



Company: Noble Energy

Rig: Production/Coretech

API # 05-123-23523

Date: 3/11/2014

Surveyor: Randy Holcomb

VS: 0.000

Lat : 40.484

Long: -104.496

Well: Trump A13-10

Location: Weld County, Colorado

North Reference: GRID

Convergence: Grid north is 0.65 East of True North

Declination: 8.36

Depth Reference: Ground Level

Elevation: 4650 Feet

Total Depth as Drilled: 6927 Feet

Lat & Long obtained by handheld GPS at wellhead

MS 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	0.293	168.610	-0.251	0.051	100.000	0.293	-0.251	0.256	168.610
200.000	0.363	191.787	-0.812	0.036	199.998	0.149	-0.812	0.813	177.438
300.000	0.331	194.740	-1.402	-0.102	299.996	0.037	-1.402	1.406	184.158
400.000	0.230	183.416	-1.882	-0.187	399.995	0.114	-1.882	1.891	185.686
500.000	0.432	85.485	-2.053	0.177	499.994	0.517	-2.053	2.061	175.081
600.000	0.652	64.825	-1.781	1.067	599.989	0.290	-1.781	2.077	149.072
700.000	0.457	64.024	-1.365	1.941	699.985	0.195	-1.365	2.372	125.120
800.000	0.565	53.478	-0.897	2.695	799.981	0.143	-0.897	2.841	108.404
900.000	0.615	57.452	-0.315	3.544	899.975	0.064	-0.315	3.557	95.078
1000.000	0.638	54.783	0.295	4.451	999.969	0.038	0.295	4.460	86.211
1100.000	0.680	45.357	1.033	5.328	1099.963	0.116	1.033	5.427	79.029
1200.000	0.703	39.731	1.921	6.142	1199.956	0.072	1.921	6.435	72.628
1300.000	0.964	57.795	2.841	7.245	1299.945	0.367	2.841	7.783	68.586
1400.000	1.023	53.450	3.821	8.674	1399.930	0.096	3.821	9.479	66.225
1500.000	0.994	60.432	4.781	10.146	1499.915	0.126	4.781	11.216	64.769
1600.000	0.943	53.608	5.698	11.564	1599.900	0.126	5.698	12.891	63.769
1700.000	0.712	81.982	6.273	12.842	1699.890	0.464	6.273	14.292	63.965
1800.000	0.895	79.522	6.502	14.226	1799.880	0.185	6.502	15.641	65.437
1900.000	1.017	90.886	6.630	15.881	1899.866	0.225	6.630	17.209	67.340
2000.000	1.064	76.751	6.829	17.672	1999.850	0.260	6.829	18.946	68.871
2100.000	1.312	76.225	7.315	19.688	2099.829	0.248	7.315	21.003	69.618
2200.000	1.194	79.474	7.777	21.824	2199.805	0.138	7.777	23.168	70.385
2300.000	1.042	63.007	8.381	23.658	2299.786	0.353	8.381	25.099	70.494
2400.000	0.869	79.186	8.936	25.213	2399.772	0.319	8.936	26.750	70.486
2500.000	1.098	70.356	9.400	26.860	2499.757	0.274	9.400	28.457	70.712
2600.000	0.566	108.440	9.566	28.231	2599.747	0.740	9.566	29.808	71.281
2700.000	0.259	108.200	9.339	28.914	2699.744	0.306	9.339	30.385	72.100
2800.000	0.331	157.282	9.002	29.241	2799.743	0.253	9.002	30.595	72.888
2900.000	0.278	144.043	8.540	29.494	2899.742	0.088	8.540	30.706	73.852
3000.000	0.523	157.403	7.923	29.812	2999.739	0.261	7.923	30.847	75.117
3100.000	0.512	134.155	7.190	30.308	3099.735	0.209	7.190	31.149	76.653
3200.000	0.360	157.299	6.589	30.749	3199.732	0.229	6.589	31.447	77.905
3300.000	0.213	149.929	6.139	30.964	3299.731	0.152	6.139	31.566	78.786
3400.000	0.289	160.427	5.740	31.141	3399.730	0.089	5.740	31.666	79.556
3500.000	0.049	201.243	5.463	31.210	3499.730	0.254	5.463	31.685	80.072
3600.000	0.137	97.092	5.408	31.313	3599.730	0.156	5.408	31.777	80.201
3700.000	0.332	55.662	5.557	31.671	3699.729	0.246	5.557	32.155	80.049

3800.000	0.383	25.662	6.021	32.055	3799.727	0.192	6.021	32.615	79.361
3900.000	0.454	17.044	6.702	32.316	3899.724	0.095	6.702	33.003	78.284
4000.000	0.402	103.926	6.997	32.772	3999.722	0.590	6.997	33.511	77.949
4100.000	0.902	224.505	6.351	32.561	4099.718	1.159	6.351	33.174	78.964
4200.000	1.856	245.519	5.118	30.535	4199.689	1.064	5.118	30.961	80.485
4300.000	2.581	241.380	3.368	27.084	4299.613	0.742	3.368	27.293	82.911
4400.000	3.142	242.545	1.026	22.676	4399.488	0.564	1.026	22.699	87.409
4500.000	3.358	240.252	-1.691	17.701	4499.327	0.252	-1.691	17.781	95.456
4600.000	3.523	236.963	-4.819	12.582	4599.147	0.257	-4.819	13.473	110.957
4700.000	3.662	235.592	-8.299	7.371	4698.951	0.163	-8.299	11.100	138.387
4800.000	3.615	233.369	-11.985	2.206	4798.749	0.149	-11.985	12.186	169.568
4900.000	3.086	233.099	-15.482	-2.476	4898.578	0.530	-15.482	15.679	189.087
5000.000	2.811	233.230	-18.566	-6.593	4998.445	0.275	-18.566	19.702	199.550
5100.000	2.436	234.257	-21.275	-10.282	5098.340	0.378	-21.275	23.630	205.794
5200.000	1.927	238.794	-23.388	-13.446	5198.268	0.537	-23.388	26.978	209.894
5300.000	1.419	253.377	-24.614	-16.071	5298.225	0.659	-24.614	29.396	213.141
5400.000	1.023	267.983	-24.999	-18.150	5398.202	0.501	-24.999	30.893	215.980
5500.000	0.842	260.346	-25.154	-19.767	5498.189	0.219	-25.154	31.992	218.161
5600.000	0.531	241.307	-25.500	-20.898	5598.182	0.382	-25.500	32.969	219.335
5700.000	0.422	195.348	-26.077	-21.401	5698.179	0.385	-26.077	33.735	219.375
5800.000	0.418	184.036	-26.796	-21.525	5798.176	0.083	-26.796	34.371	218.774
5900.000	0.596	153.966	-27.627	-21.322	5898.172	0.314	-27.627	34.898	217.660
6000.000	0.428	159.408	-28.444	-20.962	5998.168	0.175	-28.444	35.334	216.389
6100.000	0.457	159.536	-29.168	-20.692	6098.165	0.029	-29.168	35.762	215.352
6200.000	0.401	165.710	-29.880	-20.466	6198.163	0.072	-29.880	36.217	214.408
6300.000	0.439	165.784	-30.591	-20.285	6298.160	0.038	-30.591	36.706	213.549
6400.000	0.542	138.787	-31.318	-19.879	6398.156	0.250	-31.318	37.095	212.406
6500.000	0.621	145.380	-32.120	-19.260	6498.151	0.103	-32.120	37.452	210.947
6600.000	0.524	141.664	-32.925	-18.668	6598.146	0.104	-32.925	37.849	209.553
6700.000	0.551	111.789	-33.462	-17.938	6698.142	0.278	-33.462	37.967	208.195