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Mewbourne Oil Company

Eddy County, N.M. Nad (83)

Section 3-22S-23E Bogle Flats Fed Unit 3 Y1KC

Bogle Flats Fed Unit 3 Y1KC 1H

30.015-29228

Original Hole

Design: Original Hole

Standard Survey Report

09 February, 2018





Microsoft Survey Report



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: 4063 +27 @ 4090.0usft (Silver Oak 3)
MD Reference: 4063 +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	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Section 3-22S-23E Bogle Flats Fed Unit 3 Y1KC

Site Position:		Northing:	515,577.80 usft	Latitude:	32° 25' 1.653 N
From:	Map	Easting:	461,698.50 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' 1.653 N
	+E/-W	0.0 usft	Easting:	461,698.50 usft	Longitude:	104° 35' 29.105 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level:	4,063.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/10/2018	7.37	60.07	47,878.70073760

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	40.46

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
1,886.0	5,865.0	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	0.13	299.22	100.0	0.1	-0.1	0.0	0.13	0.13	0.00
200.0	0.13	253.56	200.0	0.1	-0.3	-0.1	0.10	0.00	-45.66
300.0	0.08	251.32	300.0	0.0	-0.5	-0.3	0.05	-0.05	-2.24
400.0	0.09	100.00	400.0	0.0	-0.5	-0.3	0.16	0.01	-151.32
500.0	0.21	35.03	500.0	0.1	-0.3	-0.1	0.19	0.12	-64.97
600.0	0.42	28.88	600.0	0.6	0.0	0.4	0.21	0.21	-6.15
700.0	0.49	32.52	700.0	1.3	0.4	1.2	0.08	0.07	3.64
800.0	0.35	21.07	800.0	1.9	0.7	1.9	0.16	-0.14	-11.45
900.0	0.42	44.51	900.0	2.5	1.1	2.6	0.17	0.07	23.44

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bogle Flats Fed Unit 3 Y1KC 1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	4063 +27 @ 4090.0usft (Silver Oak 3)
Site:	Section 3-22S-23E Bogle Flats Fed Unit 3 Y1KC	MD Reference:	4063 +27 @ 4090.0usft (Silver Oak 3)
Well:	Bogle Flats Fed Unit 3 Y1KC 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)
1,000.0	0.54	48.35	1,000.0	3.0	1.7	3.4	0.12	0.12	3.84
1,100.0	0.62	58.07	1,100.0	3.6	2.5	4.4	0.13	0.08	9.72
1,200.0	0.48	39.79	1,200.0	4.3	3.3	5.3	0.22	-0.14	-18.28
1,300.0	0.47	30.60	1,300.0	4.9	3.7	6.2	0.08	-0.01	-9.19
1,400.0	0.59	37.01	1,400.0	5.7	4.3	7.1	0.13	0.12	6.41
1,500.0	0.40	52.09	1,500.0	6.3	4.8	7.9	0.23	-0.19	15.08
1,600.0	0.17	55.41	1,600.0	6.6	5.2	8.4	0.23	-0.23	3.32
1,700.0	0.18	85.26	1,700.0	6.7	5.5	8.7	0.09	0.01	29.85
1,750.0	0.19	149.19	1,750.0	6.6	5.6	8.7	0.39	0.02	127.87
1750' MD Gyro Data Survey									
1,759.0	0.21	157.16	1,759.0	6.6	5.6	8.7	0.39	0.24	88.52
1,886.0	10.00	55.80	1,885.3	12.6	14.9	19.3	7.91	7.71	-79.81
1,918.0	14.90	56.80	1,916.6	16.4	20.6	25.9	15.33	15.31	3.13
1,949.0	18.60	55.80	1,946.2	21.4	28.1	34.5	11.97	11.94	-3.23
1,981.0	22.00	58.70	1,976.2	27.4	37.4	45.1	11.08	10.63	9.06
2,013.0	26.30	59.20	2,005.4	34.1	48.6	57.5	13.45	13.44	1.56
2,044.0	31.00	60.20	2,032.6	41.6	61.4	71.5	15.24	15.16	3.23
2,076.0	35.20	60.30	2,059.4	50.3	76.6	88.0	13.13	13.13	0.31
2,107.0	38.90	60.30	2,084.2	59.5	92.8	105.5	11.94	11.94	0.00
2,139.0	42.20	59.80	2,108.5	69.9	110.9	125.1	10.36	10.31	-1.56
2,171.0	45.10	59.30	2,131.6	81.1	129.9	146.0	9.13	9.06	-1.56
2,203.0	46.30	59.00	2,154.0	92.9	149.6	167.7	3.81	3.75	-0.94
2,234.0	49.80	57.70	2,174.7	105.0	169.2	189.7	11.71	11.29	-4.19
2,266.0	53.10	56.00	2,194.6	118.7	190.1	213.7	11.12	10.31	-5.31
2,297.0	56.40	54.70	2,212.5	133.1	210.9	238.1	11.18	10.65	-4.19
2,329.0	58.90	52.60	2,229.7	149.1	232.7	264.4	9.58	7.81	-6.56
2,361.0	59.60	52.70	2,246.0	165.8	254.6	291.3	2.20	2.19	0.31
2,392.0	62.50	50.10	2,261.0	182.7	275.8	317.9	11.89	9.35	-8.39
2,424.0	65.30	46.20	2,275.1	201.9	297.1	346.4	14.01	8.75	-12.19
2,455.0	67.90	42.00	2,287.4	222.3	316.9	374.8	15.00	8.39	-13.55
2,487.0	70.50	37.20	2,298.8	245.3	336.0	404.7	16.20	8.13	-15.00
2,518.0	72.60	32.30	2,308.6	269.5	352.7	433.9	16.45	6.77	-15.81
2,550.0	74.20	27.50	2,317.8	296.1	368.0	464.1	15.22	5.00	-15.00
2,581.0	75.40	22.70	2,325.9	323.2	380.7	492.9	15.43	3.87	-15.48
2,612.0	77.00	18.40	2,333.3	351.3	391.2	521.2	14.42	5.16	-13.87
2,644.0	78.30	13.90	2,340.1	381.4	399.9	549.7	14.32	4.06	-14.06
2,676.0	78.60	8.70	2,346.5	412.1	406.1	577.1	15.95	0.94	-16.25
2,707.0	79.80	4.30	2,352.4	442.3	409.5	602.3	14.47	3.87	-14.19
2,738.3	79.51	3.91	2,358.0	473.1	411.7	627.1	1.55	-0.94	-1.25
LP Bogle Flats Fed Unit 3 Y1KC									
2,739.0	79.50	3.90	2,358.1	473.7	411.8	627.7	1.55	-0.94	-1.25
2,771.0	80.10	3.70	2,363.8	505.2	413.9	652.9	1.97	1.88	-0.63
2,802.0	84.10	2.00	2,368.0	535.8	415.4	677.2	14.00	12.90	-5.48



Microsoft Survey Report



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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,834.0	87.30	1.00	2,370.4	567.7	416.2	702.0	10.47	10.00	-3.13
2,846.8	87.96	0.88	2,371.0	580.5	416.4	711.9	5.25	5.16	-0.97
New LP Bogle Flats Fed Unit 3 Y1KC									
2,865.0	88.90	0.70	2,371.5	598.7	416.7	725.9	5.25	5.16	-0.97
2,897.0	90.00	0.50	2,371.8	630.7	417.0	750.5	3.49	3.44	-0.63
2,928.0	90.20	0.40	2,371.7	661.7	417.3	774.2	0.72	0.65	-0.32
2,960.0	90.30	0.50	2,371.6	693.7	417.5	798.7	0.44	0.31	0.31
2,991.0	90.60	0.50	2,371.3	724.7	417.8	822.5	0.97	0.97	0.00
3,023.0	90.70	0.50	2,371.0	756.7	418.1	847.0	0.31	0.31	0.00
3,118.0	89.60	358.90	2,370.7	851.7	417.6	918.9	2.04	-1.16	-1.68
3,212.0	89.40	359.20	2,371.5	945.7	416.0	989.4	0.38	-0.21	0.32
3,307.0	89.40	358.40	2,372.5	1,040.6	414.0	1,060.4	0.84	0.00	-0.84
3,402.0	88.90	358.00	2,373.9	1,135.6	411.0	1,130.7	0.67	-0.53	-0.42
3,497.0	89.80	358.00	2,375.0	1,230.5	407.7	1,200.8	0.95	0.95	0.00
3,591.0	88.70	357.80	2,376.2	1,324.4	404.3	1,270.0	1.19	-1.17	-0.21
3,686.0	90.70	358.10	2,376.7	1,419.4	400.9	1,340.0	2.13	2.11	0.32
3,781.0	90.60	357.80	2,375.7	1,514.3	397.5	1,410.0	0.33	-0.11	-0.32
3,876.0	90.20	357.80	2,375.0	1,609.2	393.8	1,479.9	0.42	-0.42	0.00
3,970.0	89.40	357.60	2,375.3	1,703.2	390.1	1,548.9	0.88	-0.85	-0.21
4,065.0	88.90	357.40	2,376.7	1,798.1	385.9	1,618.4	0.57	-0.53	-0.21
4,159.0	87.60	357.10	2,379.6	1,891.9	381.4	1,686.9	1.42	-1.38	-0.32
4,254.0	87.00	357.00	2,384.1	1,986.7	376.5	1,755.8	0.64	-0.63	-0.11
4,349.0	88.80	357.80	2,387.6	2,081.5	372.2	1,825.2	2.07	1.89	0.84
4,443.0	88.30	357.80	2,389.9	2,175.4	368.6	1,894.3	0.53	-0.53	0.00
4,538.0	89.10	357.90	2,392.1	2,270.3	365.0	1,964.2	0.85	0.84	0.11
4,633.0	91.40	358.90	2,391.7	2,365.3	362.4	2,034.7	2.64	2.42	1.05
4,727.0	92.60	359.20	2,388.4	2,459.2	360.8	2,105.1	1.32	1.28	0.32
4,822.0	91.80	359.20	2,384.8	2,554.1	359.5	2,176.5	0.84	-0.84	0.00
4,917.0	91.60	358.90	2,381.9	2,649.1	357.9	2,247.7	0.38	-0.21	-0.32
5,012.0	91.40	358.10	2,379.5	2,744.0	355.4	2,318.3	0.87	-0.21	-0.84
5,095.0	90.80	357.80	2,377.9	2,826.9	352.5	2,379.5	0.81	-0.72	-0.36
5,190.0	89.90	357.90	2,377.3	2,921.8	348.9	2,449.4	0.95	-0.95	0.11
5,285.0	89.50	357.70	2,377.8	3,016.8	345.3	2,519.3	0.47	-0.42	-0.21
5,380.0	89.90	357.10	2,378.3	3,111.7	341.0	2,588.7	0.76	0.42	-0.63
5,474.0	89.60	357.10	2,378.7	3,205.6	336.2	2,657.0	0.32	-0.32	0.00
5,569.0	89.10	357.30	2,379.8	3,300.4	331.6	2,726.2	0.57	-0.53	0.21
5,664.0	88.70	357.80	2,381.6	3,395.3	327.5	2,795.7	0.67	-0.42	0.53
5,759.0	88.60	357.70	2,383.8	3,490.2	323.8	2,865.5	0.15	-0.11	-0.11
5,811.0	88.60	357.70	2,385.1	3,542.2	321.7	2,903.7	0.00	0.00	0.00
5,865.0	88.60	357.70	2,386.4	3,596.1	319.5	2,943.3	0.00	0.00	0.00

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

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Bogle Flats Fed Unit 3 Y1KC 1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	4063 +27 @ 4090.0usft (Silver Oak 3)
Site:	Section 3-22S-23E Bogle Flats Fed Unit 3 Y1KC	MD Reference:	4063 +27 @ 4090.0usft (Silver Oak 3)
Well:	Bogle Flats Fed Unit 3 Y1KC 1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,750.0	1,750.0	6.6	5.6	1750' MD Gyro Data Survey
5,865.0	2,386.4	3,596.1	319.5	5865.0' MD Projected to Bit



COMPANY: Mewbourne Oil Company
WELL: Bogle Flats Fed Unit 3 Y1KC 1H
COUNTY: Eddy County, N.M. Nad (83)
DATUM: North American Datum 1983
RIG: Silver Oak 3



Grid Correction MWD: To convert a Magnetic Direction to a Grid Direction, Add 7.51°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico Eastern Zone
4063 +27 @ 4090.0usft (Silver Oak 3)
GROUND ELEVATION: 4063.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	515577.80	461698.50	32° 25' 1.653 N	104° 35' 29.105 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1820.0	0.00	0.00	1820.0	0.0	0.0	0.00	0.00	0.0	
3	1903.3	5.00	58.00	1903.2	1.9	3.1	6.00	58.00	2.2	
4	2265.5	53.61	57.59	2209.7	94.0	148.4	13.42	-0.44	107.4	
5	2743.2	89.63	0.12	2370.0	476.7	330.6	13.42	-69.58	505.4	LP Bogle Flats Fed Unit 3 Y1KC
6	5875.3	89.63	0.12	2390.0	3608.7	337.1	0.00	0.00	3624.4	PBHL Bogle Flats Fed Unit 3 Y1KC

SHL 1647' FSL; 1651' FWL
Section 3-22S-23E
PBHL 330' FNL; 1980' FWL
Section 3-22S-23E

