

30-015-39350

Mewbourne Oil Co

Eddy County, New Mexico

Sec 21/28-18S-30E

Phoenix 21 Fed Com #1H

Wellbore #1

Survey: DDC MWD

DDC Survey Report

11 October, 2011



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Phoenix 21 Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3452 0usft (Patterson UTI #46)
Site:	Sec 21/28-18S-30E	MD Reference:	WELL @ 3452 0usft (Patterson UTI #46)
Well:	Phoenix 21 Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000 1 Single User Db

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

Site:	Sec 21/28-18S-30E		
Site Position:		Northing:	627,672 50 usft
From:	Map	Easting:	608,005 80 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 43' 30 273 N
		Longitude:	103° 58' 55 671 W
		Grid Convergence:	0 19 °

Well:	Phoenix 21 Fed Com #1H					
Well Position	+N/-S	0 0 usft	Northing:	627,672 50 usft	Latitude:	32° 43' 30 273 N
	+E/-W	0 0 usft	Easting:	608,005 80 usft	Longitude:	103° 58' 55 671 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	- usft	Ground Level:	3,431 0 usft

Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/29/2011	7 79	60 57	48,852

Design:		Wellbore #1		
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 23

Survey Program	Date	10/11/2011		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	7,527 0	VES Gyro Survey (Wellbore #1)	Good_gyro	Good Gyro
7,546 0	12,971 0	DDC MWD (Wellbore #1)	MWD default	MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
Tie into VES Gyro									
7,527 0	2 71	270 51	7,523 7	112 6	-108 8	117 7	0.00	0 00	0 00
7,546 0	2 60	257 70	7,542 7	112 5	-109 7	117.7	3 17	-0 58	-67 42
7,578 0	2 70	262 50	7,574 6	112 3	-111.1	117 5	0.76	0.31	15 00
7,609 0	2 70	267 50	7,605 6	112 1	-112 6	117.4	0.76	0.00	16 13
7,641 0	4 90	300 90	7,637 5	112 8	-114.5	118 2	9 48	6 88	104 38
7,673.0	7.90	319.20	7,669.3	115.2	-117.1	120.7	11.22	9.38	57.19
7,704.0	11.70	321.90	7,699.9	119.3	-120.5	124 9	12.34	12.26	8 71
7,737.0	14.60	326 60	7,732 0	125.4	-124.8	131 2	9.36	8.79	14 24
7,768 0	18 30	333 10	7,761 7	133 0	-129.2	139.1	13 31	11.94	20 97

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Project: Eddy County, New Mexico
Site: Sec 21/28-18S-30E
Well: Phoenix 21 Fed Com #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Phoenix 21 Fed Com #1H
WELL @ 3452 0usft (Patterson UTI #46)
WELL @ 3452 0usft (Patterson UTI #46)
Grid
Minimum Curvature
EDM 5000 1 Single User Db

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)
7,800.0	21.10	334.50	7,791.8	142.6	-133.9	149.0	8.87	8.75	4.38
7,832.0	23.70	336.50	7,821.4	153.7	-139.0	160.3	8.47	8.13	6.25
7,862.0	25.80	337.50	7,848.7	165.3	-143.9	172.1	7.14	7.00	3.33
7,894.0	28.70	340.40	7,877.1	179.0	-149.1	186.0	9.96	9.06	9.06
7,925.0	31.70	343.50	7,903.9	193.8	-153.9	201.0	10.90	9.68	10.00
Lease Line crossing @ 7936' MD									
7,936.0	32.69	344.58	7,913.2	199.4	-155.5	206.7	10.37	8.96	9.81
7,956.0	34.50	346.40	7,929.9	210.2	-158.3	217.6	10.37	9.07	9.10
7,988.0	36.40	350.40	7,956.0	228.3	-162.0	235.9	9.37	5.94	12.50
8,020.0	38.60	355.60	7,981.3	247.7	-164.4	255.3	12.04	6.88	16.25
8,052.0	40.80	358.20	8,006.0	268.1	-165.5	275.7	8.61	6.88	8.13
8,084.0	43.50	359.10	8,029.7	289.5	-166.0	297.2	8.65	8.44	2.81
8,115.0	47.50	359.40	8,051.4	311.6	-166.3	319.3	12.92	12.90	0.97
8,147.0	50.60	0.10	8,072.4	335.8	-166.4	343.4	9.83	9.69	2.19
8,179.0	53.20	0.60	8,092.1	361.0	-166.2	368.6	8.22	8.13	1.56
8,211.0	56.70	1.00	8,110.5	387.2	-165.8	394.7	10.99	10.94	1.25
8,243.0	59.80	1.30	8,127.3	414.4	-165.3	421.9	9.72	9.69	0.94
8,274.0	61.90	1.50	8,142.4	441.4	-164.6	448.9	6.80	6.77	0.65
8,305.0	64.80	1.50	8,156.3	469.1	-163.9	476.5	9.35	9.35	0.00
8,337.0	68.60	1.70	8,169.0	498.5	-163.1	505.8	11.89	11.88	0.63
8,368.0	73.30	2.20	8,179.1	527.8	-162.1	535.0	15.24	15.16	1.61
Hard Line crossing @ 8370' MD									
8,370.0	73.56	2.23	8,179.7	529.7	-162.0	536.9	12.87	12.81	1.27
8,400.0	77.40	2.60	8,187.2	558.7	-160.8	565.8	12.87	12.81	1.25
8,432.0	80.10	2.50	8,193.4	590.1	-159.4	597.1	8.44	8.44	-0.31
8,464.0	83.10	2.20	8,198.1	621.7	-158.1	628.6	9.42	9.38	-0.94
8,494.0	85.70	2.50	8,201.0	651.5	-156.9	658.3	8.72	8.67	1.00
8,529.0	88.80	2.90	8,202.7	686.4	-155.2	693.1	8.93	8.86	1.14
8,599.0	91.60	3.40	8,202.5	756.3	-151.4	762.7	4.06	4.00	0.71
8,631.0	91.10	2.40	8,201.7	788.3	-149.7	794.6	3.49	-1.56	-3.13
8,663.0	90.70	1.70	8,201.2	820.2	-148.6	826.5	2.52	-1.25	-2.19
8,694.0	90.00	0.50	8,201.0	851.2	-148.0	857.4	4.48	-2.26	-3.87
8,726.0	89.80	0.70	8,201.1	883.2	-147.7	889.3	0.88	-0.63	0.63
8,758.0	90.20	0.90	8,201.1	915.2	-147.2	921.3	1.40	1.25	0.63
8,790.0	90.30	359.90	8,200.9	947.2	-147.0	953.2	3.14	0.31	-3.13
8,822.0	90.00	358.00	8,200.9	979.2	-147.6	985.2	6.01	-0.94	-5.94
8,853.0	90.10	357.60	8,200.8	1,010.2	-148.8	1,016.2	1.33	0.32	-1.29
8,916.0	89.90	356.90	8,200.8	1,073.1	-151.8	1,079.2	1.16	-0.32	-1.11
8,980.0	90.90	356.80	8,200.4	1,137.0	-155.3	1,143.2	1.57	1.56	-0.16
9,043.0	91.40	356.20	8,199.1	1,199.9	-159.2	1,206.2	1.24	0.79	-0.95
9,107.0	90.60	356.90	8,198.0	1,263.8	-163.0	1,270.2	1.66	-1.25	1.09
9,170.0	90.80	356.60	8,197.2	1,326.7	-166.6	1,333.2	0.57	0.32	-0.48
9,234.0	90.10	357.40	8,196.7	1,390.6	-169.9	1,397.2	1.66	-1.09	1.25

DDC
Survey Report



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Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Phoenix 21 Fed Com #1H
TVD Reference: WELL @ 3452 0usft (Patterson UTI #46)
MD Reference: WELL @ 3452 0usft (Patterson UTI #46)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
9,298.0	90.20	358.60	8,196.6	1,454.5	-172.2	1,461.1	1.88	0.16	1.88
9,361.0	90.20	357.70	8,196.4	1,517.5	-174.2	1,524.1	1.43	0.00	-1.43
9,425.0	91.00	359.00	8,195.7	1,581.5	-176.0	1,588.1	2.38	1.25	2.03
9,488.0	91.60	359.10	8,194.3	1,644.4	-177.1	1,651.1	0.97	0.95	0.16
9,552.0	91.80	358.50	8,192.4	1,708.4	-178.4	1,715.0	0.99	0.31	-0.94
9,616.0	90.90	359.20	8,190.8	1,772.4	-179.7	1,779.0	1.78	-1.41	1.09
9,679.0	91.70	358.60	8,189.4	1,835.3	-180.9	1,841.9	1.59	1.27	-0.95
9,711.0	92.40	358.50	8,188.3	1,867.3	-181.7	1,873.9	2.21	2.19	-0.31
9,743.0	90.70	359.70	8,187.4	1,899.3	-182.2	1,905.9	6.50	-5.31	3.75
9,775.0	89.40	359.70	8,187.4	1,931.3	-182.4	1,937.8	4.06	-4.06	0.00
9,807.0	89.70	359.80	8,187.6	1,963.3	-182.5	1,969.8	0.99	0.94	0.31
9,838.0	90.00	359.10	8,187.7	1,994.3	-182.8	2,000.8	2.46	0.97	-2.26
9,870.0	90.30	358.90	8,187.6	2,026.3	-183.4	2,032.8	1.13	0.94	-0.63
9,901.0	90.90	358.60	8,187.3	2,057.3	-184.1	2,063.8	2.16	1.94	-0.97
9,933.0	89.80	358.80	8,187.1	2,089.3	-184.8	2,095.7	3.49	-3.44	0.63
9,964.0	88.60	359.00	8,187.5	2,120.2	-185.4	2,126.7	3.92	-3.87	0.65
9,996.0	88.50	358.90	8,188.3	2,152.2	-186.0	2,158.7	0.44	-0.31	-0.31
10,028.0	89.20	358.70	8,189.0	2,184.2	-186.7	2,190.7	2.27	2.19	-0.63
10,060.0	90.30	359.20	8,189.1	2,216.2	-187.2	2,222.7	3.78	3.44	1.56
10,092.0	90.90	359.30	8,188.8	2,248.2	-187.7	2,254.6	1.90	1.88	0.31
10,124.0	91.40	359.30	8,188.2	2,280.2	-188.0	2,286.6	1.56	1.56	0.00
10,156.0	92.30	359.10	8,187.1	2,312.2	-188.5	2,318.6	2.88	2.81	-0.63
10,188.0	91.10	359.50	8,186.2	2,344.2	-188.9	2,350.5	3.95	-3.75	1.25
10,219.0	90.00	359.80	8,185.9	2,375.2	-189.1	2,381.5	3.68	-3.55	0.97
10,251.0	90.40	0.00	8,185.8	2,407.2	-189.1	2,413.5	1.40	1.25	0.63
10,283.0	91.10	0.00	8,185.3	2,439.2	-189.1	2,445.4	2.19	2.19	0.00
10,315.0	91.90	0.20	8,184.5	2,471.1	-189.1	2,477.4	2.58	2.50	0.63
10,347.0	90.60	0.00	8,183.8	2,503.1	-189.0	2,509.3	4.11	-4.06	-0.63
10,379.0	89.60	0.40	8,183.8	2,535.1	-188.9	2,541.3	3.37	-3.13	1.25
10,410.0	89.40	0.20	8,184.0	2,566.1	-188.7	2,572.3	0.91	-0.65	-0.65
10,442.0	89.30	0.40	8,184.4	2,598.1	-188.6	2,604.2	0.70	-0.31	0.63
10,474.0	88.30	0.10	8,185.1	2,630.1	-188.4	2,636.2	3.26	-3.13	-0.94
10,506.0	88.40	0.00	8,186.0	2,662.1	-188.4	2,668.1	0.44	0.31	-0.31
10,537.0	90.10	0.00	8,186.4	2,693.1	-188.4	2,699.1	5.48	5.48	0.00
10,569.0	90.10	359.30	8,186.3	2,725.1	-188.6	2,731.0	2.19	0.00	-2.19
10,601.0	89.50	359.20	8,186.4	2,757.1	-189.0	2,763.0	1.90	-1.88	-0.31
10,633.0	88.00	359.00	8,187.1	2,789.1	-189.5	2,795.0	4.73	-4.69	-0.63
10,665.0	88.30	358.70	8,188.2	2,821.1	-190.2	2,827.0	1.33	0.94	-0.94
10,697.0	89.90	358.30	8,188.7	2,853.0	-191.0	2,858.9	5.15	5.00	-1.25
10,728.0	89.90	357.90	8,188.7	2,884.0	-192.0	2,889.9	1.29	0.00	-1.29
10,760.0	90.90	357.40	8,188.5	2,916.0	-193.3	2,921.9	3.49	3.13	-1.56
10,792.0	91.90	357.50	8,187.7	2,948.0	-194.8	2,953.9	3.14	3.13	0.31
10,823.0	92.10	356.80	8,186.6	2,978.9	-196.3	2,984.9	2.35	0.65	-2.26
10,855.0	92.90	356.40	8,185.2	3,010.8	-198.2	3,016.9	2.79	2.50	-1.25

DDC
Survey Report



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Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Phoenix 21 Fed Com #1H
TVD Reference: WELL @ 3452 0usft (Patterson UTI #46)
MD Reference: WELL @ 3452 0usft (Patterson UTI #46)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
10,887.0	92.50	356.60	8,183.7	3,042.7	-200.2	3,048.8	1.40	-1.25	0.63
10,919.0	93.00	356.80	8,182.2	3,074.6	-202.0	3,080.8	1.68	1.56	0.63
10,951.0	91.70	357.00	8,180.9	3,106.6	-203.7	3,112.8	4.11	-4.06	0.63
10,983.0	91.30	357.60	8,180.1	3,138.5	-205.2	3,144.8	2.25	-1.25	1.88
11,015.0	91.40	357.40	8,179.3	3,170.5	-206.6	3,176.8	0.70	0.31	-0.63
11,046.0	90.10	358.00	8,178.9	3,201.4	-207.9	3,207.7	4.62	-4.19	1.94
11,078.0	89.80	357.90	8,178.9	3,233.4	-209.0	3,239.7	0.99	-0.94	-0.31
11,110.0	89.40	357.70	8,179.1	3,265.4	-210.2	3,271.7	1.40	-1.25	-0.63
11,142.0	90.10	357.00	8,179.3	3,297.4	-211.7	3,303.7	3.09	2.19	-2.19
11,174.0	91.10	357.10	8,178.9	3,329.3	-213.4	3,335.7	3.14	3.13	0.31
11,205.0	91.60	356.50	8,178.2	3,360.3	-215.1	3,366.7	2.52	1.61	-1.94
11,237.0	90.50	356.60	8,177.6	3,392.2	-217.0	3,398.7	3.45	-3.44	0.31
11,269.0	90.20	356.30	8,177.4	3,424.1	-219.0	3,430.7	1.33	-0.94	-0.94
11,300.0	90.50	355.80	8,177.2	3,455.1	-221.1	3,461.7	1.88	0.97	-1.61
11,332.0	90.40	355.60	8,177.0	3,487.0	-223.5	3,493.7	0.70	-0.31	-0.63
11,364.0	90.30	355.60	8,176.8	3,518.9	-226.0	3,525.7	0.31	-0.31	0.00
11,396.0	90.10	355.10	8,176.7	3,550.8	-228.6	3,557.7	1.68	-0.63	-1.56
11,428.0	90.10	355.90	8,176.6	3,582.7	-231.1	3,589.7	2.50	0.00	2.50
11,459.0	90.20	355.60	8,176.5	3,613.6	-233.4	3,620.6	1.02	0.32	-0.97
11,491.0	90.40	355.70	8,176.4	3,645.5	-235.8	3,652.6	0.70	0.63	0.31
11,523.0	90.60	355.60	8,176.1	3,677.4	-238.3	3,684.6	0.70	0.63	-0.31
11,555.0	90.20	355.00	8,175.9	3,709.3	-240.9	3,716.6	2.25	-1.25	-1.88
11,587.0	90.20	355.20	8,175.8	3,741.2	-243.6	3,748.6	0.62	0.00	0.63
11,619.0	90.20	355.00	8,175.7	3,773.1	-246.3	3,780.6	0.62	0.00	-0.63
11,651.0	90.60	355.60	8,175.4	3,804.9	-249.0	3,812.5	2.25	1.25	1.88
11,683.0	90.10	355.00	8,175.2	3,836.8	-251.6	3,844.5	2.44	-1.56	-1.88
11,714.0	89.40	355.20	8,175.4	3,867.7	-254.2	3,875.5	2.35	-2.26	0.65
11,746.0	90.10	354.40	8,175.5	3,899.6	-257.1	3,907.5	3.32	2.19	-2.50
11,778.0	91.40	354.90	8,175.1	3,931.4	-260.1	3,939.4	4.35	4.06	1.56
11,810.0	91.40	354.10	8,174.3	3,963.3	-263.2	3,971.4	2.50	0.00	-2.50
11,842.0	92.00	354.30	8,173.4	3,995.1	-266.4	4,003.3	1.98	1.88	0.63
11,874.0	92.30	354.00	8,172.2	4,026.9	-269.7	4,035.3	1.33	0.94	-0.94
11,905.0	92.40	353.90	8,170.9	4,057.7	-272.9	4,066.2	0.46	0.32	-0.32
11,937.0	92.10	353.50	8,169.6	4,089.5	-276.4	4,098.1	1.56	-0.94	-1.25
11,969.0	91.00	353.30	8,168.8	4,121.3	-280.1	4,130.0	3.49	-3.44	-0.63
12,001.0	89.80	354.50	8,168.5	4,153.1	-283.5	4,162.0	5.30	-3.75	3.75
12,032.0	89.80	353.90	8,168.7	4,183.9	-286.7	4,192.9	1.94	0.00	-1.94
12,064.0	89.70	353.80	8,168.8	4,215.8	-290.1	4,224.9	0.44	-0.31	-0.31
12,096.0	89.50	353.40	8,169.0	4,247.6	-293.7	4,256.8	1.40	-0.63	-1.25
12,128.0	89.70	354.00	8,169.2	4,279.4	-297.2	4,288.7	1.98	0.63	1.88
12,160.0	89.90	353.00	8,169.4	4,311.2	-300.8	4,320.7	3.19	0.63	-3.13
12,192.0	91.30	353.30	8,169.0	4,342.9	-304.6	4,352.6	4.47	4.38	0.94
12,223.0	90.90	353.10	8,168.4	4,373.7	-308.3	4,383.5	1.44	-1.29	-0.65

DDC
Survey Report



Company: Mewbourne Oil Co
Project: Eddy County, New Mexico
Site: Sec 21/28-18S-30E
Well: Phoenix 21 Fed Com #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Phoenix 21 Fed Com #1H
TVD Reference: WELL @ 3452.0usft (Patterson UTI #46)
MD Reference: WELL @ 3452.0usft (Patterson UTI #46)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000 1 Single User Db

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)
12,255.0	91.40	353.20	8,167.8	4,405.5	-312.1	4,415.4	1.59	1.56	0.31
12,287.0	91.30	352.80	8,167.0	4,437.2	-316.0	4,447.3	1.29	-0.31	-1.25
12,319.0	91.40	352.80	8,166.3	4,469.0	-320.0	4,479.2	0.31	0.31	0.00
12,351.0	91.10	353.20	8,165.6	4,500.7	-323.9	4,511.1	1.56	-0.94	1.25
12,383.0	90.90	352.50	8,165.0	4,532.5	-327.9	4,543.0	2.27	-0.63	-2.19
12,414.0	90.80	352.80	8,164.6	4,563.2	-331.8	4,573.9	1.02	-0.32	0.97
12,446.0	91.00	352.60	8,164.1	4,594.9	-335.9	4,605.8	0.88	0.63	-0.63
12,477.0	90.80	352.00	8,163.6	4,625.7	-340.1	4,636.7	2.04	-0.65	-1.94
12,510.0	90.70	352.00	8,163.1	4,658.3	-344.7	4,669.5	0.30	-0.30	0.00
12,541.0	90.60	351.60	8,162.8	4,689.0	-349.1	4,700.4	1.33	-0.32	-1.29
12,572.0	90.60	352.00	8,162.5	4,719.7	-353.5	4,731.3	1.29	0.00	1.29
12,604.0	90.50	352.00	8,162.1	4,751.4	-358.0	4,763.1	0.31	-0.31	0.00
12,636.0	90.60	352.10	8,161.8	4,783.1	-362.4	4,795.0	0.44	0.31	0.31
12,668.0	90.90	352.00	8,161.4	4,814.8	-366.8	4,826.9	0.99	0.94	-0.31
12,732.0	91.10	351.80	8,160.3	4,878.1	-375.8	4,890.6	0.44	0.31	-0.31
12,795.0	91.10	350.90	8,159.1	4,940.4	-385.3	4,953.2	1.43	0.00	-1.43
12,859.0	91.80	351.20	8,157.5	5,003.6	-395.2	5,016.8	1.19	1.09	0.47
12,923.0	91.90	349.90	8,155.4	5,066.7	-405.7	5,080.4	2.04	0.16	-2.03
Projection to Bit:									
12,971.0	91.90	349.90	8,153.8	5,113.9	-414.2	5,127.9	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,527.0	7,523.7	112.6	-108.8	Tie into VES Gyro
7,936.0	7,913.2	199.4	-155.5	Lease Line crossing @ 7936' MD
8,370.0	8,179.7	529.7	-162.0	Hard Line crossing @ 8370' MD
12,971.0	8,153.8	5,113.9	-414.2	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

Company Name: Mewbourne Oil Co
Phoenix 21 Fed Com #1H
Eddy County, New Mexico
Rig: Patterson UTI #46
Created By: Shelly C. Peterkin
Date: 10/11/2011

Phoenix 21 Fed Com #1H
Eddy County, New Mexico
Q110428 & WT-11500

MEWBOURNE OIL COMPANY



Azimuths to Grid North

Magnetic North: 7.60°

Magnetic Field
Strength: 48852 1snT

Dip Angle: 60.57°

Date: 8/29/2011

Model: IGRF2010

PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: Phoenix 21 Fed Com #1H

		Ground Level	3431.0
+N/-S	+E/-W	Northing	Easting
0.0	0.0	627672.50	608005.80

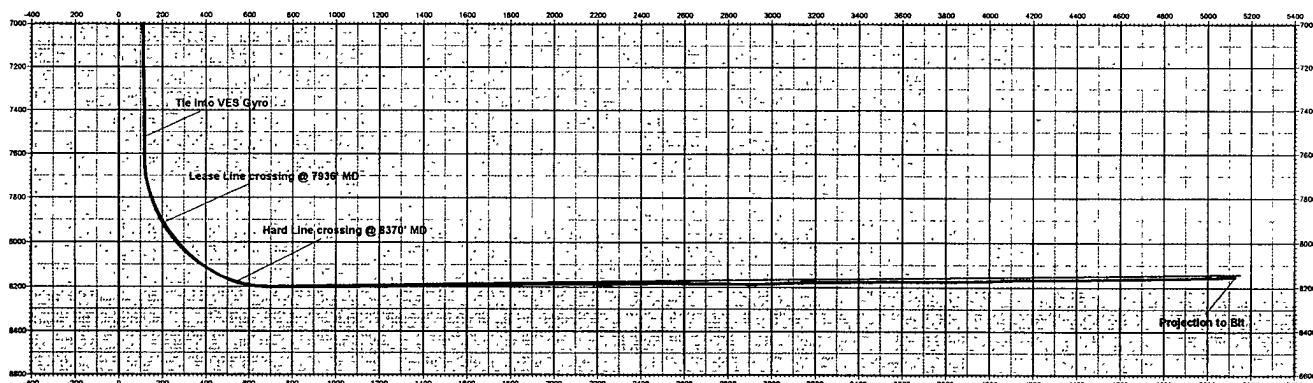
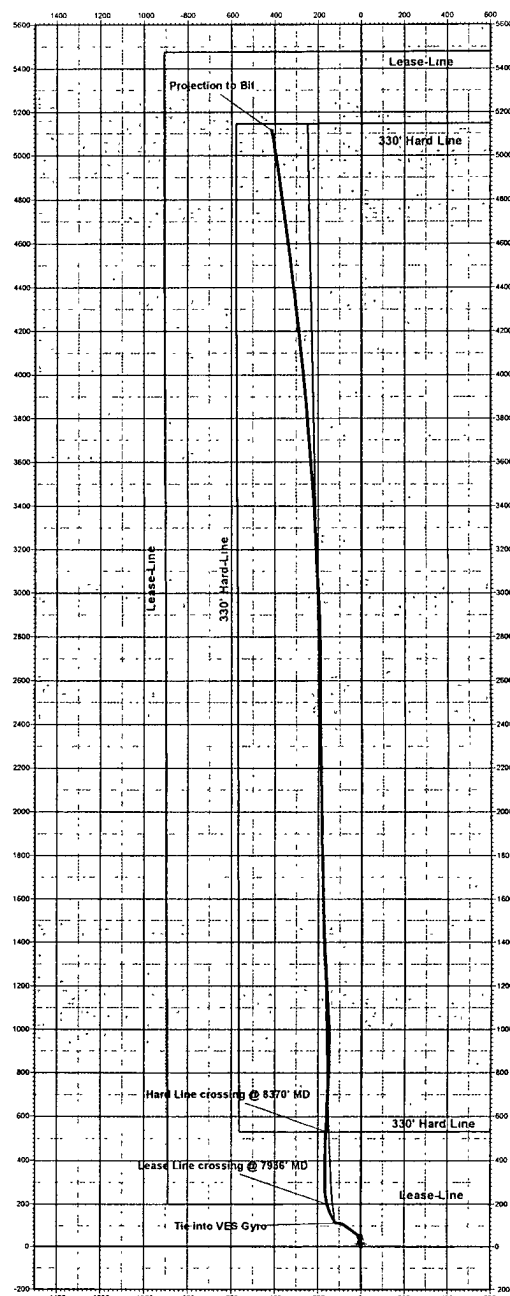
Latitude: 32° 43' 30.273 N
Longitude: 103° 58' 55.671 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Phoenix 21 Fed Com #1H Design #2	8142.0	5145.3	-248.5	632817.80	607757.30	32° 44' 21.196 N	103° 58' 58.380 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7527.0	2.71	270.51	7523.7	112.6	-108.8	117.7	184.6	Tie into VES Gyro
7936.0	32.69	344.58	7913.2	199.4	-155.5	206.7	287.4	Lease Line crossing @ 7936' MD
8370.0	73.56	2.23	8179.7	628.7	-162.0	538.9	618.5	Hard Line crossing @ 8370' MD
12971.0	91.90	349.90	8153.8	5113.9	-414.2	5127.9	5216.6	Projection to Bit



Vertical Section at 357.23° (200 usf/in)