

GyroTracer Directional:

Date: 9/27/2018
 Operator : Adrian Bruner
 API: 05-123-29031
 Well Name: **Conrad Federal 17-12**
 Field : Noble Energy Inc
 Tool Type And Number: 1717
 Bottom Depth : 6600.00
 Total Well Depth: 7890.00
 Latitude : 40.328767 N
 Longitude : 104.717533 W
 Grid Offset : 0.51

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

Northing: 0.00 Easting: 0.00 Altitude: 4703.00

Description:

Azimuth measured in degrees and referenced to local grid

Inclination measured from Vertical

Length measured in US survey feet

Start Time: 9/27/2018 8:23

End Time: 9/27/2018 10:17

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
100.020	0.310	162.252	155.298	100.020	-0.500	0.230	0.310	0.550
200.000	0.390	167.035	160.223	199.999	-0.801	0.288	0.094	0.851
300.000	0.241	170.110	155.800	299.998	-1.104	0.496	0.181	1.210
400.000	0.228	68.292	149.203	399.997	-1.425	0.849	0.417	1.659
500.000	0.428	61.619	138.534	499.995	-1.463	1.293	0.311	1.953
600.000	0.307	73.781	124.281	599.994	-1.147	1.682	0.134	2.036
700.000	0.633	5.364	95.740	699.988	-0.207	2.058	0.601	2.068
800.000	1.132	29.455	72.383	799.979	0.866	2.726	0.651	2.861
900.000	1.220	74.266	66.956	899.961	1.828	4.297	0.929	4.670
1000.000	0.988	70.816	67.846	999.937	2.570	6.312	0.280	6.815
1100.000	1.046	73.904	69.983	1099.916	3.022	8.297	0.076	8.830
1200.000	0.771	130.001	74.782	1199.908	2.531	9.306	0.973	9.644
1300.000	0.591	146.981	79.673	1299.902	1.844	10.117	0.289	10.284
1400.000	0.690	106.078	85.404	1399.894	0.884	10.993	0.469	11.028
1500.000	1.048	178.034	90.980	1499.885	-0.197	11.528	1.065	11.530
1600.000	1.675	232.783	101.197	1599.858	-2.063	10.421	1.396	10.623
1700.000	3.746	283.337	110.831	1699.742	-2.202	5.788	2.978	6.193
1800.000	6.370	291.036	284.545	1799.313	0.745	-2.871	2.663	2.966
1900.000	8.010	297.932	291.609	1898.510	5.724	-14.450	1.851	15.542
2000.000	9.580	298.438	294.872	1997.326	12.960	-27.955	1.571	30.813
2100.000	10.770	300.694	296.756	2095.741	21.828	-43.296	1.279	48.487
2200.000	11.197	301.471	297.967	2193.910	31.655	-59.617	0.454	67.499
2300.000	12.125	309.876	299.774	2291.861	43.431	-75.915	1.938	87.461

2400.000	13.314	311.831	302.152	2389.406	58.060	-92.370	1.256	109.102
2500.000	14.610	306.661	303.363	2486.378	73.343	-111.385	1.798	133.363
2600.000	15.190	306.685	303.905	2583.002	88.744	-132.041	0.582	159.092
2700.000	15.570	306.414	304.276	2679.428	104.506	-153.337	0.388	185.564
2800.000	15.844	306.196	304.555	2775.637	120.709	-175.273	0.282	212.817
2900.000	15.630	310.134	304.920	2871.969	137.159	-196.466	1.093	239.607
3000.000	15.651	310.654	305.505	2968.199	154.881	-217.098	0.145	266.683
3100.000	14.186	309.941	305.905	3064.807	171.488	-236.861	1.474	292.423
3200.000	13.450	310.631	306.229	3161.933	186.854	-255.032	0.749	316.158
3300.000	13.614	311.018	306.552	3259.168	202.154	-272.674	0.188	339.437
3400.000	14.120	305.719	306.705	3356.260	217.170	-291.306	1.368	363.348
3500.000	14.398	304.467	306.560	3453.162	231.135	-311.676	0.408	388.027
3600.000	14.733	305.425	306.471	3549.965	245.556	-332.196	0.419	413.100
3700.000	15.230	308.482	306.476	3646.582	260.912	-352.911	0.927	438.887
3800.000	16.110	311.524	306.724	3742.836	278.601	-373.450	1.190	465.922
3900.000	16.106	311.277	306.983	3838.920	296.911	-394.251	0.065	493.548
4000.000	15.920	312.459	307.240	3935.048	315.291	-414.779	0.382	521.009
4100.000	15.372	312.105	307.496	4031.348	333.482	-434.664	0.568	547.853
4200.000	15.118	312.002	307.694	4127.978	350.677	-453.820	0.235	573.521
4300.000	15.195	313.277	307.907	4224.366	368.665	-473.455	0.343	600.061
4400.000	15.540	314.495	308.179	4320.879	386.988	-492.147	0.480	626.074
4500.000	15.420	313.367	308.416	4417.222	405.586	-511.437	0.352	652.739
4600.000	14.930	311.393	308.572	4513.736	423.259	-530.735	0.733	678.843
4700.000	14.115	311.629	308.670	4610.560	439.767	-549.502	0.822	703.809
4800.000	13.901	311.703	308.776	4707.585	455.920	-567.535	0.221	727.983
4900.000	13.423	308.511	308.827	4804.860	470.955	-585.180	0.874	751.156
5000.000	14.490	307.196	308.787	4901.867	485.747	-604.432	1.102	775.427
5100.000	14.091	307.026	308.733	4998.731	500.713	-624.263	0.404	800.261
5200.000	11.193	307.367	308.688	5096.329	513.815	-641.612	2.922	821.992
5300.000	9.087	306.669	308.654	5194.756	524.454	-655.695	2.063	839.636
5400.000	7.350	307.502	308.623	5293.702	533.108	-667.262	1.737	854.074
5500.000	6.218	306.799	308.608	5393.017	540.215	-676.526	1.144	865.748
5600.000	4.518	308.404	308.582	5492.570	545.764	-684.120	1.699	875.145
5700.000	2.524	323.716	308.643	5592.389	550.134	-688.076	2.197	880.963
5800.000	0.650	253.319	308.651	5692.342	551.934	-690.136	2.308	883.696
5900.000	0.490	177.926	308.579	5792.333	550.769	-690.458	0.731	883.220
6000.000	0.530	349.685	308.592	5892.331	550.960	-690.365	1.035	883.267
6100.000	0.381	18.677	308.625	5992.330	551.408	-690.131	0.112	883.364
6200.000	0.732	335.017	308.665	6092.304	552.618	-690.653	0.527	884.527
6300.000	0.483	347.030	308.706	6192.296	553.802	-691.102	0.308	885.618
6400.000	0.846	36.522	308.758	6292.291	554.527	-690.738	0.570	885.787
6500.000	0.641	30.771	308.838	6392.282	555.700	-690.221	0.104	886.119
6600.000	0.830	34.330	308.924	6492.272	556.785	-689.451	0.220	886.200