



Company: Noble Energy

Rig: Production / CoreTech

API # 05-123-24971

Date: 9/26/2013

Surveyor: CJ Hines

VS: 0.000

Lat : 40.34571

Long: -104.6173

Well: Weidenkeller 1-25

Location: Weld County, Colorado

North Reference: GRID

Convergence: GRID North is 0.57 Degrees East c

Declination: 8.47

Depth Reference: Ground Level

Elevation: 4733

Total Depth as Drilled: 7273

Lat & Long obtained by handheld GPS at wellhead

MS Gyro Survey Calculatins

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	0.000
100.000	0.173	248.510	-0.055	-0.141	100.000	0.173	-0.055	0.151	248.510
200.000	0.248	182.613	-0.327	-0.291	199.999	0.238	-0.327	0.438	221.700
300.000	0.601	191.054	-1.058	-0.402	299.996	0.358	-1.058	1.132	200.797
400.000	1.020	201.660	-2.400	-0.831	399.986	0.443	-2.400	2.540	199.096
500.000	1.384	199.332	-4.367	-1.559	499.964	0.367	-4.367	4.637	199.650
600.000	1.506	193.201	-6.786	-2.259	599.932	0.197	-6.786	7.152	198.414
700.000	1.305	189.202	-9.189	-2.741	699.902	0.223	-9.189	9.589	196.611
800.000	1.463	185.929	-11.584	-3.055	799.873	0.177	-11.584	11.980	194.776
900.000	1.633	197.591	-14.212	-3.618	899.837	0.357	-14.212	14.665	194.282
1000.000	1.415	186.041	-16.799	-4.179	999.801	0.376	-16.799	17.311	193.969
1100.000	1.726	196.369	-19.472	-4.733	1099.764	0.419	-19.472	20.039	193.662
1200.000	1.566	193.330	-22.247	-5.473	1199.723	0.182	-22.247	22.911	193.820
1300.000	1.368	190.074	-24.752	-5.997	1299.690	0.215	-24.752	25.468	193.618
1400.000	1.227	189.422	-26.984	-6.381	1399.664	0.142	-26.984	27.728	193.304
1500.000	1.198	191.727	-29.063	-6.768	1499.642	0.057	-29.063	29.841	193.110
1600.000	1.129	191.997	-31.050	-7.186	1599.621	0.069	-31.050	31.871	193.030
1700.000	1.036	196.087	-32.882	-7.641	1699.603	0.121	-32.882	33.759	193.082
1800.000	1.113	194.809	-34.690	-8.139	1799.586	0.081	-34.690	35.632	193.205
1900.000	1.293	196.525	-36.710	-8.709	1899.564	0.183	-36.710	37.729	193.345
2000.000	1.609	197.198	-39.132	-9.444	1999.532	0.317	-39.132	40.256	193.569
2100.000	1.744	191.111	-41.967	-10.153	2099.489	0.223	-41.967	43.177	193.600
2200.000	1.715	201.553	-44.851	-10.996	2199.443	0.316	-44.851	46.179	193.775
2300.000	1.350	190.171	-47.402	-11.753	2299.408	0.473	-47.402	48.837	193.925
2400.000	1.163	201.393	-49.506	-12.331	2399.384	0.309	-49.506	51.019	193.987
2500.000	1.293	195.291	-51.539	-12.999	2499.361	0.184	-51.539	53.153	194.156
2600.000	1.326	216.817	-53.554	-13.990	2599.335	0.490	-53.554	55.351	194.640
2700.000	1.511	202.887	-55.694	-15.196	2699.305	0.390	-55.694	57.730	195.261
2800.000	1.677	213.821	-58.124	-16.523	2799.267	0.346	-58.124	60.427	195.869
2900.000	1.837	212.839	-60.686	-18.206	2899.220	0.163	-60.686	63.359	196.700
3000.000	2.026	201.290	-63.680	-19.717	2999.163	0.432	-63.680	66.663	197.204
3100.000	2.209	198.379	-67.157	-20.967	3099.095	0.212	-67.157	70.354	197.339
3200.000	2.103	209.940	-70.576	-22.491	3199.024	0.447	-70.576	74.073	197.676
3300.000	1.656	219.436	-73.283	-24.325	3298.971	0.544	-73.283	77.214	198.362
3400.000	1.231	212.631	-75.303	-25.822	3398.939	0.458	-75.303	79.607	198.927
3500.000	1.223	212.516	-77.107	-26.974	3498.916	0.008	-77.107	81.689	199.281

3600.000	1.173	202.771	-78.951	-27.944	3598.894	0.209	-78.951	83.750	199.491
3700.000	1.359	196.901	-81.030	-28.685	3698.870	0.227	-81.030	85.957	199.494
3800.000	1.474	193.967	-83.412	-29.340	3798.839	0.135	-83.412	88.422	199.379
3900.000	1.806	187.179	-86.223	-29.847	3898.798	0.384	-86.223	91.243	199.094
4000.000	1.934	186.929	-89.462	-30.248	3998.745	0.129	-89.462	94.437	198.681
4100.000	2.392	185.832	-93.213	-30.664	4098.673	0.459	-93.213	98.127	198.209
4200.000	2.831	180.905	-97.758	-30.915	4198.569	0.493	-97.758	102.530	197.549
4300.000	3.507	185.097	-103.274	-31.225	4298.416	0.714	-103.274	107.891	196.823
4400.000	3.418	190.409	-109.252	-32.036	4398.234	0.333	-109.252	113.852	196.342
4500.000	3.853	178.289	-115.544	-32.474	4498.034	0.881	-115.544	120.020	195.698
4600.000	3.346	175.459	-121.811	-32.143	4597.836	0.538	-121.811	125.981	194.782
4700.000	3.175	179.511	-127.489	-31.888	4697.674	0.287	-127.489	131.417	194.043
4800.000	2.803	167.813	-132.649	-31.348	4797.539	0.712	-132.649	136.302	193.296
4900.000	2.935	165.245	-137.514	-30.180	4897.414	0.184	-137.514	140.787	192.378
5000.000	2.501	166.183	-142.109	-29.007	4997.301	0.436	-142.109	145.039	191.537
5100.000	2.335	164.119	-146.186	-27.928	5097.212	0.187	-146.186	148.830	190.816
5200.000	1.891	165.644	-149.744	-26.962	5197.144	0.448	-149.744	152.152	190.207
5300.000	1.236	176.214	-152.419	-26.481	5297.106	0.713	-152.419	154.702	189.856
5400.000	1.218	176.591	-154.556	-26.347	5397.083	0.020	-154.556	156.786	189.674
5500.000	1.220	168.770	-156.661	-26.077	5497.061	0.166	-156.661	158.816	189.450
5600.000	1.244	168.865	-158.770	-25.660	5597.037	0.024	-158.770	160.830	189.180
5700.000	0.766	146.299	-160.391	-25.079	5697.022	0.612	-160.391	162.340	188.887
5800.000	0.359	95.931	-160.979	-24.397	5797.018	0.604	-160.979	162.818	188.618
5900.000	0.432	63.342	-160.843	-23.749	5897.015	0.233	-160.843	162.586	188.399
6000.000	0.411	39.459	-160.397	-23.184	5997.013	0.176	-160.397	162.063	188.225
6100.000	0.378	25.128	-159.821	-22.816	6097.010	0.104	-159.821	161.442	188.125
6200.000	0.384	6.905	-159.190	-22.635	6197.008	0.121	-159.190	160.791	188.093
6300.000	0.792	357.847	-158.166	-22.621	6297.003	0.417	-158.166	159.775	188.139
6400.000	1.086	343.149	-156.568	-22.922	6396.989	0.377	-156.568	158.237	188.329
6500.000	1.394	332.855	-154.579	-23.751	6496.966	0.379	-154.579	156.393	188.735
6600.000	1.581	319.040	-152.454	-25.211	6596.933	0.403	-152.454	154.525	189.390
6700.000	1.003	333.872	-150.627	-26.501	6696.907	0.663	-150.627	152.940	189.978
6800.000	0.696	354.522	-149.236	-26.944	6796.896	0.429	-149.236	151.649	190.234
6850.000	0.679	6.876	-148.640	-26.938	6846.892	0.298	-148.640	151.061	190.272

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