

GEODETTIC ZONE: New Mexico Eastern Zone

3271 + 27 @ 3298.0usft (Patterson 231)

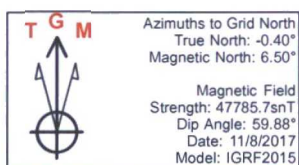
GROUND ELEVATION: 3271.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	377550.70	774340.70	32° 2' 8.654 N	103° 34' 53.036 W

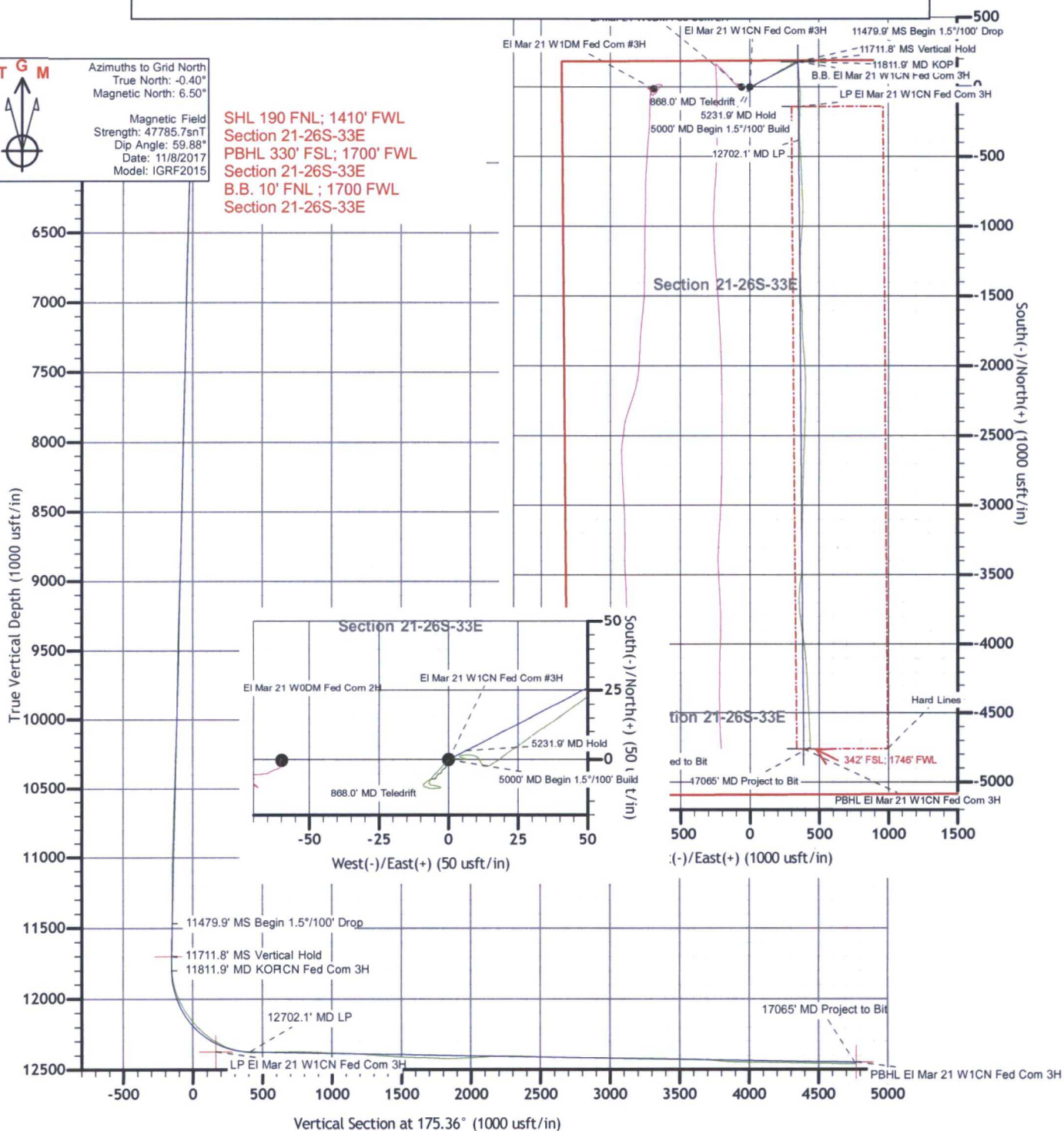
Slot

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5000.0	0.00	0.00	5000.0	0.0	0.0	0.00	0.00	0.0	
3	5231.9	3.48	62.55	5231.8	3.2	6.2	1.50	62.55	-2.7	
4	11479.9	3.48	62.55	11468.2	178.0	342.7	0.00	0.0	-149.7	
5	11711.8	0.00	0.00	11700.0	181.2	349.0	1.50	180.0	-152.4	B.B. El Mar 21 W1CN Fed Com 3H
6	1181.9	0.00	0.00	11800.1	-181.2	-348.8	0.00	0.0	0.0	
7	12702.1	89.02	179.57	12373.0	-381.9	353.2	10.00	179.57	409.2	
8	17079.9	89.02	179.57	12448.0	-478.9	385.9	0.00	0.0	4774.5	PBHL El Mar 21 W1CN Fed Com 3H



SHL 190 FNL; 1410' FWL
Section 21-26S-33E
PBHL 330' FSL; 1700' FWL
Section 21-26S-33E
B.B. 10' FNL ; 1700 FWL
Section 21-26S-33E





Mewbourne Oil Company

Lea County N. M. Nad (83)

Section 21-26S-33E El Mar W1CN Fed Com #3H

El Mar 21W1CN Fed Com #3H

Original Hole

Design: Original Hole

Standard Survey Report

30 January, 2018



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well El Mar 21 W1CN Fed Com #3H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Site:	Section 21-26S-33E El Mar W1CN Fed Com #3H	MD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Well:	El Mar 21 W1CN Fed Com #3H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Lea 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 21-26S-33E El Mar W1CN Fed Com #3H			
Site Position:		Northing:	377,550.70 usft	Latitude:	32° 2' 8.654 N
From:	Map	Easting:	774,340.70 usft	Longitude:	103° 34' 53.036 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	El Mar 21 W1CN Fed Com #3H					
Well Position	+N/-S	0.0 usft	Northing:	377,550.70 usft	Latitude:	32° 2' 8.654 N
	+E/-W	0.0 usft	Easting:	774,340.70 usft	Longitude:	103° 34' 53.036 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	27.0 usft	Ground Level:	3,271.0 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/8/2017	6.90	59.88	47,785.71136079

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	195.27

Survey Program		Date	1/30/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	868.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination	
1,025.0	17,065.0	Stryker 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	0.91	204.86	100.0	-0.7	-0.3	0.8	0.91	0.91	0.00
	200.0	0.88	189.77	200.0	-2.2	-0.8	2.3	0.24	-0.03	-15.09
	300.0	0.76	251.20	300.0	-3.2	-1.6	3.5	0.84	-0.12	61.43
	400.0	0.82	193.78	400.0	-4.1	-2.4	4.6	0.76	0.06	-57.42
	500.0	0.81	253.38	500.0	-5.0	-3.2	5.6	0.81	-0.01	59.60
	600.0	0.95	202.92	599.9	-5.9	-4.2	6.8	0.76	0.14	-50.46
	700.0	0.34	262.74	699.9	-6.7	-4.8	7.8	0.83	-0.61	59.82
	800.0	0.86	263.27	799.9	-6.9	-5.9	8.2	0.52	0.52	0.53

Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
Well: El Mar 21 W1CN Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (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)
868.0	0.77	239.47	867.9	-7.2	-6.8	8.7	0.51	-0.13	-35.00
868.0' MD Teledrift									
1,025.0	0.50	229.20	1,024.9	-8.1	-8.2	10.0	0.19	-0.17	-6.54
1,120.0	0.60	231.80	1,119.9	-8.7	-8.9	10.8	0.11	0.11	2.74
1,215.0	0.40	118.20	1,214.9	-9.2	-9.0	11.2	0.89	-0.21	-119.58
1,311.0	0.70	120.00	1,310.9	-9.6	-8.2	11.5	0.31	0.31	1.88
1,406.0	0.60	105.90	1,405.9	-10.1	-7.2	11.6	0.20	-0.11	-14.84
1,501.0	0.50	98.50	1,500.9	-10.3	-6.3	11.6	0.13	-0.11	-7.79
1,595.0	0.60	87.70	1,594.9	-10.3	-5.4	11.4	0.15	0.11	-11.49
1,691.0	0.50	87.30	1,690.9	-10.3	-4.5	11.1	0.10	-0.10	-0.42
1,786.0	0.50	75.10	1,785.9	-10.1	-3.7	10.7	0.11	0.00	-12.84
1,883.0	0.20	95.40	1,882.9	-10.0	-3.1	10.5	0.33	-0.31	20.93
1,979.0	0.10	66.10	1,978.9	-10.0	-2.9	10.4	0.13	-0.10	-30.52
2,073.0	0.10	61.60	2,072.9	-10.0	-2.7	10.3	0.01	0.00	-4.79
2,169.0	0.10	342.40	2,168.9	-9.8	-2.7	10.2	0.13	0.00	-82.50
2,263.0	0.30	292.60	2,262.9	-9.7	-2.9	10.1	0.26	0.21	-52.98
2,358.0	0.40	290.40	2,357.9	-9.4	-3.5	10.0	0.11	0.11	-2.32
2,453.0	0.50	273.80	2,452.9	-9.3	-4.2	10.1	0.17	0.11	-17.47
2,547.0	0.70	288.50	2,546.9	-9.1	-5.1	10.1	0.27	0.21	15.64
2,643.0	0.80	265.10	2,642.9	-9.0	-6.4	10.3	0.33	0.10	-24.38
2,737.0	0.70	359.60	2,736.9	-8.4	-7.0	10.0	1.17	-0.11	100.53
2,831.0	1.00	39.00	2,830.9	-7.2	-6.5	8.7	0.68	0.32	41.91
2,925.0	1.00	35.00	2,924.8	-5.9	-5.5	7.2	0.07	0.00	-4.26
3,020.0	0.90	51.10	3,019.8	-4.8	-4.5	5.8	0.30	-0.11	16.95
3,114.0	1.00	37.50	3,113.8	-3.7	-3.4	4.4	0.26	0.11	-14.47
3,208.0	0.60	48.10	3,207.8	-2.7	-2.5	3.3	0.45	-0.43	11.28
3,303.0	0.60	26.50	3,302.8	-1.9	-1.9	2.4	0.24	0.00	-22.74
3,398.0	0.70	42.50	3,397.8	-1.0	-1.3	1.3	0.22	0.11	16.84
3,493.0	0.70	61.30	3,492.8	-0.3	-0.4	0.4	0.24	0.00	19.79
3,587.0	1.90	77.30	3,586.8	0.3	1.6	-0.7	1.32	1.28	17.02
3,681.0	0.60	101.30	3,680.7	0.5	3.6	-1.5	1.46	-1.38	25.53
3,776.0	0.60	110.60	3,775.7	0.3	4.6	-1.5	0.10	0.00	9.79
3,870.0	1.30	85.20	3,869.7	0.2	6.1	-1.8	0.85	0.74	-27.02
3,965.0	0.40	277.30	3,964.7	0.3	6.8	-2.1	1.78	-0.95	-176.74
4,060.0	1.20	282.70	4,059.7	0.6	5.5	-2.0	0.84	0.84	5.68
4,155.0	0.60	302.20	4,154.7	1.1	4.1	-2.1	0.70	-0.63	20.53
4,250.0	0.40	52.60	4,249.7	1.5	4.0	-2.5	0.87	-0.21	116.21
4,345.0	0.80	92.70	4,344.7	1.7	4.9	-2.9	0.59	0.42	42.21
4,440.0	1.10	80.30	4,439.7	1.8	6.5	-3.5	0.38	0.32	-13.05
4,535.0	1.70	100.70	4,534.6	1.7	8.8	-4.0	0.81	0.63	21.47
4,630.0	0.70	136.40	4,629.6	1.0	10.5	-3.8	1.27	-1.05	37.58
4,725.0	0.70	152.60	4,724.6	0.1	11.2	-3.0	0.21	0.00	17.05

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Site:	Section 21-26S-33E El Mar W1CN Fed Com #3H	MD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Well:	El Mar 21 W1CN Fed Com #3H	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)
4,806.0	0.90	153.50	4,805.6	-0.9	11.7	-2.2	0.25	0.25	1.11
4,920.0	0.70	131.60	4,919.6	-2.2	12.6	-1.2	0.32	-0.18	-19.21
5,015.0	2.00	72.20	5,014.6	-2.1	14.6	-1.9	1.84	1.37	-62.53
5,109.0	3.60	50.50	5,108.5	0.3	18.5	-5.2	2.01	1.70	-23.09
5,203.0	3.60	55.90	5,202.3	3.8	23.2	-9.8	0.36	0.00	5.74
5,298.0	3.70	53.80	5,297.1	7.3	28.2	-14.5	0.18	0.11	-2.21
5,393.0	3.20	55.30	5,391.9	10.7	32.8	-18.9	0.53	-0.53	1.58
5,488.0	2.90	56.00	5,486.8	13.5	37.0	-22.8	0.32	-0.32	0.74
5,583.0	2.50	55.00	5,581.7	16.0	40.7	-26.2	0.42	-0.42	-1.05
5,678.0	2.80	52.80	5,676.6	18.6	44.2	-29.6	0.33	0.32	-2.32
5,773.0	2.60	53.80	5,771.5	21.3	47.8	-33.1	0.22	-0.21	1.05
5,868.0	2.50	51.90	5,866.4	23.9	51.2	-36.5	0.14	-0.11	-2.00
5,963.0	2.30	50.70	5,961.3	26.3	54.3	-39.7	0.22	-0.21	-1.26
6,057.0	2.60	52.20	6,055.2	28.8	57.4	-42.9	0.33	0.32	1.60
6,152.0	2.80	53.00	6,150.1	31.6	61.0	-46.5	0.21	0.21	0.84
6,246.0	2.60	56.10	6,244.0	34.1	64.6	-49.9	0.26	-0.21	3.30
6,341.0	3.60	57.20	6,338.8	36.9	68.9	-53.8	1.05	1.05	1.16
6,436.0	3.80	56.60	6,433.6	40.3	74.0	-58.4	0.21	0.21	-0.63
6,531.0	3.80	57.60	6,528.4	43.7	79.3	-63.1	0.07	0.00	1.05
6,625.0	3.80	59.00	6,622.2	47.0	84.6	-67.6	0.10	0.00	1.49
6,720.0	4.00	55.70	6,717.0	50.5	90.0	-72.4	0.32	0.21	-3.47
6,814.0	4.30	71.80	6,810.8	53.4	96.1	-76.8	1.28	0.32	17.13
6,909.0	3.30	77.30	6,905.6	55.1	102.1	-80.1	1.12	-1.05	5.79
7,004.0	3.30	83.10	7,000.4	56.1	107.5	-82.4	0.35	0.00	6.11
7,099.0	3.20	62.00	7,095.2	57.6	112.6	-85.3	1.26	-0.11	-22.21
7,194.0	3.30	59.80	7,190.1	60.3	117.3	-89.0	0.17	0.11	-2.32
7,289.0	3.10	59.70	7,284.9	62.9	121.9	-92.8	0.21	-0.21	-0.11
7,383.0	3.20	56.90	7,378.8	65.6	126.3	-96.6	0.20	0.11	-2.98
7,478.0	3.70	63.20	7,473.6	68.5	131.2	-100.6	0.66	0.53	6.63
7,573.0	3.80	62.10	7,568.4	71.3	136.7	-104.8	0.13	0.11	-1.16
7,667.0	3.50	58.60	7,662.2	74.3	141.9	-109.0	0.40	-0.32	-3.72
7,761.0	3.30	61.50	7,756.1	77.1	146.8	-113.0	0.28	-0.21	3.09
7,856.0	2.90	59.90	7,850.9	79.6	151.2	-116.6	0.43	-0.42	-1.68
7,951.0	2.80	62.80	7,945.8	81.8	155.4	-119.9	0.18	-0.11	3.05
8,046.0	3.40	61.10	8,040.7	84.3	159.9	-123.4	0.64	0.63	-1.79
8,141.0	3.20	62.50	8,135.5	86.9	164.7	-127.2	0.23	-0.21	1.47
8,235.0	3.00	61.00	8,229.4	89.3	169.2	-130.7	0.23	-0.21	-1.60
8,330.0	2.90	58.50	8,324.3	91.7	173.4	-134.2	0.17	-0.11	-2.63
8,423.0	3.30	64.30	8,417.1	94.1	177.8	-137.6	0.55	0.43	6.24
8,518.0	3.20	65.70	8,512.0	96.4	182.7	-141.1	0.13	-0.11	1.47
8,613.0	3.00	60.10	8,606.8	98.7	187.3	-144.6	0.38	-0.21	-5.89
8,708.0	2.50	63.30	8,701.7	100.9	191.3	-147.7	0.55	-0.53	3.37
8,802.0	3.10	57.00	8,795.6	103.2	195.3	-151.0	0.72	0.64	-6.70

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Well:	El Mar 21 W1CN Fed Com #3H	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)
8,898.0	2.90	52.10	8,891.5	106.1	199.4	-154.9	0.34	-0.21	-5.10
8,992.0	3.40	54.10	8,985.3	109.2	203.5	-158.9	0.54	0.53	2.13
9,088.0	3.90	52.20	9,081.1	112.9	208.4	-163.8	0.54	0.52	-1.98
9,183.0	3.50	51.80	9,175.9	116.6	213.2	-168.7	0.42	-0.42	-0.42
9,278.0	3.90	62.90	9,270.7	119.9	218.4	-173.2	0.86	0.42	11.68
9,372.0	4.10	44.70	9,364.5	123.7	223.6	-178.3	1.36	0.21	-19.36
9,467.0	4.40	60.60	9,459.3	128.0	229.1	-183.8	1.28	0.32	16.74
9,561.0	4.50	79.50	9,553.0	130.4	235.9	-187.9	1.56	0.11	20.11
9,657.0	4.00	84.30	9,648.7	131.4	242.9	-190.8	0.64	-0.52	5.00
9,752.0	1.50	77.20	9,743.6	132.0	247.5	-192.5	2.65	-2.63	-7.47
9,846.0	1.50	63.70	9,837.6	132.8	249.8	-193.9	0.38	0.00	-14.36
9,941.0	1.60	47.40	9,932.5	134.3	251.9	-195.9	0.47	0.11	-17.16
10,035.0	3.20	56.10	10,026.4	136.6	255.0	-199.0	1.74	1.70	9.26
10,131.0	4.40	57.60	10,122.2	140.1	260.3	-203.7	1.25	1.25	1.56
10,226.0	4.00	53.30	10,217.0	144.0	266.1	-209.0	0.54	-0.42	-4.53
10,321.0	4.20	57.10	10,311.7	147.9	271.6	-214.2	0.36	0.21	4.00
10,416.0	5.50	59.10	10,406.4	152.1	278.5	-220.1	1.38	1.37	2.11
10,511.0	5.00	63.50	10,501.0	156.3	286.1	-226.1	0.68	-0.53	4.63
10,607.0	4.60	62.30	10,596.7	160.0	293.2	-231.6	0.43	-0.42	-1.25
10,701.0	4.50	55.50	10,690.4	163.8	299.6	-236.9	0.58	-0.11	-7.23
10,796.0	4.00	64.00	10,785.1	167.4	305.7	-242.0	0.85	-0.53	8.95
10,891.0	3.30	60.10	10,879.9	170.2	311.0	-246.1	0.78	-0.74	-4.11
10,987.0	3.90	66.40	10,975.7	172.9	316.4	-250.1	0.75	0.63	6.56
11,081.0	3.30	79.00	11,069.5	174.7	322.0	-253.3	1.05	-0.64	13.40
11,177.0	2.40	90.80	11,165.4	175.2	326.7	-255.0	1.11	-0.94	12.29
11,272.0	1.70	104.60	11,260.4	174.8	330.1	-255.5	0.90	-0.74	14.53
11,367.0	2.30	79.40	11,355.3	174.8	333.3	-256.4	1.11	0.63	-26.53
11,462.0	2.10	52.10	11,450.2	176.2	336.5	-258.6	1.11	-0.21	-28.74
11,557.0	1.40	73.50	11,545.2	177.6	339.0	-260.6	1.00	-0.74	22.53
11,651.0	1.10	57.80	11,639.2	178.4	340.9	-261.9	0.48	-0.32	-16.70
11,711.9	0.80	38.11	11,700.1	179.1	341.6	-262.7	0.72	-0.49	-32.31
B.B. El Mar 21 W1CN Fed Com 3H									
11,746.0	0.70	20.90	11,734.2	179.4	341.9	-263.1	0.72	-0.29	-50.53
11,798.0	1.10	150.90	11,786.2	179.3	342.2	-263.1	3.15	0.77	250.00
11,830.0	4.90	160.40	11,818.1	177.7	342.8	-261.8	11.94	11.88	29.69
11,862.0	8.20	164.10	11,849.9	174.3	343.9	-258.7	10.39	10.31	11.56
11,893.0	11.00	164.60	11,880.5	169.3	345.3	-254.2	9.04	9.03	1.61
11,925.0	14.10	165.20	11,911.7	162.6	347.1	-248.2	9.70	9.69	1.88
11,956.0	17.10	168.30	11,941.5	154.5	349.0	-240.9	10.04	9.68	10.00
11,988.0	20.70	172.70	11,971.8	144.2	350.7	-231.5	12.09	11.25	13.75
12,019.0	24.80	175.60	12,000.4	132.3	351.9	-220.3	13.71	13.23	9.35
12,051.0	28.80	177.90	12,029.0	117.9	352.7	-206.6	12.91	12.50	7.19
12,082.0	31.00	178.10	12,055.8	102.5	353.2	-191.9	7.10	7.10	0.65

Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
Well: El Mar 21 W1CN Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (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)
12,114.0	33.10	177.10	12,082.9	85.5	353.9	-175.7	6.77	6.56	-3.13
12,146.0	34.70	176.30	12,109.5	67.7	355.0	-158.8	5.19	5.00	-2.50
12,177.0	36.90	175.50	12,134.6	49.6	356.3	-141.7	7.26	7.10	-2.58
12,209.0	40.10	175.20	12,159.7	29.7	357.9	-122.9	10.02	10.00	-0.94
12,240.0	42.90	174.80	12,182.9	9.3	359.7	-103.7	9.07	9.03	-1.29
12,272.0	45.00	175.30	12,205.9	-12.8	361.6	-82.8	6.65	6.56	1.56
12,303.0	47.30	177.20	12,227.4	-35.1	363.0	-61.7	8.64	7.42	6.13
12,335.0	50.70	179.10	12,248.4	-59.3	363.8	-38.6	11.53	10.63	5.94
12,367.0	53.90	180.50	12,268.0	-84.6	363.9	-14.2	10.58	10.00	4.38
12,398.0	57.80	182.20	12,285.4	-110.2	363.3	10.7	13.37	12.58	5.48
12,429.0	60.20	183.80	12,301.3	-136.8	361.9	36.6	8.92	7.74	5.16
12,461.0	62.20	184.00	12,316.8	-164.7	360.0	64.1	6.27	6.25	0.63
12,462.6	62.39	183.90	12,317.5	-166.1	359.9	65.5	13.31	12.15	-6.13
LP El Mar 21 W1CN Fed Com 3H									
12,493.0	66.10	182.10	12,330.7	-193.5	358.4	92.3	13.31	12.19	-5.93
12,525.0	70.50	181.10	12,342.5	-223.2	357.6	121.1	14.05	13.75	-3.13
12,566.0	75.10	180.30	12,354.7	-262.4	357.1	159.0	11.37	11.22	-1.95
12,597.0	77.40	179.60	12,362.0	-292.5	357.2	188.1	7.74	7.42	-2.26
12,629.0	78.50	178.20	12,368.7	-323.8	357.8	218.1	5.49	3.44	-4.38
12,660.0	81.60	177.20	12,374.1	-354.3	359.0	247.2	10.49	10.00	-3.23
12,692.0	85.70	176.60	12,377.6	-386.0	360.7	277.4	12.95	12.81	-1.88
12,724.0	90.90	177.20	12,378.5	-417.9	362.4	307.7	16.36	16.25	1.88
12,755.0	92.00	177.20	12,377.8	-448.9	364.0	337.2	3.55	3.55	0.00
12,787.0	92.20	177.10	12,376.6	-480.8	365.5	367.6	0.70	0.63	-0.31
12,881.0	92.40	177.70	12,372.8	-574.7	369.8	457.0	0.67	0.21	0.64
12,976.0	89.20	177.40	12,371.5	-669.5	373.9	547.4	3.38	-3.37	-0.32
13,071.0	89.80	177.50	12,372.3	-764.4	378.1	637.9	0.64	0.63	0.11
13,165.0	86.10	178.50	12,375.7	-858.3	381.4	727.6	4.08	-3.94	1.06
13,260.0	88.60	183.70	12,380.1	-953.2	379.5	819.5	6.07	2.63	5.47
13,355.0	89.80	186.20	12,381.4	-1,047.8	371.4	913.0	2.92	1.26	2.63
13,449.0	86.10	181.60	12,384.8	-1,141.5	365.0	1,005.0	6.28	-3.94	-4.89
13,544.0	85.70	180.90	12,391.6	-1,236.2	362.9	1,097.0	0.85	-0.42	-0.74
13,639.0	86.20	179.30	12,398.3	-1,331.0	362.7	1,188.4	1.76	0.53	-1.68
13,734.0	85.60	177.70	12,405.1	-1,425.7	365.2	1,279.2	1.79	-0.63	-1.68
13,765.0	85.30	178.60	12,407.5	-1,456.6	366.2	1,308.7	3.05	-0.97	2.90
13,797.0	85.90	177.70	12,410.0	-1,488.4	367.2	1,339.2	3.37	1.88	-2.81
13,828.0	90.00	177.20	12,411.1	-1,519.4	368.6	1,368.7	13.32	13.23	-1.61
13,860.0	88.90	175.30	12,411.4	-1,551.3	370.7	1,398.9	6.86	-3.44	-5.94
13,891.0	88.50	174.80	12,412.1	-1,582.2	373.4	1,428.0	2.07	-1.29	-1.61
13,924.0	88.50	177.00	12,413.0	-1,615.1	375.7	1,459.1	6.66	0.00	6.67
13,955.0	87.80	179.60	12,414.0	-1,646.1	376.7	1,488.8	8.68	-2.26	8.39
13,987.0	87.30	180.70	12,415.3	-1,678.0	376.6	1,519.6	3.77	-1.56	3.44

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well El Mar 21 W1CN Fed Com #3H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Site:	Section 21-26S-33E El Mar W1CN Fed Com #3H	MD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Well:	El Mar 21 W1CN Fed Com #3H	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)
14,018.0	88.40	180.00	12,416.5	-1,709.0	376.4	1,549.5	4.21	3.55	-2.26
14,049.0	88.20	177.30	12,417.4	-1,740.0	377.1	1,579.2	8.73	-0.65	-8.71
14,081.0	87.30	176.90	12,418.7	-1,771.9	378.7	1,609.6	3.08	-2.81	-1.25
14,113.0	88.90	176.30	12,419.7	-1,803.8	380.6	1,639.9	5.34	5.00	-1.88
14,145.0	90.50	175.40	12,419.9	-1,835.8	382.9	1,670.1	5.74	5.00	-2.81
14,176.0	92.00	175.30	12,419.2	-1,866.6	385.5	1,699.2	4.85	4.84	-0.32
14,208.0	92.40	175.50	12,418.0	-1,898.5	388.0	1,729.3	1.40	1.25	0.63
14,239.0	92.40	175.50	12,416.7	-1,929.4	390.5	1,758.5	0.00	0.00	0.00
14,271.0	93.10	176.10	12,415.2	-1,961.3	392.8	1,788.6	2.88	2.19	1.88
14,302.0	93.50	176.50	12,413.4	-1,992.2	394.8	1,817.9	1.82	1.29	1.29
14,334.0	93.60	176.20	12,411.4	-2,024.0	396.8	1,848.1	0.99	0.31	-0.94
14,365.0	92.90	176.50	12,409.6	-2,054.9	398.8	1,877.3	2.46	-2.26	0.97
14,397.0	93.50	178.20	12,407.9	-2,086.8	400.3	1,907.7	5.63	1.88	5.31
14,460.0	91.80	180.00	12,404.9	-2,149.8	401.3	1,968.2	3.93	-2.70	2.86
14,492.0	91.20	181.10	12,404.1	-2,181.7	401.0	1,999.1	3.91	-1.88	3.44
14,523.0	91.00	180.50	12,403.5	-2,212.7	400.5	2,029.1	2.04	-0.65	-1.94
14,587.0	89.70	181.60	12,403.1	-2,276.7	399.3	2,091.2	2.66	-2.03	1.72
14,619.0	89.40	181.80	12,403.4	-2,308.7	398.4	2,122.3	1.13	-0.94	0.63
14,681.0	87.60	181.60	12,405.0	-2,370.7	396.6	2,182.5	2.92	-2.90	-0.32
14,776.0	87.10	181.70	12,409.4	-2,465.5	393.8	2,274.7	0.54	-0.53	0.11
14,871.0	89.80	182.50	12,411.9	-2,560.4	390.3	2,367.2	2.96	2.84	0.84
14,966.0	89.50	182.10	12,412.5	-2,655.3	386.5	2,459.8	0.53	-0.32	-0.42
15,061.0	89.00	181.70	12,413.8	-2,750.3	383.4	2,552.2	0.67	-0.53	-0.42
15,156.0	89.50	180.50	12,415.0	-2,845.2	381.6	2,644.3	1.37	0.53	-1.26
15,250.0	89.20	181.20	12,416.1	-2,939.2	380.2	2,735.3	0.81	-0.32	0.74
15,344.0	88.60	180.90	12,417.9	-3,033.2	378.4	2,826.4	0.71	-0.64	-0.32
15,439.0	90.90	180.80	12,418.3	-3,128.2	377.0	2,918.4	2.42	2.42	-0.11
15,503.0	90.80	181.10	12,417.4	-3,192.2	376.0	2,980.4	0.49	-0.16	0.47
15,535.0	88.70	180.40	12,417.5	-3,224.1	375.6	3,011.4	6.92	-6.56	-2.19
15,567.0	89.60	180.40	12,418.0	-3,256.1	375.3	3,042.3	2.81	2.81	0.00
15,599.0	90.00	180.70	12,418.1	-3,288.1	375.0	3,073.3	1.56	1.25	0.94
15,631.0	88.40	179.50	12,418.5	-3,320.1	375.0	3,104.2	6.25	-5.00	-3.75
15,662.0	86.30	178.00	12,420.0	-3,351.1	375.6	3,133.9	8.32	-6.77	-4.84
15,693.0	87.50	178.50	12,421.6	-3,382.0	376.6	3,163.5	4.19	3.87	1.61
15,725.0	89.60	180.70	12,422.4	-3,414.0	376.8	3,194.3	9.50	6.56	6.88
15,758.0	88.40	182.80	12,423.0	-3,447.0	375.8	3,226.3	7.33	-3.64	6.36
15,789.0	88.70	185.60	12,423.8	-3,477.9	373.5	3,256.7	9.08	0.97	9.03
15,821.0	88.40	188.80	12,424.6	-3,509.6	369.5	3,288.4	10.04	-0.94	10.00
15,853.0	88.70	189.20	12,425.4	-3,541.2	364.5	3,320.2	1.56	0.94	1.25
15,886.0	88.90	186.90	12,426.1	-3,573.9	359.9	3,352.9	6.99	0.61	-6.97
15,918.0	88.90	184.10	12,426.7	-3,605.7	356.8	3,384.5	8.75	0.00	-8.75
15,950.0	88.40	183.20	12,427.5	-3,637.7	354.8	3,415.8	3.22	-1.56	-2.81
15,982.0	87.00	181.20	12,428.8	-3,669.6	353.6	3,446.9	7.62	-4.38	-6.25

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well El Mar 21 W1CN Fed Com #3H
Project:	Lea County N. M. Nad (83)	TVD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Site:	Section 21-26S-33E El Mar W1CN Fed Com #3H	MD Reference:	3271 + 27 @ 3298.0usft (Patterson 231)
Well:	El Mar 21 W1CN Fed Com #3H	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)
16,014.0	84.00	177.70	12,431.3	-3,701.5	353.9	3,477.6	14.38	-9.38	-10.94
16,045.0	83.60	176.10	12,434.6	-3,732.3	355.5	3,506.9	5.29	-1.29	-5.16
16,077.0	84.70	174.30	12,437.9	-3,764.0	358.2	3,536.8	6.57	3.44	-5.63
16,108.0	85.60	173.50	12,440.5	-3,794.7	361.5	3,565.5	3.88	2.90	-2.58
16,140.0	86.90	172.30	12,442.6	-3,826.4	365.4	3,595.1	5.52	4.06	-3.75
16,172.0	87.40	172.60	12,444.2	-3,858.1	369.6	3,624.5	1.82	1.56	0.94
16,203.0	87.20	172.50	12,445.7	-3,888.8	373.7	3,653.1	0.72	-0.65	-0.32
16,235.0	89.50	170.70	12,446.6	-3,920.4	378.3	3,682.4	9.13	7.19	-5.63
16,266.0	90.70	171.20	12,446.5	-3,951.0	383.2	3,710.6	4.19	3.87	1.61
16,298.0	90.70	172.30	12,446.1	-3,982.7	387.8	3,740.0	3.44	0.00	3.44
16,392.0	89.40	173.80	12,446.1	-4,076.0	399.2	3,827.0	2.11	-1.38	1.60
16,488.0	88.70	176.70	12,447.6	-4,171.7	407.1	3,917.2	3.11	-0.73	3.02
16,582.0	89.50	178.10	12,449.1	-4,265.5	411.4	4,006.6	1.72	0.85	1.49
16,677.0	88.20	177.00	12,451.0	-4,360.4	415.4	4,097.1	1.79	-1.37	-1.16
16,772.0	89.30	176.80	12,453.1	-4,455.3	420.6	4,187.2	1.18	1.16	-0.21
16,866.0	88.80	177.30	12,454.7	-4,549.1	425.4	4,276.5	0.75	-0.53	0.53
16,961.0	88.00	177.30	12,457.3	-4,644.0	429.9	4,366.8	0.84	-0.84	0.00
17,013.0	89.80	178.20	12,458.3	-4,695.9	431.9	4,416.4	3.87	3.46	1.73
17,065.0	89.80	178.20	12,458.5	-4,747.9	433.6	4,466.1	0.00	0.00	0.00

17065' MD Project to Bit - PBHL El Mar 21 W1CN Fed Com 3H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
868.0	867.9	-7.2	-6.8	868.0' MD Teledrift
17,065.0	12,458.5	-4,747.9	433.6	17065' MD Project to Bit



January 30, 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
El Mar 21 W1CN Federal Com #003H
Salado Draw; Wolfcamp (Gas)
Lea County, New Mexico
API# 30-025-43072

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>
Chris Alley	Original Hole	1,025ft. to 17,013ft.	11-16-17 to 12-07-17	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\El Mar 21 W1CN Fed Com #3H\171121

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



January 30, 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 November 16, 2017, through December 07, 2017 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 1,025 feet to a depth of 17,013 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 El Mar 21 W1CN Federal Com #3H well, API # 30-025-43072 in Lea 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

Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
Well: El Mar 21 W1CN Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Lea 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 21-26S-33E El Mar W1CN Fed Com #3H		
Site Position:		Northing:	377,550.70 usft
From:	Map	Easting:	774,340.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 8.654 N
		Longitude:	103° 34' 53.036 W
		Grid Convergence:	0.40 °

Well	El Mar 21 W1CN Fed Com #3H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			27.0 usft
			Latitude:
			32° 2' 8.654 N
			Longitude:
			103° 34' 53.036 W
			Ground Level:
			3,271.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/8/2017	6.90	59.88	47,785.71136080

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	195.27	



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
Well: El Mar 21 W1CN Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey Program **Date** 1/30/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	868.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination
1,025.0	17,065.0	Stryker 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 (°)
868.0	0.77	239.47	867.9	-7.2	-6.8	9.8	223.36
1,025.0	0.50	229.20	1,024.9	-8.1	-8.2	11.5	225.16
1,120.0	0.60	231.80	1,119.9	-8.7	-8.9	12.5	225.56
1,215.0	0.40	118.20	1,214.9	-9.2	-9.0	12.9	224.39
1,311.0	0.70	120.00	1,310.9	-9.6	-8.2	12.6	220.35
1,406.0	0.60	105.90	1,405.9	-10.1	-7.2	12.4	215.61
1,501.0	0.50	98.50	1,500.9	-10.3	-6.3	12.0	211.62
1,595.0	0.60	87.70	1,594.9	-10.3	-5.4	11.6	207.75
1,691.0	0.50	87.30	1,690.9	-10.3	-4.5	11.2	203.68
1,786.0	0.50	75.10	1,785.9	-10.1	-3.7	10.8	199.98
1,883.0	0.20	95.40	1,882.9	-10.0	-3.1	10.5	197.19
1,979.0	0.10	66.10	1,978.9	-10.0	-2.9	10.4	195.95
2,073.0	0.10	61.60	2,072.9	-10.0	-2.7	10.3	195.27
2,169.0	0.10	342.40	2,168.9	-9.8	-2.7	10.2	195.18
2,263.0	0.30	292.60	2,262.9	-9.7	-2.9	10.1	196.82
2,358.0	0.40	290.40	2,357.9	-9.4	-3.5	10.1	200.12
2,453.0	0.50	273.80	2,452.9	-9.3	-4.2	10.2	204.22
2,547.0	0.70	288.50	2,546.9	-9.1	-5.1	10.4	209.47
2,643.0	0.80	265.10	2,642.9	-9.0	-6.4	11.0	215.36
2,737.0	0.70	359.60	2,736.9	-8.4	-7.0	11.0	219.73
2,831.0	1.00	39.00	2,830.9	-7.2	-6.5	9.7	221.97

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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)	Closure Distance (usft)	Closure Azimuth (°)
2,925.0	1.00	35.00	2,924.8	-5.9	-5.5	8.1	222.97
3,020.0	0.90	51.10	3,019.8	-4.8	-4.5	6.5	223.05
3,114.0	1.00	37.50	3,113.8	-3.7	-3.4	5.0	222.78
3,208.0	0.60	48.10	3,207.8	-2.7	-2.5	3.7	223.24
3,303.0	0.60	26.50	3,302.8	-1.9	-1.9	2.7	225.38
3,398.0	0.70	42.50	3,397.8	-1.0	-1.3	1.7	231.88
3,493.0	0.70	61.30	3,492.8	-0.3	-0.4	0.5	231.83
3,587.0	1.90	77.30	3,586.8	0.3	1.6	1.6	79.79
3,681.0	0.60	101.30	3,680.7	0.5	3.6	3.6	81.56
3,776.0	0.60	110.60	3,775.7	0.3	4.6	4.6	86.70
3,870.0	1.30	85.20	3,869.7	0.2	6.1	6.1	88.32
3,965.0	0.40	277.30	3,964.7	0.3	6.8	6.8	87.39
4,060.0	1.20	282.70	4,059.7	0.6	5.5	5.6	84.10
4,155.0	0.60	302.20	4,154.7	1.1	4.1	4.3	75.69
4,250.0	0.40	52.60	4,249.7	1.5	4.0	4.3	69.08
4,345.0	0.80	92.70	4,344.7	1.7	4.9	5.2	70.97
4,440.0	1.10	80.30	4,439.7	1.8	6.5	6.7	74.33
4,535.0	1.70	100.70	4,534.6	1.7	8.8	8.9	78.97
4,630.0	0.70	136.40	4,629.6	1.0	10.5	10.6	84.44
4,725.0	0.70	152.60	4,724.6	0.1	11.2	11.2	89.54
4,806.0	0.90	153.50	4,805.6	-0.9	11.7	11.8	94.49
4,920.0	0.70	131.60	4,919.6	-2.2	12.6	12.8	99.80
5,015.0	2.00	72.20	5,014.6	-2.1	14.6	14.8	98.01
5,109.0	3.60	50.50	5,108.5	0.3	18.5	18.5	89.02
5,203.0	3.60	55.90	5,202.3	3.8	23.2	23.5	80.58
5,298.0	3.70	53.80	5,297.1	7.3	28.2	29.1	75.40
5,393.0	3.20	55.30	5,391.9	10.7	32.8	34.5	72.01

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Design: Original Hole

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,488.0	2.90	56.00	5,486.8	13.5	37.0	39.4	69.94
5,583.0	2.50	55.00	5,581.7	16.0	40.7	43.7	68.48
5,678.0	2.80	52.80	5,676.6	18.6	44.2	48.0	67.15
5,773.0	2.60	53.80	5,771.5	21.3	47.8	52.3	65.98
5,868.0	2.50	51.90	5,866.4	23.9	51.2	56.5	65.01
5,963.0	2.30	50.70	5,961.3	26.3	54.3	60.3	64.11
6,057.0	2.60	52.20	6,055.2	28.8	57.4	64.3	63.33
6,152.0	2.80	53.00	6,150.1	31.6	61.0	68.7	62.63
6,246.0	2.60	56.10	6,244.0	34.1	64.6	73.0	62.14
6,341.0	3.60	57.20	6,338.8	36.9	68.9	78.2	61.79
6,436.0	3.80	56.60	6,433.6	40.3	74.0	84.3	61.43
6,531.0	3.80	57.60	6,528.4	43.7	79.3	90.5	61.13
6,625.0	3.80	59.00	6,622.2	47.0	84.6	96.8	60.95
6,720.0	4.00	55.70	6,717.0	50.5	90.0	103.2	60.72
6,814.0	4.30	71.80	6,810.8	53.4	96.1	109.9	60.92
6,909.0	3.30	77.30	6,905.6	55.1	102.1	116.1	61.64
7,004.0	3.30	83.10	7,000.4	56.1	107.5	121.3	62.46
7,099.0	3.20	62.00	7,095.2	57.6	112.6	126.5	62.89
7,194.0	3.30	59.80	7,190.1	60.3	117.3	131.9	62.80
7,289.0	3.10	59.70	7,284.9	62.9	121.9	137.2	62.69
7,383.0	3.20	56.90	7,378.8	65.6	126.3	142.3	62.53
7,478.0	3.70	63.20	7,473.6	68.5	131.2	148.0	62.44
7,573.0	3.80	62.10	7,568.4	71.3	136.7	154.2	62.45
7,667.0	3.50	58.60	7,662.2	74.3	141.9	160.2	62.37
7,761.0	3.30	61.50	7,756.1	77.1	146.8	165.8	62.29
7,856.0	2.90	59.90	7,850.9	79.6	151.2	170.9	62.25
7,951.0	2.80	62.80	7,945.8	81.8	155.4	175.6	62.22



Microsoft
MWD Surveys



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Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
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Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
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Database: Stryker_EDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
8,046.0	3.40	61.10	8,040.7	84.3	159.9	180.8	62.21
8,141.0	3.20	62.50	8,135.5	86.9	164.7	186.2	62.20
8,235.0	3.00	61.00	8,229.4	89.3	169.2	191.3	62.19
8,330.0	2.90	58.50	8,324.3	91.7	173.4	196.2	62.13
8,423.0	3.30	64.30	8,417.1	94.1	177.8	201.2	62.11
8,518.0	3.20	65.70	8,512.0	96.4	182.7	206.6	62.19
8,613.0	3.00	60.10	8,606.8	98.7	187.3	211.7	62.21
8,708.0	2.50	63.30	8,701.7	100.9	191.3	216.3	62.19
8,802.0	3.10	57.00	8,795.6	103.2	195.3	220.9	62.15
8,898.0	2.90	52.10	8,891.5	106.1	199.4	225.8	61.98
8,992.0	3.40	54.10	8,985.3	109.2	203.5	230.9	61.78
9,088.0	3.90	52.20	9,081.1	112.9	208.4	237.0	61.56
9,183.0	3.50	51.80	9,175.9	116.6	213.2	243.0	61.32
9,278.0	3.90	62.90	9,270.7	119.9	218.4	249.1	61.23
9,372.0	4.10	44.70	9,364.5	123.7	223.6	255.5	61.04
9,467.0	4.40	60.60	9,459.3	128.0	229.1	262.4	60.82
9,561.0	4.50	79.50	9,553.0	130.4	235.9	269.6	61.07
9,657.0	4.00	84.30	9,648.7	131.4	242.9	276.2	61.59
9,752.0	1.50	77.20	9,743.6	132.0	247.5	280.5	61.92
9,846.0	1.50	63.70	9,837.6	132.8	249.8	282.9	61.99
9,941.0	1.60	47.40	9,932.5	134.3	251.9	285.4	61.93
10,035.0	3.20	56.10	10,026.4	136.6	255.0	289.3	61.82
10,131.0	4.40	57.60	10,122.2	140.1	260.3	295.6	61.71
10,226.0	4.00	53.30	10,217.0	144.0	266.1	302.5	61.57
10,321.0	4.20	57.10	10,311.7	147.9	271.6	309.3	61.43
10,416.0	5.50	59.10	10,406.4	152.1	278.5	317.3	61.35
10,511.0	5.00	63.50	10,501.0	156.3	286.1	326.0	61.35



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
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Wellbore: Original Hole
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Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
10,607.0	4.60	62.30	10,596.7	160.0	293.2	334.0	61.38
10,701.0	4.50	55.50	10,690.4	163.8	299.6	341.5	61.33
10,796.0	4.00	64.00	10,785.1	167.4	305.7	348.5	61.29
10,891.0	3.30	60.10	10,879.9	170.2	311.0	354.5	61.31
10,987.0	3.90	66.40	10,975.7	172.9	316.4	360.5	61.35
11,081.0	3.30	79.00	11,069.5	174.7	322.0	366.3	61.52
11,177.0	2.40	90.80	11,165.4	175.2	326.7	370.7	61.80
11,272.0	1.70	104.60	11,260.4	174.8	330.1	373.5	62.09
11,367.0	2.30	79.40	11,355.3	174.8	333.3	376.3	62.33
11,462.0	2.10	52.10	11,450.2	176.2	336.5	379.9	62.36
11,557.0	1.40	73.50	11,545.2	177.6	339.0	382.7	62.35
11,651.0	1.10	57.80	11,639.2	178.4	340.9	384.8	62.37
11,711.9	0.80	38.11	11,700.1	179.1	341.6	385.7	62.34
B.B. El Mar 21 W1CN Fed Com 3H							
11,746.0	0.70	20.90	11,734.2	179.4	341.9	386.1	62.31
11,798.0	1.10	150.90	11,786.2	179.3	342.2	386.3	62.35
11,830.0	4.90	160.40	11,818.1	177.7	342.8	386.2	62.59
11,862.0	8.20	164.10	11,849.9	174.3	343.9	385.5	63.13
11,893.0	11.00	164.60	11,880.5	169.3	345.3	384.6	63.88
11,925.0	14.10	165.20	11,911.7	162.6	347.1	383.3	64.90
11,956.0	17.10	168.30	11,941.5	154.5	349.0	381.7	66.13
11,988.0	20.70	172.70	11,971.8	144.2	350.7	379.2	67.64
12,019.0	24.80	175.60	12,000.4	132.3	351.9	375.9	69.39
12,051.0	28.80	177.90	12,029.0	117.9	352.7	371.9	71.51
12,082.0	31.00	178.10	12,055.8	102.5	353.2	367.8	73.82
12,114.0	33.10	177.10	12,082.9	85.5	353.9	364.1	76.42
12,146.0	34.70	176.30	12,109.5	67.7	355.0	361.3	79.20

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
12,177.0	36.90	175.50	12,134.6	49.6	356.3	359.7	82.07
12,209.0	40.10	175.20	12,159.7	29.7	357.9	359.1	85.25
12,240.0	42.90	174.80	12,182.9	9.3	359.7	359.8	88.52
12,272.0	45.00	175.30	12,205.9	-12.8	361.6	361.8	92.03
12,303.0	47.30	177.20	12,227.4	-35.1	363.0	364.7	95.53
12,335.0	50.70	179.10	12,248.4	-59.3	363.8	368.6	99.25
12,367.0	53.90	180.50	12,268.0	-84.6	363.9	373.6	103.09
12,398.0	57.80	182.20	12,285.4	-110.2	363.3	379.6	106.88
12,429.0	60.20	183.80	12,301.3	-136.8	361.9	386.9	110.70
12,461.0	62.20	184.00	12,316.8	-164.7	360.0	395.9	114.59
12,462.6	62.39	183.90	12,317.5	-166.1	359.9	396.4	114.78
LP El Mar 21 W1CN Fed Com 3H							
12,493.0	66.10	182.10	12,330.7	-193.5	358.4	407.3	118.36
12,525.0	70.50	181.10	12,342.5	-223.2	357.6	421.6	121.97
12,566.0	75.10	180.30	12,354.7	-262.4	357.1	443.1	126.30
12,597.0	77.40	179.60	12,362.0	-292.5	357.2	461.6	129.31
12,629.0	78.50	178.20	12,368.7	-323.8	357.8	482.5	132.14
12,660.0	81.60	177.20	12,374.1	-354.3	359.0	504.4	134.62
12,692.0	85.70	176.60	12,377.6	-386.0	360.7	528.3	136.94
12,724.0	90.90	177.20	12,378.5	-417.9	362.4	553.2	139.07
12,755.0	92.00	177.20	12,377.8	-448.9	364.0	577.9	140.96
12,787.0	92.20	177.10	12,376.6	-480.8	365.5	604.0	142.76
12,881.0	92.40	177.70	12,372.8	-574.7	369.8	683.4	147.24
12,976.0	89.20	177.40	12,371.5	-669.5	373.9	766.9	150.82
13,071.0	89.80	177.50	12,372.3	-764.4	378.1	852.8	153.68
13,165.0	86.10	178.50	12,375.7	-858.3	381.4	939.2	156.04
13,260.0	88.60	183.70	12,380.1	-953.2	379.5	1,025.9	158.29

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
13,355.0	89.80	186.20	12,381.4	-1,047.8	371.4	1,111.6	160.48
13,449.0	86.10	181.60	12,384.8	-1,141.5	365.0	1,198.4	162.27
13,544.0	85.70	180.90	12,391.6	-1,236.2	362.9	1,288.4	163.64
13,639.0	86.20	179.30	12,398.3	-1,331.0	362.7	1,379.5	164.76
13,734.0	85.60	177.70	12,405.1	-1,425.7	365.2	1,471.7	165.63
13,765.0	85.30	178.60	12,407.5	-1,456.6	366.2	1,501.9	165.89
13,797.0	85.90	177.70	12,410.0	-1,488.4	367.2	1,533.1	166.14
13,828.0	90.00	177.20	12,411.1	-1,519.4	368.6	1,563.5	166.36
13,860.0	88.90	175.30	12,411.4	-1,551.3	370.7	1,595.0	166.56
13,891.0	88.50	174.80	12,412.1	-1,582.2	373.4	1,625.7	166.72
13,924.0	88.50	177.00	12,413.0	-1,615.1	375.7	1,658.2	166.90
13,955.0	87.80	179.60	12,414.0	-1,646.1	376.7	1,688.6	167.11
13,987.0	87.30	180.70	12,415.3	-1,678.0	376.6	1,719.8	167.35
14,018.0	88.40	180.00	12,416.5	-1,709.0	376.4	1,750.0	167.58
14,049.0	88.20	177.30	12,417.4	-1,740.0	377.1	1,780.4	167.77
14,081.0	87.30	176.90	12,418.7	-1,771.9	378.7	1,811.9	167.93
14,113.0	88.90	176.30	12,419.7	-1,803.8	380.6	1,843.6	168.08
14,145.0	90.50	175.40	12,419.9	-1,835.8	382.9	1,875.3	168.22
14,176.0	92.00	175.30	12,419.2	-1,866.6	385.5	1,906.0	168.33
14,208.0	92.40	175.50	12,418.0	-1,898.5	388.0	1,937.8	168.45
14,239.0	92.40	175.50	12,416.7	-1,929.4	390.5	1,968.5	168.56
14,271.0	93.10	176.10	12,415.2	-1,961.3	392.8	2,000.2	168.67
14,302.0	93.50	176.50	12,413.4	-1,992.2	394.8	2,030.9	168.79
14,334.0	93.60	176.20	12,411.4	-2,024.0	396.8	2,062.6	168.91
14,365.0	92.90	176.50	12,409.6	-2,054.9	398.8	2,093.3	169.02
14,397.0	93.50	178.20	12,407.9	-2,086.8	400.3	2,124.9	169.14
14,460.0	91.80	180.00	12,404.9	-2,149.8	401.3	2,186.9	169.43



Microsoft
MWD Surveys



Company: Mewbourne Oil Company
Project: Lea County N. M. Nad (83)
Site: Section 21-26S-33E El Mar W1CN Fed Com #3H
Well: El Mar 21 W1CN Fed Com #3H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well El Mar 21 W1CN Fed Com #3H
TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (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)	Closure Distance (usft)	Closure Azimuth (°)
14,492.0	91.20	181.10	12,404.1	-2,181.7	401.0	2,218.3	169.59
14,523.0	91.00	180.50	12,403.5	-2,212.7	400.5	2,248.7	169.74
14,587.0	89.70	181.60	12,403.1	-2,276.7	399.3	2,311.5	170.05
14,619.0	89.40	181.80	12,403.4	-2,308.7	398.4	2,342.8	170.21
14,681.0	87.60	181.60	12,405.0	-2,370.7	396.6	2,403.6	170.50
14,776.0	87.10	181.70	12,409.4	-2,465.5	393.8	2,496.8	170.92
14,871.0	89.80	182.50	12,411.9	-2,560.4	390.3	2,590.0	171.33
14,966.0	89.50	182.10	12,412.5	-2,655.3	386.5	2,683.3	171.72
15,061.0	89.00	181.70	12,413.8	-2,750.3	383.4	2,776.9	172.06
15,156.0	89.50	180.50	12,415.0	-2,845.2	381.6	2,870.7	172.36
15,250.0	89.20	181.20	12,416.1	-2,939.2	380.2	2,963.7	172.63
15,344.0	88.60	180.90	12,417.9	-3,033.2	378.4	3,056.7	172.89
15,439.0	90.90	180.80	12,418.3	-3,128.2	377.0	3,150.8	173.13
15,503.0	90.80	181.10	12,417.4	-3,192.2	376.0	3,214.2	173.28
15,535.0	88.70	180.40	12,417.5	-3,224.1	375.6	3,245.9	173.36
15,567.0	89.60	180.40	12,418.0	-3,256.1	375.3	3,277.7	173.42
15,599.0	90.00	180.70	12,418.1	-3,288.1	375.0	3,309.5	173.49
15,631.0	88.40	179.50	12,418.5	-3,320.1	375.0	3,341.2	173.56
15,662.0	86.30	178.00	12,420.0	-3,351.1	375.6	3,372.1	173.60
15,693.0	87.50	178.50	12,421.6	-3,382.0	376.6	3,402.9	173.65
15,725.0	89.60	180.70	12,422.4	-3,414.0	376.8	3,434.7	173.70
15,758.0	88.40	182.80	12,423.0	-3,447.0	375.8	3,467.4	173.78
15,789.0	88.70	185.60	12,423.8	-3,477.9	373.5	3,497.9	173.87
15,821.0	88.40	188.80	12,424.6	-3,509.6	369.5	3,529.0	173.99
15,853.0	88.70	189.20	12,425.4	-3,541.2	364.5	3,559.9	174.12
15,886.0	88.90	186.90	12,426.1	-3,573.9	359.9	3,592.0	174.25
15,918.0	88.90	184.10	12,426.7	-3,605.7	356.8	3,623.4	174.35

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TVD Reference: 3271 + 27 @ 3298.0usft (Patterson 231)
MD Reference: 3271 + 27 @ 3298.0usft (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)	Closure Distance (usft)	Closure Azimuth (°)
15,950.0	88.40	183.20	12,427.5	-3,637.7	354.8	3,654.9	174.43
15,982.0	87.00	181.20	12,428.8	-3,669.6	353.6	3,686.6	174.50
16,014.0	84.00	177.70	12,431.3	-3,701.5	353.9	3,718.4	174.54
16,045.0	83.60	176.10	12,434.6	-3,732.3	355.5	3,749.2	174.56
16,077.0	84.70	174.30	12,437.9	-3,764.0	358.2	3,781.0	174.56
16,108.0	85.60	173.50	12,440.5	-3,794.7	361.5	3,811.9	174.56
16,140.0	86.90	172.30	12,442.6	-3,826.4	365.4	3,843.8	174.54
16,172.0	87.40	172.60	12,444.2	-3,858.1	369.6	3,875.7	174.53
16,203.0	87.20	172.50	12,445.7	-3,888.8	373.7	3,906.7	174.51
16,235.0	89.50	170.70	12,446.6	-3,920.4	378.3	3,938.6	174.49
16,266.0	90.70	171.20	12,446.5	-3,951.0	383.2	3,969.6	174.46
16,298.0	90.70	172.30	12,446.1	-3,982.7	387.8	4,001.5	174.44
16,392.0	89.40	173.80	12,446.1	-4,076.0	399.2	4,095.5	174.41
16,488.0	88.70	176.70	12,447.6	-4,171.7	407.1	4,191.5	174.43
16,582.0	89.50	178.10	12,449.1	-4,265.5	411.4	4,285.3	174.49
16,677.0	88.20	177.00	12,451.0	-4,360.4	415.4	4,380.2	174.56
16,772.0	89.30	176.80	12,453.1	-4,455.3	420.6	4,475.1	174.61
16,866.0	88.80	177.30	12,454.7	-4,549.1	425.4	4,569.0	174.66
16,961.0	88.00	177.30	12,457.3	-4,644.0	429.9	4,663.8	174.71
17,013.0	89.80	178.20	12,458.3	-4,695.9	431.9	4,715.8	174.74
17,065.0	89.80	178.20	12,458.5	-4,747.9	433.6	4,767.7	174.78

17065' MD Project to Bit - PBHL El Mar 21 W1CN Fed Com 3H