

**GyroTracer Directional:**

Date: 2/15/2019  
 Operator : Adrian Bruner  
 API : 05-123-26284  
 Well Name : **Guttersen USX CC 17-17**  
 Field : Noble Energy Inc  
 Tool Number: 1717  
 Bottom Depth : 6650.00  
 Total Well Depth: 6875.00  
 Latitude : 40.31573 N  
 Longitude : 104.45721 W  
 Grid Offset : 0.68  
 Datum: NAD 83

**Starting Point Coordinates (in local grid):**

Northing: 0.00      Easting: 0.00      GLE: 4746.00

**Description:**

*Azimuth measured in degrees and referenced to local grid*

*Inclination measured from Vertical*

*Length measured in US survey feet*

*Lat/Long/Elevation obtained by handheld GPS at wellhead. Device error  $\pm 9$  Feet*

*RKB = Ground Level Elevation*

Start Time: 2/15/2019 13:55

End Time: 2/15/2019 15:04

Depth	Inclination	Azimuth	Closure Direction	True Depth	Coordinates		Dogleg Severity	Closure Distance
					+N/-S	+E/-W		
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.000	0.250	77.190	92.603	100.000	-0.020	0.440	0.250	0.440
200.000	0.322	72.845	81.506	199.999	0.118	0.793	0.072	0.802
300.000	0.323	43.766	74.646	299.998	0.329	1.199	0.172	1.244
400.000	0.399	65.458	73.798	399.997	0.461	1.587	0.158	1.652
500.000	0.270	134.954	73.507	499.996	0.558	1.886	0.402	1.967
600.000	0.498	166.775	90.597	599.994	-0.022	2.112	0.404	2.112
700.000	0.462	135.010	105.989	699.991	-0.679	2.369	0.249	2.465
800.000	0.418	164.694	116.012	799.988	-1.290	2.643	0.260	2.941
900.000	0.308	178.372	123.348	899.986	-1.889	2.870	0.126	3.436
1000.000	0.321	169.273	129.746	999.984	-2.505	3.012	0.050	3.917
1100.000	0.325	148.557	133.510	1099.982	-3.047	3.209	0.117	4.425
1200.000	0.300	171.138	133.887	1199.981	-3.362	3.495	0.122	4.850
1300.000	0.171	118.258	133.537	1299.980	-3.486	3.669	0.384	5.061
1400.000	0.116	317.618	132.884	1399.980	-3.466	3.732	0.287	5.094
1500.000	0.114	78.019	132.374	1499.980	-3.426	3.756	0.197	5.084
1600.000	0.132	310.449	131.609	1599.979	-3.332	3.752	0.204	5.018
1700.000	0.198	61.194	132.002	1699.979	-3.269	3.630	0.285	4.885
1800.000	0.452	318.687	130.942	1799.977	-2.822	3.253	0.305	4.306
1900.000	0.991	341.472	120.682	1899.967	-1.599	2.695	0.658	3.133

2000.000	0.932	350.500	90.810	1999.953	-0.031	2.223	0.162	2.224
2100.000	1.036	338.596	46.252	2099.937	1.689	1.765	0.222	2.443
2200.000	1.170	328.163	17.708	2199.920	3.394	1.084	0.309	3.563
2300.000	1.136	328.264	1.086	2299.901	5.063	0.096	0.016	5.063
2400.000	1.059	323.979	350.782	2399.883	6.546	-1.062	0.091	6.631
2500.000	1.041	323.720	344.181	2499.866	7.935	-2.248	0.023	8.247
2600.000	1.102	323.399	339.972	2599.849	9.384	-3.421	0.019	9.988
2700.000	1.028	314.355	336.734	2699.833	10.731	-4.614	0.182	11.681
2800.000	1.013	310.133	333.919	2799.817	11.960	-5.854	0.111	13.316
2900.000	0.981	306.224	331.708	2899.803	13.116	-7.060	0.093	14.895
3000.000	0.749	300.890	329.304	2999.794	13.783	-8.182	0.227	16.029
3100.000	0.733	284.342	326.381	3099.786	14.138	-9.400	0.233	16.978
3200.000	0.892	302.559	323.759	3199.777	14.551	-10.666	0.300	18.041
3300.000	0.870	329.252	323.185	3299.765	15.619	-11.691	0.421	19.510
3400.000	1.119	347.890	324.488	3399.751	17.184	-12.263	0.399	21.111
3500.000	1.571	12.137	327.743	3499.725	19.443	-12.271	0.715	22.991
3600.000	1.889	19.689	333.177	3599.677	22.376	-11.314	0.373	25.074
3700.000	1.889	20.212	338.321	3699.618	25.610	-10.181	0.038	27.560
3800.000	1.884	2.359	342.564	3799.556	28.946	-9.091	0.576	30.340
3900.000	1.355	32.594	345.903	3899.518	31.390	-7.883	0.944	32.364
4000.000	0.960	38.814	348.605	3999.498	32.904	-6.632	0.456	33.566
4100.000	0.574	72.569	350.649	4099.488	33.716	-5.552	0.551	34.170
4200.000	0.439	87.952	352.175	4199.484	33.839	-4.650	0.177	34.157
4300.000	0.152	102.640	352.922	4299.483	33.877	-4.206	0.339	34.137
4400.000	0.180	137.805	353.471	4399.482	33.800	-3.869	0.114	34.021
4500.000	1.015	167.435	353.452	4499.474	32.631	-3.746	0.886	32.845
4600.000	2.051	190.535	352.580	4599.437	29.987	-3.905	1.059	30.240
4700.000	2.808	213.200	348.568	4699.340	25.826	-5.222	1.235	26.349
4800.000	2.970	202.364	341.555	4799.214	21.177	-7.063	0.557	22.324
4900.000	2.777	189.104	331.517	4899.090	16.593	-9.003	0.682	18.878
5000.000	2.462	211.411	318.720	4998.985	12.479	-10.956	1.059	16.606
5100.000	2.021	215.464	305.460	5098.912	9.231	-12.960	0.466	15.912
5200.000	1.781	221.603	294.206	5198.859	6.758	-15.032	0.347	16.481
5300.000	1.421	224.314	285.786	5298.823	4.745	-16.783	0.370	17.441
5400.000	1.101	231.284	280.266	5398.803	3.275	-18.084	0.365	18.378
5500.000	0.710	242.537	277.076	5498.793	2.379	-19.168	0.355	19.315
5600.000	0.601	248.075	275.205	5598.787	1.830	-20.087	0.133	20.170
5700.000	0.369	285.789	274.130	5698.783	1.506	-20.856	0.359	20.910
5800.000	0.309	248.464	273.541	5798.781	1.327	-21.437	0.258	21.478
5900.000	0.223	269.034	273.038	5898.780	1.155	-21.771	0.112	21.801
6000.000	0.052	213.587	272.712	5998.780	1.036	-21.885	0.200	21.910
6100.000	0.060	188.136	272.349	6098.780	0.899	-21.916	0.017	21.934
6200.000	0.229	173.059	272.217	6198.780	0.846	-21.844	0.140	21.860
6300.000	0.327	108.701	271.967	6298.779	0.742	-21.598	0.281	21.610
6400.000	0.334	124.311	271.375	6398.777	0.508	-21.173	0.267	21.179
6500.000	0.431	105.379	270.365	6498.775	0.132	-20.701	0.148	20.702
6600.000	0.375	103.720	269.257	6598.772	-0.261	-20.116	0.060	20.118
6650.000	0.550	123.920	268.916	6648.791	-0.376	-19.889	0.333	19.893