



Company: Noble Energy
Rig: Production/VES
API # 05-123-25803

Date: 4/6/2013
Surveyor: Rob Lampert

VS: 0.000
Lat : 40.478

Long: -104.401

Well: Wells Ranch USX AA 23-02

Location: Weld County, Colorado

North Reference: GRID

Convergence: Grid north is 0.71 East of True Noi

Declination: 8.42

Depth Reference: Ground Level

Elevation: Surface Elevation = 4779'

Total Depth as Drilled: 6929'

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
100.000	0.981	129.130	-0.540	0.664	99.995	0.981	-0.540	0.856	129.130
200.000	0.768	118.841	-1.404	1.916	199.983	0.263	-1.404	2.375	126.239
300.000	0.561	109.819	-1.893	2.963	299.977	0.232	-1.893	3.516	122.576
400.000	0.429	125.394	-2.276	3.729	399.973	0.187	-2.276	4.369	121.401
500.000	0.442	135.062	-2.766	4.307	499.970	0.074	-2.766	5.119	122.712
600.000	0.888	151.662	-3.721	4.947	599.963	0.482	-3.721	6.190	126.952
700.000	0.952	146.263	-5.095	5.777	699.950	0.108	-5.095	7.702	131.411
800.000	0.913	144.881	-6.437	6.696	799.937	0.045	-6.437	9.289	133.871
900.000	0.914	156.782	-7.822	7.469	899.924	0.189	-7.822	10.815	136.322
1000.000	0.956	159.296	-9.335	8.078	999.911	0.059	-9.335	12.345	139.127
1100.000	0.898	151.807	-10.805	8.743	1099.898	0.134	-10.805	13.900	141.022
1200.000	0.827	161.710	-12.181	9.340	1199.887	0.165	-12.181	15.350	142.521
1300.000	0.911	160.117	-13.614	9.837	1299.875	0.087	-13.614	16.796	144.150
1400.000	0.680	155.362	-14.901	10.354	1399.866	0.240	-14.901	18.145	145.205
1500.000	0.503	168.792	-15.871	10.687	1499.860	0.224	-15.871	19.133	146.044
1600.000	0.550	152.230	-16.726	10.996	1599.856	0.159	-16.726	20.016	146.678
1700.000	0.404	151.817	-17.461	11.386	1699.853	0.146	-17.461	20.846	146.892
1800.000	0.623	47.438	-17.405	11.953	1799.850	0.822	-17.405	21.114	145.520
1900.000	0.769	56.321	-16.665	12.912	1899.843	0.182	-16.665	21.082	142.231
2000.000	0.455	71.080	-16.164	13.847	1999.837	0.349	-16.164	21.284	139.415
2100.000	0.298	114.391	-16.142	14.459	2099.835	0.314	-16.142	21.671	138.148
2200.000	0.325	56.155	-16.092	14.931	2199.834	0.304	-16.092	21.952	137.142
2300.000	0.559	4.548	-15.448	15.205	2299.831	0.439	-15.448	21.676	135.453
2400.000	0.473	352.598	-14.553	15.191	2399.827	0.137	-14.553	21.037	133.771
2500.000	0.618	347.262	-13.618	15.019	2499.822	0.154	-13.618	20.273	132.199
2600.000	0.664	351.644	-12.518	14.816	2599.816	0.067	-12.518	19.396	130.196
2700.000	0.665	350.322	-11.373	14.634	2699.810	0.015	-11.373	18.534	127.854
2800.000	0.717	335.043	-10.234	14.273	2799.802	0.191	-10.234	17.563	125.643
2900.000	0.724	322.988	-9.163	13.628	2899.794	0.151	-9.163	16.422	123.915
3000.000	0.854	337.762	-7.969	12.966	2999.785	0.240	-7.969	15.219	121.575
3100.000	0.483	343.829	-6.874	12.567	3099.778	0.377	-6.874	14.324	118.679
3200.000	0.370	21.261	-6.168	12.567	3199.776	0.294	-6.168	13.998	116.142
3300.000	0.441	30.612	-5.536	12.880	3299.773	0.096	-5.536	14.019	113.258
3400.000	0.399	28.408	-4.898	13.241	3399.770	0.044	-4.898	14.118	110.301
3500.000	0.425	94.850	-4.623	13.776	3499.768	0.452	-4.623	14.531	108.551

3600.000	0.368	32.761	-4.384	14.319	3599.766	0.412	-4.384	14.976	107.023
3700.000	0.456	355.236	-3.718	14.460	3699.764	0.278	-3.718	14.931	104.419
3800.000	0.656	353.256	-2.753	14.360	3799.759	0.201	-2.753	14.622	100.854
3900.000	0.679	16.296	-1.617	14.459	3899.753	0.267	-1.617	14.549	96.380
4000.000	0.193	60.745	-0.966	14.772	3999.750	0.557	-0.966	14.804	93.741
4100.000	0.150	118.839	-0.947	15.034	4099.749	0.171	-0.947	15.063	93.603
4200.000	0.596	158.021	-1.492	15.342	4199.747	0.489	-1.492	15.415	95.553
4300.000	1.202	185.861	-3.017	15.430	4299.735	0.730	-3.017	15.722	101.063
4400.000	1.723	190.965	-5.536	15.037	4399.702	0.536	-5.536	16.023	110.210
4500.000	2.917	193.924	-9.481	14.139	4499.618	1.201	-9.481	17.023	123.846
4600.000	2.881	199.630	-14.319	12.682	4599.490	0.291	-14.319	19.127	138.469
4700.000	1.996	229.607	-17.814	10.511	4699.402	1.524	-17.814	20.684	149.457
4800.000	1.425	262.975	-19.095	7.951	4799.360	1.124	-19.095	20.684	157.393
4900.000	1.213	291.508	-18.859	5.733	4899.334	0.682	-18.859	19.711	163.092
5000.000	0.934	280.641	-18.320	3.947	4999.317	0.344	-18.320	18.741	167.842
5100.000	0.557	286.439	-18.033	2.680	5099.308	0.384	-18.033	18.231	171.546
5200.000	0.696	300.182	-17.590	1.689	5199.302	0.204	-17.590	17.671	174.515
5300.000	0.571	286.832	-17.140	0.687	5299.296	0.193	-17.140	17.154	177.704
5400.000	0.414	273.976	-16.971	-0.150	5399.293	0.190	-16.971	16.971	180.507
5500.000	0.173	249.951	-16.997	-0.653	5499.291	0.266	-16.997	17.010	182.199
5600.000	0.289	277.491	-17.016	-1.045	5599.290	0.158	-17.016	17.048	183.514
5700.000	0.284	301.880	-16.853	-1.506	5699.289	0.121	-16.853	16.920	185.105
5800.000	0.671	269.089	-16.731	-2.301	5799.286	0.459	-16.731	16.889	187.832
5900.000	1.222	276.576	-16.618	-3.946	5899.272	0.563	-16.618	17.080	193.356
6000.000	1.897	277.249	-16.287	-6.646	5999.234	0.675	-16.287	17.591	202.198
6100.000	3.435	274.870	-15.824	-11.273	6099.123	1.542	-15.824	19.429	215.465
6200.000	2.747	296.941	-14.484	-16.394	6198.980	1.362	-14.484	21.876	228.538
6300.000	1.377	340.531	-12.265	-18.931	6298.918	1.990	-12.265	22.557	237.060
6400.000	1.475	3.719	-9.848	-19.248	6398.888	0.581	-9.848	21.621	242.903
6500.000	1.219	35.639	-7.700	-18.545	6498.862	0.780	-7.700	20.080	247.452
6600.000	1.000	30.762	-6.086	-17.479	6598.843	0.238	-6.086	18.508	250.802
6700.000	1.039	14.796	-4.460	-16.801	6698.828	0.286	-4.460	17.383	255.133
6725.000	0.971	15.375	-4.037	-16.687	6723.824	0.274	-4.037	17.168	256.401

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