



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Magnolia 15 Fed Com

#705H

OH

Design: OH

Midland PVA

10 March, 2019

HOBBES
MAY 22 2019
RECEIVED



Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3326.0usft
Site:	Magnolia 15 Fed Com	MD Reference:	KB = 25' @ 3326.0usft
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	Magnolia 15 Fed Com		
Site Position:		Northing:	381,905.00 usft
From:	Map	Easting:	780,373.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 51.321 N
		Longitude:	103° 33' 42.598 W
		Grid Convergence:	0.41 °

Well	#705H		
Well Position	+N/-S	0.0 usft	Northing: 381,970.00 usft
	+E/-W	0.0 usft	Easting: 780,399.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 2' 51.962 N
		Longitude:	103° 33' 42.291 W
		Ground Level:	3,301.0 usft

Wellbore	OH		
Magnetica	Model Name	Sample Date	Declination (°)
	IGRF2015	5/10/2017	6.95
			Dip Angle (°)
			59.90
			Field Strength (nT)
			47,845.89065411

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)
	0.0	0.0	0.0
			Direction (°)
			177.41

Survey Program	Date	3/10/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
163.0	17,314.0	Driltech MWD (OH)	MWD	OWSG MWD - Standard



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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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	
163.0	0.26	85.89	163.0	0.0	0.4	0.16	0.16	0.00	0.0	0.0	
224.0	0.35	135.46	224.0	-0.1	0.6	0.44	0.15	81.26	0.0	0.0	
281.0	0.35	140.03	281.0	-0.4	0.9	0.05	0.00	8.02	0.0	0.0	
398.0	0.44	153.22	398.0	-1.0	1.3	0.11	0.08	11.27	0.0	0.0	
457.0	0.44	158.66	457.0	-1.4	1.5	0.07	0.00	9.22	0.0	0.0	
517.0	0.35	184.68	517.0	-1.8	1.6	0.33	-0.15	43.37	0.0	0.0	
575.0	0.44	176.77	575.0	-2.2	1.6	0.18	0.16	-13.64	0.0	0.0	
675.0	0.70	168.42	675.0	-3.2	1.7	0.27	0.26	-8.35	0.0	0.0	
864.0	0.44	202.87	864.0	-5.0	1.6	0.22	-0.14	18.23	0.0	0.0	
959.0	0.26	201.12	959.0	-5.6	1.4	0.19	-0.19	-1.84	0.0	0.0	
1,149.0	1.14	17.07	1,149.0	-4.2	1.8	0.74	0.46	92.61	-2.3	0.0	
1,244.0	3.52	12.15	1,243.9	-0.4	2.7	2.51	2.51	-5.18	-6.3	-0.4	
1,338.0	6.16	7.84	1,338.5	7.5	4.0	2.80	2.78	-4.54	-11.6	-1.2	
1,433.0	8.53	12.77	1,431.8	19.3	6.3	2.61	2.52	5.24	-18.0	-0.3	
1,528.0	8.97	14.26	1,525.6	33.4	9.6	0.52	0.46	1.57	-23.7	-0.7	
1,623.0	9.06	14.70	1,619.5	47.8	13.4	0.12	0.09	0.46	-26.7	-2.0	
1,717.0	9.06	13.82	1,712.3	62.1	17.0	0.15	0.00	-0.94	-26.5	-4.1	
1,812.0	9.32	11.98	1,806.1	76.9	20.4	0.41	0.27	-1.94	-25.3	-6.4	
1,907.0	9.50	14.26	1,899.8	92.0	23.9	0.44	0.19	2.40	-24.8	-6.9	
2,002.0	9.23	14.35	1,993.5	107.0	27.7	0.28	-0.28	0.09	-24.0	-8.7	
2,096.0	9.67	5.91	2,086.3	122.2	30.4	1.55	0.47	-8.98	-21.7	-12.7	
2,191.0	10.20	2.31	2,179.8	138.5	31.6	0.86	0.56	-3.79	-21.0	-13.0	
2,286.0	10.38	1.78	2,273.3	155.5	32.2	0.21	0.19	-0.56	-21.6	-11.6	
2,380.0	10.29	1.52	2,365.8	172.3	32.7	0.11	-0.10	-0.28	-22.4	-9.9	
2,475.0	10.46	1.96	2,459.2	189.4	33.2	0.20	0.18	0.46	-23.4	-8.1	
2,570.0	10.46	2.39	2,552.7	206.8	33.8	0.08	0.00	0.45	-24.4	-6.3	



Midland PVA

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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)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
2,665.0	10.38	2.57	2,646.1	223.8	34.6	0.09	-0.08	0.19	-25.4	-4.7
2,759.0	9.94	3.89	2,738.6	240.4	35.5	0.53	-0.47	1.40	-26.0	-2.9
2,854.0	9.67	4.86	2,832.2	256.5	36.8	0.33	-0.28	1.02	-25.9	-1.5
2,948.0	9.58	6.97	2,924.9	272.1	38.4	0.39	-0.10	2.24	-25.5	0.0
3,042.0	9.23	10.66	3,017.6	287.3	40.7	0.74	-0.37	3.93	-24.6	1.3
3,137.0	9.15	14.17	3,111.4	302.1	44.0	0.60	-0.08	3.69	-23.4	1.4
3,232.0	9.23	10.13	3,205.2	316.9	47.2	0.68	0.08	-4.25	-22.3	-1.4
3,326.0	8.09	8.20	3,298.1	330.9	49.4	1.25	-1.21	-2.05	-20.2	-2.5
3,421.0	9.06	9.07	3,392.1	344.9	51.6	1.03	1.02	0.92	-18.1	-2.5
3,515.0	9.32	16.11	3,484.9	359.5	54.8	1.23	0.28	7.49	-17.2	-1.8
3,610.0	9.41	22.08	3,578.6	374.1	59.9	1.03	0.09	6.28	-16.9	-3.2
3,704.0	9.58	17.60	3,671.3	388.7	65.2	0.81	0.18	-4.77	-16.1	-7.9
3,799.0	10.29	27.09	3,764.9	403.8	71.4	1.88	0.75	9.99	-18.1	-9.2
3,893.0	9.67	21.64	3,857.5	418.6	78.1	1.20	-0.66	-5.80	-17.7	-15.6
3,988.0	9.85	5.73	3,951.1	434.1	81.9	2.84	0.19	-16.75	-12.3	-21.4
4,082.0	9.32	0.37	4,043.8	449.7	82.7	1.10	-0.56	-5.70	-9.9	-21.1
4,177.0	8.53	2.57	4,137.7	464.4	83.1	0.91	-0.83	2.32	-9.1	-19.0
4,271.0	9.23	0.99	4,230.5	478.9	83.6	0.79	0.74	-1.68	-7.1	-17.5
4,366.0	8.35	15.49	4,324.4	493.2	85.5	2.50	-0.93	15.26	-9.3	-15.5
4,461.0	8.97	17.25	4,418.3	506.9	89.6	0.71	0.65	1.85	-7.9	-17.7
4,556.0	10.73	6.79	4,511.9	522.8	92.8	2.63	1.85	-11.01	-4.4	-19.9
4,650.0	10.02	12.59	4,604.4	539.5	95.6	1.34	-0.76	6.17	-7.2	-19.8
4,745.0	8.53	5.03	4,698.2	554.6	98.0	2.02	-1.57	-7.96	-3.5	-20.9
4,840.0	10.02	342.18	4,792.0	569.4	98.1	4.15	1.57	-24.05	4.8	-16.3
4,934.0	9.67	337.96	4,884.6	584.5	90.7	0.85	-0.37	-4.49	4.0	-8.5
5,029.0	9.85	339.63	4,978.2	599.6	84.8	0.35	0.19	1.76	2.0	-0.7
5,124.0	13.10	344.11	5,071.3	617.5	79.1	3.54	3.42	4.72	-1.9	6.3



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Design: OH

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MD Reference: KB = 25' @ 3326.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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Survey										
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5,219.0	13.63	350.00	5,163.7	638.9	74.2	1.54	0.56	6.20	-7.7	12.6
5,314.0	12.31	355.89	5,256.3	660.0	71.5	1.86	-1.39	6.20	-11.8	17.8
5,408.0	11.34	6.00	5,348.3	679.2	71.8	2.43	-1.03	10.76	-11.6	21.8
5,503.0	10.99	10.13	5,441.5	697.4	74.3	0.92	-0.37	4.35	-12.1	22.6
5,598.0	10.73	10.39	5,534.8	715.0	77.5	0.28	-0.27	0.27	-13.7	21.9
5,693.0	10.55	9.78	5,628.2	732.3	80.6	0.22	-0.19	-0.64	-15.1	21.1
5,787.0	11.43	10.04	5,720.5	750.0	83.7	0.94	0.94	0.28	-16.9	20.6
5,882.0	12.49	9.34	5,813.4	769.4	87.0	1.13	1.12	-0.74	-20.5	19.8
5,976.0	10.38	10.39	5,905.5	787.7	90.2	2.26	-2.24	1.12	-22.7	19.6
6,071.0	10.20	10.48	5,999.0	804.4	93.2	0.19	-0.19	0.09	-23.4	18.9
6,166.0	9.50	10.04	6,092.6	820.4	96.1	0.74	-0.74	-0.46	-23.4	18.0
6,261.0	9.50	9.60	6,186.3	835.9	98.8	0.08	0.00	-0.46	-22.9	17.2
6,356.0	8.79	8.72	6,280.1	850.8	101.2	0.76	-0.75	-0.93	-22.0	16.5
6,451.0	8.97	9.69	6,373.9	865.2	103.6	0.25	0.19	1.02	-20.0	16.4
6,545.0	9.15	8.81	6,466.8	879.9	105.9	0.24	0.19	-0.94	-18.9	15.7
6,640.0	9.58	9.07	6,560.5	895.1	108.3	0.45	0.45	0.27	-18.0	15.4
6,735.0	9.67	10.66	6,654.2	910.8	111.1	0.30	0.09	1.67	-17.1	15.3
6,830.0	9.94	10.13	6,747.8	926.7	114.0	0.30	0.28	-0.56	-17.1	14.4
6,924.0	9.85	9.95	6,840.4	942.6	116.8	0.10	-0.10	-0.19	-17.2	13.7
7,019.0	9.76	10.39	6,934.0	958.5	119.6	0.12	-0.09	0.46	-16.9	13.2
7,114.0	7.83	6.79	7,027.9	972.9	121.9	2.11	-2.03	-3.79	-15.9	11.9
7,209.0	5.72	11.80	7,122.2	983.9	123.6	2.30	-2.22	5.27	-9.6	12.6
7,303.0	5.36	12.94	7,215.8	992.8	125.5	0.40	-0.38	1.21	-2.3	11.4
7,398.0	4.31	10.48	7,310.4	1,000.6	127.2	1.13	-1.11	-2.59	4.1	10.4
7,493.0	4.13	8.46	7,405.2	1,007.5	128.3	0.25	-0.19	-2.13	8.6	10.3
7,588.0	3.96	3.10	7,499.9	1,014.2	129.0	0.44	-0.18	-5.64	9.6	11.4
7,682.0	3.43	6.44	7,593.7	1,020.2	129.5	0.61	-0.56	3.55	9.6	11.1



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7,777.0	2.11	25.86	7,688.6	1,024.6	130.6	1.69	-1.39	20.44	10.6	7.5	
7,871.0	1.58	31.53	7,782.6	1,027.3	132.0	0.60	-0.56	6.03	8.4	6.6	
7,966.0	1.32	24.37	7,877.5	1,029.4	133.2	0.33	-0.27	-7.54	5.1	7.4	
8,061.0	1.23	29.73	7,972.5	1,031.3	134.1	0.16	-0.09	5.64	3.7	7.0	
8,156.0	1.14	18.22	8,067.5	1,033.0	134.9	0.27	-0.09	-12.12	0.3	7.4	
8,251.0	1.06	15.14	8,162.5	1,034.8	135.4	0.10	-0.08	-3.24	-2.0	7.3	
8,345.0	0.88	8.55	8,256.5	1,036.3	135.8	0.22	-0.19	-7.01	-4.4	7.0	
8,440.0	0.70	6.26	8,351.5	1,037.6	135.9	0.19	-0.19	-2.41	-5.9	6.7	
8,534.0	0.44	3.36	8,445.5	1,038.6	136.0	0.28	-0.28	-3.09	-7.2	6.4	
8,629.0	0.26	289.01	8,540.5	1,039.0	135.8	0.47	-0.19	-78.26	-8.4	-5.6	
8,723.0	0.35	240.67	8,634.5	1,038.9	135.4	0.28	0.10	-51.43	-1.9	-10.2	
8,818.0	0.62	232.05	8,729.5	1,038.5	134.7	0.29	0.28	-9.07	-1.1	-10.4	
8,913.0	0.79	243.48	8,824.4	1,037.9	133.7	0.23	0.18	12.03	-4.3	-9.8	
9,007.0	0.88	246.91	8,918.4	1,037.3	132.5	0.11	0.10	3.65	-6.3	-9.5	
9,102.0	0.97	255.26	9,013.4	1,036.8	131.1	0.17	0.09	8.79	-9.1	-8.4	
9,197.0	1.06	259.21	9,108.4	1,036.4	129.4	0.12	0.09	4.16	-11.3	-7.7	
9,292.0	0.97	256.66	9,203.4	1,036.1	127.8	0.11	-0.09	-2.68	-12.7	-8.2	
9,387.0	0.88	244.45	9,298.4	1,035.6	126.3	0.23	-0.09	-12.85	-12.2	-10.9	
9,481.0	1.23	247.70	9,392.4	1,034.9	124.7	0.38	0.37	3.46	-14.5	-10.2	
9,576.0	0.53	231.97	9,487.4	1,034.2	123.5	0.77	-0.74	-16.56	-12.6	-14.0	
9,671.0	0.35	244.36	9,582.4	1,033.8	122.8	0.21	-0.19	13.04	-16.0	-10.9	
9,766.0	1.14	67.43	9,677.3	1,034.1	123.5	1.57	0.83	-186.24	15.9	10.0	
9,860.0	1.14	50.12	9,771.3	1,035.0	125.0	0.36	0.00	-18.41	10.4	14.0	
9,955.0	0.68	17.69	9,866.3	1,036.3	126.0	0.65	-0.27	-34.14	-0.2	16.9	
10,050.0	0.97	7.40	9,961.3	1,037.8	126.3	0.20	0.09	-10.83	-4.8	16.4	
10,144.0	0.79	328.82	10,055.3	1,039.2	126.1	0.64	-0.19	-41.04	-15.2	9.4	
10,239.0	0.70	307.90	10,150.3	1,040.1	125.3	0.30	-0.09	-22.02	-18.8	3.1	



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10,333.0	0.62	275.56	10,244.3	1,040.5	124.3	0.40	-0.09	-34.40	-18.5	-7.7
10,428.0	1.32	281.54	10,339.3	1,040.8	122.7	0.74	0.74	6.29	-20.8	-5.7
10,523.0	0.70	280.79	10,434.2	1,040.9	121.1	0.75	-0.65	-21.84	-19.1	-13.1
10,618.0	0.88	324.07	10,529.2	1,041.4	120.1	0.89	0.19	66.61	-21.3	11.6
10,712.0	1.58	59.52	10,623.2	1,042.6	120.8	2.00	0.74	101.54	12.4	20.8
10,807.0	1.67	64.27	10,718.2	1,043.9	123.2	0.17	0.09	5.00	11.4	19.8
10,902.0	0.62	46.25	10,813.2	1,044.9	124.8	1.16	-1.11	-18.97	2.9	21.9
10,996.0	1.93	117.18	10,907.1	1,044.5	126.6	1.94	1.39	75.46	19.9	4.9
11,091.0	2.46	118.50	11,002.1	1,042.8	129.8	0.56	0.56	1.39	16.4	4.5
11,185.0	2.11	119.73	11,096.0	1,041.0	133.0	0.38	-0.37	1.31	12.7	4.2
11,280.0	0.53	190.66	11,191.0	1,039.7	134.5	2.11	-1.66	74.66	7.1	-9.0
11,374.0	1.14	233.81	11,285.0	1,038.7	133.6	0.89	0.65	45.90	-2.2	-11.1
11,469.0	1.49	221.95	11,379.9	1,037.2	132.1	0.46	0.37	-12.48	-2.0	-11.5
11,564.0	1.67	224.85	11,474.9	1,035.3	130.3	0.21	0.19	3.05	-5.2	-11.4
11,651.0	2.29	221.51	11,561.9	1,033.1	128.2	0.72	0.71	-3.84	-7.6	-11.7
11,782.0	3.34	237.33	11,692.7	1,029.1	123.3	0.99	0.80	12.08	-16.8	-8.5
11,876.0	4.13	207.44	11,786.5	1,024.6	119.4	2.20	0.84	-31.80	-16.1	-17.1
11,971.0	4.48	204.89	11,881.2	1,018.2	116.3	0.42	0.37	-2.68	-22.4	-18.0
12,018.0	7.03	178.26	11,928.0	1,013.7	115.6	7.72	5.43	-56.66	-13.3	-26.9
12,065.0	14.07	163.85	11,974.2	1,005.3	117.3	15.88	14.98	-30.66	-6.5	-27.6
12,112.0	22.86	163.94	12,018.7	991.0	121.4	18.70	18.70	0.19	-8.2	-23.7
12,160.0	26.82	169.12	12,062.3	971.4	126.0	9.41	8.25	10.79	-10.9	-18.5
12,207.0	31.74	171.67	12,103.3	948.7	129.8	10.80	10.47	5.43	-10.3	-14.2
12,255.0	39.57	172.38	12,142.2	921.0	133.7	16.34	16.31	1.48	-8.7	-10.1
12,302.0	45.46	174.75	12,176.9	889.5	137.2	12.99	12.53	5.04	-7.2	-6.4
12,350.0	53.55	174.66	12,208.0	853.2	140.5	16.85	16.85	-0.19	-5.6	-3.2
12,392.0	61.38	177.65	12,230.6	817.9	142.9	19.58	18.64	7.12	-5.3	-1.0



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3326.0usft
Site:	Magnolia 15 Fed Com	MD Reference:	KB = 25' @ 3326.0usft
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)
12,444.0	65.69	179.23	12,253.8	771.4	144.1	8.72	8.29	3.04	-4.4	-0.1
12,476.0	71.93	182.22	12,265.3	741.5	143.7	21.36	19.50	9.34	-3.4	-0.6
12,539.0	87.23	183.19	12,276.7	679.8	140.8	24.33	24.29	1.54	-5.9	-4.1
12,571.0	87.49	182.83	12,278.2	647.9	139.1	1.39	0.81	-1.12	-7.8	-6.1
12,602.0	86.09	182.57	12,279.9	617.0	137.7	4.59	-4.52	-0.84	-6.9	-7.8
12,634.0	84.68	182.92	12,282.5	585.1	136.1	4.54	-4.41	1.09	-4.7	-9.6
12,697.0	83.45	183.19	12,289.0	522.6	132.8	2.00	-1.95	0.43	1.3	-13.5
12,728.0	83.54	183.01	12,292.5	491.8	131.1	0.65	0.29	-0.58	4.5	-15.4
12,760.0	84.77	182.39	12,295.7	460.0	129.6	4.30	3.84	-1.94	7.5	-17.2
12,823.0	88.02	180.46	12,299.7	397.2	128.1	6.00	5.16	-3.06	11.0	-19.2
12,918.0	88.64	180.20	12,302.5	302.2	127.5	0.71	0.65	-0.27	13.0	-20.6
13,012.0	89.43	178.97	12,304.1	208.2	128.2	1.55	0.84	-1.31	13.8	-20.7
13,106.0	89.69	178.97	12,304.8	114.2	129.9	0.28	0.28	0.00	13.8	-19.8
13,201.0	88.72	177.82	12,306.1	19.3	132.6	1.58	-1.02	-1.21	14.3	-17.9
13,296.0	89.87	178.70	12,307.3	-75.6	135.5	1.52	1.21	0.93	14.7	-15.8
13,390.0	89.25	182.22	12,308.0	-169.6	134.7	3.80	-0.66	3.74	14.6	-17.4
13,485.0	88.20	180.37	12,310.1	-264.6	132.6	2.24	-1.11	-1.95	15.9	-20.3
13,580.0	88.11	180.46	12,313.2	-359.5	131.9	0.13	-0.09	0.09	18.2	-21.8
13,674.0	88.81	180.99	12,315.7	-453.5	130.7	0.93	0.74	0.56	19.9	-23.8
13,768.0	91.19	182.39	12,315.7	-547.4	127.9	2.94	2.53	1.49	19.1	-27.3
13,863.0	89.08	180.90	12,315.5	-642.4	125.2	2.72	-2.22	-1.57	18.1	-30.9
13,957.0	89.78	179.58	12,316.4	-736.4	124.8	1.59	0.74	-1.40	18.2	-32.1
14,051.0	89.16	178.09	12,317.3	-830.3	126.7	1.72	-0.66	-1.59	18.3	-30.9
14,146.0	90.04	179.49	12,317.9	-925.3	128.7	1.74	0.93	1.47	18.2	-29.7
14,241.0	89.16	179.06	12,318.6	-1,020.3	129.9	1.03	-0.93	-0.45	18.1	-29.3
14,335.0	89.34	177.03	12,319.8	-1,114.2	133.1	2.17	0.19	-2.16	18.5	-26.9
14,430.0	90.40	178.09	12,320.0	-1,209.2	137.2	1.58	1.12	1.12	17.9	-23.7



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3326.0usft
Site:	Magnolia 15 Fed Com	MD Reference:	KB = 25' @ 3326.0usft
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)	Bulld (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
14,524.0	87.41	177.56	12,321.8	-1,303.1	140.7	3.23	-3.18	-0.56	18.6	-20.9
14,619.0	90.13	177.91	12,323.9	-1,398.0	144.5	2.89	2.86	0.37	19.6	-17.9
14,714.0	91.63	179.23	12,322.4	-1,492.9	146.8	2.10	1.58	1.39	17.1	-16.4
14,808.0	87.85	179.06	12,322.8	-1,586.9	148.2	4.03	-4.02	-0.18	16.4	-15.7
14,902.0	88.46	179.32	12,325.9	-1,680.8	149.6	0.71	0.65	0.28	18.4	-15.2
14,997.0	88.46	179.41	12,328.4	-1,775.8	150.6	0.09	0.00	0.09	19.9	-14.9
15,091.0	90.57	177.82	12,329.2	-1,869.7	152.9	2.81	2.24	-1.69	19.7	-13.4
15,186.0	91.36	178.09	12,327.6	-1,964.7	156.3	0.88	0.83	0.28	17.0	-10.9
15,281.0	91.36	178.35	12,325.4	-2,059.6	159.2	0.27	0.00	0.27	13.7	-8.7
15,376.0	91.89	178.53	12,322.7	-2,154.5	161.8	0.59	0.56	0.19	9.9	-6.9
15,470.0	89.78	178.44	12,321.3	-2,248.5	164.3	2.25	-2.24	-0.10	7.5	-5.2
15,564.0	85.56	177.65	12,325.1	-2,342.3	167.5	4.57	-4.49	-0.84	10.0	-2.8
15,659.0	90.57	179.06	12,328.3	-2,437.2	170.2	5.48	5.27	1.48	11.9	-0.9
15,754.0	90.57	178.62	12,327.4	-2,532.2	172.2	0.46	0.00	-0.46	9.7	0.2
15,848.0	89.69	178.09	12,327.2	-2,626.1	174.9	1.09	-0.94	-0.56	8.1	2.2
15,943.0	89.96	177.74	12,327.5	-2,721.1	178.3	0.47	0.28	-0.37	7.1	4.8
16,038.0	88.81	179.58	12,328.5	-2,816.0	180.5	2.28	-1.21	1.94	6.8	6.2
16,133.0	90.31	180.20	12,329.2	-2,911.0	180.7	1.71	1.58	0.65	6.2	5.6
16,228.0	90.13	179.14	12,328.8	-3,006.0	181.3	1.13	-0.19	-1.12	4.5	5.4
16,323.0	88.11	177.56	12,330.3	-3,101.0	184.0	2.70	-2.13	-1.66	4.6	7.3
16,418.0	91.71	181.52	12,330.5	-3,195.9	184.8	5.63	3.79	4.17	3.4	7.3
16,513.0	90.40	180.99	12,328.7	-3,290.9	182.7	1.49	-1.38	-0.56	0.4	4.4
16,608.0	89.69	181.78	12,328.6	-3,385.8	180.4	1.12	-0.75	0.83	-1.0	1.3
16,702.0	90.92	183.01	12,328.1	-3,479.8	176.5	1.85	1.31	1.31	-2.9	-3.4
16,797.0	88.90	180.99	12,328.3	-3,574.7	173.1	3.01	-2.13	-2.13	-4.0	-7.5
16,891.0	87.76	178.62	12,331.0	-3,668.6	173.5	2.80	-1.21	-2.52	-2.6	-8.0
16,986.0	89.52	178.26	12,333.3	-3,763.6	176.0	1.89	1.85	-0.38	-2.3	-6.2



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #705H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3326.0usft
Site:	Magnolia 15 Fed Com	MD Reference:	KB = 25' @ 3326.0usft
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)
17,081.0	90.04	177.91	12,333.6	-3,858.5	179.2	0.66	0.55	-0.37	-4.4	-3.8
17,176.0	91.28	177.56	12,332.5	-3,953.4	183.0	1.36	1.31	-0.37	-7.9	-0.9
17,314.0	91.28	177.56	12,329.5	-4,091.3	188.8	0.00	0.00	0.00	-14.5	3.8

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
11,975.0	11,885.2	1,017.9	116.1	KOP, MD:11975.0', TVD:11885.2',N/S:1017.9', E/W:116.1', INC:4.64
12,137.5	12,042.0	981.0	124.0	FTP Crossing, MD:12137.5', TVD:12042.0',N/S:981.0', E/W:124.0', INC:24.94
17,176.0	12,332.5	-3,953.4	183.0	Last MWD Survey (MD=17176.0')
17,314.0	12,329.5	-4,091.3	188.8	Projection to Bit (MD=17314.0')

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

Magnolia 15 Fed Com #705H

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: #705H

Ground Level: 3301.0
KB = 25' @ 3326.0usft
Northing: 381970.00 Easting: 780395.00
Latitude: 32° 2' 51.562 N Longitude: 103° 35' 42.291 W

To convert a Magnetic Direction to a Grid Direction, Add 9.54°
To convert a Magnetic Direction to a True Direction, Add 9.55° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

SECTION DETAILS

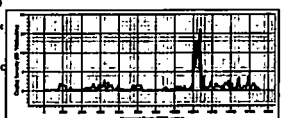
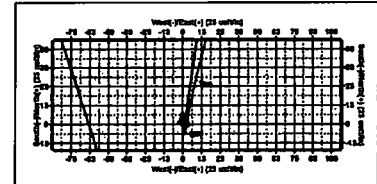
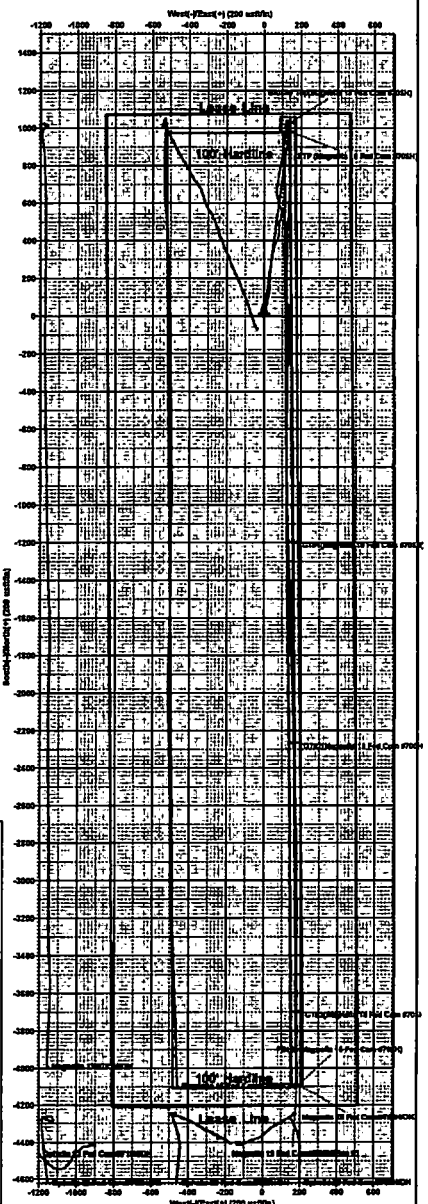
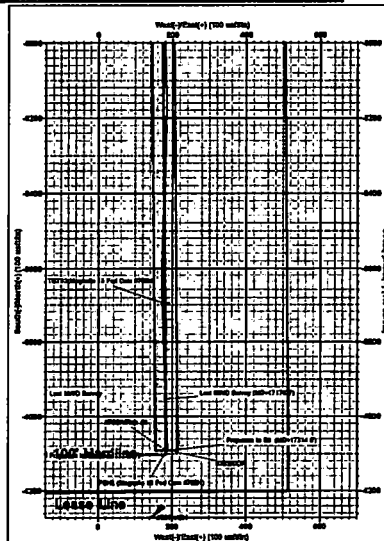
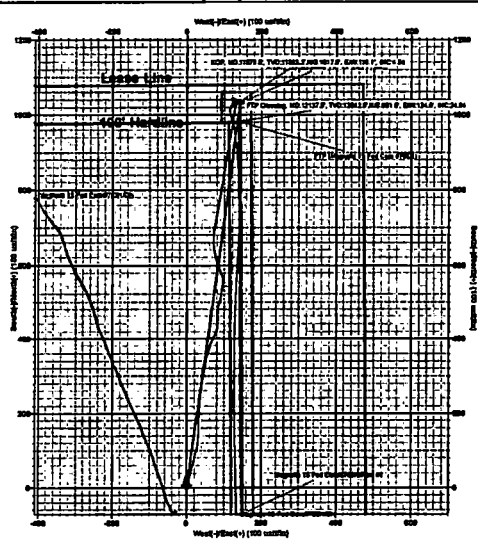
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSect	Target
1	959.0	0.26	201.12	959.0	-5.6	1.4	0.00	0.00	5.6	
2	1200.0	0.26	201.12	1200.0	-6.6	1.0	0.00	0.00	6.6	
3	1707.3	9.89	7.75	1704.8	35.6	6.5	2.00	168.97	-35.3	
4	7306.6	9.89	7.75	7220.8	988.8	138.3	0.00	0.00	-981.6	
5	7801.2	0.00	0.00	7713.0	1031.0	142.0	2.00	180.00	-1023.5	Brushy Top(Magnolia 15 Fed Com #705H)
6	11985.7	0.00	0.00	11877.5	1031.0	142.0	0.00	0.00	-1023.5	
7	12805.1	89.52	179.52	12288.7	625.2	145.4	14.00	179.52	-619.0	
8	14424.4	89.52	179.52	12302.0	-1194.0	180.7	0.00	0.00	1200.0	TGT#1(Magnolia 15 Fed Com #705H)
9	14432.5	89.36	179.52	12302.1	-1202.1	180.7	2.00	-180.00	1208.1	
10	15495.1	89.36	179.52	12314.0	-2264.6	169.7	0.00	0.00	2270.0	TGT#2(Magnolia 15 Fed Com #705H)
11	15503.1	89.20	179.52	12314.1	-2272.5	169.7	2.00	180.00	2277.9	
12	16928.3	89.20	179.52	12334.0	-3695.6	181.7	0.00	0.00	3700.0	TGT#3(Magnolia 15 Fed Com #705H)
13	16959.9	88.53	179.52	12334.7	-3729.2	182.0	2.00	-180.00	3733.8	
14	17322.9	88.53	179.52	12344.0	-4092.0	185.0	0.00	0.00	4098.2	PBHL (Magnolia 15 Fed Com #705H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top(Magnolia 15 Fed Com #705H)	7713.0	1031.0	142.0	383001.00	780541.00
FTP (Magnolia 15 Fed Com #705H)	12288.0	625.0	142.0	382951.00	780541.00
TGT#1(Magnolia 15 Fed Com #705H)	12302.0	-1194.0	180.7	380778.00	780528.68
TGT#2(Magnolia 15 Fed Com #705H)	12314.0	-2264.6	169.7	379708.40	780528.68
TGT#3(Magnolia 15 Fed Com #705H)	12334.0	-3695.6	181.7	378274.40	780528.67
PBHL (Magnolia 15 Fed Com #705H)	12344.0	-4092.0	185.0	377878.00	780534.00



Map Scale: 1 inch = 100 feet