Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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.
NMLC029405B

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.
RUBY FEDERAL 33

2. Name of Operator
CONOCOPHILLIPS COMPANY
Contact: SUSAN B MAUNDER
E-Mail: Susan.B.Maunder@conocophillips.com

9. API Well No.
30-025-41505-00-X1

3a. Address
3300 N "A" ST BLDG 6
MIDLAND, TX 79705

3b. Phone No. (include area code)
Ph: 281-206-5281
Fx: 281-206-5745

HOBBS OCD

10. Field and Pool, or Exploratory
MALJAMAR

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 18 T17S R32E SWNE 1725FNL 1688FEL
32.501393 N Lat, 103.480977 W Lon

APR 11 2014

RECEIVED

11. County or Parish, and State
LEA 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 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 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.)

ConocoPhillips Company respectfully requests approval to change the original APD approval for this well.

SUMMARY-
ConocoPhillips Co. originally drilled this well beginning February 1, 2014. While cementing the production casing, of a two string design, we did not circulate cement to surface as planned. We performed diagnostic tests as requested by BLM representatives and submitted the results. On March 7, 2014 we completed an approved remedial operation to perform a bradenhead squeeze down the annulus. We cemented across an open hole section and had good cement into the surface casing shoe. Requested tests were again performed and submitted. However, we were not able to complete a satisfactory MIT. Additional remedial options were considered.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVED
APR 8 2014
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #240867 verified by the BLM Well Information System
For CONOCOPHILLIPS COMPANY, sent to the Hobbs
Committed to AFMSS for processing by CHRISTOPHER WALLS on 04/08/2014 (14CRW0138SE)

Name *(Printed/Typed)* SUSAN B MAUNDER — Title SENIOR REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 04/02/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ — Title PETROLEUM ENGINEER — Date 04/08/2014

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.

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

APR 21 2014

Additional data for EC transaction #240867 that would not fit on the form

32. Additional remarks, continued

PROPOSAL-
Engineering staff have evaluated several options and propose spotting a liquid bridge plug utilizing specific epoxy resin tailored for oil well applications. The material??s viscosity has been lowered to provide ease of mixing and placement. The lowered viscosity is accomplished without associated volumetric shrinkage usually accompanying thinning of epoxy resin. When cured, this liquid bridge plug has strength comparable or greater than conventional cement.
Tensile strength is over 200 times that of cement and ultimate compressive strength of over 8,000 psi. Additional characteristics of Liquid Bridge Plug (LBP) include: Non-shrinking and exothermic. It functions within a wide temperature range of 50??F?\300??F. It is impermeable to gas and insoluble in water.

We propose to perform this operation as soon as approval is received and tentatively scheduled for April 4, 2014.

JUSTIFICATION-
After failure to achieve a successful MIT following the initial remediation job on Ruby Federal 33, a CBL was run and the condition of the 8-5/8?? x 5-1/2?? casing annulus was evaluated. The CBL indicates that remedial cement is present in the annulus from approximately 50 ft ?C 845 ft, across the surface casing shoe. Cement bonding to formation exists, so the likely cause of the failed MIT is the presence of a small channel near-casing.
After evaluating various options to eliminate this channel, Liquid Bridge Plug was selected as the product best-suited to create a permanent seal while preserving casing integrity. When LBP is introduced to 8.34 ppg fresh water in the casing annulus, the 15 ppg resin sinks at approximately 25 ft/min, without dispersal, and coalesces on TOC. Pressure is applied to squeeze LBP into channels existing in the cement. Following the designed cure-time, a subsequent pressure test is performed to verify the integrity of the seal. LBP has been used for onshore and offshore applications to create an annular seal, control gas migration, mitigate packer leaks, and seal perforated zones. Please refer to the attached laboratory testing results, which verify compressive strengths and shear bonding that outperforms conventional cement.

During the planned completion operations on Ruby Federal 33, pressure on the 8-5/8?? x 5-1/2?? casing annulus is expected to be 0 psi.

SUPPORTING DOCUMENTS-
Detailed Procedure
MSDS for each LBP component
Laboratory test results confirming LBP characteristics

Thank you for your time spent reviewing this request.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

ConocoPhillips

PROCEDURE: LIQUID BRIDGE PLUG (LBP), RUBY FEDERAL 33

Category 1 Well, Requires 1 Untested Barrier
1st Barrier: 5 ½" 17# L-80 csg, float collar, shoe, and cement
****Well is not perforated***

1. **Conduct safety meeting (JSA)**
2. MIRU PFS and test support equipment.
3. Test pump (PDP) for a minimum of 30 minutes.
4. RU surface line to 2" casing ball valve and 8-5/8" x 5-1/2" casing annulus.
5. Fill annulus with fresh water.

   Note: Annulus should have fresh water from TOC – surface.
6. Close 2" casing ball valve and test surface line to 1,500 psi.
7. Ensure working area for all chemicals on location has adequate containment.
8. PFS technician will mix 1 bbl of 15 ppg Liquid Bridge Plug. Ensure LBP remains above 70°F.
   a) 8-5/8" x 5-1/2" casing annulus displacement = 0.0343 bbl/ft
   b) Estimated LBP annular fill = 30 ft
   c) Estimated temperature at TOC = 70°F
9. Inject Liquid Bridge Plug into the 8-5/8" x 5-1/2" casing annulus at 1-2 gpm. Do not take returns. Flush pumps clean with water.
10. Allow 45 minutes for Liquid Bridge Plug to fall and coalesce on TOC.
11. Apply +/-400 psi to 8-5/8" x 5-1/2" casing annulus via PDP test pump. See COA
12. If sufficient squeeze pressure is noted, shut in for ~~24~~ 48 hrs hrs. If no squeeze pressure is noted after 1 bbl of LBP is squeezed, repeat Steps 5 – 12.

    Note: Verify LBP cure time when lab fluid times are confirmed +/-48 hrs prior to job. See COA
13. Ensure casing valve is closed and remove surface line from casing annulus.
14. Circulate Ultra Surf and water through pumps to remove residual LBP.
15. Shut well in and prepare for 8-5/8"x 5-1/2" casing annulus pressure test.

When Work completed – Operator To WAiT A Minimum of 48 hrs before doing Csg Annulus pressure Test
Call BLM To witness Test 500 psi for 30 min

APPROVED Liquid Bridge Plug Procedure (Ruby Federal 33)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

ConocoPhillips

PRESSURE TEST 8-5/8" x 5-1/2" CASING ANNULUS

Notify BLM field inspector of intent to pressure test, giving BLM the option to witness pressure test.

Contact: (575) 393-3612

16. RU lines to 8-5/8" x 5-1/2" casing annulus.
17. Pressure test to 600 psi and chart pressure for 30 minutes, as required by the BLM. Use a circular pressure chart with 0 – 1500 psi scale. Use red ink for recording pressure.

    ***A successful pressure test must not vary by greater than 10% over 30 minutes.**
18. After completing pressure test, ensure that the pressure test chart includes the following information, as required by the BLM:
    a) Well name and API number
    b) Start/End time and pressure
    c) Calibration date
    d) Signature of person performing the test
    e) Signature of COPC representative witnessing the test
    f) Signature of any government witness on location

    NOTE: Chart line must be clearly visible, do not write over the pressure record line.
19. RDMO lines and test unit.

CONDITIONS OF APPROVAL

Sundry dated 04/02/2014

OPERATOR'S NAME:	ConocoPhillips
LEASE NO.:	LC029405B
WELL NAME & NO.:	Ruby Federal #33 (30-025-41505)
LOCATION:	Section 18, T.17 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

1. Note: on operator's procedure step 12. "If sufficient squeeze pressure is noted, **shut in for 48 hrs**."

2. When work/job is complete; operator to **wait a minimum of 48 hours** before doing the casing annulus pressure test; a minimum of 500 psi for 30minutes and to be witness by BLM

3. If the casing annulus pressure test is successful and approved by the BLM; operator may proceed to frac the well.

4. Operator shall monitor the 8-5/8" by 5-1/2" annulus during Frac procedure and have the service company document the pressure during the procedure.

5. Operator to submit a subsequent report sundry & provide a copy of service company frac report with chart of 8-5/8" by 5-1/2" annulus being monitor.

6. Several days after the Frac the operator to shall re-test the 8-5/8" by 5-1/2" annulus up to a 500 psi with a chart recorder. Operator to keep pressure on the 8-5/8" by 5-1/2" annulus for up to 30 minutes and longer if needed until the pressure stabilizes for at least 10 minutes.

7. Operator to install a life time monitoring system on the well for the 8-5/8" by 5-1/2" casing annulus. Operator to propose a system to the BLM for final approval.

EGF 040814