

OPERATOR  
WELL/LEASE  
COUNTY

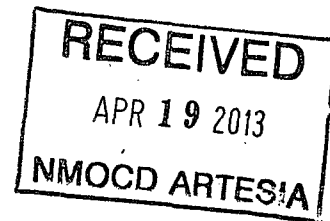
MEWBOURNE OIL COMPANY  
MIRAGE 30 PM STATE COM 001H  
EDDY

046-0085

STATE OF NEW MEXICO  
DEVIATION REPORT

373	1.12
736	0.15
1,138	1.28
1,519	0.36
1,905	0.29
2,505	0.79
2,888	0.75
3,301	0.41
3,681	0.61
4,014	1.76
4,410	2.01
4,699	1.03
4,983	1.55
5,266	0.55
5,554	1.26
5,931	2.32
6,218	2.38
6,503	0.37
6,787	2.00

30-015-40753



STATE OF TEXAS

BY: *Steve Moore*

COUNTY OF MIDLAND

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

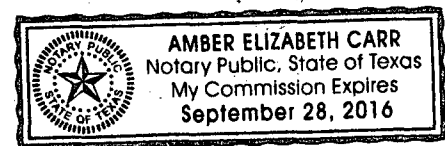
2/11/13

, by

*Amber Elizabeth Carr*

Notary Public for Midland County, Texas

My Commission Expires:





Job Number: SVMO-130075  
 Company: Mewbourne Oil & Gas  
 Lease/Well: Mirage 30 State Com 1  
 Location: Eddy County, NM  
 Rig Name: Patterson #46  
 RKB: 20.5'  
 G.L. or M.S.L.: GL

State/Country: New Mexico / USA  
 Declination: 7.70°  
 Grid: East To Grid North  
 File name: F:\SURVEY\2013SU~1\MEWBOU~1\MO\MIRAGE~1\1.SVY  
 Date/Time: 12-Feb-13 / 13:15  
 Curve Name: Surface - 7120' M.D. (SRG) (API:3001540753)

**RECEIVED**  
 APR 19 2013  
 NMOCD ARTESIA

**MS Survey**

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 274.71  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.47	221.39	200.00	-.62	-.54	.49	.82	221.39	.24
400.00	.41	233.09	399.99	-1.66	-1.66	1.51	2.35	224.94	.05
600.00	.51	244.95	599.99	-2.47	-3.04	2.82	3.91	230.90	.07
800.00	1.99	252.13	799.93	-3.91	-7.15	6.80	8.15	241.32	.74
1000.00	1.92	253.98	999.82	-5.90	-13.67	13.14	14.89	246.66	.05
1200.00	.88	276.61	1199.75	-6.65	-18.42	17.81	19.58	250.15	.58
1400.00	.67	272.21	1399.74	-6.43	-21.11	20.51	22.07	253.07	.11
1600.00	.45	315.45	1599.73	-5.82	-22.83	22.28	23.56	255.70	.23
1800.00	.35	335.65	1799.72	-4.70	-23.63	23.17	24.10	258.74	.09

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2000.00	.16	333.06	1999.72	-3.90	-24.01	23.61	24.33	260.78	.10
2200.00	.63	354.79	2199.72	-2.56	-24.24	23.95	24.37	263.98	.24
2400.00	.64	142.29	2399.71	-2.34	-23.66	23.38	23.77	264.34	.61
2600.00	.75	166.77	2599.70	-4.50	-22.67	22.23	23.12	258.77	.16
2800.00	.98	161.76	2799.67	-7.40	-21.84	21.16	23.06	251.28	.12
3000.00	.71	164.34	2999.65	-10.22	-20.97	20.06	23.33	244.02	.14
3200.00	1.06	140.39	3199.63	-12.84	-19.45	18.33	23.31	236.58	.25
3400.00	.72	151.92	3399.60	-15.37	-17.68	16.36	23.43	229.00	.19
3600.00	1.30	117.05	3599.57	-17.51	-15.07	13.58	23.10	220.72	.41
3800.00	2.06	115.41	3799.49	-20.09	-9.80	8.12	22.35	206.02	.38
4000.00	2.27	100.37	3999.34	-22.34	-2.66	.82	22.50	186.79	.30
4200.00	2.56	96.45	4199.17	-23.56	5.67	-7.59	24.23	166.46	.17
4400.00	1.98	86.16	4399.01	-23.83	13.56	-15.47	27.41	150.36	.35
4600.00	1.88	80.96	4598.90	-23.08	20.25	-22.07	30.70	138.74	.10
4800.00	1.40	74.22	4798.81	-21.90	25.84	-27.55	33.87	130.28	.26
5000.00	1.48	36.37	4998.76	-19.15	29.72	-31.19	35.36	122.80	.47
5200.00	1.19	54.12	5198.70	-15.86	32.93	-34.13	36.55	115.71	.25
5400.00	1.67	65.35	5398.64	-13.43	37.27	-38.24	39.61	109.81	.28
5600.00	1.87	110.48	5598.55	-13.35	42.97	-43.92	45.00	107.26	.69
5800.00	2.47	117.65	5798.41	-16.49	49.85	-51.03	52.50	108.31	.33
6000.00	2.61	115.99	5998.21	-20.49	57.76	-59.24	61.28	109.53	.08
6200.00	1.78	125.41	6198.07	-24.28	64.38	-66.16	68.81	110.67	.45
6400.00	1.22	140.94	6398.00	-27.74	68.26	-70.30	73.68	112.12	.34
6600.00	1.05	185.17	6597.96	-31.22	69.43	-71.76	76.13	114.21	.43
6800.00	1.20	240.78	6797.93	-34.06	67.44	-70.01	75.55	116.80	.53
7000.00	1.43	269.01	6997.88	-35.13	63.12	-65.79	72.23	119.10	.34
<b>Last Survey Depth Recorded</b>									
7120.00	3.07	301.25	7117.78	-33.49	58.87	-61.42	67.73	119.63	1.68

# **Mewbourne Oil Co**

**Eddy County, New Mexico (Nad 83)**

**Sec 30,T19S, R29E**

**Mirage 30 PM State Com #1H**

**Wellbore #1**

**Design: Wellbore #1**

## **DDC Survey Report**

**21 February, 2013**



**DDC**  
Survey Report



<b>Company:</b>	Mewbourne Oil Co	<b>Local Co-ordinate Reference:</b>	Well Mirage 30 PM State Com #1H
<b>Project:</b>	Eddy County, New Mexico (Nad 83)	<b>TVD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Site:</b>	Sec 30,T19S, R29E	<b>MD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Well:</b>	Mirage 30 PM State Com #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Eddy County, New Mexico (Nad 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Sec 30,T19S, R29E				
<b>Site Position:</b>		<b>Northing:</b>	591,334.50 usft	<b>Latitude:</b>	32° 37' 31.522 N
<b>From:</b>	Map	<b>Easting:</b>	611,308.60 usft	<b>Longitude:</b>	104° 6' 21.799 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.12 °

<b>Well</b>	Mirage 30 PM State Com #1H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	591,334.50 usft	<b>Latitude:</b>	32° 37' 31.522 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	611,308.60 usft	<b>Longitude:</b>	104° 6' 21.799 W
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,311.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2/7/2013	7.66	60.43	48,635

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>		<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Version:</b>	1.0				

<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	274.72

<b>Survey Program</b>	<b>Date</b>	2/21/2013			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
200.0	7,120.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro	
7,269.0	12,150.0	MWD (Wellbore #1)	MWD default	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.47	221.39	200.0	-0.6	-0.5	0.5	0.24	0.24	0.00	
400.0	0.41	233.09	400.0	-1.7	-1.7	1.5	0.05	-0.03	5.85	
600.0	0.51	244.95	600.0	-2.5	-3.0	2.8	0.07	0.05	5.93	
800.0	1.99	252.13	799.9	-3.9	-7.1	6.8	0.74	0.74	3.59	
1,000.0	1.92	253.98	999.8	-5.9	-13.7	13.1	0.05	-0.04	0.93	
1,200.0	0.88	276.61	1,199.8	-6.6	-18.4	17.8	0.58	-0.52	11.32	
1,400.0	0.67	272.21	1,399.7	-6.4	-21.1	20.5	0.11	-0.11	-2.20	
1,600.0	0.45	315.45	1,599.7	-5.8	-22.8	22.3	0.23	-0.11	21.62	
1,800.0	0.35	335.65	1,799.7	-4.7	-23.6	23.2	0.09	-0.05	10.10	

DDC  
Survey Report



<b>Company:</b>	Mewbourne Oil Co	<b>Local Co-ordinate Reference:</b>	Well Mirage 30 PM State Com #1H
<b>Project:</b>	Eddy County, New Mexico (Nad 83)	<b>TVD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Site:</b>	Sec 30,T19S, R29E	<b>MD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Well:</b>	Mirage 30 PM State Com #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
2,000.0	0.16	333.06	1,999.7	-3.9	-24.0	23.6	0.10	-0.10	-1.30
2,200.0	0.63	354.79	2,199.7	-2.6	-24.2	23.9	0.24	0.24	10.87
2,400.0	0.64	142.29	2,399.7	-2.3	-23.7	23.4	0.61	0.01	73.75
2,600.0	0.75	166.77	2,599.7	-4.5	-22.7	22.2	0.16	0.06	12.24
2,800.0	0.98	161.76	2,799.7	-7.4	-21.8	21.2	0.12	0.12	-2.51
3,000.0	0.71	164.34	2,999.7	-10.2	-21.0	20.1	0.14	-0.14	1.29
3,200.0	1.06	140.39	3,199.6	-12.8	-19.5	18.3	0.25	0.18	-11.98
3,400.0	0.72	151.92	3,399.6	-15.4	-17.7	16.4	0.19	-0.17	5.77
3,600.0	1.30	117.05	3,599.6	-17.5	-15.1	13.6	0.41	0.29	-17.44
3,800.0	2.06	115.41	3,799.5	-20.1	-9.8	8.1	0.38	0.38	-0.82
4,000.0	2.27	100.37	3,999.3	-22.3	-2.7	0.8	0.30	0.11	-7.52
4,200.0	2.56	96.45	4,199.2	-23.6	5.7	-7.6	0.17	0.15	-1.96
4,400.0	1.98	86.16	4,399.0	-23.8	13.6	-15.5	0.35	-0.29	-5.15
4,600.0	1.88	80.96	4,598.9	-23.1	20.2	-22.1	0.10	-0.05	-2.60
4,800.0	1.40	74.22	4,798.8	-21.9	25.8	-27.6	0.26	-0.24	-3.37
5,000.0	1.48	36.37	4,998.8	-19.2	29.7	-31.2	0.47	0.04	-18.93
5,200.0	1.19	54.12	5,198.7	-15.9	32.9	-34.1	0.25	-0.15	8.88
5,400.0	1.67	65.35	5,398.6	-13.4	37.3	-38.2	0.28	0.24	5.62
5,600.0	1.87	110.48	5,598.6	-13.4	43.0	-43.9	0.69	0.10	22.57
5,800.0	2.47	117.65	5,798.4	-16.5	49.8	-51.0	0.33	0.30	3.59
6,000.0	2.61	115.99	5,998.2	-20.5	57.8	-59.2	0.08	0.07	-0.83
6,200.0	1.78	125.41	6,198.1	-24.3	64.4	-66.2	0.45	-0.42	4.71
6,400.0	1.22	140.94	6,398.0	-27.7	68.3	-70.3	0.34	-0.28	7.77
6,600.0	1.05	185.17	6,598.0	-31.2	69.4	-71.8	0.43	-0.09	22.12
6,800.0	1.20	240.78	6,797.9	-34.1	67.4	-70.0	0.53	0.08	27.81
7,000.0	1.43	269.01	6,997.9	-35.1	63.1	-65.8	0.34	0.12	14.12
<b>TIE IN @ 7120' MD / 7117.8' TVD</b>									
7,120.0	3.07	301.25	7,117.8	-33.5	58.9	-61.4	1.68	1.37	26.87
7,269.0	3.70	218.50	7,266.6	-35.2	52.5	-55.2	3.02	0.42	-55.54
7,301.0	7.70	243.30	7,298.4	-37.0	49.9	-52.8	14.40	12.50	77.50
7,333.0	11.10	253.50	7,330.0	-38.8	45.0	-48.1	11.79	10.63	31.88
7,365.0	15.30	258.70	7,361.2	-40.5	37.9	-41.1	13.63	13.13	16.25
7,396.0	19.80	263.70	7,390.7	-41.9	28.7	-32.1	15.30	14.52	16.13
7,428.0	23.50	265.10	7,420.4	-43.0	17.0	-20.4	11.67	11.56	4.38
7,460.0	26.90	264.30	7,449.4	-44.3	3.4	-7.0	10.68	10.63	-2.50
7,491.0	29.80	266.40	7,476.7	-45.5	-11.3	7.5	9.89	9.35	6.77
7,523.0	33.40	269.80	7,503.9	-46.0	-28.0	24.1	12.55	11.25	10.63
7,555.0	36.80	273.30	7,530.1	-45.5	-46.4	42.5	12.34	10.63	10.94
7,587.0	39.40	276.20	7,555.3	-43.8	-66.1	62.3	9.86	8.13	9.06
7,619.0	42.90	279.30	7,579.4	-41.0	-86.9	83.3	12.66	10.94	9.69
7,650.0	45.90	282.00	7,601.5	-36.9	-108.2	104.8	11.43	9.68	8.71
7,682.0	49.80	284.70	7,623.0	-31.4	-131.3	128.3	13.70	12.19	8.44
7,714.0	53.70	284.80	7,642.8	-25.0	-155.6	153.0	12.19	12.19	0.31

**DDC**  
Survey Report



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<b>Site:</b>	Sec 30,T19S, R29E	<b>MD Reference:</b>	WELL @ 3331.0usft (Patterson-UT1)
<b>Well:</b>	Mirage 30 PM State Com #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
7,746.0	57.20	284.90	7,661.0	-18.3	-181.1	179.0	10.94	10.94	0.31
7,777.0	60.00	282.70	7,677.1	-12.0	-206.8	205.1	10.87	9.03	-7.10
7,809.0	63.70	279.90	7,692.2	-6.5	-234.4	233.1	13.90	11.56	-8.75
7,841.0	67.50	277.50	7,705.4	-2.1	-263.2	262.2	13.70	11.88	-7.50
<b>CROSSED HARDLINE @ 7872' MD / 7716.5' TVD</b>									
7,872.0	70.70	276.80	7,716.5	1.5	-292.0	291.1	10.54	10.32	-2.26
7,904.0	74.60	276.10	7,726.0	5.0	-322.3	321.6	12.36	12.19	-2.19
7,936.0	79.10	275.30	7,733.3	8.0	-353.3	352.8	14.27	14.06	-2.50
7,968.0	82.90	275.90	7,738.3	11.1	-384.8	384.4	12.02	11.88	1.88
7,992.0	84.90	276.00	7,740.9	13.6	-408.5	408.2	8.34	8.33	0.42
8,067.0	91.10	274.40	7,743.5	20.4	-483.1	483.1	8.54	8.27	-2.13
8,131.0	92.30	274.30	7,741.6	25.2	-546.9	547.1	1.88	1.88	-0.16
8,194.0	92.90	273.90	7,738.7	29.7	-609.7	610.0	1.14	0.95	-0.63
8,258.0	93.60	272.60	7,735.1	33.4	-673.5	673.9	2.30	1.09	-2.03
8,321.0	93.20	271.60	7,731.3	35.7	-736.3	736.7	1.71	-0.63	-1.59
8,353.0	93.30	270.90	7,729.5	36.4	-768.2	768.6	2.21	0.31	-2.19
8,384.0	93.20	271.20	7,727.8	36.9	-799.2	799.5	1.02	-0.32	0.97
8,416.0	92.50	271.80	7,726.2	37.8	-831.1	831.4	2.88	-2.19	1.88
8,447.0	91.30	272.00	7,725.2	38.8	-862.1	862.4	3.92	-3.87	0.65
8,479.0	90.10	272.70	7,724.8	40.1	-894.1	894.3	4.34	-3.75	2.19
8,511.0	90.20	272.00	7,724.7	41.4	-926.0	926.3	2.21	0.31	-2.19
8,543.0	90.30	272.70	7,724.5	42.7	-958.0	958.3	2.21	0.31	2.19
8,575.0	90.40	273.60	7,724.3	44.5	-990.0	990.3	2.83	0.31	2.81
8,606.0	90.50	275.00	7,724.1	46.8	-1,020.9	1,021.3	4.53	0.32	4.52
8,638.0	90.60	276.40	7,723.8	50.0	-1,052.7	1,053.3	4.39	0.31	4.38
8,670.0	90.60	278.00	7,723.5	54.0	-1,084.5	1,085.2	5.00	0.00	5.00
8,702.0	90.80	277.90	7,723.1	58.4	-1,116.2	1,117.2	0.70	0.63	-0.31
8,765.0	89.80	277.50	7,722.7	66.9	-1,178.6	1,180.1	1.71	-1.59	-0.63
8,828.0	90.20	276.50	7,722.7	74.5	-1,241.1	1,243.0	1.71	0.63	-1.59
8,891.0	90.10	276.30	7,722.6	81.6	-1,303.7	1,306.0	0.35	-0.16	-0.32
8,954.0	91.10	276.40	7,721.9	88.5	-1,366.3	1,369.0	1.60	1.59	0.16
9,018.0	90.50	276.00	7,721.0	95.4	-1,429.9	1,433.0	1.13	-0.94	-0.63
9,081.0	91.60	275.30	7,719.9	101.7	-1,492.6	1,495.9	2.07	1.75	-1.11
9,144.0	91.50	276.00	7,718.2	107.9	-1,555.3	1,558.9	1.12	-0.16	1.11
9,208.0	91.70	275.20	7,716.4	114.1	-1,619.0	1,622.9	1.29	0.31	-1.25
9,271.0	91.70	275.70	7,714.5	120.1	-1,681.7	1,685.8	0.79	0.00	0.79
9,334.0	91.90	276.90	7,712.5	127.0	-1,744.2	1,748.8	1.93	0.32	1.90
9,398.0	90.20	276.90	7,711.4	134.7	-1,807.8	1,812.7	2.66	-2.66	0.00
9,461.0	89.90	276.30	7,711.3	141.9	-1,870.3	1,875.7	1.06	-0.48	-0.95
9,525.0	90.00	275.70	7,711.4	148.6	-1,934.0	1,939.7	0.95	0.16	-0.94
9,588.0	91.60	275.20	7,710.5	154.6	-1,996.7	2,002.7	2.66	2.54	-0.79
9,652.0	92.10	274.70	7,708.4	160.1	-2,060.4	2,066.6	1.10	0.78	-0.78
9,715.0	91.70	274.90	7,706.3	165.4	-2,123.2	2,129.6	0.71	-0.63	0.32
9,778.0	91.70	274.60	7,704.5	170.6	-2,185.9	2,192.6	0.48	0.00	-0.48

# DDC Survey Report



<b>Company:</b>	Mewbourne Oil Co	<b>Local Co-ordinate Reference:</b>	Well Mirage 30 PM State Com #1H
<b>Project:</b>	Eddy County, New Mexico (Nad 83)	<b>TVD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Site:</b>	Sec 30,T19S, R29E	<b>MD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Well:</b>	Mirage 30 PM State Com #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
9,841.0	90.20	274.90	7,703.4	175.8	-2,248.7	2,255.5	2.43	-2.38	0.48
9,905.0	89.80	274.80	7,703.4	181.2	-2,312.5	2,319.5	0.64	-0.63	-0.16
9,968.0	89.50	275.60	7,703.8	186.9	-2,375.2	2,382.5	1.36	-0.48	1.27
10,031.0	89.80	276.20	7,704.2	193.4	-2,437.9	2,445.5	1.06	0.48	0.95
10,063.0	89.80	276.00	7,704.3	196.8	-2,469.7	2,477.5	0.62	0.00	-0.63
10,126.0	91.10	275.70	7,703.8	203.2	-2,532.4	2,540.5	2.12	2.06	-0.48
10,189.0	91.20	275.20	7,702.5	209.2	-2,595.1	2,603.5	0.81	0.16	-0.79
10,253.0	91.80	274.70	7,700.9	214.7	-2,658.8	2,667.5	1.22	0.94	-0.78
10,316.0	93.10	274.50	7,698.2	219.8	-2,721.5	2,730.4	2.09	2.06	-0.32
10,380.0	93.90	273.50	7,694.3	224.2	-2,785.3	2,794.3	2.00	1.25	-1.56
10,412.0	94.00	273.70	7,692.1	226.2	-2,817.1	2,826.2	0.70	0.31	0.63
10,444.0	91.50	274.90	7,690.5	228.6	-2,849.0	2,858.2	8.66	-7.81	3.75
10,475.0	90.60	275.60	7,689.9	231.5	-2,879.9	2,889.1	3.68	-2.90	2.26
10,507.0	89.80	275.70	7,689.8	234.6	-2,911.7	2,921.1	2.52	-2.50	0.31
10,539.0	89.80	275.20	7,689.9	237.7	-2,943.6	2,953.1	1.56	0.00	-1.56
10,570.0	89.90	274.50	7,690.0	240.3	-2,974.5	2,984.1	2.28	0.32	-2.26
10,601.0	90.20	274.30	7,690.0	242.7	-3,005.4	3,015.1	1.16	0.97	-0.65
10,633.0	90.20	273.90	7,689.9	244.9	-3,037.3	3,047.1	1.25	0.00	-1.25
10,665.0	90.50	273.50	7,689.7	247.0	-3,069.2	3,079.1	1.56	0.94	-1.25
10,696.0	91.60	272.40	7,689.1	248.6	-3,100.2	3,110.1	5.02	3.55	-3.55
10,728.0	91.80	273.40	7,688.2	250.2	-3,132.1	3,142.1	3.19	0.63	3.13
10,759.0	92.10	275.20	7,687.1	252.5	-3,163.0	3,173.1	5.88	0.97	5.81
10,790.0	92.20	276.50	7,686.0	255.7	-3,193.8	3,204.0	4.20	0.32	4.19
10,853.0	91.20	276.20	7,684.1	262.7	-3,256.4	3,267.0	1.66	-1.59	-0.48
10,916.0	91.30	274.90	7,682.7	268.8	-3,319.1	3,330.0	2.07	0.16	-2.06
10,980.0	92.00	274.80	7,680.9	274.2	-3,382.8	3,393.9	1.10	1.09	-0.16
11,043.0	93.00	275.70	7,678.1	279.9	-3,445.5	3,456.9	2.13	1.59	1.43
11,106.0	92.10	276.40	7,675.3	286.6	-3,508.1	3,519.8	1.81	-1.43	1.11
11,170.0	91.20	277.10	7,673.5	294.1	-3,571.6	3,583.7	1.78	-1.41	1.09
11,233.0	90.60	277.80	7,672.5	302.2	-3,634.1	3,646.6	1.46	-0.95	1.11
11,296.0	90.70	277.70	7,671.8	310.7	-3,696.5	3,709.5	0.22	0.16	-0.16
11,360.0	92.00	277.80	7,670.3	319.4	-3,759.9	3,773.4	2.04	2.03	0.16
11,391.0	92.60	277.70	7,669.0	323.5	-3,790.6	3,804.4	1.96	1.94	-0.32
11,423.0	92.80	278.10	7,667.5	327.9	-3,822.3	3,836.3	1.40	0.63	1.25
11,455.0	91.80	278.00	7,666.2	332.4	-3,853.9	3,868.2	3.14	-3.13	-0.31
11,487.0	90.30	278.10	7,665.6	336.9	-3,885.6	3,900.1	4.70	-4.69	0.31
11,519.0	90.40	277.80	7,665.5	341.3	-3,917.3	3,932.1	0.99	0.31	-0.94
11,582.0	90.40	279.40	7,665.0	350.7	-3,979.6	3,994.9	2.54	0.00	2.54
11,646.0	90.60	280.20	7,664.5	361.6	-4,042.6	4,058.7	1.29	0.31	1.25
11,710.0	89.40	276.80	7,664.5	371.1	-4,105.9	4,122.5	5.63	-1.88	-5.31
11,741.0	89.80	275.60	7,664.7	374.4	-4,136.7	4,153.5	4.08	1.29	-3.87
11,805.0	90.20	274.60	7,664.7	380.1	-4,200.5	4,217.5	1.68	0.63	-1.56
11,868.0	90.80	274.50	7,664.1	385.1	-4,263.3	4,280.5	0.97	0.95	-0.16



**DDC**  
Survey Report



<b>Company:</b>	Mewbourne Oil Co	<b>Local Co-ordinate Reference:</b>	Well Mirage 30 PM State Com #1H
<b>Project:</b>	Eddy County, New Mexico (Nad 83)	<b>TVD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Site:</b>	Sec 30,T19S, R29E	<b>MD Reference:</b>	WELL @ 3331.0usft (Patterson-UTI)
<b>Well:</b>	Mirage 30 PM State Com #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
11,932.0	90.80	274.10	7,663.2	389.9	-4,327.1	4,344.5	0.62	0.00	-0.63	
11,995.0	91.30	273.70	7,662.1	394.2	-4,389.9	4,407.5	1.02	0.79	-0.63	
12,058.0	91.20	273.20	7,660.7	398.0	-4,452.8	4,470.5	0.81	-0.16	-0.79	
12,099.0	91.50	272.60	7,659.7	400.1	-4,493.7	4,511.4	1.64	0.73	-1.46	
<b>TD @ 12150' MD / 7658.4' TVD</b>										
12,150.0	91.50	272.60	7,658.4	402.4	-4,544.7	4,562.4	0.00	0.00	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
7,120.0	7,117.8	-33.5	58.9	TIE IN @ 7120' MD / 7117.8' TVD	
7,872.0	7,716.5	1.5	-292.0	CROSSED HARDLINE @ 7872' MD / 7716.5' TVD	
12,150.0	7,658.4	402.4	-4,544.7	TD @ 12150' MD / 7658.4' TVD	

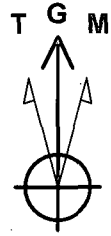
Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Company Name: Mewbourne Oil Co  
 Mirage 30 PM State Com #1H  
 Eddy County, New Mexico (Nad 83)  
 Rig: Patterson #46  
 Created By: TIFFANI MIZELL  
 Date: 2/21/2013

Mirage 30 PM State Com #1H  
 Eddy County, New Mexico (Nad 83)  
 Q120738 & WT-13122  
 Design #2



# Mewbourne Oil Company



Azimuths to Grid North  
 Magnetic North: 7.54°

Magnetic Field  
 Strength: 48634.7snT  
 Dip Angle: 60.43°  
 Date: 2/7/2013  
 Model: IGRF2010

**PROJECT DETAILS: Eddy County, New Mexico (Nad 83)**

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level

**WELL DETAILS: Mirage 30 PM State Com #1H**

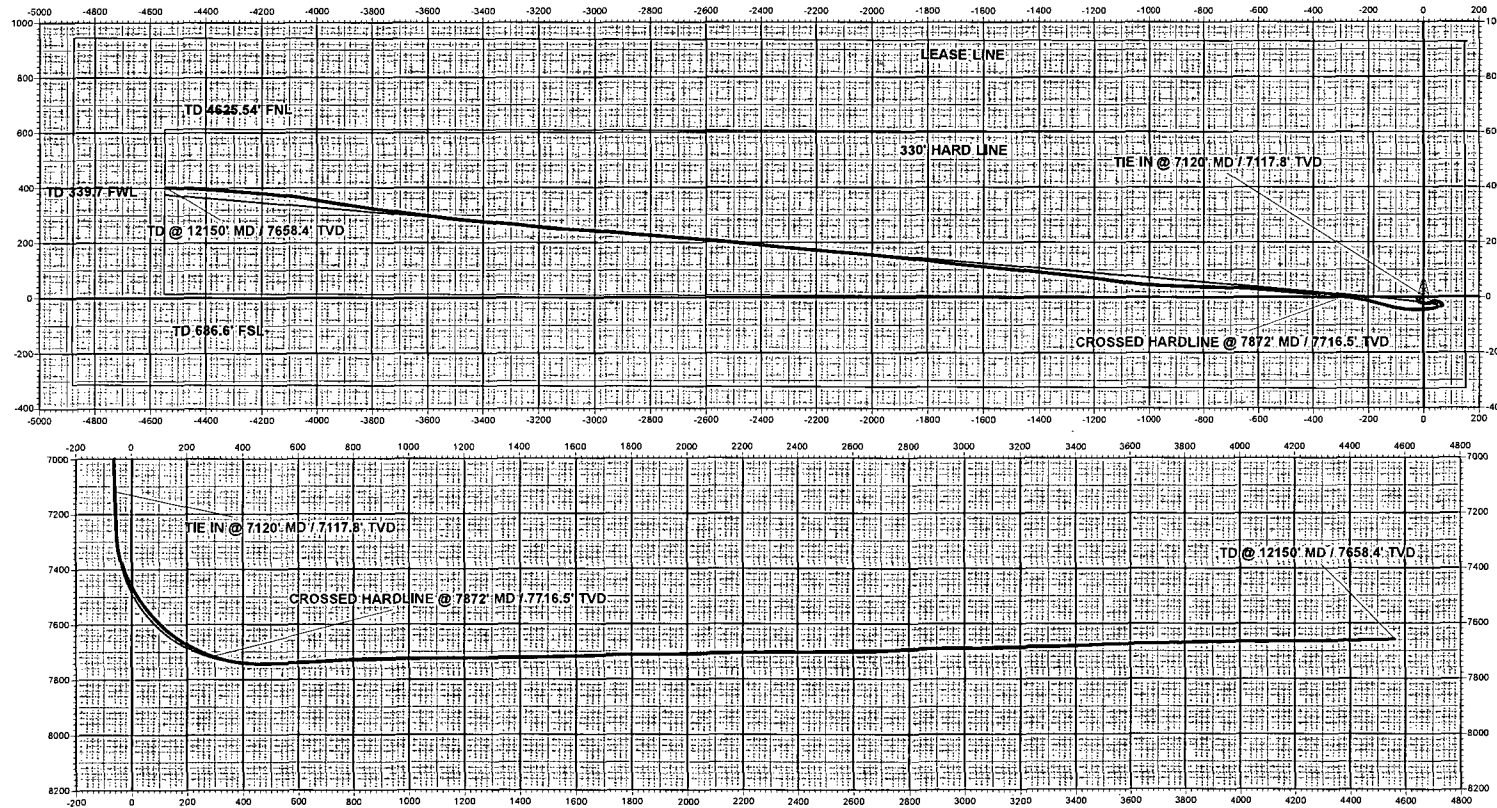
Ground Level:		3311.0	
+N-S	+E-W	Northing	Easting
0.0	0.0	591334.50	611308.60
		Latitude	Longitude
		32° 37' 31.522 N	104° 8' 21.799 W

**DESIGN TARGET DETAILS**

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
PBHL Mirage 30 PM State Com #1H - plan hits target center	7656.0	375.5	-4548.6	591710.04	606760.02	32° 37' 35.332 N	104° 7' 14.979 W

**ANNOTATIONS**

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
7120.0	3.07	301.25	7117.8	-33.5	58.9	-61.4	158.3	TIE IN @ 7120' MD / 7117.8' TVD
7872.0	70.70	276.80	7716.5	1.5	-292.0	291.1	517.9	CROSSED HARDLINE @ 7872' MD / 7716.5' TVD
12150.0	91.50	272.60	7658.4	402.4	-4544.7	4562.4	4791.4	TD @ 12150' MD / 7658.4' TVD



Vertical Section at 274.72° (200 usft/in)