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.
NMNM19858

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 9H ✓

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

9. API Well No.
30-025-42402 ✓

3a. Address
P.O. BOX 2267
MIDLAND, TX 79702

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

10. Field and Pool, or Exploratory
WILDCAT WOLFCAMP OIL

HOBBS OCD
FEB 29 2016
RECEIVED

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 26 T24S R33E SWSE 500FSL 715FEL ✓

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.)

EOG Resources requests an amendment to our approved APD for this well to reflect a change in target and well number as attached:

Change in target from Bone Spring to Wolfcamp.

New TVD 12500', 17817' MD.

Change well number from Hawk 26 Fed 9H to Hawk 26 Fed 709H.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #320186 verified by the BLM Well Information System
For EOG RESOURCES, INC., sent to the Hobbs
Committed to AFMSS for processing by KENNETH RENNICK on 10/19/2015 ()

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

Signature (Electronic Submission) — Date 10/16/2015

APPROVED
JAN 15 2016
BUREAU OF LAND MANAGEMENT

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

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.

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

MAR 02 2016

EOG RESOURCES, INC.
HAWK 26 FED NO. 709H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,218'
Top of Salt	1,710'
Base of Salt / Top Anhydrite	5,000'
Base Anhydrite	5,248'
Lamar	5,248'
Bell Canyon	5,279'
Cherry Canyon	6,273'
Brushy Canyon	7,725'
Bone Spring Lime	9,250'
1st Bone Spring Sand	10,220'
2nd Bone Spring Lime	10,670'
2nd Bone Spring Sand	10,940'
3rd Bone Spring Lime	11,360'
3rd Bone Spring Sand	11,960'
Wolfcamp	12,300'
TD	12,500'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,273'	Oil
Brushy Canyon	7,725'	Oil
Bone Spring Lime	9,250'	Oil
1st Bone Spring Sand	10,220'	Oil
2nd Bone Spring Lime	10,670'	Oil
2nd Bone Spring Sand	10,940'	Oil
3rd Bone Spring Lime	11,360'	Oil
3rd Bone Spring Sand	11,960'	Oil
Wolfcamp	12,300'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13.375" casing at 1,300' and circulating cement back to surface.

EOG RESOURCES, INC.
HAWK 26 FED NO. 709H

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 1,300'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 5,100'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0'-17,817'	5.500"	17#	P110 or HCP110	LTC	1.125	1.25	1.60

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
13-3/8" 1,300'	600	13.5	1.73	9.13	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ surface)
	300	14.8	1.34	6.34	Tail: Class C + 0.005 pps Static Free + 2% $CaCl_2$ + 0.25 pps CelloFlake + 0.005 gps FP-6L
9-5/8" 5,100'	1000	12.7	2.22	12.38	Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free (TOC @ surface)
	200	14.8	1.32	6.33	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
5-1/2" 17,817'	775	9.0	2.79	10.12	Lead: LiteCRETE + 0.10% D-065 + 0.20% D-046 + 0.40% D-167 + 0.20% D-198 + 0.04% D-208 + 2.0% D-174 (TOC @ 4,600')
	2100	14.4	1.28	5.69	Tail: Class H + 47.01 pps D-909 + 37.01 pps + 5.0% D-020 + 0.30% D-013 + 0.20% D-046 + 0.10% D-065 + 0.50% D-167 + 2.0% D-174

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.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

See COA

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh Water Gel	8.6-8.8	28-34	N/c
1,300' – 5,100'	Saturated Brine	10.0-10.2	28-34	N/c
5,100' – 12,034'	Oil Base	8.7-9.4	58-68	N/c - 6
12,034'– 17,817' Lateral	Oil base	10.0-10.5	58-68	N/c - 6

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–CCL Will be run in cased hole during completions phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 5412 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

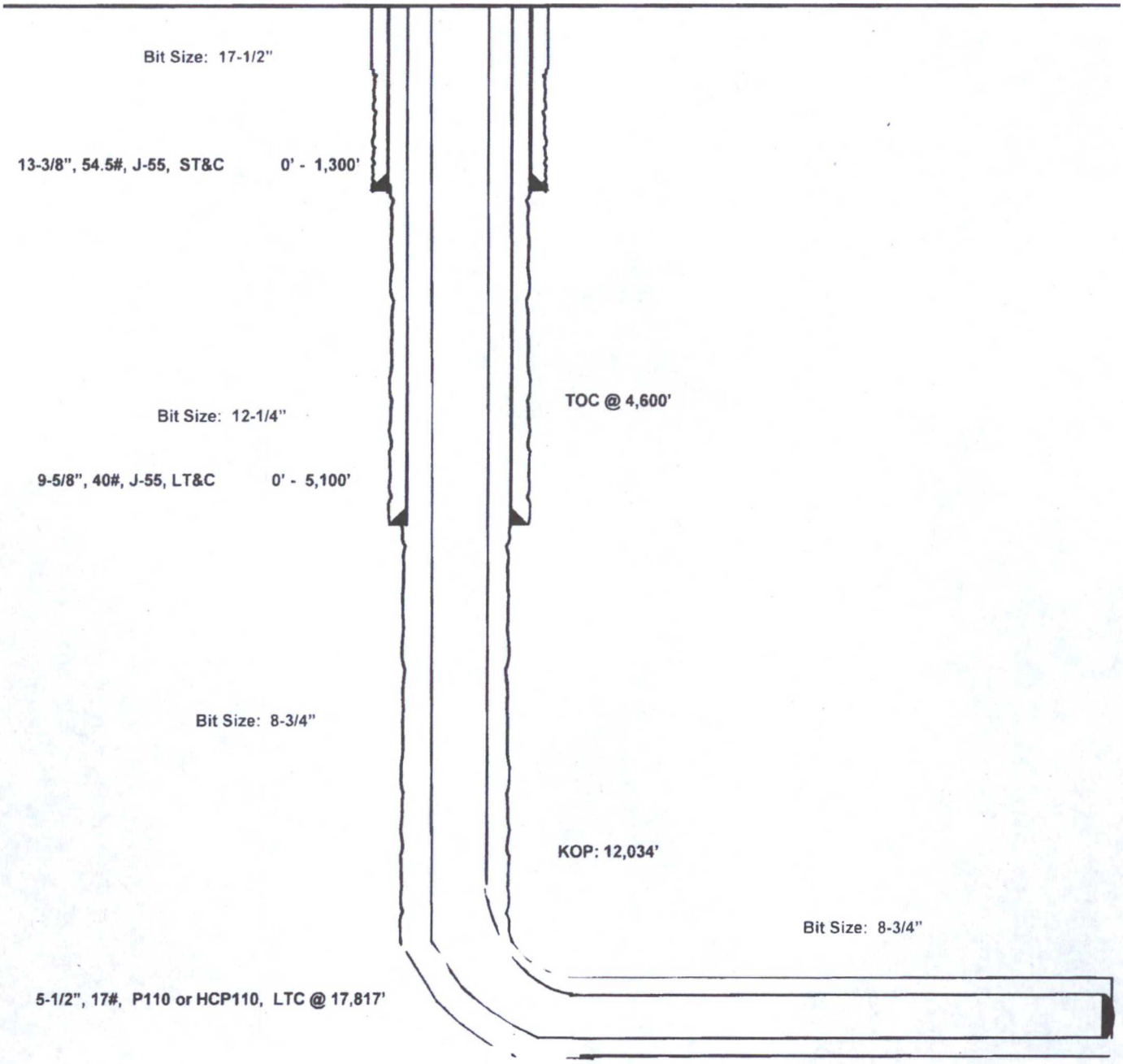
The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

Hawk 26 Fed #709H
Lea County, New Mexico
Proposed Wellbore

500' FSL
715' FEL
Section 26
T-24-S, R-33-E

API: 30-025-*****

KB: 3,568'
GL: 3,538'



Lateral:
17,817' MD, 12,500' TVD
Upper Most Perf:
10' FNL & 883' FEL
Lower Most Perf:
330' FSL & 892' FEL
BH Location: 230' FSL & 892' FEL
Section 35
T-24-S, R-33-E

eog resources

Lea County, NM (NAD 27 NME)

Hawk 26 Fed #709H

GL 3538' + 30' GL

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.80°

Magnetic Field
Strength: 48317.6snT
Dip Angle: 60.09°
Date: 3/21/2014
Model: IGRF2010

To convert a Magnetic Direction to a Grid Direction, Add 6.80°
To convert a Magnetic Direction to a True Direction, Add 7.23° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

WELL DETAILS: #709H

Ground Level: 3538.0
WELL @ 3568.0usft (GL 3538' + 30' GL)

Northing	Easting	Latitude	Longitude
431058.00	746552.00	32° 10' 57.306 N	103° 32' 11.107 W

SECTION DETAILS

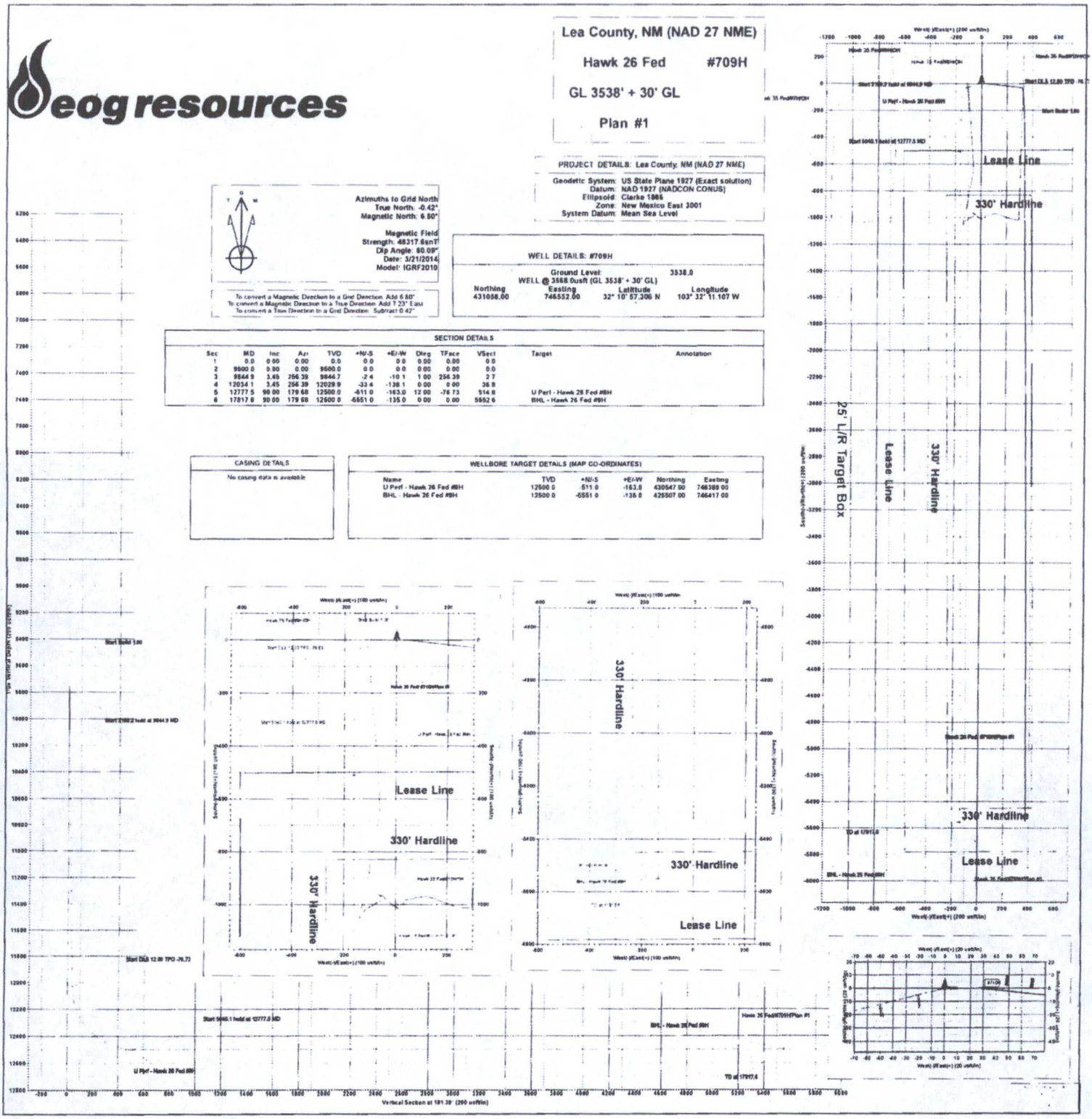
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	9600.0	0.00	0.00	9600.0	0.0	0.0	0.00	0.00	0.0		
3	9844.9	3.45	256.39	9844.7	-2.4	-10.1	1.00	256.39	2.7		
4	12034.1	3.45	256.39	12029.9	-33.4	-138.1	0.00	0.00	36.8		
5	12777.5	90.00	179.68	12500.0	-511.0	-163.0	12.00	-76.73	514.8	U Perf - Hawk 26 Fed #9H	
6	17817.6	90.00	179.68	12500.0	-5551.0	-135.0	0.00	0.00	5552.6	BHL - Hawk 26 Fed #9H	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
U Perf - Hawk 26 Fed #9H	12500.0	-511.0	-163.0	430547.00	746389.00
BHL - Hawk 26 Fed #9H	12500.0	-5551.0	-135.0	425507.00	746417.00



EOG Resources - Midland

Lea County, NM (NAD 27 NME)
Hawk 26 Fed
#709H

OH

Plan: Plan #1

Standard Planning Report

15 October, 2015

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM (NAD 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Hawk 26 Fed				
Site Position:		**Northing:**	431,034.00 usft	**Latitude:**	32° 10' 57.351 N
From:	Map	**Easting:**	742,667.00 usft	**Longitude:**	103° 32' 56.312 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.42 °

Well	#709H					
Well Position	**+N/-S**	24.0 usft	**Northing:**	431,058.00 usft	**Latitude:**	32° 10' 57.306 N
	+E/-W	3,885.0 usft	**Easting:**	746,552.00 usft	**Longitude:**	103° 32' 11.107 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,538.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	3/21/2014	7.23	60.09	48,318

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	181.39	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,844.9	3.45	256.39	9,844.7	-2.4	-10.1	1.00	1.00	0.00	256.39	
12,034.1	3.45	256.39	12,029.9	-33.4	-138.1	0.00	0.00	0.00	0.00	
12,777.5	90.00	179.68	12,500.0	-511.0	-163.0	12.00	11.64	-10.32	-76.73	U Perf - Hawk 26 Fed
17,817.6	90.00	179.68	12,500.0	-5,551.0	-135.0	0.00	0.00	0.00	0.00	BHL - Hawk 26 Fed #

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	1.00	256.39	9,600.0	-0.2	-0.8	0.2	1.00	1.00	0.00
9,700.0	2.00	256.39	9,700.0	-0.8	-3.4	0.9	1.00	1.00	0.00
9,800.0	3.00	256.39	9,799.9	-1.8	-7.6	2.0	1.00	1.00	0.00
9,844.9	3.45	256.39	9,844.7	-2.4	-10.1	2.7	1.00	1.00	0.00
9,900.0	3.45	256.39	9,899.7	-3.2	-13.3	3.5	0.00	0.00	0.00
10,000.0	3.45	256.39	9,999.5	-4.6	-19.2	5.1	0.00	0.00	0.00
10,100.0	3.45	256.39	10,099.3	-6.1	-25.0	6.7	0.00	0.00	0.00
10,200.0	3.45	256.39	10,199.1	-7.5	-30.8	8.2	0.00	0.00	0.00
10,300.0	3.45	256.39	10,299.0	-8.9	-36.7	9.8	0.00	0.00	0.00
10,400.0	3.45	256.39	10,398.8	-10.3	-42.5	11.3	0.00	0.00	0.00
10,500.0	3.45	256.39	10,498.6	-11.7	-48.4	12.9	0.00	0.00	0.00
10,600.0	3.45	256.39	10,598.4	-13.1	-54.2	14.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	3.45	256.39	10,698.2	-14.5	-60.1	16.0	0.00	0.00	0.00
10,800.0	3.45	256.39	10,798.1	-16.0	-65.9	17.6	0.00	0.00	0.00
10,900.0	3.45	256.39	10,897.9	-17.4	-71.8	19.1	0.00	0.00	0.00
11,000.0	3.45	256.39	10,997.7	-18.8	-77.6	20.7	0.00	0.00	0.00
11,100.0	3.45	256.39	11,097.5	-20.2	-83.5	22.2	0.00	0.00	0.00
11,200.0	3.45	256.39	11,197.3	-21.6	-89.3	23.8	0.00	0.00	0.00
11,300.0	3.45	256.39	11,297.2	-23.0	-95.2	25.3	0.00	0.00	0.00
11,400.0	3.45	256.39	11,397.0	-24.5	-101.0	26.9	0.00	0.00	0.00
11,500.0	3.45	256.39	11,496.8	-25.9	-106.9	28.5	0.00	0.00	0.00
11,600.0	3.45	256.39	11,596.6	-27.3	-112.7	30.0	0.00	0.00	0.00
11,700.0	3.45	256.39	11,696.4	-28.7	-118.5	31.6	0.00	0.00	0.00
11,800.0	3.45	256.39	11,796.3	-30.1	-124.4	33.1	0.00	0.00	0.00
11,900.0	3.45	256.39	11,896.1	-31.5	-130.2	34.7	0.00	0.00	0.00
12,000.0	3.45	256.39	11,995.9	-33.0	-136.1	36.3	0.00	0.00	0.00
12,034.1	3.45	256.39	12,029.9	-33.4	-138.1	36.8	0.00	0.00	0.00
12,050.0	4.31	230.85	12,045.8	-33.9	-139.0	37.3	12.00	5.40	-160.81
12,075.0	6.61	210.09	12,070.7	-35.8	-140.5	39.2	12.00	9.22	-83.06
12,100.0	9.32	200.62	12,095.4	-38.9	-141.9	42.3	12.00	10.83	-37.85
12,125.0	12.16	195.47	12,120.0	-43.3	-143.3	46.8	12.00	11.38	-20.61
12,150.0	15.07	192.26	12,144.3	-49.1	-144.7	52.6	12.00	11.62	-12.83
12,175.0	18.00	190.08	12,168.3	-56.0	-146.1	59.6	12.00	11.74	-8.74
12,200.0	20.96	188.49	12,191.8	-64.3	-147.4	67.8	12.00	11.81	-6.35
12,225.0	23.92	187.28	12,214.9	-73.7	-148.7	77.3	12.00	11.86	-4.84
12,250.0	26.89	186.32	12,237.5	-84.4	-150.0	88.0	12.00	11.89	-3.83
12,275.0	29.87	185.54	12,259.5	-96.2	-151.2	99.8	12.00	11.91	-3.12
12,300.0	32.85	184.89	12,280.8	-109.1	-152.4	112.8	12.00	11.92	-2.60
12,325.0	35.83	184.34	12,301.5	-123.2	-153.5	126.9	12.00	11.94	-2.21
12,350.0	38.82	183.86	12,321.4	-138.3	-154.6	142.0	12.00	11.94	-1.91
12,375.0	41.81	183.44	12,340.4	-154.4	-155.6	158.2	12.00	11.95	-1.68
12,400.0	44.80	183.07	12,358.6	-171.6	-156.6	175.3	12.00	11.96	-1.50
12,425.0	47.79	182.73	12,375.9	-189.6	-157.5	193.4	12.00	11.96	-1.35
12,450.0	50.78	182.43	12,392.2	-208.5	-158.4	212.3	12.00	11.96	-1.22
12,475.0	53.77	182.14	12,407.5	-228.3	-159.1	232.1	12.00	11.97	-1.12
12,500.0	56.76	181.88	12,421.7	-248.8	-159.9	252.6	12.00	11.97	-1.04
12,525.0	59.76	181.64	12,434.9	-270.1	-160.5	273.9	12.00	11.97	-0.97
12,550.0	62.75	181.41	12,446.9	-292.0	-161.1	295.8	12.00	11.97	-0.91
12,575.0	65.74	181.20	12,457.8	-314.5	-161.6	318.3	12.00	11.97	-0.87
12,600.0	68.74	180.99	12,467.4	-337.5	-162.1	341.4	12.00	11.98	-0.83
12,625.0	71.73	180.79	12,475.9	-361.1	-162.4	364.9	12.00	11.98	-0.79
12,650.0	74.73	180.60	12,483.1	-385.0	-162.7	388.8	12.00	11.98	-0.77
12,675.0	77.72	180.41	12,489.1	-409.3	-162.9	413.1	12.00	11.98	-0.75
12,700.0	80.71	180.23	12,493.7	-433.8	-163.1	437.7	12.00	11.98	-0.73
12,725.0	83.71	180.05	12,497.1	-458.6	-163.1	462.4	12.00	11.98	-0.72
12,750.0	86.70	179.88	12,499.2	-483.5	-163.1	487.3	12.00	11.98	-0.71
12,775.0	89.70	179.70	12,500.0	-508.5	-163.0	512.3	12.00	11.98	-0.70
12,777.5	90.00	179.68	12,500.0	-511.0	-163.0	514.8	12.00	11.98	-0.70
U Perf - Hawk 26 Fed #9H									
12,800.0	90.00	179.68	12,500.0	-533.5	-162.9	537.3	0.00	0.00	0.00
12,900.0	90.00	179.68	12,500.0	-633.5	-162.3	637.2	0.00	0.00	0.00
13,000.0	90.00	179.68	12,500.0	-733.5	-161.8	737.2	0.00	0.00	0.00
13,100.0	90.00	179.68	12,500.0	-833.5	-161.2	837.2	0.00	0.00	0.00
13,200.0	90.00	179.68	12,500.0	-933.5	-160.7	937.1	0.00	0.00	0.00
13,300.0	90.00	179.68	12,500.0	-1,033.5	-160.1	1,037.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.0	90.00	179.68	12,500.0	-1,133.5	-159.5	1,137.0	0.00	0.00	0.00
13,500.0	90.00	179.68	12,500.0	-1,233.5	-159.0	1,237.0	0.00	0.00	0.00
13,600.0	90.00	179.68	12,500.0	-1,333.5	-158.4	1,336.9	0.00	0.00	0.00
13,700.0	90.00	179.68	12,500.0	-1,433.5	-157.9	1,436.9	0.00	0.00	0.00
13,800.0	90.00	179.68	12,500.0	-1,533.5	-157.3	1,536.8	0.00	0.00	0.00
13,900.0	90.00	179.68	12,500.0	-1,633.5	-156.8	1,636.8	0.00	0.00	0.00
14,000.0	90.00	179.68	12,500.0	-1,733.5	-156.2	1,736.8	0.00	0.00	0.00
14,100.0	90.00	179.68	12,500.0	-1,833.5	-155.7	1,836.7	0.00	0.00	0.00
14,200.0	90.00	179.68	12,500.0	-1,933.5	-155.1	1,936.7	0.00	0.00	0.00
14,300.0	90.00	179.68	12,500.0	-2,033.5	-154.5	2,036.6	0.00	0.00	0.00
14,400.0	90.00	179.68	12,500.0	-2,133.5	-154.0	2,136.6	0.00	0.00	0.00
14,500.0	90.00	179.68	12,500.0	-2,233.5	-153.4	2,236.5	0.00	0.00	0.00
14,600.0	90.00	179.68	12,500.0	-2,333.5	-152.9	2,336.5	0.00	0.00	0.00
14,700.0	90.00	179.68	12,500.0	-2,433.5	-152.3	2,436.4	0.00	0.00	0.00
14,800.0	90.00	179.68	12,500.0	-2,533.5	-151.8	2,536.4	0.00	0.00	0.00
14,900.0	90.00	179.68	12,500.0	-2,633.5	-151.2	2,636.3	0.00	0.00	0.00
15,000.0	90.00	179.68	12,500.0	-2,733.4	-150.7	2,736.3	0.00	0.00	0.00
15,100.0	90.00	179.68	12,500.0	-2,833.4	-150.1	2,836.3	0.00	0.00	0.00
15,200.0	90.00	179.68	12,500.0	-2,933.4	-149.5	2,936.2	0.00	0.00	0.00
15,300.0	90.00	179.68	12,500.0	-3,033.4	-149.0	3,036.2	0.00	0.00	0.00
15,400.0	90.00	179.68	12,500.0	-3,133.4	-148.4	3,136.1	0.00	0.00	0.00
15,500.0	90.00	179.68	12,500.0	-3,233.4	-147.9	3,236.1	0.00	0.00	0.00
15,600.0	90.00	179.68	12,500.0	-3,333.4	-147.3	3,336.0	0.00	0.00	0.00
15,700.0	90.00	179.68	12,500.0	-3,433.4	-146.8	3,436.0	0.00	0.00	0.00
15,800.0	90.00	179.68	12,500.0	-3,533.4	-146.2	3,535.9	0.00	0.00	0.00
15,900.0	90.00	179.68	12,500.0	-3,633.4	-145.7	3,635.9	0.00	0.00	0.00
16,000.0	90.00	179.68	12,500.0	-3,733.4	-145.1	3,735.9	0.00	0.00	0.00
16,100.0	90.00	179.68	12,500.0	-3,833.4	-144.5	3,835.8	0.00	0.00	0.00
16,200.0	90.00	179.68	12,500.0	-3,933.4	-144.0	3,935.8	0.00	0.00	0.00
16,300.0	90.00	179.68	12,500.0	-4,033.4	-143.4	4,035.7	0.00	0.00	0.00
16,400.0	90.00	179.68	12,500.0	-4,133.4	-142.9	4,135.7	0.00	0.00	0.00
16,500.0	90.00	179.68	12,500.0	-4,233.4	-142.3	4,235.6	0.00	0.00	0.00
16,600.0	90.00	179.68	12,500.0	-4,333.4	-141.8	4,335.6	0.00	0.00	0.00
16,700.0	90.00	179.68	12,500.0	-4,433.4	-141.2	4,435.5	0.00	0.00	0.00
16,800.0	90.00	179.68	12,500.0	-4,533.4	-140.7	4,535.5	0.00	0.00	0.00
16,900.0	90.00	179.68	12,500.0	-4,633.4	-140.1	4,635.5	0.00	0.00	0.00
17,000.0	90.00	179.68	12,500.0	-4,733.4	-139.5	4,735.4	0.00	0.00	0.00
17,100.0	90.00	179.68	12,500.0	-4,833.4	-139.0	4,835.4	0.00	0.00	0.00
17,200.0	90.00	179.68	12,500.0	-4,933.4	-138.4	4,935.3	0.00	0.00	0.00
17,300.0	90.00	179.68	12,500.0	-5,033.4	-137.9	5,035.3	0.00	0.00	0.00
17,400.0	90.00	179.68	12,500.0	-5,133.4	-137.3	5,135.2	0.00	0.00	0.00
17,500.0	90.00	179.68	12,500.0	-5,233.4	-136.8	5,235.2	0.00	0.00	0.00
17,600.0	90.00	179.68	12,500.0	-5,333.4	-136.2	5,335.1	0.00	0.00	0.00
17,700.0	90.00	179.68	12,500.0	-5,433.4	-135.7	5,435.1	0.00	0.00	0.00
17,800.0	90.00	179.68	12,500.0	-5,533.4	-135.1	5,535.1	0.00	0.00	0.00
17,817.6	90.00	179.68	12,500.0	-5,551.0	-135.0	5,552.6	0.00	0.00	0.00

BHL - Hawk 26 Fed #9H

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well #709H
Company:	EOG Resources - Midland	**TVD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Project:	Lea County, NM (NAD 27 NME)	**MD Reference:**	WELL @ 3568.0usft (GL 3538' + 30' GL)
Site:	Hawk 26 Fed	**North Reference:**	Grid
Well:	#709H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
U Perf - Hawk 26 Fed #9 - plan hits target center - Point	0.00	0.01	12,500.0	-511.0	-163.0	430,547.00	746,389.00	32° 10' 52.261 N	103° 32' 13.048 W
BHL - Hawk 26 Fed #9H - plan hits target center - Point	0.00	0.01	12,500.0	-5,551.0	-135.0	425,507.00	746,417.00	32° 10' 2.385 N	103° 32' 13.156 W

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG Resources, Inc.**
LEASE NO.:	**NMNM-19858**
WELL NAME & NO.:	**Hawk 26 Fed 9H**
SURFACE HOLE FOOTAGE:	**0500' FSL & 0715' FEL**
BOTTOM HOLE FOOTAGE	**0230' FSL & 0892' FEL Sec. 35, T. 24 S., R 33 E.**
LOCATION:	**Section 26, T. 24 S., R 33 E., NMPM**
COUNTY:	**Lea County, New Mexico**
API:	**30-025-42402**

Original COA still applies with the following drilling modification to the COA.

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Bone Spring** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **1300** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface. **Fresh water mud to be used to setting depth.**

    a. If cement does not circulate to the surface, 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.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. 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.

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III,B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi **(Installing a 5M testing to 2,000 psi)**.

    a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

TMAK 011516