



HOBBS OCD
JUL 30 2019
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Colgrove 35 Fed Com

#704H

OH

Design: OH

Midland PVA

02 June, 2019



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #704H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3345.0usft
Site:	Colgrove 35 Fed Com	MD Reference:	KB = 25' @ 3345.0usft
Well:	#704H	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	Colgrove 35 Fed Com		
Site Position:		Northing:	364,902.00 usft
From:	Map	Easting:	785,291.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 0' 2.718 N
		Longitude:	103° 32' 46.899 W
		Grid Convergence:	0.42 °

Well	#704H		
Well Position	+N-S	0.0 usft	Northing: 364,976.00 usft
	+E-W	0.0 usft	Easting: 785,655.00 usft
Position Uncertainty	0.0 usft		Wellhead Elevation: usft
			Latitude: 32° 0' 3.424 N
			Longitude: 103° 32' 42.668 W
			Ground Level: 3,320.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	3/4/2019	(°)
			6.74
			Dip Angle
			(°)
			59.84
			Field Strength
			(nT)
			47,633.41269673

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
			(°)
			1.97

Survey Program	Date 8/2/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
198.0	19,861.0	Prodirectional MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey												
MD (usft)	Inc (°)	Asi (azimuth) (°)	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
199.0	1.10	81.10	199.0	0.3	1.9	0.56	0.56	0.00	-1.9	0.0		0.0
309.0	0.90	75.20	309.0	0.7	3.8	0.20	-0.18	-5.22	-3.8	-0.3		
411.0	0.60	76.30	411.0	1.0	5.1	0.29	-0.29	1.08	-5.2	-0.2		
505.0	0.50	68.90	505.0	1.3	5.9	0.13	-0.11	-7.87	-6.0	-0.9		
599.0	0.20	12.50	599.0	1.6	6.4	0.45	-0.32	-60.00	-2.9	-5.9		
693.0	0.40	304.00	693.0	1.9	6.1	0.40	0.21	-72.87	4.0	-5.0		
787.0	0.50	267.60	787.0	2.1	5.4	0.32	0.11	-39.72	5.5	-1.9		
866.0	0.30	257.40	866.0	2.0	4.9	0.27	-0.25	-12.91	5.2	-0.9		
946.0	0.30	310.30	946.0	2.1	4.5	0.33	0.00	66.12	2.1	-4.6		
1,040.0	0.20	268.80	1,039.9	2.3	4.2	0.21	-0.11	-44.15	4.2	-2.2		
1,134.0	0.40	253.40	1,133.9	2.2	3.7	0.23	0.21	-16.38	4.2	-1.0		
1,228.0	0.40	249.80	1,227.9	2.0	3.1	0.03	0.00	-3.83	3.6	-0.8		
1,322.0	0.40	261.30	1,321.9	1.8	2.4	0.09	0.00	12.23	2.7	-1.4		
1,416.0	0.40	260.50	1,415.9	1.7	1.8	0.01	0.00	-0.85	2.1	-1.4		
1,511.0	0.50	258.30	1,510.9	1.6	1.1	0.11	0.11	-2.32	1.4	-1.3		
1,605.0	0.60	263.00	1,604.9	1.4	0.2	0.12	0.11	5.00	0.3	-1.4		
1,699.0	0.70	269.00	1,698.9	1.4	-0.9	0.13	0.11	6.38	-0.9	-1.4		
1,793.0	0.80	267.20	1,792.9	1.3	-2.1	0.11	0.11	-1.91	-2.0	-1.4		
1,887.0	0.90	271.10	1,886.9	1.3	-3.5	0.12	0.11	4.15	-3.5	-1.2		
1,981.0	1.10	275.60	1,980.9	1.4	-5.1	0.23	0.21	4.79	-5.3	-0.9		
2,075.0	1.10	289.50	2,074.9	1.8	-6.9	0.28	0.00	14.79	-7.1	0.6		
2,169.0	1.10	289.50	2,168.9	2.4	-8.8	0.00	0.00	0.00	-8.9	0.6		
2,262.0	1.10	300.10	2,261.8	3.1	-10.2	0.22	0.00	11.40	-10.4	2.4		
2,356.0	1.00	313.70	2,355.8	4.2	-11.6	0.28	-0.11	14.47	-11.2	5.0		
2,450.0	0.90	327.30	2,449.8	5.3	-12.6	0.26	-0.11	14.47	-11.3	7.7		
2,544.0	1.00	351.50	2,543.8	6.8	-13.1	0.44	0.11	25.74	-8.6	11.9		



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 MD Reference: KB = 25' @ 3345.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
2,638.0	1.30	1.90	2,637.8	8.7	-13.2	0.39	0.32	11.06	-8.2	13.5	
2,731.0	1.40	11.90	2,730.8	10.8	-12.9	0.27	0.11	10.75	-7.9	14.9	
2,825.0	1.70	17.90	2,824.7	13.3	-12.2	0.36	0.32	6.38	-8.9	15.7	
2,918.0	1.90	36.80	2,917.7	15.8	-10.9	0.67	0.22	20.32	-8.1	18.2	
3,011.0	2.30	53.10	3,010.6	18.2	-8.5	0.77	0.43	17.53	-4.1	19.6	
3,106.0	1.80	68.40	3,105.6	19.9	-5.8	0.78	-0.53	18.11	-2.1	20.5	
3,200.0	2.00	91.80	3,199.5	20.4	-2.6	0.85	0.21	24.89	3.2	20.3	
3,294.0	0.60	126.40	3,293.5	20.0	-0.5	1.64	-1.49	36.81	12.3	15.8	
3,388.0	0.40	195.50	3,387.5	19.4	-0.2	0.63	-0.21	73.51	18.6	-5.4	
3,482.0	0.30	239.50	3,481.5	19.0	-0.5	0.30	-0.11	46.81	9.2	-16.6	
3,576.0	0.40	348.90	3,575.5	19.2	-0.8	0.61	0.11	118.38	-19.0	-2.8	
3,669.0	0.90	6.30	3,668.5	20.2	-0.8	0.57	0.54	18.71	-20.0	3.0	
3,763.0	1.60	354.30	3,762.4	22.3	-0.8	0.79	0.74	-12.77	-22.2	-1.4	
3,856.0	2.30	348.30	3,855.4	25.4	-1.3	0.78	0.75	-8.45	-25.1	-3.8	
3,950.0	1.50	330.00	3,949.3	28.3	-2.3	1.06	-0.65	-19.47	-25.7	-12.1	
4,044.0	1.00	313.20	4,043.3	29.8	-3.5	0.65	-0.53	-17.87	-23.1	-19.4	
4,138.0	1.10	170.90	4,137.3	29.6	-4.0	2.11	0.11	-151.38	29.8	0.7	
4,233.0	0.50	126.00	4,232.3	28.4	-3.5	0.87	-0.63	-47.26	19.6	20.9	
4,327.0	0.70	109.60	4,326.3	28.0	-2.8	0.28	0.21	-17.45	11.9	25.5	
4,421.0	0.30	38.60	4,420.3	28.0	-1.9	0.71	-0.43	-75.53	-20.7	19.0	
4,515.0	0.90	340.60	4,514.3	28.9	-2.0	0.83	0.64	-61.70	-27.9	-7.7	
4,610.0	1.70	12.60	4,609.3	31.0	-2.0	1.11	0.84	33.68	-29.8	8.7	
4,704.0	3.00	82.60	4,703.2	32.6	0.8	3.08	1.38	74.47	-5.0	32.3	
4,797.0	7.00	111.90	4,795.8	30.8	8.4	4.97	4.30	31.51	3.6	31.8	
4,892.0	8.80	119.40	4,889.9	25.1	20.1	2.18	1.89	7.89	-5.2	31.8	
4,985.0	8.50	118.80	4,981.9	18.3	32.4	0.34	-0.32	-0.65	-19.4	31.7	
5,079.0	9.70	121.00	5,074.7	10.8	45.2	1.33	1.28	2.34	-32.9	32.9	



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5,173.0	9.80	122.30	5,167.3	2.5	58.8	0.26	0.11	1.38	-47.4	33.8		
5,267.0	10.00	120.20	5,259.9	-5.8	72.8	0.44	0.21	-2.23	-61.0	31.8		
5,360.0	10.20	118.60	5,351.5	-13.8	88.8	0.37	0.22	-1.72	-71.5	30.1		
5,454.0	10.50	119.10	5,444.0	-22.0	101.6	0.33	0.32	0.53	-78.2	31.2		
5,548.0	10.40	118.80	5,536.4	-30.2	116.5	0.12	-0.11	-0.32	-82.3	31.4		
5,641.0	10.30	116.90	5,627.9	-38.1	131.3	0.38	-0.11	-2.04	-84.0	29.7		
5,735.0	9.80	116.80	5,720.5	-45.4	145.9	0.53	-0.53	-0.32	-83.5	30.8		
5,828.0	9.70	118.20	5,812.1	-52.4	160.0	0.13	-0.11	-0.43	-82.5	31.7		
5,922.0	10.10	122.60	5,904.7	-60.4	174.1	1.24	0.43	8.81	-77.5	41.2		
6,017.0	10.20	124.90	5,998.2	-69.7	188.0	0.44	0.11	2.42	-75.2	43.6		
6,111.0	10.10	122.80	6,090.8	-78.9	201.8	0.41	-0.11	-2.23	-78.2	40.2		
6,204.0	9.50	122.30	6,182.4	-87.4	215.1	0.65	-0.65	-0.54	-75.3	39.3		
6,298.0	9.30	121.50	6,275.1	-95.5	228.1	0.25	-0.21	-0.85	-74.1	38.2		
6,392.0	9.20	122.20	6,367.9	-103.5	241.0	0.16	-0.11	0.74	-71.5	39.0		
6,486.0	8.70	120.70	6,460.8	-111.1	253.5	0.59	-0.53	-1.60	-69.9	37.2		
6,580.0	8.50	119.60	6,553.7	-118.2	265.6	0.28	-0.21	-1.17	-67.5	36.4		
6,674.0	8.60	119.00	6,646.7	-125.0	277.8	0.14	0.11	-0.64	-64.7	38.4		
6,768.0	8.50	118.60	6,739.6	-131.6	290.0	0.12	-0.11	-0.43	-61.7	38.8		
6,862.0	8.50	117.70	6,832.6	-138.3	302.3	0.14	0.00	-0.96	-59.0	36.9		
6,956.0	7.20	121.80	6,925.7	-144.7	313.4	1.50	-1.38	4.36	-51.9	41.4		
7,050.0	6.90	119.10	7,019.0	-150.5	323.4	0.48	-0.32	-2.87	-48.1	39.5		
7,143.0	5.00	127.50	7,111.5	-155.7	331.5	2.24	-2.04	9.03	-34.5	45.1		
7,238.0	2.90	139.70	7,206.3	-160.1	338.3	2.37	-2.21	12.84	-14.7	47.1		
7,332.0	2.20	147.90	7,300.2	-163.4	338.8	0.84	-0.74	8.72	0.2	43.0		
7,426.0	1.50	123.70	7,394.1	-165.6	340.8	1.10	-0.74	-25.74	-9.7	38.1		
7,521.0	1.40	134.40	7,489.1	-167.1	342.7	0.30	-0.11	11.26	2.6	37.8		
7,614.0	1.10	138.30	7,582.1	-168.6	344.1	0.34	-0.32	4.19	7.3	36.4		



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7,707.0	0.90	136.80	7,675.1	-169.8	345.2	0.22	-0.22	-1.61	6.1	38.2	
7,802.0	1.00	71.80	7,770.0	-170.1	346.5	1.08	0.11	-68.42	-31.3	20.2	
7,898.0	0.80	102.10	7,864.0	-169.9	347.7	0.61	-0.43	32.23	-18.1	33.6	
7,991.0	0.70	113.50	7,959.0	-170.2	348.7	0.17	0.11	12.00	-12.1	36.6	
8,085.0	0.30	297.10	8,053.0	-170.4	349.0	1.06	-0.43	-187.66	10.1	-37.4	
8,178.0	0.60	263.40	8,146.0	-170.3	348.3	0.42	0.32	-36.24	28.5	-25.6	
8,273.0	0.50	224.50	8,241.0	-170.7	347.6	0.40	-0.11	-40.95	37.4	-2.3	
8,367.0	0.80	216.00	8,335.0	-171.5	346.9	0.33	0.32	-9.04	36.3	3.2	
8,461.0	1.20	202.70	8,429.0	-172.9	346.1	0.49	0.43	-14.15	33.0	11.3	
8,555.0	1.50	203.70	8,523.0	-174.9	345.3	0.32	0.32	1.06	31.0	10.7	
8,650.0	1.80	198.20	8,617.9	-177.5	344.3	0.36	0.32	-5.79	27.1	13.5	
8,744.0	2.00	199.30	8,711.9	-180.5	343.3	0.22	0.21	1.17	24.2	13.0	
8,838.0	2.00	192.50	8,805.8	-183.6	342.4	0.25	0.00	-7.23	19.2	15.6	
8,932.0	1.80	183.60	8,899.8	-186.7	341.9	0.38	-0.21	-9.47	13.5	18.1	
9,026.0	1.70	192.10	8,993.7	-189.5	341.6	0.30	-0.11	9.04	13.2	16.2	
9,120.0	1.70	200.00	9,087.7	-192.2	340.8	0.25	0.00	8.40	12.5	14.4	
9,213.0	1.80	192.50	9,180.6	-195.0	340.0	0.33	0.22	-8.06	7.6	15.7	
9,307.0	1.70	183.90	9,274.6	-197.9	339.5	0.36	-0.21	-9.15	2.2	16.4	
9,401.0	0.30	240.00	9,368.6	-199.4	339.2	1.65	-1.49	59.68	13.9	8.5	
9,495.0	0.80	248.40	9,462.6	-199.7	338.6	0.33	0.32	8.94	14.2	6.4	
9,589.0	0.40	305.70	9,556.6	-199.7	337.8	0.54	-0.21	60.96	12.5	-8.1	
9,683.0	0.60	316.60	9,650.6	-199.2	337.2	0.23	0.21	11.60	9.9	-10.2	
9,777.0	1.30	284.90	9,744.6	-198.5	335.9	0.90	0.74	-33.72	12.3	-3.8	
9,872.0	0.70	250.40	9,839.5	-198.4	334.3	0.87	-0.63	-36.32	10.8	3.3	
9,966.0	0.60	184.40	9,933.5	-199.1	333.7	0.76	-0.11	-70.21	0.7	10.7	
10,060.0	2.50	167.80	10,027.5	-201.6	334.1	2.06	2.02	-17.66	-4.9	10.3	
10,153.0	0.60	252.30	10,120.5	-203.8	334.1	2.70	-2.04	90.88	9.1	7.9	



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10,248.0	0.90	247.40	10,215.5	-204.2	332.9	0.32	0.32	-5.16	7.1	8.6	
10,341.0	1.20	230.30	10,308.4	-205.1	331.5	0.46	0.32	-16.39	2.6	10.1	
10,436.0	1.50	273.80	10,403.4	-205.7	329.5	1.09	0.32	45.79	6.9	6.2	
10,530.0	1.30	275.40	10,497.4	-205.5	327.2	0.22	-0.21	1.70	4.8	6.0	
10,624.0	1.60	265.80	10,591.4	-205.5	324.8	0.41	0.32	-10.21	1.3	6.6	
10,719.0	2.70	273.90	10,686.3	-205.4	321.3	1.20	1.16	8.53	-1.3	6.5	
10,812.0	0.50	301.70	10,779.3	-205.0	318.7	2.44	-2.37	29.89	-0.5	7.4	
10,906.0	0.40	57.90	10,873.3	-204.7	318.7	0.81	-0.11	123.62	6.7	-2.5	
11,001.0	0.30	95.70	10,968.3	-204.5	319.2	0.28	-0.11	39.79	3.3	-5.9	
11,095.0	0.30	356.80	11,062.2	-204.3	319.4	0.49	0.00	-105.21	5.1	3.9	
11,189.0	0.40	34.60	11,156.2	-203.8	319.8	0.28	0.11	40.21	5.9	0.1	
11,283.0	1.30	275.70	11,250.2	-203.4	318.7	1.63	0.96	-126.49	-3.8	4.8	
11,377.0	1.90	276.60	11,344.2	-203.1	316.1	0.64	0.64	0.96	-6.4	4.9	
11,470.0	1.90	283.90	11,437.2	-202.8	313.1	0.28	0.00	7.85	-8.8	5.8	
11,565.0	1.80	295.20	11,532.1	-201.5	310.2	0.40	-0.11	11.89	-10.5	7.8	
11,658.0	2.10	291.80	11,625.0	-200.3	307.3	0.35	0.32	-3.66	-14.1	7.0	
11,751.0	1.50	284.30	11,718.0	-199.4	304.5	0.69	-0.65	-8.06	-17.8	4.9	
11,846.0	1.50	283.20	11,853.0	-198.5	301.1	0.02	0.00	-0.81	-21.4	4.5	
11,941.0	1.80	270.10	11,947.9	-198.2	298.4	0.51	0.32	-13.79	-24.6	-0.7	
12,033.0	11.60	15.90	12,038.3	-189.3	289.5	13.27	10.65	115.00	-1.0	24.7	
12,168.0	26.40	14.50	12,128.8	-158.5	307.4	15.59	15.58	-1.47	-15.4	19.6	
12,262.0	40.80	12.80	12,207.0	-109.1	319.5	15.35	15.32	-1.81	-34.7	10.0	
12,356.0	51.30	5.60	12,272.2	-42.4	330.0	12.44	11.17	-7.66	-54.3	-4.0	
12,450.0	65.90	0.80	12,321.0	37.5	334.0	16.17	15.53	-5.32	-72.5	-12.5	
12,544.0	66.80	0.50	12,356.7	123.6	334.8	0.96	0.96	-0.11	-62.7	-14.1	
12,638.0	66.30	359.50	12,396.1	209.8	334.8	1.11	-0.53	-1.06	-70.9	-15.9	
12,732.0	67.30	359.80	12,433.2	296.2	334.3	1.10	1.06	0.32	-39.4	-16.8	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Cam
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25' @ 3345.0usft
 MD Reference: KB = 25' @ 3345.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D/Leg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
12,825.0	85.30	359.70	12,455.1	386.2	333.9	19.38	19.35	-0.11	-17.9	-16.1	
12,919.0	87.40	358.80	12,461.1	480.0	332.8	2.39	2.23	-0.85	-12.0	-15.7	
13,013.0	88.90	358.10	12,464.1	573.9	330.3	1.81	1.60	-0.85	-9.1	-14.1	
13,106.0	85.70	356.10	12,468.5	666.7	325.6	4.06	-3.44	-2.15	-4.7	-10.2	
13,200.0	87.50	355.80	12,474.1	760.3	319.1	1.93	1.91	-0.21	0.7	-4.5	
13,294.0	86.60	354.50	12,478.9	853.8	311.2	1.77	-0.96	-1.49	5.5	2.6	
13,388.0	87.60	357.40	12,483.7	947.5	304.6	3.26	1.06	3.09	10.1	8.4	
13,483.0	93.50	3.30	12,482.8	1,042.4	305.2	6.76	6.21	6.21	9.1	7.0	
13,577.0	89.90	359.70	12,480.0	1,136.3	307.6	5.41	-3.83	-3.83	6.3	3.7	
13,671.0	87.20	359.60	12,482.3	1,230.2	307.0	2.87	-2.87	-0.11	8.6	3.4	
13,764.0	90.00	1.60	12,484.6	1,323.2	308.0	3.70	3.01	2.15	10.8	1.6	
13,858.0	87.30	358.40	12,486.8	1,417.1	308.0	4.45	-2.87	-3.40	12.9	0.8	
13,953.0	87.60	355.30	12,481.1	1,511.9	302.8	3.28	0.32	-3.28	17.1	5.2	
14,047.0	87.90	358.00	12,494.8	1,605.6	297.3	2.89	0.32	2.87	20.7	9.9	
14,141.0	85.50	357.50	12,500.2	1,699.4	293.6	2.61	-2.55	-0.53	26.0	12.8	
14,235.0	92.50	0.50	12,501.8	1,793.3	292.0	8.10	7.45	3.19	27.6	13.5	
14,328.0	89.10	359.60	12,500.5	1,886.3	292.1	3.78	-3.68	-0.97	26.2	12.6	
14,422.0	88.00	359.60	12,502.9	1,980.3	291.4	1.17	-1.17	0.00	28.5	12.5	
14,516.0	91.60	0.00	12,503.2	2,074.2	291.1	3.85	3.83	0.43	28.7	12.0	
14,610.0	89.10	0.20	12,502.6	2,168.2	291.3	2.67	-2.66	0.21	28.1	11.0	
14,704.0	89.80	0.50	12,503.7	2,262.2	291.8	0.62	0.53	0.32	29.1	9.6	
14,798.0	87.90	0.50	12,505.8	2,356.2	292.7	1.81	-1.81	0.00	31.0	7.9	
14,891.0	87.90	0.50	12,509.2	2,449.1	293.5	0.00	0.00	0.00	34.4	6.3	
14,985.0	87.60	0.60	12,512.9	2,543.1	294.4	0.34	-0.32	0.11	38.0	4.6	
15,078.0	87.70	0.80	12,516.7	2,636.0	295.5	0.24	0.11	0.22	41.7	2.6	
15,172.0	88.80	0.10	12,519.5	2,729.9	296.2	1.39	1.17	-0.74	44.5	1.1	
15,266.0	92.40	0.70	12,518.6	2,823.9	296.9	3.88	3.83	0.64	43.4	-0.4	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #704H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25' @ 3343.0usft
 MD Reference: KB = 25' @ 3343.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,360.0	91.60	359.70	12,515.3	2,917.8	297.2	1.36	-0.85	-1.06	40.1	-1.6	
15,453.0	92.10	359.70	12,512.3	3,010.8	296.7	0.54	0.54	0.00	37.0	-1.9	
15,547.0	91.00	359.80	12,509.7	3,104.7	296.4	1.19	-1.17	0.21	34.4	-2.4	
15,640.0	91.40	359.80	12,507.8	3,197.7	296.2	0.43	0.43	0.00	32.4	-3.0	
15,734.0	90.10	0.40	12,508.6	3,291.7	296.5	1.48	-1.38	0.53	31.0	-4.1	
15,828.0	89.30	359.40	12,507.0	3,385.7	296.3	1.36	-0.85	-1.06	31.5	-4.8	
15,921.0	91.30	359.30	12,506.6	3,478.7	295.3	2.15	2.15	-0.11	30.9	-4.5	
16,015.0	88.80	358.00	12,506.5	3,572.7	293.1	3.00	-2.66	-1.38	30.7	-3.1	
16,108.0	88.70	358.20	12,508.5	3,665.6	290.0	0.24	-0.11	0.22	32.7	-0.9	
16,203.0	88.80	358.20	12,510.6	3,760.5	287.0	0.11	0.11	0.00	34.7	1.3	
16,298.0	89.00	358.10	12,512.4	3,855.5	283.9	0.24	0.21	-0.11	36.4	3.5	
16,393.0	89.60	358.30	12,513.6	3,950.4	280.9	0.67	0.63	0.21	37.5	5.7	
16,487.0	91.60	358.80	12,512.6	4,044.4	278.6	2.19	2.13	0.53	36.4	7.2	
16,581.0	91.60	358.70	12,510.0	4,138.3	276.5	0.11	0.00	-0.11	33.7	8.4	
16,675.0	91.90	358.90	12,507.1	4,232.2	274.5	0.38	0.32	0.21	30.8	9.6	
16,769.0	90.70	358.30	12,504.9	4,326.2	272.2	1.43	-1.28	-0.64	28.6	11.1	
16,862.0	90.90	358.40	12,503.7	4,419.1	269.6	0.24	0.22	0.11	27.2	12.9	
16,956.0	88.80	357.10	12,503.9	4,513.1	265.9	2.63	-2.23	-1.38	27.4	15.8	
17,050.0	89.20	356.90	12,505.5	4,606.9	261.0	0.48	0.43	-0.21	28.9	18.9	
17,143.0	89.50	359.50	12,506.6	4,699.9	258.0	2.81	0.32	2.80	29.9	22.0	
17,237.0	90.50	359.80	12,508.6	4,793.8	257.3	1.07	1.06	0.11	29.8	21.9	
17,331.0	91.00	359.10	12,505.4	4,887.8	256.2	0.75	0.53	-0.53	28.5	22.1	
17,424.0	89.60	359.70	12,504.9	4,980.8	255.3	1.84	-1.51	0.65	27.9	22.3	
17,518.0	90.50	0.90	12,504.8	5,075.8	255.8	1.58	0.95	1.26	27.8	21.0	
17,612.0	90.30	0.70	12,504.1	5,168.8	257.1	0.30	-0.22	-0.22	27.1	18.9	
17,706.0	91.80	1.90	12,502.4	5,262.8	259.2	2.04	1.60	1.28	25.3	15.9	
17,801.0	86.40	0.20	12,503.9	5,357.7	260.9	5.96	-5.68	-1.79	26.7	13.3	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
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 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #704H
 TVD Reference: KB = 25' @ 3345.0usft
 MD Reference: KB = 25' @ 3345.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	NBS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,894.0	88.80	0.10	12,509.3	5,450.5	261.2	0.55	0.54	-0.11	32.0	12.3	
17,987.0	89.50	0.30	12,512.3	5,543.5	261.5	2.80	2.80	0.22	34.9	11.1	
18,081.0	90.80	0.60	12,512.0	5,637.5	262.2	1.42	1.38	0.32	34.5	9.8	
18,175.0	89.40	359.40	12,511.9	5,731.5	262.2	1.96	-1.49	-1.28	34.3	8.7	
18,269.0	91.80	359.20	12,510.9	5,825.5	261.1	2.56	2.55	-0.21	33.2	9.1	
18,363.0	89.20	357.00	12,510.1	5,919.4	258.0	3.62	-2.77	-2.34	32.3	11.4	
18,456.0	92.50	357.10	12,508.7	6,012.2	253.2	3.55	3.55	0.11	30.9	15.3	
18,549.0	90.20	359.30	12,508.5	6,105.2	250.3	3.42	-2.47	2.37	28.6	17.4	
18,643.0	92.30	359.30	12,504.4	6,199.1	249.1	2.23	2.23	0.00	26.5	17.8	
18,736.0	87.80	358.40	12,504.4	6,292.1	247.3	4.93	-4.84	-0.97	26.3	18.8	
18,830.0	87.70	358.30	12,508.0	6,386.0	244.5	0.15	-0.11	-0.11	29.9	20.7	
18,924.0	88.50	358.30	12,511.2	6,479.9	241.8	0.85	0.85	0.00	33.0	22.7	
19,018.0	88.50	358.30	12,513.6	6,573.8	239.0	0.00	0.00	0.00	35.3	24.6	
19,111.0	88.70	358.40	12,515.9	6,668.7	236.3	0.24	0.22	0.11	37.5	26.5	
19,205.0	88.60	357.50	12,518.1	6,760.6	232.9	0.96	-0.11	-0.96	39.7	29.0	
19,299.0	91.80	359.60	12,517.8	6,854.6	230.6	4.07	3.40	2.23	39.3	30.6	
19,391.0	92.30	0.00	12,514.5	6,948.5	230.2	0.70	0.54	0.43	35.9	30.1	
19,485.0	92.60	359.70	12,510.5	7,040.5	230.0	0.45	0.32	-0.32	31.8	29.5	
19,579.0	92.40	0.10	12,508.4	7,134.4	229.8	0.48	-0.21	0.43	27.6	28.9	
19,672.0	88.60	359.00	12,505.6	7,227.3	229.1	4.25	-4.09	-1.18	26.7	28.8	
19,766.0	88.60	358.30	12,507.9	7,321.3	228.9	0.74	0.00	-0.74	28.9	30.2	
19,796.0	88.40	358.20	12,508.6	7,351.3	228.0	0.75	-0.67	-0.33	29.7	30.8	
19,861.0	88.40	358.20	12,510.5	7,416.2	223.9	0.00	0.00	0.00	31.5	32.3	



Midland PVA

Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Colgrove 35 Fed Com
Well: #704H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25' @ 3345.0usft
MD Reference: KB = 25' @ 3345.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,004.0	11,970.9	-197.7	297.9	KOP, MD:12004.0', TVD:11970.9', N/S:-197.7', E/W:297.9', INC:2.85
12,191.0	12,149.2	-149.0	310.1	FTP Crossing, MD:12191.0', TVD:12149.2', N/S:-149.0', E/W:310.1', INC:29.92
19,798.0	12,508.6	7,351.3	226.0	Last MWD Survey (MD=19798.0')
19,861.0	12,510.5	7,416.2	223.9	Projection to Bit (MD=19861.0')

Checked By: _____ Approved By: _____ Date: _____



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

Lea County, NM (NAD 83 NME)

Colgrove 35 Fed Com

#704H

Plan #1

WELL DETAILS: #704H

3320.0
KB = 25' @ 3345.000
Northing 364976.00
Easting 785653.00
32° 0' 3.424 N
Longitude 103° 32' 42.688 W
Slit

SECTION DETAILS

SbC	MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	VSeet	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5100.0	0.00	0.00	5100.0	0.0	0.0	0.00	0.00	0.0	
3	5625.5	10.61	121.64	5622.5	-25.2	40.9	2.00	121.64	-23.8	
4	7178.5	10.61	121.64	7149.5	-173.8	282.1	0.00	0.00	-164.0	
5	7703.9	0.00	0.00	7672.0	-199.0	323.0	2.00	180.00	-187.8	Brushy Top(Colgrove 35 FC #704H)
6	12027.4	0.00	0.00	11995.5	-199.0	323.0	0.00	0.00	-187.8	
7	12777.0	89.95	359.50	12473.0	278.0	318.8	12.00	359.50	288.8	
8	19938.3	89.95	359.50	12479.0	7439.0	256.0	0.00	0.00	7443.4	PBHL(Colgrove 35 FC #704H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Brushy Top(Colgrove 35 FC #704H)	7672.0	-199.0	323.0	364777.00	785378.00	Polygon
FTP (Colgrove 35 FC #704H)	12473.0	-149.0	323.0	364827.00	785378.00	Point
PBHL(Colgrove 35 FC #704H)	12479.0	7439.0	256.0	372415.00	785511.00	Rectangle (Sides: L0.0 W80.0)

