

30-015-42081

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
From:	Map	Easting:	588,852.66 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 1.399 N
		Longitude:	104° 2' 47.582 W
		Grid Convergence:	0.15 °

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

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

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

Survey Program	Date: 4/14/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
100.0	9,900.0	Gyro (Wellbore #1)	Good_gyro
9,955.0	15,160.0	MWD (Wellbore #1)	MWD default
			Description
			Good Gyro
			MWD - Standard

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)	
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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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

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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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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Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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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 / 9898' 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:	Newbourne 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

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

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
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: _____

Operating Company Mewbourne Oil Co.
Well Name & Number Ware Ranch 12 MD Fed Com
Sales Ticket Number 6297306-1

Company Rep Gary Sutton
Field 0
BOT Service Rep Zach Blenkinsopp



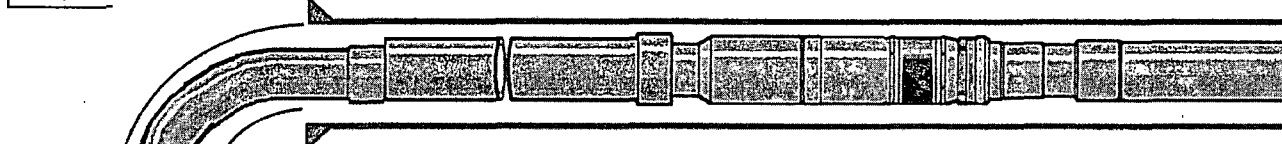
Date 4/17/2014

District Location Odessa, TX

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	10686.00		KOP		10079.00		Open Hole	6.125	Casing Vol. (bbl)	

Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat	Shear Press	Max Rate	Displ (BBL)
Liner Top 10	10292414	JR SLV W/ 4.750" ALT SEAL BORE ID	10598.07	4.00	5.750	3.913				



Zone Length	H409400010	S3/CASING HANGING PACKER	10602.07	4.63	5.875	3.875		1760		
	H299900281	4.5 LT&C x 4.5 LT&C CLR	10606.70	0.59	5.000	4.000				
	H299710014	4.5 LT&C 13.5# NIPPLE	10607.29	7.49	4.500	4.000				
		(7) 4.5 LT&C 13.5# P110 CSG/JNTS	10614.78	316.65	4.500	3.875				
	4505763576	3.500" EXPress Sleeve (Zone 30)	110931.43	2.40	5.630	3.845	3.448	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	10933.83	90.31	4.500	3.875				
	H409360008	582 OH PACKER	11024.14	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11028.03	45.35	4.500	3.875				
	4506856624	3.438" EXPress Sleeve (Zone 29)	11073.38	2.40	5.630	3.845	3.385	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11075.78	90.65	4.500	3.875				
	H409360008	582 OH PACKER	11166.43	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11170.32	45.33	4.500	3.875				
	4506856624	3.375" EXPress Sleeve (Zone 28)	11215.65	2.40	5.630	3.845	3.323	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11218.05	90.68	4.500	3.875				
	H409360008	582 OH PACKER	11308.73	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	11312.62	45.68	4.500	3.875				
	4506856624	3.313" EXPress Sleeve (Zone 27)	11358.30	2.40	5.630	3.845	3.260	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11360.70	90.41	4.500	3.875				
	H409360008	582 OH PACKER	11451.11	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11455.00	45.32	4.500	3.875				
	104695309	3.25" EXPress Sleeve (Zone 26)	11500.32	2.40	5.630	3.845	3.198	2286		

Operating Company Mewbourne Oil Co.
Well Name & Number Ware Ranch 12 MD Fed Com
Sales Ticket Number 6297306-1

Company Rep Gary Sutton
Field 0
BOT Service Rep Zach Blenkinsopp



Date 4/17/2014

District Location Odessa, TX

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	10686.00		KOP		10079.00		Open Hole		6.125	Casing Vol. (bbl)

Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seal	Shear Press.	Max Rate	Displ (BBL)
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11502.72	90.64	4.500	3.875				
	H409360008	582 OH PACKER	11593.36	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	11597.25	45.32	4.500	3.875				
	450763754	3.125" EXPress Sleeve (Zone 25)	11642.57	2.40	5.630	3.845	3.135	2286		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	11644.97	90.63	4.500	3.875				
	H409360008	582 OH PACKER	11735.60	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11739.49	45.30	4.500	3.875				
	456763754	3.125" EXPress Sleeve (Zone 24)	11784.79	2.40	5.630	3.845	3.073	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11787.19	90.65	4.500	3.875				
	H409360008	582 OH PACKER	11877.84	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	11881.73	45.32	4.500	3.875				
	4505763754	3.063" EXPress Sleeve (Zone 23)	11927.05	2.40	5.630	3.845	3.010	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	11929.45	90.63	4.500	3.875				
	H409360008	582 OH PACKER	12020.08	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	12023.97	45.34	4.500	3.875				
	4505953988	3.000" EXPress Sleeve (Zone 22)	12069.31	2.40	5.630	3.845	2.948	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12071.71	90.33	4.500	3.875				
	H409360008	582 OH PACKER	12162.04	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12165.93	45.36	4.500	3.875				
	450688322	2.938" EXPress Sleeve (Zone 21)	12211.29	2.40	5.630	3.845	2.885	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12213.69	90.62	4.500	3.875				
	H409360008	582 OH PACKER	12304.31	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	12308.20	45.32	4.500	3.875				
	4506883432	2.875" EXPress Sleeve (Zone 20)	12353.52	2.40	5.630	3.845	2.823	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12355.92	90.40	4.500	3.875				

Operating Company Mewbourne Oil Co.
Well Name & Number Ware Ranch 12 MD Fed Com
Sales Ticket Number 6297306-1

Company Rep Gary Sutton
Field 0
BOT Service Rep Zach Blenkinsopp



Date 4/17/2014

District Location Odessa, TX

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	10686.00		KOP		10079.00		Open Hole		6.125	Casing Vol. (bbl)

Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat	Shear Press	Max Rate	Displ (BBL)
	H409360008	582 OH PACKER	12446.32	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12450.21	90.37	4.500	3.875				
	104645218	2.813" EXPress Sleeve (Zone 19)	12540.58	2.40	5.630	3.845	2160	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12542.98	90.62	4.500	3.875				
	H409360008	582 OH PACKER	12633.60	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	12637.49	45.05	4.500	3.875				
	4506856624	2.75" EXPress Sleeve (Zone 18)	12682.54	2.40	5.630	3.845	2168	2286		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	12684.94	90.39	4.500	3.875				
	H409360008	582 OH PACKER	12775.33	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12779.22	45.33	4.500	3.875				
	4506856624	2.688" EXPress Sleeve (Zone 17)	12824.55	2.40	5.630	3.845	2165	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12826.95	90.63	4.500	3.875				
	H409360008	582 OH PACKER	12917.58	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12921.47	44.96	4.500	3.875				
	4506883932	2.625" EXPress Sleeve (Zone 16)	12966.43	2.40	5.630	3.845	21525	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	12968.83	89.43	4.500	3.875				
	H409360008	582 OH PACKER	13058.26	3.89	5.820	3.875		2154		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	13062.15	45.30	4.500	3.875				
	4506883932	2.563" EXPress Sleeve (Zone 15)	13107.45	2.40	5.630	3.845	21510	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13109.85	88.07	4.500	3.875				
	H409360008	582 OH PACKER	13197.92	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13201.81	40.71	4.500	3.875				
	4506883932	2.500" EXPress Sleeve (Zone 14)	13242.52	2.40	5.630	3.845	21400	2286		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	13244.92	90.33	4.500	3.875				
	H409360008	582 OH PACKER	13335.25	3.89	5.820	3.875		2154		

Operating Company Mewbourne Oil Co.
 Well Name & Number ware Ranch 12 MD Fed Com
 Sales Ticket Number 6297306-1
 Date 4/17/2014

Company Rep Gary Sutton
 Field 0
 BOT Service Rep Zach Blenkinsopp
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD		10686.00		KOP		10079.00		Open Hole	6.125	Casing Vol. (bbl)

Carry Fluid Weight (ppg)	8.4	Propan Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seal	Shear Press.	Max Rate	Displ (BBL)
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13339.14	45.03	4.500	3.875				
	4506883932	2.438" EXPress Sleeve (Zone 13)	13384.17	2.40	5.630	3.845	2.385	2286		
		(3) 4.5 LT&C 13.5# P110 JNTS/CSG	13386.57	89.93	4.500	3.875				
	H409360008	582 OH PACKER	13476.50	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13480.39	44.99	4.500	3.875				
	4506883932	2.375" EXPress Sleeve (Zone 12)	13525.38	2.40	5.630	3.845	2.275	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13527.78	90.33	4.500	3.875				
	H409360008	582 OH PACKER	13618.17	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13622.00	45.31	4.500	3.875				
	4506856624	2.313" EXPress Sleeve (Zone 11)	13667.31	2.40	5.630	3.845	2.260	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13669.71	90.34	4.500	3.875				
	H409360008	582 OH PACKER	13760.05	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13763.94	45.12	4.500	3.875				
	104686343	2.250" EXPress Sleeve (Zone 10)	13809.06	2.40	5.630	3.845	2.197	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13811.46	90.43	4.500	3.875				
	H409360008	582 OH PACKER	13901.89	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13905.78	45.31	4.500	3.875				
	10468343	2.188" EXPress Sleeve (Zone 9)	13951.09	2.40	5.630	3.845	2.135	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	13953.49	90.63	4.500	3.875				
	H409360008	582 OH PACKER	14044.12	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14048.01	45.32	4.500	3.875				
	4500883932	2.125" EXPress Sleeve (Zone 8)	14093.33	2.40	5.630	3.845	2.072	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14095.73	87.40	4.500	3.875				
	H409360008	582 OH PACKER	14183.13	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14187.02	45.06	4.500	3.875				

Operating Company Mewbourne Oil Co.
 Well Name & Number ware Ranch 12 MD Fed Com
 Sales Ticket Number 6297306-1

Company Rep Gary Sutton
 Field 0
 BOT Service Rep Zach Blenkinsopp



Date 4/17/2014

District Location Odessa, TX

	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	10686.00		KOP		10079.00		Open Hole	6.125	Casing Vol. (bbl)	

Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat	Shear Press	Max Rate	Displ (BBL)
	450594557	2.063" EXPress Sleeve (Zone 7)	14232.08	2.40	5.630	3.845	2.010	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14234.48	89.48	4.500	3.875				
	H409360008	582 OH PACKER	14323.96	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14327.85	42.71	4.500	3.875				
	4508149005	2.000" EXPress Sleeve (Zone 6)	14370.56	2.40	5.630	3.845	1.947	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14372.96	90.61	4.500	3.875				
	H409360008	582 OH PACKER	14463.57	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14467.46	45.31	4.500	3.875				
	45059545005	1.938" EXPress Sleeve (Zone 5)	14512.77	2.40	5.630	3.845	1.885	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14515.17	90.62	4.500	3.875				
	H409360008	582 OH PACKER	14605.79	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14609.68	45.30	4.500	3.875				
	4505954005	1.875" EXPress Sleeve (Zone 4)	14654.98	2.40	5.630	3.845	1.822	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14657.38	90.33	4.500	3.875				
	H409360008	582 OH PACKER	14747.71	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14751.60	45.32	4.500	3.875				
	104383299	1.813" EXPress Sleeve (Zone 3)	14796.92	2.40	5.630	3.845	1.760	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14799.32	90.21	4.500	3.875				
	H409360008	582 OH PACKER	14889.53	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14893.42	45.33	4.500	3.875				
	104409173	1.750" EXPress Sleeve (Zone 2)	14938.75	2.40	5.630	3.845	1.697	2286		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	14941.15	90.65	4.500	3.875				
	H409360008	582 OH PACKER	15031.80	3.89	5.820	3.875		2154		
		(2) 4.5 LT&C 13.5# P110 JNTS/CSG	15035.69	45.32	4.500	3.875				
	H299900281	4-1/2" LT&C COLLAR	15081.01	0.58	5.000	4.500				

Company Rep	Gary Sutton
Field	0
BOT Service Rep	Zach Blenkinsopp
District Location	Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	7,990.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,367.20	12,410	10,690
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD		10686.00	KOP		10079.00	Open Hole		6.125	Casing Vol. (bbl)	

Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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[illegible]



Alpha Sleeve Performance Calculator

Date of Analysis: 21-Mar-14
Engineer: Daniel Bruton
Customer: Mewbourne
Well Name: Delaware Ranch 12 MD Fed Com 1H
Field:
End Connections: 4.5" 13.5# P110 LTC

100
Well Parameters
Static BH: 10,000 ft
Total Vertical Depth (TVD) @ Alpha Sleeve: 10,000 ft
RH Completion Fluid Wt: 8.33 ppg
Cement Wt: 14.0 ppg
Displacement Completion Fluid Wt: 10.0 ppg
* Note: this is used to determine the opening pressure

Operational Pressures
Circulation Max Pressure: 2,000 psi
Max. Cementation Pumping Pressure: 5,000 psi
Max. Displacement Pressure: 5,000 psi
Additional Plug Bump Pressure: 0 psi

Test and Shift Pressures
Approximate Casing Test Pressure: 7,000 psi
Min. Desired Shift Pressure: 7,000 psi
Max. Topside Pressure: 6,000 psi
* * * Note: - used for casing pressure test

Notes:
Uncemented installation.
In-Tube Ball Seat option selected.
Reduced target pressures to 7000 psi.

BAKER
HUGHES
Rev. 1 (11/13)

Option 1	23	Lower Pressure	Option 2	24	Closest Selection	Option 3	25	Highest Pressure
Min Surface Pressure	6,283 psi		6,829 psi		7,324 psi			
Nominal Surface Pressure	6,776 psi		7,345 psi		7,861 psi			
Maximum Surface Pressure	7,270 psi		7,861 psi		8,399 psi			
Min Absolute Pressure	11,843 psi		12,369 psi		12,894 psi			
Nominal Absolute Pressure	12,336 psi		12,905 psi		13,421 psi			
Maximum Absolute Pressure	12,830 psi		13,421 psi		13,953 psi			
RH Circulation Buffer	1,615 psi		1,615 psi		1,615 psi			
Cementation Buffer	#VALUE!		#VALUE!		#VALUE!			
Displacement Buffer	1,283 psi		1,283 psi		1,283 psi			
Testing Percentage of Nominal	89%		89%		89%			
Approx. Casing Test Pressure should be under 90%								
Max. Req. Pressure Percentage of Max. Allowable Topside Pressure	89%		89%		89%			
Max. Casing Test Pressure	6,059 psi		6,621 psi		7,075 psi			
Activator Part Number	10412248		10412249		10412250			

Company Representative: X

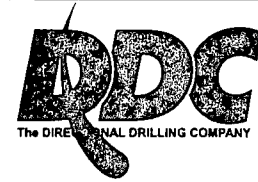
Baker Hughes Representative: X

Date: _____

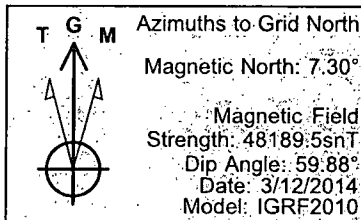
Date: _____

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

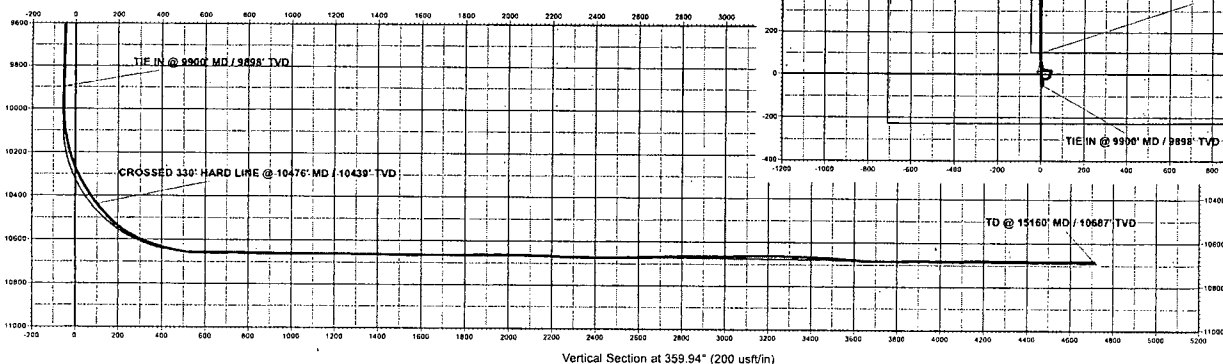


PROJECT DETAILS:		Eddy County, New Mexico
Geodetic System:	US State Plane 1927 (Exact solution)	
Datum:	NAD 1927 (NADCON CONUS)	
Ellipsoid:	Clarke 1866	
Zone:	New Mexico East 3001	
System Datum:	Mean Sea Level	

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	352174.82 588552.08 32° 3' 1.399 N 104° 2' 47.582 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude
PBHL Delaware Ranch 12 MD Fed Com #1H	10692.0	4720.4	-44.7	356995.02	588607.86	32° 3' 48.116 N	104° 2' 47.958 W
- plan misses target center by 40.0usr at 15160' MD (10692.0 TVD, 4720.4 N, -4.7 E)							
PBHL Delaware Ranch 12 MD Fed Com #1H D#2	10692.0	4720.5	-4.7	356995.12	588647.86	32° 3' 48.116 N	104° 2' 47.491 W
- plan hits target center							

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation	
9900.0	1.15	218.83	9997.8	-51.5	8.9	-51.5	178.4	TIE IN @ 9900' MD / 9898' TVD	
10475.8	38.96	357.25	10438.9	100.1	-4.1	100.1	333.9	CROSSED 330° HARD LINE @ 10478' MD / 10439' TVD	
15160.0	89.50	2.50	10686.6	4710.8	103.1	4710.7	4949.7	TD @ 15160' MD / 10687' TVD	



Vertical Section at 359.94° (200 usf/in)

