



Company: Noble Energy
 Rig: Production/VES
 API # 05-123-11285
 Date: 5/21/2013
 Surveyor: Nick Kula
 VS: 0.000
 Lat : 40.32074
 Long: -104.79

Well: Monfort Gilcrest K9-13
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid North is .46 Degrees East of T
 Declination: 8.61
 Depth Reference: Ground Level
 Elevation: 4731'
 Total Depth as Drilled: 7363'

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	0.000
100.000	0.307	66.407	0.107	0.246	100.000	0.307	0.107	0.268	66.407
200.000	0.227	43.628	0.358	0.628	199.998	0.132	0.358	0.723	60.317
300.000	0.063	243.887	0.477	0.715	299.998	0.287	0.477	0.859	56.292
400.000	0.014	315.423	0.461	0.657	399.998	0.060	0.461	0.803	54.897
500.000	0.589	243.535	0.241	0.187	499.996	0.585	0.241	0.305	37.852
600.000	0.298	234.871	-0.138	-0.485	599.993	0.298	-0.138	0.505	254.182
700.000	0.758	249.334	-0.520	-1.317	699.989	0.475	-0.520	1.416	248.434
800.000	0.397	230.953	-0.972	-2.204	799.984	0.401	-0.972	2.409	246.203
900.000	0.363	265.535	-1.215	-2.790	899.982	0.228	-1.215	3.043	246.462
1000.000	0.807	250.574	-1.474	-3.770	999.976	0.465	-1.474	4.048	248.644
1100.000	0.529	264.268	-1.755	-4.894	1099.969	0.319	-1.755	5.199	250.275
1200.000	0.669	294.956	-1.554	-5.882	1199.964	0.345	-1.554	6.084	255.200
1300.000	0.670	284.173	-1.165	-6.979	1299.957	0.126	-1.165	7.075	260.526
1400.000	0.683	276.390	-0.955	-8.138	1399.950	0.093	-0.955	8.194	263.306
1500.000	0.647	294.511	-0.654	-9.245	1499.944	0.213	-0.654	9.268	265.951
1600.000	0.697	294.345	-0.170	-10.313	1599.937	0.050	-0.170	10.314	269.058
1700.000	0.628	297.642	0.335	-11.352	1699.930	0.079	0.335	11.357	271.692
1800.000	0.695	295.552	0.851	-12.384	1799.924	0.072	0.851	12.414	273.931
1900.000	0.522	295.723	1.310	-13.342	1899.918	0.173	1.310	13.406	275.609
2000.000	0.388	319.983	1.768	-13.970	1999.915	0.231	1.768	14.082	277.211
2100.000	0.302	21.819	2.272	-14.090	2099.913	0.362	2.272	14.272	279.160
2200.000	0.374	347.307	2.835	-14.064	2199.912	0.212	2.835	14.347	281.396
2300.000	0.541	300.908	3.395	-14.540	2299.909	0.392	3.395	14.932	283.143
2400.000	0.405	282.445	3.714	-15.290	2399.905	0.203	3.714	15.735	283.652
2500.000	0.464	232.132	3.542	-15.955	2499.903	0.373	3.542	16.343	282.516
2600.000	0.629	203.132	2.789	-16.490	2599.898	0.317	2.789	16.724	279.599
2700.000	0.438	192.551	1.911	-16.788	2699.894	0.214	1.911	16.897	276.494
2800.000	1.140	177.141	0.545	-16.822	2799.884	0.727	0.545	16.831	271.854
2900.000	0.953	203.178	-1.214	-17.100	2899.868	0.505	-1.214	17.143	265.940
3000.000	1.179	163.829	-2.966	-17.141	2999.852	0.748	-2.966	17.396	260.182
3100.000	0.811	159.531	-4.617	-16.607	3099.837	0.375	-4.617	17.237	254.465
3200.000	0.544	224.025	-5.621	-16.689	3199.831	0.757	-5.621	17.610	251.388
3300.000	0.361	249.245	-6.073	-17.313	3299.828	0.266	-6.073	18.348	250.670
3400.000	0.525	263.053	-6.240	-18.062	3399.825	0.195	-6.240	19.110	250.941

3500.000	0.437	315.325	-6.024	-18.785	3499.822	0.431	-6.024	19.727	252.219
3600.000	0.463	269.659	-5.756	-19.458	3599.819	0.350	-5.756	20.291	253.522
3700.000	0.215	322.628	-5.609	-19.976	3699.817	0.375	-5.609	20.748	254.316
3800.000	0.477	350.259	-5.049	-20.160	3799.815	0.303	-5.049	20.783	255.939
3900.000	0.437	356.758	-4.258	-20.252	3899.812	0.066	-4.258	20.695	258.126
4000.000	0.313	357.613	-3.605	-20.285	3999.810	0.124	-3.605	20.603	259.923
4100.000	0.512	0.502	-2.885	-20.293	4099.807	0.200	-2.885	20.497	261.909
4200.000	0.790	358.879	-1.748	-20.302	4199.801	0.278	-1.748	20.377	265.079
4300.000	0.369	318.388	-0.818	-20.530	4299.796	0.563	-0.818	20.546	267.719
4400.000	0.456	1.753	-0.179	-20.732	4399.793	0.316	-0.179	20.732	269.506
4500.000	0.512	280.163	0.298	-21.159	4499.791	0.634	0.298	21.161	270.807
4600.000	0.613	281.215	0.481	-22.123	4599.786	0.102	0.481	22.129	271.246
4700.000	0.735	230.617	0.178	-23.144	4699.780	0.586	0.178	23.145	270.441
4800.000	0.167	236.442	-0.309	-23.761	4799.776	0.569	-0.309	23.763	269.254
4900.000	0.528	243.145	-0.598	-24.294	4899.774	0.363	-0.598	24.301	268.590
5000.000	0.527	197.915	-1.244	-24.846	4999.771	0.406	-1.244	24.877	267.134
5100.000	0.476	234.407	-1.923	-25.326	5099.767	0.318	-1.923	25.399	265.658
5200.000	0.221	268.011	-2.172	-25.856	5199.765	0.317	-2.172	25.947	265.199
5300.000	0.238	296.096	-2.087	-26.235	5299.764	0.112	-2.087	26.318	265.452
5400.000	0.466	123.363	-2.220	-26.082	5399.764	0.703	-2.220	26.176	265.136
5500.000	0.520	98.285	-2.509	-25.293	5499.760	0.220	-2.509	25.417	264.336
5600.000	0.865	41.317	-2.007	-24.346	5599.754	0.727	-2.007	24.428	265.287
5700.000	0.829	57.897	-1.056	-23.234	5699.743	0.247	-1.056	23.258	267.398
5800.000	1.045	67.427	-0.321	-21.780	5799.729	0.266	-0.321	21.782	269.155
5900.000	0.837	112.302	-0.248	-20.262	5899.717	0.744	-0.248	20.264	269.298
6000.000	0.728	89.525	-0.520	-18.951	5999.708	0.327	-0.520	18.958	268.428
6100.000	0.835	106.548	-0.722	-17.618	6099.699	0.254	-0.722	17.632	267.652
6200.000	1.214	100.702	-1.127	-15.878	6199.683	0.393	-1.127	15.918	265.942
6300.000	0.954	145.292	-2.008	-14.363	6299.667	0.857	-2.008	14.503	262.042
6400.000	0.565	177.804	-3.185	-13.870	6399.658	0.566	-3.185	14.231	257.067
6500.000	0.728	146.633	-4.208	-13.502	6499.652	0.381	-4.208	14.142	252.689
6600.000	0.446	133.974	-5.009	-12.872	6599.647	0.309	-5.009	13.812	248.738
6700.000	0.063	299.484	-5.252	-12.640	6699.646	0.507	-5.252	13.688	247.438
6800.000	0.202	309.894	-5.111	-12.824	6799.645	0.141	-5.111	13.805	248.268
6900.000	0.321	212.860	-5.233	-13.111	6899.645	0.400	-5.233	14.117	248.240
7000.000	0.597	338.328	-4.985	-13.455	6999.643	0.825	-4.985	14.349	249.672
7100.000	0.504	40.227	-4.165	-13.364	7099.639	0.571	-4.165	13.998	252.688
7200.000	0.500	161.657	-4.244	-12.942	7199.637	0.876	-4.244	13.620	251.845

True North