



Company: Noble Energy
Rig: Production
API # 05-123-16148
Date: 3/7/2013
Surveyor: Jay Hinman
VS: 0.000
Lat : 40.289
Long: -104.713

Well: Schmidt 30-4G
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid North is .510 Degrees East of
Declination: 8.59
Depth Reference: Ground Level
Elevation: 4790'
Total Depth as Drilled: N/A

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	0.305	129.663	-0.170	0.205	100.000	0.305	-0.170	0.266	129.663
200.000	0.236	139.258	-0.496	0.544	199.998	0.082	-0.496	0.736	132.336
300.000	0.345	115.311	-0.781	0.951	299.997	0.161	-0.781	1.231	129.383
400.000	0.259	229.409	-1.057	1.052	399.996	0.509	-1.057	1.491	135.114
500.000	0.062	184.386	-1.257	0.877	499.996	0.219	-1.257	1.533	145.104
600.000	0.404	199.307	-1.644	0.756	599.995	0.345	-1.644	1.809	155.300
700.000	0.223	262.214	-2.003	0.447	699.994	0.362	-2.003	2.052	167.421
800.000	0.427	234.202	-2.247	-0.048	799.992	0.253	-2.247	2.248	181.212
900.000	0.224	311.827	-2.335	-0.495	899.991	0.437	-2.335	2.387	191.975
1000.000	0.513	292.702	-2.032	-1.054	999.989	0.310	-2.032	2.289	207.420
1100.000	0.591	291.489	-1.670	-1.947	1099.984	0.078	-1.670	2.565	229.375
1200.000	0.634	322.931	-1.039	-2.760	1199.979	0.335	-1.039	2.949	249.363
1300.000	0.480	358.983	-0.179	-3.101	1299.974	0.375	-0.179	3.106	266.693
1400.000	0.641	327.947	0.714	-3.406	1399.970	0.338	0.714	3.480	281.834
1500.000	0.776	350.338	1.856	-3.816	1499.962	0.306	1.856	4.244	295.933
1600.000	0.351	5.871	2.829	-3.899	1599.957	0.448	2.829	4.817	305.965
1700.000	0.714	331.809	3.683	-4.162	1699.953	0.466	3.683	5.557	311.509
1800.000	0.761	353.916	4.893	-4.526	1799.945	0.287	4.893	6.665	317.228
1900.000	0.653	353.227	6.119	-4.664	1899.937	0.109	6.119	7.694	322.685
2000.000	0.358	339.739	6.978	-4.839	1999.933	0.316	6.978	8.492	325.257
2100.000	0.320	278.192	7.311	-5.224	2099.932	0.349	7.311	8.985	324.452
2200.000	0.799	243.297	7.037	-6.123	2199.927	0.567	7.037	9.328	318.975
2300.000	1.089	259.442	6.550	-7.680	2299.913	0.391	6.550	10.094	310.459
2400.000	0.884	270.261	6.379	-9.386	2399.899	0.276	6.379	11.349	304.202
2500.000	0.962	271.066	6.398	-10.997	2499.886	0.079	6.398	12.723	300.192
2600.000	0.698	286.386	6.586	-12.420	2599.875	0.343	6.586	14.058	297.934
2700.000	0.604	300.184	7.023	-13.460	2699.869	0.182	7.023	15.182	297.553
2800.000	0.847	266.044	7.237	-14.654	2799.861	0.485	7.237	16.343	296.282
2900.000	0.687	246.401	6.946	-15.941	2899.852	0.306	6.946	17.388	293.544
3000.000	1.019	262.975	6.597	-17.372	2999.841	0.410	6.597	18.583	290.794
3100.000	1.078	272.707	6.533	-19.194	3099.824	0.187	6.533	20.276	288.796
3200.000	1.150	249.342	6.223	-21.073	3199.806	0.456	6.223	21.972	286.453
3300.000	1.793	265.809	5.755	-23.572	3299.773	0.763	5.755	24.264	283.720
3400.000	1.693	273.979	5.743	-26.606	3399.727	0.267	5.743	27.218	282.181

3500.000	1.305	275.727	5.959	-29.212	3499.692	0.391	5.959	29.814	281.530
3600.000	0.990	278.261	6.197	-31.200	3599.672	0.319	6.197	31.810	281.234
3700.000	1.592	283.133	6.637	-33.408	3699.646	0.612	6.637	34.061	281.236
3800.000	1.317	291.039	7.365	-35.833	3799.614	0.340	7.365	36.582	281.614
3900.000	1.354	297.504	8.323	-37.953	3899.587	0.155	8.323	38.855	282.369
4000.000	1.146	311.084	9.526	-39.755	3999.564	0.360	9.526	40.880	283.475
4100.000	1.794	333.261	11.581	-41.213	4099.531	0.851	11.581	42.809	285.695
4200.000	2.611	332.543	15.000	-42.968	4199.456	0.817	15.000	45.511	289.244
4300.000	2.906	329.856	19.213	-45.291	4299.340	0.322	19.213	49.197	292.988
4400.000	2.423	323.069	23.095	-47.834	4399.232	0.576	23.095	53.117	295.772
4500.000	3.006	310.119	26.474	-51.109	4499.120	0.842	26.474	57.559	297.384
4600.000	2.465	319.227	29.792	-54.518	4599.007	0.693	29.792	62.127	298.655
4700.000	2.452	314.103	32.909	-57.458	4698.915	0.220	32.909	66.215	299.802
4800.000	1.710	301.921	35.186	-60.260	4798.848	0.860	35.186	69.781	300.281
4900.000	1.323	283.578	36.246	-62.648	4898.814	0.616	36.246	72.378	300.052
5000.000	1.685	283.720	36.866	-65.199	4998.779	0.363	36.866	74.899	299.485
5100.000	1.761	311.208	38.227	-67.783	5098.736	0.822	38.227	77.819	299.421
5200.000	1.573	331.604	40.447	-69.592	5198.694	0.619	40.447	80.492	300.165
5300.000	1.883	334.439	43.137	-70.954	5298.649	0.321	43.137	83.037	301.298
5400.000	1.848	310.657	45.669	-72.886	5398.597	0.769	45.669	86.012	302.071
5500.000	1.533	313.132	47.635	-75.086	5498.553	0.323	47.635	88.921	302.391
5600.000	1.719	325.075	49.779	-76.921	5598.513	0.385	49.779	91.623	302.909
5700.000	1.054	344.641	51.896	-78.023	5698.484	0.807	51.896	93.706	303.629
5800.000	1.474	11.893	54.042	-78.002	5798.460	0.722	54.042	94.894	304.715
5900.000	0.912	34.583	55.955	-77.285	5898.439	0.724	55.955	95.415	305.905
6000.000	0.088	71.050	56.635	-76.761	5998.434	0.843	56.635	95.393	306.420
6100.000	0.351	91.986	56.649	-76.383	6098.434	0.271	56.649	95.098	306.562
6200.000	1.722	104.377	56.266	-74.622	6198.415	1.382	56.266	93.457	307.017
6300.000	1.607	118.226	55.230	-71.931	6298.373	0.417	55.230	90.688	307.517
6400.000	1.891	120.857	53.720	-69.279	6398.326	0.296	53.720	87.667	307.790
6500.000	1.053	124.131	52.358	-67.102	6498.292	0.842	52.358	85.112	307.964
6600.000	0.931	135.888	51.259	-65.776	6598.278	0.237	51.259	83.390	307.929
6700.000	0.835	136.242	50.149	-64.706	6698.266	0.096	50.149	81.864	307.777
6800.000	0.593	142.895	49.210	-63.889	6798.258	0.256	49.210	80.644	307.605
6900.000	0.604	255.360	48.664	-64.087	6898.255	0.996	48.664	80.469	307.211
7000.000	1.377	272.771	48.588	-65.798	6998.239	0.820	48.588	81.794	306.444
7100.000	1.602	297.939	49.302	-68.233	7098.207	0.685	49.302	84.181	305.850
7200.000	1.325	300.285	50.540	-70.467	7198.174	0.283	50.540	86.718	305.648

True North