October 14, 2020 Vertex Project #: 20E-00141-061

**Spill Closure Report:** Grandi 22 2H
Unit E, Section 22, Township 22 South, Range 27 East
County: Eddy
Incident Tracking Number: NAB1801736987

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

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

Devon Energy Production Company (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a spill assessment and liner inspection following a produced water release that occurred on November 14, 2017, at Grandi 22 2H (hereafter referred to as "Grandi 22"). Devon provided immediate notification of the release to New Mexico Oil Conservation Division (NM OCD) District 2, followed by submission of an initial C-141 Release Notification on November 17, 2017 (Attachment 1). The NM OCD incident tracking number assigned to the release is NAB1801736987.

This letter provides a description of the release assessment and liner inspection, 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 November 14, 2017, a release occurred at Devon's Grandi 22 site when a hole developed in the water fill line behind the storage tanks. This incident resulted in the release of approximately 590 barrels (bbls) of produced water into the lined secondary containment. Upon discovery of the release, the well was shut in and a hydrovac truck was dispatched to site to recover all free-standing liquids. Approximately 590 bbls of produced water were recovered from the secondary containment and removed for disposal off-site. All fluids were contained within the lined Spill Prevention Control and Countermeasures containment; no produced water was released into undisturbed areas or waterways.

## Site Characterization

The release at Grandi 22 occurred on privately-owned land, N 32.38218, W 104.18518, approximately 2 miles east-southeast of Carlsbad, New Mexico. The legal description for the site is Unit E, Section 22, Township 22 South, Range 27 East, Eddy 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 agriculture. An aerial photograph and site schematic are included in Attachment 2.

Grandi 22 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 area surrounding Grandi 22.

The surrounding landscape is associated with upland landforms – mainly hill slopes, plains and terraces – generally found at elevations between 1,100 and 4,300 feet above sea level. The climate is semi-arid, with average annual precipitation ranging between 7 and 15 inches. The historic plant community has a grassland aspect, dominated by grasses, with shrubs and half-shrubs sparsely and evenly distributed. Tobosa, black grama and blue grama are the dominant grass species, and yucca, mesquite, tarbush and cholla are common shrubs (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 Grandi 22 is comprised of Qa – alluvium (New Mexico Bureau of Geology and Mineral Resources, 2020). The Natural Resources Conservation Service Web Soil Survey characterizes the soil at the site on the cusp of Atoka loam and Upton gravelly loam, distinguished by deep layers of loam and gravelly loam. These types of soils tend to be well-drained with high runoff and moderate available moisture levels in the soil profile, and are often classified as farmland of statewide importance (United States Department of Agriculture, Natural Resources Conservation Service, 2020). There is some potential for karst geology to be present near Grandi 22 (United States Department of the Interior, United States Geological Survey, 2020a).

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is the Pecos River, located approximately 1.5 miles east of Grandi 22 (United States Fish and Wildlife Service, 2020). At Grandi 22, there are no continuously flowing watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features nearby as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

The nearest recent groundwater well to the site is a 2002 New Mexico Office of the State Engineer-identified well, located approximately 0.4 miles south-southeast of the site, with a depth to groundwater of 57 feet below ground surface (bgs; New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2020). The shallowest recent depth to groundwater value in the vicinity of Grandi 22 is approximately 47 feet bgs as recorded at a 2013 United States Geological Survey well located approximately 0.8 miles due south of the release site (United States Department of the Interior, United States Geological Survey, 2020b). 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 Grandi 22 would not be subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. The closure criteria for the site would be determined to be associated with the following constituent concentration limits based on depth to groundwater.

| Table 1. Closure Criteria for Soils Impacted by a Release | | |
|---|---|---|
| **Depth to Groundwater** | **Constituent** | **Limit** |
| < 50 feet | Chloride | 600 mg/kg |
| | TPH[1] (GRO + DRO + MRO) | 100 mg/kg |
| | BTEX[2] | 50 mg/kg |
| | Benzene | 10 mg/kg |

[1]Total petroleum hydrocarbons (TPH) = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)
[2]Benzene, toluene, ethylbenzene and xylenes (BTEX)

## Liner Inspection

On September 17, 2020, 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 September 22, 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 remediation action to address the release at Grandi 22. The secondary containment liner appeared to be intact and had the ability to contain the release, 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 incident NAB1801736987 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 November 14, 2017, release at Grandi 22.

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

Sincerely,

Natalie Gordon
PROJECT MANAGER

## Attachments

Attachment 1. NM OCD C-141 Report
Attachment 2. Site Schematic
Attachment 3. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
Attachment 4. Required 48-hr Notification of Liner Inspection to Regulatory Agencies
Attachment 5. Daily Field Report(s) with Photographs

## References

New Mexico Bureau of Geology and Mineral Resources. (2020). *Interactive Geologic Map of New Mexico.* Retrieved from http://geoinfo.nmt.edu

New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2020). *Water Column/Average Depth to Water Report*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html

New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – 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, United States Geological Survey. (2020a). *Caves and Karst in the U.S. National Park Service*. Retrieved from https://www.arcgis.com/home/webmap/viewer.html?webmap=14675403c37948129acb758138f2dd1e

United States Department of the Interior, United States Geological Survey. (2020b). *National Water Information System.* Retrieved from https://maps.waterdata.usgs.gov/mapper/index.html?state=nm

United States Fish and Wildlife Service. (2020). *National Wetlands Inventory*. Retrieved from https://www.fws.gov/wetlands/data/Mapper.html

## 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.

Received on 11/17/17 OCD District II



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

Initial only

nAB1801731498T

## OPERATOR

☒ Initial Report ~~☒ Final Report~~

| | |
|---|---|
| Name of Company Devon Energy Production Company 6137 | Contact Wesley Ryan, Production Foreman |
| Address 6488 Seven Rivers Hwy, Artesia NM 88210 | Telephone No. 575-513-5436 |
| Facility Name Grandi 22 2H | Facility Type Oil |

| | | |
|---|---|---|
| Surface Owner Private | Mineral Owner State | API No. 30-015-42821 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| E | 22 | 22S | 27E | | | | | Eddy |

**Latitude** 32.38218 **Longitude** -104.18518 NAD83

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release<br>Produced Water | Volume of Release<br>590 bbls | Volume Recovered<br>590 bbls |
| Source of Release<br>N/A | Date and Hour of Occurrence<br>11/14/2017 @ 1:30AM MST | Date and Hour of Discovery<br>11/14/2017 @ 1:30AM MST |
| Was Immediate Notice Given?<br>☒ Yes ☐ No ☐ Not Required | If YES, To Whom?<br>OCD-Mike Bratcher & Crystal Weaver | |
| By Whom? Mike Shoemaker, EHS Professional | Date and Hour<br>OCD-11/15/2017 @ 6:36 AM MST | |
| Was a Watercourse Reached?<br>☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

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

Describe Cause of Problem and Remedial Action Taken.*
The lease operator received a high level alarm and responded to the site. Once on-site it was observed that there was produced water built up in the lined SPCC containment ring. The operator located a hole in the water fill line behind tanks and shut in the well. Approximately 590 bbls of produced water was released into the lined SPCC containment ring. A vacuum truck was dispatched and recovered approximately 590 bbls of produced water.

Describe Area Affected and Cleanup Action Taken.*
Approximately 590 bbls of produced water was released from the water fill line into the lined SPCC containment ring. A vacuum truck was dispatched and recovered approximately 590 bbls of produced water. 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. No further action is necessary.

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<br>Approved by Environmental Specialist: Crystal Weaver |
| Printed Name: Dana DeLaRosa | |
| Title: Field Admin Support | Approval Date: 11/16/18 Expiration Date: N/A |
| E-mail Address: dana.delarosa@dvn.com | Conditions of Approval: see attached Attached ☒ 3RP-456 |
| Date: 11/17/2017 Phone: 575.746.5594 | |

* Attach Additional Sheets If Necessary

11/16/18 AB

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **11/17/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4563 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 II office in Artesia on or before 12/17/17. 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

## Weaver, Crystal, EMNRD

**From:** Weaver, Crystal, EMNRD
**Sent:** Friday, January 12, 2018 9:12 AM
**To:** 'Reyna, Jennifer'; Bratcher, Mike, EMNRD; 'Shelly Tucker (stucker@blm.gov)'; NMSLO (Hobbs/Amber Grroves); Montoya, Kenda
**Cc:** Fulks, Brett; Shoemaker, Mike; Aguilar, Leonard; Ryan, Wesley
**Subject:** RE: Strawberry 7 Fed Com 4H_11 bbls pw_12-27-17

Hello all,

OCD started out as holding on to Initial/Final C-141 until the requested statements and photos were provided by the operators for cases when total volume recovery is mentioned due to having secondary containment that was said to have contained all fluids. Since holding on to the forms and waiting for the requested items above was not working out to be the best way to do things, OCD has decided to now to mark any Initial/Final C-141 that comes in, and is of the above mentioned nature, as an Initial C-141 only and upon receipt of the requested pictures and statements a Final C-141 can be submitted and then reviewed for processing of closure of said release case.

So for this C-141 along with the ones submitted in the recent past for Nermal 4 State 1H (DOR 10/5/17), Beetlejuice 19 Federal (DOR 11/4/17), Grandi 22 2H (DOR 11/14/17), and Lone Tree Draw 13 State COM 8H (DOR 10/24/17) I will go ahead and mark them as Initial C-141 only and process them that way so we get them in the system and off my desk.

If you have any questions or concerns about this change please let either myself or Mike Bratcher know here in the OCD District II Office.

Thank you,

**Crystal Weaver**
Environmental Specialist
OCD – Artesia District II
811 S. 1st Street
Artesia, NM 88210
Office: 575-748-1283 ext. 101
Cell: 575-840-5963
Fax: 575-748-9720

**From:** Reyna, Jennifer [mailto:Jennifer.Reyna@dvn.com]
**Sent:** Wednesday, January 10, 2018 9:36 AM
**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; 'Shelly Tucker (stucker@blm.gov)' <stucker@blm.gov>
**Cc:** Fulks, Brett <Brett.Fulks@dvn.com>; Shoemaker, Mike <Mike.Shoemaker@dvn.com>; Aguilar, Leonard <Leonard.Aguilar@dvn.com>; Ryan, Wesley <Wesley.Ryan@dvn.com>
**Subject:** Strawberry 7 Fed Com 4H_11 bbls pw_12-27-17

## Weaver, Crystal, EMNRD

**From:** Weaver, Crystal, EMNRD
**Sent:** Tuesday, December 5, 2017 11:56 AM
**To:** 'DeLaRosa, Dana'; Bratcher, Mike, EMNRD; agroves@slo.state.nm.us
**Cc:** Shoemaker, Mike; Fulks, Brett; Billings, Bradford, EMNRD
**Subject:** RE: Grandi 22-2H_590BBLS PW _11.4.2017

Mike Shoemaker,

As I mentioned to you before a while back when Devon had another release similar in nature to this one, the same expectations I stated on that one will also apply to this one.

The written statement (which it seems that you all have within your C-141 submitted for this release) attesting to the integrity of the liner and stating that you yourself or another member of your organization (that has been informed/educated on what to look for) have inspected the liner etc., this is something we are normally going to want to see on the C-141 form itself. Also if any fill material is present atop of the liner a statement would also need to be made on the C-141 form that the material was fully removed and replaced.

The photos as I mentioned before we would like to have dropped into the body of an email from Devon, and if possible show the location sign in one photo and then possibly the containment before clean up and after clean up would be preferential. We are asking for this from all operators that turn in an Initial/Final C-141 form that pertains to a full recovery stated involving secondary lined containment.

Please let either myself, Mike Bratcher or our Santa Fe Office know if you have any questions or concerns regarding this request.

Thank you,

**Crystal Weaver**
Environmental Specialist
OCD – Artesia District II
811 S. 1st Street
Artesia, NM 88210
Office: 575-748-1283 ext. 101
Cell: 575-840-5963
Fax: 575-748-9720

**From:** DeLaRosa, Dana [mailto:Dana.DeLaRosa@dvn.com]
**Sent:** Friday, November 17, 2017 10:37 AM
**To:** Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; agroves@slo.state.nm.us
**Cc:** Shoemaker, Mike <Mike.Shoemaker@dvn.com>; Fulks, Brett <Brett.Fulks@dvn.com>
**Subject:** Grandi 22-2H_590BBLS PW _11.4.2017

Good Morning,

Attached you will find a C141 and the GIS Image for the 590BBLS produced water release that occurred on 11.14.2017 at the Grandi 22-2H. The red dot represents the origin of release.

Note: During initial notification the API # for this well was reported incorrectly due to a typing error and it was listed as API #30-015-42812 the correct API is listed in the C-141 and is API #30-015-42821.

Have a wonderful day,

*Dana DeLaRosa*
Field Admin Support
Production
B-Schedule

**Devon Energy Corporation**
PO Box 250
Artesia, NM 88211
575 746 5594

devon

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAB1801736987 |
| District RP | 2RP-4563 |
| 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? | 47 (ft bgs) |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☐ Yes ☒ 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)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ 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? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☐ Yes ☒ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☐ Yes ☒ 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.
- NA Field data
- NA 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
- NA Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- NA 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAB1801736987 |
| District RP | 2RP-4563 |
| 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: Tom Bynum  Title: EHS Consultant

Signature: Tom Bynum  Date: 10/15/2020

email: tom.bynum@dvn.com  Telephone: 575-748-2663

**OCD Only**

Received by: _____  Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAB1801736987 |
| District RP | 2RP-4563 |
| 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.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

[X] 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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 10/15/2020

email: tom.bynum@dvn.com Telephone: 575-748-2663

**OCD Only**

Received by: Cristina Eads Date: 10/19/2020

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: Date: 12/23/2020

Printed Name: Cristina Eads Title: Environmental Specialist

Approximate Lease Boundary

Lined Secondary Containment

Approximate Spill Extent

VERTEX

0 12.5 25 50 ft

Map Center:
Lat/Long: 32.382028, -104.184658

NAD 1983 UTM Zone 13N
Date: Apr 09/20

N

**Site Schematic**
**Grandi 22 2H**

FIGURE:
**1**

devon

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

Note: Background image from ESRI, 2018.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\20E-001411015 - Grandi 22 #002H\Fig 2 Confirmatory Schematic Grandi 22 002H.mxd

| Closure Criteria Worksheet | | | |
|---|---|---|---|
| Site Name: Grandi 22 2H | | | |
| Spill Coordinates: | | X: 32.38218 | Y: -104.18518 |
| Site Specific Conditions | | Value | Unit |
| 1 | Depth to Groundwater | **57** | feet |
| 2 | Within 300 feet of any continuously flowing watercourse or any other significant watercourse | >1000 | feet |
| 3 | Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark) | >1000 | feet |
| 4 | Within 300 feet from an occupied residence, school, hospital, institution or church | 635 | feet |
| 5 | i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or** | 635 | feet |
| | ii) Within 1000 feet of any fresh water well or spring | >1000 | 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 | 455 | feet |
| 8 | Within the area overlying a subsurface mine | | (Y/N) |
| 9 | Within an unstable area (Karst Map) | Low | Critical<br>High<br>Medium<br>Low |
| 10 | Within a 100-year Floodplain | No | year |
| 11 | Soil Type | loam and upton gravelly loam | |
| 12 | Ecological Classification | Loamy and shallow | |
| 13 | Geology | Qa | |
| | **NMAC 19.15.29.12 E (Table 1) Closure Criteria** | <50' | <50'<br>51-100'<br>>100' |

*New Mexico Office of the State Engineer*

# Point of Diversion Summary

| Well Tag | POD Number | (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64 | Q16 | Q4 | Sec | Tws | Rng | (NAD83 UTM in meters) X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 00613 | 4 | 2 | 4 | 21 | 22S | 27E | 576434 | 3582309* |

| | | | | | |
|---|---|---|---|---|---|
| **Driller License:** | 75 | **Driller Company:** | DONOWHO, JOE | | |
| **Driller Name:** | DONOWHO, JOE | | | | |
| **Drill Start Date:** | 11/24/1954 | **Drill Finish Date:** | 11/27/1954 | **Plug Date:** | |
| **Log File Date:** | 05/29/1956 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | |
| **Casing Size:** | 7.00 | **Depth Well:** | 100 feet | **Depth Water:** | 60 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 80 | 90 | Sandstone/Gravel/Conglomerate |
| | 90 | 100 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 80 | 90 |

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

*New Mexico Office of the State Engineer*

# Point of Diversion Summary

| Well Tag | POD Number | Q64 | Q16 | Q4 | Sec | Tws | Rng | X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 00614 | 3 | 1 | 3 | 22 | 22S | 27E | 576639 | 3582314* |

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

**Driller License:** 75 **Driller Company:** DONOWHO, JOE
**Driller Name:** DONOWHO, JOE

**Drill Start Date:** 11/22/1954 **Drill Finish Date:** 11/24/1954 **Plug Date:**
**Log File Date:** 01/03/1955 **PCW Rcv Date:** **Source:** Shallow
**Pump Type:** **Pipe Discharge Size:** **Estimated Yield:**
**Casing Size:** 7.00 **Depth Well:** 95 feet **Depth Water:** 60 feet

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 83 | 93 | Sandstone/Gravel/Conglomerate |

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

*New Mexico Office of the State Engineer*

# Point of Diversion Summary

| Well Tag | POD Number | (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64 | Q16 | Q4 | Sec | Twp | Rng | (NAD83 UTM in meters) X | Y |
|---|---|---|---|---|---|---|---|---|---|
| | C 02512 POD2 | 1 | 3 | | 22 | 22S | 27E | 576740 | 3582415* |

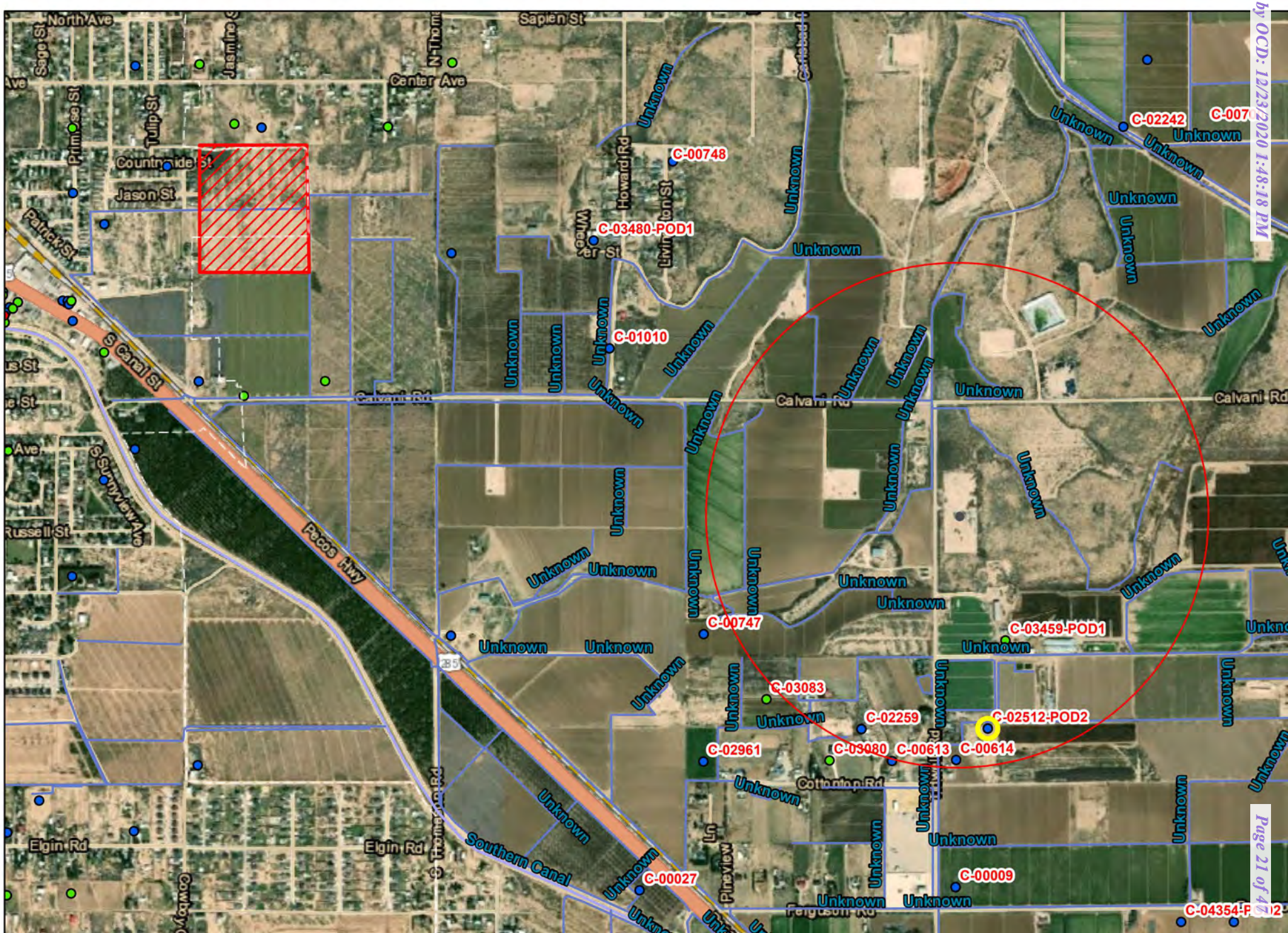
| | | | | | |
|---|---|---|---|---|---|
| **Driller License:** | 1348 | **Driller Company:** | TAYLOR WATER WELL SERVICE | | |
| **Driller Name:** | | | | | |
| **Drill Start Date:** | 08/29/2002 | **Drill Finish Date:** | 09/03/2002 | **Plug Date:** | |
| **Log File Date:** | 10/02/2002 | **PCW Rcv Date:** | | **Source:** | Shallow |
| **Pump Type:** | | **Pipe Discharge Size:** | | **Estimated Yield:** | 100 GPM |
| **Casing Size:** | 5.00 | **Depth Well:** | 142 feet | **Depth Water:** | 57 feet |

| Water Bearing Stratifications: | Top | Bottom | Description |
|---|---|---|---|
| | 112 | 142 | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|---|---|---|
| | 102 | 142 |

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

# Grandi 22 2H



Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

## Search Results -- 1 sites found

**site_no list =**

- 322238104101801

**Minimum number of levels =** 1

Save file of selected sites to local disk for future upload

---

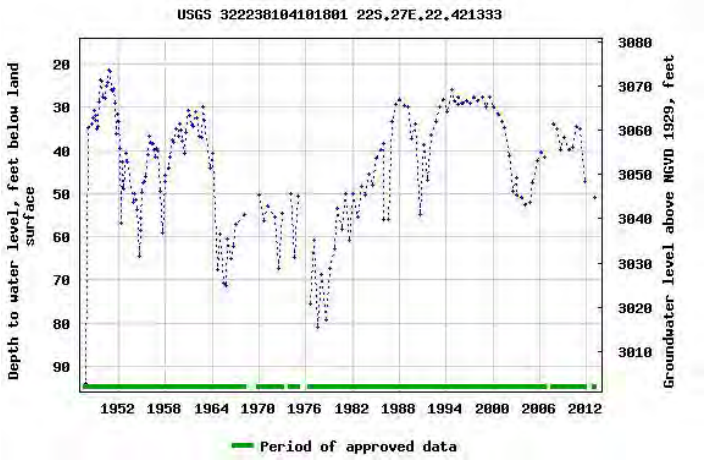
## USGS 322238104101801 22S.27E.22.421333

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°22'35.0", Longitude 104°10'23.13" NAD83
Land-surface elevation 3,095.80 feet above NGVD29
The depth of the well is 150 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

| |
|---|
| Table of data |
| Tab-separated data |
| Graph of data |
| Reselect period |



Breaks in the plot represent a gap of at least one year between field measurements.
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---

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U.S. Department of the Interior | U.S. Geological Survey
**Title: Groundwater for USA: Water Levels**
**URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?**

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-10-13 09:01:39 EDT
0.66 0.57 nadww01

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Groundwater levels for the Nation

## Search Results -- 1 sites found

**site_no list =**

- 322311104110401

**Minimum number of levels =** 1

Save file of selected sites to local disk for future upload

---

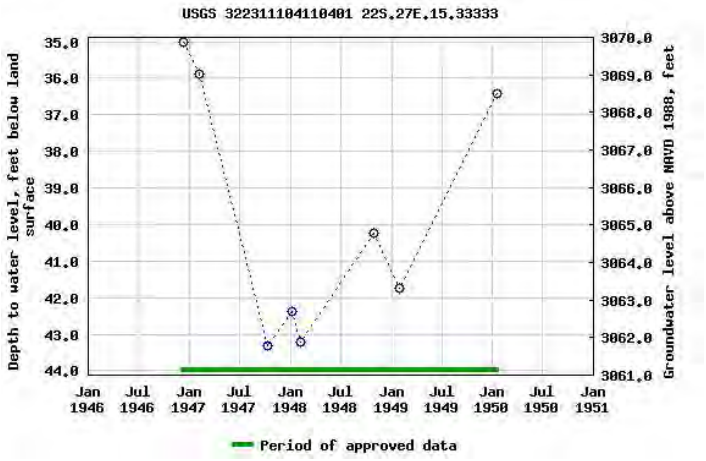
## USGS 322311104110401 22S.27E.15.33333

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°23'11", Longitude 104°11'04" NAD27
Land-surface elevation 3,105 feet above NAVD88
The depth of the well is 174 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

| |
|---|
| Table of data |
| Tab-separated data |
| Graph of data |
| Reselect period |



Breaks in the plot represent a gap of at least one year between field measurements.
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U.S. Department of the Interior | U.S. Geological Survey
**Title: Groundwater for USA: Water Levels**
**URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?**

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-10-13 08:47:45 EDT
0.66 0.6 nadww01

National Water Information System: Web Interface

USGS Water Resources

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

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- Full News

Groundwater levels for the Nation

## Search Results -- 1 sites found

**site_no list =**

- 322333104103201

**Minimum number of levels =** 1

Save file of selected sites to local disk for future upload

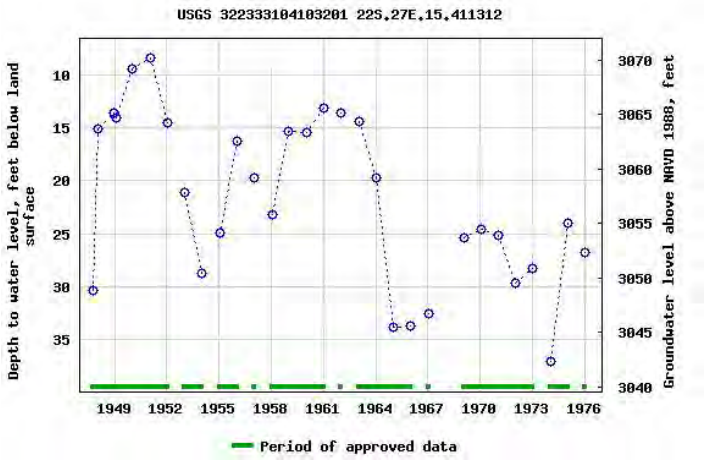
## USGS 322333104103201 22S.27E.15.411312

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°23'33", Longitude 104°10'32" NAD27
Land-surface elevation 3,079 feet above NAVD88
The depth of the well is 140 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**

| |
|---|
| Table of data |
| Tab-separated data |
| Graph of data |
| Reselect period |



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

---

Questions about sites/data?
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U.S. Department of the Interior | U.S. Geological Survey
**Title: Groundwater for USA: Water Levels**
**URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?**

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-10-13 09:23:51 EDT
0.65 0.58 nadww01

U.S. Fish and Wildlife Service

# National Wetlands Inventory

## Grandi 22 2H


October 13, 2020

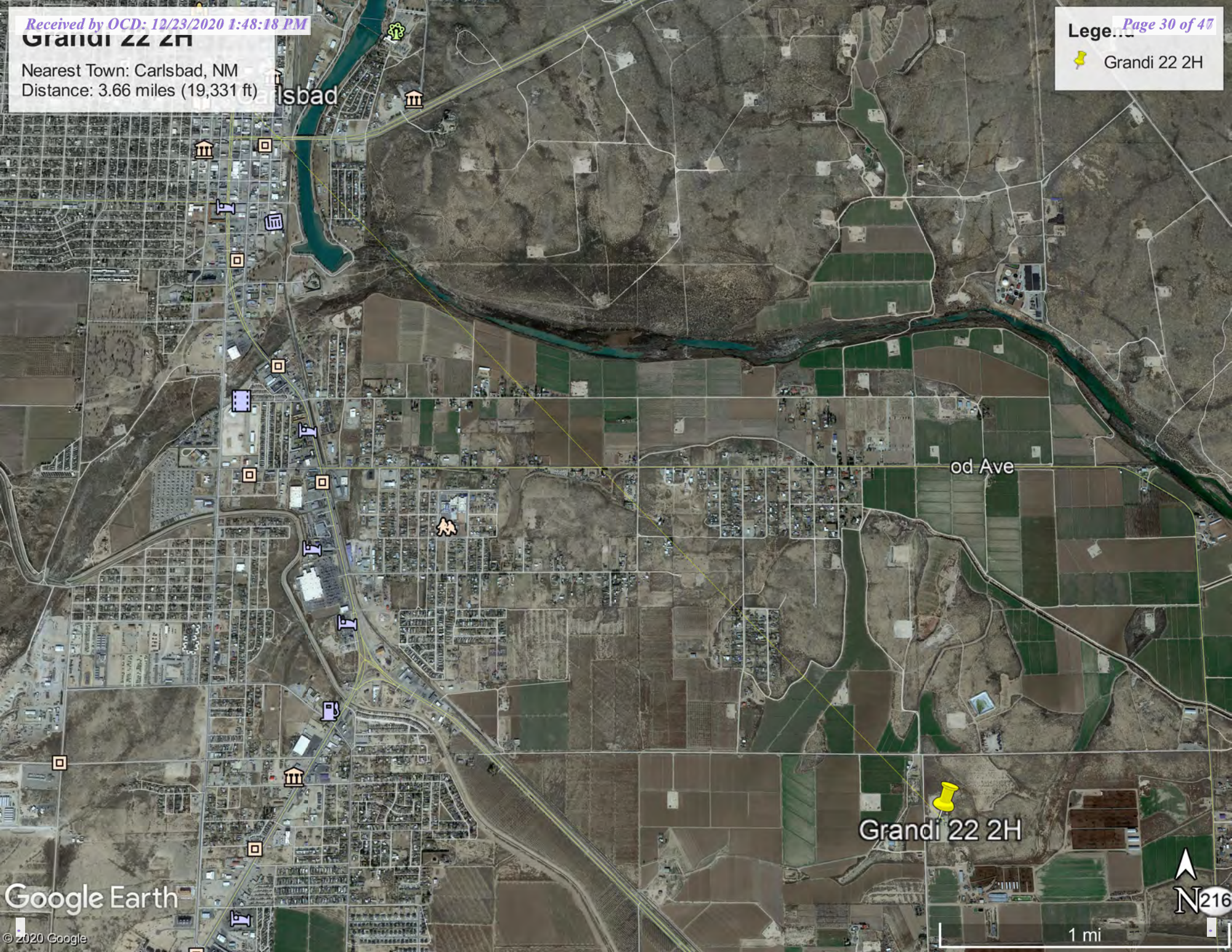
**Wetlands**

- 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.

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


Grandi 22 2H
Nearest Residence: 0.12 miles (635 ft)
Legend
Grandi 22 2H
703
Grandi 22 2H
S Tidwell Rd
Google Earth
© 2020 Google
N
400 ft


Grandi 22 2H
Nearest Town: Carlsbad, NM
Distance: 3.66 miles (19,331 ft)
Legend
Grandi 22 2H
Carlsbad
od Ave
Grandi 22 2H
Google Earth
© 2020 Google
N
216
1 mi

U.S. Fish and Wildlife Service

# National Wetlands Inventory

## Grandi 22 2H


October 13, 2020

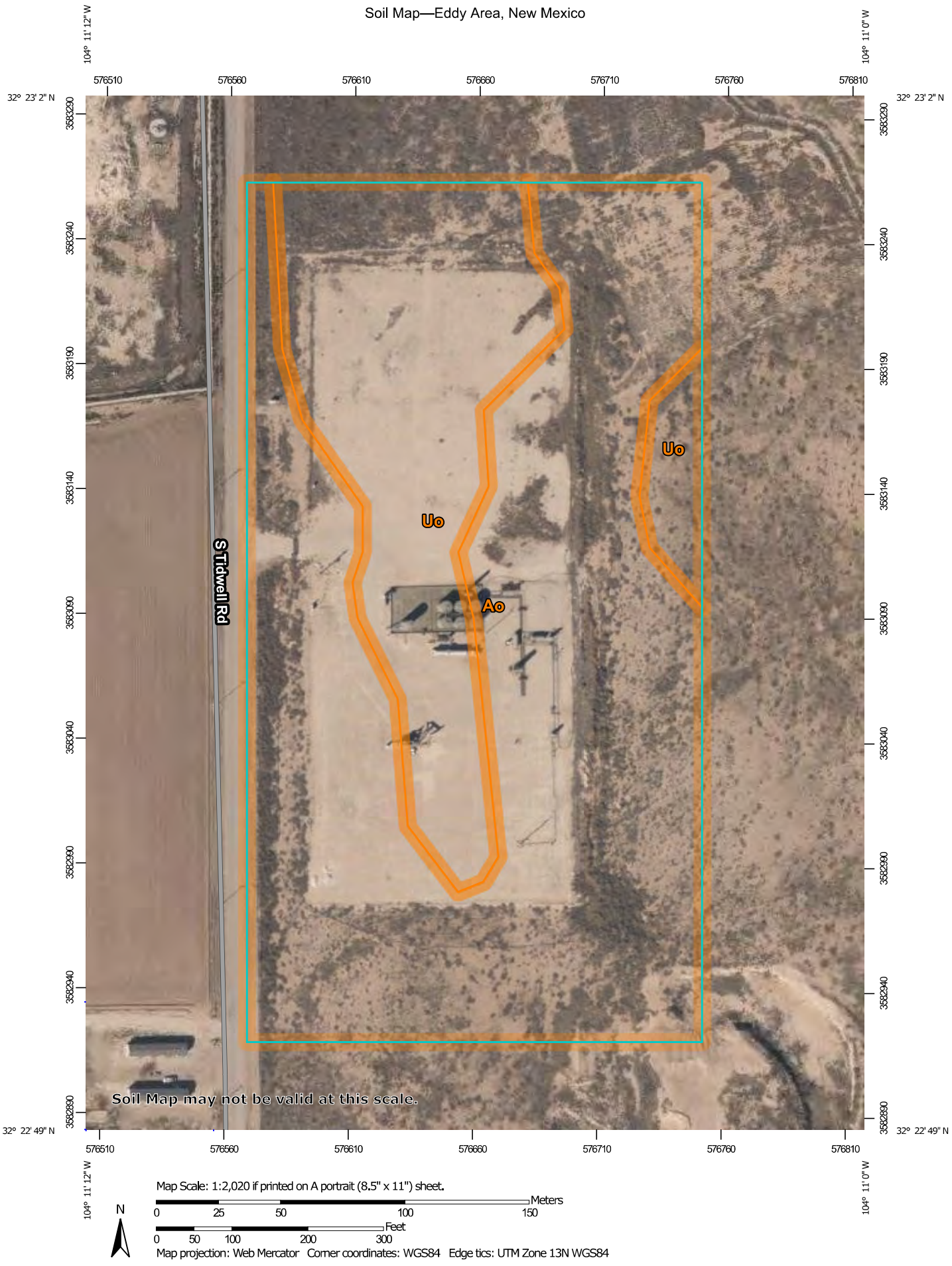
**Wetlands**

- 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.

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

# Soil Map—Eddy Area, New Mexico



## MAP LEGEND

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

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

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

**Water Features**
- Streams and Canals

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

**Background**
- Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

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

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

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

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| Ao | Atoka loam, 0 to 1 percent slopes | 10.9 | 69.5% |
| Uo | Upton gravelly loam, 0 to 9 percent slopes | 4.8 | 30.5% |
| **Totals for Area of Interest** | | **15.6** | **100.0%** |

# Eddy Area, New Mexico

## Ao—Atoka loam, 0 to 1 percent slopes

### Map Unit Setting

*National map unit symbol:* 1w40
*Elevation:* 1,100 to 4,300 feet
*Mean annual precipitation:* 7 to 15 inches
*Mean annual air temperature:* 60 to 70 degrees F
*Frost-free period:* 200 to 240 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Atoka and similar soils:* 97 percent
*Minor components:* 3 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Atoka

#### Setting

*Landform:* Plains
*Landform position (three-dimensional):* Riser
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Parent material:* Alluvium

#### Typical profile

*H1 - 0 to 8 inches:* loam
*H2 - 8 to 33 inches:* loam
*H3 - 33 to 37 inches:* indurated

#### Properties and qualities

*Slope:* 0 to 1 percent
*Depth to restrictive feature:* 20 to 40 inches to petrocalcic
*Drainage class:* Well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 15 percent
*Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 1.0
*Available water capacity:* Moderate (about 6.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3s
*Land capability classification (nonirrigated):* 7s
*Hydrologic Soil Group:* C

*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

**Minor Components**

**Atoka**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

**Reagan**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

**Upton**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC025NM - Shallow
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

# Eddy Area, New Mexico

## Uo—Upton gravelly loam, 0 to 9 percent slopes

### Map Unit Setting

*National map unit symbol:* 1w67
*Elevation:* 1,100 to 4,400 feet
*Mean annual precipitation:* 7 to 15 inches
*Mean annual air temperature:* 60 to 70 degrees F
*Frost-free period:* 200 to 240 days
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Upton and similar soils:* 96 percent
*Minor components:* 4 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Upton

#### Setting

*Landform:* Fans, ridges
*Landform position (three-dimensional):* Side slope, rise
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Parent material:* Residuum weathered from limestone

#### Typical profile

*H1 - 0 to 9 inches:* gravelly loam
*H2 - 9 to 13 inches:* gravelly loam
*H3 - 13 to 21 inches:* cemented
*H4 - 21 to 60 inches:* very gravelly loam

#### Properties and qualities

*Slope:* 0 to 9 percent
*Depth to restrictive feature:* 7 to 20 inches to petrocalcic
*Drainage class:* Well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.60 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 75 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 1.0
*Available water capacity:* Very low (about 1.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D
*Ecological site:* R042XC025NM - Shallow
*Hydric soil rating:* No

**Minor Components**

**Atoka**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

**Atoka**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

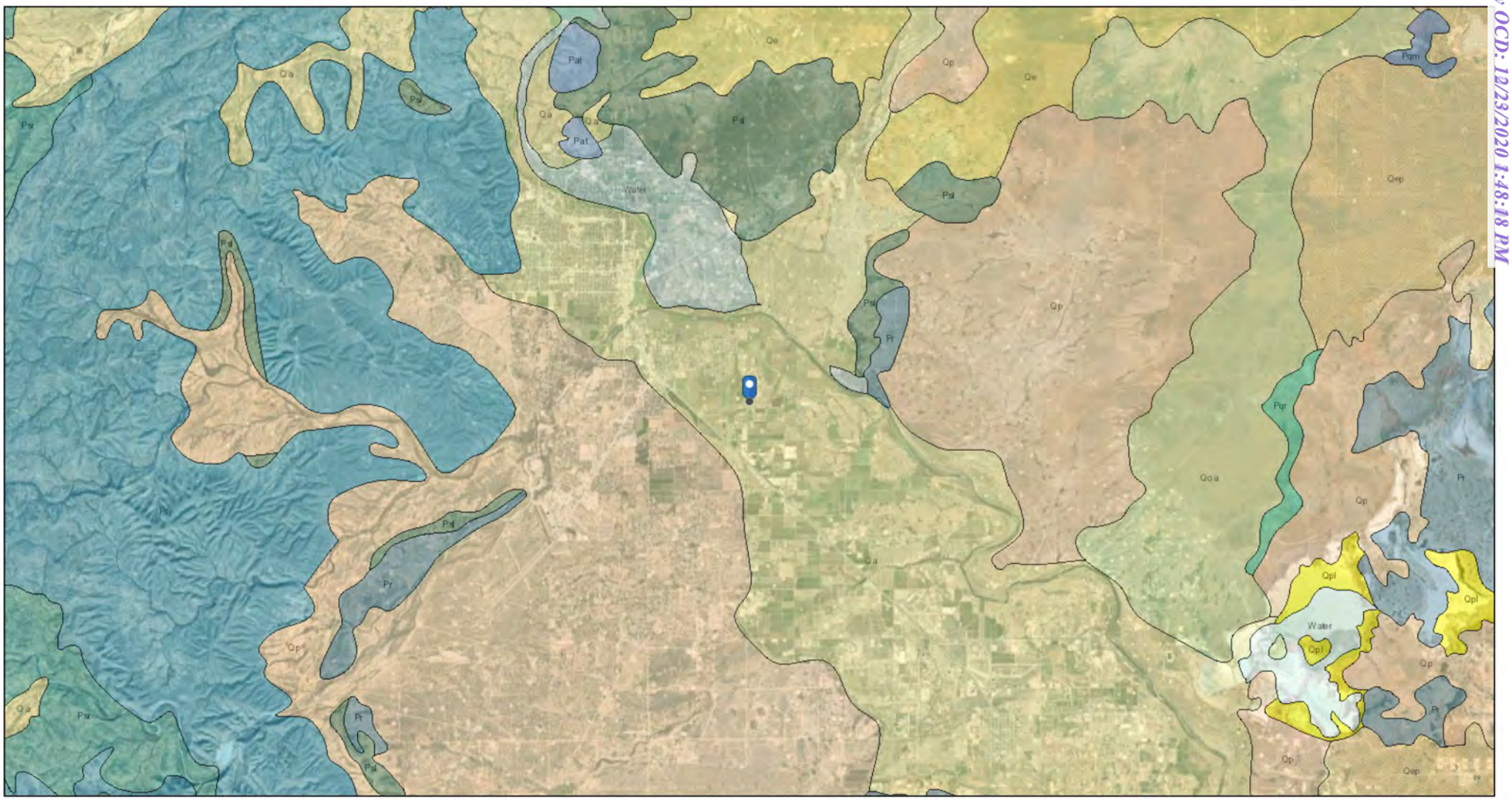
**Reagan**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC007NM - Loamy
*Hydric soil rating:* No

**Upton**
*Percent of map unit:* 1 percent
*Ecological site:* R042XC025NM - Shallow
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

# Grandi 22 2H




10/13/2020, 7:48:54 AM

Lithologic Contacts

- Contact, Exposed
- Contact, Gradational
- Nomenclature change
- Map Boundary

1:144,448

0 1.5 3 6 mi

0 2.5 5 10 km

Earthstar Geographics, NMBGMR

## Natalie Gordon

**From:** Dhugal Hanton <vertexresourcegroupusa@gmail.com>
**Sent:** Thursday, September 17, 2020 5:23 PM
**To:** Natalie Gordon
**Subject:** Fwd: NAB1801736987: Grandi 22 2H - 48-hour Notification of Liner Inspection

---------- Forwarded message ---------
From: **Dhugal Hanton** <vertexresourcegroupusa@gmail.com>
Date: Thu, Sep 17, 2020 at 5:22 PM
Subject: NAB1801736987: Grandi 22 2H - 48-hour Notification of Liner Inspection
To: <spills@slo.state.nm.us>, <OCD.Enviro@state.nm.us>, <wesley.mathews@dvn.com>, <Lupe.Carrasco@dvn.com>, <amanda.davis@dvn.com>, <tom.bynum@dvn.com>

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled a liner inspection to be conducted at Grandi 22 2H for the release that occurred on November 14, 2017, incident # NAB1801736987.

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

On Tuesday, September 22, 2020 at approximately 10:00 a.m., Kevin Smith of Vertex will be onsite to conduct a liner inspection. He can be reached at 575-988-0871. If you need directions to the site, please do not hesitate to contact him.

If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.

Thank you,
Natalie

**Natalie Gordon**
Project Manager

Vertex Resource Group Ltd.
213 S. Mesa Street
Carlsbad, NM 88220

**P 575.725.5001 ext 709**
**C 505.506.0040**

www.vertex.ca

# Daily Site Visit Report

| | | | |
|---|---|---|---|
| Client: | Devon Energy Corporation | Inspection Date: | 9/22/2020 |
| Site Location Name: | Grandi 22 #002H | Report Run Date: | 9/22/2020 2:39 PM |
| Client Contact Name: | Amanda Davis | API #: | 30-015-42821 |
| Client Contact Phone #: | (575) 748-0176 | | |
| Unique Project ID | -Grandi 22 #002H | Project Owner: | Amanda Davis |
| Project Reference # | 05/13/2019 - Gas Release | Project Manager: | Natalie Gordon |

## Summary of Times

| | |
|---|---|
| Arrived at Site | 9/22/2020 7:09 AM |
| Departed Site | 9/22/2020 8:04 AM |

## Field Notes

**7:31** Conducting liner inspection for in containment release. Purpose of inspection is to verify that there are no tears, cracks or holes within the liner and that release was successfully contained.

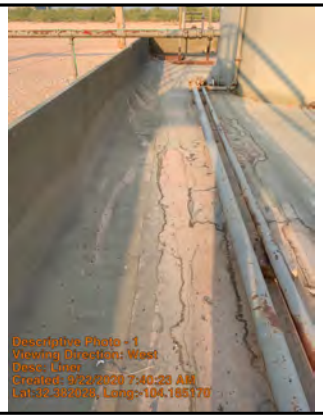
## Next Steps & Recommendations

**1** During inspection no visible signs of tear, cracks, holes or integrity deficiencies were observed. There was no visual evidence that the release escaped the secondary containment.

**2** No further remediation activity for this incident is recommended at this time.

# Daily Site Visit Report

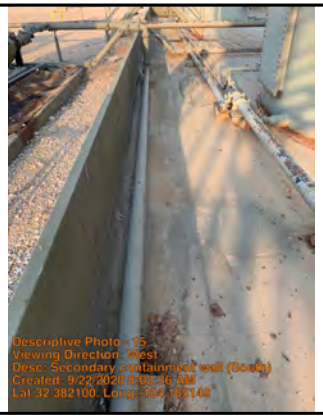
## Site Photos

| **Viewing Direction**: West | **Viewing Direction**: East |
|---|---|
|  |  |
| Secondary containment wall (south) | Secondary containment wall (north) |
| **Viewing Direction**: South | **Viewing Direction**: South |
|  |  |
| Area adjacent to east side of secondary containment | Secondary containment wall (East) |

# Daily Site Visit Report

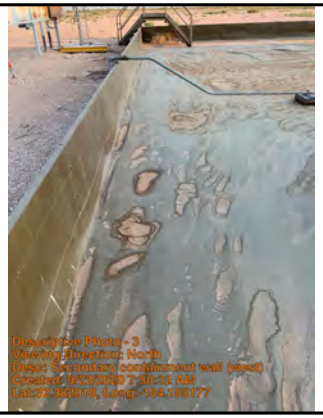
| **Viewing Direction**: West |
| --- |
|  |
| Secondary containment wall (South) |

| **Viewing Direction**: West |
| --- |
|  |
| Area adjacent to south side of secondary containment |

| **Viewing Direction**: West |
| --- |
|  |
| Secondary containment wall (South) |

| **Viewing Direction**: West |
| --- |
|  |
| Area adjacent to south side of secondary containment |

# Daily Site Visit Report

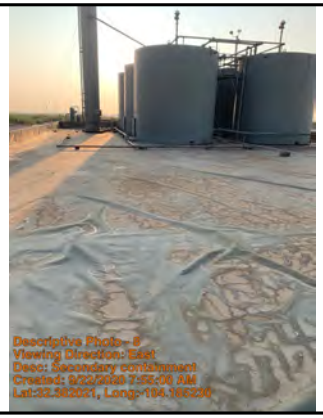
| **Viewing Direction**: North | **Viewing Direction**: North |
|---|---|
|  |  |
| Secondary containment wall (west) | Area adjacent to west side of secondary containment |
| **Viewing Direction**: South | **Viewing Direction**: East |
|  |  |
| Secondary containment wall (west) | Secondary containment wall (north) |

# Daily Site Visit Report

**Viewing Direction**: East

Area adjacent to north side of secondary containment

**Viewing Direction**: East



Secondary containment

**Viewing Direction**: West

Secondary containment wall (north)

# Daily Site Visit Report

## Daily Site Visit Signature

**Inspector:** Kevin Smith

**Signature:** 
Signature

**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 10721

## CONDITIONS OF APPROVAL

| Operator: | OGRID: | Action Number: | Action Type: |
|---|---|---|---|
| PIMA ENVIRONMENTAL SERVICES, L 1601 N. Turner Suite 500 Hobbs, NM88240 | 329999 | 10721 | C-141 |

| OCD Reviewer | Condition |
|---|---|
| ceads | None |