



Company: Noble Energy
 Rig: Production / V.E.S.
 API # 05-123-11109
 Date: 10/14/2013
 Surveyor: CJ Hines
 VS: 0.000
 Lat : 40.328
 Long: -104.794

Well: Monfort Gilcrest K 8-8
 Location: Weld County, Colorado
 North Reference: GRID
 Convergence: Grid north is 0.46 Deg East of True
 Declination: 8.567
 Depth Reference: Ground Level
 Elevation: 4695
 Total Depth as Drilled: 7439

Lat & Long obtained by handheld GPS at wellhead
 MS 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	0.000
100.000	0.095	282.429	0.018	-0.081	100.000	0.095	0.018	0.083	282.429
200.000	0.199	297.763	0.117	-0.316	200.000	0.110	0.117	0.337	290.254
300.000	0.192	5.976	0.364	-0.452	299.999	0.219	0.364	0.580	308.829
400.000	0.281	258.465	0.481	-0.675	399.999	0.385	0.481	0.828	305.473
500.000	0.149	275.286	0.444	-1.045	499.998	0.145	0.444	1.135	293.010
600.000	0.202	231.186	0.345	-1.312	599.998	0.141	0.345	1.356	284.746
700.000	0.158	152.389	0.112	-1.385	699.997	0.231	0.112	1.389	274.639
800.000	0.240	214.542	-0.183	-1.440	799.997	0.217	-0.183	1.451	262.774
900.000	0.290	285.062	-0.289	-1.802	899.996	0.308	-0.289	1.825	260.880
1000.000	0.132	181.587	-0.339	-2.050	999.995	0.345	-0.339	2.077	260.614
1100.000	0.117	318.801	-0.377	-2.120	1099.995	0.232	-0.377	2.153	259.914
1200.000	0.226	165.308	-0.491	-2.137	1199.995	0.335	-0.491	2.193	257.053
1300.000	0.140	230.599	-0.760	-2.181	1299.995	0.210	-0.760	2.310	250.797
1400.000	0.173	294.708	-0.774	-2.412	1399.994	0.168	-0.774	2.533	252.210
1500.000	0.295	328.127	-0.492	-2.685	1499.993	0.178	-0.492	2.730	259.607
1600.000	0.165	312.703	-0.176	-2.927	1599.993	0.143	-0.176	2.932	266.555
1700.000	0.361	343.669	0.224	-3.121	1699.992	0.235	0.224	3.129	274.098
1800.000	0.614	337.241	1.020	-3.417	1799.988	0.259	1.020	3.566	286.618
1900.000	0.339	309.010	1.700	-3.854	1899.984	0.354	1.700	4.213	293.804
2000.000	0.452	330.554	2.230	-4.278	1999.982	0.185	2.230	4.825	297.533
2100.000	0.761	326.412	3.127	-4.840	2099.976	0.312	3.127	5.762	302.869
2200.000	0.658	342.077	4.227	-5.384	2199.969	0.219	4.227	6.845	308.135
2300.000	0.712	342.467	5.365	-5.748	2299.962	0.054	5.365	7.863	313.028
2400.000	0.711	337.475	6.531	-6.173	2399.954	0.062	6.531	8.986	316.614
2500.000	0.531	334.097	7.521	-6.613	2499.948	0.184	7.521	10.015	318.676
2600.000	0.472	318.319	8.245	-7.089	2599.944	0.150	8.245	10.874	319.311
2700.000	0.610	316.578	8.940	-7.729	2699.940	0.139	8.940	11.818	319.154
2800.000	0.622	317.181	9.725	-8.464	2799.934	0.014	9.725	12.892	318.964
2900.000	0.666	279.429	10.218	-9.407	2899.928	0.419	10.218	13.889	317.368
3000.000	0.649	291.457	10.521	-10.508	2999.922	0.139	10.521	14.870	315.035
3100.000	0.770	293.003	10.991	-11.654	3099.914	0.122	10.991	16.019	313.323
3200.000	0.603	315.499	11.629	-12.641	3199.907	0.313	11.629	17.176	312.612
3300.000	0.393	313.139	12.239	-13.260	3299.903	0.212	12.239	18.045	312.706
3400.000	0.836	25.880	13.129	-13.192	3399.898	0.811	13.129	18.612	314.864
3500.000	0.555	25.277	14.223	-12.667	3499.891	0.281	14.223	19.045	318.312

3600.000	0.702	38.383	15.141	-12.079	3599.885	0.205	15.141	19.369	321.417
3700.000	0.804	43.282	16.132	-11.218	3699.876	0.120	16.132	19.649	325.185
3800.000	0.789	30.516	17.235	-10.388	3799.867	0.178	17.235	20.124	328.923
3900.000	0.668	30.276	18.332	-9.744	3899.858	0.121	18.332	20.761	332.009
4000.000	0.571	30.311	19.266	-9.198	3999.853	0.097	19.266	21.349	334.479
4100.000	0.439	65.542	19.855	-8.598	4099.849	0.331	19.855	21.637	336.585
4200.000	0.647	50.984	20.369	-7.811	4199.844	0.248	20.369	21.816	339.021
4300.000	0.536	65.357	20.920	-6.947	4299.839	0.185	20.920	22.043	341.630
4400.000	0.698	62.093	21.400	-5.984	4399.833	0.166	21.400	22.221	344.378
4500.000	0.521	59.387	21.916	-5.054	4499.828	0.180	21.916	22.492	347.013
4600.000	1.015	35.469	22.869	-4.149	4599.819	0.579	22.869	23.243	349.716
4700.000	1.280	11.742	24.684	-3.408	4699.799	0.538	24.684	24.918	352.139
4800.000	1.165	20.173	26.732	-2.831	4799.776	0.213	26.732	26.881	353.956
4900.000	1.346	22.897	28.768	-2.023	4899.752	0.191	28.768	28.839	355.978
5000.000	0.628	354.965	30.396	-1.614	4999.737	0.844	30.396	30.439	356.961
5100.000	0.553	354.370	31.423	-1.709	5099.732	0.075	31.423	31.469	356.886
5200.000	0.432	353.527	32.278	-1.799	5199.728	0.121	32.278	32.328	356.809
5300.000	0.558	348.882	33.131	-1.936	5299.724	0.132	33.131	33.187	356.656
5400.000	0.515	340.719	34.032	-2.178	5399.720	0.088	34.032	34.102	356.338
5500.000	0.566	286.861	34.600	-2.799	5499.716	0.492	34.600	34.713	355.375
5600.000	0.767	333.399	35.342	-3.572	5599.710	0.558	35.342	35.522	354.229
5700.000	0.560	343.134	36.408	-4.014	5699.703	0.236	36.408	36.629	353.709
5800.000	0.691	326.407	37.378	-4.489	5799.697	0.224	37.378	37.646	353.152
5900.000	0.442	339.301	38.241	-4.959	5899.693	0.279	38.241	38.561	352.611
6000.000	0.490	337.029	38.995	-5.262	5999.689	0.052	38.995	39.349	352.315
6100.000	0.233	331.462	39.567	-5.526	6099.687	0.259	39.567	39.952	352.049
6200.000	0.517	328.879	40.133	-5.856	6199.685	0.285	40.133	40.558	351.698
6300.000	0.474	342.919	40.915	-6.211	6299.681	0.128	40.915	41.383	351.368
6400.000	0.465	327.056	41.651	-6.553	6399.678	0.130	41.651	42.163	351.058
6500.000	0.163	23.645	42.121	-6.717	6499.676	0.399	42.121	42.653	350.939
6600.000	0.120	343.817	42.352	-6.689	6599.676	0.104	42.352	42.877	351.025
6700.000	0.097	9.935	42.536	-6.704	6699.676	0.054	42.536	43.061	351.044
6800.000	0.052	352.497	42.665	-6.695	6799.676	0.050	42.665	43.187	351.082
6900.000	0.136	287.974	42.747	-6.814	6899.676	0.123	42.747	43.286	350.943
7000.000	0.262	247.856	42.697	-7.140	6999.675	0.181	42.697	43.290	350.507
7100.000	0.204	112.678	42.542	-7.187	7099.675	0.432	42.542	43.145	350.411

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