



Company: Noble Energy
Rig: Production/Coretech
API # 05-123-36262
Date: 7/10/2014
Surveyor: Kevin McDowell
VS: 0.000
Lat : 40.591
Long: -104.529

Well: Jeanie #AB 10-01R
Location: Weld County Colorado
North Reference: GRID
Convergence: GRID North is 0.63 Degrees East o
Declination: 8.34 Degrees
Depth Reference: Ground Level
Elevation: 4823 Feet
Total Depth as Drilled: 9027 Feet

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	0.295	233.935	-0.151	-0.208	100.000	0.295	-0.151	0.257	233.935
200.000	0.441	239.320	-0.499	-0.747	199.997	0.150	-0.499	0.898	236.238
300.000	0.360	242.137	-0.842	-1.355	299.995	0.083	-0.842	1.595	238.141
400.000	0.350	239.339	-1.145	-1.896	399.993	0.020	-1.145	2.214	238.873
500.000	0.395	251.036	-1.412	-2.484	499.991	0.088	-1.412	2.858	240.379
600.000	0.100	315.626	-1.462	-2.872	599.990	0.363	-1.462	3.222	243.021
700.000	0.462	289.398	-1.265	-3.313	699.989	0.375	-1.265	3.547	249.102
800.000	0.382	286.950	-1.034	-4.013	799.986	0.083	-1.034	4.144	255.551
900.000	0.229	257.136	-0.981	-4.527	899.985	0.216	-0.981	4.632	257.768
1000.000	0.197	218.736	-1.160	-4.829	999.984	0.143	-1.160	4.967	256.492
1100.000	0.105	118.685	-1.338	-4.857	1099.984	0.239	-1.338	5.038	254.594
1200.000	0.176	309.974	-1.284	-4.894	1199.984	0.279	-1.284	5.060	255.303
1300.000	0.175	274.577	-1.173	-5.164	1299.983	0.107	-1.173	5.295	257.203
1400.000	0.309	357.361	-0.891	-5.328	1399.983	0.336	-0.891	5.402	260.505
1500.000	0.121	124.707	-0.682	-5.254	1499.982	0.395	-0.682	5.298	262.604
1600.000	0.238	58.042	-0.632	-4.991	1599.982	0.220	-0.632	5.030	262.781
1700.000	0.176	67.718	-0.464	-4.672	1699.981	0.071	-0.464	4.695	264.331
1800.000	0.189	32.794	-0.267	-4.440	1799.981	0.110	-0.267	4.448	266.560
1900.000	0.144	93.869	-0.137	-4.225	1899.980	0.174	-0.137	4.228	268.145
2000.000	0.145	28.387	-0.034	-4.039	1999.980	0.156	-0.034	4.040	269.515
2100.000	0.184	246.534	0.013	-4.127	2099.980	0.311	0.013	4.127	270.180
2200.000	0.203	208.566	-0.207	-4.359	2199.979	0.127	-0.207	4.364	267.283
2300.000	0.263	306.637	-0.226	-4.628	2299.979	0.354	-0.226	4.634	267.209
2400.000	0.197	13.773	0.078	-4.772	2399.978	0.260	0.078	4.772	270.939
2500.000	0.183	11.614	0.402	-4.698	2499.977	0.015	0.402	4.716	274.884
2700.000	0.215	329.799	1.038	-4.823	2699.976	0.072	1.038	4.933	282.151
2800.000	0.152	264.843	1.188	-5.049	2799.976	0.204	1.188	5.187	283.243
2900.000	0.203	53.659	1.281	-5.039	2899.976	0.342	1.281	5.199	284.268
3000.000	0.131	348.192	1.498	-4.919	2999.975	0.190	1.498	5.142	286.939
3100.000	0.189	243.139	1.536	-5.090	3099.975	0.256	1.536	5.317	286.790
3200.000	0.132	198.357	1.352	-5.273	3199.975	0.133	1.352	5.444	284.382
3300.000	0.191	318.949	1.369	-5.419	3299.975	0.282	1.369	5.589	284.175
3400.000	0.184	209.816	1.355	-5.608	3399.974	0.305	1.355	5.770	283.586
3500.000	0.168	292.960	1.273	-5.822	3499.974	0.233	1.273	5.960	282.336
3600.000	0.137	279.490	1.350	-6.075	3599.974	0.047	1.350	6.223	282.530

3700.000	0.200	130.184	1.257	-6.060	3699.973	0.325	1.257	6.189	281.722
3800.000	0.174	230.276	1.048	-6.044	3799.973	0.287	1.048	6.134	279.834
3900.000	0.144	284.082	0.981	-6.283	3899.973	0.147	0.981	6.359	278.874
4000.000	0.134	119.528	0.954	-6.303	3999.973	0.275	0.954	6.375	278.606
4100.000	0.183	185.251	0.738	-6.216	4099.972	0.177	0.738	6.260	276.767
4200.000	0.187	203.053	0.429	-6.295	4199.972	0.057	0.429	6.309	273.898
4400.000	0.196	152.059	-0.173	-6.262	4399.971	0.082	-0.173	6.265	268.421
4600.000	0.142	313.667	-0.303	-6.282	4599.971	0.167	-0.303	6.289	267.241
4700.000	0.165	256.795	-0.250	-6.512	4699.970	0.148	-0.250	6.517	267.802
4800.000	0.226	163.332	-0.472	-6.595	4799.970	0.288	-0.472	6.612	265.908
5100.000	0.193	196.495	-1.523	-6.569	5099.968	0.041	-1.523	6.743	256.945
5200.000	0.125	271.017	-1.683	-6.726	5199.968	0.200	-1.683	6.933	255.955
5300.000	0.206	159.045	-1.848	-6.770	5299.967	0.278	-1.848	7.018	254.730
5600.000	0.094	320.061	-2.163	-6.736	5599.967	0.099	-2.163	7.075	252.201
5900.000	0.872	187.622	-4.237	-7.197	5899.956	0.313	-4.237	8.352	239.517
6000.000	0.211	155.678	-5.159	-7.223	5999.951	0.703	-5.159	8.876	234.465
6100.000	0.216	240.919	-5.418	-7.312	6099.951	0.289	-5.418	9.100	233.464
6200.000	0.211	268.003	-5.516	-7.661	6199.950	0.100	-5.516	9.440	234.246
6300.000	0.221	165.394	-5.709	-7.797	6299.950	0.337	-5.709	9.663	233.788
6400.000	0.198	57.613	-5.802	-7.602	6399.949	0.339	-5.802	9.563	232.646
6500.000	0.180	301.898	-5.627	-7.589	6499.949	0.321	-5.627	9.447	233.446
6700.000	0.174	45.967	-5.250	-7.638	6699.948	0.140	-5.250	9.268	235.499
6900.000	0.209	1.592	-4.674	-7.409	6899.947	0.074	-4.674	8.760	237.756
7100.000	0.170	273.410	-4.291	-7.696	7099.947	0.133	-4.291	8.811	240.854
7200.000	0.153	249.823	-4.328	-7.969	7199.946	0.068	-4.328	9.068	241.490
7300.000	0.136	65.072	-4.324	-7.986	7299.946	0.288	-4.324	9.082	241.565
7400.000	0.176	307.036	-4.182	-8.002	7399.946	0.268	-4.182	9.028	242.407
7500.000	0.202	236.255	-4.187	-8.271	7499.945	0.220	-4.187	9.271	243.149
7600.000	0.155	336.174	-4.161	-8.473	7599.945	0.275	-4.161	9.439	243.843

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