



Company: Noble Energy
Rig: Production/Workover
API # 05-123-33737
Date: 6/4/2013
Surveyor: Rob Lampert
VS: 0.000
Lat : 40.785
Long: -103.871

Well: Rohn PC LD 04-03
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid North is 1.050 Degrees East of True North
Declination: 8.13
Depth Reference: Ground Level
Elevation: 4718'
Total Depth as Drilled: 6120'

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	0.296	102.790	-0.057	0.252	100.000	0.296	-0.057	0.258	102.790
200.000	0.229	64.182	-0.027	0.684	199.999	0.185	-0.027	0.684	92.276
300.000	0.339	64.479	0.188	1.131	299.997	0.110	0.188	1.147	80.587
400.000	0.316	67.066	0.422	1.652	399.996	0.028	0.422	1.705	75.656
500.000	0.192	78.380	0.564	2.070	499.995	0.133	0.564	2.145	74.769
600.000	0.228	218.337	0.441	2.110	599.994	0.395	0.441	2.156	78.195
700.000	0.269	207.378	0.076	1.879	699.993	0.062	0.076	1.880	87.671
800.000	0.346	209.062	-0.396	1.624	799.992	0.078	-0.396	1.672	103.704
900.000	0.379	208.531	-0.950	1.320	899.990	0.033	-0.950	1.626	125.763
1000.000	0.551	190.278	-1.714	1.076	999.987	0.225	-1.714	2.024	147.877
1100.000	0.805	176.772	-2.888	1.030	1099.980	0.298	-2.888	3.066	160.375
1200.000	0.940	174.518	-4.405	1.148	1199.968	0.139	-4.405	4.552	165.398
1300.000	0.995	171.332	-6.080	1.357	1299.954	0.077	-6.080	6.229	167.419
1400.000	1.051	153.647	-7.759	1.895	1399.938	0.319	-7.759	7.987	166.278
1500.000	1.091	154.061	-9.437	2.718	1499.921	0.041	-9.437	9.821	163.932
1600.000	0.786	147.668	-10.873	3.502	1599.907	0.322	-10.873	11.423	162.149
1700.000	0.499	106.172	-11.574	4.286	1699.901	0.529	-11.574	12.342	159.678
1800.000	0.516	72.172	-11.557	5.133	1799.898	0.297	-11.557	12.646	156.051
1900.000	0.536	64.793	-11.220	5.985	1899.893	0.071	-11.220	12.717	151.922
2000.000	0.614	63.497	-10.782	6.888	1999.888	0.079	-10.782	12.794	147.426
2100.000	0.562	74.279	-10.410	7.840	2099.883	0.122	-10.410	13.032	143.014
2200.000	0.514	78.537	-10.187	8.752	2199.879	0.062	-10.187	13.431	139.334
2300.000	0.589	70.916	-9.930	9.678	2299.874	0.105	-9.930	13.866	135.737
2400.000	0.579	71.233	-9.599	10.642	2399.869	0.010	-9.599	14.332	132.050
2500.000	0.449	64.435	-9.268	11.475	2499.865	0.144	-9.268	14.750	128.926
2600.000	0.447	52.582	-8.861	12.138	2599.862	0.093	-8.861	15.029	126.130
2700.000	0.581	56.368	-8.343	12.870	2699.858	0.137	-8.343	15.338	122.954
2800.000	0.793	54.543	-7.661	13.856	2799.851	0.213	-7.661	15.833	118.940
2900.000	0.838	89.598	-7.255	15.151	2899.841	0.493	-7.255	16.798	115.588
3000.000	1.425	124.675	-7.958	16.905	2999.822	0.883	-7.958	18.684	115.208
3100.000	1.366	124.338	-9.337	18.912	3099.793	0.060	-9.337	21.091	116.277
3200.000	1.387	125.743	-10.717	20.878	3199.764	0.040	-10.717	23.468	117.171
3300.000	1.402	125.840	-12.140	22.852	3299.734	0.015	-12.140	25.876	117.979
3400.000	1.424	125.551	-13.578	24.854	3399.704	0.023	-13.578	28.321	118.648
3500.000	1.241	114.062	-14.742	26.854	3499.677	0.323	-14.742	30.635	118.766
3600.000	1.035	88.138	-15.155	28.746	3599.658	0.549	-15.155	32.496	117.798
3700.000	0.599	92.636	-15.149	30.171	3699.647	0.441	-15.149	33.761	116.662
3800.000	1.162	266.036	-15.243	29.681	3799.642	1.758	-15.243	33.366	117.184
3900.000	1.354	266.863	-15.378	27.489	3899.618	0.193	-15.378	31.498	119.224
4000.000	0.411	1.968	-15.084	26.321	3999.608	1.450	-15.084	30.337	119.817
4100.000	0.675	24.656	-14.191	26.579	4099.603	0.335	-14.191	30.130	118.098
4200.000	0.784	13.380	-12.991	26.983	4199.595	0.180	-12.991	29.947	115.708
4300.000	0.908	10.760	-11.546	27.289	4299.585	0.130	-11.546	29.632	112.934
4400.000	0.940	2.108	-9.948	27.468	4399.572	0.143	-9.948	29.213	109.909
4500.000	0.913	350.611	-8.342	27.368	4499.559	0.188	-8.342	28.611	106.952
4600.000	0.766	3.420	-6.889	27.278	4599.548	0.237	-6.889	28.134	104.173
4700.000	0.735	5.241	-5.583	27.376	4699.539	0.039	-5.583	27.940	101.526
4800.000	0.623	9.919	-4.408	27.528	4799.532	0.126	-4.408	27.879	99.098
4900.000	0.282	19.762	-3.642	27.705	4899.529	0.348	-3.642	27.943	97.488
5000.000	0.053	125.118	-3.437	27.826	4999.529	0.300	-3.437	28.038	97.041
5100.000	0.224	178.683	-3.659	27.869	5099.528	0.197	-3.659	28.108	97.480
5200.000	0.444	198.421	-4.222	27.751	5199.527	0.245	-4.222	28.070	98.650
5300.000	0.656	187.532	-5.156	27.553	5299.522	0.235	-5.156	28.032	100.600
5400.000	0.815	180.454	-6.435	27.473	5399.514	0.184	-6.435	28.216	103.183
5500.000	0.705	180.068	-7.762	27.466	5499.505	0.110	-7.762	28.542	105.781
5600.000	0.673	146.266	-8.867	27.792	5599.498	0.402	-8.867	29.172	107.694
5700.000	0.641	134.770	-9.749	28.516	5699.492	0.135	-9.749	30.136	108.875
5800.000	0.443	145.494	-10.462	29.132	5799.487	0.222	-10.462	30.954	109.755
5900.000	0.069	205.464	-10.835	29.325	5899.486	0.413	-10.835	31.263	110.278
5934.000	0.173	131.056	-10.887	29.355	5933.486	0.493	-10.887	31.309	110.348