



**Company:** Noble Energy

**Rig:** Production/Coretech

**API #** 05-123-18869

**Date:** 3/18/2014

**Surveyor:** Randy Holcomb

**VS:** 0.000

**Lat :** 40.442

**Long:** -104.473

**Well:** UPV #31-9G3

**Location:** Weld County, Colorado

**North Reference:** GRID

**Convergence:** Grid north is 0.66 East of True North

**Declination:** 8.34

**Depth Reference:** Ground Level

**Elevation:** 4645 Feet

**Total Depth as Drilled:** 6954 Feet

**Lat & Long obtained by handheld GPS at wellhead**

**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	0.363	41.492	0.237	0.210	99.999	0.363	0.237	0.316	41.492
200.000	0.377	14.290	0.793	0.501	199.997	0.175	0.793	0.938	32.258
300.000	0.200	57.405	1.206	0.729	299.996	0.269	1.206	1.409	31.139
400.000	0.722	351.414	1.923	0.781	399.993	0.667	1.923	2.076	22.111
500.000	0.582	337.269	3.015	0.491	499.987	0.212	3.015	3.055	9.246
600.000	0.462	357.132	3.887	0.274	599.982	0.216	3.887	3.896	4.037
700.000	0.756	334.288	4.884	-0.032	699.977	0.376	4.884	4.884	359.622
800.000	0.758	332.618	6.066	-0.623	799.968	0.022	6.066	6.098	354.138
900.000	0.634	352.779	7.202	-0.996	899.961	0.273	7.202	7.270	352.122
1000.000	0.602	15.721	8.256	-0.924	999.955	0.248	8.256	8.307	353.616
1100.000	0.686	53.311	9.119	-0.301	1099.949	0.423	9.119	9.124	358.108
1200.000	0.753	352.978	10.129	0.099	1199.943	0.726	10.129	10.130	0.558
1300.000	0.607	356.377	11.311	-0.015	1299.936	0.151	11.311	11.311	359.923
1400.000	0.431	64.883	11.999	0.292	1399.932	0.602	11.999	12.003	1.392
1500.000	0.654	341.233	12.699	0.448	1499.929	0.742	12.699	12.707	2.021
1600.000	0.436	90.633	13.235	0.645	1599.926	0.898	13.235	13.251	2.789
1700.000	0.385	66.865	13.363	1.334	1699.924	0.176	13.363	13.430	5.701
1800.000	0.755	337.370	14.103	1.389	1799.920	0.844	14.103	14.171	5.627
1900.000	0.858	348.856	15.446	0.991	1899.910	0.191	15.446	15.478	3.672
2000.000	0.563	74.966	16.308	1.321	1999.905	0.994	16.308	16.362	4.632
2100.000	0.697	66.254	16.681	2.353	2099.899	0.164	16.681	16.846	8.030
2200.000	0.554	81.413	16.998	3.388	2199.893	0.218	16.998	17.332	11.273
2300.000	0.567	84.873	17.114	4.359	2299.888	0.036	17.114	17.661	14.290
2400.000	0.565	95.944	17.108	5.342	2399.883	0.109	17.108	17.922	17.342
2500.000	0.562	47.431	17.388	6.193	2499.879	0.463	17.388	18.458	19.605
2600.000	0.478	31.628	18.075	6.773	2599.875	0.165	18.075	19.302	20.542
2700.000	0.521	21.672	18.853	7.160	2699.871	0.097	18.853	20.166	20.795
2800.000	0.369	29.310	19.557	7.486	2799.868	0.163	19.557	20.940	20.945
2900.000	0.279	90.986	19.834	7.887	2899.867	0.341	19.834	21.344	21.685
3000.000	0.250	1.903	20.048	8.137	2999.866	0.372	20.048	21.636	22.092
3100.000	0.226	216.730	20.107	8.026	3099.866	0.455	20.107	21.650	21.760
3200.000	0.283	224.313	19.772	7.735	3199.865	0.066	19.772	21.231	21.366
3300.000	0.299	230.459	19.429	7.361	3299.863	0.035	19.429	20.777	20.750
3400.000	0.612	107.172	19.105	7.670	3399.862	0.816	19.105	20.587	21.874
3500.000	0.353	139.870	18.711	8.379	3499.858	0.368	18.711	20.502	24.124
3600.000	0.607	126.896	18.158	9.001	3599.855	0.274	18.158	20.266	26.369
3700.000	0.760	118.513	17.523	10.007	3699.847	0.183	17.523	20.180	29.730

3800.000	0.580	65.823	17.414	11.051	3799.841	0.616	17.414	20.625	32.400
3900.000	0.574	160.442	17.149	11.681	3899.838	0.848	17.149	20.749	34.259
4000.000	0.201	158.874	16.514	11.911	3999.836	0.373	16.514	20.361	35.803
4100.000	0.570	140.933	15.964	12.288	4099.833	0.383	15.964	20.146	37.586
4200.000	0.335	134.446	15.373	12.810	4199.830	0.240	15.373	20.011	39.803
4300.000	0.517	140.114	14.822	13.308	4299.827	0.187	14.822	19.920	41.919
4400.000	0.757	172.464	13.821	13.684	4399.821	0.423	13.821	19.449	44.715
4500.000	0.609	216.643	12.739	13.453	4499.815	0.532	12.739	18.528	46.563
4600.000	0.683	160.262	11.751	13.337	4599.809	0.614	11.751	17.776	48.618
4700.000	1.124	180.362	10.209	13.533	4699.797	0.536	10.209	16.951	52.970
4800.000	1.278	133.722	8.457	14.333	4799.777	0.961	8.457	16.642	59.457
4900.000	0.912	158.716	6.945	15.427	4899.759	0.594	6.945	16.918	65.765
5000.000	0.755	171.358	5.551	15.815	4999.749	0.241	5.551	16.761	70.658
5100.000	1.033	192.101	4.018	15.726	5099.737	0.422	4.018	16.231	75.666
5200.000	1.110	154.778	2.261	15.949	5199.721	0.689	2.261	16.109	81.931
5300.000	1.417	169.088	0.171	16.596	5299.696	0.438	0.171	16.597	89.411
5400.000	1.234	130.599	-1.745	17.648	5399.672	0.891	-1.745	17.734	95.646
5500.000	1.743	110.249	-2.972	19.892	5499.638	0.726	-2.972	20.113	98.497
5600.000	1.873	80.342	-3.224	22.930	5599.591	0.941	-3.224	23.155	98.003
5700.000	1.845	104.036	-3.340	26.103	5699.539	0.764	-3.340	26.316	97.291
5800.000	1.670	105.167	-4.112	29.071	5799.492	0.178	-4.112	29.361	98.050
5900.000	1.574	72.191	-4.073	31.786	5899.454	0.925	-4.073	32.046	97.302
6000.000	1.507	38.220	-2.619	33.907	5999.420	0.902	-2.619	34.008	94.417
6100.000	1.292	358.768	-0.459	34.697	6099.393	0.966	-0.459	34.700	90.758
6200.000	1.171	311.286	1.342	33.905	6199.372	0.998	1.342	33.931	87.733
6300.000	1.195	352.721	3.050	33.005	6299.352	0.837	3.050	33.146	84.720
6400.000	1.152	40.098	4.854	33.521	6399.334	0.944	4.854	33.870	81.761
6450.000	0.866	62.794	5.411	34.181	6449.326	0.973	5.411	34.606	81.004