



HOBBS OCD
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Adder 31 State
#504H
OH

Design: OH

Midland PVA

04 September, 2019





Midland PVA

Company: EOG Resources - Midland	Local Co-ordinate Reference: Well #504H
Project: Lea County, NM (NAD 83 NME)	TVD Reference: KB = 25 @ 3527.0usft
Site: Adder 31 State	MD Reference: KB = 25 @ 3527.0usft
Well: #504H	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 Adder 31 State			
Site Position:	Northing: 425,513.00 usft	Latitude: 32° 10' 3.867 N	
From: Map	Easting: 765,412.00 usft	Longitude: 103° 36' 33.017 W	
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.39 °	

Well #504H			
Well Position	+N-S 0.0 usft	Northing: 425,513.00 usft	Latitude: 32° 10' 3.867 N
	+E-W 0.0 usft	Easting: 765,412.00 usft	Longitude: 103° 36' 33.017 W
Position Uncertainty	0.0 usft	Wellhead Elevation: usft	Ground Level: 3,502.0 usft

Wellbore OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/8/2019	6.78	59.98	47,723.13107135

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	357.32

Survey Program Date 9/4/2019				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
172.0	15,661.0	Dritech MWD (OH)	MWD	OWSG MWD - Standard



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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)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
172.0	1.10	359.70	172.0	1.7	0.0	0.84	0.84	0.00	-1.7	0.0
228.0	1.00	354.80	228.0	2.7	-0.1	0.24	-0.18	-8.75	-2.7	-0.2
316.0	0.90	355.50	316.0	4.1	-0.2	0.11	-0.11	0.80	-4.1	-0.1
404.0	0.70	353.40	404.0	5.4	-0.3	0.23	-0.23	-2.39	-5.4	-0.3
492.0	0.70	354.60	492.0	6.4	-0.4	0.02	0.00	1.36	-6.4	-0.2
583.0	0.60	350.30	582.9	7.4	-0.5	0.12	-0.11	-4.73	-7.4	-0.7
770.0	0.80	348.80	769.9	9.7	-1.0	0.11	0.11	-0.80	-9.7	-0.9
863.0	1.00	339.20	862.9	11.1	-1.4	0.27	0.22	-10.32	-10.9	-2.7
1,049.0	1.50	303.90	1,048.9	14.0	-4.0	0.48	0.27	-18.98	-11.1	-8.4
1,143.0	1.80	291.80	1,142.8	15.2	-6.4	0.49	0.32	-12.77	-11.6	-11.7
1,237.0	1.80	279.40	1,236.8	16.0	-8.2	0.42	0.00	-13.30	-11.7	-14.3
1,331.0	1.80	284.40	1,330.7	16.1	-12.1	0.50	0.00	-15.98	-10.5	-17.2
1,425.0	1.50	256.00	1,424.7	15.8	-14.8	0.41	-0.32	-8.94	-10.8	-18.8
1,518.0	1.20	260.20	1,517.7	15.2	-16.9	0.34	-0.32	4.52	-14.1	-17.8
1,611.0	1.10	258.80	1,610.7	14.8	-18.8	0.11	-0.11	-1.51	-15.5	-18.2
1,705.0	1.00	270.30	1,704.6	14.7	-20.5	0.25	-0.11	12.23	-20.5	-14.6
1,799.0	0.80	275.20	1,798.6	14.7	-21.9	0.23	-0.21	5.21	-23.2	-12.7
1,892.0	0.80	287.10	1,891.6	15.0	-23.2	0.18	0.00	12.80	-26.6	-7.5
1,985.0	0.70	274.60	1,984.6	15.2	-24.4	0.21	-0.11	-13.44	-25.5	-13.2
2,078.0	0.70	276.90	2,077.6	15.3	-25.5	0.03	0.00	2.47	-27.2	-12.2
2,172.0	0.80	289.40	2,171.6	15.6	-26.7	0.20	0.11	13.30	-30.4	-5.9
2,265.0	0.70	286.40	2,264.6	16.0	-27.9	0.12	-0.11	-3.23	-31.2	-7.5
2,358.0	1.20	236.70	2,357.6	15.7	-29.2	0.88	0.54	-51.29	-16.8	-28.6
2,451.0	3.40	212.70	2,450.5	12.8	-31.6	2.58	2.37	-27.98	-6.2	-33.5
2,544.0	5.70	207.30	2,543.2	6.4	-35.2	2.51	2.47	-5.81	-10.1	-34.2
2,637.0	7.50	208.80	2,635.6	-3.0	-40.2	1.94	1.94	1.61	-18.8	-33.4



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Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	NS (usft)	EW (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
2,730.0	6.80	210.50	2,727.9	-13.2	-46.0	0.68	-0.65	1.63	-25.5	-32.2
2,824.0	6.00	211.20	2,821.3	-22.2	-51.4	0.86	-0.98	0.74	-28.4	-31.2
2,918.0	5.30	208.00	2,914.8	-30.3	-56.0	0.82	-0.74	-3.40	-27.7	-31.9
3,012.0	5.50	209.80	3,008.4	-38.0	-60.2	0.28	0.21	1.91	-29.4	-30.1
3,105.0	6.30	214.00	3,100.9	-46.1	-65.3	0.98	0.86	4.52	-33.0	-27.4
3,188.0	5.80	213.20	3,193.4	-54.3	-70.7	0.55	-0.54	-0.86	-34.3	-27.6
3,282.0	5.50	209.00	3,286.9	-62.2	-75.5	0.54	-0.32	-4.47	-33.3	-29.5
3,386.0	6.30	208.80	3,380.4	-70.6	-80.2	0.85	0.85	-0.11	-34.8	-28.6
3,479.0	5.50	207.70	3,472.9	-79.0	-84.7	0.87	-0.86	-1.29	-35.7	-28.3
3,573.0	5.20	207.60	3,568.5	-86.8	-88.8	0.32	-0.32	-0.11	-36.3	-27.3
3,667.0	4.90	207.50	3,660.2	-94.1	-92.6	0.32	-0.32	-0.11	-36.4	-26.2
3,761.0	4.20	204.80	3,753.9	-100.8	-95.9	0.78	-0.74	-2.77	-34.5	-26.6
3,855.0	5.00	209.80	3,847.6	-107.5	-99.4	0.95	0.85	5.21	-38.0	-22.4
3,948.0	6.40	214.30	3,940.1	-115.3	-104.4	1.58	1.51	4.84	-38.8	-19.1
4,042.0	5.30	213.80	4,033.6	-123.2	-109.7	1.17	-1.17	-0.53	-40.0	-19.2
4,135.0	4.60	211.40	4,126.3	-130.0	-114.1	0.78	-0.75	-2.58	-39.1	-20.5
4,321.0	6.20	200.50	4,311.4	-145.8	-121.5	1.02	0.88	-5.86	-36.2	-24.7
4,414.0	5.10	192.10	4,404.0	-154.5	-124.1	1.48	-1.18	-9.03	-33.9	-27.3
4,508.0	4.40	189.90	4,497.6	-162.1	-125.6	0.77	-0.74	-2.34	-33.2	-25.2
4,601.0	5.50	189.00	4,590.3	-170.1	-126.9	1.18	1.18	-0.97	-33.6	-22.2
4,694.0	7.20	193.50	4,682.7	-180.1	-128.9	1.90	1.83	4.84	-37.9	-16.1
4,788.0	6.70	188.30	4,778.0	-191.3	-130.9	1.07	-0.53	-7.66	-39.8	-17.5
4,857.0	5.50	189.00	4,844.6	-198.6	-131.9	1.79	-1.74	3.91	-42.5	-12.7
4,961.0	4.50	187.90	4,946.2	-207.5	-133.2	0.97	-0.98	-1.06	-43.3	-9.5
5,054.0	5.20	212.70	5,040.9	-214.7	-136.0	2.35	0.75	26.67	-42.7	11.4
5,148.0	6.20	219.50	5,134.5	-222.2	-141.5	1.28	1.08	7.23	-42.2	16.3
5,242.0	6.00	218.20	5,227.9	-230.0	-147.8	0.26	-0.21	-1.38	-44.3	14.8



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5,336.0	5.80	218.30	5,321.4	-237.6	-153.8	0.11	-0.11	0.11	-45.9	14.5
5,428.0	5.70	217.10	5,413.9	-245.1	-159.8	0.25	-0.22	-1.29	-47.5	13.2
5,523.0	2.80	202.20	5,507.7	-250.8	-163.2	3.46	-3.30	-15.85	-47.9	1.2
5,617.0	1.70	126.30	5,601.6	-253.8	-162.9	2.91	-0.98	-80.74	-14.8	-40.0
5,711.0	2.00	113.00	5,695.6	-255.0	-160.3	0.58	0.32	-14.15	-9.9	-34.6
5,804.0	1.20	158.80	5,788.6	-258.6	-158.4	1.58	-0.88	49.35	-28.3	-8.1
5,897.0	1.40	200.40	5,881.5	-258.6	-158.5	1.01	0.22	44.62	-22.0	15.3
5,991.0	1.10	191.30	5,975.5	-260.5	-159.0	0.38	-0.32	-8.68	-18.7	14.8
6,085.0	1.10	180.80	6,069.5	-262.3	-159.4	0.01	0.00	-0.74	-13.3	18.0
6,178.0	0.80	201.40	6,162.5	-263.8	-159.8	0.29	-0.22	11.61	-3.4	22.3
6,271.0	0.70	202.80	6,255.5	-265.0	-160.3	0.22	-0.22	1.61	2.6	23.8
6,364.0	0.70	180.10	6,348.5	-266.1	-160.6	0.17	0.00	-13.78	-0.4	25.3
6,458.0	0.60	182.20	6,442.5	-267.2	-160.8	0.11	-0.11	2.23	0.3	25.7
6,551.0	0.50	189.30	6,535.5	-268.0	-161.1	0.13	-0.11	7.63	2.6	25.5
6,645.0	0.50	186.00	6,628.5	-268.8	-161.3	0.03	0.00	-3.51	0.3	25.6
6,739.0	0.40	233.40	6,723.4	-269.4	-161.7	0.32	-0.11	39.79	15.1	20.4
6,833.0	0.40	244.80	6,817.4	-269.7	-162.2	0.08	0.00	12.13	18.2	17.1
6,928.0	3.30	0.00	6,910.4	-267.2	-162.5	3.75	3.12	123.87	5.2	-23.5
7,021.0	3.90	4.60	7,005.2	-261.2	-162.3	0.70	0.63	4.84	-2.6	-23.6
7,114.0	3.50	1.20	7,098.0	-255.3	-162.0	0.49	-0.43	-3.68	-7.2	-23.9
7,207.0	3.50	357.80	7,190.8	-249.6	-162.0	0.22	0.00	-3.68	-11.5	-24.5
7,302.0	1.10	337.20	7,285.8	-245.8	-162.5	2.63	-2.53	-21.68	-5.8	-27.9
7,395.0	1.10	289.40	7,378.7	-244.6	-163.8	0.77	0.00	-40.65	11.0	-26.2
7,489.0	1.50	284.80	7,472.7	-243.6	-165.5	0.44	0.43	-4.79	10.9	-25.3
7,583.0	1.40	301.40	7,566.7	-242.5	-167.8	0.20	-0.11	6.91	5.5	-26.2
7,676.0	1.10	288.30	7,659.7	-241.6	-169.4	0.44	-0.32	-14.09	9.4	-24.5
7,769.0	1.10	288.70	7,752.6	-241.1	-171.1	0.01	0.00	0.43	7.4	-24.6



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7,883.0	1.00	308.70	7,846.6	-240.3	-172.6	0.38	-0.11	19.15	-2.2	-25.4
7,956.0	0.80	292.40	7,839.6	-239.6	-173.9	0.32	-0.22	-15.38	2.7	-25.4
8,050.0	0.60	266.60	8,033.6	-239.3	-175.0	0.39	-0.21	-27.45	12.4	-22.0
8,143.0	0.70	258.80	8,128.6	-239.5	-176.0	0.14	0.11	-8.60	14.2	-20.1
8,237.0	0.40	244.70	8,220.6	-239.7	-176.9	0.35	-0.32	-14.79	17.8	-16.2
8,331.0	0.80	221.20	8,314.6	-240.4	-177.7	0.59	0.53	-25.00	21.7	-7.9
8,425.0	1.10	197.60	8,408.6	-241.8	-178.4	0.48	0.21	-25.11	21.5	1.1
8,517.0	1.50	195.70	8,500.6	-243.8	-179.0	0.44	0.43	-2.07	19.4	1.8
8,611.0	1.60	187.20	8,594.5	-248.3	-179.5	0.27	0.11	-9.04	16.4	4.5
8,705.0	1.80	187.70	8,688.5	-249.1	-179.9	0.21	0.21	0.53	13.6	4.4
8,788.0	1.80	185.20	8,781.4	-251.9	-180.4	0.25	0.00	8.08	11.2	2.7
8,892.0	1.80	197.90	8,875.4	-254.8	-181.3	0.09	0.00	2.87	8.3	2.3
8,986.0	2.40	198.50	8,969.3	-258.0	-182.4	0.64	0.64	0.64	4.9	2.2
9,079.0	2.20	197.10	9,062.3	-261.6	-183.5	0.22	-0.22	-1.51	1.1	2.3
9,172.0	2.30	209.30	9,155.2	-264.9	-184.9	0.53	0.11	13.12	-2.0	2.4
9,268.0	2.60	220.60	9,249.1	-268.2	-187.3	0.60	0.32	12.02	-5.5	3.1
9,359.0	3.10	227.50	9,342.0	-271.5	-190.5	0.65	0.54	7.42	-9.7	4.0
9,452.0	3.30	228.80	9,434.8	-275.0	-194.3	0.23	0.22	1.40	-14.8	4.3
9,546.0	3.40	231.30	9,528.7	-278.5	-198.6	0.19	0.11	2.66	-20.1	5.0
9,639.0	2.70	247.20	9,621.5	-281.1	-202.7	1.17	-0.75	17.10	-22.8	11.1
9,733.0	2.50	251.80	9,715.5	-282.6	-206.7	0.31	-0.21	4.89	-26.1	13.1
9,826.0	2.00	263.20	9,808.4	-283.4	-210.3	0.72	-0.54	12.28	-26.6	18.4
9,919.0	2.30	267.40	9,901.3	-283.7	-213.7	0.36	0.32	4.52	-26.7	20.4
10,013.0	2.20	261.40	9,995.2	-284.0	-217.4	0.27	-0.11	-6.38	-34.3	17.1
10,106.0	2.00	248.60	10,088.2	-284.6	-220.7	0.55	-0.22	-13.76	-40.6	8.6
10,138.0	2.00	246.30	10,120.2	-285.3	-221.7	0.25	0.00	-7.19	-42.1	7.0
10,235.0	2.80	340.00	10,217.1	-283.6	-224.1	3.65	0.82	98.60	7.6	43.3



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10,330.0	13.70	356.10	10,311.0	-270.3	-225.8	11.62	11.47	16.95	15.6	40.7
10,424.0	24.00	2.60	10,399.8	-240.0	-225.5	11.17	10.88	6.81	13.7	38.7
10,517.0	33.00	4.70	10,481.5	-195.8	-222.6	9.74	9.68	2.28	7.7	35.6
10,610.0	42.60	2.20	10,554.8	-139.0	-219.3	10.45	10.32	-2.69	-0.9	32.4
10,704.0	54.70	1.90	10,616.9	-88.6	-216.8	12.87	12.87	-0.32	-10.8	29.5
10,751.0	61.30	2.90	10,641.8	-28.8	-215.1	14.16	14.04	2.13	-17.2	27.9
10,798.0	63.80	3.80	10,663.4	12.9	-212.7	5.58	5.32	1.91	-23.8	25.4
10,845.0	66.40	3.50	10,683.2	55.4	-210.0	5.58	5.53	-0.64	-28.4	22.3
10,892.0	69.70	3.20	10,700.8	98.9	-207.4	7.05	7.02	-0.64	-31.5	19.3
10,939.0	70.50	2.50	10,718.8	143.0	-205.2	2.20	1.70	-1.49	-32.2	16.5
10,985.0	74.60	1.30	10,730.6	186.9	-203.8	8.25	8.91	-2.61	-30.9	14.4
11,032.0	79.80	359.60	10,741.0	232.7	-203.4	11.61	11.06	-3.62	-29.3	13.5
11,078.0	82.60	358.60	10,748.0	278.2	-204.1	6.45	6.09	-2.17	-27.0	13.8
11,125.0	85.70	357.80	10,752.8	324.9	-205.6	6.81	6.60	-1.70	-23.3	14.9
11,169.0	87.30	357.80	10,755.5	368.8	-207.3	3.64	3.64	0.00	-21.0	16.2
11,263.0	89.10	1.20	10,758.4	462.7	-208.1	4.09	1.91	3.62	-19.0	16.3
11,356.0	89.00	1.30	10,760.0	555.7	-206.1	0.15	-0.11	0.11	-18.3	13.5
11,450.0	89.00	0.90	10,761.6	649.6	-204.3	0.43	0.00	-0.43	-17.5	11.0
11,543.0	88.10	0.10	10,764.0	742.6	-203.5	1.29	-0.97	-0.88	-16.0	9.4
11,636.0	88.70	0.40	10,766.6	835.6	-203.1	0.72	0.65	0.32	-14.3	8.3
11,729.0	90.70	1.90	10,767.1	928.5	-201.2	2.69	2.15	1.61	-14.7	5.7
11,823.0	90.80	2.70	10,765.8	1,022.4	-197.4	0.88	0.11	0.85	-16.8	1.1
11,915.0	90.10	2.70	10,765.1	1,114.3	-193.1	0.78	-0.78	0.00	-18.4	-3.9
12,008.0	90.00	3.20	10,765.0	1,207.2	-188.3	0.55	-0.11	0.54	-19.4	-8.4
12,102.0	89.80	2.90	10,765.2	1,301.1	-183.3	0.38	-0.21	-0.32	-20.1	-15.2
12,195.0	90.00	3.50	10,765.4	1,393.9	-178.1	0.68	0.22	0.65	-20.8	-21.1
12,289.0	90.50	1.30	10,764.9	1,487.8	-174.2	2.40	0.53	-2.34	-22.0	-25.8



Midland PVA

Company: EOG Resources - Midland
 Project: Los County, NM (NAD 83 NME)
 Site: Adder 31 State
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25 @ 3527.0usft
 MD Reference: KB = 25 @ 3527.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

MD (usft)	Inc (")	Asd (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	DLeg ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
12,381.0	91.10	359.50	10,763.7	1,578.8	-173.5	2.06	0.65	-1.96	-24.1	-27.2
12,475.0	91.20	359.00	10,761.8	1,673.8	-174.8	0.54	0.11	-0.53	-26.9	-26.8
12,568.0	91.30	359.20	10,759.7	1,768.8	-176.2	0.24	0.11	0.22	-29.7	-26.0
12,662.0	91.80	359.50	10,757.2	1,860.7	-177.3	0.62	0.53	0.32	-33.1	-25.7
12,756.0	90.60	358.10	10,755.2	1,954.7	-179.2	1.98	-1.28	-1.49	-35.9	-24.5
12,850.0	90.50	358.50	10,754.3	2,048.6	-182.0	0.44	-0.11	0.43	-37.7	-22.5
12,944.0	89.20	357.50	10,754.6	2,142.6	-185.3	1.74	-1.38	-1.06	-38.3	-19.9
13,038.0	87.80	358.00	10,757.0	2,236.5	-189.0	1.58	-1.49	0.53	-36.7	-17.0
13,132.0	87.40	358.80	10,761.0	2,330.3	-193.3	1.34	-0.43	-1.28	-33.6	-13.5
13,225.0	87.80	358.20	10,764.9	2,423.1	-197.3	1.58	0.43	1.51	-30.5	-10.2
13,319.0	86.80	358.40	10,769.2	2,517.0	-200.1	0.98	-0.86	0.21	-27.0	-8.2
13,413.0	88.10	358.80	10,772.5	2,610.9	-202.3	2.40	2.34	0.53	-24.6	-6.7
13,506.0	89.80	359.00	10,773.3	2,703.9	-204.0	0.87	0.88	0.11	-24.6	-5.7
13,599.0	90.70	358.80	10,772.8	2,796.9	-205.0	1.22	0.88	0.88	-26.0	-5.5
13,693.0	91.60	0.30	10,770.9	2,890.8	-204.9	1.10	0.96	0.53	-28.7	-6.3
13,786.0	91.10	0.60	10,768.7	2,983.8	-204.2	0.63	-0.54	0.32	-31.7	-7.8
13,879.0	90.70	0.60	10,767.3	3,076.8	-203.2	0.43	-0.43	0.00	-34.0	-9.5
13,972.0	90.70	1.30	10,766.1	3,169.8	-201.7	0.75	0.00	0.75	-36.0	-11.8
14,066.0	91.10	1.30	10,764.7	3,263.7	-199.5	0.43	0.43	0.00	-38.4	-14.7
14,158.0	91.50	1.60	10,762.6	3,355.7	-197.2	0.54	0.43	0.33	-41.3	-17.8
14,250.0	90.10	0.80	10,761.3	3,447.7	-195.3	1.75	-1.52	-0.87	-43.4	-20.4
14,344.0	89.80	1.80	10,761.4	3,541.6	-193.1	1.11	-0.32	1.06	-44.0	-23.3
14,438.0	90.00	1.20	10,761.5	3,635.6	-190.7	0.67	0.21	-0.64	-44.4	-26.5
14,531.0	90.30	1.20	10,761.3	3,728.6	-188.7	0.32	0.32	0.00	-45.1	-29.2
14,625.0	90.90	359.70	10,760.3	3,822.6	-188.0	1.72	0.64	-1.60	-46.7	-30.7
14,719.0	91.50	359.40	10,758.4	3,916.5	-188.7	0.71	0.64	-0.32	-49.2	-30.7
14,812.0	92.00	359.80	10,755.5	4,009.5	-189.4	0.69	0.54	0.43	-52.6	-30.8



Midland PVA

Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Adder 31 State
 Well: #504H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 25 @ 3527.0usft
 MD Reference: KB = 25 @ 3527.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	EW (usft)	DLog ("/100usft)	Build ("/100usft)	Turn ("/100usft)	High to Plan (usft)	Right to Plan (usft)
14,905.0	92.10	359.80	10,752.2	4,102.4	-189.7	0.11	0.11	0.00	-58.4	-31.3
14,999.0	91.00	358.80	10,749.6	4,196.4	-180.9	1.58	-1.17	-1.06	-59.5	-30.8
15,093.0	89.80	356.90	10,749.0	4,290.3	-194.4	2.39	-1.28	-2.02	-60.7	-28.1
15,186.0	90.30	358.30	10,748.9	4,383.2	-198.3	1.60	0.54	1.51	-61.3	-24.9
15,279.0	87.30	357.10	10,750.9	4,476.1	-202.0	3.47	-3.23	-1.29	-58.9	-22.0
15,372.0	86.80	357.60	10,755.6	4,568.9	-206.3	0.78	-0.54	0.54	-55.7	-18.4
15,466.0	86.40	358.00	10,761.2	4,662.7	-209.9	0.60	-0.43	0.43	-50.6	-15.6
15,558.0	85.90	358.90	10,767.4	4,754.4	-212.4	1.12	-0.54	0.98	-45.0	-13.8
15,599.0	86.20	358.70	10,770.2	4,795.3	-213.2	0.88	0.73	-0.49	-42.4	-13.3
15,661.0	86.20	358.70	10,774.3	4,857.2	-214.7	0.00	0.00	0.00	-38.7	-12.4

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
10,200.0	10,182.1	-285.0	-223.4	KOP, MD:10200.0', TVD:10182.1', N/S:-285.0', E/W:-223.4', INC:1.89
10,485.9	10,455.0	-212.0	-223.8	FTP Crossing, MD:10485.9', TVD:10455.0', N/S:-212.0', E/W:-223.8', INC:29.89
15,599.0	10,770.2	4,785.3	-213.2	Last MWD Survey (MD=15599.0')
15,661.0	10,774.3	4,857.2	-214.7	Projection to Bit (MD=15661.0')

Checked By: _____ Approved By: _____ Date: _____

I certify this survey to be true and correct to the best of my belief and knowledge.

Key Maddox 11/15/2019
 Signed Date



Lea County, NM (NAD 83 NME)

Adder 31 State #504H

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: #504H

KB = 25 @ 3327.0usft 3502.0
Northing 425513.00 Easting 785412.00 Latitude 32° 10' 3.887 N Longitude 103° 38' 33.017 W



Address in Grid North
True North AL33
Magnetic North 9.33°
Magnetic Field
Strength 477.8 usft
Magnetic Error
North 9.33°
Magnetic Error
North 9.33°

To convert a Magnetic Direction to a Grid Direction, Add 9.33°
To convert a Magnetic Direction to a True Direction, Add 6.79° East
To convert a True Direction to a Grid Direction, Subtract 9.33°

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	
3	2750.2	5.00	215.37	2749.9	-8.9	-8.3	2.00	215.37	-8.8	
4	6183.5	5.00	215.37	6170.1	-253.1	-179.7	0.00	0.00	-244.4	
5	8433.7	0.00	0.00	8420.0	-262.0	-188.0	2.00	180.00	-253.0	
6	10218.7	0.00	0.00	10203.0	-262.0	-188.0	0.00	0.00	-253.0	
7	11111.3	89.48	359.54	10775.9	305.6	-190.5	10.00	359.54	314.1	
8	12078.9	89.48	359.54	10785.0	1273.0	-198.3	0.00	0.00	1280.0	TGT#1(Adder 31 State #504H)
9	12078.9	89.48	359.54	10785.0	1273.0	-198.3	2.00	0.00	1280.9	
10	14287.7	89.48	359.54	10805.0	3481.7	-216.0	0.00	0.00	3485.0	TGT#2(Adder 31 State #504H)
11	14287.0	89.67	359.54	10805.1	3491.0	-216.1	2.00	0.00	3497.3	
12	15584.1	89.67	359.54	10813.0	4858.0	-227.0	0.00	0.00	4863.3	PBHL(Adder 31 State #504H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
TGT#1(Adder 31 State #504H)	10775.0	1273.1	-198.3	428785.10	785291.272
TGT#2(Adder 31 State #504H)	10913.0	3481.7	-216.0	428594.70	785194.02
PBHL(Adder 31 State #504H)	10913.0	4858.0	-227.0	428271.00	785185.00
Brucly Top(Adder 31 State #504H)	7478.0	-262.0	-188.0	428281.00	785228.00
FTF(Adder 31 State #504H)	10773.0	-212.0	-188.0	428201.00	785228.00

