



Company: Noble Energy
Rig: Production/ V.E.S
API # 05-123-24791
Date: 4/29/2013
Surveyor: Jay Hinman
VS:
Lat : 40.16893
Long: -104.53957

Well: Waste Management U
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid North is -0.62 of 1
Declination: 8.47
Depth Reference: Ground Level
Elevation: 4892'
Total Depth as Drilled: 7195'

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	0.447	358.275	0.390	-0.012	99.999	0.447	0.390	0.390
200.000	0.702	285.359	0.942	-0.614	199.995	0.713	0.942	1.124
300.000	0.964	287.317	1.354	-2.008	299.984	0.264	1.354	2.422
400.000	0.638	277.364	1.676	-3.363	399.974	0.353	1.676	3.757
500.000	0.682	290.794	1.959	-4.471	499.968	0.160	1.959	4.881
600.000	0.304	258.898	2.119	-5.287	599.964	0.453	2.119	5.696
700.000	0.351	284.398	2.144	-5.844	699.963	0.152	2.144	6.225
800.000	0.262	60.808	2.332	-5.941	799.962	0.570	2.332	6.382
900.000	0.541	97.325	2.383	-5.274	899.960	0.365	2.383	5.787
1000.000	0.814	105.443	2.134	-4.121	999.953	0.289	2.134	4.641
1100.000	0.567	70.596	2.109	-2.970	1099.946	0.476	2.109	3.642
1200.000	0.825	112.188	2.001	-1.837	1199.939	0.550	2.001	2.717
1300.000	0.703	81.265	1.823	-0.564	1299.930	0.424	1.823	1.908
1400.000	0.736	111.104	1.685	0.641	1399.923	0.372	1.685	1.803
1500.000	1.037	75.948	1.673	2.118	1499.911	0.608	1.673	2.700
1600.000	1.264	92.304	1.849	4.098	1599.891	0.397	1.849	4.496
1700.000	0.764	80.336	1.916	5.857	1699.876	0.541	1.916	6.163
1800.000	1.057	99.092	1.883	7.424	1799.863	0.414	1.883	7.659
1900.000	0.742	99.247	1.633	8.974	1899.851	0.314	1.633	9.121
2000.000	0.689	87.649	1.554	10.214	1999.843	0.154	1.554	10.331
2100.000	0.368	54.723	1.764	11.077	2099.839	0.429	1.764	11.216
2200.000	0.489	25.670	2.334	11.524	2199.836	0.245	2.334	11.758
2300.000	0.625	357.150	3.264	11.682	2299.831	0.305	3.264	12.129
2400.000	0.770	329.137	4.386	11.310	2399.824	0.366	4.386	12.131
2500.000	1.330	306.367	5.651	10.030	2499.807	0.688	5.651	11.513
2600.000	1.646	298.946	7.035	7.839	2599.774	0.369	7.035	10.532
2700.000	1.176	298.193	8.215	5.678	2699.743	0.470	8.215	9.986
2800.000	1.123	283.682	8.931	3.821	2799.723	0.295	8.931	9.714
2900.000	1.263	311.043	9.886	2.038	2899.702	0.580	9.886	10.094
3000.000	1.118	294.257	11.011	0.318	2999.681	0.376	11.011	11.015
3100.000	0.885	316.116	11.968	-1.107	3099.666	0.443	11.968	12.019
3200.000	0.933	304.196	12.982	-2.316	3199.653	0.195	12.982	13.187
3300.000	0.524	272.030	13.456	-3.446	3299.646	0.563	13.456	13.890
3400.000	0.603	265.456	13.431	-4.427	3399.641	0.102	13.431	14.142
3500.000	0.810	278.287	13.491	-5.651	3499.633	0.260	13.491	14.627

3600.000	0.853	234.204	13.157	-6.954	3599.624	0.625	13.157	14.882
3700.000	0.873	232.804	12.262	-8.164	3699.612	0.029	12.262	14.731
3800.000	1.394	230.762	11.032	-9.713	3799.592	0.523	11.032	14.699
3900.000	1.352	231.450	9.527	-11.578	3899.564	0.045	9.527	14.994
4000.000	1.437	249.132	8.345	-13.673	3999.534	0.437	8.345	16.018
4100.000	1.322	235.547	7.246	-15.796	4099.506	0.346	7.246	17.378
4200.000	1.583	243.659	5.980	-17.985	4199.474	0.332	5.980	18.953
4300.000	1.700	249.414	4.845	-20.612	4299.433	0.202	4.845	21.174
4400.000	1.826	260.938	4.073	-23.574	4399.386	0.375	4.073	23.923
4500.000	2.070	260.457	3.523	-26.927	4499.328	0.244	3.523	27.157
4600.000	2.102	258.516	2.858	-30.505	4599.261	0.078	2.858	30.639
4700.000	2.038	252.376	1.955	-33.997	4699.196	0.231	1.955	34.053
4800.000	1.988	249.947	0.822	-37.321	4799.135	0.099	0.822	37.330
4900.000	2.007	250.825	-0.348	-40.604	4899.074	0.036	-0.348	40.606
5000.000	1.702	251.937	-1.384	-43.670	4999.021	0.307	-1.384	43.692
5100.000	1.380	259.104	-2.072	-46.265	5098.985	0.375	-2.072	46.311
5200.000	1.429	266.629	-2.373	-48.691	5198.955	0.191	-2.373	48.749
5300.000	1.655	298.093	-1.766	-51.210	5298.921	0.864	-1.766	51.240
5400.000	1.589	332.138	0.139	-53.132	5398.883	0.952	0.139	53.132
5500.000	1.374	351.041	2.550	-53.966	5498.850	0.530	2.550	54.027
5600.000	2.118	343.104	5.503	-54.690	5598.803	0.780	5.503	54.966
5700.000	1.779	357.417	8.822	-55.297	5698.746	0.591	8.822	55.997
5800.000	1.900	343.382	11.961	-55.841	5798.695	0.465	11.961	57.108
5900.000	1.696	350.381	15.008	-56.563	5898.645	0.299	15.008	58.520
6000.000	1.459	346.580	17.706	-57.106	5998.608	0.259	17.706	59.788
6100.000	1.787	339.559	20.406	-57.946	6098.567	0.383	20.406	61.434
6200.000	1.715	328.934	23.149	-59.262	6198.521	0.332	23.149	63.623
6300.000	1.733	325.073	25.670	-60.900	6298.476	0.118	25.670	66.090
6400.000	1.538	331.548	28.090	-62.405	6398.435	0.268	28.090	68.436
6500.000	1.298	318.919	30.124	-63.789	6498.405	0.393	30.124	70.544
6600.000	1.310	336.767	32.028	-64.984	6598.379	0.405	32.028	72.448
6700.000	3.278	341.122	35.783	-66.360	6698.294	1.974	35.783	75.393
6800.000	5.118	347.282	42.840	-68.267	6798.022	1.892	42.840	80.595
6900.000	3.216	346.162	49.915	-69.920	6897.753	1.903	49.915	85.909
7000.000	1.784	342.901	54.127	-71.049	6997.655	1.438	54.127	89.318

ISXY 03-06

0

True North

Cbrg

0.000

358.275

326.898

304.005

296.493

293.656

291.838

290.147

291.428

294.316

297.373

305.376

317.447

342.798

20.835

51.690

65.717

71.881

75.771

79.687

81.352

80.952

78.550

74.390

68.804

60.602

48.094

34.650

23.162

11.647

1.652

354.713

349.884

345.635

341.756

337.273

332.143
326.343
318.637
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301.397
294.641
288.392
283.229
279.802
277.453
275.353
273.291
271.261
269.508
268.185
267.436
267.210
268.025
270.150
272.705
275.746
279.064
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284.860
287.227
289.400
291.337
292.856
294.234
295.279
296.237
298.335
302.110
305.523
307.301