



**Company:** Noble Energy, Inc.

**Rig:** Production / Lightning Wire

**Latitude:** 40.293

**Longitude:** -104.859

**API #** 05-123-18310

**Date:** 9/24/12

**Well:** UPRC 23-7 I7

**Location:** Weld County, CO.

**North Reference:** -0.41 To Grid

**Depth Reference:** Ground Level

**Surveyor:** Norman Cowan

**VS:** 0.000

MS 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	0.400	111.734	-0.129	0.324	99.999	0.400	-0.129	0.349	111.734
200.000	0.249	111.104	-0.337	0.851	199.998	0.151	-0.337	0.915	111.584
300.000	0.430	23.054	-0.070	1.200	299.996	0.489	-0.070	1.202	93.333
400.000	0.108	141.778	0.201	1.405	399.995	0.491	0.201	1.420	81.856
500.000	0.117	108.972	0.094	1.560	499.995	0.064	0.094	1.563	86.546
600.000	0.254	312.888	0.212	1.494	599.995	0.363	0.212	1.509	81.932
700.000	0.334	291.833	0.471	1.061	699.994	0.133	0.471	1.161	66.066
800.000	0.368	230.308	0.374	0.543	799.992	0.361	0.374	0.659	55.430
900.000	0.437	238.509	-0.030	-0.030	899.990	0.089	-0.030	0.042	224.245
1000.000	0.488	291.631	-0.072	-0.751	999.987	0.416	-0.072	0.754	264.497
1100.000	0.615	287.241	0.244	-1.660	1099.982	0.134	0.244	1.678	278.360
1200.000	0.490	253.694	0.283	-2.583	1199.978	0.341	0.283	2.599	276.253
1300.000	0.361	269.966	0.163	-3.309	1299.975	0.175	0.163	3.313	272.817
1400.000	0.571	251.277	0.003	-4.096	1399.972	0.256	0.003	4.096	270.038
1500.000	0.845	238.952	-0.537	-5.199	1499.964	0.312	-0.537	5.227	264.099
1600.000	1.006	274.447	-0.849	-6.706	1599.952	0.585	-0.849	6.760	262.781
1700.000	0.995	197.693	-1.609	-7.845	1699.940	1.242	-1.609	8.009	258.411
1800.000	1.137	338.822	-1.511	-8.468	1799.933	2.011	-1.511	8.601	259.882
1900.000	1.254	194.702	-1.645	-9.104	1899.925	2.275	-1.645	9.251	259.760
2000.000	1.023	223.782	-3.348	-10.000	1999.906	0.614	-3.348	10.545	251.489
2100.000	0.864	263.641	-4.076	-11.367	2099.893	0.661	-4.076	12.076	250.271
2200.000	1.104	82.957	-4.042	-11.160	2199.888	1.968	-4.042	11.870	250.092
2300.000	0.627	293.603	-3.705	-10.706	2299.883	1.674	-3.705	11.329	250.913
2400.000	2.976	43.307	-1.596	-9.427	2399.839	3.241	-1.596	9.561	260.390
2500.000	7.348	22.684	6.197	-5.178	2499.416	4.681	6.197	8.075	320.119
2600.000	9.459	21.663	19.735	0.322	2598.337	2.117	19.735	19.737	0.935
2700.000	11.606	21.291	36.746	7.009	2696.647	2.148	36.746	37.408	10.799
2800.000	12.986	18.968	56.744	14.313	2794.351	1.466	56.744	58.522	14.157
2900.000	17.839	17.945	81.956	22.689	2890.726	4.861	81.956	85.039	15.475
3000.000	20.416	18.265	113.096	32.877	2985.198	2.580	113.096	117.778	16.209
3100.000	23.643	19.140	148.613	44.921	3077.885	3.244	148.613	155.254	16.818
3200.000	26.822	20.863	188.649	59.535	3168.333	3.262	188.649	197.820	17.515
3300.000	23.756	22.823	228.306	75.386	3258.740	3.178	228.306	240.430	18.273
3400.000	31.782	25.554	270.701	94.591	3347.154	8.125	270.701	286.752	19.261
3500.000	32.642	25.158	318.872	117.417	3431.761	0.885	318.872	339.803	20.215
3600.000	32.816	27.247	367.375	141.289	3515.888	1.143	367.375	393.608	21.036
3700.000	33.534	27.774	415.906	166.566	3599.587	0.774	415.906	448.020	21.826
3800.000	34.620	27.676	465.504	192.633	3682.414	1.087	465.504	503.787	22.481

3900.000	36.514	27.011	517.171	219.341	3763.754	1.933	517.171	561.762	22.983
4000.000	36.825	26.360	570.530	246.160	3843.963	0.498	570.530	621.369	23.338
4100.000	34.053	25.052	622.758	271.327	3925.429	2.874	622.758	679.299	23.542
4200.000	35.846	24.939	674.677	295.531	4007.392	1.793	674.677	736.565	23.655
4300.000	35.963	26.278	727.556	320.878	4088.393	0.794	727.556	795.173	23.799
4400.000	35.467	27.157	779.699	347.120	4169.586	0.713	779.699	853.477	23.998
4500.000	34.732	26.781	830.945	373.198	4251.401	0.766	830.945	910.904	24.186
4600.000	33.790	27.947	880.943	399.066	4334.049	1.149	880.943	967.116	24.370
4700.000	32.670	28.573	929.212	425.008	4417.696	1.171	929.212	1021.796	24.579
4800.000	33.048	26.851	977.243	450.234	4501.698	1.008	977.243	1075.972	24.736
4900.000	32.518	28.090	1025.284	475.206	4585.771	0.855	1025.284	1130.056	24.867
5000.000	31.480	28.806	1071.876	500.443	4670.576	1.105	1071.876	1182.946	25.027
5100.000	30.531	28.504	1117.077	525.146	4756.287	0.961	1117.077	1234.358	25.179
5200.000	30.846	29.588	1161.693	549.927	4842.283	0.637	1161.693	1285.282	25.332
5300.000	30.446	29.611	1206.014	575.104	4928.316	0.400	1206.014	1336.119	25.495
5400.000	27.694	30.910	1247.987	599.565	5015.711	2.823	1247.987	1384.540	25.661
5500.000	26.902	31.381	1287.239	623.282	5104.574	0.822	1287.239	1430.198	25.836
5600.000	26.897	28.068	1326.514	645.707	5193.760	1.499	1326.514	1475.322	25.955
5700.000	27.171	21.711	1367.694	664.800	5282.853	2.901	1367.694	1520.705	25.923
5800.000	28.033	19.595	1411.046	681.128	5371.473	1.306	1411.046	1566.839	25.767
5900.000	30.051	18.764	1456.897	697.065	5458.895	2.058	1456.897	1615.069	25.569
6000.000	31.688	18.854	1505.463	713.607	5544.726	1.638	1505.463	1666.030	25.362
6100.000	31.334	18.773	1554.937	730.463	5629.980	0.356	1554.937	1717.965	25.163
6200.000	31.979	18.908	1604.607	747.412	5715.101	0.649	1604.607	1770.138	24.976
6300.000	32.681	20.376	1654.968	765.394	5799.600	1.053	1654.968	1823.389	24.820
6400.000	29.872	22.238	1703.338	784.223	5885.061	2.970	1703.338	1875.198	24.722
6500.000	28.401	24.356	1748.058	803.457	5972.407	1.796	1748.058	1923.864	24.685
6600.000	27.045	26.704	1790.037	823.483	6060.928	1.741	1790.037	1970.369	24.704
6700.000	23.811	25.745	1828.539	842.473	6151.229	3.260	1828.539	2013.284	24.737
6800.000	19.822	24.508	1862.162	858.280	6244.049	4.015	1862.162	2050.437	24.745
6900.000	15.830	23.680	1890.092	870.796	6339.229	4.000	1890.092	2081.041	24.736
7000.000	12.810	22.421	1912.836	880.505	6436.111	3.035	1912.836	2105.761	24.717
7100.000	9.745	17.835	1931.145	887.327	6534.170	3.191	1931.145	2125.246	24.678
7200.000	7.471	13.214	1945.533	891.406	6633.038	2.375	1945.533	2140.025	24.616
7300.000	6.732	12.697	1957.581	894.180	6732.270	0.742	1957.581	2152.134	24.550
7400.000	6.488	11.018	1968.844	896.549	6831.606	0.311	1968.844	2163.364	24.483
7500.000	5.861	11.929	1979.385	898.684	6931.025	0.635	1979.385	2173.844	24.419
7600.000	5.361	11.371	1988.960	900.660	7030.546	0.503	1988.960	2183.380	24.362
7700.000	5.541	8.341	1998.316	902.281	7130.094	0.340	1998.316	2192.574	24.300
7800.000	4.448	7.210	2006.941	903.469	7229.712	1.098	2006.941	2200.924	24.236
7840.000	3.777	5.054	2009.792	903.779	7269.609	1.720	2009.792	2203.652	24.213