



Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com #704Y

H&P 610

Plan #1

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: #704Y

KB = 25 @ 3304.0usft (H&P 610) 3279.0
Northing 364962.00 Easting 779999.00 Latitude 32° 0' 3.867 N Longitude 103° 33' 48.461 W



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.44°
Magnetic Field
Strength: 47761.3anT
Dip Angle: 59.83°
Date: 11/28/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.44°
To convert a True Direction to a Grid Direction, Subtract 0.41°

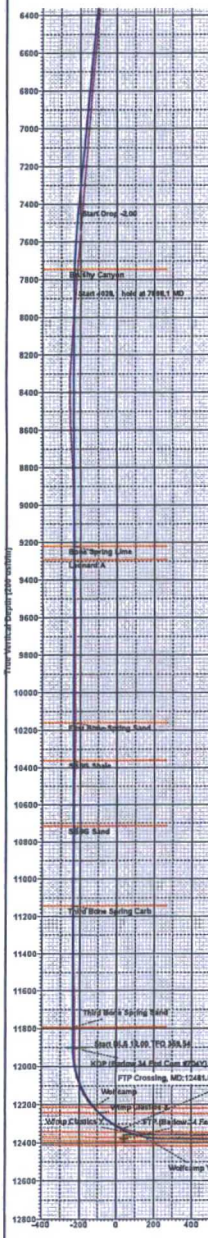
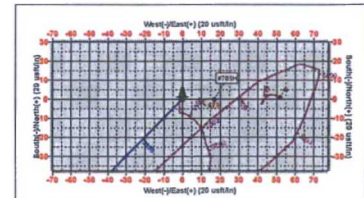
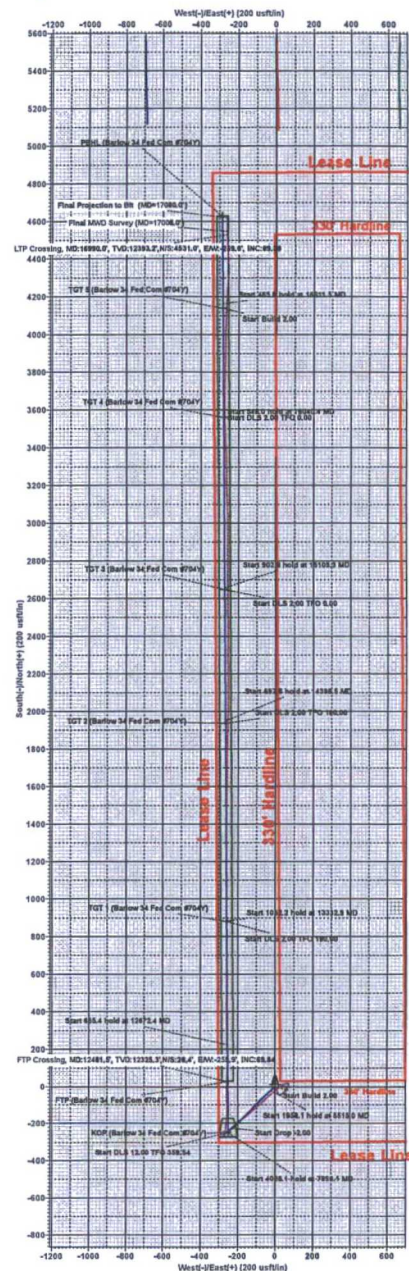
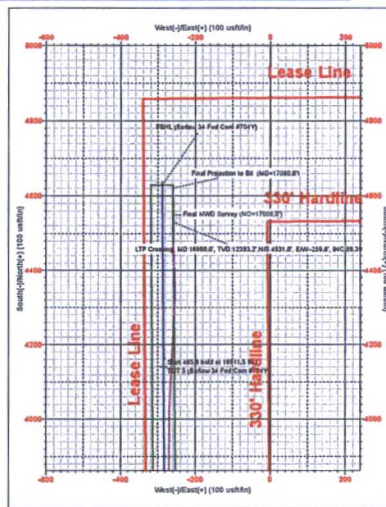
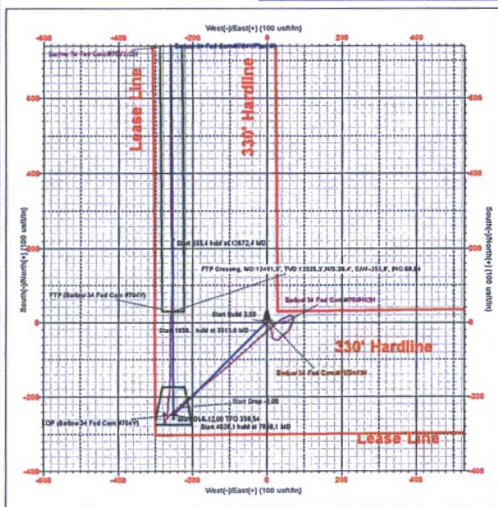
SECTION DETAILS											Target	Annotation
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect			
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0			
2	5990.0	0.00	0.00	5990.0	0.0	0.0	0.00	0.00	0.0			
3	5515.0	8.50	225.00	5513.4	-22.3	-22.3	2.00	225.00	-20.8			
4	7473.1	8.50	225.00	7450.0	-22.9	-22.9	0.00	0.00	-212.4			
5	7898.1	0.00	0.00	7873.4	-24.7	-24.7	2.00	180.00	-233.2			
6	11926.1	0.00	0.00	11901.5	-24.2	-24.2	0.00	0.00	-233.2			
7	12672.4	89.56	359.54	12379.0	224.6	-252.9	12.00	359.54	235.9			
8	13327.9	89.56	359.54	12384.0	885.0	-258.1	0.00	0.00	894.3			
9	13332.9	89.46	359.54	12384.0	885.0	-258.2	2.00	180.00	899.4			
10	14385.1	89.46	359.54	12384.0	1937.2	-266.6	0.00	0.00	1855.0			TGT 1 (Barlow 34 Fed Com #704Y)
11	14398.5	89.19	359.54	12384.2	1950.5	-266.7	2.00	180.00	1863.3			TGT 2 (Barlow 34 Fed Com #704Y)
12	15096.2	89.19	359.54	12404.0	2648.2	-272.2	0.00	0.00	2660.0			TGT 3 (Barlow 34 Fed Com #704Y)
13	15105.3	89.37	359.54	12404.1	2657.2	-272.3	2.00	0.00	2669.0			TGT 4 (Barlow 34 Fed Com #704Y)
14	16006.1	89.37	359.54	12414.0	3560.0	-278.5	0.00	0.00	3570.5			TGT 5 (Barlow 34 Fed Com #704Y)
15	16040.4	90.02	359.54	12414.2	3592.3	-278.7	2.00	0.00	3602.7			
16	16088.4	90.02	359.54	12414.0	4140.3	-284.1	0.00	0.00	4155.0			
17	16811.5	90.48	359.54	12413.9	4163.4	-284.3	2.00	0.00	4173.0			
18	17077.3	90.48	359.54	12410.0	4629.1	-288.0	0.00	0.00	4638.1			

CASING 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 #704Y)	12384.0	880.0	-258.1	365862.00	779730.86
TGT 2 (Barlow 34 Fed Com #704Y)	12384.0	1937.2	-266.6	366919.20	779722.44
TGT 3 (Barlow 34 Fed Com #704Y)	12404.0	2648.2	-272.2	367630.30	779716.77
TGT 4 (Barlow 34 Fed Com #704Y)	12414.0	3560.0	-278.5	368542.00	779709.51
TGT 5 (Barlow 34 Fed Com #704Y)	12414.0	4140.3	-284.1	369122.30	779704.89
FTP (Barlow 34 Fed Com #704Y)	12379.0	28.0	-251.0	369010.00	779738.00
KOP (Barlow 34 Fed Com #704Y)	11901.5	-249.2	-248.2	364732.85	779735.85
PBHL (Barlow 34 Fed Com #704Y)	12359.0	4629.0	-288.0	369911.00	779701.00



HOBBS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Barlow 34 Fed Com

#704Y

OH

Design: OH

PVA Report

02 January, 2018

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	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
From:	Map	Easting:	778,981.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 0' 3.879 N
		Longitude:	103° 34' 0.167 W
		Grid Convergence:	0.41 °

Well	#704Y		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	11/28/2017	6.89
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,761.30879197

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			189.09

PVA Report

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Well:	#704Y	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date 1/2/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
171.0	878.0	Olebrook MWD #1 (OH)	MWD	MWD - Standard
976.0	17,080.0	Intrepid MWD #1 (OH)	MWD	MWD - Standard

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
171.0	0.79	240.06	171.0	-0.6	-1.0	0.46	0.46	0.00	-1.2	0.0	
233.0	0.53	237.86	233.0	-1.0	-1.6	0.42	-0.42	-3.55	-1.9	-0.1	
324.0	0.97	168.57	324.0	-1.9	-1.8	1.02	0.48	-76.14	-1.5	-2.2	
418.0	0.88	160.08	418.0	-3.4	-1.4	0.17	-0.10	-9.03	-2.7	-2.5	
481.0	0.79	213.78	481.0	-4.2	-1.5	1.20	-0.14	85.24	-4.3	1.1	
607.0	0.75	162.89	607.0	-5.7	-1.8	0.53	-0.03	-40.39	-4.9	-3.4	
670.0	0.79	167.90	670.0	-6.5	-1.5	0.12	0.06	7.95	-6.1	-2.9	
796.0	0.08	58.21	795.9	-7.3	-1.3	0.65	-0.56	-87.06	5.0	-5.6	
878.0	0.20	63.13	877.9	-7.2	-1.1	0.15	0.15	6.00	4.3	-6.0	
976.0	0.40	91.70	975.9	-7.2	-0.6	0.25	0.20	29.15	0.4	-7.2	
1,162.0	0.40	99.10	1,161.9	-7.3	0.7	0.03	0.00	3.98	-1.8	-7.1	
1,348.0	0.60	125.30	1,347.9	-8.0	2.1	0.16	0.11	14.09	-6.3	-5.3	
1,534.0	0.70	117.30	1,533.9	-9.0	3.9	0.07	0.05	-4.30	-7.6	-6.2	
1,721.0	1.00	129.30	1,720.9	-10.6	6.2	0.19	0.16	6.42	-11.5	-4.3	
1,908.0	1.50	142.40	1,907.9	-13.6	9.0	0.31	0.27	7.01	-16.2	-1.2	
2,096.0	1.20	159.80	2,095.8	-17.4	11.1	0.27	-0.16	9.26	-20.2	4.4	
2,189.0	1.10	175.10	2,188.8	-19.2	11.5	0.35	-0.11	16.45	-20.1	9.9	
2,377.0	1.20	157.60	2,376.7	-22.8	12.5	0.19	0.05	-9.31	-25.8	2.8	
2,563.0	1.40	162.60	2,562.7	-26.8	13.9	0.12	0.11	2.69	-29.7	5.2	
2,750.0	1.40	160.70	2,749.6	-31.1	15.3	0.02	0.00	-1.02	-34.4	4.2	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	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)	
2,937.0	2.30	205.70	2,936.6	-36.6	14.4	0.88	0.48	24.06	-26.7	28.9	
3,123.0	2.20	129.70	3,122.4	-42.3	15.6	1.49	-0.05	-40.86	-39.0	-22.6	
3,311.0	3.00	113.20	3,310.3	-46.5	22.9	0.58	0.43	-8.78	-39.3	-33.8	
3,498.0	1.30	88.10	3,497.1	-48.4	29.5	1.02	-0.91	-13.42	-27.9	-49.3	
3,686.0	0.40	343.40	3,685.1	-47.7	31.4	0.77	-0.48	-55.69	54.7	-16.5	
3,873.0	1.30	48.70	3,872.1	-45.7	32.8	0.64	0.48	34.92	5.5	-56.0	
4,060.0	2.50	37.10	4,059.0	-41.0	36.9	0.67	0.64	-6.20	10.4	-54.2	
4,246.0	5.50	56.40	4,244.5	-32.8	46.8	1.75	1.61	10.38	-20.7	-53.3	
4,433.0	4.40	38.90	4,430.8	-22.3	58.7	0.99	-0.59	-9.36	-19.5	-59.7	
4,620.0	4.70	14.60	4,617.2	-9.3	65.2	1.04	0.16	-12.99	-7.4	-65.4	
4,808.0	3.50	26.00	4,804.8	3.3	69.6	0.77	-0.64	6.06	-33.5	-61.2	
4,860.0	3.30	25.40	4,856.7	6.1	71.0	0.39	-0.38	-1.15	-35.9	-61.5	
5,058.0	2.60	350.30	5,054.4	15.7	72.7	0.96	-0.35	-17.73	-3.2	-74.3	
5,244.0	5.80	262.70	5,240.0	18.6	62.6	3.36	1.72	-47.10	67.5	-12.9	
5,430.0	9.50	237.10	5,424.4	9.1	40.4	2.66	1.99	-13.76	57.6	10.4	
5,618.0	10.10	227.00	5,609.7	-10.6	15.3	0.97	0.32	-5.37	49.3	16.6	
5,804.0	10.20	228.70	5,792.8	-32.6	-9.0	0.17	0.05	0.91	44.3	13.9	
5,991.0	10.00	227.40	5,976.9	-54.5	-33.4	0.16	-0.11	-0.70	38.8	13.3	
6,180.0	9.30	228.00	6,163.2	-75.8	-56.8	0.37	-0.37	0.32	35.1	11.6	
6,367.0	9.10	227.50	6,347.8	-95.9	-78.9	0.12	-0.11	-0.27	32.6	10.6	
6,554.0	9.20	229.70	6,532.4	-115.6	-101.3	0.19	0.05	1.18	30.8	7.6	
6,740.0	9.10	231.10	6,716.0	-134.4	-124.0	0.13	-0.05	0.75	28.7	4.3	
6,927.0	8.90	231.20	6,900.7	-152.8	-146.8	0.11	-0.11	0.05	27.0	1.3	
7,114.0	8.40	230.50	7,085.6	-170.5	-168.6	0.27	-0.27	-0.37	26.3	-1.2	
7,302.0	8.00	230.50	7,271.7	-187.6	-189.3	0.21	-0.21	0.00	27.2	-3.8	
7,489.0	7.80	230.50	7,456.9	-203.9	-209.2	0.11	-0.11	0.00	29.0	-6.5	
7,676.0	7.60	228.20	7,642.2	-220.2	-228.2	0.20	-0.11	-1.23	25.5	-7.0	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	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)	
7,864.0	7.10	226.00	7,828.7	-236.6	-245.8	0.31	-0.27	-1.17	10.8	-6.7	
8,052.0	6.10	227.80	8,015.4	-251.4	-261.6	0.54	-0.53	0.96	-10.7	-6.7	
8,239.0	4.00	193.80	8,201.7	-264.4	-270.5	1.91	-1.12	-18.18	-19.9	-17.1	
8,425.0	0.70	211.30	8,387.6	-271.7	-272.6	1.80	-1.77	9.41	-31.4	-8.3	
8,614.0	2.60	352.80	8,576.5	-268.4	-273.7	1.68	1.01	74.87	16.0	26.8	
8,802.0	2.70	358.60	8,764.3	-259.7	-274.4	0.15	0.05	3.09	10.0	25.5	
8,989.0	1.50	358.80	8,951.2	-252.9	-274.5	0.64	-0.64	0.11	3.2	25.5	
9,176.0	0.80	342.10	9,138.1	-249.2	-275.0	0.41	-0.37	-8.93	-7.9	24.6	
9,363.0	0.30	294.10	9,325.1	-247.8	-275.8	0.34	-0.27	-25.67	-24.9	9.6	
9,551.0	0.60	13.90	9,513.1	-246.6	-276.1	0.33	0.16	42.45	4.0	26.7	
9,738.0	0.20	325.20	9,700.1	-245.4	-276.0	0.26	-0.21	-26.04	-18.4	19.9	
9,925.0	0.60	15.70	9,887.1	-244.2	-275.9	0.27	0.21	27.01	2.5	27.1	
10,112.0	0.50	325.00	10,074.1	-242.6	-276.1	0.26	-0.05	-27.11	-20.9	18.3	
10,299.0	1.10	119.70	10,261.1	-242.8	-275.0	0.84	0.32	82.73	25.6	-7.3	
10,486.0	1.80	155.90	10,448.0	-246.4	-272.3	0.60	0.37	19.36	12.0	-20.0	
10,674.0	0.50	53.00	10,636.0	-248.6	-270.4	1.05	-0.69	-54.73	16.6	13.3	
10,860.0	0.90	132.90	10,822.0	-249.1	-268.7	0.51	0.22	42.96	14.4	-13.2	
11,048.0	0.40	117.30	11,010.0	-250.4	-267.0	0.28	-0.27	-8.30	15.3	-9.3	
11,236.0	0.90	219.60	11,198.0	-251.8	-267.4	0.56	0.27	54.41	-13.7	-12.4	
11,423.0	1.80	18.50	11,384.9	-250.2	-267.4	1.42	0.48	84.97	6.7	17.0	
11,610.0	1.40	354.00	11,571.9	-245.1	-266.7	0.42	-0.21	-13.10	-5.9	17.0	
11,666.0	1.10	0.80	11,627.9	-243.9	-266.8	0.60	-0.54	12.14	-5.0	17.7	
11,828.0	0.40	122.20	11,789.9	-242.6	-266.3	0.83	-0.43	74.94	18.0	-3.6	
11,919.0	0.40	355.40	11,880.9	-242.5	-266.0	0.79	0.00	-139.34	-8.0	16.3	
11,939.7	0.33	23.96	11,901.5	-242.4	-266.0	0.93	-0.35	138.21	0.6	16.2	
KOP (Barlow 34 Fed Com #704Y)											
11,969.0	0.40	66.70	11,930.9	-242.2	-265.9	0.93	0.25	145.69	13.0	12.1	

PVA Report

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Well:	#704Y	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)	
12,015.0	3.60	22.70	11,976.8	-240.8	-265.2	7.23	6.96	-95.65	4.0	15.6	
12,062.0	9.40	359.40	12,023.5	-235.6	-264.7	13.31	12.34	-49.57	2.1	15.4	
12,109.0	17.00	3.00	12,069.2	-224.9	-264.3	16.26	16.17	7.66	6.5	14.6	
12,156.0	25.50	7.50	12,113.0	-208.0	-262.6	18.40	18.09	9.57	8.9	12.1	
12,202.0	33.20	6.20	12,153.1	-185.6	-260.0	16.80	16.74	-2.83	7.8	9.6	
12,249.0	41.50	1.50	12,190.4	-157.2	-258.2	18.66	17.66	-10.00	4.4	8.2	
12,296.0	43.80	359.80	12,225.0	-125.4	-257.8	5.47	4.89	-3.62	1.8	7.7	
12,343.0	49.50	358.80	12,257.2	-91.2	-258.3	12.23	12.13	-2.13	0.6	7.9	
12,389.0	57.10	359.40	12,284.7	-54.4	-258.8	16.55	16.52	1.30	-1.3	8.1	
12,436.0	64.40	2.50	12,307.6	-13.4	-258.1	16.56	15.53	6.60	-4.7	7.2	
12,481.5	69.84	3.69	12,325.3	28.4	-255.9	12.20	11.96	2.61	-8.8	4.8	
FTP Crossing, MD:12481.5', TVD:12325.3', N/S:28.4', E/W:-255.9', INC:69.84											
12,482.0	69.90	3.70	12,325.5	28.9	-255.8	12.20	11.97	2.51	-8.8	4.7	
12,497.8	71.44	3.53	12,330.7	43.8	-254.9	9.84	9.79	-1.08	-10.2	3.7	
FTP (Barlow 34 Fed Com #704Y)											
12,529.0	74.50	3.20	12,339.9	73.6	-253.1	9.84	9.79	-1.05	-12.6	1.7	
12,575.0	80.10	0.30	12,350.0	118.4	-251.8	13.64	12.17	-6.30	-15.7	-0.3	
12,668.0	89.40	356.20	12,358.5	210.8	-254.6	10.92	10.00	-4.41	-20.2	1.8	
12,756.0	91.20	359.70	12,358.0	298.8	-257.8	4.47	2.05	3.98	-21.5	4.3	
12,849.0	87.80	359.20	12,358.8	391.7	-258.7	3.70	-3.66	-0.54	-21.4	4.4	
12,942.0	88.60	0.20	12,361.7	484.7	-259.2	1.38	0.86	1.08	-19.2	4.2	
13,036.0	88.00	0.00	12,364.5	578.7	-259.0	0.67	-0.64	-0.21	-17.1	3.2	
13,128.0	88.20	0.00	12,367.6	670.6	-259.0	0.22	0.22	0.00	-14.8	2.5	
13,222.0	92.10	359.40	12,367.3	764.6	-259.5	4.20	4.15	-0.64	-15.8	2.3	
13,316.0	91.70	0.00	12,364.2	858.5	-260.0	0.77	-0.43	0.64	-19.6	2.0	
13,337.2	91.29	0.02	12,363.7	879.7	-260.0	1.92	-1.91	0.11	-20.3	1.8	
TGT 1 (Barlow 34 Fed Com #704Y)											

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	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)	Buld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,410.0	89.90	0.10	12,362.9	952.5	-259.9	1.92	-1.91	0.11	-21.8	1.2	
13,506.0	89.10	0.10	12,363.7	1,048.5	-259.7	0.83	-0.83	0.00	-21.8	0.2	
13,597.0	89.50	359.70	12,364.9	1,139.5	-259.9	0.62	0.44	-0.44	-21.6	-0.3	
13,690.0	89.90	0.00	12,365.3	1,232.5	-260.1	0.54	0.43	0.32	-22.0	-0.8	
13,783.0	89.80	0.10	12,365.6	1,325.5	-260.0	0.15	-0.11	0.11	-22.6	-1.6	
13,877.0	89.20	359.90	12,366.4	1,419.5	-260.0	0.67	-0.64	-0.21	-22.7	-2.4	
13,971.0	90.10	0.70	12,367.0	1,513.5	-259.5	1.28	0.96	0.85	-23.0	-3.6	
14,065.0	90.70	0.80	12,366.3	1,607.5	-258.3	0.65	0.64	0.11	-24.5	-5.6	
14,159.0	88.10	0.40	12,367.3	1,701.5	-257.3	2.80	-2.77	-0.43	-24.5	-7.3	
14,253.0	87.80	0.90	12,370.7	1,795.4	-256.3	0.62	-0.32	0.53	-22.0	-9.2	
14,345.0	90.80	1.40	12,371.8	1,887.4	-254.4	3.31	3.26	0.54	-21.7	-11.7	
14,393.9	91.42	1.56	12,370.9	1,936.3	-253.2	1.32	1.28	0.32	-23.1	-13.4	
TGT 2 (Barlow 34 Fed Com #704Y)											
14,439.0	92.00	1.70	12,369.5	1,981.3	-251.9	1.32	1.28	0.32	-25.1	-15.0	
14,531.0	86.80	359.90	12,370.5	2,073.3	-250.6	5.98	-5.65	-1.96	-25.4	-17.1	
14,625.0	87.80	359.10	12,374.9	2,167.1	-251.4	1.36	1.06	-0.85	-22.3	-17.0	
14,719.0	91.00	359.60	12,375.9	2,261.1	-252.5	3.45	3.40	0.53	-22.7	-16.7	
14,812.0	90.90	359.20	12,374.3	2,354.1	-253.5	0.44	-0.11	-0.43	-25.5	-16.4	
14,905.0	89.30	359.30	12,374.2	2,447.1	-254.7	1.72	-1.72	0.11	-27.0	-16.0	
14,998.0	90.00	0.10	12,374.7	2,540.1	-255.2	1.14	0.75	0.86	-27.7	-16.2	
15,091.0	89.20	0.00	12,375.4	2,633.1	-255.1	0.87	-0.86	-0.11	-28.4	-17.0	
15,106.8	89.05	359.98	12,375.6	2,648.8	-255.1	0.97	-0.97	-0.11	-28.4	-17.1	
TGT 3 (Barlow 34 Fed Com #704Y)											
15,184.0	88.30	359.90	12,377.4	2,726.1	-255.2	0.97	-0.97	-0.11	-27.4	-17.7	
15,277.0	87.80	359.90	12,380.6	2,819.0	-255.3	0.54	-0.54	0.00	-25.3	-18.3	
15,371.0	89.20	0.00	12,383.0	2,913.0	-255.4	1.49	1.49	0.11	-23.9	-18.9	
15,465.0	87.80	358.70	12,385.5	3,006.9	-256.5	2.03	-1.49	-1.38	-22.4	-18.6	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	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)	
15,559.0	87.30	357.90	12,389.5	3,100.8	-259.3	1.00	-0.53	-0.85	-19.4	-16.6	
15,652.0	91.30	358.70	12,390.7	3,193.7	-262.0	4.39	4.30	0.86	-19.3	-14.6	
15,746.0	89.50	358.60	12,390.0	3,287.7	-264.2	1.92	-1.91	-0.11	-21.0	-13.1	
15,838.0	89.10	358.20	12,391.1	3,379.7	-266.8	0.61	-0.43	-0.43	-20.9	-11.3	
15,933.0	88.50	358.20	12,393.1	3,474.6	-269.8	0.63	-0.63	0.00	-19.9	-9.0	
16,019.2	88.59	357.83	12,395.3	3,560.7	-272.8	0.44	0.11	-0.43	-18.7	-6.7	
TGT 4 (Barlow 34 Fed Com #704Y)											
16,026.0	88.60	357.80	12,395.5	3,567.5	-273.0	0.44	0.11	-0.43	-18.6	-6.5	
16,119.0	91.60	1.90	12,395.3	3,660.5	-273.3	5.46	3.23	4.41	-18.8	-7.0	
16,213.0	89.10	0.70	12,394.7	3,754.4	-271.1	2.95	-2.66	-1.28	-19.4	-9.9	
16,306.0	91.70	0.70	12,394.1	3,847.4	-270.0	2.80	2.80	0.00	-20.0	-11.8	
16,400.0	89.50	0.00	12,393.1	3,941.4	-269.4	2.46	-2.34	-0.74	-21.0	-13.1	
16,493.0	90.00	1.60	12,393.5	4,034.4	-268.1	1.80	0.54	1.72	-20.5	-15.1	
16,586.0	90.10	3.10	12,393.4	4,127.3	-264.3	1.62	0.11	1.61	-20.6	-19.7	
16,597.7	90.15	3.16	12,393.4	4,139.0	-263.7	0.69	0.43	0.54	-20.6	-20.4	
TGT 5 (Barlow 34 Fed Com #704Y)											
16,679.0	90.50	3.60	12,392.9	4,220.1	-258.9	0.69	0.43	0.54	-20.5	-25.9	
16,774.0	90.30	1.40	12,392.3	4,315.1	-254.7	2.33	-0.21	-2.32	-20.4	-30.8	
16,867.0	89.70	357.20	12,392.3	4,408.0	-255.9	4.56	-0.65	-4.52	-19.6	-30.4	
16,961.0	89.50	358.80	12,392.9	4,502.0	-259.2	1.72	-0.21	1.70	-18.1	-27.8	
16,990.0	89.38	359.36	12,393.2	4,531.0	-259.6	1.96	-0.43	1.91	-17.6	-27.6	
LTP Crossing, MD:16990.0', TVD:12393.2', N/S:4531.0', E/W:-259.6', INC:89.38											
17,008.0	89.30	359.70	12,393.4	4,549.0	-259.8	1.96	-0.43	1.91	-17.2	-27.6	
Final MWD Survey (MD=17008.0')											
17,080.0	89.30	359.70	12,394.3	4,620.9	-260.1	0.00	0.00	0.00	-15.8	-27.8	
Final Projection to Bit (MD=17080.0') - PBHL (Barlow 34 Fed Com #704Y)											

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704Y
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Site:	Barlow 34 Fed Com	MD Reference:	KB = 25 @ 3304.0usft (H&P 610)
Well:	#704Y	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,481.5	12,325.3	28.4	-255.9	FTP Crossing, MD:12481.5', TVD:12325.3', N/S:28.4', E/W:-255.9', INC:69.84
16,990.0	12,393.2	4,531.0	-259.6	LTP Crossing, MD:16990.0', TVD:12393.2', N/S:4531.0', E/W:-259.6', INC:89.38
17,008.0	12,393.4	4,549.0	-259.8	Final MWD Survey (MD=17008.0')
17,080.0	12,394.3	4,620.9	-260.1	Final Projection to Bit (MD=17080.0')

Checked By: _____ Approved By: _____ Date: _____