



COMPANY: Mewbourne Oil Company
WELL: Red Hills West 22 W1DM Fed Com #3H
COUNTY: Lea County N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Patterson 242

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.56°



OFFICE: 936.582.7296

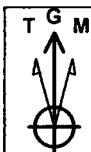
GEODETTIC ZONE: New Mexico East 3001
3145 +27 @ 3172.0usft (Patterson 242)
GROUND ELEVATION: 3145.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	377072.70	706087.70	32° 2' 5.796 N	103° 40' 5.798 W	

PLAN SECTIONS

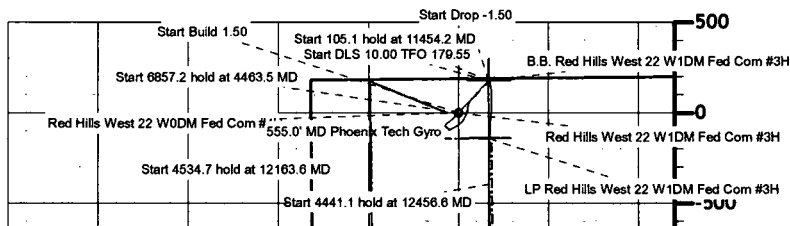
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4330.0	0.00	0.00	4330.0	0.0	0.0	0.00	0.00	0.0	
3	4463.5	2.00	43.68	4463.5	1.7	1.6	1.50	43.68	-1.6	
4	11320.7	2.00	43.68	11316.5	175.0	167.1	0.00	0.00	-167.6	
5	11454.2	0.00	0.00	11450.0	176.7	168.7	1.50	180.00	-169.2	B.B. Red Hills West 22 W1DM Fed Com #3H
6	11559.3	0.00	0.00	11555.1	176.7	168.7	0.00	0.00	-169.2	
7	12456.6	89.73	179.55	12128.0	-393.6	173.3	10.00	179.55	400.7	
8	16897.7	89.73	179.55	12149.0	-4834.5	208.5	0.00	0.00	4839.0	PBHL Red Hills West 22 W1DM Fed Com #3H

SHL: 185' FNL; 760' FWL
Section 22-26S-32E
PBHL: 330' FSL; 990' FWL
Section 22-26S-32E

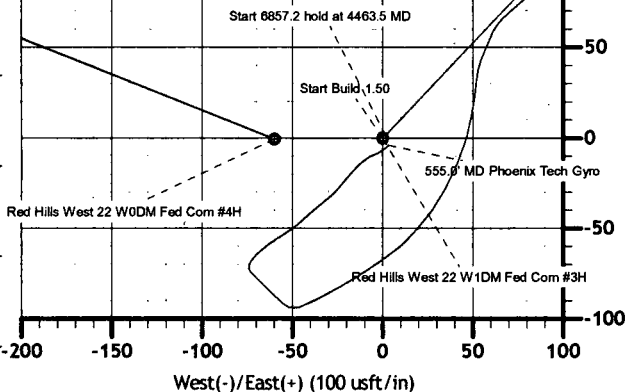


Azimuths to Grid North
True North: -0.35°
Magnetic North: 6.56°

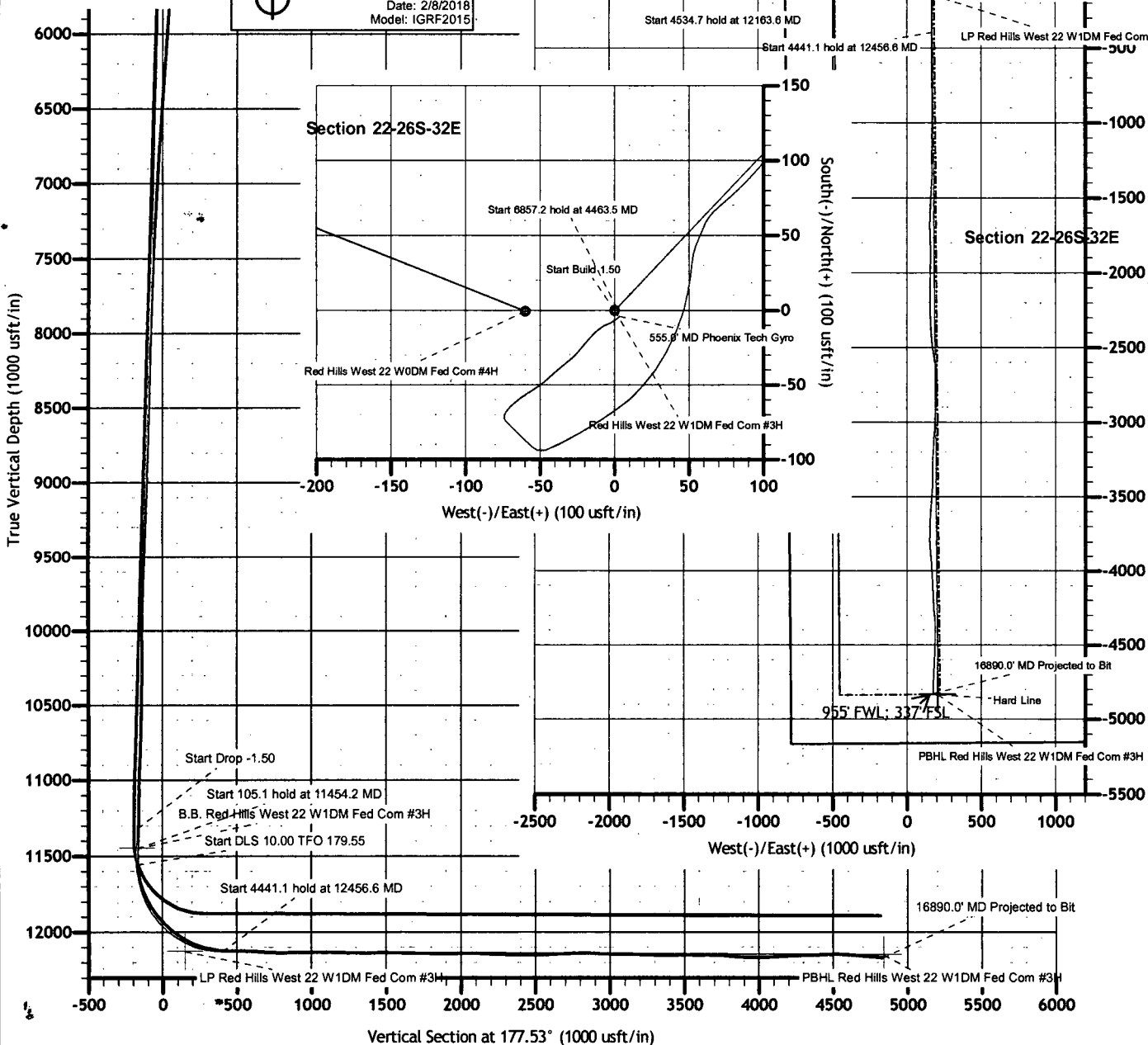
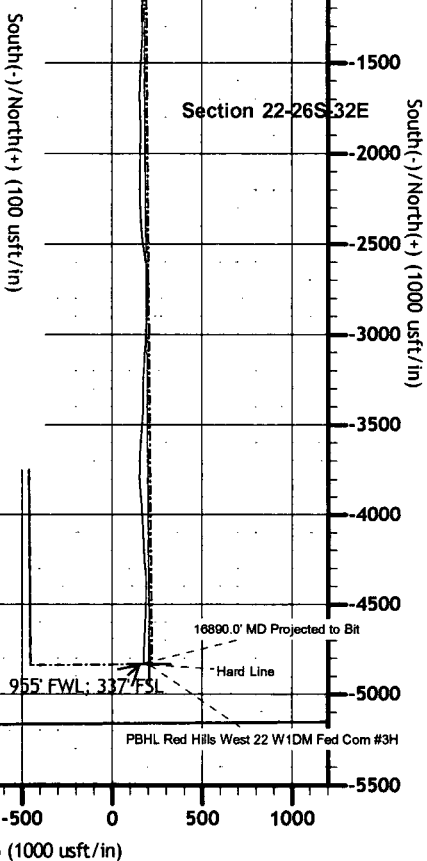
Magnetic Field
Strength: 47751.2snT
Dip Angle: 59.86°
Date: 2/8/2018
Model: IGRF2015



Section 22-26S-32E



Section 22-26S-32E



Vertical Section at 177.53° (1000 usft/in)



MEWBOURNE
OIL COMPANY

Mewbourne Oil Company

Lea County N.M.

Section 22-26S-32E Red Hills West 22 W1DM Fed Com
Red Hills West 22 W1DM Fed Com #3H

Original Hole

Design: Original Hole

Standard Survey Report

16 March, 2018



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 22 W1DM Fed Com #3H
Project:	Lea County N.M.	TVD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Site:	Section 22-26S-32E Red Hills West 22 W1DM Fed Com	MD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Well:	Red Hills West 22 W1DM Fed Com #3H	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	Section 22-26S-32E Red Hills West 22 W1DM Fed Com				
Site Position:		Northing:	377,072.70 usft	Latitude:	32° 2' 5.796 N
From:	Map	Easting:	706,087.70 usft	Longitude:	103° 40' 5.798 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	Red Hills West 22 W1DM Fed Com #3H					
Well Position	+N/-S	0.0 usft	Northing:	377,072.70 usft	Latitude:	32° 2' 5.796 N
	+E/-W	0.0 usft	Easting:	706,087.70 usft	Longitude:	103° 40' 5.798 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	3,145.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/8/2018	6.92	59.86	47,751.18732574

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	161.46

Survey Program	Date 3/16/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
696.0	16,890.0	Survey #1 (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)
555.0	0.49	210.58	555.0	-4.0	3.4	4.9	0.00	0.00	0.00
696.0	1.30	236.70	695.9	-5.4	1.8	5.7	0.63	0.57	18.52
895.0	1.30	234.00	894.9	-8.0	-1.9	6.9	0.03	0.00	-1.36
1,045.0	1.30	251.20	1,044.9	-9.5	-4.9	7.5	0.26	0.00	11.47
1,235.0	1.60	235.20	1,234.8	-11.7	-9.1	8.2	0.26	0.16	-8.42
1,425.0	1.80	226.00	1,424.7	-15.3	-13.4	10.2	0.18	0.11	-4.84
1,616.0	2.50	220.90	1,615.6	-20.5	-18.3	13.6	0.38	0.37	-2.67
1,804.0	3.00	219.80	1,803.4	-27.4	-24.2	18.3	0.27	0.27	-0.59
1,991.0	1.70	232.50	1,990.2	-32.9	-29.5	21.8	0.74	-0.70	6.79
2,177.0	1.90	230.20	2,176.1	-36.5	-34.0	23.8	0.11	0.11	-1.24

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 22 W1DM Fed Com #3H
Project:	Lea County N.M.	TVD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Site:	Section 22-26S-32E Red Hills West 22 W1DM Fed Com	MD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Well:	Red Hills West 22 W1DM Fed Com #3H	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)
2,363.0	2.10	228.50	2,362.0	-40.7	-39.0	26.2	0.11	0.11	-0.91
2,550.0	2.40	227.90	2,548.8	-45.6	-44.4	29.1	0.16	0.16	-0.32
2,736.0	2.50	234.40	2,734.7	-50.6	-50.6	31.9	0.16	0.05	3.49
2,922.0	3.10	238.60	2,920.5	-55.6	-58.2	34.2	0.34	0.32	2.26
3,109.0	3.10	229.50	3,107.2	-61.5	-66.4	37.2	0.26	0.00	-4.87
3,296.0	1.90	217.10	3,294.0	-67.3	-72.1	40.9	0.70	-0.64	-6.63
3,482.0	0.60	174.60	3,480.0	-70.7	-73.9	43.5	0.81	-0.70	-22.85
3,668.0	0.50	207.60	3,665.9	-72.4	-74.1	45.1	0.18	-0.05	17.74
3,854.0	1.00	132.00	3,851.9	-74.2	-73.3	47.0	0.54	0.27	-40.65
4,041.0	2.40	134.90	4,038.8	-78.0	-69.3	52.0	0.75	0.75	1.55
4,228.0	4.30	136.10	4,225.5	-85.9	-61.7	61.8	1.02	1.02	0.64
4,353.0	3.60	127.60	4,350.2	-91.6	-55.3	69.3	0.73	-0.56	-6.80
4,413.0	3.60	121.10	4,410.1	-93.8	-52.2	72.3	0.68	0.00	-10.83
4,506.0	3.80	68.30	4,502.9	-94.1	-46.9	74.3	3.54	0.22	-56.77
4,692.0	3.90	62.80	4,688.5	-89.0	-35.5	73.0	0.21	0.05	-2.96
4,879.0	4.30	60.30	4,875.0	-82.6	-23.8	70.7	0.23	0.21	-1.34
5,067.0	4.20	56.70	5,062.5	-75.3	-11.9	67.6	0.15	-0.05	-1.91
5,253.0	4.30	56.50	5,248.0	-67.7	-0.4	64.1	0.05	0.05	-0.11
5,440.0	3.80	48.10	5,434.5	-59.7	10.1	59.8	0.41	-0.27	-4.49
5,626.0	4.10	41.40	5,620.1	-50.6	19.1	54.0	0.30	0.16	-3.60
5,812.0	4.20	35.40	5,805.6	-40.1	27.4	46.7	0.24	0.05	-3.23
5,998.0	4.40	28.30	5,991.1	-28.2	34.7	37.8	0.31	0.11	-3.82
6,185.0	4.40	22.70	6,177.5	-15.3	40.9	27.5	0.23	0.00	-2.99
6,371.0	4.00	17.70	6,363.0	-2.5	45.6	16.9	0.29	-0.22	-2.69
6,557.0	3.80	11.20	6,548.6	9.7	48.8	6.3	0.26	-0.11	-3.49
6,744.0	3.70	7.90	6,735.2	21.8	50.8	-4.5	0.13	-0.05	-1.76
6,931.0	3.50	6.80	6,921.8	33.4	52.3	-15.0	0.11	-0.11	-0.59
7,118.0	4.10	22.30	7,108.4	45.2	55.5	-25.2	0.63	0.32	8.29
7,305.0	3.60	23.90	7,295.0	56.8	60.5	-34.6	0.27	-0.27	0.86
7,492.0	3.80	46.70	7,481.6	66.4	67.3	-41.6	0.79	0.11	12.19
7,679.0	3.10	49.80	7,668.3	73.9	75.7	-46.0	0.39	-0.37	1.66
7,865.0	3.00	45.80	7,854.0	80.6	83.1	-50.0	0.13	-0.05	-2.15
8,052.0	2.20	44.80	8,040.8	86.5	89.1	-53.7	0.43	-0.43	-0.53
8,239.0	1.60	41.90	8,227.7	91.0	93.4	-56.6	0.32	-0.32	-1.55
8,426.0	2.80	40.40	8,414.6	96.4	98.1	-60.3	0.64	0.64	-0.80
8,612.0	2.40	34.40	8,600.4	103.1	103.2	-65.0	0.26	-0.22	-3.23
8,798.0	2.50	55.20	8,786.2	108.6	108.7	-68.4	0.48	0.05	11.18
8,985.0	1.30	37.00	8,973.1	112.7	113.4	-70.8	0.71	-0.64	-9.73
9,171.0	2.40	37.60	9,159.0	117.4	117.0	-74.1	0.59	0.59	0.32
9,358.0	2.50	14.20	9,345.9	124.5	120.4	-79.8	0.53	0.05	-12.51
9,544.0	3.40	41.40	9,531.6	132.6	125.0	-85.9	0.88	0.48	14.62
9,731.0	2.60	51.00	9,718.4	139.4	132.0	-90.2	0.50	-0.43	5.13

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Project:	Lea County N.M.	TVD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Site:	Section 22-26S-32E Red Hills West 22 W1DM Fed Com	MD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Well:	Red Hills West 22 W1DM Fed Com #3H	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)
9,917.0	1.80	43.50	9,904.2	144.2	137.3	-93.0	0.46	-0.43	-4.03
10,103.0	0.60	227.30	10,090.2	145.6	138.6	-94.0	1.29	-0.65	-94.73
10,289.0	1.80	69.60	10,276.2	146.0	140.6	-93.7	1.27	0.65	-84.78
10,476.0	1.10	51.30	10,463.1	148.1	144.8	-94.4	0.44	-0.37	-9.79
10,663.0	2.30	67.90	10,650.0	150.7	149.6	-95.3	0.69	0.64	8.88
10,850.0	4.00	40.70	10,836.8	157.0	157.4	-98.8	1.19	0.91	-14.55
11,037.0	0.90	14.60	11,023.6	163.4	162.0	-103.4	1.72	-1.66	-13.96
11,224.0	0.70	42.80	11,210.6	165.6	163.1	-105.2	0.23	-0.11	15.08
11,410.0	3.40	25.40	11,396.4	171.5	166.3	-109.7	1.47	1.45	-9.35
11,463.8	3.06	29.76	11,450.2	174.2	167.7	-111.8	0.78	-0.64	8.10
B.B. Red Hills West 22 W1DM Fed Com #3H									
11,473.0	3.00	30.60	11,459.3	174.6	167.9	-112.1	0.78	-0.62	9.17
11,554.0	1.60	111.00	11,540.3	176.0	170.1	-112.8	3.90	-1.73	99.26
11,584.0	5.50	154.00	11,570.2	174.5	171.1	-111.1	14.88	13.00	143.33
11,616.0	9.50	161.20	11,601.9	170.7	172.6	-106.9	12.82	12.50	22.50
11,647.0	11.20	164.40	11,632.4	165.3	174.2	-101.4	5.79	5.48	10.32
11,678.0	14.20	166.80	11,662.7	158.7	175.9	-94.6	9.82	9.68	7.74
11,709.0	17.60	169.90	11,692.5	150.4	177.6	-86.2	11.30	10.97	10.00
11,740.0	20.60	172.10	11,721.8	140.4	179.2	-76.2	9.95	9.68	7.10
11,771.0	23.00	175.60	11,750.5	129.0	180.4	-64.9	8.80	7.74	11.29
11,802.0	26.90	176.70	11,778.6	115.9	181.3	-52.3	12.67	12.58	3.55
11,833.0	30.60	178.00	11,805.8	101.0	181.9	-37.9	12.10	11.94	4.19
11,893.0	33.80	179.70	11,856.6	69.1	182.6	-7.4	5.54	5.33	2.83
11,925.0	37.20	181.00	11,882.6	50.5	182.4	10.1	10.88	10.63	4.06
11,956.0	40.30	182.60	11,906.8	31.1	181.8	28.3	10.51	10.00	5.16
11,987.0	43.70	183.60	11,929.8	10.4	180.7	47.6	11.18	10.97	3.23
12,018.0	46.10	183.00	11,951.8	-11.5	179.4	67.9	7.86	7.74	-1.94
12,049.0	48.60	183.00	11,972.8	-34.2	178.2	89.1	8.06	8.06	0.00
12,081.0	51.40	182.50	11,993.4	-58.7	177.1	112.0	8.83	8.75	-1.56
12,112.0	54.70	182.40	12,012.0	-83.5	176.0	135.1	10.65	10.65	-0.32
12,143.0	56.70	182.60	12,029.5	-109.0	174.9	159.0	6.47	6.45	0.65
12,174.0	59.20	183.00	12,045.9	-135.3	173.6	183.5	8.14	8.06	1.29
12,205.0	62.20	183.20	12,061.1	-162.3	172.2	208.6	9.69	9.68	0.65
12,217.2	63.70	183.00	12,066.7	-173.2	171.6	218.7	12.34	12.26	-1.64
LP Red Hills West 22 W1DM Fed Com #3H									
12,236.0	66.00	182.70	12,074.6	-190.1	170.7	234.5	12.34	12.26	-1.59
12,268.0	69.40	183.10	12,086.8	-219.7	169.2	262.1	10.69	10.63	1.25
12,299.0	73.30	182.20	12,096.7	-249.0	167.9	289.5	12.88	12.58	-2.90
12,330.0	75.90	180.90	12,104.9	-278.9	167.1	317.5	9.31	8.39	-4.19
12,361.0	78.50	180.70	12,111.8	-309.1	166.6	346.0	8.41	8.39	-0.65
12,392.0	82.40	180.30	12,116.9	-339.7	166.4	374.9	12.64	12.58	-1.29
12,423.0	84.70	179.20	12,120.4	-370.5	166.5	404.2	8.21	7.42	-3.55
12,486.0	89.30	178.80	12,123.7	-433.4	167.6	464.2	7.33	7.30	-0.63

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Well:	Red Hills West 22 W1DM Fed Com #3H	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)
12,579.0	90.40	179.70	12,123.9	-526.4	168.8	552.7	1.53	1.18	0.97
12,672.0	83.80	180.60	12,128.6	-619.2	168.6	640.6	7.16	-7.10	0.97
12,766.0	87.80	178.90	12,135.5	-712.9	169.0	729.6	4.62	4.26	-1.81
12,859.0	91.40	179.30	12,136.2	-805.9	170.5	818.3	3.89	3.87	0.43
12,952.0	91.30	179.90	12,134.0	-898.8	171.1	906.6	0.65	-0.11	0.65
13,046.0	89.70	180.70	12,133.2	-992.8	170.6	995.6	1.90	-1.70	0.85
13,139.0	89.80	180.60	12,133.6	-1,085.8	169.6	1,083.4	0.15	0.11	-0.11
13,232.0	89.50	180.40	12,134.1	-1,178.8	168.7	1,171.3	0.39	-0.32	-0.22
13,326.0	88.10	179.30	12,136.1	-1,272.8	169.0	1,260.5	1.89	-1.49	-1.17
13,419.0	89.80	181.10	12,137.8	-1,365.8	168.7	1,348.5	2.66	1.83	1.94
13,512.0	93.10	184.20	12,135.5	-1,458.6	164.4	1,435.2	4.87	3.55	3.33
13,605.0	85.90	184.00	12,136.3	-1,551.3	157.7	1,521.0	7.74	-7.74	-0.22
13,698.0	90.00	179.60	12,139.6	-1,644.2	154.8	1,608.1	6.46	4.41	-4.73
13,790.0	88.60	177.70	12,140.7	-1,736.1	157.0	1,696.0	2.57	-1.52	-2.07
13,883.0	88.60	179.70	12,143.0	-1,829.1	159.1	1,784.8	2.15	0.00	2.15
13,976.0	92.30	181.20	12,142.3	-1,922.1	158.4	1,872.7	4.29	3.98	1.61
14,068.0	90.20	181.40	12,140.3	-2,014.0	156.3	1,959.2	2.29	-2.28	0.22
14,161.0	88.10	179.70	12,141.6	-2,107.0	155.4	2,047.1	2.91	-2.26	-1.83
14,254.0	87.70	179.50	12,145.0	-2,199.9	156.0	2,135.4	0.48	-0.43	-0.22
14,347.0	88.70	177.70	12,148.0	-2,292.8	158.3	2,224.2	2.21	1.08	-1.94
14,440.0	88.70	176.70	12,150.1	-2,385.7	162.8	2,313.7	1.07	0.00	-1.08
14,532.0	89.90	173.60	12,151.2	-2,477.3	170.6	2,403.1	3.61	1.30	-3.37
14,625.0	93.80	169.50	12,148.2	-2,569.3	184.3	2,494.5	6.08	4.19	-4.41
14,718.0	90.90	173.50	12,144.4	-2,661.1	198.0	2,586.0	5.31	-3.12	4.30
14,811.0	93.10	181.90	12,141.1	-2,753.9	201.7	2,675.2	9.33	2.37	9.03
14,904.0	88.60	183.70	12,139.8	-2,846.8	197.2	2,761.8	5.21	-4.84	1.94
14,996.0	86.20	182.30	12,143.9	-2,938.5	192.4	2,847.2	3.02	-2.61	-1.52
15,089.0	90.50	183.50	12,146.6	-3,031.3	187.7	2,933.7	4.80	4.62	1.29
15,182.0	89.50	184.10	12,146.6	-3,124.1	181.5	3,019.8	1.25	-1.08	0.65
15,275.0	87.10	182.90	12,149.4	-3,216.9	175.8	3,105.9	2.88	-2.58	-1.29
15,368.0	89.00	180.10	12,152.5	-3,309.8	173.4	3,193.2	3.64	2.04	-3.01
15,462.0	91.60	181.50	12,152.0	-3,403.8	172.1	3,281.9	3.14	2.77	1.49
15,555.0	90.00	183.00	12,150.7	-3,496.7	168.4	3,368.8	2.36	-1.72	1.61
15,648.0	90.10	185.20	12,150.7	-3,589.5	161.8	3,454.7	2.37	0.11	2.37
15,742.0	89.90	185.00	12,150.7	-3,683.1	153.4	3,540.8	0.30	-0.21	-0.21
15,835.0	84.80	176.20	12,155.0	-3,775.9	152.4	3,628.4	10.93	-5.48	-9.46
15,928.0	85.90	175.70	12,162.5	-3,868.3	159.0	3,718.2	1.30	1.18	-0.54
16,022.0	89.60	176.10	12,166.2	-3,962.0	165.7	3,809.1	3.96	3.94	0.43
16,115.0	93.00	177.10	12,164.1	-4,054.8	171.2	3,898.9	3.81	3.66	1.08
16,208.0	93.10	177.60	12,159.1	-4,147.6	175.5	3,988.2	0.55	0.11	0.54
16,302.0	91.40	175.90	12,155.4	-4,241.3	180.8	4,078.8	2.56	-1.81	-1.81
16,395.0	91.10	174.60	12,153.4	-4,334.0	188.5	4,169.1	1.43	-0.32	-1.40

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 22 W1DM Fed Com #3H
Project:	Lea County N.M.	TVD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Site:	Section 22-26S-32E Red Hills West 22 W1DM Fed Com	MD Reference:	3145 +27 @ 3172.0usft (Patterson 242)
Well:	Red Hills West 22 W1DM Fed Com #3H	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)
16,488.0	95.10	182.50	12,148.4	-4,426.7	190.9	4,257.8	9.51	4.30	8.49
16,581.0	87.50	182.30	12,146.3	-4,519.6	187.0	4,344.5	8.17	-8.17	-0.22
16,674.0	86.50	182.60	12,151.1	-4,612.3	183.0	4,431.2	1.12	-1.08	0.32
16,767.0	85.20	182.10	12,157.9	-4,705.0	179.2	4,517.9	1.50	-1.40	-0.54
16,838.0	84.30	181.90	12,164.4	-4,775.7	176.8	4,584.1	1.30	-1.27	-0.28
16,890.0	84.30	181.90	12,169.5	-4,827.4	175.0	4,632.6	0.00	0.00	0.00

16890.0' MD Projected to Bit - PBHL Red Hills West 22 W1DM Fed Com #3H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,890.0	12,169.5	-4,827.4	175.0	16890.0' MD Projected to Bit



April 19, 2018

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

Attn: Jackie Lathan

Re: Mewbourne Oil Company
Red Hills West 22 W1DM Federal Com #003H
LWR Bone Spring
Lea County, New Mexico
API# 30-025-42911

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

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Derek Simpson	Original Hole	696ft. to 16,838ft.	02-25-18 to 03-16-18	MWD Survey

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


Todd Estes

Enclosures

CC:

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

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

NMEMaNRD\Mewbourne Oil Company\Red Hills West 22 W1DM Fed Com #3H\M181030

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



April 19, 2018

Survey Certification Report

STATE OF TEXAS
COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of February 25, 2018, through March 16, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 696 feet to a depth of 16,838 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Red Hills West 22 W1DM Federal Com #003H well, API # **30-025-42911** in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

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



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section 22-26S-32E Red Hills West 22 W1DM Fe
Well: Red Hills West 22 W1DM Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West 22 W1DM Fed Com #3H
TVD Reference: 3145 +27 @ 3172.0usft (Patterson 242)
MD Reference: 3145 +27 @ 3172.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	Section 22-26S-32E Red Hills West 22 W1DM Fed Com		
Site Position:		Northing:	377,072.70 usft
From:	Map	Easting:	706,087.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 5.796 N
		Longitude:	103° 40' 5.798 W
		Grid Convergence:	0.35 °

Well	Red Hills West 22 W1DM Fed Com #3H		
Well Position	+N/-S	0.0 usft	Northing: 377,072.70 usft
	+E/-W	0.0 usft	Easting: 706,087.70 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft
		Latitude:	32° 2' 5.796 N
		Longitude:	103° 40' 5.798 W
		Ground Level:	3,145.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/8/2018	6.92	59.86	47,751.18732574

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	161.46	

Survey Program	Date 3/16/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
696.0	16,890.0	Survey #1 (Original Hole)	MWD	MWD v3:standard declination	



Microsoft MWD Surveys



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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
555.0	0.49	210.58	555.0	-4.0	3.4	5.3	139.15	Tie-In
696.0	1.30	236.70	695.9	-5.4	1.8	5.7	161.46	
895.0	1.30	234.00	894.9	-8.0	-1.9	8.2	193.48	
1,045.0	1.30	251.20	1,044.9	-9.5	-4.9	10.7	207.25	
1,235.0	1.60	235.20	1,234.8	-11.7	-9.1	14.8	217.89	
1,425.0	1.80	226.00	1,424.7	-15.3	-13.4	20.4	221.30	
1,616.0	2.50	220.90	1,615.6	-20.5	-18.3	27.5	221.75	
1,804.0	3.00	219.80	1,803.4	-27.4	-24.2	36.5	221.39	
1,991.0	1.70	232.50	1,990.2	-32.9	-29.5	44.1	221.91	
2,177.0	1.90	230.20	2,176.1	-36.5	-34.0	49.9	223.00	
2,363.0	2.10	228.50	2,362.0	-40.7	-39.0	56.4	223.73	
2,550.0	2.40	227.90	2,548.8	-45.6	-44.4	63.7	224.24	
2,736.0	2.50	234.40	2,734.7	-50.6	-50.6	71.6	225.01	
2,922.0	3.10	238.60	2,920.5	-55.6	-58.2	80.5	226.32	
3,109.0	3.10	229.50	3,107.2	-61.5	-66.4	90.5	227.18	
3,296.0	1.90	217.10	3,294.0	-67.3	-72.1	98.6	226.98	
3,482.0	0.60	174.60	3,480.0	-70.7	-73.9	102.2	226.26	
3,668.0	0.50	207.60	3,665.9	-72.4	-74.1	103.6	225.69	
3,854.0	1.00	132.00	3,851.9	-74.2	-73.3	104.3	224.66	
4,041.0	2.40	134.90	4,038.8	-78.0	-69.3	104.4	221.62	
4,228.0	4.30	136.10	4,225.5	-85.9	-61.7	105.7	215.70	
4,353.0	3.60	127.60	4,350.2	-91.6	-55.3	107.0	211.13	
4,413.0	3.60	121.10	4,410.1	-93.8	-52.2	107.3	209.12	
4,506.0	3.80	68.30	4,502.9	-94.1	-46.9	105.1	206.47	
4,692.0	3.90	62.80	4,688.5	-89.0	-35.5	95.8	201.76	
4,879.0	4.30	60.30	4,875.0	-82.6	-23.8	85.9	196.06	
5,067.0	4.20	56.70	5,062.5	-75.3	-11.9	76.2	188.97	



Microsoft
MWD Surveys



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Wellbore: Original Hole
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MD Reference: 3145 +27 @ 3172.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,253.0	4.30	56.50	5,248.0	-67.7	-0.4	67.7	180.33
5,440.0	3.80	48.10	5,434.5	-59.7	10.1	60.5	170.42
5,626.0	4.10	41.40	5,620.1	-50.6	19.1	54.1	159.36
5,812.0	4.20	35.40	5,805.6	-40.1	27.4	48.5	145.63
5,998.0	4.40	28.30	5,991.1	-28.2	34.7	44.8	129.10
6,185.0	4.40	22.70	6,177.5	-15.3	40.9	43.7	110.50
6,371.0	4.00	17.70	6,363.0	-2.5	45.6	45.7	93.18
6,557.0	3.80	11.20	6,548.6	9.7	48.8	49.7	78.76
6,744.0	3.70	7.90	6,735.2	21.8	50.8	55.3	66.83
6,931.0	3.50	6.80	6,921.8	33.4	52.3	62.1	57.46
7,118.0	4.10	22.30	7,108.4	45.2	55.5	71.6	50.83
7,305.0	3.60	23.90	7,295.0	56.8	60.5	83.0	46.79
7,492.0	3.80	46.70	7,481.6	66.4	67.3	94.6	45.40
7,679.0	3.10	49.80	7,668.3	73.9	75.7	105.8	45.68
7,865.0	3.00	45.80	7,854.0	80.6	83.1	115.7	45.87
8,052.0	2.20	44.80	8,040.8	86.5	89.1	124.2	45.83
8,239.0	1.60	41.90	8,227.7	91.0	93.4	130.4	45.73
8,426.0	2.80	40.40	8,414.6	96.4	98.1	137.5	45.48
8,612.0	2.40	34.40	8,600.4	103.1	103.2	145.9	45.03
8,798.0	2.50	55.20	8,786.2	108.6	108.7	153.7	45.03
8,985.0	1.30	37.00	8,973.1	112.7	113.4	159.8	45.18
9,171.0	2.40	37.60	9,159.0	117.4	117.0	165.8	44.90
9,358.0	2.50	14.20	9,345.9	124.5	120.4	173.2	44.04
9,544.0	3.40	41.40	9,531.6	132.6	125.0	182.2	43.33
9,731.0	2.60	51.00	9,718.4	139.4	132.0	192.0	43.44
9,917.0	1.80	43.50	9,904.2	144.2	137.3	199.1	43.60
10,103.0	0.60	227.30	10,090.2	145.6	138.6	201.0	43.58



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
10,289.0	1.80	69.60	10,276.2	146.0	140.6	202.7	43.93
10,476.0	1.10	51.30	10,463.1	148.1	144.8	207.1	44.34
10,663.0	2.30	67.90	10,650.0	150.7	149.6	212.4	44.81
10,850.0	4.00	40.70	10,836.8	157.0	157.4	222.3	45.07
11,037.0	0.90	14.60	11,023.6	163.4	162.0	230.1	44.76
11,224.0	0.70	42.80	11,210.6	165.6	163.1	232.5	44.56
11,410.0	3.40	25.40	11,396.4	171.5	166.3	238.9	44.12
11,463.8	3.06	29.76	11,450.2	174.2	167.7	241.8	43.92
B.B. Red Hills West 22 W1DM Fed Com #3H							
11,473.0	3.00	30.60	11,459.3	174.6	167.9	242.2	43.89
11,554.0	1.60	111.00	11,540.3	176.0	170.1	244.7	44.02
11,584.0	5.50	154.00	11,570.2	174.5	171.1	244.4	44.43
11,616.0	9.50	161.20	11,601.9	170.7	172.6	242.7	45.32
11,647.0	11.20	164.40	11,632.4	165.3	174.2	240.2	46.50
11,678.0	14.20	166.80	11,662.7	158.7	175.9	237.0	47.94
11,709.0	17.60	169.90	11,692.5	150.4	177.6	232.8	49.74
11,740.0	20.60	172.10	11,721.8	140.4	179.2	227.6	51.92
11,771.0	23.00	175.60	11,750.5	129.0	180.4	221.8	54.44
11,802.0	26.90	176.70	11,778.6	115.9	181.3	215.2	57.40
11,833.0	30.60	178.00	11,805.8	101.0	181.9	208.1	60.96
11,893.0	33.80	179.70	11,856.6	69.1	182.6	195.2	69.28
11,925.0	37.20	181.00	11,882.6	50.5	182.4	189.3	74.53
11,956.0	40.30	182.60	11,906.8	31.1	181.8	184.5	80.29
11,987.0	43.70	183.60	11,929.8	10.4	180.7	181.0	86.71
12,018.0	46.10	183.00	11,951.8	-11.5	179.4	179.8	93.65
12,049.0	48.60	183.00	11,972.8	-34.2	178.2	181.5	100.87
12,081.0	51.40	182.50	11,993.4	-58.7	177.1	186.6	108.34



Microsoft MWD Surveys



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
12,112.0	54.70	182.40	12,012.0	-83.5	176.0	194.8	115.37
12,143.0	56.70	182.60	12,029.5	-109.0	174.9	206.1	121.94
12,174.0	59.20	183.00	12,045.9	-135.3	173.6	220.1	127.93
12,205.0	62.20	183.20	12,061.1	-162.3	172.2	236.6	133.31
12,217.2	63.70	183.00	12,066.7	-173.2	171.6	243.8	135.26
LP Red Hills West 22 W1DM Fed Com #3H							
12,236.0	66.00	182.70	12,074.6	-190.1	170.7	255.5	138.08
12,268.0	69.40	183.10	12,086.8	-219.7	169.2	277.3	142.39
12,299.0	73.30	182.20	12,096.7	-249.0	167.9	300.3	146.02
12,330.0	75.90	180.90	12,104.9	-278.9	167.1	325.1	149.08
12,361.0	78.50	180.70	12,111.8	-309.1	166.6	351.2	151.67
12,392.0	82.40	180.30	12,116.9	-339.7	166.4	378.2	153.90
12,423.0	84.70	179.20	12,120.4	-370.5	166.5	406.2	155.80
12,486.0	89.30	178.80	12,123.7	-433.4	167.6	464.6	158.86
12,579.0	90.40	179.70	12,123.9	-526.4	168.8	552.8	162.22
12,672.0	83.80	180.60	12,128.6	-619.2	168.6	641.7	164.77
12,766.0	87.80	178.90	12,135.5	-712.9	169.0	732.7	166.66
12,859.0	91.40	179.30	12,136.2	-805.9	170.5	823.7	168.06
12,952.0	91.30	179.90	12,134.0	-898.8	171.1	915.0	169.22
13,046.0	89.70	180.70	12,133.2	-992.8	170.6	1,007.4	170.25
13,139.0	89.80	180.60	12,133.6	-1,085.8	169.6	1,099.0	171.12
13,232.0	89.50	180.40	12,134.1	-1,178.8	168.7	1,190.8	171.85
13,326.0	88.10	179.30	12,136.1	-1,272.8	169.0	1,284.0	172.44
13,419.0	89.80	181.10	12,137.8	-1,365.8	168.7	1,376.2	172.96
13,512.0	93.10	184.20	12,135.5	-1,458.6	164.4	1,467.9	173.57
13,605.0	85.90	184.00	12,136.3	-1,551.3	157.7	1,559.3	174.19
13,698.0	90.00	179.60	12,139.6	-1,644.2	154.8	1,651.4	174.62



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N.M.
Site: Section 22-26S-32E Red Hills West 22 W1DM Fe
Well: Red Hills West 22 W1DM Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West 22 W1DM Fed Com #3H
TVD Reference: 3145 +27 @ 3172.0usft (Patterson 242)
MD Reference: 3145 +27 @ 3172.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,790.0	88.60	177.70	12,140.7	-1,736.1	157.0	1,743.2	174.83
13,883.0	88.60	179.70	12,143.0	-1,829.1	159.1	1,836.0	175.03
13,976.0	92.30	181.20	12,142.3	-1,922.1	158.4	1,928.6	175.29
14,068.0	90.20	181.40	12,140.3	-2,014.0	156.3	2,020.1	175.56
14,161.0	88.10	179.70	12,141.6	-2,107.0	155.4	2,112.7	175.78
14,254.0	87.70	179.50	12,145.0	-2,199.9	156.0	2,205.4	175.94
14,347.0	88.70	177.70	12,148.0	-2,292.8	158.3	2,298.3	176.05
14,440.0	88.70	176.70	12,150.1	-2,385.7	162.8	2,391.2	176.10
14,532.0	89.90	173.60	12,151.2	-2,477.3	170.6	2,483.2	176.06
14,625.0	93.80	169.50	12,148.2	-2,569.3	184.3	2,575.9	175.90
14,718.0	90.90	173.50	12,144.4	-2,661.1	198.0	2,668.5	175.74
14,811.0	93.10	181.90	12,141.1	-2,753.9	201.7	2,761.3	175.81
14,904.0	88.60	183.70	12,139.8	-2,846.8	197.2	2,853.6	176.04
14,996.0	86.20	182.30	12,143.9	-2,938.5	192.4	2,944.8	176.25
15,089.0	90.50	183.50	12,146.6	-3,031.3	187.7	3,037.2	176.46
15,182.0	89.50	184.10	12,146.6	-3,124.1	181.5	3,129.4	176.67
15,275.0	87.10	182.90	12,149.4	-3,216.9	175.8	3,221.7	176.87
15,368.0	89.00	180.10	12,152.5	-3,309.8	173.4	3,314.4	177.00
15,462.0	91.60	181.50	12,152.0	-3,403.8	172.1	3,408.1	177.11
15,555.0	90.00	183.00	12,150.7	-3,496.7	168.4	3,500.8	177.24
15,648.0	90.10	185.20	12,150.7	-3,589.5	161.8	3,593.1	177.42
15,742.0	89.90	185.00	12,150.7	-3,683.1	153.4	3,686.3	177.61
15,835.0	84.80	176.20	12,155.0	-3,775.9	152.4	3,778.9	177.69
15,928.0	85.90	175.70	12,162.5	-3,868.3	159.0	3,871.6	177.65
16,022.0	89.60	176.10	12,166.2	-3,962.0	165.7	3,965.5	177.61
16,115.0	93.00	177.10	12,164.1	-4,054.8	171.2	4,058.4	177.58
16,208.0	93.10	177.60	12,159.1	-4,147.6	175.5	4,151.3	177.58



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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
16,302.0	91.40	175.90	12,155.4	-4,241.3	180.8	4,245.2	177.56
16,395.0	91.10	174.60	12,153.4	-4,334.0	188.5	4,338.1	177.51
16,488.0	95.10	182.50	12,148.4	-4,426.7	190.9	4,430.8	177.53
16,581.0	87.50	182.30	12,146.3	-4,519.6	187.0	4,523.4	177.63
16,674.0	86.50	182.60	12,151.1	-4,612.3	183.0	4,616.0	177.73
16,767.0	85.20	182.10	12,157.9	-4,705.0	179.2	4,708.4	177.82
16,838.0	84.30	181.90	12,164.4	-4,775.7	176.8	4,779.0	177.88
16,890.0	84.30	181.90	12,169.5	-4,827.4	175.0	4,830.6	177.92

16890.0' MD Projected to Bit - PBHL Red Hills West 22 W1DM Fed Com #3H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,890.0	12,169.5	-4,827.4	175.0	16890.0' MD Projected to Bit