



Company: Noble Energy
 Rig: Production/ CoreTech
 API # 05-123-25524
 Date: 9/24/2013
 Surveyor: Sean Bratt
 VS: 0.000
 Lat : 40.349
 Long: -104.626

Well: Tool G 2-28
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid north is 0.56 Deg
 Declination: 8.48 Degrees
 Depth Reference: Ground Level
 Elevation: 4683 Feet
 Total Depth as Drilled: 7375 Feet

Lat & Long obtained by handheld GPS at wellhead

MS Gyro Survey Calculations

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD
0.000	0.000	0.000	0.000	0.000	0.000	****	0.000	0.000
100.000	0.287	240.415	-0.124	-0.218	100.000	0.287	-0.124	0.250
200.000	0.230	219.587	-0.402	-0.563	199.999	0.109	-0.402	0.692
300.000	0.541	335.929	-0.125	-0.883	299.997	0.675	-0.125	0.892
400.000	1.029	315.580	0.948	-1.705	399.988	0.555	0.948	1.951
500.000	1.189	312.419	2.289	-3.100	499.969	0.171	2.289	3.853
600.000	1.465	310.312	3.817	-4.841	599.942	0.280	3.817	6.164
700.000	1.769	320.137	5.829	-6.805	699.902	0.411	5.829	8.960
800.000	2.908	256.420	6.418	-10.261	799.832	2.651	6.418	12.103
900.000	4.094	255.952	4.956	-16.190	899.643	1.187	4.956	16.932
1000.000	6.189	254.107	2.613	-24.839	999.235	2.101	2.613	24.976
1100.000	8.168	252.101	-1.047	-36.784	1098.447	1.994	-1.047	36.799
1200.000	10.347	252.585	-5.918	-52.115	1197.138	2.181	-5.918	52.450
1300.000	13.007	253.791	-11.749	-71.494	1295.060	2.671	-11.749	72.452
1400.000	13.771	260.186	-16.919	-94.029	1392.347	1.665	-16.919	95.539
1500.000	14.730	256.807	-21.850	-118.135	1489.270	1.270	-21.850	120.139
1600.000	15.741	257.543	-27.678	-143.759	1585.755	1.029	-27.678	146.399
1700.000	16.084	255.974	-33.961	-170.444	1681.923	0.550	-33.961	173.795
1800.000	15.757	256.555	-40.475	-197.090	1778.087	0.364	-40.475	201.203
1900.000	15.578	256.688	-46.724	-223.362	1874.371	0.183	-46.724	228.197
2000.000	15.986	255.683	-53.221	-249.772	1970.602	0.491	-53.221	255.379
2100.000	15.713	255.010	-60.129	-276.195	2066.800	0.329	-60.129	282.664
2200.000	15.261	254.546	-67.138	-301.960	2163.169	0.469	-67.138	309.334
2300.000	15.467	256.784	-73.693	-327.627	2259.596	0.627	-73.693	335.813
2400.000	15.653	256.018	-80.001	-353.699	2355.931	0.277	-80.001	362.633
2500.000	15.713	256.307	-86.466	-379.946	2452.208	0.099	-86.466	389.660
2600.000	16.417	257.606	-92.705	-406.904	2548.302	0.791	-92.705	417.331
2700.000	16.862	256.242	-99.187	-434.794	2644.115	0.592	-99.187	445.964
2800.000	17.116	256.016	-106.192	-463.160	2739.751	0.262	-106.192	475.178
2900.000	16.597	257.664	-112.799	-491.392	2835.455	0.705	-112.799	504.172
3000.000	16.484	255.969	-119.290	-519.109	2931.317	0.496	-119.290	532.639
3100.000	15.670	256.140	-125.965	-545.985	3027.405	0.816	-125.965	560.328
3200.000	14.933	255.392	-132.450	-571.565	3123.860	0.763	-132.450	586.711
3300.000	14.178	255.871	-138.689	-595.910	3220.650	0.764	-138.689	611.836
3400.000	14.348	256.065	-144.662	-619.812	3317.567	0.176	-144.662	636.470

3500.000	14.859	256.126	-150.721	-644.285	3414.336	0.512	-150.721	661.680
3600.000	15.603	259.332	-156.285	-669.950	3510.825	1.123	-156.285	687.938
3700.000	15.482	259.436	-161.222	-696.287	3607.168	0.124	-161.222	714.708
3800.000	16.392	255.507	-167.200	-723.071	3703.326	1.411	-167.200	742.151
3900.000	16.597	256.032	-174.179	-750.592	3799.211	0.253	-174.179	770.537
4000.000	16.482	256.727	-180.883	-778.259	3895.073	0.229	-180.883	799.003
4100.000	16.366	258.595	-186.926	-805.876	3990.993	0.541	-186.926	827.271
4200.000	16.051	256.159	-193.019	-833.110	4087.020	0.749	-193.019	855.177
4300.000	16.494	257.238	-199.462	-860.378	4183.014	0.537	-199.462	883.196
4400.000	16.511	257.499	-205.674	-888.096	4278.895	0.076	-205.674	911.601
4500.000	16.453	257.585	-211.794	-915.799	4374.785	0.063	-211.794	939.971
4600.000	16.897	257.985	-217.864	-943.844	4470.580	0.459	-217.864	968.662
4700.000	15.222	256.332	-223.992	-970.817	4566.674	1.736	-223.992	996.322
4800.000	12.963	256.497	-229.714	-994.483	4663.658	2.260	-229.714	1020.668
4900.000	11.387	256.267	-234.677	-1014.980	4761.406	1.576	-234.677	1041.757
5000.000	9.340	256.181	-238.959	-1032.450	4859.769	2.047	-238.959	1059.744
5100.000	8.138	261.330	-241.964	-1047.330	4958.608	1.433	-241.964	1074.916
5200.000	7.418	257.057	-244.477	-1060.620	5057.688	0.923	-244.477	1088.429
5300.000	5.046	257.618	-246.866	-1071.210	5157.090	2.373	-246.866	1099.283
5400.000	3.386	251.845	-248.729	-1078.310	5256.817	1.711	-248.729	1106.622
5500.000	2.011	240.350	-250.517	-1082.640	5356.704	1.471	-250.517	1111.245
5600.000	1.002	205.416	-252.175	-1084.540	5456.670	1.321	-252.175	1113.470
5700.000	0.707	192.231	-253.568	-1085.040	5556.659	0.352	-253.568	1114.279
5800.000	0.827	188.414	-254.885	-1085.280	5656.650	0.130	-254.885	1114.810
5900.000	0.419	191.728	-255.957	-1085.460	5756.644	0.409	-255.957	1115.231
6000.000	0.271	109.016	-256.392	-1085.310	5856.643	0.469	-256.392	1115.185
6100.000	0.198	90.528	-256.471	-1084.920	5956.642	0.104	-256.471	1114.817
6200.000	0.231	70.425	-256.405	-1084.550	6056.641	0.082	-256.405	1114.449
6300.000	0.418	109.298	-256.458	-1084.020	6156.640	0.279	-256.458	1113.941
6400.000	0.523	50.484	-256.288	-1083.320	6256.637	0.471	-256.288	1113.224
6500.000	0.456	62.704	-255.815	-1082.620	6356.633	0.123	-255.815	1112.428
6600.000	0.359	57.226	-255.463	-1082.000	6456.631	0.105	-255.463	1111.747
6700.000	0.431	36.780	-254.992	-1081.510	6556.628	0.157	-254.992	1111.163
6800.000	0.796	13.108	-254.015	-1081.130	6656.622	0.437	-254.015	1110.566
6900.000	1.028	3.856	-252.443	-1080.910	6756.610	0.275	-252.443	1109.996
7000.000	1.618	6.035	-250.144	-1080.700	6856.583	0.592	-250.144	1109.272
7100.000	1.041	58.032	-248.259	-1079.780	6956.559	1.276	-248.259	1107.953

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