

GyroTracer Directional:

Date: 1/9/2019
 Operator : Adrian Bruner
 API : 05-123-31989
 Well Name : **LDS D 17-18**
 Field : Noble Energy Inc
 Tool Number: 1719
 Bottom Depth : 6850.00
 Total Well Depth: 7214.00
 Latitude : 40.22914 N
 Longitude : 104.57449 W
 Grid Offset : 0.60
 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 ± 9 Feet

RKB = Ground Level Elevation

Start Time: 1/9/2019 11:28

End Time: 1/9/2019 12:37

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	0.330	266.508	228.532	100.000	-0.380	-0.430	0.330	0.574
200.000	0.509	275.369	265.939	199.997	-0.060	-0.844	0.188	0.846
300.000	0.310	247.096	275.629	299.995	0.125	-1.263	0.252	1.270
400.000	0.257	253.413	281.669	399.993	0.348	-1.684	0.052	1.720
500.000	0.325	270.190	287.732	499.992	0.638	-1.996	0.132	2.095
600.000	0.309	305.969	295.932	599.990	0.940	-1.934	0.198	2.150
700.000	0.293	308.257	302.934	699.988	1.268	-1.957	0.033	2.332
800.000	0.202	307.083	308.546	799.987	1.512	-1.898	0.016	2.427
900.000	0.309	3.904	311.990	899.986	1.568	-1.742	0.275	2.344
1000.000	0.399	9.389	315.150	999.985	1.624	-1.616	0.100	2.291
1100.000	0.053	185.057	317.694	1099.984	1.719	-1.564	0.365	2.324
1200.000	0.144	59.382	323.771	1199.982	2.094	-1.534	0.180	2.596
1300.000	0.506	26.593	330.315	1299.979	2.670	-1.522	0.459	3.074
1400.000	0.627	358.810	335.259	1399.976	3.292	-1.517	0.268	3.625
1500.000	0.548	329.987	338.340	1499.973	3.919	-1.557	0.286	4.217
1600.000	0.506	327.419	339.897	1599.970	4.444	-1.626	0.016	4.732
1700.000	0.294	305.988	341.126	1699.968	4.938	-1.688	0.212	5.219
1800.000	0.348	46.160	342.971	1799.966	5.394	-1.652	0.552	5.642
1900.000	0.465	20.768	344.335	1899.963	5.878	-1.648	0.260	6.105
2000.000	0.217	60.110	344.075	1999.962	5.827	-1.663	0.320	6.060
2100.000	0.199	190.588	343.546	2099.960	5.542	-1.637	0.304	5.779

2200.000	0.662	173.019	341.950	2199.957	4.816	-1.569	0.457	5.065
2300.000	1.098	217.586	328.784	2299.947	3.878	-2.350	0.797	4.534
2400.000	0.488	223.158	311.648	2399.936	3.079	-3.462	0.548	4.633
2500.000	0.640	289.519	303.273	2499.930	2.894	-4.410	0.615	5.275
2600.000	0.782	267.221	298.478	2599.925	2.861	-5.273	0.297	5.999
2700.000	0.643	288.213	296.721	2699.921	3.008	-5.976	0.294	6.690
2800.000	0.543	256.571	295.449	2799.918	3.153	-6.626	0.339	7.339
2900.000	0.254	346.581	295.239	2899.915	3.341	-7.088	0.567	7.836
3000.000	0.403	7.897	296.325	2999.913	3.620	-7.317	0.223	8.164
3100.000	0.458	301.122	297.530	3099.910	3.946	-7.570	0.489	8.536
3200.000	0.958	336.870	301.019	3199.905	4.759	-7.914	0.677	9.234
3300.000	0.853	341.461	304.501	3299.897	5.848	-8.509	0.110	10.325
3400.000	0.550	289.530	305.736	3399.886	6.782	-9.425	0.521	11.611
3500.000	0.913	280.252	303.920	3499.876	7.192	-10.696	0.423	12.889
3600.000	0.953	230.299	298.491	3599.858	6.759	-12.453	0.766	14.169
3700.000	0.814	257.133	292.911	3699.839	5.964	-14.110	0.412	15.319
3800.000	1.410	242.264	286.597	3799.813	4.737	-15.893	0.561	16.584
3900.000	1.552	222.926	280.197	3899.782	3.206	-17.824	0.541	18.110
4000.000	1.047	220.986	275.292	3999.764	1.753	-18.932	0.540	19.013
4100.000	1.005	160.235	270.689	4099.750	0.230	-19.116	1.026	19.117
4200.000	0.485	182.117	266.822	4199.740	-1.061	-19.106	0.546	19.135
4300.000	0.965	204.156	263.605	4299.732	-2.184	-19.489	0.618	19.611
4400.000	1.060	235.710	261.048	4399.723	-3.186	-20.225	0.578	20.475
4500.000	0.790	227.688	259.869	4499.712	-3.816	-21.354	0.277	21.692
4600.000	1.044	273.630	259.468	4599.700	-4.232	-22.765	0.734	23.155
4700.000	0.172	325.753	259.827	4699.692	-4.279	-23.848	0.928	24.228
4800.000	0.764	285.956	260.897	4799.688	-3.899	-24.333	0.657	24.644
4900.000	1.278	230.224	259.985	4899.675	-4.514	-25.565	1.029	25.960
5000.000	1.135	251.456	258.400	4999.655	-5.581	-27.190	0.513	27.757
5100.000	0.799	235.592	257.091	5099.634	-6.621	-28.889	0.396	29.638
5200.000	1.506	231.120	255.768	5199.611	-7.759	-30.593	0.656	31.562
5300.000	1.293	256.743	254.690	5299.590	-8.831	-32.259	0.798	33.446
5400.000	1.406	234.714	253.772	5399.565	-9.923	-34.092	0.564	35.507
5500.000	1.354	273.159	253.345	5499.543	-10.758	-35.962	0.909	37.537
5600.000	1.012	281.278	253.816	5599.520	-11.032	-38.014	0.369	39.582
5700.000	1.043	266.183	255.019	5699.493	-10.765	-40.230	0.312	41.645
5800.000	1.507	260.299	255.991	5799.464	-10.623	-42.580	0.501	43.885
5900.000	1.152	247.419	256.525	5899.439	-10.722	-44.745	0.539	46.012
6000.000	1.084	239.698	256.761	5999.417	-10.990	-46.713	0.159	47.988
6100.000	0.794	263.298	256.471	6099.406	-11.542	-47.966	0.447	49.336
6200.000	0.823	248.968	256.035	6199.399	-12.141	-48.820	0.180	50.307
6300.000	0.279	203.440	255.302	6299.392	-12.950	-49.370	0.661	51.041
6400.000	1.243	185.733	254.355	6399.384	-13.923	-49.719	1.103	51.631
6500.000	0.926	168.151	252.219	6499.364	-15.755	-49.128	0.369	51.592
6600.000	1.010	120.291	249.923	6599.339	-17.664	-48.329	0.877	51.455
6700.000	0.816	127.010	248.192	6699.321	-18.860	-47.133	0.153	50.767
6800.000	0.654	127.113	247.093	6799.310	-19.370	-45.840	0.373	49.764
6850.000	0.610	83.560	246.652	6849.325	-19.497	-45.167	0.338	49.195