



Company: Noble Energy

Rig: Production/Core-Tech

API # 05-123-24229

Date: 3/7/2014

Surveyor: Nick Kula

VS: 0.000

Lat : 40.306

Long: -104.464

Well: Gutteresen USX CC 17-14

Location: Weld County, Colorado

North Reference: GRID

Convergence: GRID North is 0.670 Degrees East

Declination: 8.33

Depth Reference: Ground Level

Elevation: 4739'

Total Depth as Drilled: 6877'

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	0.340	101.163	-0.057	0.291	99.999	0.340	-0.057	0.296	101.163
200.000	0.148	130.650	-0.199	0.680	199.998	0.223	-0.199	0.708	106.316
300.000	0.263	122.679	-0.407	0.971	299.998	0.118	-0.407	1.053	112.744
400.000	0.032	214.554	-0.554	1.148	399.997	0.266	-0.554	1.274	115.751
500.000	0.059	286.963	-0.562	1.083	499.997	0.058	-0.562	1.220	117.416
600.000	0.045	278.609	-0.541	0.994	599.997	0.016	-0.541	1.132	118.534
700.000	0.171	122.469	-0.615	1.081	699.997	0.213	-0.615	1.244	119.625
800.000	0.194	171.701	-0.863	1.232	799.997	0.154	-0.863	1.504	125.015
900.000	0.210	205.245	-1.197	1.178	899.996	0.118	-1.197	1.679	135.446
1000.000	0.143	256.960	-1.390	0.979	999.996	0.165	-1.390	1.700	144.855
1100.000	0.204	245.848	-1.491	0.695	1099.995	0.069	-1.491	1.645	154.996
1200.000	0.219	353.598	-1.373	0.512	1199.995	0.342	-1.373	1.466	159.557
1300.000	0.208	64.136	-1.104	0.654	1299.994	0.247	-1.104	1.283	149.354
1400.000	0.170	306.917	-0.936	0.699	1399.994	0.323	-0.936	1.168	143.239
1500.000	0.248	102.677	-0.894	0.791	1499.994	0.409	-0.894	1.194	138.490
1600.000	0.376	43.649	-0.704	1.228	1599.993	0.327	-0.704	1.416	119.813
1700.000	0.055	330.917	-0.425	1.432	1699.992	0.363	-0.425	1.493	106.519
1800.000	0.635	304.360	-0.070	0.951	1799.990	0.586	-0.070	0.953	94.204
1900.000	0.778	309.602	0.675	-0.030	1899.982	0.156	0.675	0.676	357.494
2000.000	0.937	309.171	1.625	-1.187	1999.971	0.160	1.625	2.012	323.859
2100.000	0.696	286.079	2.310	-2.404	2099.961	0.403	2.310	3.334	313.848
2200.000	0.656	283.552	2.612	-3.545	2199.954	0.050	2.612	4.403	306.386
2300.000	0.591	264.699	2.699	-4.615	2299.948	0.214	2.699	5.346	300.315
2400.000	0.385	244.106	2.504	-5.432	2399.944	0.268	2.504	5.981	294.750
2500.000	0.431	210.159	2.032	-5.923	2499.942	0.242	2.032	6.262	288.933
2600.000	0.521	240.697	1.484	-6.509	2599.939	0.265	1.484	6.676	282.843
2700.000	0.364	225.080	1.037	-7.130	2699.936	0.197	1.037	7.205	278.276
2800.000	0.352	171.082	0.510	-7.307	2799.934	0.325	0.510	7.325	273.991
2900.000	0.622	168.459	-0.325	-7.151	2899.930	0.272	-0.325	7.159	267.396
3000.000	0.695	178.838	-1.464	-7.030	2999.924	0.140	-1.464	7.181	258.238
3100.000	0.437	181.265	-2.452	-7.026	3099.919	0.259	-2.452	7.442	250.765
3200.000	0.228	201.391	-3.018	-7.107	3199.917	0.237	-3.018	7.721	246.994
3300.000	0.231	258.576	-3.242	-7.377	3299.916	0.219	-3.242	8.058	246.273
3400.000	0.613	285.475	-3.140	-8.090	3399.914	0.420	-3.140	8.678	248.789
3500.000	0.821	317.362	-2.470	-9.091	3499.906	0.442	-2.470	9.420	254.800

3600.000	0.894	301.237	-1.538	-10.243	3599.895	0.251	-1.538	10.358	261.460
3700.000	0.943	309.238	-0.613	-11.548	3699.882	0.137	-0.613	11.564	266.961
3800.000	1.076	296.199	0.322	-13.028	3799.867	0.265	0.322	13.032	271.416
3900.000	1.151	309.955	1.382	-14.640	3899.848	0.277	1.382	14.705	275.391
4000.000	1.316	304.828	2.683	-16.353	3999.825	0.198	2.683	16.572	279.317
4100.000	1.172	316.687	4.083	-17.998	4099.801	0.294	4.083	18.455	282.782
4200.000	1.586	318.254	5.860	-19.621	4199.772	0.415	5.860	20.477	286.629
4300.000	1.655	322.336	8.036	-21.425	4299.732	0.135	8.036	22.882	290.560
4400.000	1.535	316.653	10.153	-23.227	4399.694	0.199	10.153	25.349	293.611
4500.000	1.897	300.992	11.979	-25.565	4499.649	0.590	11.979	28.233	295.107
4600.000	2.237	291.348	13.542	-28.802	4599.584	0.485	13.542	31.827	295.182
4700.000	2.400	284.298	14.770	-32.650	4699.503	0.328	14.770	35.835	294.341
4800.000	2.376	277.033	15.541	-36.737	4799.416	0.303	15.541	39.889	292.930
4900.000	1.983	266.930	15.702	-40.522	4899.344	0.548	15.702	43.458	291.182
5000.000	1.752	267.456	15.542	-43.777	4999.290	0.231	15.542	46.454	289.546
5100.000	1.217	268.091	15.439	-46.366	5099.257	0.535	15.439	48.869	288.416
5200.000	0.759	281.202	15.532	-48.078	5199.242	0.508	15.532	50.524	287.904
5300.000	0.486	272.647	15.680	-49.151	5299.236	0.287	15.680	51.592	287.694
5400.000	0.076	341.625	15.763	-49.596	5399.234	0.465	15.763	52.041	287.631
5500.000	0.515	62.102	16.036	-49.220	5499.233	0.508	16.036	51.766	288.046
5600.000	0.641	65.497	16.479	-48.313	5599.228	0.130	16.479	51.046	288.833
5700.000	1.064	65.891	17.090	-46.956	5699.216	0.423	17.090	49.970	289.999
5800.000	1.114	63.379	17.905	-45.240	5799.198	0.069	17.905	48.654	291.593
5900.000	1.258	62.656	18.845	-43.395	5899.177	0.144	18.845	47.310	293.473
6000.000	1.430	66.894	19.839	-41.272	5999.149	0.199	19.839	45.793	295.673
6100.000	0.775	86.455	20.370	-39.450	6099.131	0.747	20.370	44.399	297.310
6200.000	0.686	115.745	20.152	-38.236	6199.123	0.379	20.152	43.221	297.791
6300.000	0.522	120.272	19.662	-37.303	6299.117	0.171	19.662	42.167	297.793
6400.000	0.454	132.909	19.162	-36.619	6399.114	0.127	19.162	41.330	297.623
6500.000	0.608	153.398	18.418	-36.091	6499.109	0.242	18.418	40.519	297.036
6600.000	0.582	141.561	17.546	-35.538	6599.104	0.125	17.546	39.633	296.277

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