



**Company:** Noble Energy  
**Rig:** Production/ V.E.S  
**API #** 05-123-29495  
**Date:** 6/1/2013  
**Surveyor:** Jay Hinman  
**VS:** 0.000  
**Lat :** 40.51039  
**Long:** -104.44408

**Well:** NCLP PC AA04-14  
**Location:** Weld County, Colorado  
**North Reference:** GRID  
**Convergence:** Grid North is .680 Deg  
**Declination:** 8.44  
**Depth Reference:** Ground Level  
**Elevation:** 4698'  
**Total Depth as Drilled:** 6898'

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

Field copy only not diffinitive.

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.000	0.157	205.994	-0.123	-0.060	100.000	0.157	-0.123	0.137
200.000	0.310	294.185	-0.135	-0.367	199.999	0.343	-0.135	0.391
300.000	0.250	356.059	0.193	-0.629	299.998	0.292	0.193	0.658
400.000	0.156	98.339	0.391	-0.509	399.998	0.321	0.391	0.642
500.000	0.188	1.027	0.535	-0.372	499.998	0.259	0.535	0.652
600.000	0.565	29.521	1.129	-0.126	599.995	0.410	1.129	1.136
700.000	0.184	349.096	1.716	0.087	699.993	0.442	1.716	1.718
800.000	0.389	38.167	2.141	0.266	799.992	0.303	2.141	2.158
900.000	0.373	32.723	2.682	0.652	899.990	0.040	2.682	2.760
1000.000	0.230	0.932	3.157	0.831	999.988	0.215	3.157	3.264
1100.000	0.434	285.484	3.459	0.469	1099.987	0.437	3.459	3.490
1200.000	0.099	114.949	3.523	0.182	1199.986	0.532	3.523	3.528
1300.000	0.271	269.556	3.485	0.024	1299.986	0.363	3.485	3.485
1400.000	0.262	277.571	3.514	-0.439	1399.985	0.038	3.514	3.541
1500.000	0.388	355.499	3.881	-0.692	1499.984	0.420	3.881	3.942
1600.000	0.067	198.024	4.163	-0.737	1599.983	0.450	4.163	4.227
1700.000	0.425	69.976	4.234	-0.406	1699.982	0.470	4.234	4.253
1800.000	0.197	329.886	4.510	-0.144	1799.981	0.499	4.510	4.512
1900.000	0.330	11.209	4.941	-0.174	1899.980	0.224	4.941	4.944
2000.000	0.444	40.224	5.519	0.132	1999.978	0.223	5.519	5.521
2100.000	0.606	333.859	6.290	0.150	2099.974	0.590	6.290	6.291
2200.000	0.697	323.481	7.253	-0.445	2199.968	0.149	7.253	7.267
2300.000	0.431	35.966	8.046	-0.587	2299.964	0.700	8.046	8.067
2400.000	0.623	49.486	8.703	0.048	2399.960	0.228	8.703	8.703
2500.000	0.327	33.828	9.294	0.620	2499.956	0.321	9.294	9.314
2600.000	0.735	9.957	10.162	0.890	2599.952	0.456	10.162	10.201
2700.000	0.380	7.556	11.123	1.044	2699.947	0.356	11.123	11.172
2800.000	0.616	33.344	11.901	1.383	2799.943	0.320	11.901	11.982
2900.000	0.229	321.326	12.507	1.554	2899.941	0.588	12.507	12.603
3000.000	0.268	326.966	12.859	1.302	2999.940	0.046	12.859	12.925
3100.000	0.309	52.531	13.219	1.388	3099.939	0.393	13.219	13.292
3200.000	0.402	240.769	13.212	1.296	3199.938	0.709	13.212	13.276
3300.000	0.245	125.937	12.916	1.163	3299.938	0.552	12.916	12.968
3400.000	0.754	100.714	12.668	1.983	3399.933	0.543	12.668	12.822

3500.000	0.910	122.915	12.114	3.296	3499.923	0.355	12.114	12.554
3600.000	0.995	108.396	11.409	4.787	3599.910	0.255	11.409	12.372
3700.000	0.625	105.845	10.986	6.135	3699.899	0.372	10.986	12.583
3800.000	0.816	138.936	10.300	7.127	3799.892	0.449	10.300	12.526
3900.000	1.061	104.955	9.524	8.489	3899.879	0.596	9.524	12.759
4000.000	1.212	102.982	9.048	10.414	3999.859	0.156	9.048	13.795
4100.000	1.210	115.449	8.356	12.398	4099.837	0.263	8.356	14.951
4200.000	0.819	96.445	7.822	14.062	4199.822	0.511	7.822	16.091
4300.000	0.987	126.333	7.232	15.467	4299.810	0.493	7.232	17.074
4400.000	1.738	151.084	5.394	16.894	4399.782	0.937	5.394	17.734
4500.000	1.729	176.200	2.561	17.727	4499.737	0.754	2.561	17.911
4600.000	1.508	196.290	-0.208	17.458	4599.698	0.605	-0.208	17.459
4700.000	2.040	223.365	-2.765	15.866	4699.651	0.978	-2.765	16.105
4800.000	1.464	216.491	-5.086	13.884	4799.604	0.612	-5.086	14.786
4900.000	0.817	189.348	-6.817	13.009	4899.585	0.826	-6.817	14.686
5000.000	1.064	181.802	-8.448	12.864	4999.571	0.276	-8.448	15.390
5100.000	1.084	158.911	-10.259	13.175	5099.554	0.427	-10.259	16.698
5200.000	1.137	154.716	-12.039	13.939	5199.535	0.097	-12.039	18.418
5300.000	1.096	145.637	-13.726	14.903	5299.516	0.181	-13.726	20.261
5400.000	1.242	143.470	-15.386	16.088	5399.496	0.152	-15.386	22.261
5500.000	1.272	153.974	-17.254	17.220	5499.472	0.232	-17.254	24.377
5600.000	1.397	152.730	-19.335	18.265	5599.444	0.128	-19.335	26.598
5700.000	1.449	148.004	-21.490	19.493	5699.414	0.128	-21.490	29.014
5800.000	0.812	141.617	-23.118	20.603	5799.394	0.649	-23.118	30.966
5900.000	0.839	147.271	-24.288	21.438	5899.383	0.086	-24.288	32.397
6000.000	0.950	137.433	-25.515	22.395	5999.371	0.189	-25.515	33.949
6100.000	0.854	127.051	-26.575	23.551	6099.359	0.189	-26.575	35.509
6200.000	0.752	95.596	-27.088	24.799	6199.350	0.446	-27.088	36.725
6300.000	0.296	107.894	-27.231	25.699	6299.345	0.467	-27.231	37.443
6400.000	0.392	166.881	-27.644	26.022	6399.344	0.349	-27.644	37.965
6500.000	0.755	156.270	-28.580	26.365	6499.338	0.378	-28.580	38.884
6600.000	0.395	87.371	-29.168	26.975	6599.334	0.715	-29.168	39.729
6700.000	0.872	139.578	-29.732	27.812	6699.328	0.704	-29.732	40.712
6750.000	0.467	150.977	-30.199	28.158	6749.325	0.850	-30.199	41.290

0

rees East of True North

**Cbrg**

0.000  
205.994  
249.773  
287.065  
307.484  
325.198  
353.628  
2.888  
7.085  
13.661  
14.748  
7.726  
2.961  
0.391  
352.875  
349.886  
349.961  
354.519  
358.176  
357.987  
1.375  
1.363  
356.488  
355.830  
0.313  
3.816  
5.003  
5.363  
6.630  
7.083  
5.780  
5.996  
5.604  
5.146  
8.896

15.220  
22.761  
29.183  
34.683  
41.712  
49.016  
56.020  
60.914  
64.941  
72.292  
81.779  
90.681  
99.885  
110.119  
117.655  
123.295  
127.907  
130.817  
132.646  
133.723  
135.057  
136.630  
137.789  
138.292  
138.566  
138.726  
138.452  
137.526  
136.659  
136.730  
137.308  
137.237  
136.910  
137.003