



HOBBS OGD

NOV 20 2014

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Mewbourne Oil Company .

Lea County N.M.

Section 14-20S-34E Marathon Road 14 MD

Marathon Road 14 MD Federal #1H

Original Hole

Design: Original Hole

Standard Survey Report

08 September, 2014



DEC 24 2014



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Lea County N.M.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section14-20S-34E Marathon Road 14 MD		
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Site Position:	Northing:	570,285.20 usft	Latitude:	32° 33' 55.060 N
From: Map	Easting:	745,520.43 usft	Longitude:	103° 32' 11.044 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.43 °

Well	Marathon Road 14 MD Federal #1H			
Well Position	+N/-S	0.0 usft	Northing:	570,285.20 usft
	+E/-W	0.0 usft	Easting:	745,520.43 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,651.0 usft

Wellbore	Original Hole		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/28/2014	7.20	60.43	48,503

Design	Original Hole		
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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	356.45

Survey Program	Date	9/8/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,255.0	MS Gyro Survey #1 (Original Hole)	GyroFlex	
10,383.0	15,925.0	Survey #2 (Original Hole)	MWD	MWD v3:standard declination

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	0.13	167.92	100.0	-0.1	0.0	-0.1	0.13	0.13	0.00
200.0	0.26	168.70	200.0	-0.4	0.1	-0.4	0.13	0.13	0.78
300.0	0.50	141.29	300.0	-1.0	0.4	-1.0	0.29	0.24	-27.41
400.0	0.33	147.05	400.0	-1.6	0.8	-1.6	0.17	-0.17	5.76
500.0	0.55	143.56	500.0	-2.2	1.3	-2.3	0.22	0.22	-3.49
600.0	0.36	164.60	600.0	-2.9	1.6	-3.0	0.25	-0.19	21.04
700.0	0.60	149.56	700.0	-3.7	2.0	-3.8	0.27	0.24	-15.04
800.0	0.58	151.86	800.0	-4.6	2.5	-4.7	0.03	-0.02	2.30
900.0	1.24	151.60	900.0	-6.0	3.3	-6.1	0.66	0.66	-0.26



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Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
1,000.0	1.38	153.93	999.9	-8.0	4.3	-8.2	0.15	0.14	2.33
1,100.0	1.70	141.72	1,099.9	-10.2	5.7	-10.6	0.46	0.32	-12.21
1,200.0	1.94	142.61	1,199.9	-12.7	7.7	-13.2	0.24	0.24	0.89
1,300.0	1.69	138.30	1,299.8	-15.2	9.7	-15.8	0.28	-0.25	-4.31
1,400.0	1.55	137.06	1,399.8	-17.3	11.6	-18.0	0.14	-0.14	-1.24
1,500.0	1.19	127.15	1,499.7	-18.9	13.4	-19.7	0.43	-0.36	-9.91
1,600.0	0.91	113.62	1,599.7	-19.8	14.9	-20.7	0.37	-0.28	-13.53
1,700.0	0.60	110.33	1,699.7	-20.3	16.1	-21.3	0.31	-0.31	-3.29
1,800.0	0.42	25.63	1,799.7	-20.2	16.8	-21.2	0.70	-0.18	-84.70
1,900.0	0.31	269.59	1,899.7	-19.9	16.7	-20.9	0.62	-0.11	-116.04
2,000.0	0.18	39.44	1,999.7	-19.7	16.5	-20.7	0.45	-0.13	129.85
2,100.0	0.28	65.50	2,099.7	-19.5	16.8	-20.5	0.14	0.10	26.06
2,200.0	0.32	52.44	2,199.7	-19.3	17.3	-20.3	0.08	0.04	-13.06
2,300.0	0.38	328.34	2,299.7	-18.8	17.3	-19.8	0.47	0.06	-84.10
2,400.0	0.07	93.46	2,399.7	-18.5	17.2	-19.6	0.42	-0.31	125.12
2,500.0	0.18	32.09	2,499.7	-18.4	17.3	-19.4	0.16	0.11	-61.37
2,600.0	0.66	76.38	2,599.7	-18.1	18.0	-19.2	0.55	0.48	44.29
2,700.0	0.88	68.44	2,699.7	-17.7	19.3	-18.9	0.24	0.22	-7.94
2,800.0	1.09	47.24	2,799.7	-16.8	20.7	-18.0	0.42	0.21	-21.20
2,900.0	0.63	42.90	2,899.7	-15.7	21.7	-17.0	0.46	-0.46	-4.34
3,000.0	0.46	48.40	2,999.7	-15.1	22.4	-16.4	0.18	-0.17	5.50
3,100.0	0.45	69.78	3,099.7	-14.7	23.1	-16.1	0.17	-0.01	21.38
3,200.0	0.31	50.32	3,199.7	-14.4	23.7	-15.8	0.19	-0.14	-19.46
3,300.0	0.38	54.95	3,299.7	-14.0	24.1	-15.5	0.08	0.07	4.63
3,400.0	0.21	239.74	3,399.7	-13.9	24.3	-15.4	0.59	-0.17	-175.21
3,500.0	0.14	168.19	3,499.7	-14.1	24.1	-15.6	0.21	-0.07	-71.55
3,600.0	0.26	357.45	3,599.6	-14.0	24.1	-15.5	0.40	0.12	-170.74
3,700.0	0.12	302.95	3,699.6	-13.7	24.0	-15.2	0.21	-0.14	-54.50
3,800.0	0.62	323.55	3,799.6	-13.2	23.6	-14.7	0.51	0.50	20.60
3,900.0	0.90	306.78	3,899.6	-12.3	22.7	-13.7	0.35	0.28	-16.77
4,000.0	0.89	293.31	3,999.6	-11.5	21.3	-12.8	0.21	-0.01	-13.47
4,100.0	0.96	301.36	4,099.6	-10.8	19.9	-12.0	0.15	0.07	8.05
4,200.0	0.94	295.58	4,199.6	-10.0	18.5	-11.1	0.10	-0.02	-5.78
4,300.0	0.37	320.45	4,299.6	-9.4	17.5	-10.5	0.62	-0.57	24.87
4,400.0	0.76	32.99	4,399.6	-8.6	17.7	-9.7	0.74	0.39	72.54
4,500.0	1.48	48.20	4,499.6	-7.2	19.0	-8.3	0.77	0.72	15.21
4,600.0	1.40	54.45	4,599.5	-5.6	20.9	-6.9	0.18	-0.08	6.25
4,700.0	2.49	85.96	4,699.5	-4.7	24.1	-6.2	1.49	1.09	31.51
4,800.0	3.70	85.25	4,799.3	-4.3	29.5	-6.1	1.21	1.21	-0.71
4,900.0	3.78	84.93	4,899.1	-3.8	36.0	-6.0	0.08	0.08	-0.32
5,000.0	3.97	87.31	4,998.9	-3.3	42.7	-5.9	0.25	0.19	2.38
5,100.0	3.60	95.41	5,098.7	-3.4	49.3	-6.5	0.65	-0.37	8.10
5,200.0	4.07	97.99	5,198.4	-4.2	55.9	-7.7	0.50	0.47	2.58



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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)
5,300.0	4.17	98.89	5,298.2	-5.3	63.1	-9.2	0.12	0.10	0.90
5,400.0	3.97	96.29	5,397.9	-6.2	70.1	-10.6	0.27	-0.20	-2.60
5,500.0	3.84	94.91	5,497.7	-6.9	76.9	-11.6	0.16	-0.13	-1.38
5,600.0	3.22	96.46	5,597.5	-7.5	83.0	-12.6	0.63	-0.62	1.55
5,700.0	3.14	102.22	5,697.4	-8.4	88.5	-13.9	0.33	-0.08	5.76
5,800.0	2.93	102.21	5,797.2	-9.5	93.6	-15.3	0.21	-0.21	-0.01
5,900.0	2.59	101.59	5,897.1	-10.5	98.3	-16.6	0.34	-0.34	-0.62
6,000.0	2.11	104.01	5,997.0	-11.4	102.3	-17.7	0.49	-0.48	2.42
6,100.0	1.99	106.89	6,097.0	-12.4	105.8	-18.9	0.16	-0.12	2.88
6,200.0	1.40	103.75	6,196.9	-13.2	108.6	-19.9	0.60	-0.59	-3.14
6,300.0	1.65	107.14	6,296.9	-13.9	111.2	-20.7	0.27	0.25	3.39
6,400.0	1.45	110.37	6,396.8	-14.7	113.8	-21.7	0.22	-0.20	3.23
6,500.0	1.67	134.12	6,496.8	-16.2	116.0	-23.3	0.68	0.22	23.75
6,600.0	1.73	144.35	6,596.8	-18.4	117.9	-25.7	0.31	0.06	10.23
6,700.0	1.84	162.55	6,696.7	-21.2	119.3	-28.5	0.57	0.11	18.20
6,800.0	1.70	163.67	6,796.7	-24.1	120.2	-31.5	0.14	-0.14	1.12
6,900.0	1.31	169.76	6,896.6	-26.7	120.8	-34.1	0.42	-0.39	6.09
7,000.0	1.46	177.79	6,996.6	-29.1	121.1	-36.5	0.24	0.15	8.03
7,100.0	1.50	180.69	7,096.6	-31.7	121.1	-39.1	0.08	0.04	2.90
7,200.0	1.41	167.39	7,196.5	-34.2	121.3	-41.6	0.35	-0.09	-13.30
7,300.0	0.98	174.82	7,296.5	-36.2	121.7	-43.7	0.46	-0.43	7.43
7,400.0	0.84	170.14	7,396.5	-37.8	121.9	-45.3	0.16	-0.14	-4.68
7,500.0	0.88	169.72	7,496.5	-39.3	122.2	-46.8	0.04	0.04	-0.42
7,600.0	0.76	153.05	7,596.5	-40.6	122.6	-48.1	0.27	-0.12	-16.67
7,700.0	0.63	180.51	7,696.5	-41.8	122.9	-49.3	0.35	-0.13	27.46
7,800.0	0.63	208.59	7,796.5	-42.8	122.6	-50.3	0.31	0.00	28.08
7,900.0	0.82	196.63	7,896.5	-44.0	122.2	-51.4	0.24	0.19	-11.96
8,000.0	0.86	193.54	7,996.5	-45.4	121.8	-52.8	0.06	0.04	-3.09
8,100.0	0.40	185.32	8,096.4	-46.5	121.6	-53.9	0.47	-0.46	-8.22
8,200.0	0.63	211.08	8,196.4	-47.3	121.2	-54.7	0.32	0.23	25.76
8,300.0	0.27	190.92	8,296.4	-48.0	120.9	-55.4	0.39	-0.36	-20.16
8,400.0	0.19	353.56	8,396.4	-48.1	120.9	-55.4	0.45	-0.08	162.64
8,500.0	0.14	333.85	8,496.4	-47.8	120.8	-55.2	0.07	-0.05	-19.71
8,600.0	0.20	310.61	8,596.4	-47.6	120.6	-54.9	0.09	0.06	-23.24
8,700.0	0.36	280.48	8,696.4	-47.4	120.2	-54.7	0.21	0.16	-30.13
8,800.0	0.68	274.01	8,796.4	-47.3	119.3	-54.6	0.32	0.32	-6.47
8,900.0	0.54	313.75	8,896.4	-46.9	118.3	-54.2	0.44	-0.14	39.74
9,000.0	1.32	20.03	8,996.4	-45.5	118.4	-52.7	1.21	0.78	66.28
9,100.0	1.99	38.45	9,096.4	-43.1	119.8	-50.4	0.85	0.67	18.42
9,200.0	1.62	41.58	9,196.3	-40.6	121.9	-48.1	0.38	-0.37	3.13
9,300.0	1.38	43.00	9,296.3	-38.7	123.6	-46.3	0.24	-0.24	1.42
9,400.0	1.59	45.02	9,396.3	-36.8	125.4	-44.5	0.22	0.21	2.02
9,500.0	2.07	65.06	9,496.2	-35.1	128.0	-43.0	0.79	0.48	20.04



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
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Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)
9,600.0	2.14	73.47	9,596.1	-33.8	131.5	-41.9	0.32	0.07	8.41
9,700.0	1.57	93.08	9,696.1	-33.4	134.6	-41.6	0.85	-0.57	19.61
9,800.0	1.38	105.24	9,796.1	-33.7	137.2	-42.2	0.37	-0.19	12.16
9,900.0	1.41	107.67	9,896.0	-34.4	139.5	-43.0	0.07	0.03	2.43
10,000.0	1.02	89.97	9,996.0	-34.8	141.6	-43.5	0.54	-0.39	-17.70
10,100.0	0.94	89.23	10,096.0	-34.8	143.3	-43.6	0.08	-0.08	-0.74
10,200.0	0.62	84.21	10,196.0	-34.7	144.6	-43.6	0.33	-0.32	-5.02
10,255.0	0.48	99.34	10,251.0	-34.7	145.2	-43.7	0.36	-0.25	27.51
10255' MD MS Gyro									
10,383.0	5.10	332.10	10,378.8	-29.8	143.0	-38.6	4.22	3.61	-99.41
10,414.0	9.80	327.80	10,409.5	-26.3	141.0	-35.0	15.26	15.16	-13.87
10,446.0	13.70	326.30	10,440.9	-20.9	137.4	-29.4	12.22	12.19	-4.69
10,478.0	18.20	320.90	10,471.6	-13.8	132.2	-22.0	14.79	14.06	-16.88
10,510.0	21.90	317.40	10,501.7	-5.6	125.0	-13.3	12.15	11.56	-10.94
10,541.0	24.10	312.90	10,530.2	3.0	116.4	-4.2	9.08	7.10	-14.52
10,573.0	26.50	310.20	10,559.1	12.0	106.2	5.5	8.32	7.50	-8.44
10,605.0	28.40	311.70	10,587.5	21.7	95.0	15.8	6.32	5.94	4.69
10,637.0	30.70	315.20	10,615.4	32.6	83.6	27.3	8.98	7.19	10.94
10,668.0	34.30	318.90	10,641.5	44.8	72.3	40.2	13.26	11.61	11.94
10,700.0	37.30	319.80	10,667.5	59.0	60.1	55.2	9.52	9.38	2.81
10,732.0	40.10	320.20	10,692.4	74.3	47.2	71.2	8.78	8.75	1.25
10,763.0	42.70	319.70	10,715.7	90.0	34.0	87.7	8.45	8.39	-1.61
10,795.0	44.20	320.20	10,738.9	106.8	19.9	105.4	4.81	4.69	1.56
10,827.0	45.10	321.80	10,761.7	124.3	5.7	123.7	4.50	2.81	5.00
10,858.0	47.40	321.40	10,783.1	141.9	-8.2	142.1	7.48	7.42	-1.29
10,890.0	51.70	322.60	10,803.9	161.1	-23.2	162.2	13.74	13.44	3.75
10,922.0	55.90	324.40	10,822.8	181.8	-38.5	183.9	13.89	13.13	5.63
10,954.0	59.30	325.90	10,839.9	204.0	-53.9	206.9	11.34	10.63	4.69
10,985.0	61.80	326.30	10,855.2	226.4	-69.0	230.2	8.14	8.06	1.29
11,017.0	64.70	325.80	10,869.6	250.1	-85.0	254.9	9.17	9.06	-1.56
11,049.0	67.40	326.00	10,882.6	274.3	-101.4	280.1	8.46	8.44	0.63
11,081.0	69.50	326.90	10,894.3	299.1	-117.8	305.8	7.06	6.56	2.81
11,112.0	71.20	327.90	10,904.7	323.7	-133.5	331.4	6.27	5.48	3.23
11,144.0	72.00	332.30	10,914.8	350.0	-148.7	358.6	13.28	2.50	13.75
11,176.0	74.90	336.30	10,924.0	377.7	-161.9	387.0	15.02	9.06	12.50
11,208.0	77.90	339.70	10,931.5	406.5	-173.6	416.5	13.95	9.38	10.63
11,237.0	80.00	344.10	10,937.0	433.5	-182.4	444.0	16.56	7.24	15.17
11,269.0	80.50	348.10	10,942.5	464.1	-190.0	475.0	12.42	1.56	12.50
11,285.8	80.99	349.57	10,945.2	480.4	-193.2	491.5	9.08	2.89	8.72
LP Marathon Road 14 MD Federal #1H									
11,300.0	81.40	350.80	10,947.3	494.2	-195.6	505.4	9.08	2.92	8.70
11,332.0	82.50	354.40	10,951.8	525.7	-199.7	537.0	11.66	3.44	11.25
11,364.0	83.80	356.10	10,955.6	557.3	-202.3	568.8	6.66	4.06	5.31
11,440.0	91.20	1.00	10,959.0	633.1	-204.2	644.6	11.67	9.74	6.45



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
11,535.0	91.40	359.80	10,956.8	728.1	-203.6	739.3	1.28	0.21	-1.26
11,630.0	90.40	0.80	10,955.3	823.1	-203.1	834.1	1.49	-1.05	1.05
11,725.0	89.50	0.20	10,955.4	918.1	-202.2	928.9	1.14	-0.95	-0.63
11,820.0	88.90	359.40	10,956.7	1,013.1	-202.6	1,023.7	1.05	-0.63	-0.84
11,914.0	88.80	359.00	10,958.6	1,107.1	-203.9	1,117.6	0.44	-0.11	-0.43
12,008.0	87.90	358.60	10,961.3	1,201.0	-205.8	1,211.4	1.05	-0.96	-0.43
12,105.0	88.80	358.00	10,964.1	1,297.9	-208.7	1,308.3	1.11	0.93	-0.62
12,165.0	90.20	358.80	10,964.6	1,357.9	-210.4	1,368.3	2.69	2.33	1.33
12,229.0	89.80	359.00	10,964.6	1,421.9	-211.6	1,432.2	0.70	-0.63	0.31
12,292.0	91.60	358.80	10,963.9	1,484.9	-212.8	1,495.2	2.87	2.86	-0.32
12,355.0	91.60	358.70	10,962.1	1,547.8	-214.2	1,558.1	0.16	0.00	-0.16
12,418.0	91.20	358.30	10,960.6	1,610.8	-215.9	1,621.0	0.90	-0.63	-0.63
12,482.0	90.80	357.50	10,959.4	1,674.7	-218.2	1,685.0	1.40	-0.63	-1.25
12,577.0	90.50	357.60	10,958.4	1,769.6	-222.3	1,780.0	0.33	-0.32	0.11
12,672.0	92.20	359.80	10,956.1	1,864.6	-224.4	1,874.9	2.93	1.79	2.32
12,767.0	90.00	358.80	10,954.3	1,959.5	-225.6	1,969.7	2.54	-2.32	-1.05
12,862.0	89.40	358.30	10,954.8	2,054.5	-228.0	2,064.7	0.82	-0.63	-0.53
12,956.0	89.20	358.30	10,956.0	2,148.5	-230.8	2,158.6	0.21	-0.21	0.00
13,051.0	90.10	357.40	10,956.5	2,243.4	-234.3	2,253.6	1.34	0.95	-0.95
13,146.0	91.10	359.30	10,955.5	2,338.3	-237.1	2,348.5	2.26	1.05	2.00
13,241.0	91.00	358.70	10,953.8	2,433.3	-238.7	2,443.4	0.64	-0.11	-0.63
13,336.0	90.30	358.70	10,952.7	2,528.3	-240.9	2,538.3	0.74	-0.74	0.00
13,431.0	91.80	357.80	10,951.0	2,623.2	-243.8	2,633.3	1.84	1.58	-0.95
13,526.0	91.00	357.60	10,948.7	2,718.1	-247.6	2,728.2	0.87	-0.84	-0.21
13,621.0	90.70	357.50	10,947.2	2,813.0	-251.7	2,823.2	0.33	-0.32	-0.11
13,716.0	89.90	357.10	10,946.8	2,907.9	-256.1	2,918.2	0.94	-0.84	-0.42
13,811.0	90.80	358.40	10,946.2	3,002.8	-259.9	3,013.1	1.66	0.95	1.37
13,906.0	90.30	357.60	10,945.3	3,097.8	-263.2	3,108.1	0.99	-0.53	-0.84
14,001.0	89.60	356.40	10,945.3	3,192.6	-268.1	3,203.1	1.46	-0.74	-1.26
14,096.0	89.30	358.40	10,946.3	3,287.5	-272.5	3,298.1	2.13	-0.32	2.11
14,192.0	90.60	358.70	10,946.3	3,383.5	-274.9	3,394.0	1.39	1.35	0.31
14,287.0	92.20	358.50	10,944.0	3,478.4	-277.2	3,488.9	1.70	1.68	-0.21
14,382.0	91.80	358.20	10,940.7	3,573.3	-279.9	3,583.8	0.53	-0.42	-0.32
14,477.0	90.50	357.00	10,938.8	3,668.2	-283.9	3,678.8	1.86	-1.37	-1.26
14,572.0	90.90	357.60	10,937.6	3,763.1	-288.4	3,773.7	0.76	0.42	0.63
14,666.0	89.40	356.00	10,937.4	3,857.0	-293.6	3,867.7	2.33	-1.60	-1.70
14,762.0	91.00	356.80	10,937.1	3,952.8	-299.7	3,963.7	1.86	1.67	0.83
14,856.0	93.10	357.80	10,933.7	4,046.6	-304.1	4,057.7	2.47	2.23	1.06
14,951.0	91.50	359.30	10,929.9	4,141.5	-306.5	4,152.5	2.31	-1.68	1.58
15,046.0	90.90	358.70	10,927.9	4,236.4	-308.1	4,247.4	0.89	-0.63	-0.63
15,141.0	90.20	359.90	10,927.0	4,331.4	-309.3	4,342.3	1.46	-0.74	1.26
15,235.0	89.30	358.80	10,927.4	4,425.4	-310.4	4,436.1	1.51	-0.96	-1.17
15,330.0	90.00	357.90	10,928.0	4,520.4	-313.1	4,531.1	1.20	0.74	-0.95



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

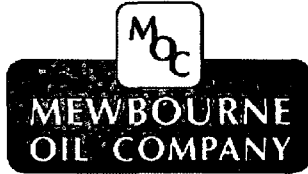
Survey

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)
15,425.0	88.60	357.00	10,929.1	4,615.3	-317.3	4,626.1	1.75	-1.47	-0.95
15,520.0	88.80	356.30	10,931.3	4,710.1	-322.9	4,721.0	0.77	0.21	-0.74
15,615.0	89.30	355.80	10,932.9	4,804.8	-329.4	4,816.0	0.74	0.53	-0.53
15,710.0	89.90	356.90	10,933.5	4,899.6	-335.5	4,911.0	1.32	0.63	1.16
15,805.0	91.60	357.70	10,932.3	4,994.5	-340.0	5,006.0	1.98	1.79	0.84
15,868.0	91.10	355.40	10,930.8	5,057.4	-343.7	5,069.0	3.74	-0.79	-3.65
15,925.0	91.10	355.40	10,929.7	5,114.2	-348.3	5,125.9	0.00	0.00	0.00

15925' MD Projected to Bit - PBHL Marathon Road 14 MD Federal #1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,255.0	10,251.0	-34.7	145.2	10255' MD MS Gyro
15,925.0	10,929.7	5,114.2	-348.3	15925' MD Projected to Bit



Mewbourne Oil Company .

Lea County N.M.

Section 14-20S-34E Marathon Road 14 MD

Marathon Road 14 MD Federal #1H

Original Hole

Design: Original Hole

Survey Report - Geographic

08 September, 2014





Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Lea County N.M.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section14-20S-34E Marathon Road 14 MD		
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Site Position:		Northing:	570,285.20 usft	Latitude:	32° 33' 55.060 N
From:	Map	Easting:	745,520.43 usft	Longitude:	103° 32' 11.044 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	Marathon Road 14 MD Federal #1H				
Well Position	+N/-S	0.0 usft	Northing:	570,285.20 usft	Latitude: 32° 33' 55.060 N
	+E/-W	0.0 usft	Easting:	745,520.43 usft	Longitude: 103° 32' 11.044 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 3,651.0 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/28/2014	7.20	60.43	48,503

Design	Original Hole				
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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	356.45

Survey Program	Date	9/8/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,255.0	MS Gyro Survey #1 (Original Hole)	GyroFlex		
10,383.0	15,925.0	Survey #2 (Original Hole)	MWD	MWD v3:standard declination	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	570,285.20	745,520.43	32° 33' 55.060 N	103° 32' 11.044 W
100.0	0.13	167.92	100.0	-0.1	0.0	570,285.09	745,520.45	32° 33' 55.059 N	103° 32' 11.044 W
200.0	0.26	168.70	200.0	-0.4	0.1	570,284.75	745,520.52	32° 33' 55.056 N	103° 32' 11.043 W
300.0	0.50	141.29	300.0	-1.0	0.4	570,284.19	745,520.83	32° 33' 55.050 N	103° 32' 11.040 W
400.0	0.33	147.05	400.0	-1.6	0.8	570,283.61	745,521.26	32° 33' 55.045 N	103° 32' 11.035 W
500.0	0.55	143.56	500.0	-2.2	1.3	570,282.98	745,521.71	32° 33' 55.038 N	103° 32' 11.030 W
600.0	0.36	164.60	600.0	-2.9	1.6	570,282.29	745,522.07	32° 33' 55.031 N	103° 32' 11.025 W
700.0	0.60	149.56	700.0	-3.7	2.0	570,281.54	745,522.42	32° 33' 55.024 N	103° 32' 11.021 W
800.0	0.58	151.86	800.0	-4.6	2.5	570,280.64	745,522.93	32° 33' 55.015 N	103° 32' 11.016 W
900.0	1.24	151.60	900.0	-6.0	3.3	570,279.24	745,523.68	32° 33' 55.001 N	103° 32' 11.007 W
1,000.0	1.38	153.93	999.9	-8.0	4.3	570,277.21	745,524.72	32° 33' 54.981 N	103° 32' 10.995 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,100.0	1.70	141.72	1,099.9	-10.2	5.7	570,274.96	745,526.17	32° 33' 54.959 N	103° 32' 10.978 W
1,200.0	1.94	142.61	1,199.9	-12.7	7.7	570,272.45	745,528.12	32° 33' 54.934 N	103° 32' 10.956 W
1,300.0	1.69	138.30	1,299.8	-15.2	9.7	570,270.01	745,530.13	32° 33' 54.909 N	103° 32' 10.932 W
1,400.0	1.55	137.06	1,399.8	-17.3	11.6	570,267.91	745,532.03	32° 33' 54.888 N	103° 32' 10.910 W
1,500.0	1.19	127.15	1,499.7	-18.9	13.4	570,266.30	745,533.78	32° 33' 54.872 N	103° 32' 10.890 W
1,600.0	0.91	113.62	1,599.7	-19.8	14.9	570,265.35	745,535.33	32° 33' 54.863 N	103° 32' 10.872 W
1,700.0	0.60	110.33	1,699.7	-20.3	16.1	570,264.85	745,536.55	32° 33' 54.858 N	103° 32' 10.858 W
1,800.0	0.42	25.63	1,799.7	-20.2	16.8	570,265.00	745,537.20	32° 33' 54.859 N	103° 32' 10.850 W
1,900.0	0.31	269.59	1,899.7	-19.9	16.7	570,265.33	745,537.09	32° 33' 54.863 N	103° 32' 10.851 W
2,000.0	0.18	39.44	1,999.7	-19.7	16.5	570,265.45	745,536.92	32° 33' 54.864 N	103° 32' 10.853 W
2,100.0	0.28	65.50	2,099.7	-19.5	16.8	570,265.67	745,537.24	32° 33' 54.866 N	103° 32' 10.850 W
2,200.0	0.32	52.44	2,199.7	-19.3	17.3	570,265.94	745,537.69	32° 33' 54.869 N	103° 32' 10.844 W
2,300.0	0.38	328.34	2,299.7	-18.8	17.3	570,266.40	745,537.73	32° 33' 54.873 N	103° 32' 10.844 W
2,400.0	0.07	93.46	2,399.7	-18.5	17.2	570,266.67	745,537.62	32° 33' 54.876 N	103° 32' 10.845 W
2,500.0	0.18	32.09	2,499.7	-18.4	17.3	570,266.80	745,537.76	32° 33' 54.877 N	103° 32' 10.843 W
2,600.0	0.66	76.38	2,599.7	-18.1	18.0	570,267.07	745,538.41	32° 33' 54.880 N	103° 32' 10.836 W
2,700.0	0.88	68.44	2,699.7	-17.7	19.3	570,267.49	745,539.68	32° 33' 54.884 N	103° 32' 10.821 W
2,800.0	1.09	47.24	2,799.7	-16.8	20.7	570,268.42	745,541.09	32° 33' 54.893 N	103° 32' 10.804 W
2,900.0	0.63	42.90	2,899.7	-15.7	21.7	570,269.47	745,542.17	32° 33' 54.903 N	103° 32' 10.792 W
3,000.0	0.46	48.40	2,999.7	-15.1	22.4	570,270.14	745,542.84	32° 33' 54.910 N	103° 32' 10.784 W
3,100.0	0.45	69.78	3,099.7	-14.7	23.1	570,270.54	745,543.51	32° 33' 54.914 N	103° 32' 10.776 W
3,200.0	0.31	50.32	3,199.7	-14.4	23.7	570,270.85	745,544.09	32° 33' 54.917 N	103° 32' 10.769 W
3,300.0	0.38	54.95	3,299.7	-14.0	24.1	570,271.21	745,544.57	32° 33' 54.920 N	103° 32' 10.764 W
3,400.0	0.21	239.74	3,399.7	-13.9	24.3	570,271.31	745,544.68	32° 33' 54.921 N	103° 32' 10.762 W
3,500.0	0.14	168.19	3,499.7	-14.1	24.1	570,271.10	745,544.55	32° 33' 54.919 N	103° 32' 10.764 W
3,600.0	0.26	357.45	3,599.6	-14.0	24.1	570,271.20	745,544.56	32° 33' 54.920 N	103° 32' 10.764 W
3,700.0	0.12	302.95	3,699.6	-13.7	24.0	570,271.49	745,544.46	32° 33' 54.923 N	103° 32' 10.765 W
3,800.0	0.62	323.55	3,799.6	-13.2	23.6	570,271.98	745,544.05	32° 33' 54.928 N	103° 32' 10.769 W
3,900.0	0.90	306.78	3,899.6	-12.3	22.7	570,272.88	745,543.10	32° 33' 54.937 N	103° 32' 10.780 W
4,000.0	0.89	293.31	3,999.6	-11.5	21.3	570,273.66	745,541.76	32° 33' 54.945 N	103° 32' 10.796 W
4,100.0	0.96	301.36	4,099.6	-10.8	19.9	570,274.40	745,540.33	32° 33' 54.952 N	103° 32' 10.813 W
4,200.0	0.94	295.58	4,199.6	-10.0	18.5	570,275.19	745,538.88	32° 33' 54.960 N	103° 32' 10.830 W
4,300.0	0.37	320.45	4,299.6	-9.4	17.5	570,275.80	745,537.93	32° 33' 54.966 N	103° 32' 10.841 W
4,400.0	0.76	32.99	4,399.6	-8.6	17.7	570,276.60	745,538.09	32° 33' 54.974 N	103° 32' 10.839 W
4,500.0	1.48	48.20	4,499.6	-7.2	19.0	570,278.02	745,539.41	32° 33' 54.988 N	103° 32' 10.823 W
4,600.0	1.40	54.45	4,599.5	-5.6	20.9	570,279.59	745,541.37	32° 33' 55.003 N	103° 32' 10.800 W
4,700.0	2.49	85.96	4,699.5	-4.7	24.1	570,280.45	745,544.53	32° 33' 55.012 N	103° 32' 10.763 W
4,800.0	3.70	85.25	4,799.3	-4.3	29.5	570,280.87	745,549.91	32° 33' 55.015 N	103° 32' 10.700 W
4,900.0	3.78	84.93	4,899.1	-3.8	36.0	570,281.43	745,556.41	32° 33' 55.020 N	103° 32' 10.624 W
5,000.0	3.97	87.31	4,998.9	-3.3	42.7	570,281.89	745,563.15	32° 33' 55.024 N	103° 32' 10.545 W
5,100.0	3.60	95.41	5,098.7	-3.4	49.3	570,281.75	745,569.73	32° 33' 55.023 N	103° 32' 10.469 W
5,200.0	4.07	97.99	5,198.4	-4.2	55.9	570,280.96	745,576.37	32° 33' 55.014 N	103° 32' 10.391 W
5,300.0	4.17	98.89	5,298.2	-5.3	63.1	570,279.91	745,583.48	32° 33' 55.003 N	103° 32' 10.308 W
5,400.0	3.97	96.29	5,397.9	-6.2	70.1	570,278.97	745,590.51	32° 33' 54.994 N	103° 32' 10.226 W
5,500.0	3.84	94.91	5,497.7	-6.9	76.9	570,278.30	745,597.29	32° 33' 54.986 N	103° 32' 10.147 W
5,600.0	3.22	96.46	5,597.5	-7.5	83.0	570,277.70	745,603.42	32° 33' 54.980 N	103° 32' 10.075 W
5,700.0	3.14	102.22	5,697.4	-8.4	88.5	570,276.80	745,608.89	32° 33' 54.971 N	103° 32' 10.012 W
5,800.0	2.93	102.21	5,797.2	-9.5	93.6	570,275.68	745,614.06	32° 33' 54.959 N	103° 32' 9.951 W
5,900.0	2.59	101.59	5,897.1	-10.5	98.3	570,274.69	745,618.77	32° 33' 54.949 N	103° 32' 9.896 W
6,000.0	2.11	104.01	5,997.0	-11.4	102.3	570,273.79	745,622.77	32° 33' 54.940 N	103° 32' 9.850 W
6,100.0	1.99	106.89	6,097.0	-12.4	105.8	570,272.84	745,626.22	32° 33' 54.930 N	103° 32' 9.809 W
6,200.0	1.40	103.75	6,196.9	-13.2	108.6	570,272.04	745,629.07	32° 33' 54.922 N	103° 32' 9.776 W
6,300.0	1.65	107.14	6,296.9	-13.9	111.2	570,271.33	745,631.63	32° 33' 54.915 N	103° 32' 9.746 W
6,400.0	1.45	110.37	6,396.8	-14.7	113.8	570,270.47	745,634.19	32° 33' 54.906 N	103° 32' 9.716 W
6,500.0	1.67	134.12	6,496.8	-16.2	116.0	570,269.01	745,636.42	32° 33' 54.892 N	103° 32' 9.690 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,600.0	1.73	144.35	6,596.8	-18.4	117.9	570,266.77	745,638.35	32° 33' 54.869 N	103° 32' 9.668 W
6,700.0	1.84	162.55	6,696.7	-21.2	119.3	570,264.01	745,639.71	32° 33' 54.842 N	103° 32' 9.652 W
6,800.0	1.70	163.67	6,796.7	-24.1	120.2	570,261.06	745,640.61	32° 33' 54.813 N	103° 32' 9.642 W
6,900.0	1.31	169.76	6,896.6	-26.7	120.8	570,258.51	745,641.23	32° 33' 54.787 N	103° 32' 9.635 W
7,000.0	1.46	177.79	6,996.6	-29.1	121.1	570,256.11	745,641.48	32° 33' 54.764 N	103° 32' 9.632 W
7,100.0	1.50	180.69	7,096.6	-31.7	121.1	570,253.53	745,641.51	32° 33' 54.738 N	103° 32' 9.632 W
7,200.0	1.41	167.39	7,196.5	-34.2	121.3	570,251.02	745,641.77	32° 33' 54.713 N	103° 32' 9.630 W
7,300.0	0.98	174.82	7,296.5	-36.2	121.7	570,248.97	745,642.11	32° 33' 54.693 N	103° 32' 9.626 W
7,400.0	0.84	170.14	7,396.5	-37.8	121.9	570,247.39	745,642.32	32° 33' 54.677 N	103° 32' 9.624 W
7,500.0	0.88	169.72	7,496.5	-39.3	122.2	570,245.91	745,642.58	32° 33' 54.663 N	103° 32' 9.621 W
7,600.0	0.76	153.05	7,596.5	-40.6	122.6	570,244.57	745,643.02	32° 33' 54.649 N	103° 32' 9.616 W
7,700.0	0.63	180.51	7,696.5	-41.8	122.9	570,243.43	745,643.31	32° 33' 54.638 N	103° 32' 9.612 W
7,800.0	0.63	208.59	7,796.5	-42.8	122.6	570,242.39	745,643.04	32° 33' 54.628 N	103° 32' 9.615 W
7,900.0	0.82	196.63	7,896.5	-44.0	122.2	570,241.23	745,642.58	32° 33' 54.616 N	103° 32' 9.621 W
8,000.0	0.86	193.54	7,996.5	-45.4	121.8	570,239.81	745,642.20	32° 33' 54.602 N	103° 32' 9.626 W
8,100.0	0.40	185.32	8,096.4	-46.5	121.6	570,238.73	745,641.99	32° 33' 54.592 N	103° 32' 9.628 W
8,200.0	0.63	211.08	8,196.4	-47.3	121.2	570,237.92	745,641.67	32° 33' 54.584 N	103° 32' 9.632 W
8,300.0	0.27	190.92	8,296.4	-48.0	120.9	570,237.21	745,641.34	32° 33' 54.577 N	103° 32' 9.636 W
8,400.0	0.19	353.56	8,396.4	-48.1	120.9	570,237.15	745,641.28	32° 33' 54.576 N	103° 32' 9.637 W
8,500.0	0.14	333.85	8,496.4	-47.8	120.8	570,237.42	745,641.21	32° 33' 54.579 N	103° 32' 9.637 W
8,600.0	0.20	310.61	8,596.4	-47.6	120.6	570,237.64	745,641.02	32° 33' 54.581 N	103° 32' 9.639 W
8,700.0	0.36	280.48	8,696.4	-47.4	120.2	570,237.82	745,640.58	32° 33' 54.583 N	103° 32' 9.645 W
8,800.0	0.68	274.01	8,796.4	-47.3	119.3	570,237.91	745,639.68	32° 33' 54.584 N	103° 32' 9.655 W
8,900.0	0.54	313.75	8,896.4	-46.9	118.3	570,238.28	745,638.75	32° 33' 54.587 N	103° 32' 9.666 W
9,000.0	1.32	20.03	8,996.4	-45.5	118.4	570,239.69	745,638.80	32° 33' 54.601 N	103° 32' 9.665 W
9,100.0	1.99	38.45	9,096.4	-43.1	119.8	570,242.13	745,640.27	32° 33' 54.625 N	103° 32' 9.648 W
9,200.0	1.62	41.58	9,196.3	-40.6	121.9	570,244.55	745,642.29	32° 33' 54.649 N	103° 32' 9.624 W
9,300.0	1.38	43.00	9,296.3	-38.7	123.6	570,246.49	745,644.05	32° 33' 54.668 N	103° 32' 9.603 W
9,400.0	1.59	45.02	9,396.3	-36.8	125.4	570,248.35	745,645.85	32° 33' 54.686 N	103° 32' 9.582 W
9,500.0	2.07	65.06	9,496.2	-35.1	128.0	570,250.09	745,648.47	32° 33' 54.703 N	103° 32' 9.551 W
9,600.0	2.14	73.47	9,596.1	-33.8	131.5	570,251.38	745,651.90	32° 33' 54.716 N	103° 32' 9.511 W
9,700.0	1.57	93.08	9,696.1	-33.4	134.6	570,251.84	745,655.06	32° 33' 54.720 N	103° 32' 9.474 W
9,800.0	1.38	105.24	9,796.1	-33.7	137.2	570,251.45	745,657.59	32° 33' 54.716 N	103° 32' 9.445 W
9,900.0	1.41	107.67	9,896.0	-34.4	139.5	570,250.76	745,659.92	32° 33' 54.709 N	103° 32' 9.417 W
10,000.0	1.02	89.97	9,996.0	-34.8	141.6	570,250.39	745,661.99	32° 33' 54.705 N	103° 32' 9.393 W
10,100.0	0.94	89.23	10,096.0	-34.8	143.3	570,250.40	745,663.70	32° 33' 54.705 N	103° 32' 9.373 W
10,200.0	0.62	84.21	10,196.0	-34.7	144.6	570,250.46	745,665.05	32° 33' 54.706 N	103° 32' 9.358 W
10,255.0	0.48	99.34	10,251.0	-34.7	145.2	570,250.46	745,665.58	32° 33' 54.706 N	103° 32' 9.351 W
10255' MD MS Gyro									
10,383.0	5.10	332.10	10,378.8	-29.8	143.0	570,255.40	745,663.44	32° 33' 54.755 N	103° 32' 9.376 W
10,414.0	9.80	327.80	10,409.5	-26.3	141.0	570,258.85	745,661.39	32° 33' 54.789 N	103° 32' 9.400 W
10,446.0	13.70	326.30	10,440.9	-20.9	137.4	570,264.31	745,657.84	32° 33' 54.844 N	103° 32' 9.441 W
10,478.0	18.20	320.90	10,471.6	-13.8	132.2	570,271.35	745,652.58	32° 33' 54.914 N	103° 32' 9.502 W
10,510.0	21.90	317.40	10,501.7	-5.6	125.0	570,279.62	745,645.38	32° 33' 54.996 N	103° 32' 9.585 W
10,541.0	24.10	312.90	10,530.2	3.0	116.4	570,288.19	745,636.83	32° 33' 55.081 N	103° 32' 9.684 W
10,573.0	26.50	310.20	10,559.1	12.0	106.2	570,297.24	745,626.59	32° 33' 55.172 N	103° 32' 9.803 W
10,605.0	28.40	311.70	10,587.5	21.7	95.0	570,306.92	745,615.46	32° 33' 55.268 N	103° 32' 9.932 W
10,637.0	30.70	315.20	10,615.4	32.6	83.6	570,317.78	745,604.02	32° 33' 55.377 N	103° 32' 10.065 W
10,668.0	34.30	318.90	10,641.5	44.8	72.3	570,329.98	745,592.69	32° 33' 55.498 N	103° 32' 10.196 W
10,700.0	37.30	319.80	10,667.5	59.0	60.1	570,344.18	745,580.51	32° 33' 55.640 N	103° 32' 10.337 W
10,732.0	40.10	320.20	10,692.4	74.3	47.2	570,359.51	745,567.65	32° 33' 55.792 N	103° 32' 10.486 W
10,763.0	42.70	319.70	10,715.7	90.0	34.0	570,375.20	745,554.46	32° 33' 55.948 N	103° 32' 10.639 W
10,795.0	44.20	320.20	10,738.9	106.8	19.9	570,392.05	745,540.30	32° 33' 56.116 N	103° 32' 10.803 W
10,827.0	45.10	321.80	10,761.7	124.3	5.7	570,409.52	745,526.15	32° 33' 56.290 N	103° 32' 10.967 W
10,858.0	47.40	321.40	10,783.1	141.9	-8.2	570,427.07	745,512.24	32° 33' 56.465 N	103° 32' 11.128 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon Road 14 MD Federal #1H
Project:	Lea County N.M.	TVD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,890.0	51.70	322.60	10,803.9	161.1	-23.2	570,446.26	745,497.26	32° 33' 56.656 N	103° 32' 11.301 W
10,922.0	55.90	324.40	10,822.8	181.8	-38.5	570,467.02	745,481.91	32° 33' 56.862 N	103° 32' 11.479 W
10,954.0	59.30	325.90	10,839.9	204.0	-53.9	570,489.19	745,466.48	32° 33' 57.083 N	103° 32' 11.657 W
10,985.0	61.80	326.30	10,855.2	226.4	-69.0	570,511.59	745,451.42	32° 33' 57.306 N	103° 32' 11.831 W
11,017.0	64.70	325.80	10,869.6	250.1	-85.0	570,535.29	745,435.47	32° 33' 57.541 N	103° 32' 12.015 W
11,049.0	67.40	326.00	10,882.6	274.3	-101.4	570,559.51	745,419.07	32° 33' 57.782 N	103° 32' 12.205 W
11,081.0	69.50	326.90	10,894.3	299.1	-117.8	570,584.31	745,402.63	32° 33' 58.029 N	103° 32' 12.395 W
11,112.0	71.20	327.90	10,904.7	323.7	-133.5	570,608.91	745,386.90	32° 33' 58.273 N	103° 32' 12.576 W
11,144.0	72.00	332.30	10,914.8	350.0	-148.7	570,635.22	745,371.77	32° 33' 58.535 N	103° 32' 12.751 W
11,176.0	74.90	336.30	10,924.0	377.7	-161.9	570,662.86	745,358.48	32° 33' 58.809 N	103° 32' 12.904 W
11,208.0	77.90	339.70	10,931.5	406.5	-173.6	570,691.69	745,346.84	32° 33' 59.095 N	103° 32' 13.037 W
11,237.0	80.00	344.10	10,937.0	433.5	-182.4	570,718.74	745,338.00	32° 33' 59.364 N	103° 32' 13.138 W
11,269.0	80.50	348.10	10,942.5	464.1	-190.0	570,749.34	745,330.43	32° 33' 59.667 N	103° 32' 13.224 W
11,285.8	80.99	349.57	10,945.2	480.4	-193.2	570,765.63	745,327.21	32° 33' 59.828 N	103° 32' 13.260 W
LP Marathon Road 14 MD Federal #1H									
11,300.0	81.40	350.80	10,947.3	494.2	-195.6	570,779.44	745,324.82	32° 33' 59.965 N	103° 32' 13.287 W
11,332.0	82.50	354.40	10,951.8	525.7	-199.7	570,810.85	745,320.74	32° 34' 0.276 N	103° 32' 13.332 W
11,364.0	83.80	356.10	10,955.6	557.3	-202.3	570,842.51	745,318.11	32° 34' 0.590 N	103° 32' 13.360 W
11,440.0	91.20	1.00	10,959.0	633.1	-204.2	570,918.34	745,316.20	32° 34' 1.340 N	103° 32' 13.375 W
11,535.0	91.40	359.80	10,956.8	728.1	-203.6	571,013.31	745,316.87	32° 34' 2.280 N	103° 32' 13.359 W
11,630.0	90.40	0.80	10,955.3	823.1	-203.1	571,108.30	745,317.36	32° 34' 3.220 N	103° 32' 13.345 W
11,725.0	89.50	0.20	10,955.4	918.1	-202.2	571,203.29	745,318.19	32° 34' 4.160 N	103° 32' 13.327 W
11,820.0	88.90	359.40	10,956.7	1,013.1	-202.6	571,298.28	745,317.86	32° 34' 5.100 N	103° 32' 13.323 W
11,914.0	88.80	359.00	10,958.6	1,107.1	-203.9	571,392.25	745,316.55	32° 34' 6.030 N	103° 32' 13.330 W
12,008.0	87.90	358.60	10,961.3	1,201.0	-205.8	571,486.19	745,314.58	32° 34' 6.959 N	103° 32' 13.345 W
12,105.0	88.80	358.00	10,964.1	1,297.9	-208.7	571,583.11	745,311.71	32° 34' 7.918 N	103° 32' 13.370 W
12,165.0	90.20	358.80	10,964.6	1,357.9	-210.4	571,643.08	745,310.03	32° 34' 8.512 N	103° 32' 13.384 W
12,229.0	89.80	359.00	10,964.6	1,421.9	-211.6	571,707.07	745,308.80	32° 34' 9.145 N	103° 32' 13.393 W
12,292.0	91.60	358.80	10,963.9	1,484.9	-212.8	571,770.05	745,307.59	32° 34' 9.769 N	103° 32' 13.401 W
12,355.0	91.60	358.70	10,962.1	1,547.8	-214.2	571,833.01	745,306.22	32° 34' 10.392 N	103° 32' 13.412 W
12,418.0	91.20	358.30	10,960.6	1,610.8	-215.9	571,895.97	745,304.57	32° 34' 11.015 N	103° 32' 13.426 W
12,482.0	90.80	357.50	10,959.4	1,674.7	-218.2	571,959.92	745,302.23	32° 34' 11.648 N	103° 32' 13.447 W
12,577.0	90.50	357.60	10,958.4	1,769.6	-222.3	572,054.82	745,298.16	32° 34' 12.587 N	103° 32' 13.487 W
12,672.0	92.20	359.80	10,956.1	1,864.6	-224.4	572,149.76	745,296.01	32° 34' 13.527 N	103° 32' 13.504 W
12,767.0	90.00	358.80	10,954.3	1,959.5	-225.6	572,244.73	745,294.85	32° 34' 14.466 N	103° 32' 13.509 W
12,862.0	89.40	358.30	10,954.8	2,054.5	-228.0	572,339.70	745,292.44	32° 34' 15.406 N	103° 32' 13.529 W
12,956.0	89.20	358.30	10,956.0	2,148.5	-230.8	572,433.65	745,289.66	32° 34' 16.336 N	103° 32' 13.553 W
13,051.0	90.10	357.40	10,956.5	2,243.4	-234.3	572,528.58	745,286.09	32° 34' 17.276 N	103° 32' 13.586 W
13,146.0	91.10	359.30	10,955.5	2,338.3	-237.1	572,623.53	745,283.36	32° 34' 18.215 N	103° 32' 13.610 W
13,241.0	91.00	358.70	10,953.8	2,433.3	-238.7	572,718.50	745,281.70	32° 34' 19.155 N	103° 32' 13.621 W
13,336.0	90.30	358.70	10,952.7	2,528.3	-240.9	572,813.47	745,279.54	32° 34' 20.095 N	103° 32' 13.638 W
13,431.0	91.80	357.80	10,951.0	2,623.2	-243.8	572,908.40	745,276.64	32° 34' 21.035 N	103° 32' 13.663 W
13,526.0	91.00	357.60	10,948.7	2,718.1	-247.6	573,003.30	745,272.83	32° 34' 21.974 N	103° 32' 13.700 W
13,621.0	90.70	357.50	10,947.2	2,813.0	-251.7	573,098.20	745,268.77	32° 34' 22.913 N	103° 32' 13.739 W
13,716.0	89.90	357.10	10,946.8	2,907.9	-256.1	573,193.09	745,264.30	32° 34' 23.853 N	103° 32' 13.783 W
13,811.0	90.80	358.40	10,946.2	3,002.8	-259.9	573,288.01	745,260.57	32° 34' 24.792 N	103° 32' 13.818 W
13,906.0	90.30	357.60	10,945.3	3,097.8	-263.2	573,382.95	745,257.25	32° 34' 25.732 N	103° 32' 13.849 W
14,001.0	89.60	356.40	10,945.3	3,192.6	-268.1	573,477.82	745,252.28	32° 34' 26.671 N	103° 32' 13.898 W
14,096.0	89.30	358.40	10,946.3	3,287.5	-272.5	573,572.71	745,247.97	32° 34' 27.610 N	103° 32' 13.940 W
14,192.0	90.60	358.70	10,946.3	3,383.5	-274.9	573,668.68	745,245.54	32° 34' 28.560 N	103° 32' 13.960 W
14,287.0	92.20	358.50	10,944.0	3,478.4	-277.2	573,763.62	745,243.22	32° 34' 29.499 N	103° 32' 13.979 W
14,382.0	91.80	358.20	10,940.7	3,573.3	-279.9	573,858.52	745,240.49	32° 34' 30.439 N	103° 32' 14.003 W
14,477.0	90.50	357.00	10,938.8	3,668.2	-283.9	573,953.41	745,236.51	32° 34' 31.378 N	103° 32' 14.041 W
14,572.0	90.90	357.60	10,937.6	3,763.1	-288.4	574,048.30	745,232.04	32° 34' 32.317 N	103° 32' 14.085 W
14,666.0	89.40	356.00	10,937.4	3,857.0	-293.6	574,142.15	745,226.79	32° 34' 33.246 N	103° 32' 14.138 W



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Site:	Section14-20S-34E Marathon Road 14 MD	MD Reference:	GL3651 + 20 @ 3671.0usft (Original Well Elev)
Well:	Marathon Road 14 MD Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,762.0	91.00	356.80	10,937.1	3,952.8	-299.7	574,237.95	745,220.76	32° 34' 34.195 N	103° 32' 14.200 W
14,856.0	93.10	357.80	10,933.7	4,046.6	-304.1	574,331.78	745,216.34	32° 34' 35.123 N	103° 32' 14.244 W
14,951.0	91.50	359.30	10,929.9	4,141.5	-306.5	574,426.67	745,213.93	32° 34' 36.062 N	103° 32' 14.264 W
15,046.0	90.90	358.70	10,927.9	4,236.4	-308.1	574,521.63	745,212.28	32° 34' 37.002 N	103° 32' 14.275 W
15,141.0	90.20	359.90	10,927.0	4,331.4	-309.3	574,616.62	745,211.12	32° 34' 37.942 N	103° 32' 14.280 W
15,235.0	89.30	358.80	10,927.4	4,425.4	-310.4	574,710.61	745,210.05	32° 34' 38.872 N	103° 32' 14.284 W
15,330.0	90.00	357.90	10,928.0	4,520.4	-313.1	574,805.57	745,207.32	32° 34' 39.812 N	103° 32' 14.308 W
15,425.0	88.60	357.00	10,929.1	4,615.3	-317.3	574,900.46	745,203.09	32° 34' 40.751 N	103° 32' 14.349 W
15,520.0	88.80	356.30	10,931.3	4,710.1	-322.9	574,995.28	745,197.54	32° 34' 41.690 N	103° 32' 14.405 W
15,615.0	89.30	355.80	10,932.9	4,804.8	-329.4	575,090.04	745,191.00	32° 34' 42.628 N	103° 32' 14.474 W
15,710.0	89.90	356.90	10,933.5	4,899.6	-335.5	575,184.84	745,184.95	32° 34' 43.567 N	103° 32' 14.536 W
15,805.0	91.60	357.70	10,932.3	4,994.5	-340.0	575,279.72	745,180.47	32° 34' 44.506 N	103° 32' 14.580 W
15,868.0	91.10	355.40	10,930.8	5,057.4	-343.7	575,342.59	745,176.68	32° 34' 45.128 N	103° 32' 14.619 W
15,925.0	91.10	355.40	10,929.7	5,114.2	-348.3	575,399.39	745,172.11	32° 34' 45.690 N	103° 32' 14.667 W

15925' MD Projected to Bit - PBHL Marathon Road 14 MD Federal #1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,255.0	10,251.0	-34.7	145.2	10255' MD MS Gyro
15,925.0	10,929.7	5,114.2	-348.3	15925' MD Projected to Bit

MARATHON ROAD 14 MD FED #1H

Operating Company Mewbourne Oil Co.
 Well Name & Number THON ROAD 14 MD FEDERA
 Sales Ticket Number 6666621
 Date 9/8/2014

Company Rep TONY CROCI
 Field 0
 BOT Service Rep 0
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	110000	6.276	6.151	BTC / BUTT	0.03826	11,412.00	9,960	6,230	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,784.18	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		10929.70		KOP		10450.00	Open Hole		6.125	Casing Vol. (bbl)	424.0
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
Liner Top	1	10292414	JR Slv w 4.750" Alt Seal Bore ID	11081.15	4.00	5.750	3.913			

Zone Length

ZONE25

472.5

ZONE24

210.54

ZONE23

170.61

ZONE22

168.35

ZONE21

166.65

ZONE20

169.29

H4090400008	S-3 Casing Hanger Packer	11085.15	4.64	5.875	3.875		1670		
H299900281	Combo Collar (4-1/2 LT&C)	11089.79	0.59	5.000	4.500				
H299710014	4-1/2" 13.5# LT&C Spacer Nipple	11090.38	6.93	4.500	3.938				
	9 Jnts 4-1/2" 13.5# LT&C csg	11097.31	379.81	4.500	3.920				
H810090200	3.500" EXPress Sleeve (Zone 25)	11477.12	2.40	5.630		3.500	2286		
	2 Jnts 4-1/2" 13.5# LT&C csg	11479.52	82.77	4.500	3.920				
H409360008	582 OH PACKER #24	11562.29	3.89	5.820	3.875		2154		
	2 Jnts 4-1/2" 13.5# LT&C csg	11566.18	83.78	4.500	3.920				
H810090199	3.438" EXPress Sleeve (Zone 24)	11649.96	2.40	5.630		3.438	2286		
	3 Jnts 4-1/2" 13.5# LT&C csg	11652.36	124.36	4.500	3.920				
H409360008	582 OH PACKER #23	11776.72	3.89	5.820	3.875		2154		
	2 Jnts 4-1/2" 13.5# LT&C csg	11780.61	84.56	4.500	3.920				
H810090198	3.375" EXPress Sleeve (Zone 23)	11865.17	2.40	5.630		3.375	2286		
	2 Jnts 4-1/2" 13.5# LT&C csg	11867.57	83.65	4.500	3.920				
H409360008	582 OH PACKER #22	11951.22	3.89	5.820	3.875		2154		
	2 Jnts 4-1/2" 13.5# LT&C csg	11955.11	83.96	4.500	3.920				
H810090197	3.313" EXPress Sleeve (Zone 22)	12039.07	2.40	5.630		3.313	2286		
	2 Jnts 4-1/2" 13.5# LT&C csg	12041.47	81.99	4.500	3.920				
H409360008	582 OH PACKER #21	12123.46	3.89	5.820	3.875		2154		
	2 Jnts 4-1/2" 13.5# LT&C csg	12127.35	80.99	4.500	3.920				
H810090196	3.250" EXPress Sleeve (Zone 21)	12208.34	2.40	5.630		3.250	2286		
	2 Jnts 4-1/2" 13.5# LT&C csg	12210.74	83.26	4.500	3.920				
H409360008	582 OH PACKER #20	12294.00	3.89	5.820	3.875		2154		
	2 Jnts 4-1/2" 13.5# LT&C csg	12297.89	84.16	4.500	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number THON ROAD 14 MD FEDERA
 Sales Ticket Number 6666621
 Date 9/8/2014

Company Rep TONY CROCI
 Field 0
 BOT Service Rep 0
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	110000	6.276	6.151	BTC / BUTT	0.03826	11,412.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,784.18	12,410	10,690		
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-		
TVD		10929.70		KOP		10450.00		Open Hole		6.125	Casing Vol. (bbl)	424.0
Carry Fluid Weight (ppg)			8.4		Propanant Content (ppa)					Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
ZONE 19 169.75	H810090195	3.188" EXPress Sleeve (Zone 20)	12382.05	2.40	5.630		3.188	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	12384.45	82.73	4.500	3.920				
	H409360008	582 OH PACKER #19	12467.18	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	12471.07	84.13	4.500	3.920				
ZONE 18 212.88	H810090194	3.125" EXPress Sleeve (Zone 19)	12555.20	2.40	5.630		3.125	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	12557.60	83.22	4.500	3.920				
	H409360008	582 OH PACKER #18	12640.82	3.89	5.820	3.875		2154		
		3 Jnts 4-1/2" 13.5# LT&C csg	12644.71	125.88	4.500	3.920				
	H810090193	3.063' EXPress Sleeve (Zone 18)	12770.59	2.40	5.630		3.063	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	12772.99	84.60	4.500	3.920				
ZONE 17 170.77	H409360008	582 OH PACKER #17	12857.59	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	12861.48	84.34	4.500	3.920				
	H810090192	3.00" EXPress Sleeve (Zone 17)	12945.82	2.40	5.630		3.000	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	12948.22	84.03	4.500	3.920				
ZONE 16 168.64	H409360008	582 OH PACKER #16	13032.25	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13036.14	83.60	4.500	3.920				
	H810090191	2.938" EXPress Sleeve (Zone 16)	13119.74	2.40	5.630		2.938	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	13122.14	82.64	4.500	3.920				
ZONE 15 170.59	H409360008	582 OH PACKER #15	13204.78	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13208.67	83.71	4.500	3.920				
	H810090190	2.875" EXPress Sleeve (Zone 15)	13292.38	2.40	5.630		2.875	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	13294.78	84.48	4.500	3.920				
ZONE 14 171.77	H409360008	582 OH PACKER #14	13379.26	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13383.15	84.58	4.500	3.920				
	H810090189	2.813" EXPress Sleeve (Zone 14)	13467.73	2.40	5.630		2.813	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	13470.13	84.79	4.500	3.920				
ZONE 13 168.49	H409360008	582 OH PACKER #13	13554.92	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13558.81	81.35	4.500	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number THON ROAD 14 MD FEDERA
 Sales Ticket Number 6666621
 Date 9/8/2014

Company Rep TONY CROCI
 Field 0
 BOT Service Rep 0
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	110000	6.276	6.151	BTC / BUTT	0.03826	11,412.00	9,960	6,230	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,784.18	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		10929.70		KOP		10450.00	Open Hole		6.125	Casing Vol. (bbl)	424.0
Carry Fluid Weight (ppg)			8.4		Propanant Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
ZONE12 211	H810090188	2.750" EXPress Sleeve (Zone 13)	13640.16	2.40	5.630		2.750	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	13642.56	84.74	4.500	3.920				
ZONE11 170.07	H409360008	582 OH PACKER #12	13727.30	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13731.19	83.95	4.500	3.920				
ZONE10 170.93	H810090187	2.688" EXPress Sleeve (Zone 12)	13815.14	2.40	5.630		2.688	2286		
		3 Jnts 4-1/2" 13.5# LT&C csg	13817.54	124.65	4.500	3.920				
ZONE9 171.32	H409360008	582 OH PACKER #11	13942.19	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	13946.08	84.47	4.500	3.920				
ZONE8 169.41	H810090186	2.625" EXPress Sleeve (Zone 11)	14030.55	2.40	5.630		2.625	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	14032.95	83.20	4.500	3.920				
ZONE7 170.29	H409360008	582 OH PACKER #10	14116.15	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	14120.04	84.46	4.500	3.920				
ZONE6 170.24	H810090185	2.563" EXPress Sleeve (Zone 10)	14204.50	2.40	5.630		2.563	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	14206.90	84.07	4.500	3.920				
ZONE5 171.32	H409360008	582 OH PACKER #9	14290.97	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	14294.86	84.54	4.500	3.920				
ZONE4 172.39	H810090184	2.500" EXPress Sleeve (Zone 9)	14379.40	2.40	5.630		2.500	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	14381.80	84.38	4.500	3.920				
ZONE3 173.46	H409360008	582 OH PACKER #8	14466.18	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	14470.07	84.11	4.500	3.920				
ZONE2 174.53	H810090183	2.438" EXPress Sleeve (Zone 8)	14554.18	2.40	5.630		2.438	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	14556.58	82.90	4.500	3.920				
ZONE1 175.60	H409360008	582 OH PACKER #7	14639.48	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	14643.37	83.79	4.500	3.920				
ZONE0 176.67	H810090182	2.375" EXPress Sleeve (Zone7)	14727.16	2.40	5.630		2.375	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	14729.56	84.10	4.500	3.920				
ZONE-1 177.74	H409360008	582 OH PACKER #6	14813.66	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	14817.55	83.11	4.500	3.920				

Company Rep	TONY CROCI
Field	0
BOT Service Rep	0
District Location	Odessa, TX



		Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
ZONE5	214.2	H810090181	2.313" EXPress Sleeve (Zone6)	14900.66	2.40	5.630	3.920	2.313	2286		
			2 Jnts 4-1/2" 13.5# LT&C csg	14903.06	84.73	4.500	3.920				
ZONE4	169.55	H409360008	582 OH PACKER #5	14987.79	3.89	5.820	3.875		2154		
			3 Jnts 4-1/2" 13.5# LT&C csg	14991.68	126.73	4.500	3.920				
ZONE3	171.5	H810090180	2.250" EXPress Sleeve (Zone5)	15118.41	2.40	5.630		2.250	2286		
			2 Jnts 4-1/2" 13.5# LT&C csg	15120.81	85.07	4.500	3.920				
ZONE2	169.18	H409360008	582 OH PACKER #4	15205.88	3.89	5.820	3.875		2154		
			2 Jnts 4-1/2" 13.5# LT&C csg	15209.77	83.01	4.500	3.920				
ZONE1	98.3	H810090179	2.188" EXPress Sleeve (Zone4)	15292.78	2.40	5.630		2.188	2286		
			2 Jnts 4-1/2" 13.5# LT&C csg	15295.18	84.14	4.500	3.920				
ZONE2	169.18	H409360008	582 OH PACKER #3	15379.32	3.89	5.820	3.875		2154		
			2 Jnts 4-1/2" 13.5# LT&C csg	15383.21	84.93	4.500	3.920				
ZONE1	98.3	H810090178	2.125" EXPress Sleeve (Zone3)	15468.14	2.40	5.630		2.125	2286		
			2 Jnts 4-1/2" 13.5# LT&C csg	15470.54	84.17	4.500	3.920				
ZONE2	169.18	H409360008	582 OH PACKER #2	15554.71	3.89	5.820	3.875		2154		
			2 Jnts 4-1/2" 13.5# LT&C csg	15558.60	84.22	4.500	3.920				
ZONE1	98.3	H810090177	2.063" EXPress Sleeve (Zone2)	15642.82	2.40	5.630		2.063	2286		
			2 Jnts 4-1/2" 13.5# LT&C csg	15645.22	82.56	4.500	3.920				
ZONE1	98.3	H409360008	582 OH PACKER #1	15727.78	3.89	5.820	3.875		2154		
			2 Jnts 4-1/2" 13.5# LT&C csg	15731.67	82.55	4.500	3.920				
ZONE1	98.3	HALLIBURTON	4-1/2 13.5# P110 LT&C Casing Sub	15814.22	6.10	4.500	3.920				
		HALLIBURTON	Halliburton RSI CT Tool(Zone 1)	15820.32	5.76	5.750	3.635		5056		
ZONE1	98.3	HALLIBURTON	4-1/2 13.5# P110 LT&C Casing Sub	15826.08	3.10	4.500	3.920				
		HALLIBURTON	Halliburton Shut Off Collar	15829.18	1.50	5.000					
ZONE1	98.3	HALLIBURTON	4-1/2 13.5# P110 LT&C Casing Sub	15830.68	3.07	4.500	3.290				
		HALLIBURTON	Halliburton Float Collar	15833.75	1.65	5.000	3.985				
ZONE1	98.3	HALLIBURTON	4-1/2 13.5# P110 LT&C Casing Sub	15835.40	10.10	4.500	3.920				
		HALLIBURTON	Halliburton Float Shoe	15845.50	1.50	5.010	4.025				

Company Rep	TONY CROCI
Field	0
BOT Service Rep	0
District Location	Odessa, TX

[illegible]



Job Number: SVMO-141426
 Company: Mewbourne Oil & Gas
 Lease/Well: Marathon Road 15 B3OB Federal 1H
 Location: Lea County, NM
 Rig Name: Patterson #45
 RKB: 16'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 6.86°
 Grid: East To Grid North
 File name: Y:\WINSER~1\2014SU~1\MEWBOU~1\MOIMARATH~1\15B3OB~1\1H.SVY
 Date/Time: 27-Oct-14 / 10:32
 Curve Name: Surface - 10324' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 3.23

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 10324' MD is, to the best of
 our knowledge a true and accurate account of the
 well bore.

Clayton Turner 10/27/14
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.01	99.61	100.00	.00	.01	.00	.01	99.53	.01
200.00	.08	193.51	200.00	-.07	.00	-.07	.07	179.26	.08
300.00	.06	34.44	300.00	-.10	.01	-.09	.10	171.53	.14
400.00	.11	85.99	400.00	-.05	.14	-.04	.15	108.09	.09
500.00	.13	37.29	500.00	.05	.30	.07	.31	80.41	.10
600.00	.16	62.01	600.00	.21	.50	.23	.54	67.34	.07
700.00	.18	28.53	700.00	.41	.69	.45	.81	59.40	.10
800.00	.27	283.13	800.00	.60	.54	.63	.81	41.88	.36
900.00	.20	222.63	900.00	.53	.19	.54	.56	20.04	.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	.23	189.82	1000.00	.20	.04	.20	.21	11.21	.12
1100.00	.52	188.61	1099.99	-.45	-.06	-.45	.45	187.96	.29
1200.00	.58	187.61	1199.99	-1.40	-.20	-1.40	1.41	188.04	.06
1300.00	.97	185.13	1299.98	-2.74	-.34	-2.76	2.76	187.07	.39
1400.00	.82	187.77	1399.97	-4.29	-.51	-4.31	4.32	186.81	.16
1500.00	.61	169.71	1499.96	-5.53	-.51	-5.55	5.55	185.32	.31
1600.00	.80	150.19	1599.95	-6.65	-.07	-6.65	6.66	180.62	.30
1700.00	1.03	111.08	1699.94	-7.58	1.11	-7.51	7.67	171.64	.65
1800.00	.88	85.87	1799.93	-7.85	2.72	-7.69	8.31	160.90	.44
1900.00	.27	17.28	1899.92	-7.57	3.55	-7.36	8.36	154.85	.82
2000.00	.32	52.63	1999.92	-7.18	3.85	-6.95	8.14	151.81	.19
2100.00	.27	90.84	2099.92	-7.01	4.30	-6.76	8.23	148.46	.20
2200.00	.13	83.65	2199.92	-7.00	4.65	-6.73	8.41	146.40	.14
2300.00	.27	136.97	2299.92	-7.16	4.93	-6.87	8.69	145.48	.22
2400.00	.20	105.73	2399.92	-7.38	5.25	-7.07	9.06	144.55	.14
2500.00	.29	91.71	2499.92	-7.44	5.68	-7.10	9.35	142.65	.11
2600.00	.25	200.98	2599.92	-7.65	5.85	-7.31	9.63	142.58	.44
2700.00	.65	61.39	2699.92	-7.58	6.27	-7.21	9.84	140.40	.86
2800.00	1.64	58.17	2799.89	-6.55	7.98	-6.09	10.33	129.38	.99
2900.00	2.21	60.03	2899.84	-4.83	10.87	-4.21	11.90	113.98	.57
3000.00	2.53	63.22	2999.75	-2.88	14.51	-2.06	14.79	101.22	.35
3100.00	3.05	65.36	3099.63	-.77	18.90	.29	18.92	92.34	.53
3200.00	3.06	66.96	3199.49	1.38	23.77	2.72	23.81	86.68	.09
3300.00	3.14	69.78	3299.34	3.37	28.80	4.99	29.00	83.32	.17
3400.00	2.50	82.97	3399.22	4.58	33.53	6.47	33.85	82.21	.91
3500.00	1.86	96.25	3499.15	4.68	37.31	6.77	37.60	82.86	.81
3600.00	1.42	105.39	3599.11	4.17	40.12	6.42	40.34	84.07	.51
3700.00	1.31	107.82	3699.08	3.49	42.40	5.87	42.55	85.29	.12
3800.00	1.40	109.08	3799.05	2.74	44.65	5.25	44.73	86.49	.09

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	1.62	107.28	3899.02	1.92	47.15	4.58	47.19	87.67	.23
4000.00	1.91	117.49	3998.97	.73	49.98	3.55	49.98	89.16	.43
4100.00	1.56	122.94	4098.93	-.78	52.60	2.19	52.60	90.85	.39
4200.00	1.27	113.51	4198.90	-1.96	54.76	1.13	54.79	92.05	.37
4300.00	1.52	101.96	4298.87	-2.68	57.07	.54	57.13	92.68	.38
4400.00	1.67	109.97	4398.83	-3.45	59.74	-.08	59.84	93.30	.27
4500.00	1.61	113.16	4498.79	-4.50	62.40	-.97	62.56	94.12	.11
4600.00	2.06	144.57	4598.74	-6.51	64.73	-2.86	65.06	95.75	1.08
4700.00	1.99	143.91	4698.68	-9.38	66.80	-5.60	67.45	98.00	.07
4800.00	2.04	142.89	4798.61	-12.20	68.89	-8.30	69.97	100.05	.06
4900.00	2.07	143.03	4898.55	-15.07	71.05	-11.04	72.63	101.97	.03
5000.00	2.05	142.55	4998.48	-17.93	73.23	-13.78	75.39	103.76	.03
5100.00	2.00	133.95	5098.42	-20.56	75.57	-16.27	78.32	105.22	.31
5200.00	2.04	131.63	5198.36	-22.95	78.16	-18.51	81.46	106.37	.09
5300.00	1.95	133.55	5298.30	-25.31	80.72	-20.72	84.60	107.41	.11
5400.00	1.68	136.22	5398.25	-27.54	82.97	-22.82	87.42	108.36	.28
5500.00	1.43	139.50	5498.21	-29.55	84.79	-24.72	89.79	109.21	.27
5600.00	.93	124.98	5598.19	-30.96	86.27	-26.05	91.66	109.74	.58
5700.00	.94	121.01	5698.18	-31.85	87.64	-26.86	93.24	109.97	.07
5800.00	.85	130.68	5798.17	-32.75	88.90	-27.69	94.74	110.23	.18
5900.00	.64	156.10	5898.16	-33.75	89.69	-28.64	95.83	110.62	.39
6000.00	.44	131.37	5998.15	-34.51	90.21	-29.38	96.58	110.94	.30
6100.00	.33	104.61	6098.15	-34.84	90.77	-29.67	97.23	111.00	.21
6200.00	.64	144.64	6198.15	-35.37	91.37	-30.16	97.98	111.16	.44
6300.00	.44	188.10	6298.14	-36.20	91.64	-30.98	98.54	111.56	.44
6400.00	.64	267.15	6398.14	-36.61	91.03	-31.42	98.12	111.91	.70
6500.00	.55	290.60	6498.13	-36.47	90.02	-31.34	97.13	112.05	.26
6600.00	.24	197.22	6598.13	-36.50	89.51	-31.40	96.67	112.18	.61
6700.00	.40	166.31	6698.13	-37.04	89.53	-31.94	96.89	112.48	.23

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6800.00	.37	117.99	6798.13	-37.53	89.90	-32.41	97.42	112.66	.32
6900.00	.64	158.13	6898.13	-38.20	90.39	-33.05	98.14	112.91	.43
7000.00	.70	201.27	6998.12	-39.29	90.38	-34.13	98.55	113.49	.50
7100.00	.68	169.86	7098.11	-40.44	90.26	-35.29	98.91	114.13	.37
7200.00	1.11	199.72	7198.10	-41.94	90.04	-36.80	99.33	114.97	.62
7300.00	.63	205.03	7298.09	-43.35	89.48	-38.24	99.43	115.85	.49
7400.00	1.06	203.36	7398.08	-44.70	88.88	-39.62	99.49	116.70	.43
7500.00	.96	209.53	7498.06	-46.27	88.10	-41.24	99.52	117.71	.15
7600.00	1.05	210.24	7598.05	-47.79	87.23	-42.80	99.46	118.72	.09
7700.00	1.46	200.60	7698.02	-49.78	86.32	-44.84	99.64	119.97	.46
7800.00	1.08	207.02	7798.00	-51.81	85.44	-46.91	99.92	121.23	.41
7900.00	1.26	193.74	7897.98	-53.72	84.75	-48.86	100.34	122.37	.32
8000.00	1.38	201.08	7997.95	-55.91	84.06	-51.08	100.95	123.63	.21
8100.00	.82	179.35	8097.93	-57.75	83.63	-52.94	101.63	124.62	.69
8200.00	.87	202.50	8197.92	-59.17	83.35	-54.37	102.22	125.37	.34
8300.00	.64	214.84	8297.91	-60.32	82.74	-55.57	102.40	126.09	.28
8400.00	.29	179.28	8397.91	-61.04	82.43	-56.30	102.56	126.52	.44
8500.00	.99	1.54	8497.91	-60.43	82.45	-55.68	102.22	126.24	1.28
8600.00	1.13	15.16	8597.89	-58.61	82.73	-53.86	101.39	125.31	.29
8700.00	1.41	1.52	8697.86	-56.43	83.02	-51.66	100.39	124.20	.41
8800.00	1.40	.89	8797.83	-53.98	83.08	-49.21	99.07	123.01	.02
8900.00	.26	13.31	8897.82	-52.54	83.15	-47.77	98.35	122.29	1.15
9000.00	.35	275.53	8997.82	-52.28	82.90	-47.53	98.01	122.24	.46
9100.00	1.07	235.12	9097.81	-52.79	81.83	-48.10	97.38	122.83	.83
9200.00	1.13	217.09	9197.80	-54.11	80.46	-49.49	96.97	123.92	.35
9300.00	.65	197.75	9297.78	-55.44	79.70	-50.86	97.08	124.82	.56
9400.00	.83	180.41	9397.78	-56.70	79.52	-52.13	97.66	125.49	.29
9500.00	.96	168.47	9497.76	-58.25	79.68	-53.66	98.70	126.17	.23
9600.00	.95	180.35	9597.75	-59.90	79.84	-55.30	99.81	126.88	.20

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
9700.00	.95	170.39	9697.74	-61.54	79.98	-56.94	100.91	127.58	.16
9800.00	1.19	172.85	9797.72	-63.39	80.24	-58.77	102.26	128.31	.24
9900.00	.82	185.16	9897.70	-65.13	80.31	-60.50	103.40	129.04	.43
10000.00	.82	243.31	9997.69	-66.17	79.61	-61.58	103.51	129.73	.80
10100.00	.96	241.80	10097.68	-66.88	78.23	-62.37	102.92	130.53	.14
10200.00	.98	240.58	10197.67	-67.70	76.75	-63.27	102.34	131.42	.03
10300.00	1.18	215.55	10297.65	-68.96	75.40	-64.60	102.18	132.44	.51
Last Survey Depth Recorded									
10324.00	1.28	213.39	10321.64	-69.38	75.11	-65.04	102.25	132.73	.46



COMPANY: Mewbourne Oil Company
 WELL: Marathon Road 14 MD Federal #1H
 COUNTY: Lea County N.M.
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Original Well Elev



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.77°

GEODETIC ZONE: New Mexico East 3001 GL3651 + 20 @ 3671.0usft (Original Well Elev) GROUND ELEVATION: 3651.0							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.0	0.0	570285.19	745520.43	32° 33' 55.060 N	103° 32' 11.044 W		

PLAN SECTIONS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	
1	10255.0	0.48	99.34	10251.0	-34.7	145.2	0.00	0.00	-43.7		
2	10450.0	0.48	99.34	10446.0	-35.0	146.8	0.00	0.00	-44.0		
3	10929.6	58.70	315.09	10846.5	124.1	-10.1	12.32	-144.42	124.5		
4	11348.8	90.62	357.97	10961.0	485.2	-153.8	12.32	60.19	493.8	LP Marathon Road 14 MD Federal #1H	
5	15992.3	90.62	357.97	10911.0	5125.5	-318.3	0.00	0.00	5135.4	PBHL Marathon Road 14 MD Federal #1H	

HOBBS OGD
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