

30-015-39058

Mewbourne Oil Co

Eddy County, New Mexico

Sec 5-20S-25E

West Draw 5 IA #1H

Wellbore #1

Survey: MWD

DDC Survey Report

08 November, 2011



DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well West Draw 5 IA #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3510.0usft (Patterson UTI #101)
Site:	Sec 5-20S-25E	MD Reference:	WELL @ 3510.0usft (Patterson UTI #101)
Well:	West Draw 5 IA #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		
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	Sec 5-20S-25E		
Site Position:		Northing:	581,736.30 usft
From:	Map	Easting:	448,890.84 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 35' 57.079 N
		Longitude:	104° 29' 57.453 W
		Grid Convergence:	-0.09 °

Well	West Draw 5 IA #1H		
Well Position	+N/-S	0.0 usft	Northing: 581,736.30 usft
	+E/-W	0.0 usft	Easting: 448,890.84 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 35' 57.079 N
		Longitude:	104° 29' 57.453 W
		Ground Level:	3,491.0 usft

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/18/2011	8.00	60.36	48,702

Design	Wellbore #1		
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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	0.48

Survey Program		Date	11/8/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	1,792.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro	
1,852.0	5,734.0	MWD (Wellbore #1)	MWD default	MWD - Standard	

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)
Tie into Gyro									
1,792.0	0.67	200.48	1,791.8	-20.5	6.8	-20.4	0.00	0.00	0.00
1,852.0	0.70	191.50	1,851.8	-21.1	6.6	-21.1	0.19	0.05	-14.97
1,871.0	0.60	200.70	1,870.8	-21.4	6.5	-21.3	0.76	-0.53	48.42
1,902.0	0.40	328.50	1,901.8	-21.4	6.4	-21.4	2.91	-0.65	412.26
1,933.0	3.00	353.50	1,932.8	-20.5	6.3	-20.5	8.53	8.39	80.65
1,964.0	6.40	357.50	1,963.7	-18.0	6.1	-17.9	11.01	10.97	12.90
1,995.0	9.80	359.10	1,994.4	-13.6	6.0	-13.6	10.99	10.97	5.16
2,027.0	14.00	358.80	2,025.7	-7.0	5.8	-7.0	13.13	13.13	-0.94
2,058.0	17.50	359.10	2,055.5	1.4	5.7	1.4	11.29	11.29	0.97

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Well:	West Draw 5 IA #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
2,090.0	20.70	359.60	2,085.7	11.9	5.6	11.9	10.01	10.00	1.56	
2,121.0	23.70	359.90	2,114.4	23.6	5.5	23.6	9.68	9.68	0.97	
2,152.0	26.60	0.50	2,142.5	36.7	5.6	36.8	9.39	9.35	1.94	
2,183.0	29.90	1.10	2,169.8	51.4	5.8	51.5	10.68	10.65	1.94	
2,215.0	33.00	1.20	2,197.1	68.1	6.1	68.2	9.69	9.69	0.31	
2,246.0	36.20	1.10	2,222.6	85.7	6.5	85.8	10.32	10.32	-0.32	
2,277.0	39.20	1.10	2,247.1	104.7	6.8	104.7	9.68	9.68	0.00	
2,308.0	42.20	1.20	2,270.6	124.9	7.2	124.9	9.68	9.68	0.32	
2,339.0	44.80	0.80	2,293.1	146.2	7.6	146.3	8.43	8.39	-1.29	
2,371.0	47.00	0.20	2,315.4	169.2	7.8	169.2	7.01	6.88	-1.88	
2,402.0	49.10	359.30	2,336.1	192.2	7.7	192.3	7.11	6.77	-2.90	
Crossed Hard Line @ 2408' MD										
2,407.5	49.53	359.21	2,339.7	196.4	7.7	196.5	7.90	7.81	-1.61	
2,434.0	51.60	358.80	2,356.5	216.9	7.3	216.9	7.90	7.81	-1.55	
2,465.0	54.00	358.60	2,375.3	241.5	6.7	241.6	7.76	7.74	-0.65	
2,496.0	56.50	358.30	2,392.9	267.0	6.0	267.0	8.10	8.06	-0.97	
2,527.0	59.80	358.70	2,409.3	293.3	5.4	293.4	10.70	10.65	1.29	
2,558.0	63.20	359.20	2,424.1	320.6	4.9	320.6	11.06	10.97	1.61	
2,590.0	65.90	359.40	2,437.8	349.5	4.5	349.5	8.46	8.44	0.63	
2,621.0	69.00	360.00	2,449.7	378.1	4.4	378.1	10.16	10.00	1.94	
2,652.0	72.80	0.30	2,459.9	407.4	4.4	407.4	12.29	12.26	0.97	
2,683.0	77.30	0.70	2,467.9	437.3	4.7	437.3	14.57	14.52	1.29	
2,715.0	80.40	0.90	2,474.0	468.7	5.1	468.7	9.71	9.69	0.63	
2,745.0	83.30	0.80	2,478.3	498.4	5.6	498.4	9.67	9.67	-0.33	
2,764.0	85.00	0.90	2,480.2	517.3	5.9	517.3	8.96	8.95	0.53	
2,853.0	89.60	359.70	2,484.4	606.2	6.3	606.2	5.34	5.17	-1.35	
2,885.0	89.60	359.90	2,484.6	638.2	6.2	638.2	0.62	0.00	0.63	
2,917.0	90.30	0.20	2,484.7	670.2	6.2	670.2	2.38	2.19	0.94	
2,949.0	90.30	0.20	2,484.5	702.2	6.4	702.2	0.00	0.00	0.00	
3,012.0	90.20	0.20	2,484.2	765.2	6.6	765.2	0.16	-0.16	0.00	
3,076.0	90.00	360.00	2,484.1	829.2	6.7	829.2	0.44	-0.31	-0.31	
3,140.0	90.60	359.90	2,483.8	893.2	6.6	893.2	0.95	0.94	-0.16	
3,204.0	90.50	360.00	2,483.2	957.2	6.6	957.2	0.22	-0.16	0.16	
3,268.0	90.20	359.90	2,482.8	1,021.2	6.5	1,021.2	0.49	-0.47	-0.16	
3,332.0	91.40	0.70	2,481.9	1,085.1	6.9	1,085.2	2.25	1.88	1.25	
3,395.0	91.60	1.00	2,480.2	1,148.1	7.8	1,148.1	0.57	0.32	0.48	
3,458.0	90.10	0.50	2,479.3	1,211.1	8.6	1,211.1	2.51	-2.38	-0.79	
3,521.0	89.40	1.10	2,479.6	1,274.1	9.5	1,274.1	1.46	-1.11	0.95	
3,585.0	90.00	1.50	2,479.9	1,338.1	10.9	1,338.1	1.13	0.94	0.63	
3,648.0	90.00	1.70	2,479.9	1,401.0	12.7	1,401.1	0.32	0.00	0.32	
3,712.0	89.80	2.00	2,480.0	1,465.0	14.8	1,465.1	0.56	-0.31	0.47	
3,776.0	89.60	2.10	2,480.4	1,529.0	17.1	1,529.1	0.35	-0.31	0.16	
3,839.0	89.80	1.10	2,480.7	1,591.9	18.8	1,592.0	1.62	0.32	-1.59	

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Survey									
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3,901.0	89.80	1.10	2,480.9	1,653.9	20.0	1,654.0	0.00	0.00	0.00
3,961.0	90.70	0.70	2,480.6	1,713.9	21.0	1,714.0	1.64	1.50	-0.67
4,016.0	90.60	0.60	2,480.0	1,768.9	21.6	1,769.0	0.26	-0.18	-0.18
4,078.0	90.40	1.10	2,479.5	1,830.9	22.5	1,831.0	0.87	-0.32	0.81
4,139.0	91.30	1.20	2,478.6	1,891.9	23.7	1,892.0	1.48	1.48	0.16
4,199.0	91.00	0.70	2,477.4	1,951.9	24.7	1,952.0	0.97	-0.50	-0.83
4,261.0	90.40	1.40	2,476.6	2,013.9	25.8	2,014.0	1.49	-0.97	1.13
4,323.0	90.20	2.50	2,476.3	2,075.8	28.0	2,076.0	1.80	-0.32	1.77
4,384.0	90.60	1.90	2,475.9	2,136.8	30.3	2,136.9	1.18	0.66	-0.98
4,444.0	91.00	2.30	2,475.0	2,196.7	32.5	2,196.9	0.94	0.67	0.67
4,504.0	91.90	1.80	2,473.5	2,256.7	34.6	2,256.9	1.72	1.50	-0.83
4,568.0	90.50	359.30	2,472.2	2,320.6	35.3	2,320.9	4.48	-2.19	-3.91
4,632.0	90.20	359.30	2,471.8	2,384.6	34.5	2,384.8	0.47	-0.47	0.00
4,696.0	89.70	359.60	2,471.8	2,448.6	33.9	2,448.8	0.91	-0.78	0.47
4,760.0	89.70	359.80	2,472.2	2,512.6	33.5	2,512.8	0.31	0.00	0.31
4,823.0	90.40	1.90	2,472.1	2,575.6	34.5	2,575.8	3.51	1.11	3.33
4,887.0	90.00	1.30	2,471.9	2,639.6	36.2	2,639.8	1.13	-0.63	-0.94
4,950.0	90.30	359.60	2,471.7	2,702.6	36.7	2,702.8	2.74	0.48	-2.70
5,014.0	89.30	0.10	2,471.9	2,766.6	36.6	2,766.8	1.75	-1.56	0.78
5,077.0	88.50	0.10	2,473.2	2,829.6	36.7	2,829.8	1.27	-1.27	0.00
5,140.0	88.20	0.50	2,475.0	2,892.5	37.0	2,892.8	0.79	-0.48	0.63
5,204.0	88.50	359.50	2,476.8	2,956.5	37.0	2,956.7	1.63	0.47	-1.56
5,268.0	91.00	359.60	2,477.1	3,020.5	36.5	3,020.7	3.91	3.91	0.16
5,331.0	91.00	359.60	2,476.0	3,083.5	36.1	3,083.7	0.00	0.00	0.00
5,395.0	90.70	359.50	2,475.0	3,147.5	35.6	3,147.7	0.49	-0.47	-0.16
5,458.0	90.50	359.70	2,474.4	3,210.5	35.1	3,210.7	0.45	-0.32	0.32
5,522.0	92.10	359.60	2,472.9	3,274.5	34.7	3,274.6	2.50	2.50	-0.16
5,586.0	92.00	359.70	2,470.6	3,338.4	34.3	3,338.6	0.22	-0.16	0.16
5,650.0	91.70	1.10	2,468.6	3,402.4	34.8	3,402.6	2.24	-0.47	2.19
5,689.0	91.50	1.10	2,467.5	3,441.4	35.5	3,441.5	0.51	-0.51	0.00
TD									
5,734.0	91.00	1.10	2,466.5	3,486.3	36.4	3,486.5	1.11	-1.11	0.00

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,792.0	1,791.8	-20.5	6.8	Tie into Gyro
2,407.5	2,339.7	196.4	7.7	Crossed Hard Line @ 2408' MD
5,734.0	2,466.5	3,486.3	36.4	TD

Checked By: _____	Approved By: _____	Date: _____
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