



HOBBS OCD
APR 12 2019
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Caravan 28 State Com

#701H

OH

Design: OH

Final PVA

06 February, 2019



Final PVA

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Caravan 28 State Com Well: #701H Wellbore: OH Design: OH		Local Co-ordinate Reference: Well #701H TVD Reference: KB = 25 @ 3544.0usft (HP 465) MD Reference: KB = 25 @ 3544.0usft (HP 465) North Reference: Grid Survey Calculation Method: Minimum Curvature Database: EDM 5000.14	
Project Lea County, NM (NAD 83 NME)			
Map System: US State Plane 1983 Geo Datum: North American Datum 1983 Map Zone: New Mexico Eastern Zone		System Datum: Mean Sea Level	
Site Caravan 28 State Com			
Site Position: From: Map Position Uncertainty: 0.0 usft		Northing: 435,268.00 usft Easting: 774,678.00 usft Slot Radius: 13-3/16 "	
		Latitude: 32° 11' 39.963 N Longitude: 103° 34' 44.423 W Grid Convergence: 0.40 "	
Well #701H			
Well Position +N-S 0.0 usft +E-W 0.0 usft Position Uncertainty 0.0 usft		Northing: 435,268.00 usft Easting: 774,737.00 usft Wellhead Elevation: usft	
		Latitude: 32° 11' 39.761 N Longitude: 103° 34' 43.738 W Ground Level: 3,519.0 usft	
Wellbore OH			
Magnetics			
Model Name	Sample Date	Declination (°)	Dip Angle (°)
IGRF2015	9/27/2018	6.82	60.02
Field Strength (nT) 47,787.54720490			
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	177.73
Survey Program			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
145.0	22,646.0	Intrepid MWD #1 (OH)	MWD
		Description	
		OWSG MWD - Standard	



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Site:	Caravan 28 State Com	MD Reference:	KB = 25 @ 3544.0usft (HP 465)
Well:	#701H	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)	Bulid (°/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
145.0	0.00	77.80	145.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
323.0	0.30	158.50	323.0	-0.4	0.2	0.17	0.17	0.00	-0.5	0.0	0.0
501.0	0.20	230.20	501.0	-1.1	0.1	0.17	-0.06	40.28	-0.6	0.9	0.9
688.0	0.20	271.90	688.0	-1.3	-0.5	0.08	0.00	22.30	-0.4	1.3	1.3
878.0	0.70	313.50	878.0	-0.5	-1.6	0.30	0.26	21.89	-0.9	1.5	1.5
1,067.0	0.70	318.80	1,067.0	1.2	-3.2	0.03	0.00	2.80	-3.0	1.6	1.6
1,238.0	0.60	339.10	1,238.0	2.8	-4.3	0.15	-0.06	11.87	-4.2	3.0	3.0
1,342.0	0.90	0.00	1,342.0	4.2	-4.4	0.39	0.29	20.10	-4.2	4.4	4.4
1,532.0	1.20	2.60	1,531.9	7.6	-4.4	0.16	0.16	1.37	-7.4	4.7	4.7
1,722.0	1.60	13.40	1,721.9	12.2	-3.7	0.25	0.21	5.68	-11.0	6.4	6.4
1,912.0	1.60	0.90	1,911.8	17.4	-3.0	0.18	0.00	-6.58	-17.4	3.3	3.3
2,102.0	4.00	59.60	2,101.6	23.4	2.8	1.82	1.26	30.89	-14.2	18.8	18.8
2,291.0	3.90	58.00	2,290.1	30.2	13.8	0.08	-0.05	-0.85	-27.8	18.3	18.3
2,481.0	3.60	54.20	2,479.7	37.1	24.2	0.20	-0.16	-2.00	-41.3	16.0	16.0
2,671.0	3.70	53.90	2,669.3	44.2	34.0	0.05	0.05	-0.16	-53.5	15.7	15.7
2,861.0	6.60	45.20	2,858.6	55.5	46.7	1.58	1.53	-4.58	-64.7	4.8	4.8
3,051.0	6.80	45.90	3,047.3	71.0	62.5	0.11	0.11	0.37	-66.8	0.9	0.9
3,241.0	9.10	39.70	3,235.4	90.4	80.2	1.29	1.21	-3.26	-66.4	-10.6	-10.6
3,431.0	9.20	44.30	3,423.0	112.9	100.4	0.39	0.05	2.42	-71.4	-9.4	-9.4
3,621.0	8.50	30.90	3,610.8	135.8	118.2	1.14	-0.37	-7.05	-69.8	-28.1	-28.1
3,811.0	8.00	33.60	3,798.8	158.8	132.8	0.33	-0.26	1.42	-71.8	-24.6	-24.6
4,001.0	6.70	26.30	3,987.2	179.8	145.0	0.84	-0.68	-3.84	-66.1	-32.1	-32.1
4,191.0	6.50	26.50	4,176.0	199.3	154.7	0.11	-0.11	0.11	-61.7	-28.9	-28.9
4,381.0	5.80	41.50	4,364.9	216.2	165.9	0.92	-0.37	7.89	-60.9	-13.3	-13.3
4,571.0	6.20	30.90	4,553.9	232.2	177.5	0.62	0.21	-5.58	-50.7	-25.1	-25.1
4,761.0	6.60	49.00	4,742.7	248.1	191.0	1.08	0.21	9.53	-51.2	-12.5	-12.5



Final PVA

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 Site: Caravan 28 State Com
 Well: #701H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #701H
 TVD Reference: KB = 25 @ 3544.0usft (HP 465)
 MD Reference: KB = 25 @ 3544.0usft (HP 465)
 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)
4,951.0	6.50	21.90	4,931.5	265.3	203.3	1.61	-0.05	-14.26	-34.5	-34.2
5,141.0	6.70	3.70	5,120.3	286.3	208.0	1.10	0.11	-9.58	-20.4	-33.7
5,331.0	6.60	2.20	5,309.0	308.3	209.1	0.11	-0.05	-0.79	-18.7	-21.1
5,521.0	7.30	16.80	5,497.6	330.8	213.0	1.00	0.37	7.68	-20.5	-5.7
5,710.0	7.90	20.90	5,684.9	354.4	221.1	0.43	0.32	2.17	-20.1	2.1
5,900.0	8.20	19.90	5,873.1	379.3	230.4	0.17	0.16	-0.53	-21.0	7.4
6,081.0	8.30	18.70	6,062.1	405.1	239.7	0.05	0.05	-0.10	-22.5	13.3
6,281.0	7.10	30.70	6,250.4	428.1	250.3	1.00	-0.63	5.79	-18.4	20.9
6,471.0	6.60	28.20	6,439.0	447.8	261.5	0.31	-0.26	-1.32	-15.6	21.7
6,661.0	6.50	29.00	6,627.8	466.9	271.8	0.07	-0.05	0.42	-10.5	23.8
6,851.0	5.50	41.60	6,816.8	483.1	283.1	0.87	-0.53	6.63	1.5	23.8
7,041.0	2.90	70.90	7,008.2	491.5	293.7	1.73	-1.37	15.42	18.5	10.2
7,231.0	2.80	68.50	7,198.0	494.7	302.6	0.08	-0.05	-1.28	17.6	4.3
7,421.0	2.50	61.80	7,385.8	498.4	310.5	0.23	-0.16	-3.53	9.0	5.3
7,611.0	2.30	47.40	7,575.6	502.9	317.0	0.33	-0.11	-7.58	-0.4	6.4
7,801.0	1.80	48.30	7,765.5	507.5	322.0	0.26	-0.26	0.47	-7.1	6.4
7,991.0	1.30	43.10	7,955.5	511.1	325.7	0.27	-0.26	-2.74	-12.8	5.5
8,181.0	0.70	79.10	8,145.4	512.9	328.3	0.44	-0.32	18.95	-10.0	13.2
8,371.0	0.20	131.70	8,335.4	512.9	329.7	0.32	-0.26	27.68	3.4	16.9
8,561.0	0.50	167.10	8,525.4	511.8	330.1	0.19	0.16	18.63	11.4	12.0
8,751.0	0.70	185.00	8,715.4	509.9	330.2	0.14	0.11	9.42	12.6	8.2
8,941.0	1.30	181.70	8,905.4	506.6	330.1	0.32	0.32	-1.74	8.8	8.8
9,131.0	0.90	179.70	9,085.3	502.9	330.0	0.21	-0.21	-1.05	4.9	9.0
9,321.0	0.80	201.70	9,285.3	500.2	329.5	0.18	-0.05	11.56	5.2	7.1
9,511.0	1.20	234.40	9,475.3	497.8	327.4	0.36	0.21	17.21	5.1	3.9
9,701.0	0.40	232.70	9,665.3	496.2	325.3	0.42	-0.42	-0.89	2.3	4.0
9,891.0	1.60	199.30	9,855.2	493.3	323.9	0.68	0.63	-17.58	-3.5	4.3



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Well:	#701H					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)		
10,080.0	2.60	223.50	10,044.1	487.7	320.0	0.70	0.53	12.80	-8.1	6.4		
10,271.0	2.30	210.30	10,234.9	481.3	315.1	0.33	-0.16	-6.91	-17.4	3.4		
10,459.0	1.50	228.70	10,422.8	478.4	311.4	0.53	-0.43	9.79	-21.5	9.9		
10,649.0	1.40	216.30	10,612.8	472.9	308.1	0.17	-0.05	-6.53	-27.9	4.5		
10,839.0	1.40	144.60	10,802.7	469.1	308.1	0.88	0.00	-37.74	-16.1	-27.2		
11,029.0	0.50	214.80	10,992.7	466.5	309.0	0.69	-0.47	36.95	-32.7	8.1		
11,219.0	2.10	288.80	11,182.7	467.0	305.2	1.06	0.84	38.95	-5.0	34.4		
11,409.0	0.60	199.90	11,372.6	467.2	301.6	1.14	-0.79	-46.79	-35.6	-7.8		
11,599.0	1.80	109.70	11,562.6	465.2	304.0	1.00	0.63	-47.47	4.9	-36.6		
11,755.0	2.60	136.60	11,718.5	461.8	308.8	0.82	0.51	17.24	-17.9	-33.7		
11,830.0	2.50	154.60	11,793.4	459.1	310.7	1.07	-0.13	24.00	-30.7	-26.0		
11,925.0	1.90	159.50	11,888.3	455.8	312.1	0.66	-0.63	5.16	-36.4	-23.1		
12,006.9	3.80	199.49	11,970.1	451.9	311.6	3.34	2.45	48.84	-46.6	6.6		
KOP (Caravan 28 State Com #701H)												
12,020.0	4.30	202.10	11,983.2	451.0	311.3	3.34	3.02	19.90	-47.1	8.7		
12,052.4	7.88	200.52	12,015.4	447.8	310.1	11.07	11.06	-4.87	-48.9	6.5		
HL Crossing, MD:12052.4', TVD:12015.4', N/S:447.5', E/W:310.1', INC:7.88												
12,067.0	9.50	200.20	12,029.8	445.7	309.3	11.07	11.07	-2.21	-49.5	5.6		
12,115.0	16.30	195.20	12,076.6	435.5	306.2	14.34	14.17	-10.42	-51.8	-1.8		
12,162.0	21.50	198.70	12,121.0	421.0	301.7	11.32	11.06	7.45	-53.9	-3.4		
12,210.0	24.00	197.20	12,165.3	403.3	296.0	5.35	5.21	-3.12	-53.9	-11.3		
12,242.0	25.00	193.90	12,194.4	390.5	292.4	5.30	3.12	-10.31	-51.1	-18.7		
12,305.0	30.00	189.60	12,250.3	362.0	286.6	8.53	7.94	-6.83	-41.6	-29.9		
12,352.0	35.30	184.10	12,289.9	336.9	283.7	12.91	11.28	-11.70	-31.2	-36.8		
12,400.0	40.60	179.30	12,327.7	307.4	282.9	12.63	11.04	-10.00	-20.3	-39.7		
FTP (Caravan 28 State Com #701H)												
12,447.0	47.80	176.60	12,361.4	274.7	284.1	16.04	15.53	-5.74	-11.3	-38.9		



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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Survey											
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12,495.0	54.30	174.50	12,391.5	237.4	287.0	13.78	13.33	-4.37	-3.6	-36.0	
12,542.0	61.30	174.40	12,416.5	197.9	290.8	14.89	14.89	-0.21	2.1	-32.2	
12,590.0	68.00	175.00	12,437.1	154.7	294.8	14.00	13.96	1.25	7.0	-28.3	
12,637.0	76.10	175.30	12,451.5	110.2	298.6	17.24	17.23	0.64	10.4	-24.9	
12,685.0	83.10	175.70	12,460.2	63.2	302.3	14.61	14.58	0.83	12.3	-21.6	
12,777.0	86.20	176.40	12,468.8	-28.2	308.6	3.45	3.37	0.76	18.5	-16.0	
12,872.0	85.70	177.60	12,475.5	-122.8	313.6	1.37	-0.53	1.26	24.4	-11.7	
12,968.0	89.70	179.30	12,479.2	-216.7	316.1	4.62	4.26	1.81	27.5	-9.8	
13,061.0	90.50	180.20	12,479.1	-311.7	316.5	1.27	0.84	0.95	26.6	-10.1	
13,156.0	88.80	179.50	12,479.7	-406.7	316.8	1.94	-1.79	-0.74	26.5	-10.5	
13,251.0	90.50	178.70	12,480.2	-501.7	318.3	1.98	1.79	-0.84	26.4	-9.6	
13,346.0	92.10	179.40	12,478.1	-596.6	319.9	1.84	1.68	0.74	23.5	-8.7	
13,441.0	91.20	179.80	12,475.4	-691.6	320.5	1.04	-0.95	0.42	20.0	-8.7	
13,536.0	91.30	179.90	12,473.3	-786.6	320.8	0.15	0.11	0.11	17.3	-9.1	
13,631.0	90.20	179.80	12,472.0	-881.6	321.0	1.18	-1.16	-0.11	15.3	-9.5	
13,725.0	88.10	178.20	12,473.4	-975.5	322.7	2.81	-2.23	-1.70	16.0	-8.5	
13,820.0	88.90	178.10	12,475.9	-1,070.4	325.7	0.85	0.84	-0.11	17.8	-8.1	
13,915.0	90.30	179.00	12,478.6	-1,165.4	328.1	1.75	1.47	0.85	17.7	-4.4	
14,010.0	89.40	179.10	12,476.8	-1,260.4	329.7	0.95	-0.95	0.11	17.3	-3.5	
14,105.0	89.50	180.00	12,477.7	-1,355.4	330.4	0.95	0.11	0.95	17.5	-3.4	
14,200.0	91.30	180.50	12,477.1	-1,450.4	330.0	1.97	1.89	0.53	16.1	-4.5	
14,295.0	91.80	181.60	12,474.5	-1,545.3	328.3	1.27	0.53	1.16	12.8	-6.9	
14,390.0	90.00	181.10	12,473.0	-1,640.3	326.1	1.97	-1.89	-0.53	10.6	-9.7	
14,485.0	88.60	180.40	12,474.2	-1,735.3	324.8	1.65	-1.47	-0.74	11.1	-11.6	
14,580.0	91.00	179.60	12,474.5	-1,830.3	324.8	2.66	2.53	-0.84	10.7	-12.3	
14,675.0	88.20	178.40	12,475.2	-1,925.2	326.5	3.21	-2.95	-1.26	10.6	-11.3	



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14,737.2	88.92	178.20	12,478.7	-1,987.3	328.3	1.20	1.16	-0.32	11.7	-9.9	
TGT 1 (Caravan 28 State Com #701H)											
14,770.0	89.30	178.10	12,477.2	-2,020.2	329.4	1.20	1.16	-0.32	12.1	-9.1	
14,865.0	90.60	177.90	12,477.3	-2,115.1	332.7	1.38	1.37	-0.21	11.7	-8.4	
14,960.0	91.70	178.50	12,475.4	-2,210.0	335.7	1.32	1.16	0.63	9.3	-4.1	
15,055.0	91.20	178.30	12,473.0	-2,305.0	338.3	0.57	-0.53	-0.21	6.4	-2.1	
15,150.0	91.00	178.60	12,471.2	-2,399.9	340.9	0.38	-0.21	0.32	4.1	-0.2	
15,248.0	92.30	178.50	12,468.4	-2,497.8	343.4	1.33	1.33	-0.10	0.8	1.6	
15,343.0	91.40	180.80	12,465.3	-2,592.8	343.9	2.60	-0.95	2.42	-2.7	1.6	
15,438.0	90.30	181.10	12,463.9	-2,687.7	342.4	1.20	-1.18	0.32	-4.6	-0.7	
15,533.0	88.80	181.50	12,464.6	-2,782.7	340.2	1.63	-1.58	0.42	-4.3	-3.5	
15,628.0	88.40	181.40	12,467.0	-2,877.7	337.8	0.43	-0.42	-0.11	-2.5	-6.5	
15,723.0	89.20	180.90	12,469.0	-2,972.6	335.9	0.99	0.84	-0.53	-1.0	-9.1	
15,818.0	89.70	180.90	12,469.9	-3,067.6	334.4	0.53	0.53	0.00	-0.5	-11.2	
15,913.0	90.10	181.00	12,470.0	-3,162.6	332.8	0.43	0.42	0.11	-0.8	-13.5	
16,008.0	89.60	180.90	12,470.3	-3,257.6	331.3	0.54	-0.53	-0.11	-1.1	-15.7	
16,104.0	90.00	180.90	12,470.6	-3,353.6	329.8	0.42	0.42	0.00	-1.2	-17.9	
16,199.0	88.50	180.50	12,471.8	-3,448.5	328.6	1.63	-1.58	-0.42	-0.5	-19.7	
16,294.0	88.30	181.20	12,474.5	-3,543.5	327.2	0.77	-0.21	0.74	1.7	-21.7	
16,389.0	89.50	181.10	12,476.3	-3,638.5	325.3	1.27	1.26	-0.11	3.1	-24.3	
16,484.0	88.20	178.00	12,478.2	-3,733.4	326.0	3.54	-1.37	-3.26	4.5	-24.2	
16,578.0	88.80	178.50	12,480.7	-3,827.3	328.9	0.83	0.64	0.53	6.5	-22.0	
16,673.0	90.50	178.60	12,481.3	-3,922.2	333.0	2.68	1.79	-2.00	6.8	-18.8	
16,740.2	90.71	176.60	12,480.6	-3,989.4	336.9	0.31	0.31	0.00	5.6	-15.1	
TGT 2 (Caravan 28 State Com #701H)											
16,769.0	90.80	176.60	12,480.2	-4,018.1	338.6	0.31	0.31	0.00	5.1	-13.6	
16,864.0	90.80	176.30	12,478.9	-4,112.9	344.5	0.32	0.00	-0.32	3.5	-8.3	



Final PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #701H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3544.0usft (HP 465)
Site:	Caravan 28 State Com	MD Reference:	KB = 25 @ 3544.0usft (HP 465)
Well:	#701H	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)
16,959.0	91.20	176.40	12,477.2	-4,207.7	350.6	0.43	0.42	0.11	1.7	-2.9
17,050.0	91.50	176.50	12,475.1	-4,298.5	356.2	0.35	0.33	0.11	-0.7	2.1
17,146.0	89.80	179.20	12,474.0	-4,394.4	359.8	3.32	-1.77	2.81	-2.0	5.0
17,241.0	88.70	179.60	12,475.2	-4,489.4	360.8	1.23	-1.16	0.42	-1.0	5.3
17,336.0	89.40	179.40	12,476.8	-4,584.4	361.6	0.77	0.74	-0.21	0.3	5.5
17,431.0	86.90	179.10	12,478.9	-4,679.3	362.9	2.65	-2.63	-0.32	3.1	6.1
17,526.0	91.30	179.70	12,481.4	-4,774.3	363.9	4.67	4.63	0.63	4.4	6.4
17,621.0	91.00	179.30	12,478.4	-4,869.2	364.7	0.53	-0.32	-0.42	2.2	6.6
17,716.0	93.90	180.10	12,475.4	-4,964.1	365.2	3.17	3.05	0.84	-2.1	6.4
17,811.0	95.30	180.30	12,467.8	-5,058.8	364.9	1.49	1.47	0.21	-9.9	5.4
17,906.0	94.20	182.70	12,459.9	-5,153.5	362.4	2.77	-1.16	2.53	-18.0	2.3
18,001.0	90.30	182.60	12,456.2	-5,248.3	358.0	4.11	-4.11	-0.11	-22.0	-2.7
18,096.0	89.10	183.10	12,456.7	-5,343.1	353.3	1.37	-1.26	0.53	-21.7	-8.1
18,191.0	85.90	181.20	12,460.8	-5,438.0	349.7	3.92	-3.37	-2.00	-17.8	-12.4
18,286.0	87.80	179.40	12,466.0	-5,532.8	349.2	2.75	2.00	-1.89	-12.8	-13.5
18,381.0	87.00	179.90	12,470.3	-5,627.7	349.8	0.99	-0.84	0.53	-8.8	-13.6
18,476.0	88.20	178.40	12,474.3	-5,722.6	351.2	2.02	1.26	-1.58	-5.0	-12.8
18,571.0	88.00	178.40	12,477.5	-5,817.5	353.9	0.21	-0.21	0.00	-2.1	-10.8
18,666.0	89.30	178.50	12,479.7	-5,912.5	356.4	1.37	1.37	0.11	-0.1	-8.9
18,743.3	90.60	177.44	12,479.8	-5,988.8	359.2	2.17	1.68	-1.37	-0.2	-6.7
TGT 3 (Caravan 28 State Com #701H)										
18,761.0	90.90	177.20	12,479.5	-6,007.4	360.0	2.17	1.68	-1.37	-0.5	-6.0
18,857.0	92.20	178.00	12,476.9	-6,103.3	364.0	1.59	1.35	0.83	-3.3	-2.7
18,952.0	90.80	177.20	12,474.5	-6,198.1	368.0	1.70	-1.47	-0.84	-6.1	0.6
19,047.0	90.10	177.10	12,473.7	-6,293.0	372.7	0.74	-0.74	-0.11	-7.1	4.7
19,142.0	90.50	179.70	12,473.2	-6,388.0	375.4	2.77	0.42	2.74	-7.8	6.7
19,237.0	90.80	179.40	12,472.1	-6,483.0	376.1	0.45	0.32	-0.32	-9.1	6.8



Final PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Caravan 28 State Com
 Well: #701H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #701H
 TVD Reference: KB = 25 @ 3544.0usft (HP 465)
 MD Reference: KB = 25 @ 3544.0usft (HP 465)
 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)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,332.0	89.40	179.30	12,472.0	-6,578.0	377.2	1.48	-1.47	-0.11	-9.5	7.2
19,427.0	87.40	178.30	12,474.6	-6,672.9	379.2	2.35	-2.11	-1.05	-7.1	8.5
19,521.0	88.80	178.30	12,478.9	-6,766.8	382.0	2.55	2.55	0.00	-5.0	10.7
19,616.0	94.00	178.30	12,473.8	-6,861.7	384.8	4.42	4.42	0.00	-8.4	12.8
19,711.0	94.30	178.60	12,466.9	-6,956.4	387.3	0.45	0.32	0.32	-15.5	14.8
19,806.0	94.60	178.60	12,459.5	-7,051.1	389.7	0.32	0.32	0.00	-23.1	16.4
19,900.0	92.00	181.30	12,454.1	-7,144.9	389.7	3.98	-2.77	2.87	-28.8	15.8
19,995.0	87.40	182.00	12,454.6	-7,239.9	387.0	4.90	-4.84	0.74	-28.5	12.4
20,090.0	88.40	181.90	12,458.1	-7,334.7	383.8	1.08	1.05	-0.11	-25.3	8.5
20,185.0	89.20	181.50	12,460.1	-7,429.7	381.0	0.84	0.84	-0.42	-23.5	5.0
20,280.0	88.00	182.30	12,462.4	-7,524.6	377.8	1.52	-1.26	0.84	-21.4	1.2
20,375.0	89.40	181.80	12,464.6	-7,619.5	374.4	1.56	1.47	-0.53	-19.5	-2.8
20,470.0	88.60	181.50	12,466.2	-7,714.5	371.7	0.90	-0.84	-0.32	-18.1	-6.2
20,565.0	89.60	181.40	12,467.7	-7,809.4	369.3	1.08	1.05	-0.11	-16.8	-9.3
20,660.0	90.40	180.30	12,467.7	-7,904.4	367.9	1.43	0.84	-1.16	-17.1	-11.3
20,755.0	91.50	180.10	12,466.1	-7,999.4	367.5	1.18	1.16	-0.21	-18.9	-12.3
20,850.0	90.30	180.80	12,464.6	-8,094.4	366.8	1.48	-1.26	0.74	-20.6	-13.7
20,944.0	89.50	179.70	12,464.8	-8,188.4	366.4	1.45	-0.85	-1.17	-20.7	-14.8
21,040.0	89.40	179.90	12,465.7	-8,284.4	366.7	0.23	-0.10	0.21	-20.0	-15.1
21,135.0	89.50	179.40	12,466.6	-8,379.4	367.3	0.54	0.11	-0.53	-19.3	-15.2
21,230.0	89.90	178.70	12,467.1	-8,474.3	368.9	0.85	0.42	-0.74	-19.1	-14.3
21,325.0	90.30	178.40	12,467.0	-8,569.3	371.3	0.53	0.42	-0.32	-19.5	-12.6
21,420.0	88.70	177.80	12,467.8	-8,664.3	374.4	1.80	-1.68	-0.63	-18.9	-10.1
21,515.0	88.60	177.80	12,470.0	-8,759.2	378.1	0.11	-0.11	0.00	-16.9	-7.1
21,610.0	89.60	177.00	12,471.5	-8,854.0	382.4	1.35	1.05	-0.84	-15.6	-3.4
21,705.0	90.20	177.20	12,471.7	-8,948.9	387.2	0.67	0.63	0.21	-15.7	0.7
21,800.0	89.80	179.10	12,471.7	-9,043.9	390.2	2.04	-0.42	2.00	-15.9	3.1



Final PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #701H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3544.0usft (HP 465)
Site:	Caravan 28 State Com	MD Reference:	KB = 25 @ 3544.0usft (HP 465)
Well:	#701H	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)	
21,895.0	90.80	179.80	12,471.2	-9,138.9	391.2	1.28	1.05	0.74	-16.7	3.4	
21,990.0	88.20	180.10	12,472.0	-9,233.8	391.2	2.75	-2.74	0.32	-16.1	2.8	
22,085.0	89.00	179.70	12,474.3	-9,328.8	391.4	0.94	0.84	-0.42	-14.0	2.3	
22,181.0	90.60	179.20	12,474.7	-9,424.8	392.3	1.75	1.67	-0.52	-13.9	2.6	
22,276.0	91.10	178.50	12,473.3	-9,519.8	394.2	0.91	0.53	-0.74	-15.5	3.8	
22,371.0	90.60	178.10	12,471.9	-9,614.7	397.0	0.87	-0.53	-0.42	-17.2	6.0	
22,466.0	92.10	178.30	12,469.6	-9,709.6	400.0	1.59	1.58	0.21	-19.7	8.3	
22,561.0	93.30	178.50	12,465.2	-9,804.5	402.7	1.28	1.26	0.21	-24.4	10.3	
22,585.0	93.50	179.00	12,463.7	-9,828.5	403.2	2.24	0.83	2.08	-25.9	10.7	
Final MWD Survey (MD=22585.0)											
22,646.0	93.50	179.00	12,460.0	-9,889.3	404.3	0.00	0.00	0.00	-29.9	11.4	
Final Projection to Bit (MD=22646.0) - PBHL (Caravan 28 State Com #701H)											

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,052.4	12,015.4	447.8	310.1	HL Crossing, MD:12052.4', TVD:12015.4', N/S:447.8', E/W:310.1', INC:7.88
22,585.0	12,463.7	-9,828.5	403.2	Final MWD Survey (MD=22585.0')
22,646.0	12,460.0	-9,889.3	404.3	Final Projection to Bit (MD=22646.0')

Checked By: _____	Approved By: _____	Date: _____
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