Form 3160-5 (June 2015)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

OCD Hobbs

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

NMNM02965A

5.	Lease Serial No.
	NIMANIMACOCEA

	SUNDRY	NOTICES	AND RE	PORTS	ON WELLS
Do	not use th	is form for	proposals	s to drill	or to re-enter an

abandoned well. Use form 3160-3 (APD) for such proposals.

6. If Indian, Allottee or Tribe Name

SUBMIT IN T	TRIPLICATE - Other inst	tructions on page 1885	005	7. If Unit or CA/Agreen	ment, Name and/or No.
Type of Well	er	DEC 26	2017	8. Well Name and No. BARLOW 34 FED	COM 701H
Name of Operator EOG RESOURCES INCORPO	Contact: DRATEDE-Mail: stan_wagn	STAN WAGNER ler@eogresources.cmECE	VED	9. API Well No. 30-025-44154-00	0-X1
3a. Address		3b. Phone No. (include area code)		10. Field and Pool or E	xploratory Area
MIDLAND, TX 79702		Ph: 432-686-3689		RED HILLS-WO	LFCAMP, WEST (GAS)
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description			11. County or Parish, S	State
Sec 34 T26S R33E 300FSL 6 32.001076 N Lat, 103.566711		/		LEA COUNTY, N	MM
12. CHECK THE AI	PPROPRIATE BOX(ES)	TO INDICATE NATURE OF	F NOTICE,	REPORT, OR OTH	ER DATA
TYPE OF SUBMISSION		TYPE OF	ACTION		
Notice of Intent	☐ Acidize	☐ Deepen	☐ Product	ion (Start/Resume)	☐ Water Shut-Off
Notice of Intent	☐ Alter Casing	☐ Hydraulic Fracturing	□ Reclam	ation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	■ New Construction	☐ Recomp	olete	Other
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug and Abandon	☐ Tempor	arily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water I	Disposal	
Attach the Bond under which the wo	ally or recomplete horizontally, rk will be performed or provide I operations. If the operation re	ent details, including estimated starting give subsurface locations and measu the Bond No. on file with BLM/BIA sults in a multiple completion or reco	red and true ve	ertical depths of all perting bsequent reports must be	ent markers and zones. filed within 30 days

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 a change in casing and TVD.

Change TVD to 12400'.

Change to a 4-string casing design as attached.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that th	e foregoing is true and correct. Electronic Submission #395338 verifie For EOG RESOURCES INCOR	PORAT	ED, sent to the Hobbs	
	Committed to AFMSS for processing by PRI	SCILLA	PEREZ on 12/11/2017 (18PP0296SE)	
Name (Printed/Typed)	STAN WAGNER	Title	REGULATORY ANALYST	
Signature	(Electronic Submission)	Date	11/16/2017	
	THIS SPACE FOR FEDERA	L OR	STATE OFFICE USE	
Approved By CHARLE	S_NIMMER	TitleP	ETROLEUM ENGINEER	Date 12/20/2017
certify that the applicant hole	ry, are attached. Approval of this notice does not warrant or ds legal or equitable title to those rights in the subject lease icant to conduct operations thereon.	Office	Hobbs	
	and Title 43 U.S.C. Section 1212, make it a crime for any peor fraudulent statements or representations as to any matter w			y of the United

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



Revised Permit Information 11/16/17:

Well Name: Barlow 34 Fed Com No. 701H

Location:

SL: 300' FSL & 625' FWL, Section 34, T-26-S, R-33-E, Lea Co., N.M.

BHL: 2432' FSL & 330' 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' - 5,000'	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'-17,085'	5.5"	20#	HCP-110	VAM SFC	1.125	1.25	1.60

Cement Program:

	No.	Wt.	Yld	Water	
Depth	Sacks	lb/gal	Ft ³ /ft	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
17,085	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')

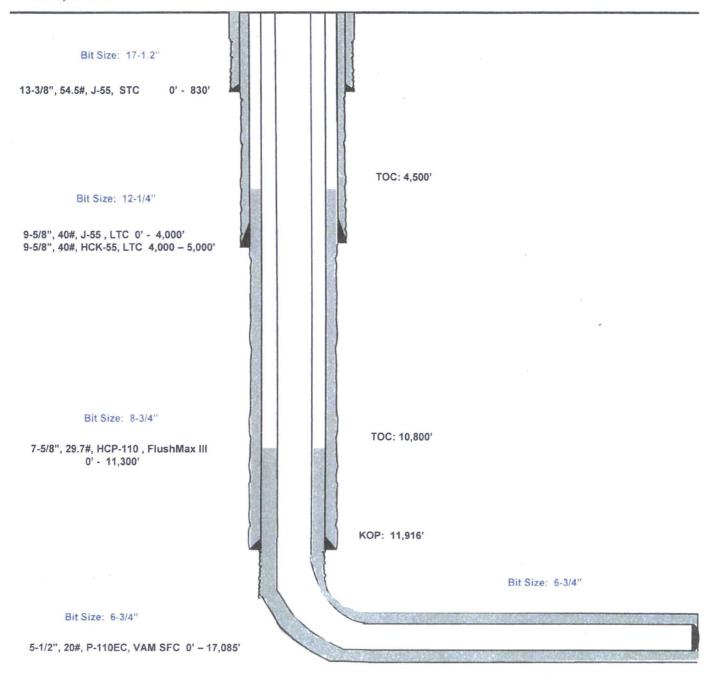
Mud Program:

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'- 17,085' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Barlow 34 Fed Com #701H

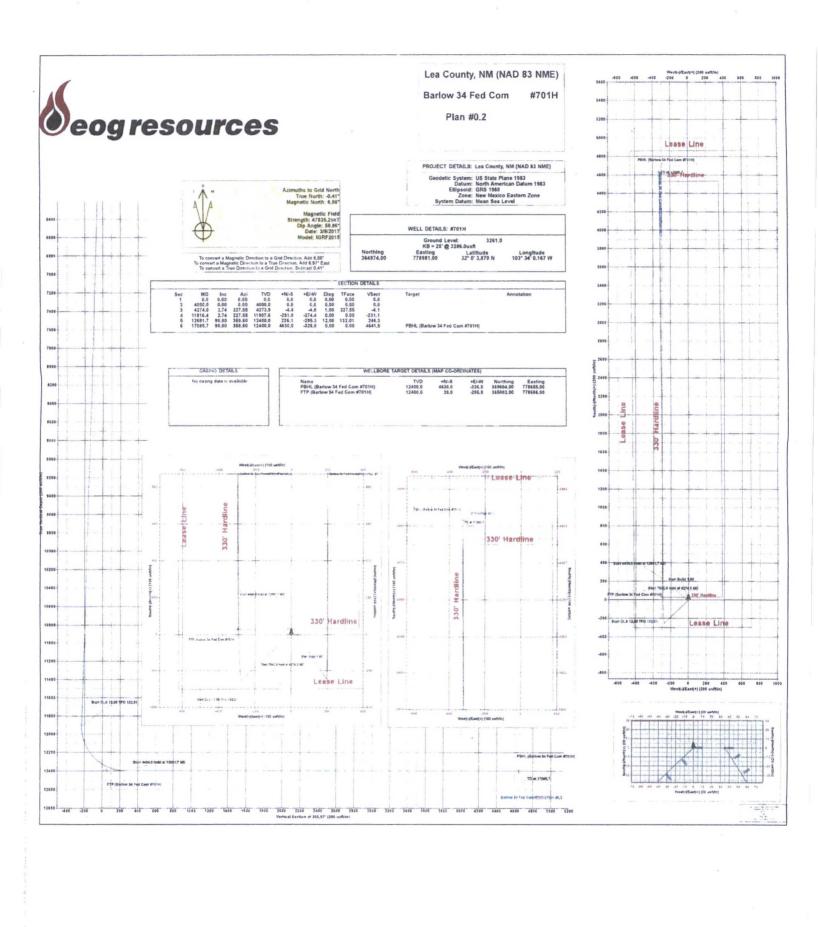
300' FSL 625' FWL Section 34 T-26-S, R-33-E Lea County, New Mexico Proposed Wellbore Revised 11/16/17 API: 30-025-44154

KB: 3,286' GL: 3,261'



Lateral: 17,085' MD, 12,400' TVD
Upper Most Perf:
330' FSL & 330' FWL Sec. 34
Lower Most Perf:
2332' FSL & 330' FWL Sec. 27
BH Location: 2432' FSL & 330' FWL
Section 27

T-26-S, R-33-E





EOG Resources - Midland

Lea County, NM (NAD 83 NME) Barlow 34 Fed Com #701H

ОН

Plan: Plan #0.2

Standard Planning Report

16 November, 2017



Database:

EDM 5000.14

Company:

EOG Resources - Midland

Project: Site:

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

Well: Wellbore: Design:

#701H Plan #0.2

Local Co-ordinate Reference:

Well #701H

TVD Reference:

KB = 25' @ 3286.0usft KB = 25' @ 3286.0usft

MD Reference: North Reference:

Survey Calculation Method:

Minimum Curvature

Project

Lea County, NM (NAD 83 NME)

Map System:

US State Plane 1983

Geo Datum: Map Zone:

North American Datum 1983 New Mexico Eastern Zone

System Datum:

Mean Sea Level

Site

Barlow 34 Fed Com

Site Position:

Northing:

364,974.00 usft

Latitude:

32° 0' 3.879 N

From:

Мар

Easting:

778,981.00 usft

Longitude:

Position Uncertainty:

Slot Radius:

13-3/16 "

Grid Convergence:

103° 34' 0.167 W

0.41 °

Well

#701H

Well Position

+N/-S +E/-W 0.0 usft 0.0 usft

0 0 usft

Northing: Easting:

364,974.00 usft 778,981.00 usft

6.97

Latitude: Longitude: 32° 0' 3.879 N

Position Uncertainty

0.0 usft

Wellhead Elevation:

3/9/2017

0.0 usft

Ground Level:

103° 34' 0.167 W

3.261.0 usft

Wellbore

ОН

Magnetics

Model Name

IGRF2015

Sample Date

Declination

Dip Angle (°)

Field Strength (nT)

47,835.24430907

Design

Plan #0.2

Audit Notes:

Version:

Phase:

PLAN

Tie On Depth:

0.0

59 86

Vertical Section:

Depth From (TVD) (usft)

0.0

+N/-S (usft)

0.0

+E/-W (usft)

0.0

Direction (°)

355.97

Depth From (usft)

Plan Survey Tool Program

Depth To (usft)

Date 11/16/2017

Survey (Wellbore)

Tool Name

Remarks

0.0

17.085 7 Plan #0.2 (OH)

MWD

MWD - Standard

Measured		Market Lord	Vertical		300000000	Dogleg	Build	Turn		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Rate	Rate	Rate	TFO	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	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	
4,274.0	2.74	227.55	4,273.9	-4.4	-4.8	1.00	1.00	0.00	227.55	
11,916.4	2.74	227.55	11,907.6	-251.0	-274.4	0.00	0.00	0.00	0.00	
12,681.7	90.00	359.60	12,400.0	226.1	-295.3	12.00	11.40	17.25	132.01	
17,085.7	90.00	359.60	12,400.0	4,630.0	-326.0	0.00	0.00	0.00	0.00	PBHL (Barlow 34

Database:

EDM 5000.14

Company: Project: EOG Resources - Midland Lea County, NM (NAD 83 NME)

Site: Well: Barlow 34 Fed Com #701H

Wellbore: Design:

OH Plan #0.2 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #701H

KB = 25' @ 3286.0usft KB = 25' @ 3286.0usft

Grid

Minimum Curvature

								The state of the s	
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/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
							0.00		
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0		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
	0.00			0.0	0.0	0.0	0.00	0.00	
2,700.0		0.00	2,700.0						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
						0.0			
4,000.0	0.00	0.00	4,000.0	0.0	0.0		0.00	0.00	0.00
4,100.0	1.00	227.55	4,100.0	-0.6	-0.6	-0.5	1.00	1 00	0.00
4,200.0	2.00	227.55	4,200.0	-2.4	-2.6	-2.2	1.00	1.00	0.00
4,274.0	2.74	227.55 227.55	4,273.9 4,299.9	-4.4 -5.3	-4.8 -5.8	-4.1 -4.8	1.00	1.00	0.00
4.400 0	2.74	227.55	4,399.8	-8.5	-9.3	-7.8	0.00	0.00	0.00
4,500.0	2.74	227.55	4,499.6	-11.7	-12.8	-10.8	0.00	0.00	0.00
4,600.0	2.74	227.55	4,599.5	-14.9	-16.3	-13.8	0.00	0.00	0.00
4,700.0	2.74	227.55	4,699.4	-18.2	-19.9	-16.7	0.00	0.00	0.00
4.800.0	2.74	227.55	4,799.3	-21.4	-23.4	-19.7	0.00	0.00	0.00
4,900.0	2.74	227.55	4,899.2	-24.6	-26.9	-22.7	0.00	0.00	0.00
5,000.0	2.74	227.55	4,999 1	-27.8	-30 4	-25.6	0.00	0.00	0.00
5,100.0	2.74	227.55	5,099.0	-31 1	-34 0	-28.6	0.00	0.00	0.00
5,200.0	2.74	227.55	5,198.8	-34.3	-37.5	-31.6	0.00	0.00	0.00

Database:

EDM 5000.14

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 N

Site:

Well: Wellbore: Design: Lea County, NM (NAD 83 NME) Barlow 34 Fed Com

#701H OH

Plan #0.2

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #701H

KB = 25' @ 3286.0usft KB = 25' @ 3286.0usft

Grid

Minimum Curvature

Measured		" "	Vertical	Territory .	PARTY TO SERVICE AND SERVICE A	Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
5,300.0	2.74	227.55	5,298.7	-37.5	-41.0	-34.5	0.00	0.00	0.00
5,400.0	2.74	227.55	5,398.6	-40.7	-44.6	-37.5	0.00	0.00	0.00
5,500.0	2.74	227.55	5,498.5	-44.0	-48.1	-40.5	0.00	0.00	0.00
5,600.0	2.74	227.55	5,598.4	-47.2	-51.6	-43.5	0.00	0.00	0.00
5,700.0	2.74	227.55	5,698.3	-50.4	-55.1	-46.4	0.00	0.00	0.00
5,800.0	2.74	227.55	5,798.2	-53.7	-58.7	-49.4	0.00	0.00	0.00
5,900.0	2.74	227.55	5,898.0	-56.9	-62.2	-52.4	0.00	0.00	0.00
6,000.0	2.74	227.55	5,997.9	-60.1	-65.7	-55.3	0.00	0.00	0.00
6,100.0	2.74	227.55	6,097.8	-63.3	-69.2	-58.3	0.00	0.00	0.00
6,200.0	2.74	227.55	6,197.7	-66.6	-72.8	-61.3	0.00	0.00	0.00
6,300.0	2.74	227.55	6,297.6	-69.8	-76.3	-64.3	0.00	0.00	0.00
6,400.0	2.74	227.55	6,397.5	-73.0	-79.8	-67.2	0.00	0.00	0.00
6,500.0	2.74	227.55	6,497.4	-76.2	-83.4	-70.2	0.00	0.00	0.00
6,600.0	2.74	227.55	6,597.2	-79.5	-86.9	-73.2	0.00	0.00	0.00
6,700.0	2.74	227.55	6,697.1	-82.7	-90.4	-76.1	0.00	0.00	0.00
6,800.0	2.74	227.55	6,797.0	-85.9	-93.9	-79.1	0.00	0.00	0.00
6,900.0	2.74	227.55	6,896.9	-89.1	-97.5	-82.1	0.00	0.00	0.00
7,000.0	2.74	227.55	6,996.8	-92.4	-101.0	-85.0	0.00	0.00	0.00
7,100.0	2.74	227.55	7,096.7	-95.6	-104.5	-88.0	0.00	0.00	0.00
7,200.0	2.74	227.55	7,196.6	-98.8	-108.0	-91.0	0.00	0.00	0.00
7,300.0	2.74	227.55	7,296.4	-102.0	-111.6	-94.0	0.00	0.00	0.00
7,400.0	2.74	227.55	7,396.3	-105.3	-115.1	-96.9	0.00	0.00	0.00
7,500.0	2.74	227.55	7,496.2	-108.5	-118.6	-99.9	0.00	0.00	0.00
7,600.0	2.74	227.55	7,596.1	-111.7	-122.2	-102.9	0.00	0.00	0.00
7,700.0	2.74	227.55	7,696.0	-114.9	-125.7	-105.8	0.00	0.00	0.00
7,800.0	2.74	227.55	7,795.9	-118.2	-129.2	-108.8	0 00	0.00	0.00
7,900.0	2.74	227.55	7,895.8	-121.4	-132.7	-111.8	0.00	0.00	0.00
8,000.0	2.74	227.55	7,995.6	-124.6	-136.3	-114.7	0.00	0.00	0.00
8,100.0	2.74	227.55	8,095.5	-127.9	-139.8	-117.7	0.00	0.00	0.00
8,200.0	2.74	227.55	8,195.4	-131.1	-143.3	-120.7	0.00	0.00	0.00
8,300.0	2.74	227.55	8,295.3	-134.3	-146.9	-123.7	0.00	0.00	0.00
8,400.0	2.74	227.55	8,395.2	-137.5	-150.4	-126.6	0.00	0.00	0.00
8,500.0	2.74	227.55	8,495.1	-140.8	-153.9	-129.6	0.00	0.00	0.00
8,600.0	2.74	227.55	8,594.9	-144.0	-157.4	-132 6	0.00	0.00	0.00
8,700.0	2.74	227.55	8,694.8	-147.2	-161.0	-135.5	0.00	0.00	0.00
8,800.0	2.74	227.55	8,794.7	-150.4	-164.5	-138.5	0.00	0.00	0.00
8.900.0	2.74	227.55	8,894.6	-153.7	-168.0	-141.5	0.00	0.00	0.00
9,000.0	2.74	227.55	8,994.5	-156.9	-171.5	-144.5	0.00	0.00	0.00
9,100.0	2.74	227.55	9,094.4	-160.1	-175.1	-147.4	0.00	0.00	0.00
9,200.0	2.74	227.55	9,194.3	-163.3	-178.6	-150.4	0.00	0.00	0 00
9,300.0	2.74	227.55	9,294.1	-166.6	-182 1	-153.4	0.00	0.00	0.00
9,400.0	2.74	227.55	9,394.0	-169.8	-185.7	-156.3	0.00	0.00	0.00
9,500.0	2.74	227.55	9,493.9	-173.0	-189.2	-159.3	0.00	0.00	0.00
9.600.0	2.74	227.55	9,593.8	-176.2	-192.7	-162.3	0.00	0.00	0.00
9,700.0	2.74	227.55	9,693.7	-179.5	-196.2	-165.2	0.00	0.00	0.00
9,800.0	2.74	227.55	9,793.6	-182.7	-199.8	-168.2	0.00	0.00	0.00
9,900.0	2.74	227.55	9,893.5	-185.9	-203.3	-171.2	0.00	0.00	0.00
10,000.0	2.74	227.55	9,993.3	-189.2	-206.8	-174.2	0.00	0.00	0.00
10,100.0	2.74	227.55	10,093.2	-192.4	-210.3	-177.1	0.00	0.00	0.00
10,200.0	2.74	227.55	10,193.1	-195.6	-213.9	-180 1	0.00	0.00	0.00
10,300.0	2.74	227 55	10,293.0	-198.8	-217.4	-183.1	0.00	0.00	0.00
10,400.0	2.74	227 55	10,392.9	-202.1	-220.9	-186.0	0.00	0.00	0.00
10,500.0	2.74	227.55	10,492.8	-205.3	-224.5	-189.0	0.00	0.00	0.00
10,600.0	2.74	227.55	10,592.7	-208.5	-228.0	-192.0	0.00	0.00	0.00

Database: Company:

Project:

EOG Resources - Midland Lea County, NM (NAD 83 NME)

Site: Well:

#701H Wellbore:

EDM 5000.14

Barlow 34 Fed Com

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #701H

KB = 25' @ 3286.0usft KB = 25' @ 3286.0usft

Grid

Minimum Curvature

esign:	Plan #0.2				是如此,				
Planned Survey		a Turn Callet			ST SERVICE	SELECTION OF SECURITION		The complete States of the	en disciplinate and
Measured	1000		Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
10,700.0	2.74	227.55	10,692.5	-211.7	-231.5	-195.0	0.00	0.00	0.00
10,800.0	2.74	227.55	10,792.4	-215.0	-235.0	-197.9	0.00	0.00	0.00
10,900.0	2.74	227.55	10,892.3	-218.2	-238.6	-200.9	0.00	0.00	0.00
11,000.0	2.74	227.55	10,992.2	-221.4	-242.1	-203.9	0.00	0.00	0.00
11,100.0	2.74	227.55	11,092.1	-224.6	-245.6	-206.8	0.00	0.00	0.00
11,200.0 11,300.0	2.74 2.74	227.55 227.55	11,192.0 11,291.9	-227.9 -231.1	-249.2 -252.7	-209.8 -212.8	0.00	0.00	0.00
11,400.0	2.74	227.55	11,391.7	-234.3	-256.2	-215.7	0.00	0.00	0.00
. 11,500.0 11,600.0	2.74 2.74	227.55 227.55	11,491.6 11,591.5	-237.5 -240.8	-259.7 -263.3	-218.7 -221.7	0.00	0.00	0.00
11,700.0	2.74	227.55	11,691.4	-244.0	-266.8	-224.7	0.00	0.00	0.00
11,800.0	2.74	227.55	11,791.3	-247.2	-270.3	-227.6	0.00	0.00	0.00
11,900.0 11,916.4	2.74	227.55 227.55	11,891.2 11,907.6	-250.4 -251.0	-273.8 -274.4	-230.6 -231.1	0.00	0.00	0.00
11,925.0	2.19	248.07	11,916.2	-251.2	-274.7	-231.1	12.00	-6.42	238.59
11,950.0	2.99	316.81	11,941.1	-250.9	-275.6	-230.9	12.00	3.23	274.96
11,975.0	5.58	338.27	11,966.1	-249.3	-276.5	-229.2	12.00	10.34	85.85
12,000.0	8.44	345.75	11,990.9	-246.4	-277.4	-226.3	12.00	11.46	29.92
12,000.0	11.38	349.43	12,015.5	-240.4	-278.3	-222.0	12.00	11.74	14.71
12,050.0	14.34	351.61	12,039.9	-236.7	-279.2	-216.5	12.00	11.84	8.72
12,075.0	17.31	353.05	12,063.9	-229.9	-280 1	-209.7	12.00	11.90	5.78
12,100.0	20.30	354.09	12,087.6	-221.9	-281.0	-201.6	12.00	11.93	4.13
12,125.0	23.28	354.86	12,110.8	-212.7	-281.9	-192.3	12.00	11.94	3.11
12,150.0	26.27	355.47	12,133.5	-202.2	-282 8	-181.9	12.00	11.96	2.44
12,175.0	29.26	355.96	12,155.6	-190.6	-283.7	-170.2	12.00	11,96	1.97
12,200.0	32.25	356.37	12,177.1	-177.9	-284.5	-157.4	12.00	11.97	1.63
12,225.0	35.25	356.72	12,197.9	-164.0	-285.3	-143.6	12.00	11.98	1.38
12,250.0	38.24	357.02	12,217.9	-149.1	-286.2	-128.6	12.00	11.98	1.19
12,275.0	41.24	357.28	12,237 1	-133.1	-287.0	-112.6	12.00	11.98	1.04
12,300.0	44.23	357.51	12,255.5	-116.2	-287.7	-95.7	12.00	11.98	0.93
12,325.0	47.23	357.72	12,272.9	-98.3	-288.5	-77.8	12.00	11.99	0.83
12,350.0	50.23	357.90	12,289.4	-79.5	-289.2	-59.0	12.00	11.99	0.76
12,375.0	53.22	358.08	12,304.9	-59.9	-289.9	-39.4	12.00	11.99	0.69
12,400.0	56.22	358.24	12,319.3	-39.5	-290.5	-19.0	12.00	11.99	0.64
12,425.0	59 22	358.39	12,332.7	-18.4	-291.2	2.1	12.00	11.99	0.60
12,450.0 12,475.0	62.22 65.21	358.53 358.66	12,344.9 12,356.0	3.4 25.8	-291.7 -292.3	23.9 46.3	12.00 12.00	11.99	0.56
								11.99	0.53
12,500.0	68.21	358.79	12,365.9	48.8	-292.8	69.2	12.00	11.99	0.51
12,525.0	71 21	358.91	12,374.5	72.2	-293 3	92.6	12.00	11.99	0.48
12,550.0	74.21	359.02	12,382.0	96.1	-293.7	116.5	12.00	11.99	0.47
12,575.0 12,600.0	77.21 80.20	359.14 359.25	12,388.1 12,393.0	120.3 144.8	-294.1 -294.4	140.7 165.1	12.00 12.00	11.99 11.99	0.45
12,625.0 12,650.0	83.20 86.20	359.36 359.46	12,396.6 12,398.9	169.6 194.4	-294.7 -295.0	189.8 214.7	12.00 12.00	11.99 11.99	0.44
12,650.0	89.20	359.46	12,398.9	219.4	-295.0	239.6	12.00	11.99	0.43
12,681.7	90.00	359.60	12,400.0	226.1	-295.3	246.3	12.00	11.99	0.43
12,700.0	90.00	359.60	12,400.0	244.4	-295.4	264.6	0.00	0.00	0.00
12,800.0 12,900.0	90.00	359.60 359.60	12,400.0 12,400.0	344.4 444.4	-296.1 -296.8	364.4 464.2	0.00	0.00	0.00
13.000.0	90.00	359.60	12,400.0	544.4	-290.6	564.0	0.00	0.00	0.00
13,100.0	90.00	359.60	12,400.0	644.4	-298.2	663.8	0.00	0.00	0.00
,				-					2.00

13.300.0

13,400.0

90.00

90.00

359.60

359.60

12,400.0

12,400.0

844.4

-299.6

-300.3

863.4

963.2

0.00

0.00

0.00

0.00

0.00

0.00



Database:

Company:

EDM 5000.14 EOG Resources - Midland Lea County, NM (NAD 83 NME)

Project: Site:

Barlow 34 Fed Com

Well:

#701H ОН

Wellbore: Design:

Plan #0.2

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Well #701H

KB = 25' @ 3286.0usft KB = 25' @ 3286.0usft

Grid

Minimum Curvature

	Flatt #0.2								
nned Survey	en e		A PARL DISTA	S. Marine				ELIKE SHAP	
Measured			Vertical	La vit	1 2 5 5	Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
13,500.0	90.00	359.60	12,400.0	1.044.4	-301.0	1,063.0	0.00	0.00	0.00
13,600.0	90.00	359.60	12,400.0	1,144.4	-301.7	1,162.8	0.00	0.00	0.00
13,700.0	90.00	359.60	12,400.0	1,244.4	-302.4	1,262.6	0.00	0.00	0.00
13,800.0	90.00	359.60	12,400.0	1,344.4	-303.1	1,362.4	0.00	0.00	0.00
13,900.0	90.00	359.60	12,400.0	1,444.4	-303.8	1,462.2	0.00	0.00	0.00
14,000.0	90.00	359.60	12,400.0	1,544.4	-304.5	1,562.0	0.00	0.00	0.00
14,100.0	90.00	359.60	12,400.0	1,644.4	-305.2	1,661.8	0.00	0.00	0.00
14,200.0	90.00	359.60	12,400.0	1,744.4	-305.9	1,761.6	0.00	0.00	0.00
14,300.0	90.00	359.60	12,400.0	1,844.4	-306 6	1,861.4	0.00	0.00	0.00
14,400.0	90.00	359.60	12,400.0	1,944.4	-307.3	1,961.2	0.00	0.00	0.00
14,500.0	90.00	359.60	12,400.0	2,044.4	-307.9	2,061.0	0.00	0.00	0.00
14,600.0	90.00	359.60	12,400.0	2,144.4	-308.6	2,160.8	0.00	0.00	0.00
14,700.0	90.00	359.60	12,400.0	2,244.4	-309.3	2,260.6	0.00	0.00	0.00
14,800.0	90.00	359.60	12,400.0	2,344.4	-310.0	2,360.4	0.00	0.00	0.00
14,900.0	90.00	359.60	12,400.0	2,444.4	-310.7	2,460.2	0.00	0.00	0.00
15,000.0	90.00	359.60	12,400.0	2,544.4	-311.4	2,560.0	0.00	0.00	0.00
15,100.0	90.00	359.60	12,400.0	2,644.4	-312.1	2,659.8	0.00	0.00	0.00
15,200.0	90.00	359.60	12,400.0	2,744.4	-312.8	2,759.6	0.00	0.00	0.00
15,300.0	90.00	359.60	12,400.0	2,844.4	-313.5	2,859.4	0.00	0.00	0.00
15,400.0	90.00	359.60	12,400.0	2,944.4	-314.2	2,959.1	0.00	0.00	0.00
15,500.0	90.00	359.60	12,400.0	3,044.3	-314.9	3,058.9	0.00	0.00	0.00
15,600.0	90.00	359.60	12,400.0	3,144.3	-315.6	3,158.7	0.00	0.00	0.00
15,700.0	90.00	359.60	12,400.0	3,244.3	-316.3	3,258.5	0.00	0.00	0.00
15,800.0	90.00	359.60	12,400.0	3,344.3	-317.0	3,358.3	0.00	0.00	0.00
15,900.0	90.00	359.60	12,400.0	3,444.3	-317.7	3,458.1	0.00	0.00	0.00
16,000.0	90.00	359.60	12,400.0	3,544.3	-318.4	3,557.9	0.00	0.00	0.00
16,100.0	90.00	359.60	12,400.0	3,644.3	-319.1	3,657.7	0.00	0.00	0.00
16,200.0	90.00	359.60	12,400.0	3,744.3	-319.8	3,757.5	0.00	0.00	0.00
16,300.0	90.00	359.60	12,400.0	3,844.3	-320.5	3,857.3	0.00	0.00	0.00
16,400.0	90.00	359.60	12,400.0	3,944.3	-321.2	3,957.1	0.00	0.00	0.00
16,500.0	90.00	359.60	12,400.0	4,044.3	-321.9	4,056.9	0.00	0.00	0.00
16,600.0	90.00	359.60	12,400.0	4,144.3	-322.6	4,156.7	0.00	0.00	0.00
16,700.0	90.00	359.60	12,400.0	4,244.3	-323.3	4,256.5	0.00	0.00	0.00
16,800.0	90.00	359.60	12,400.0	4,344.3	-324.0	4,356.3	0.00	0.00	0 00
16,900.0	90.00	359.60	12,400.0	4,444.3	-324.7	4,456.1	0.00	0.00	0.00
17,000.0	90.00	359.60	12,400.0	4,544.3	-325.4	4,555.9	0.00	0.00	0.00
17,085.7	90.00	359.60	12,400.0	4,630.0	-326.0	4,641.5	0.00	0.00	0.00

Design Targets Target Name					71 (* 1) 7 (* 1)				
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		ALC: NO SERVICE AND A SERVICE
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
FTP (Barlow 34 Fed Cor	0.00	0.00	12,400.0	28.0	-295.0	365,002.00	778,686.00	32° 0' 4.176 N	103° 34' 3.590 W
- plan misses target o	enter by 39.5	usft at 12494	5usft MD ((12363.8 TVD,	43.6 N, -292.7	7 E)			
- Point									
PBHL (Barlow 34 Fed Con- plan hits target center	0.00 er	0.00	12,400.0	4,630.0	-326.0	369,604.00	778,655.00	32° 0' 49.718 N	103° 34' 3.572 W

PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME: | EOG Resources Inc.

LEASE NO.: | NMNM02965A

WELL NAME & NO.: | 701H-Barlow 34 Fed Com

SURFACE HOLE FOOTAGE: 300'/S & 625'/E BOTTOM HOLE FOOTAGE 2432'/S & 330'/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