

**GyroTracer Directional:**

Date: 1/23/2019  
 Operator : Adrian Bruner  
 API : 05-123-26991  
 Well Name : **GWAA 3-14**  
 Field : Noble Energy Inc  
 Tool Number: 1717  
 Bottom Depth : 6900.00  
 Total Well Depth: 7204.00  
 Latitude : 40.43179 N  
 Longitude : 104.64442 W  
 Grid Offset : 0.54  
 Datum: NAD 83

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

Northing: 0.00      Easting: 0.00      GLE: 4637.00

**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: 1/23/2019 10:40

End Time: 1/23/2019 12:34

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	0.420	323.154	294.444	100.000	0.300	-0.660	0.420	0.725
200.000	0.376	327.274	308.506	199.995	1.005	-1.264	0.015	1.615
300.000	0.525	328.097	311.595	299.991	1.699	-1.914	0.094	2.560
400.000	0.421	335.433	313.744	399.986	2.428	-2.537	0.122	3.512
500.000	0.504	341.060	319.613	499.980	3.424	-2.912	0.057	4.495
600.000	0.690	337.806	323.050	599.973	4.456	-3.352	0.248	5.576
700.000	0.672	325.343	324.875	699.965	5.541	-3.898	0.168	6.775
800.000	0.626	322.863	325.791	799.958	6.560	-4.460	0.035	7.933
900.000	0.346	279.071	324.087	899.954	7.061	-5.113	0.418	8.718
1000.000	0.510	227.548	319.239	999.951	6.676	-5.755	0.397	8.814
1100.000	0.523	224.672	314.237	1099.947	6.219	-6.387	0.038	8.915
1200.000	0.372	214.332	309.148	1199.944	5.693	-6.993	0.176	9.017
1300.000	0.186	52.100	306.614	1299.942	5.343	-7.191	0.596	8.959
1400.000	0.474	86.136	310.534	1399.939	5.528	-6.465	0.328	8.506
1500.000	1.757	111.105	317.302	1499.922	5.208	-4.806	1.333	7.086
1600.000	3.042	118.203	340.024	1599.836	3.340	-1.214	1.265	3.554
1700.000	4.813	137.305	101.611	1699.598	-0.831	4.042	2.189	4.127
1800.000	6.658	136.447	126.451	1799.083	-8.139	11.019	1.836	13.699
1900.000	8.401	139.250	131.277	1898.191	-17.743	20.213	1.771	26.896
2000.000	9.940	144.668	135.642	1996.909	-30.472	29.797	1.761	42.620

2100.000	11.720	144.004	138.553	2095.124	-45.888	40.523	1.791	61.219
2200.000	13.418	141.254	139.617	2192.683	-63.319	53.855	1.807	83.124
2300.000	15.183	137.744	139.518	2289.563	-82.062	70.042	1.940	107.889
2400.000	17.168	134.789	138.812	2385.576	-102.182	89.415	2.157	135.780
2500.000	17.370	134.314	138.063	2481.072	-123.029	110.532	0.244	165.389
2600.000	17.344	134.659	137.534	2576.494	-144.035	131.825	0.112	195.253
2700.000	17.808	134.204	137.154	2671.862	-165.187	153.213	0.476	225.302
2800.000	18.280	133.248	136.718	2766.928	-186.560	175.695	0.550	256.268
2900.000	17.541	133.121	136.325	2862.058	-207.604	198.215	0.743	287.035
3000.000	17.715	134.082	136.076	2957.370	-228.512	220.087	0.332	317.263
3100.000	17.214	134.272	135.913	3052.740	-249.477	241.651	0.498	347.324
3200.000	17.022	138.332	135.922	3148.394	-270.458	261.888	1.222	376.474
3300.000	17.598	138.900	136.135	3243.786	-293.034	281.651	0.587	406.444
3400.000	17.670	137.791	136.291	3339.068	-315.730	301.809	0.346	436.777
3500.000	17.774	135.534	136.289	3434.347	-337.661	322.802	0.685	467.137
3600.000	17.990	135.048	136.222	3529.504	-359.477	344.464	0.242	497.875
3700.000	18.578	135.357	136.164	3624.466	-381.734	366.526	0.599	529.209
3800.000	19.441	135.009	136.105	3719.016	-404.811	389.492	0.851	561.762
3900.000	20.339	134.617	136.027	3812.979	-428.900	413.791	0.932	595.969
4000.000	20.817	134.426	135.947	3906.547	-453.667	438.921	0.485	631.241
4100.000	19.706	133.894	135.846	4000.244	-477.950	464.034	1.144	666.156
4200.000	18.494	134.042	135.757	4094.859	-500.398	487.349	1.199	698.504
4300.000	17.394	134.278	135.698	4189.837	-522.281	509.713	1.130	729.784
4400.000	15.200	132.607	135.618	4285.913	-541.372	529.808	2.239	757.483
4500.000	14.391	131.116	135.498	4382.528	-558.616	548.990	0.903	783.226
4600.000	13.010	128.676	135.332	4479.645	-573.887	567.276	1.512	806.938
4700.000	11.056	127.528	135.153	4577.525	-586.502	583.377	1.993	827.233
4800.000	9.310	126.845	134.985	4676.037	-596.801	597.119	1.764	844.230
4900.000	6.689	131.520	134.889	4775.024	-605.727	608.085	2.666	858.296
5000.000	5.330	124.502	134.829	4874.449	-612.589	616.259	1.558	868.931
5100.000	2.838	119.923	134.716	4974.204	-616.043	622.175	2.524	875.563
5200.000	1.125	88.011	134.607	5074.148	-616.737	625.256	1.966	878.242
5300.000	1.087	81.673	134.515	5174.130	-616.659	627.181	0.149	879.559
5400.000	1.091	94.506	134.428	5274.114	-616.500	628.936	0.268	880.700
5500.000	0.123	24.383	134.376	5374.108	-616.132	629.707	1.051	880.994
5600.000	0.178	137.435	134.371	5474.107	-615.848	629.513	0.289	880.656
5700.000	0.142	135.787	134.383	5574.107	-615.932	629.341	0.140	880.592
5800.000	0.151	195.845	134.396	5674.106	-616.068	629.199	0.141	880.586
5900.000	0.209	199.165	134.410	5774.106	-616.200	629.020	0.059	880.550
6000.000	0.323	272.069	134.424	5874.105	-616.357	628.887	0.322	880.566
6100.000	0.178	156.770	134.426	5974.105	-616.497	628.974	0.334	880.725
6200.000	0.314	118.257	134.424	6074.104	-616.665	629.199	0.111	881.003
6300.000	0.296	68.478	134.414	6174.103	-616.767	629.511	0.276	881.298
6400.000	0.136	24.737	134.407	6274.103	-616.795	629.691	0.202	881.446
6500.000	0.088	196.668	134.416	6374.102	-616.845	629.559	0.251	881.387
6600.000	0.207	10.467	134.398	6474.101	-616.695	629.791	0.311	881.447
6700.000	0.509	12.298	134.362	6574.099	-616.309	630.187	0.304	881.460
6800.000	0.830	30.625	134.303	6674.094	-615.410	630.558	0.456	881.098
6900.000	1.236	32.930	134.180	6774.073	-613.625	631.453	0.397	880.493