

Company: Extraction Oil & Gas
 Well/API: Thronson MC 2-4/05-013-06417
 Tool Type: North Seeking Rate Gyro
 Rig Name: Production/CoreTech
 County/State: Boulder/Colorado
 VS-Azi: 0.000 Degrees
 Latitude: 40.08537, Longitude: -105.09142
 All Azimuths referenced to True North
 No Grid Correction Applied



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GL Elevation = 5078
 Error Model: VESSI_GYROFLEX_SLICKLINE.IPM

| Measured Depth FT | Incl Angle Deg | Drift Direction Deg | TVD FT | N/S FT | E/W FT | Vertical Section FT | Closure Distance FT | Closure Direction Deg | Dogleg Severity Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-----------|-----------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **** |
| 100.000 | 0.290 | 138.433 | 100.000 | -0.189 | 0.168 | -0.189 | 0.253 | 138.433 | 0.290 |
| 200.000 | 0.376 | 235.476 | 199.998 | -0.565 | 0.066 | -0.565 | 0.569 | 173.348 | 0.502 |
| 300.000 | 0.331 | 212.388 | 299.997 | -0.994 | -0.359 | -0.994 | 1.057 | 199.846 | 0.148 |
| 400.000 | 0.723 | 214.556 | 399.992 | -1.758 | -0.871 | -1.758 | 1.962 | 206.370 | 0.393 |
| 500.000 | 0.694 | 231.393 | 499.985 | -2.655 | -1.702 | -2.655 | 3.154 | 212.666 | 0.209 |
| 600.000 | 1.164 | 236.851 | 599.971 | -3.588 | -3.025 | -3.588 | 4.693 | 220.138 | 0.478 |
| 700.000 | 1.586 | 232.669 | 699.942 | -4.982 | -4.975 | -4.982 | 7.041 | 224.963 | 0.434 |
| 800.000 | 2.014 | 235.844 | 799.893 | -6.808 | -7.530 | -6.808 | 10.151 | 227.884 | 0.440 |
| 900.000 | 2.032 | 234.246 | 899.830 | -8.830 | -10.423 | -8.830 | 13.661 | 229.729 | 0.059 |
| 1000.000 | 1.970 | 238.523 | 999.770 | -10.764 | -13.327 | -10.764 | 17.131 | 231.075 | 0.162 |
| 1100.000 | 2.002 | 237.691 | 1099.709 | -12.595 | -16.270 | -12.595 | 20.575 | 232.256 | 0.044 |
| 1200.000 | 1.961 | 240.571 | 1199.650 | -14.369 | -19.237 | -14.369 | 24.011 | 233.241 | 0.108 |
| 1300.000 | 1.806 | 244.099 | 1299.596 | -15.899 | -22.145 | -15.899 | 27.261 | 234.324 | 0.193 |
| 1400.000 | 1.782 | 245.070 | 1399.547 | -17.242 | -24.972 | -17.242 | 30.347 | 235.377 | 0.039 |
| 1500.000 | 1.653 | 251.410 | 1499.502 | -18.358 | -27.750 | -18.358 | 33.272 | 236.514 | 0.229 |
| 1600.000 | 1.215 | 271.394 | 1599.471 | -18.792 | -30.177 | -18.792 | 35.549 | 238.089 | 0.659 |
| 1700.000 | 1.154 | 284.393 | 1699.450 | -18.516 | -32.212 | -18.516 | 37.154 | 240.110 | 0.275 |
| 1800.000 | 1.318 | 298.330 | 1799.427 | -17.720 | -34.199 | -17.720 | 38.517 | 242.610 | 0.341 |
| 1900.000 | 1.440 | 309.404 | 1899.398 | -16.377 | -36.182 | -16.377 | 39.716 | 245.648 | 0.292 |
| 2000.000 | 1.495 | 311.587 | 1999.365 | -14.714 | -38.128 | -14.714 | 40.869 | 248.899 | 0.078 |
| 2100.000 | 1.586 | 338.816 | 2099.330 | -12.558 | -39.604 | -12.558 | 41.547 | 252.407 | 0.730 |
| 2200.000 | 1.715 | 343.956 | 2199.289 | -9.829 | -40.517 | -9.829 | 41.693 | 256.364 | 0.196 |
| 2300.000 | 1.606 | 335.115 | 2299.247 | -7.120 | -41.521 | -7.120 | 42.127 | 260.270 | 0.278 |

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|----------|-------|---------|----------|--------|---------|--------|--------|---------|-------|
| 2400.000 | 1.425 | 341.013 | 2399.212 | -4.673 | -42.515 | -4.673 | 42.771 | 263.727 | 0.239 |
| 2500.000 | 1.512 | 341.204 | 2499.179 | -2.248 | -43.344 | -2.248 | 43.403 | 267.031 | 0.088 |
| 2600.000 | 1.593 | 339.485 | 2599.142 | 0.303 | -44.257 | 0.303 | 44.258 | 270.393 | 0.093 |
| 2700.000 | 1.788 | 339.489 | 2699.099 | 3.066 | -45.291 | 3.066 | 45.394 | 273.873 | 0.195 |
| 2800.000 | 1.723 | 344.974 | 2799.052 | 5.979 | -46.227 | 5.979 | 46.612 | 277.370 | 0.180 |
| 2900.000 | 1.681 | 333.044 | 2899.008 | 8.739 | -47.281 | 8.739 | 48.082 | 280.471 | 0.356 |
| 3000.000 | 1.607 | 340.907 | 2998.967 | 11.371 | -48.405 | 11.371 | 49.723 | 283.220 | 0.237 |
| 3100.000 | 1.112 | 328.605 | 3098.939 | 13.525 | -49.369 | 13.525 | 51.188 | 285.320 | 0.572 |
| 3200.000 | 0.767 | 325.938 | 3198.925 | 14.908 | -50.250 | 14.908 | 52.415 | 286.524 | 0.348 |
| 3300.000 | 0.485 | 311.935 | 3298.919 | 15.745 | -50.940 | 15.745 | 53.318 | 287.176 | 0.319 |
| 3400.000 | 0.703 | 295.480 | 3398.914 | 16.292 | -51.809 | 16.292 | 54.310 | 287.457 | 0.275 |
| 3500.000 | 0.806 | 270.728 | 3498.905 | 16.565 | -53.066 | 16.565 | 55.592 | 287.336 | 0.339 |
| 3600.000 | 0.823 | 287.150 | 3598.895 | 16.786 | -54.456 | 16.786 | 56.984 | 287.132 | 0.233 |
| 3700.000 | 0.670 | 275.775 | 3698.887 | 17.056 | -55.723 | 17.056 | 58.275 | 287.019 | 0.212 |
| 3800.000 | 0.669 | 304.327 | 3798.880 | 17.444 | -56.787 | 17.444 | 59.406 | 287.077 | 0.330 |
| 3900.000 | 0.816 | 315.863 | 3898.872 | 18.285 | -57.765 | 18.285 | 60.590 | 287.565 | 0.209 |
| 4000.000 | 0.696 | 298.001 | 3998.863 | 19.081 | -58.797 | 19.081 | 61.816 | 287.980 | 0.263 |
| 4100.000 | 0.775 | 304.369 | 4098.855 | 19.748 | -59.892 | 19.748 | 63.064 | 288.249 | 0.113 |
| 4200.000 | 1.083 | 314.824 | 4198.842 | 20.796 | -61.120 | 20.796 | 64.561 | 288.791 | 0.351 |
| 4300.000 | 1.314 | 322.163 | 4298.820 | 22.368 | -62.494 | 22.368 | 66.376 | 289.693 | 0.276 |
| 4400.000 | 1.194 | 312.078 | 4398.796 | 23.971 | -63.970 | 23.971 | 68.314 | 290.542 | 0.251 |
| 4500.000 | 1.276 | 315.316 | 4498.773 | 25.461 | -65.526 | 25.461 | 70.299 | 291.234 | 0.108 |
| 4600.000 | 1.404 | 298.666 | 4598.746 | 26.840 | -67.384 | 26.840 | 72.533 | 291.718 | 0.408 |
| 4700.000 | 1.514 | 280.318 | 4698.714 | 27.665 | -69.759 | 27.665 | 75.044 | 291.632 | 0.478 |
| 4800.000 | 1.597 | 281.183 | 4798.677 | 28.171 | -72.426 | 28.171 | 77.712 | 291.254 | 0.086 |
| 4900.000 | 1.353 | 291.533 | 4898.644 | 28.875 | -74.891 | 28.875 | 80.265 | 291.085 | 0.360 |
| 5000.000 | 0.961 | 312.813 | 4998.624 | 29.878 | -76.604 | 29.878 | 82.225 | 291.307 | 0.575 |
| 5100.000 | 0.951 | 326.553 | 5098.610 | 31.141 | -77.677 | 31.141 | 83.686 | 291.846 | 0.229 |
| 5200.000 | 0.877 | 328.899 | 5198.598 | 32.489 | -78.530 | 32.489 | 84.985 | 292.475 | 0.083 |
| 5300.000 | 0.846 | 336.347 | 5298.586 | 33.820 | -79.221 | 33.820 | 86.138 | 293.118 | 0.116 |
| 5400.000 | 0.816 | 341.478 | 5398.576 | 35.170 | -79.743 | 35.170 | 87.154 | 293.800 | 0.080 |
| 5500.000 | 0.737 | 340.086 | 5498.567 | 36.450 | -80.188 | 36.450 | 88.084 | 294.444 | 0.081 |
| 5600.000 | 0.686 | 318.083 | 5598.559 | 37.500 | -80.807 | 37.500 | 89.084 | 294.894 | 0.276 |
| 5700.000 | 0.676 | 315.722 | 5698.552 | 38.368 | -81.619 | 38.368 | 90.187 | 295.177 | 0.030 |
| 5800.000 | 0.912 | 335.733 | 5798.543 | 39.516 | -82.358 | 39.516 | 91.347 | 295.632 | 0.361 |
| 5900.000 | 1.355 | 338.090 | 5898.523 | 41.339 | -83.126 | 41.339 | 92.838 | 296.441 | 0.445 |
| 6000.000 | 1.130 | 335.208 | 5998.499 | 43.331 | -83.981 | 43.331 | 94.501 | 297.292 | 0.233 |
| 6100.000 | 1.278 | 334.495 | 6098.477 | 45.233 | -84.875 | 45.233 | 96.176 | 298.055 | 0.148 |
| 6200.000 | 1.699 | 326.799 | 6198.443 | 47.480 | -86.167 | 47.480 | 98.382 | 298.856 | 0.466 |

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|----------|-------|---------|----------|--------|---------|--------|---------|---------|-------|
| 6300.000 | 1.506 | 307.933 | 6298.405 | 49.528 | -88.015 | 49.528 | 100.994 | 299.367 | 0.559 |
| 6400.000 | 1.558 | 339.558 | 6398.371 | 51.610 | -89.527 | 51.610 | 103.337 | 299.962 | 0.836 |
| 6500.000 | 2.156 | 346.134 | 6498.318 | 54.710 | -90.452 | 54.710 | 105.711 | 301.168 | 0.634 |
| 6600.000 | 2.017 | 343.309 | 6598.252 | 58.222 | -91.408 | 58.222 | 108.376 | 302.495 | 0.173 |
| 6700.000 | 2.496 | 354.468 | 6698.174 | 62.075 | -92.124 | 62.075 | 111.086 | 303.973 | 0.648 |
| 6800.000 | 2.434 | 353.907 | 6798.082 | 66.354 | -92.559 | 66.354 | 113.886 | 305.636 | 0.067 |
| 6900.000 | 2.838 | 5.335 | 6897.976 | 70.930 | -92.554 | 70.930 | 116.608 | 307.465 | 0.661 |
| 7000.000 | 2.906 | 16.203 | 6997.852 | 75.830 | -91.617 | 75.830 | 118.928 | 309.614 | 0.548 |
| 7100.000 | 2.900 | 21.375 | 7097.723 | 80.619 | -89.988 | 80.619 | 120.819 | 311.857 | 0.262 |
| 7200.000 | 2.795 | 17.055 | 7197.600 | 85.306 | -88.350 | 85.306 | 122.813 | 313.996 | 0.239 |
| 7300.000 | 2.401 | 25.405 | 7297.497 | 89.529 | -86.737 | 89.529 | 124.654 | 315.908 | 0.546 |
| 7400.000 | 2.305 | 13.977 | 7397.414 | 93.372 | -85.353 | 93.372 | 126.504 | 317.569 | 0.478 |

HORIZONTAL DISPLACEMENT IS
126.504 FEET AT 317.569 DEGREES

