



Company: Noble Energy
 Rig: Production/ VES
 API # 05-123-25187
 Date: 7/22/2013
 Surveyor: Sean Bratt
 VS: 0.000
 Lat : 40.20246
 Long: -104.66062

Well: Moser H #28-1
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid north is -0.54 of True North
 Declination: 8.51 Degrees
 Depth Reference: Ground Level
 Elevation: 4810 Feet
 Total Depth as Drilled: 7302 Feet

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	0.594	15.111	0.500	0.135	99.998	0.594	0.500	0.518	15.111
200.000	0.424	8.880	1.366	0.327	199.994	0.179	1.366	1.405	13.475
300.000	0.653	340.990	2.270	0.199	299.990	0.342	2.270	2.279	5.000
400.000	0.496	303.460	3.048	-0.348	399.985	0.399	3.048	3.068	353.484
500.000	0.430	331.622	3.617	-0.887	499.982	0.234	3.617	3.724	346.214
600.000	0.464	333.217	4.308	-1.248	599.979	0.036	4.308	4.485	343.843
700.000	0.278	317.120	4.847	-1.596	699.977	0.211	4.847	5.103	341.780
800.000	0.391	350.625	5.361	-1.816	799.975	0.221	5.361	5.661	341.286
900.000	0.192	313.467	5.813	-1.994	899.974	0.264	5.813	6.146	341.072
1000.000	0.346	268.858	5.923	-2.418	999.973	0.249	5.923	6.397	337.795
1100.000	0.389	240.683	5.751	-3.016	1099.971	0.184	5.751	6.494	332.327
1200.000	0.383	285.347	5.673	-3.634	1199.969	0.293	5.673	6.737	327.359
1300.000	0.510	240.417	5.542	-4.343	1299.966	0.361	5.542	7.041	321.915
1400.000	0.544	258.048	5.224	-5.194	1399.962	0.165	5.224	7.367	315.163
1500.000	0.607	252.039	4.963	-6.162	1499.957	0.087	4.963	7.912	308.845
1600.000	0.659	267.272	4.772	-7.240	1599.951	0.176	4.772	8.671	303.389
1700.000	0.574	300.830	5.001	-8.245	1699.945	0.365	5.001	9.643	301.241
1800.000	0.751	299.877	5.585	-9.244	1799.939	0.178	5.585	10.800	301.140
1900.000	0.794	296.294	6.218	-10.433	1899.930	0.064	6.218	12.146	300.795
2000.000	0.747	295.197	6.803	-11.644	1999.921	0.049	6.803	13.486	300.294
2100.000	0.891	288.437	7.326	-12.972	2099.910	0.173	7.326	14.898	299.457
2200.000	0.989	288.224	7.842	-14.529	2199.897	0.098	7.842	16.510	298.358
2300.000	0.811	283.208	8.274	-16.038	2299.885	0.194	8.274	18.046	297.288
2400.000	0.480	296.870	8.625	-17.101	2399.878	0.363	8.625	19.153	296.764
2500.000	0.138	122.249	8.749	-17.372	2499.877	0.618	8.749	19.451	296.732
2600.000	0.203	162.971	8.516	-17.218	2599.877	0.133	8.516	19.209	296.316
2700.000	0.162	134.067	8.248	-17.065	2699.876	0.099	8.248	18.954	295.796
2800.000	0.335	248.677	8.044	-17.236	2799.876	0.428	8.044	19.020	295.017
2900.000	0.772	265.306	7.882	-18.179	2899.871	0.461	7.882	19.815	293.440
3000.000	1.255	267.107	7.772	-19.944	2999.855	0.484	7.772	21.405	291.290
3100.000	1.421	266.554	7.642	-22.275	3099.828	0.166	7.642	23.550	288.936
3200.000	1.423	265.296	7.466	-24.750	3199.797	0.031	7.466	25.851	286.785
3300.000	2.005	265.644	7.231	-27.732	3299.752	0.583	7.231	28.659	284.614
3400.000	1.627	274.406	7.207	-30.892	3399.701	0.468	7.207	31.722	283.132
3500.000	1.971	293.691	8.007	-33.882	3499.653	0.691	8.007	34.816	283.296

3600.000	1.040	282.617	8.896	-36.343	3599.617	0.971	8.896	37.416	283.755
3700.000	1.267	236.052	8.477	-38.146	3699.599	0.936	8.477	39.076	282.529
3800.000	1.070	220.383	7.148	-39.668	3799.579	0.374	7.148	40.307	280.215
3900.000	1.432	215.312	5.417	-40.996	3899.555	0.378	5.417	41.352	277.527
4000.000	1.595	213.489	3.237	-42.486	3999.520	0.170	3.237	42.609	274.357
4100.000	1.844	207.657	0.651	-44.000	4099.475	0.305	0.651	44.005	270.848
4200.000	1.816	207.789	-2.176	-45.486	4199.424	0.028	-2.176	45.538	267.261
4300.000	1.479	203.233	-4.765	-46.734	4299.382	0.361	-4.765	46.977	264.179
4400.000	0.865	180.212	-6.706	-47.246	4399.361	0.762	-6.706	47.720	261.921
4500.000	0.745	189.656	-8.102	-47.358	4499.351	0.179	-8.102	48.046	260.291
4600.000	0.667	140.563	-9.193	-47.098	4599.345	0.591	-9.193	47.986	258.955
4700.000	1.243	139.660	-10.469	-46.026	4699.330	0.577	-10.469	47.202	257.185
4800.000	2.109	142.345	-12.753	-44.199	4799.287	0.870	-12.753	46.002	253.905
4900.000	2.438	166.233	-16.276	-42.569	4899.210	0.994	-16.276	45.574	249.076
5000.000	2.297	187.463	-20.328	-42.323	4999.127	0.883	-20.328	46.952	244.345
5100.000	1.763	211.665	-23.625	-43.391	5099.065	0.999	-23.625	49.406	241.433
5200.000	0.976	234.327	-25.431	-44.890	5199.037	0.941	-25.431	51.593	240.468
5300.000	0.557	267.711	-25.947	-46.068	5299.028	0.595	-25.947	52.872	240.611
5400.000	0.263	252.682	-26.034	-46.772	5399.025	0.311	-26.034	53.530	240.899
5500.000	0.154	86.769	-26.095	-46.857	5499.025	0.414	-26.095	53.633	240.886
5600.000	0.415	117.175	-26.253	-46.400	5599.024	0.293	-26.253	53.312	240.499
5700.000	0.405	133.103	-26.660	-45.820	5699.021	0.114	-26.660	53.011	239.808
5800.000	0.325	132.747	-27.093	-45.353	5799.019	0.080	-27.093	52.830	239.147
5900.000	0.728	161.908	-27.890	-44.948	5899.015	0.472	-27.890	52.898	238.180
6000.000	2.372	173.937	-30.552	-44.532	5998.975	1.667	-30.552	54.005	235.547
6100.000	1.592	206.672	-33.852	-44.937	6098.918	1.345	-33.852	56.261	233.008
6200.000	1.451	270.371	-35.085	-46.827	6198.889	1.610	-35.085	58.513	233.157
6300.000	1.849	308.380	-34.076	-49.358	6298.850	1.138	-34.076	59.978	235.379
6400.000	2.631	320.873	-31.293	-52.070	6398.773	0.918	-31.293	60.750	238.995
6500.000	2.841	322.486	-27.547	-55.028	6498.659	0.224	-27.547	61.538	243.407
6600.000	3.031	332.047	-23.246	-57.776	6598.529	0.524	-23.246	62.278	248.083
6700.000	2.998	328.476	-18.682	-60.383	6698.390	0.191	-18.682	63.207	252.809
6800.000	3.279	333.422	-13.894	-63.030	6798.240	0.390	-13.894	64.543	257.569
6900.000	3.088	335.529	-8.885	-65.425	6898.086	0.225	-8.885	66.026	262.266
7000.000	3.143	328.893	-4.086	-67.958	6997.939	0.365	-4.086	68.080	266.559
7100.000	3.657	336.810	1.193	-70.630	7097.763	0.695	1.193	70.640	270.968

