

GyroTracer Directional:

Date: 12/20/2018
 Operator : Adrian Bruner
 API : 05-123-24844
 Well Name : **Lockman 4-14**
 Field : Noble Energy Inc
 Tool Number: 1719
 Bottom Depth : 6500.00
 Total Well Depth: 7544.00
 Latitude : 40.519 N
 Longitude : 104.77667 W
 Grid Offset : 0.43
 Datum: NAD 83

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

Northing: 0.00 Easting: 0.00 GLE: 4867.00

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: 12/20/2018 8:30

End Time: 12/20/2018 9:33

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	0.920	84.529	55.713	99.990	0.900	1.320	0.920	1.598
200.000	0.615	81.571	60.026	199.981	1.440	2.497	0.298	2.883
300.000	0.669	47.514	61.467	299.972	1.951	3.589	0.435	4.085
400.000	0.741	56.853	59.839	399.967	2.563	4.410	0.146	5.101
500.000	0.843	69.443	59.649	499.960	3.120	5.328	0.202	6.174
600.000	0.581	79.603	59.750	599.954	3.601	6.175	0.310	7.148
700.000	0.451	45.640	59.556	699.951	3.987	6.785	0.354	7.870
800.000	0.353	35.267	59.497	799.949	4.280	7.266	0.098	8.433
900.000	0.452	65.292	60.083	899.947	4.356	7.570	0.280	8.733
1000.000	0.411	110.172	61.209	999.946	4.394	7.995	0.384	9.123
1100.000	0.434	94.623	62.053	1099.944	4.429	8.348	0.130	9.450
1200.000	0.288	110.513	61.665	1199.942	4.628	8.582	0.055	9.750
1300.000	0.334	182.989	61.715	1299.941	4.726	8.783	0.330	9.974
1400.000	0.317	328.572	61.432	1399.940	4.781	8.780	0.601	9.997
1500.000	0.126	185.059	61.457	1499.939	4.647	8.543	0.352	9.725
1600.000	0.154	211.121	61.041	1599.938	4.609	8.329	0.078	9.520
1700.000	0.131	191.960	60.788	1699.937	4.544	8.127	0.075	9.311
1800.000	0.074	92.591	61.193	1799.935	4.351	7.911	0.156	9.029
1900.000	0.441	287.102	61.050	1899.934	4.237	7.659	0.550	8.752
2000.000	0.522	254.082	60.587	1999.932	4.050	7.183	0.263	8.246
2100.000	0.297	218.369	59.845	2099.928	3.800	6.542	0.374	7.565

2200.000	0.779	275.296	58.196	2199.925	3.647	5.880	0.674	6.919
2300.000	0.340	130.978	57.310	2299.921	3.308	5.155	0.934	6.125
2400.000	0.685	239.517	53.410	2399.916	3.148	4.240	0.470	5.281
2500.000	0.425	285.285	48.327	2499.909	2.910	3.269	0.452	4.376
2600.000	1.035	263.981	37.817	2599.902	2.761	2.143	0.478	3.494
2700.000	0.776	262.029	22.842	2699.894	2.467	1.039	0.106	2.676
2800.000	0.669	234.408	355.941	2799.885	2.096	-0.149	0.394	2.102
2900.000	1.075	257.735	322.601	2899.876	1.849	-1.414	0.610	2.327
3000.000	0.824	207.942	296.305	2999.867	1.254	-2.537	0.797	2.829
3100.000	0.593	261.432	279.510	3099.858	0.592	-3.536	0.611	3.585
3200.000	0.773	260.438	268.446	3199.849	-0.124	-4.572	0.184	4.574
3300.000	0.823	248.999	263.277	3299.840	-0.677	-5.742	0.095	5.781
3400.000	0.552	282.733	263.918	3399.831	-0.736	-6.906	0.612	6.945
3500.000	0.842	285.759	267.596	3499.823	-0.339	-8.078	0.362	8.085
3600.000	0.579	307.225	271.096	3599.815	0.174	-9.081	0.486	9.083
3700.000	0.723	272.640	273.848	3699.807	0.680	-10.110	0.481	10.132
3800.000	0.423	306.751	275.097	3799.800	0.992	-11.128	0.479	11.172
3900.000	0.454	295.258	275.414	3899.794	1.150	-12.139	0.117	12.193
4000.000	0.851	255.339	275.017	3999.788	1.152	-13.117	0.565	13.168
4100.000	0.744	285.973	274.197	4099.783	1.027	-13.994	0.393	14.031
4200.000	0.454	228.841	273.402	4199.775	0.892	-15.006	0.519	15.032
4300.000	0.804	270.411	272.889	4299.770	0.802	-15.887	0.583	15.907
4400.000	0.827	261.660	272.276	4399.763	0.673	-16.940	0.119	16.953
4500.000	0.547	265.148	271.479	4499.755	0.467	-18.089	0.226	18.095
4600.000	0.754	298.930	270.958	4599.747	0.323	-19.300	0.505	19.302
4700.000	0.871	253.329	271.285	4699.738	0.462	-20.597	0.702	20.602
4800.000	1.091	258.748	271.023	4799.729	0.389	-21.820	0.386	21.824
4900.000	0.631	221.940	269.106	4899.718	-0.359	-23.002	0.602	23.005
5000.000	0.746	252.206	267.258	4999.707	-1.153	-24.077	0.428	24.104
5100.000	1.010	219.157	265.346	5099.695	-2.061	-25.311	0.526	25.395
5200.000	0.669	250.971	263.646	5199.684	-2.933	-26.341	0.453	26.504
5300.000	0.578	214.678	262.001	5299.673	-3.852	-27.409	0.431	27.678
5400.000	1.118	219.328	260.341	5399.661	-4.845	-28.469	0.530	28.878
5500.000	0.866	184.034	258.011	5499.647	-6.206	-29.227	0.664	29.878
5600.000	1.330	204.770	255.490	5599.632	-7.735	-29.888	0.621	30.873
5700.000	0.833	227.846	252.871	5699.615	-9.380	-30.436	0.578	31.849
5800.000	0.799	203.014	251.104	5799.597	-10.803	-31.559	0.374	33.357
5900.000	0.604	203.248	249.874	5899.587	-11.868	-32.385	0.117	34.491
6000.000	0.736	228.400	248.942	5999.579	-12.718	-33.031	0.321	35.394
6100.000	0.585	223.297	247.800	6099.572	-13.689	-33.544	0.271	36.230
6200.000	0.618	235.793	246.643	6199.564	-14.702	-34.045	0.129	37.084
6300.000	1.022	209.304	245.465	6299.555	-15.764	-34.536	0.490	37.964
6400.000	0.814	224.442	244.190	6399.545	-16.937	-35.021	0.320	38.901
6500.000	0.802	218.066	242.802	6499.534	-18.231	-35.477	0.244	39.887