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

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.

HOBBS OCD
AUG 22 2016
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM 22

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.
ENDURANCE 36 STATE COM 705H

2. Name of Operator
EOG RESOURCES INCORPORATED

Contact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com

9. API Well No.
30-025-43227-00-X1

3a. Address
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-686-3689

10. Field and Pool, or Exploratory
WC-025 G09 S263327G

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 36 T26S R33E SESW 404FSL 2320FWL

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 Drilling Operations
	☐ 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.)

EOG Resources requests an amendment to our approved APD for this well to reflect a change in the 7-5/8" intermediate casing design and cementing procedure as attached.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #346894 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by MUSTAFA HAQUE on 08/10/2016 (16MH0014SE)

Name *(Printed/Typed)* STAN WAGNER — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 08/04/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ~~(BLM Approver Not Specified)~~ Mustafa Haque — Title PETROLEUM ENGINEER — Date 08/11/2016

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 ****

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources, Inc
LEASE NO.:	NMNM122622
WELL NAME & NO.:	Endurance 36 State Com_705H
SURFACE HOLE FOOTAGE:	404'/S & 2320'/W
BOTTOM HOLE FOOTAGE	230'/N & 1652'/W SEC. 25
LOCATION:	Section 36, T 26 S., R 33 E., NMPM
COUNTY:	Lea County, New Mexico

All previous COAs still apply, except for the following:

A. CASING

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

MHH 08112016

eog resources

Endurance 36 State Com 705H

7-5/8"Cement Job Procedure
August 4, 2016

1. Drill 8-3/4" intermediate hole section to ±11,200' MD. TOH with 4-1/2" DP. LD BHA.
   a. Note: 10-3/4" surface casing will be set at 1086' MD
   b. Complete losses are anticipated at ±7300' MD

2. Install 7-5/8"casing rams in top section of double BOP. Test door seals to 1500 psi.

3. RIH with 7-5/8" casing as follows.

   a. From TD to ±1080' - 7-5/8" 29.7# HCP110 Flushmax III - No centralizers
   b. From ±1080' to Surface - 7-5/8" 29.7# HCP110 LTC - No centralizers

4. Land 7-5/8" casing on shoulder with mandrel hanger.

5. Shut 7-5/8" casing rams. Monitor casing pressure. Pump pipe capacity using 9.0 ppg reused water (~600 bbls). Record final rate and pressure. Pump 50 bbls of 9.0 ppg RW down 10-3/4" x 7-5/8" annulus. Shut down and record final pump in rate, pressure and ISIP. Do not exceed 500 psi while pumping down BS.

6. RU cementing equipment. The first stage will be pumped conventionally down the 7-5/8" casing with the 7-5/8" rams CLOSED (no returns to surface). RU to pump second stage down both valves on the 10-3/4" x 7-5/8" annulus.

7. Make certain to check the chlorides, pH and temperature of the mix water as soon as the cementing company arrives on location. Mix water should be similar to water used for field blend test.

8. Pump FIRST STAGE as follows:

   a. M&P cement at 5-7 bpm
   b. Displace cement at 7 bpm

First Stage Cement Slurry Design Criteria	
Previous Casing:	10-3/4" 40.5# J55 STC set at 1159' MD
Bit Size:	9.875" from SCP to 7838' MD, 8.750" from 7838' to TD
BHST:	177 °F
BHCT:	133 °F
Cement Volumes Based on:	10.47" AHS from SCP to 6500', 10" AHS from 6500' to 8000', 9" AHS from 8000' to TD
Excess added to AHS volumes:	±45%
TOC:	7300' (Note: Complete LC expected at ±7300')
Pump Schedule	
Pressure Test:	Pressure test lines to 4000 psi, Set fluid pumps to kick out at 3000 psi
Spacer:	40 bbls of fresh water
Tail Cement:	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P
Displacement:	Drop plug →20 bbls fresh water → ±472 bbls reused water →±20 bbls fresh water

First Stage Cement Slurry Properties					
Estimated Volume:	550	Sacks	300 Reading:	79	Rpm
Density:	14.4	Ppg	200 Reading:	56	Rpm
Yield:	1.20	ft^3/sack	100 Reading:	37	Rpm
Mix Water:	4.81	gal/sack	6 Reading:	12	Rpm
Total Mixing Water:	63	Bbls	3 Reading:	11	Rpm
Thickening Time:	3:07	hrs:min	8 hr Compressive Strength:	469	Psi
Free Water:	0	%	12 hr Compressive Strength:	1351	Psi
Fluid Loss:	22	ml/ 30 min	24 hr Compressive Strength:	2186	Psi
Top of cement:	**7300**	**Feet**	Compressive Strengths @	177	^0F

10-3/4" 40.5# J55 Burst = 3130 psi, Collapse = 1580 psi
7-5/8" 29.7# HCP110 LTC Burst = 9470 psi, Collapse = 7150 psi, JS = 769 kips
7-5/8" 29.7# HCP110 Flushmax III Burst = 7574 psi, Collapse = 5350 psi, JS = 563 kips

9. Back-out landing joint. Install and pressure test pack-off bushing.

10. Continue WOC until the first stage cement has had at least 4 hours of time since bumping plug.

11. Close blind rams. Pressure up on the inside of the 7-5/8" casing to 500 psi and maintain throughout cement job.

12. RU to pump down the 10-3/4" x 7-5/8" annulus. Pump at least 50 bbls of RW down annulus. Shut down and record final pump rate, pressure and ISIP.

13. Pump SECOND STAGE as follows:

    a. Do not exceed 500 psi while pumping down backside.
    b. M&P cement at 4-5 bpm

14. The following volumes will be pumped down the 10-3/4" x 7-5/8" annulus.

Second Stage Cement Slurry Design Criteria	
Previous Casing:	10-3/4" 40.5# J55 STC set at 1159'
Bit Size:	9.875" from SCP to 7838' MD, 8.750" from 7838' to TD
BHST:	140 °F
BHCT:	108 °F
Cement Volumes Based on:	10.47" AHS from SCP to 6500', 10" AHS from 6500' to 7300'
Excess added to AHS volumes:	±35%
TOC:	Surface
Pump Schedule	
Pressure Test:	Pressure test lines to 2500 psi, Set fluid pumps to kick out at 2000 psi
Spacer:	40 bbls of fresh water
Cement:	Class C + 5% Gypsum + 3% $CaCl_2$

Second Stage Cement Slurry Properties					
Estimated Volume:	2000	Sacks	300 Reading:	62	Rpm
Density:	14.8	Ppg	200 Reading:	54	Rpm
Yield:	1.38	ft^3/sack	100 Reading:	46	Rpm
Mix Water:	6.48	gal/sack	6 Reading:	24	Rpm
Total Mixing Water:	309	Bbls	3 Reading:	17	Rpm
Thickening Time:	2:08	hrs:min	8 hr Compressive Strength:	1369	Psi
Free Water:	0	%	12 hr Compressive Strength:	1583	Psi
Fluid Loss:	NA	ml/ 30 min	24 hr Compressive Strength:	1910	Psi
Top of cement:	**0**	**Feet**	Compressive Strengths @	140	^0F

15. Displace the cement with 4 bbls of fresh water.

16. Shut-in the 10-3/4" x 7-5/8" annulus. Do not allow any fluids down annulus.

17. Monitor the shut-in pressure on the 10-3/4" x 7-5/8" annulus for 4 hours. While WOC bleed pressure off of the inside of the 7-5/8" casing. Change out rams and pressure test BOPE.

18. If the pressure remains positive (>0 psi), RDMO cementing equipment.

19. If the pressure is not positive and the well is on a vacuum.

    a. Make certain to have at least 1000 sx (237 bbls) of Class C + 2% $CaCl_2$ "top off" cement on location.
    b. After waiting at least 4 hours from bumping the plug, fill the 10-3/4" x 7-5/8" annulus with 14.8 ppg class C + 2% $CaCl_2$ cement to surface.
    c. M&P cement at 3-4 bpm.
    d. Flush lines with 4 bbls of fresh water. Do not exceed 500 psi.
    e. Record the amount of cement required to fill annulus.
    f. RDMO cementers.