



HODDS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Red Raider 25 State

#702H

OH

Design: OH

Midland PVA

04 October, 2018



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3529.0usft
Site:	Red Raider 25 State	MD Reference:	KB = 25 @ 3529.0usft
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	Red Raider 25 State		
Site Position:		Northing:	430,866.00 usft
From:	Map	Easting:	792,872.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 54.895 N
		Longitude:	103° 31' 13.091 W
		Grid Convergence:	0.43 °

Well	#702H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 10' 54.858 N
		Longitude:	103° 31' 13.475 W
		Ground Level:	3,504.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	2/7/2018	6.86
			Dip Angle
			60.02
			Field Strength
			47,851.71355182

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
			358.50



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Survey Program		Date	10/4/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
174.0	1,295.0	Olebrook MWD TN to GN (OH)	MWD	OWSG MWD - Standard	
1,409.0	17,290.0	Total MWD (OH)	MWD	OWSG MWD - Standard	

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
174.0	0.97	179.39	174.0	-1.5	0.0	0.56	0.56	0.00	0.0	0.0
266.0	0.00	3.70	266.0	-2.3	0.0	1.05	-1.05	0.00	0.0	0.0
421.0	0.53	245.14	421.0	-2.6	-0.6	0.34	0.34	0.00	0.0	0.0
516.0	0.26	23.21	516.0	-2.5	-0.9	0.78	-0.28	145.34	0.0	0.0
611.0	0.53	74.54	611.0	-2.2	-0.4	0.44	0.28	54.03	0.0	0.0
705.0	0.35	246.10	705.0	-2.2	-0.3	0.93	-0.19	182.51	0.0	0.0
799.0	0.35	289.70	799.0	-2.2	-0.8	0.28	0.00	46.38	0.0	0.0
894.0	0.26	151.71	894.0	-2.3	-1.0	0.60	-0.09	-145.25	0.0	0.0
987.0	0.18	152.41	987.0	-2.7	-0.8	0.09	-0.09	0.75	0.0	0.0
1,114.0	0.44	1.86	1,114.0	-2.3	-0.7	0.48	0.20	-118.54	0.0	0.0
1,208.0	0.09	286.18	1,208.0	-2.0	-0.8	0.45	-0.37	-80.51	0.0	0.0
1,295.0	0.53	1.06	1,295.0	-1.5	-0.8	0.59	0.51	86.07	0.0	0.0
1,409.0	0.60	284.60	1,409.0	-0.9	-1.4	0.62	0.06	-67.07	-0.5	-0.6
1,533.0	0.80	288.80	1,533.0	-0.4	-2.8	0.17	0.16	3.39	-1.8	-1.8
1,628.0	1.00	243.60	1,628.0	-0.6	-4.2	0.75	0.21	-47.58	-0.5	-3.6
1,722.0	1.60	229.20	1,721.9	-1.8	-5.9	0.72	0.64	-15.32	-0.7	-4.1
1,816.0	1.70	236.50	1,815.9	-3.4	-8.1	0.25	0.11	7.77	-3.1	-4.3
1,911.0	1.90	239.30	1,910.8	-5.0	-10.8	0.23	0.21	2.95	-5.4	-4.6
2,005.0	2.10	242.60	2,004.8	-6.6	-13.5	0.25	0.21	3.51	-8.1	-4.7
2,100.0	2.10	245.10	2,099.7	-8.1	-16.6	0.10	0.00	2.63	-11.0	-4.9



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Well:	#702H	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)
2,195.0	2.10	246.00	2,194.7	-9.6	-19.8	0.03	0.00	0.95	-13.8	-5.3
2,289.0	2.10	246.40	2,288.6	-11.0	-22.9	0.02	0.00	0.43	-16.5	-5.8
2,384.0	2.20	248.70	2,383.5	-12.3	-26.2	0.14	0.11	2.42	-19.5	-5.7
2,478.0	2.30	253.60	2,477.5	-13.5	-29.7	0.23	0.11	5.21	-22.9	-4.5
2,667.0	2.60	259.00	2,666.3	-15.4	-37.6	0.20	0.16	2.86	-30.0	-3.5
2,762.0	1.80	228.80	2,761.2	-16.7	-40.7	1.54	-1.05	-31.79	-26.4	-19.6
2,856.0	1.20	172.40	2,855.2	-18.5	-41.5	1.46	-0.43	-60.00	0.8	-33.4
2,950.0	0.90	153.60	2,949.2	-20.2	-41.1	0.48	-0.32	-20.00	10.4	-30.8
3,044.0	1.00	137.90	3,043.2	-21.4	-40.2	0.30	0.11	-16.70	17.1	-26.2
3,138.0	1.10	130.50	3,137.1	-22.6	-39.0	0.18	0.11	-7.87	18.8	-22.9
3,233.0	1.30	119.90	3,232.1	-23.7	-37.3	0.31	0.21	-11.16	20.8	-18.2
3,422.0	1.60	103.90	3,421.1	-25.5	-32.9	0.27	0.16	-8.47	19.8	-10.4
3,516.0	2.00	95.60	3,515.0	-25.9	-30.0	0.51	0.43	-8.83	17.8	-6.8
3,611.0	2.50	108.00	3,609.9	-26.7	-26.4	0.73	0.53	13.05	12.0	-9.1
3,705.0	3.00	119.80	3,703.8	-28.6	-22.3	0.80	0.53	12.55	5.4	-9.9
3,800.0	2.60	115.10	3,798.7	-30.7	-18.2	0.49	-0.42	-4.95	1.6	-8.7
3,991.0	3.50	163.90	3,989.5	-38.2	-12.7	1.39	0.47	25.55	-12.8	-2.2
4,086.0	1.90	166.50	4,084.4	-42.5	-11.5	1.69	-1.68	2.74	-16.6	-0.8
4,181.0	0.80	173.30	4,179.3	-44.7	-11.0	1.17	-1.16	7.16	-18.0	1.9
4,275.0	0.60	183.00	4,273.3	-45.8	-11.0	0.25	-0.21	10.32	-17.7	5.4
4,370.0	0.30	241.70	4,368.3	-46.4	-11.2	0.54	-0.32	61.79	-4.2	17.8
4,464.0	0.10	307.00	4,462.3	-46.5	-11.5	0.29	-0.21	69.47	14.1	10.5
4,558.0	1.00	111.60	4,556.3	-46.8	-10.8	1.17	0.96	175.11	-11.6	-12.9
4,652.0	1.70	115.40	4,650.3	-47.7	-8.8	0.75	0.74	4.04	-14.7	-11.0
4,746.0	1.90	117.80	4,744.3	-49.0	-6.2	0.23	0.21	2.55	-18.2	-9.4
4,841.0	3.00	122.40	4,839.2	-51.1	-2.7	1.18	1.16	4.84	-22.8	-6.8
4,935.0	4.10	126.00	4,933.0	-54.3	2.1	1.19	1.17	3.83	-28.9	-4.2



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Well:	#702H	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)	OLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
5,030.0	4.40	123.30	5,027.7	-58.3	7.9	0.38	0.32	-2.84	-35.6	-4.7
5,085.0	4.40	119.90	5,082.6	-60.6	11.5	0.47	0.00	-6.18	-39.5	-6.4
5,266.0	3.80	151.90	5,263.1	-69.3	20.4	1.29	-0.33	17.68	-45.1	24.7
5,393.0	4.80	186.30	5,389.8	-78.3	21.8	2.14	0.79	27.09	-22.3	52.3
5,487.0	5.10	208.50	5,483.4	-85.9	19.3	2.05	0.32	23.62	-0.6	58.4
5,582.0	5.40	211.70	5,578.0	-93.4	15.0	0.44	0.32	3.37	2.2	58.1
5,677.0	5.10	216.70	5,672.7	-100.6	10.1	0.58	-0.32	5.26	6.8	56.9
5,771.0	5.30	220.70	5,766.3	-107.2	4.8	0.44	0.21	4.26	10.2	54.9
5,866.0	5.10	219.80	5,860.9	-113.8	-0.8	0.23	-0.21	-0.95	8.9	53.4
5,961.0	4.90	218.80	5,955.5	-120.2	-6.0	0.23	-0.21	-1.05	7.8	52.0
6,055.0	5.00	230.10	6,049.2	-126.0	-11.7	1.04	0.11	12.02	17.4	47.2
6,150.0	4.40	236.60	6,143.8	-130.6	-17.9	0.84	-0.63	6.84	22.2	41.6
6,244.0	4.30	236.00	6,237.6	-134.6	-23.8	0.12	-0.11	-0.64	21.9	38.0
6,338.0	4.50	236.50	6,331.3	-138.6	-29.8	0.22	0.21	0.53	22.3	34.0
6,432.0	4.20	236.20	6,425.0	-142.5	-35.8	0.32	-0.32	-0.32	22.2	30.3
6,526.0	4.10	237.90	6,518.8	-146.2	-41.5	0.17	-0.11	1.81	23.5	25.7
6,621.0	4.30	235.80	6,613.5	-150.0	-47.3	0.27	0.21	-2.21	22.9	22.7
6,716.0	4.20	238.20	6,708.3	-153.9	-53.2	0.21	-0.11	2.53	24.0	17.8
6,810.0	4.30	240.50	6,802.0	-157.4	-59.2	0.21	0.11	2.45	24.7	12.6
6,905.0	4.10	238.70	6,896.7	-160.9	-65.2	0.25	-0.21	-1.89	23.1	9.9
6,999.0	4.50	240.90	6,990.5	-164.5	-71.3	0.46	0.43	2.34	19.3	7.3
7,093.0	4.00	238.20	7,084.2	-168.0	-77.3	0.57	-0.53	-2.87	12.5	7.8
7,187.0	2.00	262.60	7,178.1	-169.9	-81.7	2.48	-2.13	25.96	9.9	3.3
7,282.0	1.40	268.30	7,273.1	-170.2	-84.5	0.66	-0.63	6.00	7.4	2.4
7,376.0	1.60	265.00	7,367.0	-170.3	-87.0	0.23	0.21	-3.51	4.8	2.8
7,470.0	1.80	262.20	7,461.0	-170.9	-89.7	0.46	0.21	-13.62	1.3	3.5
7,564.0	1.90	249.00	7,554.9	-171.9	-92.8	0.15	0.11	-3.40	-1.9	3.5

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	#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)	N/S (usft)	E/W (usft)	DLog (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
7,659.0	0.20	205.30	7,649.9	-172.6	-94.1	1.85	-1.79	-46.00	-5.1	0.1	
7,752.0	1.00	121.40	7,742.9	-173.2	-93.5	1.07	0.86	-90.22	-1.5	-5.2	
7,847.0	0.90	133.60	7,837.9	-174.1	-92.2	0.24	-0.11	12.84	-4.1	-4.6	
7,941.0	0.90	161.80	7,931.9	-175.4	-91.5	0.47	0.00	30.00	-7.2	-1.8	
8,036.0	1.30	167.20	8,026.9	-177.1	-91.0	0.43	0.42	5.68	-9.1	-1.0	
8,131.0	1.50	178.90	8,121.8	-179.4	-90.7	0.37	0.21	12.32	-11.4	1.1	
8,225.0	1.60	180.60	8,215.8	-181.9	-90.7	0.12	0.11	1.81	-13.9	1.4	
8,413.0	1.70	165.80	8,403.7	-187.3	-90.1	0.23	0.05	-7.87	-19.2	-2.8	
8,508.0	1.70	154.50	8,498.7	-189.9	-89.1	0.35	0.00	-11.89	-21.0	-6.8	
8,603.0	1.00	100.90	8,593.7	-191.3	-87.7	1.44	-0.74	-56.42	-8.7	-22.1	
8,697.0	0.80	98.10	8,687.6	-191.6	-86.2	0.22	-0.21	-2.98	-9.0	-22.5	
8,886.0	0.90	100.10	8,876.6	-192.0	-83.5	0.06	0.05	1.06	-12.6	-22.2	
8,980.0	0.80	108.30	8,970.6	-192.4	-82.1	0.17	-0.11	8.72	-17.0	-20.0	
9,075.0	0.80	109.30	9,065.6	-192.8	-80.9	0.01	0.00	1.05	-18.7	-19.7	
9,168.0	0.70	87.80	9,158.6	-193.0	-79.7	0.32	-0.11	-23.12	-11.4	-25.4	
9,263.0	0.70	77.00	9,253.6	-192.8	-78.5	0.14	0.00	-11.37	-7.5	-27.2	
9,357.0	1.00	77.60	9,347.6	-192.5	-77.2	0.32	0.32	0.64	-9.2	-27.1	
9,452.0	1.40	82.40	9,442.6	-192.2	-75.2	0.43	0.42	5.05	-13.4	-26.2	
9,546.0	0.70	33.10	9,536.5	-191.6	-73.8	1.15	-0.74	-52.45	9.8	-28.2	
9,640.0	1.40	45.40	9,630.5	-190.3	-72.6	0.78	0.74	13.09	1.9	-29.5	
9,735.0	1.30	61.80	9,725.5	-189.0	-70.8	0.42	-0.11	17.26	-8.7	-28.5	
9,829.0	1.30	76.00	9,819.5	-188.2	-68.9	0.34	0.00	15.11	-17.5	-25.2	
9,924.0	0.60	219.10	9,914.5	-188.3	-68.1	1.91	-0.74	150.63	-0.7	31.3	
10,018.0	0.50	196.90	10,008.5	-189.1	-68.6	0.25	-0.11	-23.62	-13.4	28.5	
10,112.0	0.20	180.20	10,102.5	-189.7	-68.7	0.33	-0.32	-17.77	-21.6	23.4	
10,206.0	0.40	170.90	10,196.5	-190.1	-68.6	0.22	0.21	-9.89	-25.6	19.6	
10,300.0	0.60	195.10	10,290.5	-190.9	-68.7	0.30	0.21	25.74	-16.1	28.5	



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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)
10,385.0	0.90	189.60	10,385.5	-192.2	-89.0	0.32	0.32	-5.79	-20.0	26.7
10,488.0	0.80	198.30	10,478.4	-193.5	-89.3	0.18	-0.11	9.35	-17.1	29.6
10,583.0	0.30	124.10	10,573.4	-194.3	-89.3	0.81	-0.53	-78.11	-33.5	-9.0
10,677.0	1.40	63.40	10,667.4	-193.9	-88.1	1.36	1.17	-64.57	-9.8	-33.9
10,771.0	2.40	55.80	10,761.4	-192.3	-85.4	1.09	1.06	-8.09	-8.3	-35.0
10,865.0	1.30	331.30	10,855.3	-190.2	-84.3	2.78	-1.17	-89.89	32.8	-13.6
10,959.0	1.50	301.70	10,949.3	-188.6	-85.9	0.79	0.21	-31.49	33.1	3.8
11,054.0	1.40	336.80	11,044.3	-186.9	-87.4	0.93	-0.11	36.95	27.1	-15.2
11,148.0	1.90	341.80	11,138.2	-184.4	-88.3	0.55	0.53	5.32	23.0	-17.4
11,242.0	1.90	342.40	11,232.2	-181.4	-89.3	0.02	0.00	0.84	19.7	-17.6
11,336.0	1.20	348.80	11,326.2	-179.0	-89.9	0.77	-0.74	6.81	15.0	-19.5
11,430.0	0.50	330.20	11,420.1	-177.6	-70.3	0.79	-0.74	-19.79	19.1	-14.0
11,524.0	0.40	277.20	11,514.1	-177.3	-70.9	0.44	-0.11	-56.38	22.1	6.5
11,619.0	0.40	163.30	11,609.1	-177.5	-71.1	0.71	0.00	-119.89	-15.1	17.3
11,713.0	0.70	157.50	11,703.1	-178.4	-70.8	0.32	0.32	-6.17	-17.7	15.6
11,842.0	1.20	141.20	11,832.1	-180.2	-69.6	0.44	0.39	-12.64	-23.5	9.8
11,897.0	3.25	348.04	11,887.1	-179.1	-69.6	7.91	3.72	-278.48	15.5	-19.6
KOP, MD:11897.0', TVD:11887.1', N/S:-179.1', E/W:-69.6', INC:3.25										
11,937.0	6.40	344.50	11,927.0	-175.8	-70.4	7.91	7.88	-8.85	13.2	-18.7
12,031.0	23.90	340.30	12,017.3	-152.7	-78.3	18.64	18.62	-4.47	-7.8	-17.5
12,078.0	33.10	342.30	12,058.6	-131.4	-85.4	19.68	19.57	4.26	-25.0	-15.7
12,102.7	35.96	345.48	12,078.9	-118.0	-89.3	13.68	11.57	12.89	-35.5	-12.7
FTP Crossing, MD:12102.7', TVD:12078.9', N/S:-118.0', E/W:-89.3', INC:35.96										
12,125.0	38.60	348.00	12,098.7	-104.8	-92.4	13.68	11.85	11.28	-44.7	-9.6
12,172.0	43.10	351.10	12,132.2	-74.6	-97.9	10.50	9.57	6.60	-62.7	-3.6
12,219.0	48.30	353.40	12,165.1	-41.3	-102.4	11.60	11.06	4.89	-79.2	2.1
12,266.0	50.10	353.20	12,195.8	-6.0	-106.6	3.84	3.83	-0.43	-93.5	5.0



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3529.0usft
Site:	Red Raider 25 State	MD Reference:	KB = 25 @ 3529.0usft
Well:	#702H	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)	EW (usft)	DLag (°/100usft)	Buflid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,314.0	51.00	356.10	12,226.3	30.9	-110.0	5.03	1.87	6.04	-103.2	12.1
12,361.0	51.50	1.70	12,255.7	67.6	-110.7	9.35	1.06	11.91	-106.7	19.6
12,408.0	51.70	2.50	12,284.9	104.4	-109.4	1.40	0.43	1.70	-105.6	18.4
12,455.0	51.50	2.70	12,314.1	141.2	-107.7	0.54	-0.43	0.43	-98.7	16.2
12,502.0	54.10	2.80	12,342.5	178.6	-105.9	5.53	5.53	0.21	-87.3	13.5
12,549.0	58.30	1.80	12,368.6	217.6	-104.3	9.11	8.94	-2.13	-73.3	10.7
12,596.0	60.70	0.40	12,392.5	258.1	-103.6	5.71	5.11	-2.98	-56.9	9.2
12,643.0	65.10	359.30	12,413.9	299.8	-103.7	9.59	9.36	-2.34	-38.5	8.9
12,690.0	68.60	358.00	12,432.4	343.1	-104.7	7.87	7.45	-2.77	-19.5	9.5
12,737.0	75.50	0.60	12,446.9	387.8	-105.2	15.59	14.68	5.53	-4.4	9.2
12,785.0	82.20	2.10	12,456.1	434.8	-104.1	14.29	13.96	3.12	5.6	7.7
12,879.0	91.60	3.10	12,461.2	528.5	-99.9	10.06	10.00	1.06	12.3	2.7
12,974.0	90.10	0.30	12,459.8	623.4	-97.1	3.34	-1.58	-2.95	12.5	-0.8
13,068.0	94.90	0.70	12,455.7	717.3	-96.2	5.12	5.11	0.43	10.1	-2.3
13,161.0	93.20	359.10	12,449.1	810.0	-96.4	2.51	-1.83	-1.72	5.1	-2.9
13,256.0	93.90	359.90	12,443.2	904.9	-97.2	1.12	0.74	0.84	0.9	-2.7
13,350.0	94.10	2.10	12,436.7	998.6	-95.6	2.34	0.21	2.34	-4.0	-5.1
13,444.0	90.10	0.90	12,433.2	1,092.5	-93.1	4.44	-4.26	-1.28	-5.8	-8.2
13,539.0	85.80	358.90	12,436.6	1,187.4	-93.3	4.99	-4.53	-2.11	-0.8	-8.8
13,633.0	89.30	359.50	12,440.7	1,281.3	-94.6	3.78	3.72	0.64	4.9	-8.2
13,727.0	91.00	358.30	12,439.7	1,375.3	-96.4	3.05	2.77	-1.28	5.5	-7.1
13,822.0	92.50	359.60	12,436.0	1,470.2	-98.1	1.51	0.63	1.37	3.5	-6.0
13,916.0	94.60	0.20	12,430.2	1,564.0	-98.3	2.32	2.23	0.64	-1.2	-6.5
14,010.0	92.90	0.40	12,424.1	1,657.8	-97.8	1.82	-1.81	0.21	-6.8	-7.7
14,105.0	93.30	0.60	12,418.9	1,752.6	-97.0	0.47	0.42	0.21	-11.4	-9.3
14,199.0	92.70	359.90	12,414.0	1,846.5	-96.6	0.98	-0.64	-0.74	-15.8	-10.4
14,293.0	91.30	358.60	12,410.7	1,940.4	-97.8	2.03	-1.49	-1.38	-18.5	-9.8



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3529.0usft
Site:	Red Raider 25 State	MD Reference:	KB = 25 @ 3529.0usft
Well:	#702H	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)
14,387.0	91.10	358.80	12,408.8	2,034.4	-99.9	0.30	-0.21	0.21	-19.9	-8.4
14,481.0	92.60	359.50	12,405.7	2,128.3	-101.3	1.76	1.60	0.74	-22.4	-7.7
14,576.0	90.50	0.80	12,403.2	2,223.3	-101.1	2.80	-2.21	1.37	-24.4	-8.7
14,670.0	89.80	0.80	12,402.9	2,317.3	-99.8	0.74	-0.74	0.00	-24.1	-10.7
14,764.0	91.40	2.40	12,401.9	2,411.2	-97.2	2.41	1.70	1.70	-24.5	-14.0
14,858.0	90.30	359.00	12,400.5	2,505.2	-96.0	3.80	-1.17	-3.62	-25.4	-15.8
14,953.0	92.90	359.20	12,397.9	2,600.1	-97.5	2.74	2.74	0.21	-27.5	-15.1
15,047.0	92.50	359.90	12,393.4	2,694.0	-98.2	0.86	-0.43	0.74	-31.3	-15.0
15,141.0	89.90	359.60	12,391.5	2,788.0	-98.6	2.78	-2.77	-0.32	-32.8	-15.3
15,235.0	89.40	354.80	12,392.1	2,881.9	-103.2	5.03	-0.53	-5.00	-31.6	-11.4
15,330.0	91.90	356.40	12,391.0	2,976.6	-110.4	3.07	2.63	1.58	-32.2	-5.0
15,424.0	89.80	357.10	12,389.6	3,070.4	-115.7	2.35	-2.23	0.74	-32.7	-0.3
15,518.0	89.40	357.70	12,390.2	3,164.3	-120.0	0.77	-0.43	0.64	-31.1	3.2
15,612.0	87.70	355.10	12,392.6	3,258.1	-125.9	3.30	-1.81	-2.77	-27.8	8.4
15,707.0	89.90	356.50	12,394.6	3,352.8	-132.8	2.74	2.32	1.47	-24.9	14.7
15,801.0	91.50	359.80	12,393.5	3,446.7	-135.8	3.90	1.70	3.51	-25.1	17.0
15,896.0	90.80	1.70	12,391.5	3,541.7	-134.6	2.13	-0.74	2.00	-26.0	15.0
15,990.0	89.00	0.40	12,391.7	3,635.7	-132.9	2.36	-1.91	-1.38	-24.9	12.6
16,084.0	90.30	0.70	12,392.3	3,729.7	-132.0	1.42	1.38	0.32	-23.4	11.0
16,179.0	91.10	359.90	12,391.1	3,824.7	-131.6	1.19	0.84	-0.84	-23.6	9.8
16,273.0	89.80	359.80	12,390.4	3,918.6	-131.7	1.39	-1.38	-0.11	-23.4	9.4
16,367.0	90.90	359.60	12,389.8	4,012.6	-132.2	1.19	1.17	-0.21	-23.0	9.2
16,461.0	92.90	358.50	12,386.7	4,106.6	-133.8	2.43	2.13	-1.17	-24.5	10.0
16,555.0	94.10	357.80	12,381.0	4,200.3	-136.8	1.48	1.28	-0.74	-28.7	12.4
16,649.0	91.70	359.70	12,376.2	4,294.2	-138.8	3.25	-2.55	2.02	-31.9	13.7
16,741.0	90.60	0.10	12,374.4	4,386.2	-139.0	1.27	-1.20	0.43	-32.2	13.2
16,835.0	85.80	359.10	12,377.3	4,480.1	-139.7	5.22	-5.11	-1.06	-27.6	13.2



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #702H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3529.0usft
Site:	Red Raider 25 State	MD Reference:	KB = 25 @ 3529.0usft
	#702H	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)
16,930.0	91.00	358.70	12,380.0	4,575.0	-141.5	5.49	5.47	-0.42	-23.4	14.3
17,024.0	91.00	358.00	12,378.3	4,869.0	-144.2	0.74	0.00	-0.74	-23.4	16.3
17,119.0	90.70	357.00	12,376.9	4,763.9	-148.3	1.10	-0.32	-1.05	-23.2	19.7
17,213.0	91.20	357.50	12,375.4	4,857.7	-152.8	0.75	0.53	0.53	-23.2	23.5
17,232.0	91.80	358.90	12,374.9	4,876.7	-153.4	8.01	3.16	7.37	-23.4	24.0
Last MWD Survey (MD=17232.0')										
17,290.0	91.80	358.90	12,373.0	4,934.7	-154.6	0.00	0.00	0.00	-24.2	24.7
Projection to Bit (MD=17290.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
11,897.0	11,887.1	-179.1	-69.6	KOP, MD:11897.0', TVD:11887.1', N/S:-179.1', E/W:-69.6', INC:3.25
12,102.7	12,078.9	-118.0	-89.3	FTP Crossing, MD:12102.7', TVD:12078.9', N/S:-118.0', E/W:-89.3', INC:35.96
17,232.0	12,374.9	4,876.7	-153.4	Last MWD Survey (MD=17232.0')
17,290.0	12,373.0	4,934.7	-154.6	Projection to Bit (MD=17290.0')

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

Red Raider 25 State #702H

Plan #1



To convert a Magnetic Direction to a Grid Direction, Add 6.43°
To convert a Magnetic Direction to a True Direction, Add 6.89° East
To convert a True Direction to a Grid Direction, Subtract 0.43°

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 @ 3528.00ft
Northing 430862.00 Easting 792839.00 Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

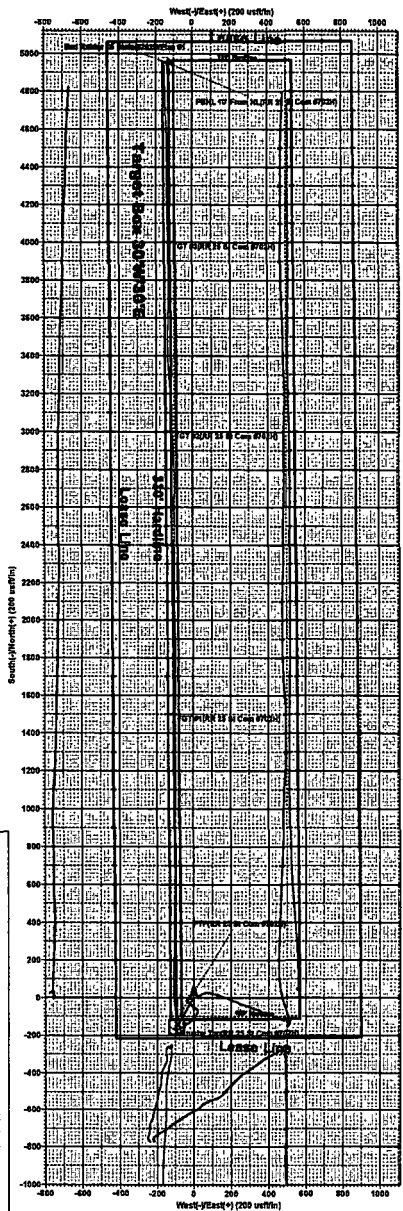
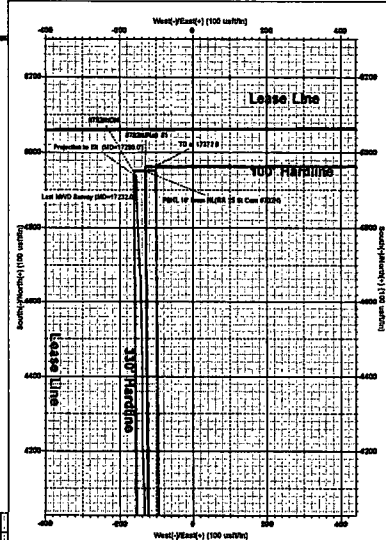
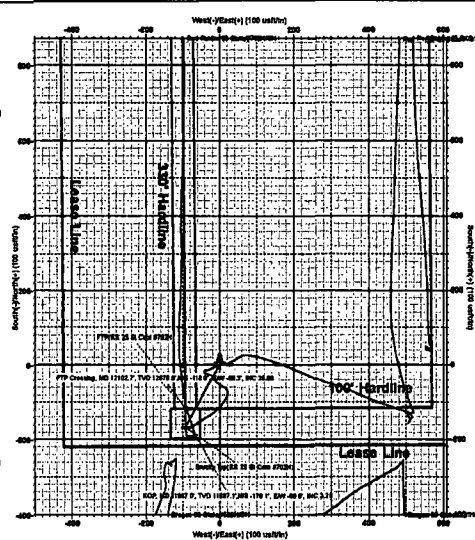
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
1	1295.0	0.53	1.06	1295.0	-1.5	-0.8	0.00	0.00	-1.5	
2	1404.8	0.60	208.64	1404.7	-1.5	-1.1	1.00	-165.34	-1.5	
3	5100.2	0.80	208.64	5100.0	-35.5	-19.6	0.00	0.00	-35.0	
4	5320.2	5.00	208.64	5319.6	-44.9	-24.8	2.00	0.00	-44.3	
5	6804.6	5.00	208.64	6798.4	-158.4	-86.8	0.00	0.00	-158.1	
6	7054.5	0.00	0.00	7048.0	-168.0	-92.0	2.00	180.00	-165.5	
7	11981.7	0.00	0.00	11975.2	-168.0	-92.0	0.00	0.00	-165.5	
8	12740.0	91.00	359.57	12452.8	317.8	-85.6	12.00	359.57	320.2	
9	13920.3	91.00	359.57	12432.0	1497.8	-104.4	0.00	0.00	1500.0	TGT #1(RR 25 St Com #702H)
10	13953.4	90.34	359.57	12431.6	1531.0	-104.6	2.00	180.00	1533.2	TGT #2(RR 25 St Com #702H)
11	15420.5	90.34	359.57	12423.0	2998.0	-115.5	0.00	0.00	3000.0	
12	15432.4	90.57	359.57	12422.9	3009.9	-115.6	2.00	0.00	3011.9	
13	16420.8	90.57	359.57	12413.0	3998.2	-122.9	0.00	0.00	4000.0	TGT #3(RR 25 St Com #702H)
14	16440.5	90.97	359.57	12412.7	4017.8	-123.1	2.00	0.00	4019.7	
15	17372.8	90.97	359.57	12397.0	4950.0	-130.0	0.00	0.00	4951.7	PBHL 10' From HL(RR 25 St Com #702H)

CASING DETAILS

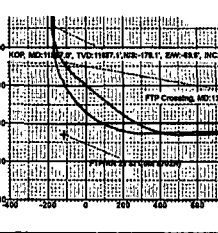
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top(RR 25 St Com #702H)	7758.0	-168.0	-92.0	430894.00	792747.00
PBHL 10' From HL(RR 25 St Com #702H)	12397.0	4950.0	-130.0	430812.00	792709.00
TGT #1(RR 25 St Com #702H)	12413.0	3998.2	-122.9	430893.20	792718.07
TGT #2(RR 25 St Com #702H)	12423.0	2998.0	-115.5	433890.00	792723.43
TGT #3(RR 25 St Com #702H)	12432.0	1497.8	-104.4	433898.50	792734.63
PTP(RR 25 St Com #702H)	12463.0	-116.0	-92.0	430744.00	792747.00



Vertical Section at 53.71° (498 units)



KOP: MD=11981.7, TVD=11987.7, NEB=178.1, SW=48.9, INC=

PTP Crossing: MD=12463.0, TVD=12478.9, NEB=116.1, SW=48.9, INC=35.9

TGT #1(RR 25 St Com #702H)

TGT #2(RR 25 St Com #702H)

TGT #3(RR 25 St Com #702H)

PBHL 10' From HL(RR 25 St Com #702H)

PTP(RR 25 St Com #702H)

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Zone: New Mexico Eastern Zone

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WELL DETAILS: #702H

KB = 25 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

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KB = 25 @ 3528.00ft

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Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Zone: New Mexico Eastern Zone

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WELL DETAILS: #702H

KB = 25 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

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 @ 3528.00ft

Northing 430862.00 Easting 792839.00

Latitude 32° 10' 54.858 N Longitude 103° 31' 13.476 W

SECTION DETAILS

CASING DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

No casing data is available

Lea County, NM (NAD 83 NME)

Red Raider 25 State #702H

Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Zone: New Mexico Eastern Zone

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