

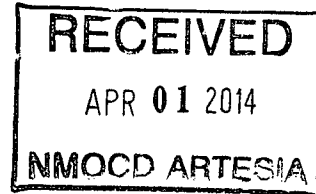
30-015-41629

Mewbourne Oil Co

Eddy County, New Mexico

Sec 14, T26S, R27E

Owl Draw 23 DM Fed Com #2H

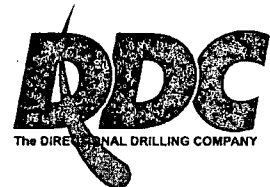


Wellbore #1

Design: Wellbore #1

DDC Survey Report

20 December, 2013



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Owl Draw 23 DM Fed Com #2H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec 14 T26S R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
Well:	Owl Draw 23 DM Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User.Db

Project	Eddy County, New Mexico		
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	Sec 14 T26S R27E		
Site Position:	Map	Northings:	376,774.54 usft
From:		Easting:	551,931.04 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 2' 8.725 N
		Longitude:	104° 9' 56.686 W
		Grid Convergence:	0.09 °

Well	Owl Draw 23 DM Fed Com #2H		
Well Position	+N/-S	0.0 usft	Northings:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 2' 8.737 N
		Longitude:	104° 9' 55.931 W
		Ground Level:	3,152.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	6/11/2013	(°)
			7.60
			Dip Angle
			(°)
			59.86
			Field Strength
			(nT)
			48,240

Design	Wellbore #1		
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
			(°)
			185.09

Survey Program	Date 12/20/2013		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	6,738.0	Gyro (Wellbore #1)	Good_gyro
6,828.0	12,530.0	MWD (Wellbore #1)	MWD default
			Description
			Good Gyro
			MWD - Standard

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.23	174.62	100.0	-0.2	0.0	0.2	0.23	0.23	0.00	
200.0	0.70	103.08	200.0	-0.5	0.6	0.5	0.66	0.47	-71.54	
300.0	1.62	116.59	300.0	-1.3	2.5	1.1	0.95	0.92	13.51	
400.0	1.79	131.30	399.9	-3.0	4.9	2.5	0.47	0.17	14.71	
500.0	2.25	131.74	499.9	-5.3	7.6	4.6	0.46	0.46	0.44	
600.0	1.66	133.30	599.8	-7.6	10.1	6.7	0.59	-0.59	1.56	
700.0	1.38	121.34	699.8	-9.2	12.2	8.1	0.42	-0.28	-11.96	
800.0	1.39	121.09	799.7	-10.5	14.2	9.2	0.01	0.01	-0.25	
900.0	1.48	131.12	899.7	-12.0	16.2	10.5	0.27	0.09	10.03	

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Owl Draw 23 DM Fed Com #2H
Project:	Eddy County New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec 14 T26S R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
Well:	Owl Draw 23 DM Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
1,000.0	1.00	138.33	999.7	-13.5	17.8	11.8	0.50	-0.48	7.21
1,100.0	1.63	128.41	1,099.7	-15.0	19.5	13.2	0.67	0.63	-9.92
1,200.0	0.96	97.16	1,199.6	-16.0	21.4	14.0	0.95	-0.67	-31.25
1,300.0	0.75	86.77	1,299.6	-16.1	22.9	14.0	0.26	-0.21	-10.39
1,400.0	0.43	103.41	1,399.6	-16.1	23.9	13.9	0.36	-0.32	16.64
1,500.0	1.06	111.62	1,499.6	-16.5	25.2	14.2	0.64	0.63	8.21
1,600.0	2.35	109.54	1,599.6	-17.6	28.0	15.0	1.29	1.29	-2.08
1,700.0	2.11	104.10	1,699.5	-18.7	31.7	15.8	0.32	-0.24	-5.44
1,800.0	2.33	97.26	1,799.4	-19.4	35.5	16.2	0.34	0.22	-6.84
1,900.0	3.37	93.59	1,899.3	-19.8	40.4	16.2	1.06	1.04	-3.67
2,000.0	3.87	89.15	1,999.1	-20.0	46.7	15.7	0.57	0.50	-4.44
2,100.0	3.59	87.16	2,098.9	-19.8	53.2	15.0	0.31	-0.28	-1.99
2,200.0	3.03	80.69	2,198.7	-19.2	59.0	13.9	0.67	-0.56	-6.47
2,300.0	2.21	78.63	2,298.6	-18.4	63.5	12.7	0.83	-0.82	-2.06
2,400.0	1.79	82.24	2,398.5	-17.8	66.9	11.8	0.44	-0.42	3.61
2,500.0	1.31	90.25	2,498.5	-17.6	69.6	11.3	0.53	-0.48	8.01
2,600.0	1.24	82.38	2,598.5	-17.4	71.8	11.0	0.19	-0.07	-7.87
2,700.0	1.40	89.90	2,698.5	-17.3	74.1	10.6	0.24	0.16	7.52
2,800.0	0.80	73.01	2,798.4	-17.1	76.0	10.3	0.68	-0.60	-16.89
2,900.0	0.45	113.62	2,898.4	-17.0	77.0	10.1	0.54	-0.35	40.61
3,000.0	0.30	176.20	2,998.4	-17.5	77.4	10.5	0.41	-0.15	62.58
3,100.0	0.24	143.88	3,098.4	-17.9	77.5	10.9	0.16	-0.06	-32.32
3,200.0	0.53	174.10	3,198.4	-18.5	77.7	11.6	0.34	0.29	30.22
3,300.0	0.70	202.41	3,298.4	-19.5	77.5	12.6	0.34	0.17	28.31
3,400.0	0.47	224.34	3,398.4	-20.4	77.0	13.5	0.32	-0.23	21.93
3,500.0	0.47	214.47	3,498.4	-21.0	76.5	14.2	0.08	0.00	-9.87
3,600.0	0.55	211.69	3,598.4	-21.8	76.0	14.9	0.08	0.08	-2.78
3,700.0	0.53	209.47	3,698.4	-22.6	75.5	15.8	0.03	-0.02	-2.22
3,800.0	1.05	200.51	3,798.4	-23.9	75.0	17.1	0.53	0.52	-8.96
3,900.0	0.46	178.83	3,898.4	-25.1	74.7	18.4	0.65	-0.59	-21.68
4,000.0	0.59	181.58	3,998.4	-26.0	74.7	19.3	0.13	0.13	2.75
4,100.0	1.03	213.83	4,098.4	-27.3	74.1	20.6	0.62	0.44	32.25
4,200.0	0.78	210.63	4,198.4	-28.6	73.3	22.0	0.25	-0.25	-3.20
4,300.0	1.02	176.58	4,298.4	-30.1	73.0	23.5	0.57	0.24	-34.05
4,400.0	1.15	181.70	4,398.3	-32.0	73.0	25.4	0.16	0.13	5.12
4,500.0	0.61	175.62	4,498.3	-33.5	73.0	26.9	0.55	-0.54	-6.08
4,600.0	0.79	173.29	4,598.3	-34.7	73.2	28.1	0.18	0.18	-2.33
4,700.0	0.83	171.42	4,698.3	-36.1	73.4	29.5	0.05	0.04	-1.87
4,800.0	1.22	184.18	4,798.3	-37.9	73.4	31.3	0.45	0.39	12.76
4,900.0	1.00	189.99	4,898.3	-39.8	73.2	33.2	0.25	-0.22	5.81
5,000.0	1.18	191.09	4,998.2	-41.7	72.8	35.1	0.18	0.18	1.10
5,100.0	0.86	210.41	5,098.2	-43.4	72.2	36.8	0.47	-0.32	19.32
5,200.0	0.93	183.52	5,198.2	-44.8	71.8	38.3	0.42	0.07	-26.89

DDC
Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Owl Draw 23 DM Fed Com #2H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec 14-T26S-R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
Well:	Owl Draw 23 DM Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
5,300.0	0.97	177.97	5,298.2	-46.5	71.8	39.9	0.10	0.04	-5.55
5,400.0	1.18	179.76	5,398.2	-48.4	71.8	41.8	0.21	0.21	1.79
5,500.0	1.43	183.86	5,498.2	-50.6	71.7	44.1	0.27	0.25	4.10
5,600.0	1.59	194.80	5,598.1	-53.2	71.3	46.7	0.33	0.16	10.94
5,700.0	1.24	211.41	5,698.1	-55.5	70.4	49.0	0.54	-0.35	16.61
5,800.0	1.87	221.51	5,798.1	-57.6	68.7	51.3	0.68	0.63	10.10
5,900.0	2.11	231.96	5,898.0	-60.0	66.2	53.9	0.43	0.24	10.45
6,000.0	2.00	234.01	5,997.9	-62.1	63.3	56.3	0.13	-0.11	2.05
6,100.0	2.08	235.85	6,097.9	-64.2	60.4	58.6	0.10	0.08	1.84
6,200.0	2.15	245.75	6,197.8	-66.0	57.2	60.6	0.37	0.07	9.90
6,300.0	2.44	260.10	6,297.7	-67.1	53.4	62.1	0.64	0.29	14.35
6,400.0	2.31	243.78	6,397.6	-68.4	49.5	63.7	0.69	-0.13	-16.32
6,500.0	3.81	232.58	6,497.5	-71.3	45.0	67.0	1.61	1.50	-11.20
6,600.0	3.31	228.92	6,597.3	-75.2	40.2	71.3	0.55	-0.50	-3.66
6,700.0	4.07	232.14	6,697.1	-79.3	35.3	75.8	0.79	0.76	3.22
Tie In @ 6738' MD / 6735' TVD									
6,738.0	3.77	223.80	6,735.0	-81.0	33.3	77.7	1.69	-0.79	-21.95
6,828.0	3.70	222.10	6,824.8	-85.3	29.3	82.3	0.15	-0.08	-1.89
6,859.0	3.80	221.60	6,855.8	-86.8	28.0	84.0	0.34	0.32	-1.61
6,891.0	3.90	226.00	6,887.7	-88.3	26.5	85.6	0.97	0.31	13.75
6,922.0	6.20	217.00	6,918.6	-90.4	24.7	87.9	7.82	7.42	-29.03
6,954.0	9.10	211.20	6,950.3	-94.0	22.4	91.6	9.37	9.06	-18.13
6,986.0	11.60	207.90	6,981.7	-99.0	19.6	96.8	8.03	7.81	-10.31
7,017.0	14.20	203.50	7,012.0	-105.2	16.6	103.3	8.96	8.39	-14.19
7,048.0	16.60	194.50	7,041.9	-113.0	14.0	111.3	10.90	7.74	-29.03
7,080.0	18.80	189.30	7,072.3	-122.5	12.0	121.0	8.46	6.88	-16.25
7,112.0	20.50	188.40	7,102.5	-133.1	10.3	131.7	5.40	5.31	-2.81
7,143.0	22.30	188.90	7,131.3	-144.3	8.6	143.0	5.84	5.81	1.61
7,175.0	25.10	191.90	7,160.6	-157.0	6.3	155.8	9.52	8.75	9.38
7,207.0	28.50	195.90	7,189.2	-170.9	2.8	170.0	12.02	10.63	12.50
7,239.0	31.80	196.30	7,216.9	-186.4	-1.7	185.8	10.33	10.31	1.25
7,270.0	34.00	196.80	7,242.9	-202.5	-6.5	202.3	7.15	7.10	1.61
7,302.0	37.10	195.80	7,268.9	-220.4	-11.7	220.5	9.86	9.69	-3.13
7,334.0	39.80	194.40	7,294.0	-239.6	-16.9	240.1	8.86	8.44	-4.38
7,365.0	41.20	194.90	7,317.6	-259.1	-21.9	260.0	4.64	4.52	1.61
7,397.0	43.10	194.70	7,341.3	-279.8	-27.4	281.2	5.95	5.94	-0.63
7,428.0	45.10	194.90	7,363.5	-300.7	-32.9	302.4	6.47	6.45	0.65
7,460.0	47.00	194.70	7,385.7	-323.0	-38.8	325.1	5.95	5.94	-0.63
7,491.0	49.10	193.00	7,406.5	-345.3	-44.3	347.9	7.91	6.77	-5.48
7,523.0	51.30	192.10	7,426.9	-369.3	-49.7	372.3	7.21	6.88	-2.81
Crossed Lease Line @ 7524' MD / 7428' TVD									
7,524.4	51.42	192.10	7,427.8	-370.4	-49.9	373.4	8.44	8.44	0.00
7,555.0	54.00	192.10	7,446.4	-394.2	-55.0	397.5	8.44	8.44	0.00
7,587.0	56.10	191.60	7,464.7	-419.9	-60.4	423.6	6.69	6.56	-1.56

DDC Survey Report



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Project:	Eddy County New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec.14-T26S-R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
7,618.0	58.80	190.30	7,481.4	-445.5	-65.4	449.6	9.40	8.71	-4.19
7,650.0	60.80	189.30	7,497.5	-472.8	-70.1	477.1	6.81	6.25	-3.13
7,681.0	63.10	188.60	7,512.0	-499.8	-74.3	504.4	7.68	7.42	-2.26
7,713.0	65.90	187.90	7,525.8	-528.4	-78.5	533.3	8.97	8.75	-2.19
7,744.0	68.90	187.00	7,537.7	-556.8	-82.2	561.9	10.04	9.68	-2.90
7,776.0	71.50	186.50	7,548.6	-586.7	-85.7	592.0	8.26	8.13	-1.56
7,808.0	73.90	186.30	7,558.1	-617.0	-89.1	622.5	7.52	7.50	-0.63
7,839.0	76.40	187.70	7,566.0	-646.8	-92.8	652.4	9.17	8.06	4.52
7,871.0	79.10	186.80	7,572.8	-677.8	-96.7	683.7	8.87	8.44	-2.81
Crossed Hard Line @ 7895.0 MD / 7577.0 TVD									
7,895.3	81.23	187.10	7,577.0	-701.5	-99.6	707.6	8.84	8.75	1.25
7,903.0	81.90	187.20	7,578.1	-709.1	-100.6	715.2	8.84	8.75	1.24
7,934.0	83.90	185.90	7,581.9	-739.7	-104.1	746.0	7.68	6.45	-4.19
7,965.0	86.30	186.50	7,584.6	-770.4	-107.4	776.9	7.98	7.74	1.94
8,030.0	90.50	185.60	7,586.4	-835.0	-114.2	841.8	6.61	6.46	-1.38
8,062.0	90.80	186.50	7,586.0	-866.8	-117.6	873.8	2.96	0.94	2.81
8,125.0	90.10	186.60	7,585.5	-929.4	-124.8	936.8	1.12	-1.11	0.16
8,157.0	90.60	186.30	7,585.3	-961.2	-128.4	968.8	1.82	1.56	-0.94
8,220.0	90.00	186.10	7,585.0	-1,023.8	-135.2	1,031.8	1.00	-0.95	-0.32
8,251.0	90.30	185.10	7,584.9	-1,054.6	-138.2	1,062.7	3.37	0.97	-3.23
8,315.0	89.30	184.70	7,585.2	-1,118.4	-143.7	1,126.7	1.68	-1.56	-0.63
8,378.0	90.00	185.20	7,585.5	-1,181.2	-149.1	1,189.7	1.37	1.11	0.79
8,442.0	88.70	184.90	7,586.3	-1,244.9	-154.8	1,253.7	2.08	-2.03	-0.47
8,505.0	89.10	184.50	7,587.5	-1,307.7	-159.9	1,316.7	0.90	0.63	-0.63
8,568.0	89.80	184.00	7,588.1	-1,370.5	-164.6	1,379.7	1.37	1.11	-0.79
8,632.0	89.60	182.60	7,588.4	-1,434.4	-168.3	1,443.7	2.21	-0.31	-2.19
8,695.0	90.60	182.90	7,588.3	-1,497.3	-171.3	1,506.6	1.66	1.59	0.48
8,758.0	90.80	182.20	7,587.5	-1,560.3	-174.1	1,569.6	1.16	0.32	-1.11
8,821.0	91.20	182.60	7,586.4	-1,623.2	-176.7	1,632.5	0.90	0.63	0.63
8,916.0	89.30	183.30	7,586.0	-1,718.1	-181.6	1,727.4	2.13	-2.00	0.74
9,010.0	89.50	182.80	7,587.0	-1,811.9	-186.6	1,821.3	0.57	0.21	-0.53
9,106.0	90.40	182.60	7,587.1	-1,907.8	-191.1	1,917.3	0.96	0.94	-0.21
9,200.0	92.20	181.00	7,585.0	-2,001.7	-194.1	2,011.1	2.56	1.91	-1.70
9,296.0	91.50	181.70	7,581.9	-2,097.7	-196.4	2,106.8	1.03	-0.73	0.73
9,391.0	89.80	182.20	7,580.8	-2,192.6	-199.6	2,201.7	1.87	-1.79	0.53
9,486.0	89.60	180.50	7,581.3	-2,287.6	-201.8	2,296.5	1.80	-0.21	-1.79
9,581.0	91.00	181.50	7,580.8	-2,382.6	-203.5	2,391.2	1.81	1.47	1.05
9,676.0	90.10	183.50	7,579.9	-2,477.5	-207.6	2,486.1	2.31	-0.95	2.11
9,771.0	90.90	183.50	7,579.0	-2,572.3	-213.4	2,581.1	0.84	0.84	0.00
9,865.0	88.60	183.80	7,579.4	-2,666.1	-219.4	2,675.0	2.47	-2.45	0.32
9,960.0	89.00	182.90	7,581.4	-2,760.9	-225.0	2,770.0	1.04	0.42	-0.95
10,056.0	89.40	181.70	7,582.8	-2,856.8	-228.8	2,865.8	1.32	0.42	-1.25
10,150.0	88.90	182.80	7,584.2	-2,950.7	-232.5	2,959.7	1.29	-0.53	1.17

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Owl Draw 23 DM Fed Com #2H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec 14-T26S-R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
Well:	Owl Draw 23 DM Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
10,214.0	89.20	182.90	7,585.2	-3,014.6	-235.7	3,023.7	0.49	0.47	0.16
10,245.0	89.50	183.60	7,585.6	-3,045.6	-237.4	3,054.6	2.46	0.97	2.26
10,277.0	90.50	184.20	7,585.6	-3,077.5	-239.6	3,086.6	3.64	3.13	1.88
10,309.0	90.80	183.30	7,585.2	-3,109.4	-241.7	3,118.6	2.96	0.94	-2.81
10,340.0	90.90	182.60	7,584.8	-3,140.4	-243.3	3,149.6	2.28	0.32	-2.26
10,404.0	90.90	182.90	7,583.8	-3,204.3	-246.4	3,213.5	0.47	0.00	0.47
10,467.0	91.00	182.40	7,582.7	-3,267.2	-249.3	3,276.5	0.81	0.16	-0.79
10,530.0	90.80	182.60	7,581.7	-3,330.2	-252.0	3,339.4	0.45	-0.32	0.32
10,594.0	90.80	183.30	7,580.8	-3,394.1	-255.3	3,403.3	1.09	0.00	1.09
10,657.0	91.10	182.90	7,579.8	-3,457.0	-258.7	3,466.3	0.79	0.48	-0.63
10,721.0	91.40	182.60	7,578.4	-3,520.9	-261.8	3,530.2	0.66	0.47	-0.47
10,815.0	91.90	182.40	7,575.7	-3,614.8	-265.9	3,624.1	0.57	0.53	-0.21
10,879.0	91.20	183.80	7,573.9	-3,678.6	-269.4	3,688.0	2.44	-1.09	2.19
10,942.0	90.00	182.90	7,573.3	-3,741.5	-273.0	3,751.0	2.38	-1.90	-1.43
11,005.0	90.40	184.90	7,573.1	-3,804.4	-277.3	3,814.0	3.24	0.63	3.17
11,068.0	92.50	187.30	7,571.5	-3,867.0	-284.0	3,876.9	5.06	3.33	3.81
11,132.0	91.20	186.60	7,569.4	-3,930.5	-291.8	3,940.9	2.31	-2.03	-1.09
11,163.0	90.80	186.50	7,568.9	-3,961.3	-295.3	3,971.8	1.33	-1.29	-0.32
11,226.0	89.60	186.50	7,568.6	-4,023.9	-302.4	4,034.8	1.90	-1.90	0.00
11,290.0	90.00	186.50	7,568.9	-4,087.5	-309.7	4,098.8	0.63	0.63	0.00
11,353.0	90.50	184.70	7,568.6	-4,150.1	-315.8	4,161.8	2.97	0.79	-2.86
11,416.0	90.80	184.00	7,567.9	-4,213.0	-320.6	4,224.8	1.21	0.48	-1.11
11,479.0	90.90	183.60	7,566.9	-4,275.8	-324.8	4,287.8	0.65	0.16	-0.63
11,574.0	90.00	183.80	7,566.2	-4,370.6	-330.9	4,382.7	0.97	-0.95	0.21
11,669.0	90.00	184.00	7,566.2	-4,465.4	-337.4	4,477.7	0.21	0.00	0.21
11,764.0	89.50	182.20	7,566.6	-4,560.3	-342.5	4,572.7	1.97	-0.53	-1.89
11,858.0	90.90	181.50	7,566.3	-4,654.2	-345.5	4,666.5	1.67	1.49	-0.74
11,953.0	92.20	181.70	7,563.7	-4,749.1	-348.2	4,761.3	1.38	1.37	0.21
11,985.0	93.00	181.90	7,562.3	-4,781.1	-349.2	4,793.2	2.58	2.50	0.63
12,048.0	90.60	182.10	7,560.3	-4,844.0	-351.4	4,856.1	3.82	-3.81	0.32
12,143.0	90.00	181.90	7,559.8	-4,938.9	-354.7	4,950.9	0.67	-0.63	-0.21
12,237.0	88.90	181.40	7,560.7	-5,032.9	-357.4	5,044.8	1.29	-1.17	-0.53
12,332.0	88.80	181.40	7,562.6	-5,127.8	-359.7	5,139.5	0.11	-0.11	0.00
12,427.0	88.20	179.90	7,565.1	-5,222.8	-360.8	5,234.2	1.70	-0.63	-1.58
12,478.0	88.10	179.40	7,566.7	-5,273.8	-360.5	5,285.0	1.00	-0.20	-0.98
12,530.0	88.10	179.40	7,568.5	-5,325.7	-360.0	5,336.7	0.00	0.00	0.00

DDC
Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Owl Draw 23 DM Fed Com #2H
Project:	Eddy County New Mexico	TVD Reference:	WELL @ 3172.0usft (Patterson #187)
Site:	Sec 14 T26S R27E	MD Reference:	WELL @ 3172.0usft (Patterson #187)
Well:	Owl Draw 23 DM Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,738.0	6,735.0	-81.0	33.3	Tie In @ 6738' MD / 6735' TVD
7,524.4	7,427.8	-370.4	-49.9	Crossed Lease Line @ 7524' MD / 7428' TVD
7,895.3	7,577.0	-701.5	-99.6	Crossed Hard Line @ 7895' MD / 7577' TVD
12,530.0	7,568.5	-5,325.7	-360.0	TD @ 12530' MD / 7569' TVD

Checked By: _____ Approved By: _____ Date: _____

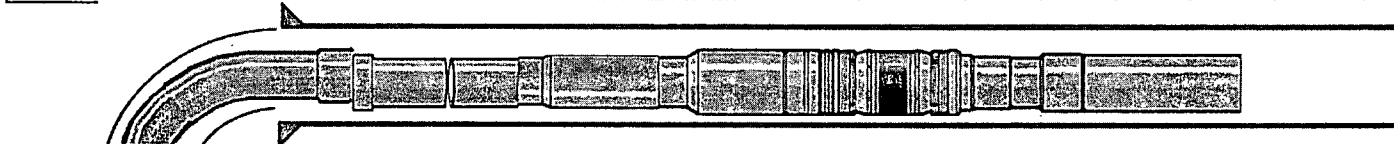
Operating Company Mewbourne Oil Co.
 Well Name & Number Owl Draw 23 DM Fed Com 2H
 Sales Ticket Number 6026502
 Date 12/20/2013

Company Rep Sandy Bass
 Field Owl Draw 23 DM
 BOT Service Rep Joseph Haynes
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,015.00	9,960	6,230	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,766.89	12,410	10,680	
Bott Liner											
TVD	7568.40		KOP		6941.00		Open Hole		6.125	Casing Vol. (bbl)	296.5
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 Setting Sleeve RH Profile	7748.11	4.00	5.750	3.875				



Zone
Length

	S3 Hyd Set Packer	7752.11	4.65	5.813	3.875					
	4-1/2-13.5 LTC Nipple	7756.76	8.09	4.500	3.920					
	8 Joints of 4-1/2-13.5 LTC Casing	7764.85	318.77	4.500	3.920					
	3.625 EX Frac Sleeve	8083.62	3.90	5.750	3.525	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	8087.52	117.68	4.500	3.920					
	Baker Open Hole Packer	8205.20	3.89	5.820	3.875	2154				
	2 Joints of 4-1/2-13.5 LTC Casing	8209.09	77.43	4.500	3.920					
	3.500 EX Frac Sleeve	8286.52	3.90		3.400	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	8290.42	119.05	4.500	3.920					
	Baker Open Hole Packer	8408.47	3.89	5.820	3.875	2154				
	3 Joints of 4-1/2-13.5 LTC Casing	8413.36	119.42	4.500	3.920					
	3.375 EX Frac Sleeve	8532.78	3.90		3.275	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	8536.68	118.65	4.500	3.920					
	Baker Open Hole Packer	8655.33	3.89	5.820	3.875	2154				
	3 Joints of 4-1/2-13.5 LTC Casing	8659.22	115.06	4.500	3.920					
	3.250 EX Frac Sleeve	8774.28	3.90		3.150	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	8778.18	119.12	4.500	3.920					
	Baker Open Hole Packer	8897.30	3.89	5.820	3.875	2154				
	3 Joints of 4-1/2-13.5 LTC Casing	8901.19	118.49	4.500	3.920					
	3.125 EX Frac Sleeve	9019.68	3.90		3.025	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	9023.58	118.99	4.500	3.920					
	Baker Open Hole Packer	9142.57	3.89	5.820	3.875	2154				
	3 Joints of 4-1/2-13.5 LTC Casing	9146.46	121.34	4.500	3.920					
	3.000 EX Frac sleeve	9267.80	3.90		2.900	2286				
	3 Joints of 4-1/2-13.5 LTC Casing	9271.70	117.36	4.500	3.920					

Operating Company Mewbourne Oil Co.
 Well Name & Number Owl Draw 23 DM Fed Com 2H
 Sales Ticket Number 6026502
 Date 12/20/2013

Company Rep Sandy Bass
 Field Owl Draw 23 DM
 BOT Service Rep Joseph Haynes
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,015.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,766.89	12,410	10,680		
Bott Liner												
TVD		7568.40		KOP		6941.00		Open Hole		6.125	Casing Vol. (bbl)	296.5
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)
	Baker Open Hole Packer	9389.06	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	9392.95	81.10	4.500	3.920				
	2.875 EX Frac Sleeve	9474.05	3.90			2.775	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	9477.95	120.33	4.500	3.920				
	Baker Open Hole Packer	9598.28	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	9602.17	116.60	4.500	3.920				
	2.750 EX Frac Sleeve	9718.77	3.90			2.650	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	9722.67	117.74	4.500	3.920				
	Baker Open Hole Packer	9840.41	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	9844.30	118.11	4.500	3.920				
	2.625 EX Frac Sleeve	9962.41	3.90			2.525	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	9966.31	118.72	4.500	3.920				
	Baker Open Hole Packer	10085.03	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	10088.92	80.35	4.500	3.920				
	2.500 EX Frac Sleeve	10169.27	3.90			2.400	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10173.17	120.26	4.500	3.920				
	Baker Open Hole Packer	10293.43	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10297.32	116.46	4.500	3.920				
	2.375 EX Frac Sleeve	10413.78	3.90			2.275	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10417.68	119.16	4.500	3.920				
	Baker Open Hole Packer	10536.84	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10540.73	118.69	4.500	3.920				
	2.250 EX Frac Sleeve	10659.42	3.90			2.150	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10663.32	121.45	4.500	3.920				
	Baker Open Hole Packer	10784.77	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	10788.66	120.27	4.500	3.920				
	2.125 EX Frac Sleeve	10908.93	3.90			2.025	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	10912.83	121.09	4.500	3.920				
	Baker Open Hole Packer	11033.92	3.89	5.820	3.875		2154		

Operating Company Mewbourne Oil Co.
Well Name & Number Owl Draw 23 DM Fed Com 2H
Sales Ticket Number 6026502

Company Rep Sandy Bass
Field Owl Draw 23 DM
BOT Service Rep Joseph Haynes



Date 12/20/2013

District Location Odessa, TX

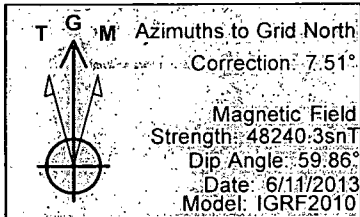
	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,015.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,766.89	12,410	10,680		
Bott Liner												
TVD		7568.40		KOP		6941.00		Open Hole	6.125	Casing Vol. (bbl)	296.5	
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)
	2 Joints of 4-1/2-13.5 LTC Casing	11037.81	78.49	4.500	3.920				
	2'000 EX Frac Sleeve	11116.30	3.90			1.900	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11120.20	118.51	4.500	3.920				
	Baker Open Hole Packer	11238.71	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	11242.60	119.78	4.500	3.920				
	1'875 EX Frac Sleeve	11362.38	3.90			1.775	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11366.28	120.09	4.500	3.920				
	Baker Open Hole Packer	11486.37	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	11490.26	118.44	4.500	3.920				
	1'750 EX Frac Sleeve	11608.70	3.90			1.650	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11612.60	117.68	4.500	3.920				
	Baker Open Hole Packer	11730.28	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	11734.17	77.46	4.500	3.920				
	1'625 EX Frac Sleeve	11811.63	3.90			1.525	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	11815.53	118.57	4.500	3.920				
	Baker Open Hole Packer	11934.10	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	11937.99	117.91	4.500	3.920				
	1'500 DBL Ball Frac Sleeve	12055.90	3.90			1.400	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	12059.80	117.68	4.500	3.920				
	Baker Open Hole Packer	12177.48	3.89	5.820	3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	12181.37	119.08	4.500	3.920				
	1'375 DBL Ball Frac Sleeve	12300.45	3.90			1.275	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	12304.35	117.52	4.500	3.920				
	Baker Open Hole Packer	12421.87	3.89	5.820	3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	12425.76	76.51	4.500	3.920				
	1'25" Short Sleeve	12502.27	2.39			1.000	3048		
	PUP JOINT	12504.66	8.07	4.500	3.920				
	DBL FLT SHOE	12512.73	2.27						
	Bttm of shoe	12515.00							

Company Name: Mewbourne Oil Co
Owl Draw 23 DM Fed Com #2H
Eddy County, New Mexico
Rig: Patterson #187
Created By: James Dawson
Date: 12/20/2013

Owl Draw 23 DM Fed Com #2H
Eddy County, New Mexico
Q130502 & WT-13922
Design #4

Mewbourne Oil Company



PROJECT DETAILS: Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

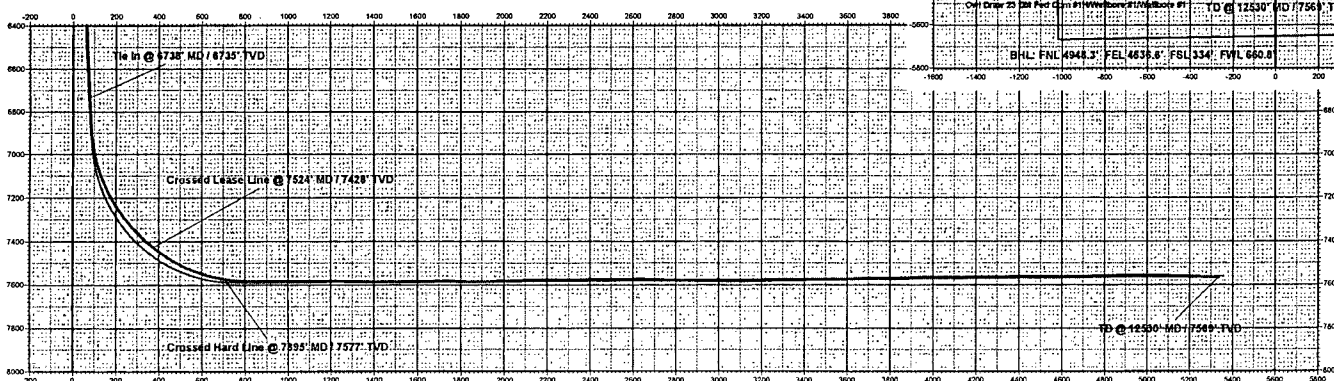
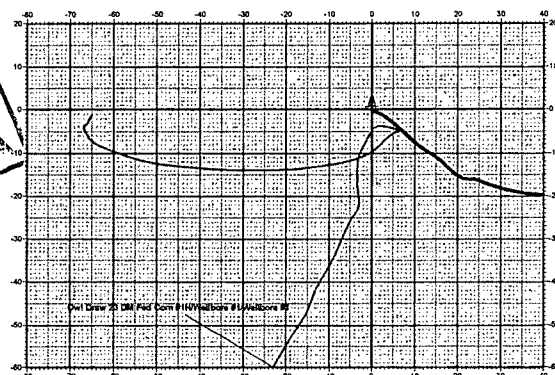


WELL DETAILS: Owl Draw 23 DM Fed Com #2H					
	Ground Level:	3152.0			
+N-S	+E-W	North	East	Latitude	Longitude
0.0	0.0	376775.82	551996.00	32° 2' 8.737" N	104° 9' 55.931" W

DESIGN TARGET DETAILS					
Name	TVD	+N-S	+E-W	North	East
PBH: Owl Draw 23 DM Fed Com #2H D6562.0	-6531.7	-6531.7	-6531.7	371444.12	551475.30
- plan hits target center				32° 1' 16.979" N	104° 10' 2.075" W

ANNOTATIONS									
MD	Inc	Adj	TVD	+N-S	+E-W	V-Sect	Departure	Annotation	
6738.0	3.77	223.80	6738.0	-81.0	33.3	77.7	170.1	Tie In @ 6735' MD / 6735' TVD	
7524.4	51.42	192.10	7427.8	-370.4	-49.9	373.4	473.5	Crossed Lease Line @ 7524' MD / 7428' TVD	
7895.3	81.23	187.10	7677.0	-701.5	-49.8	707.4	808.5	Crossed Hard Line @ 7895' MD / 7577' TVD	
12530.0	88.10	179.40	7668.5	-5255.7	-360.0	6336.7	6442.1	TD @ 12530' MD / 7569' TVD	

RECEIVED
APR 01 2014
NMOCD ARTESIA



Vertical Section at 185.58° (200 usft/in)

OPERATOR
WELL/LEASE
COUNTY

MEWBOURNE OIL COMPANY
OWL DRAW 23 DM FED COM 2H
EDDY

RECEIVED

APR 01 2014

NMOCD ARTESIA

187-0013

STATE OF NEW MEXICO
DEVIATION REPORT

490	1.90
965	0.90
1,404	0.60

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.

12/19/13, by

Amber Elizabeth Carr

Notary Public for Midland County, Texas
My Commission Expires:

