



HOBBS OCD
APR 25 2018
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com

#706H

OH

Design: OH

PVA Report

09 February, 2018



PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25' @ 3307.0usft (HP 610)
Site:	Barlow 34 Fed Com			MD Reference:	KB = 25' @ 3307.0usft (HP 610)
Well:	#706H			North Reference:	Grid
Wellbore:	OH			Survey Calculation Method:	Minimum Curvature
Design:	OH			Database:	EDM 5000.14

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	0.0 usft	Northing:	364,983.00 usft	Latitude:	32° 0' 3.893 N
	+E/-W	0.0 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				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/9/2017	6.96	59.86	47,835.45465354

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	7.05	



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Survey Program	Date	2/9/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
204.0	878.0	Olebrook MWD (OH)	MWD	MWD - Standard	
960.0	16,975.0	Drilltech MWD (OH)	MWD	MWD - Standard	

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
204.0	1.76	291.59	204.0	1.2	-2.9	0.86	0.86	0.00	0.0	0.0
296.0	1.32	254.03	295.9	1.4	-5.2	1.17	-0.48	-40.83	0.0	0.0
389.0	0.53	205.17	388.9	0.7	-6.5	1.13	-0.85	-52.54	0.0	0.0
515.0	0.79	245.86	514.9	-0.2	-7.5	0.41	0.21	32.29	0.0	0.0
577.0	0.79	206.84	576.9	-0.7	-8.1	0.85	0.00	-62.94	0.0	0.0
671.0	0.79	211.67	670.9	-1.9	-8.7	0.07	0.00	5.14	0.0	0.0
766.0	0.79	215.63	765.9	-3.0	-9.4	0.06	0.00	4.17	0.0	0.0
829.0	0.44	244.98	828.9	-3.4	-9.9	0.73	-0.56	46.59	0.0	0.0
878.0	0.18	275.30	877.9	-3.5	-10.2	0.61	-0.53	61.88	0.0	0.0
960.0	0.62	173.99	959.9	-3.9	-10.2	0.83	0.54	-123.55	-0.5	0.1
1,052.0	1.49	131.54	1,051.9	-5.2	-9.3	1.21	0.95	-46.14	-1.8	-0.6
1,145.0	3.25	118.27	1,144.8	-7.3	-6.1	1.97	1.89	-14.27	-3.8	-1.4
1,238.0	5.63	108.78	1,237.5	-10.0	0.6	2.67	2.56	-10.20	-7.5	-2.3
1,331.0	5.63	106.84	1,330.1	-12.8	9.3	0.20	0.00	-2.09	-11.8	-2.3
1,424.0	5.63	110.89	1,422.6	-15.7	17.9	0.43	0.00	4.35	-15.0	-1.1
1,517.0	5.80	111.94	1,515.1	-19.1	26.5	0.21	0.18	1.13	-17.8	-0.9
1,611.0	5.98	109.13	1,608.7	-22.5	35.5	0.36	0.19	-2.99	-20.8	-1.7
1,705.0	5.10	124.07	1,702.2	-26.4	43.6	1.79	-0.94	15.89	-23.1	3.4
1,798.0	5.28	132.07	1,794.8	-31.6	50.2	0.80	0.19	8.60	-24.7	4.9
1,892.0	4.40	134.92	1,888.5	-37.0	56.0	0.97	-0.94	3.03	-26.4	3.6



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Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
1,986.0	3.96	132.33	1,982.2	-41.8	60.9	0.51	-0.47	-2.76	-27.2	-0.1	
2,079.0	3.96	133.21	2,075.0	-46.1	65.7	0.07	0.00	0.95	-27.6	-2.1	
2,173.0	4.31	131.19	2,168.8	-50.7	70.7	0.40	0.37	-2.15	-28.2	-5.4	
2,267.0	4.57	130.75	2,262.5	-55.5	76.2	0.28	0.28	-0.47	-29.2	-7.9	
2,360.0	4.66	132.16	2,355.2	-60.4	81.8	0.16	0.10	1.52	-30.9	-9.4	
2,453.0	4.84	130.93	2,447.9	-65.5	87.6	0.22	0.19	-1.32	-32.3	-12.4	
2,546.0	4.92	131.54	2,540.5	-70.7	93.5	0.10	0.09	0.66	-34.2	-14.2	
2,640.0	5.01	130.84	2,634.2	-76.1	99.6	0.12	0.10	-0.74	-36.0	-16.9	
2,734.0	5.01	130.66	2,727.8	-81.5	105.8	0.02	0.00	-0.19	-38.0	-19.3	
2,827.0	4.66	123.81	2,820.5	-86.2	112.1	0.73	-0.38	-7.37	-36.9	-25.6	
2,920.0	4.31	117.30	2,913.2	-89.9	118.3	0.66	-0.38	-7.00	-34.6	-30.7	
3,013.0	5.01	108.25	3,005.9	-92.8	125.3	1.09	0.75	-9.73	-30.4	-36.0	
3,107.0	5.98	95.86	3,099.5	-94.6	134.0	1.62	1.03	-13.18	-24.6	-40.8	
3,201.0	5.54	108.34	3,193.0	-96.5	143.2	1.41	-0.47	13.28	-35.6	-33.2	
3,294.0	5.63	110.62	3,285.6	-99.5	151.7	0.26	0.10	2.45	-39.4	-31.6	
3,388.0	6.07	108.86	3,379.1	-102.7	160.8	0.51	0.47	-1.87	-41.5	-32.6	
3,482.0	6.51	107.55	3,472.5	-106.0	170.5	0.49	0.47	-1.39	-44.5	-33.3	
3,576.0	5.19	105.96	3,566.0	-108.7	179.7	1.41	-1.40	-1.69	-46.6	-34.1	
3,670.0	4.57	102.01	3,659.7	-110.7	187.5	0.75	-0.66	-4.20	-45.7	-36.5	
3,763.0	5.19	100.43	3,752.3	-112.2	195.2	0.68	0.67	-1.70	-46.2	-36.6	
3,857.0	6.07	96.82	3,845.9	-113.6	204.3	1.01	0.94	-3.84	-46.7	-38.1	
3,950.0	5.72	91.20	3,938.4	-114.3	213.9	0.73	-0.38	-6.04	-46.2	-40.7	
4,044.0	4.57	87.42	4,032.0	-114.2	222.3	1.27	-1.22	-4.02	-45.8	-41.4	
4,136.0	4.75	82.32	4,123.7	-113.5	229.7	0.49	0.20	-5.54	-43.8	-42.5	
4,230.0	5.36	88.83	4,217.3	-112.9	238.0	0.89	0.65	6.93	-50.5	-34.4	
4,323.0	5.54	86.19	4,309.9	-112.5	246.8	0.33	0.19	-2.84	-51.8	-34.1	
4,417.0	5.45	89.27	4,403.5	-112.2	255.8	0.33	-0.10	3.28	-56.5	-28.6	



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4,511.0	5.19	102.01	4,497.1	-113.0	264.4	1.28	-0.28	13.55	-63.5	-13.5	
4,603.0	4.48	89.97	4,588.8	-113.8	272.1	1.34	-0.77	-13.09	-61.0	-25.0	
4,697.0	4.31	83.82	4,682.5	-113.5	279.3	0.53	-0.18	-6.54	-59.3	-28.8	
4,790.0	4.75	102.89	4,775.2	-113.9	286.5	1.68	0.47	20.51	-66.2	-5.8	
4,850.0	5.54	116.95	4,835.0	-115.8	291.5	2.47	1.32	23.43	-66.8	10.6	
4,967.0	4.92	116.42	4,951.5	-120.6	301.0	0.53	-0.53	-0.45	-69.4	9.2	
5,060.0	4.48	117.30	5,044.2	-124.0	307.8	0.48	-0.47	0.95	-70.2	9.5	
5,153.0	4.57	117.48	5,136.9	-127.4	314.3	0.10	0.10	0.19	-69.5	8.9	
5,246.0	4.40	118.36	5,229.6	-130.8	320.7	0.20	-0.18	0.95	-67.2	8.7	
5,339.0	4.48	100.95	5,322.3	-133.2	327.5	1.45	0.09	-18.72	-62.8	-10.7	
5,433.0	4.84	99.90	5,416.0	-134.6	335.0	0.39	0.38	-1.12	-57.7	-9.5	
5,527.0	4.92	99.72	5,509.7	-135.9	342.8	0.09	0.09	-0.19	-51.6	-6.8	
5,620.0	5.72	107.81	5,602.3	-138.0	351.2	1.18	0.86	8.70	-45.0	1.9	
5,713.0	5.89	109.30	5,694.8	-141.0	360.1	0.24	0.18	1.60	-37.5	3.6	
5,807.0	5.98	109.30	5,788.3	-144.2	369.3	0.10	0.10	0.00	-30.0	4.2	
5,900.0	6.68	107.81	5,880.7	-147.5	379.0	0.77	0.75	-1.60	-23.5	4.2	
5,994.0	7.74	107.11	5,974.0	-151.0	390.3	1.13	1.13	-0.74	-18.2	5.0	
6,088.0	7.47	107.81	6,067.1	-154.8	402.1	0.30	-0.29	0.74	-13.5	6.3	
6,183.0	8.27	114.23	6,161.3	-159.5	414.2	1.25	0.84	6.76	-8.4	7.4	
6,276.0	9.06	115.98	6,253.2	-165.4	426.9	0.90	0.85	1.88	-5.3	6.4	
6,370.0	8.79	117.21	6,346.1	-171.9	440.0	0.35	-0.29	1.31	-2.7	4.9	
6,463.0	8.71	117.39	6,438.0	-178.4	452.5	0.09	-0.09	0.19	-0.1	3.0	
6,556.0	8.79	117.65	6,529.9	-185.0	465.1	0.10	0.09	0.28	2.6	1.1	
6,649.0	8.88	118.09	6,621.8	-191.6	477.7	0.12	0.10	0.47	5.2	-0.9	
6,743.0	8.79	119.15	6,714.7	-198.6	490.4	0.20	-0.10	1.13	7.6	-3.3	
6,837.0	8.62	119.06	6,807.6	-205.5	502.8	0.18	-0.18	-0.10	10.4	-5.7	
6,930.0	8.53	119.76	6,899.5	-212.3	514.9	0.15	-0.10	0.75	13.2	-8.3	



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7,023.0	8.09	121.61	6,991.6	-219.1	526.4	0.55	-0.47	1.99	16.1	-11.6	
7,117.0	7.65	121.61	7,084.7	-225.9	537.4	0.47	-0.47	0.00	20.1	-14.7	
7,211.0	7.47	123.54	7,177.9	-232.5	547.8	0.33	-0.19	2.05	23.7	-18.8	
7,305.0	6.86	125.39	7,271.1	-239.2	557.5	0.69	-0.65	1.97	25.3	-22.9	
7,399.0	5.89	108.07	7,364.6	-243.9	566.7	2.28	-1.03	-18.43	32.0	-15.5	
7,491.0	5.80	110.27	7,456.1	-247.0	575.5	0.26	-0.10	2.39	30.0	-16.5	
7,584.0	3.69	108.95	7,548.8	-249.6	582.7	2.27	-2.27	-1.42	27.7	-15.7	
7,678.0	2.37	118.62	7,642.6	-251.5	587.3	1.50	-1.40	10.29	21.8	-19.9	
7,772.0	2.29	119.06	7,736.5	-253.3	590.7	0.09	-0.09	0.47	17.8	-20.1	
7,867.0	2.64	126.18	7,831.5	-255.6	594.1	0.49	0.37	7.49	11.1	-21.9	
7,959.0	2.46	125.12	7,923.4	-257.9	597.4	0.20	-0.20	-1.15	7.5	-21.7	
8,052.0	2.37	117.74	8,016.3	-260.0	600.7	0.35	-0.10	-7.94	6.3	-20.8	
8,147.0	2.64	122.93	8,111.2	-262.1	604.3	0.37	0.28	5.46	0.2	-21.1	
8,240.0	2.81	118.97	8,204.1	-264.4	608.1	0.27	0.18	-4.26	-2.7	-21.2	
8,334.0	1.32	71.42	8,298.0	-265.1	611.2	2.29	-1.59	-50.59	11.2	-18.0	
8,427.0	1.41	44.79	8,391.0	-264.0	613.0	0.68	0.10	-28.63	16.0	-11.6	
8,521.0	1.41	56.48	8,485.0	-262.5	614.8	0.31	0.00	12.44	11.0	-14.3	
8,613.0	1.32	61.93	8,576.9	-261.4	616.6	0.17	-0.10	5.92	7.4	-15.2	
8,708.0	1.32	65.27	8,671.9	-260.4	618.6	0.08	0.00	3.52	4.3	-15.6	
8,802.0	0.97	58.15	8,765.9	-259.6	620.3	0.40	-0.37	-7.57	4.3	-15.0	
8,895.0	0.79	48.92	8,858.9	-258.7	621.4	0.25	-0.19	-9.92	5.3	-14.3	
8,988.0	0.53	39.26	8,951.9	-258.0	622.2	0.30	-0.28	-10.39	6.5	-13.3	
9,082.0	0.26	38.46	9,045.9	-257.5	622.6	0.29	-0.29	-0.85	6.1	-13.2	
9,176.0	0.35	300.99	9,139.9	-257.1	622.5	0.49	0.10	-103.69	12.0	7.5	
9,264.0	0.44	302.31	9,227.9	-256.8	621.9	0.10	0.10	1.50	11.6	7.2	
9,357.0	0.62	310.49	9,320.9	-256.3	621.3	0.21	0.19	8.80	11.7	5.6	
9,451.0	0.79	323.05	9,414.9	-255.5	620.5	0.24	0.18	13.36	11.5	3.0	



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9,545.0	0.88	323.76	9,508.9	-254.4	619.7	0.10	0.10	0.76	10.1	2.9	
9,639.0	1.06	304.25	9,602.8	-253.3	618.5	0.40	0.19	-20.76	7.0	5.8	
9,733.0	1.41	308.99	9,696.8	-252.1	616.9	0.39	0.37	5.04	5.5	5.3	
9,826.0	1.58	305.04	9,789.8	-250.6	615.0	0.21	0.18	-4.25	2.7	5.6	
9,919.0	1.41	299.59	9,882.8	-249.3	612.9	0.24	-0.18	-5.86	-0.3	5.7	
10,013.0	1.14	295.81	9,976.7	-248.3	611.1	0.30	-0.29	-4.02	-2.8	5.6	
10,106.0	1.14	278.67	10,069.7	-247.8	609.3	0.37	0.00	-18.43	-6.1	4.3	
10,199.0	1.49	266.28	10,162.7	-247.7	607.2	0.48	0.38	-13.32	-9.0	2.7	
10,294.0	1.85	269.00	10,257.7	-247.8	604.4	0.39	0.38	2.86	-11.6	3.1	
10,387.0	0.53	289.83	10,350.6	-247.7	602.5	1.47	-1.42	22.40	-11.6	7.6	
10,481.0	0.09	43.21	10,444.6	-247.5	602.2	0.61	-0.47	120.62	11.7	8.0	
10,574.0	0.09	346.87	10,537.6	-247.4	602.2	0.09	0.00	-60.58	-0.3	14.1	
10,669.0	0.53	78.54	10,632.6	-247.2	602.6	0.57	0.46	96.49	13.7	0.0	
10,762.0	1.23	82.59	10,725.6	-247.0	604.0	0.76	0.75	4.35	12.2	-1.0	
10,855.0	1.23	86.19	10,818.6	-246.8	606.0	0.08	0.00	3.87	10.1	-1.7	
10,948.0	1.14	68.35	10,911.6	-246.4	607.9	0.41	-0.10	-19.18	8.3	1.2	
11,042.0	0.79	70.28	11,005.6	-245.9	609.3	0.37	-0.37	2.05	6.7	1.0	
11,136.0	0.79	92.78	11,099.6	-245.7	610.6	0.33	0.00	23.94	5.3	-1.4	
11,230.0	0.79	98.93	11,193.5	-245.8	611.9	0.09	0.00	6.54	3.9	-1.9	
11,324.0	1.14	9.72	11,287.5	-245.0	612.7	1.47	0.37	-94.90	1.0	3.2	
11,418.0	1.23	9.64	11,381.5	-243.1	613.0	0.10	0.10	-0.09	-0.9	3.2	
11,511.0	1.14	41.10	11,474.5	-241.4	613.8	0.70	-0.10	33.83	-0.9	3.7	
11,605.0	0.88	59.38	11,568.5	-240.3	615.0	0.44	-0.28	19.45	-1.3	4.1	
11,698.0	0.79	49.19	11,649.5	-239.6	616.0	0.21	-0.11	-12.58	-3.2	3.7	
11,791.0	1.06	70.19	11,782.5	-238.6	617.8	0.32	0.20	15.79	-3.7	4.9	
11,884.0	6.48	346.56	11,868.8	-233.6	617.5	7.45	6.26	-96.61	-10.3	-4.0	

KOP (Barlow 34 Fed Com #706H)



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3307.0usft (HP 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3307.0usft (HP 610)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
11,912.0	6.95	345.91	11,875.2	-232.9	617.3	7.45	7.35	-10.08	-10.9	-4.1	
12,006.0	25.85	356.63	11,965.0	-206.6	614.7	20.28	20.11	11.40	-27.6	-0.4	
12,053.0	36.32	356.72	12,005.2	-182.4	613.3	22.28	22.28	0.19	-40.5	0.3	
12,099.0	41.77	357.51	12,040.9	-153.5	611.8	11.90	11.85	1.72	-54.8	1.7	
12,146.0	45.84	359.09	12,074.9	-121.1	610.9	8.55	8.23	3.36	-68.2	3.8	
12,193.0	46.87	0.14	12,107.4	-87.1	610.6	3.07	2.62	2.23	-78.7	4.8	
12,286.0	48.63	359.00	12,169.9	-18.3	610.1	2.10	1.89	-1.23	-85.9	3.4	
12,354.1	50.48	359.26	12,214.1	33.5	609.3	2.73	2.71	0.38	-79.4	4.1	
HL Crossing, MD:12354.1', TVD:12214.1', N/S:33.5', E/W:609.3', INC:50.48											
12,380.0	51.18	359.35	12,230.4	53.6	609.1	2.73	2.71	0.36	-74.4	4.3	
12,420.0	55.22	1.02	12,254.4	85.6	609.2	10.64	10.10	4.17	-65.3	4.6	
12,426.9	55.86	1.18	12,258.3	91.3	609.3	9.49	9.30	2.32	-63.6	4.5	
FTP (Barlow 34 Fed Com #706H)											
12,472.0	60.06	2.17	12,282.2	129.5	610.4	9.49	9.31	2.20	-51.9	3.0	
12,519.0	62.78	2.17	12,304.7	170.8	612.0	5.79	5.79	0.00	-37.8	0.6	
12,565.0	62.52	1.46	12,325.8	211.6	613.3	1.48	-0.57	-1.54	-20.6	-1.4	
12,612.0	71.49	1.02	12,344.2	254.8	614.2	19.10	19.09	-0.94	-3.1	-2.7	
12,659.0	76.33	0.85	12,357.2	300.0	615.0	10.30	10.30	-0.36	9.2	-3.8	
12,705.0	79.76	0.67	12,366.7	344.9	615.6	7.47	7.46	-0.39	18.1	-4.8	
12,752.0	88.02	358.30	12,371.7	391.6	615.1	18.27	17.57	-5.04	22.4	-4.7	
12,845.0	91.63	358.12	12,372.0	484.6	612.2	3.89	3.88	-0.19	21.4	-2.6	
12,884.0	92.95	357.24	12,370.5	523.5	610.6	4.07	3.38	-2.26	19.3	-1.4	
12,941.5	93.27	357.41	12,367.3	580.8	608.0	0.63	0.56	0.29	15.3	0.8	
TGT 1 (Barlow 34 Fed Com #706H)											
12,977.0	93.47	357.51	12,365.3	616.3	606.4	0.63	0.56	0.29	12.9	2.0	
13,070.0	91.36	358.74	12,361.3	709.1	603.4	2.63	-2.27	1.32	8.1	4.2	
13,163.0	89.69	356.01	12,360.5	802.0	599.1	3.44	-1.80	-2.94	6.4	7.7	



PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Barlow 34 Fed Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25' @ 3307.0usft (HP 610)
MD Reference: KB = 25' @ 3307.0usft (HP 610)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,257.0	89.69	354.61	12,361.0	895.7	591.4	1.49	0.00	-1.49	6.1	14.5	
13,350.0	90.57	355.05	12,360.8	988.3	583.0	1.06	0.95	0.47	5.1	22.1	
13,444.0	89.69	356.98	12,360.6	1,082.1	576.5	2.26	-0.94	2.05	4.0	27.8	
13,538.0	88.64	1.02	12,361.9	1,176.0	574.9	4.44	-1.12	4.30	4.5	28.6	
13,631.0	89.60	1.55	12,363.4	1,269.0	576.9	1.18	1.03	0.57	5.1	25.7	
13,725.0	91.98	2.43	12,362.1	1,362.9	580.2	2.70	2.53	0.94	2.9	21.6	
13,818.0	90.48	2.34	12,360.1	1,455.8	584.1	1.62	-1.61	-0.10	0.1	16.9	
13,912.0	88.64	1.37	12,360.8	1,549.8	587.1	2.21	-1.96	-1.03	-0.1	13.1	
14,006.0	89.16	2.17	12,362.6	1,643.7	590.0	1.01	0.55	0.85	0.9	9.3	
14,037.7	89.49	2.46	12,363.0	1,675.3	591.3	1.39	1.03	0.93	1.0	7.8	
TGT 2 (Barlow 34 Fed Com #706H)											
14,100.0	90.13	3.04	12,363.2	1,737.6	594.3	1.39	1.03	0.93	0.5	4.2	
14,193.0	92.15	4.19	12,361.3	1,830.4	600.2	2.50	2.17	1.24	-2.5	-2.4	
14,287.0	90.57	3.92	12,359.1	1,924.1	606.8	1.71	-1.68	-0.29	-5.8	-9.9	
14,380.0	87.85	1.99	12,360.4	2,017.0	611.6	3.59	-2.92	-2.08	-5.6	-15.5	
14,473.0	87.85	1.90	12,363.9	2,109.9	614.7	0.10	0.00	-0.10	-3.2	-19.5	
14,566.0	86.88	359.79	12,368.1	2,202.7	616.1	2.49	-1.04	-2.27	0.0	-21.7	
14,660.0	87.14	358.65	12,373.1	2,296.6	614.8	1.24	0.28	-1.21	3.9	-21.2	
14,754.0	88.11	358.21	12,376.9	2,390.5	612.3	1.13	1.03	-0.47	6.7	-19.5	
14,846.0	90.13	357.60	12,378.4	2,482.4	608.9	2.29	2.20	-0.66	7.0	-16.9	
14,901.2	90.34	357.86	12,378.1	2,537.6	606.7	0.60	0.38	0.46	6.1	-15.2	
TGT 3 (Barlow 34 Fed Com #706H)											
14,939.0	90.48	358.03	12,377.9	2,575.3	605.4	0.60	0.38	0.46	5.7	-14.2	
15,032.0	91.36	358.56	12,376.4	2,668.3	602.6	1.10	0.95	0.57	4.2	-12.3	
15,125.0	91.45	358.03	12,374.1	2,761.2	599.8	0.58	0.10	-0.57	1.9	-10.3	
15,218.0	92.42	359.27	12,371.0	2,854.1	597.6	1.69	1.04	1.33	-1.2	-8.9	
15,312.0	88.29	0.50	12,370.4	2,948.1	597.4	4.58	-4.39	1.31	-1.8	-9.6	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3307.0usft (HP 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25' @ 3307.0usft (HP 610)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,405.0	88.64	0.85	12,372.9	3,041.1	598.5	0.53	0.38	0.38	0.7	-11.5	
15,500.0	89.60	0.93	12,374.3	3,136.1	600.0	1.01	1.01	0.08	2.2	-13.8	
15,593.0	90.13	359.79	12,374.5	3,229.0	600.6	1.35	0.57	-1.23	2.4	-15.2	
15,686.0	91.19	359.79	12,373.5	3,322.0	600.3	1.14	1.14	0.00	1.4	-15.7	
15,780.0	92.42	0.58	12,370.5	3,416.0	600.6	1.55	1.31	0.84	-1.5	-16.8	
15,873.0	89.96	359.97	12,368.6	3,509.0	601.0	2.73	-2.65	-0.66	-3.5	-18.1	
15,967.0	89.34	359.53	12,369.1	3,603.0	600.6	0.81	-0.66	-0.47	-2.9	-18.5	
16,061.0	88.99	359.44	12,370.5	3,696.9	599.8	0.38	-0.37	-0.10	-1.5	-18.5	
16,153.0	90.22	359.35	12,371.2	3,788.9	598.8	1.34	1.34	-0.10	-0.9	-18.3	
16,247.0	90.75	359.79	12,370.4	3,882.9	598.1	0.73	0.56	0.47	-1.6	-18.5	
16,252.4	90.71	359.80	12,370.3	3,888.3	598.1	0.67	-0.67	0.10	-1.7	-18.5	
TGT 4 (Barlow 34 Fed Com #706H)											
16,340.0	90.13	359.88	12,369.6	3,975.9	597.8	0.67	-0.67	0.10	-1.4	-19.0	
16,435.0	88.90	359.53	12,370.4	4,070.9	597.3	1.35	-1.29	-0.37	0.7	-19.4	
16,527.0	91.01	0.14	12,370.5	4,162.9	597.1	2.39	2.29	0.66	2.0	-19.9	
16,620.0	90.75	359.09	12,369.1	4,255.9	596.4	1.16	-0.28	-1.13	1.9	-20.1	
16,714.0	90.84	358.47	12,367.8	4,349.9	594.4	0.67	0.10	-0.66	1.9	-18.9	
16,808.0	89.08	357.86	12,367.9	4,443.8	591.4	1.98	-1.87	-0.65	3.2	-16.7	
16,898.6	89.67	357.10	12,368.8	4,534.3	587.4	1.06	0.65	-0.84	5.5	-13.6	
HL Crossing, MD:16898.6', TVD:12368.8', N/S:4534.3', E/W:587.4', INC:89.67											
16,902.0	89.69	357.07	12,368.9	4,537.7	587.3	1.06	0.65	-0.84	5.5	-13.4	
Final MWD Survey (MD= 16902.0')											
16,975.0	89.69	357.07	12,369.3	4,610.6	583.5	0.00	0.00	0.00	6.9	-10.3	
Final Bit Projection (MD= 16975.0') - PBHL (Barlow 34 Fed Com #706H)											



PVA Report

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Barlow 34 Fed Com
Well: #706H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #706H
TVD Reference: KB = 25' @ 3307.0usft (HP 610)
MD Reference: KB = 25' @ 3307.0usft (HP 610)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,354.1	12,214.1	33.5	609.3	HL Crossing, MD:12354.1', TVD:12214.1', N/S:33.5', E/W:609.3', INC:50.48
16,898.6	12,368.8	4,534.3	587.4	HL Crossing, MD:16898.6', TVD:12368.8', N/S:4534.3', E/W:587.4', INC:89.67
16,902.0	12,368.9	4,537.7	587.3	Final MWD Survey (MD= 16902.0')
16,975.0	12,369.3	4,610.6	583.5	Final Bit Projection (MD= 16975.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com #706H

HP 610

Plan #2

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: #706H

Ground Level: 3262.0
KB = 25' @ 3307.0ust (HP 610)
Northing: 364983.00
Easting: 780041.00
Latitude: 32° 0' 3.893 N
Longitude: 103° 33' 47.857 W



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.56°
Magnetic Field
Strength: 47835.5nT
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°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Deg	TFace	V/Sect	Target	Annotation
1	878.0	0.18	275.30	877.9	-3.5	-10.2	0.00	0.00	-4.7		
2	878.0	0.18	275.30	877.9	-3.5	-10.5	0.00	0.00	-4.7		
3	1395.4	4.00	111.03	1394.9	-8.6	2.5	1.00	-164.94	-8.3		
4	5009.2	4.00	111.03	5009.0	-8.1	237.8	0.00	0.00	-8.2		
5	5658.6	10.46	111.03	5649.0	-128.3	313.7	1.00	0.00	-8.8		
6	7176.7	10.46	111.03	7156.7	-227.4	571.5	0.00	0.00	-105.5		
7	7699.9	0.00	0.00	7679.0	-244.5	616.0	2.00	190.00	-167.1		
8	11912.4	0.00	0.00	11869.5	-244.5	616.0	0.00	0.00	-167.1		KOP (Barlow 34 Fed Com #706H)
9	12655.5	89.18	359.49	12346.9	226.1	611.9	12.00	359.49	295.5		TGT 1 (Barlow 34 Fed Com #706H)
10	13009.5	89.18	359.49	12352.0	590.0	608.7	0.00	0.00	650.3		TGT 2 (Barlow 34 Fed Com #706H)
11	13024.6	89.48	359.49	12352.2	595.1	608.6	2.00	0.00	650.3		TGT 3 (Barlow 34 Fed Com #706H)
12	14104.6	89.48	359.49	12362.0	1675.0	599.1	0.00	0.00	1735.9		TGT 4 (Barlow 34 Fed Com #706H)
13	14111.8	89.33	359.49	12362.1	1682.2	599.0	2.00	190.00	1743.0		
14	14966.7	89.33	359.49	12372.0	2537.0	591.5	0.00	0.00	2590.4		
15	15000.4	90.01	359.49	12372.2	2570.7	591.2	2.00	0.00	2623.8		
16	16318.1	90.01	359.49	12372.0	3888.3	579.6	0.00	0.00	3930.0		
17	16357.1	90.79	359.49	12371.7	3927.3	579.2	2.00	0.00	3968.7		
18	17953.9	90.79	359.49	12362.0	4634.0	573.0	0.00	0.00	4669.3		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
KOP (Barlow 34 Fed Com #706H)	11869.5	-244.5	616.0	364738.50	780557.00
TGT 1 (Barlow 34 Fed Com #706H)	12352.0	590.0	608.7	365563.00	780649.73
TGT 2 (Barlow 34 Fed Com #706H)	12352.0	1675.0	599.1	366568.00	780640.08
TGT 3 (Barlow 34 Fed Com #706H)	12372.0	2537.0	591.5	367520.00	780632.48
TGT 4 (Barlow 34 Fed Com #706H)	12372.0	3888.3	579.6	368871.30	780620.57
PBHL (Barlow 34 Fed Com #706H)	12362.0	4634.0	573.0	369917.00	780614.00
FTP (Barlow 34 Fed Com #706H)	12347.0	35.0	614.0	365018.00	780555.00

