



Company: EXXON MOBIL  
 Lease/Well: FCU/197-28A8  
 Location:  
 Rig Name: PRODUCTION  
 State/County: COLORADO/RIO BLANCO  
 Latitude: 39.93  
 GRID North is 1.81 Degrees West of True North  
 VS-Azi: 0.00 Degrees

FIELD COPY ONLY (NOT DEFINITIVE)

DEPTH REFERENCE : KB = 0' = GL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro\_run01-01.ut  
 Minimum Curvature Method  
 Report Date/Time: 9/20/2010 / 11:05  
 Vaughn Energy Services  
 Rifle, Colorado  
 970 456 2071  
 Surveyor: S.Anderson  
 FRU 197-28A8 API# 05-103-11631

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
200.00	0.74	359.98	199.99	1.30	0.00	1.30	1.30	359.98	0.37
400.00	0.67	249.74	399.99	2.19	-1.09	2.19	2.45	333.46	0.58
600.00	0.60	113.23	599.98	1.37	-1.22	1.37	1.84	318.30	0.59
800.00	0.58	126.15	799.97	0.36	0.56	0.36	0.67	57.27	0.07
1000.00	0.69	85.91	999.96	-0.15	2.58	-0.15	2.58	93.40	0.22
1200.00	0.62	109.69	1199.95	-0.43	4.80	-0.43	4.81	95.15	0.14
1400.00	0.52	80.67	1399.94	-0.65	6.72	-0.65	6.75	95.52	0.15
1600.00	0.39	91.50	1599.93	-0.52	8.29	-0.52	8.31	93.58	0.08
1800.00	0.54	98.27	1799.92	-0.67	9.90	-0.67	9.92	93.89	0.08
2000.00	1.27	303.91	1999.91	0.43	9.00	0.43	9.01	87.29	0.89
2200.00	4.10	268.05	2199.68	1.42	0.01	1.42	1.42	0.47	1.58
2400.00	7.05	263.13	2398.71	-0.30	-19.32	-0.30	19.32	269.12	1.49
2600.00	8.91	254.98	2596.78	-5.78	-46.45	-5.78	46.81	262.91	1.09
2800.00	8.87	251.74	2794.38	-14.62	-76.04	-14.62	77.44	259.12	0.25
3000.00	8.71	251.97	2992.03	-24.14	-105.09	-24.14	107.83	257.06	0.08
3200.00	8.96	249.38	3189.65	-34.31	-134.08	-34.31	138.40	255.64	0.23
3400.00	9.62	249.28	3387.03	-45.71	-164.28	-45.71	170.52	254.45	0.33
3600.00	9.80	257.66	3584.18	-55.26	-196.52	-55.26	204.15	254.29	0.71
3800.00	8.91	254.05	3781.52	-63.15	-228.03	-63.15	236.62	254.52	0.53
4000.00	6.98	258.74	3979.59	-69.78	-254.84	-69.78	264.22	254.69	1.02
4200.00	3.58	259.11	4178.72	-73.33	-272.90	-73.33	282.58	254.96	1.70
4400.00	0.47	266.90	4378.57	-74.56	-279.85	-74.56	289.61	255.08	1.56
4600.00	0.18	132.12	4578.56	-74.81	-280.43	-74.81	290.24	255.06	0.31
4800.00	0.77	149.72	4778.56	-76.18	-279.53	-76.18	289.72	254.76	0.30
5000.00	1.17	144.86	4978.53	-79.00	-277.68	-79.00	288.70	254.12	0.20
5200.00	0.99	134.18	5178.49	-81.87	-275.27	-81.87	287.19	253.44	0.13
5400.00	1.24	131.66	5378.45	-84.51	-272.42	-84.51	285.22	252.77	0.13
5600.00	1.65	120.04	5578.39	-87.39	-268.30	-87.39	282.18	251.96	0.25
5800.00	1.88	119.80	5778.30	-90.47	-262.95	-90.47	278.08	251.01	0.12
6000.00	2.69	109.41	5978.14	-93.66	-255.67	-93.66	272.29	249.88	0.45
6200.00	3.63	102.98	6177.83	-96.64	-245.08	-96.64	263.44	248.48	0.50
6400.00	3.75	106.52	6377.42	-99.92	-232.64	-99.92	253.20	246.76	0.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
6600.00	3.58	102.33	6577.01	-103.12	-220.27	-103.12	243.21	244.91	0.16
6800.00	3.48	105.70	6776.63	-106.09	-208.32	-106.09	233.78	243.01	0.12
7000.00	2.70	103.21	6976.34	-108.81	-197.90	-108.81	225.84	241.20	0.40
7200.00	2.44	121.42	7176.14	-112.10	-189.70	-112.10	220.34	239.42	0.43
7400.00	2.13	140.02	7375.98	-117.17	-183.68	-117.17	217.87	237.47	0.40
7600.00	1.97	139.94	7575.85	-122.66	-179.06	-122.66	217.05	235.59	0.08
7800.00	1.77	146.59	7775.75	-127.87	-175.15	-127.87	216.86	233.87	0.15
8000.00	1.90	145.68	7975.64	-133.18	-171.58	-133.18	217.21	232.18	0.07
8200.00	1.64	145.31	8175.55	-138.27	-168.09	-138.27	217.65	230.56	0.13
8400.00	1.59	151.19	8375.47	-143.05	-165.13	-143.05	218.47	229.10	0.09
8600.00	1.63	141.33	8575.39	-147.70	-162.01	-147.70	219.23	227.65	0.14
8800.00	1.54	144.49	8775.31	-152.11	-158.68	-152.11	219.81	226.21	0.06
9000.00	1.39	124.42	8975.25	-155.67	-155.11	-155.67	219.76	224.90	0.27
9200.00	1.11	129.33	9175.20	-158.27	-151.61	-158.27	219.17	223.77	0.15
9400.00	0.98	160.13	9375.17	-161.10	-149.54	-161.10	219.80	222.87	0.28
9600.00	1.22	164.45	9575.13	-164.75	-148.39	-164.75	221.73	222.01	0.13
9800.00	1.16	158.26	9775.09	-168.68	-147.07	-168.68	223.79	221.09	0.07
10000.00	1.10	159.00	9975.05	-172.35	-145.63	-172.35	225.64	220.20	0.03
10200.00	1.04	152.54	10175.02	-175.75	-144.11	-175.75	227.28	219.35	0.07
10400.00	0.94	147.49	10374.99	-178.74	-142.39	-178.74	228.53	218.54	0.07
10600.00	1.10	198.84	10574.96	-181.94	-142.13	-181.94	230.87	218.00	0.45
10800.00	1.72	231.70	10774.90	-185.61	-145.10	-185.61	235.60	218.02	0.50
11000.00	1.92	222.90	10974.80	-189.92	-149.73	-189.92	241.84	218.25	0.17
11200.00	1.50	218.85	11174.71	-194.41	-153.66	-194.41	247.80	218.32	0.21
11400.00	1.20	193.34	11374.66	-198.50	-155.79	-198.50	252.33	218.13	0.33
11600.00	0.83	186.46	11574.63	-201.97	-156.43	-201.97	255.47	217.76	0.19
11800.00	0.83	182.80	11774.61	-204.85	-156.67	-204.85	257.89	217.41	0.03
12000.00	0.80	154.16	11974.59	-207.55	-156.13	-207.55	259.71	216.95	0.20
12126.00	0.63	181.30	12100.58	-209.03	-155.76	-209.03	260.68	216.69	0.30

HORIZONTAL DISPLACEMENT IS  
260.68 FEET AT 216.69 DEGREES