



**Company:** Noble Energy  
**Rig:** Production/VES  
**API #** 05-123-33457

**Date:** 6/5/2013  
**Surveyor:** Nick Kula

**VS:** 0.000  
**Lat :** 40.68639  
**Long:** -103.978

**Well:** McClellan PC LG 04-15  
**Location:** Weld County, Colorado  
**North Reference:** GRID

**Convergence:** Grid north is -0.98 of Tru  
**Declination:** 8.19

**Depth Reference:** Ground Level  
**Elevation:** 4843'

**Total Depth as Drilled:** 6415'

**Lat & Long obtained by handheld GPS at wellhead**

HA Gyro Survey Calculations

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD	Cbrg
0.000	0.000	0.000	0.000	0.000	0.000	****	0.000	0.000	0.000
100.000	0.661	172.762	-0.572	0.073	99.998	0.661	-0.572	0.577	172.762
200.000	0.697	165.383	-1.733	0.299	199.991	0.095	-1.733	1.758	170.215
300.000	0.758	188.966	-2.975	0.349	299.983	0.303	-2.975	2.996	173.306
400.000	0.632	192.305	-4.168	0.128	399.976	0.133	-4.168	4.170	178.234
500.000	0.736	202.158	-5.301	-0.231	499.968	0.157	-5.301	5.306	182.497
600.000	0.659	202.980	-6.425	-0.698	599.961	0.078	-6.425	6.463	186.198
700.000	0.609	218.699	-7.369	-1.254	699.955	0.180	-7.369	7.475	189.660
800.000	0.598	223.723	-8.161	-1.947	799.949	0.054	-8.161	8.390	193.420
900.000	0.421	216.942	-8.832	-2.529	899.945	0.187	-8.832	9.187	195.979
1000.000	0.369	210.866	-9.402	-2.915	999.943	0.067	-9.402	9.844	197.226
1100.000	0.419	242.385	-9.848	-3.404	1099.941	0.219	-9.848	10.420	199.070
1200.000	0.361	197.879	-10.317	-3.825	1199.939	0.300	-10.317	11.004	200.342
1300.000	0.361	189.150	-10.929	-3.972	1299.937	0.055	-10.929	11.628	199.974
1400.000	0.364	203.301	-11.532	-4.148	1399.935	0.089	-11.532	12.255	199.783
1500.000	0.326	191.198	-12.103	-4.329	1499.933	0.082	-12.103	12.854	199.681
1600.000	0.216	196.510	-12.562	-4.438	1599.932	0.113	-12.562	13.323	199.456
1700.000	0.343	223.703	-12.959	-4.698	1699.931	0.180	-12.959	13.784	199.926
1800.000	0.345	210.280	-13.435	-5.056	1799.929	0.080	-13.435	14.355	200.623
1900.000	0.759	243.972	-13.986	-5.803	1899.924	0.510	-13.986	15.142	202.536
2000.000	1.009	260.365	-14.424	-7.267	1999.912	0.353	-14.424	16.151	206.740
2100.000	0.948	250.213	-14.851	-8.914	2099.898	0.184	-14.851	17.321	210.973
2200.000	1.258	280.577	-14.930	-10.771	2199.880	0.650	-14.930	18.410	215.809
2300.000	1.312	257.655	-14.973	-12.969	2299.856	0.513	-14.973	19.809	220.896
2400.000	1.230	240.277	-15.750	-15.019	2399.831	0.392	-15.750	21.763	223.638
2500.000	1.167	265.672	-16.359	-16.966	2499.810	0.530	-16.359	23.569	226.044
2600.000	1.027	248.871	-16.759	-18.818	2599.792	0.349	-16.759	25.199	228.312
2700.000	1.114	234.050	-17.653	-20.441	2699.775	0.289	-17.653	27.009	229.186
2800.000	1.086	246.084	-18.608	-22.095	2799.757	0.232	-18.608	28.887	229.896
2900.000	0.644	291.161	-18.789	-23.486	2899.746	0.779	-18.789	30.077	231.339
3000.000	0.933	1.137	-17.772	-23.994	2999.738	0.935	-17.772	29.859	233.473
3100.000	1.788	24.087	-15.534	-23.341	3099.710	0.997	-15.534	28.038	236.356
3200.000	2.113	21.361	-12.393	-22.033	3199.652	0.338	-12.393	25.279	240.644
3300.000	2.217	22.900	-8.894	-20.609	3299.580	0.119	-8.894	22.446	246.656
3400.000	2.097	29.275	-5.517	-18.962	3399.510	0.268	-5.517	19.748	253.777
3500.000	2.391	39.180	-2.304	-16.749	3499.433	0.486	-2.304	16.907	262.166

3600.000	2.408	32.493	1.085	-14.303	3599.346	0.280	1.085	14.344	274.336
3700.000	2.638	42.109	4.563	-11.632	3699.249	0.481	4.563	12.495	291.421
3800.000	2.155	53.617	7.386	-8.575	3799.162	0.679	7.386	11.317	310.738
3900.000	1.890	94.622	8.368	-5.418	3899.105	1.438	8.368	9.969	327.079
4000.000	1.959	110.390	7.640	-2.172	3999.049	0.532	7.640	7.942	344.128
4100.000	1.980	120.433	6.169	0.920	4098.990	0.345	6.169	6.237	8.478
4200.000	2.311	113.466	4.491	4.258	4198.920	0.421	4.491	6.189	43.475
4300.000	3.061	103.406	3.069	8.705	4298.810	0.883	3.069	9.231	70.579
4400.000	3.770	94.370	2.200	14.581	4398.633	0.888	2.200	14.746	81.421
4500.000	3.847	84.132	2.292	21.196	4498.413	0.683	2.292	21.320	83.828
4600.000	2.995	65.383	3.723	26.908	4598.237	1.395	3.723	27.165	82.122
4700.000	1.157	59.197	5.329	30.151	4698.167	1.849	5.329	30.618	79.977
4800.000	0.604	127.965	5.521	31.434	4798.157	1.094	5.521	31.915	80.037
4900.000	0.412	162.890	4.854	31.955	4898.153	0.356	4.854	32.322	81.363
5000.000	0.307	209.850	4.278	31.927	4998.152	0.302	4.278	32.213	82.368
5100.000	0.376	181.536	3.718	31.785	5098.150	0.180	3.718	32.002	83.329
5200.000	0.128	68.952	3.430	31.880	5198.149	0.441	3.430	32.064	83.859
5300.000	0.243	93.515	3.457	32.197	5298.149	0.138	3.457	32.382	83.871
5400.000	0.487	86.626	3.469	32.833	5398.147	0.247	3.469	33.016	83.969
5500.000	0.313	76.440	3.558	33.523	5498.144	0.187	3.558	33.711	83.941
5600.000	0.306	288.563	3.707	33.535	5598.144	0.594	3.707	33.739	83.692
5700.000	0.389	22.821	4.105	33.414	5698.142	0.512	4.105	33.665	82.996
5800.000	0.288	60.241	4.543	33.764	5798.141	0.238	4.543	34.068	82.337
5900.000	0.130	91.411	4.665	34.095	5898.140	0.189	4.665	34.413	82.210
6000.000	0.421	126.286	4.444	34.505	5998.139	0.324	4.444	34.790	82.661

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