



HOBBS OCD

MAR 24 2015

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Mewbourne Oil Company .

Lea County N.M.

Section 15-20S-34E Marathon Road 15 NC Fed #1H

Marathon RD 15 NC Fed #1H

Original Hole

Design: Original Hole

Standard Survey Report

13 February, 2015



APR 03 2015



Stryker Directional Survey Report



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section15-20S-34E Marathon Road 15 NC Fed #1H
Well: Marathon RD 15 NC Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

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

System Datum: Mean Sea Level

Site Section15-20S-34E Marathon Road 15 NC Fed #1H

Site Position: Northing: 570,596.50 usft Latitude: 32° 33' 58.456 N
From: Map Easting: 741,221.50 usft Longitude: 103° 33' 1.247 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.42 °

Well Marathon RD 15 NC Fed #1H

Well Position +N/-S 0.0 usft Northing: 570,596.50 usft Latitude: 32° 33' 58.456 N
+E/-W 0.0 usft Easting: 741,221.50 usft Longitude: 103° 33' 1.247 W
Position Uncertainty 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 3,646.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/2/2015	7.22	60.41	48,387

Design Original Hole

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	357.84

Survey Program Date 2/13/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,280.0	MS Gyeo Survey (Original Hole)	GyroFlex	
10,407.0	15,515.0	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	0.26	112.61	100.0	-0.1	0.2	-0.1	0.26	0.26	0.00
200.0	0.27	202.73	200.0	-0.4	0.3	-0.4	0.38	0.01	90.12
300.0	0.17	178.01	300.0	-0.8	0.2	-0.8	0.14	-0.10	-24.72
400.0	0.22	160.90	400.0	-1.1	0.3	-1.1	0.08	0.05	-17.11
500.0	0.17	149.17	500.0	-1.4	0.4	-1.4	0.06	-0.05	-11.73
600.0	0.08	109.95	600.0	-1.5	0.6	-1.6	0.12	-0.09	-39.22
700.0	0.11	173.71	700.0	-1.7	0.7	-1.7	0.10	0.03	63.76
800.0	0.05	200.92	800.0	-1.8	0.7	-1.8	0.07	-0.06	27.21



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon RD 15 NC Fed #1H
Project:	Lea County N.M.	TVD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Site:	Section15-20S-34E Marathon Road 15 NC Fed #1H	MD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Well:	Marathon RD 15 NC Fed #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)
900.0	0.03	219.30	900.0	-1.9	0.6	-1.9	0.02	-0.02	18.38
1,000.0	0.04	328.51	1,000.0	-1.9	0.6	-1.9	0.06	0.01	109.21
1,100.0	0.10	248.75	1,100.0	-1.9	0.5	-1.9	0.10	0.06	-79.76
1,200.0	0.18	234.38	1,200.0	-2.0	0.3	-2.0	0.09	0.08	-14.37
1,300.0	0.22	214.91	1,300.0	-2.2	0.0	-2.2	0.08	0.04	-19.47
1,400.0	0.33	195.46	1,400.0	-2.7	-0.1	-2.7	0.14	0.11	-19.45
1,500.0	0.33	199.68	1,500.0	-3.2	-0.3	-3.2	0.02	0.00	4.22
1,600.0	0.51	161.49	1,600.0	-3.9	-0.3	-3.9	0.32	0.18	-38.19
1,700.0	0.35	179.86	1,700.0	-4.6	-0.1	-4.6	0.21	-0.16	18.37
1,800.0	0.31	174.54	1,800.0	-5.2	-0.1	-5.2	0.05	-0.04	-5.32
1,900.0	0.19	264.71	1,900.0	-5.5	-0.2	-5.5	0.36	-0.12	90.17
2,000.0	0.19	260.99	2,000.0	-5.5	-0.6	-5.5	0.01	0.00	-3.72
2,100.0	0.07	262.45	2,100.0	-5.6	-0.8	-5.5	0.12	-0.12	1.46
2,200.0	0.06	121.65	2,200.0	-5.6	-0.8	-5.6	0.12	-0.01	-140.80
2,300.0	0.10	133.62	2,300.0	-5.7	-0.7	-5.7	0.04	0.04	11.97
2,400.0	0.12	129.58	2,400.0	-5.8	-0.6	-5.8	0.02	0.02	-4.04
2,500.0	0.27	345.36	2,500.0	-5.7	-0.5	-5.6	0.37	0.15	-144.22
2,600.0	0.27	81.21	2,600.0	-5.4	-0.4	-5.4	0.40	0.00	95.85
2,700.0	0.60	86.87	2,700.0	-5.3	0.4	-5.3	0.33	0.33	5.66
2,800.0	0.90	85.99	2,800.0	-5.2	1.7	-5.3	0.30	0.30	-0.88
2,900.0	1.06	78.98	2,900.0	-5.0	3.4	-5.1	0.20	0.16	-7.01
3,000.0	1.09	78.13	2,999.9	-4.6	5.2	-4.8	0.03	0.03	-0.85
3,100.0	0.78	63.04	3,099.9	-4.1	6.8	-4.4	0.39	-0.31	-15.09
3,200.0	0.61	56.12	3,199.9	-3.5	7.8	-3.8	0.19	-0.17	-6.92
3,300.0	0.63	53.60	3,299.9	-2.9	8.7	-3.2	0.03	0.02	-2.52
3,400.0	0.11	98.63	3,399.9	-2.6	9.2	-2.9	0.56	-0.52	45.03
3,500.0	0.41	126.65	3,499.9	-2.8	9.6	-3.2	0.32	0.30	28.02
3,600.0	0.33	132.93	3,599.9	-3.2	10.1	-3.6	0.09	-0.08	6.28
3,700.0	0.49	170.67	3,699.9	-3.9	10.4	-4.2	0.31	0.16	37.74
3,800.0	0.78	147.85	3,799.9	-4.8	10.8	-5.3	0.38	0.29	-22.82
3,900.0	1.05	141.48	3,899.9	-6.1	11.8	-6.6	0.29	0.27	-6.37
4,000.0	0.48	150.26	3,999.9	-7.2	12.5	-7.7	0.58	-0.57	8.78
4,100.0	0.43	166.86	4,099.9	-8.0	12.8	-8.4	0.14	-0.05	16.60
4,200.0	0.57	145.05	4,199.9	-8.7	13.2	-9.2	0.23	0.14	-21.81
4,300.0	0.96	132.98	4,299.9	-9.7	14.1	-10.2	0.42	0.39	-12.07
4,400.0	1.81	137.90	4,399.8	-11.4	15.8	-12.0	0.86	0.85	4.92
4,500.0	1.90	130.34	4,499.8	-13.7	18.1	-14.4	0.26	0.09	-7.56
4,600.0	2.43	132.75	4,599.7	-16.2	20.9	-17.0	0.54	0.53	2.41
4,700.0	2.51	137.49	4,699.6	-19.3	24.0	-20.1	0.22	0.08	4.74
4,800.0	3.36	143.04	4,799.5	-23.2	27.2	-24.2	0.90	0.85	5.55
4,900.0	3.43	138.72	4,899.3	-27.8	30.9	-28.9	0.27	0.07	-4.32
5,000.0	3.26	140.05	4,999.1	-32.2	34.7	-33.5	0.19	-0.17	1.33



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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)
5,100.0	3.10	145.70	5,099.0	-36.6	38.1	-38.1	0.35	-0.16	5.65
5,200.0	2.69	149.48	5,198.9	-40.9	40.8	-42.4	0.45	-0.41	3.78
5,300.0	2.17	150.67	5,298.8	-44.6	42.9	-46.2	0.52	-0.52	1.19
5,400.0	1.86	150.43	5,398.7	-47.6	44.6	-49.3	0.31	-0.31	-0.24
5,500.0	1.10	161.51	5,498.7	-50.0	45.7	-51.6	0.81	-0.76	11.08
5,600.0	0.79	158.95	5,598.7	-51.5	46.3	-53.2	0.31	-0.31	-2.56
5,700.0	0.63	161.98	5,698.6	-52.7	46.7	-54.4	0.16	-0.16	3.03
5,800.0	0.51	163.43	5,798.6	-53.6	47.0	-55.4	0.12	-0.12	1.45
5,900.0	0.38	165.60	5,898.6	-54.4	47.2	-56.1	0.13	-0.13	2.17
6,000.0	0.45	159.49	5,998.6	-55.1	47.4	-56.8	0.08	0.07	-6.11
6,100.0	0.30	178.12	6,098.6	-55.7	47.6	-57.4	0.19	-0.15	18.63
6,200.0	0.27	186.23	6,198.6	-56.2	47.6	-57.9	0.05	-0.03	8.11
6,300.0	0.31	195.79	6,298.6	-56.7	47.5	-58.4	0.06	0.04	9.56
6,400.0	0.16	66.73	6,398.6	-56.9	47.5	-58.6	0.43	-0.15	-129.06
6,500.0	0.09	10.59	6,498.6	-56.8	47.7	-58.5	0.13	-0.07	-56.14
6,600.0	0.30	320.97	6,598.6	-56.5	47.5	-58.2	0.25	0.21	-49.62
6,700.0	0.63	300.68	6,698.6	-56.0	46.9	-57.7	0.36	0.33	-20.29
6,800.0	0.74	291.94	6,798.6	-55.5	45.8	-57.2	0.15	0.11	-8.74
6,900.0	0.66	284.25	6,898.6	-55.1	44.7	-56.7	0.12	-0.08	-7.69
7,000.0	0.72	278.08	6,998.6	-54.9	43.5	-56.5	0.10	0.06	-6.17
7,100.0	0.57	272.67	7,098.6	-54.7	42.4	-56.3	0.16	-0.15	-5.41
7,200.0	0.35	236.14	7,198.6	-54.9	41.6	-56.4	0.36	-0.22	-36.53
7,300.0	0.32	251.74	7,298.6	-55.1	41.1	-56.7	0.10	-0.03	15.60
7,400.0	0.36	228.58	7,398.6	-55.4	40.6	-56.9	0.14	0.04	-23.16
7,500.0	0.45	199.81	7,498.6	-56.0	40.2	-57.5	0.22	0.09	-28.77
7,600.0	0.95	182.58	7,598.6	-57.2	40.0	-58.7	0.54	0.50	-17.23
7,700.0	1.14	176.13	7,698.6	-59.0	40.1	-60.5	0.22	0.19	-6.45
7,800.0	1.23	178.92	7,798.5	-61.1	40.2	-62.6	0.11	0.09	2.79
7,900.0	1.33	182.92	7,898.5	-63.3	40.1	-64.8	0.13	0.10	4.00
8,000.0	1.27	181.62	7,998.5	-65.6	40.0	-67.1	0.07	-0.06	-1.30
8,100.0	0.87	183.34	8,098.5	-67.5	40.0	-68.9	0.40	-0.40	1.72
8,200.0	0.71	183.05	8,198.5	-68.8	39.9	-70.3	0.16	-0.16	-0.29
8,300.0	0.44	195.55	8,298.5	-69.8	39.7	-71.3	0.30	-0.27	12.50
8,400.0	0.29	207.76	8,398.5	-70.4	39.5	-71.9	0.17	-0.15	12.21
8,500.0	0.47	308.03	8,498.5	-70.4	39.1	-71.8	0.59	0.18	100.27
8,600.0	0.93	354.47	8,598.5	-69.3	38.7	-70.7	0.70	0.46	46.44
8,700.0	1.17	343.44	8,698.4	-67.6	38.3	-68.9	0.31	0.24	-11.03
8,800.0	1.28	333.42	8,798.4	-65.6	37.5	-66.9	0.24	0.11	-10.02
8,900.0	1.38	305.31	8,898.4	-63.9	36.0	-65.2	0.65	0.10	-28.11
9,000.0	2.01	308.47	8,998.3	-62.1	33.7	-63.3	0.64	0.63	3.16
9,100.0	1.65	291.18	9,098.3	-60.5	31.0	-61.6	0.66	-0.36	-17.29
9,200.0	1.40	293.69	9,198.3	-59.5	28.5	-60.5	0.26	-0.25	2.51
9,300.0	0.97	270.68	9,298.2	-59.0	26.5	-59.9	0.63	-0.43	-23.01



Stryker Directional Survey Report



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section15-20S-34E Marathon Road 15 NC Fed #1H
Well: Marathon RD 15 NC Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
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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)
9,400.0	1.15	266.03	9,398.2	-59.0	24.7	-59.9	0.20	0.18	-4.65
9,500.0	1.61	273.01	9,498.2	-59.0	22.3	-59.8	0.49	0.46	6.98
9,600.0	1.68	272.22	9,598.1	-58.9	19.4	-59.6	0.07	0.07	-0.79
9,700.0	0.93	251.31	9,698.1	-59.1	17.2	-59.7	0.88	-0.75	-20.91
9,800.0	0.94	254.91	9,798.1	-59.6	15.6	-60.1	0.06	0.01	3.60
9,900.0	1.12	276.00	9,898.1	-59.7	13.9	-60.2	0.42	0.18	21.09
10,000.0	1.58	293.77	9,998.1	-59.0	11.6	-59.4	0.62	0.46	17.77
10,100.0	1.66	297.63	10,098.0	-57.8	9.1	-58.1	0.14	0.08	3.86
10,200.0	1.52	302.46	10,198.0	-56.4	6.7	-56.6	0.19	-0.14	4.83
10,280.0	1.03	302.56	10,278.0	-55.5	5.2	-55.6	0.61	-0.61	0.13
10280' MS Gyro Survey									
10,407.0	5.70	349.40	10,404.7	-48.6	3.1	-48.7	3.98	3.68	36.88
10,439.0	9.50	353.60	10,436.4	-44.5	2.5	-44.5	11.99	11.88	13.13
10,470.0	12.50	359.20	10,466.9	-38.6	2.1	-38.6	10.26	9.68	18.06
10,502.0	15.00	356.80	10,497.9	-31.0	1.9	-31.0	8.01	7.81	-7.50
10,534.0	17.80	358.00	10,528.6	-21.9	1.5	-22.0	8.81	8.75	3.75
10,566.0	20.70	357.00	10,558.8	-11.4	1.0	-11.4	9.12	9.06	-3.13
10,598.0	23.90	357.70	10,588.5	0.7	0.4	0.7	10.03	10.00	2.19
10,630.0	27.60	359.80	10,617.3	14.6	0.1	14.6	11.91	11.56	6.56
10,661.0	30.90	0.40	10,644.3	29.8	0.2	29.7	10.69	10.65	1.94
10,693.0	33.10	0.20	10,671.4	46.7	0.3	46.7	6.88	6.88	-0.63
10,725.0	35.30	0.70	10,697.9	64.7	0.4	64.7	6.93	6.88	1.56
10,757.0	38.50	359.90	10,723.5	83.9	0.5	83.8	10.11	10.00	-2.50
10,789.0	42.00	358.90	10,747.9	104.6	0.3	104.5	11.12	10.94	-3.13
10,820.0	45.70	359.00	10,770.3	126.1	-0.1	126.0	11.94	11.94	0.32
10,852.0	48.40	359.80	10,792.1	149.5	-0.4	149.4	8.63	8.44	2.50
10,884.0	51.20	359.80	10,812.7	173.9	-0.4	173.8	8.75	8.75	0.00
10,915.0	54.50	359.80	10,831.4	198.6	-0.5	198.5	10.65	10.65	0.00
10,947.0	57.50	359.70	10,849.3	225.2	-0.6	225.0	9.38	9.38	-0.31
10,979.0	60.00	359.40	10,865.9	252.5	-0.9	252.4	7.85	7.81	-0.94
11,011.0	62.40	358.90	10,881.4	280.5	-1.3	280.4	7.62	7.50	-1.56
11,043.0	64.70	358.50	10,895.6	309.2	-1.9	309.0	7.27	7.19	-1.25
11,074.0	67.20	357.90	10,908.2	337.5	-2.8	337.3	8.26	8.06	-1.94
11,106.0	69.10	357.20	10,920.1	367.2	-4.1	367.0	6.28	5.94	-2.19
11,138.0	71.40	358.30	10,931.0	397.2	-5.3	397.2	7.88	7.19	3.44
11,170.0	74.80	359.80	10,940.3	427.9	-5.8	427.8	11.53	10.63	4.69
11,202.0	76.80	0.50	10,948.1	458.9	-5.7	458.8	6.60	6.25	2.19
11,234.0	80.60	0.30	10,954.4	490.2	-5.5	490.1	11.89	11.88	-0.63
11,265.0	84.80	358.90	10,958.3	521.0	-5.7	520.8	14.27	13.55	-4.52
11,286.7	87.60	357.54	10,959.8	542.6	-6.4	542.5	14.34	12.92	-6.25
LP Marathon RD 15 NC Fed #1H									
11,289.0	87.90	357.40	10,959.8	544.9	-6.5	544.8	14.34	12.92	-6.23
11,353.0	90.90	357.50	10,960.5	608.8	-9.3	608.8	4.69	4.69	0.16



Stryker Directional Survey Report



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Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
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)
11,448.0	90.20	356.70	10,959.6	703.7	-14.1	703.8	1.12	-0.74	-0.84
11,544.0	91.00	358.70	10,958.6	799.6	-18.0	799.7	2.24	0.83	2.08
11,639.0	91.30	359.30	10,956.7	894.6	-19.6	894.7	0.71	0.32	0.63
11,703.0	90.50	358.70	10,955.7	958.6	-20.7	958.7	1.56	-1.25	-0.94
11,734.0	91.00	358.50	10,955.3	989.6	-21.5	989.7	1.74	1.61	-0.65
11,765.0	89.50	357.90	10,955.1	1,020.6	-22.5	1,020.7	5.21	-4.84	-1.94
11,797.0	86.90	356.70	10,956.1	1,052.5	-24.0	1,052.7	8.95	-8.13	-3.75
11,829.0	87.00	356.40	10,957.9	1,084.4	-25.9	1,084.6	0.99	0.31	-0.94
11,860.0	86.50	356.10	10,959.6	1,115.3	-27.9	1,115.5	1.88	-1.61	-0.97
11,892.0	86.30	355.80	10,961.6	1,147.1	-30.2	1,147.5	1.13	-0.63	-0.94
11,924.0	87.80	357.30	10,963.3	1,179.0	-32.1	1,179.4	6.62	4.69	4.69
11,955.0	89.20	357.50	10,964.1	1,210.0	-33.5	1,210.4	4.56	4.52	0.65
11,987.0	91.20	358.00	10,964.0	1,242.0	-34.8	1,242.4	6.44	6.25	1.56
12,018.0	91.30	357.70	10,963.3	1,272.9	-35.9	1,273.4	1.02	0.32	-0.97
12,113.0	90.90	357.70	10,961.5	1,367.8	-39.7	1,368.4	0.42	-0.42	0.00
12,208.0	91.90	356.90	10,959.1	1,462.7	-44.2	1,463.3	1.35	1.05	-0.84
12,303.0	90.80	356.30	10,956.9	1,557.5	-49.8	1,558.3	1.32	-1.16	-0.63
12,398.0	89.90	355.20	10,956.3	1,652.2	-56.9	1,653.2	1.50	-0.95	-1.16
12,493.0	90.30	356.50	10,956.2	1,747.0	-63.8	1,748.2	1.43	0.42	1.37
12,588.0	92.10	357.00	10,954.2	1,841.8	-69.1	1,843.1	1.97	1.89	0.53
12,681.0	91.80	356.50	10,951.0	1,934.6	-74.4	1,936.0	0.63	-0.32	-0.54
12,775.0	91.50	356.50	10,948.3	2,028.4	-80.1	2,030.0	0.32	-0.32	0.00
12,871.0	91.20	355.90	10,946.0	2,124.2	-86.5	2,125.9	0.70	-0.31	-0.63
12,966.0	90.90	355.60	10,944.3	2,218.9	-93.5	2,220.8	0.45	-0.32	-0.32
13,061.0	91.20	358.10	10,942.6	2,313.7	-98.8	2,315.8	2.65	0.32	2.63
13,156.0	91.00	358.00	10,940.7	2,408.6	-102.0	2,410.8	0.24	-0.21	-0.11
13,252.0	91.70	358.00	10,938.5	2,504.6	-105.3	2,506.7	0.73	0.73	0.00
13,347.0	91.50	357.20	10,935.8	2,599.4	-109.3	2,601.7	0.87	-0.21	-0.84
13,442.0	91.40	356.40	10,933.4	2,694.3	-114.6	2,696.7	0.85	-0.11	-0.84
13,537.0	91.30	356.70	10,931.2	2,789.1	-120.3	2,791.6	0.33	-0.11	0.32
13,632.0	91.30	356.20	10,929.0	2,883.8	-126.2	2,886.6	0.53	0.00	-0.53
13,728.0	89.00	356.80	10,928.8	2,979.7	-132.1	2,982.5	2.48	-2.40	0.63
13,821.0	89.10	356.40	10,930.3	3,072.5	-137.6	3,075.5	0.44	0.11	-0.43
13,916.0	88.50	355.20	10,932.3	3,167.2	-144.6	3,170.4	1.41	-0.63	-1.26
14,012.0	90.20	357.20	10,933.4	3,263.0	-150.9	3,266.3	2.73	1.77	2.08
14,106.0	90.10	358.20	10,933.1	3,356.9	-154.7	3,360.3	1.07	-0.11	1.06
14,202.0	91.90	0.20	10,931.5	3,452.9	-156.0	3,456.3	2.80	1.88	2.08
14,295.0	91.90	0.00	10,928.4	3,545.8	-155.9	3,549.2	0.21	0.00	-0.22
14,390.0	91.00	358.70	10,926.0	3,640.8	-156.9	3,644.1	1.66	-0.95	-1.37
14,485.0	90.10	357.30	10,925.1	3,735.7	-160.3	3,739.1	1.75	-0.95	-1.47
14,579.0	89.50	356.60	10,925.4	3,829.6	-165.3	3,833.1	0.98	-0.64	-0.74
14,674.0	90.60	356.80	10,925.3	3,924.4	-170.7	3,928.1	1.18	1.16	0.21



Stryker Directional Survey Report



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section15-20S-34E Marathon Road 15 NC Fed #1H
Well: Marathon RD 15 NC Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

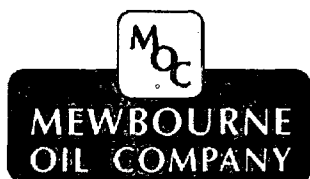
Survey

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)
14,769.0	90.90	356.50	10,924.1	4,019.2	-176.3	4,023.0	0.45	0.32	-0.32
14,864.0	89.30	359.00	10,923.9	4,114.2	-180.0	4,118.0	3.12	-1.68	2.63
14,960.0	89.40	358.90	10,925.0	4,210.1	-181.8	4,214.0	0.15	0.10	-0.10
15,055.0	89.30	359.30	10,926.1	4,305.1	-183.3	4,309.0	0.43	-0.11	0.42
15,150.0	91.50	1.40	10,925.4	4,400.1	-182.7	4,403.9	3.20	2.32	2.21
15,245.0	91.60	1.40	10,922.8	4,495.0	-180.4	4,498.7	0.11	0.11	0.00
15,341.0	91.80	0.40	10,920.0	4,591.0	-178.9	4,594.5	1.06	0.21	-1.04
15,436.0	92.10	0.20	10,916.8	4,685.9	-178.4	4,689.3	0.38	0.32	-0.21
15,468.0	92.30	359.60	10,915.5	4,717.9	-178.4	4,721.3	1.98	0.63	-1.88
15,515.0	92.30	359.60	10,913.6	4,764.9	-178.7	4,768.2	0.00	0.00	0.00

15515' MD Projected to Bit - PBHL Marathon 15NC

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,280.0	10,278.0	-55.5	5.2	10280' MS Gyro Survey
15,515.0	10,913.6	4,764.9	-178.7	15515' MD Projected to Bit



HOBBS OCD

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Mewbourne Oil Company .

Lea County N.M.

Section 15-20S-34E Marathon Road 15 NC Fed #1H

Marathon RD 15 NC Fed #1H

Original Hole

Design: Original Hole

Survey Report - Geographic

13 February, 2015





Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Marathon RD 15 NC Fed #1H
Project:	Lea County N.M.	TVD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Site:	Section15-20S-34E Marathon Road 15 NC Fed #1H	MD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Well:	Marathon RD 15 NC Fed #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 Section15-20S-34E Marathon Road 15 NC Fed #1H

Site Position:		Northing:	570,596.50 usft	Latitude:	32° 33' 58.456 N
From:	Map	Easting:	741,221.50 usft	Longitude:	103° 33' 1.247 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	Marathon RD 15 NC Fed #1H				
Well Position	+N/-S 0.0 usft	Northing:	570,596.50 usft	Latitude:	32° 33' 58.456 N
	+E/-W 0.0 usft	Easting:	741,221.50 usft	Longitude:	103° 33' 1.247 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,646.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/2/2015	7.22	60.41	48,387

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	357.84

Survey Program Date 2/13/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,280.0	MS Gyeo Survey (Original Hole)	GyroFlex	
10,407.0	15,515.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	570,596.50	741,221.50	32° 33' 58.456 N	103° 33' 1.247 W
100.0	0.26	112.61	100.0	-0.1	0.2	570,596.42	741,221.71	32° 33' 58.456 N	103° 33' 1.245 W
200.0	0.27	202.73	200.0	-0.4	0.3	570,596.11	741,221.82	32° 33' 58.452 N	103° 33' 1.244 W
300.0	0.17	178.01	300.0	-0.8	0.2	570,595.75	741,221.74	32° 33' 58.449 N	103° 33' 1.245 W
400.0	0.22	160.90	400.0	-1.1	0.3	570,595.42	741,221.81	32° 33' 58.446 N	103° 33' 1.244 W
500.0	0.17	149.17	500.0	-1.4	0.4	570,595.11	741,221.95	32° 33' 58.443 N	103° 33' 1.242 W
600.0	0.08	109.95	600.0	-1.5	0.6	570,594.96	741,222.09	32° 33' 58.441 N	103° 33' 1.241 W
700.0	0.11	173.71	700.0	-1.7	0.7	570,594.84	741,222.16	32° 33' 58.440 N	103° 33' 1.240 W
800.0	0.05	200.92	800.0	-1.8	0.7	570,594.70	741,222.16	32° 33' 58.439 N	103° 33' 1.240 W
900.0	0.03	219.30	900.0	-1.9	0.6	570,594.64	741,222.13	32° 33' 58.438 N	103° 33' 1.240 W



Stryker Directional Survey Report - Geographic



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section15-20S-34E Marathon Road 15 NC Fed #1H
Well: Marathon RD 15 NC Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,000.0	0.04	328.51	1,000.0	-1.9	0.6	570,594.65	741,222.09	32° 33' 58.438 N	103° 33' 1.241 W
1,100.0	0.10	248.75	1,100.0	-1.9	0.5	570,594.65	741,221.99	32° 33' 58.438 N	103° 33' 1.242 W
1,200.0	0.18	234.38	1,200.0	-2.0	0.3	570,594.52	741,221.78	32° 33' 58.437 N	103° 33' 1.244 W
1,300.0	0.22	214.91	1,300.0	-2.2	0.0	570,594.27	741,221.54	32° 33' 58.434 N	103° 33' 1.247 W
1,400.0	0.33	195.46	1,400.0	-2.7	-0.1	570,593.84	741,221.36	32° 33' 58.430 N	103° 33' 1.249 W
1,500.0	0.33	199.68	1,500.0	-3.2	-0.3	570,593.29	741,221.18	32° 33' 58.425 N	103° 33' 1.251 W
1,600.0	0.51	161.49	1,600.0	-3.9	-0.3	570,592.60	741,221.23	32° 33' 58.418 N	103° 33' 1.251 W
1,700.0	0.35	179.86	1,700.0	-4.6	-0.1	570,591.87	741,221.37	32° 33' 58.411 N	103° 33' 1.249 W
1,800.0	0.31	174.54	1,800.0	-5.2	-0.1	570,591.30	741,221.40	32° 33' 58.405 N	103° 33' 1.249 W
1,900.0	0.19	264.71	1,900.0	-5.5	-0.2	570,591.01	741,221.26	32° 33' 58.402 N	103° 33' 1.251 W
2,000.0	0.19	260.99	2,000.0	-5.5	-0.6	570,590.97	741,220.93	32° 33' 58.402 N	103° 33' 1.255 W
2,100.0	0.07	262.45	2,100.0	-5.6	-0.8	570,590.94	741,220.70	32° 33' 58.401 N	103° 33' 1.257 W
2,200.0	0.06	121.65	2,200.0	-5.6	-0.8	570,590.90	741,220.69	32° 33' 58.401 N	103° 33' 1.257 W
2,300.0	0.10	133.62	2,300.0	-5.7	-0.7	570,590.81	741,220.80	32° 33' 58.400 N	103° 33' 1.256 W
2,400.0	0.12	129.58	2,400.0	-5.8	-0.6	570,590.69	741,220.94	32° 33' 58.399 N	103° 33' 1.254 W
2,500.0	0.27	345.36	2,500.0	-5.7	-0.5	570,590.85	741,220.96	32° 33' 58.400 N	103° 33' 1.254 W
2,600.0	0.27	81.21	2,600.0	-5.4	-0.4	570,591.11	741,221.13	32° 33' 58.403 N	103° 33' 1.252 W
2,700.0	0.60	86.87	2,700.0	-5.3	0.4	570,591.18	741,221.89	32° 33' 58.404 N	103° 33' 1.243 W
2,800.0	0.90	85.99	2,800.0	-5.2	1.7	570,591.26	741,223.20	32° 33' 58.404 N	103° 33' 1.228 W
2,900.0	1.06	78.98	2,900.0	-5.0	3.4	570,591.49	741,224.89	32° 33' 58.407 N	103° 33' 1.208 W
3,000.0	1.09	78.13	2,999.9	-4.6	5.2	570,591.86	741,226.73	32° 33' 58.410 N	103° 33' 1.187 W
3,100.0	0.78	63.04	3,099.9	-4.1	6.8	570,592.37	741,228.26	32° 33' 58.415 N	103° 33' 1.169 W
3,200.0	0.61	56.12	3,199.9	-3.5	7.8	570,592.97	741,229.31	32° 33' 58.421 N	103° 33' 1.156 W
3,300.0	0.63	53.60	3,299.9	-2.9	8.7	570,593.60	741,230.20	32° 33' 58.427 N	103° 33' 1.146 W
3,400.0	0.11	98.63	3,399.9	-2.6	9.2	570,593.91	741,230.73	32° 33' 58.430 N	103° 33' 1.140 W
3,500.0	0.41	126.65	3,499.9	-2.8	9.6	570,593.68	741,231.12	32° 33' 58.428 N	103° 33' 1.135 W
3,600.0	0.33	132.93	3,599.9	-3.2	10.1	570,593.27	741,231.61	32° 33' 58.424 N	103° 33' 1.129 W
3,700.0	0.49	170.67	3,699.9	-3.9	10.4	570,592.65	741,231.90	32° 33' 58.418 N	103° 33' 1.126 W
3,800.0	0.78	147.85	3,799.9	-4.8	10.8	570,591.65	741,232.33	32° 33' 58.408 N	103° 33' 1.121 W
3,900.0	1.05	141.48	3,899.9	-6.1	11.8	570,590.36	741,233.26	32° 33' 58.395 N	103° 33' 1.110 W
4,000.0	0.48	150.26	3,999.9	-7.2	12.5	570,589.28	741,234.04	32° 33' 58.384 N	103° 33' 1.101 W
4,100.0	0.43	166.86	4,099.9	-8.0	12.8	570,588.55	741,234.33	32° 33' 58.377 N	103° 33' 1.098 W
4,200.0	0.57	145.05	4,199.9	-8.7	13.2	570,587.78	741,234.70	32° 33' 58.369 N	103° 33' 1.094 W
4,300.0	0.96	132.98	4,299.9	-9.7	14.1	570,586.80	741,235.60	32° 33' 58.359 N	103° 33' 1.083 W
4,400.0	1.81	137.90	4,399.8	-11.4	15.8	570,585.06	741,237.27	32° 33' 58.342 N	103° 33' 1.064 W
4,500.0	1.90	130.34	4,499.8	-13.7	18.1	570,582.81	741,239.59	32° 33' 58.320 N	103° 33' 1.037 W
4,600.0	2.43	132.75	4,599.7	-16.2	20.9	570,580.30	741,242.41	32° 33' 58.295 N	103° 33' 1.004 W
4,700.0	2.51	137.49	4,699.6	-19.3	24.0	570,577.25	741,245.45	32° 33' 58.264 N	103° 33' 0.969 W
4,800.0	3.36	143.04	4,799.5	-23.2	27.2	570,573.29	741,248.69	32° 33' 58.225 N	103° 33' 0.932 W
4,900.0	3.43	138.72	4,899.3	-27.8	30.9	570,568.70	741,252.43	32° 33' 58.179 N	103° 33' 0.888 W
5,000.0	3.26	140.05	4,999.1	-32.2	34.7	570,564.27	741,256.23	32° 33' 58.135 N	103° 33' 0.844 W
5,100.0	3.10	145.70	5,099.0	-36.6	38.1	570,559.86	741,259.58	32° 33' 58.091 N	103° 33' 0.806 W
5,200.0	2.69	149.48	5,198.9	-40.9	40.8	570,555.60	741,262.29	32° 33' 58.049 N	103° 33' 0.774 W
5,300.0	2.17	150.67	5,298.8	-44.6	42.9	570,551.93	741,264.41	32° 33' 58.012 N	103° 33' 0.750 W
5,400.0	1.86	150.43	5,398.7	-47.6	44.6	570,548.87	741,266.14	32° 33' 57.982 N	103° 33' 0.730 W
5,500.0	1.10	161.51	5,498.7	-50.0	45.7	570,546.55	741,267.24	32° 33' 57.959 N	103° 33' 0.717 W
5,600.0	0.79	158.95	5,598.7	-51.5	46.3	570,544.99	741,267.80	32° 33' 57.943 N	103° 33' 0.711 W
5,700.0	0.63	161.98	5,698.6	-52.7	46.7	570,543.83	741,268.21	32° 33' 57.932 N	103° 33' 0.706 W
5,800.0	0.51	163.43	5,798.6	-53.6	47.0	570,542.88	741,268.51	32° 33' 57.922 N	103° 33' 0.703 W
5,900.0	0.38	165.60	5,898.6	-54.4	47.2	570,542.13	741,268.72	32° 33' 57.915 N	103° 33' 0.700 W
6,000.0	0.45	159.49	5,998.6	-55.1	47.4	570,541.44	741,268.94	32° 33' 57.908 N	103° 33' 0.698 W
6,100.0	0.30	178.12	6,098.6	-55.7	47.6	570,540.81	741,269.09	32° 33' 57.902 N	103° 33' 0.696 W
6,200.0	0.27	186.23	6,198.6	-56.2	47.6	570,540.32	741,269.07	32° 33' 57.897 N	103° 33' 0.696 W
6,300.0	0.31	195.79	6,298.6	-56.7	47.5	570,539.82	741,268.97	32° 33' 57.892 N	103° 33' 0.698 W



Stryker Directional Survey Report - Geographic



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section15-20S-34E Marathon Road 15 NC Fed #1H
Well: Marathon RD 15 NC Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,400.0	0.16	66.73	6,398.6	-56.9	47.5	570,539.62	741,269.02	32° 33' 57.890 N	103° 33' 0.697 W
6,500.0	0.09	10.59	6,498.6	-56.8	47.7	570,539.75	741,269.17	32° 33' 57.891 N	103° 33' 0.695 W
6,600.0	0.30	320.97	6,598.6	-56.5	47.5	570,540.03	741,269.02	32° 33' 57.894 N	103° 33' 0.697 W
6,700.0	0.63	300.68	6,698.6	-56.0	46.9	570,540.51	741,268.38	32° 33' 57.899 N	103° 33' 0.704 W
6,800.0	0.74	291.94	6,798.6	-55.5	45.8	570,541.04	741,267.31	32° 33' 57.904 N	103° 33' 0.717 W
6,900.0	0.66	284.25	6,898.6	-55.1	44.7	570,541.42	741,266.15	32° 33' 57.908 N	103° 33' 0.730 W
7,000.0	0.72	278.08	6,998.6	-54.9	43.5	570,541.65	741,264.97	32° 33' 57.910 N	103° 33' 0.744 W
7,100.0	0.57	272.67	7,098.6	-54.7	42.4	570,541.76	741,263.85	32° 33' 57.912 N	103° 33' 0.757 W
7,200.0	0.35	236.14	7,198.6	-54.9	41.6	570,541.61	741,263.10	32° 33' 57.910 N	103° 33' 0.766 W
7,300.0	0.32	251.74	7,298.6	-55.1	41.1	570,541.36	741,262.58	32° 33' 57.908 N	103° 33' 0.772 W
7,400.0	0.36	228.58	7,398.6	-55.4	40.6	570,541.06	741,262.08	32° 33' 57.905 N	103° 33' 0.778 W
7,500.0	0.45	199.81	7,498.6	-56.0	40.2	570,540.48	741,261.71	32° 33' 57.899 N	103° 33' 0.782 W
7,600.0	0.95	182.58	7,598.6	-57.2	40.0	570,539.29	741,261.54	32° 33' 57.887 N	103° 33' 0.784 W
7,700.0	1.14	176.13	7,698.6	-59.0	40.1	570,537.46	741,261.57	32° 33' 57.869 N	103° 33' 0.784 W
7,800.0	1.23	178.92	7,798.5	-61.1	40.2	570,535.40	741,261.66	32° 33' 57.849 N	103° 33' 0.783 W
7,900.0	1.33	182.92	7,898.5	-63.3	40.1	570,533.17	741,261.62	32° 33' 57.827 N	103° 33' 0.784 W
8,000.0	1.27	181.62	7,998.5	-65.6	40.0	570,530.90	741,261.53	32° 33' 57.804 N	103° 33' 0.785 W
8,100.0	0.87	183.34	8,098.5	-67.5	40.0	570,529.03	741,261.45	32° 33' 57.786 N	103° 33' 0.786 W
8,200.0	0.71	183.05	8,198.5	-68.8	39.9	570,527.66	741,261.38	32° 33' 57.772 N	103° 33' 0.787 W
8,300.0	0.44	195.55	8,298.5	-69.8	39.7	570,526.67	741,261.24	32° 33' 57.763 N	103° 33' 0.789 W
8,400.0	0.29	207.76	8,398.5	-70.4	39.5	570,526.08	741,261.02	32° 33' 57.757 N	103° 33' 0.792 W
8,500.0	0.47	308.03	8,498.5	-70.4	39.1	570,526.10	741,260.58	32° 33' 57.757 N	103° 33' 0.797 W
8,600.0	0.93	354.47	8,598.5	-69.3	38.7	570,527.16	741,260.18	32° 33' 57.767 N	103° 33' 0.801 W
8,700.0	1.17	343.44	8,698.4	-67.6	38.3	570,528.95	741,259.81	32° 33' 57.785 N	103° 33' 0.806 W
8,800.0	1.28	333.42	8,798.4	-65.6	37.5	570,530.93	741,259.02	32° 33' 57.805 N	103° 33' 0.815 W
8,900.0	1.38	305.31	8,898.4	-63.9	36.0	570,532.62	741,257.54	32° 33' 57.822 N	103° 33' 0.832 W
9,000.0	2.01	308.47	8,998.3	-62.1	33.7	570,534.41	741,255.18	32° 33' 57.840 N	103° 33' 0.859 W
9,100.0	1.65	291.18	9,098.3	-60.5	31.0	570,536.02	741,252.46	32° 33' 57.856 N	103° 33' 0.891 W
9,200.0	1.40	293.69	9,198.3	-59.5	28.5	570,537.03	741,250.00	32° 33' 57.866 N	103° 33' 0.919 W
9,300.0	0.97	270.68	9,298.2	-59.0	26.5	570,537.53	741,248.04	32° 33' 57.871 N	103° 33' 0.942 W
9,400.0	1.15	266.03	9,398.2	-59.0	24.7	570,537.47	741,246.19	32° 33' 57.871 N	103° 33' 0.964 W
9,500.0	1.61	273.01	9,498.2	-59.0	22.3	570,537.48	741,243.79	32° 33' 57.871 N	103° 33' 0.992 W
9,600.0	1.68	272.22	9,598.1	-58.9	19.4	570,537.61	741,240.92	32° 33' 57.872 N	103° 33' 1.026 W
9,700.0	0.93	251.31	9,698.1	-59.1	17.2	570,537.41	741,238.69	32° 33' 57.870 N	103° 33' 1.052 W
9,800.0	0.94	254.91	9,798.1	-59.6	15.6	570,536.93	741,237.12	32° 33' 57.866 N	103° 33' 1.070 W
9,900.0	1.12	276.00	9,898.1	-59.7	13.9	570,536.82	741,235.36	32° 33' 57.865 N	103° 33' 1.091 W
10,000.0	1.58	293.77	9,998.1	-59.0	11.6	570,537.48	741,233.13	32° 33' 57.872 N	103° 33' 1.117 W
10,100.0	1.66	297.63	10,098.0	-57.8	9.1	570,538.71	741,230.58	32° 33' 57.884 N	103° 33' 1.146 W
10,200.0	1.52	302.46	10,198.0	-56.4	6.7	570,540.09	741,228.18	32° 33' 57.898 N	103° 33' 1.174 W
10,280.0	1.03	302.56	10,278.0	-55.5	5.2	570,541.05	741,226.68	32° 33' 57.907 N	103° 33' 1.192 W
10280' MS Gyro Survey									
10,407.0	5.70	349.40	10,404.7	-48.6	3.1	570,547.86	741,224.56	32° 33' 57.975 N	103° 33' 1.216 W
10,439.0	9.50	353.60	10,436.4	-44.5	2.5	570,552.05	741,223.97	32° 33' 58.016 N	103° 33' 1.222 W
10,470.0	12.50	359.20	10,466.9	-38.6	2.1	570,557.95	741,223.64	32° 33' 58.075 N	103° 33' 1.226 W
10,502.0	15.00	356.80	10,497.9	-31.0	1.9	570,565.55	741,223.36	32° 33' 58.150 N	103° 33' 1.228 W
10,534.0	17.80	358.00	10,528.6	-21.9	1.5	570,574.57	741,222.95	32° 33' 58.239 N	103° 33' 1.232 W
10,566.0	20.70	357.00	10,558.8	-11.4	1.0	570,585.11	741,222.49	32° 33' 58.344 N	103° 33' 1.237 W
10,598.0	23.90	357.70	10,588.5	0.7	0.4	570,597.24	741,221.93	32° 33' 58.464 N	103° 33' 1.242 W
10,630.0	27.60	359.80	10,617.3	14.6	0.1	570,611.13	741,221.65	32° 33' 58.601 N	103° 33' 1.244 W
10,661.0	30.90	0.40	10,644.3	29.8	0.2	570,626.28	741,221.68	32° 33' 58.751 N	103° 33' 1.243 W
10,693.0	33.10	0.20	10,671.4	46.7	0.3	570,643.24	741,221.76	32° 33' 58.919 N	103° 33' 1.240 W
10,725.0	35.30	0.70	10,697.9	64.7	0.4	570,661.22	741,221.91	32° 33' 59.097 N	103° 33' 1.237 W
10,757.0	38.50	359.90	10,723.5	83.9	0.5	570,680.43	741,222.00	32° 33' 59.287 N	103° 33' 1.234 W
10,789.0	42.00	358.90	10,747.9	104.6	0.3	570,701.10	741,221.78	32° 33' 59.491 N	103° 33' 1.235 W



Stryker Directional Survey Report - Geographic



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Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Marathon RD 15 NC Fed #1H
TVD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
MD Reference: 3646 +20 @ 3666.0usft (Patterson 46)
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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,820.0	45.70	359.00	10,770.3	126.1	-0.1	570,722.57	741,221.39	32° 33' 59.704 N	103° 33' 1.238 W
10,852.0	48.40	359.80	10,792.1	149.5	-0.4	570,745.99	741,221.15	32° 33' 59.936 N	103° 33' 1.239 W
10,884.0	51.20	359.80	10,812.7	173.9	-0.4	570,770.43	741,221.06	32° 34' 0.177 N	103° 33' 1.238 W
10,915.0	54.50	359.80	10,831.4	198.6	-0.5	570,795.13	741,220.97	32° 34' 0.422 N	103° 33' 1.236 W
10,947.0	57.50	359.70	10,849.3	225.2	-0.6	570,821.66	741,220.86	32° 34' 0.684 N	103° 33' 1.236 W
10,979.0	60.00	359.40	10,865.9	252.5	-0.9	570,849.01	741,220.64	32° 34' 0.955 N	103° 33' 1.236 W
11,011.0	62.40	358.90	10,881.4	280.5	-1.3	570,877.05	741,220.22	32° 34' 1.232 N	103° 33' 1.238 W
11,043.0	64.70	358.50	10,895.6	309.2	-1.9	570,905.69	741,219.57	32° 34' 1.516 N	103° 33' 1.243 W
11,074.0	67.20	357.90	10,908.2	337.5	-2.8	570,933.98	741,218.68	32° 34' 1.796 N	103° 33' 1.251 W
11,106.0	69.10	357.20	10,920.1	367.2	-4.1	570,963.65	741,217.41	32° 34' 2.090 N	103° 33' 1.264 W
11,138.0	71.40	358.30	10,931.0	397.2	-5.3	570,993.75	741,216.23	32° 34' 2.387 N	103° 33' 1.275 W
11,170.0	74.80	359.80	10,940.3	427.9	-5.8	571,024.36	741,215.73	32° 34' 2.690 N	103° 33' 1.278 W
11,202.0	76.80	0.50	10,948.1	458.9	-5.7	571,055.38	741,215.81	32° 34' 2.997 N	103° 33' 1.274 W
11,234.0	80.60	0.30	10,954.4	490.2	-5.5	571,086.75	741,216.03	32° 34' 3.308 N	103° 33' 1.269 W
11,265.0	84.80	358.90	10,958.3	521.0	-5.7	571,117.49	741,215.81	32° 34' 3.612 N	103° 33' 1.269 W
11,286.7	87.60	357.54	10,959.8	542.6	-6.4	571,139.11	741,215.14	32° 34' 3.826 N	103° 33' 1.275 W
LP Marathon RD 15 NC Fed #1H									
11,289.0	87.90	357.40	10,959.8	544.9	-6.5	571,141.42	741,215.04	32° 34' 3.849 N	103° 33' 1.276 W
11,353.0	90.90	357.50	10,960.5	608.8	-9.3	571,205.35	741,212.19	32° 34' 4.482 N	103° 33' 1.304 W
11,448.0	90.20	356.70	10,959.6	703.7	-14.1	571,300.22	741,207.39	32° 34' 5.421 N	103° 33' 1.352 W
11,544.0	91.00	358.70	10,958.6	799.6	-18.0	571,396.13	741,203.53	32° 34' 6.370 N	103° 33' 1.389 W
11,639.0	91.30	359.30	10,956.7	894.6	-19.6	571,491.10	741,201.88	32° 34' 7.310 N	103° 33' 1.400 W
11,703.0	90.50	358.70	10,955.7	958.6	-20.7	571,555.08	741,200.76	32° 34' 7.943 N	103° 33' 1.407 W
11,734.0	91.00	358.50	10,955.3	989.6	-21.5	571,586.07	741,200.00	32° 34' 8.250 N	103° 33' 1.414 W
11,765.0	89.50	357.90	10,955.1	1,020.6	-22.5	571,617.05	741,199.03	32° 34' 8.556 N	103° 33' 1.422 W
11,797.0	86.90	356.70	10,956.1	1,052.5	-24.0	571,649.00	741,197.52	32° 34' 8.872 N	103° 33' 1.437 W
11,829.0	87.00	356.40	10,957.9	1,084.4	-25.9	571,680.90	741,195.60	32° 34' 9.188 N	103° 33' 1.457 W
11,860.0	86.50	356.10	10,959.6	1,115.3	-27.9	571,711.78	741,193.57	32° 34' 9.494 N	103° 33' 1.478 W
11,892.0	86.30	355.80	10,961.6	1,147.1	-30.2	571,743.64	741,191.32	32° 34' 9.809 N	103° 33' 1.501 W
11,924.0	87.80	357.30	10,963.3	1,179.0	-32.1	571,775.53	741,189.40	32° 34' 10.125 N	103° 33' 1.521 W
11,955.0	89.20	357.50	10,964.1	1,210.0	-33.5	571,806.49	741,187.99	32° 34' 10.432 N	103° 33' 1.535 W
11,987.0	91.20	358.00	10,964.0	1,242.0	-34.8	571,838.46	741,186.73	32° 34' 10.748 N	103° 33' 1.547 W
12,018.0	91.30	357.70	10,963.3	1,272.9	-35.9	571,869.43	741,185.57	32° 34' 11.055 N	103° 33' 1.558 W
12,113.0	90.90	357.70	10,961.5	1,367.8	-39.7	571,964.34	741,181.76	32° 34' 11.994 N	103° 33' 1.594 W
12,208.0	91.90	356.90	10,959.1	1,462.7	-44.2	572,059.20	741,177.29	32° 34' 12.933 N	103° 33' 1.638 W
12,303.0	90.80	356.30	10,956.9	1,557.5	-49.8	572,154.01	741,171.65	32° 34' 13.871 N	103° 33' 1.696 W
12,398.0	89.90	355.20	10,956.3	1,652.2	-56.9	572,248.74	741,164.61	32° 34' 14.809 N	103° 33' 1.770 W
12,493.0	90.30	356.50	10,956.2	1,747.0	-63.8	572,343.49	741,157.74	32° 34' 15.747 N	103° 33' 1.842 W
12,588.0	92.10	357.00	10,954.2	1,841.8	-69.1	572,438.31	741,152.35	32° 34' 16.686 N	103° 33' 1.897 W
12,681.0	91.80	356.50	10,951.0	1,934.6	-74.4	572,531.11	741,147.08	32° 34' 17.605 N	103° 33' 1.951 W
12,775.0	91.50	356.50	10,948.3	2,028.4	-80.1	572,624.90	741,141.35	32° 34' 18.533 N	103° 33' 2.010 W
12,871.0	91.20	355.90	10,946.0	2,124.2	-86.5	572,720.66	741,134.99	32° 34' 19.481 N	103° 33' 2.076 W
12,966.0	90.90	355.60	10,944.3	2,218.9	-93.5	572,815.38	741,127.95	32° 34' 20.419 N	103° 33' 2.150 W
13,061.0	91.20	358.10	10,942.6	2,313.7	-98.8	572,910.21	741,122.73	32° 34' 21.358 N	103° 33' 2.203 W
13,156.0	91.00	358.00	10,940.7	2,408.6	-102.0	573,005.14	741,119.50	32° 34' 22.297 N	103° 33' 2.232 W
13,252.0	91.70	358.00	10,938.5	2,504.6	-105.3	573,101.06	741,116.15	32° 34' 23.246 N	103° 33' 2.263 W
13,347.0	91.50	357.20	10,935.8	2,599.4	-109.3	573,195.93	741,112.17	32° 34' 24.185 N	103° 33' 2.301 W
13,442.0	91.40	356.40	10,933.4	2,694.3	-114.6	573,290.76	741,106.87	32° 34' 25.124 N	103° 33' 2.355 W
13,537.0	91.30	356.70	10,931.2	2,789.1	-120.3	573,385.56	741,101.16	32° 34' 26.063 N	103° 33' 2.414 W
13,632.0	91.30	356.20	10,929.0	2,883.8	-126.2	573,480.35	741,095.27	32° 34' 27.001 N	103° 33' 2.474 W
13,728.0	89.00	356.80	10,928.8	2,979.7	-132.1	573,576.16	741,089.41	32° 34' 27.949 N	103° 33' 2.535 W
13,821.0	89.10	356.40	10,930.3	3,072.5	-137.6	573,668.99	741,083.90	32° 34' 28.868 N	103° 33' 2.591 W
13,916.0	88.50	355.20	10,932.3	3,167.2	-144.6	573,763.71	741,076.94	32° 34' 29.806 N	103° 33' 2.664 W
14,012.0	90.20	357.20	10,933.4	3,263.0	-150.9	573,859.48	741,070.58	32° 34' 30.754 N	103° 33' 2.730 W



Stryker Directional Survey Report - Geographic



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Project:	Lea County N.M.	TVD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Site:	Section15-20S-34E Marathon Road 15 NC Fed #1H	MD Reference:	3646 +20 @ 3666.0usft (Patterson 46)
Well:	Marathon RD 15 NC Fed #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
14,106.0	90.10	358.20	10,933.1	3,356.9	-154.7	573,953.41	741,066.81	32° 34' 31.684 N	103° 33' 2.766 W
14,202.0	91.90	0.20	10,931.5	3,452.9	-156.0	574,049.37	741,065.47	32° 34' 32.634 N	103° 33' 2.774 W
14,295.0	91.90	0.00	10,928.4	3,545.8	-155.9	574,142.32	741,065.63	32° 34' 33.553 N	103° 33' 2.764 W
14,390.0	91.00	358.70	10,926.0	3,640.8	-156.9	574,237.28	741,064.55	32° 34' 34.493 N	103° 33' 2.768 W
14,485.0	90.10	357.30	10,925.1	3,735.7	-160.3	574,332.22	741,061.24	32° 34' 35.433 N	103° 33' 2.799 W
14,579.0	89.50	356.60	10,925.4	3,829.6	-165.3	574,426.08	741,056.24	32° 34' 36.362 N	103° 33' 2.849 W
14,674.0	90.60	356.80	10,925.3	3,924.4	-170.7	574,520.92	741,050.77	32° 34' 37.301 N	103° 33' 2.905 W
14,769.0	90.90	356.50	10,924.1	4,019.2	-176.3	574,615.75	741,045.22	32° 34' 38.239 N	103° 33' 2.962 W
14,864.0	89.30	359.00	10,923.9	4,114.2	-180.0	574,710.67	741,041.49	32° 34' 39.179 N	103° 33' 2.997 W
14,960.0	89.40	358.90	10,925.0	4,210.1	-181.8	574,806.65	741,039.73	32° 34' 40.129 N	103° 33' 3.010 W
15,055.0	89.30	359.30	10,926.1	4,305.1	-183.3	574,901.63	741,038.24	32° 34' 41.069 N	103° 33' 3.019 W
15,150.0	91.50	1.40	10,925.4	4,400.1	-182.7	574,996.61	741,038.82	32° 34' 42.008 N	103° 33' 3.004 W
15,245.0	91.60	1.40	10,922.8	4,495.0	-180.4	575,091.55	741,041.14	32° 34' 42.948 N	103° 33' 2.969 W
15,341.0	91.80	0.40	10,920.0	4,591.0	-178.9	575,187.49	741,042.65	32° 34' 43.897 N	103° 33' 2.943 W
15,436.0	92.10	0.20	10,916.8	4,685.9	-178.4	575,282.44	741,043.14	32° 34' 44.836 N	103° 33' 2.929 W
15,468.0	92.30	359.60	10,915.5	4,717.9	-178.4	575,314.41	741,043.09	32° 34' 45.153 N	103° 33' 2.927 W
15,515.0	92.30	359.60	10,913.6	4,764.9	-178.7	575,361.37	741,042.76	32° 34' 45.617 N	103° 33' 2.926 W

15515' MD Projected to Bit - PBHL Marathon 15NC

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,280.0	10,278.0	-55.5	5.2	10280' MS Gyro Survey
15,515.0	10,913.6	4,764.9	-178.7	15515' MD Projected to Bit