

30-015-38403

Mewbourne Oil Co

Eddy County, New Mexico

Section 10-20S-25E

Quick Draw 10 HA #1H

Wellbore #1

Survey: MWD Survey

DDC Survey Report

07 March, 2011



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Quick Draw 10 HA #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3403.0usft (Patterson UTI #101)
Site:	Section 10-20S-25E	MD Reference:	WELL @ 3403.0usft (Patterson UTI #101)
Well:	Quick Draw 10 HA #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	Section 10-20S-25E		
Site Position:		Northing:	579,886.88 usft
From:	Map	Easting:	454,317.67 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 35' 38.857 N
		Longitude:	104° 28' 53.985 W
		Grid Convergence:	-0.08 °

Well	Quick Draw 10 HA #1H		
Well Position	+N/-S	0.0 usft	Northing: 577,293.59 usft
	+E/-W	0.0 usft	Easting: 459,513.53 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 35' 13.262 N
		Longitude:	104° 27' 53.213 W
		Ground Level:	3,384.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/7/2011	8.07	60.38	48,777

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 3/7/2011			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,900.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
1,988.0	5,080.0	MWD Survey (Wellbore #1)	MWD default	MWD - Standard

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)
Tie-In to Gyro										
	1,900.0	0.64	66.46	1,899.8	-7.2	9.3	-7.1	0.00	0.00	0.00
	1,988.0	0.80	94.30	1,987.8	-7.1	10.3	-7.0	0.43	0.18	31.64
	2,019.0	0.80	90.90	2,018.8	-7.1	10.7	-7.0	0.15	0.00	-10.97
	2,051.0	0.80	46.40	2,050.8	-6.9	11.1	-6.8	1.89	0.00	-139.06
	2,081.0	2.90	10.90	2,080.8	-6.0	11.4	-5.9	7.65	7.00	-118.33
	2,111.0	5.90	5.10	2,110.7	-3.8	11.7	-3.7	10.10	10.00	-19.33
	2,143.0	8.80	3.70	2,142.4	0.3	12.0	0.4	9.08	9.06	-4.38
	2,176.0	11.80	5.00	2,174.9	6.2	12.5	6.3	9.12	9.09	3.94
	2,206.0	15.20	3.70	2,204.0	13.2	13.0	13.3	11.38	11.33	-4.33

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Well:	Quick Draw 10 HA #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)
2,237.0	15.00	14.40	2,234.0	21.1	14.3	21.3	9.00	-0.65	34.52
2,269.0	14.80	24.00	2,264.9	28.9	16.9	29.0	7.73	-0.63	30.00
2,300.0	16.80	20.40	2,294.7	36.7	20.1	36.9	7.18	6.45	-11.61
2,332.0	19.80	14.40	2,325.1	46.3	23.1	46.5	11.06	9.38	-18.75
2,362.0	22.90	9.70	2,353.0	57.0	25.3	57.2	11.80	10.33	-15.67
2,393.0	26.20	5.40	2,381.2	69.7	27.0	69.9	12.10	10.65	-13.87
2,425.0	30.00	2.20	2,409.5	84.8	28.0	85.0	12.77	11.88	-10.00
2,456.0	33.80	0.90	2,435.8	101.1	28.4	101.4	12.46	12.26	-4.19
2,487.0	37.50	0.00	2,461.0	119.2	28.5	119.4	12.05	11.94	-2.90
2,518.0	41.10	358.90	2,484.9	138.8	28.3	139.1	11.83	11.61	-3.55
2,550.0	44.80	358.00	2,508.4	160.6	27.7	160.8	11.72	11.56	-2.81
2,582.0	48.60	357.80	2,530.3	183.9	26.9	184.1	11.88	11.88	-0.63
2,613.0	52.50	357.20	2,550.0	207.8	25.8	208.0	12.67	12.58	-1.94
2,644.0	56.40	357.10	2,568.0	233.0	24.6	233.2	12.58	12.58	-0.32
2,676.0	60.10	357.00	2,584.9	260.2	23.2	260.3	11.57	11.56	-0.31
2,707.0	63.90	356.90	2,599.4	287.5	21.7	287.7	12.26	12.26	-0.32
Crossed Lease-Line @ 2727' MD									
2,727.0	66.09	357.03	2,607.9	305.6	20.8	305.7	10.98	10.97	0.65
2,738.0	67.30	357.10	2,612.2	315.7	20.2	315.8	10.98	10.97	0.63
2,769.0	70.30	357.50	2,623.4	344.5	18.9	344.7	9.75	9.68	1.29
2,800.0	73.40	357.90	2,633.1	374.0	17.7	374.1	10.07	10.00	1.29
2,832.0	76.80	358.10	2,641.3	404.9	16.6	405.0	10.64	10.63	0.63
2,863.0	79.90	357.90	2,647.6	435.2	15.6	435.3	10.02	10.00	-0.65
2,894.0	83.00	357.90	2,652.2	465.8	14.4	465.9	10.00	10.00	0.00
2,926.0	86.40	357.90	2,655.1	497.7	13.3	497.8	10.63	10.63	0.00
2,957.0	88.80	358.20	2,656.4	528.6	12.2	528.7	7.80	7.74	0.97
2,989.0	89.50	357.90	2,656.9	560.6	11.1	560.7	2.38	2.19	-0.94
3,016.0	89.80	357.60	2,657.1	587.6	10.1	587.6	1.57	1.11	-1.11
Crossed Hard-Line @ 3065' MD									
3,065.0	90.46	357.68	2,657.0	636.5	8.1	636.6	1.37	1.36	0.17
3,075.0	90.60	357.70	2,656.9	646.5	7.7	646.6	1.37	1.36	0.17
3,104.0	90.70	358.60	2,656.5	675.5	6.7	675.5	3.12	0.34	3.10
3,135.0	90.60	359.40	2,656.2	706.5	6.2	706.5	2.60	-0.32	2.58
3,165.0	91.20	0.90	2,655.7	736.5	6.3	736.5	5.38	2.00	5.00
3,196.0	91.20	1.50	2,655.1	767.5	6.9	767.5	1.94	0.00	1.94
3,255.0	90.90	1.50	2,654.0	826.5	8.4	826.5	0.51	-0.51	0.00
3,316.0	91.90	1.40	2,652.5	887.4	10.0	887.5	1.65	1.64	-0.16
3,377.0	92.10	1.50	2,650.4	948.4	11.5	948.4	0.37	0.33	0.16
3,439.0	92.00	1.70	2,648.1	1,010.3	13.3	1,010.4	0.36	-0.16	0.32
3,501.0	91.30	1.20	2,646.4	1,072.3	14.8	1,072.3	1.39	-1.13	-0.81
3,563.0	91.70	0.10	2,644.7	1,134.2	15.5	1,134.3	1.89	0.65	-1.77
3,625.0	91.50	359.60	2,643.0	1,196.2	15.4	1,196.3	0.87	-0.32	-0.81
3,688.0	91.40	1.10	2,641.4	1,259.2	15.8	1,259.3	2.39	-0.16	2.38

DDC Survey Report



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Site:	Section 10-20S-25E	MD Reference:	WELL @ 3403.0usft (Patterson UTI #101)
Well:	Quick Draw 10 HA #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)
3,752.0	92.20	0.80	2,639.4	1,323.1	16.8	1,323.2	1.33	1.25	-0.47
3,815.0	92.00	1.40	2,637.1	1,386.1	18.0	1,386.2	1.00	-0.32	0.95
3,879.0	91.70	1.20	2,635.0	1,450.0	19.5	1,450.1	0.56	-0.47	-0.31
3,942.0	91.30	0.20	2,633.4	1,513.0	20.2	1,513.1	1.71	-0.63	-1.59
4,006.0	93.40	0.80	2,630.7	1,576.9	20.8	1,577.1	3.41	3.28	0.94
4,069.0	93.90	358.50	2,626.7	1,639.8	20.4	1,639.9	3.73	0.79	-3.65
4,132.0	91.90	359.00	2,623.5	1,702.7	19.1	1,702.8	3.27	-3.17	0.79
4,195.0	91.50	359.20	2,621.7	1,765.7	18.1	1,765.8	0.71	-0.63	0.32
4,259.0	92.00	359.10	2,619.7	1,829.6	17.1	1,829.7	0.80	0.78	-0.16
4,322.0	92.10	359.30	2,617.5	1,892.6	16.2	1,892.7	0.35	0.16	0.32
4,385.0	92.30	359.70	2,615.1	1,955.5	15.7	1,955.6	0.71	0.32	0.63
4,449.0	91.60	0.20	2,612.9	2,019.5	15.6	2,019.6	1.34	-1.09	0.78
4,513.0	91.20	0.00	2,611.3	2,083.5	15.7	2,083.5	0.70	-0.63	-0.31
4,577.0	91.60	359.40	2,609.7	2,147.5	15.4	2,147.5	1.13	0.63	-0.94
4,640.0	91.70	359.80	2,607.9	2,210.4	15.0	2,210.5	0.65	0.16	0.63
4,704.0	92.40	359.20	2,605.6	2,274.4	14.4	2,274.4	1.44	1.09	-0.94
4,767.0	92.60	359.30	2,602.9	2,337.3	13.6	2,337.4	0.35	0.32	0.16
4,831.0	91.10	359.30	2,600.8	2,401.3	12.8	2,401.3	2.34	-2.34	0.00
4,895.0	91.40	359.20	2,599.4	2,465.3	12.0	2,465.3	0.49	0.47	-0.16
4,927.0	90.90	358.70	2,598.8	2,497.3	11.4	2,497.3	2.21	-1.56	-1.56
4,958.0	92.30	358.70	2,597.9	2,528.2	10.7	2,528.2	4.52	4.52	0.00
4,990.0	94.20	359.30	2,596.1	2,560.2	10.1	2,560.2	6.23	5.94	1.88
5,022.0	94.70	359.30	2,593.6	2,592.1	9.7	2,592.1	1.56	1.56	0.00
TD									
5,080.0	94.70	359.30	2,588.9	2,649.9	9.0	2,649.9	0.00	0.00	0.00

Survey Annotations

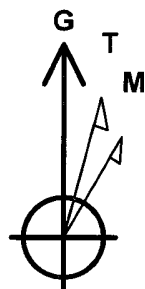
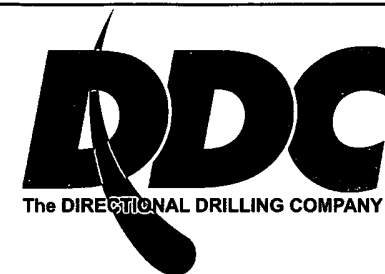
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,900.0	1,899.8	-7.2	9.3	Tie-In to Gyro
2,727.0	2,607.9	305.6	20.8	Crossed Lease-Line @ 2727' MD
3,065.0	2,657.0	636.5	8.1	Crossed Hard-Line @ 3065' MD
5,080.0	2,588.9	2,649.9	9.0	TD

Checked By: _____ Approved By: _____ Date: _____

Quick Draw 10 HA #1H
Eddy County, New Mexico
Q110006 & WT-11098

Company Name: Mewbourne Oil Co
Quick Draw 10 HA #1H
Eddy County, New Mexico
Rig: Patterson UTI #101
Created By: Shane Robbins
Date: 03/07/2011

Mewbourne Oil Company



Azimuths to Grid North

Correction: 8.14°

Magnetic Field
Strength: 48777.1snT

Dip Angle: 60.38°

Date: 1/7/2011

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 Quick Draw 10 HA #1H

	Ground Level	3384.0
+N/-S	0.0	
+E/-W	0.0	
Northing	577293.59	
Easting	459513.53	
Latitude	32° 35' 13.262 N	
Longitude	104° 27' 53.213 W	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Quick Draw 10 HA #1H - plan hits target center	2590.0	2658.3	22.1	579951.90	459535.60	32° 35' 39.568 N	104° 27' 52.993 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	V-Sect	Departure	Annotation
1900.0	0.64	66.46	1899.8	-7.2	9.3	-7.1	25.0	Tie-In to Gyro
2727.0	66.09	357.03	2607.9	305.6	20.8	305.7	342.0	Crossed Lease-Line @ 2727' MD
3065.0	90.46	357.68	2657.0	636.5	8.1	636.6	673.2	Crossed Hard-Line @ 3065' MD
5080.0	94.70	359.30	2588.9	2649.9	9.0	2649.9	2686.8	TD

