

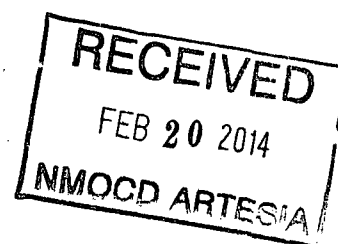
OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE BRADLEY 36 LI STATE COM 001H
COUNTY EDDY

045-0100

STATE OF NEW MEXICO
DEVIATION REPORT

30 015 4827

375	0.56
525	1.31
645	1.46
829	1.55
977	1.64
1,131	1.00
1,283	1.45
1,440	0.88
1,548	1.26
2,039	0.44
2,437	0.05
2,913	0.39
3,388	0.63
3,771	1.60
4,246	1.75
4,723	1.00
5,099	1.16
5,483	0.76
5,861	1.27
6,280	3.79
6,408	4.02
6,533	2.86
6,660	2.51
6,823	1.85
6,946	0.95
7,392	1.63



BY: Steve Moore

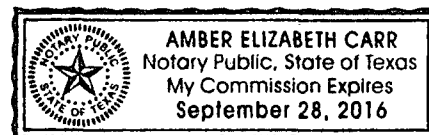
STATE OF TEXAS

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:





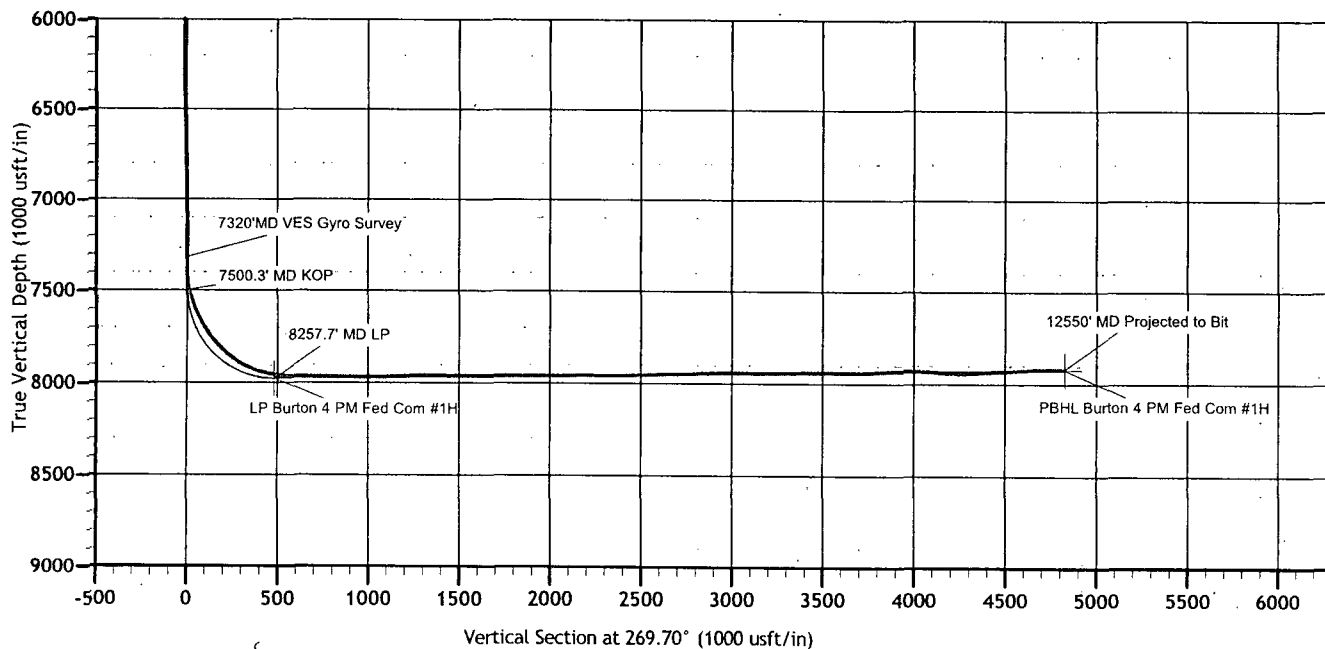
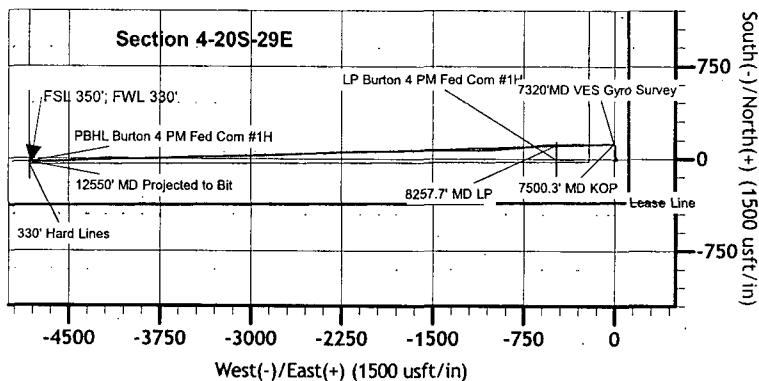
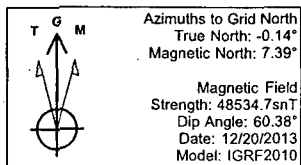
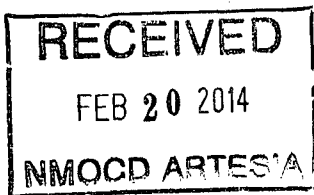
COMPANY: Mewbourne Oil Company
WELL: Burton 4 PM Federal Com #1H
COUNTY: Eddy County, New Mexico
DATUM: NAD 1927 (NADCON CONUS)

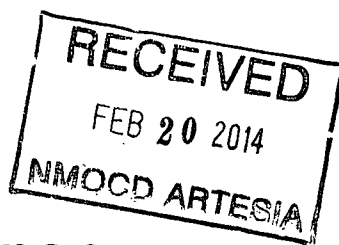
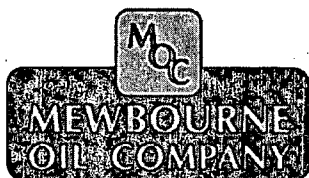


RIG: Patterson 41
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.39°

GEODETTIC ZONE: New Mexico East 3001							
GL3306 + 20 @ 3326.0usft (Patterson 41)							
GROUND ELEVATION: 3306.0							
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot	
0.0	0.0	580674.16	580685.63	32° 35' 45.980 N	104° 4' 16.838 W		

PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	7320.0	0.18	116.00	7316.9	126.9	-4.4	0.00	0.00	3.8	
2	7500.3	0.18	116.00	7497.2	126.6	-3.9	0.00	0.00	3.3	
3	8257.7	90.73	268.20	7976.0	110.8	-487.2	12.00	152.20	486.6	
4	12598.5	90.73	268.20	7921.0	-25.2	-4825.6	0.00	0.00	4825.6	PBHL Burton 4 PM Fed Com #1H





Mewbourne Oil Company .

Eddy County, New Mexico

Section 4-20S-29E Burton 4 PM Federal Com #1H

Burton 4 PM Federal Com #1H

Original Hole

Design: Original Hole

Standard Survey Report

30 December, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E-Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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	Section 4-20S-29E-Burton 4 PM Federal Com #1H		
Site Position:	Northing:	580,674.16 usft	Latitude: 32° 35' 45.980 N
From: Map	Easting:	580,685.63 usft	Longitude: 104° 4' 16.838 W
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.14 °

Well	Burton 4 PM Federal Com #1H		
Well Position	+N/-S	0.0 usft	Latitude: 32° 35' 45.980 N
	+E/-W	0.0 usft	Longitude: 104° 4' 16.838 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
			Ground Level: 3,306.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/20/2013	7.54	60.38	48,535

Survey Program		Date: 12/30/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,320.0	VES Gyro Survey #1 (Original Hole)	GyroFlex	
7,383.0	12,550.0	MWD Survey #2 (Original Hole)	MWD	MWD - Standard

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	0.30	303.72	100.0	0.1	-0.2	0.2	0.30	0.30	0.00
200.0	0.43	245.17	200.0	0.1	-0.8	0.8	0.37	0.13	-58.55
300.0	0.94	223.04	300.0	-0.6	-1.7	1.7	0.57	0.51	-22.13
400.0	1.16	220.62	400.0	-2.0	-2.9	2.9	0.22	0.22	-2.42
500.0	1.29	219.09	500.0	-3.6	-4.3	4.3	0.13	0.13	-1.53
600.0	0.82	228.87	599.9	-5.0	-5.5	5.5	0.50	-0.47	9.78
700.0	0.39	125.30	699.9	-5.6	-5.8	5.8	0.99	-0.43	-103.57
800.0	1.23	80.90	799.9	-5.7	-4.4	4.5	0.99	0.84	-44.40
900.0	2.54	80.95	899.9	-5.2	-1.2	1.2	1.31	1.31	0.05
1,000.0	2.70	83.52	999.8	-4.5	3.3	-3.3	0.20	0.16	2.57
1,100.0	1.96	68.52	1,099.7	-3.6	7.3	-7.3	0.95	-0.74	-15.00
1,200.0	1.99	61.37	1,199.6	-2.2	10.4	-10.4	0.25	0.03	-7.15
1,300.0	1.82	53.73	1,299.6	-0.4	13.2	-13.2	0.31	-0.17	-7.64
1,400.0	1.49	46.75	1,399.5	1.4	15.4	-15.4	0.39	-0.33	-6.98
1,500.0	1.64	46.99	1,499.5	3.3	17.4	-17.4	0.15	0.15	0.24



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Burton 4 PM Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E Burton 4 PM Federal Com #1H	MDI Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
1,600.0	1.73	48.19	1,599.4	5.3	19.6	-19.6	0.10	0.09	1.20
1,700.0	1.92	66.28	1,699.4	6.9	22.2	-22.3	0.60	0.19	18.09
1,800.0	0.37	166.65	1,799.4	7.3	23.9	-23.9	2.02	-1.55	100.37
1,900.0	1.17	200.78	1,899.4	6.0	23.6	-23.6	0.89	0.80	34.13
2,000.0	1.23	196.60	1,999.3	4.0	22.9	-22.9	0.11	0.06	-4.18
2,100.0	1.12	187.60	2,099.3	2.1	22.5	-22.5	0.21	-0.11	-9.00
2,200.0	1.31	195.14	2,199.3	0.0	22.0	-22.0	0.25	0.19	7.54
2,300.0	1.12	202.10	2,299.3	-2.0	21.4	-21.4	0.24	-0.19	6.96
2,400.0	0.48	194.03	2,399.3	-3.3	20.9	-20.9	0.65	-0.64	-8.07
2,500.0	0.23	304.59	2,499.3	-3.6	20.6	-20.6	0.60	-0.25	110.56
2,600.0	0.18	291.64	2,599.3	-3.5	20.3	-20.3	0.07	-0.05	-12.95
2,700.0	0.18	15.68	2,699.3	-3.3	20.2	-20.2	0.24	0.00	84.04
2,800.0	1.16	355.46	2,799.3	-2.1	20.2	-20.2	0.99	0.98	-20.22
2,900.0	2.63	346.01	2,899.2	1.1	19.5	-19.5	1.50	1.47	-9.45
3,000.0	2.81	341.04	2,999.1	5.7	18.2	-18.2	0.30	0.18	-4.97
3,100.0	2.96	338.12	3,099.0	10.4	16.4	-16.5	0.21	0.15	-2.92
3,200.0	2.85	338.08	3,198.8	15.1	14.5	-14.6	0.11	-0.11	-0.04
3,300.0	2.58	339.22	3,298.7	19.5	12.8	-12.9	0.28	-0.27	1.14
3,400.0	2.46	336.64	3,398.6	23.6	11.2	-11.3	0.17	-0.12	-2.58
3,500.0	2.64	343.36	3,498.5	27.8	9.7	-9.8	0.35	0.18	6.72
3,600.0	2.34	340.57	3,598.4	31.9	8.3	-8.5	0.32	-0.30	-2.79
3,700.0	2.08	341.91	3,698.4	35.5	7.1	-7.3	0.27	-0.26	1.34
3,800.0	2.16	343.34	3,798.3	39.1	6.0	-6.2	0.10	0.08	1.43
3,900.0	1.77	350.92	3,898.2	42.4	5.2	-5.4	0.47	-0.39	7.58
4,000.0	1.29	7.31	3,998.2	45.1	5.1	-5.3	0.64	-0.48	16.39
4,100.0	1.15	356.39	4,098.2	47.2	5.2	-5.4	0.27	-0.14	-10.92
4,200.0	1.43	6.81	4,198.1	49.4	5.2	-5.5	0.36	0.28	10.42
4,300.0	1.53	5.73	4,298.1	52.0	5.5	-5.8	0.10	0.10	-1.08
4,400.0	1.56	9.21	4,398.1	54.6	5.9	-6.2	0.10	0.03	3.48
4,500.0	1.42	6.37	4,498.0	57.2	6.2	-6.5	0.16	-0.14	-2.84
4,600.0	1.48	3.42	4,598.0	59.7	6.5	-6.8	0.10	0.06	-2.95
4,700.0	1.56	1.70	4,698.0	62.4	6.6	-6.9	0.09	0.08	-1.72
4,800.0	1.35	357.30	4,797.9	64.9	6.6	-6.9	0.24	-0.21	-4.40
4,900.0	1.35	358.92	4,897.9	67.3	6.5	-6.8	0.04	0.00	1.62
5,000.0	1.59	3.56	4,997.9	69.8	6.5	-6.9	0.27	0.24	4.64
5,100.0	1.53	19.24	5,097.8	72.5	7.1	-7.4	0.43	-0.06	15.68
5,200.0	1.20	17.99	5,197.8	74.7	7.8	-8.2	0.33	-0.33	-1.25
5,300.0	1.58	22.65	5,297.8	77.0	8.7	-9.1	0.40	0.38	4.66
5,400.0	1.63	25.05	5,397.7	79.6	9.8	-10.2	0.08	0.05	2.40
5,500.0	1.52	9.99	5,497.7	82.2	10.6	-11.1	0.43	-0.11	-15.06
5,600.0	1.71	347.46	5,597.7	84.9	10.6	-11.0	0.66	0.19	-22.53
5,700.0	1.99	353.67	5,697.6	88.1	10.0	-10.5	0.34	0.28	6.21
5,800.0	1.90	348.33	5,797.6	91.5	9.5	-10.0	0.20	-0.09	-5.34



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E, Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
5,900.0	1.86	4.28	5,897.5	94.7	9.3	-9.8	0.52	-0.04	15.95
6,000.0	2.10	7.09	5,997.4	98.1	9.6	-10.2	0.26	0.24	2.81
6,100.0	2.12	4.69	6,097.4	101.8	10.0	-10.6	0.09	0.02	-2.40
6,200.0	1.91	4.26	6,197.3	105.3	10.3	-10.9	0.21	-0.21	-0.43
6,300.0	1.86	336.15	6,297.3	108.5	9.8	-10.3	0.92	-0.05	-28.11
6,400.0	1.45	305.70	6,397.2	110.7	8.1	-8.7	0.95	-0.41	-30.45
6,500.0	1.69	305.75	6,497.2	112.3	5.9	-6.4	0.24	0.24	0.05
6,600.0	1.96	316.52	6,597.1	114.4	3.5	-4.1	0.44	0.27	10.77
6,700.0	2.16	321.08	6,697.1	117.1	1.1	-1.7	0.26	0.20	4.56
6,800.0	1.68	332.93	6,797.0	119.9	-0.7	0.1	0.62	-0.48	11.85
6,900.0	1.25	329.67	6,897.0	122.1	-1.9	1.3	0.44	-0.43	-3.26
7,000.0	1.19	320.32	6,997.0	123.8	-3.2	2.5	0.21	-0.06	-9.35
7,100.0	1.18	330.27	7,096.9	125.5	-4.3	3.7	0.21	-0.01	9.95
7,200.0	0.31	15.66	7,196.9	126.7	-4.8	4.1	0.99	-0.87	45.39
7,300.0	0.23	103.30	7,296.9	126.9	-4.5	3.8	0.38	-0.08	87.64
7,320.0	0.18	116.00	7,316.9	126.9	-4.4	3.8	0.34	-0.25	63.50
7,320 MD VES Gyro Survey									
7,383.0	0.80	194.20	7,379.9	126.4	-4.5	3.8	1.24	0.98	124.13
7,415.0	1.30	223.90	7,411.9	125.9	-4.8	4.1	2.26	1.56	92.81
7,447.0	4.40	252.70	7,443.9	125.3	-6.2	5.5	10.38	9.69	90.00
7,479.0	9.30	260.00	7,475.6	124.5	-9.9	9.3	15.52	15.31	22.81
7,510.0	13.50	264.20	7,506.0	123.7	-16.0	15.3	13.80	13.55	13.55
7,542.0	16.00	266.70	7,537.0	123.1	-24.1	23.4	8.06	7.81	7.81
7,573.0	19.00	267.30	7,566.5	122.6	-33.4	32.8	9.69	9.68	1.94
7,605.0	22.40	267.80	7,596.5	122.1	-44.7	44.1	10.64	10.63	1.56
7,636.0	25.30	268.50	7,624.8	121.7	-57.2	56.6	9.40	9.35	2.26
7,668.0	27.40	270.40	7,653.5	121.6	-71.4	70.8	7.07	6.56	5.94
7,700.0	29.90	269.50	7,681.6	121.6	-86.8	86.1	7.93	7.81	-2.81
7,731.0	33.30	269.00	7,708.0	121.3	-103.0	102.4	11.00	10.97	-1.61
7,763.0	36.90	269.70	7,734.1	121.1	-121.4	120.8	11.32	11.25	2.19
7,794.0	39.60	269.60	7,758.5	121.0	-140.6	140.0	8.71	8.71	-0.32
7,826.0	41.10	269.60	7,782.9	120.9	-161.3	160.7	4.69	4.69	0.00
7,857.0	43.90	270.30	7,805.7	120.9	-182.3	181.6	9.16	9.03	2.26
7,889.0	47.10	271.70	7,828.1	121.3	-205.1	204.4	10.48	10.00	4.38
7,920.0	50.30	272.20	7,848.6	122.1	-228.3	227.7	10.39	10.32	1.61
7,952.0	53.50	272.10	7,868.3	123.0	-253.5	252.9	10.00	10.00	-0.31
7,983.0	57.80	271.40	7,885.8	123.8	-279.1	278.4	14.00	13.87	-2.26
8,015.0	63.40	269.90	7,901.5	124.1	-306.9	306.3	17.97	17.50	-4.69
8,046.0	67.10	269.40	7,914.5	123.9	-335.1	334.4	12.02	11.94	-1.61
8,078.0	69.50	268.90	7,926.3	123.5	-364.8	364.2	7.64	7.50	-1.56
8,109.0	72.10	268.40	7,936.5	122.8	-394.1	393.4	8.52	8.39	-1.61
8,141.0	76.00	267.90	7,945.3	121.8	-424.8	424.2	12.28	12.19	-1.56



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E-Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)
8,172.0	79.10	268.10	7,952.0	120.7	-455.1	454.4	10.02	10.00	0.65
8,204.0	81.10	268.30	7,957.5	119.7	-486.6	485.9	6.28	6.25	0.63
8,236.0	83.80	268.00	7,961.7	118.7	-518.3	517.7	8.49	8.44	-0.94
8,258.0	85.70	267.90	7,963.7	117.9	-540.2	539.6	8.65	8.64	-0.45
8,333.0	90.10	264.00	7,966.5	112.6	-614.9	614.3	7.84	5.87	-5.20
8,364.0	90.40	263.60	7,966.3	109.3	-645.7	645.1	1.61	0.97	-1.29
8,427.0	90.20	263.40	7,966.0	102.2	-708.3	707.8	0.45	-0.32	-0.32
8,490.0	89.50	263.40	7,966.2	94.9	-770.9	770.4	1.11	-1.11	0.00
8,554.0	89.60	264.90	7,966.7	88.4	-834.6	834.1	2.35	0.16	2.34
8,617.0	89.70	265.50	7,967.1	83.1	-897.3	896.9	0.97	0.16	0.95
8,680.0	89.50	265.20	7,967.5	78.0	-960.1	959.7	0.57	-0.32	-0.48
8,744.0	89.70	267.10	7,968.0	73.7	-1,024.0	1,023.6	2.99	0.31	2.97
8,807.0	91.00	269.50	7,967.6	71.9	-1,086.9	1,086.6	4.33	2.06	3.81
8,870.0	91.60	270.50	7,966.1	71.9	-1,149.9	1,149.5	1.85	0.95	1.59
8,934.0	92.70	269.60	7,963.7	71.9	-1,213.9	1,213.5	2.22	1.72	-1.41
8,997.0	92.40	269.60	7,960.9	71.5	-1,276.8	1,276.4	0.48	-0.48	0.00
9,060.0	89.90	270.30	7,959.7	71.4	-1,339.8	1,339.4	4.12	-3.97	1.11
9,123.0	89.00	270.50	7,960.3	71.9	-1,402.8	1,402.4	1.46	-1.43	0.32
9,186.0	89.10	270.00	7,961.3	72.1	-1,465.8	1,465.4	0.81	0.16	-0.79
9,250.0	89.90	269.60	7,961.9	71.9	-1,529.8	1,529.4	1.40	1.25	-0.63
9,313.0	90.30	268.50	7,961.8	70.9	-1,592.8	1,592.4	1.86	0.63	-1.75
9,376.0	90.40	267.60	7,961.4	68.7	-1,655.7	1,655.4	1.44	0.16	-1.43
9,440.0	90.50	268.50	7,960.9	66.5	-1,719.7	1,719.3	1.41	0.16	1.41
9,503.0	89.80	269.80	7,960.7	65.6	-1,782.7	1,782.3	2.34	-1.11	2.06
9,566.0	90.10	269.50	7,960.8	65.2	-1,845.7	1,845.3	0.67	0.48	-0.48
9,629.0	90.60	269.20	7,960.4	64.5	-1,908.7	1,908.3	0.93	0.79	-0.48
9,692.0	90.90	269.30	7,959.6	63.7	-1,971.7	1,971.3	0.50	0.48	0.16
9,756.0	91.30	269.10	7,958.3	62.8	-2,035.7	2,035.3	0.70	0.63	-0.31
9,819.0	91.60	268.30	7,956.7	61.4	-2,098.6	2,098.3	1.36	0.48	-1.27
9,914.0	89.40	269.00	7,955.9	59.1	-2,193.6	2,193.2	2.43	-2.32	0.74
10,009.0	88.90	268.00	7,957.3	56.6	-2,288.5	2,288.2	1.18	-0.53	-1.05
10,104.0	91.00	267.60	7,957.4	53.0	-2,383.5	2,383.1	2.25	2.21	-0.42
10,198.0	91.30	266.90	7,955.5	48.5	-2,477.3	2,477.0	0.81	0.32	-0.74
10,293.0	92.20	266.60	7,952.6	43.1	-2,572.1	2,571.9	1.00	0.95	-0.32
10,388.0	91.20	267.80	7,949.8	38.5	-2,667.0	2,666.7	1.64	-1.05	1.26
10,483.0	92.20	267.20	7,947.0	34.3	-2,761.8	2,761.6	1.23	1.05	-0.63
10,578.0	92.60	267.80	7,943.0	30.2	-2,856.7	2,856.5	0.76	0.42	0.63
10,673.0	90.50	267.40	7,940.4	26.2	-2,951.5	2,951.4	2.25	-2.21	-0.42
10,767.0	89.50	269.10	7,940.4	23.3	-3,045.5	3,045.3	2.10	-1.06	1.81
10,862.0	88.30	269.10	7,942.3	21.8	-3,140.5	3,140.3	1.26	-1.26	0.00
10,956.0	92.30	269.70	7,941.8	20.9	-3,234.4	3,234.3	4.30	4.26	0.64
11,051.0	90.50	270.40	7,939.4	20.9	-3,329.4	3,329.2	2.03	-1.89	0.74
11,146.0	90.10	269.50	7,938.9	20.9	-3,424.4	3,424.2	1.04	-0.42	-0.95



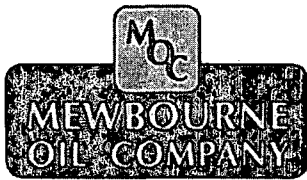
Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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)	
11,241.0	89.90	267.80	7,938.9	18.6	-3,519.4	3,519.2	1.80	-0.21	-1.79	
11,336.0	88.40	265.90	7,940.4	13.4	-3,614.2	3,614.1	2.55	-1.58	-2.00	
11,430.0	91.70	266.10	7,940.3	6.8	-3,708.0	3,707.9	3.52	3.51	0.21	
11,525.0	94.10	266.50	7,935.5	0.7	-3,802.6	3,802.6	2.56	2.53	0.42	
11,620.0	93.00	270.90	7,929.6	-1.4	-3,897.4	3,897.4	4.77	-1.16	4.63	
11,715.0	89.30	273.40	7,927.7	2.1	-3,992.3	3,992.2	4.70	-3.89	2.63	
11,809.0	86.80	272.10	7,930.9	6.6	-4,086.1	4,086.0	3.00	-2.66	-1.38	
11,904.0	85.80	267.50	7,937.0	6.3	-4,180.9	4,180.8	4.95	-1.05	-4.84	
11,999.0	91.60	263.80	7,939.2	-0.9	-4,275.5	4,275.5	7.24	6.11	-3.89	
12,063.0	92.40	264.70	7,936.9	-7.3	-4,339.2	4,339.2	1.88	1.25	1.41	
12,126.0	93.50	266.20	7,933.7	-12.3	-4,401.9	4,401.9	2.95	1.75	2.38	
12,189.0	92.20	265.20	7,930.6	-17.0	-4,464.6	4,464.7	2.60	-2.06	-1.59	
12,284.0	94.20	267.20	7,925.2	-23.3	-4,559.3	4,559.3	2.97	2.11	2.11	
12,379.0	92.70	267.60	7,919.5	-27.6	-4,654.0	4,654.1	1.63	-1.58	0.42	
12,410.0	90.80	270.00	7,918.6	-28.2	-4,685.0	4,685.1	9.87	-6.13	7.74	
12,490.0	90.60	270.00	7,917.6	-28.2	-4,765.0	4,765.1	0.25	-0.25	0.00	
12,550.0	90.00	270.00	7,917.3	-28.2	-4,825.0	4,825.1	1.00	-1.00	0.00	
12550' MD Projected to Bit										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,320.0	7,316.9	126.9	-4.4	7320' MD VES Gyro Survey
12,550.0	7,917.3	-28.2	-4,825.0	12550' MD Projected to Bit



Mewbourne Oil Company .

Eddy County, New Mexico

Section 4-20S-29E Burton 4 PM Federal Com #1H

Burton 4 PM Federal Com #1H

Original Hole

Design: Original Hole

Survey Report - Geographic

30 December, 2013





Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E, Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	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:		Section 4-20S-29E, Burton 4 PM Federal Com #1H			
Site Position:		Northing:	580,674.16 usft	Latitude:	32° 35' 45.980 N
From:	Map	Easting:	580,685.63 usft	Longitude:	104° 4' 16.838 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.14 °

Well:	Burton 4 PM Federal Com #1H					
Well Position	+N/-S	0.0 usft	Northing:	580,674.16 usft	Latitude:	32° 35' 45.980 N
	+E/-W	0.0 usft	Easting:	580,685.63 usft	Longitude:	104° 4' 16.838 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,306.0 usft	

Wellbore:	Original Hole
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/20/2013	7.54	60.38	48,535

Design:	Original Hole
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	269.70

Survey Program		Date: 12/30/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,320.0	VES Gyro Survey #1 (Original Hole)	GyroFlex	
7,383.0	12,550.0	MWD Survey #2 (Original Hole)	MWD	MWD - Standard

Survey	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
	0.0	0.00	0.00	0.0	0.0	0.0	580,674.16	580,685.63	32° 35' 45.980 N	104° 4' 16.838 W
	100.0	0.30	303.72	100.0	0.1	-0.2	580,674.31	580,685.41	32° 35' 45.981 N	104° 4' 16.841 W
	200.0	0.43	245.17	200.0	0.1	-0.8	580,674.30	580,684.85	32° 35' 45.981 N	104° 4' 16.847 W
	300.0	0.94	223.04	300.0	-0.6	-1.7	580,673.54	580,683.95	32° 35' 45.973 N	104° 4' 16.858 W
	400.0	1.16	220.62	400.0	-2.0	-2.9	580,672.17	580,682.74	32° 35' 45.960 N	104° 4' 16.872 W
	500.0	1.29	219.09	500.0	-3.6	-4.3	580,670.53	580,681.37	32° 35' 45.944 N	104° 4' 16.888 W
	600.0	0.82	228.87	599.9	-5.0	-5.5	580,669.19	580,680.12	32° 35' 45.930 N	104° 4' 16.903 W
	700.0	0.39	125.30	699.9	-5.6	-5.8	580,668.52	580,679.86	32° 35' 45.924 N	104° 4' 16.906 W
	800.0	1.23	80.90	799.9	-5.7	-4.4	580,668.49	580,681.19	32° 35' 45.924 N	104° 4' 16.890 W
	900.0	2.54	80.95	899.9	-5.2	-1.2	580,669.01	580,684.44	32° 35' 45.929 N	104° 4' 16.852 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well/Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E-Burton 4 PM Federal Com #1H	MD Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,000.0	2.70	83.52	999.8	-4.5	3.3	580,669.63	580,688.97	32° 35' 45.935 N	104° 4' 16.799 W
1,100.0	1.96	68.52	1,099.7	-3.6	7.3	580,670.52	580,692.90	32° 35' 45.943 N	104° 4' 16.753 W
1,200.0	1.99	61.37	1,199.6	-2.2	10.4	580,671.98	580,696.02	32° 35' 45.958 N	104° 4' 16.717 W
1,300.0	1.82	53.73	1,299.6	-0.4	13.2	580,673.75	580,698.82	32° 35' 45.975 N	104° 4' 16.684 W
1,400.0	1.49	46.75	1,399.5	1.4	15.4	580,675.58	580,701.05	32° 35' 45.993 N	104° 4' 16.658 W
1,500.0	1.64	46.99	1,499.5	3.3	17.4	580,677.44	580,703.04	32° 35' 46.012 N	104° 4' 16.635 W
1,600.0	1.73	48.19	1,599.4	5.3	19.6	580,679.43	580,705.21	32° 35' 46.031 N	104° 4' 16.609 W
1,700.0	1.92	66.28	1,699.4	6.9	22.2	580,681.11	580,707.87	32° 35' 46.048 N	104° 4' 16.578 W
1,800.0	0.37	166.65	1,799.4	7.3	23.9	580,681.47	580,709.48	32° 35' 46.051 N	104° 4' 16.559 W
1,900.0	1.17	200.78	1,899.4	6.0	23.6	580,680.20	580,709.19	32° 35' 46.039 N	104° 4' 16.563 W
2,000.0	1.23	196.60	1,999.3	4.0	22.9	580,678.21	580,708.53	32° 35' 46.019 N	104° 4' 16.570 W
2,100.0	1.12	187.60	2,099.3	2.1	22.5	580,676.22	580,708.09	32° 35' 45.999 N	104° 4' 16.576 W
2,200.0	1.31	195.14	2,199.3	0.0	22.0	580,674.15	580,707.66	32° 35' 45.979 N	104° 4' 16.581 W
2,300.0	1.12	202.10	2,299.3	-2.0	21.4	580,672.14	580,707.00	32° 35' 45.959 N	104° 4' 16.589 W
2,400.0	0.48	194.03	2,399.3	-3.3	20.9	580,670.82	580,706.53	32° 35' 45.946 N	104° 4' 16.594 W
2,500.0	0.23	304.59	2,499.3	-3.6	20.6	580,670.53	580,706.26	32° 35' 45.943 N	104° 4' 16.597 W
2,600.0	0.18	291.64	2,599.3	-3.5	20.3	580,670.70	580,705.95	32° 35' 45.945 N	104° 4' 16.601 W
2,700.0	0.18	15.68	2,699.3	-3.3	20.2	580,670.91	580,705.84	32° 35' 45.947 N	104° 4' 16.602 W
2,800.0	1.16	355.46	2,799.3	-2.1	20.2	580,672.07	580,705.81	32° 35' 45.958 N	104° 4' 16.602 W
2,900.0	2.63	346.01	2,899.2	1.1	19.5	580,675.31	580,705.17	32° 35' 45.990 N	104° 4' 16.610 W
3,000.0	2.81	341.04	2,999.1	5.7	18.2	580,679.85	580,703.82	32° 35' 46.035 N	104° 4' 16.625 W
3,100.0	2.96	338.12	3,099.0	10.4	16.4	580,684.57	580,702.06	32° 35' 46.082 N	104° 4' 16.646 W
3,200.0	2.85	338.08	3,198.8	15.1	14.5	580,689.27	580,700.17	32° 35' 46.129 N	104° 4' 16.668 W
3,300.0	2.58	339.22	3,298.7	19.5	12.8	580,693.68	580,698.45	32° 35' 46.172 N	104° 4' 16.688 W
3,400.0	2.46	336.64	3,398.6	23.6	11.2	580,697.75	580,696.80	32° 35' 46.213 N	104° 4' 16.707 W
3,500.0	2.64	343.36	3,498.5	27.8	9.7	580,701.93	580,695.29	32° 35' 46.254 N	104° 4' 16.725 W
3,600.0	2.34	340.57	3,598.4	31.9	8.3	580,706.06	580,693.95	32° 35' 46.295 N	104° 4' 16.740 W
3,700.0	2.08	341.91	3,698.4	35.5	7.1	580,709.71	580,692.70	32° 35' 46.331 N	104° 4' 16.754 W
3,800.0	2.16	343.34	3,798.3	39.1	6.0	580,713.24	580,691.60	32° 35' 46.366 N	104° 4' 16.767 W
3,900.0	1.77	350.92	3,898.2	42.4	5.2	580,716.57	580,690.82	32° 35' 46.399 N	104° 4' 16.776 W
4,000.0	1.29	7.31	3,998.2	45.1	5.1	580,719.22	580,690.72	32° 35' 46.425 N	104° 4' 16.777 W
4,100.0	1.15	356.39	4,098.2	47.2	5.2	580,721.33	580,690.80	32° 35' 46.446 N	104° 4' 16.776 W
4,200.0	1.43	6.81	4,198.1	49.4	5.2	580,723.57	580,690.88	32° 35' 46.468 N	104° 4' 16.775 W
4,300.0	1.53	5.73	4,298.1	52.0	5.5	580,726.14	580,691.16	32° 35' 46.494 N	104° 4' 16.772 W
4,400.0	1.56	9.21	4,398.1	54.6	5.9	580,728.81	580,691.51	32° 35' 46.520 N	104° 4' 16.768 W
4,500.0	1.42	6.37	4,498.0	57.2	6.2	580,731.39	580,691.87	32° 35' 46.546 N	104° 4' 16.764 W
4,600.0	1.48	3.42	4,598.0	59.7	6.5	580,733.91	580,692.08	32° 35' 46.571 N	104° 4' 16.761 W
4,700.0	1.56	1.70	4,698.0	62.4	6.6	580,736.56	580,692.20	32° 35' 46.597 N	104° 4' 16.760 W
4,800.0	1.35	357.30	4,797.9	64.9	6.6	580,739.10	580,692.19	32° 35' 46.622 N	104° 4' 16.760 W
4,900.0	1.35	358.92	4,897.9	67.3	6.5	580,741.45	580,692.11	32° 35' 46.645 N	104° 4' 16.761 W
5,000.0	1.59	3.56	4,997.9	69.8	6.5	580,744.01	580,692.17	32° 35' 46.671 N	104° 4' 16.760 W
5,100.0	1.53	19.24	5,097.8	72.5	7.1	580,746.66	580,692.70	32° 35' 46.697 N	104° 4' 16.754 W
5,200.0	1.20	17.99	5,197.8	74.7	7.8	580,748.91	580,693.46	32° 35' 46.719 N	104° 4' 16.745 W
5,300.0	1.58	22.65	5,297.8	77.0	8.7	580,751.18	580,694.32	32° 35' 46.741 N	104° 4' 16.734 W
5,400.0	1.63	25.05	5,397.7	79.6	9.8	580,753.74	580,695.45	32° 35' 46.767 N	104° 4' 16.721 W
5,500.0	1.52	9.99	5,497.7	82.2	10.6	580,756.34	580,696.28	32° 35' 46.792 N	104° 4' 16.711 W
5,600.0	1.71	347.46	5,597.7	84.9	10.6	580,759.10	580,696.19	32° 35' 46.820 N	104° 4' 16.712 W
5,700.0	1.99	353.67	5,697.6	88.1	10.0	580,762.28	580,695.67	32° 35' 46.851 N	104° 4' 16.718 W
5,800.0	1.90	348.33	5,797.6	91.5	9.5	580,765.63	580,695.14	32° 35' 46.884 N	104° 4' 16.724 W
5,900.0	1.86	4.28	5,897.5	94.7	9.3	580,768.87	580,694.93	32° 35' 46.917 N	104° 4' 16.727 W
6,000.0	2.10	7.09	5,997.4	98.1	9.6	580,772.31	580,695.28	32° 35' 46.951 N	104° 4' 16.723 W
6,100.0	2.12	4.69	6,097.4	101.8	10.0	580,775.97	580,695.66	32° 35' 46.987 N	104° 4' 16.718 W
6,200.0	1.91	4.26	6,197.3	105.3	10.3	580,779.48	580,695.93	32° 35' 47.021 N	104° 4' 16.715 W
6,300.0	1.86	336.15	6,297.3	108.5	9.8	580,782.62	580,695.40	32° 35' 47.053 N	104° 4' 16.721 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local/Co-ordinate Reference:	Well Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E Burton 4 PM Federal Com #1H	MD Reference:	GL3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM5000.1 Single User.Dba

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,400.0	1.45	305.70	6,397.2	110.7	8.1	580,784.85	580,693.71	32° 35' 47.075 N	104° 4' 16.741 W
6,500.0	1.69	305.75	6,497.2	112.3	5.9	580,786.45	580,691.49	32° 35' 47.091 N	104° 4' 16.766 W
6,600.0	1.96	316.52	6,597.1	114.4	3.5	580,788.55	580,689.12	32° 35' 47.111 N	104° 4' 16.794 W
6,700.0	2.16	321.08	6,697.1	117.1	1.1	580,791.26	580,686.76	32° 35' 47.138 N	104° 4' 16.822 W
6,800.0	1.68	332.93	6,797.0	119.9	-0.7	580,794.03	580,684.90	32° 35' 47.166 N	104° 4' 16.843 W
6,900.0	1.25	329.67	6,897.0	122.1	-1.9	580,796.27	580,683.69	32° 35' 47.188 N	104° 4' 16.857 W
7,000.0	1.19	320.32	6,997.0	123.8	-3.2	580,798.01	580,682.47	32° 35' 47.205 N	104° 4' 16.872 W
7,100.0	1.18	330.27	7,096.9	125.5	-4.3	580,799.71	580,681.30	32° 35' 47.222 N	104° 4' 16.885 W
7,200.0	0.31	15.66	7,196.9	126.7	-4.8	580,800.86	580,680.86	32° 35' 47.233 N	104° 4' 16.890 W
7,300.0	0.23	103.30	7,296.9	126.9	-4.5	580,801.08	580,681.13	32° 35' 47.236 N	104° 4' 16.887 W
7,320.0	0.18	116.00	7,316.9	126.9	-4.4	580,801.05	580,681.20	32° 35' 47.235 N	104° 4' 16.886 W
7320 MD VES Gyro Survey									
7,383.0	0.80	194.20	7,379.9	126.4	-4.5	580,800.58	580,681.18	32° 35' 47.231 N	104° 4' 16.887 W
7,415.0	1.30	223.90	7,411.9	125.9	-4.8	580,800.11	580,680.87	32° 35' 47.226 N	104° 4' 16.890 W
7,447.0	4.40	252.70	7,443.9	125.3	-6.2	580,799.48	580,679.45	32° 35' 47.220 N	104° 4' 16.907 W
7,479.0	9.30	260.00	7,475.6	124.5	-9.9	580,798.66	580,675.73	32° 35' 47.212 N	104° 4' 16.950 W
7,510.0	13.50	264.20	7,506.0	123.7	-16.0	580,797.86	580,669.66	32° 35' 47.204 N	104° 4' 17.021 W
7,542.0	16.00	266.70	7,537.0	123.1	-24.1	580,797.23	580,661.54	32° 35' 47.198 N	104° 4' 17.116 W
7,573.0	19.00	267.30	7,566.5	122.6	-33.4	580,796.75	580,652.23	32° 35' 47.193 N	104° 4' 17.225 W
7,605.0	22.40	267.80	7,596.5	122.1	-44.7	580,796.27	580,640.93	32° 35' 47.189 N	104° 4' 17.357 W
7,636.0	25.30	268.50	7,624.8	121.7	-57.2	580,795.87	580,628.40	32° 35' 47.185 N	104° 4' 17.504 W
7,668.0	27.40	270.40	7,653.5	121.6	-71.4	580,795.74	580,614.20	32° 35' 47.184 N	104° 4' 17.670 W
7,700.0	29.90	269.50	7,681.6	121.6	-86.8	580,795.72	580,598.86	32° 35' 47.185 N	104° 4' 17.849 W
7,731.0	33.30	269.00	7,708.0	121.3	-103.0	580,795.51	580,582.62	32° 35' 47.183 N	104° 4' 18.039 W
7,763.0	36.90	269.70	7,734.1	121.1	-121.4	580,795.30	580,564.23	32° 35' 47.181 N	104° 4' 18.254 W
7,794.0	39.60	269.60	7,758.5	121.0	-140.6	580,795.19	580,545.04	32° 35' 47.181 N	104° 4' 18.478 W
7,826.0	41.10	269.60	7,782.9	120.9	-161.3	580,795.04	580,524.32	32° 35' 47.180 N	104° 4' 18.720 W
7,857.0	43.90	270.30	7,805.7	120.9	-182.3	580,795.03	580,503.38	32° 35' 47.180 N	104° 4' 18.965 W
7,889.0	47.10	271.70	7,828.1	121.3	-205.1	580,795.43	580,480.56	32° 35' 47.185 N	104° 4' 19.232 W
7,920.0	50.30	272.20	7,848.6	122.1	-228.3	580,796.23	580,457.29	32° 35' 47.193 N	104° 4' 19.504 W
7,952.0	53.50	272.10	7,868.3	123.0	-253.5	580,797.17	580,432.13	32° 35' 47.203 N	104° 4' 19.798 W
7,983.0	57.80	271.40	7,885.8	123.8	-279.1	580,797.95	580,406.55	32° 35' 47.211 N	104° 4' 20.097 W
8,015.0	63.40	269.90	7,901.5	124.1	-306.9	580,798.25	580,378.69	32° 35' 47.215 N	104° 4' 20.423 W
8,046.0	67.10	269.40	7,914.5	123.9	-335.1	580,798.08	580,350.54	32° 35' 47.214 N	104° 4' 20.752 W
8,078.0	69.50	268.90	7,926.3	123.5	-364.8	580,797.64	580,320.81	32° 35' 47.210 N	104° 4' 21.099 W
8,109.0	72.10	268.40	7,936.5	122.8	-394.1	580,796.95	580,291.55	32° 35' 47.204 N	104° 4' 21.441 W
8,141.0	76.00	267.90	7,945.3	121.8	-424.8	580,795.95	580,260.80	32° 35' 47.195 N	104° 4' 21.801 W
8,172.0	79.10	268.10	7,952.0	120.7	-455.1	580,794.90	580,230.56	32° 35' 47.185 N	104° 4' 22.154 W
8,204.0	81.10	268.30	7,957.5	119.7	-486.6	580,793.91	580,199.05	32° 35' 47.176 N	104° 4' 22.523 W
8,236.0	83.80	268.00	7,961.7	118.7	-518.3	580,792.88	580,167.35	32° 35' 47.167 N	104° 4' 22.893 W
8,258.0	85.70	267.90	7,963.7	117.9	-540.2	580,792.10	580,145.45	32° 35' 47.160 N	104° 4' 23.149 W
8,333.0	90.10	264.00	7,966.5	112.6	-614.9	580,786.80	580,070.72	32° 35' 47.109 N	104° 4' 24.023 W
8,364.0	90.40	263.60	7,966.3	109.3	-645.7	580,783.46	580,039.91	32° 35' 47.077 N	104° 4' 24.383 W
8,427.0	90.20	263.40	7,966.0	102.2	-708.3	580,776.33	579,977.31	32° 35' 47.008 N	104° 4' 25.115 W
8,490.0	89.50	263.40	7,966.2	94.9	-770.9	580,769.08	579,914.73	32° 35' 46.938 N	104° 4' 25.847 W
8,554.0	89.60	264.90	7,966.7	88.4	-834.6	580,762.56	579,851.07	32° 35' 46.875 N	104° 4' 26.591 W
8,617.0	89.70	265.50	7,967.1	83.1	-897.3	580,757.29	579,788.29	32° 35' 46.824 N	104° 4' 27.325 W
8,680.0	89.50	265.20	7,967.5	78.0	-960.1	580,752.18	579,725.50	32° 35' 46.775 N	104° 4' 28.059 W
8,744.0	89.70	267.10	7,968.0	73.7	-1,024.0	580,747.89	579,661.65	32° 35' 46.734 N	104° 4' 28.806 W
8,807.0	91.00	269.50	7,967.6	71.9	-1,086.9	580,746.02	579,598.68	32° 35' 46.717 N	104° 4' 29.542 W
8,870.0	91.60	270.50	7,966.1	71.9	-1,149.9	580,746.02	579,535.70	32° 35' 46.718 N	104° 4' 30.278 W
8,934.0	92.70	269.60	7,963.7	71.9	-1,213.9	580,746.07	579,471.75	32° 35' 46.721 N	104° 4' 31.026 W
8,997.0	92.40	269.60	7,960.9	71.5	-1,276.8	580,745.63	579,408.81	32° 35' 46.718 N	104° 4' 31.761 W
9,060.0	89.90	270.30	7,959.7	71.4	-1,339.8	580,745.58	579,345.83	32° 35' 46.719 N	104° 4' 32.497 W



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E, Burton 4 PM Federal Com #1H	MD Reference:	GL3306 +20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,123.0	89.00	270.50	7,960.3	71.9	-1,402.8	580,746.02	579,282.83	32° 35' 46.725 N	104° 4' 33.234 W	
9,186.0	89.10	270.00	7,961.3	72.1	-1,465.8	580,746.29	579,219.84	32° 35' 46.729 N	104° 4' 33.970 W	
9,250.0	89.90	269.60	7,961.9	71.9	-1,529.8	580,746.07	579,155.85	32° 35' 46.728 N	104° 4' 34.718 W	
9,313.0	90.30	268.50	7,961.8	70.9	-1,592.8	580,745.03	579,092.86	32° 35' 46.719 N	104° 4' 35.455 W	
9,376.0	90.40	267.60	7,961.4	68.7	-1,655.7	580,742.88	579,029.89	32° 35' 46.700 N	104° 4' 36.191 W	
9,440.0	90.50	268.50	7,960.9	66.5	-1,719.7	580,740.70	578,965.93	32° 35' 46.679 N	104° 4' 36.938 W	
9,503.0	89.80	269.80	7,960.7	65.6	-1,782.7	580,739.77	578,902.94	32° 35' 46.672 N	104° 4' 37.675 W	
9,566.0	90.10	269.50	7,960.8	65.2	-1,845.7	580,739.38	578,839.94	32° 35' 46.669 N	104° 4' 38.411 W	
9,629.0	90.60	269.20	7,960.4	64.5	-1,908.7	580,738.67	578,776.95	32° 35' 46.664 N	104° 4' 39.147 W	
9,692.0	90.90	269.30	7,959.6	63.7	-1,971.7	580,737.85	578,713.96	32° 35' 46.657 N	104° 4' 39.884 W	
9,756.0	91.30	269.10	7,958.3	62.8	-2,035.7	580,736.95	578,649.98	32° 35' 46.650 N	104° 4' 40.632 W	
9,819.0	91.60	268.30	7,956.7	61.4	-2,098.6	580,735.52	578,587.02	32° 35' 46.637 N	104° 4' 41.368 W	
9,914.0	89.40	269.00	7,955.9	59.1	-2,193.6	580,733.29	578,492.05	32° 35' 46.617 N	104° 4' 42.478 W	
10,009.0	88.90	268.00	7,957.3	56.6	-2,288.5	580,730.80	578,397.10	32° 35' 46.595 N	104° 4' 43.588 W	
10,104.0	91.00	267.60	7,957.4	53.0	-2,383.5	580,727.15	578,302.17	32° 35' 46.561 N	104° 4' 44.698 W	
10,198.0	91.30	266.90	7,955.5	48.5	-2,477.3	580,722.64	578,208.30	32° 35' 46.519 N	104° 4' 45.795 W	
10,293.0	92.20	266.60	7,952.6	43.1	-2,572.1	580,717.26	578,113.50	32° 35' 46.468 N	104° 4' 46.903 W	
10,388.0	91.20	267.80	7,949.8	38.5	-2,667.0	580,712.62	578,018.66	32° 35' 46.424 N	104° 4' 48.012 W	
10,483.0	92.20	267.20	7,947.0	34.3	-2,761.8	580,708.48	577,923.79	32° 35' 46.385 N	104° 4' 49.121 W	
10,578.0	92.60	267.80	7,943.0	30.2	-2,856.7	580,704.34	577,828.96	32° 35' 46.347 N	104° 4' 50.230 W	
10,673.0	90.50	267.40	7,940.4	26.2	-2,951.5	580,700.36	577,734.09	32° 35' 46.309 N	104° 4' 51.339 W	
10,767.0	89.50	269.10	7,940.4	23.3	-3,045.5	580,697.49	577,640.14	32° 35' 46.283 N	104° 4' 52.437 W	
10,862.0	88.30	269.10	7,942.3	21.8	-3,140.5	580,696.00	577,545.17	32° 35' 46.271 N	104° 4' 53.547 W	
10,956.0	92.30	269.70	7,941.8	20.9	-3,234.4	580,695.02	577,451.19	32° 35' 46.263 N	104° 4' 54.646 W	
11,051.0	90.50	270.40	7,939.4	20.9	-3,329.4	580,695.10	577,356.23	32° 35' 46.266 N	104° 4' 55.756 W	
11,146.0	90.10	269.50	7,938.9	20.9	-3,424.4	580,695.02	577,261.23	32° 35' 46.268 N	104° 4' 56.866 W	
11,241.0	89.90	267.80	7,938.9	18.6	-3,519.4	580,692.78	577,166.26	32° 35' 46.248 N	104° 4' 57.976 W	
11,336.0	88.40	265.90	7,940.4	13.4	-3,614.2	580,687.56	577,071.42	32° 35' 46.198 N	104° 4' 59.085 W	
11,430.0	91.70	266.10	7,940.3	6.8	-3,708.0	580,681.00	576,977.66	32° 35' 46.136 N	104° 5' 0.181 W	
11,525.0	94.10	266.50	7,935.5	0.7	-3,802.6	580,674.88	576,882.99	32° 35' 46.077 N	104° 5' 1.288 W	
11,620.0	93.00	270.90	7,929.6	-1.4	-3,897.4	580,672.73	576,788.22	32° 35' 46.058 N	104° 5' 2.396 W	
11,715.0	89.30	273.40	7,927.7	2.1	-3,992.3	580,676.30	576,693.33	32° 35' 46.096 N	104° 5' 3.505 W	
11,809.0	86.80	272.10	7,930.9	6.6	-4,086.1	580,680.80	576,599.50	32° 35' 46.142 N	104° 5' 4.602 W	
11,904.0	85.80	267.50	7,937.0	6.3	-4,180.9	580,680.48	576,504.73	32° 35' 46.141 N	104° 5' 5.710 W	
11,999.0	91.60	263.80	7,939.2	-0.9	-4,275.5	580,673.27	576,410.08	32° 35' 46.072 N	104° 5' 6.816 W	
12,063.0	92.40	264.70	7,936.9	-7.3	-4,339.2	580,666.86	576,346.44	32° 35' 46.010 N	104° 5' 7.560 W	
12,126.0	93.50	266.20	7,933.7	-12.3	-4,401.9	580,661.87	576,283.73	32° 35' 45.962 N	104° 5' 8.293 W	
12,189.0	92.20	265.20	7,930.6	-17.0	-4,464.6	580,657.15	576,220.99	32° 35' 45.917 N	104° 5' 9.027 W	
12,284.0	94.20	267.20	7,925.2	-23.3	-4,559.3	580,650.87	576,126.35	32° 35' 45.857 N	104° 5' 10.133 W	
12,379.0	92.70	267.60	7,919.5	-27.6	-4,654.0	580,646.57	576,031.63	32° 35' 45.817 N	104° 5' 11.241 W	
12,410.0	90.80	270.00	7,918.6	-28.2	-4,685.0	580,645.92	576,000.65	32° 35' 45.811 N	104° 5' 11.603 W	
12,490.0	90.60	270.00	7,917.6	-28.2	-4,765.0	580,645.92	575,920.66	32° 35' 45.813 N	104° 5' 12.538 W	
12,550.0	90.00	270.00	7,917.3	-28.2	-4,825.0	580,645.92	575,860.66	32° 35' 45.814 N	104° 5' 13.239 W	

12550 MD Projected to Bit

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,320.0	7,316.9	126.9	-4.4	7320 MD VES Gyro Survey
12,550.0	7,917.3	-28.2	-4,825.0	12550 MD Projected to Bit



Stryker Directional Survey Report - Geographic



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Burton 4 PM Federal Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3306 + 20 @ 3326.0usft (Patterson 41)
Site:	Section 4-20S-29E Burton 4 PM Federal Com #1H	MD Reference:	GL 3306 + 20 @ 3326.0usft (Patterson 41)
Well:	Burton 4 PM Federal Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Operating Company Mewbourne Oil Co.
Well Name & Number Burton 4 PM Fed Com #1H
Sales Ticket Number 0006050654-1
Date 12/28/2013

Company Rep Brian Reede
Field 0
BOT Service Rep John Davis
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	8,321.00	9,960	6,230	
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,478.82	12,410	10,680	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD	7925.00		KOP		7432.00		Open Hole		6.125	Casing Vol. (bbl)	308.4
Carry Fluid Weight (ppg)			8.8		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		8059.18							

20	JR Sleeve S3 Hyd Set Packer	8059.18	9.55	5.313	3.875				
	4-1/2-13.5 LTC Nipple	8068.73	8.09	5.000	3.920				
	8 Joints of 4-1/2-13.5 LTC Casing	8076.82	316.94	5.000	3.920				
19	3.625 EX Frac Sleeve	8393.76	2.40	5.750		3.525	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	8396.16	118.22	5.000	3.920				
	Baker Open Hole Packer	8514.38	3.89	5.820	3.875		2154		
18	2 Joints of 4-1/2-13.5 LTC Casing	8518.27	79.59	5.000	3.920				
	3.500 EX Frac Sleeve	8597.86	2.40			3.400	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	8600.26	119.22	5.000	3.920				
17	Baker Open Hole Packer	8719.48	3.89		3.875		2154		
	3 Joints of 4-1/2-13.5 LTC Casing	8723.37	119.44	5.000	3.920				
	3.375 EX Frac Sleeve	8842.81	2.40			3.275	2286		
16	3 Joint of 4-1/2-13.5 LTC Casing	8845.21	119.70	5.000	3.920				
	Baker Open Hole Packer	8964.91	3.89		3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	8968.80	81.45	5.000	3.920				
	3.250 EX Frac Sleeve	9050.25	2.40			3.150	2286		
	3 Joint of 4-1/2-13.5 LTC Casing	9052.65	117.82	5.000	3.920				
	Baker Open Hole Packer	9170.47	3.89		3.875		2154		
	2 Joints of 4-1/2-13.5 LTC Casing	9174.36	79.66	5.000	3.920				
	3.125 EX Frac Sleeve	9254.02	2.40			3.025	2286		
	3 Joints of 4-1/2-13.5 LTC Casing	9256.42	118.49	5.000	3.920				
	Baker Open Hole Packer	9374.91	3.89		3.875		2154		

Operating Company Mewbourne Oil Co.
Well Name & Number Burton 4 PM Fed Com #1H
Sales Ticket Number 0006050654-1

Company Rep Brian Reede
Field 0
BOT Service Rep John Davis
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	8,321.00	9,960	16,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,478.82	12,410	10,680
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	7925.00		KOP	7432.00		Open Hole	6.125	Casing Vol. (bbl)		308.4
Carry Fluid Weight (ppg)		8.8		Propanant Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ (BBL)
15		3 Joints of 4-1/2-13.5 LTC Casing	9378.80	118.86	5.000	3.920				
		3.000 EX Frac sleeve	9497.66	2.40			2.900	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9500.06	119.48	5.000	3.920				
14		Baker Open Hole Packer	9619.54	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9623.43	79.25	5.000	3.920				
		2.875 EX Frac Sleeve	9702.68	2.40			2.775	2286		
13		3 Joints of 4-1/2-13.5 LTC Casing	9705.08	117.58	5.000	3.920				
		Baker Open Hole Packer	9822.66	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9826.55	81.01	5.000	3.920				
12		2.750 EX Frac Sleeve	9907.56	2.40			2.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9909.96	118.98	5.000	3.920				
		Baker Open Hole Packer	10028.94	3.89		3.875		2154		
11		3 Joints of 4-1/2-13.5 LTC Casing	10032.83	117.25	5.000	3.920				
		2.625 EX Frac Sleeve	10150.08	2.40			2.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10152.48	119.72	5.000	3.920				
10		Baker Open Hole Packer	10272.20	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10276.09	81.62	5.000	3.920				
		2.500 EX Frac Sleeve	10357.71	2.40			2.400	2286		
9		3 Joint of 4-1/2-13.5 LTC Casing	10360.11	117.80	5.000	3.920				
		Baker Open Hole Packer	10477.91	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10481.80	79.06	5.000	3.920				
		2.375 EX Frac Sleeve	10560.86	2.40			2.275	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10563.26	120.06	5.000	3.920				
		Baker Open Hole Packer	10683.32	3.89		3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	10687.21	79.09	5.000	3.920				
		2.250 EX Frac Sleeve	10766.30	2.40			2.150	2286		

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District Location Odessa, TX



Date 12/28/2013

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	8,321.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,478.82	12,410	10,680
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-
TVD	7925.00		KOP		7432.00		Open Hole	6.125	Casing Vol. (bbl)	308.4
Carry Fluid Weight (ppg)	8.8		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)
8		3 Joints of 4-1/2-13.5 LTC Casing	10768.70	119.64	5.000	3.920				
		Baker Open Hole Packer	10808.34	3.89		3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	10892.23	118.31	5.000	3.920				
7		2.125 EX Frac Sleeve	11010.54	2.40			2.025	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11012.94	119.14	5.000	3.920				
		Baker Open Hole Packer	11132.08	3.89		3.875		2154		
6		2 Joint of 4-1/2-13.5 LTC Casing	11135.97	79.21	5.000	3.920				
		2.000 EX Frac Sleeve	11215.18	2.40			1.900	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11217.58	117.73	5.000	3.920				
5		Baker Open Hole Packer	11335.31	3.89		3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11339.20	121.57	5.000	3.920				
		1.875 EX Frac Sleeve	11460.77	2.40			1.775	2286		
4		3 Joints of 4-1/2-13.5 LTC Casing	11463.17	119.70	5.000	3.920				
		Baker Open Hole Packer	11582.87	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11586.76	80.14	5.000	3.920				
3		1.750 EX Frac Sleeve	11666.90	2.40			1.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	11669.30	119.94	5.000	3.920				
		Baker Open Hole Packer	11789.23	3.89		3.875		2154		
2		2 Joints of 4-1/2-13.5 LTC Casing	11793.13	78.56	5.000	3.920				
		1.625 EX Frac Sleeve	11871.69	2.40			1.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11874.09	119.23	5.000	3.920				
1		Baker Open Hole Packer	11908.32	3.89		3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11997.21	78.54	5.000	3.920				
		1.500 DBL Ball Frac Sleeve	12075.75	2.40			1.400	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	12078.15	119.49	5.000	3.920				
		Baker Open Hole Packer	12197.64	3.89		3.875		2154		

Company Rep	Brian Reede
Field	0
BOT Service Rep	John Davis
District Location	Odessa, TX



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TVD		7925.00		KOP		7432.00		Open Hole		6.125	Casing Vol. (bbl)	308.4
Carry Fluid Weight (ppg)			8.8		Propant Content (ppa)				Max Drill Out Size		0	

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