



**Cement Bond  
Variable Density Log  
W/ Gamma Ray/CCL**

|                                 |                            |                |                            |
|---------------------------------|----------------------------|----------------|----------------------------|
| Company                         | Bonanza Creek Energy       | Company        | Bonanza Creek Energy       |
| Well                            | State Antelope 24-21-12HNC | Well           | State Antelope 24-21-12HNC |
| Field                           | Wattenberg                 | Field          | Wattenberg                 |
| County                          | Weld                       | County         | Weld                       |
| State                           | Colorado                   | State          | Colorado                   |
| Location:                       | APL # : 05-123-38888       | Other Services | NONE                       |
| SHL: 350' FSL & 1389' FNL SE/SW |                            |                |                            |
| SEC 12 TWP 5N RGE 62W           |                            |                |                            |
| Permanent Datum                 | Ground Level               | Elevation      | 4575'                      |
| Log Measured From               | Kelly Bushing 17' APD      |                |                            |
| Drilling Measured From          | Kelly Bushing              |                |                            |
| Elevation                       | K.B. 4592'                 |                |                            |
|                                 | D.F. 4591'                 |                |                            |
|                                 | G.L. 4575'                 |                |                            |
| Date                            | April 6th, 2014            |                |                            |
| Run Number                      | 1                          |                |                            |
| Depth Driller                   | NA                         |                |                            |
| Depth Logger                    | 6372'                      |                |                            |
| Bottom Logged Interval          | 6360'                      |                |                            |
| Top Log Interval                | Surface                    |                |                            |
| Open Hole Size                  | 8.75                       |                |                            |
| Type Fluid                      | Fresh Water                |                |                            |
| Density / Viscosity             | 8.33                       |                |                            |
| Max. Recorded Temp.             | N/A                        |                |                            |
| Estimated Cement Top            | Surface                    |                |                            |
| Time Well Ready                 | 1030                       |                |                            |
| Time Logger on Bottom           | 1100                       |                |                            |
| Equipment Number                | 13033                      |                |                            |
| Location                        | Brighton                   |                |                            |
| Recorded By                     | Robert Grissom             |                |                            |
| Witnessed By                    | D.Barberousse              |                |                            |
| Borehole Record                 |                            | Tubing Record  |                            |
| Run Number                      | Bit                        | From           | To                         |
|                                 |                            |                |                            |
|                                 |                            |                |                            |
|                                 |                            |                |                            |
|                                 |                            |                |                            |
|                                 |                            |                |                            |
| Casing Record                   | Size                       | Wgt/Ft         | Top                        |
| Surface String                  | 9 5/8"                     | 36#            | 0                          |
| Prot. String                    |                            |                |                            |
| Production String               | 7"                         | 26#            | 0                          |
| Liner                           |                            |                |                            |

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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 interpretation, 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 set out in our current Price Schedule.

Comments

Primary Log on this Well

Main Pass and Repeat Pass logged with 0 PSI

Logged from 17' Kelly Bushing

Logging Speed Requested by Company

Thank You For using Allied Wireline Services  
(303) 659-4609



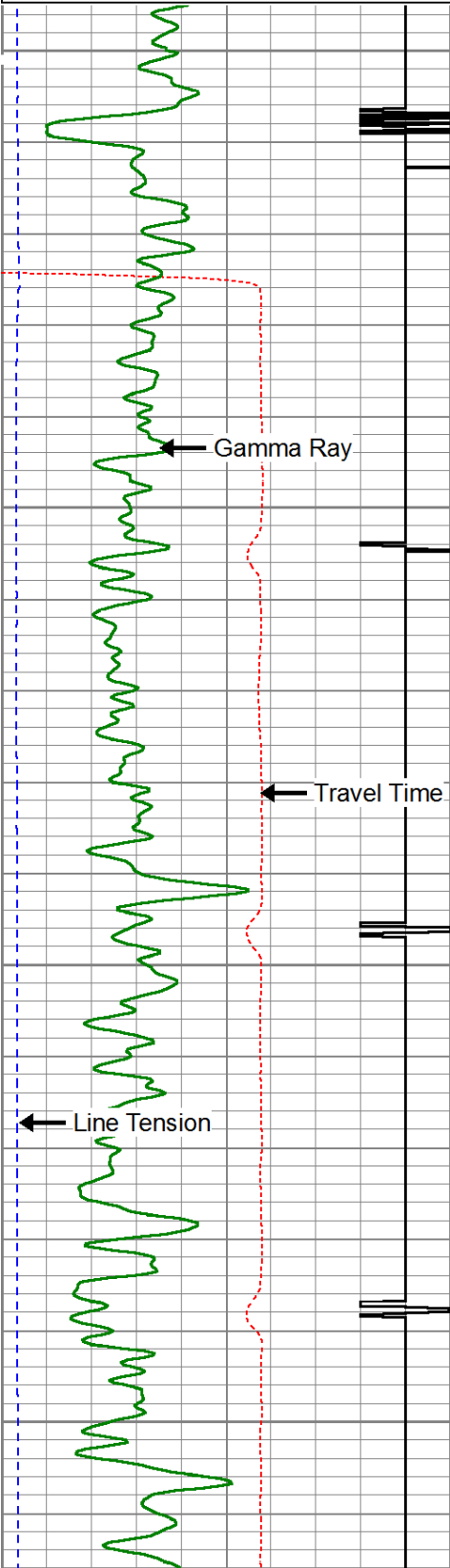
Main Pass (0 PSI)

Database File: bonanza creek state antelope 24-21-12hnc.db  
Dataset Pathname: pass6  
Presentation Format: cblprobe  
Dataset Creation: Sun Apr 06 11:48:32 2014 by Log 0  
Charted by: Depth in Feet scaled 1:240

|     |                    |      |
|-----|--------------------|------|
| 400 | Travel Time (usec) | 200  |
| 9   | Casing Collar      | -1   |
| 0   | Gamma Ray (GAPI)   | 150  |
| 0   | Line Tension (lb)  | 5000 |

|   |                          |     |
|---|--------------------------|-----|
| 0 | Amplitude (mV)           | 100 |
| 0 | Amplified Amplitude (mV) | 10  |

200 Variable Density 1200

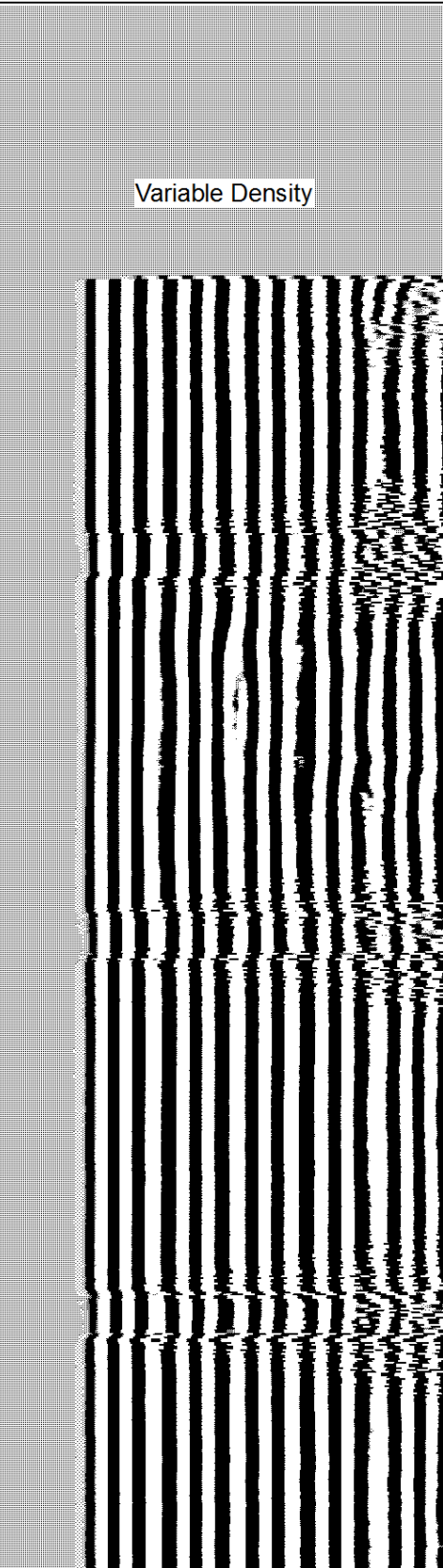
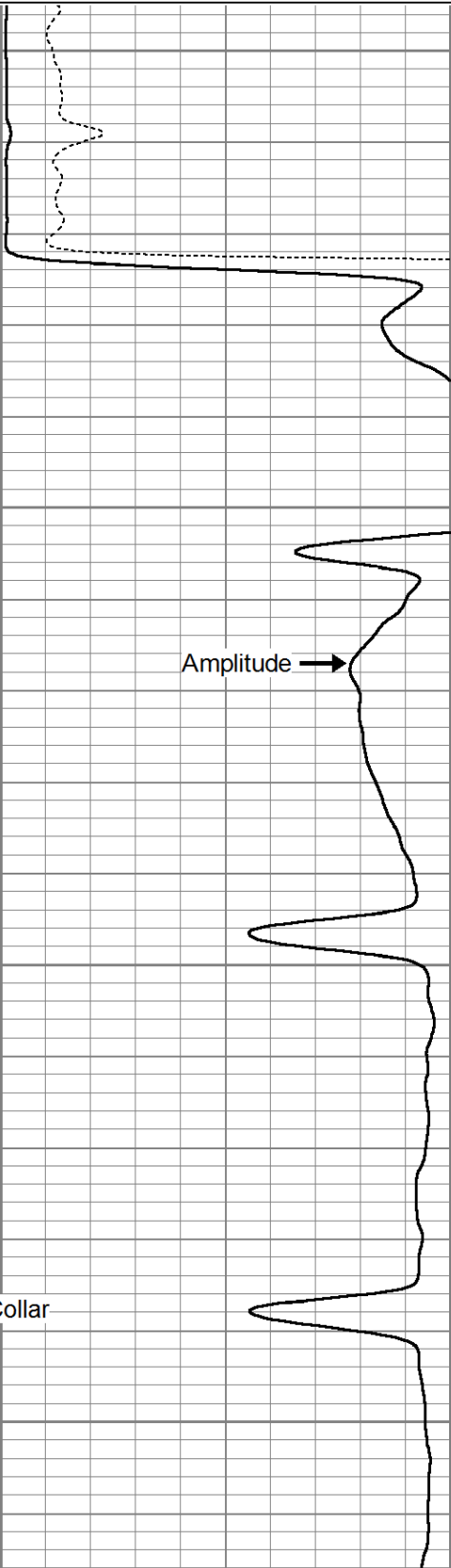


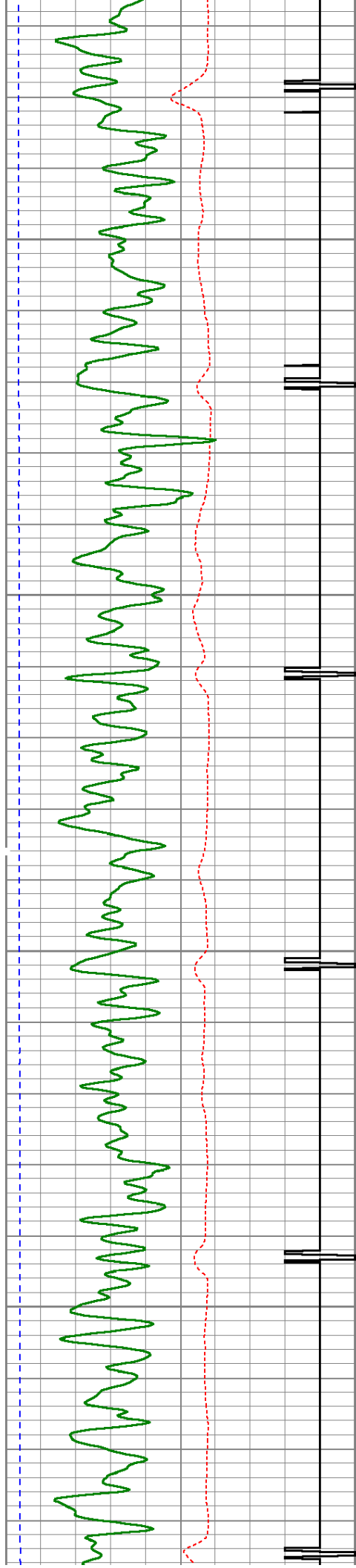
0

50

100

150



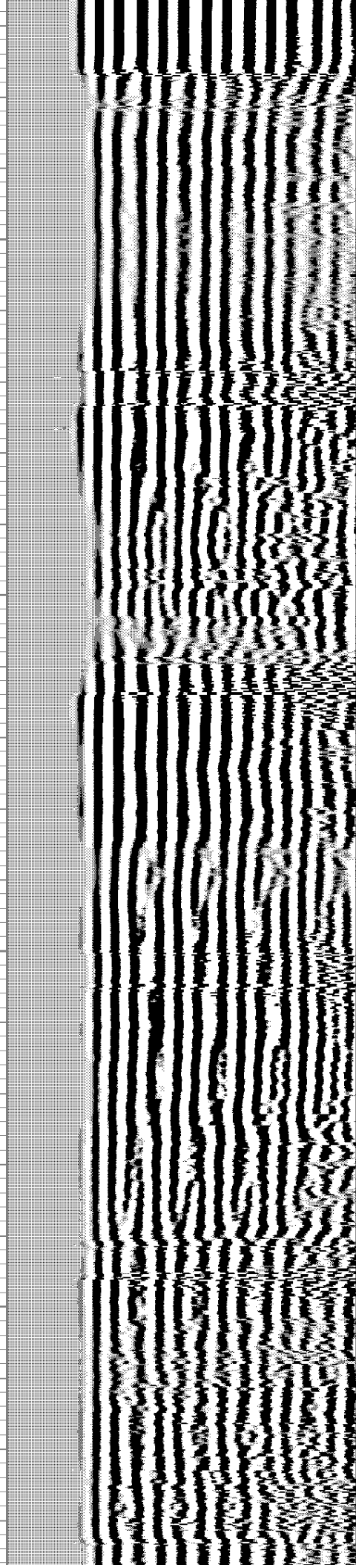
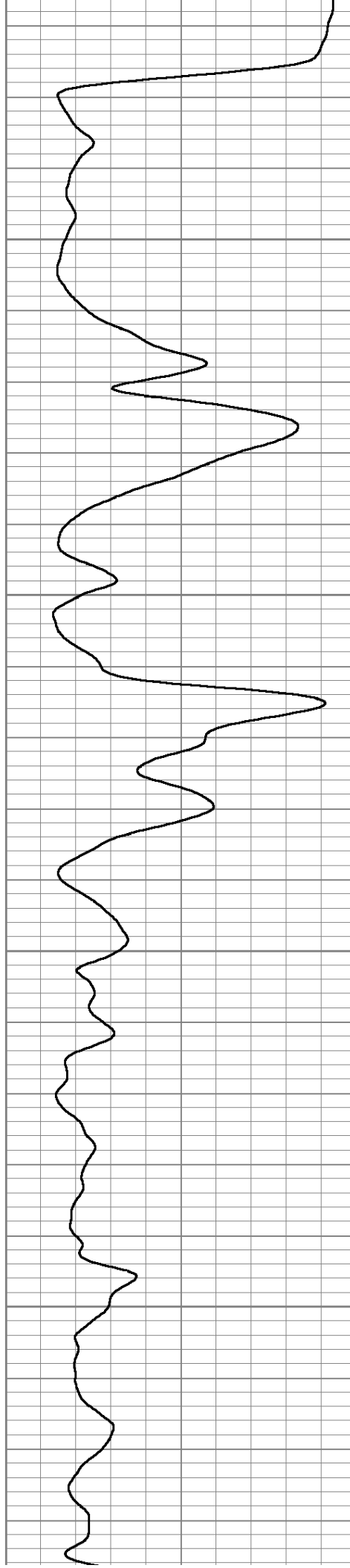


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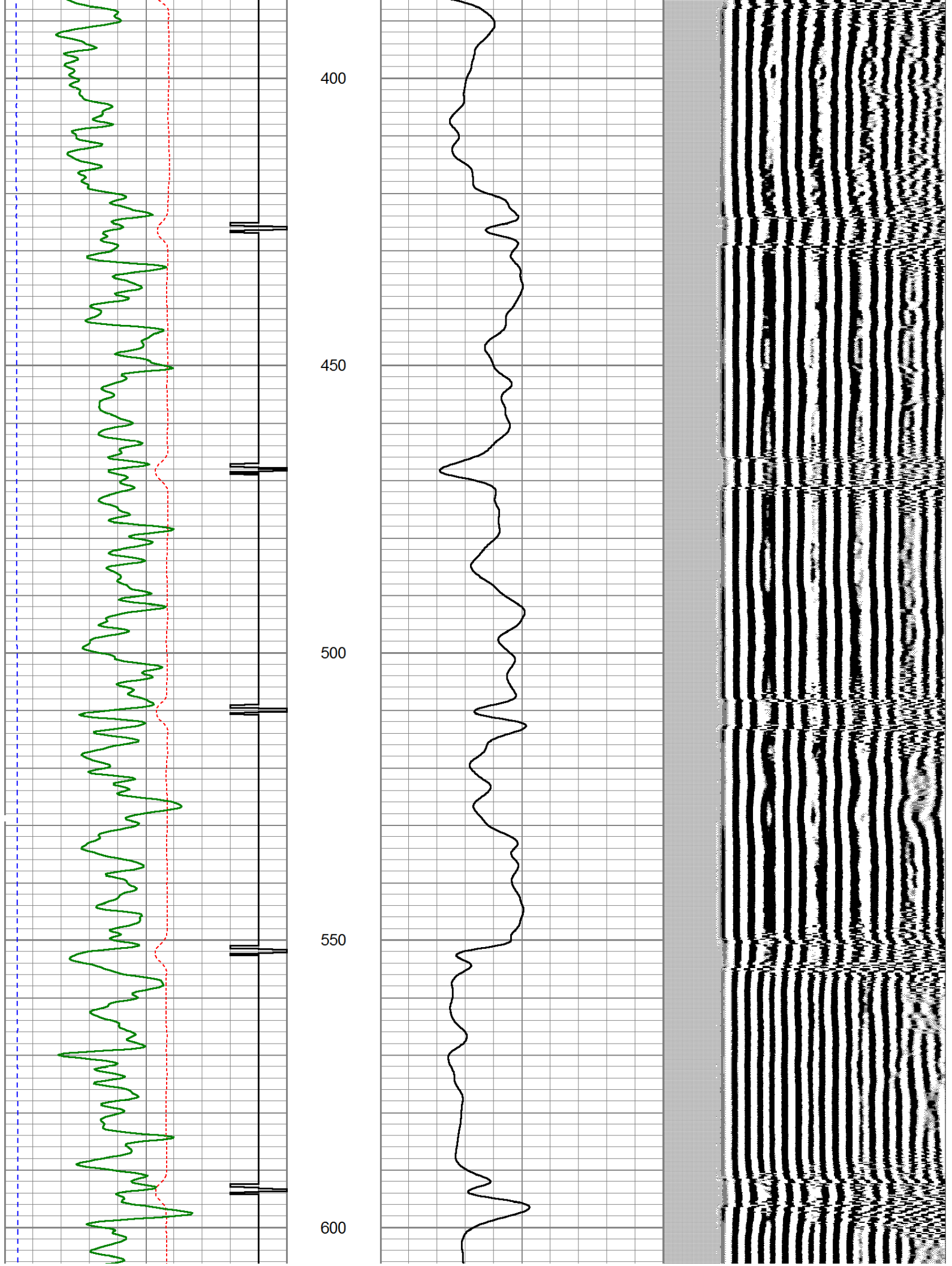
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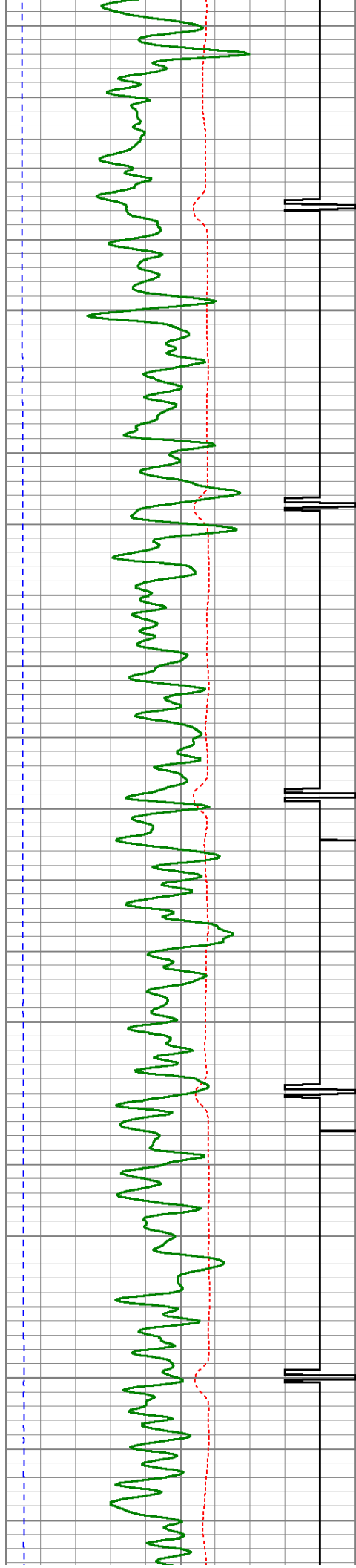
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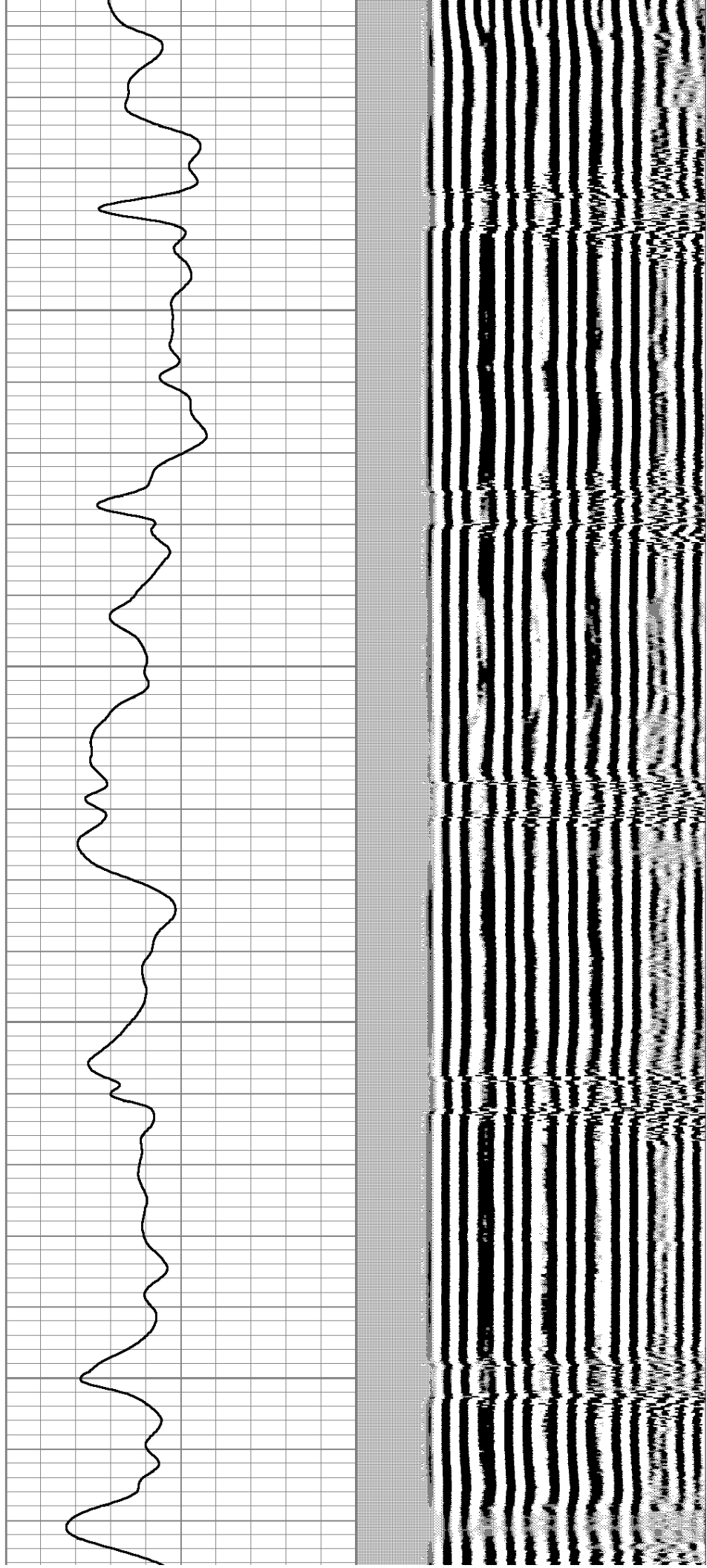


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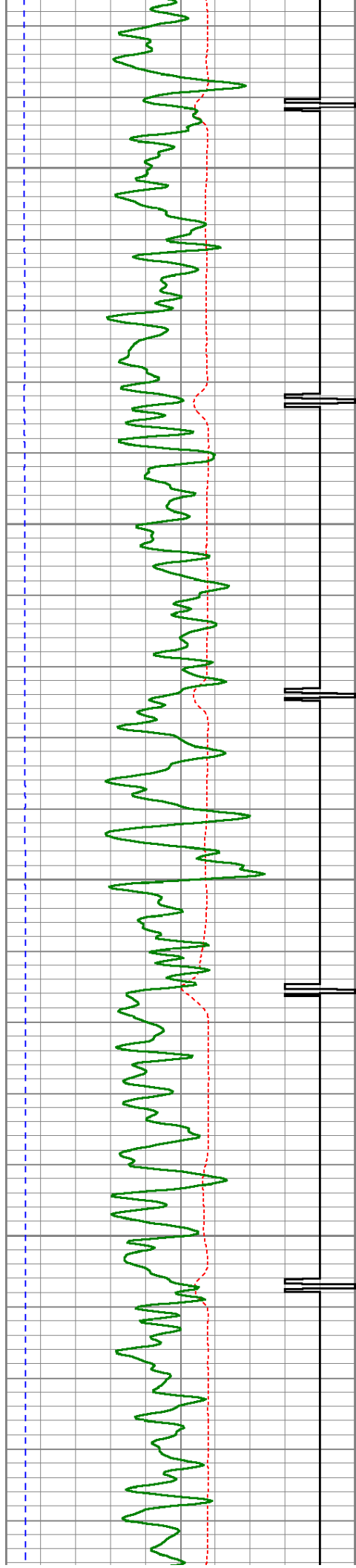
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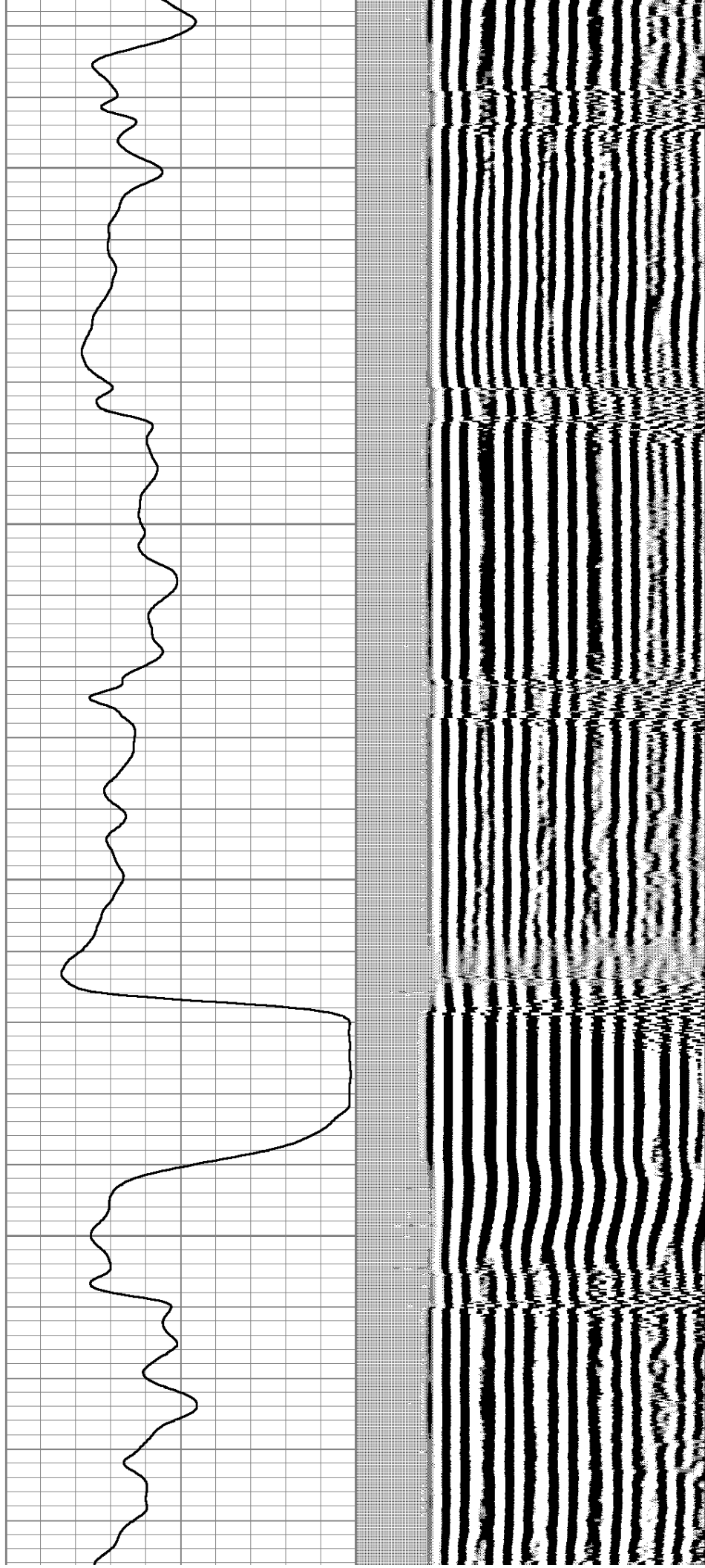


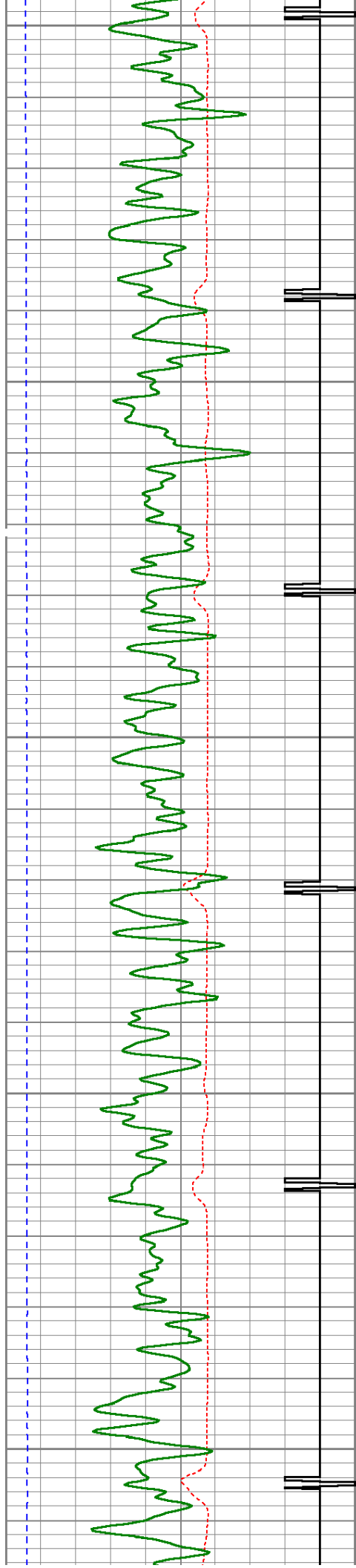
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900

950

1000





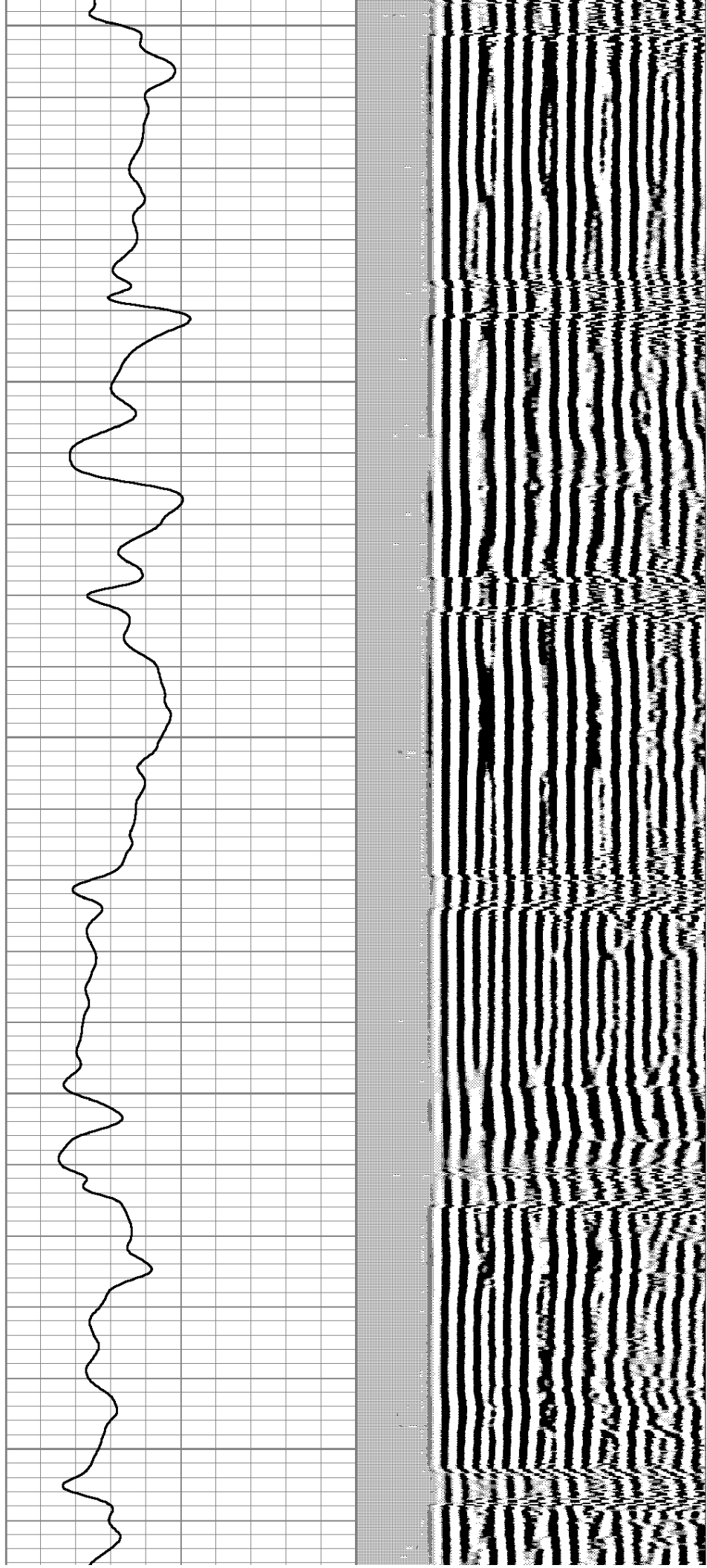
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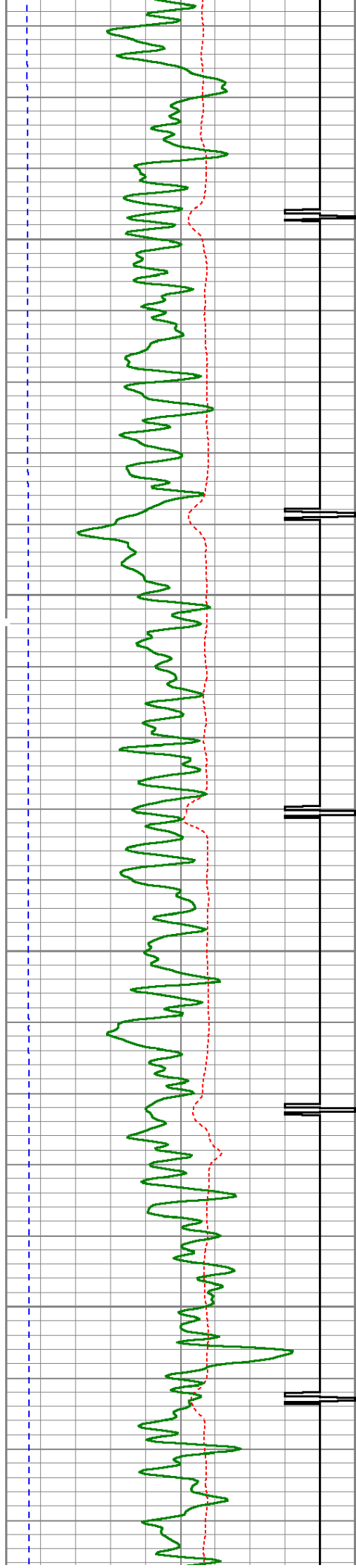
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1200

1250





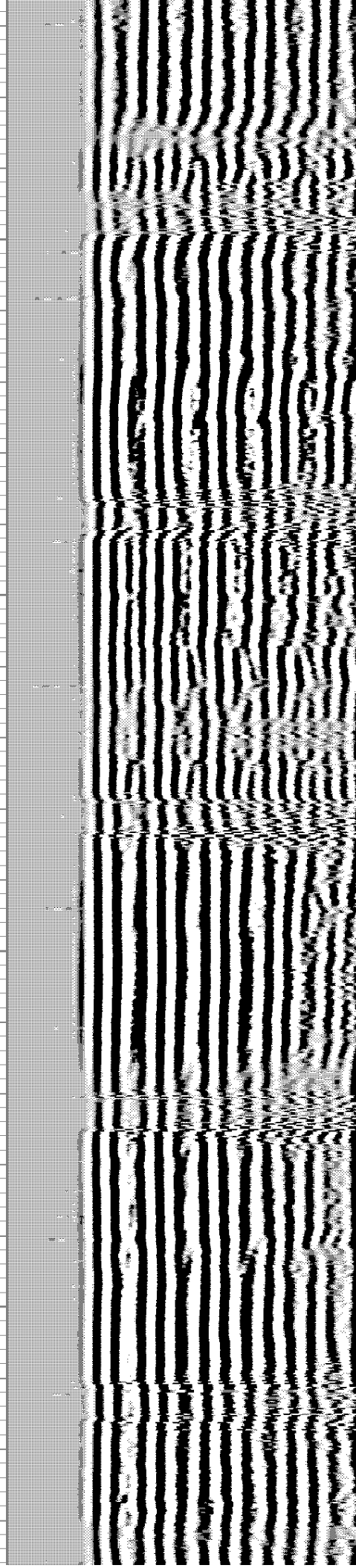
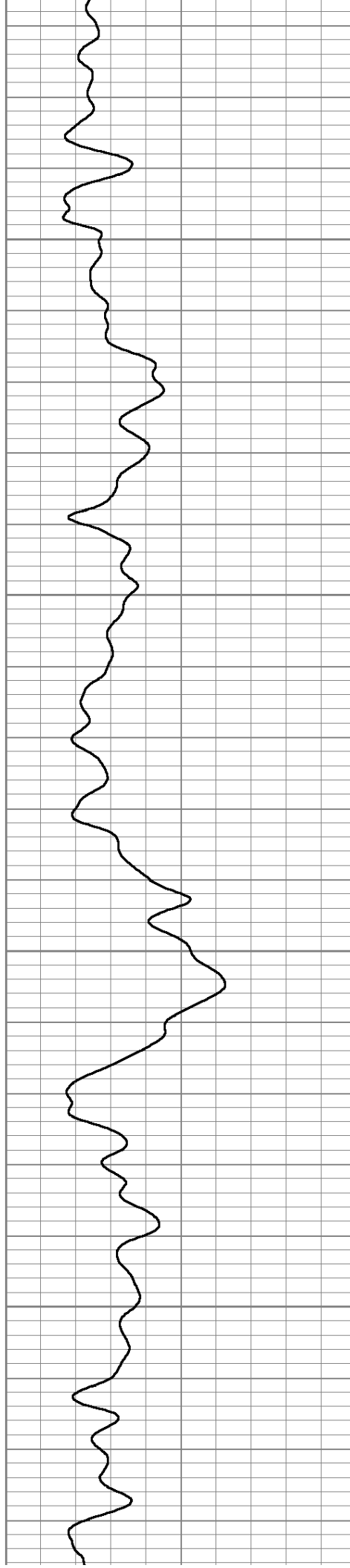


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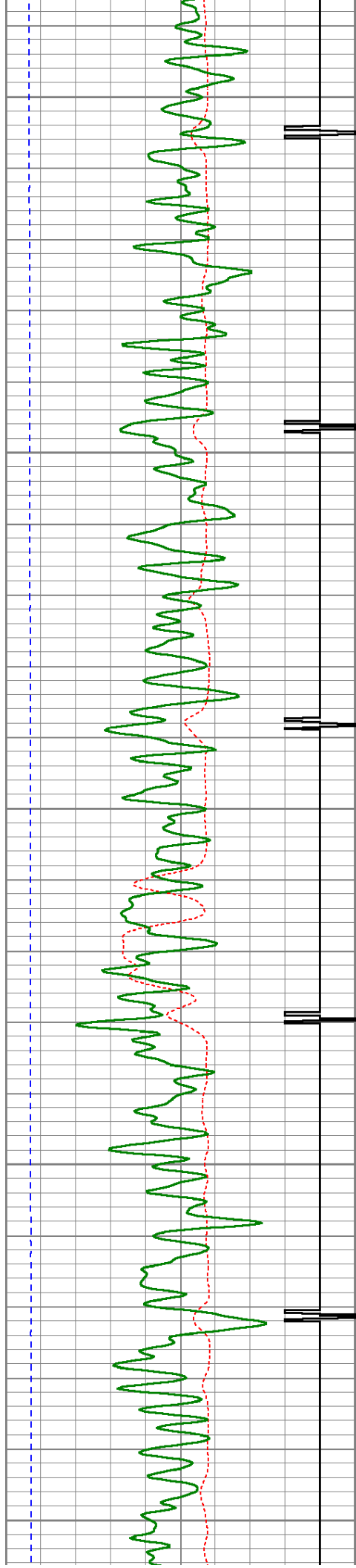
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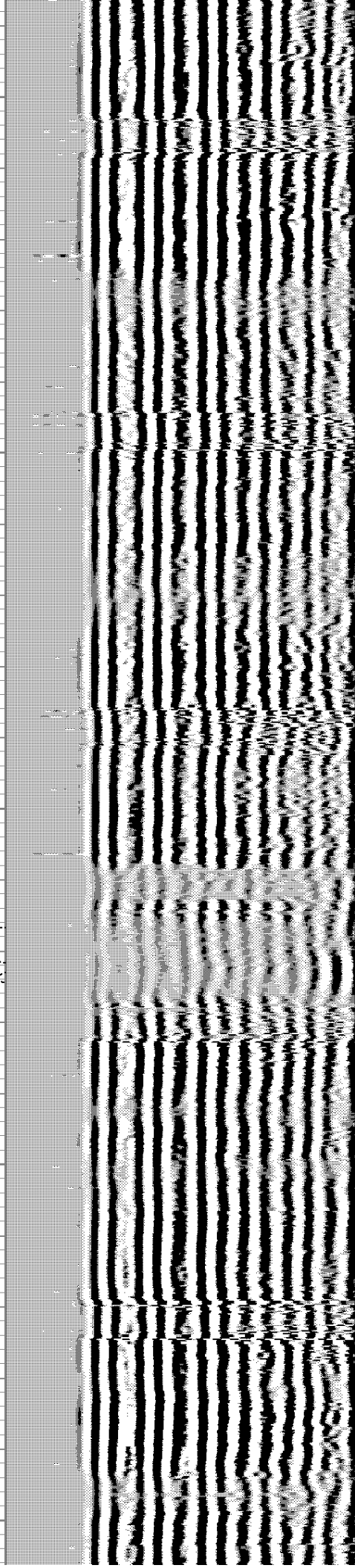
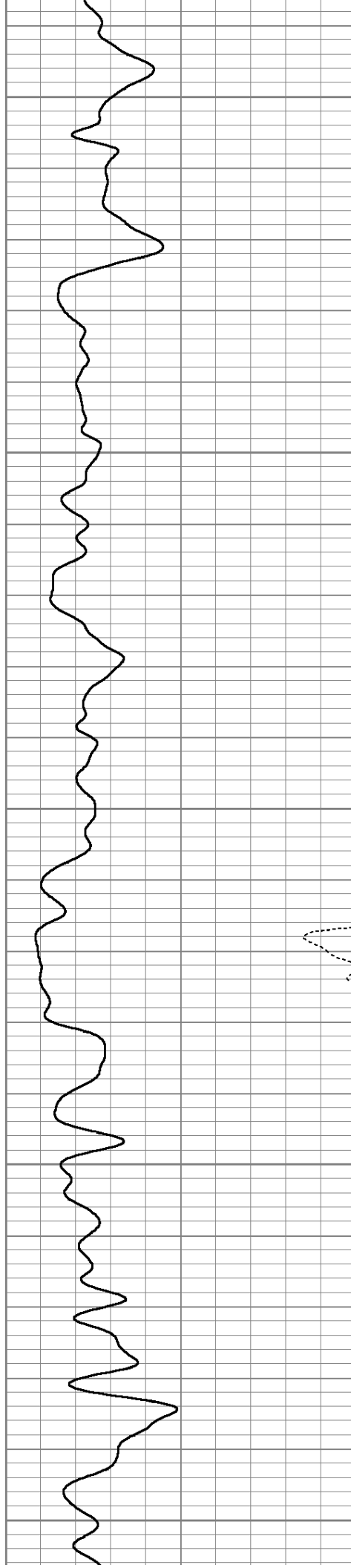
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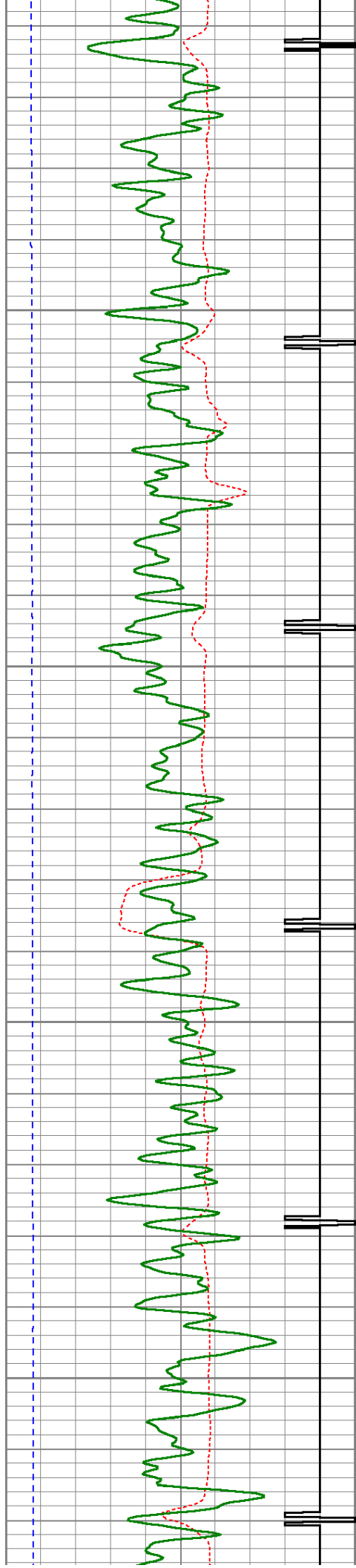
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1700



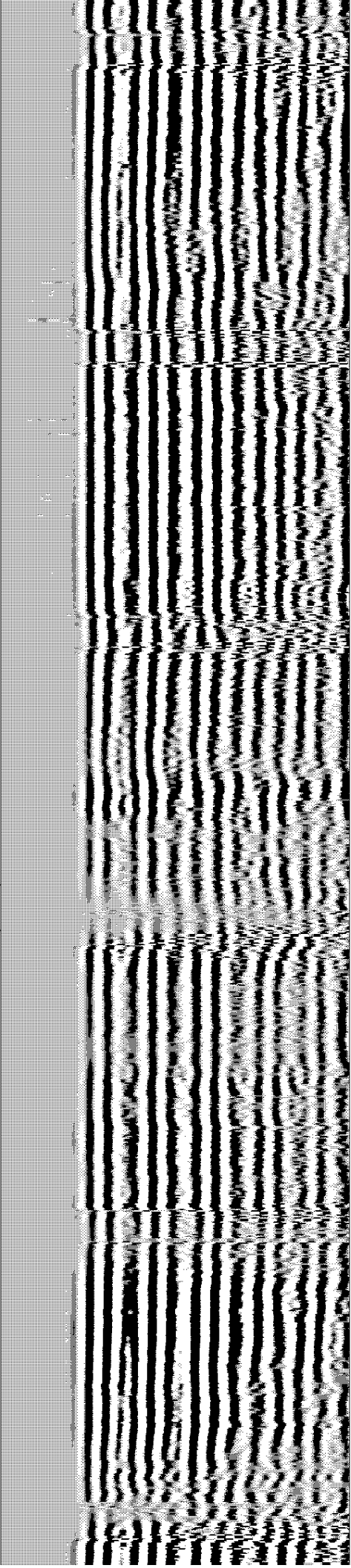
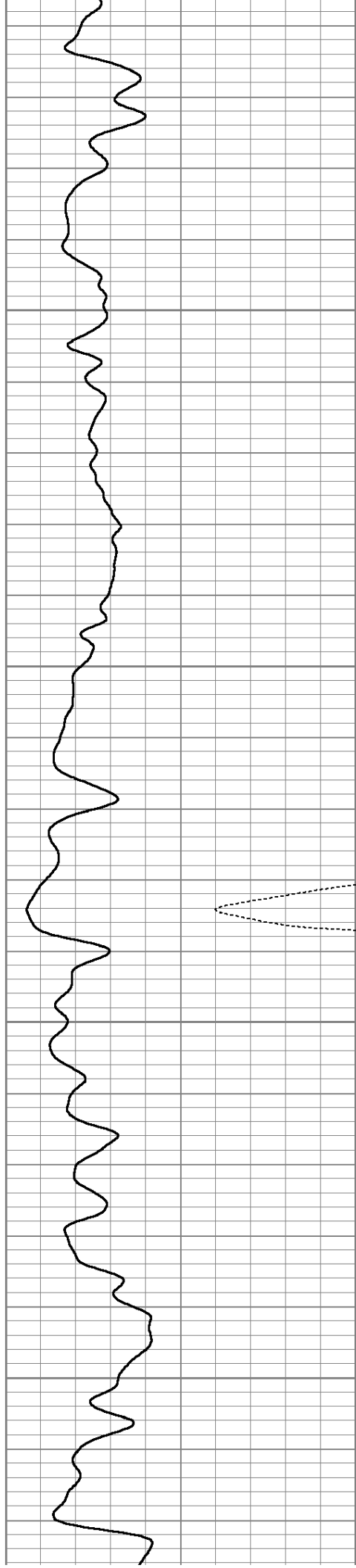


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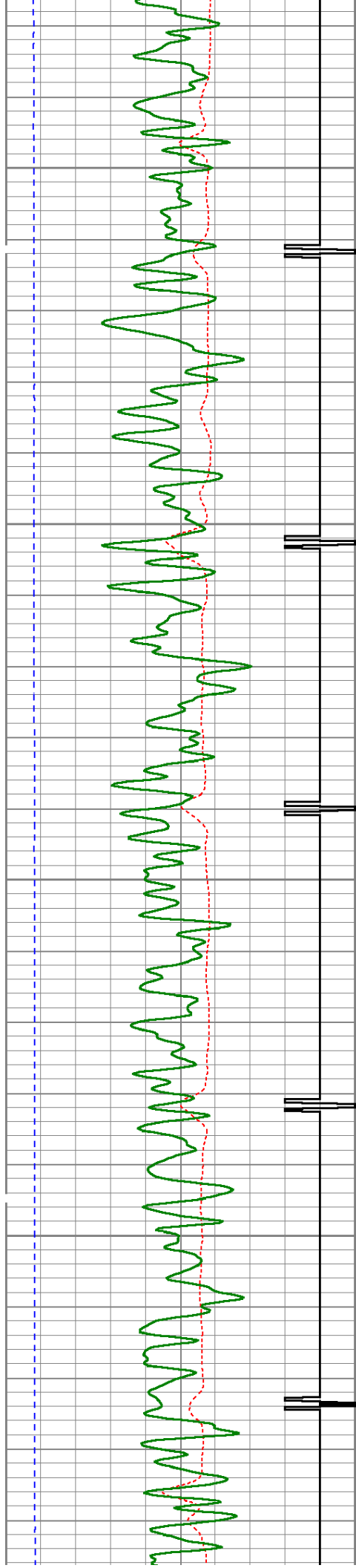
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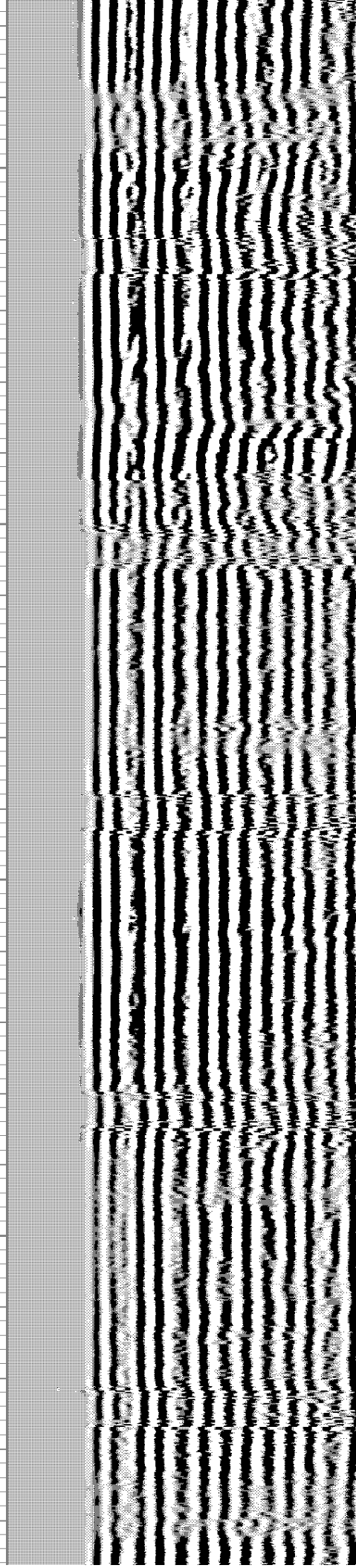
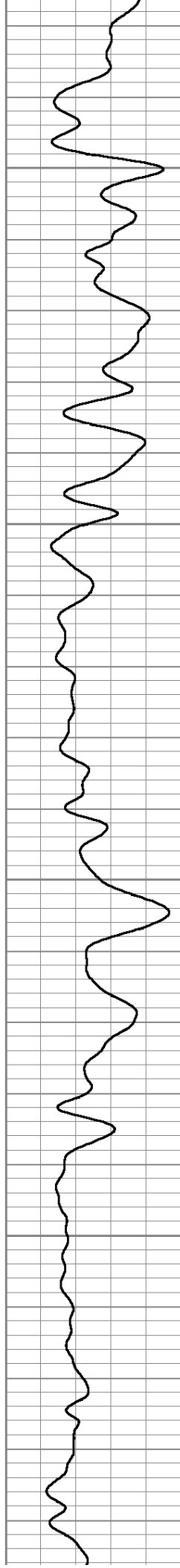


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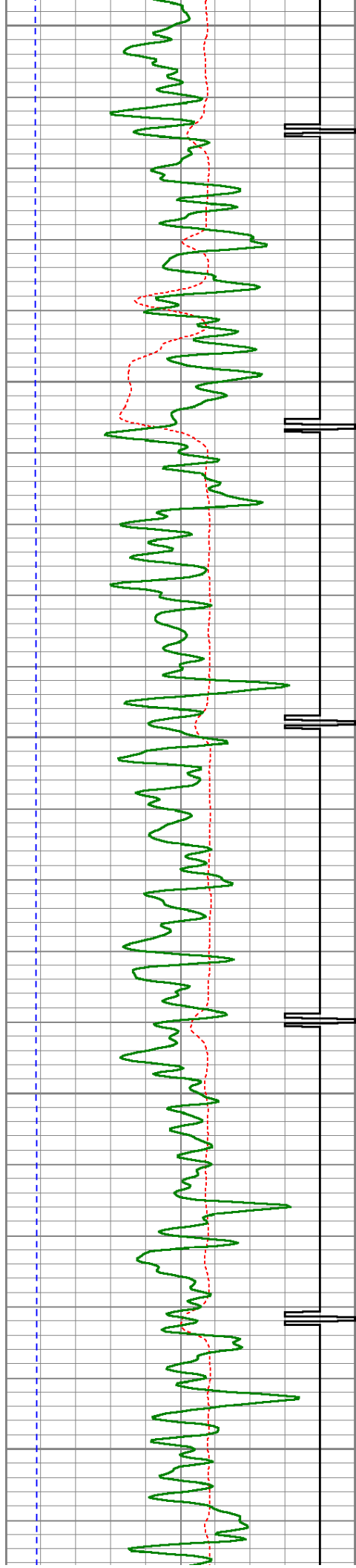
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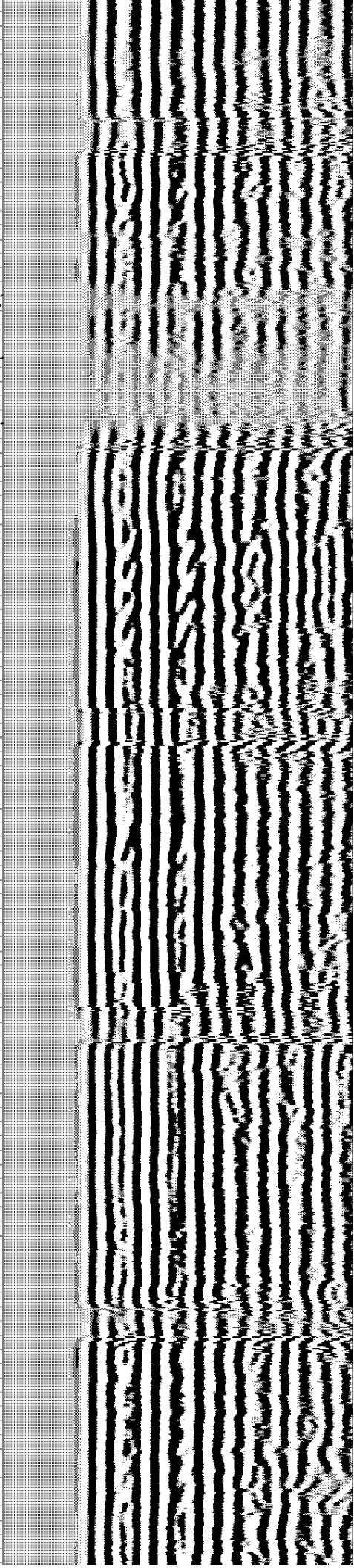
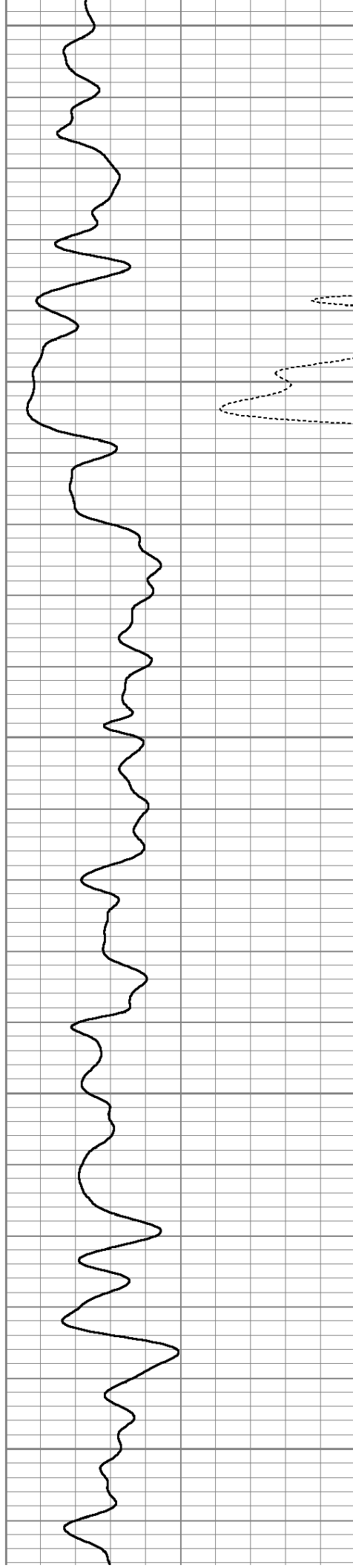
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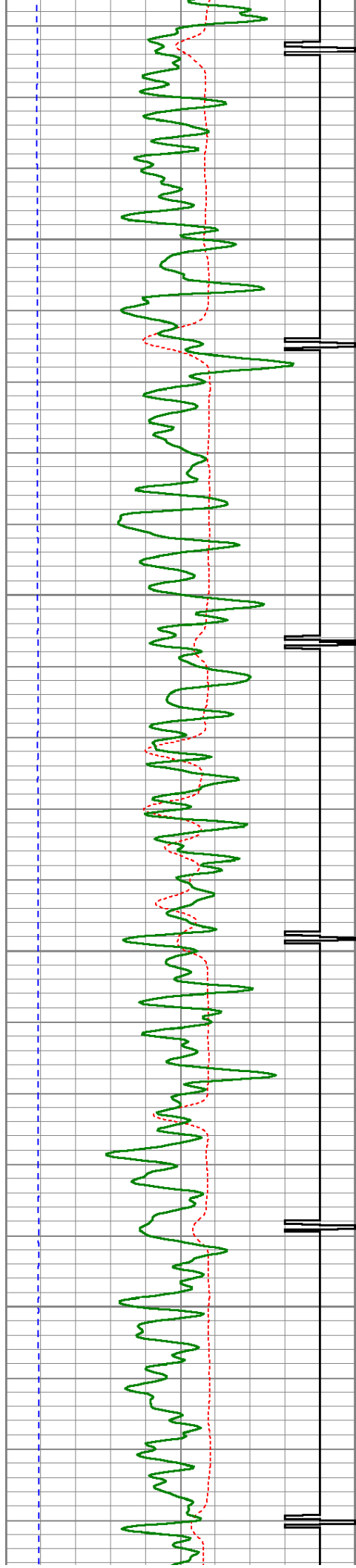
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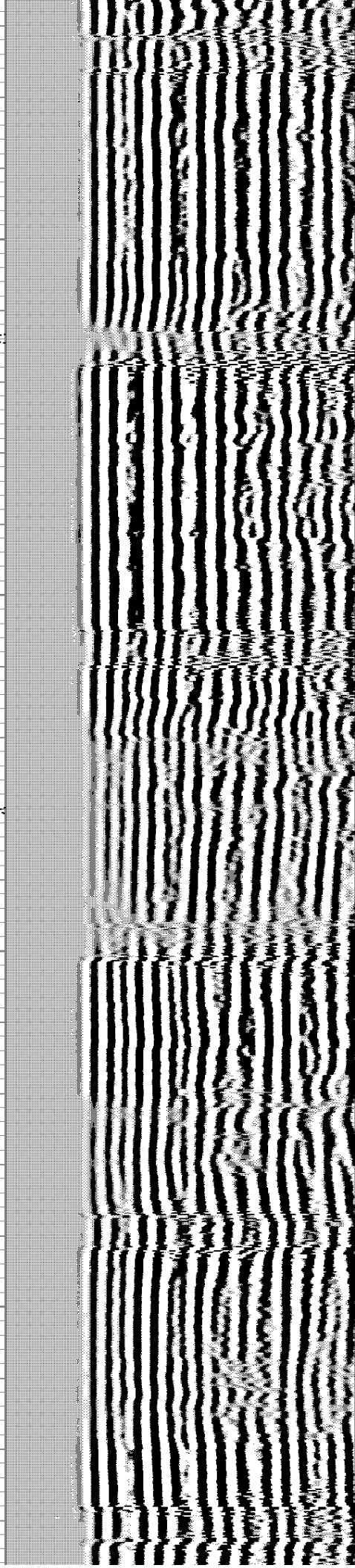
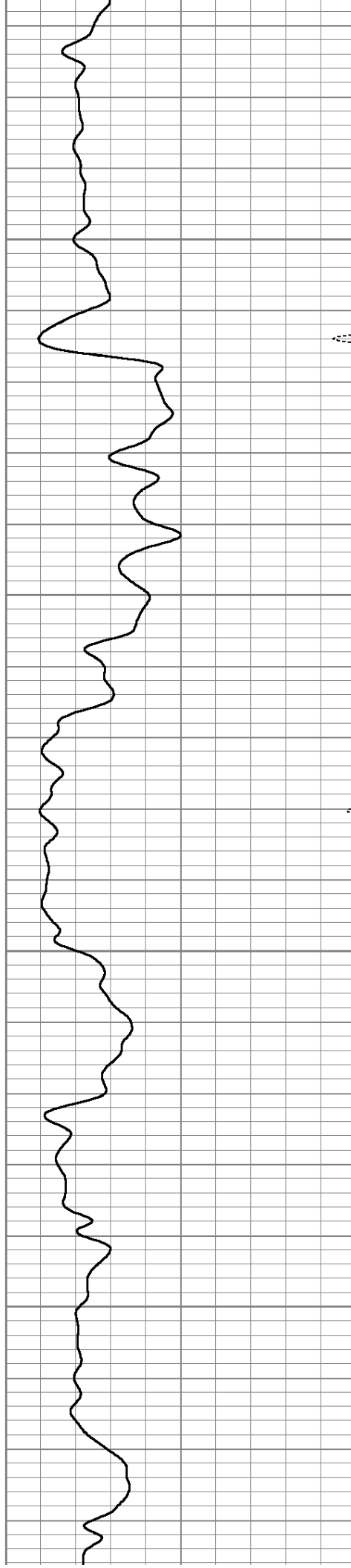


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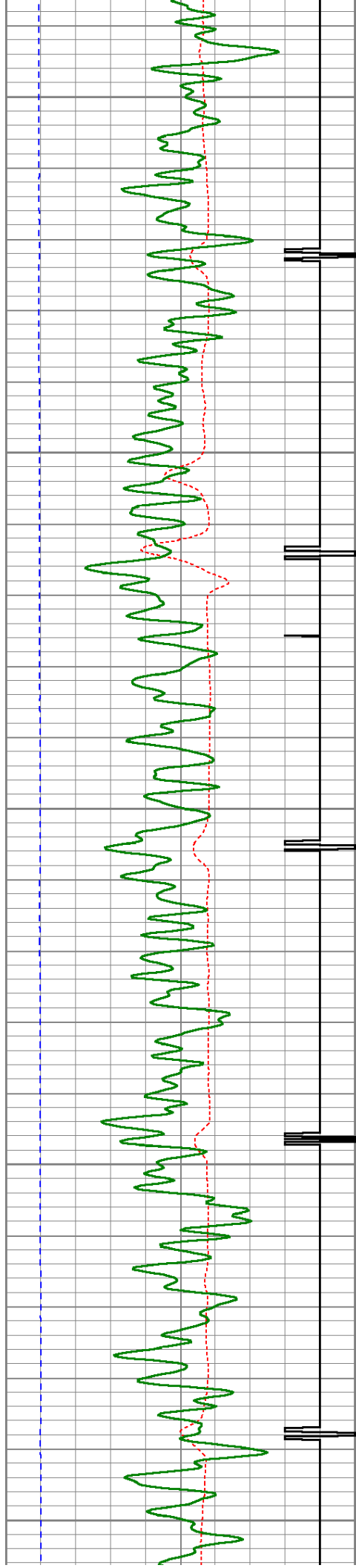
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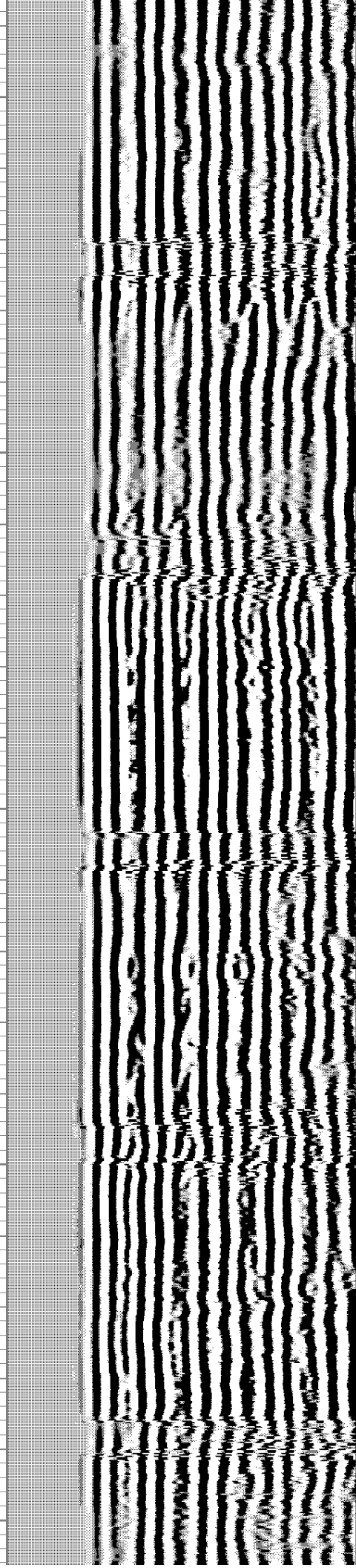
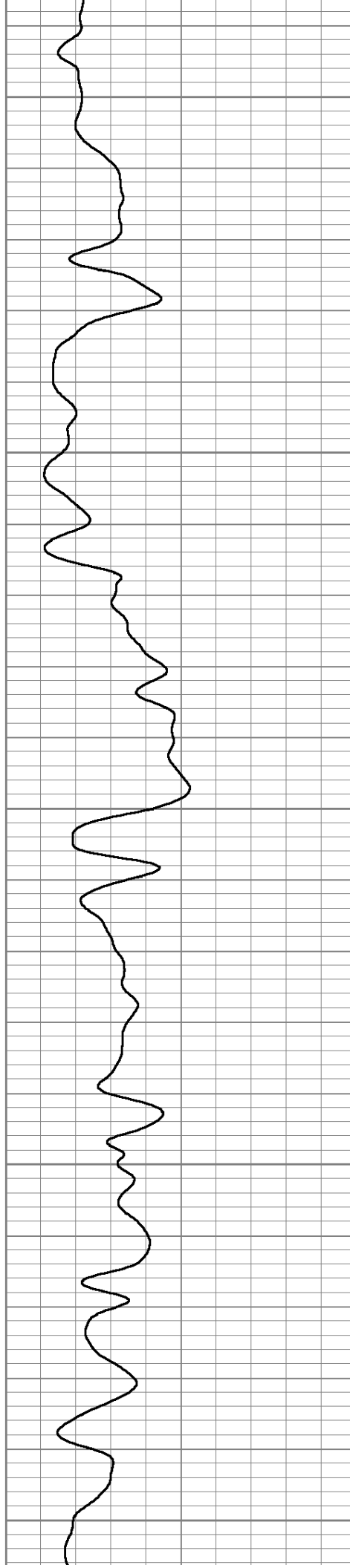
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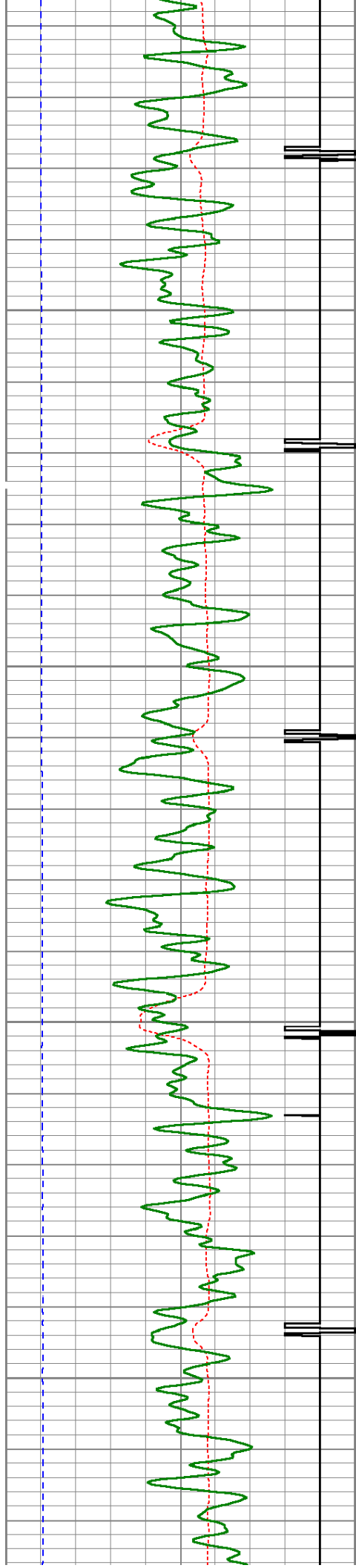
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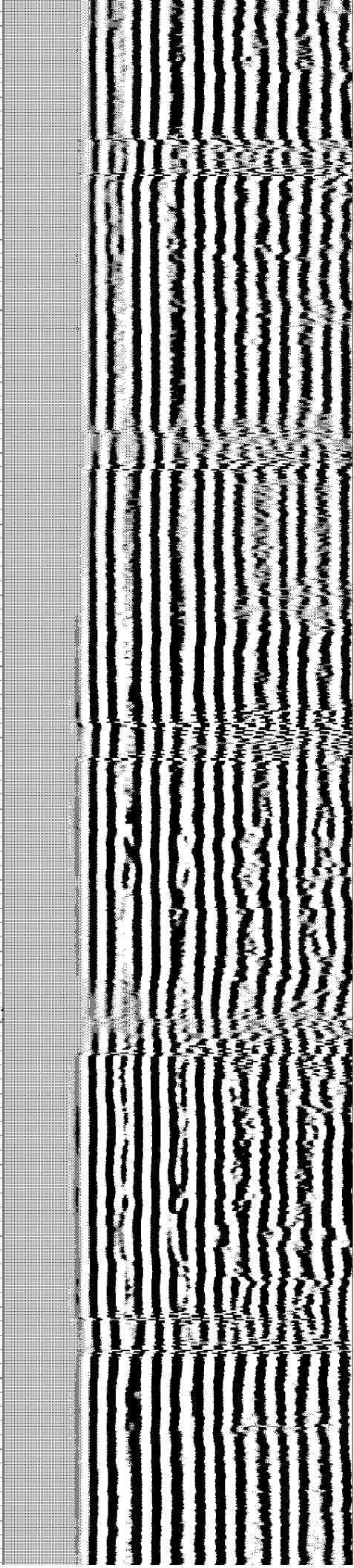
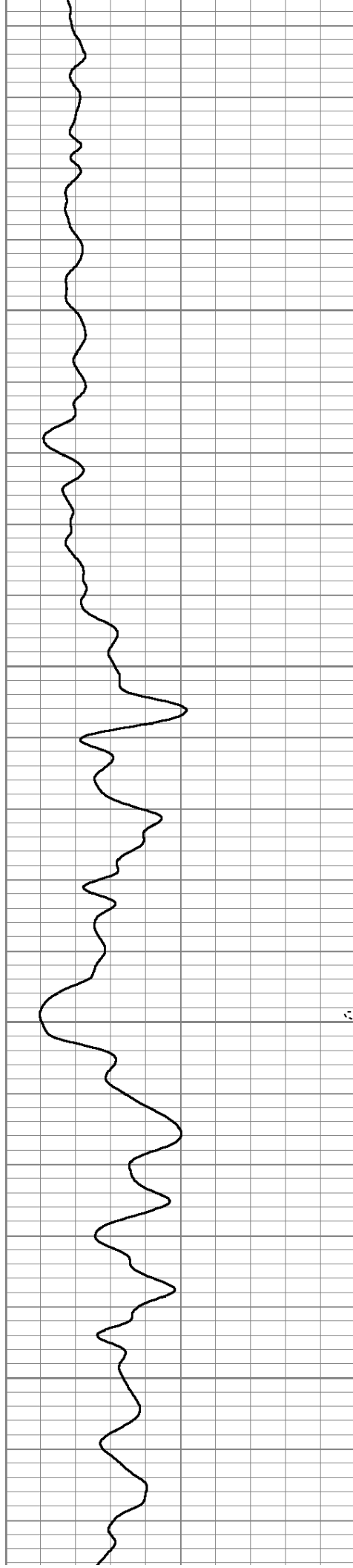


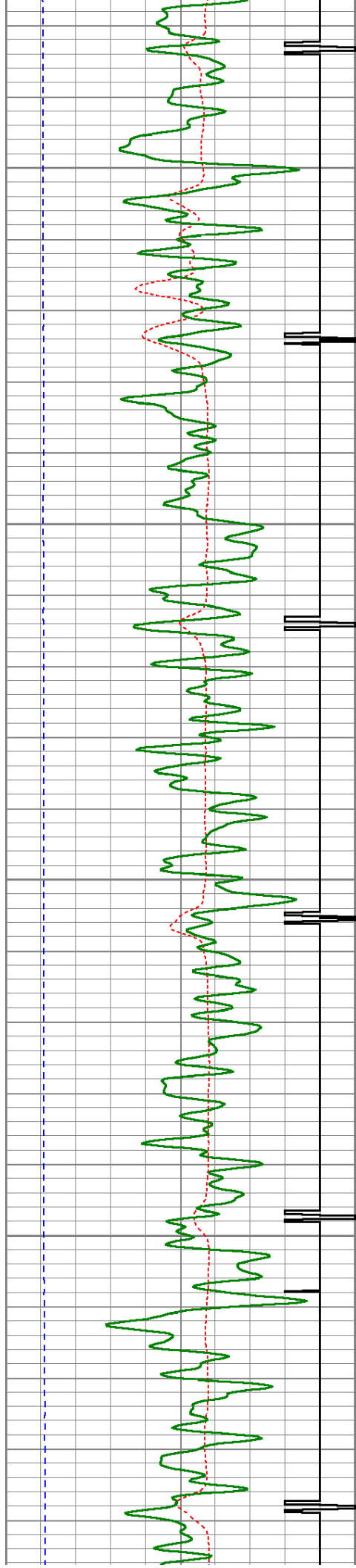
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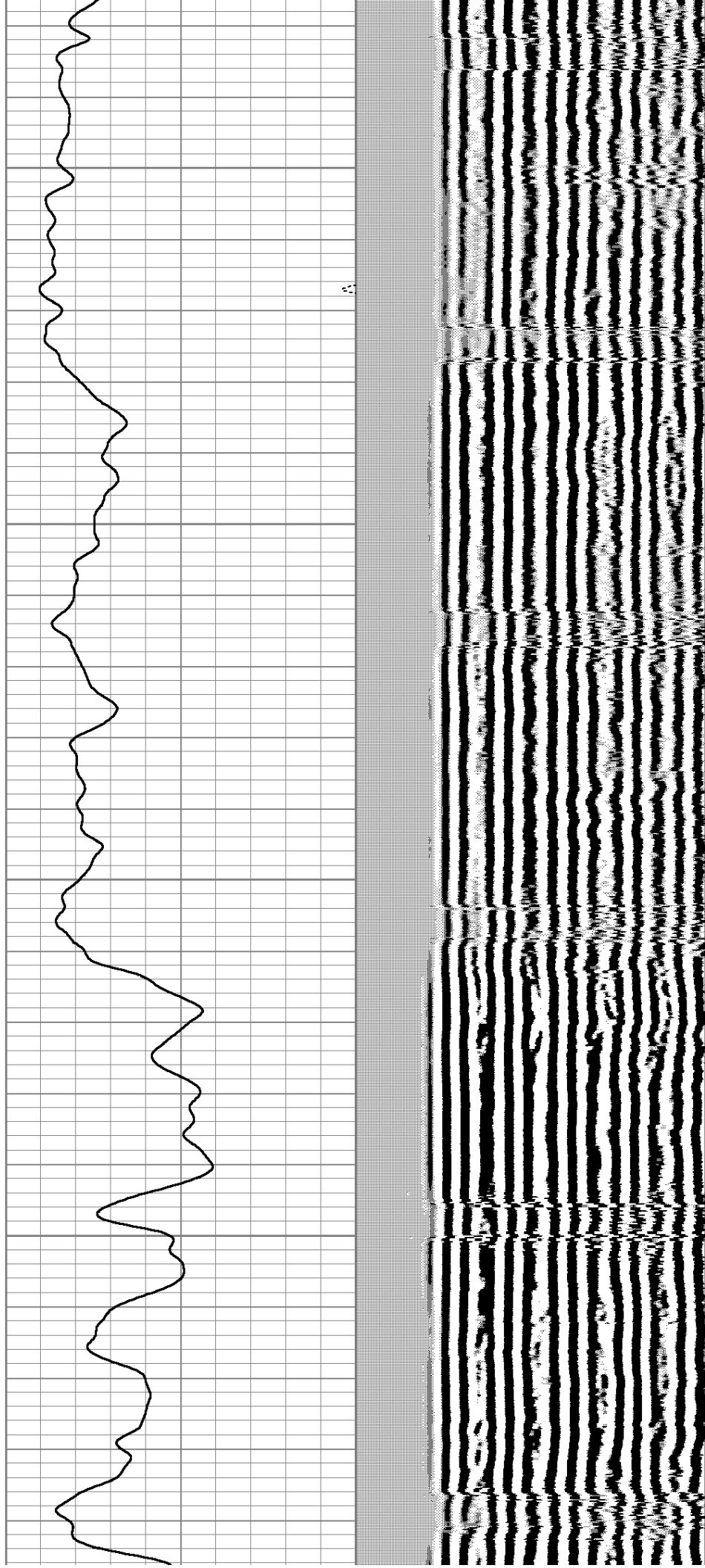


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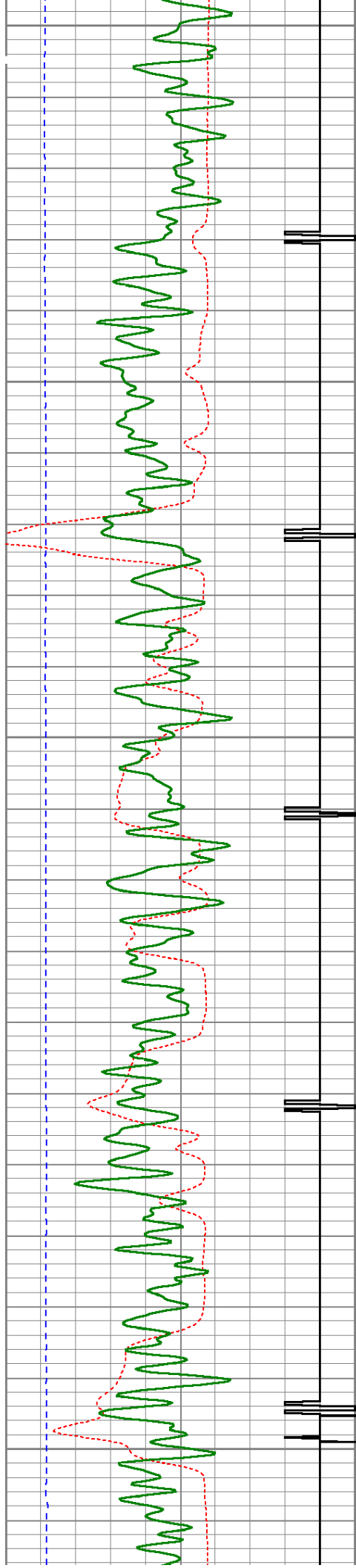
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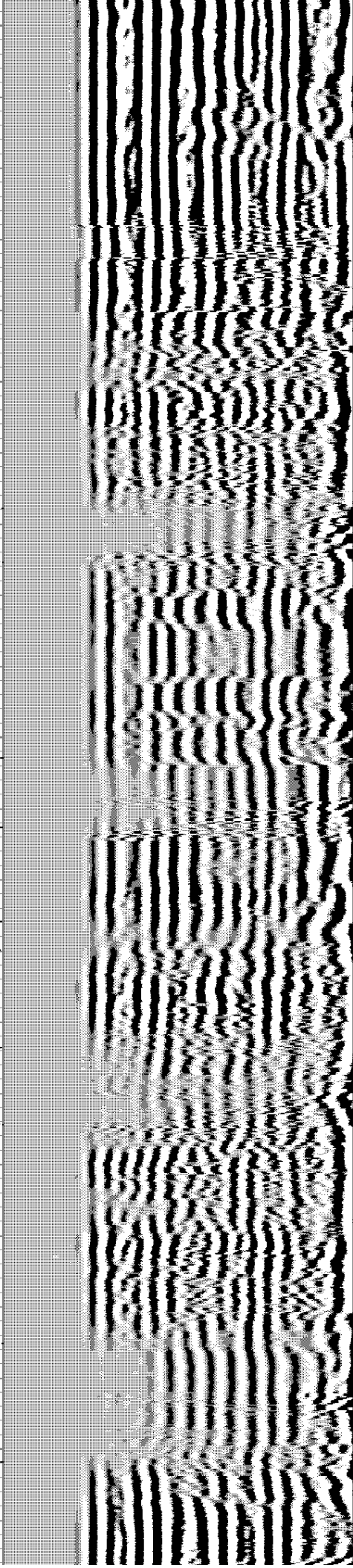
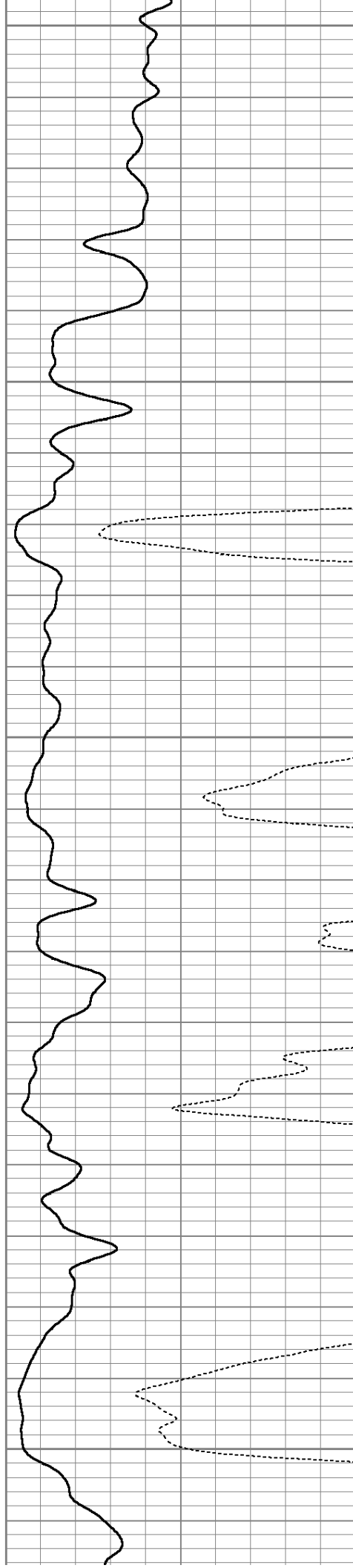
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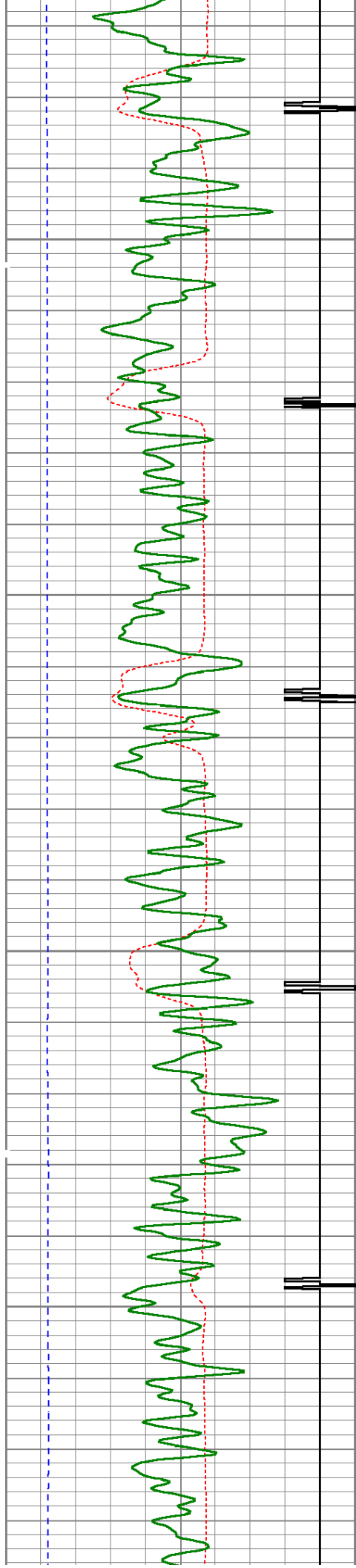
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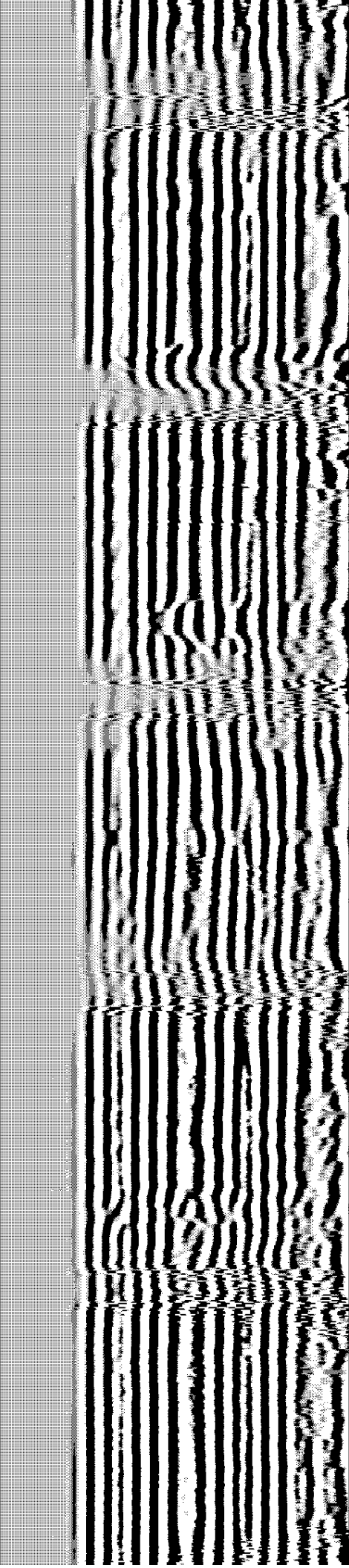
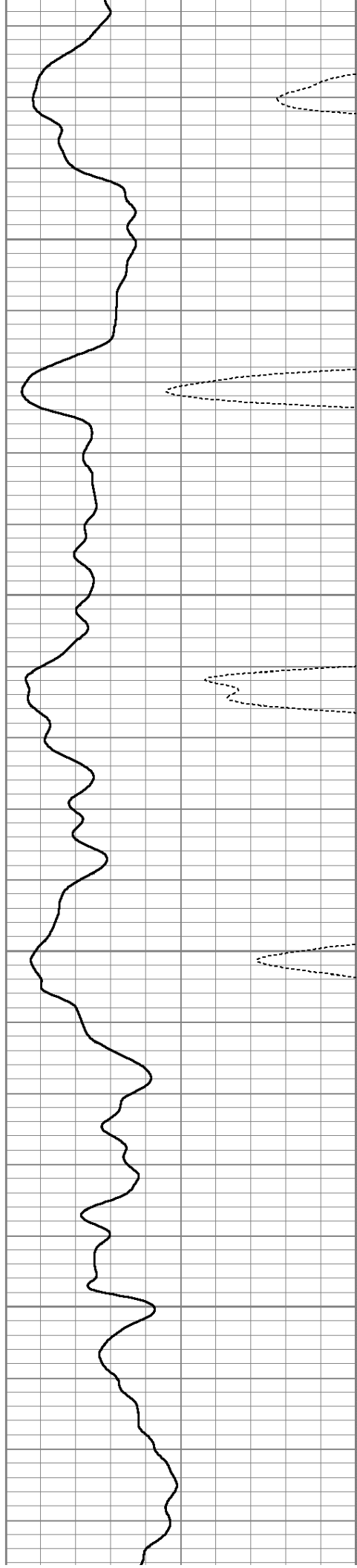


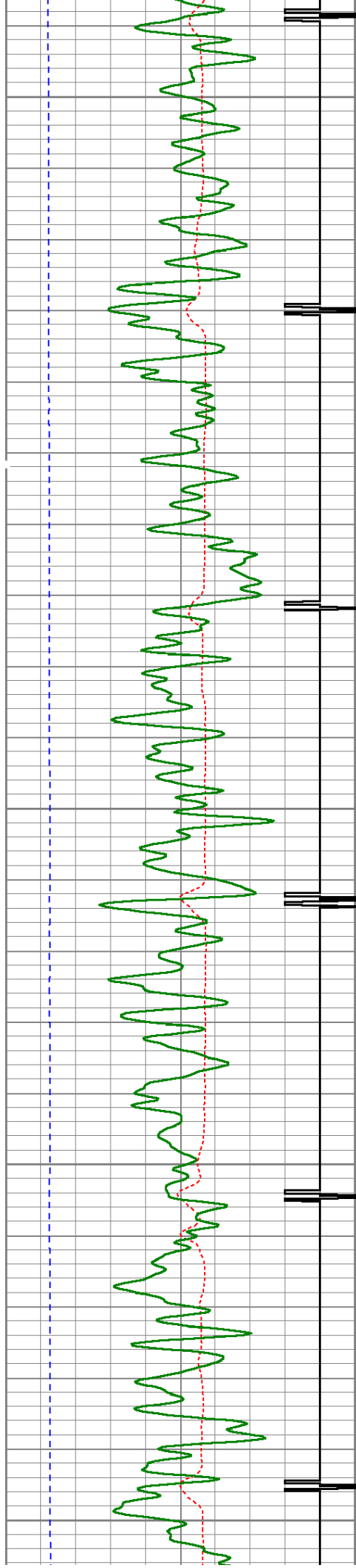
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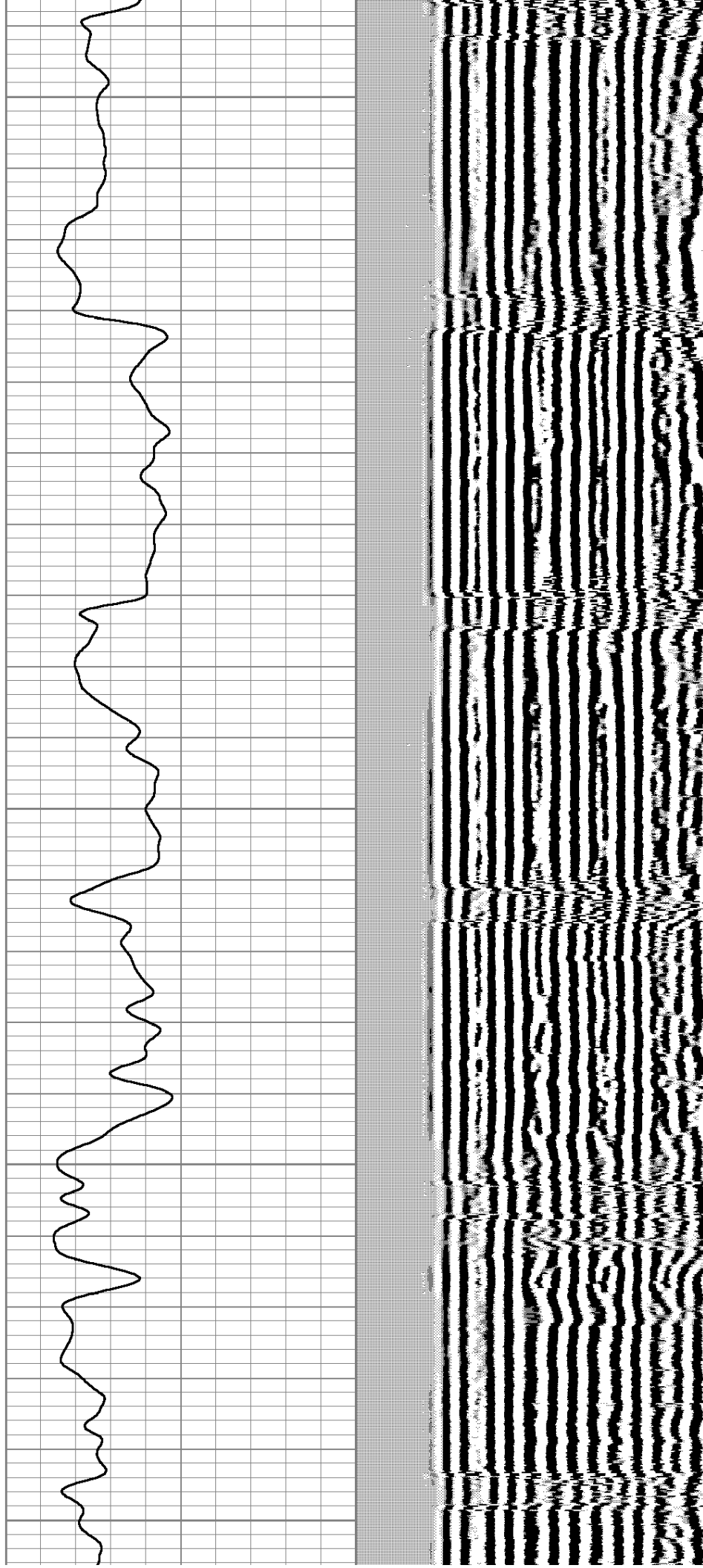
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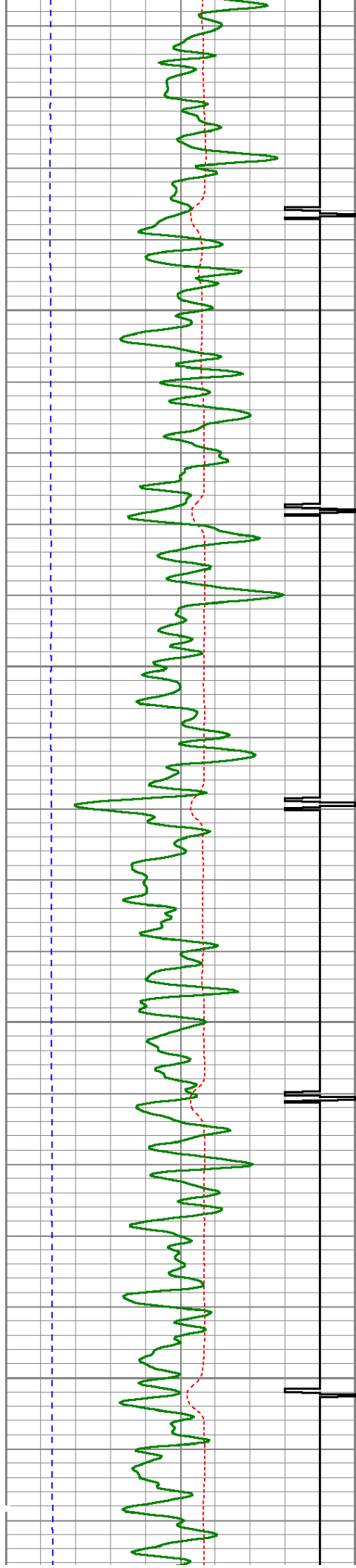
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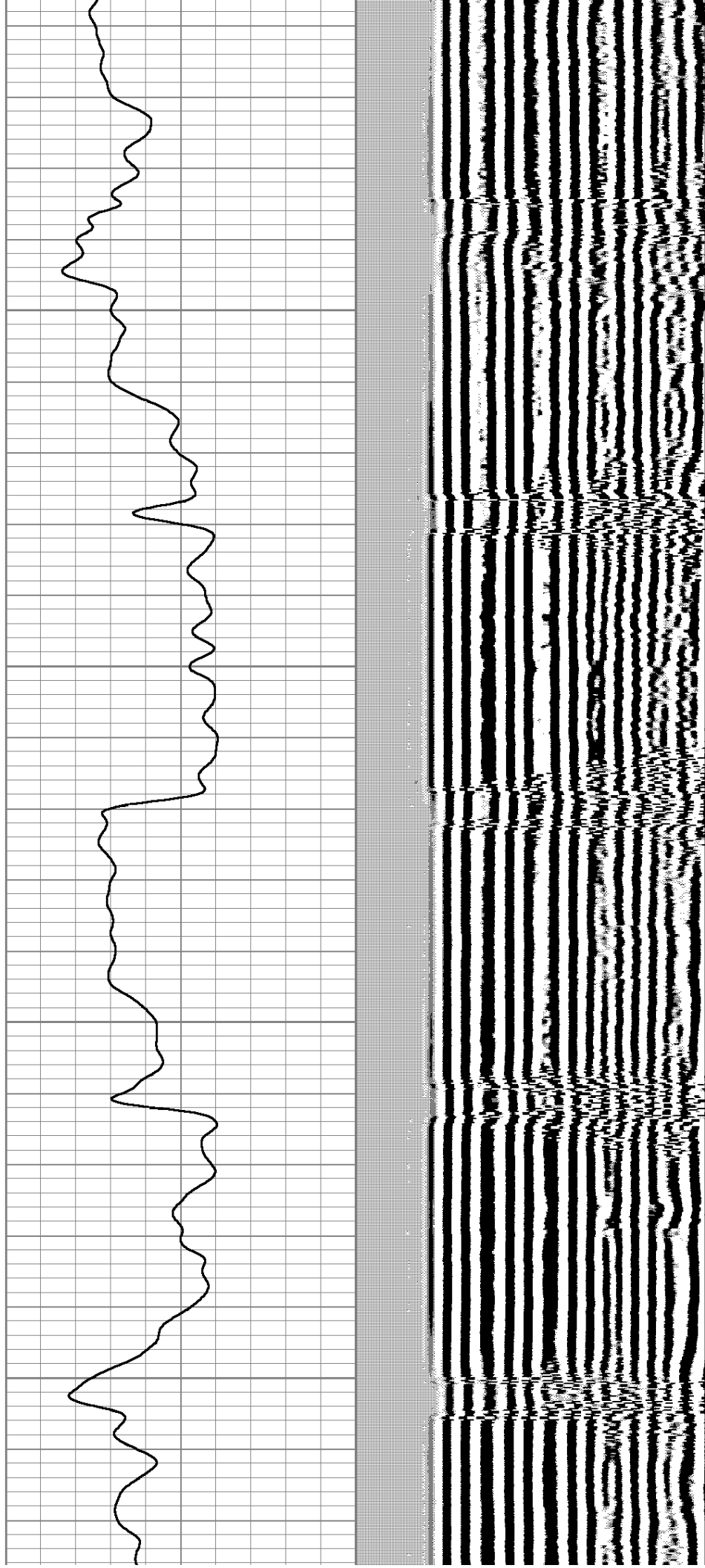


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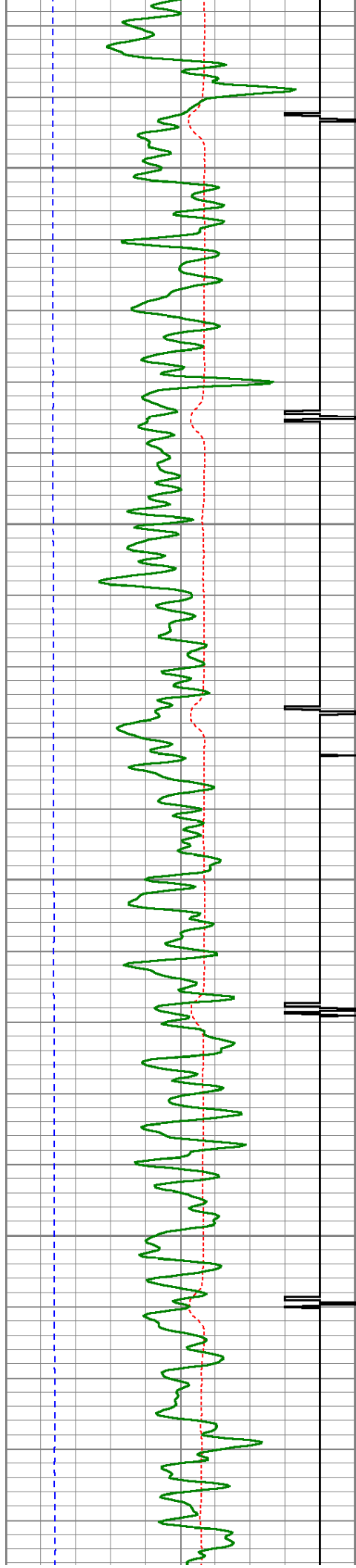
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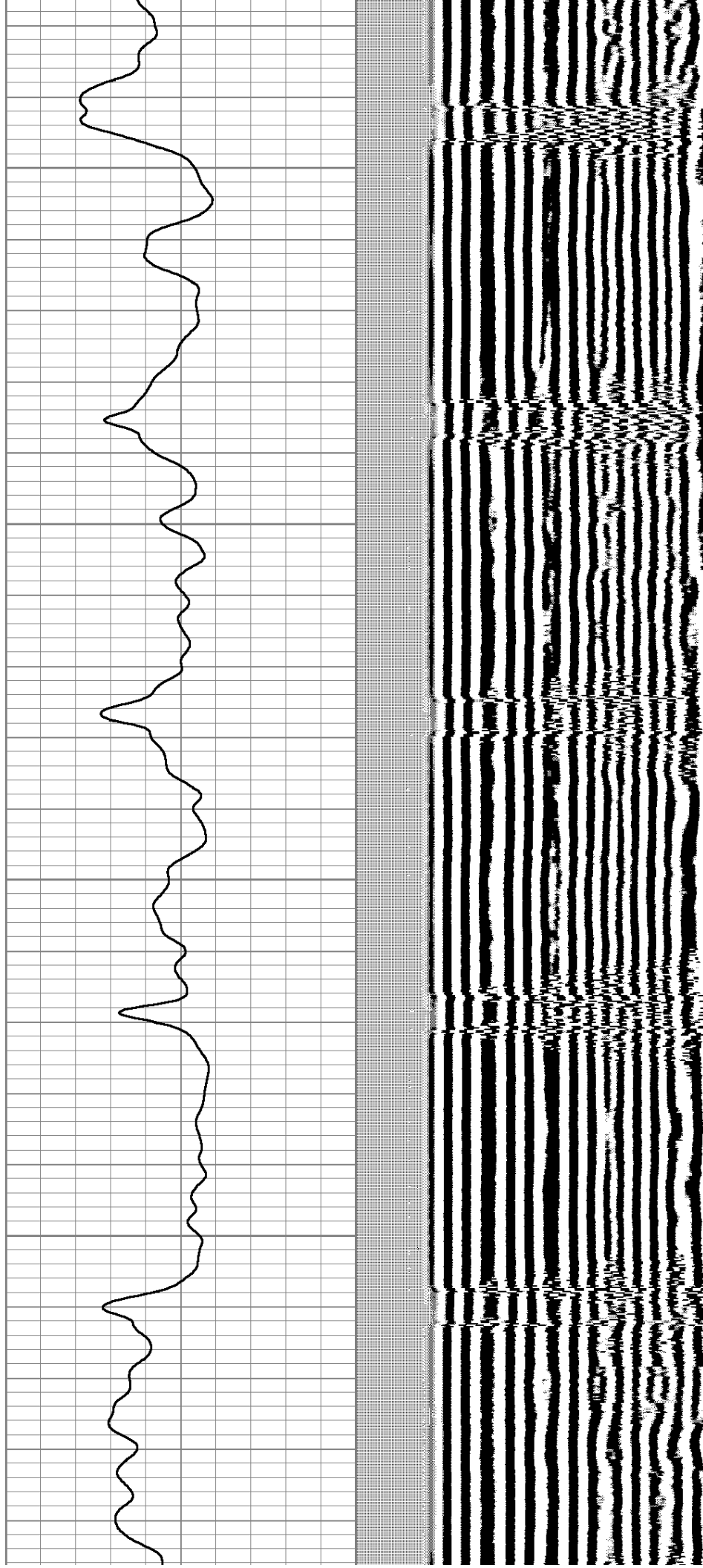


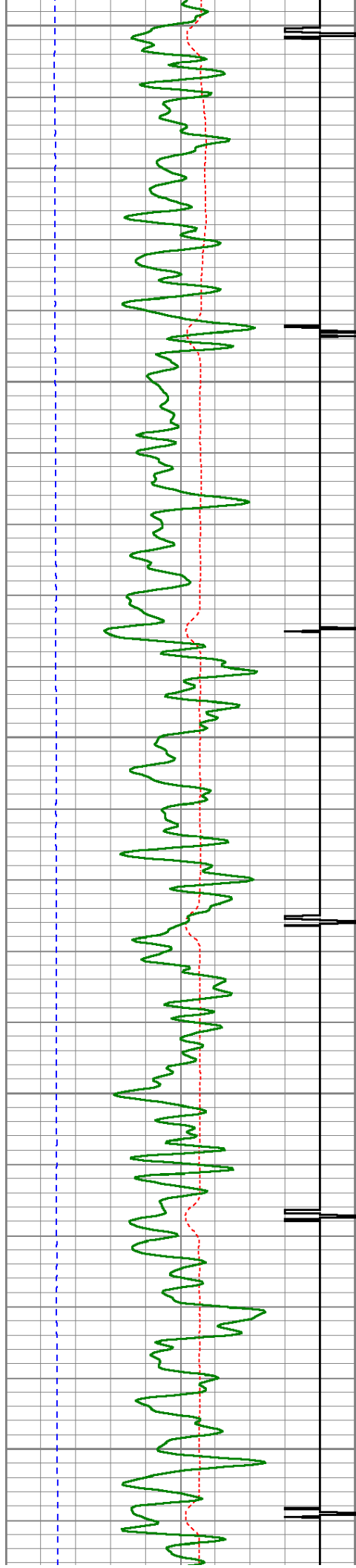
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4200

4250

4300





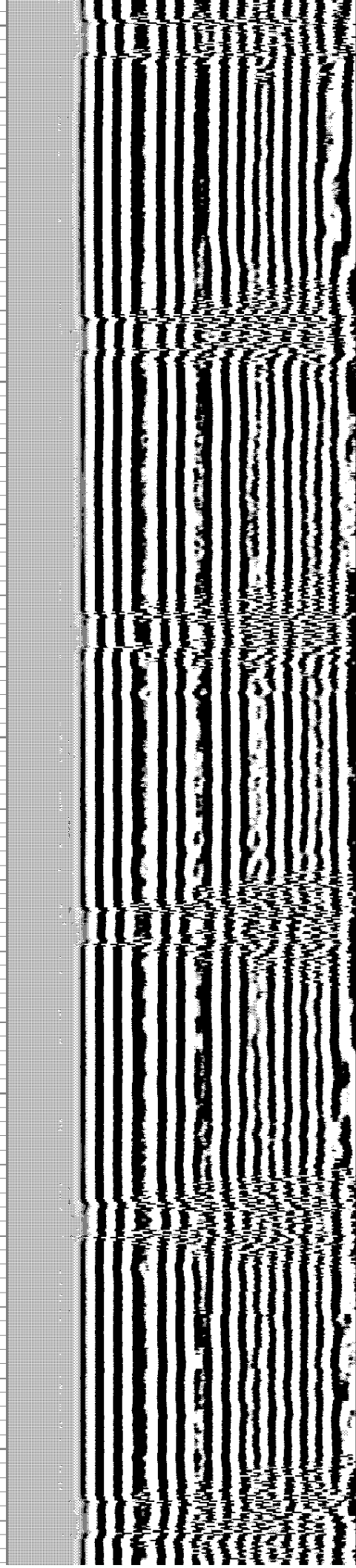
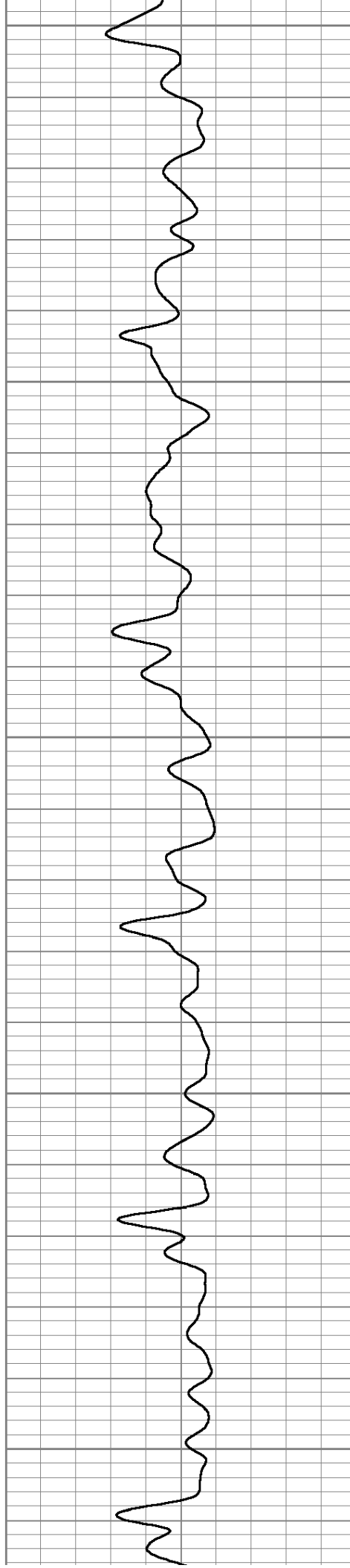
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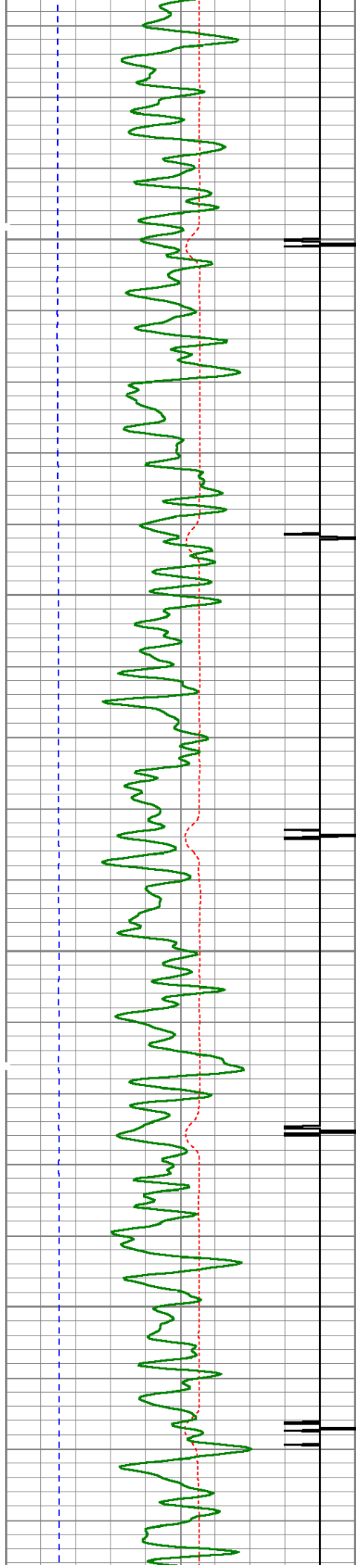
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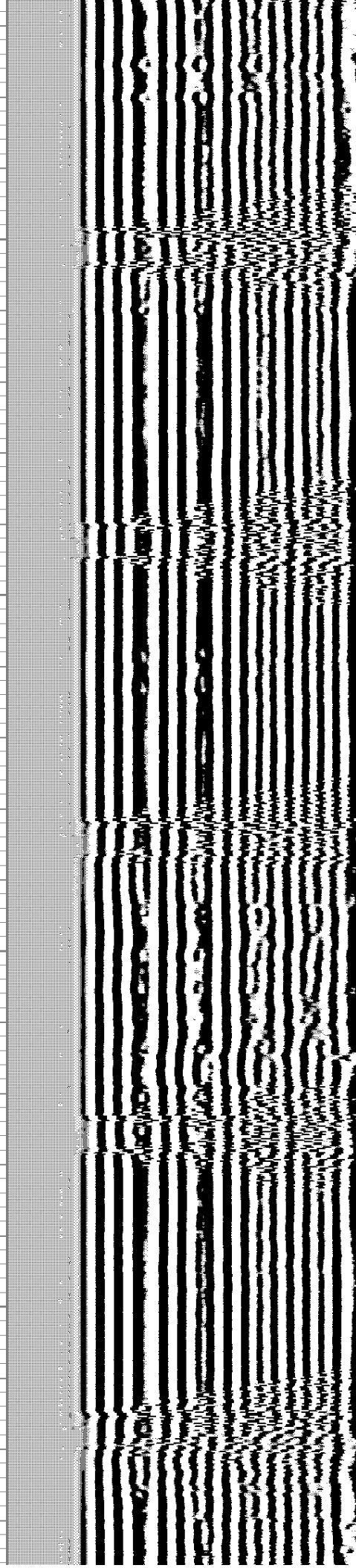
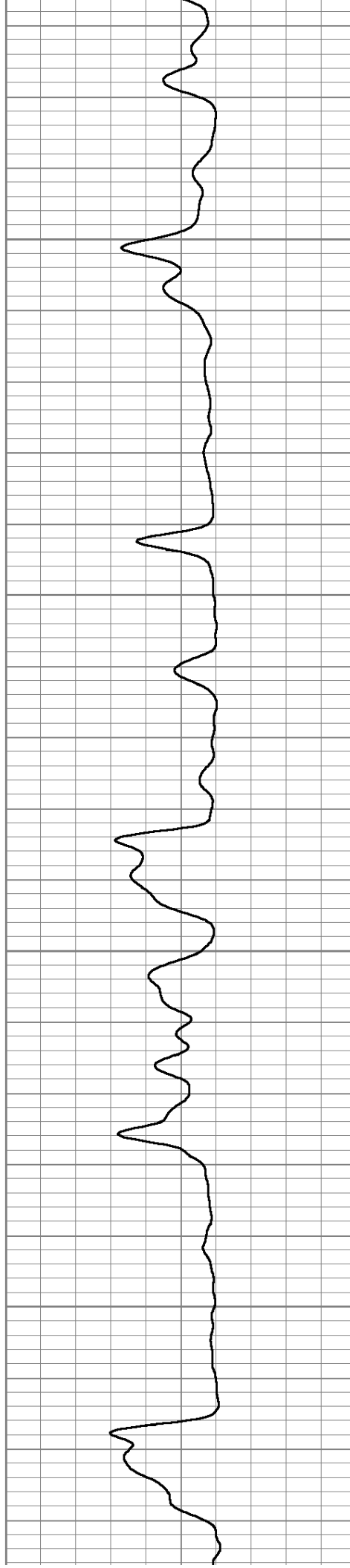


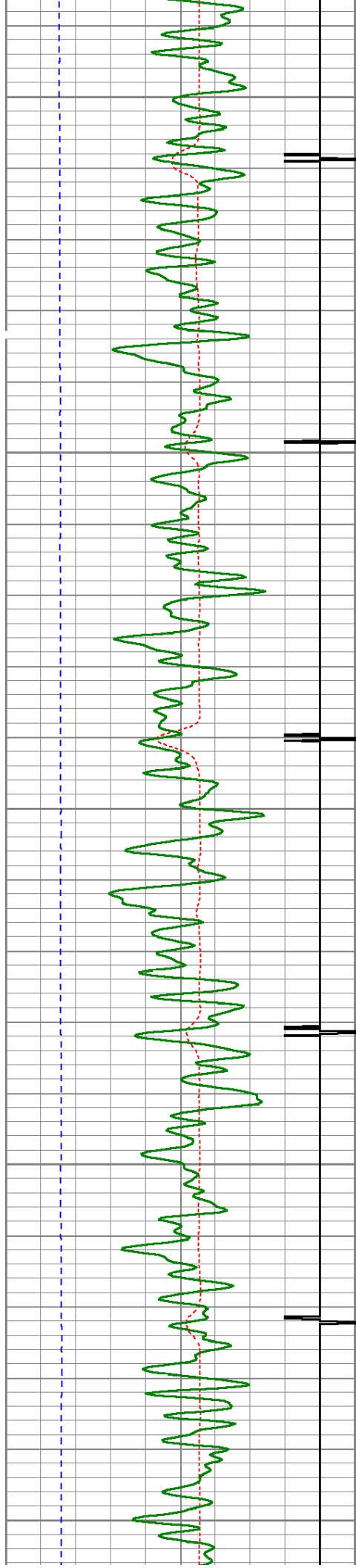
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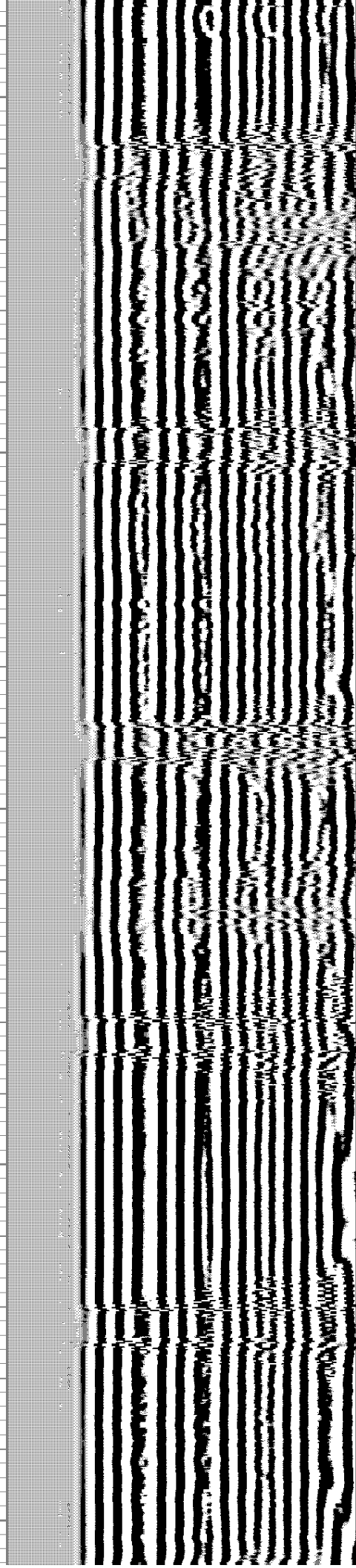
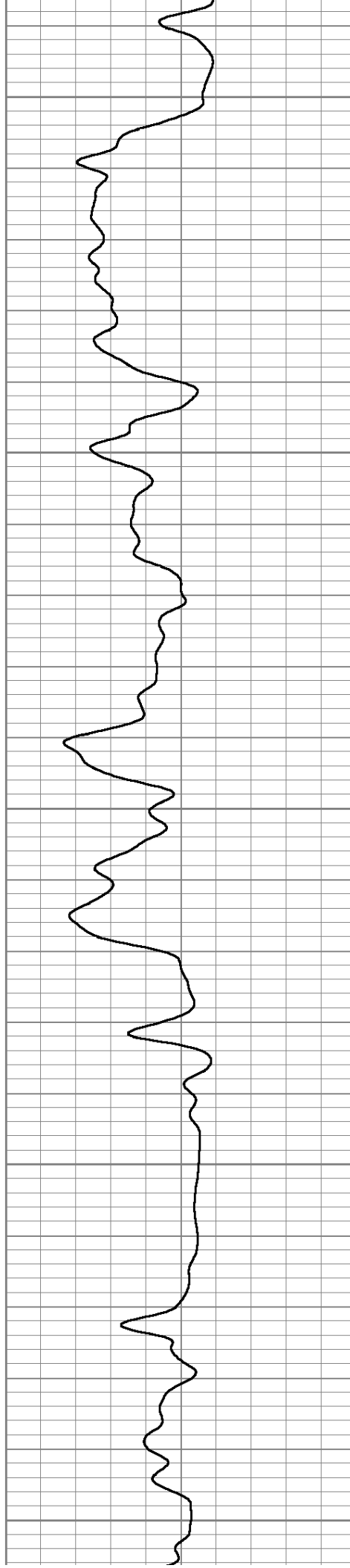
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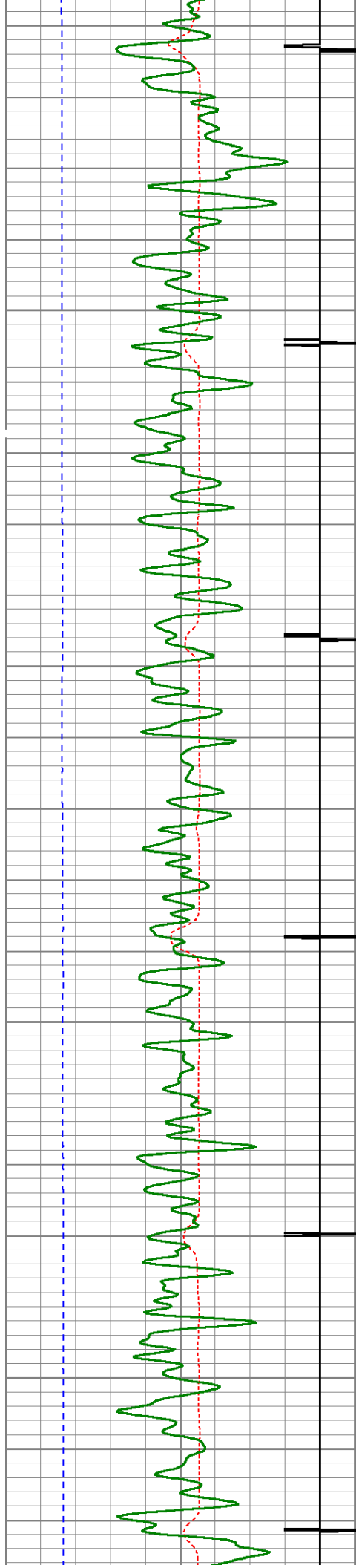
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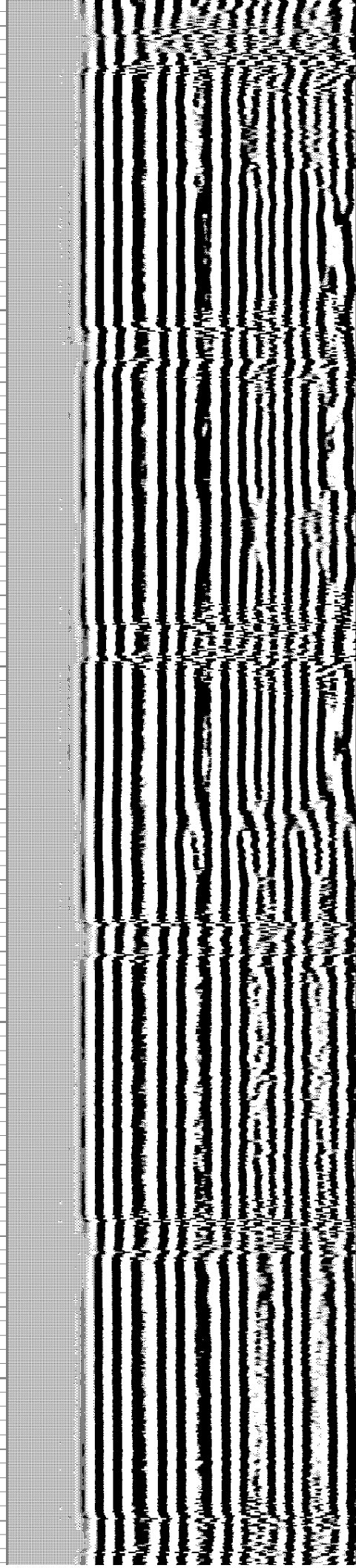
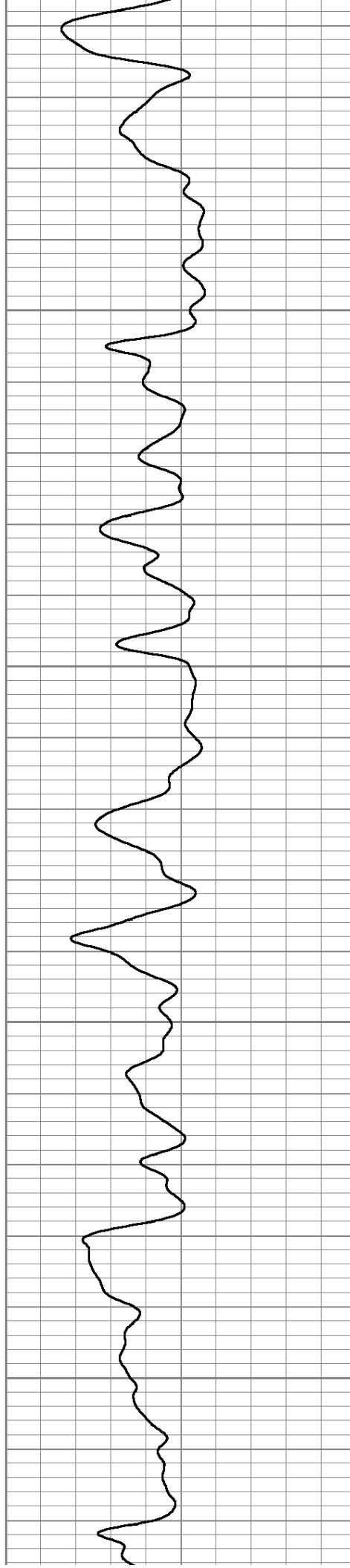


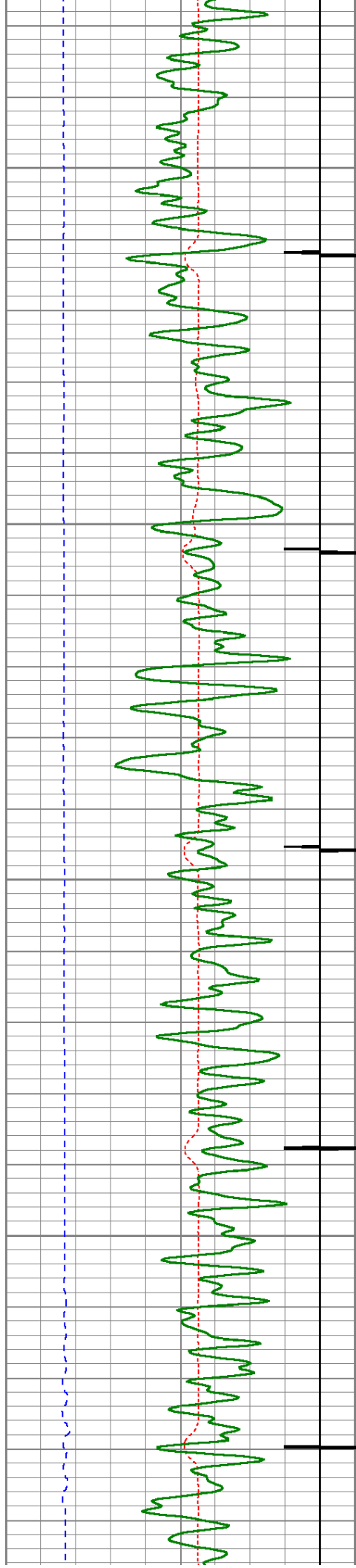
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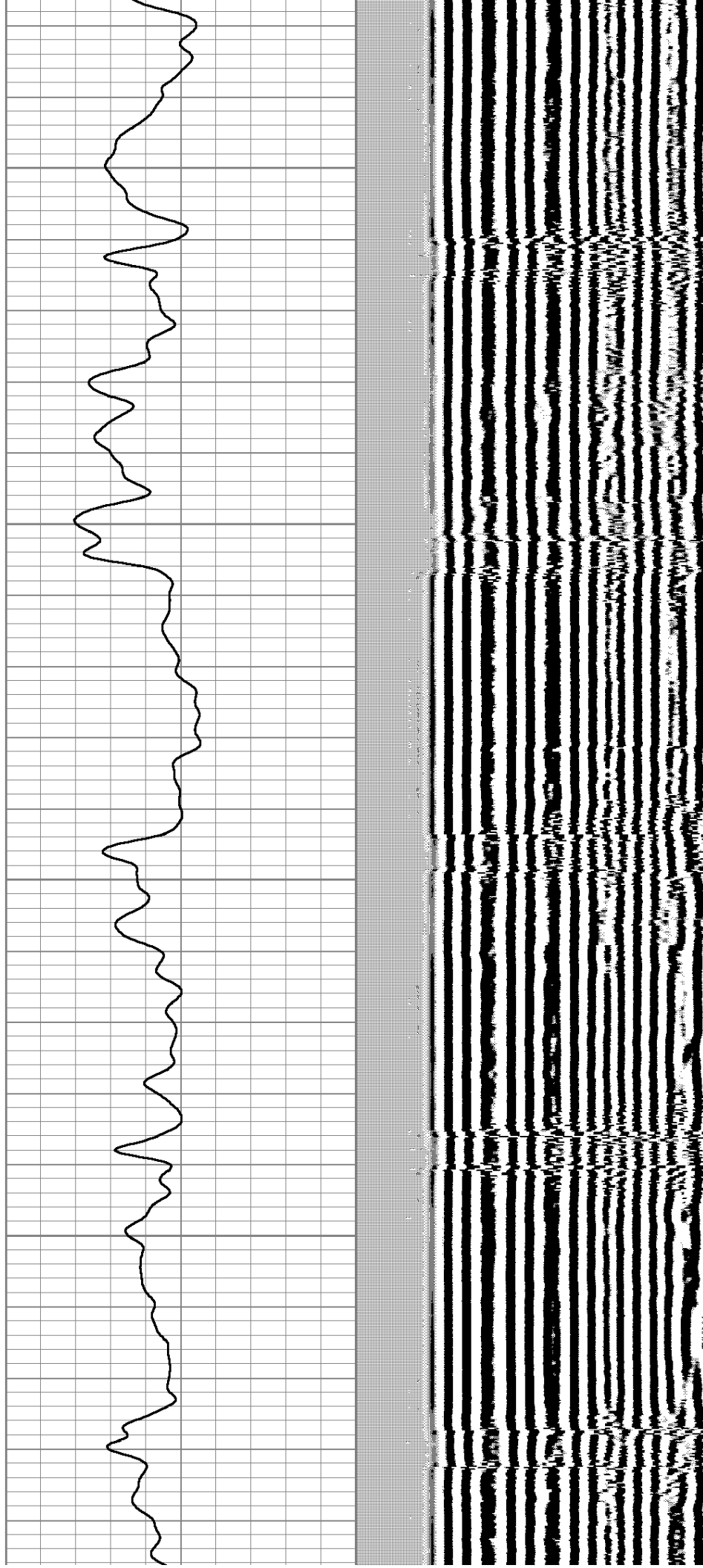


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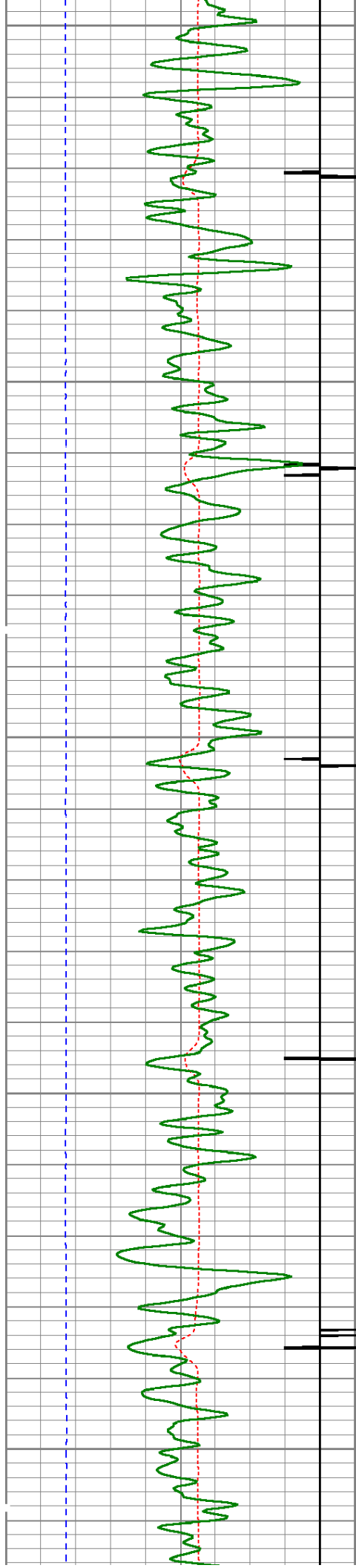
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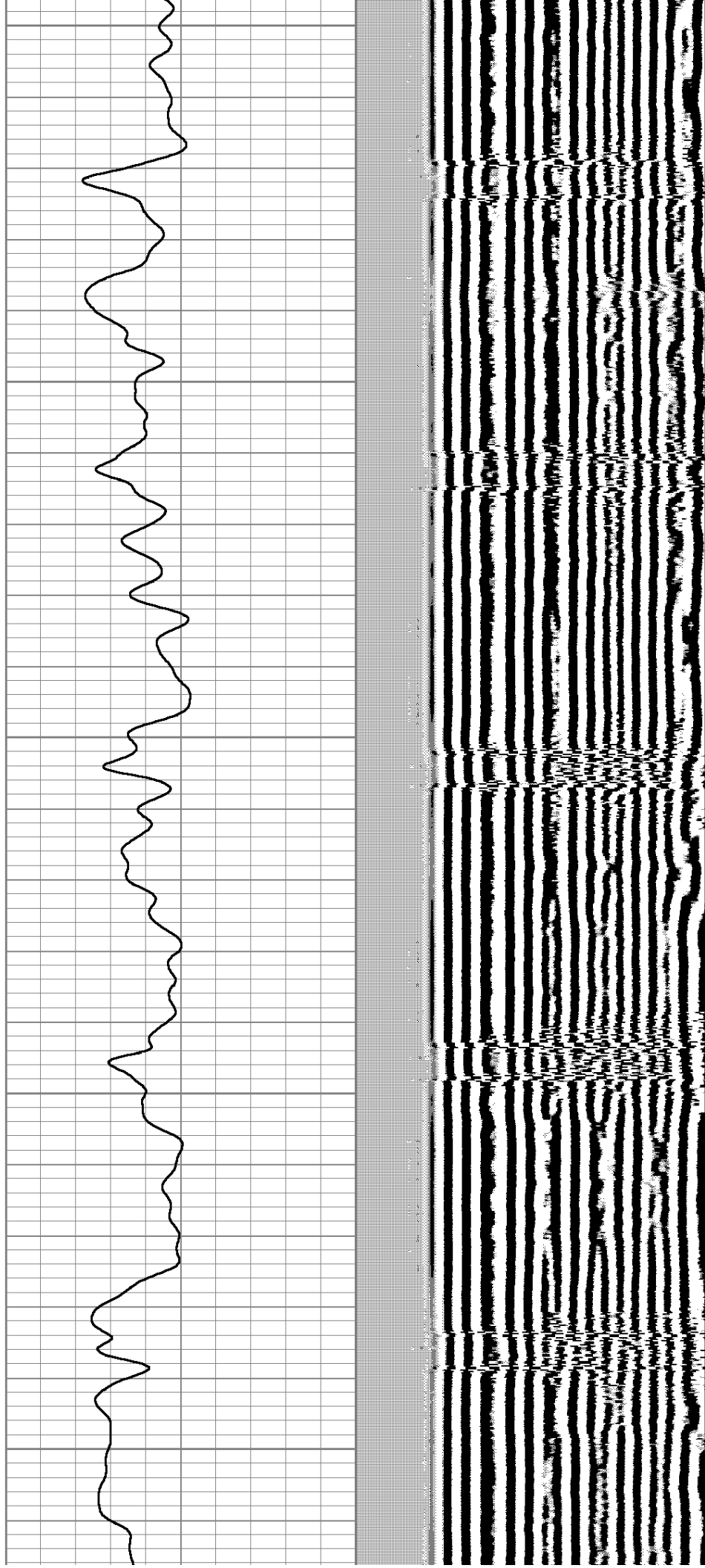
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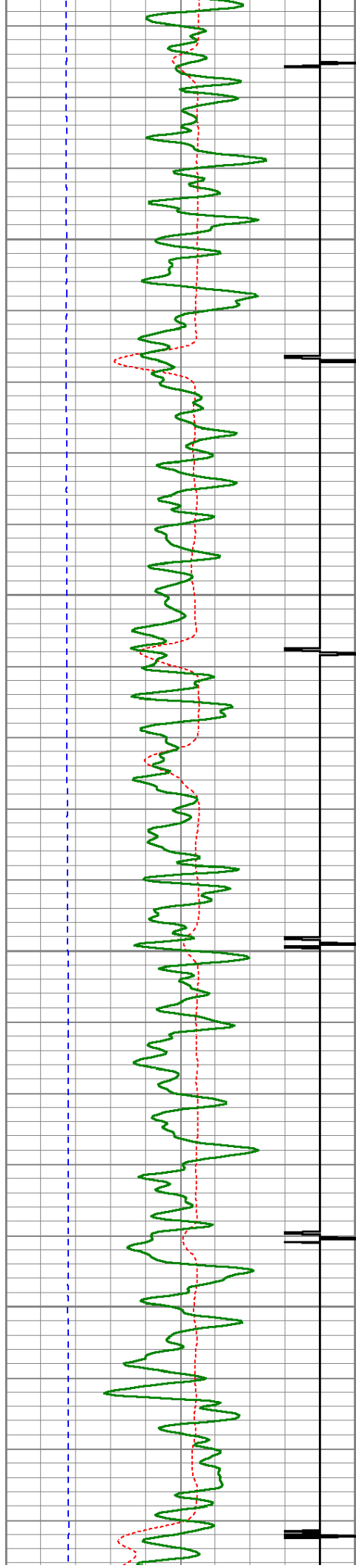
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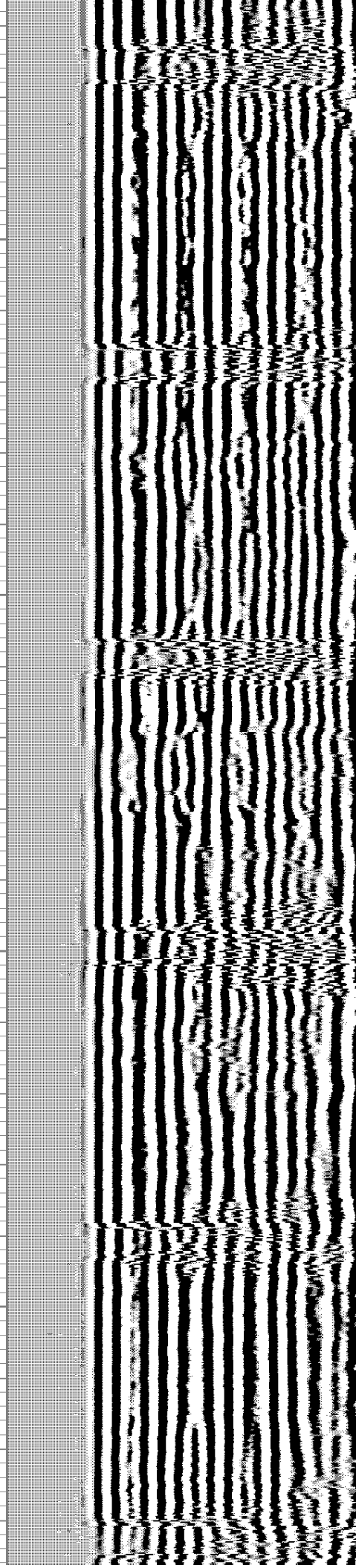
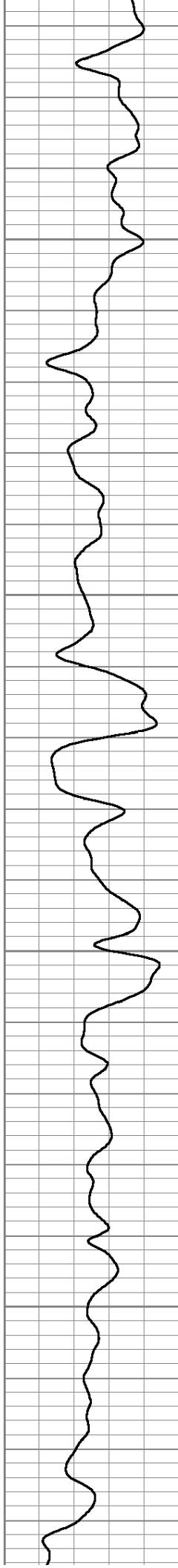


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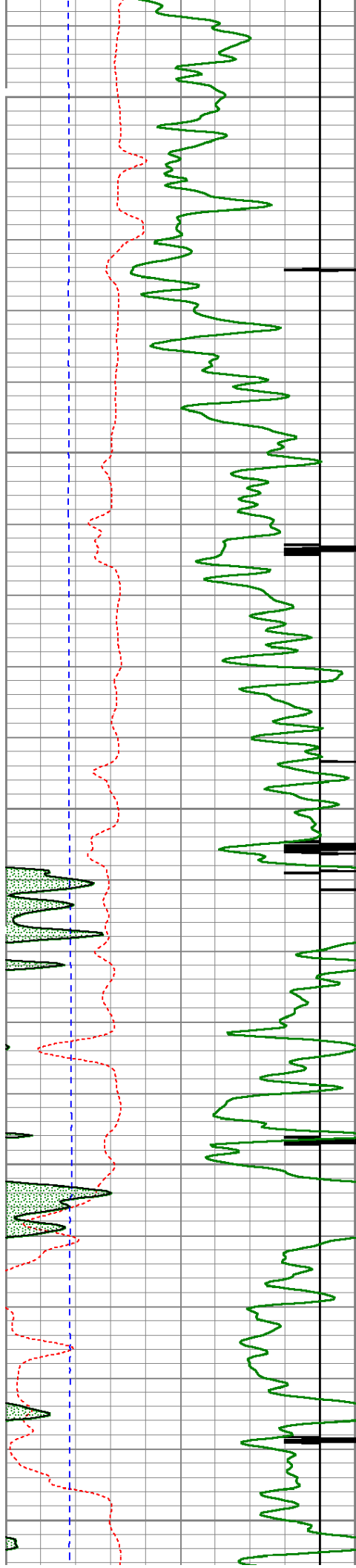
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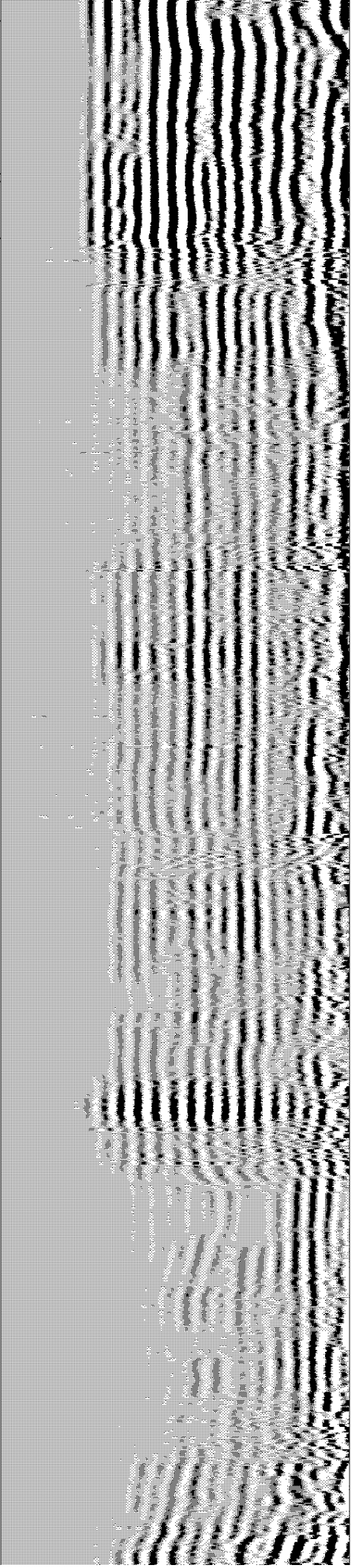
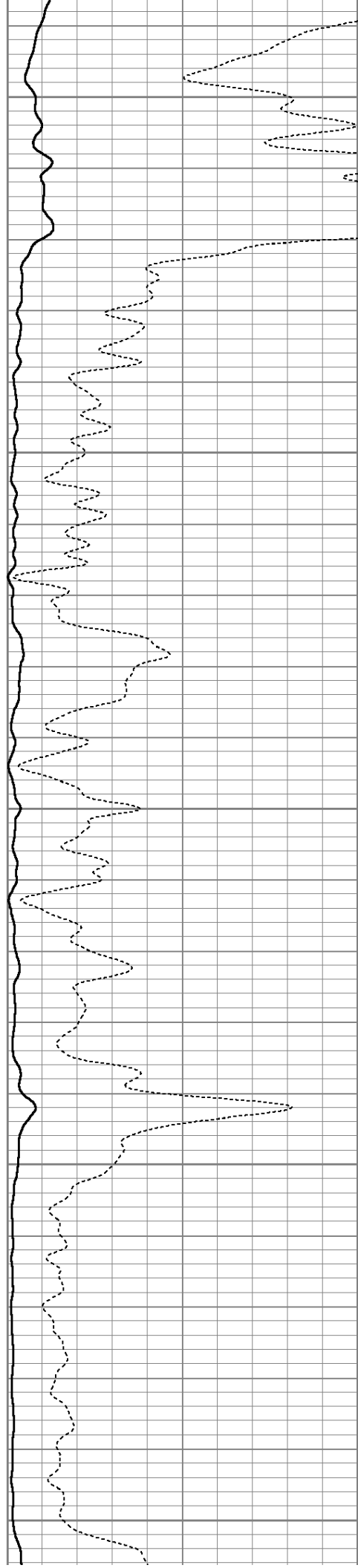
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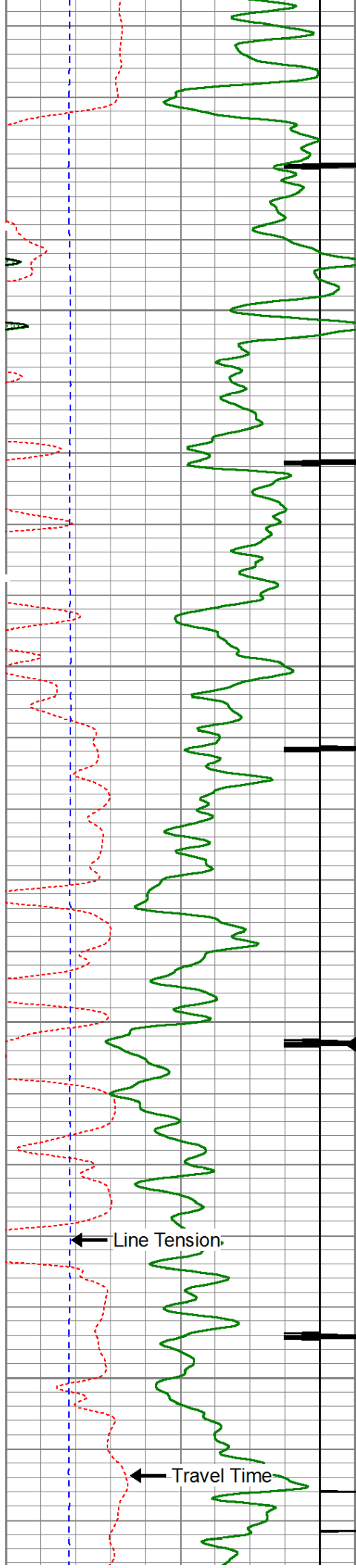
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6050

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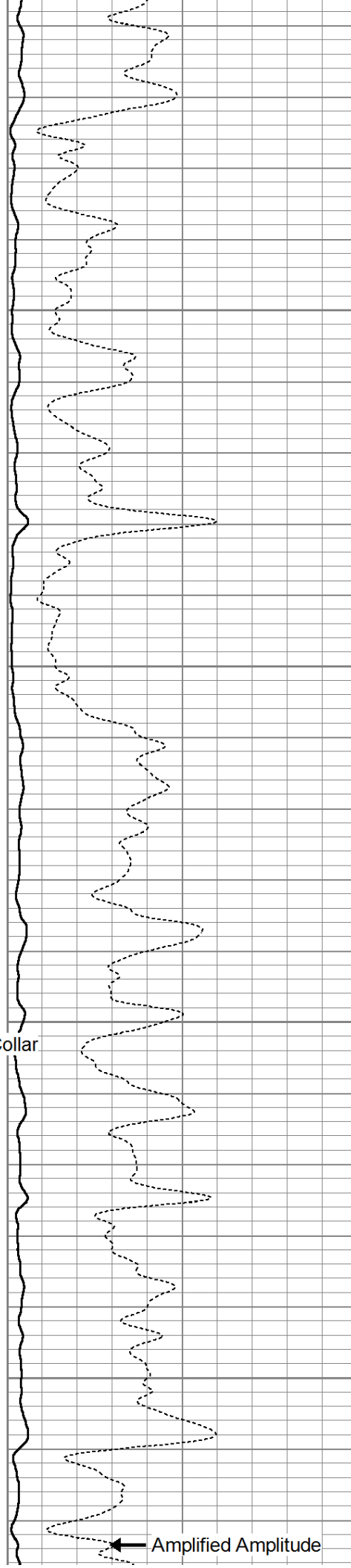
6200

6250  
Casing Collar

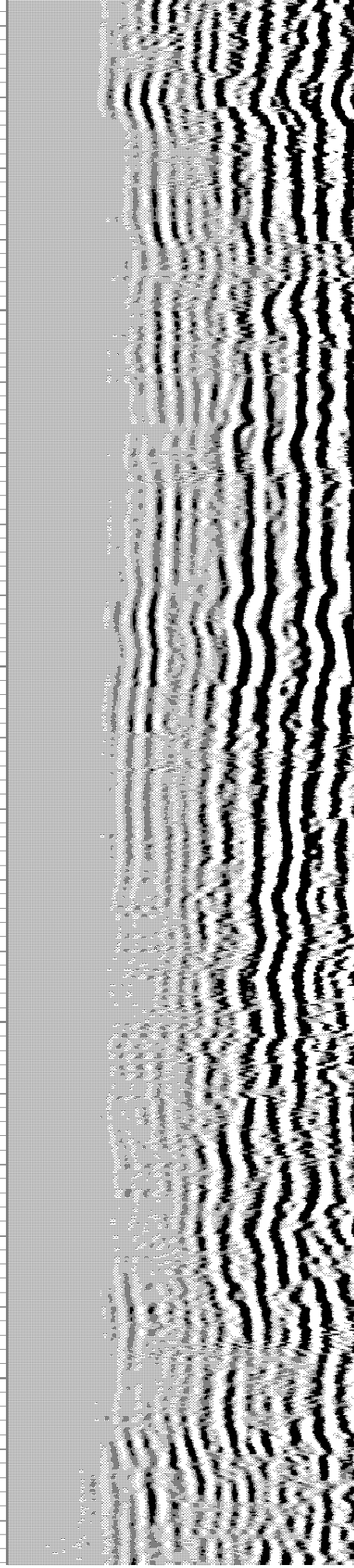
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Line Tension

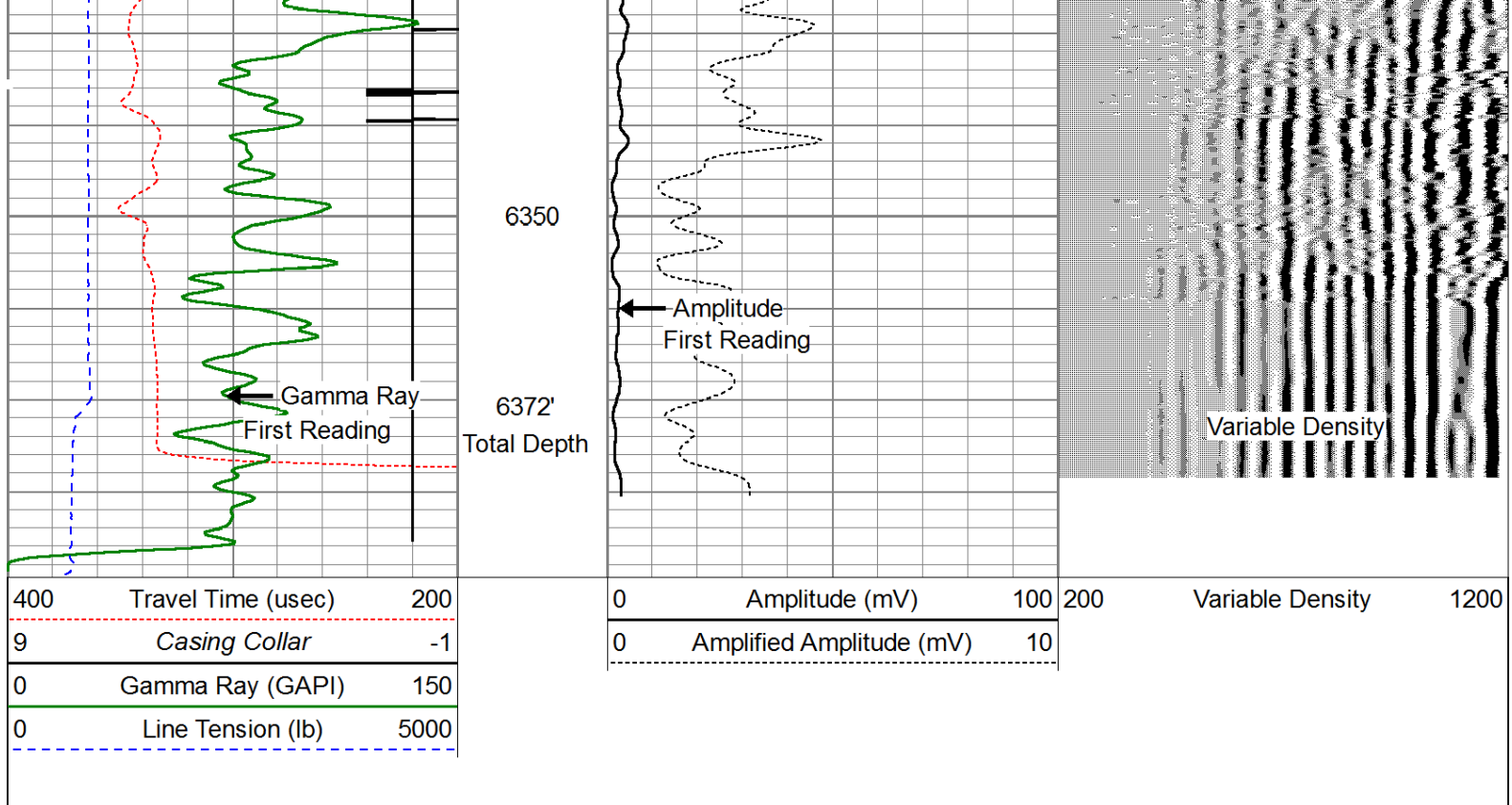
Travel Time



Amplified Amplitude



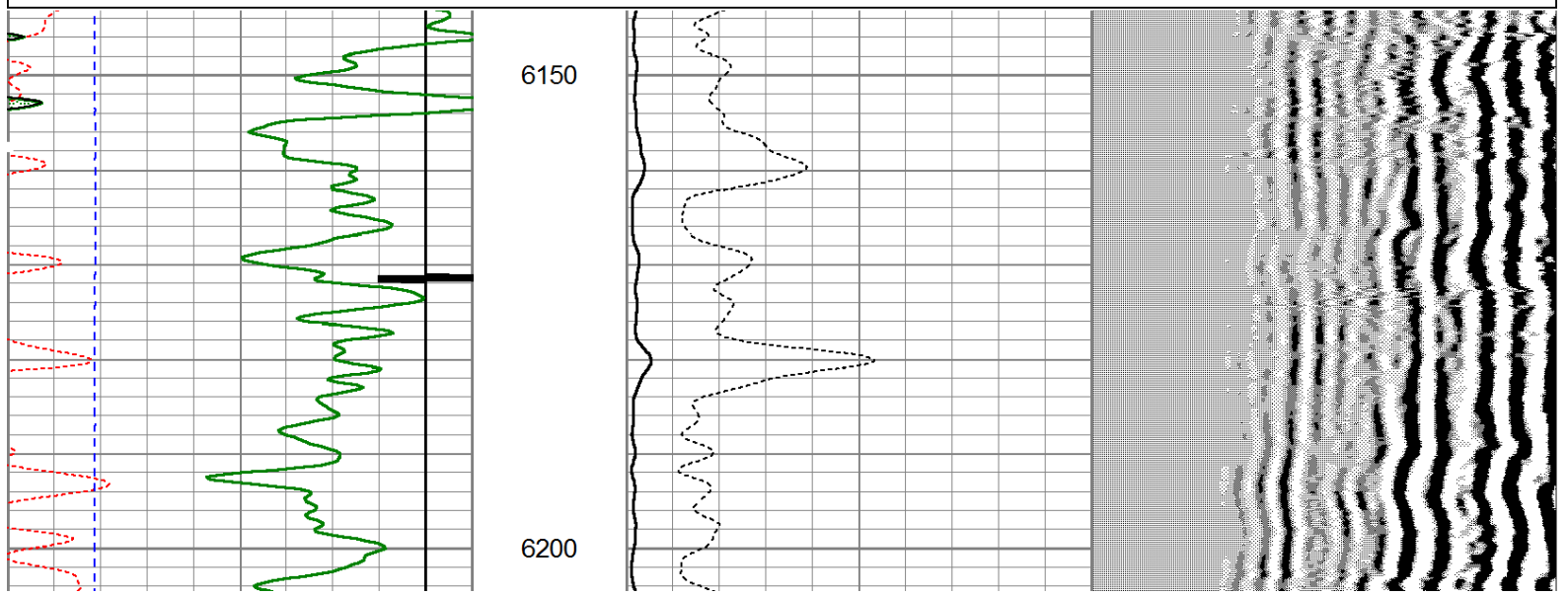


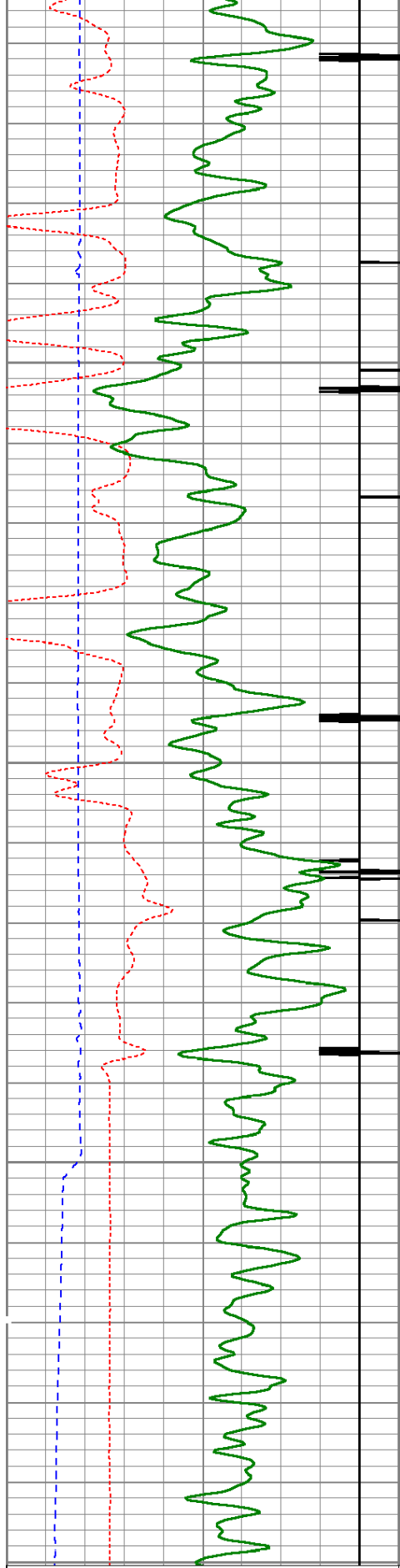


# Repeat Section

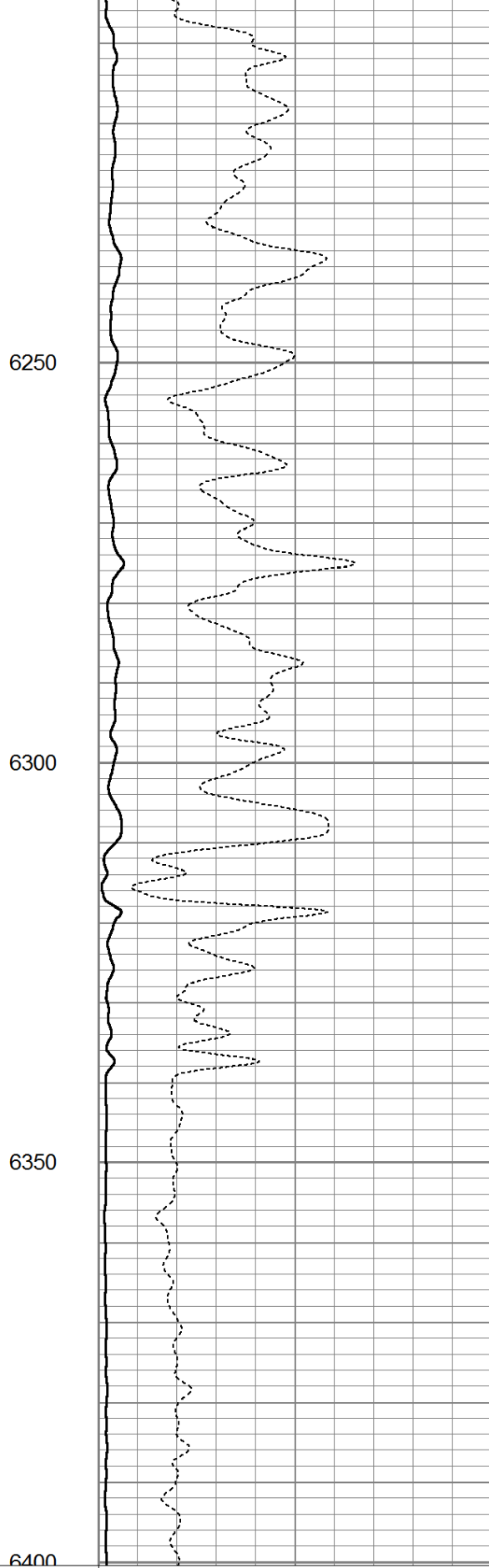
Database File: bonanza creek state antelope 24-21-12hnc.db  
 Dataset Pathname: pass4  
 Presentation Format: cblprobe  
 Dataset Creation: Sun Apr 06 11:08:15 2014 by Log 0  
 Charted by: Depth in Feet scaled 1:240

|     |                    |      |   |                          |     |     |                  |      |
|-----|--------------------|------|---|--------------------------|-----|-----|------------------|------|
| 400 | Travel Time (usec) | 200  | 0 | Amplitude (mV)           | 100 | 200 | Variable Density | 1200 |
| 9   | Casing Collar      | -1   | 0 | Amplified Amplitude (mV) | 10  |     |                  |      |
| 0   | Gamma Ray (GAPI)   | 150  |   |                          |     |     |                  |      |
| 0   | Line Tension (lb)  | 5000 |   |                          |     |     |                  |      |

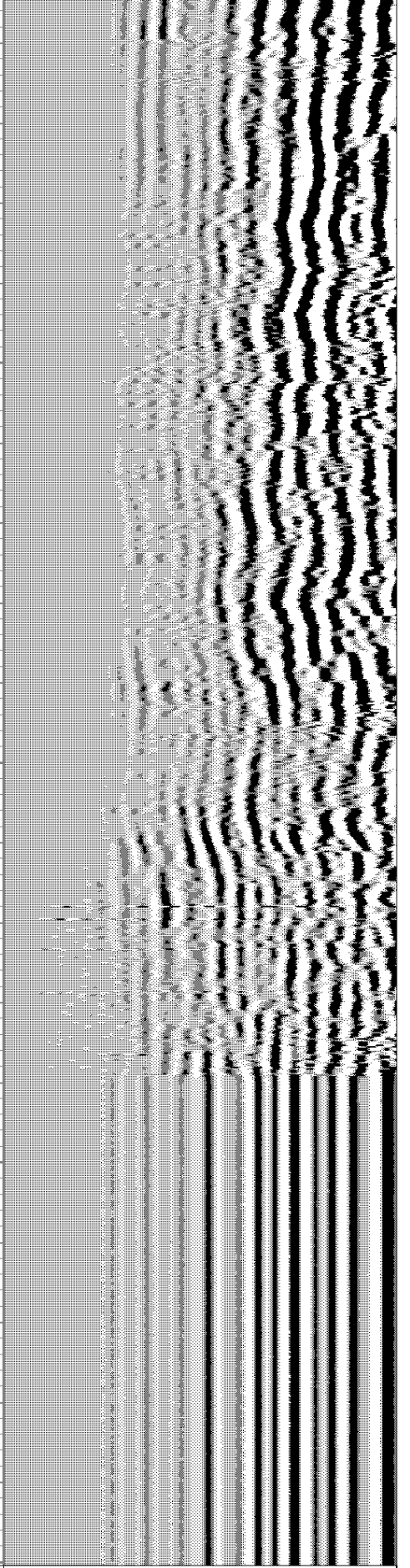




|     |                    |      |
|-----|--------------------|------|
| 400 | Travel Time (uSec) | 200  |
| 9   | Casing Collar      | -1   |
| 0   | Gamma Ray (GAPI)   | 150  |
| 0   | Line Tension (lb)  | 5000 |



|   |                          |     |
|---|--------------------------|-----|
| 0 | Amplitude (mV)           | 100 |
| 0 | Amplified Amplitude (mV) | 10  |



|     |                  |      |
|-----|------------------|------|
| 200 | Variable Density | 1200 |
|-----|------------------|------|



# Calibration Report

Database File: bonanza creek state antelope 24-21-12hnc.db  
Dataset Pathname: pass6  
Dataset Creation: Sun Apr 06 11:48:32 2014 by Log 0

## Gamma Ray Calibration Report

Serial Number: 111111  
Tool Model: Probe275  
Performed: Sun Apr 06 08:54:14 2014

Calibrator Value: 1022.0 GAPI

Background Reading: 82.4 cps  
Calibrator Reading: 1474.8 cps

Sensitivity: 0.7340 GAPI/cps

## Temperature Calibration Report

Serial Number: 111111  
Tool Model: Probe275  
Performed: Sun Jun 13 13:33:21 1993

|                 | Reference | Reading  |
|-----------------|-----------|----------|
| Low Reference:  | 0.00 degF | 0.00 cps |
| High Reference: | 1.00 degF | 1.00 cps |
| Gain:           | 1.00      |          |
| Offset:         | 0.00      |          |
| Delta Spacing   | 2         |          |

## Segmented Cement Bond Log Calibration Report

Serial Number: 101254  
Tool Model: Probe

Calibration Casing Diameter: 7.000 in  
Calibration Depth: 1010.573 ft

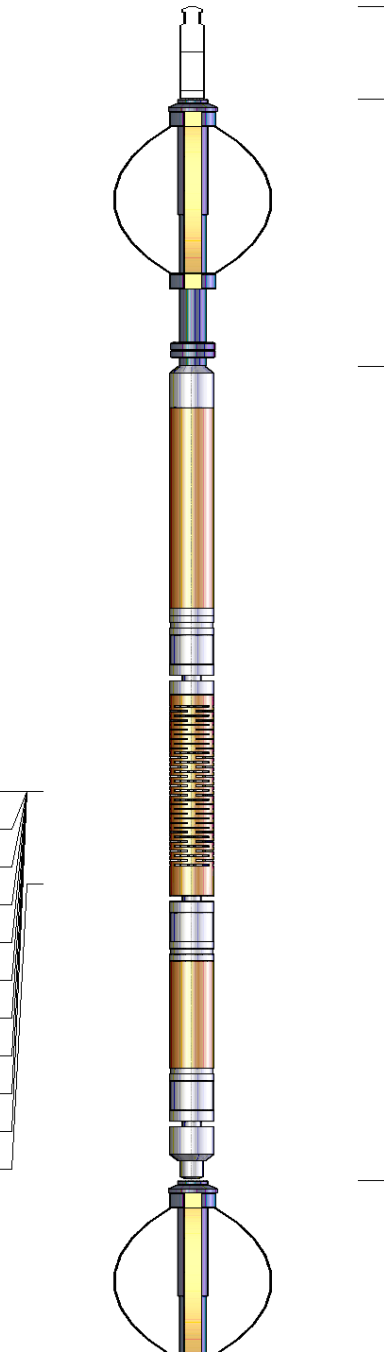
Master Calibration, performed Tue Mar 11 10:24:33 2014:

|     | Raw (v) |       | Calibrated (mv) |         | Results |        |
|-----|---------|-------|-----------------|---------|---------|--------|
|     | Zero    | Cal   | Zero            | Cal     | Gain    | Offset |
| 3'  | 0.012   | 0.629 | 1.000           | 62.165  | 99.136  | 3.173  |
| CAL | -0.023  | 1.095 |                 |         |         |        |
| 5'  | -0.022  | 0.619 | 1.000           | 62.165  | 95.397  | 3.088  |
| SUM |         |       |                 |         |         |        |
| S1  | 0.000   | 0.666 | 0.000           | 100.000 | 150.048 | -0.005 |
| S2  | -0.018  | 0.614 | 0.000           | 100.000 | 153.135 | 1.923  |
| S3  | -0.013  | 0.549 | 0.000           | 100.000 | 177.882 | 2.371  |
| S4  | -0.022  | 0.515 | 0.000           | 100.000 | 186.457 | 4.013  |
| S5  | -0.022  | 0.560 | 0.000           | 100.000 | 171.769 | 3.791  |
| S6  | -0.022  | 0.649 | 0.000           | 100.000 | 149.054 | 3.251  |
| S7  | -0.015  | 0.708 | 0.000           | 100.000 | 138.173 | 2.135  |
| S8  | -0.010  | 0.699 | 0.000           | 100.000 | 141.020 | 1.398  |

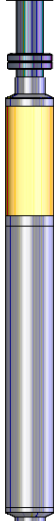
Internal Reference Calibration, performed Mon Oct 10 09:42:03 2005:

|  | Raw (v) |     | Calibrated (v) |     | Results |        |
|--|---------|-----|----------------|-----|---------|--------|
|  | Zero    | Cal | Zero           | Cal | Gain    | Offset |

|   |         |                |         |       |       |       |
|---|---------|----------------|---------|-------|-------|-------|
| CAL   | 0.000   | 0.000          | -0.023  | 1.095 | 1.000 | 0.000 |
| Air Zero Calibration, performed Sat Feb 22 08:53:18 2014: |         |                |         |       |       |       |
|   | Raw (v) | Calibrated (v) | Results |       |       |       |
|   | Zero    | Zero           | Offset  |       |       |       |
| 3'  | 0.000   | 0.000          | 0.000   |       |       |       |
| 5'  | 0.000   | 0.000          | 0.000   |       |       |       |
| SUM   |         |                |         |       |       |       |
| S1  | 0.000   | 0.000          | 0.000   |       |       |       |
| S2  | 0.000   | 0.000          | 0.000   |       |       |       |
| S3  | 0.000   | 0.000          | 0.000   |       |       |       |
| S4  | 0.000   | 0.000          | 0.000   |       |       |       |
| S5  | 0.000   | 0.000          | 0.000   |       |       |       |
| S6  | 0.000   | 0.000          | 0.000   |       |       |       |
| S7  | 0.000   | 0.000          | 0.000   |       |       |       |
| S8  | 0.000   | 0.000          | 0.000   |       |       |       |

| Sensor | Offset (ft) | Schematic  | Description  | Len (ft) | OD (in) | Wt (lb) |
|--------|-------------|--|--|----------|---------|---------|
|        |             |  | Titan<br>Cable_head  | 1.00     | 1.44    | 10.00   |
|        |             |  | Probe275<br>2.75" Centralizer                                      | 2.88     | 2.75    | 20.00   |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
|        |             |  |  |          |         |         |
| WVF3FT | 11.84       |  | RBT-Probe (101254)<br>Probe Radii Bond Tool with Digital Telemetry | 8.75     | 2.75    | 90.00   |
| WVFCAL | 11.84       |  |  |          |         |         |
| WVFS1  | 11.84       |  |  |          |         |         |
| WVFS2  | 11.84       |  |  |          |         |         |
| WVFS3  | 11.84       |  |  |          |         |         |
| WVFS4  | 11.84       |  |  |          |         |         |
| WVFS5  | 11.84       |  |  |          |         |         |
| WVFS6  | 11.84       |  |  |          |         |         |
| WVFS7  | 11.84       |  |  |          |         |         |
| WVFS8  | 11.84       |  |  |          |         |         |
| WVF5FT | 10.84       |  |  |          |         |         |
|        |             |  | Probe275<br>2.75" Centralizer                                      | 2.88     | 2.75    | 20.00   |



|               |      |   |  |      |      |
|---------------|------|---|--|------|------|
| CCL           | 3.88 |  |  |      |      |
| TEMP          | 3.00 |   |  |      |      |
| GR            | 2.54 |   | GR-Probe275 (111111)<br>Probe 2 3/4" Logging Gamma Ray | 4.78 | 2.75 |
| Dataset:      |      | bonanza creek state antelope 24-21-12hnc.db: field/well/run1/pass6              |  |      |      |
| Total Length: |      | 20.28 ft  |  |      |      |
| Total Weight: |      | 197.00 lb   |  |      |      |
| O.D.          |      | 2.75 in   |  |      |      |