



Company: Noble Energy
Rig: Production / Cable Inc
API # 05-123-17706
Date: 6/19/2014
Surveyor: Norman Cowan
VS: 0.000
Lat : 40.176
Long: -104.662
Well: UPRC 33-16 J 5
Location: Weld County Colorado
North Reference: GRID
Convergence: GRID North is 0.54 Degrees East of True North
Declination: 8.38 Degrees
Depth Reference: RKB = Ground Level
Elevation: 4843 Feet
Total Depth as Drilled: 7315 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	0.290	15.838	0.243	0.069	100.000	0.290	0.243	0.253	15.838
200.000	0.156	353.413	0.623	0.122	199.999	0.157	0.623	0.634	11.132
300.000	0.214	327.432	0.915	0.006	299.998	0.100	0.915	0.915	0.402
400.000	0.363	6.801	1.387	-0.057	399.997	0.239	1.387	1.388	357.666
500.000	0.318	4.432	1.978	0.002	499.995	0.046	1.978	1.978	0.071
600.000	0.153	356.568	2.388	0.016	599.994	0.168	2.388	2.388	0.382
700.000	0.192	315.600	2.640	-0.109	699.994	0.126	2.640	2.643	357.635
800.000	0.433	196.821	2.398	-0.335	799.993	0.551	2.398	2.422	352.041
900.000	0.570	156.523	1.581	-0.246	899.990	0.369	1.581	1.600	351.139
1000.000	0.753	169.368	0.479	0.073	999.983	0.234	0.479	0.485	8.646
1100.000	0.653	235.163	-0.492	-0.274	1099.977	0.768	-0.492	0.563	209.086
1200.000	0.569	243.145	-1.042	-1.185	1199.971	0.119	-1.042	1.578	228.664
1300.000	0.733	232.132	-1.660	-2.133	1299.965	0.206	-1.660	2.703	232.120
1400.000	0.450	237.019	-2.266	-2.968	1399.959	0.288	-2.266	3.734	232.636
1500.000	0.352	155.026	-2.758	-3.167	1499.957	0.531	-2.758	4.200	228.951
1600.000	0.380	164.529	-3.357	-2.949	1599.955	0.067	-3.357	4.468	221.303
1700.000	0.209	152.766	-3.839	-2.777	1699.954	0.181	-3.839	4.738	215.886
1800.000	0.050	258.133	-4.010	-2.737	1799.954	0.227	-4.010	4.855	214.316
1900.000	0.206	343.944	-3.846	-2.829	1899.954	0.208	-3.846	4.775	216.340
2000.000	0.372	317.465	-3.435	-3.098	1999.952	0.209	-3.435	4.626	222.052
2100.000	1.143	13.236	-2.225	-3.089	2099.944	0.983	-2.225	3.807	234.238
2200.000	1.478	355.478	0.031	-2.962	2199.918	0.522	0.031	2.963	270.607
2300.000	1.463	343.047	2.538	-3.436	2299.885	0.319	2.538	4.272	306.447
2400.000	1.462	0.067	5.035	-3.807	2399.853	0.433	5.035	6.312	322.905
2500.000	1.374	323.348	7.272	-4.521	2499.825	0.897	7.272	8.563	328.131
2600.000	1.546	323.648	9.321	-6.037	2599.792	0.173	9.321	11.105	327.071
2700.000	1.571	314.969	11.377	-7.806	2699.755	0.237	11.377	13.797	325.543
2800.000	1.266	319.746	13.188	-9.490	2799.724	0.327	13.188	16.248	324.262
2900.000	1.408	322.088	15.001	-10.959	2899.697	0.153	15.001	18.577	323.850
3000.000	1.376	332.931	17.040	-12.260	2999.668	0.265	17.040	20.992	324.264
3100.000	1.328	330.509	19.118	-13.377	3099.640	0.075	19.118	23.333	325.018
3200.000	0.997	313.413	20.724	-14.579	3199.620	0.476	20.724	25.339	324.873
3300.000	0.960	302.990	21.778	-15.914	3299.605	0.181	21.778	26.973	323.843
3400.000	0.781	280.454	22.358	-17.287	3399.594	0.383	22.358	28.261	322.289
3500.000	1.306	305.822	23.148	-18.882	3499.577	0.688	23.148	29.872	320.797
3600.000	1.157	347.203	24.800	-20.029	3599.556	0.881	24.800	31.878	321.074
3700.000	1.271	15.305	26.854	-19.960	3699.535	0.600	26.854	33.459	323.377
3800.000	1.320	16.662	29.027	-19.337	3799.509	0.058	29.027	34.878	326.329
3900.000	1.467	357.480	31.409	-19.063	3899.480	0.486	31.409	36.742	328.745
4000.000	1.413	355.868	33.917	-19.208	3999.448	0.067	33.917	38.979	330.476
4100.000	1.525	352.991	36.468	-19.460	4099.416	0.135	36.468	41.335	331.915
4200.000	1.289	2.603	38.913	-19.571	4199.385	0.333	38.913	43.557	333.300
4300.000	1.286	15.867	41.115	-19.213	4299.360	0.297	41.115	45.383	334.953
4400.000	1.513	345.513	43.473	-19.237	4399.332	0.765	43.473	47.539	336.131

4500.000	1.425	5.767	45.988	-19.442	4499.300	0.524	45.988	49.929	337.083
4600.000	1.594	8.506	48.600	-19.112	4599.265	0.183	48.600	52.223	338.533
4700.000	1.369	35.954	50.943	-18.204	4699.233	0.736	50.943	54.098	340.336
4800.000	1.922	59.713	52.756	-16.054	4799.192	0.867	52.756	55.145	343.074
4900.000	2.795	50.992	55.137	-12.711	4899.107	0.941	55.137	56.583	347.018
5000.000	2.384	40.290	58.258	-9.472	4999.005	0.633	58.258	59.023	350.765
5100.000	2.333	28.952	61.625	-7.142	5098.921	0.469	61.625	62.038	353.389
5200.000	1.436	33.843	64.447	-5.459	5198.866	0.911	64.447	64.677	355.158
5300.000	1.067	3.282	66.417	-4.708	5298.843	0.749	66.417	66.584	355.946
5400.000	0.857	0.224	68.094	-4.652	5398.829	0.217	68.094	68.253	356.092
5500.000	0.786	20.406	69.485	-4.409	5498.819	0.296	69.485	69.625	356.369
5600.000	0.402	26.060	70.443	-4.016	5598.813	0.388	70.443	70.557	356.737
5700.000	0.534	44.534	71.090	-3.535	5698.810	0.199	71.090	71.178	357.153
5800.000	1.200	350.952	72.456	-3.373	5798.799	0.982	72.456	72.535	357.335
5900.000	1.120	0.080	74.467	-3.536	5898.779	0.201	74.467	74.551	357.281
6000.000	1.824	24.058	76.898	-2.886	5998.746	0.921	76.898	76.952	357.851
6100.000	1.963	35.736	79.741	-1.237	6098.692	0.409	79.741	79.751	359.111
6200.000	2.399	59.316	82.200	1.563	6198.621	0.988	82.200	82.215	1.089
6300.000	1.682	76.170	83.619	4.788	6298.558	0.928	83.619	83.756	3.277
6400.000	1.670	110.504	83.459	7.577	6398.518	0.989	83.459	83.802	5.188
6500.000	1.495	80.689	83.160	10.229	6498.481	0.831	83.160	83.787	7.013
6600.000	1.408	81.738	83.547	12.733	6598.449	0.091	83.547	84.512	8.665
6700.000	1.730	109.529	83.219	15.371	6698.413	0.816	83.219	84.627	10.465
6800.000	1.532	114.287	82.165	18.013	6798.372	0.240	82.165	84.116	12.365
6900.000	1.547	78.798	81.877	20.555	6898.339	0.938	81.877	84.418	14.093
7000.000	1.742	84.331	82.290	23.392	6998.297	0.251	82.290	85.550	15.868
7100.000	2.043	111.963	81.773	26.557	7098.245	0.950	81.773	85.978	17.992