

HOBBS OCD
JUL 27 2018
RECEIVED

EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Fox 30 Fed Com

#703H

OH

Design: OH

PVA Report

14 May, 2018

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Project	Lea County, NM (NAD 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Fox 30 Fed Com		
Site Position:		Northing:	401,135.00 usft
From:	Map	Easting:	756,049.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 6' 0.493 N
		Longitude:	103° 30' 23.282 W
		Grid Convergence:	0.44 "

Well	#703H		
Well Position	+N-S	0.0 usft	Northing: 401,142.00 usft
	+E-W	0.0 usft	Easting: 756,999.00 usft
Position Uncertainty	0.0 usft		Latitude: 32° 6' 0.490 N
			Longitude: 103° 30' 12.238 W
		Wellhead Elevation:	0.0 usft
			Ground Level: 3,323.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	2/7/2017	(°)
			6.95
			59.96
			47,909.00764561
			(nT)

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
			(°)
			178.84

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Corn	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program	Date	5/14/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
191.0	5,103.0	M3P MWD (OH)	MWD	OWSG MWD - Standard	
5,232.0	20,005.0	Intrepid MWD (OH)	MWD	OWSG 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
191.0	0.20	120.00	191.0	-0.2	0.3	0.10	0.10	0.00	0.0	0.0
364.0	0.40	120.60	364.0	-0.6	1.1	0.12	0.12	0.35	0.0	0.0
547.0	0.80	97.70	547.0	-1.1	2.9	0.25	0.22	-12.51	0.0	0.0
738.0	1.40	98.60	738.0	-1.6	6.5	0.31	0.31	0.47	0.0	0.0
928.0	1.30	89.60	927.9	-2.0	11.0	0.12	-0.05	-4.74	0.0	0.0
967.0	1.30	98.60	966.9	-2.0	11.8	0.52	0.00	23.08	0.0	0.0
1,042.0	1.20	96.70	1,041.9	-2.3	13.5	0.14	-0.13	-2.53	0.0	0.0
1,137.0	1.10	53.90	1,136.9	-1.8	15.2	0.89	-0.11	-45.05	0.0	0.0
1,232.0	1.40	359.20	1,231.8	-0.1	15.9	1.24	0.32	-57.58	0.0	0.0
1,421.0	1.30	347.80	1,420.8	4.3	15.4	0.15	-0.05	-6.03	0.0	0.0
1,611.0	1.10	354.90	1,610.7	8.2	14.8	0.13	-0.11	3.74	0.0	0.0
1,801.0	1.10	6.00	1,800.7	11.8	14.8	0.11	0.00	5.84	0.0	0.0
1,991.0	0.50	314.50	1,990.7	14.2	14.4	0.46	-0.32	-27.11	0.0	0.0
2,181.0	0.60	323.90	2,180.7	15.6	13.3	0.07	0.05	4.95	0.0	0.0
2,371.0	0.60	334.90	2,370.7	17.3	12.3	0.06	0.00	5.79	0.0	0.0
2,561.0	0.60	347.60	2,560.7	19.2	11.6	0.07	0.00	6.68	0.0	0.0
2,751.0	0.80	17.30	2,750.6	21.4	11.8	0.21	0.11	15.63	0.0	0.0
2,941.0	0.80	23.50	2,940.6	23.9	12.7	0.05	0.00	3.26	0.0	0.0
3,131.0	0.70	14.00	3,130.6	26.2	13.5	0.08	-0.05	-5.00	0.0	0.0
3,321.0	0.80	9.90	3,320.6	28.7	14.0	0.06	0.05	-2.16	0.0	0.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	Btld (*100usft)	Turn (*100usft)	High to Plan (usft)	Right to Plan (usft)	
3,511.0	0.20	306.70	3,510.6	30.2	14.0	0.39	-0.32	-33.26	0.0	0.0	
3,701.0	0.40	46.50	3,700.6	30.8	14.2	0.25	0.11	52.53	0.0	0.0	
3,891.0	0.20	340.20	3,890.6	31.6	14.6	0.19	-0.11	-34.89	0.0	0.0	
4,081.0	0.60	40.90	4,080.6	32.7	15.1	0.28	0.21	31.95	0.0	0.0	
4,271.0	0.70	63.80	4,270.6	33.9	16.8	0.15	0.05	12.05	0.0	0.0	
4,462.0	0.40	359.70	4,461.6	35.1	17.9	0.33	-0.16	-33.56	0.0	0.0	
4,652.0	0.50	107.60	4,651.6	35.5	18.6	0.38	0.05	56.79	0.0	0.0	
4,842.0	0.30	283.50	4,841.6	35.4	19.0	0.42	-0.11	92.58	0.0	0.0	
5,032.0	0.70	142.80	5,031.5	34.6	19.2	0.50	0.21	-74.05	0.0	0.0	
5,103.0	0.70	162.30	5,102.5	33.8	19.6	0.33	0.00	27.46	0.0	0.0	
5,232.0	0.50	123.80	5,231.5	32.8	20.3	0.34	-0.16	-29.84	0.0	0.3	
5,422.0	5.60	54.80	5,421.2	37.6	28.5	2.86	2.68	-36.32	-4.9	-4.6	
5,611.0	9.40	2.30	5,608.8	58.4	36.7	3.94	2.01	-27.78	-1.9	-11.2	
5,800.0	8.80	358.70	5,795.4	88.3	37.0	0.44	-0.32	-1.90	-1.5	-6.5	
5,990.0	10.20	354.50	5,982.8	119.6	35.1	0.82	0.74	-2.21	-0.8	0.8	
6,179.0	9.50	357.20	6,169.0	151.8	32.7	0.44	-0.37	1.43	-1.4	8.6	
6,369.0	10.30	354.70	6,356.2	184.4	30.4	0.48	0.42	-1.32	-2.8	16.2	
6,558.0	8.80	4.60	6,542.6	215.6	30.0	1.17	-0.79	5.24	1.2	22.1	
6,747.0	9.20	355.10	6,729.2	245.1	29.8	0.81	0.21	-5.03	-0.4	27.7	
6,937.0	10.70	3.50	6,916.4	277.8	29.6	1.10	0.79	4.42	3.4	33.1	
7,126.0	10.90	5.90	7,102.0	313.1	32.5	0.26	0.11	1.27	1.7	35.8	
7,316.0	9.60	5.40	7,289.0	346.7	35.8	0.69	-0.68	-0.26	0.1	38.0	
7,505.0	8.20	11.60	7,475.7	375.6	40.0	0.90	-0.74	3.28	6.0	38.4	
7,695.0	4.60	31.50	7,664.5	395.4	46.8	2.20	-1.89	10.47	17.2	31.1	
7,885.0	3.30	35.40	7,854.1	406.4	53.9	0.70	-0.68	2.05	13.1	27.0	
8,074.0	2.50	26.70	8,042.8	414.5	58.9	0.48	-0.42	-4.60	-0.5	27.8	
8,263.0	2.50	62.70	8,231.7	420.1	64.4	0.82	0.00	19.05	8.5	25.2	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	
8,453.0	2.20	69.30	8,421.5	423.3	71.5	0.21	-0.16	3.47	3.5	24.5	
8,642.0	2.30	65.70	8,610.4	426.1	78.4	0.09	0.05	-1.90	-5.4	24.5	
8,831.0	1.60	125.00	8,799.3	426.1	84.0	1.07	-0.37	31.38	13.7	20.4	
9,021.0	1.50	109.30	8,989.2	423.8	88.5	0.23	-0.05	-8.26	2.6	22.6	
9,210.0	1.20	106.20	9,178.1	422.4	92.7	0.16	-0.16	-1.64	-3.0	22.6	
9,400.0	0.80	94.30	9,368.1	421.8	96.0	0.24	-0.21	-6.26	-10.9	21.1	
9,589.0	1.00	97.60	9,557.1	421.5	98.9	0.11	0.11	1.75	-12.7	21.8	
9,779.0	0.60	95.30	9,747.1	421.1	101.6	0.21	-0.21	-1.21	-16.2	21.2	
9,968.0	1.00	96.20	9,936.1	420.9	104.2	0.21	0.21	0.48	-18.5	21.4	
10,157.0	1.40	153.30	10,125.0	418.6	106.9	0.63	0.21	30.21	4.8	28.5	
10,347.0	1.20	294.50	10,315.0	417.4	106.1	1.29	-0.11	74.32	14.0	-23.8	
10,536.0	0.40	301.70	10,504.0	418.6	103.7	0.43	-0.42	3.81	8.3	-25.1	
10,726.0	0.90	319.70	10,694.0	420.0	102.2	0.28	0.26	9.47	-2.0	-26.2	
10,915.0	0.60	82.60	10,883.0	421.3	102.2	0.70	-0.16	65.03	-21.1	17.2	
11,103.0	0.60	59.20	11,070.9	421.9	104.0	0.13	0.00	-12.45	-28.1	7.0	
11,293.0	0.30	242.90	11,260.9	422.2	104.5	0.47	-0.16	-92.79	28.1	-8.8	
11,482.0	0.20	77.00	11,449.9	422.1	104.3	0.26	-0.05	-87.78	-24.9	15.3	
11,671.0	0.80	73.20	11,638.9	422.5	105.9	0.32	0.32	-2.01	-27.5	13.6	
11,861.0	1.30	91.60	11,828.9	422.8	109.3	0.31	0.26	9.68	-25.2	22.0	
11,980.0	1.60	84.00	11,947.9	423.0	112.3	0.30	0.25	-6.39	-30.9	18.3	
12,033.1	2.68	143.97	12,001.0	422.1	113.8	4.39	2.03	112.90	-1.3	36.6	
KOP (Fox 30 Fed Com #703H)											
12,075.0	4.30	158.70	12,042.8	419.8	115.0	4.39	3.87	35.17	7.0	36.4	
12,122.0	10.00	171.70	12,089.4	414.1	116.2	12.53	12.13	27.66	14.3	35.0	
12,169.0	13.30	174.00	12,135.4	404.7	117.3	7.09	7.02	4.89	15.1	35.4	
12,216.0	20.50	178.20	12,180.3	391.1	118.2	15.53	15.32	8.94	16.3	35.0	
12,264.0	23.80	175.80	12,224.8	373.0	119.1	7.13	6.87	-5.00	13.2	36.3	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	BuId (°/100usft)	Turn (°/100usft)	Hlgh to Plan (usft)	Right to Plan (usft)	
12,311.0	28.10	174.60	12,267.0	352.5	120.9	9.22	9.15	-2.55	11.5	38.0	
12,358.0	29.70	177.50	12,308.2	329.9	122.4	4.52	3.40	6.17	13.4	38.8	
12,405.0	33.70	185.80	12,348.2	305.2	121.6	12.57	8.51	17.66	19.7	35.7	
12,453.0	40.00	186.50	12,386.6	276.6	118.5	13.15	13.12	1.46	21.0	32.2	
12,500.0	46.10	189.40	12,420.9	244.9	114.0	13.64	12.98	6.17	21.6	26.8	
12,548.0	52.50	188.40	12,452.2	209.0	108.4	13.43	13.33	-2.08	19.2	21.6	
12,595.0	56.80	183.20	12,479.4	170.8	104.6	12.85	9.15	-11.06	15.8	18.7	
12,642.0	62.20	180.10	12,503.2	130.4	103.5	12.82	11.49	-6.60	12.9	17.7	
12,651.9	63.30	179.95	12,507.8	121.6	103.5	11.15	11.06	-1.54	12.3	17.7	
HL Crossing, MD:12651.9, TVD:12507.8, N/S:121.6, E/W:103.5, INC:63.30											
12,680.0	66.40	179.53	12,519.7	96.2	103.6	11.15	11.06	-1.49	10.5	17.6	
FTP (Fox 30 Fed Com #703H)											
12,689.0	67.40	179.40	12,523.3	87.9	103.7	11.15	11.07	-1.44	9.9	17.6	
12,737.0	70.00	178.80	12,540.7	43.2	104.4	5.54	5.42	-1.25	7.6	18.0	
12,784.0	72.90	178.60	12,555.6	-1.4	105.4	6.18	6.17	-0.43	6.9	18.6	
12,832.0	75.30	179.30	12,568.8	-47.5	106.2	5.19	5.00	1.46	8.0	19.1	
12,879.0	76.70	179.80	12,580.2	-93.1	106.6	3.15	2.98	1.06	11.3	19.1	
12,926.0	76.60	180.70	12,591.0	-138.9	106.4	1.88	-0.21	1.91	17.7	18.6	
12,973.0	77.70	180.50	12,601.5	-184.7	105.9	2.38	2.34	-0.43	27.1	17.9	
13,021.0	83.70	180.10	12,609.2	-232.0	105.7	12.53	12.50	-0.83	34.5	17.1	
13,068.0	87.40	178.70	12,612.9	-278.9	106.1	8.41	7.87	-2.98	37.7	17.1	
13,115.0	88.20	178.00	12,614.7	-325.8	107.5	2.26	1.70	-1.49	39.1	18.1	
13,210.0	90.00	178.20	12,616.2	-420.8	110.6	1.91	1.89	0.21	39.6	20.5	
13,257.0	90.40	179.10	12,616.0	-467.7	111.8	2.10	0.85	1.91	39.0	21.2	
13,304.0	90.60	178.70	12,615.6	-514.7	112.7	0.95	0.43	-0.85	38.1	21.7	
13,351.0	89.20	182.00	12,615.7	-561.7	112.4	7.63	-2.98	7.02	37.8	21.0	
13,399.0	89.50	181.60	12,616.2	-609.7	110.9	1.04	0.62	-0.83	37.8	19.1	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
13,494.0	92.00	181.00	12,615.0	-704.7	108.7	2.71	2.63	-0.63	35.7	16.2
13,588.0	90.50	180.80	12,612.9	-798.6	107.2	1.61	-1.60	-0.21	32.7	14.0
13,683.0	86.80	182.40	12,615.2	-893.5	104.6	4.24	-3.89	1.68	34.0	10.5
13,714.0	87.00	184.30	12,616.8	-924.4	102.8	6.15	0.65	6.13	35.4	8.4
13,777.0	87.10	183.20	12,620.1	-987.2	98.7	1.75	0.16	-1.75	38.0	3.8
13,809.0	84.70	179.00	12,622.4	-1,019.1	98.0	15.09	-7.50	-13.12	40.0	3.0
13,841.0	83.80	177.70	12,625.6	-1,050.9	99.0	4.92	-2.81	-4.06	42.9	3.7
13,872.0	83.60	177.50	12,629.0	-1,081.7	100.2	0.91	-0.65	-0.65	46.0	4.7
13,935.0	86.90	178.00	12,634.2	-1,144.5	102.7	5.30	5.24	0.79	50.6	6.7
13,967.0	87.40	177.90	12,635.8	-1,176.4	103.9	1.59	1.56	-0.31	51.9	7.5
14,061.0	92.50	179.40	12,635.9	-1,270.3	106.1	5.66	5.43	1.60	51.0	9.0
14,156.0	91.60	182.30	12,632.5	-1,365.2	104.7	3.19	-0.95	3.05	46.7	6.8
14,250.0	90.10	184.50	12,631.1	-1,459.1	99.1	2.83	-1.60	2.34	44.4	0.4
14,280.0	90.70	184.50	12,630.9	-1,489.0	96.7	2.00	2.00	0.00	43.9	-2.2
14,343.0	89.60	181.60	12,630.7	-1,551.9	93.4	4.92	-1.75	-4.60	43.1	-6.0
14,375.0	89.50	181.10	12,630.9	-1,583.9	92.6	1.59	-0.31	-1.56	43.0	-7.0
14,438.0	89.10	181.30	12,631.7	-1,646.8	91.3	0.71	-0.63	0.32	43.2	-8.8
14,469.0	89.30	181.10	12,632.1	-1,677.8	90.7	0.91	0.65	-0.65	43.3	-9.7
14,564.0	86.50	178.80	12,635.6	-1,772.8	90.7	3.81	-2.95	-2.42	45.9	-10.4
14,588.4	87.02	178.90	12,637.0	-1,797.1	91.2	2.17	2.13	0.43	47.0	-10.1
TOT 1 (Fox 30 Fed Com #703H)										
14,658.0	88.50	179.20	12,639.7	-1,866.6	92.4	2.17	2.13	0.43	49.1	-9.6
14,722.0	89.40	179.80	12,640.9	-1,930.6	92.9	1.69	1.41	0.94	49.6	-9.5
14,753.0	88.80	179.20	12,641.4	-1,961.6	93.2	2.74	-1.94	-1.94	49.8	-9.5
14,816.0	87.80	177.60	12,643.3	-2,024.6	95.0	2.99	-1.59	-2.54	51.1	-8.2
14,848.0	87.50	177.30	12,644.6	-2,056.5	96.4	1.33	-0.94	-0.94	52.1	-7.1
14,911.0	88.00	177.40	12,647.0	-2,119.4	99.3	0.81	0.79	0.16	53.9	-4.7

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Corn	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
14,942.0	88.00	177.90	12,648.1	-2,150.4	100.6	1.61	0.00	1.61	54.7	-3.7
15,005.0	88.20	177.50	12,650.2	-2,213.3	103.1	0.71	0.32	-0.63	56.2	-1.6
15,037.0	88.30	176.90	12,651.2	-2,245.2	104.7	1.90	0.31	-1.87	56.9	-0.3
15,131.0	92.70	178.30	12,650.4	-2,339.1	108.6	4.91	4.68	1.49	55.1	2.8
15,178.0	92.10	178.20	12,648.4	-2,386.0	110.0	1.29	-1.28	-0.21	52.7	3.9
15,226.0	91.80	178.70	12,646.8	-2,434.0	111.3	1.21	-0.62	1.04	50.6	4.8
15,273.0	91.50	178.70	12,645.4	-2,481.0	112.4	0.64	-0.64	0.00	48.8	5.5
15,321.0	91.30	178.10	12,644.2	-2,528.9	113.7	1.32	-0.42	-1.25	47.2	6.4
15,368.0	91.20	178.00	12,643.2	-2,575.9	115.3	0.30	-0.21	-0.21	45.7	7.6
15,415.0	91.20	178.10	12,642.2	-2,622.9	116.9	0.21	0.00	0.21	44.3	8.8
15,510.0	90.50	178.00	12,640.8	-2,717.8	120.2	0.74	-0.74	-0.11	42.0	11.3
15,557.0	90.60	178.00	12,640.4	-2,764.8	121.8	0.21	0.21	0.00	41.1	12.5
15,605.0	90.90	177.20	12,639.7	-2,812.7	123.8	1.78	0.62	-1.67	40.0	14.1
15,668.0	88.90	179.00	12,639.9	-2,875.7	125.9	4.27	-3.17	2.86	39.5	15.7
15,699.0	89.50	180.00	12,640.3	-2,906.7	126.2	3.76	1.94	3.23	39.7	15.7
15,794.0	88.80	181.40	12,641.7	-3,001.6	125.0	1.65	-0.74	1.47	40.2	13.8
15,857.0	89.10	182.30	12,642.9	-3,064.6	123.0	1.51	0.48	1.43	40.8	11.2
15,889.0	87.90	181.20	12,643.7	-3,096.6	122.0	5.09	-3.75	-3.44	41.3	10.0
15,952.0	86.10	179.40	12,647.0	-3,159.5	121.7	4.04	-2.86	-2.86	44.0	9.2
15,983.0	85.80	178.70	12,649.2	-3,190.4	122.2	2.45	-0.97	-2.26	45.9	9.4
16,046.0	87.00	178.90	12,653.1	-3,253.3	123.5	1.93	1.90	0.32	49.3	10.2
16,078.0	88.40	179.20	12,654.4	-3,285.2	124.0	4.47	4.37	0.94	50.3	10.5
16,110.0	88.70	179.80	12,655.2	-3,317.2	124.3	2.10	0.94	1.87	50.8	10.5
16,173.0	89.60	180.00	12,656.2	-3,380.2	124.4	1.46	1.43	0.32	51.2	10.1
16,267.0	89.80	179.80	12,656.7	-3,474.2	124.6	0.30	0.21	-0.21	50.8	9.5
16,362.0	89.10	180.20	12,657.6	-3,569.2	124.6	0.85	-0.74	0.42	50.8	8.7

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
16,391.9	89.70	180.36	12,657.9	-3,599.1	124.4	2.07	2.00	0.53	50.9	8.3
TGT 2 (Fox 30 Fed Com #703H)										
16,457.0	91.00	180.70	12,657.5	-3,664.2	123.8	2.07	2.00	0.53	49.7	7.1
16,551.0	90.00	180.40	12,656.7	-3,758.2	122.9	1.11	-1.06	-0.32	47.8	5.5
16,646.0	89.60	180.30	12,657.0	-3,853.2	122.4	0.43	-0.42	-0.11	47.0	4.1
16,709.0	88.70	180.10	12,657.9	-3,916.2	122.1	1.46	-1.43	-0.32	47.2	3.4
16,741.0	88.30	180.30	12,658.8	-3,948.2	122.0	1.40	-1.25	0.62	47.7	3.0
16,804.0	88.90	180.30	12,660.3	-4,011.1	121.7	0.95	0.95	0.00	48.5	2.2
16,835.0	88.90	180.10	12,660.9	-4,042.1	121.6	0.65	0.00	-0.65	48.7	1.8
16,898.0	88.10	178.60	12,662.5	-4,105.1	122.3	2.70	-1.27	-2.38	49.6	2.0
16,930.0	89.60	177.20	12,663.2	-4,137.1	123.5	6.41	4.69	-4.37	49.9	2.9
17,024.0	91.60	178.20	12,662.2	-4,231.0	127.2	2.38	2.13	1.06	47.8	5.9
17,119.0	91.40	177.80	12,659.7	-4,325.9	130.6	0.47	-0.21	-0.42	44.2	8.5
17,214.0	90.50	178.60	12,658.1	-4,420.8	133.5	1.27	-0.95	0.84	41.6	10.7
17,277.0	88.20	178.20	12,658.9	-4,483.8	135.3	3.71	-3.65	-0.63	41.5	11.9
17,308.0	87.70	178.40	12,660.0	-4,514.8	136.2	1.74	-1.61	0.65	42.3	12.6
17,372.0	88.70	177.90	12,662.0	-4,578.7	138.3	1.75	1.56	-0.78	43.5	14.1
17,403.0	90.50	177.30	12,662.2	-4,609.7	139.6	6.12	5.81	-1.94	43.4	15.1
17,498.0	93.50	181.40	12,658.9	-4,704.6	140.7	5.35	3.16	4.32	39.0	15.5
17,561.0	92.00	181.80	12,655.9	-4,767.5	138.9	2.46	-2.38	0.63	35.2	13.2
17,592.0	89.50	182.20	12,655.4	-4,798.5	137.8	8.17	-8.06	1.29	34.5	11.8
17,655.0	89.80	183.00	12,655.8	-4,861.4	135.0	1.36	0.48	1.27	34.1	8.4
17,687.0	88.60	183.00	12,656.3	-4,893.3	133.3	3.75	-3.75	0.00	34.2	6.5
17,750.0	87.70	182.50	12,658.3	-4,956.2	130.3	1.63	-1.43	-0.79	35.5	3.0
17,782.0	87.60	182.90	12,659.6	-4,988.2	128.8	1.29	-0.31	1.25	36.4	1.2
17,876.0	87.70	182.40	12,663.5	-5,082.0	124.4	0.54	0.11	-0.53	39.2	-3.9
17,970.0	89.80	180.00	12,665.5	-5,175.9	122.5	3.39	2.23	-2.55	40.1	-6.6

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
18,033.0	90.30	179.00	12,665.5	-5,238.9	123.0	1.77	0.79	-1.59	39.3	-6.6	
18,065.0	89.50	178.60	12,665.5	-5,270.9	123.7	2.80	-2.50	-1.25	39.0	-6.2	
18,159.0	88.00	178.00	12,667.6	-5,364.9	126.5	1.72	-1.60	-0.64	40.0	-4.2	
18,191.6	87.69	177.76	12,668.8	-5,397.4	127.7	1.21	-0.96	-0.74	40.8	-3.2	
TGT 3 (Fox 30 Fed Com #703H)											
18,253.0	87.10	177.30	12,671.6	-5,458.7	130.3	1.21	-0.96	-0.74	42.7	-1.1	
18,348.0	86.50	177.20	12,676.9	-5,553.4	134.9	0.64	-0.63	-0.11	46.6	2.7	
18,411.0	87.90	176.10	12,680.0	-5,616.3	138.5	2.82	2.22	-1.75	48.8	5.9	
18,443.0	89.30	175.80	12,680.8	-5,648.2	140.8	4.47	4.37	-0.94	49.1	7.9	
18,506.0	86.80	175.20	12,682.9	-5,710.9	145.7	4.08	-3.97	-0.95	50.3	12.3	
18,538.0	88.80	176.00	12,684.1	-5,742.8	148.2	6.73	6.25	2.50	51.1	14.5	
18,569.0	89.60	176.70	12,684.6	-5,773.7	150.2	3.43	2.58	2.26	51.1	16.2	
18,601.0	91.60	178.00	12,684.2	-5,805.7	151.6	7.45	6.25	4.06	50.3	17.4	
18,632.0	92.10	179.90	12,683.2	-5,836.7	152.2	6.33	1.61	6.13	48.8	17.7	
18,695.0	92.70	182.10	12,680.6	-5,899.6	151.1	3.62	0.95	3.49	45.2	16.1	
18,727.0	91.40	182.10	12,679.4	-5,931.6	149.9	4.06	-4.06	0.00	43.6	14.6	
18,759.0	89.90	182.10	12,679.1	-5,963.5	148.8	4.69	-4.69	0.00	42.8	13.2	
18,822.0	88.40	182.00	12,680.0	-6,026.5	146.5	2.39	-2.38	-0.16	42.8	10.4	
18,853.0	90.00	181.60	12,680.5	-6,057.5	145.5	5.32	5.16	-1.29	42.8	9.2	
18,885.0	88.90	181.40	12,680.8	-6,089.5	144.7	3.49	-3.44	-0.62	42.6	8.1	
18,917.0	88.40	180.80	12,681.5	-6,121.4	144.1	2.44	-1.56	-1.87	42.9	7.2	
18,948.0	87.70	180.90	12,682.6	-6,152.4	143.6	2.28	-2.26	0.32	43.5	6.5	
19,011.0	90.50	176.80	12,683.6	-6,215.4	144.9	7.88	4.44	-6.51	43.6	7.3	
19,069.0	91.30	175.50	12,682.6	-6,273.2	148.8	2.63	1.38	-2.24	41.8	10.7	
19,106.0	90.40	174.80	12,682.1	-6,310.1	151.9	3.08	-2.43	-1.89	40.7	13.5	
19,170.0	91.00	175.50	12,681.3	-6,373.9	157.3	1.44	0.94	1.09	39.0	18.4	
19,201.0	92.80	176.70	12,680.3	-6,404.8	159.4	6.98	5.81	3.87	37.5	20.3	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lea County, NM (NAD 27 NME)	TVD Reference:	KB = 25' @ 3348.0usft (HP 465)
Site:	Fox 30 Fed Com	MD Reference:	KB = 25' @ 3348.0usft (HP 465)
Well:	#703H	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)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,296.0	95.10	179.10	12,673.7	-6,499.5	162.9	3.49	2.42	2.53	29.5	23.0
19,328.0	94.50	179.10	12,671.1	-6,531.4	163.4	1.87	-1.87	0.00	26.4	23.3
19,391.0	94.00	179.40	12,666.4	-6,594.2	164.2	0.92	-0.79	0.48	20.8	23.5
19,422.0	94.20	180.80	12,664.2	-6,625.1	164.2	4.55	0.65	4.52	18.1	23.3
19,454.0	94.00	181.30	12,661.9	-6,657.0	163.6	1.68	-0.62	1.56	15.4	22.4
19,485.0	93.50	181.20	12,659.9	-6,687.9	162.9	1.64	-1.61	-0.32	12.9	21.5
19,532.0	93.20	180.90	12,657.1	-6,734.9	162.1	0.90	-0.64	-0.64	9.5	20.2
19,580.0	92.00	181.20	12,654.9	-6,782.8	161.2	2.58	-2.50	0.62	6.6	18.9
19,675.0	90.90	182.60	12,652.5	-6,877.7	158.0	1.87	-1.16	1.47	2.8	15.0
19,770.0	90.50	182.40	12,651.4	-6,972.6	153.9	0.47	-0.42	-0.21	0.3	10.1
19,865.0	89.30	183.10	12,651.5	-7,067.5	149.3	1.46	-1.26	0.74	-0.9	4.7
19,936.0	88.44	182.14	12,652.9	-7,138.4	146.1	1.82	-1.22	-1.35	-0.6	0.9
HL Crossing, MD:19936.0', TVD:12652.9', N/S:-7138.4', E/W:146.1', INC:88.44										
19,939.0	88.40	182.10	12,653.0	-7,141.4	146.0	1.82	-1.22	-1.35	-0.6	0.8
Final MWD Survey (MD=19939.0')										
20,005.0	88.40	182.10	12,654.9	-7,207.3	143.6	0.00	0.00	0.00	0.3	-2.2
Final Projection to Bit (MD=20005.0') - PBHL (Fox 30 Fed Com #703H)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,651.9	12,507.8	121.6	103.5	HL Crossing, MD:12651.9', TVD:12507.8', N/S:121.6', E/W:103.5', INC:63.30
19,936.0	12,652.9	-7,138.4	146.1	HL Crossing, MD:19936.0', TVD:12652.9', N/S:-7138.4', E/W:146.1', INC:88.44
19,939.0	12,653.0	-7,141.4	146.0	Final MWD Survey (MD=19939.0')
20,005.0	12,654.9	-7,207.3	143.6	Final Projection to Bit (MD=20005.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 27 NME)

Fox 30 Fed Com #703H

HP 465

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #703H

Ground Level: 3323.0
KB = 25' @ 3348.0usft (HP 465)
Northing 401142.00 Easting 756999.00 Latitude 32° 5' 0.490 N Longitude 103° 30' 12.238 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	5103.0	0.70	162.30	5102.5	33.8	19.6	0.00	0.00	-33.4	
2	5200.5	0.70	162.30	5200.0	32.7	19.9	0.00	0.00	-32.3	
3	5726.0	9.88	9.55	5723.1	74.2	28.4	2.00	-154.48	-73.6	
4	7412.2	9.88	9.55	7384.3	359.6	76.4	0.00	0.00	-358.0	
5	7906.4	0.00	0.00	7876.0	401.6	83.5	2.00	180.00	-399.8	
6	12031.5	0.00	0.00	12001.1	401.6	83.5	0.00	0.00	-399.8	
7	12925.9	89.44	179.53	12574.0	-165.8	88.1	10.00	179.53	167.5	
8	14559.3	89.44	179.53	12590.0	-1799.0	101.4	0.00	0.00	1800.7	TGT 1 (Fox 30 Fed Com #703H)
9	16359.4	89.44	179.53	12607.0	-3599.0	116.1	0.00	-12.98	3600.6	TGT 2 (Fox 30 Fed Com #703H)
10	16366.7	89.33	179.53	12607.1	-3606.3	116.2	2.00	178.28	3607.9	
11	18159.6	89.33	179.53	12628.0	-5399.0	130.9	0.00	0.00	5400.5	TGT 3 (Fox 30 Fed Com #703H)
12	18168.2	89.16	179.53	12628.1	-5407.6	131.0	2.00	-180.00	5409.2	
13	19998.8	89.16	179.53	12655.0	-7238.0	146.0	0.00	0.00	7239.5	PBHL (Fox 30 Fed Com #703H)

CASINO DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOP (Fox 30 Fed Com #703H)	12001.1	401.6	83.5	401543.57	757082.55
FTP (Fox 30 Fed Com #703H)	12574.0	121.0	86.0	401263.00	757085.00
TGT 1 (Fox 30 Fed Com #703H)	12590.0	-1799.0	101.4	399343.00	767100.38
TGT 2 (Fox 30 Fed Com #703H)	12607.0	-3599.0	116.1	397643.00	767116.15
TGT 3 (Fox 30 Fed Com #703H)	12628.0	-5399.0	130.9	395743.00	767123.81
PBHL (Fox 30 Fed Com #703H)	12655.0	-7238.0	146.0	393904.00	767145.00

