



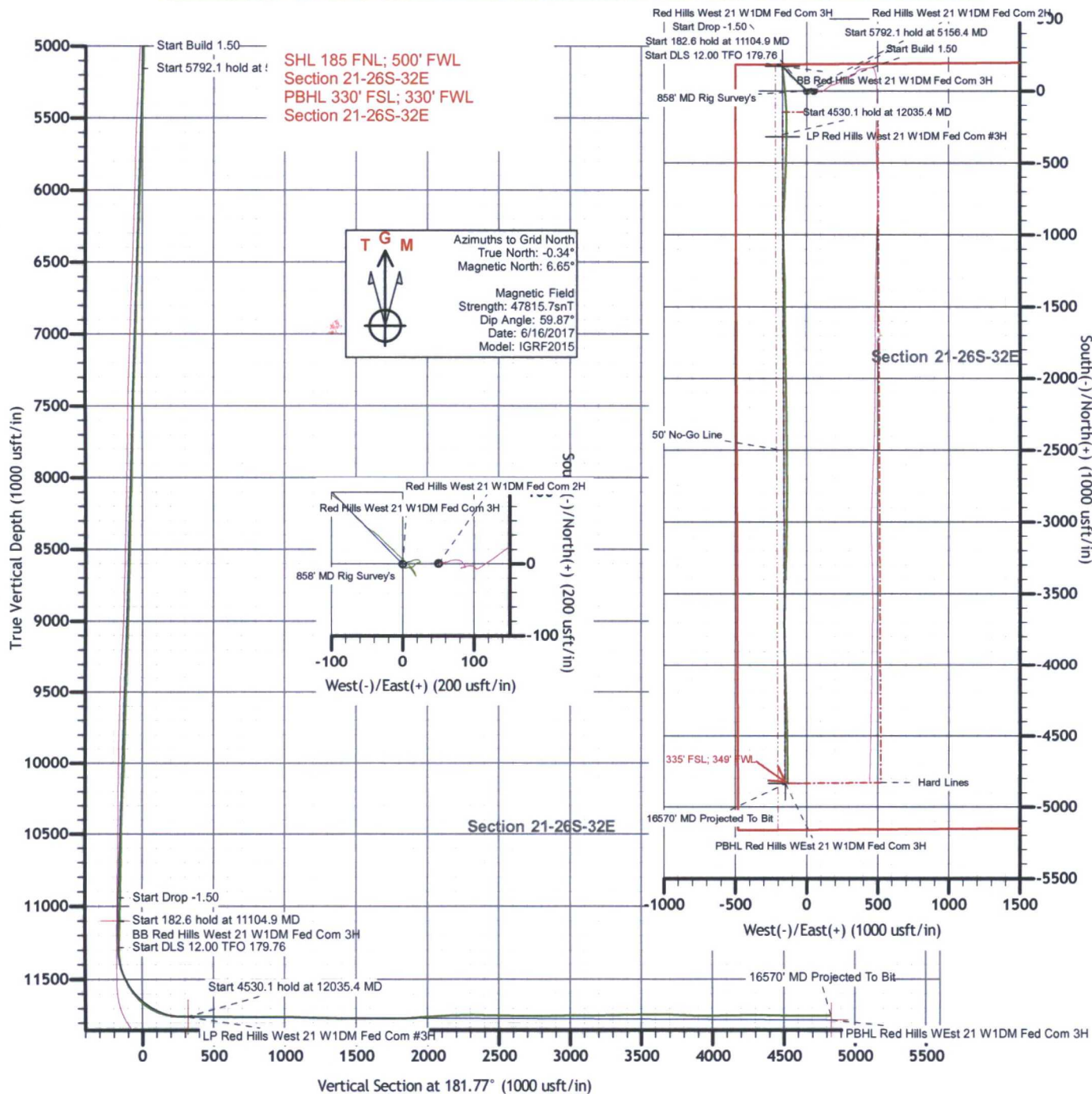
COMPANY: Mewbourne Oil Company
WELL: Red Hills West 21 W1DM Fed Com 3H
COUNTY: Lea County N.M.
DATUM: NAD 1927 (NADCON CONUS)
RIG: Patterson Patterson 231



Grid Correction MWD: To convert a Magnetic Direction to a Grid Direction, Add 6.65°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001 3153 + 27 @ 3180.0usft (Patterson 231) GROUND ELEVATION: 3153.0											
					+N/-S 0.0	+E/-W 0.0	Northing 377030.60	Easting 700441.90	Latitude 32° 2' 5.718 N	Longitude 103° 41' 11.386 W	Slot
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	5000.0	0.00	0.00	5000.0	0.0	0.0	0.00	0.00	0.0		
3	5156.4	2.35	315.51	5156.4	2.3	-2.2	1.50	315.51	-2.2		
4	10948.5	2.35	315.51	10943.6	171.5	-168.4	0.00	0.00	-166.2		
5	11104.9	0.00	0.00	11100.0	173.7	-170.7	1.50	180.00	-168.4	BB Red Hills West 21 W1DM Fed Com 3H	
6	11287.5	0.00	0.00	11282.6	173.7	-170.7	0.00	0.00	-168.4		
7	12035.4	89.75	179.76	11760.0	-301.6	-168.7	12.00	179.76	306.7		
8	16565.5	89.75	179.76	11780.0	-4831.6	-149.6	0.00	0.00	4834.0	PBHL Red Hills West 21 W1DM Fed Com 3H	





HOBBS OCD
SEP 28 2017
RECEIVED

Mewbourne Oil Company

Lea County N.M.

Section 21-26S-32E Red Hills West 21 W1DM Fed Com3

Red Hills West 21 W1DM Fed Com 3H

Original Hole

Design: Original Hole

Standard Survey Report

17 July, 2017



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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 21-26S-32E Red Hills West 21 W1DM Fed Com3		
Site Position:		Northing:	377,030.60 usft
From:	Map	Easting:	700,441.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 5.718 N
		Longitude:	103° 41' 11.386 W
		Grid Convergence:	0.34 °

Well	Red Hills West 21 W1DM Fed Com 3H		
Well Position	+N/-S	0.0 usft	Northing: 377,030.60 usft
	+E/-W	0.0 usft	Easting: 700,441.90 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	3,180.0 usft
		Latitude:	32° 2' 5.718 N
		Longitude:	103° 41' 11.386 W
		Ground Level:	3,153.0 usft

Wellbore	Original Hole		
-----------------	---------------	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/16/2017	6.99	59.87	47,815.70941452

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	71.38

Survey Program		Date 7/17/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
134.0	858.0	Rig Survey (Original Hole)	MWD	MWD v3:standard declination
963.0	16,570.0	MWD Survey (Original Hole)	MWD+IGRF	OWSG MWD + IGRF or WMM

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
	134.0	0.10	163.70	134.0	-0.1	0.0	0.0	0.07	0.07	0.00
	191.0	0.00	101.70	191.0	-0.2	0.0	0.0	0.18	-0.18	0.00
	252.0	0.10	83.70	252.0	-0.2	0.1	0.0	0.16	0.16	0.00
	312.0	0.50	78.00	312.0	-0.1	0.4	0.4	0.67	0.67	-9.50
	372.0	0.80	72.00	372.0	0.1	1.1	1.0	0.51	0.50	-10.00
	433.0	0.90	72.00	433.0	0.4	1.9	1.9	0.16	0.16	0.00
	491.0	1.30	63.00	491.0	0.8	2.9	3.0	0.75	0.69	-15.52
	551.0	1.30	65.00	551.0	1.4	4.2	4.4	0.08	0.00	3.33

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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)
610.0	1.40	66.00	609.9	2.0	5.4	5.8	0.17	0.17	1.69
670.0	1.10	65.00	669.9	2.5	6.6	7.1	0.50	-0.50	-1.67
730.0	1.00	70.00	729.9	2.9	7.6	8.2	0.23	-0.17	8.33
795.0	1.00	87.00	794.9	3.2	8.7	9.3	0.45	0.00	26.15
858.0	0.80	80.00	857.9	3.3	9.7	10.3	0.36	-0.32	-11.11
858' MD Rig Survey's									
963.0	1.30	65.40	962.9	3.9	11.5	12.2	0.54	0.48	-13.90
1,027.0	1.60	63.70	1,026.9	4.6	13.0	13.8	0.47	0.47	-2.66
1,122.0	1.60	75.20	1,121.8	5.5	15.5	16.4	0.34	0.00	12.11
1,217.0	1.60	81.30	1,216.8	6.1	18.0	19.0	0.18	0.00	6.42
1,313.0	1.50	98.40	1,312.8	6.1	20.6	21.5	0.49	-0.10	17.81
1,408.0	0.80	116.60	1,407.7	5.6	22.4	23.1	0.82	-0.74	19.16
1,503.0	0.30	112.90	1,502.7	5.2	23.3	23.7	0.53	-0.53	-3.89
1,598.0	0.60	142.80	1,597.7	4.7	23.8	24.1	0.39	0.32	31.47
1,693.0	0.60	150.10	1,692.7	3.9	24.3	24.3	0.08	0.00	7.68
1,789.0	0.70	134.40	1,788.7	3.0	25.0	24.7	0.21	0.10	-16.35
1,886.0	0.90	262.10	1,885.7	2.5	24.7	24.2	1.48	0.21	131.65
1,982.0	1.40	258.90	1,981.7	2.2	22.8	22.3	0.52	0.52	-3.33
2,077.0	1.40	246.20	2,076.7	1.5	20.6	20.0	0.33	0.00	-13.37
2,172.0	1.20	239.30	2,171.6	0.5	18.7	17.9	0.27	-0.21	-7.26
2,267.0	1.10	219.00	2,266.6	-0.7	17.2	16.1	0.44	-0.11	-21.37
2,362.0	1.10	219.10	2,361.6	-2.1	16.1	14.6	0.00	0.00	0.11
2,457.0	0.90	218.80	2,456.6	-3.4	15.0	13.2	0.21	-0.21	-0.32
2,552.0	1.10	264.70	2,551.6	-4.1	13.7	11.7	0.84	0.21	48.32
2,647.0	1.40	271.70	2,646.6	-4.1	11.6	9.7	0.35	0.32	7.37
2,742.0	1.40	263.20	2,741.5	-4.2	9.3	7.5	0.22	0.00	-8.95
2,836.0	1.30	252.40	2,835.5	-4.7	7.1	5.3	0.29	-0.11	-11.49
2,931.0	1.10	259.90	2,930.5	-5.2	5.2	3.3	0.27	-0.21	7.89
3,027.0	0.70	245.20	3,026.5	-5.6	3.8	1.8	0.48	-0.42	-15.31
3,122.0	0.10	162.70	3,121.5	-5.9	3.3	1.2	0.73	-0.63	-86.84
3,215.0	0.40	92.00	3,214.5	-6.0	3.6	1.5	0.41	0.32	-76.02
3,310.0	0.60	83.60	3,309.5	-5.9	4.4	2.3	0.22	0.21	-8.84
3,404.0	0.80	51.70	3,403.5	-5.5	5.4	3.4	0.46	0.21	-33.94
3,498.0	0.50	81.40	3,497.4	-5.0	6.4	4.4	0.47	-0.32	31.60
3,592.0	0.20	39.40	3,591.4	-4.8	6.9	5.0	0.40	-0.32	-44.68
3,686.0	0.30	67.00	3,685.4	-4.6	7.2	5.4	0.16	0.11	29.36
3,781.0	0.90	106.60	3,780.4	-4.7	8.1	6.2	0.73	0.63	41.68
3,875.0	0.70	113.00	3,874.4	-5.1	9.4	7.2	0.23	-0.21	6.81
3,969.0	1.10	130.80	3,968.4	-6.0	10.6	8.1	0.51	0.43	18.94
4,063.0	0.90	135.50	4,062.4	-7.1	11.8	8.9	0.23	-0.21	5.00
4,157.0	1.30	142.40	4,156.4	-8.4	13.0	9.6	0.45	0.43	7.34
4,250.0	1.20	145.60	4,249.4	-10.1	14.2	10.2	0.13	-0.11	3.44

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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)
4,375.0	1.20	145.60	4,374.3	-12.2	15.6	10.9	0.00	0.00	0.00
4,469.0	1.10	151.30	4,468.3	-13.8	16.6	11.3	0.16	-0.11	6.06
4,562.0	1.10	145.80	4,561.3	-15.4	17.6	11.7	0.11	0.00	-5.91
4,656.0	1.10	144.30	4,655.3	-16.8	18.6	12.2	0.03	0.00	-1.60
4,750.0	1.10	332.50	4,749.3	-16.8	18.7	12.4	2.33	0.00	-182.77
4,845.0	1.40	344.90	4,844.3	-14.9	18.0	12.3	0.42	0.32	13.05
4,940.0	1.60	342.30	4,939.2	-12.5	17.3	12.4	0.22	0.21	-2.74
5,035.0	2.20	323.80	5,034.2	-9.7	15.8	11.9	0.90	0.63	-19.47
5,130.0	2.40	320.90	5,129.1	-6.7	13.5	10.6	0.24	0.21	-3.05
5,224.0	2.30	317.70	5,223.0	-3.8	10.9	9.2	0.18	-0.11	-3.40
5,319.0	2.30	316.80	5,317.9	-1.0	8.4	7.6	0.04	0.00	-0.95
5,414.0	2.50	315.80	5,412.9	1.9	5.6	5.9	0.22	0.21	-1.05
5,509.0	2.40	311.50	5,507.8	4.7	2.7	4.0	0.22	-0.11	-4.53
5,603.0	2.50	311.20	5,601.7	7.3	-0.3	2.0	0.11	0.11	-0.32
5,698.0	2.50	311.90	5,696.6	10.1	-3.4	0.0	0.03	0.00	0.74
5,792.0	2.50	311.40	5,790.5	12.8	-6.5	-2.1	0.02	0.00	-0.53
5,887.0	2.50	316.40	5,885.4	15.7	-9.5	-4.0	0.23	0.00	5.26
5,981.0	2.30	317.10	5,979.3	18.5	-12.2	-5.6	0.22	-0.21	0.74
6,076.0	2.20	313.70	6,074.3	21.2	-14.8	-7.3	0.18	-0.11	-3.58
6,171.0	2.30	307.40	6,169.2	23.6	-17.6	-9.2	0.28	0.11	-6.63
6,266.0	2.70	312.50	6,264.1	26.3	-20.8	-11.3	0.48	0.42	5.37
6,361.0	2.80	315.70	6,359.0	29.5	-24.1	-13.4	0.19	0.11	3.37
6,456.0	2.70	317.00	6,453.9	32.8	-27.2	-15.3	0.12	-0.11	1.37
6,551.0	2.60	315.80	6,548.8	35.9	-30.2	-17.2	0.12	-0.11	-1.26
6,646.0	2.40	312.70	6,643.7	38.8	-33.2	-19.1	0.25	-0.21	-3.26
6,741.0	2.50	309.00	6,738.6	41.5	-36.3	-21.1	0.20	0.11	-3.89
6,836.0	2.40	305.60	6,833.5	43.9	-39.5	-23.4	0.19	-0.11	-3.58
6,931.0	2.30	298.80	6,928.4	46.0	-42.8	-25.9	0.31	-0.11	-7.16
7,026.0	2.90	303.00	7,023.3	48.3	-46.5	-28.6	0.66	0.63	4.42
7,120.0	3.30	307.30	7,117.2	51.2	-50.6	-31.6	0.49	0.43	4.57
7,215.0	3.40	324.40	7,212.0	55.1	-54.4	-34.0	1.05	0.11	18.00
7,310.0	2.90	309.60	7,306.9	59.0	-57.9	-36.1	1.00	-0.53	-15.58
7,406.0	2.90	307.20	7,402.8	62.0	-61.7	-38.7	0.13	0.00	-2.50
7,501.0	2.70	318.00	7,497.7	65.1	-65.2	-41.0	0.59	-0.21	11.37
7,596.0	2.50	320.70	7,592.6	68.4	-68.0	-42.6	0.25	-0.21	2.84
7,692.0	2.00	315.60	7,688.5	71.2	-70.5	-44.0	0.56	-0.52	-5.31
7,788.0	1.60	314.40	7,784.4	73.3	-72.6	-45.4	0.42	-0.42	-1.25
7,883.0	1.90	303.10	7,879.4	75.1	-74.9	-47.0	0.48	0.32	-11.89
7,978.0	2.50	308.10	7,974.3	77.2	-77.8	-49.1	0.66	0.63	5.26
8,074.0	2.80	326.10	8,070.2	80.5	-80.8	-50.8	0.92	0.31	18.75
8,170.0	2.30	327.40	8,166.1	84.0	-83.1	-51.9	0.52	-0.52	1.35
8,264.0	1.90	314.20	8,260.1	86.7	-85.2	-53.1	0.67	-0.43	-14.04
8,359.0	1.60	299.10	8,355.0	88.5	-87.5	-54.7	0.58	-0.32	-15.89

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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)
8,454.0	2.00	302.50	8,450.0	90.0	-90.1	-56.6	0.44	0.42	3.58
8,550.0	2.90	305.00	8,545.9	92.3	-93.5	-59.1	0.94	0.94	2.60
8,645.0	3.10	307.50	8,640.8	95.2	-97.5	-62.0	0.25	0.21	2.63
8,739.0	2.90	298.80	8,734.6	97.9	-101.6	-65.0	0.53	-0.21	-9.26
8,834.0	2.20	319.20	8,829.5	100.5	-104.9	-67.3	1.20	-0.74	21.47
8,930.0	2.40	312.90	8,925.5	103.2	-107.6	-69.0	0.34	0.21	-6.56
9,023.0	2.90	319.30	9,018.4	106.3	-110.5	-70.8	0.62	0.54	6.88
9,118.0	1.80	315.50	9,113.3	109.2	-113.1	-72.3	1.17	-1.16	-4.00
9,213.0	2.10	313.40	9,208.2	111.5	-115.5	-73.8	0.32	0.32	-2.21
9,307.0	2.00	329.80	9,302.2	114.1	-117.5	-74.9	0.63	-0.11	17.45
9,402.0	1.80	329.90	9,397.1	116.8	-119.1	-75.6	0.21	-0.21	0.11
9,497.0	1.90	316.80	9,492.1	119.2	-120.9	-76.5	0.46	0.11	-13.79
9,592.0	2.20	326.20	9,587.0	121.9	-123.0	-77.7	0.47	0.32	9.89
9,688.0	1.80	312.80	9,682.9	124.5	-125.2	-78.9	0.64	-0.42	-13.96
9,784.0	2.00	314.10	9,778.9	126.7	-127.5	-80.4	0.21	0.21	1.35
9,879.0	1.80	294.60	9,873.8	128.4	-130.0	-82.2	0.71	-0.21	-20.53
9,975.0	2.70	317.80	9,969.8	130.7	-132.9	-84.2	1.32	0.94	24.17
10,070.0	3.00	331.50	10,064.6	134.6	-135.6	-85.5	0.78	0.32	14.42
10,166.0	3.20	333.00	10,160.5	139.2	-138.0	-86.3	0.22	0.21	1.56
10,261.0	3.00	331.30	10,255.4	143.7	-140.4	-87.2	0.23	-0.21	-1.79
10,356.0	3.30	320.30	10,350.2	148.0	-143.3	-88.6	0.71	0.32	-11.58
10,451.0	2.80	303.00	10,445.1	151.4	-147.0	-91.0	1.10	-0.53	-18.21
10,546.0	2.50	275.90	10,540.0	152.8	-151.0	-94.3	1.34	-0.32	-28.53
10,642.0	2.50	283.60	10,635.9	153.5	-155.2	-98.0	0.35	0.00	8.02
10,736.0	2.20	284.20	10,729.8	154.5	-158.9	-101.3	0.32	-0.32	0.64
10,832.0	1.90	280.90	10,825.8	155.2	-162.3	-104.2	0.34	-0.31	-3.44
10,927.0	2.20	317.90	10,920.7	156.9	-165.0	-106.3	1.40	0.32	38.95
11,022.0	2.10	353.50	11,015.6	160.0	-166.4	-106.7	1.39	-0.11	37.47
11,106.8	1.83	356.04	11,100.4	162.9	-166.7	-106.0	0.33	-0.32	3.00
BB Red Hills West 21 W1DM Fed Com 3H									
11,117.0	1.80	356.40	11,110.6	163.2	-166.7	-105.9	0.33	-0.31	3.50
11,211.0	1.30	334.20	11,204.6	165.6	-167.3	-105.7	0.82	-0.53	-23.62
11,244.0	1.20	316.80	11,237.5	166.2	-167.7	-105.8	1.18	-0.30	-52.73
11,308.0	1.50	278.30	11,301.5	166.8	-169.0	-106.9	1.46	0.47	-60.16
11,340.0	3.40	192.10	11,333.5	165.9	-169.6	-107.7	11.32	5.94	-269.38
11,372.0	7.60	178.10	11,365.4	162.9	-169.7	-108.8	13.68	13.13	-43.75
11,404.0	11.30	175.30	11,396.9	157.7	-169.4	-110.2	11.65	11.56	-8.75
11,436.0	15.30	175.90	11,428.0	150.3	-168.8	-112.0	12.51	12.50	1.88
11,467.0	19.90	174.40	11,457.6	141.0	-168.0	-114.2	14.91	14.84	-4.84
11,499.0	24.30	173.50	11,487.2	129.0	-166.8	-116.8	13.79	13.75	-2.81
11,531.0	28.00	173.60	11,516.0	115.0	-165.2	-119.8	11.56	11.56	0.31
11,562.0	30.50	172.90	11,543.0	100.0	-163.4	-122.9	8.14	8.06	-2.26
11,594.0	34.20	173.00	11,570.0	83.0	-161.3	-126.3	11.56	11.56	0.31

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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)
11,625.0	36.80	173.10	11,595.3	65.1	-159.1	-130.0	8.39	8.39	0.32
11,657.0	41.20	174.70	11,620.1	45.1	-157.0	-134.4	14.10	13.75	5.00
11,689.0	46.00	173.70	11,643.3	23.1	-154.7	-139.3	15.15	15.00	-3.13
11,721.0	50.40	173.80	11,664.6	-0.6	-152.1	-144.4	13.75	13.75	0.31
11,753.0	55.50	174.60	11,683.9	-26.0	-149.6	-150.0	16.06	15.94	2.50
11,785.0	60.00	176.20	11,701.0	-52.9	-147.4	-156.6	14.68	14.06	5.00
11,817.0	64.20	177.30	11,715.9	-81.2	-145.8	-164.1	13.47	13.13	3.44
11,848.0	69.00	177.90	11,728.2	-109.6	-144.6	-172.0	15.59	15.48	1.94
11,883.0	74.90	178.60	11,739.1	-142.8	-143.6	-181.7	16.96	16.86	2.00
11,948.0	84.00	179.10	11,751.0	-206.7	-142.3	-200.9	14.02	14.00	0.77
11,979.0	87.30	179.60	11,753.3	-237.6	-142.0	-210.4	10.77	10.65	1.61
12,043.0	89.10	179.80	11,755.3	-301.5	-141.7	-230.5	2.83	2.81	0.31
12,057.9	89.27	179.94	11,755.5	-316.4	-141.6	-235.2	1.50	1.16	0.95
LP Red Hills West 21 W1DM Fed Com #3H									
12,138.0	90.20	180.70	11,755.9	-396.5	-142.1	-261.2	1.50	1.16	0.95
12,233.0	89.80	181.70	11,755.9	-491.5	-144.1	-293.5	1.13	-0.42	1.05
12,328.0	88.70	182.30	11,757.2	-586.4	-147.4	-326.9	1.32	-1.16	0.63
12,423.0	89.80	183.00	11,758.4	-681.3	-151.8	-361.4	1.37	1.16	0.74
12,517.0	89.40	182.90	11,759.1	-775.2	-156.6	-395.9	0.44	-0.43	-0.11
12,613.0	89.30	181.60	11,760.1	-871.1	-160.4	-430.1	1.36	-0.10	-1.35
12,708.0	90.60	179.30	11,760.2	-966.1	-161.1	-461.2	2.78	1.37	-2.42
12,802.0	89.90	179.40	11,759.8	-1,060.1	-160.0	-490.2	0.75	-0.74	0.11
12,898.0	87.30	178.60	11,762.2	-1,156.0	-158.4	-519.2	2.83	-2.71	-0.83
12,993.0	87.80	177.00	11,766.2	-1,250.9	-154.7	-546.1	1.76	0.53	-1.68
13,088.0	88.90	179.20	11,769.0	-1,345.8	-151.6	-573.4	2.59	1.16	2.32
13,182.0	90.30	180.60	11,769.6	-1,439.8	-151.4	-603.2	2.11	1.49	1.49
13,277.0	88.50	180.20	11,770.6	-1,534.8	-152.1	-634.2	1.94	-1.89	-0.42
13,372.0	91.90	179.70	11,770.3	-1,629.7	-152.0	-664.4	3.62	3.58	-0.53
13,467.0	88.40	177.20	11,770.0	-1,724.7	-149.4	-692.3	4.53	-3.68	-2.63
13,562.0	92.60	179.30	11,769.2	-1,819.6	-146.5	-719.9	4.94	4.42	2.21
13,594.0	92.30	180.30	11,767.8	-1,851.6	-146.4	-730.0	3.26	-0.94	3.13
13,657.0	94.10	178.90	11,764.3	-1,914.5	-146.0	-749.7	3.62	2.86	-2.22
13,689.0	94.20	178.90	11,762.0	-1,946.4	-145.4	-759.3	0.31	0.31	0.00
13,752.0	93.90	178.80	11,757.5	-2,009.2	-144.1	-778.1	0.50	-0.48	-0.16
13,784.0	94.20	178.90	11,755.3	-2,041.1	-143.5	-787.7	0.99	0.94	0.31
13,848.0	92.80	178.80	11,751.4	-2,105.0	-142.2	-806.9	2.19	-2.19	-0.16
13,879.0	92.60	178.90	11,749.9	-2,136.0	-141.6	-816.2	0.72	-0.65	0.32
13,943.0	92.00	179.10	11,747.4	-2,199.9	-140.4	-835.6	0.99	-0.94	0.31
14,038.0	89.40	179.40	11,746.2	-2,294.9	-139.2	-864.7	2.75	-2.74	0.32
14,069.0	89.30	179.50	11,746.5	-2,325.9	-138.9	-874.3	0.46	-0.32	0.32
14,132.0	88.90	179.60	11,747.5	-2,388.9	-138.4	-894.0	0.65	-0.63	0.16
14,227.0	88.70	179.80	11,749.5	-2,483.8	-137.9	-923.8	0.30	-0.21	0.21

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Red Hills West 21 W1DM Fed Com 3H
Project:	Lea County N.M.	TVD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Site:	Section 21-26S-32E Red Hills West 21 W1DM Fed Com3	MD Reference:	3153 + 27 @ 3180.0usft (Patterson 231)
Well:	Red Hills West 21 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)
14,322.0	88.50	179.60	11,751.8	-2,578.8	-137.4	-953.7	0.30	-0.21	-0.21
14,416.0	90.80	179.40	11,752.4	-2,672.8	-136.6	-982.9	2.46	2.45	-0.21
14,511.0	90.60	179.80	11,751.3	-2,767.8	-135.9	-1,012.6	0.47	-0.21	0.42
14,606.0	90.40	180.20	11,750.4	-2,862.8	-135.9	-1,043.0	0.47	-0.21	0.42
14,701.0	90.20	180.70	11,749.9	-2,957.8	-136.7	-1,074.0	0.57	-0.21	0.53
14,797.0	89.80	180.80	11,749.9	-3,053.8	-137.9	-1,105.8	0.43	-0.42	0.10
14,891.0	90.90	181.30	11,749.4	-3,147.7	-139.7	-1,137.5	1.29	1.17	0.53
14,985.0	91.20	181.50	11,747.6	-3,241.7	-142.0	-1,169.7	0.38	0.32	0.21
15,080.0	91.50	182.10	11,745.4	-3,336.6	-144.9	-1,202.8	0.71	0.32	0.63
15,175.0	90.90	181.50	11,743.4	-3,431.6	-147.9	-1,235.9	0.89	-0.63	-0.63
15,270.0	89.90	181.10	11,742.7	-3,526.5	-150.1	-1,268.3	1.13	-1.05	-0.42
15,365.0	90.50	181.70	11,742.4	-3,621.5	-152.4	-1,300.8	0.89	0.63	0.63
15,460.0	87.80	180.80	11,743.8	-3,716.5	-154.5	-1,333.1	3.00	-2.84	-0.95
15,555.0	87.50	179.70	11,747.7	-3,811.4	-154.9	-1,363.8	1.20	-0.32	-1.16
15,650.0	88.60	177.60	11,750.9	-3,906.3	-152.6	-1,392.0	2.49	1.16	-2.21
15,745.0	91.40	178.10	11,750.9	-4,001.2	-149.1	-1,418.9	2.99	2.95	0.53
15,840.0	91.80	178.10	11,748.3	-4,096.1	-145.9	-1,446.3	0.42	0.42	0.00
15,935.0	90.10	178.40	11,746.7	-4,191.1	-143.0	-1,473.8	1.82	-1.79	0.32
16,029.0	90.20	178.70	11,746.5	-4,285.0	-140.7	-1,501.6	0.34	0.11	0.32
16,124.0	88.80	178.70	11,747.3	-4,380.0	-138.5	-1,529.9	1.47	-1.47	0.00
16,219.0	88.70	178.70	11,749.4	-4,475.0	-136.3	-1,558.1	0.11	-0.11	0.00
16,313.0	89.20	179.00	11,751.1	-4,568.9	-134.5	-1,586.4	0.62	0.53	0.32
16,408.0	89.90	179.40	11,751.8	-4,663.9	-133.1	-1,615.4	0.85	0.74	0.42
16,503.0	91.10	179.70	11,751.0	-4,758.9	-132.4	-1,645.1	1.30	1.26	0.32
16,519.0	91.30	179.50	11,750.7	-4,774.9	-132.3	-1,650.1	1.77	1.25	-1.25
16,570.0	91.30	179.50	11,749.5	-4,825.9	-131.8	-1,665.9	0.00	0.00	0.00
16570' MD Projected To Bit - PBHL Red Hills West 21 W1DM Fed Com 3H									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
858.0	857.9	3.3	9.7	858' MD Rig Survey's
16,570.0	11,749.5	-4,825.9	-131.8	16570' MD Projected To Bit



July 28, 2017

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 W1DM Federal Com #003H
Wolfcamp Y Sand (W0)
Lea County, New Mexico
API# 30-025-42914

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>
Keith Broussard	Original Hole	963ft. to 16,519ft.	06-26-17 to 07-15-17	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 21 W1DM Federal Com#3H\M171048

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



July 28, 2017

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 June 26, 2017, through July 15, 2017 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 963 feet to a depth of 16,519 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 21 WIDM Federal Com #003H well, API # **30-025-42914** 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.

A handwritten signature in black ink, appearing to read "Todd Estes", written over a horizontal line.

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 21-26S-32E Red Hills West 21 W1DM Fe
Well: Red Hills West 21 W1DM Fed Com 3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Red Hills West 21 W1DM Fed Com 3H
TVD Reference: 3153 + 27 @ 3180.0usft (Patterson 231)
MD Reference: 3153 + 27 @ 3180.0usft (Patterson 231)
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 21-26S-32E Red Hills West 21 W1DM Fed Com3		
Site Position:		Northing: 377,030.60 usft	Latitude: 32° 2' 5.718 N
From: Map		Easting: 700,441.90 usft	Longitude: 103° 41' 11.386 W
Position Uncertainty: 0.0 usft		Slot Radius: 13-3/16 "	Grid Convergence: 0.34 °

Well	Red Hills West 21 W1DM Fed Com 3H		
Well Position	+N/-S 0.0 usft	Northing: 377,030.60 usft	Latitude: 32° 2' 5.718 N
	+E/-W 0.0 usft	Easting: 700,441.90 usft	Longitude: 103° 41' 11.386 W
Position Uncertainty	0.0 usft	Wellhead Elevation: 3,180.0 usft	Ground Level: 3,153.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/16/2017	6.99	59.87	47,815.70941452
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	71.38	