



Company: Noble Energy
 Rig: Production / V.E.S.
 API # 05-123-22418
 Date: 11/23/2013
 Surveyor: Norman Cowan
 VS: 0.000
 Lat : 40.190
 Long: -104.637

Well: Moser H 26-13
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid north is 0.56 Deg East of Tru
 Declination: 8.45 Degrees
 Depth Reference: Ground Level
 Elevation: 4830 Feet
 Total Depth as Drilled: 7285 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	0.211	335.010	0.167	-0.078	100.000	0.211	0.167	0.184	335.010
200.000	0.299	300.524	0.466	-0.380	199.999	0.173	0.466	0.602	320.779
300.000	0.286	338.053	0.831	-0.699	299.998	0.189	0.831	1.085	319.925
400.000	0.357	311.466	1.269	-1.026	399.996	0.163	1.269	1.632	321.046
500.000	0.242	322.092	1.642	-1.389	499.995	0.127	1.642	2.151	319.767
600.000	0.349	285.445	1.890	-1.813	599.993	0.212	1.890	2.619	316.192
700.000	0.357	295.956	2.108	-2.387	699.992	0.065	2.108	3.184	311.443
800.000	0.358	287.383	2.337	-2.965	799.990	0.053	2.337	3.776	308.248
900.000	0.461	287.868	2.554	-3.646	899.987	0.104	2.554	4.451	305.012
1000.000	0.160	251.881	2.634	-4.162	999.986	0.345	2.634	4.925	302.332
1100.000	0.322	291.897	2.695	-4.555	1099.985	0.224	2.695	5.292	300.617
1200.000	0.306	276.784	2.832	-5.080	1199.983	0.084	2.832	5.816	299.135
1300.000	0.512	299.740	3.085	-5.733	1299.981	0.260	3.085	6.510	298.284
1400.000	0.424	302.825	3.507	-6.433	1399.977	0.092	3.507	7.327	298.602
1500.000	0.265	262.553	3.678	-6.972	1499.976	0.281	3.678	7.883	297.813
1600.000	0.279	275.724	3.672	-7.444	1599.974	0.064	3.672	8.300	296.261
1700.000	0.529	279.364	3.772	-8.141	1699.972	0.251	3.772	8.973	294.858
1800.000	0.561	301.539	4.103	-9.015	1799.968	0.212	4.103	9.905	294.474
1900.000	0.734	299.708	4.677	-9.988	1899.961	0.173	4.677	11.029	295.090
2000.000	0.892	279.368	5.121	-11.312	1999.951	0.326	5.121	12.417	294.356
2100.000	0.682	261.585	5.160	-12.669	2099.942	0.319	5.160	13.679	292.162
2200.000	0.908	235.321	4.622	-13.910	2199.932	0.423	4.622	14.657	288.381
2300.000	0.963	233.481	3.671	-15.237	2299.919	0.062	3.671	15.673	283.546
2400.000	0.609	243.479	2.934	-16.388	2399.910	0.378	2.934	16.648	280.149
2500.000	0.820	228.855	2.225	-17.402	2499.902	0.277	2.225	17.544	277.287
2600.000	0.855	219.865	1.182	-18.420	2599.891	0.136	1.182	18.458	273.670
2700.000	1.158	203.304	-0.319	-19.298	2699.876	0.417	-0.319	19.300	269.054
2800.000	1.055	194.751	-2.137	-19.932	2799.857	0.194	-2.137	20.046	263.881
2900.000	1.005	204.361	-3.826	-20.528	2899.841	0.180	-3.826	20.881	259.442
3000.000	1.027	206.542	-5.427	-21.290	2999.826	0.044	-5.427	21.971	255.700
3100.000	1.046	181.964	-7.141	-21.722	3099.810	0.442	-7.141	22.865	251.802
3200.000	1.284	171.401	-9.162	-21.585	3199.789	0.319	-9.162	23.449	247.002
3300.000	1.552	168.272	-11.595	-21.143	3299.758	0.279	-11.595	24.113	241.258
3400.000	1.365	169.132	-14.091	-20.643	3399.726	0.188	-14.091	24.994	235.682
3500.000	0.585	195.863	-15.752	-20.558	3499.711	0.882	-15.752	25.899	232.539

3600.000	0.389	265.746	-16.269	-21.036	3599.708	0.581	-16.269	26.593	232.283
3700.000	0.633	307.363	-15.959	-21.814	3699.704	0.429	-15.959	27.029	233.812
3800.000	0.780	313.619	-15.154	-22.746	3799.697	0.166	-15.154	27.332	236.328
3900.000	0.964	292.411	-14.364	-24.016	3899.685	0.368	-14.364	27.984	239.117
4000.000	1.151	300.147	-13.539	-25.662	3999.668	0.235	-13.539	29.015	242.185
4100.000	1.869	294.028	-12.370	-28.020	4099.633	0.735	-12.370	30.629	246.179
4200.000	2.278	293.810	-10.904	-31.328	4199.567	0.409	-10.904	33.171	250.809
4300.000	1.632	287.999	-9.662	-34.501	4299.509	0.675	-9.662	35.828	254.356
4400.000	0.939	290.231	-8.938	-36.624	4399.483	0.694	-8.938	37.699	256.285
4500.000	0.885	300.439	-8.263	-38.059	4499.470	0.171	-8.263	38.946	257.750
4600.000	0.694	308.997	-7.491	-39.196	4599.461	0.224	-7.491	39.905	259.180
4700.000	0.925	318.544	-6.505	-40.201	4699.451	0.267	-6.505	40.724	260.809
4800.000	0.671	315.022	-5.485	-41.150	4799.441	0.258	-5.485	41.514	262.408
4900.000	0.450	20.652	-4.703	-41.426	4899.437	0.636	-4.703	41.692	263.523
5000.000	0.662	21.112	-3.797	-41.079	4999.432	0.212	-3.797	41.254	264.719
5100.000	0.664	12.356	-2.692	-40.747	5099.426	0.101	-2.692	40.836	266.220
5200.000	0.634	5.413	-1.576	-40.571	5199.419	0.084	-1.576	40.601	267.776
5300.000	0.694	27.092	-0.485	-40.243	5299.413	0.257	-0.485	40.246	269.309
5400.000	1.086	39.404	0.786	-39.366	5399.401	0.434	0.786	39.373	271.144
5500.000	1.473	47.340	2.389	-37.819	5499.375	0.424	2.389	37.894	273.615
5600.000	1.450	34.809	4.299	-36.151	5599.343	0.320	4.299	36.406	276.781
5700.000	1.452	355.773	6.602	-35.522	5699.314	0.970	6.602	36.131	280.528
5800.000	1.404	336.390	8.988	-36.107	5799.283	0.483	8.988	37.209	283.979
5900.000	1.427	334.632	11.236	-37.131	5899.253	0.049	11.236	38.794	286.837
6000.000	1.335	328.997	13.360	-38.265	5999.224	0.164	13.360	40.530	289.247
6100.000	1.190	329.180	15.250	-39.396	6099.199	0.145	15.250	42.245	291.161
6200.000	1.071	334.173	16.983	-40.335	6199.180	0.154	16.983	43.765	292.833
6300.000	1.160	338.005	18.763	-41.122	6299.161	0.116	18.763	45.200	294.526
6400.000	1.293	328.227	20.660	-42.095	6399.138	0.247	20.660	46.892	296.142
6500.000	0.990	319.347	22.275	-43.252	6499.118	0.350	22.275	48.651	297.249
6600.000	0.938	309.165	23.447	-44.449	6599.104	0.179	23.447	50.254	297.812
6700.000	0.920	269.426	23.956	-45.887	6699.092	0.632	23.956	51.764	297.568
6800.000	1.290	219.219	23.077	-47.401	6799.075	0.995	23.077	52.720	295.959
6900.000	2.042	195.973	20.492	-48.603	6899.033	0.997	20.492	52.746	292.861
7000.000	2.598	176.998	16.516	-48.974	6998.953	0.941	16.516	51.684	288.636

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