

HOBBS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Fox 30 Fed Com

#706H

OH

Design: OH

Final PVA Report

12 June, 2018



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Corn	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
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	Fox 30 Fed Corn		
Site Position:		Northing:	401,193.00 usft
From:	Map	Easting:	797,271.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 6' 0.944 N
		Longitude:	103° 30' 24.557 W
		Grid Convergence:	0.44 °

Well	#706H		
Well Position	+N-S	0.0 usft	Northing: 401,200.00 usft
	+E-W	0.0 usft	Easting: 798,255.00 usft
Position Uncertainty	0.0 usft		Latitude: 32° 6' 0.938 N
			Longitude: 103° 30' 13.118 W
		Wellhead Elevation:	usft
		Ground Level:	3,322.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	5/7/2018	6.82
			Dip Angle (°)
			59.95
			Field Strength (nT)
			47,781.25116773

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)
	0.0	0.0	0.0
			Direction (°)
			174.64



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Survey Program	Date	6/12/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
105.0	1,010.0	Integrity MWD Cartel 41 8' KB + 17' (OH)	MWD	OWSG MWD - Standard	
1,161.0	20,018.0	Intrepid MWD (OH)	MWD	OWSG MWD - Standard	

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	D.Lag ("/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
105.0	0.60	0.00	105.0	0.5	0.0	0.57	0.57	0.00	0.0	0.0
222.0	0.80	184.90	222.0	0.3	-0.1	1.20	0.17	-149.66	0.0	0.0
344.0	0.70	196.10	344.0	-1.2	-0.3	0.15	-0.08	9.18	0.0	0.0
471.0	1.00	158.10	471.0	-3.0	-0.2	0.49	0.24	-29.92	0.0	0.0
598.0	1.30	131.10	597.9	-5.0	1.3	0.48	0.24	-21.26	0.0	0.0
725.0	1.70	120.60	724.9	-6.9	4.1	0.38	0.31	-8.27	0.0	0.0
851.0	1.60	101.60	850.9	-8.2	7.4	0.44	-0.08	-15.08	0.0	0.0
978.0	2.00	91.90	977.8	-8.6	11.3	0.39	0.31	-7.64	0.0	0.0
1,010.0	1.90	83.10	1,009.8	-8.6	12.4	0.99	-0.31	-27.50	0.0	0.0
1,161.0	1.60	90.70	1,160.7	-8.3	17.0	0.25	-0.20	5.03	0.4	-0.3
1,350.0	1.40	95.90	1,349.6	-8.6	22.0	0.13	-0.11	2.75	1.5	-1.5
1,540.0	1.20	105.60	1,539.6	-9.3	26.2	0.16	-0.11	5.11	2.8	-3.8
1,729.0	0.70	118.90	1,728.6	-10.4	29.1	0.29	-0.26	7.04	3.8	-7.5
1,919.0	1.90	70.50	1,918.5	-9.9	33.1	0.80	0.63	-25.47	10.4	-1.6
2,109.0	1.40	72.60	2,108.4	-8.2	38.3	0.27	-0.26	1.11	11.1	-0.7
2,299.0	1.20	70.20	2,298.4	-6.8	42.3	0.11	-0.11	-1.26	12.9	1.0
2,488.0	1.00	64.80	2,487.3	-5.4	45.7	0.12	-0.11	-2.86	15.1	4.0
2,677.0	1.80	63.80	2,676.3	-3.4	49.9	0.42	0.42	-0.53	16.3	6.3
2,867.0	2.40	65.40	2,866.2	-0.5	56.2	0.32	0.32	0.84	15.5	7.9
3,056.0	3.90	66.30	3,054.9	3.8	65.6	0.79	0.79	0.48	11.7	9.3



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Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Bolid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
3,246.0	6.40	65.40	3,244.1	10.8	81.2	1.32	1.32	-0.47	9.5	7.1
3,436.0	7.00	69.20	3,432.8	19.3	101.6	0.39	0.32	2.00	6.8	1.5
3,626.0	7.00	62.70	3,621.4	28.7	122.7	0.42	0.00	-3.42	3.1	-2.5
3,815.0	6.20	56.30	3,809.1	39.7	141.5	0.57	-0.42	-3.39	1.4	-4.7
4,005.0	5.40	52.20	3,998.2	50.8	157.1	0.47	-0.42	-2.16	2.4	-5.2
4,194.0	5.60	52.70	4,186.3	61.9	171.4	0.11	0.11	0.26	4.0	-5.1
4,383.0	5.20	53.70	4,374.4	72.5	185.7	0.22	-0.21	0.53	5.9	-5.4
4,573.0	5.60	62.20	4,563.6	82.0	200.8	0.47	0.21	4.47	6.8	-8.2
4,761.0	6.00	58.70	4,750.6	91.3	217.3	0.28	0.21	-1.86	7.9	-10.4
4,950.0	6.90	63.30	4,938.4	101.6	235.9	0.55	0.48	2.43	5.2	-13.9
5,138.0	5.90	51.80	5,125.3	112.6	253.6	0.86	-0.53	-6.12	6.8	-14.5
5,153.0	5.80	51.80	5,140.2	113.6	254.8	0.67	-0.67	0.00	6.8	-14.5
5,233.0	5.10	55.50	5,218.8	118.1	260.9	0.98	-0.87	4.62	6.7	-15.1
5,327.0	6.70	50.20	5,313.3	124.0	268.6	1.80	1.70	-5.64	8.2	-14.4
5,516.0	11.80	42.90	5,499.8	145.2	290.2	2.76	2.70	-3.86	-1.0	-11.3
5,705.0	12.10	43.50	5,684.7	173.7	317.0	0.17	0.16	0.32	-20.9	-8.0
5,893.0	11.70	42.40	5,868.7	202.1	343.4	0.24	-0.21	-0.59	-40.4	-5.2
6,081.0	11.70	53.90	6,052.8	227.4	371.7	1.24	0.00	6.12	-58.9	6.3
6,269.0	11.20	51.00	6,237.1	250.1	401.3	0.41	-0.27	-1.54	-77.0	2.9
6,459.0	11.10	49.90	6,423.5	273.5	429.6	0.12	-0.05	-0.58	-94.1	2.0
6,648.0	11.30	49.10	6,608.9	297.4	457.5	0.13	0.11	-0.42	-111.3	1.7
6,836.0	11.70	57.40	6,793.1	319.7	487.5	0.90	0.21	4.41	-127.8	18.8
7,025.0	8.90	63.90	6,979.1	338.4	516.8	1.60	-1.48	3.44	-139.4	31.4
7,215.0	6.50	59.20	7,167.3	348.4	539.2	1.30	-1.26	-2.47	-154.1	17.3
7,404.0	5.50	58.80	7,355.3	358.6	556.1	0.53	-0.53	-0.21	-172.0	16.0
7,594.0	2.90	47.70	7,544.8	366.5	567.5	1.43	-1.37	-5.84	-185.6	-19.3
7,783.0	2.70	46.30	7,733.5	372.8	574.2	0.11	-0.11	-0.74	-194.3	-23.9



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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)	
7,973.0	2.40	51.90	7,923.4	378.4	580.6	0.21	-0.16	2.95	-204.2	-4.4	
7,978.3	2.39	51.97	7,928.7	378.5	580.8	0.22	-0.21	1.33	-204.4	-4.1	
KOP (Fox 30 Fed Com #706H)											
8,162.0	2.00	54.90	8,112.2	382.7	586.4	0.22	-0.21	1.59	-211.4	6.5	
8,352.0	1.80	61.80	8,302.1	386.0	591.8	0.16	-0.11	3.63	-215.3	32.3	
8,541.0	1.70	77.70	8,491.0	388.0	597.1	0.26	-0.05	8.41	-203.9	90.9	
8,730.0	1.50	85.70	8,680.0	388.8	602.3	0.16	-0.11	4.23	-194.5	118.7	
8,918.0	1.00	85.60	8,867.9	389.1	606.4	0.27	-0.27	-0.05	-198.8	118.4	
9,107.0	0.60	95.90	9,056.9	389.2	609.0	0.22	-0.21	5.45	-177.1	152.3	
9,295.0	0.40	122.60	9,244.9	388.7	610.6	0.16	-0.11	14.20	-90.6	213.8	
9,483.0	0.10	88.40	9,432.9	388.4	611.3	0.17	-0.16	-18.19	-183.9	117.1	
9,672.0	0.70	341.90	9,621.9	389.5	611.1	0.39	0.32	-56.35	-55.0	-191.0	
9,857.0	0.60	270.40	9,806.9	390.5	609.8	0.41	-0.05	-38.65	147.1	-101.9	
10,046.0	0.60	162.10	9,995.9	389.6	609.1	0.51	0.00	-57.30	43.1	152.2	
10,236.0	1.50	190.90	10,185.8	388.2	608.9	0.53	0.47	15.16	92.9	99.8	
10,427.0	1.30	171.20	10,376.8	381.6	608.8	0.27	-0.10	-10.31	39.8	106.9	
10,615.0	0.70	242.70	10,564.8	379.0	608.1	0.67	-0.32	38.03	92.8	1.3	
10,804.0	1.70	297.30	10,753.7	379.7	604.6	0.75	0.53	28.89	42.6	-56.3	
10,992.0	4.00	298.80	10,941.5	384.2	596.3	1.22	1.22	0.80	23.6	-39.5	
11,180.0	3.40	292.90	11,129.1	389.5	585.5	0.38	-0.32	-3.14	5.7	-20.4	
11,369.0	1.90	260.60	11,317.9	391.2	577.2	1.09	-0.79	-17.09	-9.4	-7.9	
11,558.0	1.30	270.60	11,506.8	390.7	572.0	0.35	-0.32	5.29	-31.5	6.4	
11,748.0	1.50	263.00	11,696.7	390.4	567.4	0.14	0.11	-4.00	-48.2	8.6	
11,915.0	1.50	177.10	11,863.7	388.0	565.3	1.22	0.00	-51.44	-15.5	-51.2	
12,059.0	1.10	216.30	12,007.7	385.0	564.6	0.66	-0.28	27.22	-47.2	-28.7	
12,153.0	6.70	157.00	12,101.4	379.2	566.2	6.61	5.96	-63.09	-3.3	-55.1	
12,200.0	15.30	160.70	12,147.5	370.8	569.3	18.35	18.30	7.87	-10.3	-52.5	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,248.0	24.70	164.10	12,192.6	355.1	574.2	19.72	19.58	7.08	-20.1	-48.6
12,295.0	27.40	167.40	12,234.8	335.1	579.2	6.52	5.74	7.02	-30.1	-43.7
12,342.0	30.20	172.20	12,276.0	312.8	583.2	7.72	5.96	10.21	-38.7	-38.0
12,389.0	30.60	174.50	12,316.5	289.2	585.9	2.62	0.85	4.89	-42.5	-34.0
12,436.0	34.30	174.50	12,356.2	264.1	588.3	7.87	7.87	0.00	-42.4	-31.6
12,483.0	37.50	177.20	12,394.3	236.7	590.3	7.59	6.81	5.74	-42.1	-28.1
12,530.0	42.50	177.80	12,430.3	206.5	591.6	10.67	10.64	1.28	-40.0	-26.6
12,577.0	47.60	180.80	12,463.5	173.2	592.0	11.75	10.85	6.38	-38.5	-25.1
12,624.0	54.90	180.20	12,492.8	136.6	591.7	15.56	15.53	-1.28	-36.9	-26.0
12,638.4	56.80	180.14	12,500.9	124.7	591.6	13.20	13.19	-0.45	-36.8	-26.2
HL Crossing, MD:12638.4, TVD:12500.9, N/S:124.7, EW:591.6, INC:56.80										
12,671.0	61.10	180.00	12,517.7	96.8	591.6	13.20	13.19	-0.42	-36.9	-26.5
12,693.2	62.99	179.66	12,528.1	77.2	591.7	8.61	8.51	-1.52	-36.9	-26.7
FTP (Fox 30 Fed Com #706H)										
12,718.0	65.10	179.30	12,539.0	54.9	591.9	8.61	8.51	-1.46	-36.8	-26.8
12,765.0	70.50	178.70	12,556.8	11.4	592.6	11.55	11.49	-1.28	-36.5	-26.5
12,814.0	75.80	178.60	12,571.0	-35.5	593.7	10.82	10.82	-0.20	-36.5	-25.7
12,861.0	78.20	178.00	12,581.5	-81.3	595.1	5.26	5.11	-1.28	-35.4	-24.8
12,909.0	81.60	177.90	12,589.9	-128.5	596.8	7.09	7.08	-0.21	-32.5	-23.4
12,956.0	86.70	178.60	12,594.7	-175.2	598.2	10.95	10.85	1.49	-29.3	-22.3
13,003.0	88.90	179.00	12,596.5	-222.2	599.2	4.76	4.68	0.85	-28.0	-21.7
13,050.0	90.50	179.00	12,598.8	-269.1	600.0	3.40	3.40	0.00	-28.2	-21.3
13,098.0	91.10	179.10	12,598.1	-317.1	600.8	1.27	1.25	0.21	-29.4	-20.9
13,158.0	89.50	177.90	12,595.8	-377.1	602.4	3.33	-2.67	-2.00	-30.3	-19.8
13,192.0	88.30	176.80	12,596.5	-411.1	604.0	4.79	-3.53	-3.24	-30.0	-18.5
13,239.0	89.60	177.40	12,597.3	-458.0	606.3	3.05	2.77	1.28	-29.6	-16.5
13,287.0	89.80	176.90	12,597.6	-505.9	608.7	1.12	0.42	-1.04	-29.8	-14.5



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13,334.0	87.10	175.40	12,598.8	-552.8	611.9	6.57	-5.74	-3.19	-29.0	-11.8
13,382.0	87.40	174.40	12,601.1	-600.6	616.1	2.17	0.62	-2.08	-27.2	-7.9
13,429.0	87.80	174.80	12,603.1	-647.3	620.6	1.20	0.85	0.85	-25.7	-3.9
13,476.0	89.20	178.10	12,604.3	-694.2	623.5	7.62	2.98	7.02	-25.0	-1.3
13,523.0	90.30	178.10	12,604.5	-741.2	625.0	2.34	2.34	0.00	-25.2	-0.2
13,571.0	90.50	177.70	12,604.2	-789.1	626.8	0.93	0.42	-0.83	-26.1	1.2
13,618.0	90.90	176.90	12,603.6	-836.1	629.0	1.90	0.85	-1.70	-27.1	3.0
13,666.0	90.40	178.80	12,603.1	-884.0	630.8	4.09	-1.04	3.96	-28.1	4.4
13,713.0	90.50	178.30	12,602.7	-931.0	632.0	1.08	0.21	-1.06	-29.0	5.2
13,761.0	91.60	181.70	12,601.8	-979.0	632.0	7.44	2.29	7.08	-30.4	4.8
13,808.0	92.00	180.80	12,600.4	-1,026.0	631.0	2.09	0.85	-1.91	-32.3	3.4
13,882.0	89.10	180.50	12,599.7	-1,100.0	630.1	3.94	-3.92	-0.41	-33.8	2.0
13,914.0	87.40	180.40	12,600.6	-1,131.9	629.9	5.32	-5.31	-0.31	-33.1	1.4
13,945.0	87.20	180.10	12,602.1	-1,162.9	629.7	1.16	-0.65	-0.97	-32.0	1.1
13,977.0	86.90	180.60	12,603.7	-1,194.9	629.5	1.82	-0.94	1.56	-30.6	0.6
14,040.0	86.40	180.20	12,607.4	-1,257.8	629.1	1.02	-0.79	-0.63	-27.6	-0.4
14,071.0	87.60	180.80	12,609.0	-1,288.7	628.8	4.33	3.87	1.94	-26.3	-0.9
14,103.0	88.80	180.60	12,610.0	-1,320.7	628.4	3.80	3.75	-0.62	-25.6	-1.5
14,166.0	88.10	180.10	12,611.7	-1,383.7	628.1	1.37	-1.11	-0.79	-24.5	-2.5
14,260.0	88.20	180.60	12,614.8	-1,477.6	627.5	0.54	0.11	0.53	-22.4	-3.8
14,307.0	88.30	180.40	12,616.2	-1,524.6	627.1	0.48	0.21	-0.43	-21.5	-4.6
14,354.0	88.30	180.10	12,617.6	-1,571.6	626.9	0.64	0.00	-0.64	-20.6	-5.2
14,401.0	89.50	179.80	12,618.5	-1,618.6	626.9	2.63	2.55	-0.64	-20.1	-5.6
14,449.0	90.70	180.80	12,618.4	-1,666.6	626.7	3.25	2.50	2.08	-20.7	-6.2
14,496.0	90.00	180.40	12,618.1	-1,713.6	626.2	1.72	-1.49	-0.85	-21.5	-7.1
14,543.0	89.70	180.80	12,618.3	-1,760.6	625.7	1.06	-0.64	0.85	-21.8	-8.0
14,590.0	89.40	180.80	12,618.6	-1,807.5	625.0	0.64	-0.64	0.00	-21.9	-9.0



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)
14,638.0	89.20	181.30	12,619.2	-1,855.5	624.1	1.12	-0.42	1.04	-21.8	-10.3
14,685.0	89.50	179.90	12,619.8	-1,902.5	623.6	3.05	0.64	-2.98	-21.8	-11.2
14,731.4	91.05	181.45	12,619.5	-1,948.9	623.1	4.71	3.33	3.33	-22.5	-12.1
TGT#1(Fox 30 Fed Com #706H)										
14,733.0	91.10	181.50	12,619.5	-1,950.5	623.1	4.71	3.33	3.33	-22.5	-12.2
14,780.0	91.20	181.10	12,618.6	-1,997.5	622.0	0.88	0.21	-0.85	-23.9	-13.6
14,827.0	91.00	181.40	12,617.7	-2,044.5	621.0	0.77	-0.43	0.64	-25.3	-15.0
14,922.0	87.00	178.20	12,619.3	-2,139.4	621.3	5.39	-4.21	-3.37	-24.6	-15.5
14,969.0	86.30	178.10	12,622.1	-2,186.3	622.8	1.50	-1.49	-0.21	-22.3	-14.4
15,017.0	86.90	178.40	12,624.9	-2,234.2	624.3	1.40	1.25	0.62	-19.9	-13.3
15,064.0	89.40	178.30	12,626.4	-2,281.2	625.6	5.32	5.32	-0.21	-18.9	-12.3
15,112.0	89.40	177.40	12,626.9	-2,329.1	627.4	1.87	0.00	-1.87	-18.9	-10.9
15,207.0	88.70	177.90	12,628.5	-2,424.0	631.3	0.91	-0.74	0.53	-18.2	-7.8
15,302.0	92.70	179.00	12,627.3	-2,519.0	633.9	4.37	4.21	1.16	-20.3	-6.0
15,349.0	91.60	178.60	12,625.6	-2,565.9	634.9	2.49	-2.34	-0.85	-22.6	-5.4
15,396.0	91.30	177.90	12,624.4	-2,612.9	636.3	1.62	-0.64	-1.49	-24.2	-4.4
15,443.0	89.90	177.40	12,623.9	-2,659.9	638.2	3.16	-2.98	-1.06	-25.2	-2.9
15,491.0	89.60	177.20	12,624.1	-2,707.8	640.5	0.75	-0.62	-0.42	-25.4	-1.0
15,538.0	90.40	179.40	12,624.1	-2,754.8	641.9	4.98	1.70	4.68	-25.9	0.0
15,585.0	89.80	178.10	12,624.0	-2,801.8	642.9	3.05	-1.28	-2.77	-26.5	0.6
15,632.0	87.90	176.00	12,625.0	-2,848.7	645.3	6.02	-4.04	-4.47	-26.0	2.7
15,680.0	87.80	175.70	12,626.8	-2,896.5	648.8	0.66	-0.21	-0.62	-24.7	5.7
15,774.0	88.40	178.70	12,629.9	-2,990.4	653.4	3.25	0.64	3.19	-22.5	9.6
15,869.0	88.10	180.60	12,632.8	-3,085.3	654.0	2.02	-0.32	2.00	-20.5	9.4
15,963.0	88.40	180.80	12,635.7	-3,179.2	652.8	0.38	0.32	0.21	-18.6	7.4
16,058.0	91.70	181.20	12,635.6	-3,274.2	651.2	3.50	3.47	0.42	-19.6	5.0
16,105.0	92.00	181.20	12,634.1	-3,321.2	650.2	0.64	0.64	0.00	-21.6	3.6



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #708H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#708H	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)	EW (usft)	DLeg (°/100usft)	Botld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
16,153.0	90.70	180.70	12,632.9	-3,369.2	649.4	2.90	-2.71	-1.04	-23.2		2.4
16,200.0	89.50	180.30	12,632.8	-3,416.2	649.0	2.69	-2.55	-0.85	-23.8		1.6
16,248.0	89.40	180.60	12,633.3	-3,464.2	648.6	0.66	-0.21	0.62	-23.8		0.8
16,311.0	90.30	180.10	12,633.5	-3,527.2	648.2	1.63	1.43	-0.79	-24.2		-0.1
16,342.0	89.50	179.90	12,633.5	-3,558.2	648.2	2.66	-2.58	-0.65	-24.5		-0.3
16,437.0	91.30	178.80	12,632.9	-3,653.1	649.3	2.22	1.89	-1.16	-26.1		0.0
16,484.0	90.00	178.40	12,632.3	-3,700.1	650.4	2.89	-2.77	-0.85	-27.1		0.7
16,532.0	89.40	177.80	12,632.6	-3,748.1	652.0	1.77	-1.25	-1.25	-27.3		1.9
16,626.0	90.00	178.60	12,633.1	-3,842.0	655.0	1.06	0.64	0.85	-27.8		4.1
16,658.0	89.80	179.10	12,633.1	-3,874.0	655.6	1.68	-0.62	1.56	-28.0		4.5
16,721.0	89.60	178.70	12,633.5	-3,937.0	656.8	0.71	-0.32	-0.63	-28.3		5.2
16,740.3	89.97	179.56	12,633.5	-3,956.4	657.1	4.86	1.91	4.47	-28.5		5.3
TGT#2(Fox 30 Fed Com #708H)											
16,768.0	90.50	180.80	12,633.4	-3,984.0	657.0	4.86	1.91	4.47	-28.9		5.0
16,815.0	88.00	179.10	12,634.0	-4,031.0	657.1	6.43	-5.32	-3.62	-28.9		4.6
16,910.0	87.10	179.30	12,638.1	-4,125.9	658.4	0.97	-0.95	0.21	-26.1		5.2
16,973.0	86.90	179.30	12,641.4	-4,188.8	659.2	0.32	-0.32	0.00	-23.6		5.4
17,005.0	86.50	180.60	12,643.2	-4,220.8	659.2	4.24	-1.25	4.06	-22.2		5.2
17,097.0	89.90	181.90	12,646.1	-4,312.7	657.2	3.96	3.70	1.41	-20.5		2.4
17,129.0	91.40	181.50	12,645.8	-4,344.7	656.2	4.85	4.69	-1.25	-21.3		1.2
17,192.0	90.90	178.00	12,644.5	-4,407.7	656.5	5.61	-0.79	-5.56	-23.3		0.9
17,286.0	88.90	175.10	12,644.7	-4,501.5	662.2	3.75	-2.13	-3.09	-24.4		5.8
17,350.0	90.10	175.20	12,645.2	-4,565.2	667.6	1.88	1.87	0.16	-24.7		10.7
17,381.0	90.10	176.90	12,645.2	-4,596.2	669.7	5.48	0.00	5.48	-25.1		12.6
17,444.0	89.10	177.20	12,645.6	-4,659.1	673.0	1.66	-1.59	0.48	-25.5		15.3
17,476.0	87.90	177.90	12,646.4	-4,691.0	674.3	4.34	-3.75	2.19	-25.1		16.4
17,539.0	88.70	177.80	12,648.3	-4,754.0	676.7	1.28	1.27	-0.16	-24.0		18.2



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	EW (usft)	DLog (°/100usft)	Bulid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,571.0	87.60	179.50	12,649.3	-4,785.9	677.5	6.33	-3.44	5.31	-23.4	18.7
17,665.0	88.90	180.10	12,652.2	-4,879.9	677.8	1.52	1.38	0.64	-21.7	18.3
17,760.0	90.00	180.70	12,653.1	-4,974.9	677.1	1.32	1.16	0.63	-22.1	16.8
17,791.0	90.10	180.50	12,653.1	-5,005.9	676.8	0.72	0.32	-0.65	-22.5	16.3
17,823.0	89.20	179.70	12,653.3	-5,037.9	676.7	3.76	-2.81	-2.50	-22.7	15.9
17,855.0	90.00	179.40	12,653.5	-5,069.9	677.0	2.67	2.50	-0.94	-22.9	15.9
17,886.0	90.00	179.90	12,653.5	-5,100.9	677.2	1.61	0.00	1.61	-23.3	15.9
17,918.0	88.40	179.30	12,654.0	-5,132.9	677.4	5.34	-5.00	-1.87	-23.3	15.8
17,949.0	89.90	179.90	12,654.4	-5,163.9	677.6	5.21	4.84	1.94	-23.2	15.8
17,981.0	89.90	180.20	12,654.5	-5,195.9	677.6	0.94	0.00	0.94	-23.6	15.5
18,012.0	89.40	181.10	12,654.7	-5,226.9	677.2	3.32	-1.61	2.90	-23.8	14.9
18,044.0	89.10	180.80	12,655.1	-5,258.8	676.7	1.33	-0.94	-0.94	-23.8	14.1
18,075.0	89.40	180.70	12,655.5	-5,289.8	676.3	1.02	0.97	-0.32	-23.8	13.4
18,107.0	89.10	180.20	12,655.9	-5,321.8	676.0	1.82	-0.94	-1.56	-23.8	12.9
18,139.0	89.60	180.00	12,656.3	-5,353.8	676.0	1.68	1.56	-0.62	-23.8	12.6
18,170.0	90.80	180.30	12,656.2	-5,384.8	675.9	3.99	3.87	0.97	-24.3	12.2
18,202.0	93.40	182.10	12,655.0	-5,416.8	675.2	9.88	8.12	5.62	-25.9	11.3
18,233.0	92.40	181.40	12,653.4	-5,447.8	674.3	3.94	-3.23	-2.26	-27.9	10.1
18,280.0	91.50	181.30	12,651.8	-5,494.7	673.2	1.93	-1.91	-0.21	-30.1	8.6
18,328.0	92.70	181.40	12,650.1	-5,542.7	672.1	2.51	2.50	0.21	-32.5	7.1
18,422.0	86.00	179.70	12,651.1	-5,636.6	671.2	7.35	-7.13	-1.81	-32.6	5.4
18,517.0	86.80	179.60	12,657.1	-5,731.4	671.7	0.85	0.84	-0.11	-27.9	5.2
18,612.0	94.50	182.30	12,656.0	-5,826.3	670.2	8.59	8.11	2.84	-30.2	2.9
18,643.0	95.10	182.20	12,653.4	-5,857.2	669.0	1.96	1.94	-0.32	-33.2	1.4
18,674.0	95.40	182.00	12,650.6	-5,888.0	667.8	1.16	0.97	-0.65	-36.4	0.0
18,706.0	94.20	181.90	12,647.9	-5,919.9	666.7	3.76	-3.75	-0.31	-39.5	-1.4
18,737.0	92.00	181.60	12,646.2	-5,950.8	665.8	7.16	-7.10	-0.97	-41.6	-2.6



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Databases:	EDM 5000.14

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLog ("/100usft)	Bulid ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
18,748.8	91.14	181.92	12,645.9	-5,962.6	665.4	7.77	-7.27	2.73	-42.1	-3.0
TGT#3(Fox 30 Fed Com #706H)										
18,759.0	90.40	182.20	12,645.8	-5,972.8	665.1	7.77	-7.27	2.73	-42.3	-3.5
18,779.0	90.60	182.70	12,645.6	-5,992.8	664.2	2.69	1.00	2.50	-42.8	-4.5
18,801.0	91.60	182.70	12,645.2	-8,014.8	663.2	4.55	4.55	0.00	-43.5	-5.7
18,832.0	92.40	182.40	12,644.1	-6,045.7	661.8	2.76	2.58	-0.97	-45.0	-7.3
18,864.0	89.80	182.90	12,643.5	-8,077.7	660.3	8.27	-8.12	1.56	-46.0	-9.1
18,895.0	87.80	183.00	12,644.1	-6,108.6	658.7	6.46	-6.45	0.32	-45.8	-10.9
18,927.0	89.20	184.40	12,645.0	-6,140.5	656.7	6.19	4.37	4.37	-45.4	-13.2
18,990.0	90.70	183.50	12,645.0	-6,203.4	652.3	2.78	2.38	-1.43	-46.2	-18.1
19,021.0	88.30	182.20	12,645.3	-6,234.3	650.8	8.80	-7.74	-4.19	-46.3	-19.9
19,084.0	89.40	181.70	12,646.6	-6,297.3	648.6	1.92	1.75	-0.79	-45.9	-22.6
19,116.0	89.50	179.30	12,646.9	-6,329.3	648.4	7.51	0.31	-7.50	-46.0	-23.2
19,148.0	88.70	178.40	12,647.4	-6,361.3	649.0	3.76	-2.50	-2.81	-45.9	-22.8
19,179.0	87.60	178.20	12,648.4	-6,392.3	649.9	3.61	-3.55	-0.65	-45.3	-22.1
19,211.0	88.30	177.90	12,649.5	-6,424.2	651.0	2.38	2.19	-0.94	-44.6	-21.3
19,273.0	93.30	179.40	12,648.7	-6,486.2	652.5	8.42	8.06	2.42	-46.3	-20.4
19,305.0	92.30	178.00	12,647.1	-6,518.1	653.2	5.37	-3.12	-4.37	-48.3	-19.9
19,336.0	91.80	178.30	12,646.0	-6,549.1	654.2	1.88	-1.61	0.97	-49.8	-19.2
19,368.0	89.10	178.60	12,645.7	-6,581.1	655.1	8.49	-8.44	0.94	-50.5	-18.5
19,399.0	88.20	179.10	12,646.5	-6,612.1	655.7	3.32	-2.90	1.61	-50.2	-18.2
19,431.0	87.50	179.70	12,647.7	-6,644.0	656.0	2.88	-2.19	1.87	-49.4	-18.1
19,462.0	87.60	178.60	12,649.0	-6,675.0	656.5	3.56	0.32	-3.55	-48.5	-17.9
19,494.0	86.80	177.40	12,650.5	-6,706.9	657.6	4.50	-2.50	-3.75	-47.4	-17.1
19,525.0	85.80	176.00	12,652.5	-6,737.8	659.4	5.54	-3.23	-4.52	-45.8	-15.6
19,557.0	84.90	175.00	12,655.1	-6,769.6	661.9	4.20	-2.81	-3.12	-43.6	-13.4
19,589.0	84.20	174.90	12,658.2	-6,801.3	664.7	2.21	-2.19	-0.31	-41.0	-10.8



Final PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3347.0usft (H&P 465)
Well:	#706H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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)
19,652.0	85.60	174.60	12,663.8	-6,863.8	670.4	2.27	2.22	-0.48	-36.3	-5.6
19,683.0	89.80	175.90	12,665.0	-6,894.7	673.0	14.18	13.55	4.19	-35.4	-3.2
19,727.0	89.50	175.40	12,665.3	-6,938.6	676.3	1.33	-0.68	-1.14	-35.7	-0.3
19,774.0	89.50	175.20	12,665.7	-6,985.4	680.2	0.43	0.00	-0.43	-36.0	3.2
19,821.0	89.70	174.00	12,666.0	-7,032.2	684.6	2.59	0.43	-2.55	-36.3	7.2
19,867.0	90.00	175.90	12,666.2	-7,078.0	688.6	4.18	0.65	4.13	-36.8	10.9
19,923.6	89.26	177.62	12,666.5	-7,134.5	691.8	3.31	-1.30	3.04	-37.2	13.6
HL Crossing, MD:19923.6', TVD:12666.5', N/S:-7134.5', E/W:691.8', INC:89.26'										
19,936.0	89.10	178.00	12,666.7	-7,146.9	692.3	3.31	-1.30	3.04	-37.1	14.0
19,957.0	89.70	177.30	12,666.9	-7,167.9	693.2	4.39	2.86	-3.33	-37.2	14.7
Final MWD Survey (MD=19957.0')										
20,018.0	89.70	177.30	12,667.2	-7,228.8	696.0	0.00	0.00	0.00	-37.7	17.1
Final Projection to Bit (MD=20018.0') - PBHL (Fox 30 Fed Com #706H)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,638.4	12,500.9	124.7	591.6	HL Crossing, MD:12638.4', TVD:12500.9', N/S:124.7', E/W:591.6', INC:56.80
19,923.6	12,666.5	-7,134.5	691.8	HL Crossing, MD:19923.6', TVD:12666.5', N/S:-7134.5', E/W:691.8', INC:89.26
19,957.0	12,666.9	-7,167.9	693.2	Final MWD Survey (MD=19957.0')
20,018.0	12,667.2	-7,228.8	696.0	Final Projection to Bit (MD=20018.0')

Checked By: _____ Approved By: _____ Date: _____

Lea County, NM (NAD 83 NME)

Fox 30 Fed Com #706H

H&P 465

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

KB = 25' @ 3347.0' (H&P 465) 3322.0
Northing 401200.00 Easting 788255.00 Latitude 32° 5' 0.938 N Longitude 103° 30' 13.118 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	1010.0	1.90	83.10	1009.8	-8.6	12.4	0.00	0.00	9.7	
2	3000.0	1.90	83.10	2998.7	-8.6	77.9	0.00	0.00	7.9	
3	3223.3	6.00	52.66	3221.4	6.9	90.9	2.00	-42.85	1.6	
4	7000.0	6.00	52.66	6977.4	246.3	404.7	0.00	0.00	-207.4	
5	7300.0	0.00	0.00	7276.9	255.9	417.2	2.00	180.00	-215.7	
6	9156.1	0.00	0.00	9133.0	255.9	417.2	0.00	0.00	-215.7	
7	9456.2	6.00	52.89	9432.6	265.3	429.8	2.00	52.89	-224.0	
8	11535.5	6.00	52.89	11500.4	396.5	603.2	0.00	0.00	-338.4	
9	11835.6	0.00	0.00	11800.0	406.0	615.7	2.00	180.00	-346.7	
10	12086.6	0.00	0.00	12051.0	406.0	615.7	0.00	0.00	-346.7	
11	12980.8	89.42	179.53	12623.9	-161.2	620.4	10.00	179.53	218.4	
12	14769.0	89.42	179.53	12642.0	-1949.2	635.2	0.00	0.00	2000.0	TGT#1(Fox 30 Fed Com #706H)
13	14769.4	89.43	179.53	12642.0	-1949.6	635.2	2.00	0.00	2000.4	
14	16776.4	89.43	179.53	12662.0	-3956.4	651.8	0.00	0.00	4000.0	TGT#2(Fox 30 Fed Com #706H)
15	16785.0	89.26	179.53	12662.1	-3965.0	651.9	2.00	-180.00	4008.5	
16	18783.8	89.26	179.53	12688.0	-5963.6	668.5	0.00	0.00	6000.0	TGT#3(Fox 30 Fed Com #706H)
17	18785.0	89.23	179.53	12688.0	-5964.8	668.5	2.00	180.00	6001.2	
18	20054.4	89.23	179.53	12705.0	-7234.0	679.0	0.00	0.00	7265.8	PBHL (Fox 30 Fed Com #706H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Fox 30 Fed Com #706H)	7927.0	406.0	615.7	401200.00	788255.00
FTP (Fox 30 Fed Com #706H)	12624.0	128.0	618.0	401326.00	788873.00
TGT#1(Fox 30 Fed Com #706H)	12642.0	-1949.2	635.2	399250.80	788890.20
TGT#2(Fox 30 Fed Com #706H)	12662.0	-3956.4	651.8	397343.60	789066.84
TGT#3(Fox 30 Fed Com #706H)	12688.0	-5963.6	668.5	395236.40	789223.47
PBHL (Fox 30 Fed Com #706H)	12705.0	-7234.0	679.0	393066.00	789334.00

