M & M EXCAVATING, INC.
PO Box 1120
Carlsbad, New Mexico 88221
Phone (575) 236-6600

August 6, 2019

NMOCD District 2
811 S. First Street
Artesia, New Mexico 88210

To Whom it May Concern:

M&M Excavating, Inc. (MMX) has prepared this Remediation Closure Report for Devon Energy Production Company that describes the remediation of a release of liquids at the Cotton Draw Unit 25 CTB. The site is in Unit K, Section 25, Township 24S, Range 31E, Latitude 32.115359, Longitude -103.4355041, Eddy County, New Mexico, on Federal land. Figure 1 provides the vicinity and site location on an USGS 7.5-minute quadrangle map.

Site Information and Closure Criteria

The Cotton Draw Unit 25 CTB is located approximately 27 miles southwest of Eunice, New Mexico on Federal land at an elevation of approximately 3,532 feet above mean sea level (amsl).

Based upon well water data. (Appendix B), depth to groundwater in the area is estimated to be between 450 and 550 feet below grade surface (bgs). There are no known water wells within ½ mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) and United State Geological Survey USGS. The nearest significant watercourse is an unnamed freshwater pond located approximately 2,700 feet to the south.

The site has been remediated to the applicable NMOCD Closure Criteria for groundwater greater than 100 feet bgs. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

Release Information and Closure Criteria			
Name	Cotton Draw Unit 25 CTB		
API Number	30-015-42849		
Incident Number	2RP-4906		
Source of Release	Leak in polyline		
Released Material	Produced Water	Released Volume	19 BBLS
Recovered Volume	15 BBLS	Net Release	4BBLS
NMOCD Closure Criteria	>100 feet to groundwater		

Release Information

On July 19, 2018, a release was discovered at the Cotton Draw Unit 25 CTB due to a failed weld on a poly transfer line, resulting in the release of approximately 19 bbls of produced water into the lined containment. Initial response activities were conducted by the operator, and included source elimination, equipment repair and site containment, which recovered approximately 15 bbls of produced water from the lined containment area. Figures 1 and 2 illustrate the vicinity and site location. Figure 3 illustrates the release location. The C-141 form is included in Appendix A.

Release Characterization and Remediation Activities

At the request of Devon Energy, White Buffalo Environmental (WBE) power-washed the containment after the release and conducted a liner integrity inspection per requirements of 19.15.29.11.A(5)(a) NMAC. WBE stated that after a visual inspection of the liner within the containment, the liner appeared to be intact and had the ability to contain the leak in question. A photo log documenting the inspection conducted by WBE is included in Appendix C.

On behalf of Devon Energy, MMX recommends no further action and requests closure for the release associated with 2RP-4906.

Submitted by:
M&M Excavating, Inc.

Lupe Carrasco

Lupe Carrasco

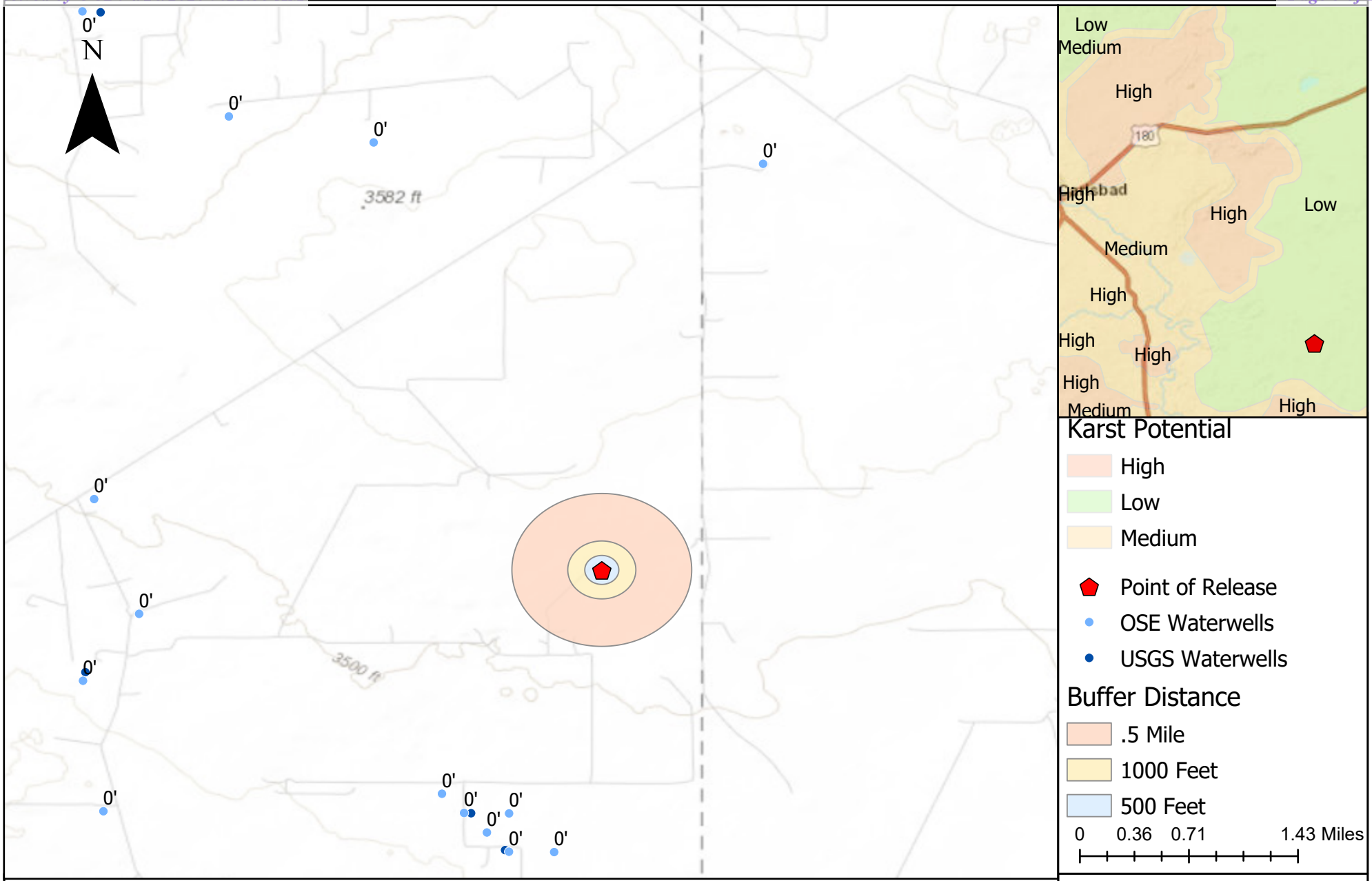
ATTACHMENTS:

Figures:

Tables:

Appendices:

FIGURES



Regional Vicinity & Wellhead Protection Map
Cotton Draw Unit 25 CTB - Devon Energy
Sec 25 T24S R31E Eddy County, New Mexico

Figure 1

P:\5-MM Excavating (5128335)\GIS\ARCGIS\MMX_MIT.aprx

Date Saved: 7/18/2019

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn LC
Date 7/18/2019
Checked
Approved

M&M EXCAVATING, INC.

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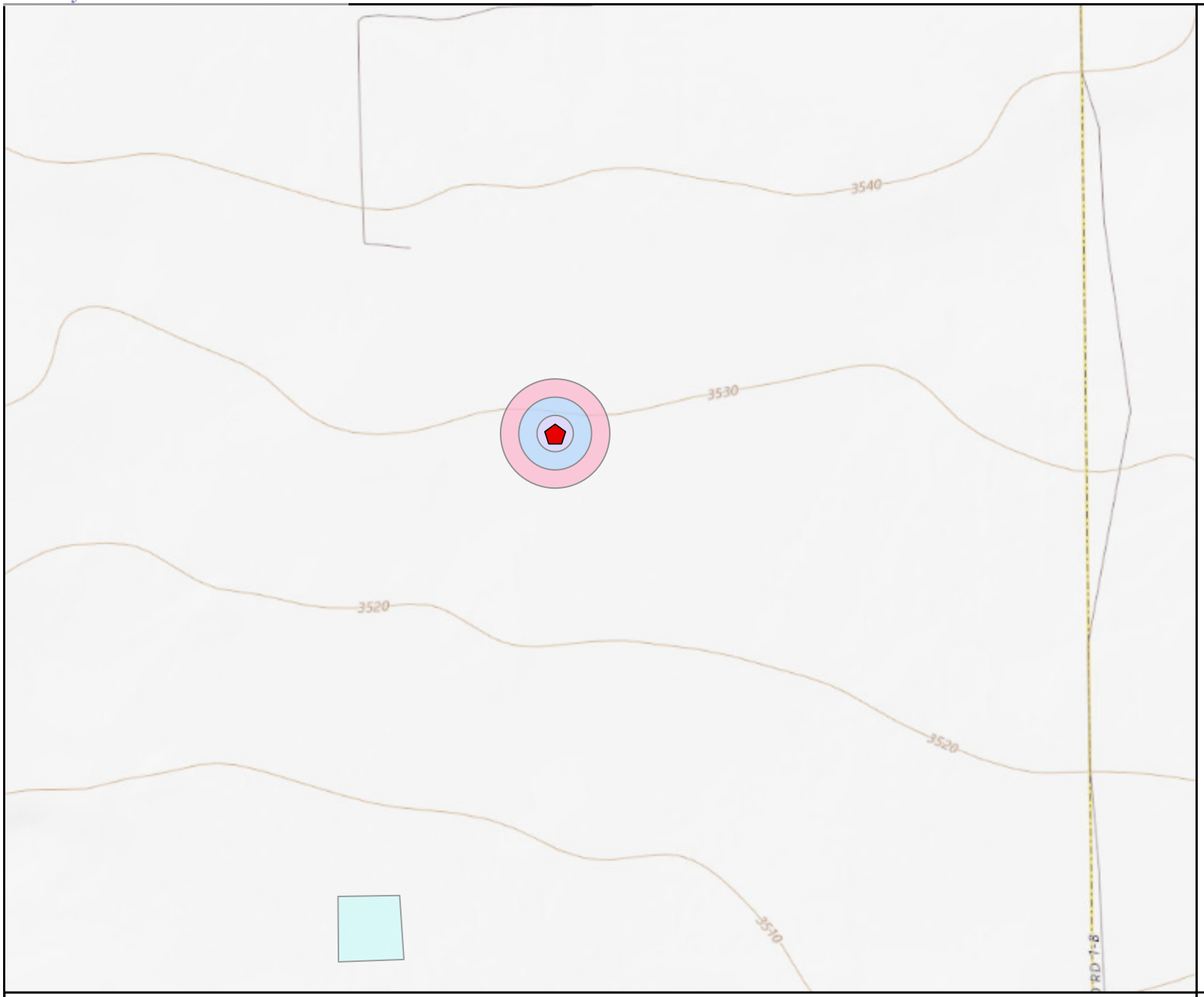
Carlsbad, NM 88220
(575) 230-6600



Point of Release
Springs Seeps
Streams Canals
Rivers
NM Wetlands
Lakes Playas
FEMA Flood Zones 2011

Buffer Distance
100 Feet
200 Feet
300 Feet

N

0 425 850 1,700 Feet

Surface Water Protection Map
Cotton Draw Unit 25 CTB - Devon Energy
Sec 25 T24S R31E Eddy County, New Mexico

Figure 2

P:\5-MM Excavating (5128335)\GIS\ARCGIS\MMX_MIT.aprx

Date Saved: 7/18/2019

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By: Date: Descr:
By: Date: Descr:

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M&M EXCAVATING, INC.

78 Roberson Rd
Carlsbad, NM 88220
(575) 236-6600

Cotton Draw 25 CTB

19.07BBLS PW_7.19.2018

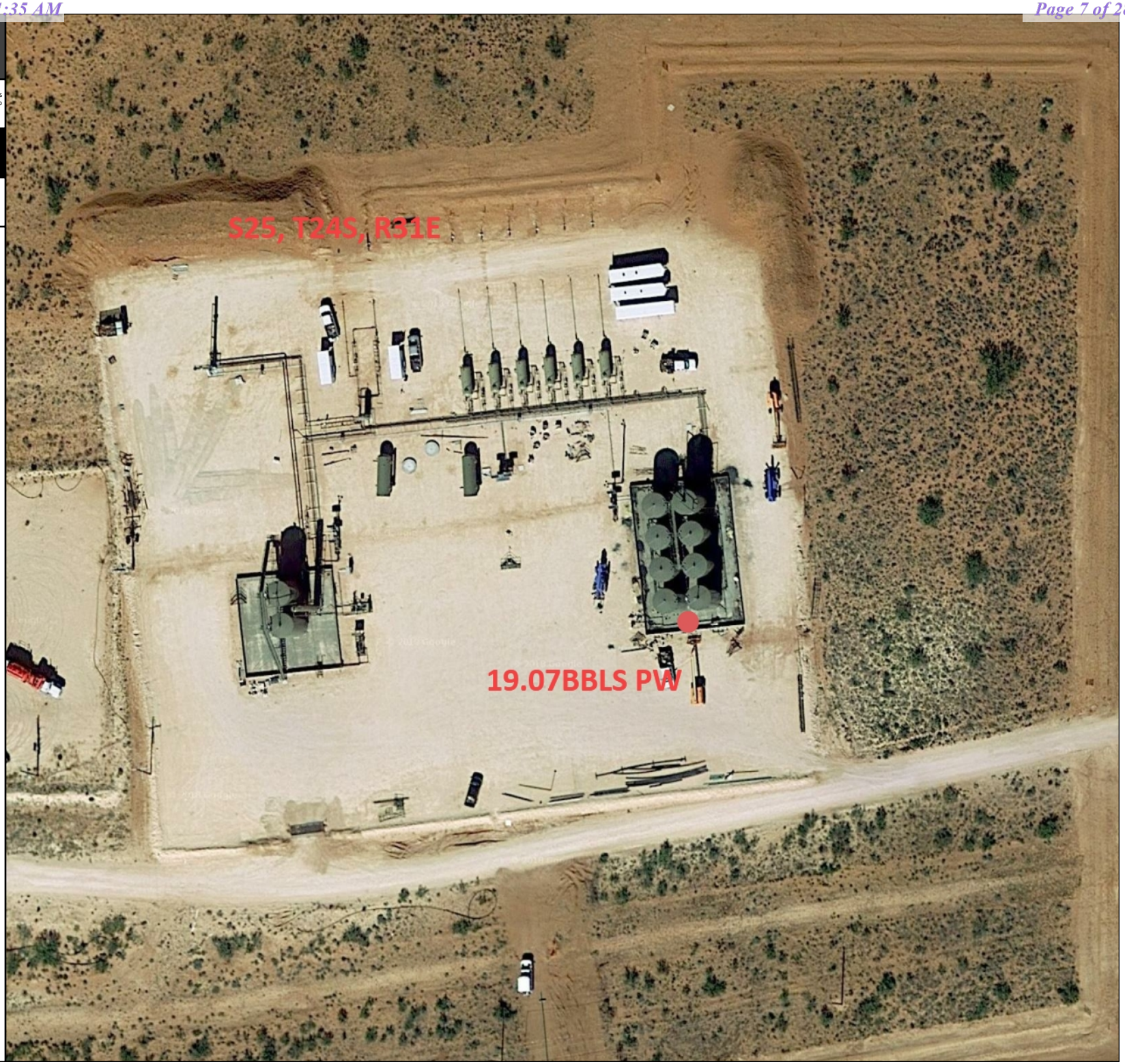
devon

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. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Dana DeLaRosa
Map is current as of: 26-Jul-2018

N

Miles
0 0.00 0.01 0.02 1: 889



TABLE

Table 1: NMOCD Closure Criteria

Cotton Draw Unit 25 CTB

Devon Energy Production Company

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)			Source/Notes
Depth to Groundwater (feet bgs)		450-550	USGS (Appendix B)
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)		--	
Hortizontal Distance to Nearest Significant Watercourse (ft)		2700	Freshwater pond to the south

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)							
Depth to Groundwater			Closure Criteria (units in mg/kg)				
			Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
Less than 50' BGS			600	100		50	10
51' to 100'			10000	2500	1000	50	10
Greater than 100'	x		20000	2500	1000	50	10
Surface Water	Yes	No	if yes, then				
Less than 300' from continuously flowing watercourse or other significant watercourse?		x	600	100		50	10
Less than 200' from lakebed, sinkhole or playa lake?		x					
Water Well or Water Source							
Less than 500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?		x					
Less than 1000' from fresh water well or spring?		x					
Human and Other Areas							
Less than 300' from an occupied permanent residence, school, hospital, institution or church?		x					
Within incorporated municipal boundaries or within a defined municipal fresh water well field?		x					
Less than 100' from wetland?		x					
Within area overlying a subsurface mine		x					
Within an unstable area?		x					
Within a 100-year floodplain?		x					

M & M EXCAVATING, INC.

Appendix A
C141

OCD Rec'd: 08/06/18

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 April 3, 2017

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

Release Notification and Corrective Action

nAB1822248773

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Devon Energy Production Company 6137	Contact: Wes Ryan, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Cotton Draw Unit 25 CTB	Facility Type Oil

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-42849

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	25	24S	31E					Eddy

Latitude__ Longitude__ NAD83

NATURE OF RELEASE

Type of Release Produced Water (pw)	Volume of Release 19.07BBLS	Volume Recovered 15BBLS
Source of Release Poly Line	Date and Hour of Occurrence July 19, 2018 @ 2:00 PM MST	Date and Hour of Discovery July 19, 2018 @ 2:00 PM MST
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
A leak was discovered on the weld of the poly transfer line towards the containment causing a release on location. The pumps were isolated to prevent any further release.

Describe Area Affected and Cleanup Action Taken.*
Approximately 19.07 bbls of produced water was released on the location. 15.127 bbls were recovered from lined containment. An environmental contractor will be called in to assist with delineation and remediation efforts.

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

Signature: Dana DeLaRosa	OIL CONSERVATION DIVISION
Printed Name: Dana DeLaRosa	Approved by Environmental Specialist: Maria Pruett
Title: Field Admin Support	Approval Date: 8/8/18 — Expiration Date: N/A
E-mail Address: dana.delarosa@dvn.com	Conditions of Approval: See attached — Attached ☒
Date: Phone: 575.748.3371	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on ___08/06/18_____ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4906 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _2__ office in Artesia_ on or before _09/06/18_____. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Appendix B
Water Well Data

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	Twws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02572		CUB	ED	4	2	2	02	25S	31E	618695	3559294*	2693	852		
C 02574		CUB	ED	1	1	2	02	25S	31E	618092	3559494*	2755			
C 02571		CUB	ED	4	1	2	02	25S	31E	618292	3559294*	2839	860		
C 02573		CUB	ED	1	4	2	02	25S	31E	618499	3559091*	2948			
C 02568		CUB	ED	4	3	1	01	25S	31E	619103	3558892*	2999	1025		
C 02569		CUB	ED	4	4	2	02	25S	31E	618699	3558891*	3079	1016		
C 02570		CUB	ED	4	2	4	02	25S	31E	618704	3558489*	3468	895		
C 03830 POD1		CUB	ED	4	2	4	02	25S	31E	618632	3558432	3539	450		
C 03530 POD1		C	LE	3	4	3	07	24S	32E	620886	3566156	4510	550		
C 02440		C	ED		2	3	10	24S	31E	616103	3566599*	5822	350		
C 02460		C	ED			3	02	24S	31E	617496	3568022*	6472	320		
C 02460 POD2		C	ED			3	02	24S	31E	617496	3568022*	6472	320		
C 02464		C	ED	3	4	1	02	24S	31E	617589	3568530*	6931	320	205	115

Average Depth to Water: **205 feet**

Minimum Depth: **205 feet**

Maximum Depth: **205 feet**

Record Count: 13

UTMNAD83 Radius Search (in meters):

Easting (X): 619495 **Northing (Y):** 3561866 **Radius:** 7000

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

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USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

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- 320932103443801

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USGS 320932103443801 25S.31E.02.23441

Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°09'37.4", Longitude 103°44'29.6" NAD83
Land-surface elevation 3,460.00 feet above NGVD29
The depth of the well is 1,016 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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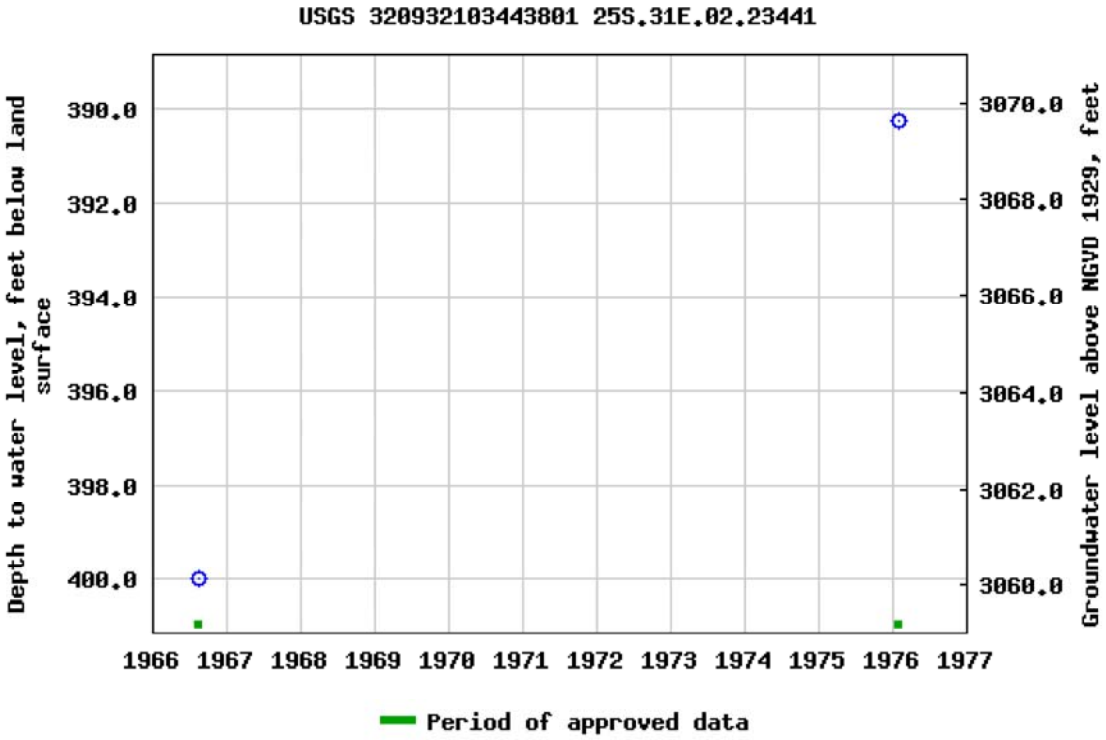
Tab-separated data
Graph of data
Reselect period



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Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°09'50.0", Longitude 103°44'41.2" NAD83
Land-surface elevation 3,468.0 feet above NGVD29
This well is completed in the Azotea Tongue of Seven Rivers Formation (313AZOT) local aquifer.

Output formats

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Graph of data
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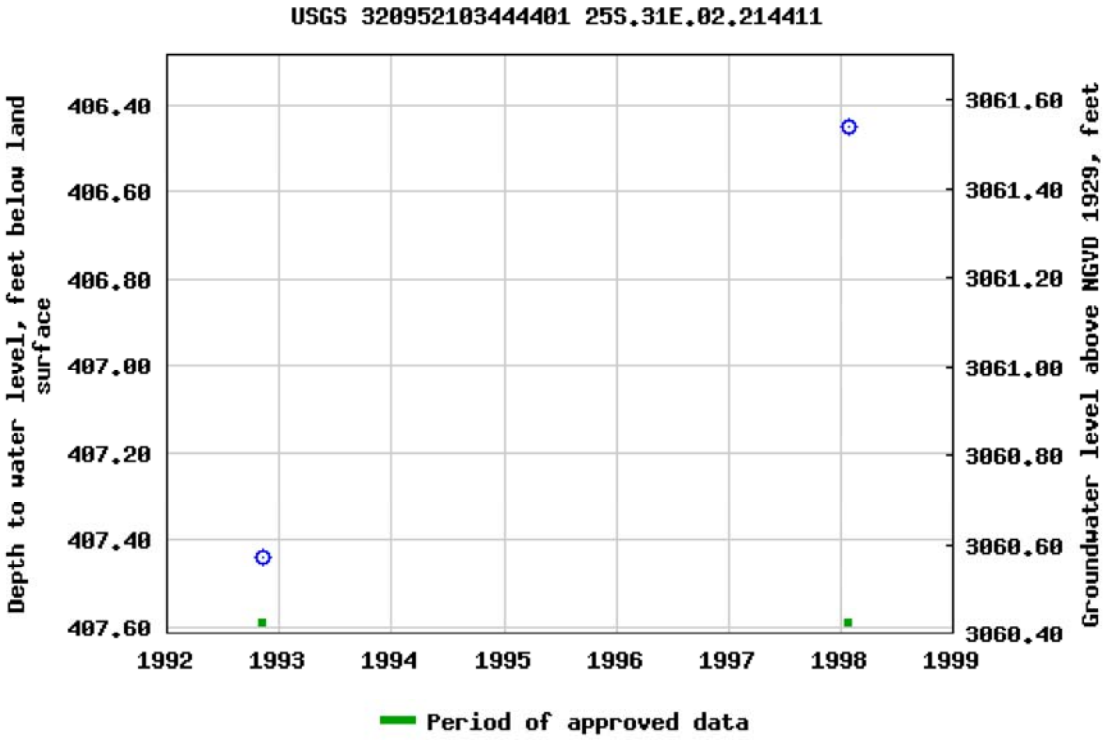

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Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°14'23.7", Longitude 103°46'47.8" NAD83
Land-surface elevation 3,419.00 feet above NGVD29
The depth of the well is 627 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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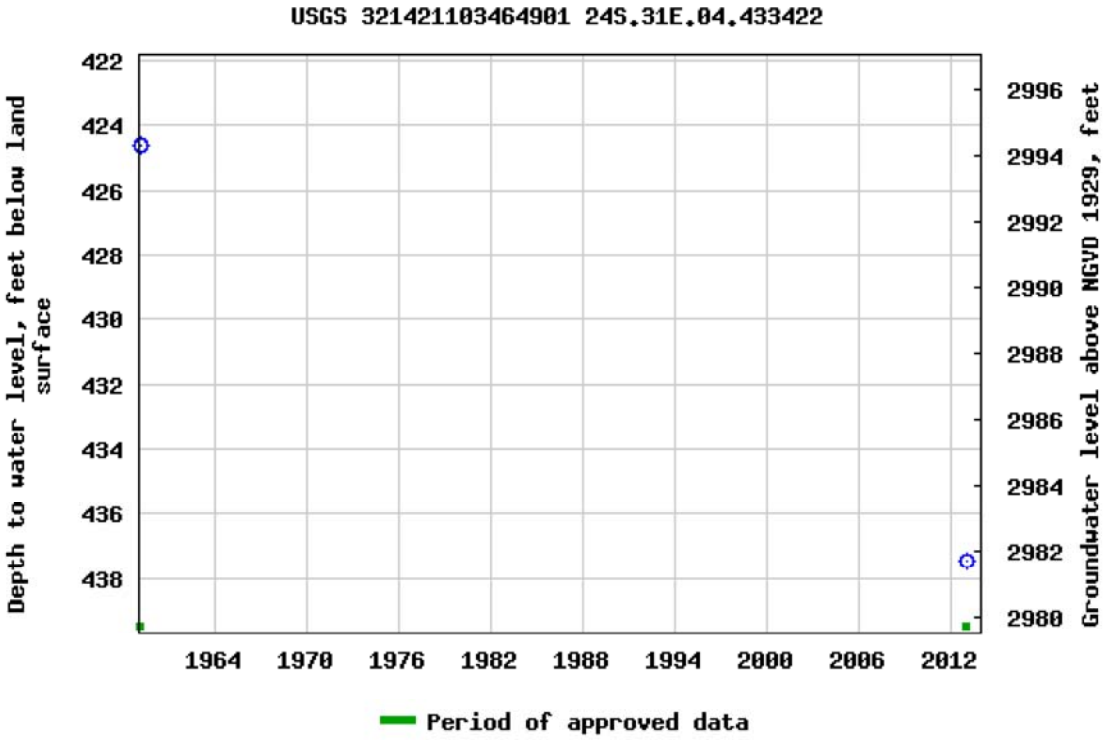
Tab-separated data
Graph of data
Reselect period



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USGS 321034103465501 24S.31E.33.231113

Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°10'38.2", Longitude 103°46'53.0" NAD83
Land-surface elevation 3,461.00 feet above NGVD29
The depth of the well is 740 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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Graph of data
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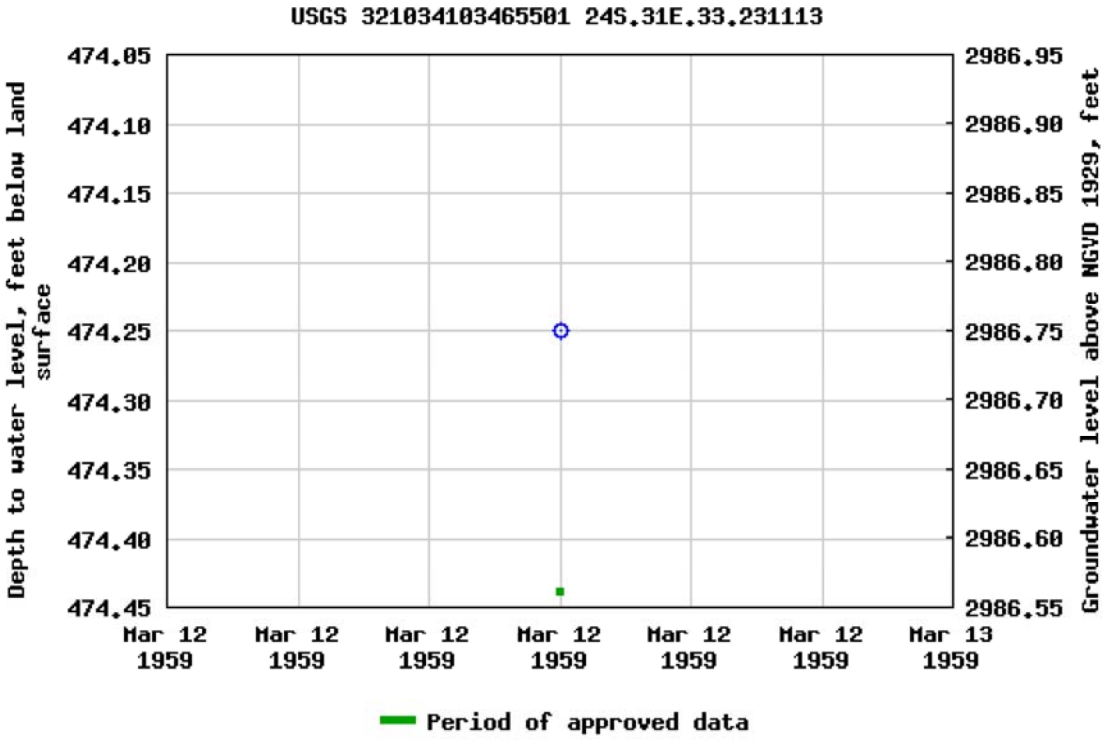

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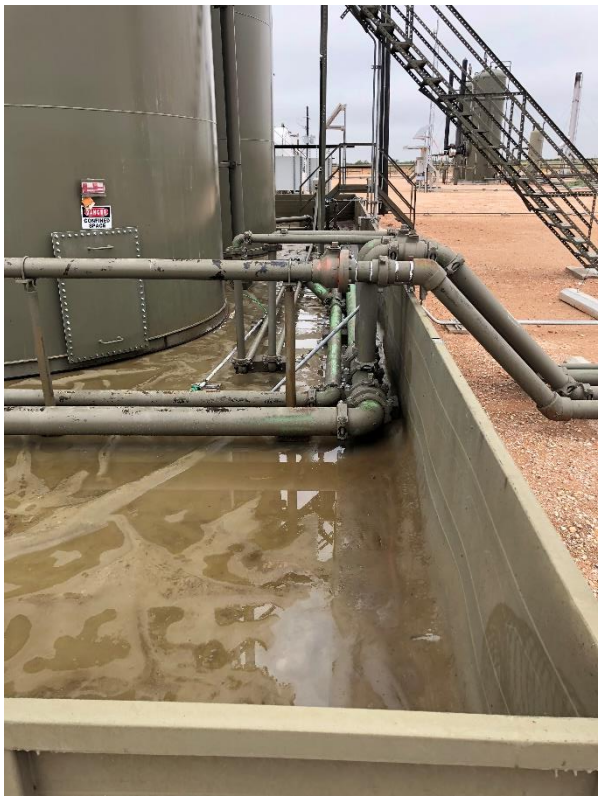
0.95 0.89 nadww01

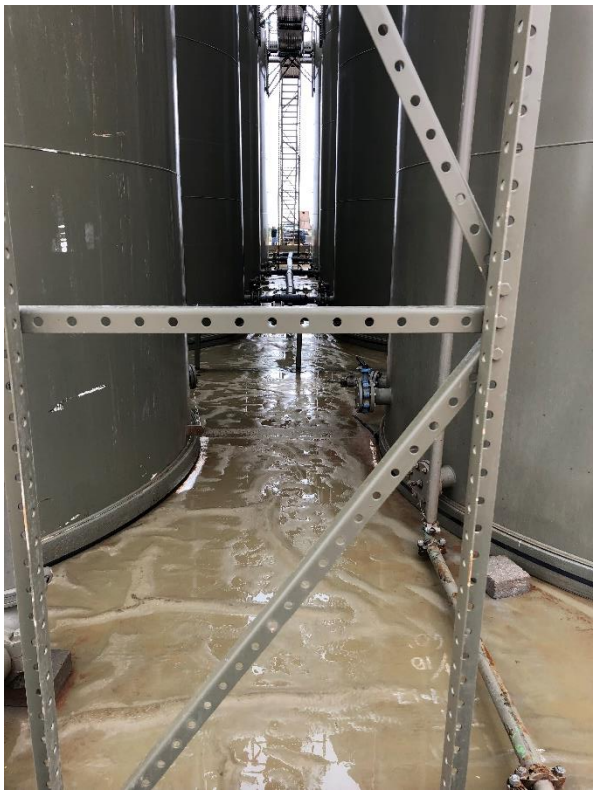
Appendix C
Photo Log Created by WBE

DEVON
COTTON DRAW 25 CTB
AFTER PHOTOS

DEVON
COTTON DRAW 25 CTB
AFTER PHOTOS

DEVON
COTTON DRAW 25 CTB
AFTER PHOTOS





DEVON
COTTON DRAW 25 CTB
AFTER PHOTOS