

**GyroTracer Directional:**

Date: 9/20/2018  
 Operator : Adrian Bruner  
 API: 05-123-22105  
 Well Name: **Williams I 34-13X**  
 Field : Noble Energy Inc  
 Tool Type And Number: 1717  
 Bottom Depth : 7100.00  
 Total Well Depth: 7340.00  
 Latitude : 40.438876 N  
 Longitude : 104.771732 W  
 Grid Offset : 0.47

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

Northing: 0.00      Easting: 0.00      Altitude: 4695.00

**Description:**

*Azimuth measured in degrees and referenced to local grid*

*Inclination measured from Vertical*

*Length measured in US survey feet*

Start Time: 9/20/2018 7:14

End Time: 9/20/2018 8:25

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	336.900	336.280	100.000	0.660	-0.290	0.420	0.721
200.000	0.380	351.544	341.496	199.998	1.266	-0.424	0.089	1.335
300.000	0.191	281.289	339.217	299.997	1.670	-0.634	0.356	1.786
400.000	0.111	285.298	334.773	399.996	1.740	-0.820	0.040	1.924
500.000	0.152	326.111	331.617	499.996	1.858	-1.004	0.119	2.112
600.000	0.102	261.882	329.348	599.996	1.968	-1.166	0.134	2.288
700.000	0.174	309.815	326.675	699.995	1.916	-1.259	0.068	2.293
800.000	0.096	97.101	328.557	799.995	1.820	-1.113	0.064	2.133
900.000	0.058	263.134	330.224	899.995	1.755	-1.004	0.201	2.022
1000.000	0.092	138.291	328.029	999.994	1.684	-1.051	0.176	1.985
1100.000	0.204	71.979	330.600	1099.994	1.650	-0.930	0.187	1.894
1200.000	0.333	358.537	339.321	1199.992	2.232	-0.843	0.346	2.386
1300.000	0.291	353.610	342.365	1299.990	2.786	-0.886	0.021	2.923
1400.000	0.437	319.997	341.101	1399.988	3.310	-1.133	0.227	3.499
1500.000	0.501	314.630	336.578	1499.985	3.899	-1.689	0.146	4.249
1600.000	0.464	317.475	332.761	1599.981	4.515	-2.324	0.050	5.078
1700.000	0.507	309.943	329.769	1699.976	5.167	-3.011	0.071	5.980
1800.000	0.668	281.216	325.698	1799.971	5.710	-3.895	0.330	6.912
1900.000	0.900	282.696	318.903	1899.960	6.077	-5.301	0.209	8.064
2000.000	0.710	264.827	312.438	1999.950	6.137	-6.712	0.232	9.095
2100.000	0.764	253.841	306.611	2099.942	5.872	-7.903	0.119	9.846
2200.000	0.825	244.668	300.620	2199.934	5.374	-9.080	0.127	10.551
2300.000	0.580	219.169	294.099	2299.925	4.531	-10.129	0.360	11.096

2400.000	0.837	212.878	287.086	2399.914	3.395	-11.046	0.165	11.556
2500.000	0.856	210.251	280.100	2499.902	2.106	-11.820	0.024	12.006
2600.000	1.005	208.187	272.320	2599.887	0.509	-12.570	0.164	12.581
2700.000	1.070	206.996	265.198	2699.870	-1.128	-13.423	0.119	13.470
2800.000	1.013	208.972	259.271	2799.852	-2.718	-14.343	0.076	14.598
2900.000	1.121	210.537	254.459	2899.837	-4.239	-15.244	0.100	15.823
3000.000	0.934	211.882	250.540	2999.821	-5.709	-16.156	0.083	17.135
3100.000	0.847	208.413	247.533	3099.809	-7.031	-17.003	0.103	18.399
3200.000	0.891	218.510	245.209	3199.797	-8.285	-17.938	0.113	19.759
3300.000	0.853	211.826	243.284	3299.786	-9.466	-18.808	0.089	21.056
3400.000	0.730	206.721	241.322	3399.776	-10.661	-19.490	0.159	22.216
3500.000	0.796	199.419	239.408	3499.767	-11.882	-20.097	0.151	23.347
3600.000	0.473	188.578	237.641	3599.761	-12.920	-20.391	0.305	24.140
3700.000	0.444	186.154	236.056	3699.757	-13.758	-20.440	0.048	24.639
3800.000	0.470	203.604	234.770	3799.753	-14.576	-20.639	0.148	25.267
3900.000	0.511	199.611	233.840	3899.750	-15.342	-20.992	0.044	26.001
4000.000	0.468	205.643	232.906	3999.746	-16.129	-21.331	0.062	26.742
4100.000	0.932	227.492	232.479	4099.738	-17.008	-22.148	0.461	27.925
4200.000	1.520	253.873	233.517	4199.712	-17.891	-24.194	0.826	30.090
4300.000	1.291	273.713	235.283	4299.682	-18.390	-26.541	0.592	32.289
4400.000	1.350	271.150	237.596	4399.655	-18.319	-28.862	0.051	34.185
4500.000	1.099	275.212	239.615	4499.629	-18.255	-31.133	0.315	36.091
4600.000	0.567	272.201	241.026	4599.614	-18.178	-32.830	0.534	37.526
4700.000	0.734	268.859	241.902	4699.606	-18.178	-34.048	0.072	38.597
4800.000	0.707	270.219	242.721	4799.598	-18.219	-35.331	0.020	39.752
4900.000	0.590	269.996	243.325	4899.590	-18.346	-36.517	0.205	40.866
5000.000	0.535	267.752	243.937	4999.586	-18.300	-37.417	0.119	41.652
5100.000	0.167	266.922	244.497	5099.583	-18.203	-38.159	0.324	42.279
5200.000	0.283	281.000	244.872	5199.581	-18.111	-38.614	0.106	42.651
5300.000	0.094	307.347	245.138	5299.581	-17.972	-38.784	0.179	42.746
5400.000	0.362	323.691	245.569	5399.580	-17.712	-38.989	0.298	42.824
5500.000	0.866	277.436	246.465	5499.577	-17.242	-39.587	0.684	43.179
5600.000	0.942	266.288	247.219	5599.565	-17.269	-41.119	0.248	44.598
5700.000	0.929	247.534	247.493	5699.550	-17.713	-42.749	0.282	46.274
5800.000	1.099	239.014	247.289	5799.535	-18.535	-44.287	0.216	48.010
5900.000	0.837	220.640	246.668	5899.520	-19.649	-45.554	0.307	49.611
6000.000	1.194	231.232	246.110	5999.514	-20.474	-46.224	0.415	50.555
6100.000	0.578	217.115	245.545	6099.508	-21.301	-46.839	0.306	51.455
6200.000	0.268	213.160	245.072	6199.506	-21.923	-47.168	0.150	52.013
6300.000	0.154	165.557	244.593	6299.504	-22.414	-47.188	0.214	52.241
6400.000	0.361	247.917	244.393	6399.503	-22.760	-47.488	0.504	52.661
6500.000	0.371	243.878	244.447	6499.501	-22.971	-48.044	0.046	53.253
6600.000	0.359	239.684	244.405	6599.499	-23.271	-48.581	0.010	53.867
6700.000	0.488	231.274	244.190	6699.495	-23.807	-49.226	0.100	54.681
6800.000	0.442	229.829	243.985	6799.492	-24.303	-49.796	0.074	55.410
6900.000	0.360	236.278	243.874	6899.490	-24.683	-50.326	0.084	56.053
7000.000	0.344	233.866	243.718	6999.487	-25.148	-50.923	0.028	56.795
7100.000	0.130	217.360	243.634	7099.485	-25.477	-51.401	0.285	57.368

