NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 03 2015
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Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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 reverse side.

5. Lease Serial No.
NMNM94651

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
CEDAR CANYON 28 FEDERAL 6H

2. Name of Operator
OXY USA INCORPORATED
Contact: DAVID STEWART

9. API Well No.
30-015-43234-00-X1

3a. Address
5 GREENWAY PLAZA STE 110
HOUSTON, TX 77046-0521

3b. Phone No. (include area code)
Ph: 432.685.5717

10. Field and Pool, or Exploratory
PIERCE CROSSING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 28 T24S R29E NESE 1820FSL 240FEL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall 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 approval for the following changes to the drilling plan:

Proposed TD - 13533'M 8625'V

1. Request casing design modification, to set deep intermediate casing.

a. Add DV tool and ACP +/- 3000' for contingency second stage cement job. If cement comes to surface during first stage cement job we will inflate the ACP and then drop the cancelation cone for the DV tool.

b. Set the casing string within +/- 100' of the planned set point depending on how formation tops affect our planned KOP. If deeper, cement volumes will be increased appropriately.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Accepted for record
NMOCD 9/3/15

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

Electronic Submission #313569 verified by the BLM Well Information System
For OXY USA INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by CHRISTOPHER WALLS on 09/01/2015 (15CRW0109SE)

Name *(Printed/Typed)* DAVID STEWART — Title REGULATORY ADVISOR

Signature (Electronic Submission) — Date 08/24/2015

APPROVED
SEP - 1 2015
Tengku Muchlis Krueng

THIS 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 BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD 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.

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

Additional data for EC transaction #313569 that would not fit on the form

32. Additional remarks, continued

Intermediate Casing
7-5/8" 29.7# L-80 BT&C new csg @ 0-8000', 9-7/8" hole w/ 9.0# mud

Coll Rating (psi)-4790 Burst Rating (psi)-6890
SF Coll-2.48 SF Burst-1.42 SF Ten-2.29

Collapse and burst loads calculated using Stress Check with anticipated loads, see attached for design assumptions

2. Cement program modifications detailed below.

a. Intermediate - Circulate cement to surface w/ 1070sx Tuned Light (TM) system cmt w/ 3#/sx Kol-Seal + .125#/sx Poly-E-Flake + .8% HR-601, 10.2ppg 3.05 yield 500# in 15.07hr CS 125% Excess followed by 100sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% Halad(R)-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield 500# in 12.57hr CS 15% Excess.

Contingency 2nd Stage - Circulate cement to surface w/ 470sx HES light PP cmt w/ 5% Salt + .1% HR-800, 12.9ppg 1.85 yield 500# in 12.44hr CS 75% Excess followed by 180sx PP cmt, 14.8ppg 1.33 yield 500# in 6.31hr CS 125% Excess.

b. Production - Cement w/ 500sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% Halad(R)-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield 500# in 12.57hr CS 50% Excess. Estimated TOC @ 7000'.

Description of Cement Additives: Salt (Accelerator); CFR-3 (Dispersant); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)
The above cement volumes could be revised pending the caliper measurement.

3. Mud Program

Depth	Mud WT	Vis Sec	Fluid Loss	Type
0-500'	8.5-9.0	40-55	50-75cc/30min	EnerSeal Spud Mud (MMH)
500-3000'	9.8-10	28-32	NC	NaCl Brine
3000-8000'	9.0-9.4	38-50	50-75cc/30min	EnerSeal (MMH)
8000'-TD	8.8-9.6	28-32	NC	Cut Brine

Remarks: The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Oxy proposes to drill out the 10-3/4" surface casing shoe with a saturated brine system from 500-3000', which is the base of the salt system. At this point we will swap fluid systems to a high viscosity mixed metal hydroxide system. We will drill with this system to the intermediate TD @ 8000'.

We are also proposing to change the production mud system back to a cut brine system.

OXY USA Inc.
Cedar Canyon 27/28 Federal

Casing Design Assumptions:

Burst Loads

CSG Test (Intermediate)
- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from the Intermediate hole TD to Surface CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

CSG Test (Production)
- Internal: Fresh water displacement fluid + 80% CSG Burst rating
- External: Pore Pressure from the well TD the Intermediate CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Gas Kick (Intermediate)
- Internal: Gas Kick based on Pore Pressure or Fracture Gradient @ CSG shoe with a gas 0.115psi/ft Gas gradient to surface while drilling the next hole section (e.g. Gas Kick while drilling the production hole section is a burst load used to design the intermediate CSG)
- External: Pore Pressure from section TD to previous CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Stimulation (Production)
- Internal: Displacement fluid + Max Frac treating pressure (not to exceed 80% CSG Burst rating)
- External: Pore Pressure from the well TD to the Intermediate CSG shoe and 8.5 ppg MWE to surface

Collapse Loads

Lost Circulation (Intermediate)
- Internal: Losses experienced while drilling the next hole section (e.g. losses while drilling the production hole section are used as a collapse load to design the intermediate CSG). After losses there will be a column of mud inside the CSG with an equivalent weight to the Pore Pressure of the lost circulation zone
- External: MW of the drilling mud that was in the hole when the CSG was run

Cementing (Intermediate/Production)
- Internal: Displacement Fluid
- External: Cement Slurries to TOC, MW to surface

Full Evacuation (Production)
- Internal: Atmospheric Pressure
- External: MW of the drilling mud that was in the hole when the CSG was run

Tension Loads

Running CSG (Intermediate/Production)
- Axial load of the buoyant weight of the string plus either 100 klb over-pull or string weight in air, whichever is less

Green Cement (Intermediate/Production)
- Axial load of the buoyant weight of the string plus the cement plug bump pressure (Final displacement pressure + 500 psi)

Burst, Collapse and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software.

Conditions of Approval
Oxy USA WTP LP
Cedar Canyon 28 Fed 6H
30-015-43234

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

   a. First stage to DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

Operator has proposed a contingency DV tool at 3000'. 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.

   b. Second stage above DV tool:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Cave/Karst.**