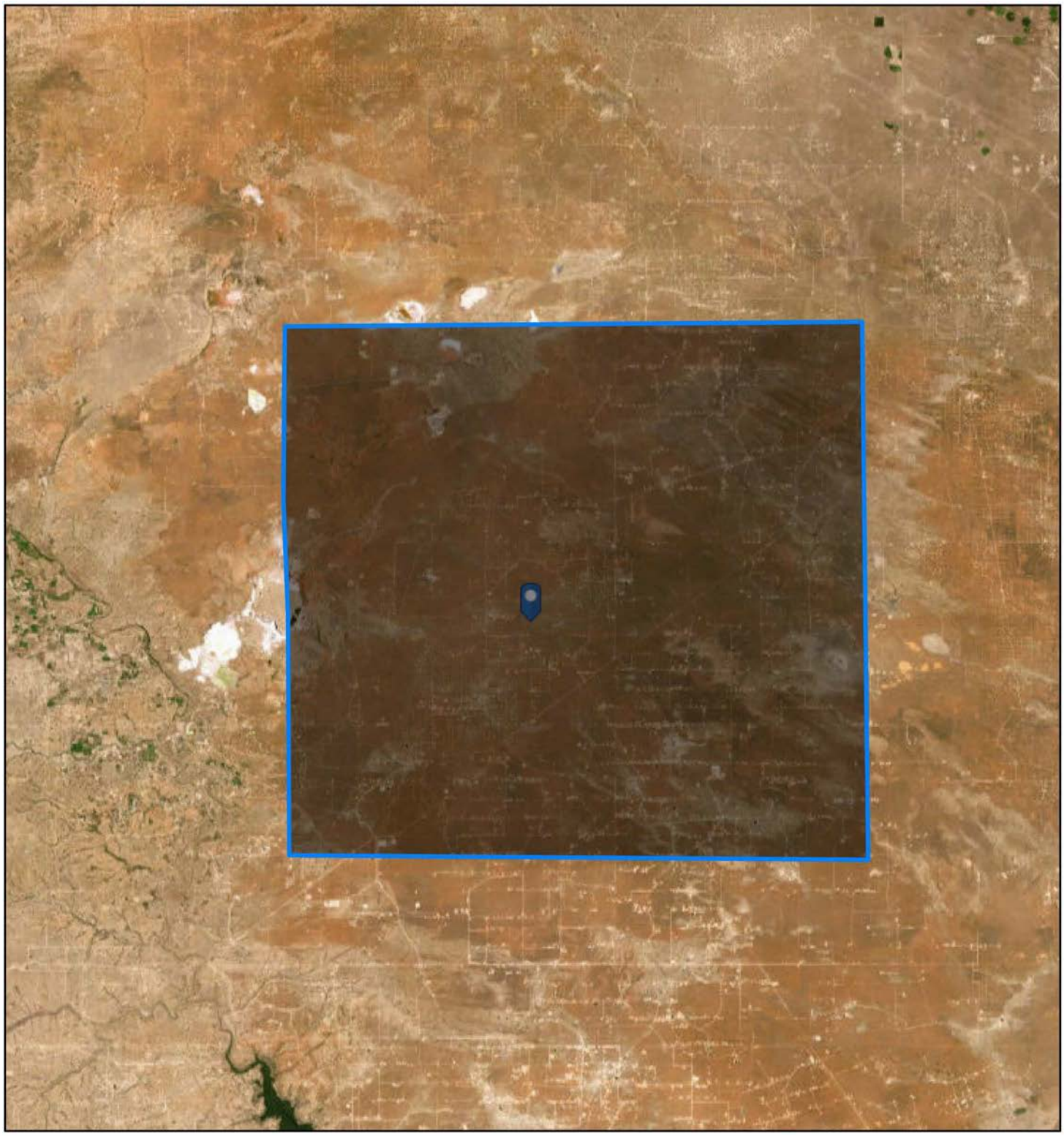
Exotic Cat 5 CTB 2

Nearest Town: Malaga, NM
Distance: 23.09 miles (121,927 feet)



Released to Imaging: 1/28/2025 4:31:53 PM

Exotic Cat 5 CTB 2 - Subsurface Mines with 922 Sq Mile Buffer



1/17/2025, 8:26:22 PM

1:577,791

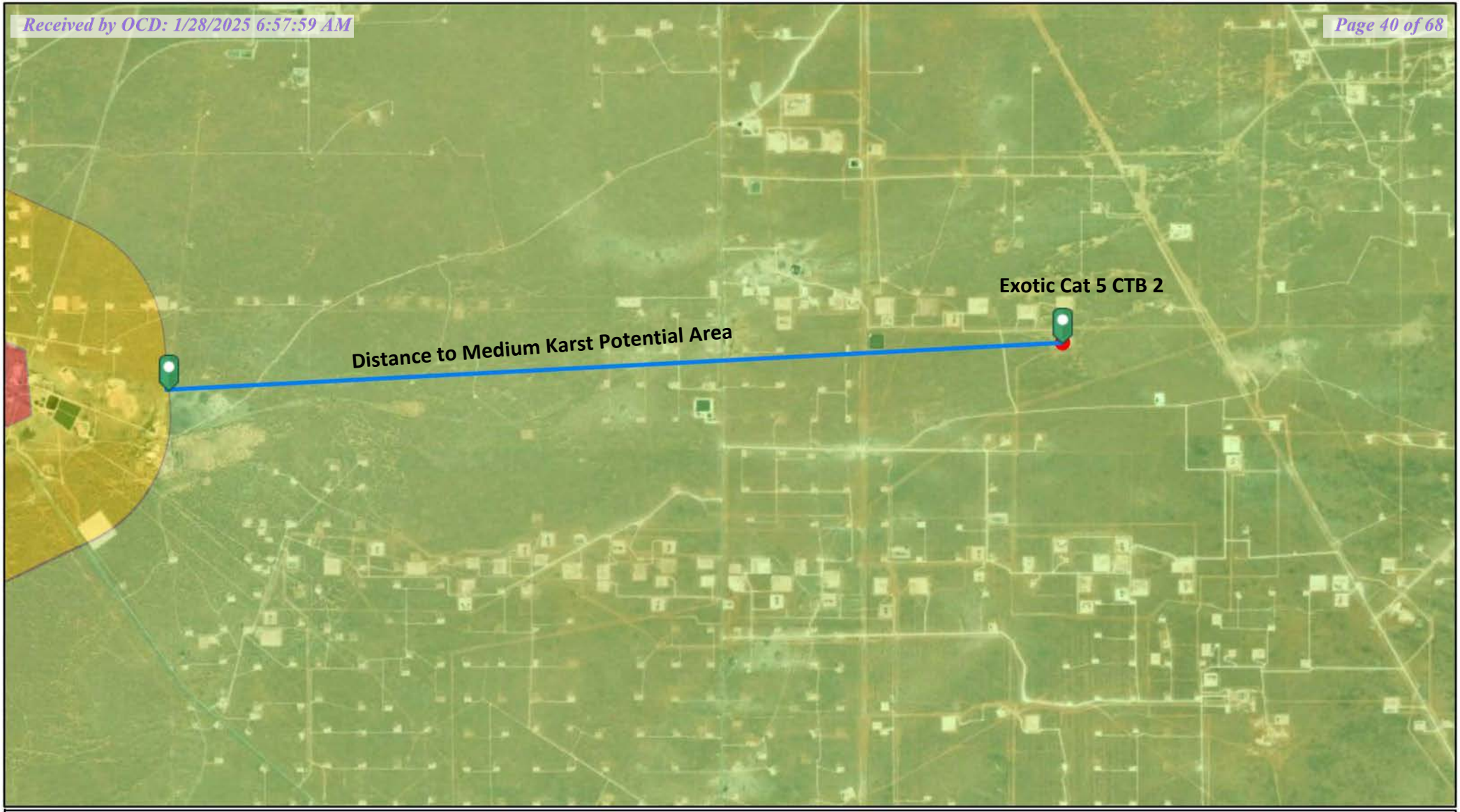
0 4.25 8.5 17 mi

0 5 10 20 km

Earthstar Geographics, NM Coal Mine Reclamation Program, NM EMNRD

EMNRD MMD GIS Coordinator

New Mexico Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappbuilder/index.html?id=7ebfa3c432db42978d66c99a9cc8311a)



Exotic Cat 5 CTB 2 Karst Potential & Distance to Medium Karst Area

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.

Released to Imaging: 1/28/2025 4:31:53 PM

Map Created: 1/16/2025

User drawn points

Karst_Potential_NM

Potential

High

Medium

Low

Critical_Karst_Zone_NM

Distance to Medium Karst Potential Area - 6.43 miles (33,943 feet)

Received by OCD: 1/28/2025 6:57:59 AM

National Flood Hazard Layer FIRMette

FEMA

103°42'15"W 32°20'25"N

103°41'37"W 32°19'54"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 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 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 1/16/2025 at 4:54 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.

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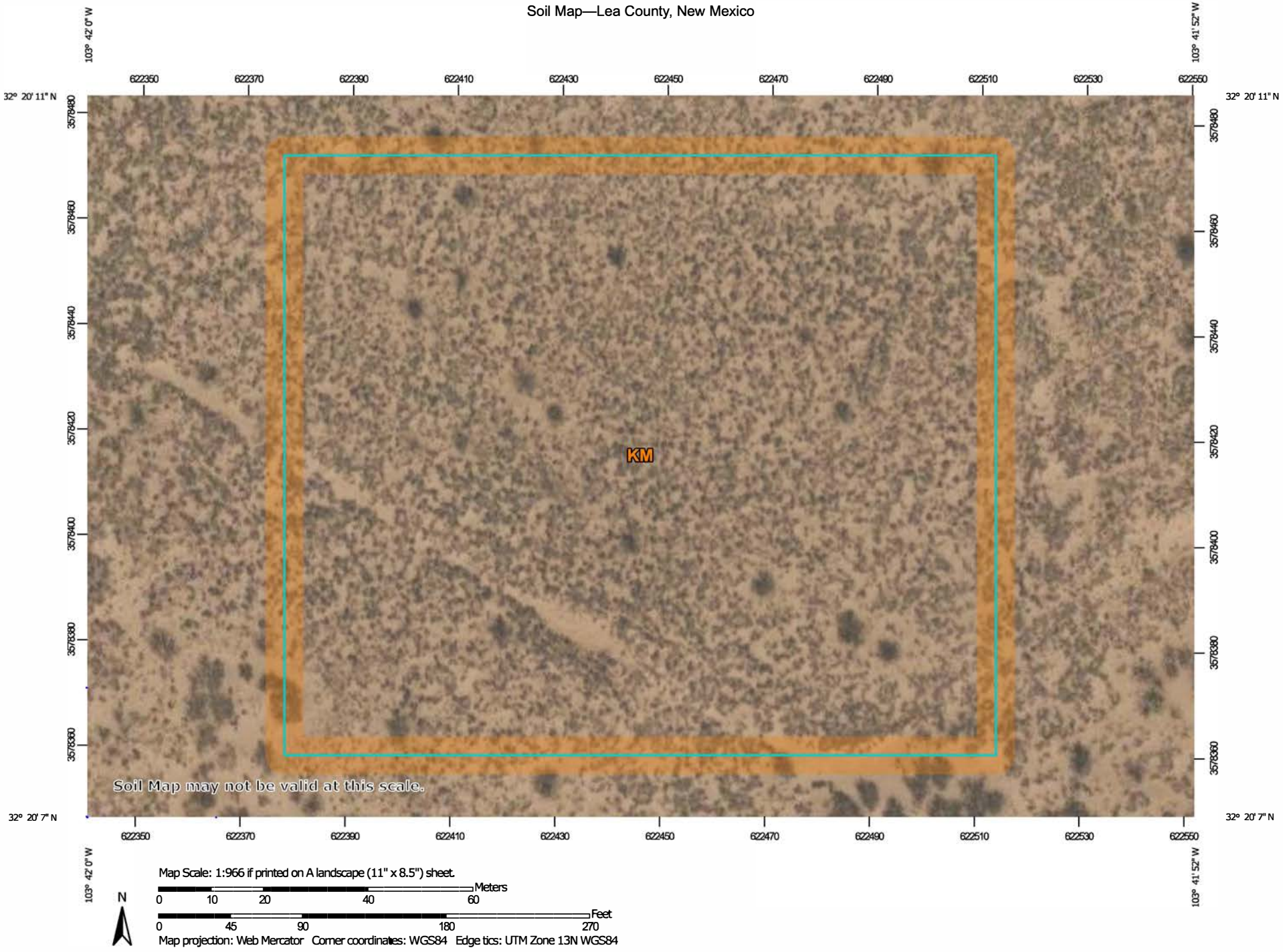
Exotic Cat 5 CTB 2

Soil Map—Lea County, New Mexico



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Received by OCD: 1/28/2025 6:57:59 AM

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: 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.

Released to Imaging: 1/28/2025 4:31:53 PM

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	3.8	100.0%
Totals for Area of Interest		**3.8**	**100.0%**

Lea County, New Mexico

KM—Kermit soils and Dune land, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 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

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

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 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 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BC022NM - Sandhills
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Palomas

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Pyote

Percent of map unit: 3 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent
Ecological site: R070BD003NM - Loamy Sand

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 R070BC022NM
Sandhills

Accessed: 01/17/2025

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on plains. The soils are calcareous sandy eolian deposits derived from sedimentary rock. Land form of sand dunes or hillslopes. Slopes average 5 to 35 percent. Slopes are complex as the steeper slopes are shorter in length while the more gentle slopes are longer in length. Direction of slopes vary and is usually not significant. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Hill (3) Dune
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	5–35%
Aspect	Aspect is not a significant factor

Climatic features

The climate of the area is “semi-arid continental”. The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms. Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer. The average frost-free season is 180 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November. Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Because of the texture of this soil, most rainfall is effective. Strong winds blow from the west and southwest from January through June which accelerates soil drying at a time 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)	220 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by wetlands or streams.

Soil features

The soils of this site are deep and very deep. Surface textures are fine sand or loamy fine sand. Subsoilis a fine sand or loamy fine sand to a depth of 60 inches or more. These soils have less than 10 percent clay content. These soils are subject to severe wind erosion if vegetative cover is not adequate.

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

Characteristic Soils Are:
Kermit
Aguena

Table 4. Representative soil features

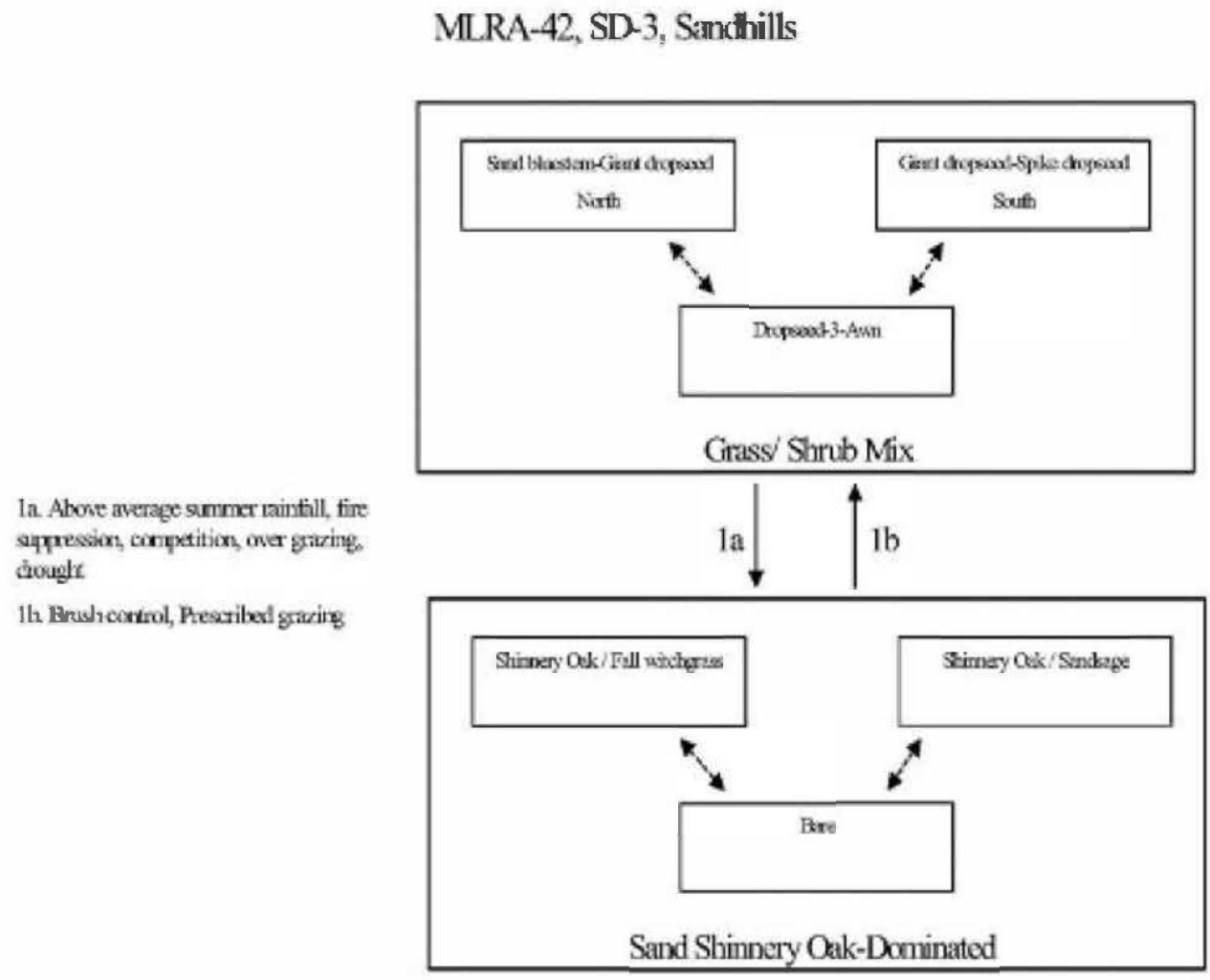
Surface texture	(1) Fine sand (2) Loamy fine sand (3) Loamy sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Rapid to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–9 in
Calcium carbonate equivalent (0-40in)	0–7%
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0–1
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–5%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview:
The Sandhills site occurs adjacent to or intergrades with the Deep Sand site. The Sandhills site is differentiated from deep sand sites by a steeper average slope, and an increased depth to a soil texture change. Sandhills slopes are usually greater than eight percent, and the soil profile is a fine sand or loamy fine sand to a depth greater than 60 inches. Deep Sand sites have slopes less than eight percent and a textural change can occur at less than 60 inches. The historic plant community of the Sandhills site is a mixture of grasses, shrubs and forbs, with tall grasses dominating in aspect. During years of abundant spring moisture, tall growing forbs occasionally reach aspect dominance. Sand bluestem and giant dropseed are the dominant grasses, with Havard panicum and dropseeds as sub-dominants. Sand shinnery oak and soapweed yucca are the dominant shrubs. Drought favors shinnery by impacting grasses more severly. Shinnery oak's ability to store water and carbohydrates, and its strong negetive leaf water potential enable it to out compete grasses during drought conditions. Changes in historical fire regimes, competition by shrubs, and overgrazing may contribute to this site becoming dominated by sand shinnery oak.

State and transition model

Plant Communities and Transitional Pathways (diagram)



State 1
Grass/Shrub Mix

Community 1.1
Grass/Shrub Mix

Grass/Shrub Mix: The historic plant community in the northern part of the resource area (SD-3) is dominated by sand bluestem and giant dropseed, with Havard panicum as a sub-dominant. Primary grass dominance may gradually shift moving south across the resource area to a community dominated by giant dropseed and spike dropseed, with mesa dropseed as the sub-dominant grass species. Throughout the resource area sand shinnery oak and soapweed yucca are the dominant shrubs with sand sagebrush as the sub-dominant. As retrogression within this state occurs, plants such as sand bluestem, giant dropseed, Havard panicum, plains bristlegrass, sand paspalum, and fourwing saltbush decrease. This results in an increase in spike dropseed, sand dropseed, mesa dropseed, threeawns sand shinnery oak, and sand sagebrush. Continued loss of grass cover may result in a transition to a sand shinnery oak dominated state. Diagnosis: Sand bluestem or giant dropseed are dominant or present in substantial amounts. Spike dropseed, sand dropseed or mesa dropseed may be dominant in some instances. Grass cover is variable, shifting sands and large irregular dunes produce considerable variation in the spatial distribution and composition of the plant community. Grass cover is not continuous, but is fairly uniform across the more stable areas. Large natural bare areas or blowouts are a common feature on the less stable portions of the Sandhills site.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	360	585	810
Shrub/Vine	120	195	270
Forb	120	195	270
Total	**600**	**975**	**1350**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	10-15%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	20-25%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	45-60%

Figure 5. Plant community growth curve (percent production by month). NM2822, R042XC022NM Sandhills HCPC. R042XC022NM Sandhills HCPC warm season plant community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	1	3	4	10	10	25	30	12	5	0	0

State 2
Sand Shinnery Oak-Dominated

Community 2.1
Sand Shinnery Oak-Dominated

Additional States: Sand Shinnery Oak -Dominated: Sand shinnery oak is the dominant species and in dense stands may reduce forage production by as much as 90 percent.1 It often forms a mosaic of dense thickets interspersed with occasional motts of taller oaks, large areas of bare ground, and concentrations of sand sagebrush. Sand shinnery oak is well suited to deep sandy soils. The height and cover of oak decreases as sand depth decreases or clay content increases. The aggressive nature of fall witchgrass and continued loss of more palatable grasses and threeawn species may result in a sand shinnery oak-fall witchgrass community. Burning may result in a community with very little grass or sand shinnery oak (bare). Sand shinnery oak usually recovers due to its ability to sprout aggressively following fire. Diagnosis: Sand shinnery oak is the dominant species. Grass cover is sparse and patchy. Shrub cover is high. Blowouts and bare areas are common, however, high shrub cover mediates erosion. Transition to Sand Shinnery Oak Dominated (1a): Climate may play a role in facilitating the spread sand shinnery oak. It is best adapted to those areas that receive and average of 16 inches of annual rainfall; it may therefore gain a competitive advantage during cycles of above average precipitation. Sand shinnery oak spreads mainly by elongation of rhizomes, but in some instances will reproduce by seed. The establishment and survival of seedlings is limited to those years with abundant rainfall during the months of July and August. If fire historically played a part in suppressing the density and distribution of shrubs in desert grasslands, then fire suppression may facilitate a shift to shrub dominance.2 Competition for resources between grasses and shrubs may be a factor in increased densities of sand shinnery oak. 1 Sand shinnery oak has an extensive system of underground roots and stems that can uptake and store water for growth during drier periods, allowing it to increase, at times when grasses decrease. Evidence of competitive suppression of grasses is indicated by increases in herbaceous vegetation following chemical control of sand shinnery oak.1 However, this increase may in part be due to a flush of nutrients made available from the decomposing biomass of woody roots and stems. Loss of grass cover due to overgrazing or drought may give a competitive advantage to sand shinnery oak. Key indicators of approach to transition: * A decrease in the tall grass species and the associated increase in threeawns may be indicative of the initial stage of transition to a shrub-dominated state. * Increased cover of sand shinnery oak. Transition back to Grass/Shrub Mix (1b) Chemical brush control is an effective means of controlling sand shinnery oak and sand sagebrush. Where large areas of chemical control are planned, increased erosion and the effect on loss of wildlife habitat should be considered. Prescribed grazing will help ensure an adequate deferment period to allow grass recovery and subsequent proper forage utilization. There have been studies that suggest long term browsing by goats can reduce sand shinnery oak, altering production in favor of grasses.3

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				195–293	
	sand bluestem	ANHA	*Andropogon hallii*	195–293	–
	Havard's panicgrass	PAHA2	*Panicum havardii*	195–293	–
	giant dropseed	SPGI	*Sporobolus giganteus*	195–293	–
2				146–195	
	spike dropseed	SPCO4	*Sporobolus contractus*	146–195	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	146–195	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	146–195	–
3				49–98	
	thin paspalum	PASE5	*Paspalum setaceum*	49–98	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	49–98	–
4				29–49	

4				29–49	
	threeawn	ARIST	*Aristida*	29–49	–
	mat sandbur	CELO3	*Cenchrus longispinus*	29–49	–
	flatsedge	CYPER	*Cyperus*	29–49	–
5				29–49	
	Grass, perennial	2GP	*Grass, perennial*	29–49	–
Shrub/Vine					
6				49–98	
	Havard oak	QUHA3	*Quercus havardii*	49–98	–
7				49–98	
	soapweed yucca	YUGL	*Yucca glauca*	49–98	–
8				29–49	
	sand sagebrush	ARFI2	*Artemisia filifolia*	29–49	–
9				20–49	
	fourwing saltbush	ATCA2	*Atriplex canescens*	20–49	–
10				20–49	
	rabbitbrush	CHRYS9	*Chrysothamnus*	20–49	–
11				20–49	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	20–49	–
Forb					
12				20–49	
	featherplume	DAFO	*Dalea formosa*	20–49	–
13				29–49	
	sundrops	CALYL	*Calylophus*	29–49	–
	phlox heliotrope	HECO5	*Heliotropium convolvulaceum*	29–49	–
	sharpleaf penstemon	PEAC	*Penstemon acuminatus*	29–49	–
14				20–49	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	20–49	–
	lemon beebalm	MOCI	*Monarda citriodora*	20–49	–
16				29–49	
	hymenopappus	HYMEN4	*Hymenopappus*	29–49	–
	blazingstar	MENTZ	*Mentzelia*	29–49	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	29–49	–
17				20–49	
	sunflower	HELIA3	*Helianthus*	20–49	–
18				20–49	
	buckwheat	ERIOG	*Eriogonum*	20–49	–
19				20–49	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	20–49	–

Animal community

This site provides habitat which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, Ord's kangaroo rat, Northern grasshopper mouse, Southern Plains woodrat, swift fox, roadrunner, meadowlark, lark bunting, ferruginous hawk, lesser prairie chicken, mourning dove, scaled quail, sand

dune lizard, marbled whiptail, ornate box turtle, bullsnake and Western diamondback rattlesnake. Grasshopper and vesper sparrows utilize the site during migration. The ferruginous hawk sometimes nests on dunes associated with the site. White-tailed deer are also sometimes associated with this site (Mescalero Sands). Where mesquite invades, resident species of birds such as white-necked raven, roadrunner, pyrrhuloxia, mourning dove, and Harris hawk nest. Where sand hummocks form around shrubs, rodent populations and their predators increase. Fourwing saltbush, shinnery oak, sand sagebrush, and mesquite provide protective cover for scaled quail. Seed, green herbage, and fruit from a variety of grasses, forbs, and shrubs provide food for a number of birds and mammals, including mourning dove, scaled quail, lessor prairie chicken and antelope.

Hydrological functions

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

Hydrologic Interpretations
Soil Series------- Hydrologic Group
Kermit---------- A
Aguena---------- A

Recreational uses

This site offers recreation potential for hiking, horseback riding, nature observation and photography. This site also offers opportunities for hunting of such species as quail, dove and antelope.

Mechanical, off-road vehicle use by dune buggies, four wheelers, or motor bikes is site-destructive, resulting in severe soil movement by wind erosion. Off-road vehicle use should be confined to those areas which are already deterioriated and where intensive management for soil protection can be practiced.

During years of abundant spring moisture, this site desplays a colorful array of wildflowers during May and June. A few showy summer and fall flowers also occur.

Wood products

The plant community associated with this site affords little or no wood products.

Other products

This site is suitable for grazing during all seasons of the year by all kinds and classes of livestock. Where shinnery oak has increased considerably above the amount in the potential plant community cattle loss can occur if grazed during the late bud and early leaf stage. This site responds well to an integrated brush management and grazing management. Brush management is inappropriate in occupied or potential habitat for sand dune lizard. Mismannagement of this site will cause a decrease in Harvard panicum, sand bluestem, giant dropseed, plains bristlegrass, sand paspalum and fourwing saltbush. There will be a corresponding increase in dropseeds, sand sagebrush and shinnery oak. When shinnery oak is not a problem, this site responds best to a system of mangement that rotates the season of use. Grazing management plans should be design to leave adequate residual cover for lesser prairie chicken nesting.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index----- Ac/AUM
100 - 76---------- 2.0 – 4.0
75 – 51---------- 3.0 – 6.5
50 – 26---------- 5.0 – 12.0
25 – 0---------- 12.0 - +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains (SD-3) Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: South Chaves, Eddy, Lea and Otero Counties.

Other references

Literature Cited:

1. Sears, W.E., C.M. Britton, D.B. Wester, and R.D. Pettit. 1986. Herbicide conversion of a sand shinnery oak (Quercus havardii) community: effects on biomass. J. Range. Manage. 39: 399-403.

2. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, September). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ [accessed 1/07/02].

3.Villena, F. and J.A. Pfister. 1990. Sand shinnery oak as forage for Angora and Spanish goats. J. Range. Manage. 43: 116-122.

Contributors

David Trujillo
Don Sylvester

Rangeland health reference sheet

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

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

Indicators

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

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

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

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

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

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

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

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

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

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

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

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

    Dominant:

    Sub-dominant:

    Other:

    Additional:

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

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

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

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

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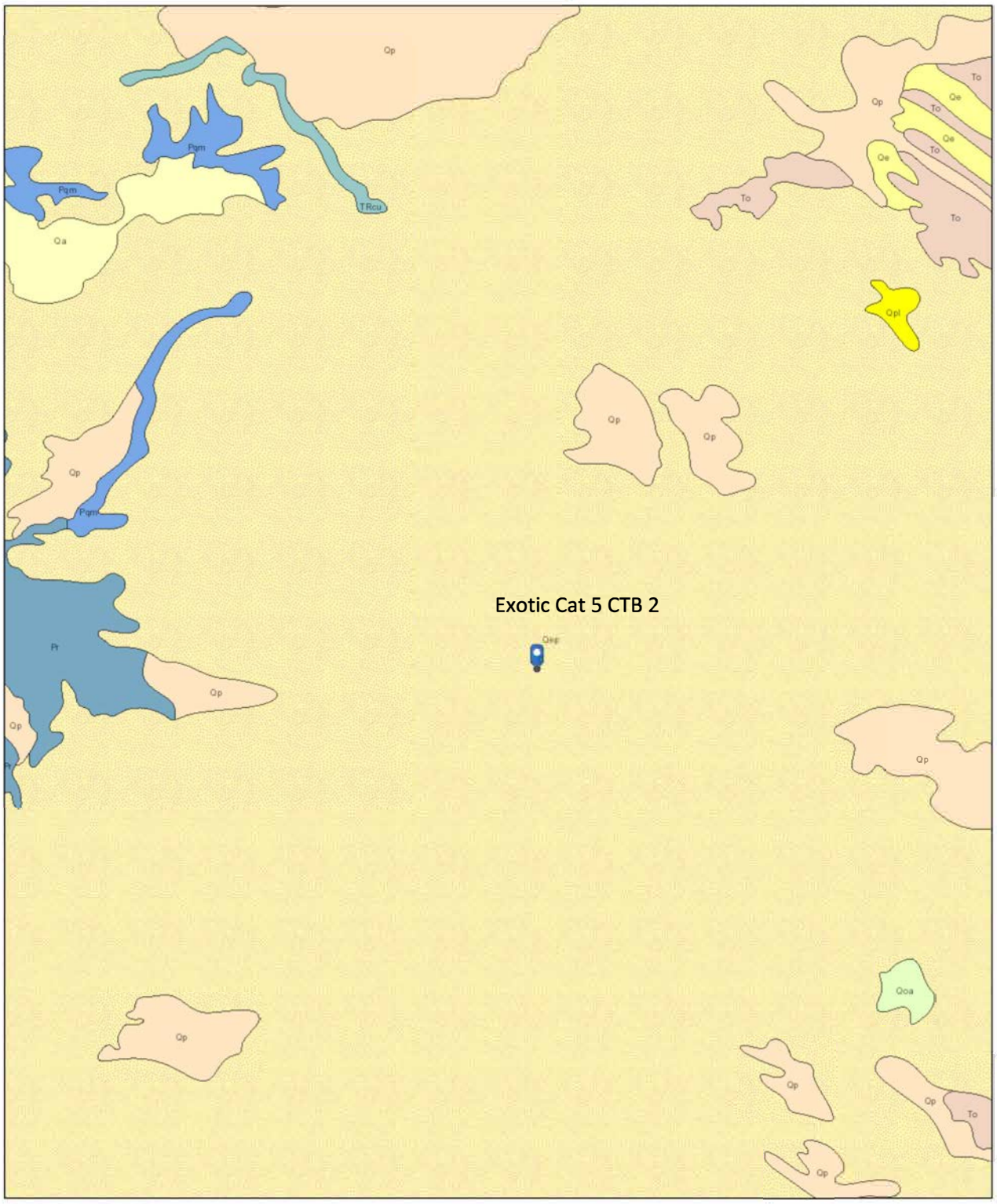
17. **Perennial plant reproductive capability:**

Exotic Cat 5 CTB 2 Geological Map



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Lithologic Units

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

Site Lithological Unit

Qep--Eolian and piedmont deposits (Holocene to middle Pleistocene) - Interlayed eolian sands and piedmont-slope deposits

1:144,448

0 1.25 2.5 5 mi

0 2.25 4.5 9 km

Esri, NASA, NGA, USGS, NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset,

ATTACHMENT 3: CORRESPONDENCE

Outlook

RE: [EXTERNAL] nAPP2428730359/nAPP2431931028/nAPP2433729249 Exotic Cat 5 CTB 2 Liner Notifications

From Raley, Jim <jim.raley@dvn.com>
Date Thu 12/19/2024 9:32 AM
To Monica Peppin <Monica.Peppin@soudermiller.com>
Cc BLM Spill Email <blm_nm_cfo_spill@blm.gov>; ocd.enviro@emnrd.nm.gov <OCD.Enviro@emnrd.nm.gov>; Stephanie Hinds <stephanie.hinds@soudermiller.com>

Submitted for all three incidents on 12/19/2024

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@soudermiller.com>
Sent: Wednesday, December 18, 2024 2:37 PM
To: Raley, Jim <Jim.Raley@dvn.com>
Cc: BLM Spill Email <blm_nm_cfo_spill@blm.gov>; ocd.enviro@emnrd.nm.gov; Stephanie Hinds <stephanie.hinds@soudermiller.com>
Subject: [EXTERNAL] nAPP2428730359/nAPP2431931028/nAPP2433729249 Exotic Cat 5 CTB 2 Liner Notifications

All:
SMA anticipates conducting liner inspection activities at the following site on Saturday, December 21, 2024:
Proposed Date:12.21.24
Proposed Time Frame: 11:30 AM
Site Name: Exotic Cat 5 CTB 2
Incident Number: nAPP2428730359/nAPP2431931028/nAPP2433729249
API: fAPP2308735100/NMNM63994

Liner Inspection Notification	
Incident ID and Site Name:	**Exotic Cat 5 CTB 2 nAPP2428730359 nAPP2431931028 nAPP2433729249**
API # and Corresponding Agency:	**fAPP2308735100 BLM/Federal**
Question	**Answer (Fill In)**
What is the liner inspection surface area in square feet (secondary containmet):	**Tank Containment 5,466 sq ft Separators/Heater Treaters Containment 8,189 sq ft**
Have all the impacted materials been removed from the liner and cleaned?	**Yes - 12.12.2024**

Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC: 48 HOURS PRIOR TO INSPECTION	**12.21.2024**
Time liner inspection will commence:	**11:30 AM**
Please provide any information necessary for observers to contact inspector: (Name and Number)	**Monica Peppin 575.909.3418**
Please provide any information necessary for navigation to liner inspection site and coordinates (Lat/Long)	**Intersection 128/Red Rd travel north for 6.45 miles, turn right/east onto lease road travel 0.39 miles, follow turn to the right/south travel 0.15 miles, turn left/facing southeast travel 0.51 miles, slight right/east travel 0.08 miles, right/south for 0.22 miles, left/ east for 0.54 miles, turn north 0.08 miles, east for 0.13 miles, south for 0.12 miles, turn left facing east for 0.77 miles, right follow for 0.13 miles and dead end on site. 32.335969, -103.698928**

SMA Since 1985

Stronger Communities by Design

Monica Peppin, A.S.

Project Manager

Direct/Mobile: 575.909.3418

Office: 575.689.7040

201 S Halagueno St.

Carlsbad, NM 88220

Outlook

RE: [EXTERNAL] Devon Energy Extension Request - nAPP2428730359

From Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Date Thu 1/9/2025 2:45 PM
To Raley, Jim <Jim.Raley@dvn.com>
Cc Monica Peppin <Monica.Peppin@soudermiller.com>; Stephanie Hinds <stephanie.hinds@soudermiller.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>

Good afternoon Jim,

The extension request for NAPP2428730359 EXOTIC CAT 5 CTB 2 is approved. The new due date to submit your closure report to the OCD is February 10, 2025. 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: Raley, Jim <Jim.Raley@dvn.com>
Sent: Thursday, January 9, 2025 1:29 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Monica Peppin <Monica.Peppin@soudermiller.com>; Stephanie Hinds <stephanie.hinds@soudermiller.com>
Subject: [EXTERNAL] Devon Energy Extension Request - nAPP2428730359

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

NMOCD District II,
Devon Energy requests an extension to deliver closure report for incident (NAPP2428730359 EXOTIC CAT 5 CTB 2)

The inspection has been completed but we are still in process of compiling the closure document and plan on delivering it within 30 days.

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

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

QUESTIONS

Action 425454

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 425454
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2428730359**
Incident Name	**NAPP2428730359 EXOTIC CAT 5 CTB 2 @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2308735100] EXOTIC CAT 5 CTB 2**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	EXOTIC CAT 5 CTB 2
Date Release Discovered	10/12/2024
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 | Production Tank | Produced Water | Released: 21 BBL | Recovered: 20 BBL | Lost: 1 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)	Pinhole formed on load line connection at water tank. 20.5 bbls released into lined containment. 20 bbls recovered.

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 425454
	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: 01/28/2025

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QUESTIONS (continued)

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	Action Number: 425454
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (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 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	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	11/01/2024
On what date will (or did) the final sampling or liner inspection occur	12/21/2024
On what date will (or was) the remediation complete(d)	12/21/2024
What is the estimated surface area (in square feet) that will be remediated	5466
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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	Action Number: 425454
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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: 01/28/2025
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)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 425454
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Liner Inspection Information	
Last liner inspection notification (C-141L) recorded	**413867**
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	**12/21/2024**
Was all the impacted materials removed from the liner	**Yes**
What was the liner inspection surface area in square feet	**5466**

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	5466
What was the total volume (cubic yards) remediated	0
Summarize any additional remediation activities not included by answers (above)	Secondary Containment inspection completed. No breach through liner

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 01/28/2025

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CONDITIONS

Action 425454

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 425454
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	1/28/2025