



Company: Noble Energy
Rig: Production/ V.E.S
API # 05-123-14026
Date: 4/30/2013
Surveyor: Jay Hinman
VS: 0.000
Lat : 40.42975
Long: -104.52928

Well: Clemons 42-3
Location: Weld County, Colorado
North Reference: GRID
Convergence: Grid North is 0.63 Deg
Declination: 8.49
Depth Reference: Ground Level
Elevation: 4632'
Total Depth as Drilled: 6947'

Lat & Long obtained by handheld GPS at wellhead

HA Gyro Survey Calculations

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD
0.000	0.000	0.000	0.000	0.000	0.000	****	0.000	0.000
100.000	0.312	67.751	0.103	0.252	100.000	0.312	0.103	0.272
200.000	0.173	73.586	0.249	0.648	199.999	0.141	0.249	0.695
300.000	0.207	359.093	0.472	0.790	299.998	0.231	0.472	0.920
400.000	0.376	71.299	0.757	1.098	399.997	0.370	0.757	1.334
500.000	0.047	129.744	0.836	1.441	499.996	0.354	0.836	1.666
600.000	0.399	45.562	1.054	1.721	599.996	0.397	1.054	2.018
700.000	0.207	142.074	1.155	2.081	699.995	0.470	1.155	2.380
800.000	0.271	300.108	1.131	1.988	799.994	0.470	1.131	2.287
900.000	0.271	42.175	1.425	1.942	899.994	0.421	1.425	2.408
1000.000	0.251	36.797	1.775	2.231	999.993	0.032	1.775	2.851
1100.000	0.046	188.399	1.910	2.356	1099.992	0.292	1.910	3.033
1200.000	0.108	285.734	1.896	2.260	1199.992	0.123	1.896	2.950
1300.000	0.275	303.252	2.053	1.968	1299.992	0.175	2.053	2.844
1400.000	0.315	328.538	2.419	1.624	1399.990	0.135	2.419	2.914
1500.000	0.153	69.364	2.701	1.606	1499.990	0.375	2.701	3.142
1600.000	0.439	218.252	2.447	1.494	1599.989	0.576	2.447	2.867
1700.000	0.388	163.022	1.823	1.356	1699.987	0.386	1.823	2.272
1800.000	0.593	186.732	0.985	1.394	1799.983	0.285	0.985	1.707
1900.000	0.414	159.503	0.132	1.459	1899.979	0.294	0.132	1.465
2000.000	0.252	160.567	-0.413	1.659	1999.978	0.162	-0.413	1.710
2100.000	0.703	159.128	-1.193	1.951	2099.974	0.451	-1.193	2.287
2200.000	0.456	180.293	-2.165	2.167	2199.969	0.323	-2.165	3.063
2300.000	0.856	171.600	-3.301	2.274	2299.962	0.411	-3.301	4.009
2400.000	0.754	167.682	-4.683	2.524	2399.952	0.116	-4.683	5.320
2500.000	1.226	154.559	-6.292	3.124	2499.937	0.521	-6.292	7.025
2600.000	1.267	167.597	-8.338	3.821	2599.914	0.286	-8.338	9.172
2700.000	1.325	171.116	-10.560	4.237	2699.888	0.099	-10.560	11.378
2800.000	1.584	180.070	-13.085	4.414	2799.856	0.343	-13.085	13.809
2900.000	1.914	187.711	-16.122	4.188	2899.809	0.404	-16.122	16.657
3000.000	2.042	188.334	-19.540	3.706	2999.750	0.130	-19.540	19.888
3100.000	2.229	192.121	-23.204	3.039	3099.680	0.234	-23.204	23.402
3200.000	2.339	194.729	-27.079	2.112	3199.601	0.151	-27.079	27.161
3300.000	2.758	200.836	-31.300	0.737	3299.502	0.499	-31.300	31.309
3400.000	3.059	213.953	-35.763	-1.609	3399.374	0.729	-35.763	35.799

3500.000	3.024	216.102	-40.107	-4.653	3499.233	0.119	-40.107	40.376
3600.000	2.372	219.101	-43.844	-7.513	3599.122	0.667	-43.844	44.483
3700.000	2.157	227.043	-46.733	-10.195	3699.044	0.380	-46.733	47.832
3800.000	2.458	226.912	-49.480	-13.139	3798.963	0.301	-49.480	51.195
3900.000	2.361	213.505	-52.663	-15.842	3898.875	0.571	-52.663	54.994
4000.000	2.676	208.121	-56.440	-18.080	3998.778	0.394	-56.440	59.265
4100.000	2.835	214.644	-60.533	-20.586	4098.663	0.351	-60.533	63.938
4200.000	2.764	225.893	-64.246	-23.723	4198.544	0.553	-64.246	68.486
4300.000	2.651	206.783	-67.989	-26.497	4298.435	0.906	-67.989	72.970
4400.000	2.865	207.963	-72.261	-28.711	4398.319	0.221	-72.261	77.756
4500.000	2.736	211.854	-76.495	-31.142	4498.200	0.229	-76.495	82.592
4600.000	3.067	222.881	-80.483	-34.222	4598.072	0.647	-80.483	87.456
4700.000	2.828	221.645	-84.286	-37.681	4697.940	0.247	-84.286	92.326
4800.000	1.906	219.773	-87.408	-40.385	4797.853	0.925	-87.408	96.287
4900.000	1.409	227.859	-89.511	-42.360	4897.811	0.548	-89.511	99.029
5000.000	1.319	211.617	-91.316	-43.875	4997.783	0.396	-91.316	101.310
5100.000	0.975	226.356	-92.883	-45.094	5097.763	0.451	-92.883	103.251
5200.000	0.566	201.127	-93.931	-45.887	5197.754	0.522	-93.931	104.541
5300.000	0.387	204.055	-94.700	-46.203	5297.751	0.181	-94.700	105.370
5400.000	0.199	176.517	-95.182	-46.330	5397.750	0.229	-95.182	105.858
5500.000	0.432	339.034	-95.003	-46.454	5497.749	0.624	-95.003	105.753
5600.000	0.511	22.270	-94.239	-46.420	5597.746	0.355	-94.239	105.051
5700.000	0.174	279.934	-93.800	-46.401	5697.744	0.574	-93.800	104.649
5800.000	0.260	68.874	-93.692	-46.339	5797.744	0.419	-93.692	104.525
5900.000	0.147	25.809	-93.494	-46.071	5897.744	0.183	-93.494	104.229
6000.000	0.459	228.039	-93.646	-46.313	5997.743	0.598	-93.646	104.473
6100.000	0.456	214.249	-94.243	-46.834	6097.739	0.110	-94.243	105.239
6200.000	0.437	222.779	-94.852	-47.318	6197.736	0.069	-94.852	105.999
6300.000	0.578	224.730	-95.490	-47.931	6297.733	0.141	-95.490	106.845
6400.000	0.652	236.089	-96.166	-48.758	6397.727	0.142	-96.166	107.820
6500.000	0.595	210.915	-96.928	-49.497	6497.721	0.277	-96.928	108.835
6600.000	0.931	225.133	-97.948	-50.340	6597.712	0.383	-97.948	110.126
6700.000	1.393	197.724	-99.679	-51.286	6697.692	0.711	-99.679	112.099
6790.000	1.089	192.587	-101.556	-51.805	6787.671	0.360	-101.556	114.006

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rees East of True North

Cbrg

0.000
67.751
69.015
59.162
55.409
59.863
58.513
60.962
60.352
53.722
51.492
50.966
50.003
43.789
33.874
30.739
31.408
36.641
54.751
84.816
103.979
121.458
134.967
145.439
151.680
153.598
155.381
158.139
161.360
165.438
169.262
172.539
175.540
178.650
182.576

186.618
189.723
192.307
194.871
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