



June 12, 2018

30-015-43902

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
Derringer 18 B2MP Federal #1H
Russell; Bone Spring "C" Sand
Eddy County, New Mexico
API# 30-015-43902

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>
Noah Townsend	Original Hole	3,028ft. to 12,159ft.	04-07-18 to 04-18-18	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.

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\Derringer 18 B2MP Federal #001HM181040

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



June 12, 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 April 7, 2018, through April 18, 2018 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 3,028 feet to a depth of 12,159 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 Derringer 18 B2MP Federal #1H well, API # **30-15-43902** 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.

Eric Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

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Microsoft MWD Surveys



Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 18-20S-29E Derringer 18 B2MP Fed #1H
Well: Derringer 18 B2MP Fed #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Derringer 18 B2MP Fed #1H
TVD Reference: 3251 + 27 @ 3278.0usft (Patterson 560)
MD Reference: 3251 + 27 @ 3278.0usft (Patterson 560)
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 18-20S-29E Derringer 18 B2MP Fed #1H		
Site Position:		Northing:	570,126.20 usft
From:	Map	Easting:	606,833.30 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 34' 1.749 N
		Longitude:	104° 7' 14.626 W
		Grid Convergence:	0.11 °

Well	Derringer 18 B2MP Fed #1H		
Well Position	+N-S	0.0 usft	Northing: 570,126.20 usft
	+E-W	0.0 usft	Easting: 606,833.30 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft
		Latitude:	32° 34' 1.749 N
		Longitude:	104° 7' 14.626 W
		Ground Level:	3,251.0 usft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	3/12/2018	7.16
			Dip Angle (°)
			60.28
			Field Strength (nT)
			48,008.38503813

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)
	0.0	0.0	0.0
			Direction (°)
			248.00



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Survey Program		Date 4/17/2018						
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description				
100.0	2,874.0	Phoenix Tech Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline				
3,028.0	12,215.0	Survey #2 (Original Hole)						
Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
2,874.0	0.60	88.57	2,872.4	-28.6	-70.9	76.5	248.00	Tie-In
3,028.0	0.70	356.10	3,026.4	-27.7	-70.1	75.4	248.46	
3,122.0	2.50	301.70	3,120.4	-26.0	-71.9	76.5	250.10	
3,217.0	3.10	299.30	3,215.3	-23.7	-75.9	79.5	252.68	
3,311.0	3.60	282.60	3,309.1	-21.8	-81.0	83.9	254.94	
3,406.0	3.90	273.60	3,403.9	-20.9	-87.2	89.6	256.49	
3,500.0	4.00	274.30	3,497.7	-20.5	-93.6	95.8	257.65	
3,594.0	4.00	273.10	3,591.4	-20.1	-100.2	102.2	258.67	
3,689.0	4.10	287.60	3,686.2	-18.9	-106.7	108.4	259.97	
3,783.0	4.40	293.80	3,779.9	-16.4	-113.2	114.4	261.76	
3,878.0	4.40	292.40	3,874.7	-13.5	-119.9	120.7	263.56	
3,972.0	4.40	291.20	3,968.4	-10.9	-126.6	127.1	265.10	
4,067.0	4.30	298.90	4,063.1	-7.8	-133.1	133.4	266.64	
4,161.0	4.30	299.50	4,156.9	-4.4	-139.3	139.3	268.20	
4,256.0	4.30	299.50	4,251.6	-0.9	-145.5	145.5	269.66	
4,351.0	4.40	298.90	4,346.3	2.6	-151.8	151.8	271.00	
4,445.0	3.90	295.80	4,440.1	5.8	-157.8	157.9	272.10	
4,540.0	3.80	296.10	4,534.9	8.6	-163.5	163.8	273.00	
4,634.0	3.90	294.20	4,628.6	11.2	-169.3	169.6	273.80	
4,729.0	4.00	293.30	4,723.4	13.9	-175.2	175.8	274.53	
4,823.0	4.00	293.40	4,817.2	16.5	-181.3	182.0	275.20	



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
4,918.0	4.20	291.20	4,911.9	19.1	-187.5	188.5	275.80
5,013.0	4.20	290.00	5,006.7	21.5	-194.1	195.2	276.32
5,107.0	4.10	291.00	5,100.4	23.9	-200.4	201.8	276.80
5,202.0	4.30	287.60	5,195.2	26.2	-207.0	208.6	277.21
5,296.0	4.30	287.20	5,288.9	28.3	-213.7	215.6	277.54
5,391.0	4.40	288.10	5,383.6	30.5	-220.6	222.7	277.86
5,485.0	4.40	297.30	5,477.4	33.2	-227.2	229.6	278.32
5,580.0	4.30	283.50	5,572.1	35.7	-233.9	236.6	278.69
5,675.0	4.10	280.20	5,666.8	37.2	-240.7	243.6	278.78
5,769.0	4.00	279.20	5,760.6	38.3	-247.3	250.2	278.80
5,864.0	4.50	289.40	5,855.4	40.1	-254.1	257.2	278.96
5,958.0	4.40	289.80	5,949.1	42.5	-260.9	264.4	279.25
6,053.0	3.50	301.20	6,043.8	45.3	-266.8	270.6	279.62
6,147.0	3.10	302.20	6,137.7	48.1	-271.4	275.7	280.05
6,242.0	3.70	286.80	6,232.5	50.3	-276.5	281.1	280.32
6,337.0	3.60	279.40	6,327.3	51.7	-282.4	287.1	280.38
6,432.0	4.00	285.80	6,422.1	53.1	-288.6	293.4	280.43
6,526.0	3.90	284.90	6,515.9	54.8	-294.8	299.9	280.53
6,621.0	3.90	282.40	6,610.7	56.3	-301.1	306.3	280.60
6,715.0	4.90	292.40	6,704.4	58.6	-307.9	313.4	280.77
6,810.0	4.90	292.10	6,799.1	61.6	-315.4	321.4	281.06
6,905.0	5.00	290.30	6,893.7	64.6	-323.1	329.5	281.31
7,000.0	3.10	306.30	6,988.5	67.6	-329.0	335.9	281.60
7,094.0	1.60	335.90	7,082.4	70.3	-331.6	339.0	281.96
7,189.0	1.00	336.20	7,177.4	72.2	-332.5	340.2	282.26
7,241.5	1.06	333.20	7,229.9	73.1	-332.9	340.8	282.38

B.B. Derringer 18 B2MP Fed 1H

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
7,278.0	1.10	331.30	7,266.3	73.7	-333.2	341.3	282.47
7,339.0	1.60	59.10	7,327.3	74.6	-332.8	341.0	282.64
7,371.0	8.00	71.00	7,359.2	75.6	-330.3	338.8	282.89
7,402.0	12.60	69.30	7,389.7	77.5	-325.1	334.2	283.41
7,434.0	15.90	68.90	7,420.7	80.3	-317.7	327.7	284.19
7,465.0	18.60	78.60	7,450.3	82.8	-308.9	319.8	285.01
7,497.0	22.70	87.20	7,480.3	84.1	-297.7	309.4	285.78
7,529.0	26.20	88.50	7,509.4	84.6	-284.5	296.8	286.56
7,560.0	29.20	90.10	7,536.8	84.8	-270.1	283.1	287.43
7,592.0	32.00	87.40	7,564.4	85.1	-253.8	267.7	288.55
7,624.0	35.00	86.60	7,591.1	86.1	-236.2	251.4	290.03
7,656.0	38.20	84.50	7,616.7	87.6	-217.1	234.1	291.96
7,687.0	42.70	81.80	7,640.3	90.0	-197.2	216.7	294.53
7,719.0	46.20	80.60	7,663.2	93.4	-175.0	198.4	298.09
7,751.0	49.30	79.70	7,684.7	97.5	-151.7	180.3	302.72
7,782.0	52.20	78.50	7,704.3	102.0	-128.1	163.8	308.53
7,814.0	55.80	78.10	7,723.1	107.3	-102.8	148.6	316.22
7,837.4	58.59	77.57	7,735.8	111.4	-83.6	139.3	323.12
LP Derringer 18 B2MP Fed 1H							
7,845.0	59.50	77.40	7,739.7	112.8	-77.2	136.7	325.62
7,878.0	63.40	76.80	7,755.5	119.3	-49.0	129.0	337.69
7,909.0	67.20	76.30	7,768.4	125.9	-21.6	127.7	350.27
7,941.0	71.20	76.20	7,779.8	133.0	7.5	133.2	3.22
7,972.0	75.20	76.50	7,788.7	140.0	36.3	144.6	14.54
8,004.0	77.90	76.50	7,796.2	147.2	66.6	161.6	24.33
8,036.0	82.80	75.80	7,801.5	154.8	97.2	182.8	32.13
8,069.0	85.50	77.80	7,804.9	162.3	129.1	207.4	38.51



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8,139.0	90.50	82.10	7,807.3	174.5	198.0	263.9	48.61
8,234.0	88.30	87.80	7,808.3	182.8	292.6	345.0	58.00
8,328.0	88.70	90.30	7,810.8	184.4	386.5	428.3	64.50
8,423.0	88.70	90.40	7,812.9	183.8	481.5	515.4	69.11
8,518.0	88.40	90.20	7,815.3	183.3	576.5	604.9	72.36
8,612.0	88.90	89.90	7,817.6	183.2	670.4	695.0	74.71
8,707.0	89.30	89.50	7,819.1	183.7	765.4	787.2	76.50
8,802.0	89.50	89.60	7,820.1	184.5	860.4	880.0	77.90
8,896.0	87.20	88.60	7,822.8	186.0	954.4	972.3	78.97
8,991.0	87.50	88.10	7,827.2	188.7	1,049.2	1,066.0	79.81
9,086.0	87.60	87.80	7,831.2	192.1	1,144.1	1,160.1	80.47
9,180.0	87.70	87.10	7,835.1	196.3	1,237.9	1,253.4	80.99
9,275.0	88.70	90.00	7,838.1	198.7	1,332.8	1,347.5	81.52
9,369.0	89.40	90.10	7,839.6	198.6	1,426.8	1,440.5	82.08
9,464.0	89.90	89.80	7,840.2	198.7	1,521.8	1,534.7	82.56
9,559.0	90.20	89.40	7,840.1	199.3	1,616.8	1,629.0	82.97
9,653.0	90.20	88.50	7,839.8	201.0	1,710.8	1,722.5	83.30
9,748.0	90.90	88.10	7,838.9	203.9	1,805.7	1,817.2	83.56
9,843.0	88.60	90.40	7,839.3	205.1	1,900.7	1,911.7	83.84
9,937.0	88.90	90.70	7,841.3	204.2	1,994.7	2,005.1	84.15
10,032.0	86.80	89.90	7,844.9	203.7	2,089.6	2,099.5	84.43
10,126.0	87.30	89.20	7,849.7	204.4	2,183.5	2,193.0	84.65
10,221.0	87.30	88.60	7,854.2	206.3	2,278.4	2,287.7	84.83
10,315.0	87.70	88.00	7,858.3	209.1	2,372.2	2,381.4	84.96
10,410.0	88.90	87.90	7,861.1	212.5	2,467.1	2,476.2	85.08
10,505.0	88.90	90.10	7,863.0	214.1	2,562.1	2,571.0	85.22
10,600.0	90.20	89.60	7,863.7	214.4	2,657.1	2,665.7	85.39



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10,694.0	89.40	90.70	7,864.0	214.1	2,751.1	2,759.4	85.55
10,789.0	90.10	90.40	7,864.4	213.2	2,846.1	2,854.0	85.72
10,884.0	88.60	91.20	7,865.5	211.9	2,941.0	2,948.7	85.88
10,978.0	89.20	91.10	7,867.3	210.0	3,035.0	3,042.3	86.04
11,073.0	86.70	91.10	7,870.7	208.2	3,129.9	3,136.8	86.19
11,167.0	86.90	91.20	7,876.0	206.3	3,223.8	3,230.3	86.34
11,262.0	86.90	91.00	7,881.1	204.5	3,318.6	3,324.9	86.47
11,356.0	87.10	90.40	7,886.0	203.3	3,412.5	3,418.5	86.59
11,451.0	89.90	91.80	7,888.5	201.5	3,507.4	3,513.2	86.71
11,546.0	90.00	91.00	7,888.6	199.2	3,602.4	3,607.9	86.84
11,640.0	89.20	88.10	7,889.2	199.9	3,696.4	3,701.8	86.90
11,735.0	87.60	85.10	7,891.9	205.5	3,791.1	3,796.7	86.90
11,828.0	88.50	88.60	7,895.1	210.6	3,883.9	3,889.6	86.90
11,923.0	89.30	89.50	7,896.9	212.2	3,978.9	3,984.6	86.95
12,017.0	90.20	89.40	7,897.3	213.1	4,072.9	4,078.5	87.00
12,112.0	89.70	87.90	7,897.4	215.4	4,167.9	4,173.4	87.04
12,159.0	89.80	87.70	7,897.6	217.2	4,214.8	4,220.4	87.05
12,215.0	89.80	87.70	7,897.8	219.4	4,270.8	4,276.4	87.06

12215.0' Projected to Bit - PBHL Derringer 18 B2MP Fed 1H

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,215.0	7,897.8	219.4	4,270.8	12215.0' Projected to Bit