



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Heartthrob 17 State Com

#706H

OH

Design: OH

Midland PVA

24 February, 2019

HOBBS OCD

MAY 17 2019

RECEIVED



Midland PVA

Company:	EOG Resources - Midland		Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)		TVD Reference:	KB = 25 @ 3594.0usft
Site:	Hearthrob 17 State Com		MD Reference:	KB = 25 @ 3594.0usft
Well:	#706H		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	Hearthrob 17 State Com				
Site Position:		Northing:	441,601.00 usft	Latitude:	32° 12' 42.634 N
From:	Map	Easting:	771,748.00 usft	Longitude:	103° 35' 18.010 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	#706H					
Well Position	+N-S	0.0 usft	Northing:	441,599.00 usft	Latitude:	32° 12' 42.645 N
	+E-W	0.0 usft	Easting:	771,295.00 usft	Longitude:	103° 35' 23.283 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,569.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/23/2018	8.83	60.03	47,806.24333124

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	353.83	

Survey Program	Date 2/24/2019				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
247.0	17,495.0	Total MWD (OH)	MWD	OWSG MWD - Standard	



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 TVD Reference: KB = 25 @ 3594.0ust
 MD Reference: KB = 25 @ 3594.0ust
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (ust)	Inc (°)	Azi (azimuth) (°)	TVD (ust)	N/S (ust)	EW (ust)	DLag (°/100ust)	Buld (°/100ust)	Turn (°/100ust)	High to Plan (ust)	Right to Plan (ust)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0	0.0
247.0	0.70	103.60	247.0	-0.4	1.5	0.28	0.28	0.00	0.0	0.0	0.0
334.0	0.80	91.50	334.0	-0.5	2.6	0.21	0.11	-13.91	0.0	0.0	0.0
422.0	0.60	92.10	422.0	-0.5	3.7	0.23	-0.23	0.68	0.0	0.0	0.0
614.0	0.60	91.30	614.0	-0.6	5.7	0.00	0.00	-0.42	0.0	0.0	0.0
707.0	0.80	76.40	707.0	-0.5	6.6	0.17	0.00	-16.02	0.0	0.0	0.0
894.0	0.60	70.60	894.0	0.1	8.5	0.03	0.00	-3.10	0.0	0.0	0.0
987.0	0.70	61.10	988.9	0.5	9.5	0.16	0.11	-10.22	0.0	0.0	0.0
1,081.0	0.70	72.40	1,080.9	1.0	10.5	0.15	0.00	12.02	0.0	0.0	0.0
1,174.0	0.40	90.00	1,173.9	1.1	11.4	0.37	-0.32	18.92	0.0	0.0	0.0
1,288.0	0.40	84.10	1,297.9	1.2	12.2	0.03	0.00	-4.78	0.0	0.0	0.0
1,495.0	4.40	205.10	1,494.7	-5.6	9.7	2.34	2.03	61.42	0.0	0.0	0.0
1,619.0	7.20	221.10	1,618.1	-15.8	2.6	2.59	2.28	12.90	0.0	0.0	0.0
1,713.0	7.40	220.80	1,711.3	-24.8	-5.2	0.22	0.21	-0.32	0.0	0.0	0.0
1,808.0	7.80	222.80	1,805.5	-34.0	-13.5	0.35	0.21	2.11	0.0	0.0	0.0
1,802.0	7.30	223.80	1,898.7	-43.0	-22.0	0.15	-0.11	0.65	0.0	0.0	0.0
1,997.0	7.40	225.40	1,992.9	-51.8	-30.6	0.27	-0.11	1.89	0.0	0.0	0.0
2,081.0	7.40	227.00	2,086.1	-60.2	-39.3	0.22	0.00	1.70	0.0	0.0	0.0
2,185.0	7.20	227.90	2,179.4	-68.3	-48.1	0.25	-0.21	0.96	0.0	0.0	0.0
2,279.0	7.20	227.10	2,272.6	-76.2	-56.8	0.11	0.00	-0.85	0.0	0.0	0.0
2,373.0	7.30	229.20	2,365.9	-84.1	-65.6	0.30	0.11	2.23	0.0	0.0	0.0
2,467.0	7.10	228.60	2,459.1	-91.9	-74.5	0.23	-0.21	-0.64	0.0	0.0	0.0
2,561.0	6.90	230.40	2,552.4	-89.3	-83.2	0.32	-0.21	1.91	0.0	0.0	0.0
2,655.0	6.60	231.00	2,645.8	-106.3	-91.8	0.33	-0.32	0.64	0.0	0.0	0.0
2,749.0	6.40	231.70	2,739.2	-113.0	-100.1	0.23	-0.21	0.74	0.0	0.0	0.0
2,843.0	6.20	233.30	2,832.6	-119.3	-108.3	0.28	-0.21	1.70	0.0	0.0	0.0
2,938.0	6.10	234.90	2,927.1	-125.2	-116.5	0.21	-0.11	1.68	0.0	0.0	0.0



Midland PVA

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 Site: Heathrob 17 State Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3594.0usft
 MD Reference: KB = 25 @ 3594.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asl (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	Hgh to Plan (usft)	Right to Plan (usft)	
3,032.0	5.70	237.70	3,020.6	-130.6	-124.5	0.52	-0.43	2.98	0.0	0.0	
3,126.0	5.20	239.10	3,114.1	-135.3	-132.1	0.55	-0.53	1.49	0.0	0.0	
3,221.0	4.60	242.90	3,208.8	-139.2	-139.2	0.72	-0.63	4.00	0.0	0.0	
3,315.0	6.50	222.70	3,302.4	-144.8	-146.2	2.87	2.02	-21.49	0.0	0.0	
3,409.0	6.90	222.50	3,395.7	-152.9	-153.6	0.43	0.43	-0.21	0.0	0.0	
3,504.0	6.20	221.60	3,490.1	-161.0	-160.9	0.74	-0.74	-0.95	0.0	0.0	
3,599.0	5.50	219.70	3,584.6	-168.3	-167.2	0.76	-0.74	-2.00	0.0	0.0	
3,693.0	5.10	219.60	3,678.2	-175.0	-172.7	0.43	-0.43	-0.11	0.0	0.0	
3,788.0	7.20	220.40	3,772.6	-182.8	-179.3	2.21	2.21	0.84	0.0	0.0	
3,882.0	7.70	219.40	3,865.9	-192.1	-187.1	0.55	0.53	-1.06	0.0	0.0	
3,976.0	7.60	219.50	3,959.0	-201.6	-195.0	0.11	-0.11	0.11	0.0	0.0	
4,071.0	7.40	219.10	4,053.2	-211.4	-202.9	0.22	-0.21	-0.42	0.0	0.0	
4,165.0	7.00	218.90	4,146.5	-220.7	-210.2	0.52	-0.43	-2.34	0.0	0.0	
4,259.0	6.70	217.40	4,239.8	-229.6	-216.9	0.33	-0.32	0.53	0.0	0.0	
4,353.0	6.20	210.40	4,333.2	-238.3	-222.8	0.99	-0.53	-7.45	0.0	0.0	
4,447.0	6.50	195.10	4,426.6	-247.9	-226.8	1.82	0.32	-16.28	0.0	0.0	
4,542.0	5.80	172.80	4,521.1	-257.8	-227.6	2.60	-0.74	-23.47	0.0	0.0	
4,636.0	7.20	184.70	4,614.5	-268.4	-227.5	2.06	1.49	12.66	0.0	0.0	
4,730.0	8.60	195.10	4,707.8	-281.0	-229.8	2.12	1.49	11.06	0.0	0.0	
4,824.0	9.30	204.90	4,800.5	-294.7	-234.8	1.78	0.74	10.43	0.0	0.0	
4,918.0	7.60	220.90	4,893.5	-306.3	-242.1	3.07	-1.81	17.02	0.0	0.0	
5,013.0	7.30	226.00	4,987.7	-315.3	-250.5	0.76	-0.32	5.37	0.0	0.0	
5,107.0	6.70	227.10	5,081.0	-323.1	-258.9	0.65	-0.64	1.17	0.0	0.0	
5,201.0	6.40	225.30	5,174.3	-330.6	-266.6	0.39	-0.32	-1.91	0.0	0.0	
5,295.0	6.30	223.10	5,267.8	-338.0	-273.8	0.28	-0.11	-2.34	0.0	0.0	
5,390.0	6.50	241.50	5,362.2	-344.4	-282.1	2.16	0.21	19.37	0.0	0.0	
5,484.0	6.80	243.60	5,455.6	-349.3	-291.6	0.28	0.11	2.23	0.0	0.0	



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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)
5,578.0	6.70	244.40	5,548.9	-354.1	-301.4	0.15	0.11	0.85	0.0	0.0
5,672.0	6.70	244.30	5,642.3	-358.8	-311.3	0.01	0.00	-0.11	0.0	0.0
5,767.0	6.80	244.20	5,736.6	-363.7	-321.4	0.21	0.21	-0.11	0.0	0.0
5,861.0	7.00	242.70	5,829.9	-368.8	-331.6	0.22	0.11	-1.60	0.0	0.0
5,955.0	7.00	242.30	5,923.2	-374.1	-341.8	0.05	0.00	-0.43	0.0	0.0
6,050.0	6.40	242.70	6,017.6	-379.2	-351.6	0.63	-0.63	0.42	0.0	0.0
6,144.0	6.10	241.60	6,111.0	-384.0	-360.7	0.34	-0.32	-1.17	0.0	0.0
6,239.0	6.00	241.20	6,205.5	-388.8	-369.4	0.11	-0.11	-0.42	0.0	0.0
6,333.0	5.90	241.30	6,299.0	-393.5	-378.0	0.11	-0.11	0.11	0.0	0.0
6,427.0	5.70	238.70	6,392.5	-398.2	-386.2	0.35	-0.21	-2.77	0.0	0.0
6,521.0	5.70	238.60	6,486.0	-403.1	-394.2	0.01	0.00	-0.11	0.0	0.0
6,616.0	5.70	236.80	6,580.6	-408.1	-402.2	0.19	0.00	-1.89	0.0	0.0
6,711.0	5.50	236.40	6,675.1	-413.2	-409.9	0.21	-0.21	-0.42	0.0	0.0
6,805.0	5.40	236.40	6,768.7	-418.2	-417.3	0.11	-0.11	0.00	0.0	0.0
6,899.0	5.40	237.30	6,862.3	-423.0	-424.7	0.09	0.00	0.98	0.0	0.0
6,994.0	5.20	237.00	6,956.9	-427.8	-432.1	0.21	-0.21	-0.32	0.0	0.0
7,088.0	5.00	238.30	7,050.5	-432.2	-439.2	0.25	-0.21	1.38	0.0	0.0
7,181.0	4.90	237.60	7,143.2	-436.5	-446.0	0.13	-0.11	-0.75	0.0	0.0
7,275.0	4.20	231.10	7,236.9	-440.8	-452.0	0.92	-0.74	-8.91	0.0	0.0
7,369.0	2.50	244.60	7,330.7	-443.8	-456.6	1.98	-1.81	14.36	0.0	0.0
7,463.0	1.00	216.90	7,424.6	-445.4	-458.9	1.79	-1.60	-29.47	0.0	0.0
7,557.0	0.80	212.70	7,518.6	-446.6	-459.8	0.22	-0.21	-4.47	0.0	0.0
7,652.0	1.00	227.20	7,613.6	-447.7	-460.7	0.32	0.21	15.26	0.0	0.0
7,746.0	0.70	231.50	7,707.6	-448.6	-461.8	0.33	-0.32	4.57	0.0	0.0
7,840.0	0.80	234.50	7,801.6	-449.4	-462.8	0.11	0.11	3.19	0.0	0.0
7,934.0	0.70	232.20	7,895.6	-450.1	-463.8	0.11	-0.11	-2.45	0.0	0.0
8,028.0	0.60	225.40	7,989.6	-450.8	-464.6	0.13	-0.11	-7.23	0.0	0.0



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Well:	#706H	North Reference:	Grid
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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)	
8,122.0	0.60	209.40	8,083.6	-451.6	-465.2	0.18	0.00	-17.02	0.0	0.0	
8,216.0	0.70	209.10	8,177.6	-452.5	-465.7	0.11	0.11	-0.32	0.0	0.0	
8,310.0	0.70	208.70	8,271.6	-453.5	-466.2	0.01	0.00	-0.43	0.0	0.0	
8,404.0	0.80	210.40	8,365.6	-454.6	-466.8	0.11	0.11	1.81	0.0	0.0	
8,498.0	0.90	212.60	8,459.6	-455.8	-467.6	0.11	0.11	2.34	0.0	0.0	
8,592.0	0.90	214.90	8,553.5	-457.0	-468.4	0.04	0.00	2.45	0.0	0.0	
8,686.0	1.00	217.60	8,647.5	-458.2	-469.3	0.12	0.11	2.87	0.0	0.0	
8,779.0	1.00	216.10	8,740.5	-459.5	-470.3	0.03	0.00	-1.61	0.0	0.0	
8,874.0	1.10	225.30	8,835.5	-460.9	-471.4	0.21	0.11	9.68	0.0	0.0	
8,967.0	1.10	232.90	8,928.5	-462.0	-472.8	0.16	0.00	8.17	0.0	0.0	
9,062.0	1.20	236.00	9,023.5	-463.1	-474.3	0.12	0.11	3.26	0.0	0.0	
9,156.0	1.40	228.50	9,117.4	-464.4	-476.0	0.26	0.21	-7.98	0.0	0.0	
9,250.0	1.30	231.50	9,211.4	-465.9	-477.7	0.13	-0.11	3.19	0.0	0.0	
9,344.0	1.00	237.20	9,305.4	-467.0	-479.2	0.34	-0.32	6.06	0.0	0.0	
9,438.0	1.50	227.80	9,399.4	-468.2	-480.8	0.57	0.53	-10.00	0.0	0.0	
9,532.0	2.00	245.60	9,493.3	-469.7	-483.2	0.78	0.53	18.94	0.0	0.0	
9,626.0	0.70	312.40	9,587.3	-470.0	-485.1	1.96	-1.38	71.06	0.0	0.0	
9,720.0	0.20	308.00	9,681.3	-469.5	-485.7	0.53	-0.53	-4.68	0.0	0.0	
9,815.0	0.50	290.70	9,776.3	-469.3	-486.2	0.33	0.32	-18.21	0.0	0.0	
9,909.0	0.70	313.80	9,870.3	-468.8	-487.0	0.33	0.21	24.57	0.0	0.0	
10,003.0	0.70	290.40	9,964.3	-468.2	-486.0	0.30	0.00	-24.89	0.0	0.0	
10,098.0	0.80	282.00	10,059.3	-467.8	-489.2	0.16	0.11	-8.84	0.0	0.0	
10,192.0	1.10	270.30	10,153.3	-467.7	-490.7	0.38	0.32	-12.45	0.0	0.0	
10,287.0	1.00	253.70	10,248.3	-467.9	-492.4	0.34	-0.11	-17.47	0.0	0.0	
10,381.0	1.10	237.60	10,342.2	-468.6	-494.0	0.33	0.11	-17.13	0.0	0.0	
10,476.0	1.40	239.50	10,437.2	-469.7	-495.7	0.32	0.32	2.00	0.0	0.0	
10,570.0	1.60	242.10	10,531.2	-470.9	-497.9	0.22	0.21	2.77	0.0	0.0	



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLog (°/100usft)	Bolid (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
10,664.0	2.00	244.90	10,625.1	-472.2	-500.5	0.44	0.43	2.98	0.0	0.0
10,758.0	2.20	221.60	10,719.1	-474.2	-503.2	0.93	0.21	-24.79	0.0	0.0
10,853.0	2.70	209.80	10,814.0	-477.6	-505.5	0.74	0.53	-12.42	0.0	0.0
10,947.0	2.70	207.00	10,907.8	-481.4	-507.8	0.14	0.00	-2.98	0.0	0.0
11,041.0	2.80	213.90	11,001.8	-485.2	-509.8	0.36	-0.11	7.34	0.0	0.0
11,135.0	2.10	236.40	11,095.7	-487.9	-512.4	1.11	-0.53	23.94	0.0	0.0
11,229.0	1.80	254.80	11,189.7	-489.3	-515.3	0.73	-0.32	19.57	0.0	0.0
11,324.0	2.00	250.30	11,284.6	-490.2	-518.3	0.26	0.21	-4.74	0.0	0.0
11,418.0	2.60	248.70	11,378.5	-491.5	-521.8	0.64	0.64	-1.70	0.0	0.0
11,512.0	2.40	258.00	11,472.4	-492.7	-525.8	0.48	-0.21	9.89	0.0	0.0
11,606.0	3.30	267.40	11,566.3	-493.2	-530.4	1.08	0.96	10.00	0.0	0.0
11,689.0	4.00	273.90	11,649.1	-493.2	-535.7	0.98	0.84	7.83	0.0	0.0
11,727.0	4.20	273.10	11,687.1	-493.0	-538.4	0.55	0.53	-2.11	0.0	0.0
11,822.0	4.20	271.20	11,781.8	-492.7	-545.3	0.15	0.00	-2.00	0.0	0.1
11,916.0	4.10	263.90	11,875.5	-493.0	-552.1	0.57	-0.11	-7.77	0.0	0.7
12,009.0	3.50	258.60	11,968.3	-493.9	-558.2	0.75	-0.65	-5.70	0.4	2.0
12,103.0	3.30	296.80	12,062.2	-493.3	-563.4	2.38	-0.21	40.74	2.9	0.2
12,197.0	20.20	1.30	12,154.1	-475.7	-565.5	20.21	17.98	68.51	-9.7	-5.8
12,249.0	26.50	7.00	12,201.8	-455.2	-563.9	12.86	12.12	10.96	-20.2	-6.8
12,282.0	26.30	8.20	12,240.3	-436.2	-561.3	1.33	-0.47	2.79	-26.7	-8.4
12,386.0	37.60	10.50	12,319.9	-387.2	-553.1	12.09	12.02	2.45	-35.7	-12.2
12,480.0	43.20	9.10	12,391.5	-327.2	-542.8	6.03	5.96	-1.49	-38.2	-16.5
12,575.0	50.50	5.90	12,456.4	-258.5	-533.9	8.07	7.68	-3.37	-30.7	-16.7
12,669.0	65.30	4.50	12,506.2	-179.5	-526.7	15.79	15.74	-1.49	-22.5	-10.2
12,716.0	72.80	5.00	12,523.0	-135.8	-523.1	15.99	15.96	1.06	-20.3	-5.7
12,764.0	72.20	5.10	12,537.5	-90.2	-519.1	1.27	-1.25	0.21	-16.0	-0.9
12,860.0	85.70	357.10	12,555.9	3.8	-517.4	16.26	14.06	-8.33	-3.9	16.1



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Hearthrob 17 State Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3594.0ush
 MD Reference: KB = 25 @ 3594.0ush
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (ush)	Inc (°)	Azi (azimuth) (°)	TVD (ush)	N/S (ush)	EW (ush)	DLeg (°/100ush)	Build (°/100ush)	Turn (°/100ush)	High to Plan (ush)	Right to Plan (ush)	
12,955.0	92.30	0.40	12,557.5	98.7	-519.5	7.77	8.95	3.47	-0.9	34.4	
13,050.0	89.00	2.10	12,556.4	193.6	-517.4	3.91	-3.47	1.79	-1.4	43.8	
13,144.0	91.50	2.70	12,556.0	287.5	-513.5	2.74	2.66	0.64	-0.9	46.6	
13,238.0	88.90	3.60	12,555.7	381.4	-508.3	2.93	-2.77	0.96	-0.4	43.3	
13,332.0	91.00	3.10	12,555.8	475.2	-502.8	2.30	2.23	-0.53	0.5	37.6	
13,426.0	88.60	2.20	12,556.1	569.1	-498.5	2.73	-2.55	-0.96	1.7	33.1	
13,520.0	92.20	3.70	12,555.5	662.9	-493.6	4.15	3.83	1.60	1.8	28.1	
13,615.0	93.50	4.00	12,550.7	757.6	-487.3	1.40	1.37	0.32	-2.1	21.5	
13,710.0	87.50	3.30	12,549.9	852.4	-481.2	6.36	-6.32	-0.74	-2.0	15.2	
13,805.0	90.00	2.40	12,552.0	947.2	-476.5	2.80	2.63	-0.95	0.9	10.3	
13,899.0	91.30	2.00	12,550.9	1,041.1	-472.9	1.45	1.38	-0.43	0.7	6.1	
13,993.0	89.80	2.20	12,550.0	1,135.1	-469.5	1.61	-1.60	0.21	0.8	1.9	
14,088.0	89.40	2.00	12,550.7	1,230.0	-466.0	0.47	-0.42	-0.21	2.4	-2.3	
14,182.0	89.60	0.20	12,551.5	1,324.0	-464.2	1.93	0.21	-1.91	4.1	-4.8	
14,276.0	90.70	0.20	12,551.2	1,418.0	-463.8	1.17	1.17	0.00	4.8	-5.8	
14,370.0	91.00	359.40	12,549.9	1,512.0	-464.2	0.91	0.32	-0.85	4.4	-6.2	
14,466.0	92.30	359.50	12,547.1	1,607.9	-465.1	1.36	1.35	0.10	2.6	-6.0	
14,560.0	89.80	359.10	12,545.4	1,701.9	-466.2	2.69	-2.66	-0.43	1.8	-5.6	
14,655.0	90.10	357.20	12,545.4	1,796.8	-469.3	2.02	0.32	-2.00	2.8	-3.2	
14,749.0	89.00	354.40	12,546.2	1,890.6	-476.2	3.20	-1.17	-2.98	4.5	3.0	
14,843.0	90.00	357.30	12,547.0	1,984.3	-483.0	3.26	1.06	3.09	6.2	9.1	
14,937.0	90.70	354.80	12,546.4	2,078.1	-489.5	2.76	0.74	-2.66	6.3	14.8	
15,031.0	90.90	354.40	12,545.1	2,171.6	-498.3	0.48	0.21	-0.43	5.8	23.0	
15,126.0	92.50	356.70	12,542.3	2,266.4	-504.0	4.83	1.68	4.53	3.6	28.0	
15,220.0	92.70	0.90	12,538.0	2,360.3	-504.4	2.35	0.21	2.34	0.0	27.6	
15,314.0	94.10	1.00	12,532.5	2,454.1	-502.8	1.49	1.49	0.11	-4.9	25.3	
15,408.0	89.20	0.80	12,529.8	2,548.0	-501.3	5.22	-5.21	-0.21	-6.8	23.2	



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Heathrob 17 State Com
 Well: #706H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3594.0usft
 MD Reference: KB = 25 @ 3594.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Asd (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,502.0	89.20	359.10	12,531.1	2,642.0	-501.4	1.81	0.00	-1.81	-4.8	22.5	
15,596.0	92.00	2.10	12,530.1	2,736.0	-500.4	4.37	2.98	3.19	-5.2	20.8	
15,690.0	90.00	2.10	12,528.4	2,829.9	-497.0	2.13	-2.13	0.00	-6.1	16.7	
15,784.0	89.70	1.40	12,528.7	2,923.9	-494.1	0.81	-0.32	-0.74	-5.1	13.1	
15,878.0	88.50	0.50	12,530.2	3,018.8	-492.5	1.58	-1.26	-0.95	-2.9	10.8	
15,973.0	88.50	358.80	12,532.8	3,112.8	-493.3	2.02	0.00	-2.02	0.2	10.9	
16,067.0	89.40	357.80	12,534.4	3,206.7	-496.2	1.28	0.96	-0.85	2.7	13.1	
16,161.0	90.80	2.70	12,534.2	3,300.7	-495.8	5.42	1.49	5.21	3.2	12.0	
16,255.0	91.60	6.50	12,532.2	3,394.4	-488.3	4.13	0.85	4.04	1.9	3.7	
16,350.0	90.40	8.50	12,530.6	3,488.5	-475.9	2.45	-1.26	2.11	1.0	-9.4	
16,444.0	91.30	7.50	12,529.2	3,581.6	-462.8	1.43	0.96	-1.06	0.4	-23.1	
16,538.0	90.90	7.90	12,527.4	3,674.7	-450.2	0.60	-0.43	0.43	-0.8	-38.4	
16,728.0	91.40	349.10	12,523.5	3,863.8	-455.2	9.90	0.26	-9.89	-3.5	-32.9	
16,823.0	90.40	352.50	12,522.0	3,957.5	-470.3	3.73	-1.05	3.58	-4.1	-18.4	
16,918.0	89.00	357.30	12,522.5	4,052.1	-478.8	5.26	-1.47	5.05	-2.6	-10.7	
17,012.0	91.50	358.40	12,522.1	4,146.1	-482.3	2.91	2.68	1.17	-2.1	-7.9	
17,106.0	88.30	357.10	12,522.3	4,240.0	-488.0	3.67	-3.40	-1.38	-0.9	-4.9	
17,200.0	88.80	357.40	12,524.7	4,333.8	-490.5	0.62	0.53	0.32	2.4	-1.1	
17,294.0	92.20	359.20	12,523.8	4,427.8	-493.3	4.09	3.62	1.91	2.8	0.9	
17,389.0	88.00	355.90	12,523.7	4,522.6	-497.4	5.62	-4.42	-3.47	3.4	4.3	
17,443.0	87.60	355.80	12,525.7	4,576.5	-501.3	0.76	-0.74	-0.18	6.0	7.8	
17,495.0	87.60	355.80	12,527.9	4,628.3	-505.1	0.00	0.00	0.00	8.8	11.2	



Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #706H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3594.0usft
Site:	Hearthrob 17 State Com	MD Reference:	KB = 25 @ 3594.0usft
Well:	#706H	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)	
12,085.0	12,044.2	-493.7	-562.5	KOP, MD:12085.0', TVD:12044.2', N/S:-493.7', E/W:-562.5', INC:3.22
12,316.3	12,281.8	-425.0	-559.6	FTP Crossing, MD:12316.3', TVD:12281.8', N/S:-425.0', E/W:-559.6', INC:28.22
17,443.0	12,525.7	4,576.5	-501.3	Last MWD Survey (MD=17443.0')
17,495.0	12,527.9	4,628.3	-505.1	Projection to Bit (MD=17495.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Heartthrob 17 State Com #706H

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: #706H

KB = 25 @ 3594.0usft 3599.0
Northing 441599.00 Easting 771295.00 Latitude 32° 12' 42.645 N Longitude 103° 35' 23.283 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSecl	Target
1	11754.0	4.20	272.56	11714.0	-492.9	-540.3	0.00	0.00	-433.0	
2	12118.8	4.20	272.56	12077.8	-491.7	-567.0	0.00	0.00	-429.0	
3	12878.1	90.48	11.85	12539.5	-13.3	-504.3	12.00	99.03	40.2	
4	13270.5	90.51	339.86	12559.2	378.4	-485.0	3.00	-89.71	423.5	
5	13650.2	90.51	359.86	12551.0	956.1	-488.2	0.00	0.00	1000.1	
6	13886.1	90.57	359.57	12550.8	972.0	-488.3	2.00	-78.94	1015.9	
7	14855.1	90.57	359.57	12541.0	1960.9	-473.8	0.00	0.00	2000.0	TGT#1(HT 17 St #706H)
8	14862.3	90.43	359.57	12540.9	1968.1	-473.8	2.00	179.01	2007.1	
9	16884.9	90.43	359.57	12526.0	3970.8	-488.9	0.00	0.00	4000.0	TGT#2(HT 17 St #706H)
10	16873.4	90.60	359.56	12525.9	3979.1	-488.9	2.00	-2.18	4008.5	
11	17538.4	90.60	359.56	12519.0	4844.0	-494.0	0.00	0.00	4870.2	PBHL(HT 17 St #706H)

To convert a Magnetic Direction to a Grid Direction, Add 8.44°
To convert a Magnetic Direction to a True Direction, Add 9.83° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

CASINO DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KOP#(HT 17 St #706H)	12068.5	-476.0	-458.0	441124.00	770838.00
PBHL(HT 17 St #706H)	12519.0	-484.0	-458.0	445243.00	770891.00
TGT#1(HT 17 St #706H)	12528.0	-375.8	-458.0	445569.80	770804.14
TGT#2(HT 17 St #706H)	12541.0	1860.9	-473.8	443509.90	770821.34
TGT#3(HT 17 St #706H)	12551.0	858.1	-488.2	442055.10	770828.78
PTP#(HT 17 St #706H)	12589.0	-425.0	-458.0	441174.00	770838.00

