



Company: Noble Energy
 Rig: Production/VES
 API # 05-123-18958
 Date: 5/21/2013
 Surveyor: Nick Kula
 VS: 0.000
 Lat : 40.32084
 Long: -104.8

Well: Monfort Gilcrest K8-15
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid North is .45 Degrees East of
 Declination: 8.62
 Depth Reference: Ground Level
 Elevation: 4700'
 Total Depth as Drilled: 7406'

Lat & Long obtained by handheld GPS at wellhead

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	0.312	190.187	-0.268	-0.048	100.000	0.312	-0.268	0.272	190.187
200.000	0.407	194.367	-0.880	-0.184	199.998	0.099	-0.880	0.899	191.839
300.000	0.347	195.305	-1.517	-0.353	299.995	0.061	-1.517	1.557	193.090
400.000	0.713	147.269	-2.333	-0.096	399.991	0.546	-2.333	2.335	182.357
500.000	0.998	138.523	-3.509	0.817	499.980	0.312	-3.509	3.603	166.887
600.000	0.576	116.438	-4.385	1.844	599.971	0.513	-4.385	4.757	157.192
700.000	0.697	142.236	-5.090	2.667	699.965	0.308	-5.090	5.746	152.350
800.000	0.976	160.651	-6.374	3.321	799.954	0.384	-6.374	7.188	152.478
900.000	0.969	179.705	-8.024	3.608	899.940	0.322	-8.024	8.798	155.789
1000.000	1.054	180.927	-9.789	3.597	999.924	0.087	-9.789	10.429	159.822
1100.000	0.699	170.379	-11.310	3.685	1099.913	0.388	-11.310	11.895	161.956
1200.000	0.670	167.201	-12.482	3.916	1199.905	0.048	-12.482	13.082	162.582
1300.000	1.042	173.189	-13.955	4.153	1299.894	0.382	-13.955	14.560	163.426
1400.000	0.925	178.135	-15.665	4.288	1399.879	0.145	-15.665	16.242	164.693
1500.000	0.806	183.136	-17.175	4.275	1499.868	0.141	-17.175	17.699	166.021
1600.000	0.578	207.530	-18.325	4.004	1599.861	0.368	-18.325	18.757	167.676
1700.000	0.170	225.197	-18.877	3.665	1699.858	0.419	-18.877	19.230	169.013
1800.000	0.672	189.873	-19.559	3.459	1799.856	0.542	-19.559	19.863	169.971
1900.000	1.431	156.098	-21.279	3.865	1899.839	0.950	-21.279	21.627	169.706
2000.000	1.859	123.950	-23.327	5.716	1999.799	0.999	-23.327	24.017	166.230
2100.000	1.511	114.039	-24.770	8.266	2099.756	0.453	-24.770	26.112	161.545
2200.000	1.108	84.905	-25.221	10.433	2199.731	0.765	-25.221	27.293	157.527
2300.000	0.583	73.881	-24.994	11.884	2299.720	0.547	-24.994	27.675	154.569
2400.000	0.418	47.376	-24.606	12.641	2399.716	0.280	-24.606	27.663	152.808
2500.000	0.637	33.468	-23.895	13.216	2499.712	0.252	-23.895	27.307	151.054
2600.000	0.648	30.761	-22.946	13.812	2599.706	0.032	-22.946	26.782	148.955
2700.000	0.263	30.825	-22.263	14.218	2699.702	0.385	-22.263	26.416	147.435
2800.000	0.562	8.825	-21.582	14.411	2799.700	0.333	-21.582	25.951	146.267
2900.000	0.516	26.410	-20.694	14.686	2899.695	0.171	-20.694	25.376	144.637
3000.000	0.483	0.865	-19.870	14.893	2999.692	0.223	-19.870	24.832	143.147
3100.000	0.430	350.734	-19.078	14.839	3099.688	0.097	-19.078	24.170	142.124
3200.000	0.643	340.904	-18.178	14.595	3199.684	0.232	-18.178	23.312	141.239
3300.000	0.686	350.149	-17.058	14.309	3299.677	0.115	-17.058	22.265	140.008
3400.000	0.874	324.358	-15.849	13.762	3399.668	0.393	-15.849	20.990	139.030

3500.000	0.759	301.186	-14.886	12.752	3499.658	0.347	-14.886	19.601	139.416
3600.000	0.641	308.005	-14.199	11.745	3599.651	0.144	-14.199	18.427	140.404
3700.000	0.843	313.454	-13.349	10.770	3699.642	0.214	-13.349	17.151	141.103
3800.000	1.163	305.181	-12.258	9.406	3799.627	0.350	-12.258	15.450	142.499
3900.000	0.883	299.813	-11.289	7.907	3899.611	0.296	-11.289	13.783	144.992
4000.000	1.060	281.067	-10.729	6.331	3999.597	0.361	-10.729	12.457	149.455
4100.000	1.382	246.816	-11.026	4.315	4099.575	0.782	-11.026	11.840	158.626
4200.000	1.491	255.142	-11.834	1.949	4199.544	0.235	-11.834	11.994	170.646
4300.000	1.924	277.325	-11.954	-0.973	4299.500	0.782	-11.954	11.993	184.655
4400.000	1.901	303.428	-10.826	-4.022	4399.447	0.864	-10.826	11.549	200.382
4500.000	1.869	292.461	-9.289	-6.913	4499.393	0.362	-9.289	11.580	216.658
4600.000	2.500	278.628	-8.339	-10.577	4599.320	0.818	-8.339	13.469	231.747
4700.000	2.445	263.565	-8.251	-14.853	4699.228	0.650	-8.251	16.991	240.947
4800.000	2.872	283.041	-7.925	-19.413	4799.123	0.993	-7.925	20.968	247.794
4900.000	2.009	292.185	-6.697	-23.477	4899.031	0.944	-6.697	24.414	254.078
5000.000	1.860	276.431	-5.854	-26.714	4998.975	0.550	-5.854	27.347	257.640
5100.000	1.037	290.569	-5.354	-29.174	5098.942	0.891	-5.354	29.661	259.601
5200.000	1.062	299.122	-4.585	-30.831	5198.926	0.159	-4.585	31.170	261.542
5300.000	0.947	298.804	-3.736	-32.365	5298.910	0.116	-3.736	32.580	263.416
5400.000	1.060	278.429	-3.202	-34.004	5398.895	0.372	-3.202	34.154	264.621
5500.000	1.214	290.022	-2.704	-35.914	5498.876	0.276	-2.704	36.015	265.695
5600.000	0.513	237.919	-2.579	-37.288	5598.865	0.986	-2.579	37.377	266.044
5700.000	0.343	207.817	-3.081	-37.806	5698.862	0.276	-3.081	37.931	265.341
5800.000	0.104	354.311	-3.255	-37.955	5798.862	0.433	-3.255	38.094	265.098
5900.000	0.379	329.156	-2.881	-38.133	5898.861	0.289	-2.881	38.242	265.679
6000.000	0.337	302.539	-2.439	-38.551	5998.859	0.170	-2.439	38.628	266.380
6100.000	0.494	274.943	-2.243	-39.228	6098.856	0.250	-2.243	39.292	266.727
6200.000	0.187	320.709	-2.080	-39.761	6198.855	0.387	-2.080	39.815	267.006
6300.000	0.449	334.011	-1.601	-40.036	6298.853	0.270	-1.601	40.068	267.710
6400.000	0.255	308.121	-1.111	-40.383	6398.851	0.246	-1.111	40.399	268.424
6500.000	0.506	303.850	-0.727	-40.925	6498.849	0.252	-0.727	40.932	268.982
6600.000	0.105	271.232	-0.479	-41.384	6598.847	0.421	-0.479	41.387	269.336
6700.000	0.532	291.078	-0.311	-41.908	6698.845	0.435	-0.311	41.910	269.575
6800.000	0.718	283.601	0.004	-42.950	6798.839	0.203	0.004	42.950	270.005
6900.000	0.415	271.340	0.159	-43.921	6898.834	0.324	0.159	43.921	270.208
7000.000	1.240	293.725	0.603	-45.274	6998.823	0.871	0.603	45.278	270.764
7100.000	0.558	304.595	1.315	-46.665	7098.811	0.700	1.315	46.684	271.614

True North