



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Hearns 34 State Com

#708H

OH

Design: OH

Midland PVA

26 July, 2018

HOBBS OCD

OCT 22 2018

RECEIVED





Midland PVA



Company:	EOG Resources - Midland		Local Co-ordinate Reference:	Well #708H	
Project:	Lea County, NM (NAD 83 NME)		TVD Reference:	KB = 25' @ 3492.0usft	
Site:	Hearns 34 State Com		MD Reference:	KB = 25' @ 3492.0usft	
Well:	#708H		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	Hearns 34 State Com				
Site Position:		Northing:	425,568.00 usft	Latitude:	32° 10' 3.355 N
From:	Map	Easting:	780,745.00 usft	Longitude:	103° 33' 34.635 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	#708H					
Well Position	+N-S	0.0 usft	Northing:	425,568.00 usft	Latitude:	32° 10' 3.353 N
	+E-W	0.0 usft	Easting:	780,780.00 usft	Longitude:	103° 33' 34.228 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,467.0 usft

Wellbore	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/14/2017	6.94	60.01	47,906.42108114

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	356.79	



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Survey Program		Date 7/26/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
155.0	5,010.0	Gordon MWD Cartel 18 + 3' (OH)	MWD	OWSG MWD - Standard	
5,100.0	22,664.0	Total MWD #1 (OH)	MWD	OWSG MWD - Standard	

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
155.0	0.23	181.44	155.0	-0.3	0.0	0.15	0.15	0.00	0.0	0.0
294.0	0.34	222.09	294.0	-0.9	-0.3	0.16	0.08	29.24	0.0	0.0
425.0	0.14	203.43	425.0	-1.3	-0.6	0.16	-0.15	-14.24	0.0	0.0
555.0	0.09	259.59	555.0	-1.5	-0.8	0.09	-0.04	43.20	0.0	0.0
730.0	0.18	23.41	730.0	-1.3	-0.8	0.14	0.05	70.75	0.0	0.0
904.0	0.79	357.72	904.0	0.2	-0.7	0.36	0.35	-14.76	0.0	0.0
1,079.0	0.79	40.63	1,079.0	2.3	0.0	0.33	0.00	24.52	0.0	0.0
1,207.0	0.88	44.47	1,207.0	3.7	1.3	0.08	0.07	3.00	0.0	0.0
1,297.0	0.62	60.53	1,297.0	4.4	2.2	0.37	-0.29	17.84	0.0	0.0
1,472.0	0.80	257.93	1,471.9	4.6	1.8	0.80	0.10	-92.91	0.0	0.0
1,646.0	1.27	265.23	1,645.9	4.2	-1.3	0.28	0.27	4.20	0.0	0.0
1,821.0	0.36	265.92	1,820.9	4.0	-3.8	0.52	-0.52	0.39	0.0	0.0
1,995.0	0.64	214.95	1,994.9	3.2	-4.9	0.29	0.16	-29.29	0.0	0.0
2,170.0	3.00	246.40	2,169.8	0.5	-9.7	1.42	1.35	17.97	0.0	0.0
2,344.0	4.05	243.27	2,343.5	-4.1	-19.3	0.61	0.60	-1.80	0.0	0.0
2,519.0	6.18	244.89	2,517.8	-10.9	-33.4	1.22	1.22	0.81	0.0	0.0
2,693.0	5.63	245.34	2,690.8	-18.4	-49.6	0.32	-0.32	0.37	0.0	0.0
2,868.0	6.54	242.35	2,864.8	-26.6	-66.2	0.55	0.52	-1.71	0.0	0.0
3,041.0	5.65	243.69	3,036.9	-35.0	-82.6	0.52	-0.51	0.77	0.0	0.0
3,216.0	5.67	241.00	3,211.0	-43.0	-97.8	0.15	0.01	-1.54	0.0	0.0



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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)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,390.0	4.69	242.07	3,384.3	-50.5	-111.7	0.57	-0.56	0.61	0.0	0.0	
3,565.0	6.02	249.84	3,558.5	-57.0	-126.6	0.86	0.76	4.44	0.0	0.0	
3,739.0	6.73	243.41	3,731.5	-84.7	-144.3	0.58	0.41	-3.70	0.0	0.0	
3,914.0	5.38	239.77	3,905.5	-73.4	-160.5	0.80	-0.77	-2.08	0.0	0.0	
4,088.0	5.35	248.23	4,078.7	-80.5	-175.1	0.45	-0.02	4.86	0.0	0.0	
4,263.0	5.74	247.36	4,252.9	-86.9	-190.8	0.23	0.22	-0.50	0.0	0.0	
4,438.0	5.32	244.35	4,427.1	-93.8	-206.2	0.29	-0.24	-1.72	0.0	0.0	
4,612.0	6.21	242.00	4,600.2	-101.7	-221.7	0.53	0.51	-1.35	0.0	0.0	
4,786.0	5.41	235.67	4,773.3	-110.8	-236.8	0.59	-0.46	-3.64	0.0	0.0	
4,961.0	5.62	232.82	4,947.5	-120.6	-250.5	0.20	0.12	-1.63	0.0	0.0	
5,010.0	5.30	231.98	4,996.3	-123.5	-254.2	0.67	-0.65	-1.71	0.0	0.0	
5,100.0	4.10	232.80	5,086.0	-128.0	-260.0	1.34	-1.33	0.91	0.9	-0.1	
5,184.0	4.70	242.50	5,179.7	-131.8	-266.1	1.01	0.64	10.32	2.9	-0.1	
5,289.0	5.50	248.50	5,274.3	-135.2	-273.8	1.01	0.84	6.32	4.3	-0.3	
5,383.0	5.50	248.10	5,367.9	-138.6	-282.1	0.04	0.00	-0.43	5.2	-0.5	
5,477.0	5.50	245.70	5,461.5	-142.1	-290.4	0.24	0.00	-2.55	6.0	-0.2	
5,571.0	5.60	245.80	5,555.0	-145.8	-298.7	0.11	0.11	0.11	6.7	0.0	
5,665.0	5.40	245.00	5,648.6	-149.6	-306.9	0.23	-0.21	-0.85	7.5	0.4	
5,759.0	5.20	244.40	5,742.2	-153.3	-314.8	0.22	-0.21	-0.64	8.6	0.9	
5,853.0	5.50	243.80	5,835.8	-157.1	-322.6	0.32	0.32	-0.64	9.7	1.5	
5,947.0	6.00	242.00	5,929.3	-161.4	-331.0	0.57	0.53	-1.91	10.0	2.6	
6,041.0	6.00	241.90	6,022.8	-166.0	-339.7	0.01	0.00	-0.11	9.9	3.5	
6,135.0	5.70	241.00	6,116.3	-170.6	-348.1	0.33	-0.32	-0.96	10.0	4.6	
6,230.0	6.10	245.40	6,210.8	-175.0	-356.8	0.64	0.42	4.63	10.5	4.5	
6,324.0	6.30	247.70	6,304.2	-179.0	-366.1	0.34	0.21	2.45	10.4	4.1	
6,418.0	6.20	247.90	6,397.7	-182.9	-375.6	0.11	-0.11	0.21	9.9	4.0	
6,511.0	6.20	247.30	6,490.1	-186.7	-384.9	0.07	0.00	-0.65	9.6	4.0	



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6,606.0	6.00	246.40	6,584.6	-190.7	-394.2	0.23	-0.21	-0.95	9.3	4.2	
6,700.0	6.30	244.90	6,678.1	-194.9	-403.4	0.36	0.32	-1.60	9.0	4.7	
6,795.0	6.30	243.60	6,772.5	-199.4	-412.7	0.15	0.00	-1.37	8.3	5.4	
6,889.0	6.20	243.60	6,865.9	-203.9	-421.9	0.11	-0.11	0.00	7.9	6.0	
6,983.0	6.10	244.70	6,959.4	-208.3	-431.0	0.16	-0.11	1.17	7.7	6.3	
7,078.0	5.80	244.40	7,053.9	-212.6	-439.9	0.32	-0.32	-0.32	7.8	6.8	
7,172.0	5.70	242.60	7,147.4	-216.8	-448.3	0.22	-0.11	-1.91	7.9	7.7	
7,267.0	5.50	243.60	7,241.9	-221.0	-456.6	0.23	-0.21	1.05	8.7	8.2	
7,362.0	5.20	245.00	7,336.5	-224.8	-464.5	0.34	-0.32	1.47	9.9	8.5	
7,456.0	5.30	252.00	7,430.1	-227.9	-472.6	0.69	0.11	7.45	11.0	7.0	
7,550.0	4.70	265.30	7,523.8	-229.6	-480.5	1.38	-0.64	14.15	9.7	3.5	
7,644.0	4.10	263.60	7,617.5	-230.3	-487.7	0.65	-0.64	-1.81	4.9	2.9	
7,738.0	4.20	264.20	7,711.3	-231.0	-494.4	0.12	0.11	0.64	-1.7	2.8	
7,833.0	1.20	303.70	7,806.2	-230.8	-498.7	3.54	-3.16	41.58	-3.2	5.5	
7,927.0	1.10	310.90	7,900.1	-229.7	-500.2	0.19	-0.11	7.66	-4.4	6.0	
8,021.0	0.90	304.80	7,994.1	-228.7	-501.5	0.24	-0.21	-6.49	-6.6	5.4	
8,115.0	0.80	277.00	8,088.1	-228.2	-502.8	0.45	-0.11	-29.57	-9.7	1.3	
8,209.0	0.60	273.10	8,182.1	-228.1	-503.9	0.22	-0.21	-4.15	-10.9	0.6	
8,303.0	0.40	281.60	8,276.1	-228.1	-504.7	0.24	-0.21	-12.23	-11.6	-1.6	
8,397.0	0.80	244.90	8,370.1	-228.4	-505.7	0.46	0.43	-17.77	-11.6	-5.0	
8,492.0	0.90	236.70	8,465.1	-229.1	-506.9	0.17	0.11	-8.63	-12.2	-6.7	
8,587.0	0.90	239.90	8,560.1	-229.9	-508.1	0.05	0.00	3.37	-14.0	-6.0	
8,682.0	0.90	233.40	8,655.1	-230.7	-509.4	0.11	0.00	-6.84	-14.8	-7.6	
8,776.0	1.20	231.70	8,749.0	-231.7	-510.8	0.32	0.32	-1.81	-16.3	-8.1	
8,870.0	1.20	246.50	8,843.0	-232.7	-512.4	0.33	0.00	15.74	-19.7	-3.4	
8,965.0	1.00	38.90	8,938.0	-232.5	-512.8	2.25	-0.21	160.42	15.9	12.6	
9,059.0	1.40	40.30	9,032.0	-231.0	-511.6	0.43	0.43	1.49	14.3	12.2	



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9,153.0	1.00	29.70	9,126.0	-229.4	-510.4	0.48	-0.43	-11.28	9.8	14.4	
9,247.0	0.80	343.80	9,220.0	-228.1	-510.2	0.77	-0.21	-48.83	-4.7	16.5	
9,341.0	0.60	52.80	9,314.0	-227.1	-510.0	0.86	-0.21	73.40	13.0	11.0	
9,435.0	0.30	328.50	9,408.0	-226.6	-509.7	0.68	-0.32	-89.68	-9.9	13.5	
9,529.0	1.60	313.60	9,501.9	-225.5	-510.8	1.40	1.38	-15.85	-14.6	10.5	
9,623.0	1.40	340.60	9,595.9	-223.5	-512.1	0.77	-0.21	28.72	-10.6	16.6	
9,718.0	0.60	191.50	9,690.9	-222.9	-512.6	2.04	-0.84	-156.95	1.1	-20.2	
9,813.0	1.60	162.80	9,785.9	-224.7	-512.3	1.17	1.05	-30.21	8.9	-17.5	
9,907.0	1.60	156.60	9,879.8	-227.1	-511.4	0.18	0.00	-6.60	8.1	-16.6	
10,001.0	0.40	86.80	9,973.8	-228.3	-510.6	1.61	-1.28	-74.26	17.6	0.7	
10,096.0	0.40	35.40	10,068.8	-228.0	-510.0	0.37	0.00	-54.11	9.9	13.9	
10,191.0	0.20	180.30	10,163.8	-227.9	-509.9	0.61	-0.21	152.53	0.0	-16.9	
10,285.0	0.50	217.40	10,257.8	-228.4	-510.1	0.38	0.32	39.47	-10.7	-13.3	
10,380.0	0.70	244.40	10,352.8	-229.0	-510.9	0.36	0.21	28.42	-16.5	-6.8	
10,474.0	0.80	255.10	10,446.8	-229.4	-512.0	0.18	0.11	11.38	-18.7	-3.5	
10,568.0	1.00	293.00	10,540.8	-229.2	-513.4	0.65	0.21	40.32	-18.3	9.1	
10,662.0	1.00	327.60	10,634.8	-228.2	-514.6	0.63	0.00	36.81	-11.4	18.4	
10,757.0	0.90	317.40	10,729.8	-227.0	-515.6	0.21	-0.11	-10.74	-16.0	15.9	
10,851.0	0.50	318.50	10,823.8	-226.1	-516.3	0.43	-0.43	1.17	-16.9	16.2	
10,945.0	0.90	96.90	10,917.8	-225.9	-515.9	1.40	0.43	147.23	23.0	-0.7	
11,039.0	0.70	95.50	11,011.8	-226.1	-514.6	0.21	-0.21	-1.49	21.7	-0.1	
11,133.0	0.90	50.70	11,105.8	-225.6	-513.4	0.68	0.21	-47.66	14.3	14.8	
11,227.0	1.10	41.80	11,199.7	-224.5	-512.3	0.27	0.21	-9.47	10.2	16.7	
11,322.0	1.30	41.10	11,294.7	-223.0	-510.9	0.21	0.21	-0.74	8.0	16.8	
11,416.0	1.20	4.60	11,388.7	-221.2	-510.2	0.84	-0.11	-38.83	-5.4	17.6	
11,510.0	1.20	309.60	11,482.7	-219.6	-510.8	1.18	0.00	-58.51	-19.1	4.9	
11,605.0	2.40	307.50	11,577.6	-217.8	-513.2	1.26	1.26	-2.21	-22.2	4.2	



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11,699.0	3.10	302.40	11,671.5	-215.2	-516.9	0.79	0.74	-5.43	-27.0		2.0
11,818.0	2.30	314.30	11,790.4	-211.8	-521.3	0.82	-0.67	10.00	-31.6		8.2
11,912.0	1.70	319.00	11,884.3	-209.5	-523.6	0.66	-0.64	5.00	-34.1		10.9
12,007.0	1.10	331.30	11,979.3	-207.6	-524.9	0.70	-0.63	12.95	-33.2		18.2
12,056.0	5.22	354.76	12,028.2	-205.0	-525.4	8.64	8.41	47.87	-25.8		30.2
KOP 12056.0' MD; 12028.2' TVD; -205.0'; -525.4'; 5.22											
12,101.0	9.10	357.30	12,072.9	-199.4	-525.7	8.64	8.62	5.65	-27.1		31.5
12,148.0	17.80	358.10	12,118.5	-188.4	-526.1	18.51	18.51	1.70	-29.8		32.2
12,196.0	22.30	4.80	12,163.6	-172.0	-525.6	10.51	9.37	13.96	-29.8		34.9
12,243.0	26.10	8.90	12,206.5	-152.9	-523.3	8.84	8.09	8.72	-29.9		34.5
12,290.0	31.50	6.40	12,247.6	-130.5	-520.3	11.77	11.49	-5.32	-32.4		30.0
12,337.0	42.40	3.20	12,285.2	-102.4	-518.0	23.54	23.19	-6.81	-36.4		26.1
12,384.0	49.20	1.70	12,317.9	-68.7	-516.6	14.65	14.47	-3.19	-41.7		23.7
12,431.0	48.90	1.10	12,348.7	-33.2	-515.8	1.16	-0.64	-1.28	-44.4		22.2
12,479.0	49.70	359.30	12,380.0	3.1	-515.6	3.30	1.67	-3.75	-42.2		21.0
12,526.0	54.80	359.70	12,408.8	40.3	-516.0	10.87	10.85	0.85	-36.9		21.2
12,539.8	55.69	359.73	12,416.6	51.6	-516.0	6.46	6.46	0.21	-35.1		21.3
FTP Crossing 12539.8' MD; 12416.6' TVD; 51.6'; -516.0'; 55.69											
12,574.0	57.90	359.80	12,435.4	80.2	-516.1	6.46	6.46	0.21	-29.7		21.3
12,621.0	65.60	1.90	12,457.6	121.6	-515.5	16.85	16.38	4.47	-22.2		20.5
12,669.0	75.00	1.10	12,473.8	166.7	-514.3	19.65	19.58	-1.67	-17.1		18.7
12,716.0	78.90	1.20	12,484.4	212.5	-513.4	8.30	8.30	0.21	-12.5		17.4
12,764.0	81.80	3.30	12,492.4	259.8	-511.5	7.42	6.04	4.37	-5.8		15.2
12,858.0	88.30	4.30	12,500.5	353.2	-505.3	7.00	6.91	1.06	2.9		8.3
12,953.0	90.80	1.80	12,501.3	448.0	-500.3	3.72	2.63	-2.63	4.4		2.6
13,047.0	92.30	0.90	12,498.7	541.9	-498.1	1.86	1.60	-0.96	2.7		-0.3
13,142.0	90.80	0.80	12,496.2	636.9	-496.7	1.58	-1.58	-0.11	0.8		-2.3



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hearn 34 State Corn
Well: #708H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25' @ 3492.0usft
MD Reference: KB = 25' @ 3492.0usft
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)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
13,237.0	90.60	0.40	12,495.0	731.9	-495.7	0.47	-0.21	-0.42	0.5	-4.0	
13,332.0	91.70	359.80	12,493.1	826.9	-495.5	1.32	1.16	-0.63	-0.6	-4.8	
13,426.0	91.40	359.90	12,490.6	920.8	-495.7	0.34	-0.32	0.11	-2.4	-5.2	
13,520.0	88.00	357.90	12,491.0	1,014.8	-497.5	4.20	-3.62	-2.13	-1.1	-4.0	
13,615.0	90.90	357.80	12,492.0	1,109.7	-501.1	3.05	3.05	-0.11	0.6	-1.1	
13,709.0	91.50	357.80	12,490.0	1,203.6	-504.7	0.64	0.64	0.00	-0.8	1.8	
13,803.0	93.40	357.00	12,486.0	1,297.4	-509.0	2.19	2.02	-0.85	-3.8	5.4	
13,897.0	89.70	0.30	12,483.4	1,391.3	-511.2	5.27	-3.94	3.51	-5.6	7.0	
13,992.0	91.20	1.50	12,482.7	1,486.3	-509.7	2.02	1.58	1.26	-5.5	4.8	
14,086.0	89.00	1.50	12,482.5	1,580.3	-507.2	2.34	-2.34	0.00	-4.9	1.7	
14,180.0	89.60	2.00	12,483.7	1,674.2	-504.4	0.83	0.64	0.53	-3.0	-1.8	
14,275.0	90.50	2.30	12,483.6	1,769.2	-500.8	1.00	0.95	0.32	-2.3	-6.0	
14,369.0	90.00	2.60	12,483.2	1,863.1	-496.8	0.62	-0.53	0.32	-1.9	-10.7	
14,463.0	90.40	0.90	12,482.8	1,957.0	-493.9	1.86	0.43	-1.81	-1.5	-14.2	
14,557.0	91.30	0.40	12,481.4	2,051.0	-492.8	1.10	0.96	-0.53	-2.1	-15.9	
14,652.0	90.90	359.30	12,479.6	2,146.0	-493.1	1.23	-0.42	-1.16	-3.1	-16.3	
14,746.0	91.20	359.10	12,477.9	2,240.0	-494.4	0.38	0.32	-0.21	-4.1	-15.7	
14,841.0	91.80	358.50	12,475.4	2,334.9	-496.4	0.89	0.63	-0.63	-5.8	-14.3	
14,935.0	91.70	358.70	12,472.5	2,428.8	-498.7	0.24	-0.11	0.21	-7.8	-12.7	
15,029.0	89.90	359.80	12,471.2	2,522.8	-499.9	2.24	-1.91	1.17	-8.2	-12.1	
15,123.0	89.90	0.30	12,471.4	2,616.8	-499.8	0.53	0.00	0.53	-6.9	-12.8	
15,217.0	89.50	0.40	12,471.9	2,710.8	-499.3	0.44	-0.43	0.11	-5.2	-14.0	
15,311.0	90.40	359.90	12,472.0	2,804.8	-499.0	1.10	0.96	-0.53	-3.9	-14.9	
15,406.0	90.60	0.70	12,471.1	2,899.8	-498.5	0.87	0.21	0.84	-3.6	-16.1	
15,501.0	90.10	1.20	12,470.6	2,994.8	-496.9	0.74	-0.53	0.53	-3.0	-18.3	
15,596.0	88.60	359.60	12,471.6	3,089.8	-496.3	2.31	-1.58	-1.68	-0.7	-19.6	
15,692.0	90.40	358.00	12,472.5	3,185.8	-498.3	2.51	1.87	-1.67	1.3	-18.3	



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hearn 34 State Com
Well: #708H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25' @ 3492.0usft
MD Reference: KB = 25' @ 3492.0usft
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)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,787.0	92.70	356.80	12,469.9	3,280.6	-502.6	2.73	2.42	-1.26	-0.1	-14.7	
15,882.0	94.10	358.10	12,464.3	3,375.3	-506.8	2.01	1.47	1.37	-4.5	-11.1	
15,977.0	93.00	0.20	12,458.4	3,470.1	-508.2	2.49	-1.16	2.21	-9.2	-10.3	
16,072.0	91.30	1.60	12,454.8	3,565.1	-506.7	2.32	-1.79	1.47	-11.6	-12.5	
16,167.0	91.40	3.90	12,452.6	3,659.9	-502.2	2.42	0.11	2.42	-12.6	-17.7	
16,266.0	90.60	3.40	12,450.9	3,758.7	-495.9	0.95	-0.81	-0.51	-13.1	-24.7	
16,365.0	89.80	356.60	12,450.5	3,857.6	-495.9	6.92	-0.81	-6.87	-12.2	-25.4	
16,399.0	89.70	355.30	12,450.7	3,891.5	-498.3	3.84	-0.29	-3.83	-11.7	-23.2	
16,494.0	91.30	355.30	12,449.8	3,986.2	-506.1	1.68	1.68	0.00	-11.4	-16.0	
16,589.0	90.20	357.90	12,448.6	4,081.0	-511.7	2.97	-1.16	2.74	-11.4	-11.1	
16,684.0	90.40	358.10	12,448.1	4,176.0	-515.0	0.30	0.21	0.21	-10.7	-8.4	
16,779.0	91.40	358.80	12,446.6	4,270.9	-517.6	1.28	1.05	0.74	-11.0	-6.5	
16,874.0	90.50	358.30	12,445.0	4,365.9	-520.0	1.08	-0.95	-0.53	-11.4	-4.8	
16,969.0	90.90	358.90	12,443.9	4,460.8	-522.3	0.76	0.42	0.63	-11.3	-3.1	
17,064.0	91.40	0.20	12,442.0	4,555.8	-523.0	1.47	0.53	1.37	-12.2	-3.0	
17,159.0	89.40	0.20	12,441.3	4,650.8	-522.7	2.11	-2.11	0.00	-11.7	-4.0	
17,254.0	90.50	357.50	12,441.4	4,745.8	-524.6	3.07	1.16	-2.84	-10.6	-2.7	
17,349.0	91.90	358.10	12,439.4	4,840.7	-528.3	1.60	1.47	0.63	-11.5	0.2	
17,444.0	90.60	359.90	12,437.3	4,935.6	-529.9	2.34	-1.37	1.89	-12.5	1.2	
17,539.0	91.40	359.70	12,435.7	5,030.6	-530.3	0.87	0.84	-0.21	-13.1	0.9	
17,634.0	90.50	1.50	12,434.1	5,125.6	-529.3	2.12	-0.95	1.89	-13.6	-0.7	
17,729.0	89.60	0.00	12,434.0	5,220.6	-528.0	1.84	-0.95	-1.58	-12.6	-2.6	
17,824.0	90.70	1.10	12,433.7	5,315.6	-527.1	1.64	1.16	1.16	-11.8	-4.2	
17,918.0	90.50	1.50	12,432.8	5,409.5	-525.0	0.48	-0.21	0.43	-11.7	-7.0	
18,012.0	89.00	1.00	12,433.2	5,503.5	-522.9	1.68	-1.60	-0.53	-10.2	-9.7	
18,107.0	86.00	356.00	12,437.3	5,598.3	-525.4	6.13	-3.16	-5.26	-5.0	-7.9	
18,202.0	88.90	355.20	12,441.5	5,693.0	-532.7	3.17	3.05	-0.84	0.3	-1.2	



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hearn's 34 State Com
Well: #708H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25' @ 3492.0usft
MD Reference: KB = 25' @ 3492.0usft
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)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)	
18,296.0	90.60	356.70	12,442.0	5,786.7	-539.3	2.41	1.81	1.60	1.8	4.7	
18,390.0	90.20	357.10	12,441.3	5,880.6	-544.4	0.60	-0.43	0.43	2.2	9.2	
18,484.0	90.60	357.70	12,440.6	5,974.5	-548.7	0.77	0.43	0.64	2.6	12.8	
18,578.0	90.70	358.50	12,439.6	6,068.4	-551.8	0.86	0.11	0.85	2.5	15.3	
18,672.0	91.30	358.70	12,437.9	6,162.4	-554.1	0.67	0.64	0.21	1.8	16.9	
18,769.0	89.90	1.00	12,436.9	6,259.4	-554.3	2.78	-1.44	2.37	1.7	16.5	
18,863.0	90.20	0.50	12,436.8	6,353.4	-553.1	0.62	0.32	-0.53	2.6	14.6	
18,957.0	90.80	0.40	12,436.0	6,447.3	-552.4	0.65	0.64	-0.11	2.7	13.2	
19,052.0	90.90	0.30	12,434.6	6,542.3	-551.8	0.15	0.11	-0.11	2.2	12.0	
19,146.0	91.00	359.80	12,433.1	6,636.3	-551.7	0.54	0.11	-0.53	1.6	11.3	
19,240.0	90.10	359.50	12,432.2	6,730.3	-552.3	1.01	-0.96	-0.32	1.7	11.2	
19,334.0	89.10	0.20	12,432.8	6,824.3	-552.5	1.30	-1.06	0.74	3.2	10.8	
19,429.0	90.30	0.40	12,433.3	6,919.3	-552.0	1.28	1.26	0.21	4.7	9.6	
19,523.0	90.20	359.70	12,432.9	7,013.3	-551.9	0.75	-0.11	-0.74	5.0	8.9	
19,617.0	92.30	359.60	12,430.8	7,107.3	-552.5	2.24	2.23	-0.11	2.2	8.8	
19,711.0	92.00	359.30	12,427.3	7,201.2	-553.4	0.45	-0.32	-0.32	-2.1	9.1	
19,806.0	90.40	359.80	12,425.3	7,296.2	-554.2	1.76	-1.68	0.53	-5.0	9.2	
19,899.0	89.70	359.60	12,425.2	7,389.2	-554.6	0.78	-0.75	-0.22	-5.9	9.0	
19,994.0	89.10	359.20	12,426.2	7,484.2	-555.6	0.76	-0.63	-0.42	-5.8	9.3	
20,088.0	88.80	358.90	12,428.0	7,578.1	-557.2	0.45	-0.32	-0.32	-4.9	10.3	
20,182.0	89.70	359.60	12,429.2	7,672.1	-558.4	1.21	0.96	0.74	-4.5	10.8	
20,276.0	88.10	358.30	12,431.0	7,766.1	-560.2	2.19	-1.70	-1.38	-3.5	11.9	
20,370.0	90.20	359.10	12,432.4	7,860.0	-562.3	2.39	2.23	0.85	-3.0	13.4	
20,464.0	88.60	359.20	12,433.4	7,954.0	-563.7	1.71	-1.70	0.11	-2.8	14.1	
20,558.0	89.00	359.20	12,435.3	8,048.0	-565.0	0.43	0.43	0.00	-1.7	14.8	
20,652.0	89.40	358.80	12,436.7	8,142.0	-566.6	0.60	0.43	-0.43	-1.3	15.8	
20,746.0	91.00	359.00	12,436.3	8,235.9	-568.4	1.72	1.70	0.21	-2.4	16.9	



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hearn 34 State Com
Well: #708H
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Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25' @ 3492.0usft
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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)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
20,841.0	90.20	359.90	12,435.3	8,330.9	-569.3	1.27	-0.84	0.95	-4.3	17.2
20,935.0	90.80	0.90	12,434.5	8,424.9	-568.7	1.24	0.64	1.06	-5.9	15.9
21,029.0	89.80	0.30	12,434.0	8,519.0	-567.7	1.24	-1.06	-0.64	-7.3	14.3
21,123.0	87.80	359.80	12,436.0	8,612.9	-567.6	2.19	-2.13	-0.53	-6.1	13.5
21,217.0	89.60	1.10	12,438.1	8,706.9	-566.9	2.36	1.91	1.38	-4.9	12.1
21,312.0	91.50	1.20	12,437.2	8,801.9	-565.0	2.00	2.00	0.11	-6.6	9.6
21,406.0	89.20	359.30	12,436.6	8,895.9	-564.6	3.17	-2.45	-2.02	-8.0	8.5
21,500.0	88.90	359.90	12,438.2	8,989.8	-565.2	0.71	-0.32	0.64	-7.3	8.5
21,594.0	87.80	0.60	12,440.9	9,083.8	-564.8	1.39	-1.17	0.74	-5.5	7.5
21,688.0	88.70	0.60	12,443.8	9,177.7	-563.8	0.96	0.96	0.00	-3.4	5.8
21,783.0	89.30	0.30	12,445.4	9,272.7	-563.1	0.71	0.63	-0.32	-2.6	4.4
21,876.0	90.00	0.20	12,446.0	9,365.7	-562.7	0.76	0.75	-0.11	-2.9	3.4
21,971.0	91.10	359.60	12,445.1	9,460.7	-562.8	1.32	1.16	-0.63	-4.7	2.9
22,065.0	90.70	359.20	12,443.6	9,554.7	-563.8	0.60	-0.43	-0.43	-7.0	3.2
22,159.0	90.60	358.90	12,442.5	9,648.6	-565.4	0.34	-0.11	-0.32	-8.9	4.1
22,254.0	90.40	358.90	12,441.7	9,743.6	-567.2	0.21	-0.21	0.00	-10.6	5.3
22,347.0	90.90	359.90	12,440.7	9,836.6	-568.2	1.20	0.54	1.08	-12.5	5.6
22,442.0	92.10	0.20	12,438.2	9,931.6	-568.1	1.30	1.26	0.32	-15.8	4.9
22,535.0	92.80	0.00	12,434.2	10,024.5	-567.9	0.78	0.75	-0.22	-20.6	4.1
22,604.0	92.30	0.30	12,431.1	10,093.5	-567.8	0.84	-0.72	0.43	-24.3	3.4
Last MWD Survey (MD = 22604.0)										
22,664.0	92.30	0.30	12,428.7	10,153.4	-567.4	0.00	0.00	0.00	-27.2	2.7
Projection to Bit (MD = 22664.0)										



Midland PVA



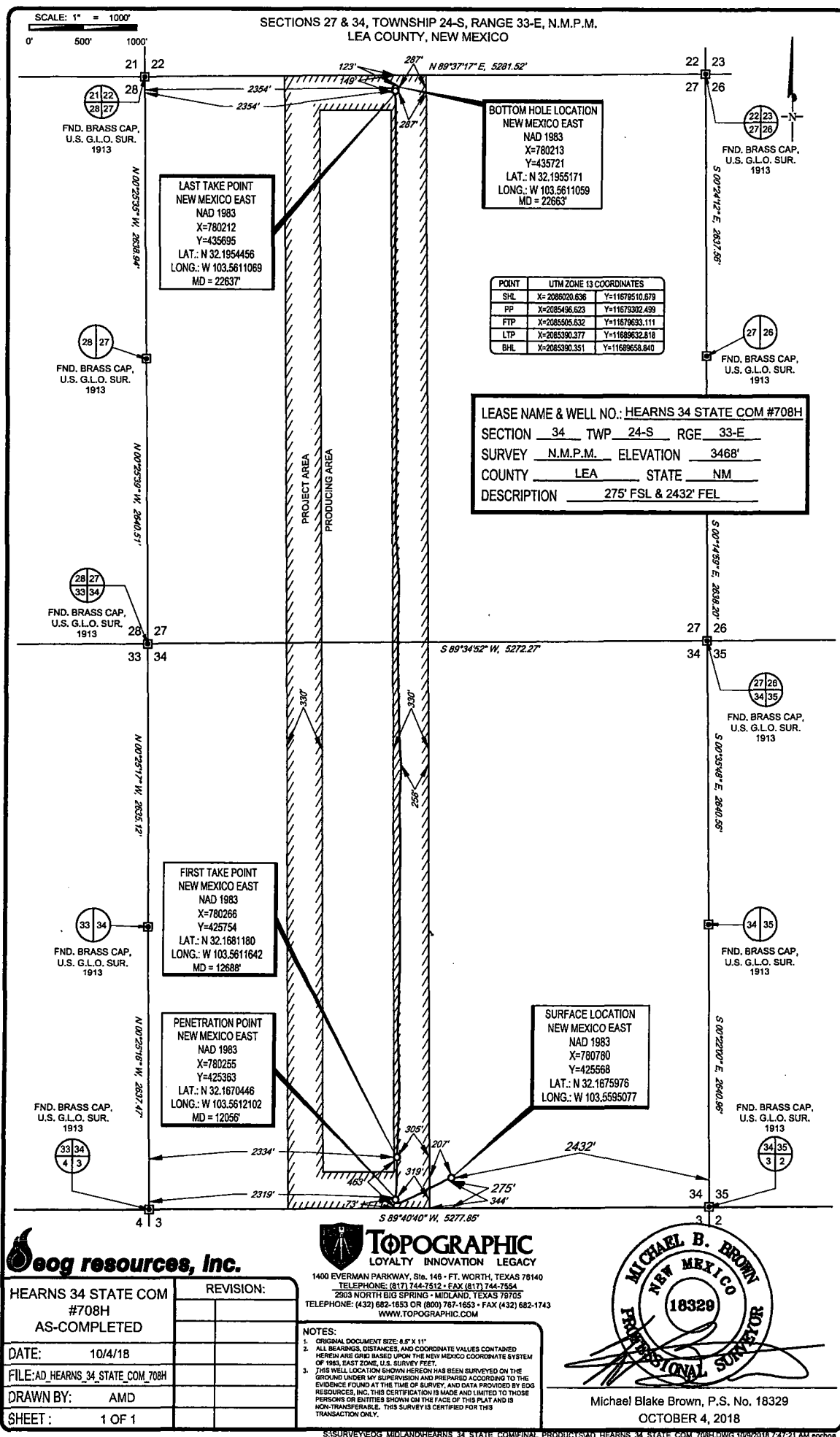
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Hearn 34 State Com
Well: #708H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #708H
TVD Reference: KB = 25' @ 3492.0usft
MD Reference: KB = 25' @ 3492.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,056.0	12,028.2	-205.0	-525.4	KOP 12056.0' MD; 12028.2' TVD; -205.0'; -525.4'; 5.22
12,539.8	12,416.6	51.6	-516.0	FTP Crossing 12539.8' MD; 12416.6' TVD; 51.6'; -516.0'; 55.69
22,604.0	12,431.1	10,093.5	-567.8	Last MWD Survey (MD = 22604.0)
22,664.0	12,428.7	10,153.4	-567.4	Projection to Bit (MD = 22664.0)

Checked By: _____ Approved By: _____ Date: _____





Lea County, NM (NAD 83 NME)

Hearns 34 State Com #708H

Plan #2

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: #708H

3467.0
Northing 425568.00 Easting 780780.00
KB = 25' @ 3492.0usft
Latitude 32°10' 3.353 N Longitude 103°33' 34.228 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	5010.0	5.30	231.98	4996.3	-123.5	-254.2	0.00	0.00	-109.0	
2	5110.0	5.30	231.98	5095.8	-129.1	-261.4	0.00	0.00	-114.3	
3	5191.8	5.99	247.11	5177.2	-133.1	-268.3	2.00	72.67	-117.9	
4	7377.4	5.99	247.11	7350.9	-221.9	-478.6	0.00	0.00	-194.7	
5	7677.0	0.00	0.00	7650.0	-228.0	-493.0	2.00	180.00	-200.0	Brushy Top (Hearns 34 State Com #708H)
6	12048.0	0.00	0.00	12021.0	-228.0	-493.0	0.00	0.00	-200.0	
7	12802.0	90.48	359.60	12498.4	253.4	-496.3	12.00	359.60	280.8	
8	16023.9	90.48	359.60	12480.0	2475.2	-511.7	0.00	0.00	2500.0	TGT #1(Hearns 34 State Com #708H)
9	15035.9	90.72	359.60	12479.9	2487.2	-511.8	2.00	0.00	2512.0	TGT #2(Hearns 34 State Com #708H)
10	17026.5	90.72	359.60	12455.0	4477.6	-525.5	0.00	0.00	4500.0	TGT #3(Hearns 34 State Com #708H)
11	17029.9	90.65	359.60	12455.0	4481.0	-525.5	2.00	-180.00	4503.4	TGT #4(Hearns 34 State Com #708H)
12	18528.4	90.65	359.60	12438.0	5979.4	-535.9	0.00	0.00	6000.0	
13	18532.3	90.57	359.60	12438.0	5983.2	-535.9	2.00	180.00	6003.8	
14	19529.6	90.57	359.60	12428.0	6980.5	-542.8	0.00	0.00	7000.0	
15	19563.9	89.49	359.60	12428.0	7034.8	-542.2	2.00	-180.00	7054.2	
16	22595.3	89.49	359.60	12455.0	10046.0	-564.0	0.00	0.00	10061.6	PBHL (Hearns 34 State Com #708H)
17	22725.3	89.49	359.60	12456.2	10176.0	-564.9	0.00	0.00	10191.7	

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
Brushy Top (Hearns 34 State Com #708H)	7650.0	-228.0	-493.0	425340.50	780287.00
TGT #1(Hearns 34 State Com #708H)	12426.0	6880.5	-542.8	425548.50	780237.18
TGT #2(Hearns 34 State Com #708H)	12433.0	6879.4	-535.9	425547.40	780244.10
PBHL (Hearns 34 State Com #708H)	12455.0	10046.0	-564.0	425614.00	780216.00
TGT #3(Hearns 34 State Com #708H)	12455.0	4477.6	-525.5	425045.60	780254.48
TGT #4(Hearns 34 State Com #708H)	12480.0	2476.2	-511.7	425043.20	780268.32
FTP (Hearns 34 State Com #708H)	12500.0	62.0	-493.0	425820.00	780227.00

