



**Company:** Noble Energy  
**Rig:** Production / VES  
**API #** 05-123-17089

**Date:** 2/15/2014

**Surveyor:** CJ Hines

**VS:** 0.000

**Lat :** 40.209

**Long:** -104.638

**Well:** UPRC #23-12J

**Location:** Weld County, Colorado

**North Reference:** GRID

**Convergence:** Grid north is 0.56 East of True Noi

**Declination:** 8.42

**Depth Reference:** Ground Level

**Elevation:** 4798

**Total Depth as Drilled:** 7239

**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	0.830	85.026	0.063	0.722	99.997	0.830	0.063	0.724	85.026
200.000	0.307	87.023	0.140	1.711	199.991	0.523	0.140	1.717	85.338
300.000	0.110	148.139	0.072	2.030	299.991	0.272	0.072	2.031	87.976
400.000	0.115	4.930	0.090	2.089	399.991	0.214	0.090	2.091	87.530
500.000	0.067	75.871	0.204	2.154	499.990	0.113	0.204	2.164	84.578
600.000	0.148	71.448	0.260	2.333	599.990	0.082	0.260	2.348	83.646
700.000	0.160	117.031	0.238	2.580	699.990	0.120	0.238	2.591	84.736
800.000	0.135	56.790	0.239	2.803	799.990	0.149	0.239	2.813	85.127
900.000	0.194	108.067	0.251	3.063	899.989	0.152	0.251	3.073	85.316
1000.000	0.180	42.492	0.314	3.330	999.989	0.203	0.314	3.345	84.611
1100.000	0.476	46.007	0.718	3.735	1099.987	0.296	0.718	3.803	79.112
1200.000	0.146	354.615	1.134	4.022	1199.986	0.401	1.134	4.178	74.257
1300.000	0.212	63.967	1.342	4.176	1299.985	0.211	1.342	4.386	72.189
1400.000	0.343	337.160	1.698	4.226	1399.984	0.393	1.698	4.554	68.107
1500.000	0.256	260.582	1.937	3.889	1499.983	0.377	1.937	4.345	63.526
1600.000	0.417	346.823	2.255	3.586	1599.982	0.475	2.255	4.236	57.837
1700.000	0.347	305.232	2.785	3.256	1699.980	0.279	2.785	4.284	49.461
1800.000	0.597	286.907	3.111	2.510	1799.977	0.289	3.111	3.997	38.895
1900.000	0.703	316.740	3.709	1.590	1899.970	0.350	3.709	4.036	23.208
2000.000	0.951	320.772	4.800	0.645	1999.960	0.254	4.800	4.843	7.652
2100.000	1.039	326.596	6.200	-0.379	2099.945	0.134	6.200	6.211	356.498
2200.000	0.976	333.067	7.716	-1.264	2199.929	0.130	7.716	7.819	350.694
2300.000	1.049	348.488	9.372	-1.833	2299.914	0.281	9.372	9.550	348.935
2400.000	1.140	340.617	11.208	-2.346	2399.896	0.176	11.208	11.451	348.179
2500.000	1.134	7.871	13.127	-2.540	2499.877	0.536	13.127	13.371	349.047
2600.000	1.002	354.550	14.978	-2.488	2599.860	0.281	14.978	15.183	350.569
2700.000	0.852	12.231	16.575	-2.413	2699.847	0.321	16.575	16.750	351.716
2800.000	1.136	13.922	18.263	-2.017	2799.832	0.285	18.263	18.374	353.696
2900.000	1.567	22.392	20.489	-1.258	2899.804	0.474	20.489	20.528	356.486
3000.000	2.095	21.419	23.455	-0.070	2999.752	0.529	23.455	23.455	359.829
3100.000	2.257	26.736	26.915	1.483	3099.680	0.259	26.915	26.956	3.154
3200.000	2.442	41.303	30.273	3.775	3199.597	0.623	30.273	30.508	7.108
3300.000	3.072	46.102	33.732	7.112	3299.481	0.671	33.732	34.473	11.906
3400.000	3.519	37.938	38.010	10.930	3399.316	0.647	38.010	39.550	16.042
3500.000	3.709	37.543	42.995	14.787	3499.117	0.191	42.995	45.467	18.980

3600.000	3.738	31.901	48.326	18.480	3598.906	0.367	48.326	51.739	20.927
3700.000	3.154	20.346	53.673	21.160	3698.726	0.904	53.673	57.694	21.516
3800.000	3.008	7.909	58.852	22.477	3798.583	0.683	58.852	62.998	20.903
3900.000	3.078	354.486	64.123	22.580	3898.443	0.714	64.123	67.983	19.399
4000.000	3.066	0.474	69.469	22.344	3998.300	0.321	69.469	72.974	17.830
4100.000	3.047	357.589	74.798	22.255	4098.157	0.155	74.798	78.039	16.569
4200.000	3.432	345.561	80.352	21.397	4197.999	0.779	80.352	83.152	14.911
4300.000	3.565	343.653	86.235	19.775	4297.812	0.177	86.235	88.473	12.916
4400.000	3.621	344.704	92.264	18.067	4397.616	0.086	92.264	94.016	11.079
4500.000	3.688	338.978	98.312	16.080	4497.413	0.371	98.312	99.619	9.289
4600.000	3.591	341.612	104.286	13.939	4597.211	0.194	104.286	105.214	7.613
4700.000	3.493	337.925	110.080	11.806	4697.020	0.248	110.080	110.712	6.122
4800.000	2.595	331.196	114.887	9.570	4796.878	0.964	114.887	115.285	4.762
4900.000	2.194	323.030	118.400	7.329	4896.791	0.526	118.400	118.626	3.542
5000.000	2.105	320.158	121.338	5.001	4996.721	0.140	121.338	121.441	2.360
5100.000	1.248	334.477	123.731	3.356	5096.678	0.947	123.731	123.777	1.554
5200.000	0.721	10.579	125.333	3.002	5196.663	0.789	125.333	125.369	1.372
5300.000	0.915	0.946	126.750	3.131	5296.653	0.237	126.750	126.789	1.415
5400.000	0.657	46.803	127.941	3.562	5396.645	0.657	127.941	127.991	1.595
5500.000	0.740	78.371	128.464	4.613	5496.637	0.388	128.464	128.547	2.057
5600.000	0.085	99.752	128.582	5.319	5596.634	0.661	128.582	128.692	2.369
5700.000	0.358	121.846	128.405	5.657	5696.633	0.280	128.405	128.529	2.523
5800.000	0.786	51.263	128.669	6.458	5796.629	0.748	128.669	128.831	2.873
5900.000	0.613	42.080	129.496	7.351	5896.622	0.206	129.496	129.704	3.249
6000.000	0.449	69.321	130.031	8.076	5996.618	0.296	130.031	130.282	3.554
6100.000	0.139	174.131	130.049	8.455	6096.617	0.503	130.049	130.324	3.720
6200.000	0.058	276.425	129.934	8.418	6196.616	0.161	129.934	130.206	3.707
6300.000	0.257	124.523	129.813	8.553	6296.616	0.309	129.813	130.094	3.769
6400.000	0.317	182.573	129.410	8.725	6396.615	0.283	129.410	129.703	3.857
6500.000	0.346	142.280	128.894	8.898	6496.614	0.230	128.894	129.201	3.949
6600.000	0.866	145.030	128.036	9.516	6596.608	0.520	128.036	128.389	4.250
6700.000	0.233	204.426	127.232	9.864	6696.603	0.774	127.232	127.614	4.433
6800.000	0.532	316.743	127.385	9.462	6796.602	0.657	127.385	127.736	4.248
6900.000	0.522	307.269	127.999	8.781	6896.597	0.088	127.999	128.300	3.924
6950.000	0.626	318.862	128.343	8.420	6946.595	0.311	128.343	128.619	3.754

rth