



Company: Noble Energy
Rig: Production/VES
API # 05-123-26197

Date: 1/6/2014
Surveyor: Nick Kula

VS: 0.000
Lat : 40.205
Long: -104.639

Well: UPRC H23-13
Location: Weld County, Colorado
North Reference: GRID
Convergence: GRID North is 0.560 Degrees East
Declination: 8.44

Depth Reference: Ground Level
Elevation: 4809'

Total Depth as Drilled: 7303'

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	0.211	214.555	-0.152	-0.104	100.000	0.211	-0.152	0.184	214.555
200.000	0.204	214.253	-0.450	-0.309	199.999	0.007	-0.450	0.546	214.457
300.000	0.266	335.930	-0.385	-0.504	299.999	0.412	-0.385	0.634	232.597
400.000	0.382	294.820	-0.033	-0.901	399.997	0.252	-0.033	0.902	267.884
500.000	0.609	6.686	0.634	-1.142	499.994	0.610	0.634	1.306	299.060
600.000	1.095	331.437	2.001	-1.537	599.983	0.693	2.001	2.523	322.483
700.000	0.920	4.434	3.641	-1.931	699.969	0.596	3.641	4.122	332.056
800.000	1.189	2.875	5.478	-1.817	799.952	0.271	5.478	5.772	341.648
900.000	1.167	351.187	7.520	-1.921	899.931	0.241	7.520	7.762	345.670
1000.000	1.192	348.752	9.547	-2.280	999.910	0.056	9.547	9.815	346.568
1100.000	1.154	343.864	11.534	-2.763	1099.889	0.107	11.534	11.860	346.530
1200.000	1.239	346.767	13.553	-3.290	1199.867	0.104	13.553	13.947	346.356
1300.000	1.312	335.042	15.643	-4.020	1299.842	0.271	15.643	16.152	345.587
1400.000	1.360	329.985	17.709	-5.097	1399.815	0.127	17.709	18.428	343.942
1500.000	1.443	325.939	19.780	-6.396	1499.785	0.129	19.780	20.789	342.080
1600.000	1.372	319.508	21.734	-7.879	1599.755	0.173	21.734	23.119	340.073
1700.000	1.139	320.092	23.408	-9.295	1699.731	0.234	23.408	25.185	338.343
1800.000	0.823	312.585	24.656	-10.461	1799.716	0.340	24.656	26.784	337.009
1900.000	0.906	319.988	25.748	-11.499	1899.705	0.139	25.748	28.199	335.935
2000.000	1.299	322.551	27.253	-12.696	1999.686	0.396	27.253	30.065	335.021
2100.000	1.318	329.781	29.147	-13.964	2099.660	0.166	29.147	32.319	334.401
2200.000	1.442	331.025	31.241	-15.152	2199.631	0.128	31.241	34.722	334.126
2300.000	1.280	331.482	33.324	-16.295	2299.603	0.162	33.324	37.095	333.941
2400.000	1.372	330.713	35.350	-17.415	2399.576	0.094	35.350	39.407	333.773
2500.000	1.542	332.712	37.590	-18.617	2499.544	0.177	37.590	41.948	333.652
2600.000	1.649	320.920	39.902	-20.141	2599.505	0.345	39.902	44.697	333.217
2700.000	2.091	328.272	42.571	-22.007	2699.452	0.503	42.571	47.923	332.663
2800.000	2.270	324.570	45.737	-24.115	2799.379	0.227	45.737	51.705	332.199
2900.000	2.281	334.034	49.140	-26.135	2899.301	0.376	49.140	55.657	331.994
3000.000	2.014	333.152	52.497	-27.799	2999.231	0.269	52.497	59.403	332.097
3100.000	1.872	357.270	55.696	-28.671	3099.175	0.823	55.696	62.642	332.762
3200.000	2.692	355.766	59.669	-28.922	3199.095	0.822	59.669	66.309	334.140
3300.000	2.754	2.753	64.410	-28.980	3298.982	0.337	64.410	70.630	335.776
3400.000	2.709	7.470	69.153	-28.557	3398.869	0.229	69.153	74.817	337.561
3500.000	2.833	5.882	73.954	-27.997	3498.752	0.146	73.954	79.076	339.265

3600.000	2.682	7.516	78.732	-27.437	3598.636	0.170	78.732	83.375	340.787
3700.000	2.622	3.697	83.334	-26.984	3698.529	0.187	83.334	87.594	342.058
3800.000	2.687	10.531	87.920	-26.408	3798.422	0.323	87.920	91.801	343.282
3900.000	2.658	5.187	92.534	-25.770	3898.313	0.251	92.534	96.055	344.438
4000.000	2.939	8.616	97.378	-25.176	3998.194	0.327	97.378	100.580	345.504
4100.000	3.610	15.652	102.944	-23.943	4098.030	0.781	102.944	105.692	346.907
4200.000	4.310	17.904	109.551	-21.939	4197.791	0.717	109.551	111.726	348.676
4300.000	4.908	19.456	117.160	-19.359	4297.467	0.611	117.160	118.749	350.618
4400.000	5.712	22.231	125.800	-16.051	4397.038	0.843	125.800	126.820	352.729
4500.000	5.829	24.663	135.021	-12.049	4496.531	0.271	135.021	135.558	354.900
4600.000	5.184	19.702	143.889	-8.408	4596.070	0.801	143.889	144.134	356.656
4700.000	4.674	21.986	151.920	-5.359	4695.700	0.546	151.920	152.015	357.980
4800.000	4.645	31.110	159.165	-1.742	4795.371	0.741	159.165	159.174	359.373
4900.000	3.869	37.255	165.317	2.393	4895.094	0.899	165.317	165.334	0.829
5000.000	3.073	44.455	169.916	6.313	4994.911	0.906	169.916	170.033	2.128
5100.000	2.267	41.786	173.304	9.508	5094.801	0.816	173.304	173.565	3.140
5200.000	1.287	38.143	175.662	11.520	5194.752	0.986	175.662	176.039	3.752
5300.000	1.139	2.996	177.538	12.265	5294.731	0.746	177.538	177.961	3.952
5400.000	1.738	335.611	179.912	11.691	5394.700	0.896	179.912	180.292	3.718
5500.000	2.120	351.092	183.121	10.778	5494.644	0.643	183.121	183.438	3.368
5600.000	2.249	8.934	186.887	10.796	5594.572	0.689	186.887	187.199	3.306
5700.000	2.369	25.893	190.685	12.004	5694.492	0.691	190.685	191.063	3.602
5800.000	1.441	26.421	193.670	13.466	5794.436	0.929	193.670	194.138	3.977
5900.000	0.923	39.659	195.417	14.539	5894.414	0.582	195.417	195.957	4.255
6000.000	0.671	33.425	196.526	15.376	5994.405	0.267	196.526	197.126	4.474
6100.000	0.683	37.769	197.485	16.063	6094.398	0.053	197.485	198.137	4.650
6200.000	1.032	17.728	198.814	16.703	6194.387	0.455	198.814	199.514	4.802
6300.000	1.232	25.600	200.641	17.441	6294.367	0.253	200.641	201.398	4.968
6400.000	1.127	17.864	202.546	18.207	6394.346	0.190	202.546	203.363	5.137
6500.000	1.417	6.031	204.712	18.639	6494.321	0.390	204.712	205.559	5.202
6600.000	1.370	327.379	206.949	18.124	6594.294	0.923	206.949	207.741	5.005
6700.000	1.499	359.927	209.264	17.478	6694.264	0.813	209.264	209.992	4.774
6800.000	1.656	8.779	212.000	17.697	6794.226	0.289	212.000	212.737	4.772
6900.000	1.264	350.991	214.517	17.745	6894.194	0.595	214.517	215.249	4.729
7000.000	2.083	357.194	217.421	17.483	6994.151	0.837	217.421	218.123	4.597

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