



February 18, 2020

Vertex Project #: 20E-00141-001

**Spill Closure Report:** Malachite 22 CTB  
Unit D, Section 22, Township 19 South, Range 33 East  
County: Lea  
API: 30-025-40318  
Tracking Number: nOY1722030579

**Prepared For:** Devon Energy Production Company  
6488 Seven Rivers Hwy  
Artesia, New Mexico 88210

**New Mexico Oil Conservation Division – District 1 – Hobbs**

1625 North French Drive  
Hobbs, New Mexico 88240

Devon Energy Production Company (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a spill assessment and remediation for an oil release that occurred at Malachite 22 CTB, API 30-025-40318 (hereafter referred to as “Malachite”). Devon provided immediate notification of the spill to New Mexico Oil Conservation Division (NM OCD) District 1 and the Bureau of Land Management (BLM) on July 24, 2017, and followed up with the submission of an initial C-141 Release Notification (Attachment 1) on October 8, 2017. The NM OCD tracking number for this incident is nOY1722030579.

This letter provides a description of the spill assessment and remediation activities, and demonstrates that closure criteria established in 19.15.29.12 *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) have been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NM OCD for closure of this release.

**Incident Description**

On July 24, 2017, a release occurred at Devon’s Malachite site when an oil storage tank within containment overflowed. This incident resulted in the release of approximately 10 barrels (bbls) of oil into a lined secondary containment. Upon discovery of the release, the overflow of oil was stopped and a hydrovac truck was dispatched to the site to recover free liquids. All fluids were contained within the lined Spill Prevention Control and Countermeasures (SPCC) containment. Approximately 10 bbls of oil was recovered from the secondary containment and removed for disposal off-site.

**Site Characterization**

The release at Malachite occurred on federally-owned land, N 32.6520462, W 103.6584854, approximately 30 miles west of Hobbs, New Mexico. The legal description for the site is Unit D, Section 22, Township 19 South, Range 33 East, Lea County, New Mexico. This location is within the Permian Basin in southeast New Mexico and has historically been used for oil and gas exploration and production, and rangeland. An aerial photograph and site schematic are included in Attachment 2.

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201 S Mesa Street, Carlsbad, New Mexico 88220, USA | P 575.725.5001

Malachite is typical of oil and gas exploration and production sites in the western portion of the Permian Basin, and is currently used for oil and gas production, and storage. The following sections specifically describe the release area on the western portion of the constructed wellpad where the storage tanks are located.

The surrounding landscape has historically been associated with low sandy dunes and is not prime farmland. The climate is semiarid, with average annual precipitation ranging between 10 and 12 inches. The plant community has the aspect of a grassland/shrub mix, dominated by dropseed grass species, bluestems and threeawns, with scattered shinnery oak and soapweed yucca. Bare ground and litter make up a significant portion of the ground cover (United States Department of Agriculture, Natural Resources Conservation Service, 2020). Limited to no vegetation is allowed to grow on the compacted wellpad.

*The Geological Map of New Mexico* indicates the surface geology at Malachite is comprised primarily of Qep-Eolian and piedmont deposits (Holocene to middle Pleistocene) characterized by interlayered eolian sand and piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2019). The National Resource Conservation Service (NRCS) Web Soil Survey characterizes the soil at the site as Kermit-Palomas fine sands, which are associated with dunes resulting from calcareous sandy eolian deposits derived from sedimentary rock. This type of soil, which has between 3 and 12 percent slopes, is typically found at elevations of 3,000 to 4,400 feet above sea level. This type of soil tends to be excessively drained with very low runoff and low available moisture in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2020). There is low potential for karst geology to be present near Malachite (United States Department of the Interior, Bureau of Land Management, 2020).

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is a draw located approximately 6.5 miles northeast of the site (New Mexico Office of the State Engineer, Interstate Stream Commission, 2019). There are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

The nearest recent well is a United States Geological Survey (USGS) well from 2015 located 2.10 miles northwest of the site. Data for that well show a depth to groundwater at 131 feet bgs (United States Department of the Interior, United States Geological Survey, 2020). Documentation pertaining to site characterization and depth to groundwater determination is included in Attachment 3.

## Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Attachment 3) was completed to determine if the release would be subject to any of the special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC, if the release had escaped secondary containment.

Based on data included in the closure criteria determination worksheet, the release at Malachite would not be subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC and the closure criteria for the site would be determined to be associated with the following constituent concentration limits.

Devon Energy Production Company  
Malachite 22 CTB

2020 Spill Assessment and Closure  
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Table 1. Closure Criteria for Soils Impacted by a Release		
Depth to Groundwater	Constituent	Limit
>100 feet	Chloride	20,000 mg/kg
	TPH <sup>1</sup> (GRO + DRO + MRO)	2,500 mg/kg
	GRO + DRO	1,000 mg/kg
	BTEX <sup>2</sup>	50 mg/kg
	Benzene	10 mg/kg

<sup>1</sup>Total petroleum hydrocarbons (TPH) = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

<sup>2</sup>Benzene, toluene, ethylbenzene and xylenes (BTEX)

## Remedial Actions

On January 20, 2020, after the production equipment within secondary containment was cleaned, Vertex provided 48-hour notification of the liner inspection to NM OCD, as required by Subparagraph (a) of Paragraph (5) of Subsection A 19.15.29.11 NMAC (Attachment 4). On January 23, 2020, Vertex conducted a visual inspection of the production equipment secondary containment liner for cracks, tears, cuts and other signs of damage to verify that the liner remained intact and had the ability to contain the release. The Daily Field Report (DFR) associated with the inspection is included in Attachment 5.

## Closure Request

Vertex recommends no additional remediation action to address the release at Malachite. The secondary containment liner appeared to be intact and had the ability to contain the release in question, as shown in the inspection photographs included with the DFR (Attachment 5). There are no anticipated risks to human, ecological or hydrological receptors associated with the release site.

Vertex requests that this incident (nOY1722030579) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. 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 NM OCD requirements to obtain closure on the July 24, 2017, release at Malachite.

Should you have any questions or concerns, please do not hesitate to contact me at 505.506.0040 or ngordon@vertex.ca.

Sincerely,



Natalie Gordon  
PROJECT MANAGER

vertex.ca

201 S Mesa Street, Carlsbad, New Mexico 88220, USA | P 575.725.5001

**Devon Energy Production Company**  
Malachite 22 CTB

**2020 Spill Assessment and Closure**  
February 2020

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**Attachments**

- Attachment 1. NM OCD C-141 Report
- Attachment 2. Site Schematic
- Attachment 3. Site Characterization Research Documentation
- Attachment 4. Required 48-hr Notification of Liner Inspection to Regulatory Agencies
- Attachment 5. Daily Field Report(s) with Photographs

Devon Energy Production Company  
Malachite 22 CTB

2020 Spill Assessment and Closure  
February 2020

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## References

- New Mexico Bureau of Geology and Mineral Resources. (2020). *Interactive Geologic Map*. Retrieved from <http://geoinfo.nmt.edu>.
- New Mexico Office of the State Engineer, Interstate Stream Commission. (2019). *OSE POD Locations*. Retrieved from [https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/).
- New Mexico Oil Conservation Division. (2018). *Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.
- United States Department of Agriculture, Natural Resources Conservation Service. (2020). *Web Soil Survey*. Retrieved from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- United States Department of the Interior, Bureau of Land Management. (2020). *New Mexico Cave/Karsts*. Retrieved from <https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico>.
- United States Department of the Interior, United States Geological Survey. (2020). *Groundwater for New Mexico: Water Levels*. Retrieved from <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>.

**Devon Energy Production Company**  
Malachite 22 CTB

**2020 Spill Assessment and Closure**  
February 2020

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### **Limitations**

This report has been prepared for the sole benefit of Devon Energy Production Company (Devon). This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and Devon. 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.

## **ATTACHMENT 1**

4441 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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☒ Final Report

<b>Name of Company</b> Devon Energy Production Company	<b>Contact</b> Rebecca Jamison, Production Foreman
<b>Address</b> 6488 Seven Rivers Hwy Artesia, NM 88210	<b>Telephone No.</b> 575-513-5538
<b>Facility Name</b> Malachite 22 CTB	<b>Facility Type</b> Oil
<b>Surface Owner</b> Federal	<b>Mineral Owner</b> Federal
<b>API No</b> 30-025-40318	

### LOCATION OF RELEASE

Unit Letter D	Section 22	Township 19S	Range 33E	Feet from the 330	North/South Line North	Feet from the 330	East/West Line West	County Lea
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**Latitude:** 32.6520462

**Longitude:** -103.6584854

### NATURE OF RELEASE

<b>Type of Release</b> Oil	<b>Volume of Release</b> 10BBLS	<b>Volume Recovered</b> 10BBLS
<b>Source of Release</b> Oil Storage tank	<b>Date and Hour of Occurrence</b> 7/24/2017 @ 5:30 PM	<b>Date and Hour of Discovery</b> 7/24/2017 @ 5:30 PM
<b>Was Immediate Notice Given?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	<b>If YES, To Whom?</b> BLM-Shelly Tucker OCD-Olivia Yu	
<b>By Whom?</b> Rebecca Jamison, Production Foreman	<b>Date and Hour</b> BLM-7/24/2017 @ 5:30 PM OCD-7/24/2017 @ 5:40 PM	
<b>Was a Watercourse Reached?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If YES, Volume Impacting the Watercourse</b>	

**If a Watercourse was Impacted, Describe Fully.\***  
N/A

**Describe Cause of Problem and Remedial Action Taken.\***  
Oil storage tanks overflowed into the lined containment.


**RECEIVED**

By Olivia Yu at 8:27 am, Aug 08, 2017

**Describe Area Affected and Cleanup Action Taken.\***

Approximately 10BBLS of oil was released as a result of the oil storage tanks overflowing. Approximately 10BBLS was recovered via the dispatched vacuum truck. All fluid stayed inside the lined SPCC containment. Once fluids were removed the liner was visually inspected by Devon field staff for any pinholes or punctures and none were found. Based on this inspection there is no evidence that the spill fluids left containment.

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

<b>Signature:</b> Dana DeLaRosa	<b>OIL CONSERVATION DIVISION</b>	
<b>Printed Name:</b> Dana DeLaRosa	Approved by Environmental Specialist: 	
<b>Title:</b> Field Admin Support	Approval Date: 8/8/2017	Expiration Date:
<b>E-mail Address:</b> dana.delarosa@dvn.com	Conditions of Approval:	Attached <input type="checkbox"/>
<b>Date:</b> 8-07-2017 <b>Phone:</b> 575.746.5594	Please inspect liner in question. Provide NMOCD with a concise report of the inspection with affirmation the liner has and will continue to contain liquids.	

\* Attach Additional Sheets If Necessary

nOY1722030579



Malachite 22 CTB  
10BBLs Oil\_7.24.2017



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. The user makes no warranty, kind regarding this map.

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
Prepared by: Dana DeLaRosa  
Map is current as of: 07-Aug-2017



- DWN Currently Drilling
- DWN Currently Fracing
- Devon Google Maps Imagery

## **ATTACHMENT 2**



## LEGEND

 SPILL AREA WELL PAD

0 25 50 100 ft  
SCALE 1:900

Notes: Aerial Image from ESRI Digital Globe 2016



Site Schematic  
Malachite 22 CTB



DRAWN: NM
APPROVED: JC
DATE: JAN 22/20

FIGURE:  
**1**

VERSATILITY. EXPERTISE.



## **ATTACHMENT 3**

<b>Table 1. Closure Criteria Determination</b>			
<b>Site Name: Malachite 22 Fed 1H</b>			
<b>Spill Coordinates: 32.6520462. -103.6584854</b>		<b>X: 625811.76</b>	<b>Y: 3613508.57</b>
<b>Site Specific Conditions</b>		<b>Value</b>	<b>Unit</b>
1	Depth to Groundwater	131	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	34,320	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	12,930	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	12,647	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, <b>or</b>	5,356	feet
	ii) Within 1000 feet of any fresh water well or spring	5,356	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	36,755	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	undetermined	year
<b>NMAC 19.15.29.12 E (Table 1) Closure Criteria</b>		>100'	<50' 51-100' >100'


## Malachite 2 CTB

Distance to well: 11,104 feet (2.10 miles)  
Depth to water: 131 ft

### Legend

-  Feature 1
-  Feature 2

323947103412001  323947103412001

32.6520462, -103.6584854  Malachite 22 CTB

Google Earth



1 mi



[USGS Home](#)  
[Contact USGS](#)  
[Search USGS](#)

## National Water Information System: Web Interface

USGS Water Resources

Data Category:


Site Information ▼

Geographic Area:

United States ▼

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

# USGS 323947103412001 19S.33E.17.11224

Available data for this site

SUMMARY OF ALL AVAILABLE DATA ▼

GO

## Well Site

### DESCRIPTION:

Latitude 32°40'01.8", Longitude 103°41'24.3" NAD83

Lea County, New Mexico , Hydrologic Unit 13060011

Well depth: 131 feet

Land surface altitude: 3,654 feet above NAVD88.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

### AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
<a href="#">Field groundwater-level measurements</a>	1965-12-08	2015-12-17	9
<a href="#">Revisions</a>	Unavailable (site:0) (timeseries:0)		

### OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center

Email questions about this site to [New Mexico Water Science Center Water-Data Inquiries](#)

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[Questions about sites/data?](#)

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: NWIS Site Information for USA: Site Inventory**

**URL: [https://waterdata.usgs.gov/nwis/inventory?agency\\_code=USGS&site\\_no=323947103412001](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=323947103412001)**



Page Contact Information: [New Mexico Water Data Support Team](#)

Page Last Modified: 2020-02-11 16:06:15 EST

0.42 0.41 caww02



# 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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">CP 00810 POD1</a>	CP	LE		3	3	08	19S	33E		622675	3615385*	3657	110		
<a href="#">CP 00658 POD1</a>	CP	LE		2	2	4	26	19S	33E	628857	3611125*	3863	100		
<a href="#">CP 00805 POD1</a>	CP	LE		3	1	18	19S	33E		621057	3614563*	4871	450		
<a href="#">L 07023</a>	L	LE		2	3	3	32	19S	33E	622840	3609047*	5356	262	185	77
<a href="#">CP 00809 POD1</a>	CP	LE		2	1	05	19S	33E		623048	3618206*	5454	300		
<a href="#">CP 00653 POD1</a>	CP	LE		4	4	04	20S	33E		625573	3607367*	6141	60		
<a href="#">CP 00812 POD1</a>	CP	LE		4	4	01	19S	32E		620623	3616973*	6241	200		
<a href="#">CP 00813 POD1</a>	CP	LE			1	33	18S	33E		624441	3619644*	6291	300		
<a href="#">CP 00748 POD1</a>	CP	LE			2	01	20S	33E		630197	3608428*	6707			
<a href="#">CP 00317</a>	CP	LE		3	4	3	05	20S	33E	623054	3607235*	6848	680	325	355
<a href="#">L 07213</a>	L	LE		4	1	4	31	19S	34E	631700	3609351*	7205	160	110	50
<a href="#">CP 00875</a>	CP	LE		3	4	3	05	19S	34E	632592	3617013*	7634	200		
<a href="#">L 03454</a>	L	LE		2	2	30	18S	33E		622200	3621422*	8703	100	35	65
<a href="#">CP 01584 POD1</a>	CP	LE		2	1	3	30	18S	34E	630654	3620788	8746	500		
<a href="#">CP 00075</a>	O	CP	LE	2	4	34	19S	32E		617502	3609301	9312	575		
<a href="#">CP 00811 POD1</a>	CP	LE		4	4	09	19S	34E		635132	3615542*	9540	50		
<a href="#">CP 00750 POD1</a>	CP	LE		3	4	07	20S	34E		631639	3605834*	9632	320		
<a href="#">CP 00806 POD1</a>	CP	LE		4	4	04	19S	34E		635109	3617151*	9987	50		

Average Depth to Water: **163 feet**

Minimum Depth: **35 feet**

Maximum Depth: **325 feet**

Record Count: 18

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 625811.82

**Northing (Y):** 3613503.45

**Radius:** 10000

\*UTM location was derived from PLSS - see Help

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

1/16/20 5:39 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# 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, (quarters are 1=NW 2=NE 3=SW 4=SE)

C=the file is closed)

(quarters are smallest to largest)























(NAD83 UTM in meters)

WR File Nbr	Sub			Owner	County	POD Number	Well		q q q							X	Y	Distance	
	basin	Use	Diversion				Tag	Code Grant	Source	6416	4	Sec	Tws	Rng					
<a href="#">CP 00810</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00810 POD1</a>			Shallow	3	3	08	19S	33E	622675	3615385*		3657	
<a href="#">CP 00658</a>	CP	PLS		2 KENNETH SMITH	LE	<a href="#">CP 00658 POD1</a>			Shallow	2	2	4	26	19S	33E	628857	3611125*		3863
<a href="#">CP 00805</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00805 POD1</a>			Shallow	3	1	18	19S	33E	621057	3614563*		4871	
<a href="#">CP 00880</a>	CP	OIL		0 TRIUMPH EXPLORATION, INC.	LE	<a href="#">CP 00880 POD1</a>				3	3	3	19	19S	33E	620988	3612048*		5038
<a href="#">CP 00071</a>	CP	OIL		7 KENNETH SMITH	LE	<a href="#">CP 00071 POD1</a>				3	1	1	18	19S	33E	620950	3614864*		5048
<a href="#">CP 00883</a>	CP	SRO		0 ROBINSON OIL INC.	LE	<a href="#">CP 00883 POD1</a>				4	3	30	19S	33E	621517	3610545*		5215	
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD5</a>						30	19S	33E	621510	3610489		5252	
<a href="#">L 07023</a>	L	PRO		0 CACTUS DRILLING CORPORATION	LE	<a href="#">L 07023</a>			Shallow	2	3	3	32	19S	33E	622840	3609047*		5356
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD2</a>						30	19S	33E	621209	3610646		5417	
<a href="#">CP 00809</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00809 POD1</a>			Shallow	2	1	05	19S	33E	623048	3618206*		5454	
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD6</a>						25	19S	32E	620705	3610639		5854	
					LE	<a href="#">CP 01163 POD8</a>						34	18S	33E	627051	3619490		6114	
<a href="#">CP 00653</a>	CP	PLS		2 MARK SMITH	LE	<a href="#">CP 00653 POD1</a>			Shallow	4	4	04	20S	33E	625573	3607367*		6141	
<a href="#">CP 00812</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00812 POD1</a>			Shallow	4	4	01	19S	32E	620623	3616973*		6241	
<a href="#">CP 00813</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00813 POD1</a>			Shallow		1	33	18S	33E	624441	3619644*		6291	
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD4</a>						01	19S	32E	620623	3617379		6476	
					LE	<a href="#">CP 01163 POD7</a>						34	18S	33E	626946	3619897		6493	
<a href="#">CP 00748</a>	CP	PRO		0 GRACE DRILLING CO.	LE	<a href="#">CP 00748 POD1</a>			Shallow	2	01	20S	33E		630197	3608428*		6707	

\*UTM location was derived from PLSS - see Help

(R=POD has been replaced  
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)














(acre ft per annum)

WR File Nbr	Sub				County	POD Number	Well		Source	q q q					X	Y	Distance		
	basin	Use	Diversion	Owner			Tag	Code Grant		6416	4	Sec	Tws	Rng					
<a href="#">CP 00317</a>	CP	PRO		0 PAN AMERICAN PET. CORPORATION	LE	<a href="#">CP 00317</a>			Shallow	3	4	3	05	20S	33E	623054	3607235*		6848
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD9</a>							27	18S	33E	627037	3620271		6878
					LE	<a href="#">CP 01163 POD1</a>							01	19S	32E	620229	3617878		7092
<a href="#">L 07213</a>	L	PRO		0 MCVAY DRILLING COMPANY	LE	<a href="#">L 07213</a>			Shallow	4	1	4	31	19S	34E	631700	3609351*		7205
<a href="#">CP 01163</a>	CP	MON		0 BUREAU OF LAND MANAGEMENT	LE	<a href="#">CP 01163 POD3</a>							01	19S	32E	619904	3618078		7471
<a href="#">CP 01583</a>	CP	EXP		0 T H MCELVAIN OIL & GAS LLLP	LE	<a href="#">CP 01583 POD1</a>				2	1	3	31	18S	34E	630771	3619263		7601
<a href="#">CP 00875</a>	CP	PRO		0 MATADOR PETROLEUM INC.	LE	<a href="#">CP 00875</a>				3	4	3	05	19S	34E	632592	3617013*		7634
<a href="#">CP 00466</a>	CP	PRO		0 GULF OIL CORPORATION	LE	<a href="#">CP 00466</a>				2	3	3	16	19S	34E	634046	3614012*		8249
<a href="#">L 03454</a>	L	DOM		3 W H ELLISON	LE	<a href="#">L 03454</a>			Shallow		2	2	30	18S	33E	622200	3621422*		8703
<a href="#">CP 01584</a>	CP	EXP		0 T H MCELVAIN OIL & GAS LLLP	LE	<a href="#">CP 01584 POD1</a>				2	1	3	30	18S	34E	630653	3620788		8746
<a href="#">CP 00075</a>	CP	OIL		20 G. KELLY STOUT	LE	<a href="#">CP 00075 POD1</a>					2	4	34	19S	32E	617515	3609321		9291
<a href="#">CP 01482</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00075 POD1</a>					2	4	34	19S	32E	617515	3609321		9291
<a href="#">CP 01483</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00075 POD1</a>					2	4	34	19S	32E	617515	3609321		9291
<a href="#">CP 01484</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00075 POD1</a>					2	4	34	19S	32E	617515	3609321		9291
<a href="#">CP 00074</a>	CP	OIL		20 G. KELLY STOUT	LE	<a href="#">CP 00074 POD1</a>				1	2	4	34	19S	32E	617497	3609334		9301
<a href="#">CP 01478</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00074 POD1</a>				1	2	4	34	19S	32E	617497	3609334		9301
<a href="#">CP 01479</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00074 POD1</a>				1	2	4	34	19S	32E	617497	3609334		9301
<a href="#">CP 00073</a>	CP	OIL		20 G. KELLY STOUT	LE	<a href="#">CP 00073 POD1</a>				1	2	4	34	19S	32E	617501	3609320		9303
<a href="#">CP 01475</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00073 POD1</a>				1	2	4	34	19S	32E	617501	3609320		9303
<a href="#">CP 01476</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00073 POD1</a>				1	2	4	34	19S	32E	617501	3609320		9303
<a href="#">CP 01477</a>	CP	PRO		0 CONCHO OIL & GAS	LE	<a href="#">CP 00073 POD1</a>				1	2	4	34	19S	32E	617501	3609320		9303
<a href="#">CP 00078</a>	CP	OIL		50 G. KELLY STOUT	LE	<a href="#">CP 00078 POD1</a>					2	4	34	19S	32E	617502	3609301*		9312

\*UTM location was derived from PLSS - see Help

(R=POD has been replaced  
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)  
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub					County	POD Number	Well		Source	q q q					X	Y	Distance		
	basin	Use	Diversion	Owner	Tag			Code	Grant		6416	4	Sec	Tws	Rng					
<a href="#">CP 01479</a>	CP	PRO		0 CONCHO OIL & GAS	ED	<a href="#">CP 00074</a>					2	4	34	19S	32E	617502	3609301		9312	
<a href="#">CP 01480</a>	CP	PRO		0 CONCHO OIL & GAS	ED	<a href="#">CP 00074</a>					2	4	34	19S	32E	617502	3609301		9312	
<a href="#">CP 00811</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00811 POD1</a>				Shallow	4	4	09	19S	34E	635132	3615542*		9540	
<a href="#">CP 00808</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00808 POD1</a>					4	4	26	18S	32E	618973	3620178*		9556	
<a href="#">CP 00750</a>	CP	PRO		0 TXO PROD.	LE	<a href="#">CP 00750 POD1</a>					3	4	07	20S	34E	631639	3605834*		9632	
<a href="#">CP 01443</a>	CP	MON		0 COG OPERATING, LLC	LE	<a href="#">CP 01443 POD6</a>					3	3	1	24	18S	33E	628913	3622682		9688
					LE	<a href="#">CP 01443 POD1</a>					4	3	1	24	18S	33E	629078	3622628		9692
					LE	<a href="#">CP 01443 POD2</a>					3	3	1	24	18S	33E	628957	3622679		9700
					LE	<a href="#">CP 01443 POD5</a>					4	3	1	24	18S	33E	629142	3622715		9795
<a href="#">CP 01586</a>	CP	STK		3 KENNETH SMITH INC	LE	<a href="#">CP 01586 POD1</a>					3	4	4	04	19S	34E	634972	3616983		9798
<a href="#">CP 01443</a>	CP	MON		0 COG OPERATING, LLC	LE	<a href="#">CP 01443 POD3</a>					1	3	1	24	18S	33E	628940	3622790		9799
					LE	<a href="#">CP 01443 POD4</a>					2	3	1	24	18S	33E	629039	3622803		9844
<a href="#">CP 00806</a>	CP	PLS		3 KENNETH SMITH	LE	<a href="#">CP 00806 POD1</a>				Shallow	4	4	04	19S	34E	635109	3617151*		9987	

Record Count: 53

**UTMNAD83 Radius Search (in meters):****Easting (X):** 625811.82**Northing (Y):** 3613503.45**Radius:** 10000**Sorted by:** Distance

\*UTM location was derived from PLSS - see Help

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

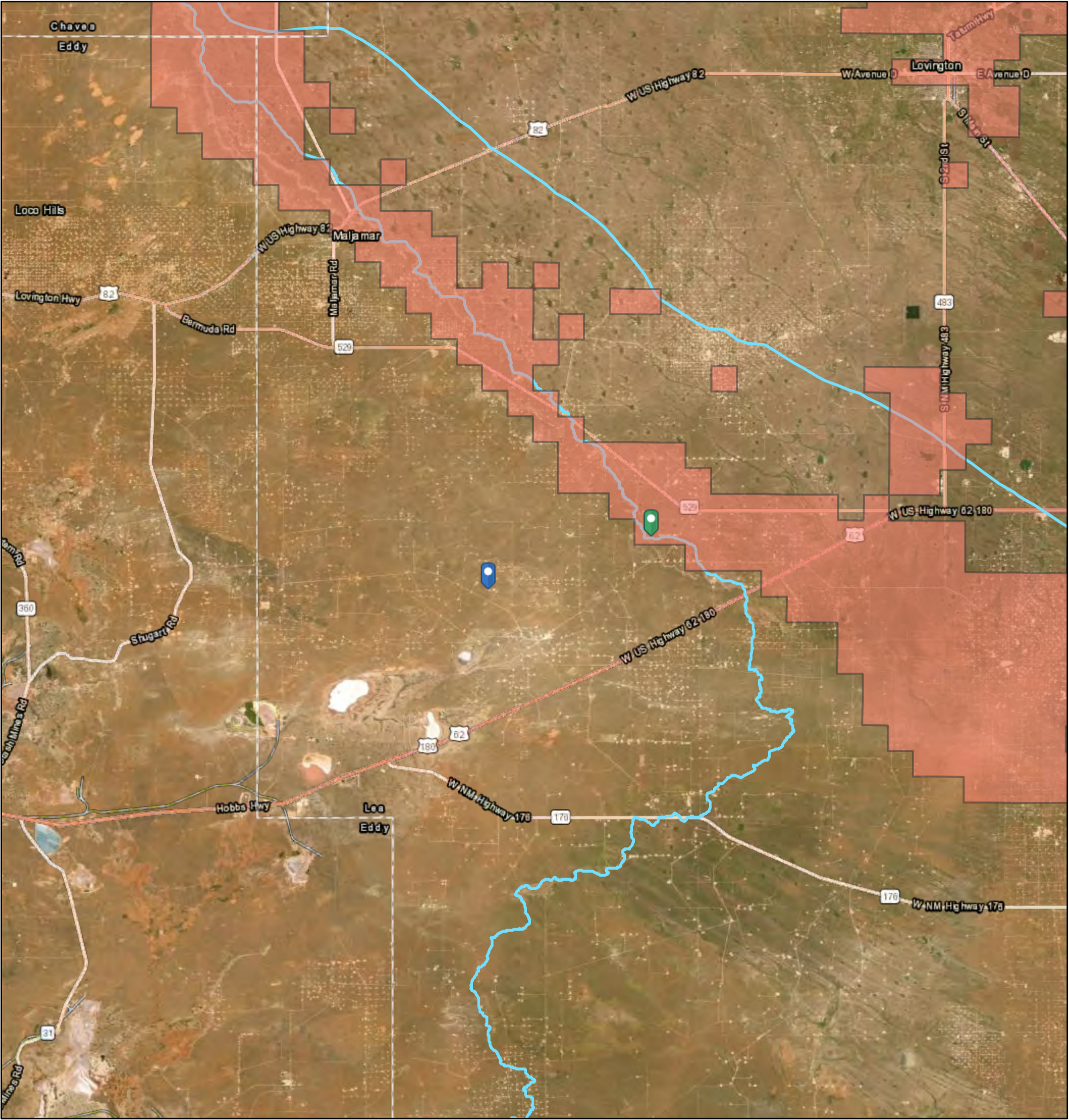
1/16/20 5:40 PM

Page 3 of 3

ACTIVE &amp; INACTIVE POINTS OF DIVERSION



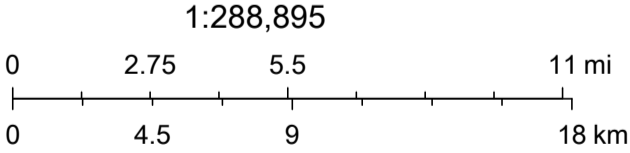
# Malachite 22 CTB 1



2/13/2020, 1:43:59 PM

Water Right Regulations

- Critical Management Area - Guidelines
- OSE District Boundary
- Surface Water Sub Basins



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and



Malachite 22 Fed 1H: Lake 12,930 ft



January 18, 2020

**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.



Malachite 22 Fed 1H: Lake 12,930 ft



January 18, 2020

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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- Lake
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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.

# Distance to Residence

12,647 ft

## Legend

-  Distance to Residence
-  Feature 1

Malachite 22 Fed 1H



Residence

Google Earth



1 km



# New Mexico Office of the State Engineer

## Wells with Well Log Information

(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	POD Sub-Code	basin	County	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
<a href="#">L 07023</a>	L	LE	Shallow		2	3	3	32	19S	33E	622840	3609047*	5356	11/12/1970	11/15/1970	11/19/1970	262	185	MURRELL ABBOTT	46
<a href="#">CP 00748 POD1</a>	CP	LE	Shallow			2		01	20S	33E	630197	3608428*	6707	06/01/1990	06/02/1990	05/31/1991			COLLIS, ROBERT E. (LD)	1184
<a href="#">CP 00317</a>	CP	LE	Shallow		3	4	3	05	20S	33E	623054	3607235*	6848	02/05/1966	02/17/1966	02/24/1966	680	325	ABBOTT, MURRIEL	46
<a href="#">L 07213</a>	L	LE	Shallow		4	1	4	31	19S	34E	631700	3609351*	7205	05/04/1974	05/05/1974	05/15/1974	160	110		46
<a href="#">CP 00875</a>	CP	LE			3	4	3	05	19S	34E	632592	3617013*	7634	01/07/1998	01/07/1998	01/29/1998	200		MARSH, KENNETH R.	586
<a href="#">L 03454</a>	L	LE	Shallow		2	2		30	18S	33E	622200	3621422*	8703	03/29/1957	03/30/1957	04/17/1957	100	35	MUSSELWHITE, O.R.	99
<a href="#">CP 01584 POD1</a>	CP	LE			2	1	3	30	18S	34E	630654	3620788	8746	04/05/2016	04/06/2016	05/23/2017	500		GOERTZEN, JOHN	1611
<a href="#">CP 00750 POD1</a>	CP	LE			3	4		07	20S	34E	631639	3605834*	9632	06/20/1990	06/20/1990	07/26/1990	320		GLENN, CLARK A. "CORKY" (LD)	421

Record Count: 8

UTM NAD83 Radius Search (in meters):

Easting (X): 625811.82

Northing (Y): 3613503.45

Radius: 10000

\*UTM location was derived from PLSS - see Help

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

1/16/20 5:41 PM

Page 1 of 1

WELLS WITH WELL LOG INFORMATION



## Malachite: Wetland 36,755 ft



January 17, 2020

**Wetlands**

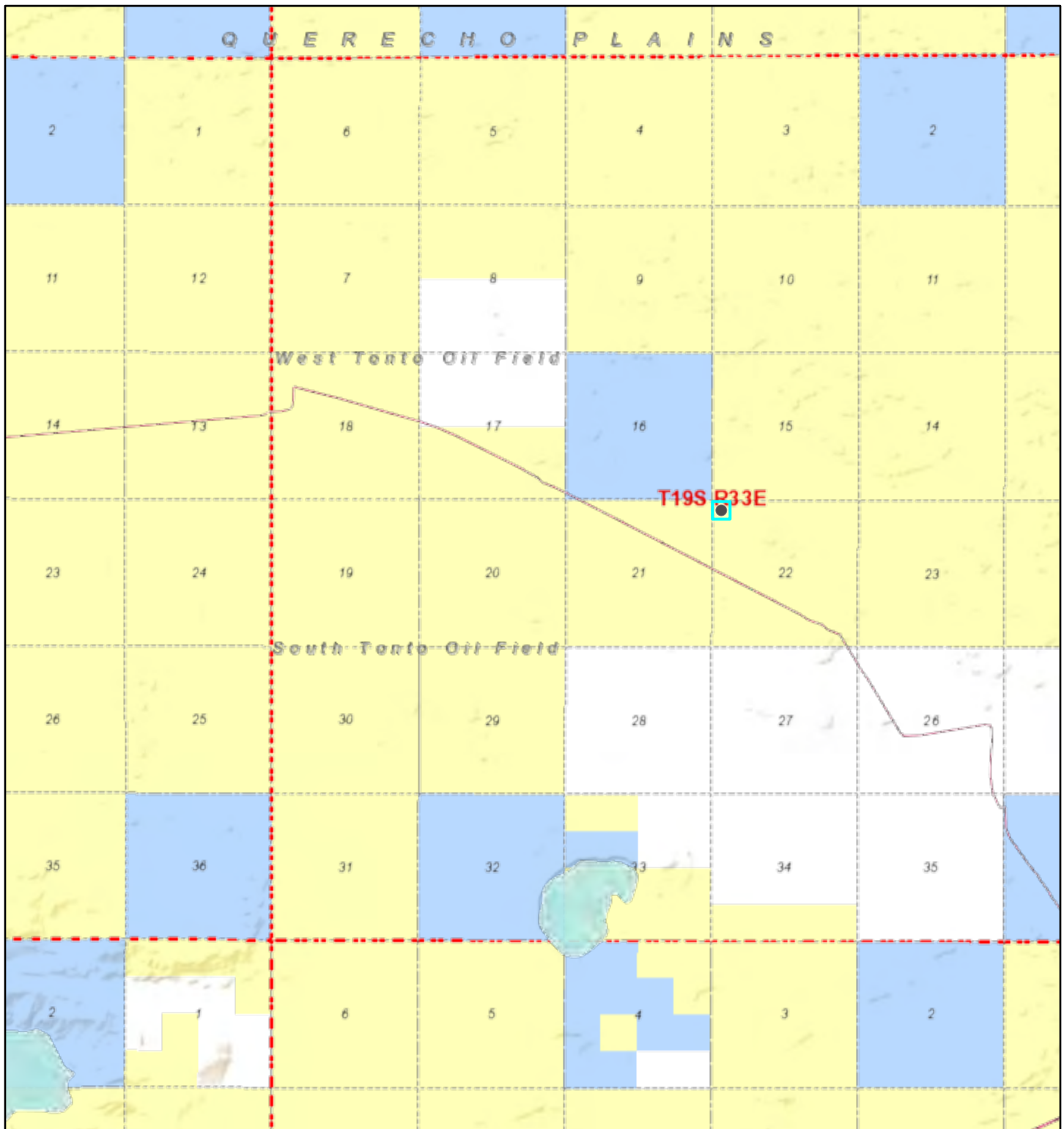
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

- Lake
- Other
- Riverine

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## Active Mines near Malachite 22 Fed 1H



1/18/2020, 11:59:16 AM

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

U.S. Bureau of Land Management - New Mexico State Office, Sources:  
Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

# National Flood Hazard Layer FIRMette



32°39'22.35"N



## Legend

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

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



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/16/2020 at 7:57:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

32°38'52.05"N

Soil Map—Lea County, New Mexico  
(Malachite 22 Fed 1H Soil Map)



Natural Resources  
Conservation Service


Web Soil Survey  
National Cooperative Soil Survey

1/18/2020  
Page 1 of 3


Soil Map—Lea County, New Mexico  
(Malachite 22 Fed 1H 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: Lea County, New Mexico

Survey Area Data: Version 16, Sep 15, 2019

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

Date(s) aerial images were photographed: Sep 18, 2016—Nov 20, 2017

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
KD	Kermit-Palomas fine sands, 0 to 12 percent slopes	2.7	100.0%
Totals for Area of Interest		2.7	100.0%

## Lea County, New Mexico

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

#### Map Unit Setting

*National map unit symbol:* dmpv

*Elevation:* 3,000 to 4,400 feet

*Mean annual precipitation:* 10 to 12 inches

*Mean annual air temperature:* 60 to 62 degrees F

*Frost-free period:* 190 to 205 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Kermit and similar soils:* 70 percent

*Palomas and similar soils:* 20 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Kermit

##### Setting

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder, backslope, footslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex, linear, concave

*Across-slope shape:* Convex

*Parent material:* Calcareous sandy eolian deposits derived from sedimentary rock

##### Typical profile

*A - 0 to 8 inches:* fine sand

*C - 8 to 60 inches:* fine sand

##### Properties and qualities

*Slope:* 3 to 12 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Excessively drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Very high (20.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 2.0

*Available water storage in profile:* Low (about 3.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

Map Unit Description: Kermit-Palomas fine sands, 0 to 12 percent slopes---Lea County, New Mexico

Malachite 22 Fed 1H Soil Report

*Hydrologic Soil Group:* A  
*Ecological site:* Deep Sand (R042XC005NM)  
*Hydric soil rating:* No

## Description of Palomas

### Setting

*Landform:* Dunes  
*Landform position (two-dimensional):* Shoulder, backslope, footslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex, linear, concave  
*Across-slope shape:* Convex  
*Parent material:* Alluvium derived from sandstone

### Typical profile

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

### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 50 percent  
*Gypsum, maximum in profile:* 1 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 7.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* Loamy Sand (R042XC003NM)  
*Hydric soil rating:* No

## Minor Components

### Maljamar

*Percent of map unit:* 4 percent  
*Ecological site:* Loamy Sand (R042XC003NM)  
*Hydric soil rating:* No

### Pyote

*Percent of map unit:* 4 percent  
*Ecological site:* Loamy Sand (R042XC003NM)

Map Unit Description: Kermit-Palomas fine sands, 0 to 12 percent slopes---Lea County, New Mexico

Malachite 22 Fed 1H Soil Report

---

*Hydric soil rating:* No

**Dune land**

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

**Palomas**

*Percent of map unit:* 1 percent

*Ecological site:* Loamy Sand (R042XC003NM)

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 16, Sep 15, 2019



## **ATTACHMENT 4**

## Natalie Gordon

---

**From:** Natalie Gordon  
**Sent:** Monday, January 20, 2020 5:10 PM  
**To:** emnrd-ocd-district1spills@state.nm.us; Mike Bratcher (mike.bratcher@state.nm.us);  
ramona.marcus@state.nm.us  
**Cc:** Wesley. Mathews@dvn. com (Wesley.Mathews@dvn.com); Bynum, Tom (Contract)  
**Subject:** nOY1722030579: Malachite 22 CTB 48-hr Liner Inspection Notification - Devon Energy

All,

Please accept this email as 48-hr notification that Vertex Resource Services Inc. has scheduled a liner inspection to be conducted at Malachite 22 CTB for Incident nOY1722030579, DOR: 07/24/2017.

On Thursday, January 23, 2020 at approximately 10:30 a.m., Monica Peppin of Vertex will be onsite to perform the liner inspection. She can be reached at 575-361-9880. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,  
Natalie

## Natalie Gordon

---

**From:** Natalie Gordon  
**Sent:** Monday, January 20, 2020 5:12 PM  
**To:** 'blm\_nm\_cfo\_spill@blm.gov'; 'Wade , Kelsey'  
**Subject:** nOY1722030579: Malachite 22 CTB 48-hr Liner Inspection Notification - Devon Energy

All,

Please accept this email as 48-hr notification that Vertex Resource Services Inc. has scheduled a liner inspection to be conducted at Malachite 22 CTB for Incident nOY1722030579, DOR: 07/24/2017.

On Thursday, January 23, 2020 at approximately 10:30 a.m., Monica Peppin of Vertex will be onsite to perform the liner inspection. She can be reached at 575-361-9880. If you need directions to the site, please do not hesitate to contact her. If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,  
Natalie

## **ATTACHMENT 5**



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	1/23/2020
Site Location Name:	Malachite 22 CTB	Report Run Date:	1/25/2020 1:00 AM
Project Owner:		File (Project) #:	
Project Manager:		API #:	30-025-40318
Client Contact Name:	Amanda Davis	Reference	
Client Contact Phone #:	(575) 748-0176		

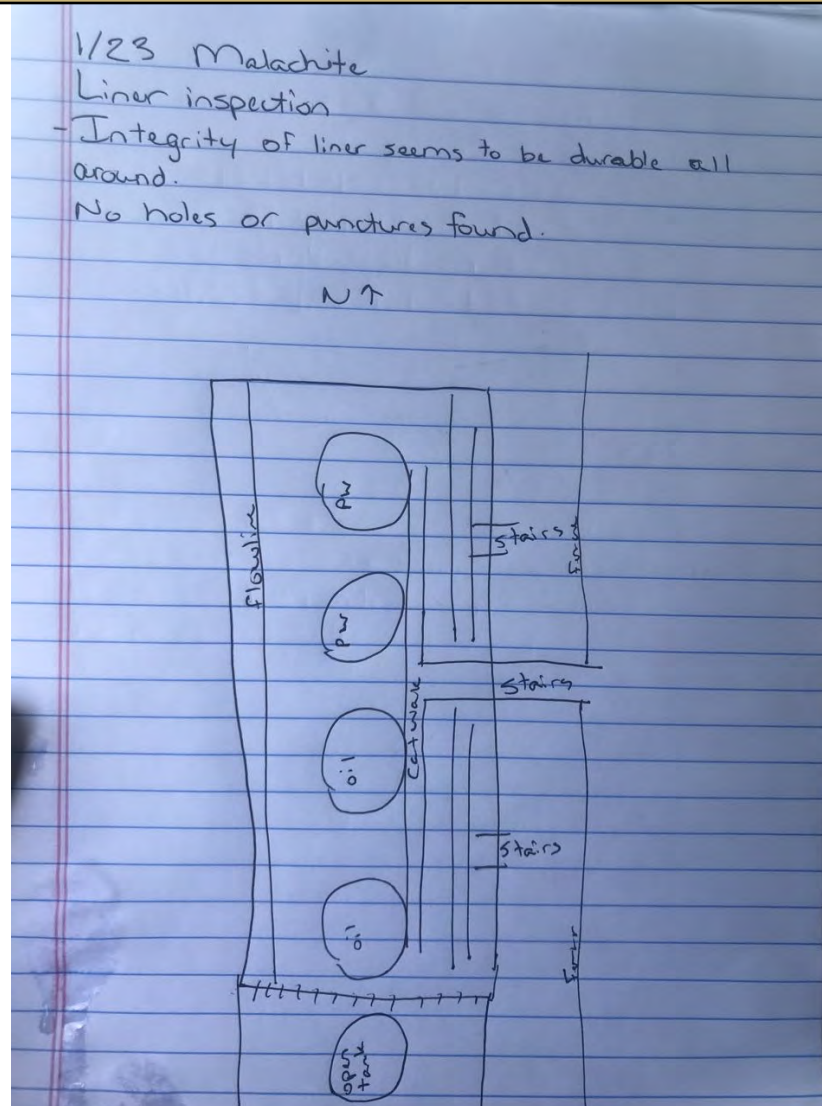
### Summary of Times

Left Office	1/23/2020 11:00 AM
Arrived at Site	1/23/2020 12:22 PM
Departed Site	1/23/2020 1:21 PM
Returned to Office	1/23/2020 4:04 PM

# Daily Site Visit Report



## Site Sketch



## Daily Site Visit Report



### Summary of Daily Operations

**12:28** Travel to location  
Safety paperwork  
Inspect containment liner  
Take photos and notes  
Report findings

### Next Steps & Recommendations

- 1 Return to office
- 2 Report findings to project manager

# Daily Site Visit Report



## Site Photos

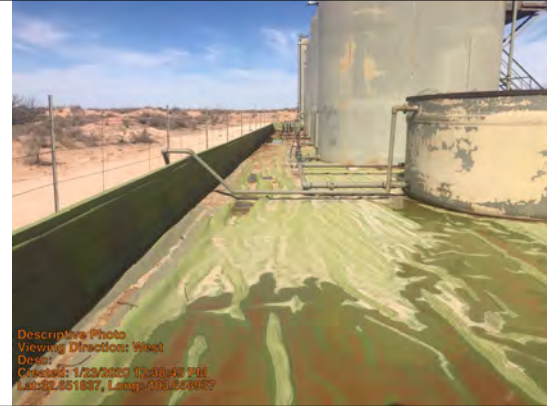
Viewing Direction: North



Descriptive Photo  
Viewing Direction: North  
Desc: Liner peeling from side of tank  
Created: 1/23/2020 10:32:18 PM  
Lat:32.661838, Long:-103.660949

Liner integrity

Viewing Direction: North



Descriptive Photo  
Viewing Direction: West  
Desc:  
Created: 1/23/2020 12:00:48 PM  
Lat:32.661837, Long:-103.661077

Liner integrity

Viewing Direction: South



Descriptive Photo  
Viewing Direction: South  
Desc: Liner integrity behind tanks  
Created: 1/23/2020 3:24:30 PM  
Lat:32.662145, Long:-103.660949

Liner integrity behind tanks

Viewing Direction: South







Descriptive Photo  
Viewing Direction: South  
Desc: Liner integrity in front of tanks  
Created: 1/23/2020 12:43:06 PM  
Lat:32.662330, Long:-103.660923

Liner integrity in front of tanks



## Daily Site Visit Report

<p><b>Viewing Direction: West</b></p>  <p>Descriptive Photo Viewing Direction: West Date: Remediated location 1 Created: 1/24/2020 3:45:33 PM</p>	<p><b>Viewing Direction: Southeast</b></p>  <p>Descriptive Photo Viewing Direction: Southeast Date: Remediated location 1 Created: 1/24/2020 3:45:33 PM</p>
Remediated location 1	Remediated location 1
<p><b>Viewing Direction: East</b></p>  <p>Descriptive Photo Viewing Direction: East Date: Remediated location 1 Created: 1/24/2020 3:45:33 PM</p>	<p><b>Viewing Direction: Northwest</b></p>  <p>Descriptive Photo Viewing Direction: Northwest Date: Remediated location 2 Created: 1/24/2020 3:45:33 PM</p>
Remediated location 1	Remediated location 2



## Daily Site Visit Report

Viewing Direction: North



Remediated location 2

Viewing Direction: Southeast



Remediated location 2

Viewing Direction: South



Remediated location 2

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Monica Peppin

A handwritten signature in black ink, appearing to be 'Monica Peppin', written over a horizontal line.

**Signature:**

Signature



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	1/23/2020
Site Location Name:	Malachite 22 CTB	Report Run Date:	1/23/2020 11:05 PM
Project Owner:		File (Project) #:	
Project Manager:		API #:	30-025-40318
Client Contact Name:	Amanda Davis	Reference	
Client Contact Phone #:	(575) 748-0176		

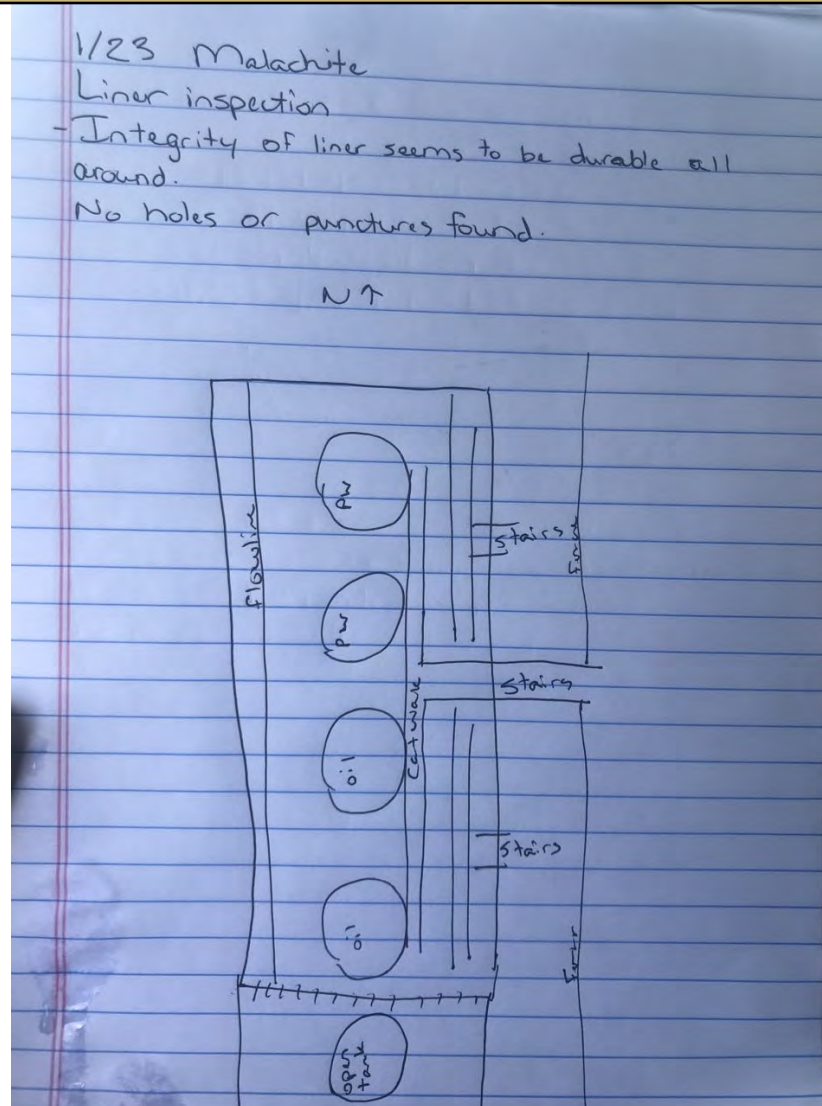
### Summary of Times

Left Office	1/23/2020 11:00 AM
Arrived at Site	1/23/2020 12:22 PM
Departed Site	1/23/2020 1:21 PM
Returned to Office	

# Daily Site Visit Report



## Site Sketch



## Daily Site Visit Report



### Summary of Daily Operations

**12:28** Travel to location  
Safety paperwork  
Inspect containment liner  
Take photos and notes  
Report findings

### Next Steps & Recommendations

- 1** Return to office
- 2** Report findings to project manager

# Daily Site Visit Report



## Site Photos

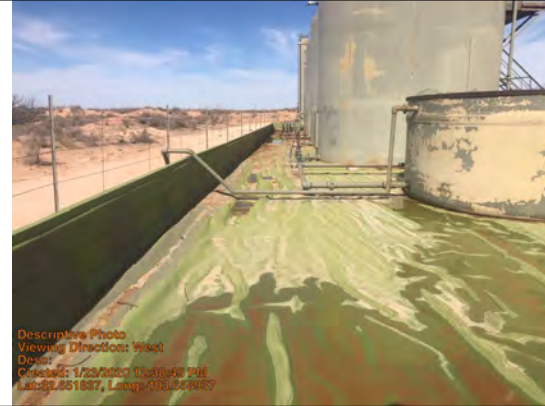
Viewing Direction: North



Descriptive Photo  
Viewing Direction: North  
Desc: Liner peeling from side of tank  
Created: 1/23/2020 10:32:18 PM  
Lat:32.661838, Long:-103.660949

Liner integrity

Viewing Direction: North



Descriptive Photo  
Viewing Direction: West  
Desc:  
Created: 1/23/2020 12:00:48 PM  
Lat:32.661837, Long:-103.661077

Liner integrity

Viewing Direction: South



Descriptive Photo  
Viewing Direction: South  
Desc: Liner integrity behind tanks  
Created: 1/23/2020 3:24:30 PM  
Lat:32.662145, Long:-103.660949

Liner integrity behind tanks

Viewing Direction: South



Descriptive Photo  
Viewing Direction: South  
Desc: Liner integrity in front of tanks  
Created: 1/23/2020 11:43:06 PM  
Lat:32.662330, Long:-103.660923

Liner integrity in front of tanks

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Monica Peppin

**Signature:**



## Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	1/23/2020
Site Location Name:	Malachite 22 CTB	Report Run Date:	1/24/2020 12:24 AM
Project Owner:	Amanda Davis	File (Project) #:	20E-00141
Project Manager:	Natalie Gordon	API #:	30-025-40318
Client Contact Name:	Amanda Davis	Reference	Release in containment + 2 non-reportables
Client Contact Phone #:	(575) 748-0176		

### Summary of Times

Left Office	1/23/2020 7:58 AM
Arrived at Site	1/23/2020 10:10 AM
Departed Site	1/23/2020 4:24 PM
Returned to Office	

### Summary of Daily Operations

**11:06** Cleanup 2 nonreportable spills

### Next Steps & Recommendations

**1** Complete remediation

## Daily Site Visit Report



## Site Photos

Viewing Direction: Northwest



Spill area 1

Viewing Direction: East



Spill area 1

Viewing Direction: Southwest



Spill area 1





Viewing Direction: West



Spill area 2





## Daily Site Visit Report

<p><b>Viewing Direction: Northeast</b></p>  <p>Descriptive Photo Viewing Direction: Northeast Desc: Spill area 2 Created: 1/23/2020 11:14:54 AM</p> <p>Spill area 2</p>	<p><b>Viewing Direction: Southeast</b></p>  <p>Descriptive Photo Viewing Direction: Southeast Desc: Spill area 2 Created: 1/23/2020 11:15:40 AM</p> <p>Spill area 2</p>
<p><b>Viewing Direction: Northwest</b></p>  <p>Descriptive Photo Viewing Direction: Northwest Desc: Scraped location 1 Created: 1/23/2020 2:15:28 PM</p> <p>Scraped location 1</p>	<p><b>Viewing Direction: Southeast</b></p>  <p>Descriptive Photo Viewing Direction: Southeast Desc: Scraped location 1 Created: 1/23/2020 2:15:28 PM</p> <p>Scraped location 1</p>



## Daily Site Visit Report

Viewing Direction: West	Viewing Direction: East
 <p>Descriptive Photo Viewing Direction: West Desc: Location 2 in process Created: 1/23/2020 4:16:04 PM</p>	 <p>Descriptive Photo Viewing Direction: East Desc: Cleaned wellhead Created: 1/23/2020 4:22:50 PM</p>
Location 2 in process	Cleaned wellhead

## Daily Site Visit Report



Daily Site Visit Signature

**Inspector:** Tommy Odell

**Signature:**

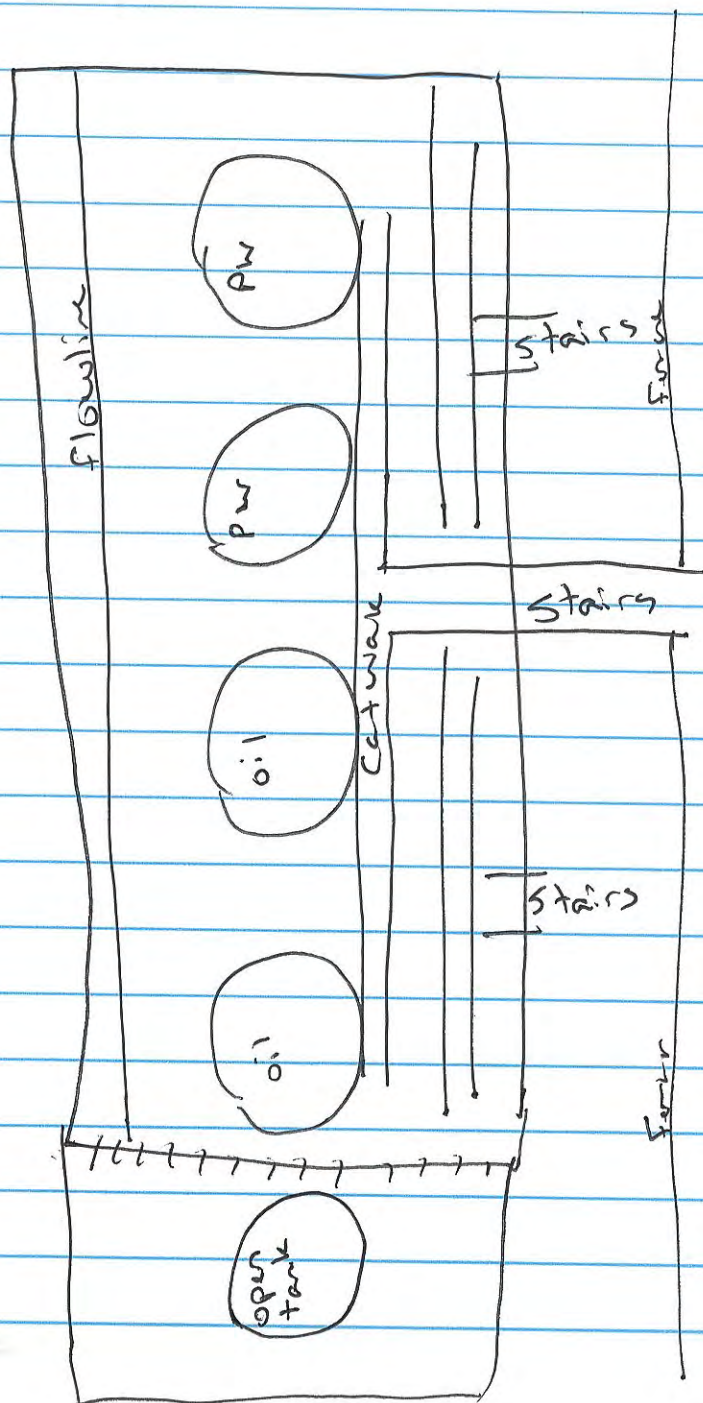
1/23 Malachite

Liner inspection

- Integrity of liner seems to be durable all around.

No holes or punctures found.

N ↑



Incident ID	nOY1722030579
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>131</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

State of New Mexico  
Oil Conservation Division

Incident ID	nOY1722030579
District RP	
Facility ID	
Application ID	

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: Wes Mathews Title: Environmental Representative

Signature: Wesley Mathews Date: 2/19/2020

email: Wesley.mathews@dvn.com Telephone: 575-746-5549

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	nOY1722030579
District RP	
Facility ID	
Application ID	

## Closure

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

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ NA Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Wes Mathews Title: Environmental Representative  
Signature: Wesley Mathews Date: 2/19/2020  
email: wesley.mathews@dvn.com Telephone: 575-746-5549

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Bradford Billings Date: 09/22/2021  
Printed Name: Bradford Billings Title: Envi.Spec.A

**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**

CONDITIONS  
  
Action 5147

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 5147
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	None	9/22/2021