Spills In Line	d Containment
Measurements	Of Standing Fluid
Length(Ft)	87
Width(Ft)	48
Depth(in.)	1.25
Total Capacity without tank displacements (bbls) No. of 500 bbl Tanks In	77.48
Standing Fluid No. of Other Tanks In Standing Fluid	6
OD Of Other Tanks In Standing Fluid(feet)	
Total Volume of standing fluid accounting for tank displacement.	56.48

.



Incident Numbers: nAPP2125651649 and nAB1515927960

Release Assessment and Closure

Aldabra 25 Federal #006H & #007H Battery

Section 25, Township 23 South, Range 31 East API: 30-015-38602 County: Eddy Vertex File Number: 23E-04614

Prepared for: Devon Energy Production Company, LP

Prepared by: Vertex Resource Services Inc.

Date: March 2024 Devon Energy Production Company, LP Aldabra 25 Federal #006H & #007H Battery Release Assessment and Closure March 2024

Release Assessment and Closure Aldabra 25 Federal #006H & #007H Battery Section 25, Township 23 South, Range 31 East API: 30-015-38602 County: Eddy

Prepared for: **Devon Energy Production Company, LP** 6488 Seven Rivers Highway Artesia, New Mexico 88210

New Mexico Oil Conservation Division – District 2 811 S. 1st Street Artesia, New Mexico 88210

Prepared by: Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad, New Mexico 88220

Stephanie McCarty

Stephanie McCarty, B.Sc. ENVIRONMENTAL TECHNOLOGIST, REPORTING March 21, 2024

Date

kent stallings P.G.

Kent Stallings, P.G. SENIOR GEOLOGIST, REPORT REVIEW March 29, 2024

Date

Devon Energy Production Company, LP	Release Assessment and Closure
Aldabra 25 Federal #006H & #007H Battery	March 2024

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Release Assessment and Closure March 2024

1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release that occurred on September 11, 2021, at Aldabra 25 Fed #006H & #007H Battery API: 30-015-38602 (hereafter referred to as the "site"). Devon submitted the initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on September 24, 2021. Incident ID number nAPP2125651649 was assigned to this incident.

Devon also retained Vertex to conduct a Release Assessment and Closure for an oil and produced water release that occurred on June 3, 2015, at Aldabra 25 Fed #006H Battery API: 30-015-38602 (hereafter referred to as the "site"). Devon submitted the initial C-141 Release Notification (Appendix A) to NMOCD District 2 on June 5, 2015. Incident ID number nAB1515927960 was assigned to this incident.

This report provides a description of the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for closure of these releases, with the understanding that restoration of these release sites will be completed following remedial activities and reclamation will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The September 11, 2021, release occurred when a water tank ran over, resulting in produced water released into lined containment. The incident was reported on September 24, 2021, and involved the release of approximately 56.48 barrels (bbl.) of produced water. Approximately 56.48 bbl. were recovered during the initial clean-up.

The June 3, 2015, release occurred when the three-phase separator manway gasket failure, resulting in oil and produced water released into lined containment, and as overspray. The incident was reported on June 5, 2015, and involved the release of approximately 0.25 bbl. of oil and 1.75 bbl. of produced water. Approximately 0.25 bbl. of oil and 1 bbl. of produced water were recovered during the initial clean-up.

Additional details relevant to the releases are presented in the C-141 Reports (Appendix A).

3.0 Site Characteristics

The site is located approximately 22.3 miles southeast of Malaga, New Mexico, at 32.2686806, - 103.7263489 (Google Inc., 2024). The legal location for the site is Section 25, Township 23 South and Range 31 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

Devon Energy Production Company, LP Aldabra 25 Federal #006H & #007H Battery

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production, and storage. The following sections specifically describe the release area at the site on or in proximity to the constructed pad (Figure 1).

The surrounding landscape is associated with deep sand occurring on terraces, Piedmonts, dune fields, or upland plains with elevations ranging between 2,842 and 4,500 feet. The climate is semiarid with average annual precipitation ranging between 8 and 13 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses with shrubs. The historical plant community is dominated by giant dropseed (*Sporobolus giganteus*) and other dropseeds (*S. flexuosus, S. contractus, S. cryptandrus*), with scattered shinnery oak (*Quercus havardii*) and soapweed yucca (*Yucca glauca*; United States Department of Agriculture, Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

The surface geology at the site primarily comprises Qep – Eolian and piedmont deposits from the Holocene to middle Pleistocene (New Mexico Bureau of Geology and Mineral Resources, 2024) and the soil at the site is characterized as fine sand (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Additional soil characteristics include a drainage class of excessively drained with a very negligible runoff class. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

4.0 Closure Criteria Determination

The nearest active well to the site is New Mexico Office of the State Engineer (NMOSE) exploratory borehole C-04790-POD-1, located approximately 0.39 miles west of the site, drilled on February 6, 2024 (United States Geological Survey, 2024). The borehole was advanced to a depth of 55 feet. The borehole was left to recharge as per the requirements on the WR-07 Application for Permit to Drill a Well with No Water Rights, and an Solinst Interface Meter probe model 122 was utilized to determine whether groundwater was present at the conclusion of the 72 hour recharge period. No water was found to be present at that time. The borehole was plugged and abandoned according to the WD-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Documentation related to the exploratory borehole is included in Appendix B.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is a riverine located approximately 4.6 miles northwest of the site (United States Fish and Wildlife Service, 2024).

At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Aldabra 25 Federal #006H & #007H Battery

Page 8 of 105

Release Assessment	and Closure
	March 2024

Table 1.	Closure Criteria Determination		
Site Name	e: Aldabra 25 Fed #006H & #007H Battery	N 640055 205	V 2570020 400
Spill Coord	dinates: 32.2686806,-103.7263489	X: 619955.295	Y: 35/0929.433
Site Speci	Death to Croundwater (nearest reference)	Value	Unit
	Distance between release and pearest DTGW	2 05/	feet
1	reference	0.39	miles
	Date of nearest DTGW reference measurement	Februar	v 6, 2024
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	24,506	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	27,150	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	25,113	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	NA	feet
	ii) Within 1000 feet of any fresh water well or spring	49,213	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	10,950	feet
	Within the area overlying a subsurface mine	No	(Y/N)
8	Distance between release and nearest registered mine	56,847	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	37,683	feet
10	Within a 100-year Floodplain	No	year
10	Distance between release and nearest FEMA Zone A (100-year Floodplain)	34,641	feet
11	Soil Type	fines	sands
12	Ecological Classification	Kermit-Berino fine	sands, 0-3% slopes
13	Geology	Q	ep
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	51-100'	<50' 51-100' >100'

3

VERSATILITY. EXPERTISE.

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The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release				
Minimum depth below any point within the horizontal boundary of the release to groundwater				
less than 10,000 mg/l TDS	Constituent	Limit		
	Chloride	10,000 mg/kg		
	TPH (GRO+DRO+MRO)	2,500 mg/kg		
51 feet - 100 feet	GRO+DRO	1,000 mg/kg		
	BTEX	50 mg/kg		
	Benzene	10 mg/kg		

TDS – total dissolved solids

TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

An initial site inspection of the release area was completed on December 5, 2023, which identified the area of release relating to incident ID nAB1515927960 involving an oil and produced water release of approximately 0.25 bbl. and 1.75 bbl., respectively, that occurred on June 3, 2015, and estimated the approximate volume of the release. The impacted area was determined to be approximately 12 feet long and 20 feet wide; the total affected area was 287 square feet. No exceedances to closure criteria were found during characterization. Initial characterization field screening results are presented in Table 3. Samples BH23-01 through BH23-11, not included in Table 3, were utilized to delineate an additional release on the site's pad to the west, release ID nAB1616056900. The Daily Field Reports (DFRs) associated with the site inspection are included in Appendix C.

Notification that a liner inspection was scheduled to be completed was provided to the NMOCD on September 15, 2023. Visual observation of the liner was completed on all sides and the base of the containment, around equipment, and of all seams in the liner. As evidenced in the DFR (Appendix C), liner integrity was confirmed. The Liner Inspection Notification email is included in Appendix D. The laboratory data report is included in Appendix E.

6.0 Closure Request

The release area was fully delineated and no exceedances to closure criteria of allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release locations "51 - 100 feet to groundwater" were found during characterization. Excavation of soils will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

Based on these findings, Devon Energy Production Company, LP requests that this release be closed.

Should you have any questions or concerns, please do not hesitate to contact Kent Stallings at 346.814.1413 or kstallings@vertex.ca.

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7.0 References

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- United States Geological Survey. (2024). National Water Information System: Web Interface. Retrieved from https://waterdata.usgs.gov/nwis

8.0 Limitations

This report has been prepared for the sole benefit of Devon Energy Production Company, LP. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division and the Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and Devon Energy Production Company, LP. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

6

FIGURES



TABLES

Client Name: Devon Energy Production Company, LP. Site Name: Aldabra 25 Federal #006H & #007H Battery NMOCD Tracking #: nAPP2125651649 and nAB1515927960 Project #: 23E-04614 Lab Report: 2312374

	Table 3. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater 51 - 100 feet bg												
	Sample Descr	iption	Field Screening					Petroleum Hydrocarbons					
						Vol	atile			Extractable	e		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
					101								ND
BH32-13	0	December 5, 2023	0	32	121	ND	ND	ND	ND	ND	ND	ND	ND
BH23-12	0	December 5, 2023 December 5, 2023	0	32 13	121 96	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
BH23-12	0 2 0	December 5, 2023 December 5, 2023 December 5, 2023	0 0 0	32 13 —	121 96 1,597	ND ND ND	ND ND ND	ND ND ND	ND ND 11	ND ND ND	ND ND 11	ND ND 11	ND 2300
BH23-12 BH23-13	0 2 0 2	December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023	0 0 0 0	32 13 -	121 96 1,597 421	ND ND ND ND	ND ND ND ND	ND ND ND ND	ND ND 11 ND	ND ND ND ND	ND ND 11 ND	ND ND 11 ND	ND ND 2300 290
BH23-12 BH23-13	0 2 0 2 0	December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023	0 0 0 0	32 13 — — 34	121 96 1,597 421 ND	ND ND ND ND ND	ND ND ND ND	ND ND ND ND	ND ND 11 ND ND	ND ND ND ND	ND ND 11 ND ND	ND ND 11 ND ND	ND ND 2300 290 ND
BH23-12 BH23-13 BH23-14	0 2 0 2 0 2	December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023	0 0 0 0 0 0	32 13 34 33	121 96 1,597 421 ND 43	ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND ND	ND ND 11 ND ND ND	ND ND ND ND ND	ND ND 11 ND ND ND	ND ND 11 ND ND ND	ND ND 2300 290 ND ND
BH23-12 BH23-13 BH23-14 BH23-15	0 2 0 2 0 2 0 2 0	December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023 December 5, 2023	0 0 0 0 0 0	32 13 — 34 33 20	121 96 1,597 421 ND 43 443	ND ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND 11 ND ND ND ND	ND ND ND ND ND ND ND	ND ND 11 ND ND ND ND	ND ND 11 ND ND ND ND	ND ND 2300 290 ND ND 480
BH23-12 BH23-13 BH23-14 BH23-15	0 2 0 2 0 2 0 2 0 2	December 5, 2023 December 5, 2023	0 0 0 0 0 0 0 0	32 13 34 33 20 1	121 96 1,597 421 ND 43 443 370	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND 11 ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND 11 ND ND ND ND ND	ND ND 11 ND ND ND ND ND	ND ND 2300 290 ND 480 300
BH23-12 BH23-13 BH23-14 BH23-15 BH23-16	0 2 0 2 0 2 0 2 0 2 0 2 0	December 5, 2023 December 5, 2023	0 0 0 0 0 0 0 0 0	32 13 34 33 20 1 44	121 96 1,597 421 ND 43 443 370 124	ND ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND 11 ND ND ND ND 13	ND ND ND ND ND ND ND ND	ND ND 11 ND ND ND ND 13	ND ND 11 ND ND ND ND 13	ND 2300 290 ND ND 480 300 ND

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)

.

APPENDIX A - NMOCD C-141 Reports

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

)

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude	

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: State Federal Tribal Private (Name: _

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Page	2
1 age	~

Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
Yes No	
If YES, was immediate n	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

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.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name:	Title:			
Signature: <u>Kendra DeHoyos</u>	Date:			
email:	Telephone:			
OCD Only				
Received by: Ramona Marcus	Date:			

Received by OCD: 6/25/2024 2:57:11 PM								Page 19 of 105			
District I 1625 N. French District II	Dr., Hobbs, NM 88	3240	State of N Energy Minerals a			New Mexi and Natural	co Resources		Form C-141 Revised August 8, 2011		
District III 1000 Rio Brazos District IV 1220 S. St. Fran	s Road, Aztec, NM	87410 M 87505	Oil Conserv 1220 South 5 Santa Fe			vation Div St. Franci , NM 8750	ision s Dr. 05	Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.			
			Rele	ase Notific	ation	and Co	rrective A	ction			
<u>nABI</u>	5159274	140				OPERAT	OR		🛛 Initi	al Report 🔲 Final Report	
Name of C	ompany Devon	Energy I	Producti rtesia	$\frac{100}{100}$ $\frac{137}{100}$		Contact Ra	andy Gladden	<u></u>			
Facility Na	me Aldabra 25	5 Fed 6 B	attery	<u>101 0</u> 0220	I	Facility Typ	e Oil				
Surface Ov	wner Federal			Mineral	Owner l	Federal			API N	0. 30-015-38602	
					TION	J OF REI	FASE	l			
Unit Letter	Section Tow	wnship	Range	Feet from the	North/	South Line	Feet from the	East/W	est Line	County	
Р	25 2	235	31Ĕ	200		FSL	1050	FI	EL	Eddy	
				L		I					
			La	titude <u>:</u>	32.1607	Lon	gitude: <u>103.4</u>	<u>4335</u>			
				NA1	URE	OF RELI	EASE				
Type of Rele	ease Spill .25 B	BL Oil &	1.75 BE	3L Produced Wa	iter	Volume of .25 Oil BB Produced	Release L & 1.75 BBL Water		Volume .25 BBL	Recovered & 1 BBL Produced Water	
Source of R	elease 3 Phase Se	eparator				Date and H	Hour of Occurre	nce Date and Hour of Discovery			
Was Immed	liate Notice Give	en?	Yes [] No [□] Not R	equired	If YES, To Whom? Jim Amos BLM					
By Whom?	Randy Gladden					Date and I	lour			- NM OIL CONSERVATION	
					6/5/15 1:45	<u>PM</u>	41 317-4		ARTESIA DISTRICT		
Was a Watercourse Reached?					If YES, Vo	lume Impacting	the Wat	ercours	* JUN 5 '2015		
If a Watercourse was Impacted, Describe Fully.* RECEIVED						RECEIVED					
Describe Cause of Problem and Remedial Action Taken.* At the Aldabra 25-6 &7 battery at 12:00 pm the 3 phase separator was blowing out of the gasket on water dump manway. Lease operator saw the gasket blowing a mist so he went to the battery and noticed it was the Aldabra 25-3 separator. He shut the well down and shut it in, he then went to battery and sbut it at the header.											
Describe Area Affected and Cleanup Action Taken.* It was mostly in containment an over spray, went onto pasture25 bbl of oil and 1.75 bbl produced water was release and .25 BBL of oil and 1 BBL of produced water was recovered. The 15 X 20 area will be pressure sprayed with soap and water also evaluated by environmental group. Vendor called to replace gasket.											
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.											
Signature: Jeanette Barron					OIL CON	SERV.	ATION	I DIVISION			
Printed Name: Jeanette Barron					Approved by	Environmental S	specialist	Her	m		
Title: Field	Admin Support					Approval Da	1e: 418115	E	Expiration	n Date: NHT	
E-mail Address: Jeanette.barron@dvn.com					Conditions o Remedial	f Approval: ion per O.C.D), Rules	s & Gui	delinesched		
* Attach Additional Sheets If Necessary					N PHUI	-USAL					
Auton Auto	anonal Sheets II	1 11000558	чy				10410	HY		2KP-3036	

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Received by OCD: 6/25/2024 2:57:11 PM Form C-141 State of New Mexico

Page 3

Oil Conservation Division

	Page 20 of 1	05
Incident ID	nAPP2125651649, nAB1515927960	
District RP	2RP-3036	
Facility ID		
Application ID		

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>55</u> (ft bgs)			
Did this release impact groundwater or surface water?				
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No			
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No			
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No			
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No			
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No			
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No			
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No			
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No			
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No			
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No			
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🔀 No			

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 6/25/2024 2:57:11 PM Form C-141 State of New Mexico

Page 3

Oil Conservation Division

Incident ID	nAPP2125651649, nAB1515927960
District RP	2RP-3036
Facility ID	
Application ID	

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Site Assessment/Characterization

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

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

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

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

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- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 6/25/2024 2:57: Form C-141 Page 4	State of New Mexico Oil Conservation Division		Incident ID District RP Facility ID Application ID	Page 22 of 105 nAPP2125651649, nAB1515927960 2RP-3036
I hereby certify that the information g regulations all operators are required public health or the environment. Th failed to adequately investigate and ro addition, OCD acceptance of a C-141 and/or regulations. Printed Name: Dale Wood	given above is true and complete to the best of to report and/or file certain release notification e acceptance of a C-141 report by the OCD of emediate contamination that pose a threat to report does not relieve the operator of response all	of my knowledge ar ons and perform co does not relieve the groundwater, surfa onsibility for compl Title: Env.	nd understand that pursu prective actions for rele e operator of liability sho ce water, human health liance with any other feo Professional	aant to OCD rules and ases which may endanger buld their operations have or the environment. In deral, state, or local laws
Signature:	Dat	te:		
email: <u>dale.woodall@dvn.</u>	<u>com</u> T	elephone:	575-748-1838	
OCD Only Received by:		Date:		

Received by OCD: 6/25/2024 2:57:11 PM Form C-141 State of New Mexico

Page 5

Incident ID	nAPP2125651649, nAB1515927960
District RP	2RP-3036
Facility ID	
Application ID	

Remediation Plan

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

Detailed description of proposed remediation technique

Scaled sitemap with GPS coordinates showing delineation points

Estimated volume of material to be remediated

Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC

Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: Each of the following items must be co	nfirmed as part of any request for deferral of remediation.								
<u>Deterrar requests only</u> . Each of the following terms must be each	in med as part of any request for deferrat of remediation								
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.									
Extents of contamination must be fully delineated.									
Contamination does not cause an imminent risk to human healt	h, the environment, or groundwater.								
I hereby certify that the information given above is true and comple rules and regulations all operators are required to report and/or file which may endanger public health or the environment. The accepta liability should their operations have failed to adequately investigat surface water, human health or the environment. In addition, OCD responsibility for compliance with any other federal, state, or local	ete to the best of my knowledge and understand that pursuant to OCD certain release notifications and perform corrective actions for releases ance of a C-141 report by the OCD does not relieve the operator of e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of laws and/or regulations.								
Printed Name:Dale Woodall	Title:Env. Professional								
Signature:	Date:								
email: <u>dale.woodall@dvn.com</u>	Telephone: <u>575-748-1838</u>								
OCD Only									
Received by:	Date:								
Approved Approved with Attached Conditions of	Approval Denied Deferral Approved								
Signature:	Date:								

•

Page 6

Oil Conservation Division

Incident ID	nAPP2125651649, nAB1515927960
District RP	2RP-3036
Facility ID	
Application ID	

Title: _____

Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report. A scaled site and sampling diagram as described in 19.15.29.11 NMAC Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: _____Dale Woodall ______Title: _____Title: _____Title: _____ Signature: Date: Telephone: 575-748-1838 email: dale.woodall@dvn.com **OCD Only** Received by: Date: Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations. Closure Approved by: Date:

Printed Name:

APPENDIX B – Closure Criteria Research Documentation

•

Closure Cr	iteria Determination			
Site Name	: Aldabra 25 Fed #006H & #007H Battery			
Spill Coord	linates: 32.2686806,-103.7263489	X: 619955.295	Y: 3570929.433	
Site Speci	Ic Conditions	Value	Unit	
	Depth to Groundwater (nearest reference)	> 55	feet	
1	Distance between release and nearest DTGW reference	2,054	reet	
	Date of nearest DTGW reference measurement	0.59 Februar	nines	
	Within 200 fast of any continuously flowing watercourse		y 0, 2024	
2	or any other significant watercourse	24,506	feet	
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	27,150	feet	
4	Within 300 feet from an occupied residence, school, hospital, institution or church	25,113	feet	
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	NA	feet	
	ii) Within 1000 feet of any fresh water well or spring	49,213	feet	
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)	
7	Within 300 feet of a wetland	10,950	feet	
	Within the area overlying a subsurface mine	No	(Y/N)	
8	Distance between release and nearest registered mine	56,847	feet	
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low	
	Distance between release and nearest unstable area	37,683	feet	
	Within a 100-year Floodplain	No	year	
10	Distance between release and nearest FEMA Zone A (100- year Floodplain)	34,641	feet	
11	Soil Type	fines	sands	
12	Ecological Classification	Kermit-Berino fine	sands, 0-3% slopes	
13	Geology	Q	ер	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	51-100'	<50' 51-100' >100'	

PAGE 1 OF 2

WELL TAG ID NO.



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

CAND WELL LOCA	WELL OWNER 1 WELL OWNER 1 205 E Bender	AILING	irces		C4790-POD1 C4790 WELL OWNER NAME(S)						C04790 PHONE (OPTIONAL)					
CAND WELL L	well owner 1 205 E Bender	AILING	Devon Energy Resources													
AND		WELL OWNER MAILING ADDRESS 205 E Bender Road #150								STATE NM 88240	ZIP					
-	WELL D LOCATION LATITUDE			egrees 32	minutes 16	SECONE 6.708	s 3 N	* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND						
ERA	(FROM GPS)	LON	NGITUDE	-103	43	59.55	6 W	* DATUM REC	QUIRED: WGS 84							
1. GEN	DESCRIPTION	RELATIN	IG WELL LOCATION TO	O STREET ADDI	RESS AND COMMO	ON LANDMAI	RKS – PLS	SS (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE						
	LICENSE NO.		NAME OF LICENSED	DRILLER	Jason Maley				NAME OF WELL DR	ILLING COMPANY						
-	DRILLING STARTED DRILLING ENDED			DEPTH OF CC	OMPLETED WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTERED (FT))					
	2-6-24		2-6-24	2 - A -	55'	-		55'		Dry						
N	COMPLETED W	ELL IS:	ARTESIAN *add Centralizer info be	DRY HOI	LE 🗌 SHALL	OW (UNCON	FINED)	ED) STATIC WATER LEVEL DATE IN COMPLETED WELL 0' (FT)			measure)-24					
ATIC	DRILLING FLUID: AIR MUD ADDITIVES – SPECIFY:															
RM.	DRILLING METHOD: ROTARY HAMMER CABLE TOOL OTHER - SPECIFY:							INSTALLED								
G INFC	DEPTH (feet bgl) BORE HOLE G FROM TO DIAM (inches)		BORE HOLE	CASING MATERIAL AND/OR GRADE CAN		ASING	CASING INSIDE DIAM.	CASING WALL THICKNESS	SLOT							
ASIN			(include note	(include each casing string, and note sections of screen) T (add coupl		ГҮРЕ ling diameter)	(inches)	(inches)	(inches)							
& C	0	45'	6"	2	" PVC SCH40		1	Thread	2"	SCH40	N/A					
FLING	45'	55'	6"	2	2" PVC SCH40		1	Thread	2"	SCH40	.02					
2. DRI			-													
F																
ļ																
							OD 1115	L BLOW AVER								
	DEPTH (fe	et bgl)	BORE HOLE	LIST ANNU	LIST ANNULAR SEAL MATERIAL AND GRAVEL PA RANGE BY INTERVAL			L PACK SIZE-	AMOUNT	METHO	DOF					
ERIAL	FROM	TO	DIAM. (inches)	*(if using Centralizers for Artesian wells- indicate the sp None Pulled and plugged			e spacing below)	(cubic feet)	PLACEN	MENT						
TAM R																
INULAI																
3. AN																
FOR	OSE INTERNA	LINE]				WR-2	WELL RECORD	& LOG (Version 00/2	2/2022)					

LOCATION

	DEPTH (1	eet bgl)	·	COLOR AND TYPE OF MATERIAL FN		337.4	TED	ESTIMATED		
	FROM	то	THICKNESS (feet)	INCLUDE WATER-BEARING CAVITIES OR (attach supplemental sheets to fully de	BEA (YES	RING? / NO)	YIELD FOR WATER- BEARING ZONES (gpm)			
	0	40'	40'	Red dirt with small rocks		Y	✓ N			
	40'	55'	15'	Tan fine sand with small roo	eks	Y	√ N			
	1					Y	N			
						Y	N			
						Y	N			
Ţ						Y	N			
WEI						Y	N			
ð						Y	N			
50	1					Y	N			
	1					Y	N			
ř	i					Y	N			
3EO						Y	N	N		
KO	1					Y	N			
HYD						Y	N			
4.						Y	N			
						Y	N			
						Y	N			
						Y	N			
						Y	N			
						Y	N			
	1					Y	N			
	METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: TOTA PUMP AIR LIFT BAILER OTHER – SPECIFY:Dry WEI							'AL ESTIMATED 'LL YIELD (gpm): 0		
	WELL TES	IDING DISC	CHARGE I	METHOD, DD,						
TEST; RIG SUPERVISIO	MISCELLANEOUS INFORMATION: PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:									
RE 5.	THE UNDE	RSIGNED RECORD (HEREBY CERTIFI DF THE ABOVE DI	ES THAT, TO THE BEST OF HIS OR HER KNO SCRIBED HOLE AND THAT HE OR SHE WILL	WLEDGE AND BELIEF FILE THIS WELL REC	, THE FOR	EGOING I	IS A TRUE ANI ATE ENGINEEI		
6. SIGNATUP	AND THE P	ERMIT HO	FURF OF DRILLEF	Jason Maley	ING: 	O	21 DATE	24		
			V	V		PROCES -	100 10			
FO	R OSE INTERI	NAL USE		POD NO	WR-20 WELL	RECORD &	LOG (Ve	rsion 09/22/2022		
	L 110.			100110.	interio.		_			

Released to Imaging: 6/26/2024 9:28:33 AM



PLUGGING RECORD



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

I. GENERAL / WELL OWNERSHIP:

State	Engineer Well Number: <u>C-</u> Devon Energy Res	4790-POD1				DI	11.0			
Well	owner: 205 E Bender	Road #150			-	Phone	No.:			
City:	Hobbs		State:			NM		_ Zip code	e: <u>882</u> 4	40
<u>II. W</u>	ELL PLUGGING INFO	RMATION:	÷							
1)	Name of well drilling co	ompany that plug	ged well:	Vision Res	sources	_				
2)	New Mexico Well Drill	er License No.:	1833				Expira	ation Date:	10-7-2	5
3)	Well plugging activities Jason Maley	were supervised	by the foll	owing wel	l driller	r(s)/rig su	pervisor(s):		
4)	Date well plugging bega	nn: 2-10-24		Date	well pl	ugging co	oncluded:	2-10-24		
5)	GPS Well Location:	Latitude: Longitude:	32 -103	deg, deg,	16 43	min, min,	6.708 59.556	_ sec _ sec, WGS	84	
6)	Depth of well confirmed by the following manned	l at initiation of p r: <u>T</u> ape	lugging as:	55'	ft be	elow grou	ind level (bgl),		
7)	Static water level measu	red at initiation c	of plugging	. 0	ft bg	gl				
8)	Date well plugging plan	of operations wa	as approved	by the Sta	ate Eng	ineer:	12-6-23			
9)	Were all plugging activi	ties consistent wi	ith an appro	oved plugg	ging pla	n?	Yes	_ If not,	please	describe

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

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement <u>Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
	0 Wyoming Bentonite 55'	77.50	77.50	Tremie pipe Open Hole	annular space also plugged , etc.)
L SIGN	ATURE:	MULTIPLY cubic feet x 7 cubic yards x 20	BY AND OBTAIN 7.4805 = gallons 1.97 = gallons		

For each interval plugged, describe within the following columns:

Π

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

Signature of Well Driller Date

Version: September 8, 2009 Page 2 of 2

AND DO TO THE STRATE

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

ATION	OSE POD NO. (W	ELL NO.)	PODI	WELL TAG ID NO.		OSE FILE NO(s). C - <	+712				
WELL LOC	Harvard Petroleum Company Wellowner Mailing address PO Box 936						Reswell NM 88202					
1. GENERAL AND	WELL LOCATION (FROM GPS) DESCRIPTION F	LATI	DEC TUDE	GREES MINUTES SECON 32 15 46 03 42 52 STREET ADDRESS AND COMMON LANDM	ACCURACY REQUIRED: ONE TENTH OF A SECOND ADATUM REQUIRED: WGS 84 SS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE							
	LICENSE NO. 1833 DRILLING STAR	TED	NAME OF LICENSED	DRILLER Maley DEPTH OF COMPLETED WELL (FT) 55	BORE HOL	LE DEPTH (FT)	NAME OF WELL DRI Visian DEPTH WATER FIRS Dry	LLING COMPANY Resources It encountered (FT))			
IATION	COMPLETED W	ELL IS:	ARTESIAN *add Centralizer info bel	MUD ADDITIVES-SPE	ONFINED) CIFY:	STATIC IN COM (FT)	WATER LEVEL PLETED WELL	DATE STATIC				
SING INFORM	DEPTH (feet bgl) BORE HOLE FROM TO DIAM (inches)		BORE HOLE DIAM (inches)	4ER CABLE TOOL OTHER - SPECIFY: CASING MATERIAL AND/OR GRADE (include each casing string, and CON (include each casing string, and (add con) (add con) (add con)		ASING NECTION YPE ling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)			
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2							QSE DIT APR	ă 2023 mi :22				
Ţ	DEPTH (fee	et bgl)	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZ RANGE BY INTERVAL			AMOUNT (cubic feet)	METHO	D OF MENT			
3. ANNULAR MATERIA	FROM	TO		*(if using Centralizers for Artesian wells-indicate the spacing belo None Putted And			Ptugge					
FOR FILE	OSE INTERNA E NO. $C - 4$ ATION V	L USE 712-	POD1 23.32	POD NO.	1	WR-2 TRN 1 WELL TAG II	0 WELL RECORD & NO. 7431 D NO.	& LOG (Version 09/2 89 – PAGE	2/2022) 1 OF 2			

1	DEPTU	faat hal)									-	ESTIMATED
	FROM	TO	THICKNESS (feet)	COLOR AN INCLUDE WATE (attach sup	D TYPE OF MA R-BEARING C/ plemental sheet	TERIAL EN AVITIES OI s to fully de	NCOUN R FRAC scribe a	TERED - TURE ZONE Il units)	s	WAT BEAR (YES /	ER ING? NO)	YIELD FOR WATER- BEARING ZONES (gpm)
	~	20	20	1. 16: 10	Color	ha	-		-	Y	R	Lorriso (gpm)
	20	45	25	Roman	Fre S	me				Y	N	
	45	55	10	Red 50	ada al	whp.				Y	N	
	-10			1.00 04	nog a	2.00				Y	N	
										Y	N	
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WEL										Y	N	
OF										Y	N	
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HYD										Y	N	
4.										Y	N	
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										Y	N	
	METHOD U	JSED TO E	STIMATE YIELD	OF WATER-BEARING	G STRATA: HER – SPECIFY	<i>(</i> :			TOTAL WELL	ESTIM YIELD	ATED (gpm):	Dry
N	WELL TES	T TEST	RESULTS - ATT	ACH A COPY OF DAT	A COLLECTED	DURING	WELL T	ESTING, INC	CLUDING	G DISCH	IARGE N G PERIO	METHOD, D.
ISIO	MISCELLANEOUS DECOMATION.											
; RIG SUPERV	MISCELLA	NEOUS IN	FORMATION:					C	ISE DIT	APR 4	2023	ML:23
5. TEST	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:											
6. SIGNATURE	THE UNDE CORRECT AND THE I	RSIGNED RECORD (PERMIT HO SIGNA	HEREBY CERTIF OF THE ABOVE D OLDER WITHIN 3	IES THAT, TO THE B ESCRIBED HOLE AN 0 DAYS AFTER COM DAYS AFTER COM R / PRINT SIGNEE	EST OF HIS OR ID THAT HE OF PLETION OF W SM NAME	ther KNO She Will Ell Drili	WLEDC L FILE LING:	GE AND BEL	IEF, THE RECORD	e FOREG	GOING I THE STA 23 DATE	S A TRUE AND ATE ENGINEER
EO	OSE NITER	NAL LICE					-	WD 20 WD	LI DECC		00.0	mion 00/22/2022
FIL	E NO. C-	471	2-200	(POD NO.	1		TRN NO.	74	315	29	sion 09/22/2022)
LO	CATION N	ion	23.32	.31.141			WELL	TAG ID NO.			-	PAGE 2 OF 2





Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr: 743189 File Nbr: C 04712 Well File Nbr: C 04712 POD1

Apr. 04, 2023

VERTEX RESOURCES P.O. BOX 936 ROSWELL, NM 88202

Greetings:

The above numbered permit was issued in your name on 02/21/2023.

The Well Record was received in this office on 04/04/2023, stating that it had been completed on 03/09/2023, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 02/21/2024.

If you have any questions, please feel free to contact us.

Sincerely, Maret Thompson

(575)622-6521

drywell

OSE POD Location Map



2/19/2024, 2:10:00 PM

Override 1 OSE District Boundary

GIS WATERS PODs Water Right Regulations

Active

Closure Area

• Pending

Artesian Planning Area

Plugged



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

Received by OCD: 6/25/2024 2:57:11 PM

U.S. Fish and Wildlife Service

National Wetlands Inventory

Aldabra 25 Fed #006H - Watercourse - 24,506ft

Page 35 of 105



Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Forested/Shrub Wetland
 - **Freshwater Pond**

Lake Other Riverine be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)

This page was produced by the NWI mapper

2024 2.57.11 Recei d by OCL

U.S. Fish and Wildlife Service

National Wetlands Inventory



December 7, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

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


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U.S. Fish and Wildlife Service

National Wetlands Inventory

Aldabra 25 Fed #006H Wetland 10,950 ft

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February 2, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

Released to Imaging: 6/26/2024 9:28:33 AM

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

Lake Other Riverine

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

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Aldabra 25 Fed #006H Nearest Subsurface Mine10.8 Mi (56,847 ft)



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



Received by OCD: 6/25/2024 2:57:11 PM Algabra 25 Federal #006

High Karst Area: Feature 1 Site: 32.268681, -103.726349

128

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Image © 2024 Airbus

Distance to nearest high karst area 7.13 miles/37,682 feet

128



32.268681, -103.726349

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5 mi

128

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Google Earth Released to Imaging: 6/26/2024 9:28:33 AM

Received by OCD: 6/25/2024 2:57:11,PM National Flood Hazard Layer FIRMette



Legend

regulatory purposes.

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Releasea to Imaging: 6/26/2024 9.98:33 AM 1,500



Basemap Imagery Source: USGS National Map 2023

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Received by OCD: 6/25/2024 2:57:11 PM Distance 34,641 Tt

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Enterprise Products Sand Dunes North

Legend

Page 44 of 105

- Aldabra 25 Fed #006H
- Distance 34,641 ft.
 - FEMA 100-year Flood Zone Hazard Area

2 mi

Aldabra 25(Fed #006H

Jal, NM Picnic Area

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United States Department of Agriculture

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants Custom Soil Resource Report for Eddy Area, New Mexico, and Lea County, New Mexico



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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MAP L	EGEND	MAP INFORMATION	
Area of Interest (AOI) Area of Interest (AOI)	Spoil Area	The soil surveys that comprise your AOI were mapped at 1:20,000.	
Soils Soil Map Unit Polygons	Very Stony Spot Wet Spot	Please rely on the bar scale on each map sheet for map measurements.	
Soil Map Unit Lines Soil Map Unit Points	 △ Other Special Line Features 	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Margater (EDSC:2957)	
Special Point Features Image: Special Point	watures Special Life Features Coordinate System: Web Mercator (EPS ut Water Features Maps from the Web Soil Survey are based		
Clay Spot	Transportation +++ Rails	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	
Gravel Pit	Interstate HighwaysUS Routes	This product is generated from the USDA-NRCS certified data as	
Cravely Spot	Major Roads Local Roads	Soil Survey Area: Eddy Area, New Mexico	
Marsh or Swamp	Background Aerial Photography	Soil Survey Area Data: Version 19, Sep 7, 2023 Soil Survey Area: Lea County, New Mexico	
Mille of Quarry Miscellaneous Water Berennial Water		Your area of interest (AOI) includes more than one soil survey	
Rock Outcrop		area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interretations that do not completely agree	
Sandy Spot		across soil survey area boundaries.	
Sinkhole		1:50,000 or larger.	
Side or Silp		Date(s) aeriai images were photographed: Feb 7, 2020—May 12, 2020	
		compiled and digitized probably differs from the background	

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MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ВА	Berino loamy fine sand, 0 to 3 percent slopes	19.2	3.0%
КМ	Kermit-Berino fine sands, 0 to 3 percent slopes	395.3	60.8%
SN	Simona and Wink fine sandy loams, 0 to 3 percent slopes, eroded	28.7	4.4%
Subtotals for Soil Survey Area		443.2	68.2%
Totals for Area of Interest		649.9	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
КD	Kermit-Palomas fine sands, 0 to 12 percent slopes	89.8	13.8%
MF	Maljamar and Palomas fine sands, 0 to 3 percent slopes	101.6	15.6%
PU	Pyote and Maljamar fine sands	15.3	2.4%
Subtotals for Soil Survey Area		206.7	31.8%
Totals for Area of Interest		649.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They

generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eddy Area, New Mexico

BA—Berino loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w42 Elevation: 2,000 to 5,700 feet Mean annual precipitation: 6 to 14 inches Mean annual air temperature: 57 to 70 degrees F Frost-free period: 180 to 260 days Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 99 percent Minor components: 1 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

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

Typical profile

H1 - 0 to 12 inches: loamy fine sand H2 - 12 to 58 inches: sandy clay loam H3 - 58 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BC007NM - Loamy Hydric soil rating: No

Minor Components

Pajarito

Percent of map unit: 1 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

KM—Kermit-Berino fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4q Elevation: 3,100 to 4,200 feet Mean annual precipitation: 10 to 14 inches Mean annual air temperature: 60 to 64 degrees F Frost-free period: 190 to 230 days Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 50 percent Berino and similar soils: 35 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Plains, alluvial fans Landform position (three-dimensional): Talf, rise Down-slope shape: Convex, linear Across-slope shape: Linear Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 7 inches: fine sand *H2 - 7 to 60 inches:* fine sand

Properties and qualities

Slope: 0 to 3 percent Depth to restrictive feature: More than 80 inches Drainage class: Excessively drained Runoff class: Negligible 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 Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm) Sodium adsorption ratio, maximum: 1.0 Available water supply, 0 to 60 inches: Low (about 3.1 inches)

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Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: A Ecological site: R070BD005NM - Deep Sand Hydric soil rating: No

Description of Berino

Setting

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

Typical profile

H1 - 0 to 17 inches: fine sand H2 - 17 to 50 inches: fine sandy loam H3 - 50 to 58 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Minor Components

Active dune land

Percent of map unit: 15 percent Hydric soil rating: No

SN—Simona and Wink fine sandy loams, 0 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1w5y Elevation: 3,000 to 4,200 feet Mean annual precipitation: 10 to 14 inches Mean annual air temperature: 60 to 64 degrees F Frost-free period: 200 to 220 days Farmland classification: Not prime farmland

Map Unit Composition

Simona and similar soils: 45 percent Wink and similar soils: 40 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Simona

Setting

Landform: Plains, alluvial fans Landform position (three-dimensional): Rise Down-slope shape: Convex, linear Across-slope shape: Linear Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 19 inches: fine sandy loam *H2 - 19 to 23 inches:* indurated

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s Land capability classification (nonirrigated): 7e Hydrologic Soil Group: D Ecological site: R070BD002NM - Shallow Sandy Hydric soil rating: No

Description of Wink

Setting

Landform: Swales, depressions Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Convex Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 8 inches: fine sandy loam

H2 - 8 to 38 inches: fine sandy loam

H3 - 38 to 60 inches: stratified gravelly variable

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: A Ecological site: R070BD004NM - Sandy Hydric soil rating: No

Minor Components

Dune land

Percent of map unit: 15 percent *Hydric soil rating:* No

Lea County, New Mexico

KD—Kermit-Palomas fine sands, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpv Elevation: 3,000 to 4,400 feet Mean annual precipitation: 10 to 12 inches Mean annual air temperature: 60 to 62 degrees F Frost-free period: 190 to 205 days Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 70 percent *Palomas and similar soils:* 20 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: 3 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 flooding: None Maximum salinity: Nonsaline (0.0 to 1.0 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: R070BD005NM - Deep Sand Hydric soil rating: No

Description of Palomas

Setting

Landform: Dunes

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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: Alluvium derived from sandstone

Typical profile

A - 0 to 16 inches: fine sand Bt - 16 to 60 inches: sandy clay loam Bk - 60 to 66 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 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: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Minor Components

Pyote

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

Maljamar

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

Palomas

Percent of map unit: 1 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Dune land

Percent of map unit: 1 percent Hydric soil rating: No

MF—Maljamar and Palomas fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: dmqb Elevation: 3,000 to 3,900 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: Farmland of statewide importance

Map Unit Composition

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

Description of Maljamar

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): 7e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B

Custom Soil Resource Report

Ecological site: R070BD003NM - Loamy Sand *Hydric soil rating:* No

Description of Palomas

Setting

Landform: Plains Landform position (three-dimensional): Rise Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium derived from sandstone

Typical profile

A - 0 to 16 inches: fine sand Bt - 16 to 60 inches: sandy clay loam Bk - 60 to 66 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 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: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent Ecological site: R070BC022NM - Sandhills Hydric soil rating: No

Wink

Percent of map unit: 5 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

PU—Pyote and Maljamar fine sands

Map Unit Setting

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

Map Unit Composition

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

Description of Pyote

Setting

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

Typical profile

A - 0 to 30 inches: fine sand Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 7s Hydrologic Soil Group: A

Custom Soil Resource Report

Ecological site: R070BD003NM - Loamy Sand *Hydric soil rating:* No

Description of Maljamar

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Kermit

Percent of map unit: 10 percent Ecological site: R070BC022NM - Sandhills Hydric soil rating: No

Soil Information for All Uses

Ecological Sites

Individual soil map unit components can be correlated to a particular ecological site. The Ecological Site Assessment section includes ecological site descriptions, plant growth curves, state and transition models, and selected National Plants database information.

All Ecological Sites — (Aldabra 25 Fed 6H)

An "ecological site" is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. For example, the hydrology of the site is influenced by development of the soil and plant community. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production.

An ecological site name provides a general description of a particular ecological site. For example, "Loamy Upland" is the name of a rangeland ecological site. An "ecological site ID" is the symbol assigned to a particular ecological site.

The map identifies the dominant ecological site for each map unit, aggregated by dominant condition. Other ecological sites may occur within each map unit. Each map unit typically consists of one or more components (soils and/or miscellaneous areas). Each soil component is associated with an ecological site. Miscellaneous areas, such as rock outcrop, sand dunes, and badlands, have little or no soil material and support little or no vegetation and therefore are not linked to an ecological site. The table below the map lists all of the ecological sites for each map unit component in your area of interest.

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Custom Soil Resource Report Map—Dominant Ecological Site (Aldabra 25 Fed 6H) 42' 38" W 103° 44' 29' W 103° 619200 621300 618600 618900 619500 619800 620100 620400 620700 621000 32° 16' 37" N 32° 16' 37" N 3571800 3571800 BA 3571500 3571500 3571200 3571200 MF 3570900 KM -KD 3570900 3570600 3570600 SN 3570300 3570300 PU 3570000 - 80 32° 15' 36" N 32° 15' 36" N 620400 618900 619200 . 619500 . 620100 620700 621000 618600 619800 621300 103°44'29" W 103° 42' 38" W Map Scale: 1:13,300 if printed on A landscape (11" x 8.5") sheet. ___Meters 900 Ν 300 600 150 Feet 3000 1000 2000 500 0 \mathbb{A} Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Custom Soil Resource Report

	MAP LEGEND		MAP INFORMATION
Area of In	terest (AOI) Area of Interest (AOI)	✓ US Routes✓ Major Roads	The soil surveys that comprise your AOI were mapped at 1:20,000.
Soils Soil Rat	ing Polygons R070BC007NM	Local Roads	Please rely on the bar scale on each map sheet for map measurements.
	R070BD002NM R070BD003NM	Aerial Photography	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
	R070BD005NM Not rated or not available		Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
Soil Rat	ing Lines R070BC007NM		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.
~	R070BD002NM R070BD003NM		This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
\sim	Not rated or not available		Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 19, Sep 7, 2023
Soil Rat	ing Points R070BC007NM R070BD002NM		Soil Survey Area: Lea County, New Mexico Survey Area Data: Version 20, Sep 6, 2023
	R070BD003NM R070BD005NM		Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different
U Water Fea	Not rated or not available tures		different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.
Transport	Streams and Canals ation		Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.
~	Rails Interstate Highways		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

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Custom Soil Resource Report

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
Γ

Table—Ecological Sites by Map Unit Component (Aldabra 25 Fed 6H)

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI			
BA	Berino loamy fine sand, 0 to 3	Berino (99%)	R070BC007NM — Loamy	19.2	3.0%			
	percent slopes	Pajarito (1%)	R070BD003NM — Loamy Sand					
КМ	Kermit-Berino fine sands, 0 to 3 percent slopes	Kermit (50%)	R070BD005NM — Deep Sand	395.3	60.8%			
		Berino (35%)	R070BD003NM — Loamy Sand					
		Active dune land (15%)						
SN	Simona and Wink fine sandy loams, 0 to 3 percent slopes, eroded	Simona (45%)	R070BD002NM — Shallow Sandy	28.7	4.4%			
		Wink (40%)	R070BD004NM — Sandy					
		Dune land (15%)						
Subtotals for Soil S	urvey Area	1		443.2	68.2%			
Totals for Area of In	terest			649.9	100.0%			

Map unit symbol Map unit name		Component name (percent)	Ecological site	Acres in AOI	Percent of AOI	
KD	Kermit-Palomas fine sands, 0 to 12	Kermit (70%)	R070BD005NM — Deep Sand	89.8	13.8%	
	percent slopes	Palomas (20%)	R070BD003NM — Loamy Sand			
		Maljamar (4%)	R070BD003NM — Loamy Sand			
		Pyote (4%)	R070BD003NM — Loamy Sand			
		Dune land (1%)				
		Palomas (1%)	R070BD003NM — Loamy Sand			
MF	Maljamar and Palomas fine sands, 0 to 3 percent slopes	Maljamar (46%)	R070BD003NM — Loamy Sand	101.6	15.6%	
		Palomas (44%)	R070BD003NM — Loamy Sand			
		Kermit (5%)	R070BC022NM — Sandhills			
		Wink (5%)	R070BD003NM — Loamy Sand			
PU	Pyote and Maljamar fine sands	Pyote (46%)	R070BD003NM — Loamy Sand	15.3	2.4%	

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Custom Soil Resource Report

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
		Maljamar (44%)	R070BD003NM — Loamy Sand		
		Kermit (10%)	R070BC022NM — Sandhills		
Subtotals for Soil Su	irvey Area	206.7	31.8%		
Totals for Area of Interest				649.9	100.0%

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Conservation Service

USDA Natural Resources

Ecological site R070BD005NM Deep Sand

Accessed: 02/23/2024

General information

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

Figure 1. Mapped extent

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

Table 1. Dominant plant species

Tree	Not specified			
Shrub	Not specified			
Herbaceous	Not specified			

Physiographic features

This site occurs on terraces, Piedmonts, dunes fields, or upland plains. Parent material consists of eolian deposits and alluvium derived from sandstone. Slopes range from 0 to 15 percent, usually less than 5 percent. Low, stabilized hummocks or dunes frequently occur. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative	physiographic	features
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Landforms	(1) Dune(2) Parna dune(3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	0–15%
Aspect	Aspect is not a significant factor

Climatic features

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

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

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

Both temperature and moisture favor warm season perennial plant growth. During years of abundant winter and early spring moisture, cool season growth and annual forbs, make up an important component of this site. Strong winds blow from the west from January through June, which accelerates soil drying during a critical period for cool

season plant growth.

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

Table 3. Representative climatic features

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

Influencing water features

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

Soil features

Soils are deep or very deep. Surface textures are sand loam, fine sand or loamy fine sand, Underlying material textures are loamy fine sand, fine sand, sand or fine sandy loam. Because of the coarse textures and rapid drying of the surface, the soil, if unprotected by plant cover and organic residue, becomes windblown and low hummocks or dunes are formed around shrubs.

Characteristic soils are: Anthony Aguena Kermit Likes Pintura Bluepoint

Table 4. Representative soil features

Surface texture	(1) Sand(2) Fine sand(3) Loamy fine sand				
Family particle size	(1) Sandy				
Drainage class	Well drained to excessively drained				
Permeability class	Moderate to very rapid				
Soil depth	60–72 in				
Surface fragment cover <=3"	0–5%				
Surface fragment cover >3"	0%				
Available water capacity (0-40in)	3–5 in				
Calcium carbonate equivalent (0-40in)	5–15%				
Electrical conductivity (0-40in)	0–4 mmhos/cm				
Sodium adsorption ratio (0-40in)	0–2				
Soil reaction (1:1 water) (0-40in)	6.6–7.8				

Subsurface fragment volume <=3" (Depth not specified)	5–10%		
Subsurface fragment volume >3" (Depth not specified)	0%		

Ecological dynamics

Overview

The Deep Sand site occurs adjacent to and/or intergraded with the Sandhills and Sandy sites (SD-3). The Deep Sand site can be distinguished by slopes less than eight percent (approximately five percent) and textural changes at depths greater than 40 inches. The Deep Sand site has well drained soils with a surface texture of sand or loamy fine sand. The Sandhills site has slopes greater than eight percent and textural depths greater than 60 inches. Conversely, the Sandy site has slopes less than five percent and depths to textural change commonly around 20 inches. The historic plant community of the Deep Sand site is dominated primarily by giant dropseed (*Sporobolus giganteus*) and other dropseeds (*S. flexuosus, S. contractus, S. cryptandrus*), with scattered shinnery oak (*Quercus havardii*) and soapweed yucca (*Yucca glauca*). Other herbaceous species include threeawns (Aristida spp.), bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), and annual and perennial forbs distributed relative to precipitation occurrences. Bare ground and litter compose a significant proportion of ground cover while grasses are the remainder. Shinnery oak will increase with an associated decrease in dropseed and bluestem abundance possibly due to climatic change, fire suppression, interspecific competition, and excessive grazing. Continued grass cover loss may result in a transition to a shinnery oak dominated state with increases in sand sage (*Artemisia filifolia*) and honey mesquite (*Prosopis glandulosa*). However, brush management may restore the grassland component and reverse the shinnery oak state back toward the historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram)

MLRA-42, SD-3, Deep Sand



1.a Climate, fire suppression, competition, over grazing

1.b Brush control, Prescribed grazing

State 1 Historic Climax Plant Community

Community 1.1 Historic Climax Plant Community

State Containing Historic Plant Community Grassland: The historic plant community is dominated by giant dropseed, other dropseeds, threeawns, and bluestems. Dominant woody plants include shinnery oak and soapweed yucca. Forb abundance and distribution varies and is dependent on annual rainfall. The Deep Sand site typically exists in sandy plains and dunes (Sosebee 1983). Grass dominance stabilizes the potentially erosive sandy soils. Historical fire suppression, however, may have contributed to increased woody plant abundance, which has reduced grass species. Further, drought conditions compounded with excessive grazing likely has driven most grass species out of competition with shrubs which has resulted in a shinnery oak dominated state with sand sage and mesquite (Young et al. 1948). Diagnosis: Grassland dominated by dropseeds, threeawns, and bluestems. Small shrubs, such as shinnery oak and soapweed yucca, and subshrubs are dispersed throughout the grassland. Other grasses that could appear on this site would include: flatsedge, almejita signalgrass, big bluestem, Indiangrass, fall witchgrass, hairy grama and red lovegrass Other shrubs include: fourwing saltbush, mesquite, ephedra and broom snakeweed. Other forbs include: wooly and scarlet gaura, wooly dalea, phlox heliotrope, scorpionweed, deerstongue, fleabane, nama, hoffmanseggia, lemon beebalm and stickleaf.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	396	858	1320
Shrub/Vine	108	234	360
Forb	96	208	320
Total	600	1300	2000

Table 6. Ground cover

Tree foliar cover	0%	
Shrub/vine/liana foliar cover	0%	
Grass/grasslike foliar cover	15-20%	
Forb foliar cover	0%	
Non-vascular plants	0%	
Biological crusts	0%	
Litter	35-40%	
Surface fragments >0.25" and <=3"	0%	
Surface fragments >3"	0%	
Bedrock	0%	
Water	0%	
Bare ground	35-40%	

Figure 5. Plant community growth curve (percent production by month). NM2805, HCPC. SD-3 Deep Sand - Warm season plant community .

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

State 2 Shinnery Oak Dominated

Community 2.1 Shinnery Oak Dominated Shinnery oak-Dominated



Shinnery oak-Dominated



Shinnery oak-Dominated





 Shiraway oak and dropseeds
 Grass cover minimizes here put these and erosion

Schmery oak and sand sage
 Large bare patches and soil
 blowouts in adjacent sandhalls
 Extensive mixmus reduce soil

 Send bluesten, threesens, giant caraton, spike dropseed, Hall's perioum, little bluestem

 Feather dales, mesquite, Shinnery oak, bush muhly, four-wing calibush, javelins

Roswell series

buch, and cand cage Pintura series logany fine cand

Shinnery Oak Dominated: This state is dominated by shinnery oak with subdominants of sand sage or mesquite. Bare ground is a significant component in this state as well. shinnery oak is characterized by dense stands in sandy soils; however, as clay percentage increases, shinnery oak decreases. Shinnery oak abundance and distribution increase with disturbances, such as excessive grazing and fire, due to an aggressive rhizome system. As shinnery oak abundance increases, an associated increase of mesquite, sand sage, and soapweed yucca also occurs. Shinnery oak's extensive root system allows the oak to competitively exclude grasses and forbs. Sand sage, however, stabilizes light sandy soils from wind erosion and can co-exist with herbaceous species by protecting them in heavily grazed conditions (Davis and Bonham 1979). Shinnery oak has been found primarily in very deep, excessively drained, and rapidly permeable soils. Shinnery oak is associated with landforms which are gently undulating to rolling uplands, very gently sloping to moderately steep slopes, and upland plains, alluvial fans and valley sideslopes. Shinnery oak and sand sage can be controlled with herbicide if applied in the spring with a subsequent rest from grazing (Herbel et al. 1979, Pettit 1986). In addition, repetitive seasons of goat browsing can also reduce shinnery oak abundance. Patches should be maintained during brush control, however, to prevent erosion and to provide wildlife cover and forage. Further, as shinnery oak and other shrubs increase, bare patches and erosion will increase due to a lack of herbaceous ground cover. Diagnosis: Shinnery oak dominated with subdominant sand sage, honey mesquite, and soapweed yucca with increasing frequency and size of bare patches. Transition to Shinnery oak dominated state (1a): The historic plant community begins to shift toward the shinnery oak dominated state as drivers such as climate change, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by an increase of shrub species abundance and bare patch expansion. Key indicators of approach to transition: • Loss of grass and forb cover • Surface soil erosion • Bare patch expansion • Increased shrub species abundance and composition Transition to Historic Plant Community (1b): The shinnery oak dominated state may transition back toward the historic plant community as new drivers are introduced such as prescribed grazing, brush control, and discontinued drought conditions.

Additional community tables

Table 7. Community 1.1 plant community composition

Group Common Name

Symbol Scientific Name

•

4				450 505	
1	Warm Season		1	450–585	
	spike dropseed	SPCO4	Sporobolus contractus	450–585	
	sand dropseed	SPCR	Sporobolus cryptandrus	450–585	
	mesa dropseed	SPFL2	Sporobolus flexuosus	450–585	-
	giant dropseed	SPGI	Sporobolus giganteus	450–585	-
2	Warm Season	<u>.</u>	-	65–104	
	sand bluestem	ANHA	Andropogon hallii	65–104	-
	little bluestem	SCSC	Schizachyrium scoparium	65–104	-
3	Warm Season			39–91	
	threeawn	ARIST	Aristida	39–91	-
4	Warm Season		•	13–39	
	thin paspalum	PASE5	Paspalum setaceum	13–39	-
5	Warm Season		•	13–39	
	black grama	BOER4	Bouteloua eriopoda	13–39	
6	Warm Season	<u>I</u>		13–39	
	mat sandbur	CELO3	Cenchrus longispinus	13–39	
7	Warm Season			13–39	
	Havard's panicgrass	PAHA2	Panicum havardii	13–39	
8	Warm Season		1	13–65	
	plains bristlegrass	SEVU2	Setaria vulpiseta	13–65	
9	Other Annual Grasses			13–65	
	Grass, annual	2GA	Grass. annual	13–65	
Shru	b/Vine	Į	, , , , , , , , , , , , , , , , , , ,		
10	Shrub			65–130	
	Havard oak	QUHA3	Quercus havardii	65–130	
11	Shrub			13–39	
	sand sagebrush	ARFI2	Artemisia filifolia	13–39	
12	Shrub			65–130	
	VUCCA	YUCCA	Уисса	65-130	
13	Shrub	1000/	10000	13-39	
	rabbitbrush	CHRYS9	Chrysothamnus	13-39	
14	Other Shrubs	0111100		13-39	
17	Shrub (> 5m)	2SHRUB	Shruh (> 5m)	13_30	
Forb	Silidb (2.511)	2011(00		13-39	
15	Forb			20.01	
15	rorb	срото	Croton	39–91	
				39–91	
16		GAPU	Gaillarula pulchella	39-91	
01			A - 4 - 1	39–91	
	aster	ASTER	Aster	39–91	
	whitest evening primrose	OEAL	Oenothera albicaulis	39–91	
	beardtongue	PENST	Penstemon	39–91	
17	Forb		1	39–91	
	Itouristolant	DIWI2	Dimorphocarpa wislizeni	39–91	_

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	buckwheat	ERIOG	Eriogonum	39–91	-
	sunflower	HELIA3	Helianthus	39–91	
	spiny false fiddleleaf	HYSP	Hydrolea spinosa	39–91	-
	threadleaf ragwort	SEFLF	Senecio flaccidus var. flaccidus	39–91	
18	Other Forbs			13–65	
	Forb (herbaceous, not grass nor grass-like)	2FORB	Forb (herbaceous, not grass nor grass-like)	13–65	-

Animal community

This site provides habitat which supports a resident animal population characterized by pronghorn, antelope, blacktailed jackrabbit, spotted ground squirrel, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, meadowlark, roadrunner, white-necked raven, cactus wren, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake and ornate box turtle. In the area called Mescalero Sands, there are white-tailed and mule deer.

Hydrological functions

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

Hydrologic Interpretations Soil Series Hydrologic Group Anthony B Bluepoint A Kermit A Aguena A Likes A Pintura A

Recreational uses

This site offers limited recreation potential for hiking, horseback riding, nature observation and photography; game bird, predator, antelope, and deer hunting.

Wood products

This site has no potential for wood products.

Other products

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. Shinnery oak is toxic in the late bud or early leaf stage. Shinnery oak will increase, as will sand sagebrush following drought. Changes in the fire return interval have also favored an increase in shrub cover. The dropseeds and bluestem will decrease. This site responds very well to brush manangement and deferment. This site is well suited to a grazing system that rotates the season of use. Nesting habitat for lesser prairie chicken can be improved by providing residual cover that is at least 14 inches high.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM 100 - 76 2.0 - 3.8 75 - 51 3.0 - 6.0 50 - 26 5.0 - 10.0 25 - 0 10.1 +

Inventory data references

Other References:

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

Other references

Literature Cited

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

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

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

Sosebee, Ronald E. 1983. Physiological, phenological, and environmental considerations in brush and weed control. In: McDaniel, Kirk C., ed. Proceedings--brush management symposium; 1983 February 16; Albuquerque, NM. Denver, CO: Society for Range Management: 27-43.

Young, Vernon A., Anderwald, Frank R.,McCully, Wayne G. 1948. Brush problems on Texas ranges. Miscellaneous Publication 21. College Station, TX: Texas Agricultural Experiment Station. 19 p.

Contributors

Don Sylvester Quinn Hodgson

Rangeland health reference sheet

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

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

Indicators

1. Number and extent of rills:

- 2. Presence of water flow patterns:
- 3. Number and height of erosional pedestals or terracettes:
- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):
- 5. Number of gullies and erosion associated with gullies:
- 6. Extent of wind scoured, blowouts and/or depositional areas:
- 7. Amount of litter movement (describe size and distance expected to travel):
- 8. Soil surface (top few mm) resistance to erosion (stability values are averages most sites will show a range of values):
- 9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):
- 10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:
- 11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):
- 12. Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):

Dominant:

Sub-dominant:

Other:

Additional:

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

decadence):

- 14. Average percent litter cover (%) and depth (in):
- 15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annualproduction):
- 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:
- 17. Perennial plant reproductive capability:

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Aldabra 25 Fed #006H Geology



Playa—Alluvium and evaporite deposits (Holocene)

Water-Perenial standing water

Qa—Alluvium (Holocene to upper Pleistocene)



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 Bureau TIGER/Line data; USFS

APPENDIX C – Daily Field and Sampling Reports



Client:	Devon Energy Corporation	Inspection Date:	9/20/2023
Site Location Name:	Aldabra 25 Federal #006H	Report Run Date:	9/20/2023 6:54 PM
Client Contact Name:	Dale Woodall	API #:	30-015-38602
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	
		Summary of T	limes
Arrived at Site	9/20/2023 11:00 AM		
Departed Site	9/20/2023 12:15 PM		

Field Notes

11:43 Completed safety paperwork. Arrived for scheduled, on site Liner inspection.

12:00 Inspected both outside and inside walls and liner of containment and did not find any damage or breaches related to incident. There was no unexpected staining on soil outside the containment. Inspected liner around and between equipment and tanks inside containment. Did not find any damage, breaches, or areas of concern with liner within containment.

Next Steps & Recommendations

1 Prepare report



 Site Photos

 Viewing Direction: Southwest

 Viewing Direction: West

 Viewing Direction: West

 Viewing Direction: West

 Northeast corner containment facing southwest. East side, outside containment.

 Appears to be some residual rainwater, with various larvae thriving, pooled in corner.





side and center, inside containment.

Run on 9/20/2023 6:54 PM UTC

side and center, inside containment.





Northeast corner containment facing northeast. East side, inside containment.

Southeast corner containment facing southeast. East side, inside containment.

Run on 9/20/2023 6:54 PM UTC



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Run on 9/20/2023 6:54 PM UTC





V

VERTEX

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature:

Run on 9/20/2023 6:54 PM UTC

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APPENDIX D – Notification



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Liner Inspection Aldabra 25 Fed 6

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Fri, Sep 15, 2023 at 5:40 PM To: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, Brittany.Hall@emnrd.nm.gov, "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>, KStallings@vertex.ca

Please accept this email as notification that Vertex Resource Services has scheduled a Liner Inspection to be conducted at the following release.

Aldabra 25 Fed 6, nAB1515927960, nAB1616056900

On Wednesday September 20, 2023, Vertex will be on-site to conduct a final liner inspection. If you have any questions regarding this notification, please call at 346-814-1413.

V/R, Steph McCarty Environmental Technician Vertex Resource Services Inc. 3101 Boyd Drive, Carlsbad, NM 88220

C 575.263.3295

www.vertex.ca

 Rodgers, Scott, EMNRD <Scott.Rodgers@emnrd.nm.gov>
 Mon, Sep 18, 2023 at 9:34 AM

 To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>, "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>,

 "Hall, Brittany, EMNRD" <Brittany.Hall@emnrd.nm.gov>, "KStallings@vertex.ca" <KStallings@vertex.ca>

The OCD has received your notification. 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.

Scott Rodgers • Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113

505.469.1830 | scott.rodgers@emnrd.nm.gov

http://www.emnrd.nm.gov/ocd_



From: Dhugal Hanton <vertexresourcegroupusa@gmail.com> Sent: Friday, September 15, 2023 5:41 PM To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; KStallings@vertex.ca Subject: [EXTERNAL] Liner Inspection Aldabra 25 Fed 6

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

[Quoted text hidden]

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District III

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

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

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

QUESTIONS

Action 357449

QUESTIONS		
Operator:	OGRID:	
DEVON ENERGY PRODUCTION COMPANY, LP	6137	
333 West Sheridan Ave. Oklahoma City, OK 73102	Action Number:	
	357449	
	Action Type:	
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2125651649
Incident Name	NAPP2125651649 ALDABRA 25 FED #06H @ 30-015-38602
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-38602] ALDABRA 25 FEDERAL #006H

Location of Release Source

Please answer all the questions in this group.		
Site Name	ALDABRA 25 FED #06H	
Date Release Discovered	09/11/2021	
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	Νο	
Has this release endangered or does it have a reasonable probability of endangering public health	Νο	
Has this release substantially damaged or will it substantially damage property or the environment	Νο	
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	Νο	

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: Other Other (Specify) Produced Water Released: 56 BBL Recovered: 56 BBL Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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)	Not answered.

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District IV

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

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

QUESTIONS, Page 2

Action 357449

QUESTIONS (continued)		
Operator:	OGRID:	
DEVON ENERGY PRODUCTION COMPANY, LP	6137	
333 West Sheridan Ave.	Action Number:	
Oklahoma City, OK 73102	357449	
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Initial Response

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	Yes	
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.	
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.		

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 remed actions to date in the follow-up C-141 submission. If remedial efforts have been successfully comple Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure	tlation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of eted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of 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 to report and/or file certain release notifications and perform corrective actions for rele the OCD does not relieve the operator of liability should their operations have failed to water, human health or the environment. In addition, OCD acceptance of a C-141 repo local laws and/or regulations.	knowledge and understand that pursuant to OCD rules and regulations all operators are required bases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface rt does not relieve the operator of responsibility for compliance with any other federal, state, or
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com

Date: 06/25/2024

District I

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

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

QUESTIONS, Page 3

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Action 357449

 QUESTIONS (continued)

 Operator:
 DEVON ENERGY PRODUCTION COMPANY, LP
 0GRID:

 333 West Sheridan Ave.
 6137

 Oklahoma City, OK 73102
 Action Number:

 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.

release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 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		
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 which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence	09/15/2023	
On what date will (or did) the final sampling or liner inspection occur	09/15/2023	
On what date will (or was) the remediation complete(d)	09/15/2023	
What is the estimated surface area (in square feet) that will be remediated	0	
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	e 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.

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

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

District III

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

District IV aia Dr. Canta Fa. NM 97505

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

Page 103 of 105

Action 357449

Phone:(505) 476-3470 Fax:(505) 476-3462		
QUESTIONS (continued)		
Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137 Action Number: 357449 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	he 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 remediat	te / 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)	No	
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed which includes the anticipated timelines for beginning and completing the remediation.	efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC,	
I hereby certify that the information given above is true and complete to the best of my to report and/or file certain release notifications and perform corrective actions for rele the OCD does not relieve the operator of liability should their operations have failed to water, human health or the environment. In addition, OCD acceptance of a C-141 report local laws and/or regulations.	v knowledge and understand that pursuant to OCD rules and regulations all operators are required eases which may endanger public health or the environment. The acceptance of a C-141 report by a dequately investigate and remediate contamination that pose a threat to groundwater, surface ort does not relieve the operator of responsibility for compliance with any other federal, state, or	
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 06/25/2024	

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.

District I

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<u>District IV</u> 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 6

Action 357449

QUESTIONS (continued)		
Operator:	OGRID:	
DEVON ENERGY PRODUCTION COMPANY, LP	6137	
333 West Sheridan Ave.	Action Number:	
Oklahoma City, OK 73102	357449	
	Action Type:	
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Liner Inspection Information	
Last liner inspection notification (C-141L) recorded	357494
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	09/20/2023
Was all the impacted materials removed from the liner	Yes
What was the liner inspection surface area in square feet	5400

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
 0

 What was the total volume (cubic yards) remediated
 0

 Summarize any additional remediation activities not included by answers (above)
 no rips, tears, or holes detected.

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: Dale Woodall Title: EHS Professional
	Email: Dale.woodail@dvn.com
	Date: 06/25/2024

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

District III

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

District IV

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

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

CONDITIONS

Action 357449

CONDITIONS	
Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	357449
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation report closure approved.	6/26/2024