



Company: Noble Energy
Rig: Production / V.E.S.

API # 05-123-24798

Date: 4-26-13

Surveyor: Norman Cowan

VS: 0.000

Lat : 40.162

Long: -104.544

Well: Waste Management USX Y 3-13

Location: Weld County, Colorado

North Reference: GRID

Convergence: Grid north is -0.62 degrees of True

Declination: 8.47 Degrees

Depth Reference: Ground Level

Elevation: 4879 Feet

Total Depth as Drilled: 7638 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	0.693	219.091	-0.469	-0.381	99.998	0.693	-0.469	0.605	219.091
200.000	0.395	221.653	-1.196	-0.991	199.993	0.299	-1.196	1.554	219.659
300.000	0.371	220.962	-1.698	-1.433	299.991	0.024	-1.698	2.222	220.158
400.000	0.123	201.709	-2.042	-1.685	399.990	0.258	-2.042	2.648	219.522
500.000	0.121	186.328	-2.247	-1.736	499.989	0.033	-2.247	2.839	217.695
600.000	0.206	183.702	-2.531	-1.759	599.989	0.086	-2.531	3.083	214.804
700.000	0.156	191.700	-2.844	-1.799	699.989	0.056	-2.844	3.365	212.312
800.000	0.373	213.553	-3.248	-2.006	799.987	0.236	-3.248	3.817	211.700
900.000	0.923	266.499	-3.568	-2.990	899.981	0.759	-3.568	4.655	219.959
1000.000	1.428	274.667	-3.516	-5.035	999.960	0.531	-3.516	6.141	235.075
1100.000	1.476	275.201	-3.298	-7.559	1099.928	0.050	-3.298	8.247	246.430
1200.000	1.459	278.949	-2.983	-10.099	1199.895	0.097	-2.983	10.530	253.543
1300.000	1.457	276.232	-2.647	-12.619	1299.863	0.069	-2.647	12.894	258.152
1400.000	1.584	274.076	-2.411	-15.262	1399.828	0.140	-2.411	15.451	261.023
1500.000	1.574	261.433	-2.517	-17.998	1499.790	0.348	-2.517	18.173	262.038
1600.000	1.589	267.886	-2.773	-20.741	1599.752	0.179	-2.773	20.926	262.385
1700.000	1.596	271.408	-2.790	-23.519	1699.713	0.098	-2.790	23.684	263.235
1800.000	1.467	273.679	-2.674	-26.189	1799.678	0.142	-2.674	26.325	264.171
1900.000	1.414	282.361	-2.327	-28.672	1899.646	0.225	-2.327	28.766	265.359
2000.000	1.254	277.397	-1.922	-30.962	1999.619	0.197	-1.922	31.021	266.447
2100.000	1.151	278.685	-1.630	-33.040	2099.597	0.106	-1.630	33.080	267.176
2200.000	1.217	263.270	-1.603	-35.088	2199.576	0.324	-1.603	35.125	267.385
2300.000	1.324	251.356	-2.096	-37.238	2299.552	0.284	-2.096	37.297	266.778
2400.000	1.203	250.173	-2.822	-39.320	2399.527	0.123	-2.822	39.421	265.895
2500.000	1.414	249.721	-3.606	-41.465	2499.501	0.211	-3.606	41.622	265.030
2600.000	1.536	245.287	-4.594	-43.840	2599.468	0.167	-4.594	44.080	264.018
2700.000	1.703	244.407	-5.796	-46.398	2699.428	0.168	-5.796	46.759	262.880
2800.000	1.823	246.572	-7.070	-49.198	2799.381	0.138	-7.070	49.703	261.822
2900.000	1.996	248.335	-8.346	-52.276	2899.325	0.183	-8.346	52.938	260.929
3000.000	2.035	251.190	-9.561	-55.576	2999.263	0.107	-9.561	56.392	260.238
3100.000	2.233	257.960	-10.540	-59.161	3099.194	0.320	-10.540	60.093	259.898
3200.000	2.189	263.787	-11.153	-62.965	3199.120	0.229	-11.153	63.945	259.955
3300.000	2.242	262.264	-11.623	-66.802	3299.045	0.080	-11.623	67.806	260.130
3400.000	2.161	266.329	-12.007	-70.622	3398.971	0.176	-12.007	71.636	260.351
3500.000	2.283	267.481	-12.215	-74.493	3498.896	0.129	-12.215	75.488	260.688

3600.000	2.240	274.343	-12.155	-78.432	3598.818	0.274	-12.155	79.368	261.191
3700.000	2.328	273.904	-11.869	-82.407	3698.739	0.089	-11.869	83.257	261.804
3800.000	2.711	286.609	-11.054	-86.699	3798.643	0.675	-11.054	87.401	262.734
3900.000	2.879	278.931	-9.989	-91.445	3898.524	0.410	-9.989	91.989	263.766
4000.000	2.986	278.427	-9.217	-96.503	3998.393	0.110	-9.217	96.942	264.544
4100.000	3.281	281.382	-8.271	-101.884	4098.244	0.336	-8.271	102.219	265.359
4200.000	3.497	280.938	-7.127	-107.683	4198.069	0.217	-7.127	107.919	266.213
4300.000	3.640	278.337	-6.089	-113.818	4297.875	0.216	-6.089	113.980	266.938
4400.000	3.267	275.044	-5.378	-119.797	4397.693	0.422	-5.378	119.917	267.430
4500.000	3.282	275.549	-4.851	-125.484	4497.530	0.032	-4.851	125.578	267.786
4600.000	3.074	280.921	-4.066	-130.966	4597.376	0.363	-4.066	131.029	268.222
4700.000	2.274	287.188	-2.972	-135.494	4697.267	0.850	-2.972	135.527	268.744
4800.000	1.689	287.159	-1.950	-138.798	4797.207	0.585	-1.950	138.812	269.195
4900.000	1.562	292.448	-0.995	-141.466	4897.166	0.197	-0.995	141.469	269.597
5000.000	1.326	282.484	-0.225	-143.855	4997.135	0.344	-0.225	143.855	269.911
5100.000	1.416	292.946	0.507	-146.123	5097.106	0.266	0.507	146.124	270.199
5200.000	1.061	287.345	1.265	-148.145	5197.083	0.375	1.265	148.150	270.489
5300.000	0.956	277.089	1.644	-149.857	5297.067	0.209	1.644	149.866	270.629
5400.000	0.403	265.981	1.723	-151.035	5397.060	0.566	1.723	151.045	270.653
5500.000	0.320	192.521	1.426	-151.447	5497.058	0.437	1.426	151.453	270.539
5600.000	0.458	115.258	0.983	-151.146	5597.057	0.497	0.983	151.149	270.373
5700.000	0.486	151.520	0.440	-150.583	5697.054	0.295	0.440	150.583	270.167
5800.000	0.993	167.692	-0.780	-150.195	5797.045	0.544	-0.780	150.197	269.702
5900.000	1.315	140.258	-2.509	-149.277	5897.025	0.630	-2.509	149.298	269.037
6000.000	1.919	150.926	-4.855	-147.730	5996.985	0.673	-4.855	147.809	268.118
6100.000	2.179	149.032	-7.949	-145.938	6096.921	0.268	-7.949	146.154	266.882
6200.000	2.269	153.133	-11.346	-144.065	6196.846	0.183	-11.346	144.511	265.497
6300.000	2.383	139.091	-14.683	-141.808	6296.764	0.580	-14.683	142.567	264.089
6400.000	2.092	137.849	-17.608	-139.222	6396.688	0.295	-17.608	140.331	262.792
6500.000	1.968	136.122	-20.199	-136.806	6496.625	0.139	-20.199	138.289	261.601
6600.000	1.783	127.263	-22.379	-134.378	6596.572	0.344	-22.379	136.229	260.545
6700.000	1.504	135.521	-24.257	-132.221	6696.531	0.365	-24.257	134.427	259.604
6800.000	0.917	134.688	-25.756	-130.732	6796.508	0.586	-25.756	133.245	258.855
6900.000	0.778	120.763	-26.666	-129.580	6896.497	0.248	-26.666	132.295	258.371
7000.000	0.442	114.444	-27.173	-128.645	6996.491	0.342	-27.173	131.483	258.073
7100.000	0.604	61.903	-27.085	-127.828	7096.488	0.485	-27.085	130.666	258.037
7200.000	1.041	46.917	-26.216	-126.700	7196.477	0.484	-26.216	129.384	258.310
7300.000	0.512	86.812	-25.570	-125.590	7296.468	0.727	-25.570	128.167	258.492
7400.000	0.327	133.872	-25.743	-124.938	7396.466	0.376	-25.743	127.563	258.357
7450.000	0.135	138.304	-25.886	-124.796	7446.465	0.384	-25.886	127.453	258.282

North