



Company: Noble Energy
Rig: Production/Coretech
API # 05-123-35654
Date: 5-13-14
Surveyor: Justin Williams
VS: 0.000
Lat : 40.854
Long: -104.242

Well: Con GQ 7-1
Location: Weld County, Colorado
North Reference: GRID
Convergence: GRID North is 0.81 De
Declination: 8.36
Depth Reference: RKB = Ground Level
Elevation: 5078
Total Depth as Drilled: 10372

Lat & Long obtained by handheld GPS at wellhead

MS 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	0.000
100.000	0.339	350.349	0.291	-0.050	99.999	0.339	0.291	0.296
200.000	0.496	315.032	0.889	-0.405	199.997	0.294	0.889	0.977
300.000	0.481	305.726	1.441	-1.052	299.993	0.081	1.441	1.784
400.000	0.505	329.131	2.064	-1.618	399.990	0.201	2.064	2.623
500.000	0.468	318.746	2.749	-2.114	499.986	0.096	2.749	3.467
600.000	0.405	325.633	3.348	-2.582	599.983	0.081	3.348	4.228
700.000	0.194	301.643	3.728	-2.926	699.982	0.242	3.728	4.739
800.000	0.028	101.085	3.812	-3.046	799.982	0.220	3.812	4.880
900.000	0.307	332.670	4.046	-3.146	899.981	0.325	4.046	5.125
1000.000	0.422	14.294	4.642	-3.178	999.979	0.281	4.642	5.625
1100.000	0.038	109.985	4.987	-3.056	1099.978	0.428	4.987	5.849
1200.000	0.246	32.064	5.158	-2.911	1199.978	0.241	5.158	5.923
1300.000	0.239	343.082	5.539	-2.857	1299.977	0.201	5.539	6.233
1400.000	0.155	359.326	5.874	-2.919	1399.977	0.100	5.874	6.559
1500.000	0.167	358.329	6.155	-2.925	1499.976	0.012	6.155	6.814
1600.000	0.241	63.006	6.395	-2.742	1599.976	0.227	6.395	6.958
1700.000	0.301	51.382	6.655	-2.349	1699.975	0.081	6.655	7.058
1800.000	0.196	72.469	6.871	-1.981	1799.974	0.138	6.871	7.151
1900.000	0.319	94.257	6.901	-1.540	1899.973	0.155	6.901	7.071
2000.000	0.343	80.545	6.930	-0.968	1999.971	0.082	6.930	6.997
2100.000	0.262	80.141	7.018	-0.447	2099.970	0.080	7.018	7.033
2200.000	0.380	86.510	7.078	0.110	2199.968	0.123	7.078	7.079
2236.000	0.410	86.535	7.093	0.358	2235.967	0.084	7.093	7.102
2300.000	0.236	136.122	7.012	0.678	2299.966	0.491	7.012	7.044
2400.000	0.244	296.652	6.959	0.631	2399.966	0.472	6.959	6.987
2500.000	0.246	203.458	6.857	0.355	2499.965	0.356	6.857	6.866
2600.000	0.251	48.078	6.806	0.432	2599.965	0.485	6.806	6.820
2700.000	0.248	346.544	7.163	0.545	2699.964	0.255	7.163	7.184
2800.000	0.250	343.152	7.582	0.431	2799.963	0.015	7.582	7.595
2900.000	0.224	127.744	7.672	0.523	2899.963	0.452	7.672	7.689
3000.000	0.279	309.036	7.705	0.488	2999.963	0.503	7.705	7.720
3100.000	0.117	131.345	7.791	0.376	3099.962	0.396	7.791	7.800
3200.000	0.393	157.607	7.406	0.584	3199.961	0.292	7.406	7.429
3300.000	0.184	79.577	7.118	0.872	3299.960	0.397	7.118	7.172
3400.000	0.290	178.434	6.895	1.037	3399.960	0.366	6.895	6.972

3500.000	0.338	138.334	6.422	1.240	3499.958	0.220	6.422	6.540
3600.000	0.371	47.338	6.420	1.674	3599.957	0.506	6.420	6.635
3700.000	0.181	113.485	6.576	2.057	3699.956	0.340	6.576	6.890
3800.000	0.251	330.914	6.704	2.096	3799.956	0.410	6.704	7.024
3900.000	0.399	63.265	7.052	2.300	3899.955	0.480	7.052	7.418
4000.000	0.392	121.599	7.029	2.902	3999.953	0.386	7.029	7.605
4100.000	0.332	122.837	6.693	3.437	4099.951	0.061	6.693	7.524
4200.000	0.191	13.613	6.698	3.720	4199.950	0.434	6.698	7.662

0

degrees East of True North

Cbrg

0.000
350.349
335.511
323.868
321.896
322.442
322.353
321.875
321.374
322.137
325.603
328.505
330.564
332.714
333.571
334.578
336.794
340.560
343.919
347.419
352.051
356.356
0.891
2.889
5.523
5.178
2.965
3.635
4.349
3.254
3.897
3.627
2.765
4.506
6.984
8.550

10.928
14.614
17.369
17.357
18.062
22.435
27.185
29.050