



Company: Noble Energy
Rig: Production/ VES
API # 05-123-27178
Date: 4/20/2013
Surveyor: Sean Bratt
VS: 0.000
Lat : 40.45988
Long: -104.41525

Well: Wells Ranch USX AA 27-8
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid north is -0.7 of True North
Declination: 8.43 Degrees
Depth Reference: Ground Level
Elevation: 4818 Feet
Total Depth as Drilled: 7021 Feet

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	0.207	284.750	0.046	-0.175	100.000	0.207	0.046	0.181	284.750
200.000	0.227	324.295	0.253	-0.465	199.999	0.148	0.253	0.530	298.542
300.000	0.099	247.140	0.381	-0.660	299.999	0.227	0.381	0.762	299.964
400.000	0.358	193.004	0.043	-0.810	399.998	0.310	0.043	0.811	273.054
500.000	0.353	177.209	-0.569	-0.865	499.996	0.098	-0.569	1.035	236.669
600.000	0.306	108.562	-0.962	-0.597	599.995	0.374	-0.962	1.132	211.809
700.000	0.280	92.491	-1.058	-0.099	699.993	0.086	-1.058	1.062	185.359
800.000	0.267	107.410	-1.138	0.368	799.992	0.072	-1.138	1.196	162.103
900.000	0.276	108.671	-1.285	0.818	899.991	0.010	-1.285	1.523	147.516
1000.000	0.280	115.897	-1.469	1.266	999.990	0.035	-1.469	1.939	139.244
1100.000	0.437	117.118	-1.749	1.825	1099.988	0.157	-1.749	2.528	133.789
1200.000	0.140	69.119	-1.879	2.278	1199.987	0.358	-1.879	2.953	129.521
1300.000	0.350	162.755	-2.128	2.483	1299.986	0.385	-2.128	3.270	130.596
1400.000	0.446	63.397	-2.245	2.921	1399.985	0.610	-2.245	3.685	127.544
1500.000	0.144	4.665	-1.946	3.280	1499.983	0.391	-1.946	3.813	120.677
1600.000	0.493	39.966	-1.491	3.566	1599.982	0.384	-1.491	3.865	112.686
1700.000	0.280	348.773	-0.921	3.795	1699.980	0.385	-0.921	3.905	103.644
1800.000	0.443	42.564	-0.397	4.009	1799.978	0.358	-0.397	4.028	95.651
1900.000	0.033	203.922	-0.139	4.258	1899.977	0.475	-0.139	4.260	91.865
2000.000	0.472	199.242	-0.554	4.111	1999.976	0.438	-0.554	4.148	97.674
2100.000	0.544	193.728	-1.404	3.862	2099.972	0.087	-1.404	4.109	109.971
2200.000	0.674	178.876	-2.453	3.761	2199.966	0.204	-2.453	4.490	123.108
2300.000	0.689	159.708	-3.605	3.981	2299.959	0.227	-3.605	5.371	132.158
2400.000	0.766	144.633	-4.714	4.577	2399.951	0.205	-4.714	6.570	135.845
2500.000	0.846	131.946	-5.752	5.513	2499.941	0.195	-5.752	7.967	136.218
2580.000	0.981	140.704	-6.677	6.386	2579.931	0.242	-6.677	9.240	136.277

