July 14, 2020 Vertex Project #: 20E-00141-035

Spill Closure Report: Bilbrey 33 Federal Com 3H
Unit J, Section 33, Township 21 South, Range 32 East
County: Lea
API: 30-025-41806
Tracking Number: NCH1815829199

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

New Mexico Oil Conservation Division – District 1 – Hobbs
1625 North French Drive
Hobbs, New Mexico 88240

Devon Energy Production Company (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a spill assessment and liner inspection following the produced water release that occurred at Bilbrey 33 Federal Com 3H, API 30-025-41806 (hereafter referred to as "Bilbrey 33"). Devon provided immediate notification of the spill to New Mexico Oil Conservation Division (NM OCD) District 1 on May 23, 2018, followed by submission of the initial C-141 Release Notification to NM OCD and the Bureau of Land Management (BLM), who owns the property, on June 7, 2018 (Attachment 1). The NM OCD tracking number assigned to this release is NCH1815829199.

This letter provides a description of the spill 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 May 22, 2018, a release occurred at Devon's Bilbrey 33 site when a victaulic connection on the inlet line to the produced water tanks developed a leak. This incident resulted in the release of approximately 50 barrels (bbls) of produced water into the lined secondary containment. Upon discovery of the release, the wells were shut in to stop the leak and a hydrovac truck was dispatched to site to recover free liquids. Approximately 50 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 and no produced water was released into undisturbed areas or waterways.

Site Characterization

The release at Bilbrey 33 occurred on federally-owned land, N 32.435219, W 103.676091, approximately 30 miles east of Carlsbad, New Mexico. The legal description for the site is Unit J, Section 33, Township 21 South, Range 32 East, Lea

County, New Mexico. This location is within the Permian Basin in southeast New Mexico and has historically been used for oil and gas exploration and production, and rangeland. An aerial photograph and site schematic are included in Attachment 2.

Bilbrey 33 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 the constructed wellpad where the tanks are located.

The surrounding landscape is associated with the southwestern plains, generally found at elevations of 3,000 to 3,900 feet above sea level, and is classified as farmland of statewide importance. The climate is semi-arid, with average annual precipitation ranging between 10 and 12 inches. Historically, the plant community has been dominated by black grama, dropseeds and bluestems, with scattered shinnery oak and sand sage. Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and, to a lesser extent, bare ground make up a significant portion of the ground cover, while grasses compose the remainder (United States Department of Agriculture, Natural Resources Conservation Service, 2020). Limited to no vegetation is allowed to grow on the compacted production wellpad or around the tank battery.

The *Geological Map of New Mexico* indicates the surface geology at Bilbrey 33 is comprised primarily of Qep – interlaid eolian sands and piedmont-slope deposits from the Holocene to middle Pleistocene ages (New Mexico Bureau of Geology and Mineral Resources, 2020). The National Resources Conservation Service Web Soil Survey characterizes the soil at the site as Pyote loamy fine sand, which is comprised of loamy fine sand over deep layers of fine sandy loam. It tends to be well-drained with negligible runoff and low available moisture levels in the soil profile (United States Department of Agriculture, Natural Resources Conservation Service, 2020). There is low potential for karst geology to be present near Bilbrey 33, although some erosional karst may be possible (United States Department of the Interior, United States Geological Survey, 2020).

There is no surface water located on-site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 0.4 miles southwest of the site (United States Fish and Wildlife Service, 2020). At Bilbrey 33, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

The nearest active well to Bilbrey 33 is a New Mexico Office of the State Engineer (OSE) well from 2018 located approximately 1.3 miles east of the site, with a depth to groundwater of approximately 560 feet below ground surface (bgs; New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System, 2020). The shallowest depth to groundwater identified in the vicinity is a 2014 OSE well located approximately 1.9 miles south of the site, with a depth to a water bearing stratification of 55 feet bgs (New Mexico Office of the State Engineer, New Mexico Interstate Stream Commission, 2020). Documentation pertaining to site characterization and depth to groundwater determination is included in Attachment 3.

Closure Criteria Determination

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

Based on data included in the closure criteria determination worksheet, the release at Bilbrey 33 would not be subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. As the nearest groundwater well is further than a ½ mile from the release site, the depth to groundwater at Bilbrey 33 cannot be accurately determined and the closure criteria for the site would be determined to be associated with the below constituent concentration limits.

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 June 8, 2020, Vertex provided 48-hour notification of the liner inspection to NM OCD and the BLM, as required by Subparagraph (a) of Paragraph (5) of Subsection A 19.15.29.11 NMAC (Attachment 4). On June 11, 2020, Vertex was on-site to conduct a visual inspection of the production equipment secondary containment liner for cracks, tears, cuts and other signs of damage, and 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 Bilbrey 33. 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 NCH1815829199 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 May 22, 2018, open release at Bilbrey 33.

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.* Retrieved from http://geoinfo.nmt.edu

New Mexico Office of the State Engineer, New Mexico Interstate Stream Commission. (2020). *OSE Pod Locations.* Retrieved from http://gis.ose.state.nm.us/gisapps/ose_pod_locations/

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. (2020). *Caves and Karst in the U.S. National Park Service*. Retrieved from https://www.arcgis.com/home/webmap/viewer.html?webmap=14675403c37948129acb758138f2dd1e

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.

ATTACHMENT 1

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

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Devon Energy Production Company	Contact Merle Lewis, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Bilbrey 33 Federal Com 3H	Facility Type Oil

Surface Owner Federal	Mineral Owner Federal	API No. 30-025-41806

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	33	21S	32E					Lea

Latitude_32.435219_ **Longitude**_103.676091_ NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 50bbls	Volume Recovered 50bbls
Source of Release Water line on produced water tank	Date and Hour of Occurrence May 22, 2018 @ 2:00 PM MST	Date and Hour of Discovery May 22, 2018 @ 2:00 PM MST
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Olivia Yu, OCD	
By Whom? Brett Fulks, EHS Representative	Date and Hour May 23, 2018 @ 2:22 PM MST	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

RECEIVED
By CHernandez at 8:02 am, Jun 07, 2018

Describe Cause of Problem and Remedial Action Taken.*
A Victaulic connection on the inlet line to the produced water tanks developed a leak. The wells were shut in to stop the release and repairs were made.

Describe Area Affected and Cleanup Action Taken.*
Approximately 50bbls of produced water was released into the lined SPCC containment ring. A vacuum truck was dispatched and recovered approximately 50bbls of produced water from the lined containment. All fluid stayed inside the lined SPCC containment. Once fluids were removed the liner was visually inspected by Devon field staff for any pinholes or punctures and none were found. Based on this inspection there is no evidence that the spill fluids left containment.

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

Signature: Sheila Fisher

Printed Name: Sheila Fisher

Title: Field Admin Support

E-mail Address: Sheila.Fisher@dvn.com

Date: 5/31/18 Phone: 575.748.1829

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: CH

Approval Date: 6/7/2018 Expiration Date:

Conditions of Approval: Attached ☐

Please inspect liner in question. Provide NMOCD with a concise report of the inspection with affirmation the liner has and will continue to contain liquids.

nCH1815829199

* Attach Additional Sheets If Necessary

Bilbrey 33 Fed 3H

50bbls pw_5.22.18

devon

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Sheila Fisher
Map is current as of: 31-May-2018

N

Miles
0 0.01 0.02 0.04
1: 1,779

State of New Mexico
Oil Conservation Division

Incident ID	NCH1815829199
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	55 (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	NCH1815829199
District RP	
Facility ID	
Application ID	

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

Printed Name: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/15/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NCH1815829199
District RP	
Facility ID	
Application ID	

Closure

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

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

[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: 7/15/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: Cristina Eads Date: 07/20/2020

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: 09/15/2020

Printed Name: Cristina Eads Title: Environmental Specialist

ATTACHMENT 2

Approximate Lease Boundary

Approximate Spill Extent (~ 6,660 sq.ft.)

Containment

VERTEX

0 30 60 120 ft

Map Center:
Lat/Long: 32.435, -103.676

NAD 1983 UTM Zone 13N

Date: Jun 16/20

N

Site Schematic
Bilbrey 33 Federal Com 3H

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: Imagery from ESRI, 2018.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\20E-00141\035 - Bilbrey 33 Fed Com 3H\Figure 1 Confirmatory Sampling Bilbrey 33 Fed Com 3H.mxd

ATTACHMENT 3

Closure Criteria Worksheet			
Site Name: Bilbrey 33 Fed Com 3H Closure Criteria Determination			
Spill Coordinates: 32.435219, -103.676091		X: 624460.73	Y: 3589449.41
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	**560.00**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	2,092	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	19,189	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	108,435	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**	7,057	feet
	ii) Within 1000 feet of any fresh water well or spring	7,057	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	6,028	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	No	year
11	Soil Type	PT	Pyote loamy fine sand
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01701 POD1	CP	LE		1	3	35	21S	32E	626652	3589283	2151	840	560	280
C 03717 POD1	C	LE	4	4	1	09	22S	32E	624094	3586365	3098	650		

Average Depth to Water: **560 feet**

Minimum Depth: **560 feet**

Maximum Depth: **560 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 624506.48 **Northing (Y):** 3589437.22 **Radius:** 5000

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 03717 POD1	4	4	1	09	22S	32E	624094	3586365

Driller License: 1058 **Driller Company:** KEY'S DRILLING & PUMP SERVICE

Driller Name: KEY, GARY

Drill Start Date: 08/04/2014 **Drill Finish Date:** 08/12/2014 **Plug Date:**

Log File Date: 08/26/2014 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 2 GPM

Casing Size: 10.00 **Depth Well:** 650 feet **Depth Water:**

Water Bearing Stratifications:	Top	Bottom	Description
	55	72	Sandstone/Gravel/Conglomerate
	620	630	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	2	20

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
NA	CP 01701 POD1		1	3	35	21S	32E	626652	3589283

Driller License:	1706	**Driller Company:**	ELITE DRILLERS CORPORATION		
Driller Name:	WALLACE, BRYCE J.				
Drill Start Date:	10/15/2018	**Drill Finish Date:**	11/29/2018	**Plug Date:**	
Log File Date:	12/13/2018	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	30 GPM
Casing Size:	6.00	**Depth Well:**	840 feet	**Depth Water:**	560 feet

Water Bearing Stratifications:	Top	Bottom	Description
	560	575	Sandstone/Gravel/Conglomerate
	750	770	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	460	840

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USGS 322314103384301 22S.32E.14.32322

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:
Latitude 32°23'23", Longitude 103°38'53" NAD27
Lea County, New Mexico , Hydrologic Unit 13070007
Well depth: 435 feet
Land surface altitude: 3,717.00 feet above NGVD29.
Well completed in "Santa Rosa Sandstone" (231SNRS) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1972-09-13	1996-02-20	5
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:
Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

U.S. Fish and Wildlife Service

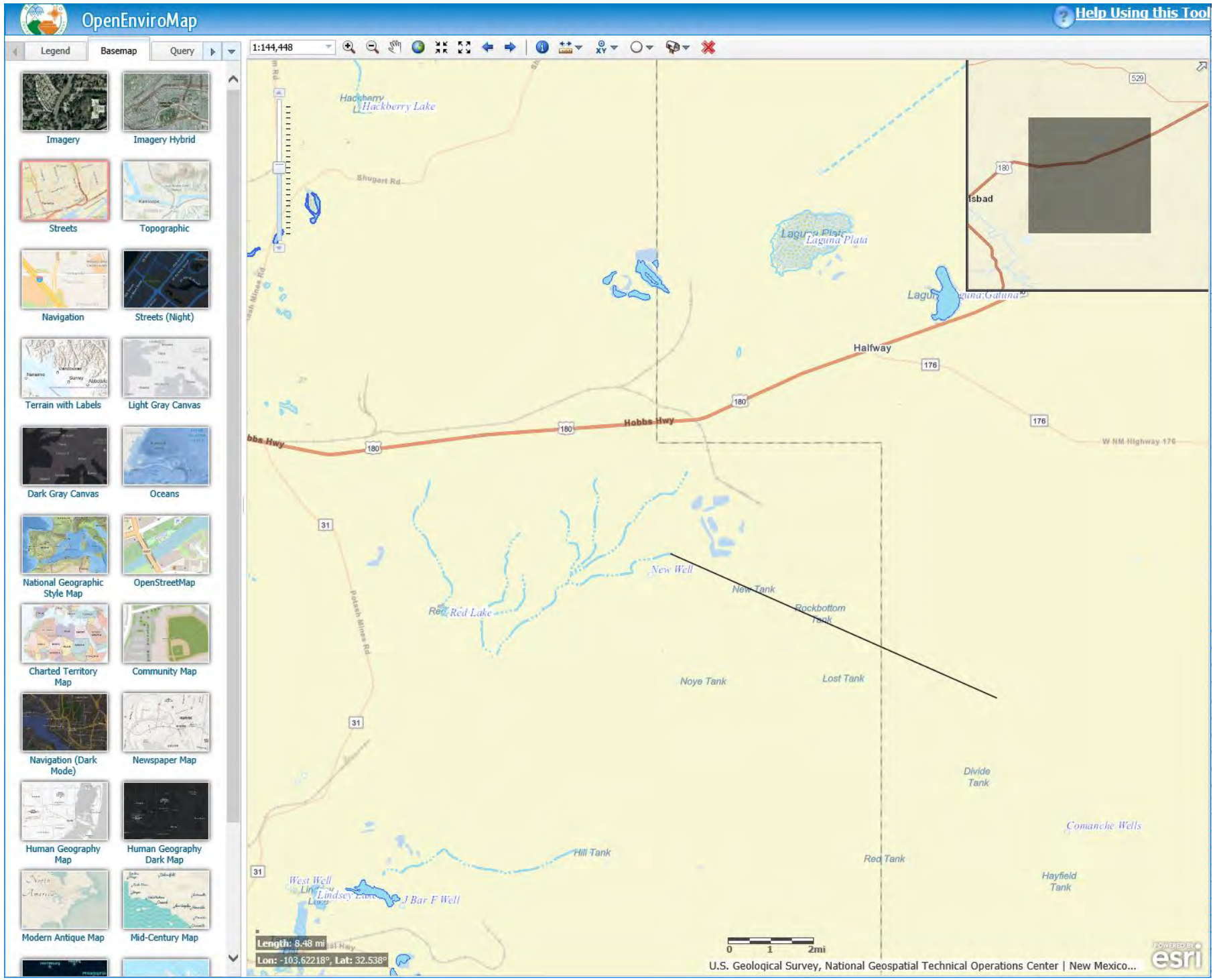
National Wetlands Inventory

Bilbrey 33 Fed 3 - 2,091.5 ft

July 9, 2020

Wetlands

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


OpenEnviroMap
Help Using this Tool
Legend
Basemap
Query
1:144,448
Imagery
Imagery Hybrid
Streets
Topographic
Navigation
Streets (Night)
Terrain with Labels
Light Gray Canvas
Dark Gray Canvas
Oceans
National Geographic Style Map
OpenStreetMap
Charted Territory Map
Community Map
Navigation (Dark Mode)
Newspaper Map
Human Geography Map
Human Geography Dark Map
Modern Antique Map
Mid-Century Map
Hackberry Lake
Shugart Rd
Laguna Plata
Halfway
Hobbs Hwy
W NM Highway 176
Red Lake
New Well
New Tank
Rockbottom Tank
Noye Tank
Lost Tank
Divide Tank
Comanche Wells
Hill Tank
Red Tank
Hayfield Tank
West Well
Lindsey Lake
J Bar F Well
Potash Mines Rd
Length: 8.48 mi
Lon: -103.62218°, Lat: 32.538°
0 1 2mi
U.S. Geological Survey, National Geospatial Technical Operations Center | New Mexico...
esri

U.S. Fish and Wildlife Service
National Wetlands Inventory

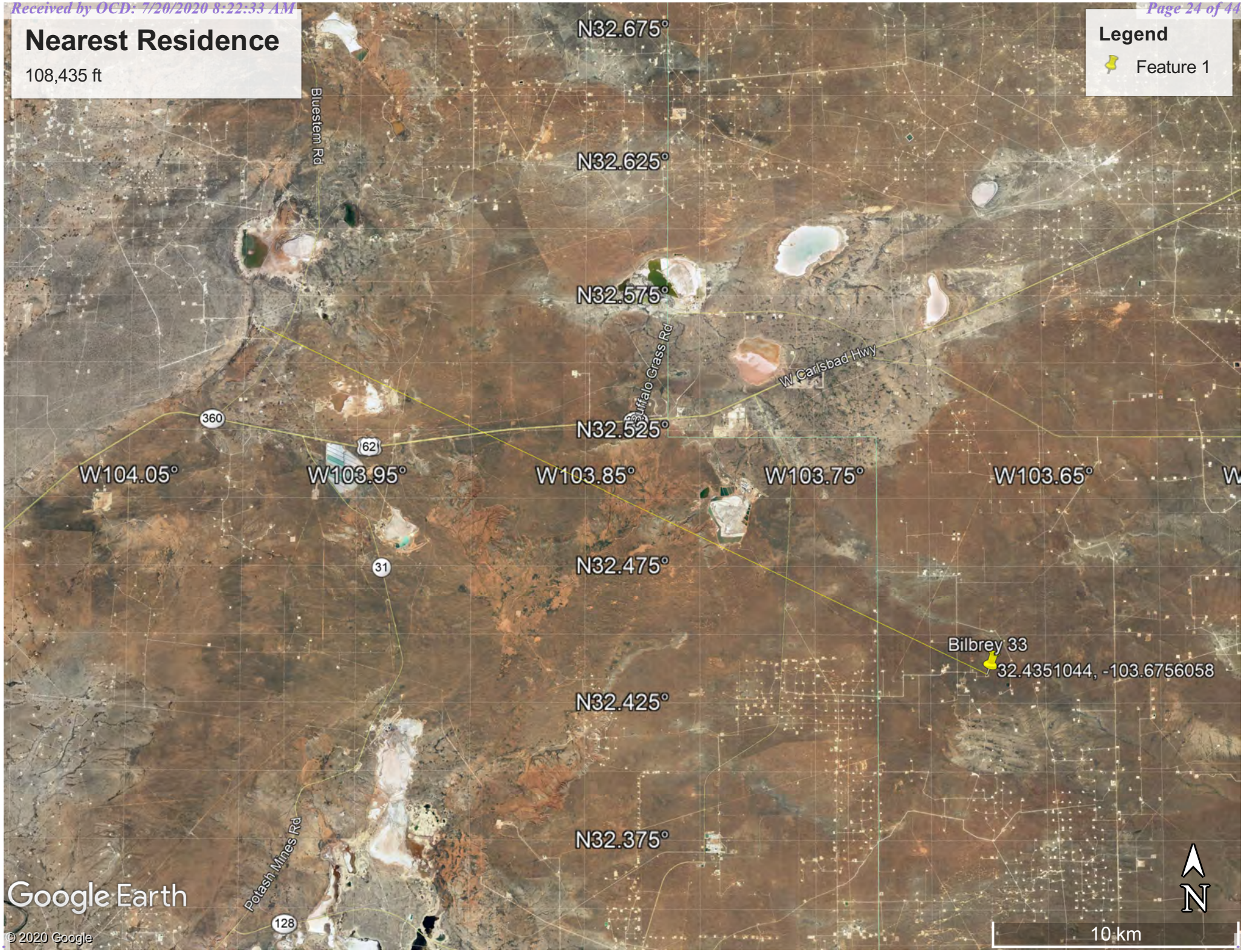
Bilbrey 33 Fed Com 3H Lake 19,189 ft

March 2, 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.


Nearest Residence
108,435 ft
Legend
Feature 1
N32.675°
N32.625°
N32.575°
N32.525°
N32.475°
N32.425°
N32.375°
W104.05°
W103.95°
W103.85°
W103.75°
W103.65°
Bluestem Rd
Buffalo Grass Rd
W Carlsbad Hwy
360
62
31
128
Potash Mines Rd
Bilbrey 33
32.4351044, -103.6756058
Google Earth
© 2020 Google
N
10 km

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance
CP 01701	CP	COM	50	JIMMY MILLS 2005 GST TRUST	LE	CP 01701 POD1	NA			Artesian	1 3	35	21S	32E	626652	3589283	2151

Record Count: 1

UTMNAD83 Radius Search (in meters):

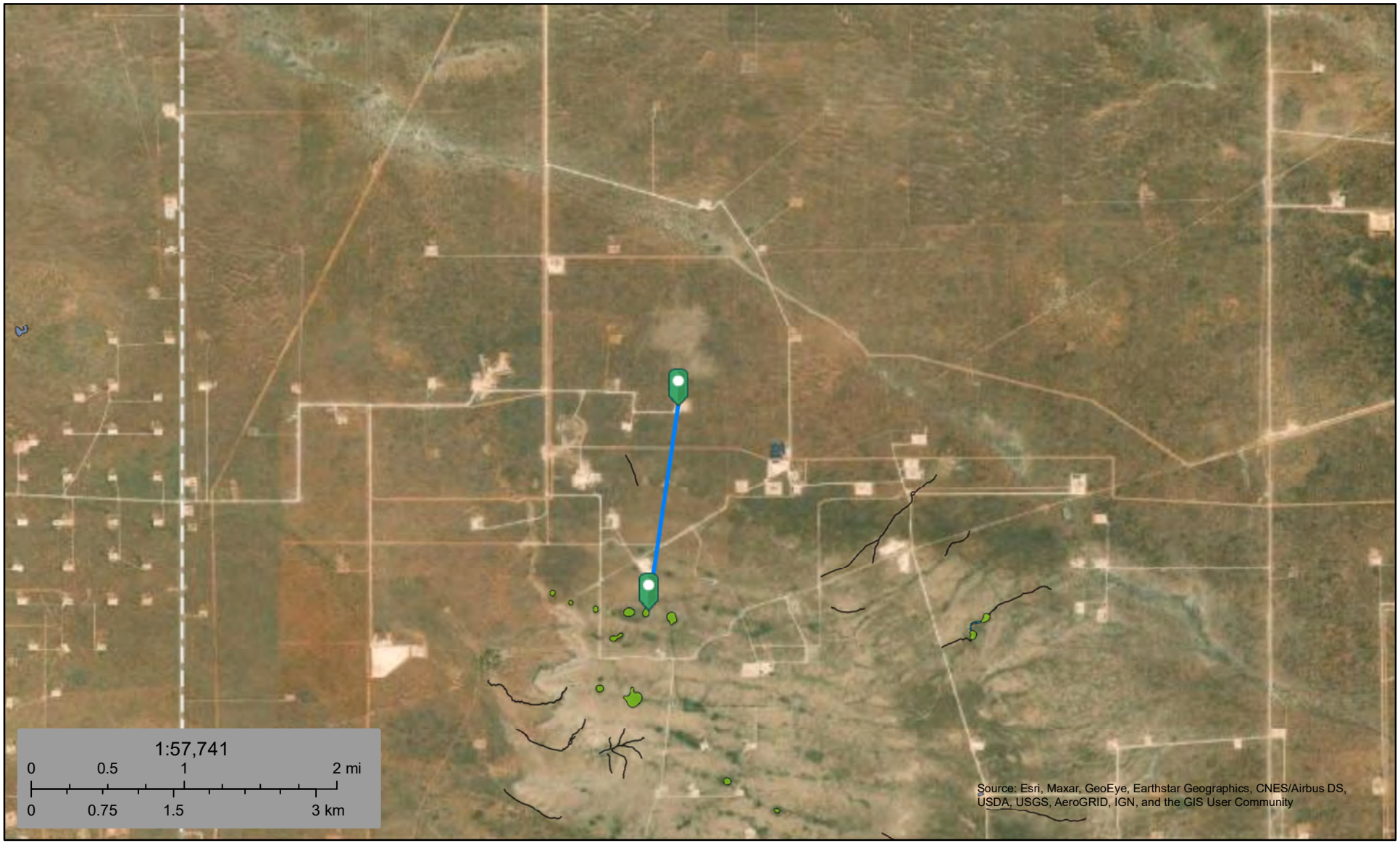
Easting (X): 624506.48 **Northing (Y):** 3589437.22 **Radius:** 2500

Sorted by: Distance

U.S. Fish and Wildlife Service

National Wetlands Inventory

Bilbrey 33 Fed 3 - 6,020.8 ft



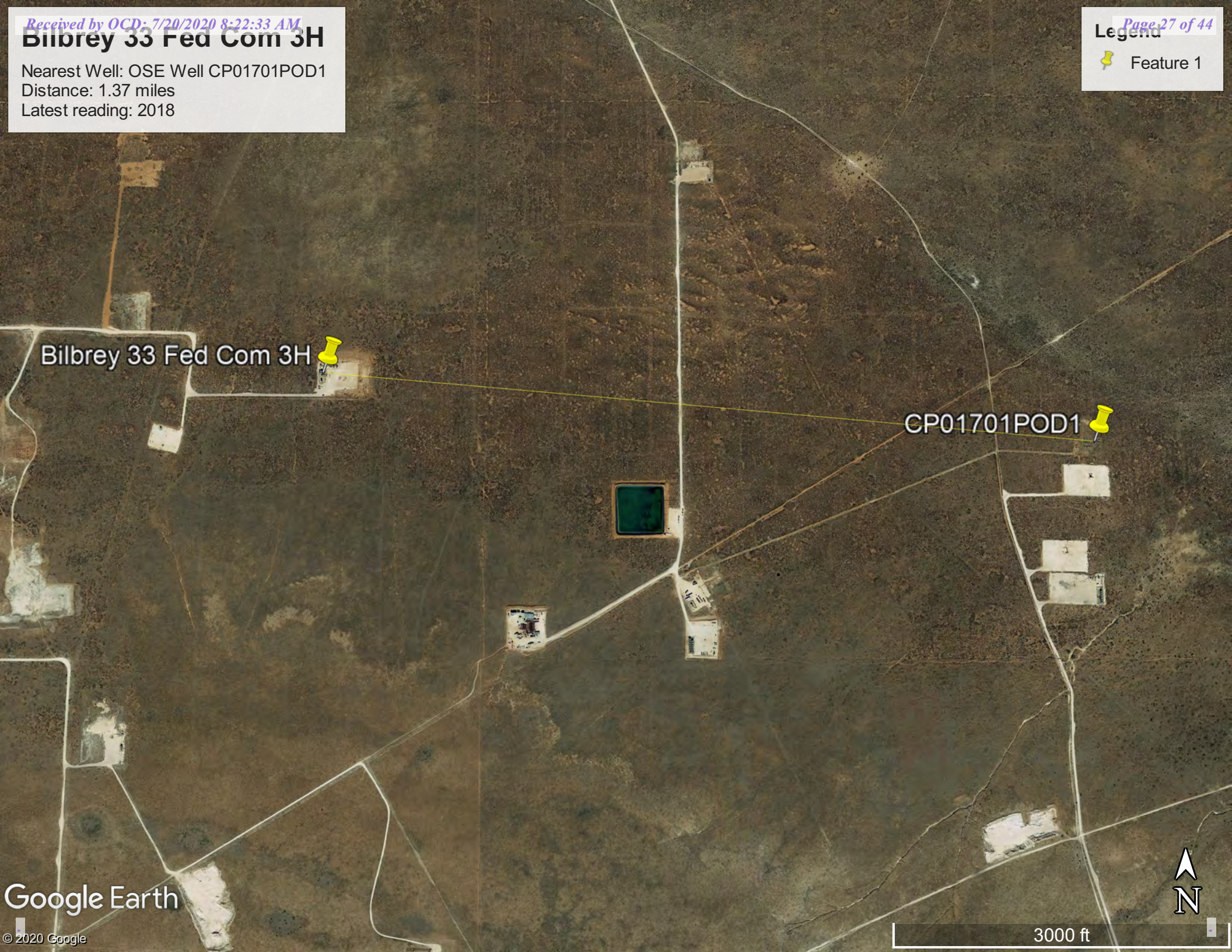
July 9, 2020

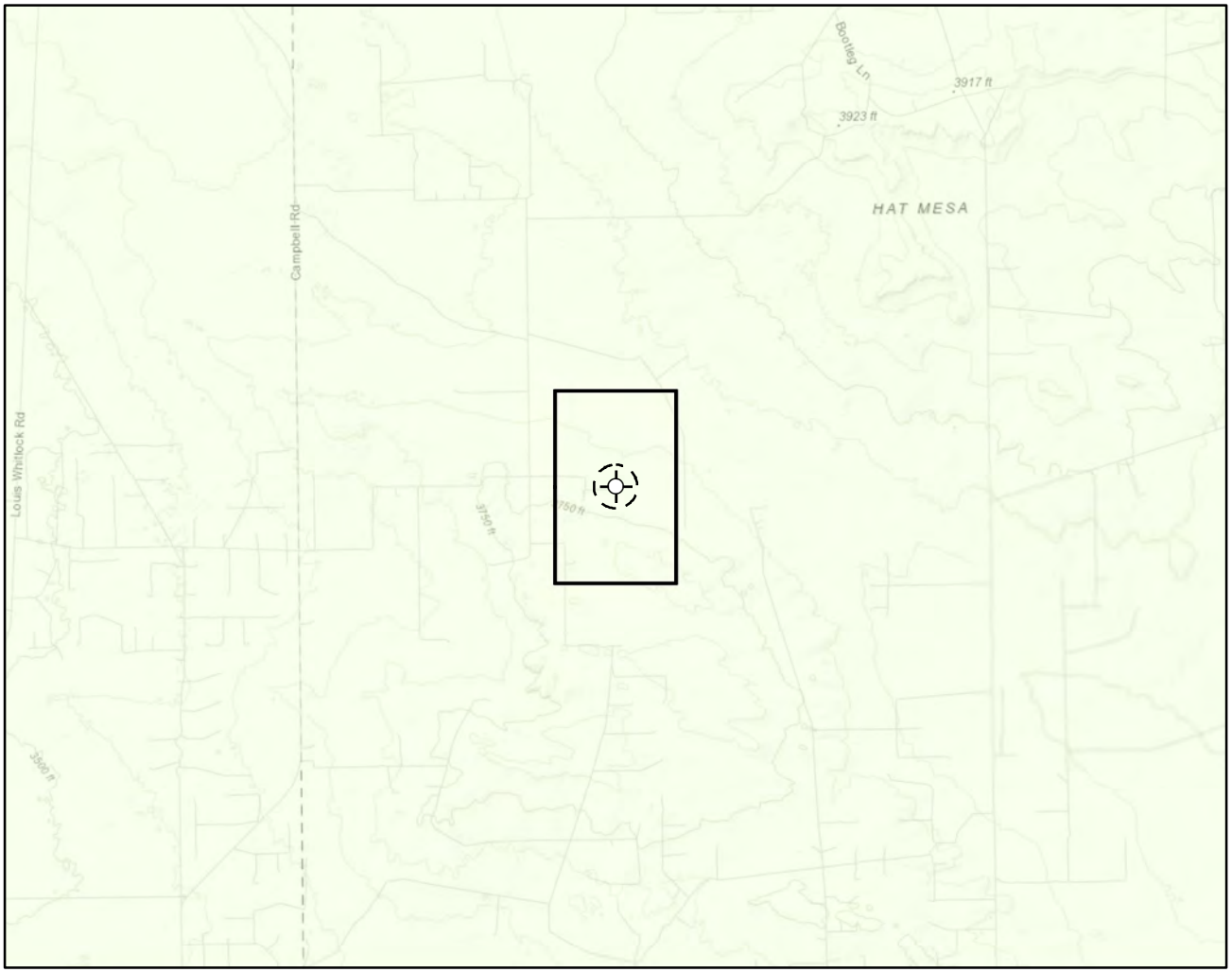
Wetlands

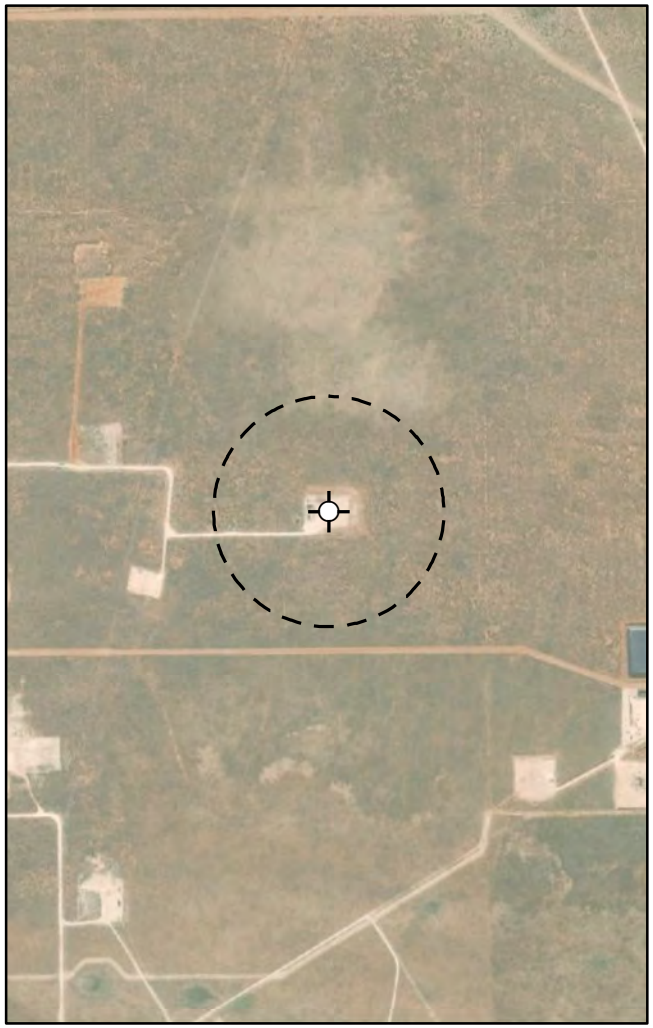
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Bilbrey 33 Fed Com 3H

Nearest Well: OSE Well CP01701POD1
Distance: 1.37 miles
Latest reading: 2018







Karst Potential

- Critical
- High
- Medium
- Low

Site

Site Buffer (1000 ft.)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 600 1,200 ft.

VERTEX

Map Center:
Lat/Long: 32.435104, -103.675606

NAD 1983 UTM Zone 13N
Date: Jun 11/20

N

Karst Potential Map
Bilbrey 33 Fed Com 3H

FIGURE:
X

devon

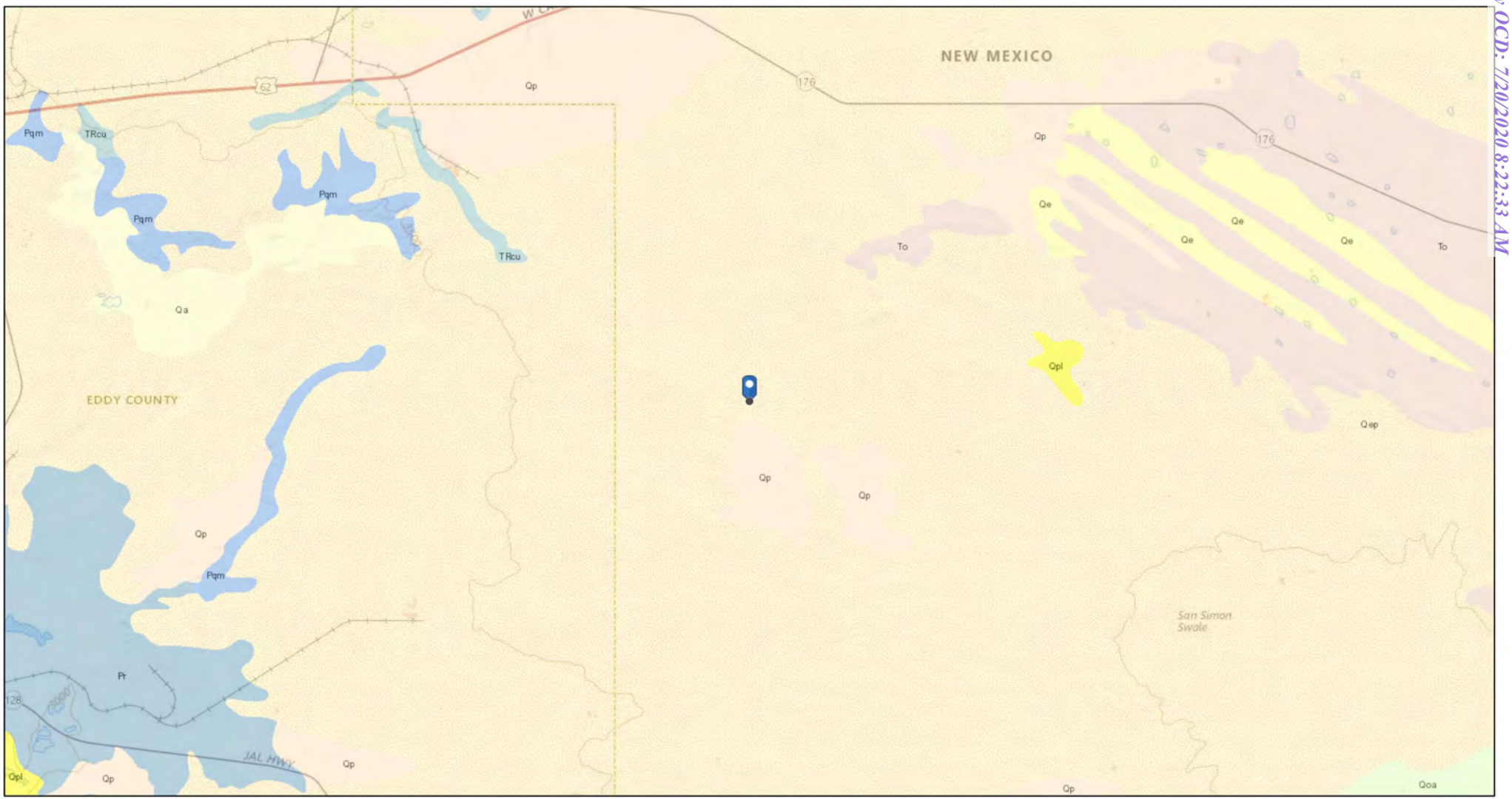
Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Inset Map - ESRI 2018; Overview Map - ESRI World Topographic

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\20E-00141\035 - Bilbrey 33 Fed Com 3H\Fig X Bilbrey 33 Fed Com 3H Karst.mxd

Bilbrey 33 Federal Com 3H



6/10/2020, 12:16:27 PM

1:144,448

0 1.5 3 6 mi

0 2.5 5 10 km

Faults

- Fault, Exposed
- Fault, Intermittent
- Fault, Concealed
- Shere Zone

Dikes

- <all other values>
- Dike
- Dike intruding fault
- Volcanic Vents

STATEMAP (1993 to Present) [Publications]

- Mapping in Complete
- Mapping in Progress

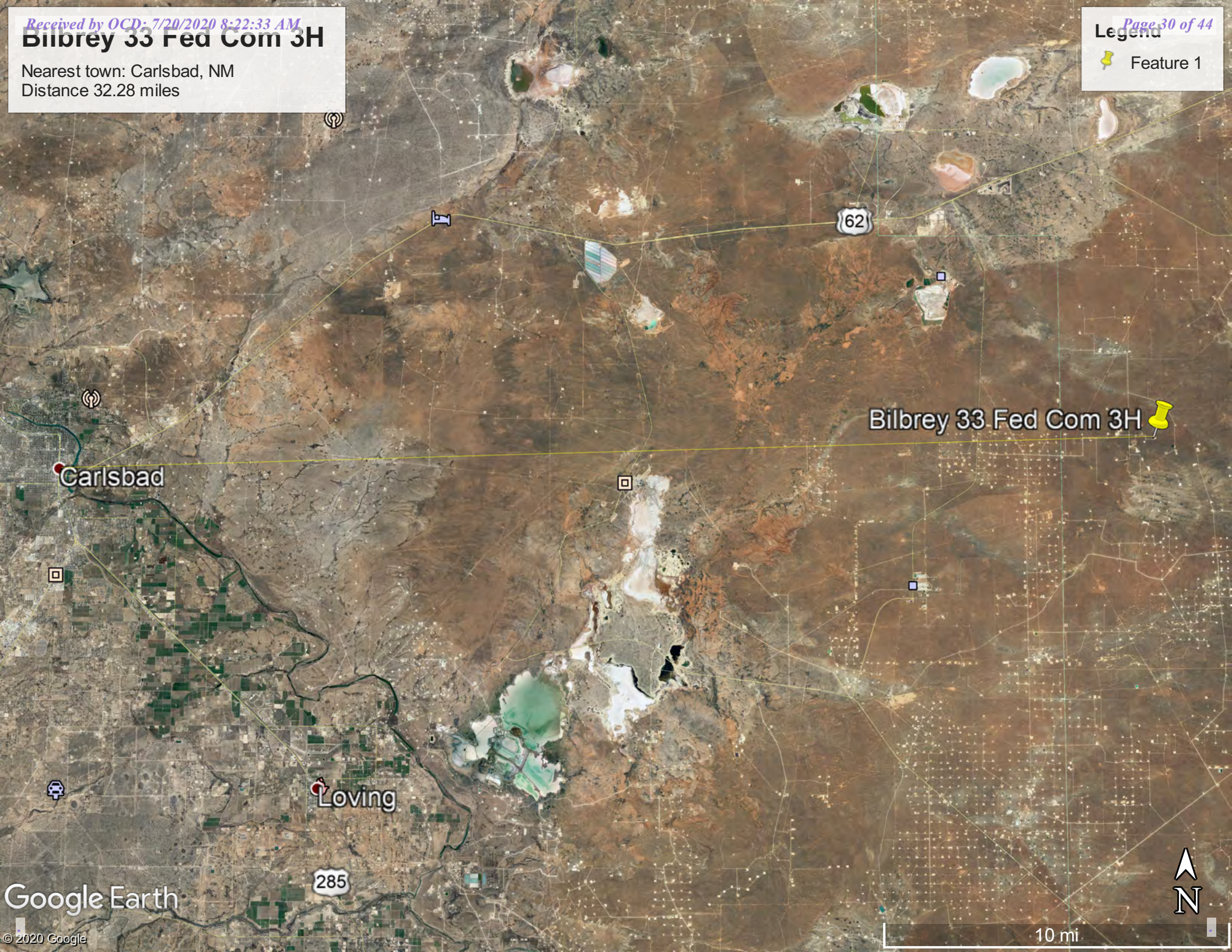
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS

Web AppBuilder for ArcGIS

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line

Bilbrey 33 Fed Com 3H

Nearest town: Carlsbad, NM
Distance 32.28 miles



Soil Map—Lea County, New Mexico

Map Scale: 1:1,290 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 16, Sep 15, 2019

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

Date(s) aerial images were photographed: Dec 31, 2009—Sep 17, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PT	Pyote loamy fine sand	7.0	100.0%
Totals for Area of Interest		**7.0**	**100.0%**

Lea County, New Mexico

PT—Pyote loamy fine sand

Map Unit Setting

National map unit symbol: dmqp
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pyote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 25 inches: loamy fine sand
Bt - 25 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Minor Components

Maljamar
Percent of map unit: 8 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Palomas
Percent of map unit: 7 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 16, Sep 15, 2019

ATTACHMENT 4

Natalie Gordon

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Monday, June 8, 2020 5:35 PM
To: Natalie Gordon
Subject: Fwd: NCH1903651025: Bilbrey 33 Federal Com #3H 48-hr notification of confirmation sampling

---------- Forwarded message ---------
From: **Dhugal Hanton** <vertexresourcegroupusa@gmail.com>
Date: Mon, Jun 8, 2020 at 5:34 PM
Subject: Re: NCH1903651025: Bilbrey 33 Federal Com #3H 48-hr notification of confirmation sampling
To: EMNRD-OCD-District1spills <emnrd-ocd-district1spills@state.nm.us>, Bratcher, Mike, EMNRD <Mike.Bratcher@state.nm.us>, Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>, Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>, CFO_Spill, BLM_NM <blm_nm_cfo_spill@blm.gov>, Amos, James A <Jamos@blm.gov>, Kelsey <KWade@blm.gov>, <ramona.marcus@state.nm.us>
Cc: <wesley.mathews@dvn.com>, <amanda.davis@dvn.com>, <tom.bynum@dvn.com>, <Lupe.Carrasco@dvn.com>

All,

In addition to the confirmatory sampling scheduled at Bilbrey 33 Fed Com #3H for Thursday, June 11, 2020, Vertex will also be conducting a liner inspection during that same visit for a separate release that occurred on May 22, 2018. The incident tracking number assigned to this second release is NCH1815829199.

If there are any questions, please let me know.

Thank you,
Natalie

On Mon, Jun 8, 2020 at 5:28 PM Dhugal Hanton <vertexresourcegroupusa@gmail.com> wrote:

> All,
>
> Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted at Bilbry 33 Fed Com #3H for the release that occurred on January 1, 2019, incident tracking # NCH1903651025.
>
> This work will be completed on behalf of Devon Energy Production Company.
>
> On Thursday, June 11, 2020 at approximately 8:00 a.m., Monica Peppin of Vertex will be onsite to conduct final confirmatory sampling. She can be reached at 575-361-9880. If you need directions to the site, please do not hesitate to contact her.
>
> If you have any questions or concerns regarding this notification, please give me a call at 505-506-0040.
>
> Thank you,
> Natalie

Natalie Gordon
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

ATTACHMENT 5

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	6/11/2020
Site Location Name:	Bilbrey 33 Federal Com #3H	Report Run Date:	6/11/2020 8:21 PM
Project Owner:	Amanda Davis	File (Project) #:	20E-00141
Project Manager:	Natalie Gordon	API #:	30-025-41806
Client Contact Name:	Amanda Davis	Reference	05/22/2018 - 50bbls Release
Client Contact Phone #:	(575) 748-0176		

Summary of Times	
Left Office	6/11/2020 6:31 AM
Arrived at Site	6/11/2020 7:42 AM
Departed Site	6/11/2020 11:29 AM
Returned to Office	

Daily Site Visit Report

Summary of Daily Operations

7:43 Conduct liner inspection

7:57 Vegetation outside of pad area is lush for the area. No signs of produced water spill. No visual staining

Next Steps & Recommendations

1 Begin closure report

Daily Site Visit Report

Viewing Direction: East	**Viewing Direction**: North
	
South side of pad where more electrical panels are located	West side of pad from entrance where electrical boxes are located
Viewing Direction: West	**Viewing Direction**: North
	
Liner on south side of containment	Liner on East side of containment

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: East
	
Liner on west side of containment	Liner in between tanks within containment
Viewing Direction: East	**Viewing Direction**: South
	
Liner on north side of containment	Liner on East side of containment

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Monica Peppin

Signature: