

Santa Fe Main Office

Phone: (505) 476-3441 Fax: (55) 476-3462

General Information

Phone: (505) 629-6116

Online Phone Directory Visit:

<https://www.emnrd.nm.gov/ocd/contact-us/>State of New Mexico  
Energy, Minerals and Natural ResourcesForm C-103  
Revised July 18, 2013OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

|                                                                                          |
|------------------------------------------------------------------------------------------|
| WELL API NO.<br>30-045-09733                                                             |
| 5. Indicate Type of Lease<br>STATE <input type="checkbox"/> FEE <input type="checkbox"/> |
| 6. State Oil & Gas Lease No.<br>NA                                                       |
| 7. Lease Name or Unit Agreement Name<br>NE Hogback Unit                                  |
| 8. Well Number # 29                                                                      |
| 9. OGRID Number 279508                                                                   |
| 10. Pool name or Wildcat<br>HORSESHOE GALLUP                                             |

|                                                                                                                                                                                                                                                                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)<br>1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> |  |
| 2. Name of Operator<br>CHUZA OIL COMPANY                                                                                                                                                                                                                                                                                                        |  |
| 3. Address of Operator<br>NA                                                                                                                                                                                                                                                                                                                    |  |
| 4. Well Location<br>Unit Letter <u>F</u> : <u>2090</u> feet from the <u>North</u> line and <u>2190</u> feet from the <u>West</u> line<br>Section <u>11</u> Township <u>30N</u> Range <u>16W</u> NMPM County <u>San Juan</u>                                                                                                                     |  |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.)<br>5485 GR                                                                                                                                                                                                                                                                                   |  |

## 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

|                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                                       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>NOTICE OF INTENTION TO:</b><br>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/><br>TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/><br>PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/><br>DOWNHOLE COMMINGLE <input type="checkbox"/><br>CLOSED-LOOP SYSTEM <input type="checkbox"/><br>OTHER: <input type="checkbox"/> |  | <b>SUBSEQUENT REPORT OF:</b><br>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/><br>COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/><br>CASING/CEMENT JOB <input type="checkbox"/><br>OTHER: <input type="checkbox"/> |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

This well was previously operated by Chuza Oil Company. Marathon Petroleum Company LP, BP America, and BHP Petroleum/Woodside Energy have been identified by the BLM as record title holders and has taken responsibility for plugging and abandoning the well.

This well will be plugged and abandoned per the attached approved P&A procedure/COAs.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Senior Managing Geologist DATE 9/10/2024

Type or print name Stuart Hyde E-mail address: shyde@ensolum.com PHONE: 970-903-1607

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Sundry Print Report

09/03/2024

|                                   |                                                                              |                                                 |
|-----------------------------------|------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Well Name:</b> NE HOGBACK UNIT | <b>Well Location:</b> T30N / R16W / SEC 11 /<br>SENW / 36.83008 / -108.49516 | <b>County or Parish/State:</b> SAN<br>JUAN / NM |
| <b>Well Number:</b> 29            | <b>Type of Well:</b> OIL WELL                                                | <b>Allottee or Tribe Name:</b>                  |
| <b>Lease Number:</b> NMNM077282   | <b>Unit or CA Name:</b> NE HOGBACK UNIT                                      | <b>Unit or CA Number:</b><br>NMNM78403A         |
| <b>US Well Number:</b> 3004509733 | <b>Operator:</b> CHUZA OIL CO<br>INCORPORATED                                |                                                 |

### Notice of Intent

**Sundry ID:** 2807739

**Type of Submission:** Notice of Intent

**Type of Action:** Plug and Abandonment

**Date Sundry Submitted:** 08/20/2024

**Time Sundry Submitted:** 02:21

**Date proposed operation will begin:** 12/01/2024

**Procedure Description:** This well was previously operated by Chuza Oil Company. Marathon Petroleum Company LP, BP America, and BHP Petroleum/Woodside Energy have been identified as a previous record title owners and have taken responsibility for plugging and abandoning the well. This well will be plugged and abandoned per the attached P&A procedure.

### Surface Disturbance

**Is any additional surface disturbance proposed?:** No

### Oral Submission

**Oral Notification Date:** Aug 20, 2024

**Oral Notification Time:** 12:00 AM

**Contacted By:** Devin Hencmann

**Contact's Email:** dhencmann@ensolum.com

**Comments:** Procedure and reclamation plan submitted through email and uploaded by BLM. Request was submitted by previous record title owners of the lease.

### NOI Attachments

#### Procedure Description

NE\_Hogback\_Unit\_29\_\_Reclamation\_Plan\_20240820141842.pdf

NEHU\_29\_P\_A\_Plan\_20240820141841.pdf

|                                   |                                                                              |                                                 |
|-----------------------------------|------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Well Name:</b> NE HOGBACK UNIT | <b>Well Location:</b> T30N / R16W / SEC 11 /<br>SENW / 36.83008 / -108.49516 | <b>County or Parish/State:</b> SAN<br>JUAN / NM |
| <b>Well Number:</b> 29            | <b>Type of Well:</b> OIL WELL                                                | <b>Allottee or Tribe Name:</b>                  |
| <b>Lease Number:</b> NMNM077282   | <b>Unit or CA Name:</b> NE HOGBACK UNIT                                      | <b>Unit or CA Number:</b><br>NMNM78403A         |
| <b>US Well Number:</b> 3004509733 | <b>Operator:</b> CHUZA OIL CO<br>INCORPORATED                                |                                                 |

Conditions of Approval

Specialist Review  
2807739\_NOI\_PnA\_NE\_Hogback\_Unit\_29\_3004509733\_MHK\_08.23.2024\_20240903103529.pdf  
General\_Requirement\_PxA\_20240822091522.pdf  
SN\_ID\_2807739\_30N16W11\_NE\_Hogback\_Unit\_29\_Geo\_MHK\_20240822091452.pdf

BLM Point of Contact

|                                     |                                             |
|-------------------------------------|---------------------------------------------|
| <b>BLM POC Name:</b> MATTHEW H KADE | <b>BLM POC Title:</b> Petroleum Engineer    |
| <b>BLM POC Phone:</b> 5055647736    | <b>BLM POC Email Address:</b> MKADE@BLM.GOV |
| <b>Disposition:</b> Approved        | <b>Disposition Date:</b> 09/03/2024         |
| <b>Signature:</b> Matthew Kade      |                                             |

Form 3160-5  
(June 2015)

**UNITED STATES**  
**DEPARTMENT OF THE INTERIOR**  
**BUREAU OF LAND MANAGEMENT**

FORM APPROVED  
 OMB No. 1004-0137  
 Expires: January 31, 2018

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an  
 abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

5. Lease Serial No. **NM 077282**

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.  
**14-08-001-6674**8. Well Name and No. **NEHU #29**9. API Well No. **30-045-09733**10. Field and Pool or Exploratory Area  
**Horseshoe Gallup**11. Country or Parish, State  
**San Juan County, NM**

1. Type of Well

☐ Oil Well    ☐ Gas Well    ☒ Other
2. Name of Operator **Marathon Petroleum Corp for Chuza Oil Company**3a. Address **539 S. Main St., Findlay, OH 45840**

3b. Phone No. (include area code)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

| TYPE OF SUBMISSION                                   | TYPE OF ACTION                                |                                               |                                                    |                                         |
|------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------|-----------------------------------------|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize              | <input type="checkbox"/> Deepen               | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Alter Casing         | <input type="checkbox"/> Hydraulic Fracturing | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice    | <input type="checkbox"/> Casing Repair        | <input type="checkbox"/> New Construction     | <input type="checkbox"/> Recomplete                | <input type="checkbox"/> Other          |
|                                                      | <input type="checkbox"/> Change Plans         | <input type="checkbox"/> Plug and Abandon     | <input type="checkbox"/> Temporarily Abandon       |                                         |
|                                                      | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back            | <input type="checkbox"/> Water Disposal            |                                         |

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

This well will be plugged and abandoned per the attached P&A procedure.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

**Devin Hencmann**

Associate Principal Geologist

Title

Signature

Date

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**Plug and Abandonment Procedure****N.E. Hogback Unit #29****API #30-45-09733****Unit F, 2090' FNL and 2190' FWL Sec. 11, T30N, R16W****San Juan County, NM**

**Note: All cement is to be Class G mixed at 15.8 ppg, yield 1.15 cu ft / sx. Cement volumes are based on inside capacities + 50' excess and outside capacities + 100% excess.**

1. Hold Pre job meeting, comply with all NMOCD, BLM and environmental regulations.
2. MIRU P & A rig and equipment.
3. Check and record tubing, casing and bradenhead pressures daily.
4. Remove existing piping from casing valve, RU blow lines from casing valves and blow down casing pressure. Kill well as necessary. Ensure that well is dead or on a vacuum.
5. ND WH, NU BOP, function test BOP.
6. Attempt to retrieve packer @ 1745', if unable to remove with injection tubing, push packer below perfs.
7. TOH and LD tubing if necessary PU workstring.
8. RIH 4.5" CIBP and set at 1726'. TOH.
9. MIRU logging truck. Run CBL log from CIBP to surface. Hold 600 psi on casing if possible. NOTE: Results of CBL may change the following plugs. Electronic copy of CBL to be sent to:
10. RIH with tubing workstring. Drop ball valve down tubing and pressure test to 1000#. Pressure test casing to 500#. If casing does not test then discuss with Regulatory for procedure change.

11. Plug 1: Gallup perforations and top: With CIBP @ 1726' mix and pump Class G cement from top of BP to 1445'.
12. Pull up hole, WOC. TIH, tag Plug 1. If Plug 1 is at 1445' or above, continue to next step. If tag is lower than 1445' then discuss with Regulatory for procedure change.
13. Plug #2: Mancos top. Perforate casing @ 510', test ROI. RIH and set and release 4.5" CR @ 460'. Mix and pump Class G cement inside and outside from 510' – 360' PUH and WOC. If cement is lower than 360' contact Regulatory for procedure change.
14. Plug 3: Surface casing top: Perforate casing @ 264' and check for circulation out BH. Mix and pump Class G cement plug from 264' to 5' and circulate good cement out all annuli.
15. RD cementing equipment. Cut off wellhead, fill any exposed annulus with cement, as necessary. **Surface PxA marker is to be installed at surface, 12"x18", and exposed at the reclaimed GL surface.**
16. Record GPS coordinates for P&A marker and the Final P&A Report. Photograph the P&A marker and attach to the report.
17. Top off casings and cellar with cement as required.
18. RD and MO all rig and cement equipment. Assure that location is free of trash before moving off.
19. Send all reports and attachments will be uploaded to NMOCD website within 30 days of completion.

**N.E. Hogback Unit #29****Current WBD**

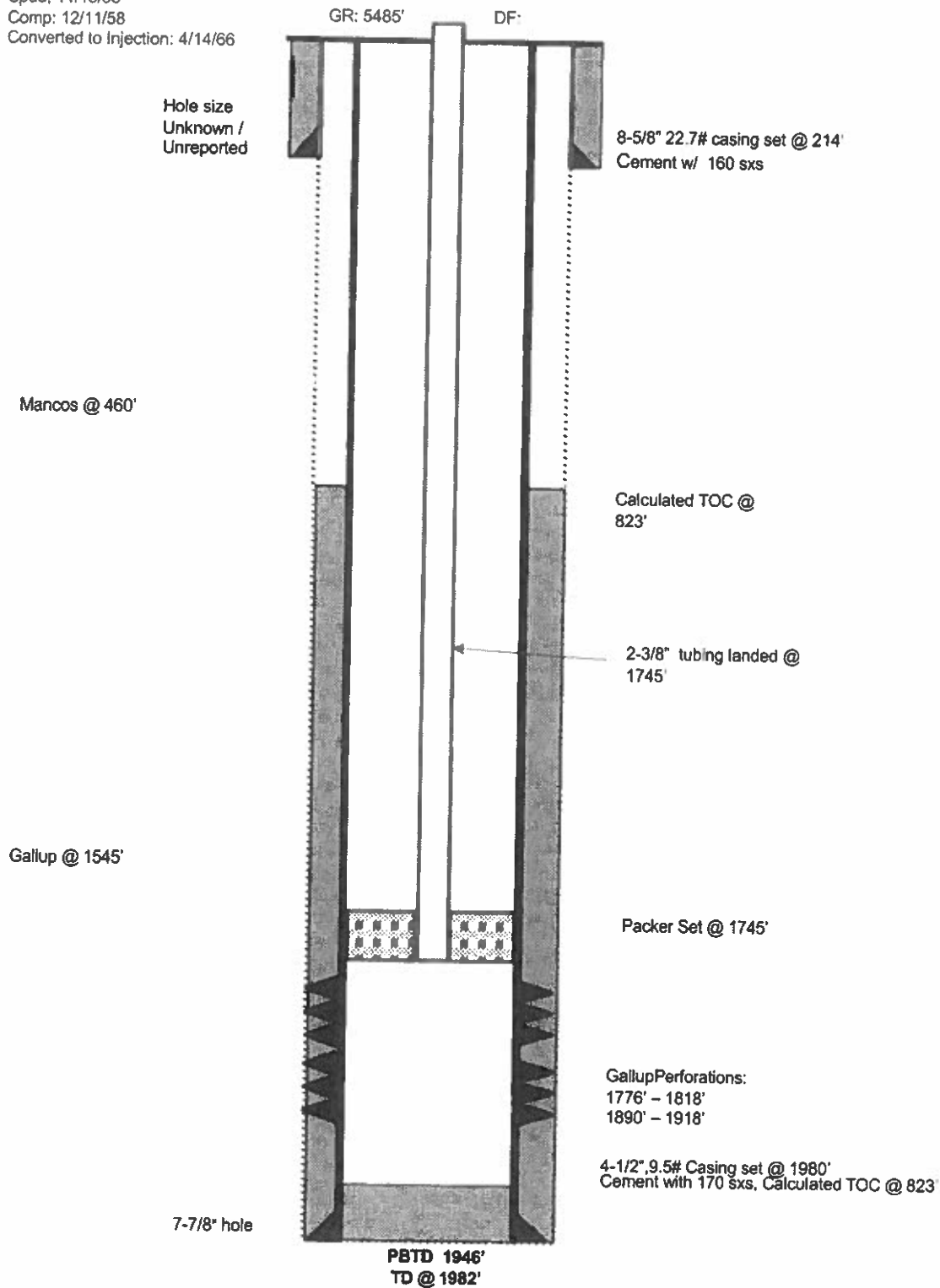
Horseshoe Gallup

Unit F, 2090' FNL & 2190' FWL, Section 11, T30N, R16W  
San Juan County, NM, API #30-045-09733

Spud: 11/18/58

Comp: 12/11/58

Converted to Injection: 4/14/66



# N.E. Hogback Unit #29

## Proposed P&A WBD

Horseshoe Gallup

Unit F, 2090' FNL & 2190' FWL, Section 11, T30N, R16W  
San Juan County, NM, API #30-045-09733

Spud; 11/18/58  
Comp: 12/11/58  
Converted to Injection: 4/14/66

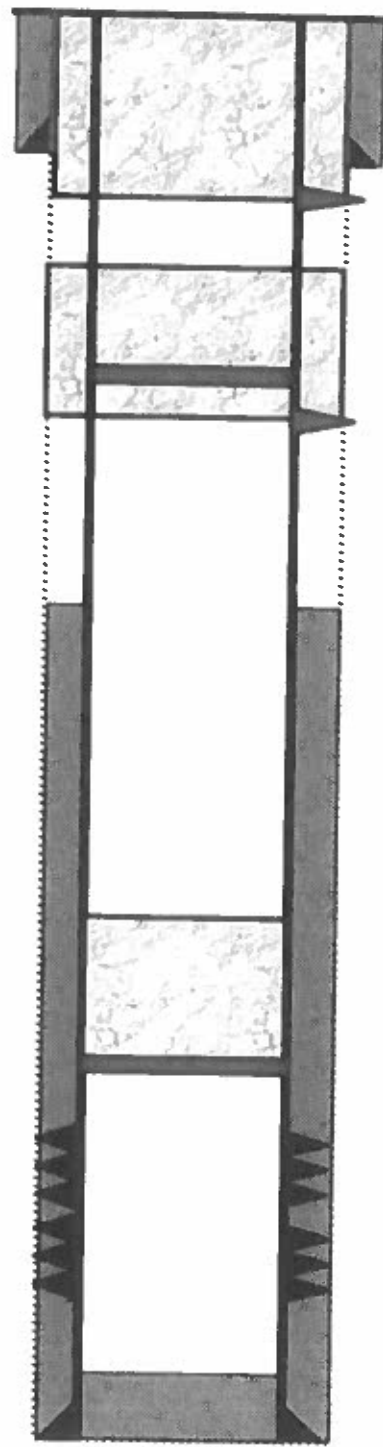
GR: 5485'      DF:

Hole size  
Unknown /  
Unreported

Mancos @ 460'

Gallup @ 1545'

7-7/8" hole



Plug #3: 264' - 5'  
Class G cement

8-5/8" 22.7# casing set @ 214'  
Cement w/ 160 sxs

Perforate @ 264'

Plug #2: 510' - 360'  
Class G cement

CR @ 460'

Perforate @ 510'

Calculated TOC @  
823'

Plug #1: 1726' - 1445'  
Class G cement

Set CIBP @ 1726'

Gallup Perforations:  
1776' - 1818'  
1890' - 1918'

4-1/2" 9.5# Casing set @ 1980'  
Cement with 170 sxs, Calculated TOC @ 823'

PBTD 1946'  
TD @ 1982'





May 16, 2024

**Bureau of Land Management**  
Farmington Field Office  
6521 College Blvd  
Farmington, New Mexico 87402

**Re: Proposed Reclamation Plan  
NE Hogback Unit #29  
San Juan County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of Marathon Petroleum Company LP (Marathon), has prepared the following Reclamation Plan for the NE Hogback Unit #29 well pad (Site). The Reclamation Plan documents the Site history and conditions and proposes reclamation and monitoring activities.

#### **SITE INFORMATION**

Operator: Marathon Petroleum Company LP

Well Name: NE Hogback Unit #29

API Number: 30-045-09733

GPS Coordinates: 36.830162, -108.4957962

Location: Unit F, Section 11, Township 30N, Range 16W, San Juan County, New Mexico

#### **SITE HISTORY**

- The NE Hogback Unit #29 is an oil and gas production well that was in production between 1958 and 2017.
- The well was previously operated by Chuza Oil Company. Marathon Petroleum Company LP has been identified as a record title holder and has taken responsibility for the well. The well is scheduled for plugging and abandonment. The well will be plugged and abandoned in accordance with Bureau of Land Management (BLM) and New Mexico Oil Conservation Division (NMOCD) regulations.
- A review of NMOCD well records and available historical satellite imagery was completed.
  - No pits were documented in the NMOCD well records.
  - No spills or incidents were recorded at the Site by the NMOCD.
  - No spills or pits were identified at the Site during a review of historical satellite imagery.

#### **SITE CONDITIONS**

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants  
776 E 2nd Ave | Durango Colorado, 81301 | ensolum.com

- A Site visit was conducted on May 9, 2024, to evaluate current Site conditions. Photographs from the Site visit are included in Appendix A.
  - Surface production equipment remained at the Site. The remaining production equipment included a metal shed around the wellhead, a 2-inch buried steel line, a concrete pad, and concrete debris.
  - There is an existing archaeological site to the northeast of the pad with remains of two circular sandstone buildings and a sandstone fence with numerous old cans.
  - The Site is accessed by an approximate 645 feet of access road that will require reclamation.
  - The well pad surface was leveled (cut/fill) during pad construction activities and will require recontouring. No foreign material (caliche/gravel) appeared to have been hauled in during construction of the well pad or access road.
  - Minor surface staining was identified inside the metal shed around the wellhead.
  - The well pad has some vegetation.
  - The well pad and surrounding topography are flat.
  - The surrounding land consists of rock outcrops and native rangeland and is predominantly used for wildlife grazing and oil and gas operations.
- The Natural Resources Conservation Service (NRCS) Web Soil Survey classifies the soil type at the Site as Badland-Monierco-Rock Outcrop Complex.

Summary of Badland:

- Typical Soil Profile
  - 0 to 60 inches: Bedrock
- Properties
  - Slope: 5 to 30 percent slopes
  - Depth to restrictive feature: 0 to 2 inches to paralithic bedrock
  - Drainage Class: Well drained
  - Runoff class: Very high

Summary of Monierco:

- Typical Soil Profile
  - 0 to 2 inches: Fine sandy loam
  - 2 to 14 inches: Clay loam
  - 14 to 20 inches: Bedrock
- Properties
  - Slope: 0 to 8 percent slopes
  - Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
  - Drainage Class: Well drained
  - Runoff class: High

Summary of Rock Outcrop:

- Typical Soil Profile
  - 0 to 60 inches: Bedrock
- Properties
  - Slope: 5 to 30 percent slopes
  - Depth to restrictive feature: 0 inches to paralithic bedrock

- Drainage Class: Well drained
- Runoff class: Very high

## RECLAMATION PLAN

- The well and flow lines will be abandoned in accordance with applicable NMOCD regulations. All surface production equipment and power poles will be removed from the Site.
- The BLM will be notified at least two business days prior to commencement of reclamation operations.
- No impacted soil was identified during the aerial imagery review or Site visit. However, if any stained or impacted soil is discovered during reclamation activities it will be excavated and removed from the Site.
  - If impacted soil is encountered that is sufficient to be considered a reportable release, per Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC), a release notification will be submitted to NMOCD and remediation and soil sampling activities will be completed in accordance with 19.15.29.12 NMAC.
- Upon completion of remediation activities, if required, surface reclamation will proceed.
- The well pad will be recontoured to match the surrounding topography.
- The well pad and access road will be ripped or disced, if needed, to alleviate compaction. Ripping will not be completed in areas of exposed or shallow bedrock.
- Any salvaged topsoil will be distributed across the well pad and roughened for initial seedbed preparation.
- The well pad and access road will be seeded.
  - Seeding will be completed within two weeks following completion of final seedbed preparation, if conditions are favorable. Alternatively, seeding will be completed the following spring/fall when temperatures and precipitation are the most conducive to vegetation growth.
- A certified weed-free seed mix will be used. Based on the soil type and location of the Site, the below BLM recommended Badland seed mix will be used to seed the Site at the rate specified in pounds of pure live seed (PLS) per acre. Seed species will include:

| Common Name              | Scientific Name        | PLS/Acre |
|--------------------------|------------------------|----------|
| Fourwing saltbush        | Atriplex canescens     | 4.0      |
| Shadscale                | Atriplex confertifolia | 2.0      |
| Indian ricegrass         | Achnatherum hymenoides | 5.0      |
| Sand dropseed            | Sporobolus cryptandrus | 0.5      |
| Blue grama               | Bouteloua gracilis     | 2.0      |
| Siberian wheatgrass      | Agropyron fragile      | 3.0      |
| Small flower globemallow | Sphaeralcea parvifolia | 0.25     |

- Seed species may be substituted for other Badland seed mix species based on availability from the seed supplier.
- The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled, and seeding will be followed by light chaining or harrowing.

- The seeded areas may be fenced, if warranted, to prevent livestock and wildlife from impacting vegetation establishment.
- Reclamation activities will be documented with photographs and will be timestamped with GPS data in decimal degrees.
- Erosion control of the newly reclaimed areas will include prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- The access road will be bermed at the entrance to discourage vehicles from entering the reclaimed areas. Seed will be broadcast on the berm to encourage stabilization.

## RECLAMATION MONITORING

- The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.
  - In the event erosion control management is necessary to support vegetation growth and minimize erosion until the root structures take hold, the following best management practices (BMPs) may be applied:
    - Placement of wattles in areas with a propensity for high run off rates;
    - Straw cover, if high winds are anticipated, to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
    - Other erosional control BMPs as necessary to support timely and healthy regrowth of vegetation in disturbed areas.
  - Noxious and invasive weeds will be identified and treated by a licensed contracted herbicide applicator or mechanically removed.
- Annual inspections (at a minimum) will take place at the location until revegetation is consistent with local natural vegetation density.
- Upon completion of revegetation, a Final Abandonment Notice (FAN), Form 3160-5, will be submitted to the BLM for final inspection and release.

## SCHEDULE OF IMPLEMENTATION

All Site activities are planned to be completed as soon as possible. The schedule will be arranged as necessary pending plugging and abandonment of the well and approval of this Reclamation Plan by the BLM.

If you have any questions or comments, please contact Mr. Devin Hencmann at (970) 403-6023 or [dhencmann@ensolum.com](mailto:dhencmann@ensolum.com).

Sincerely,  
**Ensolum, LLC**

Devin Hencmann  
Associate Principal



cc: Kateri A Luka, Marathon Petroleum Company LP

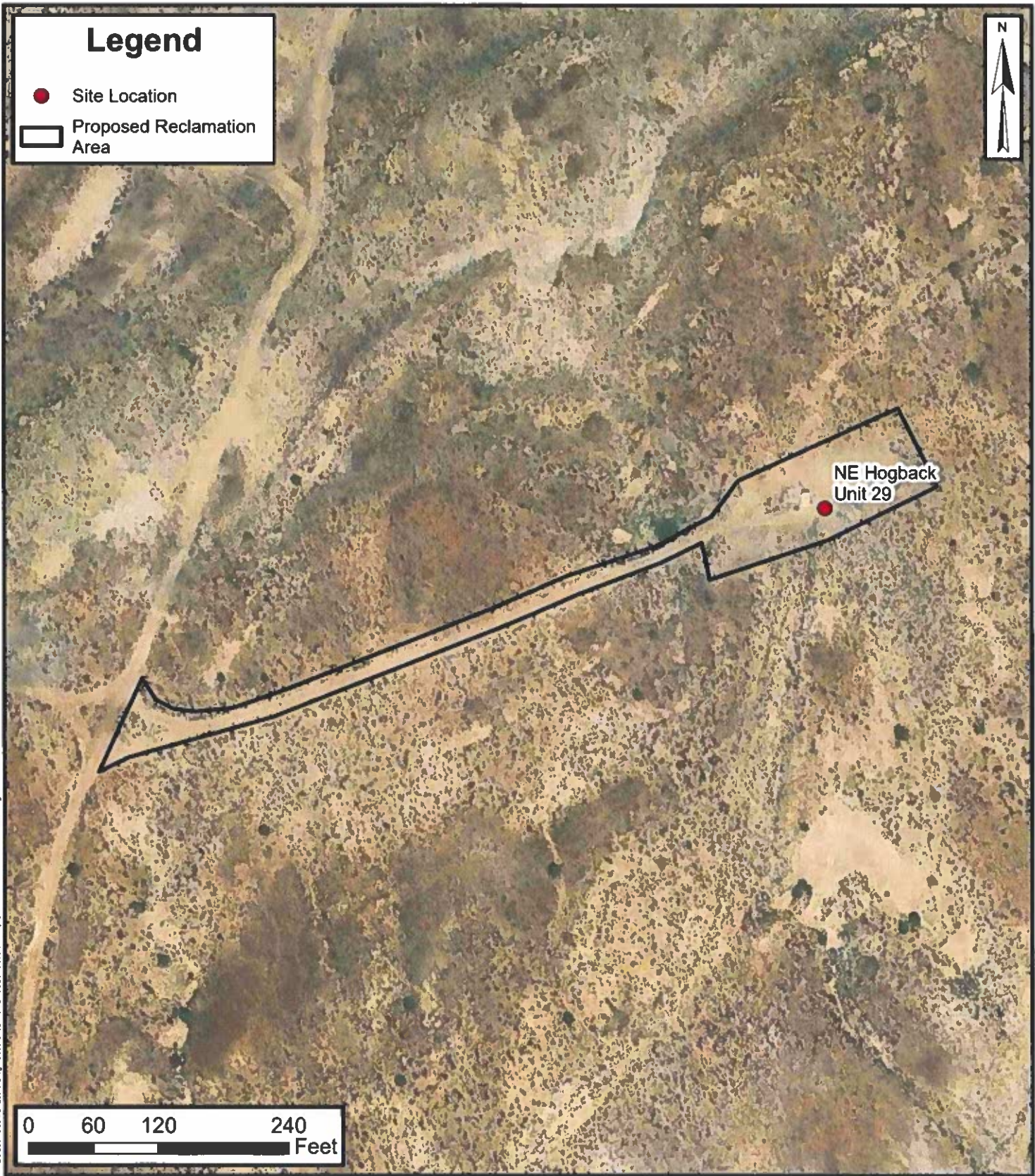
Appendices:

Figure 1 Total Reclamation Area  
Figure 2 Well Pad Reclamation Area  
Appendix A Photographic Log



## FIGURES

---



**ENSOLUM**  
Environmental, Engineering and  
Hydrogeologic Consultants

**Total Reclamation Area**

NE Hogback Unit #29  
Marathon Petroleum Company LP

36.830162, -108.4957962  
San Juan County, New Mexico

**FIGURE**  
**1**

Sources: Environmental Systems Research Institute (ESRI), Maxar, Microsoft



## Well Pad Reclamation Area

NE Hogback Unit #29  
Marathon Petroleum Company LP

36.830162, -108.4957962  
San Juan County, New Mexico

FIGURE  
2

Sources: Google Earth (2019)

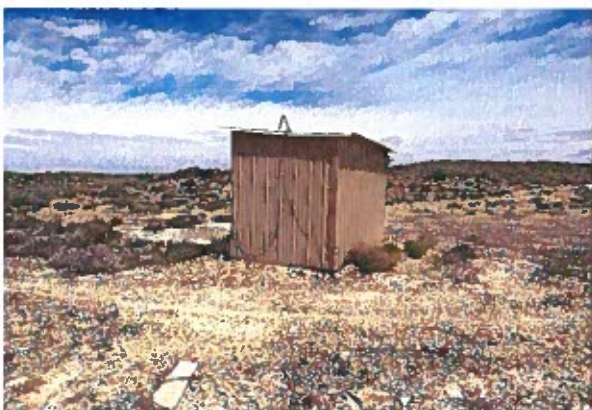


## APPENDIX A

---

**Photographic Log**

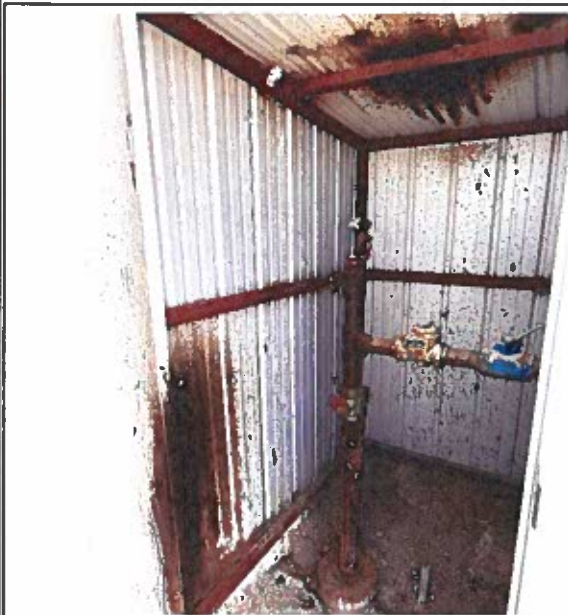
Marathon Petroleum Company LP  
NE HOGBACK UNIT #029  
30-045-09733



Photograph 1 Date: 5-8-2024  
Description: Shed around well head  
View: North



Photograph 2 Date: 5-8-2024  
Description: Shed around well head  
View: East



Photograph 3 Date: 5-8-2024  
Description: Wellhead and staining in shed  
View: NA



Photograph 4 Date: 5-8-2024  
Description: Well head flow line  
View: NA



Photographic Log  
Marathon Petroleum Company LP  
NE HOGBACK UNIT #029  
30-045-09733



Photograph 5                      Date: 5-8-2024  
Description: Pipeline scar/corridor leaving pad  
View: South



Photograph 6                      Date: 5-8-2024  
Description: Concrete debris NE of pad  
View: SW



Photograph 7                      Date: 5-8-2024  
Description: Archaeological site NE of pad  
View: Southwest



Photograph 8                      Date: 5-8-2024  
Description: Archaeological site NE of pad



**BLM FLUID MINERALS  
P&A Geologic Report**

**AFMSS ID: 2807739**

**Date Completed: 06/13/2024**

|                                                 |       |              |                   |     |        |            |     |
|-------------------------------------------------|-------|--------------|-------------------|-----|--------|------------|-----|
| Well No.: NE Hogback Unit 29 (API 30-045-09733) |       | Location:    | 2090              | FNL | &      | 2190       | FWL |
| Lease No.: NMNM 04407                           |       | SENW         | Sec. 11           |     | T30N   | R16W       |     |
| Operator: Chuza Oil Company                     |       | County:      | San Juan          |     | State: | New Mexico |     |
| Total Depth:                                    | 1982' | 1946' (PBSD) | Formation: Gallup |     |        |            |     |
| Elevation (GL): 5485'                           |       |              | Elevation (KB):   |     |        |            |     |

| Geologic Formations | Est. Top | Log Top | Remarks            |
|---------------------|----------|---------|--------------------|
| San Jose Fm         |          |         |                    |
| Nacimiento Fm       |          |         |                    |
| Ojo Alamo Ss        |          |         |                    |
| Kirtland Shale      |          |         |                    |
| Fruitland Fm        |          |         |                    |
| Pictured Cliffs Ss  |          |         |                    |
| Lewis Shale         |          |         |                    |
| Chacra              |          |         |                    |
| Cliff House Ss      |          |         |                    |
| Menefee Fm          |          |         |                    |
| Point Lookout Ss    |          | Surface | Possible gas/water |
| Mancos Shale        |          | 443'    | Oil & gas          |
| Gallup              |          | 1742'   | Oil & gas          |
| Greenhorn           |          |         |                    |
| Graneros Shale      |          |         |                    |
| Dakota Ss           |          |         |                    |

Remarks:

P&A

- Marathon Petroleum is plugging this well as previous record title owner of the lease
- Gallup perms 1776 – 1918'

Reference Wells:

Chuza Oil Co Inc.  
NE Hogback Unit 29 (3004509733)  
Sec 11, T30N, R16W

**Prepared by: Matthew Kade**

With help from Aleksandr Knapowski





# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Farmington District Office  
6251 College Boulevard, Suite A  
Farmington, New Mexico 87402  
<http://www.blm.gov/nm>



## CONDITIONS OF APPROVAL

August 28, 2024

### Notice of Intent - Plug and Abandonment

**Operator:** Chuza Oil Company  
Marathon Petroleum Company LP (as previous record title owner)  
**Lease:** NMNM077282  
**Unit:** NMNM78403A  
**Well(s):** NE Hogback Unit 29, API # 30-045-09733  
**Location:** SENW Sec 11 T30N R16W (San Juan County, NM)  
**Sundry Notice ID#:** 2807739

The Notice of Intent to Plug and Abandon is accepted with the following Conditions of Approval (COA):

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Send electronic copy of CBL to BLM Petroleum Engineers Matthew Kade ([mkade@blm.gov](mailto:mkade@blm.gov)) and Kenneth Rennick ([krennick@blm.gov](mailto:krennick@blm.gov))
3. The following modifications to your plugging program are made:
  - a. Adjust Plug #2 (Step 13) up to cover BLM Mancos formation top pick @ 443'. Perforate @ 493', test ROI. Set CR @ 443'. Mix and pump class G cement inside/outside from 493' – 343' and WOC (Estimated minimum 29 sx below/12 sx above). If cement is lower than 393' contact Regulatory for procedure changes.
4. **Notification:** Farmington Field Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.
5. **Deadline of Completion of Operations:** Complete the plugging operation before December 31, 2024. If unable to meet deadline, notify the Bureau of Land Management's Farmington Field Office prior to the deadline via Sundry Notice (Form 3160-5) Notice of Intent detailing the reason for the delay and the date the well is to be plugged.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements. Any estimated minimum sacks provided in procedure modification include necessary excesses.

Office Hours: 7:45 a.m. to 4:30 p.m. / Matthew Kade ([mkade@blm.gov](mailto:mkade@blm.gov)) / 505-564-7736)



**GENERAL REQUIREMENTS FOR  
PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES  
FARMINGTON FIELD OFFICE**

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

**4.6 A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

- 5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.
- 5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.
- 5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.
- 5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. **If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.**

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

- 6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.
- 6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H<sub>2</sub>S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), through the Automated Fluid Minerals Support System (AFMSS) with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d) and 43 CFR 3172.12(a)(10). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

# **BLM FLUID MINERALS P&A Geologic Report**

**AFMSS ID: 2807739**

**Date Completed: 06/13/2024**

|                                                 |              |                   |     |        |            |     |
|-------------------------------------------------|--------------|-------------------|-----|--------|------------|-----|
| Well No.: NE Hogback Unit 29 (API 30-045-09733) | Location:    | 2090              | FNL | &      | 2190       | FWL |
| Lease No.: NMNM 04407                           | SENW         | Sec. 11           |     | T30N   | R16W       |     |
| Operator: Chuza Oil Company                     | County:      | San Juan          |     | State: | New Mexico |     |
| Total Depth: 1982'                              | 1946' (PBSD) | Formation: Gallup |     |        |            |     |
| Elevation (GL): 5485'                           |              | Elevation (KB):   |     |        |            |     |

| Geologic Formations | Est. Top | Log Top | Remarks            |
|---------------------|----------|---------|--------------------|
| San Jose Fm         |          |         |                    |
| Nacimiento Fm       |          |         |                    |
| Ojo Alamo Ss        |          |         |                    |
| Kirtland Shale      |          |         |                    |
| Fruitland Fm        |          |         |                    |
| Pictured Cliffs Ss  |          |         |                    |
| Lewis Shale         |          |         |                    |
| Chacra              |          |         |                    |
| Cliff House Ss      |          |         |                    |
| Menefee Fm          |          |         |                    |
| Point Lookout Ss    |          | Surface | Possible gas/water |
| Mancos Shale        |          | 443'    | Oil & gas          |
| Gallup              |          | 1742'   | Oil & gas          |
| Greenhorn           |          |         |                    |
| Graneros Shale      |          |         |                    |
| Dakota Ss           |          |         |                    |

**Remarks:**

P&A

- Marathon Petroleum is plugging this well as previous record title owner of the lease
- Gallup perms 1776 – 1918'

**Reference Wells:**

Chuza Oil Co Inc.  
NE Hogback Unit 29 (3004509733)  
Sec 11, T30N, R16W

**Prepared by: Matthew Kade**

With help from Aleksandr Knapowski





# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Farmington District Office  
6251 College Boulevard, Suite A  
Farmington, New Mexico 87402  
<http://www.blm.gov/nm>



## CONDITIONS OF APPROVAL

August 28, 2024

### Notice of Intent - Plug and Abandonment

**Operator:** Chuza Oil Company  
Marathon Petroleum Company LP (as previous record title owner)  
**Lease:** NMNM077282  
**Unit:** NMNM78403A  
**Well(s):** NE Hogback Unit 29, API # 30-045-09733  
**Location:** SENW Sec 11 T30N R16W (San Juan County, NM)  
**Sundry Notice ID#:** 2807739

The Notice of Intent to Plug and Abandon is accepted with the following Conditions of Approval (COA):

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Send electronic copy of CBL to BLM Petroleum Engineers Matthew Kade ([mkade@blm.gov](mailto:mkade@blm.gov)) and Kenneth Rennick ([krennick@blm.gov](mailto:krennick@blm.gov))
3. The following modifications to your plugging program are made:
  - a. Adjust Plug #2 (Step 13) up to cover BLM Mancos formation top pick @ 443'. Perforate @ 493', test ROI. Set CR @ 443'. Mix and pump class G cement inside/outside from 493' – 343' and WOC (Estimated minimum 29 sx below/12 sx above). If cement is lower than 393' contact Regulatory for procedure changes.
4. **Notification:** Farmington Field Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.
5. **Deadline of Completion of Operations:** Complete the plugging operation before December 31, 2024. If unable to meet deadline, notify the Bureau of Land Management's Farmington Field Office prior to the deadline via Sundry Notice (Form 3160-5) Notice of Intent detailing the reason for the delay and the date the well is to be plugged.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements. Any estimated minimum sacks provided in procedure modification include necessary excesses.

Office Hours: 7:45 a.m. to 4:30 p.m. / Matthew Kade ([mkade@blm.gov](mailto:mkade@blm.gov) / 505-564-7736)



**GENERAL REQUIREMENTS FOR  
PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES  
FARMINGTON FIELD OFFICE**

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

**4.6 A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

- 5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.
- 5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.
- 5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.
- 5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. **If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.**

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

- 6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.
- 6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H<sub>2</sub>S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), through the Automated Fluid Minerals Support System (AFMSS) with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d) and 43 CFR 3172.12(a)(10). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

**State of New Mexico**  
**Energy, Minerals and Natural Resources Department**  
**Oil Conservation Division**  
**Standard Plugging Conditions**



This document provides OCD's general plugging conditions of approval. It should be noted that the list below may not cover special plugging programs in unique and unusual cases, and OCD expressly reserves the right to impose additional requirements to the extent dictated by project conditions. The OCD also reserves the right to approve deviations from the below conditions if field conditions warrant a change. A C-103F NOI to P&A must be approved prior to plugging operations. Failure to comply with the conditions attached to a plugging approval may result in a violation of 19.15.5.11 NMAC, which may result in enforcement actions, including but not limited to penalties and a requirement that the well be re-plugged as necessary.

1. Notify OCD office at least 24 hours before beginning work and seek prior approval to implementing any changes to the C-103 NOI to PA.
  - North Contact, Monica Kuehling, 505-320-0243, [monica.kuehling@emnrd.nm.gov](mailto:monica.kuehling@emnrd.nm.gov)
  - South Contact, Gilbert Cordero, 575-626-0830, [gilbert.cordero@emnrd.nm.gov](mailto:gilbert.cordero@emnrd.nm.gov)
2. A Cement Bond Log is required to ensure strata isolation of producing formations, protection of water and correlative rights. A CBL must be run or be on file that can be used to properly evaluate the cement behind the casing.

Note: Logs must be submitted to OCD via OCD permitting. A copy of the log may be emailed to OCD inspector for faster review times, but emailing does not relieve the operators obligation to submit through OCD permitting.

3. Once Plugging operations have commenced, the rig must not rig down until the well is fully plugged without OCD approval. If gap in plugging operations exceeds 30 days, the Operator must file a subsequent sundry of work performed and revised NOI for approval on work remaining. At no time shall the rig be removed from location if it will result in waste or contamination of fresh water.
4. Insure all bradenheads have been exposed, identified and valves are operational prior to rig up.
5. Fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
  - North, water or mud laden fluids
  - South, mud laden fluids
6. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to an OCD permitted disposal facility.

7. Class of cement shall be used in accordance with the below table for depth allowed.

| Class          | TVD Lower Limit (feet) |
|----------------|------------------------|
| Class A/B      | 6,000                  |
| Class I/II     | 6,000                  |
| Class C or III | 6,000                  |
| Class G and H  | 8,000                  |
| Class D        | 10,000                 |
| Class E        | 14,000                 |
| Class F        | 16,000                 |

8. After cutting the well head any "top off cement jobs" must remain static for 30 minutes. Any gas bubbles or flow during this 30 minutes shall be reported to the OCD for approval of next steps.
9. Trucking companies being used to haul oilfield waste fluids (Commercial or Private) to a disposal facility shall have an approved OCD C-133 permit.
- A copy of this permit shall be available in each truck used to haul waste products.
  - It is the responsibility of the Operator and Contractor to verify that this permit is in place prior to performing work.
  - Drivers shall be able to produce a copy upon request of an OCD Compliance Officer.
10. Filing a [C-103] Sub. Plugging (C-103P) will serve as notification that the well has been plugged.
11. A [C-103] Sub. Release After P&A (C-103Q) shall be filed no later than a year after plugging and a site inspection by OCD Compliance officer to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to meet OCD standards before bonding can be released.
12. Produced water or brine-based fluids **may not** be used during any part of plugging operations without **prior OCD approval**.
13. Cementing;
- All cement plugs will be neat cement and a minimum of 100' in length. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
  - If cement does not exist between or behind the casing strings at recommended formation depths, the casing perforations will be shot at 50' below the formation top and the cement retainer shall be set no more than 50' from the perforations.
  - WOC (Wait on Cement) time will be:
    - 4 hours for accelerated (calcium chloride) cement.
    - 6 hours on regular cement.
  - Operator must tag all cement plugs unless it meets the below condition.
    - The operator has a passing pressure test for the casing annulus and the plug is only an inside plug.
  - If perforations are made operator must tag all plugs using the work string to tag unless given approval to tag with wireline by the correct contact from COA #1 of this document.
    - This includes plugs pumped underneath a cement retainer to ensure retainer seats properly after cement is pumped.
  - Cement can only be bull-headed with specific prior approval.
  - Squeeze pressures are not to exceed the exposed formations frac gradient or the burst pressure of the casing.

14. A cement plug is required to be set from 50' below to 50' above (straddling) formation tops, casing shoes, casing stubs, any attempted casing cut offs, anywhere the casing is perforated, DV tools.
- Perforation/Formation top plug. (When there is less than 100ft between the top perforation to the formation top.) These plugs are required to be started no greater than 50ft from the top perforation. However, the plug should be set below the formation top or as close to the formation top as possible for the maximum isolation between the formations. The plug is required to be a 100ft cement plug plus excess.
  - Perforation Plug when a formation top is not included. These plugs are required to be started within 50ft of the top perforation. The plug is required to be a 100ft cement plug plus excess.
  - Cement caps on top of bridge plugs or cement retainers for perforation plugs, that are not straddling a formation top, may be set using a bailer with a minimum of 35' of cement in lieu of the 100' plug. The bridge plug or retainer must be set within 50ft of the perforations.
  - Perforations are required below the surface casing shoe if cement does not exist behind the casing, a 30-minute minimum wait time will be required immediately after perforating to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. If gas is detected contact the OCD office for directions.
15. No more than 3000 feet is allowed between cement plugs in cased hole and no more than 2000 feet is allowed in open hole.
16. Formation Tops to be isolated with cement plugs, but not limited to are:
- Northwest See Figure A
  - South (Artesia) See Figure B
  - Potash See Figure C
    - In the R-111-P (Or as subsequently revised) Area a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, woe 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.
  - South (Hobbs) See Figure D1 and D2
  - Areas not provided above will need to be reviewed with the OCD on a case by case basis.
17. Markers
- Dry hole marker requirements 19.15.25.10.  
The operator shall mark the exact location of plugged and abandoned wells with a steel marker not less than four inches in diameter set in cement and extending at least four feet above mean ground level. The marker must include the below information:
    1. Operator name
    2. Lease name and well number
    3. API number
    4. Unit letter
    5. Section, Township and Range

- AGRICULTURE (Below grade markers)

In Agricultural areas a request can be made for a below ground marker. For a below ground marker the operator must file their request on a C-103 notice of intent, and it must include the following;

A) Aerial photo showing the agricultural area

B) Request from the landowner for the below ground marker.

C) Subsequent plugging report for a well using a below ground marker must have an updated C-102 signed by a certified surveyor for SHL.

Note: A below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to OCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to OCD. OCD requires a current survey to verify the location of the below ground marker, however OCD will accept a GPS coordinate that were taken with a GPS that has an accuracy of within 15 feet.

18. If work has not commenced within 1 year of the approval of this procedure, the approval is automatically expired. After 1 year a new [C-103] NOI Plugging (C-103F) must be submitted and approved prior to work.

Figure A

North Formations to be isolated with cement plugs are:

- San Jose
- Nacimiento
- Ojo Alamo
- Kirtland
- Fruitland
- Picture Cliffs
- Chacra (if below the Chacra Line)
- Mesa Verde Group
- Mancos
- Gallup
- Basin Dakota (plugged at the top of the Graneros)
- Deeper formations will be reviewed on a case-by-case basis

Figure B

South (Artesia) Formations to be isolated with cement plugs are:

- Fusselman
- Montoya
- Devonian
- Morrow
- Strawn
- Atoka
- Permo-Penn
- Wolfcamp
- Bone Springs
- Delaware , in certain areas where the Delaware is subdivided into;
  - 1. Bell Canyon
  - 2. Cherry Canyon
  - 3. Brushy Canyon
- Any salt sections
- Abo
- Yeso
- Glorieta
- San Andres
- Greyburg
- Queen
- Yates

## Figure C

## Potash Area R-111-P

## T 18S – R 30E

Sec 10 Unit P. Sec 11 Unit M,N. Sec 13 Unit L,M,N. Sec 14 Unit C -P. Sec 15 Unit A G,H,I,J,K,N,O,P. Sec 22 Unit All

except for M. Sec 23, Sec 24 Unit C,D,E,L, Sec 26 Unit A-G, Sec 27 Unit A,B,C

## T 19S – R 29E

Sec 11 Unit P. Sec 12 Unit H-P. Sec 13. Sec 14 Unit A,B,F-P. Sec 15 Unit P. Sec 22 Unit A,B,C,F,G,H,I,J K,N,O,P. Sec 23.

Sec 24. Sec 25 Unit D. Sec 26 Unit A- F. Sec 27 Unit A,B,C,F,G,H.

## T 19S – R 30E

Sec 2 Unit K,L,M,N. Sec 3 Unit I,L,M,N,O,P. Sec 4 Unit C,D,E,F,G,I-P. Sec 5 Unit A,B,C,E-P. Sec 6 Unit I,O,P. Sec 7 – Sec

10. Sec 11 Unit D, G—P. Sec 12 Unit A,B,E-P. Sec 13 Unit A-O. Sec 14-Sec 18. Sec 19 Unit A-L, P. Sec 20 – Sec 23. Sec

24 Unit C,D,E,F,L,M,N. Sec 25 Unit D. Sec 26 Unit A-G, I-P. Sec 27, Sec 28, Sec 29 Unit

A,B,C,D,F,G,H,I,J,O,P. Sec 32

Unit A,B,G,H,I,J,N,O,P. Sec 33. Sec 34. Sec 35. Sec 36 Unit D,E,F,I-P.

## T 19S – R 31E

Sec 7 Unit C,D,E,F,L. Sec 18 Unit C,D,E,F,G,K,L. Sec 31 Unit M. Sec 34 Unit P. Sec 35 Unit M,N,O. Sec 36 Unit O,P.

## T 20S – R 29E

Sec 1 Unit H,I,P. Sec 13 Unit E,L,M,N. Sec 14 Unit B-P. Sec 15 Unit A,H,I,J,N,O,P. Sec 22 Unit A,B,C,F,G,H,I,J,O,P. Sec

23. Sec 24 Unit C,D,E,F,G,J-P. Sec 25 Unit A-O. Sec 26. Sec 27 Unit A,B,G,H,I,J,O,P. Sec 34 Unit A,B,G,H. Sec 35 Unit

A-H. Sec 36 Unit B-G.

## T 20S – R 30E

Sec 1 – Sec 4. Sec 5 Unit A,B,C,E-P. Sec 6 Unit E,G-P. Sec 7 Unit A-H,I,J,O,P. Sec 8 – 17. Sec 18 Unit A,B,G,H,I,J,O,P.

Sec 19 Unit A,B,G,H,I,J,O,P. Sec 20 – 29. Sec 30 Unit A-L,N,O,P. Sec 31 Unit A,B,G,H,I,P. Sec 32 – Sec 36.

## T 20S – R 31E

Sec 1 Unit A,B,C,E-P. Sec 2. Sec 3 Unit A,B,G,H,I,J,O,P. Sec 6 Unit D,E,F,J-P. Sec 7. Sec 8 Unit E-P. Sec 9 Unit E,F,J-P.

Sec 10 Unit A,B,G-P. Sec 11 – Sec 36.

## T 21S – R 29E

Sec 1 – Sec 3. Sec 4 Unit L1 – L16,I,J,K,O,P. Sec 5 Unit L1. Sec 10 Unit A,B,H,P. Sec 11 – Sec 14. Sec 15 Unit A,H,I. Sec

23 Unit A,B. Sec 24 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 25 Unit A,O,P. Sec 35 Unit G,H,I,J,K,N,O,P. Sec 36 A,B,C,F – P.

## T 21S – R 30E

Sec 1 – Sec 36

T 21S – R 31E

Sec 1 – Sec 36

T 22S – R 28E

Sec 36 Unit A,H,I,P.

T 22S – R 29E

Sec 1. Sec2. Sec 3 Unit I,J,N,O,P. Sec 9 Unit G – P. Sec 10 – Sec 16. Sec 19 Unit H,I,J. Sec 20 – Sec 28. Sec 29 Unit

A,B,C,D,G,H,I,J,O,P. Sec 30 Unit A. Section 31 Unit C – P. Sec 32 – Sec 36

T 22S – R 30E

Sec 1 – Sec 36

T 22S – R 31E

Sec 1 – Sec 11. Sec 12 Unit B,C,D,E,F,L. Sec 13 Unit E,F,K,L,M,N. Sec 14 – Sec 23. Sec 24 Unit C,D,E,F,K,L,M,N. Sec 25

Unit A,B,C,D. Sec 26 Unit A,BC,D,G,H. Sec 27 – Sec 34.

T 23S – R 28E

Sec 1 Unit A

T 23S – R 29E

Sec 1 – Sec 5. Sec 6 Unit A – I, N,O,P. Sec 7 Unit A,B,C,G,H,I,P. Sec 8 Unit A – L, N,O,P. Sec 9 – Sec 16. Sec 17 Unit

A,B,G,H,I,P. Sec 21 – Sec 23. Sec 24 Unit A – N. Sec 25 Unit D,E,L. Sec 26. Sec 27. Sec 28 Unit A – J, N,O,P. Sec 33

Unit A,B,C. Sec 34 Unit A,B,C,D,F,G,H. Sec 35. Sec 36 Unit B,C,D,E,F,G,K,L.

T 23S – R 30E

Sec 1 – Sec 18. Sec 19 Unit A – I,N,O,P. Sec 20, Sec 21. Sec 22 Unit A – N, P. Sec 23, Sec 24, Sec 25. Sec 26 Unit

A,B,F-P. Sec 27 Unit C,D,E,I,N,O,P. Sec 28 Unit A – H, K,L,M,N. Sec 29 Unit A – J, O,P. Sec 30 Unit A,B. Sec 32 A,B. Sec

33 Unit C,D,H,I,O,P. Sec 34, Sec 35, Sec 36.

T 23S – R 31E

Sec 2 Unit D,E,J,O. Sec 3 – Sec 7. Sec 8 Unit A – G, K – N. Sec 9 Unit A,B,C,D. Sec 10 Unit D,P. Sec 11 Unit G,H,I,J,M,N,O,P. Sec 12 Unit E,L,K,M,N. Sec 13 Unit C,D,E,F,G,J,K,L,M,N,O. Sec 14. Sec 15 Unit A,B,E – P. Sec 16 Unit

I, K – P. Sec 17 Unit B,C,D,E, I – P. Sec 18 – Sec 23. Sec 24 Unit B – G, K,L,M,N. Sec 25 Unit B – G, J,K,L. Sec 26 – Sec

34. Sec 35 Unit C,D,E.

T 24S – R 29E

Sec 2 Unit A, B, C, D. Sec 3 Unit A

T 24S – R 30E

Sec 1 Unit A – H, J – N. Sec 2, Sec 3. Sec 4 Unit A,B,F – K, M,N,O,P. Sec 9 Unit A – L. Sec 10 Unit A – L, O,P. Sec 11.

Sec 12 Unit D,E,L. Sec 14 Unit B – G. Sec 15 Unit A,B,G,H.

T 24S – R 31E

Sec 3 Unit B – G, J – O. Sec 4. Sec 5 Unit A – L, P. Sec 6 Unit A – L. Sec 9 Unit A – J, O, P. Sec 10 Unit B – G, K – N. Sec

35 Unit E – P. Sec 36 Unit E, K, L, M, N.

T 25S – R 31E

Sec 1 Unit C, D, E, F. Sec 2 Unit A – H.

Figure D1 and D2

South (Hobbs) Formations to be isolated with cement plugs are:

The plugging requirements in the Hobbs Area are based on the well location within specific areas of the Area (See Figure D1). The Formations in the Hobbs Area to be isolated with cement plugs are (see Figure D2)

Figure D1 Map

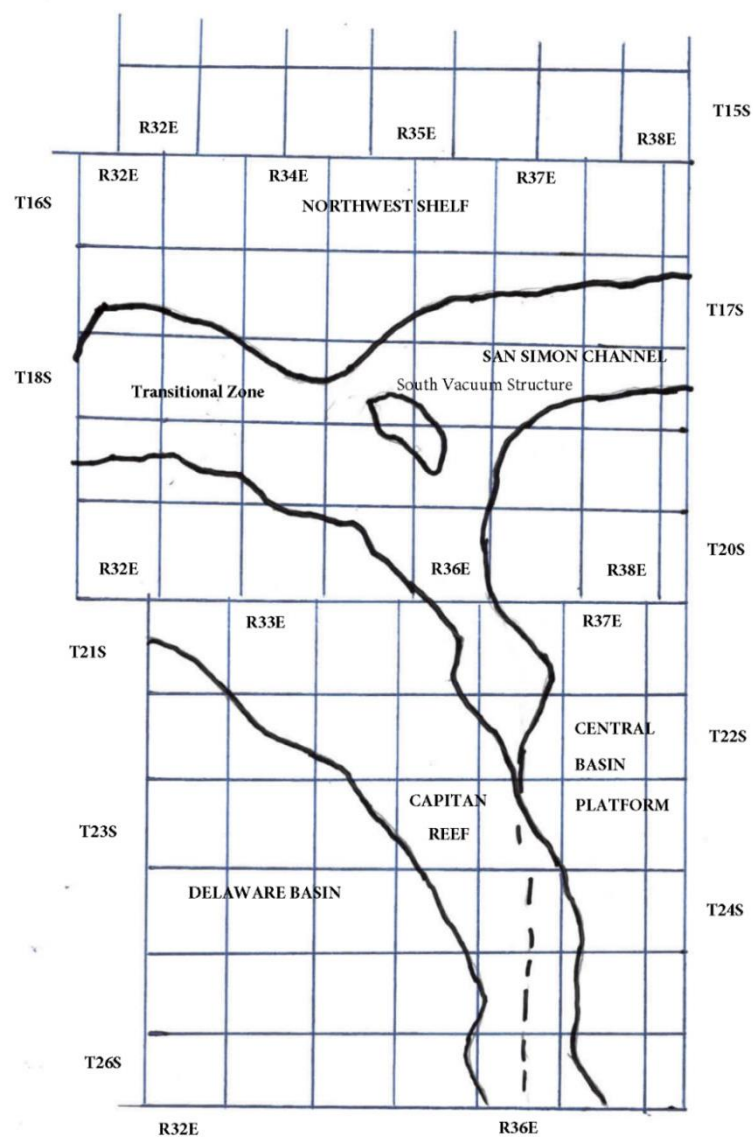


Figure D2 Formation Table

| 100' P'plug to isolate upper and lower fresh water zones (typiailly 2.50' to 350')  |                      |                     |                    |                          |                                                   |                                                                                                                          |
|-------------------------------------------------------------------------------------|----------------------|---------------------|--------------------|--------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| NDItrhwst Shelf                                                                     | C;iptan Reef Are<a   | Trani5ition Zone    | San Simon Oh.annel | South llacJUUm Structure | Delaware Basin                                    | Ce<n,tiral Basin Platform                                                                                                |
| Granit \./ash (Detrital basement material and fractured pre-Cambrian basement rock) | Siluro-Devonian      | Morrow              | Siluro-Devonian    | Ellenburger              | Siluro-Devonian                                   | Granit \./ash (Detrital basement material, fractured pre-Cambrian basement rock and fracture Mafic Volcanic intrusives). |
| Montoya                                                                             | Mississippian        | Atoka               | Morrow             | Mckee                    | Morrow                                            | Ellenburger                                                                                                              |
| Fusselman                                                                           | Morrow               | Strawn              | \./olfcamp         | Siluro-Devonian          | Atoka                                             | Connell                                                                                                                  |
| Woodford                                                                            | Atoka                | Cisco               | Abo Reef           | Woodford                 | Strawn                                            | Waddell                                                                                                                  |
| Siluro-Devonian                                                                     | Strawn               | Pennsylvanian       | Bone Spring        | Mississippian            | Pennsylvanian                                     | Mckee                                                                                                                    |
| Chester                                                                             | Pennsylvanian        | \./olfcamp          | Delaware           | Barnett Shale            | Low er \./olfcamp                                 | Simpson Group                                                                                                            |
| Austin                                                                              | \./olfcamp           | Bone Spring         | San Andres         | Morrow                   | Upper \./olfcamp                                  | Montoya                                                                                                                  |
| Mississippian                                                                       | Abo Reef, if present | Delaware            | Queen              | Atoka                    | \./olfcamp                                        | Fusselman                                                                                                                |
| Morrow                                                                              | Abo, if present      | San Andres          | Yates              | Strawn                   | Third Bone Spring Sand (Top of \./olfbone)        | Silurian                                                                                                                 |
| Atoka                                                                               | Queen, if present    | Grayburg-San Andres | Base of Salt       | Canyon                   | First Bone Spring Sand (Top of Lower Bone Spring) | Devonian                                                                                                                 |
| Lower Pennsylvanian                                                                 | Bone Spring          | Queen               | Rustler            | Pennsylvanian            | Bone Spring                                       | Strawn                                                                                                                   |
| Cisco-Canyon                                                                        | Delaware             | Seven Rivers        |                    | Blinebry                 | Brushy Canyon                                     | Pennsylvanian                                                                                                            |
| Pennsylvanian                                                                       | Base Capitan Reef    | Yates               |                    | Bone Spring              | Delaw are (Base of Salt)                          | \./olfcamp                                                                                                               |
| Bough                                                                               | Seven Rivers         | Base of Salt        |                    | San Andres               | Rustler                                           | Abo                                                                                                                      |
| \./olfcamp                                                                          | Yates                | Rustler             |                    | Queen                    |                                                   | Abo Reef                                                                                                                 |
| Abo                                                                                 | Top Capitan Reef     |                     |                    | Base of Salt             |                                                   | Drinkard                                                                                                                 |
| Abo Reef, if present                                                                | Base of Salt         |                     |                    | Rustler                  |                                                   | Tubb                                                                                                                     |
| Yeso (Township 15 South to Township 17 South)                                       | Rustler              |                     |                    |                          |                                                   | Blinebry                                                                                                                 |
| Drinkard or Low er Yeso (Township 15 South to Township 17 South)                    |                      |                     |                    |                          |                                                   | Paddock                                                                                                                  |
| Tubb (Township 15 South to Township 17 South)                                       |                      |                     |                    |                          |                                                   | Glorieta                                                                                                                 |
| Blinebry (Township 15 South to Township 17 South)                                   |                      |                     |                    |                          |                                                   | San Andres                                                                                                               |
| Paddock (Township 15 South to Township 17 South)                                    |                      |                     |                    |                          |                                                   | Grayburg                                                                                                                 |
| Glorieta                                                                            |                      |                     |                    |                          |                                                   | Grayburg-San Andres                                                                                                      |
| San Andres                                                                          |                      |                     |                    |                          |                                                   | Queen                                                                                                                    |
| Queen (Township 15 South to Township 17 South)                                      |                      |                     |                    |                          |                                                   | Seven Rivers                                                                                                             |
| Seven Rivers (Township 15 South to Township 17 South)                               |                      |                     |                    |                          |                                                   | Yates                                                                                                                    |
| Yates (Township 15 South to Township 17 South)                                      |                      |                     |                    |                          |                                                   | Base of Salt                                                                                                             |
| Base of Salt                                                                        |                      |                     |                    |                          |                                                   | Rustler                                                                                                                  |
| Rustler                                                                             |                      |                     |                    |                          |                                                   |                                                                                                                          |

**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 382350

CONDITIONS

|                                                                                           |                                                     |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Operator:<br>Western Refining Southwest LLC<br>539 South Main Street<br>Findlay, OH 45840 | OGRID:<br>267595                                    |
|                                                                                           | Action Number:<br>382350                            |
|                                                                                           | Action Type:<br>[C-103] NOI Plug & Abandon (C-103F) |

CONDITIONS

| Created By  | Condition                                                              | Condition Date |
|-------------|------------------------------------------------------------------------|----------------|
| loren.diede | Notify NMOCD 24 hours prior to beginning P&A operations.               | 9/11/2024      |
| loren.diede | Use these elevations: GL = 5489', DF = 5499', KB = 5500'.              | 9/11/2024      |
| loren.diede | The P&A marker is to be an above-ground 4" marker, not a plate marker. | 9/11/2024      |
| loren.diede | Use the BLM Gallup formation top pick of 1742'.                        | 9/11/2024      |