Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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 19 2017
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM118726

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.
ANTIETAM 9 FED COM 701H

2. Name of Operator
EOG RESOURCES, INC.
Contact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com

9. API Well No.
30-025-43477

3a. Address
ATTN: STAN WAGNER P.O. BOX 2267
MIDLAND, TX 79702

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

10. Field and Pool or Exploratory Area
WC-025 S253309A UPPER WC

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 9 T26S R33E Mer NMP NWNW 59FNL 348FWL

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.

EOG Resources requests an amendment to our approved APD for this well to reflect the addition of a DV tool to the intermediate casing string.

Detailed information attached.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #377830 verified by the BLM Well Information System
For EOG RESOURCES, INC., sent to the Hobbs
Committed to AFMSS for processing by DEBORAH MCKINNEY on 06/05/2017 ()

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

Signature (Electronic Submission) — Date 06/02/2017

APPROVED
JUN 6 2017
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Haque — Title PETROLEUM ENGINEER — Date 06/06/2017

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 CFO

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 to any matter within its jurisdiction.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

EOG RESOURCES, INC.
ANTIETAM 9 FED COM NO. 701H

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
14.75"	0 – 1,190'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0 – 4,900'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
9.875"	4,900' – 8,000'	7.625"	29.7#	P-110HC	MO-FXL	1.125	1.25	1.60
8.75"	8,000' – 11,900'	7.625"	29.7#	P-110HC	MO-FXL	1.125	1.25	1.60
6.75"	0' – 11,400'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	11,400'-19,860'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
10-3/4" 1,190'	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 11,900' DV Tool w ECP @ 5,000'	479	11.8	2.37	13.56	Stage 2 Lead: Class C + 4% MPA-5 + 15 pps BA-90 + 1% BA-10A + 5% A-10 + 1% ASA-301 + 3% SMS + 2.5% R-21 + 0.005 pps Static Free + 0.005 gpd FP-6L (TOC @ Surface)
	157	15.6	1.20	5.71	Stage 2 Tail: Class H + 1% EC-1 + 015% ASA-301 + 0.2% SMS + 0.85% CD-32 + 0.85% BA-10A + 0.25% R-21 + 0.005 gps FP-6L
	528	11.8	2.37	13.56	Stage 1 Lead: Class C + 4% MPA-5 + 15 pps BA-90 + 1% BA-10A + 5% A-10 + 1% ASA-301 + 3% SMS + 2.5% R-21 + 0.005 pps Static Free + 0.005 gpd FP-6L
	529	15.6	1.20	5.71	Stage 1 Tail: Class H + 1% EC-1 + 015% ASA-301 + 0.2% SMS + 0.85% CD-32 + 0.85% BA-10A + 0.25% R-21 + 0.005 gps FP-6L
5-1/2" 19,860'	850	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 11,400')

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources, Inc.
LEASE NO.:	NMNM118726
WELL NAME & NO.:	701H-Antietam 9 Fed Com
SURFACE HOLE FOOTAGE:	59'/N & 348'/W
BOTTOM HOLE FOOTAGE	2410'/N & 330'/W
LOCATION:	Section 9, T.25 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

All previous COAs still apply except the following:

A. CASING

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

Operator has proposed DV tool at depth of 5000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

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 or approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate to the surface:

i. The appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

ii. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

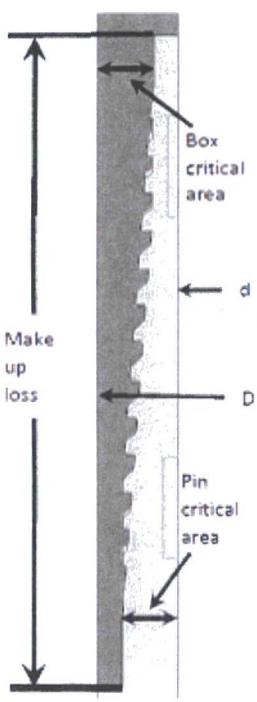
iii. If cement falls back, remedial cementing will be done prior to drilling out that string.

MHH 06052017

Metal One Corp.	MO-FXL	Page	MCTP
Metal One		Date	3-Nov-16
	Connection Data Sheet		
		Rev.	0

Geometry

MO-FXL



Pipe Body

Grade	P110HC *1		P110HC *1	
Pipe OD (D)	7 5/8	in	193.68	mm
Weight	29.70	lb/ft	44.25	kg/m
Actual weight	29.04		43.26	kg/m
Wall Thickness (t)	0.375	in	9.53	mm
Pipe ID (d)	6.875	in	174.63	mm
Pipe body cross section	8.537	in^2	5,508	mm^2
Drift Dia.	6.750	in	171.45	mm

Connection

Box OD (W)	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Make up Loss	4.219	in	107.16	mm
Box Critical Area	5.714	in^2	3686	mm^2
Joint load efficiency	70	%	70	%
Thread Taper	1 / 10 (1.2" per ft)			
Number of Threads	5 TPI			

Performance

Performance Properties for Pipe Body

S.M.Y.S. *1	1,067	kips	4,747	kN
M.I.Y.P. *1	10,760	psi	74.21	MPa
Collapse Strength *1	7,360	psi	50.76	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body
*1 Based on VSB P110HC (YS=125~140ksi)

Performance Properties for Connection

Tensile Yield load	747 kips (70% of S.M.Y.S.)
Min. Compression Yield	747 kips (70% of S.M.Y.S.)
Internal Pressure	8,610 psi (80% of M.I.Y.P.)
External Pressure	100% of Collapse Strength
Max. DLS (deg. /100ft)	40

Recommended Torque

Min.	15,500	ft-lb	21,000	N-m
Opti.	17,200	ft-lb	23,300	N-m
Max.	18,900	ft-lb	25,600	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application