



EOG Resources, Inc.  
Artesia Division Office  
104 S. 4<sup>th</sup> Street  
Artesia, N. M. 88210

**EOG Resources, Inc.**

***Characterization &  
Remediation Plan***

**Boyd X State Com #15H**

**30-015-42223**

**Section 16, T19S-R25E**

**Eddy County, New Mexico**

**January 6, 2020**

**2RP-5594**



## I. Location

From Artesia, NM travel south on US 285 to Rocking R Red Road, (CR 21) between MM56 & MM57. Turn right (west) onto Rocking R Red Road, continue for approximately 7.0 miles, then turn right (north) onto lease road, continue on lease road for approximately 1.1 miles, turn right (southeast) and continue for 0.15 miles, turn left (northeast), continue 0.1 miles to the Julie #2 location, road turns right (east), continue 0.5 miles to the Boyd X State Com #15H Battery.

## II. Background

On August 88, 2019, EOG Resources, Inc. submitted to the NMOCD District II office a Form C-141 for the release of 1 B/Oil and 4 B/PW with 0 B/Oil and 3 B/PW recovered. The affected area is approximately 15' X 25' within the primary berm of the battery. The release was caused by a ¼" nipple on the bottom of the dump valve that corroded and failed, which caused the release. A vacuum truck was called and recovered the remaining produced water. A backhoe was dispatched and scraped up the surface of the impacted area, contaminated soils were disposed at an NMOCD approved facility. The release occurred on the well pad and remained on the well pad

## III. Surface and Ground Water

Area surface geology is Piedmont alluvial deposits. Based on information regarding this location (Section 16, T19S-R25E), the New Mexico Office of the State Engineer (NMOSE) Point of Diversion Summary indicates the depth to groundwater as follows: (NMOSE-RA05900, Depth to Water: 95', Log File Date: 3/1974, Distance from Location: 0.72 miles), the United States Geological Survey National Water Information System, indicates the depth to groundwater as follows: (USGS #324041104294801, Depth to Water: 120', Field groundwater-level measurements: 1/2012, Distance from Location: 0.83 miles, USGS #324004104285801, Depth to Water: 95', Field groundwater-level measurements: 1/2015, Distance from Location: 0.73 miles, USGS #323948104302901, Depth to Water: 97', Field groundwater-level measurements: 2/1994, Distance from Location: 0.78 miles).

Watercourses in the area are dry except for infrequent flows in response to major precipitation events, with the nearest body of surface water being the Pecos River (7.55 miles, southwest of the location).

## IV. NMOCD Table I Criteria

Depth to ground water	51-99'
Wellhead Protection Area	> 1000'
Distance to significant watercourse	> 1000'

Depth	Constituent	Method	Limit
51-99'	Chloride	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg



## V. Site Delineation Status

Initial sampling was conducted on August 13, 2019, with samples collected at the following depths.

S-1.1:	12"
S-1.2:	24"
S-1.3:	36"
S-1.4:	48"

These samples were sent to an NMOCD approved laboratory and analysis for the following constituents/methods.

Chlorides:	EPA 300.0
TPH (GRO+DRO+MRO):	Method 8015M
BTEX:	Method 8015B
Benzene:	Method 8015B

Appendix 5 contains the Field Data/Sample Data.

Appendix 6 contains Laboratory Data and COC.

## VI. Remediation Plan

EOG proposes the following remediation plan.

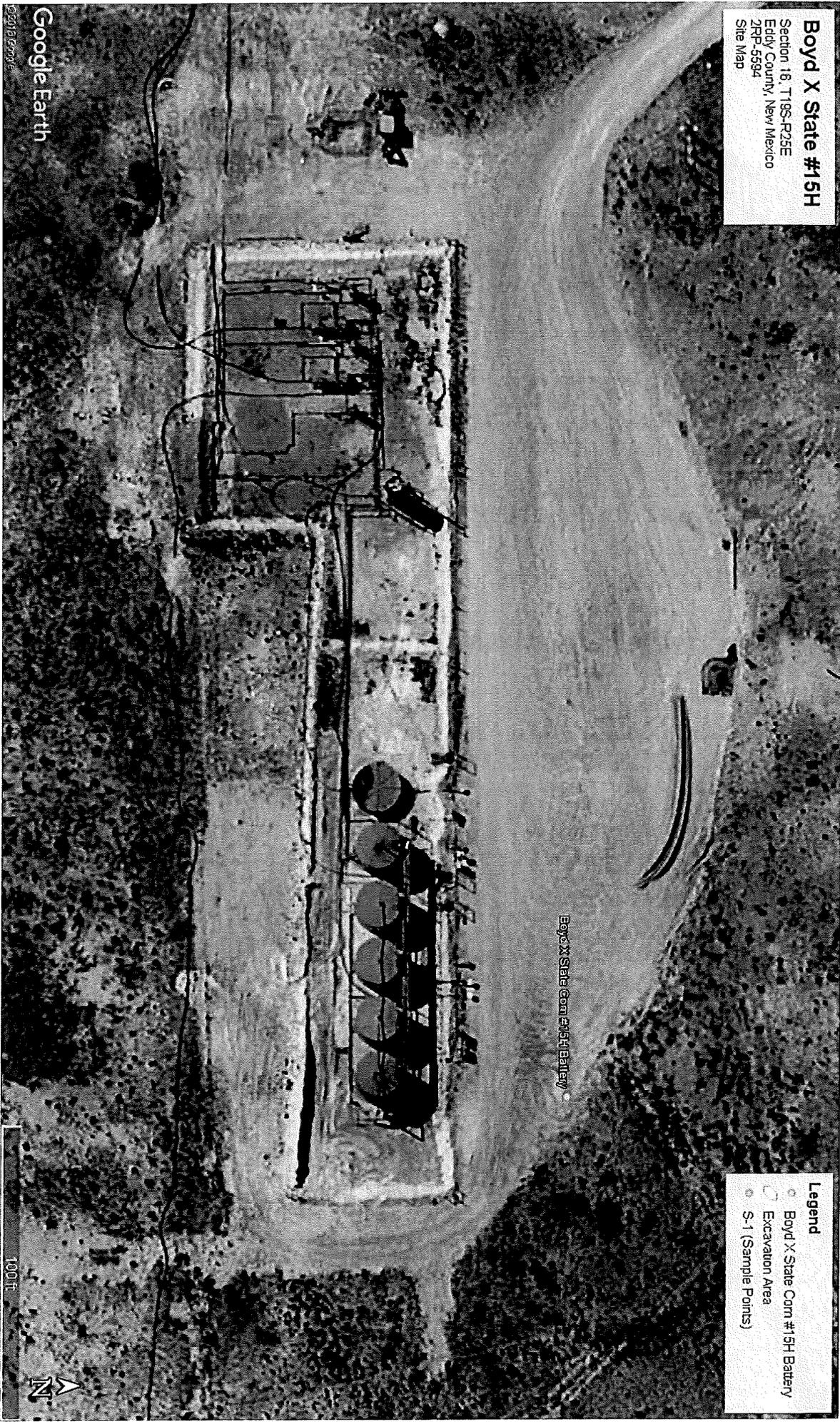
EOG Resources, Inc. had a contractor excavate soils from the release/sample area. This excavated area will be approximately 15' X 25' X 2', these soils will be taken to an approved NMOCD facility. The excavation depth at this time is based off of the 8/13/2019 enclosed analytical results. EOG will collect samples of the bottom of the excavation as well as the sidewalls will be collected and analyzed for the same constituents/methods as described in Section V. EOG will test the remediated areas for contamination with representative five-point composite samples and individual grab samples from any wet or discolored areas. The samples will be analyzed for the constituents listed in Table I of 19.15.29.12 NMAC. If these samples indicate any levels above the NMOCD Table I Criteria, Closure Criteria for Soils Impacted by a release for the 51-99' limits, further impacted soils will be excavated/tested until levels are below closure limits.

EOG will notify the appropriate division district office two business days prior to conducting final sampling. Separate representative wall and base 5-point composite samples will be collected to show horizontal and vertical remediation. Each composite sample must not be representative of more than 200 ft<sup>2</sup>.

If all composite and grab sample concentrations are less than or equal to the parameters listed in Table I or any conditions of approval, then the responsible party may proceed to backfill any excavated areas.

## VII. Site Closure

Upon completion of the remedial and backfilling activities, EOG Resources, Inc. will submit a Form C-141/Closure to the NMOCD, and site closure requested.



**Boyd X State #15H**  
 Section 16, T19S-R25E  
 Eddy County, New Mexico  
 ZRP--5594  
 Site Map

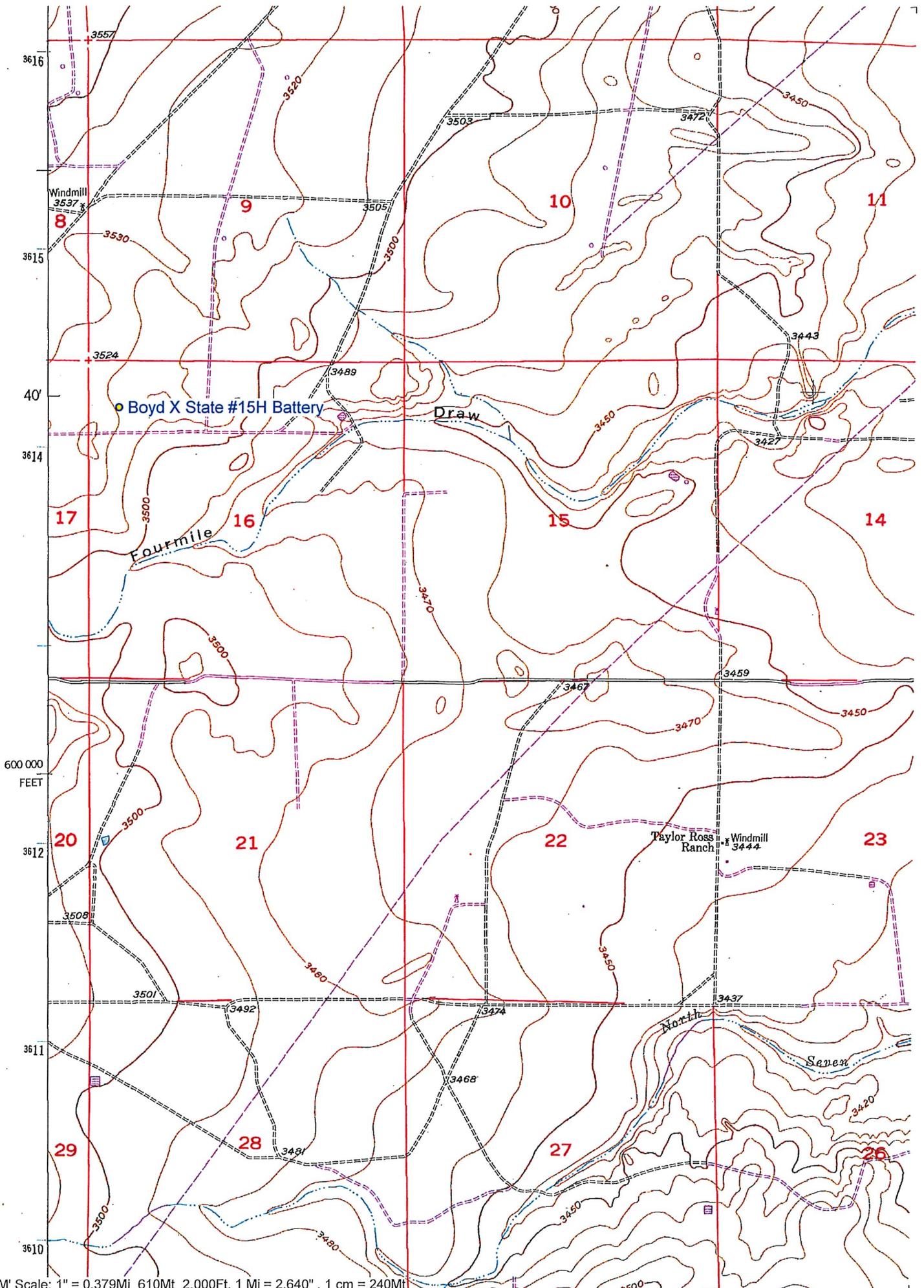
**Legend**  
 Boyd X State Com #15H Battery  
 Excavation Area  
 S-1 (Sample Points)

Boyd X State Com #15H Battery

Google Earth

100 ft





Boyd X State Com #15H  
Characterization & Remediation Plan



January 6, 2020

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## Appendix 2

### Depth to Ground Water

# Boyd X State #15H

Section 16, T19S-R25E  
 Eddy County, New Mexico  
 2RP-5594  
 DTW: Depth to Water  
 LFD: Log File Data (NMOSE)  
 FGLM: Field groundwater-level measurements (USGS)  
 DFL: Distance from Location

**Legend**

- Boyd X State Com #15H Battery
- NMOSE & USGS Water Well Data



USGS - 323948104302901 (DTW: 97', FGLM: 2/21/1994, DFL: 0.78 miles)

NMOSE - RA06900 (DTGW: 95', LFD: 3/25/1974, DFL: 0.73 miles)  
 Boyd X State Com #15H Battery

USGS - 324004104285601 (DTW: 95', FGLM: 1/13/2015, DFL: 0.73 miles)

USGS - 324041104294801 (DTGW: 120', FGLM: 1/5/2012, DFL: 0.83 miles)

© 2018 Google

Google Earth

2 mi





# New Mexico Office of the State Engineer

## Point of Diversion Summary

<b>Well Tag</b>	<b>POD Number</b>						
	RA 05900						
		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)		(NAD83 UTM in meters)		<b>X</b>	<b>Y</b>
		<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	548442	3614424*
		2	2	16	19S	25E	

<b>Driller License:</b> 460	<b>Driller Company:</b> JENKINS BROTHERS DRILLING		
<b>Driller Name:</b>			
<b>Drill Start Date:</b> 03/18/1974	<b>Drill Finish Date:</b> 03/19/1974	<b>Plug Date:</b>	
<b>Log File Date:</b> 03/25/1974	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow	
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b> 30 GPM	
<b>Casing Size:</b> 7.00	<b>Depth Well:</b> 185 feet	<b>Depth Water:</b> 95 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	118	122	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	108	158

\*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.

USGS 324041104294801 19S.25E.08.42222

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## USGS 324041104294801 19S.25E.08.42222

Available data for this site

### Well Site

#### DESCRIPTION:

Latitude 32°40'41", Longitude 104°29'48" NAD27  
 Eddy County, New Mexico , Hydrologic Unit 13060011  
 Well depth: 142 feet  
 Land surface altitude: 3,539 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>	1955-01-04	2012-01-05	32
<a href="#">Revisions</a>	Unavailable (site:0) (timeseries:0)		

#### OPERATION:

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**agency\_code=USGS&site\_no=324041104294801**



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Groundwater: Field measurements	GO
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Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°40'41", Longitude 104°29'48" NAD27

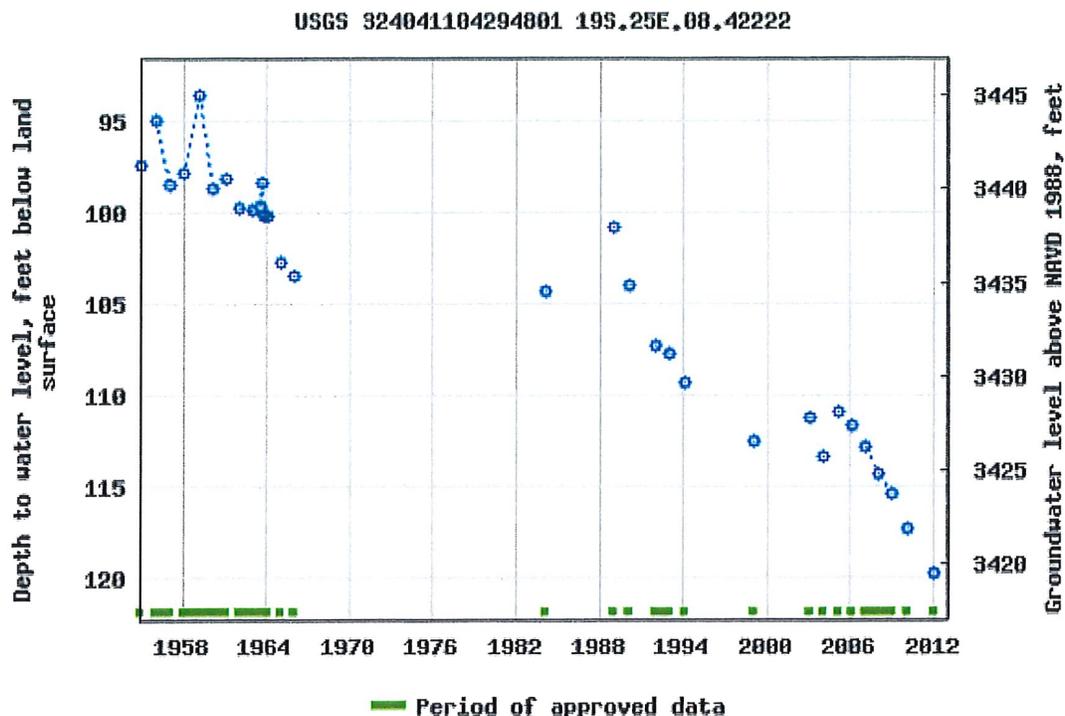
Land-surface elevation 3,539 feet above NAVD88

The depth of the well is 142 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

#### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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### Well Site

#### DESCRIPTION:

Latitude 32°40'04", Longitude 104°28'58" NAD27  
 Eddy County, New Mexico , Hydrologic Unit 13060011  
 Well depth: not determined.  
 Land surface altitude: 3,487 feet above NAVD88.  
 Well completed in "Alluvium, Bolson Deposits and Other Surface  
 Deposits" (110AVMB) local aquifer

#### AVAILABLE DATA:

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<a href="#">Revisions</a>	Unavailable (site:0) (timeseries:0)		

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Eddy County, New Mexico

Hydrologic Unit Code 13060011

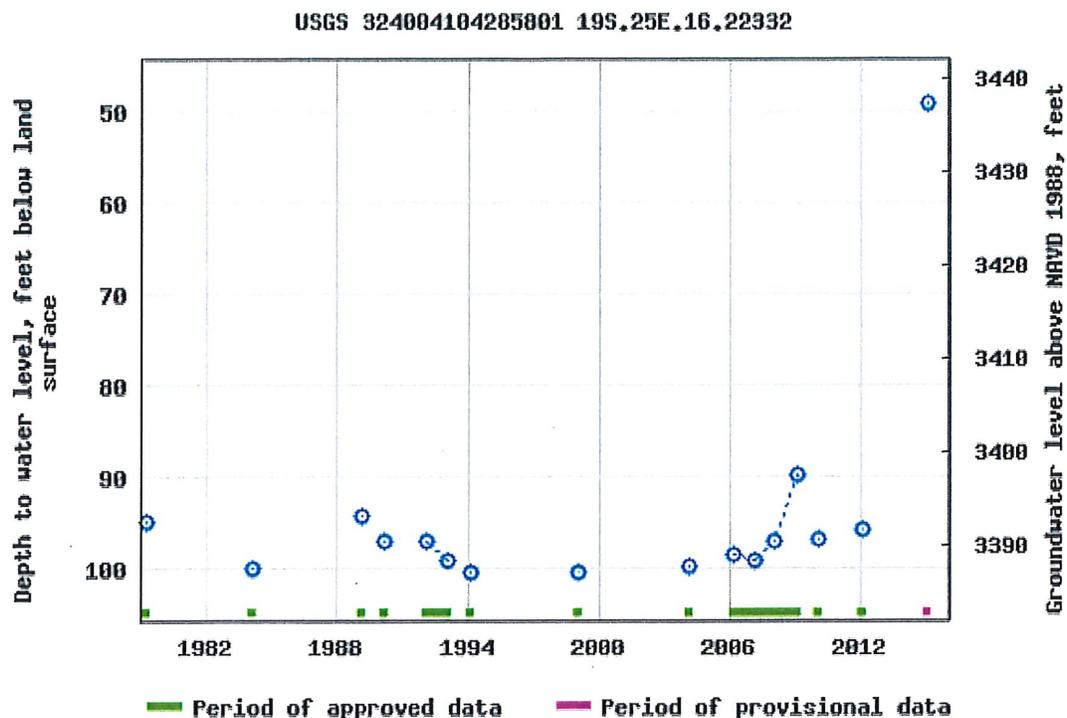
Latitude 32°40'04", Longitude 104°28'58" NAD27

Land-surface elevation 3,487 feet above NAVD88

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

#### Output formats

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### Well Site

#### DESCRIPTION:

Latitude 32°39'48", Longitude 104°30'29" NAD27  
 Eddy County, New Mexico , Hydrologic Unit 13060011  
 Well depth: 120 feet  
 Land surface altitude: 3,528 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>	1979-07-03	1994-02-21	4
<a href="#">Revisions</a>	Unavailable (site:0) (timeseries:0)		

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Groundwater: Field measurements	GO
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Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°39'48", Longitude 104°30'29" NAD27

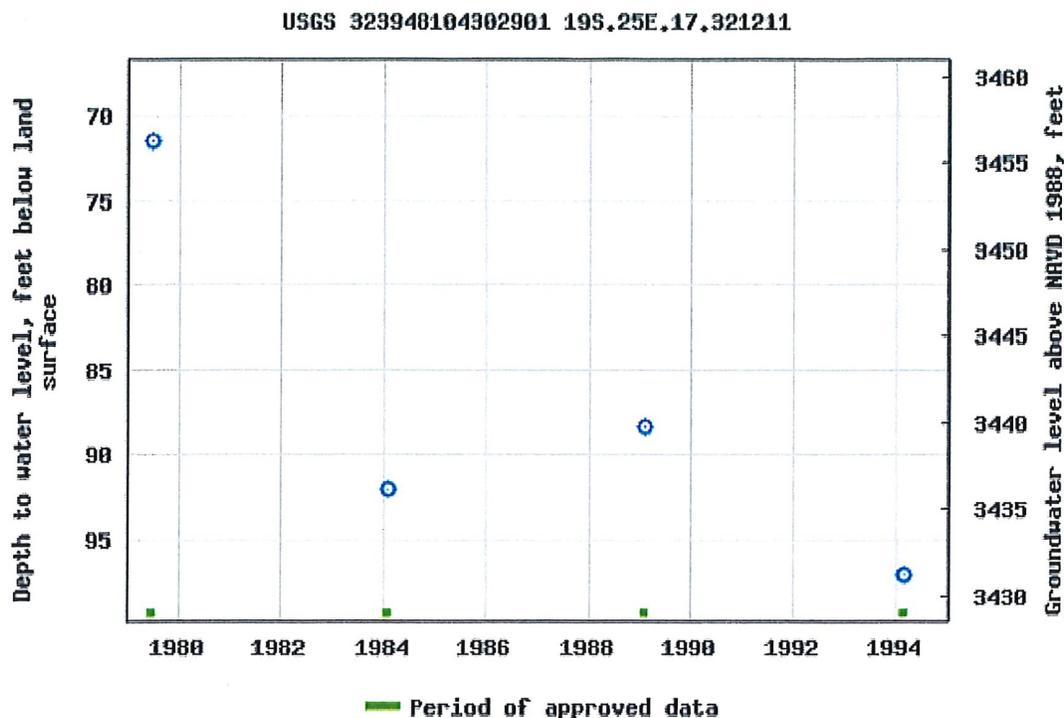
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