

**GyroTracer Directional:**

Date: 5/7/2018  
 Operator : Matt Milsness  
 API : 05-123-26618  
 Well Name : **Hertzke N 1-11**  
 Field : Noble Energy Inc  
 Tool Type And Number: 1609  
 Bottom Depth : 7050.00  
 Total Well Depth: 7304.00  
 Latitude : 40.426801 N  
 Longitude : 104.843648 W  
 Grid Offset : 0.42

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

Northing: 0.00      Easting: 0.00      Altitude: 4895.00

**Description:**

*Azimuth measured in degrees and referenced to local grid*

*Inclination measured from Vertical*

*Length measured in US survey feet*

Start Time: 5/7/2018 12:27

End Time: 5/7/2018 13:33

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
101.540	0.410	42.006	87.614	101.540	0.030	0.720	0.404	0.721
200.000	0.471	87.079	72.509	199.997	0.416	1.320	0.348	1.384
300.000	0.488	115.127	85.781	299.993	0.157	2.123	0.194	2.129
400.000	0.472	137.387	97.532	399.990	-0.356	2.696	0.189	2.719
500.000	0.486	150.453	108.310	499.987	-1.022	3.088	0.108	3.253
600.000	0.496	166.860	117.589	599.983	-1.780	3.406	0.149	3.843
700.000	0.599	171.769	125.779	699.979	-2.627	3.645	0.172	4.493
800.000	0.695	178.446	133.563	799.974	-3.606	3.792	0.110	5.233
900.000	0.585	183.622	141.250	899.968	-4.679	3.755	0.056	5.999
1000.000	0.738	199.835	149.118	999.961	-5.872	3.512	0.214	6.842
1100.000	0.749	202.163	156.778	1099.952	-7.100	3.046	0.136	7.725
1200.000	0.770	206.706	163.193	1199.943	-8.332	2.517	0.078	8.704
1300.000	0.809	204.182	168.721	1299.933	-9.535	1.902	0.049	9.723
1400.000	0.710	206.287	173.320	1399.925	-10.671	1.250	0.118	10.744
1500.000	0.610	216.777	177.231	1499.917	-11.629	0.562	0.172	11.643
1600.000	0.641	218.210	180.403	1599.911	-12.591	-0.088	0.040	12.591
1700.000	0.555	227.480	183.623	1699.904	-13.415	-0.850	0.152	13.442
1800.000	0.545	241.202	187.023	1799.898	-14.061	-1.732	0.112	14.167
1900.000	0.595	241.512	190.722	1899.892	-14.511	-2.747	0.054	14.768
2000.000	0.816	255.274	194.431	1999.884	-14.949	-3.847	0.270	15.436
2100.000	0.723	248.035	198.076	2099.877	-15.296	-4.992	0.114	16.090
2200.000	0.703	250.327	201.437	2199.869	-15.675	-6.155	0.070	16.840
2300.000	0.696	242.691	204.586	2299.861	-16.067	-7.351	0.095	17.669

2400.000	0.657	248.386	207.491	2399.853	-16.467	-8.569	0.134	18.563
2500.000	0.829	239.428	210.003	2499.844	-16.978	-9.803	0.182	19.605
2600.000	1.097	224.977	212.023	2599.832	-17.743	-11.097	0.410	20.927
2700.000	1.213	229.704	213.518	2699.810	-19.108	-12.656	0.130	22.919
2800.000	1.356	225.829	214.529	2799.782	-20.812	-14.319	0.198	25.262
2900.000	1.412	219.911	215.111	2899.750	-22.718	-15.973	0.134	27.771
3000.000	1.593	195.333	214.168	2999.716	-25.073	-17.019	0.663	30.304
3100.000	1.460	183.414	212.468	3099.687	-27.434	-17.456	0.411	32.516
3200.000	1.558	186.168	210.149	3199.650	-30.143	-17.508	0.125	34.858
3300.000	1.759	197.650	208.580	3299.607	-33.034	-17.995	0.373	37.617
3400.000	1.352	224.003	208.461	3399.565	-35.562	-19.277	0.817	40.450
3500.000	1.531	220.146	209.155	3499.530	-37.604	-20.977	0.113	43.059
3600.000	1.508	220.853	209.931	3599.494	-39.578	-22.786	0.056	45.669
3700.000	1.537	213.174	210.106	3699.459	-41.775	-24.222	0.194	48.289
3800.000	1.521	208.468	210.147	3799.423	-44.052	-25.585	0.098	50.943
3900.000	1.638	210.191	210.272	3899.385	-46.376	-27.070	0.112	53.699
4000.000	1.329	187.459	209.827	3999.355	-48.652	-27.893	0.595	56.081
4100.000	1.310	142.419	208.224	4099.328	-50.804	-27.268	0.986	57.659
4200.000	1.415	118.816	205.918	4199.299	-52.303	-25.418	0.542	58.152
4300.000	1.611	93.362	203.089	4299.256	-53.065	-22.622	0.733	57.686
4400.000	1.359	91.201	200.395	4399.216	-53.216	-19.785	0.369	56.775
4500.000	1.152	119.331	198.168	4499.190	-53.592	-17.587	0.711	56.404
4600.000	1.029	139.744	196.379	4599.171	-54.899	-16.136	0.416	57.221
4700.000	1.047	153.218	194.939	4699.153	-56.397	-15.048	0.297	58.370
4800.000	1.046	160.574	193.925	4799.138	-57.961	-14.371	0.213	59.715
4900.000	0.807	163.935	193.197	4899.129	-59.202	-13.882	0.156	60.808
5000.000	0.540	173.936	192.784	4999.124	-60.188	-13.657	0.228	61.718
5100.000	0.548	285.876	192.863	5099.121	-60.837	-13.892	0.878	62.403
5200.000	0.451	236.116	193.165	5199.118	-61.394	-14.360	0.172	63.051
5300.000	0.690	244.280	193.743	5299.113	-61.945	-15.150	0.255	63.771
5400.000	1.628	239.454	195.011	5399.092	-62.893	-16.865	0.906	65.114
5500.000	1.559	242.113	196.885	5499.048	-64.230	-19.497	0.145	67.124
5600.000	1.068	243.873	198.220	5599.023	-65.238	-21.475	0.494	68.682
5700.000	0.766	224.910	198.852	5699.015	-65.896	-22.500	0.388	69.631
5800.000	0.685	222.422	199.145	5799.011	-66.478	-23.079	0.158	70.370
5900.000	0.483	213.983	199.392	5899.007	-67.145	-23.636	0.145	71.184
6000.000	0.650	193.804	199.543	5999.001	-68.097	-24.172	0.258	72.260
6100.000	0.742	206.818	199.391	6098.991	-69.426	-24.436	0.228	73.601
6200.000	0.879	216.246	199.365	6198.979	-70.877	-24.911	0.232	75.128
6300.000	0.920	217.059	199.529	6298.963	-72.431	-25.691	0.031	76.852
6400.000	1.138	219.622	199.801	6398.945	-74.029	-26.654	0.208	78.681
6500.000	0.847	256.617	200.388	6498.932	-75.018	-27.881	0.599	80.032
6600.000	1.354	276.955	201.315	6598.920	-75.203	-29.344	0.698	80.725
6700.000	1.130	280.240	202.545	6698.904	-74.816	-31.059	0.070	81.007
6800.000	1.164	294.476	203.790	6798.888	-74.194	-32.708	0.275	81.083
6900.000	1.341	275.908	205.227	6898.864	-73.919	-34.826	0.433	81.712
7000.000	0.975	278.165	206.481	6998.846	-73.677	-36.703	0.265	82.313
7050.000	0.770	320.940	206.982	7048.850	-73.380	-37.360	0.953	82.343

