



Company: Noble Energy
Rig: Production/CoreTech
API # 05-123-24309
Date: 1/8/2014
Surveyor: Randy Holcomb
VS: 0.000
Lat : 40.481
Long: -104.469

Well: Peppler 17-33
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid north is 0.67 east of True North
Declination: 8.37
Depth Reference: Ground Level
Elevation: 4674 Feet
Total Depth as Drilled: 6936 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	0.627	220.297	-0.417	-0.354	99.998	0.627	-0.417	0.547	220.297
200.000	0.618	225.496	-1.212	-1.092	199.992	0.057	-1.212	1.632	222.013
300.000	0.926	270.824	-1.579	-2.285	299.984	0.659	-1.579	2.778	235.357
400.000	1.597	296.001	-0.956	-4.346	399.960	0.855	-0.956	4.450	257.589
500.000	1.950	300.670	0.522	-7.061	499.912	0.381	0.522	7.081	274.230
600.000	2.055	298.935	2.257	-10.094	599.851	0.122	2.257	10.343	282.606
700.000	2.180	303.213	4.167	-13.254	699.782	0.202	4.167	13.894	287.452
800.000	2.157	299.834	6.145	-16.478	799.711	0.130	6.145	17.587	290.451
900.000	2.117	300.326	8.014	-19.705	899.641	0.044	8.014	21.272	292.131
1000.000	2.407	306.632	10.199	-22.985	999.563	0.382	10.199	25.146	293.929
1100.000	2.388	299.492	12.478	-26.483	1099.476	0.299	12.478	29.276	295.229
1200.000	2.135	305.275	14.579	-29.817	1199.398	0.340	14.579	33.191	296.057
1300.000	2.010	306.104	16.688	-32.754	1299.333	0.128	16.688	36.761	296.999
1400.000	1.778	309.477	18.708	-35.369	1399.278	0.257	18.708	40.012	297.876
1500.000	1.552	308.176	20.531	-37.631	1499.236	0.229	20.531	42.867	298.617
1600.000	1.202	314.095	22.098	-39.449	1599.207	0.378	22.098	45.216	299.256
1700.000	1.037	324.156	23.561	-40.732	1699.188	0.256	23.561	47.055	300.047
1800.000	1.035	320.461	24.992	-41.837	1799.171	0.067	24.992	48.733	300.852
1900.000	0.981	317.234	26.317	-42.993	1899.156	0.078	26.317	50.408	301.471
2000.000	1.096	316.824	27.642	-44.228	1999.140	0.115	27.642	52.156	302.005
2100.000	1.124	316.393	29.050	-45.559	2099.121	0.029	29.050	54.032	302.523
2200.000	1.808	293.216	30.381	-47.685	2199.088	0.892	30.381	56.541	302.502
2300.000	2.025	276.406	31.200	-50.890	2299.033	0.600	31.200	59.693	301.512
2400.000	2.078	278.442	31.663	-54.438	2398.969	0.090	31.663	62.977	300.184
2500.000	1.933	280.996	32.251	-57.888	2498.908	0.170	32.251	66.266	299.124
2600.000	1.938	276.388	32.761	-61.225	2598.851	0.156	32.761	69.439	298.151
2700.000	2.018	283.485	33.360	-64.618	2698.791	0.257	33.360	72.721	297.306
2800.000	1.955	287.532	34.285	-67.957	2798.731	0.154	34.285	76.115	296.771
2900.000	1.857	293.979	35.457	-71.063	2898.676	0.236	35.457	79.417	296.517
3000.000	1.916	291.910	36.739	-74.094	2998.622	0.090	36.739	82.702	296.374
3100.000	1.767	290.758	37.909	-77.087	3098.570	0.153	37.909	85.904	296.187
3200.000	1.503	280.705	38.699	-79.817	3198.530	0.389	38.699	88.704	295.866
3300.000	2.166	257.901	38.547	-82.954	3298.479	0.973	38.547	91.472	294.923
3400.000	2.290	253.170	37.572	-86.713	3398.404	0.222	37.572	94.503	293.427
3500.000	2.241	252.555	36.408	-90.491	3498.325	0.055	36.408	97.540	291.917
3600.000	2.268	235.966	34.714	-93.996	3598.249	0.651	34.714	100.201	290.270
3700.000	2.266	233.008	32.417	-97.214	3698.171	0.117	32.417	102.477	288.442

3800.000	2.256	225.915	29.859	-100.207	3798.093	0.280	29.859	104.561	286.593
3900.000	1.935	236.467	27.557	-103.028	3898.027	0.500	27.557	106.650	284.974
4000.000	1.491	224.019	25.689	-105.339	3997.982	0.577	25.689	108.426	283.705
4100.000	1.092	224.485	24.074	-106.910	4097.956	0.399	24.074	109.587	282.690
4200.000	0.989	227.835	22.815	-108.217	4197.940	0.120	22.815	110.596	281.905
4300.000	0.789	221.894	21.723	-109.317	4297.928	0.219	21.723	111.454	281.239
4400.000	0.648	235.147	20.887	-110.241	4397.920	0.217	20.887	112.203	280.729
4500.000	0.594	243.036	20.329	-111.167	4497.914	0.101	20.329	113.011	280.363
4600.000	0.536	229.263	19.789	-111.983	4597.909	0.147	19.789	113.718	280.021
4700.000	0.656	222.252	19.060	-112.722	4697.904	0.140	19.060	114.322	279.597
4800.000	0.686	210.265	18.119	-113.409	4797.897	0.143	18.119	114.847	279.077
4900.000	0.812	201.514	16.943	-113.971	4897.889	0.170	16.943	115.223	278.456
5000.000	0.534	200.119	15.846	-114.391	4997.882	0.278	15.846	115.483	277.886
5100.000	0.277	227.169	15.243	-114.729	5097.879	0.314	15.243	115.737	277.568
5200.000	0.266	269.186	15.076	-115.138	5197.878	0.195	15.076	116.121	277.460
5300.000	0.330	120.057	14.928	-115.121	5297.878	0.575	14.928	116.085	277.388
5400.000	0.574	241.779	14.547	-115.313	5397.876	0.798	14.547	116.227	277.190
5500.000	0.561	240.122	14.066	-116.179	5497.871	0.021	14.066	117.028	276.903
5600.000	0.589	240.800	13.571	-117.053	5597.866	0.029	13.571	117.837	276.613
5700.000	0.740	309.815	13.734	-117.997	5697.861	0.763	13.734	118.794	276.639
5800.000	0.620	256.953	14.026	-119.021	5797.854	0.615	14.026	119.844	276.721
5900.000	0.645	258.512	13.791	-120.100	5897.848	0.031	13.791	120.889	276.551
6000.000	0.678	252.356	13.500	-121.216	5997.842	0.078	13.500	121.965	276.355
6100.000	0.931	269.788	13.317	-122.592	6097.832	0.349	13.317	123.313	276.200
6200.000	1.256	281.469	13.532	-124.478	6197.814	0.393	13.532	125.212	276.204
6300.000	2.715	286.240	14.412	-127.826	6297.751	1.467	14.412	128.636	276.433
6400.000	1.675	306.513	15.944	-131.275	6397.678	1.282	15.944	132.240	276.925
6500.000	3.271	347.560	19.601	-133.065	6497.588	2.289	19.601	134.501	278.380
6600.000	6.735	354.671	28.228	-134.224	6597.193	3.513	28.228	137.160	281.877
6700.000	9.152	353.432	41.970	-135.679	6696.226	2.422	41.970	142.022	287.188