

HOBBS OCD

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Colgrove 35 Fed

#705H

OH

Design: OH

Midland PVA

05 November, 2018



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3351.0usft
Site:	Colgrove 35 Fed	MD Reference:	KB = 25' @ 3351.0usft
Well:	#705H	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		
Site Position:		Northing:	365,035.00 usft
From:	Map	Easting:	786,945.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 0' 3.914 N
		Longitude:	103° 32' 27.681 W
		Grid Convergence:	0.42 °

Well	#705H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			usft
			Latitude:
			Longitude:
			Ground Level:
			3,326.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	10/2/2018	(°)
			6.78
			Dip Angle
			(°)
			59.85
			Field Strength
			(nT)
			47,676.83252058

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
			(°)
			357.10

Survey Program	Date 11/5/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
201.0	19,937.0	Driltech MWD (OH)	MWD
			Description
			OWSG MWD - Standard



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Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
201.0	0.44	249.91	201.0	-0.3	-0.7	0.22	0.22	0.00	-0.8	0.0	
319.0	0.18	144.00	319.0	-0.6	-1.0	0.44	-0.22	-89.75	0.2	-1.2	
499.0	0.53	204.38	499.0	-1.6	-1.2	0.28	0.19	33.54	-1.9	-0.5	
672.0	0.09	150.50	672.0	-2.4	-1.5	0.28	-0.25	-31.14	-1.4	-2.5	
768.0	0.09	172.04	768.0	-2.5	-1.4	0.04	0.00	22.44	-2.3	-1.8	
861.0	0.44	179.42	861.0	-3.0	-1.4	0.38	0.38	7.94	-3.0	-1.5	
917.0	0.44	182.41	917.0	-3.4	-1.4	0.04	0.00	5.34	-3.5	-1.3	
1,051.0	0.44	79.05	1,051.0	-3.8	-0.9	0.52	0.00	-77.13	1.7	-3.6	
1,144.0	0.26	86.61	1,144.0	-3.7	-0.4	0.20	-0.19	8.13	0.6	-3.7	
1,236.0	0.35	88.80	1,236.0	-3.7	0.1	0.10	0.10	2.38	0.0	-3.7	
1,329.0	0.26	53.12	1,329.0	-3.6	0.6	0.22	-0.10	-38.37	1.7	-3.2	
1,421.0	0.35	97.50	1,421.0	-3.5	1.0	0.27	0.10	48.24	-1.5	-3.3	
1,515.0	0.44	61.12	1,515.0	-3.4	1.6	0.28	0.10	-38.70	0.2	-3.7	
1,607.0	0.53	80.37	1,607.0	-3.1	2.3	0.20	0.10	20.92	-1.8	-3.5	
1,701.0	0.44	85.11	1,701.0	-3.0	3.1	0.10	-0.10	5.04	-2.9	-3.3	
1,796.0	0.26	40.99	1,796.0	-2.8	3.6	0.33	-0.19	-46.44	-0.2	-4.6	
1,889.0	0.35	61.21	1,889.0	-2.5	4.0	0.15	0.10	21.74	-2.3	-4.1	
1,984.0	0.26	195.06	1,984.0	-2.6	4.2	0.59	-0.09	140.89	-1.4	4.7	
2,078.0	0.09	284.01	2,078.0	-2.8	4.1	0.29	-0.18	94.63	4.6	1.7	
2,173.0	0.26	176.34	2,173.0	-3.0	4.0	0.32	0.18	-113.34	-3.2	3.8	
2,268.0	0.09	108.49	2,268.0	-3.2	4.1	0.25	-0.18	-71.42	-4.9	-1.8	
2,362.0	0.44	137.32	2,362.0	-3.5	4.4	0.39	0.37	30.67	-5.6	0.9	
2,457.0	0.53	113.94	2,457.0	-4.0	5.1	0.23	0.09	-24.61	-6.2	-1.6	
2,550.0	0.35	118.69	2,550.0	-4.3	5.7	0.20	-0.19	5.11	-7.1	-1.0	
2,645.0	0.44	142.86	2,645.0	-4.7	6.2	0.20	0.09	25.44	-7.5	2.1	
2,738.0	0.26	79.49	2,738.0	-4.9	6.6	0.43	-0.19	-68.14	-5.6	-6.1	



Midland PVA

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Site: Colgrove 35 Fed			MD Reference:			KB = 25' @ 3351.0usft		
Well: #705H			North Reference:			Grid		
Wellbore: OH			Survey Calculation Method:			Minimum Curvature		
Design: OH			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)	
2,833.0	0.53	107.00	2,833.0	-5.0	7.2	0.34	0.28	28.96	-8.4	-2.7	
2,926.0	0.62	106.29	2,925.9	-5.3	8.1	0.10	0.10	-0.76	-9.3	-2.8	
3,020.0	0.62	112.62	3,019.9	-5.6	9.1	0.07	0.00	6.73	-10.6	-1.7	
3,208.0	1.23	114.12	3,207.9	-6.9	11.9	0.32	0.32	0.80	-13.6	-1.4	
3,300.0	1.41	101.28	3,299.9	-7.5	13.9	0.38	0.20	-13.96	-15.1	-4.6	
3,395.0	1.14	107.35	3,394.9	-8.0	15.9	0.32	-0.28	6.39	-17.6	-2.9	
3,487.0	1.06	110.69	3,486.9	-8.6	17.6	0.11	-0.09	3.63	-19.5	-1.8	
3,580.0	0.70	277.86	3,579.8	-8.8	17.9	1.88	-0.39	179.75	18.9	6.3	
3,675.0	0.79	292.27	3,674.8	-8.5	16.7	0.22	0.09	15.17	18.6	1.5	
3,769.0	0.97	24.99	3,768.8	-7.5	16.4	1.36	0.19	98.64	-0.1	-18.0	
3,863.0	1.58	48.29	3,862.8	-5.9	17.7	0.84	0.65	24.79	-9.3	-16.2	
3,958.0	0.79	62.44	3,957.8	-4.7	19.3	0.88	-0.83	14.89	-14.9	-13.1	
4,053.0	0.79	63.49	4,052.8	-4.1	20.4	0.02	0.00	1.11	-16.4	-12.8	
4,147.0	0.70	65.25	4,146.8	-3.6	21.5	0.10	-0.10	1.87	-18.0	-12.3	
4,241.0	0.62	72.81	4,240.8	-3.2	22.5	0.13	-0.09	8.04	-20.6	-9.7	
4,336.0	0.79	78.78	4,335.8	-2.9	23.7	0.19	0.18	6.28	-22.7	-7.5	
4,431.0	0.88	72.54	4,430.7	-2.6	25.0	0.13	0.09	-6.57	-23.1	-10.0	
4,525.0	1.58	78.78	4,524.7	-2.1	27.0	0.76	0.74	6.64	-26.0	-7.3	
4,620.0	1.67	82.74	4,619.7	-1.7	29.6	0.15	0.09	4.17	-29.2	-5.4	
4,714.0	1.14	76.50	4,713.7	-1.3	31.9	0.59	-0.56	-6.64	-30.7	-8.7	
4,808.0	1.06	80.01	4,807.6	-0.9	33.7	0.11	-0.09	3.73	-33.0	-6.8	
4,903.0	1.32	81.68	4,902.6	-0.6	35.6	0.28	0.27	1.76	-35.1	-5.8	
4,997.0	1.58	83.71	4,996.6	-0.3	38.0	0.28	0.28	2.16	-37.7	-4.5	
5,166.0	1.67	79.84	5,165.5	0.4	42.7	0.08	0.05	-2.29	-48.2	-4.9	
5,259.0	0.88	165.44	5,258.5	-0.1	44.2	1.96	-0.85	92.04	-6.4	53.2	
5,352.0	1.85	221.69	5,351.5	-1.9	43.4	1.66	1.04	60.48	48.4	37.0	
5,446.0	3.52	214.31	5,445.4	-5.4	40.8	1.81	1.78	-7.85	51.3	46.2	



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

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
5,541.0	6.33	223.80	5,540.0	-11.6	35.5	3.07	2.96	9.99	65.8	39.3	
5,635.0	7.83	235.41	5,633.3	-19.0	26.6	2.20	1.60	12.35	76.9	25.1	
5,729.0	10.73	246.66	5,726.1	-26.1	13.3	3.63	3.09	11.97	80.8	6.5	
5,821.0	10.46	246.13	5,816.5	-32.9	-2.2	0.31	-0.29	-0.58	79.0	2.9	
5,915.0	12.05	247.18	5,908.7	-40.1	-19.0	1.71	1.69	1.12	76.1	-3.0	
6,010.0	13.19	249.91	6,001.4	-47.7	-38.3	1.35	1.20	2.87	70.4	-11.5	
6,104.0	12.57	250.43	6,093.0	-54.8	-58.0	0.67	-0.66	0.55	64.4	-17.6	
6,198.0	11.52	248.68	6,185.0	-61.6	-76.4	1.18	-1.12	-1.86	60.5	-21.0	
6,292.0	12.13	246.66	6,277.0	-69.0	-94.2	0.78	0.65	-2.15	57.4	-23.7	
6,386.0	12.93	249.56	6,368.7	-76.5	-113.2	1.08	0.85	3.09	50.9	-31.3	
6,480.0	12.31	249.56	6,460.5	-83.7	-132.4	0.68	-0.66	0.00	45.6	-36.6	
6,574.0	12.75	238.39	6,552.2	-92.7	-150.6	2.62	0.47	-11.88	47.4	-31.4	
6,668.0	13.89	230.66	6,643.7	-105.2	-168.2	2.25	1.21	-8.22	45.5	-26.4	
6,762.0	13.89	231.01	6,735.0	-119.5	-185.7	0.09	0.00	0.37	38.8	-26.8	
6,856.0	13.98	229.43	6,826.2	-134.0	-203.1	0.42	0.10	-1.68	32.8	-25.7	
6,950.0	13.63	229.60	6,917.5	-148.5	-220.1	0.37	-0.37	0.18	26.3	-25.6	
7,043.0	13.72	228.81	7,007.8	-162.9	-236.8	0.22	0.10	-0.85	20.5	-24.9	
7,138.0	12.13	221.52	7,100.4	-177.8	-251.9	2.39	-1.67	-7.67	18.3	-21.0	
7,232.0	11.43	220.82	7,192.5	-192.3	-264.5	0.76	-0.74	-0.74	15.2	-18.3	
7,326.0	10.99	214.31	7,284.7	-206.7	-275.7	1.42	-0.47	-6.93	14.4	-13.0	
7,420.0	7.83	211.59	7,377.4	-219.6	-284.1	3.39	-3.36	-2.89	13.8	-7.9	
7,514.0	6.07	208.25	7,470.7	-229.4	-289.8	1.92	-1.87	-3.55	13.8	-3.0	
7,609.0	4.48	203.15	7,565.3	-237.2	-293.6	1.74	-1.67	-5.37	13.2	1.9	
7,703.0	1.76	191.11	7,659.1	-242.0	-295.3	2.96	-2.89	-12.81	11.9	7.4	
7,797.0	1.49	162.10	7,753.1	-244.6	-295.2	0.91	-0.29	-30.86	5.3	13.9	
7,892.0	1.67	163.25	7,848.1	-247.1	-294.5	0.19	0.19	1.21	3.0	14.0	
7,987.0	1.76	170.54	7,943.0	-249.9	-293.8	0.25	0.09	7.67	1.9	13.7	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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8,080.0	1.85	178.19	8,036.0	-252.8	-293.5	0.28	0.10	8.23	0.8	13.5	
8,173.0	1.85	209.57	8,128.9	-255.6	-294.2	1.08	0.00	33.74	4.9	11.9	
8,268.0	2.11	227.67	8,223.9	-258.1	-296.3	0.71	0.27	19.05	5.2	10.2	
8,363.0	0.35	303.43	8,318.9	-259.1	-297.8	2.16	-1.85	79.75	10.5	-0.8	
8,456.0	0.88	18.49	8,411.9	-258.3	-297.8	0.92	0.57	80.71	1.1	-10.1	
8,550.0	0.09	13.57	8,505.8	-257.5	-297.6	0.84	-0.84	-5.23	1.2	-10.0	
8,644.0	0.53	28.77	8,599.8	-257.1	-297.3	0.47	0.47	16.17	-2.0	-9.9	
8,737.0	0.35	211.59	8,692.8	-256.9	-297.3	0.95	-0.19	-190.52	2.6	9.8	
8,830.0	0.62	196.73	8,785.8	-257.7	-297.6	0.32	0.29	-15.98	-0.8	10.1	
8,924.0	0.44	199.55	8,879.8	-258.5	-297.9	0.19	-0.19	3.00	-1.2	10.1	
9,018.0	1.23	223.45	8,973.8	-259.6	-298.7	0.90	0.84	25.43	1.7	9.9	
9,112.0	1.23	238.13	9,067.8	-260.8	-300.2	0.33	0.00	15.62	2.2	9.4	
9,207.0	1.23	229.96	9,162.8	-262.0	-301.9	0.18	0.00	-8.60	-1.2	9.4	
9,301.0	1.32	224.24	9,256.8	-263.4	-303.4	0.17	0.10	-6.09	-4.2	9.2	
9,396.0	1.67	229.16	9,351.7	-265.1	-305.2	0.39	0.37	5.18	-5.9	9.6	
9,489.0	1.93	227.32	9,444.7	-267.1	-307.4	0.29	0.28	-1.98	-9.1	9.4	
9,584.0	2.29	232.42	9,539.6	-269.3	-310.1	0.43	0.38	5.37	-11.8	10.3	
9,679.0	1.76	247.62	9,634.6	-271.0	-312.9	0.79	-0.56	16.00	-11.9	13.5	
9,772.0	2.11	252.02	9,727.5	-272.1	-315.9	0.41	0.38	4.73	-14.0	14.5	
9,866.0	1.49	274.96	9,821.5	-272.5	-318.7	1.00	-0.66	24.40	-10.1	19.5	
9,960.0	0.79	299.74	9,915.4	-272.1	-320.5	0.89	-0.74	26.36	-2.7	22.4	
10,054.0	0.18	2.14	10,009.4	-271.6	-321.1	0.77	-0.65	66.38	18.2	13.4	
10,147.0	0.70	139.69	10,102.4	-271.9	-320.7	0.90	0.56	147.90	-4.8	-22.0	
10,243.0	0.35	208.42	10,198.4	-272.6	-320.4	0.69	-0.36	71.59	-22.8	-3.0	
10,337.0	0.09	187.68	10,292.4	-273.0	-320.6	0.28	-0.28	-22.06	-20.6	-10.9	
10,430.0	0.26	16.47	10,385.4	-272.8	-320.5	0.38	0.18	-184.10	21.9	7.7	
10,524.0	2.37	56.28	10,479.4	-271.5	-318.9	2.32	2.24	42.35	19.6	-8.0	



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Design:	OH	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)	
10,619.0	2.73	67.88	10,574.3	-269.6	-315.1	0.68	0.38	12.22	13.4	-11.4	
10,713.0	1.67	34.84	10,668.2	-267.6	-312.3	1.71	-1.13	-35.16	14.2	-3.5	
10,807.0	2.11	48.90	10,762.2	-265.4	-310.2	0.68	0.47	14.96	9.9	-8.5	
10,901.0	2.20	27.90	10,856.1	-262.6	-308.0	0.84	0.10	-22.34	8.1	-3.1	
10,994.0	2.29	32.91	10,949.1	-259.5	-306.2	0.23	0.10	5.39	4.2	-3.7	
11,089.0	1.76	24.28	11,044.0	-256.6	-304.6	0.64	-0.56	-9.07	1.4	-3.3	
11,183.0	2.37	344.04	11,137.9	-253.4	-304.5	1.63	0.65	-42.82	0.1	-2.6	
11,277.0	3.25	312.66	11,231.8	-249.7	-307.0	1.85	0.94	-33.38	-2.9	-3.1	
11,372.0	2.99	296.14	11,326.7	-246.8	-311.2	0.98	-0.27	-17.39	-6.9	-4.6	
11,465.0	3.08	276.63	11,419.6	-245.4	-315.9	1.11	0.10	-20.98	-9.8	-7.5	
11,558.0	3.08	279.17	11,512.4	-244.8	-320.8	0.15	0.00	2.73	-15.1	-6.9	
11,652.0	3.08	284.36	11,606.3	-243.7	-325.8	0.30	0.00	5.52	-20.7	-5.3	
11,746.0	2.37	289.46	11,700.2	-242.5	-330.0	0.80	-0.76	5.43	-25.6	-3.2	
11,829.0	1.41	292.62	11,783.1	-241.5	-332.6	1.16	-1.16	3.81	-28.4	-1.7	
11,880.0	0.97	282.43	11,834.1	-241.2	-333.6	0.95	-0.86	-19.98	-28.7	-6.8	
11,975.0	0.79	323.56	11,929.1	-240.5	-334.8	0.67	-0.19	43.29	-27.4	14.3	
12,030.0	3.65	20.53	11,984.1	-238.5	-334.4	5.97	5.20	103.57	-4.9	31.1	
KOP: 12030.0 MD; 11984.1 TVD; -238.5; -334.4; 3.65											
12,068.0	5.89	24.99	12,021.9	-235.6	-333.1	5.97	5.90	11.75	-5.6	31.4	
12,162.0	18.38	18.40	12,113.7	-217.1	-326.4	13.35	13.29	-7.01	-18.9	26.3	
12,201.2	22.46	15.19	12,150.4	-204.0	-322.5	10.80	10.42	-8.20	-24.5	22.1	
FTP Crossing 12201.2 MD; 12150.4 TVD; -204.0; -322.5; 22.46											
12,255.0	28.14	12.24	12,199.0	-181.7	-317.1	10.80	10.55	-5.48	-30.2	15.8	
12,349.0	39.92	12.51	12,276.8	-130.4	-305.8	12.53	12.53	0.29	-37.4	4.6	
12,444.0	51.79	8.12	12,342.8	-63.4	-293.9	12.92	12.49	-4.62	-43.4	-10.5	
12,507.0	58.12	5.57	12,379.0	-12.2	-287.8	10.58	10.05	-4.05	-45.3	-18.7	
12,536.0	58.92	4.87	12,394.1	12.4	-285.6	3.44	2.76	-2.41	-44.9	-21.7	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3351.0usft
Site:	Colgrove 35 Fed	MD Reference:	KB = 25' @ 3351.0usft
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (*H00usft)	Build (*H00usft)	Turn (*H00usft)	High to Plan (usft)	Right to Plan (usft)	
12,630.0	66.04	356.78	12,437.6	95.6	-284.5	10.75	7.57	-8.61	-35.9	-26.2	
12,692.0	66.13	352.83	12,462.8	152.0	-289.7	5.83	0.15	-6.37	-23.5	-22.0	
12,725.0	68.15	352.83	12,475.6	182.2	-293.5	6.12	6.12	0.00	-14.7	-18.1	
12,818.0	77.65	345.71	12,502.9	269.3	-310.1	12.56	10.22	-7.66	9.9	-1.4	
12,943.0	93.91	343.07	12,512.1	389.0	-343.6	13.18	13.01	-2.11	19.9	30.3	
12,975.0	96.46	346.59	12,509.2	419.7	-351.9	13.55	7.97	11.00	17.1	38.5	
13,037.0	95.50	354.94	12,502.7	480.5	-361.8	13.48	-1.55	13.47	9.8	48.3	
13,069.0	94.26	0.30	12,500.0	512.4	-363.1	17.13	-3.87	16.75	6.6	49.4	
13,100.0	93.03	3.46	12,498.0	543.3	-362.1	10.92	-3.97	10.19	4.5	48.1	
13,193.0	90.31	3.37	12,495.3	636.1	-356.6	2.93	-2.92	-0.10	1.9	41.8	
13,286.0	89.43	3.81	12,495.5	728.9	-350.8	1.06	-0.95	0.47	2.0	35.1	
13,380.0	88.99	2.85	12,496.8	822.7	-345.3	1.12	-0.47	-1.02	3.2	28.8	
13,473.0	90.40	359.95	12,497.3	915.7	-343.0	3.47	1.52	-3.12	3.6	25.8	
13,567.0	90.13	0.47	12,496.9	1,009.7	-342.7	0.62	-0.29	0.55	3.0	24.6	
13,661.0	90.66	359.16	12,496.2	1,103.7	-343.0	1.50	0.56	-1.39	2.3	24.1	
13,754.0	89.16	2.06	12,496.4	1,198.7	-342.0	3.51	-1.61	3.12	2.3	22.3	
13,848.0	90.04	1.62	12,497.0	1,290.6	-339.0	1.05	0.94	-0.47	2.9	18.4	
13,941.0	90.57	1.09	12,496.5	1,383.6	-336.8	0.81	0.57	-0.57	2.3	15.4	
14,035.0	89.60	359.68	12,496.4	1,477.6	-336.1	1.82	-1.03	-1.50	2.0	14.0	
14,128.0	90.31	359.33	12,496.5	1,570.6	-336.9	0.85	0.76	-0.38	2.0	13.9	
14,222.0	90.31	359.16	12,496.0	1,664.6	-336.2	0.18	0.00	-0.18	1.4	14.4	
14,315.0	90.04	356.87	12,495.7	1,757.5	-341.4	2.48	-0.29	-2.46	1.0	16.8	
14,409.0	90.22	358.36	12,495.5	1,851.4	-345.3	1.60	0.19	1.59	0.7	19.9	
14,502.0	90.75	359.33	12,494.7	1,944.4	-347.2	1.19	0.57	1.04	-0.2	20.9	
14,596.0	88.11	357.75	12,495.6	2,038.4	-349.6	3.27	-2.81	-1.68	0.6	22.5	
14,689.0	91.89	359.86	12,495.6	2,131.3	-351.5	4.65	4.06	2.27	0.5	23.6	
14,783.0	88.11	4.60	12,495.6	2,225.2	-347.9	6.45	-4.02	5.04	0.5	19.1	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3351.0usft
Site:	Colgrove 35 Fed	MD Reference:	KB = 25' @ 3351.0usft
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)	
14,877.0	88.64	3.90	12,498.3	2,318.9	-340.9	0.93	0.56	-0.74	3.0	11.3	
14,970.0	89.69	5.57	12,499.6	2,411.6	-333.2	2.12	1.13	1.80	4.2	2.8	
15,064.0	91.45	6.36	12,498.7	2,505.0	-323.5	2.05	1.87	0.84	3.2	-7.7	
15,158.0	87.85	3.81	12,499.3	2,598.7	-315.1	4.69	-3.83	-2.71	3.6	-16.9	
15,251.0	89.34	4.52	12,501.6	2,691.4	-308.4	1.77	1.60	0.76	5.8	-24.5	
15,344.0	87.76	1.62	12,503.9	2,784.2	-303.4	3.55	-1.70	-3.12	8.0	-30.3	
15,437.0	87.85	0.21	12,507.5	2,877.1	-301.9	1.52	0.10	-1.52	11.5	-32.5	
15,532.0	90.22	357.92	12,509.1	2,972.1	-303.5	3.47	2.49	-2.41	13.0	-31.8	
15,626.0	90.22	357.75	12,508.7	3,066.0	-307.0	0.18	0.00	-0.18	12.6	-29.1	
15,719.0	90.57	357.84	12,508.1	3,158.9	-310.6	0.39	0.38	0.10	11.8	-26.3	
15,813.0	92.42	358.54	12,505.6	3,252.9	-313.6	2.10	1.97	0.74	9.2	-24.2	
15,906.0	89.96	359.07	12,503.7	3,345.8	-315.5	2.71	-2.65	0.57	7.2	-23.1	
16,000.0	90.57	359.16	12,503.3	3,439.8	-317.0	0.66	0.65	0.10	6.7	-22.4	
16,093.0	89.25	357.13	12,503.4	3,532.7	-320.0	2.60	-1.42	-2.18	6.7	-20.2	
16,187.0	89.60	357.49	12,504.3	3,626.6	-324.4	0.53	0.37	0.38	7.6	-16.7	
16,280.0	89.43	357.57	12,505.1	3,719.5	-328.4	0.20	-0.18	0.09	8.3	-13.5	
16,373.0	89.69	357.92	12,505.8	3,812.5	-332.0	0.47	0.28	0.38	8.9	-10.6	
16,467.0	90.31	358.72	12,505.8	3,906.4	-334.8	1.08	0.66	0.85	8.7	-8.7	
16,560.0	91.98	359.77	12,504.0	3,999.4	-336.0	2.12	1.80	1.13	6.8	-8.3	
16,654.0	89.87	1.26	12,502.5	4,093.4	-335.2	2.75	-2.24	1.59	5.2	-9.9	
16,747.0	88.02	359.95	12,504.2	4,186.3	-334.2	2.44	-1.99	-1.41	6.8	-11.7	
16,841.0	90.66	2.58	12,505.3	4,280.3	-332.1	3.96	2.81	2.80	7.8	-14.6	
16,934.0	88.02	359.07	12,506.3	4,373.3	-330.8	4.72	-2.84	-3.77	8.7	-16.8	
17,028.0	88.81	356.08	12,508.9	4,467.1	-334.8	3.29	0.84	-3.18	11.2	-13.6	
17,122.0	91.71	355.82	12,508.5	4,560.9	-341.4	3.10	3.09	-0.28	10.7	-7.8	
17,215.0	91.01	358.36	12,506.3	4,653.7	-346.1	2.83	-0.75	2.73	8.4	-3.9	
17,330.0	88.81	358.28	12,506.5	4,768.7	-349.5	1.91	-1.91	-0.07	8.4	-1.6	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed
 Well: #705H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #705H
 TVD Reference: KB = 25' @ 3351.0usft
 MD Reference: KB = 25' @ 3351.0usft
 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)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,423.0	90.31	359.86	12,507.2	4,861.6	-351.0	2.34	1.61	1.70	9.0	-0.8	
17,516.0	90.22	2.14	12,506.8	4,954.6	-349.4	2.45	-0.10	2.45	8.5	-3.3	
17,610.0	90.84	2.67	12,505.9	5,048.5	-345.4	0.87	0.66	0.56	7.5	-8.1	
17,703.0	90.13	1.88	12,505.1	5,141.5	-341.7	1.14	-0.76	-0.85	6.6	-12.6	
17,798.0	90.84	358.36	12,504.3	5,238.4	-341.5	3.78	0.75	-3.71	5.7	-13.6	
17,892.0	90.04	356.08	12,503.6	5,330.3	-346.1	2.57	-0.85	-2.43	4.9	-9.9	
17,985.0	91.71	358.10	12,502.2	5,423.2	-350.8	2.82	1.80	2.17	3.4	-8.0	
18,079.0	90.92	356.61	12,500.0	5,517.1	-355.2	1.79	-0.84	-1.59	1.1	-2.5	
18,173.0	87.32	353.53	12,501.5	5,610.7	-363.2	5.04	-3.83	-3.28	2.4	4.8	
18,267.0	88.81	356.78	12,504.6	5,704.3	-371.2	3.80	1.59	3.46	5.5	11.9	
18,360.0	88.72	359.59	12,506.6	5,797.2	-374.1	3.02	-0.10	3.02	7.4	14.0	
18,454.0	90.04	359.68	12,507.6	5,891.2	-374.7	1.41	1.40	0.10	8.3	13.8	
18,547.0	90.57	359.42	12,507.2	5,984.2	-375.4	0.63	0.57	-0.28	7.7	13.7	
18,641.0	90.75	359.59	12,506.1	6,078.2	-376.2	0.26	0.19	0.18	6.5	13.7	
18,735.0	90.84	359.33	12,504.8	6,172.2	-377.1	0.29	0.10	-0.28	5.1	13.8	
18,828.0	90.84	359.24	12,503.4	6,265.1	-378.3	0.10	0.00	-0.10	3.7	14.1	
18,921.0	92.68	359.59	12,500.5	6,358.1	-379.2	2.01	1.98	0.38	0.7	14.3	
19,015.0	91.98	359.51	12,496.7	6,452.0	-380.0	0.75	-0.74	-0.09	-3.2	14.2	
19,108.0	91.10	359.42	12,494.2	6,545.0	-380.8	0.95	-0.95	-0.10	-5.8	14.2	
19,202.0	88.90	357.92	12,494.2	6,638.9	-383.0	2.83	-2.34	-1.60	-5.9	15.6	
19,296.0	88.64	358.28	12,486.2	6,732.9	-386.1	0.47	-0.28	0.38	-4.0	17.9	
19,391.0	89.78	358.80	12,497.6	6,827.8	-388.6	1.32	1.20	0.55	-2.8	19.5	
19,485.0	90.84	358.19	12,497.0	6,921.8	-391.0	1.30	1.13	-0.65	-3.4	21.1	
19,579.0	91.36	357.22	12,485.2	7,015.7	-394.8	1.17	0.55	-1.03	-5.3	24.0	
19,674.0	91.36	357.66	12,493.0	7,110.6	-399.0	0.46	0.00	0.46	-7.7	27.5	
19,768.0	88.46	357.05	12,493.1	7,204.4	-403.4	3.15	-3.09	-0.65	-7.7	31.0	



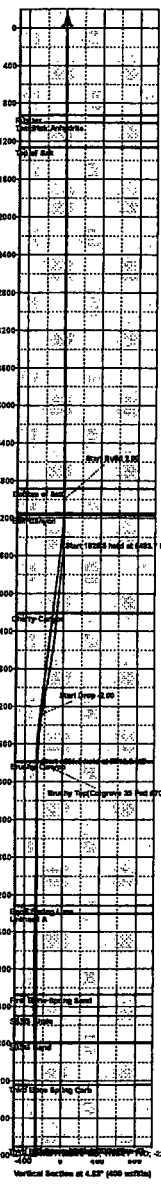
Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3351.0usft
Site:	Colgrove 35 Fed	MD Reference:	KB = 25' @ 3351.0usft
Well:	#705H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

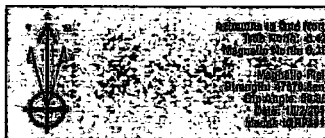
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,862.0	88.20	357.66	12,495.9	7,298.3	-407.7	0.71	-0.28	0.65	-5.1	34.5
Last MWD Survey (MD = 19862.0)										
19,937.0	88.20	357.66	12,498.2	7,373.2	-410.8	0.00	0.00	0.00	-2.8	36.9
Projection to Bit (MD = 19937.0)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
12,030.0	11,984.1	-238.5	-334.4	KOP 12030.0' MD; 11984.1' TVD; -238.5'; -334.4'; 3.65
12,201.2	12,150.4	-204.0	-322.5	FTP Crossing 12201.2' MD; 12150.4' TVD; -204.0'; -322.5'; 22.46
19,862.0	12,495.9	7,298.3	-407.7	Last MWD Survey (MD = 19862.0)
19,937.0	12,498.2	7,373.2	-410.8	Projection to Bit (MD = 19937.0)

Checked By: _____	Approved By: _____	Date: _____
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Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

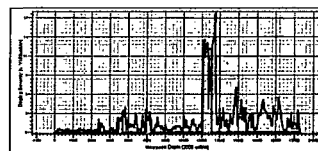
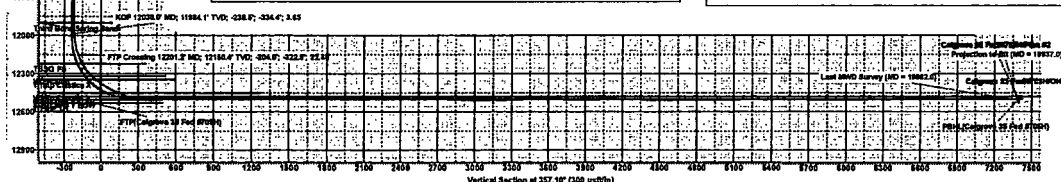
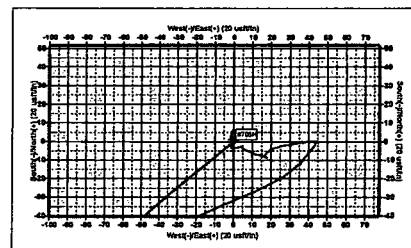
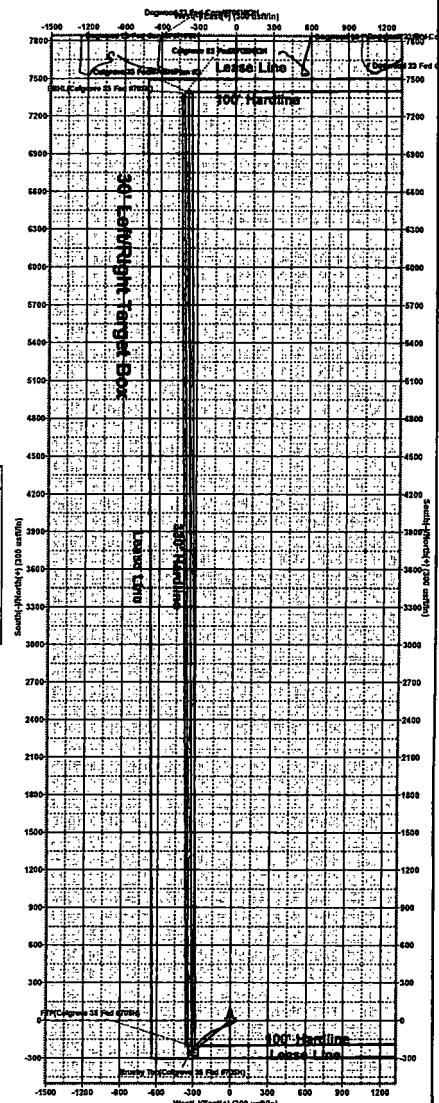
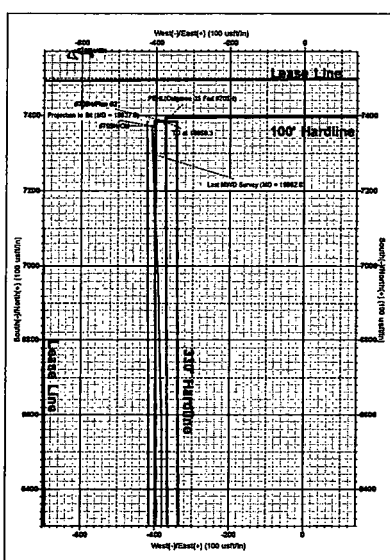
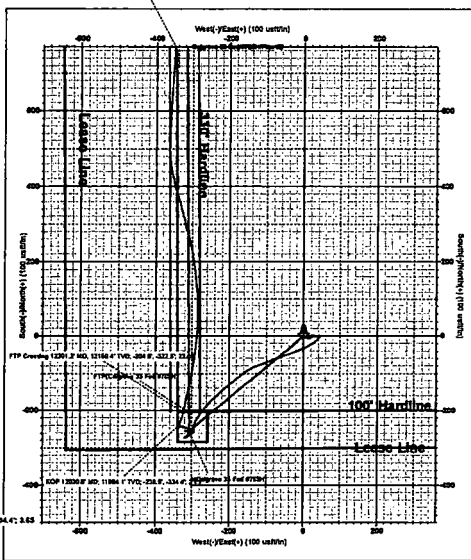


To convert a Magnetic Direction to a Grid Direction, Add 6.38°
To convert a Magnetic Direction to a True Direction, Add 6.78° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

WELL DETAILS: #705H						
			KB = 25'	3326.0		
			3351.0usft			
+N/S	+E/W	Nothing	Eastings	Latitudes	Longitudes	Slat
0.0	0.0	365035.00	786945.00	32° 0' 3.914 N	103° 32' 27.681 W	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSect	Target
2	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
3	5000.0	0.00	0.00	5000.0	0.0	0.0	0.00	0.00	0.0	
4	5493.7	9.87	230.40	5491.3	-27.1	-32.7	2.00	230.40	-25.4	
3	7322.2	9.87	230.40	7292.7	-226.9	-274.3	0.00	0.00	-212.8	
5	7816.0	0.00	0.00	7784.0	-254.0	-307.0	2.00	180.00	-238.1	Brushy Top(Colgrove 35 Fed #705H)
6	12047.5	0.00	0.00	12015.5	-254.0	-307.0	0.00	0.00	-238.1	
7	12796.9	89.94	359.50	12493.0	222.9	-311.2	12.00	359.50	238.4	
8	19959.3	89.94	359.50	12501.0	7385.0	-374.0	0.00	0.00	7394.5	PBHL(Colgrove 35 Fed #705H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TYD	N-S	E-W	Nothing	Easting	Shape
Brushy Top(Colgrove 35 Fed #705H)	7784.0	-254.0	-307.0	364781.0	786638.0	Polygon
FTP(Colgrove 35 Fed #705H)	12483.0	-204.0	-307.0	364831.0	786638.0	Point
PBHL(Colgrove 35 Fed #705H)	12451.0	7385.0	-374.0	372420.0	786571.0	Rectangle (Sides: L0.0 W60.0)



Los County 991 (RUC 83 1007)
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