

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM02965A
2. Name of Operator EOG RESOURCES INCORPORATED Contact: STAN WAGNER E-Mail: stan_wagner@eogresources.com		6. If Indian, Allottee or Tribe Name
3a. Address MIDLAND, TX 79702	3b. Phone No. (include area code) Ph: 432-686-3689	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 34 T26S R33E 300FSL 625FWL 32.001076 N Lat, 103.566711 W Lon		8. Well Name and No. BARLOW 34 FED COM 701H
		9. API Well No. 30-025-44154-00-X1
		10. Field and Pool or Exploratory Area RED HILLS-WOLFCAMP, WEST (GAS)
		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 Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Drilling Operations
	☐ 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 recompleat 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 recompleat 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 intends to set a whipstock in the 6-3/4" lateral section of this well.

While drilling the lateral the BHA became stuck and fishing attempts were unsuccessful.

Attached is the detailed whipstock procedure.

Field Office
OCD Hobbs

14. I hereby certify that the foregoing is true and correct. Electronic Submission #402744 verified by the BLM Well Information System For EOG RESOURCES INCORPORATED, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 01/31/2018 (18PP0576SE)	
Name (Printed/Typed) STAN WAGNER	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 01/31/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>ZOTA STEVENS</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>02/22/2018</u>
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 ****

BLM Sundry Notice of Intent

API #: 30-025-44154

Barlow 34 Fed Com #701H

Current Situation

While drilling the lateral 6.75 inch section at 16,181 feet MD the BHA became stuck and attempted to work it free. Not able to free pipe with hook load or torque or circulation. It then broke free with a sudden loss of pressure. Upon inspection it was found that the BHA separated from the drill string at 14,400 feet and left drill pipe and the BHA in the hole.

A fishing assembly with overshot and grapples was used in an attempt to retrieve the BHA when it became stuck near the base of the curve at 13,118 feet. After multiple attempts to free itself, the fishing assembly was parted at 13,016 feet leaving the overshot and grapples in the hole.

Intent and Plan

The intent is to plug back the existing lateral hole by setting a cemented whipstock in the vertical below the 7-5/8 inch intermediate casing and to redrill the curve and lateral. The cement is designed to cover all formations from the Wolfcamp up into the 7-5/8 inch casing. The bottom of cement is designed at 12,310 feet (12,233 TVD) and the top of cement is designed at 11,500 feet. A new well plan and whipstock cementing procedure are submitted for review.

Existing Well Construction

Intermediate #2 Casing: 7-5/8" 29.7# P110ICY MO-FLX shoe at 11,714 ft
7-5/8" 29.7# ECP110 BTC at 916 ft
Cemented Shoe 7-5/8": FIT 13.5 ppg equivalent and TOC 4,100'

Formation Tops

2nd Bone Spring Sand	10635
3rd Bone Spring Carb	11105
3rd Bone Spring Sand	11773
3 rd Bone Spring Shale	12,092
Wolfcamp	12,189
Wolfcamp Clastics X	12,230
Wolfcamp Clastics Y	12,342



eog resources

Cemented Open Hole Whipstock Procedure

Barlow 34 Fed Com #705H

01/29/2018

PRESENT WELL CONFIGURATION: 7-5/8" intermediate casing set at 11,714' and cemented to ~4,100'; 6-3/4" open hole from 11,714' - ~16,181' (PBTD); and 12.5 ppg OBM.

1. With drill pipe free and on bottom circulate bottoms up and TOOH for whipstock assembly.
2. PU Whipstock assembly: 2 7/8" tubing tail pipe, Schlumberger cementable whipstock, VES UBHO, Xover, 10 stds HWDP, DP.
 - a. TIH with open hole whipstock assembly with 2 7/8" tubing tail pipe (est. 538' (17 jts), tubing setting depth should be ~12,310') w/ slotted tubing on bottom. Follow attached procedure from Schlumberger and any directions by Schlumberger whipstock hand while TIH
 1. Optimum MUT for 2 7/8" 6.5# EUE tubing is 2,250 ft-lb
 - b. Orient whipstock w/ VES gyro at ~50° AZI and set slips on whipstock at 11,818' MD (top of whipstock should be 11,800' MD)
 1. Use attached OH whipstock setting procedure from Schlumberger and follow directions from Schlumberger whipstock hand.
3. **Pump Balanced Plug** (12,310'-11,500') job procedure (pump and displace at 5-6 bpm unless losses are incurred).
 - a. Pump 50 bbls of 13.0 ppg GXT spacer
 - b. Mix and pump 165 sacks of cement (15.6 ppg, 1.18 cu/ft/sk yield, 35 bbls of slurry).
 - c. Pump 40 bbls of 8.4 ppg FW spacer ahead of displacement fluid.
 - d. Displace with active mud
4. Follow Schlumberger procedure for pulling off of whipstock and circulating to clean drill pipe.
 - a. **Pull 1,000' above whipstock at 30'/min, circulate 2 B/U**
5. TOOH and L/D Schlumberger tools and pick up directional assembly. Wait a reasonable amount of time before running in hole to allow cement to set up. **WOC 8 hours before beginning to drill cement.**
6. PU 6-3/4" directional assembly: MM63C, 4-3/4" 2.12* 7:8 4.5 Motor, UBHO, NMDC's, X-over, DP, 10 stds HWDP, DP. TIH & tag cement, wash and ream cement to top of whipstock. Orient directional tools and kick off of whipstock according to directional plan. Attempt to kick off of cement plug ~30-50' above whipstock. (Note: if on magnetic toolface, whipstock will cause interference).



Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com #701H

HP 647

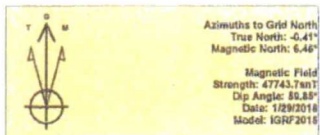
Plan #4

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

WELL DETAILS: #701H

Ground Level: 3261.0
KB = 25' @ 3288.5 bush (HP 647)
Northing: 364974.00 Easting: 778981.00 Latitude: 32° 0' 3.875 N Longitude: 103° 34' 0.167 W



To convert a Magnetic Direction to a Grid Direction, Add 6.46°
To convert a Magnetic Direction to a True Direction, Add 6.87° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

SECTION DETAILS

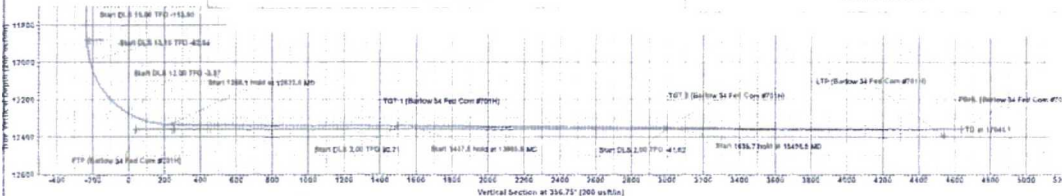
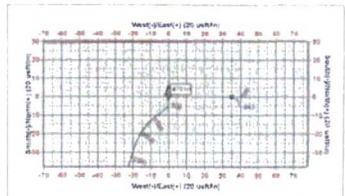
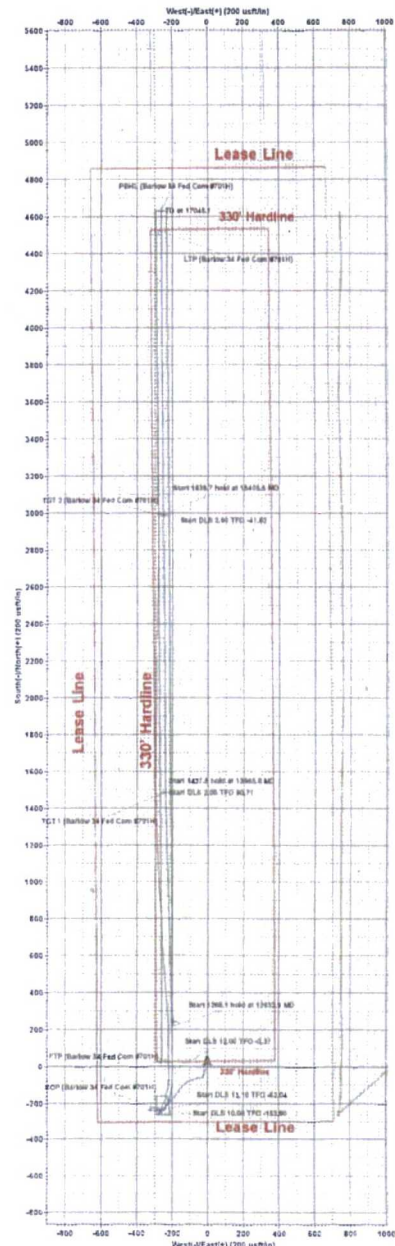
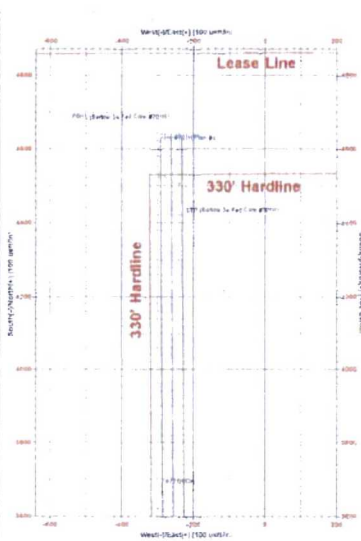
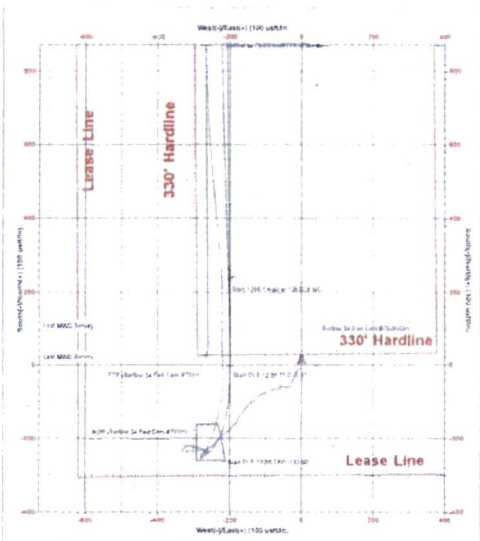
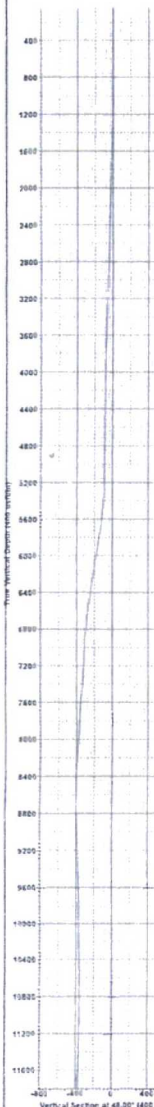
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target	Annotation
1	11672.0	1.60	189.70	11648.6	-250.6	-278.9	0.00	0.00	-234.4		
2	11800.0	1.51	262.08	11776.6	-254.0	-278.9	0.27	111.13	-237.7		
3	11913.5	20.00	50.00	11986.0	-232.9	-252.6	10.00	-153.80	-216.2		
4	12386.2	60.00	0.00	12270.9	-17.9	-200.7	13.10	-42.04	-4.5		
5	12322.9	89.68	356.34	12335.0	216.8	-204.4	12.00	-3.37	229.7		
6	13001.0	89.68	358.34	12342.0	148.0	-241.2	0.00	0.00	1497.3	TGT 1 (Barlow 34 Fed Com #701H)	
7	13965.8	89.67	358.63	12342.4	193.8	-242.3	2.00	80.71	1962.0	TGT 2 (Barlow 34 Fed Com #701H)	
8	15403.3	89.67	358.63	12350.7	289.2	-251.6	0.00	0.00	2897.7		
9	15405.5	89.70	359.60	12350.7	299.4	-251.6	2.00	-41.82	2999.8		
10	17045.1	89.70	359.60	12359.3	463.0	-263.0	0.00	0.00	4637.5	PBHL (Barlow 34 Fed Com #701H)	

CABINS DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT 1 (Barlow 34 Fed Com #701H)	12342.0	148.0	-241.2	366460.00	778735.89
TGT 2 (Barlow 34 Fed Com #701H)	12342.4	193.8	-242.3	367983.30	778735.40
PBHL (Barlow 34 Fed Com #701H)	12350.7	289.2	-251.6	369804.00	778718.00
KCP (Barlow 34 Fed Com #701H)	11802.5	-236.0	-262.1	364738.03	778718.93
LTP (Barlow 34 Fed Com #701H)	12345.0	453.0	-292.3	369504.00	778685.69
Plan @ 12360.1 (#701H ST Plan #3)	12360.1	243.3	-193.7	365217.32	778787.26



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com

#701H

72874

ST

Plan: Plan #4

Standard Planning Report

29 January, 2018

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Com	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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	#701H					
Well Position	+N/-S	0.0 usft	Northing:	364,974.00 usft	Latitude:	32° 0' 3.879 N
	+E/-W	0.0 usft	Easting:	778,981.00 usft	Longitude:	103° 34' 0.167 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,261.0 usft

Wellbore	ST				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/29/2018	6.87	59.85	47,743.68749032

Design	Plan #4			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	11,672.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	356.75

Plan Survey Tool Program	Date 1/29/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	11,672.0	17,045.1 Plan #4 (ST)	MWD	
			MWD - Standard	

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Com	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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
11,672.0	1.60	189.70	11,648.6	-250.6	-278.9	0.00	0.00	0.00	0.00	
11,800.0	1.51	202.08	11,776.6	-254.0	-279.8	0.27	-0.07	9.67	111.13	
12,013.5	20.00	50.00	11,986.0	-232.9	-252.6	10.00	8.66	-71.25	-153.90	
12,385.2	60.00	0.01	12,270.9	-17.9	-200.7	13.10	10.76	-13.45	-62.04	
12,632.9	89.68	358.34	12,335.0	218.5	-204.4	12.00	11.98	-0.67	-3.37	
13,901.0	89.68	358.34	12,342.0	1,486.0	-241.2	0.00	0.00	0.00	0.00	TGT 1 (Barlow 34 Fed
13,965.8	89.67	359.63	12,342.4	1,550.8	-242.3	2.00	-0.02	2.00	90.71	
15,403.3	89.67	359.63	12,350.7	2,988.2	-251.6	0.00	0.00	0.00	0.00	TGT 2 (Barlow 34 Fed
15,405.5	89.70	359.60	12,350.7	2,990.4	-251.6	2.00	1.50	-1.33	-41.62	
17,045.1	89.70	359.60	12,359.3	4,630.0	-263.0	0.00	0.00	0.00	0.00	PBHL (Barlow 34 Fed

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Com	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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
131.0	0.80	238.50	131.0	-0.5	-0.8	-0.4	0.61	0.61	0.00
159.0	0.70	167.50	159.0	-0.7	-0.9	-0.7	3.12	-0.36	-253.57
216.0	1.00	155.50	216.0	-1.5	-0.6	-1.5	0.61	0.53	-21.05
247.0	0.60	138.50	247.0	-1.9	-0.4	-1.9	1.49	-1.29	-54.84
278.0	0.30	154.50	278.0	-2.1	-0.3	-2.1	1.04	-0.97	51.61
309.0	0.60	158.50	309.0	-2.3	-0.2	-2.3	0.97	0.97	12.90
372.0	0.40	139.50	372.0	-2.8	0.1	-2.8	0.41	-0.32	-30.16
404.0	0.30	216.50	404.0	-3.0	0.1	-3.0	1.38	-0.31	240.63
435.0	0.50	192.50	435.0	-3.2	0.0	-3.1	0.83	0.65	-77.42
466.0	0.40	232.50	466.0	-3.3	-0.1	-3.3	1.04	-0.32	129.03
497.0	0.20	191.50	497.0	-3.5	-0.2	-3.5	0.91	-0.65	-132.26
528.0	0.30	189.50	528.0	-3.6	-0.2	-3.6	0.32	0.32	-6.45
559.0	0.50	196.50	559.0	-3.8	-0.3	-3.8	0.66	0.65	22.58
621.0	0.70	196.50	621.0	-4.4	-0.4	-4.4	0.32	0.32	0.00
684.0	0.60	217.50	684.0	-5.1	-0.7	-5.0	0.41	-0.16	33.33
884.0	0.40	220.50	884.0	-6.4	-1.8	-6.3	0.10	-0.10	1.50
986.0	0.40	229.50	986.0	-6.9	-2.3	-6.8	0.06	0.00	8.82
1,079.0	0.50	229.50	1,079.0	7.4	-2.9	-7.2	0.11	0.11	0.00
1,263.0	0.80	235.20	1,262.9	-8.7	-4.6	-8.4	0.17	0.16	3.10
1,449.0	0.90	238.70	1,448.9	-10.2	-6.9	-9.7	0.06	0.05	1.88
1,636.0	1.20	228.60	1,635.9	-12.2	-9.6	-11.6	0.19	0.16	-5.40
1,822.0	1.30	222.10	1,821.8	-15.1	-12.5	-14.3	0.09	0.05	-3.49
2,010.0	1.60	214.00	2,009.8	-18.8	-15.4	-17.9	0.19	0.16	-4.31
2,198.0	1.80	205.30	2,197.7	-23.7	-18.1	-22.6	0.17	0.11	-4.63
2,384.0	1.70	196.00	2,383.6	-29.0	-20.1	-27.8	0.16	-0.05	-5.00
2,572.0	1.90	197.40	2,571.5	-34.6	-21.8	-33.3	0.11	0.11	0.74
2,759.0	2.20	203.70	2,758.4	-40.9	-24.2	-39.4	0.20	0.16	3.37
2,947.0	2.10	197.90	2,946.3	-47.4	-26.7	-45.9	0.13	-0.05	-3.09
3,135.0	2.20	196.90	3,134.1	-54.2	-28.8	-52.5	0.06	0.05	-0.53
3,322.0	1.10	229.70	3,321.1	-58.8	-31.2	-56.9	0.75	-0.59	17.54
3,510.0	1.80	252.30	3,509.0	-60.8	-35.4	-58.7	0.47	0.37	12.02
3,698.0	2.40	275.50	3,696.9	-61.4	-42.1	-58.9	0.55	0.32	12.34
3,885.0	0.90	295.60	3,883.8	-60.3	-47.4	-57.6	0.85	-0.80	10.75
4,071.0	0.60	282.80	4,069.8	-59.5	-49.6	-56.6	0.18	-0.16	-6.88
4,258.0	1.40	274.60	4,256.8	-59.1	-52.8	-56.0	0.43	0.43	-4.39
4,445.0	1.80	280.40	4,443.7	-58.4	-58.0	-55.0	0.23	0.21	3.10
4,633.0	0.30	289.80	4,631.6	-57.7	-61.4	-54.1	0.80	-0.80	5.00
4,804.0	1.50	150.30	4,802.6	-59.5	-60.7	-55.9	1.02	0.70	-81.58
4,997.0	1.30	140.90	4,995.6	-63.4	-58.1	-60.0	0.16	-0.10	-4.67
5,185.0	2.10	269.90	5,183.5	-65.0	-60.2	-61.5	1.64	0.43	68.62
5,372.0	4.50	260.60	5,370.2	-66.2	-70.8	-62.1	1.31	1.28	-4.97
5,560.0	7.10	253.10	5,557.2	-70.8	-89.2	-65.6	1.44	1.38	-3.99
5,748.0	9.10	239.80	5,743.4	-81.7	-113.2	-75.1	1.45	1.06	-7.07
5,935.0	10.20	229.20	5,927.7	-99.9	-138.5	-91.9	1.12	0.59	-5.67
6,123.0	9.50	214.20	6,113.0	-123.7	-159.8	-114.4	1.41	-0.37	-7.98
6,310.0	9.30	215.30	6,297.5	-148.7	-177.2	-138.5	0.14	-0.11	0.59
6,498.0	8.50	222.50	6,483.2	-171.4	-195.4	-160.0	0.73	-0.43	3.83
6,686.0	7.20	238.70	6,669.5	-167.8	-214.9	-175.3	1.36	-0.69	8.62
6,874.0	3.70	224.30	6,856.6	-198.2	-229.2	-184.9	1.98	-1.86	-7.66
7,062.0	3.30	216.10	7,044.3	-206.9	-236.6	-193.2	0.34	-0.21	-4.36
7,250.0	3.70	215.80	7,231.9	-216.2	-243.3	-202.1	0.21	0.21	-0.16
7,437.0	4.90	243.10	7,418.4	-224.7	-254.0	-210.0	1.25	0.64	14.60
7,624.0	5.70	255.60	7,604.6	-230.7	-270.1	-215.0	0.75	0.43	6.68

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Com	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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)
7,812.0	3.80	268.20	7,791.9	-233.2	-285.4	-216.6	1.15	-1.01	6.70
8,000.0	4.50	272.80	7,979.5	-233.0	-299.0	-215.7	0.41	0.37	2.45
8,187.0	5.40	257.30	8,165.8	-234.6	-314.9	-216.4	0.86	0.48	-8.29
8,376.0	3.30	280.10	8,354.2	-235.6	-328.9	-216.6	1.42	-1.11	12.06
8,563.0	1.10	19.50	8,541.1	-233.0	-333.6	-213.7	1.95	-1.18	53.16
8,751.0	2.20	49.90	8,729.0	-228.9	-330.3	-209.8	0.73	0.59	16.17
8,939.0	2.20	61.40	8,916.9	-224.9	-324.3	-206.1	0.23	0.00	6.12
9,126.0	1.90	63.10	9,103.8	-221.8	-318.4	-203.3	0.16	-0.16	0.91
9,314.0	2.10	95.60	9,291.7	-220.7	-312.2	-202.6	0.60	0.11	17.29
9,502.0	1.90	98.70	9,479.6	-221.5	-305.7	-203.8	0.12	-0.11	1.65
9,690.0	1.30	107.60	9,667.5	-222.6	-300.6	-205.2	0.34	-0.32	4.73
9,877.0	1.20	109.20	9,854.4	-223.9	-296.7	-206.7	0.06	-0.05	0.86
10,064.0	0.90	136.50	10,041.4	-225.6	-293.8	-208.6	0.31	-0.16	14.60
10,251.0	1.40	70.10	10,228.4	-225.9	-290.7	-209.0	0.71	0.27	-35.51
10,438.0	2.70	98.80	10,415.3	-225.8	-284.2	-209.3	0.87	0.70	15.35
10,626.0	1.90	114.00	10,603.1	-227.7	-277.0	-211.7	0.53	-0.43	8.09
10,813.0	1.70	119.30	10,790.0	-230.3	-271.7	-214.6	0.14	-0.11	2.83
11,002.0	1.30	172.50	10,979.0	-233.8	-269.0	-218.2	0.74	-0.21	28.15
11,189.0	2.50	227.90	11,165.9	-238.7	-271.7	-222.9	1.10	0.64	29.63
11,375.0	1.50	226.90	11,351.7	-243.1	-276.5	-227.0	0.54	-0.54	-0.54
11,563.0	1.70	183.70	11,539.7	-247.5	-278.5	-231.3	0.63	0.11	-22.98
11,672.0	1.60	189.70	11,648.6	-250.6	-278.9	-234.4	0.18	-0.09	5.50
11,700.0	1.57	192.28	11,676.6	-251.4	-279.0	-235.2	0.27	-0.09	9.21
11,800.0	1.51	202.08	11,776.6	-254.0	-279.8	-237.7	0.27	-0.06	9.80
11,850.0	3.70	58.49	11,826.6	-253.7	-278.7	-237.5	10.00	4.39	-287.18
11,900.0	8.67	52.54	11,876.2	-250.6	-274.3	-234.6	10.00	9.93	-11.91
11,950.0	13.66	50.91	11,925.3	-244.6	-266.7	-229.1	10.00	9.98	-3.25
12,000.0	18.66	50.14	11,973.3	-235.7	-256.0	-220.8	10.00	9.99	-1.53
12,013.5	20.00	50.00	11,986.0	-232.9	-252.6	-218.2	10.00	9.99	-1.06
12,025.0	20.75	46.23	11,996.8	-230.2	-249.6	-215.7	13.10	6.50	-32.67
12,050.0	22.63	38.96	12,020.0	-223.4	-243.4	-209.2	13.10	7.50	-29.09
12,075.0	24.78	32.82	12,042.9	-215.2	-237.5	-201.4	13.10	8.61	-24.57
12,100.0	27.14	27.64	12,065.4	-205.8	-232.0	-192.3	13.10	9.46	-20.70
12,125.0	29.67	23.26	12,087.4	-195.0	-226.9	-181.9	13.10	10.11	-17.52
12,150.0	32.32	19.52	12,108.8	-183.0	-222.2	-170.1	13.10	10.60	-14.95
12,175.0	35.07	16.30	12,129.6	-169.9	-218.0	-157.2	13.10	10.98	-12.88
12,200.0	37.88	13.50	12,149.7	-155.5	-214.2	-143.1	13.10	11.27	-11.21
12,225.0	40.76	11.03	12,169.1	-140.0	-210.8	-127.8	13.10	11.51	-9.86
12,250.0	43.69	8.84	12,187.6	-123.5	-207.9	-111.5	13.10	11.70	-8.77
12,275.0	46.65	6.87	12,205.2	-105.9	-205.5	-94.1	13.10	11.85	-7.87
12,300.0	49.64	5.09	12,221.9	-87.4	-203.6	-75.7	13.10	11.97	-7.14
12,325.0	52.66	3.46	12,237.6	-68.0	-202.2	-56.4	13.10	12.07	-6.53
12,350.0	55.69	1.95	12,252.2	-47.7	-201.2	-36.2	13.10	12.15	-6.02
12,375.0	58.75	0.55	12,265.7	-26.7	-200.7	-15.3	13.10	12.22	-5.60
12,385.2	60.00	0.01	12,270.9	-17.9	-200.7	-6.5	13.10	12.26	-5.34
12,400.0	61.77	359.89	12,278.1	-5.0	-200.7	6.4	12.00	11.98	-0.80
12,425.0	64.77	359.70	12,289.4	17.3	200.8	26.7	12.00	11.98	-0.77
12,450.0	67.76	359.51	12,299.4	40.2	201.0	51.5	12.00	11.98	-0.73
12,475.0	70.76	359.34	12,308.3	63.6	201.2	74.9	12.00	11.98	-0.70
12,500.0	73.75	359.17	12,315.9	87.4	201.5	98.7	12.00	11.98	-0.67
12,525.0	76.75	359.01	12,322.3	111.5	201.9	122.8	12.00	11.98	-0.65
12,550.0	79.75	358.85	12,327.4	136.0	202.3	147.3	12.00	11.98	-0.64
12,575.0	82.74	358.69	12,331.2	160.7	202.9	172.0	12.00	11.98	-0.63
12,600.0	85.74	358.54	12,333.7	185.6	203.5	196.8	12.00	11.98	-0.62

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Com	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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)
12,625.0	88.73	358.38	12,334.9	210.5	-204.1	221.8	12.00	11.98	-0.61
12,632.9	89.68	358.34	12,335.0	218.5	-204.4	229.7	12.00	11.98	-0.61
12,700.0	89.68	358.34	12,335.4	285.5	-206.3	296.7	0.00	0.00	0.00
12,800.0	89.68	358.34	12,335.9	385.5	-209.2	396.7	0.00	0.00	0.00
12,900.0	89.68	358.34	12,336.5	485.4	-212.1	496.7	0.00	0.00	0.00
13,000.0	89.68	358.34	12,337.0	585.4	-215.0	596.6	0.00	0.00	0.00
13,100.0	89.68	358.34	12,337.6	685.3	-217.9	696.6	0.00	0.00	0.00
13,200.0	89.68	358.34	12,338.1	785.3	-220.8	796.5	0.00	0.00	0.00
13,300.0	89.68	358.34	12,338.7	885.2	-223.7	896.5	0.00	0.00	0.00
13,400.0	89.68	358.34	12,339.2	985.2	-226.7	996.5	0.00	0.00	0.00
13,500.0	89.68	358.34	12,339.8	1,085.2	-229.6	1,096.4	0.00	0.00	0.00
13,600.0	89.68	358.34	12,340.3	1,185.1	-232.5	1,196.4	0.00	0.00	0.00
13,700.0	89.68	358.34	12,340.9	1,285.1	-235.4	1,296.3	0.00	0.00	0.00
13,800.0	89.68	358.34	12,341.4	1,385.0	-238.3	1,396.3	0.00	0.00	0.00
13,901.0	89.68	358.34	12,342.0	1,486.0	-241.2	1,497.3	0.00	0.00	0.00
13,965.8	89.67	359.63	12,342.4	1,550.8	-242.3	1,562.0	2.00	-0.02	2.00
14,000.0	89.67	359.63	12,342.6	1,585.0	-242.6	1,596.2	0.00	0.00	0.00
14,100.0	89.67	359.63	12,343.1	1,685.0	-243.2	1,696.0	0.00	0.00	0.00
14,200.0	89.67	359.63	12,343.7	1,785.0	-243.9	1,795.9	0.00	0.00	0.00
14,300.0	89.67	359.63	12,344.3	1,885.0	-244.5	1,895.8	0.00	0.00	0.00
14,400.0	89.67	359.63	12,344.9	1,985.0	-245.1	1,995.7	0.00	0.00	0.00
14,500.0	89.67	359.63	12,345.5	2,084.9	-245.8	2,095.5	0.00	0.00	0.00
14,600.0	89.67	359.63	12,346.0	2,184.9	-246.4	2,195.4	0.00	0.00	0.00
14,700.0	89.67	359.63	12,346.6	2,284.9	-247.1	2,295.3	0.00	0.00	0.00
14,800.0	89.67	359.63	12,347.2	2,384.9	-247.7	2,395.1	0.00	0.00	0.00
14,900.0	89.67	359.63	12,347.8	2,484.9	-248.4	2,495.0	0.00	0.00	0.00
15,000.0	89.67	359.63	12,348.4	2,584.9	-249.0	2,594.9	0.00	0.00	0.00
15,100.0	89.67	359.63	12,348.9	2,684.9	-249.6	2,694.8	0.00	0.00	0.00
15,200.0	89.67	359.63	12,349.5	2,784.9	-250.3	2,794.6	0.00	0.00	0.00
15,300.0	89.67	359.63	12,350.1	2,884.9	-250.9	2,894.5	0.00	0.00	0.00
15,403.3	89.67	359.63	12,350.7	2,988.2	-251.6	2,997.7	0.00	0.00	0.00
15,405.5	89.70	359.60	12,350.7	2,990.4	-251.6	2,999.8	2.00	1.50	-1.33
15,500.0	89.70	359.60	12,351.2	3,084.9	-252.3	3,094.3	0.00	0.00	0.00
15,600.0	89.70	359.60	12,351.7	3,184.9	-253.0	3,194.1	0.00	0.00	0.00
15,700.0	89.70	359.60	12,352.3	3,284.9	-253.7	3,294.0	0.00	0.00	0.00
15,800.0	89.70	359.60	12,352.8	3,384.9	-254.4	3,393.9	0.00	0.00	0.00
15,900.0	89.70	359.60	12,353.3	3,484.9	-255.0	3,493.7	0.00	0.00	0.00
16,000.0	89.70	359.60	12,353.8	3,584.9	-255.7	3,593.6	0.00	0.00	0.00
16,100.0	89.70	359.60	12,354.3	3,684.9	-256.4	3,693.5	0.00	0.00	0.00
16,200.0	89.70	359.60	12,354.9	3,784.9	-257.1	3,793.4	0.00	0.00	0.00
16,300.0	89.70	359.60	12,355.4	3,884.9	-257.8	3,893.2	0.00	0.00	0.00
16,400.0	89.70	359.60	12,355.9	3,984.9	-258.5	3,993.1	0.00	0.00	0.00
16,500.0	89.70	359.60	12,356.4	4,084.9	-259.2	4,093.0	0.00	0.00	0.00
16,600.0	89.70	359.60	12,357.0	4,184.9	-259.9	4,192.9	0.00	0.00	0.00
16,700.0	89.70	359.60	12,357.5	4,284.9	-260.6	4,292.7	0.00	0.00	0.00
16,800.0	89.70	359.60	12,358.0	4,384.9	-261.3	4,392.6	0.00	0.00	0.00
16,900.0	89.70	359.60	12,358.5	4,484.9	-262.0	4,492.5	0.00	0.00	0.00
17,000.0	89.70	359.60	12,359.0	4,584.9	-262.7	4,592.4	0.00	0.00	0.00
17,045.1	89.70	359.60	12,359.3	4,630.0	-263.0	4,637.5	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #701H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25' @ 3286.0usft (HP 647)
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25' @ 3286.0usft (HP 647)
Site:	Barlow 34 Fed Cor	North Reference:	Grid
Well:	#701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST		
Design:	Plan #4		

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
KOP (Barlow 34 Fed Co - plan misses target center by 17 9usft at 11909.8usft MD (11885 9 TVD, -249.6 N, -273.1 E) - Polygon Point 1 Point 2 Point 3 Point 4	0.00	0.00	11,882.5	-236.0	-262.1	364,738.03	778,718.93	32° 0' 1.562 N	103° 34' 3.230 W
TGT 1 (Barlow 34 Fed C - plan hits target center - Point	0.00	0.00	12,342.0	1,486.0	-241.2	366,460.00	778,739.80	32° 0' 18.600 N	103° 34' 2.846 W
TGT 2 (Barlow 34 Fed C - plan hits target center - Point	0.00	0.01	12,350.7	2,988.2	-251.6	367,962.20	778,729.40	32° 0' 33.466 N	103° 34' 2.843 W
PBHL (Barlow 34 Fed C - plan hits target center - Rectangle (sides W60.0 H0.0 D4,602.0)	90.00	359.60	12,359.3	4,630.0	-263.0	369,604.00	778,718.00	32° 0' 49.713 N	103° 34' 2.840 W
FTP (Barlow 34 Fed Cor - plan misses target center by 88.2usft at 12460.6usft MD (12303.4 TVD, 50.1 N, -201.0 E) - Point	0.00	0.00	12,360.0	28.0	-265.0	365,002.00	778,716.00	32° 0' 4.174 N	103° 34' 3.242 W
Plan @ 12360.1 (#701H - plan misses target center by 27.4usft at 12657.6usft MD (12335.1 TVD, 243.1 N, -205.1 E) - Point	0.00	0.00	12,360.1	243.3	-193.7	365,217.31	778,787.26	32° 0' 6.300 N	103° 34' 2.397 W
LTP (Barlow 34 Fed Cor - plan misses target center by 46.7usft at 16945.5usft MD (12358.8 TVD, 4530.4 N, -262.3 E) - Point	0.00	0.00	12,394.5	4,530.0	-292.3	369,504.00	778,688.69	32° 0' 48.726 N	103° 34' 3.189 W

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:

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% CaCl ₂ (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'	Oil Base	10.0-11.5	58-68	3 - 6
Lateral				