

30-015-40401

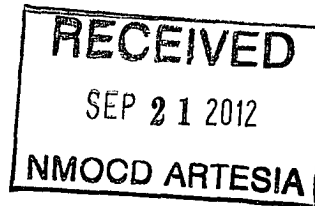
Mewbourne Oil Co

Eddy County, New Mexico

Sec 9-25S-28E

San Lorenzo 9 PA Fee #1H

Wellbore #1



Survey: MWD

DDC Survey Report

13 September, 2012



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well San Lorenzo 9 PA Fee #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2965.0usft (Patterson #45)
Site:	Sec 9-25S-28E	MD Reference:	WELL @ 2965.0usft (Patterson #45)
Well:	San Lorenzo 9 PA Fee #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 9-25S-28E				
Site Position:	Northing:	413,906.40 usft	Latitude:	32° 8' 15.729 N	
From:	Map	Easting:	576,749.14 usft	Longitude:	104° 5' 7.369 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well:	San Lorenzo 9 PA Fee #1H					
Well Position	+N/-S	0.0 usft	Northing:	413,906.40 usft	Latitude:	32° 8' 15.729 N
	+E/-W	0.0 usft	Easting:	576,749.14 usft	Longitude:	104° 5' 7.369 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,945.0 usft	

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	8/3/2012	(°)	(°)	(nT)
			7.68	59.99	48,397

Design:	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	359.67	

Survey Program:	Date:	9/13/2012		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	7,490.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
7,602.0	12,650.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
TIE IN @ 7490' MD / 7486' TVD									
7,490.0	2.75	293.63	7,485.3	-17.2	30.4	-17.3	0.00	0.00	0.00
7,602.0	1.10	271.90	7,597.2	-16.0	26.9	-16.2	1.59	-1.47	-19.40
7,634.0	1.10	314.50	7,629.2	-15.8	26.3	-16.0	2.50	0.00	133.13
7,666.0	4.60	356.80	7,661.2	-14.3	26.0	-14.5	12.06	10.94	132.19
7,698.0	8.00	2.30	7,693.0	-10.8	26.1	-11.0	10.78	10.63	17.19
7,729.0	11.30	0.50	7,723.5	-5.6	26.2	-5.8	10.69	10.65	-5.81
7,761.0	15.00	355.10	7,754.7	1.6	25.8	1.5	12.17	11.56	-16.88
7,793.0	18.50	351.40	7,785.3	10.8	24.7	10.7	11.43	10.94	-11.56
7,825.0	22.30	350.90	7,815.3	21.8	23.0	21.7	11.89	11.88	-1.56

DDC
Survey Report



Company: Mewbourne Oil Co
Project: Eddy County, New Mexico
Site: Sec 9-25S-28E
Well: San Lorenzo 9 PA Fee #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well San Lorenzo 9 PA Fee #1H
TVD Reference: WELL @ 2965.0usft (Patterson #45)
MD Reference: WELL @ 2965.0usft (Patterson #45)
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)
7,856.0	25.30	352.10	7,843.7	34.2	21.2	34.1	9.80	9.68	3.87
7,888.0	28.80	354.40	7,872.2	48.6	19.5	48.5	11.41	10.94	7.19
7,920.0	31.70	355.60	7,899.8	64.7	18.1	64.6	9.26	9.06	3.75
7,952.0	35.90	356.10	7,926.4	82.4	16.8	82.3	13.15	13.13	1.56
7,983.0	39.90	356.10	7,950.9	101.4	15.5	101.3	12.90	12.90	0.00
8,015.0	43.70	356.30	7,974.7	122.7	14.1	122.6	11.88	11.88	0.63
8,047.0	47.90	356.80	7,997.0	145.6	12.7	145.5	13.17	13.13	1.56
CROSSED HARD LINE @ 8063' MD / 8007' TVD									
8,062.5	49.85	357.37	8,007.2	157.3	12.1	157.2	12.87	12.57	3.65
8,078.0	51.80	357.90	8,017.0	169.3	11.6	169.2	12.87	12.59	3.45
8,110.0	55.20	358.80	8,036.0	195.0	10.9	194.9	10.86	10.63	2.81
8,142.0	58.70	359.60	8,053.5	221.8	10.5	221.7	11.14	10.94	2.50
8,174.0	61.50	358.90	8,069.4	249.5	10.2	249.5	8.95	8.75	-2.19
8,205.0	65.10	358.80	8,083.4	277.2	9.6	277.2	11.62	11.61	-0.32
8,237.0	68.60	358.60	8,095.9	306.6	8.9	306.6	10.95	10.94	-0.63
8,269.0	72.30	358.90	8,106.6	336.8	8.3	336.7	11.60	11.56	0.94
8,301.0	76.20	358.90	8,115.3	367.6	7.7	367.5	12.19	12.19	0.00
8,332.0	80.80	358.20	8,121.5	397.9	6.9	397.9	15.00	14.84	-2.26
8,364.0	84.50	358.10	8,125.6	429.6	5.9	429.6	11.57	11.56	-0.31
8,448.0	89.80	358.40	8,129.8	513.5	3.3	513.4	6.32	6.31	0.36
8,512.0	89.40	359.10	8,130.2	577.4	1.9	577.4	1.26	-0.63	1.09
8,575.0	89.10	359.10	8,131.0	640.4	0.9	640.4	0.48	-0.48	0.00
8,638.0	90.00	359.30	8,131.5	703.4	0.1	703.4	1.46	1.43	0.32
8,702.0	90.00	359.10	8,131.5	767.4	-0.8	767.4	0.31	0.00	-0.31
8,765.0	90.20	358.90	8,131.4	830.4	-1.9	830.4	0.45	0.32	-0.32
8,828.0	90.00	358.80	8,131.3	893.4	-3.2	893.4	0.35	-0.32	-0.16
8,892.0	89.90	358.80	8,131.4	957.4	-4.5	957.4	0.16	-0.16	0.00
8,955.0	90.00	358.40	8,131.4	1,020.4	-6.1	1,020.4	0.65	0.16	-0.63
9,019.0	90.40	358.10	8,131.2	1,084.3	-8.0	1,084.4	0.78	0.63	-0.47
9,082.0	90.80	357.90	8,130.6	1,147.3	-10.2	1,147.3	0.71	0.63	-0.32
9,145.0	91.00	358.90	8,129.6	1,210.3	-12.0	1,210.3	1.62	0.32	1.59
9,209.0	90.90	358.60	8,128.5	1,274.2	-13.4	1,274.3	0.49	-0.16	-0.47
9,272.0	90.70	359.60	8,127.6	1,337.2	-14.4	1,337.3	1.62	-0.32	1.59
9,336.0	91.00	0.20	8,126.7	1,401.2	-14.5	1,401.3	1.05	0.47	0.94
9,399.0	90.80	0.70	8,125.7	1,464.2	-14.0	1,464.3	0.85	-0.32	0.79
9,465.0	90.00	0.90	8,125.2	1,530.2	-13.1	1,530.2	1.25	-1.21	0.30
9,529.0	88.50	1.20	8,126.1	1,594.2	-11.9	1,594.2	2.39	-2.34	0.47
9,592.0	88.00	1.00	8,128.0	1,657.1	-10.7	1,657.2	0.85	-0.79	-0.32
9,656.0	87.70	1.00	8,130.4	1,721.1	-9.6	1,721.1	0.47	-0.47	0.00
9,719.0	87.40	0.50	8,133.1	1,784.0	-8.8	1,784.0	0.92	-0.48	-0.79
9,783.0	87.50	0.20	8,135.9	1,847.9	-8.4	1,848.0	0.49	0.16	-0.47
9,847.0	88.30	359.50	8,138.3	1,911.9	-8.5	1,911.9	1.66	1.25	-1.09
9,911.0	89.80	359.30	8,139.3	1,975.9	-9.2	1,975.9	2.36	2.34	-0.31

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well San Lorenzo 9 PA Fee #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2965.0usft (Patterson #45)
Site:	Sec 9-25S-28E	MD Reference:	WELL @ 2965.0usft (Patterson #45)
Well:	San Lorenzo 9 PA Fee #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
9,974.0	89.90	359.10	8,139.5	2,038.9	-10.1	2,038.9	0.35	0.16	-0.32
10,037.0	90.00	359.10	8,139.6	2,101.9	-11.1	2,101.9	0.16	0.16	0.00
10,101.0	89.40	358.90	8,139.9	2,165.9	-12.2	2,165.9	0.99	-0.94	-0.31
10,164.0	89.10	358.60	8,140.7	2,228.8	-13.6	2,228.9	0.67	-0.48	-0.48
10,228.0	88.40	358.40	8,142.1	2,292.8	-15.2	2,292.9	1.14	-1.09	-0.31
10,291.0	89.70	358.80	8,143.2	2,355.8	-16.8	2,355.8	2.16	2.06	0.63
10,355.0	90.60	359.50	8,143.0	2,419.8	-17.7	2,419.8	1.78	1.41	1.09
10,419.0	90.50	359.10	8,142.4	2,483.8	-18.5	2,483.8	0.64	-0.16	-0.63
10,483.0	89.00	359.50	8,142.6	2,547.8	-19.3	2,547.8	2.43	-2.34	0.63
10,546.0	87.90	359.50	8,144.4	2,610.7	-19.8	2,610.8	1.75	-1.75	0.00
10,609.0	87.20	359.50	8,147.0	2,673.7	-20.4	2,673.7	1.11	-1.11	0.00
10,673.0	87.50	359.10	8,150.0	2,737.6	-21.2	2,737.7	0.78	0.47	-0.63
10,737.0	87.30	359.30	8,152.9	2,801.5	-22.1	2,801.6	0.44	-0.31	0.31
10,801.0	87.90	0.00	8,155.6	2,865.5	-22.4	2,865.5	1.44	0.94	1.09
10,864.0	88.20	359.50	8,157.7	2,928.4	-22.7	2,928.5	0.93	0.48	-0.79
10,928.0	89.60	359.80	8,159.0	2,992.4	-23.1	2,992.5	2.24	2.19	0.47
10,991.0	90.10	358.20	8,159.1	3,055.4	-24.2	3,055.5	2.66	0.79	-2.54
11,055.0	90.40	358.80	8,158.8	3,119.4	-25.9	3,119.5	1.05	0.47	0.94
11,118.0	90.60	358.60	8,158.3	3,182.4	-27.3	3,182.5	0.45	0.32	-0.32
11,182.0	90.50	358.80	8,157.7	3,246.3	-28.8	3,246.5	0.35	-0.16	0.31
11,245.0	89.50	358.40	8,157.7	3,309.3	-30.3	3,309.4	1.71	-1.59	-0.63
11,309.0	90.20	359.10	8,157.8	3,373.3	-31.7	3,373.4	1.55	1.09	1.09
11,372.0	92.00	359.80	8,156.6	3,436.3	-32.3	3,436.4	3.07	2.86	1.11
11,435.0	91.80	358.90	8,154.6	3,499.2	-33.0	3,499.4	1.46	-0.32	-1.43
11,499.0	91.30	358.40	8,152.8	3,563.2	-34.5	3,563.3	1.10	-0.78	-0.78
11,562.0	90.50	357.90	8,151.8	3,626.2	-36.6	3,626.3	1.50	-1.27	-0.79
11,626.0	90.00	357.20	8,151.6	3,690.1	-39.3	3,690.3	1.34	-0.78	-1.09
11,689.0	91.60	357.40	8,150.7	3,753.0	-42.3	3,753.2	2.56	2.54	0.32
11,753.0	92.10	357.70	8,148.6	3,816.9	-45.0	3,817.1	0.91	0.78	0.47
11,816.0	91.60	359.50	8,146.6	3,879.9	-46.5	3,880.1	2.96	-0.79	2.86
11,880.0	90.90	1.20	8,145.2	3,943.9	-46.1	3,944.1	2.87	-1.09	2.66
11,943.0	90.50	1.20	8,144.4	4,006.8	-44.8	4,007.0	0.63	-0.63	0.00
12,007.0	90.40	0.90	8,143.9	4,070.8	-43.7	4,071.0	0.49	-0.16	-0.47
12,070.0	89.60	0.50	8,143.9	4,133.8	-42.9	4,134.0	1.42	-1.27	-0.63
12,134.0	90.50	1.20	8,143.8	4,197.8	-41.9	4,198.0	1.78	1.41	1.09
12,197.0	89.60	1.00	8,143.8	4,260.8	-40.7	4,261.0	1.46	-1.43	-0.32
12,261.0	90.80	0.70	8,143.6	4,324.8	-39.8	4,325.0	1.93	1.88	-0.47
12,324.0	89.60	359.30	8,143.3	4,387.8	-39.8	4,387.9	2.93	-1.90	-2.22
12,388.0	90.80	359.50	8,143.1	4,451.8	-40.4	4,451.9	1.90	1.88	0.31
12,451.0	91.70	359.30	8,141.8	4,514.8	-41.1	4,514.9	1.46	1.43	-0.32
12,514.0	92.70	359.80	8,139.3	4,577.7	-41.6	4,577.9	1.77	1.59	0.79
12,577.0	92.90	359.80	8,136.3	4,640.6	-41.8	4,640.8	0.32	0.32	0.00
12,595.0	92.20	359.60	8,135.5	4,658.6	-41.9	4,658.8	4.04	-3.89	-1.11

TD @ 12650'MD / 8133' TVD

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well San Lorenzo 9 PA Fee #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2965.0usft (Patterson #45)
Site:	Sec 9-25S-28E	MD Reference:	WELL @ 2965.0usft (Patterson #45)
Well:	San Lorenzo 9 PA Fee #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)
12,650.0	92.20	359.60	8,133.3	4,713.6	-42.3	4,713.7	0.00	0.00	0.00

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		N/S (usft)	E/W (usft)	
7,490.0	7,485.3	-17.2	30.4	TIE IN @ 7490' MD / 7485' TVD
8,062.5	8,007.2	157.3	12.1	CROSSED HARD LINE @ 8063' MD / 8007' TVD
12,650.0	8,133.3	4,713.6	-42.3	TD @ 12650' MD / 8133' TVD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------