



## GAMMA RAY

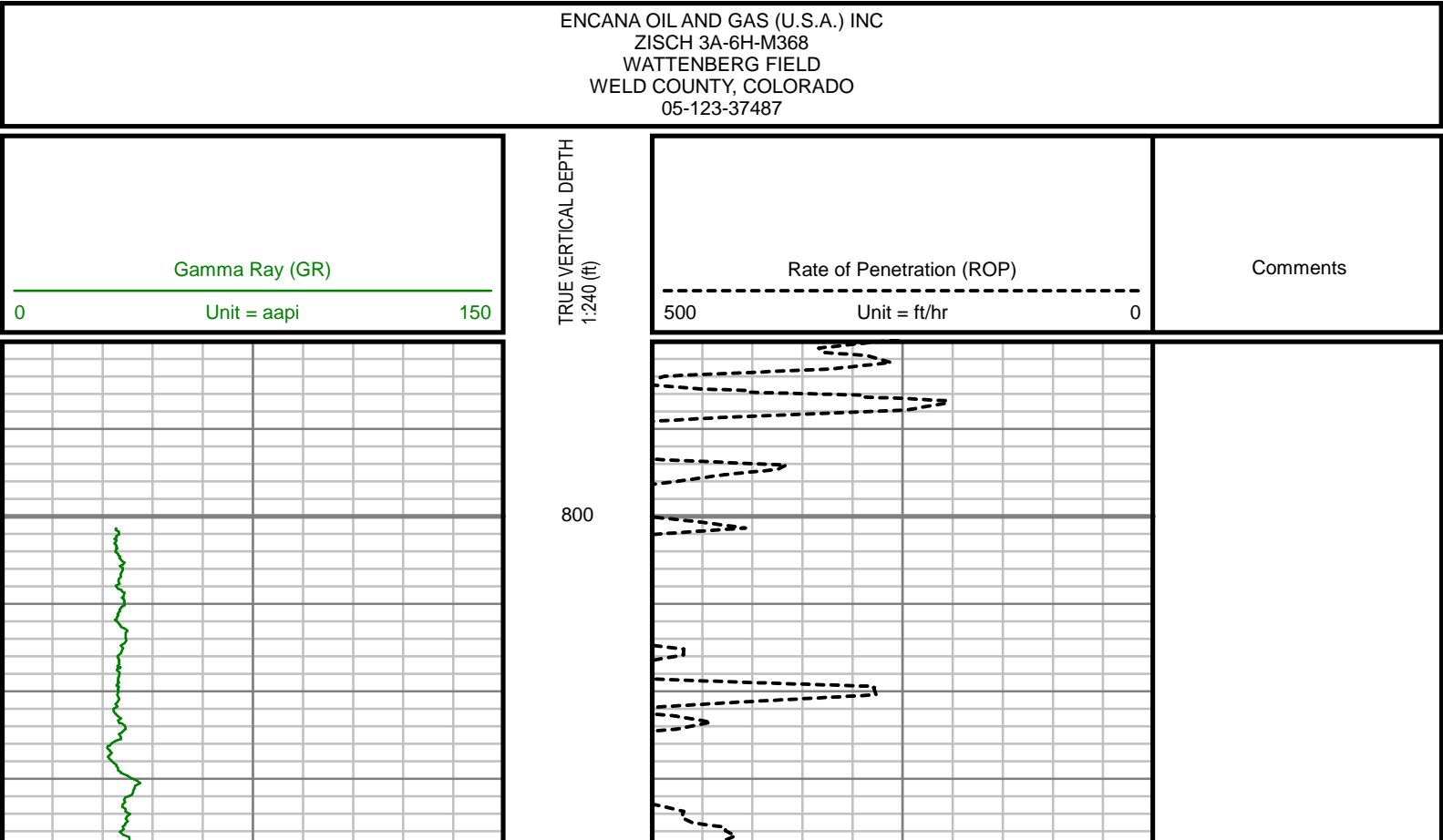
5" = 100' FEET TVD

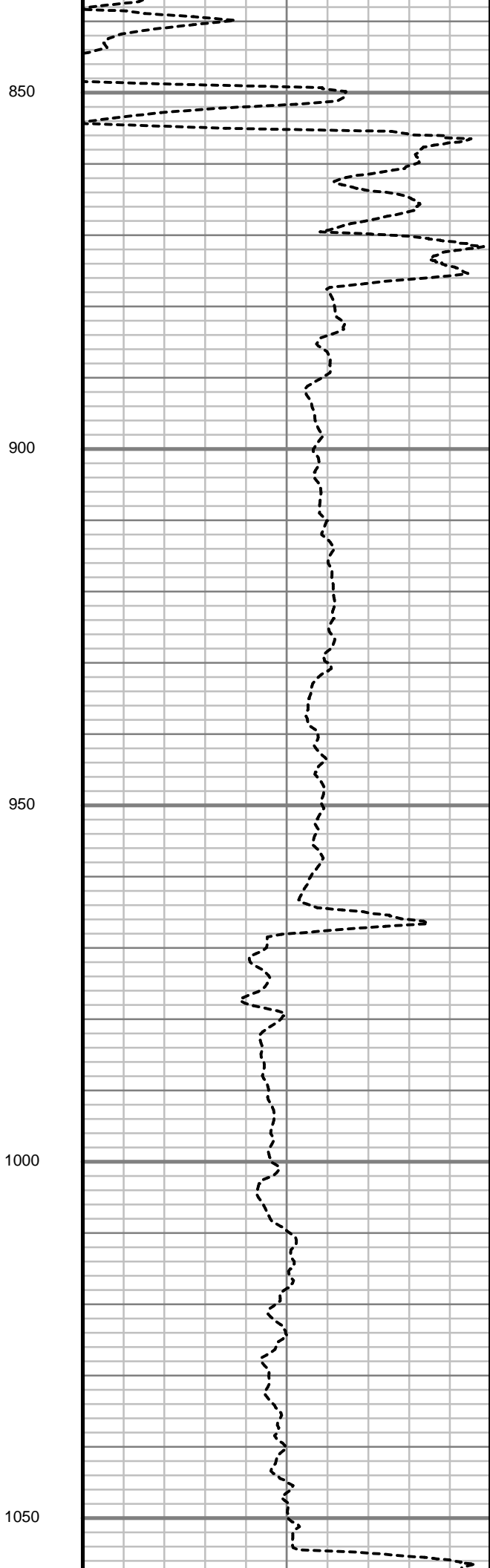
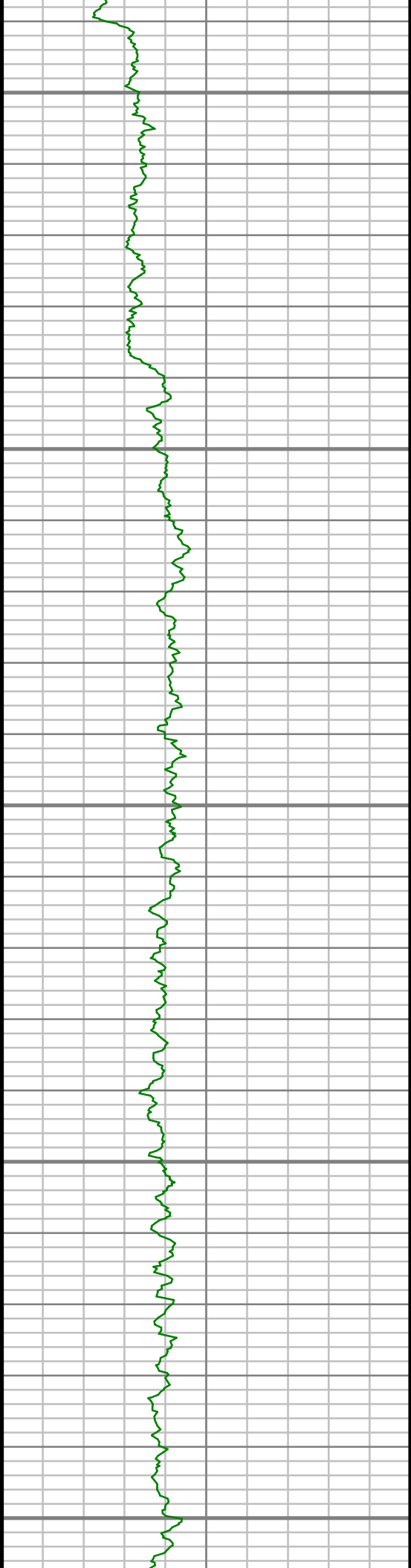
| COMPANY : ENCANANA OIL AND GAS ( U.S.A. ) INC<br>WELL : ZISCH 3A-6H-M368<br>FIELD : WATTENBERG<br>COUNTY : WELD<br>STATE : COLORADO<br>COUNTRY : U.S.A.<br><br>UWI : 05-123-37487 |         |       |                        |  |         | COMPANY : ENCANANA OIL AND GAS ( U.S.A. ) INC<br>WELL : ZISCH 3A-6H-M368<br>FIELD : WATTENBERG<br>COUNTY : WELD<br>STATE : COLORADO<br>COUNTRY : U.S.A.<br><br>UWI : 05-123-37487 |  |                 |     |  |  |
|---|---------|-------|------------------------|--|---------|---|--|-----------------|-----|--|--|
| DEPTH REF. : R.K.B.   |         |       |                        |  |         | OTHER SERVICES  |  |                 |     |  |  |
| REF. HEIGHT : 13.000 ft   |         |       | R.K.B. to Ground Level |  |         | DIRECTIONAL   |  |                 | ROP |  |  |
| GROUND LEVEL : 5163.000 ft  |         |       | G.L. to MEAN SEA LEVEL |  |         |   |  |                 |     |  |  |
| BOREHOLE RECORD   |         |       |                        | DEVIATION RECORD                       |         |   |  |                 |     |  |  |
| HOLE SIZE in  | FROM Ft | TO Ft |                        | INCLINATION deg                        | FROM Ft | TO Ft   |  |                 |     |  |  |
| 12.25   | 0       | 860   |                        | 0 - 8                                  | 0       | 860   |  |                 |     |  |  |
| 8.75  | 860     | 7627  |                        | 8 - 86                                 | 860     | 7627  |  |                 |     |  |  |
| 6.125   | 7627    | 11425 |                        | 86 - 93                                | 7627    | 11425   |  |                 |     |  |  |
|   |         |       |                        |  |         |   |  |                 |     |  |  |
|   |         |       |                        |  |         |   |  |                 |     |  |  |
| CASING RECORD   |         |       |                        |  |         |   |  |                 |     |  |  |
| CASING SIZE in  | FROM Ft | TO Ft |                        |  |         |   |  |                 |     |  |  |
| 9.625   | 0       | 848   |                        |  |         |   |  |                 |     |  |  |
| 7   | 0       | 7617  |                        |  |         |   |  |                 |     |  |  |
|   |         |       |                        | DRILLING CO.: ENSIGN                   |         |   |  |                 |     |  |  |
|   |         |       |                        | RLG:124                                |         |   |  |                 |     |  |  |
|   |         |       |                        | LMD UNIT NO.: C70-EW4#8DISTRICT:CASPER |         |   |  |                 |     |  |  |
|   |         |       |                        | SPUD DATE: 05/25/2014                  |         |   |  |                 |     |  |  |
|   |         |       |                        | LMD START DATE: 05/28/2014             |         |   |  | DEPTH: 5000 ft  |     |  |  |
|   |         |       |                        | LMD END DATE: 06/03/2014               |         |   |  | DEPTH: 11425 ft |     |  |  |
|   |         |       |                        | TOTAL DEPTH: 11425 ft                  |         |   |  |                 |     |  |  |

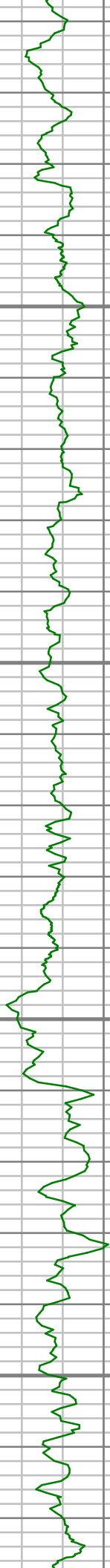
| Run Data              |             |             |             |  |  |  |
|-----------------------|-------------|-------------|-------------|--|--|--|
| RUN NUMBER            | 1           | 2           | 3           |  |  |  |
| START DATE            | 05/25/2014  | 05/27/2014  | 05/31/2014  |  |  |  |
| START TIME            | 1615        | 0630        | 2300        |  |  |  |
| END DATE              | 05/26/2014  | 05/30/2014  | 06/03/2014  |  |  |  |
| END TIME              | 0215        | 0830        | 2000        |  |  |  |
| DEPTH IN (ft)         | 96          | 860         | 7627        |  |  |  |
| DEPTH OUT (ft)        | 860         | 7627        | 11425       |  |  |  |
| LOG TOP (ft)          | -           | 5000        | 7572        |  |  |  |
| LOG BOTTOM (ft)       | -           | 7572        | 11425       |  |  |  |
| HOLE SIZE (in)        | 12.25       | 8.75        | 6.125       |  |  |  |
| MUD DATA @ (ft)       | 860         | 7627        | 10528       |  |  |  |
| MUD TYPE              | WATER-BASED | WATER-BASED | WATER-BASED |  |  |  |
| DENSITY (lb / gal)    | 9           | 10.2        | 10.4        |  |  |  |
| VISCOSITY (s / qt)    | 51          | 42          | 42          |  |  |  |
| pH                    | 9.4         | 7.9         | 9.2         |  |  |  |
| FLUID LOSS (cm3 / 30) | -           | -           | -           |  |  |  |
| SALINITY (ppm)        | -           | -           | -           |  |  |  |
| Rm (ohmm @ deg F)     | -           | -           | -           |  |  |  |
| Rmf (ohmm @ deg F)    | -           | -           | -           |  |  |  |
| MAX TEMP (deg F)      | 86          | 165         | 208         |  |  |  |
| Rm @ MAX TEMP (ohmm)  | -           | -           | -           |  |  |  |
| LWD ENGINEER #1       | M. SMITH    | M. SMITH    | M. SMITH    |  |  |  |
| LWD ENGINEER #2       | J. SMITH    | J. SMITH    | J. SMITH    |  |  |  |
| LWD ENGINEER #3       | -           | -           | -           |  |  |  |
| LOG WITNESS #1        | D. HILDRETH | D. HILDRETH | D. HILDRETH |  |  |  |
| LOG WITNESS #2        | -           | -           | -           |  |  |  |

|  |
|--|
| Remarks  |
| ENCANA OIL AND GAS (U.S.A.) INC PRODUCTION AFE# 13178943                       |
| SCIENTIFIC DRILLING INTERNATIONAL JOB# 154161                                  |
|  |
| ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.                            |
| ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.                               |
|  |
| FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE                      |
| FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE            |
|  |
| RUN #1: MWD / DIRECTIONAL RUN  |
| SENSORS S/N: CONT = 1011 / MWD EYE = 862                                       |
| BIT TO SENSOR OFFSET: SURVEY = 59.08 FT.                                       |
|  |
| RUN #2: MWD / GAMMA RAY LOGGING RUN  |
| SENSORS S/N: PULSER = 128-030 / CONT = 831 / MWD EYE = 0429 / GAMMA RAY = 1035 |
| BIT TO SENSOR OFFSETS: SURVEY = 68.40 FT. / GAMMA RAY = 55.15 FT.              |
|  |
| RUN #3: MWD / GAMMA RAY LOGGING RUN  |
| SENSORS S/N: PULSER = 78-237 / CONT = 114 / MWD EYE = 862 / GAMMA RAY = 1074   |
| BIT TO SENSOR OFFSETS: SURVEY = 66.86 FT. / GAMMA RAY = 53.61 FT.              |
|  |
| MNEMONICS LIST:  |
| GR = GAMMA RAY   |
| ROP = RATE OF PENETRATION  |
|  |
|  |

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions as set out in our current price schedule.





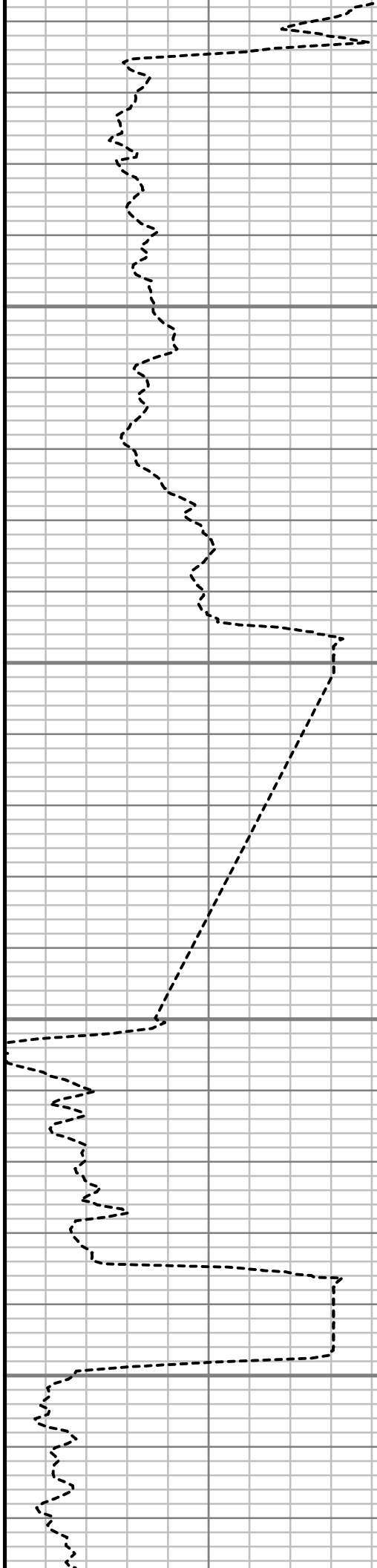


1100

1150

1200

1250



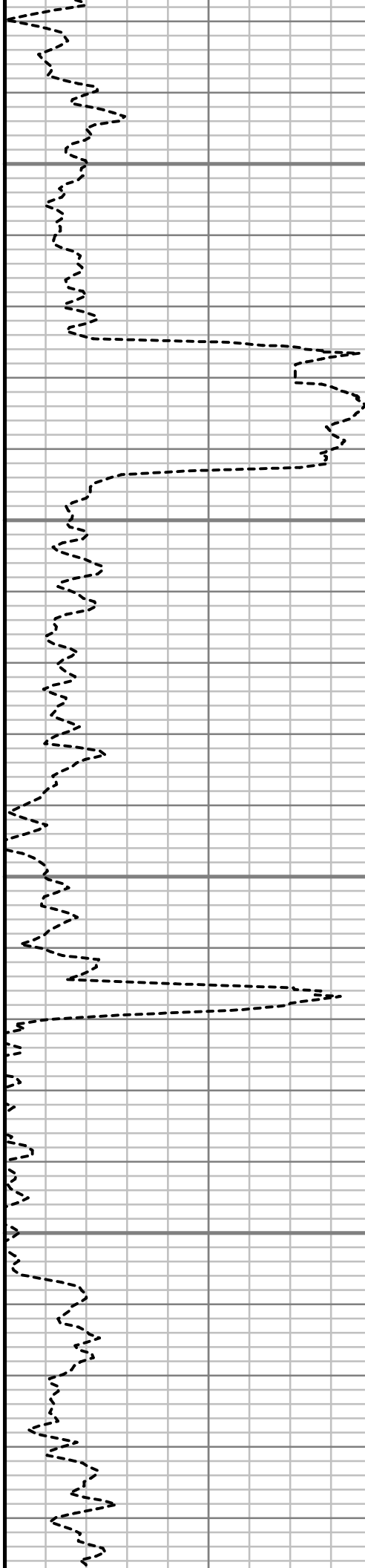


1300

1350

1400

1450





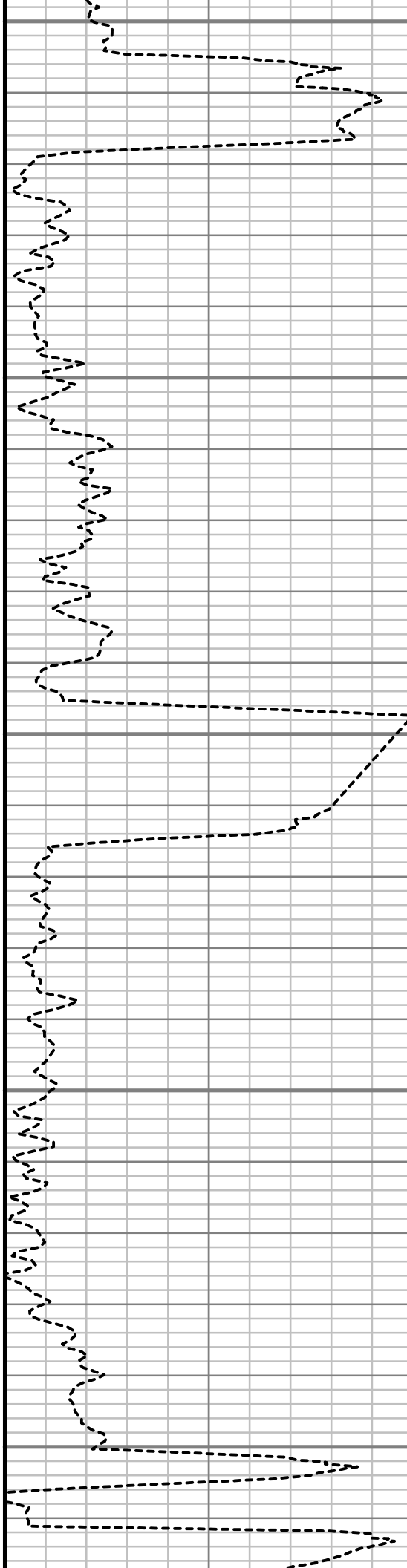
1500

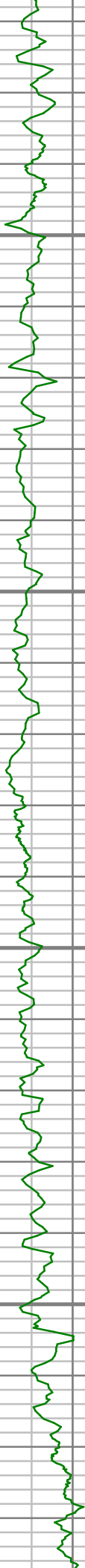
1550

1600

1650

1700



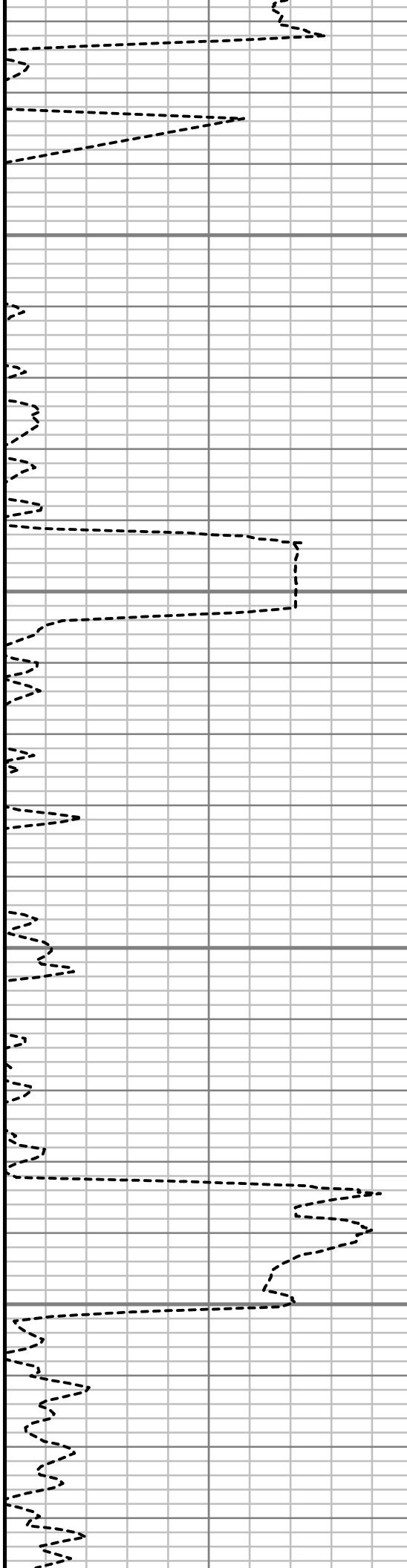


1750

1800

1850

1900





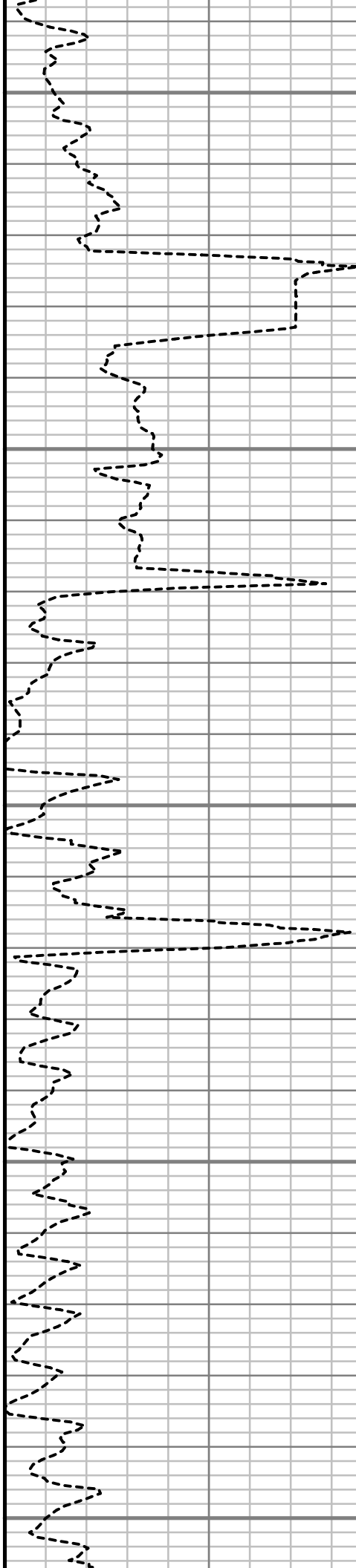
1950

2000

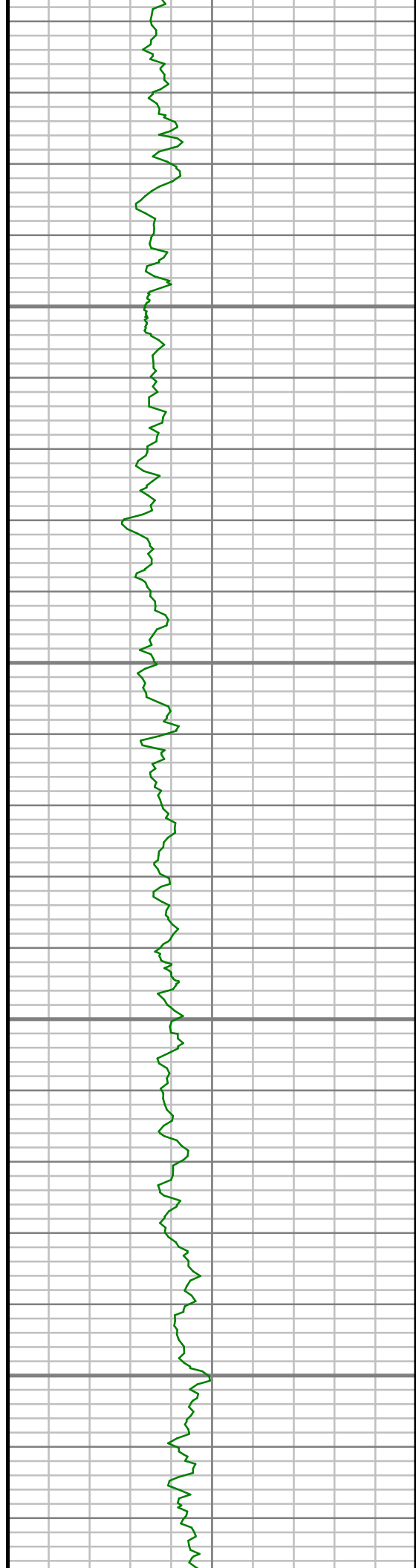
2050

2100

2150





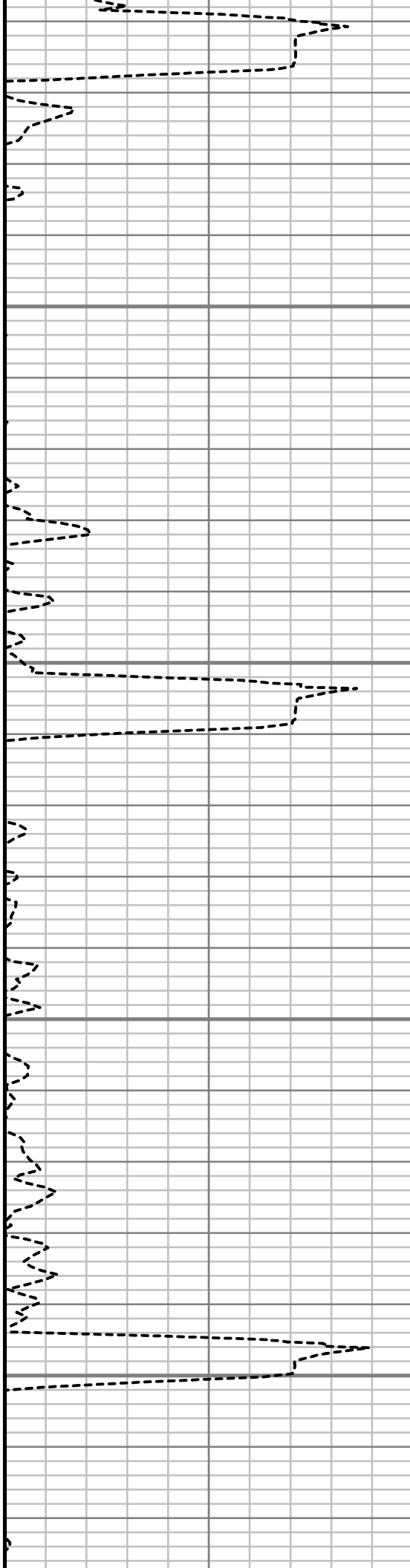


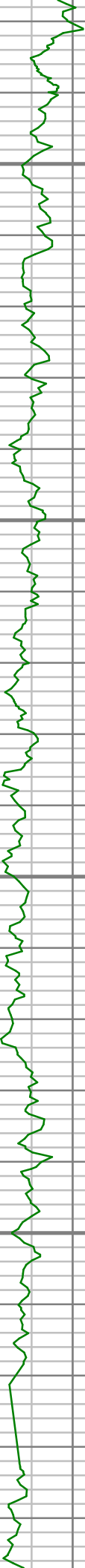
2200

2250

2300

2350



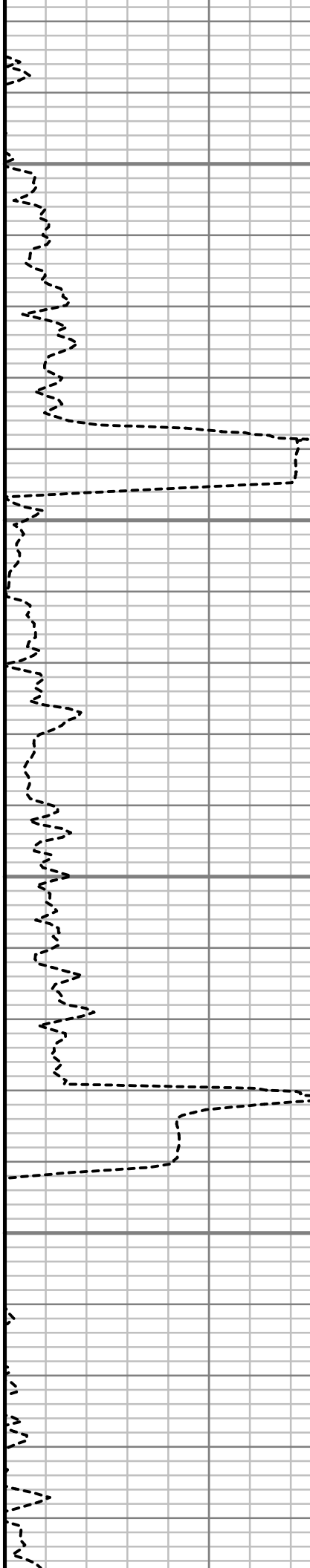


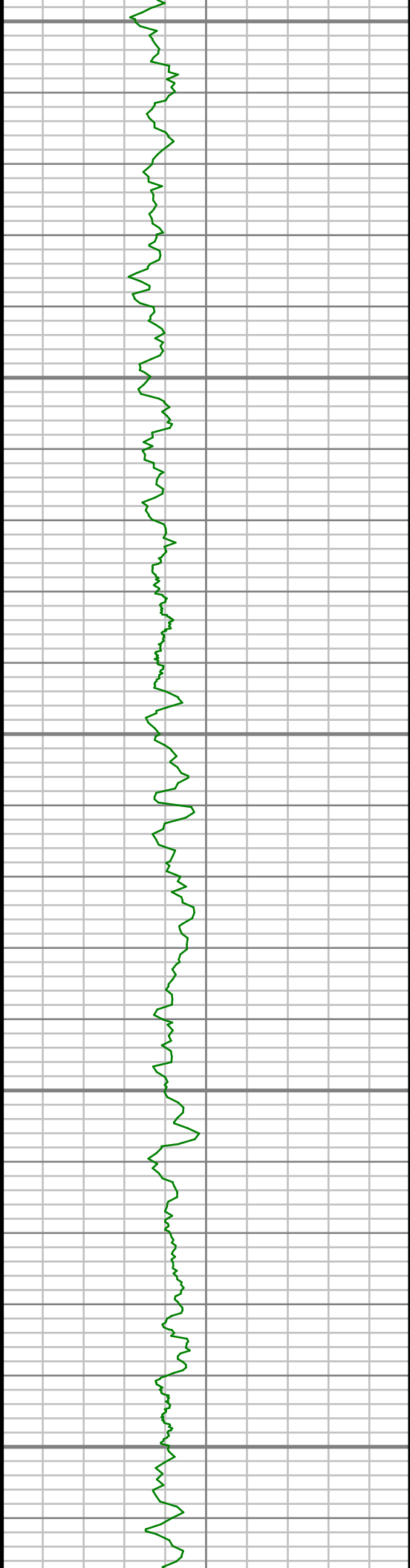
2400

2450

2500

2550





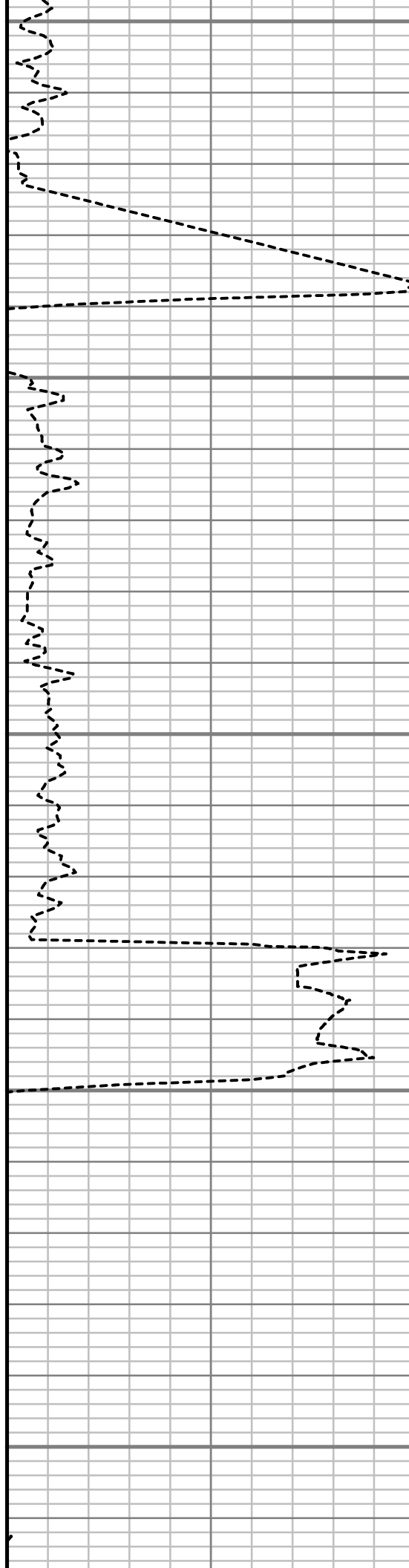
2600

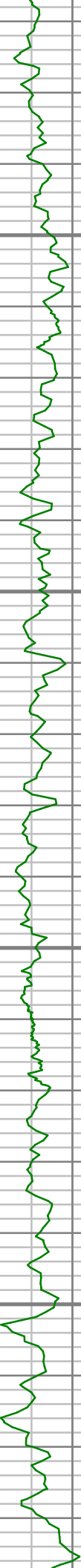
2650

2700

2750

2800



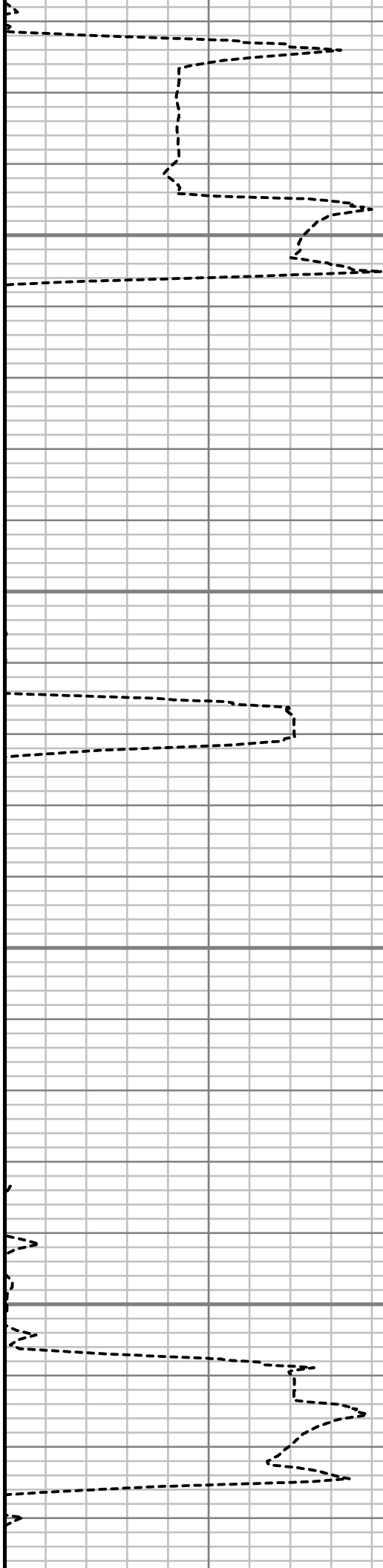


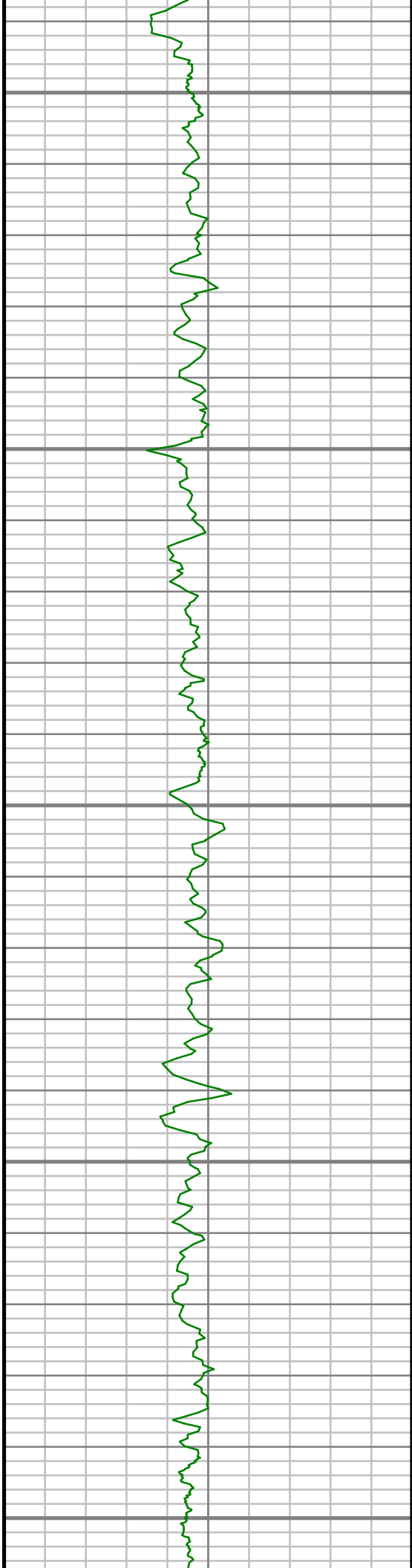
2850

2900

2950

3000





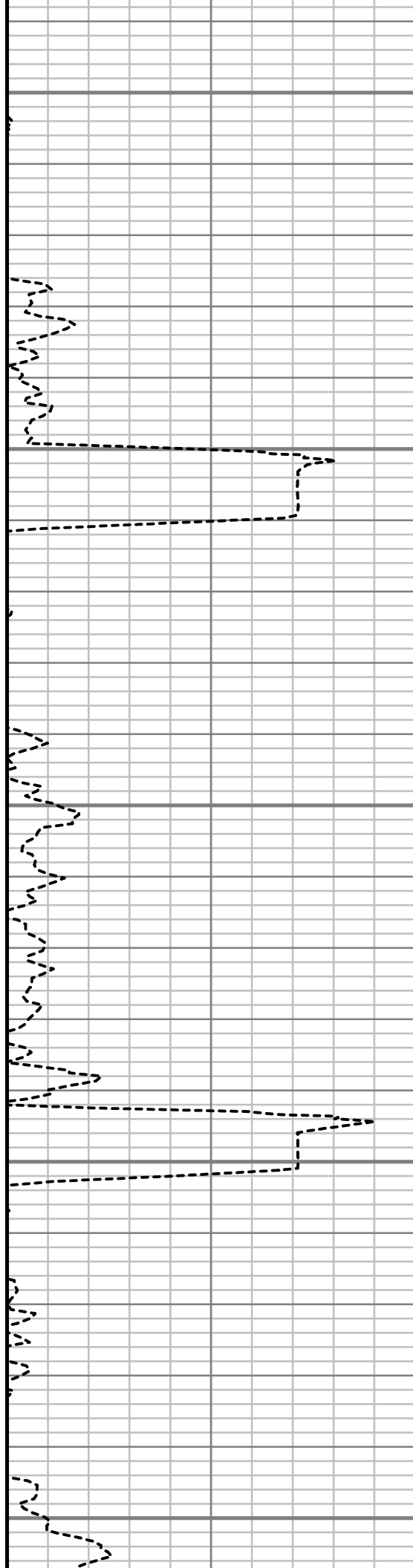
3050

3100

3150

3200

3250



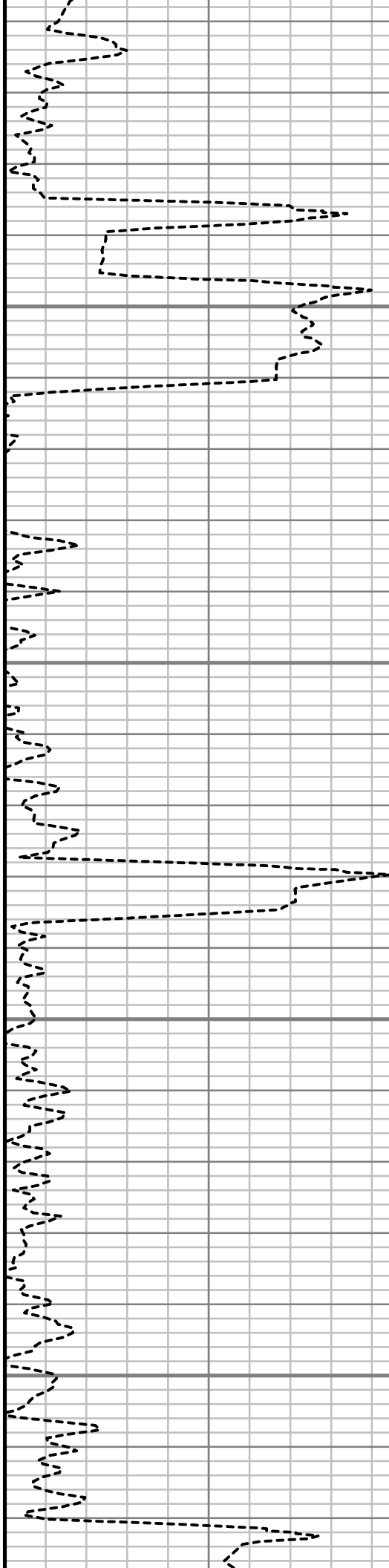


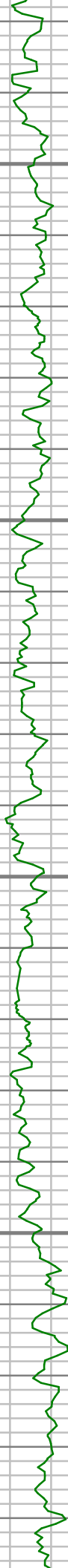
3300

3350

3400

3450



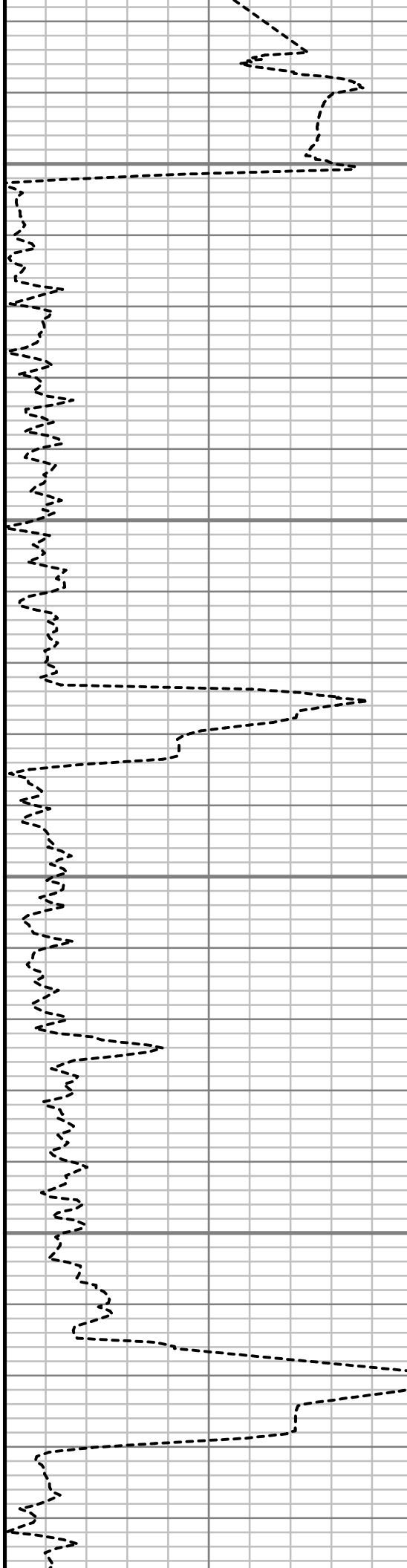


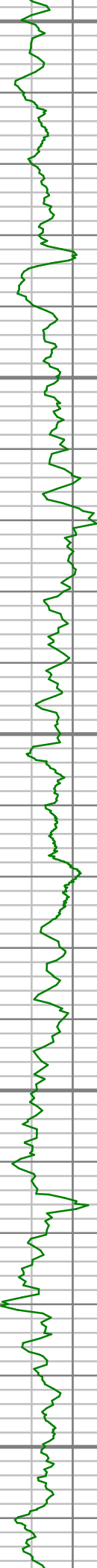
3500

3550

3600

3650





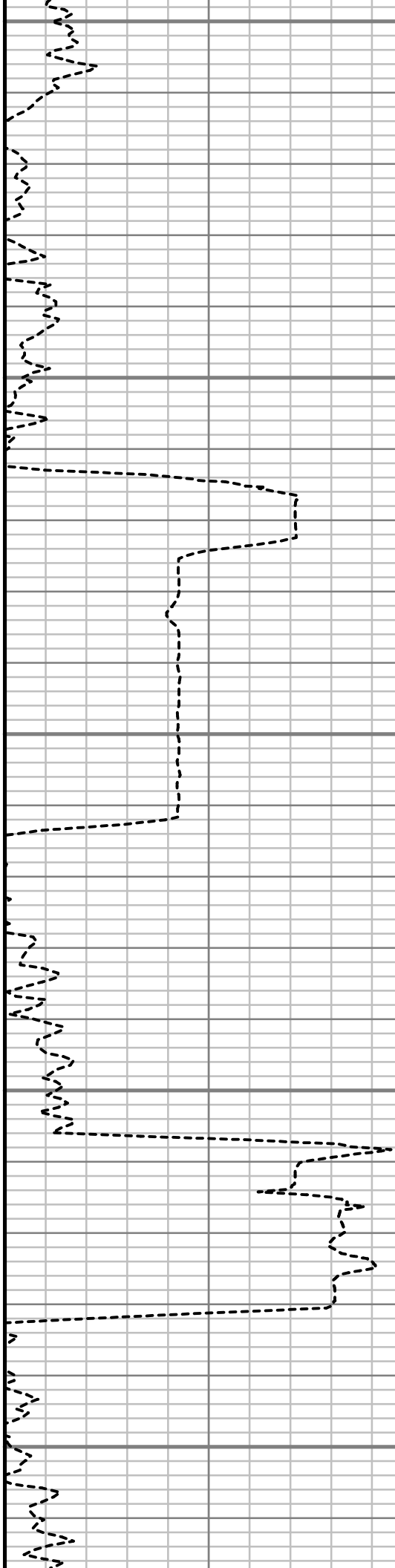
3700

3750

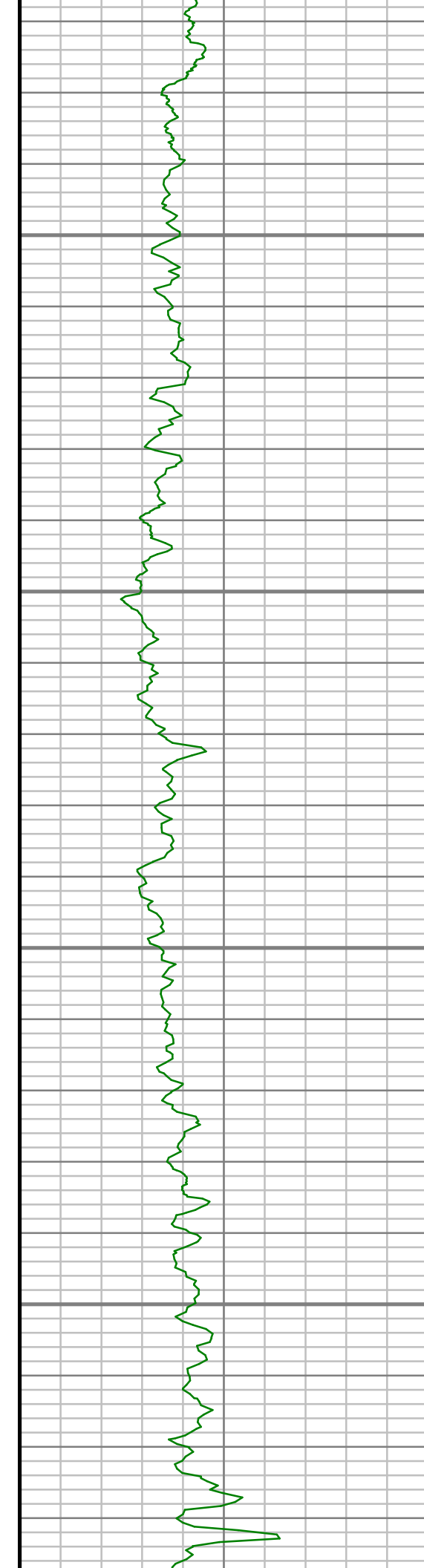
3800

3850

3900





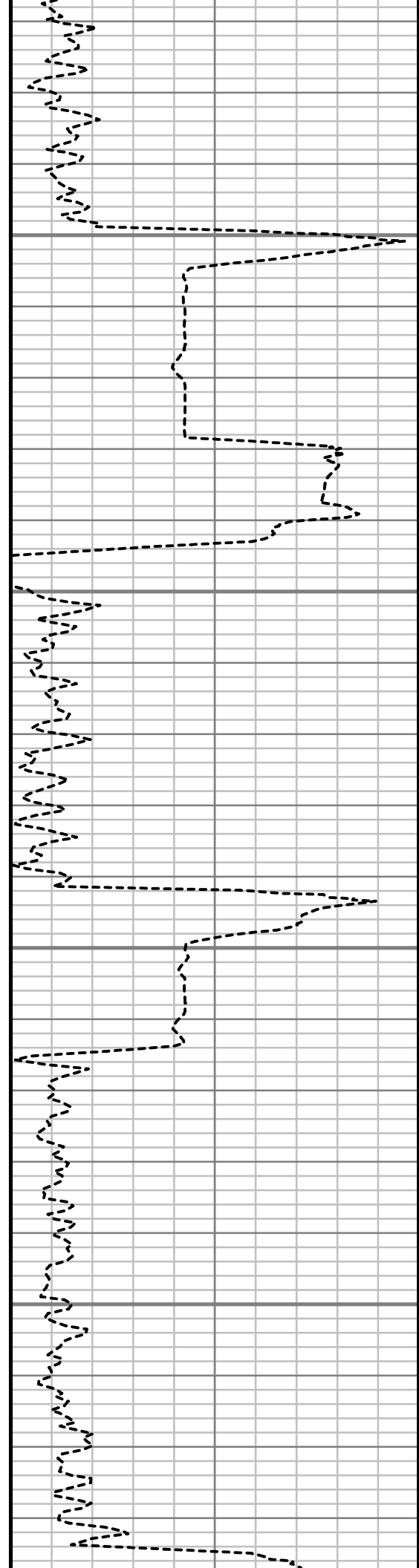


3950

4000

4050

4100





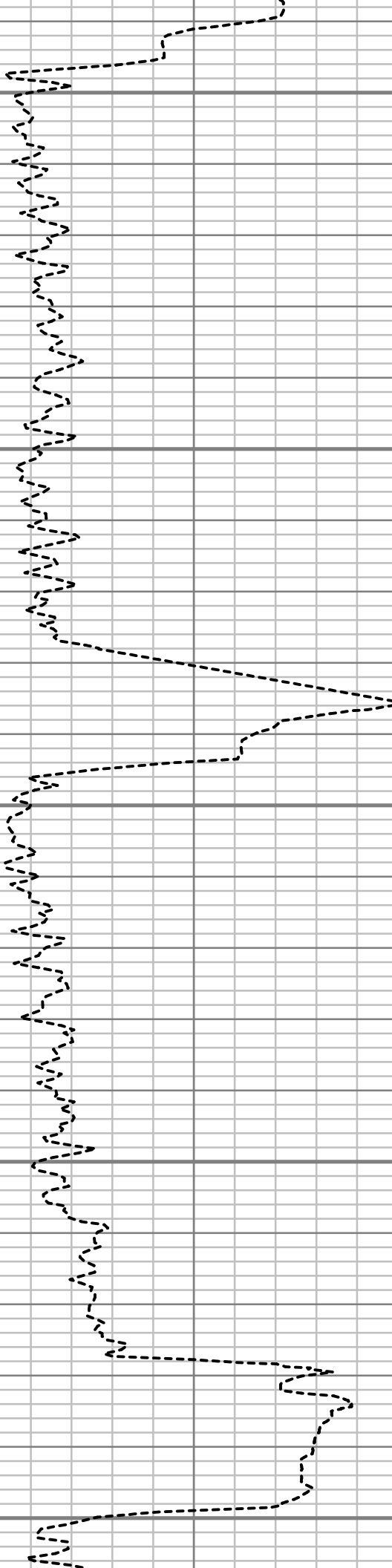
4150

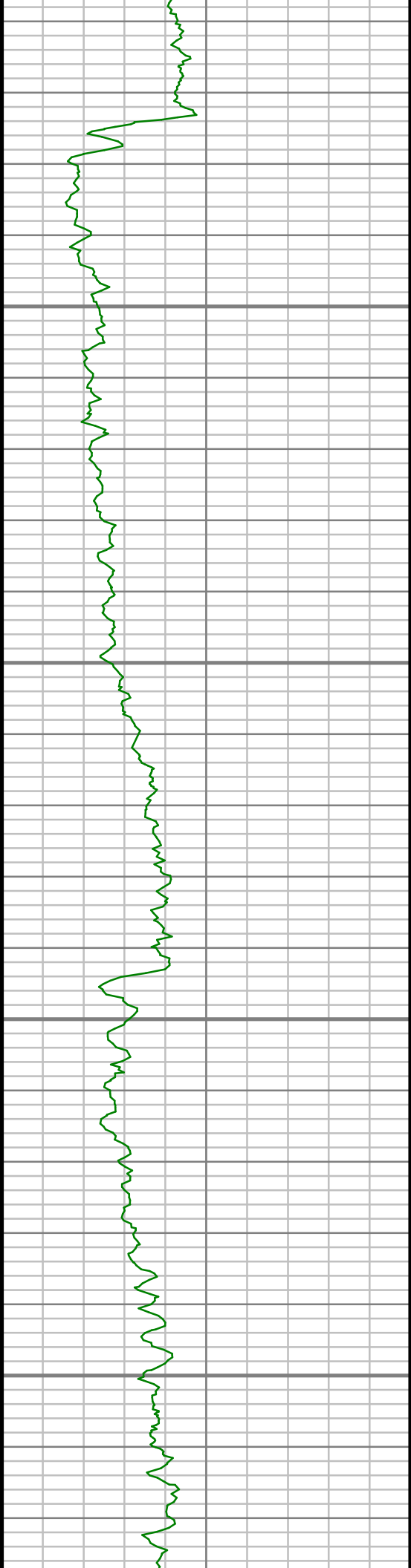
4200

4250

4300

4350



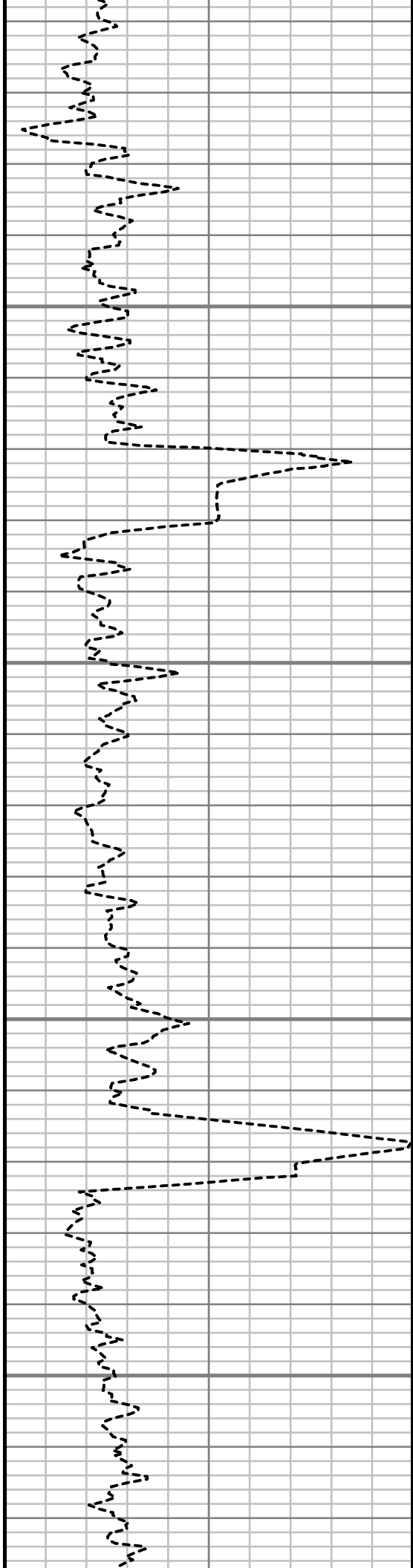


4400

4450

4500

4550



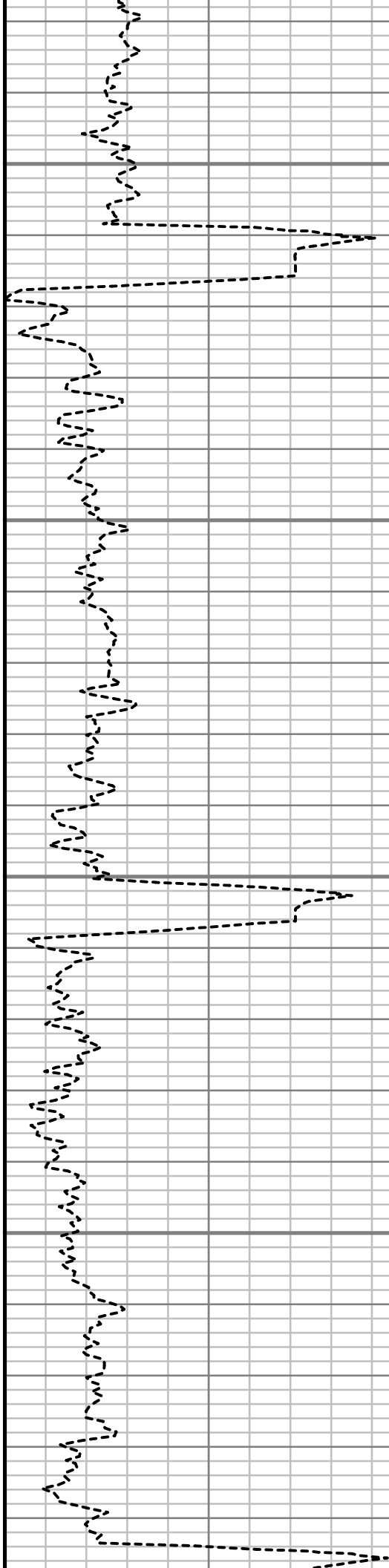


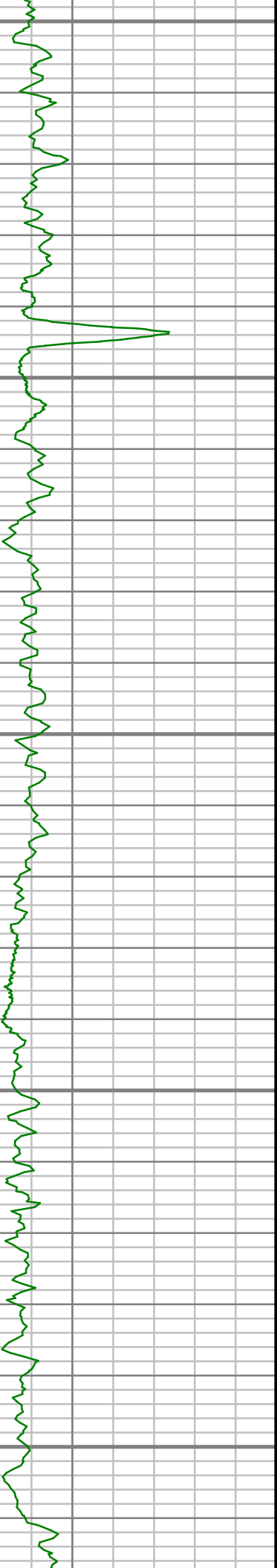
4600

4650

4700

4750





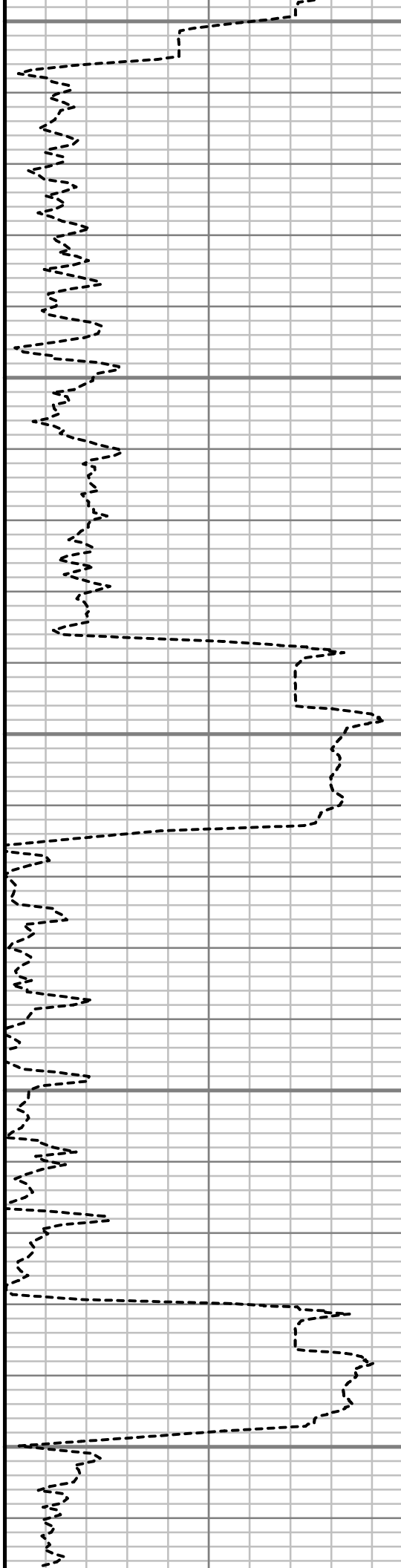
4800

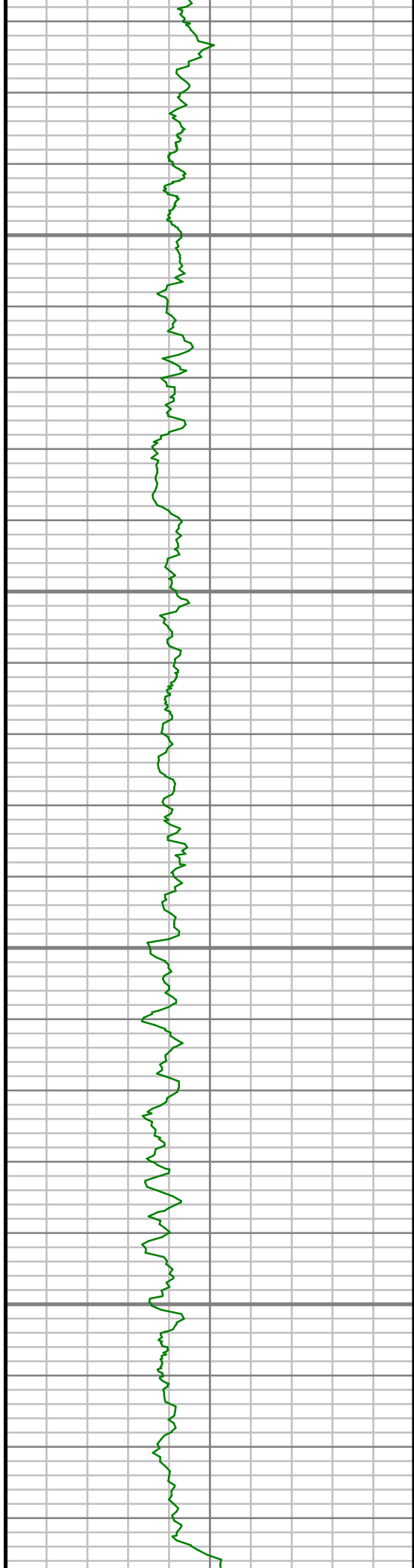
4850

4900

4950

5000



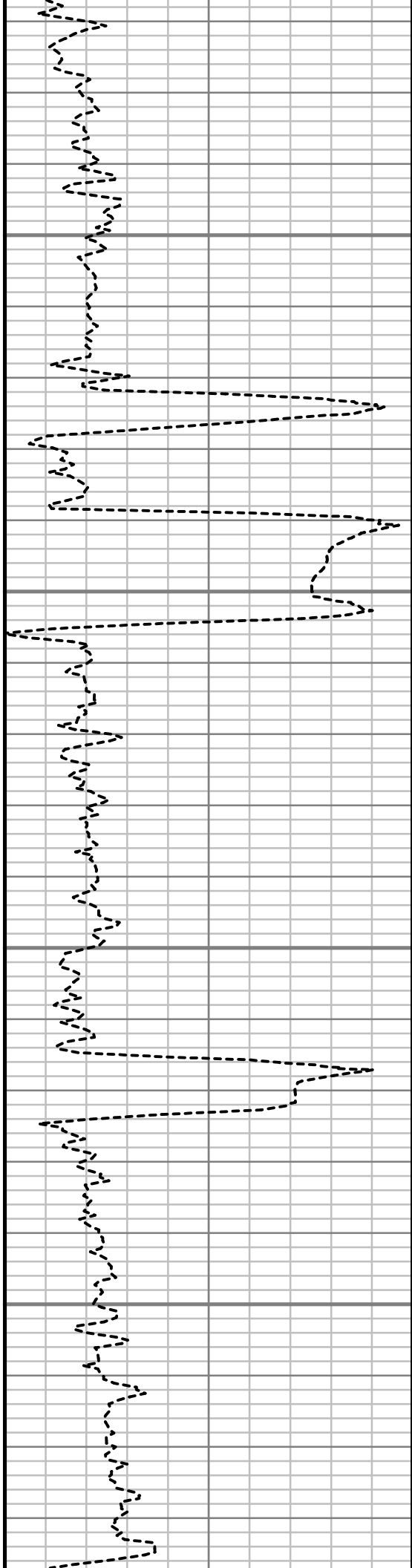


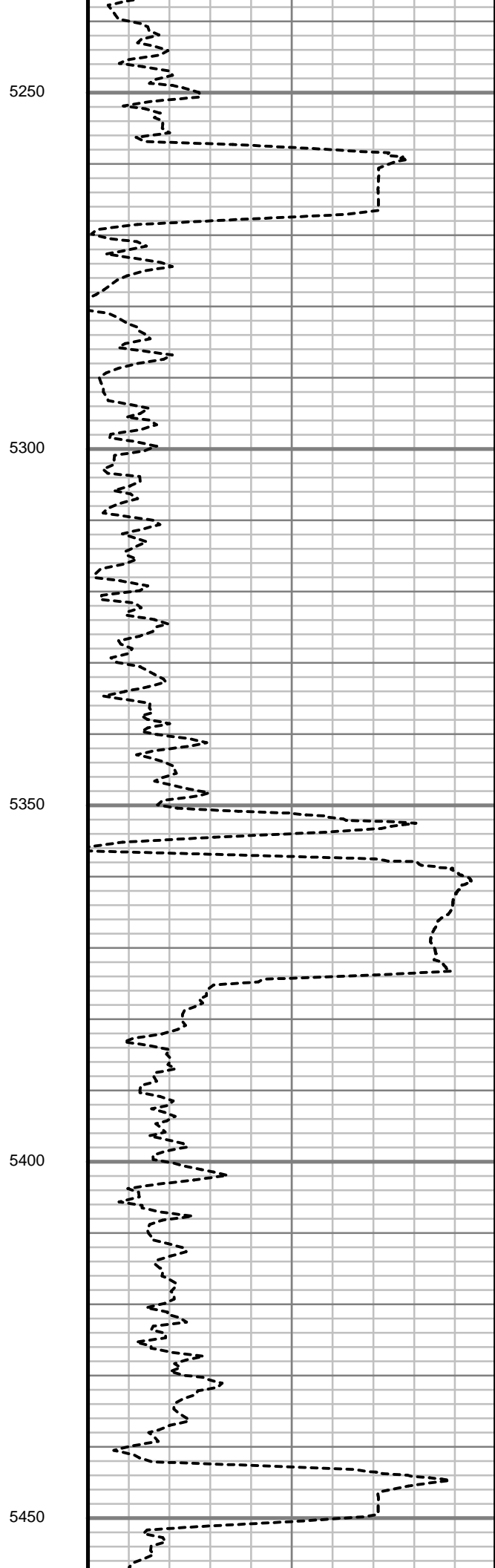
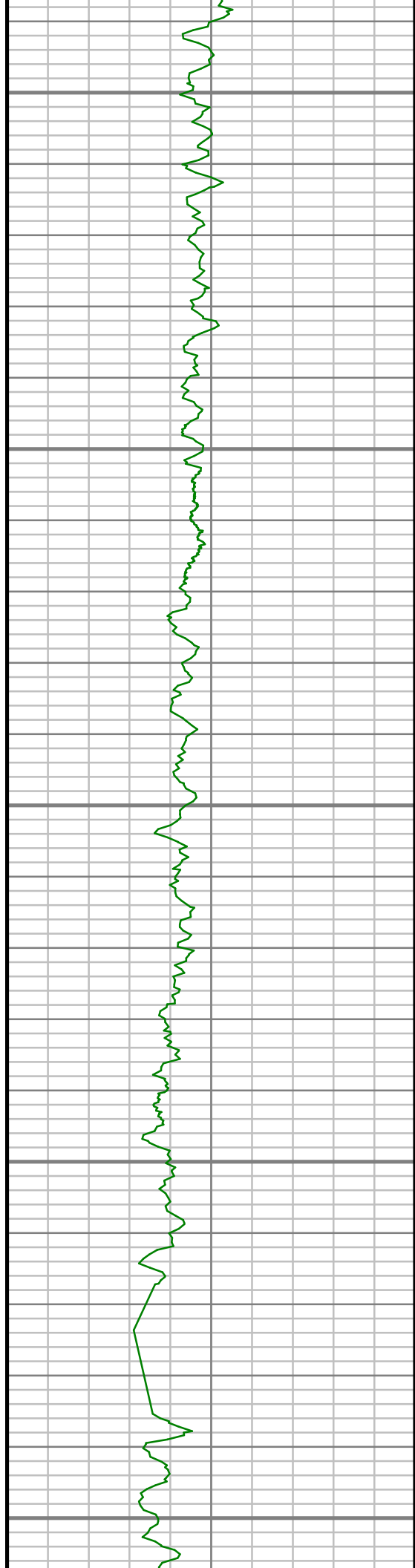
5050

5100

5150

5200





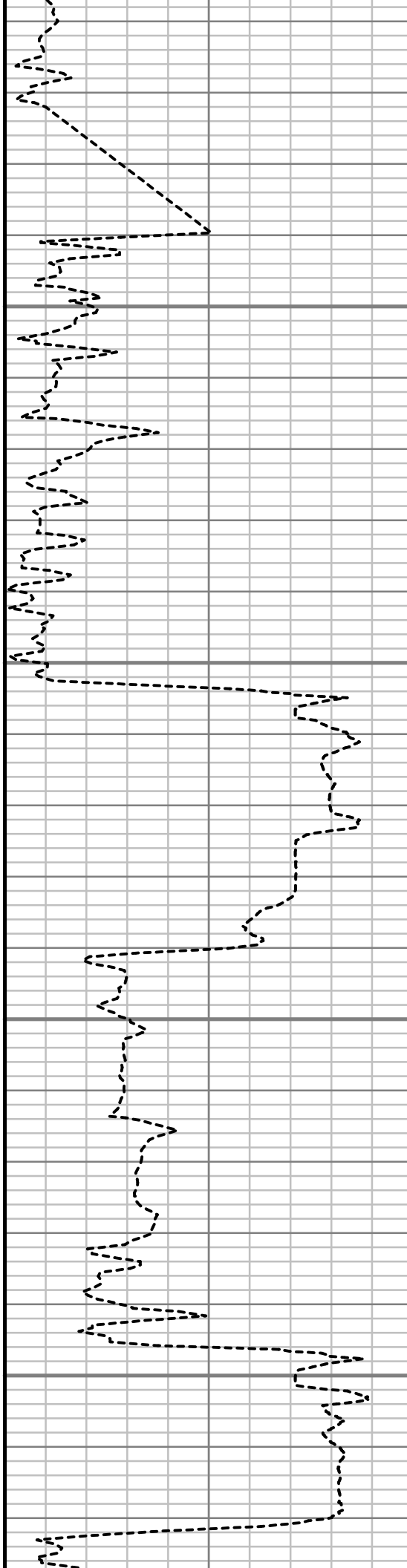


5500

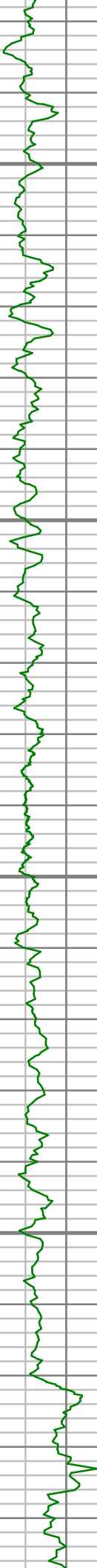
5550

5600

5650





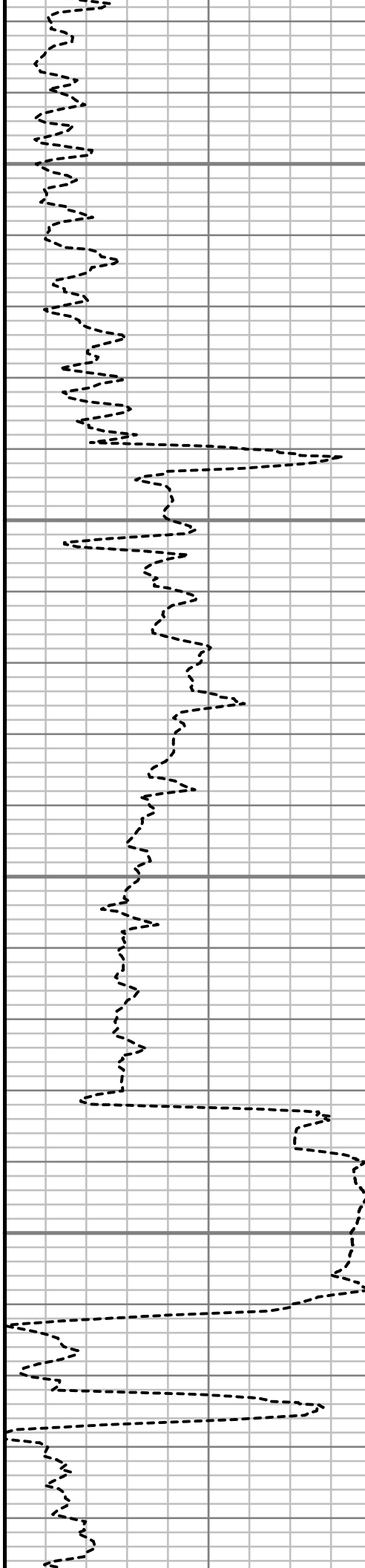


5700

5750

5800

5850





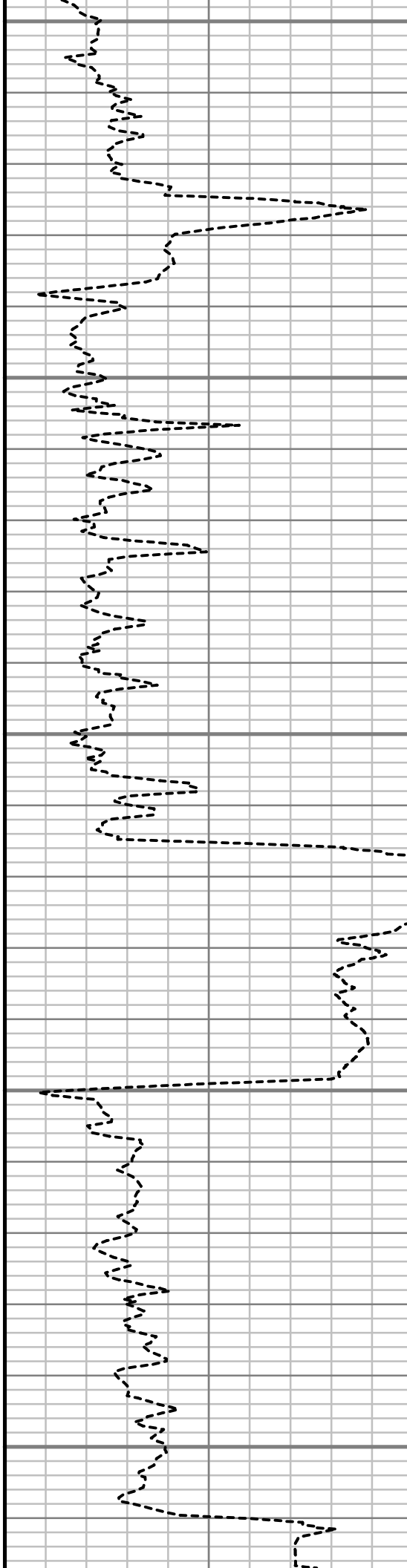
5900

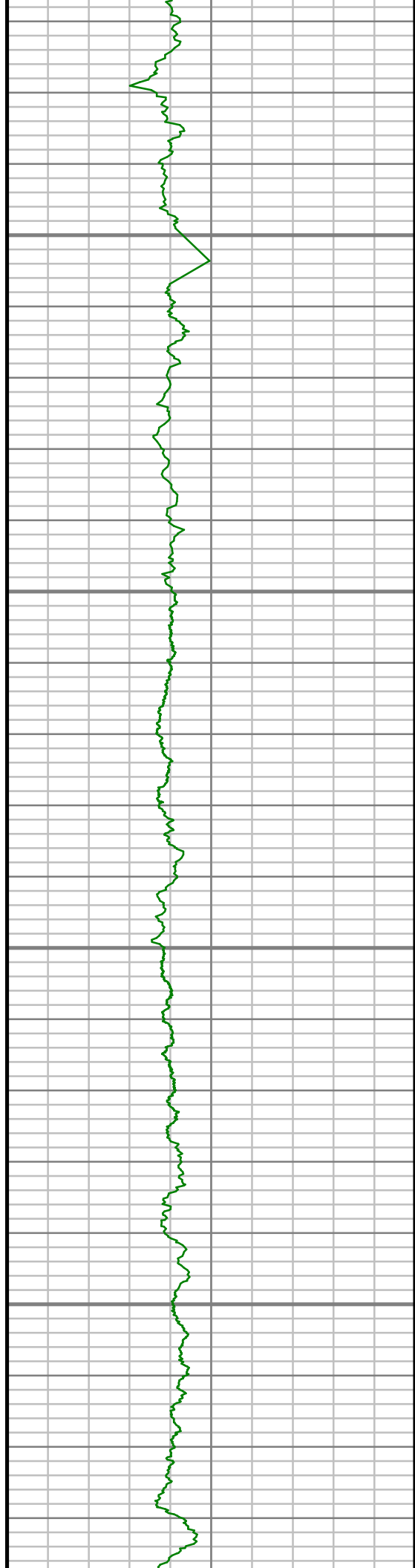
5950

6000

6050

6100



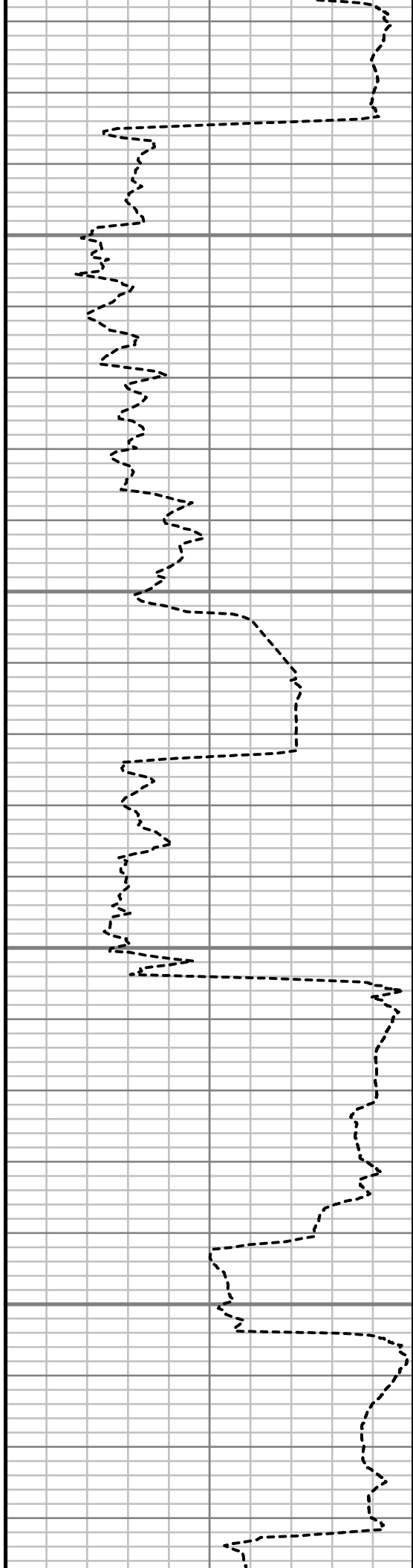


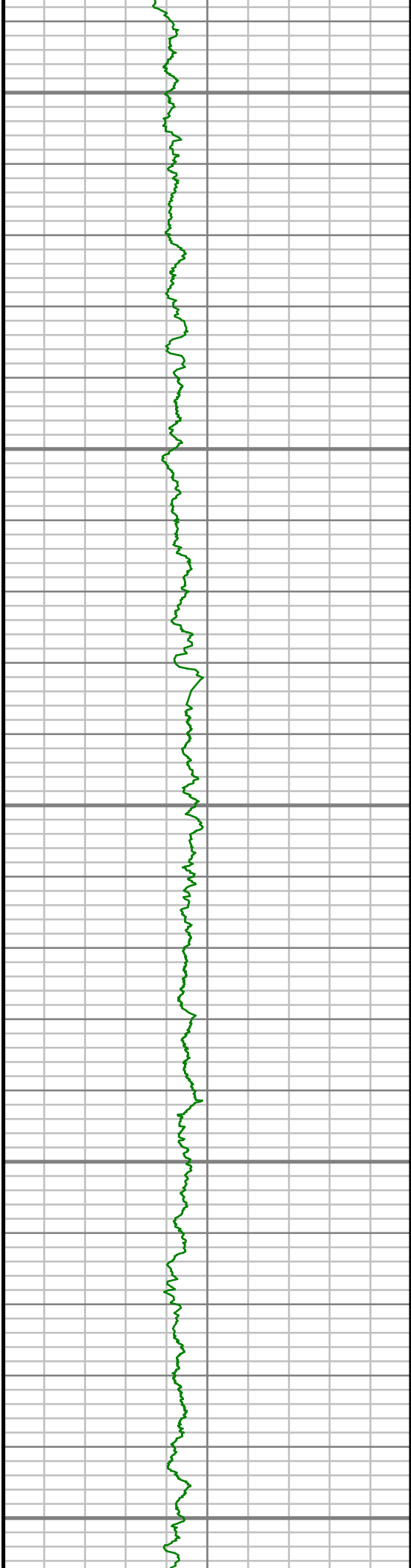
6150

6200

6250

6300





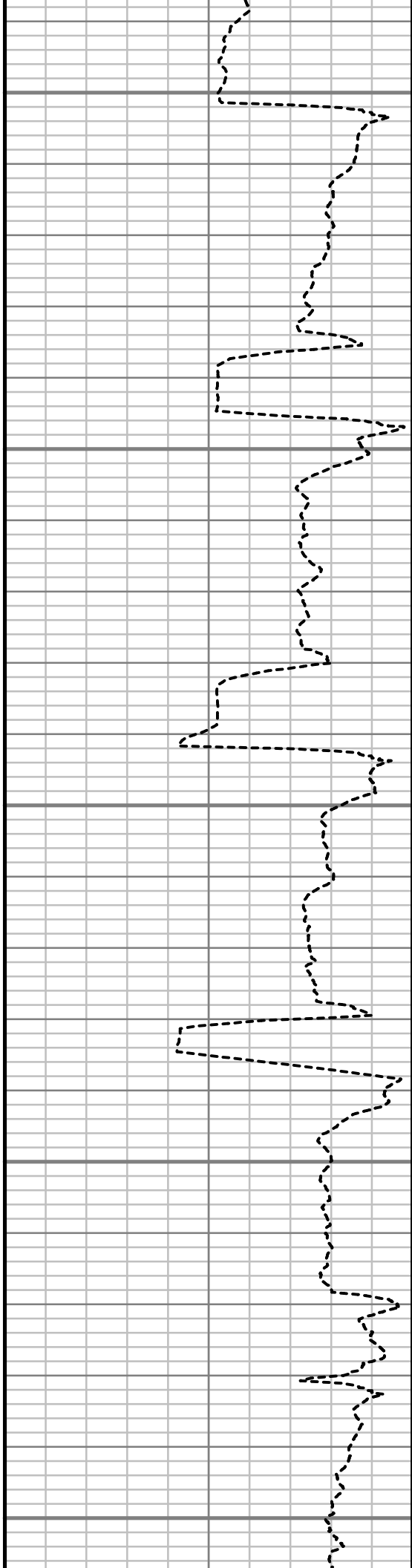
6350

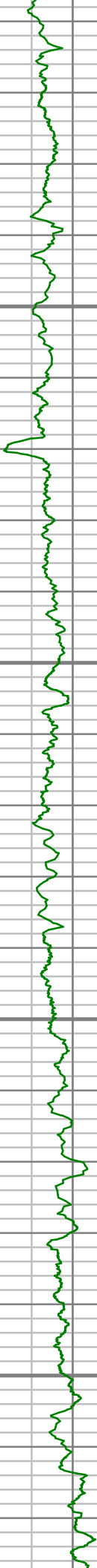
6400

6450

6500

6550



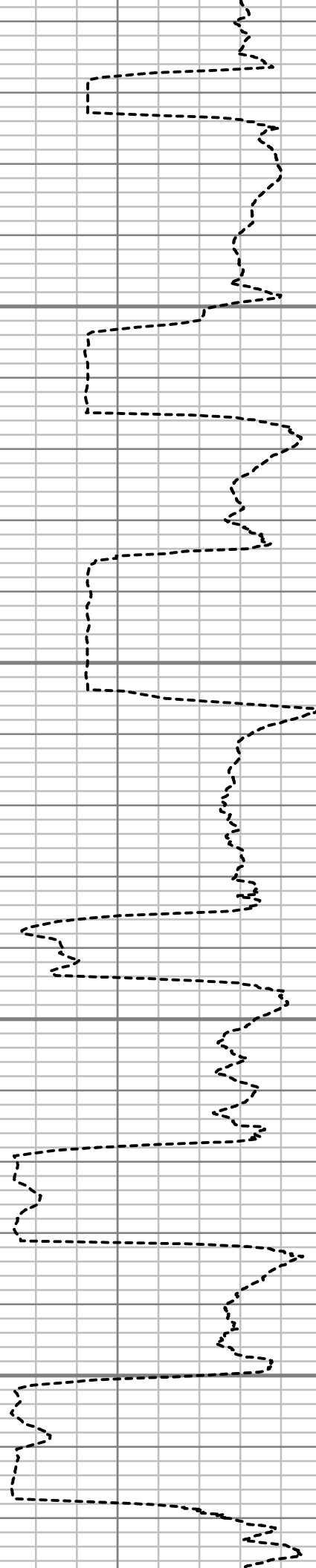


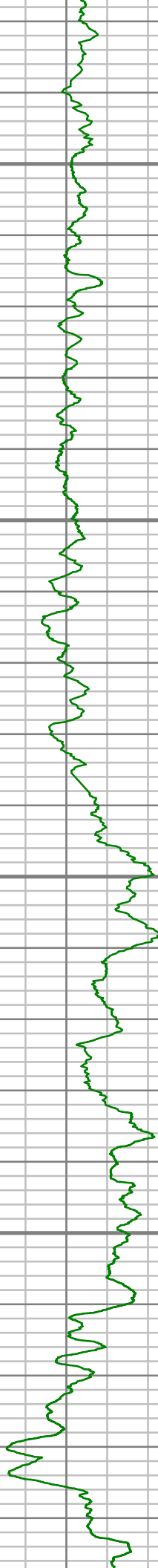
6600

6650

6700

6750



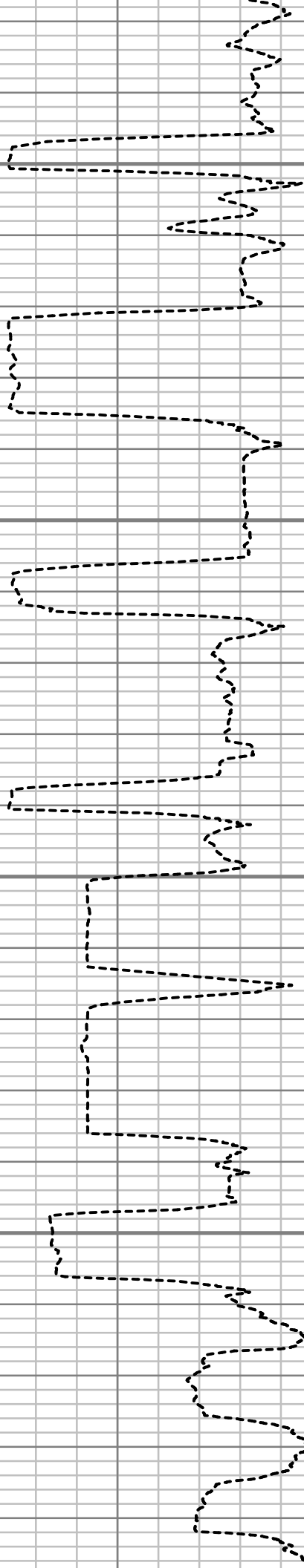


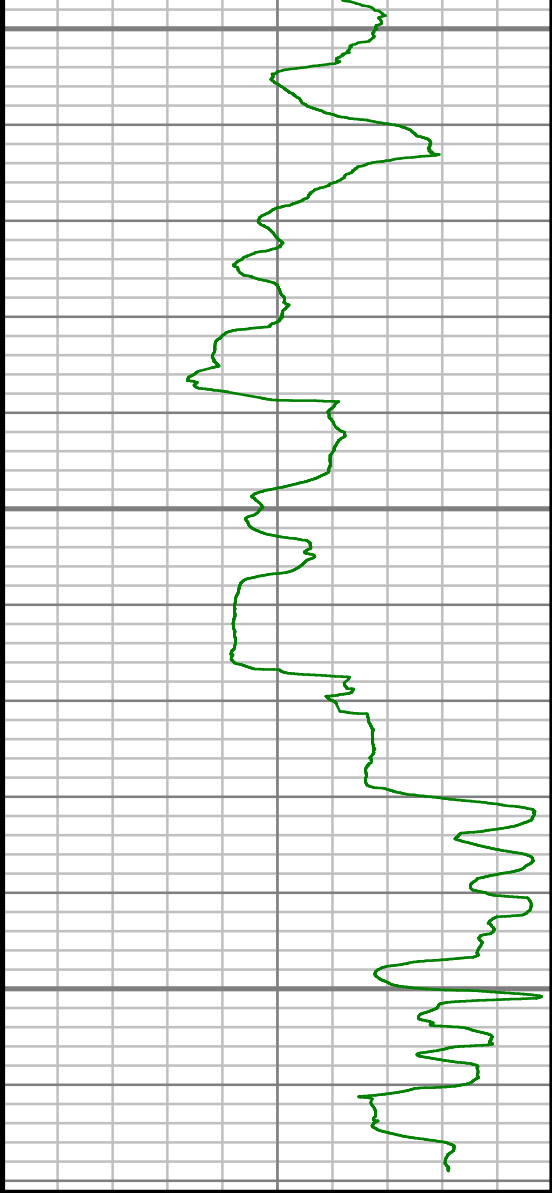
6800

6850

6900

6950





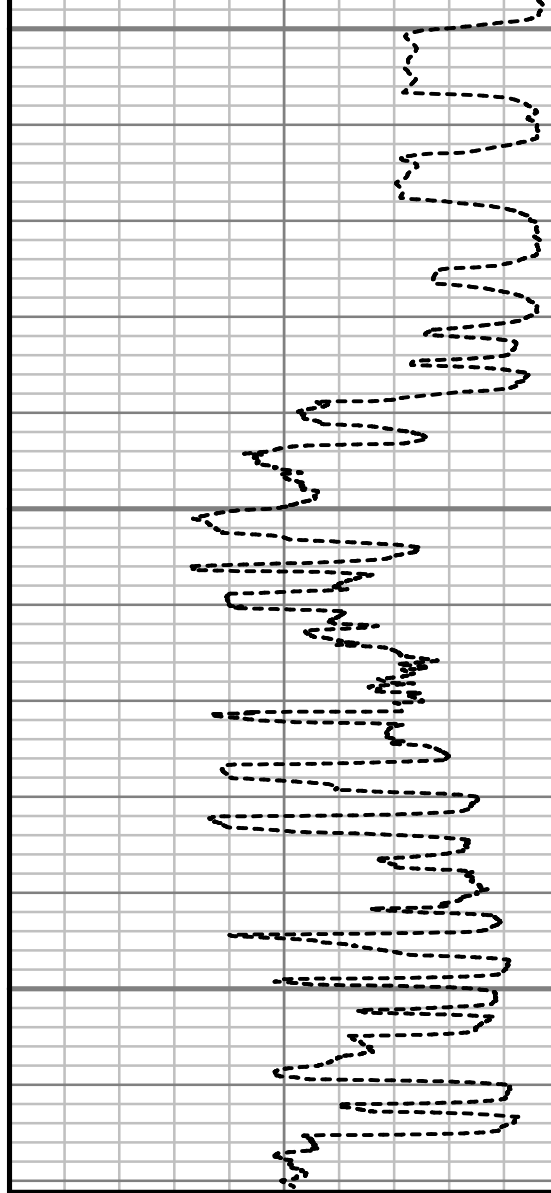
| Gamma Ray (GR) |             |     |
|----------------|-------------|-----|
| 0              | Unit = aapi | 150 |

7000

7050

7100

TRUE VERTICAL DEPTH  
1:240 (ft)



| Rate of Penetration (ROP) |              |   |
|---------------------------|--------------|---|
| 500                       | Unit = ft/hr | 0 |

|          |
|----------|
| Comments |
|----------|



## MWD Survey Report

|                      |   |
|----------------------|---|
| Well Location        | ZISCH/DRIETH                            |
| Well Name            | ZISCH 3A-6H-M368                        |
| Survey Date          | 5/21/2014                               |
| Latitude             | 40°14'53.700"N                          |
| Longitude            | 105°3'10.116"W                          |
| Btotal               | 52616 nT                                |
| Dip                  | 66.77 deg                               |
| Magnetic Declination | 8.69 deg                                |
| North Reference      | True North                              |
| Grid Correction      | None                                    |
| Depth Reference      | R.K.B. (13.00 ft)                       |
| Calculation Method   | Minimum Curvature                       |
| Section (VS) Ref     | 0.00N (ft), 0.00E (ft), 90.00Azim (deg) |
| Operator(s)          | JEFFREY SMITH, MARK SMITH               |

Well Notes

| MD      | Inc   | Azim   | TVD     | VS      | +N/-S  | +E/-W   | Closure Direction | Closure Distance | DLS     |
|---------|-------|--------|---------|---------|--------|---------|-------------------|------------------|---------|
| ft      | deg   | deg    | ft      | ft      | ft     | ft      | deg               | ft               | "/100ft |
| 0.00    | 0.00  | 0.00   | 0.00    | 0.00    | 0.00   | 0.00    | 0.00              | 0.00             | Invalid |
| 450.00  | 5.18  | 325.32 | 449.39  | -11.56  | 16.71  | -11.56  | 325.32            | 20.32            | 1.15    |
| 543.00  | 7.01  | 323.39 | 541.86  | -17.33  | 24.71  | -17.33  | 324.96            | 30.18            | 1.98    |
| 637.00  | 7.88  | 324.79 | 635.07  | -24.46  | 34.58  | -24.46  | 324.72            | 42.35            | 0.95    |
| 730.00  | 8.48  | 324.42 | 727.12  | -32.13  | 45.36  | -32.13  | 324.69            | 55.58            | 0.65    |
| 799.00  | 8.64  | 322.10 | 795.35  | -38.27  | 53.58  | -38.27  | 324.47            | 65.85            | 0.55    |
| 906.00  | 8.98  | 319.15 | 901.09  | -48.66  | 66.24  | -48.66  | 323.70            | 82.19            | 0.53    |
| 1092.00 | 9.82  | 321.71 | 1084.59 | -67.99  | 89.67  | -67.99  | 322.83            | 112.53           | 0.51    |
| 1277.00 | 9.82  | 316.59 | 1266.88 | -88.61  | 113.52 | -88.61  | 322.02            | 144.01           | 0.47    |
| 1463.00 | 10.86 | 321.53 | 1449.86 | -110.42 | 138.77 | -110.42 | 321.49            | 177.34           | 0.73    |
| 1649.00 | 10.94 | 321.89 | 1632.51 | -132.22 | 166.38 | -132.22 | 321.53            | 212.52           | 0.05    |
| 1835.00 | 7.97  | 320.63 | 1815.96 | -151.30 | 190.24 | -151.30 | 321.51            | 243.07           | 1.60    |
| 2023.00 | 9.05  | 333.44 | 2001.90 | -166.18 | 213.55 | -166.18 | 322.11            | 270.59           | 1.16    |
| 2213.00 | 8.67  | 330.53 | 2189.63 | -179.91 | 239.39 | -179.91 | 323.07            | 299.46           | 0.31    |
| 2404.00 | 8.71  | 324.32 | 2378.44 | -195.43 | 263.68 | -195.43 | 323.45            | 328.21           | 0.49    |
| 2595.00 | 8.65  | 319.64 | 2567.26 | -213.17 | 286.37 | -213.17 | 323.34            | 357.00           | 0.37    |
| 2785.00 | 8.25  | 321.31 | 2755.20 | -230.94 | 307.89 | -230.94 | 323.13            | 384.88           | 0.25    |
| 2976.00 | 8.97  | 321.92 | 2944.04 | -248.69 | 330.31 | -248.69 | 323.02            | 413.46           | 0.38    |
| 3166.00 | 9.31  | 328.51 | 3131.64 | -265.85 | 355.07 | -265.85 | 323.18            | 443.57           | 0.58    |



| MD      | Inc   | Azim   | TVD     | VS      | +N/-S  | +E/-W   | Closure<br>Direction | Closure<br>Distance | DLS     |
|---------|-------|--------|---------|---------|--------|---------|----------------------|---------------------|---------|
| ft      | deg   | deg    | ft      | ft      | ft     | ft      | deg                  | ft                  | °/100ft |
| 3357.00 | 8.91  | 322.25 | 3320.23 | -282.98 | 379.93 | -282.98 | 323.32               | 473.74              | 0.56    |
| 3548.00 | 9.88  | 319.74 | 3508.67 | -302.62 | 404.14 | -302.62 | 323.17               | 504.88              | 0.55    |
| 3738.00 | 10.75 | 318.64 | 3695.60 | -324.87 | 429.88 | -324.87 | 322.92               | 538.82              | 0.47    |
| 3929.00 | 9.66  | 316.99 | 3883.57 | -347.57 | 454.96 | -347.57 | 322.62               | 572.53              | 0.59    |
| 4120.00 | 9.34  | 323.65 | 4071.96 | -367.68 | 479.16 | -367.68 | 322.50               | 603.97              | 0.60    |
| 4310.00 | 8.10  | 319.50 | 4259.76 | -385.51 | 501.75 | -385.51 | 322.46               | 632.75              | 0.73    |
| 4501.00 | 10.29 | 325.84 | 4448.30 | -403.83 | 526.11 | -403.83 | 322.49               | 663.23              | 1.26    |
| 4691.00 | 9.93  | 322.79 | 4635.35 | -423.28 | 553.21 | -423.28 | 322.58               | 696.56              | 0.34    |
| 4882.00 | 8.36  | 318.67 | 4823.92 | -442.41 | 576.76 | -442.41 | 322.51               | 726.90              | 0.89    |
| 5072.00 | 9.11  | 313.39 | 5011.72 | -462.46 | 597.46 | -462.46 | 322.26               | 755.53              | 0.58    |
| 5263.00 | 9.36  | 319.21 | 5200.25 | -483.59 | 619.61 | -483.59 | 322.03               | 785.99              | 0.51    |
| 5453.00 | 8.62  | 321.27 | 5387.91 | -502.60 | 642.42 | -502.60 | 321.96               | 815.66              | 0.42    |
| 5644.00 | 8.06  | 323.49 | 5576.89 | -519.53 | 664.35 | -519.53 | 321.97               | 843.37              | 0.34    |
| 5834.00 | 8.53  | 322.17 | 5764.90 | -536.09 | 686.19 | -536.09 | 322.00               | 870.78              | 0.27    |
| 6025.00 | 9.15  | 314.17 | 5953.64 | -555.68 | 707.96 | -555.68 | 321.87               | 899.99              | 0.72    |
| 6215.00 | 9.51  | 320.65 | 6141.13 | -576.46 | 730.62 | -576.46 | 321.73               | 930.65              | 0.58    |
| 6260.00 | 8.71  | 319.87 | 6185.56 | -581.01 | 736.10 | -581.01 | 321.72               | 937.77              | 1.79    |
| 6311.00 | 8.14  | 314.60 | 6236.01 | -586.07 | 741.58 | -586.07 | 321.68               | 945.21              | 1.89    |

| MD      | Inc   | Azim   | TVD     | VS      | +N/-S  | +E/-W   | Closure<br>Direction | Closure<br>Distance | DLS     |
|---------|-------|--------|---------|---------|--------|---------|----------------------|---------------------|---------|
| ft      | deg   | deg    | ft      | ft      | ft     | ft      | deg                  | ft                  | °/100ft |
| 6358.00 | 9.07  | 334.63 | 6282.49 | -590.03 | 747.27 | -590.03 | 321.71               | 952.13              | 6.64    |
| 6406.00 | 10.90 | 350.98 | 6329.77 | -592.36 | 755.17 | -592.36 | 321.89               | 959.78              | 6.99    |
| 6453.00 | 15.10 | 2.19   | 6375.57 | -592.82 | 765.68 | -592.82 | 322.25               | 968.36              | 10.38   |
| 6501.00 | 17.96 | 15.81  | 6421.60 | -590.57 | 779.06 | -590.57 | 322.84               | 977.60              | 10.00   |
| 6548.00 | 19.52 | 32.95  | 6466.14 | -584.32 | 792.63 | -584.32 | 323.60               | 984.73              | 12.13   |
| 6597.00 | 22.59 | 49.30  | 6511.90 | -572.72 | 805.66 | -572.72 | 324.59               | 988.48              | 13.47   |
| 6644.00 | 26.60 | 63.71  | 6554.66 | -556.42 | 816.22 | -556.42 | 325.72               | 987.83              | 15.28   |
| 6692.00 | 30.65 | 68.43  | 6596.79 | -535.39 | 825.48 | -535.39 | 327.03               | 983.90              | 9.67    |
| 6739.00 | 32.38 | 72.40  | 6636.87 | -512.25 | 833.69 | -512.25 | 328.43               | 978.49              | 5.74    |
| 6787.00 | 34.64 | 81.56  | 6676.91 | -486.49 | 839.59 | -486.49 | 329.91               | 970.35              | 11.53   |
| 6834.00 | 37.49 | 85.48  | 6714.90 | -459.01 | 842.68 | -459.01 | 331.42               | 959.58              | 7.80    |
| 6882.00 | 41.64 | 83.57  | 6751.90 | -428.58 | 845.62 | -428.58 | 333.12               | 948.03              | 9.01    |
| 6929.00 | 43.42 | 83.83  | 6786.53 | -397.01 | 849.11 | -397.01 | 334.94               | 937.33              | 3.80    |
| 6977.00 | 45.81 | 84.71  | 6820.70 | -363.47 | 852.47 | -363.47 | 336.91               | 926.72              | 5.14    |
| 7024.00 | 51.27 | 85.95  | 6851.81 | -328.38 | 855.32 | -328.38 | 339.00               | 916.19              | 11.79   |
| 7073.00 | 57.45 | 88.73  | 6880.35 | -288.62 | 857.13 | -288.62 | 341.39               | 904.42              | 13.43   |
| 7120.00 | 61.50 | 89.63  | 6904.22 | -248.15 | 857.70 | -248.15 | 343.86               | 892.88              | 8.76    |
| 7168.00 | 62.47 | 88.57  | 6926.76 | -205.78 | 858.37 | -205.78 | 346.52               | 882.69              | 2.82    |

| MD      | Inc   | Azim  | TVD     | VS      | +N/-S  | +E/-W   | Closure<br>Direction | Closure<br>Distance | DLS     |
|---------|-------|-------|---------|---------|--------|---------|----------------------|---------------------|---------|
| ft      | deg   | deg   | ft      | ft      | ft     | ft      | deg                  | ft                  | °/100ft |
| 7215.00 | 64.09 | 89.59 | 6947.89 | -163.80 | 859.04 | -163.80 | 349.20               | 874.52              | 3.97    |
| 7263.00 | 66.37 | 89.86 | 6968.00 | -120.22 | 859.25 | -120.22 | 352.04               | 867.62              | 4.77    |
| 7310.00 | 69.50 | 89.47 | 6985.65 | -76.67  | 859.51 | -76.67  | 354.90               | 862.92              | 6.69    |
| 7358.00 | 72.56 | 88.65 | 7001.26 | -31.29  | 860.25 | -31.29  | 357.92               | 860.82              | 6.57    |
| 7405.00 | 75.75 | 87.89 | 7014.09 | 13.90   | 861.62 | 13.90   | 0.92                 | 861.73              | 6.97    |
| 7453.00 | 80.22 | 87.58 | 7024.08 | 60.80   | 863.48 | 60.80   | 4.03                 | 865.62              | 9.32    |
| 7500.00 | 83.98 | 89.34 | 7030.54 | 107.32  | 864.73 | 107.32  | 7.07                 | 871.36              | 8.82    |
| 7557.00 | 86.51 | 90.44 | 7035.27 | 164.12  | 864.83 | 164.12  | 10.75                | 880.27              | 4.84    |
| 7669.00 | 91.25 | 91.10 | 7037.47 | 276.06  | 863.33 | 276.06  | 17.73                | 906.39              | 4.27    |
| 7764.00 | 89.76 | 91.15 | 7036.63 | 371.03  | 861.46 | 371.03  | 23.30                | 937.96              | 1.56    |
| 7860.00 | 88.12 | 90.71 | 7038.41 | 467.00  | 859.90 | 467.00  | 28.51                | 978.52              | 1.78    |
| 7955.00 | 89.26 | 91.02 | 7040.58 | 561.96  | 858.47 | 561.96  | 33.21                | 1026.04             | 1.25    |
| 8051.00 | 88.08 | 91.08 | 7042.80 | 657.92  | 856.71 | 657.92  | 37.52                | 1080.19             | 1.23    |
| 8146.00 | 87.88 | 90.56 | 7046.15 | 752.85  | 855.35 | 752.85  | 41.35                | 1139.48             | 0.58    |
| 8241.00 | 87.24 | 89.13 | 7050.20 | 847.76  | 855.61 | 847.76  | 44.74                | 1204.48             | 1.65    |
| 8336.00 | 87.18 | 89.51 | 7054.82 | 942.64  | 856.73 | 942.64  | 47.73                | 1273.80             | 0.41    |
| 8431.00 | 89.06 | 90.34 | 7057.94 | 1037.58 | 856.85 | 1037.58 | 50.45                | 1345.65             | 2.16    |
| 8527.00 | 88.75 | 89.75 | 7059.77 | 1133.57 | 856.78 | 1133.57 | 52.92                | 1420.93             | 0.70    |

| MD       | Inc   | Azim  | TVD     | VS      | +N/-S  | +E/-W   | Closure<br>Direction | Closure<br>Distance | DLS     |
|----------|-------|-------|---------|---------|--------|---------|----------------------|---------------------|---------|
| ft       | deg   | deg   | ft      | ft      | ft     | ft      | deg                  | ft                  | °/100ft |
| 8622.00  | 88.92 | 89.72 | 7061.69 | 1228.55 | 857.23 | 1228.55 | 55.09                | 1498.05             | 0.18    |
| 8717.00  | 89.33 | 88.30 | 7063.14 | 1323.52 | 858.86 | 1323.52 | 57.02                | 1577.77             | 1.55    |
| 8812.00  | 88.02 | 87.51 | 7065.34 | 1418.43 | 862.33 | 1418.43 | 58.70                | 1659.98             | 1.61    |
| 8908.00  | 89.39 | 89.62 | 7067.51 | 1514.36 | 864.73 | 1514.36 | 60.27                | 1743.86             | 2.62    |
| 9003.00  | 90.87 | 90.15 | 7067.29 | 1609.36 | 864.92 | 1609.36 | 61.75                | 1827.05             | 1.65    |
| 9098.00  | 89.46 | 94.36 | 7067.01 | 1704.26 | 861.18 | 1704.26 | 63.19                | 1909.49             | 4.67    |
| 9193.00  | 89.23 | 94.33 | 7068.09 | 1798.98 | 853.98 | 1798.98 | 64.61                | 1991.39             | 0.25    |
| 9288.00  | 89.33 | 95.05 | 7069.29 | 1893.66 | 846.21 | 1893.66 | 65.92                | 2074.13             | 0.77    |
| 9384.00  | 89.60 | 92.65 | 7070.19 | 1989.43 | 839.77 | 1989.43 | 67.11                | 2159.41             | 2.52    |
| 9479.00  | 90.77 | 92.22 | 7069.89 | 2084.34 | 835.73 | 2084.34 | 68.15                | 2245.64             | 1.32    |
| 9574.00  | 90.40 | 89.82 | 7068.91 | 2179.31 | 834.03 | 2179.31 | 69.06                | 2333.46             | 2.56    |
| 9670.00  | 90.27 | 89.77 | 7068.35 | 2275.31 | 834.37 | 2275.31 | 69.86                | 2423.47             | 0.15    |
| 9765.00  | 89.43 | 91.65 | 7068.60 | 2370.30 | 833.20 | 2370.30 | 70.63                | 2512.48             | 2.17    |
| 9861.00  | 87.65 | 91.46 | 7071.05 | 2466.23 | 830.59 | 2466.23 | 71.39                | 2602.34             | 1.87    |
| 9956.00  | 89.43 | 93.01 | 7073.48 | 2561.12 | 826.88 | 2561.12 | 72.11                | 2691.29             | 2.49    |
| 10052.00 | 87.75 | 90.16 | 7075.84 | 2657.04 | 824.23 | 2657.04 | 72.77                | 2781.94             | 3.45    |
| 10147.00 | 86.67 | 88.39 | 7080.47 | 2751.91 | 825.43 | 2751.91 | 73.30                | 2873.04             | 2.17    |
| 10242.00 | 87.35 | 88.36 | 7085.43 | 2846.75 | 828.12 | 2846.75 | 73.78                | 2964.75             | 0.71    |

| MD       | Inc   | Azim  | TVD     | VS      | +N/-S  | +E/-W   | Closure Direction | Closure Distance | DLS     |
|----------|-------|-------|---------|---------|--------|---------|-------------------|------------------|---------|
| ft       | deg   | deg   | ft      | ft      | ft     | ft      | deg               | ft               | "/100ft |
| 10338.00 | 88.69 | 88.52 | 7088.75 | 2942.65 | 830.73 | 2942.65 | 74.24             | 3057.66          | 1.41    |
| 10433.00 | 88.89 | 88.56 | 7090.75 | 3037.60 | 833.15 | 3037.60 | 74.66             | 3149.78          | 0.22    |
| 10528.00 | 87.41 | 89.11 | 7093.82 | 3132.53 | 835.08 | 3132.53 | 75.07             | 3241.93          | 1.66    |
| 10623.00 | 87.71 | 90.09 | 7097.86 | 3227.44 | 835.74 | 3227.44 | 75.48             | 3333.89          | 1.08    |
| 10719.00 | 87.95 | 90.92 | 7101.49 | 3323.36 | 834.89 | 3323.36 | 75.90             | 3426.63          | 0.90    |
| 10814.00 | 88.99 | 90.85 | 7104.02 | 3418.32 | 833.42 | 3418.32 | 76.30             | 3518.45          | 1.10    |
| 10909.00 | 88.99 | 90.22 | 7105.69 | 3513.30 | 832.52 | 3513.30 | 76.67             | 3610.59          | 0.66    |
| 11004.00 | 87.95 | 89.40 | 7108.23 | 3608.26 | 832.84 | 3608.26 | 77.00             | 3703.13          | 1.40    |
| 11100.00 | 88.35 | 88.58 | 7111.33 | 3704.19 | 834.53 | 3704.19 | 77.30             | 3797.04          | 0.95    |
| 11195.00 | 88.42 | 88.60 | 7114.01 | 3799.13 | 836.88 | 3799.13 | 77.58             | 3890.21          | 0.07    |
| 11290.00 | 88.49 | 87.57 | 7116.57 | 3894.04 | 840.05 | 3894.04 | 77.83             | 3983.62          | 1.08    |
| 11356.00 | 88.22 | 87.14 | 7118.47 | 3959.94 | 843.09 | 3959.94 | 77.98             | 4048.70          | 0.76    |

| MD | Inc | Azim | TVD | VS | +N/-S | +E/-W | Closure<br>Direction | Closure<br>Distance | DLS     |
|----|-----|------|-----|----|-------|-------|----------------------|---------------------|---------|
| ft | deg | deg  | ft  | ft | ft    | ft    | deg                  | ft                  | °/100ft |
|    |     |      |     |    |       |       |                      |                     |         |

5" = 100' FEET TVD