



HOBES OCD
FEB 08 2018
RECEIVED

COMPANY: Mewbourne Oil Company
WELL: Bilbrey 34-245 W2PA Fed Com #1H
COUNTY: Lea County N. M. Nad (83)
DATUM: North American Datum 1983
RIG: Patterson 242

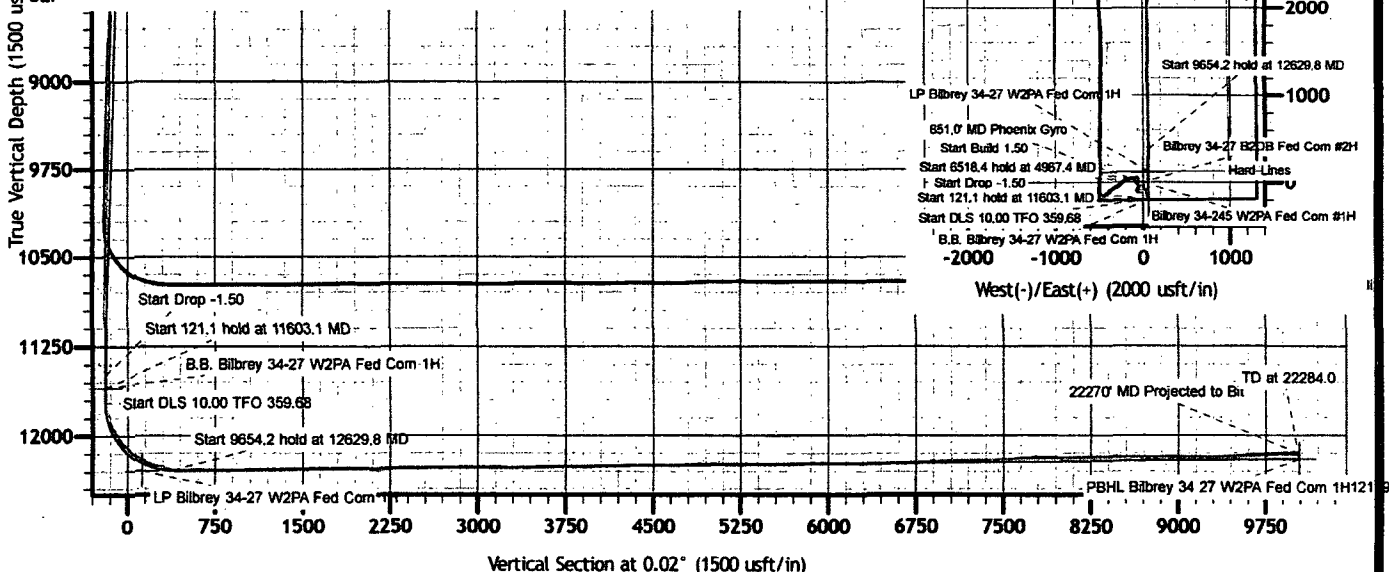
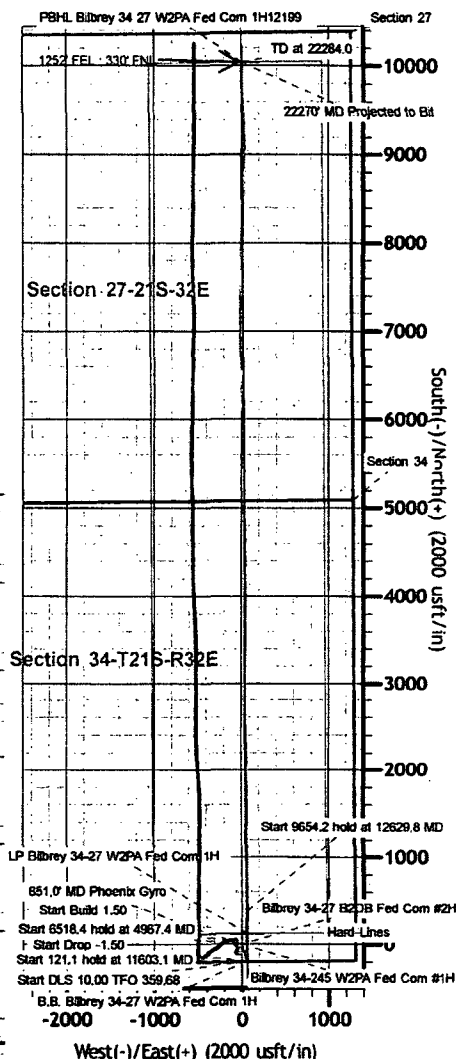
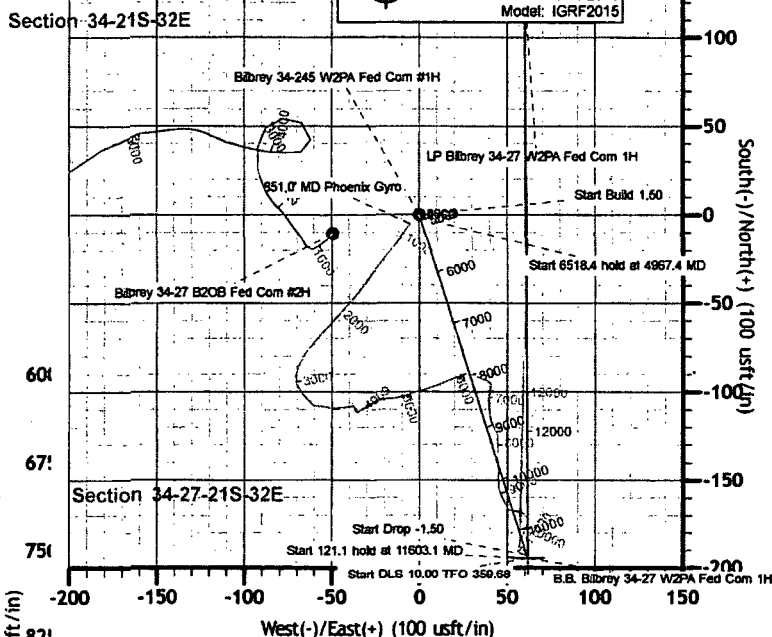
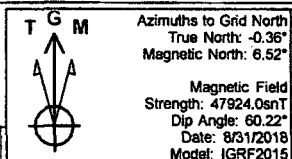


OFFICE: 936.582.7296

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.52°

GEODETIC ZONE: New Mexico Eastern Zone											
3717 + 27 @ 3744.0usft (Patterson 242)											
GROUND ELEVATION: 3717.0											
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot				
	0.0	0.0	520300.70	749609.80	32° 25' 42.831 N	103° 39' 29.914 W					
PLAN SECTIONS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	4850.0	0.00	0.00	4850.0	0.0	0.0	0.00	0.00	0.0		
3	4987.4	1.76	162.41	4987.4	-1.7	0.5	1.50	162.41	-1.7		
4	11485.7	1.76	162.41	11482.6	-192.6	61.1	0.00	0.00	-192.6		
5	11603.1	0.00	0.00	11600.0	-194.3	61.6	1.50	180.00	-194.3	B.B. Bilbrey 34-27 W2PA Fed Com 1H	
6	11724.2	0.00	0.00	11721.1	-194.3	61.6	0.00	0.00	-194.3		
7	12629.8	90.56	359.68	12294.0	384.3	58.4	10.00	359.68	384.3		
8	22284.0	90.56	359.68	12199.0	10037.8	4.3	0.00	0.00	10037.8	PBHL Bilbrey 34 27 W2PA Fed Com 1H12199	

SHL: 205' FSL: 1311' FEL
Section 34-21S-32E
PBHL: 330 FNL: 1250' FEL
Section 27-21S-32E



STRYKER

DIRECTIONAL

November 15, 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
Bilbrey 34-27 W2PA Federal Com #001H
Wildcat; Wolfcamp Gas
Lea County, New Mexico
API# 30-025-45008

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>
Greg Morris	Original Hole	1,004ft. to 22,222ft.	09-09-18 to 10-22-18	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\Bilbrey 34-27 W2PA Fed Com #1HM18112

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



November 15, 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 September 18, 2018, through October 20, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 1,004feet to a depth of 22,222feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Bilbrey 34-27 W2PA Federal Com #1H ,well API # **30-025-45008** 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.

A handwritten signature in black ink, appearing to read "Eric Estes", is written over a horizontal line.

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



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed
Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bilbrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (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
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1

Site Position:	Map	Northing:	520,300.70 usft	Latitude:	32° 25' 42.831 N
From:		Easting:	749,609.80 usft	Longitude:	103° 39' 29.914 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well Bilbrey 34-245 W2PA Fed Com #1H

Well Position	+N/-S	0.0 usft	Northing:	520,300.70 usft	Latitude:	32° 25' 42.831 N
	+E/-W	0.0 usft	Easting:	749,609.80 usft	Longitude:	103° 39' 29.914 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	3,717.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/31/2018	6.88	60.22	47,924.00329536

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	216.56

Survey Program Date 10/19/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
1,004.0	22,270.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination



Microsoft
MWD Surveys



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Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
851.0	2.36	216.88	850.9	2,893.1	-5.2	-5.2	7.4	224.95
851.0' MD Phoenix Gyro								
1,004.0	2.60	215.80	1,003.7	2,740.3	-10.6	-9.2	14.0	220.87
1,194.0	3.10	218.80	1,193.5	2,550.5	-18.1	-14.9	23.4	219.48
1,384.0	3.10	218.50	1,383.2	2,360.8	-26.1	-21.3	33.7	219.23
1,574.0	3.20	216.10	1,572.9	2,171.1	-34.4	-27.6	44.1	218.77
1,701.0	3.30	216.80	1,699.7	2,044.3	-40.2	-31.9	51.3	218.44
1,893.0	3.40	221.20	1,891.4	1,852.6	-48.9	-39.0	62.5	218.55
2,082.0	3.80	221.80	2,080.0	1,664.0	-57.5	-46.6	74.1	219.01
2,270.0	3.50	223.30	2,267.7	1,476.3	-66.1	-54.5	85.7	219.49
2,458.0	3.20	219.20	2,455.4	1,288.6	-74.4	-61.7	96.7	219.70
2,646.0	2.60	208.50	2,643.1	1,100.9	-82.2	-67.1	106.1	219.23
2,834.0	2.00	198.40	2,831.0	913.0	-89.0	-70.2	113.4	218.24
3,023.0	1.80	166.20	3,019.9	724.1	-95.0	-70.5	118.3	216.56
3,212.0	2.40	134.60	3,208.7	535.3	-100.7	-67.0	120.9	213.62
3,400.0	3.50	138.20	3,396.5	347.5	-107.8	-60.3	123.5	209.25
3,589.0	5.40	72.40	3,585.0	159.0	-109.4	-48.0	119.4	203.70
3,778.0	1.40	126.10	3,773.7	-29.7	-108.0	-37.7	114.4	199.22
3,966.0	1.20	177.60	3,961.6	-217.6	-111.4	-35.7	116.9	197.79
4,154.0	2.80	43.90	4,149.6	-405.6	-110.0	-32.5	114.7	196.44
4,342.0	2.20	70.70	4,337.4	-593.4	-105.5	-25.9	108.6	193.77
4,530.0	1.60	88.30	4,525.3	-781.3	-104.2	-19.8	106.1	190.77
4,670.0	1.70	82.10	4,665.2	-921.2	-103.9	-15.8	105.1	188.66
4,719.0	1.90	79.50	4,714.2	-970.2	-103.7	-14.3	104.6	187.86
4,908.0	1.80	73.30	4,903.1	-1,159.1	-102.2	-8.4	102.6	184.69
5,098.0	1.90	71.60	5,093.0	-1,349.0	-100.4	-2.5	100.4	181.45
5,287.0	2.20	73.40	5,281.9	-1,537.9	-98.3	3.9	98.4	177.72



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Billrey 34-27 W2PA Fed
Well: Billrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Billrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,476.0	2.00	69.20	5,470.8	-1,726.8	-96.1	10.5	96.7	173.78
5,666.0	1.70	65.90	5,660.7	-1,916.7	-93.8	16.1	95.2	170.23
5,855.0	1.50	71.70	5,849.6	-2,105.6	-91.9	21.1	94.3	167.10
6,044.0	1.50	69.00	6,038.5	-2,294.5	-90.2	25.7	93.8	164.09
6,233.0	2.20	113.70	6,227.4	-2,483.4	-90.8	31.3	96.1	160.96
6,421.0	2.10	113.40	6,415.3	-2,671.3	-93.6	37.8	101.0	158.01
6,610.0	1.10	190.20	6,604.3	-2,860.3	-96.8	40.7	105.0	157.21
6,798.0	0.90	197.00	6,792.2	-3,048.2	-100.0	39.9	107.6	158.23
6,986.0	0.90	187.30	6,980.2	-3,236.2	-102.8	39.3	110.1	159.09
7,175.0	1.30	171.80	7,169.2	-3,425.2	-106.4	39.4	113.5	159.68
7,363.0	1.50	179.60	7,357.1	-3,613.1	-111.0	39.7	117.9	160.31
7,551.0	1.60	160.90	7,545.0	-3,801.0	-116.0	40.6	122.9	160.70
7,739.0	1.90	151.40	7,733.0	-3,989.0	-121.2	43.0	128.6	160.48
7,927.0	2.10	181.80	7,920.8	-4,176.8	-127.3	44.3	134.8	160.80
8,115.0	2.50	178.80	8,108.7	-4,364.7	-134.9	44.3	142.0	161.81
8,303.0	1.20	171.60	8,296.6	-4,552.6	-140.9	44.7	147.9	162.40
8,490.0	1.40	176.20	8,483.5	-4,739.5	-145.2	45.1	152.0	162.73
8,678.0	1.20	189.50	8,671.5	-4,927.5	-149.4	45.0	156.0	163.25
8,866.0	1.50	173.50	8,859.4	-5,115.4	-153.8	44.9	160.2	163.72
9,054.0	2.20	153.60	9,047.3	-5,303.3	-159.4	46.8	166.2	163.64
9,242.0	1.50	154.20	9,235.2	-5,491.2	-164.9	49.5	172.2	163.30
9,427.0	1.20	94.10	9,420.2	-5,676.2	-167.2	52.5	175.3	162.58
9,613.0	2.00	109.40	9,606.1	-5,862.1	-168.4	57.5	178.0	161.16
9,803.0	1.40	160.90	9,796.1	-6,052.1	-171.7	61.3	182.4	160.34
9,991.0	1.50	205.20	9,984.0	-6,240.0	-176.1	61.1	186.4	160.88
10,178.0	1.10	204.50	10,171.0	-6,427.0	-180.0	59.3	189.5	161.77
10,367.0	1.00	202.60	10,359.9	-6,615.9	-183.1	57.9	192.1	162.46



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MWD Surveys



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Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
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North Reference: Grid
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Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
10,556.0	0.70	185.60	10,548.9	-6,804.9	-185.8	57.1	194.4	162.91
10,745.0	0.80	214.20	10,737.9	-6,993.9	-188.1	56.3	196.3	163.34
10,934.0	0.70	175.40	10,926.9	-7,182.9	-190.3	55.6	198.3	163.70
11,123.0	1.30	87.50	11,115.8	-7,371.8	-191.4	57.9	199.9	163.17
11,312.0	0.70	43.10	11,304.8	-7,560.8	-190.4	60.8	199.9	162.29
11,500.0	0.90	266.90	11,492.8	-7,748.8	-189.7	60.1	199.0	162.42
11,607.2	0.68	285.43	11,600.0	-7,856.0	-189.6	58.7	198.4	162.81
B.B. Bilbrey 34-27 W2PA Fed Com 1H								
11,675.0	0.60	303.00	11,667.8	-7,923.8	-189.2	58.0	197.9	162.97
11,708.0	0.40	314.80	11,700.8	-7,956.8	-189.1	57.7	197.7	163.02
11,739.0	2.20	344.30	11,731.8	-7,987.8	-188.4	57.5	197.0	163.03
11,770.0	5.70	355.30	11,762.7	-8,018.7	-188.3	57.2	194.9	162.93
11,802.0	9.30	359.30	11,794.4	-8,050.4	-182.1	57.1	190.9	162.61
11,833.0	12.60	2.40	11,824.9	-8,080.9	-176.2	57.2	185.3	162.03
11,865.0	16.90	1.70	11,855.8	-8,111.8	-168.1	57.4	177.7	161.13
11,896.0	21.00	0.60	11,885.1	-8,141.1	-158.0	57.6	168.2	159.96
11,928.0	24.20	0.70	11,914.7	-8,170.7	-145.8	57.8	156.8	158.38
11,959.0	26.60	1.20	11,942.7	-8,198.7	-132.5	58.0	144.6	156.35
11,991.0	29.70	1.40	11,970.9	-8,226.9	-117.4	58.3	131.1	153.57
12,022.0	32.30	1.90	11,997.4	-8,253.4	-101.4	58.8	117.2	149.89
12,053.0	34.20	2.50	12,023.4	-8,279.4	-84.4	59.5	103.3	144.84
12,085.0	36.70	2.70	12,049.4	-8,305.4	-65.9	60.3	89.3	137.53
12,116.0	40.30	1.90	12,073.7	-8,329.7	-46.6	61.1	76.8	127.35
12,147.0	43.30	0.60	12,096.8	-8,352.8	-26.0	61.5	66.8	112.87
12,179.0	46.50	359.20	12,119.5	-8,375.5	-3.4	61.5	61.6	93.14
12,211.0	49.10	358.80	12,140.9	-8,396.9	20.3	61.1	64.4	71.58
12,242.0	51.70	359.20	12,160.7	-8,416.7	44.2	60.6	75.0	53.91



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12,273.0	55.10	359.80	12,179.2	-8,435.2	69.1	60.4	91.8	41.17
12,304.0	58.50	0.20	12,198.2	-8,452.2	95.0	60.4	112.6	32.45
12,336.0	61.50	0.30	12,212.2	-8,468.2	122.7	60.6	136.9	26.26
12,368.0	64.20	359.80	12,226.8	-8,482.8	151.2	60.6	162.9	21.83
12,372.5	64.62	359.70	12,228.7	-8,484.7	155.2	60.6	166.6	21.31
LP Bilbrey 34-27 W2PA Fed Com 1H								
12,399.0	67.10	359.10	12,239.5	-8,495.5	179.4	60.3	189.3	18.57
12,418.0	69.00	358.90	12,246.6	-8,502.6	197.1	60.0	206.0	16.93
12,464.0	72.00	0.00	12,262.0	-8,518.0	240.4	59.6	247.7	13.92
12,496.0	74.40	359.20	12,271.2	-8,527.2	271.1	59.4	277.5	12.35
12,527.0	77.10	358.60	12,278.9	-8,534.9	301.1	58.8	306.8	11.05
12,558.0	80.10	358.80	12,285.0	-8,541.0	331.5	58.1	336.5	9.94
12,590.0	82.10	359.00	12,289.9	-8,545.9	363.1	57.5	367.6	9.00
12,621.0	85.80	359.10	12,293.2	-8,549.2	393.9	57.0	398.0	8.23
12,716.0	93.80	0.20	12,293.5	-8,549.5	488.8	56.4	492.1	6.58
12,810.0	89.70	359.40	12,290.7	-8,546.7	582.7	56.1	585.4	5.50
12,905.0	88.30	359.20	12,292.3	-8,548.3	677.7	54.9	679.9	4.83
12,999.0	90.20	359.30	12,293.6	-8,549.6	771.7	53.7	773.6	3.98
13,093.0	89.80	358.80	12,293.6	-8,549.6	865.7	52.1	867.3	3.45
13,188.0	91.70	359.50	12,292.3	-8,548.3	960.7	50.7	962.0	3.02
13,282.0	91.50	359.90	12,289.7	-8,545.7	1,054.6	50.2	1,055.8	2.73
13,377.0	91.60	0.90	12,287.1	-8,543.1	1,149.6	50.9	1,150.7	2.53
13,471.0	91.20	0.50	12,284.8	-8,540.8	1,243.6	52.0	1,244.6	2.40
13,565.0	90.50	1.10	12,283.4	-8,539.4	1,337.5	53.3	1,338.6	2.28
13,659.0	90.60	0.20	12,282.5	-8,538.5	1,431.5	54.4	1,432.6	2.18
13,754.0	91.50	0.30	12,280.8	-8,536.8	1,526.5	54.8	1,527.5	2.06
13,848.0	92.10	0.20	12,277.8	-8,533.8	1,620.5	55.2	1,621.4	1.95



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed
Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bilbrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,943.0	90.30	0.30	12,275.9	-8,531.9	1,715.4	55.7	1,716.3	1.86
14,037.0	89.50	0.30	12,276.0	-8,532.0	1,809.4	56.1	1,810.3	1.78
14,132.0	89.80	359.80	12,276.6	-8,532.6	1,904.4	56.2	1,905.3	1.69
14,226.0	89.20	358.90	12,277.4	-8,533.4	1,998.4	55.2	1,999.2	1.58
14,320.0	88.50	358.70	12,279.3	-8,535.3	2,092.4	53.2	2,093.1	1.46
14,415.0	91.60	359.80	12,279.2	-8,535.2	2,187.4	51.9	2,188.0	1.36
14,509.0	92.10	359.80	12,276.2	-8,532.2	2,281.3	51.6	2,281.9	1.30
14,604.0	90.20	358.30	12,274.3	-8,530.3	2,376.3	50.0	2,376.8	1.21
14,698.0	91.20	358.30	12,273.1	-8,529.1	2,470.2	47.3	2,470.7	1.10
14,792.0	90.50	353.40	12,271.7	-8,527.7	2,563.9	40.5	2,564.2	0.90
14,886.0	91.10	356.10	12,270.4	-8,526.4	2,657.5	31.9	2,657.7	0.69
14,981.0	92.00	0.20	12,267.9	-8,523.9	2,752.4	28.8	2,752.6	0.60
15,075.0	90.90	358.90	12,265.5	-8,521.5	2,846.4	28.1	2,846.5	0.56
15,170.0	88.80	2.40	12,265.7	-8,521.7	2,941.3	29.1	2,941.5	0.57
15,265.0	87.00	2.50	12,269.2	-8,525.2	3,036.2	33.2	3,036.4	0.63
15,359.0	88.70	1.50	12,272.7	-8,528.7	3,130.1	36.5	3,130.3	0.67
15,453.0	90.20	1.30	12,273.6	-8,529.6	3,224.0	38.8	3,224.3	0.69
15,547.0	89.00	1.30	12,274.3	-8,530.3	3,318.0	40.9	3,318.3	0.71
15,642.0	93.20	0.50	12,272.5	-8,528.5	3,412.9	42.4	3,413.2	0.71
15,736.0	92.70	359.10	12,267.6	-8,523.6	3,506.8	42.1	3,507.1	0.69
15,830.0	92.40	359.00	12,263.4	-8,519.4	3,600.7	40.5	3,600.9	0.64
15,925.0	89.10	359.80	12,262.2	-8,518.2	3,695.7	39.5	3,695.9	0.61
16,020.0	89.50	0.90	12,263.4	-8,519.4	3,790.7	40.1	3,790.9	0.61
16,114.0	88.70	1.20	12,264.8	-8,520.8	3,884.7	41.8	3,884.9	0.62
16,209.0	93.10	1.10	12,263.3	-8,519.3	3,979.6	43.7	3,979.8	0.63
16,303.0	91.70	0.60	12,259.4	-8,515.4	4,073.5	45.1	4,073.8	0.63
16,398.0	92.10	0.30	12,256.3	-8,512.3	4,168.4	45.9	4,168.7	0.63



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed
Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bilbrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
16,493.0	92.70	0.10	12,252.3	-8,508.3	4,263.4	46.2	4,263.6	0.62
16,588.0	90.50	357.70	12,249.6	-8,505.6	4,358.3	44.4	4,358.5	0.58
16,683.0	89.70	358.30	12,249.5	-8,505.5	4,453.2	41.0	4,453.4	0.53
16,777.0	89.20	358.30	12,250.4	-8,506.4	4,547.2	38.3	4,547.3	0.48
16,872.0	88.90	359.40	12,251.9	-8,507.9	4,642.2	36.4	4,642.3	0.45
16,967.0	91.60	359.80	12,251.5	-8,507.5	4,737.1	35.7	4,737.3	0.43
17,051.0	92.40	359.10	12,248.6	-8,504.6	4,821.1	34.9	4,821.2	0.41
17,146.0	93.50	358.40	12,243.7	-8,499.7	4,915.9	32.8	4,916.0	0.38
17,240.0	90.10	358.70	12,240.8	-8,496.8	5,009.8	30.4	5,009.9	0.35
17,335.0	88.90	357.70	12,241.6	-8,497.6	5,104.8	27.5	5,104.9	0.31
17,430.0	88.30	357.90	12,243.9	-8,499.9	5,199.7	23.8	5,199.7	0.26
17,525.0	89.30	0.90	12,245.9	-8,501.9	5,294.7	22.8	5,294.7	0.25
17,619.0	90.50	1.00	12,246.1	-8,502.1	5,388.6	24.4	5,388.7	0.28
17,714.0	91.00	0.70	12,244.8	-8,500.8	5,483.6	25.8	5,483.7	0.27
17,809.0	91.00	0.20	12,243.2	-8,499.2	5,578.6	26.5	5,578.7	0.27
17,904.0	91.60	359.90	12,241.0	-8,497.0	5,673.6	26.6	5,673.6	0.27
17,999.0	92.40	0.00	12,237.7	-8,493.7	5,768.5	26.5	5,768.6	0.26
18,094.0	90.50	358.60	12,235.3	-8,491.3	5,863.5	25.4	5,863.5	0.25
18,190.0	90.00	358.50	12,234.9	-8,490.9	5,959.4	22.9	5,959.5	0.22
18,285.0	91.50	359.00	12,233.6	-8,489.6	6,054.4	20.9	6,054.4	0.20
18,380.0	89.00	357.90	12,233.2	-8,489.2	6,149.4	18.3	6,149.4	0.17
18,475.0	89.20	357.90	12,234.7	-8,490.7	6,244.3	14.8	6,244.3	0.14
18,570.0	89.20	357.70	12,236.0	-8,492.0	6,339.2	11.2	6,339.2	0.10
18,655.0	89.70	359.00	12,236.8	-8,492.8	6,424.2	8.7	6,424.2	0.08
18,761.0	92.90	359.00	12,234.4	-8,490.4	6,530.1	6.9	6,530.1	0.06
18,856.0	93.70	359.00	12,229.0	-8,485.0	6,624.9	5.2	6,624.9	0.05
18,952.0	90.40	359.00	12,225.5	-8,481.5	6,720.8	3.5	6,720.9	0.03



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed
Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bilbrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
19,047.0	91.40	359.30	12,224.0	-8,480.0	6,815.8	2.1	6,815.8	0.02
19,142.0	92.00	358.80	12,221.2	-8,477.2	6,910.8	0.6	6,910.8	0.00
19,237.0	91.80	0.50	12,218.1	-8,474.1	7,005.7	0.0	7,005.7	360.00
19,331.0	89.10	359.20	12,217.3	-8,473.3	7,099.7	-0.3	7,099.7	360.00
19,426.0	91.30	0.90	12,217.0	-8,473.0	7,194.7	-0.2	7,194.7	360.00
19,521.0	91.10	0.20	12,215.0	-8,471.0	7,289.7	0.7	7,289.7	0.01
19,616.0	90.90	0.10	12,213.4	-8,469.4	7,384.8	1.0	7,384.8	0.01
19,712.0	92.20	1.20	12,210.8	-8,466.8	7,480.6	2.1	7,480.6	0.02
19,806.0	93.20	1.30	12,206.3	-8,462.3	7,574.5	4.1	7,574.5	0.03
19,901.0	94.80	0.90	12,199.6	-8,455.6	7,669.2	5.9	7,669.2	0.04
19,996.0	92.70	359.80	12,193.3	-8,449.3	7,764.0	6.5	7,764.0	0.05
20,091.0	89.10	359.50	12,191.8	-8,447.8	7,859.0	5.9	7,859.0	0.04
20,186.0	89.10	359.80	12,193.3	-8,449.3	7,954.0	5.3	7,954.0	0.04
20,281.0	90.50	1.70	12,193.7	-8,449.7	8,048.9	6.6	8,048.9	0.05
20,362.0	91.40	1.90	12,192.3	-8,448.3	8,129.9	9.1	8,129.9	0.06
20,457.0	91.00	1.30	12,190.3	-8,446.3	8,224.8	11.8	8,224.8	0.08
20,552.0	91.00	2.10	12,188.7	-8,444.7	8,319.8	14.6	8,319.8	0.10
20,646.0	90.60	1.80	12,187.4	-8,443.4	8,413.7	17.8	8,413.7	0.12
20,742.0	90.60	1.90	12,186.3	-8,442.3	8,509.7	20.9	8,509.7	0.14
20,837.0	89.70	1.10	12,186.1	-8,442.1	8,604.6	23.4	8,604.7	0.16
20,931.0	88.60	1.00	12,187.5	-8,443.5	8,698.6	25.1	8,698.6	0.17
21,026.0	90.50	0.70	12,188.2	-8,444.2	8,793.6	26.5	8,793.6	0.17
21,122.0	91.20	0.80	12,186.8	-8,442.8	8,889.6	27.8	8,889.6	0.18
21,217.0	88.60	0.40	12,187.0	-8,443.0	8,984.5	28.8	8,984.6	0.18
21,313.0	87.80	0.10	12,190.0	-8,446.0	9,080.5	29.2	9,080.5	0.18
21,409.0	90.20	358.30	12,191.7	-8,447.7	9,176.5	27.9	9,176.5	0.17
21,504.0	91.60	358.20	12,190.2	-8,446.2	9,271.4	25.0	9,271.4	0.15



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed
Well: Bilbrey 34-245 W2PA Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bilbrey 34-245 W2PA Fed Com #1H
TVD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
MD Reference: 3717 + 27 @ 3744.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
21,800.0	93.20	358.10	12,186.2	-8,442.2	9,367.3	21.9	9,367.3	0.13
21,696.0	93.00	358.10	12,181.0	-8,437.0	9,463.1	18.7	9,463.1	0.11
21,790.0	93.40	358.30	12,175.7	-8,431.7	9,556.9	15.7	9,556.9	0.09
21,885.0	92.80	357.90	12,170.6	-8,426.6	9,651.7	12.6	9,651.7	0.07
21,980.0	93.40	358.30	12,165.4	-8,421.4	9,746.5	9.4	9,746.5	0.06
22,074.0	91.80	359.30	12,161.2	-8,417.2	9,840.4	7.5	9,840.4	0.04
22,169.0	91.60	359.30	12,158.4	-8,414.4	9,935.3	6.3	9,935.3	0.04
22,222.0	91.30	359.50	12,157.0	-8,413.0	9,988.3	5.8	9,988.3	0.03
22,270.0	91.30	359.50	12,155.9	-8,411.9	10,036.3	5.3	10,036.3	0.03

22270' MD Projected to Bit - PBHL Bilbrey 34 27 W2PA Fed Com 1H12199

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
851.0	850.9	-5.2	-5.2	851.0' MD Phoenix Gyro
22,270.0	12,155.9	10,036.3	5.3	22270' MD Projected to Bit



Mewbourne Oil Company

Lea County N. M. Nad (83)

Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1

Bilbrey 34-245 W2PA Fed Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

19 October, 2018



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1		
Site Position:		Northing:	520,300.70 usft
From:	Map	Easting:	749,609.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 25' 42.831 N
		Longitude:	103° 39' 29.914 W
		Grid Convergence:	0.36 °

Well	Bilbrey 34-245 W2PA Fed Com #1H		
Well Position	+N/-S	0.0 usft	Northing: 520,300.70 usft
	+E/-W	0.0 usft	Easting: 749,609.80 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft
		Latitude:	32° 25' 42.831 N
		Longitude:	103° 39' 29.914 W
		Ground Level:	3,717.0 usft

Wellbore	Original Hole		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/31/2018	6.88	60.22	47,924.00329536

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	216.56

Survey Program	Date 10/19/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
1,004.0	22,270.0	MWD Survey (Original Hole)	MWD
			MWD v3:standard declination

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)
851.0	2.36	216.88	850.9	-5.2	-5.2	7.3	0.00	0.00	0.00
1,004.0	2.60	215.80	1,003.7	-10.6	-9.2	13.9	0.16	0.16	-0.71
1,194.0	3.10	218.80	1,193.5	-18.1	-14.9	23.4	0.27	0.26	1.58
1,384.0	3.10	218.50	1,383.2	-26.1	-21.3	33.7	0.01	0.00	-0.16
1,574.0	3.20	216.10	1,572.9	-34.4	-27.6	44.1	0.09	0.05	-1.26
1,701.0	3.30	216.80	1,699.7	-40.2	-31.9	51.3	0.08	0.08	0.55
1,893.0	3.40	221.20	1,891.4	-48.9	-39.0	62.5	0.14	0.05	2.29
2,082.0	3.60	221.80	2,080.0	-57.5	-46.6	74.0	0.11	0.11	0.32
2,270.0	3.50	223.30	2,267.7	-66.1	-54.5	85.6	0.07	-0.05	0.80
2,458.0	3.20	219.20	2,455.4	-74.4	-61.7	96.5	0.20	-0.16	-2.18

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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)
2,646.0	2.60	208.50	2,643.1	-82.2	-67.1	106.0	0.43	-0.32	-5.69
2,834.0	2.00	198.40	2,831.0	-89.0	-70.2	113.3	0.38	-0.32	-5.37
3,023.0	1.80	166.20	3,019.9	-95.0	-70.5	118.3	0.57	-0.11	-17.04
3,212.0	2.40	134.60	3,208.7	-100.7	-67.0	120.8	0.68	0.32	-16.72
3,400.0	3.50	138.20	3,396.5	-107.8	-60.3	122.5	0.59	0.59	1.91
3,589.0	5.40	72.40	3,585.0	-109.4	-48.0	116.4	2.69	1.01	-34.81
3,778.0	1.40	126.10	3,773.7	-108.0	-37.7	109.2	2.49	-2.12	28.41
3,966.0	1.20	177.60	3,961.6	-111.4	-35.7	110.7	0.61	-0.11	27.39
4,154.0	2.80	43.90	4,149.6	-110.0	-32.5	107.7	1.98	0.85	-71.12
4,342.0	2.20	70.70	4,337.4	-105.5	-25.9	100.2	0.69	-0.32	14.26
4,530.0	1.60	88.30	4,525.3	-104.2	-19.8	95.5	0.44	-0.32	9.36
4,670.0	1.70	82.10	4,665.2	-103.9	-15.8	92.9	0.15	0.07	-4.43
4,719.0	1.90	79.50	4,714.2	-103.7	-14.3	91.8	0.44	0.41	-5.31
4,908.0	1.80	73.30	4,903.1	-102.2	-8.4	87.1	0.12	-0.05	-3.28
5,098.0	1.90	71.60	5,093.0	-100.4	-2.5	82.1	0.06	0.05	-0.89
5,287.0	2.20	73.40	5,281.9	-98.3	3.9	76.7	0.16	0.16	0.95
5,476.0	2.00	69.20	5,470.8	-96.1	10.5	71.0	0.13	-0.11	-2.22
5,666.0	1.70	65.90	5,660.7	-93.8	16.1	65.7	0.17	-0.16	-1.74
5,855.0	1.50	71.70	5,849.6	-91.9	21.1	61.3	0.14	-0.11	3.07
6,044.0	1.50	69.00	6,038.5	-90.2	25.7	57.2	0.04	0.00	-1.43
6,233.0	2.20	113.70	6,227.4	-90.8	31.3	54.3	0.82	0.37	23.65
6,421.0	2.10	113.40	6,415.3	-93.6	37.8	52.7	0.05	-0.05	-0.16
6,610.0	1.10	190.20	6,604.3	-96.8	40.7	53.5	1.13	-0.53	40.63
6,798.0	0.90	197.00	6,792.2	-100.0	39.9	56.5	0.12	-0.11	3.62
6,986.0	0.90	187.30	6,980.2	-102.8	39.3	59.2	0.08	0.00	-5.16
7,175.0	1.30	171.80	7,169.2	-106.4	39.4	62.0	0.26	0.21	-8.20
7,363.0	1.50	179.60	7,357.1	-111.0	39.7	65.5	0.15	0.11	4.15
7,551.0	1.60	160.90	7,545.0	-116.0	40.6	68.9	0.27	0.05	-9.95
7,739.0	1.90	151.40	7,733.0	-121.2	43.0	71.7	0.22	0.16	-5.05
7,927.0	2.10	181.80	7,920.8	-127.3	44.3	75.9	0.57	0.11	16.17
8,115.0	2.50	178.80	8,108.7	-134.9	44.3	81.9	0.22	0.21	-1.60
8,303.0	1.20	171.60	8,296.6	-140.9	44.7	86.6	0.70	-0.69	-3.83
8,490.0	1.40	176.20	8,483.5	-145.2	45.1	89.7	0.12	0.11	2.46
8,678.0	1.20	189.50	8,671.5	-149.4	45.0	93.2	0.19	-0.11	7.07
8,866.0	1.50	173.50	8,859.4	-153.8	44.9	96.8	0.25	0.16	-8.51
9,054.0	2.20	153.60	9,047.3	-159.4	46.8	100.2	0.50	0.37	-10.59
9,242.0	1.50	154.20	9,235.2	-164.9	49.5	103.0	0.37	-0.37	0.32
9,427.0	1.20	94.10	9,420.2	-167.2	52.5	103.1	0.74	-0.16	-32.49
9,613.0	2.00	109.40	9,606.1	-168.4	57.5	101.1	0.48	0.43	8.23
9,803.0	1.40	160.90	9,796.1	-171.7	61.3	101.4	0.83	-0.32	27.11
9,991.0	1.50	205.20	9,984.0	-176.1	61.1	105.1	0.58	0.05	23.56
10,178.0	1.10	204.50	10,171.0	-180.0	59.3	109.3	0.21	-0.21	-0.37

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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)	
10,367.0	1.00	202.60	10,359.9	-183.1	57.9	112.6	0.06	-0.05	-1.01	
10,556.0	0.70	185.60	10,548.9	-185.8	57.1	115.2	0.21	-0.16	-8.99	
10,745.0	0.80	214.20	10,737.9	-188.1	56.3	117.5	0.20	0.05	15.13	
10,934.0	0.70	175.40	10,926.9	-190.3	55.6	119.7	0.27	-0.05	-20.53	
11,123.0	1.30	87.50	11,115.8	-191.4	57.9	119.2	0.77	0.32	-46.51	
11,312.0	0.70	43.10	11,304.8	-190.4	60.8	116.7	0.50	-0.32	-23.49	
11,500.0	0.90	266.90	11,492.8	-189.7	60.1	116.5	0.79	0.11	-72.45	
11,607.2	0.68	285.43	11,600.0	-189.5	58.7	117.3	0.31	-0.20	17.29	
B.B. Bilbrey 34-27 W2PA Fed Com 1H										
11,675.0	0.60	303.00	11,667.8	-189.2	58.0	117.5	0.31	-0.12	25.89	
11,708.0	0.40	314.80	11,700.8	-189.1	57.7	117.5	0.68	-0.61	35.76	
11,739.0	2.20	344.30	11,731.8	-188.4	57.5	117.1	6.01	5.81	95.16	
11,770.0	5.70	355.30	11,762.7	-186.3	57.2	115.6	11.50	11.29	35.48	
11,802.0	9.30	359.30	11,794.4	-182.1	57.1	112.3	11.36	11.25	12.50	
11,833.0	12.60	2.40	11,824.9	-176.2	57.2	107.5	10.81	10.65	10.00	
11,865.0	16.90	1.70	11,855.8	-168.1	57.4	100.8	13.45	13.44	-2.19	
11,896.0	21.00	0.60	11,885.1	-158.0	57.6	92.6	13.28	13.23	-3.55	
11,928.0	24.20	0.70	11,914.7	-145.8	57.8	82.7	10.00	10.00	0.31	
11,959.0	26.60	1.20	11,942.7	-132.5	58.0	71.8	7.77	7.74	1.61	
11,991.0	29.70	1.40	11,970.9	-117.4	58.3	59.5	9.69	9.69	0.63	
12,022.0	32.30	1.90	11,997.4	-101.4	58.8	46.4	8.43	8.39	1.61	
12,053.0	34.20	2.50	12,023.4	-84.4	59.5	32.4	6.22	6.13	1.94	
12,085.0	36.70	2.70	12,049.4	-65.9	60.3	17.0	7.82	7.81	0.63	
12,116.0	40.30	1.90	12,073.7	-46.6	61.1	1.1	11.72	11.61	-2.58	
12,147.0	43.30	0.60	12,096.8	-26.0	61.5	-15.8	10.07	9.68	-4.19	
12,179.0	46.50	359.20	12,119.5	-3.4	61.5	-33.9	10.47	10.00	-4.38	
12,211.0	49.10	358.80	12,140.9	20.3	61.1	-52.7	8.18	8.13	-1.25	
12,242.0	51.70	359.20	12,160.7	44.2	60.6	-71.6	8.45	8.39	1.29	
12,273.0	55.10	359.80	12,179.2	69.1	60.4	-91.5	11.08	10.97	1.94	
12,304.0	58.50	0.20	12,196.2	95.0	60.4	-112.3	11.02	10.97	1.29	
12,336.0	61.50	0.30	12,212.2	122.7	60.6	-134.7	9.38	9.38	0.31	
12,368.0	64.20	359.80	12,226.8	151.2	60.6	-157.5	8.55	8.44	-1.56	
12,372.5	64.62	359.70	12,228.7	155.2	60.6	-160.8	9.58	9.35	-2.30	
LP Bilbrey 34-27 W2PA Fed Com 1H										
12,399.0	67.10	359.10	12,239.5	179.4	60.3	-180.1	9.58	9.36	-2.25	
12,418.0	69.00	358.90	12,246.6	197.1	60.0	-194.0	10.05	10.00	-1.05	
12,464.0	72.00	0.00	12,262.0	240.4	59.6	-228.6	6.90	6.52	2.39	
12,496.0	74.40	359.20	12,271.2	271.1	59.4	-253.1	7.87	7.50	-2.50	
12,527.0	77.10	358.60	12,278.9	301.1	58.8	-276.9	8.91	8.71	-1.94	
12,558.0	80.10	358.80	12,285.0	331.5	58.1	-300.8	9.70	9.68	0.65	
12,590.0	82.10	359.00	12,289.9	363.1	57.5	-325.9	6.28	6.25	0.63	
12,621.0	85.80	359.10	12,293.2	393.9	57.0	-350.3	11.94	11.94	0.32	
12,716.0	93.80	0.20	12,293.5	488.8	56.4	-426.2	8.50	8.42	1.16	

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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)
12,810.0	89.70	359.40	12,290.7	582.7	56.1	-501.5	4.44	-4.36	-0.85
12,905.0	88.30	359.20	12,292.3	677.7	54.9	-577.1	1.49	-1.47	-0.21
12,999.0	90.20	359.30	12,293.6	771.7	53.7	-651.8	2.02	2.02	0.11
13,093.0	89.80	358.80	12,293.6	865.7	52.1	-726.4	0.68	-0.43	-0.53
13,188.0	91.70	359.50	12,292.3	960.7	50.7	-801.8	2.13	2.00	0.74
13,282.0	91.50	359.90	12,289.7	1,054.6	50.2	-877.0	0.48	-0.21	0.43
13,377.0	91.60	0.90	12,287.1	1,149.6	50.9	-953.7	1.06	0.11	1.05
13,471.0	91.20	0.50	12,284.8	1,243.6	52.0	-1,029.8	0.60	-0.43	-0.43
13,565.0	90.50	1.10	12,283.4	1,337.5	53.3	-1,106.1	0.98	-0.74	0.64
13,659.0	90.60	0.20	12,282.5	1,431.5	54.4	-1,182.2	0.96	0.11	-0.96
13,754.0	91.50	0.30	12,280.8	1,526.5	54.8	-1,258.8	0.95	0.95	0.11
13,848.0	92.10	0.20	12,277.8	1,620.5	55.2	-1,334.5	0.65	0.64	-0.11
13,943.0	90.30	0.30	12,275.9	1,715.4	55.7	-1,411.0	1.90	-1.89	0.11
14,037.0	89.50	0.30	12,276.0	1,809.4	56.1	-1,486.8	0.85	-0.85	0.00
14,132.0	89.80	359.80	12,276.6	1,904.4	56.2	-1,563.2	0.61	0.32	-0.53
14,226.0	89.20	358.90	12,277.4	1,998.4	55.2	-1,638.0	1.15	-0.64	-0.96
14,320.0	88.50	358.70	12,279.3	2,092.4	53.2	-1,712.3	0.77	-0.74	-0.21
14,415.0	91.60	359.80	12,279.2	2,187.4	51.9	-1,787.9	3.46	3.26	1.16
14,509.0	92.10	359.80	12,276.2	2,281.3	51.6	-1,863.1	0.53	0.53	0.00
14,604.0	90.20	358.30	12,274.3	2,376.3	50.0	-1,938.5	2.55	-2.00	-1.58
14,698.0	91.20	358.30	12,273.1	2,470.2	47.3	-2,012.3	1.06	1.06	0.00
14,792.0	90.50	353.40	12,271.7	2,563.9	40.5	-2,083.5	5.27	-0.74	-5.21
14,886.0	91.10	356.10	12,270.4	2,657.5	31.9	-2,153.5	2.94	0.64	2.87
14,981.0	92.00	0.20	12,267.9	2,752.4	28.8	-2,227.9	4.42	0.95	4.32
15,075.0	90.90	358.90	12,265.5	2,846.4	28.1	-2,303.0	1.81	-1.17	-1.38
15,170.0	88.80	2.40	12,265.7	2,941.3	29.1	-2,379.9	4.30	-2.21	3.68
15,265.0	87.00	2.50	12,269.2	3,036.2	33.2	-2,458.5	1.90	-1.89	0.11
15,359.0	88.70	1.50	12,272.7	3,130.1	36.5	-2,535.8	2.10	1.81	-1.06
15,453.0	90.20	1.30	12,273.6	3,224.0	38.8	-2,612.7	1.61	1.60	-0.21
15,547.0	89.00	1.30	12,274.3	3,318.0	40.9	-2,689.4	1.28	-1.28	0.00
15,642.0	93.20	0.50	12,272.5	3,412.9	42.4	-2,766.6	4.50	4.42	-0.84
15,736.0	92.70	359.10	12,267.6	3,506.8	42.1	-2,841.8	1.58	-0.53	-1.49
15,830.0	92.40	359.00	12,263.4	3,600.7	40.5	-2,916.3	0.34	-0.32	-0.11
15,925.0	89.10	359.80	12,262.2	3,695.7	39.5	-2,992.0	3.57	-3.47	0.84
16,020.0	89.50	0.90	12,263.4	3,790.7	40.1	-3,068.6	1.23	0.42	1.16
16,114.0	88.70	1.20	12,264.8	3,884.6	41.8	-3,145.1	0.91	-0.85	0.32
16,209.0	93.10	1.10	12,263.3	3,979.6	43.7	-3,222.5	4.63	4.63	-0.11
16,303.0	91.70	0.60	12,259.4	4,073.5	45.1	-3,298.8	1.58	-1.49	-0.53
16,398.0	92.10	0.30	12,256.3	4,168.4	45.9	-3,375.5	0.53	0.42	-0.32
16,493.0	92.70	0.10	12,252.3	4,263.4	46.2	-3,451.9	0.67	0.63	-0.21
16,588.0	90.50	357.70	12,249.6	4,358.3	44.4	-3,527.1	3.43	-2.32	-2.53
16,683.0	89.70	358.30	12,249.5	4,453.2	41.0	-3,601.3	1.05	-0.84	0.63

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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)
16,777.0	89.20	358.30	12,250.4	4,547.2	38.3	-3,675.1	0.53	-0.53	0.00
16,872.0	88.90	359.40	12,251.9	4,642.2	36.4	-3,750.3	1.20	-0.32	1.16
16,967.0	91.60	359.80	12,251.5	4,737.1	35.7	-3,826.2	2.87	2.84	0.42
17,051.0	92.40	359.10	12,248.6	4,821.1	34.9	-3,893.1	1.27	0.95	-0.83
17,146.0	93.50	358.40	12,243.7	4,915.9	32.8	-3,968.1	1.37	1.16	-0.74
17,240.0	90.10	358.70	12,240.8	5,009.8	30.4	-4,042.1	3.63	-3.62	0.32
17,335.0	88.90	357.70	12,241.6	5,104.8	27.5	-4,116.6	1.64	-1.26	-1.05
17,430.0	88.30	357.90	12,243.9	5,199.7	23.8	-4,190.6	0.67	-0.63	0.21
17,525.0	89.30	0.90	12,245.9	5,294.7	22.8	-4,266.3	3.33	1.05	3.16
17,619.0	90.50	1.00	12,246.1	5,388.6	24.4	-4,342.7	1.28	1.28	0.11
17,714.0	91.00	0.70	12,244.8	5,483.6	25.8	-4,419.9	0.61	0.53	-0.32
17,809.0	91.00	0.20	12,243.2	5,578.6	26.5	-4,496.6	0.53	0.00	-0.53
17,904.0	91.60	359.90	12,241.0	5,673.6	26.6	-4,572.9	0.71	0.63	-0.32
17,999.0	92.40	0.00	12,237.7	5,768.5	26.5	-4,649.1	0.85	0.84	0.11
18,094.0	90.50	358.60	12,235.3	5,863.5	25.4	-4,724.7	2.48	-2.00	-1.47
18,190.0	90.00	358.50	12,234.9	5,959.4	22.9	-4,800.4	0.53	-0.52	-0.10
18,285.0	91.50	359.00	12,233.6	6,054.4	20.9	-4,875.4	1.66	1.58	0.53
18,380.0	89.00	357.90	12,233.2	6,149.4	18.3	-4,950.1	2.88	-2.63	-1.16
18,475.0	89.20	357.90	12,234.7	6,244.3	14.8	-5,024.3	0.21	0.21	0.00
18,570.0	89.20	357.70	12,236.0	6,339.2	11.2	-5,098.4	0.21	0.00	-0.21
18,655.0	89.70	359.00	12,236.8	6,424.2	8.7	-5,165.2	1.64	0.59	1.53
18,761.0	92.90	359.00	12,234.4	6,530.1	6.9	-5,249.2	3.02	3.02	0.00
18,856.0	93.70	359.00	12,229.0	6,624.9	5.2	-5,324.3	0.84	0.84	0.00
18,952.0	90.40	359.00	12,225.5	6,720.8	3.5	-5,400.4	3.44	-3.44	0.00
19,047.0	91.40	359.30	12,224.0	6,815.8	2.1	-5,475.8	1.10	1.05	0.32
19,142.0	92.00	358.80	12,221.2	6,910.8	0.6	-5,551.2	0.82	0.63	-0.53
19,237.0	91.80	0.50	12,218.1	7,005.7	0.0	-5,627.1	1.80	-0.21	1.79
19,331.0	89.10	359.20	12,217.3	7,099.7	-0.3	-5,702.4	3.19	-2.87	-1.38
19,426.0	91.30	0.90	12,217.0	7,194.7	-0.2	-5,778.8	2.93	2.32	1.79
19,521.0	91.10	0.20	12,215.0	7,289.7	0.7	-5,855.6	0.77	-0.21	-0.74
19,616.0	90.90	0.10	12,213.4	7,384.6	1.0	-5,932.0	0.24	-0.21	-0.11
19,712.0	92.20	1.20	12,210.8	7,480.6	2.1	-6,009.7	1.77	1.35	1.15
19,806.0	93.20	1.30	12,206.3	7,574.5	4.1	-6,086.4	1.07	1.06	0.11
19,901.0	94.90	0.90	12,199.6	7,669.2	5.9	-6,163.5	1.84	1.79	-0.42
19,996.0	92.70	359.80	12,193.3	7,764.0	6.5	-6,240.0	2.59	-2.32	-1.16
20,091.0	89.10	359.50	12,191.8	7,859.0	5.9	-6,316.0	3.80	-3.79	-0.32
20,186.0	89.10	359.80	12,193.3	7,954.0	5.3	-6,391.9	0.32	0.00	0.32
20,281.0	90.50	1.70	12,193.7	8,048.9	6.6	-6,468.9	2.48	1.47	2.00
20,362.0	91.40	1.90	12,192.3	8,129.9	9.1	-6,535.5	1.14	1.11	0.25
20,457.0	91.00	1.30	12,190.3	8,224.8	11.8	-6,613.3	0.76	-0.42	-0.63
20,552.0	91.00	2.10	12,188.7	8,319.8	14.6	-6,691.2	0.84	0.00	0.84
20,646.0	90.60	1.80	12,187.4	8,413.7	17.8	-6,768.6	0.53	-0.43	-0.32
20,742.0	90.60	1.90	12,186.3	8,509.7	20.9	-6,847.5	0.10	0.00	0.10

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bilbrey 34-245 W2PA Fed Com #1H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Site:	Section 34-27-21S-32E Bilbrey 34-27 W2PA Fed Com 1	MD Reference:	3717 + 27 @ 3744.0usft (Patterson 242)
Well:	Bilbrey 34-245 W2PA Fed Com #1H	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)
20,837.0	89.70	1.10	12,186.1	8,604.6	23.4	-6,925.3	1.27	-0.95	-0.84
20,931.0	88.60	1.00	12,187.5	8,698.6	25.1	-7,001.8	1.18	-1.17	-0.11
21,026.0	90.50	0.70	12,188.2	8,793.6	26.5	-7,078.9	2.02	2.00	-0.32
21,122.0	91.20	0.80	12,186.8	8,889.6	27.8	-7,156.7	0.74	0.73	0.10
21,217.0	88.60	0.40	12,187.0	8,984.5	28.8	-7,233.6	2.77	-2.74	-0.42
21,313.0	87.80	0.10	12,190.0	9,080.5	29.2	-7,311.0	0.89	-0.83	-0.31
21,409.0	90.20	358.30	12,191.7	9,176.5	27.9	-7,387.2	3.12	2.50	-1.88
21,504.0	91.60	358.20	12,190.2	9,271.4	25.0	-7,461.8	1.48	1.47	-0.11
21,600.0	93.20	358.10	12,186.2	9,367.3	21.9	-7,536.9	1.67	1.67	-0.10
21,696.0	93.00	358.10	12,181.0	9,463.1	18.7	-7,612.0	0.21	-0.21	0.00
21,790.0	93.40	358.30	12,175.7	9,556.9	15.7	-7,685.6	0.48	0.43	0.21
21,885.0	92.80	357.90	12,170.6	9,651.7	12.6	-7,759.8	0.76	-0.63	-0.42
21,980.0	93.40	358.30	12,165.4	9,746.5	9.4	-7,834.1	0.76	0.63	0.42
22,074.0	91.80	359.30	12,161.2	9,840.4	7.5	-7,908.4	2.01	-1.70	1.06
22,169.0	91.60	359.30	12,158.4	9,935.3	6.3	-7,983.9	0.21	-0.21	0.00
22,222.0	91.30	359.50	12,157.0	9,988.3	5.8	-8,026.2	0.68	-0.57	0.38
22,270.0	91.30	359.50	12,155.9	10,036.3	5.3	-8,064.5	0.00	0.00	0.00

22270' MD Projected to Bit - PBHL Bilbrey 34 27 W2PA Fed Com 1H12199

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
22,270.0	12,155.9	10,036.3	5.3	22270' MD Projected to Bit