

OPERATOR
WELL/LEASE
COUNTY

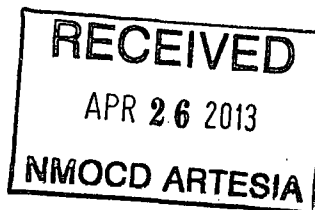
MEWBOURNE OIL COMPANY
THOMPSON 8 FED 3H
EDDY

047-0102

STATE OF NEW MEXICO
DEVIATION REPORT

30-015-41040

351	1.00
640	1.00
1,018	1.34
1,350	1.84
1,477	1.46
1,731	0.49
2,016	1.15
2,206	2.33
2,301	2.24
3,211	2.00
3,484	2.53
3,962	1.86
4,470	1.10
4,724	0.20
5,234	0.90
5,725	1.00
6,235	1.20
6,566	1.60
6,806	1.70
7,041	1.40



Received

MAR 19 2013

the Oil Company
625

BY:

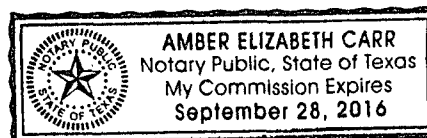
STATE OF TEXAS

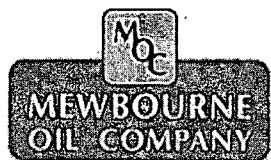
COUNTY OF MIDLAND

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

3/12/13, by

Notary Public for Midland County, Texas
My Commission Expires:





Company: Mewbourne Oil Company
Lease/Well: Thompson 8 Federal/No 003H
Location: Sec 008 T-20S R-29E
Rig Name: Patterson 47
State/County: New Mexico /Eddy
Latitude: 32.59, Longitude: -104.09
GRID North Is 0.13 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB 19 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: thompson 8 fed #3-de_01.ut

Minimum Curvature Method

Report Date/Time: 3/4/2013 / 09:24

Vaughn Energy Services

Shreveport, LA

318-549-3860

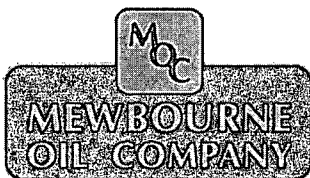
Surveyor: Billy James

Thompson 8 Federal No 003H / API 30-015-41040

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.72	297.46	100.00	0.29	-0.56	0.29	0.63	297.46	0.72
200.00	0.51	219.02	199.99	0.23	-1.39	0.23	1.41	279.48	0.79
300.00	0.53	141.61	299.99	-0.48	-1.39	-0.48	1.47	251.06	0.65
400.00	0.94	174.29	399.98	-1.65	-1.02	-1.65	1.94	211.59	0.57
500.00	0.75	193.41	499.97	-3.11	-1.09	-3.11	3.29	199.29	0.34
600.00	0.48	120.52	599.97	-3.96	-0.88	-3.96	4.05	192.51	0.76
700.00	1.27	103.87	699.95	-4.44	0.56	-4.44	4.47	172.84	0.82
800.00	1.88	91.56	799.92	-4.75	3.27	-4.75	5.77	145.39	0.70
900.00	1.85	91.55	899.86	-4.83	6.53	-4.83	8.13	126.50	0.03
1000.00	1.67	95.74	999.82	-5.02	9.59	-5.02	10.83	117.63	0.22
1100.00	1.39	99.35	1099.78	-5.37	12.24	-5.37	13.36	113.67	0.29
1200.00	1.54	105.45	1199.75	-5.92	14.73	-5.92	15.88	111.90	0.21
1300.00	1.30	115.25	1299.72	-6.76	17.05	-6.76	18.34	111.63	0.34
1400.00	1.05	135.64	1399.70	-7.90	18.72	-7.90	20.32	112.89	0.48
1500.00	0.15	116.97	1499.69	-8.62	19.48	-8.62	21.30	113.87	0.92
1600.00	0.25	109.40	1599.69	-8.75	19.80	-8.75	21.65	113.84	0.11
1700.00	0.49	62.05	1699.69	-8.62	20.38	-8.62	22.13	112.93	0.37
1800.00	1.50	65.62	1799.67	-7.88	21.95	-7.88	23.33	109.75	1.02
1900.00	1.63	58.87	1899.63	-6.60	24.37	-6.60	25.25	105.16	0.22
2000.00	1.22	21.34	1999.60	-4.87	25.97	-4.87	26.43	100.63	0.99

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N-S FT	+E-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
2100.00	1.10	290.58	2099.59	-3.54	25.46	-3.54	25.71	97.92	1.66
2200.00	1.43	257.35	2199.57	-3.48	23.35	-3.48	23.61	98.47	0.79
2300.00	1.50	220.70	2299.54	-4.75	21.28	-4.75	21.80	102.57	0.92
2400.00	1.74	230.75	2399.50	-6.70	19.25	-6.70	20.38	109.19	0.37
2500.00	0.87	299.69	2499.48	-7.28	17.42	-7.28	18.88	112.69	1.64
2600.00	0.81	310.41	2599.46	-6.45	16.22	-6.45	17.45	111.68	0.17
2700.00	0.51	280.91	2699.46	-5.90	15.24	-5.90	16.35	111.17	0.45
2800.00	1.31	239.39	2799.45	-6.40	13.83	-6.40	15.24	114.84	0.99
2900.00	1.86	218.75	2899.41	-8.25	11.83	-8.25	14.42	124.88	0.78
3000.00	1.79	209.96	2999.36	-10.86	10.04	-10.86	14.79	137.25	0.29
3100.00	1.40	205.43	3099.32	-13.32	8.73	-13.32	15.93	146.75	0.40
3200.00	1.55	231.44	3199.29	-15.27	7.15	-15.27	16.86	154.92	0.68
3300.00	0.70	241.23	3299.27	-16.41	5.55	-16.41	17.33	161.33	0.87
3400.00	0.86	257.83	3399.26	-16.87	4.27	-16.87	17.40	165.78	0.27
3500.00	1.29	241.42	3499.24	-17.57	2.55	-17.57	17.75	171.74	0.53
3600.00	1.43	240.02	3599.21	-18.73	0.48	-18.73	18.73	178.54	0.14
3700.00	1.57	239.27	3699.18	-20.05	-1.78	-20.05	20.13	185.06	0.14
3800.00	1.26	238.90	3799.15	-21.32	-3.90	-21.32	21.67	190.36	0.30
3900.00	1.66	236.68	3899.11	-22.68	-6.05	-22.68	23.48	194.94	0.40
4000.00	1.44	236.68	3999.08	-24.17	-8.31	-24.17	25.56	198.98	0.22
4100.00	1.01	251.08	4099.05	-25.15	-10.20	-25.15	27.13	202.07	0.53
4200.00	1.11	278.36	4199.04	-25.29	-11.99	-25.29	27.99	205.36	0.51
4300.00	0.63	266.88	4299.03	-25.18	-13.50	-25.18	28.57	208.20	0.51
4400.00	1.10	233.41	4399.01	-25.78	-14.82	-25.78	29.74	209.90	0.67
4500.00	1.41	250.96	4498.99	-26.76	-16.76	-26.76	31.57	212.06	0.49
4600.00	0.48	260.11	4598.98	-27.23	-18.34	-27.23	32.83	213.96	0.94
4700.00	0.43	278.37	4698.97	-27.25	-19.12	-27.25	33.29	215.06	0.15
4800.00	0.38	297.54	4798.97	-27.04	-19.79	-27.04	33.51	216.20	0.14
4900.00	0.58	274.83	4898.97	-26.84	-20.59	-26.84	33.83	217.50	0.27
5000.00	0.56	231.56	4998.96	-27.10	-21.49	-27.10	34.59	218.41	0.42
5100.00	1.10	229.07	5098.95	-28.04	-22.60	-28.04	36.01	218.87	0.54
5200.00	0.97	272.41	5198.94	-28.63	-24.17	-28.63	37.47	220.17	0.78
5300.00	0.37	305.32	5298.93	-28.41	-25.28	-28.41	38.03	221.67	0.69
5400.00	0.45	276.05	5398.93	-28.18	-25.94	-28.18	38.30	222.63	0.22
5500.00	0.66	297.59	5498.92	-27.87	-26.84	-27.87	38.69	223.92	0.29
5600.00	0.36	319.77	5598.92	-27.36	-27.56	-27.36	38.83	225.20	0.35
5700.00	0.46	329.16	5698.92	-26.78	-27.97	-26.78	38.72	226.25	0.12
5800.00	1.04	359.77	5798.91	-25.52	-28.18	-25.52	38.02	227.83	0.68
5900.00	0.50	356.40	5898.90	-24.18	-28.21	-24.18	37.16	229.39	0.54
6000.00	0.68	338.04	5998.89	-23.20	-28.46	-23.20	36.72	230.81	0.26
6100.00	1.00	19.68	6098.88	-21.83	-28.39	-21.83	35.81	232.44	0.67
6200.00	1.43	5.99	6198.86	-19.76	-27.96	-19.76	34.24	234.75	0.51

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
6300.00	1.61	348.43	6298.83	-17.15	-28.11	-17.15	32.93	238.61	0.50
6400.00	1.63	347.99	6398.79	-14.38	-28.69	-14.38	32.09	243.38	0.03
6500.00	1.04	336.68	6498.76	-12.15	-29.35	-12.15	31.76	247.50	0.65
6600.00	1.62	333.79	6598.73	-10.05	-30.33	-10.05	31.95	251.66	0.58
6700.00	1.86	333.30	6698.68	-7.34	-31.68	-7.34	32.52	256.96	0.25
6800.00	1.70	333.87	6798.64	-4.55	-33.07	-4.55	33.38	262.16	0.16
6900.00	1.23	300.59	6898.60	-2.67	-34.65	-2.67	34.75	265.60	0.95
7000.00	1.29	299.09	6998.58	-1.57	-36.55	-1.57	36.59	267.53	0.06
7100.00	1.18	293.69	7098.56	-0.62	-38.47	-0.62	38.48	269.08	0.16
7200.00	1.93	308.06	7198.52	0.83	-40.74	0.83	40.75	271.17	0.84
7250.00	1.68	308.24	7248.50	1.81	-41.98	1.81	42.02	272.46	0.49
7310.00	1.98	307.22	7308.46	2.98	-43.49	2.98	43.60	273.92	0.50



Mewbourne Oil Company

EDDY COUNTY, NM (NAD27)

SECTION 8

THOMPSON 8 FEDERAL #3H

Wellbore #1

Survey: Plan v. Actual

Standard Survey Report

19 March, 2013





Stryker Directional

Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well THOMPSON 8 FEDERAL #3H
Project:	EDDY COUNTY, NM (NAD27)	TVD Reference:	WELL @ 3299.0usft (Original Well Elev)
Site:	SECTION 8	MD Reference:	WELL @ 3299.0usft (Original Well Elev)
Well:	THOMPSON 8 FEDERAL #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	Database:	EDM 5000.1 Single User Db

Project	EDDY COUNTY, NM (NAD27), NM-EAST		
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 8, H		
Site Position:		Northing:	578,069.43 usft
From:	Map	Easting:	575,373.44 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 35' 20.329 N
		Longitude:	104° 5' 19.004 W
		Grid Convergence:	0.13 °

Well	THOMPSON 8 FEDERAL #3H		
Well Position	+N/-S	0.0 usft	Northing: 578,069.43 usft
	+E/-W	0.0 usft	Easting: 575,373.44 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 35' 20.329 N
		Longitude:	104° 5' 19.004 W
		Ground Level:	3,279.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	9/27/2012	7.69
			Dip Angle
			(°)
			60.40
			Field Strength
			(nT)
			48,651

Design	Plan v. Actual		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			273.06

Survey Program	Date 3/19/2013		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
100.0	7,310.0	Gyro Survey (Wellbore #1)	
7,486.0	12,540.0	Plan v. Actual (Wellbore #1)	

Survey	Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
	Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
	(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	7,310.0	1.98	307.22	7,308.5	3.0	-43.5	43.6	0.00	0.00	0.00
	TI @ 7310 MD, 1.98°									
	7,486.0	4.60	304.60	7,484.2	8.8	-51.7	52.1	1.49	1.49	-1.49
	7,518.0	7.20	296.20	7,516.0	10.4	-54.6	55.0	8.54	8.13	-26.25
	7,550.0	10.30	271.10	7,547.6	11.4	-59.2	59.7	15.15	9.69	-78.44
	7,581.0	12.60	278.40	7,578.0	11.9	-65.3	65.9	8.76	7.42	23.55
	7,613.0	16.10	275.50	7,609.0	12.9	-73.2	73.8	11.16	10.94	-9.06
	7,645.0	19.10	267.70	7,639.5	13.1	-82.9	83.4	11.91	9.38	-24.38
	7,677.0	21.90	260.50	7,669.5	11.9	-94.0	94.5	11.76	8.75	-22.50
	7,708.0	23.90	261.60	7,698.0	10.0	-105.9	106.3	6.60	6.45	3.55



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well THOMPSON 8 FEDERAL #3H
Project:	EDDY COUNTY, NM (NAD27)	TVD Reference:	WELL @ 3299.0usft (Original Well Elev)
Site:	SECTION 8	MD Reference:	WELL @ 3299.0usft (Original Well Elev)
Well:	THOMPSON 8 FEDERAL #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	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)
7,740.0	25.60	265.60	7,727.1	8.5	-119.2	119.5	7.45	5.31	12.50
7,772.0	28.60	266.70	7,755.6	7.6	-133.7	134.0	9.50	9.38	3.44
7,804.0	31.80	264.70	7,783.2	6.3	-149.8	149.9	10.48	10.00	-6.25
7,835.0	35.30	263.50	7,809.1	4.6	-166.8	166.8	11.49	11.29	-3.87
7,867.0	39.20	264.00	7,834.5	2.5	-186.1	185.9	12.22	12.19	1.56
7,899.0	44.10	266.00	7,858.4	0.6	-207.3	207.0	15.86	15.31	6.25
7,931.0	49.70	267.90	7,880.3	-0.6	-230.6	230.2	18.03	17.50	5.94
7,962.0	55.50	268.90	7,899.1	-1.3	-255.2	254.8	18.88	18.71	3.23
7,994.0	61.10	270.70	7,915.9	-1.4	-282.4	281.9	18.14	17.50	5.63
8,026.0	66.90	273.90	7,930.0	-0.2	-311.1	310.7	20.23	18.13	10.00
8,058.0	72.20	275.60	7,941.1	2.3	-341.0	340.6	17.29	16.56	5.31
8,084.0	77.20	275.60	7,948.0	4.8	-365.9	365.7	19.23	19.23	0.00
8,161.0	90.50	273.70	7,956.2	10.9	-442.1	442.0	17.45	17.27	-2.47
8,193.0	90.80	273.20	7,955.9	12.9	-474.0	474.0	1.82	0.94	-1.56
8,256.0	91.50	272.30	7,954.6	15.9	-536.9	537.0	1.81	1.11	-1.43
8,319.0	89.70	269.80	7,953.9	17.0	-599.9	600.0	4.89	-2.86	-3.97
8,383.0	91.10	269.50	7,953.5	16.6	-663.9	663.8	2.24	2.19	-0.47
8,446.0	92.20	270.20	7,951.7	16.5	-726.9	726.7	2.07	1.75	1.11
8,509.0	91.30	269.50	7,949.7	16.3	-789.8	789.6	1.81	-1.43	-1.11
8,572.0	92.90	270.90	7,947.4	16.5	-852.8	852.5	3.37	2.54	2.22
8,635.0	93.10	271.80	7,944.1	18.0	-915.7	915.3	1.46	0.32	1.43
8,698.0	94.10	273.20	7,940.2	20.8	-978.5	978.2	2.73	1.59	2.22
8,761.0	93.50	275.30	7,936.0	25.4	-1,041.2	1,041.1	3.46	-0.95	3.33
8,824.0	93.10	276.30	7,932.4	31.8	-1,103.8	1,103.9	1.71	-0.63	1.59
8,887.0	89.80	280.20	7,930.8	40.8	-1,166.1	1,166.6	8.11	-5.24	6.19
8,951.0	89.80	280.70	7,931.0	52.4	-1,229.0	1,230.0	0.78	0.00	0.78
9,014.0	90.30	280.50	7,931.0	64.0	-1,290.9	1,292.5	0.85	0.79	-0.32
9,077.0	88.50	280.50	7,931.6	75.5	-1,352.9	1,355.0	2.86	-2.86	0.00
9,140.0	86.60	279.00	7,934.3	86.1	-1,414.9	1,417.5	3.84	-3.02	-2.38
9,203.0	85.60	274.70	7,938.6	93.6	-1,477.3	1,480.2	6.99	-1.59	-6.83
9,267.0	86.20	273.20	7,943.2	98.0	-1,541.0	1,544.0	2.52	0.94	-2.34
9,298.0	88.60	272.60	7,944.6	99.6	-1,571.9	1,575.0	7.98	7.74	-1.94
9,330.0	90.70	271.10	7,944.8	100.6	-1,603.9	1,607.0	8.06	6.56	-4.69
9,362.0	90.70	269.30	7,944.4	100.7	-1,635.9	1,638.9	5.62	0.00	-5.63
9,393.0	90.60	269.10	7,944.0	100.3	-1,666.9	1,669.8	0.72	-0.32	-0.65
9,425.0	91.20	268.20	7,943.5	99.6	-1,698.8	1,701.7	3.38	1.88	-2.81
9,456.0	93.10	267.90	7,942.4	98.5	-1,729.8	1,732.6	6.20	6.13	-0.97
9,488.0	92.90	267.50	7,940.7	97.2	-1,761.7	1,764.4	1.40	-0.63	-1.25
9,520.0	92.10	268.60	7,939.3	96.1	-1,793.7	1,796.3	4.25	-2.50	3.44
9,551.0	91.90	270.40	7,938.2	95.9	-1,824.7	1,827.2	5.84	-0.65	5.81
9,583.0	92.10	269.60	7,937.1	95.9	-1,856.6	1,859.1	2.58	0.63	-2.50
9,615.0	92.00	269.30	7,936.0	95.6	-1,888.6	1,891.0	0.99	-0.31	-0.94
9,646.0	91.80	270.50	7,934.9	95.5	-1,919.6	1,922.0	3.92	-0.65	3.87



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well THOMPSON 8 FEDERAL #3H
Project:	EDDY COUNTY, NM (NAD27)	TVD Reference:	WELL @ 3299.0usft (Original Well Elev)
Site:	SECTION 8	MD Reference:	WELL @ 3299.0usft (Original Well Elev)
Well:	THOMPSON 8 FEDERAL #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	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)
9,678.0	92.20	271.90	7,933.8	96.2	-1,951.6	1,953.9	4.55	1.25	4.38
9,710.0	92.00	271.10	7,932.6	97.0	-1,983.5	1,985.9	2.58	-0.63	-2.50
9,741.0	91.80	270.90	7,931.6	97.6	-2,014.5	2,016.9	0.91	-0.65	-0.65
9,773.0	92.20	272.10	7,930.5	98.4	-2,046.5	2,048.8	3.95	1.25	3.75
9,805.0	92.80	273.20	7,929.1	99.9	-2,078.4	2,080.8	3.91	1.88	3.44
9,836.0	93.20	272.80	7,927.5	101.5	-2,109.3	2,111.8	1.82	1.29	-1.29
9,868.0	92.20	273.90	7,926.0	103.4	-2,141.3	2,143.7	4.64	-3.13	3.44
9,931.0	92.10	276.20	7,923.6	108.9	-2,204.0	2,206.6	3.65	-0.16	3.65
9,994.0	92.90	275.60	7,920.9	115.4	-2,266.6	2,269.5	1.59	1.27	-0.95
10,057.0	92.20	276.50	7,918.0	122.0	-2,329.2	2,332.3	1.81	-1.11	1.43
10,121.0	88.20	278.40	7,917.8	130.3	-2,392.6	2,396.1	6.92	-6.25	2.97
10,184.0	87.40	278.10	7,920.2	139.3	-2,454.9	2,458.8	1.36	-1.27	-0.48
10,247.0	90.70	273.90	7,921.3	145.9	-2,517.5	2,521.7	8.48	5.24	-6.67
10,310.0	91.00	273.50	7,920.4	150.0	-2,580.4	2,584.7	0.79	0.48	-0.63
10,373.0	91.30	273.30	7,919.1	153.7	-2,643.3	2,647.7	0.57	0.48	-0.32
10,436.0	91.20	272.50	7,917.7	156.9	-2,706.2	2,710.7	1.28	-0.16	-1.27
10,500.0	91.40	272.30	7,916.3	159.6	-2,770.1	2,774.7	0.44	0.31	-0.31
10,563.0	91.40	271.90	7,914.7	161.9	-2,833.0	2,837.6	0.63	0.00	-0.63
10,626.0	90.60	271.90	7,913.6	164.0	-2,896.0	2,900.6	1.27	-1.27	0.00
10,690.0	90.80	271.40	7,912.8	165.8	-2,960.0	2,964.6	0.84	0.31	-0.78
10,753.0	92.90	270.50	7,910.8	166.9	-3,022.9	3,027.5	3.63	3.33	-1.43
10,816.0	93.60	269.80	7,907.2	167.0	-3,085.8	3,090.3	1.57	1.11	-1.11
10,880.0	93.20	273.30	7,903.4	168.8	-3,149.7	3,154.2	5.49	-0.63	5.47
10,943.0	91.90	274.60	7,900.6	173.1	-3,212.4	3,217.1	2.92	-2.06	2.06
11,006.0	88.50	276.50	7,900.4	179.2	-3,275.1	3,280.0	6.18	-5.40	3.02
11,070.0	89.00	276.30	7,901.8	186.3	-3,338.7	3,343.9	0.84	0.78	-0.31
11,133.0	91.80	276.90	7,901.4	193.6	-3,401.3	3,406.8	4.55	4.44	0.95
11,196.0	91.80	277.40	7,899.4	201.4	-3,463.8	3,469.6	0.79	0.00	0.79
11,259.0	92.30	277.00	7,897.1	209.3	-3,526.2	3,532.4	1.02	0.79	-0.63
11,322.0	92.90	276.90	7,894.3	216.9	-3,588.7	3,595.2	0.97	0.95	-0.16
11,386.0	91.70	277.40	7,891.7	224.9	-3,652.2	3,659.0	2.03	-1.88	0.78
11,449.0	87.80	279.00	7,892.0	233.8	-3,714.5	3,721.7	6.69	-6.19	2.54
11,512.0	89.10	277.70	7,893.7	243.0	-3,776.8	3,784.4	2.92	2.06	-2.06
11,576.0	89.30	277.00	7,894.6	251.2	-3,840.3	3,848.2	1.14	0.31	-1.09
11,639.0	88.00	275.30	7,896.1	257.9	-3,902.9	3,911.1	3.40	-2.06	-2.70
11,702.0	87.30	274.20	7,898.7	263.1	-3,965.6	3,974.0	2.07	-1.11	-1.75
11,765.0	86.60	272.80	7,902.0	267.0	-4,028.4	4,036.9	2.48	-1.11	-2.22
11,829.0	88.60	269.60	7,904.7	268.3	-4,092.3	4,100.8	5.89	3.13	-5.00
11,892.0	89.50	267.70	7,905.7	266.8	-4,155.3	4,163.6	3.34	1.43	-3.02
11,955.0	91.60	266.50	7,905.1	263.6	-4,218.2	4,226.3	3.84	3.33	-1.90
12,019.0	93.20	266.50	7,902.4	259.7	-4,282.0	4,289.8	2.50	2.50	0.00
12,082.0	93.60	265.60	7,898.7	255.4	-4,344.8	4,352.2	1.56	0.63	-1.43
12,145.0	95.40	265.10	7,893.8	250.3	-4,407.4	4,414.4	2.96	2.86	-0.79



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well THOMPSON 8 FEDERAL #3H
Project:	EDDY COUNTY, NM (NAD27)	TVD Reference:	WELL @ 3299.0usft (Original Well Elev)
Site:	SECTION 8	MD Reference:	WELL @ 3299.0usft (Original Well Elev)
Well:	THOMPSON 8 FEDERAL #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan v. Actual	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)
12,208.0	97.20	264.60	7,886.9	244.7	-4,469.7	4,476.4	2.96	2.86	-0.79
12,272.0	98.20	265.30	7,878.3	239.1	-4,532.9	4,539.2	1.90	1.56	1.09
12,335.0	98.60	267.00	7,869.1	234.9	-4,595.1	4,601.1	2.74	0.63	2.70
12,398.0	94.30	268.40	7,862.0	232.4	-4,657.6	4,663.4	7.17	-6.83	2.22
12,461.0	94.10	268.10	7,857.4	230.5	-4,720.4	4,726.0	0.57	-0.32	-0.48
12,477.0	94.20	267.70	7,856.2	229.9	-4,736.4	4,741.9	2.57	0.63	-2.50
12,540.0	94.20	267.70	7,851.6	227.4	-4,799.2	4,804.5	0.00	0.00	0.00
BHL @ 12540 MD, 94.20°									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,310.0	7,308.5	3.0	-43.5	TI @ 7310 MD, 1.98°
12,540.0	7,851.6	227.4	-4,799.2	BHL @ 12540 MD, 94.20°

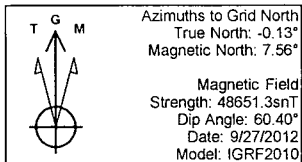
Checked By: _____	Approved By: _____	Date: _____
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COMPANY: Mewbourne Oil Company
 WELL: THOMPSON 8 FEDERAL #3H
 COUNTY: EDDY COUNTY, NM (NAD27)
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: PATTERSON 47
 GRID CORRECTION: 7.56° E



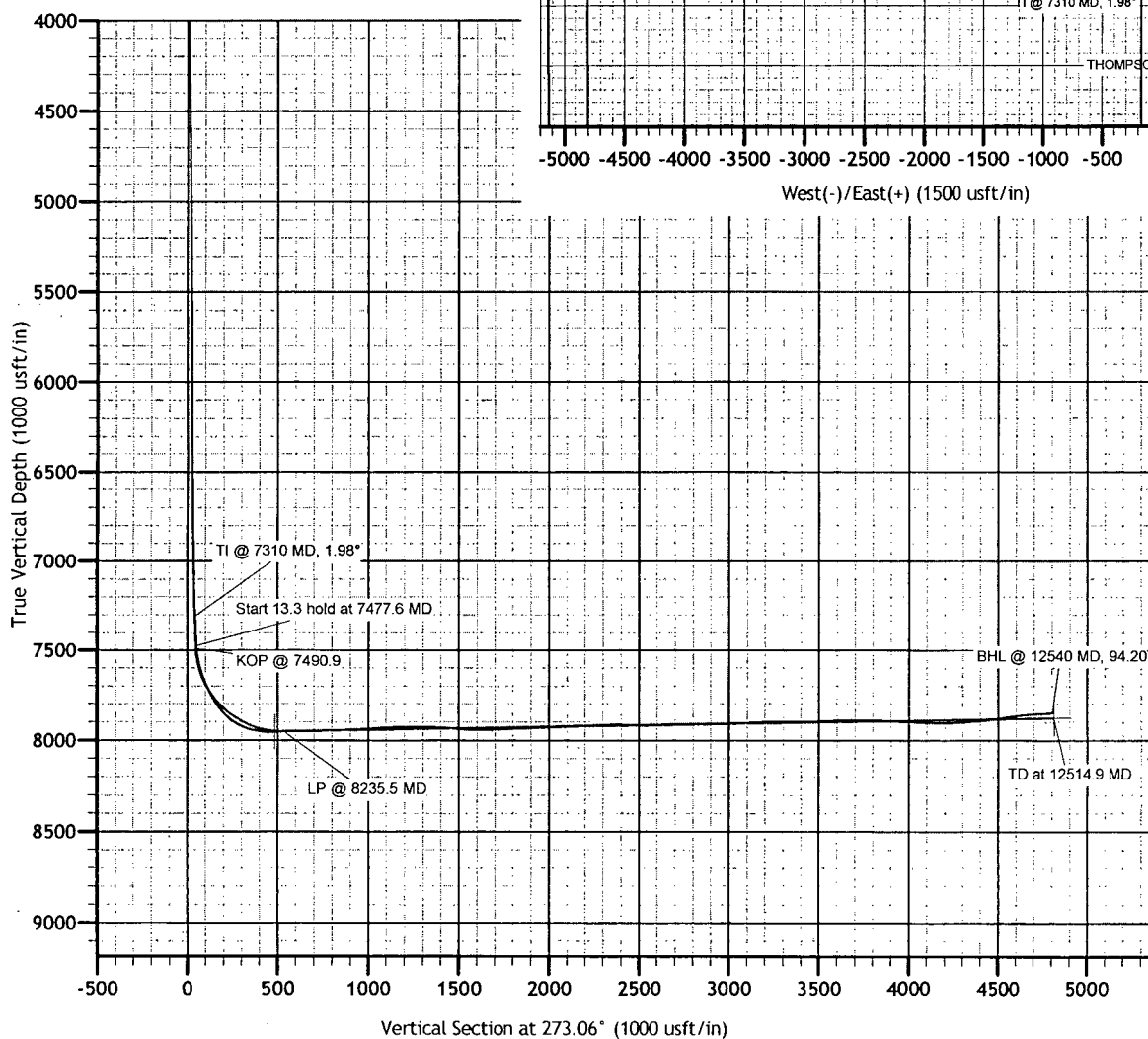
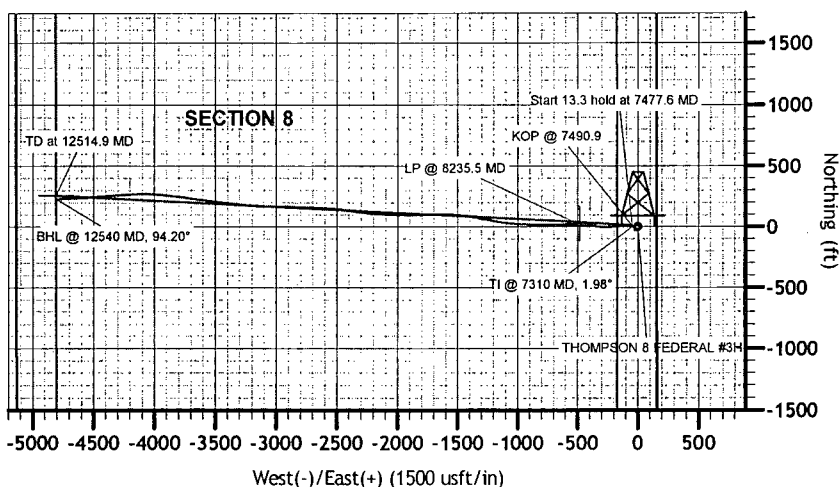
OFFICE: 936.582.7296 PLANNING: 214.784.3778



GEODETTIC ZONE: New Mexico East 3001					
WELL @ 3299.0usft (Original Well Elev)					
GROUND ELEVATION: 3279.0					
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.0	0.0	578069.42	575373.44	32° 35' 20.329 N	104° 5' 19.004 W

CRITICAL POINTS									
TVD	MD	Inc	Azi	+N-S	+E-W	VSec	Departure	Annotation	
7308.5	7310.0	1.98	307.22	3.0	-43.5	43.6	0.0	TI @ 7310 MD, 1.98°	
7851.6	12540.0	94.20	267.70	227.4	-4799.2	4804.5	4776.1	BHL @ 12540 MD, 94.20°	

CREATED BY: BRANDON ESTES
 DATE: 10:21, March 19 2013
 PLAN: Plan v. Actual



Operating Company Mewbourne
 Well Name & Number Thomson 8 Federal #3H
 Sales Ticket Number 5341745
 Date 3/10/2013

Company Rep Brian
 Field Thompson
 BOT Service Rep Joseph Haynes
 District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,147.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,697.15	12,410	10,680	
Bott Liner											
TVD		7,856.00		KOP		7,426.00		Open Hole	6.125	Casing Vol. (bbl)	180.4
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		3.625

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press	Max Rate (BPM)	Displ (BBL)
Liner Top	1	10292414	JR Setting Sleeve_RH Profile	7825.85	4.00	5.750	4.000			

Zone Length													
20		H4090400008	JR Sleeve_S3 Hyd Set Packer	7829.85	4.69	5.875	3.875		1670				
		10825400	4-1/2-13.5 LTC Nipple	7834.54	10.99	4.500	3.920						
			10 Joints of 4-1/2-13.5 LTC Casing	7845.53	382.26	4.500	3.920						
		H809870074	3.625 EX Frac Sleeve	8227.79	3.90	5.750		3.525	2286			186	
19			3 Joints of 4-1/2-13.5 LTC Casing	8231.69	113.33	4.500	3.920						
		H409360008	Baker Open Hole Packer	8345.02	3.89	5.820	3.875		2154				
			2 Joints of 4-1/2-13.5 LTC Casing	8348.91	76.17	4.500	3.920						
		H809870016	3.500 EX Frac Sleeve	8425.08	3.90	5.750		3.400	2286			188	
18			3 Joints of 4-1/2-13.5 LTC Casing	8428.98	114.03	4.500	3.920						
		H409360008	Baker Open Hole Packer	8543.01	3.89	5.820	3.875		2154				
			3 Joints of 4-1/2-13.5 LTC Casing	8546.90	114.24	4.500	3.920						
		H809870073	3.375 EX Frac Sleeve	8661.14	3.90	5.750		3.275	2286			193	
17			3 Joints of 4-1/2-13.5 LTC Casing	8665.04	114.70	4.500	3.920						
		H409360008	Baker Open Hole Packer	8779.74	3.89	5.820	3.875		2154				
			2 Joints of 4-1/2-13.5 LTC Casing	8783.63	76.69	4.500	3.920						
		H809870072	3.250 EX Frac Sleeve	8860.32	3.90	5.750		3.150	2286			196	
16			3 Joints of 4-1/2-13.5 LTC Casing	8864.22	114.23	4.500	3.920						
		H409360008	Baker Open Hole Packer	8978.46	3.89	5.820	3.875		2154				
			3 Joints of 4-1/2-13.5 LTC Casing	8982.34	113.59	4.500	3.920						
		H809870070	3.125 EX Frac Sleeve	9095.93	3.90	5.750		3.025	2286			199	
			3 Joints of 4-1/2-13.5 LTC Casing	9099.83	114.25	4.500	3.920						
		H409360008	Baker Open Hole Packer	9214.08	3.89	5.820	3.875		2154				
			2 Joints of 4-1/2-13.5 LTC Casing	9217.97	76.42	4.500	3.920						

Operating Company Mewbourne
Well Name & Number Thomson 8 Federal #3H
Sales Ticket Number 5341745
Date 3/10/2013

Company Rep Brian
Field Thompson
BOT Service Rep Joseph Haynes
District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,147.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,697.15	12,410	10,680	
Bott Liner											
TVD		7,856.00		KOP		7,426.00		Open Hole	6.125	Casing Vol. (bbl)	180.4
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		3.625

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ (BBL)
15	H809870069	3.000 EX Frac Sleeve	9294.39	3.90	5.750		2.900	2286		201
		3 Joints of 4-1/2-13.5 LTC Casing	9298.29	115.09	4.500	3.920				
	H409360008	Baker Open Hole Packer	9413.38	3.89	5.820	3.875		2154		
14		2 Joints of 4-1/2-13.5 LTC Casing	9417.27	75.03	4.500	3.920				
	H809870068	2.875 EX Frac sleeve	9492.30	3.90	5.750		2.775	2286		205
		3 Joints of 4-1/2-13.5 LTC Casing	9496.20	113.67	4.500	3.920				
13	H409360008	Baker Open Hole Packer	9609.87	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	9613.76	113.93	4.500	3.920				
	H809870067	2.750 EX Frac Sleeve	9727.69	3.90	5.750		2.650	2286		209
12		3 Joint of 4-1/2-13.5 LTC Casing	9731.59	113.52	4.500	3.920				
	H409360008	Baker Open Hole Packer	9845.11	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9849.00	76.25	4.500	3.920				
11	H809870066	2.625 EX Frac Sleeve	9925.25	3.90	5.750		2.525	2286		212
		3 Joints of 4-1/2-13.5 LTC Casing	9929.15	114.06	4.500	3.920				
	H409360008	Baker Open Hole Packer	10043.21	3.89	5.820	3.875		2154		
10		2 Joints of 4-1/2-13.5 LTC Casing	10047.10	75.25	4.500	3.920				
	H809870065	2.500 EX Frac Sleeve	10122.35	3.90	5.750		2.400	2286		215
		3 Joints of 4-1/2-13.5 LTC Casing	10126.25	111.99	4.500	3.920				
9	H409360008	Baker Open Hole Packer	10238.24	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10242.13	114.36	4.500	3.920				
	H809870063	2.375 EX Frac Sleeve	10356.49	3.90	5.750		2.275	2286		218
8		3 Joints of 4-1/2-13.5 LTC Casing	10360.39	113.74	4.500	3.920				
	H409360008	Baker Open Hole Packer	10474.13	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10478.02	74.22	4.500	3.920				
7	H809870054	2.250 EX Frac Sleeve	10552.24	3.90	5.750		2.150	2286		221
		3 Joints of 4-1/2-13.5 LTC Casing	10556.14	114.95	4.500	3.920				
	H409360008	Baker Open Hole Packer	10671.09	3.89	5.820	3.875		2154		

Operating Company Mewbourne
Well Name & Number Thomson 8 Federal #3H
Sales Ticket Number 5341745
Date 3/10/2013

Company Rep Brian
Field Thompson
BOT Service Rep Joseph Haynes
District Location Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,147.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,697.15	12,410	10,680	
Bott Liner											
TVD		7,856.00		KOP		7,426.00	Open Hole		6.125	Casing Vol. (bbl)	180.4
Carry Fluid Weight (ppg)		8.4		Propant Content (ppa)					Max Drill Out Size		3.625

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
8		2 Joints of 4-1/2-13.5 LTC Casing	10674.98	76.43	4.500	3.920				
	H809870047	2.125 EX Frac Sleeve	10751.41	3.90	5.750		2.025	2286		224
		3 Joints of 4-1/2-13.5 LTC Casing	10755.31	112.51	4.500	3.920				
7	H409360008	Baker Open Hole Packer	10867.82	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	10871.71	113.77	4.500	3.920				
	H809870042	2.000 EX Frac Sleeve	10985.48	3.90	5.750		1.900	2286		227
6		3 Joints of 4-1/2-13.5 LTC Casing	10989.38	111.43	4.500	3.920				
	H409360008	Baker Open Hole Packer	11100.81	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11104.70	76.96	4.500	3.920				
5	H809870088	1.875 EX Frac Sleeve	11181.66	3.90	5.750		1.775	2286		230
		3 Joints of 4-1/2-13.5 LTC Casing	11185.56	112.95	4.500	3.920				
	H409360008	Baker Open Hole Packer	11298.51	3.89	5.820	3.875		2154		
4		3 Joints of 4-1/2-13.5 LTC Casing	11302.40	114.48	4.500	3.920				
	H809870087	1.750 EX Frac Sleeve	11416.88	3.90	5.750		1.650	2286		234
		3 Joints of 4-1/2-13.5 LTC Casing	11420.78	111.54	4.500	3.920				
3	H409360008	Baker Open Hole Packer	11532.32	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11536.21	77.06	4.500	3.920				
	H809870086	1.625 EX Frac Sleeve	11613.27	3.90	5.750		1.525	2286		237
2		7 Joints of 4-1/2-13.5 LTC Casing	11617.17	266.99	4.500	3.920				
	H409360008	Baker Open Hole Packer	11884.16	3.89	5.820	3.875		2154		
		7 Joints of 4-1/2-13.5 LTC Casing	11888.05	265.84	4.500	3.920				
1	H809870085	1.500 EX Frac Sleeve	12153.89	3.90	5.750		1.400	2286		245
		3 Joints of 4-1/2-13.5 LTC Casing	12157.79	113.53	4.500	3.920				
	H409360008	Baker Open Hole Packer	12271.32	3.89	5.820	3.875		2154		
0		2 Joints of 4-1/2-13.5 LTC Casing	12275.21	77.52	4.500	3.920				
	H809160007	1.375 DBL Ball Frac Sleeve	12352.73	3.90	5.750		1.275	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	12356.63	74.70	4.500	3.920				

Company Rep	Brian
Field	Thompson
BOT Service Rep	Joseph Haynes
District Location	Odessa, Texas, USA



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LT&C	0.03826	8,147.00	9,960	6,230	
Top Liner	4.500	13.50	338000	3.920	3.795	LT&C	0.01492	4,697.15	12,410	10,680	
Bott Liner											
TVD		7,856.00		KOP		7,426.00		Open Hole	6.125	Casing Vol. (bbl)	180.4
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		3.625

[illegible]