

GyroTracer Directional:

Date: 4/16/2018
 Operator : Derek Lewis
 API : 05-123-12862
 Well Name : Nelson 12-22
 Field : Noble Energy Inc
 Tool Type And Number: 1719
 Bottom Depth : 6000.00
 Total Well Depth: 7180.00
 Latitude : 40.469855 N
 Longitude : 104.656582 W
 Grid Offset : 0.54

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

Northing: 0.00 Easting: 0.00 Altitude: 4708.00

Description:

Azimuth measured in degrees and referenced to local grid

Inclination measured from Vertical

Length measured in US survey feet

Start Time: 4/16/2018 14:31

End Time: 4/16/2018 16:00

| 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 | 0.210 | 13.989 | 57.374 | 99.998 | 0.307 | 0.479 | 0.485 | 0.569 |
| 200.000 | 0.260 | 16.985 | 50.985 | 199.997 | 0.657 | 0.811 | 0.042 | 1.044 |
| 300.000 | 0.370 | 53.432 | 41.085 | 299.994 | 1.270 | 1.107 | 0.222 | 1.685 |
| 400.000 | 0.700 | 24.965 | 36.922 | 399.988 | 2.162 | 1.624 | 0.405 | 2.704 |
| 500.000 | 0.840 | 5.757 | 34.299 | 499.981 | 3.199 | 2.182 | 0.299 | 3.872 |
| 600.000 | 0.580 | 16.982 | 31.486 | 599.974 | 4.286 | 2.625 | 0.277 | 5.026 |
| 700.000 | 0.540 | 42.142 | 32.652 | 699.966 | 5.236 | 3.355 | 0.241 | 6.219 |
| 800.000 | 0.860 | 42.071 | 32.847 | 799.957 | 6.310 | 4.074 | 0.315 | 7.511 |
| 900.000 | 0.890 | 56.639 | 34.443 | 899.949 | 7.233 | 4.960 | 0.225 | 8.770 |
| 1000.000 | 0.850 | 42.064 | 35.712 | 999.940 | 8.138 | 5.850 | 0.210 | 10.023 |
| 1100.000 | 0.890 | 50.234 | 36.673 | 1099.930 | 9.137 | 6.804 | 0.135 | 11.392 |
| 1200.000 | 0.680 | 56.283 | 38.728 | 1199.917 | 10.099 | 8.099 | 0.230 | 12.946 |
| 1300.000 | 1.110 | 45.182 | 39.714 | 1299.900 | 11.333 | 9.413 | 0.449 | 14.732 |
| 1400.000 | 0.970 | 29.316 | 40.053 | 1399.883 | 12.679 | 10.659 | 0.320 | 16.564 |
| 1500.000 | 0.930 | 33.953 | 39.672 | 1499.865 | 14.202 | 11.779 | 0.064 | 18.451 |
| 1600.000 | 1.240 | 28.698 | 39.407 | 1599.846 | 15.749 | 12.939 | 0.307 | 20.383 |
| 1700.000 | 1.180 | 32.780 | 39.333 | 1699.826 | 17.279 | 14.159 | 0.098 | 22.339 |
| 1800.000 | 0.780 | 41.300 | 39.546 | 1799.811 | 18.545 | 15.312 | 0.432 | 24.049 |
| 1900.000 | 0.640 | 38.229 | 39.563 | 1899.800 | 19.691 | 16.268 | 0.146 | 25.542 |
| 2000.000 | 0.750 | 63.967 | 40.300 | 1999.793 | 20.333 | 17.244 | 0.311 | 26.660 |
| 2100.000 | 0.280 | 100.342 | 40.881 | 2099.790 | 20.648 | 17.874 | 0.551 | 27.309 |
| 2200.000 | 0.470 | 71.416 | 41.395 | 2199.786 | 21.030 | 18.537 | 0.273 | 28.033 |
| 2300.000 | 0.210 | 103.252 | 41.364 | 2299.785 | 21.405 | 18.847 | 0.269 | 28.519 |

| | | | | | | | | |
|----------|-------|---------|--------|----------|--------|--------|-------|--------|
| 2400.000 | 0.370 | 13.534 | 41.570 | 2399.783 | 21.652 | 19.204 | 0.430 | 28.941 |
| 2500.000 | 0.490 | 67.400 | 41.945 | 2499.781 | 21.893 | 19.674 | 0.381 | 29.434 |
| 2600.000 | 0.470 | 154.590 | 42.892 | 2599.779 | 21.657 | 20.119 | 0.612 | 29.560 |
| 2700.000 | 0.660 | 127.529 | 44.430 | 2699.775 | 21.102 | 20.687 | 0.318 | 29.551 |
| 2800.000 | 0.350 | 131.835 | 45.554 | 2799.773 | 20.573 | 20.975 | 0.310 | 29.380 |
| 2900.000 | 0.740 | 167.432 | 47.485 | 2899.767 | 19.729 | 21.519 | 0.504 | 29.194 |
| 3000.000 | 0.280 | 161.617 | 48.594 | 2999.763 | 18.892 | 21.424 | 0.482 | 28.564 |
| 3100.000 | 0.190 | 226.766 | 49.711 | 3099.760 | 18.197 | 21.465 | 0.237 | 28.140 |
| 3200.000 | 0.600 | 238.830 | 50.500 | 3199.755 | 17.415 | 21.125 | 0.413 | 27.378 |
| 3300.000 | 0.650 | 243.370 | 50.430 | 3299.751 | 16.956 | 20.518 | 0.087 | 26.618 |
| 3400.000 | 0.070 | 207.181 | 49.813 | 3399.750 | 16.931 | 20.045 | 0.607 | 26.239 |
| 3500.000 | 0.110 | 28.235 | 49.305 | 3499.748 | 16.801 | 19.536 | 0.215 | 25.767 |
| 3600.000 | 0.510 | 253.907 | 48.520 | 3599.746 | 16.836 | 19.044 | 0.569 | 25.419 |
| 3700.000 | 0.350 | 318.295 | 47.469 | 3699.744 | 17.148 | 18.694 | 0.432 | 25.368 |
| 3800.000 | 0.460 | 258.791 | 46.285 | 3799.740 | 17.129 | 17.915 | 0.415 | 24.786 |
| 3900.000 | 0.200 | 232.039 | 44.925 | 3899.737 | 17.258 | 17.213 | 0.456 | 24.375 |
| 4000.000 | 0.620 | 279.099 | 44.025 | 3999.735 | 17.327 | 16.747 | 0.504 | 24.097 |
| 4100.000 | 0.570 | 317.647 | 42.396 | 4099.732 | 17.602 | 16.071 | 0.379 | 23.835 |
| 4200.000 | 0.750 | 301.505 | 40.786 | 4199.729 | 17.975 | 15.508 | 0.268 | 23.740 |
| 4300.000 | 0.120 | 348.414 | 39.205 | 4299.725 | 18.487 | 15.080 | 0.739 | 23.857 |
| 4400.000 | 0.790 | 333.099 | 37.537 | 4399.720 | 19.136 | 14.704 | 0.670 | 24.133 |
| 4500.000 | 0.750 | 7.414 | 36.467 | 4499.715 | 20.000 | 14.781 | 0.397 | 24.869 |
| 4600.000 | 0.710 | 338.090 | 35.171 | 4599.709 | 21.033 | 14.822 | 0.367 | 25.731 |
| 4700.000 | 0.870 | 276.268 | 32.560 | 4699.701 | 21.607 | 13.797 | 0.698 | 25.636 |
| 4800.000 | 0.730 | 267.498 | 29.182 | 4799.688 | 22.033 | 12.305 | 0.180 | 25.236 |
| 4900.000 | 0.560 | 251.822 | 26.241 | 4899.678 | 22.108 | 10.898 | 0.216 | 24.649 |
| 5000.000 | 0.950 | 258.177 | 23.163 | 4999.664 | 21.834 | 9.342 | 0.384 | 23.749 |
| 5100.000 | 0.420 | 244.223 | 20.617 | 5099.654 | 21.480 | 8.081 | 0.553 | 22.950 |
| 5200.000 | 0.360 | 215.933 | 18.884 | 5199.649 | 21.043 | 7.198 | 0.208 | 22.240 |
| 5300.000 | 0.340 | 206.916 | 17.633 | 5299.646 | 20.773 | 6.603 | 0.064 | 21.797 |
| 5400.000 | 0.300 | 322.360 | 15.797 | 5399.641 | 20.568 | 5.819 | 0.547 | 21.375 |
| 5500.000 | 0.160 | 334.669 | 15.954 | 5499.639 | 21.046 | 6.017 | 0.164 | 21.890 |
| 5600.000 | 0.435 | 49.967 | 16.152 | 5599.636 | 21.603 | 6.257 | 0.413 | 22.491 |
| 5700.000 | 0.370 | 80.347 | 17.434 | 5699.633 | 21.977 | 6.901 | 0.222 | 23.035 |
| 5800.000 | 0.630 | 34.885 | 17.888 | 5799.631 | 22.465 | 7.251 | 0.454 | 23.606 |
| 5900.000 | 0.310 | 69.884 | 19.803 | 5899.624 | 22.884 | 8.240 | 0.420 | 24.322 |
| 6000.000 | 0.350 | 92.770 | 21.943 | 5999.616 | 23.286 | 9.381 | 0.138 | 25.105 |