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DISTRICT II-ARTESIA O.C.D.

Mewbourne Oil Company

Eddy County, N.M. Nad (83)

Section 5-4-23S-27E Wolfman 5-4 W0LI Fed Com 1H

Wolfman 5-4 W0LI Fed Com 1H

Original Hole

30-015-44 544

Design: Original Hole

Standard Survey Report

04 January, 2018





Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 5-4-23S-27E Wolfman 5-4 WOLI Fed Com 1H
Well: Wolfman 5-4 WOLI Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Wolfman 5-4 WOLI Fed Com 1H
TVD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
MD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Eddy County, N.M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Section 5-4-23S-27E Wolfman 5-4 WOLI Fed Com 1H

Site Position:		Northing:	484,247.00 usft	Latitude:	32° 19' 52.378 N
From:	Map	Easting:	576,272.70 usft	Longitude:	104° 13' 12.815 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.06 °

Well Wolfman 5-4 WOLI Fed Com 1H

Well Position	+N/-S	0.0 usft	Northing:	484,247.00 usft	Latitude:	32° 19' 52.378 N
	+E/-W	0.0 usft	Easting:	576,272.70 usft	Longitude:	104° 13' 12.815 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	27.0 usft	Ground Level:	3,182.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/4/2017	7.21	60.05	47,885.86686199

Design Original Hole

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	14.91

Survey Program Date 1/4/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	18,783.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.40	70.00	100.0	0.1	0.3	0.2	0.40	0.40	0.00
200.0	0.90	77.00	200.0	0.4	1.4	0.8	0.51	0.50	7.00
295.0	2.20	58.00	295.0	1.5	3.7	2.4	1.45	1.37	-20.00
394.0	2.50	53.00	393.9	3.9	7.0	5.5	0.37	0.30	-5.05
419.0	2.50	53.00	418.8	4.5	7.9	6.4	0.00	0.00	0.00
441.0	2.50	53.10	440.8	5.1	8.7	7.1	0.02	0.00	0.45
534.0	2.30	60.60	533.7	7.2	11.9	10.0	0.40	-0.22	8.06
593.0	1.50	62.90	592.7	8.2	13.6	11.4	1.36	-1.36	3.90
653.0	0.10	195.10	652.7	8.5	14.3	11.9	2.61	-2.33	220.33

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
713.0	0.50	174.20	712.7	8.2	14.3	11.6	0.68	0.67	-34.83
773.0	0.70	180.30	772.7	7.5	14.4	11.0	0.35	0.33	10.17
833.0	0.50	174.00	832.7	6.9	14.4	10.4	0.35	-0.33	-10.50
929.0	0.40	256.30	928.7	6.4	14.1	9.8	0.62	-0.10	85.73
992.0	0.20	305.00	991.7	6.4	13.8	9.7	0.49	-0.32	77.30
1,055.0	0.10	125.50	1,054.7	6.4	13.8	9.8	0.48	-0.16	-284.92
1,119.0	0.70	114.10	1,118.7	6.3	14.2	9.7	0.94	0.94	-17.81
1,182.0	1.60	118.20	1,181.7	5.7	15.3	9.4	1.43	1.43	6.51
1,245.0	1.80	114.00	1,244.7	4.9	17.0	9.1	0.37	0.32	-6.67
1,309.0	2.00	111.50	1,308.6	4.0	18.9	8.8	0.34	0.31	-3.91
1,372.0	1.80	108.50	1,371.6	3.3	20.9	8.6	0.35	-0.32	-4.76
1,436.0	1.30	97.60	1,435.6	2.9	22.6	8.6	0.90	-0.78	-17.03
1,499.0	1.50	88.10	1,498.5	2.8	24.1	8.9	0.49	0.32	-15.08
1,563.0	1.90	89.30	1,562.5	2.9	26.0	9.5	0.63	0.63	1.88
1,626.0	2.20	91.40	1,625.5	2.9	28.2	10.0	0.49	0.48	3.33
1,689.0	2.40	90.20	1,688.4	2.8	30.8	10.7	0.33	0.32	-1.90
1,753.0	1.10	85.30	1,752.4	2.9	32.7	11.2	2.04	-2.03	-7.66
1,798.0	0.40	296.90	1,797.4	3.0	33.0	11.4	3.24	-1.56	-329.78
1,876.0	0.70	294.40	1,875.4	3.3	32.3	11.5	0.39	0.38	-3.21
1,971.0	0.80	290.00	1,970.4	3.8	31.2	11.7	0.12	0.11	-4.63
2,065.0	2.30	351.10	2,064.3	5.9	30.3	13.4	2.17	1.60	65.00
2,160.0	3.50	359.00	2,159.2	10.6	29.9	18.0	1.33	1.26	8.32
2,255.0	3.50	320.00	2,254.0	16.4	30.0	23.6	0.27	0.00	4.42
2,349.0	3.30	359.50	2,347.9	22.0	30.2	29.0	0.32	-0.21	-3.94
2,443.0	2.80	355.50	2,441.7	27.0	30.0	33.8	0.58	-0.53	-4.26
2,538.0	3.50	357.70	2,536.6	32.2	29.7	38.8	0.75	0.74	2.32
2,632.0	3.30	355.70	2,630.4	37.8	29.4	44.1	0.25	-0.21	-2.13
2,726.0	4.20	356.30	2,724.2	43.9	28.9	49.9	0.96	0.96	0.64
2,821.0	3.90	355.50	2,819.0	50.6	28.4	56.2	0.32	-0.32	-0.84
2,915.0	4.00	353.10	2,912.8	57.0	27.8	62.3	0.21	0.11	-2.55
3,010.0	3.90	354.40	3,007.5	63.6	27.1	68.4	0.14	-0.11	1.37
3,104.0	4.10	352.60	3,101.3	70.1	26.3	74.5	0.25	0.21	-1.91
3,199.0	3.60	348.00	3,196.1	76.3	25.3	80.3	0.62	-0.53	-4.84
3,292.0	3.50	349.60	3,288.9	82.0	24.2	85.5	0.15	-0.11	1.72
3,387.0	3.30	352.90	3,383.8	87.6	23.3	90.6	0.29	-0.21	3.47
3,482.0	4.30	354.10	3,478.5	93.8	22.6	96.5	1.06	1.05	1.26
3,576.0	4.30	357.10	3,572.3	100.8	22.1	103.1	0.24	0.00	3.19
3,671.0	3.90	353.10	3,667.0	107.6	21.5	109.5	0.52	-0.42	-4.21
3,765.0	3.50	346.00	3,760.8	113.6	20.4	115.0	0.65	-0.43	-7.55
3,860.0	3.40	345.70	3,855.7	119.1	19.0	120.0	0.11	-0.11	-0.32
3,955.0	3.00	337.80	3,950.5	124.1	17.4	124.4	0.63	-0.42	-8.32
4,050.0	3.80	351.10	4,045.4	129.6	16.0	129.3	1.18	0.84	14.00

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4,144.0	4.70	354.40	4,139.1	136.5	15.1	135.8	0.99	0.96	3.51
4,238.0	3.90	349.50	4,232.8	143.4	14.1	142.3	0.94	-0.85	-5.21
4,333.0	3.50	341.40	4,327.6	149.4	12.6	147.6	0.69	-0.42	-8.53
4,427.0	4.40	351.20	4,421.4	155.6	11.2	153.3	1.19	0.96	10.43
4,522.0	4.00	349.60	4,516.2	162.5	10.0	159.6	0.44	-0.42	-1.68
4,616.0	3.50	345.50	4,610.0	168.5	8.7	165.1	0.60	-0.53	-4.36
4,710.0	4.50	354.30	4,703.7	175.0	7.6	171.0	1.25	1.06	9.36
4,805.0	3.70	348.00	4,798.5	181.7	6.6	177.3	0.97	-0.84	-6.63
4,900.0	4.10	353.40	4,893.3	188.0	5.6	183.1	0.57	0.42	5.68
4,994.0	5.10	6.20	4,987.0	195.5	5.6	190.4	1.52	1.06	13.62
5,088.0	4.70	10.90	5,080.6	203.5	6.8	198.4	0.60	-0.43	5.00
5,183.0	3.60	13.40	5,175.4	210.2	8.2	205.2	1.17	-1.16	2.63
5,277.0	4.50	13.10	5,269.1	216.6	9.8	211.9	0.96	0.96	-0.32
5,373.0	3.80	4.50	5,364.9	223.5	10.9	218.8	0.97	-0.73	-8.96
5,467.0	5.50	356.90	5,458.6	231.1	10.9	226.1	1.92	1.81	-8.09
5,561.0	4.40	350.50	5,552.2	239.1	10.0	233.7	1.31	-1.17	-6.81
5,656.0	4.40	340.30	5,646.9	246.2	8.2	240.0	0.82	0.00	-10.74
5,751.0	4.30	337.80	5,741.7	252.9	5.6	245.8	0.23	-0.11	-2.63
5,846.0	4.30	4.80	5,836.4	259.7	4.6	252.2	2.11	0.00	28.42
5,940.0	3.40	18.70	5,930.2	265.9	5.8	258.4	1.37	-0.96	14.79
6,034.0	5.00	18.00	6,023.9	272.4	7.9	265.3	1.70	1.70	-0.74
6,130.0	4.50	18.80	6,119.6	280.0	10.4	273.2	0.53	-0.52	0.83
6,225.0	4.30	30.80	6,214.3	286.6	13.5	280.4	0.99	-0.21	12.63
6,320.0	4.60	15.40	6,309.1	293.3	16.3	287.6	1.29	0.32	-16.21
6,415.0	3.80	21.70	6,403.8	299.9	18.5	294.6	0.97	-0.84	6.63
6,510.0	1.20	4.30	6,498.7	303.8	19.7	298.7	2.82	-2.74	-18.32
6,604.0	2.40	341.90	6,592.7	306.7	19.2	301.3	1.46	1.28	-23.83
6,698.0	2.80	350.50	6,686.6	310.8	18.2	305.0	0.59	0.43	9.15
6,793.0	2.10	358.60	6,781.5	314.8	17.8	308.8	0.82	-0.74	8.53
6,888.0	2.30	22.80	6,876.4	318.3	18.5	312.4	0.99	0.21	25.47
6,983.0	3.30	28.70	6,971.3	322.5	20.5	316.9	1.09	1.05	6.21
7,078.0	2.90	31.50	7,066.1	326.9	23.1	321.9	0.45	-0.42	2.95
7,173.0	2.20	29.00	7,161.1	330.6	25.2	325.9	0.75	-0.74	-2.63
7,267.0	1.60	32.70	7,255.0	333.3	26.8	328.9	0.65	-0.64	3.94
7,362.0	1.10	42.00	7,350.0	335.1	28.1	331.0	0.57	-0.53	9.79
7,456.0	1.00	74.00	7,444.0	335.9	29.5	332.2	0.62	-0.11	34.04
7,551.0	1.90	58.30	7,538.9	337.0	31.7	333.8	1.03	0.95	-16.53
7,646.0	3.20	81.30	7,633.8	338.2	35.6	336.0	1.72	1.37	24.21
7,740.0	3.70	53.50	7,727.7	340.4	40.6	339.4	1.84	0.53	-29.57
7,834.0	2.90	53.40	7,821.5	343.7	45.0	343.7	0.85	-0.85	-0.11
7,929.0	1.70	61.00	7,916.4	345.8	48.2	346.5	1.30	-1.26	8.00
8,023.0	1.70	155.80	8,010.4	345.2	49.9	346.4	2.66	0.00	100.85
8,118.0	0.90	141.40	8,105.4	343.3	51.0	344.9	0.90	-0.84	-15.16



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8,212.0	0.40	193.60	8,199.4	342.4	51.4	344.1	0.77	-0.53	55.53
8,307.0	0.50	206.50	8,294.4	341.7	51.1	343.4	0.15	0.11	13.58
8,402.0	0.70	219.50	8,389.4	340.9	50.6	342.4	0.25	0.21	13.68
8,412.2	0.60	217.18	8,399.6	340.8	50.5	342.3	1.02	-0.98	-22.70
B.B. Wolfman 5-4 WOLI Fed Com 1H									
8,433.0	0.40	208.90	8,420.4	340.7	50.4	342.2	1.02	-0.96	-39.85
8,519.0	4.70	87.90	8,506.3	340.5	53.8	342.9	5.72	5.00	-140.70
8,550.0	8.80	85.00	8,537.1	340.8	57.4	344.1	13.27	13.23	-9.35
8,582.0	13.20	79.00	8,568.5	341.7	63.4	346.5	14.19	13.75	-18.75
8,613.0	17.10	76.60	8,598.4	343.4	71.3	350.2	12.74	12.58	-7.74
8,645.0	20.10	75.20	8,628.7	345.9	81.2	355.2	9.48	9.38	-4.38
8,676.0	24.60	75.30	8,657.4	348.9	92.6	361.0	14.52	14.52	0.32
8,708.0	28.20	75.80	8,686.0	352.5	106.4	368.0	11.27	11.25	1.56
8,739.0	30.90	76.00	8,713.0	356.2	121.2	375.4	8.72	8.71	0.65
8,771.0	34.40	75.70	8,739.9	360.4	138.0	383.8	10.95	10.94	-0.94
8,802.0	38.30	75.20	8,764.9	365.0	155.7	392.8	12.62	12.58	-1.61
8,834.0	41.50	74.70	8,789.4	370.4	175.6	403.1	10.05	10.00	-1.56
8,865.0	46.00	74.50	8,811.8	376.1	196.2	413.9	14.52	14.52	-0.65
8,896.0	49.20	75.00	8,832.7	382.1	218.3	425.4	10.39	10.32	1.61
8,928.0	52.00	75.20	8,853.0	388.4	242.2	437.7	8.76	8.75	0.63
8,959.0	54.90	75.20	8,871.5	394.8	266.3	450.0	9.35	9.35	0.00
8,992.0	58.30	75.50	8,889.7	401.8	292.9	463.6	10.33	10.30	0.91
9,023.0	61.10	76.00	8,905.3	408.3	318.9	476.6	9.14	9.03	1.61
9,055.0	64.80	76.70	8,919.8	415.1	346.6	490.2	11.73	11.56	2.19
9,086.0	67.90	77.70	8,932.3	421.3	374.2	503.4	10.43	10.00	3.23
9,118.0	70.40	78.90	8,943.7	427.4	403.5	516.8	8.56	7.81	3.75
9,149.0	73.00	80.20	8,953.4	432.7	432.5	529.4	9.28	8.39	4.19
9,181.0	76.00	80.80	8,962.0	437.8	462.9	542.2	9.55	9.38	1.88
9,196.6	77.46	81.36	8,965.5	440.2	477.8	548.3	9.98	9.35	3.57
LP Wolfman 5-4 WOLI Fed Com 1H									
9,212.0	78.90	81.90	8,968.7	442.4	492.8	554.3	9.98	9.36	3.53
9,232.0	80.90	81.80	8,972.2	445.2	512.3	562.0	10.01	10.00	-0.50
9,295.0	85.80	84.80	8,979.5	452.5	574.4	585.0	9.10	7.78	4.76
9,358.0	88.90	84.40	8,982.4	458.4	637.0	606.8	4.96	4.92	-0.63
9,452.0	88.90	84.10	8,984.2	467.8	730.6	640.0	0.32	0.00	-0.32
9,546.0	87.30	82.60	8,987.3	478.7	823.9	674.5	2.33	-1.70	-1.60
9,641.0	90.00	83.10	8,989.6	490.5	918.1	710.1	2.89	2.84	0.53
9,735.0	89.50	82.60	8,990.0	502.2	1,011.4	745.4	0.75	-0.53	-0.53
9,830.0	89.60	81.60	8,990.7	515.3	1,105.5	782.3	1.06	0.11	-1.05
9,924.0	91.80	84.10	8,989.6	527.0	1,198.7	817.6	3.54	2.34	2.66
10,019.0	90.10	87.30	8,988.0	534.1	1,293.4	848.8	3.81	-1.79	3.37
10,114.0	89.90	88.20	8,988.0	537.8	1,388.3	876.8	0.97	-0.21	0.95



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Database: Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,208.0	87.30	87.90	8,990.3	541.0	1,482.2	904.1	2.78	-2.77	-0.32
10,303.0	86.40	86.30	8,995.5	545.8	1,577.0	933.1	1.93	-0.95	-1.68
10,397.0	91.20	85.50	8,997.5	552.5	1,670.7	963.7	5.18	5.11	-0.85
10,491.0	89.20	86.10	8,997.2	559.4	1,764.4	994.4	2.22	-2.13	0.64
10,587.0	87.50	85.00	8,999.9	566.8	1,860.1	1,026.2	2.11	-1.77	-1.15
10,683.0	90.00	87.70	9,002.0	573.0	1,955.9	1,056.8	3.83	2.60	2.81
10,779.0	90.70	89.80	9,001.4	575.0	2,051.8	1,083.5	2.31	0.73	2.19
10,873.0	87.30	86.40	9,003.1	578.2	2,145.7	1,110.6	5.11	-3.62	-3.62
10,968.0	88.00	84.60	9,007.0	585.6	2,240.4	1,142.2	2.03	0.74	-1.89
11,063.0	88.10	84.00	9,010.2	595.0	2,334.8	1,175.6	0.64	0.11	-0.63
11,158.0	88.60	84.40	9,012.9	604.6	2,429.3	1,209.2	0.67	0.53	0.42
11,254.0	91.10	86.30	9,013.2	612.4	2,525.0	1,241.3	3.27	2.60	1.98
11,348.0	90.00	85.70	9,012.3	619.0	2,618.7	1,271.7	1.33	-1.17	-0.64
11,443.0	89.50	85.50	9,012.7	626.3	2,713.5	1,303.1	0.57	-0.53	-0.21
11,537.0	89.30	87.60	9,013.7	631.9	2,807.3	1,332.7	2.24	-0.21	2.23
11,631.0	90.90	89.50	9,013.5	634.3	2,901.2	1,359.2	2.64	1.70	2.02
11,726.0	89.80	89.10	9,012.9	635.5	2,996.2	1,384.8	1.23	-1.16	-0.42
11,821.0	89.70	88.80	9,013.3	637.2	3,091.2	1,410.9	0.33	-0.11	-0.32
11,915.0	88.50	87.00	9,014.8	640.6	3,185.1	1,438.4	2.30	-1.28	-1.91
12,009.0	87.00	89.40	9,018.5	643.6	3,279.0	1,465.4	3.01	-1.60	2.55
12,104.0	87.60	89.90	9,023.0	644.2	3,373.9	1,490.3	0.82	0.63	0.53
12,198.0	88.40	89.70	9,026.3	644.5	3,467.8	1,514.8	0.88	0.85	-0.21
12,293.0	91.30	88.00	9,026.5	646.4	3,562.8	1,541.1	3.54	3.05	-1.79
12,387.0	90.90	86.40	9,024.7	651.0	3,656.7	1,569.7	1.75	-0.43	-1.70
12,481.0	89.70	87.60	9,024.2	655.9	3,750.5	1,598.6	1.81	-1.28	1.28
12,576.0	87.80	89.20	9,026.3	658.6	3,845.5	1,625.5	2.61	-2.00	1.68
12,670.0	85.50	88.10	9,031.8	660.8	3,939.3	1,651.8	2.71	-2.45	-1.17
12,764.0	90.40	89.70	9,035.1	662.6	4,033.2	1,677.7	5.48	5.21	1.70
12,859.0	90.50	89.10	9,034.4	663.6	4,128.2	1,703.1	0.64	0.11	-0.63
12,953.0	90.50	90.90	9,033.6	663.6	4,222.2	1,727.3	1.91	0.00	1.91
13,047.0	91.60	90.90	9,031.9	662.1	4,316.1	1,750.0	1.17	1.17	0.00
13,142.0	92.00	92.10	9,028.9	659.6	4,411.0	1,772.0	1.33	0.42	1.26
13,236.0	87.20	92.10	9,029.5	656.2	4,505.0	1,792.8	5.11	-5.11	0.00
13,331.0	85.40	93.00	9,035.7	652.0	4,599.7	1,813.1	2.12	-1.89	0.95
13,425.0	86.00	90.30	9,042.7	649.3	4,693.3	1,834.6	2.93	0.64	-2.87
13,520.0	86.70	89.10	9,048.8	649.7	4,788.1	1,859.5	1.46	0.74	-1.26
13,614.0	89.40	88.60	9,052.0	651.6	4,882.1	1,885.5	2.92	2.87	-0.53
13,709.0	90.90	87.50	9,051.7	654.9	4,977.0	1,913.0	1.96	1.58	-1.16
13,803.0	92.40	86.30	9,049.0	659.9	5,070.8	1,942.0	2.04	1.60	-1.28
13,847.4	92.88	87.59	9,047.0	662.3	5,115.1	1,955.7	3.09	1.08	2.90
point									
13,896.0	93.40	89.00	9,044.3	663.8	5,163.6	1,969.6	3.09	1.07	2.90
13,990.0	90.20	90.40	9,041.3	664.2	5,257.6	1,994.2	3.72	-3.40	1.49

Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 5-4-23S-27E Wolfman 5-4 WOLI Fed Com 1H
Well: Wolfman 5-4 WOLI Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Wolfman 5-4 WOLI Fed Com 1H
TVD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
MD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,085.0	85.80	89.20	9,044.7	664.6	5,352.5	2,019.0	4.80	-4.63	-1.26
14,181.0	90.50	90.00	9,047.8	665.2	5,448.4	2,044.3	4.97	4.90	0.83
14,275.0	92.00	91.50	9,045.7	664.0	5,542.4	2,067.3	2.26	1.60	1.60
14,369.0	85.70	90.70	9,047.6	662.2	5,636.3	2,089.7	6.76	-6.70	-0.85
14,464.0	89.90	91.50	9,051.2	660.4	5,731.2	2,112.3	4.50	4.42	0.84
14,559.0	90.30	91.30	9,051.1	658.1	5,826.1	2,134.5	0.47	0.42	-0.21
14,654.0	90.00	91.50	9,050.8	655.7	5,921.1	2,156.7	0.38	-0.32	0.21
14,748.0	88.80	90.70	9,051.8	653.9	6,015.1	2,179.1	1.53	-1.28	-0.85
14,842.0	88.70	89.50	9,053.9	653.8	6,109.1	2,203.1	1.28	-0.11	-1.28
14,937.0	89.60	88.20	9,055.3	655.7	6,204.0	2,229.4	1.66	0.95	-1.37
15,031.0	89.10	86.30	9,056.3	660.2	6,297.9	2,257.9	2.09	-0.53	-2.02
15,125.0	88.70	89.10	9,058.1	664.0	6,391.8	2,285.7	3.01	-0.43	2.98
15,220.0	90.70	89.40	9,058.6	665.2	6,486.8	2,311.3	2.13	2.11	0.32
15,315.0	91.10	90.00	9,057.1	665.7	6,581.8	2,336.3	0.76	0.42	0.63
15,409.0	88.40	91.00	9,057.6	664.9	6,675.8	2,359.6	3.06	-2.87	1.06
15,503.0	88.40	90.40	9,060.2	663.7	6,769.7	2,382.7	0.64	0.00	-0.64
15,597.0	88.10	90.80	9,063.0	662.8	6,863.7	2,405.9	0.53	-0.32	0.43
15,692.0	87.60	90.60	9,066.6	661.6	6,958.6	2,429.2	0.57	-0.53	-0.21
15,786.0	89.00	92.00	9,069.4	659.5	7,052.5	2,451.3	2.11	1.49	1.49
15,881.0	86.30	88.00	9,073.3	659.5	7,147.4	2,475.7	5.08	-2.84	-4.21
15,975.0	89.20	88.50	9,077.0	662.3	7,241.3	2,502.6	3.13	3.09	0.53
16,070.0	90.50	88.90	9,077.2	664.5	7,336.3	2,529.1	1.43	1.37	0.42
16,164.0	89.50	87.80	9,077.2	667.2	7,430.2	2,555.9	1.58	-1.06	-1.17
16,258.0	88.90	87.90	9,078.5	670.7	7,524.1	2,583.5	0.65	-0.64	0.11
16,353.0	89.50	88.60	9,079.9	673.6	7,619.1	2,610.7	0.97	0.63	0.74
16,447.0	87.20	88.50	9,082.6	676.0	7,713.0	2,637.2	2.45	-2.45	-0.11
16,542.0	89.60	90.00	9,085.2	677.2	7,808.0	2,662.8	2.98	2.53	1.58
16,636.0	89.10	89.30	9,086.3	677.8	7,901.9	2,687.5	0.92	-0.53	-0.74
16,730.0	91.10	92.80	9,086.1	676.1	7,995.9	2,710.0	4.29	2.13	3.72
16,825.0	88.80	90.60	9,086.2	673.3	8,090.9	2,731.7	3.35	-2.42	-2.32
16,919.0	91.00	92.70	9,086.4	670.6	8,184.8	2,753.3	3.24	2.34	2.23
17,014.0	95.30	98.20	9,081.2	661.6	8,279.2	2,768.9	7.34	4.53	5.79
17,108.0	86.10	93.40	9,080.0	652.1	8,372.6	2,783.7	11.04	-9.79	-5.11
17,202.0	89.10	93.50	9,083.9	646.4	8,466.3	2,802.4	3.19	3.19	0.11
17,296.0	89.80	91.40	9,084.9	642.4	8,560.2	2,822.6	2.35	0.74	-2.23
17,391.0	86.60	87.20	9,087.8	643.6	8,655.1	2,848.2	5.56	-3.37	-4.42
17,485.0	85.60	86.60	9,094.2	648.6	8,748.8	2,877.2	1.24	-1.06	-0.64
17,580.0	85.80	87.10	9,101.4	653.9	8,843.3	2,906.5	0.57	0.21	0.53
17,675.0	89.10	86.20	9,105.6	659.4	8,938.1	2,936.2	3.60	3.47	-0.95
17,769.0	90.00	85.60	9,106.3	666.1	9,031.8	2,966.9	1.15	0.96	-0.64
17,864.0	89.10	84.40	9,107.1	674.4	9,126.5	2,999.2	1.58	-0.95	-1.26
17,958.0	89.70	85.10	9,108.0	683.0	9,220.1	3,031.6	0.98	0.64	0.74
18,052.0	89.10	85.60	9,109.0	690.6	9,313.8	3,063.0	0.83	-0.64	0.53



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 5-4-23S-27E Wolfman 5-4 WOLI Fed Com 1H
Well: Wolfman 5-4 WOLI Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Wolfman 5-4 WOLI Fed Com 1H
TVD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
MD Reference: 3182 + 27 @ 3209.0usft (Patterson 220)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

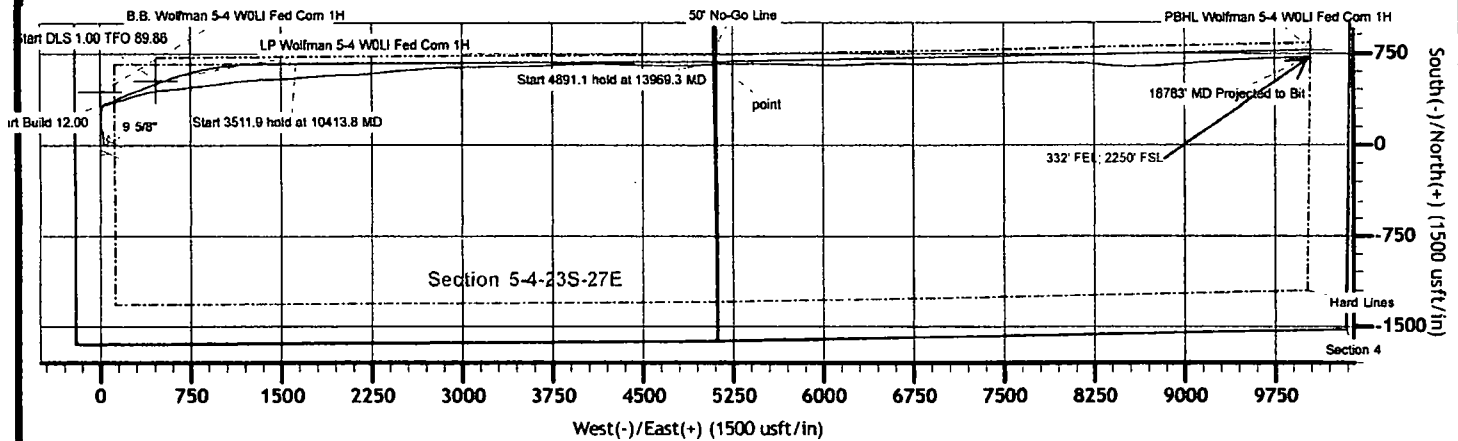
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,146.0	87.70	85.70	9,111.7	697.7	9,407.4	3,094.0	1.49	-1.49	0.11
18,239.0	93.80	88.60	9,110.4	702.4	9,500.3	3,122.4	7.26	6.56	3.12
18,333.0	93.60	88.00	9,104.4	705.2	9,594.0	3,149.2	0.67	-0.21	-0.64
18,427.0	92.70	88.00	9,099.2	708.4	9,687.8	3,176.5	0.96	-0.96	0.00
18,521.0	92.20	87.90	9,095.2	711.8	9,781.7	3,203.9	0.54	-0.53	-0.11
18,615.0	86.70	87.40	9,096.1	715.6	9,875.6	3,231.7	5.88	-5.85	-0.53
18,709.0	86.20	87.20	9,101.9	720.1	9,969.3	3,260.1	0.57	-0.53	-0.21
18,721.0	86.50	87.00	9,102.7	720.7	9,981.2	3,263.8	3.00	2.50	-1.67
18,783.0	86.50	87.00	9,106.5	723.9	10,043.0	3,282.8	0.00	0.00	0.00

18783' MD Projected to Bit - PBHL Wolfman 5-4 WOLI Fed Com 1H

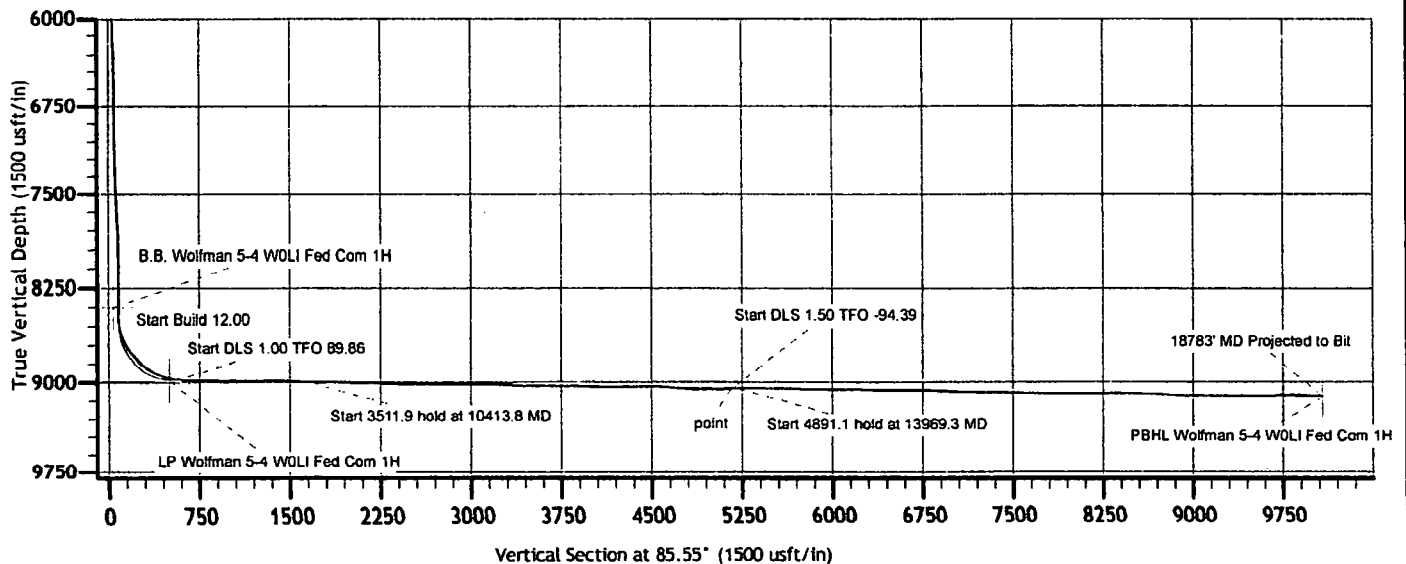
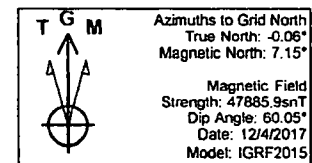
Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
18,783.0	9,106.5	723.9	10,043.0	18783' MD Projected to Bit

GEODETIC ZONE: New Mexico Eastern Zone										
3182 + 27 @ 3209.0usft (Patterson 220)										
GROUND ELEVATION: 3182.0										
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot				
0.0	0.0	484247.00	576272.70	32° 19' 52.378 N	104° 13' 12.815 W					
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	8433.0	0.40	208.90	8420.4	340.7	50.4	0.00	0.00	78.8	
2	8473.0	0.00	0.00	8480.4	340.5	50.3	1.00	180.00	78.8	
3	8517.2	0.00	0.00	8504.6	340.5	50.3	0.00	0.00	76.6	
4	8260.8	89.23	69.00	8982.0	509.3	490.1	12.00	69.00	528.1	
5	10087.8	89.23	89.68	8993.2	661.6	1298.4	2.50	90.13	1345.7	
6	13904.0	89.23	89.68	9044.3	682.9	5114.2	0.00	0.00	5151.7	point
7	13958.8	89.24	88.86	9045.0	683.6	5169.0	1.50	-89.70	5208.4	
8	18838.7	89.24	88.86	9110.0	781.1	10047.5	0.00	0.00	10077.8	PBHL Wolfman 5-4 WOLI Fed Com 1H



SHL 1650' FSL; 210' FWL
Section 5-23S-27E
PBHL 2308' FSL; 330' FEL
Section 4-23S-27E





February 1, 2018

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Jackie Lathan

Re: Mewbourne Oil Company
Wolfman 5 4 W0LI Federal Com #001H
Purple Sage; Wolfcamp (Gas)
Eddy County, New Mexico
API# 30-015-44544

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Joe Scheffey	Original Hole	534ft. to 18,721ft.	12-15-17 to 01-04-18	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Todd Estes

Enclosures

CC:

Mewbourne Oil Company
Attn: Frosty Lathan
P.O. Box 5720
Hobbs, NM 88241

Mewbourne Oil Company
Attn: Robin Terrell
P.O. Box 5720
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Company\Wolfman 5 4 W0LI Federal Com #1H\M171132

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



February 1, 2018

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of December 15, 2017, through January 04, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 534 feet to a depth of 18,721 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Wolfman 5 4 W0LI Federal Com #001H well, API # **30-015-44544** in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

**STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163**