



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Date 14 State Com

#508H

OH

Design: OH

Final PVA Report

03 December, 2019

REC'D 10/27/2020 - NMOCD



Final PVA Report

Company: EOG Resources - Midland Project: Lea County, NM (NAD 83 NME) Site: Date 14 State Com Well: #508H Wellbore: OH Design: OH		Local Co-ordinate Reference: TVD Reference: Well #508H MD Reference: KB = 25 @ 3837.0usft North Reference: KB = 25 @ 3837.0usft Survey Calculation Method: Grid Database: Minimum Curvature EDM	
Project Lea County, NM (NAD 83 NME)		System Datum: Mean Sea Level	
Map System: US State Plane 1983 Geo Datum: North American Datum 1983 Map Zone: New Mexico Eastern Zone			
Site Date 14 State Com			
Site Position: From: Map Position Uncertainty: 0.0 usft	Northing: 536,428.00 usft Easting: 786,265.00 usft Slot Radius: 13-3/16 "	Latitude: 32° 28' 19.914 N Longitude: 103° 32' 20.860 W Grid Convergence: 0.43 °	
Well #508H			
Well Position +N/-S 0.0 usft +E/-W 0.0 usft Position Uncertainty 0.0 usft	Wellhead Elevation: 536,989.00 usft 783,320.00 usft	Latitude: 32° 28' 25.680 N Longitude: 103° 32' 55.187 W Ground Level: 3,812.0 usft	
Wellbore OH			
Magnetics Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)		IGRF2015 9/10/2019 6.72 60.26 47,855.45708019	
Design OH			
Audit Notes: 1.0		Phase: ACTUAL	
Version: 1.0		Tie On Depth: 0.0	
Vertical Section:		Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)	
		0.0 0.0 0.0 355.79	
Survey Program From (usft) To (usft) Survey (Wellbore) Date		Tool Name Description	
205.0 21,330.0 Intrepid MWD #1 (OH)		EOG MWD+IFR1 MWD + IFR1	



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 North Reference: KB = 25 @ 3837.0usft
 Survey Calculation Method: Grid
 Database: Minimum Curvature
 EDM

Survey

MD (usft)	Inc (°)	Azi (grid_north_azim)	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	0.00	0.0
205.0	0.60	278.80	205.0	0.2	-1.1	0.29	0.29	0.00	0.00	0.0
382.0	0.40	241.90	382.0	0.0	-2.5	0.21	-0.11	-20.85	0.0	0.0
555.0	0.10	6.50	555.0	-0.1	-3.0	0.27	-0.17	72.02	0.0	0.0
744.0	0.30	124.10	744.0	-0.2	-2.6	0.19	0.11	62.22	0.0	0.0
933.0	0.10	286.80	933.0	-0.5	-2.4	0.21	-0.11	86.08	0.0	0.0
1,121.0	0.30	175.80	1,121.0	-0.9	-2.5	0.19	0.11	-59.04	0.0	0.0
1,310.0	0.20	112.40	1,310.0	-1.5	-2.1	0.15	-0.05	-33.54	0.0	0.0
1,498.0	0.20	122.00	1,498.0	-1.8	-1.6	0.02	0.00	5.11	0.0	0.0
1,687.0	0.40	169.00	1,687.0	-2.6	-1.1	0.16	0.11	24.87	0.0	0.0
1,875.0	0.40	150.40	1,875.0	-3.9	-0.7	0.07	0.00	-9.89	0.0	0.0
2,005.0	0.50	52.80	2,005.0	-3.9	0.0	0.52	0.08	-75.08	0.0	0.0
2,103.0	1.10	65.00	2,103.0	-3.3	1.2	0.63	0.61	12.45	0.0	0.0
2,260.0	1.60	219.30	2,259.9	-4.3	1.1	1.68	0.32	98.28	0.0	0.0
2,449.0	4.70	236.70	2,448.6	-10.6	-7.0	1.70	1.64	9.21	0.0	0.0
2,637.0	8.40	235.40	2,635.4	-22.6	-24.7	1.97	1.97	-0.69	0.0	0.0
2,826.0	9.80	230.90	2,822.0	-40.6	-48.6	0.83	0.74	-2.38	0.0	0.0
3,014.0	11.70	222.00	3,006.7	-64.9	-73.8	1.34	1.01	-4.73	0.0	0.0
3,203.0	10.70	216.60	3,192.1	-93.2	-97.1	0.77	-0.53	-2.86	0.0	0.0
3,392.0	10.90	220.00	3,377.8	-121.0	-119.0	0.35	0.11	1.80	0.0	0.0
3,580.0	9.20	217.20	3,562.9	-146.6	-139.5	0.94	-0.90	-1.49	0.0	0.0
3,769.0	10.60	217.40	3,749.1	-172.4	-159.2	0.74	0.74	0.11	0.0	0.0
3,958.0	10.40	217.90	3,934.9	-199.7	-180.2	0.12	-0.11	0.26	0.0	0.0
4,147.0	10.00	220.70	4,120.9	-225.6	-201.4	0.34	-0.21	1.48	0.0	0.0
4,335.0	11.40	225.30	4,305.6	-251.0	-225.3	0.87	0.74	2.45	0.0	0.0
4,524.0	11.40	226.30	4,490.9	-277.1	-252.1	0.10	0.00	0.53	0.0	0.0
4,713.0	12.00	227.40	4,676.0	-303.3	-280.0	0.34	0.32	0.58	0.0	0.0



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Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference: KB = 25 @ 3837.0usft
MD Reference: KB = 25 @ 3837.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM

Well #508H
 KB = 25 @ 3837.0usft
 KB = 25 @ 3837.0usft
 Grid
 Minimum Curvature
 EDM

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
4,902.0	13.40	229.20	4,860.3	-330.9	-311.1	0.77	0.74	0.95	0.0	0.0
5,091.0	14.00	228.10	5,044.0	-360.5	-344.7	0.35	0.32	-0.58	0.0	0.0
5,197.0	13.80	228.60	5,146.9	-377.4	-363.7	0.22	-0.19	0.47	0.0	0.0
5,290.0	13.20	228.50	5,237.3	-391.8	-380.0	0.65	-0.65	-0.11	0.2	-1.5
5,478.0	13.60	218.60	5,420.2	-423.3	-409.8	1.24	0.21	-5.27	1.2	-7.9
5,667.0	13.60	213.20	5,603.9	-459.2	-435.9	0.67	0.00	-2.86	1.9	-10.0
5,856.0	13.00	212.40	5,787.8	-495.8	-459.4	0.33	-0.32	-0.42	2.9	-9.8
6,045.0	13.20	209.90	5,971.9	-532.4	-481.6	0.32	0.11	-1.32	4.8	-8.1
6,233.0	13.40	208.60	6,154.9	-570.2	-502.7	0.19	0.11	-0.69	5.8	-5.0
6,422.0	13.60	208.40	6,338.7	-608.9	-523.8	0.11	0.11	-0.11	5.9	-1.5
6,611.0	13.40	208.50	6,522.4	-647.7	-544.8	0.11	-0.11	0.05	6.0	2.1
6,800.0	9.60	206.10	6,707.6	-681.1	-562.2	2.03	-2.01	-1.27	12.4	6.8
6,988.0	7.60	210.20	6,893.5	-706.0	-575.3	1.11	-1.06	2.18	25.6	9.0
7,177.0	4.00	228.00	7,081.5	-721.2	-586.5	2.11	-1.90	9.42	36.7	-2.8
7,366.0	2.50	232.40	7,270.2	-728.1	-594.7	0.80	-0.79	2.33	41.2	-10.6
7,555.0	2.20	234.20	7,459.0	-732.8	-600.9	0.16	-0.16	0.95	36.8	-13.2
7,744.0	2.00	229.20	7,647.9	-737.0	-606.3	0.14	-0.11	-2.65	30.9	-10.3
7,933.0	1.80	224.60	7,836.8	-741.3	-610.9	0.13	-0.11	-2.43	25.4	-8.0
8,122.0	1.70	221.50	8,025.7	-745.5	-614.8	0.07	-0.05	-1.64	20.0	-6.8
8,310.0	1.40	210.80	8,213.6	-749.6	-617.9	0.22	-0.16	-5.69	15.9	-3.5
8,499.0	1.10	199.80	8,402.6	-753.3	-619.7	0.20	-0.16	-5.82	12.2	-0.8
8,688.0	1.10	201.30	8,591.6	-756.7	-620.9	0.02	0.00	0.79	8.5	-1.1
8,877.0	1.10	223.60	8,780.5	-759.7	-622.8	0.23	0.00	11.80	4.0	-3.6
9,066.0	1.20	201.90	8,969.5	-762.8	-624.8	0.23	0.05	-11.48	1.3	-2.5
9,254.0	0.60	306.00	9,157.5	-764.1	-626.4	0.78	-0.32	55.37	-3.3	1.2
9,443.0	0.60	229.40	9,346.5	-764.1	-627.9	0.39	0.00	-40.53	-3.2	-3.9
9,633.0	1.10	344.00	9,536.5	-763.0	-629.2	0.77	0.26	60.32	-3.6	5.4



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OH
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Well #508H
KB = 25 @ 3837.0usft
KB = 25 @ 3837.0usft
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MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
9,821.0	1.10	24.90	9,724.4	-759.6	-628.9	0.41	0.00	21.76	-2.4	7.6
9,950.0	0.90	305.90	9,853.4	-757.9	-629.2	0.99	-0.16	-61.24	-9.2	-2.1
10,139.0	0.80	58.90	10,042.4	-756.4	-629.3	0.75	-0.05	59.79	0.9	10.6
10,328.0	0.90	71.30	10,231.4	-755.2	-626.7	0.11	0.05	6.56	0.4	10.5
10,517.0	0.20	137.70	10,420.4	-755.0	-625.1	0.44	-0.37	35.13	8.8	5.2
10,593.3	3.30	359.13	10,496.6	-752.9	-625.1	4.52	4.06	-181.72	-12.1	1.9
KOP (Date 14 State Com #508H)										
10,611.0	4.10	358.70	10,514.3	-751.8	-625.1	4.52	4.52	-2.43	-13.0	1.8
10,658.0	7.40	353.00	10,561.1	-747.1	-625.5	7.12	7.02	-12.13	-14.4	0.7
10,706.0	10.70	356.20	10,608.5	-739.6	-626.2	6.95	6.87	6.67	-14.4	2.1
10,753.0	13.90	357.50	10,654.4	-729.6	-626.7	6.83	6.81	2.77	-13.0	3.0
10,800.0	16.80	357.90	10,699.7	-717.1	-627.2	6.17	6.17	0.85	-10.2	3.5
10,807.9	17.36	358.02	10,707.2	-714.8	-627.3	7.06	7.04	1.56	-9.6	3.6
HL Crossing, MD:10807.9', TVD:10707.2', N/S:-714.8', E/W:-627.3', INC:17.36										
10,844.0	19.90	358.50	10,741.4	-703.3	-627.6	7.06	7.05	1.32	-6.4	4.0
10,897.0	21.40	359.40	10,791.0	-684.6	-628.0	2.89	2.83	1.70	0.6	4.3
10,944.0	27.60	5.50	10,833.8	-665.2	-627.0	14.23	13.19	12.98	8.0	2.5
10,991.0	33.10	8.60	10,874.3	-641.6	-624.0	12.16	11.70	6.60	13.9	-1.7
11,038.0	39.30	7.10	10,912.2	-614.1	-620.3	13.32	13.19	-3.19	18.7	-5.8
11,085.0	43.40	7.40	10,947.5	-583.3	-616.4	8.73	8.72	0.64	23.0	-10.3
FTP (Date 14 State Com #508H)										
11,132.0	49.30	2.10	10,980.0	-549.5	-613.6	14.96	12.55	-11.28	27.6	-11.9
11,179.0	55.70	358.10	11,008.6	-512.2	-613.6	15.19	13.62	-8.51	30.7	-11.1
11,226.0	63.50	358.00	11,032.3	-471.7	-615.0	16.60	16.60	-0.21	31.2	-10.1
11,274.0	72.40	359.60	11,050.3	-427.3	-615.9	18.80	18.54	3.33	28.3	-9.9
11,336.0	84.30	2.20	11,062.8	-366.7	-614.9	19.63	19.19	4.19	19.0	-11.8
11,368.0	87.60	2.60	11,065.1	-334.8	-613.6	10.39	10.31	1.25	12.6	-13.2



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11,463.0	90.50	0.40	11,066.7	-239.9	-611.1	3.83	3.05	-2.32	-1.3	-16.2
11,557.0	90.70	359.00	11,065.7	-145.9	-611.6	1.50	0.21	-1.49	-4.0	-16.5
11,652.0	90.20	358.00	11,064.9	-50.9	-614.1	1.18	-0.53	-1.05	-4.3	-14.8
11,746.0	91.70	358.70	11,063.4	43.0	-616.8	1.76	1.60	0.74	-5.3	-12.9
11,841.0	92.00	358.60	11,060.3	137.9	-619.0	0.33	0.32	-0.11	-7.9	-11.4
11,935.0	92.40	358.00	11,056.7	231.8	-621.8	0.77	0.43	-0.64	-11.0	-9.4
12,030.0	90.00	359.50	11,054.7	326.8	-623.9	2.98	-2.53	1.58	-12.5	-8.2
12,124.0	89.40	358.70	11,055.2	420.8	-625.4	1.06	-0.64	-0.85	-11.5	-7.5
12,219.0	90.30	358.30	11,055.5	515.7	-627.8	1.04	0.95	-0.42	-10.7	-5.7
12,313.0	91.20	0.70	11,054.2	609.7	-628.7	2.73	0.96	2.55	-11.4	-5.7
12,408.0	92.10	0.10	11,051.5	704.7	-628.0	1.14	0.95	-0.63	-13.6	-7.2
12,503.0	92.10	359.40	11,048.0	799.6	-628.4	0.74	0.00	-0.74	-16.6	-7.5
12,596.0	93.10	358.70	11,043.8	892.5	-630.0	1.31	1.08	-0.75	-20.3	-6.8
12,690.0	91.90	0.50	11,039.7	986.4	-630.6	2.30	-1.28	1.91	-23.9	-6.9
12,785.0	90.70	1.00	11,037.5	1,081.4	-629.4	1.37	-1.26	0.53	-25.6	-8.9
12,879.0	92.60	0.60	11,034.8	1,175.3	-628.1	2.07	2.02	-0.43	-27.8	-11.0
12,974.0	91.30	0.90	11,031.6	1,270.2	-626.8	1.40	-1.37	0.32	-30.5	-13.0
12,989.6	91.17	0.83	11,031.3	1,285.9	-626.6	0.95	-0.85	-0.43	-30.7	-13.4
TGT 1 (Date 14 State Com #508H)										
13,068.0	90.50	0.50	11,030.1	1,364.2	-625.7	0.95	-0.85	-0.43	-31.3	-14.9
13,162.0	92.20	0.00	11,027.9	1,458.2	-625.3	1.89	1.81	-0.53	-32.9	-16.1
13,257.0	91.00	359.10	11,025.2	1,553.2	-626.0	1.58	-1.26	-0.95	-34.9	-16.2
13,352.0	89.80	359.10	11,024.6	1,648.1	-627.5	1.26	-1.26	0.00	-34.8	-15.5
13,446.0	91.60	358.80	11,023.4	1,742.1	-629.2	1.94	1.91	-0.32	-35.3	-14.5
13,540.0	91.40	0.40	11,021.0	1,836.1	-629.9	1.71	-0.21	1.70	-37.1	-14.6
13,635.0	90.50	1.50	11,019.4	1,931.0	-628.3	1.50	-0.95	1.16	-38.0	-17.0
13,730.0	88.90	1.10	11,019.9	2,026.0	-626.1	1.74	-1.68	-0.42	-36.8	-19.9



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13,824.0	90.60	0.70	11,020.3	2,120.0	-624.7	1.86	1.81	-0.43	-35.7	-22.2
13,918.0	90.10	358.80	11,019.7	2,214.0	-625.1	2.09	-0.53	-2.02	-35.7	-22.6
14,013.0	92.30	357.30	11,017.7	2,308.9	-628.3	2.80	2.32	-1.58	-37.0	-20.1
14,107.0	90.90	357.50	11,015.1	2,402.8	-632.6	1.50	-1.49	0.21	-38.9	-16.6
14,201.0	91.80	356.80	11,012.9	2,496.6	-637.2	1.21	0.96	-0.74	-40.5	-12.7
14,296.0	91.50	358.30	11,010.2	2,591.5	-641.3	1.61	-0.32	1.58	-42.5	-9.5
14,390.0	91.30	0.00	11,007.9	2,685.5	-642.7	1.82	-0.21	1.81	-44.1	-8.8
14,484.0	91.60	359.70	11,005.5	2,779.4	-642.9	0.45	0.32	-0.32	-45.9	-9.4
14,578.0	92.20	359.30	11,002.4	2,873.4	-643.8	0.77	0.64	-0.43	-48.3	-9.3
14,673.0	90.60	0.00	11,000.1	2,968.3	-644.3	1.84	-1.68	0.74	-49.9	-9.5
14,768.0	91.30	359.70	10,998.5	3,063.3	-644.6	0.80	0.74	-0.32	-50.8	-10.1
14,862.0	89.60	359.70	10,997.7	3,157.3	-645.1	1.81	-1.81	0.00	-50.9	-10.4
14,956.0	90.90	358.70	10,997.3	3,251.3	-646.4	1.74	1.38	-1.06	-50.7	-9.8
15,050.0	89.00	358.60	10,997.4	3,345.3	-648.6	2.02	-2.02	-0.11	-49.9	-8.4
15,145.0	90.00	358.30	10,998.2	3,440.2	-651.2	1.10	1.05	-0.32	-48.4	-6.6
15,239.0	90.40	1.10	10,997.9	3,534.2	-651.7	3.01	0.43	2.98	-48.0	-6.9
15,333.0	91.70	1.70	10,996.2	3,628.2	-649.4	1.52	1.38	0.64	-49.1	-10.0
15,427.0	90.10	0.70	10,994.7	3,722.1	-647.4	2.01	-1.70	-1.06	-49.9	-12.7
15,522.0	90.20	359.40	10,994.5	3,817.1	-647.3	1.37	0.11	-1.37	-49.5	-13.6
15,616.0	91.40	357.90	10,993.2	3,911.1	-649.5	2.04	1.28	-1.60	-50.1	-12.1
15,711.0	90.90	358.80	10,991.3	4,006.0	-652.3	1.08	-0.53	0.95	-51.4	-10.2
15,794.2	91.87	358.71	10,989.2	4,099.2	-654.1	1.18	1.17	-0.11	-52.8	-9.1
TGT 2 (Date 14 State Com #508H)										
15,805.0	92.00	358.70	10,988.9	4,100.0	-654.3	1.18	1.17	-0.11	-53.1	-8.9
15,899.0	91.00	359.40	10,986.4	4,193.9	-655.9	1.30	-1.06	0.74	-54.8	-8.1
15,993.0	90.60	359.40	10,985.1	4,287.9	-656.9	0.43	-0.43	0.00	-55.3	-7.9
16,088.0	90.80	0.70	10,983.9	4,382.9	-656.8	1.38	0.21	1.37	-55.7	-8.8



Final PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Date 14 State Com
 Well: #508H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well #508H
 KB = 25 @ 3837.0usft
 KB = 25 @ 3837.0usft
 Grid
 Minimum Curvature
 EDM

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
16,182.0	88.70	1.50	10,984.3	4,476.9	-655.0	2.39	-2.23	0.85	-54.6	-11.4
16,276.0	89.10	0.30	10,986.2	4,570.9	-653.5	1.35	0.43	-1.28	-52.0	-13.6
16,371.0	90.60	359.40	10,986.4	4,665.9	-653.7	1.84	1.58	-0.95	-51.0	-14.2
16,465.0	90.40	0.20	10,985.6	4,759.8	-654.1	0.88	-0.21	0.85	-51.1	-14.6
16,559.0	91.70	358.80	10,983.9	4,853.8	-654.9	2.03	1.38	-1.49	-52.1	-14.6
16,653.0	90.70	358.70	10,981.9	4,947.8	-656.9	1.07	-1.06	-0.11	-53.3	-13.3
16,747.0	92.30	358.00	10,979.4	5,041.7	-659.6	1.86	1.70	-0.74	-55.0	-11.4
16,842.0	90.20	358.40	10,977.4	5,136.6	-662.6	2.25	-2.21	0.42	-56.3	-9.2
16,936.0	89.90	358.00	10,977.3	5,230.6	-665.6	0.53	-0.32	-0.43	-55.6	-7.0
17,030.0	90.50	356.80	10,976.9	5,324.5	-669.8	1.43	0.64	-1.28	-55.2	-3.5
17,125.0	90.70	358.00	10,976.0	5,419.4	-674.2	1.28	0.21	1.26	-55.5	0.0
17,219.0	90.30	0.30	10,975.1	5,513.4	-675.5	2.48	-0.43	2.45	-55.5	0.6
17,313.0	89.10	1.40	10,975.6	5,607.3	-674.2	1.73	-1.28	1.17	-54.3	-1.6
17,408.0	90.10	0.50	10,976.3	5,702.3	-672.6	1.42	1.05	-0.95	-52.9	-3.9
17,501.0	91.30	359.00	10,975.2	5,795.3	-673.0	2.07	1.29	-1.61	-53.3	-4.3
17,596.0	92.90	357.70	10,971.7	5,890.2	-675.7	2.17	1.68	-1.37	-56.0	-2.3
17,621.0	93.00	358.90	10,970.4	5,915.2	-676.5	4.81	0.40	4.80	-57.1	-1.8
17,715.0	92.70	358.80	10,965.7	6,009.0	-678.3	0.34	-0.32	-0.11	-61.0	-0.7
17,810.0	91.10	359.90	10,962.6	6,104.0	-679.4	2.04	-1.68	1.16	-63.4	-0.4
17,904.0	89.30	1.10	10,962.2	6,198.0	-678.6	2.30	-1.91	1.28	-63.0	-2.0
17,999.0	89.50	0.50	10,963.2	6,292.9	-677.3	0.67	0.21	-0.63	-61.2	-4.1
18,093.0	89.80	359.70	10,963.8	6,386.9	-677.1	0.91	0.32	-0.85	-59.9	-5.0
18,187.0	90.20	1.80	10,963.8	6,480.9	-675.9	2.27	0.43	2.23	-59.2	-7.1
18,281.0	91.70	357.90	10,962.2	6,574.9	-676.1	4.44	1.60	-4.15	-60.0	-7.6
18,307.7	91.39	358.47	10,961.5	6,601.5	-677.0	2.43	-1.17	2.13	-60.5	-6.9
TGT 3 (Date 14 State Com #508H)										
18,375.0	90.60	359.90	10,960.4	6,668.8	-677.9	2.43	-1.17	2.13	-61.2	-6.5



Final PVA Report

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Date 14 State Com
 Well: #508H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference:
 TVD Reference: KB = 25 @ 3837.0usft
 MD Reference: KB = 25 @ 3837.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM

Well #508H
 KB = 25 @ 3837.0usft
 KB = 25 @ 3837.0usft
 Grid
 Minimum Curvature
 EDM

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
18,469.0	88.80	1.30	10,960.8	6,762.8	-676.9	2.43	-1.91	1.49	-60.2	-8.3
18,563.0	87.10	3.10	10,964.2	6,856.7	-673.3	2.63	-1.81	1.91	-56.2	-12.7
18,658.0	88.70	3.20	10,967.7	6,951.5	-668.1	1.69	1.68	0.11	-52.2	-18.7
18,752.0	88.70	0.10	10,969.8	7,045.4	-665.4	3.30	0.00	-3.30	-49.5	-22.2
18,846.0	89.80	359.30	10,971.1	7,139.4	-665.9	1.45	1.17	-0.85	-47.7	-22.5
18,941.0	90.20	358.20	10,971.1	7,234.4	-668.0	1.23	0.42	-1.16	-47.1	-21.2
19,035.0	91.70	358.20	10,969.5	7,328.3	-670.9	1.60	1.60	0.00	-48.1	-19.0
19,129.0	90.10	359.70	10,968.0	7,422.3	-672.7	2.33	-1.70	1.60	-49.0	-18.0
19,223.0	89.60	358.80	10,968.3	7,516.3	-673.9	1.10	-0.53	-0.96	-48.2	-17.6
19,318.0	87.30	358.60	10,970.8	7,611.2	-676.0	2.43	-2.42	-0.21	-45.0	-16.2
19,412.0	88.40	358.00	10,974.4	7,705.1	-678.8	1.33	1.17	-0.64	-40.9	-14.2
19,506.0	90.70	357.50	10,975.1	7,799.0	-682.5	2.50	2.45	-0.53	-39.6	-11.3
19,600.0	91.10	359.40	10,973.6	7,893.0	-685.1	2.07	0.43	2.02	-40.5	-9.5
19,695.0	90.40	0.90	10,972.4	7,988.0	-684.8	1.74	-0.74	1.58	-41.2	-10.6
19,789.0	92.20	359.90	10,970.2	8,081.9	-684.2	2.19	1.91	-1.06	-42.7	-12.0
19,883.0	90.70	359.70	10,967.9	8,175.9	-684.5	1.61	-1.60	-0.21	-44.6	-12.5
19,951.8	90.26	0.14	10,967.3	8,244.7	-684.6	0.90	-0.64	0.64	-44.7	-12.9
TGT 4 (Date 14 State Com #508H)										
19,977.0	90.10	0.30	10,967.2	8,269.9	-684.5	0.90	-0.64	0.64	-44.6	-13.2
20,071.0	88.40	0.30	10,968.4	8,363.9	-684.0	1.81	-1.81	0.00	-42.4	-14.5
20,166.0	89.10	359.30	10,970.5	8,458.8	-684.3	1.28	0.74	-1.05	-39.3	-15.0
20,260.0	90.90	359.50	10,970.5	8,552.8	-685.3	1.93	1.91	0.21	-38.4	-14.7
20,354.0	89.60	0.10	10,970.1	8,646.8	-685.6	1.52	-1.38	0.64	-37.8	-15.2
20,449.0	89.90	359.70	10,970.5	8,741.8	-685.8	0.53	0.32	-0.42	-36.4	-15.8
20,543.0	89.50	0.50	10,971.0	8,835.8	-685.6	0.95	-0.43	0.85	-35.0	-16.8
20,638.0	90.20	0.10	10,971.3	8,930.8	-685.1	0.85	0.74	-0.42	-33.8	-18.0
20,732.0	89.10	0.50	10,971.8	9,024.8	-684.6	1.25	-1.17	0.43	-32.3	-19.3



Final PVA Report

Company: EOG Resources - Midland
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Well #508H
 KB = 25 @ 3837.0usft
 KB = 25 @ 3837.0usft
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 Minimum Curvature
 EDM

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
20,826.0	90.20	359.80	10,972.4	9,118.8	-684.4	1.39	1.17	-0.74	-30.7	-20.3
20,920.0	89.20	359.50	10,972.9	9,212.8	-685.0	1.11	-1.06	-0.32	-29.3	-20.5
21,014.0	90.10	359.50	10,973.5	9,306.8	-685.8	0.96	0.96	0.00	-27.7	-20.5
21,109.0	90.10	359.60	10,973.3	9,401.8	-686.5	0.11	0.00	0.11	-26.9	-20.5
21,203.0	91.50	359.60	10,972.0	9,495.8	-687.2	1.49	1.49	0.00	-27.3	-20.7
Final MWD Survey (MD=21203.0')										
21,329.6	91.50	359.60	10,968.7	9,622.4	-688.1	0.00	0.00	0.00	-29.3	-20.8
PBHL (Date 14 State Com #508H)										
21,330.0	91.50	359.60	10,968.7	9,622.7	-688.1	0.00	0.00	0.00	-29.3	-20.8
Final Projection to Bit (MD=21330.0')										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,807.9	10,707.2	-714.8	-627.3	HL Crossing, MD:10807.9', TVD:10707.2', N/S:-714.8', E/W:-627.3', INC:17.36
21,203.0	10,972.0	9,495.8	-687.2	Final MWD Survey (MD=21203.0')
21,330.0	10,968.7	9,622.7	-688.1	Final Projection to Bit (MD=21330.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

**Date 14 State Com #508H
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: #508H

KB @ 25 @ 3837.0usft 3812.0
Northing 536989.00 Easting 783320.00 Latitude 32° 28' 25.680 N Longitude 103° 32' 55.187 W

Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.30°

Magnetic Field
Strength: 47855.5nT
Dip Angle: 60.26°
Date: 9/10/2019
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.30°
To convert a Magnetic Direction to a True Direction, Add 6.72° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	5197.0	13.80	228.60	5146.9	-377.4	-363.7	0.00	0.00	-349.7	
2	5380.6	13.57	213.06	5325.3	-410.0	-391.9	2.00	-101.06	-380.1	
3	6844.9	13.57	213.06	6748.7	-697.9	-579.4	0.00	0.00	-653.5	
4	7523.5	0.00	359.53	7421.0	-765.0	-623.0	2.00	180.00	-717.2	
5	10599.5	0.00	359.53	10497.0	-765.0	-623.0	0.00	0.00	-717.2	KOP (Date 14 State Com #508H)
6	11502.6	90.31	359.53	11069.9	-189.0	-627.8	10.00	359.53	-142.3	
7	12978.1	90.31	359.53	11062.0	1286.5	-640.0	0.00	0.00	1330.0	TGT 1 (Date 14 State Com #508H)
8	12983.1	90.41	359.53	11062.0	1291.5	-640.0	2.00	0.00	1335.0	
9	15782.1	90.41	359.53	11042.0	4090.3	-663.1	0.00	0.00	4128.0	TGT 2 (Date 14 State Com #508H)
10	15784.5	90.46	359.53	11042.0	4092.7	-663.2	2.00	0.00	4130.3	
11	18294.6	90.46	359.53	11022.0	6602.6	-683.9	0.00	0.00	6635.0	TGT 3 (Date 14 State Com #508H)
12	18299.9	90.35	359.53	11022.0	6608.0	-684.0	2.00	180.00	6640.4	
13	19937.1	90.35	359.53	11012.0	8245.0	-697.5	0.00	0.00	8274.0	TGT 4 (Date 14 State Com #508H)
14	19948.8	90.58	359.53	11011.9	8256.7	-697.6	2.00	0.00	8285.7	
15	21315.2	90.58	359.53	10998.0	9623.0	-708.9	0.00	0.00	9649.1	PBHL (Date 14 State Com #508H)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP (Date 14 State Com #508H)	10497.0	-765.0	-623.0	536224.00	782697.00
TGT 1 (Date 14 State Com #508H)	11062.0	1286.5	-640.0	538275.50	782680.04
TGT 2 (Date 14 State Com #508H)	11042.0	4090.3	-663.1	541079.30	782656.65
TGT 3 (Date 14 State Com #508H)	11022.0	6602.6	-683.9	543091.60	782636.08
TGT 4 (Date 14 State Com #508H)	11012.0	8245.0	-697.5	545234.00	782622.49
PBHL (Date 14 State Com #508H)	10998.0	9623.0	-708.9	546612.00	782611.10
FTP (Date 14 State Com #508H)	11070.0	-715.0	-623.0	536274.00	782697.00

