

30-025-43892

EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ruby 2 State Com

#702H

OH

Design: OH

PVA Report

02 October, 2017

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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	Ruby 2 State Com		
Site Position:		Northing:	393,589.99 usft
From:	Map	Easting:	775,148.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 47.315 N
		Longitude:	103° 34' 42.355 W
		Grid Convergence:	0.40 °

Well	#702H		
Well Position	+N/-S	0.0 usft	Northing: 393,647.00 usft
	+E/-W	0.0 usft	Easting: 816,335.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 4' 44.776 N
		Longitude:	103° 26' 43.667 W
		Ground Level:	3,304.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	9/15/2017	6.86
			59.95
			47,840.73562525

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 (°)	237.18

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date	10/2/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
131.0	1,051.0	Invictvs MWD #1 (OH)	MWD	MWD - Standard	
1,143.0	17,504.0	Intrepid MWD (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
131.0	0.70	226.43	131.0	-0.6	-0.6	0.53	0.53	0.00	0.0	0.0
191.0	0.40	235.43	191.0	-0.9	-1.0	0.52	-0.50	15.00	0.0	0.0
220.0	0.60	131.43	220.0	-1.1	-1.0	2.75	0.69	-358.62	0.0	0.0
249.0	0.60	107.43	249.0	-1.2	-0.7	0.86	0.00	-82.76	0.0	0.0
277.0	0.50	217.43	277.0	-1.4	-0.7	3.22	-0.36	392.86	0.0	0.0
306.0	0.30	299.43	306.0	-1.4	-0.8	1.88	-0.69	282.76	0.0	0.0
338.0	0.70	156.43	338.0	-1.6	-0.8	2.99	1.25	-446.87	0.0	0.0
400.0	0.20	336.43	400.0	-1.8	-0.7	1.45	-0.81	-290.32	0.0	0.0
463.0	0.70	229.43	463.0	-2.0	-1.0	1.24	0.79	-169.84	0.0	0.0
495.0	0.50	136.43	495.0	-2.2	-1.1	2.75	-0.62	-290.62	0.0	0.0
525.0	0.70	220.43	525.0	-2.4	-1.1	2.72	0.67	280.00	0.0	0.0
557.0	0.60	158.43	557.0	-2.7	-1.2	2.11	-0.31	-193.75	0.0	0.0
620.0	0.40	302.43	620.0	-2.9	-1.2	1.51	-0.32	228.57	0.0	0.0
652.0	0.30	357.43	652.0	-2.8	-1.3	1.05	-0.31	171.87	0.0	0.0
683.0	0.60	306.43	683.0	-2.6	-1.5	1.52	0.97	-164.52	0.0	0.0
714.0	0.50	194.43	714.0	-2.6	-1.6	2.95	-0.32	-361.29	0.0	0.0
777.0	0.60	316.43	777.0	-2.7	-1.9	1.53	0.16	193.65	0.0	0.0
808.0	0.90	249.43	808.0	-2.6	-2.3	2.79	0.97	-216.13	0.0	0.0
871.0	0.90	237.43	871.0	-3.1	-3.2	0.30	0.00	-19.05	0.0	0.0
903.0	0.60	311.43	903.0	-3.1	-3.5	2.92	-0.94	231.25	0.0	0.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)	
934.0	0.90	277.43	934.0	-3.0	-3.9	1.69	0.97	-109.68	0.0	0.0	
966.0	0.10	287.43	966.0	-2.9	-4.1	2.51	-2.50	31.25	0.0	0.0	
997.0	0.20	255.43	997.0	-2.9	-4.2	0.41	0.32	-103.23	0.0	0.0	
1,051.0	0.30	283.43	1,051.0	-2.9	-4.4	0.29	0.19	51.85	0.0	0.0	
1,143.0	0.40	256.50	1,143.0	-2.9	-5.0	0.21	0.11	-29.27	-0.1	0.1	
1,331.0	4.00	326.90	1,330.8	2.4	-9.2	2.07	1.91	37.45	-3.2	-0.5	
1,515.0	4.70	328.60	1,514.3	14.2	-16.6	0.39	0.38	0.92	-8.1	-3.0	
1,702.0	4.70	331.40	1,700.6	27.5	-24.3	0.12	0.00	1.50	-9.0	-7.1	
1,890.0	6.20	322.60	1,887.8	42.3	-34.1	0.91	0.80	-4.68	-9.5	-12.3	
2,077.0	6.20	327.80	2,073.7	58.9	-45.7	0.30	0.00	2.78	-15.0	-14.6	
2,265.0	6.20	327.10	2,260.6	76.0	-56.6	0.04	0.00	-0.37	-19.2	-18.9	
2,452.0	6.10	313.80	2,446.5	91.4	-69.2	0.76	-0.05	-7.11	-17.9	-25.3	
2,640.0	5.90	322.80	2,633.5	106.0	-82.3	0.51	-0.11	4.79	-25.0	-23.4	
2,828.0	4.70	324.80	2,820.7	120.0	-92.6	0.65	-0.64	1.06	-27.1	-25.5	
3,015.0	3.70	323.80	3,007.2	131.1	-100.6	0.54	-0.53	-0.53	-24.4	-29.2	
3,202.0	3.30	347.30	3,193.9	141.2	-105.3	0.79	-0.21	12.57	-31.4	-23.8	
3,390.0	3.40	331.20	3,381.5	151.4	-109.2	0.50	0.05	-8.56	-18.8	-38.2	
3,577.0	4.20	314.00	3,568.1	161.0	-116.8	0.74	0.43	-9.20	-2.5	-44.0	
3,765.0	1.50	304.70	3,755.9	167.2	-123.8	1.45	-1.44	-4.95	11.6	-42.5	
3,939.0	1.60	247.70	3,929.8	167.5	-127.9	0.85	0.06	-32.76	44.6	-1.6	
4,127.0	1.10	69.00	4,117.8	167.2	-128.6	1.44	-0.27	-95.05	-50.3	-10.7	
4,315.0	1.90	68.20	4,305.7	169.0	-124.0	0.43	0.43	-0.43	-58.8	-19.5	
4,502.0	1.40	189.20	4,492.7	167.9	-121.5	1.54	-0.27	64.71	11.4	65.3	
4,690.0	2.00	126.20	4,680.6	163.7	-119.2	0.98	0.32	-33.51	-57.3	37.8	
4,878.0	0.30	259.80	4,868.6	161.7	-117.1	1.18	-0.90	71.06	68.6	17.9	
4,972.0	1.80	303.50	4,962.6	162.4	-118.6	1.70	1.60	46.49	60.3	-34.3	
5,065.0	0.50	61.00	5,055.6	163.4	-119.4	2.24	-1.40	126.34	-58.0	-36.4	

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)
5,252.0	0.70	108.00	5,242.6	163.5	-117.6	0.27	0.11	25.13	-67.9	18.3
5,439.0	3.90	274.30	5,429.4	163.6	-122.9	2.45	1.71	88.93	65.0	-1.4
5,627.0	4.20	277.70	5,617.0	165.0	-136.1	0.20	0.16	1.81	51.5	-4.9
5,814.0	4.30	279.30	5,803.4	167.1	-149.8	0.08	0.05	0.86	37.5	-6.1
6,001.0	3.90	277.30	5,990.0	169.0	-163.0	0.23	-0.21	-1.07	24.4	-5.0
6,189.0	3.60	279.10	6,177.6	170.7	-175.2	0.17	-0.16	0.96	11.9	-5.6
6,376.0	1.90	272.50	6,364.3	171.8	-184.1	0.92	-0.91	-3.53	3.5	-4.9
6,565.0	0.90	290.60	6,553.3	172.5	-188.6	0.57	-0.53	9.58	-2.6	-4.8
6,752.0	1.00	318.60	6,740.3	174.2	-191.0	0.25	0.05	14.97	-7.5	-2.3
6,939.0	0.70	85.50	6,927.3	175.5	-191.0	0.82	-0.16	67.86	2.5	8.7
7,126.0	0.70	70.10	7,114.2	176.0	-188.8	0.10	0.00	-8.24	-2.1	8.7
7,313.0	0.70	59.10	7,301.2	177.0	-186.7	0.07	0.00	-5.88	-6.0	7.9
7,500.0	0.50	61.00	7,488.2	178.0	-185.0	0.11	-0.11	1.02	-7.7	8.2
7,687.0	0.30	53.50	7,675.2	178.6	-183.9	0.11	-0.11	-4.01	-10.0	7.0
7,875.0	1.10	261.60	7,863.2	178.7	-185.3	0.73	0.43	-80.80	4.2	-11.1
8,062.0	1.30	237.10	8,050.2	177.3	-188.9	0.29	0.11	-13.10	4.6	-9.1
8,250.0	0.20	344.90	8,238.1	176.4	-190.7	0.73	-0.59	57.34	-9.8	0.4
8,438.0	0.80	69.60	8,426.1	177.2	-189.6	0.43	0.32	45.05	-1.8	10.1
8,625.0	1.10	63.60	8,613.1	178.4	-186.8	0.17	0.16	-3.21	-6.0	9.7
8,813.0	1.90	45.70	8,801.0	181.4	-182.9	0.49	0.43	-9.52	-13.5	6.8
9,000.0	1.50	64.60	8,988.0	184.6	-178.5	0.37	-0.21	10.11	-15.9	11.9
9,187.0	1.30	67.10	9,174.9	186.5	-174.3	0.11	-0.11	1.34	-20.0	12.6
9,375.0	1.60	61.30	9,362.8	188.6	-170.1	0.18	0.16	-3.09	-25.9	10.3
9,561.0	1.60	50.90	9,548.8	191.5	-165.8	0.16	0.00	-5.59	-32.5	5.0
9,749.0	1.00	245.90	9,736.8	192.5	-165.2	1.37	-0.32	-87.77	31.0	-13.9
9,935.0	1.50	236.10	9,922.7	190.5	-168.7	0.29	0.27	-5.27	28.9	-8.8
10,122.0	1.80	239.40	10,109.6	187.6	-173.3	0.17	0.16	1.76	22.9	-10.3

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)	
10,310.0	2.90	229.30	10,297.5	183.0	-179.4	0.62	0.59	-5.37	16.7	-6.6	
10,498.0	3.00	237.40	10,485.2	177.2	-187.2	0.23	0.05	4.31	6.0	-8.2	
10,686.0	2.00	261.00	10,673.1	174.1	-194.6	0.75	-0.53	12.55	-5.6	-8.0	
10,872.0	4.40	260.80	10,858.7	172.4	-204.8	1.29	1.29	-0.11	-15.9	-8.0	
11,059.0	0.90	299.50	11,045.5	172.0	-213.2	2.00	-1.87	20.70	-24.5	8.2	
11,247.0	2.20	314.60	11,233.5	175.3	-217.0	0.72	0.69	8.03	-26.5	14.7	
11,434.0	2.00	284.40	11,420.3	178.6	-222.7	0.59	-0.11	-16.15	-36.7	-2.4	
11,620.0	0.70	321.30	11,606.3	180.3	-226.6	0.81	-0.70	19.84	-34.6	22.0	
11,808.0	1.10	199.40	11,794.3	179.5	-227.9	0.84	0.21	-64.84	-1.6	-42.0	
11,938.0	1.40	318.30	11,924.3	179.5	-229.4	1.66	0.23	91.46	-36.9	22.8	
12,125.0	1.30	187.90	12,111.2	179.1	-231.2	1.31	-0.05	-69.73	5.9	-44.6	
12,219.0	3.70	183.60	12,205.1	175.0	-231.5	2.56	2.55	-4.57	6.4	-44.2	
12,266.0	6.50	181.60	12,251.9	170.8	-231.7	5.97	5.96	-4.26	9.3	-44.2	
12,313.0	7.40	183.20	12,298.6	165.2	-232.0	1.96	1.91	3.40	12.4	-45.1	
12,374.0	9.80	187.50	12,358.9	156.1	-232.8	4.07	3.93	7.05	19.1	-48.4	
12,408.0	14.00	188.20	12,392.2	149.1	-233.8	12.36	12.35	2.06	25.5	-50.7	
12,501.0	29.40	172.90	12,478.4	115.1	-232.6	17.51	16.56	-16.45	52.1	-40.5	
12,548.0	42.00	167.80	12,516.5	88.2	-227.8	27.53	26.81	-10.85	56.3	-32.2	
12,595.0	50.10	169.10	12,549.1	55.1	-221.1	17.35	17.23	2.77	52.8	-27.8	
12,641.0	59.50	171.40	12,575.6	18.1	-214.8	20.84	20.43	5.00	46.3	-24.5	
12,688.0	69.10	174.50	12,595.9	-23.9	-209.6	21.27	20.43	6.60	36.2	-22.2	
12,735.0	75.50	176.50	12,610.2	-68.5	-206.1	14.21	13.62	4.26	24.5	-20.2	
12,746.0	77.30	176.50	12,612.8	-79.2	-205.5	16.36	16.36	0.00	21.6	-19.7	
12,763.0	79.40	176.90	12,616.2	-95.8	-204.5	12.57	12.35	2.35	17.1	-19.0	
12,775.0	79.40	176.90	12,618.4	-107.6	-203.9	0.00	0.00	0.00	14.2	-18.4	
12,778.5	79.41	176.88	12,619.1	-111.0	-203.7	0.76	0.43	-0.64	13.4	-18.3	
HL Crossing, MD:12778.5', TVD:12619.1', N/S:-111.0', E/W:-203.7', INC:79.41											

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)
12,822.0	79.60	176.60	12,627.0	-153.7	-201.3	0.76	0.43	-0.64	5.2	-16.2
12,854.0	81.80	176.50	12,632.2	-185.3	-199.3	6.88	6.87	-0.31	0.9	-14.6
12,871.0	82.80	176.40	12,634.4	-202.1	-198.3	5.91	5.88	-0.59	-1.0	-13.7
12,903.0	84.60	176.20	12,638.0	-233.8	-196.3	5.66	5.62	-0.62	-3.8	-11.9
12,934.0	86.80	176.90	12,640.3	-264.7	-194.4	7.45	7.10	2.26	-5.5	-10.3
12,965.0	88.90	177.30	12,641.4	-295.6	-192.8	6.90	6.77	1.29	-6.4	-9.0
13,059.0	91.70	177.70	12,641.0	-389.5	-188.7	3.01	2.98	0.43	-7.9	-5.7
13,153.0	91.40	177.10	12,638.4	-483.4	-184.5	0.71	-0.32	-0.64	-11.4	-2.2
13,246.0	90.50	176.80	12,636.9	-576.2	-179.5	1.02	-0.97	-0.32	-13.9	1.9
13,340.0	89.10	175.80	12,637.2	-670.0	-173.5	1.83	-1.49	-1.06	-14.5	7.1
13,434.0	89.90	176.70	12,638.0	-763.8	-167.3	1.28	0.85	0.96	-14.6	12.5
13,527.0	89.40	176.30	12,638.6	-856.6	-161.6	0.69	-0.54	-0.43	-15.0	17.4
13,622.0	88.40	177.60	12,640.4	-951.5	-156.6	1.73	-1.05	1.37	-14.1	21.6
13,715.0	87.00	177.20	12,644.1	-1,044.3	-152.4	1.57	-1.51	-0.43	-11.4	25.0
13,809.0	85.20	176.90	12,650.5	-1,138.0	-147.5	1.94	-1.91	-0.32	-6.0	29.1
13,903.0	87.60	178.80	12,656.4	-1,231.7	-144.0	3.25	2.55	2.02	-0.9	31.8
13,996.0	87.30	178.80	12,660.6	-1,324.6	-142.1	0.32	-0.32	0.00	2.3	32.9
14,089.0	88.90	179.40	12,663.7	-1,417.5	-140.6	1.84	1.72	0.65	4.5	33.6
14,183.0	91.20	181.90	12,663.6	-1,511.5	-141.7	3.61	2.45	2.66	3.4	31.7
14,277.0	90.30	182.20	12,662.3	-1,605.4	-145.0	1.01	-0.96	0.32	1.3	27.6
14,370.0	89.90	181.90	12,662.2	-1,698.4	-148.4	0.54	-0.43	-0.32	0.2	23.4
14,465.0	89.30	181.30	12,662.8	-1,793.3	-151.0	0.89	-0.63	-0.63	-0.1	20.0
14,557.0	87.90	180.20	12,665.1	-1,885.3	-152.2	1.94	-1.52	-1.20	1.2	18.0
14,651.0	88.20	180.50	12,668.3	-1,979.2	-152.8	0.45	0.32	0.32	3.5	16.6
14,745.0	89.60	180.90	12,670.1	-2,073.2	-153.9	1.55	1.49	0.43	4.3	14.6
14,839.0	89.10	181.20	12,671.2	-2,167.2	-155.7	0.62	-0.53	0.32	4.5	12.1
14,932.0	90.70	181.60	12,671.3	-2,260.2	-157.9	1.77	1.72	0.43	3.7	9.0

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)
15,025.0	90.00	181.00	12,670.8	-2,353.1	-160.0	0.99	-0.75	-0.65	2.2	6.1
15,119.0	88.40	180.90	12,672.1	-2,447.1	-161.6	1.71	-1.70	-0.11	2.6	3.8
15,212.0	88.00	180.40	12,675.0	-2,540.1	-162.7	0.69	-0.43	-0.54	4.6	1.9
15,305.0	85.30	180.20	12,680.4	-2,632.9	-163.1	2.91	-2.90	-0.22	9.3	0.6
15,399.0	85.70	180.70	12,687.8	-2,726.6	-163.9	0.68	0.43	0.53	15.8	-0.9
15,493.0	93.10	181.40	12,688.8	-2,820.5	-165.6	7.91	7.87	0.74	16.0	-3.4
15,584.0	92.50	179.70	12,684.3	-2,911.4	-166.5	1.98	-0.66	-1.87	10.8	-5.1
15,678.0	88.10	179.30	12,683.8	-3,005.4	-165.7	4.70	-4.68	-0.43	9.5	-5.1
15,771.0	87.50	179.40	12,687.4	-3,098.3	-164.6	0.65	-0.65	0.11	12.3	-4.8
15,865.0	91.70	181.20	12,688.1	-3,192.3	-165.1	4.86	4.47	1.91	12.1	-6.1
15,958.0	92.30	180.60	12,684.8	-3,285.2	-166.6	0.91	0.65	-0.65	8.1	-8.4
16,052.0	92.40	180.10	12,681.0	-3,379.1	-167.1	0.54	0.11	-0.53	3.4	-9.7
16,146.0	87.20	178.60	12,681.3	-3,473.1	-166.1	5.76	-5.53	-1.60	2.9	-9.5
16,240.0	87.30	178.50	12,685.8	-3,566.9	-163.7	0.15	0.11	-0.11	6.6	-7.9
16,334.0	87.20	177.90	12,690.3	-3,660.8	-160.7	0.65	-0.11	-0.64	10.3	-5.7
16,427.0	86.20	177.80	12,695.7	-3,753.6	-157.3	1.08	-1.08	-0.11	14.9	-3.1
16,521.0	92.10	179.10	12,697.1	-3,847.5	-154.7	6.43	6.28	1.38	15.5	-1.3
16,615.0	93.30	179.40	12,692.6	-3,941.4	-153.5	1.32	1.28	0.32	10.2	-0.9
16,709.0	92.40	180.20	12,688.0	-4,035.2	-153.2	1.28	-0.96	0.85	4.8	-1.4
16,802.0	89.80	182.20	12,686.2	-4,128.2	-155.1	3.53	-2.80	2.15	2.2	-4.1
16,896.0	89.90	182.10	12,686.4	-4,222.1	-158.6	0.15	0.11	-0.11	1.6	-8.4
16,989.0	89.60	182.80	12,686.8	-4,315.0	-162.6	0.82	-0.32	0.75	1.2	-13.2
17,083.0	90.20	182.70	12,687.0	-4,408.9	-167.1	0.65	0.64	-0.11	0.6	-18.5
17,176.0	85.10	181.60	12,690.8	-4,501.7	-170.6	5.61	-5.48	-1.18	3.5	-22.8
17,269.0	81.70	181.00	12,701.5	-4,594.1	-172.7	3.71	-3.66	-0.65	13.3	-25.8
17,364.0	79.30	179.20	12,717.2	-4,687.8	-172.9	3.14	-2.53	-1.89	28.2	-26.9

PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3329.0usft (H&P 642)
Well:	#702H	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)	
17,407.0	79.47	179.26	12,725.1	-4,730.0	-172.3	0.43	0.41	0.14	35.8	-26.7	
HL Crossing, MD:17407.0', TVD:12725.1', N/S:-4730.0', E/W:-172.3', INC:79.47											
17,438.0	79.60	179.30	12,730.7	-4,760.5	-171.9	0.43	0.41	0.14	41.1	-26.6	
Final MWD Survey (MD=17438.0')											
17,504.0	79.60	179.30	12,742.6	-4,825.4	-171.1	0.00	0.00	0.00	52.5	-26.4	
Final Projection to Bit (MD=17504.0')											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
12,778.5	12,619.1	-111.0	-203.7	HL Crossing, MD:12778.5', TVD:12619.1', N/S:-111.0', E/W:-203.7', INC:79.41	
17,407.0	12,725.1	-4,730.0	-172.3	HL Crossing, MD:17407.0', TVD:12725.1', N/S:-4730.0', E/W:-172.3', INC:79.47	
17,438.0	12,730.7	-4,760.5	-171.9	Final MWD Survey (MD=17438.0')	
17,504.0	12,742.6	-4,825.4	-171.1	Final Projection to Bit (MD=17504.0')	

Checked By: _____ Approved By: _____ Date: _____