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

Carlsbad Field Office
OCD Hobbs

**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***

AUG 06 2018

RECEIVED

| | |
|---|---|
| 5. Lease Serial No. NMNM66925 | |
| 6. If Indian, Allottee or Tribe Name | |
| 7. If Unit or CA/Agreement, Name and/or No. NMNM137096X | |
| 1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other | 8. Well Name and No. Multiple--See Attached |
| 2. Name of Operator OXY USA INCORPORATED<br>Contact: SARAH CHAPMAN<br>E-Mail: SARAH_CHAPMAN@OXY.COM | 9. API Well No. Multiple--See Attached |
| 3a. Address P O BOX 4294 HOUSTON, TX 77210-4294<br>3b. Phone No. (include area code) Ph: 713-350-4997 | 10. Field and Pool or Exploratory Area MESA VERDE |
| 4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Multiple--See Attached | 11. County or Parish, State LEA COUNTY, NM |

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☒ Notice of Intent | ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| ☐ Subsequent Report | ☐ Alter Casing | ☐ Hydraulic Fracturing | ☐ Reclamation | ☐ Well Integrity |
| ☐ Final Abandonment Notice | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☒ Other Change to Original APD |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| | ☐ Convert to Injection | ☐ Plug Back | ☐ 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 recomplete 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 recompletion 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.

OXY USA Inc. respectfully requests to amend the APD for the following wells:

This bulk sundry request for eight Mesa Verde Unit wells in sections 13 and 18. This sundry is to change the DV tool placement on all eight wells and to change the production casing string for wells 14H, 15H, 18H and 19H. The wells related to this sundry request are:

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Mesa Verde BS Unit 14H - 3002544911 - NMNM66925
Mesa Verde BS Unit 15H - 3002544190 - NMNM66925
~~Mesa Verde BS Unit 16H - 3001544551 - NMNM114979~~
~~Mesa Verde BS Unit 17H - 3001544550 - NMNM114979~~
~~Mesa Verde BS Unit 18H - 3001544549 - NMNM114979~~
~~Mesa Verde BS Unit 19H - 3001544548 - NMNM114979~~

- operator must submit one separate Sundry for Mesa Verde Unit 16H, 17H, 18H, 19H, 20H, 21H

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #425749 verified by the BLM Well Information System**
**For OXY USA INCORPORATED, sent to the Hobbs**
**Committed to AFMSS for processing by PRISCILLA PEREZ on 06/29/2018 (18PP1366SE)**

Name *(Printed/Typed)* SAVID STEWART — Title SR. REGULATORY ADVISOR

Signature (Electronic Submission) — Date 06/28/2018

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

Approved By MUSTAFA HAQUE — Title PETROLEUM ENGINEER — Date 07/18/2018

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 Hobbs

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

## Additional data for EC transaction #425749 that would not fit on the form

**Wells/Facilities, continued**

| Agreement | Lease | Well/Fac Name, Number | API Number | Location |
|---|---|---|---|---|
| NMNM137096X | NMNM66925 | MESA VERDE BS UNIT 14 | 30-025-44191-00-X1 | Sec 18 T24S R32E 310FSL 1078FWL 32.210979 N Lat, 103.719498 W Lon |
| NMNM137096X | NMNM66925 | MESA VERDE BS UNIT 15 | 30-025-44190-00-X1 | Sec 18 T24S R32E 280FSL 1078FWL 32.210896 N Lat, 103.719498 W Lon |

**32. Additional remarks, continued**

~~Mesa Verde BS Unit 20H - 3001544547 - NMNM114979~~
~~Mesa Verde BS Unit 21H - 3001544546 - NMNM114979~~

The revised casing program reflects the change from tapered production string (5.5" X 4.5") on the 14H, 15H, 18H and 19H to long string of all 5.5" production casing. The depths are representative of the Mesa Verde BS Unit 14H.

## 1. Bulk Sundry Details

This is a bulk sundry request for eight Mesa Verde Unit wells in sections 13 and 18. This sundry is to change the DV tool placement on all wells below and to change the production casing string on the 14H, 15H, 18H, and 19H. The wells related to this sundry request are:

| Well Name | API | Lease Number |
|---|---|---|
| Mesa Verde BS Unit 14H | 3002544191 | NMNM66925 |
| Mesa Verde BS Unit 15H | 3002544190 | NMNM66925 |
| Mesa Verde BS Unit 16H | 3001544551 | NMNM114979 |
| Mesa Verde BS Unit 17H | 3001544550 | NMNM114979 |
| Mesa Verde BS Unit 18H | 3001544549 | NMNM114979 |
| Mesa Verde BS Unit 19H | 3001544548 | NMNM114979 |
| Mesa Verde BS Unit 20H | 3001544547 | NMNM114979 |
| Mesa Verde BS Unit 21H | 3001544546 | NMNM114979 |

Information remaining the same from the original APD will not be included here. The information below is based on the Mesa Verde BS Unit 14H.

## 2. Casing Program

The revised casing program below reflects the change from a tapered production string (5.5" x 4.5") on the 14H, 15H, 18H and 19H to a long string of all 5.5" production casing. The depths are representative of the Mesa Verde BS Unit 14H.

| Hole Size (in) | Casing Interval From (ft) | Casing Interval To (ft) | Csg. Size (in) | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | Bouyant Body SF Tension | Bouyant Joint SF Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 14.75 | 0 | 970 | 10.75 | 40.5 | J55 | BTC | 1.125 | 1.2 | 1.4 | 1.4 |
| 9.875 | 0 | 9797 | 7.625 | 26.4 | L80 | BTC | 1.125 | 1.2 | 1.4 | 1.4 |
| 6.75 | 0 | 15671 | 5.5 | 20 | P-110 | DQX | 1.125 | 1.2 | 1.4 | 1.4 |

SF Values will meet or exceed

### Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open-hole section.

## 3. Cementing Program

The cementing volumes below are calculated for the Mesa Verde BS Unit 14H based on the casing scheme in Section 1. The DV tool placement at 4,693ft is 50ft into the Lamar/Delaware. We are requesting to change the DV tool set point to this depth for all wells listed in Section 1. This is the anticipated set depth, but the drilling engineer will adjust final set position to meet first and second stage cementing objectives based on well conditions. The intermediate first and second stage volumes in the table below are representative of all wells listed in Section 1 with the new DV tool placement.

| Casing | Slurry | #Sks | Wt. (Lb/gal) | Yld ft3/sack | H20 gal/sk | 500# Comp. Strength | Slurry Description |
|---|---|---|---|---|---|---|---|
| Surface | Tail | 961 | 14.8 | 1.33 | 6.365 | 5:26 | Accelerator |
| 1st Stage Intermediate | Lead | 420 | 10.2 | 2.58 | 11.568 | 6:59 | Retarder, Extender, Dispersant |
| | Tail | 160 | 13.2 | 1.61 | 7.804 | 7:11 | Retarder, Dispersant, Salt |
| DV/ECP Tool @ 4,693ft ft | | | | | | | |
| 2nd Stage Intermediate | Tail | 1,521 | 13.6 | 1.67 | 8.765 | 7:32 | Extender. Accelerator, Dispersant |
| Production Liner | Tail | 450 | 13.2 | 1.38 | 6.686 | 3:49 | Retarder, Dispersant, Fluid Loss Control, Extender |

| Casing String | Top of Lead (ft) | Bottom of Lead (ft) | Top of Tail (ft) | Bottom of Tail (ft) | % Excess Lead | % Excess Tail |
|---|---|---|---|---|---|---|
| Surface | N/A | N/A | 0 | 970 | N/A | 100% |
| 1st Stage Intermediate Casing | 4593 | 8797 | 8797 | 9797 | 20% | 20% |
| 2nd Stage Intermediate Casing | N/A | N/A | 0 | 4693 | N/A | 150% |
| Production Casing | N/A | N/A | 9297 | 15671 | N/A | 15% |

# PERFORMANCE DATA

**TMK UP DQX** **5.500 in** **20.00 lbs/ft** **P-110**
**Technical Data Sheet**

## Tubular Parameters

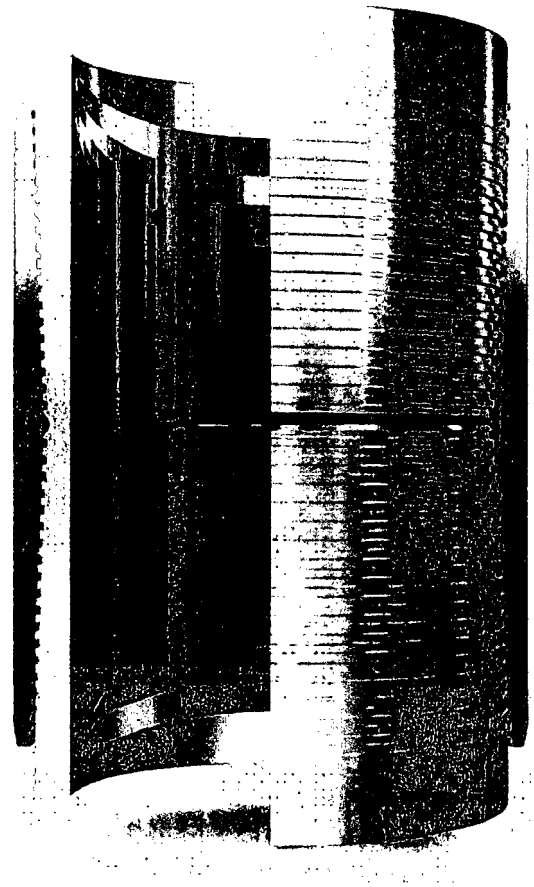
| | | | | | |
|---|---|---|---|---|---|
| Size | 5.500 | in | Minimum Yield | 110,000 | psi |
| Nominal Weight | 20.00 | lbs/ft | Minimum Tensile | 125,000 | psi |
| Grade | P-110 | | Yield Load | 641,000 | lbs |
| PE Weight | 19.81 | lbs/ft | Tensile Load | 729,000 | lbs |
| Wall Thickness | 0.361 | in | Min. Internal Yield Pressure | 12,600 | psi |
| Nominal ID | 4.778 | in | Collapse Pressure | 11,100 | psi |
| Drift Diameter | 4.653 | in | | | |
| Nom. Pipe Body Area | 5.828 | in² | | | |

## Connection Parameters

| | | |
|---|---|---|
| Connection OD | 6.050 | in |
| Connection ID | 4.778 | in |
| Make-Up Loss | 4.122 | in |
| Critical Section Area | 5.828 | in² |
| Tension Efficiency | 100.0 | % |
| Compression Efficiency | 100.0 | % |
| Yield Load In Tension | 641,000 | lbs |
| Min. Internal Yield Pressure | 12,600 | psi |
| Collapse Pressure | 11,100 | psi |

## Make-Up Torques

| | | |
|---|---|---|
| Min. Make-Up Torque | 11,600 | ft-lbs |
| Opt. Make-Up Torque | 12,900 | ft-lbs |
| Max. Make-Up Torque | 14,100 | ft-lbs |
| Yield Torque | 20,600 | ft-lbs |



**Printed on: July-29-2014**



TMK IPSCO

# PECOS DISTRICT
# DRILLING OPERATIONS
# CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | OXY USA Inc |
| LEASE NO.: | NM66925 |
| WELL NAME & NO.: | Mesa Verde BS Unit – 14H |
| SURFACE HOLE FOOTAGE: | 310'/S & 1078'/W |
| BOTTOM HOLE FOOTAGE | 180'/N & 1323'/W |
| LOCATION: | Sec. 18, T. 24 S, R. 32 E |
| COUNTY: | Lea County |

| | | | |
|---|---|---|---|
| Potash | ◉ None | ○ Secretary | ○ R-111-P |
| Cave/Karst Potential | ◉ Low | ○ Medium | ○ High |
| Variance | ○ None | ◉ Flex Hose | ○ Other |
| Wellhead | ○ Conventional | ◉ Multibowl | |
| Other | ☐4 String Area | ☐Capitan Reef | ☐WIPP |

**All previous COAs still apply except for the following:**

## A. CASING

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

1. The minimum required fill of cement behind the **7 5/8** inch intermediate casing is:

**Operator has proposed a contingency DV tool at 4693'. If operator circulates cement on the first stage, operator is approved to inflate the ACP and run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will inflate ACP and proceed with the second stage.**

   a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job. **Excess calculates to 21% - additional might be required.**

   b. Second stage above DV tool:

      - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

2. The minimum required fill of cement behind the **5 1/2** inch production casing is:

- Cement should tie-back at least **100** feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 14% - additional cement will be required.**

# GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.