



Company: Noble Energy
Rig: Production/VES
API # 05-123-25884

Date: 7/29/2013
Surveyor: Nick Kula

VS: 0.000
Lat : 40.43741

Long: -104.397

Well: Wells Ranch USX AA 35-16
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid North is .71 Degrees East of T

Declination: 8.39
Depth Reference: Ground Level

Elevation: 4727'

Total Depth as Drilled: 6805'

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	0.310	71.746	0.085	0.257	100.000	0.310	0.085	0.270	71.746
200.000	0.418	65.809	0.319	0.846	199.997	0.115	0.319	0.904	69.353
300.000	0.175	23.685	0.608	1.240	299.996	0.311	0.608	1.382	63.874
400.000	0.355	45.183	0.967	1.522	399.995	0.203	0.967	1.803	57.569
500.000	0.433	100.745	1.115	2.112	499.993	0.373	1.115	2.389	62.174
600.000	0.251	185.872	0.827	2.461	599.992	0.481	0.827	2.596	71.427
700.000	0.532	90.111	0.608	2.903	699.990	0.610	0.608	2.966	78.164
800.000	0.342	179.597	0.309	3.369	799.988	0.629	0.309	3.383	84.755
900.000	0.460	167.639	-0.381	3.457	899.986	0.144	-0.381	3.478	96.283
1000.000	0.843	177.316	-1.507	3.577	999.979	0.397	-1.507	3.881	112.847
1100.000	0.211	184.195	-2.426	3.598	1099.974	0.634	-2.426	4.339	123.987
1200.000	0.229	199.527	-2.797	3.518	1199.973	0.061	-2.797	4.494	128.493
1300.000	0.227	135.490	-3.126	3.590	1299.973	0.241	-3.126	4.760	131.054
1400.000	0.180	43.952	-3.154	3.837	1399.972	0.293	-3.154	4.967	129.423
1500.000	0.278	235.191	-3.180	3.747	1499.972	0.456	-3.180	4.914	130.322
1600.000	0.196	111.856	-3.382	3.706	1599.972	0.419	-3.382	5.018	132.382
1700.000	0.172	17.808	-3.303	3.911	1699.971	0.270	-3.303	5.119	130.183
1800.000	0.180	266.832	-3.169	3.800	1799.971	0.290	-3.169	4.948	129.829
1900.000	0.210	219.685	-3.319	3.525	1899.971	0.159	-3.319	4.842	133.274
2000.000	0.165	322.344	-3.347	3.320	1999.970	0.294	-3.347	4.714	135.226
2100.000	0.124	32.612	-3.141	3.291	2099.970	0.170	-3.141	4.549	133.667
2200.000	0.127	77.957	-3.027	3.458	2199.970	0.097	-3.027	4.595	131.195
2300.000	0.169	247.332	-3.060	3.430	2299.970	0.295	-3.060	4.597	131.739
2400.000	0.168	117.942	-3.186	3.423	2399.969	0.305	-3.186	4.677	132.941
2500.000	0.138	27.158	-3.147	3.608	2499.969	0.219	-3.147	4.788	131.097
2600.000	0.157	232.792	-3.122	3.554	2599.969	0.288	-3.122	4.731	131.299
2700.000	0.160	9.798	-3.067	3.469	2699.969	0.295	-3.067	4.631	131.482
2800.000	0.129	62.025	-2.877	3.592	2799.969	0.130	-2.877	4.602	128.690
2900.000	0.194	115.238	-2.896	3.844	2899.968	0.156	-2.896	4.813	126.994
3000.000	0.153	281.520	-2.942	3.866	2999.968	0.344	-2.942	4.858	127.265
3100.000	0.109	287.751	-2.886	3.645	3099.968	0.046	-2.886	4.649	128.373
3200.000	0.116	140.253	-2.935	3.619	3199.968	0.216	-2.935	4.659	129.042
3300.000	0.131	44.948	-2.932	3.764	3299.968	0.183	-2.932	4.771	127.915
3400.000	0.187	139.010	-2.974	3.952	3399.967	0.236	-2.974	4.946	126.967

3500.000	0.156	27.041	-2.977	4.121	3499.967	0.285	-2.977	5.084	125.839
3600.000	0.145	158.310	-2.972	4.230	3599.967	0.274	-2.972	5.170	125.097
3700.000	0.184	263.006	-3.109	4.117	3699.967	0.261	-3.109	5.159	127.061
3800.000	0.121	278.136	-3.114	3.852	3799.966	0.074	-3.114	4.954	128.947
3900.000	0.150	105.002	-3.133	3.874	3899.966	0.271	-3.133	4.982	128.959
4000.000	0.181	286.054	-3.123	3.849	3999.966	0.331	-3.123	4.957	129.053
4100.000	0.082	316.487	-3.028	3.649	4099.966	0.117	-3.028	4.741	129.685
4200.000	0.145	292.199	-2.928	3.482	4199.966	0.078	-2.928	4.549	130.057
4300.000	0.145	133.606	-2.967	3.456	4299.966	0.285	-2.967	4.555	130.644
4400.000	0.144	177.800	-3.180	3.553	4399.965	0.109	-3.180	4.768	131.832
4500.000	0.144	80.799	-3.286	3.681	4499.965	0.216	-3.286	4.934	131.751
4600.000	0.177	208.264	-3.402	3.732	4599.965	0.288	-3.402	5.050	132.347
4700.000	0.143	119.624	-3.599	3.768	4699.965	0.225	-3.599	5.211	133.690
4800.000	0.147	220.930	-3.758	3.792	4799.964	0.224	-3.758	5.339	134.737
4900.000	0.178	234.079	-3.946	3.582	4899.964	0.049	-3.946	5.329	137.763
5000.000	0.144	191.694	-4.160	3.431	4999.964	0.121	-4.160	5.392	140.485
5100.000	0.137	169.798	-4.400	3.427	5099.963	0.054	-4.400	5.577	142.090
5200.000	0.090	136.416	-4.575	3.502	5199.963	0.079	-4.575	5.761	142.565
5300.000	0.154	203.592	-4.755	3.503	5299.963	0.145	-4.755	5.906	143.620
5400.000	0.159	87.851	-4.872	3.587	5399.963	0.264	-4.872	6.050	143.636
5500.000	0.132	157.418	-4.973	3.770	5499.963	0.167	-4.973	6.240	142.837
5600.000	0.136	53.046	-5.008	3.909	5599.962	0.212	-5.008	6.353	142.024
5700.000	0.244	42.592	-4.779	4.148	5699.962	0.113	-4.779	6.329	139.041
5800.000	0.148	350.836	-4.495	4.272	5799.961	0.192	-4.495	6.201	136.455
5900.000	0.188	329.548	-4.226	4.168	5899.961	0.074	-4.226	5.936	135.392
6000.000	0.162	249.794	-4.133	3.952	5999.961	0.225	-4.133	5.719	136.280
6100.000	0.208	354.068	-4.001	3.801	6099.960	0.294	-4.001	5.519	136.470
6200.000	0.179	49.130	-3.718	3.900	6199.960	0.181	-3.718	5.389	133.634
6300.000	0.098	220.962	-3.681	3.962	6299.960	0.275	-3.681	5.408	132.892
6400.000	0.193	226.216	-3.861	3.785	6399.959	0.096	-3.861	5.407	135.575
6500.000	0.307	247.093	-4.082	3.417	6499.958	0.144	-4.082	5.323	140.071
6600.000	0.084	133.748	-4.237	3.223	6599.958	0.348	-4.237	5.323	142.738

True North