



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Colgrove 35 Fed Com

#703H

OH

Design: OH

Midland PVA

15 May, 2019

HOBBS OCD
JUL 30 2019
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Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
Project:	Lee County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3345.0usft
Site:	Colgrove 35 Fed Com	MD Reference:	KB = 25' @ 3345.0usft
Well:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Project	Lee 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	Grid Radius:	13-3/16 "
		Latitude:	32° 0' 2.718 N
		Longitude:	103° 32' 46.899 W
		Grid Convergence:	0.42 "

Well	#703H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 0' 3.426 N
		Longitude:	103° 32' 43.002 W
		Ground Level:	3,320.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	3/4/2019	6.74
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,633.40333891

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	(°)
			357.11

Survey Program	Date 5/15/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
200.0	19,917.0	Prodirectional (OH)	MWD
			Description
			OWSG MWD - Standard



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 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)	DLeg (°/100usft)	BuId (°/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	0.0
200.0	1.10	4.20	200.0	1.9	0.1	0.55	0.55	0.00	-1.9	0.0		
220.0	1.40	1.00	220.0	2.4	0.2	1.54	1.50	-16.00	-2.4	-0.1		
390.0	1.30	358.60	389.9	6.4	0.1	0.07	-0.08	-1.41	-6.3	-0.3		
574.0	0.80	348.20	573.9	9.7	-0.2	0.30	-0.27	-8.74	-9.5	-2.1		
761.0	1.20	293.10	760.9	11.7	-2.3	0.61	0.21	-28.40	-6.7	-9.9		
856.0	1.30	290.10	855.9	12.5	-4.2	0.13	0.11	-3.16	-8.3	-10.3		
1,039.0	1.20	289.10	1,038.8	13.8	-8.0	0.06	-0.05	-0.55	-12.1	-10.4		
1,133.0	1.20	289.20	1,132.8	14.6	-9.8	0.22	0.00	10.74	-15.7	-8.0		
1,227.0	1.30	290.50	1,226.8	15.5	-11.7	0.23	0.11	-9.26	-16.3	-10.4		
1,321.0	1.20	292.60	1,320.7	16.2	-13.6	0.12	-0.11	2.23	-18.8	-9.8		
1,415.0	1.10	286.60	1,414.7	16.9	-15.3	0.17	-0.11	-6.38	-19.5	-11.8		
1,510.0	1.20	279.40	1,509.7	17.3	-17.2	0.18	0.11	-7.58	-19.8	-14.3		
1,604.0	1.30	271.10	1,603.7	17.5	-19.2	0.22	0.11	-8.83	-19.6	-17.1		
1,698.0	1.20	275.90	1,697.7	17.6	-21.3	0.15	-0.11	5.11	-23.0	-15.3		
1,792.0	1.40	274.80	1,791.6	17.8	-23.4	0.21	0.21	-1.17	-24.8	-15.8		
1,886.0	1.40	273.80	1,885.6	18.0	-25.7	0.03	0.00	-1.06	-26.8	-16.2		
1,981.0	1.50	275.10	1,980.6	18.2	-28.1	0.11	0.11	1.37	-29.6	-15.6		
2,074.0	1.20	276.60	2,073.6	18.4	-30.3	0.32	-0.32	1.61	-32.2	-14.8		
2,168.0	1.10	273.40	2,167.5	18.5	-32.1	0.13	-0.11	-3.40	-33.2	-16.6		
2,261.0	1.00	273.00	2,260.5	18.6	-33.8	0.11	-0.11	-0.43	-34.8	-16.8		
2,355.0	3.40	224.00	2,354.5	16.7	-36.6	3.03	2.55	-52.13	-12.9	-37.8		
2,449.0	7.60	222.20	2,448.0	10.1	-42.7	4.47	4.47	-1.91	-17.5	-37.4		
2,543.0	8.60	204.40	2,541.1	-0.9	-49.8	2.86	1.06	-18.94	-12.9	-39.4		
2,637.0	8.10	223.40	2,634.1	-12.2	-57.3	2.97	-0.53	20.21	-29.2	-28.6		
2,730.0	7.50	223.90	2,728.2	-21.3	-66.0	0.65	-0.65	0.54	-32.7	-26.1		
2,824.0	7.10	221.60	2,819.5	-30.1	-74.1	0.53	-0.43	-2.45	-34.1	-25.0		



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 North Reference: Grid
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 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)		
2,917.0	6.90	219.60	2,911.8	-38.7	-81.4	0.34	-0.22	-2.15	-35.2	-23.5		
3,010.0	6.50	217.40	3,004.1	-47.1	-88.2	0.51	-0.43	-2.37	-36.0	-21.8		
3,105.0	6.00	213.10	3,098.6	-55.6	-94.2	0.72	-0.53	-4.53	-35.5	-20.8		
3,199.0	5.80	208.70	3,192.1	-63.9	-99.0	0.73	-0.21	-6.81	-34.1	-20.2		
3,294.0	5.70	210.50	3,286.6	-72.3	-103.6	0.41	-0.11	4.00	-36.0	-13.1		
3,387.0	5.60	210.50	3,379.2	-80.2	-108.2	0.11	-0.11	0.00	-36.5	-6.6		
3,481.0	5.40	207.00	3,472.7	-88.1	-112.5	0.42	-0.21	-3.72	-36.3	-6.4		
3,575.0	4.20	198.60	3,566.4	-95.3	-115.6	1.48	-1.28	-8.94	-35.1	-6.1		
3,668.0	3.30	181.70	3,659.2	-101.2	-116.8	1.52	-0.97	-18.17	-32.2	-9.1		
3,762.0	4.70	231.50	3,753.0	-106.3	-119.9	3.83	1.49	52.98	-23.6	21.7		
3,855.0	3.90	239.30	3,845.7	-110.3	-125.6	1.06	-0.86	8.39	-17.6	24.8		
3,949.0	3.90	244.40	3,939.5	-113.3	-131.2	0.37	0.00	5.43	-12.0	25.3		
4,043.0	6.80	246.30	4,033.1	-116.9	-139.2	3.09	3.09	2.02	-10.2	24.1		
4,137.0	8.00	250.10	4,128.3	-121.4	-150.5	1.38	1.28	4.04	-11.2	22.9		
4,232.0	7.10	251.40	4,220.5	-125.5	-162.2	0.98	-0.95	1.37	-13.5	20.8		
4,326.0	5.70	250.70	4,313.9	-128.9	-172.2	1.49	-1.49	-0.74	-14.7	18.3		
4,420.0	4.70	247.10	4,407.5	-131.9	-180.1	1.12	-1.06	-3.83	-14.6	15.3		
4,514.0	4.40	240.50	4,501.2	-135.2	-186.8	0.64	-0.32	-7.02	-13.9	12.5		
4,609.0	4.90	249.20	4,595.9	-138.4	-193.8	0.91	0.53	9.16	-9.8	12.9		
4,703.0	3.60	238.20	4,689.6	-141.5	-200.0	1.71	-1.38	-13.83	-9.5	9.6		
4,797.0	3.50	213.90	4,783.5	-145.5	-204.0	1.46	-0.11	-23.72	-9.0	8.0		
4,891.0	4.00	198.90	4,877.3	-151.0	-208.7	1.17	0.53	-15.96	-9.0	10.8		
4,984.0	4.40	204.60	4,970.0	-157.3	-209.2	0.62	0.43	6.13	-8.5	17.1		
5,078.0	4.30	204.40	5,063.7	-163.8	-212.2	0.11	-0.11	-0.21	-5.4	22.4		
5,172.0	4.60	218.00	5,157.5	-170.0	-215.9	1.16	0.32	14.47	2.1	27.1		
5,266.0	5.30	224.60	5,251.1	-176.1	-221.3	0.96	0.74	7.02	6.7	29.2		
5,359.0	5.10	226.40	5,343.7	-182.0	-227.3	0.28	-0.22	1.94	8.8	30.9		



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5,453.0	5.10	226.70	5,437.4	-187.7	-233.4	0.03	0.00	0.32	10.3	32.6		
5,547.0	5.10	223.60	5,531.0	-193.6	-239.3	0.29	0.00	-3.30	9.7	35.2		
5,604.0	5.10	224.60	5,587.8	-197.2	-242.8	0.16	0.00	1.75	11.1	36.3		
5,734.0	4.80	223.10	5,717.3	-205.3	-250.6	0.25	-0.23	-1.15	12.1	39.7		
5,827.0	4.80	223.90	5,809.9	-211.0	-256.0	0.07	0.00	0.86	14.4	41.8		
5,921.0	4.80	227.60	5,903.6	-218.5	-261.6	0.33	0.00	3.94	18.6	42.6		
6,016.0	4.80	250.80	5,998.3	-220.4	-268.3	2.03	0.00	24.42	33.1	31.7		
6,110.0	5.90	265.80	6,091.9	-222.1	-276.8	1.68	1.17	15.96	34.9	21.3		
6,203.0	3.70	276.00	6,184.6	-222.1	-284.6	2.53	-2.37	10.97	31.1	15.0		
6,297.0	2.40	284.60	6,278.4	-221.3	-289.5	1.46	-1.38	9.15	28.1	10.6		
6,391.0	2.50	290.20	6,372.3	-220.1	-293.3	0.26	0.11	5.96	25.0	8.0		
6,485.0	2.40	287.10	6,466.3	-218.8	-297.1	0.18	-0.11	-3.30	20.5	9.2		
6,579.0	2.50	286.40	6,560.2	-217.7	-301.0	0.11	0.11	-0.74	16.3	9.4		
6,673.0	2.70	285.70	6,654.1	-218.5	-305.1	0.22	0.21	-0.74	12.0	9.6		
6,767.0	2.50	286.20	6,748.0	-215.3	-309.2	0.21	-0.21	0.53	7.8	9.5		
6,861.0	2.30	289.60	6,841.9	-214.1	-312.9	0.26	-0.21	3.62	4.4	9.2		
6,955.0	2.10	339.60	6,935.8	-211.9	-315.3	1.99	-0.21	53.19	6.9	4.0		
7,049.0	2.00	332.10	7,029.8	-208.8	-316.7	0.30	-0.11	-7.98	3.0	4.6		
7,142.0	1.70	328.20	7,122.7	-206.2	-318.2	0.35	-0.32	-4.19	-0.3	4.7		
7,237.0	1.90	321.40	7,217.7	-203.8	-319.9	0.31	0.21	-7.16	-3.9	4.5		
7,331.0	1.60	316.40	7,311.6	-201.6	-321.7	0.33	-0.32	-3.19	-6.9	4.2		
7,425.0	1.60	320.40	7,405.6	-199.6	-323.4	0.06	0.00	2.13	-9.4	4.4		
7,520.0	1.40	324.10	7,500.6	-197.8	-325.0	0.23	-0.21	3.89	-11.6	5.1		
7,613.0	0.10	85.60	7,593.6	-196.7	-325.5	1.56	-1.40	130.65	10.9	8.2		
7,706.0	0.40	111.70	7,686.6	-196.8	-325.2	0.34	0.32	28.06	13.0	2.6		
7,801.0	0.50	73.00	7,781.5	-196.8	-324.5	0.33	0.11	-40.74	7.9	9.9		
7,895.0	1.40	40.00	7,875.5	-195.8	-323.3	1.08	0.96	-35.11	-0.3	12.4		



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MD (usft)	Inc (")	Asl (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
7,990.0	1.50	48.40	7,970.5	-194.1	-321.7	0.25	0.11	8.84	-0.9	12.5	
8,084.0	1.30	66.90	8,064.5	-192.9	-319.7	0.52	-0.21	19.68	0.9	12.5	
8,177.0	0.70	65.20	8,157.5	-192.2	-318.3	0.85	-0.85	-1.83	-1.1	12.5	
8,272.0	0.90	68.30	8,252.5	-191.7	-317.0	0.22	0.21	3.26	-1.7	12.6	
8,366.0	0.70	63.60	8,346.4	-191.2	-315.8	0.22	-0.21	-5.00	-4.1	12.3	
8,460.0	1.20	19.30	8,440.4	-190.0	-315.0	0.91	0.53	-47.13	-12.9	5.6	
8,554.0	0.80	2.20	8,534.4	-188.4	-314.7	0.53	-0.43	-18.19	-15.6	1.3	
8,648.0	1.80	24.40	8,628.4	-186.4	-314.0	1.17	1.06	23.62	-16.0	7.3	
8,742.0	1.10	43.20	8,722.4	-184.4	-312.8	0.89	-0.74	20.00	-15.1	12.6	
8,835.0	1.30	62.10	8,815.3	-183.2	-311.2	0.47	0.22	20.32	-12.1	17.1	
8,930.0	1.40	66.60	8,910.3	-182.3	-309.2	0.15	0.11	4.74	-13.0	18.1	
9,023.0	1.10	84.00	9,003.3	-181.7	-307.3	0.52	-0.32	18.71	-9.0	21.5	
9,118.0	0.70	98.90	9,098.3	-181.7	-305.8	0.48	-0.42	15.68	-4.8	23.3	
9,211.0	0.70	106.10	9,191.3	-182.0	-304.7	0.13	0.00	10.97	-1.6	23.8	
9,305.0	0.70	132.80	9,285.3	-182.6	-303.8	0.31	0.00	25.21	7.0	22.7	
9,400.0	0.80	120.00	9,380.3	-183.3	-302.8	0.20	0.11	-13.47	0.6	23.6	
9,494.0	0.80	108.00	9,474.3	-183.8	-301.6	0.18	0.00	-12.77	-5.6	23.0	
9,588.0	1.10	128.50	9,568.2	-184.6	-300.2	0.48	0.32	21.81	1.3	23.8	
9,682.0	1.20	105.50	9,682.2	-185.4	-298.6	0.50	0.11	-24.47	-9.9	22.0	
9,776.0	1.40	98.70	9,756.2	-185.8	-296.5	0.30	0.21	-9.36	-15.3	20.1	
9,870.0	1.30	96.50	9,850.2	-186.1	-294.3	0.11	-0.11	-0.21	-17.8	20.0	
9,965.0	1.40	113.70	9,945.1	-186.7	-292.2	0.44	0.11	18.11	-13.0	24.7	
10,059.0	1.50	122.40	10,039.1	-187.8	-290.1	0.26	0.11	9.26	-11.5	26.5	
10,152.0	0.70	205.50	10,132.1	-188.9	-289.3	1.70	-0.86	89.35	24.2	15.8	
10,247.0	0.30	266.00	10,227.1	-189.5	-289.8	0.64	-0.42	63.68	25.2	-12.8	
10,340.0	0.50	283.50	10,320.1	-189.4	-290.4	0.25	0.22	18.82	19.5	-19.7	
10,434.0	2.10	279.50	10,414.1	-189.0	-292.5	1.70	1.70	-4.26	18.7	-18.3	



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10,529.0	3.60	282.70	10,508.9	-188.1	-297.1	1.59	1.58	3.37	12.9	-19.2		
10,623.0	5.40	272.50	10,602.7	-187.2	-304.4	2.09	1.91	-10.65	8.8	-17.2		
10,718.0	4.80	277.00	10,697.3	-186.6	-312.7	0.94	-0.84	4.74	-0.8	-17.4		
10,811.0	4.10	281.60	10,790.0	-184.9	-319.5	1.30	-0.54	15.70	-12.1	-15.8		
10,905.0	4.50	284.20	10,883.8	-182.8	-326.2	0.73	0.43	-7.87	-17.0	-17.6		
11,000.0	2.90	260.80	10,978.6	-182.2	-332.2	2.28	-1.68	-24.63	-14.4	-24.4		
11,094.0	2.50	224.70	11,072.5	-184.1	-338.0	1.82	-0.43	-38.40	-1.3	-29.6		
11,188.0	3.20	234.40	11,166.4	-187.1	-339.5	0.90	0.74	10.32	-10.9	-28.6		
11,282.0	3.00	221.50	11,260.2	-190.4	-343.3	0.77	-0.21	-13.72	-9.2	-30.9		
11,376.0	3.30	211.00	11,354.1	-194.6	-346.3	0.69	0.32	-11.17	-8.6	-32.6		
11,469.0	2.90	223.80	11,448.9	-198.6	-349.3	0.88	-0.43	13.76	-20.5	-29.3		
11,564.0	3.20	234.20	11,541.8	-201.9	-353.1	0.68	0.32	10.95	-30.5	-24.7		
11,657.0	2.70	236.10	11,634.7	-204.6	-357.1	0.55	-0.54	2.04	-36.1	-23.5		
11,750.0	2.30	233.90	11,727.6	-206.9	-360.4	0.44	-0.43	-2.37	-39.2	-25.0		
11,847.0	0.90	163.00	11,864.5	-209.6	-362.3	1.59	-1.02	-51.75	8.8	-47.6		
11,941.0	1.80	118.50	11,958.5	-211.0	-368.8	1.40	0.96	-47.34	37.8	-28.5		
12,034.0	9.60	24.40	12,051.1	-204.6	-356.3	10.64	8.39	-101.18	21.0	36.5		
12,128.0	21.20	6.50	12,141.6	-180.5	-351.1	13.20	12.34	-19.04	6.5	36.4		
12,222.0	26.70	2.70	12,228.4	-142.1	-348.1	6.01	5.79	-4.00	5.3	33.4		
12,316.0	38.80	8.40	12,307.3	-91.6	-342.8	13.38	12.98	6.06	12.3	26.6		
12,410.0	51.50	7.40	12,373.4	-25.6	-333.7	13.43	13.40	-1.06	13.8	17.2		
12,504.0	63.20	5.90	12,424.0	52.9	-324.7	12.52	12.45	-1.60	13.8	7.9		
12,598.0	76.70	5.00	12,456.2	140.6	-316.3	14.39	14.36	-0.96	11.6	-0.7		
12,692.0	88.00	2.60	12,468.5	232.4	-310.2	12.42	12.15	-2.58	7.3	-7.3		
12,786.0	90.10	2.00	12,470.1	326.3	-306.5	2.32	2.23	-0.64	7.1	-11.8		
12,880.0	90.00	1.90	12,470.0	420.2	-303.3	0.15	-0.11	-0.11	6.9	-15.7		
12,974.0	88.00	2.10	12,471.6	514.1	-300.0	2.14	-2.13	0.21	8.4	-19.8		



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #703H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #703H
 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)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,108.0	90.80	357.50	12,472.8	608.1	-300.3	5.85	3.04	-5.00	9.3	-20.2	
13,200.0	91.50	357.00	12,470.7	700.0	-304.8	0.92	0.74	-0.53	7.4	-18.4	
13,294.0	91.50	355.40	12,468.2	793.7	-311.1	1.70	0.00	-1.70	4.8	-10.9	
13,388.0	89.80	357.90	12,467.2	887.8	-316.5	3.22	-1.81	2.66	3.7	-8.2	
13,483.0	89.30	357.00	12,467.9	982.5	-320.8	1.08	-0.53	-0.95	4.4	-2.7	
13,577.0	89.50	359.60	12,468.9	1,076.4	-323.6	2.77	0.21	2.77	5.3	-0.7	
13,671.0	90.00	1.10	12,469.3	1,170.4	-323.0	1.88	0.53	1.60	5.6	-2.0	
13,764.0	89.90	2.30	12,469.4	1,263.4	-320.2	1.29	-0.11	1.29	5.6	-3.5	
13,858.0	91.30	1.70	12,468.4	1,357.3	-318.9	1.62	1.49	-0.64	4.5	-8.5	
13,953.0	91.30	1.20	12,468.3	1,452.2	-314.5	0.53	0.00	-0.53	2.3	-12.7	
14,047.0	91.80	1.30	12,463.7	1,546.2	-312.5	0.54	0.53	0.11	-0.3	-15.5	
14,141.0	90.20	358.80	12,462.1	1,640.2	-312.4	3.16	-1.70	-2.66	-2.0	-18.3	
14,235.0	87.50	358.20	12,464.0	1,734.1	-314.9	2.94	-2.87	-0.64	-0.2	-14.6	
14,328.0	87.40	358.00	12,468.1	1,828.9	-318.0	0.24	-0.11	-0.22	3.8	-12.3	
14,422.0	88.00	357.70	12,471.9	1,920.8	-321.5	0.71	0.64	-0.32	7.5	-9.5	
14,516.0	92.00	359.00	12,471.9	2,014.7	-324.2	4.47	4.26	1.38	7.4	-7.5	
14,610.0	92.60	359.30	12,468.1	2,108.7	-325.6	0.71	0.64	0.32	3.6	-6.9	
14,704.0	89.50	359.70	12,466.4	2,202.6	-326.4	3.33	-3.30	0.43	1.8	-8.8	
14,798.0	89.70	359.40	12,467.0	2,296.6	-327.1	0.38	0.21	-0.32	2.4	-8.8	
14,891.0	88.40	359.30	12,468.6	2,389.6	-328.2	1.40	-1.40	-0.11	3.8	-8.5	
14,985.0	87.70	359.00	12,471.8	2,483.5	-329.8	0.81	-0.74	-0.32	6.9	-5.9	
15,078.0	92.30	0.70	12,471.8	2,576.5	-329.8	5.27	4.95	1.83	6.9	-8.4	
15,172.0	92.00	0.40	12,468.3	2,670.4	-328.9	0.45	-0.32	-0.32	3.3	-8.0	
15,266.0	91.40	359.70	12,465.5	2,764.4	-328.8	0.98	-0.64	-0.74	0.4	-8.9	
15,360.0	92.70	0.20	12,462.1	2,858.3	-328.9	1.48	1.38	0.53	-3.0	-8.5	
15,454.0	91.90	0.00	12,458.3	2,952.3	-328.8	0.88	-0.85	-0.21	-6.9	-10.5	
15,547.0	90.50	358.80	12,458.4	3,045.2	-329.9	2.13	-1.51	-1.51	-8.9	-10.1	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #703H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #703H
 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 (°)	Asd (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,641.0	89.20	358.60	12,456.6	3,139.2	-332.2	1.38	-1.38	0.00	-8.8	-8.5	
15,734.0	88.30	357.80	12,458.7	3,232.1	-335.1	1.29	-0.97	-0.86	-6.8	-6.3	
15,828.0	87.80	357.40	12,461.9	3,326.0	-339.0	0.68	-0.53	-0.43	-3.7	-3.1	
15,921.0	88.00	357.70	12,465.3	3,418.8	-343.0	0.39	0.22	0.32	-0.4	0.1	
16,015.0	90.80	358.90	12,466.2	3,512.8	-345.8	3.24	2.98	1.28	0.6	2.1	
16,109.0	88.80	359.20	12,466.6	3,606.8	-347.4	2.15	-2.13	0.32	0.8	2.9	
16,203.0	91.20	0.00	12,466.6	3,700.8	-348.0	2.69	2.55	0.85	0.7	2.8	
16,298.0	89.20	359.80	12,466.2	3,795.7	-348.2	2.12	-2.11	-0.21	0.3	2.2	
16,393.0	90.20	1.20	12,466.7	3,890.7	-347.4	1.81	1.05	1.47	0.7	0.7	
16,487.0	85.10	0.90	12,470.6	3,984.6	-345.6	5.43	-5.43	-0.32	4.5	-1.8	
16,581.0	86.30	0.40	12,477.6	4,078.3	-344.6	1.38	1.28	-0.53	11.5	-3.6	
16,675.0	88.00	359.10	12,482.3	4,172.2	-345.0	2.28	1.81	-1.38	16.1	-4.0	
16,769.0	88.70	359.00	12,485.0	4,266.2	-346.5	0.75	0.74	-0.11	18.7	-3.2	
16,862.0	87.90	358.40	12,487.8	4,359.1	-348.7	1.08	-0.86	-0.65	21.4	-1.8	
16,956.0	91.20	0.30	12,488.5	4,453.1	-349.7	4.05	3.51	2.02	22.0	-1.5	
17,050.0	92.40	0.70	12,485.6	4,547.0	-348.9	1.35	1.28	0.43	19.0	-3.0	
17,143.0	91.50	0.40	12,482.4	4,640.0	-348.0	1.02	-0.97	-0.32	15.8	-4.7	
17,237.0	91.10	0.30	12,480.3	4,733.9	-347.4	0.44	-0.43	-0.11	13.5	-6.0	
17,331.0	91.50	0.20	12,478.1	4,827.9	-347.0	0.44	0.43	-0.11	11.3	-7.2	
17,425.0	91.70	0.20	12,475.5	4,921.9	-346.7	0.21	0.21	0.00	8.8	-8.2	
17,519.0	92.30	0.10	12,472.2	5,015.8	-346.4	0.65	0.64	-0.11	5.3	-9.2	
17,613.0	89.80	0.00	12,470.5	5,109.8	-346.4	2.66	-2.66	-0.11	3.5	-10.1	
17,707.0	89.50	359.70	12,471.1	5,203.8	-346.6	0.45	-0.32	-0.32	4.0	-10.6	
17,801.0	91.20	1.00	12,470.5	5,297.8	-346.0	2.28	1.81	1.38	3.3	-11.9	
17,894.0	89.50	359.80	12,469.9	5,390.8	-345.4	2.24	-1.83	-1.29	2.7	-13.3	
17,987.0	89.80	0.30	12,470.5	5,483.8	-345.3	0.83	0.32	0.54	3.2	-14.1	
18,081.0	90.70	1.40	12,470.1	5,577.8	-343.9	1.51	0.96	1.17	2.7	-16.3	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #703H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #703H
 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)	EW (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)		
18,175.0	90.00	0.40	12,469.5	5,671.7	-342.4	1.30	-0.74	-1.08	2.0	-18.5		
18,269.0	88.10	358.60	12,471.1	5,765.7	-343.3	2.78	-2.02	-1.91	3.5	-18.4		
18,363.0	88.70	358.60	12,473.7	5,859.7	-345.6	0.64	0.64	0.00	6.0	-18.9		
18,456.0	88.60	358.70	12,475.9	5,952.6	-347.7	0.15	-0.11	0.11	8.1	-15.4		
18,549.0	88.00	357.70	12,478.7	6,045.5	-350.7	1.25	-0.65	-1.08	10.8	-13.2		
18,643.0	88.40	357.70	12,481.6	6,139.4	-354.4	0.43	0.43	0.00	13.7	-10.2		
18,736.0	87.30	357.10	12,485.1	6,232.2	-358.6	1.35	-1.18	-0.65	17.1	-6.8		
18,830.0	91.60	358.50	12,486.0	6,326.1	-362.3	4.81	4.57	1.49	17.9	-3.9		
18,924.0	90.00	357.60	12,484.7	6,420.1	-365.5	1.95	-1.70	-0.96	16.5	-1.4		
19,018.0	91.60	358.30	12,483.4	6,514.0	-368.8	1.86	1.70	0.74	15.2	1.2		
19,111.0	92.20	358.60	12,480.3	6,606.9	-371.3	0.72	0.65	0.32	12.0	2.9		
19,205.0	91.60	358.10	12,477.2	6,700.6	-374.0	0.83	-0.64	-0.53	8.8	4.8		
19,299.0	91.20	357.50	12,474.9	6,794.7	-377.6	0.77	-0.43	-0.64	6.4	7.7		
19,392.0	90.50	356.80	12,473.5	6,887.6	-382.3	1.08	-0.75	-0.75	5.0	11.6		
19,485.0	90.10	356.40	12,473.0	6,980.4	-387.8	0.61	-0.43	-0.43	4.4	16.4		
19,579.0	90.40	356.30	12,472.6	7,074.2	-393.8	0.34	0.32	-0.11	3.9	21.6		
19,672.0	91.00	355.90	12,471.5	7,167.0	-400.1	0.78	0.65	-0.43	2.7	27.2		
19,767.0	90.70	355.30	12,470.1	7,261.7	-407.4	0.71	-0.32	-0.63	1.2	33.8		
19,852.0	90.20	354.60	12,469.4	7,346.4	-414.9	1.01	-0.59	-0.82	0.5	40.6		
19,917.0	90.20	354.60	12,469.2	7,411.1	-421.0	0.00	0.00	0.00	0.2	46.2		



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #703H
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:	#703H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,005.0	11,882.5	-210.8	-360.0	KOP, MD:12005.0', TVD:11982.5', N/S:-210.8', E/W:-360.0', INC:2.73
12,235.6	12,203.7	-154.0	-348.8	FTP Crossing, MD:12235.6', TVD:12203.7', N/S:-154.0', E/W:-348.8', INC:25.10
19,852.0	12,469.4	7,346.4	-414.9	Last MWD Survey (MD=19852.0')
19,917.0	12,469.2	7,411.1	-421.0	Projection to Bit (MD=19917.0')

Checked By: _____	Approved By: _____	Date: _____
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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

#703H

Plan #1

WELL DETAILS: #703H

3220.0
K3 = 25 @ 3245.0m
+N-S +E-W Northing Easting
0.0 0.0 364978.00 785626.00 32° 0' 3.426 N 103° 32' 43.002 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2300.0	0.00	0.00	2300.0	0.0	0.0	0.00	0.00	0.0	
3	2600.0	6.00	236.99	2599.4	-8.5	-13.2	2.00	236.99	-7.9	
4	5882.1	6.00	236.99	5863.6	-185.5	-300.8	0.00	0.00	-180.0	
5	6182.1	0.00	0.00	6163.0	-204.0	-314.0	2.00	180.00	-187.9	
6	12004.6	0.00	0.00	11985.5	-204.0	-314.0	0.00	0.00	-187.9	
7	12754.2	89.95	359.54	12463.0	273.0	-317.8	12.00	359.54	288.7	
8	19915.4	89.95	359.54	12469.0	7434.0	-375.0	0.00	0.00	7443.5	PBHL(Colgrove 35 FC #703H)

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Brushy Top(Colgrove 35 FC #703H)	7662.0	-204.0	-314.0	364772.00	785312.00	Polygon
PTP(Colgrove 35 FC #703H)	12463.0	-184.0	-314.0	364822.00	785312.00	Point
PBHL(Colgrove 35 FC #703H)	12463.0	7434.0	-375.0	372410.00	785251.00	Rectangle (Sides: L=0 W=0.0)

