

GyroTracer Directional:

Date: 10/19/2018
 Operator : Adrian Bruner
 API: 05-123-33521
 Well Name: **Howard USX A 9-2D**
 Field : Noble Energy Inc
 Tool Type And Number: 1719
 Bottom Depth : 7400.00
 Total Well Depth: 7670.00
 Latitude : 40.50402 N
 Longitude : 104.55982 W
 Grid Offset : 0.61

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

Northing: 0.00 Easting: 0.00 Altitude: 4868.00

Description:

Azimuth measured in degrees and referenced to local grid

Inclination measured from Vertical

Length measured in US survey feet

Start Time: 10/19/2018 10:13

End Time: 10/19/2018 12:20

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	0.220	204.822	219.611	100.000	-0.290	-0.240	0.220	0.376
200.000	0.758	186.504	196.898	199.998	-0.598	-0.182	0.558	0.625
300.000	0.478	160.562	184.188	299.994	-1.333	-0.098	0.331	1.336
400.000	0.488	203.924	183.713	399.991	-2.136	-0.139	0.328	2.141
500.000	0.571	225.027	185.656	499.987	-2.922	-0.289	0.406	2.936
600.000	0.529	240.149	188.346	599.982	-3.750	-0.550	0.253	3.790
700.000	0.789	228.039	194.409	699.977	-4.414	-1.134	0.337	4.557
800.000	0.731	266.610	206.656	799.969	-4.554	-2.286	0.441	5.096
900.000	1.359	64.874	208.026	899.963	-4.160	-2.215	1.919	4.713
1000.000	3.053	67.385	148.691	999.875	-2.206	1.342	1.708	2.583
1100.000	6.220	68.540	84.671	1099.506	0.859	9.207	3.151	9.247
1200.000	8.898	70.473	76.050	1198.634	5.343	21.508	2.694	22.161
1300.000	11.105	69.605	73.568	1297.180	11.048	37.460	2.216	39.055
1400.000	12.567	70.024	72.266	1395.145	17.998	56.280	1.465	59.087
1500.000	14.519	68.201	71.438	1492.336	26.288	78.284	2.002	82.579
1600.000	16.470	67.148	70.266	1588.656	36.931	102.954	1.955	109.377
1700.000	18.026	68.725	69.754	1684.288	47.954	130.013	1.619	138.575
1800.000	19.407	68.914	69.573	1779.045	59.512	159.794	1.359	170.516
1900.000	20.585	68.045	69.358	1872.977	72.198	191.657	1.228	204.805
2000.000	22.392	68.151	69.173	1966.047	85.817	225.595	1.792	241.366
2100.000	24.040	69.762	69.164	2057.847	99.952	262.631	1.762	281.008
2200.000	25.240	69.226	69.217	2148.797	114.458	301.581	1.235	322.571
2300.000	26.978	65.557	68.951	2238.548	131.679	342.163	2.364	366.626

2400.000	28.316	65.364	68.544	2327.181	151.015	384.232	1.365	412.843
2500.000	28.499	66.305	68.243	2415.123	170.654	427.596	0.475	460.392
2600.000	28.520	67.073	68.091	2502.982	189.597	471.434	0.377	508.131
2700.000	28.621	67.968	68.038	2590.772	207.946	515.663	0.456	556.013
2800.000	28.790	68.808	68.068	2678.505	225.599	560.286	0.453	603.999
2900.000	28.540	68.397	68.102	2766.269	243.140	604.889	0.347	651.926
3000.000	28.199	68.639	68.119	2854.209	260.697	649.141	0.361	699.534
3100.000	27.290	70.118	68.214	2942.859	276.792	692.521	1.137	745.787
3200.000	27.600	70.825	68.349	3031.647	292.118	735.899	0.458	791.758
3300.000	27.367	69.481	68.453	3120.407	307.692	779.244	0.669	837.792
3400.000	27.647	69.344	68.501	3209.153	323.920	822.381	0.285	883.875
3500.000	27.269	70.511	68.563	3297.771	339.962	865.848	0.650	930.198
3600.000	26.538	70.891	68.656	3386.871	355.071	908.656	0.740	975.567
3700.000	25.260	70.530	68.740	3476.964	369.469	949.585	1.287	1018.930
3800.000	24.713	69.868	68.806	3567.479	383.727	989.631	0.609	1061.421
3900.000	24.691	67.284	68.809	3658.338	398.785	1028.588	1.092	1103.187
4000.000	24.668	66.488	68.732	3749.137	415.357	1067.069	0.332	1145.058
4100.000	26.444	68.348	68.685	3839.402	431.848	1106.804	1.943	1188.069
4200.000	28.482	68.622	68.680	3928.022	448.784	1149.915	2.041	1234.387
4300.000	29.866	71.481	68.710	4015.374	465.859	1195.495	1.949	1283.056
4400.000	31.165	72.727	68.853	4101.495	481.170	1243.953	1.441	1333.771
4500.000	31.450	72.192	68.991	4186.782	496.862	1293.751	0.387	1385.880
4600.000	30.399	71.864	69.098	4272.678	512.691	1342.441	1.070	1437.010
4700.000	28.254	71.794	69.184	4359.836	528.076	1388.979	2.057	1485.977
4800.000	28.179	72.039	69.271	4448.058	542.594	1433.767	0.114	1533.002
4900.000	27.040	70.159	69.339	4536.339	557.467	1478.320	1.424	1579.937
5000.000	26.646	69.695	69.346	4625.390	573.329	1520.958	0.432	1625.429
5100.000	25.441	68.832	69.343	4715.212	588.910	1562.056	1.290	1669.382
5200.000	22.740	69.381	69.337	4806.363	603.569	1600.448	2.663	1710.477
5300.000	20.864	68.901	69.335	4899.136	616.803	1635.316	1.909	1747.771
5400.000	19.829	66.633	69.308	4993.184	629.572	1666.802	1.324	1781.738
5500.000	18.838	63.938	69.226	5087.594	643.598	1696.619	1.334	1814.589
5600.000	19.292	65.328	69.154	5182.194	657.238	1726.026	0.649	1846.924
5700.000	17.929	64.035	69.086	5276.573	671.057	1756.037	1.437	1879.889
5800.000	15.586	62.080	68.992	5372.471	684.038	1781.200	2.390	1908.030
5900.000	12.530	63.515	68.922	5469.449	694.922	1802.988	3.101	1932.274
6000.000	9.269	66.104	68.886	5567.560	702.992	1820.492	3.296	1951.510
6100.000	8.250	63.894	68.848	5666.390	709.665	1834.181	1.079	1966.684
6200.000	6.292	65.178	68.812	5765.562	715.417	1845.587	2.016	1979.397
6300.000	4.635	60.764	68.793	5865.149	719.288	1853.725	1.697	1988.384
6400.000	3.865	85.880	68.789	5964.889	721.967	1860.327	2.004	1995.508
6500.000	2.022	115.470	68.867	6064.757	720.929	1865.130	2.338	1999.612
6600.000	1.109	118.472	68.929	6164.721	719.347	1867.064	1.000	2000.847
6700.000	1.016	113.127	68.964	6264.710	718.445	1868.108	0.106	2001.497
6800.000	0.370	93.508	68.978	6364.703	718.355	1869.222	0.618	2002.505
6900.000	1.302	67.289	68.976	6464.690	718.919	1870.519	0.953	2003.918
7000.000	0.756	32.315	68.955	6564.673	720.180	1871.723	0.709	2005.494
7100.000	0.952	26.016	68.920	6664.650	721.916	1872.845	0.322	2007.165
7200.000	1.529	20.335	68.874	6764.619	724.081	1874.014	0.640	2009.035
7300.000	1.263	53.168	68.831	6864.587	726.192	1875.241	0.858	2010.941

7400.000	0.907	27.708	68.804	6964.560	727.802	1876.757	0.631	2012.936
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