

30-015-40945

Mewbourne Oil Co

Eddy County, New Mexico

Sec 12, T26S, R28E

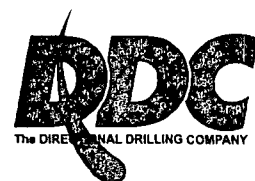
Delaware Ranch 12 MD Fed Com #1H

Wellbore #1

Design: Wellbore #1

DDC Survey Report

14 April, 2014



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well: Delaware Ranch 12 MD Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2967.0usft (Patterson #75)
Site:	Sec 12, T26S, R28E	MD Reference:	WELL @ 2967.0usft (Patterson #75)
Well:	Delaware Ranch 12 MD Fed Com #1H	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 12, T26S, R28E			
Site Position:		Northing:	382,174.62 usft	Latitude:	32° 3' 1.399 N
From:	Map	Easting:	588,852.66 usft	Longitude:	104° 2' 47.582 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well: Delaware Ranch 12 MD Fed Com #1H						
Well Position	+N-S	0.0 usft	Northing:	382,174.62 usft	Latitude:	32° 3' 1.399 N
	+E-W	0.0 usft	Easting:	588,852.66 usft	Longitude:	104° 2' 47.582 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,947.0 usft

Wellbore						Wellbore #1					
Magnetics		Model Name		Sample Date		Declination (°)		Dip Angle (°)		Field Strength (nT)	
		IGRF2010		3/12/2014		7.46		59.88		48,190	

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	359.94

Survey Program		Date	4/14/2014	
From	To			
(usft)	(usft)	Survey (Wellbore)	Tool Name	Description
100.0	9,900.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro
9,955.0	15,160.0	MWD (Wellbore #1)	MWD default	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	0.29	334.78	100.0	0.2	-0.1	0.2	0.29	0.29	0.00
200.0	0.63	346.10	200.0	1.0	-0.3	1.0	0.35	0.34	11.32
300.0	1.59	349.73	300.0	2.9	-0.7	2.9	0.96	0.96	3.63
400.0	1.58	352.30	399.9	5.6	-1.2	5.6	0.07	-0.01	2.57
500.0	1.51	3.28	499.9	8.3	-1.3	8.3	0.30	-0.07	10.98
600.0	1.39	14.71	599.9	10.8	-0.9	10.8	0.31	-0.12	11.43
700.0	1.32	29.98	699.8	13.0	0.0	13.0	0.37	-0.07	15.27
800.0	1.44	39.23	799.8	14.9	1.4	14.9	0.25	0.12	9.25
900.0	1.31	35.65	899.8	16.8	2.8	16.8	0.16	-0.13	-3.58

DDC
Survey Report



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Site:	Sec.12, T26S, R28E	MD Reference:	WELL @ 2967.0usft (Patterson #75)
Well:	Delaware Ranch 12 MD Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
1,000.0	1.07	27.66	999.8	18.6	3.9	18.6	0.29	-0.24	-7.99	
1,100.0	0.94	21.58	1,099.7	20.2	4.7	20.2	0.17	-0.13	-6.08	
1,200.0	0.73	11.09	1,199.7	21.6	5.1	21.6	0.26	-0.21	-10.49	
1,300.0	0.70	350.72	1,299.7	22.8	5.1	22.8	0.25	-0.03	-20.37	
1,400.0	0.59	331.61	1,399.7	23.9	4.8	23.8	0.24	-0.11	-19.11	
1,500.0	0.51	286.82	1,499.7	24.4	4.1	24.4	0.43	-0.08	-44.79	
1,600.0	0.22	235.66	1,599.7	24.5	3.5	24.5	0.41	-0.29	-51.16	
1,700.0	0.39	212.18	1,699.7	24.1	3.2	24.1	0.21	0.17	-23.48	
1,800.0	0.53	174.18	1,799.7	23.3	3.0	23.3	0.33	0.14	-38.00	
1,900.0	0.37	148.18	1,899.7	22.6	3.3	22.6	0.26	-0.16	-26.00	
2,000.0	2.19	93.10	1,999.7	22.2	5.3	22.2	2.00	1.82	-55.08	
2,100.0	2.66	93.86	2,099.6	21.9	9.6	21.9	0.47	0.47	0.76	
2,200.0	2.71	97.08	2,199.5	21.5	14.2	21.5	0.16	0.05	3.22	
2,300.0	2.67	97.52	2,299.4	20.9	18.9	20.9	0.05	-0.04	0.44	
2,400.0	2.73	97.90	2,399.3	20.3	23.5	20.2	0.06	0.06	0.38	
2,500.0	2.68	98.22	2,499.2	19.6	28.2	19.6	0.05	-0.05	0.32	
2,600.0	2.13	98.32	2,599.1	19.0	32.4	19.0	0.55	-0.55	0.10	
2,700.0	1.60	97.68	2,699.0	18.5	35.6	18.5	0.53	-0.53	-0.64	
2,800.0	1.38	96.17	2,799.0	18.2	38.2	18.2	0.22	-0.22	-1.51	
2,900.0	1.33	94.08	2,898.9	18.0	40.5	18.0	0.07	-0.05	-2.09	
3,000.0	1.04	87.82	2,998.9	18.0	42.6	17.9	0.32	-0.29	-6.26	
3,100.0	0.78	100.50	3,098.9	17.9	44.2	17.8	0.33	-0.26	12.68	
3,200.0	0.66	118.09	3,198.9	17.5	45.3	17.4	0.25	-0.12	17.59	
3,300.0	0.64	109.80	3,298.9	17.0	46.4	17.0	0.10	-0.02	-8.29	
3,400.0	0.46	96.52	3,398.9	16.8	47.3	16.7	0.22	-0.18	-13.28	
3,500.0	0.25	139.91	3,498.9	16.6	47.8	16.5	0.33	-0.21	43.39	
3,600.0	0.31	141.07	3,598.9	16.2	48.2	16.1	0.06	0.06	1.16	
3,700.0	0.22	137.58	3,698.9	15.8	48.5	15.8	0.09	-0.09	-3.49	
3,800.0	0.12	176.92	3,798.9	15.6	48.6	15.5	0.15	-0.10	39.34	
3,900.0	0.30	230.80	3,898.9	15.3	48.4	15.3	0.25	0.18	53.88	
4,000.0	0.37	227.98	3,998.9	14.9	47.9	14.9	0.07	0.07	-2.82	
4,100.0	0.37	224.05	4,098.9	14.5	47.5	14.4	0.03	0.00	-3.93	
4,200.0	0.39	211.14	4,198.9	14.0	47.1	13.9	0.09	0.02	-12.91	
4,300.0	0.31	229.97	4,298.9	13.5	46.7	13.5	0.14	-0.08	18.83	
4,400.0	0.33	251.17	4,398.9	13.2	46.2	13.2	0.12	0.02	21.20	
4,500.0	0.21	224.60	4,498.9	13.0	45.8	13.0	0.17	-0.12	-26.57	
4,600.0	0.18	218.58	4,598.9	12.8	45.6	12.7	0.04	-0.03	-6.02	
4,700.0	0.26	196.23	4,698.9	12.4	45.4	12.4	0.12	0.08	-22.35	
4,800.0	0.21	195.98	4,798.9	12.0	45.3	12.0	0.05	-0.05	-0.25	
4,900.0	0.41	215.57	4,898.9	11.6	45.1	11.5	0.22	0.20	19.59	
5,000.0	0.52	220.01	4,998.9	10.9	44.6	10.9	0.12	0.11	4.44	
5,100.0	0.56	186.53	5,098.9	10.1	44.2	10.0	0.31	0.04	-33.48	
5,200.0	0.52	204.97	5,198.9	9.2	44.0	9.2	0.18	-0.04	18.44	

DDC
Survey Report



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Well:	Delaware Ranch 12 MD Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
5,300.0	0.69	205.74	5,298.9	8.2	43.5	8.2	0.17	0.17	0.77
5,400.0	0.79	206.32	5,398.8	7.1	42.9	7.0	0.10	0.10	0.58
5,500.0	0.86	198.87	5,498.8	5.8	42.4	5.7	0.13	0.07	-7.45
5,600.0	0.97	201.09	5,598.8	4.3	41.8	4.2	0.12	0.11	2.22
5,700.0	1.08	194.35	5,698.8	2.6	41.3	2.5	0.16	0.11	-6.74
5,800.0	1.30	187.15	5,798.8	0.5	40.9	0.5	0.27	0.22	-7.20
5,900.0	1.39	183.62	5,898.8	-1.8	40.7	-1.9	0.12	0.09	-3.53
6,000.0	1.46	180.28	5,998.7	-4.3	40.6	-4.4	0.11	0.07	-3.34
6,100.0	1.46	185.92	6,098.7	-6.8	40.5	-6.9	0.14	0.00	5.64
6,200.0	1.39	180.79	6,198.7	-9.3	40.3	-9.4	0.15	-0.07	-5.13
6,300.0	1.41	187.42	6,298.6	-11.8	40.2	-11.8	0.16	0.02	6.63
6,400.0	1.57	243.50	6,398.6	-13.6	38.8	-13.6	1.41	0.16	56.08
6,500.0	0.55	245.98	6,498.6	-14.4	37.1	-14.4	1.02	-1.02	2.48
6,600.0	0.65	245.64	6,598.6	-14.8	36.2	-14.9	0.10	0.10	-0.34
6,700.0	0.69	236.86	6,698.6	-15.4	35.1	-15.4	0.11	0.04	-8.78
6,800.0	0.81	237.12	6,798.6	-16.1	34.0	-16.1	0.12	0.12	0.26
6,900.0	1.15	259.85	6,898.6	-16.7	32.5	-16.7	0.51	0.34	22.73
7,000.0	1.24	262.13	6,998.5	-17.0	30.4	-17.0	0.10	0.09	2.28
7,100.0	1.47	240.91	7,098.5	-17.8	28.2	-17.8	0.55	0.23	-21.22
7,200.0	1.91	248.07	7,198.5	-19.0	25.5	-19.0	0.49	0.44	7.16
7,300.0	1.95	272.49	7,298.4	-19.6	22.3	-19.6	0.82	0.04	24.42
7,400.0	1.98	276.24	7,398.3	-19.3	18.9	-19.3	0.13	0.03	3.75
7,500.0	1.54	275.19	7,498.3	-19.0	15.8	-19.0	0.44	-0.44	-1.05
7,600.0	1.68	278.89	7,598.3	-18.6	13.0	-18.7	0.17	0.14	3.70
7,700.0	1.44	282.36	7,698.2	-18.1	10.4	-18.2	0.26	-0.24	3.47
7,800.0	0.95	283.92	7,798.2	-17.7	8.3	-17.7	0.49	-0.49	1.56
7,900.0	0.40	234.82	7,898.2	-17.7	7.2	-17.7	0.75	-0.55	-49.10
8,000.0	0.49	167.89	7,998.2	-18.3	7.1	-18.3	0.50	0.09	-66.93
8,100.0	0.68	143.86	8,098.2	-19.2	7.5	-19.2	0.31	0.19	-24.03
8,200.0	0.40	183.51	8,198.2	-20.0	7.8	-20.0	0.45	-0.28	39.65
8,300.0	0.50	175.98	8,298.2	-20.8	7.8	-20.8	0.12	0.10	-7.53
8,400.0	0.69	86.61	8,398.2	-21.2	8.5	-21.2	0.85	0.19	-89.37
8,500.0	0.21	93.98	8,498.2	-21.2	9.2	-21.2	0.48	-0.48	7.37
8,600.0	0.86	210.56	8,598.2	-21.8	9.0	-21.8	0.97	0.65	116.58
8,700.0	0.84	216.68	8,698.2	-23.1	8.2	-23.1	0.09	-0.02	6.12
8,800.0	1.60	180.66	8,798.1	-25.1	7.8	-25.1	1.04	0.76	-36.02
8,900.0	1.53	178.61	8,898.1	-27.8	7.8	-27.8	0.09	-0.07	-2.05
9,000.0	1.38	177.75	8,998.1	-30.3	7.9	-30.3	0.15	-0.15	-0.86
9,100.0	1.49	179.31	9,098.0	-32.8	7.9	-32.8	0.12	0.11	1.56
9,200.0	1.33	178.57	9,198.0	-35.3	8.0	-35.3	0.16	-0.16	-0.74
9,300.0	1.47	182.10	9,298.0	-37.7	8.0	-37.7	0.16	0.14	3.53
9,400.0	1.56	179.62	9,397.9	-40.4	7.9	-40.4	0.11	0.09	-2.48
9,500.0	1.54	181.76	9,497.9	-43.1	7.9	-43.1	0.06	-0.02	2.14

DDC
Survey Report



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Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2967.0usft (Patterson #75)
Site:	Sec 12, T26S R28E	MD Reference:	WELL @ 2967.0usft (Patterson #75)
Well:	Delaware Ranch 12 MD Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
9,600.0	1.44	189.85	9,597.9	-45.7	7.6	-45.7	0.23	-0.10	8.09
9,700.0	1.36	189.63	9,697.8	-48.1	7.2	-48.1	0.08	-0.08	-0.22
9,800.0	0.89	196.96	9,797.8	-50.0	6.8	-50.0	0.49	-0.47	7.33
TIE IN @ 9900 MD / 9998 TVD									
9,900.0	1.15	218.83	9,897.8	-51.5	5.9	-51.5	0.46	0.26	21.87
9,955.0	1.20	215.80	9,952.8	-52.4	5.3	-52.4	0.14	0.09	-5.51
9,987.0	0.70	228.50	9,984.8	-52.8	4.9	-52.8	1.69	-1.56	39.69
10,019.0	1.90	343.00	10,016.8	-52.4	4.6	-52.4	7.13	3.75	357.81
10,051.0	4.70	345.90	10,048.7	-50.6	4.1	-50.7	8.76	8.75	9.06
10,082.0	7.10	344.20	10,079.6	-47.6	3.3	-47.6	7.76	7.74	-5.48
10,114.0	9.40	353.40	10,111.2	-43.1	2.5	-43.1	8.27	7.19	28.75
10,146.0	11.60	352.60	10,142.7	-37.3	1.7	-37.3	6.89	6.88	-2.50
10,178.0	14.00	355.00	10,173.9	-30.2	1.0	-30.2	7.68	7.50	7.50
10,209.0	16.20	359.10	10,203.8	-22.2	0.6	-22.2	7.88	7.10	13.23
10,241.0	18.90	0.40	10,234.3	-12.5	0.6	-12.5	8.53	8.44	4.06
10,272.0	21.10	359.70	10,263.5	-1.9	0.6	-1.9	7.14	7.10	-2.26
10,303.0	23.90	359.60	10,292.1	9.9	0.5	9.9	9.03	9.03	-0.32
10,335.0	27.20	357.80	10,321.0	23.7	0.2	23.7	10.59	10.31	-5.63
10,367.0	30.10	357.90	10,349.0	39.1	-0.4	39.1	9.06	9.06	0.31
10,399.0	32.20	356.00	10,376.4	55.6	-1.3	55.6	7.24	6.56	-5.94
10,430.0	34.70	356.80	10,402.3	72.6	-2.4	72.6	8.19	8.06	2.58
10,462.0	37.80	356.00	10,428.1	91.5	-3.6	91.5	9.80	9.69	-2.50
CROSSED 33 HARD LINE @ 10476 MD / 10439 TVD									
10,475.8	38.96	357.25	10,438.9	100.1	-4.1	100.1	10.08	8.38	9.04
10,494.0	40.50	358.80	10,452.9	111.7	-4.5	111.7	10.08	8.48	8.53
10,525.0	43.20	359.60	10,476.0	132.4	-4.7	132.4	8.88	8.71	2.58
10,557.0	45.80	1.70	10,498.8	154.8	-4.5	154.8	9.34	8.13	6.56
10,589.0	48.20	0.90	10,520.6	178.2	-3.9	178.2	7.72	7.50	-2.50
10,620.0	52.50	0.70	10,540.4	202.1	-3.6	202.1	13.88	13.87	-0.65
10,652.0	56.20	359.30	10,559.1	228.1	-3.6	228.1	12.10	11.56	-4.38
10,684.0	59.90	358.00	10,576.0	255.2	-4.3	255.2	12.07	11.56	-4.06
10,715.0	64.00	358.40	10,590.6	282.5	-5.1	282.5	13.27	13.23	1.29
10,747.0	67.80	357.40	10,603.6	311.7	-6.2	311.7	12.21	11.88	-3.13
10,770.0	70.20	358.00	10,611.9	333.2	-7.1	333.2	10.72	10.43	2.61
10,860.0	75.50	357.90	10,638.4	419.1	-10.1	419.1	5.89	5.89	-0.11
10,891.0	78.30	356.50	10,645.4	449.2	-11.6	449.2	10.05	9.03	-4.52
10,923.0	80.20	355.40	10,651.4	480.6	-13.8	480.6	6.83	5.94	-3.44
10,955.0	82.40	356.00	10,656.2	512.1	-16.2	512.2	7.12	6.88	1.88
10,986.0	85.30	356.60	10,659.6	542.9	-18.2	542.9	9.55	9.35	1.94
11,018.0	89.30	357.60	10,661.1	574.8	-19.8	574.8	12.88	12.50	3.13
11,050.0	91.60	358.70	10,660.8	606.8	-20.8	606.8	7.97	7.19	3.44
11,144.0	90.20	359.00	10,659.3	700.8	-22.7	700.8	1.52	-1.49	0.32
11,239.0	87.70	0.40	10,661.1	795.7	-23.2	795.7	3.02	-2.63	1.47
11,302.0	89.00	2.30	10,662.9	858.7	-21.7	858.7	3.65	2.06	3.02

DDC
Survey Report



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Delaware Ranch 12 MD Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2967.0usft (Patterson #75)
Site:	Sec 12, T26S, R28E	MD Reference:	WELL @ 2967.0usft (Patterson #75)
Well:	Delaware Ranch 12 MD Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
11,366.0	89.80	1.70	10,663.6	922.6	-19.5	922.7	1.56	1.25	-0.94
11,429.0	91.60	1.10	10,662.8	985.6	-18.0	985.6	3.01	2.86	-0.95
11,493.0	90.10	359.80	10,661.9	1,049.6	-17.5	1,049.6	3.10	-2.34	-2.03
11,556.0	90.20	358.30	10,661.7	1,112.6	-18.5	1,112.6	2.39	0.16	-2.38
11,619.0	89.50	357.70	10,661.9	1,175.5	-20.7	1,175.6	1.46	-1.11	-0.95
11,682.0	89.40	0.70	10,662.5	1,238.5	-21.6	1,238.5	4.76	-0.16	4.76
11,745.0	90.20	3.10	10,662.7	1,301.5	-19.5	1,301.5	4.02	1.27	3.81
11,808.0	88.00	2.20	10,663.7	1,364.4	-16.6	1,364.4	3.77	-3.49	-1.43
11,871.0	88.60	2.20	10,665.5	1,427.3	-14.2	1,427.3	0.95	0.95	0.00
11,934.0	88.90	1.20	10,666.9	1,490.3	-12.3	1,490.3	1.66	0.48	-1.59
11,997.0	90.40	1.30	10,667.3	1,553.3	-10.9	1,553.3	2.39	2.38	0.16
12,061.0	90.80	359.20	10,666.6	1,617.3	-10.6	1,617.3	3.34	0.63	-3.28
12,124.0	89.90	359.90	10,666.2	1,680.3	-11.1	1,680.3	1.81	-1.43	1.11
12,187.0	89.20	359.80	10,666.7	1,743.3	-11.3	1,743.3	1.12	-1.11	-0.16
12,250.0	91.90	359.60	10,666.1	1,806.2	-11.6	1,806.3	4.30	4.29	-0.32
12,313.0	90.20	359.30	10,665.0	1,869.2	-12.2	1,869.2	2.74	-2.70	-0.48
12,376.0	90.60	359.50	10,664.5	1,932.2	-12.9	1,932.2	0.71	0.63	0.32
12,439.0	89.60	359.90	10,664.4	1,995.2	-13.2	1,995.2	1.71	-1.59	0.63
12,503.0	88.70	0.60	10,665.4	2,059.2	-13.0	2,059.2	1.78	-1.41	1.09
12,566.0	87.70	0.10	10,667.4	2,122.2	-12.6	2,122.2	1.77	-1.59	-0.79
12,629.0	87.50	0.00	10,670.0	2,185.1	-12.5	2,185.1	0.35	-0.32	-0.16
12,692.0	87.80	1.10	10,672.6	2,248.1	-11.9	2,248.1	1.81	0.48	1.75
12,756.0	89.10	0.40	10,674.3	2,312.0	-11.1	2,312.1	2.31	2.03	-1.09
12,819.0	89.70	0.60	10,675.0	2,375.0	-10.5	2,375.0	1.00	0.95	0.32
12,882.0	89.80	0.40	10,675.2	2,438.0	-10.0	2,438.0	0.35	0.16	-0.32
12,945.0	91.30	1.30	10,674.6	2,501.0	-9.0	2,501.0	2.78	2.38	1.43
13,008.0	91.50	2.10	10,673.1	2,564.0	-7.2	2,564.0	1.31	0.32	1.27
13,071.0	91.20	2.00	10,671.6	2,626.9	-4.9	2,626.9	0.50	-0.48	-0.16
13,134.0	90.80	1.10	10,670.5	2,689.9	-3.2	2,689.9	1.56	-0.63	-1.43
13,197.0	91.40	1.50	10,669.3	2,752.9	-1.8	2,752.9	1.14	0.95	0.63
13,260.0	90.90	1.80	10,668.0	2,815.8	0.0	2,815.8	0.93	-0.79	0.48
13,324.0	90.10	1.00	10,667.5	2,879.8	1.6	2,879.8	1.77	-1.25	-1.25
13,387.0	89.80	1.90	10,667.5	2,942.8	3.2	2,942.8	1.51	-0.48	1.43
13,450.0	90.30	3.50	10,667.5	3,005.7	6.2	3,005.7	2.66	0.79	2.54
13,513.0	91.40	5.80	10,666.5	3,068.5	11.3	3,068.5	4.05	1.75	3.65
13,576.0	91.30	6.00	10,665.1	3,131.1	17.7	3,131.1	0.35	-0.16	0.32
13,640.0	89.80	6.40	10,664.4	3,194.7	24.6	3,194.7	2.43	-2.34	0.63
13,703.0	88.20	5.40	10,665.5	3,257.4	31.1	3,257.4	2.99	-2.54	-1.59
13,767.0	89.50	7.10	10,666.8	3,321.0	38.1	3,321.0	3.34	2.03	2.66
13,830.0	87.60	6.50	10,668.4	3,383.5	45.5	3,383.5	3.16	-3.02	-0.95
13,893.0	87.30	7.10	10,671.2	3,446.0	53.0	3,446.0	1.06	-0.48	0.95
13,956.0	86.30	6.20	10,674.7	3,508.5	60.3	3,508.4	2.13	-1.59	-1.43
13,988.0	85.90	5.10	10,676.9	3,540.3	63.4	3,540.2	3.65	-1.25	-3.44

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Delaware Ranch 12 MD Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 2967.0usft (Patterson #75)
Site:	Sec 12, T26S, R28E	MD Reference:	WELL @ 2967.0usft (Patterson #75)
Well:	Delaware Ranch 12 MD Fed Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
14,020.0	85.60	4.80	10,679.3	3,572.1	66.2	3,572.0	1.32	-0.94	-0.94	
14,051.0	85.50	4.60	10,681.7	3,602.9	68.7	3,602.8	0.72	-0.32	-0.65	
14,083.0	85.20	4.10	10,684.3	3,634.7	71.1	3,634.6	1.82	-0.94	-1.56	
14,114.0	86.60	3.10	10,686.5	3,665.5	73.1	3,665.5	5.55	4.52	-3.23	
14,146.0	89.50	3.10	10,687.6	3,697.5	74.8	3,697.4	9.06	9.06	0.00	
14,178.0	91.20	3.80	10,687.4	3,729.4	76.7	3,729.3	5.75	5.31	2.19	
14,241.0	91.60	2.60	10,685.9	3,792.3	80.2	3,792.2	2.01	0.63	-1.90	
14,273.0	91.30	2.60	10,685.1	3,824.2	81.7	3,824.2	0.94	-0.94	0.00	
14,336.0	90.00	0.60	10,684.3	3,887.2	83.5	3,887.1	3.79	-2.06	-3.17	
14,399.0	89.10	0.10	10,684.8	3,950.2	83.8	3,950.1	1.63	-1.43	-0.79	
14,462.0	89.40	1.10	10,685.7	4,013.2	84.5	4,013.1	1.66	0.48	1.59	
14,525.0	91.10	2.60	10,685.4	4,076.2	86.5	4,076.1	3.60	2.70	2.38	
14,589.0	91.10	1.80	10,684.2	4,140.1	89.0	4,140.0	1.25	0.00	-1.25	
14,652.0	88.90	0.70	10,684.2	4,203.1	90.4	4,203.0	3.90	-3.49	-1.75	
14,715.0	88.90	358.90	10,685.4	4,266.1	90.1	4,266.0	2.86	0.00	-2.86	
14,778.0	89.80	0.30	10,686.1	4,329.1	89.7	4,329.0	2.64	1.43	2.22	
14,841.0	89.20	1.90	10,686.6	4,392.0	90.9	4,391.9	2.71	-0.95	2.54	
14,905.0	90.00	1.60	10,687.1	4,456.0	92.9	4,455.9	1.33	1.25	-0.47	
14,968.0	90.80	2.50	10,686.6	4,519.0	95.1	4,518.9	1.91	1.27	1.43	
15,031.0	90.30	2.60	10,686.0	4,581.9	97.9	4,581.8	0.81	-0.79	0.16	
15,095.0	89.60	1.80	10,686.1	4,645.9	100.4	4,645.7	1.66	-1.09	-1.25	
15,109.0	89.60	2.50	10,686.2	4,659.8	100.9	4,659.7	5.00	0.00	5.00	
TD @ 15160' MD / 10687' TVD										
15,160.0	89.50	2.50	10,686.6	4,710.8	103.1	4,710.7	0.20	-0.20	0.00	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,900.0	9,897.8	-51.5	5.9	TIE IN @ 9900' MD / 9898' TVD
10,475.8	10,438.9	100.1	-4.1	CROSSED 33' HARD LINE @ 10476' MD / 10439' TVD
15,160.0	10,686.6	4,710.8	103.1	TD @ 15160' MD / 10687' TVD

Checked By: _____ Approved By: _____ Date: _____

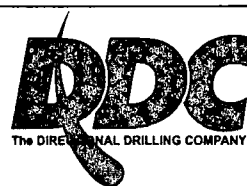
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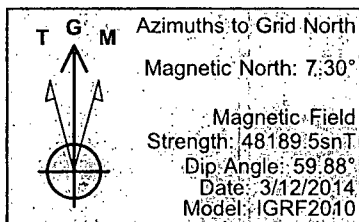
NMOCD ARTESIA

Company Name: Mewbourne Oil Co
Delaware Ranch 12 MD Fed Com #1H
Eddy County, New Mexico
Rig: Patterson #75
Created By: James Dawson
Date: 4/14/2014

Delaware Ranch 12 MD Fed Com #1H
Eddy County, New Mexico
Q140279 & WT-140228
Design #2



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: Delaware Ranch 12 MD Fed Com #1H

Ground Level: 2947.0
+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 362174.82 58852.86 32° 3' 1.395 N 104° 2' 47.582 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Delaware Ranch 12 MD Fed Com #1H	10692.0	4720.4	-44.7	38885.02	58887.96	32° 3' 48.116 N	104° 2' 47.958 W
- plan misses target center by 40.88ft at 15163.38ft MD (10692.0 TVD, 4720.4 N, -4.7 E)							
PBHL Delaware Ranch 12 MD Fed Com #1H DM2	10692.0	4720.5	-4.7	38885.12	58884.786	32° 3' 48.116 N	104° 2' 47.491 W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsct	Departure	Annotation
8900.0	1.15	218.83	8907.8	-51.5	5.9	-51.5	178.4	TIE IN @ 9900' MD / 9898' TVD
10475.8	38.96	371.25	10438.9	100.1	-4.1	100.1	333.8	CROSSED 330° HARD LINE @ 10476' MD / 10439' TVD
15160.0	89.50	2.50	10686.6	4710.8	103.1	4710.7	4949.7	TD @ 15160' MD / 10687' TVD

