



HOBBS OCD
JUL 30 2019
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Colgrove 35 Fed Com
#702H
OH

Design: OH

Midland PVA

04 April, 2019



Midland PVA

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25 @ 3343.0usft
Site:	Colgrove 35 Fed Corn			MD Reference:	KB = 25 @ 3343.0usft
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	Colgrove 35 Fed Corn				
Site Position:		Northing:	364,902.00 usft	Latitude:	32° 0' 2.718 N
From:	Map	Easting:	785,291.00 usft	Longitude:	103° 32' 46.899 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	#702H					
Well Position	+N-S	0.0 usft	Northing:	365,174.00 usft	Latitude:	32° 0' 5.504 N
	+E-W	0.0 usft	Easting:	783,984.00 usft	Longitude:	103° 33' 2.285 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,318.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/30/2019	6.75	59.84	47,642.46547881

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	4.95	

Survey Program	Date	4/4/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
189.0	19,922.0	Driltech MWD (OH)	MWD	OWSG MWD - Standard



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Design:	OH	Database:	EDM 5000.14

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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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
189.0	0.59	1.27	189.0	1.0	0.0	0.31	0.31	0.00	-1.0	0.0	
311.0	0.96	304.41	311.0	2.2	-0.8	0.66	0.30	-46.61	-1.9	-1.3	
398.0	1.28	309.68	398.0	3.2	-2.2	0.39	0.37	6.06	-3.7	-1.1	
483.0	1.37	302.96	482.9	4.4	-3.7	0.21	0.11	-7.91	-5.5	-1.6	
572.0	1.45	305.78	571.9	5.6	-5.5	0.12	0.08	3.18	-7.8	-1.3	
672.0	1.51	305.37	671.9	7.1	-7.6	0.06	0.06	-0.42	-10.4	-1.4	
767.0	1.66	293.82	766.9	8.4	-9.9	0.37	0.16	-12.16	-12.5	-3.7	
861.0	2.18	302.23	860.8	9.9	-12.7	0.63	0.55	8.95	-16.0	-1.6	
953.0	1.74	303.49	952.7	11.6	-15.3	0.48	-0.48	1.37	-19.2	-1.2	
1,053.0	1.76	298.57	1,052.7	13.2	-17.9	0.15	0.02	-4.92	-22.1	-3.0	
1,147.0	1.87	299.18	1,146.7	14.5	-20.4	0.10	-0.10	0.65	-24.9	-2.7	
1,241.0	0.44	54.84	1,240.6	15.4	-21.3	2.02	-1.31	123.04	8.7	25.1	
1,336.0	2.99	97.74	1,335.6	15.3	-18.6	2.83	2.68	45.16	23.4	13.9	
1,431.0	6.16	91.58	1,430.3	14.8	-11.0	3.37	3.34	-6.48	19.5	18.9	
1,526.0	8.79	95.80	1,524.5	13.9	1.3	2.83	2.77	4.44	16.8	21.6	
1,620.0	9.06	96.68	1,617.3	12.3	15.8	0.32	0.29	0.94	13.2	26.2	
1,715.0	8.97	98.35	1,711.2	10.4	30.6	0.29	-0.09	1.76	10.4	30.6	
1,810.0	8.88	99.85	1,805.0	8.1	45.1	0.26	-0.09	1.58	7.9	34.9	
1,904.0	8.71	100.55	1,897.9	5.5	59.3	0.21	-0.18	0.74	5.3	39.1	
1,999.0	9.23	113.38	1,891.7	1.2	73.3	2.17	0.55	13.51	11.3	40.1	
2,094.0	10.29	120.76	2,085.4	-6.2	87.6	1.72	1.12	7.77	12.4	39.3	
2,188.0	11.26	123.31	2,177.7	-15.5	102.5	1.15	1.03	2.71	8.6	38.5	
2,283.0	11.26	123.58	2,270.9	-25.7	118.0	0.08	0.00	0.28	2.4	37.8	
2,377.0	11.17	122.70	2,363.1	-35.7	133.3	0.21	-0.10	-0.94	-4.5	37.3	
2,472.0	11.08	121.55	2,456.3	-45.5	148.8	0.25	-0.09	-1.21	-11.3	36.8	
2,567.0	11.08	120.06	2,548.5	-54.8	164.5	0.30	0.00	-1.57	-18.4	36.4	



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 Wellbore: OH
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 MD Reference: KB = 25 @ 3343.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asd (azimuth) (°)	TVD (usft)	NIS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
2,662.0	10.29	119.97	2,642.9	-63.6	179.7	0.63	-0.83	-0.09	-23.9	-36.5	
2,757.0	9.94	118.13	2,736.4	-71.7	194.3	0.50	-0.37	-1.94	-29.5	-38.0	
2,851.0	10.02	114.26	2,829.0	-78.9	208.9	0.72	0.09	-4.12	-36.1	-34.7	
2,946.0	10.55	118.13	2,922.5	-86.4	224.1	0.92	0.56	4.07	-38.5	-38.2	
3,041.0	11.17	120.06	3,015.8	-95.1	239.8	0.76	0.65	2.03	-42.9	-39.8	
3,136.0	11.52	116.98	3,108.9	-104.0	256.2	0.74	0.37	-3.24	-51.5	-37.8	
3,230.0	11.78	114.44	3,201.0	-112.3	273.3	0.61	0.28	-2.70	-60.1	-36.4	
3,325.0	11.78	120.15	3,294.0	-121.2	290.5	1.23	0.00	6.01	-63.4	-43.2	
3,420.0	12.40	131.31	3,386.9	-132.8	306.6	2.54	0.65	11.75	-61.8	-54.2	
3,515.0	13.37	133.24	3,478.5	-147.0	322.2	1.12	1.02	2.03	-69.3	-53.9	
3,609.0	12.49	130.43	3,571.1	-161.1	337.9	1.15	-0.94	-2.99	-81.0	-47.9	
3,704.0	11.43	125.33	3,664.0	-173.2	353.4	1.57	-1.12	-5.37	-92.5	-38.6	
3,799.0	10.64	126.04	3,757.3	-183.8	368.1	0.84	-0.83	0.75	-98.1	-38.7	
3,893.0	9.76	120.85	3,849.8	-193.0	382.0	1.35	-0.94	-5.52	-105.8	-28.9	
3,988.0	9.67	112.15	3,943.4	-200.1	396.3	1.55	-0.09	-9.16	-112.8	-13.3	
4,083.0	9.50	104.59	4,037.1	-205.1	411.3	1.34	-0.18	-7.96	-117.5	0.7	
4,177.0	10.46	112.85	4,129.7	-210.4	426.7	1.63	1.02	8.79	-120.5	20.3	
4,272.0	10.64	123.93	4,223.1	-218.6	441.9	2.14	0.19	11.66	-119.5	43.8	
4,367.0	11.17	120.15	4,316.4	-228.1	457.1	0.94	0.56	-3.98	-127.9	35.5	
4,462.0	12.66	115.14	4,409.3	-237.2	474.5	1.91	1.57	-5.27	-137.9	24.7	
4,556.0	13.19	111.10	4,501.0	-245.4	493.8	1.11	0.56	-4.30	-148.5	16.2	
4,651.0	11.34	116.11	4,593.8	-253.4	512.3	2.24	-1.95	5.27	-154.8	30.9	
4,745.0	10.99	115.49	4,686.0	-261.3	528.7	0.39	-0.37	-0.66	-161.1	30.2	
4,840.0	12.57	110.66	4,779.0	-268.9	546.6	1.96	1.66	-5.08	-170.5	18.0	
4,935.0	11.87	125.07	4,871.9	-278.1	564.2	3.28	-0.74	15.17	-168.4	61.2	
5,029.0	10.38	131.40	4,964.1	-289.3	578.5	2.05	-1.59	6.73	-167.0	78.0	
5,124.0	8.41	130.96	5,057.7	-300.0	590.8	1.02	-1.02	-0.46	-172.0	74.4	



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5,218.0	8.44	131.13	5,150.8	-309.8	601.8	1.03	-1.03	0.18	-174.5	72.7	
5,313.0	8.53	129.46	5,244.5	-318.7	612.5	0.28	0.09	-1.78	-178.4	65.6	
5,408.0	8.62	129.82	5,338.5	-327.7	623.4	0.11	0.09	0.38	-180.1	64.7	
5,502.0	8.27	117.69	5,431.4	-335.4	634.8	1.93	-0.37	-12.90	-191.2	24.9	
5,597.0	8.27	97.47	5,525.5	-339.4	647.6	3.05	0.00	-21.28	-190.2	-39.7	
5,692.0	8.09	91.76	5,618.5	-340.5	661.1	0.88	-0.19	-6.01	-188.1	-53.1	
5,786.0	8.09	91.94	5,712.6	-341.0	674.3	0.03	0.00	0.19	-190.8	-46.7	
5,881.0	6.16	98.86	5,806.8	-341.8	686.0	2.13	-2.03	5.18	-194.6	-24.8	
5,976.0	4.40	116.98	5,901.4	-344.1	694.3	2.66	-1.85	21.18	-187.6	45.8	
6,070.0	4.92	126.12	5,995.1	-348.1	700.8	0.96	0.55	9.72	-173.5	74.2	
6,165.0	2.99	138.87	6,089.9	-352.3	705.7	2.22	-2.03	13.42	-147.7	107.7	
6,259.0	1.14	273.34	6,183.9	-354.1	708.4	4.12	-1.97	143.05	170.4	25.7	
6,354.0	1.76	280.64	6,278.8	-353.8	704.0	0.68	0.65	7.68	158.4	-0.3	
6,449.0	1.49	291.10	6,373.8	-353.1	701.4	0.42	-0.28	11.01	141.0	-30.9	
6,543.0	1.49	281.60	6,467.8	-352.4	699.1	0.26	0.00	-10.11	130.2	-11.2	
6,638.0	1.41	285.38	6,562.7	-351.8	696.8	0.13	-0.08	3.98	115.0	-22.9	
6,733.0	1.41	286.88	6,657.7	-351.2	694.5	0.04	0.00	1.58	100.1	-28.8	
6,828.0	1.58	289.34	6,752.7	-350.4	692.2	0.19	0.18	2.59	84.3	-35.4	
6,922.0	0.79	330.56	6,846.7	-349.4	690.6	1.19	-0.84	43.85	28.0	-75.2	
7,017.0	1.41	62.93	6,941.6	-348.3	691.4	1.73	0.65	97.23	-70.9	-13.9	
7,111.0	1.06	61.35	7,035.6	-347.4	693.1	0.37	-0.37	-1.68	-66.2	-5.6	
7,206.0	1.32	59.24	7,130.6	-346.4	694.9	0.28	0.27	-2.22	-62.0	2.7	
7,358.0	1.49	72.95	7,282.8	-344.9	698.2	0.25	0.11	9.02	-50.1	32.1	
7,396.0	1.41	69.08	7,320.5	-344.6	699.2	0.33	-0.21	-10.18	-50.1	32.4	
7,490.0	1.23	83.50	7,414.5	-344.1	701.2	0.40	-0.19	15.34	-33.5	51.0	
7,585.0	0.97	83.94	7,508.5	-343.9	703.1	0.27	-0.27	0.46	-28.0	56.4	
7,680.0	1.06	97.91	7,604.5	-343.9	704.7	0.28	0.09	14.71	-10.1	63.8	



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7,774.0	0.85	105.04	7,898.5	-344.2	706.1	0.45	-0.44	7.59	-1.3		65.3
7,869.0	0.79	85.19	7,793.5	-344.4	707.3	0.20	0.15	-10.37	-13.5		64.1
7,964.0	0.88	119.38	7,888.5	-344.8	708.6	0.38	0.09	25.44	12.6		64.3
8,058.0	1.08	100.72	7,982.4	-345.3	710.0	0.38	0.19	-19.83	-10.2		64.7
8,153.0	1.32	91.78	8,077.4	-345.5	712.0	0.34	0.27	-9.43	-22.1		62.2
8,248.0	1.32	98.24	8,172.4	-345.7	714.2	0.11	0.00	4.72	-19.4		63.8
8,342.0	1.58	94.22	8,266.4	-345.9	716.6	0.28	0.28	-2.15	-24.0		63.1
8,437.0	1.58	82.20	8,361.3	-346.0	718.2	0.06	0.00	-2.13	-28.8		62.1
8,531.0	1.76	100.55	8,455.3	-346.3	721.9	0.32	0.19	8.88	-22.2		65.8
8,626.0	0.88	162.60	8,550.3	-347.3	723.5	1.64	-0.93	65.32	46.3		51.8
8,721.0	1.23	165.59	8,645.3	-349.0	724.0	0.37	0.37	3.15	47.2		49.3
8,816.0	1.41	168.66	8,740.2	-351.1	724.5	0.20	0.19	3.23	47.6		48.8
8,911.0	1.49	164.53	8,835.2	-353.5	725.0	0.14	0.08	-4.35	41.7		50.0
9,006.0	1.58	171.74	8,930.2	-355.9	725.6	0.22	0.09	7.59	45.1		44.5
9,101.0	1.58	177.28	9,025.1	-358.6	725.8	0.16	0.00	5.83	46.6		40.1
9,195.0	1.49	179.81	9,119.1	-361.1	725.9	0.12	-0.10	2.80	45.9		38.0
9,290.0	1.67	183.69	9,214.1	-363.7	725.8	0.22	0.19	3.88	45.7		34.8
9,385.0	1.49	190.80	9,309.0	-366.3	725.5	0.28	-0.18	7.59	47.1		28.1
9,480.0	1.49	189.76	9,404.0	-368.7	725.0	0.03	0.00	-1.20	44.0		30.0
9,574.0	1.23	189.49	9,498.0	-370.9	724.7	0.28	-0.28	-0.29	41.6		30.2
9,669.0	1.49	209.53	9,592.9	-373.0	723.9	0.57	0.27	21.09	47.3		14.5
9,764.0	1.58	224.12	9,687.9	-375.0	722.4	0.42	0.09	15.36	46.9		2.4
9,858.0	2.02	199.34	9,781.9	-377.5	720.9	0.94	0.47	-28.38	38.7		21.3
9,953.0	2.55	194.50	9,876.8	-381.1	719.8	0.59	0.56	-5.09	33.0		24.3
10,048.0	2.29	204.00	9,971.7	-384.9	718.5	0.50	-0.27	10.00	32.6		18.9
10,142.0	2.64	218.67	10,065.6	-388.3	716.4	0.76	0.37	15.61	32.3		10.5
10,237.0	2.29	225.18	10,160.5	-391.4	713.7	0.47	-0.37	6.85	29.2		7.0



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10,332.0	2.29	228.94	10,255.5	-394.0	711.0	0.07	0.00	1.85	25.7	6.2	
10,428.0	2.37	241.81	10,349.4	-396.2	707.9	0.64	0.09	15.61	22.8	-0.1	
10,521.0	3.61	250.14	10,444.2	-398.1	703.3	1.38	1.31	8.88	17.4	-3.1	
10,616.0	2.46	264.84	10,539.1	-399.4	698.5	1.45	-1.21	15.26	11.2	-6.6	
10,712.0	1.58	291.36	10,635.1	-399.1	695.2	1.32	-0.92	27.83	3.8	-10.0	
10,806.0	1.41	320.28	10,729.0	-397.7	693.3	0.81	-0.18	30.77	-3.8	-10.0	
10,901.0	1.49	335.74	10,824.0	-395.7	692.0	0.42	0.08	16.27	-8.7	-8.3	
11,186.0	1.23	347.35	11,108.9	-389.3	689.8	0.13	-0.09	4.07	-16.9	-5.6	
11,280.0	1.06	327.83	11,202.9	-387.6	689.1	0.45	-0.18	-20.77	-15.8	-11.3	
11,375.0	1.23	304.37	11,297.9	-386.3	687.8	0.52	0.18	-24.69	-11.8	-17.0	
11,469.0	1.58	298.39	11,391.8	-385.1	685.8	0.40	0.37	-6.38	-12.3	-18.3	
11,564.0	1.23	304.19	11,486.8	-383.9	683.9	0.40	-0.37	6.11	-16.4	-16.8	
11,659.0	0.87	342.07	11,581.8	-382.6	682.8	0.79	-0.27	39.87	-24.9	-2.5	
11,775.0	1.06	29.01	11,697.8	-380.7	683.0	0.70	0.08	40.47	-20.6	17.2	
11,866.0	1.49	68.73	11,808.8	-378.3	684.8	0.86	0.39	35.78	-7.1	27.0	
11,981.0	1.93	78.03	11,903.7	-378.4	687.5	0.52	0.46	7.68	-6.4	27.8	
12,076.0	4.22	13.54	11,988.8	-374.6	689.9	3.84	2.41	-65.78	-31.4	5.8	
12,123.0	13.01	1.41	12,045.0	-367.7	690.4	18.99	18.70	-25.81	-34.3	-1.6	
12,170.0	18.82	359.39	12,090.2	-354.8	690.5	12.42	12.38	-4.30	-37.6	-3.0	
12,217.0	22.25	358.16	12,134.2	-338.3	690.1	7.35	7.30	-2.62	-39.8	-3.6	
12,266.0	26.91	357.19	12,178.8	-317.9	689.3	9.55	9.51	-1.98	-40.1	-3.4	
12,313.0	33.24	358.42	12,219.4	-284.4	688.4	13.53	13.47	2.62	-39.9	-1.9	
12,360.0	40.54	0.62	12,257.0	-266.2	688.2	15.78	15.53	4.68	-40.2	-0.7	
12,407.0	45.99	359.65	12,291.2	-234.0	688.3	11.68	11.60	-2.06	-40.7	-1.6	
12,455.0	46.98	357.72	12,323.8	-198.7	687.4	6.90	6.23	-4.02	-39.4	-1.9	
12,502.0	54.26	356.84	12,352.8	-161.9	685.7	11.33	11.23	-1.87	-38.5	-0.5	
12,550.0	60.59	358.33	12,378.6	-121.5	684.0	13.44	13.19	3.10	-33.3	1.4	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #702H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #702H
 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)	
12,597.0	62.08	359.83	12,401.2	-80.2	683.3	4.23	3.17	3.19	-28.3		2.1
12,645.0	66.21	1.06	12,422.1	-37.1	683.7	8.91	8.60	2.56	-20.5		1.5
12,692.0	74.92	0.79	12,437.7	7.2	684.4	18.54	18.53	-0.57	-13.4		0.3
12,739.0	83.27	358.68	12,448.6	53.3	684.2	18.30	17.77	-4.49	-8.5		0.2
12,834.0	86.70	358.33	12,454.9	147.9	681.7	3.63	3.61	-0.37	-0.5		1.9
12,928.0	88.37	359.47	12,459.0	241.8	679.9	2.15	1.78	1.21	3.6		2.9
13,022.0	91.28	359.47	12,459.2	335.8	679.0	3.10	3.10	0.00	3.9		3.0
13,117.0	90.22	359.04	12,458.0	430.8	677.8	1.20	-1.12	-0.45	2.7		3.5
13,211.0	90.57	0.18	12,457.3	524.8	677.2	1.27	0.37	1.21	2.1		3.4
13,306.0	91.36	0.00	12,455.7	618.7	677.3	0.85	0.83	-0.19	0.5		2.5
13,401.0	90.22	359.56	12,454.4	714.7	676.9	1.29	-1.20	-0.46	-0.8		2.1
13,496.0	90.04	358.86	12,454.2	809.7	675.6	0.78	-0.19	-0.74	-1.0		2.7
13,590.0	88.90	358.51	12,455.1	903.7	673.5	1.27	-1.21	-0.37	-0.1		4.1
13,685.0	87.67	358.66	12,457.9	998.6	669.5	2.34	-1.29	-1.95	2.8		7.3
13,780.0	90.04	358.86	12,459.8	1,093.5	665.8	3.40	2.49	2.32	4.8		10.3
13,874.0	91.36	359.30	12,458.7	1,187.4	664.3	1.48	1.40	0.47	3.6		11.0
13,969.0	92.33	359.21	12,455.6	1,282.4	663.0	1.03	1.02	-0.09	0.6		11.5
14,063.0	89.16	359.83	12,454.4	1,376.4	662.2	3.44	-3.37	0.66	-0.6		11.5
14,158.0	88.46	358.95	12,456.4	1,471.3	661.2	1.18	-0.74	-0.93	1.4		11.8
14,252.0	88.64	359.91	12,458.8	1,565.3	660.3	1.04	0.19	1.02	3.9		12.0
14,347.0	89.78	0.00	12,460.1	1,660.3	660.2	1.20	1.20	0.09	5.2		11.3
14,441.0	90.66	359.47	12,459.7	1,754.3	659.8	1.09	0.94	-0.56	4.9		11.0
14,536.0	90.40	359.91	12,458.8	1,849.3	659.3	0.54	-0.27	0.46	4.0		10.7
14,631.0	89.52	0.27	12,458.9	1,944.3	659.4	1.00	-0.93	0.38	4.1		9.8
14,726.0	90.04	0.88	12,459.3	2,039.3	660.4	0.84	0.55	0.64	4.5		8.1
14,821.0	88.55	1.06	12,460.4	2,134.2	662.0	1.58	-1.57	0.19	5.7		5.8
14,916.0	90.66	2.29	12,461.1	2,229.2	664.7	2.57	2.22	1.29	6.4		2.2



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Colgrove 35 Fed Com
 Well: #702H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #702H
 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)	NBS (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,011.0	88.64	3.98	12,461.7	2,324.0	689.9	2.76	-2.13	1.76	7.0	-3.7	
15,108.0	89.78	2.29	12,463.0	2,418.8	675.1	2.13	1.20	-1.76	8.4	-8.6	
15,201.0	89.78	1.14	12,463.3	2,513.8	677.9	1.21	0.00	-1.21	8.8	-13.2	
15,295.0	91.10	359.12	12,462.6	2,607.8	678.2	2.57	1.40	-2.15	8.1	-14.2	
15,390.0	91.45	358.21	12,460.5	2,702.8	676.8	0.38	0.37	0.09	6.0	-13.8	
15,485.0	89.96	0.44	12,459.3	2,797.8	676.5	2.03	-1.57	1.29	4.9	-14.0	
15,579.0	90.92	359.12	12,458.6	2,891.8	676.1	1.74	1.02	-1.40	4.2	-14.4	
15,673.0	88.99	357.37	12,456.7	2,985.7	673.2	2.77	-2.05	-1.88	4.3	-12.3	
15,768.0	91.01	358.33	12,458.7	3,080.6	669.7	2.35	2.13	1.01	4.4	-9.5	
15,863.0	91.45	358.77	12,456.6	3,175.6	667.3	0.65	0.46	0.46	2.3	-7.9	
15,958.0	88.46	356.49	12,456.7	3,270.5	663.4	3.98	-3.15	-2.40	2.5	-4.7	
16,053.0	88.81	356.84	12,459.0	3,365.3	657.8	0.52	0.37	0.37	4.8	0.1	
16,147.0	93.39	356.93	12,457.2	3,459.1	652.7	4.87	4.87	0.10	3.0	4.4	
16,242.0	91.28	357.80	12,453.3	3,553.9	648.4	2.40	-2.22	0.92	-0.8	8.0	
16,336.0	89.52	359.12	12,452.7	3,647.9	645.8	2.34	-1.87	1.40	-1.5	9.8	
16,430.0	89.25	0.79	12,453.7	3,741.9	645.8	1.80	-0.29	1.78	-0.4	9.1	
16,525.0	88.99	1.58	12,455.1	3,836.9	647.7	0.88	-0.27	0.83	1.1	6.4	
16,620.0	90.66	2.73	12,455.4	3,931.8	651.3	2.13	1.78	1.21	1.4	2.1	
16,714.0	89.08	0.62	12,455.6	4,025.7	654.0	2.80	-1.68	-2.24	1.6	-1.4	
16,809.0	90.13	1.67	12,456.3	4,120.7	655.9	1.56	1.11	1.11	2.3	-4.1	
16,904.0	90.48	0.88	12,455.8	4,215.7	658.1	0.91	0.37	-0.83	1.8	-8.9	
16,999.0	90.40	0.79	12,455.0	4,310.7	659.4	0.13	-0.08	-0.09	1.0	-8.1	
17,093.0	90.75	2.02	12,454.1	4,404.6	661.7	1.36	0.37	1.31	0.1	-12.1	
17,189.0	89.69	1.85	12,453.7	4,500.6	665.0	1.12	-1.10	-0.18	-0.3	-16.1	
17,283.0	88.81	359.74	12,455.0	4,594.6	666.3	2.43	-0.94	-2.24	1.0	-18.2	
17,377.0	89.52	359.04	12,456.3	4,688.5	665.3	1.06	0.76	-0.74	2.3	-17.9	
17,472.0	89.25	359.65	12,457.4	4,783.5	664.2	0.70	-0.28	0.64	3.4	-17.6	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lee County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3343.0usft
Site:	Colgrove 35 Fed Com	MD Reference:	KB = 25 @ 3343.0usft
Well:	#702H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	NRS (usft)	EW (usft)	DLeg (°/100usft)	Bolld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
17,568.0	90.57	358.85	12,457.5	4,877.5	663.1	1.59	1.40	-0.74	3.5	-17.2	
17,661.0	89.25	359.47	12,457.6	4,872.5	661.7	1.49	-1.39	0.55	3.6	-16.7	
17,755.0	88.55	359.74	12,459.5	5,066.5	661.1	0.80	-0.74	0.29	5.4	-16.8	
17,850.0	93.56	1.67	12,457.7	5,161.4	662.3	5.65	5.27	2.03	3.7	-18.7	
17,944.0	91.19	0.79	12,453.8	5,255.3	664.3	2.69	-2.52	-0.94	-0.2	-21.4	
18,039.0	92.15	359.74	12,451.0	5,350.3	664.7	1.50	1.01	-1.11	-3.0	-22.6	
18,134.0	88.02	357.80	12,450.9	5,445.2	662.7	4.80	-4.35	-2.04	-3.1	-21.4	
18,229.0	87.41	357.98	12,454.7	5,540.1	659.2	0.87	-0.64	0.19	0.7	-18.6	
18,323.0	91.54	357.98	12,455.5	5,634.0	655.9	4.39	4.39	0.00	1.5	-16.1	
18,418.0	89.43	358.86	12,454.7	5,729.0	653.3	2.41	-2.22	0.93	0.7	-14.2	
18,513.0	93.30	359.12	12,452.5	5,823.9	651.6	4.08	4.07	0.27	-1.5	-13.3	
18,608.0	90.92	0.18	12,449.0	5,918.8	651.0	2.74	-2.51	1.12	-5.0	-13.5	
18,702.0	87.23	2.20	12,450.5	6,012.8	653.0	4.47	-3.93	2.15	-3.5	-16.1	
18,797.0	89.16	1.32	12,453.5	6,107.7	655.9	2.23	2.03	-0.93	-0.5	-19.8	
18,891.0	91.01	0.27	12,453.4	6,201.7	657.2	2.26	1.97	-1.12	-0.6	-21.9	
18,986.0	87.05	358.60	12,455.0	6,296.6	656.2	4.52	-4.17	-1.76	1.0	-21.7	
19,080.0	88.35	358.24	12,460.4	6,390.4	653.6	0.84	-0.74	-0.38	6.4	-19.9	
19,175.0	91.63	358.07	12,462.0	6,485.3	650.6	5.56	5.56	-0.18	8.0	-17.6	
19,270.0	88.37	357.01	12,462.0	6,580.2	646.5	3.61	-3.43	-1.12	8.1	-14.2	
19,365.0	96.20	356.13	12,458.3	6,674.9	640.8	8.29	8.24	-0.93	4.2	-8.4	
19,460.0	94.97	357.63	12,449.0	6,769.3	635.7	2.04	-1.29	1.58	-5.0	-4.9	
19,554.0	92.86	359.12	12,442.6	6,863.1	633.0	2.75	-2.24	1.59	-11.4	-3.0	
19,649.0	90.48	1.06	12,438.8	6,958.0	633.2	3.23	-2.51	2.04	-14.2	-3.9	
19,744.0	88.29	0.44	12,440.8	7,053.0	634.4	2.40	-2.31	-0.65	-13.2	-5.9	
19,839.0	87.85	1.32	12,444.0	7,147.9	635.9	1.04	-0.46	0.93	-10.0	-8.1	
19,922.0	87.85	1.32	12,447.2	7,230.8	637.8	0.00	0.00	0.00	-8.8	-10.7	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3343.0usft
Site:	Colgrove 35 Fed Com	MD Reference:	KB = 25 @ 3343.0usft
Well:	#702H	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)	
12,050.0	11,972.7	-376.3	689.4	KOP, MD:12050.0', TVD:11972.7', N/S:-376.3', E/W:689.4', INC:3.34
12,162.9	12,083.5	-357.0	690.5	FTP Crossing, MD:12162.9', TVD:12083.5', N/S:-357.0', E/W:690.5', INC:17.94
19,839.0	12,444.0	7,147.9	635.9	Last MWD Survey (MD=19839.0')
19,922.0	12,447.2	7,230.8	637.8	Projection to Bit (MD=19922.0')

Checked By: _____	Approved By: _____	Date: _____
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Lea County, NM (NAD 83 NME)

Colgrove 35 Fed Com #702H

Plan #1

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

WELL DETAILS: #702H

KB = 25 @ 3343.0usft 3318.0
Northing 385174.00 Easting 783964.00 Longitude 32° 0' 5.604 N 103° 33' 2.283 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
1570.2	7.40	120.81	1569.2	-12.2	20.6	2.00	120.81	-10.3	
7402.5	7.40	120.81	7352.5	-394.8	667.4	0.00	0.00	-335.8	
7772.7	0.00	0.00	7722.0	-407.0	688.0	2.00	180.00	-346.1	Brushy Top(Colgrove 35 FC #702H)
12028.7	0.00	0.00	11978.0	-407.0	688.0	0.00	0.00	-346.1	
12778.9	80.02	359.54	12455.5	70.6	684.2	12.00	359.54	429.4	TGT#1(Colgrove 35 FC #702H)
16686.8	90.02	359.54	12454.0	3958.4	653.2	0.00	0.00	4000.0	
16687.8	90.00	359.54	12454.0	3959.5	653.2	2.00	-180.00	4001.1	
19949.5	90.00	359.54	12454.0	7241.0	627.0	0.00	0.00	7268.1	PBHL(Colgrove 35 FC #702H)

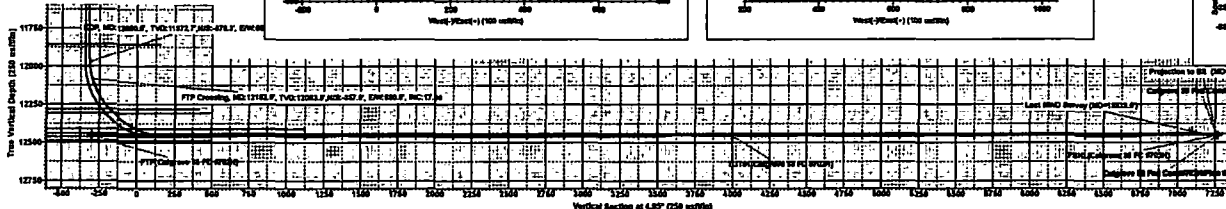
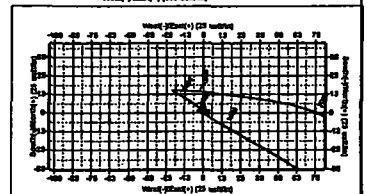
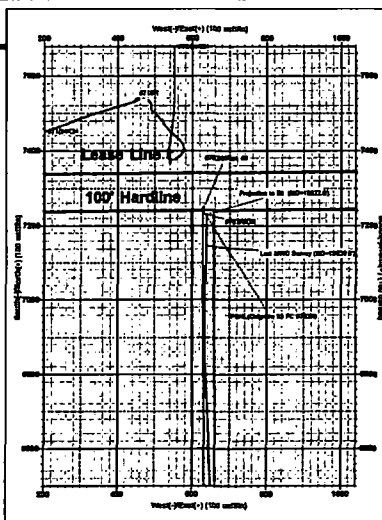
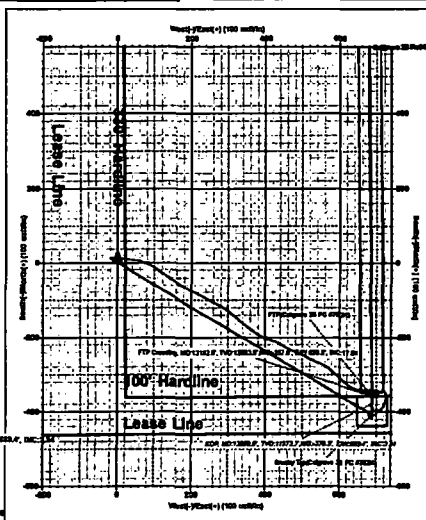
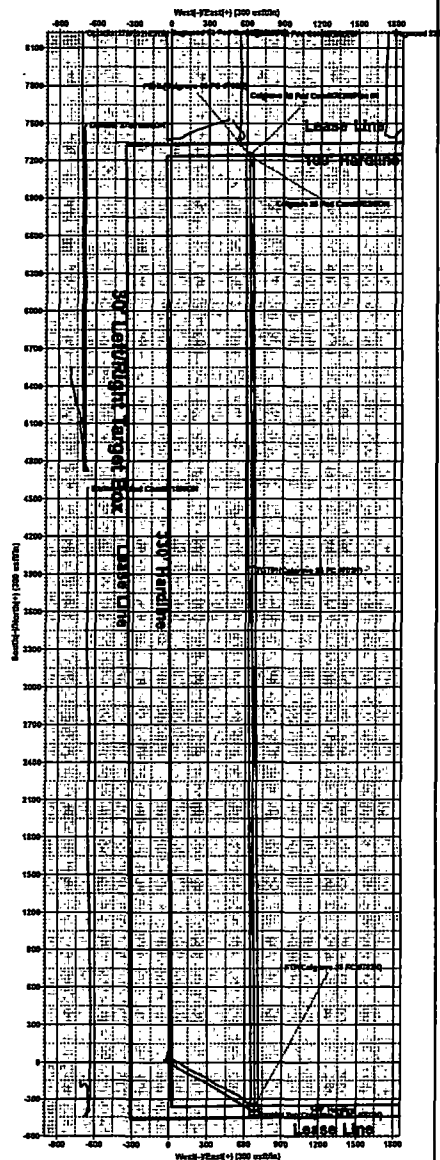
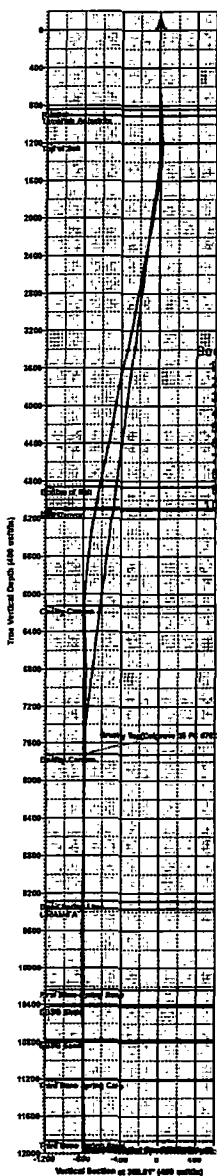
To convert a Magnetic Direction to a Grid Direction, Add 6.24°
To convert a Magnetic Direction to a True Direction, Add 6.79° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top(Colgrove 35 FC #702H)	7722.0	-407.0	688.0	384177.00	784682.00
TGT#1(Colgrove 35 FC #702H)	12454.0	3958.4	653.2	389132.40	784817.18
PBHL(Colgrove 35 FC #702H)	12454.0	7241.0	627.0	372416.00	784891.00
FTP(Colgrove 35 FC #702H)	12452.0	-357.0	685.0	384817.00	784682.00



See Notes to Well for
Log Scale
1" = 100' in Well