



Company: Noble Energy
Rig: Production/VES
API # 05-123-18262

Date: 2/21/2014
Surveyor: Nick Kula

VS: 0.000

Lat : 40.329

Long: -104.787

Well: UPRC 9-316

Location: Weld County, Colorado

North Reference: GRID

Convergence: GRID North is 0.460 Degrees East

Declination: 8.51

Depth Reference: Ground Level

Elevation: 4695'

Total Depth as Drilled: 7592'

Lat & Long obtained by handheld GPS at wellhead

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	0.213	264.413	-0.018	-0.185	100.000	0.213	-0.018	0.186	264.413
200.000	0.160	290.078	0.012	-0.501	199.999	0.097	0.012	0.501	271.357
300.000	0.182	255.552	0.020	-0.786	299.999	0.104	0.020	0.786	271.478
400.000	0.226	226.003	-0.156	-1.082	399.998	0.113	-0.156	1.093	261.773
500.000	0.147	177.755	-0.422	-1.219	499.998	0.169	-0.422	1.290	250.914
600.000	0.355	64.186	-0.415	-0.935	599.997	0.435	-0.415	1.023	246.063
700.000	0.122	61.983	-0.230	-0.561	699.996	0.233	-0.230	0.607	247.740
800.000	0.328	95.045	-0.205	-0.182	799.995	0.236	-0.205	0.274	221.569
900.000	0.262	68.572	-0.146	0.317	899.994	0.150	-0.146	0.349	114.800
1000.000	0.270	176.265	-0.298	0.545	999.993	0.430	-0.298	0.622	118.682
1100.000	0.262	184.523	-0.762	0.543	1099.992	0.039	-0.762	0.936	144.546
1200.000	0.632	202.670	-1.499	0.312	1199.989	0.391	-1.499	1.531	168.240
1300.000	0.594	184.267	-2.525	0.061	1299.984	0.200	-2.525	2.526	178.616
1400.000	0.833	207.176	-3.689	-0.310	1399.976	0.368	-3.689	3.702	184.799
1500.000	1.062	194.702	-5.232	-0.877	1499.962	0.307	-5.232	5.305	189.516
1600.000	1.118	201.848	-7.034	-1.475	1599.944	0.147	-7.034	7.187	191.845
1700.000	0.979	241.035	-8.354	-2.586	1699.929	0.715	-8.354	8.745	197.201
1800.000	0.690	296.077	-8.503	-3.875	1799.919	0.813	-8.503	9.344	204.499
1900.000	0.613	287.518	-8.077	-4.926	1899.913	0.124	-8.077	9.461	211.380
2000.000	0.767	279.581	-7.804	-6.096	1999.906	0.180	-7.804	9.903	217.996
2100.000	0.676	276.165	-7.630	-7.343	2099.898	0.100	-7.630	10.589	223.902
2200.000	0.667	275.784	-7.508	-8.508	2199.891	0.010	-7.508	11.347	228.574
2300.000	0.622	319.623	-7.035	-9.438	2299.885	0.483	-7.035	11.772	233.299
2400.000	0.865	304.521	-6.194	-10.412	2399.877	0.311	-6.194	12.115	239.253
2500.000	0.583	304.295	-5.479	-11.454	2499.869	0.283	-5.479	12.698	244.435
2600.000	0.629	317.439	-4.789	-12.245	2599.863	0.146	-4.789	13.149	248.640
2700.000	0.910	262.462	-4.489	-13.404	2699.855	0.753	-4.489	14.136	251.484
2800.000	1.700	255.026	-4.977	-15.625	2799.829	0.806	-4.977	16.398	252.333
2900.000	2.102	234.308	-6.430	-18.548	2899.775	0.790	-6.430	19.631	250.880
3000.000	2.172	244.126	-8.327	-21.742	2999.705	0.372	-8.327	23.283	249.043
3100.000	1.705	242.843	-9.833	-24.772	3099.648	0.469	-9.833	26.652	248.349
3200.000	0.756	251.262	-10.724	-26.720	3199.624	0.964	-10.724	28.792	248.131
3300.000	0.260	7.835	-10.711	-27.313	3299.621	0.903	-10.711	29.339	248.587
3400.000	0.592	61.485	-10.240	-26.829	3399.618	0.485	-10.240	28.717	249.109
3500.000	1.381	80.355	-9.792	-25.187	3499.603	0.843	-9.792	27.023	248.756

3600.000	1.204	45.874	-8.858	-23.245	3599.579	0.785	-8.858	24.875	249.140
3700.000	1.374	54.308	-7.427	-21.517	3699.554	0.254	-7.427	22.763	250.957
3800.000	1.043	8.122	-5.827	-20.415	3799.534	0.995	-5.827	21.230	254.070
3900.000	0.856	51.797	-4.464	-19.699	3899.521	0.727	-4.464	20.198	257.232
4000.000	0.999	85.058	-3.927	-18.243	3999.509	0.548	-3.927	18.661	257.853
4100.000	0.896	36.005	-3.219	-16.915	4099.496	0.792	-3.219	17.219	259.225
4200.000	0.916	2.538	-1.788	-16.421	4199.485	0.522	-1.788	16.518	263.784
4300.000	0.924	61.846	-0.609	-15.674	4299.474	0.910	-0.609	15.686	267.774
4400.000	0.700	66.008	0.019	-14.406	4399.464	0.232	0.019	14.406	270.077
4500.000	0.581	6.101	0.771	-13.794	4499.459	0.647	0.771	13.816	273.200
4600.000	0.377	44.910	1.508	-13.508	4599.455	0.372	1.508	13.592	276.372
4700.000	0.431	357.172	2.118	-13.294	4699.453	0.331	2.118	13.462	279.051
4800.000	0.551	6.516	2.971	-13.258	4799.449	0.143	2.971	13.587	282.630
4900.000	0.171	341.206	3.589	-13.252	4899.447	0.403	3.589	13.729	285.155
5000.000	0.441	348.504	4.108	-13.376	4999.446	0.273	4.108	13.993	287.071
5100.000	2.628	14.607	6.703	-12.875	5099.404	2.240	6.703	14.515	297.504
5200.000	8.453	20.396	15.819	-9.732	5198.895	5.845	15.819	18.573	328.398
5300.000	13.331	19.172	33.608	-3.381	5297.064	4.884	33.608	33.778	354.256
5400.000	17.476	19.108	58.697	5.324	5393.451	4.145	58.697	58.938	5.183
5500.000	22.478	23.704	90.411	17.933	5487.410	5.239	90.411	92.172	11.219
5600.000	26.855	21.877	128.893	34.042	5578.264	4.442	128.893	133.313	14.795
5700.000	31.608	23.584	173.896	52.954	5665.507	4.825	173.896	181.780	16.936
5800.000	30.269	23.238	221.073	73.384	5751.277	1.351	221.073	232.934	18.363
5900.000	30.986	23.812	267.782	93.720	5837.326	0.775	267.782	283.709	19.289
6000.000	31.284	21.195	315.542	113.501	5922.925	1.385	315.542	335.335	19.784
6100.000	30.547	24.104	362.949	133.268	6008.722	1.666	362.949	386.642	20.162
6200.000	29.704	24.776	408.641	154.030	6095.215	0.908	408.641	436.707	20.653
6300.000	27.861	23.914	452.501	173.887	6182.857	1.889	452.501	484.761	21.021
6400.000	26.983	25.685	494.308	193.192	6271.621	1.199	494.308	530.720	21.347
6500.000	23.257	27.454	532.286	212.134	6362.149	3.800	532.286	573.000	21.729
6600.000	19.107	25.178	564.632	228.206	6455.374	4.230	564.632	609.005	22.007
6700.000	15.193	23.921	591.432	240.487	6550.909	3.932	591.432	638.456	22.128
6800.000	11.293	21.871	612.505	249.451	6648.232	3.927	612.505	661.353	22.159
6900.000	12.733	20.529	631.913	256.963	6746.039	1.467	631.913	682.162	22.129
7000.000	18.997	26.179	656.867	268.020	6842.188	6.445	656.867	709.443	22.197
7100.000	21.328	18.731	688.705	281.044	6936.069	3.463	688.705	743.841	22.199
7200.000	21.668	15.822	723.690	291.918	7029.114	1.119	723.690	780.348	21.968
7250.000	16.967	18.607	739.494	296.765	7076.287	9.578	739.494	796.820	21.866

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