Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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
DEC 26 2017
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM66927

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.
BARLOW 34 FED COM 706H

2. Name of Operator
EOG RESOURCES INCORPORATED

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

9. API Well No.
30-025-44169-00-X1

3a. Address
MIDLAND, TX 79702

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

10. Field and Pool or Exploratory Area
RED HILLS-WOLFCAMP, WEST (GAS)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 34 T26S R33E 300FSL 1685FWL
32.001080 N Lat, 103.563293 W Lon

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 changes in casing design, BHL, and TVD as attached.

Change to 4-string casing design

Change BHL to 2414' FSL & 2319' FWL 27-26S-33E
Change TVD to 12400'.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #395340 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/13/2017 (18PP0310SE)

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

Signature (Electronic Submission) — Date 11/16/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHARLES NIMMER — Title PETROLEUM ENGINEER — Date 12/20/2017

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 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.

(Instructions on page 2)

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

Revised Permit Information 11/16/17:

Well Name: Barlow 34 Fed Com No. 706H

Location:

SL: 300' FSL & 1685' FWL, Section 34, T-26-S, R-33-E, Lea Co., N.M.

BHL: 2414' FSL & 2319' FWL, Section 27, T-26-S, R-33-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 830'	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' - 11,300'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0'-17,102'	5.5"	20#	HCP-110	VAM SFC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Water Gal/sk	Slurry Description
830'	600	13.5	1.74	9.13	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl2 (TOC @ Surface)
	300	14.8	1.35	6.34	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
5,000'	1780	12.7	2.20	11.64	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	200	16.0	1.12	4.75	Tail: Class C + 0.13% C-20
11,300'	340	11.5	2.72	15.70	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,500')
	210	16.0	1.12	4.74	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
17,102'	950	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 @ 10,800')

Mud Program:

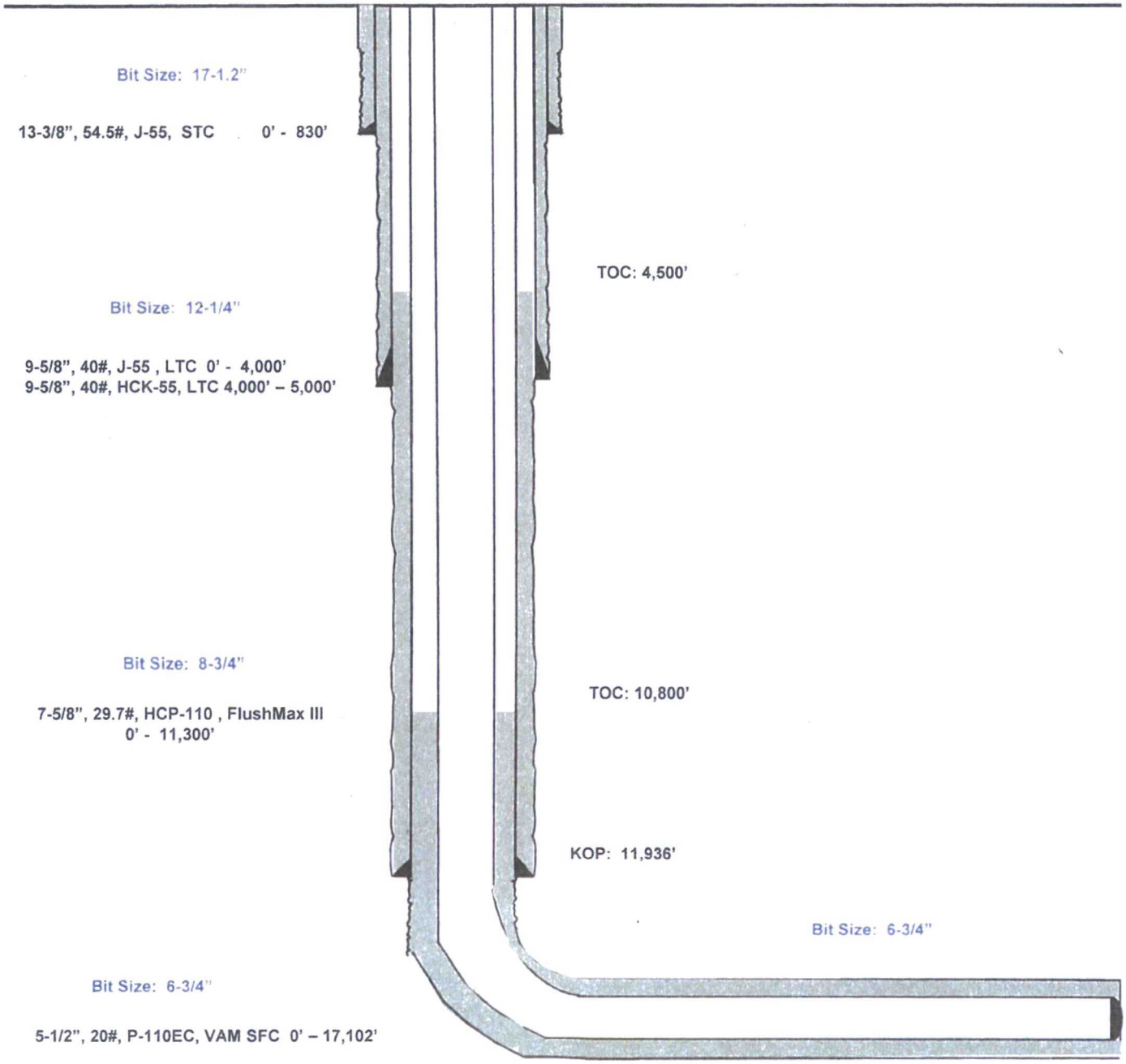
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 830'	Fresh - Gel	8.6-8.8	28-34	N/c
830' – 5,000'	Brine	10.0-10.2	28-34	N/c
5,000'– 11,300'	Oil Base	8.7-9.4	58-68	N/c - 6
11,300'– 17,102' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Barlow 34 Fed Com #706H

300' FSL
1685' FWL
Section 34
T-26-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 11/16/17
API: 30-025-44169

KB: 3,307'
GL: 3,282'



Lateral: 17,102' MD, 12,400' TVD
Upper Most Perf:
330' FSL & 2329' FWL Sec. 34
Lower Most Perf:
2314' FSL & 2320' FWL Sec. 27
BH Location: 2414' FSL & 2319' FWL
Section 27
T-26-S, R-33-E

eog resources

Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com #706H

Plan #0.3

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.56°

Magnetic Field
Strength: 47835.5snT
Dip Angle: 59.86°
Date: 3/9/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.56°
To convert a Magnetic Direction to a True Direction, Add 6.96° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

WELL DETAILS: #706H

Ground Level: 3282.0
KB = 25' @ 3307.0usft

Northing	Easting	Latitude	Longitude
364983.00	780041.00	32° 0' 3.893 N	103° 33' 47.857 W

SECTION DETAILS

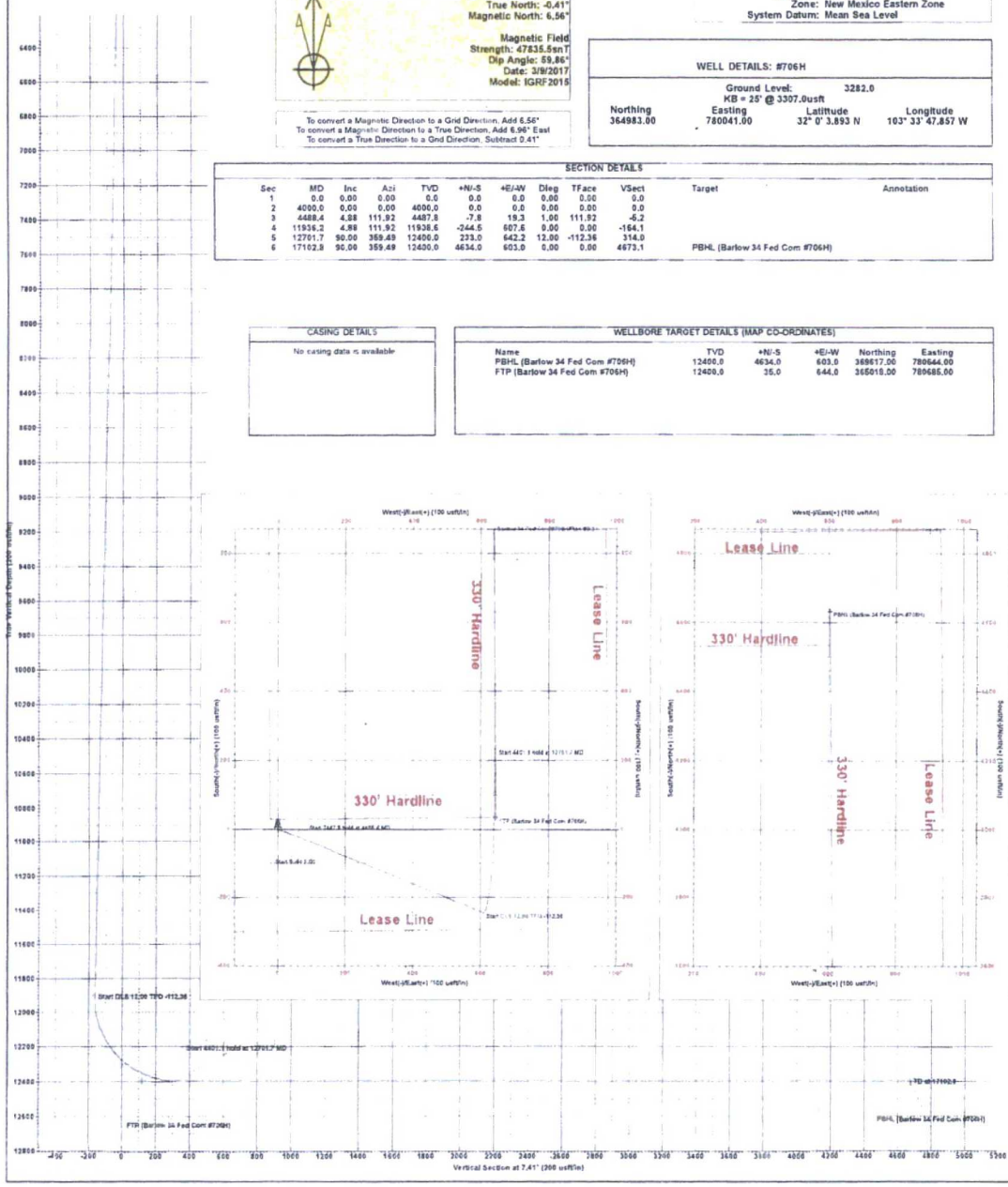
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4090.0	0.00	0.00	4090.0	0.0	0.0	0.00	0.00	0.0		
3	4488.4	4.88	111.92	4487.8	-7.8	19.3	1.00	111.92	-5.2		
4	11936.2	4.88	111.92	11938.6	-244.5	607.6	0.00	0.00	-164.1		
5	12701.7	90.00	359.49	12400.0	223.0	642.2	12.00	-112.36	314.0		
6	17102.8	90.00	359.49	12400.0	4634.0	603.0	0.00	0.00	4673.1	PBHL (Barlow 34 Fed Com #706H)	

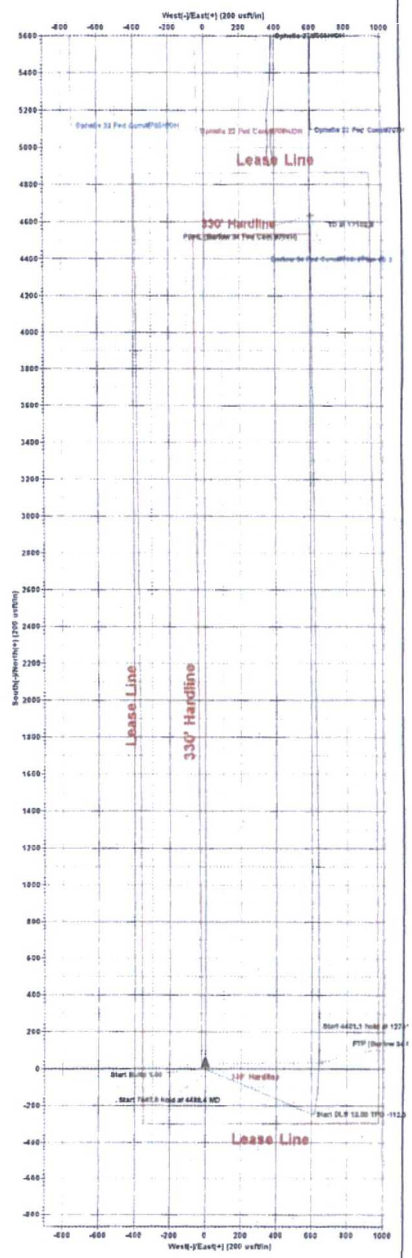
CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (Barlow 34 Fed Com #706H)	12400.0	4634.0	603.0	369617.00	780644.00
FTP (Barlow 34 Fed Com #706H)	12400.0	35.0	644.0	365018.00	780685.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Barlow 34 Fed Com
#706H

OH

Plan: Plan #0.3

Standard Planning Report

16 November, 2017

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #706H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3307.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3307.0usft
Site:	Barlow 34 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.3		

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Barlow 34 Fed Com				
Site Position:		**Northing:**	364,974.00 usft	**Latitude:**	32° 0' 3.879 N
From:	Map	**Easting:**	778,981.00 usft	**Longitude:**	103° 34' 0.167 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well	#706H					
Well Position	**+N/-S**	9.0 usft	**Northing:**	364,983.00 usft	**Latitude:**	32° 0' 3.893 N
	+E/-W	1,060.0 usft	**Easting:**	780,041.00 usft	**Longitude:**	103° 33' 47.857 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,282.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	3/9/2017	6.96	59.86	47,835.45465354

Design	Plan #0.3				
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	7.41	

Plan Survey Tool Program **Date** 11/16/2017

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,101.8	Plan #0.3 (OH)	MWD	
				MWD - Standard	

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	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,488.4	4.88	111.92	4,487.8	-7.8	19.3	1.00	1.00	0.00	111.92	
11,936.2	4.88	111.92	11,908.6	-244.5	607.6	0.00	0.00	0.00	0.00	
12,701.7	90.00	359.49	12,400.0	233.0	642.2	12.00	11.12	-14.69	-112.36	
17,102.8	90.00	359.49	12,400.0	4,634.0	603.0	0.00	0.00	0.00	0.00	PBHL (Barlow 34 Fed

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #706H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3307.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3307.0usft
Site:	Barlow 34 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.3		

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	1.00	111.92	4,100.0	-0.3	0.8	-0.2	1.00	1.00	0.00
4,200.0	2.00	111.92	4,200.0	-1.3	3.2	-0.9	1.00	1.00	0.00
4,300.0	3.00	111.92	4,299.9	-2.9	7.3	-2.0	1.00	1.00	0.00
4,400.0	4.00	111.92	4,399.7	-5.2	12.9	-3.5	1.00	1.00	0.00
4,488.4	4.88	111.92	4,487.8	-7.8	19.3	-5.2	1.00	1.00	0.00
4,500.0	4.88	111.92	4,499.4	-8.1	20.2	-5.5	0.00	0.00	0.00
4,600.0	4.88	111.92	4,599.0	-11.3	28.1	-7.6	0.00	0.00	0.00
4,700.0	4.88	111.92	4,698.6	-14.5	36.0	-9.7	0.00	0.00	0.00
4,800.0	4.88	111.92	4,798.3	-17.7	43.9	-11.9	0.00	0.00	0.00
4,900.0	4.88	111.92	4,897.9	-20.8	51.8	-14.0	0.00	0.00	0.00
5,000.0	4.88	111.92	4,997.6	-24.0	59.7	-16.1	0.00	0.00	0.00
5,100.0	4.88	111.92	5,097.2	-27.2	67.6	-18.3	0.00	0.00	0.00
5,200.0	4.88	111.92	5,196.8	-30.4	75.5	-20.4	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #706H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3307.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3307.0usft
Site:	Barlow 34 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0 3		

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)
5,300.0	4.88	111.92	5,296.5	-33.6	83.4	-22.5	0.00	0.00	0.00
5,400.0	4.88	111.92	5,396.1	-36.7	91.3	-24.7	0.00	0.00	0.00
5,500.0	4.88	111.92	5,495.7	-39.9	99.2	-26.8	0.00	0.00	0.00
5,600.0	4.88	111.92	5,595.4	-43.1	107.1	-28.9	0.00	0.00	0.00
5,700.0	4.88	111.92	5,695.0	-46.3	115.0	-31.1	0.00	0.00	0.00
5,800.0	4.88	111.92	5,794.6	-49.5	122.9	-33.2	0.00	0.00	0.00
5,900.0	4.88	111.92	5,894.3	-52.6	130.8	-35.3	0.00	0.00	0.00
6,000.0	4.88	111.92	5,993.9	-55.8	138.7	-37.4	0.00	0.00	0.00
6,100.0	4.88	111.92	6,093.6	-59.0	146.6	-39.6	0.00	0.00	0.00
6,200.0	4.88	111.92	6,193.2	-62.2	154.5	-41.7	0.00	0.00	0.00
6,300.0	4.88	111.92	6,292.8	-65.3	162.4	-43.8	0.00	0.00	0.00
6,400.0	4.88	111.92	6,392.5	-68.5	170.3	-46.0	0.00	0.00	0.00
6,500.0	4.88	111.92	6,492.1	-71.7	178.2	-48.1	0.00	0.00	0.00
6,600.0	4.88	111.92	6,591.7	-74.9	186.1	-50.2	0.00	0.00	0.00
6,700.0	4.88	111.92	6,691.4	-78.1	194.0	-52.4	0.00	0.00	0.00
6,800.0	4.88	111.92	6,791.0	-81.2	201.9	-54.5	0.00	0.00	0.00
6,900.0	4.88	111.92	6,890.7	-84.4	209.8	-56.6	0.00	0.00	0.00
7,000.0	4.88	111.92	6,990.3	-87.6	217.7	-58.8	0.00	0.00	0.00
7,100.0	4.88	111.92	7,089.9	-90.8	225.6	-60.9	0.00	0.00	0.00
7,200.0	4.88	111.92	7,189.6	-94.0	233.5	-63.0	0.00	0.00	0.00
7,300.0	4.88	111.92	7,289.2	-97.1	241.4	-65.2	0.00	0.00	0.00
7,400.0	4.88	111.92	7,388.8	-100.3	249.3	-67.3	0.00	0.00	0.00
7,500.0	4.88	111.92	7,488.5	-103.5	257.2	-69.4	0.00	0.00	0.00
7,600.0	4.88	111.92	7,588.1	-106.7	265.1	-71.6	0.00	0.00	0.00
7,700.0	4.88	111.92	7,687.7	-109.8	273.0	-73.7	0.00	0.00	0.00
7,800.0	4.88	111.92	7,787.4	-113.0	280.9	-75.8	0.00	0.00	0.00
7,900.0	4.88	111.92	7,887.0	-116.2	288.8	-78.0	0.00	0.00	0.00
8,000.0	4.88	111.92	7,986.7	-119.4	296.7	-80.1	0.00	0.00	0.00
8,100.0	4.88	111.92	8,086.3	-122.6	304.6	-82.2	0.00	0.00	0.00
8,200.0	4.88	111.92	8,185.9	-125.7	312.5	-84.4	0.00	0.00	0.00
8,300.0	4.88	111.92	8,285.6	-128.9	320.4	-86.5	0.00	0.00	0.00
8,400.0	4.88	111.92	8,385.2	-132.1	328.3	-88.6	0.00	0.00	0.00
8,500.0	4.88	111.92	8,484.8	-135.3	336.2	-90.8	0.00	0.00	0.00
8,600.0	4.88	111.92	8,584.5	-138.5	344.1	-92.9	0.00	0.00	0.00
8,700.0	4.88	111.92	8,684.1	-141.6	352.0	-95.0	0.00	0.00	0.00
8,800.0	4.88	111.92	8,783.8	-144.8	359.9	-97.2	0.00	0.00	0.00
8,900.0	4.88	111.92	8,883.4	-148.0	367.8	-99.3	0.00	0.00	0.00
9,000.0	4.88	111.92	8,983.0	-151.2	375.7	-101.4	0.00	0.00	0.00
9,100.0	4.88	111.92	9,082.7	-154.3	383.6	-103.6	0.00	0.00	0.00
9,200.0	4.88	111.92	9,182.3	-157.5	391.5	-105.7	0.00	0.00	0.00
9,300.0	4.88	111.92	9,281.9	-160.7	399.4	-107.8	0.00	0.00	0.00
9,400.0	4.88	111.92	9,381.6	-163.9	407.3	-110.0	0.00	0.00	0.00
9,500.0	4.88	111.92	9,481.2	-167.1	415.2	-112.1	0.00	0.00	0.00
9,600.0	4.88	111.92	9,580.8	-170.2	423.1	-114.2	0.00	0.00	0.00
9,700.0	4.88	111.92	9,680.5	-173.4	431.0	-116.4	0.00	0.00	0.00
9,800.0	4.88	111.92	9,780.1	-176.6	438.9	-118.5	0.00	0.00	0.00
9,900.0	4.88	111.92	9,879.8	-179.8	446.8	-120.6	0.00	0.00	0.00
10,000.0	4.88	111.92	9,979.4	-183.0	454.7	-122.8	0.00	0.00	0.00
10,100.0	4.88	111.92	10,079.0	-186.1	462.6	-124.9	0.00	0.00	0.00
10,200.0	4.88	111.92	10,178.7	-189.3	470.5	-127.0	0.00	0.00	0.00
10,300.0	4.88	111.92	10,278.3	-192.5	478.4	-129.2	0.00	0.00	0.00
10,400.0	4.88	111.92	10,377.9	-195.7	486.3	-131.3	0.00	0.00	0.00
10,500.0	4.88	111.92	10,477.6	-198.8	494.2	-133.4	0.00	0.00	0.00
10,600.0	4.88	111.92	10,577.2	-202.0	502.1	-135.6	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #706H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3307.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3307.0usft
Site:	Barlow 34 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.3		

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	4.88	111.92	10,676.9	-205.2	510.0	-137.7	0.00	0.00	0.00
10,800.0	4.88	111.92	10,776.5	-208.4	517.9	-139.8	0.00	0.00	0.00
10,900.0	4.88	111.92	10,876.1	-211.6	525.8	-142.0	0.00	0.00	0.00
11,000.0	4.88	111.92	10,975.8	-214.7	533.7	-144.1	0.00	0.00	0.00
11,100.0	4.88	111.92	11,075.4	-217.9	541.6	-146.2	0.00	0.00	0.00
11,200.0	4.88	111.92	11,175.0	-221.1	549.5	-148.3	0.00	0.00	0.00
11,300.0	4.88	111.92	11,274.7	-224.3	557.4	-150.5	0.00	0.00	0.00
11,400.0	4.88	111.92	11,374.3	-227.5	565.2	-152.6	0.00	0.00	0.00
11,500.0	4.88	111.92	11,473.9	-230.6	573.1	-154.7	0.00	0.00	0.00
11,600.0	4.88	111 92	11,573.6	-233.8	581.0	-156.9	0.00	0.00	0.00
11,700.0	4.88	111.92	11,673.2	-237.0	588.9	-159.0	0.00	0.00	0.00
11,800.0	4.88	111.92	11,772.9	-240.2	596.8	-161.1	0.00	0.00	0.00
11,900.0	4.88	111.92	11,872.5	-243.3	604.7	-163.3	0.00	0.00	0.00
11,936.2	4.88	111.92	11,908.6	-244.5	607.6	-164.1	0.00	0.00	0.00
11,950.0	4.52	92.09	11,922.3	-244.7	608.7	-164.1	12.00	-2.63	-143.62
11,975.0	5.31	57.69	11,947.2	-244.2	610.7	-163.3	12.00	3.16	-137.60
12,000.0	7.34	37.30	11,972.1	-242.3	612.6	-161.2	12.00	8.13	-81.57
12,025.0	9.88	26.46	11,996.8	-239.1	614.5	-157.8	12.00	10.15	-43.33
12,050.0	12.62	20.15	12,021.3	-234.6	616.4	-153.1	12.00	10.96	-25.25
12,075.0	15.45	16.09	12,045.6	-228.8	618.3	-147.1	12.00	11.34	-16.24
12,100.0	18.34	13.27	12,069.5	-221.8	620.1	-139.9	12.00	11.55	-11.27
12,125.0	21.26	11.20	12,093.0	-213.5	621 9	-131.5	12.00	11.67	-8.28
12,150.0	24.20	9.62	12,116.1	-204.0	623.6	-121.8	12.00	11.75	-6.36
12,175.0	27 15	8.35	12,138.6	-193.3	625.3	-111 0	12.00	11.80	-5.05
12,200.0	30.10	7.32	12,160 5	-181.5	626.9	-99.0	12.00	11.84	-4.13
12,225.0	33.07	6.46	12,181.8	-168.5	628.5	-85.9	12.00	11.86	-3.45
12,250.0	36.04	5.72	12,202.4	-154.4	630.0	-71.8	12.00	11.88	-2.94
12,275.0	39.02	5.08	12,222.2	-139.2	631.4	-56.6	12.00	11.90	-2.55
12,300.0	41.99	4.52	12,241.2	-123.0	632.8	-40.3	12.00	11.91	-2.24
12,325.0	44.97	4.02	12,259.4	-105.9	634.1	-23.2	12.00	11.92	-2.00
12,350.0	47.96	3.57	12,276.6	-87.8	635.3	-5.1	12.00	11.93	-1.80
12,375.0	50.94	3.17	12,292.9	-68.8	636.4	13.9	12.00	11.94	-1.64
12,400.0	53.93	2.79	12,308.1	-49.0	637.4	33.6	12.00	11.94	-1.50
12,425.0	56.91	2.44	12,322 3	-28.5	638.4	54.1	12.00	11.94	-1 39
12,450.0	59.90	2.11	12,335 4	-7.2	639.2	75.3	12.00	11.95	-1.30
12,475.0	62.89	1.81	12,347.3	14.7	640.0	97.2	12.00	11.95	-1.23
12,500.0	65.88	1.52	12,358 2	37.3	640.6	119.6	12.00	11.95	-1.16
12,525.0	68.86	1.24	12,367 8	60.3	641.2	142.6	12.00	11.96	-1.11
12,550.0	71.85	0.97	12,376.2	83.9	641.6	166.0	12.00	11.96	-1.07
12,575 0	74.84	0.72	12,383.3	107.8	642.0	189.7	12.00	11.96	-1.03
12,600.0	77.83	0.47	12,389.2	132.1	642.2	213.9	12.00	11.96	-1.00
12,625.0	80.82	0.22	12,393.9	156.7	642.4	238.2	12.00	11.96	-0.98
12,650.0	83.81	359.98	12,397.2	181.4	642.4	262.8	12.00	11.96	-0.96
12,675.0	86.81	359.74	12,399.3	206.3	642.4	287.5	12.00	11.96	-0.95
12,701.7	90.00	359 49	12,400.0	233.0	642.2	314.0	12.00	11.96	-0.95
12,800.0	90.00	359.49	12,400.0	331.3	641 3	411 3	0.00	0.00	0.00
12,900 0	90.00	359.49	12,400.0	431.3	640 4	510.4	0.00	0.00	0.00
13,000 0	90.00	359.49	12,400.0	531.3	639.5	609.4	0.00	0.00	0.00
13,100.0	90 00	359.49	12,400.0	631.3	638.6	708.4	0.00	0.00	0.00
13,200.0	90 00	359.49	12,400.0	731.3	637.7	807.5	0.00	0.00	0.00
13,300.0	90 00	359.49	12,400.0	831 3	636 8	906.5	0.00	0.00	0.00
13,400.0	90.00	359.49	12,400 0	931 3	636.0	1,005.6	0.00	0.00	0.00
13,500.0	90.00	359.49	12,400 0	1,031.3	635 1	1,104.6	0.00	0.00	0.00
13,600.0	90.00	359.49	12,400.0	1,131.3	634.2	1,203.7	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #706H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3307.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3307.0usft
Site:	Barlow 34 Fed Com	**North Reference:**	Grid
Well:	#706H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.3		

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)
13,700.0	90.00	359.49	12,400.0	1,231.3	633.3	1,302.7	0.00	0.00	0.00
13,800.0	90.00	359.49	12,400.0	1,331.3	632.4	1,401.8	0.00	0.00	0.00
13,900.0	90.00	359.49	12,400.0	1,431.3	631.5	1,500.8	0.00	0.00	0.00
14,000.0	90.00	359.49	12,400.0	1,531.3	630.6	1,599.9	0.00	0.00	0.00
14,100.0	90.00	359.49	12,400.0	1,631.3	629.7	1,698.9	0.00	0.00	0.00
14,200.0	90.00	359.49	12,400.0	1,731.3	628.8	1,797.9	0.00	0.00	0.00
14,300.0	90.00	359.49	12,400.0	1,831.3	627.9	1,897.0	0.00	0.00	0.00
14,400.0	90.00	359.49	12,400.0	1,931.3	627.1	1,996.0	0.00	0.00	0.00
14,500.0	90.00	359.49	12,400.0	2,031.3	626.2	2,095.1	0.00	0.00	0.00
14,600.0	90.00	359.49	12,400.0	2,131.3	625.3	2,194.1	0.00	0.00	0.00
14,700.0	90.00	359.49	12,400.0	2,231.3	624.4	2,293.2	0.00	0.00	0.00
14,800.0	90.00	359.49	12,400.0	2,331.3	623.5	2,392.2	0.00	0.00	0.00
14,900.0	90.00	359.49	12,400.0	2,431.2	622.6	2,491.3	0.00	0.00	0.00
15,000.0	90.00	359.49	12,400.0	2,531.2	621.7	2,590.3	0.00	0.00	0.00
15,100.0	90.00	359.49	12,400.0	2,631.2	620.8	2,689.4	0.00	0.00	0.00
15,200.0	90.00	359.49	12,400.0	2,731.2	619.9	2,788.4	0.00	0.00	0.00
15,300.0	90.00	359.49	12,400.0	2,831.2	619.0	2,887.4	0.00	0.00	0.00
15,400.0	90.00	359.49	12,400.0	2,931.2	618.2	2,986.5	0.00	0.00	0.00
15,500.0	90.00	359.49	12,400.0	3,031.2	617.3	3,085.5	0.00	0.00	0.00
15,600.0	90.00	359.49	12,400.0	3,131.2	616.4	3,184.6	0.00	0.00	0.00
15,700.0	90.00	359.49	12,400.0	3,231.2	615.5	3,283.6	0.00	0.00	0.00
15,800.0	90.00	359.49	12,400.0	3,331.2	614.6	3,382.7	0.00	0.00	0.00
15,900.0	90.00	359.49	12,400.0	3,431.2	613.7	3,481.7	0.00	0.00	0.00
16,000.0	90.00	359.49	12,400.0	3,531.2	612.8	3,580.8	0.00	0.00	0.00
16,100.0	90.00	359.49	12,400.0	3,631.2	611.9	3,679.8	0.00	0.00	0.00
16,200.0	90.00	359.49	12,400.0	3,731.2	611.0	3,778.8	0.00	0.00	0.00
16,300.0	90.00	359.49	12,400.0	3,831.2	610.1	3,877.9	0.00	0.00	0.00
16,400.0	90.00	359.49	12,400.0	3,931.2	609.3	3,976.9	0.00	0.00	0.00
16,500.0	90.00	359.49	12,400.0	4,031.2	608.4	4,076.0	0.00	0.00	0.00
16,600.0	90.00	359.49	12,400.0	4,131.2	607.5	4,175.0	0.00	0.00	0.00
16,700.0	90.00	359.49	12,400.0	4,231.2	606.6	4,274.1	0.00	0.00	0.00
16,800.0	90.00	359.49	12,400.0	4,331.2	605.7	4,373.1	0.00	0.00	0.00
16,900.0	90.00	359.49	12,400.0	4,431.2	604.8	4,472.2	0.00	0.00	0.00
17,000.0	90.00	359.49	12,400.0	4,531.2	603.9	4,571.2	0.00	0.00	0.00
17,102.8	90.00	359.49	12,400.0	4,634.0	603.0	4,673.1	0.00	0.00	0.00

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
PBHL (Barlow 34 Fed C - plan hits target center - Point	0.00	0.00	12,400.0	4,634.0	603.0	369,617.00	780,644.00	32° 0' 49.706 N	103° 33' 40.470 W
FTP (Barlow 34 Fed Cor - plan misses target center by 39.5usft at 12514.1usft MD (12363.7 TVD, 50.2 N, 640.9 E) - Point	0.00	0.00	12,400.0	35.0	644.0	365,018.00	780,685.00	32° 0' 4.194 N	103° 33' 40.376 W

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources Inc.
LEASE NO.:	NMNM02965A
WELL NAME & NO.:	706H-Barlow 34 Fed Com
SURFACE HOLE FOOTAGE:	300'/S & 1685'/W
BOTTOM HOLE FOOTAGE	2417'/S & 1988'/W
LOCATION:	Section 34, T.26 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

I. SPECIAL REQUIREMENT(S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

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 **Delaware** 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.

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.

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

1. The **13 3/8** inch surface casing shall be set at approximately **875** 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.
    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.

Medium Cave/Karst: If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.

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

2. The minimum required fill of cement behind the **9 5/8** inch intermediate casing, which shall be set at approximately **5100** feet (**basal anhydrite of the Castile formation or the top of the Lamar Limestone**), is:

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

3. The minimum required fill of cement behind the **7 5/8** inch 2nd intermediate casing is:
    ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

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

   ☒ Cement should tie-back at least 200 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 53.

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 10,000 (10M) psi. **10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

4. 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.

a. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **3rd Bone Springs** 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 **3rd Bone Springs** and **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Proposed mud weight may not be adequate for drilling through 3rd Bone Springs and Wolfcamp.

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.

CLN 12202017