



January 31, 2018

**NM OIL CONSERVATION
ARTESIA DISTRICT**

MAR 28 2018

RECEIVED

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

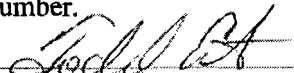
Attn: Jackie Lathan

**Re: Mewbourne Oil Company
Annabelle 18 13 W2P0 Federal Com #001H
Purple Sage; Wolfcamp (Gas)
Eddy County, New Mexico
API# 30-015-44532**

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>
Jimmy Walker	Original Hole	610ft. to 16,581ft.	12-21-17 to 01-10-18	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.


Todd 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\Annabelle 18 13 W2P0 Federal Com #1HWM171129

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



January 31, 2018

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of December 21, 2017, through January 10, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 610 feet to a depth of 16,581 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 Annabelle 18 13 W2P0 Federal Com #001H well, API # 30-015-44532 in Eddy 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.


Todd Estes

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Mewbourne Oil Company

Eddy County, N.M. Nad (83)

Section 18-13-24S-26-27E Annabelle 18-13 W2PO Fed

Annabelle 18-13 W2PO Fed Com 1H

Original Hole

Design: Original Hole

Standard Survey Report

10 January, 2018





Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section18-13-24S-26-27E Annabelle 18-13 W2PO Fed
Well: Annabelle 18-13 W2PO Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Annabelle 18-13 W2PO Fed Com 1H
TVD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
MD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Eddy 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 Section18-13-24S-26-27E Annabelle 18-13 W2PO Fed

Site Position: **Northing:** 440,131.50 usft **Latitude:** 32° 12' 35.818 N
From: Map **Easting:** 575,714.20 usft **Longitude:** 104° 13' 19.857 W
Position Uncertainty: 0.0 usft **Slot Radius:** 13-3/16 " **Grid Convergence:** 0.06 °

Well Annabelle 18-13 W2PO Fed Com 1H

Well Position **+N/-S** 0.0 usft **Northing:** 440,131.50 usft **Latitude:** 32° 12' 35.818 N
+E/-W 0.0 usft **Easting:** 575,714.20 usft **Longitude:** 104° 13' 19.857 W
Position Uncertainty 0.0 usft **Wellhead Elevation:** 27.0 usft **Ground Level:** 3,241.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/29/2017	7.20	59.94	47,814.67538607

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	328.43

Survey Program Date 1/10/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	468.0	Phoenix Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
610.0	16,650.0	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	0.54	308.96	100.0	0.3	-0.4	0.4	0.54	0.54	0.00
200.0	0.63	284.56	200.0	0.7	-1.3	1.3	0.26	0.09	-24.40
300.0	0.09	323.74	300.0	0.9	-1.8	1.8	0.56	-0.54	39.18
400.0	0.98	13.28	400.0	1.8	-1.7	2.4	0.92	0.89	49.54
468.0	0.57	341.35	468.0	2.7	-1.7	3.2	0.85	-0.60	-46.96
268' MD Phoenix Gyro									
610.0	0.60	69.50	610.0	3.6	-1.2	3.7	0.57	0.02	62.08
671.0	0.60	74.10	671.0	3.8	-0.6	3.6	0.08	0.00	7.54



Microsoft Survey Report



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Wellbore: Original Hole
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
733.0	0.70	57.00	733.0	4.1	0.0	3.5	0.35	0.16	-27.58
797.0	0.60	69.60	797.0	4.5	0.7	3.5	0.27	-0.16	19.69
860.0	0.50	81.10	860.0	4.6	1.3	3.3	0.24	-0.16	18.25
924.0	0.50	85.40	924.0	4.8	1.8	3.1	0.21	0.00	-24.53
987.0	0.40	61.10	987.0	5.0	2.2	3.1	0.17	-0.16	-6.83
1,050.0	0.50	29.90	1,050.0	5.4	2.6	3.2	0.41	0.16	-49.52
1,114.0	0.40	12.50	1,114.0	5.8	2.8	3.5	0.26	-0.16	-27.19
1,177.0	0.70	5.20	1,176.9	6.4	2.8	4.0	0.49	0.48	-11.59
1,241.0	0.80	359.80	1,240.9	7.2	2.9	4.7	0.19	0.16	-8.44
1,304.0	0.90	7.00	1,303.9	8.2	2.9	5.4	0.23	0.16	11.43
1,368.0	0.10	358.60	1,367.9	8.7	3.0	5.9	1.25	-1.25	-13.13
1,431.0	0.70	155.90	1,430.9	8.4	3.1	5.5	1.26	0.95	249.68
1,495.0	1.20	137.00	1,494.9	7.6	3.8	4.5	0.91	0.78	-29.53
1,558.0	0.10	177.80	1,557.9	7.0	4.2	3.8	1.79	-1.75	64.76
1,621.0	1.30	310.50	1,620.9	7.5	3.7	4.4	2.17	1.90	210.63
1,653.0	1.80	310.20	1,652.9	8.0	3.0	5.3	1.56	1.56	-0.94
1,717.0	1.40	299.50	1,716.9	9.1	1.6	6.9	0.78	-0.63	-16.72
1,780.0	0.70	247.30	1,779.9	9.3	0.5	7.6	1.77	-1.11	-82.86
1,812.0	0.60	227.80	1,811.9	9.1	0.2	7.6	0.75	-0.31	-60.94
1,909.0	0.60	212.20	1,908.9	8.3	-0.4	7.3	0.17	0.00	-16.08
1,980.0	0.70	214.90	1,979.9	7.7	-0.9	7.0	0.15	0.14	3.80
2,029.0	0.80	192.10	2,028.9	7.1	-1.1	6.6	0.64	0.20	-46.53
2,124.0	0.60	175.00	2,123.8	5.9	-1.2	5.7	0.30	-0.21	-18.00
2,220.0	1.10	348.60	2,219.8	6.3	-1.3	6.1	1.77	0.52	180.83
2,315.0	2.30	2.70	2,314.8	9.1	-1.4	8.5	1.33	1.26	14.84
2,410.0	2.50	4.20	2,409.7	13.1	-1.2	11.8	0.22	0.21	1.58
2,505.0	2.30	359.40	2,504.6	17.1	-1.1	15.1	0.30	-0.21	-5.05
2,600.0	3.30	3.20	2,599.5	21.7	-0.9	19.0	1.07	1.05	4.00
2,695.0	3.00	355.80	2,694.4	26.9	-1.0	23.4	0.53	-0.32	-7.79
2,790.0	2.80	353.70	2,789.3	31.7	-1.4	27.7	0.24	-0.21	-2.21
2,885.0	2.50	348.00	2,884.1	36.0	-2.1	31.8	0.42	-0.32	-6.00
2,981.0	2.30	341.80	2,980.1	39.9	-3.1	35.6	0.34	-0.21	-6.46
3,076.0	3.00	350.10	3,075.0	44.2	-4.1	39.8	0.84	0.74	8.74
3,171.0	2.80	348.20	3,169.8	48.9	-5.0	44.3	0.23	-0.21	-2.00
3,266.0	3.10	0.80	3,264.7	53.7	-5.5	48.6	0.75	0.32	13.26
3,361.0	2.70	351.80	3,359.6	58.5	-5.8	52.9	0.64	-0.42	-9.47
3,457.0	2.60	343.70	3,455.5	62.8	-6.7	57.0	0.40	-0.10	-8.44
3,552.0	3.00	353.70	3,550.4	67.4	-7.6	61.4	0.66	0.42	10.53
3,647.0	3.70	11.70	3,645.2	72.9	-7.2	65.9	1.32	0.74	18.95
3,742.0	3.30	12.60	3,740.0	78.5	-6.0	70.0	0.42	-0.42	0.95
3,837.0	2.90	13.90	3,834.9	83.5	-4.8	73.7	0.43	-0.42	1.37
3,932.0	1.90	357.60	3,929.8	87.4	-4.3	76.8	1.26	-1.05	-17.16



Microsoft Survey Report



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4,027.0	2.20	342.30	4,024.8	90.7	-4.9	79.9	0.65	0.32	-16.11
4,122.0	2.40	353.40	4,119.7	94.5	-5.7	83.5	0.51	0.21	11.68
4,217.0	2.70	1.30	4,214.6	98.7	-5.9	87.2	0.49	0.32	8.32
4,312.0	4.00	6.60	4,309.4	104.2	-5.5	91.6	1.41	1.37	5.58
4,408.0	3.30	9.20	4,405.2	110.3	-4.6	96.4	0.75	-0.73	2.71
4,503.0	3.00	13.70	4,500.1	115.4	-3.6	100.2	0.41	-0.32	4.74
4,597.0	3.10	17.00	4,594.0	120.2	-2.3	103.6	0.21	0.11	3.51
4,692.0	2.60	14.80	4,688.8	124.7	-1.0	106.8	0.54	-0.53	-2.32
4,787.0	3.50	8.60	4,783.7	129.7	0.0	110.5	1.01	0.95	-6.53
4,883.0	2.80	10.00	4,879.6	134.9	0.8	114.5	0.73	-0.73	1.46
4,978.0	2.30	15.10	4,974.5	139.0	1.7	117.5	0.58	-0.53	5.37
5,074.0	2.90	7.80	5,070.4	143.3	2.6	120.7	0.71	0.63	-7.60
5,169.0	2.40	1.30	5,165.3	147.6	2.9	124.3	0.61	-0.53	-6.84
5,264.0	1.90	357.90	5,260.2	151.2	2.9	127.3	0.54	-0.53	-3.58
5,360.0	2.70	4.40	5,356.1	155.1	3.0	130.5	0.88	0.83	6.77
5,454.0	2.50	5.00	5,450.0	159.3	3.4	133.9	0.21	-0.21	0.64
5,549.0	2.00	347.70	5,544.9	163.0	3.2	137.2	0.88	-0.53	-18.21
5,644.0	4.00	350.20	5,639.8	167.9	2.3	141.8	2.11	2.11	2.63
5,739.0	3.60	355.20	5,734.6	174.1	1.5	147.6	0.55	-0.42	5.26
5,834.0	2.10	21.10	5,829.5	178.7	1.9	151.3	2.04	-1.58	27.26
5,929.0	2.20	1.00	5,924.4	182.2	2.5	153.9	0.80	0.11	-21.16
6,024.0	3.30	0.20	6,019.3	186.7	2.6	157.7	1.16	1.16	-0.84
6,120.0	2.90	3.50	6,115.2	191.9	2.7	162.1	0.46	-0.42	3.44
6,215.0	3.80	10.00	6,210.0	197.4	3.4	166.4	1.03	0.95	6.84
6,311.0	2.90	11.90	6,305.8	202.9	4.5	170.5	0.94	-0.94	1.98
6,407.0	0.40	345.30	6,401.8	205.6	4.9	172.6	2.65	-2.60	-27.71
6,501.0	2.10	15.20	6,495.8	207.6	5.3	174.1	1.88	1.81	31.81
6,597.0	3.30	7.40	6,591.7	212.0	6.1	177.5	1.30	1.25	-8.13
6,692.0	4.10	0.30	6,686.5	218.1	6.4	182.5	0.97	0.84	-7.47
6,787.0	3.20	358.60	6,781.3	224.2	6.4	187.6	0.95	-0.95	-1.79
6,883.0	3.80	358.30	6,877.1	230.0	6.2	192.7	0.63	0.63	-0.31
6,978.0	2.10	352.90	6,972.0	234.9	5.9	197.0	1.81	-1.79	-5.68
7,074.0	2.40	338.50	7,067.9	238.5	5.0	200.6	0.66	0.31	-15.00
7,169.0	3.60	339.90	7,162.8	243.2	3.2	205.5	1.27	1.26	1.47
7,264.0	3.10	333.50	7,257.6	248.3	1.0	211.0	0.66	-0.53	-6.74
7,360.0	2.30	326.70	7,353.5	252.2	-1.2	215.5	0.90	-0.83	-7.08
7,455.0	2.80	335.00	7,448.4	255.9	-3.2	219.7	0.65	0.53	8.74
7,551.0	3.30	336.00	7,544.3	260.6	-5.3	224.8	0.52	0.52	1.04
7,645.0	2.30	336.90	7,638.1	264.8	-7.1	229.3	1.06	-1.06	0.96
7,740.0	2.30	358.00	7,733.1	268.4	-8.0	232.9	0.89	0.00	22.21
7,835.0	2.90	356.10	7,828.0	272.7	-8.2	236.6	0.64	0.63	-2.00
7,930.0	3.50	10.70	7,922.8	278.0	-7.8	240.9	1.06	0.63	15.37
8,025.0	1.40	52.00	8,017.7	281.5	-6.4	243.2	2.75	-2.21	43.47



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8,120.0	1.90	14.00	8,112.7	283.8	-5.1	244.4	1.24	0.53	-40.00
8,216.0	2.70	16.00	8,208.6	287.5	-4.1	247.1	0.84	0.83	2.08
8,311.0	1.60	23.30	8,303.6	290.9	-2.9	249.3	1.19	-1.16	7.68
8,406.0	1.40	16.10	8,398.5	293.2	-2.1	250.9	0.29	-0.21	-7.58
8,501.0	2.60	19.40	8,493.5	296.3	-1.0	253.0	1.27	1.26	3.47
8,597.0	2.20	28.20	8,589.4	300.0	0.6	255.3	0.57	-0.42	9.17
8,692.0	2.20	2.00	8,684.3	303.5	1.5	257.8	1.05	0.00	-27.58
8,788.0	3.70	347.70	8,780.2	308.3	0.9	262.2	1.73	1.56	-14.90
8,882.0	2.80	346.40	8,874.0	313.5	-0.3	267.3	0.96	-0.96	-1.38
8,978.0	1.60	0.00	8,970.0	317.1	-0.8	270.6	1.35	-1.25	14.17
9,008.6	1.47	0.34	9,000.5	318.0	-0.8	271.3	0.42	-0.42	1.12
B.B.									
9,073.0	1.20	1.30	9,064.9	319.5	-0.8	272.6	0.42	-0.42	1.49
9,105.0	1.10	354.30	9,096.9	320.1	-0.8	273.2	0.54	-0.31	-21.88
9,126.0	1.10	358.40	9,117.9	320.5	-0.9	273.5	0.37	0.00	19.52
9,158.0	1.20	314.10	9,149.9	321.0	-1.1	274.1	2.73	0.31	-138.44
9,190.0	4.40	284.30	9,181.9	321.6	-2.6	275.3	10.66	10.00	-93.13
9,222.0	8.70	283.60	9,213.7	322.5	-6.1	277.9	13.44	13.44	-2.19
9,253.0	13.20	287.30	9,244.1	324.1	-11.8	282.2	14.68	14.52	11.94
9,284.0	15.80	288.70	9,274.1	326.5	-19.1	288.2	8.46	8.39	4.52
9,315.0	17.30	285.00	9,303.8	329.0	-27.6	294.8	5.91	4.84	-11.94
9,347.0	19.70	280.80	9,334.2	331.3	-37.5	301.8	8.57	7.50	-13.13
9,379.0	22.60	277.60	9,364.0	333.1	-48.9	309.4	9.75	9.06	-10.00
9,411.0	25.50	275.50	9,393.2	334.5	-61.8	317.4	9.45	9.06	-6.56
9,443.0	29.00	272.10	9,421.7	335.5	-76.4	325.9	11.97	10.94	-10.63
9,474.0	33.00	270.50	9,448.2	335.8	-92.4	334.5	13.17	12.90	-5.16
9,506.0	38.40	269.30	9,474.5	335.8	-110.6	344.0	10.84	10.63	-3.75
9,538.0	39.00	268.60	9,499.8	335.4	-130.2	354.0	8.23	8.13	-2.19
9,570.0	41.60	269.30	9,524.3	335.1	-150.9	364.5	8.25	8.13	2.19
9,602.0	44.60	270.50	9,547.6	335.0	-172.7	375.9	9.72	9.38	3.75
9,633.0	48.60	272.70	9,568.9	335.7	-195.2	388.2	13.89	12.90	7.10
9,665.0	53.50	274.10	9,589.0	337.2	-220.1	402.5	15.69	15.31	4.38
9,697.0	57.40	274.90	9,607.2	339.2	-246.3	418.0	12.36	12.19	2.50
9,728.0	60.20	275.10	9,623.2	341.5	-272.8	433.8	9.05	9.03	0.65
9,760.0	62.00	275.10	9,638.7	344.0	-300.7	450.5	5.63	5.63	0.00
9,792.0	64.40	274.90	9,653.1	346.5	-329.1	467.5	7.52	7.50	-0.63
9,824.0	67.60	274.00	9,666.1	348.8	-358.3	484.7	10.32	10.00	-2.81
9,838.0	68.90	273.50	9,671.3	349.6	-371.2	492.3	9.86	9.29	-3.57
9,881.0	71.70	269.10	9,685.8	350.5	-411.7	514.2	11.63	6.51	-10.23
9,913.0	74.40	269.60	9,695.1	350.2	-442.3	529.9	8.57	8.44	1.56
9,945.0	77.40	269.90	9,702.9	350.1	-473.3	546.1	9.42	9.38	0.94
9,976.0	80.40	270.60	9,708.9	350.2	-503.7	562.1	9.93	9.68	2.26
10,008.0	82.50	271.60	9,713.7	350.8	-535.4	579.2	7.25	6.56	3.13



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section18-13-24S-26-27E Annabelle 18-13 W2PO Fed
Well: Annabelle 18-13 W2PO Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Annabelle 18-13 W2PO Fed Com 1H
TVD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
MD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
10,040.0	83.40	271.80	9,717.6	351.7	-567.1	596.6	2.88	2.81	0.63
10,072.0	84.20	271.60	9,721.0	352.7	-598.9	614.1	2.58	2.50	-0.63
10,103.0	85.30	271.50	9,723.9	353.5	-629.8	630.9	3.56	3.55	-0.32
10,133.8	86.68	271.85	9,726.0	354.4	-660.5	647.8	4.62	4.48	1.15
LP Annabelle 18-13 W2PO Fed Com 1H									
10,199.0	89.60	272.60	9,728.2	357.0	-725.6	684.0	4.62	4.48	1.14
10,294.0	89.80	272.70	9,728.7	361.4	-820.5	737.5	0.24	0.21	0.11
10,390.0	89.20	273.90	9,729.5	366.9	-916.3	792.3	1.40	-0.63	1.25
10,485.0	91.50	272.10	9,728.9	371.8	-1,011.2	846.2	3.07	2.42	-1.89
10,580.0	92.30	269.80	9,725.8	373.4	-1,106.1	897.3	2.56	0.84	-2.42
10,675.0	92.70	269.90	9,721.6	373.2	-1,201.0	946.8	0.43	0.42	0.11
10,769.0	89.70	267.70	9,719.6	371.2	-1,295.0	994.3	3.96	-3.19	-2.34
10,864.0	92.00	270.00	9,718.2	369.3	-1,389.9	1,042.4	3.42	2.42	2.42
10,960.0	89.10	269.20	9,717.3	368.6	-1,485.9	1,092.0	3.13	-3.02	-0.83
11,056.0	89.80	270.40	9,718.2	368.3	-1,581.9	1,142.0	1.45	0.73	1.25
11,151.0	88.20	269.40	9,719.9	368.1	-1,676.9	1,191.6	1.99	-1.68	-1.05
11,246.0	89.70	269.80	9,721.6	367.5	-1,771.9	1,240.8	1.63	1.58	0.42
11,341.0	89.60	270.40	9,722.2	367.6	-1,866.9	1,290.6	0.64	-0.11	0.63
11,437.0	93.20	271.50	9,719.9	369.2	-1,962.8	1,342.2	3.92	3.75	1.15
11,532.0	91.30	269.60	9,716.1	370.1	-2,057.7	1,392.7	2.83	-2.00	-2.00
11,627.0	87.60	267.40	9,717.1	367.6	-2,152.6	1,440.3	4.53	-3.89	-2.32
11,722.0	87.50	267.90	9,721.1	363.8	-2,247.5	1,486.6	0.54	-0.11	0.53
11,817.0	87.30	268.20	9,725.4	360.5	-2,342.3	1,533.5	0.38	-0.21	0.32
11,913.0	91.10	269.20	9,726.8	358.3	-2,438.3	1,581.9	4.09	3.96	1.04
12,009.0	91.00	269.80	9,725.0	357.5	-2,534.3	1,631.5	0.63	-0.10	0.63
12,104.0	89.80	270.20	9,724.3	357.5	-2,629.3	1,681.2	1.33	-1.26	0.42
12,199.0	90.50	269.10	9,724.1	356.9	-2,724.2	1,730.4	1.37	0.74	-1.16
12,295.0	91.70	268.10	9,722.3	354.6	-2,820.2	1,778.7	1.63	1.25	-1.04
12,390.0	93.10	267.90	9,718.3	351.3	-2,915.1	1,825.5	1.49	1.47	-0.21
12,486.0	93.70	268.40	9,712.6	348.2	-3,010.8	1,873.0	0.81	0.63	0.52
12,581.0	92.00	269.80	9,707.9	346.7	-3,105.7	1,921.4	2.32	-1.79	1.47
12,677.0	92.70	268.40	9,703.9	345.2	-3,201.6	1,970.4	1.63	0.73	-1.46
12,771.0	88.00	266.70	9,703.3	341.2	-3,295.5	2,016.1	5.32	-5.00	-1.81
12,866.0	88.10	268.40	9,706.6	337.1	-3,390.3	2,062.3	1.79	0.11	1.79
12,961.0	90.10	270.30	9,708.1	336.0	-3,485.3	2,111.1	2.90	2.11	2.00
13,056.0	92.70	272.70	9,705.8	338.5	-3,580.2	2,162.9	3.72	2.74	2.53
13,152.0	91.20	272.80	9,702.5	343.1	-3,676.1	2,217.0	1.57	-1.56	0.10
13,247.0	88.40	272.50	9,702.8	347.5	-3,771.0	2,270.4	2.96	-2.95	-0.32
13,342.0	91.80	273.10	9,702.6	352.1	-3,865.8	2,324.1	3.63	3.58	0.63
13,438.0	92.90	274.70	9,698.7	358.7	-3,961.5	2,379.7	2.02	1.15	1.67
13,533.0	93.50	274.90	9,693.4	366.6	-4,056.0	2,436.0	0.67	0.63	0.21
13,628.0	88.60	273.10	9,691.7	373.2	-4,150.8	2,491.2	5.49	-5.16	-1.89



Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section18-13-24S-26-27E Annabelle 18-13 W2PO Fed
Well: Annabelle 18-13 W2PO Fed Com 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Annabelle 18-13 W2PO Fed Com 1H
TVD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
MD Reference: 3241 + 27 @ 3268.0usft (Patterson 245)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
13,723.0	88.90	270.80	9,693.7	376.5	-4,245.7	2,543.7	2.44	0.32	-2.42
13,819.0	88.10	270.80	9,696.3	377.8	-4,341.6	2,595.0	0.83	-0.83	0.00
13,914.0	89.30	269.80	9,698.4	378.3	-4,436.6	2,645.2	1.64	1.26	-1.05
14,009.0	90.50	268.30	9,698.6	376.7	-4,531.6	2,693.6	2.02	1.26	-1.58
14,103.0	90.40	267.70	9,697.8	373.4	-4,625.5	2,740.0	0.65	-0.11	-0.64
14,198.0	92.30	268.90	9,695.6	370.6	-4,720.5	2,787.3	2.37	2.00	1.26
14,293.0	91.60	269.00	9,692.4	368.9	-4,815.4	2,835.5	0.74	-0.74	0.11
14,388.0	92.50	270.30	9,689.0	368.3	-4,910.3	2,884.7	1.66	0.95	1.37
14,484.0	90.00	269.10	9,686.9	367.8	-5,006.3	2,934.5	2.89	-2.60	-1.25
14,578.0	88.90	268.30	9,687.8	365.7	-5,100.3	2,981.9	1.45	-1.17	-0.85
14,674.0	89.00	268.60	9,689.5	363.1	-5,196.2	3,029.9	0.33	0.10	0.31
14,770.0	89.30	269.90	9,691.0	361.8	-5,292.2	3,079.1	1.39	0.31	1.35
14,866.0	90.90	269.20	9,690.8	361.1	-5,388.2	3,128.7	1.82	1.67	-0.73
14,961.0	90.60	269.80	9,689.5	360.2	-5,483.2	3,177.7	0.71	-0.32	0.63
15,055.0	90.60	270.00	9,688.6	360.1	-5,577.2	3,226.8	0.21	0.00	0.21
15,150.0	91.00	271.10	9,687.2	361.0	-5,672.1	3,277.3	1.23	0.42	1.16
15,245.0	90.20	271.20	9,686.2	362.9	-5,767.1	3,328.7	0.85	-0.84	0.11
15,340.0	89.70	271.10	9,686.3	364.8	-5,862.1	3,380.0	0.54	-0.53	-0.11
15,435.0	88.80	271.60	9,687.6	367.0	-5,957.1	3,431.7	1.08	-0.95	0.53
15,530.0	89.30	269.30	9,689.1	367.8	-6,052.0	3,482.0	2.48	0.53	-2.42
15,625.0	90.00	268.90	9,689.7	366.3	-6,147.0	3,530.5	0.85	0.74	-0.42
15,720.0	91.30	268.20	9,688.6	363.9	-6,242.0	3,578.1	1.55	1.37	-0.74
15,814.0	90.90	267.30	9,686.8	360.2	-6,335.9	3,624.2	1.05	-0.43	-0.96
15,908.0	90.20	267.30	9,685.9	355.8	-6,429.8	3,669.6	0.74	-0.74	0.00
16,004.0	90.20	267.50	9,685.6	351.4	-6,525.7	3,716.1	0.21	0.00	0.21
16,099.0	90.80	268.20	9,684.8	347.8	-6,620.6	3,762.7	0.97	0.63	0.74
16,194.0	91.10	268.90	9,683.2	345.4	-6,715.6	3,810.4	0.80	0.32	0.74
16,290.0	90.50	269.20	9,681.9	343.9	-6,811.5	3,859.3	0.70	-0.63	0.31
16,385.0	91.10	270.10	9,680.5	343.3	-6,906.5	3,908.5	1.14	0.63	0.95
16,480.0	90.20	270.10	9,679.5	343.4	-7,001.5	3,958.4	0.95	-0.95	0.00
16,581.0	88.90	270.30	9,680.3	343.8	-7,102.5	4,011.6	1.30	-1.29	0.20
16,650.0	88.90	270.30	9,681.6	344.2	-7,171.5	4,048.0	0.00	0.00	0.00

16650' MD Projected to Bit - PBHL Annabelle 18-13 W2PO Fed Com 1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
		+N/-S (usft)	+E/-W (usft)
468.0	468.0	2.7	-1.7
16,650.0	9,681.6	344.2	-7,171.5

268' MD Phoenix Gyro
16650' MD Projected to Bit



COMPANY: Mewbourne Oil Company
WELL: Annabelle 18-13 W2PO Fed Com 1H
COUNTY: Eddy County, N.M. Nad (83)
DATUM: North American Datum 1983
RIG: Patterson Patterson 245

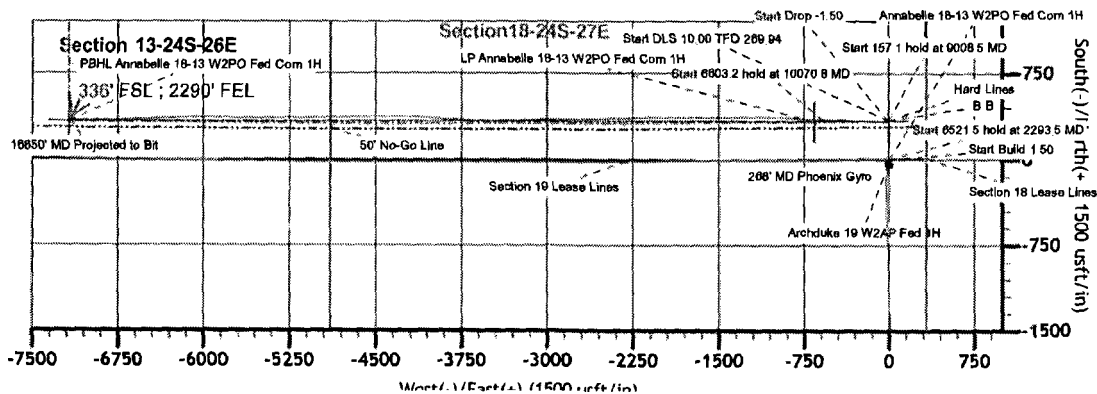


GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.14°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico Eastern Zone										
3241 + 27 @ 3268.0usft (Patterson 245)										
GROUND ELEVATION: 3241.0										
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot			
	0.0	0.0	440131.50	575714.20	32° 12' 35.818 N	104° 13' 19.857 W				
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Diag	TFace	VSect	Target
1	0 0	0.00	0.00	0 0	0.0	0.0	0.00	0.00	0.0	
2	2100 0	0.00	0.00	2100.0	0.0	0.0	0.00	0.00	0.0	
3	2293.5	2.90	359.82	2293.4	4.9	0.0	1.50	359.82	0.2	
4	8815.0	2.90	359.82	8806.6	335.1	-1.1	0.00	0.00	16.5	
5	9008.5	0.00	0.00	9000.0	340.0	-1.1	1.50	180.00	16.8	B B
6	9165.6	0.00	0.00	9157.1	340.0	-1.1	0.00	0.00	16.8	
7	10070.8	90.52	269.94	9730.0	339.4	-579.2	10.00	269.94	594.3	
8	16674 0	90.52	269.94	9670.0	332.4	-7182.2	0.00	0.00	7189.9	PBHL Annabelle 18-13 W2PQ Fed Com 1H

PBHL Annabelle 18-13 W2PO Fed Com 1H



SHL 10' FNL; 330' FEL
Section 19-24S-27E
PBHL 330' FSL; 2310' FEL
Section 13-24S-26E

