



Company/Rig: Noble Energy/ VES

WELL: Weiss 34-04 I 7

DECLINATION: 8.47 Degrees

TD AS DRILLED: 7457 Feet

COUNTY/STATE: Weld/Colorado

Latitude: 40.274, Longitude: -104.884

GRID North is 0.400 Degrees East of True North

VS-Azi: 0.000 Degrees



DEPTH REFERENCE : RKB=GL/ ELEVATION= 4895 Feet

DRILLOG GYRO SURVEY CALCULATIONS

Filename: post-de\_01.ut

Minimum Curvature Method

Report Date/Time: 11/17/2014 / 10:57

LAT & LONG OBTAINED BY HANDHELD GPS AT WELLHEAD

NORTH REFERENCE: GRID

HENDERSON, COLORADO

303-853-4976

Surveyor: Sean Bratt

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	****
100.000	0.541	264.600	99.999	-0.044	-0.470	-0.044	0.472	264.600	0.541
200.000	0.418	278.052	199.995	-0.038	-1.301	-0.038	1.302	268.338	0.166
300.000	0.395	251.889	299.993	-0.094	-1.990	-0.094	1.992	267.303	0.185
400.000	0.348	259.210	399.991	-0.258	-2.615	-0.258	2.628	264.375	0.067
500.000	0.404	256.513	499.988	-0.397	-3.256	-0.397	3.280	263.055	0.059
600.000	0.425	253.810	599.986	-0.582	-3.955	-0.582	3.997	261.625	0.029
700.000	0.403	283.566	699.983	-0.603	-4.653	-0.603	4.692	262.615	0.214
800.000	0.652	255.615	799.979	-0.662	-5.546	-0.662	5.586	263.195	0.351
900.000	0.874	267.453	899.970	-0.837	-6.859	-0.837	6.910	263.042	0.271
1000.000	1.066	275.989	999.956	-0.774	-8.547	-0.774	8.582	264.826	0.240
1100.000	1.190	264.018	1099.937	-0.785	-10.505	-0.785	10.534	265.726	0.265
1200.000	1.291	278.175	1199.913	-0.733	-12.652	-0.733	12.673	266.684	0.322
1300.000	1.251	271.380	1299.889	-0.547	-14.858	-0.547	14.868	267.893	0.156
1400.000	1.317	270.405	1399.864	-0.512	-17.099	-0.512	17.106	268.284	0.070
1500.000	1.361	273.454	1499.836	-0.432	-19.433	-0.432	19.438	268.725	0.084
1600.000	1.287	252.613	1599.810	-0.696	-21.690	-0.696	21.702	268.161	0.484
1700.000	1.176	251.490	1699.787	-1.358	-23.735	-1.358	23.773	266.726	0.114
1800.000	0.815	267.263	1799.772	-1.717	-25.418	-1.717	25.476	266.135	0.450
1900.000	0.834	275.904	1899.762	-1.676	-26.853	-1.676	26.905	266.428	0.126

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
2000.000	0.703	270.975	1999.753	-1.591	-28.190	-1.591	28.235	266.770	0.147
2100.000	0.680	269.774	2099.746	-1.583	-29.397	-1.583	29.439	266.918	0.027
2200.000	0.535	249.842	2199.740	-1.746	-30.428	-1.746	30.478	266.716	0.254
2300.000	0.357	264.989	2299.737	-1.934	-31.177	-1.934	31.237	266.450	0.211
2400.000	0.420	281.693	2399.735	-1.887	-31.846	-1.887	31.902	266.609	0.129
2500.000	0.456	301.035	2499.732	-1.608	-32.546	-1.608	32.586	267.172	0.151
2600.000	0.549	289.200	2599.728	-1.245	-33.339	-1.245	33.362	267.861	0.139
2700.000	0.546	285.219	2699.723	-0.963	-34.251	-0.963	34.264	268.390	0.038
2800.000	0.533	272.969	2799.719	-0.814	-35.175	-0.814	35.185	268.675	0.116
2900.000	0.501	252.738	2899.715	-0.919	-36.058	-0.919	36.069	268.540	0.184
3000.000	0.532	249.428	2999.711	-1.212	-36.910	-1.212	36.930	268.119	0.043
3100.000	0.912	270.857	3099.703	-1.363	-38.140	-1.363	38.164	267.953	0.460
3200.000	0.891	273.523	3199.691	-1.304	-39.712	-1.304	39.733	268.120	0.047
3300.000	0.993	248.790	3299.678	-1.569	-41.295	-1.569	41.325	267.824	0.415
3400.000	1.045	256.818	3399.662	-2.091	-42.991	-2.091	43.042	267.216	0.152
3500.000	1.005	211.611	3499.647	-3.045	-44.338	-3.045	44.443	266.071	0.789
3600.000	0.906	194.503	3599.634	-4.557	-44.996	-4.557	45.226	264.217	0.301
3700.000	0.681	198.729	3699.624	-5.886	-45.385	-5.886	45.765	262.611	0.232
3800.000	0.698	181.168	3799.617	-7.058	-45.588	-7.058	46.131	261.200	0.211
3900.000	0.795	189.317	3899.608	-8.352	-45.713	-8.352	46.470	259.646	0.144
4000.000	0.858	199.341	3999.598	-9.743	-46.073	-9.743	47.092	258.059	0.157
4100.000	0.858	199.551	4099.587	-11.155	-46.572	-11.155	47.889	256.530	0.003
4200.000	0.828	203.646	4199.576	-12.522	-47.112	-12.522	48.748	255.115	0.067
4300.000	1.204	241.762	4299.561	-13.681	-48.328	-13.681	50.227	254.193	0.753
4400.000	1.380	285.757	4399.538	-13.851	-50.413	-13.851	52.281	254.636	0.982
4500.000	0.825	271.225	4499.519	-13.509	-52.292	-13.509	54.008	255.515	0.617
4600.000	0.502	338.038	4599.514	-13.087	-53.176	-13.087	54.762	256.174	0.779
4700.000	0.358	33.580	4699.511	-12.420	-53.167	-12.420	54.598	256.851	0.421
4800.000	0.395	35.967	4799.509	-11.881	-52.791	-11.881	54.111	257.317	0.040
4900.000	0.040	284.505	4899.508	-11.593	-52.622	-11.593	53.884	257.576	0.412
5000.000	0.368	232.999	4999.508	-11.777	-52.912	-11.777	54.207	257.451	0.345
5100.000	0.468	214.032	5099.505	-12.309	-53.397	-12.309	54.797	257.019	0.169
5200.000	0.301	198.163	5199.503	-12.897	-53.707	-12.897	55.234	256.497	0.196
5300.000	0.575	213.896	5299.500	-13.563	-54.069	-13.563	55.744	255.919	0.297
5400.000	0.628	234.319	5399.494	-14.299	-54.794	-14.299	56.629	255.374	0.220
5500.000	0.517	294.723	5499.490	-14.430	-55.649	-14.430	57.490	255.463	0.584
5600.000	0.870	11.731	5599.485	-13.498	-55.904	-13.498	57.511	256.425	0.906
5700.000	0.597	83.629	5699.478	-12.698	-55.232	-12.698	56.673	257.053	0.889
5800.000	0.494	109.340	5799.474	-12.783	-54.308	-12.783	55.792	256.755	0.263
5900.000	0.418	120.927	5899.471	-13.113	-53.588	-13.113	55.169	256.250	0.120

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
6000.000	0.603	208.818	5999.468	-13.761	-53.529	-13.761	55.269	255.583	0.720
6100.000	0.725	156.414	6099.462	-14.801	-53.530	-14.801	55.538	254.544	0.596
6200.000	0.792	164.555	6199.453	-16.047	-53.092	-16.047	55.464	253.183	0.127
6300.000	0.780	206.683	6299.445	-17.321	-53.214	-17.321	55.962	251.970	0.565
6400.000	0.977	206.522	6399.433	-18.692	-53.900	-18.692	57.049	250.874	0.197
6500.000	0.763	181.969	6499.421	-20.120	-54.303	-20.120	57.911	249.670	0.425
6600.000	1.231	131.340	6599.408	-21.495	-53.520	-21.495	57.675	248.118	0.952
6700.000	0.760	139.594	6699.392	-22.710	-52.283	-22.710	57.002	246.522	0.492
6800.000	0.556	226.231	6799.388	-23.550	-52.204	-23.550	57.270	245.719	0.915
6900.000	0.730	260.973	6899.382	-23.986	-53.183	-23.986	58.342	245.724	0.418
7000.000	0.517	296.793	6999.376	-23.883	-54.215	-23.883	59.242	246.226	0.434
7100.000	0.049	308.452	7099.375	-23.652	-54.652	-23.652	59.550	246.598	0.469
7200.000	0.557	208.344	7199.373	-24.053	-54.916	-24.053	59.953	246.347	0.567