



Company: Noble Energy
Rig: Production/VES
API # 05-123-26528

Date: 10/28/13
Surveyor: Levi Sheldon

VS: 0.000
Lat : 40.250

Long: -104.607

Well: Shelton H01-23

Location: Weld County, Colorado

North Reference: GRID

Convergence: GRID North is 0.580 Degrees East

Declination: 8.45

Depth Reference: Ground Level

Elevation: 4,872 Feet

Total Depth as Drilled: 7,301 Feet

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	0.330	189.758	-0.284	-0.049	99.999	0.330	-0.284	0.288	189.758
200.000	0.507	205.329	-0.968	-0.287	199.997	0.209	-0.968	1.009	196.515
300.000	0.565	222.599	-1.731	-0.810	299.992	0.171	-1.731	1.911	205.083
400.000	0.640	258.078	-2.209	-1.690	399.987	0.374	-2.209	2.782	217.420
500.000	0.715	249.041	-2.548	-2.819	499.980	0.131	-2.548	3.800	227.898
600.000	0.484	253.897	-2.888	-3.808	599.975	0.237	-2.888	4.779	232.822
700.000	0.706	245.904	-3.257	-4.776	699.969	0.236	-3.257	5.781	235.709
800.000	0.634	272.293	-3.486	-5.890	799.963	0.314	-3.486	6.845	239.382
900.000	0.382	261.955	-3.511	-6.773	899.959	0.267	-3.511	7.629	242.601
1000.000	0.525	245.900	-3.744	-7.521	999.956	0.190	-3.744	8.402	243.534
1100.000	0.592	264.682	-3.979	-8.454	1099.951	0.194	-3.979	9.343	244.793
1200.000	0.391	257.850	-4.099	-9.302	1199.947	0.209	-4.099	10.165	246.218
1300.000	0.513	275.508	-4.128	-10.081	1299.944	0.183	-4.128	10.893	247.732
1400.000	0.391	262.122	-4.132	-10.865	1399.941	0.160	-4.132	11.624	249.178
1500.000	0.562	272.698	-4.156	-11.693	1499.938	0.191	-4.156	12.409	250.435
1600.000	0.531	272.179	-4.115	-12.645	1599.933	0.032	-4.115	13.298	251.975
1700.000	0.538	235.613	-4.362	-13.495	1699.929	0.335	-4.362	14.183	252.087
1800.000	0.301	235.564	-4.775	-14.099	1799.926	0.237	-4.775	14.885	251.288
1900.000	0.440	244.392	-5.089	-14.661	1899.924	0.150	-5.089	15.519	250.856
2000.000	0.444	242.303	-5.435	-15.350	1999.921	0.017	-5.435	16.284	250.501
2100.000	0.253	259.788	-5.655	-15.910	2099.919	0.217	-5.655	16.885	250.434
2200.000	0.232	193.469	-5.891	-16.175	2199.919	0.266	-5.891	17.214	249.988
2300.000	0.606	299.553	-5.827	-16.682	2299.917	0.707	-5.827	17.671	250.746
2400.000	0.963	314.311	-4.979	-17.744	2399.907	0.407	-4.979	18.429	254.325
2500.000	1.384	330.415	-3.343	-18.941	2499.886	0.531	-3.343	19.234	259.992
2600.000	2.170	320.305	-0.836	-20.746	2599.838	0.844	-0.836	20.763	267.693
2700.000	2.498	324.708	2.400	-23.215	2699.755	0.373	2.400	23.339	275.903
2800.000	2.625	324.650	6.047	-25.799	2799.655	0.127	6.047	26.498	283.191
2900.000	2.463	307.370	9.219	-28.831	2899.558	0.781	9.219	30.269	287.731
3000.000	2.260	315.673	11.934	-31.917	2999.473	0.397	11.934	34.075	290.500
3100.000	1.430	328.437	14.407	-33.948	3099.421	0.922	14.407	36.879	292.996
3200.000	1.109	295.050	15.880	-35.477	3199.397	0.791	15.880	38.869	294.113
3300.000	0.471	230.926	16.030	-36.673	3299.389	0.998	16.030	40.024	293.611
3400.000	0.589	173.843	15.260	-36.937	3399.385	0.517	15.260	39.966	292.448
3500.000	0.310	170.605	14.483	-36.838	3499.382	0.280	14.483	39.583	291.462

3600.000	0.508	335.994	14.621	-36.974	3599.381	0.812	14.621	39.760	291.575
3700.000	1.506	339.550	16.257	-37.614	3699.364	0.999	16.257	40.977	293.375
3800.000	0.740	344.248	18.110	-38.248	3799.344	0.771	18.110	42.319	295.337
3900.000	0.281	313.407	18.900	-38.602	3899.340	0.519	18.900	42.980	296.087
4000.000	0.404	159.866	18.738	-38.658	3999.339	0.667	18.738	42.960	295.860
4100.000	1.048	159.700	17.550	-38.220	4099.331	0.644	17.550	42.057	294.663
4200.000	1.711	144.697	15.474	-37.040	4199.302	0.750	15.474	40.142	292.673
4300.000	2.024	145.828	12.794	-35.186	4299.248	0.315	12.794	37.440	289.983
4400.000	2.649	141.943	9.514	-32.770	4399.165	0.645	9.514	34.123	286.190
4500.000	2.460	147.417	5.886	-30.189	4499.066	0.308	5.886	30.758	281.033
4600.000	2.656	135.018	2.439	-27.396	4598.967	0.585	2.439	27.504	275.088
4700.000	3.466	127.181	-1.027	-23.349	4698.824	0.910	-1.027	23.372	267.482
4800.000	3.396	124.974	-4.552	-18.513	4798.644	0.149	-4.552	19.065	256.186
4900.000	3.820	124.886	-8.155	-13.353	4898.446	0.423	-8.155	15.647	238.588
5000.000	4.651	120.411	-12.112	-7.124	4998.172	0.894	-12.112	14.052	210.464
5100.000	4.243	121.181	-16.080	-0.463	5097.871	0.412	-16.080	16.087	181.650
5200.000	3.314	122.225	-19.537	5.147	5197.652	0.931	-19.537	20.204	165.240
5300.000	2.423	121.201	-22.173	9.401	5297.526	0.893	-22.173	24.084	157.024
5400.000	1.466	115.806	-23.825	12.361	5397.467	0.974	-23.825	26.841	152.580
5500.000	1.126	118.255	-24.847	14.377	5497.442	0.344	-24.847	28.707	149.945
5600.000	0.635	101.694	-25.425	15.785	5597.430	0.548	-25.425	29.926	148.165
5700.000	0.257	71.727	-25.466	16.540	5697.427	0.432	-25.466	30.367	146.996
5800.000	0.376	83.114	-25.357	17.079	5797.425	0.134	-25.357	30.572	146.037
5900.000	0.424	51.835	-25.089	17.697	5897.423	0.221	-25.089	30.702	144.802
6000.000	0.557	60.153	-24.618	18.409	5997.419	0.150	-24.618	30.740	143.210
6100.000	0.501	58.834	-24.149	19.205	6097.415	0.057	-24.149	30.855	141.505
6200.000	0.450	59.528	-23.724	19.919	6197.411	0.051	-23.724	30.977	139.983
6300.000	0.721	60.576	-23.215	20.805	6297.406	0.270	-23.215	31.174	138.134
6400.000	0.618	60.058	-22.637	21.820	6397.399	0.103	-22.637	31.441	136.053
6500.000	0.807	57.271	-21.987	22.880	6497.391	0.192	-21.987	31.732	133.861
6600.000	1.190	65.546	-21.177	24.417	6597.376	0.408	-21.177	32.321	130.935
6700.000	2.123	66.407	-20.006	27.060	6697.333	0.934	-20.006	33.652	126.476
6800.000	3.969	77.854	-18.536	32.141	6797.189	1.934	-18.536	37.103	119.972
6900.000	1.785	83.256	-17.625	37.072	6897.057	2.198	-17.625	41.048	115.427
7000.000	0.300	93.001	-17.456	38.880	6997.037	1.490	-17.456	42.619	114.178

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