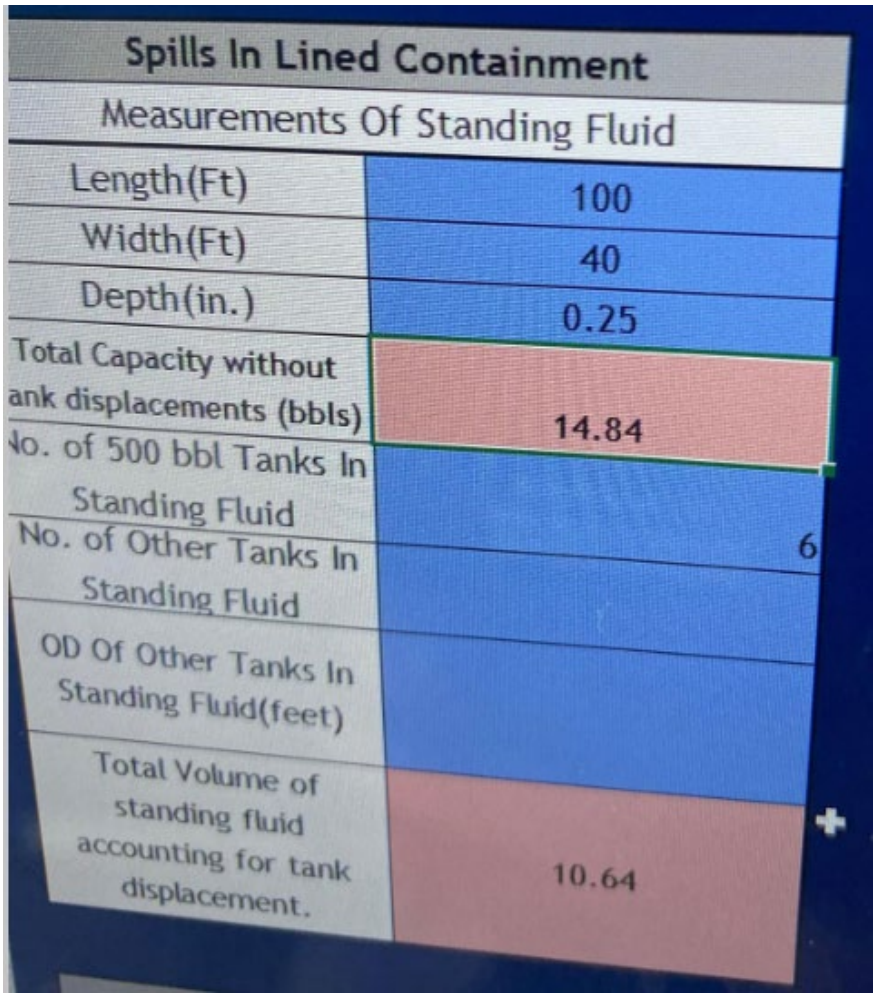

Spills In Lined Containment	
Measurements Of Standing Fluid	
Length(Ft)	100
Width(Ft)	40
Depth(in.)	0.25
Total Capacity without ank displacements (bbls)	14.84
No. of 500 bbl Tanks In Standing Fluid	
No. of Other Tanks In Standing Fluid	6
OD Of Other Tanks In Standing Fluid(feet)	
Total Volume of standing fluid accounting for tank displacement.	10.64

Incident Number: nAPP2205939051

Release Assessment and Closure

Longview Federal 12 #013H

Unit D, Section 12, Township 23 South, Range 28 East

API: 30-015-41091

County: Eddy

Vertex File Number: 22E-00764

Prepared for:

Devon Energy Production Company, LP

Prepared by:

Vertex Resource Services Inc.

Date:

May 2024

Release Assessment and Closure
Longview Federal 12 #013H
Unit D, Section 12, Township 23 South, Range 28 East
API: 30-015-41091
County: Eddy

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

New Mexico Oil Conservation Division – District 2 – Artesia
811 South First Street
Artesia, New Mexico 88210

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

Lakin Pullman

Lakin Pullman, B.Sc.
ENVIRONMENTAL SPECIALIST, REPORTING

May 18, 2024
Date

kent stallings P.G.

Kent Stallings, P.G.
PROJECT MANAGER, REPORT REVIEW

May 28, 2024
Date

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1.0 Introduction

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release that occurred on February 15, 2022, at Longview Federal 12 #013H API 30-015-41091 (hereafter referred to as the "site"). Devon submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on March 3, 2022. Incident ID number nAPP2205939051 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 be deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release was discovered on February 15, 2022, when fluid was released from the transfer pump. The incident was reported on February 28, 2022, and involved the release of approximately 10.64 barrels (bbl.) of produced water into lined containment. Approximately 10.64 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 3.8 miles northeast of Loving, New Mexico (Google Inc., 2024). The legal location for the site is Unit D, Section 12, Township 23 South, Range 28 East in Eddy County, New Mexico. The spill area is located on federal property. An aerial photograph and site schematic are presented on Figure 1.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2024) indicates the site's surface geology primarily comprised Qoa - older alluvial deposits of upland plains and piedmont areas. Predominant soil textures on the site are gravelly fine sandy loam, silty clay loam, and clay loam. The Natural Resources Conservation Service *Web Soil Survey* characterizes the predominant soil texture at the site as Simona-Bippus complex. It tends to be well drained with very high runoff and very low available moisture levels in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2024). The site is in an area of medium karst potential (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with plains, alluvial fans, and flood plains at elevations of 1,800 to 5,000 feet above sea level. The climate is semi-arid, with annual precipitation ranging between 8 to 24 inches. Historically, the plant community had a grassland aspect, dominated by grasses with shrubs. Black grama and sacaton are dominant with a mixture of creosotebush and mesquite shrubs. Overgrazing and extended drought can reduce grass cover (United States Department of Agriculture, Natural Resources Conservation Service, 2024).

There is no surface water located at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC (New Mexico Oil Conservation Division, 2018), is the Pecos River located approximately 2,581 feet west of the site. There is an emergent wetland located approximately 274 feet northeast of the release, which is inside the threshold outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC (United States Fish and Wildlife Service, 2024).

4.0 Closure Criteria Determination

The depth to groundwater was determined using the New Mexico Office of the State Engineer Water Column/Average Depth to Water reports. A 0.5-mile search radius was used to determine groundwater depth. The closest recorded depth to groundwater was determined to be greater than 55 feet below ground surface (bgs) and 1,683 feet from the site (New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2024). Documentation used in Closure Criteria Determination research is included in Appendix B. The release occurred within 300 feet of a wetland and, therefore, the strictest criteria were used to determine constituent concentration thresholds.

Table 1. Closure Criteria Determination			
Site Name: Longview Federal 12 #013H			
Spill Coordinates: 32.325104,-104.048159		**X: 589590**	**Y: 3576870**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	**>55**	feet
	Distance between release and nearest DTGW reference	**1,683**	feet
		0.32	miles
	Date of nearest DTGW reference measurement	**March 31, 2020**	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,581	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	7,359	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	5,822	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**	-	feet
	ii) Within 1000 feet of any fresh water well or spring	3,192	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	**274**	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	51,115	feet
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
	Distance between release and nearest unstable area	19,772	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	2,268	feet
11	Soil Type	gravelly fine sandy loam	
12	Ecological Classification	Shallow sandy and Bottomland	
13	Geology	Qoa	
	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.

Table 2. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	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 = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX - Benzene, toluene, ethylbenzene, and xylenes

5.0 Remedial Actions Taken

5.1 Liner Inspection

On March 8, 2022, Vertex provided 48-hour notification of the liner inspection to NMOCD District 2 and the Bureau of Land Management, as required by Subparagraph (a) of Paragraph (5) of Subsection A 19.15.29.11 NMAC. On March 11, 2022, Vertex was on-site to conduct an inspection of the lined containment and verify that the liner was intact and had the ability to contain the release. The Daily Field Report and associated photographs of the liner inspection are included in Appendix C. The inspection revealed three punctures in the liner approximately 1 to 2 inches in length. The liner remained mostly intact and had the ability to contain the majority of the release. The notification of liner inspection is included in Appendix D.

5.2 Initial Characterization

On April 7 and November 23, 2022, initial characterization soil sampling was completed with boreholes advanced via hand auger to investigate the impact of the liner perforations. Four boreholes were established in the four cardinal directions outside of the lined containment for horizontal delineation, and four more points established inside the containment beneath the liner for vertical delineation. Three of the boreholes were advanced at puncture sites. Impacted soils were field screened and collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Hall Environmental Laboratory Analysis under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chloride (EPA Method 300.0). Laboratory results are presented in Table 3 and the laboratory data report is included in Appendix E.

Samples from three of the four boreholes inside the containment yielded results that exceeded NMOCD strictest criteria for TPH and/or chloride. Deferral was requested for the portion of contaminated soil directly under the tank battery and containment as it would require extensive disassembly and movement of the infrastructure in addition to shut-in of the wells to complete remedial activities.

5.3 Closure and Deferral Denial, and Supplementary Characterization

Devon submitted the initial closure and deferral report to the NMOCD on February 28, 2023. The initial request was denied on January 22, 2024, with following notations:

> *"This deferral application is not approved. The report describes 3 punctures in the liner, however it does not describe or visually show how these punctures were addressed to assure the future integrity of the liner. The release should be horizontally and vertically delineated to 600 mg/kg for chlorides 100 mg/kg TPH to define the edges of the release. Delineation samples must include lab tested analytical results."*

On September 11, 2023, and February 1, 2024, Vertex completed additional horizontal and vertical delineation to define the edges of the release. Field screening and laboratory results are presented in Table 3. On May 17, 2024, Vertex conducted a liner inspection and deemed the repaired patches at the inside borehole locations (including the three puncture sites) were deemed to be sufficient and the overall liner remained in good condition. The Daily Field Reports and associated photographs of the expanded delineations and liner repairs are included in Appendix C.

6.0 Closure Request

Vertex recommends no additional remediation action to address the release at Longview. The secondary containment liner was mostly intact and contained the majority of the release. The liner has since been repaired and confirmed to be intact and capable of containing a release. There are no anticipated risks to human, ecological or hydrological receptors associated with the release site.

As the release occurred under an active tank battery, Vertex requests that restoration and reclamation of the spill area be deferred until such time as the equipment is removed and the facility pad reclaimed per 19.15.29.13 NMAC.

Vertex requests that this incident (nAPP2205939051) be closed with the caveat of a deferral for the area under the tank battery and containment, as the areas outside the containment have met closure requirements set forth in Subsection E of 19.15.29.12 NMAC. Devon certifies that all information in this report and the attachments is correct, and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the February 15, 2022, release at Longview Federal 12 #013H.

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

7.0 References

Google Inc. (2024). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from https://earth.google.com

New Mexico Bureau of Geology and Mineral Resources. (2024). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2024). *Water Column/Average Depth to Water Report.* Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html.

New Mexico Oil Conservation Division. (2018). N*ew Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.

United States Department of Agriculture, Natural Resources Conservation Service. (2024). *Web Soil Survey.* Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karsts.* Retrieved from https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico.

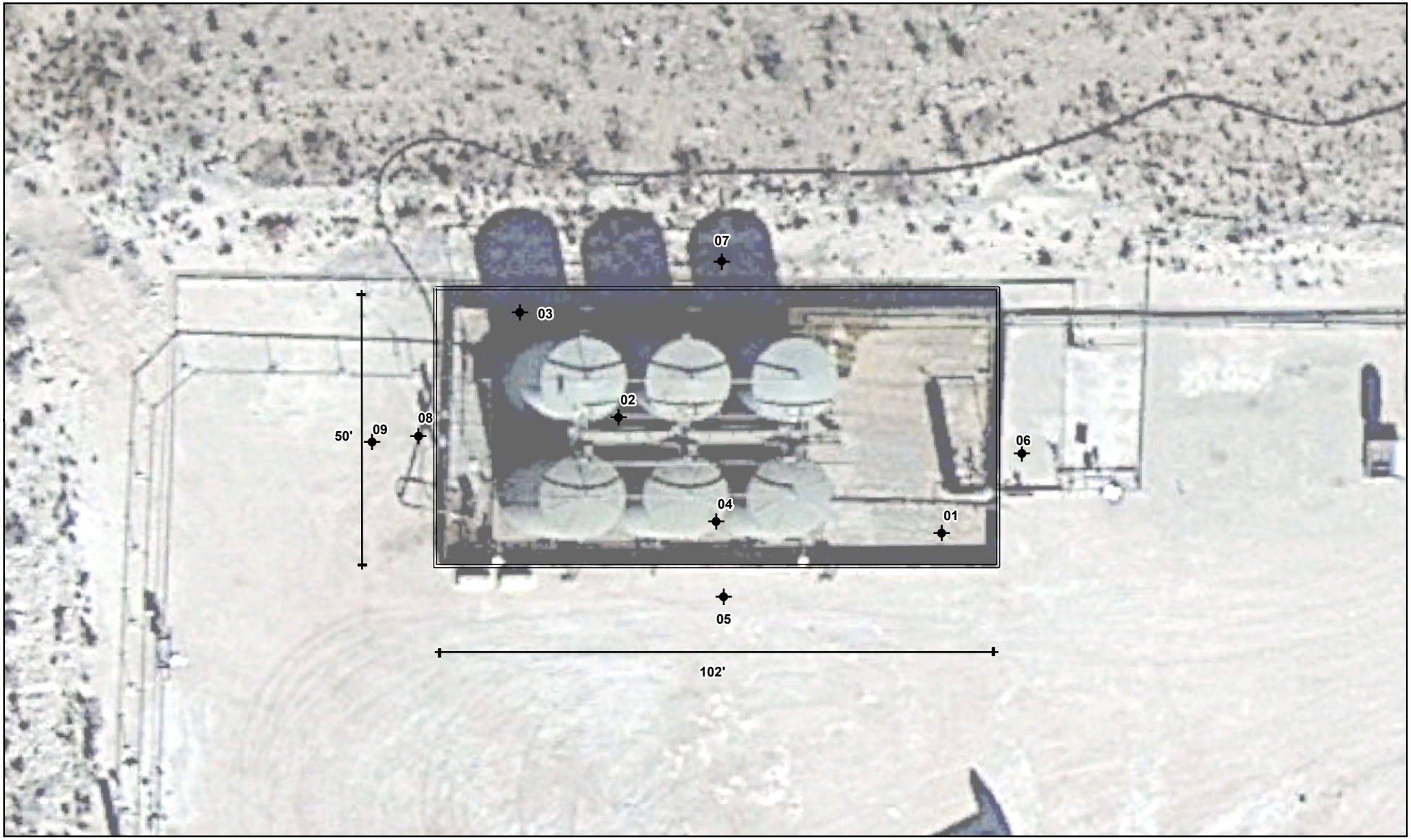
United States Fish and Wildlife Service. (2024). *National Wetlands Inventory Surface Waters and Wetland*. Retrieved from https://www.fws.gov/ wetlands/data/Mapper.html.

8.0 Limitations

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

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

FIGURES



Borehole (Prefixed by "BH22-") Containment Boundary

VERTEX

0 5 10 20 ft

Map Center:
Lat/Long: 32.325126, -104.048165

NAD 1983 UTM Zone 13N
Date: Mar 12/24

N

Characterization Sampling Site Schematic
Longview Federal 12 #013H

FIGURE:
1

devon

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 Google Earth, 2023. Site Features from GPS by Vertex Professional Services Ltd., 2023.

VERSATILITY. EXPERTISE.

Document Path: S:\04 - Geomatics\1-Projects_US PROJECTS\Devon Energy Corporation\2022\22E-00764 - Longview Federal 12 #013H\Figure 1 Characterization Schematic (22E-00764)ID17972.mxd

TABLES

Client Name: Devon Energy Production Company, LP
Site Name: Longview Federal 12 #013H
NM OCD Tracking #: nAPP2205939051
Project #: 22E-00764
Lab Reports: 2204427, 2211E00, 2309849, and 2402165

Table 3. Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH22-01	0	April 7, 2022	0	51	590	ND	ND	ND	11	ND	11	11	85
	0.5	April 7, 2022	0	26	360	ND	ND	ND	ND	ND	ND	ND	160
BH22-02	0	April 7, 2022	0	400	725	ND	ND	ND	530	390	**530**	**920**	480
	0.5	April 7, 2022	0	254	850	-	-	-	-	-	-	-	-
	2	November 23, 2022	0	96	382	ND	ND	ND	ND	ND	ND	ND	ND
BH22-03	0	April 7, 2022	0	555	3,140	ND	ND	ND	940	740	**940**	**1680**	**2100**
	0.5	April 7, 2022	0	458	1,877	-	-	-	-	-	-	-	-
BH22-04	0	April 7, 2022	0	23	1,825	ND	ND	ND	ND	ND	ND	ND	**1800**
	0.5	April 7, 2022	0	114	1,550	-	-	-	-	-	-	-	-
BH22-05	0	April 7, 2022	0	14	370	ND	ND	ND	ND	ND	ND	ND	ND
	0.5	April 7, 2022	0	20	348	-	-	-	-	-	-	-	-
	1	February 1, 2024	-	45	650	ND	ND	ND	ND	ND	ND	ND	430
BH22-06	0	April 7, 2022	0	6	477	ND	ND	ND	ND	ND	ND	ND	ND
	0.5	April 7, 2022	0	9	462	-	-	-	-	-	-	-	-
	1	February 1, 2024	-	76	638	ND	ND	ND	ND	ND	ND	ND	360
BH22-07	0	April 7, 2022	0	12	330	ND	ND	ND	ND	ND	ND	ND	ND
	0.5	April 7, 2022	0	22	325	-	-	-	-	-	-	-	-
	1	February 1, 2024	-	48	288	ND	ND	ND	ND	ND	ND	ND	ND
BH22-08	0	April 7, 2022	0	24	388	ND	ND	ND	ND	ND	ND	ND	ND
	0.5	April 7, 2022	0	15	370	-	-	-	-	-	-	-	-
BH23-09	0	September 11, 2023	0	82	477	ND	ND	ND	ND	ND	ND	ND	ND
	2	September 11, 2023	0	33	540	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria

APPENDIX A - NMOCD C-141 Reports

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2205939051
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Dale Woodall	Contact Telephone
Contact email Dale.Woodall@dvn.com	Incident # *(assigned by OCD)*
Contact mailing address 6488 Seven Rivers Hwy Artesia, NM 88210	

Location of Release Source

Latitude 32.324965 Longitude -104.047890
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Longview Fed 12-13H	Site Type Oil
Date Release Discovered 02/15/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
D	12	23S	28E	Eddy

Surface Owner: ☐ State ■ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
■ Produced Water	Volume Released (bbls) 10.64 BBLS	Volume Recovered (bbls) 10.64 BBLS
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Fluid released from transfer pump. All fluid stayed within lined containment.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205939051
District RP	
Facility ID	
Application ID	

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

Initial Response

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

- ■ The source of the release has been stopped.
- ■ The impacted area has been secured to protect human health and the environment.
- ■ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ■ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

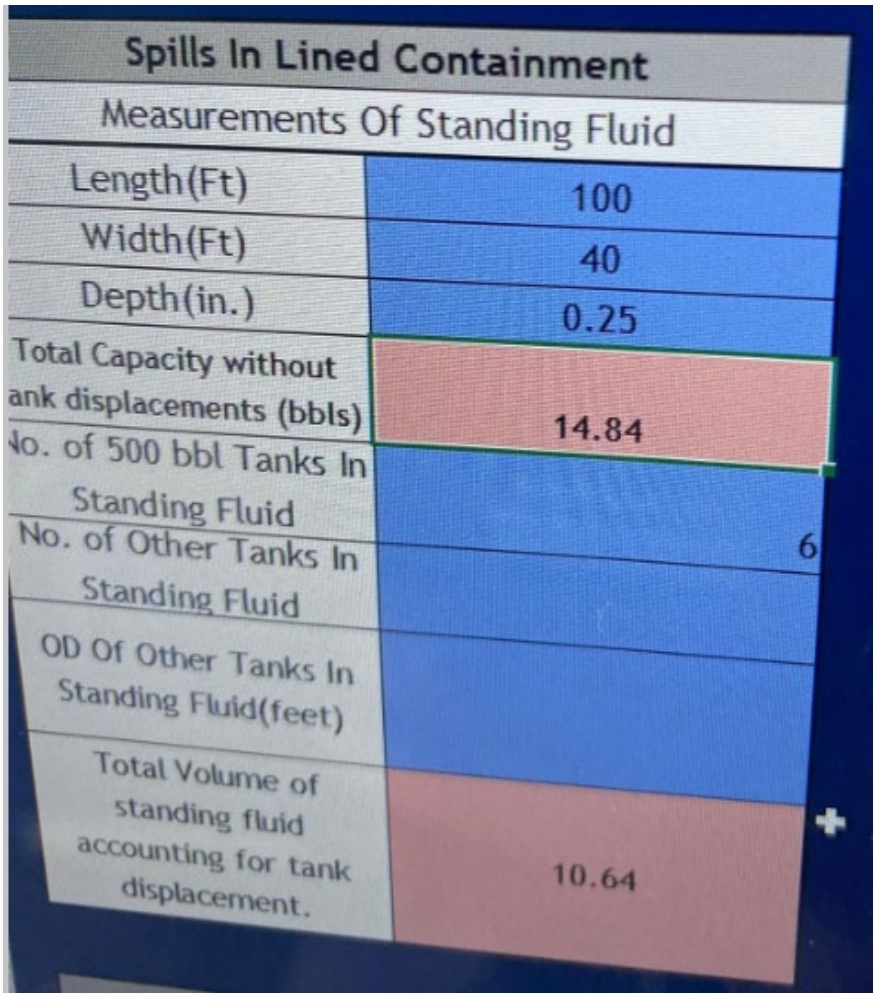
Printed Name: Kendra DeHoyos Title: EHS Associate

Signature: Kendra DeHoyos Date: 03/03/2022

email: Kendra.Ruiz@dvn.com Telephone: 575-748-0167

OCD Only

Received by: Jocelyn Harimon Date: 03/08/2022



Spills In Lined Containment	
Measurements Of Standing Fluid	
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Width(Ft)	40
Depth(in.)	0.25
Total Capacity without ank displacements (bbls)	14.84
No. of 500 bbl Tanks In Standing Fluid	6
No. of Other Tanks In Standing Fluid	
OD Of Other Tanks In Standing Fluid(feet)	
Total Volume of standing fluid accounting for tank displacement.	10.64

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Phone:(575) 393-6161 Fax:(575) 393-0720
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811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 86139
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

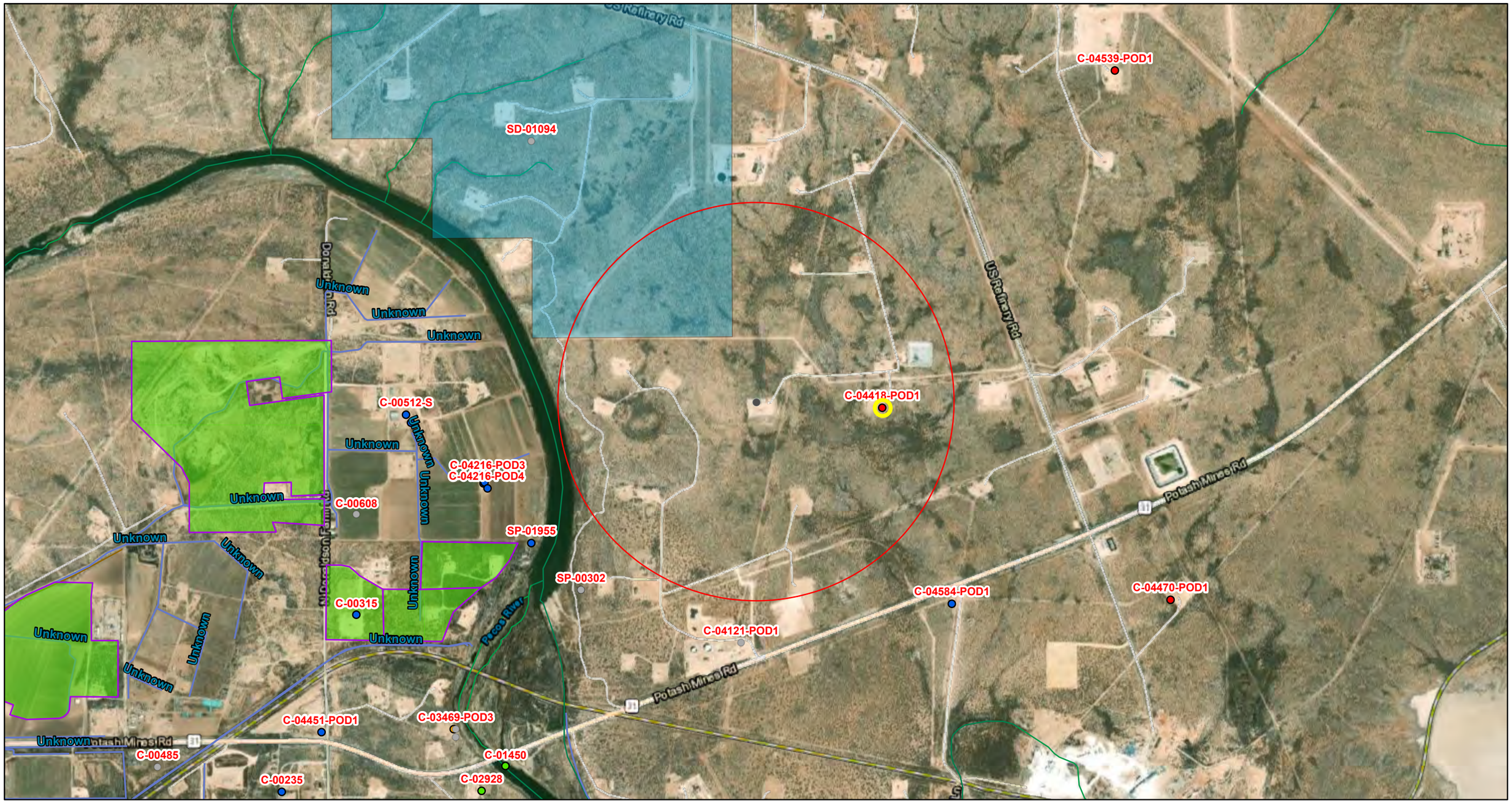
Created By	Condition	Condition Date
rmarcus	None	3/8/2022

APPENDIX B – Closure Criteria Research Documentation

Closure Criteria Determination			
Site Name: Longview Federal 12 #013H			
Spill Coordinates: 32.325104,-104.048159		X: 589590	Y: 3576870
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>55	feet
	Distance between release and nearest DTGW reference	1,683	feet
		0.32	miles
	Date of nearest DTGW reference measurement	March 31, 2020	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,581	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	7,359	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	5,822	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**	-	feet
	ii) Within 1000 feet of any fresh water well or spring	3,192	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	274	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	51,115	feet
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
	Distance between release and nearest unstable area	19,772	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	2,268	feet
11	Soil Type	gravelly fine sandy loam	
12	Ecological Classification	Shallow sandy and Bottomland	
13	Geology	Qoa	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

OSE POD 0.5 mile

C-04418-POD1: 0.3 miles away (1591 feet)



2/16/2023, 11:43:29 AM

GIS WATERS PODs
- Active
- Pending
- Capped
- Plugged

OSE District Boundary

Water Right Regulations
- Negative Easement Area

New Mexico State Trust Lands
- Both Estates

Conveyances
- Ditch

NHD Flowlines
- Artificial Path
- Canal Ditch
- Stream River

SiteBoundaries

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

Web Generated Map
Map is generated by web users.

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
NA	C 04418 POD1	4	2	1	12	23S	28E	590104	3576851

Driller License: 1789 **Driller Company:** HRL COMPLIANCE SOLUTIONS, INC

Driller Name: MARK MUMBY

Drill Start Date:	03/31/2020	**Drill Finish Date:**	03/31/2020	**Plug Date:**	04/03/2020
Log File Date:	05/26/2020	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	0 GPM
Casing Size:	2.00	**Depth Well:**	55 feet	**Depth Water:**	

Casing Perforations:	Top	Bottom
	0	45
	45	55

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1	Well Tag ID Not Issued	C 04418

WELL OWNER NAME(S)	PHONE (OPTIONAL)
WPX Energy	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
5315 Buena Vista Drive	Carlsbad	NM	88220

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	19	29.6	N
	LONGITUDE	-104	02	33.7	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

C-12-23S-28E; Longview Federal 12-15

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1789	Mark Mumby	HRL Compliance Solutions

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
3/31/2020	3/31/2020	55	55	Water was not encountered

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): Water was not present in the well after 48-hour

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	45	6.25	Blank PVC	Flush Thread	2.0	0.154	0.010
45	55	6.25	Factory Slotted PVC Screen	Flush Thread	2.0	0.154	0.010

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			No Annular Seal Material or Gravel Pack	None	

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO.	C-4418	POD NO.	1	TRN NO.	670356
LOCATION	214 T23S R28E Sec12			WELL TAG ID NO.	NA

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	55	55	Silt/Sand with Interbedded caliche	Y ✓ N	0.00
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY: Water Not Encountered

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Well was drilled to determine depth to groundwater in the area. The well was a temporary well. The well was monitored for the presence of water 48-hours after drilling was complete; water was not encountered in the well at this time. The well was subsequently abandoned on 4/3/2020.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Kalvin (Kelly) Padilla

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

Mark Mumby — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

4/23/2020 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO.	POD NO.	TRN NO.	
C-4418	1	670356	
LOCATION 21 4 T23S R38E Sec 12		WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 670356
File Nbr: C 04418
Well File Nbr: C 04418 POD1

Jun. 09, 2020

LYNDA LAUMBACH
WPX ENERGY
5315 BUENA VISTA DRIVE
CARLSBAD, NM 88220

Greetings:

The above numbered permit was issued in your name on 03/26/2020.

The Well Record was received in this office on 05/26/2020, stating that it had been completed on 03/31/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 03/26/2021.

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

Sincerely,

Andrew Dennis
(575)622-6521

drywell

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04418 POD1		CUB	ED	4	2	1	12	23S	28E	590104	3576851	513	55		
C 04216 POD3		CUB	ED	1	4	1	11	23S	28E	588501	3576556	1133	23	13	10
C 04216 POD4		CUB	ED	2	4	1	11	23S	28E	588499	3576513	1147	20	10	10
C 04216 POD1		CUB	ED	2	4	1	11	23S	28E	588488	3576534	1151	20	10	10
C 00109		CUB	ED	1	3	3	04	23S	27E	588486	3576531	1154	168	120	48
C 04216 POD2		CUB	ED	1	4	1	11	23S	28E	588465	3576555	1168	20	10	10
C 00512 EXPL	O	CUB	ED			1	11	23S	28E	588272	3576703*	1328	200	16	184
C 00512		CUB	ED	4	1	1	11	23S	28E	588188	3576775	1405	175	15	160
C 00512 CLW198323	O	CUB	ED	4	1	1	11	23S	28E	588167	3576806*	1424	100		
C 00512 S		CUB	ED	4	1	1	11	23S	28E	588167	3576806*	1424	100		
C 01216		CUB	ED	4	1	1	13	23S	28E	589801	3575205*	1678	60	45	15
C 00608		C	ED	3	3	1	11	23S	28E	587970	3576401*	1686	200		
C 03469 POD3		CUB	ED	3	4	3	11	23S	28E	588381	3575538	1798	47		
C 03469 POD1		CUB	ED	3	4	3	11	23S	28E	588374	3575538	1803	68	38	30
C 03469 POD2		CUB	ED	3	4	3	11	23S	28E	588382	3575506	1821	48		
C 00315		CUB	ED	3	1	3	11	23S	28E	587973	3575995*	1838	100	45	55
C 04470 POD1		CUB	ED	3	1	3	07	23S	29E	591280	3576086	1863			
C 04524 POD1		CUB	ED	1	1	2	01	23S	28E	590452	3578629	1959	55		
C 04539 POD1		CUB	ED	2	4	2	01	23S	28E	591034	3578223	1979	55		
C 03460 POD1		CUB	ED	3	1	2	14	23S	28E	588857	3575004	2004	100	38	62
C 04417 POD1		CUB	ED	4	3	3	36	22S	28E	589736	3578874	2009	55		
C 02702		C	ED			2	13	23S	28E	590715	3575108*	2090	38	20	18
C 04451 POD1		C	ED	4	4	4	10	23S	28E	587833	3575521	2214	120	57	63
C 01214		CUB	ED	1	2	3	13	23S	28E	590010	3574597*	2311	70	20	50
C 01967		C	ED		2	3	13	23S	28E	590111	3574498*	2428	264	200	64
C 00616		CUB	ED	1	3	1	14	23S	28E	587982	3574978*	2483	120	30	90
C 00235		C	ED		2	2	15	23S	28E	587676	3575280*	2488	160		
C 01217		CUB	ED	4	1	3	13	23S	28E	589789	3574371	2506	87	50	37
C 01215		CUB	ED	4	2	3	13	23S	28E	590210	3574397*	2549	104	15	89
C 04490 POD2		CUB	ED	2	3	3	13	23S	28E	589899	3574259	2628	23	19	4
C 00321		C	ED		4	2	15	23S	28E	587679	3574874*	2763	120		

C_02503		C	ED		4	2	15	23S	28E	587679	3574874*	2763	70	12	58
C_00269		C	ED	4	4	2	15	23S	28E	587778	3574773*	2771	240	35	205
C_00269 CLW199753	O	C	ED	4	4	2	15	23S	28E	587778	3574773*	2771	240	35	205
C_02189		C	ED	1	1	3	14	23S	28E	587985	3574572*	2803	48	29	19
C_00128		C	ED	2	4	4	15	23S	28E	587783	3574162*	3255	149		
C_01102		C	ED		1	2	23	23S	28E	588901	3573672*	3271	100	12	88
C_03965 POD5		CUB	ED	4	1	1	24	23S	28E	589864	3573534	3346	35	31	4
C_00154		CUB	ED	4	2	1	23	23S	28E	588595	3573566*	3450	196	38	158
C_00326		CUB	ED	3	3	3	10	23S	28E	586358	3575572*	3482	130	19	111
C_00326 CLW196238	O	CUB	ED	3	3	3	10	23S	28E	586358	3575572*	3482	196	25	171
C_03965 POD4		CUB	ED		1	4	24	23S	28E	589918	3573381	3503	40	31	9
C_00154 CLW194067	O	CUB	ED	3	2	1	23	23S	28E	588395	3573566*	3513	150	65	85
C_01108		C	ED	3	2	1	23	23S	28E	588395	3573566*	3513	60	35	25
C_04490 POD3		CUB	ED	4	1	2	24	23S	28E	590596	3573502	3515	37	33	4
C_00800		C	ED		4	2	09	23S	28E	586050	3576479*	3561	200	30	170
C_04556 POD1		CUB	ED	4	3	1	24	23S	28E	589720	3573237	3634	40	36	4
C_04556 POD2		CUB	ED	4	3	1	24	23S	28E	589891	3573239	3642	40	36	4
C_02804		CUB	ED		2	1	08	23S	29E	593262	3576905*	3672	100		
C_02805		CUB	ED		2	1	08	23S	29E	593262	3576905*	3672	100		
C_00500		CUB	ED	4	3	1	24	23S	28E	589811	3573176*	3700	130		
C_00868		CUB	ED	4	3	1	24	23S	28E	589811	3573176*	3700	190		
C_04556 POD3		CUB	ED	4	3	1	24	23S	28E	590567	3573265	3734	40	36	4
C_02706		C	ED			4	18	23S	29E	592302	3574291*	3742	17	10	7
C_00072		CUB	ED	3	3	1	15	23S	28E	586364	3574760*	3854	120	54	66
C_01816		C	ED	1	3	1	23	23S	28E	587992	3573355*	3861	200	40	160
C_02704		C	ED			1	19	23S	29E	591531	3573493*	3895	174		
C_03146		C	ED	1	1	3	24	23S	28E	589613	3572970*	3900	82	36	46
C_04415 POD8		CUB	ED	4	1	4	04	23S	28E	585656	3577583	3997	27	23	4
C_04415 POD1		CUB	ED	4	1	4	04	23S	28E	585657	3577591	3998	25	20	5
C_04415 POD2		CUB	ED	4	1	4	04	23S	28E	585653	3577570	3998	12		
C_04588 POD1		CUB	ED	2	2	2	04	23S	28E	586043	3578720	4000	50		
C_04415 POD3		CUB	ED	4	1	4	04	23S	28E	585645	3577552	4003	11		
C_04415 POD5		CUB	ED	4	1	4	04	23S	28E	585652	3577605	4006	10		
C_04415 POD6		CUB	ED	4	1	4	04	23S	28E	585652	3577605	4006	10		
C_04415 POD7		CUB	ED	3	1	4	04	23S	28E	585628	3577518	4014	55	38	17
C_04415 POD4		CUB	ED	3	1	4	04	23S	28E	585628	3577575	4024	11		
C_00048		CUB	ED	3	3	1	23	23S	28E	587997	3573160	4037	182	75	107
C_00048	C	CUB	ED	3	3	1	23	23S	28E	587997	3573160	4037	182	75	107

C 03762 POD3		CUB	ED	4	4	2	17	23S	28E	584893	3575598	4866	40	30	10
C 00211		C	ED	4	3	3	15	23S	28E	586570	3573949*	4201	89	48	41
C 01872		C	ED		2	1	22	23S	28E	586878	3573649*	4210	68	48	20
C 03059 EXPLORE		CUB	ED	4	1	3	17	23S	29E	592993	3574378*	4217		65	
C 00094		CUB	ED	3	4	2	22	23S	28E	587588	3573151*	4223	100	60	40
C 00094	C	CUB	ED	3	4	2	22	23S	28E	587588	3573151*	4223	100	60	40
C 00094 A	C	CUB	ED	3	4	2	22	23S	28E	587588	3573151*	4223	166	40	126
C 00094 AS	C	CUB	ED	1	3	2	22	23S	28E	587183	3573346*	4267	165	40	125
C 01487 CLW201796	O	CUB	ED		3	2	22	23S	28E	587284	3573247*	4294	90	30	60
C 00453		C	ED	2	2	4	22	23S	28E	587790	3572945*	4318	65		
C 01336		C	ED	2	1	1	22	23S	28E	586572	3573744*	4345	190	30	160
C 00443		C	ED	4	2	4	22	23S	28E	587790	3572745*	4500	171	160	11
C 02847		CUB	ED	2	1	4	22	23S	28E	587386	3572941*	4504	80		
C 02849		CUB	ED	2	1	4	22	23S	28E	587386	3572941*	4504	60		
C 04490 POD1		CUB	ED	1	4	4	24	23S	28E	590876	3572492	4562	37	25	12
C 00311		C	ED	4	2	1	16	23S	28E	585353	3575152*	4572	163	55	108
C 02705		C	ED			2	17	23S	29E	593902	3575093*	4663	68	28	40
C 01487		CUB	ED	3	4	1	22	23S	28E	586779	3573142*	4669	150	38	112
C 00869 S-2	O	CUB	ED		3	3	23	23S	28E	588097	3572444*	4671	150	58	92
C 02608		CUB	ED	3	1	4	17	23S	29E	593598	3574387*	4714	400		
C 01253		CUB	ED	1	3	1	22	23S	28E	586375	3573338*	4776	179	50	129
C 00136 S		CUB	ED	1	1	2	25	23S	28E	590426	3572167*	4776	122	45	77
C 01885		C	ED		2	2	21	23S	28E	586070	3573640*	4777	104	35	69
C 03056		C	ED	3	3	3	04	23S	28E	584772	3577226	4831	60	31	29
C 01443		C	ED		2	1	25	23S	28E	590123	3572064*	4835	50	27	23
C 02796		CUB	ED		2	3	22	23S	28E	586882	3572838*	4856	200		
C 03762 POD2		CUB	ED	4	4	2	17	23S	28E	584893	3575598	4866	40	30	10
C 02806		CUB	ED		1	1	09	23S	29E	594473	3576927*	4883	100		
C 02807		CUB	ED		1	1	09	23S	29E	594473	3576927*	4883	100		
C 03587 POD2		CUB	ED	1	2	4	19	23S	29E	592213	3572706	4921	77	16	61
C 00136		CUB	ED	3	1	2	25	23S	28E	590426	3571967*	4973	200	42	158
C 00136 CLW194026	O	CUB	ED	3	1	2	25	23S	28E	590426	3571967*	4973	200	52	148
C 00136 CLW235233	O	CUB	ED	3	1	2	25	23S	28E	590426	3571967*	4973	200	42	158
C 01122		CUB	ED	1	1	1	26	23S	28E	587999	3572138*	4992	175	30	145

Average Depth to Water: **40 feet**

Minimum Depth: **10 feet**

Maximum Depth: **200 feet**

Record Count: 103

UTMNAD83 Radius Search (in meters):

Easting (X): 389590 **Northing (Y):** 3576870 **Radius:** 5000

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

3/28/22 7:05 AM

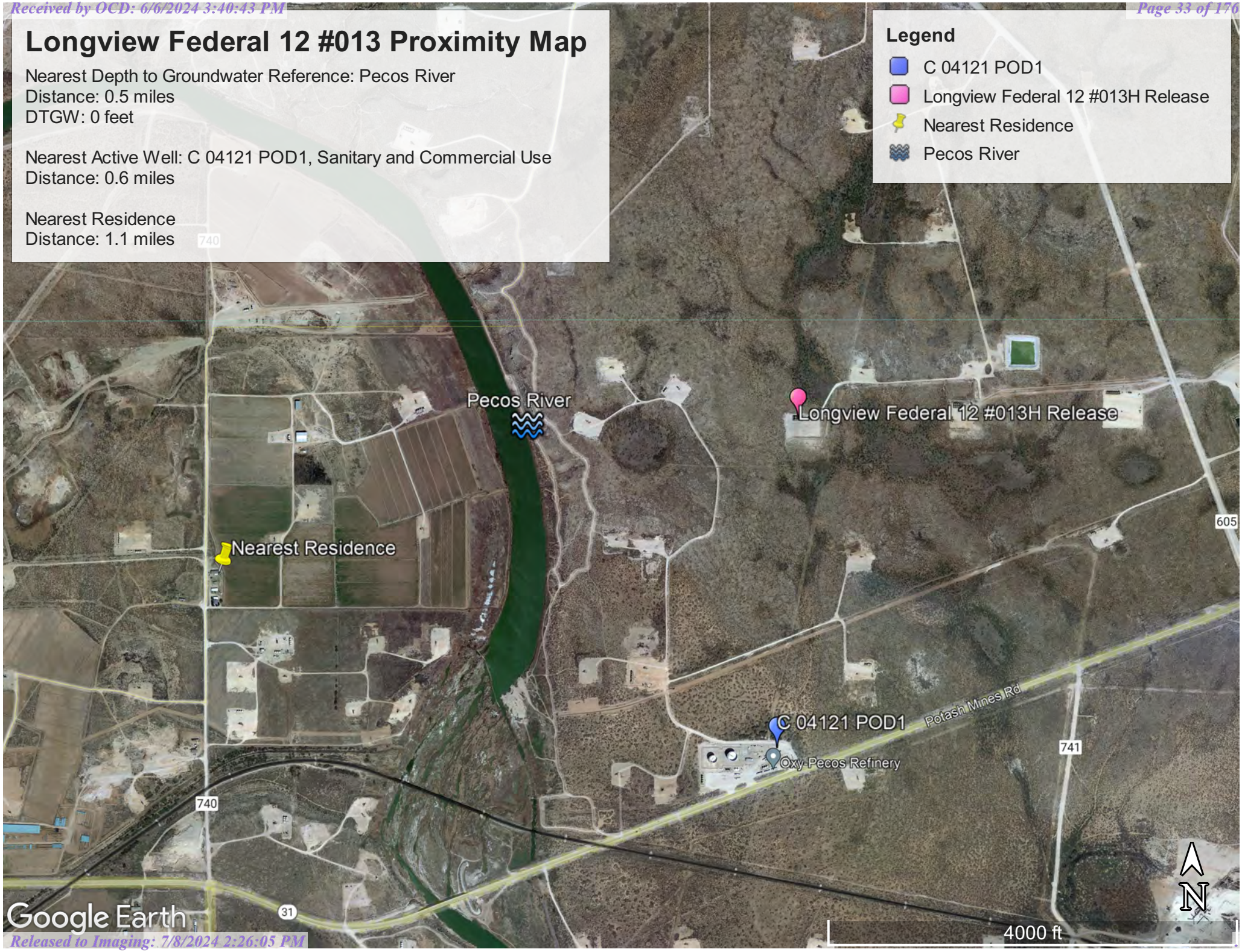
WATER COLUMN/ AVERAGE DEPTH TO WATER

Longview Federal 12 #013 Proximity Map

Nearest Depth to Groundwater Reference: Pecos River
Distance: 0.5 miles
DTGW: 0 feet

Nearest Active Well: C 04121 POD1, Sanitary and Commercial Use
Distance: 0.6 miles

Nearest Residence
Distance: 1.1 miles



Longview Federal 12 #013H Depth to Groundwater

POD C 04418 drilled to 55' bgs in 2020, no water found.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Pecos River, 2581 feet

March 28, 2022

Wetlands

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

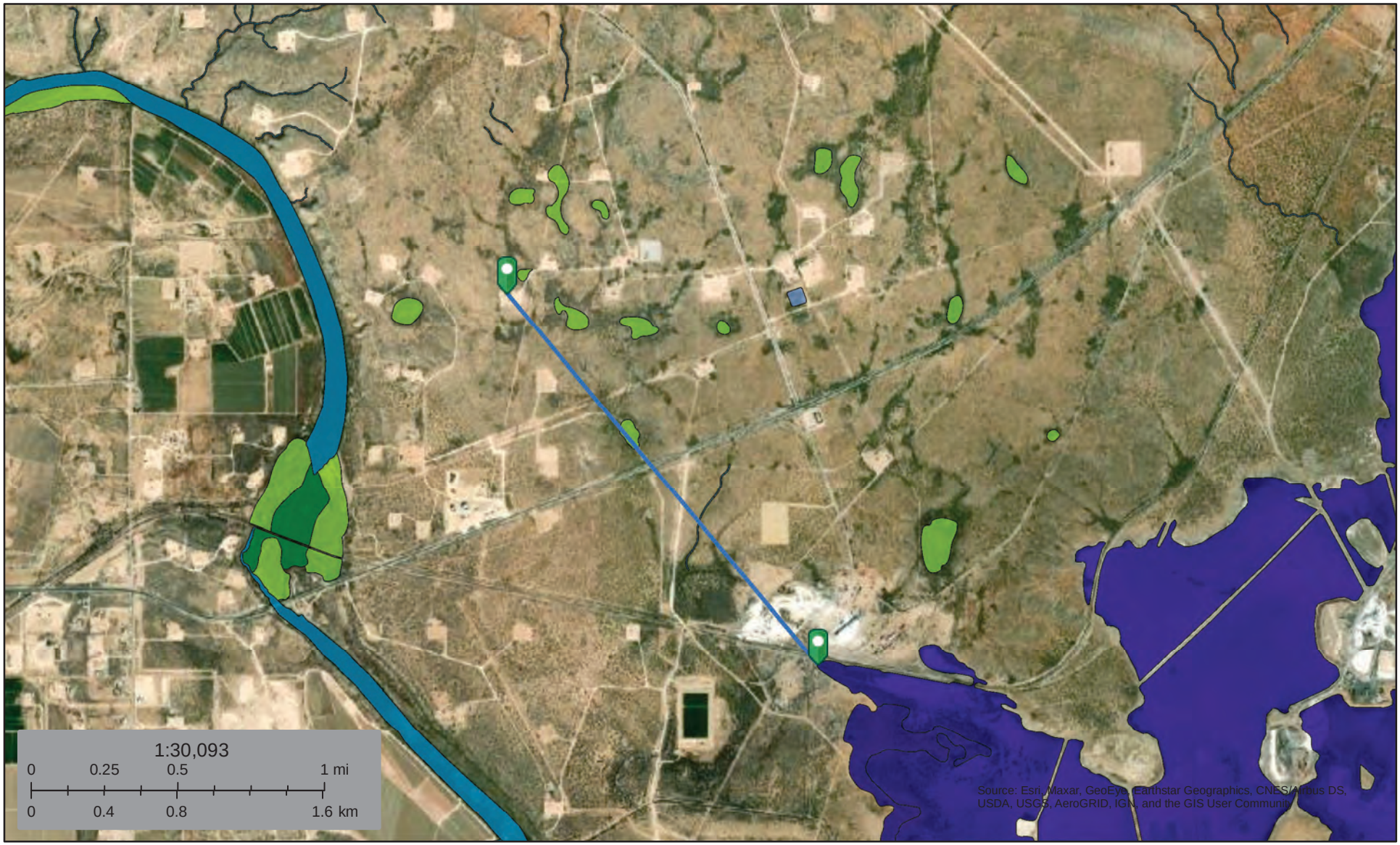
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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

U.S. Fish and Wildlife Service

National Wetlands Inventory

Salt Lake, 7359 feet



March 28, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
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- Riverine

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

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

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04121 POD1	1	3	3	12	23S	28E	589536	3575898

x

Driller License: **Driller Company:**

Driller Name:

Drill Start Date: **Drill Finish Date:** **Plug Date:**

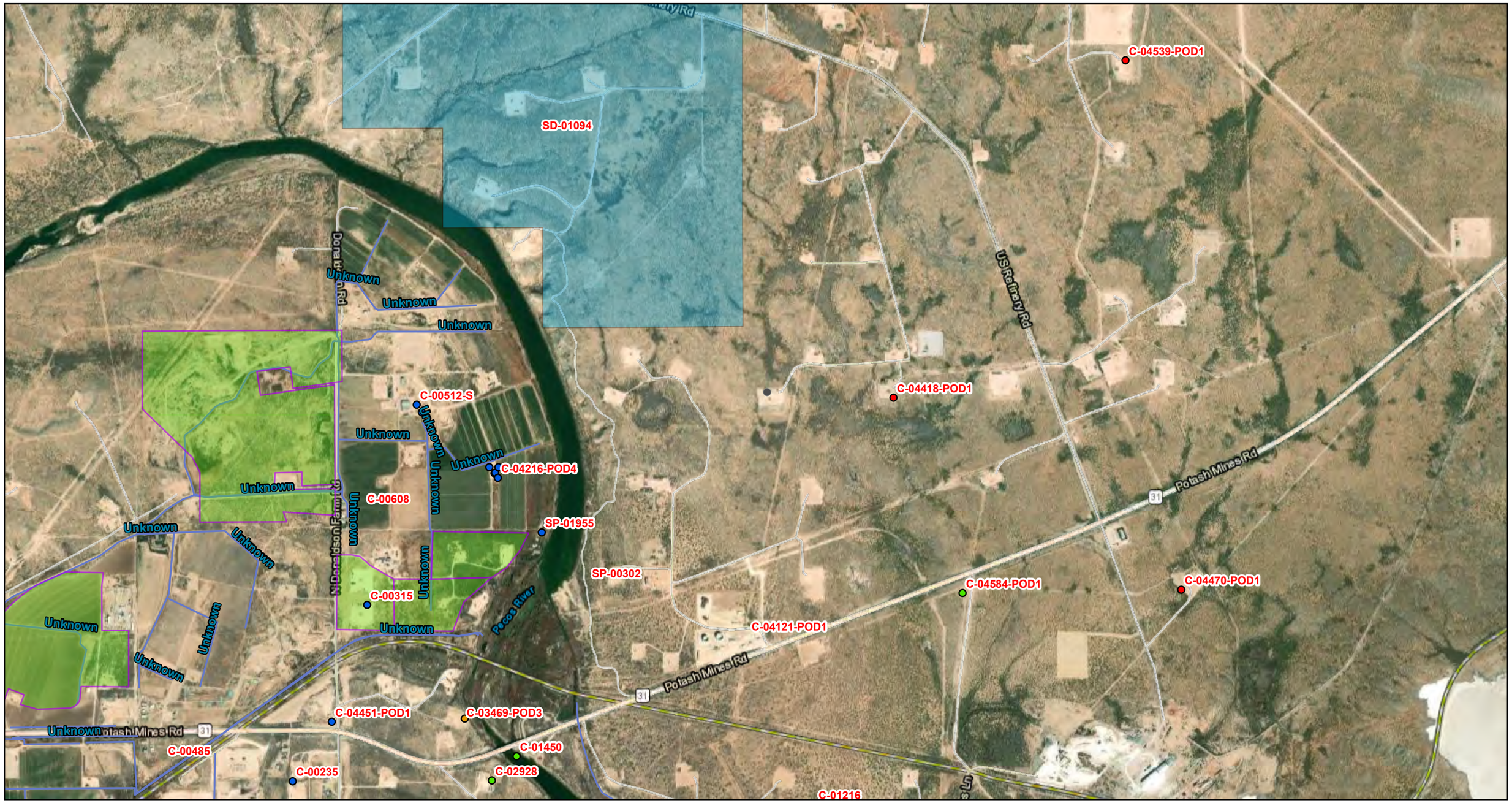
Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** **Depth Water:**

x

OSE POD Locations Map



3/28/2022, 8:07:38 AM

1:18,056

GIS WATERS PODs
- Active
- Pending
- Capped
- Plugged
- OSE District Boundary

Water Right Regulations
- Negative Easement Area

New Mexico State Trust Lands
- Both Estates

Conveyances
- Ditch
- SiteBoundaries

0 0.17 0.35 0.7 mi
0 0.3 0.6 1.2 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, U.S. Department of Energy Office of Legacy

Unofficial Online Map
These maps are distributed “as is” without warranty of any kind.

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 04121 **Subbasin:** C **Cross Reference:** -

Primary Purpose: SAN 72-12-1 SANITARY IN CONJUNCTION WITH A COMMERCIAL USE

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 1 **Cause/Case:** -

Owner: CENTURION PIPELINE LTD PRTNRSH

Contact: LINDA K GULLY

x

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	610829	72121	2017-07-28	PMT	APR	C 04121 POD1	T		1	

x

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04121 POD1	NA		1	3	3	12	23S	28E	589536	3575898	410 POTASH MINES RD, LOVING,NM

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 04418 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: WPX ENERGY

Contact: LYNDA LAUMBACH

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	670356	EXPL	2020-03-26	PMT	APR	C 04418 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04418 POD1	NA		4	2	1	12	23S	28E	590104	3576851	MW-1

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(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)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y	Distance
C 04418	CUB	MON	0	WPX ENERGY	ED	C 04418 POD1	NA				4	2	1	12	23S	28E	590103	3576851	513
C 04121	C	SAN	1	CENTURION PIPELINE LTD PRTNRSH	ED	C 04121 POD1	NA				1	3	3	12	23S	28E	589536	3575898	973
SP 00302	CUB	IND	4639.5	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	SP 00302						1	4	11	23S	28E	588886	3576107*	1038
SP 01942	CUB	IND	10868	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	SP 01942						1	4	11	23S	28E	588886	3576107*	1038
SP 02045	CUB	IND	18100	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	SP 02045						1	4	11	23S	28E	588886	3576107*	1038
SP 01955	CUB	IRR	150.8	U.S. BANK NATIONAL ASSO. INTREPID MINING NM LLC	ED	SP 01955								11	23S	28E	588680	3576294*	1076
C 04216	CUB	MON	0	ROCKCLIFF OPERATING NM LLC	ED	C 04216 POD3	NA			Shallow	1	4	1	11	23S	28E	588501	3576556	1133
C 04584	CUB	MON	0	MOSAIC POTASH CARLSBAD INC	ED	C 04584 POD1	NA				3	1	4	12	23S	28E	590391	3576064	1136
C 04216	CUB	MON	0	ROCKCLIFF OPERATING NM LLC	ED	C 04216 POD4	NA			Shallow	2	4	1	11	23S	28E	588499	3576513	1147
					ED	C 04216 POD1				Shallow	2	4	1	11	23S	28E	588488	3576534	1151
C 00098	CUB	IRR	405.39	JAMES B KENNEY	ED	C 00109	NA			Shallow	1	3	3	04	23S	27E	588485	3576531	1154
C 00109	CUB	IRR	405.39	MONTIE BUNCH	ED	C 00109	NA			Shallow	1	3	3	04	23S	27E	588485	3576531	1154
C 04219	CUB	PRO	0	JAMES B KENNEY	ED	C 00109	NA			Shallow	1	3	3	04	23S	27E	588485	3576531	1154
C 04216	CUB	MON	0	ROCKCLIFF OPERATING NM LLC	ED	C 04216 POD2	NA			Shallow	1	4	1	11	23S	28E	588464	3576555	1168
SD 01094	CUB	IND	381.6	UNITED STATES POTASH COMPANY (NSL) A CORP.	ED	SD 01094								02	23S	28E	588668	3577916*	1394
C 00512	CUB	IRR	322.8	ANTONIO C. & GLORIA G. ONSUREZ	ED	C 00512				Shallow	4	1	1	11	23S	28E	588188	3576775	1405
C 03536	C	PRO	0	GLENN'S WATER WELL SERVICE	ED	C 00512				Shallow	4	1	1	11	23S	28E	588188	3576775	1405
C 00512	CUB	IRR	322.8	ANTONIO C. & GLORIA G. ONSUREZ	ED	C 00512 S				Shallow	4	1	1	11	23S	28E	588167	3576806*	1424
C 01216	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01216				Shallow	4	1	1	13	23S	28E	589801	3575205*	1678
C 00608	C	DOM	0	JOSE AREVALO	ED	C 00608					3	3	1	11	23S	28E	587970	3576401*	1686
C 01256	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01256					3	2	2	14	23S	28E	589196	3575199*	1716
C 01257	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01257					4	1	2	14	23S	28E	588990	3575194*	1780
C 01450	C	PUB	0	GARDNER BRIDGE CO.	ED	C 01450					2	2	1	14	23S	28E	588585	3575389*	1789
C 03469	CUB	POL	0	BTA OIL PRODUCERS, LLC	ED	C 03469 POD3					3	4	3	11	23S	28E	588381	3575538	1798
					ED	C 03469 POD1				Shallow	3	4	3	11	23S	28E	588373	3575538	1803
					ED	C 03469 POD2					3	4	3	11	23S	28E	588382	3575506	1821
C 00315	CUB	IRR	0	JOSE AREVALO	ED	C 00315				Shallow	3	1	3	11	23S	28E	587973	3575995*	1838
C 04470	CUB	MON	0	MARATHON OIL	ED	C 04470 POD1	NA				3	1	3	07	23S	29E	591280	3576086	1863
C 04584	CUB	MON	0	GOLDER ASSOCIATES INC	ED	C 04584 POD2	NA				4	2	1	13	23S	28E	590250	3575123	1866
C 00791	CUB	MIN	0	MISSISSIPPI CHEMICAL COMPANY	ED	C 00791					1	3	1	13	23S	28E	589603	3574999*	1871
C 01212	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01212					1	3	1	13	23S	28E	589603	3574999*	1871
C 01293	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01293					1	3	1	13	23S	28E	589603	3574999*	1871
C 02928	C	PUB	0	NEW MEXICO STATE HIGHWAY & T.D	ED	C 02928						2	1	14	23S	28E	588486	3575290*	1927
C 04524	CUB	MON	0	ALTAMIRA-US LLC	ED	C 04524 POD1	NA				1	1	2	01	23S	28E	590451	3578629	1959
C 04539	CUB	MON	0	DEVON ENERGY CORPORATION	ED	C 04539 POD1	NA				2	4	2	01	23S	28E	591034	3578223	1979
C 03460	CUB	EXP	0	HUNGRY HORSE, LLC	ED	C 03460 POD1				Shallow	3	1	2	14	23S	28E	588857	3575004	2004
C 04417	CUB	MON	0	WPX ENERGY	ED	C 04417 POD1	NA				4	3	3	36	22S	28E	589735	3578874	2009
C 02702	C		0	IMC KALIUM	ED	C 02702				Shallow		2		13	23S	28E	590715	3575108*	2090
C 02703	C		0	IMC KALIUM	ED	C 02703						2		13	23S	28E	590715	3575108*	2090
C 04584	CUB	MON	0	GOLDER ASSOCIATES INC	ED	C 04584 POD3	NA				3	2	2	13	23S	28E	590887	3575127	2171
C 04451	C	DOL	3	ALFRED CARRASCO	ED	C 04451 POD1	20C1F			Shallow	4	4	4	10	23S	28E	587833	3575521	2214
C 01255	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01255					1	1	3	13	23S	28E	589606	3574593*	2277
C 01214	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01214				Shallow	1	2	3	13	23S	28E	590010	3574597*	2311
C 01446	C	PUB	0	NM STATE HWY DEPT.	ED	C 01446								14	23S	28E	588692	3574670*	2376
C 01967	C	DOM	3	PERRY L COLEMAN	ED	C 01967				Shallow		2	3	13	23S	28E	590111	3574498*	2428
C 04268	C	DOM	1	JOSE P VALENCIA	ED	C 04268	20772				1	3	1	14	23S	28E	587894	3575069	2473
C 01258	CUB	EXP	0	US BORAX & CHEM. CORP.	ED	C 01258					3	1	3	13	23S	28E	589606	3574393*	2477
C 00616	CUB	IRR	0	LEE & WELMA VOIGT	ED	C 00616				Shallow	1	3	1	14	23S	28E	587982	3574978*	2483
C 01213	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01213					4	1	3	13	23S	28E	589806	3574393*	2486

C 00235	C	STK	3	LEE S. WILLIAMS	ED	C 00235			Shallow		2	2	15	23S	28E	587676	3575280*	2488
C 01217	CUB	COM	150	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	C 01217			Shallow	4	1	3	13	23S	28E	589788	3574371	2506
SP 00302	CUB	IND	4639.5	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	C 01217			Shallow	4	1	3	13	23S	28E	589788	3574371	2506
C 01215	CUB	EXP	0	U.S. BORAX & CHEM.	ED	C 01215			Shallow	4	2	3	13	23S	28E	590210	3574397*	2549
C 04490	CUB	MON	0	GOLDER ASSOCIATES INC	ED	C 04490 POD2	NA		Shallow	2	3	3	13	23S	28E	589898	3574259	2628
C 00321	C	DOM	0	W.J. BAILEY	ED	C 00321					4	2	15	23S	28E	587679	3574874*	2763
C 02503	C	DOM	3	JIMMY G TARVIN SR	ED	C 02503			Shallow		4	2	15	23S	28E	587679	3574874*	2763
C 00269	C	IRR	3	JOHNNY GIOVENGO JR.	ED	C 00269			Shallow	4	4	2	15	23S	28E	587778	3574773*	2771
C 01352	C	DOM	3	D H MAGBY	ED	C 00269			Shallow	4	4	2	15	23S	28E	587778	3574773*	2771
					ED	C 01352				4	4	2	15	23S	28E	587778	3574773*	2771
C 01364	C	DOM	3	DANIEL H MAGBY	ED	C 00269			Shallow	4	4	2	15	23S	28E	587778	3574773*	2771
C 02189	C	PRO	0	RB OPERATING COMPANY	ED	C 02189			Shallow	1	1	3	14	23S	28E	587985	3574572*	2803
C 00485	CUB	IRR	0	G.W. CRISP	ED	C 00485				1	1	2	15	23S	28E	587170	3575375*	2844
C 01218	CUB	EXP	0	U.S. BORAX & CHEM. CORP.	ED	C 01218				3	4	3	13	23S	28E	590012	3573991*	2909
C 02810	C	DOM	3	JOHN REID	ED	C 02810				4	3	2	15	23S	28E	587373	3574769*	3054
C 02926	C	STK	3	JOHNNY L REID	ED	C 02926				4	3	2	15	23S	28E	587373	3574769*	3054
C 04252	CUB	MON	0	CHEVRON NORTH AM EXPL & PROD	ED	C 04252 POD1	NA			4	4	3	14	23S	28E	588513	3573957	3104
C 01328	CUB	IRR	0	URQUIDEZ VICENTE L	ED	C 01328				3	3	2	15	23S	28E	587173	3574769*	3202
C 04490	CUB	MON	0	GOLDER ASSOCIATES INC	ED	C 04490 POD4	NA			4	2	1	24	23S	28E	590205	3573676	3252
C 00128	C	DOL	3	YLARIO URQUIDEZ	ED	C 00128			Shallow	2	4	4	15	23S	28E	587783	3574162*	3255
C 01102	C	STK	3	C. L. REID	ED	C 01102			Shallow		1	2	23	23S	28E	588901	3573672*	3271
C 03965	CUB	MON	0	ARCADIS US INC-CHEVRON	ED	C 03965 POD7	NA			4	1	1	24	23S	28E	589883	3573599	3283
					ED	C 03965 POD8				4	1	1	24	23S	28E	589722	3573587	3285
				ARCADIS US INC-CHEVRON	ED	C 03965 POD5			Shallow	4	1	1	24	23S	28E	589864	3573534	3346
					ED	C 03965 POD3				3	2	1	24	23S	28E	590013	3573527	3369
					ED	C 03965 POD6				3	2	1	24	23S	28E	590020	3573526	3371
					ED	C 03965 POD11				2	4	2	23	23S	28E	589503	3573464	3406
					ED	C 03965 POD2				2	3	1	24	23S	28E	589891	3573473	3409
					ED	C 03965 POD9				1	3	1	24	23S	28E	589707	3573460	3411
					ED	C 03965 POD1				2	3	1	24	23S	28E	589799	3573463	3412
C 00154	CUB	CLS	0	JOHNNY L. REID	ED	C 00154			Shallow	4	2	1	23	23S	28E	588595	3573566*	3450
C 00326	CUB	IRR	221.45	HENRY E MCDONALD	ED	C 00326			Shallow	3	3	3	10	23S	28E	586358	3575572*	3482
C 03965	CUB	MON	0	ARCADIS US INC-CHEVRON	ED	C 03965 POD4			Shallow		1	4	24	23S	28E	589918	3573381	3503
C 00048 A	CUB	CLS	0	WILLIAM & MARIA T STENNIS REVOCABLE TRUST	ED	C 00154 POD2		C		3	2	1	23	23S	28E	588395	3573566*	3513
C 00154	CUB	CLS	0	JOHNNY L. REID	ED	C 00154 POD2				3	2	1	23	23S	28E	588395	3573566*	3513
C 01108	C	STK	3	CLARENCE REID	ED	C 01108			Shallow	3	2	1	23	23S	28E	588395	3573566*	3513
C 04490	CUB	MON	0	MOSAIC POTASH CARLSBAD INC	ED	C 04490 POD3	NA		Shallow	4	1	2	24	23S	28E	590596	3573502	3515
C 03965	CUB	MON	0	ARCADIS US INC-CHEVRON	ED	C 03965 POD10	NA			2	3	1	24	23S	28E	589813	3573358	3518
C 00800	C	DOL	0	E.F. ROSSON	ED	C 00800			Shallow		4	2	09	23S	28E	586050	3576479*	3561
C 04564	CUB	MON	0	ARCADIS US INC-CHEVRON ENVIRO	ED	C 04564 POD1	NA			3	3	1	24	23S	28E	589705	3573277	3594
C 04254	CUB	MON	0	BUREAU OF LAND MANAGEMENT	ED	C 04254 POD3	NA				4	2	09	23S	28E	585989	3576451	3625
C 04556	CUB	MON	0	ARCADIS US INC/CHEVRON ENVIRO	ED	C 04556 POD1	NA		Shallow	4	3	1	24	23S	28E	589719	3573237	3634
C 04564	CUB	MON	0	ARCADIS US INC-CHEVRON ENVIRO	ED	C 04564 POD2	NA			4	3	1	24	23S	28E	589719	3573237	3634
C 04254	CUB	MON	0	BUREAU OF LAND MANAGEMENT	ED	C 04254 POD4	NA				4	2	09	23S	28E	585973	3576472	3638
					ED	C 04254 POD1					4	2	09	23S	28E	585973	3576451	3640
					ED	C 04254 POD2					4	2	09	23S	28E	585973	3576435	3642
C 04556	CUB	MON	0	ARCADIS US INC/CHEVRON ENVIRO	ED	C 04556 POD2	NA		Shallow	4	3	1	24	23S	28E	589890	3573239	3642
C 00501	CUB	IRR	93.51	EQUITABLE LIFE ASSURANCE SOCIETY	ED	C 00501				1	2	3	15	23S	28E	586772	3574559*	3644
C 00501 C	CUB	IRR	2.67	CARRASCO CANDELARIO JR	ED	C 00501				1	2	3	15	23S	28E	586772	3574559*	3644
C 00501 CA	CUB	IRR	111	RUBEN U CARRASCO	ED	C 00501				1	2	3	15	23S	28E	586772	3574559*	3644
C 00001	CUB	IRR	0	W H SWEARINGEN	ED	C 00001			Shallow		2	4	04	23S	28E	586037	3577693*	3647
C 04254	CUB	MON	0	BUREAU OF LAND MANAGEMENT	ED	C 04254 POD5	NA				4	2	09	23S	28E	585952	3576451	3661
C 02804	CUB	MON	0	IMC	ED	C 02804					2	1	08	23S	29E	593262	3576905*	3672
C 02805	CUB	MON	0	IMC	ED	C 02805					2	1	08	23S	29E	593262	3576905*	3672
C 00500	CUB	IRR	200.13	C.A. CARRASCO, JR.	ED	C 00500				4	3	1	24	23S	28E	589811	3573176*	3700
C 00868	CUB	IRR	936.42	DRAPER BRANTLEY JR.	ED	C 00868			Shallow	4	3	1	24	23S	28E	589811	3573176*	3700

C 00868 A	CUB	IRR	528.671	HENRY E MC DONALD	ED	C 00868				Shallow	4	3	1	24	23S	28E	589811	3573176*		3700
C 00868 B	CUB	IRR	300	HENRY E. OR JACKIE DALE MCDONALD	ED	C 00868				Shallow	4	3	1	24	23S	28E	589811	3573176*		3700
C 04556	CUB	MON	0	ARCADIS US INC/CHEVRON ENVIRO	ED	C 04556 POD3	NA			Shallow	4	3	1	24	23S	28E	590567	3573265		3734
C 02706	C		0	IMC KALIUM	ED	C 02706				Shallow			4	18	23S	29E	592302	3574291*		3742
C 00501	CUB	IRR	93.51	EQUITABLE LIFE ASSURANCE SOCIETY	ED	C 00501 A-S				Shallow	3	2	3	15	23S	28E	586772	3574359*		3774
C 00501 A	CUB	IRR	443.64	HENRY E MCDONALD	ED	C 00501 A				Shallow	3	3	4	15	23S	28E	587179	3573958*		3780
C 00501 B	CUB	IRR	194.49	UFFIE LAND CO	ED	C 00501 A				Shallow	3	3	4	15	23S	28E	587179	3573958*		3780
C 00501	CUB	IRR	93.51	EQUITABLE LIFE ASSURANCE SOCIETY	ED	C 00501 AS				Shallow	3	2	3	15	23S	28E	586766	3574353		3782
C 00501 A	CUB	IRR	443.64	JACKIE D MCDONALD	ED	C 00501 AS				Shallow	3	2	3	15	23S	28E	586766	3574353		3782
C 00501 D	CUB	IRR	296.46	NELDA ONSUREZ	ED	C 00501 AS				Shallow	3	2	3	15	23S	28E	586766	3574353		3782
C 00072	CUB	IRR	552	J L NYMEYER	ED	C 00072				Shallow	3	3	1	15	23S	28E	586364	3574760*		3854
C 01816	C	DOL	3	A R DONALDSON	ED	C 01816				Shallow	1	3	1	23	23S	28E	587992	3573355*		3861
C 02704	C		0	IMC KALIUM	ED	C 02704				Shallow			1	19	23S	29E	591531	3573493*		3895
C 03146	C	DOL	3	DRAPER BRANTLEY JR	ED	C 03146				Shallow	1	1	3	24	23S	28E	589613	3572970*		3900
C 04415	CUB	MON	0	DEVON ENERGY CORP	ED	C 04415 POD13	NA					4	1	4	04	23S	28E	585677	3577582		3976
					ED	C 04415 POD17						4	1	4	04	23S	28E	585677	3577614		3982
					ED	C 04415 POD8				Shallow	4	1	4	04	23S	28E	585656	3577583		3997
					ED	C 04415 POD1				Shallow	4	1	4	04	23S	28E	585657	3577591		3998
					ED	C 04415 POD2					4	1	4	04	23S	28E	585653	3577570		3998
					ED	C 04415 POD11					4	1	4	04	23S	28E	585652	3577570		3999
					ED	C 04415 POD10					4	1	4	04	23S	28E	585656	3577597		3999
C 04588	CUB	MON	0	WHITE DRILLING COMPANY INC	ED	C 04588 POD1	NA			Shallow	2	2	2	04	23S	28E	586043	3578720		4000
C 04415	CUB	MON	0	WSP USA	ED	C 04415 POD3	NA				4	1	4	04	23S	28E	585644	3577552		4003
					ED	C 04415 POD5					4	1	4	04	23S	28E	585651	3577605		4006
					ED	C 04415 POD6					4	1	4	04	23S	28E	585651	3577605		4006
					ED	C 04415 POD21					4	1	4	04	23S	28E	585648	3577585		4006
C 04408	C	DOL	3	BERNICE MOORE	ED	C 04408 POD1	22381				1	1	4	24	23S	28E	590445	3572955		4007
C 04415	CUB	MON	0	WSP USA	ED	C 04415 POD7	NA			Shallow	3	1	4	04	23S	28E	585627	3577518		4014
					ED	C 04415 POD16					3	1	4	04	23S	28E	585636	3577605		4021
					ED	C 04415 POD4					3	1	4	04	23S	28E	585628	3577575		4024
					ED	C 04415 POD20					3	1	4	04	23S	28E	585624	3577562		4025
					ED	C 04415 POD12					3	1	4	04	23S	28E	585627	3577585		4026
C 00048	CUB	CLS	0	JOHHNY L. REID	ED	C 00048		C		Shallow	3	3	1	23	23S	28E	587997	3573160		4037
C 00048 1	CUB	IRR	124.589	JACKIE REID	ED	C 00048				Shallow	3	3	1	23	23S	28E	587997	3573160		4037
C 00048 2	CUB	STO	0.739	JOHNNY L REID	ED	C 00048				Shallow	3	3	1	23	23S	28E	587997	3573160		4037
C 00048 A	CUB	CLS	0	WILLIAM & MARIA T STENNIS REVOCABLE TRUST	ED	C 00048		C		Shallow	3	3	1	23	23S	28E	587997	3573160		4037
C 00154	CUB	CLS	0	JOHNNY L. REID	ED	C 00048				Shallow	3	3	1	23	23S	28E	587997	3573160		4037
C 03762	CUB	MON	0	VILLAGE OF LOVING	ED	C 03762 POD3				Shallow	4	2	2	16	23S	28E	586203	3574642		4053
C 04415	CUB	MON	0	WSP USA	ED	C 04415 POD15	NA				3	1	4	04	23S	28E	585587	3577580		4064
					ED	C 04415 POD22					3	1	4	04	23S	28E	585578	3577532		4065
C 00127	CUB	IRR	0	C.E. HICKS	ED	C 00127					2	2	1	22	23S	28E	586977	3573748*		4071
C 04415	CUB	MON	0	DEVON ENERGY CORP	ED	C 04415 POD14	NA				3	1	4	01	23S	28E	585555	3577636		4106
C 00211	C	DOM	3	DAVID A. CARPENTER	ED	C 00211				Shallow	4	3	3	15	23S	28E	586570	3573949*		4201
C 01872	C	DOL	3	ROXIE RENA DOYLE	ED	C 01872				Shallow		2	1	22	23S	28E	586878	3573649*		4210
C 03059	CUB		0	UNITED SALT CORPORATION	ED	C 03059 EXPLORE				Shallow	4	1	3	17	23S	29E	592993	3574378*		4217
C 00048	CUB	CLS	0	JACKIE REID	ED	C 00094		C		Shallow	3	4	2	22	23S	28E	587588	3573151*		4223
C 00094 A	CUB	CLS	0	DOROTHY W. QUEEN	ED	C 00094		C		Shallow	3	4	2	22	23S	28E	587588	3573151*		4223
					ED	C 00094 A		C		Shallow	3	4	2	22	23S	28E	587588	3573151*		4223
C 00154	CUB	CLS	0	JOHNNY L. REID	ED	C 00094				Shallow	3	4	2	22	23S	28E	587588	3573151*		4223
C 00094 A	CUB	CLS	0	DOROTHY W. QUEEN	ED	C 00094 AS		C		Shallow	1	3	2	22	23S	28E	587183	3573346*		4267
C 00453	C	DOM	3	MAXIMIANO JASSO	ED	C 00453					2	2	4	22	23S	28E	587790	3572945*		4318
C 00002	CUB	IRR	0	W H SWEARINGEN	ED	C 00002				Shallow	2	2	3	04	23S	28E	585345	3577785*		4342
C 01336	C	DOM	3	JAMES NYMEYER	ED	C 01336				Shallow	2	1	1	22	23S	28E	586572	3573744*		4345
C 00443	C	DOM	3	NIEVES B. JASSO	ED	C 00443				Shallow	4	2	4	22	23S	28E	587790	3572745*		4500
C 02847	CUB	COM	40	DRAPER BRANTLEY JR	ED	C 02847					2	1	4	22	23S	28E	587386	3572941*		4504

C 02849	CUB	COM	40	HENRY MCDONALD	ED	C 02849			2	1	4	22	23S	28E	587386	3572941*	4504
C 04490	CUB	MON	0	MOSAIC POTASH CARLSBAD INC	ED	C 04490 POD1	NA	Shallow	1	4	4	24	23S	28E	590876	3572492	4562
C 00311	C	DOM	3	CARTER FARMS CO.	ED	C 00311		Shallow	4	2	1	16	23S	28E	585353	3575152*	4572
C 01766	CUB	IRR	375	ROXIE L. WILLIAMS TRUST	ED	C 01766			3	3	4	23	23S	28E	588806	3572354*	4583
C 01766 A	CUB	IRR	15	WOODROW AND RUBY BURKHAM	ED	C 01766			3	3	4	23	23S	28E	588806	3572354*	4583
C 01961	C	DOL	0	DRAPER BRANTLEY JR	ED	C 01961				1	4	22	23S	28E	587287	3572842*	4639
C 02705	C		0	IMC KALIUM	ED	C 02705		Shallow			2	17	23S	29E	593902	3575093*	4663
C 01487	CUB	IRR	226.8	JAVIER S.& BRETHA A. JASSO	ED	C 01487		Shallow	3	4	1	22	23S	28E	586779	3573142*	4669
C 02913	C	DOL	3	JAVIER S JASSO	ED	C 02913			3	4	1	22	23S	28E	586779	3573142*	4669
C 02500	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 02500			4	3	2	17	23S	29E	593800	3574791*	4695
C 02608	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 02608		Shallow	3	1	4	17	23S	29E	593598	3574387*	4714
C 01253	CUB	IRR	277.644	NEW MEXICO INTERSTATE STREAM	ED	C 01253		Shallow	1	3	1	22	23S	28E	586375	3573338*	4776
C 00136	CUB	IRR	657	JOHN OR JANICE WRIGHT	ED	C 00136 S		Shallow	1	1	2	25	23S	28E	590426	3572167*	4776
C 01885	C	DOM	3	FRANK LONDON	ED	C 01885		Shallow		2	2	21	23S	28E	586070	3573640*	4777
C 04463	C	DOL	3	HENRY MCDONALD	ED	C 04463 POD1	20C6E		1	3	1	22	23S	28E	586276	3573423	4780
C 00868	CUB	IRR	936.42	DRAPER BRANTLEY, JR.	ED	C 00869 S2		Shallow	3	3	3	23	23S	28E	587996	3572343*	4799
C 00868 A	CUB	IRR	528.671	HENRY E MC DONALD	ED	C 00869 S2		Shallow	3	3	3	23	23S	28E	587996	3572343*	4799
C 00868 B	CUB	IRR	300	HENRY E. OR JACKIE DALE MCDONALD	ED	C 00869 S2		Shallow	3	3	3	23	23S	28E	587996	3572343*	4799
C 01238	C	STK	3	S. F. WILLIAMS	ED	C 01238				1	1	25	23S	28E	589718	3572060*	4811
C 03056	C	DOL	3	BRANTLEY BROTHERS	ED	C 03056		Shallow	3	3	3	04	23S	28E	584772	3577226	4831
C 01443	C	STK	3	S. F. WILLIAMS	ED	C 01443		Shallow		2	1	25	23S	28E	590123	3572064*	4835
C 04490	CUB	MON	0	GOLDER ASSOCIATES INC	ED	C 04490 POD5	NA		4	3	3	19	23S	29E	591424	3572381	4848
C 02796	CUB	MON	0	IMC	ED	C 02796				2	3	22	23S	28E	586882	3572838*	4856
C 03737	C	DOL	0	JOHNNY REID	ED	C 03737 POD1			2	2	1	26	23S	28E	588519	3572124	4864
C 03762	CUB	MON	0	SOUTHWEST ENGINEERING INC	ED	C 03762 POD2		Shallow	4	4	2	17	23S	28E	584892	3575598	4866
C 02806	CUB	MON	0	IMC	ED	C 02806				1	1	09	23S	29E	594473	3576927*	4883
C 02807	CUB	MON	0	IMC	ED	C 02807				1	1	09	23S	29E	594473	3576927*	4883
C 03587	CUB	MON	0	MOSAIC POTASH CARLSBAD INC	ED	C 03587 POD2		Shallow	1	2	4	19	23S	29E	592213	3572706	4921
C 00136	CUB	IRR	657	JOHN OR JANICE WRIGHT	ED	C 00136		Shallow	3	1	2	25	23S	28E	590426	3571967*	4973
C 01122	CUB	IRR	0	VICTOR QUEEN	ED	C 01122		Shallow	1	1	1	26	23S	28E	587999	3572138*	4992

Record Count: 190

UTMNAD83 Radius Search (in meters):

Easting (X): 589590 **Northing (Y):** 3576870 **Radius:** 5000

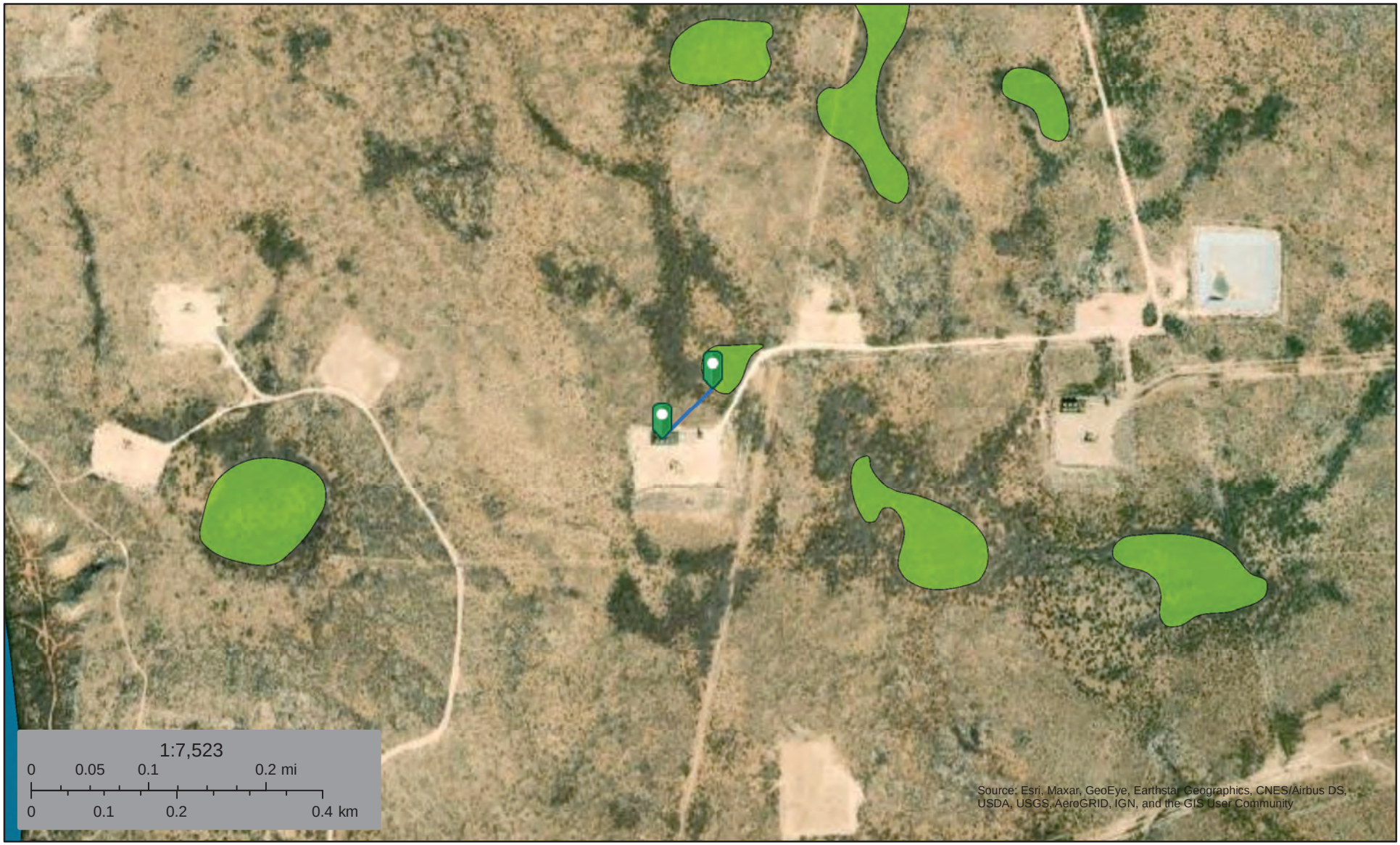
Sorted by: Distance

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

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetland, 274 feet



March 28, 2022

Wetlands

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

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

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

Active Mines in New Mexico

Closest subsurface mine: 9.68 miles away (51115 feet)

2/20/2024, 2:02:33 PM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Registered Mines

- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Potash
- Salt

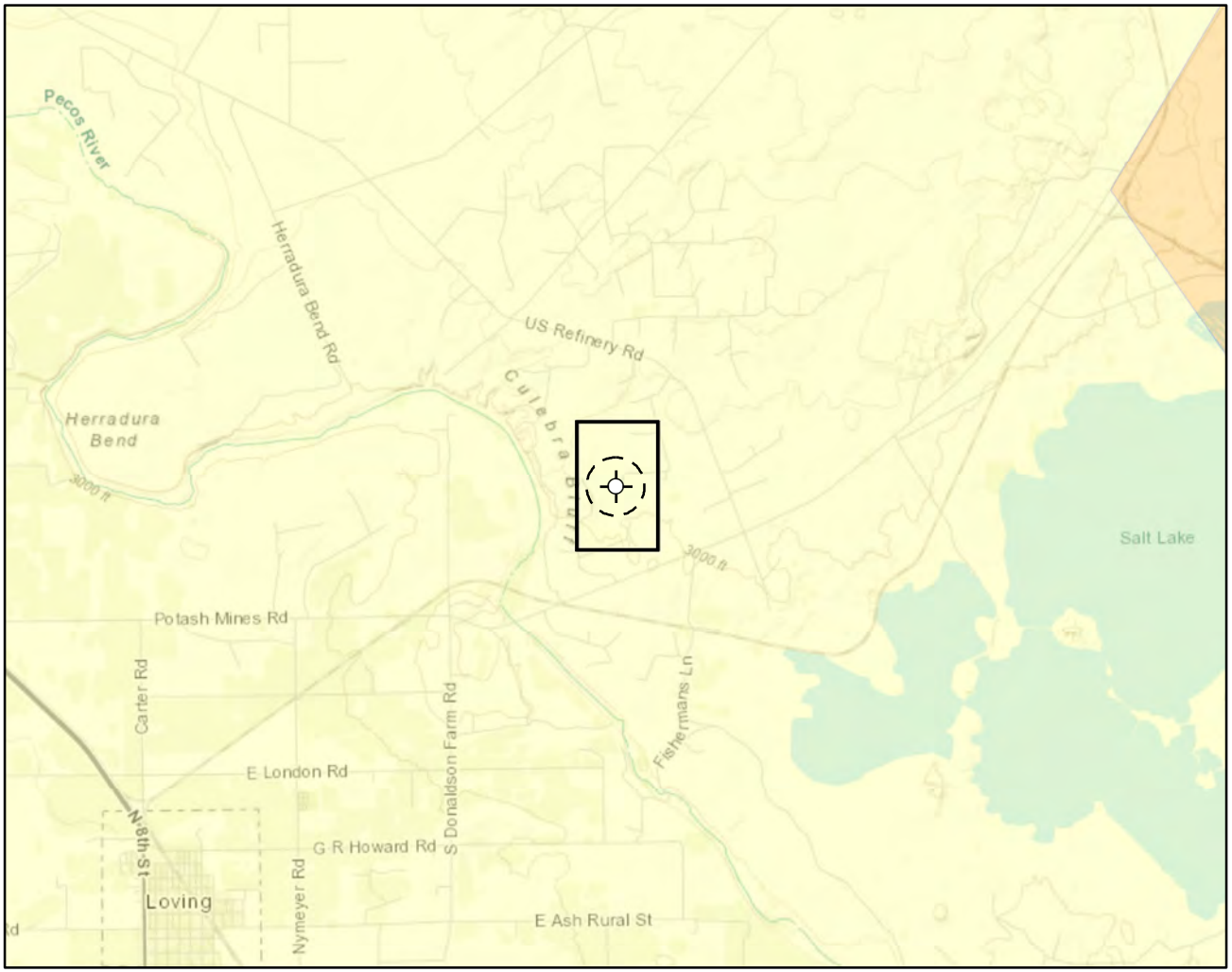
Land Ownership

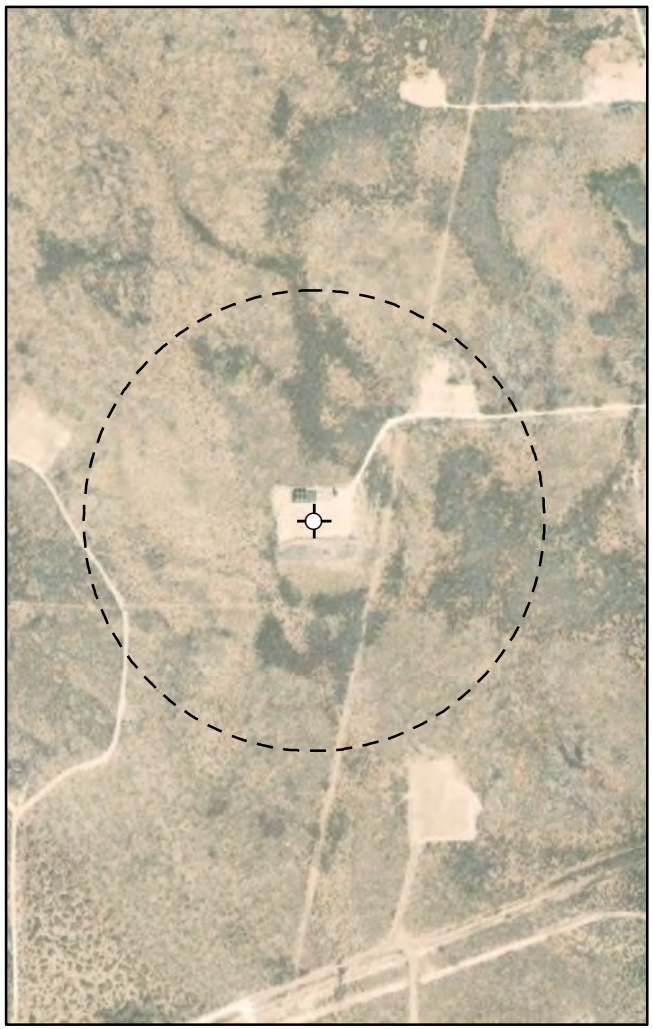
- BLM
- P
- S

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

EMNRD MMD GIS Coordinator

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





Karst Potential

- Critical
- High
- Medium
- Low

Site Location

Site Buffer (1,000 ft.)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft.

VERTEX

Map Center:
Lat/Long: 32.324909, -104.047836

NAD 1983 UTM Zone 13N
Date: Apr 07/22

N

Karst Potential Map
Longview Federal 12 #013H

FIGURE:
X

devon

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: Inset Map, ESRI 20XX; Overview Map: ESRI World Topographic. Karst potential data sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2022\22E-00764 - Longview Federal 12 #013H\Figure X Karst Potential Map Longview Federal 12 #013H.mxd

Distance to High Karst Potential

3.74 miles away from Longview
(19,772 feet)

FEMA Zone A

0.43 miles away (2268 feet)

Legend

32.324900, -104.047800

FEMA Zone A

a Bluff

32.324900, -104.047800

Google Earth

Image © 2024 Airbus

N

2000 ft

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

March 28, 2022

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 17, Sep 12, 2021

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

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SM	Simona-Bippus complex, 0 to 5 percent slopes	6.3	100.0%
Totals for Area of Interest		**6.3**	**100.0%**

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Eddy Area, New Mexico

SM—Simona-Bippus complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1w5x
Elevation: 1,800 to 5,000 feet
Mean annual precipitation: 8 to 24 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Simona and similar soils: 55 percent
Bippus and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Simona

Setting

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

Typical profile

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R042XC002NM - Shallow Sandy
Hydric soil rating: No

Description of Bippus

Setting

Landform: Flood plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 37 inches: silty clay loam
H2 - 37 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 5 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): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

Minor Components

Simona

Percent of map unit: 8 percent
Ecological site: R042XC002NM - Shallow Sandy
Hydric soil rating: No

Bippus

Percent of map unit: 7 percent
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

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USDA Natural Resources Conservation Service

Ecological site R042XC017NM
Bottomland

Accessed: 03/28/2022

General information

Figure 1. Mapped extent

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

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on broad valleys, flood plains or basins at the lowest position in relation to adjacent landscapes. They are derived from mixed alluvium for sandstone, shale and limestone. It is found at the mouth of intermittent drainages or draws. Slopes are level to nearly level, averaging less than 3 percent. Elevations range from 2,842 to 4,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Alluvial flat (2) Valley floor (3) Basin floor
Flooding duration	Very brief (4 to 48 hours) to brief (2 to 7 days)
Flooding frequency	Rare to frequent
Ponding frequency	None
Elevation	2,842–4,000 ft

Slope	1–3%
Aspect	Aspect is not a significant factor

Climatic features

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

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

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

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. This site receives overflow from heavy summer rains periodically. Occasionally water will stand on the surface for short periods. When this happens frequently, or when water stands for longer periods, only the plants that can tolerate inundation, such as giant sacaton, will survive. During drought periods or when long periods occur between overflows, a variety of plants will move in and establish on the site.

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 may be associated or influenced by wetlands and/or streams but does not normally meet wetland criteria.

Soil features

The soils of this site are deep and very deep. Surface textures are loamy fine sand, very fine sandy loam, fine sandy loam, sandy loam, silty loam, loam, clay loam or silty clay loam. The underlying layers may be loam, silt loam, clay loam, silty clay loam, sandy loam, fine sandy loam or loamy fine sand. These soils may have thin stratas of sand, silt, clay, very fine sand or very fine sandy loam. The soils have rapid to moderately slow permeability.

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

Characteristic Soils:
Glendale
Bippus
Bigetty
Largo
Harkey
Pecos
Pima
Dev
Pima Varient

Table 4. Representative soil features

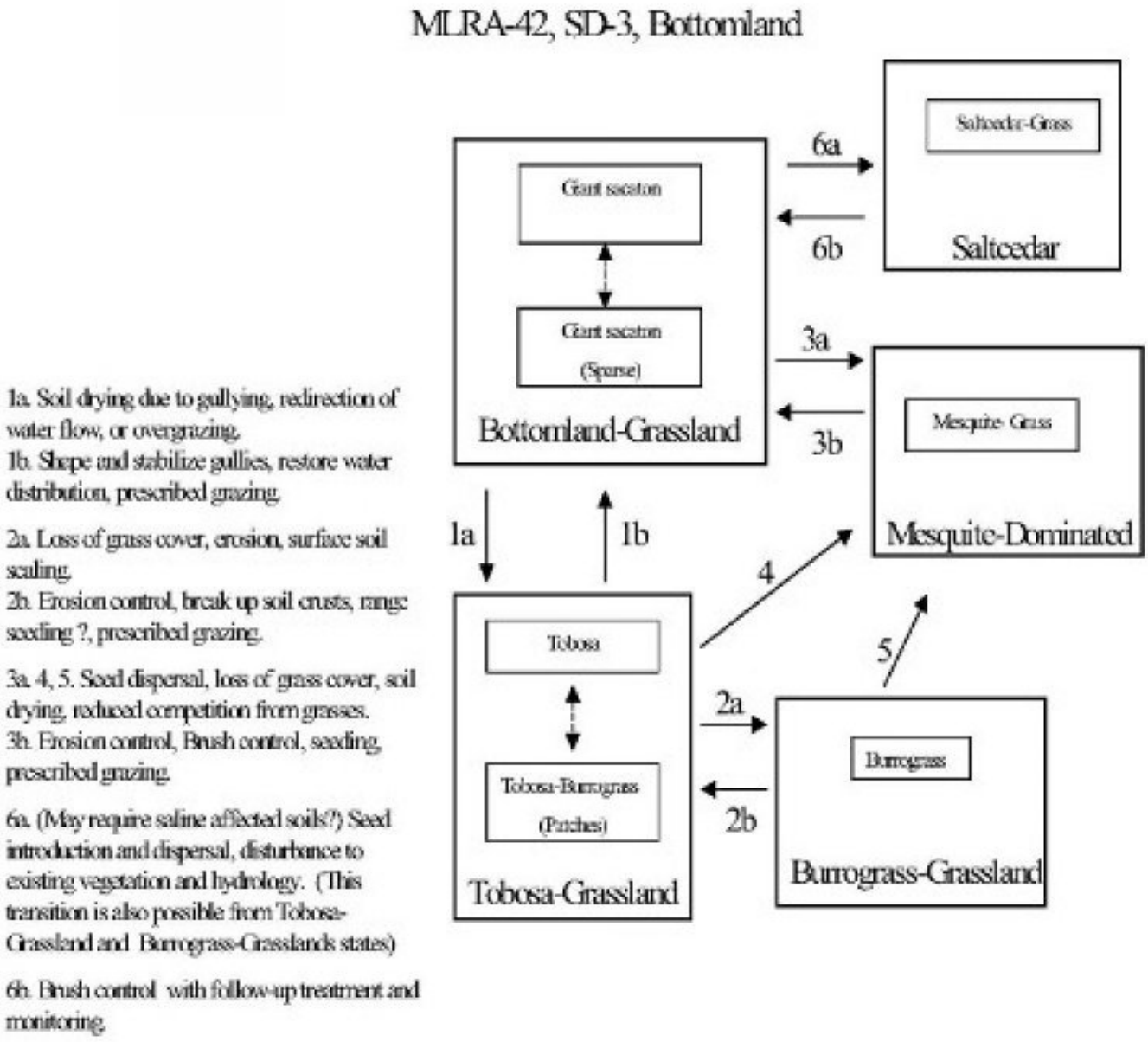
Surface texture	(1) Loamy fine sand (2) Loam (3) Fine sandy loam
Family particle size	(1) Loamy
Drainage class	Moderately well drained to well drained
Permeability class	Moderately slow to rapid
Soil depth	72 in
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0–1%
Available water capacity (0-40in)	3–8 in
Calcium carbonate equivalent (0-40in)	3–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–5
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–15%
Subsurface fragment volume >3" (Depth not specified)	0–1%

Ecological dynamics

The Bottomland site occurs on broad valleys and flood plains at the lowest positions on the landscape and is subject to periodic flooding. This periodic flooding and deep wetting essentially determine vegetation patterns on this site. The Bottomland site is associated with and often found at the mouth of Draw sites. The potential plant community exhibits a tall grass aspect largely dominated by giant sacaton. Soil drying due to overgrazing, gullying, and redirection or blockage of water flow may cause the transition to a tobosa-dominated state. A state dominated by burrograss may result due to continued loss of tobosa, erosion, and soil surface sealing—especially on silt loam and silty clay loam textured surface soils. A mesquite-dominated state may result from the loss of grass cover and dispersal of mesquite seed. Saltcedar may invade in response to changes in the historical flow regimes and the introduction of its seed—especially along stream channels or on soils adjacent to areas with a high water table.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Soil drying due to gullying, redirection of water flow, or overgrazing.
1b. Shape and stabilize gullies, restore water distribution, prescribed grazing.

2a. Loss of grass cover, erosion, surface soil scaling.
2b. Erosion control, break up soil crusts, range seeding ?, prescribed grazing.

3a. 4, 5. Seed dispersal, loss of grass cover, soil drying, reduced competition from grasses.
3b. Erosion control, Brush control, seeding, prescribed grazing.

6a. (May require saline affected soils?) Seed introduction and dispersal, disturbance to existing vegetation and hydrology. (This transition is also possible from Tobosa-Grassland and Burrograss-Grasslands states)

6b. Brush control with follow-up treatment and monitoring.

Figure 4.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Bottomland Grassland: The historic plant community is principally dominated by giant sacaton. Some additional grass species representative of this site include alkali sacaton, tobosa, vine mesquite, plains bristlegrass, and twoflower trichloris. Fourwing saltbush and mesquite are two of the more common shrubs associated with this site, but in the historic community they are sparsely scattered across the site. Giant sacaton has the capability to produce large amounts of aboveground biomass, which provides important forage for livestock and helps to slow runoff, increase infiltration, and protect the site from erosion. Grazing in the spring, deferring grazing in the fall, or during

dry summers, can maximize forage production.4 Mowing giant sacaton during the summer may improve forage quality and accessibility while minimizing negative effects on production.3 Fire has produced mixed results depending on time of year and fire intensity. Several growing seasons may be required for giant sacaton to recover pre-burn production levels. Overgrazing, drought, or fire can cause a decrease in giant sacaton, vine mesquite, alkali sacaton, plains bristlegrass, and twoflower trichloris. A sparser, less vigorous sacaton community may result. Continued loss of grass cover increases erosion, effectively drying the site causing the transition to an alternate grassland state (Tobosa Grassland).

Diagnosis: Giant sacaton is the dominant grass. Grass cover is uniform. Litter cover is high, and bare patches are few and less than 2 m in length. Shrubs are sparse, averaging less than three percent canopy cover.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	2125	3188	4250
Shrub/Vine	200	300	400
Forb	175	262	350
Total	**2500**	**3750**	**5000**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	35-40%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	40-45%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	15-20%

Figure 6. Plant community growth curve (percent production by month). NM2817, R042XC017NM Bottomland HCPC. R042XC017NM Bottomland HCPC Warm Season Plant Community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	10	10	25	30	15	5	0	0

State 2
Tobosa Grassland

Community 2.1
Tobosa Grassland

Additional States:

Tobosa Grassland: This state is characterized by the predominance of tobosa. On fine-textured soils that receive surface run-in water, tobosa may attain dense almost pure stands. On drier sites that receive less water due to gullying, or due to decreased infiltration, associated with loss of

grass cover, tobosa occurs in scattered patches with large areas of bare ground. Burrograss is the sub-dominant species. In the absence of grazing, tobosa tends to stagnate and accumulates large amounts of standing dead material. Rotational grazing, or burning during years with adequate precipitation following fire may help to maximize tobosa production and forage quality.1,12 Burning during years with below average precipitation may limit increases in tobosa yield the first year following fire.6

Diagnosis: Tobosa is the dominant grass species. Grass cover is variable (depending on the degree of site degradation) ranging from uniform to patchy.

Transition to Tobosa Grassland (1a) The transition to a tobosa-dominated community is believed to result from decreased available soil moisture due to the redirection or blockage of run-in water, gullying, or overgrazing. Roads or other physical barriers on site or off site may cause the redirection or blockage of run-in water. Reduction of overland flow and decreased residence time of stand water may favor tobosa dominance. Tobosa is favored by sites that receive periodic flooding, but cannot withstand extended periods of inundation. Overgrazing increases runoff rates and gully formation, reduces infiltration, effectively drying the site. Sites with finer textured soils may have a greater susceptibility for dominance by tobosa. 12

Key indicators of approach to transition:
Decreased vigor and cover of giant sacaton
Increase in the amount of tobosa
Reduced overland flow and residence time of standing water
Formation of gullies or deepening of existing channels

Transition back to Bottomland Grassland (1b) The natural hydrology of the site must be restored. Culverts, turnouts, or rerouting roads may help re-establish natural overland flow, if roads or trails have blocked or altered the flow of run-in water. Erosion control structures or shaping and filling gullies may help regain natural flow patterns and establish vegetation if the flow has been channeled. Prescribed grazing will help establish proper forage utilization and maintain grass cover and litter necessary to protect the site from accelerated erosion.

State 3
Burrograss Grassland

Community 3.1
Burrograss Grassland

Burrograss Grassland: Burrograss is the dominant species. Tobosa is typically present in varying amounts, usually in patches or clumps occupying the more moist depressions. Burrograss ranks poor as a forage grass, but begins growth early and is used to some extent when young and green. Burrograss is favored by calcareous fine textured soils and spreads by seed and stolons. It produces large amounts of seed with wiry awns that help in dissemination, and in augering the hardened callus (tip of the seed) into the soil. The ability of burrograss to auger into soils enables it to establish and expand on bare soils prone to crust over with physical and biological crusts.

Diagnosis: Burrograss is the dominant grass species. Grass cover is variable ranging from patchy to very patchy. Large bare areas are present and interconnected. Physical crusts are present and may occupy most of the bare areas.

Transition to Burrograss Grassland (2a) Loss of grass cover, decreased soil moisture, soil surface sealing, and erosion enable this transition. As grass cover declines, organic matter and infiltration decrease. Erosion increases, removing soil and nutrients from bare areas, which results in soil sealing. Burrograss produces substantial amounts of viable seed and is one of the few grasses able to maintain, and even increase, on bottomland soils that are sealed by biological and physical crusts.

Key indicators of approach to transition:
Decrease in cover of tobosa
Increased amount of bare ground
Increased evidence of physical and biological crusts.

Transition back to Tobosa Grassland (2b) Erosion control structures may help regain natural overland flow and increase vegetation cover (see transition1b above). Re-establishing grass cover will further decrease erosion and increase infiltration. Breaking up physical crusts by soil disturbance may promote infiltration and seedling emergence. Seeding may be necessary if inadequate seed source remains. Prescribed grazing will help establish proper forage utilization and maintain grass cover.

State 4
Mesquite-Dominated

Community 4.1
Mesquite-Dominated

Mesquite-Dominated State:
This state is characterized by the dominance of mesquite, and by accelerated erosion. Grass cover is variable, but typically patchy.

Diagnosis: Mesquite is the dominant species in aspect and composition. Grass cover is typically patchy with large, interconnected bare areas present. Giant sacaton and alkali sacaton are absent or restricted to small patches. Tobosa or burrograss are the dominant grasses on this site. Rills and gullies may be common and actively eroding.

Transition to Mesquite-Dominated (3a, 4, 5) The reasons for different pathways in transitions to a mesquite-dominated state versus a tobosa or burrograss grassland with few shrubs are not known. Dispersal of shrub seed, persistent loss of grass cover, and competition between shrubs and remaining grasses for resources may drive this transition. Loss of grass cover reduces infiltration, decreasing available soil moisture necessary for grass seedling establishment. Reduced soil moisture may favor mesquite establishment and survival. Accelerated erosion due to loss of grass cover can relocate organic matter and nutrients from shrub interspaces, and concentrate them around shrub bases.14 This relocation of resources further increases the shrubs competitive advantage.

Key indicators of approach to transition:
Increase in size and frequency of bare patches.
Loss of grass cover in shrub interspaces.
Increased signs of erosion.

Transition back to Bottomland Grassland (3b) Erosion control methods such as shaping and filling gullies, net wire diversions, rock and brush dams, etc. may be needed to curtail erosion and restore site hydrology. Brush control will be necessary to overcome competition between shrubs and grass seedlings. Seeding may expedite recovery or may be necessary if an adequate seed source is no longer remaining. Prescribed grazing will help ensure adequate deferment and proper forage utilization following grass establishment. The degree to which this site is capable of recovery depends on the restoration of hydrology, the extent of degradation to soil resources, and adequate rainfall necessary to establish grasses.

State 5
Saltcedar State

Community 5.1
Saltcedar State

Saltcedar State: Saltcedar is an aggressive invader that typically invades on fine-textured soils where its roots can reach the water table, but once established it can survive without access to ground water. It reaches maximum density where the water table is from 1.5 to 6 m deep, and forms more open stands where the water table is deeper. 9,10 Saltcedar is a prolific seed producer. It is resistant to fire, periods of inundation with water, salinity, and re-sprouts following cutting. Saltcedar can also increase soil salinity by up-taking salts and concentrating them in its leaves and subsequent shedding of the leaves to the soil surface.

Diagnosis: This state is characterized by the presence of saltcedar. Saltcedar cover is variable ranging from sparse to dense. Densities may depend on such variables as depth to ground water, timing and duration of flood events, and soil texture and salinity. Grass cover varies in response to saltcedar density.

Transition to Saltcedar State (6a) It is not know if this transition occurs only on saline affected soils, or if it can occur on non-saline sites. Salty Bottomland sites typically have a higher susceptibility to the invasion of saltcedar. The invasion of saltcedar is associated with saline soils, the presence of saltcedar on adjacent sites and dispersal of its seed, and disturbance to existing vegetation or hydrology. Saltcedar propagules must be present to invade and establish on bottomland sites. Disturbance such as fire, grazing, or drought may facilitate the establishment of saltcedar by decreasing the vigor of native vegetation and providing bare areas for saltcedar seedling establishment with minimal competition. Changes in seasonal timing, rate and volume of run-in water may facilitate the establishment of saltcedar on Bottomland sites.8 Damming rivers has reduced flow volume and caused shifts in the timing of peak flow from spring to summer. The reduced flows have increased fine sediments, creating the ideal conditions for saltcedar seedling establishment. Summer water discharges provide water at times consistent with saltcedar seed production. Increases in salinity due to return of irrigation water to streams and ditches may also support the establishment of saltcedar. (This transition should also possible from the Tobosa-Grassland and Burrograss-Grassland states).

Key indicators of approach to transition:
Increase in size and frequency of bare patches.
Changes in timing and volume of peak discharge
Increased soil salinity
Presence of saltcedar propagules

Transition back to Bottomland Grassland (6b) Saltcedar control is costly and often labor intensive. Control programs utilizing herbicide, or herbicide in conjunction with mechanical control or prescribed fire have proven effective in some instances. 5,7,11 Without restoring historical flow regimes, extensive follow-up management may be necessary to maintain the bottomland grassland.13

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1				2438–2625	
	big sacaton	SPWR2	*Sporobolus wrightii*	2438–2625	–
2				263–375	
	tobosagrass	PLMU3	*Pleuraphis mutica*	263–375	–
	alkali sacaton	SPAI	*Sporobolus airoides*	263–375	–
3				263–375	
	vine mesquite	PAOB	*Panicum obtusum*	263–375	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	263–375	–
4				113–188	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	113–188	–
	white tridens	TRAL2	*Tridens albescens*	113–188	–
	false Rhodes grass	TRCR9	*Trichloris crinita*	113–188	–
5				113–188	
	Grass, perennial	2GP	*Grass, perennial*	113–188	–
Shrub/Vine					
6				113–188	
	fourwing saltbush	ATCA2	*Atriplex canescens*	113–188	–
7				38–113	
	honey mesquite	PRGL2	*Prosopis glandulosa*	38–113	–
8				38–113	
	Apache plume	FAPA	*Fallugia paradoxa*	38–113	–
	American tarwort	FLCE	*Flourensia cernua*	38–113	–
	littleleaf sumac	RHMI3	*Rhus microphylla*	38–113	–
9				38–113	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	38–113	–
Forb					
10				75–188	
	coyote gourd	CUPA	*Cucurbita palmata*	75–188	–
	common sunflower	HEAN3	*Helianthus annuus*	75–188	–
	broadleaved pepperweed	LELA2	*Lepidium latifolium*	75–188	–
	globemallow	SPHAE	*Sphaeralcea*	75–188	–
11				75–188	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	75–188	–

Animal community

This site provides habitats which support a resident animal community that is characterized by black-tailed jackrabbit, yellow-faced pocket gopher, coyote, meadowlark, mourning dove, scaled quail, sparrow hawk, Western spadefoot toad and Western diamondback rattlesnake. Where this site includes riparian vegetation along the Pecos and Black rivers, the resident animal community is characterized by raccoon, gray fox, muskrat, red-winged blackbird, summer tanager, ferruginous hawk, mourning dove, Gambel's quail, killdeer, tree lizard, Eastern fence lizard, tiger salamander, leopard frog, bullfrog and checkered garter shake.

Most resident birds and Bullock's oriole, blue grosbeak, painted bunting, Swainson's hawk and mourning dove nest. Where aquatic macrophytes occur, yellow-throated warbler nest. Sandhill crane and long-billed curlew winter along the Pecos River and American avocet and blacknecked stilt utilize this site during migration. The golden eagle utilizes larger trees for roosting and occasionally, nesting.

Hydrological functions

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

Hydrologic Interpretations
Soil Series----- Hydrologic Group
Bippus---------- B
Bigetty--------- C
Glendale-------- B
Harkey---------- B
Largo----------- B
Pima------------ B
Dev------------- A
Pecos----------- D/B

Recreational uses

This site offers recreation potential for hiking, nature observation and photography in addition to antelope, quail and dove hunting.

Natural beauty is enhanced by the constrast between this lush vegetated site and the drier, more barren sites which surround it.

Wood products

This site has no real potential for wood products. Where woody species have increased, they can be used for curiosities or small furniture.

Other products

This site is well suited for all kinds and classes of livestock, during all seasons of the year. It is best suited for cows during the growing season. Periodic removal of excess coarse stalk material by burning, shredding or mowing every other year will help to keep new growth avaialble to livestock. Burning, if practiced, should be done in late winter or early spring when soil surface moisture is present. Retrogression is characterized by a decrease in vine-mesquite and vigor of giant sacaton. Alkali sacaton, plains bristlegrass and twoflower trichloris decrease. This causes an increase in tobosa to a point of being a colony type of vegetation. Continued retrogression can cause severe water erosion that can destroy the potential of this site.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index - Ac/AUM
100 - 76---------- 1.0 – 2.3
75 – 51----------- 2.0 – 3.3
50 – 26----------- 3.4 – 6.0
25 – 0------------ 6.1 - +

Other references

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Contributors

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Rangeland health reference sheet

USDA Natural Resources Conservation Service

Ecological site R042XC002NM
Shallow Sandy

Accessed: 03/28/2022

General information

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

R042XC004NM	**Sandy** Sandy sites often occur in association or in a complex with Shallow Sandy Sites.

Similar sites

R042XC004NM	**Sandy** Sandy ecological sites are similar to Shallow Sandy sites in species composition and Transition pathways.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occures on plains, alluvial fans, uplands, or fan piedmonts. The parent material consists of mixed loamy alluvium or eolian material derived from igneous and sedimentory bedrock. The petrocalcic layer is at a depth of 10 to 25 inches and undulating.

Slopes are nearly level to undulating, usually less than 9 percent. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Fan piedmont (3) Alluvial fan
Elevation	2,842–4,500 ft
Slope	1–9%
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 from 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.
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 the site. The vegetation of this site can take advantage of the moisture and the time it falls. Because of the soil profile, little moisture can be stored in the soil for any length of time. Moisture is readily available to the plants from the time it falls. Strong winds from the southwest blow from January through June which rapidly dries out the soil profile during a critical period for 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 very shallow to shallow, less than 20 inches in depth. Surface and subsurface textures are gravelly loamy sand, gravelly fine sandy loam or fine sandy loam.

An indurated calache layer occurs at depths of 6 to 25 inches and is at an average of 15 inches from the surface. Underlying material textures are very gravelly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam. Gravels are calcium carbonate concretions, calcium carbonate content ranges from 30 to 65 percent.

The indurated caliche layer typically holds water up in the profile for short periods within the root zone of plants. These soils will blow if left unprotected by vegetation.

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

Characteristic soils are:
Simona
Jerag

Table 4. Representative soil features

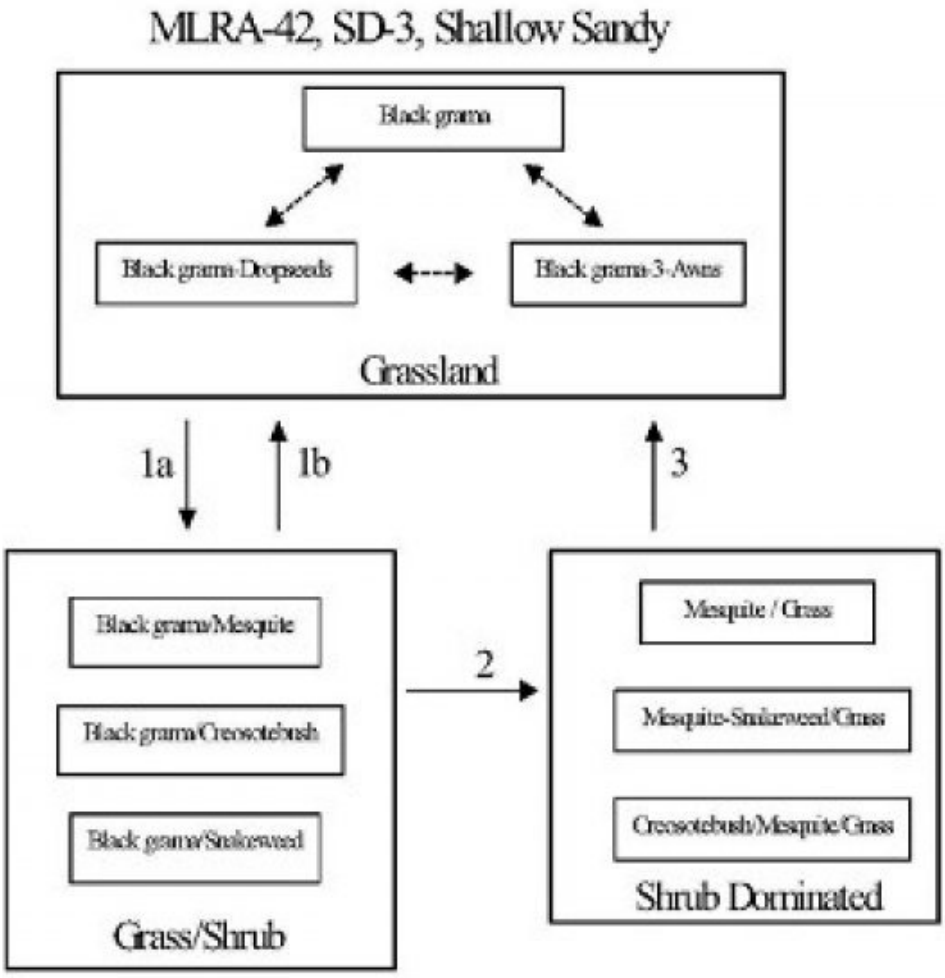
Surface texture	(1) Fine sandy loam (2) Loamy fine sand (3) Gravelly fine sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained to moderately well drained
Permeability class	Moderately slow to moderate
Soil depth	7–24 in
Surface fragment cover <=3"	5–25%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	1–2 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0
Soil reaction (1:1 water) (0-40in)	7.4–8
Subsurface fragment volume <=3" (Depth not specified)	5–25%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview
The Shallow Sandy site occurs on upland plains, and tops of low ridges and mesas, associated with Sandy, Loamy Sand, and Shallow sites. Coarse to moderately coarse soil surface textures, shallow depth (<20 inches) to an indurated caliche layer (petrocalcic horizon), and an overwhelming dominance by black grama help to distinguish this site. The historic plant community of the Shallow Sandy site is a black grama dominated grassland sparsely dotted with shrubs. Shrubs, especially mesquite and creosotebush can increase or colonize due to the dispersal of shrub seeds by livestock or wildlife. This increase in mesquite and colonization of creosotebush may be enhanced by proximity to areas with existing high shrub densities. Fire suppression, and the loss of grass cover due to overgrazing or drought may facilitate the increase and encroachment of shrubs. Persistent loss of grass cover, competition for resources by shrubs, and periods of climate with increased winter precipitation and dry summers, may initiate the transition to a shrub-dominated state.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Seed dispersal, drought, overgrazing, fire suppression.
1b. Prescribed fire, brush control, prescribed grazing.

2. Persistent loss of grass cover, resource competition, increased winter precipitation.

3. Brush control, range seeding, prescribed grazing.

Figure 4.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: This site responds well to management and is resistant to state change, due to the shallow depth to petrocalcic horizon and sandy surface textures. The sandy surface textures allow rapid water infiltration and the petrocalcic horizon helps to keep water perched and available to shallow rooted grasses. Black grama is the dominant species in the historic plant community, averaging 50 to 60 percent of the total production for this site. Bush muhly, blue grama, and dropseeds are present as sub-dominants. Typically, yucca, javalinabush, range

ratany, prickly pear, and mesquite are sparsely dotted across the landscape. Leatherweed croton, cutleaf happlopappus, wooly groundsel, and threadleaf groundsel are common forbs. Continuous heavy grazing or extended periods of drought will cause a loss of grass cover characterized by a decrease in black grama, bush muhly, blue and sideoats grama, plains bristlegrass, and Arizona cottontop. Dropseeds and or threeawns may increase and become sub-dominant to black grama. Continued loss of grass cover in conjunction with dispersal of shrub seeds and fire suppression is believed to cause the transition to a state with increased amounts of shrubs (Grass/Shrub state).

Diagnosis: Black grama is the dominant grass species. Grass cover uniformly distributed. Shrubs are a minor component averaging only two to five percent canopy cover. Litter cover is high (40-50 percent of area), and litter movement is limited to smaller size class litter and short distances (<. 5m).

Other grasses that could appear on this site would include: six-weeks grama, fluffgrass, false-buffalograss, hairy grama, little bluestem, bristle panicum, cane bluestem, Indian ricegrass, tridens spp., and red lovegrass.

Other woody plants include: pricklypear, cholla, fourwing saltbush, catclaw mimosa, winterfat, American tarbush and mesquite.

Other forbs include: globemallow, verbena, desert holly, senna, plains blackfoot, trailing fleabane, fiddleneck, deerstongue, wooly Indianwheat, and locoweed.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	474	652	830
Forb	78	107	136
Shrub/Vine	48	66	84
Total	**600**	**825**	**1050**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	30-35%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	40-50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	15-25%

Figure 6. Plant community growth curve (percent production by month). NM2802, R042XC002NM-Shallow Sandy-HCPC. SD-3 Shallow Sandy - 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: This state is characterized by the notable presence of shrubs, especially mesquite, broom snakeweed, and/or creosotebush, however grasses remain as the dominant species. Black grama is the dominant grass species. Threeawns and or dropseeds are sub-dominant. The susceptibility of the Shallow Sandy site to shrub encroachment may be higher when located adjacent to other sites with high densities of mesquite or creosotebush. Retrogression within this site is characterized by decreases in grass cover and increasing densities of shrubs.

Diagnosis: Black grama remains as the dominant grass species. Grass cover varies in response to the amount of shrub increase, ranging from uniform to patchy. Shrubs are found at increased densities relative to the grassland state, especially mesquite, creosotebush, or broom snakeweed.

Transition to Grass/Shrub (1a) Historically fire may have kept mesquite and other shrubs in check by completely killing some species and disrupting seed production cycles and suppressing the establishment of shrub seedlings in others. Fire suppression combined with seed dispersal by livestock and wildlife is believed to be the factors responsible for the establishment and increase in shrubs.1, 3 Loss of grass cover due to overgrazing, prolonged periods of drought, or their combination, reduces fire fuel loads and increases the susceptibility of the site to shrub establishment.

Key indicators of approach to transition:
Increase in the relative abundance of dropseeds and threeawns
Presence of shrub seedlings
Loss of organic matter—evidenced by an increase in physical soil crusts 8

Transition back to Grassland (1b) Brush control is necessary to initiate the transition back to the grassland state. If adequate fuel loads remain, possibly the reintroduction of fire as a management tool will assist in the transition back, however, mixed results have been observed concerning the effects of fire on black grama grasslands.6 Prescribed grazing will help ensure adequate rest following brush control and will assist in the establishment and maintenance of grass cover capable of sustaining fire.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated: Across the range of soil types included in the Shallow Sandy site, mesquite is typically the dominant shrub, but it does occur as a co-dominant or sub-dominant species with creosotebush or broom snakeweed. Mesquite tends to dominate when the Shallow Sandy site occurs as part of a complex or in association with Sandy or Loamy Sand sites. Creosotebush tends to dominate on Shallow Sandy sites that occur as part of, or adjacent to Shallow Sites. Broom snakeweed increases in response to heavy grazing, but tends to cycle in and out depending on timing of rainfall. However, once the site is dominated by shrubs and snakeweed becomes well established, it tends to remain as a major component in the shrub dominated state.

Diagnosis: Mesquite, creosotebush, or snakeweed cover is high, exceeding that of grasses. Grass cover is patchy with large connected bare areas present. Black grama, threeawns, or dropseeds may be the dominant grass. Evidence of accelerated wind erosion in the form of pedestalling of plants, and soil deposition around shrub bases may be common.

Transition to Shrub-Dominated (2) Persistent loss of grass cover and the resulting increased competition between shrubs and remaining grasses for dwindling resources (especially soil moisture) may drive this transition.5 Additionally periods of increased winter precipitation may facilitate periodic episodes of shrub expansion and establishment. 4

Key indicators of approach to transition:
Increase in size and frequency of bare patches.
Loss of grass cover in shrub interspaces.
Increased signs of erosion, evidenced by pedestalling of plants, and soil and litter deposition on leeward side of plants. 7

Transition back to Grassland (3) Brush control is necessary to reduce competition from shrubs and reestablish grasses. Range seeding may be necessary if insufficient grasses remain, The benefits, and costs, will vary depending upon the degree of site degradation, and adequate precipitation following seeding.

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			413–495	
	black grama	BOER4	*Bouteloua eriopoda*	413–495	–
2	**Warm Season**			41–83	
	bush muhly	MUPO2	*Muhlenbergia porteri*	41–83	–
3	**Warm Season**			41–83	
	blue grama	BOGR2	*Bouteloua gracilis*	41–83	–
4	**Warm Season**			25–41	
	sideoats grama	BOCU	*Bouteloua curtipendula*	25–41	–
5	**Warm Season**			41–83	
	spike dropseed	SPCO4	*Sporobolus contractus*	41–83	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	41–83	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	41–83	–
6	**Warm Season**			17–41	
	threeawn	ARIST	*Aristida*	17–41	–
7	**Warm Season**			41–83	
	Arizona cottontop	DICA8	*Digitaria californica*	41–83	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	41–83	–
8	**Warm Season**			41–83	
	mat sandbur	CELO3	*Cenchrus longispinus*	41–83	–
	hooded windmill grass	CHCU2	*Chloris cucullata*	41–83	–
9	**Other Perennial Grasses**			25–41	
	Grass, perennial	2GP	*Grass, perennial*	25–41	–
Shrub/Vine					
10	**Shrub**			8–25	
	javelina bush	COER5	*Condalia ericoides*	8–25	–
11	**Shrub**			8–25	
	yucca	YUCCA	*Yucca*	8–25	–
12	**Shrub**			8–25	
	jointfir	EPHED	*Ephedra*	8–25	–
	littleleaf ratany	KRER	*Krameria erecta*	8–25	–
13	**Shrub**			8–25	

	featherplume	DAFO	*Dalea formosa*	8–25	–
14	**Shrub**			8–25	
	broom snakeweed	GUSA2	*Gutierrezia sarothrae*	8–25	–
15	**Other Shrubs**			25–41	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	25–41	–
Forb					
16	**Forb**			17–41	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	17–41	–
	Goodding's tansyaster	MAPIG2	*Machaeranthera pinnatifida ssp. gooddingii var. gooddingii*	17–41	–
17	**Forb**			17–41	
	woolly groundsel	PACA15	*Packera cana*	17–41	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	17–41	–
18	**Forb**			8–25	
	whitest evening primrose	OEAL	*Oenothera albicaulis*	8–25	–
19	**Other Forbs**			8–25	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	8–25	–

Animal community

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, swift fox, black-tailed jackrabbit, spotted ground squirrel, Ord’s kangaroo rat, northern grasshopper mouse, coyote, horned lark, meadowlark, lark bunting, scaled quail, morning dove, side-blotched lizard, round-tailed horned lizard, marbled whiptail, prairie rattlesnake and ornate box turtle.

Hydrological functions

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

Hydrologic Interpretations
Soil Series Hydrologic Group
Jarag D
Simona D

Recreational uses

This site offers recreation for hiking, horseback riding, nature observation and photography, and quail and dove hunting. During years of abundant spring moisture, this site displays a riot of color from wildflowers during May and June. A few summer and fall flowers also occur.

Wood products

The natural potential plant community of this site affords little or no wood products. Where the site has been invaded by mesquite or cholla cactus the roots and stems of these plants provide attractive material for a variety of curiosities, such as lamps and small furniture.

Other products

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. Because of the sandy textures and shallow profile, this site will respond rapidly to management. As this site deteriorates, plants such as black grama, bush muhly, blue and sideoats grama, plains bristlegrass and Arizona cottontop, will decrease and be replaced by plants such as threeawns, mesquite, creosote bush, and broom snakeweed. This also causes a decrease in ground cover, leaving the soil to blow. This site responds best to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.5 – 3.5
75 – 51 3.2 – 4.6
50 – 26 4.5 – 7.5
25 – 0 7.6 +

Inventory data references

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

Other references

Literature References:

1. Brooks, M.L. and D.A. Pyke. 2001. Invasive plants and fire in the deserts of North America. Pages 1–14 in K.E.M. Galley and T.P. Wilson (eds.). Proceedings of the Invasive Species Workshop: the Role of Fire in the Control and Spread of Invasive Species.

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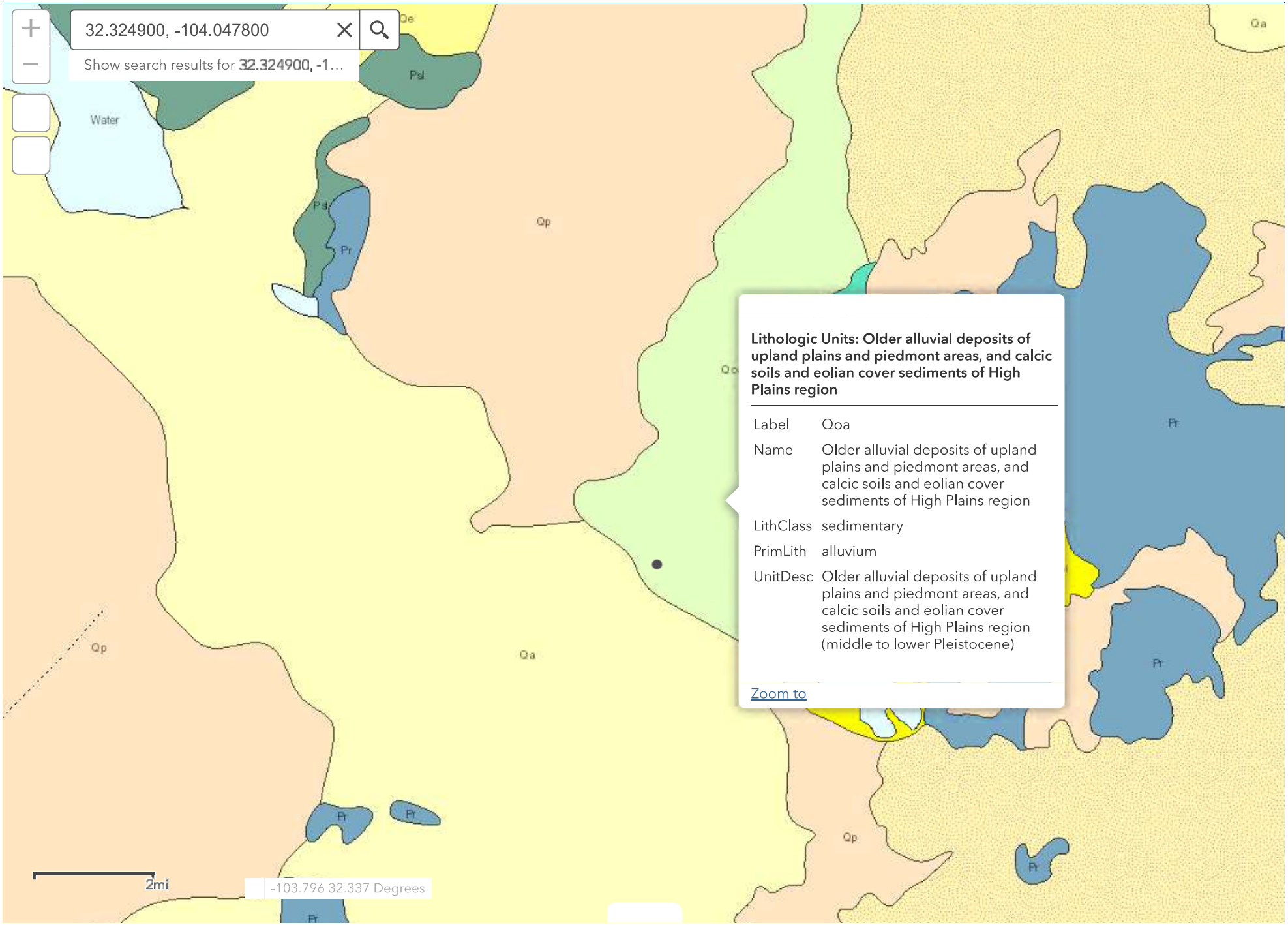
7. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheets. Rangeland Soil Quality—Wind Erosion. Rangeland Sheet 10 [Online]. Available: http://www.statlab.iastate.edu/survey/SQI/range.html

8. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheets. Rangeland Soil Quality—Physical and Biological Soil Crusts. Rangeland Sheet 7 [Online]. Available: http://www.statlab.iastate.edu/survey/SQI/range.html

NMBGMR Interactive Resources Map



APPENDIX C – Daily Field and Sampling Reports

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	3/11/2022
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	3/11/2022 6:40 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/11/2022 8:30 AM
Departed Site	3/11/2022 10:11 AM

Field Notes

9:52 On site to document liner inspection after release on Feb 15, 2022 according to C-141 nAPP2205939051.

10:03 3 punctures found inside containment.
-Puncture on North side of far West Oil tank, sn:F55077
-Puncture in middle of tanks, West side between oil tank F55077 and water tank G6410-13.
-Puncture between two far East water tanks G6413-14 and G6411-14 on South side.

10:00 All punctures approximately 1-2” in length/size.

10:00 Punctures circled in WHITE paint.

Next Steps & Recommendations

1 Send report to client

Daily Site Visit Report

Site Photos

Viewing Direction: North

Puncture on North side of far West Oil tank, sn:F55077

Viewing Direction: Southwest

Southwest corner of battery

Viewing Direction: South

Puncture in middle of tanks, West side between oil tank F55077 and water tank G6410-13.

Viewing Direction: North

Puncture between two far East water tanks G6413-14 and G6411-14 on South side.

Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: Northwest
	
Southeast corner of battery	Middle of East side of battery
Viewing Direction: Northeast	**Viewing Direction**: West
	
Northeast corner of battery	North side of battery

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: South
	
Northwest corner of battery	West side of battery

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Austin Harris

Signature: 

Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/4/2022
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	4/4/2022 9:41 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/4/2022 12:05 PM
Departed Site	4/4/2022 12:45 PM

Field Notes

12:14 On site to flag containment for one call.

12:14 Project sample points have been repaired. Will need to cut them back open to delineate.

12:18 Containment is marked for one call

12:23 One call being put in for containment and 50’ radius of it

Next Steps & Recommendations

1 Delineate punctures in the liner

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: West
	
Sample area patched back up	Sample area patched back up
Viewing Direction: West	**Viewing Direction**: North
	
Sample area patched back up	One call area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/7/2022
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	5/6/2022 5:10 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/7/2022 7:30 AM
Departed Site	4/7/2022 3:00 PM

Field Notes

11:00 Arrived on site to delineate the punctures that the spill went through inside the liner.

11:02 Collected BH22-01 through BH22-04 inside the liner.
BH22-01 was clean on all field screening at 0’ and 0.5’
BH22-02 through BH22-04 were hot on silver nitrate.
BH22-04 was clean on PetroFlag.

11:03 BH22-05 through BH22-08 were collected outside of the containment in all cardinal directions to make sure contaminants did not migrate outside of the liner.

11:03 BH22-05 through BH22-07 were clean on all field screening at 0’ and 0.5’

11:03 All samples hit refusal at 0.5’

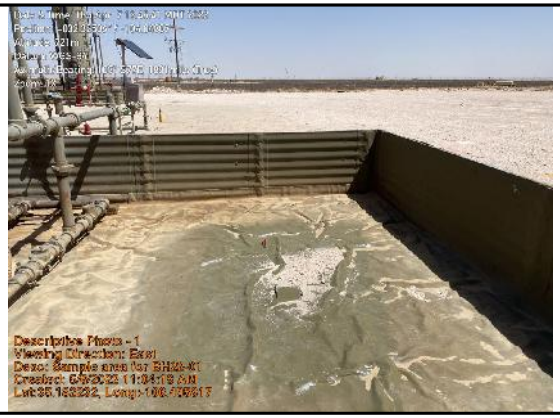
Next Steps & Recommendations

1 Send samples to lab

Daily Site Visit Report

Site Photos

Viewing Direction: East



Sample area for BH22-01

Viewing Direction: North

Sample area for BH22-02

Viewing Direction: West

Sample area for BH22-03

Viewing Direction: South

Sample area for BH22-04

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
Sample area for BH22-05	Sample area for BH22-06
Viewing Direction: West	**Viewing Direction**: South
	
Sample area for BH22-07	Sample area for BH22-08

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	11/23/2022
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	11/24/2022 5:56 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	11/23/2022 7:45 AM
Departed Site	11/23/2022 10:30 AM

Field Notes

10:00 Arrived on site to collect a 4’ sample from underneath the liner for confirmation and delineation.

10:00 Attempted to collect a 4’ sample from BH22-02 inside the containment. I hit refusal at 2’ bgs. It is under strictest criteria on field screening.

9:59 Based on delineation a few months ago and today, it appears that the release did not migrate horizontally passed the containment. Will send the 2’ sample to lab for analysis for confirmation.

Next Steps & Recommendations

1 Send confirmation sample to lab for analysis and write closure report

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: Northeast
	
Sample area for BH22-02	Containment area
Viewing Direction: Southeast	**Viewing Direction**: East
	
Containment area	Inside containment area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	9/11/2023
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	9/12/2023 6:01 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	9/11/2023 4:00 PM
Departed Site	9/11/2023 4:45 PM

Field Notes

16:23 On site to step out BH22-08 to BH23-09 for horizontal delineation. Samples were collected at surface and 2’ bgs. Both samples were under strictest criteria on titration and Petroflag

16:23 All damage and sample areas inside the containment/liner have been successfully patched

Next Steps & Recommendations

1 No recommendations at this time

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast

Sample area for BH23-09

Viewing Direction: East

BH22-01 patched

Viewing Direction: West

BH22-02 patched

Viewing Direction: West

BH22-03 patched

Daily Site Visit Report

Viewing Direction: East

BH22-04 patched

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 

Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	2/1/2024
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	2/1/2024 9:55 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/1/2024 8:51 AM
Departed Site	2/1/2024 12:41 PM

Field Notes

9:34 Arrived on site. Filled out paperwork and reviewed tasks for the day. BH22-06 hit refusal at 8”.

10:06 Located area for BH22-07. Hit refusal at 1’

10:40 Located area for BH22-05. Hit refusal at 10”.

12:33 Samples screened within criteria. Jarred them up.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: West

BH22-06 @ 8”

Viewing Direction: South

BH22-07 @ 1’

Viewing Direction: North

BH22-05 @ 10”

Viewing Direction: West

Area surrounding BH22-05

Daily Site Visit Report

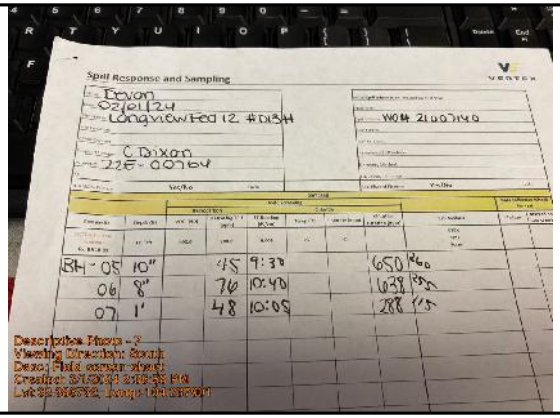
Viewing Direction: Northwest

Area surrounding BH22-06

Viewing Direction: Southwest

Area surrounding BH22-07

Viewing Direction: South



Field screen sheet

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Angela Mohle

Signature: 
Signature

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	5/17/2024
Site Location Name:	Longview Federal 12 #013H	Report Run Date:	5/18/2024 12:20 AM
Client Contact Name:	Jim Raley	API #:	
Client Contact Phone #:	575-748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	5/17/2024 8:00 AM
Departed Site	

Field Notes

8:13 Arrived on site , completed safety paperwork and Initial site walkthrough.

8:39 Tasked with performing a liner inspection inside the containment to address the issues mentioned in the closure report denial.

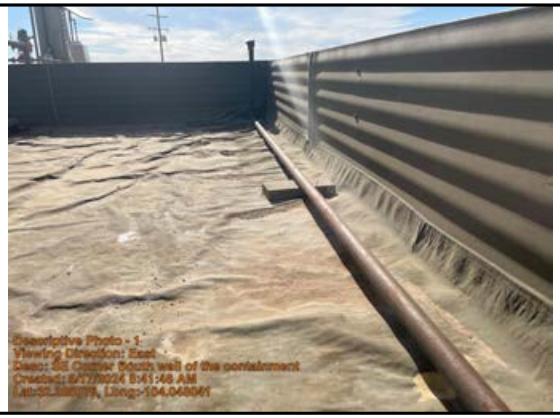
9:40 No evidence of tears, holes, rust in the liner of the containment. Pervious sample location inside the containment , BH22-01 through BH22-04, have been patched and in a good operational state. These were the areas that NMOCD was concerned over. No evidence outside the containment of fluid breaching the walls.

Next Steps & Recommendations

1 Proceed with site closure.

Daily Site Visit Report

Site Photos

Viewing Direction: East	**Viewing Direction**: Southwest
	
South wall of the containment looking towards the southeast corner.	Southeast corner of the containment looking northwest.
Viewing Direction: North	**Viewing Direction**: West
	
East wall of the containment looking north toward the northeast corner.	Northeast corner looking west along the north containment wall.

Daily Site Visit Report

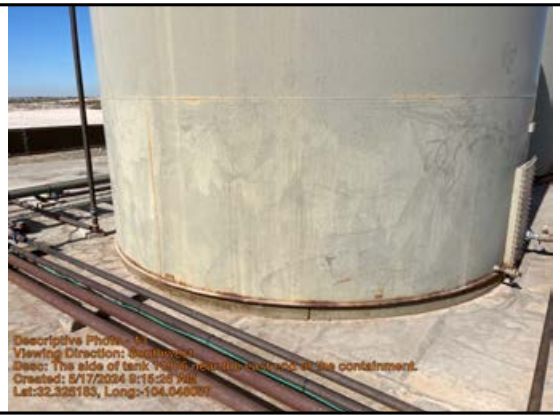
Viewing Direction: West	**Viewing Direction**: South
	
North wall of the containment looking towards the northwest corner.	Northeast corner of the containment looking along the west wall.
Viewing Direction: Southeast	**Viewing Direction**: East
	
Southwest corner of the containment.	Southwest corner of the containment looking along the south wall.

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
Patched location where sample BH22-01 was collected.	Patched location of where sample BH22-02 was collected.
Viewing Direction: Southwest	**Viewing Direction**: North
	
Patched location where sample BH22-03 was collected.	Patched location of where sample BH22-04 was collected.

Daily Site Visit Report

Viewing Direction: Southwest



The side of tank 11976 near the east end of the containment.

Viewing Direction: North

In between tanks 119766 and 119765.

Viewing Direction: South

In between tanks 119765 and 119764.

Viewing Direction: East

In between tanks 119764 and the southwest unmarked tank.

Daily Site Visit Report

Viewing Direction: Northwest	**Viewing Direction**: East
	
West end of the containment looking northwest.	East end of the containment.
Viewing Direction: East	**Viewing Direction**: North
	
Southeast corner outside the containment looking along the south wall.	Southeast corner outside the containment looking along the east wall.

Daily Site Visit Report

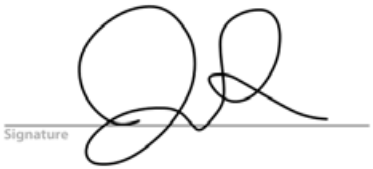
Viewing Direction: West	**Viewing Direction**: Southeast
	
Northeast corner outside the containment longing along the north wall.	Northwest corner outside the containment looking along the east wall.

Viewing Direction: East	**Viewing Direction**: East
	
Southwest corner outside the containment looking along the south wall.	South wall outside of the containment.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: John Rewis

Signature: 

APPENDIX D – Notifications

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Longview Federal 12-13H (nAPP2205939051)

1 message

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Tue, Mar 8, 2022 at 4:21 PM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, "CFO_Spill, BLM_NM" <blm_nm_cfo_spill@blm.gov>
Cc: dale.woodall@dvn.com, bschafer@vertex.ca
Bcc: aharris@vertex.ca

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled a liner inspection to be conducted for the following releases:

nAPP2205939051 DOR: 2/15/22 Site Name: Longview Federal 12-13H

This work will be completed on behalf of Devon Energy Production Company.

On Friday, March 11, 2022 at approximately 8:00 a.m., Austin Harris will be on site to conduct a liner inspection. He can be reached at 575-250-5003. If you need directions to the site, please do not hesitate to contact him. If you have any questions or concerns regarding this notification, please give me a call at 701-301-1564.

Thank you,

Brandon Schafer
Project Manager

Vertex Resource Services Inc.

P 701.645.3111 Ext. 706
C 701.301.1564
F 780.464.3731

www.vertex.ca

OCD Permitting

[NOTIFY] Notification Of Liner Inspection (C-141L) Application

Submission Information

Submission ID:	343927	**Districts:**	Artesia
Operator:	[6137] DEVON ENERGY PRODUCTION COMPANY, LP	**Counties:**	Eddy
Description:	DEVON ENERGY PRODUCTION COMPANY, LP [6137] , LONGVIEW FEDERAL 12 #013H , nAPP2205939051		
Status:	APPROVED		
Status Date:	05/13/2024		
References (2):	30-015-41091, nAPP2205939051		

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	**nAPP2205939051**
Incident Name	**NAPP2205939051 LONGVIEW FEDERAL 12 #013H @ 30-015-41091**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-015-41091] LONGVIEW FEDERAL 12 #013H**

Location of Release Source

Site Name	**LONGVIEW FEDERAL 12 #013H**
Date Release Discovered	**02/15/2022**
Surface Owner	**Federal**

Liner Inspection Event Information

Please answer all the questions in this group.

What is the liner inspection surface area in square feet	5,575
Have all the impacted materials been removed from the liner	Yes
Liner inspection date pursuant to Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC	05/17/2024
Time liner inspection will commence	08:00 AM

Warning: Notification can not be less than two business days prior to conducting liner inspection.

Please provide any information necessary for observers to liner inspection	John Regis 505-860-3733
Please provide any information necessary for navigation to liner inspection site	32.3249092 -104.478363

Comments

No comments found for this submission.

Conditions

Summary: *wdale (5/13/2024),* Failure to notify the OCD of liner inspections including any changes in date/time per the requirements of 19.15.29.11.A(5)(a)(ii) NMAC, may result in the inspection not being accepted.

Reasons

No reasons found for this submission.

Go Back

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 20, 2022

Monica Peppin

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Longview 12 13H OrderNo.: 2204427

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/9/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-001 **Matrix:** SOIL

Client Sample ID: BH22-01 0'
Collection Date: 4/7/2022 9:00:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	11	7.8		mg/Kg	1	4/14/2022 1:11:21 AM
Motor Oil Range Organics (MRO)	ND	39		mg/Kg	1	4/14/2022 1:11:21 AM
Surr: DNOP	91.6	51.1-141		%Rec	1	4/14/2022 1:11:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/13/2022 1:54:46 AM
Surr: BFB	99.0	37.7-212		%Rec	1	4/13/2022 1:54:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 1:54:46 AM
Toluene	ND	0.048		mg/Kg	1	4/13/2022 1:54:46 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/13/2022 1:54:46 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/13/2022 1:54:46 AM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	4/13/2022 1:54:46 AM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	85	60		mg/Kg	20	4/15/2022 12:22:52 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-002 **Matrix:** SOIL

Client Sample ID: BH22-01 0.5'
Collection Date: 4/7/2022 9:05:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/14/2022 1:22:02 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/14/2022 1:22:02 AM
Surr: DNOP	96.9	51.1-141		%Rec	1	4/14/2022 1:22:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/13/2022 2:18:17 AM
Surr: BFB	100	37.7-212		%Rec	1	4/13/2022 2:18:17 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 2:18:17 AM
Toluene	ND	0.049		mg/Kg	1	4/13/2022 2:18:17 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/13/2022 2:18:17 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/13/2022 2:18:17 AM
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	4/13/2022 2:18:17 AM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	160	60		mg/Kg	20	4/14/2022 7:37:25 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-003 **Matrix:** SOIL

Client Sample ID: BH22-02 0'
Collection Date: 4/7/2022 9:10:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	530	9.0		mg/Kg	1	4/14/2022 1:32:40 AM
Motor Oil Range Organics (MRO)	390	45		mg/Kg	1	4/14/2022 1:32:40 AM
Surr: DNOP	109	51.1-141		%Rec	1	4/14/2022 1:32:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/13/2022 3:05:10 AM
Surr: BFB	97.3	37.7-212		%Rec	1	4/13/2022 3:05:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 3:05:10 AM
Toluene	ND	0.048		mg/Kg	1	4/13/2022 3:05:10 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/13/2022 3:05:10 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/13/2022 3:05:10 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	4/13/2022 3:05:10 AM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	480	60		mg/Kg	20	4/14/2022 7:49:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-004 **Matrix:** SOIL

Client Sample ID: BH22-03 0'
Collection Date: 4/7/2022 9:20:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	940	9.6		mg/Kg	1	4/14/2022 1:53:49 AM
Motor Oil Range Organics (MRO)	740	48		mg/Kg	1	4/14/2022 1:53:49 AM
Surr: DNOP	93.8	51.1-141		%Rec	1	4/14/2022 1:53:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/13/2022 3:28:34 AM
Surr: BFB	95.6	37.7-212		%Rec	1	4/13/2022 3:28:34 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	4/13/2022 3:28:34 AM
Toluene	ND	0.049		mg/Kg	1	4/13/2022 3:28:34 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/13/2022 3:28:34 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/13/2022 3:28:34 AM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	4/13/2022 3:28:34 AM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	2100	60		mg/Kg	20	4/14/2022 8:51:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Estimated value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-005 **Matrix:** SOIL

Client Sample ID: BH22-04 0'
Collection Date: 4/7/2022 9:30:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/15/2022 9:05:51 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/15/2022 9:05:51 AM
Surr: DNOP	102	51.1-141		%Rec	1	4/15/2022 9:05:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/13/2022 3:51:56 AM
Surr: BFB	95.5	37.7-212		%Rec	1	4/13/2022 3:51:56 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 3:51:56 AM
Toluene	ND	0.048		mg/Kg	1	4/13/2022 3:51:56 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/13/2022 3:51:56 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/13/2022 3:51:56 AM
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	4/13/2022 3:51:56 AM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	1800	60		mg/Kg	20	4/14/2022 9:03:50 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-006 **Matrix:** SOIL

Client Sample ID: BH22-05 0'
Collection Date: 4/7/2022 9:40:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/13/2022 4:26:56 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/13/2022 4:26:56 PM
Surr: DNOP	88.1	51.1-141		%Rec	1	4/13/2022 4:26:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/13/2022 2:13:00 PM
Surr: BFB	103	37.7-212		%Rec	1	4/13/2022 2:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 2:13:00 PM
Toluene	ND	0.049		mg/Kg	1	4/13/2022 2:13:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/13/2022 2:13:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/13/2022 2:13:00 PM
Surr: 4-Bromofluorobenzene	84.0	70-130		%Rec	1	4/13/2022 2:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	ND	60		mg/Kg	20	4/14/2022 9:16:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-007 **Matrix:** SOIL

Client Sample ID: BH22-06 0'
Collection Date: 4/7/2022 9:50:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/13/2022 4:37:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2022 4:37:38 PM
Surr: DNOP	90.9	51.1-141		%Rec	1	4/13/2022 4:37:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/13/2022 3:12:00 PM
Surr: BFB	96.9	37.7-212		%Rec	1	4/13/2022 3:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.024		mg/Kg	1	4/13/2022 3:12:00 PM
Toluene	ND	0.048		mg/Kg	1	4/13/2022 3:12:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/13/2022 3:12:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/13/2022 3:12:00 PM
Surr: 4-Bromofluorobenzene	80.3	70-130		%Rec	1	4/13/2022 3:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	ND	60		mg/Kg	20	4/14/2022 9:28:31 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-008 **Matrix:** SOIL

Client Sample ID: BH22-07 0'
Collection Date: 4/7/2022 10:00:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/13/2022 4:48:21 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/13/2022 4:48:21 PM
Surr: DNOP	81.6	51.1-141		%Rec	1	4/13/2022 4:48:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/13/2022 4:11:00 PM
Surr: BFB	100	37.7-212		%Rec	1	4/13/2022 4:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.023		mg/Kg	1	4/13/2022 4:11:00 PM
Toluene	ND	0.047		mg/Kg	1	4/13/2022 4:11:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/13/2022 4:11:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	4/13/2022 4:11:00 PM
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	1	4/13/2022 4:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	ND	60		mg/Kg	20	4/14/2022 10:05:33 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2204427**
Date Reported: **4/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 12 13H
Lab ID: 2204427-009 **Matrix:** SOIL

Client Sample ID: BH22-08 0'
Collection Date: 4/7/2022 10:10:00 AM
Received Date: 4/9/2022 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/13/2022 4:59:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/13/2022 4:59:06 PM
Surr: DNOP	87.7	51.1-141		%Rec	1	4/13/2022 4:59:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/13/2022 4:31:00 PM
Surr: BFB	101	37.7-212		%Rec	1	4/13/2022 4:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BRM**
Benzene	ND	0.025		mg/Kg	1	4/13/2022 4:31:00 PM
Toluene	ND	0.049		mg/Kg	1	4/13/2022 4:31:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/13/2022 4:31:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/13/2022 4:31:00 PM
Surr: 4-Bromofluorobenzene	82.9	70-130		%Rec	1	4/13/2022 4:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **LRN**
Chloride	ND	60		mg/Kg	20	4/14/2022 10:17:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID:	**MB-66856**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**66856**	RunNo:	**87263**					
Prep Date:	**4/14/2022**	Analysis Date:	**4/14/2022**	SeqNo:	**3085785**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID:	**LCS-66856**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**66856**	RunNo:	**87263**					
Prep Date:	**4/14/2022**	Analysis Date:	**4/14/2022**	SeqNo:	**3085786**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	90	110			

Sample ID:	**MB-66855**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**66855**	RunNo:	**87264**					
Prep Date:	**4/14/2022**	Analysis Date:	**4/14/2022**	SeqNo:	**3085853**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID:	**LCS-66855**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**66855**	RunNo:	**87264**					
Prep Date:	**4/14/2022**	Analysis Date:	**4/14/2022**	SeqNo:	**3085854**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **MB-66787**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **66787**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084981** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.5	51.1	141			

Sample ID: **MB-66788**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **66788**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084982** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.1	51.1	141			

Sample ID: **LCS-66787**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **66787**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084984** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.4	68.9	135			
Surr: DNOP	4.3		5.000		86.3	51.1	141			

Sample ID: **LCS-66788**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **66788**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084985** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.9	68.9	135			
Surr: DNOP	5.3		5.000		107	51.1	141			

Sample ID: **2204427-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH22-05 0'**	Batch ID: **66788**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/13/2022**	SeqNo: **3085051** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.7	48.36	7.366	80.4	36.1	154			
Surr: DNOP	4.5		4.836		93.3	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **2204427-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH22-05 0'**	Batch ID: **66788**	RunNo: **87194**
Prep Date: **4/12/2022**	Analysis Date: **4/14/2022**	SeqNo: **3085054** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.4	47.08	7.366	70.6	36.1	154	13.0	33.9	
Surr: DNOP	4.0		4.708		84.3	51.1	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **mb-66770**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **66770**	RunNo: **87187**							
Prep Date: **4/11/2022**	Analysis Date: **4/12/2022**	SeqNo: **3082623**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.8	37.7	212			

Sample ID: **lcs-66770**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **66770**	RunNo: **87187**							
Prep Date: **4/11/2022**	Analysis Date: **4/12/2022**	SeqNo: **3082624**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.3	72.3	137			
Surr: BFB	2000		1000		204	37.7	212			

Sample ID: **lcs-66776**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **66776**	RunNo: **87227**							
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084157**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	72.3	137			
Surr: BFB	2200		1000		218	37.7	212			S

Sample ID: **mb-66776**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **66776**	RunNo: **87227**							
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084158**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	37.7	212			

Sample ID: **2204427-006ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH22-05 0'**	Batch ID: **66776**	RunNo: **87227**							
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084170**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.34	0	114	70	130			
Surr: BFB	2200		973.7		225	37.7	212			S

Sample ID: **2204427-006amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **BH22-05 0'**	Batch ID: **66776**	RunNo: **87227**							
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084171**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **2204427-006amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH22-05 0'**	Batch ID: **66776**	RunNo: **87227**
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084171** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.44	0	111	70	130	2.53	20	
Surr: BFB	2200		977.5		220	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **mb-66770**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **66770**	RunNo: **87187**
Prep Date: **4/11/2022**	Analysis Date: **4/12/2022**	SeqNo: **3082670** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: **LCS-66770**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **66770**	RunNo: **87187**
Prep Date: **4/11/2022**	Analysis Date: **4/12/2022**	SeqNo: **3082671** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.5	80	120			
Toluene	0.93	0.050	1.000	0	92.9	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.3	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: **lcs-66776**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **66776**	RunNo: **87227**
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084210** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.5	80	120			
Toluene	0.91	0.050	1.000	0	91.0	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.5	80	120			
Surr: 4-Bromofluorobenzene	0.83		1.000		83.3	70	130			

Sample ID: **mb-66776**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **66776**	RunNo: **87227**
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084211** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.83		1.000		82.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204427**

20-Apr-22

Client: Devon Energy

Project: Longview 12 13H

Sample ID: **2204427-007ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH22-06 0'**	Batch ID: **66776**	RunNo: **87227**
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084224** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.024	0.9625	0	92.0	68.8	120			
Toluene	0.91	0.048	0.9625	0	94.7	73.6	124			
Ethylbenzene	0.91	0.048	0.9625	0	94.5	72.7	129			
Xylenes, Total	2.7	0.096	2.887	0	94.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.78		0.9625		81.6	70	130			

Sample ID: **2204427-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH22-06 0'**	Batch ID: **66776**	RunNo: **87227**
Prep Date: **4/11/2022**	Analysis Date: **4/13/2022**	SeqNo: **3084225** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9588	0	93.5	68.8	120	1.16	20	
Toluene	0.91	0.048	0.9588	0	95.4	73.6	124	0.412	20	
Ethylbenzene	0.92	0.048	0.9588	0	96.1	72.7	129	1.27	20	
Xylenes, Total	2.7	0.096	2.876	0	95.6	75.7	126	0.763	20	
Surr: 4-Bromofluorobenzene	0.80		0.9588		83.4	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2204427 RcptNo: 1

Received By: Desiree Dominguez 4/9/2022 9:45:00 AM DD

Completed By: Desiree Dominguez 4/9/2022 10:34:06 AM DD

Reviewed By: JR ~~SR~~ 4/11/22
JR 4/11/22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: CMC 4/11/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good				

Chain-of-Custody Record

Client: Devon

Mailing Address: On File

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5-Day
☑ Standard ☒ Rush

Project Name: Longview 12 #13H

Project #: 22E-00764

Project Manager: Monica Peppin

Sampler: CD

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.2-0.2=2.0(°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2204427	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/7	9:00	Soil	BH22-01 0'	402	Ice	-001	✓	✓					✓			
	9:05		BH22-01 0.5'			-002										
	9:10		BH22-02 0'			-003										
	9:20		BH22-03 0'			-004										
	9:30		BH22-04 0'			-005										
	9:40		BH22-05 0'			-006										
	9:50		BH22-06 0'			-007										
	10:00		BH22-07 0'			-008										
	10:10		BH22-08 0'			-009										
			per sample bottle 4/11/22													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		CCummings	CCummings		4/8/22	840
Date: 4/8/22	Time: 1900	Relinquished by: CCummings	Received by: DDS	Via: courier	Date: 4/9/22	Time: 9:45

Remarks: CC: Chance Dixon
Direct Bill Devon Energy

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 07, 2022

Kent Stallings

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX

RE: Longview 13 14 H OrderNo.: 2211E00

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2211E00**
Date Reported: **12/7/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview 13 14 H
Lab ID: 2211E00-001 **Matrix:** SOIL

Client Sample ID: BH22-02 2'
Collection Date: 11/23/2022 9:30:00 AM
Received Date: 11/29/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/2/2022 9:22:40 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/2/2022 9:22:40 PM
Surr: DNOP	74.6	21-129		%Rec	1	12/2/2022 9:22:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/2/2022 7:05:00 PM
Surr: BFB	92.7	37.7-212		%Rec	1	12/2/2022 7:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	12/2/2022 7:05:00 PM
Toluene	ND	0.049		mg/Kg	1	12/2/2022 7:05:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/2/2022 7:05:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/2/2022 7:05:00 PM
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	12/2/2022 7:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	ND	60		mg/Kg	20	12/6/2022 12:41:35 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211E00**
07-Dec-22

Client: Devon Energy
Project: Longview 13 14 H

Sample ID: **MB-71860** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **71860** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350498** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-71860** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **71860** RunNo: **93034**
Prep Date: **12/5/2022** Analysis Date: **12/5/2022** SeqNo: **3350499** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211E00**

07-Dec-22

Client: Devon Energy

Project: Longview 13 14 H

Sample ID: **MB-71813** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **71813** RunNo: **92982**
Prep Date: **12/2/2022** Analysis Date: **12/2/2022** SeqNo: **3348099** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.3	21	129			

Sample ID: **LCS-71813** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **71813** RunNo: **92982**
Prep Date: **12/2/2022** Analysis Date: **12/2/2022** SeqNo: **3348100** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.2	21	129			

Sample ID: **MB-71804** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **71804** RunNo: **92986**
Prep Date: **12/1/2022** Analysis Date: **12/2/2022** SeqNo: **3348204** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.7	21	129			

Sample ID: **MB-71804** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **71804** RunNo: **92982**
Prep Date: **12/1/2022** Analysis Date: **12/2/2022** SeqNo: **3349661** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		91.0	21	129			

Sample ID: **LCS-71804** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **71804** RunNo: **92982**
Prep Date: **12/1/2022** Analysis Date: **12/2/2022** SeqNo: **3349664** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	86.2	64.4	127			
Surr: DNOP	4.4		5.000		87.5	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211E00**
07-Dec-22

Client: Devon Energy
Project: Longview 13 14 H

Sample ID: **lcs-71778** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **71778** RunNo: **93006**
Prep Date: **11/30/2022** Analysis Date: **12/2/2022** SeqNo: **3349255** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.0	72.3	137			
Surr: BFB	2000		1000		204	37.7	212			

Sample ID: **mb-71778** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **71778** RunNo: **93006**
Prep Date: **11/30/2022** Analysis Date: **12/2/2022** SeqNo: **3349256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.0	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2211E00**
07-Dec-22

Client: Devon Energy
Project: Longview 13 14 H

Sample ID: **lcs-71778** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **71778** RunNo: **93006**
Prep Date: **11/30/2022** Analysis Date: **12/2/2022** SeqNo: **3349352** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.1	80	120			
Toluene	0.97	0.050	1.000	0	96.6	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.6	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.1	70	130			

Sample ID: **mb-71778** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **71778** RunNo: **93006**
Prep Date: **11/30/2022** Analysis Date: **12/2/2022** SeqNo: **3349353** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2211E00 | RcptNo: 1

Received By: Juan Rojas 11/29/2022 7:25:00 AM

Completed By: Tracy Casarrubias 11/29/2022 10:12:20 AM

Reviewed By: JR 11/29/22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JR 11-29-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: On File

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-Day
☐ Standard ☑ Rush

Project Name: Longview 13-14 H

Project #: 22E-00764

Project Manager: Kent Stallings

Sampler: CD

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.3+0.1=1.4 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211E00
11/28/22	9:30	Soil	BH22-02 2'	4oz	Ice	001

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
✓	✓					✓			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
11/28	1100				11/28/22	1100
11/28/22	1900			courier	11/29/22	7:25

Remarks: CC: Chance Dixon
Direct Bill Devon (210071140)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 15, 2024

Chance Dixon

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Longview Fed 12 013H OrderNo.: 2402165

Dear Chance Dixon:

Eurofins Environment Testing South Central, LLC received 3 sample(s) on 2/3/2024 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2402165**
Date Reported: **2/15/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview Fed 12 013H
Lab ID: 2402165-001 **Matrix:** SOIL

Client Sample ID: BH22-05 1'
Collection Date: 2/1/2024 9:30:00 AM
Received Date: 2/3/2024 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/8/2024 2:09:47 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/8/2024 2:09:47 PM
Surr: DNOP	108	61.2-134		%Rec	1	2/8/2024 2:09:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/11/2024 7:25:59 PM
Surr: BFB	95.0	15-244		%Rec	1	2/11/2024 7:25:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/11/2024 7:25:59 PM
Toluene	ND	0.048		mg/Kg	1	2/11/2024 7:25:59 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/11/2024 7:25:59 PM
Xylenes, Total	ND	0.096		mg/Kg	1	2/11/2024 7:25:59 PM
Surr: 4-Bromofluorobenzene	84.8	39.1-146		%Rec	1	2/11/2024 7:25:59 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	430	60		mg/Kg	20	2/9/2024 12:35:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2402165**
Date Reported: **2/15/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview Fed 12 013H
Lab ID: 2402165-002 **Matrix:** SOIL

Client Sample ID: BH22-06 1'
Collection Date: 2/1/2024 10:40:00 AM
Received Date: 2/3/2024 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/8/2024 2:33:32 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/8/2024 2:33:32 PM
Surr: DNOP	90.2	61.2-134		%Rec	1	2/8/2024 2:33:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/11/2024 7:49:26 PM
Surr: BFB	94.9	15-244		%Rec	1	2/11/2024 7:49:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	2/11/2024 7:49:26 PM
Toluene	ND	0.048		mg/Kg	1	2/11/2024 7:49:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	2/11/2024 7:49:26 PM
Xylenes, Total	ND	0.096		mg/Kg	1	2/11/2024 7:49:26 PM
Surr: 4-Bromofluorobenzene	83.8	39.1-146		%Rec	1	2/11/2024 7:49:26 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	360	60		mg/Kg	20	2/9/2024 12:47:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2402165**
Date Reported: **2/15/2024**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview Fed 12 013H
Lab ID: 2402165-003 **Matrix:** SOIL

Client Sample ID: BH22-07 1'
Collection Date: 2/1/2024 10:05:00 AM
Received Date: 2/3/2024 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JKU**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/8/2024 2:57:16 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/8/2024 2:57:16 PM
Surr: DNOP	92.5	61.2-134		%Rec	1	2/8/2024 2:57:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/11/2024 8:12:44 PM
Surr: BFB	93.6	15-244		%Rec	1	2/11/2024 8:12:44 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	2/11/2024 8:12:44 PM
Toluene	ND	0.050		mg/Kg	1	2/11/2024 8:12:44 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/11/2024 8:12:44 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/11/2024 8:12:44 PM
Surr: 4-Bromofluorobenzene	83.5	39.1-146		%Rec	1	2/11/2024 8:12:44 PM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	2/9/2024 1:00:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402165**

15-Feb-24

Client: Devon Energy

Project: Longview Fed 12 013H

Sample ID: **MB-80358**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **80358**	RunNo: **103010**								
Prep Date: **2/9/2024**	Analysis Date: **2/9/2024**	SeqNo: **3807709**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-80358**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **LCSS**	Batch ID: **80358**	RunNo: **103010**								
Prep Date: **2/9/2024**	Analysis Date: **2/9/2024**	SeqNo: **3807710**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402165**

15-Feb-24

Client: Devon Energy

Project: Longview Fed 12 013H

Sample ID: **MB-80330**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **80330**	RunNo: **102994**
Prep Date: **2/7/2024**	Analysis Date: **2/8/2024**	SeqNo: **3806975** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		112	61.2	134			

Sample ID: **LCS-80330**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **80330**	RunNo: **102994**
Prep Date: **2/7/2024**	Analysis Date: **2/8/2024**	SeqNo: **3806976** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	10	50.00	0	123	59.7	135			
Surr: DNOP	5.3		5.000		105	61.2	134			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402165**

15-Feb-24

Client: Devon Energy

Project: Longview Fed 12 013H

Sample ID: **lcs-80289**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **80289**	RunNo: **103014**
Prep Date: **2/7/2024**	Analysis Date: **2/11/2024**	SeqNo: **3807952** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: **mb-80289**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **80289**	RunNo: **103014**
Prep Date: **2/7/2024**	Analysis Date: **2/11/2024**	SeqNo: **3807953** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.7	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2402165**

15-Feb-24

Client: Devon Energy

Project: Longview Fed 12 013H

Sample ID: **LCS-80289**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **80289**	RunNo: **103014**
Prep Date: **2/7/2024**	Analysis Date: **2/11/2024**	SeqNo: **3807961** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.1	70	130			
Toluene	0.87	0.050	1.000	0	87.0	70	130			
Ethylbenzene	0.88	0.050	1.000	0	87.7	70	130			
Xylenes, Total	2.6	0.10	3.000	0	87.9	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		88.8	39.1	146			

Sample ID: **mb-80289**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **80289**	RunNo: **103014**
Prep Date: **2/7/2024**	Analysis Date: **2/11/2024**	SeqNo: **3807962** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		87.0	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Devon Energy** Work Order Number: **2402165** RcptNo: **1**

Received By: **Tracy Casarrubias** **2/3/2024 9:40:00 AM**

Completed By: **Tracy Casarrubias** **2/3/2024 11:15:52 AM**

Reviewed By: 2/5/24

Chain of Custody

1. Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐	
2. How was the sample delivered?	Courier			

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: TMC 2/3/24

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Mailing address,phone number, and Email/Fax are missing on COC- TMC 2/3/24

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon (Vertex)

WO# 21007140

Mailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☒ Rush 5 Day

Project Name: Longview Fed 12 #013H

Project #: 22E-00764

Project Manager: C. Dixon

Sampler: A. Mohl

On Ice: ☑ Yes ☐ No morty

# of Coolers: 1

Cooler Temp(including CF): 1.8 + 0 = 1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2402165	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/1/24	9:30	soil	BH22-05 1'	4oz jar	ice	001	X	X					X			
1	10:40	1	BH22-06 1'	1	1	002	1	1					1			
1	10:05	1	BH22-07 1'	1	1	003	1	1					1			

Analysis Request

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/2/24	1100				2/2/24	1100
2/2/24	1900			courier	2/3/24	9:40

Remarks: results to: cdixon@vertex.ca

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2023

Chance Dixon

Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Longview Federal 12 13H OrderNo.: 2309849

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/15/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2309849**
Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Longview Federal 12 13H
Lab ID: 2309849-001 **Matrix:** SOIL

Client Sample ID: BH23-09 0'
Collection Date: 9/11/2023 3:50:00 PM
Received Date: 9/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/20/2023 12:21:48 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2023 12:21:48 PM
Surr: DNOP	110	69-147		%Rec	1	9/20/2023 12:21:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/19/2023 8:10:00 PM
Surr: BFB	99.2	15-244		%Rec	1	9/19/2023 8:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	9/19/2023 8:10:00 PM
Toluene	ND	0.049		mg/Kg	1	9/19/2023 8:10:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/19/2023 8:10:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/19/2023 8:10:00 PM
Surr: 4-Bromofluorobenzene	87.8	39.1-146		%Rec	1	9/19/2023 8:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	ND	60		mg/Kg	20	9/20/2023 9:36:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2309849**
Date Reported: **9/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-09 2'
Project: Longview Federal 12 13H
Collection Date: 9/11/2023 3:55:00 PM
Lab ID: 2309849-002 **Matrix:** SOIL **Received Date:** 9/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2023 4:06:24 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2023 4:06:24 AM
Surr: DNOP	103	69-147		%Rec	1	9/20/2023 4:06:24 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/19/2023 8:32:00 PM
Surr: BFB	96.8	15-244		%Rec	1	9/19/2023 8:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	9/19/2023 8:32:00 PM
Toluene	ND	0.047		mg/Kg	1	9/19/2023 8:32:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/19/2023 8:32:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/19/2023 8:32:00 PM
Surr: 4-Bromofluorobenzene	85.3	39.1-146		%Rec	1	9/19/2023 8:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **KCB**
Chloride	ND	60		mg/Kg	20	9/20/2023 9:48:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309849**

25-Sep-23

Client: Devon Energy

Project: Longview Federal 12 13H

Sample ID: **MB-77655**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77655**	RunNo: **99855**
Prep Date: **9/20/2023**	Analysis Date: **9/20/2023**	SeqNo: **3652507** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77655**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77655**	RunNo: **99855**
Prep Date: **9/20/2023**	Analysis Date: **9/20/2023**	SeqNo: **3652508** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309849**

25-Sep-23

Client: Devon Energy

Project: Longview Federal 12 13H

Sample ID: **MB-77580**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77580**	RunNo: **99810**
Prep Date: **9/19/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648794** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		114	69	147			

Sample ID: **LCS-77580**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77580**	RunNo: **99810**
Prep Date: **9/19/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648795** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	109	61.9	130			
Surr: DNOP	5.4		5.000		108	69	147			

Sample ID: **MB-77579**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **77579**	RunNo: **99809**
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3649079** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		118	69	147			

Sample ID: **LCS-77579**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **77579**	RunNo: **99809**
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3649081** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		110	69	147			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309849**

25-Sep-23

Client: Devon Energy

Project: Longview Federal 12 13H

Sample ID: **lcs-77575**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **77575**	RunNo: **99813**
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648847** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.0	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: **mb-77575**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **77575**	RunNo: **99813**
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648848** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.1	15	244			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2309849**

25-Sep-23

Client: Devon Energy

Project: Longview Federal 12 13H

Sample ID: **lcs-77575**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **77575**	RunNo: **99813**							
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648857**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.7	70	130			
Toluene	0.90	0.050	1.000	0	90.4	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		88.9	39.1	146			

Sample ID: **mb-77575**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **77575**	RunNo: **99813**							
Prep Date: **9/18/2023**	Analysis Date: **9/19/2023**	SeqNo: **3648858**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	39.1	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy | Work Order Number: 2309849 | RcptNo: 1

Received By: Tracy Casarrubias 9/15/2023 7:00:00 AM

Completed By: Tracy Casarrubias 9/15/2023 7:44:13 AM

Reviewed By: SCM 9/15/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted?
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: TMC 9/15/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: Mailing address,phone number and Email/Fax are missing on COC- TMC 9/15/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes	Morty		

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: On File

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 5-Day
☑ Standard ☒ Rush

Project Name: Longview Federal 12 #13H

Project #: 22E-00764

Project Manager: Chance Dixon

Sampler: CD

On Ice: ☑ Yes ☐ No marty

# of Coolers: 1

Cooler Temp(including CF): 3.2-0.1=3.1 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2309849	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9/11	3:50	Soil	BH23-09 0'	4oz	Ice	001	✓	✓					✓			
1	3:55	1	BH23-09 2'	1	1	002	✓	✓					✓			

Analysis Request

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/14	845				9/14/23	845
9/14/23	1900			Courier	9/15/23	7:05

Remarks: Direct Bill Devon
21007140

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

QUESTIONS

Action 351618

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2205939051**
Incident Name	**NAPP2205939051 LONGVIEW FEDERAL 12 #013H @ 30-015-41091**
Incident Type	**Produced Water Release**
Incident Status	**Deferral Request Received**
Incident Well	**[30-015-41091] LONGVIEW FEDERAL 12 #013H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	LONGVIEW FEDERAL 12 #013H
Date Release Discovered	02/15/2022
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 11 BBL | Recovered: 11 BBL | Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Lease Operator showed up to location and noticed a hose on the discharge side of a transfer pump had busted and released produced water. Water did not breach lined secondary containment. Water did not leave location. The transfer pump was turned off immediately and isolated. Vacuum truck dispatched to recovered fluids. 10.6 bbls releases. 10.6 bbls recovered.

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 06/06/2024

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 200 and 300 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2100
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1680
GRO+DRO (EPA SW-846 Method 8015M)	940
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	04/07/2022
On what date will (or did) the final sampling or liner inspection occur	11/23/2022
On what date will (or was) the remediation complete(d)	11/23/2022
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	0
What is the estimated volume (in cubic yards) that will be remediated	0
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	*Not answered.*
(Ex Situ) Excavation and **on-site** 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)	Yes
Other Non-listed Remedial Process. Please specify	A liner inspection indicated holes in the liner. Samples collected beneath the liner are above state action levels because of a wetland being within 300 feet of the location. Because the impacted soils are beneath production equipment, a deferral is being requested. No remediation was conducted. it is estimated that the impacted soils are approximately 1,500 square feet to a depth of 1/2 foot below ground surface.
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	

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

I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 06/06/2024

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

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	tanks, containment, liner and pumps in the containment would have to be deconstructed and moved
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	1500
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	28
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	*Not answered.*
Enter the well API (30-) on which this deferral should be granted	30-015-41091 LONGVIEW FEDERAL 12 #013H
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Dale Woodall Title: EHS Professional Email: Dale.Woodall@dvn.com Date: 06/06/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	*{Unavailable.}*

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 351618

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 351618
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of BH22-02, BH22-03, and BH22-04 (under tank battery) is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	7/8/2024