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MAY 14 2018

DISTRICT II-ARTESIA O.C.D.

March 1, 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
Bogle Flats Federal Unit 3 Y1KC #001H
Indian Basin; Upper Penn (Pro Gas)
Eddy County, New Mexico
API# 30-015-29228

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>
Roy Lum	Re-Entry	1,886ft. to 5,811 ft.	02-04-18 to 02-08-18	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\Bogle Flats Fed Unit 3 Y1KC #1HM181014

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



February 19, 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 February 04, 2018, through February 08, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 1,886 feet to a depth of 5,811 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 Bogle Flats Federal Unit 3 Y1KC #001H well, API # **30-015-29228** 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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Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 3-22S-23E Bogle Flats Fed Unit 3 Y1KC
Well: Bogle Flats Fed Unit 3 Y1KC 1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Bogle Flats Fed Unit 3 Y1KC 1H
TVD Reference: 4083 +27 @ 4090.0usft (Silver Oak 3)
MD Reference: 4083 +27 @ 4090.0usft (Silver Oak 3)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project Eddy 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 3-22S-23E Bogle Flats Fed Unit 3 Y1KC

Site Position:		Northing:	515,577.80 usft	Latitude:	32° 25' 1.683 N
From:	Map	Easting:	481,898.50 usft	Longitude:	104° 35' 29.105 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.14 °

Well Bogle Flats Fed Unit 3 Y1KC 1H

Well Position	+N/-S	0.0 usft	Northing:	515,577.80 usft	Latitude:	32° 25' 1.683 N
	+E/-W	0.0 usft	Easting:	481,898.50 usft	Longitude:	104° 35' 29.105 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	4,063.0usft	

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2018	1/10/2018	7.37	60.07	47,878.70073759

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	40.48



Microsoft MWD Surveys



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Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey Program Date 2/9/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,759.0	Gyro Data Gyro Survey #1 (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline
1,888.0	8,888.0	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 (°)
1,759.0	0.21	187.18	1,759.0	8.8	8.8	8.7	40.48
1,888.0	10.00	55.80	1,888.3	12.8	14.9	19.5	49.70
1,918.0	14.80	58.80	1,918.6	16.4	20.8	26.4	51.48
1,948.0	18.60	55.80	1,948.2	21.4	28.1	35.3	52.66
1,981.0	22.00	58.70	1,976.2	27.4	37.4	46.3	53.78
2,013.0	26.30	59.20	2,005.4	34.1	48.8	59.4	54.93
2,044.0	31.00	60.20	2,032.6	41.8	61.4	74.2	55.89
2,076.0	35.20	60.30	2,059.4	50.3	78.6	91.8	56.72
2,107.0	38.90	60.30	2,084.2	58.8	92.8	110.3	57.33
2,139.0	42.20	59.80	2,108.5	68.9	110.9	131.1	57.76
2,171.0	45.10	59.30	2,131.6	81.1	129.9	153.1	58.01
2,203.0	48.30	59.00	2,164.0	92.9	149.8	176.0	58.18
2,234.0	49.80	57.70	2,174.7	108.0	169.2	199.1	58.18
2,266.0	53.10	58.00	2,194.8	118.7	190.1	224.1	58.03
2,297.0	56.40	54.70	2,212.5	133.1	210.9	249.4	57.76
2,329.0	58.90	52.60	2,229.7	149.1	232.7	276.4	57.38
2,361.0	59.60	52.70	2,248.0	168.8	254.8	303.8	56.93
2,392.0	62.50	50.10	2,261.0	182.7	275.8	330.8	56.48
2,424.0	65.30	48.20	2,275.1	201.9	297.1	359.2	55.81
2,455.0	67.90	42.00	2,287.4	222.3	316.9	387.1	54.95
2,487.0	70.80	37.20	2,298.8	245.3	338.0	416.0	53.88



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Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Bogle Flats Fed Unit 3 Y1KC 1H
4083 +27 @ 4080.0usft (Silver Oak 3)
4083 +27 @ 4080.0usft (Silver Oak 3)
Grid
Minimum Curvature
Stryker_EDM

Survey

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (")
2,518.0	72.80	32.30	2,308.8	289.5	352.7	443.9	52.82
2,550.0	74.20	27.50	2,317.8	289.1	358.0	472.3	51.18
2,581.0	75.40	22.70	2,325.9	323.2	360.7	499.4	49.67
2,612.0	77.00	18.40	2,333.3	351.3	391.2	525.8	48.08
2,644.0	78.30	13.90	2,340.1	381.4	399.9	552.6	46.38
2,676.0	78.80	8.70	2,348.5	412.1	406.1	578.5	44.68
2,707.0	79.80	4.30	2,352.4	442.3	406.6	602.8	42.79
2,738.3	79.51	3.91	2,358.0	473.1	411.7	627.2	41.03
LP Bogle Flats Fed Unit 3 Y1KC							
2,739.0	79.50	3.90	2,358.1	473.7	411.8	627.7	41.00
2,771.0	80.10	3.70	2,363.8	505.2	413.9	653.0	39.33
2,802.0	84.10	2.00	2,368.0	535.6	416.4	678.0	37.78
2,834.0	87.30	1.00	2,370.4	567.7	418.2	703.9	36.25
2,866.8	87.98	0.88	2,371.0	598.6	416.4	714.4	35.65
New LP Bogle Flats Fed Unit 3 Y1KC							
2,865.0	88.90	0.70	2,371.5	598.7	416.7	729.4	34.84
2,897.0	90.00	0.50	2,371.8	630.7	417.0	756.1	33.47
2,928.0	90.20	0.40	2,371.7	661.7	417.3	782.3	32.24
2,960.0	90.30	0.50	2,371.6	693.7	417.6	808.6	31.04
2,991.0	90.80	0.50	2,371.3	724.7	417.8	836.6	29.98
3,023.0	90.70	0.50	2,371.0	756.7	418.1	864.6	28.92
3,118.0	89.60	358.90	2,370.7	681.7	417.6	948.6	26.12
3,212.0	89.40	359.20	2,371.5	645.7	416.0	1,033.1	23.76
3,307.0	89.40	358.40	2,372.5	1,040.6	414.0	1,120.0	21.70
3,402.0	88.90	358.00	2,373.9	1,135.6	411.0	1,207.7	19.90
3,497.0	89.80	358.00	2,375.0	1,230.6	407.7	1,296.3	18.33
3,591.0	88.70	357.80	2,376.2	1,324.4	404.3	1,384.6	16.97



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
3,688.0	90.70	358.10	2,376.7	1,419.4	400.9	1,474.9	15.77
3,781.0	90.80	357.80	2,376.7	1,514.3	397.5	1,588.8	14.71
3,878.0	90.20	357.80	2,375.0	1,609.2	393.8	1,656.7	13.76
3,970.0	89.40	357.80	2,375.3	1,703.2	390.1	1,747.2	12.90
4,065.0	88.90	357.40	2,376.7	1,798.1	385.9	1,839.0	12.11
4,169.0	87.80	357.10	2,379.8	1,891.9	381.4	1,930.0	11.40
4,264.0	87.00	357.00	2,384.1	1,986.7	376.6	2,022.0	10.73
4,349.0	86.80	357.80	2,387.6	2,081.5	372.2	2,114.5	10.14
4,443.0	86.30	357.80	2,389.9	2,175.4	368.6	2,206.4	9.82
4,538.0	89.10	357.90	2,392.1	2,270.3	369.0	2,299.5	9.13
4,633.0	91.40	358.90	2,391.7	2,365.3	362.4	2,392.9	8.71
4,727.0	92.80	359.20	2,388.4	2,459.2	360.8	2,485.5	8.35
4,822.0	91.80	359.20	2,384.8	2,554.1	358.6	2,579.3	8.01
4,917.0	91.80	358.90	2,381.9	2,648.1	357.9	2,673.1	7.70
5,012.0	91.40	358.10	2,379.5	2,744.0	355.4	2,766.9	7.38
5,095.0	90.80	357.80	2,377.9	2,828.9	352.5	2,848.8	7.11
5,180.0	89.90	357.90	2,377.3	2,921.8	348.9	2,942.8	6.81
5,265.0	89.50	357.70	2,377.6	3,016.8	345.3	3,036.5	6.53
5,360.0	89.90	357.10	2,376.3	3,111.7	341.0	3,130.3	6.26
5,474.0	89.80	357.10	2,376.7	3,206.6	336.2	3,223.1	5.99
5,569.0	89.10	357.30	2,376.8	3,300.4	331.8	3,317.1	5.74
5,664.0	88.70	357.60	2,381.6	3,396.3	327.6	3,411.1	5.51
5,759.0	88.80	357.70	2,383.8	3,490.2	323.8	3,505.2	5.30
5,811.0	88.60	357.70	2,385.1	3,542.2	321.7	3,556.8	5.19
5,865.0	88.60	357.70	2,386.4	3,595.1	319.5	3,610.3	5.08

5865.0' MD Projected to Bit - PBHL Bogle Flats Fed Unit 3 Y1KC