

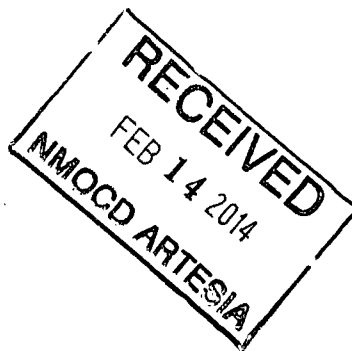
OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE TAMANO 11 NC FEDERAL 1H
COUNTY EDDY

080-0144

STATE OF NEW MEXICO
DEVIATION REPORT

15-41358

417	0.25
841	0.50
1,011	0.40
1,506	0.60
2,024	1.50
2,341	0.40
2,536	0.20
2,722	0.40
3,197	0.90
3,678	1.20
4,092	1.10
4,340	0.80
4,721	1.10
5,101	0.70
5,578	1.70
5,996	2.90
6,092	1.60
6,425	0.65
6,901	2.22
7,545	2.80



BY:

Steve Moore

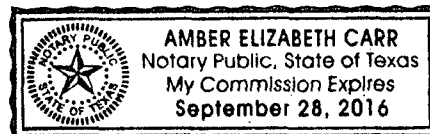
STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Steve Moore on behalf of Patterson-UTL Drilling Company LLC.

11/22/13, by

Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:





Mewbourne Oil Company .

Eddy County, N.M. Nad (83)
Tamano #11NC Section 11-18S-31E
Tamano #11NC Federal #1H

Original Hole

Design: Original Hole

Standard Survey Report

18 November, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Tamano #11NC Federal #1H
Project:	Eddy County, N.M., Nad(83)	TVD Reference:	GL 3719. + 20. @ 3739.0usft (Patterson #80)
Site:	Tamano #11NC Section 11-18S-31E	MD Reference:	GL 3719. + 20. @ 3739.0usft (Patterson #80)
Well:	Tamano #11NC Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM:5000.1 Single User Db

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:	Tamano #11NC Section 11-18S-31E		
Site Position:		Northing:	638,832.10 usft
From:	Map	Easting:	692,611.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 45' 18.789 N
		Longitude:	103° 50' 28.538 W
		Grid Convergence:	0.27 °

Well	Tamano #11NC Federal #1H					
Well Position	+N/-S	0.0 usft	Northing:	638,832.10 usft	Latitude:	32° 45' 18.789 N
	+E/-W	0.0 usft	Easting:	692,611.40 usft	Longitude:	103° 50' 28.538 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,719.0 usft	

Wellbore:	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/21/2013	7.46	60.57	48,669

Survey Program	Date	11/18/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,960.0	VES Gyro Survey #1 (Original Hole)	GyroFlex	
8,054.0	13,085.0	Survey #2 (Original Hole)	MWD	MWD - Standard

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	0.44	278.25	100.0	0.1	-0.4	0.1	0.44	0.44	0.00
200.0	0.72	269.59	200.0	0.1	-1.4	0.1	0.29	0.28	-8.66
300.0	0.02	268.56	300.0	0.1	-2.0	0.1	0.70	-0.70	-1.03
400.0	0.45	261.47	400.0	0.0	-2.4	0.1	0.43	0.43	-7.09
500.0	0.06	259.15	500.0	0.0	-2.9	0.0	0.39	-0.39	-2.32
600.0	0.26	256.39	600.0	-0.1	-3.2	0.0	0.20	0.20	-2.76
700.0	0.21	279.26	700.0	-0.1	-3.6	0.0	0.11	-0.05	22.87
800.0	0.25	274.83	800.0	-0.1	-4.0	0.0	0.04	0.04	-4.43
900.0	0.20	227.93	900.0	-0.2	-4.3	-0.1	0.18	-0.05	-46.90
1,000.0	0.33	23.37	1,000.0	0.0	-4.3	0.1	0.52	0.13	155.44
1,100.0	0.17	22.28	1,100.0	0.4	-4.1	0.5	0.16	-0.16	-1.09
1,200.0	0.62	30.44	1,200.0	1.0	-3.8	1.1	0.45	0.45	8.16
1,300.0	0.66	50.44	1,300.0	1.8	-3.1	1.9	0.23	0.04	20.00
1,400.0	0.62	43.82	1,400.0	2.6	-2.3	2.6	0.08	-0.04	-6.62
1,500.0	0.69	58.35	1,500.0	3.3	-1.4	3.3	0.18	0.07	14.53



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Tamano #11NC Federal #1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Site:	Tamano #11NC Section 11-18S-31E	MD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Well:	Tamano #11NC Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM-5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,600.0	0.56	56.54	1,600.0	3.9	-0.5	3.9	0.13	-0.13	-1.81
1,700.0	0.57	51.34	1,700.0	4.5	0.3	4.4	0.05	0.01	-5.20
1,800.0	0.68	71.70	1,799.9	4.9	1.3	4.9	0.25	0.11	20.36
1,900.0	0.59	79.67	1,899.9	5.2	2.3	5.2	0.13	-0.09	7.97
2,000.0	1.53	76.09	1,999.9	5.6	4.2	5.6	0.94	0.94	-3.58
2,100.0	1.32	74.81	2,099.9	6.3	6.6	6.1	0.21	-0.21	-1.28
2,200.0	0.91	64.40	2,199.9	6.9	8.4	6.8	0.46	-0.41	-10.41
2,300.0	0.52	60.19	2,299.9	7.5	9.5	7.3	0.39	-0.39	-4.21
2,400.0	0.34	55.86	2,399.9	7.9	10.1	7.7	0.18	-0.18	-4.33
2,500.0	0.26	327.07	2,499.9	8.2	10.3	8.0	0.42	-0.08	-88.79
2,600.0	0.28	309.74	2,599.9	8.6	9.9	8.4	0.08	0.02	-17.33
2,700.0	0.36	277.75	2,699.9	8.8	9.4	8.6	0.19	0.08	-31.99
2,800.0	0.51	273.14	2,799.9	8.8	8.7	8.7	0.15	0.15	-4.61
2,900.0	0.53	283.58	2,899.9	9.0	7.8	8.8	0.10	0.02	10.44
3,000.0	0.56	277.58	2,999.8	9.1	6.9	9.0	0.06	0.03	-6.00
3,100.0	0.93	280.15	3,099.8	9.4	5.6	9.2	0.37	0.37	2.57
3,200.0	0.86	286.75	3,199.8	9.7	4.1	9.6	0.12	-0.07	6.60
3,300.0	1.08	291.41	3,299.8	10.3	2.5	10.2	0.23	0.22	4.66
3,400.0	1.06	289.25	3,399.8	10.9	0.7	10.9	0.05	-0.02	-2.16
3,500.0	1.02	280.04	3,499.8	11.4	-1.0	11.4	0.17	-0.04	-9.21
3,600.0	1.16	286.04	3,599.8	11.8	-2.9	11.9	0.18	0.14	6.00
3,700.0	1.06	271.12	3,699.7	12.1	-4.8	12.2	0.30	-0.10	-14.92
3,800.0	1.03	282.16	3,799.7	12.3	-6.6	12.4	0.20	-0.03	11.04
3,900.0	0.91	287.18	3,899.7	12.7	-8.2	12.9	0.15	-0.12	5.02
4,000.0	0.80	279.37	3,999.7	13.1	-9.7	13.3	0.16	-0.11	-7.81
4,100.0	0.92	287.23	4,099.7	13.4	-11.1	13.6	0.17	0.12	7.86
4,200.0	0.84	294.76	4,199.7	14.0	-12.6	14.2	0.14	-0.08	7.53
4,300.0	0.84	298.93	4,299.7	14.6	-13.9	14.9	0.06	0.00	4.17
4,400.0	0.79	297.78	4,399.7	15.3	-15.1	15.6	0.05	-0.05	-1.15
4,500.0	0.75	293.07	4,499.6	15.9	-16.3	16.2	0.07	-0.04	-4.71
4,600.0	0.81	296.58	4,599.6	16.5	-17.6	16.8	0.08	0.06	3.51
4,700.0	0.88	298.28	4,699.6	17.2	-18.9	17.5	0.07	0.07	1.70
4,800.0	0.95	299.66	4,799.6	17.9	-20.3	18.3	0.07	0.07	1.38
4,900.0	1.02	309.88	4,899.6	18.9	-21.7	19.3	0.19	0.07	10.22
5,000.0	0.78	313.78	4,999.6	20.0	-22.8	20.4	0.25	-0.24	3.90
5,100.0	0.76	305.73	5,099.6	20.8	-23.9	21.2	0.11	-0.02	-8.05
5,200.0	0.63	322.10	5,199.6	21.6	-24.7	22.1	0.24	-0.13	16.37
5,300.0	0.68	326.78	5,299.6	22.6	-25.4	23.0	0.07	0.05	4.68
5,400.0	0.83	353.52	5,399.6	23.8	-25.8	24.3	0.38	0.15	26.74
5,500.0	1.14	41.66	5,499.5	25.2	-25.2	25.7	0.85	0.31	48.14
5,600.0	1.74	56.51	5,599.5	26.8	-23.3	27.2	0.70	0.60	14.85
5,700.0	2.16	38.76	5,699.5	29.1	-20.9	29.5	0.73	0.42	-17.75
5,800.0	2.54	43.74	5,799.4	32.2	-18.2	32.5	0.43	0.38	4.98
5,900.0	2.70	48.09	5,899.3	35.4	-14.9	35.6	0.26	0.16	4.35



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Tamano #11NC Federal #1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Site:	Tamano #11NC Section 11:18S-31E	MD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Well:	Tamano #11NC Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM5000.1 Single User Db

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)
6,000.0	2.46	44.72	5,999.2	38.5	-11.6	38.7	0.28	-0.24	-3.37
6,100.0	1.49	47.33	6,099.1	40.9	-9.1	41.0	0.97	-0.97	2.61
6,200.0	1.13	54.09	6,199.1	42.3	-7.4	42.5	0.39	-0.36	6.76
6,300.0	1.04	49.44	6,299.1	43.5	-5.9	43.6	0.13	-0.09	-4.65
6,400.0	1.07	21.25	6,399.0	45.0	-4.9	45.0	0.51	0.03	-28.19
6,500.0	1.50	349.93	6,499.0	47.1	-4.8	47.2	0.81	0.43	-31.32
6,600.0	1.71	337.61	6,599.0	49.8	-5.6	49.9	0.40	0.21	-12.32
6,700.0	1.51	328.06	6,698.9	52.3	-6.8	52.4	0.33	-0.20	-9.55
6,800.0	1.89	310.18	6,798.9	54.5	-8.8	54.6	0.65	0.38	-17.88
6,900.0	2.27	315.50	6,898.8	57.0	-11.4	57.2	0.43	0.38	5.32
7,000.0	2.41	316.13	6,998.7	59.9	-14.3	60.1	0.14	0.14	0.63
7,100.0	2.38	318.37	7,098.7	62.9	-17.1	63.3	0.10	-0.03	2.24
7,200.0	2.20	341.96	7,198.6	66.3	-19.1	66.7	0.95	-0.18	23.59
7,300.0	2.10	6.64	7,298.5	70.0	-19.5	70.3	0.92	-0.10	24.68
7,400.0	2.38	8.68	7,398.4	73.8	-18.9	74.2	0.29	0.28	2.04
7,500.0	2.33	18.93	7,498.4	77.8	-18.0	78.1	0.42	-0.05	10.25
7,600.0	2.11	39.43	7,598.3	81.2	-16.1	81.4	0.82	-0.22	20.50
7,700.0	2.02	30.02	7,698.2	84.1	-14.1	84.4	0.35	-0.09	-9.41
7,800.0	1.77	28.76	7,798.2	87.0	-12.5	87.2	0.25	-0.25	-1.26
7,900.0	1.58	28.85	7,898.1	89.6	-11.1	89.7	0.19	-0.19	0.09
7,960.0	1.49	26.99	7,958.1	91.0	-10.3	91.1	0.17	-0.15	-3.10
7960 MD VES Gyro Survey									
8,054.0	2.20	26.70	8,052.0	93.7	-8.9	93.8	0.76	0.76	-0.31
8,085.0	4.90	8.20	8,083.0	95.5	-8.5	95.7	9.35	8.71	-59.68
8,117.0	8.50	6.50	8,114.8	99.2	-8.0	99.3	11.27	11.25	-5.31
8,149.0	11.50	7.90	8,146.3	104.7	-7.3	104.8	9.41	9.38	4.38
8,181.0	14.50	4.70	8,177.4	111.9	-6.5	112.0	9.64	9.38	-10.00
8,213.0	17.00	2.40	8,208.2	120.5	-6.0	120.6	8.05	7.81	-7.19
8,244.0	19.70	357.20	8,237.7	130.3	-6.1	130.4	10.18	8.71	-16.77
8,276.0	21.80	0.00	8,267.6	141.6	-6.3	141.7	7.26	6.56	8.75
8,308.0	22.70	359.50	8,297.2	153.7	-6.4	153.8	2.87	2.81	-1.56
8,339.0	26.10	359.30	8,325.4	166.5	-6.5	166.6	10.97	10.97	-0.65
8,371.0	30.00	357.50	8,353.7	181.6	-7.0	181.7	12.47	12.19	-5.63
8,403.0	31.50	356.10	8,381.2	197.9	-7.9	198.0	5.19	4.69	-4.38
8,434.0	33.80	358.00	8,407.3	214.6	-8.7	214.7	8.12	7.42	6.13
8,466.0	37.30	0.70	8,433.3	233.2	-8.9	233.3	11.98	10.94	8.44
8,498.0	41.20	1.00	8,458.1	253.5	-8.6	253.6	12.20	12.19	0.94
8,530.0	45.00	0.00	8,481.4	275.3	-8.4	275.4	12.07	11.88	-3.13
8,562.0	48.50	357.90	8,503.4	298.6	-8.9	298.7	11.94	10.94	-6.56
8,593.0	51.80	357.30	8,523.2	322.4	-9.9	322.5	10.75	10.65	-1.94
8,625.0	57.20	358.90	8,541.8	348.4	-10.7	348.6	17.36	16.88	5.00
8,657.0	62.20	358.80	8,557.9	376.0	-11.3	376.2	15.63	15.63	-0.31
8,688.0	67.40	359.60	8,571.1	404.1	-11.7	404.2	16.94	16.77	2.58



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Tamano #11NC Federal #1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Site:	Tamano #11NC Section 11-18S-31E	MD Reference:	GL 3719 + 20 @ 3739.0usft (Patterson #80)
Well:	Tamano #11NC Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
8,720.0	73.20	359.60	8,581.9	434.2	-11.9	434.3	18.13	18.13	0.00
8,752.0	79.00	359.10	8,589.6	465.2	-12.2	465.4	18.19	18.13	-1.56
8,782.0	83.90	357.30	8,594.1	494.9	-13.2	495.0	17.38	16.33	-6.00
8,834.0	90.60	359.80	8,596.6	546.8	-14.5	546.9	13.75	12.88	4.81
8,865.0	90.50	358.90	8,596.3	577.8	-14.8	577.9	2.92	-0.32	-2.90
8,897.0	92.80	358.20	8,595.3	609.7	-15.7	609.9	7.51	7.19	-2.19
8,929.0	93.60	358.00	8,593.6	641.7	-16.7	641.9	2.58	2.50	-0.63
9,024.0	94.80	357.50	8,586.6	736.3	-20.4	736.6	1.37	1.26	-0.53
9,120.0	94.30	359.60	8,579.0	832.0	-22.9	832.3	2.24	-0.52	2.19
9,215.0	92.30	0.30	8,573.5	926.8	-22.9	927.1	2.23	-2.11	0.74
9,310.0	92.40	0.00	8,569.6	1,021.8	-22.7	1,022.0	0.33	0.11	-0.32
9,405.0	91.50	0.00	8,566.4	1,116.7	-22.7	1,116.9	0.95	-0.95	0.00
9,500.0	91.70	1.20	8,563.7	1,211.7	-21.7	1,211.8	1.28	0.21	1.26
9,595.0	90.90	2.10	8,561.6	1,306.6	-19.0	1,306.7	1.27	-0.84	0.95
9,690.0	93.80	3.50	8,557.7	1,401.4	-14.3	1,401.4	3.39	3.05	1.47
9,785.0	91.50	359.60	8,553.3	1,496.2	-11.8	1,496.2	4.76	-2.42	-4.11
9,880.0	90.30	358.80	8,551.8	1,591.2	-13.1	1,591.2	1.52	-1.26	-0.84
9,974.0	90.00	358.40	8,551.5	1,685.2	-15.4	1,685.2	0.53	-0.32	-0.43
10,069.0	91.50	357.50	8,550.3	1,780.1	-18.8	1,780.1	1.84	1.58	-0.95
10,164.0	93.00	356.30	8,546.6	1,874.9	-23.9	1,875.0	2.02	1.58	-1.26
10,259.0	93.00	355.80	8,541.6	1,969.5	-30.4	1,969.7	0.53	0.00	-0.53
10,354.0	92.30	355.10	8,537.2	2,064.1	-38.0	2,064.5	1.04	-0.74	-0.74
10,449.0	92.10	354.70	8,533.6	2,158.7	-46.4	2,159.2	0.47	-0.21	-0.42
10,544.0	90.30	356.10	8,531.6	2,253.3	-54.0	2,254.0	2.40	-1.89	1.47
10,639.0	91.80	356.80	8,529.8	2,348.1	-59.9	2,348.8	1.74	1.58	0.74
10,735.0	92.30	356.80	8,526.4	2,443.9	-65.3	2,444.7	0.52	0.52	0.00
10,830.0	92.00	356.10	8,522.8	2,538.7	-71.1	2,539.6	0.80	-0.32	-0.74
10,925.0	90.40	358.90	8,520.8	2,633.6	-75.3	2,634.5	3.39	-1.68	2.95
11,020.0	90.40	359.80	8,520.2	2,728.5	-76.4	2,729.5	0.95	0.00	0.95
11,115.0	89.40	0.00	8,520.3	2,823.5	-76.5	2,824.5	1.07	-1.05	0.21
11,210.0	92.20	359.10	8,519.0	2,918.5	-77.3	2,919.4	3.10	2.95	-0.95
11,305.0	92.20	358.90	8,515.4	3,013.4	-78.9	3,014.4	0.21	0.00	-0.21
11,399.0	92.20	358.40	8,511.8	3,107.3	-81.1	3,108.3	0.53	0.00	-0.53
11,494.0	90.90	357.50	8,509.2	3,202.2	-84.5	3,203.3	1.66	-1.37	-0.95
11,589.0	91.70	357.70	8,507.0	3,297.1	-88.5	3,298.2	0.87	0.84	0.21
11,684.0	91.90	357.90	8,504.1	3,392.0	-92.2	3,393.1	0.30	0.21	0.21
11,779.0	91.20	0.90	8,501.5	3,487.0	-93.2	3,488.1	3.24	-0.74	3.16
11,874.0	92.20	0.50	8,498.7	3,581.9	-92.0	3,583.0	1.13	1.05	-0.42
11,968.0	92.90	2.40	8,494.5	3,675.8	-89.6	3,676.8	2.15	0.74	2.02
12,064.0	90.80	1.00	8,491.4	3,771.7	-86.8	3,772.6	2.63	-2.19	-1.46
12,158.0	91.50	359.60	8,489.5	3,865.7	-86.3	3,866.6	1.66	0.74	-1.49
12,253.0	91.50	359.30	8,487.0	3,960.6	-87.2	3,961.6	0.32	0.00	-0.32
12,348.0	92.30	359.30	8,483.9	4,055.6	-88.4	4,056.5	0.84	0.84	0.00



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Tamano #11NC Federal #1H
Project:	Eddy County, N.M. Nad (83)	TVD Reference:	GL 37.19 + 20 @ 3739.0usft (Patterson #80)
Site:	Tamano #11NC Section 11-18S-31E	MD Reference:	GL 37.19 + 20 @ 3739.0usft (Patterson #80)
Well:	Tamano #11NC Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
12,443.0	91.80	358.90	8,480.5	4,150.5	-89.8	4,151.4	0.67	-0.53	-0.42
12,538.0	90.90	358.20	8,478.2	4,245.4	-92.3	4,246.4	1.20	-0.95	-0.74
12,633.0	93.60	358.40	8,474.5	4,340.3	-95.1	4,341.3	2.85	2.84	0.21
12,728.0	93.80	358.60	8,468.4	4,435.1	-97.5	4,436.1	0.30	0.21	0.21
12,823.0	94.40	358.40	8,461.6	4,529.8	-100.0	4,530.9	0.67	0.63	-0.21
12,918.0	92.00	359.10	8,456.3	4,624.6	-102.1	4,625.7	2.63	-2.53	0.74
13,014.0	91.50	358.90	8,453.3	4,720.6	-103.8	4,721.7	0.56	-0.52	-0.21
13,040.0	91.50	358.90	8,452.7	4,746.6	-104.3	4,747.7	0.00	0.00	0.00
13,085.0	91.00	358.90	8,451.7	4,791.5	-105.1	4,792.7	1.11	-1.11	0.00
13085' MD Projected to Bit									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,960.0	7,958.1	91.0	-10.3	7960' MD VES Gyro Survey
13,085.0	8,451.7	4,791.5	-105.1	13085' MD Projected to Bit



COMPANY: Mewbourne Oil Company
 WELL: Tamano #11NC Federal #1H
 COUNTY: Eddy County, N.M. Nad (83)
 DATUM: North American Datum 1983
 RIG: Patterson #80



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.19°

OFFICE: 936.582.7296

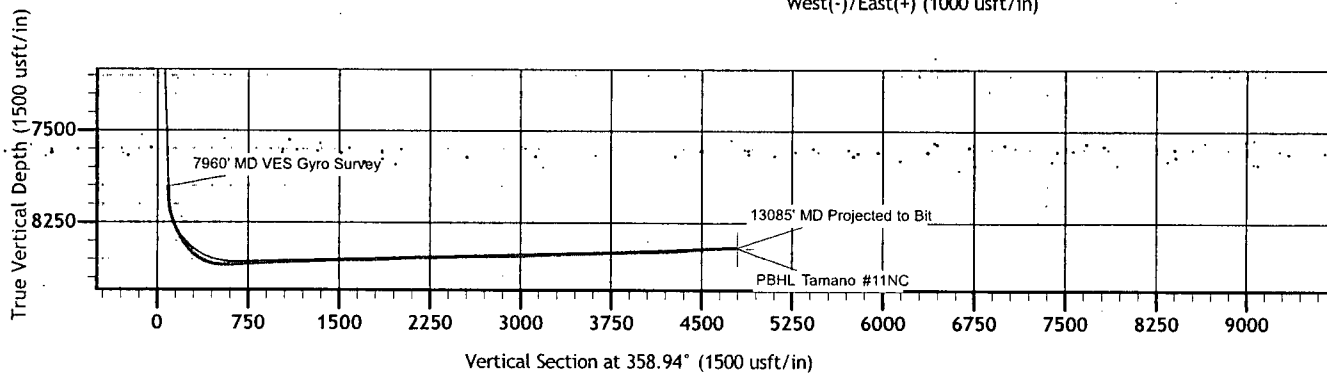
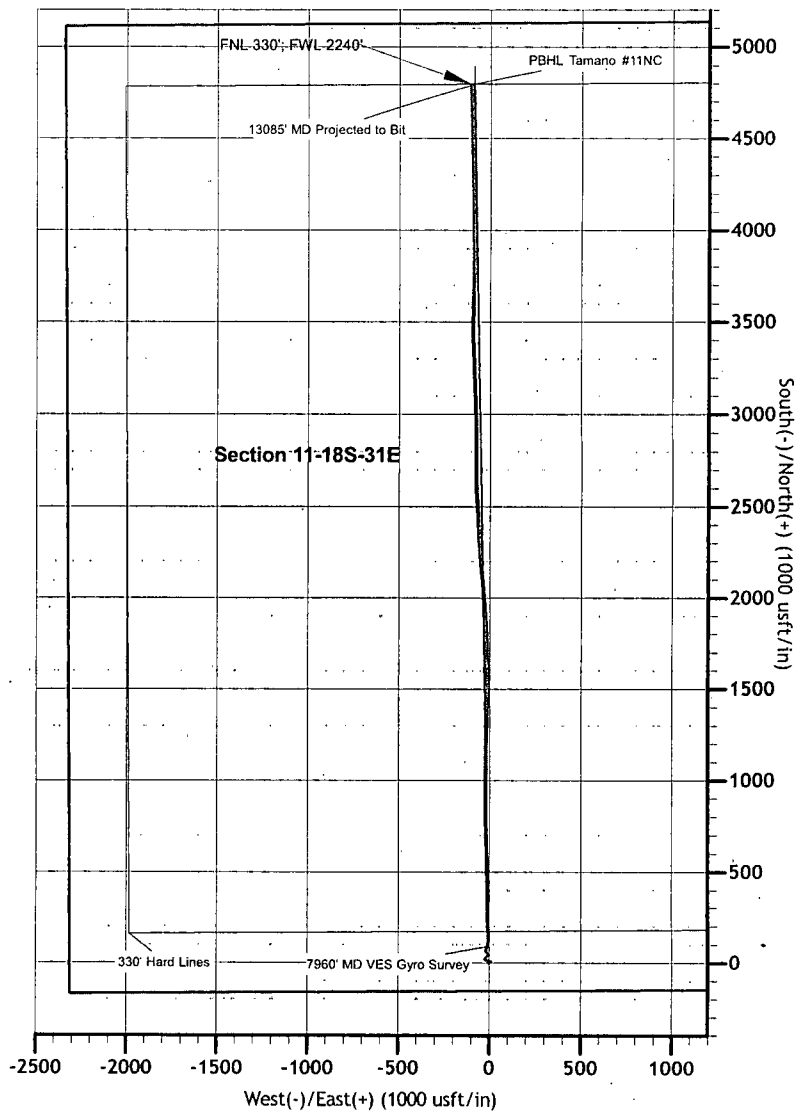
GEODETIC ZONE: New Mexico Eastern Zone
 GL 3719 + 20 @ 3739.0usft (Patterson #80)
 GROUND ELEVATION: 3719.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	638832.10	692611.40	32° 45' 18.789 N	103° 50' 28.538 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	7960.0	1.49	26.99	7958.1	91.0	-10.3	0.00	0.00	91.1	
2	8062.0	1.49	26.99	8060.1	93.3	-9.1	0.00	0.00	93.5	
3	8881.9	91.51	358.96	8568.8	627.8	-12.5	11.00	-28.02	627.9	
4	13055.1	91.51	358.96	8459.0	4798.8	-88.5	0.00	0.00	4799.6	PBHL Tamano #11NC


 Azimuths to Grid North
 True North: -0.27°
 Magnetic North: 7.20°
 Magnetic Field
 Strength: 48668.8snT
 Dip Angle: 60.57°
 Date: 10/21/2013
 Model: IGRF2010



Operating Company Mewbourne Oil Co.
Well Name & Number Tamano II NC Fed Com #1H
Sales Ticket Number 5950691

Company Rep Travis Ingerson
Field
BOT Service Rep Joseph Haynes
District Location Odessa, TX



Date 11/16/2013

District Location Odessa, TX

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,830.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,422.49	12,410	10,680
TVD	8489.00		KOP		8062.00		Open Hole	6.125	Casing Vol. (bbl)	329.5
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size	0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ (BBL)
Liner Top	1	JR Sleeve S3 Hyd Set Packer	8610.51	8.65						

Zone Length		4-1/2-13.5 LTC Nipple	8619.16	8.06	4.500	3.920				
		7 Joints of 4-1/2-13.5 LTC Casing	8627.22	279.56	4.500	3.920				
	20	3.625 EX Frac Sleeve	8906.78	2.40	5.750		3.525	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	8909.18	119.64	4.500	3.920				
		Baker Open Hole Packer	9028.32	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9032.71	118.38	4.500	3.920				
	19	3.500 EX Frac Sleeve	9151.09	2.40	5.750		3.400	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9153.49	114.46	4.500	3.920				
		Baker Open Hole Packer	9267.95	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9271.84	76.95	4.500	3.920				
	18	3.375 EX Frac Sleeve	9348.79	2.40	5.750		3.275	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9351.19	111.98	4.500	3.920				
		Baker Open Hole Packer	9463.17	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9467.06	77.06	4.500	3.920				
	17	3.250 EX Frac Sleeve	9544.12	2.40	5.750		3.150	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9546.52	114.94	4.500	3.920				
		Baker Open Hole Packer	9661.46	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9665.35	115.57	4.500	3.920				
	16	3.125 EX Frac Sleeve	9760.92	2.40	5.750		3.025	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	9783.32	118.86	4.500	3.920				
		Baker Open Hole Packer	9902.18	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9906.07	80.24	4.500	3.920				

Operating Company Mewbourne Oil Co.
Well Name & Number Tamano II NC Fed Com #1H
Sales Ticket Number 5950691
Date 11/16/2013

Company Rep Travis Ingerson
Field
BOT Service Rep Joseph Haynes
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,830.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,422.49	12,410	10,680		
TVD		8489.00		KOP		8062.00		Open Hole		6.125	Casing Vol. (bbl)	329.5
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0	

Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
15	3.000 EX Frac sleeve	9986.31	2.40	5.750		2.900	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	9988.71	118.40	4.500	3.920				
	Baker Open Hole Packer	10107.11	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10111.00	115.20	4.500	3.920				
14	2.875 EX Frac Sleeve	10226.20	2.40	5.750		2.775	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10228.60	117.19	4.500	3.920				
	Baker Open Hole Packer	10346.79	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10349.68	117.59	4.500	3.920				
13	2.750 EX Frac Sleeve	10467.27	2.40	5.750		2.650	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	10469.67	116.66	4.500	3.920				
	Baker Open Hole Packer	10586.33	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10590.22	119.75	4.500	3.920				
12	2.625 EX Frac Sleeve	10709.97	2.40	5.750		2.525	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10712.37	120.86	4.500	3.920				
	Baker Open Hole Packer	10833.23	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	10837.12	81.47	4.500	3.920				
11	2.500 EX Frac Sleeve	10916.59	2.40	5.750		2.400	2286		
	2 Joint of 4-1/2-13.5 LTC Casing	10920.99	80.53	4.500	3.920				
	Baker Open Hole Packer	11001.62	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	11005.41	79.91	4.500	3.920				
10	2.375 EX Frac Sleeve	11085.32	2.40	5.750		2.275	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11087.72	120.00	4.500	3.920				
	Baker Open Hole Packer	11207.72	3.89	5.820	3.875		2154		
	2 Joint of 4-1/2-13.5 LTC Casing	11211.61	80.16	4.500	3.920				
9	2.250 EX Frac Sleeve	11291.77	2.40	5.750		2.150	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11294.17	120.27	4.500	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number Tamano II NC Fed Com #1H
 Sales Ticket Number 5950691
 Date 11/16/2013

Company Rep Travis Ingerson
 Field
 BOT Service Rep Joseph Haynes
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,830.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,422.49	12,410	10,680
TVD		8489.00	KOP		8062.00	Open Hole		6.125	Casing Vol. (bbl)	329.5
Carry Fluid Weight (ppg)		8.4	Propanant Content (ppa)					Max Drill Out Size		0

Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ (BBL)
	Baker Open Hole Packer	11414.44	3.89	5.820	3.875		2154		
	3 Joint of 4-1/2-13.5 LTC Casing	11418.33	120.39	4.500	3.920				
8	2.125 EX Frac Sleeve	11538.72	2.40	5.750		2.025	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11541.12	121.34	4.500	3.920				
	Baker Open Hole Packer	11662.46	3.89	5.820	3.875		2154		
	2 Joint of 4-1/2-13.5 LTC Casing	11666.35	80.46	4.500	3.920				
7	2.000 EX Frac Sleeve	11746.81	2.40	5.750		1.900	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11749.21	120.21	4.500	3.920				
	Baker Open Hole Packer	11869.42	3.89	5.820	3.875		2154		
	2 Joint of 4-1/2-13.5 LTC Casing	11873.31	77.94	4.500	3.920				
6	1.875 EX Frac Sleeve	11951.25	2.40	5.750		1.775	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11953.65	120.20	4.500	3.920				
	Baker Open Hole Packer	12073.85	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	12077.74	120.71	4.500	3.920				
5	1.750 EX Frac Sleeve	12198.45	2.40	5.750		1.650	2286		
	2 Joint of 4-1/2-13.5 LTC Casing	12200.85	80.07	4.500	3.920				
	Baker Open Hole Packer	12280.92	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	12284.81	81.18	4.500	3.920				
4	1.625 EX Frac Sleeve	12365.99	2.40	5.750		1.525	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	12368.39	121.79	4.500	3.920				
	Baker Open Hole Packer	12490.18	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	12494.07	118.03	4.500	3.920				
3	1.500 DBL Ball Frac Sleeve	12612.10	2.40	5.750		1.400	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	12614.50	119.25	4.500	3.920				
	Baker Open Hole Packer	12733.75	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	12737.64	120.88	4.500	3.920				

Company Rep	Travis Ingerson
Field	
BOT Service Rep	Joseph Haynes
District Location	Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,830.00	19,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,422.49	12,410	10,680
TVD		8489.00	KOP		8062.00	Open Hole		6.125	Casing Vol. (bbl)	329.5
Carry Fluid Weight (ppg)			8.4	Propant Content (ppa)				Max Drill Out Size		0

[illegible]