



Company: Noble Energy
Rig: Production / V.E.S.
API # 05-123-22419
Date: 11/23/2013
Surveyor: Norman Cowan
VS: 0.000
Lat : 40.194
Long: -104.637

Well: Moser H 26-12
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: 4820 Feet
Total Depth as Drilled: 7268 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	0.977	323.881	0.689	-0.503	99.995	0.977	0.689	0.853	323.881
200.000	0.726	338.496	1.967	-1.237	199.984	0.330	1.967	2.324	327.827
300.000	0.437	359.570	2.938	-1.473	299.979	0.355	2.938	3.287	333.382
400.000	0.211	340.831	3.494	-1.536	399.977	0.247	3.494	3.817	336.271
500.000	0.285	341.792	3.905	-1.674	499.976	0.074	3.905	4.249	336.791
600.000	0.275	348.979	4.377	-1.798	599.975	0.036	4.377	4.732	337.668
700.000	0.166	44.252	4.717	-1.743	699.975	0.227	4.717	5.029	339.722
800.000	0.216	2.378	5.009	-1.634	799.974	0.144	5.009	5.269	341.935
900.000	0.112	277.207	5.210	-1.723	899.974	0.235	5.210	5.487	341.699
1000.000	0.116	267.998	5.218	-1.921	999.974	0.019	5.218	5.561	339.789
1100.000	0.115	286.018	5.243	-2.119	1099.973	0.036	5.243	5.655	337.994
1200.000	0.111	121.163	5.220	-2.132	1199.973	0.224	5.220	5.639	337.781
1300.000	0.117	209.599	5.081	-2.100	1299.973	0.159	5.081	5.498	337.550
1400.000	0.086	168.687	4.919	-2.135	1399.973	0.077	4.919	5.363	336.536
1500.000	0.123	331.751	4.940	-2.171	1499.973	0.207	4.940	5.396	336.274
1600.000	0.307	4.639	5.302	-2.201	1599.972	0.215	5.302	5.741	337.461
1700.000	0.566	342.547	6.041	-2.327	1699.969	0.304	6.041	6.473	338.933
1800.000	0.672	355.529	7.096	-2.521	1799.963	0.175	7.096	7.531	340.445
1900.000	0.757	359.189	8.342	-2.576	1899.956	0.096	8.342	8.730	342.840
2000.000	0.411	346.486	9.351	-2.669	1999.950	0.367	9.351	9.725	344.070
2100.000	0.236	293.370	9.782	-2.942	2099.949	0.329	9.782	10.215	343.261
2200.000	0.496	238.358	9.637	-3.499	2199.947	0.409	9.637	10.252	340.043
2300.000	0.768	218.290	8.884	-4.283	2299.941	0.347	8.884	9.862	334.262
2400.000	1.211	208.757	7.431	-5.206	2399.926	0.472	7.431	9.074	324.985
2500.000	1.575	219.904	5.450	-6.597	2499.896	0.452	5.450	8.557	309.565
2600.000	1.950	209.710	2.918	-8.321	2599.849	0.487	2.918	8.818	289.326
2700.000	1.967	209.657	-0.051	-10.014	2699.791	0.018	-0.051	10.014	269.708
2800.000	2.018	206.674	-3.116	-11.654	2799.730	0.115	-3.116	12.063	255.031
2900.000	1.964	209.707	-6.178	-13.293	2899.670	0.118	-6.178	14.659	245.074
3000.000	2.181	207.204	-9.359	-15.013	2999.604	0.234	-9.359	17.691	238.061
3100.000	1.475	205.211	-12.215	-16.431	3099.553	0.708	-12.215	20.474	233.371
3200.000	1.280	221.688	-14.214	-17.722	3199.524	0.440	-14.214	22.717	231.269
3300.000	0.961	264.697	-15.125	-19.299	3299.507	0.873	-15.125	24.520	231.914
3400.000	0.924	315.992	-14.622	-20.694	3399.495	0.817	-14.622	25.339	234.755
3500.000	0.756	316.057	-13.568	-21.712	3499.484	0.169	-13.568	25.603	237.999

3600.000	0.553	300.734	-12.846	-22.585	3599.478	0.266	-12.846	25.982	240.369
3700.000	0.486	272.908	-12.578	-23.423	3699.474	0.258	-12.578	26.586	241.764
3800.000	0.520	245.656	-12.744	-24.260	3799.470	0.239	-12.744	27.403	242.287
3900.000	0.283	257.858	-12.983	-24.915	3899.468	0.250	-12.983	28.094	242.477
4000.000	0.360	234.948	-13.215	-25.413	3999.466	0.148	-13.215	28.644	242.526
4100.000	0.268	217.334	-13.581	-25.812	4099.465	0.132	-13.581	29.167	242.249
4200.000	0.274	204.991	-13.983	-26.055	4199.463	0.058	-13.983	29.570	241.778
4300.000	0.650	295.348	-13.957	-26.668	4299.461	0.707	-13.957	30.100	242.374
4400.000	0.928	293.192	-13.395	-27.925	4399.451	0.280	-13.395	30.972	244.374
4500.000	1.089	295.458	-12.668	-29.528	4499.436	0.166	-12.668	32.131	246.781
4600.000	1.489	289.831	-11.818	-31.608	4599.410	0.418	-11.818	33.746	249.500
4700.000	1.836	309.653	-10.355	-34.064	4699.369	0.666	-10.355	35.603	253.091
4800.000	1.986	326.488	-7.888	-36.254	4799.314	0.579	-7.888	37.102	257.725
4900.000	2.545	345.260	-4.296	-37.776	4899.237	0.922	-4.296	38.019	263.512
5000.000	2.748	359.597	0.249	-38.357	4999.131	0.690	0.249	38.358	270.372
5100.000	2.657	11.669	4.916	-37.906	5099.021	0.575	4.916	38.223	277.389
5200.000	2.292	26.468	8.976	-36.545	5198.928	0.733	8.976	37.632	283.799
5300.000	1.768	37.417	11.991	-34.717	5298.866	0.650	11.991	36.729	289.055
5400.000	1.518	48.738	14.090	-32.784	5398.825	0.409	14.090	35.683	293.257
5500.000	1.555	58.878	15.664	-30.627	5498.789	0.274	15.664	34.400	297.088
5600.000	1.683	63.125	17.030	-28.155	5598.749	0.175	17.030	32.905	301.167
5700.000	1.670	68.616	18.225	-25.489	5698.706	0.161	18.225	31.334	305.564
5800.000	1.763	80.452	19.011	-22.615	5798.662	0.366	19.011	29.544	310.051
5900.000	1.763	78.408	19.575	-19.591	5898.614	0.063	19.575	27.695	314.976
6000.000	1.668	75.633	20.245	-16.675	5998.570	0.126	20.245	26.228	320.524
6100.000	1.877	72.365	21.103	-13.704	6098.522	0.232	21.103	25.162	327.000
6200.000	2.019	57.212	22.553	-10.663	6198.465	0.533	22.553	24.946	334.695
6300.000	2.591	54.026	24.834	-7.353	6298.383	0.586	24.834	25.900	343.508
6400.000	3.004	71.111	27.011	-3.044	6398.266	0.926	27.011	27.182	353.571
6500.000	3.453	101.724	27.247	2.384	6498.114	1.758	27.247	27.351	5.001
6600.000	3.495	127.185	24.793	7.762	6597.936	1.531	24.793	25.979	17.383
6700.000	3.466	142.647	20.547	12.024	6697.754	0.936	20.547	23.807	30.337
6800.000	3.278	146.630	15.756	15.431	6797.581	0.301	15.756	22.054	44.402
6900.000	2.519	155.869	11.363	17.902	6897.453	0.889	11.363	21.204	57.594
7000.000	1.653	164.517	7.968	19.186	6997.386	0.918	7.968	20.774	67.447

e North