



**Company:** Noble Energy  
**Rig:** Production/ VES  
**API #** 05-123-22820  
**Date:** 9/11/2013  
**Surveyor:** Sean Bratt  
**VS:** 0.000  
**Lat :** 40.273  
**Long:** -104.607

**Well:** Gerrity State G36-17  
**Location:** Weld County, Colorado  
**North Reference:** GRID  
**Convergence:** Grid north is .580 Degr  
**Declination:** 8.47 Degrees  
**Depth Reference:** Ground Level  
**Elevation:** 4829 Feet  
**Total Depth as Drilled:** 7253 Feet

**Lat & Long obtained by handheld GPS at wellhead**  
**HA Gyro Survey Calculations**

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
100.000	0.145	286.948	0.037	-0.121	100.000	0.145	0.037	0.127
200.000	0.071	141.599	0.025	-0.204	200.000	0.208	0.025	0.205
300.000	0.041	102.854	-0.032	-0.130	300.000	0.047	-0.032	0.134
400.000	0.064	162.763	-0.093	-0.079	400.000	0.056	-0.093	0.121
500.000	0.182	163.623	-0.298	-0.017	499.999	0.119	-0.298	0.299
600.000	0.353	188.615	-0.755	-0.018	599.998	0.203	-0.755	0.756
700.000	0.427	199.075	-1.412	-0.186	699.996	0.102	-1.412	1.424
800.000	0.394	197.550	-2.091	-0.412	799.994	0.034	-2.091	2.132
900.000	0.590	238.307	-2.690	-0.954	899.990	0.389	-2.690	2.854
1000.000	0.548	199.904	-3.410	-1.555	999.985	0.376	-3.410	3.748
1100.000	0.512	234.532	-4.119	-2.081	1099.981	0.317	-4.119	4.614
1200.000	0.684	246.845	-4.612	-2.994	1199.976	0.214	-4.612	5.499
1300.000	0.745	256.302	-5.001	-4.174	1299.968	0.132	-5.001	6.514
1400.000	0.753	265.921	-5.202	-5.460	1399.960	0.126	-5.202	7.541
1500.000	0.924	268.741	-5.266	-6.922	1499.949	0.176	-5.266	8.697
1600.000	0.924	269.135	-5.296	-8.534	1599.936	0.006	-5.296	10.044
1700.000	1.049	278.834	-5.168	-10.246	1699.921	0.208	-5.168	11.475
1800.000	0.947	253.678	-5.259	-11.943	1799.907	0.446	-5.259	13.050
1900.000	1.322	218.817	-6.391	-13.460	1899.888	0.768	-6.391	14.900
2000.000	1.340	216.676	-8.228	-14.882	1999.861	0.053	-8.228	17.005
2100.000	1.284	195.443	-10.246	-15.879	2099.835	0.487	-10.246	18.897
2200.000	1.647	185.207	-12.756	-16.308	2199.803	0.446	-12.756	20.704
2300.000	1.692	184.781	-15.659	-16.561	2299.760	0.047	-15.659	22.792
2400.000	1.718	170.970	-18.611	-16.449	2399.716	0.411	-18.611	24.838
2500.000	1.741	180.293	-21.611	-16.221	2499.671	0.282	-21.611	27.021
2600.000	2.164	161.954	-24.925	-15.644	2599.614	0.750	-24.925	29.428
2700.000	2.404	160.025	-28.691	-14.343	2699.534	0.251	-28.691	32.077
2800.000	2.399	160.896	-32.640	-12.941	2799.446	0.037	-32.640	35.112
2900.000	2.173	152.118	-36.294	-11.369	2899.367	0.416	-36.294	38.033
3000.000	2.167	152.396	-39.646	-9.606	2999.295	0.012	-39.646	40.793
3100.000	1.832	167.902	-42.885	-8.395	3099.235	0.634	-42.885	43.699
3200.000	1.923	177.984	-46.124	-8.001	3199.181	0.342	-46.124	46.813
3300.000	2.692	191.596	-50.102	-8.414	3299.100	0.939	-50.102	50.804
3400.000	3.576	196.594	-55.391	-9.777	3398.950	0.924	-55.391	56.247
3500.000	3.944	208.040	-61.415	-12.284	3498.736	0.834	-61.415	62.632

3600.000	3.212	200.785	-67.070	-14.895	3598.541	0.859	-67.070	68.704
3700.000	1.924	185.137	-71.362	-16.040	3698.439	1.455	-71.362	73.142
3800.000	1.640	161.936	-74.395	-15.746	3798.392	0.769	-74.395	76.043
3900.000	1.673	163.022	-77.152	-14.876	3898.350	0.046	-77.152	78.573
4000.000	1.733	164.252	-80.004	-14.039	3998.306	0.070	-80.004	81.226
4100.000	1.107	178.400	-82.425	-13.602	4098.275	0.713	-82.425	83.540
4200.000	0.996	207.141	-84.164	-13.972	4198.259	0.533	-84.164	85.315
4300.000	1.205	201.142	-85.918	-14.747	4298.241	0.238	-85.918	87.174
4400.000	1.331	177.815	-88.059	-15.082	4398.217	0.527	-88.059	89.341
4500.000	1.476	166.028	-90.469	-14.727	4498.187	0.322	-90.469	91.660
4600.000	0.613	150.257	-92.184	-14.150	4598.170	0.902	-92.184	93.264
4700.000	0.576	48.261	-92.314	-13.509	4698.166	0.925	-92.314	93.297
4800.000	1.806	359.319	-90.403	-13.153	4798.145	1.492	-90.403	91.355
4900.000	2.695	351.326	-86.502	-13.526	4898.067	0.941	-86.502	87.554
5000.000	3.289	336.767	-81.542	-15.013	4997.931	0.960	-81.542	82.912
5100.000	3.042	320.762	-76.851	-17.822	5097.781	0.914	-76.851	78.890
5200.000	2.336	323.329	-73.161	-20.718	5197.670	0.715	-73.161	76.038
5300.000	1.765	336.108	-70.118	-22.559	5297.606	0.728	-70.118	73.657
5400.000	1.361	342.078	-67.580	-23.548	5397.569	0.436	-67.580	71.565
5500.000	0.651	343.245	-65.906	-24.077	5497.553	0.710	-65.906	70.167
5600.000	1.467	335.050	-64.201	-24.781	5597.535	0.828	-64.201	68.818
5700.000	2.071	333.413	-61.424	-26.130	5697.487	0.606	-61.424	66.751
5800.000	2.161	340.017	-58.036	-27.583	5797.419	0.260	-58.036	64.258
5900.000	2.036	328.151	-54.755	-29.165	5897.352	0.451	-54.755	62.038
6000.000	2.097	325.160	-51.744	-31.148	5997.287	0.124	-51.744	60.396
6100.000	2.560	312.837	-48.724	-33.831	6097.205	0.679	-48.724	59.317
6200.000	3.116	302.765	-45.734	-37.754	6197.082	0.745	-45.734	59.304
6300.000	3.679	308.315	-42.274	-42.557	6296.906	0.652	-42.274	59.985
6400.000	2.722	313.451	-38.652	-46.799	6396.750	0.999	-38.652	60.696
6500.000	1.755	319.369	-35.856	-49.520	6496.672	0.993	-35.856	61.138
6600.000	1.378	314.026	-33.858	-51.382	6596.635	0.404	-33.858	61.534
6700.000	2.292	310.707	-31.719	-53.762	6696.582	0.919	-31.719	62.421
6800.000	2.787	292.244	-29.495	-57.528	6796.486	0.950	-29.495	64.648
6900.000	0.355	246.151	-28.699	-60.061	6896.442	2.553	-28.699	66.566
7000.000	0.650	123.208	-29.135	-59.870	6996.440	0.894	-29.135	66.583

0

rees East of True North

**Cbrg**

0.000

286.948

277.021

256.303

220.268

183.302

181.400

187.515

191.134

199.519

204.507

206.807

212.985

219.847

226.390

232.737

238.179

243.235

246.234

244.603

241.064

237.168

231.966

226.604

221.471

216.892

212.114

206.560

201.627

197.393

193.620

191.076

189.841

189.533

190.010

191.311

192.521  
192.668  
191.951  
190.914  
189.953  
189.371  
189.425  
189.740  
189.719  
189.246  
188.727  
188.326  
188.278  
188.887  
190.432  
193.057  
195.811  
197.835  
199.211  
200.069  
201.106  
203.045  
205.421  
208.042  
211.047  
214.774  
219.540  
225.191  
230.446  
234.092  
236.617  
239.460  
242.856  
244.460  
244.051