

GyroTracer Directional:

Date: 1/4/2018
 Operator : Jacob Landis
 Crew : 05-123-17191
 Well: Richardson 10-12
 Field : Noble Energy Inc.
 Tool Type And Number: 1213
 Bottom Depth : 6750.00
 Total Well Depth: 6970.00
 Latitude : 40.324515 N
 Longitude : 104.543049 W
 Grid Offset : 0.62

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

Northing: 0.00 Easting: 0.00 Altitude: 4663.00

Description:

Azimuth measured in degrees and referenced to local grid

Inclination measured from Vertical

Length measured in feet

Temperature measured in Fahrenheit degrees

Start Time: 1/4/2018 10:16

End Time: 1/4/2018 11:27

Depth	Inclination	Azimuth	Closure Direction	True Depth	Coordinates		Dogleg Severity	Closure Distance	Temp
					+N/-S	+E/-W			
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.920	0.230	126.909	155.323	100.920	-0.370	0.170	0.228	0.407	69.130
200.000	0.416	133.592	152.827	199.997	-0.975	0.500	0.191	1.096	69.120
300.000	0.406	133.338	146.267	299.992	-1.729	1.154	0.019	2.079	69.140
400.000	0.470	137.418	142.668	399.986	-2.469	1.883	0.070	3.105	69.140
500.000	0.229	92.595	140.009	499.980	-3.099	2.599	0.347	4.045	69.140
600.000	0.245	106.004	136.233	599.978	-3.332	3.192	0.059	4.615	69.140
700.000	0.215	117.421	133.804	699.975	-3.654	3.810	0.052	5.279	69.160
800.000	0.209	118.354	132.390	799.972	-4.025	4.409	0.018	5.970	69.150
900.000	0.204	150.343	131.194	899.969	-4.406	5.034	0.121	6.690	69.170
1000.000	0.314	161.543	130.383	999.967	-4.682	5.505	0.101	7.226	69.184
1100.000	0.197	220.940	130.682	1099.966	-4.873	5.669	0.276	7.475	69.210
1200.000	0.180	229.107	130.962	1199.965	-5.013	5.775	0.030	7.647	69.250
1300.000	0.283	152.066	131.189	1299.964	-5.070	5.794	0.306	7.699	70.200
1400.000	1.396	307.759	131.776	1399.963	-5.203	5.824	1.669	7.809	70.330
1500.000	0.232	170.101	132.428	1499.962	-5.316	5.816	1.049	7.879	70.489
1600.000	0.272	189.651	133.171	1599.961	-5.462	5.822	0.061	7.983	70.650
1700.000	1.617	333.468	133.897	1699.960	-5.618	5.839	1.847	8.103	70.840
1800.000	0.249	162.499	134.209	1799.957	-5.714	5.873	1.949	8.194	71.050
1900.000	0.149	197.365	133.855	1899.956	-5.882	6.122	0.148	8.489	71.280
2000.000	0.341	144.192	133.350	1999.954	-6.108	6.470	0.284	8.898	71.540
2100.000	0.615	129.521	132.363	2099.949	-6.627	7.267	0.293	9.835	71.859
2200.000	0.890	127.034	131.368	2199.937	-7.485	8.499	0.289	11.325	72.190
2300.000	0.958	120.590	130.652	2299.920	-8.556	9.964	0.123	13.134	72.570
2400.000	1.107	110.905	130.036	2399.902	-9.660	11.497	0.225	15.016	77.900

2500.000	1.210	120.101	128.976	2499.882	-10.664	13.180	0.215	16.953	78.520
2600.000	0.856	129.515	128.209	2599.866	-11.579	14.709	0.421	18.720	79.150
2700.000	0.802	104.039	127.338	2699.855	-12.211	16.007	0.363	20.133	79.830
2800.000	0.732	129.758	126.741	2799.844	-12.889	17.266	0.411	21.547	80.510
2900.000	0.646	148.393	126.637	2899.834	-13.681	18.396	0.239	22.926	81.230
3000.000	0.764	159.754	127.720	2999.823	-14.855	19.206	0.167	24.281	82.000
3100.000	2.458	158.121	130.631	3099.779	-17.390	20.267	1.323	26.705	82.860
3200.000	3.644	148.128	134.210	3199.619	-22.330	22.954	1.278	32.023	83.760
3300.000	1.902	142.584	135.672	3299.501	-26.235	25.626	1.775	36.674	84.740
3400.000	1.347	121.975	135.492	3399.460	-28.175	27.695	0.770	39.508	85.752
3500.000	1.198	110.384	134.287	3499.437	-28.923	29.652	0.300	41.422	86.860
3600.000	0.987	94.167	132.858	3599.418	-29.231	31.503	0.377	42.975	98.900
3700.000	1.105	79.938	131.095	3699.402	-29.039	33.294	0.285	44.179	100.190
3800.000	0.617	63.944	129.663	3799.390	-28.814	34.753	0.521	45.144	101.459
3900.000	0.497	175.920	129.361	3899.386	-29.022	35.381	1.000	45.761	102.740
4000.000	0.529	188.360	130.276	3999.382	-29.801	35.171	0.116	46.099	104.100
4100.000	0.694	224.105	131.811	4099.373	-30.906	34.552	0.441	46.358	105.508
4200.000	1.390	221.047	133.845	4199.359	-32.272	33.601	0.705	46.589	106.970
4300.000	1.682	215.417	136.818	4299.328	-34.123	32.024	0.332	46.797	108.540
4400.000	1.761	213.687	140.354	4399.285	-36.354	30.123	0.096	47.212	110.170
4500.000	2.019	203.072	144.007	4499.232	-39.072	28.380	0.423	48.291	111.873
4600.000	1.699	218.124	147.411	4599.180	-41.750	26.689	0.556	49.551	113.846
4700.000	1.555	276.164	150.352	4699.143	-42.565	24.227	1.594	48.977	116.080
4800.000	2.184	265.603	153.991	4799.079	-42.427	20.701	0.705	47.207	135.800
4900.000	2.135	274.198	157.740	4899.017	-42.010	17.195	0.328	45.392	137.740
5000.000	1.208	287.549	160.760	4998.976	-41.452	14.468	1.008	43.905	139.638
5100.000	0.831	321.593	161.848	5098.961	-40.391	13.242	0.698	42.507	141.560
5200.000	1.100	344.887	161.773	5198.950	-38.941	12.824	0.461	40.998	143.600
5300.000	0.940	16.164	160.817	5298.935	-37.280	12.970	0.577	39.472	145.710
5400.000	0.945	42.821	158.921	5398.922	-35.970	13.865	0.439	38.550	147.780
5500.000	1.175	85.692	156.348	5498.905	-35.183	15.409	0.809	38.409	150.030
5600.000	1.182	95.877	154.153	5598.888	-35.491	17.193	0.212	39.437	152.216
5700.000	0.970	117.251	152.662	5698.874	-36.140	18.683	0.128	40.684	154.470
5800.000	1.003	142.141	152.009	5798.861	-37.278	19.813	0.430	42.217	156.910
5900.000	1.198	132.013	151.368	5898.841	-38.702	21.129	0.278	44.094	177.520
6000.000	1.282	122.882	150.570	5998.821	-40.070	22.606	0.240	46.007	179.660
6100.000	1.207	130.421	150.179	6098.802	-41.525	23.801	0.182	47.862	181.540
6200.000	1.012	155.535	149.941	6198.783	-43.086	24.935	0.449	49.781	183.450
6300.000	1.199	141.401	149.640	6298.763	-44.665	26.163	0.106	51.763	185.470
6400.000	1.623	154.086	149.540	6398.733	-46.732	27.484	0.417	54.215	187.540
6500.000	1.822	150.326	149.704	6498.695	-49.134	28.707	0.215	56.906	189.660
6600.000	1.591	174.633	150.128	6598.663	-51.459	29.557	0.767	59.344	191.750
6700.000	2.318	172.322	151.258	6698.593	-55.065	30.199	0.725	62.803	193.771
6750.750	2.040	166.190	151.885	6749.305	-57.021	30.466	0.184	64.649	196.090