



NM OIL CONSERVATION
ARTESIA DISTRICT

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30-015-43786

Mewbourne Oil Company .

Eddy County, New Mexico

Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H

Pavo Macho 31 B2MP Fed #1H

Original Hole

Design: Original Hole

Standard Survey Report

14 July, 2016





Stryker Directional Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TYD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H

Site Position: **Northings:** 617,901.70 usft **Latitude:** 32° 41' 54.707 N
From: Map **Easting:** 565,413.50 usft **Longitude:** 104° 7' 14.487 W
Position Uncertainty: 0.0 usft **Slot Radius:** 13-3/16 " **Grid Convergence:** 0.11 °

Well Pavo Macho 31 B2MP Fed #1H

Well Position **+N/-S** 0.0 usft **Northings:** 617,901.70 usft **Latitude:** 32° 41' 54.707 N
+E/-W 0.0 usft **Easting:** 565,413.50 usft **Longitude:** 104° 7' 14.487 W
Position Uncertainty 0.0 usft **Wellhead Elevation:** 25.0 usft **Ground Level:** 3,389.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/20/2016	7.35	60.42	48,263

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	255.00

Survey Program Date 7/14/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	5,240.0	Phoenix Tech Gyro Survey #1 (Original Hc	GyroFlex	
5,357.0	11,914.0	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	0.30	246.00	100.0	-0.1	-0.2	0.3	0.30	0.30	0.00
200.0	0.41	230.95	200.0	-0.4	-0.8	0.8	0.14	0.11	-15.05
300.0	0.45	211.43	300.0	-1.0	-1.2	1.5	0.15	0.04	-19.52
400.0	0.50	153.81	400.0	-1.7	-1.3	1.7	0.46	0.05	-57.62
500.0	0.71	130.70	500.0	-2.5	-0.6	1.2	0.32	0.21	-23.11
600.0	1.01	86.56	600.0	-2.9	0.8	0.0	0.70	0.30	-44.14
700.0	1.21	82.32	700.0	-2.7	2.7	-1.9	0.22	0.20	-4.24
800.0	0.64	94.91	799.9	-2.6	4.3	-3.5	0.60	-0.57	12.59



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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)
900.0	0.55	83.86	899.9	-2.6	5.3	-4.5	0.15	-0.09	-11.05
1,000.0	0.57	106.31	999.9	-2.7	6.3	-5.4	0.22	0.02	22.45
1,100.0	0.51	76.68	1,099.9	-2.7	7.2	-6.2	0.28	-0.06	-29.63
1,200.0	0.27	134.55	1,199.9	-2.8	7.8	-6.8	0.43	-0.24	57.87
1,300.0	0.20	241.68	1,299.9	-3.0	7.8	-6.8	0.38	-0.07	107.13
1,400.0	0.67	93.03	1,399.9	-3.1	8.2	-7.1	0.85	0.47	-148.65
1,500.0	0.13	58.71	1,499.9	-3.1	8.9	-7.8	0.57	-0.54	-34.32
1,600.0	0.21	292.78	1,599.9	-3.0	8.8	-7.8	0.31	0.08	-125.93
1,700.0	0.45	32.68	1,699.9	-2.6	8.9	-7.9	0.53	0.24	99.90
1,800.0	0.24	174.50	1,799.9	-2.4	9.1	-8.2	0.66	-0.21	141.82
1,900.0	0.29	216.14	1,899.9	-2.9	9.0	-7.9	0.19	0.05	41.64
2,000.0	0.51	204.31	1,999.9	-3.5	8.7	-7.5	0.23	0.22	-11.83
2,100.0	0.54	218.69	2,099.9	-4.2	8.2	-6.8	0.13	0.03	14.38
2,200.0	0.60	230.01	2,199.9	-5.0	7.5	-5.9	0.13	0.06	11.32
2,300.0	0.63	258.18	2,299.9	-5.4	6.5	-4.9	0.30	0.03	28.17
2,400.0	0.46	230.75	2,399.9	-5.8	5.7	-4.0	0.31	-0.17	-27.43
2,500.0	0.18	120.32	2,499.9	-6.1	5.5	-3.8	0.55	-0.28	-110.43
2,600.0	0.34	214.47	2,599.9	-6.4	5.5	-3.6	0.40	0.16	94.15
2,700.0	0.62	273.49	2,699.9	-6.6	4.8	-2.9	0.53	0.28	59.02
2,800.0	0.72	245.59	2,799.9	-6.9	3.7	-1.8	0.34	0.10	-27.90
2,900.0	0.49	166.18	2,899.9	-7.5	3.2	-1.1	0.79	-0.23	-79.41
3,000.0	0.48	235.76	2,999.9	-8.2	3.0	-0.7	0.55	-0.01	69.58
3,100.0	0.55	203.24	3,099.9	-8.9	2.4	0.0	0.30	0.07	-32.52
3,200.0	0.54	233.00	3,199.9	-9.6	1.9	0.7	0.28	-0.01	29.76
3,300.0	0.55	241.98	3,299.9	-10.1	1.1	1.6	0.09	0.01	8.98
3,400.0	1.30	247.44	3,399.9	-10.8	-0.4	3.2	0.75	0.75	5.46
3,500.0	0.97	272.95	3,499.8	-11.2	-2.3	5.1	0.60	-0.33	25.51
3,600.0	1.16	256.63	3,599.8	-11.3	-4.1	6.9	0.36	0.19	-16.32
3,700.0	1.15	257.34	3,699.8	-11.8	-6.1	9.0	0.02	-0.01	0.71
3,800.0	1.72	270.46	3,799.8	-12.0	-8.6	11.4	0.65	0.57	13.12
3,900.0	1.51	283.14	3,899.7	-11.7	-11.4	14.0	0.41	-0.21	12.68
4,000.0	1.53	272.31	3,999.7	-11.3	-14.0	16.4	0.29	0.02	-10.83
4,100.0	1.46	277.09	4,099.7	-11.1	-16.6	18.9	0.14	-0.07	4.78
4,200.0	0.93	239.36	4,199.6	-11.4	-18.5	20.9	0.92	-0.53	-37.73
4,300.0	1.47	251.75	4,299.6	-12.2	-20.5	22.9	0.60	0.54	12.39
4,400.0	1.05	216.36	4,399.6	-13.3	-22.2	24.9	0.86	-0.42	-35.39
4,500.0	1.12	269.33	4,499.6	-14.1	-23.7	26.6	0.97	0.07	52.97
4,600.0	1.83	287.49	4,599.5	-13.6	-26.2	28.9	0.84	0.71	18.16
4,700.0	1.95	283.78	4,699.5	-12.7	-29.4	31.7	0.17	0.12	-3.71
4,800.0	2.12	275.02	4,799.4	-12.2	-32.9	34.9	0.35	0.17	-8.76
4,900.0	2.46	265.69	4,899.3	-12.2	-36.9	38.8	0.50	0.34	-9.33
5,000.0	2.86	258.73	4,999.2	-12.8	-41.5	43.4	0.51	0.40	-6.96



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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)
5,100.0	3.69	258.87	5,099.1	-13.9	-47.1	49.1	0.83	0.83	0.14
5,200.0	5.19	262.44	5,198.8	-15.1	-54.7	56.8	1.52	1.50	3.57
5,240.0	5.64	261.40	5,238.6	-15.7	-58.5	60.5	1.15	1.13	-2.60
5240' MD Phoenix Gyro's									
5,357.0	5.20	261.40	5,355.1	-17.3	-69.4	71.5	0.38	-0.38	0.00
5,451.0	3.00	268.50	5,448.8	-18.0	-76.1	78.1	2.40	-2.34	7.55
5,545.0	1.60	288.70	5,542.7	-17.7	-79.8	81.6	1.70	-1.49	21.49
5,640.0	1.80	289.00	5,637.7	-16.8	-82.4	84.0	0.21	0.21	0.32
5,735.0	1.10	296.00	5,732.7	-15.9	-84.7	85.9	0.76	-0.74	7.37
5,831.0	1.40	287.90	5,828.7	-15.1	-86.6	87.6	0.36	0.31	-8.44
5,926.0	0.10	49.10	5,923.6	-14.7	-87.7	88.5	1.53	-1.37	127.58
6,021.0	0.20	309.40	6,018.6	-14.5	-87.7	88.5	0.25	0.11	-104.95
6,115.0	0.80	279.30	6,112.6	-14.3	-88.5	89.2	0.68	0.64	-32.02
6,211.0	1.10	252.30	6,208.6	-14.5	-90.0	90.7	0.55	0.31	-28.13
6,307.0	1.50	238.10	6,304.6	-15.4	-92.0	92.8	0.53	0.42	-14.79
6,402.0	0.90	230.00	6,399.6	-16.6	-93.6	94.7	0.65	-0.63	-8.53
6,497.0	1.20	203.70	6,494.6	-18.0	-94.6	96.0	0.59	0.32	-27.68
6,593.0	1.60	200.70	6,590.5	-20.1	-95.5	97.4	0.42	0.42	-3.13
6,689.0	1.00	233.70	6,686.5	-21.9	-96.6	99.0	0.98	-0.63	34.38
6,784.0	1.20	237.60	6,781.5	-22.9	-98.1	100.7	0.22	0.21	4.11
6,879.0	1.10	253.60	6,876.5	-23.7	-99.8	102.6	0.35	-0.11	16.84
6,975.0	1.20	246.70	6,972.5	-24.4	-101.6	104.5	0.18	0.10	-7.19
6,994.0	1.10	240.60	6,991.5	-24.5	-102.0	104.8	0.83	-0.53	-32.11
7,026.0	1.60	103.10	7,023.4	-24.8	-101.8	104.8	7.88	1.56	-429.69
7,058.0	6.00	92.70	7,055.4	-25.0	-99.7	102.8	13.86	13.75	-32.50
7,089.0	10.10	87.20	7,086.1	-24.9	-95.4	98.6	13.44	13.23	-17.74
7,121.0	15.00	85.00	7,117.3	-24.4	-88.4	91.7	15.38	15.31	-6.88
7,153.0	19.70	85.40	7,147.8	-23.6	-78.9	82.3	14.69	14.69	1.25
7,184.0	23.70	86.40	7,176.6	-22.8	-67.5	71.1	12.96	12.90	3.23
7,216.0	26.60	87.30	7,205.6	-22.1	-53.9	57.8	9.14	9.06	2.81
7,248.0	29.20	87.70	7,233.9	-21.4	-39.0	43.2	8.15	8.13	1.25
7,279.0	31.40	88.80	7,260.6	-20.9	-23.3	28.0	7.32	7.10	3.55
7,311.0	33.00	90.40	7,287.7	-20.8	-6.3	11.5	5.67	5.00	5.00
7,343.0	33.00	92.20	7,314.5	-21.2	11.1	-5.3	3.06	0.00	5.63
7,375.0	34.50	92.80	7,341.1	-22.0	28.9	-22.2	4.80	4.69	1.88
7,407.0	37.80	93.20	7,367.0	-23.0	47.8	-40.2	10.34	10.31	1.25
7,439.0	41.00	91.40	7,391.7	-23.8	68.0	-59.6	10.62	10.00	-5.63
7,470.0	43.50	91.80	7,414.6	-24.4	88.9	-79.5	8.11	8.06	1.29
7,502.0	48.00	93.60	7,437.0	-25.5	111.8	-101.4	14.63	14.06	5.63
7,533.0	52.70	94.20	7,456.7	-27.1	135.6	-123.9	15.23	15.16	1.94
7,565.0	56.20	91.00	7,475.4	-28.3	161.6	-148.7	13.63	10.94	-10.00
7,597.0	58.40	89.30	7,492.6	-28.3	188.5	-174.7	8.20	6.88	-5.31
7,627.0	59.20	89.30	7,508.2	-28.0	214.2	-199.6	2.67	2.67	0.00



Stryker Directional

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7,659.0	62.90	88.50	7,523.7	-27.5	242.1	-226.8	11.77	11.56	-2.50
7,689.0	67.00	88.50	7,536.4	-26.8	269.3	-253.2	13.67	13.67	0.00
7,721.0	70.50	89.90	7,548.0	-26.4	299.1	-282.1	11.67	10.94	4.38
7,753.0	72.40	91.00	7,558.1	-26.6	329.5	-311.3	6.77	5.94	3.44
7,785.0	73.30	92.40	7,567.6	-27.5	360.0	-340.6	5.04	2.81	4.38
7,817.0	77.60	93.50	7,575.6	-29.1	390.9	-370.1	13.84	13.44	3.44
7,849.0	82.50	92.80	7,581.1	-30.8	422.4	-400.0	15.46	15.31	-2.19
7,874.0	84.30	91.40	7,584.0	-31.7	447.2	-423.8	9.10	7.20	-5.60
7,906.0	85.40	90.30	7,586.9	-32.2	479.1	-454.4	4.85	3.44	-3.44
7,938.0	86.40	89.70	7,589.2	-32.2	511.0	-485.2	3.64	3.13	-1.88
8,033.0	91.20	90.10	7,591.2	-32.0	606.0	-577.0	5.07	5.05	0.42
8,129.0	89.20	89.50	7,590.8	-31.7	702.0	-669.8	2.18	-2.08	-0.63
8,224.0	90.80	90.60	7,590.8	-31.8	796.9	-761.5	2.04	1.68	1.16
8,319.0	85.30	88.40	7,594.1	-31.0	891.8	-853.4	6.23	-5.79	-2.32
8,413.0	87.50	89.90	7,600.0	-29.6	985.6	-944.4	2.83	2.34	1.60
8,509.0	87.50	89.90	7,604.2	-29.4	1,081.6	-1,037.1	0.00	0.00	0.00
8,604.0	88.10	89.80	7,607.8	-29.2	1,176.5	-1,128.8	0.64	0.63	-0.11
8,699.0	89.20	89.30	7,610.0	-28.4	1,271.5	-1,220.7	1.27	1.16	-0.53
8,794.0	89.70	89.00	7,611.0	-27.0	1,366.4	-1,312.9	0.61	0.53	-0.32
8,889.0	88.10	90.00	7,612.8	-26.2	1,461.4	-1,404.8	1.99	-1.68	1.05
8,984.0	89.20	90.00	7,615.0	-26.2	1,556.4	-1,496.5	1.16	1.16	0.00
9,079.0	92.00	90.70	7,614.0	-26.8	1,651.4	-1,588.1	3.04	2.95	0.74
9,173.0	89.50	91.70	7,612.8	-28.7	1,745.3	-1,678.4	2.86	-2.66	1.06
9,268.0	85.40	90.60	7,617.0	-30.6	1,840.2	-1,769.5	4.47	-4.32	-1.16
9,362.0	86.30	90.50	7,623.8	-31.5	1,933.9	-1,859.8	0.96	0.96	-0.11
9,457.0	87.10	89.90	7,629.3	-31.9	2,028.8	-1,951.4	1.05	0.84	-0.63
9,553.0	87.80	89.90	7,633.6	-31.7	2,124.7	-2,044.0	0.73	0.73	0.00
9,647.0	89.10	90.10	7,636.1	-31.7	2,218.6	-2,134.8	1.40	1.38	0.21
9,742.0	88.70	90.20	7,637.9	-31.9	2,313.6	-2,226.5	0.43	-0.42	0.11
9,837.0	89.50	89.90	7,639.4	-32.0	2,408.6	-2,318.2	0.90	0.64	-0.32
9,931.0	88.30	89.90	7,641.2	-31.9	2,502.6	-2,409.0	1.28	-1.28	0.00
10,027.0	88.70	89.90	7,643.7	-31.7	2,598.6	-2,501.8	0.42	0.42	0.00
10,122.0	89.50	89.60	7,645.2	-31.3	2,693.6	-2,593.6	0.90	0.84	-0.32
10,217.0	90.30	88.90	7,645.4	-30.0	2,788.5	-2,685.7	1.12	0.84	-0.74
10,312.0	89.10	90.00	7,645.9	-29.1	2,883.5	-2,777.7	1.71	-1.26	1.16
10,406.0	88.40	91.80	7,647.9	-30.6	2,977.5	-2,868.1	2.05	-0.74	1.91
10,502.0	89.20	91.60	7,650.0	-33.4	3,073.4	-2,960.0	0.86	0.83	-0.21
10,596.0	90.30	90.70	7,650.4	-35.3	3,167.4	-3,050.3	1.51	1.17	-0.96
10,691.0	88.60	91.20	7,651.3	-36.9	3,262.4	-3,141.6	1.87	-1.79	0.53
10,786.0	88.80	91.30	7,653.4	-39.0	3,357.3	-3,232.8	0.24	0.21	0.11
10,881.0	89.30	90.90	7,655.0	-40.8	3,452.3	-3,324.0	0.67	0.53	-0.42
10,976.0	89.60	90.40	7,655.9	-41.9	3,547.3	-3,415.5	0.61	0.32	-0.53



Stryker Directional Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
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)
11,071.0	90.30	89.90	7,656.0	-42.1	3,642.3	-3,507.2	0.91	0.74	-0.53
11,166.0	89.00	90.10	7,656.6	-42.1	3,737.3	-3,599.0	1.38	-1.37	0.21
11,261.0	88.20	89.80	7,658.9	-42.0	3,832.3	-3,690.7	0.90	-0.84	-0.32
11,356.0	88.70	89.30	7,661.5	-41.3	3,927.2	-3,782.6	0.74	0.53	-0.53
11,451.0	88.60	88.50	7,663.7	-39.5	4,022.2	-3,874.8	0.85	-0.11	-0.84
11,546.0	88.20	88.80	7,666.4	-37.2	4,117.1	-3,967.1	0.53	-0.42	0.32
11,641.0	88.80	87.80	7,668.8	-34.4	4,212.0	-4,059.5	1.23	0.63	-1.05
11,736.0	89.10	87.70	7,670.6	-30.7	4,307.0	-4,152.2	0.33	0.32	-0.11
11,831.0	89.80	87.60	7,671.5	-26.8	4,401.9	-4,244.8	0.74	0.74	-0.11
11,860.0	90.20	87.40	7,671.5	-25.5	4,430.8	-4,273.2	1.54	1.38	-0.69
11,914.0	90.20	87.40	7,671.3	-23.1	4,484.8	-4,325.9	0.00	0.00	0.00

11914' MD Projected to Bit

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,240.0	5,238.6	-15.7	-58.5	5240' MD Phoenix Gyro's
11,914.0	7,671.3	-23.1	4,484.8	11914' MD Projected to Bit



July 27, 2016

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

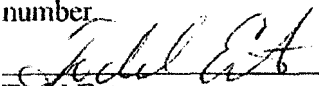
Attn: Jackie Lathan

Re: Mewbourne Oil Company
Pavo Macho 31 B2MP Federal #001H
Palmillo; Bone Spring, East
Eddy County, New Mexico
API# 30-015-43786

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>
Keith Broussard	Original Hole	5,357ft. to 11,860ft.	07-05-16 to 07-15-16	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\Pavo Macho 31 B2MP Federal #1H\M161046

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



July 27, 2016

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 July 05, 2016, through July 15, 2016 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 5,357 feet to a depth of 11,860 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 Pavo Macho 31 B2MP Federal #001H well, API # **30-015-43786** 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

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

Stryker Directional
Pavo Macho 31 B2MP Fed #1H

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project: Eddy County, New Mexico

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H

Site Position:		Northing:	617,901.70 usft	Latitude:	32° 41' 54.707 N
From:	Map	Easting:	565,413.50 usft	Longitude:	104° 7' 14.487 W
Position Uncertainty:	0.0 usft	Slot Radius:	13 3/16 "	Grid Convergence:	0.11 °

Well: Pavo Macho 31 B2MP Fed #1H

Well Position	+N/-S	0.0 usft	Northing:	617,901.70 usft	Latitude:	32° 41' 54.707 N
	+E/-W	0.0 usft	Easting:	565,413.50 usft	Longitude:	104° 7' 14.487 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	25.0 usft	Ground Level:	3,389.0 usft

Wellbore: Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/20/2016	7.34	60.42	48,263

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	255.00

Stryker Directional
Pavo Macho 31 B2MP Fed #1H

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #1
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey Program **Date** 7/14/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	5,240.0	Phoenix Tech Gyro Survey #1 (Original Hole)	GyroFlex	
5,357.0	11,914.0	MWD Survey (Original Hole)	MWD	MWD v3 standard declination

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	D Leg (°/100usft)
5,240.0	5.64	261.40	5,238.6	-15.7	-58.5	60.5	60.5	255.00	0.00
5,357.0	5.20	261.40	5,355.1	-17.3	-69.4	71.5	71.5	255.98	0.38
5,451.0	3.00	268.50	5,448.8	-18.0	-76.1	78.1	78.2	256.67	2.40
5,545.0	1.60	288.70	5,542.7	-17.7	-79.8	81.6	81.7	257.51	1.70
5,640.0	1.80	289.00	5,637.7	-18.8	-82.4	84.0	84.1	258.51	0.21
5,735.0	1.10	296.00	5,732.7	-15.9	-84.7	85.9	86.1	259.38	0.76
5,831.0	1.40	287.90	5,828.7	15.1	-86.6	87.6	87.9	260.10	0.36
5,926.0	0.10	49.10	5,923.6	-14.7	-87.7	88.5	88.9	260.48	1.53
6,021.0	0.20	309.40	6,018.6	14.5	-87.7	88.5	88.9	260.59	0.25
6,115.0	0.80	279.30	6,112.6	-14.3	-88.5	89.2	89.6	260.80	0.68
6,211.0	1.10	257.30	6,208.6	-14.5	-90.0	90.7	91.2	260.86	0.55
6,307.0	1.50	238.10	6,304.6	15.4	-92.0	92.8	93.3	260.47	0.53
6,402.0	0.90	239.00	6,399.6	-16.6	-93.6	94.7	95.1	259.98	0.65
6,497.0	1.20	203.70	6,494.6	-18.0	-94.6	96.0	96.3	259.24	0.59
6,593.0	1.60	200.70	6,590.5	-20.1	-95.5	97.4	97.6	258.08	0.42
6,689.0	1.00	233.70	6,686.5	-21.9	-96.6	99.0	99.1	257.23	0.98
6,784.0	1.20	237.60	6,781.5	-22.9	-96.1	100.7	100.8	256.85	0.22
6,879.0	1.10	253.60	6,876.5	-23.7	-99.8	102.6	102.6	256.64	0.35
6,975.0	1.20	246.70	6,972.5	-24.4	-101.6	104.5	104.5	256.52	0.18
6,994.0	1.10	249.60	6,991.5	24.5	-102.0	104.8	104.9	256.47	0.83
7,026.0	1.60	103.10	7,023.4	-24.8	-101.8	104.8	104.8	256.32	7.88

Stryker Directional
Pavo Macho 31 B2MP Fed #1H

Company: Newbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31 18S-29E Pavo Macho 31 B2MP Fed #1H
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414 Dusb (Patterson 231)
MD Reference: 3389 + 25 @ 3414 Dusb (Patterson 231)
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)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLog (°/100usft)
7,058.0	6.00	92.70	7,055.4	-25.0	-99.7	102.8	102.8	255.94	13.86
7,089.0	10.10	87.20	7,086.1	-24.9	-95.4	98.6	98.6	255.36	13.44
7,121.0	15.00	85.00	7,117.3	-24.4	-88.4	91.7	91.7	254.57	15.38
7,153.0	19.70	85.40	7,147.8	-23.6	-78.9	82.3	82.4	253.34	14.69
7,184.0	23.70	86.40	7,176.6	-22.8	-67.6	71.1	71.2	251.33	12.96
7,216.0	26.60	87.30	7,205.6	-22.1	-53.8	57.8	58.3	247.74	9.14
7,248.0	29.20	87.70	7,233.9	-21.4	-39.0	43.2	44.5	241.20	8.15
7,279.0	31.40	88.60	7,260.6	-20.9	-23.3	28.0	31.3	228.08	7.32
7,311.0	33.00	89.40	7,287.7	-20.8	-6.3	11.5	21.8	196.77	5.67
7,343.0	33.00	92.20	7,314.5	-21.2	11.1	-5.3	24.0	152.30	3.06
7,375.0	34.50	92.80	7,341.1	-22.0	28.9	-22.2	36.3	127.26	4.80
7,407.0	37.80	93.20	7,367.0	-23.0	47.8	-40.2	53.0	115.71	10.34
7,439.0	41.00	91.40	7,391.7	-23.8	68.0	59.6	72.1	109.28	10.82
7,470.0	43.50	91.80	7,414.6	-24.4	68.9	-79.5	92.2	105.34	8.11
7,502.0	48.00	93.60	7,437.0	-25.5	111.8	-101.4	114.6	102.84	14.63
7,533.0	52.70	94.20	7,456.7	-27.1	135.6	-123.9	138.3	101.30	15.23
7,565.0	56.20	91.00	7,475.4	-28.3	161.6	148.7	164.0	99.92	13.63
7,597.0	56.40	89.30	7,492.6	-28.3	188.5	174.7	190.8	98.55	8.20
7,627.0	59.20	89.30	7,508.2	-28.0	214.2	199.6	216.0	97.45	2.67
7,659.0	62.90	88.50	7,523.7	-27.5	242.1	-226.6	243.7	96.47	11.77
7,689.0	67.00	88.50	7,536.4	-26.8	269.3	-253.2	270.6	95.68	13.67
7,721.0	70.50	89.90	7,548.0	-26.4	299.1	-282.1	300.3	95.03	11.67
7,753.0	72.40	91.00	7,558.1	-26.6	329.5	-311.3	330.6	94.61	8.77
7,785.0	73.30	92.40	7,567.6	-27.5	360.0	340.8	361.1	94.37	6.04
7,817.0	77.80	93.50	7,575.6	-28.1	389.9	-370.1	392.0	94.26	13.84
7,849.0	82.50	92.80	7,581.1	-30.8	422.4	-400.0	423.5	94.17	16.46
7,874.0	84.30	91.40	7,584.0	-31.7	447.2	-423.8	448.3	94.06	9.10

Stryker Directional
Pavo Macho 31 B2MP Fed #1H

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed 4
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
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)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	Dleg (°/100usft)
7,906.0	85.40	90.30	7,586.9	-32.2	479.1	-454.4	480.2	93.85	4.85
7,936.0	86.40	89.70	7,589.2	32.2	511.0	-485.2	512.0	93.61	3.64
8,033.0	91.20	90.10	7,591.2	-32.0	606.0	-577.0	606.8	93.03	5.07
8,129.0	89.20	89.50	7,590.8	31.7	702.0	-669.8	702.7	92.59	2.18
8,224.0	90.80	90.60	7,590.8	-31.8	796.9	-761.5	797.6	92.28	2.04
8,319.0	85.30	88.40	7,594.1	-31.0	691.8	853.4	692.4	91.89	6.23
8,413.0	87.50	89.90	7,600.0	-29.6	986.6	-944.4	986.1	91.72	2.83
8,509.0	87.50	89.90	7,604.2	-29.4	1,081.6	-1,037.1	1,082.0	91.56	0.00
8,604.0	88.10	89.80	7,607.8	-29.2	1,176.5	-1,128.8	1,176.8	91.42	0.64
8,699.0	89.20	89.30	7,610.0	-28.4	1,271.5	-1,220.7	1,271.8	91.28	1.27
8,794.0	89.70	89.00	7,611.0	-27.0	1,366.4	-1,312.9	1,366.7	91.13	0.81
8,889.0	88.10	90.00	7,612.8	-26.2	1,461.4	-1,404.8	1,461.6	91.03	1.99
8,984.0	89.20	90.00	7,615.0	-26.2	1,556.4	-1,496.5	1,556.8	90.86	1.16
9,079.0	92.00	90.70	7,614.0	26.8	1,651.4	-1,588.1	1,651.8	90.83	3.04
9,173.0	89.60	91.70	7,612.8	-26.7	1,745.3	-1,678.4	1,745.6	90.94	2.86
9,268.0	85.40	90.60	7,617.0	-30.6	1,840.2	-1,769.5	1,840.4	90.95	4.47
9,362.0	86.30	90.50	7,623.8	-31.5	1,933.9	-1,859.8	1,934.2	90.93	0.96
9,457.0	87.10	89.90	7,629.3	-31.9	2,028.8	-1,951.4	2,029.0	90.90	1.06
9,553.0	87.80	89.90	7,633.6	-31.7	2,124.7	-2,044.0	2,124.9	90.85	0.73
9,647.0	89.10	90.10	7,636.1	-31.7	2,218.6	-2,134.8	2,218.9	90.82	1.40
9,742.0	86.70	90.20	7,637.9	-31.9	2,313.6	-2,226.5	2,313.9	90.79	0.43
9,837.0	89.50	89.90	7,639.4	-32.0	2,408.6	-2,318.2	2,408.8	90.76	0.90
9,931.0	86.30	89.90	7,641.2	-31.9	2,502.6	-2,409.0	2,502.8	90.73	1.28
10,027.0	88.70	89.90	7,643.7	-31.7	2,598.6	-2,501.6	2,598.8	90.70	0.42
10,122.0	89.50	89.60	7,645.2	-31.3	2,693.6	-2,593.6	2,693.7	90.67	0.90
10,217.0	90.30	88.90	7,645.4	30.0	2,788.5	-2,685.7	2,788.7	90.62	1.12
10,312.0	89.10	90.00	7,645.9	-29.1	2,883.5	-2,777.7	2,883.7	90.58	1.71

Stryker Directional
Pavo Macho 31 B2MP Fed #1H

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H
Well: Pavo Macho 31 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Pavo Macho 31 B2MP Fed #1H
TVD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
MD Reference: 3389 + 25 @ 3414.0usft (Patterson 231)
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)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/100usft)
10,406.0	88.40	91.80	7,647.9	-30.6	2,977.6	-2,868.1	2,977.7	90.59	2.05
10,502.0	88.70	91.50	7,650.0	-33.4	3,073.4	-2,960.0	3,073.6	90.62	0.86
10,596.0	90.30	90.70	7,650.4	36.3	3,167.4	-3,050.3	3,167.6	90.64	1.51
10,691.0	88.80	91.20	7,651.3	-36.9	3,262.4	-3,141.6	3,262.6	90.65	1.87
10,786.0	88.80	91.30	7,653.4	-39.0	3,357.3	-3,232.8	3,357.6	90.67	0.24
10,881.0	88.30	90.90	7,655.0	-40.8	3,452.3	-3,324.0	3,452.6	90.68	0.67
10,976.0	89.60	90.40	7,656.9	-41.9	3,547.3	-3,415.5	3,547.5	90.68	0.61
11,071.0	90.30	89.90	7,656.0	-42.1	3,642.3	-3,507.2	3,642.5	90.66	0.91
11,166.0	89.00	90.10	7,656.6	-42.1	3,737.3	-3,599.0	3,737.5	90.65	1.38
11,261.0	88.20	89.80	7,658.9	-42.0	3,832.3	-3,690.7	3,832.5	90.63	0.90
11,356.0	88.70	89.30	7,661.5	41.3	3,927.2	-3,782.6	3,927.4	90.60	0.74
11,451.0	88.80	88.50	7,663.7	39.5	4,022.2	-3,874.8	4,022.4	90.58	0.85
11,546.0	88.20	88.80	7,666.4	-37.2	4,117.1	-3,967.1	4,117.3	90.52	0.53
11,641.0	88.80	87.80	7,668.8	-34.4	4,212.0	-4,059.5	4,212.2	90.47	1.23
11,736.0	89.10	87.70	7,670.6	-30.7	4,307.0	-4,152.2	4,307.1	90.41	0.33
11,831.0	89.90	87.60	7,671.5	-26.8	4,401.9	-4,244.8	4,401.9	90.35	0.74
11,860.0	90.20	87.40	7,671.5	25.5	4,430.8	4,273.2	4,430.9	90.33	1.54
11,914.0	90.20	87.40	7,671.3	-23.1	4,484.8	-4,325.9	4,484.8	90.29	0.00

11914' MD Projected to Bit

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,914.0	7,671.3	23.1	4,484.8	11914' MD Projected to Bit