



COMPANY: Mewbourne Oil Company
WELL: Jennings 27 W1AP Fed Com #4H
COUNTY: Lea County N. M. Nad (83)
DATUM: North American Datum 1983
RIG: Patterson 242



OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.54°

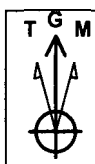
GEODETTIC ZONE: New Mexico Eastern Zone
3397 + 27 @ 3424.0usft (Patterson 242)
GROUND ELEVATION: 3397.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.0	0.0	403671.00	750327.60	32° 6' 28.700 N	103° 39' 30.098 W	

PLAN SECTIONS

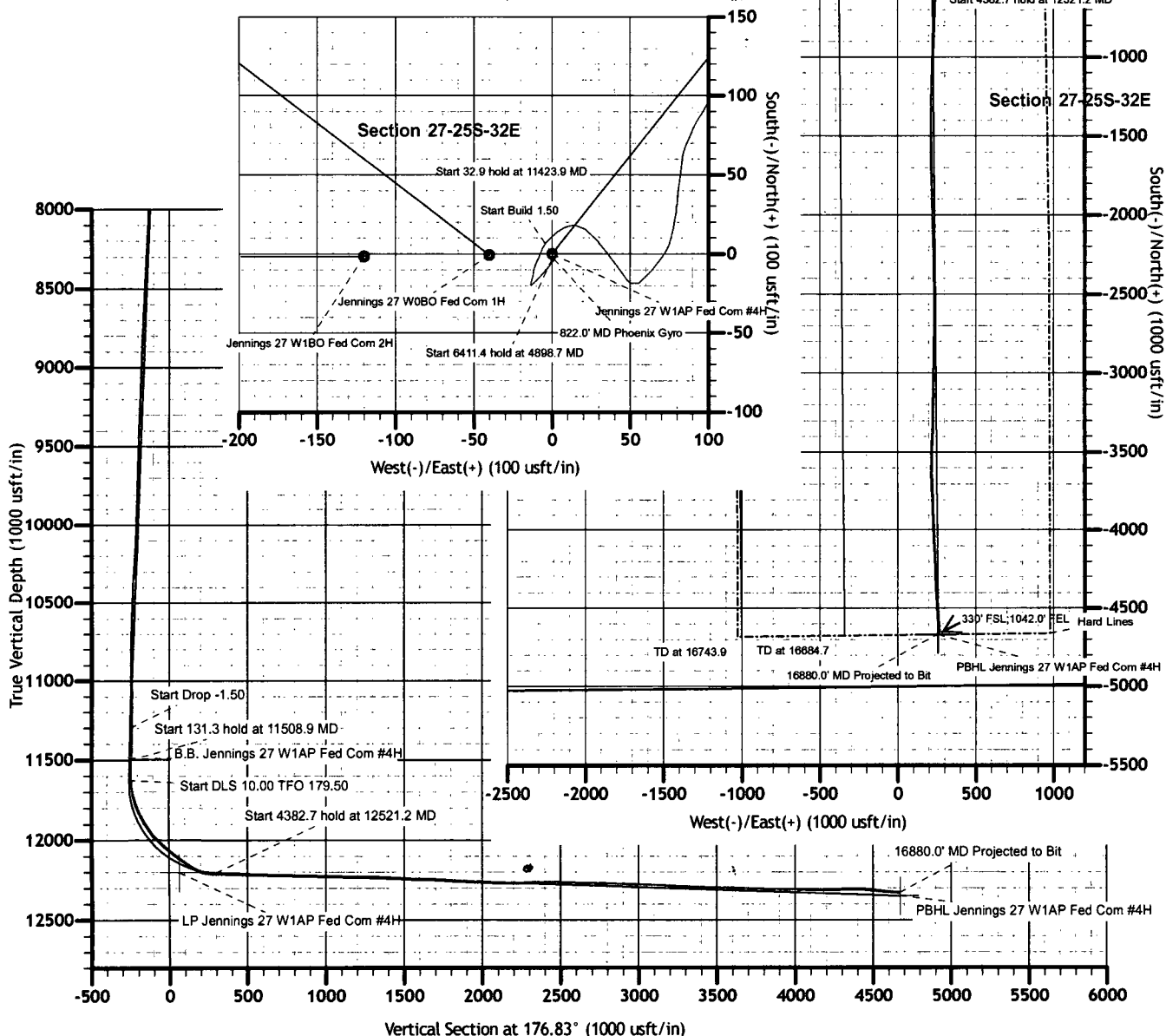
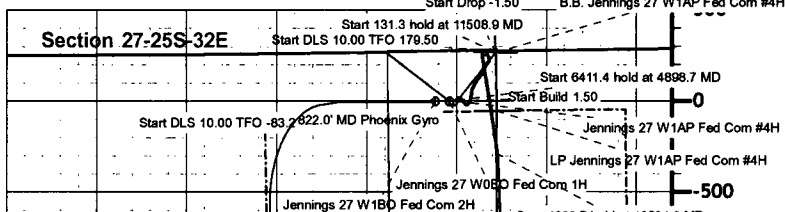
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4700.0	0.00	0.00	4700.0	0.0	0.0	0.00	0.00	0.0	
3	4898.7	2.98	38.89	4898.6	4.0	3.2	1.50	38.89	-3.8	
4	11310.1	2.98	38.89	11301.4	263.5	212.6	0.00	0.00	-251.4	
5	11508.9	0.00	0.00	11500.0	267.5	215.8	1.50	180.00	-255.2	B.B. Jennings 27 W1AP Fed Com #4H
6	11640.2	0.00	0.00	11631.3	267.5	215.8	0.00	0.00	-255.2	
7	12521.2	88.10	179.50	12204.0	-286.4	220.6	10.00	179.50	298.2	
8	16904.0	88.10	179.50	12349.0	-4666.6	258.7	0.00	0.00	4673.8	PBHL Jennings 27 W1AP Fed Com #4H

SHL: 275' FNL; 1270' FEL
Section 27-25S-32E
PBHL: 330' FSL; 1050 FEL
Section 27-25S-32E



Azimuths to Grid North
True North: -0.36°
Magnetic North: 6.54°

Magnetic Field
Strength: 47780.0snT
Dip Angle: 59.93°
Date: 3/29/2018
Model: IGRF2015





MEWBOURNE
OIL COMPANY

Mewbourne Oil Company

Lea County N. M. Nad (83)

Section 27-25S-32E Jennings 27 W1AP Fed Com 4H

Jennings 27 W1AP Fed Com #4H

Original hole

Design: Original hole

Standard Survey Report

07 May, 2018



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Jennings 27 W1AP Fed Com #4H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Site:	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H	MD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Well:	Jennings 27 W1AP Fed Com #4H	North Reference:	Grid
Wellbore:	Original hole	Survey Calculation Method:	Minimum Curvature
Design:	Original hole	Database:	Stryker_EDM

Project	Lea County N. M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H				
Site Position:		Northing:	403,671.00 usft	Latitude:	32° 6' 28.700 N
From:	Map	Easting:	750,327.60 usft	Longitude:	103° 39' 30.098 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °

Well	Jennings 27 W1AP Fed Com #4H				
Well Position	+N/-S	0.0 usft	Northing:	403,671.00 usft	Latitude: 32° 6' 28.700 N
	+E/-W	0.0 usft	Easting:	750,327.60 usft	Longitude: 103° 39' 30.098 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	27.0 usft	Ground Level: 3,397.0 usft

Wellbore	Original hole
-----------------	---------------

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/29/2018	6.90	59.93	47,780.00771316

Design	Original hole
---------------	---------------

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	157.00

Survey Program	Date 5/7/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	822.0	Phoenix Gyro Survey (Original hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline	
923.0	16,880.0	MWD Survey (Original hole)	MWD	MWD v3:standard declination	

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
100.0	0.35	337.81	100.0	0.3	-0.1	-0.3	0.35	0.35	0.00
200.0	0.44	53.13	200.0	0.8	0.1	-0.7	0.49	0.09	75.32
300.0	0.45	102.11	300.0	0.9	0.8	-0.6	0.37	0.01	48.98
400.0	0.32	202.79	400.0	0.6	1.0	-0.1	0.60	-0.13	100.68
500.0	0.55	124.13	500.0	0.1	1.3	0.4	0.58	0.23	-78.66
600.0	0.68	190.60	600.0	-0.8	1.6	1.3	0.68	0.13	66.47
700.0	0.55	176.20	700.0	-1.8	1.5	2.3	0.20	-0.13	-14.40
800.0	0.74	195.32	800.0	-2.9	1.4	3.3	0.28	0.19	19.12

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Jennings 27 W1AP Fed Com #4H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Site:	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H	MD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Well:	Jennings 27 W1AP Fed Com #4H	North Reference:	Grid
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)
822.0	0.61	185.67	822.0	-3.2	1.4	3.5	0.78	-0.59	-43.86
822.0' MD Phoenix Gyro									
923.0	1.50	217.80	923.0	-4.8	0.5	4.6	1.03	0.88	31.81
1,113.0	1.90	220.90	1,112.9	-9.1	-3.1	7.2	0.22	0.21	1.63
1,303.0	2.00	222.50	1,302.8	-13.9	-7.4	9.9	0.06	0.05	0.84
1,430.0	2.10	226.50	1,429.7	-17.2	-10.6	11.7	0.14	0.08	3.15
1,617.0	0.10	321.50	1,616.6	-19.4	-13.2	12.7	1.13	-1.07	50.80
1,803.0	0.20	258.00	1,802.6	-19.4	-13.6	12.5	0.10	0.05	-34.14
1,990.0	1.30	19.10	1,989.6	-17.4	-13.2	10.9	0.76	0.59	64.76
2,176.0	1.10	15.90	2,175.6	-13.7	-12.0	7.9	0.11	-0.11	-1.72
2,361.0	1.20	0.40	2,360.5	-10.1	-11.5	4.8	0.18	0.05	-8.38
2,548.0	1.40	27.80	2,547.5	-6.1	-10.5	1.5	0.35	0.11	14.65
2,734.0	1.10	24.50	2,733.5	-2.4	-8.7	-1.1	0.17	-0.16	-1.77
2,920.0	1.10	21.20	2,919.4	0.8	-7.3	-3.6	0.03	0.00	-1.77
3,107.0	1.10	22.70	3,106.4	4.2	-5.9	-6.2	0.02	0.00	0.80
3,294.0	1.70	44.20	3,293.3	7.8	-3.3	-8.5	0.42	0.32	11.50
3,480.0	2.50	48.40	3,479.2	12.5	1.7	-10.8	0.44	0.43	2.26
3,667.0	2.30	66.90	3,666.0	16.7	8.2	-12.2	0.43	-0.11	9.89
3,853.0	2.00	88.80	3,851.9	18.2	14.8	-11.0	0.47	-0.16	11.77
4,039.0	2.70	128.10	4,037.8	15.6	21.5	-5.9	0.92	0.38	21.13
4,226.0	3.30	138.70	4,224.5	8.8	28.5	3.1	0.44	0.32	5.67
4,412.0	4.70	141.50	4,410.1	-1.2	36.8	15.5	0.76	0.75	1.51
4,541.0	5.00	143.20	4,538.6	-9.8	43.5	26.0	0.26	0.23	1.32
4,603.0	5.20	145.20	4,600.3	-14.3	46.7	31.4	0.43	0.32	3.23
4,790.0	3.10	54.20	4,787.0	-18.3	55.7	38.6	3.26	-1.12	-48.66
4,977.0	3.90	38.40	4,973.7	-10.4	63.7	34.4	0.67	0.43	-8.45
5,163.0	3.60	37.40	5,159.3	-0.8	71.2	28.5	0.17	-0.16	-0.54
5,350.0	4.20	13.80	5,345.8	10.6	76.4	20.1	0.91	0.32	-12.62
5,536.0	4.00	8.60	5,531.4	23.6	79.0	9.1	0.23	-0.11	-2.80
5,722.0	3.60	5.60	5,717.0	35.8	80.5	-1.5	0.24	-0.22	-1.61
5,909.0	2.50	8.80	5,903.7	45.7	81.7	-10.1	0.60	-0.59	1.71
6,095.0	2.50	5.60	6,089.5	53.7	82.7	-17.1	0.08	0.00	-1.72
6,282.0	2.40	8.90	6,276.3	61.7	83.7	-24.0	0.09	-0.05	1.76
6,469.0	3.20	24.30	6,463.1	70.3	86.5	-30.9	0.58	0.43	8.24
6,655.0	2.60	22.30	6,648.9	78.9	90.2	-37.4	0.33	-0.32	-1.08
6,841.0	3.60	33.40	6,834.6	87.7	95.0	-43.6	0.62	0.54	5.97
7,026.0	3.00	25.30	7,019.3	96.9	100.3	-50.0	0.41	-0.32	-4.38
7,213.0	2.30	19.50	7,206.1	104.9	103.6	-56.0	0.40	-0.37	-3.10
7,400.0	2.90	33.20	7,392.9	112.4	107.5	-61.4	0.46	0.32	7.33
7,586.0	2.60	48.60	7,578.7	119.1	113.2	-65.4	0.43	-0.16	8.28
7,772.0	4.00	38.20	7,764.4	127.0	120.4	-69.8	0.82	0.75	-5.59
7,958.0	2.90	37.90	7,950.0	135.8	127.3	-75.3	0.59	-0.59	-0.16

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Jennings 27 W1AP Fed Com #4H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Site:	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H	MD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Well:	Jennings 27 W1AP Fed Com #4H	North Reference:	Grid
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)
8,051.0	2.60	37.50	8,042.9	139.3	130.0	-77.4	0.32	-0.32	-0.43
8,145.0	3.90	37.80	8,136.8	143.6	133.3	-80.1	1.38	1.38	0.32
8,331.0	2.80	31.30	8,322.5	152.4	139.5	-85.8	0.62	-0.59	-3.49
8,517.0	3.60	28.30	8,508.2	161.5	144.7	-92.1	0.44	0.43	-1.61
8,704.0	3.50	28.20	8,694.8	171.7	150.1	-99.3	0.05	-0.05	-0.05
8,891.0	3.10	22.20	8,881.5	181.4	154.8	-106.5	0.28	-0.21	-3.21
9,078.0	2.20	21.70	9,068.3	189.4	158.0	-112.6	0.48	-0.48	-0.27
9,264.0	1.80	24.70	9,254.2	195.4	160.5	-117.1	0.22	-0.22	1.61
9,450.0	2.40	32.90	9,440.1	201.3	163.9	-121.2	0.36	0.32	4.41
9,636.0	1.90	38.20	9,625.9	207.0	167.9	-124.9	0.29	-0.27	2.85
9,822.0	2.80	49.30	9,811.8	212.4	173.2	-127.8	0.54	0.48	5.97
10,008.0	2.10	7.80	9,997.6	218.7	177.1	-132.1	1.00	-0.38	-22.31
10,195.0	3.60	357.40	10,184.4	228.0	177.3	-140.5	0.85	0.80	-5.56
10,382.0	2.90	348.30	10,371.1	238.5	176.1	-150.7	0.46	-0.37	-4.87
10,568.0	3.20	335.40	10,556.8	247.8	173.0	-160.5	0.40	0.16	-6.94
10,755.0	1.20	272.90	10,743.7	252.6	168.9	-166.6	1.53	-1.07	-33.42
10,941.0	1.60	254.10	10,929.6	252.0	164.4	-167.7	0.32	0.22	-10.11
11,127.0	1.90	269.60	11,115.5	251.3	158.9	-169.2	0.30	0.16	8.33
11,314.0	2.00	294.10	11,302.4	252.6	152.8	-172.8	0.45	0.05	13.10
11,501.0	2.50	280.50	11,489.3	254.7	145.8	-177.5	0.39	0.27	-7.27
11,508.5	2.50	277.98	11,496.8	254.7	145.5	-177.6	1.46	0.04	-33.54
B.B. Jennings 27 W1AP Fed Com #4H									
11,586.0	2.80	254.10	11,574.2	254.4	142.0	-178.7	1.46	0.38	-30.82
11,615.0	2.70	247.60	11,603.2	254.0	140.7	-178.8	1.13	-0.34	-22.41
11,646.0	3.30	206.90	11,634.1	252.9	139.6	-178.3	6.97	1.94	-131.29
11,677.0	6.90	178.50	11,665.0	250.3	139.2	-176.0	13.85	11.61	-91.61
11,708.0	11.00	170.40	11,695.6	245.5	139.8	-171.3	13.80	13.23	-26.13
11,739.0	14.90	169.10	11,725.8	238.6	141.0	-164.6	12.61	12.58	-4.19
11,770.0	18.50	170.30	11,755.5	229.9	142.6	-155.9	11.67	11.61	3.87
11,801.0	21.70	170.90	11,784.6	219.4	144.3	-145.5	10.34	10.32	1.94
11,832.0	24.10	170.50	11,813.2	207.5	146.3	-133.8	7.76	7.74	-1.29
11,863.0	26.40	171.00	11,841.2	194.4	148.4	-121.0	7.45	7.42	1.61
11,894.0	29.40	171.90	11,868.6	180.1	150.5	-106.9	9.77	9.68	2.90
11,925.0	31.70	171.30	11,895.3	164.5	152.9	-91.7	7.48	7.42	-1.94
11,956.0	34.20	170.90	11,921.3	147.8	155.5	-75.3	8.09	8.06	-1.29
11,988.0	37.10	169.40	11,947.3	129.5	158.7	-57.2	9.46	9.06	-4.69
12,019.0	40.20	168.70	11,971.5	110.5	162.3	-38.2	10.10	10.00	-2.26
12,049.0	43.20	169.20	11,993.9	90.9	166.2	-18.7	10.06	10.00	1.67
12,080.0	46.30	170.50	12,015.9	69.4	170.0	2.6	10.43	10.00	4.19
12,111.0	49.00	171.20	12,036.8	46.8	173.6	24.8	8.87	8.71	2.26
12,165.0	52.60	169.80	12,070.9	5.5	180.6	65.5	6.96	6.67	-2.59
12,196.0	53.10	172.00	12,089.7	-18.9	184.5	89.5	5.88	1.61	7.10
12,227.0	54.00	171.40	12,108.1	-43.6	188.1	113.6	3.29	2.90	-1.94

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Jennings 27 W1AP Fed Com #4H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Site:	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H	MD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Well:	Jennings 27 W1AP Fed Com #4H	North Reference:	Grid
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)
12,258.0	54.40	171.30	12,126.2	-68.4	191.9	137.9	1.32	1.29	-0.32
12,289.0	55.00	170.40	12,144.1	-93.4	195.9	162.5	3.06	1.94	-2.90
12,293.1	55.16	170.29	12,146.5	-96.7	196.4	165.7	4.57	3.99	-2.70
LP Jennings 27 W1AP Fed Com #4H									
12,319.0	56.20	169.60	12,161.1	-117.8	200.2	186.6	4.57	4.00	-2.66
12,350.0	59.60	168.90	12,177.6	-143.6	205.1	212.3	11.13	10.97	-2.26
12,381.0	67.90	170.30	12,191.3	-170.9	210.1	239.4	27.08	26.77	4.52
12,409.0	76.40	171.30	12,199.8	-197.2	214.3	265.3	30.55	30.36	3.57
12,474.0	86.90	173.70	12,209.3	-260.8	222.7	327.1	16.56	16.15	3.69
12,567.0	90.40	177.00	12,211.4	-353.5	230.2	415.3	5.17	3.76	3.55
12,660.0	87.50	177.80	12,213.2	-446.4	234.4	502.5	3.23	-3.12	0.86
12,753.0	88.80	179.30	12,216.2	-539.3	236.8	588.9	2.13	1.40	1.61
12,846.0	88.80	180.10	12,218.1	-632.3	237.3	674.7	0.86	0.00	0.86
12,939.0	89.20	182.70	12,219.7	-725.2	235.0	759.4	2.83	0.43	2.80
13,032.0	88.40	182.50	12,221.7	-818.1	230.8	843.2	0.89	-0.86	-0.22
13,125.0	87.40	182.00	12,225.1	-911.0	227.1	927.3	1.20	-1.08	-0.54
13,218.0	89.30	182.00	12,227.8	-1,003.9	223.9	1,011.5	2.04	2.04	0.00
13,311.0	89.30	182.10	12,228.9	-1,096.8	220.6	1,095.8	0.11	0.00	0.11
13,404.0	89.90	181.40	12,229.5	-1,189.7	217.7	1,180.2	0.99	0.65	-0.75
13,498.0	89.20	180.40	12,230.3	-1,283.7	216.3	1,266.2	1.30	-0.74	-1.06
13,591.0	87.20	179.90	12,233.2	-1,376.7	216.0	1,351.6	2.22	-2.15	-0.54
13,684.0	86.00	180.20	12,238.7	-1,469.5	215.9	1,437.0	1.33	-1.29	0.32
13,778.0	88.40	179.50	12,243.3	-1,563.4	216.2	1,523.6	2.66	2.55	-0.74
13,871.0	88.70	180.00	12,245.7	-1,656.4	216.6	1,609.3	0.63	0.32	0.54
13,964.0	86.10	177.90	12,249.9	-1,749.2	218.3	1,695.4	3.59	-2.80	-2.26
14,057.0	85.80	179.20	12,256.5	-1,842.0	220.6	1,781.7	1.43	-0.32	1.40
14,150.0	87.90	178.50	12,261.6	-1,934.8	222.5	1,867.9	2.38	2.26	-0.75
14,243.0	88.10	178.00	12,264.8	-2,027.7	225.3	1,954.5	0.58	0.22	-0.54
14,337.0	87.80	177.80	12,268.2	-2,121.6	228.8	2,042.3	0.38	-0.32	-0.21
14,430.0	91.30	179.10	12,268.9	-2,214.5	231.3	2,128.8	4.01	3.76	1.40
14,522.0	93.50	179.30	12,265.0	-2,306.4	232.6	2,213.9	2.40	2.39	0.22
14,615.0	88.40	177.50	12,263.5	-2,399.4	235.2	2,300.5	5.82	-5.48	-1.94
14,707.0	88.80	179.90	12,265.8	-2,491.3	237.3	2,385.9	2.64	0.43	2.61
14,800.0	88.50	180.20	12,267.9	-2,584.3	237.2	2,471.5	0.46	-0.32	0.32
14,895.0	88.50	181.30	12,270.4	-2,679.2	235.9	2,558.4	1.16	0.00	1.16
14,988.0	88.90	181.00	12,272.5	-2,772.2	234.1	2,643.2	0.54	0.43	-0.32
15,081.0	87.80	180.30	12,275.2	-2,865.1	233.0	2,728.4	1.40	-1.18	-0.75
15,174.0	89.10	181.40	12,277.7	-2,958.1	231.6	2,813.4	1.83	1.40	1.18
15,267.0	87.70	181.70	12,280.3	-3,051.0	229.1	2,897.9	1.54	-1.51	0.32
15,359.0	86.90	179.50	12,284.7	-3,142.9	228.2	2,982.1	2.54	-0.87	-2.39
15,452.0	86.80	180.30	12,289.8	-3,235.8	228.3	3,067.7	0.87	-0.11	0.86
15,545.0	87.60	181.90	12,294.3	-3,328.6	226.5	3,152.5	1.92	0.86	1.72
15,638.0	88.60	184.70	12,297.4	-3,421.4	221.2	3,235.8	3.20	1.08	3.01

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Jennings 27 W1AP Fed Com #4H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Site:	Section 27-25S-32E Jennings 27 W1AP Fed Com 4H	MD Reference:	3397 + 27 @ 3424.0usft (Patterson 242)
Well:	Jennings 27 W1AP Fed Com #4H	North Reference:	Grid
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)
15,731.0	89.70	182.50	12,298.8	-3,514.2	215.3	3,318.9	2.64	1.18	-2.37
15,824.0	88.10	177.70	12,300.6	-3,607.2	215.2	3,404.4	5.44	-1.72	-5.16
15,917.0	85.90	176.60	12,305.4	-3,699.9	219.8	3,491.6	2.64	-2.37	-1.18
16,009.0	90.10	178.50	12,308.6	-3,791.7	223.7	3,577.7	5.01	4.57	2.07
16,101.0	87.80	178.10	12,310.3	-3,883.7	226.5	3,663.4	2.54	-2.50	-0.43
16,194.0	89.70	177.80	12,312.4	-3,976.6	229.8	3,750.2	2.07	2.04	-0.32
16,287.0	90.90	177.70	12,311.9	-4,069.5	233.4	3,837.1	1.29	1.29	-0.11
16,380.0	87.70	175.40	12,313.0	-4,162.3	239.0	3,924.8	4.24	-3.44	-2.47
16,473.0	94.90	179.20	12,310.9	-4,255.1	243.4	4,011.9	8.75	7.74	4.09
16,565.0	91.90	177.60	12,305.4	-4,346.9	246.0	4,097.4	3.69	-3.26	-1.74
16,658.0	84.20	175.50	12,308.6	-4,439.6	251.6	4,184.9	8.58	-8.28	-2.26
16,751.0	84.50	176.30	12,317.8	-4,531.9	258.2	4,272.4	0.91	0.32	0.86
16,826.0	85.00	177.80	12,324.6	-4,606.5	262.0	4,342.6	2.10	0.67	2.00
16,880.0	85.00	177.80	12,329.3	-4,660.3	264.1	4,392.9	0.00	0.00	0.00

16880.0' MD Projected to Bit - PBHL Jennings 27 W1AP Fed Com #4H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
822.0	822.0	-3.2	1.4	822.0' MD Phoenix Gyro
16,880.0	12,329.3	-4,660.3	264.1	16880.0' MD Projected to Bit



June 7, 2018

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Eric Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of April 15, 2018, through May 5, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 923 feet to a depth of 16,826 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Jennings 27 W1AP Federal Com #4H well, API # **30-05-43354** in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

Eric Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

P.O. Box 1250

Montgomery, TX 77356

Office (936) 582-7296 * Fax (936)-588-4163



June 7, 2018

New Mexico Energy, Minerals and Natural Resources Department
Attn: Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Jackie Lathan

Re: Mewbourne Oil Company
Jennings 27 W1AP Federal Com #4H
Wolfcamp A Shale (W1)
Lea County, New Mexico
API# 30-025-43354

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Jason Deen	Original Hole	923ft. to 16,826ft.	04-15-18 to 05-05-18	MWD Survey

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Eric Estes

Enclosures

CC:

Mewbourne Oil Company
Attn: Frosty Lathan
P.O. Box 5720
Hobbs, NM 88241

Mewbourne Oil Company
Attn: Robin Terrell
P.O. Box 5720
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Company\Jennings 27 W1AP Federal Com #4HM181046

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Com
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Lea County N. M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Section 27-25S-32E Jennings 27 W1AP Fed Com 4H

Site Position:		Northing:	403,671.00 usft	Latitude:	32° 6' 28.700 N
From:	Map	Easting:	750,327.60 usft	Longitude:	103° 39' 30.098 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °

Well Jennings 27 W1AP Fed Com #4H

Well Position	+N/-S	0.0 usft	Northing:	403,671.00 usft	Latitude:	32° 6' 28.700 N
	+E/-W	0.0 usft	Easting:	750,327.60 usft	Longitude:	103° 39' 30.098 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	3,397.0 usft

Wellbore Original hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/29/2018	6.90	59.93	47,780.00771316

Design Original hole

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	157.00	

Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey Program Date 5/7/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	822.0	Phoenix Gyro Survey (Original hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
923.0	16,880.0	MWD Survey (Original hole)	MWD	MWD v3:standard declination

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
822.0	0.61	185.67	822.0	-3.2	1.4	3.5	157.00	Tie-In
923.0	1.50	217.80	923.0	-4.8	0.5	4.8	174.11	
1,113.0	1.90	220.90	1,112.9	-9.1	-3.1	9.6	198.75	
1,303.0	2.00	222.50	1,302.8	-13.9	-7.4	15.8	207.95	
1,430.0	2.10	226.50	1,429.7	-17.2	-10.6	20.2	211.63	
1,617.0	0.10	321.50	1,616.6	-19.4	-13.2	23.5	214.16	
1,803.0	0.20	258.00	1,802.6	-19.4	-13.6	23.6	215.08	
1,990.0	1.30	19.10	1,989.6	-17.4	-13.2	21.9	217.19	
2,176.0	1.10	15.90	2,175.6	-13.7	-12.0	18.2	221.29	
2,361.0	1.20	0.40	2,360.5	-10.1	-11.5	15.3	228.91	
2,548.0	1.40	27.80	2,547.5	-6.1	-10.5	12.1	239.82	
2,734.0	1.10	24.50	2,733.5	-2.4	-8.7	9.0	254.23	
2,920.0	1.10	21.20	2,919.4	0.8	-7.3	7.3	276.63	
3,107.0	1.10	22.70	3,106.4	4.2	-5.9	7.2	305.16	
3,294.0	1.70	44.20	3,293.3	7.8	-3.3	8.5	337.12	
3,480.0	2.50	48.40	3,479.2	12.5	1.7	12.6	7.56	
3,667.0	2.30	66.90	3,666.0	16.7	8.2	18.6	26.08	
3,853.0	2.00	88.80	3,851.9	18.2	14.8	23.5	39.18	
4,039.0	2.70	128.10	4,037.8	15.6	21.5	26.6	54.13	
4,226.0	3.30	138.70	4,224.5	8.8	28.5	29.9	72.86	
4,412.0	4.70	141.50	4,410.1	-1.2	36.8	36.8	91.84	



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con.
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
4,541.0	5.00	143.20	4,538.6	-9.8	43.5	44.6	102.72
4,603.0	5.20	145.20	4,600.3	-14.3	46.7	48.8	107.01
4,790.0	3.10	54.20	4,787.0	-18.3	55.7	58.6	108.20
4,977.0	3.90	38.40	4,973.7	-10.4	63.7	64.5	99.23
5,163.0	3.60	37.40	5,159.3	-0.8	71.2	71.2	90.61
5,350.0	4.20	13.80	5,345.8	10.6	76.4	77.1	82.13
5,536.0	4.00	8.60	5,531.4	23.6	79.0	82.4	73.37
5,722.0	3.60	5.60	5,717.0	35.8	80.5	88.1	66.02
5,909.0	2.50	8.80	5,903.7	45.7	81.7	93.6	60.79
6,095.0	2.50	5.60	6,089.5	53.7	82.7	98.6	56.99
6,282.0	2.40	8.90	6,276.3	61.7	83.7	104.0	53.63
6,469.0	3.20	24.30	6,463.1	70.3	86.5	111.4	50.90
6,655.0	2.60	22.30	6,648.9	78.9	90.2	119.9	48.82
6,841.0	3.60	33.40	6,834.6	87.7	95.0	129.3	47.30
7,026.0	3.00	25.30	7,019.3	96.9	100.3	139.5	45.98
7,213.0	2.30	19.50	7,206.1	104.9	103.6	147.5	44.66
7,400.0	2.90	33.20	7,392.9	112.4	107.5	155.5	43.72
7,586.0	2.60	48.60	7,578.7	119.1	113.2	164.3	43.55
7,772.0	4.00	38.20	7,764.4	127.0	120.4	175.0	43.47
7,958.0	2.90	37.90	7,950.0	135.8	127.3	186.2	43.15
8,051.0	2.60	37.50	8,042.9	139.3	130.0	190.6	43.02
8,145.0	3.90	37.80	8,136.8	143.6	133.3	195.9	42.88
8,331.0	2.80	31.30	8,322.5	152.4	139.5	206.7	42.47
8,517.0	3.60	28.30	8,508.2	161.5	144.7	216.8	41.86
8,704.0	3.50	28.20	8,694.8	171.7	150.1	228.1	41.17
8,891.0	3.10	22.20	8,881.5	181.4	154.8	238.4	40.47
9,078.0	2.20	21.70	9,068.3	189.4	158.0	246.6	39.83



Microsoft MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
9,264.0	1.80	24.70	9,254.2	195.4	160.5	252.9	39.41
9,450.0	2.40	32.90	9,440.1	201.3	163.9	259.6	39.15
9,636.0	1.90	38.20	9,625.9	207.0	167.9	266.5	39.05
9,822.0	2.80	49.30	9,811.8	212.4	173.2	274.1	39.21
10,008.0	2.10	7.80	9,997.6	218.7	177.1	281.4	39.01
10,195.0	3.60	357.40	10,184.4	228.0	177.3	288.8	37.88
10,382.0	2.90	348.30	10,371.1	238.5	176.1	296.4	36.45
10,568.0	3.20	335.40	10,556.8	247.8	173.0	302.2	34.92
10,755.0	1.20	272.90	10,743.7	252.6	168.9	303.9	33.76
10,941.0	1.60	254.10	10,929.6	252.0	164.4	300.9	33.12
11,127.0	1.90	269.60	11,115.5	251.3	158.9	297.3	32.30
11,314.0	2.00	294.10	11,302.4	252.6	152.8	295.2	31.17
11,501.0	2.50	280.50	11,489.3	254.7	145.8	293.4	29.79
11,508.5	2.50	277.98	11,496.8	254.7	145.5	293.3	29.73
B.B. Jennings 27 W1AP Fed Com #4H							
11,586.0	2.80	254.10	11,574.2	254.4	142.0	291.4	29.16
11,615.0	2.70	247.60	11,603.2	254.0	140.7	290.3	28.98
11,646.0	3.30	206.90	11,634.1	252.9	139.6	288.9	28.89
11,677.0	6.90	178.50	11,665.0	250.3	139.2	286.4	29.09
11,708.0	11.00	170.40	11,695.6	245.5	139.8	282.5	29.65
11,739.0	14.90	169.10	11,725.8	238.6	141.0	277.2	30.58
11,770.0	18.50	170.30	11,755.5	229.9	142.6	270.5	31.81
11,801.0	21.70	170.90	11,784.6	219.4	144.3	262.6	33.34
11,832.0	24.10	170.50	11,813.2	207.5	146.3	253.8	35.19
11,863.0	26.40	171.00	11,841.2	194.4	148.4	244.6	37.35
11,894.0	29.40	171.90	11,868.6	180.1	150.5	234.7	39.90
11,925.0	31.70	171.30	11,895.3	164.5	152.9	224.5	42.90



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con.
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
11,956.0	34.20	170.90	11,921.3	147.8	155.5	214.5	46.44
11,988.0	37.10	169.40	11,947.3	129.5	158.7	204.8	50.79
12,019.0	40.20	168.70	11,971.5	110.5	162.3	196.4	55.77
12,049.0	43.20	169.20	11,993.9	90.9	166.2	189.4	61.33
12,080.0	46.30	170.50	12,015.9	69.4	170.0	183.6	67.80
12,111.0	49.00	171.20	12,036.8	46.8	173.6	179.8	74.93
12,165.0	52.60	169.80	12,070.9	5.5	180.6	180.6	88.25
12,196.0	53.10	172.00	12,089.7	-18.9	184.5	185.4	95.85
12,227.0	54.00	171.40	12,108.1	-43.6	188.1	193.0	103.04
12,258.0	54.40	171.30	12,126.2	-68.4	191.9	203.7	109.63
12,289.0	55.00	170.40	12,144.1	-93.4	195.9	217.0	115.49
12,293.1	55.16	170.29	12,146.5	-96.7	196.4	218.9	116.20
LP Jennings 27 W1AP Fed Com #4H							
12,319.0	56.20	169.60	12,161.1	-117.8	200.2	232.2	120.47
12,350.0	59.60	168.90	12,177.6	-143.6	205.1	250.3	124.99
12,381.0	67.90	170.30	12,191.3	-170.9	210.1	270.8	129.13
12,409.0	76.40	171.30	12,199.8	-197.2	214.3	291.2	132.61
12,474.0	86.90	173.70	12,209.3	-260.8	222.7	343.0	139.51
12,567.0	90.40	177.00	12,211.4	-353.5	230.2	421.8	146.92
12,660.0	87.50	177.80	12,213.2	-446.4	234.4	504.2	152.29
12,753.0	88.80	179.30	12,216.2	-539.3	236.8	589.0	156.29
12,846.0	88.80	180.10	12,218.1	-632.3	237.3	675.3	159.43
12,939.0	89.20	182.70	12,219.7	-725.2	235.0	762.3	162.04
13,032.0	88.40	182.50	12,221.7	-818.1	230.8	850.0	164.25
13,125.0	87.40	182.00	12,225.1	-911.0	227.1	938.8	166.00
13,218.0	89.30	182.00	12,227.8	-1,003.9	223.9	1,028.5	167.43
13,311.0	89.30	182.10	12,228.9	-1,096.8	220.6	1,118.8	168.63



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,404.0	89.90	181.40	12,229.5	-1,189.7	217.7	1,209.5	169.63
13,498.0	89.20	180.40	12,230.3	-1,283.7	216.3	1,301.8	170.44
13,591.0	87.20	179.90	12,233.2	-1,376.7	216.0	1,393.5	171.08
13,684.0	86.00	180.20	12,238.7	-1,469.5	215.9	1,485.3	171.64
13,778.0	88.40	179.50	12,243.3	-1,563.4	216.2	1,578.3	172.13
13,871.0	88.70	180.00	12,245.7	-1,656.4	216.6	1,670.5	172.55
13,964.0	86.10	177.90	12,249.9	-1,749.2	218.3	1,762.8	172.89
14,057.0	85.80	179.20	12,256.5	-1,842.0	220.6	1,855.1	173.17
14,150.0	87.90	178.50	12,261.6	-1,934.8	222.5	1,947.6	173.44
14,243.0	88.10	178.00	12,264.8	-2,027.7	225.3	2,040.2	173.66
14,337.0	87.80	177.80	12,268.2	-2,121.6	228.8	2,133.9	173.85
14,430.0	91.30	179.10	12,268.9	-2,214.5	231.3	2,226.6	174.04
14,522.0	93.50	179.30	12,265.0	-2,306.4	232.6	2,318.1	174.24
14,615.0	88.40	177.50	12,263.5	-2,399.4	235.2	2,410.8	174.40
14,707.0	88.80	179.90	12,265.8	-2,491.3	237.3	2,502.6	174.56
14,800.0	88.50	180.20	12,267.9	-2,584.3	237.2	2,595.1	174.76
14,895.0	88.50	181.30	12,270.4	-2,679.2	235.9	2,689.6	174.97
14,988.0	88.90	181.00	12,272.5	-2,772.2	234.1	2,782.0	175.17
15,081.0	87.80	180.30	12,275.2	-2,865.1	233.0	2,874.6	175.35
15,174.0	89.10	181.40	12,277.7	-2,958.1	231.6	2,967.1	175.52
15,267.0	87.70	181.70	12,280.3	-3,051.0	229.1	3,059.6	175.71
15,359.0	86.90	179.50	12,284.7	-3,142.9	228.2	3,151.2	175.85
15,452.0	86.80	180.30	12,289.8	-3,235.8	228.3	3,243.8	175.96
15,545.0	87.60	181.90	12,294.3	-3,328.6	226.5	3,336.3	176.11
15,638.0	88.60	184.70	12,297.4	-3,421.4	221.2	3,428.6	176.30
15,731.0	89.70	182.50	12,298.8	-3,514.2	215.3	3,520.8	176.49
15,824.0	88.10	177.70	12,300.6	-3,607.2	215.2	3,613.6	176.59



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 27-25S-32E Jennings 27 W1AP Fed Con
Well: Jennings 27 W1AP Fed Com #4H
Wellbore: Original hole
Design: Original hole

Local Co-ordinate Reference: Well Jennings 27 W1AP Fed Com #4H
TVD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
MD Reference: 3397 + 27 @ 3424.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
15,917.0	85.90	176.60	12,305.4	-3,699.9	219.8	3,706.4	176.60
16,009.0	90.10	178.50	12,308.6	-3,791.7	223.7	3,798.3	176.62
16,101.0	87.80	178.10	12,310.3	-3,883.7	226.5	3,890.3	176.66
16,194.0	89.70	177.80	12,312.4	-3,976.6	229.8	3,983.2	176.69
16,287.0	90.90	177.70	12,311.9	-4,069.5	233.4	4,076.2	176.72
16,380.0	87.70	175.40	12,313.0	-4,162.3	239.0	4,169.2	176.71
16,473.0	94.90	179.20	12,310.9	-4,255.1	243.4	4,262.1	176.73
16,565.0	91.90	177.60	12,305.4	-4,346.9	246.0	4,353.9	176.76
16,658.0	84.20	175.50	12,308.6	-4,439.6	251.6	4,446.7	176.76
16,751.0	84.50	176.30	12,317.8	-4,531.9	258.2	4,539.3	176.74
16,826.0	85.00	177.80	12,324.6	-4,606.5	262.0	4,614.0	176.74
16,880.0	85.00	177.80	12,329.3	-4,660.3	264.1	4,667.7	176.76

16880.0' MD Projected to Bit - PBHL Jennings 27 W1AP Fed Com #4H

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
16,880.0	12,329.3	-4,660.3	264.1	16880.0' MD Projected to Bit