



NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 16 2016

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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	Local Co-ordinate Reference:	Well Pavo Macho 31 B2MP Fed #1H
Project:	Eddy County, New Mexico	TVD Reference:	3389 + 25 @ 3414.0usft (Patterson 231)
Site:	Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H	MD Reference:	3389 + 25 @ 3414.0usft (Patterson 231)
Well:	Pavo Macho 31 B2MP Fed #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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:		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				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/20/2016	7.35	60.42	48,263

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	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 Hole)	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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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)
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



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Survey									
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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	0.84	-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	Local Co-ordinate Reference:	Well Pavo Macho 31 B2MP Fed #1H
Project:	Eddy County, New Mexico	TVD Reference:	3389 + 25 @ 3414.0usft (Patterson 231)
Site:	Section 31-18S-29E Pavo Macho 31 B2MP Fed #1H	MD Reference:	3389 + 25 @ 3414.0usft (Patterson 231)
Well:	Pavo Macho 31 B2MP Fed #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)
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)	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:		Northing:	617,901.70 usft
From:	Map	Easting:	565,413.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 54.707 N
		Longitude:	104° 7' 14.487 W
		Grid Convergence:	0.11 °

Well	Pavo Macho 31 B2MP Fed #1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	25.0 usft
		Latitude:	32° 41' 54.707 N
		Longitude:	104° 7' 14.487 W
		Ground Level:	3,389.0 usft

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

Design	Original Hole		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	Tie On Depth:
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			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 #
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 Hc	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 (°)	DLeg (°/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	-16.8	-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	252.30	6,208.6	-14.5	-90.0	90.7	91.2	260.85	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	230.00	6,399.6	-16.6	-93.6	94.7	95.1	259.96	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	-98.1	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	240.60	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: 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)	EW (usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	DLeg (°/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	-67.5	71.1	71.2	251.33	12.96
7,216.0	26.60	87.30	7,205.6	-22.1	-53.9	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	88.80	7,260.6	-20.9	-23.3	28.0	31.3	228.08	7.32
7,311.0	33.00	90.40	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	127.28	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	10.62
7,470.0	43.50	91.80	7,414.6	-24.4	88.9	-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	58.40	89.30	7,492.6	-28.3	188.5	-174.7	190.6	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	-226.8	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	330.5	94.61	6.77
7,785.0	73.30	92.40	7,567.6	-27.5	360.0	-340.6	361.1	94.37	5.04
7,817.0	77.60	93.50	7,575.6	-29.1	390.9	-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	15.46
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 #
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
7,938.0	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	891.8	-853.4	892.4	91.99	6.23
8,413.0	87.50	89.90	7,600.0	-29.6	985.6	-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	0.61
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	1,556.6	90.96	1.16
9,079.0	92.00	90.70	7,614.0	-26.8	1,651.4	-1,588.1	1,651.6	90.93	3.04
9,173.0	89.50	91.70	7,612.8	-28.7	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	-1,789.5	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	1.05
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	88.70	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	88.30	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	-2,501.8	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	2,788.6	-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	2,977.5	-2,868.1	2,977.7	90.59	2.05
10,502.0	89.20	91.60	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	-35.3	3,167.4	-3,050.3	3,167.6	90.64	1.51
10,691.0	88.60	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	89.30	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	7,655.9	-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	88.60	88.50	7,663.7	-39.5	4,022.2	-3,874.8	4,022.4	90.56	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	87.60	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	89.80	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



COMPANY: Mewbourne Oil Company
 WELL: Pavo Macho 31 B2MP Fed #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Patterson Patterson 231



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.24°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001 3389 + 25 @ 3414.0usft (Patterson 231) GROUND ELEVATION: 3389.0										
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot				
0.0	0.0	617901.70	565413.50	32° 41' 54.707 N	104° 7' 14.487 W					
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	5240.0	5.64	261.40	5238.6	-15.7	-58.5	0.00	0.00	-58.2	
2	5522.0	0.00	261.40	5520.1	-17.7	-72.2	2.00	180.00	-71.9	
3	7110.5	0.00	261.40	7108.6	-17.7	-72.2	0.00	261.40	-71.9	
4	7848.8	88.59	90.63	7586.0	-22.9	393.5	12.00	90.63	393.8	
5	11961.8	88.59	90.63	7687.0	-68.1	4505.1	0.00	0.00	4505.6	PBHL Pavo Macho 31 B2MP 1H

SHL 450' FSL; 215' FWL
 Section 31-18S-29E
 PBHL 450' FSL; 330' FEL
 Section 31-18S-29E

