



## SITE INFORMATION

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**Closure Report**  
**CASS 16 STATE 234 TB**  
**Incident ID: NAPP2331464718**  
**Unit E Sec 16 T23S R27E**  
**32.3065857°, -104.2022462°**  
**Eddy County, New Mexico**

**Produced Water Release**  
**Point of Release: Pinhole on a 90° fitting on the water line inside the secondary**  
**containment**  
**Release Date: 11.10.23**  
**Volume Released: 21.47 Barrels of Produced Water**  
**Volume Recovered: 21.47 Barrels of Produced Water**

**CARMONA RESOURCES**



**Prepared for:**  
**Marathon Oil Corporation**  
**990 Town and Country Blvd,**  
**Houston, Texas 77024**

**Prepared by:**  
**Carmona Resources, LLC**  
**310 West Wall Street**  
**Suite 500**  
**Midland, Texas 79701**



## TABLE OF CONTENTS

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### 1.0 SITE INFORMATION AND BACKGROUND

### 2.0 SITE CHARACTERIZATION AND GROUNDWATER

### 3.0 NMAC REGULATORY CRITERIA

### 4.0 LINER INSPECTION ACTIVITIES

### 5.0 CONCLUSIONS

#### FIGURES

FIGURE 1                      OVERVIEW                      FIGURE 2                      TOPOGRAPHIC

FIGURE 3                      SECONDARY CONTAINMENT MAP

#### APPENDICES

APPENDIX A                      PHOTOS

APPENDIX B                      INITIAL AND FINAL C-141/NMOCD CORRESPONDENCE

APPENDIX C                      SITE CHARACTERIZATION AND GROUNDWATER



November 20, 2023

Mike Bratcher  
District Supervisor  
Oil Conservation Division, District 2  
811 S. First Street  
Artesia, New Mexico 88210

**Re: Closure Report  
CASS 16 STATE 234 TB  
Marathon Oil Corporation  
Incident ID: NAPP2331464718  
Site Location: Unit E, S16, T23S, R27E  
(Lat 32.3065857°, Long -104.2022462°)  
Eddy County, New Mexico**

Mr. Bratcher:

On behalf of Marathon Oil Corporation, Carmona Resources, LLC has prepared this letter to document the Cass 16 State 234 TB site activities. The site is located at 32.3065857°, -104.2022462° within Unit E, S16, T23S, R27E, in Eddy County, New Mexico (Figures 1 and 2).

### **1.0 Site Information and Background**

Based on the initial C-141 obtained from the New Mexico Oil Conservation Division (NMOCD), the incident was discovered on November 10, 2023, due to a pinhole on a 90° fitting on the water line inside the secondary containment. The incident released approximately twenty-one point four seven (21.47) barrels of produced water, with twenty-one point four seven (21.47) barrels of produced water recovered. All fluids were contained within the lined facility. See Figure 3. The initial C-141 form is attached in Appendix B.

### **2.0 Site Characterization and Groundwater**

The site is located within a high karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, no known water source is within a 0.50-mile radius of the location. The nearest well is located approximately 0.80 miles northeast of the site in S09, T23S, R27E and was drilled in 2017. The well has a reported groundwater depth of 150' feet below the ground surface (ft bgs). A copy of the associated point of diversion is attached in Appendix C.

### **3.0 NMAC Regulatory Criteria**

Per the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following criteria were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.
- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride: 600 mg/kg.

### **4.0 Liner Inspection Activities**

On November 21, 2023, Carmona Resources, LLC conducted liner inspection activities to assess the liner's integrity within the facility. Prior to the liner inspection, the NMOCD division office was notified via email on November 17, 2023, per Subsection D of 19.15.29.12 NMAC. See Appendix B. Carmona



Resources, LLC personnel inspected the liner visually and found it to be intact with no integrity issues. Refer to the Photolog.

### **5.0 Conclusions**

Based on the liner inspection throughout the facility, no further actions are required at the site. The final C-141 is attached, and Marathon formally requests the closure of the spill. If you have any questions regarding this report or need additional information, please contact us at 432-813-1992.

Sincerely,

**Carmona Resources, LLC**

Clinton Merritt  
Sr. Project Manager

Ashton Thielke  
Sr. Project Manager

## FIGURES

CARMONA RESOURCES







OVERVIEW MAP  
MARATHON OIL CORPORATION  
CASS 16 STATE 234 TB  
EDDY COUNTY, NEW MEXICO  
32.3065857°, -104.2022462°



FIGURE 1



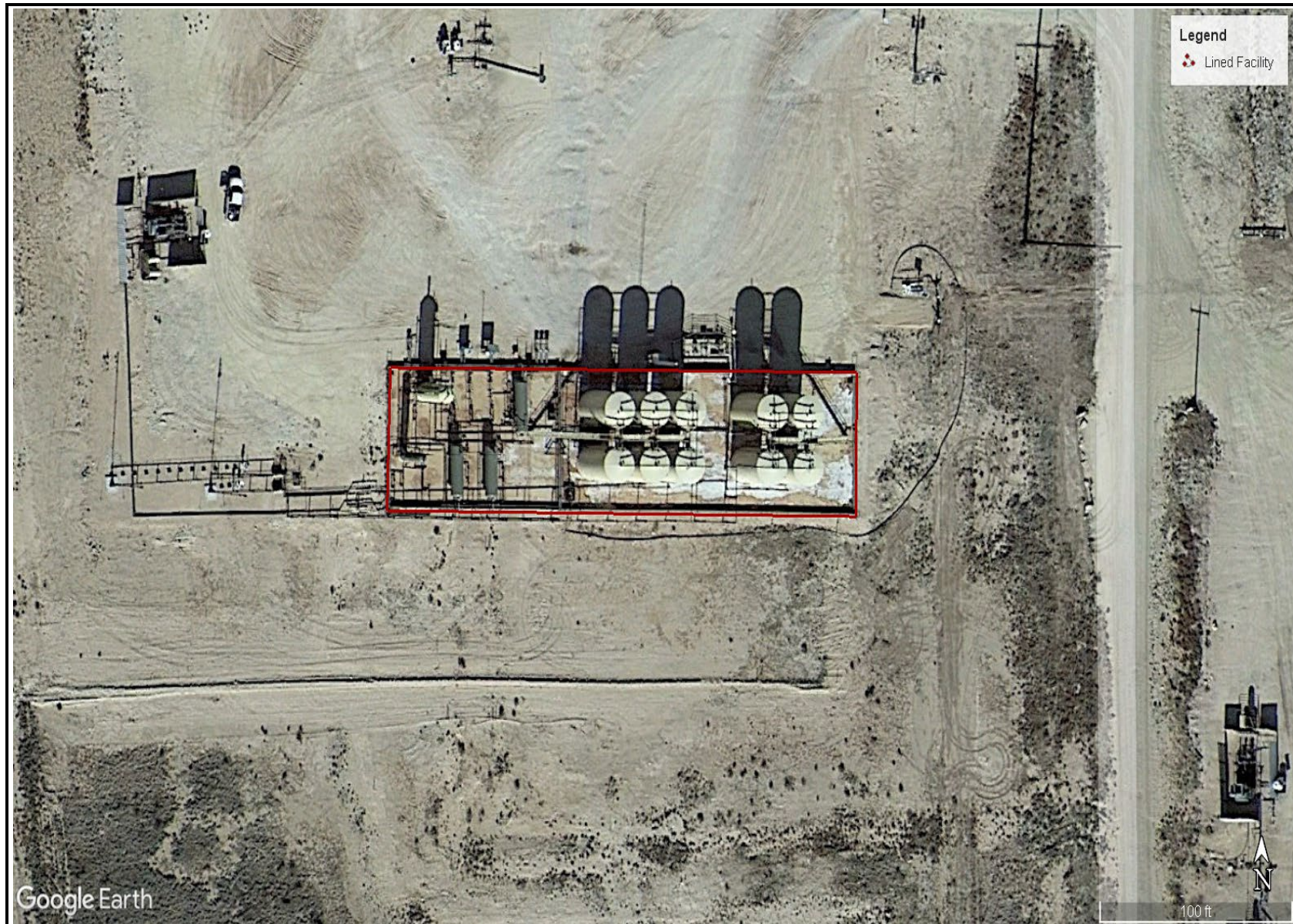


TOPOGRAPHIC MAP  
MARATHON OIL CORPORATION  
CASS 16 STATE 234 TB  
EDDY COUNTY, NEW MEXICO  
32.3065857°, -104.2022462°



FIGURE 2





SECONDARY CONTAINMENT MAP  
MARATHON OIL CORPORATION  
CASS 16 STATE 234 TB  
EDDY COUNTY, NEW MEXICO  
32.3065857°, -104.2022462°



FIGURE 3



## APPENDIX A

CARMONA RESOURCES



**PHOTOGRAPHIC LOG****Marathon Oil Corporation****Photograph No. 1****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**  
View South, facility signage.**Photograph No. 2****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**  
View Southwest, area of lined facility.**Photograph No. 3****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**  
View Northwest, area of lined facility.



**PHOTOGRAPHIC LOG****Marathon Oil Corporation****Photograph No. 4****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**

View East, area of lined facility.

**Photograph No. 5****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**

View NORTH, area of lined facility.

**Photograph No. 6****Facility:** CASS 16 State 234 TB**County:** Eddy County, New Mexico**Description:**

View East, area of lined facility.





# PHOTOGRAPHIC LOG

## Marathon Oil Corporation

### Photograph No. 7

**Facility:** CASS 16 State 234 TB

**County:** Eddy County, New Mexico

**Description:**

View Southwest, area of lined facility.



### Photograph No. 8

**Facility:** CASS 16 State 234 TB

**County:** Eddy County, New Mexico

**Description:**

View Southeast, area of lined facility.



### Photograph No. 9

**Facility:** CASS 16 State 234 TB

**County:** Eddy County, New Mexico

**Description:**

View Southwest, area of lined facility.



## APPENDIX B

CARMONA RESOURCES



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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

|                |                |
|----------------|----------------|
| Incident ID    | nAPP2331464718 |
| District RP    |                |
| Facility ID    | fAPP2125249869 |
| Application ID |                |

Release Notification

Responsible Party

|  |                                |
|--|--------------------------------|
| Responsible Party Marathon Oil Permian LLC   | OGRID 372098                   |
| Contact Name Melodie Sanjari   | Contact Telephone 575-988-8753 |
| Contact email <a href="mailto:msanjari@marathonoil.com">msanjari@marathonoil.com</a> | Incident # (assigned by OCD)   |
| Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220                       |                                |

Location of Release Source

Latitude 32.3065857, Longitude -104.2022462  
(NAD 83 in decimal degrees to 5 decimal places)

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Site Name CASS 16 STATE 234 TB    | Site Type Oil & Gas Tank Battery |
| Date Release Discovered: 11/10/23 | Facility ID#fAPP2125249869       |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| E           | 16      | 23S      | 27E   | Eddy   |

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

|  |  |   |
|--|--|---|
| <input type="checkbox"/> Crude Oil                 | Volume Released (bbls)   | Volume Recovered (bbls)   |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 21.47   | Volume Recovered (bbls) 21.47                                       |
|  | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)   | Volume Recovered (bbls)   |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)  | Volume Recovered (Mcf)  |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)   | Volume/Weight Recovered (provide units)                             |

Cause of Release:  
A pinhole on a 90 from the water line resulted in the release of approx. 21.47 bbl. of produced water inside of the lined, secondary containment. The source was isolated for repairs and the fluid was recovered in tandem to the pressure washing of the containment as it was too shallow to be recovered by truck. A notice will be sent out prior to a liner integrity inspection.



## Oil Conservation Division

|                |                |
|----------------|----------------|
| Incident ID    | nAPP2331464718 |
| District RP    |                |
| Facility ID    | fAPP2125249869 |
| Application ID |                |

|  |  |
|--|--|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>NOR submitted 11/10/23 |  |

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

|  |  |
|--|--|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.   |  |
| If all the actions described above have <u>not</u> been undertaken, explain why:   |  |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  |  |
| 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: <u>Melodie Sanjari</u>   | Title: <u>Environmental Professional</u> |
| Signature: <u>Melodie Sanjari</u>  | Date: <u>11/16/23</u>                    |
| email: <u>msanjari@marathonoil.com</u>   | Telephone: <u>575-988-8753</u>           |
| <b><u>OCD Only</u></b>   |  |
| Received by: _____   | Date: _____                              |

## MRO Spill Calculation Tool

**Standing Liquid Inputs:**

|                     | Length (ft.) | Width (ft.) (Area<br>for<br>Displacement) | Avg. Liquid<br>Depth (in.) | % Oil | Total Volume<br>(bbls) | Water Volume<br>(bbls) | Oil Volume<br>(bbls) |
|---------------------|--------------|---|----------------------------|-------|------------------------|------------------------|----------------------|
| Rectangle Area #1   | 65           | 89  | 0.25                       |       | 21.47                  | 21.47                  | 0.00                 |
| Rectangle Area #2   |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #3   |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #4   |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #5   |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #6   |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Vessel Displacement |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Vessel Displacement |              |   |                            |       | 0.00                   | 0.00                   | 0.00                 |
| Liquid Volume:      |              |   |                            |       | 21.47                  | 21.47                  | 0.00                 |

**Saturated Soil Inputs:**

 Soil Type: **Gravel or Sand**

|                   | Length (ft.) | Width (ft.) | Avg. Saturated<br>Depth (in.) | % Oil | Total Volume<br>(bbls) | Water Volume<br>(bbls) | Oil Volume<br>(bbls) |
|-------------------|--------------|-------------|-------------------------------|-------|------------------------|------------------------|----------------------|
| Rectangle Area #1 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #2 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #3 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #4 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #5 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #6 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #7 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Rectangle Area #8 |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |
| Saturated Volume  |              |             |                               |       | 0.00                   | 0.00                   | 0.00                 |

|                            | Total Volume<br>(bbls) | Water Volume<br>(bbls) | Oil Volume<br>(bbls) |
|----------------------------|------------------------|------------------------|----------------------|
| Total Spill Volume (bbls): | 21.47                  | 21.47                  | 0.00                 |
| Total Spill Volume (gals): | 901.56                 | 901.56                 | 0.00                 |

Comments:

Color Key:

|                                 |                             |                            |          |
|---------------------------------|-----------------------------|----------------------------|----------|
| <b>Required Input<br/>Cells</b> | Supplemental<br>Input Cells | No Input<br>(Calculations) | No Input |
|---------------------------------|-----------------------------|----------------------------|----------|

### Ground/Vegetation Overspray

| Cover Type    | Microns | Approximate Depth (in) |
|---------------|---------|------------------------|
| <b>Ground</b> |         |                        |
| Dull Color    | 10      | 0.00003281             |
| Dark Color    | 50      | 0.00016404             |

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

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

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

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

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



State of New Mexico  
Oil Conservation Division

Page 4

|                |  |
|----------------|--|
| Incident ID    |  |
| 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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

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

|                |  |
|----------------|--|
| Incident ID    |  |
| District RP    |  |
| Facility ID    |  |
| Application ID |  |

## Closure

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

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

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

---

**From:** Wells, Shelly, EMNRD  
**Sent:** Friday, November 17, 2023 10:44 AM  
**To:** Clint Merritt  
**Cc:** Melodie Sanjari; Castro, Isaac (MRO); Mike Carmona; Conner Moehring; Devin Dominguez; Hamlet, Robert, EMNRD; Bratcher, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] CASS 16 STATE 234 TB Liner Inspection Notification

Hi Clinton,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

*Shelly*

**Shelly Wells** \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive | Santa Fe, NM 87505  
(505)469-7520 | [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

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**From:** Clint Merritt <[MerrittC@carmonaresources.com](mailto:MerrittC@carmonaresources.com)>  
**Sent:** Friday, November 17, 2023 9:31 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Melodie Sanjari <[msanjari@marathonoil.com](mailto:msanjari@marathonoil.com)>; Castro, Isaac (MRO) <[icastro@marathonoil.com](mailto:icastro@marathonoil.com)>; Mike Carmona <[Mcarmona@carmonaresources.com](mailto:Mcarmona@carmonaresources.com)>; Conner Moehring <[Cmoehring@carmonaresources.com](mailto:Cmoehring@carmonaresources.com)>; Devin Dominguez <[Ddominguez@carmonaresources.com](mailto:Ddominguez@carmonaresources.com)>  
**Subject:** [EXTERNAL] CASS 16 STATE 234 TB Liner Inspection Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Morning,

On behalf of Marathon Oil, Carmona Resources will conduct a liner inspection at the below-referenced site on **11/21/23 around 1:00 PM. Mountain Time**. Please let me know if you have any questions.

**CASS 16 STATE 234 TB**  
**Incident ID: nAPP2331464718**  
**Eddy County, New Mexico**



Clinton Merritt  
310 West Wall Street, Suite 500  
Midland TX, 79701  
M: 432-813-9044  
[MerrittC@carmonaresources.com](mailto:MerrittC@carmonaresources.com)

CARMONA RESOURCES



## APPENDIX C

CARMONA RESOURCES



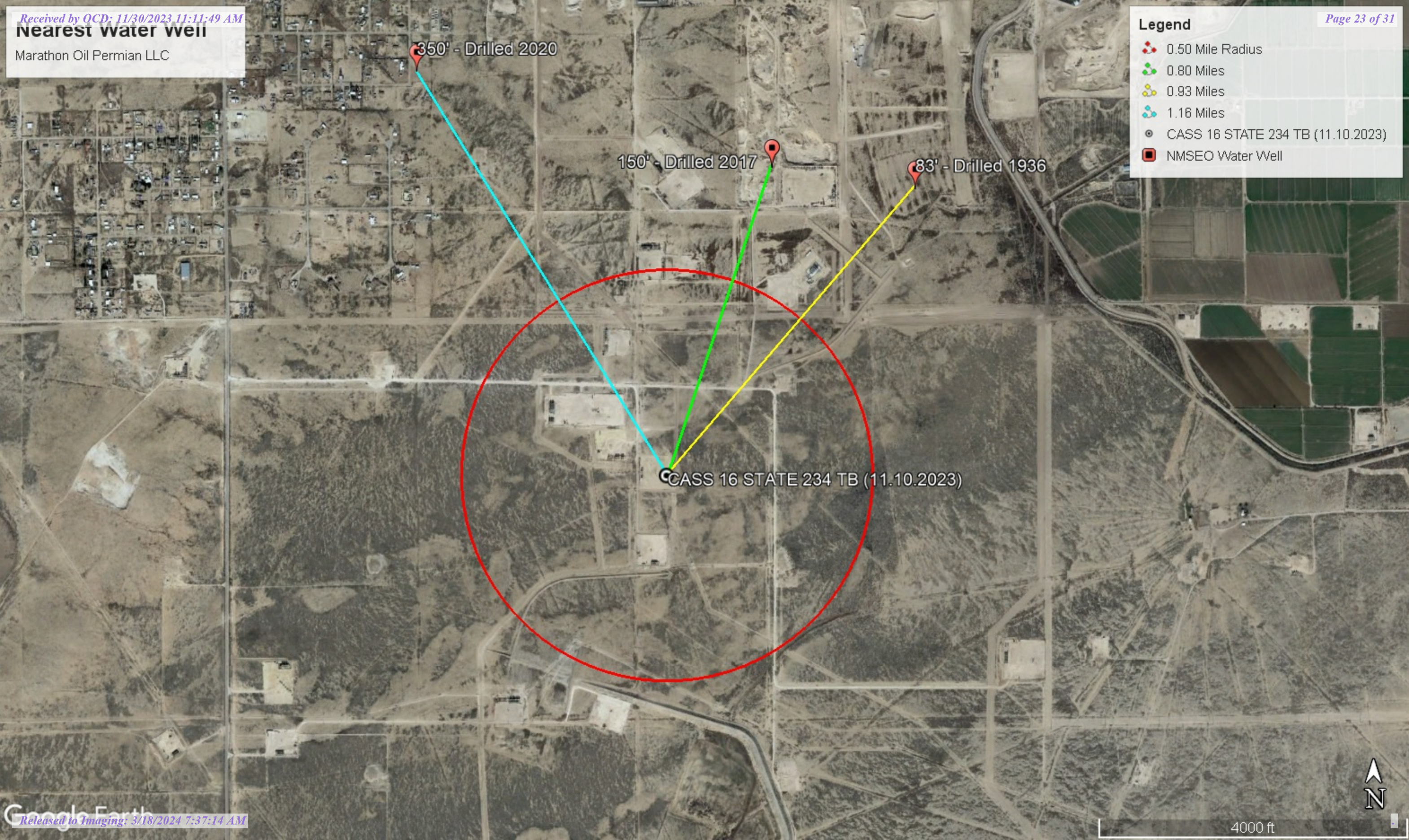


**Nearest water well**

Marathon Oil Permian LLC

**Legend**

- 0.50 Mile Radius
- 0.80 Miles
- 0.93 Miles
- 1.16 Miles
- CASS 16 STATE 234 TB (11.10.2023)
- NMSEO Water Well






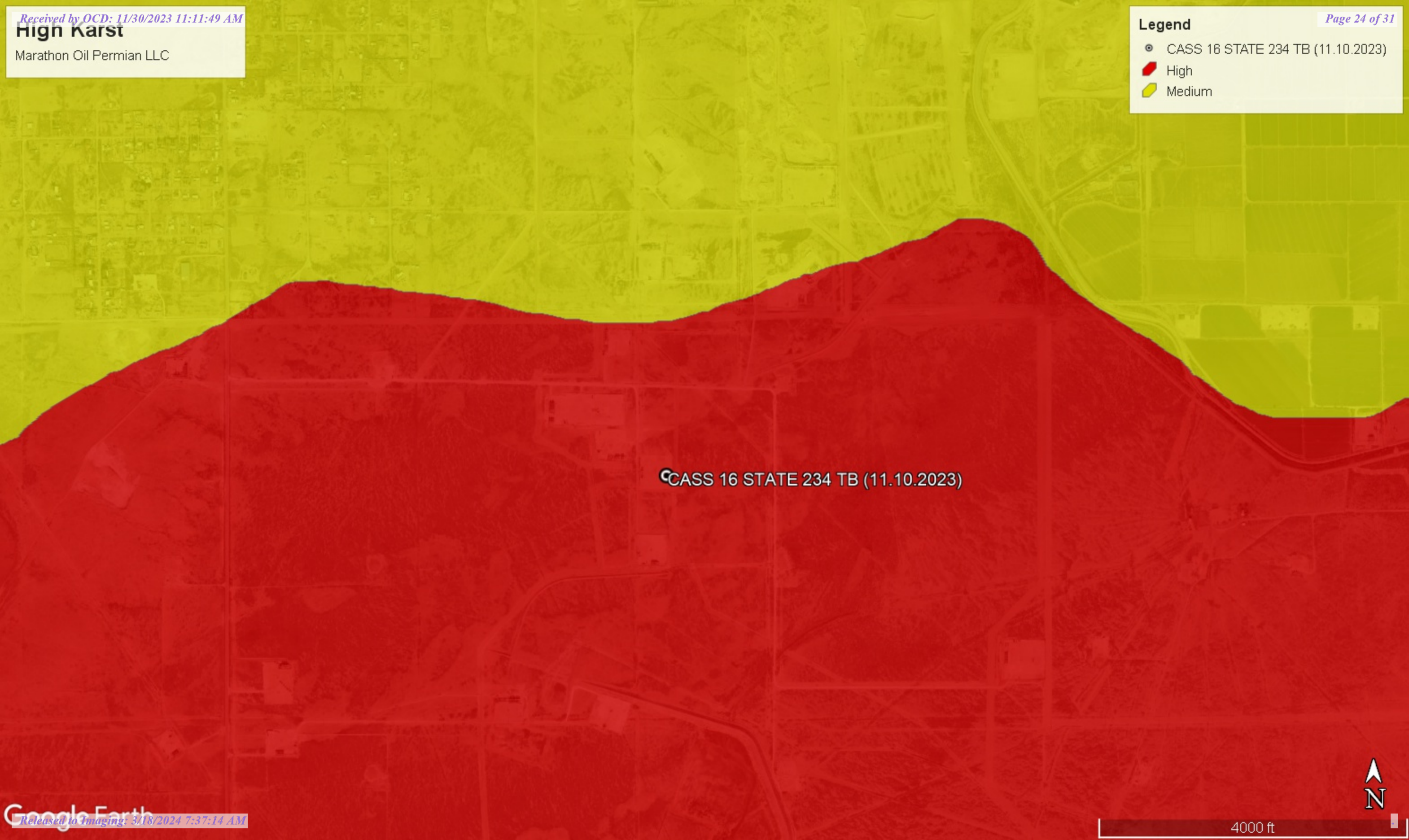


High Karst

Marathon Oil Permian LLC

**Legend**

-  CASS 16 STATE 234 TB (11.10.2023)
-  High
-  Medium



CASS 16 STATE 234 TB (11.10.2023)



N



4000 ft



# 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      |       | Q Q Q  |    |    |     |     |        |          | X   | Y   | Distance  | Depth Well | Depth Water | Water Column |     |
|-----------------------------------|----------|-------|--------|----|----|-----|-----|--------|----------|---|---|---|------------|-------------|--------------|-----|
|                                   | Sub-Code | basin | County | 64 | 16 | 4   | Sec | Tws    | Rng      |   |   |   |            |             |              |     |
| <a href="#">C 04044 POD1</a>      | CUB      | ED    | 3      | 2  | 3  | 09  | 23S | 27E    | 575504   | 3575907   |    | 1274  | 290        | 150         | 140          |     |
| <a href="#">C 00195</a>           | CUB      | ED    | 4      | 1  | 4  | 09  | 23S | 27E    | 576069   | 3575827*  |    | 1487  | 128        | 83          | 45           |     |
| <a href="#">C 04429 POD1</a>      | C        | ED    | 4      | 4  | 1  | 08  | 23S | 27E    | 574102   | 3576270   |    | 1863  | 400        | 350         | 50           |     |
| <a href="#">C 04581 POD1</a>      | C        | ED    | 3      | 1  | 1  | 09  | 23S | 27E    | 575167   | 3576589   |    | 1892  | 165        | 109         | 56           |     |
| <a href="#">C 01261</a>           | CUB      | ED    |        |    |    | 21  | 23S | 27E    | 575780   | 3572889*  |    | 1932  | 250        |             |              |     |
| <a href="#">C 01618</a>           | C        | ED    | 4      | 4  | 4  | 07  | 23S | 27E    | 573252   | 3575384*  |    | 1972  | 250        |             |              |     |
| <a href="#">C 00420</a>           | C        | CUB   | ED     | 4  | 2  | 09  | 23S | 27E    | 576370   | 3576337*  |    | 2072  | 2151       |             |              |     |
| <a href="#">C 00508 CLW225089</a> | O        | CUB   | ED     | 4  | 1  | 3   | 10  | 23S    | 27E      | 576877  | 3575839*  |    | 2110       | 234         | 28           | 206 |
| <a href="#">C 00623</a>           | C        | ED    | 2      | 1  | 15 | 23S | 27E | 577189 | 3575142* |    | 2134  | 200   |            |             |              |     |
| <a href="#">C 03005</a>           | C        | ED    | 3      | 4  | 4  | 07  | 23S | 27E    | 573052   | 3575384*  |  | 2160  | 140        | 100         | 40           |     |
| <a href="#">C 00068 CLW193190</a> | O        | CUB   | ED     | 3  | 3  | 1   | 10  | 23S    | 27E      | 576673  | 3576241*  |  | 2202       | 175         |              |     |
| <a href="#">C 00508 S</a>         | CUB      | ED    | 2      | 1  | 3  | 10  | 23S | 27E    | 576877   | 3576039*  |  | 2225  | 234        | 28          | 206          |     |
| <a href="#">C 01071</a>           | C        | ED    |        |    | 1  | 08  | 23S | 27E    | 573751   | 3576499*  |  | 2250  | 279        | 95          | 184          |     |
| <a href="#">C 02191</a>           | C        | ED    |        |    | 1  | 08  | 23S | 27E    | 573751   | 3576499*  |  | 2250  | 252        | 75          | 177          |     |
| <a href="#">C 00187</a>           | C        | ED    | 1      | 1  | 4  | 15  | 23S | 27E    | 577380   | 3574509   |  | 2287  | 210        | 125         | 85           |     |
| <a href="#">C 01632</a>           | C        | ED    | 3      | 2  | 4  | 07  | 23S | 27E    | 573050   | 3575789*  |  | 2323  | 162        | 100         | 62           |     |
| <a href="#">C 01632 CLW197648</a> | O        | C     | ED     | 3  | 2  | 4   | 07  | 23S    | 27E      | 573050  | 3575789*  |  | 2323       | 162         | 100          | 62  |
| <a href="#">C 01632 POD2</a>      | C        | ED    | 3      | 2  | 4  | 07  | 23S | 27E    | 573050   | 3575789*  |  | 2323  | 173        | 100         | 73           |     |
| <a href="#">C 00068</a>           | CUB      | ED    | 1      | 3  | 1  | 10  | 23S | 27E    | 576673   | 3576441*  |  | 2347  | 175        |             |              |     |
| <a href="#">C 03892 POD1</a>      | C        | ED    | 1      | 2  | 1  | 08  | 23S | 27E    | 573846   | 3576764   |  | 2417  | 148        | 54          | 94           |     |
| <a href="#">C 00323</a>           | C        | ED    | 4      | 4  | 05 | 23S | 27E | 574750 | 3577122* |  | 2449  | 200   |            |             |              |     |
| <a href="#">C 02711</a>           | C        | ED    | 4      | 4  | 05 | 23S | 27E | 574750 | 3577122* |  | 2449  | 170   | 75         | 95          |              |     |
| <a href="#">C 03020</a>           | C        | ED    | 4      | 4  | 05 | 23S | 27E | 574750 | 3577122* |  | 2449  | 176   | 135        | 41          |              |     |
| <a href="#">C 02510</a>           | C        | ED    | 1      | 2  | 1  | 08  | 23S | 27E    | 573848   | 3576806*  |  | 2452  | 350        | 350         | 0            |     |
| <a href="#">C 03799 POD1</a>      | C        | ED    | 1      | 3  | 3  | 04  | 23S | 27E    | 574981   | 3577170   |  | 2475  | 200        | 51          | 149          |     |

\*UTM location was derived from PLSS - see Help

(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               |      |       |        |    |    |   |     |     |     |   |   |          |      |              |
|-------------------|------|-------|--------|----|----|---|-----|-----|-----|---|---|----------|------|--------------|
| Sub-              |      |       |        |    |    |   |     |     |     |   |   |          |      |              |
| Q Q Q             |      |       |        |    |    |   |     |     |     |   |   |          |      |              |
| Depth Depth Water |      |       |        |    |    |   |     |     |     |   |   |          |      |              |
| POD Number        | Code | basin | County | 64 | 16 | 4 | Sec | Tws | Rng | X | Y | Distance | Well | Water Column |

Average Depth to Water: 117 feet

Minimum Depth: 28 feet

Maximum Depth: 350 feet

Record Count: 25

UTMNAD83 Radius Search (in meters):

Easting (X): 575101

Northing (Y): 3574698

Radius: 2500

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# 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)

|                 |                   |            |            |           |            |            |            |          |          |
|-----------------|-------------------|------------|------------|-----------|------------|------------|------------|----------|----------|
| <b>Well Tag</b> | <b>POD Number</b> | <b>Q64</b> | <b>Q16</b> | <b>Q4</b> | <b>Sec</b> | <b>Tws</b> | <b>Rng</b> | <b>X</b> | <b>Y</b> |
| C               | 04044 POD1        | 3          | 2          | 3         | 09         | 23S        | 27E        | 575504   | 3575907  |

**Driller License:** 331 **Driller Company:** SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.  
**Driller Name:**

**Drill Start Date:** 04/21/2017 **Drill Finish Date:** 04/22/2017 **Plug Date:**  
**Log File Date:** 05/16/2017 **PCW Rcv Date:** **Source:** Shallow  
**Pump Type:** **Pipe Discharge Size:** **Estimated Yield:**  
**Casing Size:** 8.60 **Depth Well:** 290 feet **Depth Water:** 150 feet

| Water Bearing Stratifications: | Top | Bottom | Description                   |
|--------------------------------|-----|--------|-------------------------------|
|                                | 100 | 290    | Sandstone/Gravel/Conglomerate |

| Casing Perforations: | Top | Bottom |
|----------------------|-----|--------|
|                      | 150 | 290    |

|                             |             |                             |           |
|-----------------------------|-------------|-----------------------------|-----------|
| <b>Meter Number:</b>        | 18408       | <b>Meter Make:</b>          | OCTAVE    |
| <b>Meter Serial Number:</b> | 16-3-026520 | <b>Meter Multiplier:</b>    | 100.0000  |
| <b>Number of Dials:</b>     | 9           | <b>Meter Type:</b>          | Diversion |
| <b>Unit of Measure:</b>     | Gallons     | <b>Return Flow Percent:</b> |           |
| <b>Usage Multiplier:</b>    |             | <b>Reading Frequency:</b>   | Monthly   |

### Meter Readings (in Acre-Feet)

| Read Date  | Year | Mtr Reading | Flag | Rdr | Comment | Mtr Amount Online |
|------------|------|-------------|------|-----|---------|-------------------|
| 11/29/2019 | 2019 | 3057884     | A    | RPT |         | 0                 |

|                             |             |               |
|-----------------------------|-------------|---------------|
| <b>**YTD Meter Amounts:</b> | <b>Year</b> | <b>Amount</b> |
|                             | 2019        | 0             |

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11/20/23 7:02 AM

POINT OF DIVERSION SUMMARY



# 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) |     |                    |     |                         |     | (NAD83 UTM in meters) |          |
|--------------------------|------------|------------------------------------|-----|--------------------|-----|-------------------------|-----|-----------------------|----------|
|                          |            | Q64                                | Q16 | Q4                 | Sec | Tws                     | Rng | X                     | Y        |
|                          | C 00195    | 4                                  | 1   | 4                  | 09  | 23S                     | 27E | 576069                | 3575827* |
| <hr/>                    |            |                                    |     |                    |     |                         |     |                       |          |
| <b>Driller License:</b>  |            | <b>Driller Company:</b>            |     |                    |     |                         |     |                       |          |
| <b>Driller Name:</b>     |            | FRANK GENTRY                       |     |                    |     |                         |     |                       |          |
| <b>Drill Start Date:</b> |            | <b>Drill Finish Date:</b>          |     | 12/31/1936         |     | <b>Plug Date:</b>       |     |                       |          |
| <b>Log File Date:</b>    |            | <b>PCW Rcv Date:</b>               |     | 10/16/1950         |     | <b>Source:</b>          |     | Shallow               |          |
| <b>Pump Type:</b>        |            | <b>Pipe Discharge Size:</b>        |     |                    |     | <b>Estimated Yield:</b> |     | 1500 GPM              |          |
| <b>Casing Size:</b>      |            | 10.00                              |     | <b>Depth Well:</b> |     | 128 feet                |     | <b>Depth Water:</b>   |          |
|                          |            |                                    |     |                    |     |                         |     | 83 feet               |          |

\*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



# 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                  | Tws                                | Rng                          | X                | Y            |   |          |  |
| 2242D                | C 04429 POD1 | 4                                  | 4   | 1                  | 08                   | 23S                                | 27E                          | 574102           | 3576270      |  |          |  |
| <hr/>                |              |                                    |     |                    |                      |                                    |                              |                  |              |   |          |  |
| Driller License:     |              | 1753                               |     | Driller Company:   |                      |                                    | VANGUARD WELL RESOURCES, LLC |                  |              |   |          |  |
| Driller Name:        |              | FRIESSEN, JACOBONTEE.NER           |     |                    |                      |                                    |                              |                  |              |   |          |  |
| Drill Start Date:    |              | 04/27/2020                         |     | Drill Finish Date: |                      |                                    | 05/04/2020                   |                  | Plug Date:   |   |          |  |
| Log File Date:       |              | 08/24/2020                         |     | PCW Rcv Date:      |                      |                                    |                              |                  |              | Source: Shallow   |          |  |
| Pump Type:           |              |                                    |     |                    | Pipe Discharge Size: |                                    |                              | Estimated Yield: |              |   |          |  |
| Casing Size:         |              | 5.00                               |     | Depth Well:        |                      |                                    | 400 feet                     |                  | Depth Water: |   | 350 feet |  |
| <hr/>                |              |                                    |     |                    |                      |                                    |                              |                  |              |   |          |  |
| Casing Perforations: |              |                                    |     | Top                | Bottom               |                                    |                              |                  |              |   |          |  |
|                      |              |                                    |     | 320                | 400                  |                                    |                              |                  |              |   |          |  |

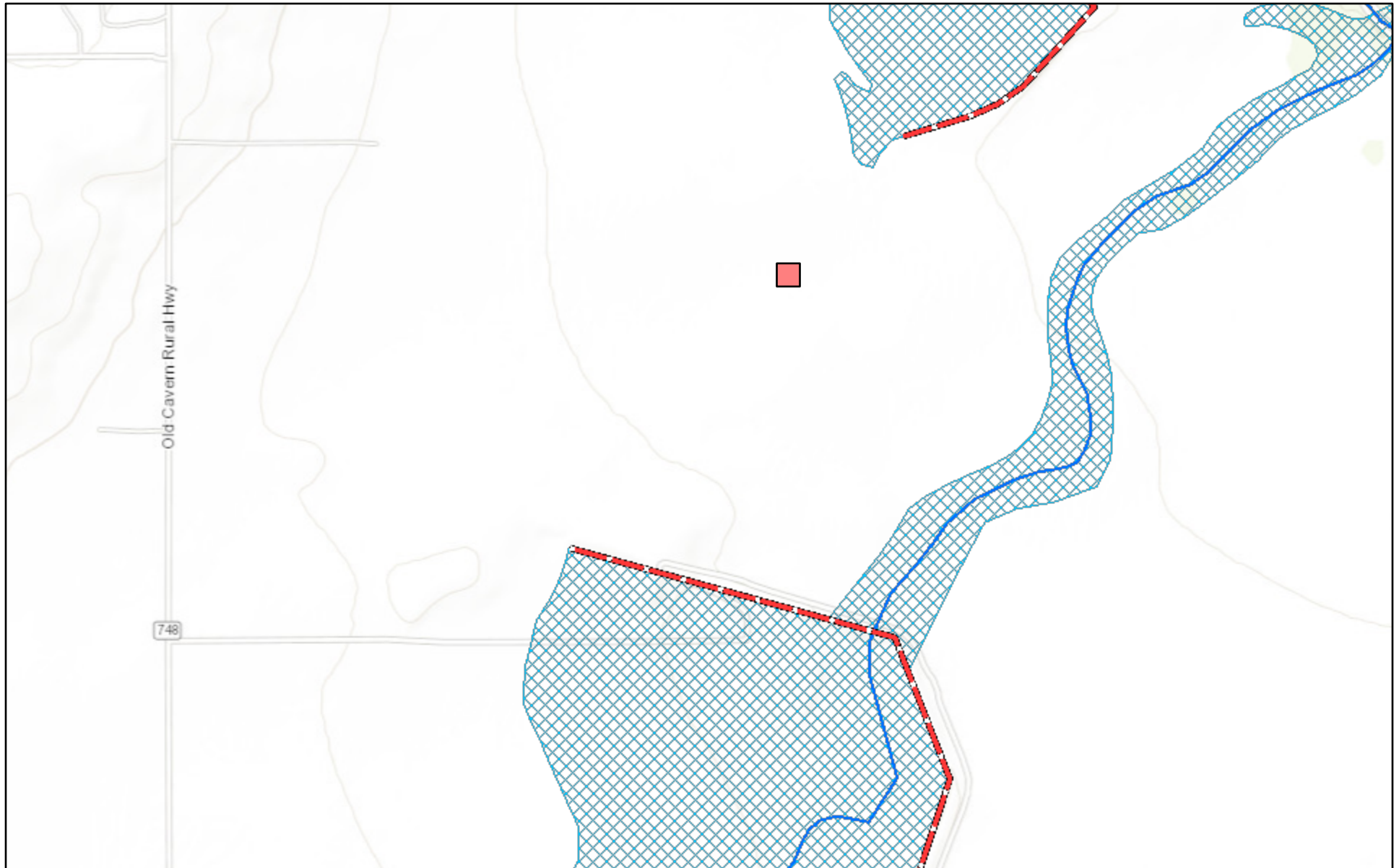
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11/20/23 7:05 AM

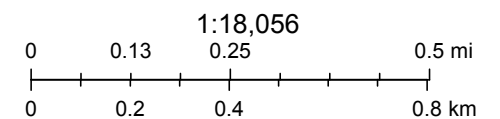
POINT OF DIVERSION SUMMARY



# New Mexico NFHL Data



November 20, 2023



FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

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**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 289835

CONDITIONS

|  |   |
|--|---|
| Operator:<br>MARATHON OIL PERMIAN LLC<br>990 Town & Country Blvd.<br>Houston, TX 77024 | OGRID:<br>372098  |
|  | Action Number:<br>289835                                  |
|  | Action Type:<br>[C-141] Release Corrective Action (C-141) |

CONDITIONS

|            |           |                |
|------------|-----------|----------------|
| Created By | Condition | Condition Date |
| bhall      | None      | 3/18/2024      |