

OPERATOR
WELL/LEASE
COUNTY

MEWBOURNE OIL COMPANY
Two Lakes 12 AD State Com 1H
EDDY

046-0097

STATE OF NEW MEXICO
DEVIATION REPORT

30 015 41006

400	0.32
792	0.62
1,096	0.87
1,415	0.69
1,797	1.33
2,179	1.75
2,561	2.47
2,949	1.81
3,332	1.78
3,712	1.51
4,093	1.69
4,475	1.69
4,857	1.61
5,271	2.26
5,654	1.21

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 15 2014

RECEIVED

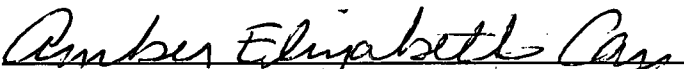
BY: 

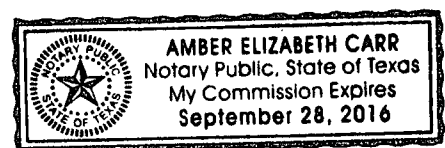
STATE OF TEXAS

COUNTY OF MIDLAND

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

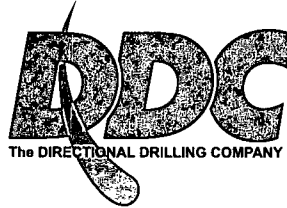
7/16/14, by


Notary Public for Midland County, Texas
My Commission Expires:



Company Name: Mewbourne Oil Co
Two Lakes 12 AD State Com #1H
Eddy County, New Mexico
Rig: Patterson #48
Created By: Sam Hays
Date: 6/25/2014

Mewbourne Oil Company



Two Lakes 12 AD State Com #1H
Eddy County, New Mexico
Q140395 & WT-140550
Design #3

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: Two Lakes 12 AD State Com #1H

Ground Level: 3592.0
+N-S +E-W Northing Easting Latitude Longitude
0.0 0.0 706572.87 665105.02 32° 56' 32.147 N 104° 7' 18.014 W



Azimuths to Grid North

Magnetic North: 7.41°

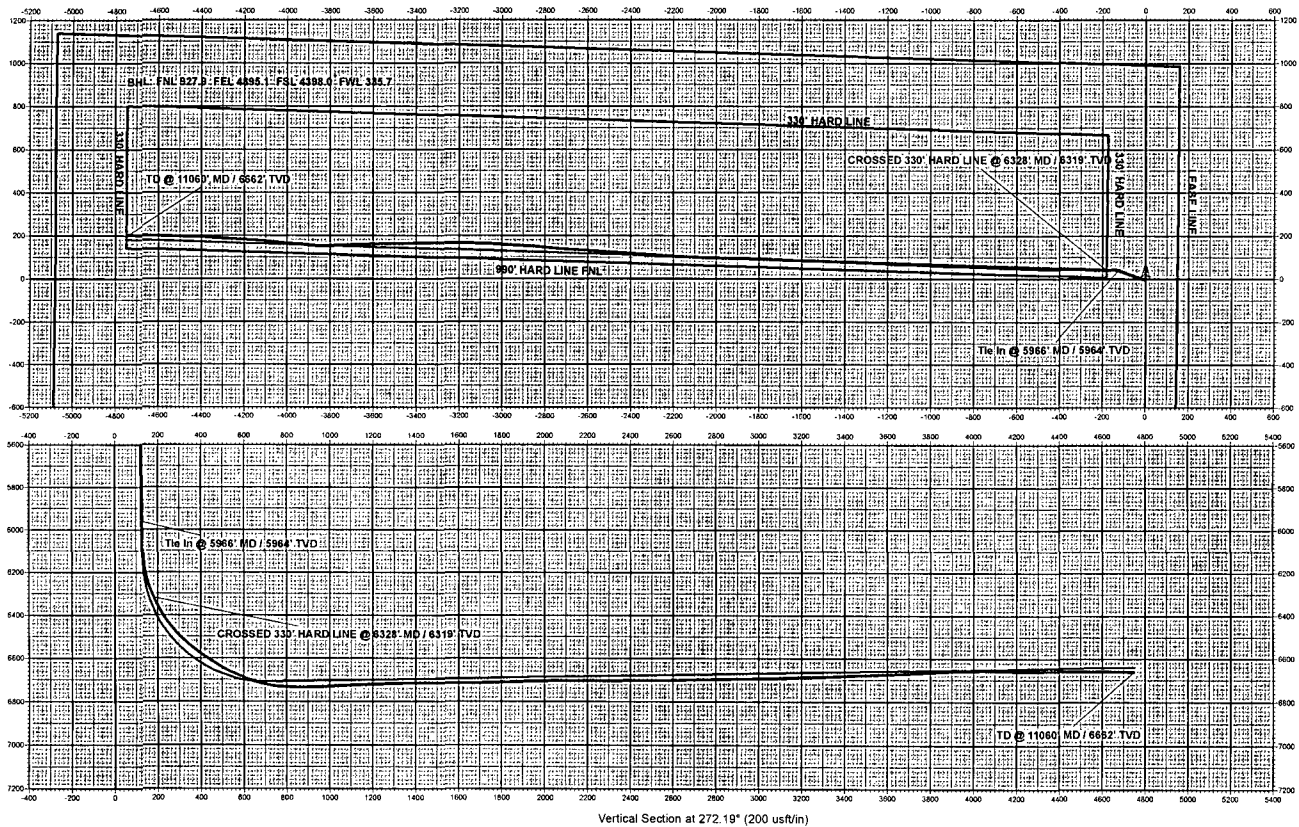
Magnetic Field
Strength: 48687.5snT
Dip Angle: 60.68°
Date: 6/9/2014
Model: IGRF2010

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
PBHL Two Lakes 12 AD State Com #1H DW2	6640.0	+181.5	-4749.5	706754.37	560355.52	32° 56' 34.034 N	104° 8' 11.743 W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation
5966.0	0.79	292.25	5964.1	39.6	-126.9	127.4	136.3	Tie In @ 5966' MD / 5964' TVD
6328.4	24.26	266.41	6316.8	39.3	-179.3	180.7	190.3	CROSSED 330' HARD LINE @ 6328' MD / 6319' TVD
11060.0	88.30	271.40	6661.9	202.1	-4743.6	4747.9	4759.7	TD @ 11060' MD / 6662' TVD



Mewbourne Oil Co

Eddy County, New Mexico

Sec 12, T16S, R28E

Two Lakes 12 AD State Com #1H

Wellbore #1

Design: Wellbore #1

DDC Survey Report

25 June, 2014



DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Two Lakes 12 AD State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3612.0usft (Patterson #46)
Site:	Sec 12, T16S, R28E	MD Reference:	WELL @ 3612.0usft (Patterson #46)
Well:	Two Lakes 12 AD State 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, T16S, R28E		
Site Position:		Northing:	706,572.87 usft
From:	Map	Easting:	565,105.02 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 56' 32.147 N
		Longitude:	104° 7' 16.014 W
		Grid Convergence:	0.12 °

Well	Two Lakes 12 AD State Com #1H		
Well Position	+N/-S	0.0 usft	Northing: 706,572.87 usft
	+E/-W	0.0 usft	Easting: 565,105.02 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 56' 32.147 N
		Longitude:	104° 7' 16.014 W
		Ground Level:	3,592.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	6/9/2014	7.53
			Dip Angle
			(°)
			60.68
			Field Strength
			(nT)
			48,687

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
			(°)
			272.19

Survey Program	Date	6/25/2014		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	5,966.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
6,011.0	11,060.0	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	0.32	210.87	100.0	-0.2	-0.1	0.1	0.32	0.32	0.00
200.0	0.35	209.51	200.0	-0.7	-0.4	0.4	0.03	0.03	-1.36
300.0	0.40	209.47	300.0	-1.3	-0.8	0.7	0.05	0.05	-0.04
400.0	0.43	202.30	400.0	-2.0	-1.1	1.0	0.06	0.03	-7.17
500.0	0.35	195.09	500.0	-2.6	-1.3	1.2	0.09	-0.08	-7.21
600.0	0.40	199.11	600.0	-3.2	-1.5	1.4	0.06	0.05	4.02
700.0	0.29	220.98	700.0	-3.8	-1.8	1.6	0.17	-0.11	21.87
800.0	0.30	276.47	800.0	-3.9	-2.2	2.0	0.27	0.01	55.49
900.0	0.37	267.66	900.0	-3.9	-2.8	2.6	0.09	0.07	-8.81

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Two Lakes 12 AD State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3612.0usft (Patterson #46)
Site:	Sec 12, T16S, R28E	MD Reference:	WELL @ 3612.0usft (Patterson #46)
Well:	Two Lakes 12 AD State 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	0.46	274.57	1,000.0	-3.9	-3.5	3.4	0.10	0.09	6.91
1,100.0	0.50	276.72	1,100.0	-3.8	-4.3	4.2	0.04	0.04	2.15
1,200.0	0.57	269.64	1,200.0	-3.7	-5.3	5.1	0.10	0.07	-7.08
1,300.0	0.67	285.61	1,300.0	-3.6	-6.3	6.2	0.20	0.10	15.97
1,400.0	0.78	290.15	1,400.0	-3.2	-7.5	7.4	0.12	0.11	4.54
1,500.0	0.81	287.35	1,499.9	-2.8	-8.8	8.7	0.05	0.03	-2.80
1,600.0	0.98	290.20	1,599.9	-2.3	-10.3	10.2	0.18	0.17	2.85
1,700.0	1.08	286.98	1,699.9	-1.7	-12.0	11.9	0.12	0.10	-3.22
1,800.0	1.20	290.07	1,799.9	-1.0	-13.9	13.9	0.13	0.12	3.09
1,900.0	1.35	292.26	1,899.9	-0.2	-16.0	16.0	0.16	0.15	2.19
2,000.0	1.39	289.04	1,999.8	0.6	-18.2	18.2	0.09	0.04	-3.22
2,100.0	1.54	289.67	2,099.8	1.4	-20.6	20.7	0.15	0.15	0.63
2,200.0	1.62	288.65	2,199.8	2.4	-23.2	23.3	0.08	0.08	-1.02
2,300.0	1.73	288.45	2,299.7	3.3	-26.0	26.1	0.11	0.11	-0.20
2,400.0	1.86	287.71	2,399.7	4.3	-29.0	29.1	0.13	0.13	-0.74
2,500.0	1.91	287.49	2,499.6	5.2	-32.1	32.3	0.05	0.05	-0.22
2,600.0	1.89	289.66	2,599.6	6.3	-35.3	35.5	0.07	-0.02	2.17
2,700.0	1.98	289.01	2,699.5	7.4	-38.4	38.7	0.09	0.09	-0.65
2,800.0	2.09	289.56	2,799.5	8.6	-41.8	42.1	0.11	0.11	0.55
2,900.0	1.94	295.80	2,899.4	9.9	-45.0	45.4	0.27	-0.15	6.24
3,000.0	1.76	292.00	2,999.3	11.3	-48.0	48.4	0.22	-0.18	-3.80
3,100.0	1.79	291.90	3,099.3	12.4	-50.9	51.3	0.03	0.03	-0.10
3,200.0	1.83	295.88	3,199.2	13.7	-53.7	54.2	0.13	0.04	3.98
3,300.0	1.82	295.43	3,299.2	15.1	-56.6	57.2	0.02	-0.01	-0.45
3,400.0	1.53	285.90	3,399.2	16.1	-59.3	59.9	0.40	-0.29	-9.53
3,500.0	1.72	283.76	3,499.1	16.8	-62.1	62.7	0.20	0.19	-2.14
3,600.0	1.85	284.59	3,599.1	17.6	-65.1	65.7	0.13	0.13	0.83
3,700.0	1.75	283.00	3,699.0	18.4	-68.1	68.8	0.11	-0.10	-1.59
3,800.0	1.82	290.19	3,799.0	19.2	-71.1	71.8	0.23	0.07	7.19
3,900.0	1.68	287.60	3,898.9	20.2	-74.0	74.7	0.16	-0.14	-2.59
4,000.0	1.61	289.39	3,998.9	21.1	-76.7	77.5	0.09	-0.07	1.79
4,100.0	1.67	287.71	4,098.8	22.1	-79.4	80.2	0.08	0.06	-1.68
4,200.0	1.66	296.26	4,198.8	23.1	-82.1	83.0	0.25	-0.01	8.55
4,300.0	1.61	290.14	4,298.8	24.3	-84.8	85.6	0.18	-0.05	-6.12
4,400.0	1.42	293.71	4,398.7	25.2	-87.2	88.1	0.21	-0.19	3.57
4,500.0	1.59	288.05	4,498.7	26.2	-89.7	90.6	0.23	0.17	-5.66
4,600.0	1.45	295.97	4,598.6	27.2	-92.1	93.1	0.25	-0.14	7.92
4,700.0	1.64	289.30	4,698.6	28.2	-94.6	95.6	0.26	0.19	-6.67
4,800.0	1.69	287.48	4,798.6	29.1	-97.4	98.4	0.07	0.05	-1.82
4,900.0	1.93	287.25	4,898.5	30.0	-100.4	101.5	0.24	0.24	-0.23
5,000.0	1.94	287.44	4,998.5	31.1	-103.6	104.7	0.01	0.01	0.19
5,100.0	1.99	286.54	5,098.4	32.1	-106.9	108.0	0.06	0.05	-0.90
5,200.0	1.99	287.96	5,198.3	33.1	-110.2	111.4	0.05	0.00	1.42

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Two Lakes 12 AD State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3612.0usft (Patterson #46)
Site:	Sec 12, T16S, R28E	MD Reference:	WELL @ 3612.0usft (Patterson #46)
Well:	Two Lakes 12 AD State 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	1.96	294.58	5,298.3	34.3	-113.4	114.6	0.23	-0.03	6.62	
5,400.0	1.60	294.86	5,398.2	35.6	-116.2	117.5	0.36	-0.36	0.28	
5,500.0	1.20	293.35	5,498.2	36.6	-118.5	119.8	0.40	-0.40	-1.51	
5,600.0	0.95	290.36	5,598.2	37.3	-120.2	121.5	0.26	-0.25	-2.99	
5,700.0	0.93	289.09	5,698.2	37.9	-121.7	123.1	0.03	-0.02	-1.27	
5,800.0	1.10	294.43	5,798.2	38.5	-123.4	124.8	0.19	0.17	5.34	
5,900.0	0.96	289.76	5,898.1	39.2	-125.0	126.4	0.16	-0.14	-4.67	
Tie In @ 5966' MD / 5964' TVD										
5,966.0	0.79	292.25	5,964.1	39.6	-126.0	127.4	0.26	-0.26	3.77	
6,011.0	0.50	292.90	6,009.1	39.8	-126.4	127.9	0.64	-0.64	1.44	
6,042.0	0.90	309.00	6,040.1	40.0	-126.8	128.2	1.43	1.29	51.94	
6,074.0	0.50	295.00	6,072.1	40.2	-127.1	128.5	1.35	-1.25	-43.75	
6,106.0	2.50	278.50	6,104.1	40.4	-127.9	129.3	6.33	6.25	-51.56	
6,138.0	5.10	270.70	6,136.0	40.5	-130.0	131.5	8.27	8.13	-24.38	
6,169.0	8.10	279.20	6,166.8	40.9	-133.5	135.0	10.15	9.68	27.42	
6,201.0	11.60	281.60	6,198.4	41.9	-138.9	140.4	11.01	10.94	7.50	
6,233.0	15.30	274.30	6,229.5	42.8	-146.3	147.8	12.70	11.56	-22.81	
6,265.0	19.20	260.90	6,260.0	42.3	-155.7	157.2	17.33	12.19	-41.88	
6,297.0	22.50	261.60	6,289.9	40.6	-167.0	168.4	10.34	10.31	2.19	
CROSSED 330' HARD LINE @ 6328' MD / 6319' TVD										
6,328.4	24.26	266.41	6,318.8	39.3	-179.3	180.7	8.28	5.62	15.33	
6,329.0	24.30	266.50	6,319.3	39.3	-179.6	181.0	8.28	5.85	14.25	
6,361.0	26.60	271.10	6,348.2	39.0	-193.3	194.7	9.47	7.19	14.38	
6,392.0	29.90	272.10	6,375.5	39.4	-208.0	209.3	10.75	10.65	3.23	
6,424.0	33.30	272.10	6,402.8	40.1	-224.7	226.1	10.63	10.63	0.00	
6,456.0	36.80	272.80	6,429.0	40.8	-243.1	244.5	11.01	10.94	2.19	
6,488.0	38.40	272.80	6,454.3	41.8	-262.6	264.0	5.00	5.00	0.00	
6,520.0	41.90	271.10	6,478.8	42.5	-283.2	284.6	11.46	10.94	-5.31	
6,552.0	44.50	270.00	6,502.1	42.7	-305.1	306.5	8.46	8.13	-3.44	
6,584.0	47.50	270.40	6,524.3	42.8	-328.1	329.5	9.42	9.38	1.25	
6,615.0	50.20	270.70	6,544.7	43.0	-351.5	352.9	8.74	8.71	0.97	
6,647.0	52.80	270.70	6,564.6	43.3	-376.5	377.9	8.13	8.13	0.00	
6,679.0	55.40	271.10	6,583.4	43.7	-402.4	403.8	8.19	8.13	1.25	
6,711.0	57.00	270.70	6,601.2	44.1	-429.0	430.4	5.11	5.00	-1.25	
6,743.0	57.50	271.10	6,618.5	44.6	-455.9	457.3	1.88	1.56	1.25	
6,774.0	60.00	271.40	6,634.6	45.1	-482.4	483.8	8.11	8.06	0.97	
6,806.0	62.30	271.80	6,650.0	45.9	-510.4	511.8	7.27	7.19	1.25	
6,838.0	64.40	272.10	6,664.4	46.9	-539.0	540.4	6.62	6.56	0.94	
6,870.0	66.50	272.50	6,677.7	48.1	-568.1	569.5	6.66	6.56	1.25	
6,902.0	68.80	272.80	6,689.8	49.4	-597.7	599.1	7.24	7.19	0.94	
6,934.0	71.10	271.80	6,700.8	50.6	-627.7	629.2	7.76	7.19	-3.13	
6,966.0	73.20	270.70	6,710.6	51.3	-658.2	659.6	7.33	6.56	-3.44	
6,998.0	76.50	270.70	6,719.0	51.7	-689.0	690.5	10.31	10.31	0.00	
7,029.0	79.90	271.40	6,725.3	52.2	-719.4	720.8	11.19	10.97	2.26	

DDC
Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Two Lakes 12 AD State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3612.0usft (Patterson #46)
Site:	Sec 12, T16S, R28E	MD Reference:	WELL @ 3612.0usft (Patterson #46)
Well:	Two Lakes 12 AD State 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)
7,061.0	83.80	272.50	6,729.9	53.3	-751.0	752.5	12.65	12.19	3.44
7,080.0	85.50	272.80	6,731.6	54.2	-769.9	771.4	9.08	8.95	1.58
7,173.0	90.40	271.10	6,735.0	57.3	-862.8	864.3	5.58	5.27	-1.83
7,204.0	91.30	271.40	6,734.5	58.0	-893.8	895.3	3.06	2.90	0.97
7,236.0	92.00	272.10	6,733.6	59.0	-925.7	927.3	3.09	2.19	2.19
7,299.0	92.00	272.10	6,731.4	61.3	-988.7	990.3	0.00	0.00	0.00
7,363.0	92.40	271.80	6,728.9	63.5	-1,052.6	1,054.2	0.78	0.63	-0.47
7,426.0	93.10	271.80	6,725.9	65.5	-1,115.5	1,117.1	1.11	1.11	0.00
7,489.0	92.70	272.80	6,722.7	68.0	-1,178.3	1,180.1	1.71	-0.63	1.59
7,552.0	92.00	272.80	6,720.1	71.1	-1,241.2	1,243.0	1.11	-1.11	0.00
7,615.0	92.20	272.50	6,717.8	74.0	-1,304.1	1,306.0	0.57	0.32	-0.48
7,679.0	90.40	272.50	6,716.4	76.8	-1,368.0	1,369.9	2.81	-2.81	0.00
7,742.0	90.10	272.10	6,716.1	79.3	-1,431.0	1,432.9	0.79	-0.48	-0.63
7,806.0	90.10	271.80	6,716.0	81.5	-1,494.9	1,496.9	0.47	0.00	-0.47
7,869.0	90.10	271.80	6,715.9	83.4	-1,557.9	1,559.9	0.00	0.00	0.00
7,932.0	89.90	271.40	6,715.9	85.2	-1,620.9	1,622.9	0.71	-0.32	-0.63
7,995.0	91.30	271.80	6,715.2	87.0	-1,683.8	1,685.9	2.31	2.22	0.63
8,058.0	91.50	271.40	6,713.7	88.7	-1,746.8	1,748.9	0.71	0.32	-0.63
8,121.0	91.70	271.80	6,711.9	90.5	-1,809.7	1,811.9	0.71	0.32	0.63
8,185.0	92.20	271.10	6,709.7	92.1	-1,873.7	1,875.8	1.34	0.78	-1.09
8,280.0	91.30	271.40	6,706.8	94.2	-1,968.6	1,970.8	1.00	-0.95	0.32
8,375.0	89.70	272.80	6,706.0	97.6	-2,063.5	2,065.8	2.24	-1.68	1.47
8,437.0	90.10	272.80	6,706.1	100.7	-2,125.5	2,127.8	0.65	0.65	0.00
8,532.0	90.40	272.50	6,705.7	105.1	-2,220.4	2,222.8	0.45	0.32	-0.32
8,627.0	90.40	273.50	6,705.0	110.0	-2,315.2	2,317.7	1.05	0.00	1.05
8,722.0	90.40	274.60	6,704.4	116.8	-2,410.0	2,412.7	1.16	0.00	1.16
8,785.0	90.60	273.90	6,703.8	121.4	-2,472.8	2,475.7	1.16	0.32	-1.11
8,849.0	90.30	273.90	6,703.3	125.8	-2,536.7	2,539.6	0.47	-0.47	0.00
8,944.0	91.10	272.80	6,702.2	131.3	-2,631.5	2,634.6	1.43	0.84	-1.16
9,039.0	91.80	274.60	6,699.8	137.5	-2,726.3	2,729.5	2.03	0.74	1.89
9,134.0	90.80	275.60	6,697.6	145.9	-2,820.9	2,824.4	1.49	-1.05	1.05
9,229.0	91.00	272.80	6,696.1	152.8	-2,915.6	2,919.3	2.95	0.21	-2.95
9,324.0	90.80	273.50	6,694.6	158.1	-3,010.4	3,014.3	0.77	-0.21	0.74
9,419.0	91.70	272.10	6,692.5	162.7	-3,105.3	3,109.2	1.75	0.95	-1.47
9,513.0	91.70	270.70	6,689.8	165.0	-3,199.2	3,203.2	1.49	0.00	-1.49
9,609.0	91.30	270.00	6,687.2	165.6	-3,295.2	3,299.1	0.84	-0.42	-0.73
9,703.0	93.10	268.60	6,683.6	164.4	-3,389.1	3,392.9	2.43	1.91	-1.49
9,799.0	92.70	268.60	6,678.8	162.1	-3,484.9	3,488.6	0.42	-0.42	0.00
9,862.0	91.80	269.00	6,676.3	160.8	-3,547.9	3,551.4	1.56	-1.43	0.63
9,957.0	92.40	268.30	6,672.8	158.5	-3,642.8	3,646.2	0.97	0.63	-0.74
10,021.0	92.20	267.60	6,670.3	156.3	-3,706.7	3,710.0	1.14	-0.31	-1.09
10,084.0	92.70	267.60	6,667.6	153.6	-3,769.6	3,772.7	0.79	0.79	0.00
10,115.0	92.90	268.30	6,666.0	152.5	-3,800.5	3,803.6	2.35	0.65	2.26

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Two Lakes 12 AD State Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3612.0usft (Patterson #46)
Site:	Sec 12, T16S, R28E	MD Reference:	WELL @ 3612.0usft (Patterson #46)
Well:	Two Lakes 12 AD State 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)	
10,147.0	93.60	269.70	6,664.2	152.0	-3,832.5	3,835.5	4.89	2.19	4.38	
10,179.0	93.80	273.20	6,662.2	152.8	-3,864.4	3,867.4	10.93	0.63	10.94	
10,210.0	93.10	274.60	6,660.3	154.9	-3,895.3	3,898.3	5.04	-2.26	4.52	
10,242.0	90.80	275.30	6,659.2	157.6	-3,927.1	3,930.3	7.51	-7.19	2.19	
10,305.0	90.60	275.30	6,658.4	163.4	-3,989.8	3,993.2	0.32	-0.32	0.00	
10,368.0	89.90	275.00	6,658.2	169.1	-4,052.6	4,056.1	1.21	-1.11	-0.48	
10,432.0	89.70	274.60	6,658.4	174.5	-4,116.4	4,120.0	0.70	-0.31	-0.63	
10,495.0	88.70	273.90	6,659.3	179.1	-4,179.2	4,183.0	1.94	-1.59	-1.11	
10,590.0	90.60	273.20	6,659.8	185.0	-4,274.0	4,277.9	2.13	2.00	-0.74	
10,685.0	89.70	273.50	6,659.6	190.6	-4,368.8	4,372.9	1.00	-0.95	0.32	
10,781.0	90.80	271.80	6,659.2	195.0	-4,464.7	4,468.9	2.11	1.15	-1.77	
10,876.0	89.70	271.40	6,658.8	197.7	-4,559.7	4,563.9	1.23	-1.16	-0.42	
11,003.0	88.80	271.40	6,660.4	200.8	-4,686.6	4,690.9	0.71	-0.71	0.00	
TD @ 11060' MD / 6662' TVD										
11,060.0	88.30	271.40	6,661.9	202.1	-4,743.6	4,747.9	0.88	-0.88	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
5,966.0	5,964.1	39.6	-126.0	Tie In @ 5966' MD / 5964' TVD	
6,328.4	6,318.8	39.3	-179.3	CROSSED 330' HARD LINE @ 6328' MD / 6319' TVD	
11,060.0	6,661.9	202.1	-4,743.6	TD @ 11060' MD / 6662' TVD	

Checked By: _____	Approved By: _____	Date: _____
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Operating Company Mewbourne Oil Co.
 Well Name & Number Two Lakes 12 AD ST Com #1H
 Sales Ticket Number 0
 Date 6/25/2014

Company Rep Larry Sutton
 Field 0
 BOT Service Rep Anthony Thomas
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	830000	6.276	6.151	LTC / 8RD	0.03826	7,130.00	75,120	7,220	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,139.00	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		7130.00		KOP		6133.00	Open Hole		6.125	Casing Vol. (bbl)	262.5
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	10292414	JR Slv w 4.750" Alt Seal Bore ID	6861.59	4.00	5.750	3.913			

Zone Length	H4090400008	S-3 Casing Hanger Packer	6865.59	4.65	5.875	3.875				
	H299900281	Combo Collar (4-1/2 LT&C)	6870.24	0.59	5.000					
	H299710014	4-1/2" 13.5# LT&C Spacer Nipple	6870.83	7.51	4.500	3.920				
		7 Jnts 4-1/2" 13.5# LT&C csg	6878.34	296.51	4.500	3.920				
	H810090200	3.500" EXPress Sleeve (Zone 20)	7174.85	2.40	5.630		3.448	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	7177.25	88.15	4.500	3.920				
	H409360008	582 OH PACKER #19	7265.40	3.89	5.820	3.875		2154		
		3 Jnts 4-1/2" 13.5# LT&C csg	7269.29	131.59	4.500	3.920				
	H810090199	3.438" EXPress Sleeve (Zone 19)	7400.88	2.40	5.630		3.385	2286		
		1 Jnts 4-1/2" 13.5# LT&C csg	7403.28	44.37	4.500	3.920				
	H409360008	582 OH PACKER #18	7447.65	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	7451.54	88.56	4.500	3.920				
	H810090198	3.375" EXPress Sleeve (Zone 18)	7540.10	2.40	5.630		3.323	2286		
		1 Jnts 4-1/2" 13.5# LT&C csg	7542.50	44.38	4.500	3.920				
	H409360008	582 OH PACKER #17	7586.88	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	7590.77	88.63	4.500	3.920				
	H810090197	3.313" EXPress Sleeve (Zone 17)	7679.40	2.40	5.630		3.260	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	7681.80	89.69	4.500	3.920				
	H409360008	582 OH PACKER #16	7771.49	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	7775.38	89.59	4.500	3.920				
	H810090196	3.250" EXPress Sleeve (Zone 16)	7864.97	2.40	5.630		3.198	2286		
		3 Jnts 4-1/2" 13.5# LT&C csg	7867.37	131.74	4.500	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number Two Lakes 12 AD ST Com #11
 Sales Ticket Number 0
 Date 6/25/2014

Company Rep Larry Sutton
 Field 0
 BOT Service Rep Anthony Thomas
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	830000	6.276	6.151	LTC / 8RD	0.03826	7,130.00	75,120	7,220	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,139.00	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		7130.00		KOP		6133.00		Open Hole	6.125	Casing Vol. (bbl)	262.5
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
	H409360008	582 OH PACKER #15	7999.11	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	8003.00	89.84	4.500	3.920				
	H810090195	3.188" EXPress Sleeve (Zone 15)	8092.84	2.40	5.630		3.135	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	8095.24	90.62	4.500	3.920				
	H409360008	582 OH PACKER #14	8185.86	3.89	5.820	3.875		2154		
		3 Jnts 4-1/2" 13.5# LT&C csg	8189.75	135.93	4.500	3.920				
	H810090194	3.125" EXPress Sleeve (Zone 14)	8325.68	2.40	5.630		3.073	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	8328.08	131.64	4.500	3.920				
	H409360008	582 OH PACKER #13	8459.72	3.89	5.820	3.875		2154		
		3 Jnts 4-1/2" 13.5# LT&C csg	8463.61	134.59	4.500	3.920				
	H810090193	3.063" EXPress Sleeve (Zone 13)	8598.20	2.40	5.630		3.010	2286	226	263
		2 Jnts 4-1/2" 13.5# LT&C csg	8600.60	89.67	4.500	3.920				
	H409360008	582 OH PACKER #12	8690.27	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	8694.16	88.64	4.500	3.920				
	H810090192	3.00" EXPress Sleeve (Zone 12)	8782.80	2.40	5.630		2.948	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	8785.20	89.70	4.500	3.920				
	H409360008	582 OH PACKER #11	8874.90	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	8878.79	90.62	4.500	3.920				
	H810090191	2.938" EXPress Sleeve (Zone 11)	8969.41	2.40	5.630		2.885	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	8971.81	90.65	4.500	3.920				
	H409360008	582 OH PACKER #10	9062.46	3.89	5.820	3.875		2154		
		3 Jnts 4-1/2" 13.5# LT&C csg	9066.35	45.31	4.500	3.920				
	H810090190	2.875" EXPress Sleeve (Zone 10)	9111.66	2.40	5.630		2.823	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	9114.06	88.99	4.500	3.920				
	H409360008	582 OH PACKER #9	9203.05	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	9206.94	88.75	4.500	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number Two Lakes 12 AD ST Com #11
 Sales Ticket Number 0
 Date 6/25/2014

Company Rep Larry Sutton
 Field 0
 BOT Service Rep Anthony Thomas
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	830000	6.276	6.151	LTC / 8RD	0.03826	7,130.00	75,120	7,220	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01493	4,139.00	12,410	10,690	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		7130.00		KOP		6133.00		Open Hole	6.125	Casing Vol. (bbl)	262.5
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
	H810090189	2.813" EXPress Sleeve (Zone 9)	9295.69	2.40	5.630		2.760	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	9298.09	89.72	4.500	3.920				
	H409360008	582 OH PACKER #8	9387.81	3.89	5.820	3.875		2154		
		4 Jnts 4-1/2" 13.5# LT&C csg	9391.70	89.70	4.500	3.920				
	H810090188	2.750" EXPress Sleeve (Zone 8)	9481.40	2.40	5.630		2.698	2286		
		4 Jnts 4-1/2" 13.5# LT&C csg	9483.80	134.98	4.500	3.920				
	H409360008	582 OH PACKER #7	9618.78	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	9622.67	88.69	4.500	3.920				
	H810090187	2.688" EXPress Sleeve (Zone 7)	9711.36	2.40	5.630		2.635	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	9713.76	134.05	4.500	3.920				
	H409360008	582 OH PACKER #6	9847.81	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	9851.70	89.69	4.500	3.920				
	H810090186	2.625" EXPress Sleeve (Zone 6)	9941.39	2.40	5.630		2.573	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	9943.79	89.72	4.500	3.920				
	H409360008	582 OH PACKER #5	10033.51	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	10037.40	90.91	4.500	3.920				
	H810090185	2.563" EXPress Sleeve (Zone 5)	10128.31	2.40	5.630		2.510	2286		
		3 Jnts 4-1/2" 13.5# LT&C csg	10130.71	135.95	4.500	3.920				
	H409360008	582 OH PACKER #4	10266.66	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	10270.55	90.66	4.500	3.920				
	H810090184	2.500" EXPress Sleeve (Zone 4)	10361.21	2.40	5.630		2.448	2286		
		2 Jnts 4-1/2" 13.5# LT&C csg	10363.61	90.64	4.500	3.920				
	H409360008	582 OH PACKER #3	10454.25	3.89	5.820	3.875		2154		
		2 Jnts 4-1/2" 13.5# LT&C csg	10458.14	90.61	4.500	3.920				
	H810090183	2.438" EXPress Sleeve (Zone 3)	10548.75	2.40	5.630		2.385	2286		
		3 Jnts 4-1/2" 13.5# LT&C csg	10551.15	135.95	4.500	3.920				

Company Rep	Larry Sutton
Field	0
BOT Service Rep	Anthony Thomas
District Location	Odessa, TX

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HALLIBURTON

Mewbourne

Two Lakes 12AD ST Com 1H

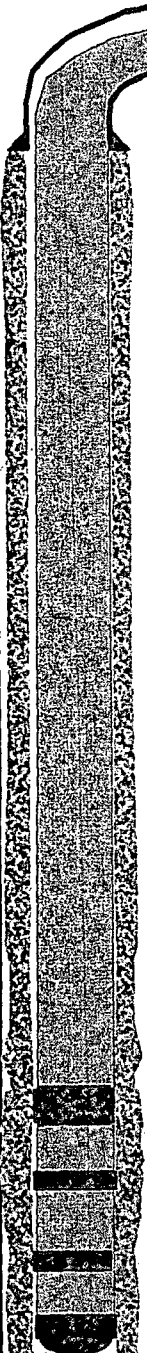
Eddy, NM

26-Jun-14

D. Woodward / Carmen Biscaino

SO# 901453119

Proposed Installation

Installation	Depth	Length	Jts	Description	OD	ID
						
		10,999.35				
	10,975.00	5.72		4 1/2" 15.1# RSI with 10 Pins, Min-4,787psi, Nom-5,365psi, Max-5,944psi	5.750	3.635
	10,980.72	3.09	1	1 Jt 4 1/2" 13.5# Casing	4.500	3.920
	10,983.81	1.51		4 1/2" 13.5# LC	5.000	0.000
	10,985.32	3.06	1	1 Jt 4 1/2" 13.5# Casing	4.500	3.920
	10,988.38	0.89		4 1/2" 9.5-13.5PPF P110 FC	5.040	3.985
	10,989.27	10.08	1	1 Jt 4 1/2" 13.5# Casing	4.500	3.920
	10,999.35	1.5		4 1/2" p110 FS	5.020	4.025
				End of Tools - 10,999.35		