Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
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.

HOBBS OCD

JUN 20 2016

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM 93658

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.
HAWK 26 FED 709H

2. Name of Operator
EOG RESOURCES INCORPORATED

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

9. API Well No.
30-025-42402-00-X1

3a. Address
MIDLAND, TX 79702

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

10. Field and Pool, or Exploratory
WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 26 T24S R33E SESE 500FSL 715FEL
32.182585 N Lat, 103.536418 W Lon

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 intends to pump this previously discussed intermediate cement procedure for our approved casing design on this well.

The purpose of this sundry is to provide to BLM a detailed design and procedure for this job as attached. The job will be pumped 6/19/16.

- Please submit CBL to BLM

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #342347 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by MUSTAFA HAQUE on 06/17/2016 (16MH0003SE)

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

Signature (Electronic Submission) — Date 06/17/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ~~(BLM Approver Not Specified)~~ mustafa Haque — Title PETROLEUM ENGINEER — Date 06/17/2016

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 **

FOR RECORD ONLY
MW/OCD 6/21/2016

eog resources

Hawk 26 Fed 709H
Foam Cement Job Procedure
June 16, 2016

1. Drill 9-7/8" and 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 is set at 1,358' MD
    b. 9-7/8" intermediate hole section was drilled from SCP to 9089' MD
    c. 8-3/4" intermediate hole section was drilled from 9089' to TD.
    d. Lost complete returns at 7215' MD while drilling with 10+ ppg BW

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 ±8900' - 7-5/8" 29.7# HCP110 Flushmax III - No centralizers
    b. From ±8900' to 1000' - 7-5/8" 29.7# HCP110 LTC - One centralizer every other joint
    c. Maximum allowable pressure on 7-5/8" casing = 3000 psi

4. Kill well as needed by pumping 10 ppg BW down BS. Do not pump any weighted and/or viscosified mud down the 7-5/8" x 10-3/4" annulus.

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

6. Shut 7-5/8" casing rams. Monitor casing pressure. Pump pipe capacity using 9.0 ppg reused water (~600 bbls). Shut down and record ISIP, 5 and 10 minute SIPs. Pump 50 bbls of 9.0 ppg RW down 10-3/4" x 7-5/8" annulus. Shut down and record ISIP, 5 and 10 minute SIPs. Send info to Munsell. Do not exceed 500 psi while pumping down BS.

7. RU Nine's foam cementing equipment that includes two fluid pump trucks, one N_2 pump truck, batch mixer and foam cement trailer. Check to make certain that the foam generator has a **10/64** choke bean installed. Rig up to take returns on the first stage via the flow-line (conventionally). RU to pump second stage down both valves on the 10-3/4" x 7-5/8" annulus.

8. Make certain Nine checks the chlorides and pH of the mix water as soon as they arrive on location. Mix water should be similar to water used for field blend test.

    Fresh water required to mix cement:
    (40+69+221+40+5 = 375) x 1.5 ~ 600 bbls

9. Pump FIRST STAGE as follows:

First Stage Cement Slurry Design Criteria	
Previous Casing:	10-3/4" 40.5# J55 STC set at 1,358' MD
Bit Size:	9.875" from SCP to 9089' MD, 8.750" from 9089' to TD
BHST:	177 °F
BHCT:	135 °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:	25%
TOC:	7300' (Note: lost complete returns at 7215' drlg with 10# BW)
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:	52	Rpm
Density:	14.4	Ppg	200 Reading:	38	Rpm
Yield:	1.20	ft^3/sack	100 Reading:	22	Rpm
Mix Water:	4.82	gal/sack	6 Reading:	9	Rpm
Total Mixing Water:	69	Bbls	3 Reading:	8	Rpm
Thickening Time:	3:30	hrs:min	8 hr Compressive Strength:		Psi
Free Water:	0	%	24 hr Compressive Strength:	1351	Psi
Fluid Loss:	22	ml/ 30 min	48 hr Compressive Strength:	2186	Psi
Top of cement:	**7300**	**Feet**	Compressive Strengths @	177	°F

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

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

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

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

13. 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 ISIP, 5 min and 10 min SIPs.

14. Pump SECOND STAGE as follows:

    a. Theoretically the annulus pressure should not exceed 800 psi.
    b. Try not exceed the following pressures while pumping the noted fluid weights.
        i. 1000 psi - 14.8 ppg + 250 scf/bbls N_2
        ii. 500 psi – 14.8 ppg + 0 scf/bbl N_2

Second Stage Cement Slurry Design Criteria	
Previous Casing:	10-3/4" 40.5# J55 STC set at 1,358'
Bit Size:	9.875" from SCP to 9089' MD, 8.750" from 9089' 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:	25%
TOC:	Surface
Pump Schedule	
Pressure Test:	Pressure test lines to 2500 psi, Set fluid pumps to kick out at 2000 psi
Cement:	Class C + 5% Gypsum + 3% $CaCl_2$ + 0.1 gps Plexfoam 7

Second Stage Cement Slurry Properties					
Estimated Volume:	1400	Sacks	300 Reading:	135	Rpm
Density:	14.8	Ppg	200 Reading:	117	Rpm
Yield:	1.42	ft^3/sack	100 Reading:	90	Rpm
Mix Water:	6.62	gal/sack	6 Reading:	18	Rpm
Total Mixing Water:	363	Bbls	3 Reading:	14	Rpm
Thickening Time:	1:04	hrs:min	8 hr Compressive Strength:		Psi
Free Water:	0	%	12 hr Compressive Strength:		Psi
Fluid Loss:	NA	ml/ 30 min	24 hr Compressive Strength:	1257	Psi
Top of cement:	**0**	**Feet**	Compressive Strengths @	100	°F

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

Stage	Density ppg	Base Slurry Volume Bbls	Cumulative Cement Bbls	Base Slurry Rate Bpm	N2 SCFPB Base Slurry	N2 SCF/Min	Total Stage N2 SCF	Foamer Rate GPM	Foamer Volume Gals	Cum Foamer Gals	Cum N2 SCF	Tot Min
Spacer	8.4	40	0	4	0	0	0	0.00	0.0	0	0	
Foam 1	14.8	13	13	4	625	2500	8125	1.6	5.2	5.2	8125	3.25
Foam 2	14.8	13	26	4	575	2300	7475	1.6	5.2	10.4	15600	6.50
Foam 3	14.8	16	42	4	550	2200	8800	1.6	6.4	16.8	24400	10.5
Foam 4	14.8	16	58	4	515	2060	8240	1.6	6.4	23.2	32640	14.5
Foam 5	14.8	16	74	4	475	1900	7600	1.6	6.4	29.6	40240	18.5
Foam 6	14.8	16	90	4	425	1700	6800	1.6	6.4	36.0	47040	22.5
Foam 7	14.8	16	106	4	400	1600	6400	1.6	6.4	42.4	53440	26.5
Foam 8	14.8	16	122	4	375	1500	6000	1.6	6.4	48.8	59440	30.5
Foam 9	14.8	16	138	4	350	1400	5600	1.6	6.4	55.2	65040	34.5
Foam 10	14.8	16	154	4	300	1200	4800	1.6	6.4	61.6	69840	38.5
Foam 11	14.8	16	170	4	275	1100	4400	1.6	6.4	68.0	74240	42.5
Foam 12	14.8	16	186	4	225	900	3600	1.6	6.4	74.4	73440	46.5
Foam 13	14.8	15	201	4	175	700	2800	1.6	6.0	80.4	76065	50.3
Foam 14	14.8	14	215	4	150	600	2100	1.6	5.6	86.0	78165	53.8
Tail	14.8	21	21	4	0	0	0	0	0	92.0	78165	5.25
Fresh Wtr	8.4	5										

14.8 ppg foamed cement is being foamed down to a 10.0 ppge

16. After displacing fresh water to wellhead do the following based on the final pressure.
    a. Positive pressure – Shut the well in and monitor for one hour to make certain that the pressure does not go to zero.
    b. Negative pressure – shut the well in and run a temperature survey four to six hours after bumping plug. Log well with GR/temperature/CCL from surface to within 100' of float collar.
        i. Based on results from the temperature survey, calculate the volume from surface to the TOC based on an average hole size of 11.5" open hole + 25% excess. Fill 10-3/4" annulus with 14.8 ppg cement (same slurry as above) to surface.
        ii. WOC for 4 hours. Rerun temperature survey to verify top and bottom of cement used to cap off annulus.

17. Continue on with normal drilling operations for at least 48 hours to allow cement to obtain maximum compressive strength.

18. Run GR/Cement Bond log from at least 100' above 7-5/8" float collar to surface with 500 psi surface pressure. Submit CBL to BLM.

Hawk 26 Fed No. 709H
30-025-42402
EOG Resources, Inc
Surface Location: Sec. 26, T. 24S, R. 33E
Conditions of Approval

DRILLING

- **Run GR/Cement Bond Log from at least 100' above 7 5/8" float collar to surface with 500 psi surface pressure.**
- **Submit Cement Bond Log (CBL) copy to BLM.**