



Company: Noble Energy

Rig: Production/Coretech

API # 05-123-12159

Date: 3/13/2014

Surveyor: Randy Holcomb

VS: 0.000

Lat : 40.156

Long: -104.955

Well: Johnson 1

Location: Weld County, Colorado

North Reference: GRID

Convergence: Grid north is 0.350 East of True North

Declination: 8.58

Depth Reference: Ground Level

Elevation: 4835 Feet

Total Depth as Drilled: 7365 Feet

**Lat & Long obtained by handheld GPS at wellhead
MS Gyro Survey Calculations**

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD	Cbgr
0.000	0.000	0.000	0.000	0.000	0.000	****	0.000	0.000	0.000
100.000	0.302	30.006	0.228	0.132	100.000	0.302	0.228	0.264	30.006
200.000	0.358	100.027	0.402	0.571	199.998	0.381	0.402	0.699	54.861
300.000	0.291	111.180	0.256	1.116	299.997	0.092	0.256	1.145	77.081
400.000	0.238	140.798	0.003	1.484	399.996	0.145	0.003	1.484	89.876
500.000	0.152	101.017	-0.183	1.745	499.995	0.155	-0.183	1.755	95.989
600.000	0.050	54.476	-0.183	1.911	599.995	0.123	-0.183	1.920	95.469
700.000	0.385	273.351	-0.138	1.611	699.994	0.426	-0.138	1.617	94.890
800.000	0.410	230.743	-0.345	0.998	799.992	0.290	-0.345	1.056	109.063
900.000	0.316	295.322	-0.453	0.471	899.990	0.396	-0.453	0.654	133.907
1000.000	0.239	284.253	-0.284	0.019	999.989	0.094	-0.284	0.285	176.077
1100.000	0.000	238.771	-0.233	-0.183	1099.989	0.239	-0.233	0.296	218.129
1200.000	0.460	184.432	-0.633	-0.214	1199.988	0.460	-0.633	0.668	198.652
1300.000	0.708	264.235	-1.096	-0.859	1299.984	0.773	-1.096	1.392	218.114
1400.000	0.628	216.577	-1.598	-1.801	1399.978	0.545	-1.598	2.407	228.419
1500.000	0.349	176.445	-2.342	-2.108	1499.974	0.425	-2.342	3.151	221.997
1600.000	0.466	128.311	-2.898	-1.770	1599.972	0.349	-2.898	3.396	211.422
1700.000	0.496	98.452	-3.214	-1.023	1699.969	0.250	-3.214	3.373	197.661
1800.000	0.475	268.941	-3.285	-1.009	1799.968	0.967	-3.285	3.436	197.077
1900.000	0.423	208.076	-3.618	-1.597	1899.965	0.457	-3.618	3.955	203.813
2000.000	0.312	212.783	-4.172	-1.918	1999.963	0.115	-4.172	4.592	204.685
2100.000	0.353	156.771	-4.684	-1.944	2099.961	0.314	-4.684	5.072	202.536
2200.000	0.184	281.471	-4.935	-1.980	2199.961	0.482	-4.935	5.318	201.856
2300.000	0.352	224.736	-5.122	-2.353	2299.960	0.294	-5.122	5.636	204.676
2400.000	0.291	188.806	-5.591	-2.608	2399.958	0.207	-5.591	6.169	205.009
2500.000	0.292	181.714	-6.096	-2.655	2499.957	0.036	-6.096	6.649	203.530
2600.000	0.209	171.554	-6.531	-2.635	2599.956	0.094	-6.531	7.043	201.974
2700.000	0.233	144.642	-6.878	-2.491	2699.955	0.105	-6.878	7.315	199.909
2800.000	0.474	174.553	-7.455	-2.334	2799.954	0.296	-7.455	7.812	197.384
2900.000	0.514	129.159	-8.151	-1.947	2899.950	0.383	-8.151	8.380	193.432
3000.000	0.215	159.346	-8.609	-1.532	2999.948	0.346	-8.609	8.745	190.093
3100.000	0.226	130.538	-8.913	-1.317	3099.947	0.110	-8.913	9.009	188.402
3200.000	0.267	214.300	-9.233	-1.298	3199.947	0.331	-9.233	9.324	188.002
3300.000	0.411	254.441	-9.522	-1.775	3299.945	0.269	-9.522	9.686	190.558
3400.000	0.420	202.954	-9.956	-2.263	3399.943	0.361	-9.956	10.210	192.807
3500.000	0.311	247.713	-10.396	-2.657	3499.941	0.296	-10.396	10.730	194.338
3600.000	0.608	235.156	-10.802	-3.344	3599.938	0.312	-10.802	11.308	197.200
3700.000	0.682	192.482	-11.687	-3.908	3699.932	0.474	-11.687	12.323	198.490

3800.000	0.682	192.623	-12.849	-4.167	3799.925	0.002	-12.849	13.507	197.967
3900.000	0.714	214.570	-13.943	-4.650	3899.918	0.268	-13.943	14.698	198.445
4000.000	0.797	251.771	-14.674	-5.664	3999.909	0.488	-14.674	15.729	201.108
4100.000	0.810	254.550	-15.079	-7.006	4099.900	0.041	-15.079	16.628	204.921
4200.000	0.866	264.271	-15.343	-8.440	4199.889	0.153	-15.343	17.511	208.813
4300.000	0.898	323.934	-14.785	-9.653	4299.879	0.878	-14.785	17.657	213.140
4400.000	0.613	354.001	-13.620	-10.170	4399.871	0.479	-13.620	16.998	216.749
4500.000	0.729	20.026	-12.490	-10.008	4499.864	0.323	-12.490	16.005	218.705
4600.000	0.247	53.316	-11.764	-9.617	4599.860	0.540	-11.764	15.195	219.268
4700.000	0.594	355.565	-11.118	-9.485	4699.858	0.507	-11.118	14.614	220.467
4800.000	0.753	39.937	-10.097	-9.103	4799.851	0.530	-10.097	13.595	222.035
4900.000	0.170	55.373	-9.509	-8.559	4899.848	0.591	-9.509	12.794	221.990
5000.000	0.561	67.966	-9.241	-7.983	4999.846	0.396	-9.241	12.212	220.823
5100.000	0.388	0.499	-8.720	-7.527	5099.843	0.546	-8.720	11.519	220.801
5200.000	0.433	341.687	-8.023	-7.643	5199.840	0.141	-8.023	11.080	223.610
5300.000	0.492	335.170	-7.274	-7.942	5299.837	0.079	-7.274	10.770	227.511
5400.000	0.413	328.556	-6.577	-8.310	5399.834	0.095	-6.577	10.598	231.639
5500.000	0.428	308.314	-6.038	-8.791	5499.831	0.149	-6.038	10.665	235.517
5600.000	0.287	331.940	-5.586	-9.202	5599.829	0.201	-5.586	10.765	238.742
5700.000	0.442	302.925	-5.155	-9.644	5699.827	0.236	-5.155	10.935	241.873
5800.000	0.413	328.697	-4.638	-10.154	5799.825	0.193	-4.638	11.163	245.454
5900.000	0.287	325.128	-4.125	-10.485	5899.823	0.128	-4.125	11.267	248.526
6000.000	0.432	281.582	-3.844	-10.997	5999.821	0.299	-3.844	11.649	250.735
6100.000	0.323	73.627	-3.688	-11.096	6099.820	0.733	-3.688	11.693	251.613
6200.000	0.275	250.366	-3.689	-11.051	6199.820	0.597	-3.689	11.651	251.539
6300.000	0.753	220.245	-4.272	-11.702	6299.815	0.534	-4.272	12.457	249.946
6400.000	1.121	250.123	-5.106	-13.046	6399.802	0.600	-5.106	14.010	248.626
6500.000	1.335	292.038	-5.001	-15.046	6499.781	0.901	-5.001	15.856	251.613
6600.000	1.730	304.935	-3.700	-17.363	6599.746	0.522	-3.700	17.753	257.971
6700.000	1.330	348.179	-1.699	-18.839	6699.713	1.187	-1.699	18.915	264.845
6800.000	0.811	327.550	0.034	-19.456	6799.696	0.638	0.034	19.456	270.099
6900.000	1.022	334.921	1.439	-20.214	6899.683	0.241	1.439	20.265	274.071
7000.000	1.356	351.002	3.415	-20.777	6999.661	0.469	3.415	21.056	279.334
7100.000	1.330	354.303	5.738	-21.077	7099.634	0.082	5.738	21.844	285.230