

Mewbourne Oil Company .

Eddy County, New Mexico

Glock 17 MP Federal #1H

Glock 17 MP Federal #1H

OH

15-41417

Design: OH

Standard Survey Report

23 October, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Glock 17 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3267 + 20 @ 3287.0usft (Patterson 45)
Site:	Glock 17 MP Federal #1H	MD Reference:	GL 3267 + 20 @ 3287.0usft (Patterson 45)
Well:	Glock 17 MP Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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:	Glock 17 MP Federal #1H
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Site Position:	From:	Map	Northing:	570,144.41 usft	Latitude:	32° 34' 2.014 N
			Easting:	570,447.90 usft	Longitude:	104° 6' 16.774 W
Position Uncertainty:	0.0 usft		Slot Radius:	13-3/16 "	Grid Convergence:	0.12 °

Well		Glock 17 MP Federal #1H				
Well Position	+N-S	0.0 usft	Northing:	570,144.41 usft	Latitude:	32° 34' 2.014 N
	+E-W	0.0 usft	Easting:	570,447.90 usft	Longitude:	104° 6' 16.774 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,267.0 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/20/2013	7.58	60.36	48,539

Design:	OH
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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	90.00

Survey/Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	10/22/2013	100.0	7,100.0	Gyro Survey #1 (OH)	GyroFlex	
		7,159.0	12,390.0	MWD Survey #2 (OH)	MWD	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	0.69	166.67	100.0	-0.6	0.1	0.1	0.69	0.69	0.00
	200.0	0.90	190.81	200.0	-1.9	0.1	0.1	0.39	0.21	24.14
	300.0	1.42	213.00	300.0	-3.8	-0.7	-0.7	0.68	0.52	22.19
	400.0	1.41	203.62	399.9	-5.9	-1.9	-1.9	0.23	-0.01	-9.38
	500.0	1.99	213.25	499.9	-8.5	-3.3	-3.3	0.64	0.58	9.63
	600.0	1.55	213.38	599.8	-11.1	-5.0	-5.0	0.44	-0.44	0.13
	700.0	1.37	172.72	699.8	-13.4	-5.6	-5.6	1.03	-0.18	-40.66
	800.0	1.26	116.65	799.8	-15.1	-4.5	-4.5	1.24	-0.11	-56.07
	900.0	1.52	124.02	899.8	-16.3	-2.4	-2.4	0.32	0.26	7.37



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Glock 17-MPI Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3267 +20 @ 3287.0usft/(Patterson) 45
Site:	Glock 17-MPI Federal #1H	MD Reference:	GL 3267 +20 @ 3287.0usft/(Patterson) 45
Well:	Glock 17-MPI Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.0	1.60	107.03	999.7	-17.5	0.1	0.1	0.47	0.08	-16.99
1,100.0	1.79	115.78	1,099.7	-18.5	2.8	2.8	0.32	0.19	8.75
1,200.0	1.04	107.77	1,199.7	-19.5	5.1	5.1	0.77	-0.75	-8.01
1,300.0	0.93	118.53	1,299.6	-20.2	6.6	6.6	0.21	-0.11	10.76
1,400.0	1.18	126.49	1,399.6	-21.2	8.2	8.2	0.29	0.25	7.96
1,500.0	1.44	145.49	1,499.6	-22.8	9.7	9.7	0.50	0.26	19.00
1,600.0	1.13	146.54	1,599.6	-24.7	11.0	11.0	0.31	-0.31	1.05
1,700.0	1.28	147.68	1,699.5	-26.4	12.1	12.1	0.15	0.15	1.14
1,800.0	1.06	191.00	1,799.5	-28.3	12.5	12.5	0.89	-0.22	43.32
1,900.0	0.91	190.89	1,899.5	-30.0	12.2	12.2	0.15	-0.15	-0.11
2,000.0	1.11	233.23	1,999.5	-31.3	11.3	11.3	0.75	0.20	42.34
2,100.0	2.20	217.46	2,099.5	-33.4	9.3	9.3	1.17	1.09	-15.77
2,200.0	3.29	204.89	2,199.3	-37.6	7.0	7.0	1.24	1.09	-12.57
2,300.0	4.57	196.94	2,299.1	-44.0	4.6	4.6	1.39	1.28	-7.95
2,400.0	5.29	202.96	2,398.7	-52.0	1.6	1.6	0.89	0.72	6.02
2,500.0	6.78	210.76	2,498.2	-61.4	-3.2	-3.2	1.70	1.49	7.80
2,600.0	7.98	212.12	2,597.3	-72.3	-9.9	-9.9	1.21	1.20	1.36
2,700.0	8.46	212.72	2,696.3	-84.4	-17.5	-17.5	0.49	0.48	0.60
2,800.0	8.84	215.32	2,795.2	-96.8	-26.0	-26.0	0.55	0.38	2.60
2,900.0	9.16	218.08	2,894.0	-109.4	-35.3	-35.3	0.54	0.32	2.76
3,000.0	9.36	219.98	2,992.7	-121.9	-45.5	-45.5	0.37	0.20	1.90
3,100.0	8.08	220.57	3,091.5	-133.4	-55.2	-55.2	1.28	-1.28	0.59
3,200.0	6.54	224.89	3,190.7	-142.8	-63.8	-63.8	1.63	-1.54	4.32
3,300.0	5.24	225.42	3,290.1	-150.1	-71.1	-71.1	1.30	-1.30	0.53
3,400.0	4.73	227.07	3,389.8	-156.1	-77.4	-77.4	0.53	-0.51	1.65
3,500.0	4.04	235.47	3,489.5	-160.9	-83.3	-83.3	0.94	-0.69	8.40
3,600.0	3.12	230.54	3,589.3	-164.6	-88.3	-88.3	0.97	-0.92	-4.93
3,700.0	2.62	225.59	3,689.2	-167.9	-92.0	-92.0	0.56	-0.50	-4.95
3,800.0	2.26	225.39	3,789.1	-170.9	-95.1	-95.1	0.36	-0.36	-0.20
3,900.0	1.96	222.05	3,889.0	-173.6	-97.6	-97.6	0.32	-0.30	-3.34
4,000.0	1.97	218.00	3,988.9	-176.2	-99.8	-99.8	0.14	0.01	-4.05
4,100.0	1.71	213.87	4,088.9	-178.8	-101.7	-101.7	0.29	-0.26	-4.13
4,200.0	1.46	226.83	4,188.8	-180.9	-103.5	-103.5	0.44	-0.25	12.96
4,300.0	1.35	228.02	4,288.8	-182.6	-105.3	-105.3	0.11	-0.11	1.19
4,400.0	1.94	212.39	4,388.8	-184.8	-107.1	-107.1	0.74	0.59	-15.63
4,500.0	2.39	205.76	4,488.7	-188.1	-108.9	-108.9	0.51	0.45	-6.63
4,600.0	1.86	192.81	4,588.6	-191.5	-110.1	-110.1	0.71	-0.53	-12.95
4,700.0	1.41	181.38	4,688.6	-194.4	-110.5	-110.5	0.55	-0.45	-11.43
4,800.0	1.49	186.36	4,788.6	-196.9	-110.7	-110.7	0.15	0.08	4.98
4,900.0	1.14	149.31	4,888.5	-199.0	-110.3	-110.3	0.90	-0.35	-37.05
5,000.0	1.53	139.34	4,988.5	-200.9	-109.0	-109.0	0.45	0.39	-9.97
5,100.0	1.30	128.35	5,088.5	-202.6	-107.2	-107.2	0.35	-0.23	-10.99
5,200.0	1.22	134.54	5,188.5	-204.1	-105.6	-105.6	0.16	-0.08	6.19



Stryker Directional Survey Report



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Site:	Glock 17 MP Federal #1H	MD Reference:	GL 3267 + 20 @ 3287'0usft (Patterson 45)
Well:	Glock 17 MP Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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	1.02	159.75	5,288.4	-205.6	-104.5	-104.5	0.53	-0.20	25.21
5,400.0	0.91	178.14	5,388.4	-207.3	-104.2	-104.2	0.33	-0.11	18.39
5,500.0	0.88	194.57	5,488.4	-208.8	-104.3	-104.3	0.26	-0.03	16.43
5,600.0	0.74	182.11	5,588.4	-210.2	-104.5	-104.5	0.22	-0.14	-12.46
5,700.0	0.58	213.04	5,688.4	-211.3	-104.8	-104.8	0.38	-0.16	30.93
5,800.0	0.42	247.06	5,788.4	-211.8	-105.5	-105.5	0.33	-0.16	34.02
5,900.0	0.43	244.90	5,888.4	-212.1	-106.1	-106.1	0.02	0.01	-2.16
6,000.0	0.60	126.93	5,988.4	-212.6	-106.1	-106.1	0.89	0.17	-117.97
6,100.0	0.60	157.88	6,088.4	-213.4	-105.4	-105.4	0.32	0.00	30.95
6,200.0	0.22	329.00	6,188.4	-213.7	-105.3	-105.3	0.82	-0.38	171.12
6,300.0	0.22	72.11	6,288.4	-213.5	-105.3	-105.3	0.34	0.00	103.11
6,400.0	0.72	19.85	6,388.4	-212.9	-104.9	-104.9	0.61	0.50	-52.26
6,500.0	0.94	20.97	6,488.4	-211.5	-104.4	-104.4	0.22	0.22	1.12
6,600.0	0.75	13.80	6,588.4	-210.1	-103.9	-103.9	0.22	-0.19	-7.17
6,700.0	0.57	51.31	6,688.4	-209.1	-103.4	-103.4	0.46	-0.18	37.51
6,800.0	1.28	137.33	6,788.3	-209.7	-102.2	-102.2	1.36	0.71	86.02
6,900.0	1.47	142.69	6,888.3	-211.5	-100.7	-100.7	0.23	0.19	5.36
7,000.0	1.29	118.88	6,988.3	-213.1	-98.9	-98.9	0.60	-0.18	-23.81
7,100.0	0.81	137.81	7,088.3	-214.1	-97.5	-97.5	0.59	-0.48	18.93
7,100 MD MS Gyro									
7,159.0	1.00	76.00	7,147.3	-214.3	-96.7	-96.7	1.60	0.32	-104.76
7,190.0	4.80	48.20	7,178.2	-213.4	-95.4	-95.4	12.72	12.26	-89.68
7,222.0	9.40	42.60	7,210.0	-210.6	-92.7	-92.7	14.52	14.38	-17.50
7,254.0	13.80	40.10	7,241.3	-205.7	-88.5	-88.5	13.84	13.75	-7.81
7,286.0	16.80	39.50	7,272.2	-199.2	-83.0	-83.0	9.39	9.38	-1.88
7,317.0	17.70	38.20	7,301.8	-192.1	-77.3	-77.3	3.16	2.90	-4.19
7,349.0	19.70	41.50	7,332.1	-184.2	-70.7	-70.7	7.07	6.25	10.31
7,381.0	23.70	44.50	7,361.8	-175.6	-62.6	-62.6	12.97	12.50	9.38
7,413.0	28.10	46.90	7,390.6	-165.8	-52.6	-52.6	14.13	13.75	7.50
7,444.0	30.20	48.60	7,417.7	-155.7	-41.4	-41.4	7.28	6.77	5.48
7,476.0	32.70	50.30	7,445.0	-144.8	-28.7	-28.7	8.29	7.81	5.31
7,508.0	35.20	53.30	7,471.5	-133.8	-14.7	-14.7	9.40	7.81	9.38
7,540.0	37.70	57.60	7,497.2	-123.0	1.0	1.0	11.17	7.81	13.44
7,572.0	40.50	61.70	7,522.1	-112.9	18.4	18.4	11.91	8.75	12.81
7,603.0	44.20	65.10	7,545.0	-103.6	37.1	37.1	14.03	11.94	10.97
7,635.0	47.80	67.00	7,567.2	-94.2	58.1	58.1	12.03	11.25	5.94
7,667.0	50.00	67.30	7,588.2	-84.9	80.3	80.3	6.91	6.88	0.94
7,699.0	52.50	67.20	7,608.3	-75.2	103.3	103.3	7.82	7.81	-0.31
7,731.0	55.90	67.10	7,627.0	-65.1	127.3	127.3	10.63	10.63	-0.31
7,762.0	58.90	67.30	7,643.7	-55.0	151.3	151.3	9.69	9.68	0.65
7,794.0	61.40	69.30	7,659.6	-44.8	177.1	177.1	9.51	7.81	6.25
7,826.0	64.40	72.00	7,674.2	-35.3	204.0	204.0	12.01	9.38	8.44
7,858.0	68.10	74.40	7,687.1	-26.9	232.0	232.0	13.45	11.56	7.50



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Glock 17 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3267+20 @ 3287.0usft (Patterson) 45
Site:	Glock 17 MP Federal #1H	MD Reference:	GL 3267+20 @ 3287.0usft (Patterson) 45
Well:	Glock 17 MP Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,889.0	71.50	76.00	7,697.8	-19.4	260.1	260.1	11.99	10.97	5.16
7,921.0	74.90	78.30	7,707.0	-12.6	290.0	290.0	12.66	10.63	7.19
7,953.0	77.50	81.30	7,714.7	-7.1	320.6	320.6	12.20	8.13	9.38
7,984.0	79.40	83.40	7,720.9	-3.1	350.7	350.7	9.03	6.13	6.77
8,016.0	81.80	85.10	7,726.1	0.1	382.1	382.1	9.15	7.50	5.31
8,048.0	86.00	87.40	7,729.5	2.1	413.8	413.8	14.94	13.13	7.19
8,080.0	87.90	88.00	7,731.2	3.4	445.8	445.8	6.23	5.94	1.88
8,114.1	88.55	88.27	7,732.3	4.5	479.9	479.9	2.06	1.90	0.79
LP Glock 17 MP Federal #1H									
8,143.0	89.10	88.50	7,732.9	5.3	508.7	508.7	2.06	1.90	0.79
8,207.0	89.40	88.70	7,733.7	6.9	572.7	572.7	0.56	0.47	0.31
8,270.0	89.50	88.60	7,734.3	8.4	635.7	635.7	0.22	0.16	-0.16
8,334.0	89.50	88.30	7,734.9	10.1	699.6	699.6	0.47	0.00	-0.47
8,397.0	89.70	88.00	7,735.3	12.2	762.6	762.6	0.57	0.32	-0.48
8,461.0	89.60	87.50	7,735.7	14.7	826.6	826.6	0.80	-0.16	-0.78
8,524.0	88.80	88.10	7,736.6	17.1	889.5	889.5	1.59	-1.27	0.95
8,588.0	88.30	88.80	7,738.2	18.8	953.5	953.5	1.34	-0.78	1.09
8,652.0	88.40	88.10	7,740.0	20.5	1,017.4	1,017.4	1.10	0.16	-1.09
8,715.0	88.20	88.90	7,741.9	22.2	1,080.4	1,080.4	1.31	-0.32	1.27
8,779.0	88.30	89.50	7,743.9	23.1	1,144.3	1,144.3	0.95	0.16	0.94
8,842.0	88.60	88.80	7,745.6	24.0	1,207.3	1,207.3	1.21	0.48	-1.11
8,906.0	88.40	89.80	7,747.2	24.8	1,271.3	1,271.3	1.59	-0.31	1.56
8,969.0	88.70	90.10	7,748.8	24.9	1,334.2	1,334.2	0.67	0.48	0.48
9,033.0	88.90	90.30	7,750.2	24.6	1,398.2	1,398.2	0.44	0.31	0.31
9,096.0	89.50	90.40	7,751.0	24.3	1,461.2	1,461.2	-0.97	-0.95	0.16
9,160.0	89.10	91.30	7,751.8	23.3	1,525.2	1,525.2	1.54	-0.63	1.41
9,223.0	89.30	91.20	7,752.7	21.9	1,588.2	1,588.2	0.35	0.32	-0.16
9,287.0	89.80	90.70	7,753.2	20.9	1,652.2	1,652.2	1.10	0.78	-0.78
9,350.0	88.90	91.00	7,753.9	19.9	1,715.2	1,715.2	1.51	-1.43	0.48
9,414.0	89.10	91.20	7,755.0	18.7	1,779.1	1,779.1	0.44	0.31	0.31
9,478.0	89.30	90.60	7,755.9	17.7	1,843.1	1,843.1	0.99	0.31	-0.94
9,541.0	88.50	90.90	7,757.1	16.9	1,906.1	1,906.1	1.36	-1.27	0.48
9,605.0	88.40	91.00	7,758.9	15.8	1,970.1	1,970.1	0.22	-0.16	0.16
9,668.0	88.70	90.60	7,760.5	14.9	2,033.0	2,033.0	0.79	0.48	-0.63
9,732.0	88.90	90.30	7,761.8	14.4	2,097.0	2,097.0	0.56	0.31	-0.47
9,795.0	88.80	90.90	7,763.1	13.8	2,160.0	2,160.0	0.97	-0.16	0.95
9,859.0	89.10	90.70	7,764.2	12.9	2,224.0	2,224.0	0.56	0.47	-0.31
9,922.0	89.40	90.50	7,765.1	12.2	2,287.0	2,287.0	0.57	0.48	-0.32
9,986.0	89.50	90.30	7,765.7	11.8	2,351.0	2,351.0	0.35	0.16	-0.31
10,049.0	89.00	90.90	7,766.5	11.1	2,414.0	2,414.0	1.24	-0.79	0.95
10,113.0	88.80	91.00	7,767.7	10.1	2,478.0	2,478.0	0.35	-0.31	0.16
10,176.0	89.10	90.70	7,768.9	9.1	2,540.9	2,540.9	0.67	0.48	-0.48
10,240.0	89.50	90.30	7,769.7	8.6	2,604.9	2,604.9	0.88	0.63	-0.63
10,303.0	89.20	89.50	7,770.4	8.7	2,667.9	2,667.9	1.36	-0.48	-1.27



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3267 +20 @ 3287.0usft (Patterson 45)
Site:	Glock 17 MP Federal #1H	MD Reference:	GL 3267 +20 @ 3287.0usft (Patterson 45)
Well:	Glock 17 MP Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,370.0	89.60	88.10	7,771.1	10.1	2,734.9	2,734.9	2.17	0.60	-2.09
10,433.0	89.30	88.10	7,771.7	12.2	2,797.9	2,797.9	0.48	-0.48	0.00
10,497.0	89.20	88.00	7,772.5	14.3	2,861.8	2,861.8	0.22	-0.16	-0.16
10,560.0	89.10	88.10	7,773.5	16.5	2,924.8	2,924.8	0.22	-0.16	0.16
10,624.0	89.00	87.90	7,774.5	18.7	2,988.7	2,988.7	0.35	-0.16	-0.31
10,687.0	89.40	87.50	7,775.4	21.2	3,051.7	3,051.7	0.90	0.63	-0.63
10,751.0	88.70	87.60	7,776.5	24.0	3,115.6	3,115.6	1.10	-1.09	0.16
10,814.0	88.60	87.70	7,778.0	26.6	3,178.5	3,178.5	0.22	-0.16	0.16
10,878.0	88.00	88.20	7,779.9	28.8	3,242.5	3,242.5	1.22	-0.94	0.78
10,941.0	87.90	88.30	7,782.1	30.8	3,305.4	3,305.4	0.22	-0.16	0.16
11,005.0	88.00	88.90	7,784.4	32.3	3,369.3	3,369.3	0.95	0.16	0.94
11,068.0	88.00	89.30	7,786.6	33.3	3,432.3	3,432.3	0.63	0.00	0.63
11,132.0	88.50	89.50	7,788.6	34.0	3,496.3	3,496.3	0.84	0.78	0.31
11,195.0	88.60	89.40	7,790.1	34.6	3,559.2	3,559.2	0.22	0.16	-0.16
11,259.0	88.50	89.30	7,791.8	35.3	3,623.2	3,623.2	0.22	-0.16	-0.16
11,322.0	89.40	89.30	7,792.9	36.1	3,686.2	3,686.2	1.43	1.43	0.00
11,386.0	89.10	88.90	7,793.8	37.1	3,750.2	3,750.2	0.78	-0.47	-0.63
11,449.0	89.10	88.90	7,794.7	38.3	3,813.2	3,813.2	0.00	0.00	0.00
11,513.0	89.50	89.20	7,795.5	39.4	3,877.1	3,877.1	0.78	0.63	0.47
11,576.0	89.30	89.00	7,796.2	40.4	3,940.1	3,940.1	0.45	-0.32	-0.32
11,640.0	89.40	89.10	7,796.9	41.4	4,004.1	4,004.1	0.22	0.16	0.16
11,703.0	89.50	89.10	7,797.5	42.4	4,067.1	4,067.1	0.16	0.16	0.00
11,767.0	89.60	89.50	7,798.0	43.2	4,131.1	4,131.1	0.64	0.16	0.63
11,830.0	89.60	89.50	7,798.5	43.7	4,194.1	4,194.1	0.00	0.00	0.00
11,894.0	89.70	89.90	7,798.9	44.1	4,258.1	4,258.1	0.64	0.16	0.63
11,957.0	89.40	89.80	7,799.3	44.2	4,321.1	4,321.1	0.50	-0.48	-0.16
12,021.0	89.30	89.50	7,800.1	44.6	4,385.1	4,385.1	0.49	-0.16	-0.47
12,085.0	89.40	89.40	7,800.8	45.2	4,449.1	4,449.1	0.22	0.16	-0.16
12,148.0	89.50	89.30	7,801.4	46.0	4,512.1	4,512.1	0.22	0.16	-0.16
12,212.0	89.30	89.40	7,802.1	46.7	4,576.1	4,576.1	0.35	-0.31	0.16
12,275.0	89.40	89.30	7,802.8	47.4	4,639.1	4,639.1	0.22	0.16	-0.16
12,332.0	89.40	89.00	7,803.4	48.2	4,696.1	4,696.1	0.53	0.00	-0.53
12,390.0	89.40	89.00	7,804.0	49.3	4,754.0	4,754.0	0.00	0.00	0.00

12390' MD Projected to Bit - PBHL Glock 17 MP Federal #1H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
7,100.0	7,088.3	-214.1	-97.5	7100' MD MS Gyro
12,390.0	7,804.0	49.3	4,754.0	12390' MD Projected to Bit



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well: Glock 17 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3267 - 20 @ 3287.0usft (Patterson 45)
Site:	Glock 17 MP Federal #1H	MD Reference:	GL 3267 - 20 @ 3287.0usft (Patterson 45)
Well:	Glock 17 MP Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM:5000.1 Single User Db



COMPANY: Mewbourne Oil Company
 WELL: Glock 17 MP Federal #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)

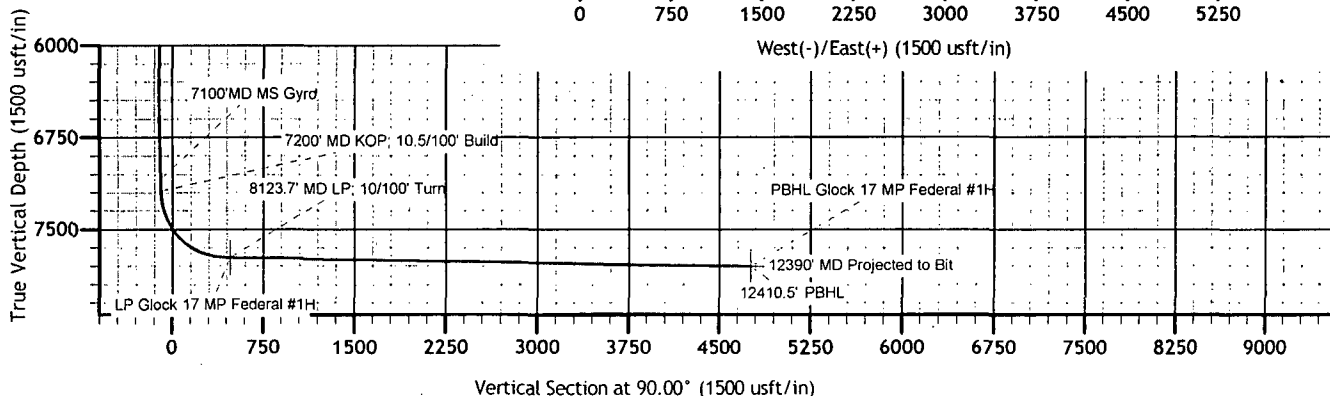
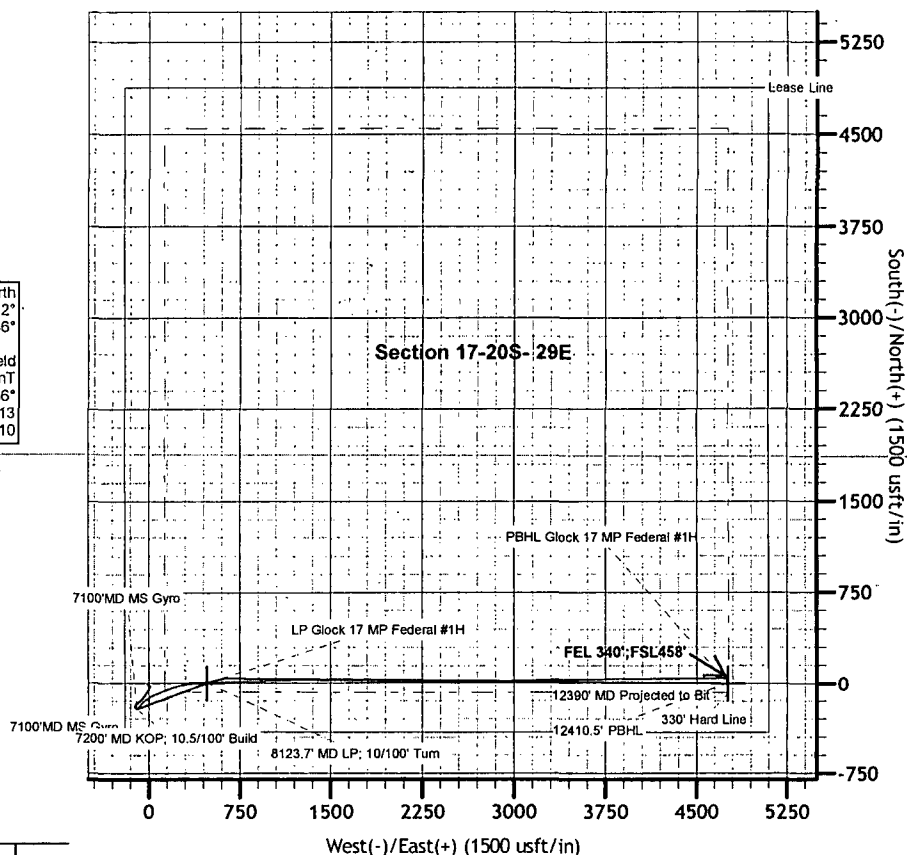
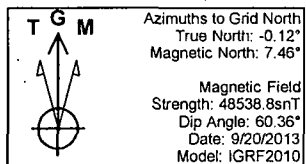


GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.46°

OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001						
GL 3267 + 20 @ 3287.0usft (Patterson 45)						
GROUND ELEVATION: 3267.0						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	570144.41	570447.90	32° 34' 2.014 N	104° 6' 16.774 W	

PLAN SECTIONS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target	
1	7100.0	0.81	137.81	7088.3	-214.1	-97.5	0.00	0.00	-97.5		
2	7200.0	0.81	137.81	7188.3	-215.2	-96.5	0.00	0.00	-96.5		
3	8043.4	88.93	68.88	7730.5	-29.0	405.1	10.51	-68.95	405.1		
4	8123.7	88.93	68.88	7732.0	0.0	480.0	0.00	0.00	480.0	LP Glock 17 MP Federal #1H	
5	8340.3	89.00	90.54	7736.0	38.5	691.8	10.00	90.02	691.8		
6	12410.5	89.00	90.54	7807.0	0.0	4761.2	0.00	0.00	4761.2	PBHL Glock 17 MP Federal #1H	





Company: Mewbourne O&G Lease / Well: GLOCK 17 MP FED. #1H County/Parish: Eddy County State: NM Date: 10/10/2013 API#: 30-015-41417 Dir. Company: TRYKER Latitude: 32 34 2.014 Longitude: 104 6 16.774	Operator: Shawn F Job Number: SVMO-130846 Gyro Serial #: 7409 Proposed Direction: 90 Mag. Declination: 7.46 EAST TO GRID Rig/RKB: Patterson 45 18 ft. Tie-in Company: Surface X: Y:
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TIE-IN Survey					
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Coordinates (+N/-S)	Coordinates (+E/-W)
0.00	0.00	0.00	0.00	0.00	0.00

Digital Multi-Shot Survey Report									
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates (+N/-S)	Coordinates (+E/-W)	Dog-Leg / 100 ft.	Closure Distance	Closure Direction
100.00	0.69	166.67	100.00	0.14	-0.59	0.14	0.69	0.60	166.67
200.00	0.90	190.81	199.99	0.13	-1.94	0.13	0.39	1.95	176.16
300.00	1.42	213.00	299.97	-0.69	-3.75	-0.69	0.68	3.82	190.44
400.00	1.41	203.62	399.94	-1.86	-5.92	-1.86	0.23	6.21	197.44
500.00	1.99	213.25	499.89	-3.30	-8.50	-3.30	0.64	9.12	201.25
600.00	1.55	213.38	599.85	-5.00	-11.08	-5.00	0.44	12.16	204.29
700.00	1.37	172.72	699.82	-5.59	-13.40	-5.59	1.03	14.52	202.66
800.00	1.26	116.65	799.79	-4.46	-15.08	-4.46	1.24	15.72	196.48
900.00	1.52	124.02	899.76	-2.38	-16.31	-2.38	0.32	16.48	188.29
1000.00	1.60	107.03	999.73	0.06	-17.46	0.06	0.47	17.46	179.81
1100.00	1.79	115.78	1099.68	2.80	-18.55	2.80	0.32	18.76	171.42
1200.00	1.04	107.77	1199.65	5.07	-19.51	5.07	0.77	20.15	165.43
1300.00	0.93	118.53	1299.64	6.65	-20.17	6.65	0.21	21.24	161.76
1400.00	1.18	126.49	1399.62	8.19	-21.17	8.19	0.29	22.70	158.86
1500.00	1.44	145.49	1499.59	9.73	-22.82	9.73	0.50	24.80	156.91
1600.00	1.13	146.54	1599.57	10.98	-24.68	10.98	0.31	27.01	156.01
1700.00	1.28	147.68	1699.55	12.12	-26.44	12.12	0.15	29.09	155.37
1800.00	1.06	191.00	1799.53	12.54	-28.29	12.54	0.89	30.95	156.09
1900.00	0.91	190.89	1899.51	12.22	-29.98	12.22	0.15	32.38	157.83
2000.00	1.11	233.23	1999.50	11.29	-31.34	11.29	0.75	33.31	160.19
2100.00	2.20	217.46	2099.46	9.35	-33.45	9.35	1.17	34.73	164.38
2200.00	3.29	204.89	2199.34	6.97	-37.57	6.97	1.24	38.21	169.49
2300.00	4.57	196.94	2299.10	4.60	-43.99	4.60	1.39	44.23	174.02
2400.00	5.29	202.96	2398.73	1.65	-52.04	1.65	0.89	52.07	178.19
2500.00	6.78	210.76	2498.18	-3.17	-61.36	-3.17	1.70	61.44	182.96
2600.00	7.98	212.12	2597.35	-9.88	-72.31	-9.88	1.21	72.98	187.78
2700.00	8.46	212.72	2696.32	-17.55	-84.38	-17.55	0.49	86.18	191.75
2800.00	8.84	215.32	2795.18	-25.97	-96.84	-25.97	0.55	100.26	195.01
2900.00	9.16	218.08	2893.95	-35.32	-109.37	-35.32	0.54	114.93	197.90
3000.00	9.36	219.98	2992.65	-45.45	-121.87	-45.45	0.37	130.07	200.45
3100.00	8.08	220.57	3091.49	-55.25	-133.44	-55.25	1.28	144.42	202.49
3200.00	6.54	224.89	3190.68	-63.84	-142.81	-63.84	1.63	156.43	204.09
3300.00	5.24	225.42	3290.15	-71.11	-150.05	-71.11	1.30	166.05	205.36
3400.00	4.73	227.07	3389.77	-77.38	-156.07	-77.38	0.53	174.20	206.37
3500.00	4.04	235.47	3489.48	-83.30	-160.87	-83.30	0.94	181.16	207.38
3600.00	3.12	230.54	3589.28	-88.31	-164.60	-88.31	0.97	186.79	208.21
3700.00	2.62	225.59	3689.15	-92.04	-167.93	-92.04	0.56	191.50	208.73
3800.00	2.26	225.39	3789.06	-95.08	-170.91	-95.08	0.36	195.58	209.09
3900.00	1.96	222.05	3889.00	-97.63	-173.57	-97.63	0.32	199.14	209.36
4000.00	1.97	218.00	3988.94	-99.83	-176.19	-99.83	0.14	202.51	209.54
4100.00	1.71	213.87	4088.89	-101.72	-178.78	-101.72	0.29	205.69	209.64
4200.00	1.46	226.83	4188.85	-103.48	-180.89	-103.48	0.44	208.40	209.77
4300.00	1.35	228.02	4288.82	-105.29	-182.55	-105.29	0.11	210.74	209.97
4400.00	1.94	212.39	4388.78	-107.07	-184.77	-107.07	0.74	213.55	210.09
4500.00	2.39	205.76	4488.70	-108.88	-188.08	-108.88	0.51	217.32	210.07
4600.00	1.86	192.81	4588.64	-110.15	-191.54	-110.15	0.71	220.95	209.90
4700.00	1.41	181.38	4688.60	-110.54	-194.35	-110.54	0.55	223.59	209.63



Company: Mewbourne O&G Lease / Well: GLOCK 17 MP FED. #1H County/Parish: Eddy County State: NM Date: 10/10/2013 API#: 30-015-41417 Dir. Company: TRYKER Latitude: 32 34 2.014 Longitude: 104 6 16.774	Operator: Shawn F Job Number: SVMO-130846 Gyro Serial #: 7409 Proposed Direction: 90 Mag. Declination: 7.46 EAST TO GRID Rig/RKB: Patterson 45 18 ft. Tie-in Company: Surface X: Y:
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TIE-IN Survey					
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Coordinates (+N/-S) (+E/-W)	
0.00	0.00	0.00	0.00	0.00	0.00

Digital Multi-Shot Survey Report									
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates (+N/-S) (+E/-W)		Dog-Leg / 100 ft.	Closure Distance	Closure Direction
4800.00	1.49	186.36	4788.56	-110.71	-196.87	-110.71	0.15	225.87	209.35
4900.00	1.14	149.31	4888.54	-110.35	-199.02	-110.35	0.90	227.56	209.01
5000.00	1.53	139.34	4988.51	-108.97	-200.89	-108.97	0.45	228.54	208.48
5100.00	1.30	128.35	5088.48	-107.21	-202.60	-107.21	0.35	229.22	207.89
5200.00	1.22	134.54	5188.46	-105.56	-204.06	-105.56	0.16	229.74	207.35
5300.00	1.02	159.75	5288.44	-104.49	-205.64	-104.49	0.53	230.66	206.94
5400.00	0.91	178.14	5388.42	-104.16	-207.27	-104.16	0.33	231.97	206.68
5500.00	0.88	194.57	5488.41	-104.33	-208.80	-104.33	0.26	233.42	206.55
5600.00	0.74	182.11	5588.40	-104.54	-210.19	-104.54	0.22	234.75	206.44
5700.00	0.58	213.04	5688.40	-104.84	-211.26	-104.84	0.38	235.85	206.39
5800.00	0.42	247.06	5788.39	-105.46	-211.83	-105.46	0.33	236.63	206.47
5900.00	0.43	244.90	5888.39	-106.14	-212.13	-106.14	0.02	237.20	206.58
6000.00	0.60	126.93	5988.39	-106.06	-212.60	-106.06	0.89	237.59	206.51
6100.00	0.60	157.88	6088.38	-105.44	-213.40	-105.44	0.32	238.03	206.29
6200.00	0.22	329.00	6188.38	-105.34	-213.72	-105.34	0.82	238.27	206.24
6300.00	0.22	72.11	6288.38	-105.26	-213.50	-105.26	0.34	238.04	206.24
6400.00	0.72	19.85	6388.38	-104.86	-212.85	-104.86	0.61	237.28	206.23
6500.00	0.94	20.97	6488.37	-104.36	-211.49	-104.36	0.22	235.84	206.26
6600.00	0.75	13.80	6588.36	-103.91	-210.09	-103.91	0.22	234.38	206.32
6700.00	0.57	51.31	6688.35	-103.36	-209.15	-103.36	0.46	233.29	206.30
6800.00	1.28	137.33	6788.34	-102.22	-209.66	-102.22	1.36	233.25	205.99
6900.00	1.47	142.69	6888.31	-100.68	-211.50	-100.68	0.23	234.24	205.46
7000.00	1.29	118.88	6988.28	-98.92	-213.06	-98.92	0.60	234.90	204.90
7100.00	0.81	137.81	7088.26	-97.46	-214.13	-97.46	0.59	235.26	204.47



Job Number: SVM0-130846
 Company: Mewbourne Oil & Gas
 Lease/Well: Glock 17 MP Fed 1H
 Location: Eddy County, NM
 Rig Name: Patterson #45
 RKB: 18'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.46°
 Grid: East To Grid North
 File name: S:\SURVEY\NEWSUR~1\RRC\WINSER~1\2013SU~1\MEWBOU~1\MOIG~1.C
 Date/Time: 11-Oct-13 / 11:14
 Curve Name: Surface - 7100' M.D. (SRG)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 90.00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

RECEIVED
 DEC 13 2013
 NMOCD ARTESIA

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.69	166.67	100.00	-.59	.14	.14	.60	166.67	.69
200.00	.90	190.81	199.99	-1.94	.13	.13	1.95	176.16	.39
300.00	1.42	213.00	299.97	-3.75	-.69	-.69	3.82	190.44	.68
400.00	1.41	203.62	399.94	-5.92	-1.86	-1.86	6.21	197.44	.23
500.00	1.99	213.25	499.89	-8.50	-3.30	-3.30	9.12	201.25	.64
600.00	1.55	213.38	599.85	-11.08	-5.00	-5.00	12.16	204.29	.44
700.00	1.37	172.72	699.82	-13.40	-5.59	-5.59	14.52	202.66	1.03
800.00	1.26	116.65	799.79	-15.08	-4.46	-4.46	15.72	196.48	1.24
900.00	1.52	124.02	899.76	-16.31	-2.38	-2.38	16.48	188.29	.32

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	1.60	107.03	999.73	-17.46	.06	.06	17.46	179.81	.47
1100.00	1.79	115.78	1099.68	-18.55	2.80	2.80	18.76	171.42	.32
1200.00	1.04	107.77	1199.65	-19.51	5.07	5.07	20.15	165.43	.77
1300.00	.93	118.53	1299.64	-20.17	6.65	6.65	21.24	161.76	.21
1400.00	1.18	126.49	1399.62	-21.17	8.19	8.19	22.70	158.86	.29
1500.00	1.44	145.49	1499.59	-22.82	9.73	9.73	24.80	156.91	.50
1600.00	1.13	146.54	1599.57	-24.68	10.98	10.98	27.01	156.01	.31
1700.00	1.28	147.68	1699.55	-26.44	12.12	12.12	29.09	155.37	.15
1800.00	1.06	191.00	1799.53	-28.29	12.54	12.54	30.95	156.09	.89
1900.00	.91	190.89	1899.51	-29.98	12.22	12.22	32.38	157.83	.15
2000.00	1.11	233.23	1999.50	-31.34	11.29	11.29	33.31	160.19	.75
2100.00	2.20	217.46	2099.46	-33.45	9.35	9.35	34.73	164.38	1.17
2200.00	3.29	204.89	2199.34	-37.57	6.97	6.97	38.21	169.49	1.24
2300.00	4.57	196.94	2299.10	-43.99	4.60	4.60	44.23	174.02	1.39
2400.00	5.29	202.96	2398.73	-52.04	1.65	1.65	52.07	178.19	.89
2500.00	6.78	210.76	2498.18	-61.36	-3.17	-3.17	61.44	182.96	1.70
2600.00	7.98	212.12	2597.35	-72.31	-9.88	-9.88	72.98	187.78	1.21
2700.00	8.46	212.72	2696.32	-84.38	-17.55	-17.55	86.18	191.75	.49
2800.00	8.84	215.32	2795.18	-96.84	-25.97	-25.97	100.26	195.01	.55
2900.00	9.16	218.08	2893.95	-109.37	-35.32	-35.32	114.93	197.90	.54
3000.00	9.36	219.98	2992.65	-121.87	-45.45	-45.45	130.07	200.45	.37
3100.00	8.08	220.57	3091.49	-133.44	-55.25	-55.25	144.42	202.49	1.28
3200.00	6.54	224.89	3190.68	-142.81	-63.84	-63.84	156.43	204.09	1.63
3300.00	5.24	225.42	3290.15	-150.05	-71.11	-71.11	166.05	205.36	1.30
3400.00	4.73	227.07	3389.77	-156.07	-77.38	-77.38	174.20	206.37	.53
3500.00	4.04	235.47	3489.48	-160.87	-83.30	-83.30	181.16	207.38	.94
3600.00	3.12	230.54	3589.28	-164.60	-88.31	-88.31	186.79	208.21	.97
3700.00	2.62	225.59	3689.16	-167.93	-92.04	-92.04	191.50	208.73	.56
3800.00	2.26	225.39	3789.06	-170.91	-95.08	-95.08	195.58	209.09	.36

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	1.96	222.05	3889.00	-173.57	-97.63	-97.63	199.14	209.36	.32
4000.00	1.97	218.00	3988.94	-176.19	-99.83	-99.83	202.51	209.54	.14
4100.00	1.71	213.87	4088.89	-178.78	-101.72	-101.72	205.69	209.64	.29
4200.00	1.46	226.83	4188.85	-180.89	-103.48	-103.48	208.40	209.77	.44
4300.00	1.35	228.02	4288.82	-182.55	-105.29	-105.29	210.74	209.97	.11
4400.00	1.94	212.39	4388.78	-184.77	-107.07	-107.07	213.55	210.09	.74
4500.00	2.39	205.76	4488.71	-188.08	-108.88	-108.88	217.32	210.07	.51
4600.00	1.86	192.81	4588.64	-191.54	-110.15	-110.15	220.95	209.90	.71
4700.00	1.41	181.38	4688.60	-194.35	-110.54	-110.54	223.59	209.63	.55
4800.00	1.49	186.36	4788.56	-196.87	-110.71	-110.71	225.87	209.35	.15
4900.00	1.14	149.31	4888.54	-199.02	-110.35	-110.35	227.56	209.01	.90
5000.00	1.53	139.34	4988.51	-200.89	-108.97	-108.97	228.54	208.48	.45
5100.00	1.30	128.35	5088.48	-202.60	-107.21	-107.21	229.22	207.89	.35
5200.00	1.22	134.54	5188.46	-204.06	-105.56	-105.56	229.74	207.35	.16
5300.00	1.02	159.75	5288.44	-205.64	-104.49	-104.49	230.66	206.94	.53
5400.00	.91	178.14	5388.43	-207.27	-104.16	-104.16	231.97	206.68	.33
5500.00	.88	194.57	5488.41	-208.80	-104.33	-104.33	233.42	206.55	.26
5600.00	.74	182.11	5588.40	-210.19	-104.54	-104.54	234.75	206.44	.22
5700.00	.58	213.04	5688.40	-211.26	-104.84	-104.84	235.85	206.39	.38
5800.00	.42	247.06	5788.39	-211.83	-105.46	-105.46	236.63	206.47	.33
5900.00	.43	244.90	5888.39	-212.13	-106.14	-106.14	237.20	206.58	.02
6000.00	.60	126.93	5988.39	-212.60	-106.06	-106.06	237.59	206.51	.89
6100.00	.60	157.88	6088.38	-213.40	-105.44	-105.44	238.03	206.29	.32
6200.00	.22	329.00	6188.38	-213.72	-105.34	-105.34	238.27	206.24	.82
6300.00	.22	72.11	6288.38	-213.50	-105.26	-105.26	238.04	206.24	.34
6400.00	.72	19.85	6388.38	-212.85	-104.86	-104.86	237.28	206.23	.61
6500.00	.94	20.97	6488.37	-211.49	-104.36	-104.36	235.84	206.26	.22
6600.00	.75	13.80	6588.36	-210.09	-103.91	-103.91	234.38	206.32	.22
6700.00	.57	51.31	6688.35	-209.15	-103.36	-103.36	233.29	206.30	.46

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6800.00	1.28	137.33	6788.34	-209.66	-102.22	-102.22	233.25	205.99	1.36
6900.00	1.47	142.69	6888.31	-211.50	-100.68	-100.68	234.24	205.46	.23
7000.00	1.29	118.88	6988.28	-213.06	-98.92	-98.92	234.90	204.90	.60
Last Survey Depth Recorded									
7100.00	.81	137.81	7088.27	-214.13	-97.46	-97.46	235.26	204.47	.59

OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE GLOCK 17 MP FEDERAL 1H
COUNTY EDDY

045-0098

STATE OF NEW MEXICO
DEVIATION REPORT

381	0.50
518	0.87
775	1.03
1,105	0.75
1,290	0.70
1,700	1.34
2,081	1.81
2,494	5.95
2,621	7.96
2,685	8.22
2,748	8.57
2,844	9.34
2,939	9.11
3,095	8.26
3,284	5.72
3,602	2.97
3,982	1.96
4,330	1.05
4,679	1.59
4,996	1.30
5,376	0.71
6,167	0.71
6,516	0.74
6,835	1.22

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.

Amber Elizabeth Carr
Notary Public for Midland County, Texas
My Commission Expires:

