



Incident Number: nAPP2431250006

## Release Assessment and Closure

Wolf AJA Federal Com #21H

Unit M, Section 36, Township 21 South, Range 31 East

County: Eddy

Vertex File Number: 24E-04879

**Prepared for:**

EOG Resources, Inc.

**Prepared by:**

Vertex Resource Services Inc.

**Date:**

December 2024

**EOG Resources, Inc.**  
Wolf AJA Federal Com #21H

**Release Assessment and Closure**  
December 2024

**Release Assessment and Closure**  
**Wolf AJA Federal Com #21H**  
**Unit M, Section 36, Township 21 South, Range 31 East**  
**County: Eddy**

Prepared for:  
**EOG Resources, Inc.**  
104 S. 4<sup>th</sup> Street  
Artesia, New Mexico 88210

**New Mexico Oil Conservation Division**  
506 West Texas Avenue  
Artesia, New Mexico 88210

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

*John Lewis*

John Lewis, B.Sc.  
ENVIRONMENTAL TECHNICIAN, REPORTING

12/23/2024

Date

*Chance Dixon*

Chance Dixon, B.Sc.  
PROJECT MANAGER, REPORT REVIEW

12/23/2024

Date

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## 1.0 Introduction

EOG Resources, Inc (EOG) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water and crude oil release that occurred on November 5, 2024, at Wolf AJA Federal Com #21H (hereafter referred to as the “site”). EOG submitted a Release Notification to New Mexico Oil Conservation Division (NMOCD) on November 7, 2024. Incident ID number nAPP2431250006 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 this release, with the understanding that restoration of the release site will not be completed until the site is decommissioned and the active pad is reclaimed per 19.15.29.13 NMAC.

## 2.0 Incident Description

The release occurred on November 5, 2024, due to human error from the flare stack. The incident was reported on November 7, 2024, and involved the release of approximately 180 barrels (bbl.) of produced water and oil on the pad site. Approximately 149 bbl. of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

## 3.0 Site Characteristics

The site is located approximately 40 miles east of Carlsbad, New Mexico. The legal location for the site is Unit M, Section 36, Township 21 South and Range 31 East in Eddy County, New Mexico. The release area is located on federal property. An aerial photograph and site schematic are presented in Figure 1.

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 around the flare or in proximity to the constructed pad (Figure 1).

*The Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2024) indicates the site’s surface geology primarily comprises Qep – eolian and piedmont deposits (Holocene to middle Pleistocene). The soil at the site is characterized as loamy sand (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Additional soil characteristics include a drainage class of well drained to somewhat excessively drained with a runoff class of moderate to moderately rapid. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with fan piedmonts with elevations ranging between 2,800 and 5,000 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 black grama and dropseeds. Grasses with shrubs and half-shrubs dominate the historical plant community (United States Department of Agriculture,

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Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

#### 4.0 Closure Criteria Determination

The nearest active well to the site is a New Mexico Office of the State Engineer (NMOSE) monitoring well located approximately 1.04 miles west of the location (United States Geological Survey, 2024). Data from 2023 show the NMOSE borehole recorded a depth to groundwater of 110 feet below ground surface (bgs). Information pertaining to the depth to ground water determination is included in Appendix A.

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 an intermittent stream located approximately 2.86 miles southeast 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.

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Table 1. Closure Criteria Determination			
Site Name: Wolf AJA Federal Com #21H			
Spill Coordinates: 32.4318924, -103.7379227		X: 618651.84	Y: 3589010.20
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	110	feet
	Distance between release and nearest DTGW reference	5,280	feet
		1.04	miles
	Date of nearest DTGW reference measurement	February 20, 2023	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	15,126	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	49,804 ft	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	37,792 ft	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	5,280	feet
	ii) Within 1000 feet of any fresh water well or spring	5,280	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	15,986 ft	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	29,583 ft	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	12,250	feet
10	Within a 100-year Floodplain	100-500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	49,835 ft	feet
11	Soil Type	BB and KM	
12	Ecological Classification	Loamy Sand	
13	Geology	Qep	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

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

<b>Table 2. Closure Criteria for Soils Impacted by a Release DTGW &lt;50 feet bgs</b>		
<b>Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS</b>	<b>Constituent</b>	<b>Limit</b>
<b>&lt; 50 feet</b>	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 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

Remediation efforts began on November 14, 2024, and were finalized on November 26, 2024. Vertex personnel supervised the excavation of impacted soils. Excavation activities involved remediating the area around the flare stack and then eventually temporarily moving it. Field screening was completed with a total of 12 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dextsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Quantabs (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 3 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. A Daily Field Report documenting final excavation before the backfill is presented in Appendix B.

Notification that confirmatory samples were being collected was provided to the NMOCD for each day of sampling activities. Horizontal delineation was obtained through excavation utilizing composite sampling. Vertical delineation was completed during excavation with a discrete sample (BS24-07) at three feet below ground surface (bgs) to comply with the regulations set forth in NMAC 19.15.29.12. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments (Figure 1). A total of 12 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Cardinal Laboratory in Hobbs, New Mexico, under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Confirmatory laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix C. All confirmatory samples collected and analyzed were below closure criteria for the site.

On November 26, 2024, Vertex concluded confirmation sampling for the remediation. Upon arrival, it was discovered that the area of BS24-04 was excavated from 2 to 3 feet bgs, which was not planned as that sample point was analyzed under criteria at 2 feet. This essentially removed WS24-03 as well which was a wall sample collected from where the excavation transitioned from 2 to 3 feet. Vertex collected BS24-04 at 3 feet bgs to ensure that no impact remained at



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that depth. The adjacent wall sample (WS24-01) was then collected to account for the additional foot that was exposed from the additional remediation of BS24-04. The sample was analyzed under closure criteria.

## 6.0 Closure Request

The release area was fully delineated, remediated, and backfilled with local soil by November 27, 2024. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release locations “under 50 feet to groundwater”.

Vertex and EOG request that the incident be approved for remediation as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. EOG certifies that all information and appendices in this report are correct, and that they complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain approval on the release at the site.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or [cdixon@vertexresource.com](mailto:cdixon@vertexresource.com).

## 7.0 References

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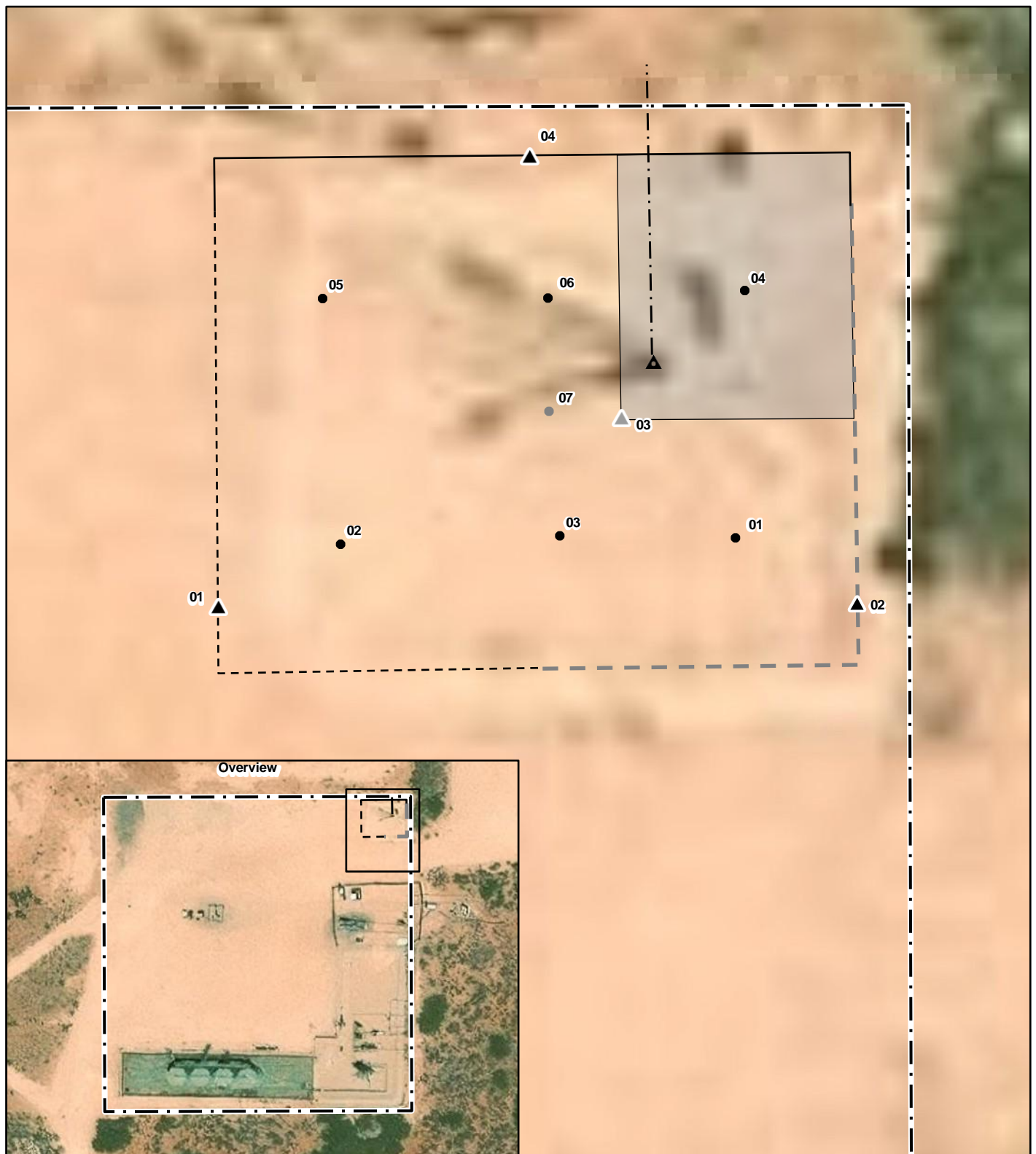
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December 2024

## 8.0 Limitations

This report has been prepared for the sole benefit of EOG Resources, Inc. 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 EOG Resources, Inc. 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.

## **FIGURE**



0 2 4 8 ft  
NAD 1983 UTM Zone 13N  
Date: Dec 19/24  
Map Center:  
Lat: 32.432048°N,  
Long: 103.737498°W



### Confirmation Sampling Site Schematic Wolf AJA Federal Com #21H

FIGURE:  
**1**



Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2024. Approximate site boundary from imagery by Vertex Professional Services Ltd. (VPS), 2024. Site features from GPS by VPS, 2024.

VERSATILITY. EXPERTISE.

## **TABLE**

Client Name: EOG Resources, Inc.  
 Site Name: Wolf AJA Federal Com #21H  
 NMOCD Tracking #: nAPP2431250006  
 Project #: 24E-04879  
 Lab Reports: H247016, H247112, H247206, H247254

Table 3. Confirmatory Sample Field Screen and Laboratory Results

Table 3. Confirmatory Sample Field Screen and Laboratory Results												
Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
					Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Depth to Groundwater: <50												
Backfill-01	N/A	November 26, 2024	-	-	ND	ND	ND	ND	ND	ND	ND	112
BS24-01	0.5	November 14, 2024	-	5,018	-	-	-	-	-	-	-	-
	1	November 14, 2024	-	6,053	-	-	-	-	-	-	-	-
	2	November 15, 2024	-	4,678	ND	ND	ND	ND	ND	ND	ND	4,480
	3	November 20, 2024	9	372	ND	ND	ND	ND	ND	ND	ND	144
BS24-02	0.5	November 14, 2024	-	150	-	-	-	-	-	-	-	-
	1	November 14, 2024	-	6,510	-	-	-	-	-	-	-	-
	2	November 15, 2024	-	6,650	ND	ND	ND	ND	ND	ND	ND	5,680
	3	November 20, 2024	10	150	ND	ND	ND	ND	ND	ND	ND	64
BS24-03	0.5	November 14, 2024	-	4,620	-	-	-	-	-	-	-	-
	1	November 14, 2024	-	3,580	-	-	-	-	-	-	-	-
	2	November 15, 2024	-	2,538	ND	ND	ND	ND	ND	ND	ND	2,160
	3	November 20, 2024	6	237	ND	ND	ND	ND	ND	ND	ND	16
BS24-04	0.5	November 14, 2024	-	7,138	-	-	-	-	-	-	-	-
	1	November 14, 2024	-	3,050	-	-	-	-	-	-	-	-
	2	November 15, 2024	17	108	ND	ND	ND	ND	ND	ND	ND	32
	3	November 26, 2024	-	150	ND	ND	ND	ND	ND	ND	ND	80
BS24-05	0.5	November 14, 2024	-	4,035	-	-	-	-	-	-	-	-
	1	November 14, 2024	-	3,375	-	-	-	-	-	-	-	-
	2	November 15, 2024	-	3,415	ND	ND	ND	ND	ND	ND	ND	3,200
	3	November 20, 2024	0	180	ND	ND	ND	ND	ND	ND	ND	48
BS24-06	2	November 21, 2021	5	130	ND	ND	ND	ND	ND	ND	ND	16
	3	November 26, 2024	4	80	ND	ND	ND	ND	ND	ND	ND	ND
BS24-07	3	November 21, 2024	12	145	ND	ND	ND	ND	ND	ND	ND	96
WS24-01	0-2	November 15, 2024	14	115	ND	ND	ND	ND	ND	ND	ND	96
	2-3	November 26, 2024	1	125	ND	ND	ND	ND	ND	ND	ND	96
WS24-02	0-2	November 15, 2024	25	443	ND	ND	ND	ND	ND	ND	ND	336
	2-3	November 26, 2024	-	107	ND	ND	ND	ND	ND	ND	ND	128
WS24-03	2-3	November 20, 2024	17	282	ND	ND	ND	ND	ND	ND	ND	64
WS24-04	0-3	November 21, 2024	11	187	ND	ND	ND	ND	ND	ND	ND	96

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Strikethrough indicates well samples that were excavated out.

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

## **APPENDIX A – Closure Criteria Research Documentation**



# OSE POD Location Map



11/23/2024, 7:53:00 AM

- Override 1

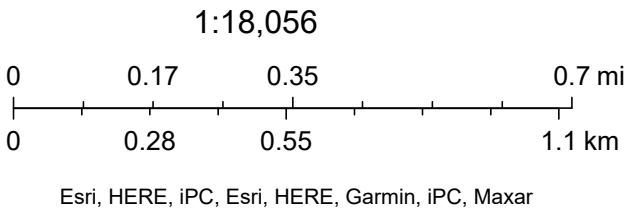
● GIS WATERS PODs

● Active

● Plugged
- OSE District Boundary

NHD Flowlines

— Stream River





# Water Right Summary




[get image](#)  
[list](#)

WR File Number:	C 04691	Subbasin:	CUB	Cross Reference:
Primary Purpose:	MON MONITORING WELL			
Primary Status:	PMT Permit			
Total Acres:		Subfile:	Header:	
Total Diversion:	0.000	Cause/Case:		
Owner:	OXY USA INC			
Contact:	WADE DITTRICH			
Owner:	ENSOLUM LLC			
Contact:	BEAUX JENNINGS			

## Documents on File

(acre-fee)

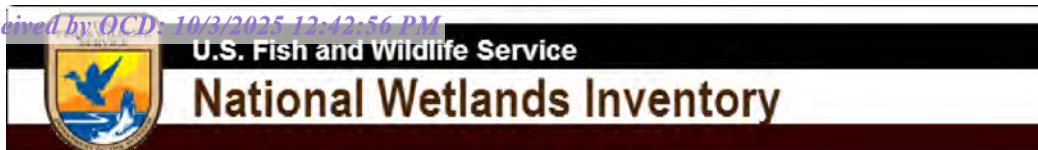
Transaction Images	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/To	Acres	Diversion
 <a href="#">.get images</a>	<a href="#">739532</a>	EXPL	2022-12-22	PMT	APR	C 04691 POD1	T	0.000	0.000

## Current Points of Diversion

POD Number	Well Tag	Source	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map	Other Location Desc
<a href="#">C 04691 POD1</a>	NA		SW	SW	SW	35	21S	31E	617014.9	3588637.1		SB-1

\* UTM location was derived from PLSS - see Help

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



# Wolf AJA Federal Com #21H Watercourse 15,126ft



November 23, 2024

**Wetlands**

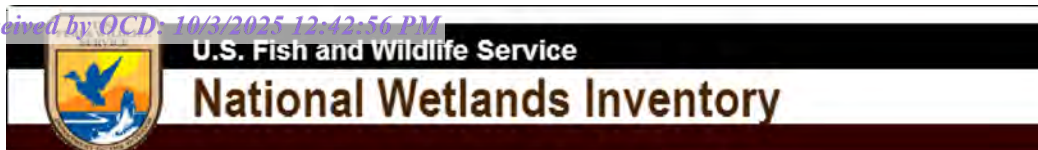
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

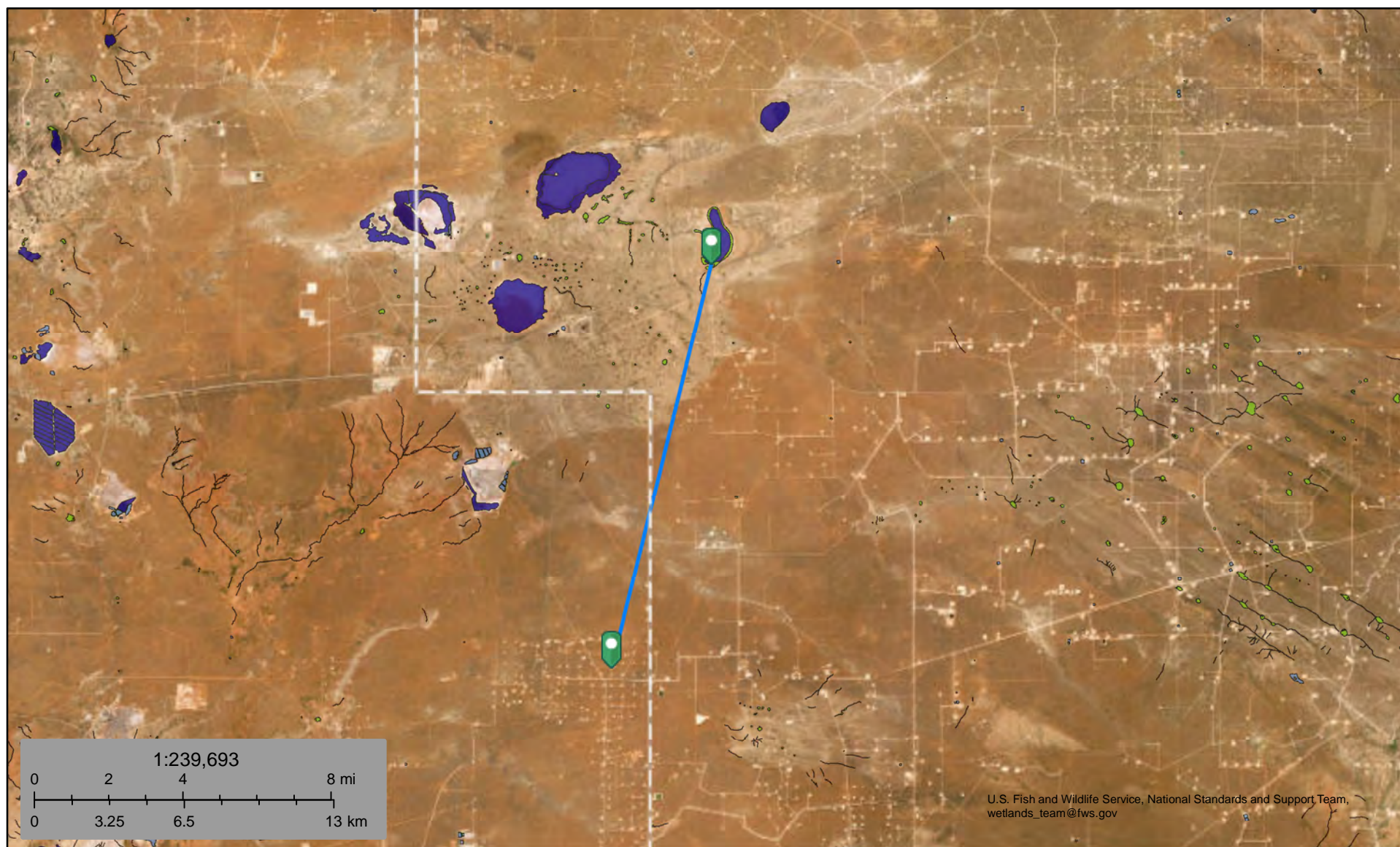
- Lake
- Other
- Riverine

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





# Wolf AJA Federal Com #21H Lake 49,804 ft



November 9, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

- Lake
- Other
- Riverine




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

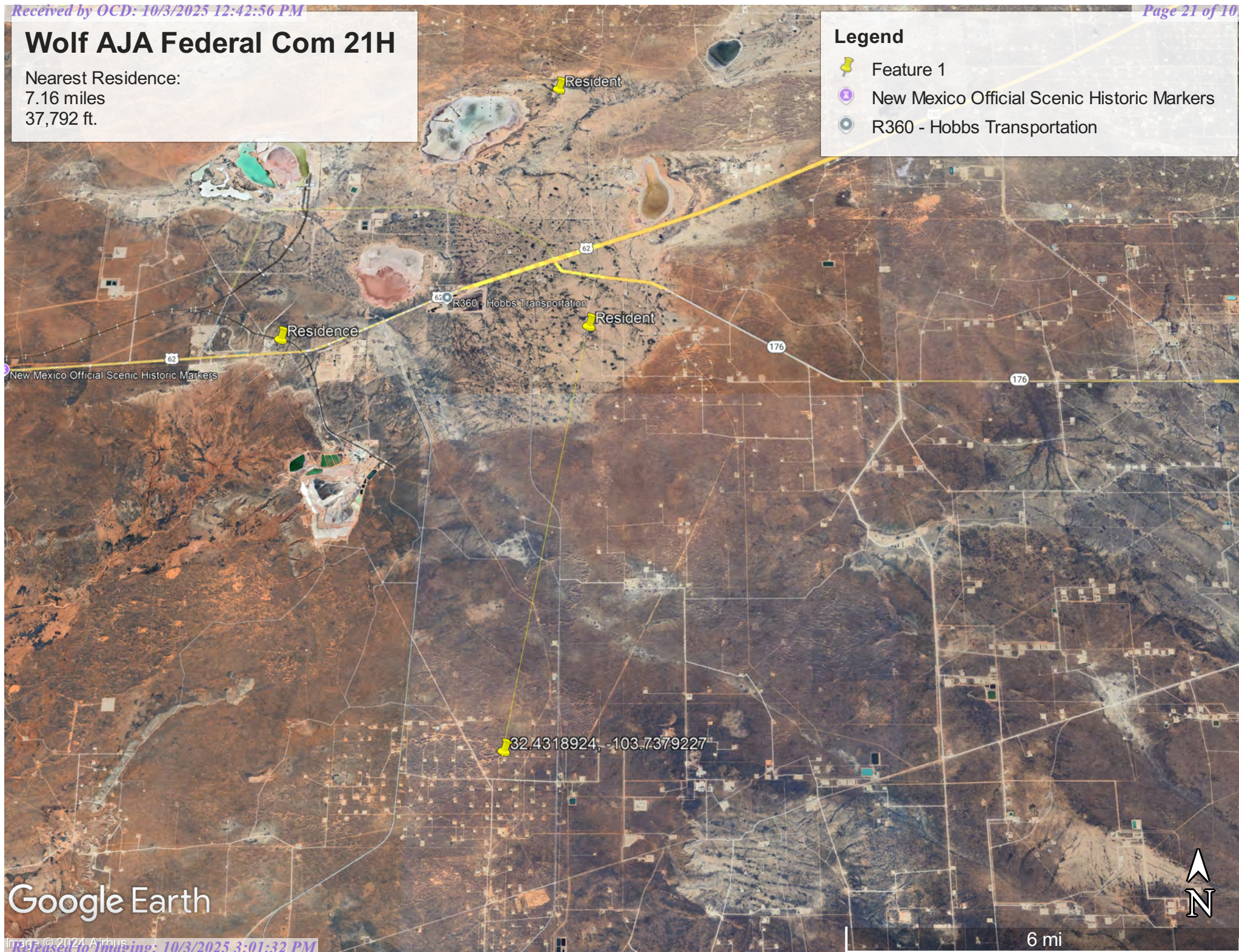


# Wolf AJA Federal Com 21H

Nearest Residence:  
7.16 miles  
37,792 ft.

## Legend

-  Feature 1
-  New Mexico Official Scenic Historic Markers
-  R360 - Hobbs Transportation



Google Earth





# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

			(acre ft per annum)					(R=POD has been replaced and no longer serves this file, C=the file is closed)			(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)		(meters)	
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tws	Range	X	Y	Map	Distance
<a href="#">C 04691</a>	CUB	MON	0.000	OXY USA INC	ED	<a href="#">C 04691 POD1</a>	NA				SW	SW	SW	35	21S	31E	617014.9	3588637.1		1,678.9
<a href="#">C 04695</a>	CUB	MON	0.000	OXY USA INC.	LE	<a href="#">C 04695 POD1</a>	NA				SW	SW	SW	35	21S	31E	617014.9	3588636.8		1,679.0
<a href="#">C 03635</a>	CUB	MON	0.000	U S DEPARTMENT OF ENERGY	LE	<a href="#">C 03635 POD1</a>					SW	SW	NE	31	21S	32E	621059.3	3589565.3		2,470.6
<a href="#">C 02949</a>	CUB	EXP	0.000	US DEPT OF ENERGYCARLSBAD FIELD OFFICE, WIPP	ED	<a href="#">C 02949 EXPL</a>			Artesian		NW	NW	SE	34	21S	31E	616140.0	3589231.0 *		2,521.5
<a href="#">C 02744</a>	CUB	MON	0.000	U.S. DEPT. OF ENERGY - WIPP	ED	<a href="#">C 02744</a>					SW	NE	NW	11	22S	31E	617374.0	3586631.0 *		2,700.6
<a href="#">C 04144</a>	CUB	MON	0.000	GHD SERVICES INC	LE	<a href="#">C 04144 POD11</a>	NA				SE	NE	SE	12	22S	31E	620084.2	3585900.4		3,423.8
					LE	<a href="#">C 04144 POD25</a>	NA				NW	NW	SW	07	22S	32E	620213.3	3585962.7		3,424.2
					LE	<a href="#">C 04144 POD20</a>	NA				SW	NW	SW	07	22S	32E	620133.8	3585919.5		3,427.6
					LE	<a href="#">C 04144 POD44</a>	NA				SW	NW	SW	07	22S	32E	620200.4	3585948.0		3,431.5
					LE	<a href="#">C 04144 POD5</a>	NA				SW	NW	SW	07	22S	32E	620238.4	3585961.4		3,436.9
					LE	<a href="#">C 04144 POD26</a>	NA				SW	NE	NE	07	22S	32E	620211.7	3585942.9		3,441.1
					LE	<a href="#">C 04144 POD21</a>	NA				SW	NW	SW	07	22S	32E	620154.0	3585913.6		3,441.7
					LE	<a href="#">C 04144 POD22</a>	NA				SW	NW	SW	07	22S	32E	620135.6	3585899.8		3,446.2
					LE	<a href="#">C 04144 POD43</a>	NA				SW	NW	SW	07	22S	32E	620189.5	3585923.0		3,448.9
					LE	<a href="#">C 04144 POD24</a>	NA				SW	NW	SW	07	22S	32E	620168.2	3585910.1		3,451.1
					LE	<a href="#">C 04144 POD27</a>	NA				SW	NW	SW	07	22S	32E	620206.9	3585929.0		3,451.4
					LE	<a href="#">C 04144 POD23</a>	NA				SW	NW	SW	07	22S	32E	620153.1	3585900.7		3,452.9























(acre ft per  
annum)

(R=POD has been replaced and  
no longer serves this file, C=the  
file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tw	Range	X	Y	Map	Distance
					LE	<a href="#">C 04144 POD31</a>	NA				SW	NW	SW	07	22S	32E	620232.4	3585936.4		3,456.4
					LE	<a href="#">C 04144 POC28</a>	NA				SW	NW	SW	07	22S	32E	620201.4	3585908.6		3,467.1
					LE	<a href="#">C 04144 POD42</a>	NA				SW	NW	SW	07	22S	32E	620165.2	3585879.5		3,477.3
					LE	<a href="#">C 04144 POD30</a>	NA				SW	NW	SW	07	22S	32E	620195.6	3585889.8		3,481.4
					LE	<a href="#">C 04144 POD29</a>	NA				SW	NW	SW	07	22S	32E	620195.2	3585879.6		3,490.4
					LE	<a href="#">C 04144 POD33</a>	NA				SW	NW	SW	07	22S	32E	620284.4	3585916.1		3,498.4
					LE	<a href="#">C 04144 POD34</a>	NA				SW	NW	SW	07	22S	32E	620302.4	3585920.6		3,502.9
					LE	<a href="#">C 04144 POD32</a>	NA				SW	NW	SW	07	22S	32E	620244.7	3585888.8		3,504.3
					LE	<a href="#">C 04144 POD12</a>	NA				NE	NW	SW	07	22S	32E	620399.8	3585962.1		3,513.7
					LE	<a href="#">C 04144 POD37</a>	NA				SW	NW	SW	07	22S	32E	620225.8	3585855.3		3,525.7
					LE	<a href="#">C 04144 POD39</a>	NA				SW	NW	SW	07	22S	32E	620199.4	3585836.5		3,530.9
					LE	<a href="#">C 04144 POD38</a>	NA				SW	NW	SW	07	22S	32E	620223.1	3585837.1		3,540.8
					LE	<a href="#">C 04144 POD1</a>	NA			Shallow	SW	NW	SW	07	22S	32E	620240.3	3585844.1		3,542.2
					LE	<a href="#">C 04144 POD3</a>	NA				SW	NW	SW	07	22S	32E	620240.3	3585842.3		3,543.8
					LE	<a href="#">C 04144 POD41</a>	NA				SW	NW	SW	07	22S	32E	620180.6	3585812.6		3,544.3
					LE	<a href="#">C 04144 POD35</a>	NA				SW	NW	SW	07	22S	32E	620269.2	3585855.8		3,544.9
					LE	<a href="#">C 04144 POD40</a>	NA				SW	NW	SW	07	22S	32E	620200.1	3585821.1		3,545.1
					LE	<a href="#">C 04144 POD36</a>	NA				SW	NW	SW	07	22S	32E	620254.4	3585845.8		3,547.1
					LE	<a href="#">C 04144 POD14</a>	NA				SW	NW	SW	07	22S	32E	620122.0	3585776.2		3,552.5
					ED	<a href="#">C 04144 POD13</a>	NA				SE	NE	SE	12	22S	31E	620081.4	3585756.3		3,554.1
					LE	<a href="#">C 04144 POD4</a>	NA				SW	NW	SW	07	22S	32E	620199.5	3585808.2		3,556.4
					LE	<a href="#">C 04144 POD15</a>	NA				SW	NW	SW	07	22S	32E	620120.2	3585770.9		3,556.6




















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annum)

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file is closed)




(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tw	Range	X	Y	Map	Distance
					LE	<a href="#">C 04144 POD45</a>	NA				SW	NW	SW	07	22S	32E	620127.8	3585765.8		3,564.3
					LE	<a href="#">C 04144 POD16</a>	NA				NW	SW	SW	07	22S	32E	620118.8	3585758.0		3,567.7
					LE	<a href="#">C 04144 POD2</a>	NA			Shallow	SW	NW	SW	07	22S	32E	620146.6	3585768.8		3,569.5
					LE	<a href="#">C 04144 POD10</a>	NA				NE	SE	SE	12	22S	31E	620088.7	3585741.6		3,570.5
					LE	<a href="#">C 04144 POD17</a>	NA				NW	SW	SW	07	22S	32E	620120.6	3585740.7		3,584.3
					LE	<a href="#">C 04144 POD18</a>	NA				NW	SW	SW	07	22S	32E	620141.5	3585739.1		3,594.3
					LE	<a href="#">C 04144 POD46</a>	NA				NW	SW	SW	07	22S	32E	620127.5	3585731.6		3,595.4
					LE	<a href="#">C 04144 POD19</a>	NA				NW	SW	SW	07	22S	32E	620150.6	3585739.5		3,597.7
					LE	<a href="#">C 04144 POD6</a>	NA				SE	NW	SW	07	22S	32E	620402.3	3585844.5		3,617.4
					LE	<a href="#">C 04144 POD8</a>	NA				NW	SW	SW	07	22S	32E	620242.2	3585725.5		3,649.5
					LE	<a href="#">C 04144 POD9</a>	NA				NW	SW	SW	07	22S	32E	620126.4	3585667.5		3,653.5
					LE	<a href="#">C 04144 POD7</a>	NA				NE	SW	SW	07	22S	32E	620367.4	3585748.6		3,685.3
<a href="#">CP 01934</a>	CP	EXP	0.000	INTREPID POTASH NM LLC	LE	<a href="#">CP 01934 POD2</a>	NA				SW	SE	NW	05	22S	32E	622311.5	3588290.2		3,729.8
<a href="#">C 04686</a>	CUB	MON	0.000	OXY USA INC	ED	<a href="#">C 04686 POD1</a>	NA				SE	SW	NE	04	22S	31E	614681.2	3587769.7		4,159.9
<a href="#">C 02745</a>	CUB	MON	0.000	US DEPARTMENT OF ENERGY	ED	<a href="#">C 02745 POD2</a>	NA				SE	NE	NE	15	22S	31E	616805.1	3585021.3		4,395.7
					ED	<a href="#">C 02745</a>					SE	NE	NE	15	22S	31E	616789.0	3585013.0 *		4,410.0
<a href="#">C 02746</a>	CUB	MON	0.000	U.S. DEPT. OF ENERGY - WIPP	ED	<a href="#">C 02746</a>					SE	NE	NE	15	22S	31E	616789.0	3585013.0 *		4,410.0
<a href="#">C 02747</a>	CUB	MON	0.000	U.S. DEPT. OF ENERGY - WIPP	ED	<a href="#">C 02747</a>					SE	NE	NE	15	22S	31E	616789.0	3585013.0 *		4,410.0
<a href="#">C 04599</a>	CUB	MON	0.000	CENTENNIAL RESOURCES PROD LLC	LE	<a href="#">C 04599 POD1</a>	NA				SW	SE	SE	29	21S	32E	623073.6	3590370.5		4,626.3



			(acre ft per annum)					no longer serves this file, C=the file is closed)			(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)					(NAD83 UTM in meters)				(meters)	
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q64	q16	q4	Sec	Tw	Range	X	Y	Map	Distance	
<a href="#">C 04839</a>	CUB	MON	0.000	GOODNIGHT MIDSTREAM PERMIAN LL	LE	<a href="#">C 04839 POD1</a>	NA				NW	SW	SW	28	21S	32E	623353.3	3590609.0		4,965.9	
<a href="#">C 04742</a>	CUB	MON	0.000	GOODNIGHT MIDSTREAM LLC	LE	<a href="#">C 04742 POD2</a>	NA				SW	NW	SW	28	21S	32E	623324.9	3590751.5		4,986.9	
<a href="#">C 03150</a>	CUB	MON	0.000	U.S. DEPT OF ENERGY	ED	<a href="#">C 03150</a>				Shallow	NE	SE	SE	14	22S	31E	618412.0	3584025.0 *		4,991.0	

Record Count: 61

Filters Applied:

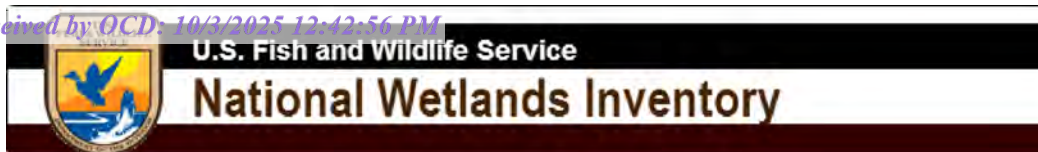
UTM Filters (in meters):

Easting: 618651.84  
Northing: 3589010.20  
Radius: 5000.0

Sorted By: Distance

\* UTM location was derived from PLSS - see Help

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



# Wolf AJA Federal Com #21H

## Wetland 15,986 ft



November 9, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

- Lake
- Other
- Riverine

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

## Active Mines in New Mexico



11/9/2024, 1:18:45 PM

1:72,224

## Registered Mines

P



Aggregate, Stone etc.

S



Potash

## Land Ownership

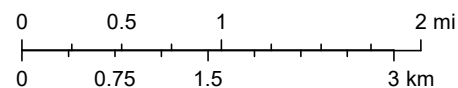
BLM



PLSS First Division



PLSS Townships



U.S. BLM, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA, BLM



EMNRD MMD GIS Coordinator

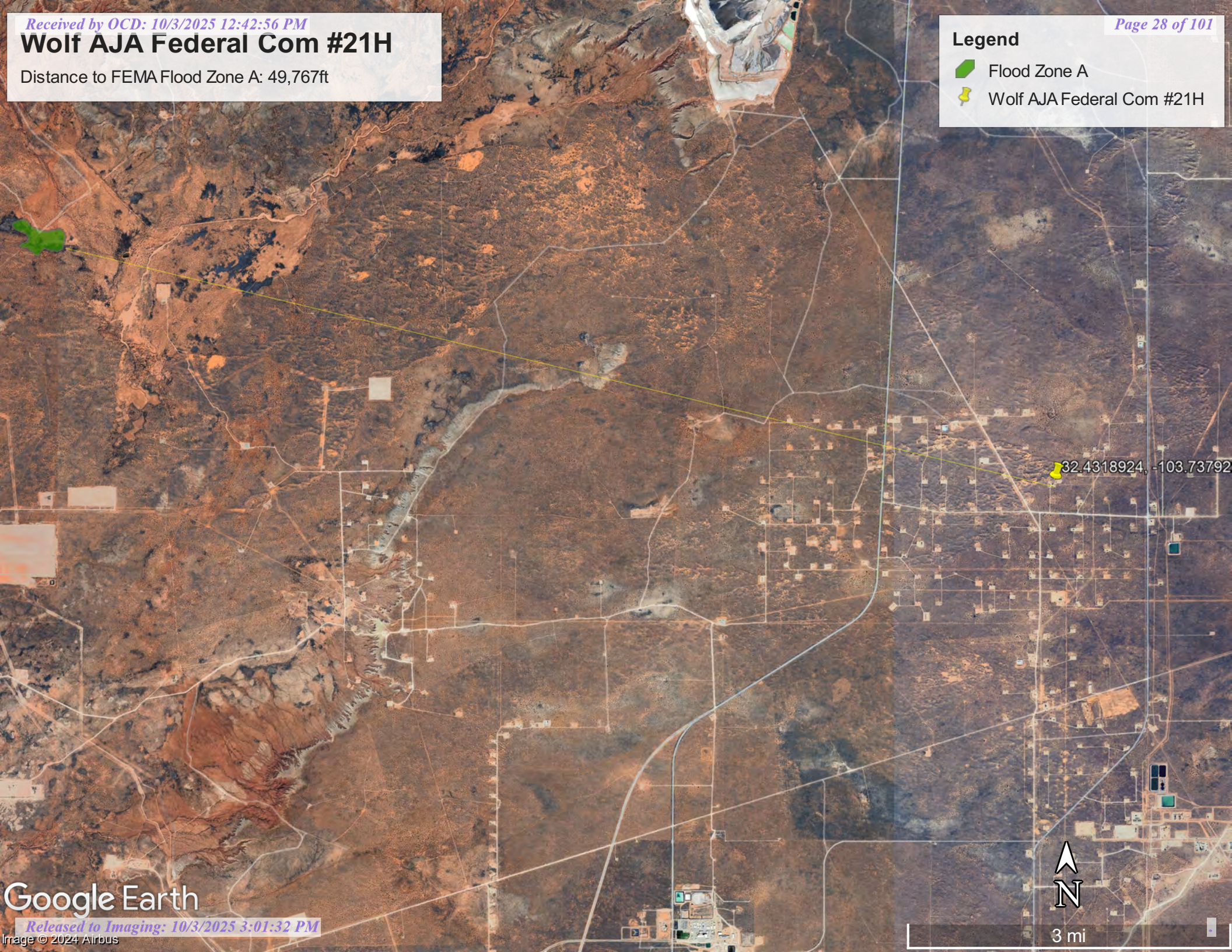


# Wolf AJA Federal Com #21H

Distance to FEMA Flood Zone A: 49,767ft

## Legend

-  Flood Zone A
-  Wolf AJA Federal Com #21H



3 mi



# National Flood Hazard Layer FIRMMette



103°44'35"W 32°26'10"N



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

1:6,000

103°43'58"W 32°25'40"N

## Legend

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

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



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/23/2024 at 3:08 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



United States  
Department of  
Agriculture

**NRCS**

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



November 9, 2024



# Preface

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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](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

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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

## Custom Soil Resource Report

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

## 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

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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.

# Custom Soil Resource Report Soil Map



## Custom Soil Resource Report

**Eddy Area, New Mexico****BB—Berino complex, 0 to 3 percent slopes, eroded****Map Unit Setting***National map unit symbol:* 1w43*Elevation:* 2,000 to 5,700 feet*Mean annual precipitation:* 5 to 15 inches*Mean annual air temperature:* 57 to 70 degrees F*Frost-free period:* 180 to 260 days*Farmland classification:* Not prime farmland**Map Unit Composition***Berino and similar soils:* 60 percent*Pajarito and similar soils:* 25 percent*Minor components:* 15 percent*Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Berino****Setting***Landform:* Plains, fan piedmonts*Landform position (three-dimensional):* Riser*Down-slope shape:* Convex*Across-slope shape:* Linear*Parent material:* Mixed alluvium and/or eolian sands**Typical profile***H1 - 0 to 17 inches:* fine sand*H2 - 17 to 58 inches:* sandy clay loam*H3 - 58 to 60 inches:* loamy sand**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* More than 80 inches*Drainage class:* Well drained*Runoff class:* Low*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum content:* 40 percent*Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)*Sodium adsorption ratio, maximum:* 1.0*Available water supply, 0 to 60 inches:* Moderate (about 8.0 inches)**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7e*Hydrologic Soil Group:* B*Ecological site:* R070BD003NM - Loamy Sand*Hydric soil rating:* No



## Custom Soil Resource Report

**Description of Pajarito****Setting**

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

**Typical profile**

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

**Properties and qualities**

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

**Interpretive groups**

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

**Minor Components****Pajarito**

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

**Wink**

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

**Cacique**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No

**Kermit**

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



## Custom Soil Resource Report

**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)

**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

## Custom Soil Resource Report

**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

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

## Custom Soil Resource Report

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# Ecological site R070BD003NM

## Loamy Sand

Accessed: 11/09/2024

### General information

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

Figure 1. Mapped extent

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

### Associated sites

R070BD004NM	<b>Sandy</b> Sandy
R070BD005NM	<b>Deep Sand</b> Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

### Physiographic features

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

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

Table 2. Representative physiographic features

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

### Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms. Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes.



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

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

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

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

**Table 3. Representative climatic features**

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

## Influencing water features

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

## Soil features

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

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

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

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

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

Characteristic soils are:

Maljamar  
Berino  
Parjarito  
Palomas  
Wink  
Pyote

**Table 4. Representative soil features**

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

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

## Ecological dynamics

### Overview

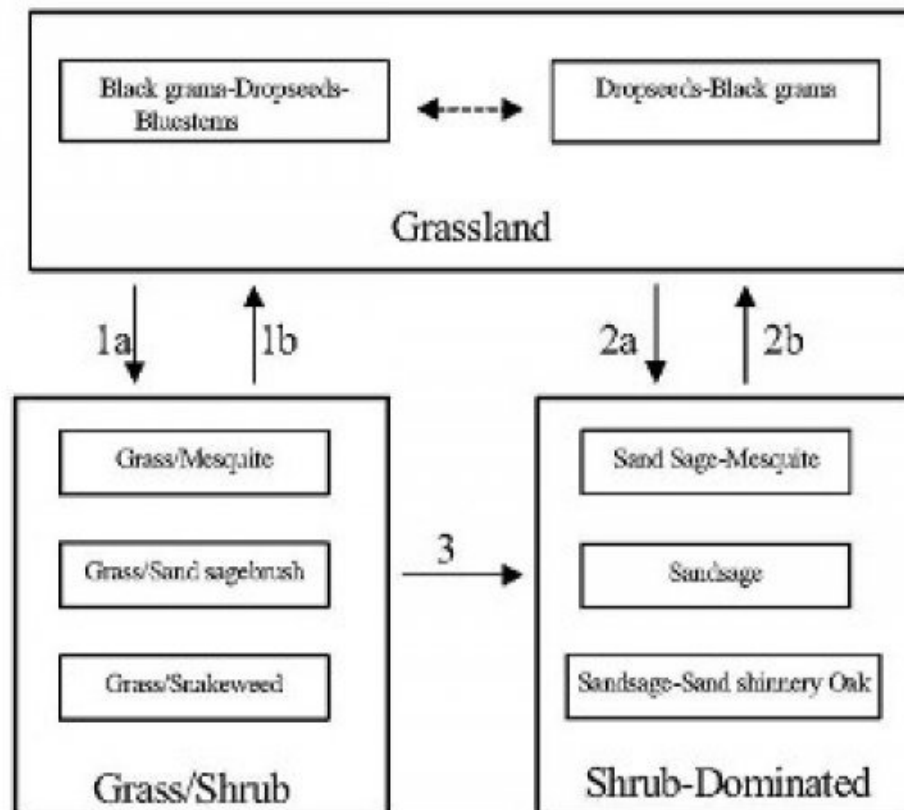
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured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

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

## State and transition model

## Plant Communities and Transitional Pathways (diagram):

### MLRA-42, SD-3, Loamy Sand



1a. Drought, over grazing, fire suppression.

1b. Brush control, prescribed grazing

2.a Severe loss of grass cover, fire suppression, erosion.

2b. Brush control, seeding, prescribed grazing.

3. Continued loss of grass cover, erosion.

## State 1

### Historic Climax Plant Community

## Community 1.1

### Historic Climax Plant Community

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

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

Table 5. Annual production by plant type

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

Table 6. Ground cover

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

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

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

State 2  
Grass/Shrub

Community 2.1  
Grass/Shrub





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

### **State 3 Shrub Dominated**

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

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

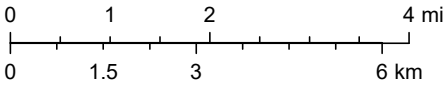
# ArcGIS Web Map



11/9/2024, 10:50:20 AM

1:144,448

- Lithologic Units
- Playa—Alluvium and evaporite deposits (Holocene)
  - Water—Perennial 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

ArcGIS Web AppBuilder

## **APPENDIX B – Daily Field Report**



## Daily Site Visit Report

Client:	EOG Resources Inc.	Inspection Date:	11/26/2024
Site Location Name:	Wolf AJA Federal Com #21H	Report Run Date:	11/27/2024 1:31 AM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

### Summary of Times

Arrived at Site	11/26/2024 8:40 AM
Departed Site	11/26/2024 2:00 PM

### Field Notes

- 15:45** Arrived on site, completed safety paperwork upon arrival and held safety brief with the crew from BDS.
- 15:45** On site to grab WS24-02 at 0-3ft bgs and a backfill sample when it arrives from the caliche pit.
- 15:45** Both samples were field screened for chlorides using silver nitrate titration and TPH using a Dexsil Petroflag and met NMOCD Strictest criteria.
- 17:57** Backfill had not arrived on site upon arrival. According to BDS they were not aware of the site being backfilled today. I requested for the backfill soil to come and to fill the excavation today. Backfill filled arrived ~11:50am.
- 17:59** The crew from BDS that disassembled the flare also mistakenly took the clean 2ft bgs level of the excavation and mixed it into the soil pile from the island that held up the flare. 30 to 40 cubic yards of soil had to be hauled off site.
- 18:00** Recollected BS24-04, BS24-06, WS24-01 at 0-3ft bgs and WS24-02 at 0-3ft bgs to account for the new depth in the excavation.

### Next Steps & Recommendations

1



# Daily Site Visit Report



## Site Photos

Viewing Direction: North



Location of BS24-04 and BS24-06 at 3ft bgs in the northeast corner of the excavation. WS24-01 was recollected at 0-3ft bgs.

Viewing Direction: South



WS24-02 at 0-3ft bgs along the south wall and the south half of the east wall.

Viewing Direction: North



Backfill came to the site today. A 5-point composite sample was taken from the pile.

Viewing Direction: West



WS24-03 being filled in with the backfill.

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** John Rewis

**Signature:**

A handwritten signature in black ink, consisting of a large, stylized 'J' and 'R' connected together, followed by a horizontal line.

## **APPENDIX C – Laboratory Data Reports and Chain of Custody Forms**



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

November 18, 2024

CHANCE DIXON

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: WOLF ASA #21H

Enclosed are the results of analyses for samples received by the laboratory on 11/18/24 12:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 01 2' (H247016-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/18/2024	ND	2.13	106	2.00	2.35		
Toluene*	<0.050	0.050	11/18/2024	ND	2.04	102	2.00	1.71		
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.05	103	2.00	0.0771		
Total Xylenes*	<0.150	0.150	11/18/2024	ND	6.10	102	6.00	0.102		
Total BTEX	<0.300	0.300	11/18/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	11/18/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	211	105	200	0.943	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	199	99.3	200	0.824	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 02 2' (H247016-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/18/2024	ND	2.13	106	2.00	2.35	
Toluene*	<0.050	0.050	11/18/2024	ND	2.04	102	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.05	103	2.00	0.0771	
Total Xylenes*	<0.150	0.150	11/18/2024	ND	6.10	102	6.00	0.102	
Total BTEX	<0.300	0.300	11/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	11/18/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	203	101	200	0.517	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	182	90.8	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 03 2' (H247016-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/18/2024	ND	2.13	106	2.00	2.35	
Toluene*	<0.050	0.050	11/18/2024	ND	2.04	102	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.05	103	2.00	0.0771	
Total Xylenes*	<0.150	0.150	11/18/2024	ND	6.10	102	6.00	0.102	
Total BTEX	<0.300	0.300	11/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	11/18/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	203	101	200	0.517	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	182	90.8	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.0 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 04 2' (H247016-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/18/2024	ND	2.28	114	2.00	4.72		
Toluene*	<0.050	0.050	11/18/2024	ND	2.34	117	2.00	4.07		
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.24	112	2.00	4.02		
Total Xylenes*	<0.150	0.150	11/18/2024	ND	7.13	119	6.00	3.64		
Total BTEX	<0.300	0.300	11/18/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/18/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	203	101	200	0.517	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	182	90.8	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 95.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BS 24 - 05 2' (H247016-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/18/2024	ND	2.28	114	2.00	4.72	
Toluene*	<0.050	0.050	11/18/2024	ND	2.34	117	2.00	4.07	
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.24	112	2.00	4.02	
Total Xylenes*	<0.150	0.150	11/18/2024	ND	7.13	119	6.00	3.64	
Total BTEX	<0.300	0.300	11/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3200	16.0	11/18/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	194	96.8	200	1.32	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	189	94.4	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 82.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.0 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: WS24 - 01 0-2' (H247016-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/18/2024	ND	2.14	107	2.00	2.28		
Toluene*	<0.050	0.050	11/18/2024	ND	2.13	106	2.00	4.86		
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.26	113	2.00	8.60		
Total Xylenes*	<0.150	0.150	11/18/2024	ND	6.81	113	6.00	9.50		
Total BTEX	<0.300	0.300	11/18/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/18/2024	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	194	96.8	200	1.32	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	189	94.4	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 75.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.5 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/18/2024  
 Reported: 11/18/2024  
 Project Name: WOLF ASA #21H  
 Project Number: NONE GIVEN  
 Project Location: CARLSBAD

Sampling Date: 11/15/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: WS24 - 02 0-2' (H247016-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/18/2024	ND	2.14	107	2.00	2.28		
Toluene*	<0.050	0.050	11/18/2024	ND	2.13	106	2.00	4.86		
Ethylbenzene*	<0.050	0.050	11/18/2024	ND	2.26	113	2.00	8.60		
Total Xylenes*	<0.150	0.150	11/18/2024	ND	6.81	113	6.00	9.50		
Total BTEX	<0.300	0.300	11/18/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	11/18/2024	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2024	ND	194	96.8	200	1.32	
DRO >C10-C28*	<10.0	10.0	11/18/2024	ND	189	94.4	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/18/2024	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



**CARDINAL**  
Laboratories

101 East Marland, Hobbs, NM 86240  
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: **Vertex**

Project Manager: **Chance Dixon**

Address: **on file**

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project #: \_\_\_\_\_ Project Owner: **EOG**

Project Name: **4016 45A #21H**

Project Location: **Carlsbad**

Sampler Name: **Andrea Cudvik**

P.O. #: \_\_\_\_\_

Company: **EOG**

Attn: **Chase Sattler**

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

**BILL TO**

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	(G)RAB OR (C)M.P.	# CONTAINERS	MATRIX					DATE	TIME	BTX	TPH	CI
				GROUNDWATER	WASTEWATER	SOL	OIL	SLUDGE					
1	BS24-01	2'	2						11/15	1255			
2	BS24-02	2'	1							1300			
3	BS24-03	2'	1							1305			
4	BS24-04	2'	1							1316			
5	BS24-05	2'	1							1315			
6	LS24-01	0-2'	1							1320			
7	LS24-02	0-2'	1										

Relinquished By: **CSB**

Date: **11/18** Time: **1:59** Received By: \_\_\_\_\_

Relinquished By: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Delivered By: (Circle One) ☒ UPS ☐ Bus ☐ Other

Observed Temp. °C: **2.0** Sample Condition: **COOL** ☒ Intact ☐ Leaking

Corrected Temp. °C: **2.0** ☐ Yes ☒ No

Checked By: **CSB**

Thermometer ID: **#140-04** Standard ☒ Push ☐ Same Day ☐ Yes ☒ No

Correction Factor: **0.0** ☐ Yes ☒ No

Remarks: \_\_\_\_\_

Verbal Result: ☐ Yes ☒ No Add'l Phone #: \_\_\_\_\_

All Results are emailed. Please provide Email address: \_\_\_\_\_



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November 21, 2024

CHANCE DIXON

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: WOLF AJA FEDERAL COM #21H

Enclosed are the results of analyses for samples received by the laboratory on 11/21/24 13:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/21/2024  
 Reported: 11/21/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: 24E-04879  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BS 24 - 01 3' (H247112-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/21/2024	ND	2.04	102	2.00	6.35	
Toluene*	<0.050	0.050	11/21/2024	ND	1.95	97.7	2.00	5.94	
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	1.95	97.3	2.00	5.15	
Total Xylenes*	<0.150	0.150	11/21/2024	ND	5.81	96.8	6.00	5.22	
Total BTX	<0.300	0.300	11/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/21/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2024	ND	204	102	200	0.475	
DRO >C10-C28*	<10.0	10.0	11/21/2024	ND	187	93.6	200	0.0818	
EXT DRO >C28-C36	<10.0	10.0	11/21/2024	ND					

Surrogate: 1-Chlorooctane 86.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/21/2024  
 Reported: 11/21/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: 24E-04879  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BS 24 - 02 3' (H247112-02)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2024	ND	2.19	109	2.00	7.69		
Toluene*	<0.050	0.050	11/21/2024	ND	2.24	112	2.00	9.46		
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	2.14	107	2.00	9.83		
Total Xylenes*	<0.150	0.150	11/21/2024	ND	6.82	114	6.00	7.81		
Total BTEX	<0.300	0.300	11/21/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/21/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2024	ND	203	101	200	3.41	
DRO >C10-C28*	<10.0	10.0	11/21/2024	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	11/21/2024	ND					

Surrogate: 1-Chlorooctane 93.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.2 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/21/2024  
 Reported: 11/21/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: 24E-04879  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BS 24 - 03 3' (H247112-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/21/2024	ND	2.19	109	2.00	7.69	
Toluene*	<0.050	0.050	11/21/2024	ND	2.24	112	2.00	9.46	
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	2.14	107	2.00	9.83	
Total Xylenes*	<0.150	0.150	11/21/2024	ND	6.82	114	6.00	7.81	
Total BTEx	<0.300	0.300	11/21/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/21/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2024	ND	203	101	200	3.41	
DRO >C10-C28*	<10.0	10.0	11/21/2024	ND	187	93.7	200	5.96	
EXT DRO >C28-C36	<10.0	10.0	11/21/2024	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/21/2024  
 Reported: 11/21/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: 24E-04879  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BS 24 - 05 3' (H247112-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2024	ND	2.19	109	2.00	7.69		
Toluene*	<0.050	0.050	11/21/2024	ND	2.24	112	2.00	9.46		
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	2.14	107	2.00	9.83		
Total Xylenes*	<0.150	0.150	11/21/2024	ND	6.82	114	6.00	7.81		
Total BTEX	<0.300	0.300	11/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/21/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2024	ND	191	95.4	200	4.00	
DRO >C10-C28*	<10.0	10.0	11/21/2024	ND	183	91.4	200	5.51	
EXT DRO >C28-C36	<10.0	10.0	11/21/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/21/2024  
 Reported: 11/21/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: 24E-04879  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: WS 24 - 03 2'-3' (H247112-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2024	ND	2.19	109	2.00	7.69		
Toluene*	<0.050	0.050	11/21/2024	ND	2.24	112	2.00	9.46		
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	2.14	107	2.00	9.83		
Total Xylenes*	<0.150	0.150	11/21/2024	ND	6.82	114	6.00	7.81		
Total BTEX	<0.300	0.300	11/21/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/21/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2024	ND	191	95.4	200	4.00	
DRO >C10-C28*	<10.0	10.0	11/21/2024	ND	183	91.4	200	5.51	
EXT DRO >C28-C36	<10.0	10.0	11/21/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager







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November 25, 2024

CHANCE DIXON

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: WOLF AJA FEDERAL COM #21H

Enclosed are the results of analyses for samples received by the laboratory on 11/25/24 11:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/25/2024  
 Reported: 11/25/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: NONE GIVEN  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/21/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BS24 - 06 2' (H247206-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	4.53	
Toluene*	<0.050	0.050	11/25/2024	ND	1.92	96.1	2.00	2.85	
Ethylbenzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	5.00	
Total Xylenes*	<0.150	0.150	11/25/2024	ND	6.17	103	6.00	5.46	
Total BTEX	<0.300	0.300	11/25/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/25/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/25/2024	ND	202	101	200	3.65	
DRO >C10-C28*	<10.0	10.0	11/25/2024	ND	197	98.6	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	11/25/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/25/2024  
 Reported: 11/25/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: NONE GIVEN  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/21/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BS24 - 07 3' (H247206-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	4.53	
Toluene*	<0.050	0.050	11/25/2024	ND	1.92	96.1	2.00	2.85	
Ethylbenzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	5.00	
Total Xylenes*	<0.150	0.150	11/25/2024	ND	6.17	103	6.00	5.46	
Total BTEX	<0.300	0.300	11/25/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/25/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/25/2024	ND	202	101	200	3.65	
DRO >C10-C28*	<10.0	10.0	11/25/2024	ND	197	98.6	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	11/25/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
 CHANCE DIXON  
 3101 BOYD DRIVE  
 CARLSBAD NM, 88220  
 Fax To: NA

Received: 11/25/2024  
 Reported: 11/25/2024  
 Project Name: WOLF AJA FEDERAL COM #21H  
 Project Number: NONE GIVEN  
 Project Location: EOG - CARLSBAD

Sampling Date: 11/21/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WS24 - 04 0'-3' (H247206-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	4.53	
Toluene*	<0.050	0.050	11/25/2024	ND	1.92	96.1	2.00	2.85	
Ethylbenzene*	<0.050	0.050	11/25/2024	ND	2.03	101	2.00	5.00	
Total Xylenes*	<0.150	0.150	11/25/2024	ND	6.17	103	6.00	5.46	
Total BTEX	<0.300	0.300	11/25/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/25/2024	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/25/2024	ND	202	101	200	3.65	
DRO >C10-C28*	<10.0	10.0	11/25/2024	ND	197	98.6	200	4.08	
EXT DRO >C28-C36	<10.0	10.0	11/25/2024	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





Company Name: Vertex	BILL TO	ANALYSIS REQUEST
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[illegible]



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December 10, 2024

CHANCE DIXON

VERTEX RESOURCE

3101 BOYD DRIVE

CARLSBAD, NM 88220

RE: WOLF AJA FEDERAL COM #21H

Enclosed are the results of analyses for samples received by the laboratory on 11/26/24 12:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at

[www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NAReported:  
10-Dec-24 15:52

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BS 24 - 04 3'	H247254-01	Soil	26-Nov-24 12:00	26-Nov-24 12:50
BS 24 - 06 3'	H247254-02	Soil	26-Nov-24 12:05	26-Nov-24 12:50
WS 24 - 01 2'-3'	H247254-03	Soil	26-Nov-24 12:10	26-Nov-24 12:50
WS 24 - 02 2'-3'	H247254-04	Soil	26-Nov-24 12:05	26-Nov-24 12:50
BACKFILL - 01 0'	H247254-05	Soil	26-Nov-24 12:15	26-Nov-24 12:50

12/10/24 - Client changed the sample IDs for -03 and -04 (see COC). This is the revised report and will replace the one sent on 11/26/24.

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "C. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**BS 24 - 04 3'**  
**H247254-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>80.0</b>		16.0	mg/kg	4	4112634	AC	26-Nov-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4112603	JH	26-Nov-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)		104 %		71.5-134		4112603	JH	26-Nov-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	

Surrogate: 1-Chlorooctane		92.0 %		48.2-134		4112553	MS	26-Nov-24	8015B	
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Surrogate: 1-Chlorooctadecane		94.1 %		49.1-148		4112553	MS	26-Nov-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**BS 24 - 06 3'**  
**H247254-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	4112634	AC	26-Nov-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4112603	JH	26-Nov-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5-134		4112603	JH	26-Nov-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B	

Surrogate: 1-Chlorooctane			88.5 %	48.2-134		4112553	MS	26-Nov-24	8015B	
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Surrogate: 1-Chlorooctadecane			89.2 %	49.1-148		4112553	MS	26-Nov-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**WS 24 - 01 2'-3'****H247254-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>96.0</b>		16.0	mg/kg	4	4112634	AC	26-Nov-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Toluene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	4112603	JH	26-Nov-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	103 %	71.5-134	4112603	JH	26-Nov-24	8021B
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B

Surrogate: 1-Chlorooctane	96.3 %	48.2-134	4112553	MS	26-Nov-24	8015B
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Surrogate: 1-Chlorooctadecane	97.7 %	49.1-148	4112553	MS	26-Nov-24	8015B
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**WS 24 - 02 2'-3'**  
**H247254-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>128</b>		16.0	mg/kg	4	4112634	AC	26-Nov-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Toluene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	4112603	JH	26-Nov-24	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	4112603	JH	26-Nov-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	103 %	71.5-134	4112603	JH	26-Nov-24	8021B
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B

Surrogate: 1-Chlorooctane	94.0 %	48.2-134	4112553	MS	26-Nov-24	8015B
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Surrogate: 1-Chlorooctadecane	95.1 %	49.1-148	4112553	MS	26-Nov-24	8015B
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**BACKFILL - 01 0'****H247254-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>112</b>		16.0	mg/kg	4	4112634	AC	26-Nov-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	4112506	JH	26-Nov-24	8021B
Toluene*	<0.050	0.050	mg/kg	50	4112506	JH	26-Nov-24	8021B
Ethylbenzene*	<0.050	0.050	mg/kg	50	4112506	JH	26-Nov-24	8021B
Total Xylenes*	<0.150	0.150	mg/kg	50	4112506	JH	26-Nov-24	8021B
Total BTEX	<0.300	0.300	mg/kg	50	4112506	JH	26-Nov-24	8021B

Surrogate: 4-Bromofluorobenzene (PID)	103 %	71.5-134	4112506	JH	26-Nov-24	8021B
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	4112553	MS	26-Nov-24	8015B

Surrogate: 1-Chlorooctane	91.3 %	48.2-134	4112553	MS	26-Nov-24	8015B
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Surrogate: 1-Chlorooctadecane	91.2 %	49.1-148	4112553	MS	26-Nov-24	8015B
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4112634 - 1:4 DI Water</b>									
<b>Blank (4112634-BLK1)</b>				Prepared & Analyzed: 26-Nov-24					
Chloride	ND	16.0	mg/kg						
<b>LCS (4112634-BS1)</b>				Prepared & Analyzed: 26-Nov-24					
Chloride	416	16.0	mg/kg	400		104	80-120		
<b>LCS Dup (4112634-BSD1)</b>				Prepared & Analyzed: 26-Nov-24					
Chloride	384	16.0	mg/kg	400		96.0	80-120	8.00	20

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**Volatile Organic Compounds by EPA Method 8021 - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4112506 - Volatiles****Blank (4112506-BLK1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0516		mg/kg	0.0500		103	71.5-134			

**LCS (4112506-BS1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

Benzene	2.09	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.11	0.050	mg/kg	2.00		106	86-128			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	4.38	0.100	mg/kg	4.00		110	89-129			
o-Xylene	2.08	0.050	mg/kg	2.00		104	86.1-125			
Total Xylenes	6.46	0.150	mg/kg	6.00		108	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0501		mg/kg	0.0500		100	71.5-134			

**LCS Dup (4112506-BSD1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

Benzene	2.04	0.050	mg/kg	2.00		102	82.8-130	2.46	15.8	
Toluene	2.08	0.050	mg/kg	2.00		104	86-128	1.35	15.9	
Ethylbenzene	2.01	0.050	mg/kg	2.00		100	85.9-128	1.31	16	
m,p-Xylene	4.29	0.100	mg/kg	4.00		107	89-129	2.19	16.2	
o-Xylene	2.05	0.050	mg/kg	2.00		102	86.1-125	1.34	16.7	
Total Xylenes	6.34	0.150	mg/kg	6.00		106	88.2-128	1.92	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0518		mg/kg	0.0500		104	71.5-134			

**Batch 4112603 - Volatiles****Blank (4112603-BLK1)**

Prepared &amp; Analyzed: 26-Nov-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**Volatile Organic Compounds by EPA Method 8021 - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4112603 - Volatiles****Blank (4112603-BLK1)**

Prepared &amp; Analyzed: 26-Nov-24

Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0512		mg/kg	0.0500		102	71.5-134			

**LCS (4112603-BS1)**

Prepared &amp; Analyzed: 26-Nov-24

Benzene	1.77	0.050	mg/kg	2.00		88.4	82.8-130			
Toluene	1.81	0.050	mg/kg	2.00		90.7	86-128			
Ethylbenzene	1.81	0.050	mg/kg	2.00		90.7	85.9-128			
m,p-Xylene	3.63	0.100	mg/kg	4.00		90.8	89-129			
o-Xylene	1.76	0.050	mg/kg	2.00		87.9	86.1-125			
Total Xylenes	5.39	0.150	mg/kg	6.00		89.8	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0508		mg/kg	0.0500		102	71.5-134			

**LCS Dup (4112603-BSD1)**

Prepared &amp; Analyzed: 26-Nov-24

Benzene	1.97	0.050	mg/kg	2.00		98.7	82.8-130	11.0	15.8	
Toluene	2.03	0.050	mg/kg	2.00		101	86-128	11.1	15.9	
Ethylbenzene	2.02	0.050	mg/kg	2.00		101	85.9-128	10.7	16	
m,p-Xylene	4.04	0.100	mg/kg	4.00		101	89-129	10.5	16.2	
o-Xylene	1.93	0.050	mg/kg	2.00		96.3	86.1-125	9.19	16.7	
Total Xylenes	5.96	0.150	mg/kg	6.00		99.4	88.2-128	10.1	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0510		mg/kg	0.0500		102	71.5-134			

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

VERTEX RESOURCE  
3101 BOYD DRIVE  
CARLSBAD NM, 88220

Project: WOLF AJA FEDERAL COM #21H  
Project Number: 24E - 04879  
Project Manager: CHANCE DIXON  
Fax To: NA

Reported:  
10-Dec-24 15:52

**Petroleum Hydrocarbons by GC FID - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4112553 - General Prep - Organics****Blank (4112553-BLK1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	48.4		mg/kg	50.0		96.8	48.2-134		
Surrogate: 1-Chlorooctadecane	49.1		mg/kg	50.0		98.2	49.1-148		

**LCS (4112553-BS1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

GRO C6-C10	192	10.0	mg/kg	200		95.9	81.5-123		
DRO >C10-C28	188	10.0	mg/kg	200		94.2	77.7-122		
Total TPH C6-C28	380	10.0	mg/kg	400		95.1	80.9-121		
Surrogate: 1-Chlorooctane	45.2		mg/kg	50.0		90.4	48.2-134		
Surrogate: 1-Chlorooctadecane	45.2		mg/kg	50.0		90.4	49.1-148		

**LCS Dup (4112553-BS1)**

Prepared: 25-Nov-24 Analyzed: 26-Nov-24

GRO C6-C10	192	10.0	mg/kg	200		96.2	81.5-123	0.294	13
DRO >C10-C28	185	10.0	mg/kg	200		92.6	77.7-122	1.67	15.6
Total TPH C6-C28	378	10.0	mg/kg	400		94.4	80.9-121	0.672	18.5
Surrogate: 1-Chlorooctane	47.3		mg/kg	50.0		94.7	48.2-134		
Surrogate: 1-Chlorooctadecane	49.4		mg/kg	50.0		98.7	49.1-148		

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Vertex</u>		P.O. #:		BILL TO		ANALYSIS REQUEST																																			
Project Manager: <u>Chance Dixon</u>		Company: <u>EOG</u>																																							
Address: <u>3101 Boyd Dr.</u>		Attn: <u>Chase Schlie</u>																																							
City: <u>Carlsbad</u>		Address:																																							
State: <u>NM</u> Zip: <u>88220</u>		City: <u>Carlsbad</u>																																							
Phone #: _____		Fax #: _____																																							
Project #: <u>24E-04879</u>		Project Owner: <u>EOG</u>																																							
Project Name: <u>Wolf AJA Federal Com # 214</u>		State: _____ Zip: _____																																							
Project Location: _____		Phone #: _____																																							
Sampler Name: <u>John Lewis</u>		Fax #: _____																																							
FOR LAB USE ONLY		PRESERV:		SAMPLING																																					
Lab I.D. <u>H047254</u>		Sample I.D. _____																																							
1		B524-04		3'		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		CE/COOL		OTHER:		DATE		TIME		TPH		BTEX		Chlorides					
2		B524-06		3'		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		11/26/24		12:05		X		X		X					
3		W524-01		28'-3'		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		12:10		12:05		X		X		X					
4		W524-02		28'-3'		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		12:05		12:15		X		X		X					
5		Rackfill-01		0'		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		C 1		12:15		12:15		X		X		X					
Relinquished By: _____		Date: <u>11/26/24</u>		Time: <u>12:50</u>		Received By: <u>Speedy</u>		Date: _____		Time: _____		Received By: _____		Date: _____		Time: _____		Received By: _____		Date: _____		Time: _____		Received By: _____		Date: _____		Time: _____		Received By: _____		Date: _____		Time: _____		Received By: _____		Date: _____		Time: _____	
Delivered By: (Circle One)		Observed Temp. °C: <u>5.0</u>		Corrected Temp. °C: <u>5.0</u>		Sample Condition		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact					
Sampler - UPS - Bus - Other:		Observed Temp. °C: <u>5.0</u>		Corrected Temp. °C: <u>5.0</u>		Sample Condition		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact					
Turnaround Time: _____		Thermometer ID #140		Correction Factor -0.6°C		Standard		Bacteria (only)		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact		Cool Intact							
REMARKS: <u>*Customer requested Depth changes.</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>		REMARKS: <u>Direct Bill to EOG</u>							

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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 512107

**QUESTIONS**

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2431250006
Incident Name	NAPP2431250006 WOLF AJA FEDERAL COM #21H @ 30-015-42239
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-42239] WOLF AJA FEDERAL COM #021H

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WOLF AJA FEDERAL COM #21H
Date Release Discovered	11/05/2024
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Human Error   Valve   Crude Oil   Released: 5 BBL   Recovered: 4 BBL   Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Human Error   Valve   Produced Water   Released: 175 BBL   Recovered: 145 BBL   Lost: 30 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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QUESTIONS, Page 2

Action 512107

**QUESTIONS (continued)**

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	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.	

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Chase Settle Title: Safety & Environmental Rep II Email: chase_settle@eogresources.com Date: 10/03/2025
--	--

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QUESTIONS, Page 3

Action 512107

**QUESTIONS (continued)**

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS****Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (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
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	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	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 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
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	5680
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	11/14/2024
On what date will (or did) the final sampling or liner inspection occur	11/26/2024
On what date will (or was) the remediation complete(d)	11/26/2024
What is the estimated surface area (in square feet) that will be reclaimed	1156
What is the estimated volume (in cubic yards) that will be reclaimed	4350
What is the estimated surface area (in square feet) that will be remediated	1156
What is the estimated volume (in cubic yards) that will be remediated	4350

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 512107

**QUESTIONS (continued)**

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	<a href="#">fEEM0112342028 LEA LAND LANDFILL</a>
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Chase Settle Title: Safety & Environmental Rep II Email: <a href="mailto:chase_settle@eogresources.com">chase_settle@eogresources.com</a> Date: 10/03/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 512107

QUESTIONS (continued)

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 512107

**QUESTIONS (continued)**

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	405929
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/26/2024
What was the (estimated) number of samples that were to be gathered	1
What was the sampling surface area in square feet	200

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1156
What was the total volume (cubic yards) remediated	4350
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	1156
What was the total volume (in cubic yards) reclaimed	4350
Summarize any additional remediation activities not included by answers (above)	All details are included within the attached Closure Report.
<p><i>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></p>	
<p>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.</p>	
I hereby agree and sign off to the above statement	Name: Chase Settle Title: Safety & Environmental Rep II Email: chase_settle@eogresources.com Date: 10/03/2025



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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 7  
  
Action 512107

QUESTIONS (continued)

Operator:  EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID:  7377
	Action Number:  512107
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS

Action 512107

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 512107
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	10/3/2025