

Mewbourne Oil Company

Lea County, New Mexico

Red Hills West 21 A2DM Fed Com 2H

Sec 21, T26S, R32E

SL: 200' FNL & 990' FWL

BHL: 330' FSL & 990' FWL

Plan: Design #1

Standard Planning Report

02 July, 2015

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Red Hills West 21 A2DM Fed Com 2H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3175.0usft (Original Well Elev)
Project:	Lea County, New Mexico	MD Reference:	WELL @ 3175.0usft (Original Well Elev)
Site:	Red Hills West 21 A2DM Fed Com 2H	North Reference:	Grid
Well:	Sec 21, T26S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FSL & 990' FWL		
Design:	Design #1		

Project	Lea County, New Mexico		
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	Red Hills West 21 A2DM Fed Com 2H		
Site Position:		Northing:	377,019.30 usft
From:	Map	Easting:	700,931.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 5.578 N
		Longitude:	103° 41' 5.696 W
		Grid Convergence:	0.34 °

Well	Sec 21, T26S, R32E		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	3,175.0 usft
		Latitude:	32° 2' 5.578 N
		Longitude:	103° 41' 5.696 W
		Ground Level:	3,150.0 usft

Wellbore	BHL: 330' FSL & 990' FWL		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	7/2/2015	7.13
			Dip Angle
			(°)
			59.89
			Field Strength
			(nT)
			48,088

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			179.76

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,320.0	0.00	0.00	8,320.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,220.0	90.00	179.76	8,893.0	-573.0	2.4	10.00	10.00	0.00	179.76	
13,463.4	90.00	179.76	8,893.0	-4,816.3	20.3	0.00	0.00	0.00	0.00	BHL: 330' FSL & 990'

Planning Report

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Project:	Lea County, New Mexico	MD Reference:	WELL @ 3175.0usft (Original Well Elev)
Site:	Red Hills West 21 A2DM Fed Com 2H	North Reference:	Grid
Well:	Sec 21, T26S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FSL & 990' FWL		
Design:	Design #1		

Planned 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
SL: 200' FNL & 990' FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico
 Site: Red Hills West 21 A2DM Fed Com 2H
 Well: Sec 21, T26S, R32E
 Wellbore: BHL: 330' FSL & 990' FWL
 Design: Design #1

Local Co-ordinate Reference: Site Red Hills West 21 A2DM Fed Com 2H
 TVD Reference: WELL @ 3175.0usft (Original Well Elev)
 MD Reference: WELL @ 3175.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,320.0	0.00	0.00	8,320.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP @ 8320'									
8,400.0	8.00	179.76	8,399.7	-5.6	0.0	5.6	10.00	10.00	0.00
8,500.0	18.00	179.76	8,497.1	-28.0	0.1	28.0	10.00	10.00	0.00
8,600.0	28.00	179.76	8,589.0	-67.0	0.3	67.0	10.00	10.00	0.00
8,700.0	38.00	179.76	8,672.8	-121.4	0.5	121.4	10.00	10.00	0.00
8,713.7	39.37	179.76	8,683.5	-130.0	0.5	130.0	10.00	10.00	0.00
First Take Point: 330' FNL & 990' FWL									
8,800.0	48.00	179.76	8,745.8	-189.5	0.8	189.5	10.00	10.00	0.00
8,900.0	58.00	179.76	8,805.9	-269.3	1.1	269.3	10.00	10.00	0.00
9,000.0	68.00	179.76	8,851.3	-358.3	1.5	358.3	10.00	10.00	0.00
9,100.0	78.00	179.76	8,880.5	-453.8	1.9	453.8	10.00	10.00	0.00
9,200.0	88.00	179.76	8,892.6	-552.9	2.3	552.9	10.00	10.00	0.00
9,220.1	90.00	179.76	8,893.0	-573.0	2.4	573.0	9.98	9.98	0.00
LP: 773' FNL & 990' FWL									
9,300.0	90.00	179.76	8,893.0	-652.9	2.8	652.9	0.00	0.00	0.00
9,400.0	90.00	179.76	8,893.0	-752.9	3.2	752.9	0.00	0.00	0.00
9,500.0	90.00	179.76	8,893.0	-852.9	3.6	852.9	0.00	0.00	0.00
9,600.0	90.00	179.76	8,893.0	-952.9	4.0	952.9	0.00	0.00	0.00
9,700.0	90.00	179.76	8,893.0	-1,052.9	4.4	1,052.9	0.00	0.00	0.00
9,800.0	90.00	179.76	8,893.0	-1,152.9	4.9	1,152.9	0.00	0.00	0.00
9,900.0	90.00	179.76	8,893.0	-1,252.9	5.3	1,252.9	0.00	0.00	0.00

Planning Report

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Project:	Lea County, New Mexico	MD Reference:	WELL @ 3175.0usft (Original Well Elev)
Site:	Red Hills West 21 A2DM Fed Com 2H	North Reference:	Grid
Well:	Sec 21, T26S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FSL & 990' FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	90.00	179.76	8,893.0	-1,352.9	5.7	1,352.9	0.00	0.00	0.00
10,100.0	90.00	179.76	8,893.0	-1,452.9	6.1	1,452.9	0.00	0.00	0.00
10,200.0	90.00	179.76	8,893.0	-1,552.9	6.5	1,552.9	0.00	0.00	0.00
10,300.0	90.00	179.76	8,893.0	-1,652.9	7.0	1,652.9	0.00	0.00	0.00
10,400.0	90.00	179.76	8,893.0	-1,752.9	7.4	1,752.9	0.00	0.00	0.00
10,500.0	90.00	179.76	8,893.0	-1,852.9	7.8	1,852.9	0.00	0.00	0.00
10,600.0	90.00	179.76	8,893.0	-1,952.9	8.2	1,952.9	0.00	0.00	0.00
10,700.0	90.00	179.76	8,893.0	-2,052.9	8.7	2,052.9	0.00	0.00	0.00
10,800.0	90.00	179.76	8,893.0	-2,152.9	9.1	2,152.9	0.00	0.00	0.00
10,900.0	90.00	179.76	8,893.0	-2,252.9	9.5	2,252.9	0.00	0.00	0.00
11,000.0	90.00	179.76	8,893.0	-2,352.9	9.9	2,352.9	0.00	0.00	0.00
11,100.0	90.00	179.76	8,893.0	-2,452.9	10.3	2,452.9	0.00	0.00	0.00
11,200.0	90.00	179.76	8,893.0	-2,552.9	10.8	2,552.9	0.00	0.00	0.00
11,300.0	90.00	179.76	8,893.0	-2,652.9	11.2	2,652.9	0.00	0.00	0.00
11,400.0	90.00	179.76	8,893.0	-2,752.9	11.6	2,752.9	0.00	0.00	0.00
11,500.0	90.00	179.76	8,893.0	-2,852.9	12.0	2,852.9	0.00	0.00	0.00
11,600.0	90.00	179.76	8,893.0	-2,952.9	12.4	2,952.9	0.00	0.00	0.00
11,700.0	90.00	179.76	8,893.0	-3,052.9	12.9	3,052.9	0.00	0.00	0.00
11,800.0	90.00	179.76	8,893.0	-3,152.9	13.3	3,152.9	0.00	0.00	0.00
11,900.0	90.00	179.76	8,893.0	-3,252.9	13.7	3,252.9	0.00	0.00	0.00
12,000.0	90.00	179.76	8,893.0	-3,352.9	14.1	3,352.9	0.00	0.00	0.00
12,100.0	90.00	179.76	8,893.0	-3,452.9	14.6	3,452.9	0.00	0.00	0.00
12,200.0	90.00	179.76	8,893.0	-3,552.9	15.0	3,552.9	0.00	0.00	0.00
12,300.0	90.00	179.76	8,893.0	-3,652.9	15.4	3,652.9	0.00	0.00	0.00
12,400.0	90.00	179.76	8,893.0	-3,752.9	15.8	3,752.9	0.00	0.00	0.00
12,500.0	90.00	179.76	8,893.0	-3,852.9	16.2	3,852.9	0.00	0.00	0.00
12,600.0	90.00	179.76	8,893.0	-3,952.9	16.7	3,952.9	0.00	0.00	0.00
12,700.0	90.00	179.76	8,893.0	-4,052.9	17.1	4,052.9	0.00	0.00	0.00
12,800.0	90.00	179.76	8,893.0	-4,152.9	17.5	4,152.9	0.00	0.00	0.00
12,900.0	90.00	179.76	8,893.0	-4,252.9	17.9	4,252.9	0.00	0.00	0.00
13,000.0	90.00	179.76	8,893.0	-4,352.9	18.3	4,352.9	0.00	0.00	0.00
13,100.0	90.00	179.76	8,893.0	-4,452.9	18.8	4,452.9	0.00	0.00	0.00
13,200.0	90.00	179.76	8,893.0	-4,552.9	19.2	4,552.9	0.00	0.00	0.00
13,300.0	90.00	179.76	8,893.0	-4,652.9	19.6	4,652.9	0.00	0.00	0.00
13,400.0	90.00	179.76	8,893.0	-4,752.9	20.0	4,752.9	0.00	0.00	0.00
13,463.4	90.00	179.76	8,893.0	-4,816.3	20.3	4,816.3	0.00	0.00	0.00

BHL: 330' FSL & 990' FWL

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Red Hills West 21 A2DM Fed Com 2H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3175.0usft (Original Well Elev)
Project:	Lea County, New Mexico	MD Reference:	WELL @ 3175.0usft (Original Well Elev)
Site:	Red Hills West 21 A2DM Fed Com 2H	North Reference:	Grid
Well:	Sec 21, T26S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FSL & 990' FWL		
Design:	Design #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 200' FNL & 990' FW - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	377,019.30	700,931.80	32° 2' 5.578 N	103° 41' 5.696 W
KOP @ 8320' - plan hits target center - Point	0.00	0.00	8,320.0	0.0	0.0	377,019.30	700,931.80	32° 2' 5.578 N	103° 41' 5.696 W
First Take Point: 330' FN - plan misses target center by 0.1usft at 8713.7usft MD (8683.5 TVD, -130.0 N, 0.5 E) - Point	0.00	0.00	8,683.5	-130.0	0.5	376,889.30	700,932.30	32° 2' 4.291 N	103° 41' 5.699 W
BHL: 330' FSL & 990' Fv - plan hits target center - Point	0.00	0.00	8,893.0	-4,816.3	20.3	372,203.00	700,952.10	32° 1' 17.914 N	103° 41' 5.796 W
LP: 773' FNL & 990' FW - plan hits target center - Point	0.00	0.00	8,893.0	-573.0	2.4	376,446.30	700,934.20	32° 1' 59.907 N	103° 41' 5.708 W

Red Hills West 21 A2DM Fed Com 2H

