



Company: Noble Energy
Rig: Production/VES
API # 05-123-29885

Date: 3/8/2013
Surveyor: Jay Hinman

VS: 0.000

Lat : 40.287

Long: -104.715

Well: Schmidt G30-31

Location: Weld County, Colorado

North Reference: GRID

Convergence: Grid north is .510 Degrees East of

Declination: 8.59

Depth Reference: Ground Level

Elevation: 4781'

Total Depth as Drilled: 7389'

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	0.263	209.435	-0.200	-0.113	100.000	0.263	-0.200	0.229	209.435
200.000	0.538	294.364	-0.206	-0.654	199.998	0.578	-0.206	0.685	252.524
300.000	0.592	324.006	0.406	-1.385	299.993	0.294	0.406	1.443	286.333
400.000	0.396	348.313	1.162	-1.759	399.989	0.283	1.162	2.108	303.456
500.000	0.595	342.185	1.994	-1.987	499.986	0.205	1.994	2.815	315.101
600.000	1.165	39.641	3.271	-1.497	599.975	0.983	3.271	3.598	335.407
700.000	1.656	62.932	4.712	0.438	699.945	0.745	4.712	4.732	5.309
800.000	1.973	59.405	6.245	3.206	799.895	0.336	6.245	7.020	27.174
900.000	1.904	77.437	7.483	6.310	899.839	0.611	7.483	9.788	40.139
1000.000	1.935	65.325	8.549	9.466	999.783	0.406	8.549	12.755	47.913
1100.000	1.672	60.538	9.971	12.270	1099.733	0.303	9.971	15.811	50.901
1200.000	1.843	50.241	11.717	14.776	1199.687	0.359	11.717	18.858	51.587
1300.000	1.847	49.545	13.791	17.239	1299.635	0.023	13.791	22.076	51.340
1400.000	1.468	44.016	15.757	19.354	1399.593	0.411	15.757	24.958	50.849
1500.000	1.639	49.026	17.616	21.324	1499.556	0.219	17.616	27.659	50.439
1600.000	0.695	33.456	19.060	22.738	1599.534	0.988	19.060	29.670	50.029
1700.000	0.232	154.714	19.383	23.159	1699.532	0.839	19.383	30.199	50.072
1800.000	0.540	176.282	18.729	23.275	1799.530	0.336	18.729	29.875	51.177
1900.000	0.867	225.771	17.731	22.764	1899.523	0.660	17.731	28.854	52.084
2000.000	0.539	207.420	16.785	22.005	1999.515	0.394	16.785	27.676	52.663
2100.000	0.507	142.789	16.015	22.055	2099.512	0.560	16.015	27.257	54.015
2200.000	1.226	143.581	14.802	22.958	2199.500	0.720	14.802	27.316	57.189
2300.000	1.606	168.574	12.567	23.871	2299.470	0.716	12.567	26.977	62.234
2400.000	1.882	191.721	9.587	23.815	2399.425	0.750	9.587	25.672	68.073
2500.000	2.224	192.822	6.087	23.051	2499.361	0.345	6.087	23.841	75.208
2600.000	2.041	214.230	2.722	21.618	2599.293	0.812	2.722	21.789	82.824
2700.000	1.899	213.425	-0.134	19.704	2699.234	0.145	-0.134	19.704	90.388
2800.000	2.023	213.663	-2.986	17.812	2799.175	0.124	-2.986	18.061	99.515
2900.000	1.729	200.043	-5.872	16.317	2899.122	0.532	-5.872	17.341	109.793
3000.000	1.506	195.580	-8.555	15.447	2999.082	0.256	-8.555	17.658	118.980
3100.000	1.122	227.178	-10.487	14.376	3099.057	0.805	-10.487	17.794	126.109
3200.000	0.750	248.216	-11.395	13.050	3199.044	0.500	-11.395	17.325	131.127
3300.000	0.376	269.982	-11.638	12.114	3299.039	0.425	-11.638	16.799	133.852
3400.000	0.780	341.252	-10.994	11.567	3399.034	0.749	-10.994	15.958	133.544

3500.000	0.737	31.324	-9.800	11.683	3499.027	0.643	-9.800	15.249	129.991
3600.000	1.091	30.730	-8.432	12.503	3599.014	0.355	-8.432	15.081	123.995
3700.000	0.727	35.223	-7.095	13.356	3699.001	0.371	-7.095	15.124	117.980
3800.000	0.400	58.698	-6.396	14.020	3798.996	0.394	-6.396	15.410	114.522
3900.000	0.136	309.658	-6.139	14.227	3898.995	0.463	-6.139	15.495	113.339
4000.000	0.363	298.116	-5.914	13.856	3998.994	0.231	-5.914	15.065	113.112
4100.000	0.669	322.740	-5.299	13.223	4098.990	0.372	-5.299	14.246	111.839
4200.000	1.123	326.839	-4.014	12.334	4198.978	0.457	-4.014	12.971	108.029
4300.000	1.488	329.575	-2.075	11.141	4298.952	0.370	-2.075	11.332	100.550
4400.000	1.637	320.775	0.151	9.580	4398.915	0.282	0.151	9.581	89.097
4500.000	1.098	340.414	2.160	8.356	4498.886	0.707	2.160	8.630	75.507
4600.000	1.118	309.839	3.687	7.286	4598.869	0.584	3.687	8.166	63.158
4700.000	1.080	351.244	5.243	6.393	4698.852	0.778	5.243	8.269	50.645
4800.000	1.257	24.726	7.171	6.709	4798.832	0.694	7.171	9.820	43.092
4900.000	1.767	53.542	9.084	8.408	4898.798	0.900	9.084	12.377	42.787
5000.000	1.934	57.886	10.897	11.078	4998.746	0.218	10.897	15.539	45.471
5100.000	1.627	61.677	12.468	13.757	5098.698	0.329	12.468	18.566	47.814
5200.000	1.365	51.670	13.880	15.941	5198.664	0.369	13.880	21.137	48.953
5300.000	0.736	41.560	15.100	17.301	5298.647	0.653	15.100	22.964	48.887
5400.000	0.750	47.076	16.026	18.207	5398.638	0.073	16.026	24.256	48.645
5500.000	1.108	46.544	17.137	19.388	5498.625	0.358	17.137	25.876	48.527
5600.000	1.388	12.221	18.986	20.347	5598.602	0.784	18.986	27.829	46.981
5700.000	1.661	342.375	21.551	20.164	5698.568	0.828	21.551	29.513	43.096
5800.000	1.593	347.413	24.289	19.423	5798.528	0.158	24.289	31.099	38.648
5900.000	1.779	347.821	27.163	18.792	5898.485	0.187	27.163	33.030	34.677
6000.000	1.741	355.087	30.194	18.334	5998.438	0.226	30.194	35.325	31.267
6100.000	1.348	22.304	32.795	18.651	6098.403	0.821	32.795	37.728	29.627
6200.000	1.694	38.138	35.046	20.010	6198.368	0.542	35.046	40.356	29.725
6300.000	1.820	63.719	36.912	22.347	6298.322	0.787	36.912	43.150	31.191
6400.000	2.191	71.725	38.215	25.586	6398.261	0.464	38.215	45.989	33.803
6500.000	2.916	73.694	39.528	29.842	6498.161	0.730	39.528	49.528	37.051
6600.000	3.402	64.860	41.503	34.969	6598.009	0.687	41.503	54.271	40.117
6700.000	2.534	56.886	43.971	39.507	6697.875	0.959	43.971	59.112	41.939
6800.000	2.027	38.373	46.566	42.457	6797.796	0.888	46.566	63.016	42.357
6900.000	1.138	23.555	48.863	43.952	6897.758	0.972	48.863	65.722	41.971
7000.000	0.898	19.238	50.513	44.607	6997.742	0.252	50.513	67.390	41.447
7100.000	0.458	4.194	51.652	44.894	7097.735	0.471	51.652	68.435	40.996
7200.000	0.694	25.830	52.595	45.187	7197.730	0.317	52.595	69.341	40.668

True North