

30-015-4385

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 17 2016

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Mewbourne Oil Company .

Eddy County, New Mexico

Section 14/13 Delaware Ranch 13 B2DA Fed Com #1H

Delaware Ranch 13 B2DA Fed Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

23 July, 2015

Stryker Directional Survey Report

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Delaware Ranch 13 B2DA Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	2947 + 20 @ 2967.0usft (Patterson)
Site:	Section 14/13 Delaware Ranch 13 B2DA Fed Com #1H	MD Reference:	2947 + 20 @ 2967.0usft (Patterson)
Well:	Delaware Ranch 13 B2DA Fed Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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 14/13 Delaware Ranch 13 B2DA Fed Com #1H			
Site Position:		Northing:	381,282.90 usft	Latitude:	32° 2' 52.597 N
From:	Map	Easting:	587,958.30 usft	Longitude:	104° 2' 58.001 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well	Delaware Ranch 13 B2DA Fed Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	381,282.90 usft	Latitude:	32° 2' 52.597 N
	+E/-W	0.0 usft	Easting:	587,958.30 usft	Longitude:	104° 2' 58.001 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	2,947.0 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/16/2015	7.38	59.85	47,990

Design	Original Hole				
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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	89.79

Survey Program		Date 7/23/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
250.0	2,464.0	MWD Vertical Survey #1 (Original Hole)	MWD	MWD v3:standard declination	
7,645.0	13,270.0	Stryker MWD Survey (Original Hole)			

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	
250.0	1.40	106.70	250.0	-0.9	2.9	2.9	0.56	0.56	0.00	
337.0	1.30	274.70	337.0	-1.1	3.0	3.0	3.09	-0.11	193.10	
510.0	1.20	288.60	509.9	-0.4	-0.7	-0.7	0.18	-0.06	8.03	
685.0	1.00	314.60	684.9	1.3	-3.5	-3.5	0.30	-0.11	14.86	
858.0	1.80	329.40	857.8	4.7	-6.0	-6.0	0.50	0.46	8.55	
942.0	0.30	324.40	941.8	6.0	-6.8	-6.8	1.79	-1.79	-5.95	
1,132.0	1.00	265.00	1,131.8	6.3	-8.7	-8.7	0.47	0.37	-31.26	
1,323.0	2.30	256.20	1,322.7	5.2	-14.1	-14.1	0.69	0.68	-4.61	

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Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)	
1,418.0	1.10	10.80	1,417.7	5.6	-15.8	-15.8	3.09	-1.26	120.63	
1,513.0	2.30	43.00	1,512.7	7.9	-14.3	-14.3	1.57	1.26	33.89	
1,608.0	0.80	127.50	1,607.6	8.9	-12.5	-12.5	2.49	-1.58	88.95	
1,798.0	1.90	211.20	1,797.6	5.4	-13.1	-13.1	1.04	0.58	44.05	
1,893.0	0.90	334.30	1,892.6	4.8	-14.2	-14.2	2.64	-1.05	129.58	
1,988.0	2.10	50.10	1,987.5	6.5	-13.2	-13.2	2.18	1.26	79.79	
2,083.0	2.50	124.20	2,082.5	6.5	-10.2	-10.1	2.94	0.42	78.00	
2,178.0	3.50	195.70	2,177.4	2.5	-9.2	-9.2	3.79	1.05	75.26	
2,273.0	1.20	247.30	2,272.3	-0.6	-10.9	-10.9	3.06	-2.42	54.32	
2,368.0	1.80	26.40	2,367.3	0.3	-11.2	-11.2	2.97	0.63	146.42	
2,464.0	1.40	115.00	2,463.3	1.2	-9.5	-9.4	2.35	-0.42	92.29	
2464' MD Survey Depth										
7,645.0	1.30	197.50	7,643.2	-81.6	30.2	29.9	0.03	0.00	1.59	
7,676.0	1.50	201.30	7,674.2	-82.4	30.0	29.7	0.71	0.65	12.26	
7,708.0	0.80	202.90	7,706.2	-82.9	29.7	29.4	2.19	-2.19	5.00	
7,740.0	3.00	74.50	7,738.2	-82.9	30.5	30.2	11.10	6.88	-401.25	
7,772.0	6.60	70.80	7,770.1	-82.1	33.0	32.7	11.29	11.25	-11.56	
7,803.0	9.90	69.00	7,800.8	-80.6	37.2	36.9	10.68	10.65	-5.81	
7,835.0	12.90	66.80	7,832.1	-78.2	43.0	42.7	9.47	9.38	-6.88	
7,867.0	15.50	70.20	7,863.2	-75.3	50.3	50.1	8.53	8.13	10.63	
7,899.0	17.90	62.20	7,893.8	-71.6	58.7	58.5	10.37	7.50	-25.00	
7,930.0	21.80	61.00	7,923.0	-66.6	68.0	67.7	12.65	12.58	-3.87	
7,962.0	25.90	62.30	7,952.2	-60.4	79.4	79.1	12.92	12.81	4.06	
7,994.0	29.70	67.20	7,980.5	-54.1	92.9	92.7	13.85	11.88	15.31	
8,026.0	33.70	70.60	8,007.8	-48.1	108.6	108.4	13.69	12.50	10.63	
8,058.0	38.00	73.70	8,033.7	-42.4	126.4	126.2	14.58	13.44	9.69	
8,089.0	41.40	77.90	8,057.5	-37.5	145.6	145.4	13.97	10.97	13.55	
8,121.0	43.50	83.40	8,081.2	-34.0	166.9	166.8	13.32	6.56	17.19	
8,153.0	47.00	87.10	8,103.7	-32.2	189.5	189.4	13.67	10.94	11.56	
8,184.0	51.30	88.10	8,124.0	-31.2	212.9	212.8	14.08	13.87	3.23	
8,216.0	55.70	89.20	8,143.0	-30.6	238.6	238.5	14.02	13.75	3.44	
8,248.0	58.00	91.00	8,160.5	-30.7	265.4	265.3	8.59	7.19	5.63	
8,279.0	58.60	92.00	8,176.8	-31.4	291.8	291.7	3.36	1.94	3.23	
8,311.0	62.10	90.40	8,192.6	-31.9	319.6	319.5	11.77	10.94	-5.00	
8,343.0	65.80	88.00	8,206.7	-31.5	348.3	348.2	13.38	11.56	-7.50	
8,374.0	69.90	88.30	8,218.3	-30.6	377.0	376.9	13.26	13.23	0.97	
8,406.0	74.40	88.70	8,228.1	-29.8	407.5	407.4	14.11	14.06	1.25	
8,438.0	78.50	91.00	8,235.6	-29.7	438.6	438.5	14.59	12.81	7.19	
8,470.0	80.90	91.50	8,241.4	-30.4	470.0	469.9	7.66	7.50	1.56	
8,502.0	83.00	90.90	8,245.8	-31.1	501.7	501.6	6.82	6.56	-1.88	
8,534.0	84.70	90.60	8,249.3	-31.5	533.5	533.4	5.39	5.31	-0.94	
8,565.0	85.40	90.60	8,252.0	-31.8	564.4	564.3	2.26	2.26	0.00	

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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)	
8,595.0	88.50	91.20	8,253.5	-32.3	594.4	594.2	10.52	10.33	2.00	
8,627.0	88.90	90.80	8,254.3	-32.8	626.4	626.2	1.77	1.25	-1.25	
8,658.0	88.40	90.30	8,255.0	-33.1	657.3	657.2	2.28	-1.61	-1.61	
8,721.0	87.20	89.50	8,257.4	-33.0	720.3	720.2	2.29	-1.90	-1.27	
8,816.0	90.20	88.70	8,259.6	-31.5	815.2	815.1	3.27	3.16	-0.84	
8,879.0	89.40	87.80	8,259.8	-29.6	878.2	878.1	1.91	-1.27	-1.43	
8,942.0	88.30	87.80	8,261.1	-27.2	941.2	941.0	1.75	-1.75	0.00	
9,037.0	89.30	90.40	8,263.1	-25.7	1,036.1	1,036.0	2.93	1.05	2.74	
9,132.0	88.50	89.70	8,264.9	-25.8	1,131.1	1,131.0	1.12	-0.84	-0.74	
9,227.0	88.90	90.00	8,267.0	-25.5	1,226.1	1,226.0	0.53	0.42	0.32	
9,322.0	88.70	92.40	8,269.0	-27.5	1,321.0	1,320.9	2.53	-0.21	2.53	
9,417.0	85.40	92.00	8,273.9	-31.2	1,415.8	1,415.7	3.50	-3.47	-0.42	
9,512.0	84.70	91.60	8,282.1	-34.1	1,510.4	1,510.3	0.85	-0.74	-0.42	
9,607.0	86.10	89.70	8,289.7	-35.2	1,605.1	1,605.0	2.48	1.47	-2.00	
9,701.0	88.70	88.20	8,294.0	-33.5	1,699.0	1,698.8	3.19	2.77	-1.60	
9,796.0	91.90	89.50	8,293.5	-31.6	1,793.9	1,793.8	3.64	3.37	1.37	
9,891.0	90.10	90.60	8,291.8	-31.7	1,888.9	1,888.8	2.22	-1.89	1.16	
9,986.0	89.20	90.40	8,292.4	-32.5	1,983.9	1,983.8	0.97	-0.95	-0.21	
10,081.0	88.20	89.10	8,294.6	-32.1	2,078.9	2,078.7	1.73	-1.05	-1.37	
10,176.0	87.40	87.80	8,298.2	-29.5	2,173.8	2,173.6	1.61	-0.84	-1.37	
10,271.0	88.60	87.60	8,301.5	-25.7	2,268.6	2,268.5	1.28	1.26	-0.21	
10,366.0	90.10	89.80	8,302.6	-23.6	2,363.6	2,363.5	2.80	1.58	2.32	
10,461.0	89.90	90.00	8,302.6	-23.4	2,458.6	2,458.5	0.30	-0.21	0.21	
10,556.0	89.60	88.40	8,303.0	-22.1	2,553.6	2,553.5	1.71	-0.32	-1.68	
10,651.0	89.40	89.70	8,303.9	-20.5	2,648.6	2,648.5	1.38	-0.21	1.37	
10,746.0	87.90	91.10	8,306.1	-21.1	2,743.5	2,743.4	2.16	-1.58	1.47	
10,841.0	88.00	91.00	8,309.5	-22.9	2,838.5	2,838.3	0.15	0.11	-0.11	
10,936.0	87.60	90.60	8,313.1	-24.2	2,933.4	2,933.3	0.60	-0.42	-0.42	
11,032.0	87.80	90.60	8,317.0	-25.2	3,029.3	3,029.2	0.21	0.21	0.00	
11,126.0	87.40	90.10	8,320.9	-25.8	3,123.2	3,123.1	0.68	-0.43	-0.53	
11,222.0	88.10	89.10	8,324.7	-25.1	3,219.1	3,219.0	1.27	0.73	-1.04	
11,317.0	88.20	88.70	8,327.8	-23.3	3,314.1	3,314.0	0.43	0.11	-0.42	
11,412.0	87.60	88.10	8,331.2	-20.6	3,409.0	3,408.9	0.89	-0.63	-0.63	
11,507.0	89.40	88.60	8,333.7	-17.9	3,503.9	3,503.8	1.97	1.89	0.53	
11,603.0	90.10	87.70	8,334.1	-14.8	3,599.8	3,599.8	1.19	0.73	-0.94	
11,698.0	89.90	89.50	8,334.1	-12.5	3,694.8	3,694.7	1.91	-0.21	1.89	
11,793.0	88.10	89.70	8,335.8	-11.8	3,789.8	3,789.7	1.91	-1.89	0.21	
11,888.0	87.40	88.90	8,339.5	-10.7	3,884.7	3,884.6	1.12	-0.74	-0.84	
11,983.0	87.00	88.20	8,344.2	-8.3	3,979.5	3,979.5	0.85	-0.42	-0.74	
12,078.0	88.20	87.70	8,348.2	-4.9	4,074.4	4,074.4	1.37	1.26	-0.53	
12,173.0	87.80	86.50	8,351.5	-0.1	4,169.2	4,169.2	1.33	-0.42	-1.26	
12,268.0	90.70	88.50	8,352.7	4.1	4,264.1	4,264.1	3.71	3.05	2.11	
12,362.0	90.00	89.30	8,352.1	5.9	4,358.1	4,358.1	1.13	-0.74	0.85	

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Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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)	
12,457.0	88.20	89.80	8,353.6	6.6	4,453.1	4,453.1	1.97	-1.89	0.53	
12,551.0	88.50	88.60	8,356.3	7.9	4,547.0	4,547.0	1.32	0.32	-1.28	
12,646.0	88.00	89.20	8,359.2	9.8	4,642.0	4,642.0	0.82	-0.53	0.63	
12,741.0	88.60	89.10	8,362.1	11.2	4,736.9	4,736.9	0.64	0.63	-0.11	
12,835.0	89.10	90.80	8,363.9	11.2	4,830.9	4,830.9	1.88	0.53	1.81	
12,930.0	86.90	92.70	8,367.3	8.4	4,925.8	4,925.8	3.06	-2.32	2.00	
13,025.0	86.10	91.50	8,373.1	4.9	5,020.5	5,020.5	1.52	-0.84	-1.26	
13,120.0	85.80	90.30	8,379.8	3.4	5,115.3	5,115.3	1.30	-0.32	-1.26	
13,211.0	88.10	91.80	8,384.6	1.7	5,206.1	5,206.1	3.02	2.53	1.65	
13,270.0	88.10	91.80	8,386.6	-0.1	5,265.1	5,265.0	0.00	0.00	0.00	
13270' MD Projected to Bit										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
13,270.0	8,386.6	-0.1	5,265.1	13270' MD Projected to Bit	



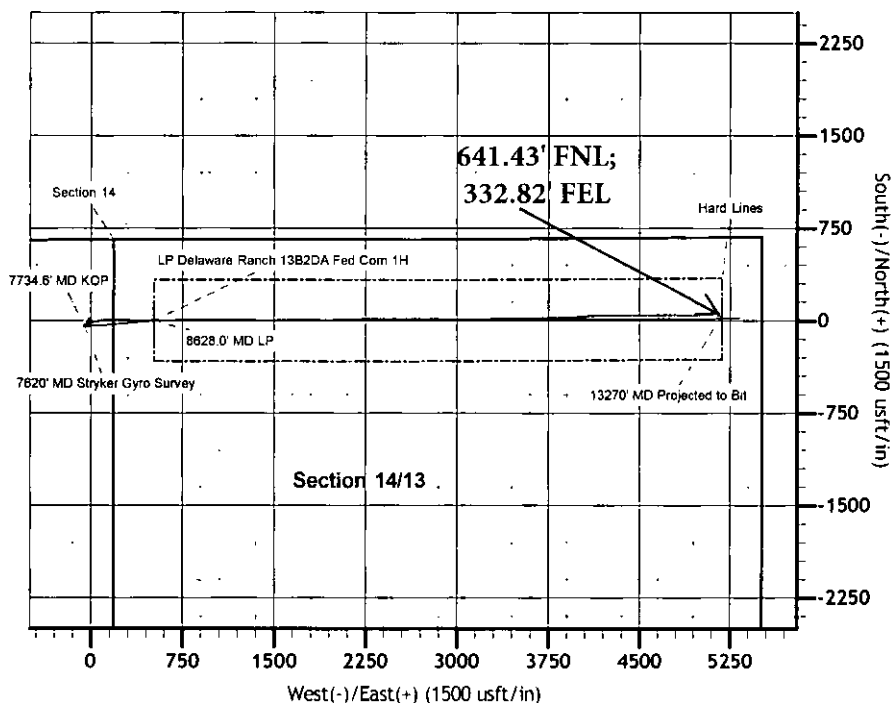
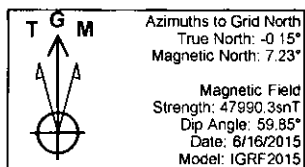
COMPANY: Mewbourne Oil Company
 WELL: Delaware Ranch 13 B2DA Fed Com #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Patterson



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.22°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001 2947 + 20 @ 2967.0usft (Patterson) GROUND ELEVATION: 2947.0										Slot
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude					
0.0	0.0	381282.90	587958.30	32° 2' 52.597 N	104° 2' 58.001 W					
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	7620.0	1.55	231.07	7618.7	-43.9	-56.1	0.00	0.00	-56.3	
2	7734.6	1.55	231.07	7733.3	-45.9	-58.5	0.00	0.00	-58.7	
3	8576.7	88.77	84.29	8280.9	-1.7	463.7	10.70	-146.79	463.7	
4	8628.0	88.77	89.78	8282.0	1.0	514.9	10.70	90.02	514.9	LP Delaware Ranch 13B2DA Fed Com 1H
5	13296.4	88.77	89.78	8382.0	18.7	5182.3	0.00	0.00	5182.3	PBHL Delaware Ranch 13 B2DA Fed Com 1H



SHL; 660' FNL; 185' FEL
 Section 14-26S-28E
 PBHL; 660' FNL; 330' FEL
 Section 13-26S-28E

