



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: **Company** **WPX ENERGY**

CH085759 **Well** **FEDERAL NER 434-32**

API No: **Field** **RULISON**

05045217780000 **County** **GARFIELD** **State** **CO**

## Location

SHL: 165' FNL & 2598' FWL (5 75 93W)

BHL: 346' FSL & 1766' FEL (32 65 93W)

SEC 32 TWP 6S RGE 93W

## Other Services

RPM

Permanent Datum **GL** **Elevation** **7603 ft**

Log Measured From **KB** **26 ft** **Above P. D.**

Drill Measured From **KB** **Elevations** **KB 7629 ft** **DF** **GL 7603 ft**

|                              |           |                |
|------------------------------|-----------|----------------|
| Date                         | 13/MAY/14 |                |
| Run                          | ONE       |                |
| Service Order                | US085759  |                |
| Depth Driller                | 10077 ft  |                |
| Depth Logger                 | 10012 ft  |                |
| Bottom Logged Interval       | 10002 ft  |                |
| Top Logged Interval          | 26 ft     |                |
| Time Started                 | 7:30      |                |
| Time Finished                | 12:00     |                |
| Operator Rig Time            | 4.5 HOURS |                |
| Type of Fluid in Hole        | WATER     |                |
| Fluid Density                | NA        |                |
| Salinity                     | NA        |                |
| Fluid Level                  | 88 ft     |                |
| Logged Cement Top            | NA        |                |
| Wellhead Pressure            | 0 psi     |                |
| Maximum Hole Deviation       | NA        |                |
| Nominal Logging Speed        | 66 fpm    |                |
| Maximum Recorded Temperature | 246 degF  |                |
| Reference Log                | NA        |                |
| Reference Log Date           | NA        |                |
| Equipment No.                | 4271      | GRAND JUNCTION |
| Recorded By                  | NEMELL    |                |
| Witnessed By                 | JEFF DUCY |                |

- FOLD HERE

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

| Borehole Record |         |          |
|-----------------|---------|----------|
| Bit Size        | From    | To       |
| 13.5 in         | 0 ft    | 1108 ft  |
| 8.75 in         | 1108 ft | 10133 ft |

| Casing Record |             |       |      |          |
|---------------|-------------|-------|------|----------|
| Size          | Weight      | Grade | From | To       |
| 9.625 in      |             |       | 0 ft | 1108 ft  |
| 4.5 in        | 11.6 lbm/ft | P-110 | 0 ft | 10133 ft |

| Remarks  |
|--|
| All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request. |
| The amount of linear shift is 10 feet.   |
| Logged with zero PSI at wellhead.  |
| BHT = 246 °F   |

| Equipment Data |      |        |               |               |             |
|----------------|------|--------|---------------|---------------|-------------|
| Run            | Trip | Tool   | Series Number | Serial Number | Position    |
| 1              | 1    | CBL    | 1426XA        | 10218496      | CENTRALIZED |
| 1              | 1    | GR/CCL | 2459XA        | 10417456      | CENTRALIZED |

PRIMARY PRESENTATION

0 PSI

| MEASUREMENT TYPE | PARAMETER             | VALUE   | UNITS   | TOP    | BOTTOM    |
|------------------|-----------------------|---------|---------|--------|-----------|
| RAL              | Amp Gate Start Far    | 305.000 | usec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Start Near   | 195.000 | usec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Start Radial | 195.000 | usec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Far    | 25.000  | usec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Near   | 25.000  | usec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Radial | 25.000  | usec    | 35.129 | 10013.250 |
| RAL              | casing od             | 4.500   | inches  | 35.129 | 10013.250 |
| RAL              | casing wt             | 11.600  | lbm/ft  | 35.129 | 10013.250 |
| RAL              | FB Start Far          | 291.900 | usec    | 35.129 | 10013.250 |
| RAL              | FB Start Near         | 175.391 | usec    | 35.129 | 10013.250 |
| RAL              | FB Start Radial       | 175.391 | usec    | 35.129 | 10013.250 |
| RAL              | FB Thresh Far         | 10.000  | mv      | 35.129 | 10013.250 |
| RAL              | FB Thresh Near        | 4.000   | mv      | 35.129 | 10013.250 |
| RAL              | FB Thresh Radial      | 4.000   | mv      | 35.129 | 10013.250 |
| RAL              | Fluid Travel Time     | 200.000 | usec/ft | 35.129 | 10013.598 |

DEPTH OFFSETS

(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |     |     |     |     |      |  |  |
|--------|--------------|-----------------|-----|-----|-----|-----|------|--|--|
| 1426XA | -16.750      | ACAL            | ANR | AR1 | AR2 | AR3 | AR4  |  |  |
|        |              | AR5             | AR6 | AR7 | AR8 | CHV | FPR2 |  |  |

1426XA -15.750  
2459XA -11.340  
2459XA -9.490  
2459XA -4.090

FPR3 FPR5 TT3 TTR1 TTR2 TTR3  
TTR4 TTR5 TTR6 TTR7 TTR8 XAMP  
AFAR SIG TT5  
CCL  
GR  
NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

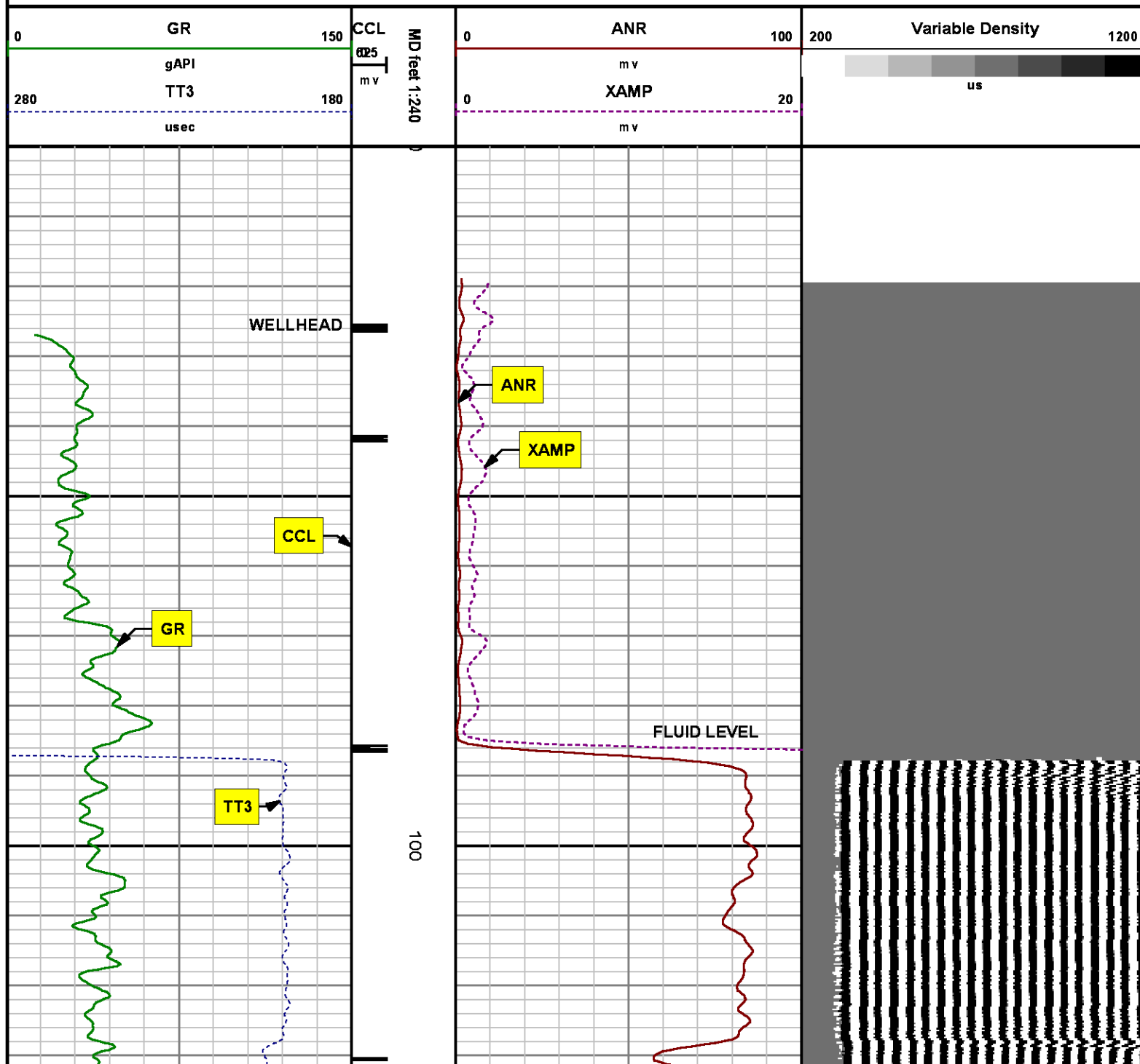
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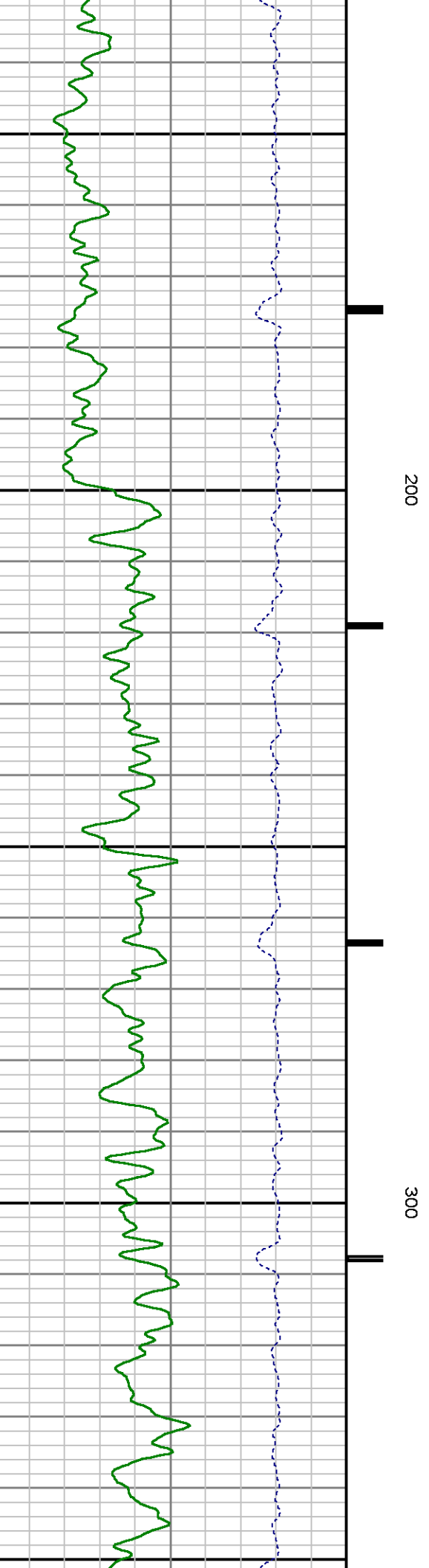
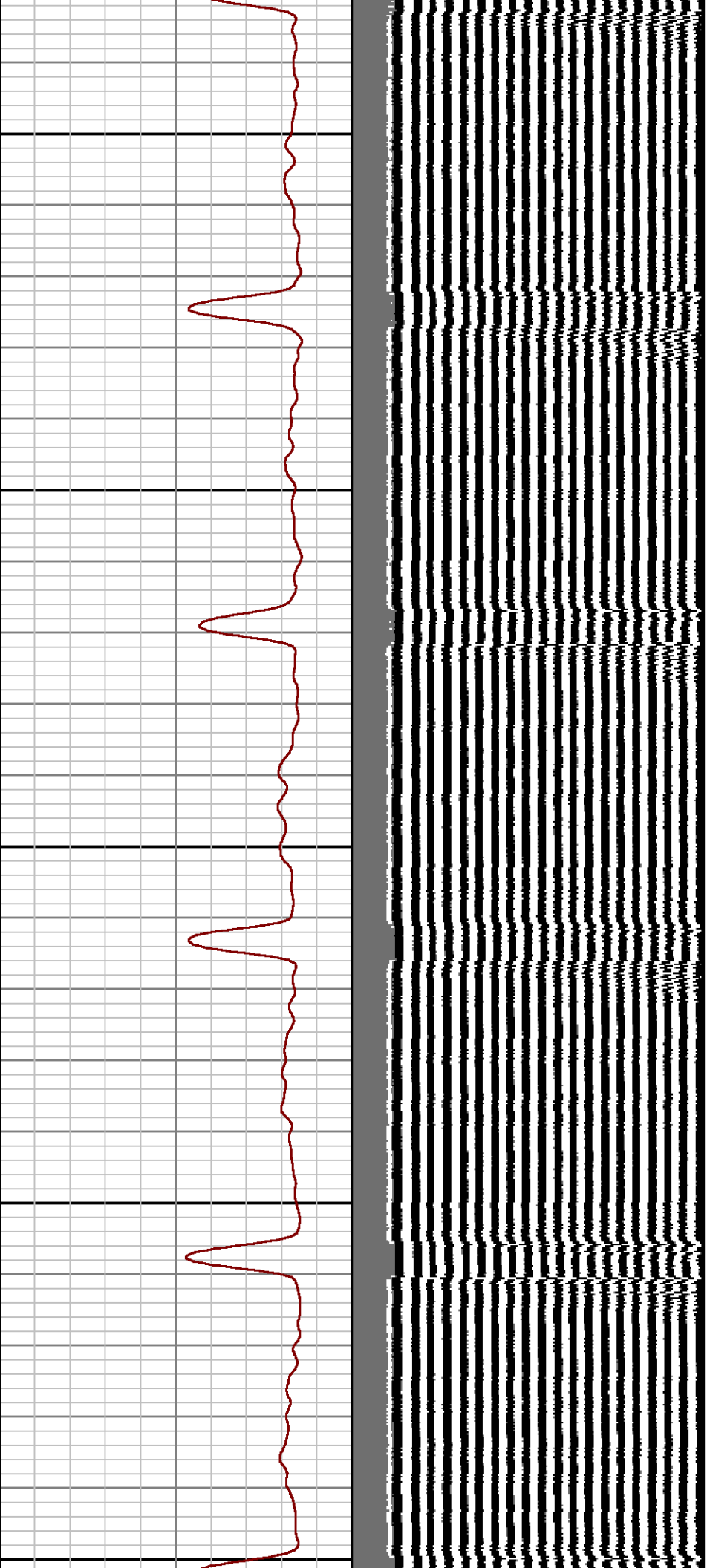
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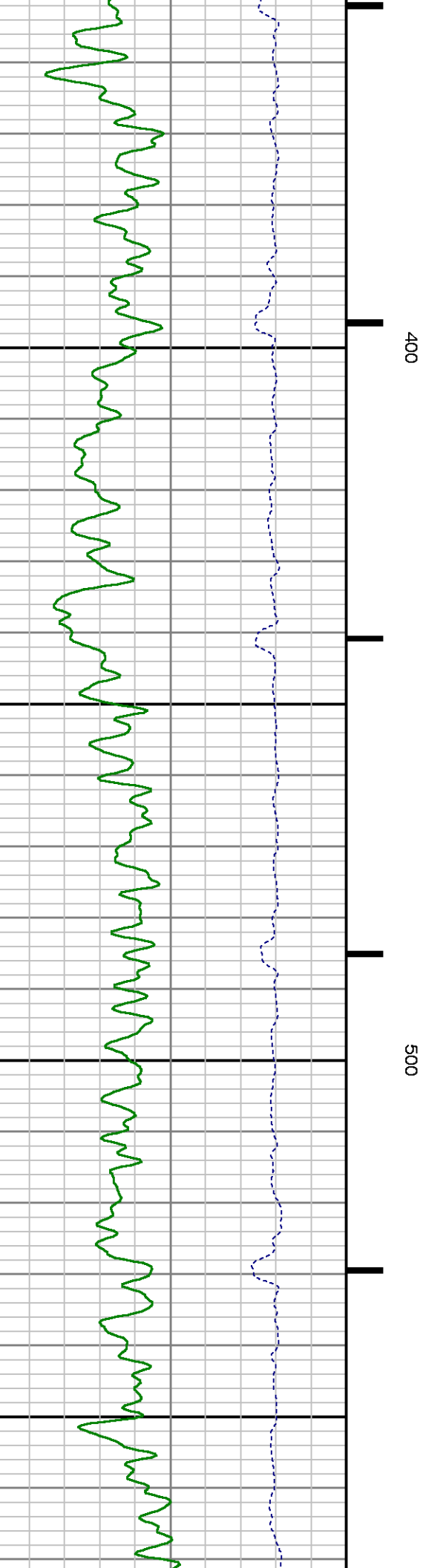
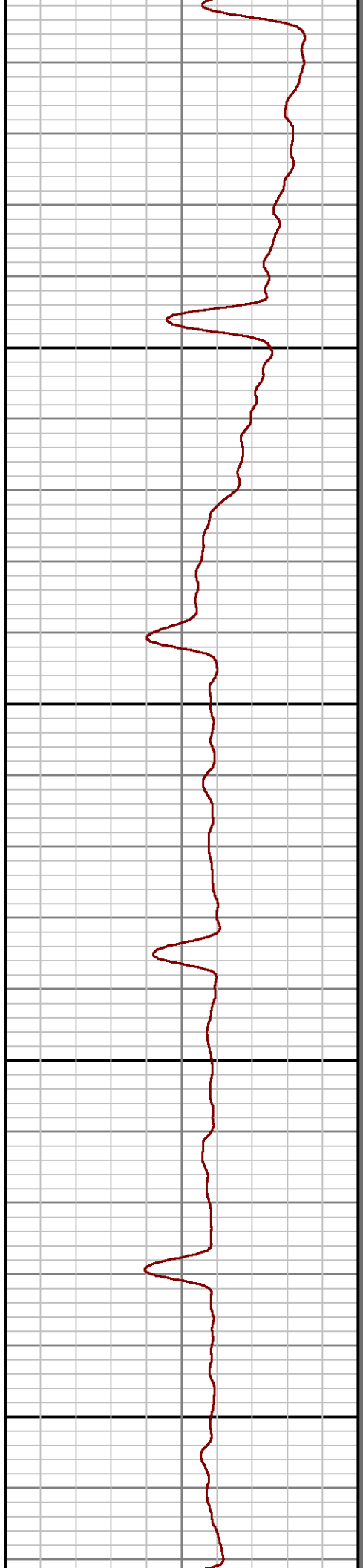
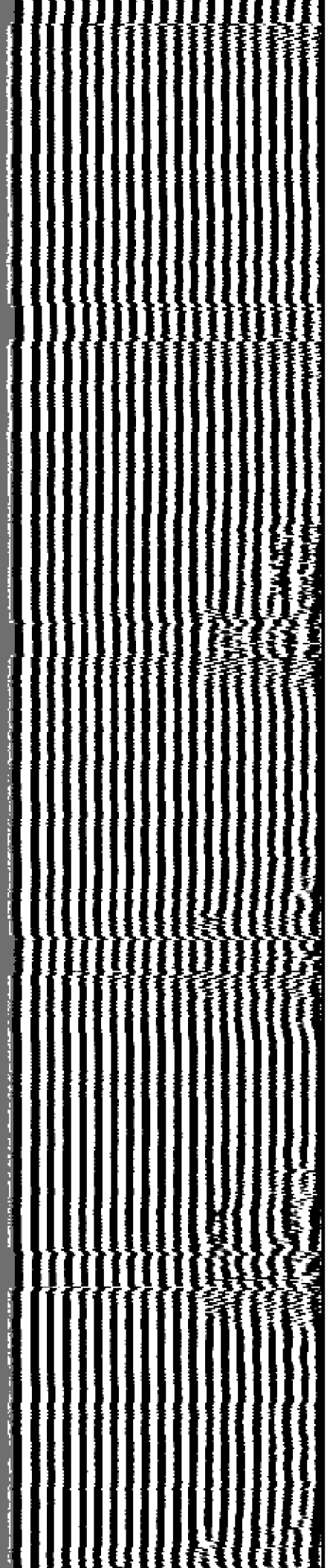
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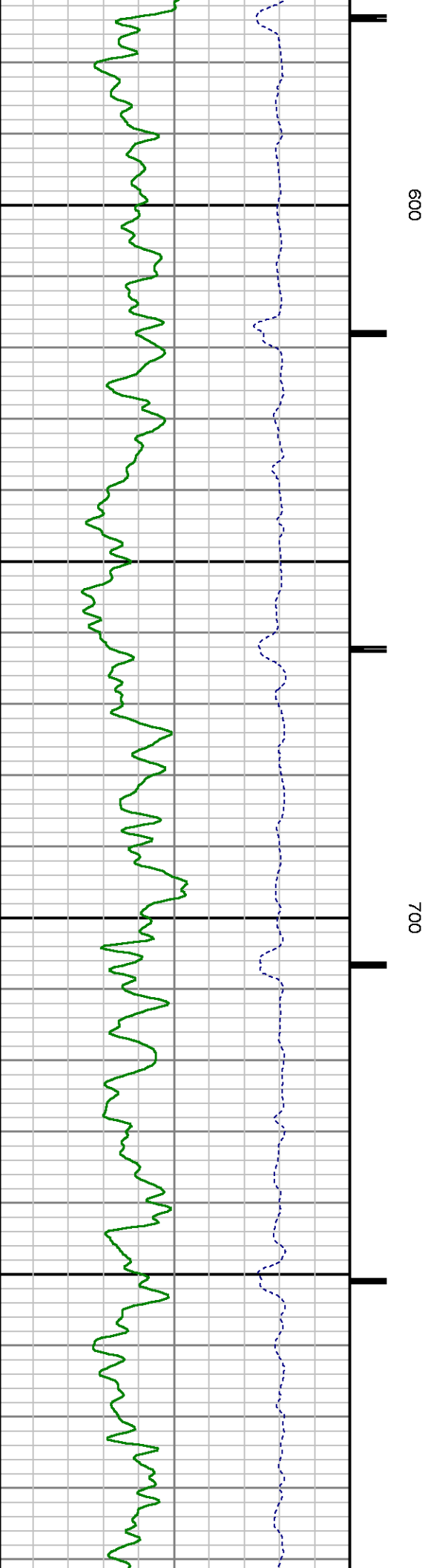
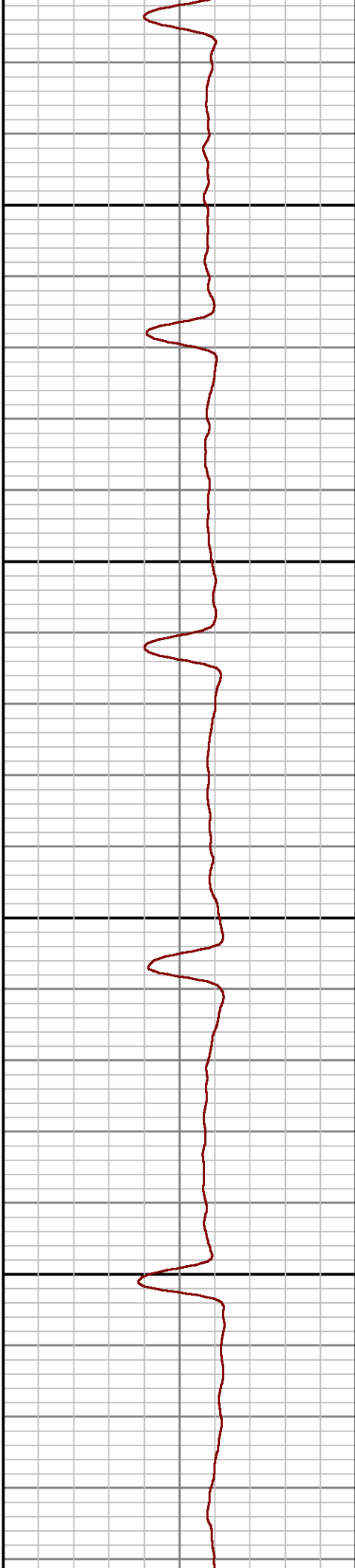
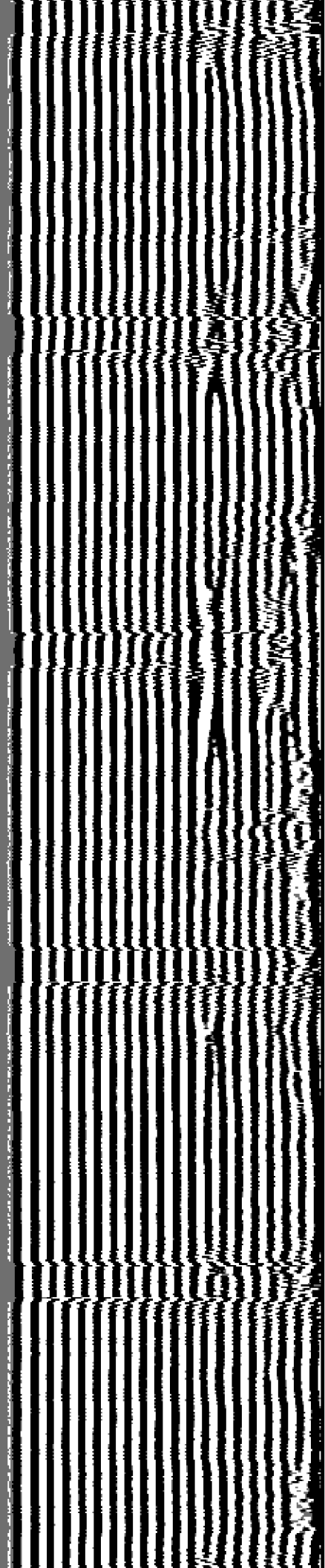
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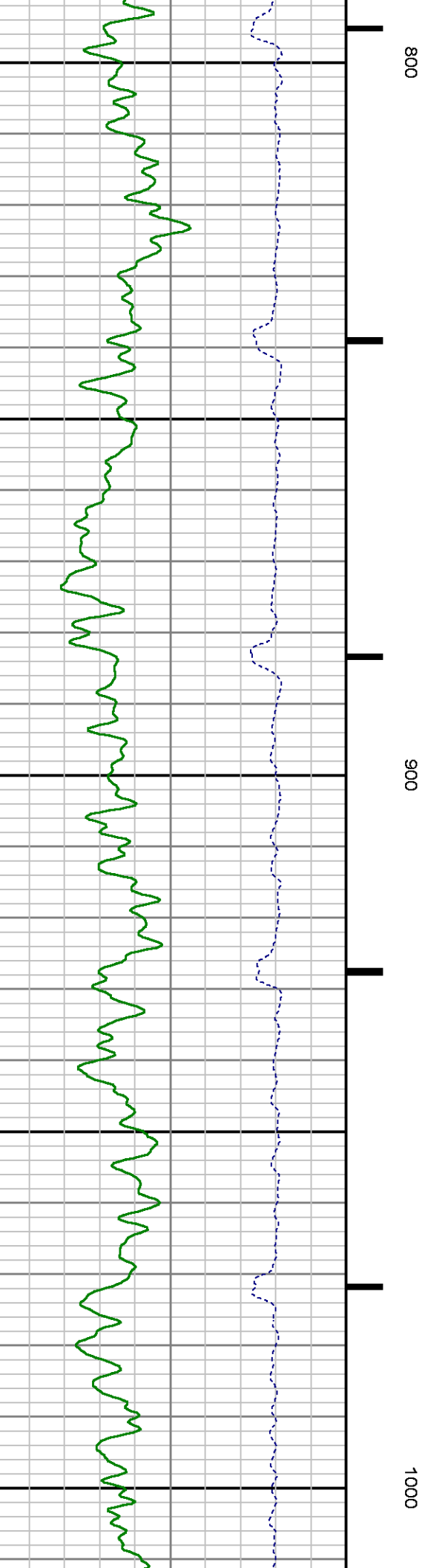
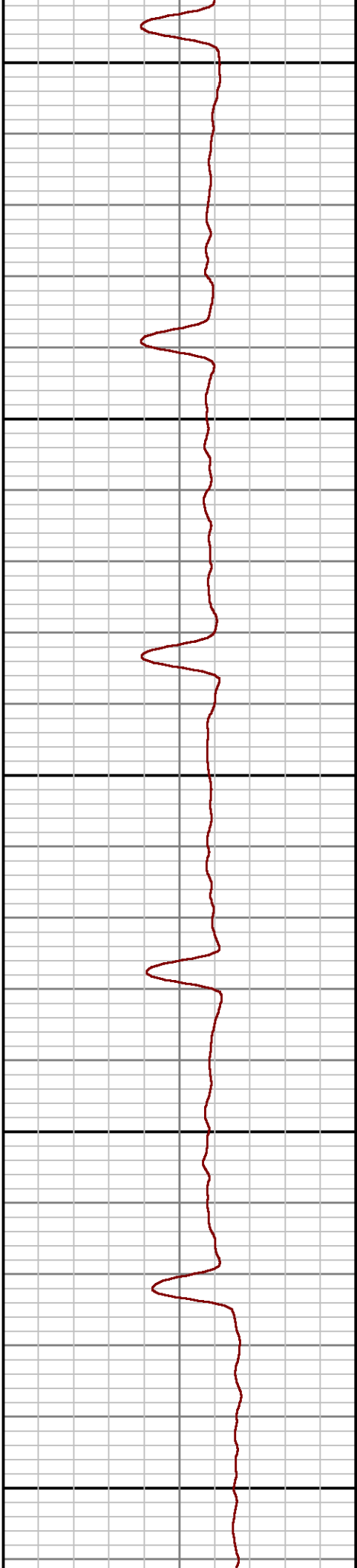
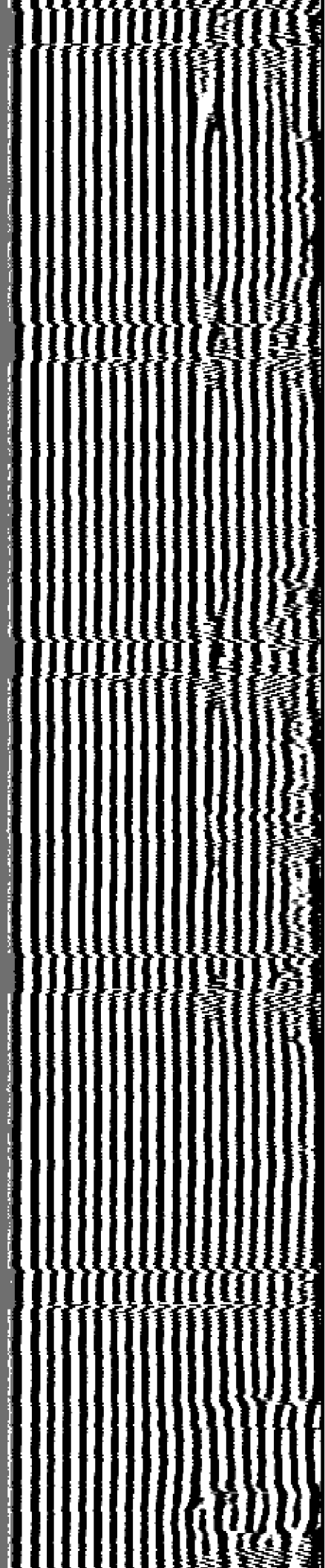


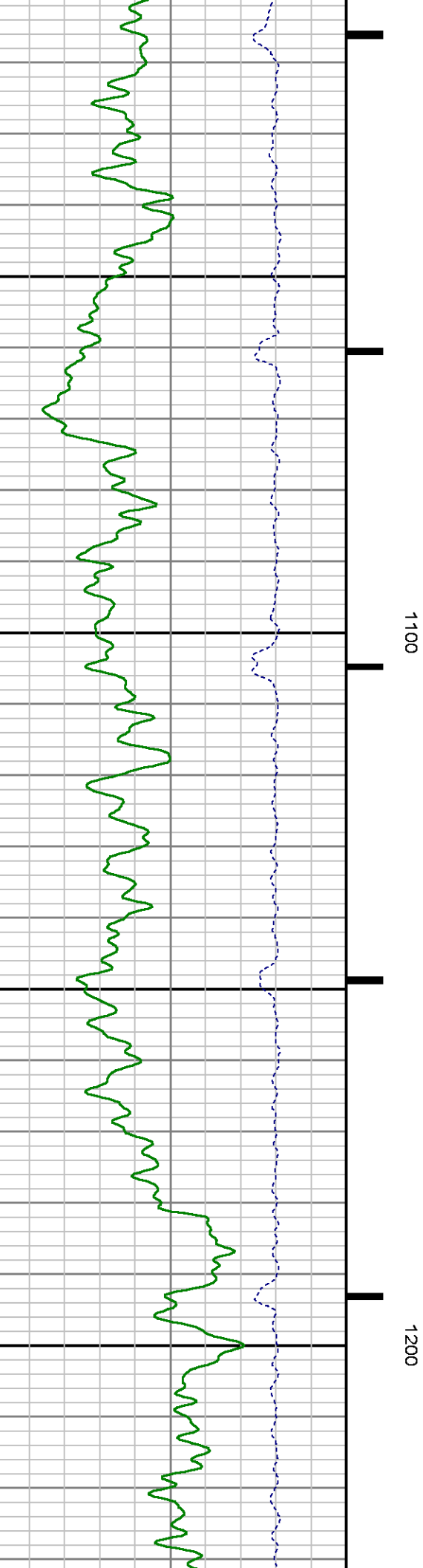
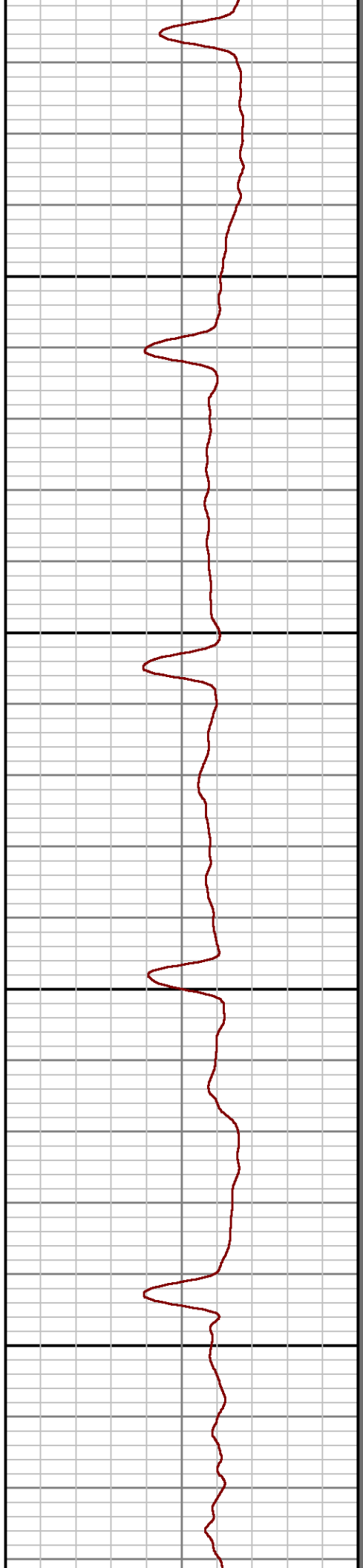
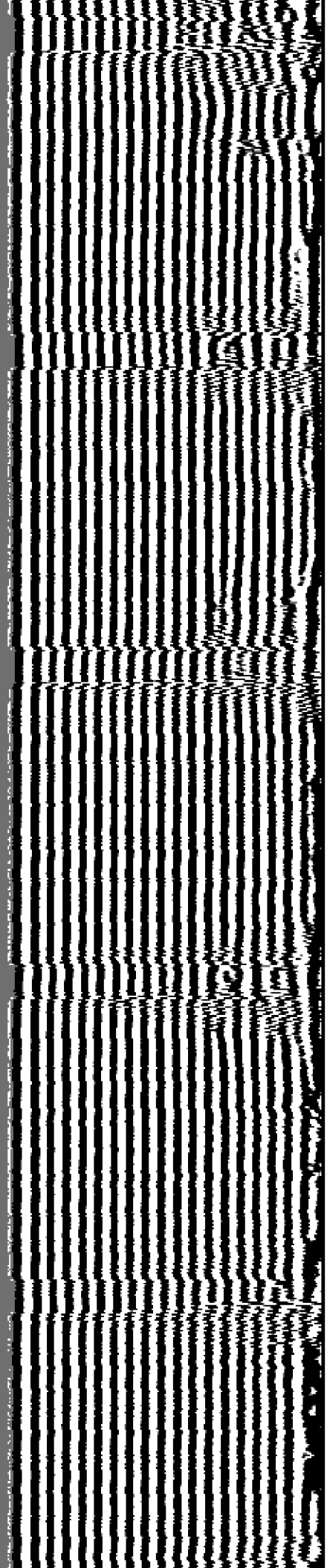


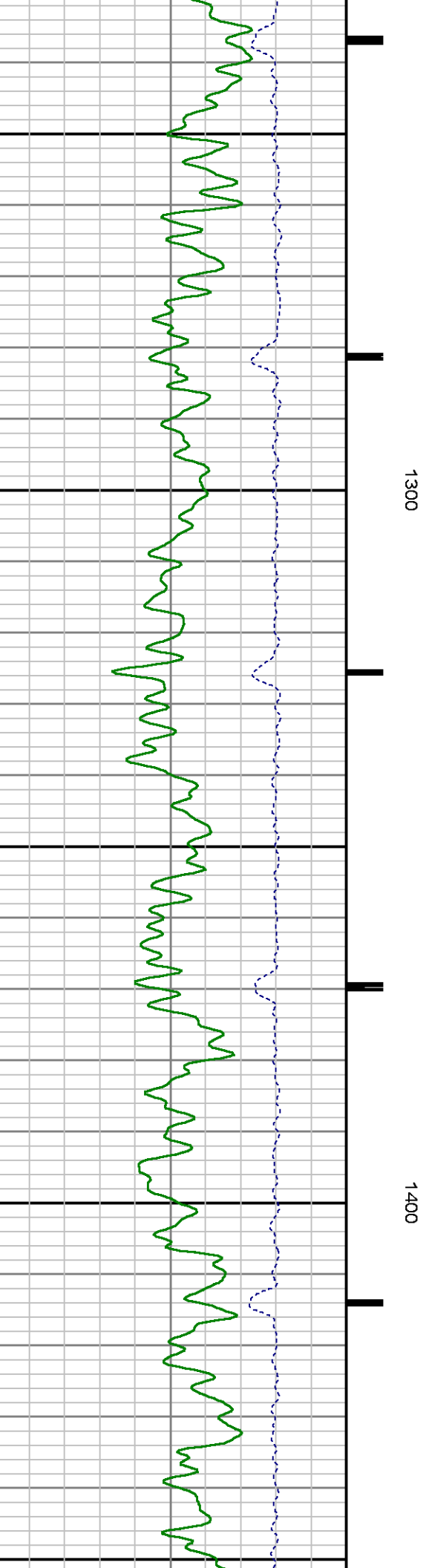
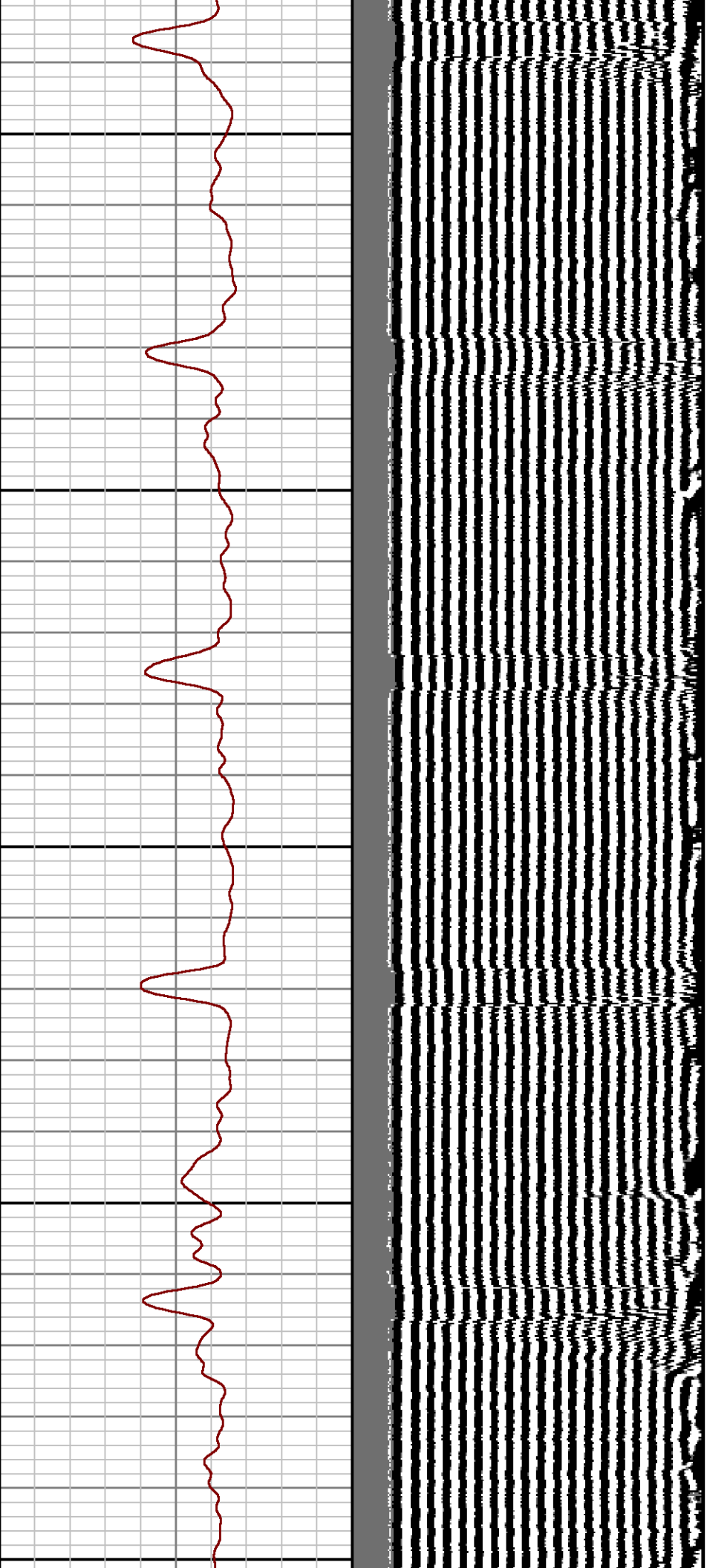


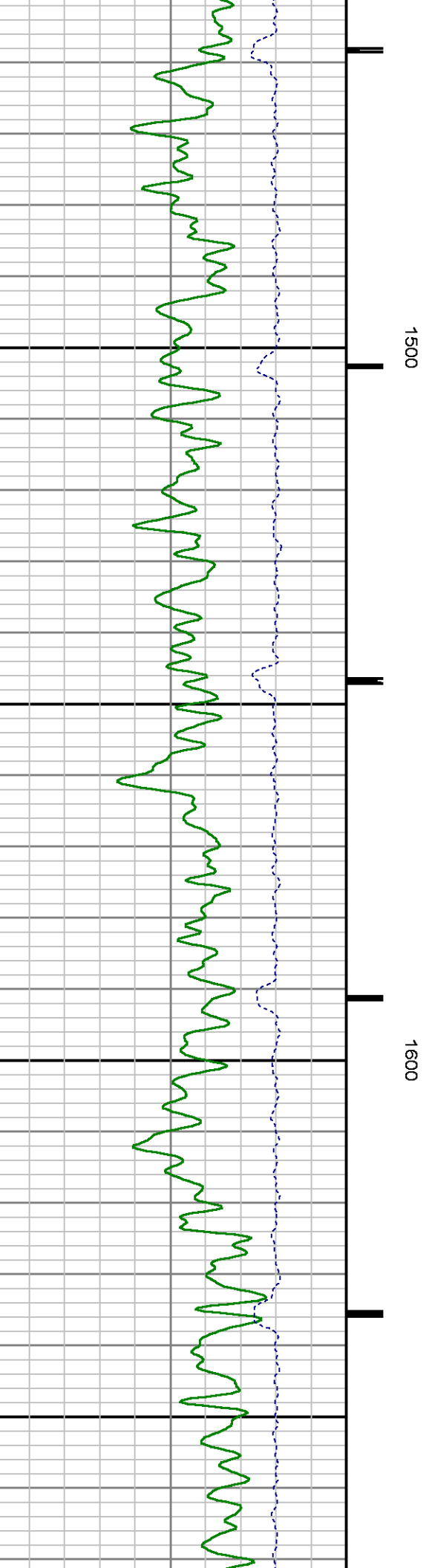
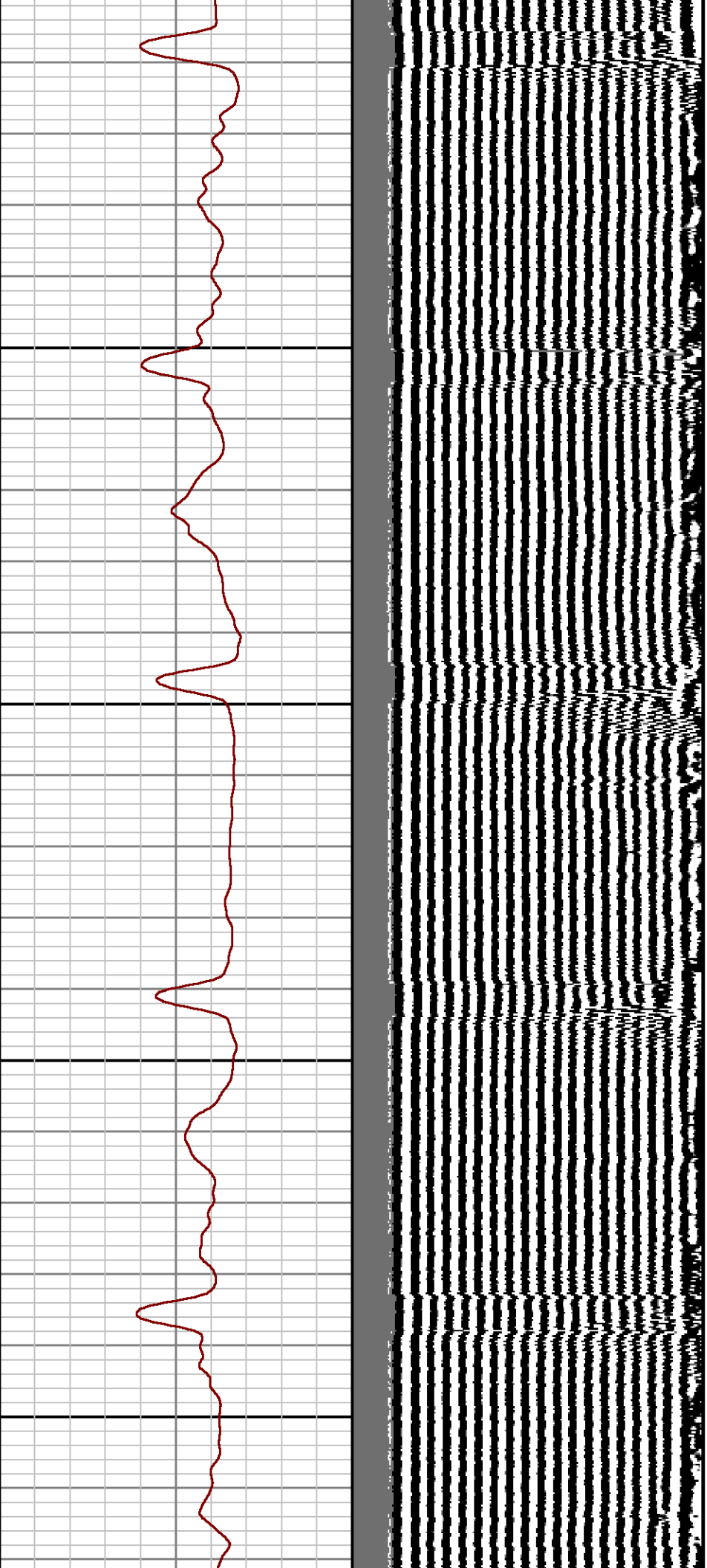




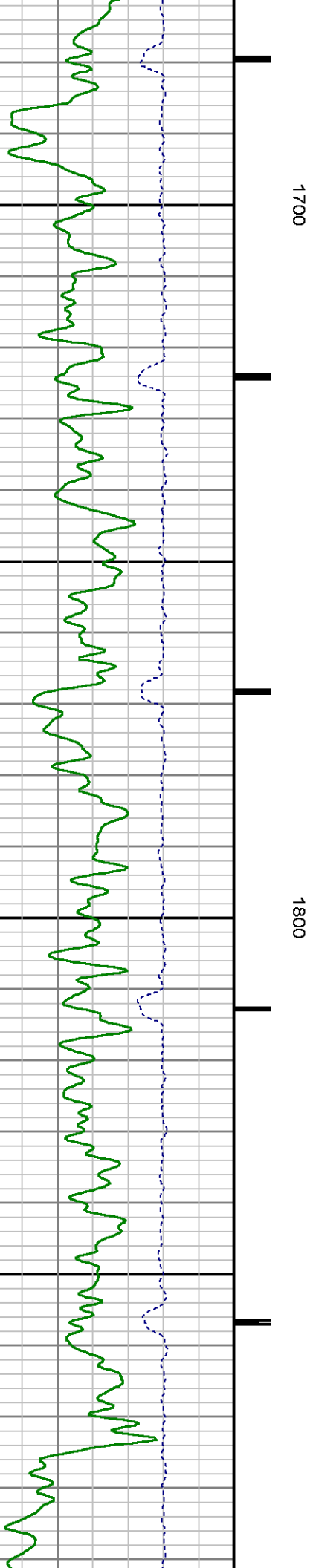
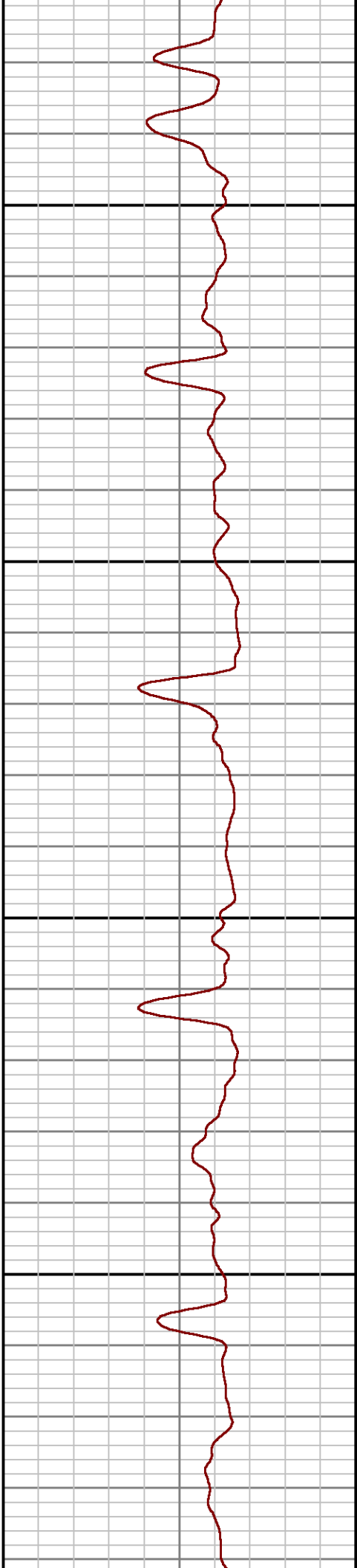
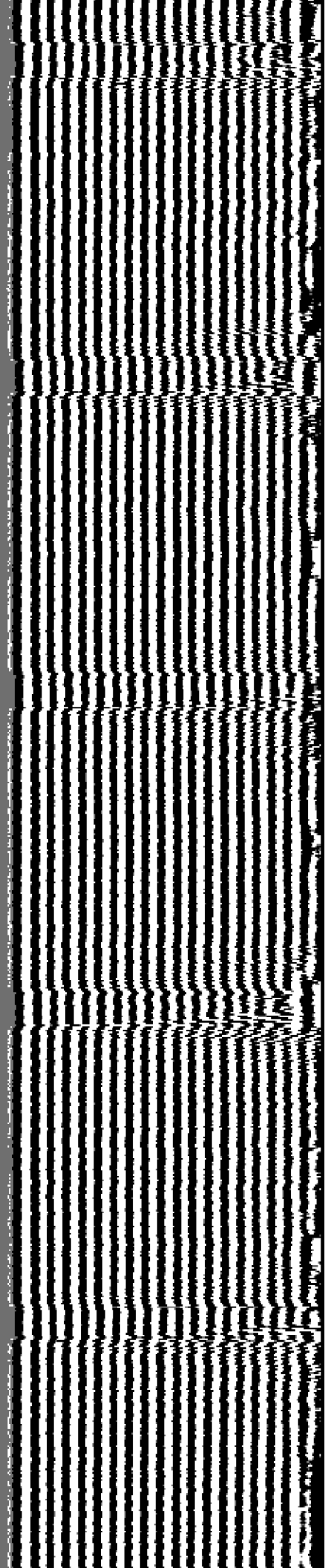


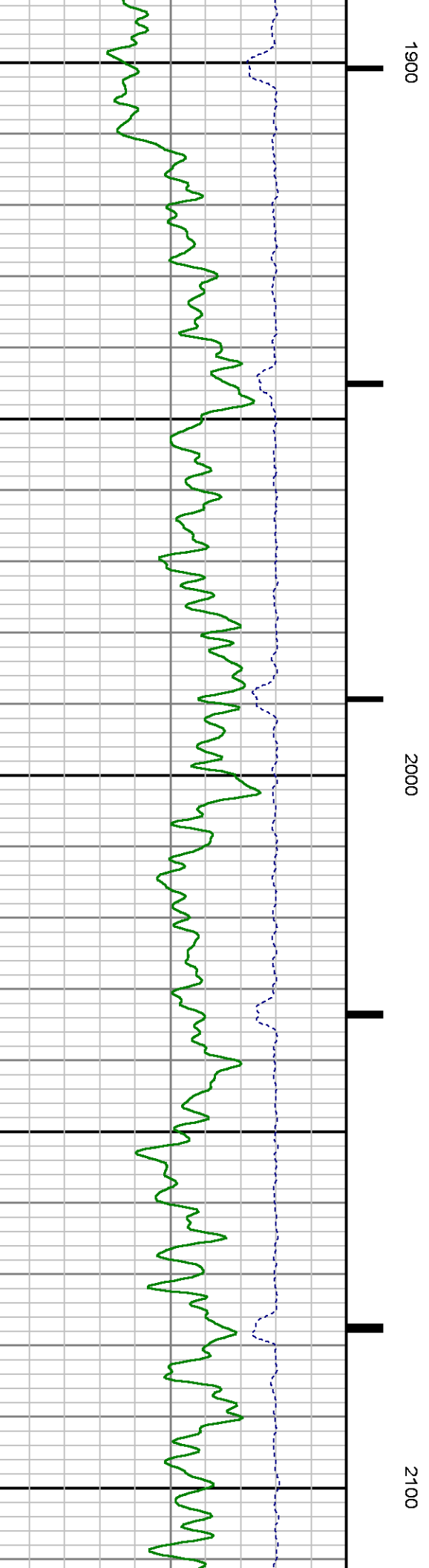
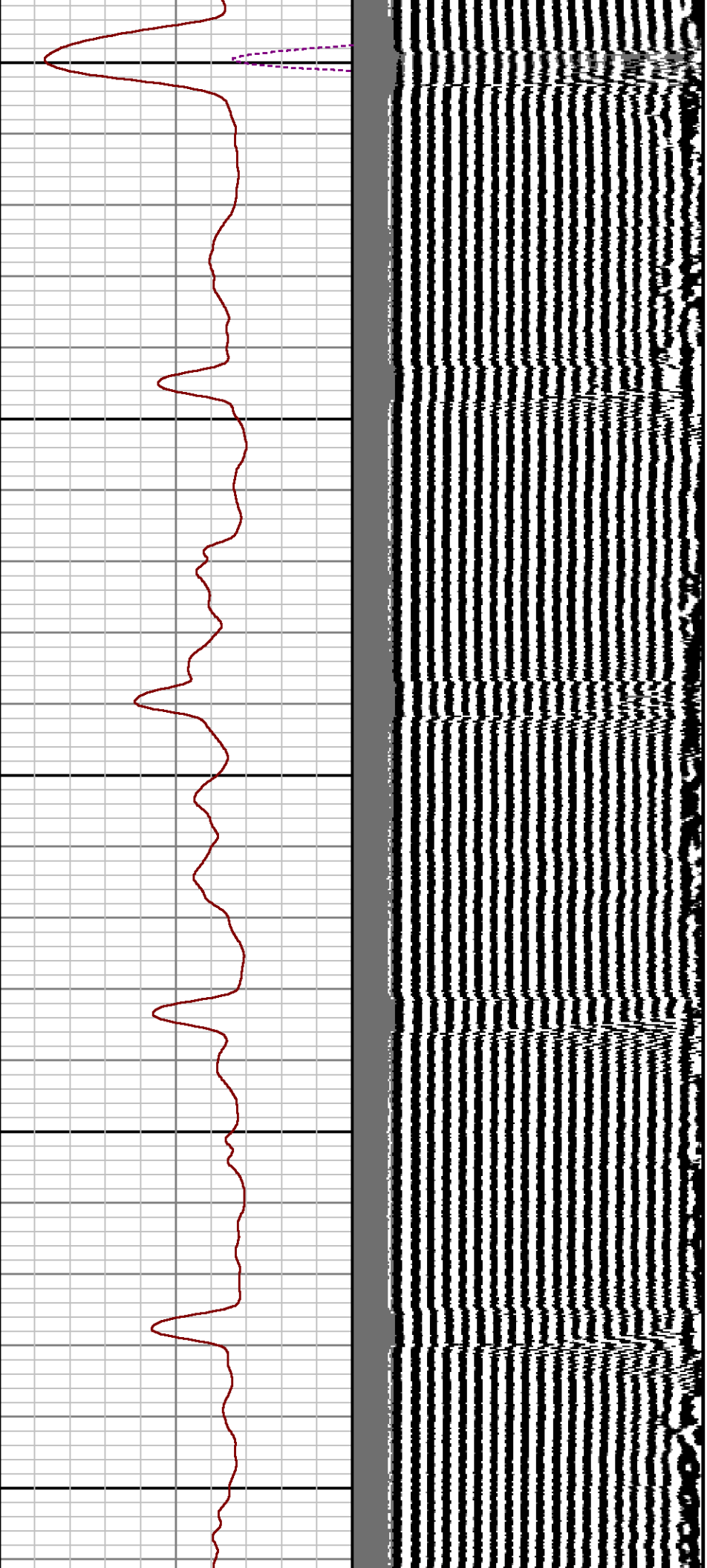




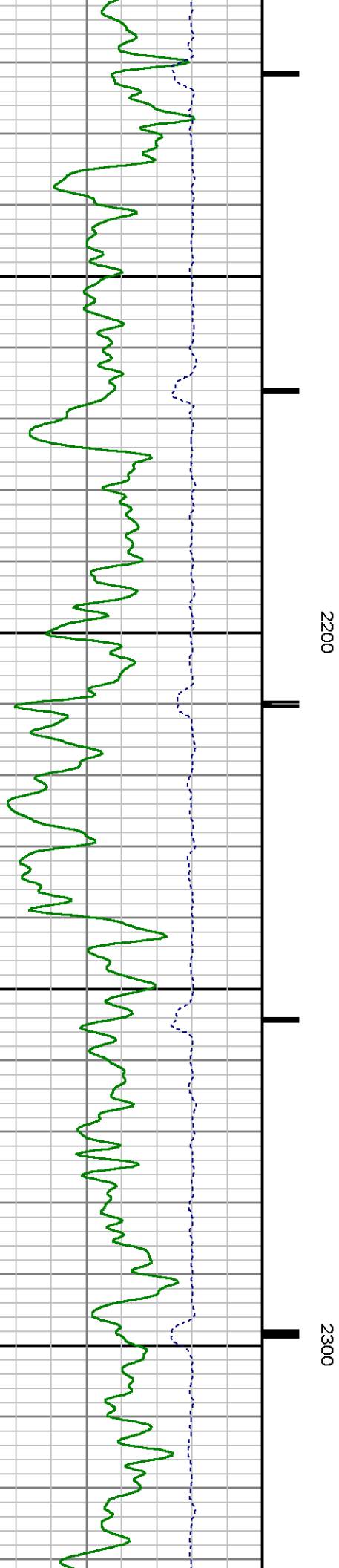
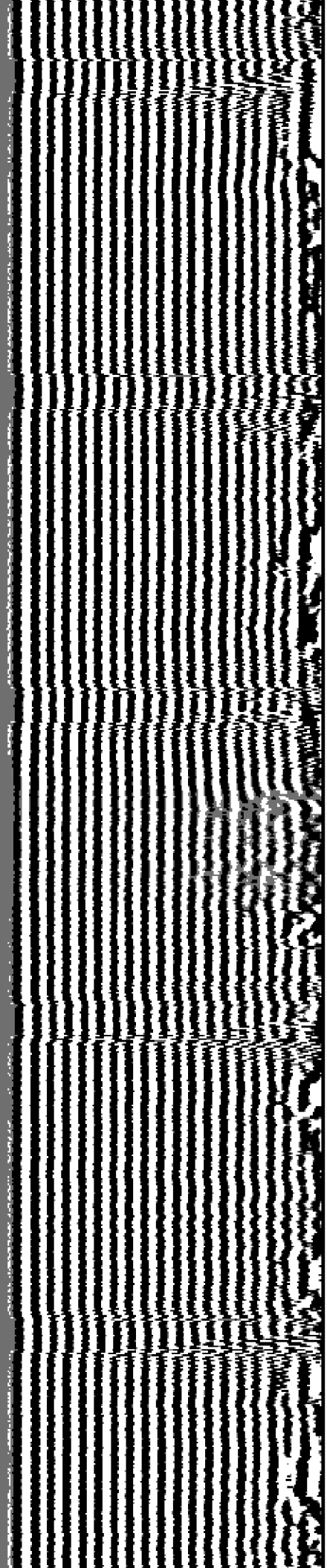


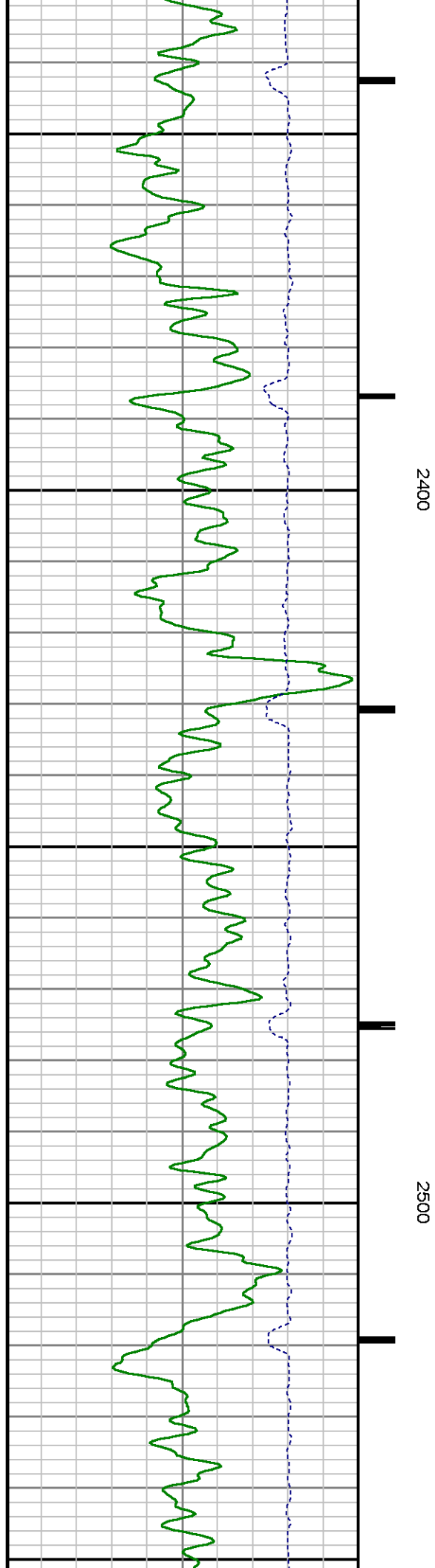
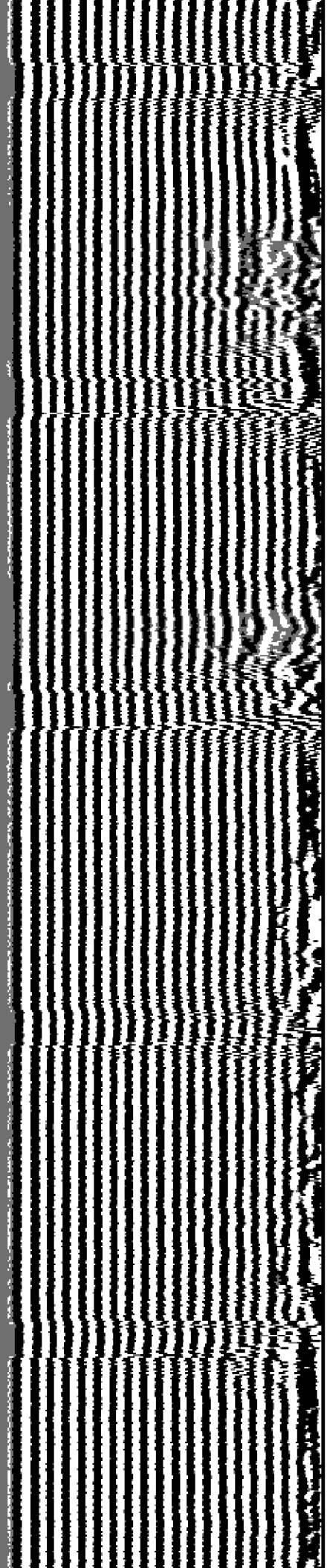


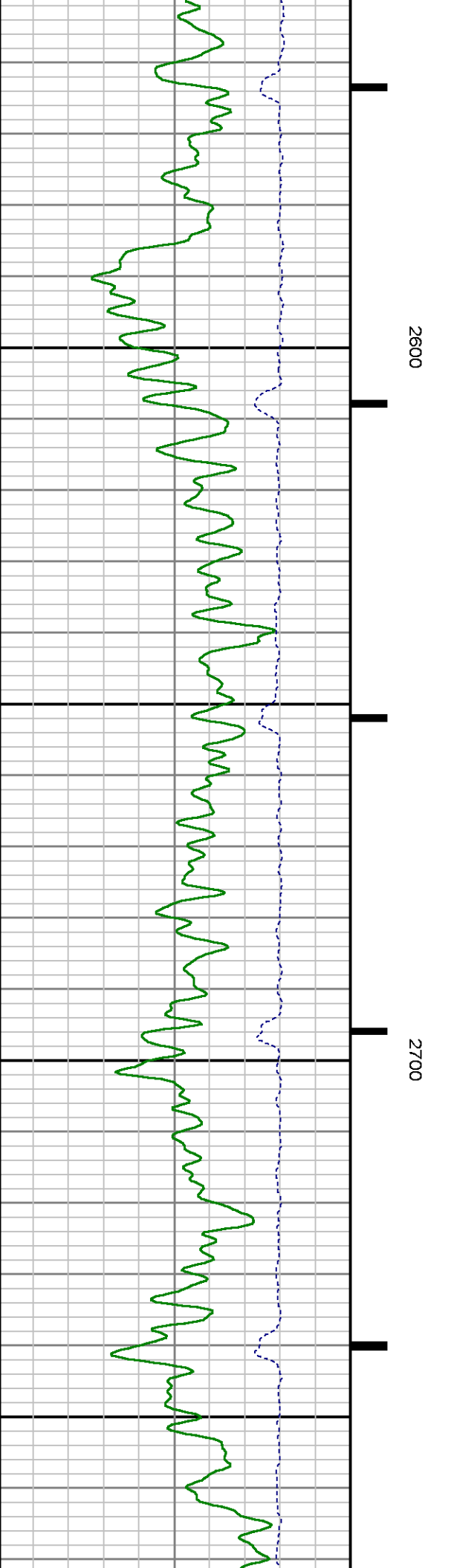
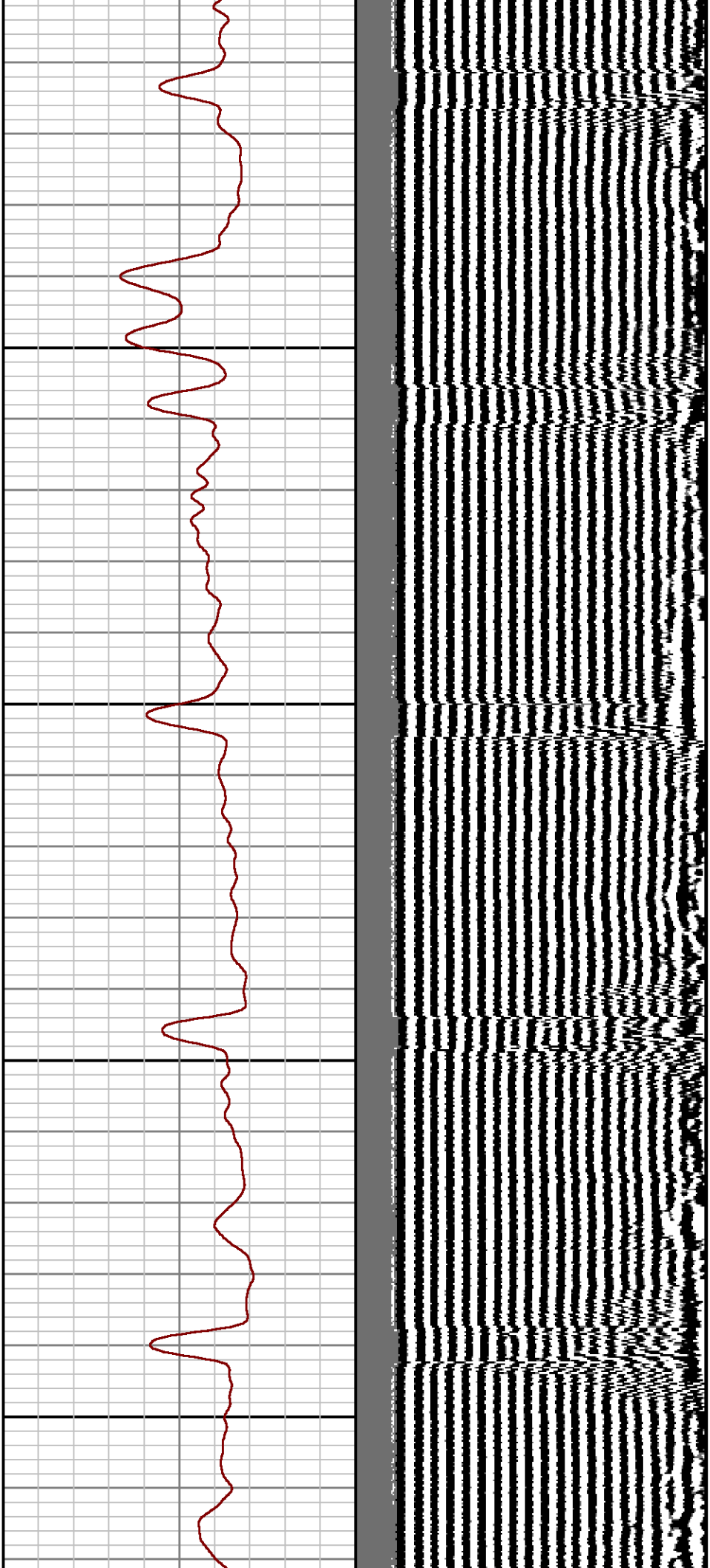


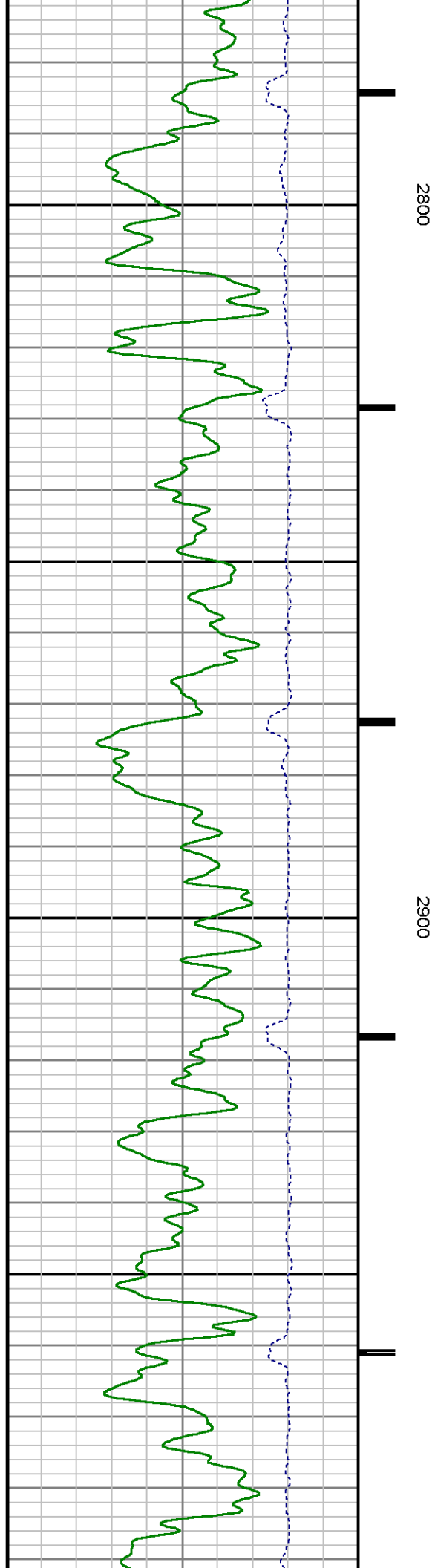
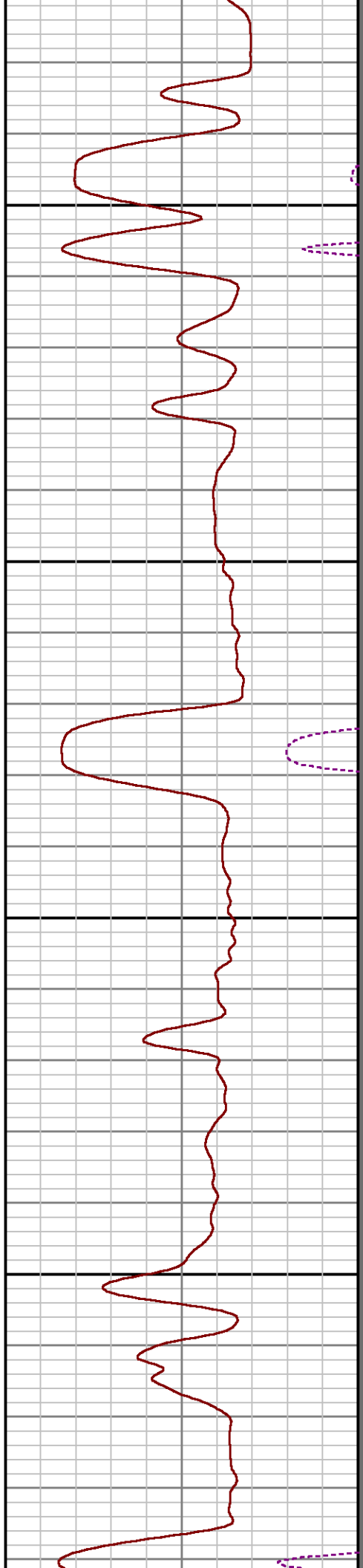
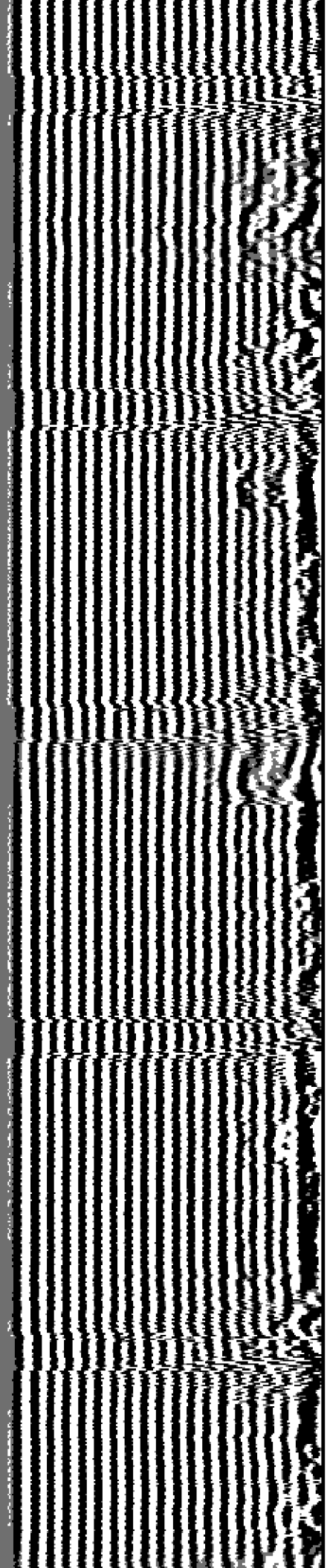


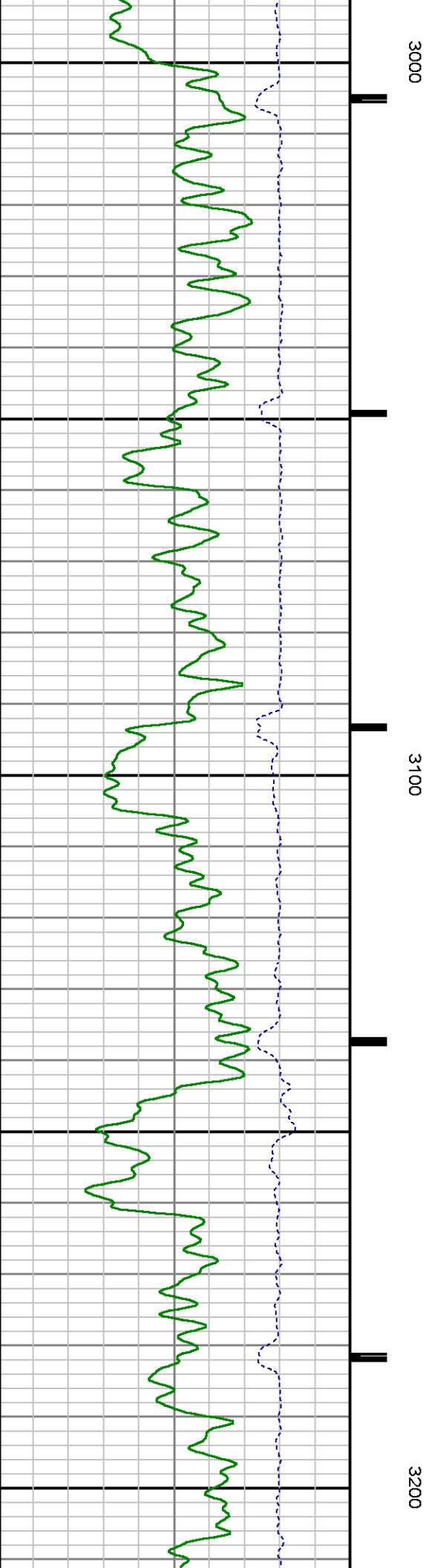
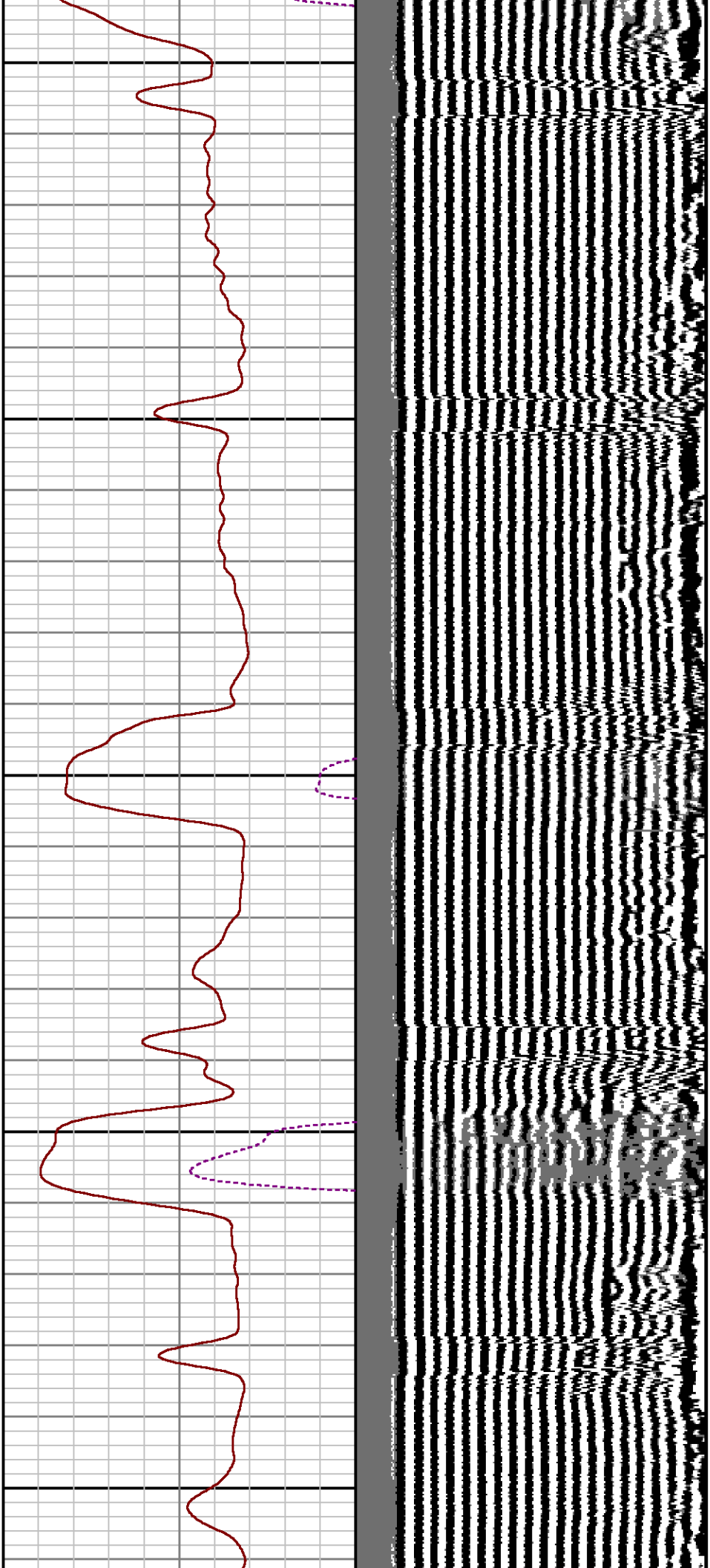




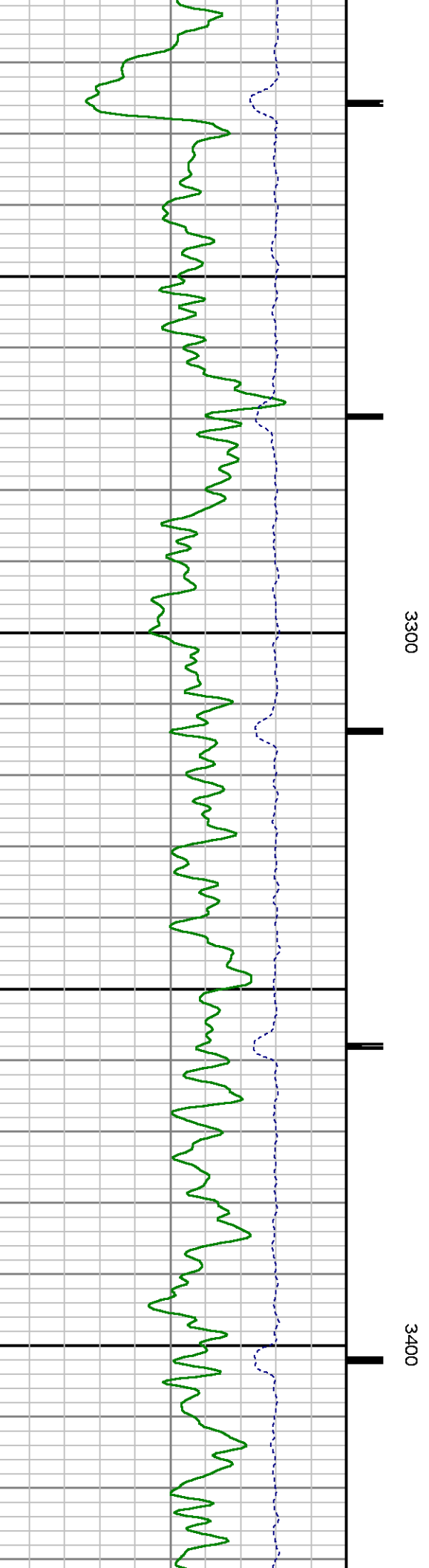
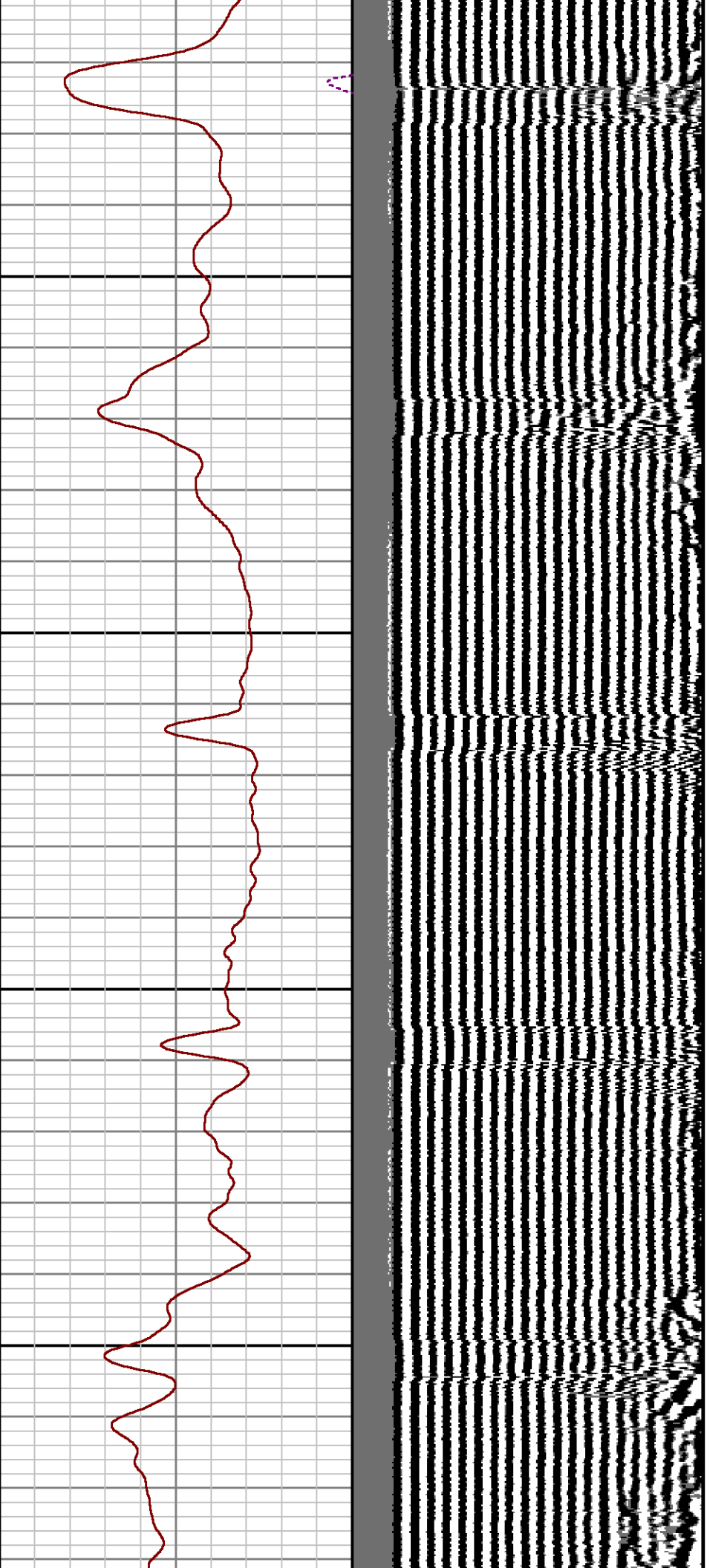


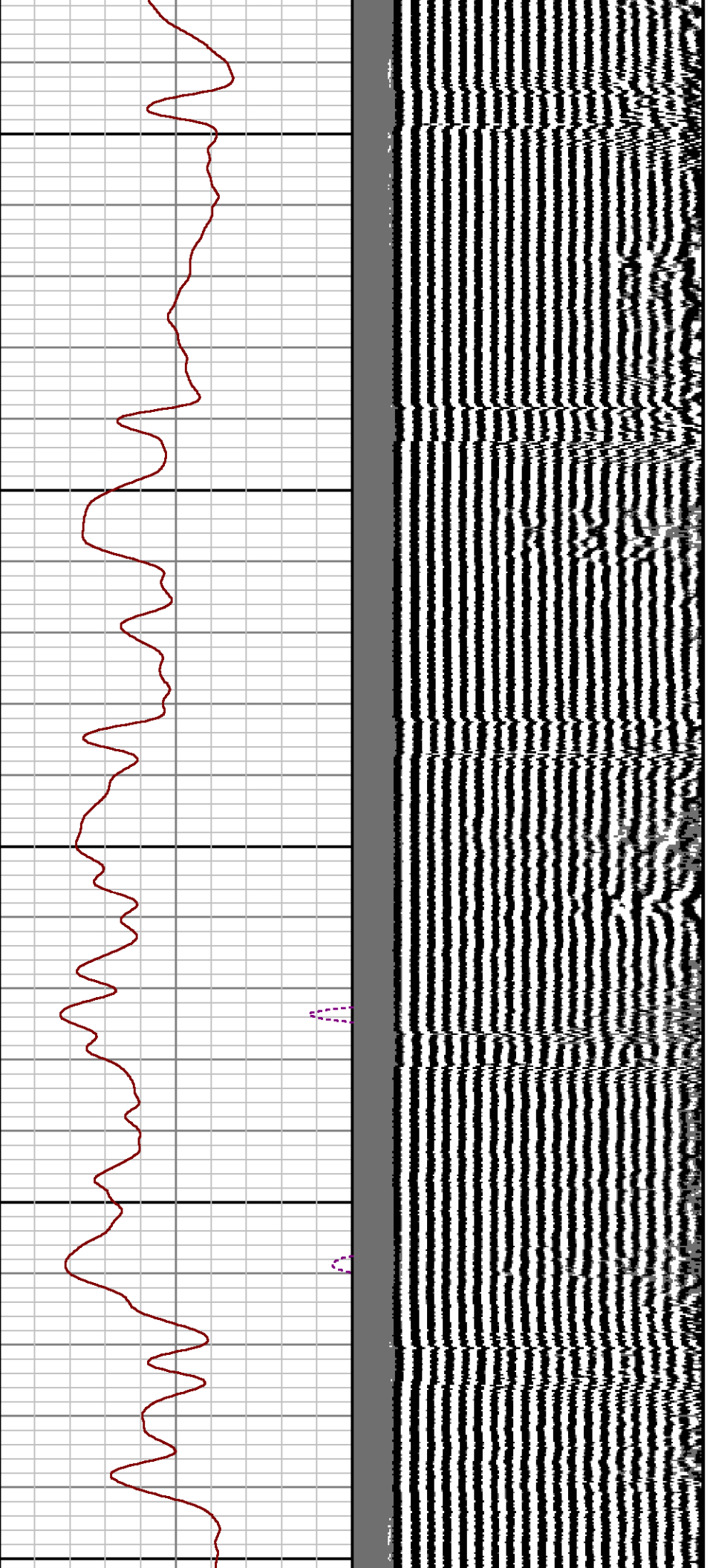






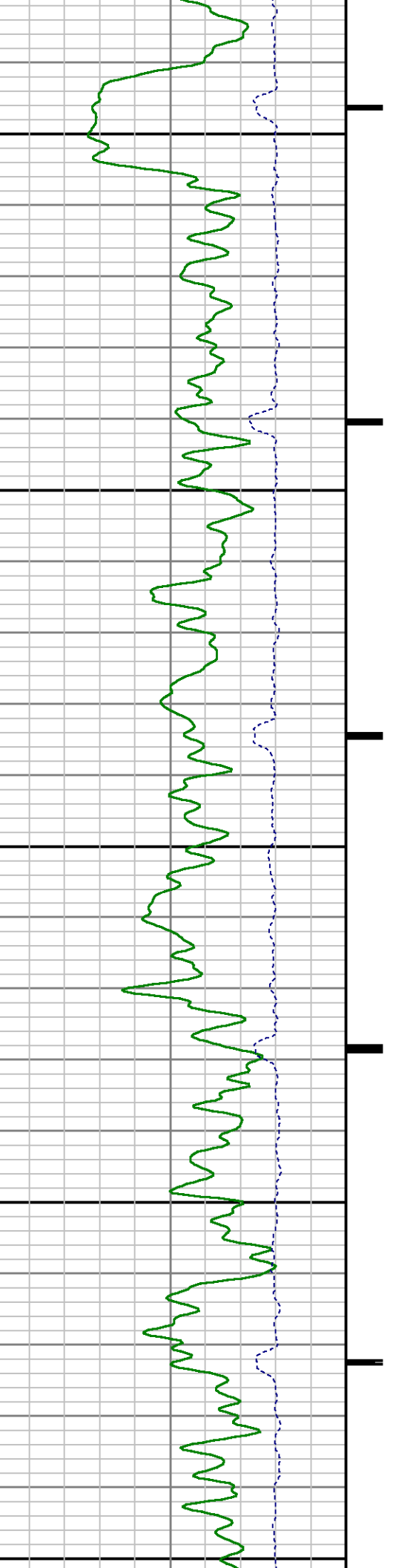


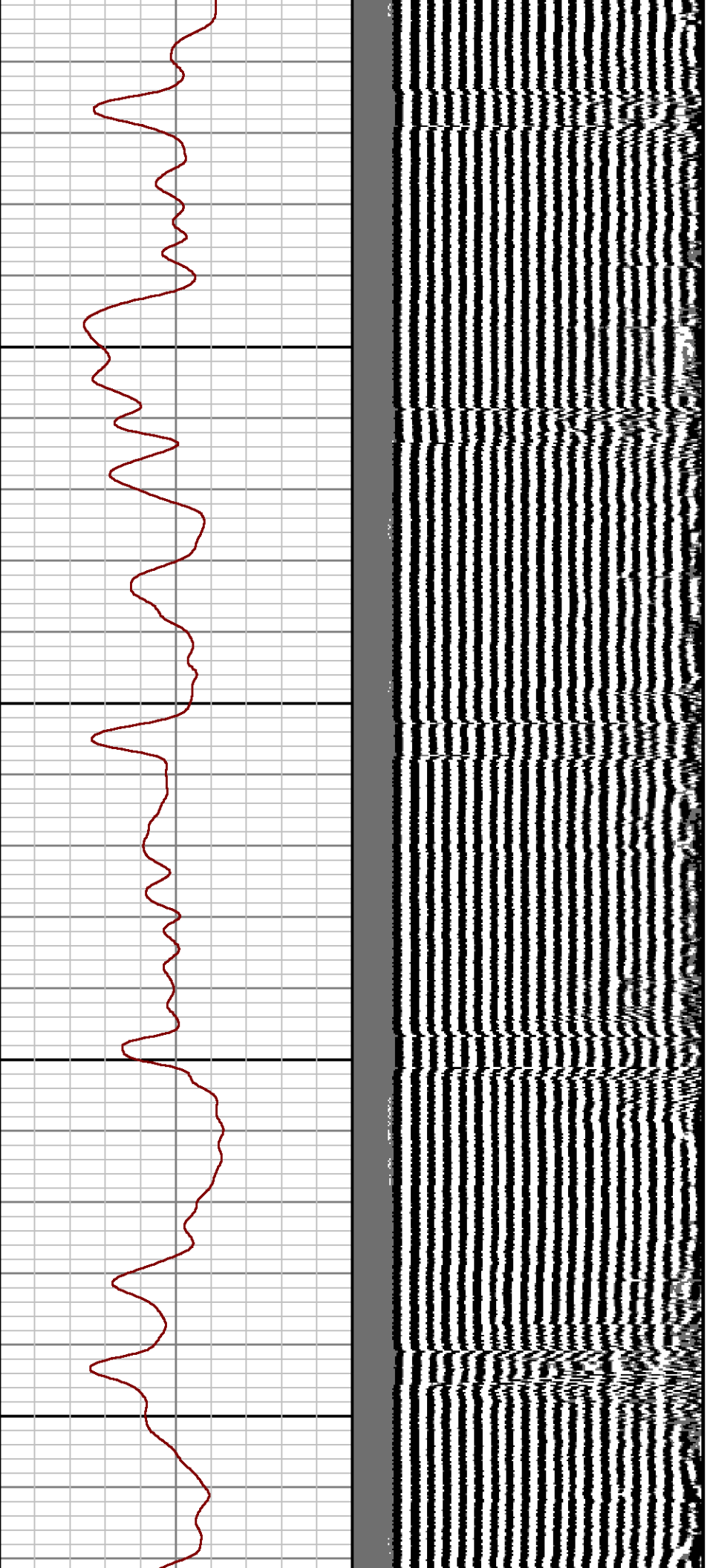




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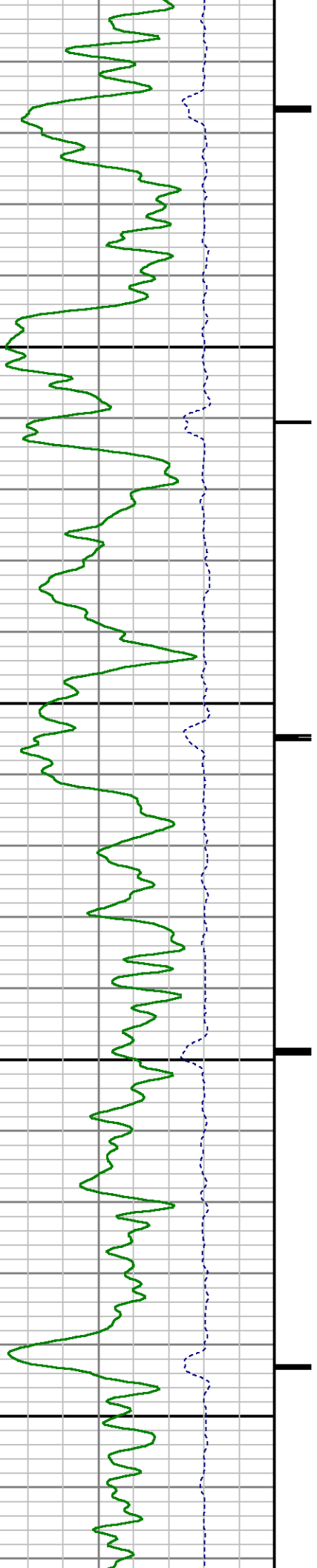
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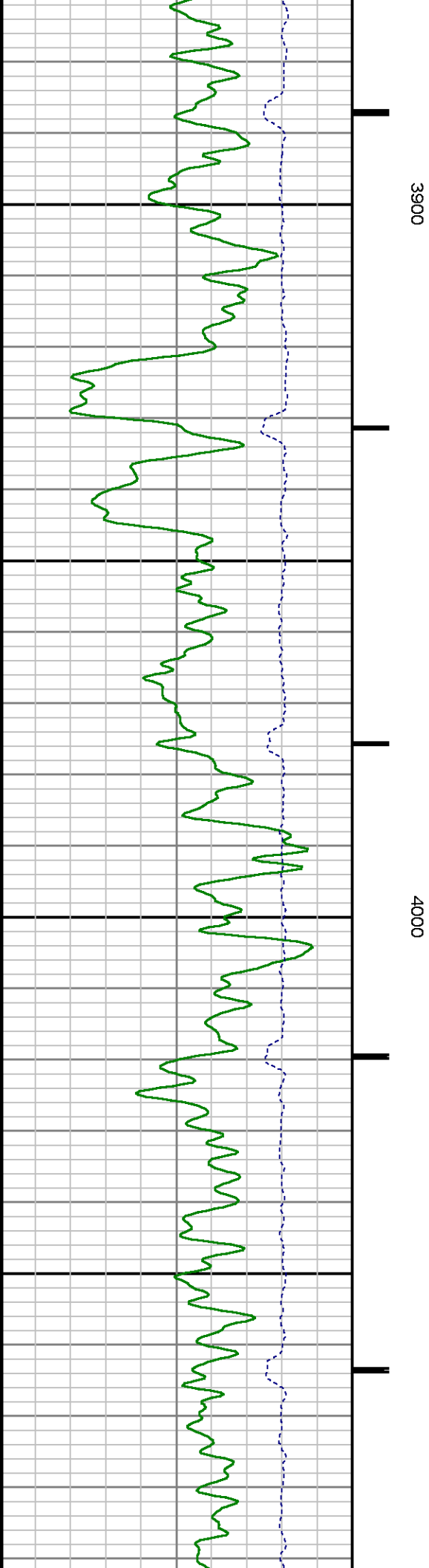
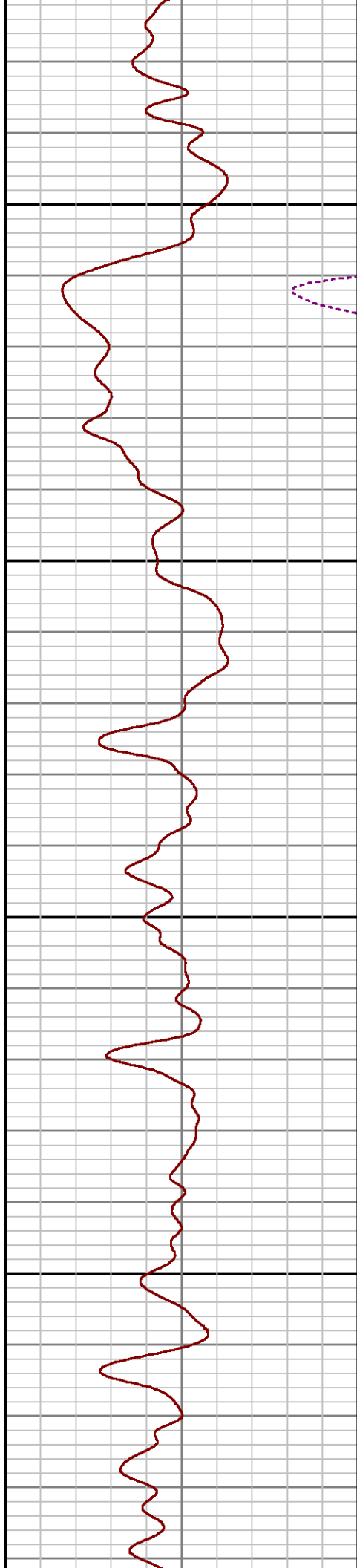
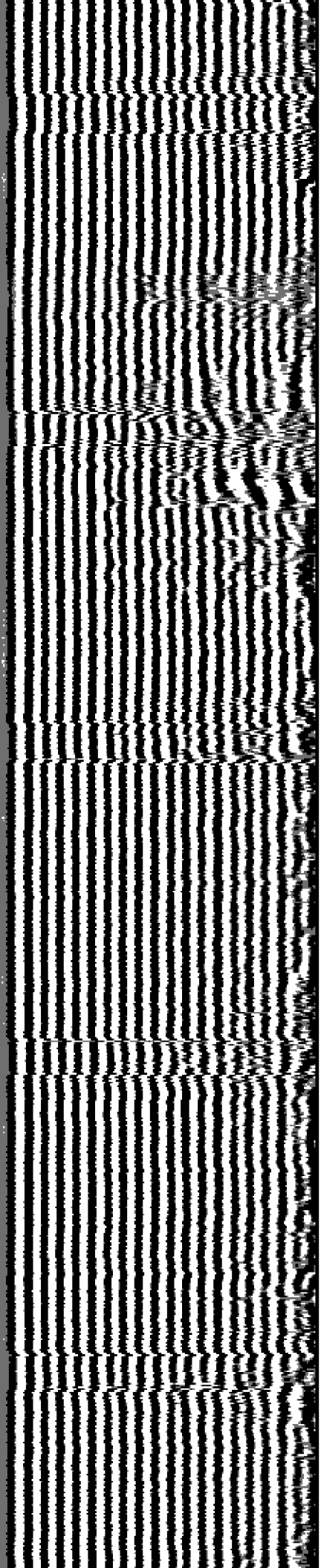


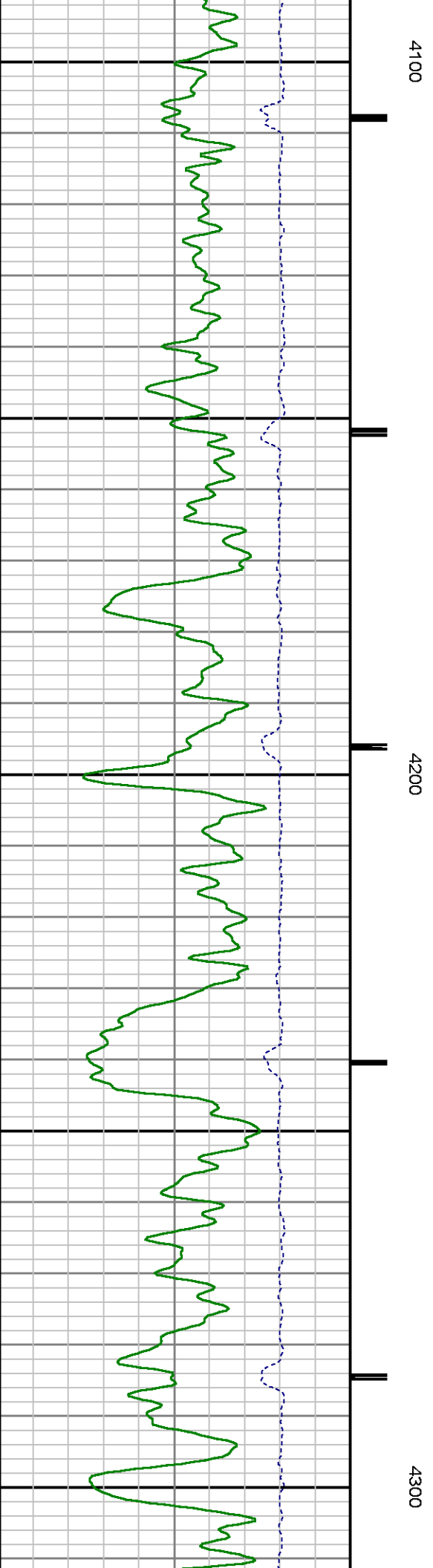
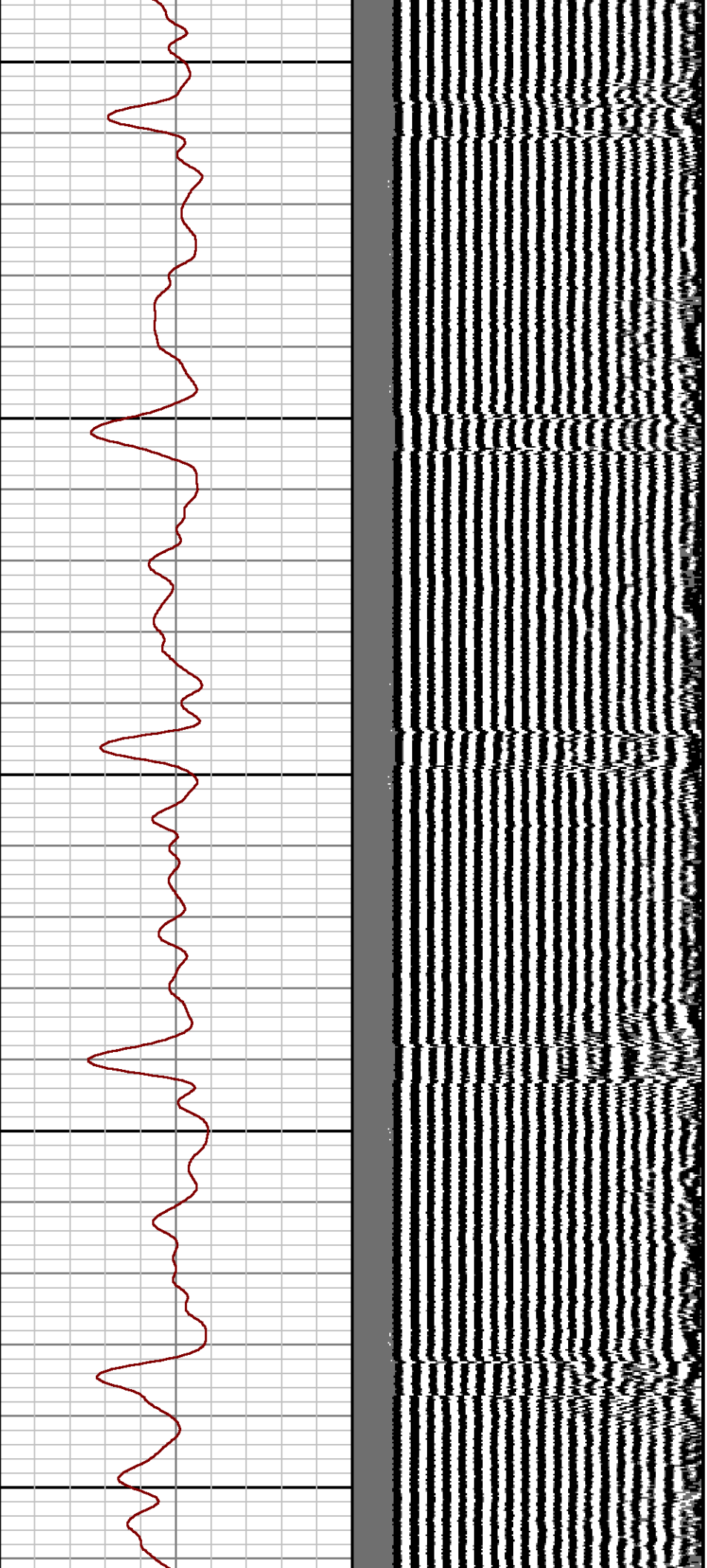
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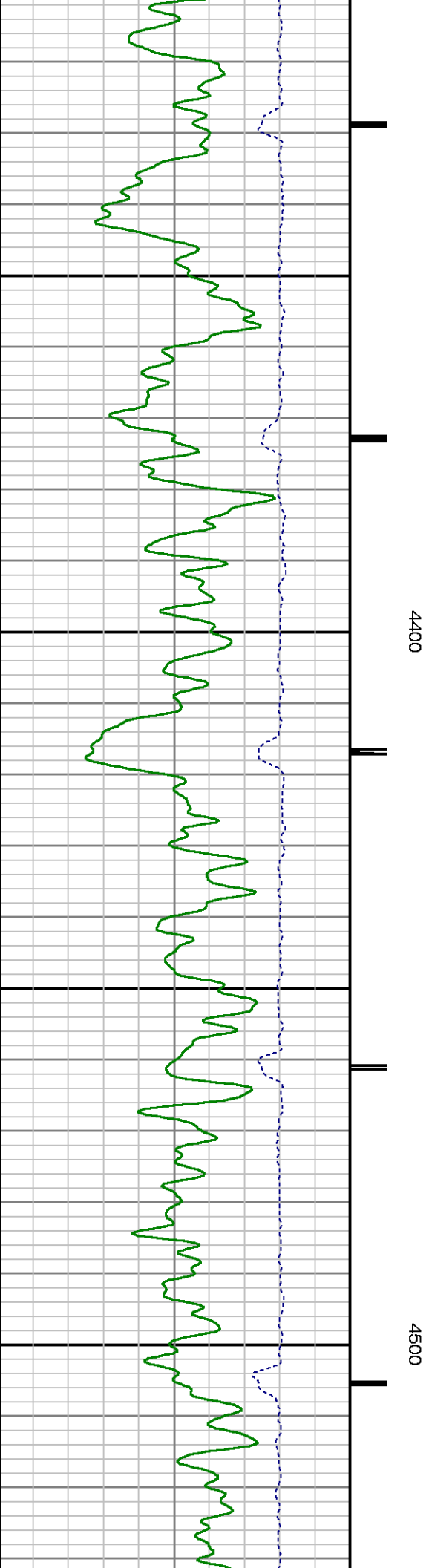
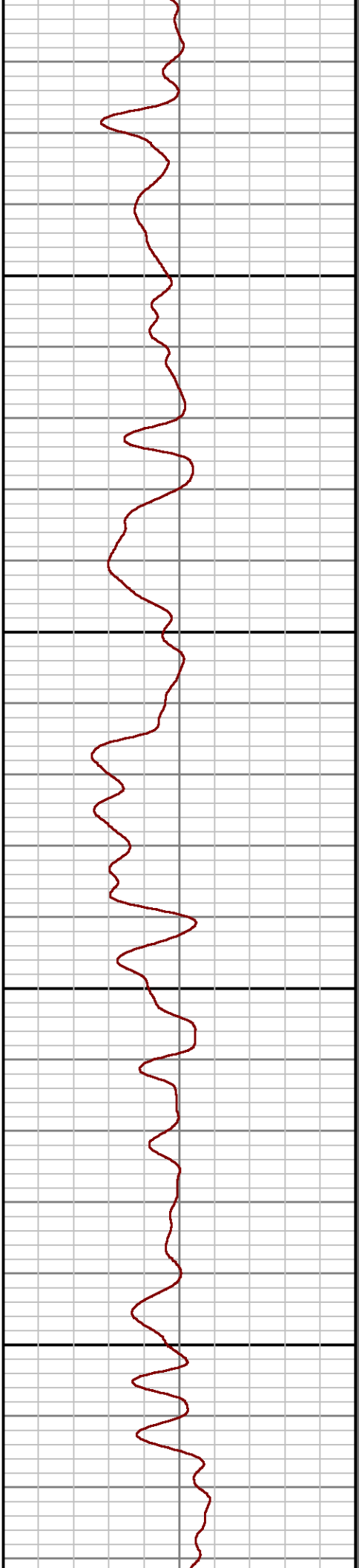
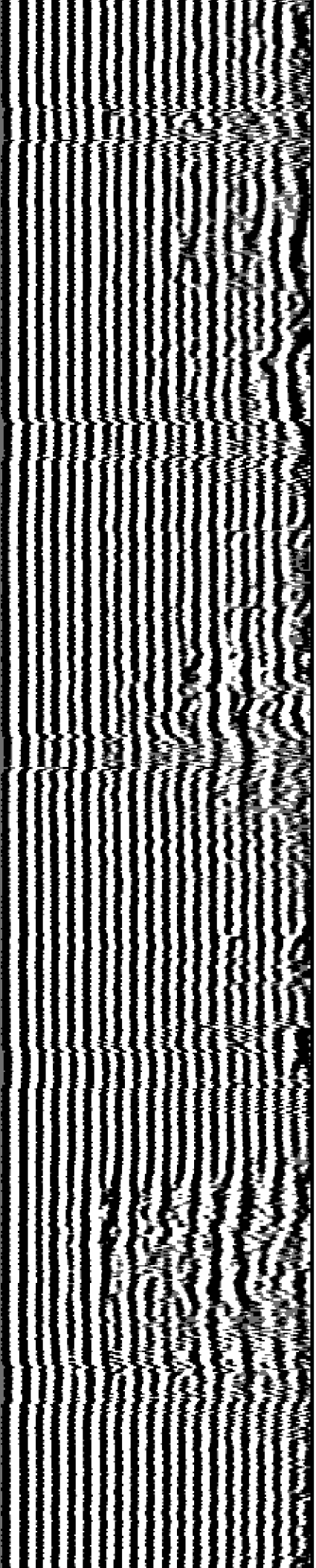
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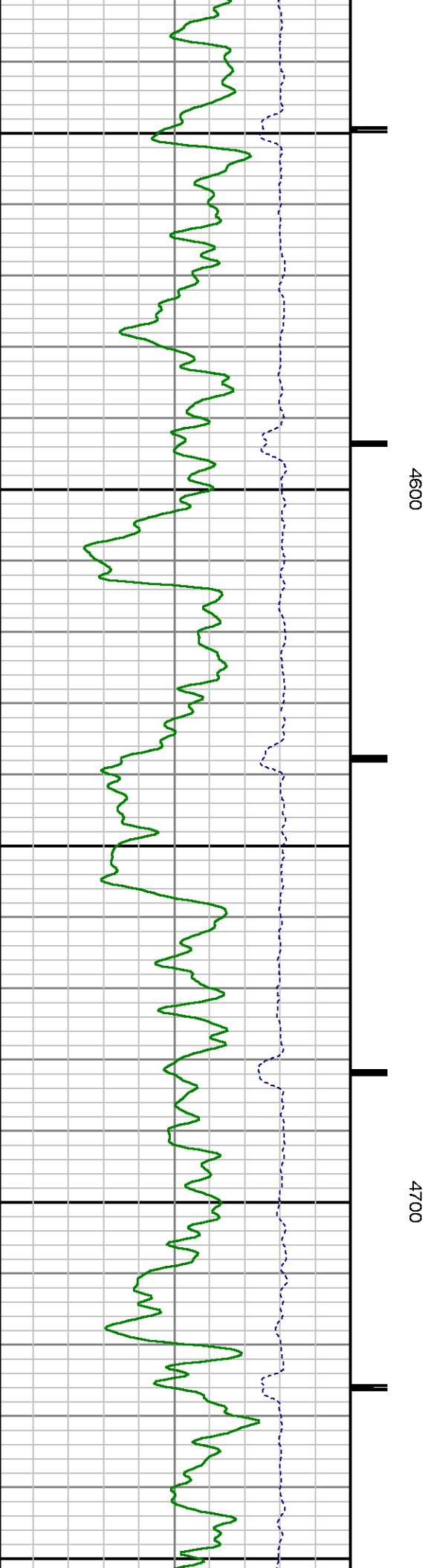
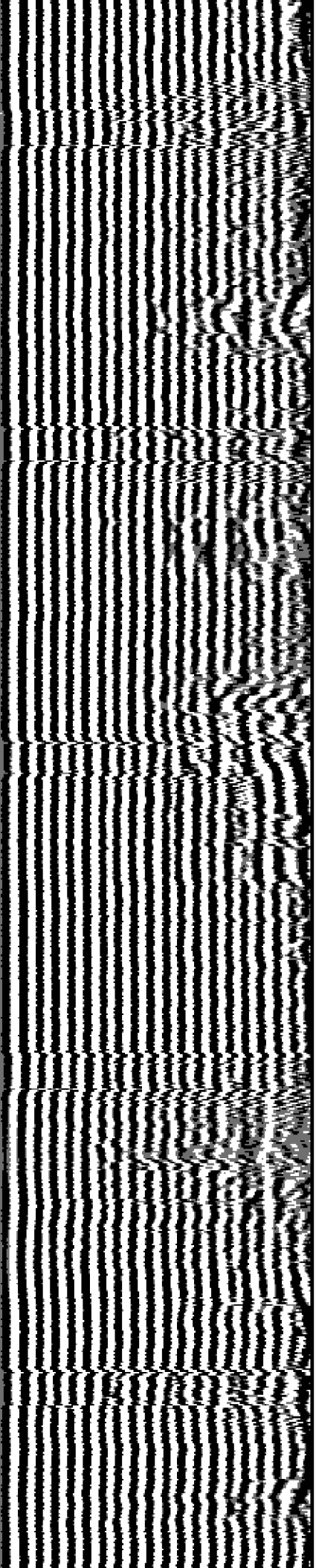


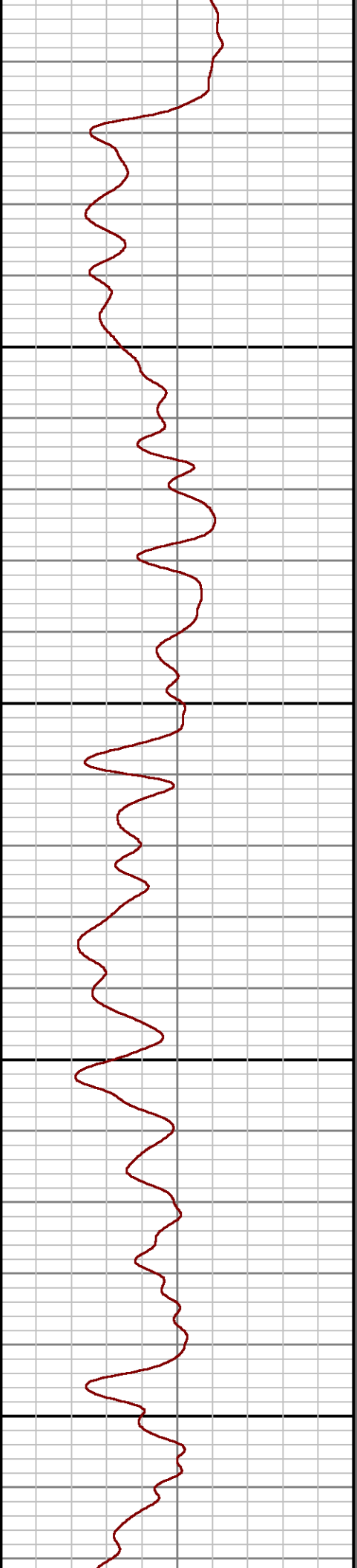
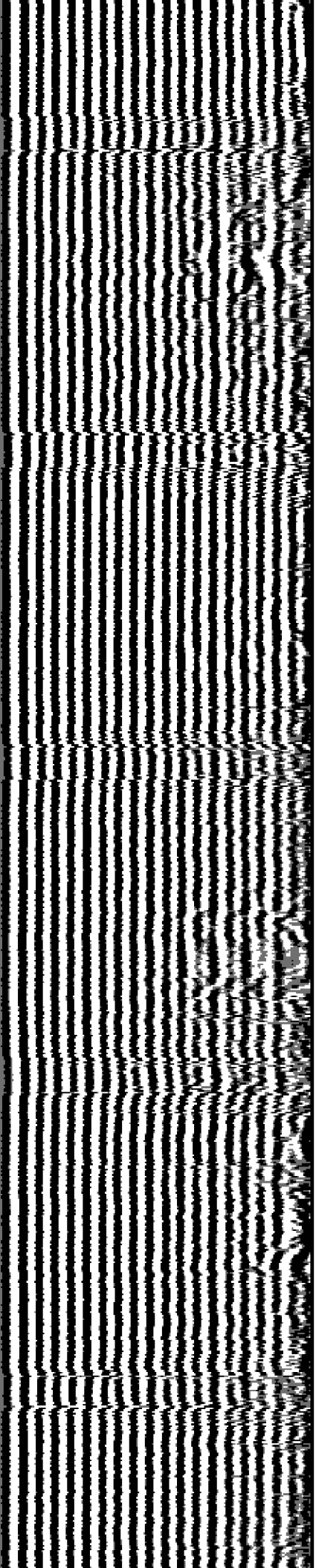






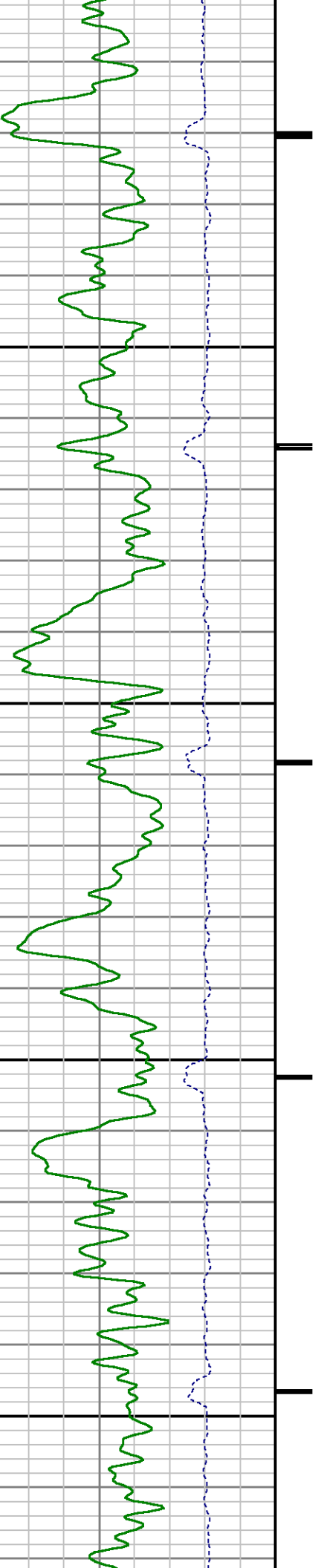




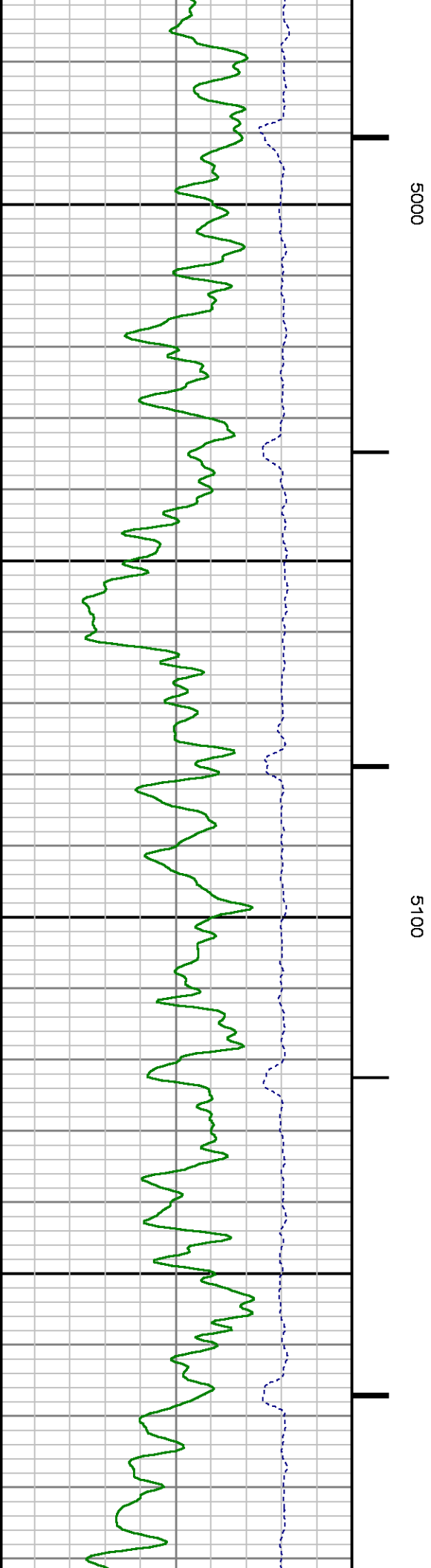
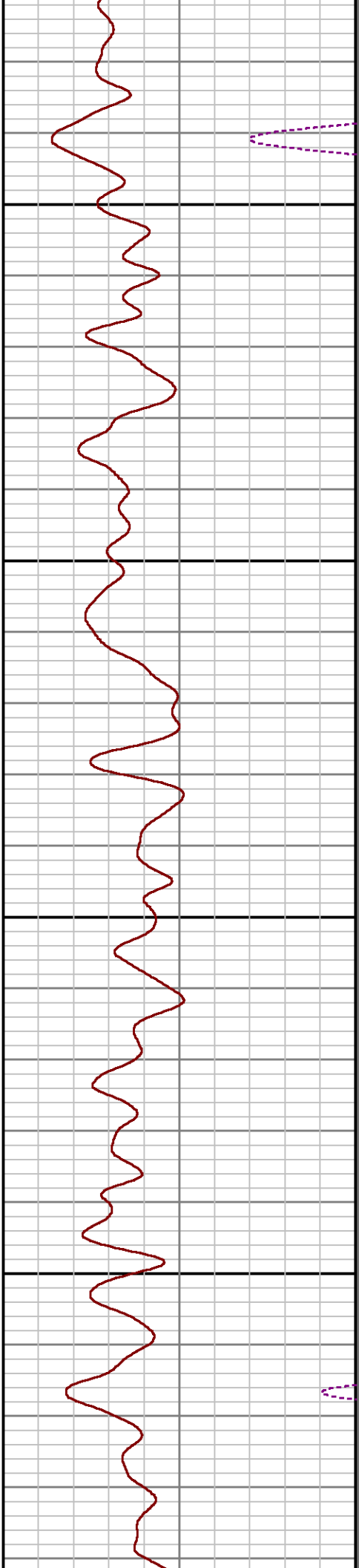
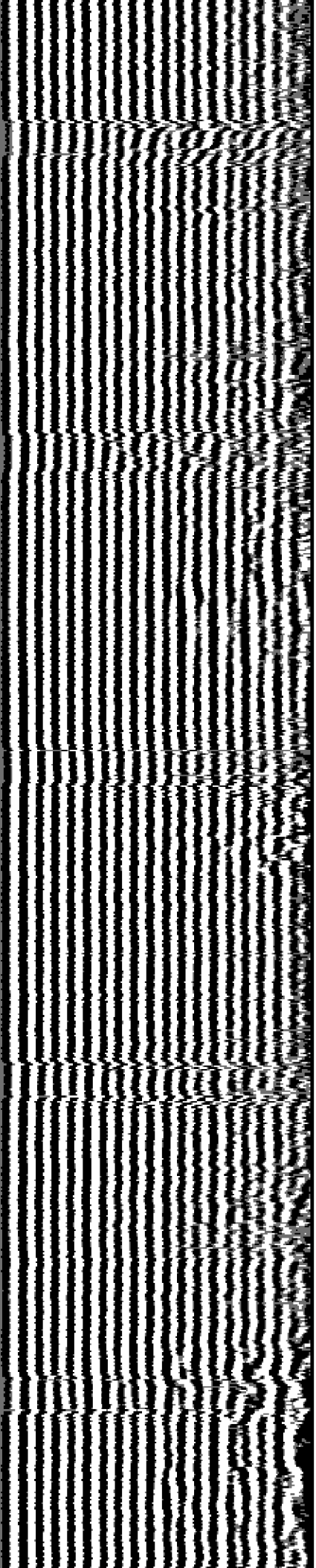


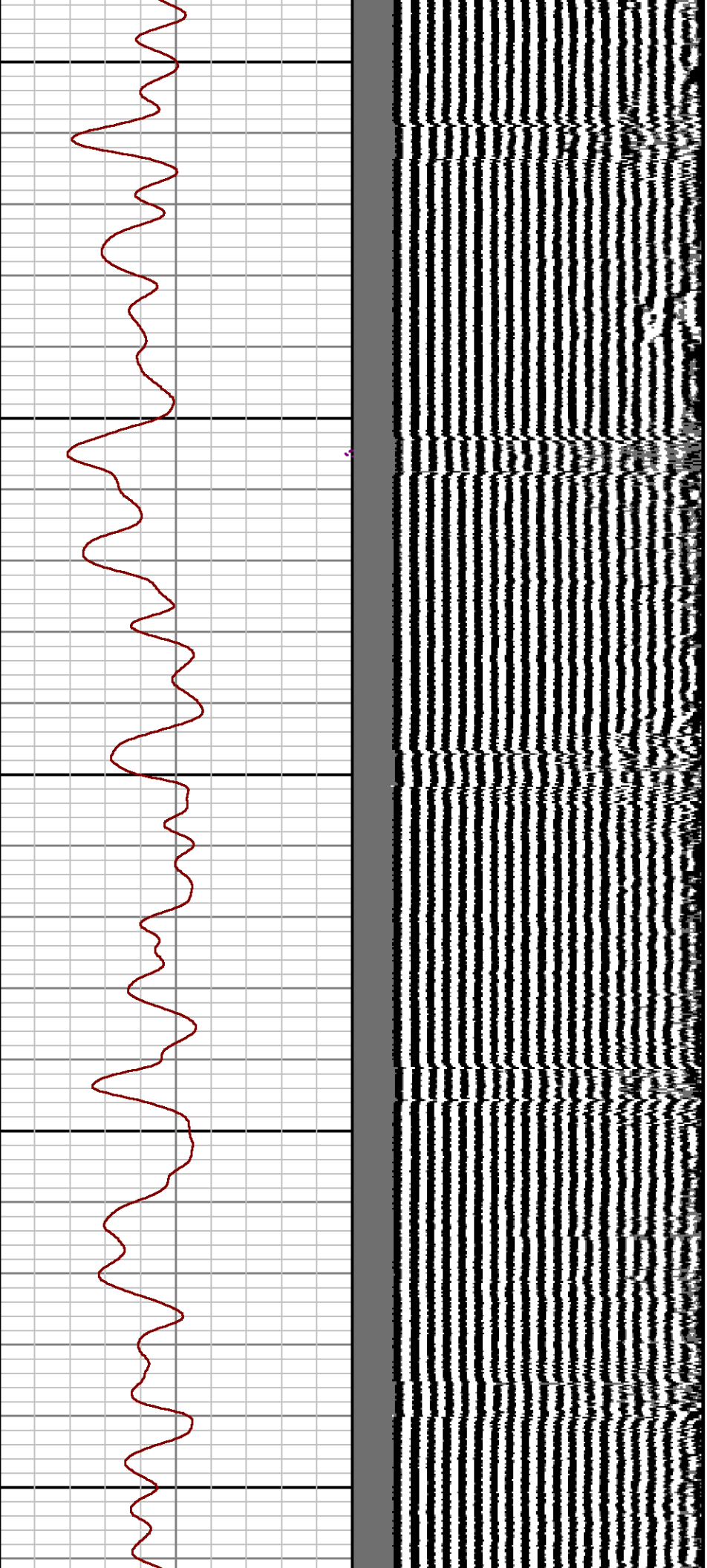
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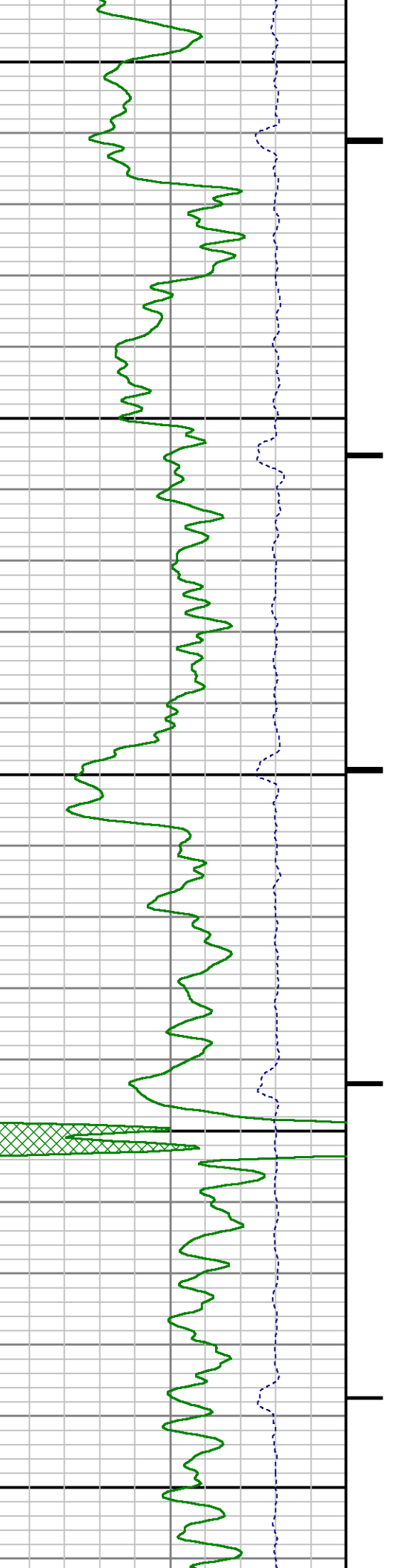


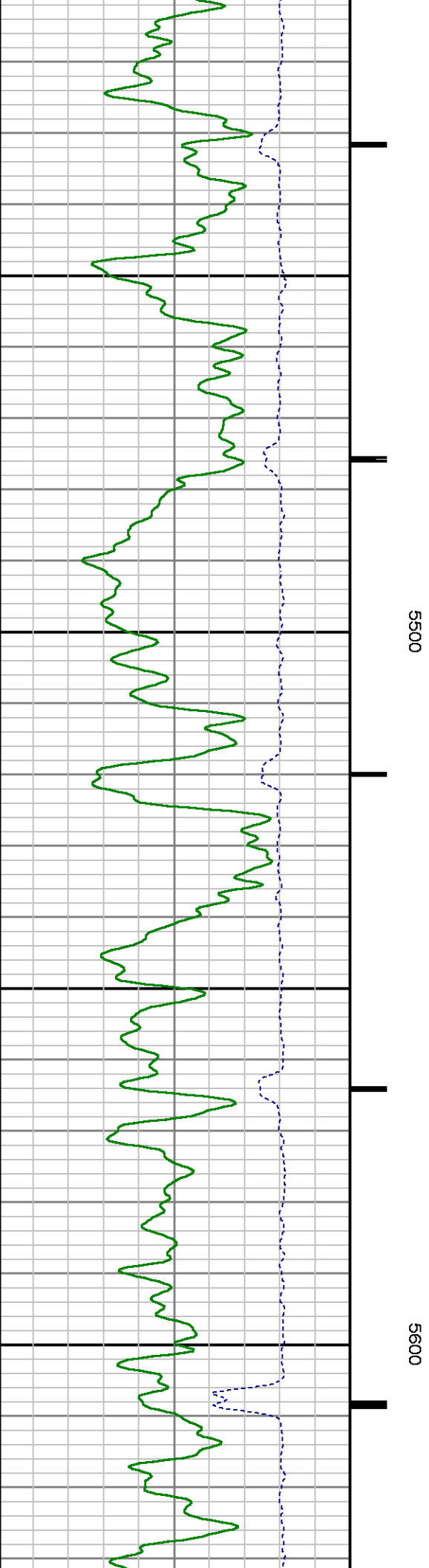
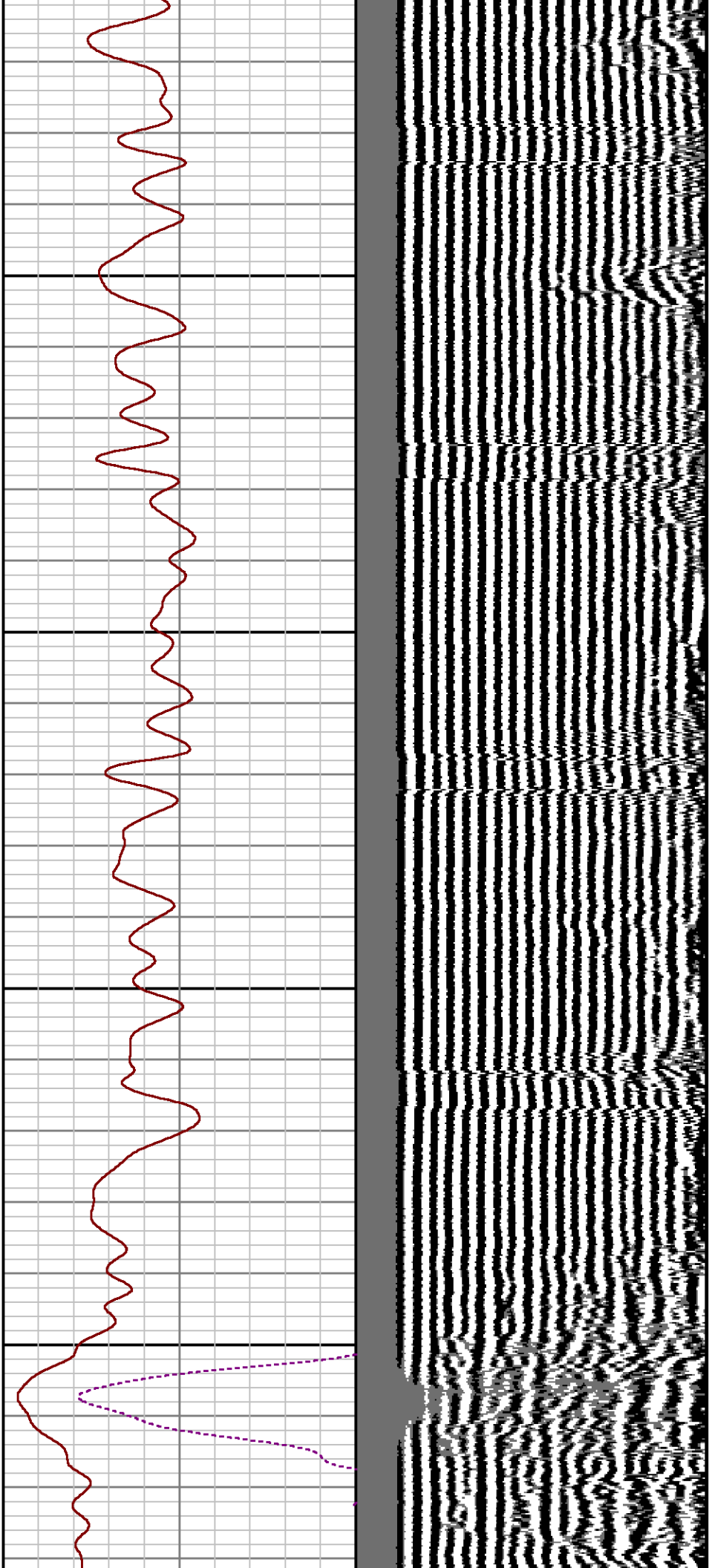


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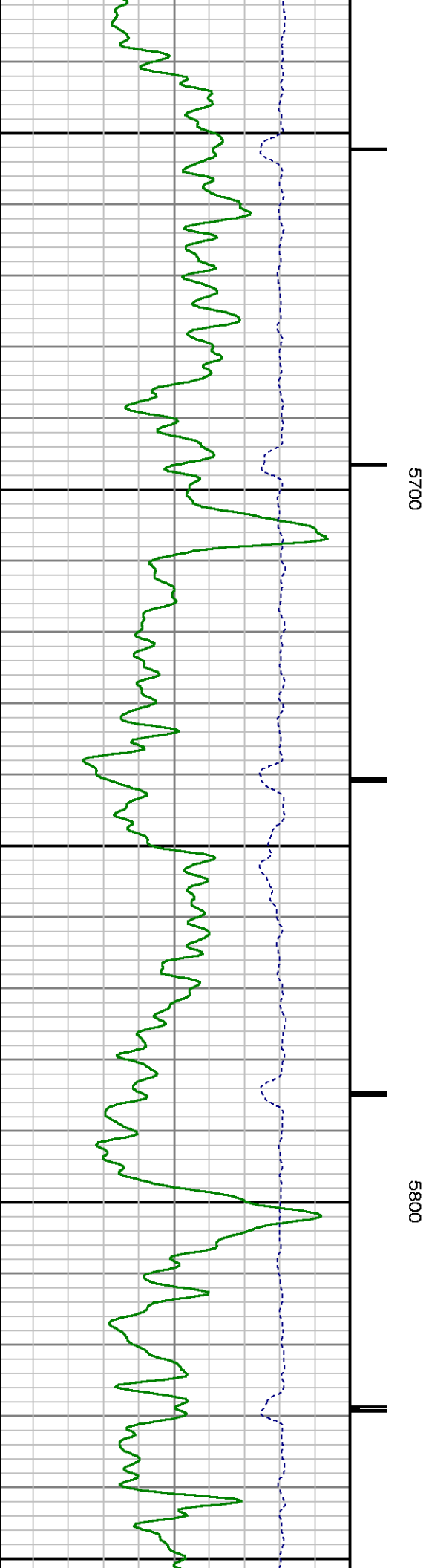
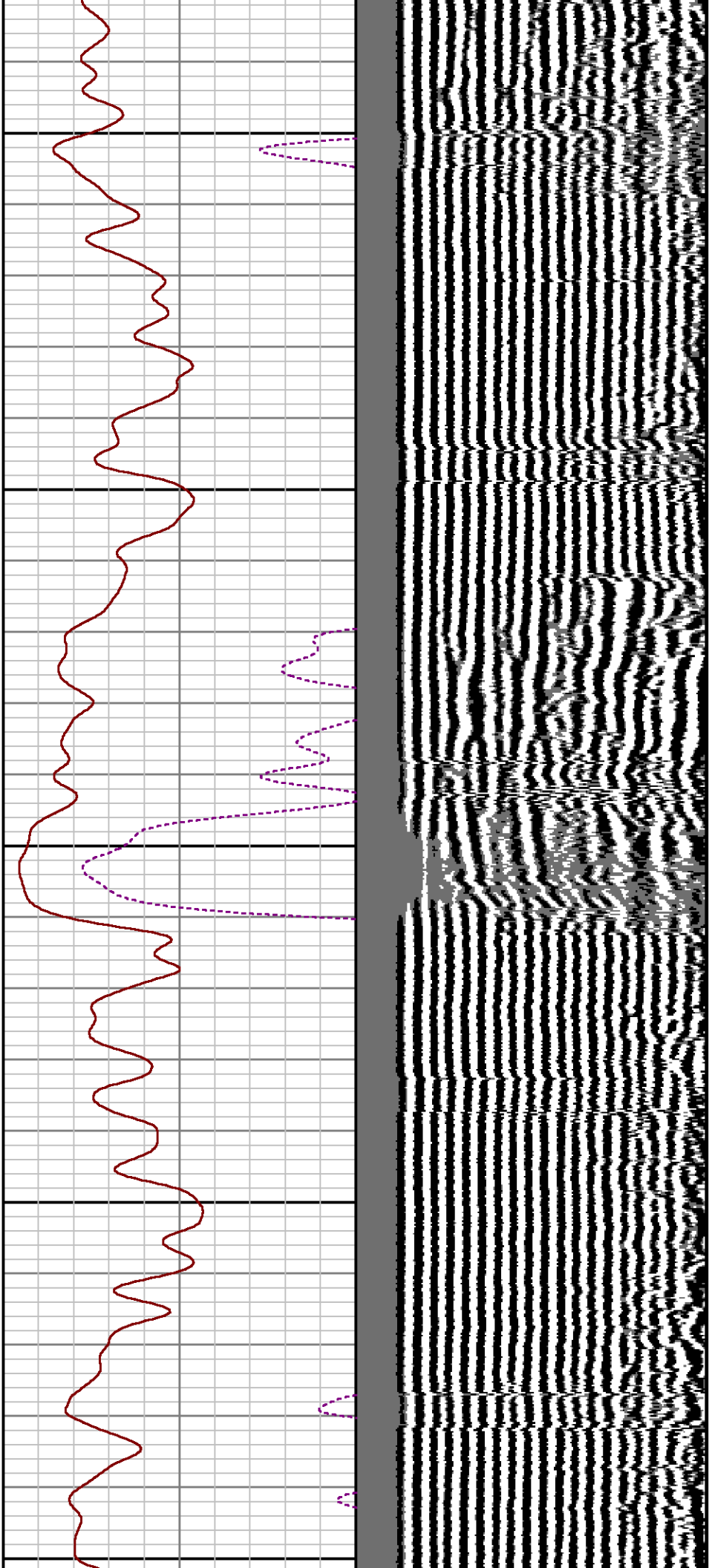
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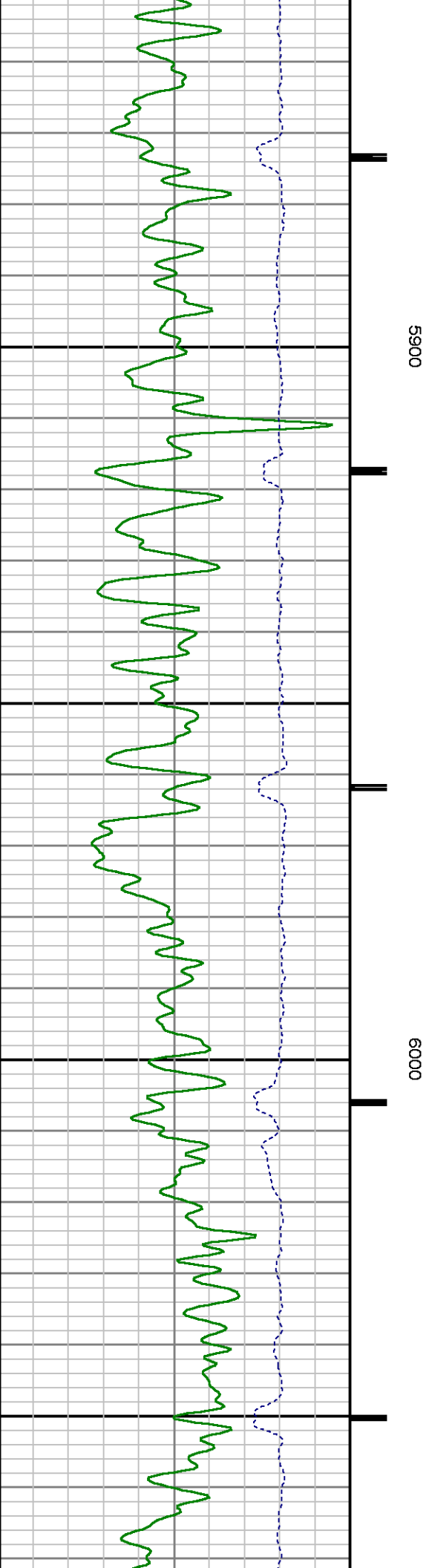
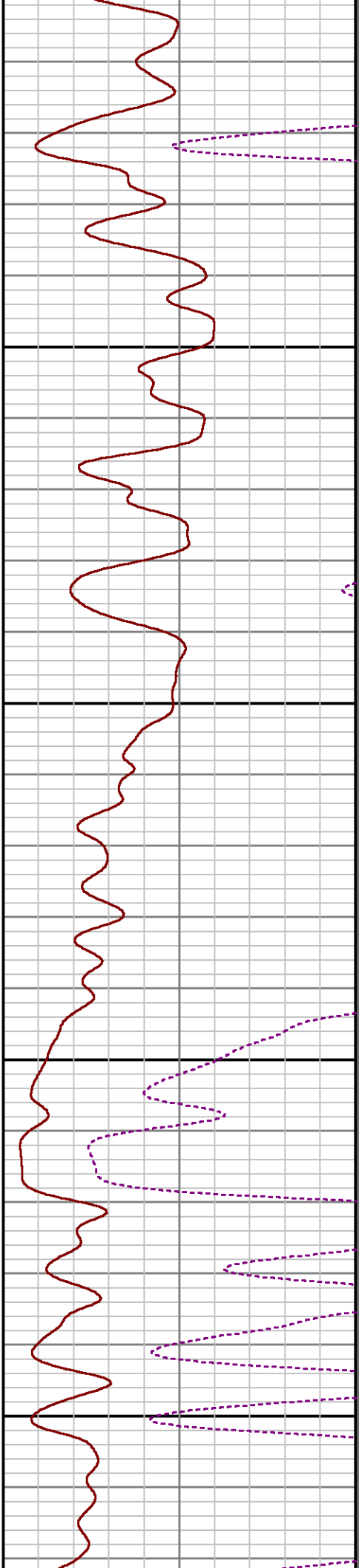
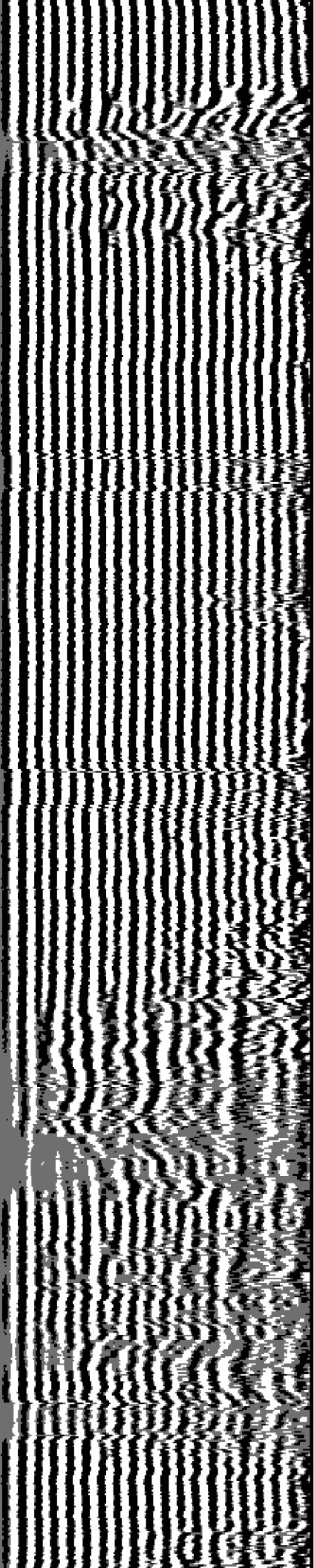
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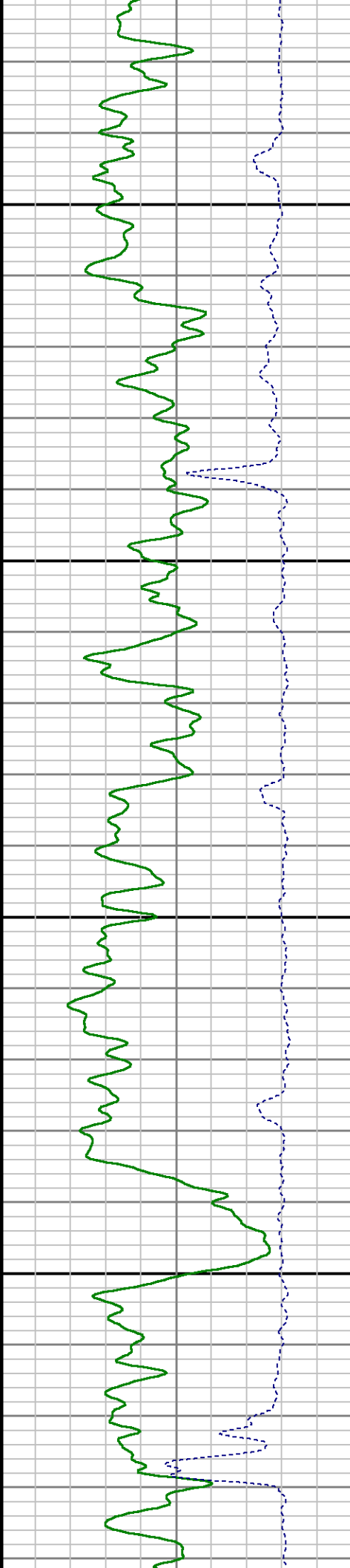
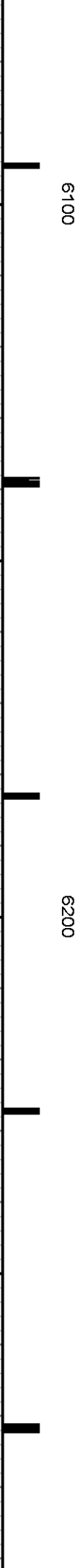
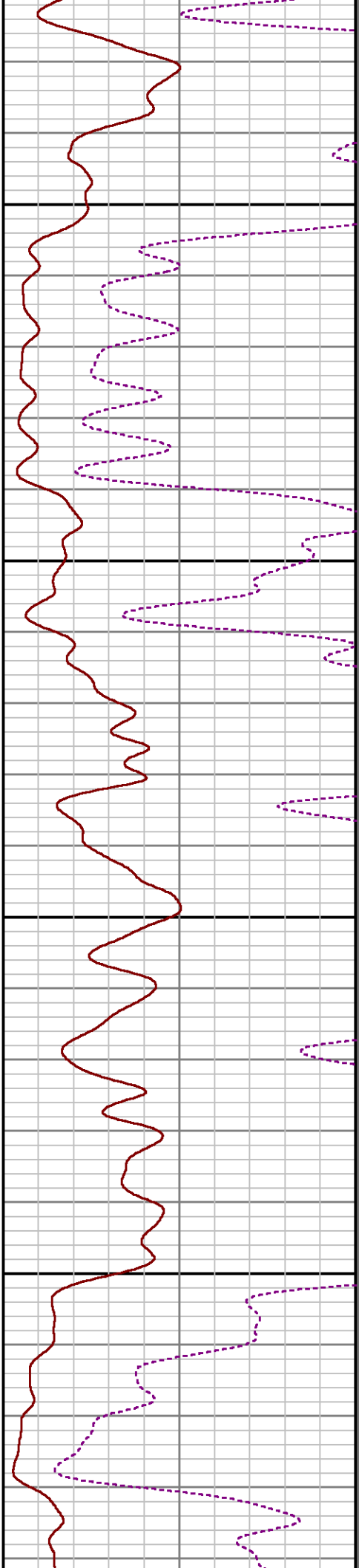
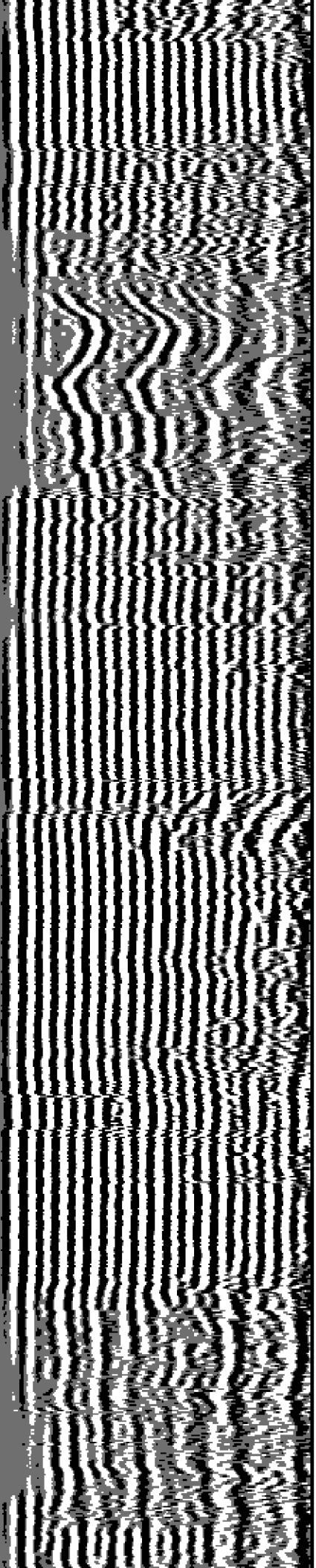


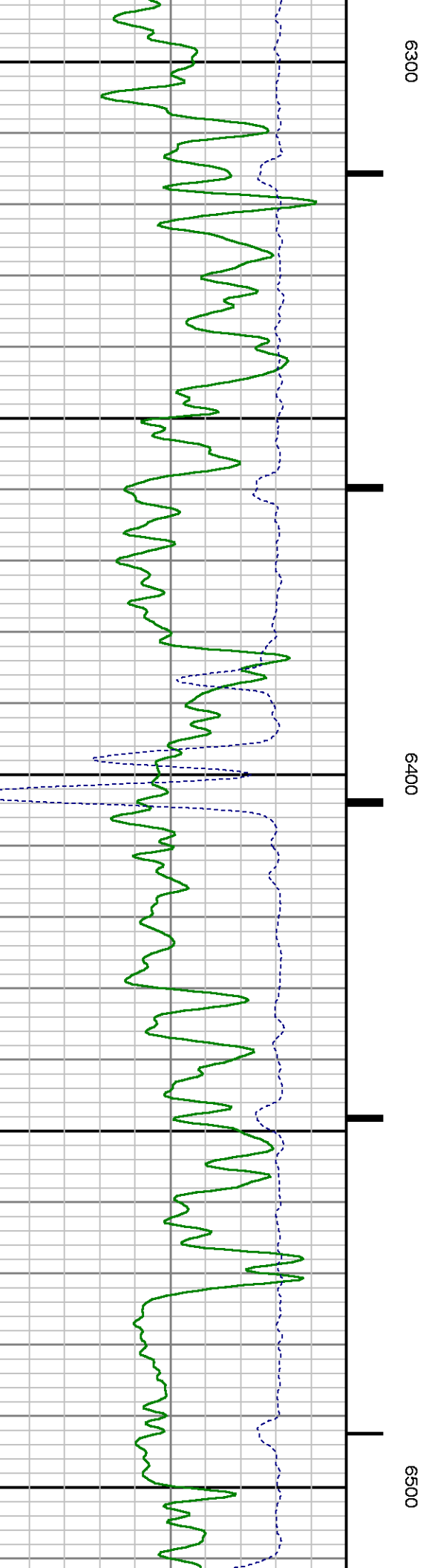
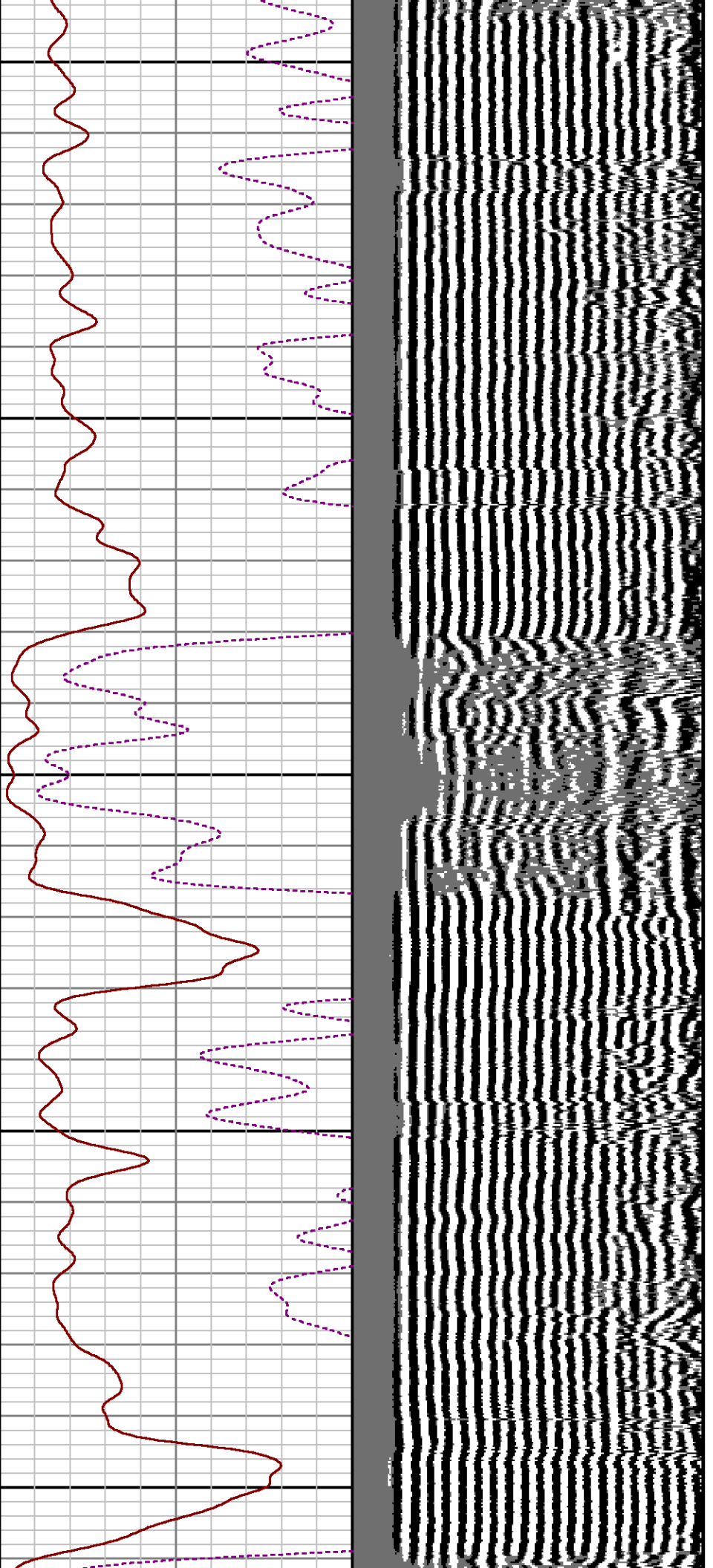


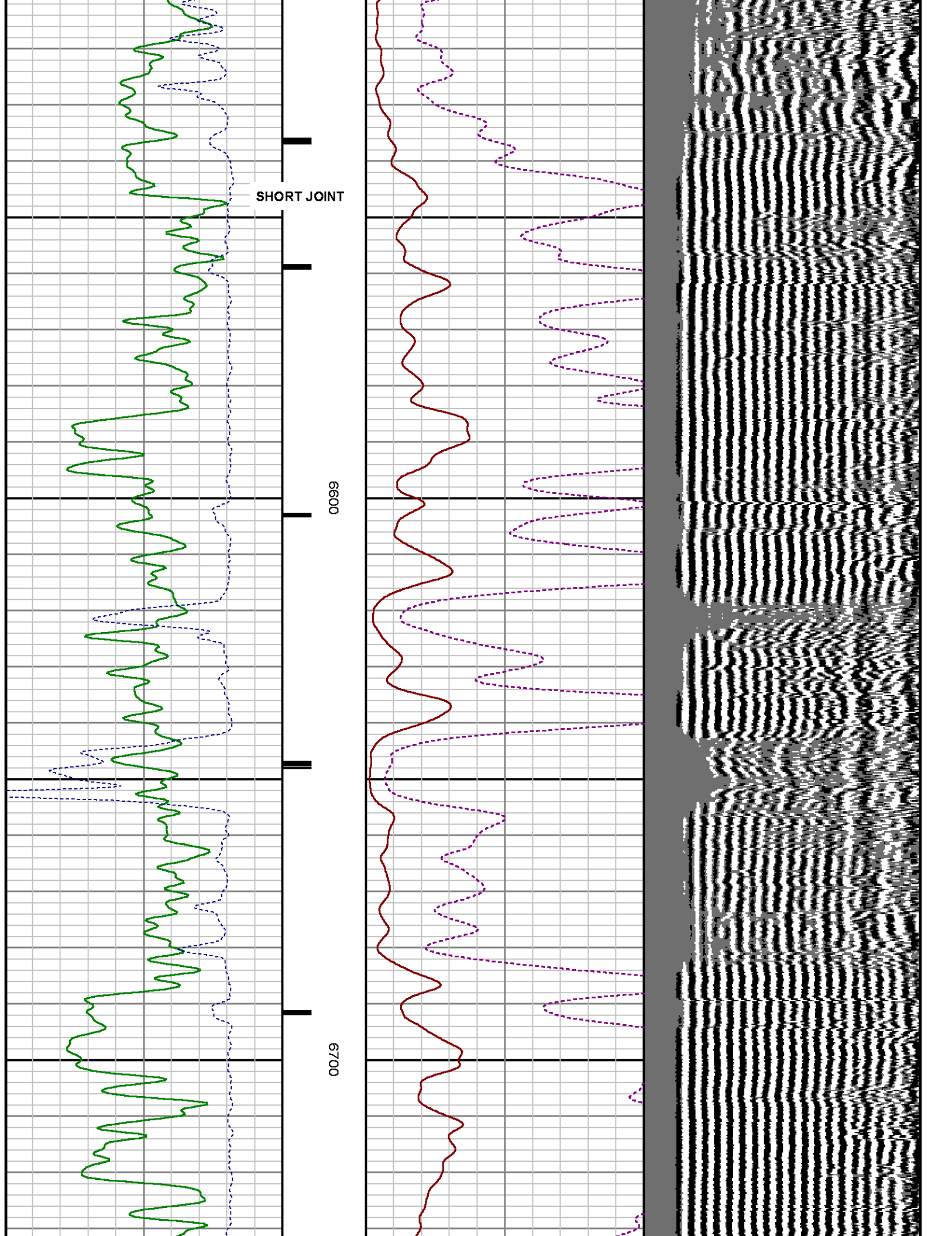




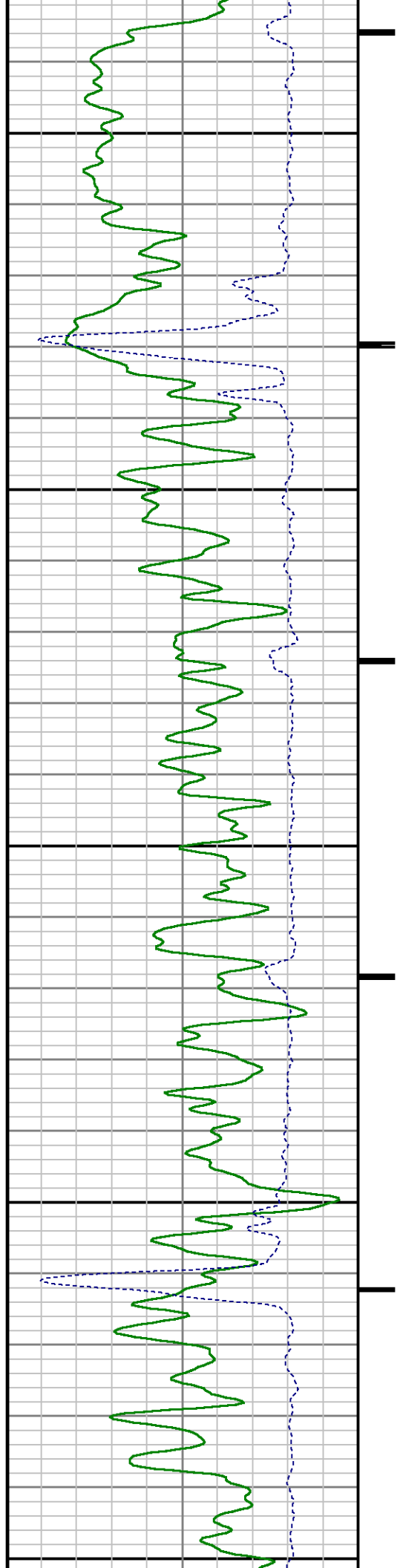






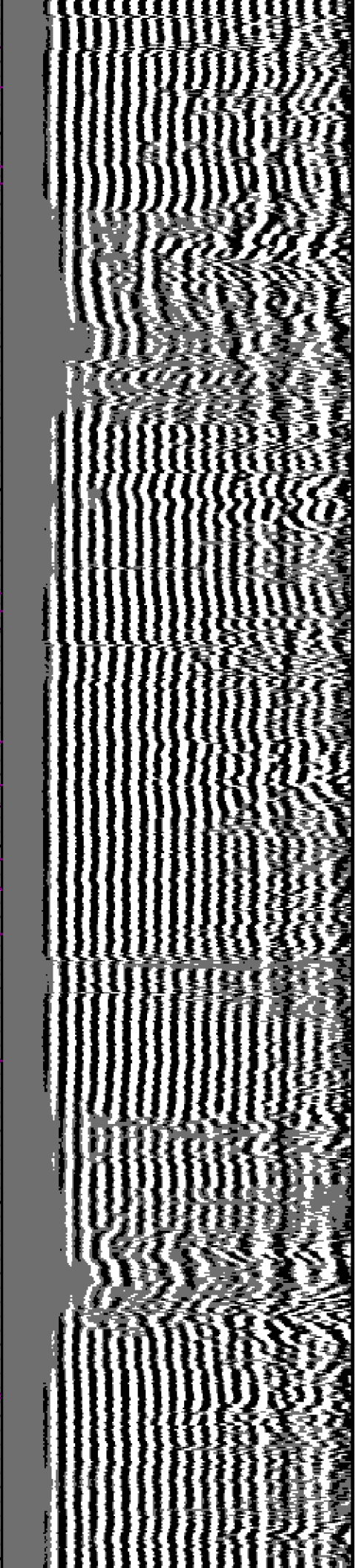
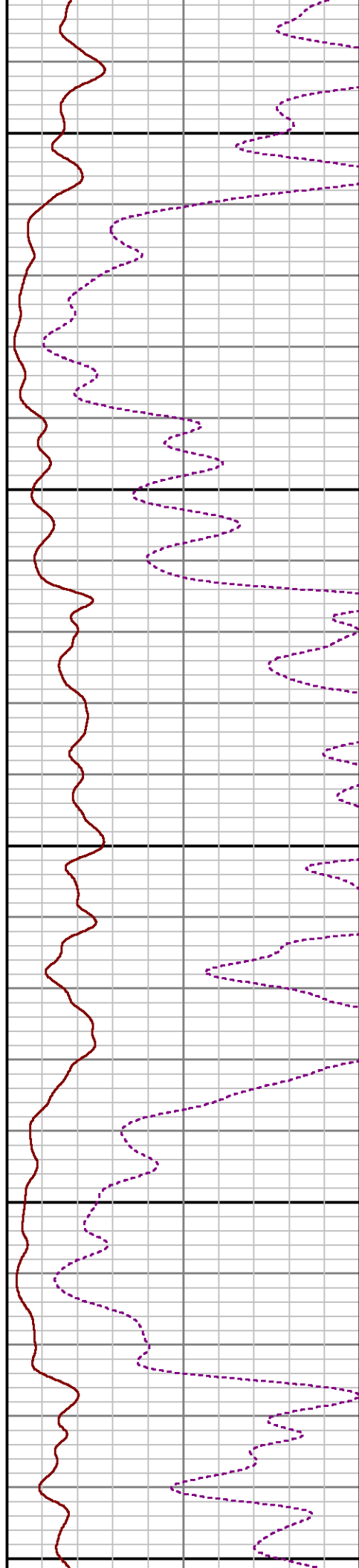




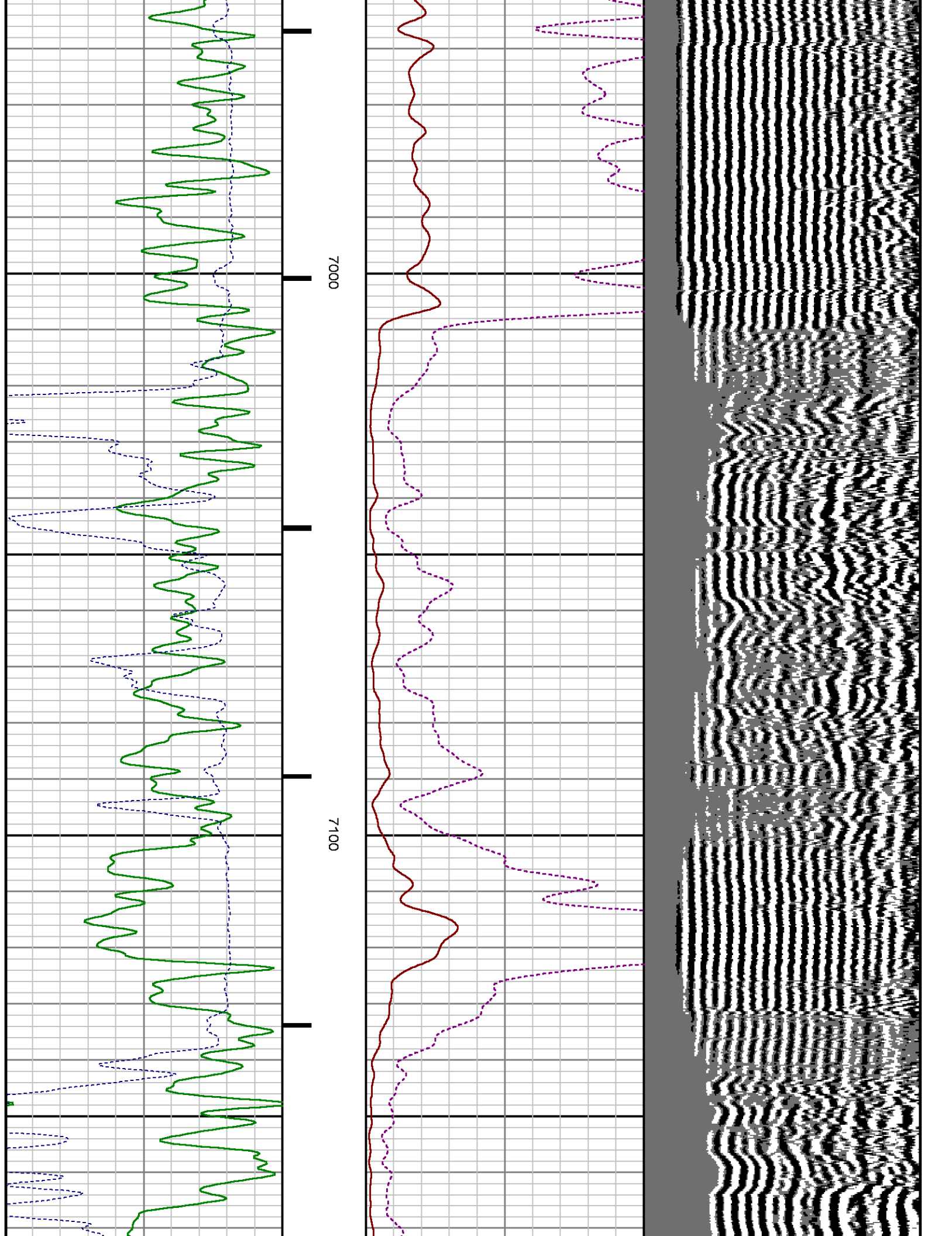


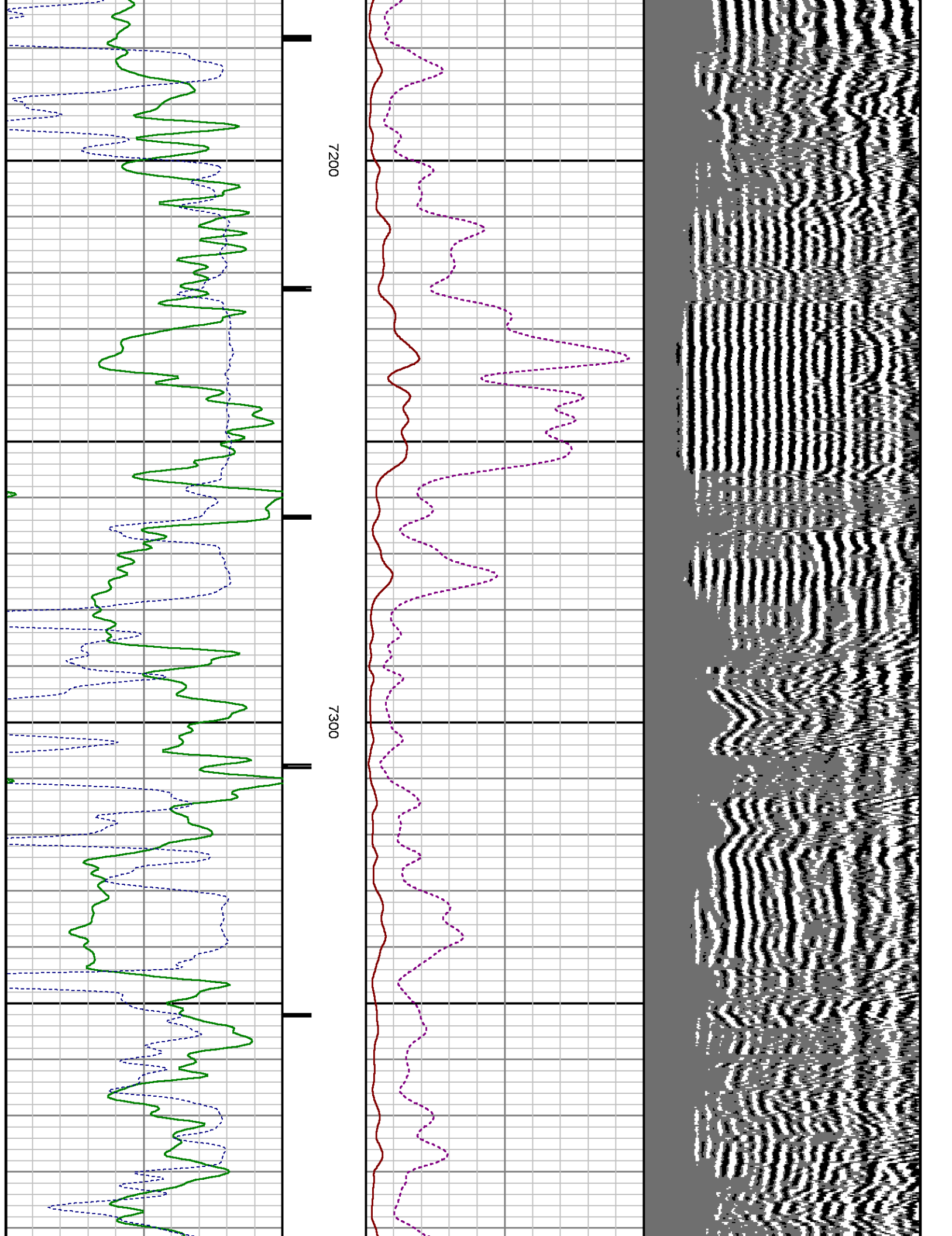
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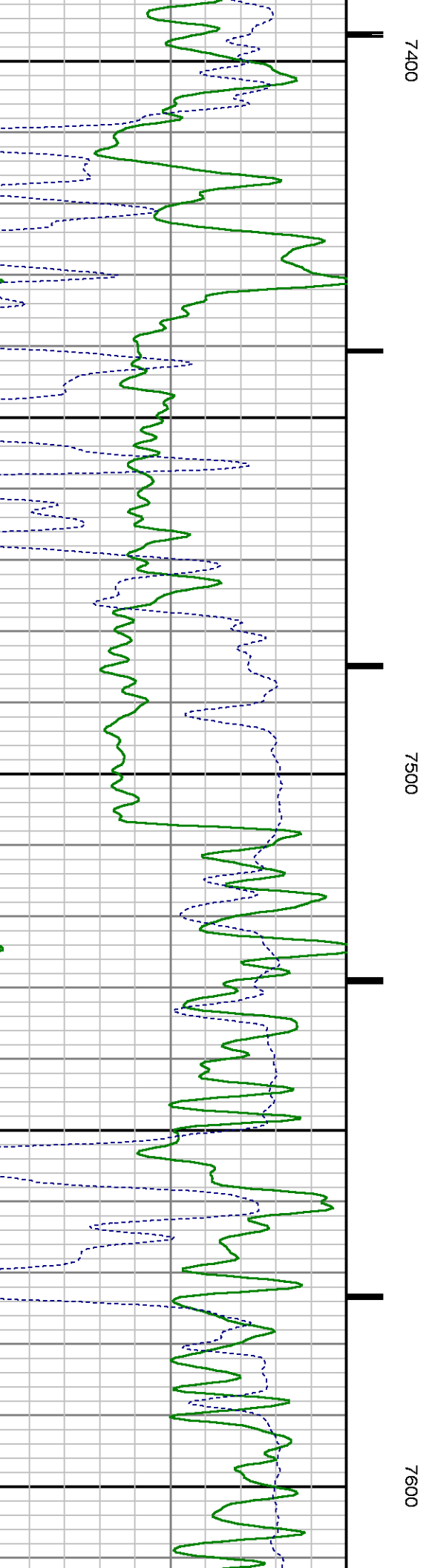
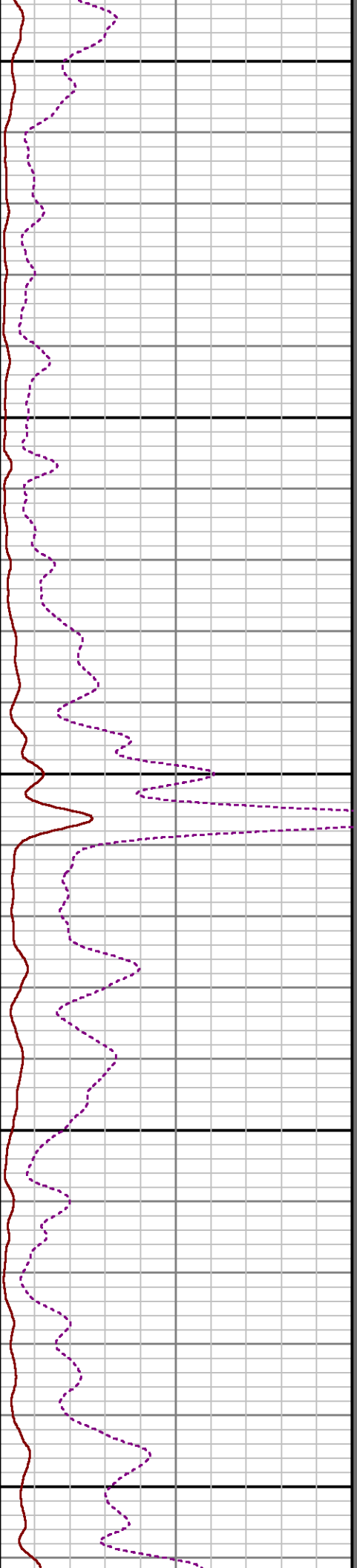
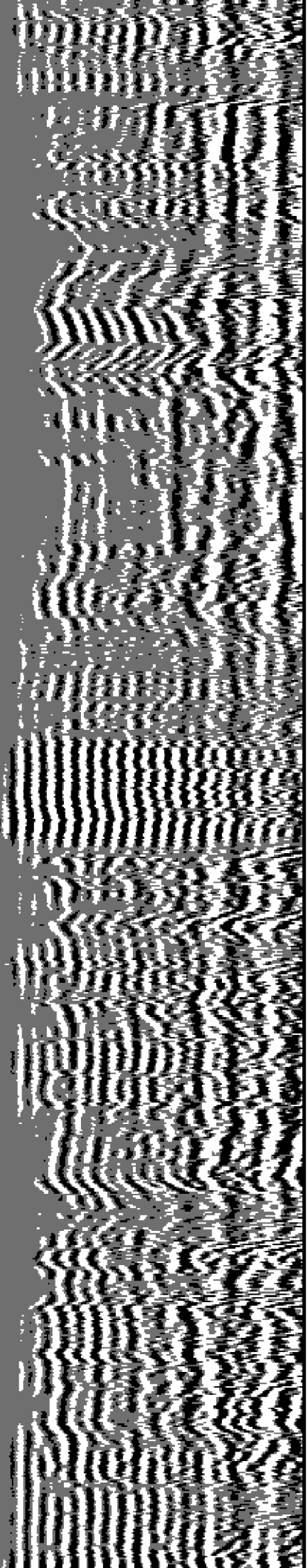
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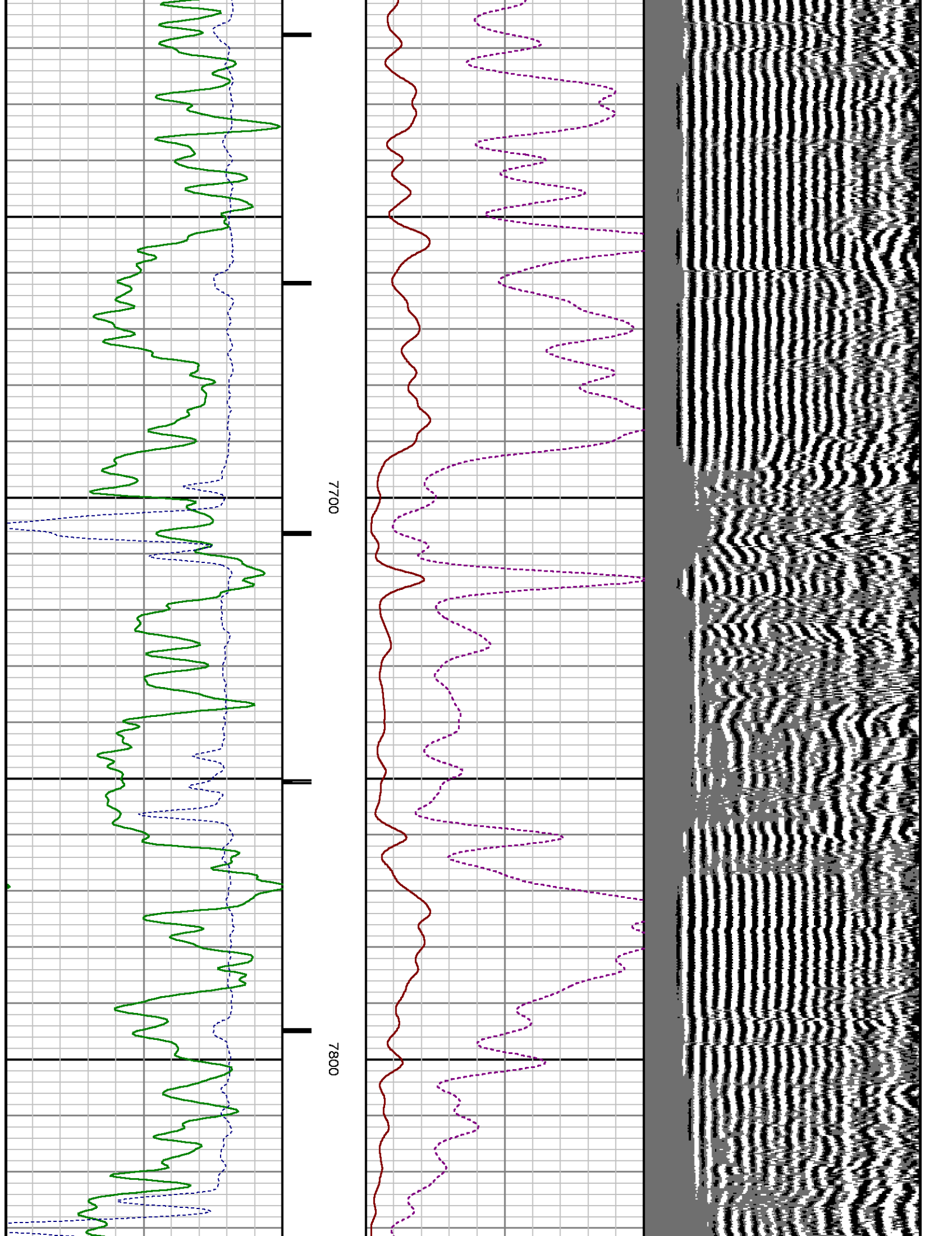


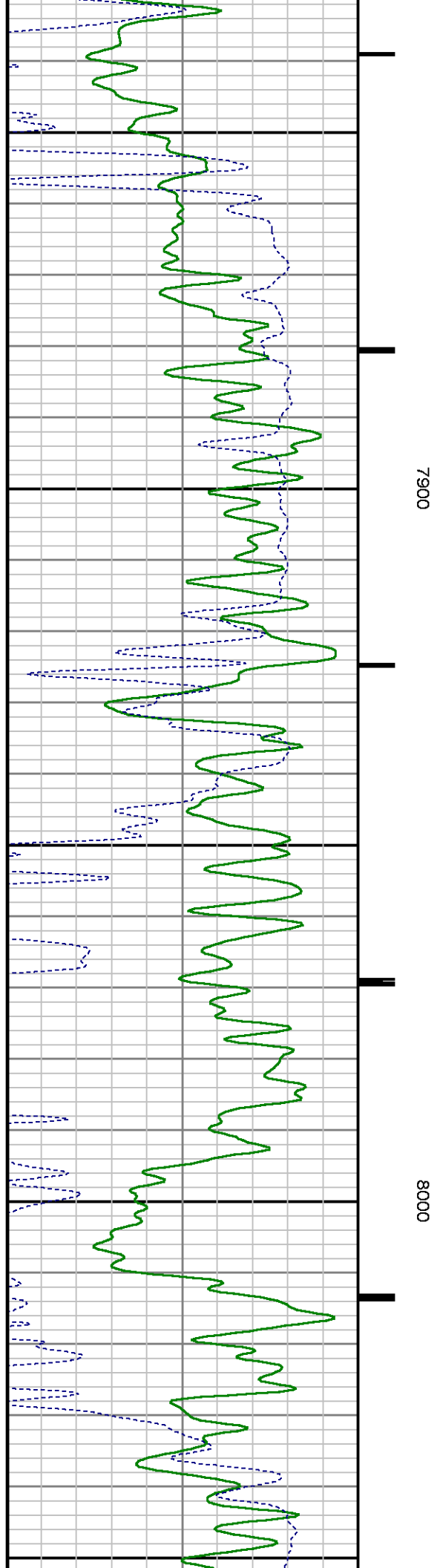
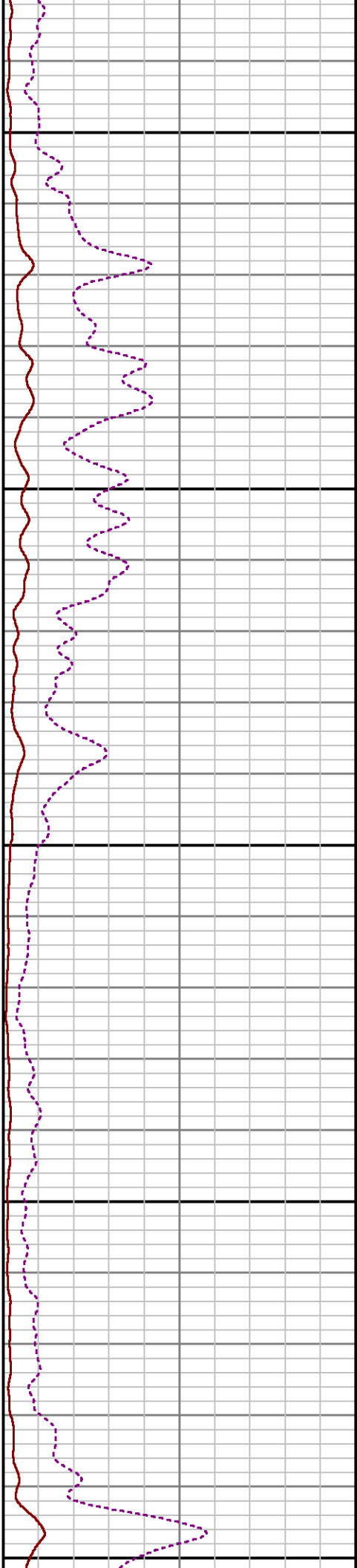
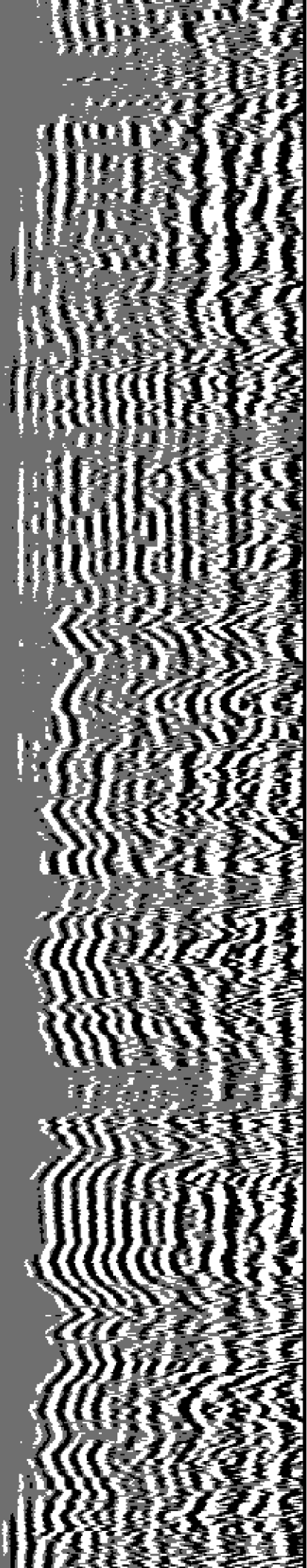




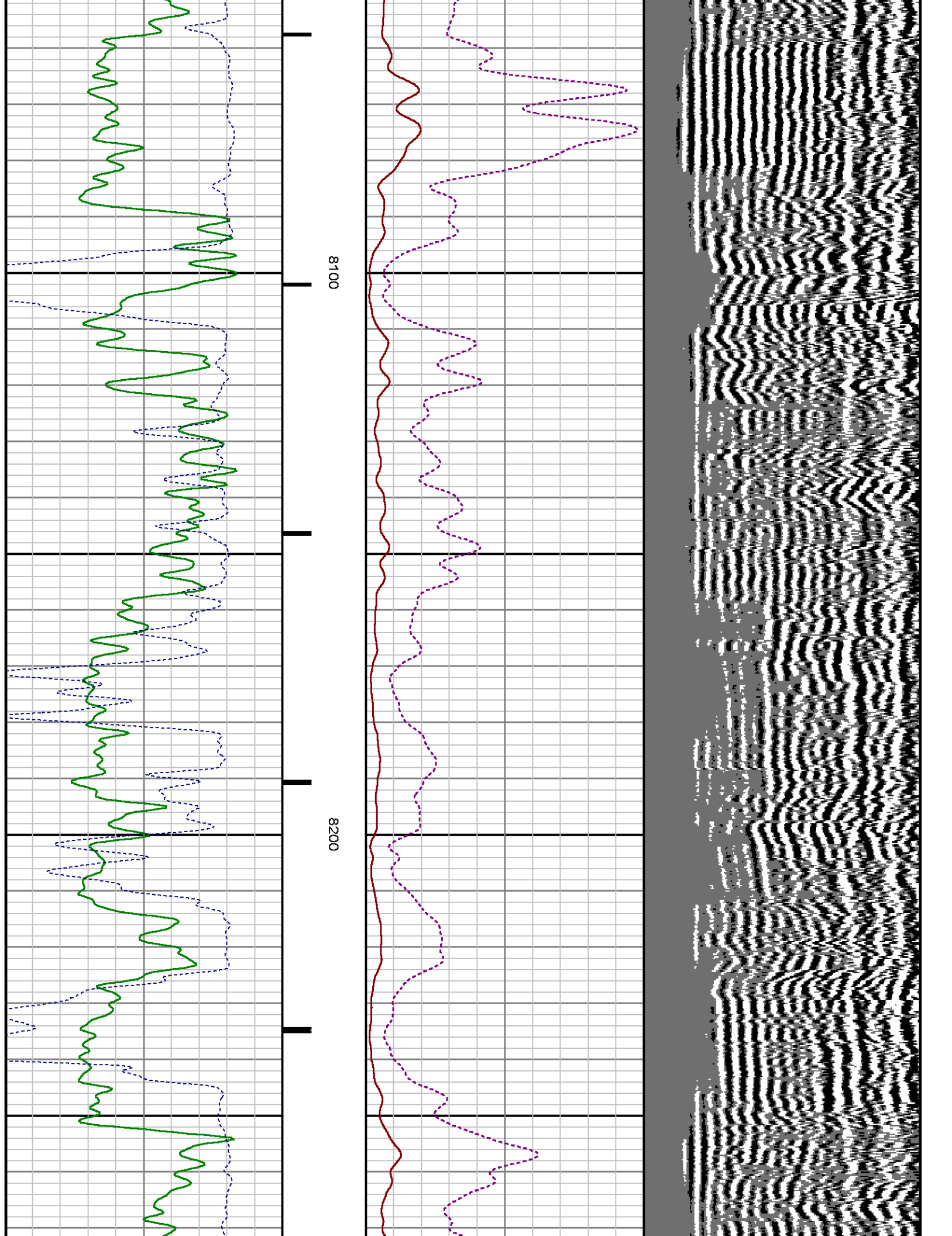




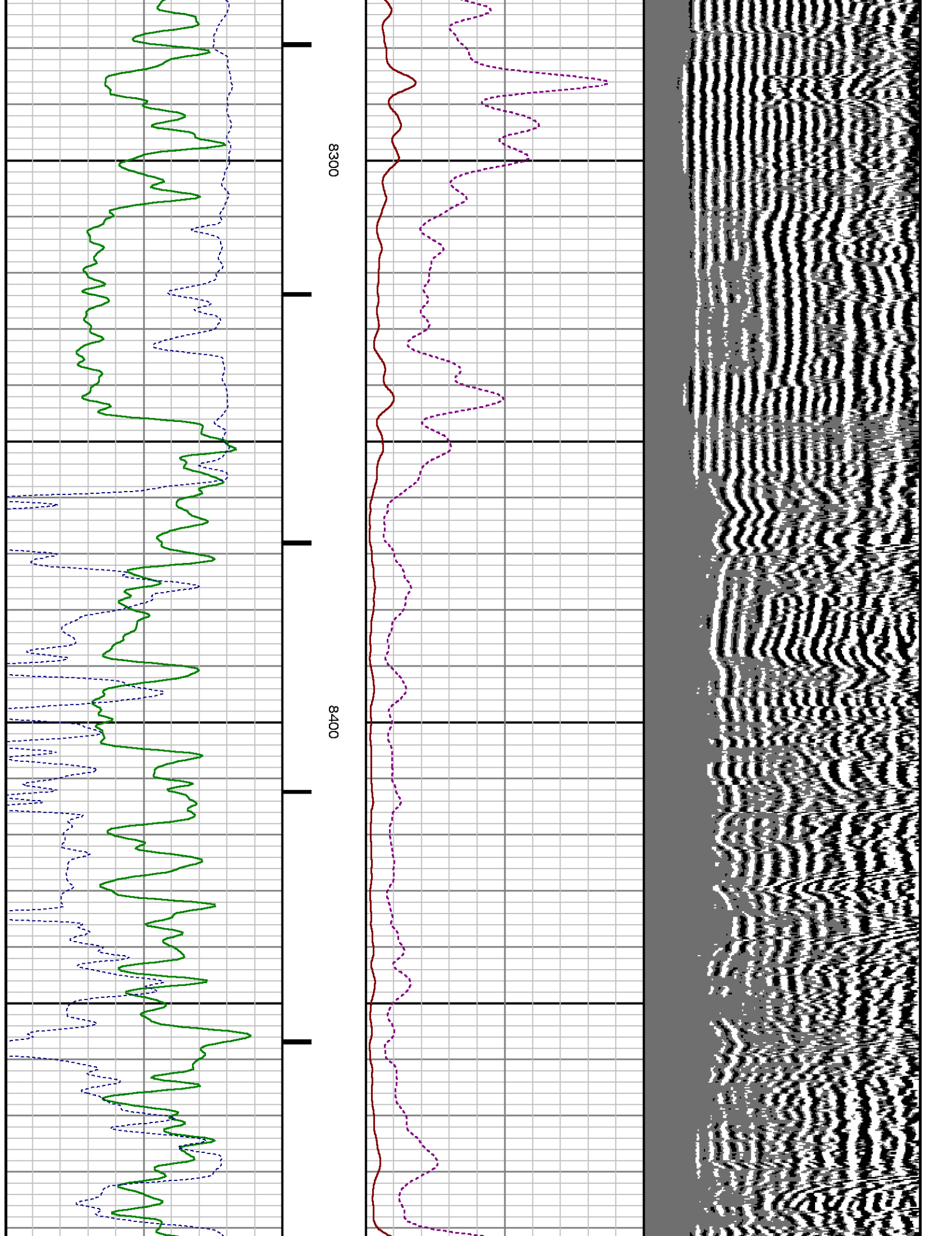


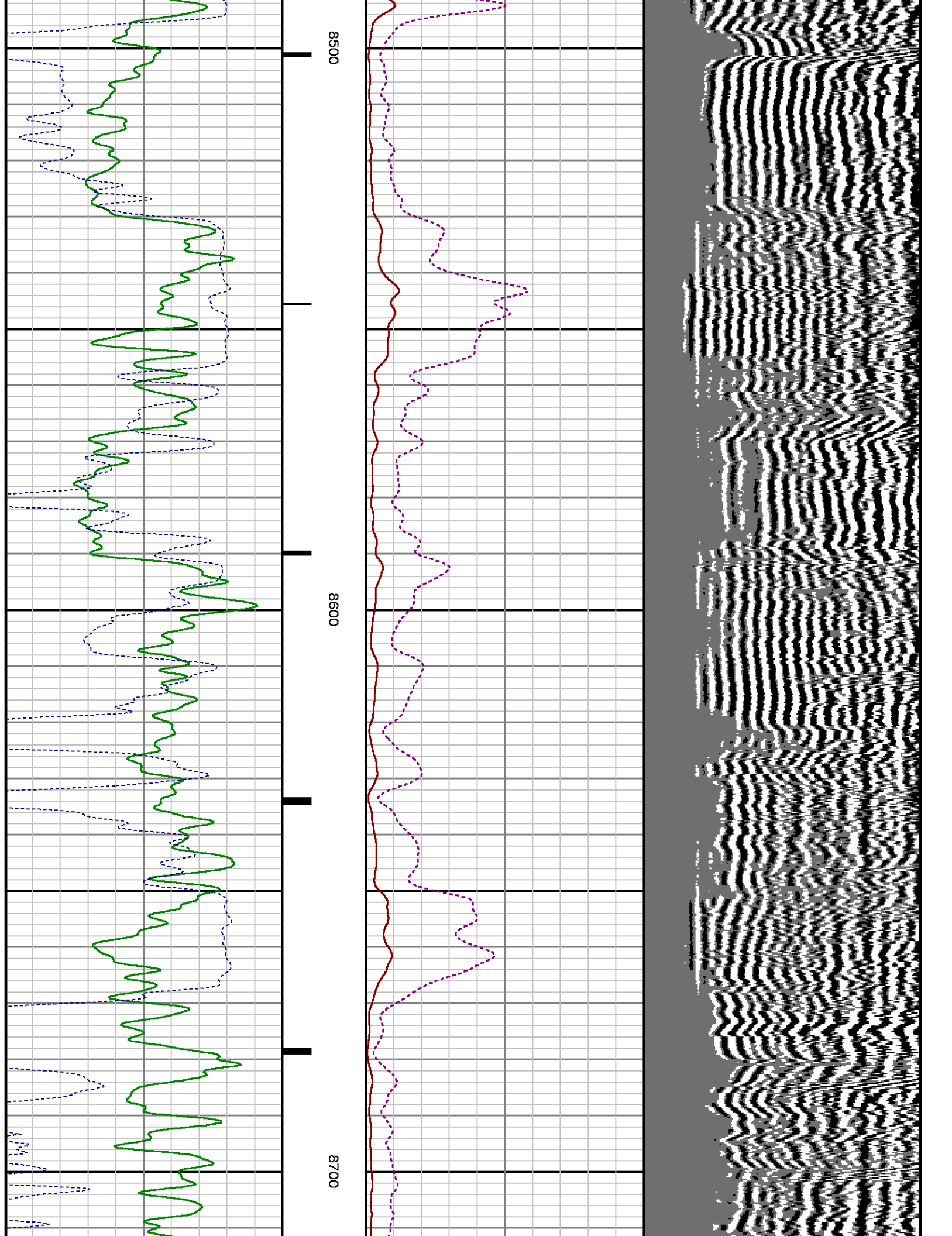


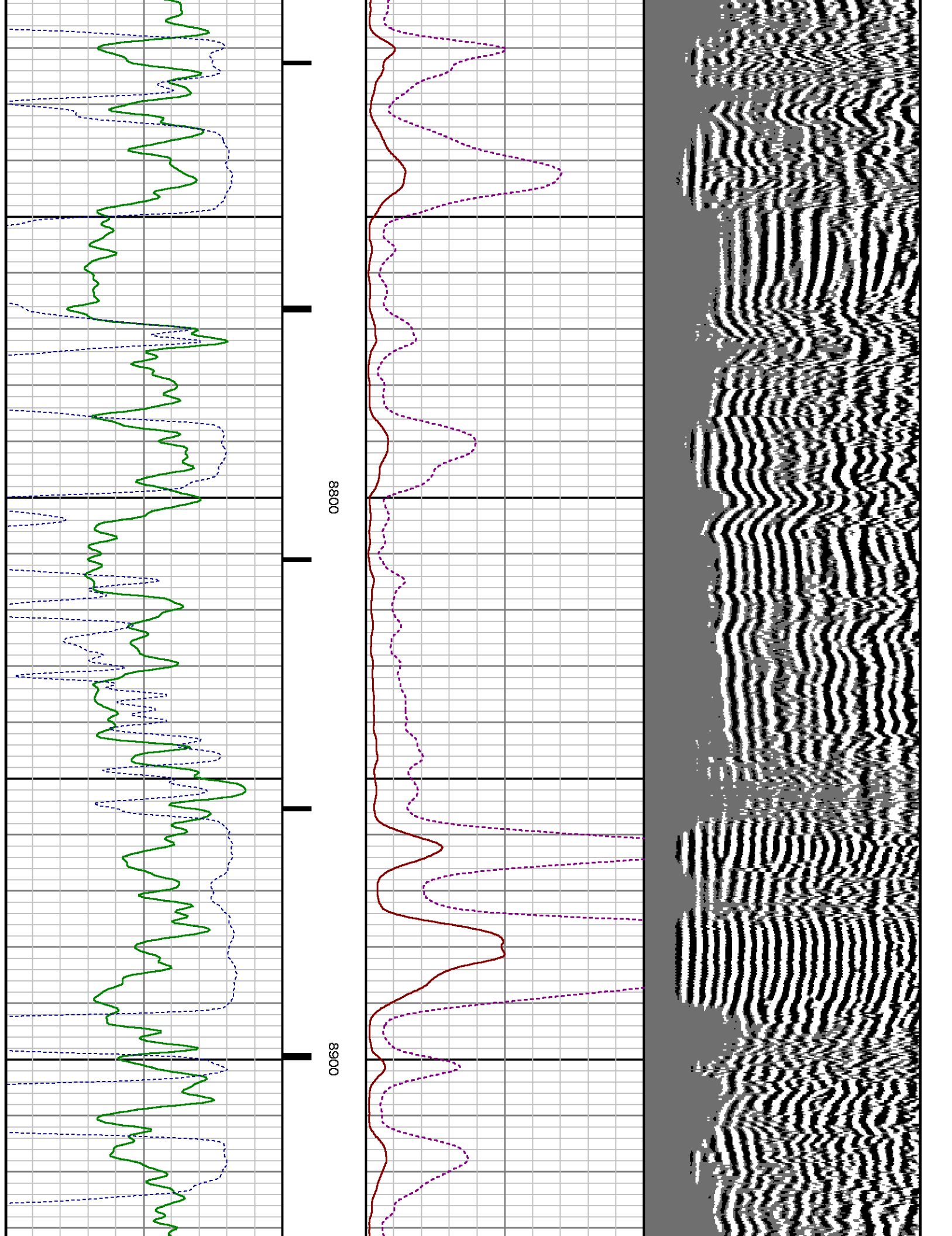


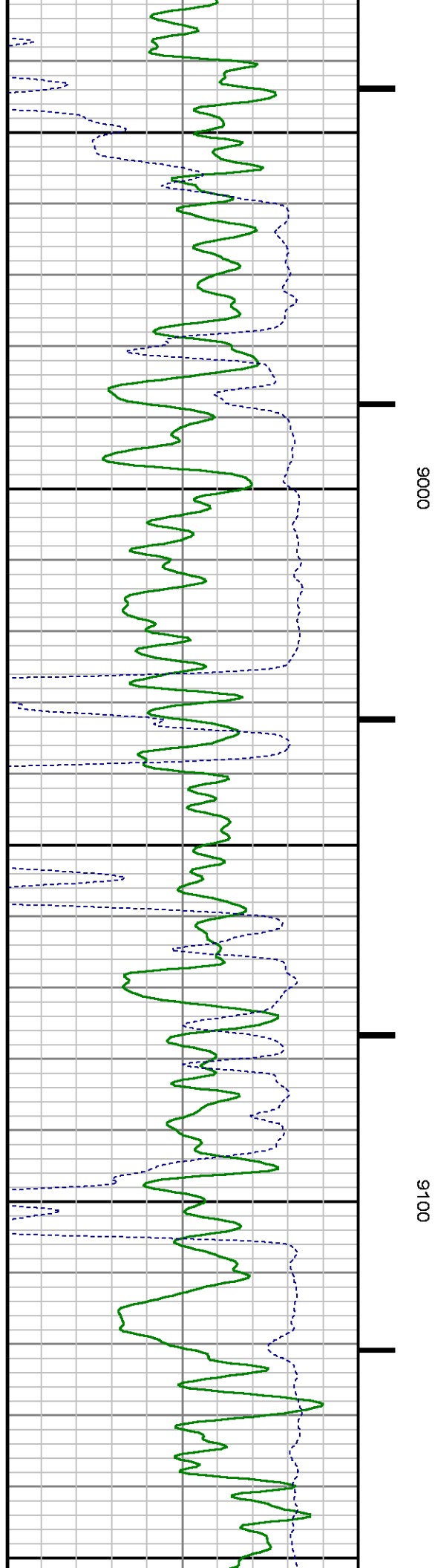
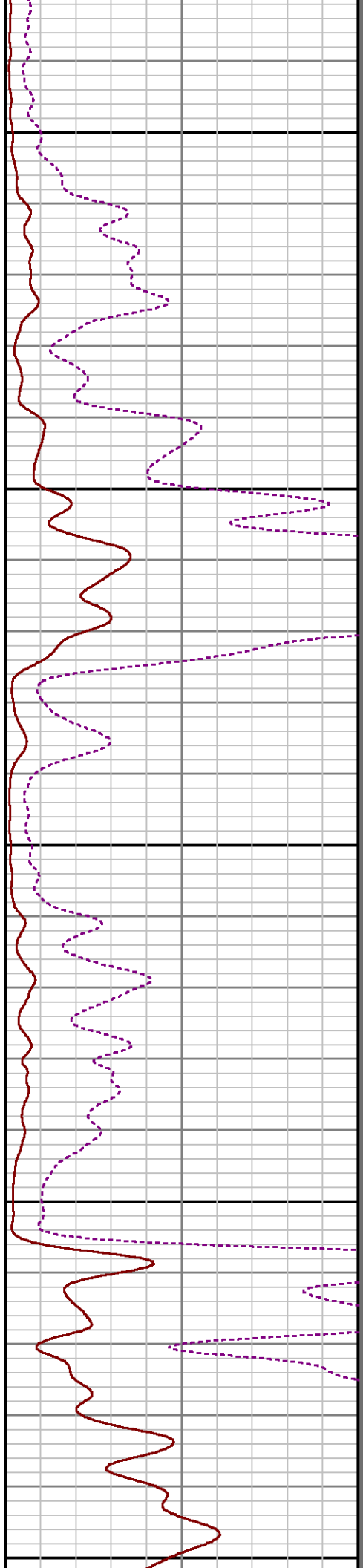
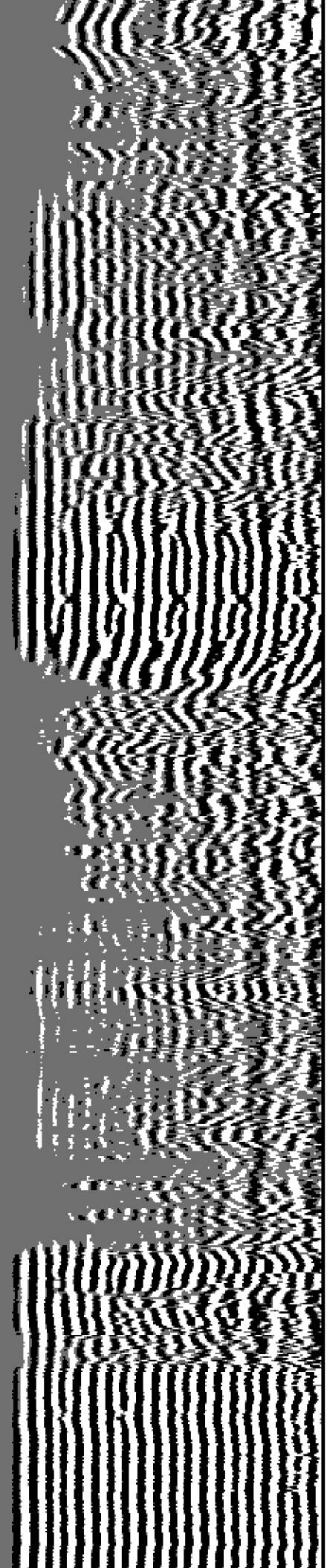


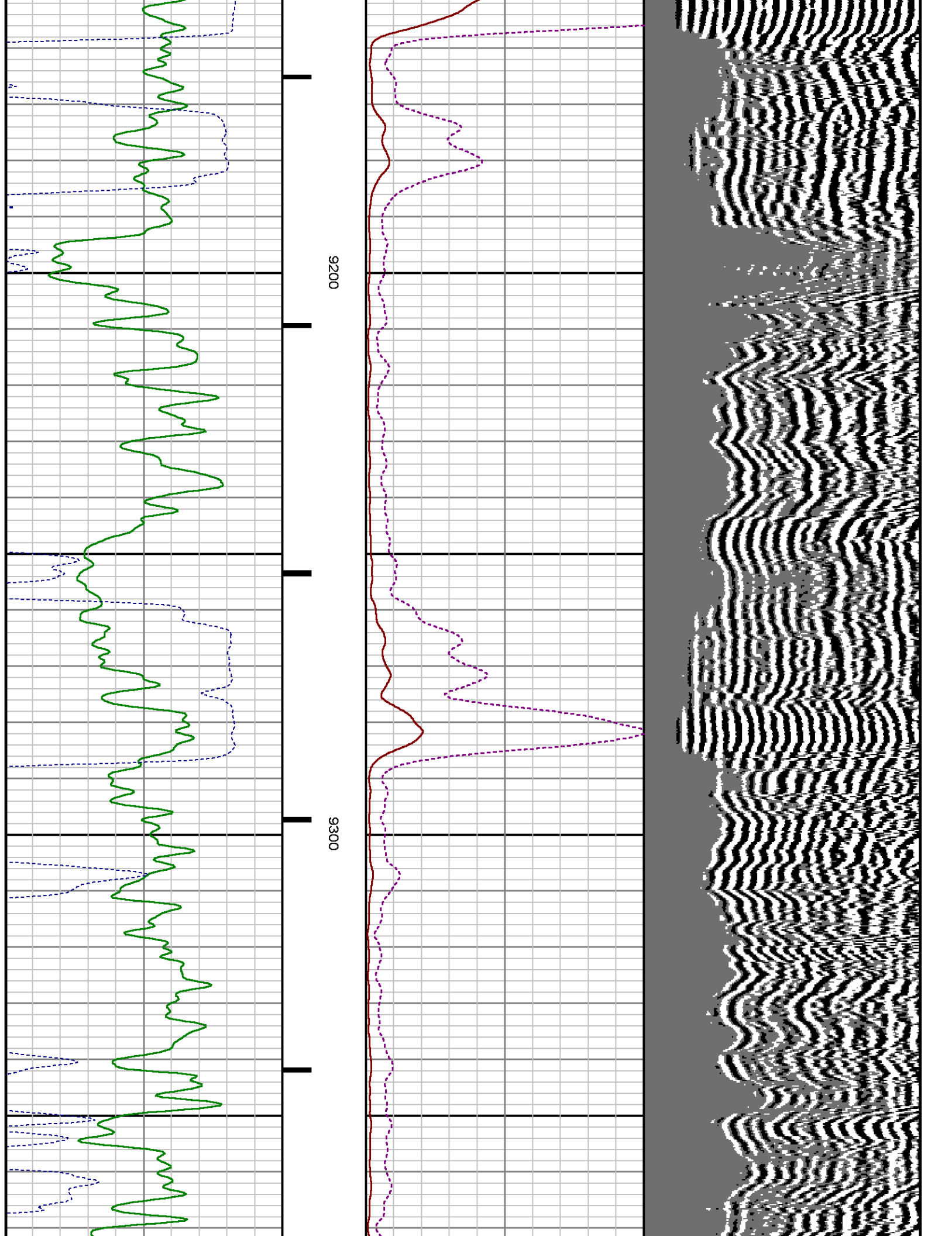




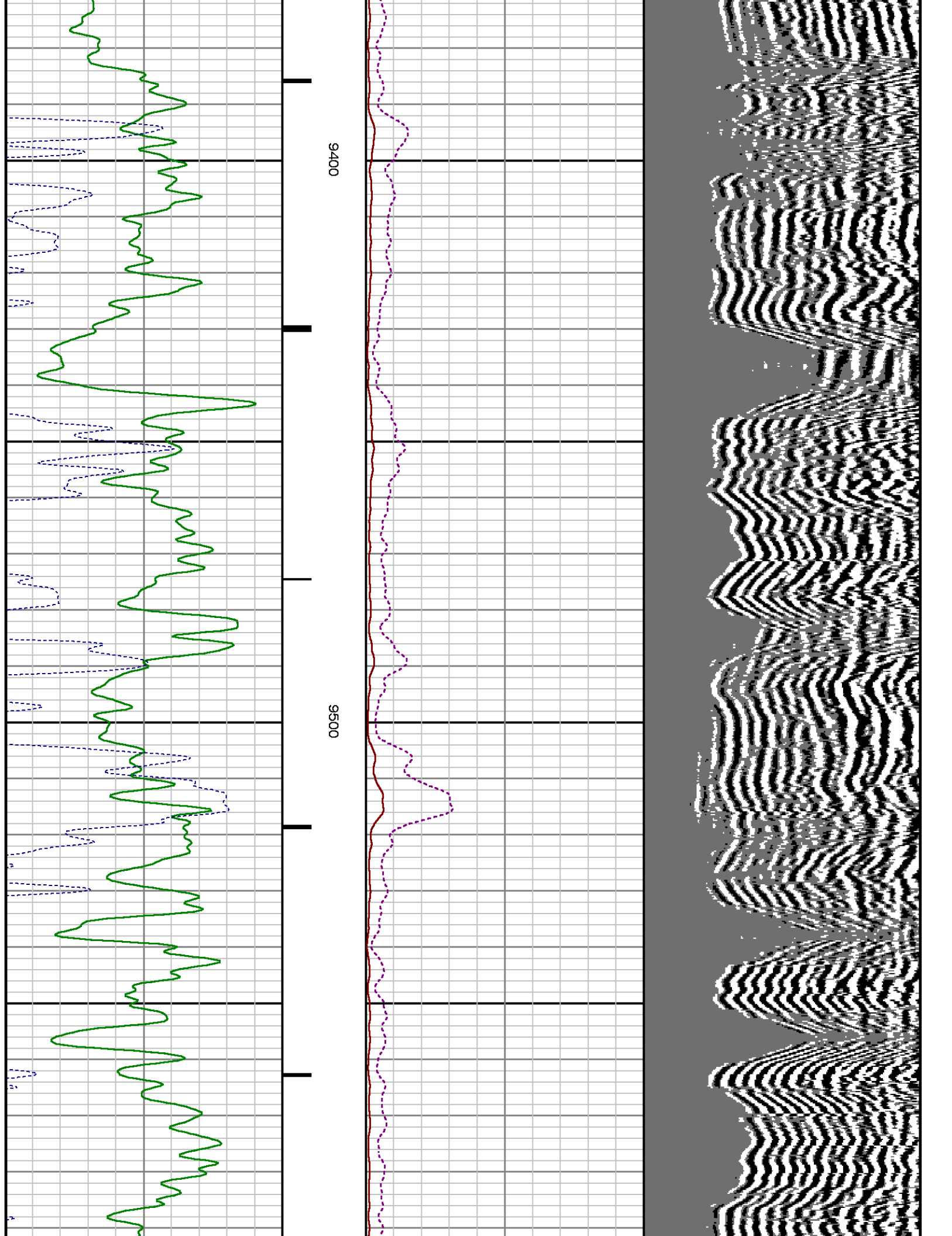




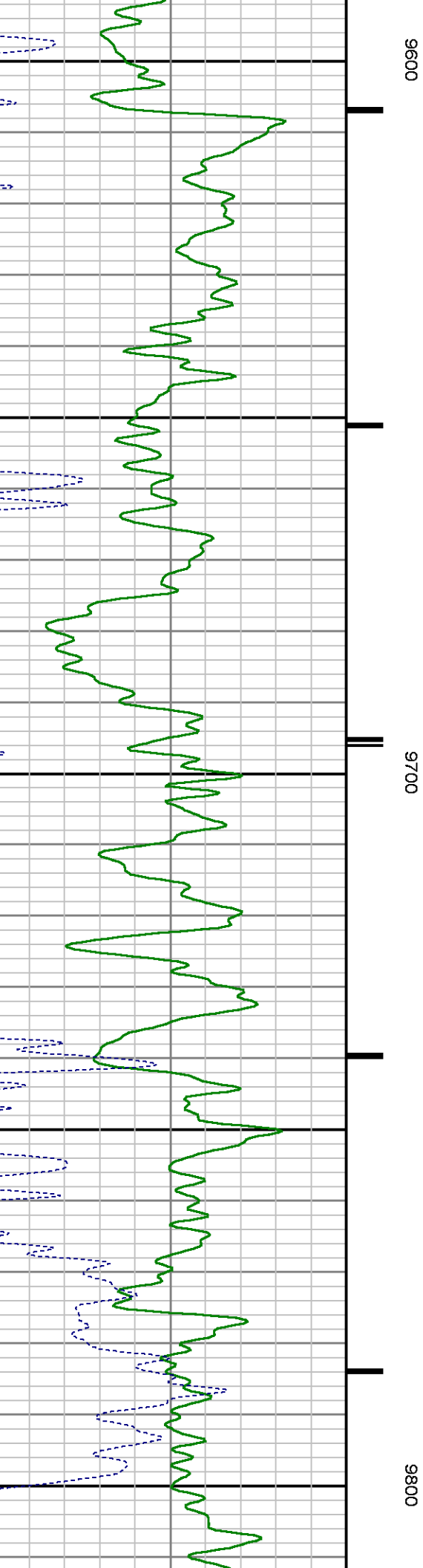
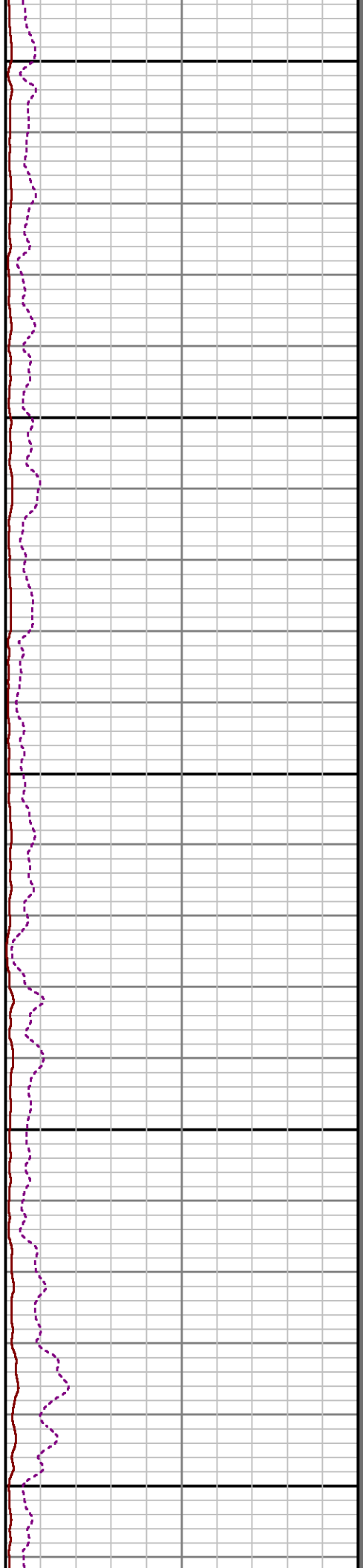
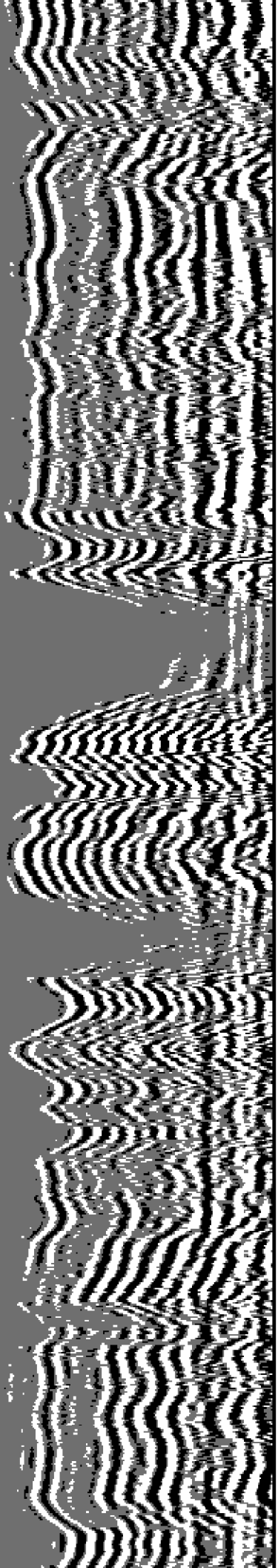


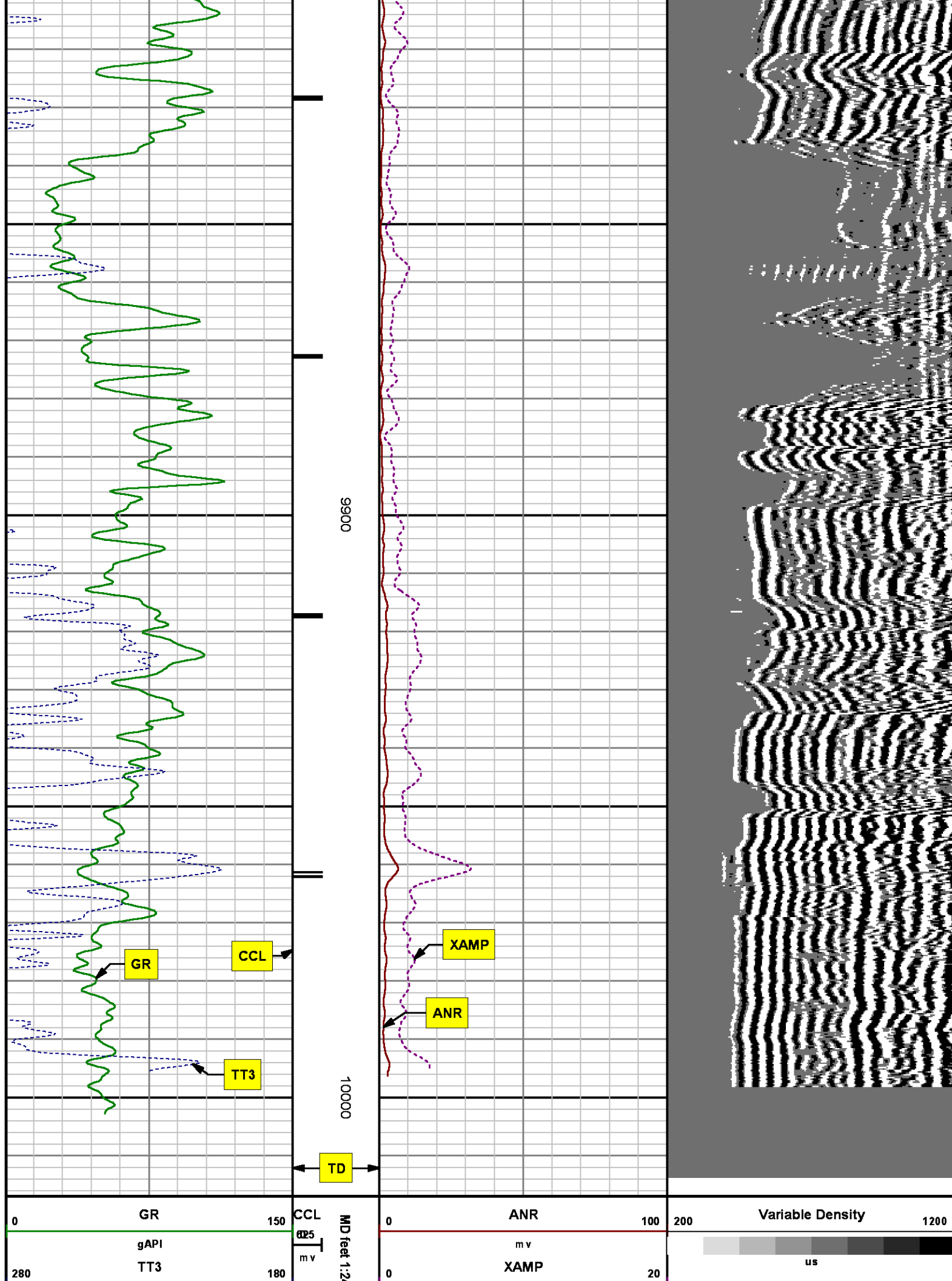












u sec

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m v

## SECONDARY PRESENTATION

### 0 PSI

| MEASUREMENT TYPE | PARAMETER             | VALUE   | UNITS    | TOP    | BOTTOM    |
|------------------|-----------------------|---------|----------|--------|-----------|
| RAL              | Amp Gate Start Far    | 305.000 | u sec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Start Near   | 195.000 | u sec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Start Radial | 195.000 | u sec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Far    | 25.000  | u sec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Near   | 25.000  | u sec    | 35.129 | 10013.250 |
| RAL              | Amp Gate Width Radial | 25.000  | u sec    | 35.129 | 10013.250 |
| RAL              | casing od             | 4.500   | inches   | 35.129 | 10013.250 |
| RAL              | casing wt             | 11.600  | lbm/ft   | 35.129 | 10013.250 |
| RAL              | FB Start Far          | 291.900 | u sec    | 35.129 | 10013.250 |
| RAL              | FB Start Near         | 175.391 | u sec    | 35.129 | 10013.250 |
| RAL              | FB Start Radial       | 175.391 | u sec    | 35.129 | 10013.250 |
| RAL              | FB Thresh Far         | 10.000  | mv       | 35.129 | 10013.250 |
| RAL              | FB Thresh Near        | 4.000   | mv       | 35.129 | 10013.250 |
| RAL              | FB Thresh Radial      | 4.000   | mv       | 35.129 | 10013.250 |
| RAL              | Fluid Travel Time     | 200.000 | u sec/ft | 35.129 | 10013.598 |

## DEPTH OFFSETS

(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |      |      |      |      |      |
|--------|--------------|-----------------|------|------|------|------|------|
| 1426XA | -16.750      | ACAL            | ANR  | AR1  | AR2  | AR3  | AR4  |
|        |              | AR5             | AR6  | AR7  | AR8  | CHV  | FPR2 |
|        |              | FPR3            | FPR5 | TT3  | TTR1 | TTR2 | TTR3 |
|        |              | TTR4            | TTR5 | TTR6 | TTR7 | TTR8 | XAMP |
| 1426XA | -15.750      | AFAR            | SIG  | TT5  |      |      |      |
| 2459XA | -11.340      | CCL             |      |      |      |      |      |
| 2459XA | -9.490       | GR              |      |      |      |      |      |
| 2459XA | -4.090       | NEU             |      |      |      |      |      |

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

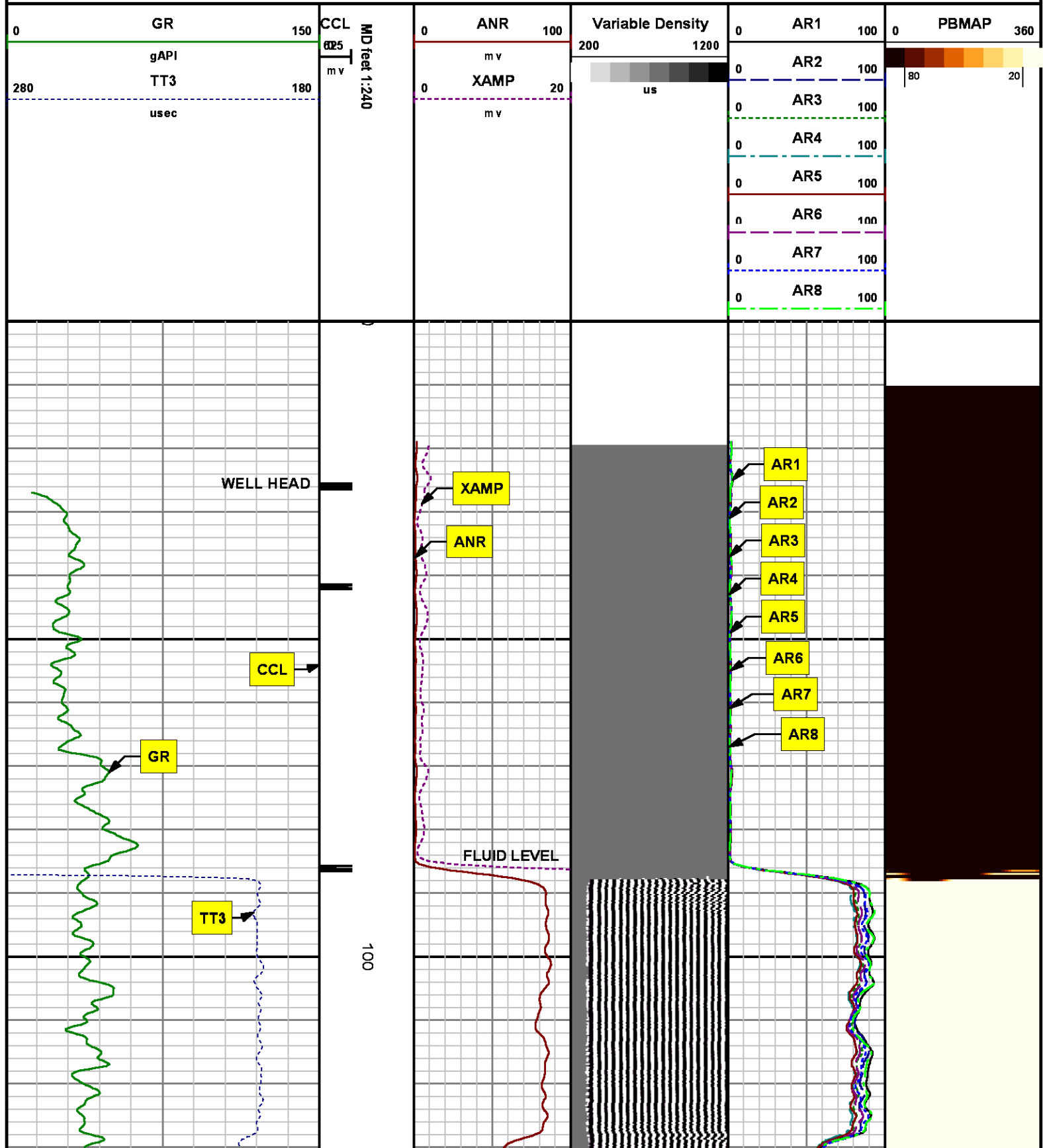
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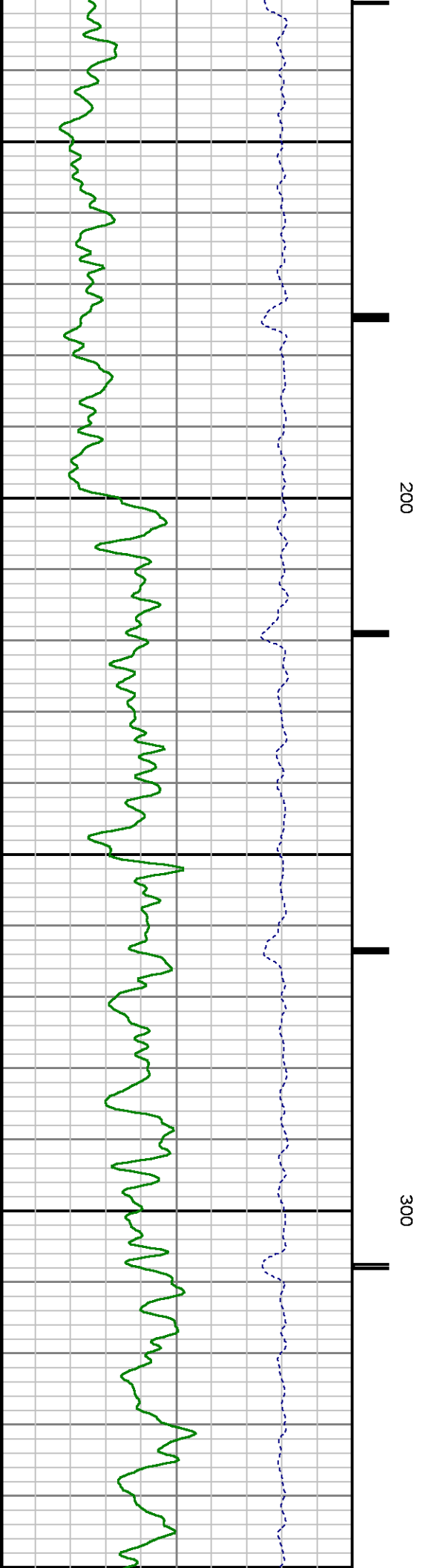
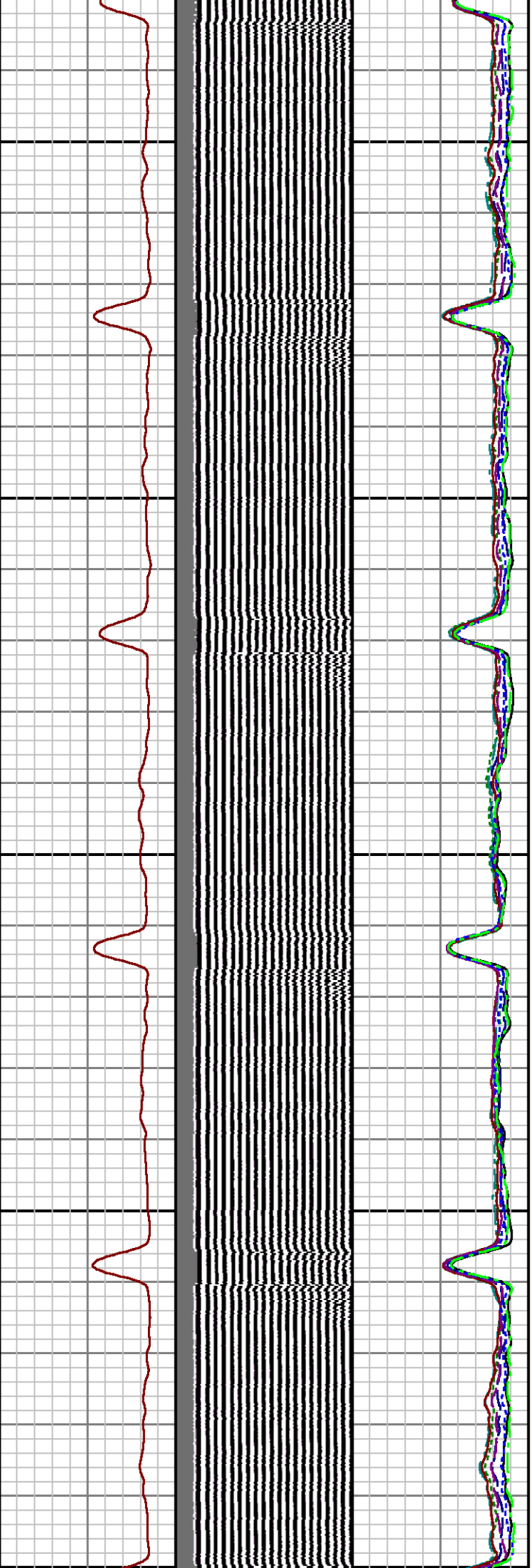
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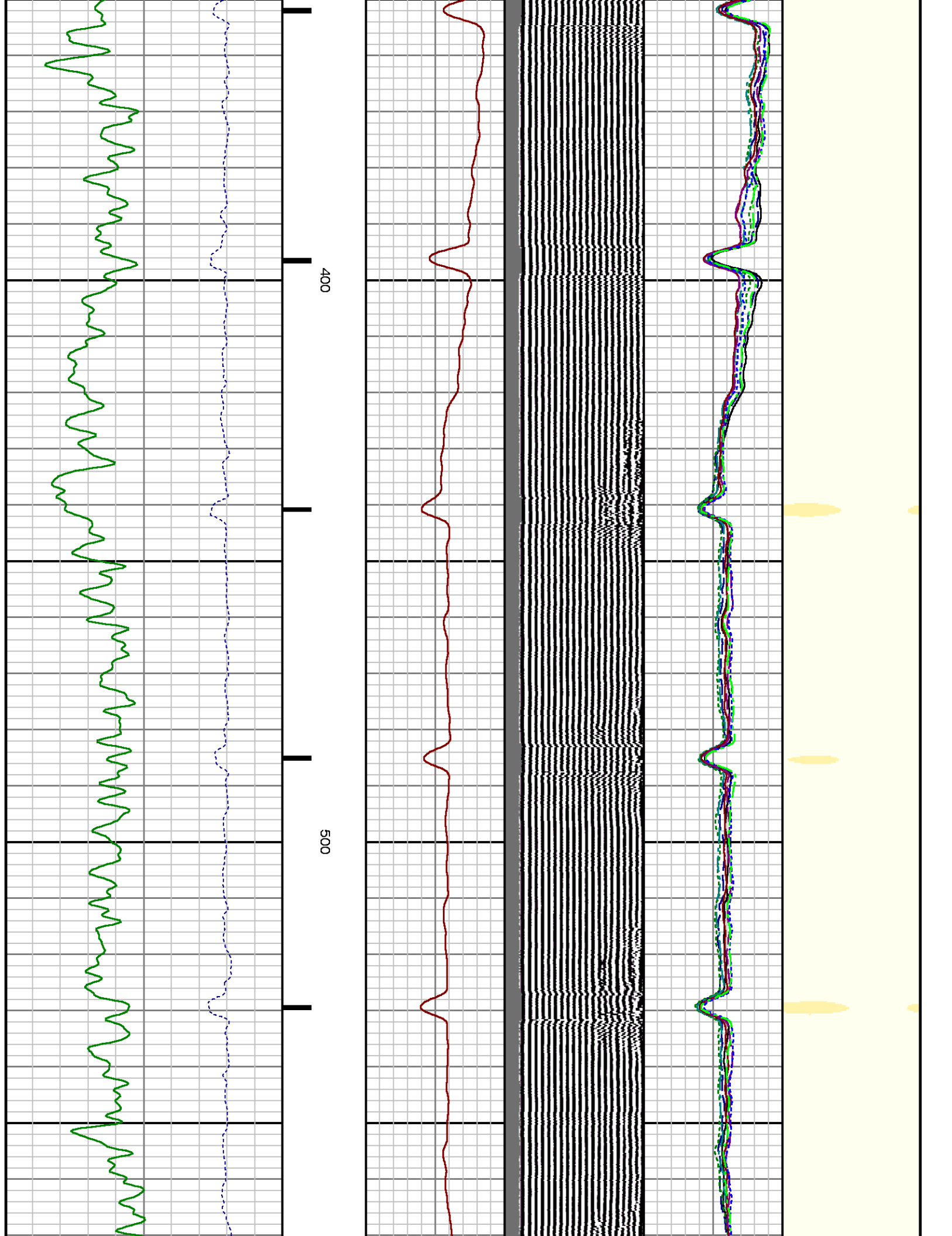
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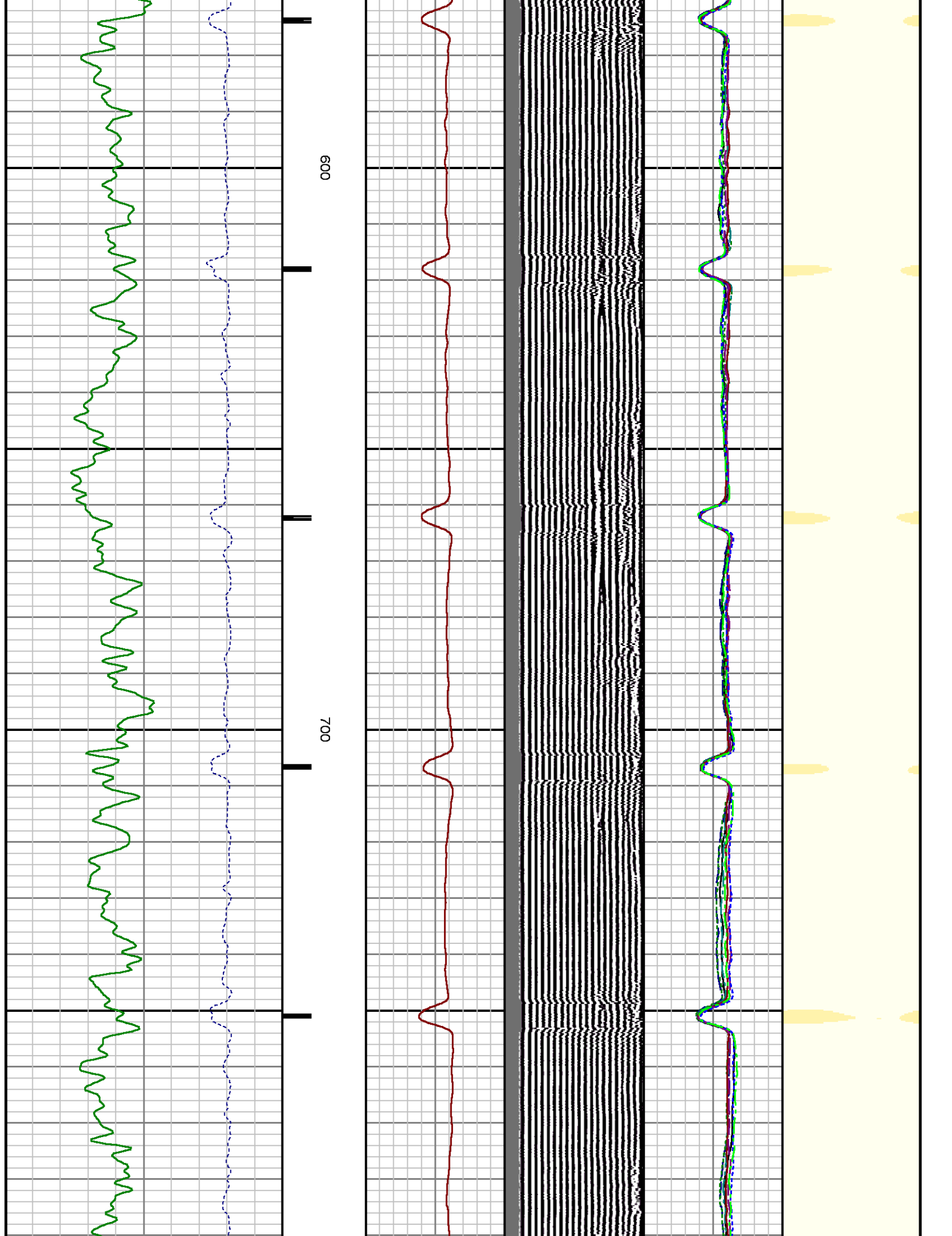
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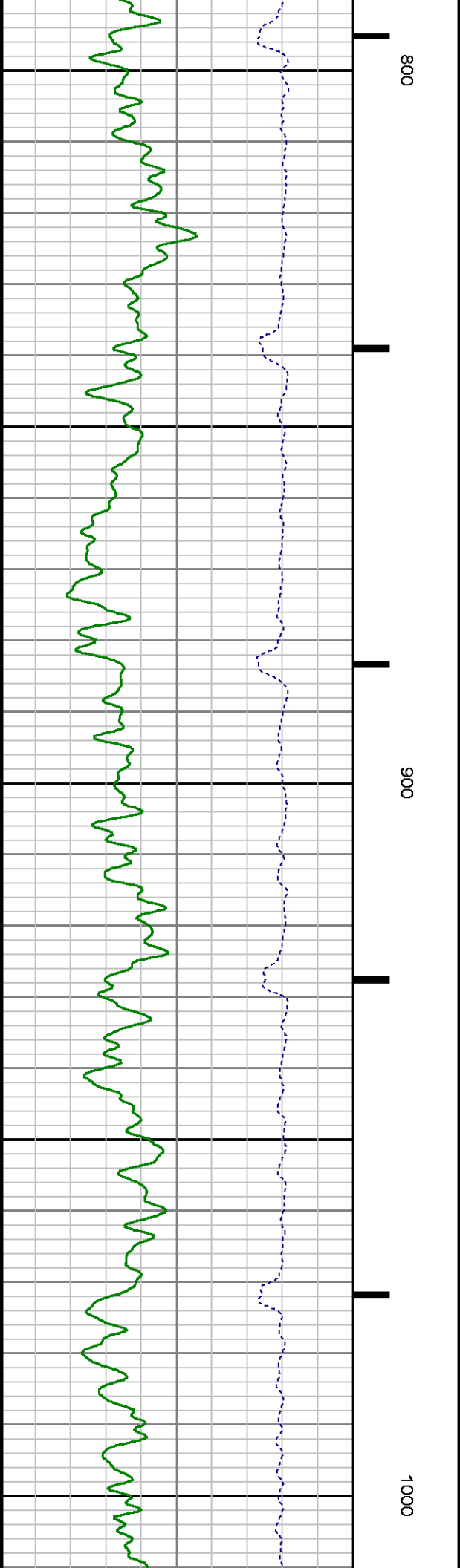
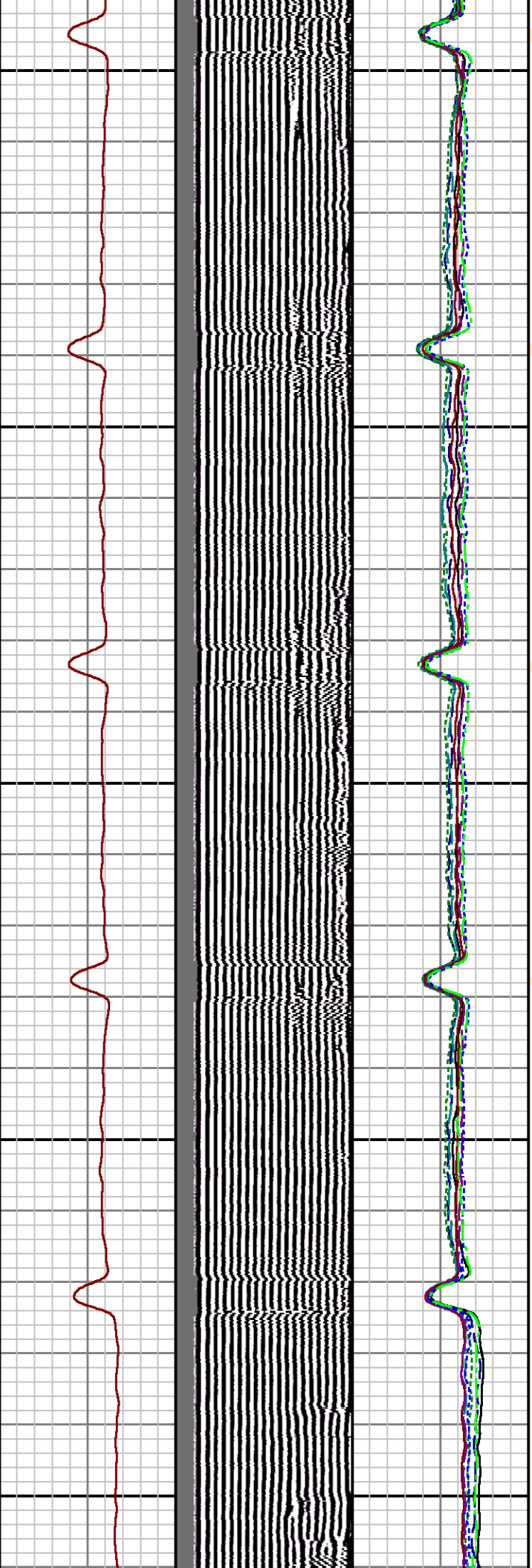


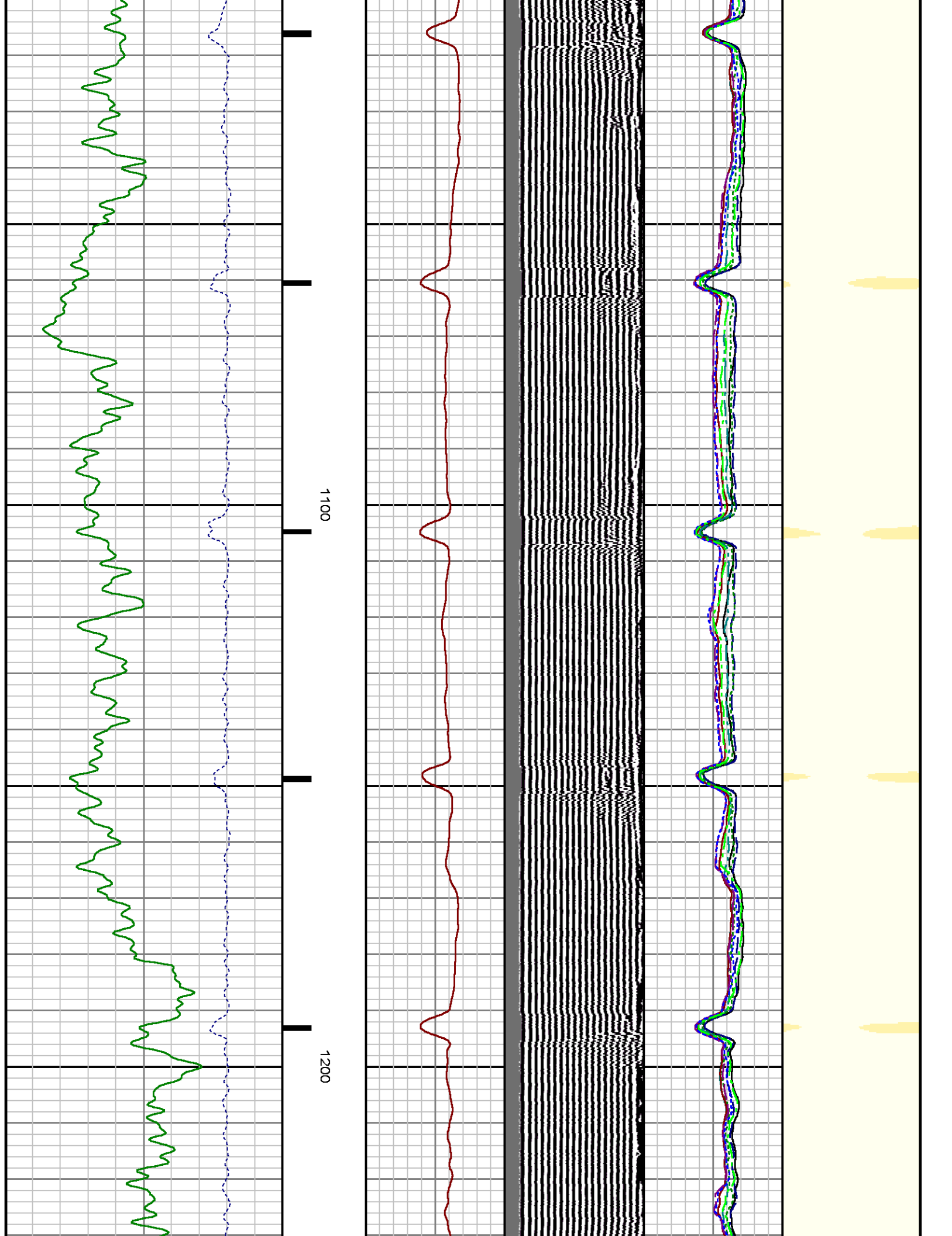


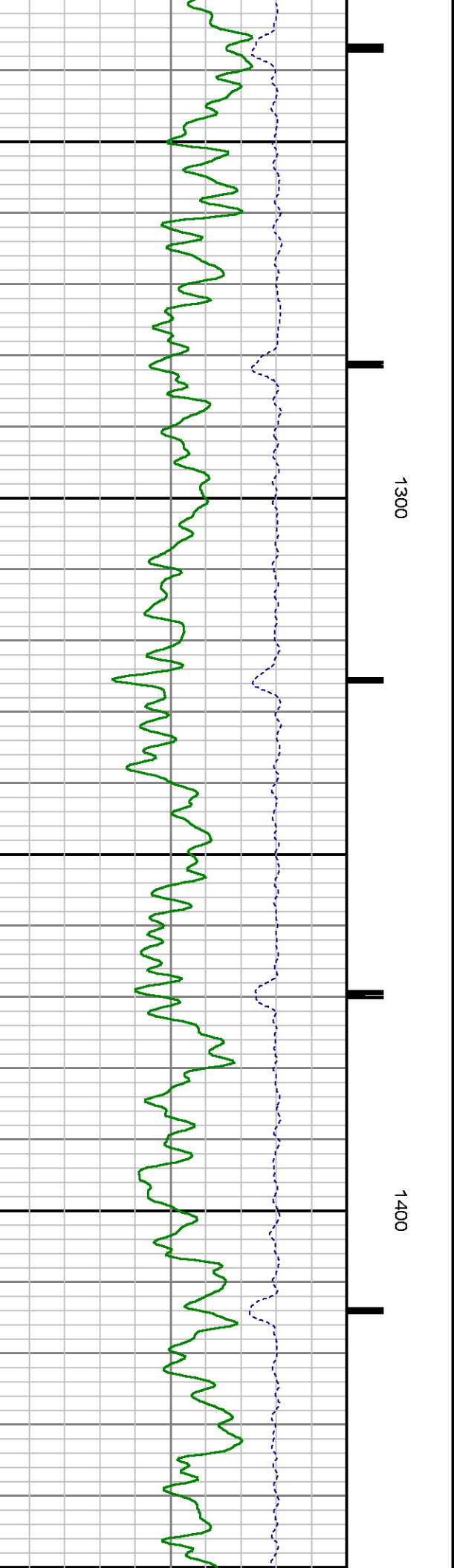
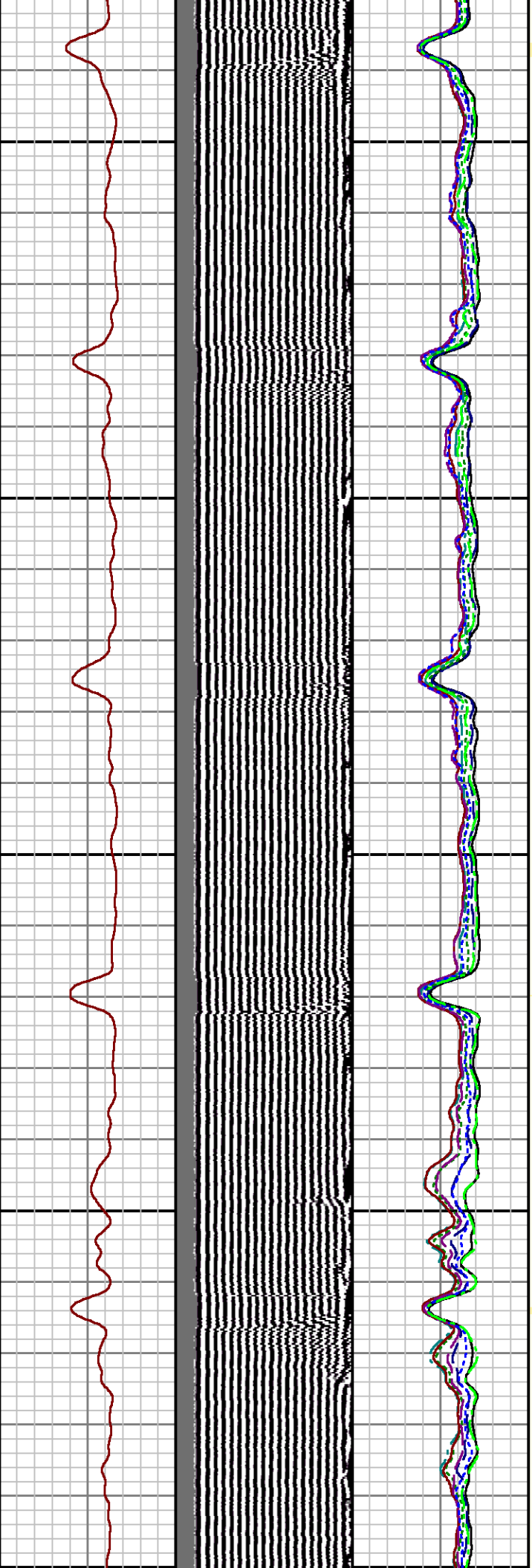


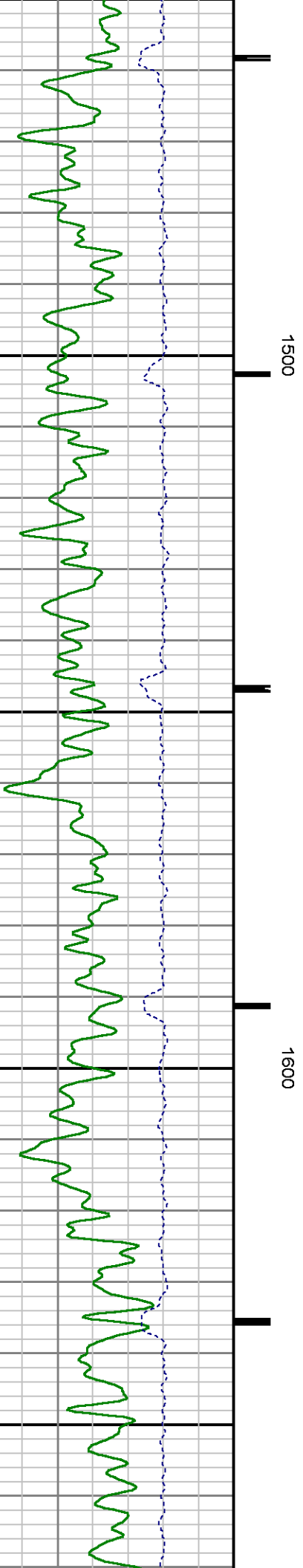
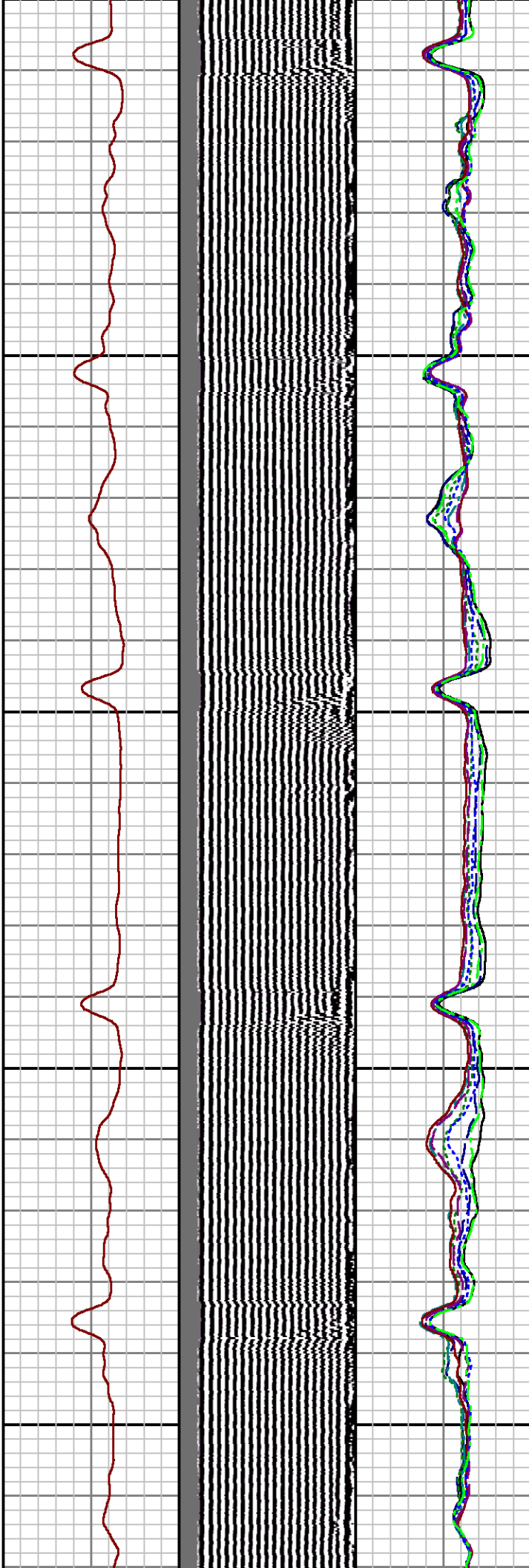
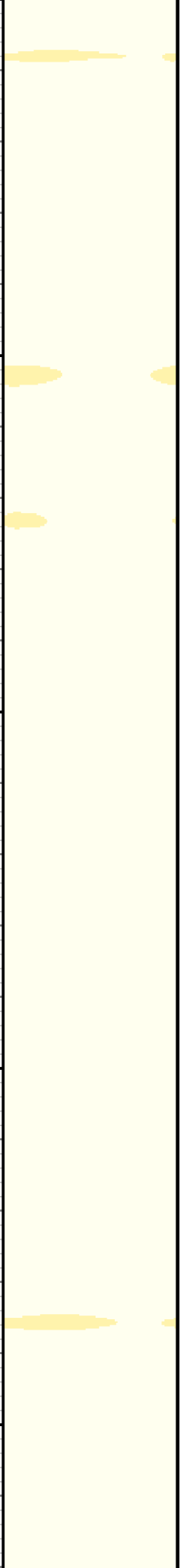


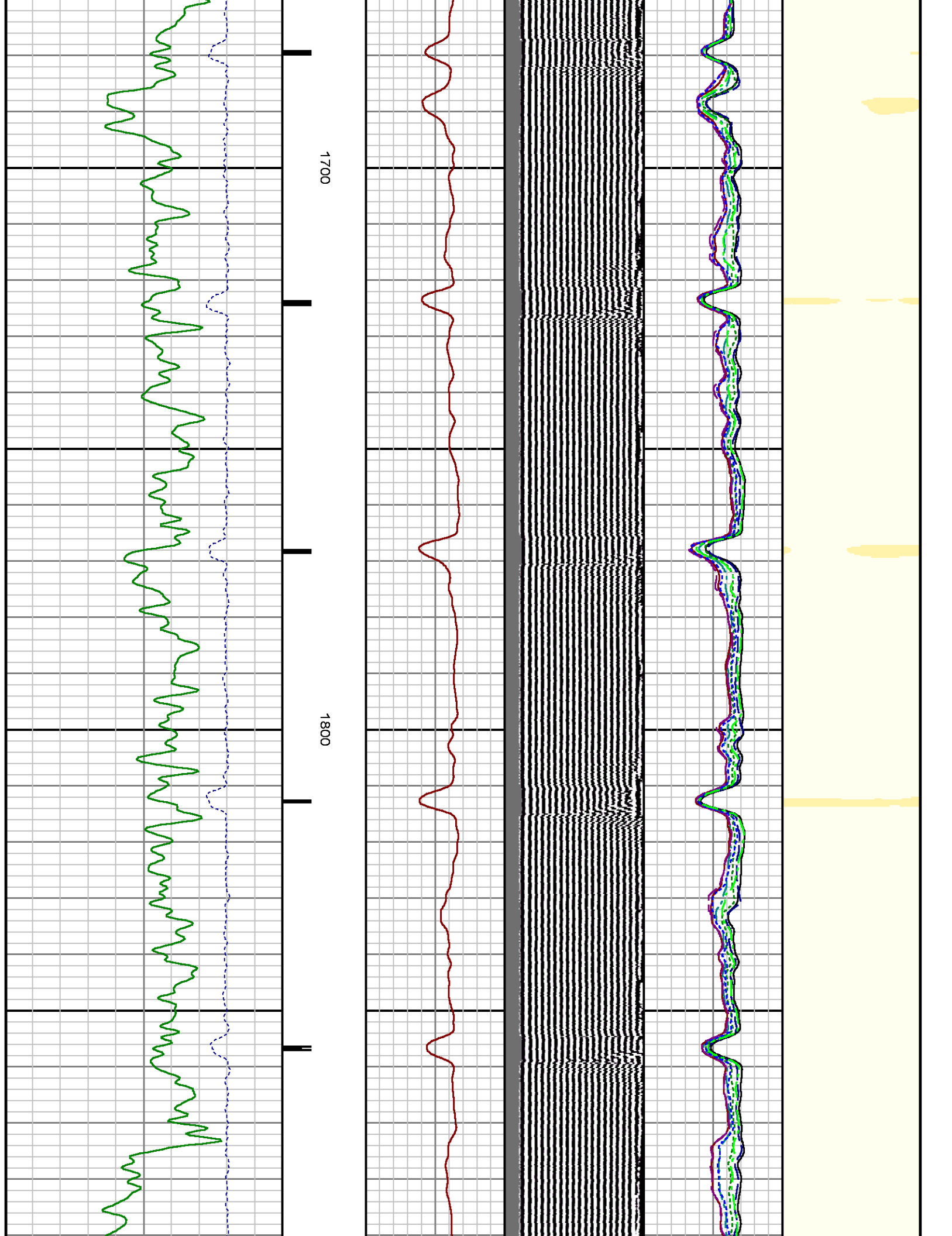




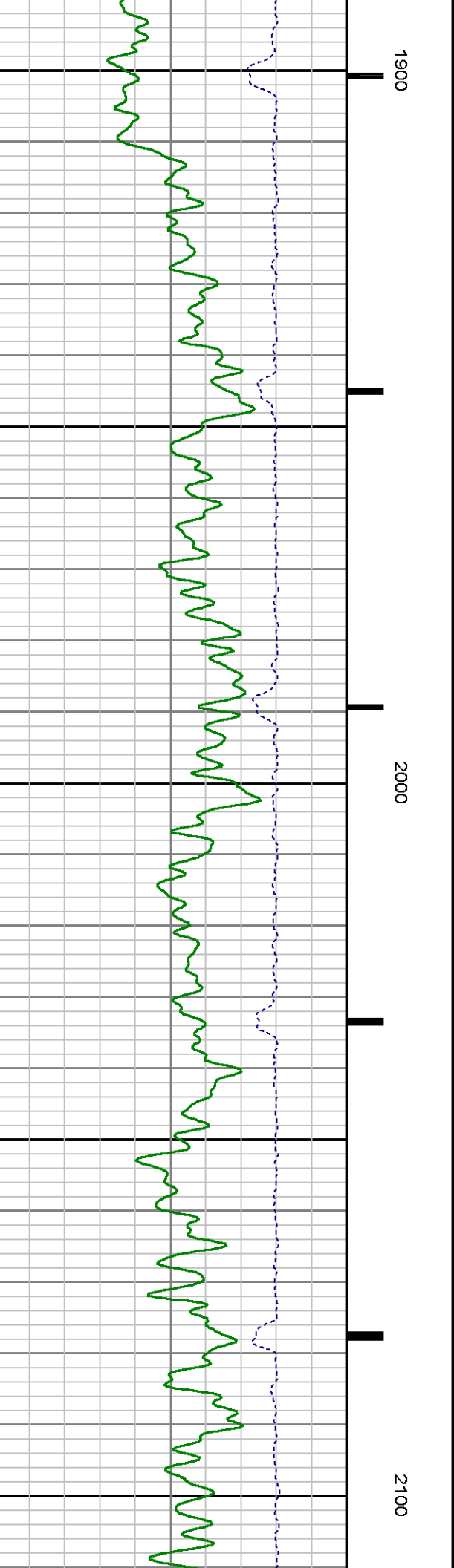
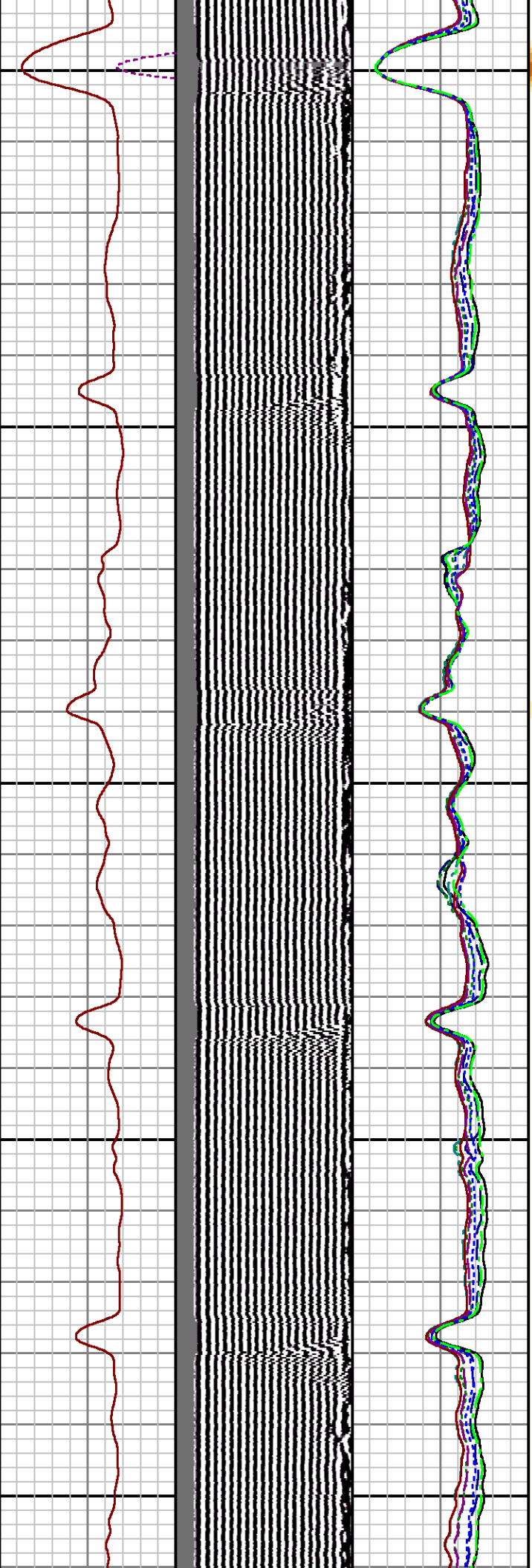


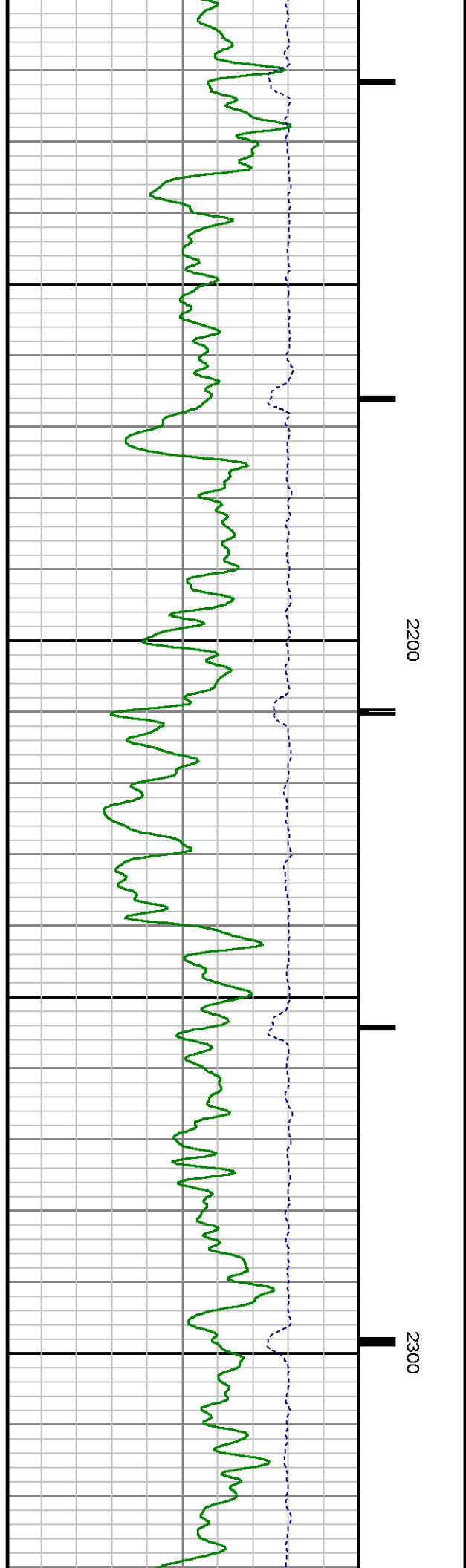
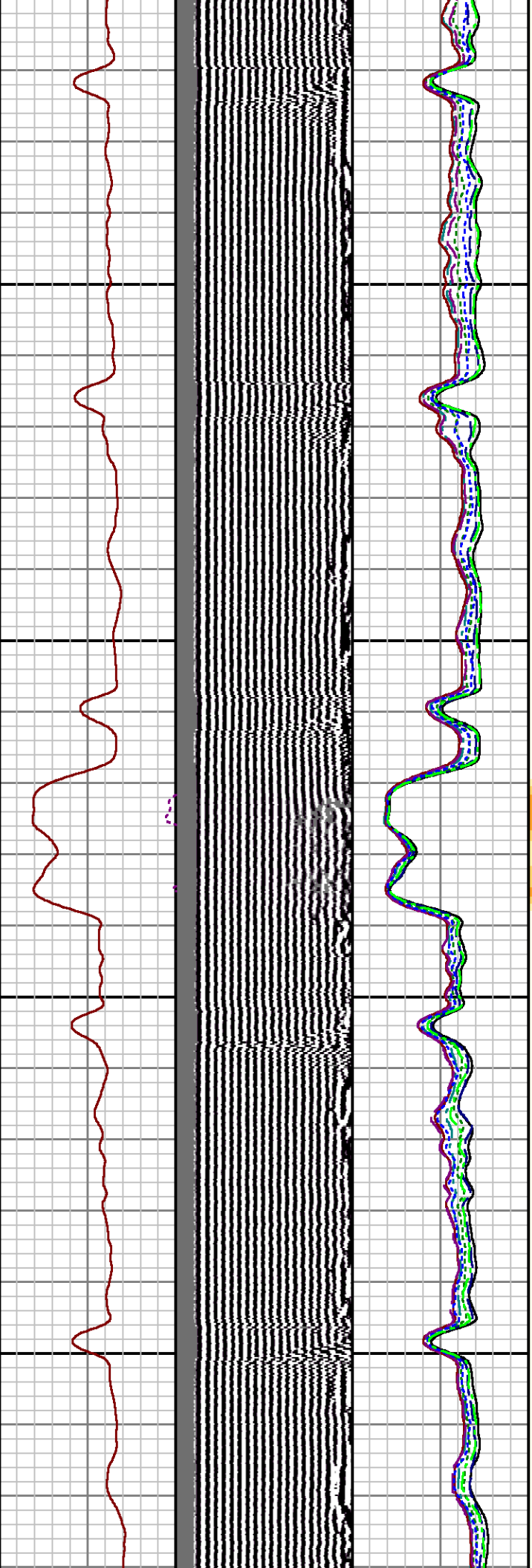


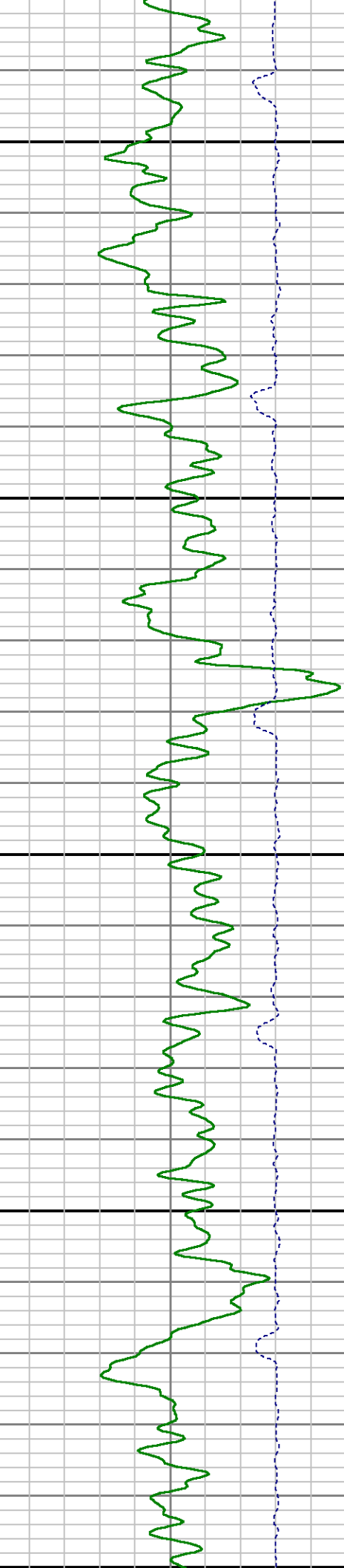
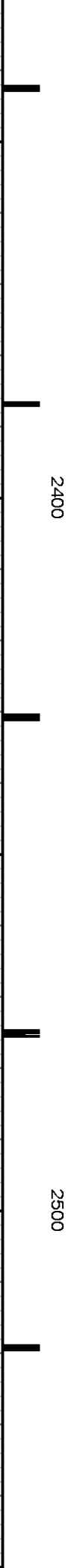
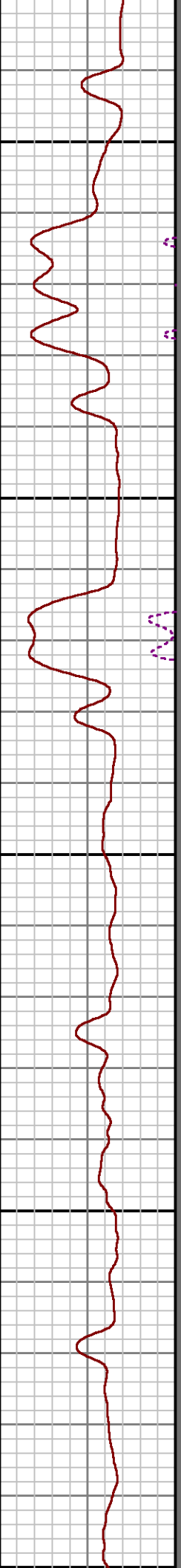
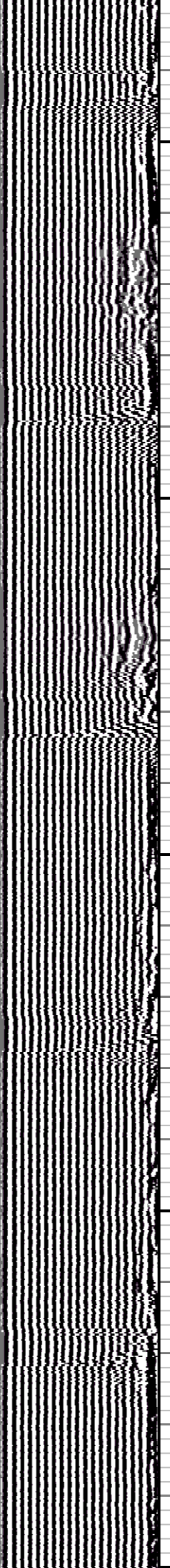
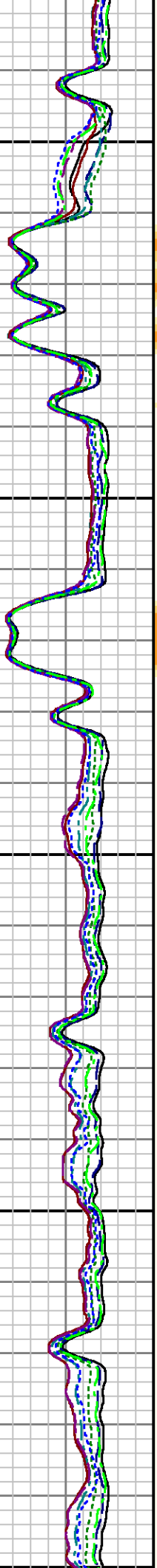


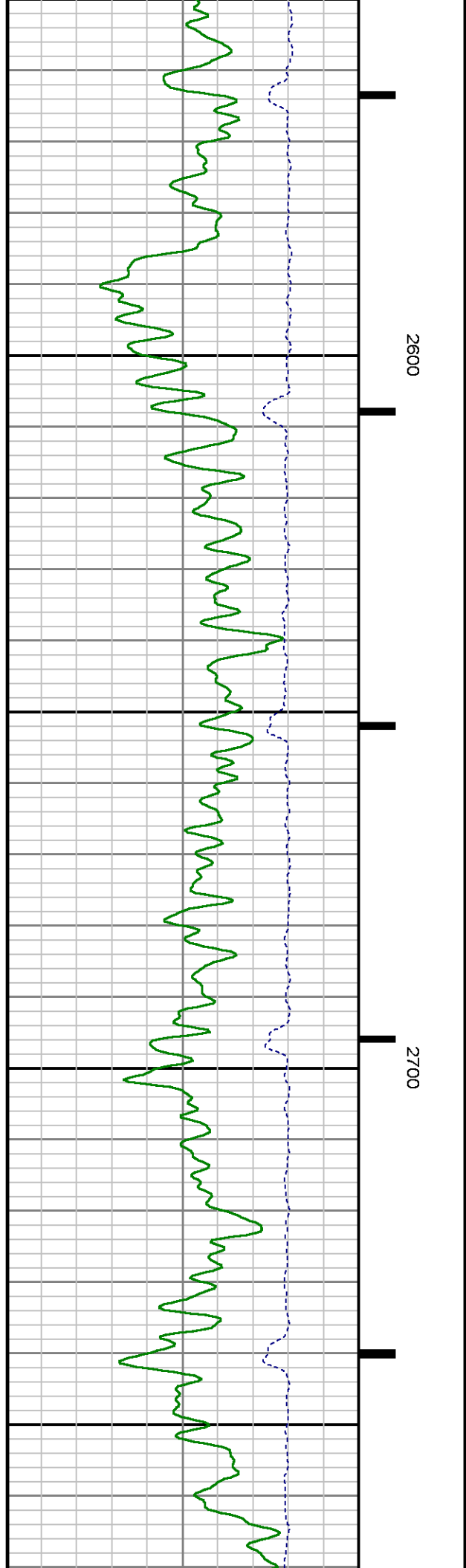
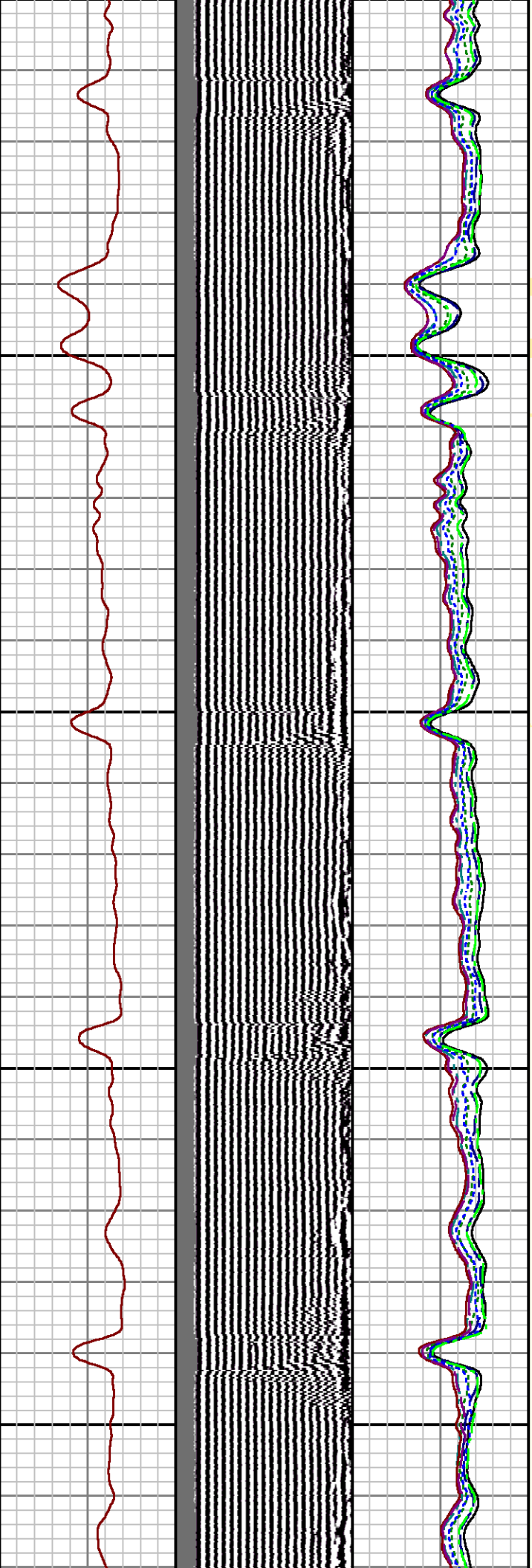


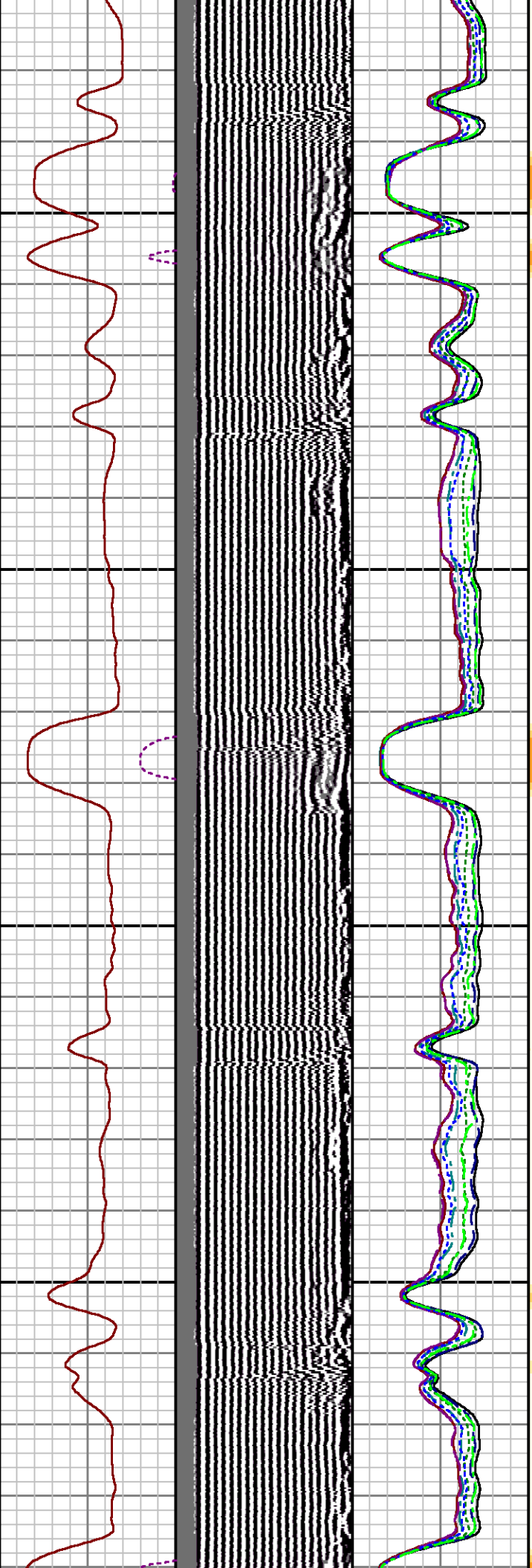






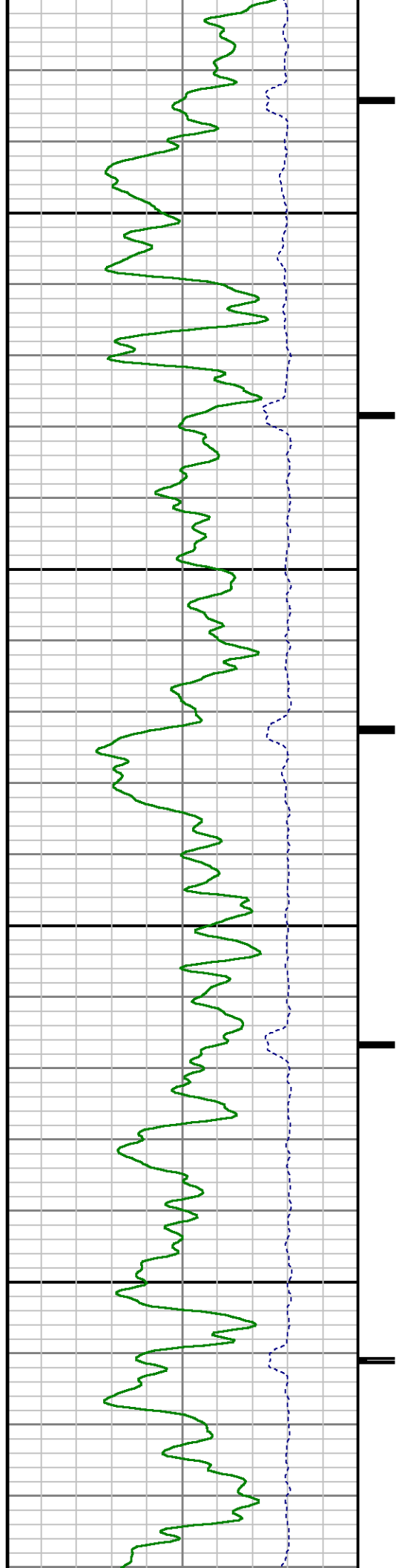




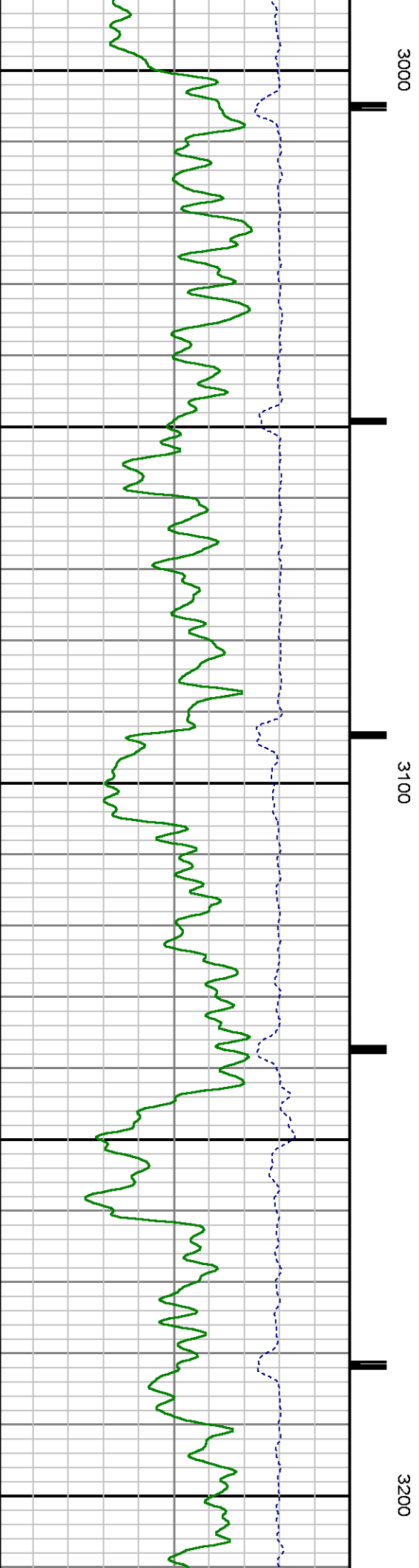
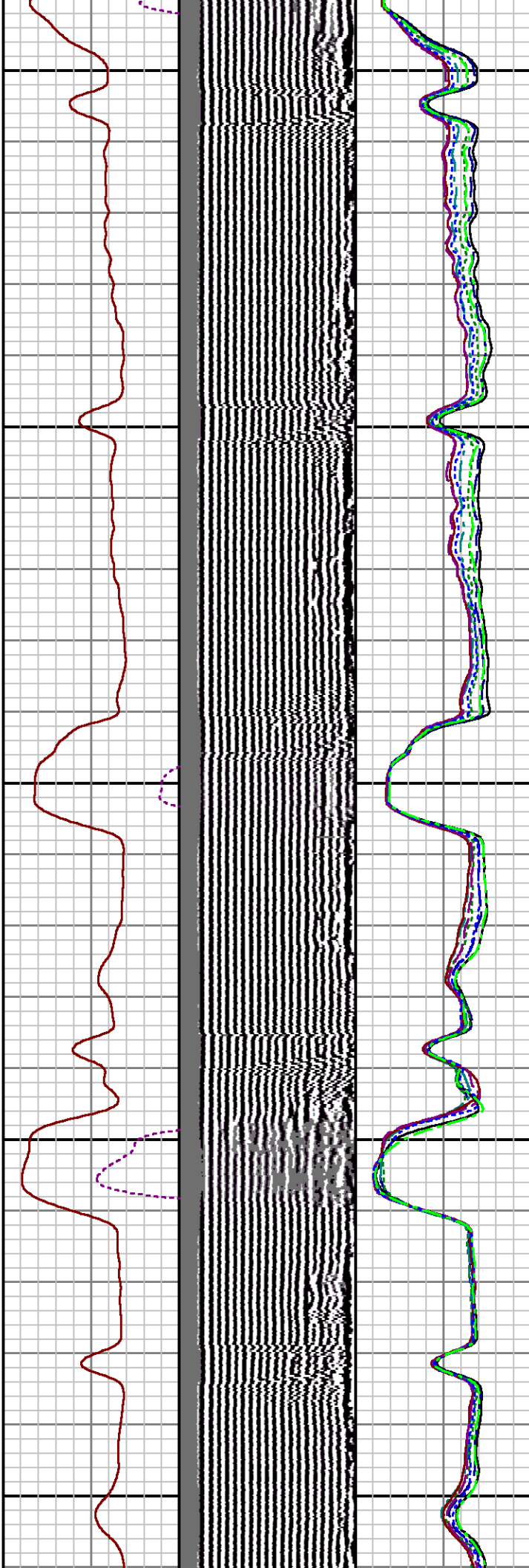
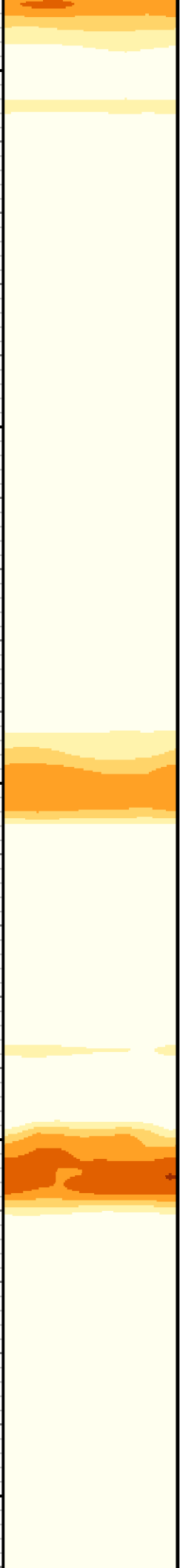


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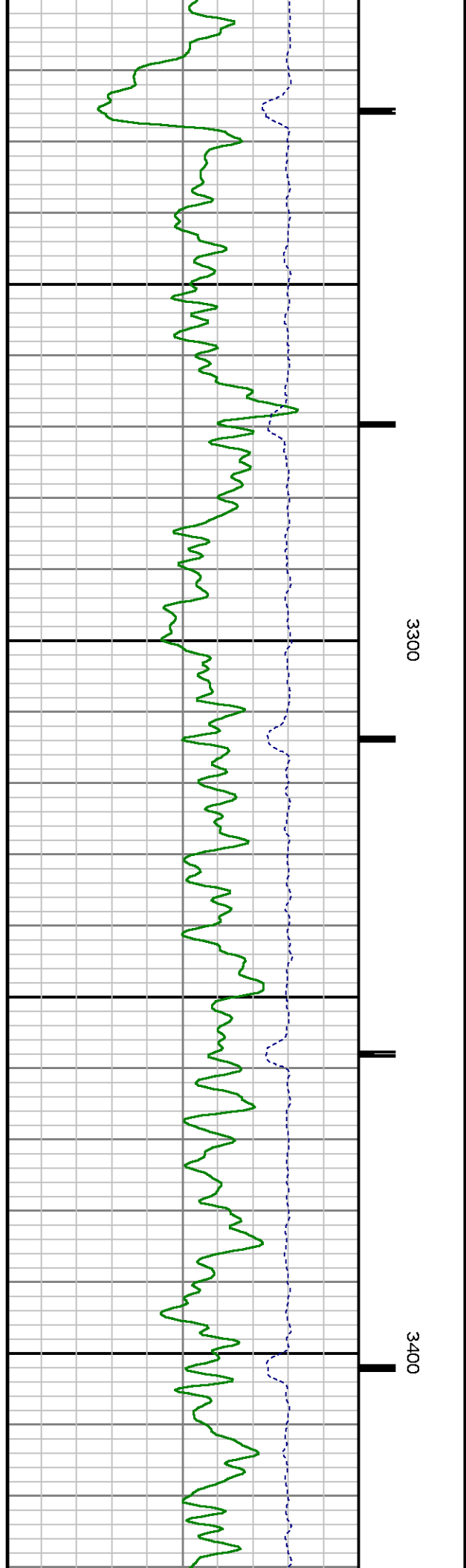
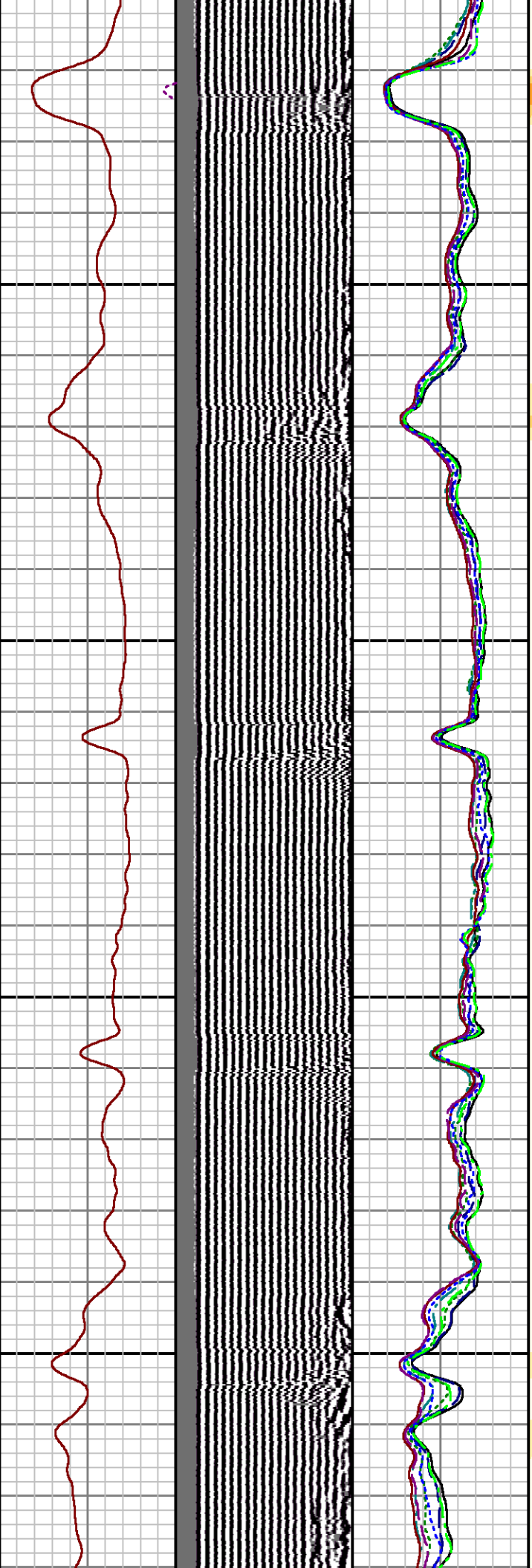
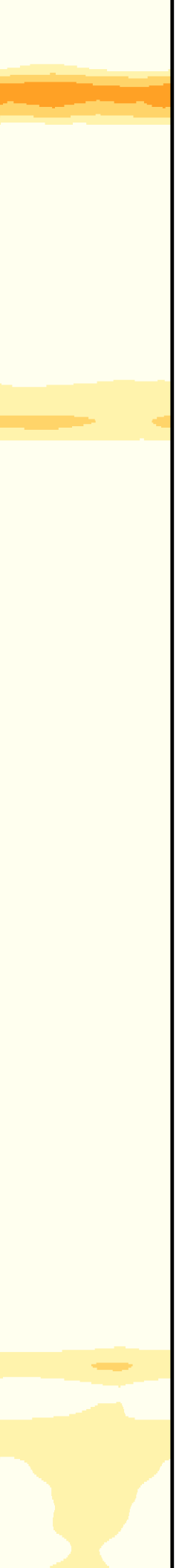
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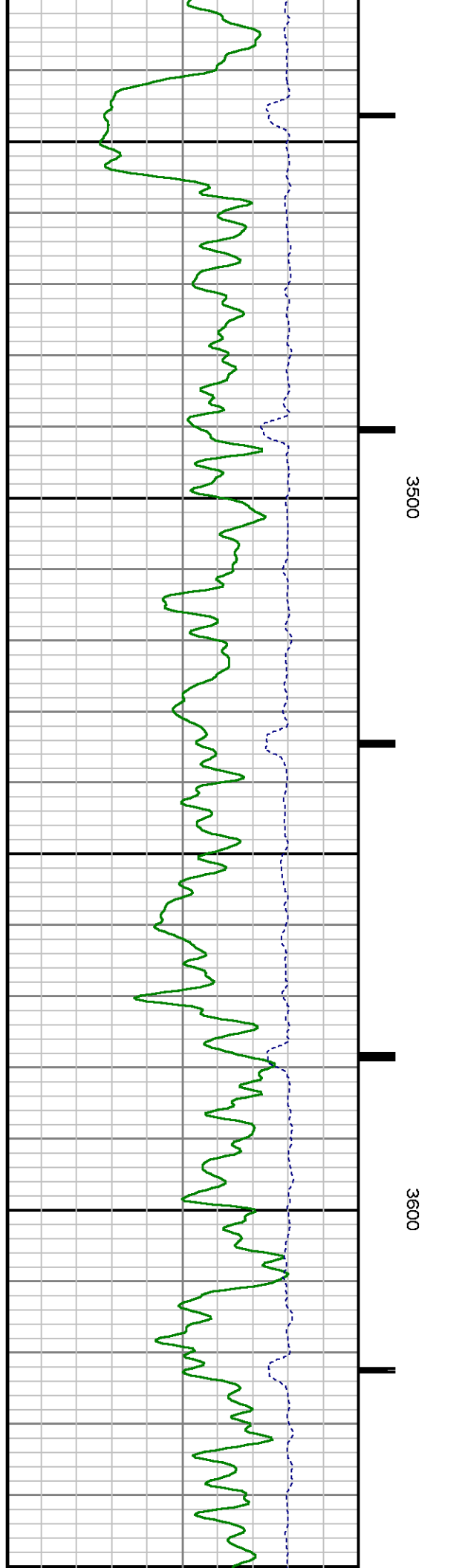
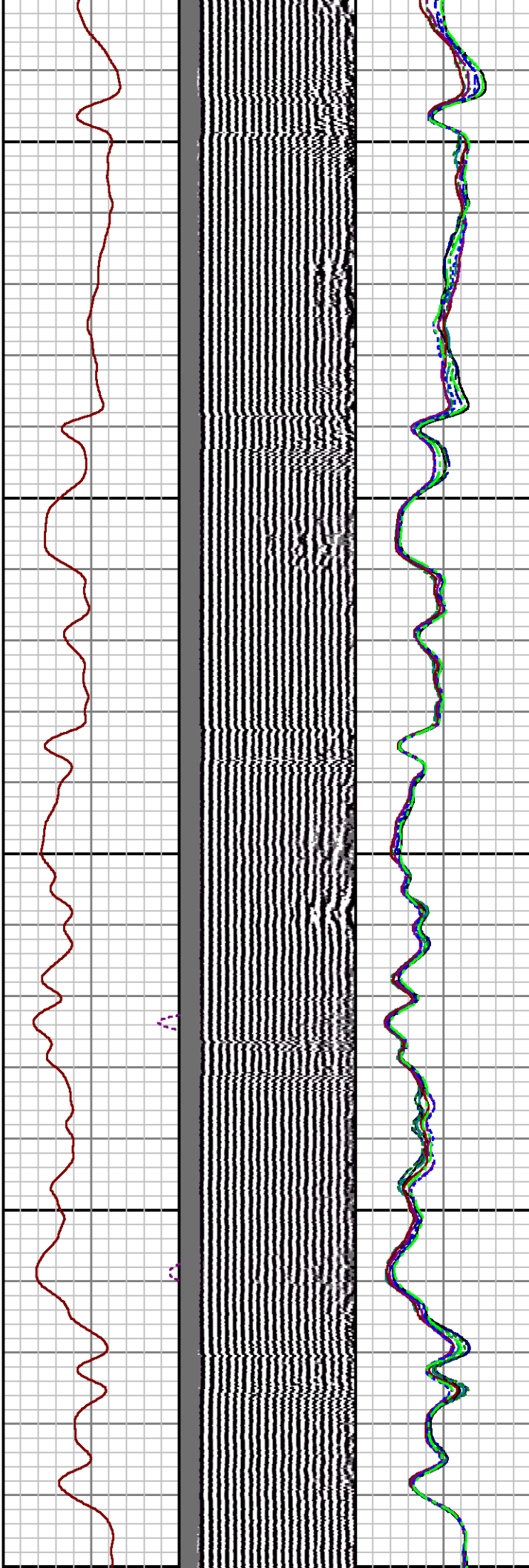
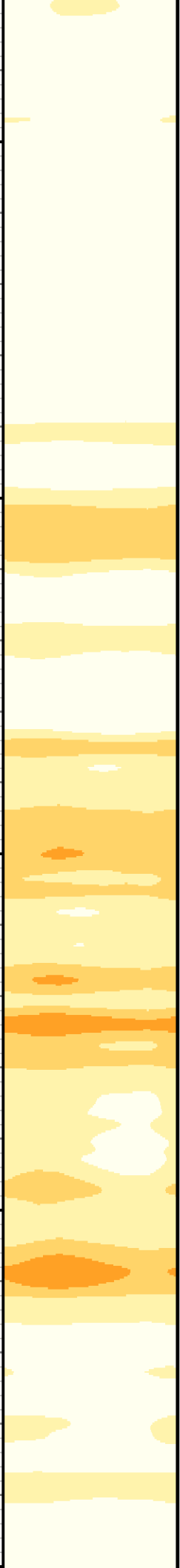


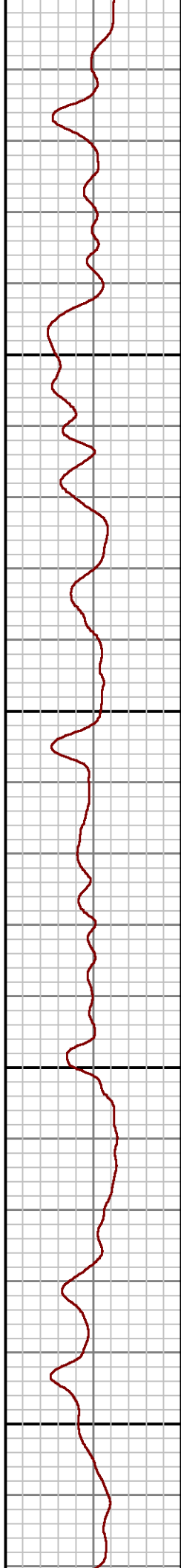
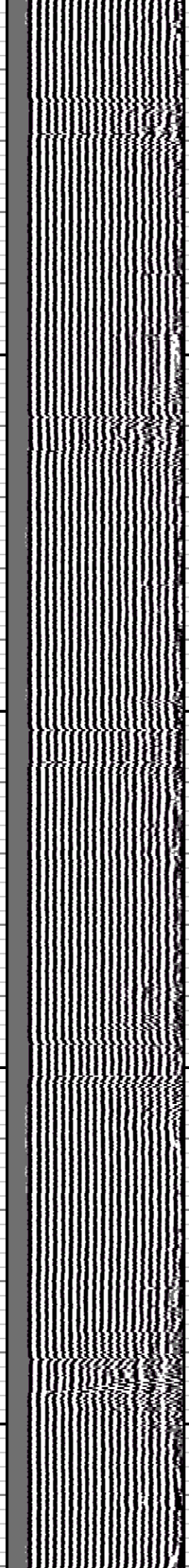
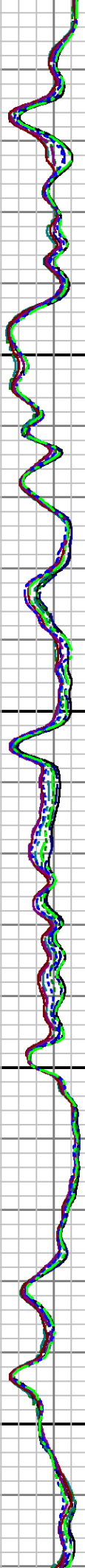
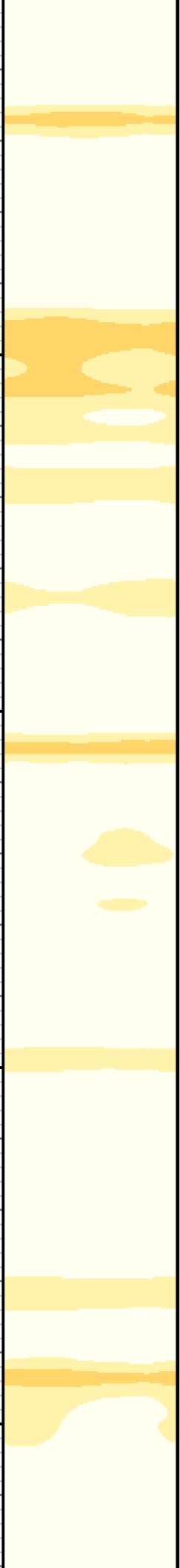






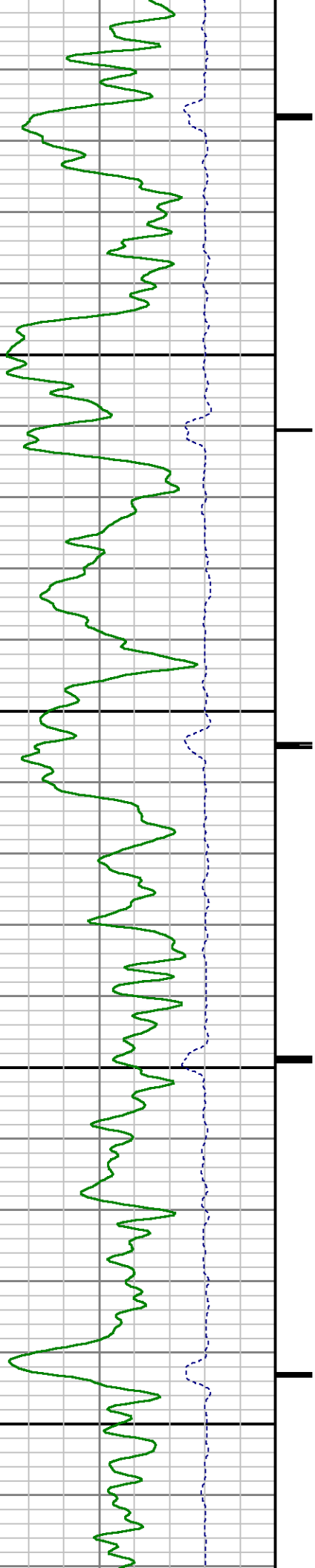


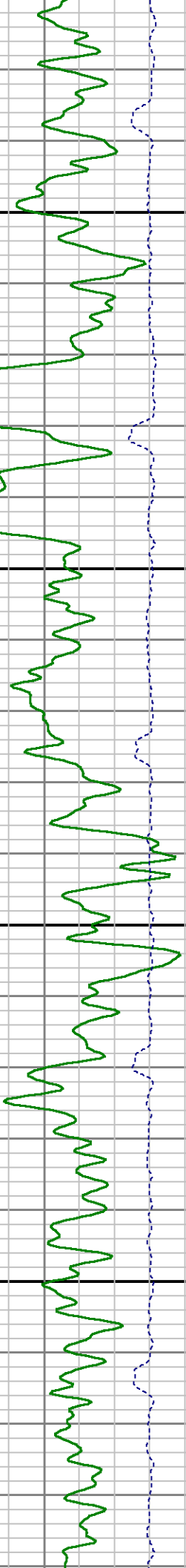
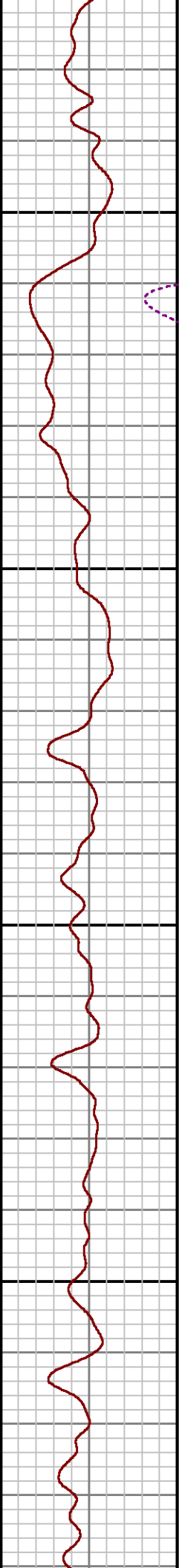
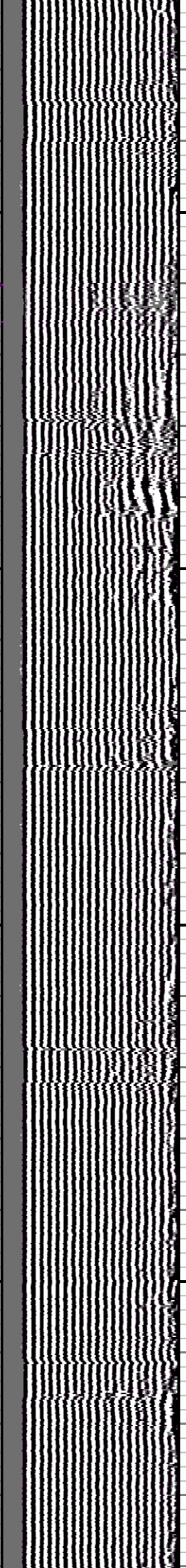
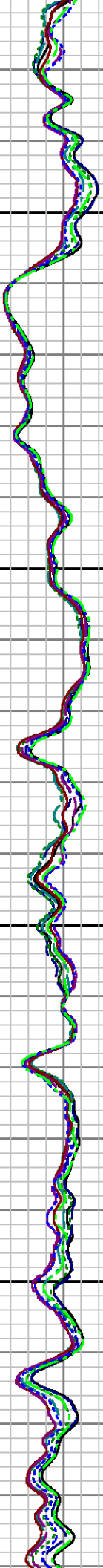
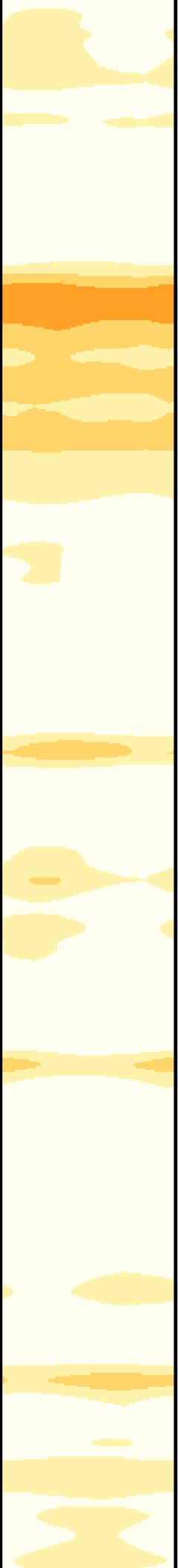




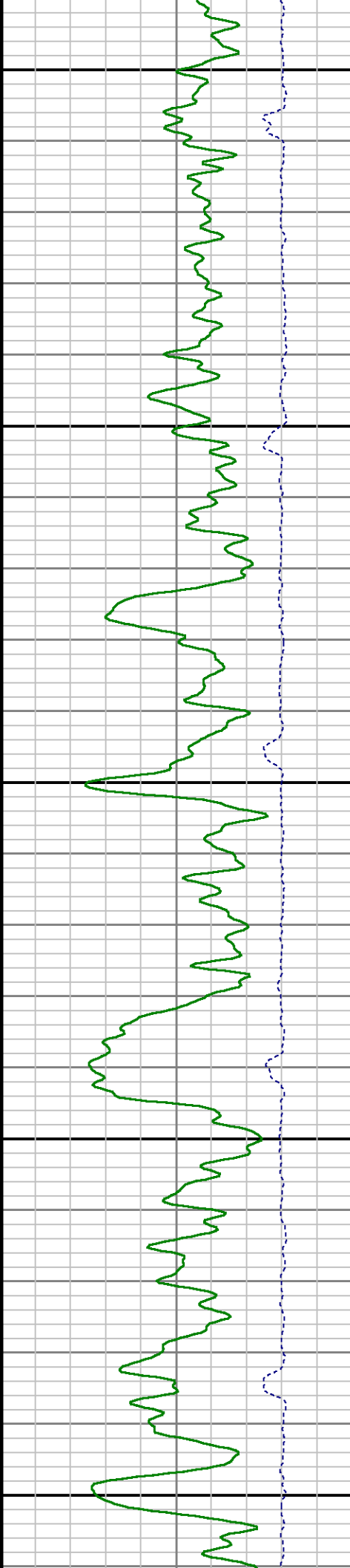
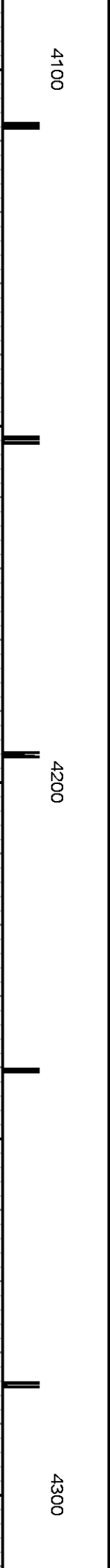
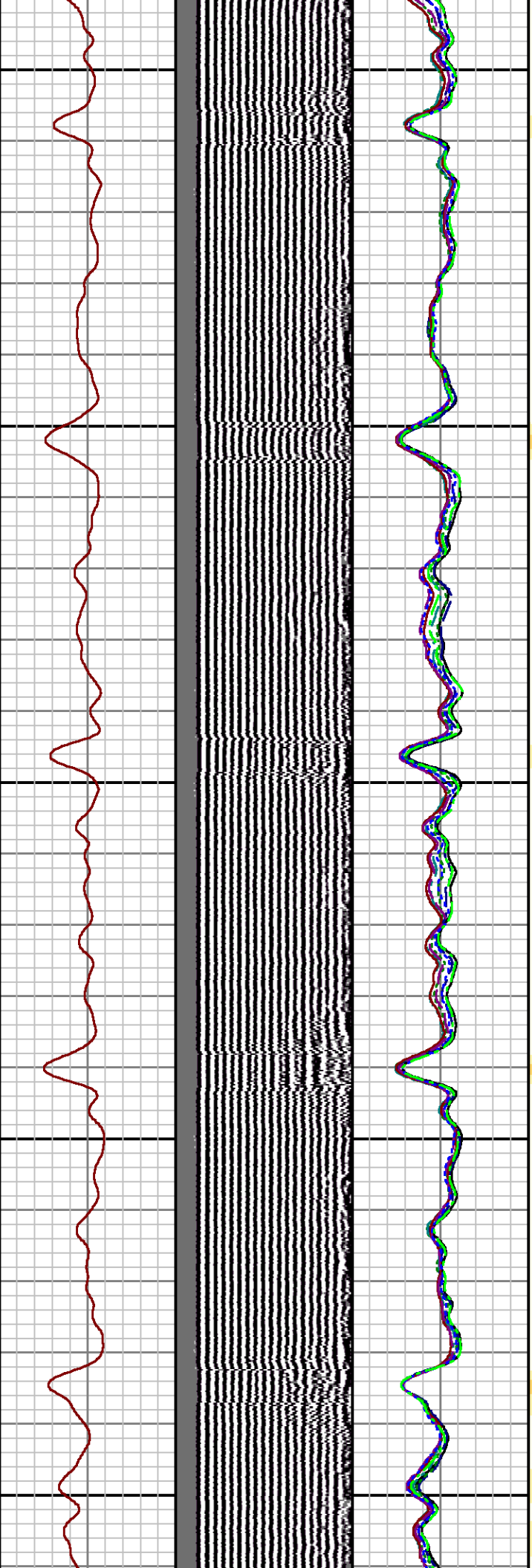
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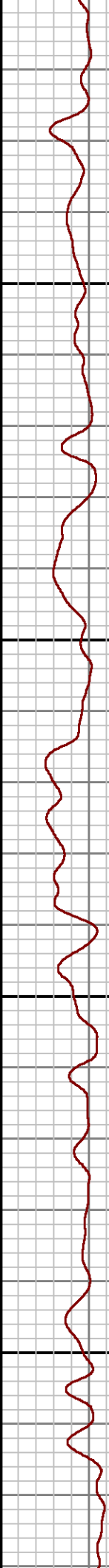
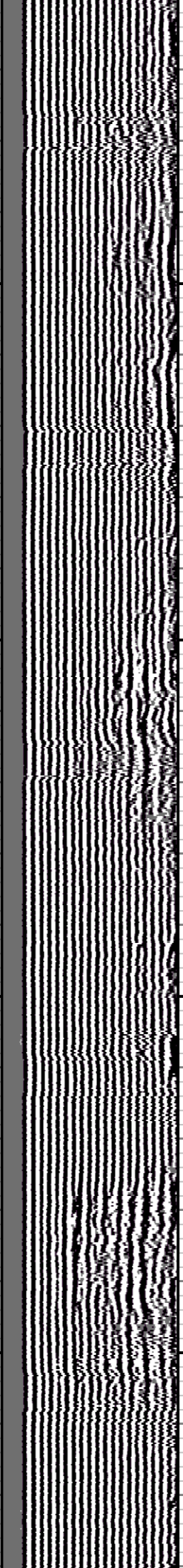
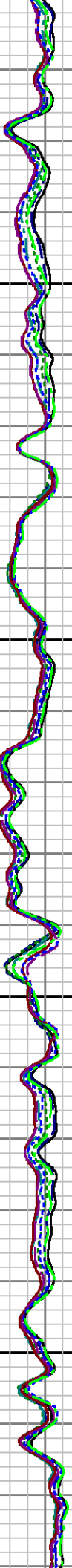
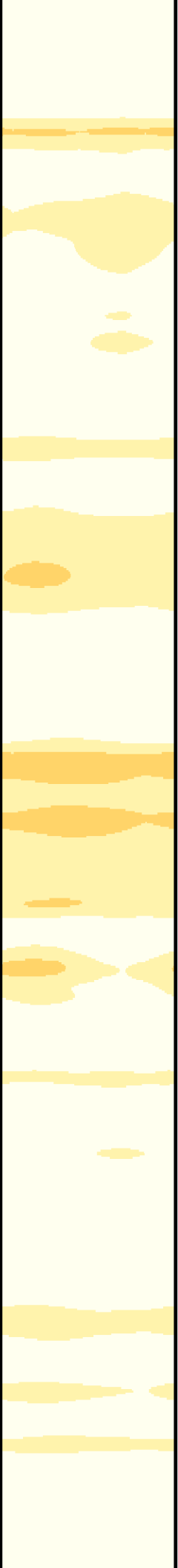
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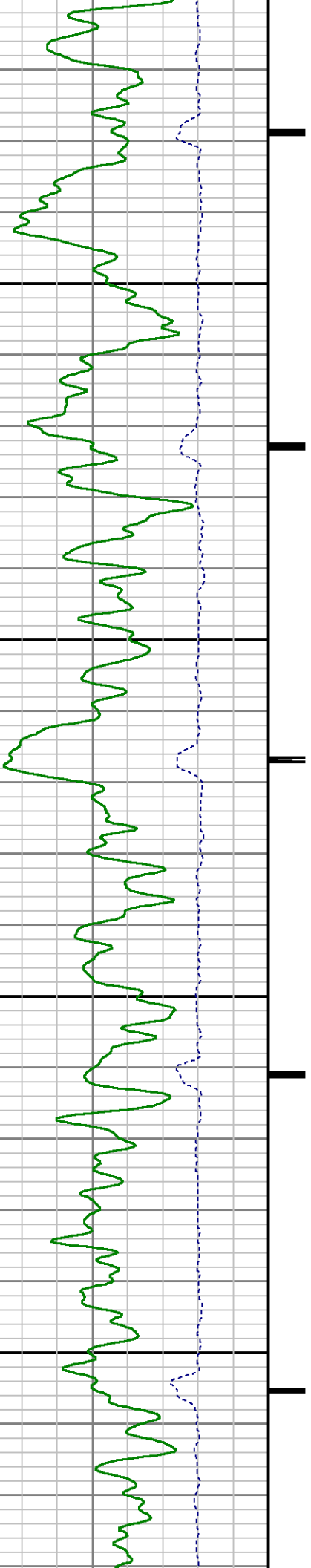




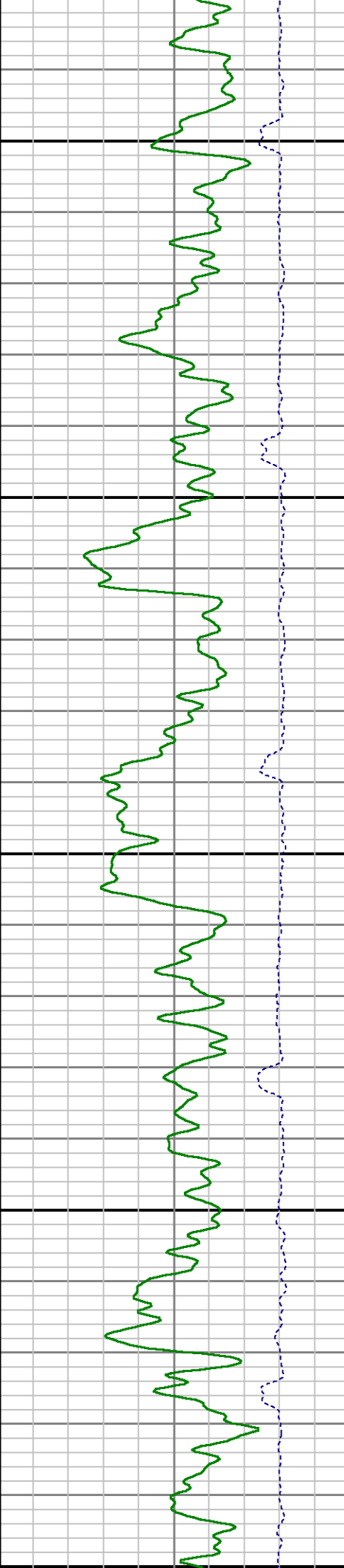
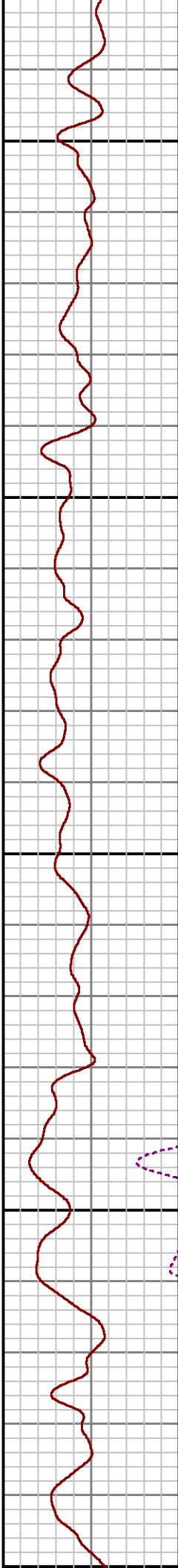
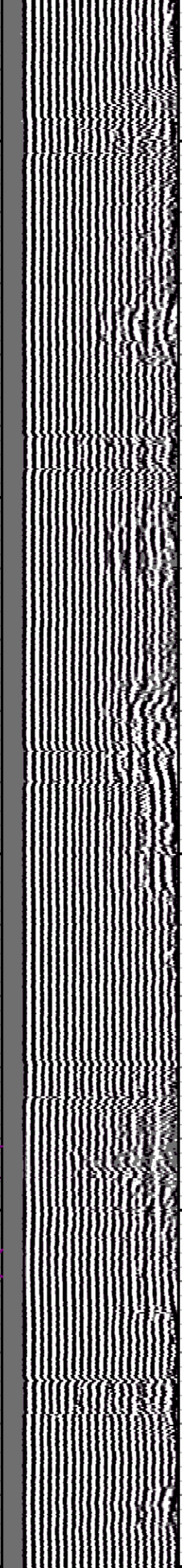
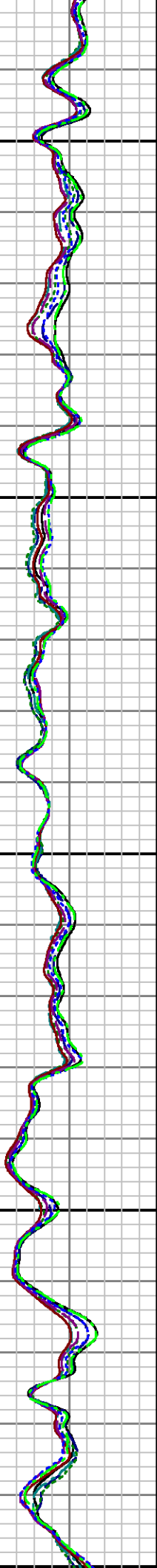
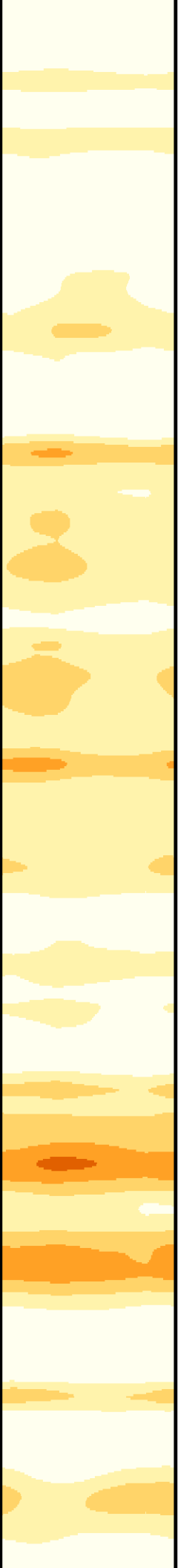


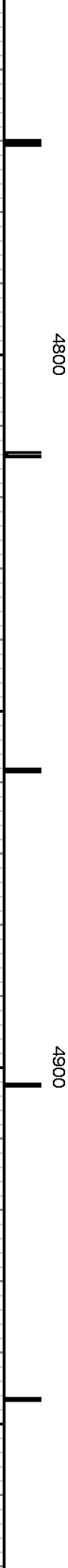
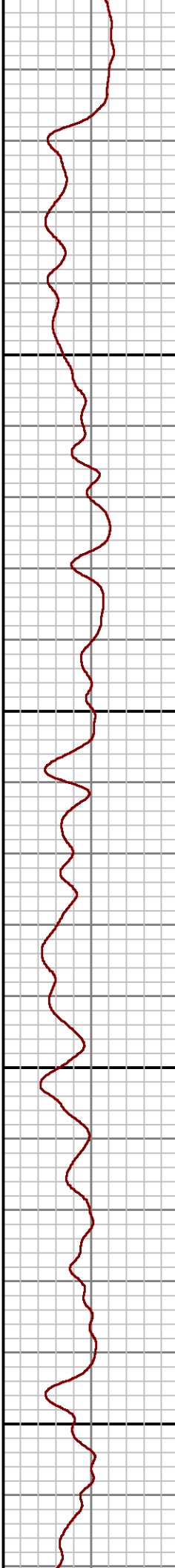
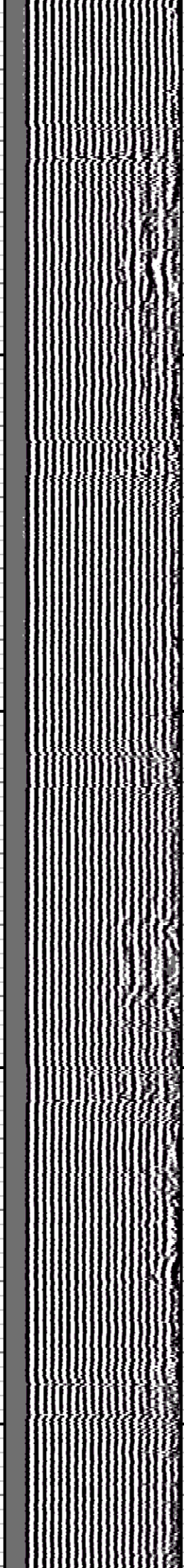
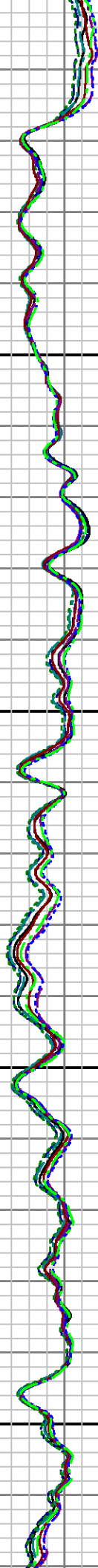
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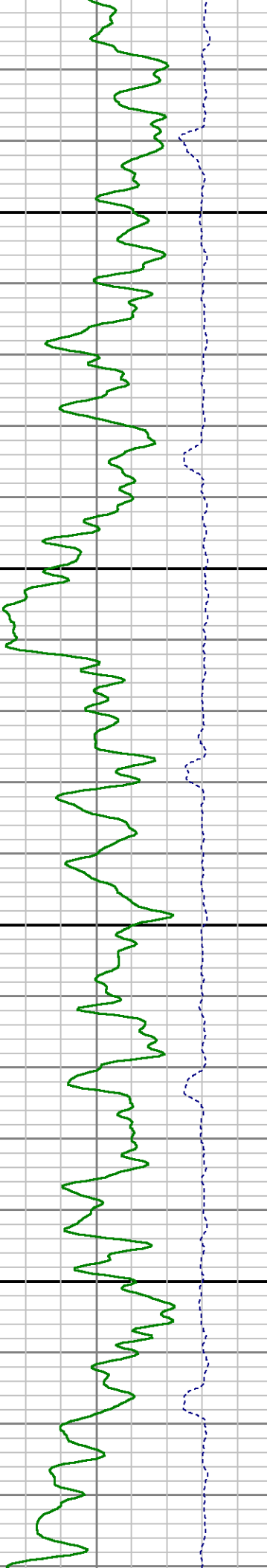
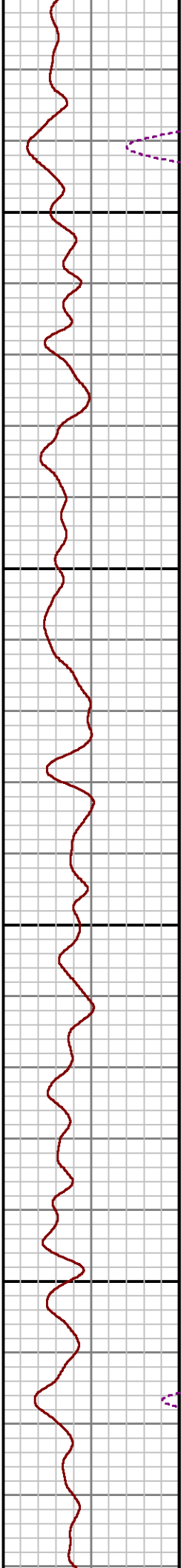
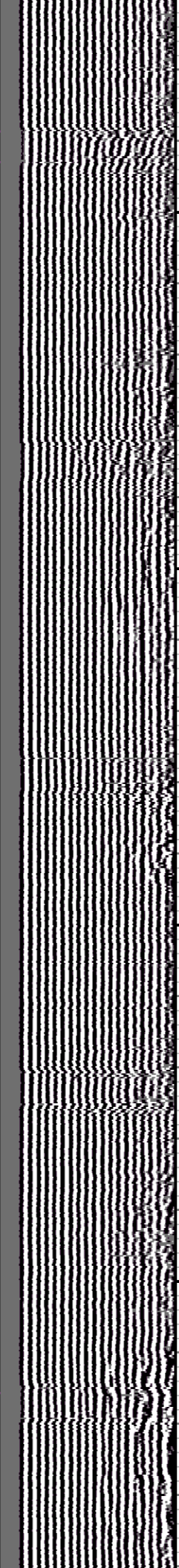
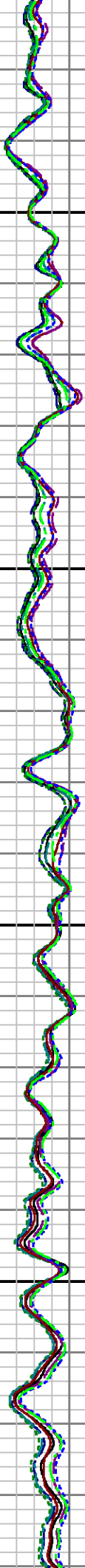
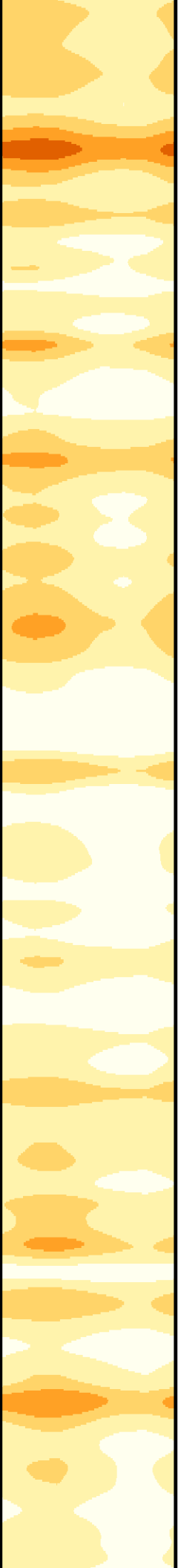
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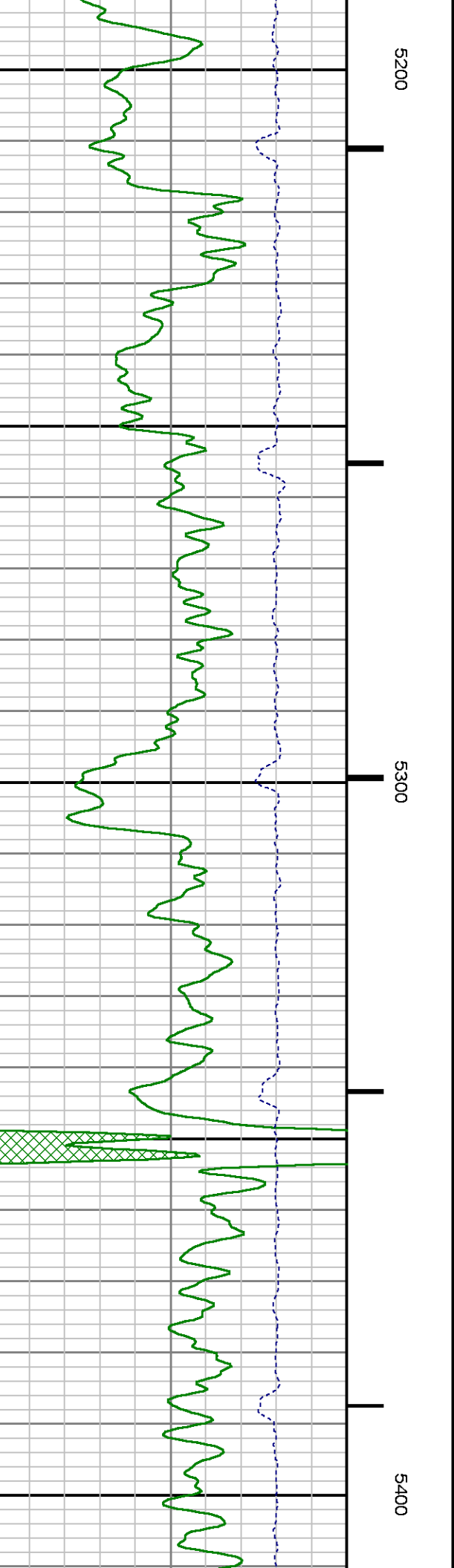
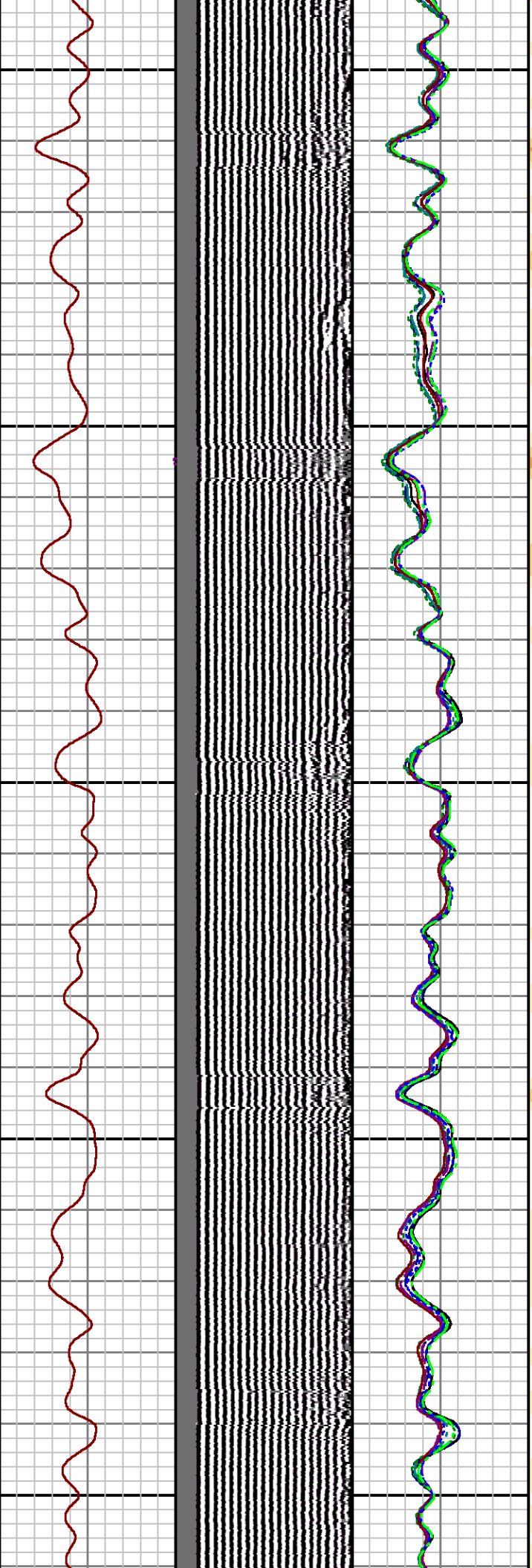
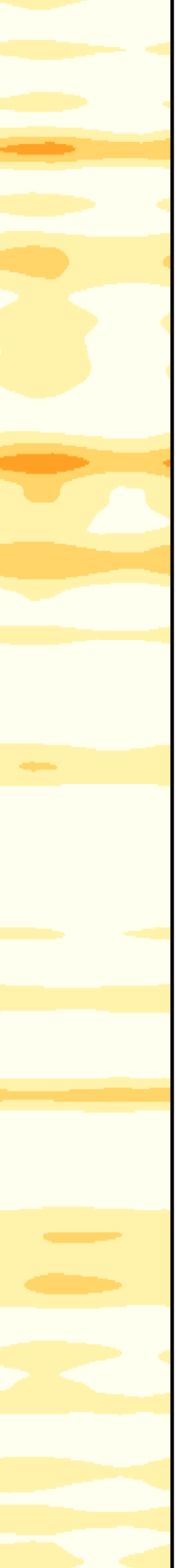




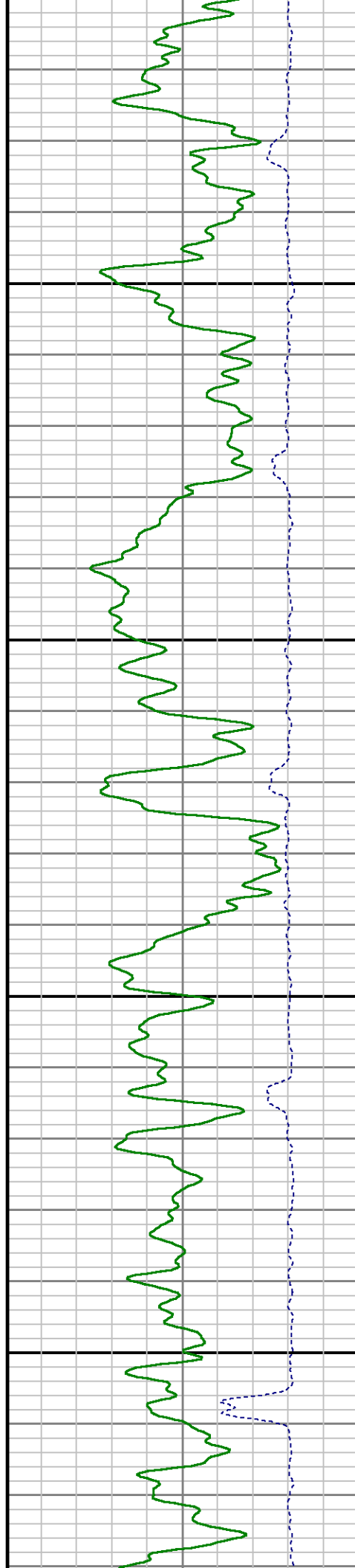
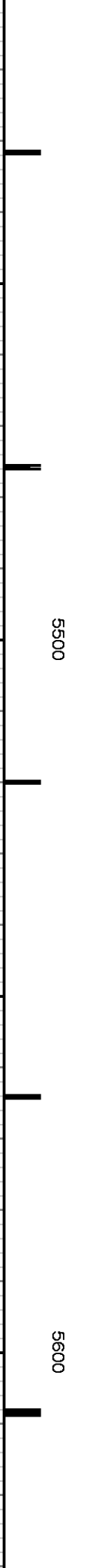
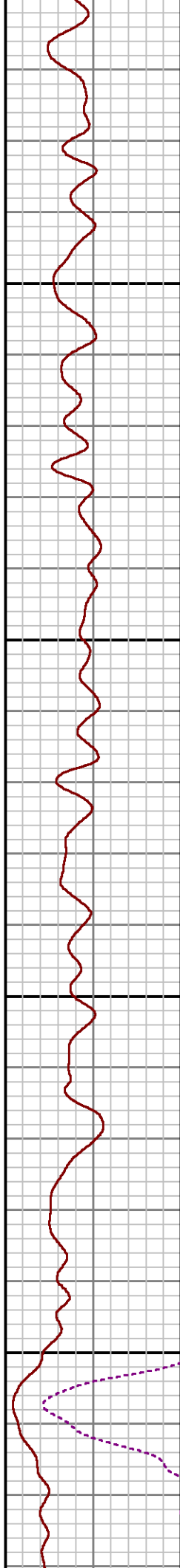
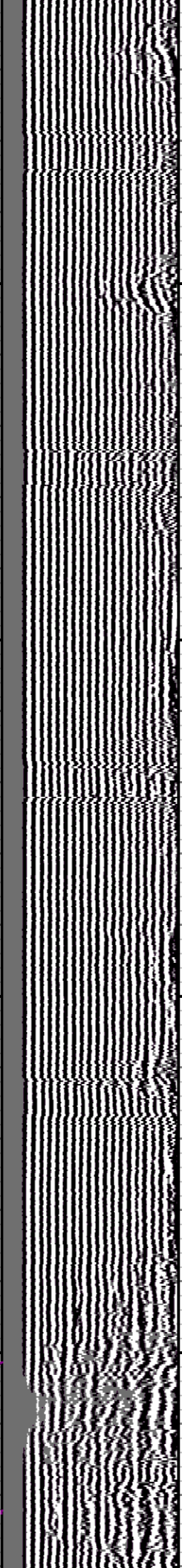
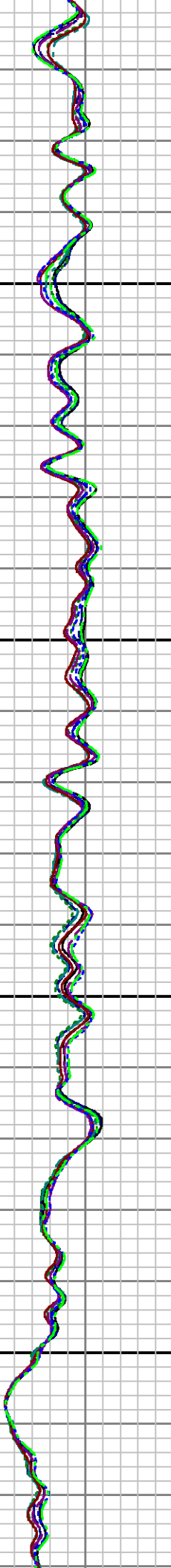
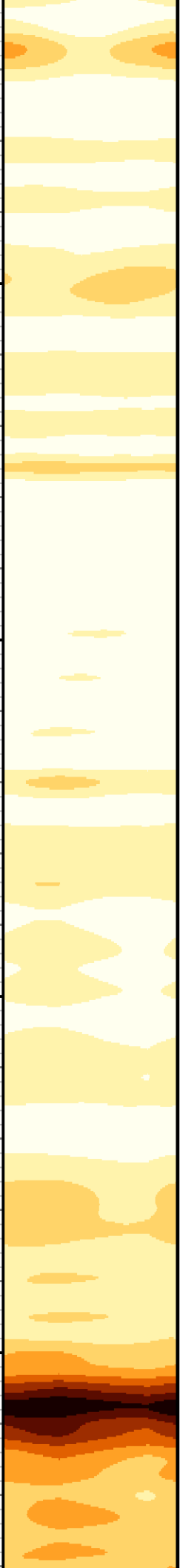


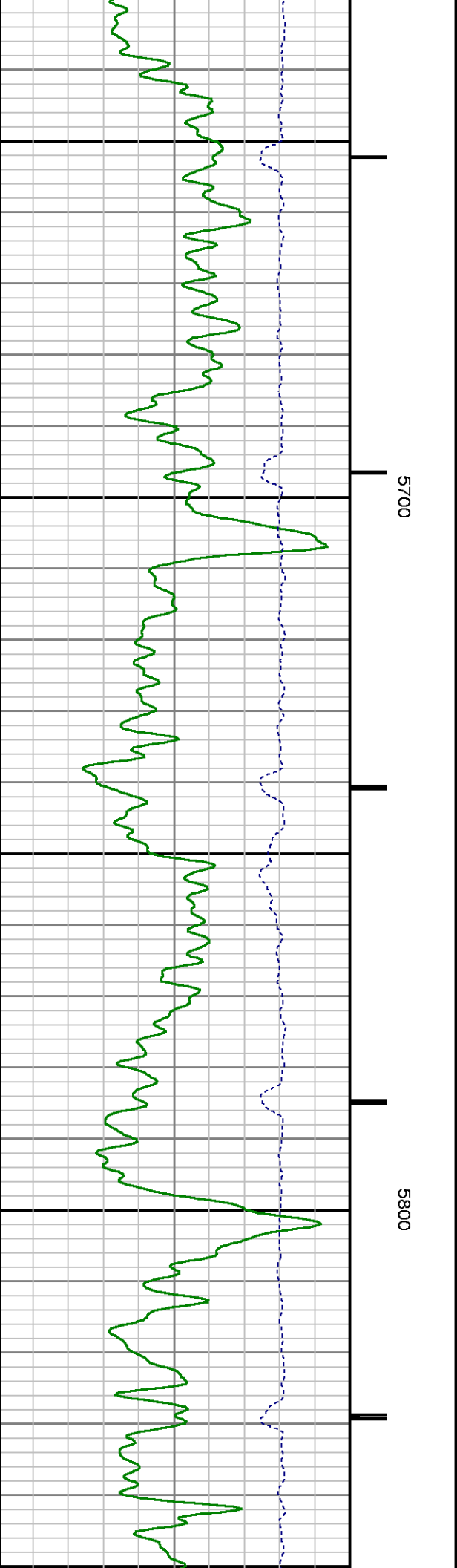
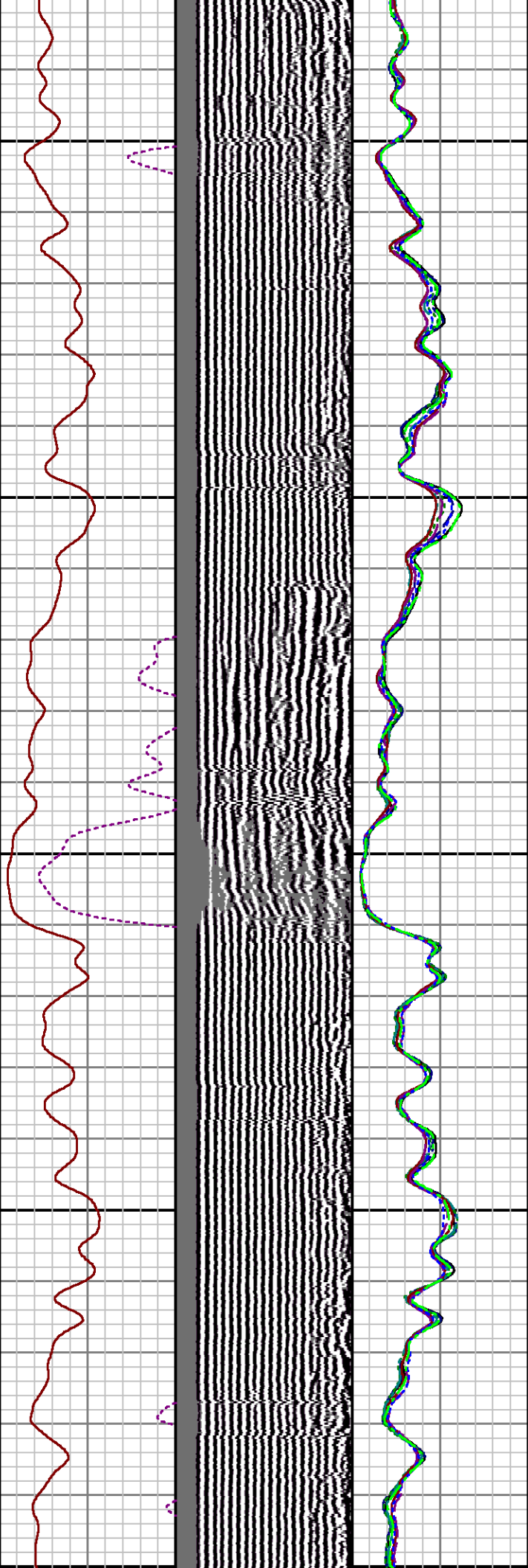




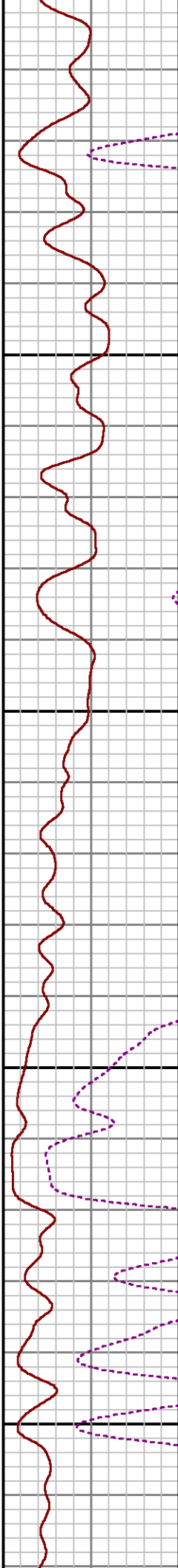
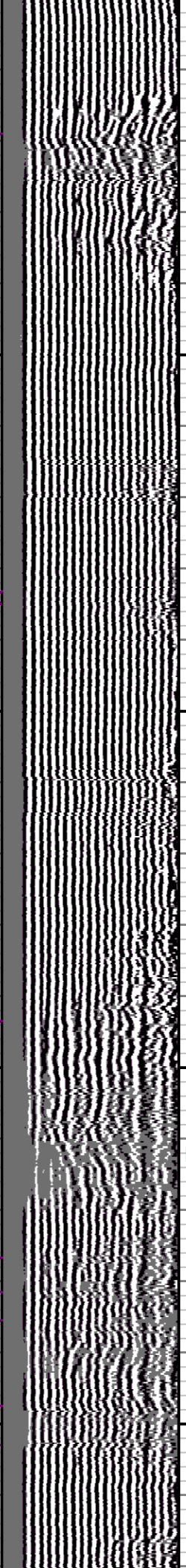
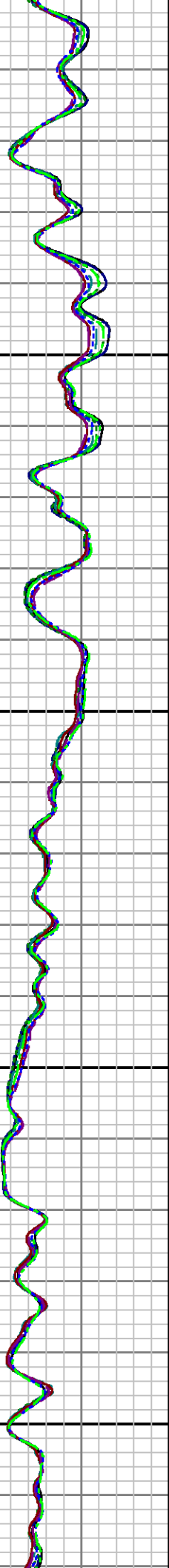
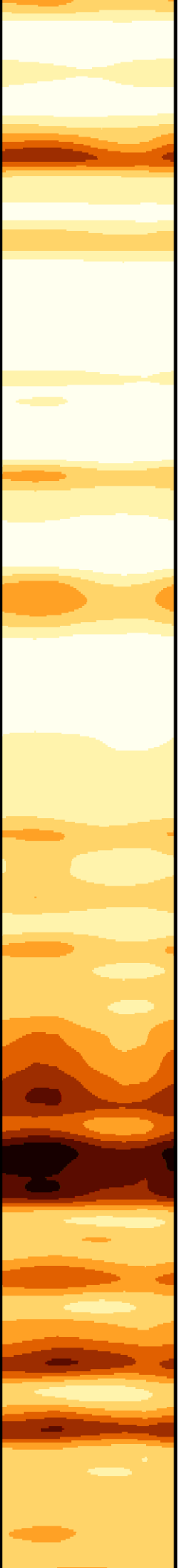






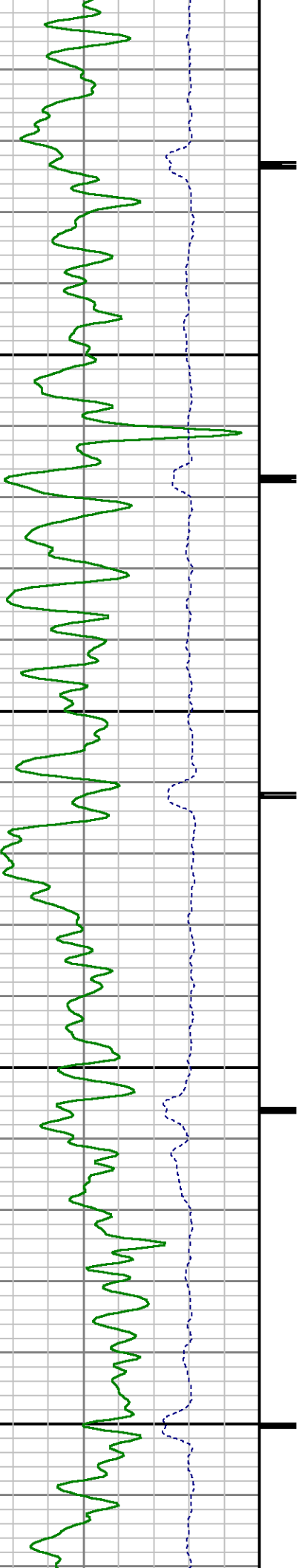


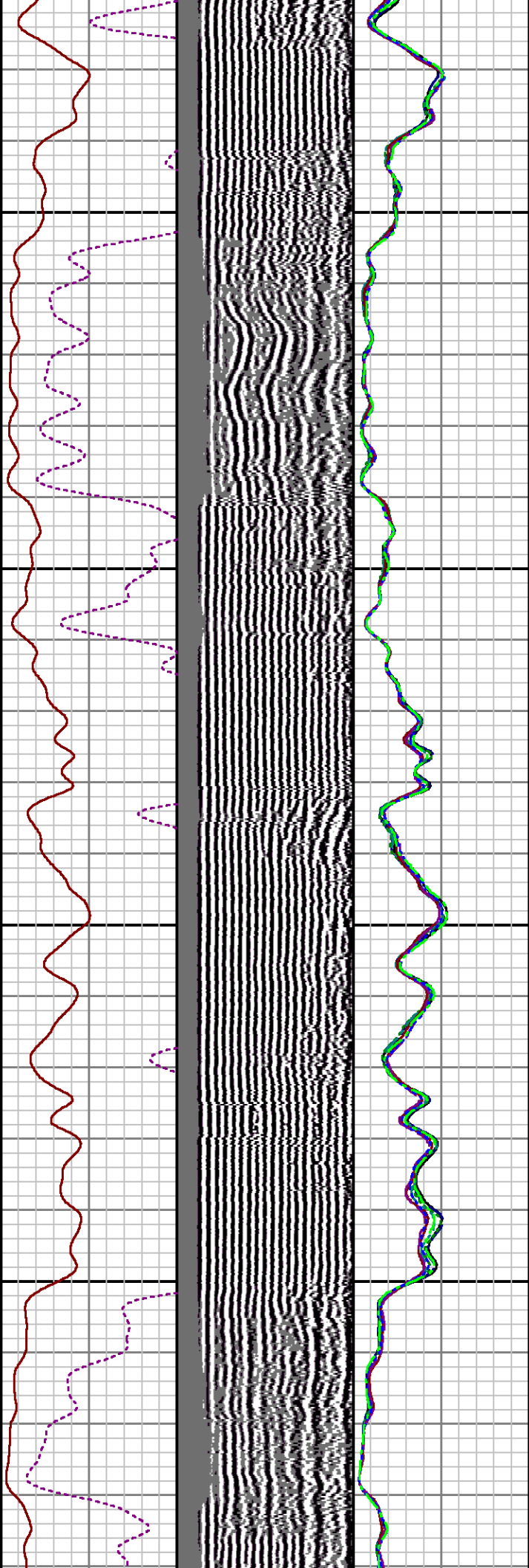
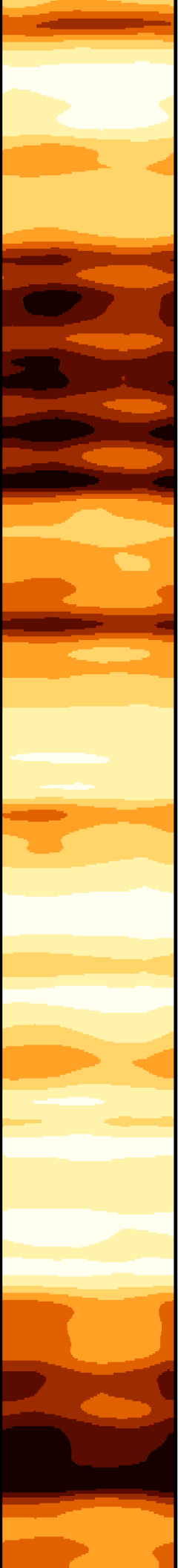




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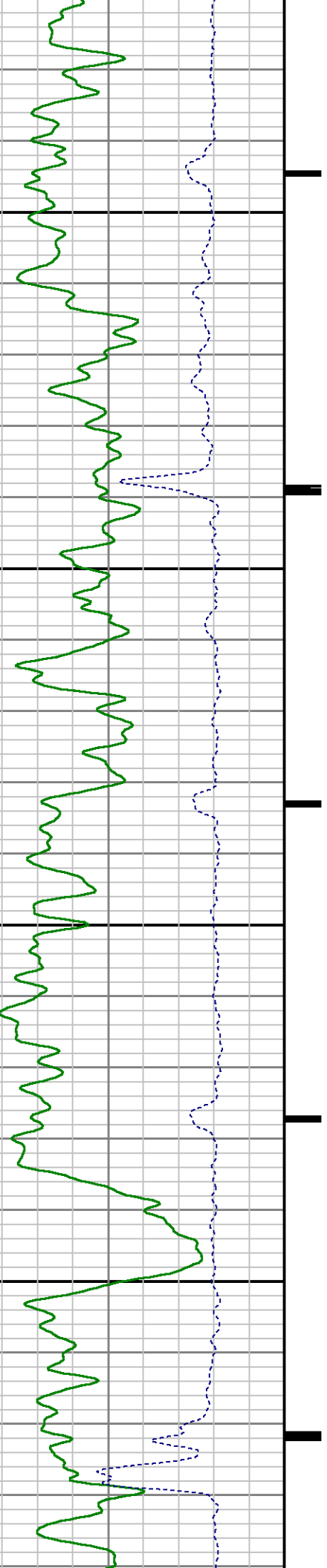
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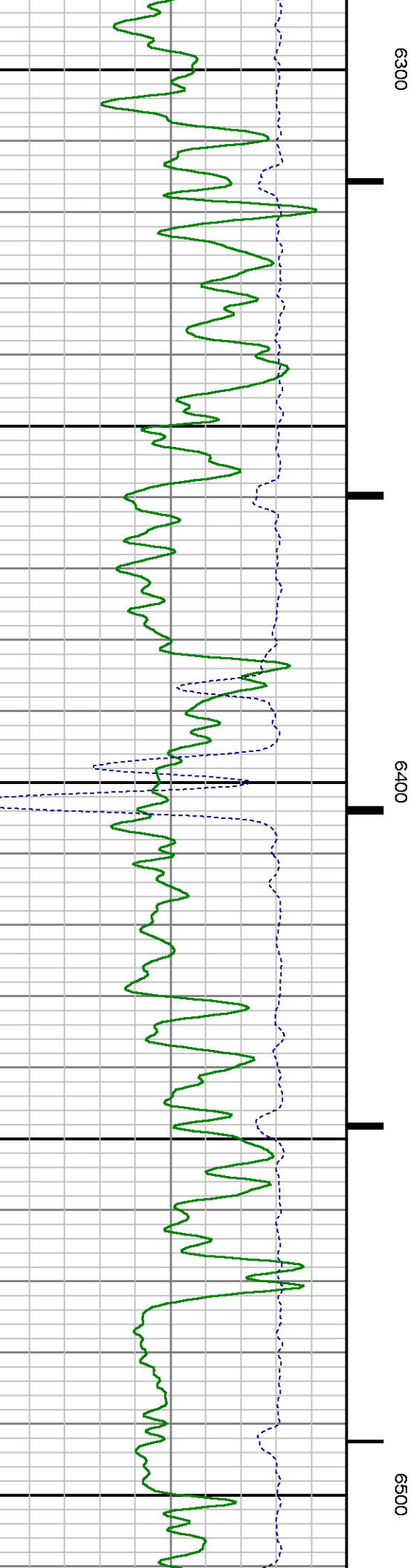
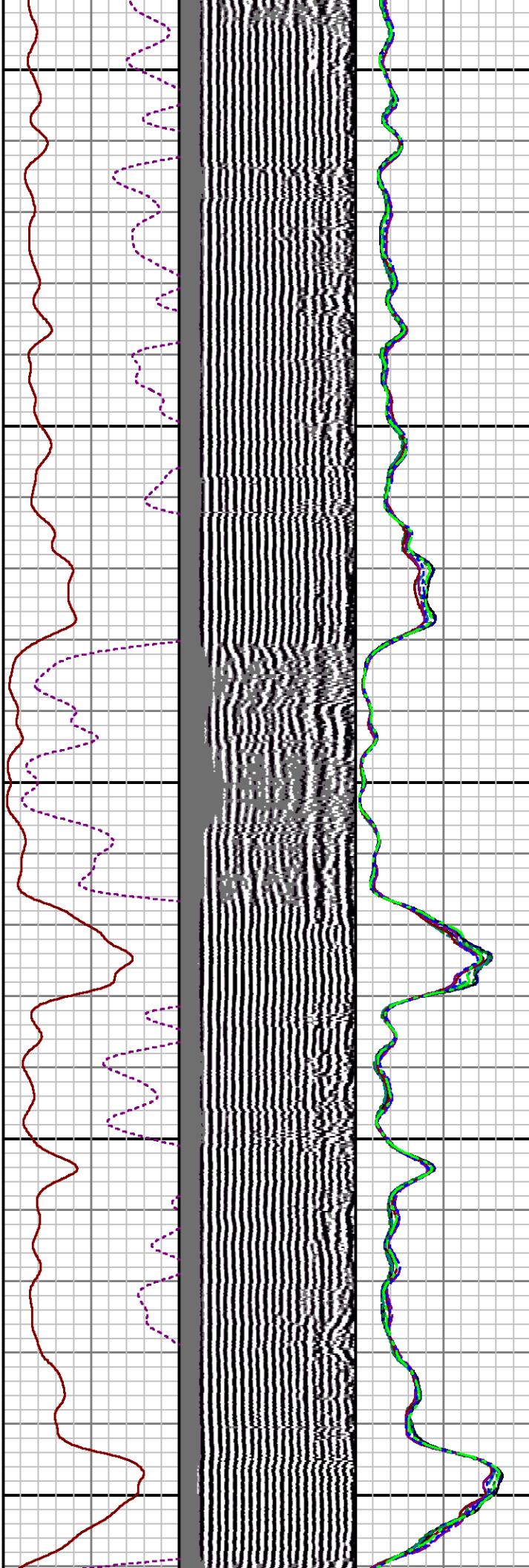


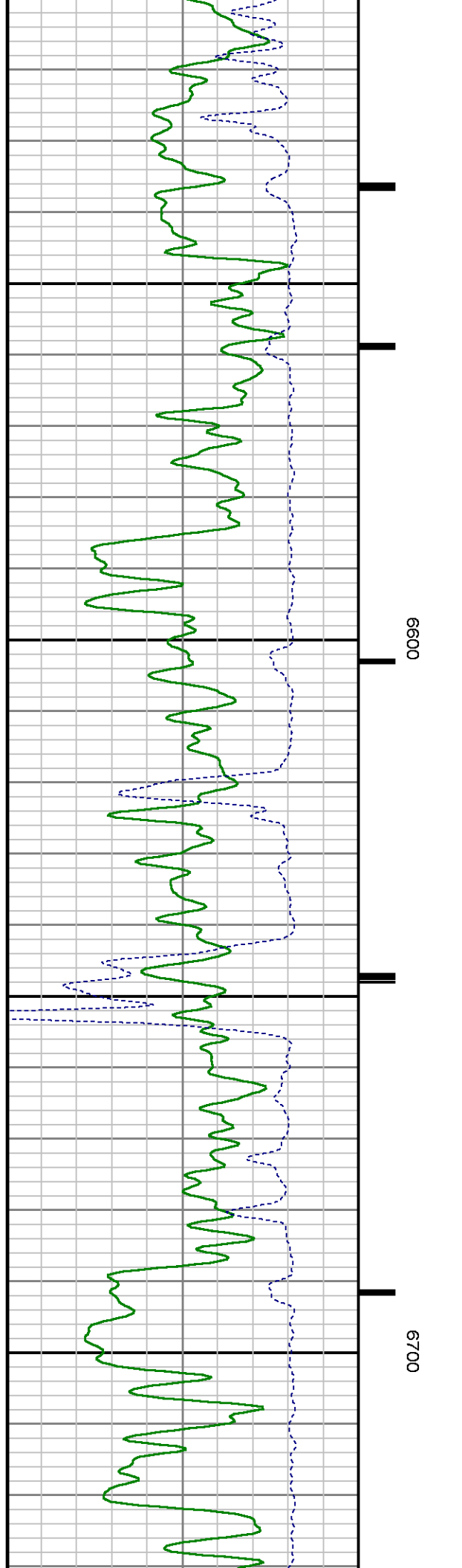
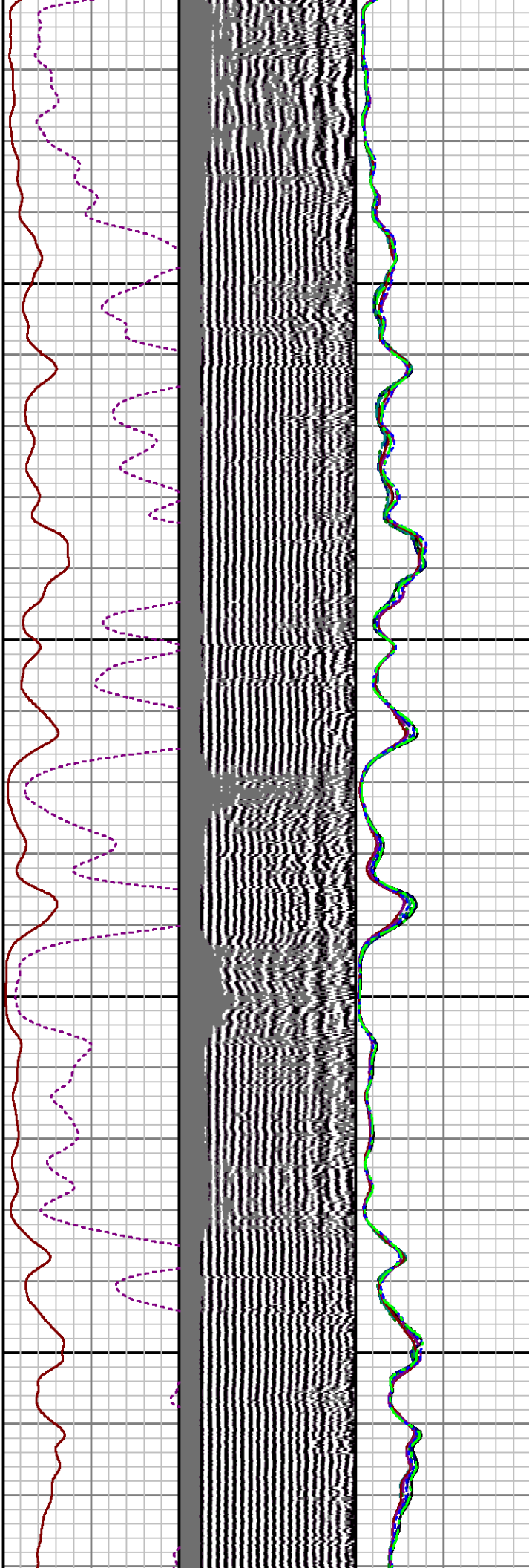
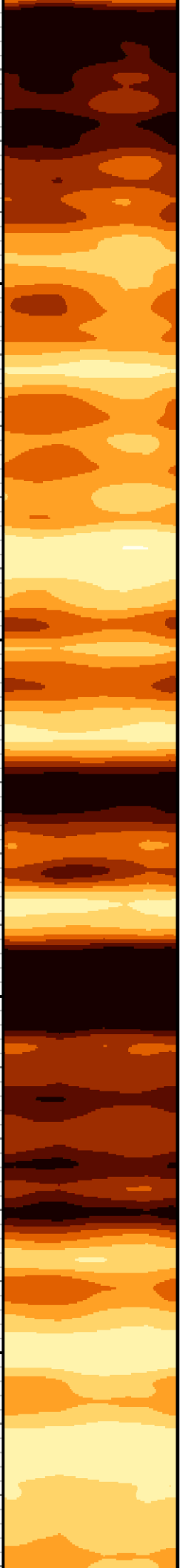


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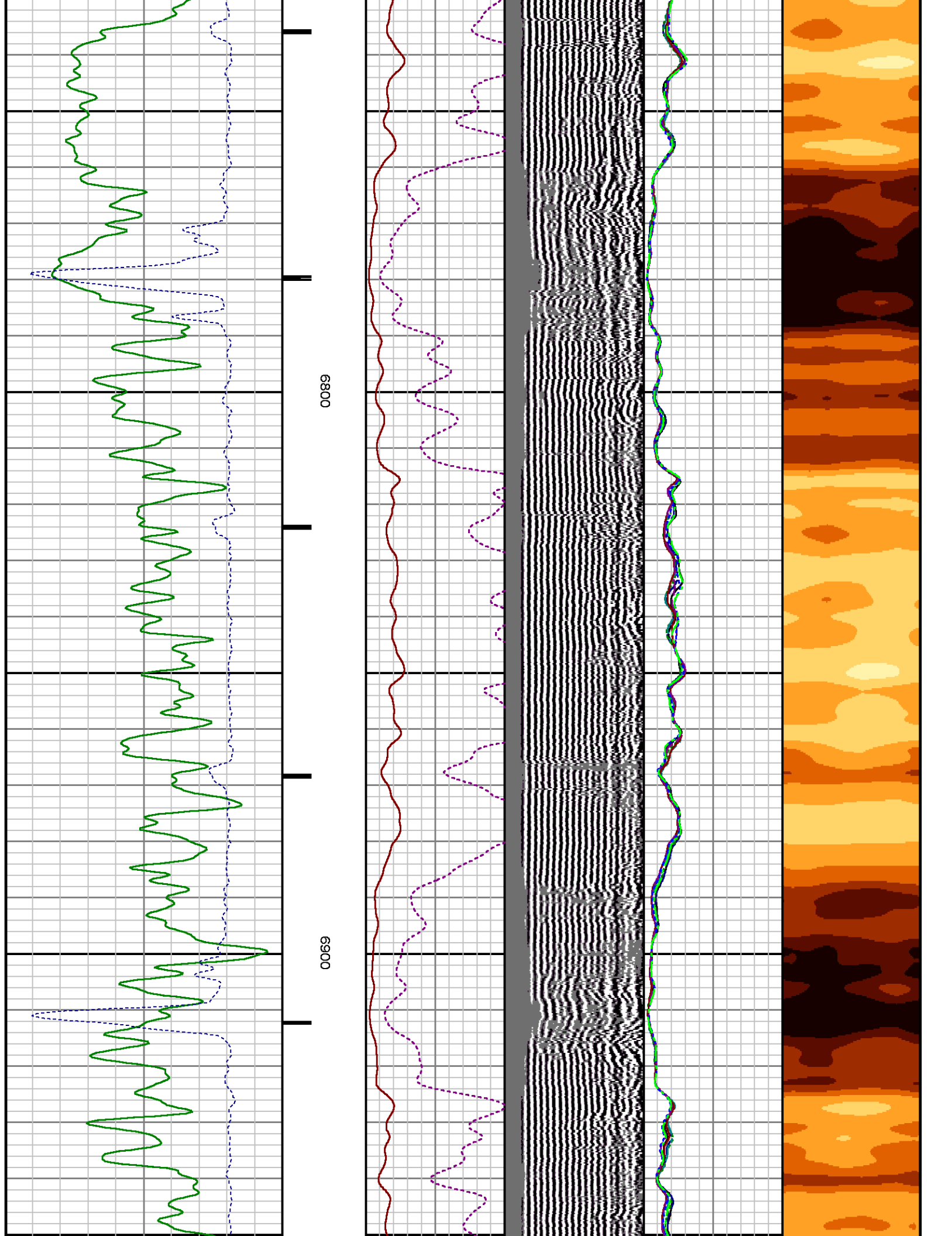
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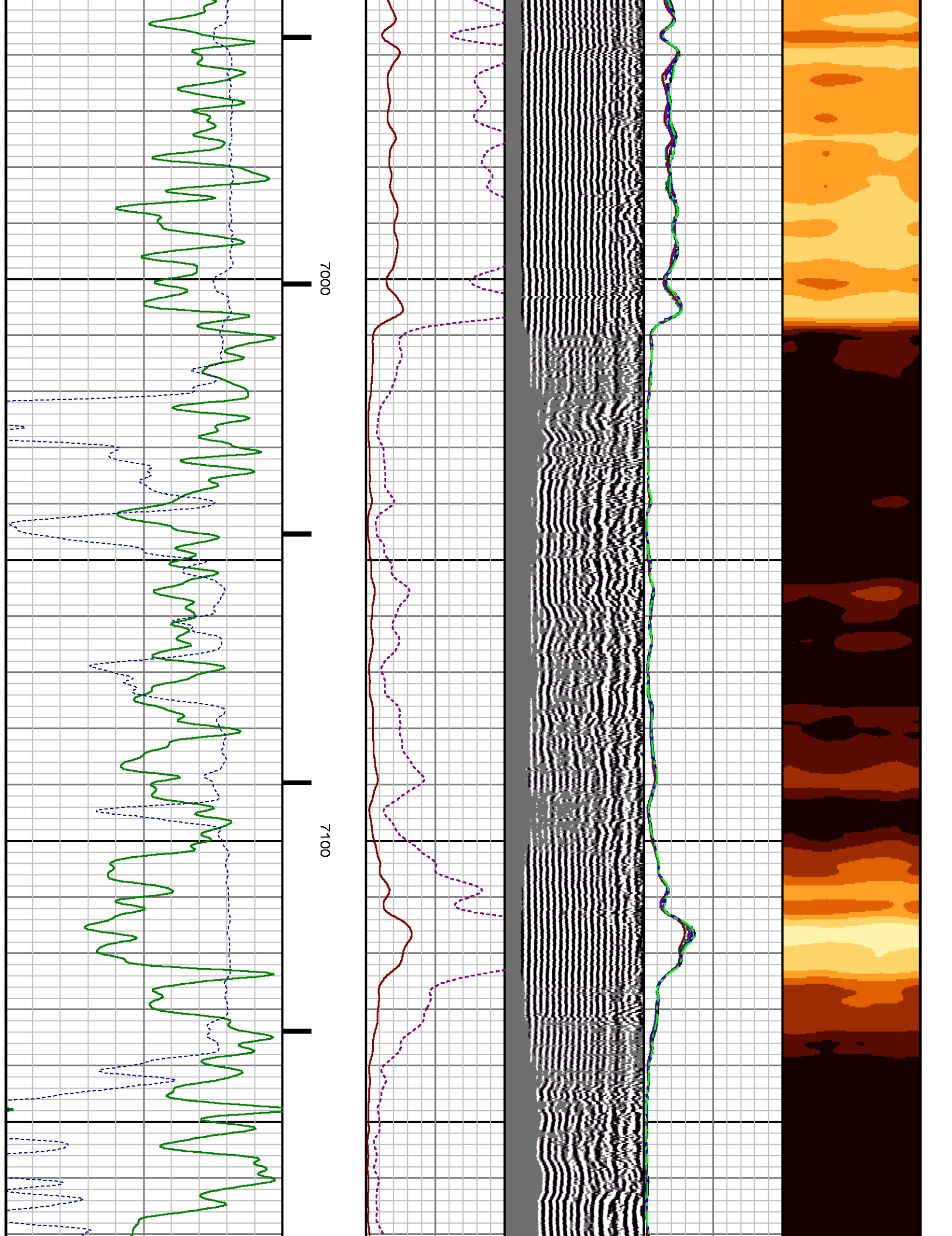




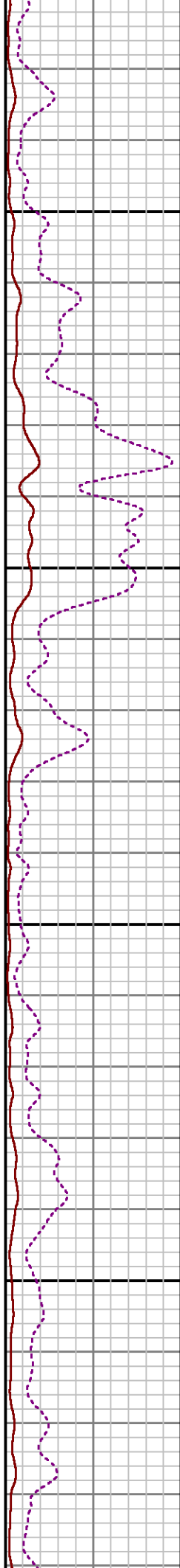
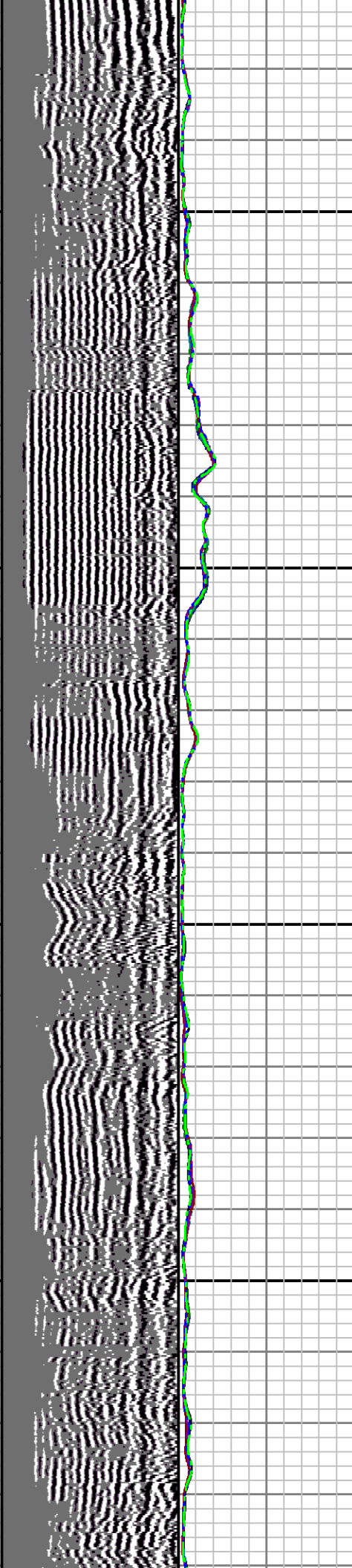
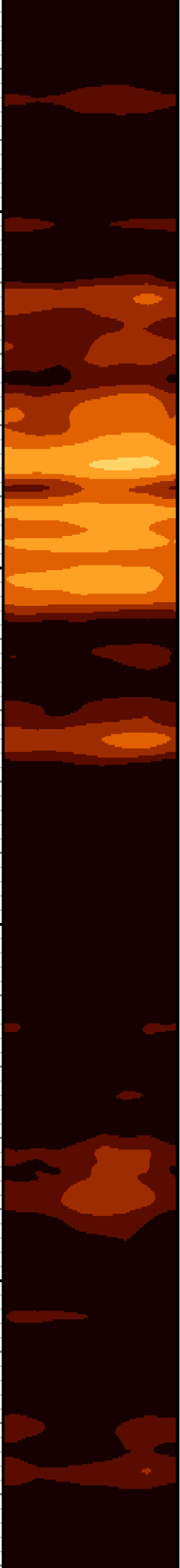






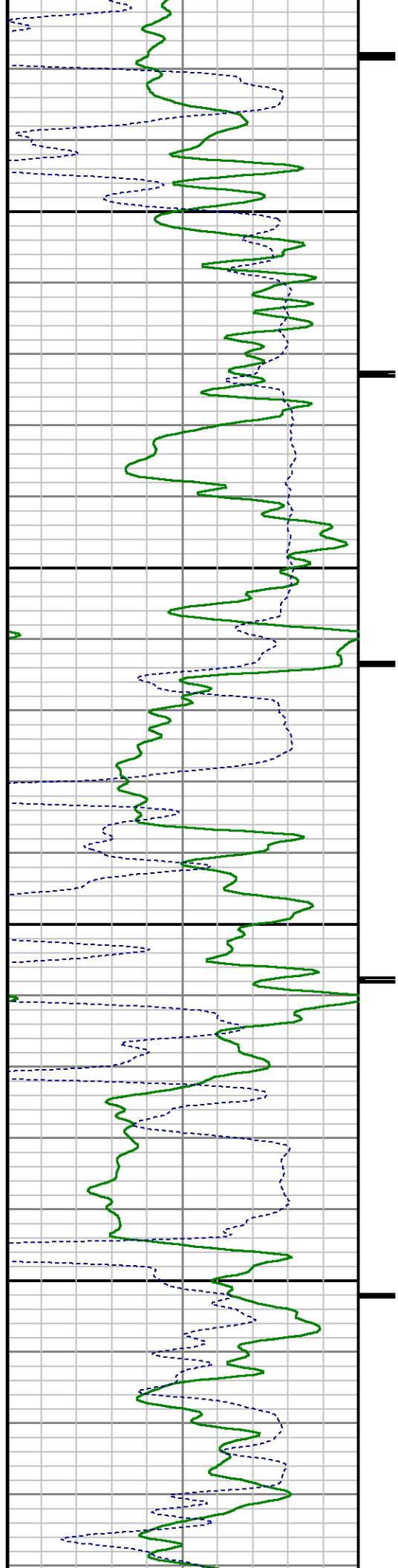


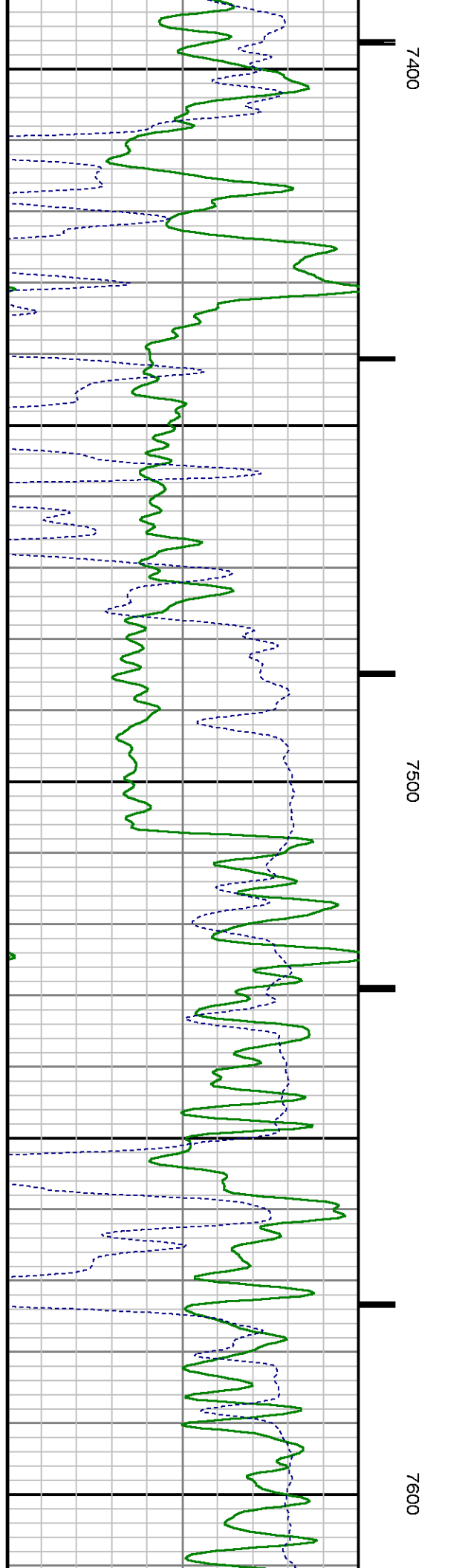
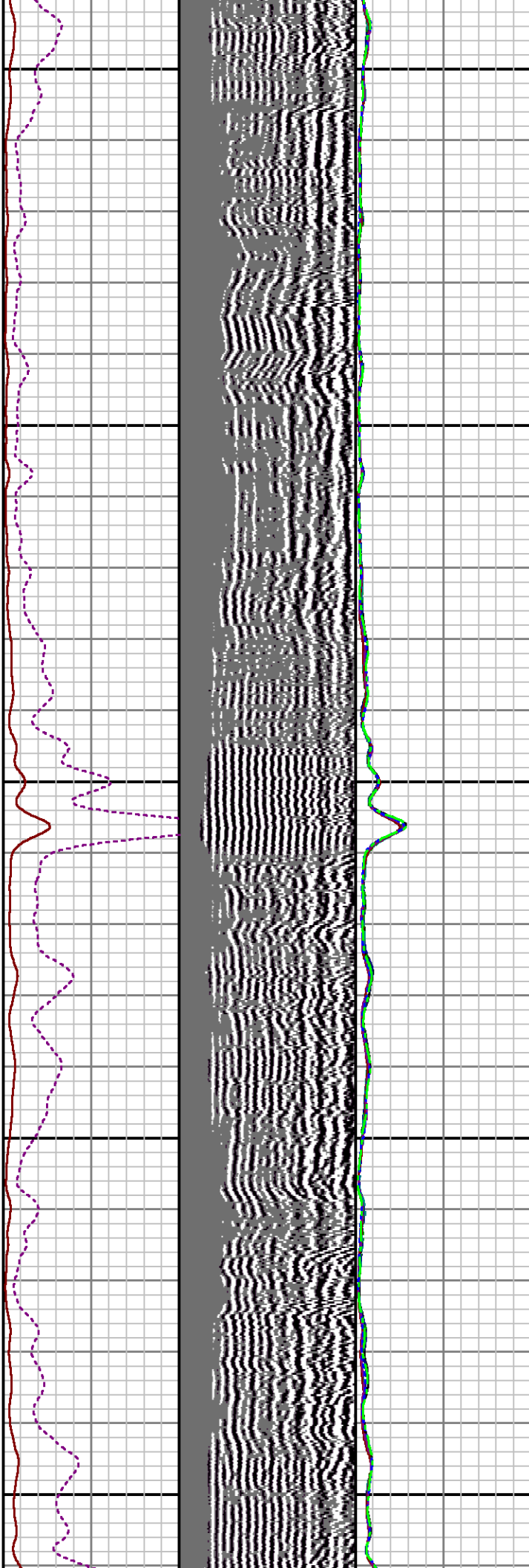
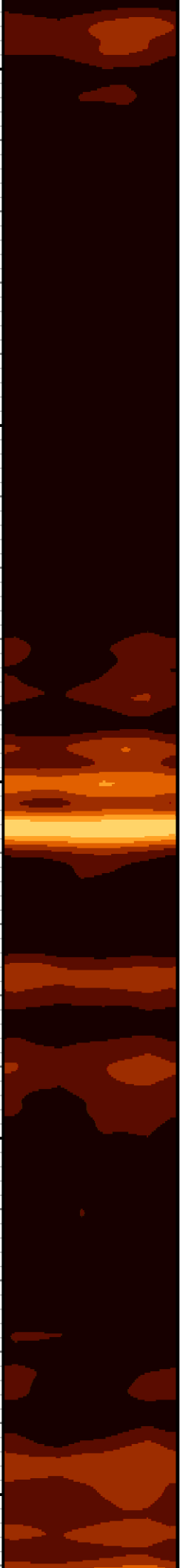


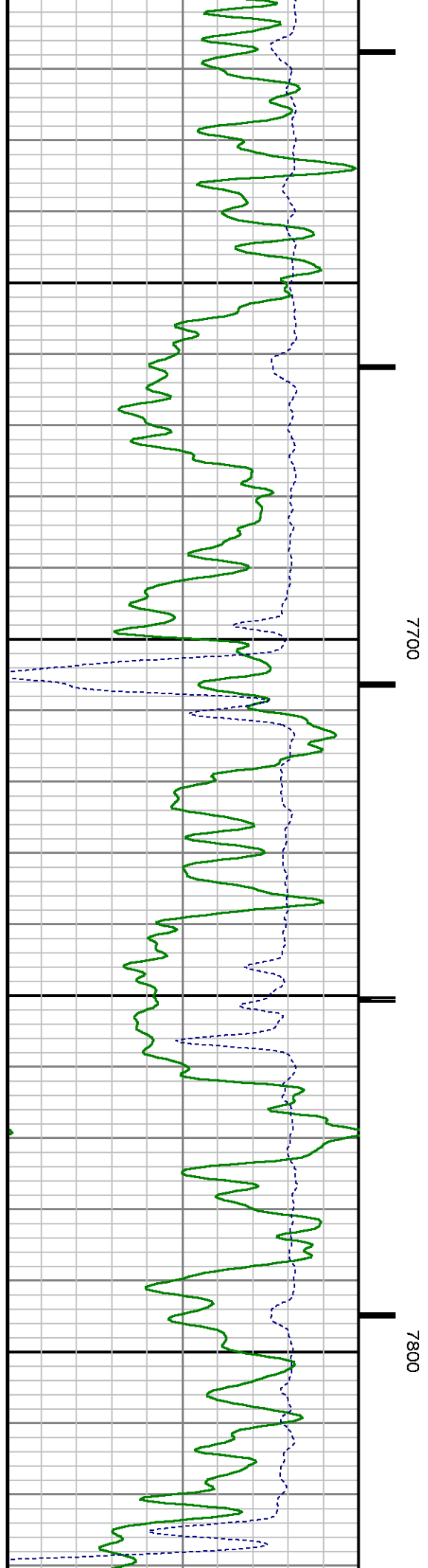
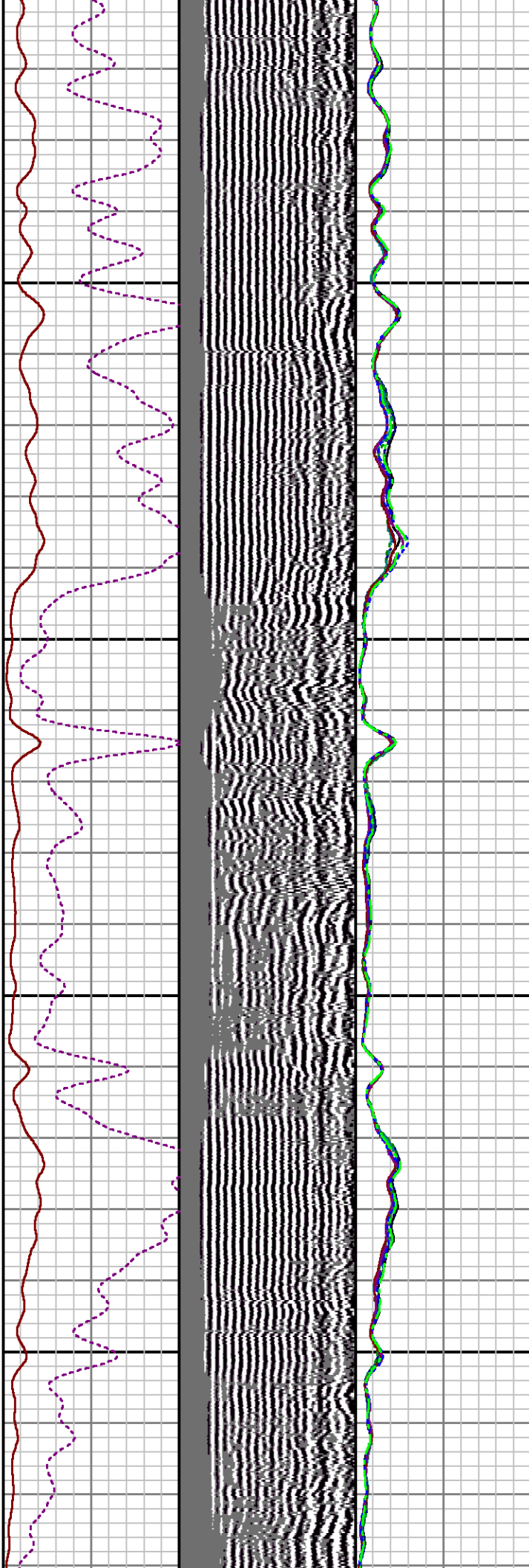
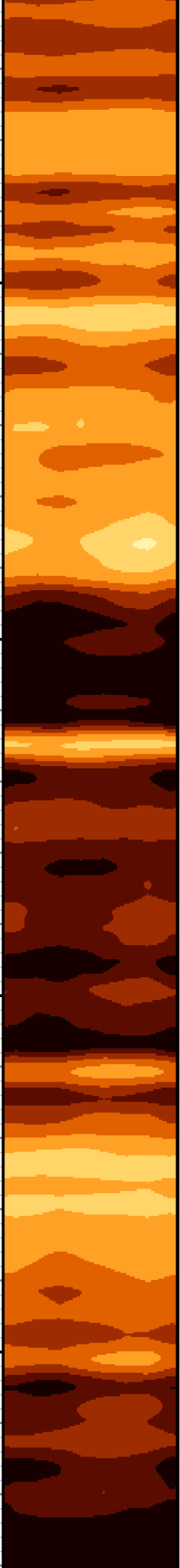


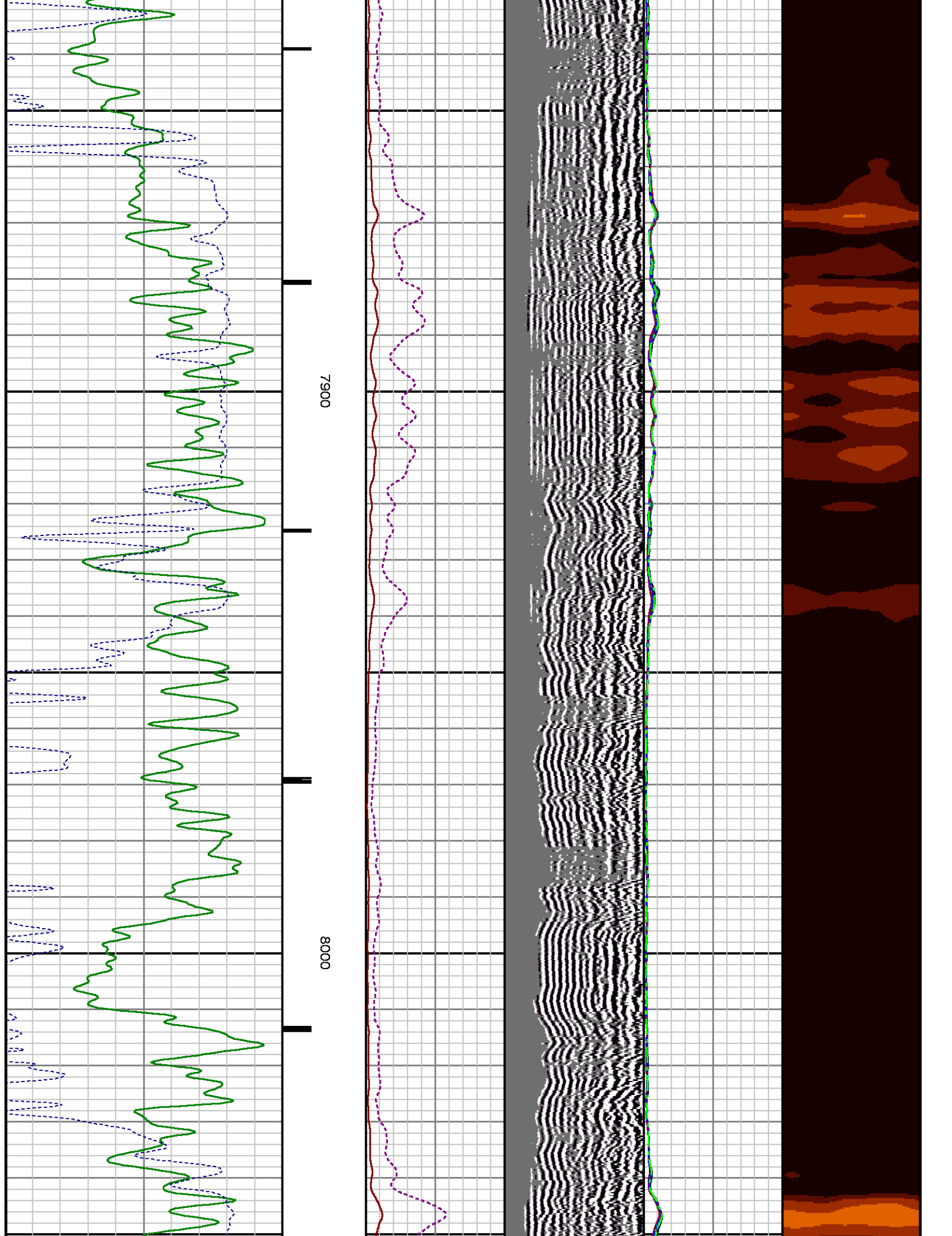
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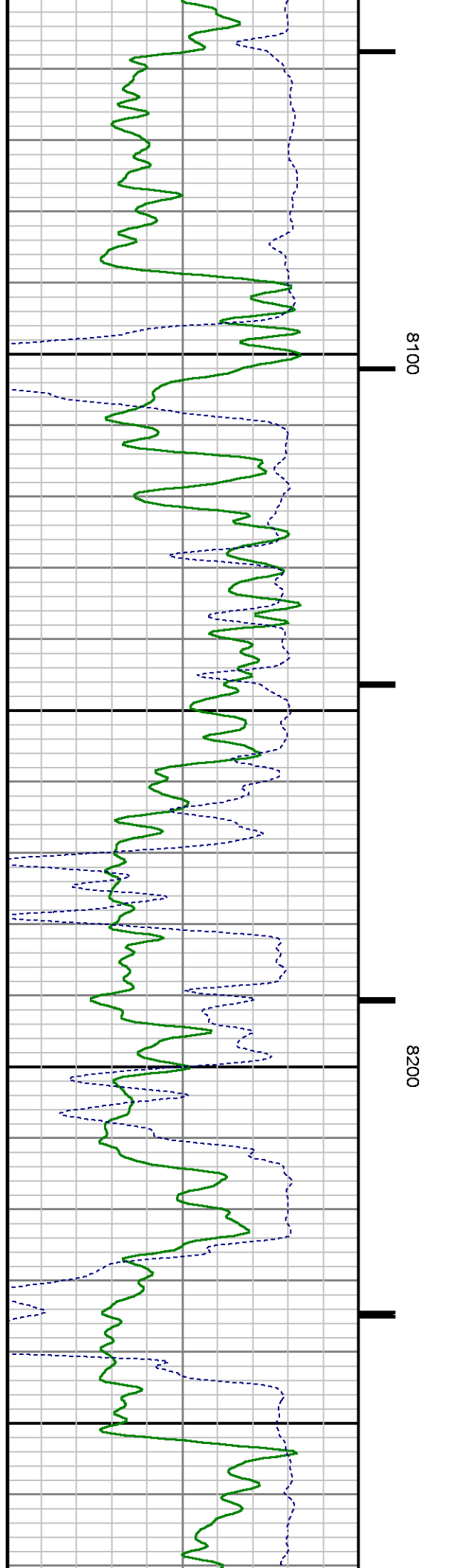
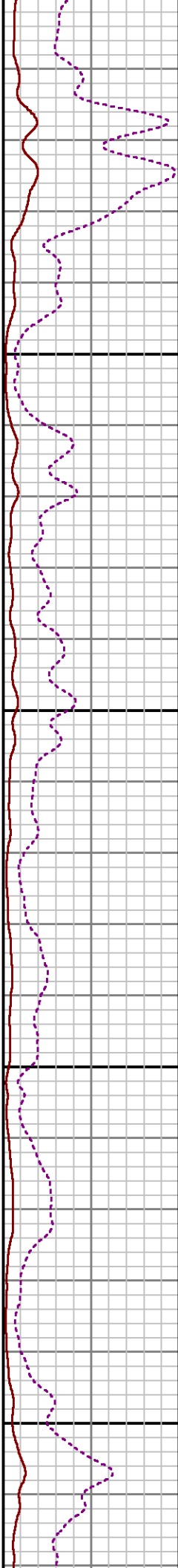
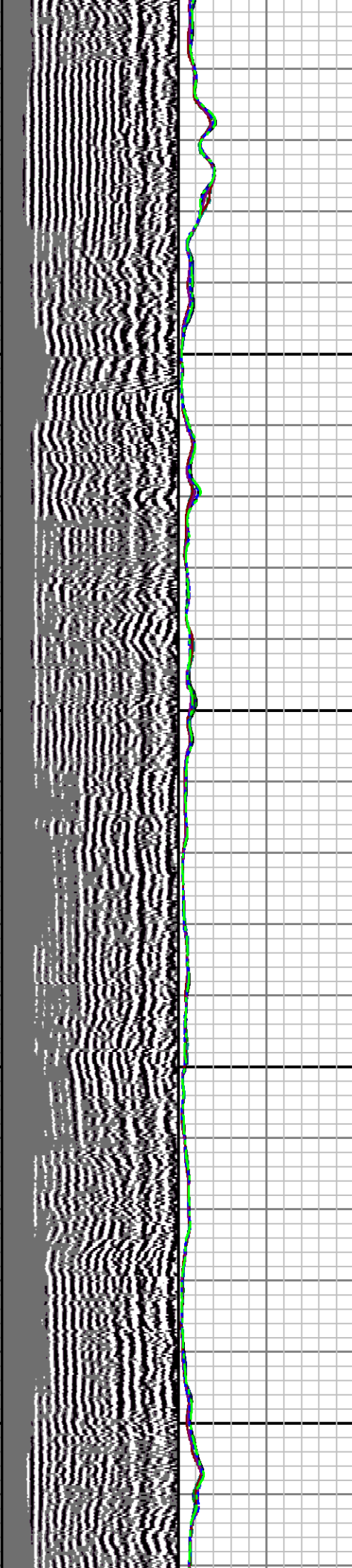




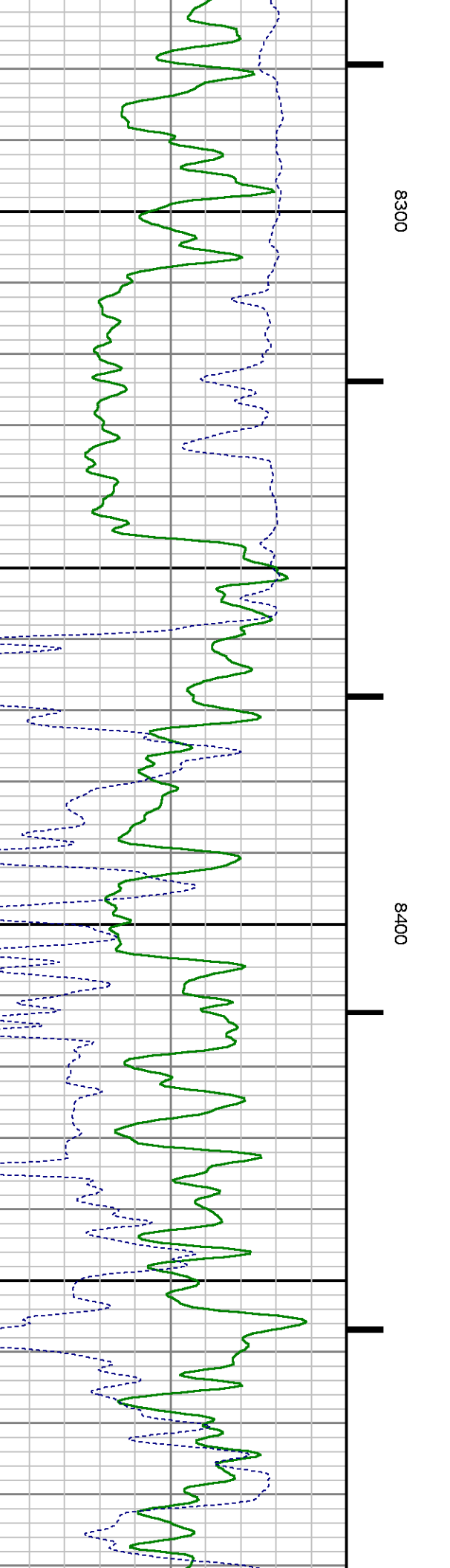
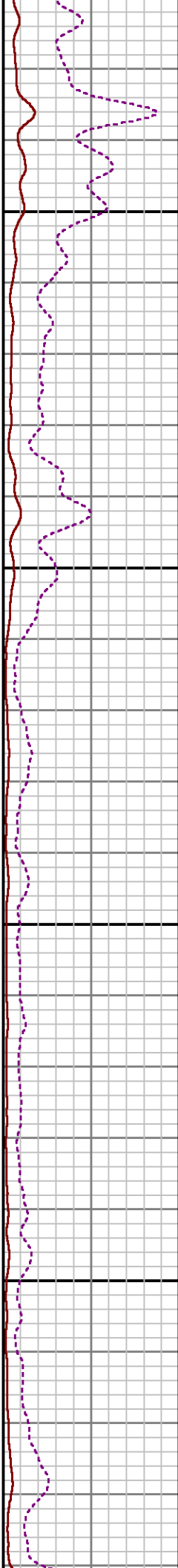
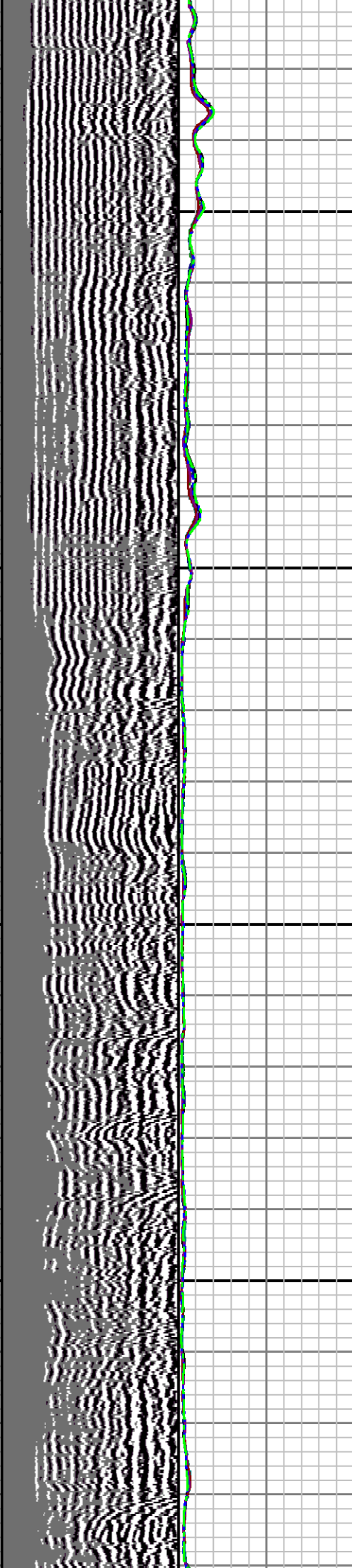


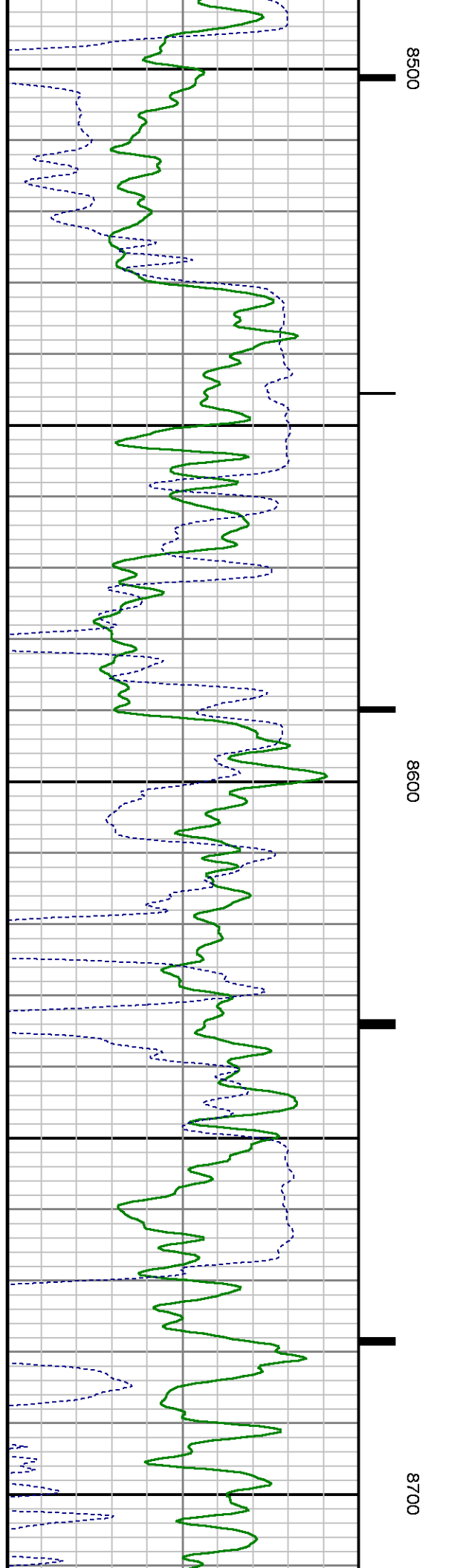
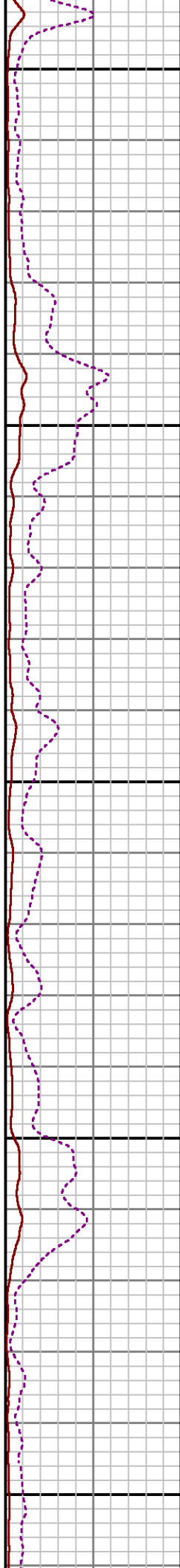
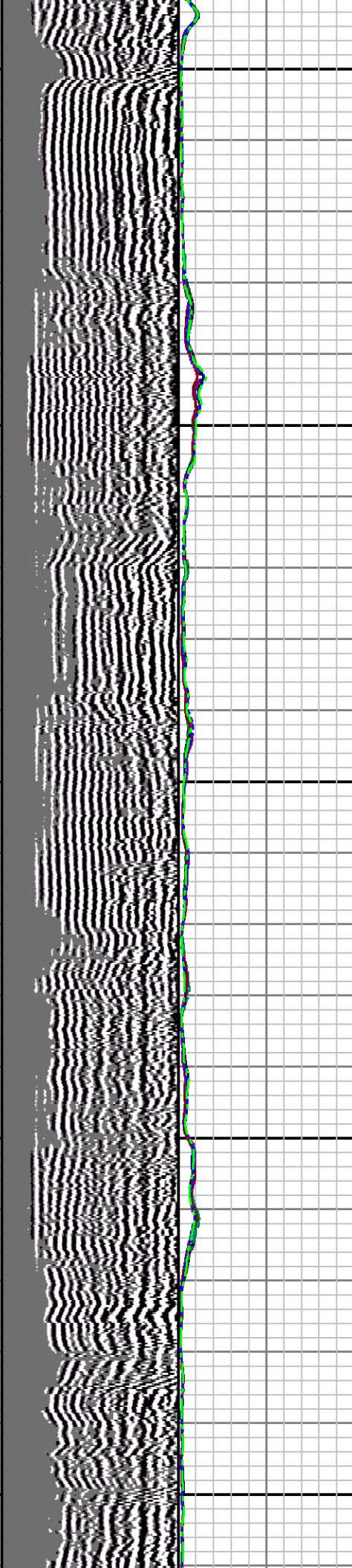
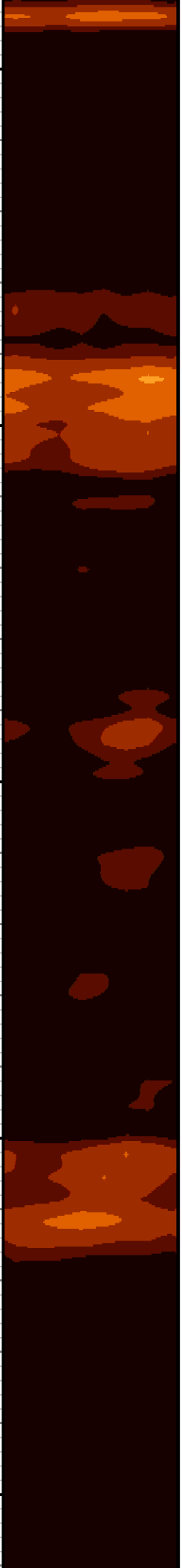


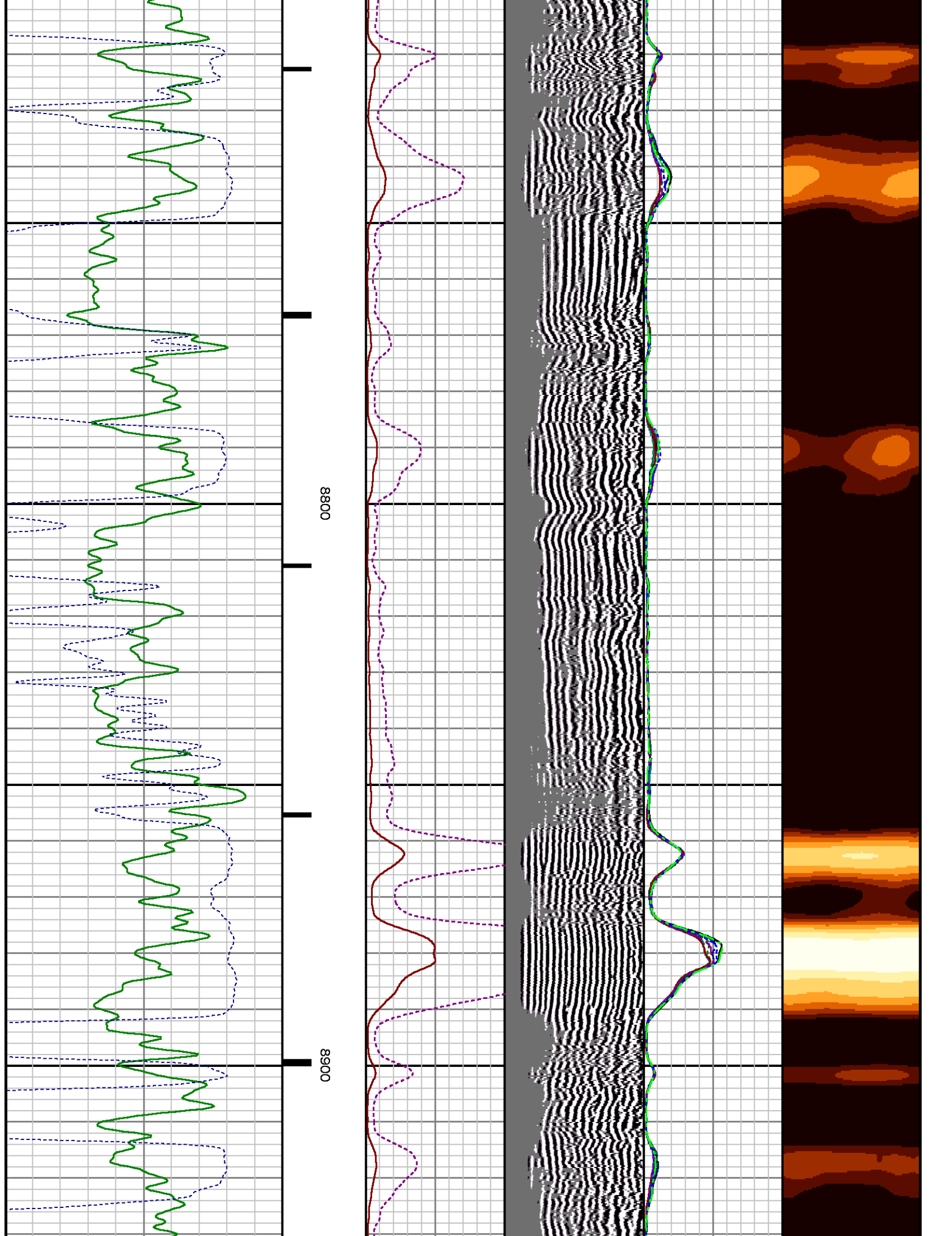


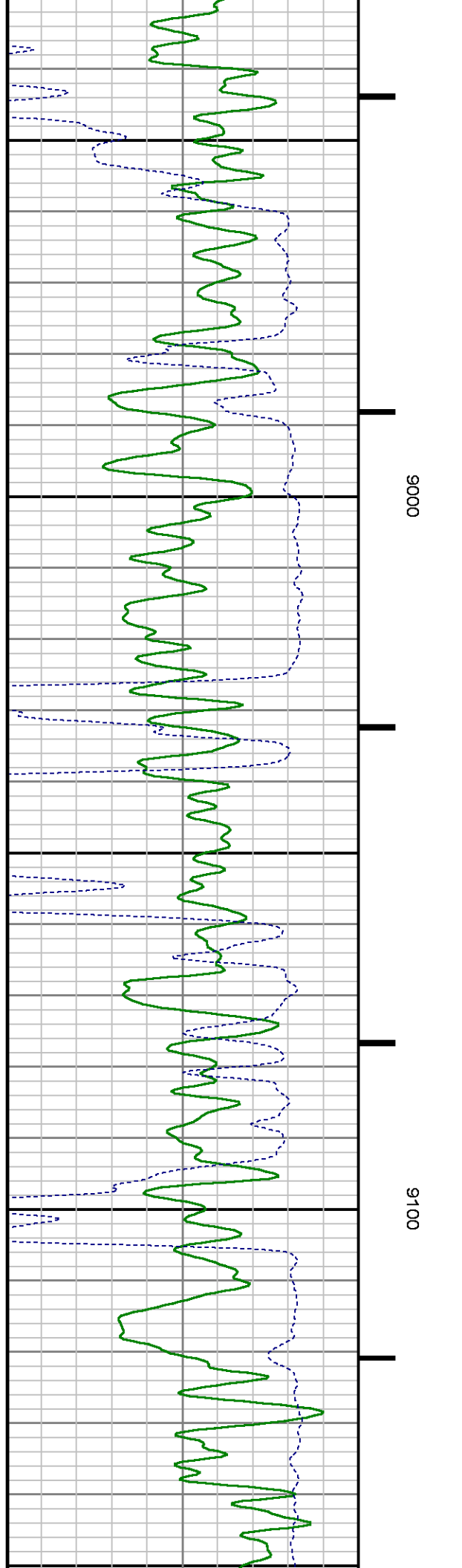
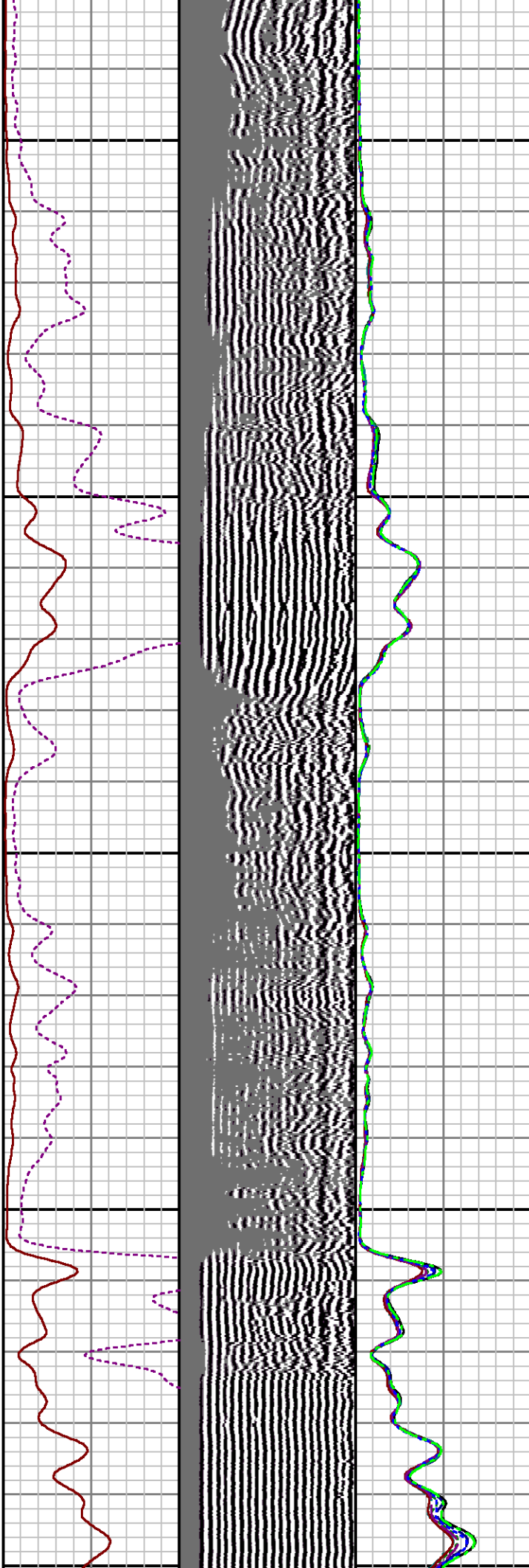




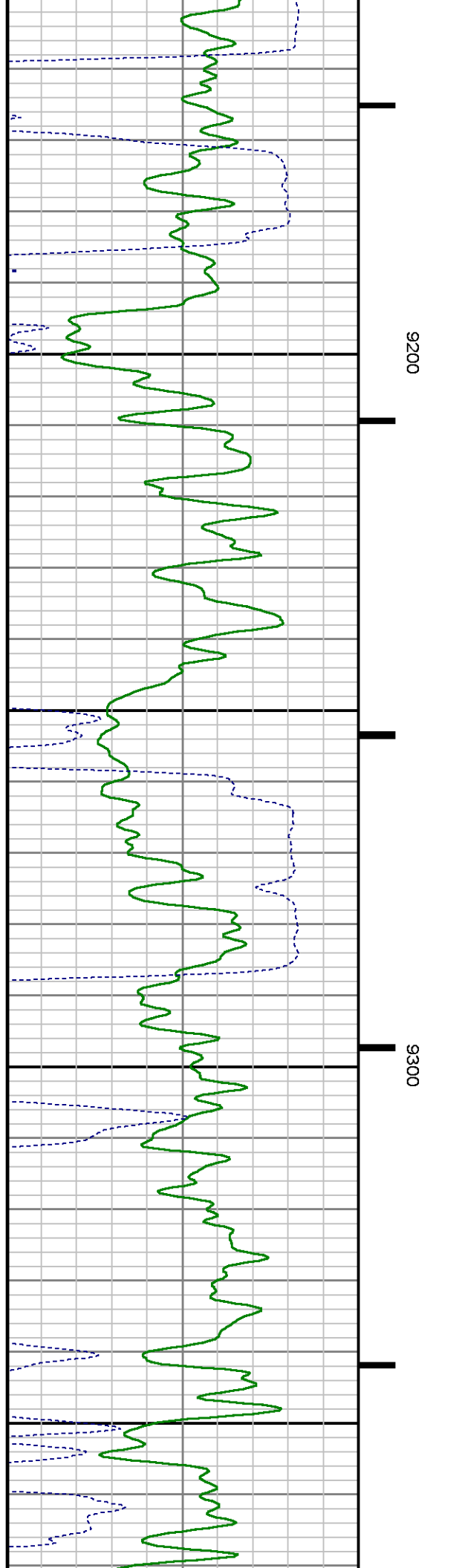
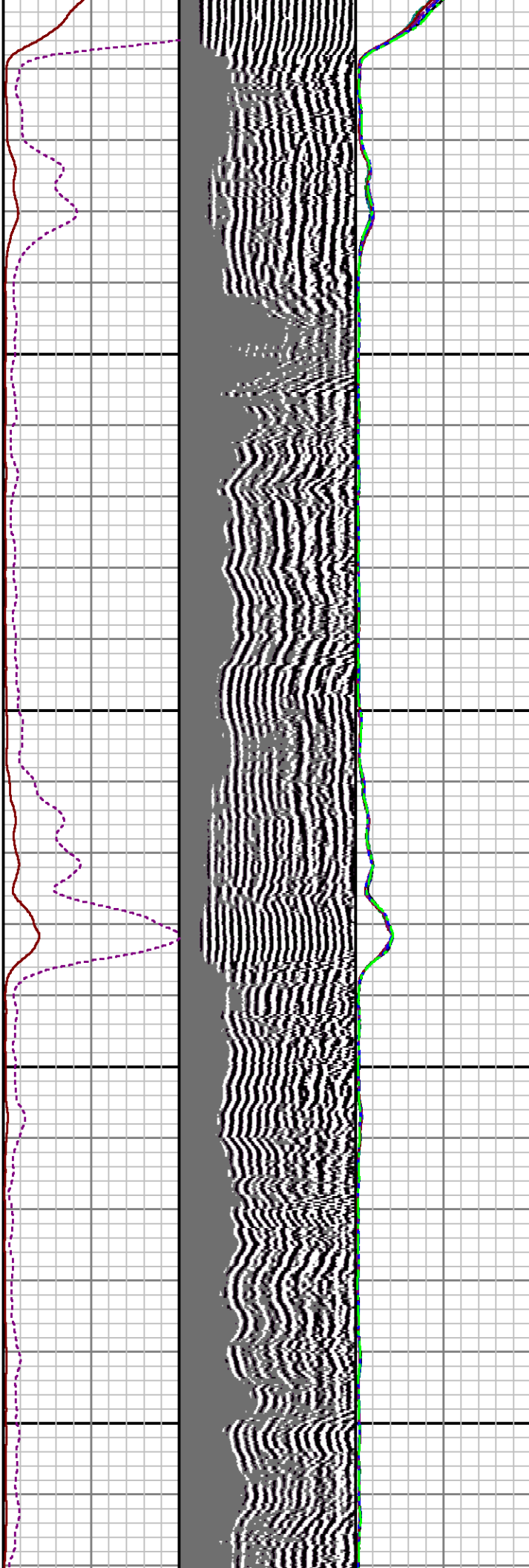




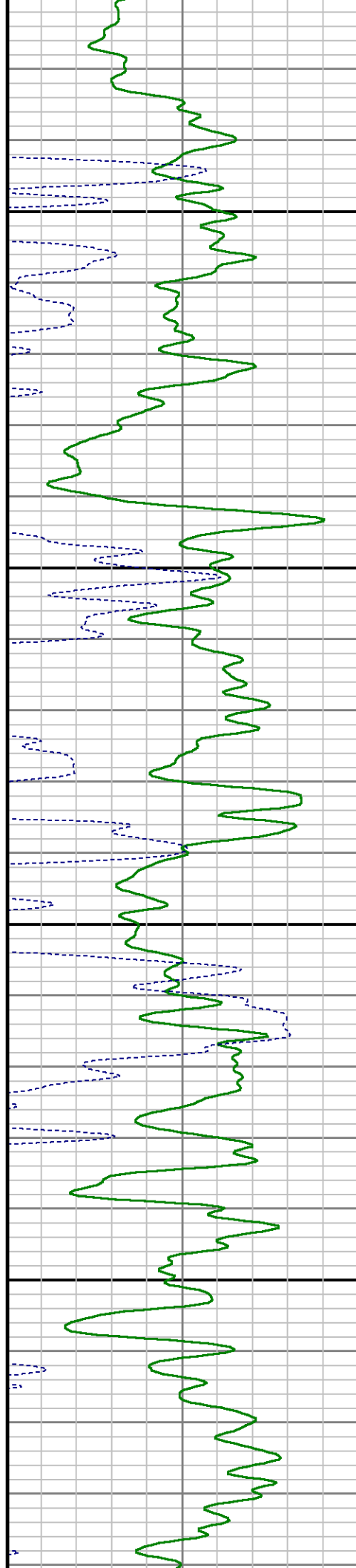
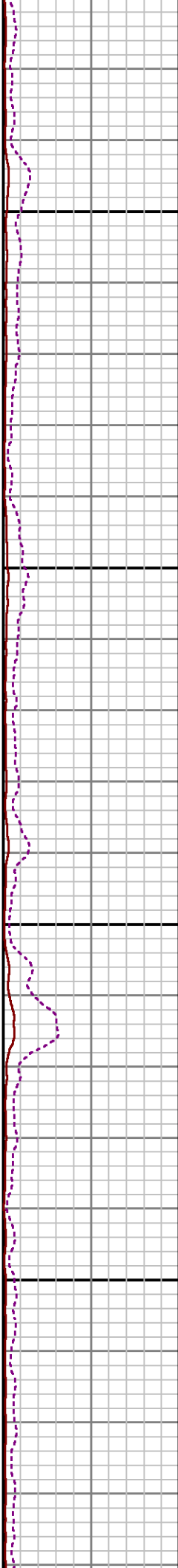
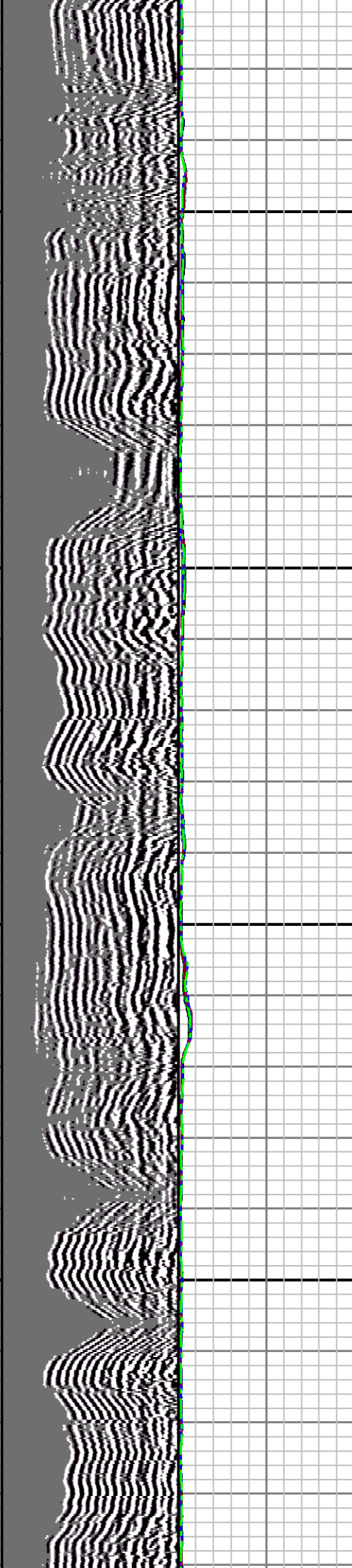


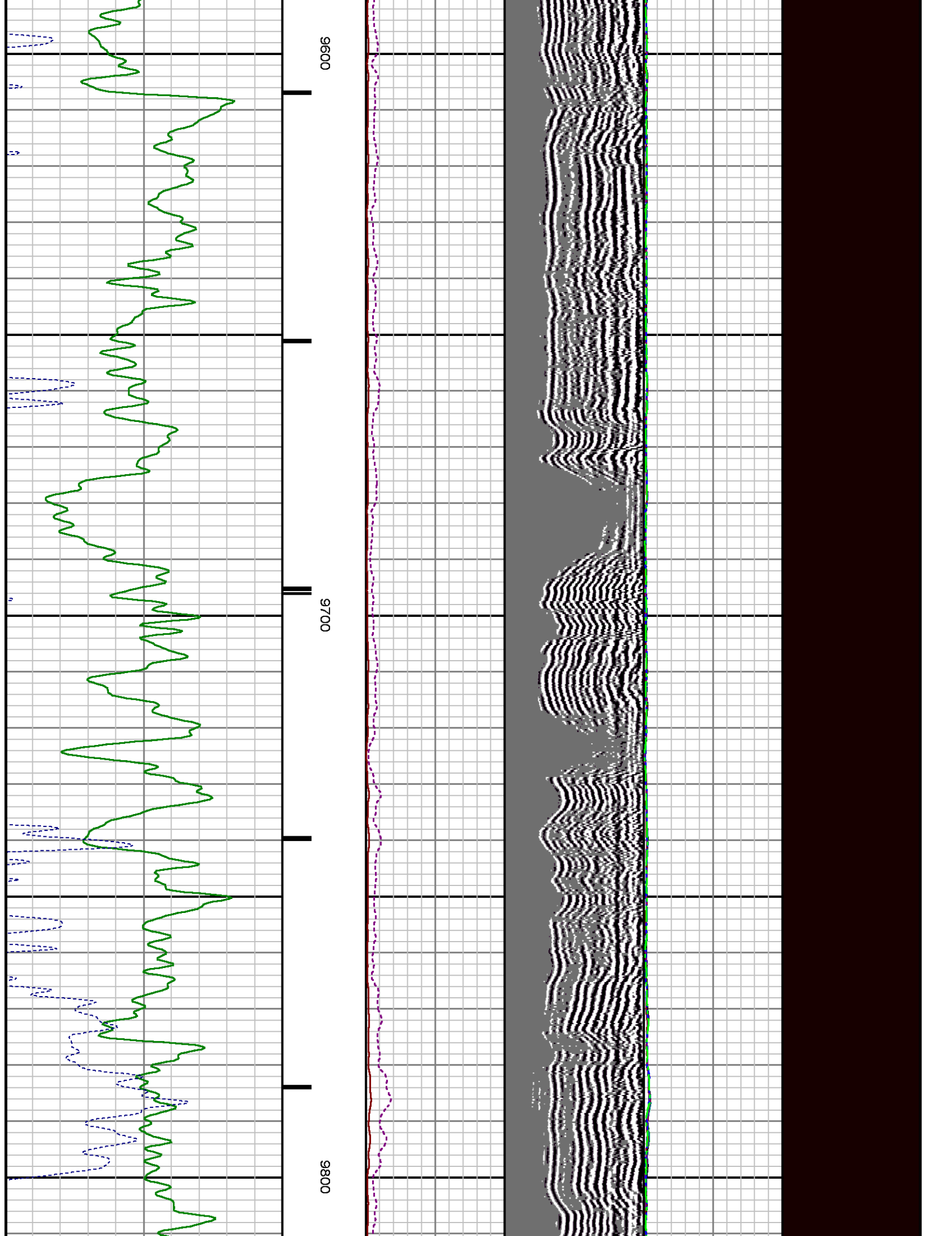


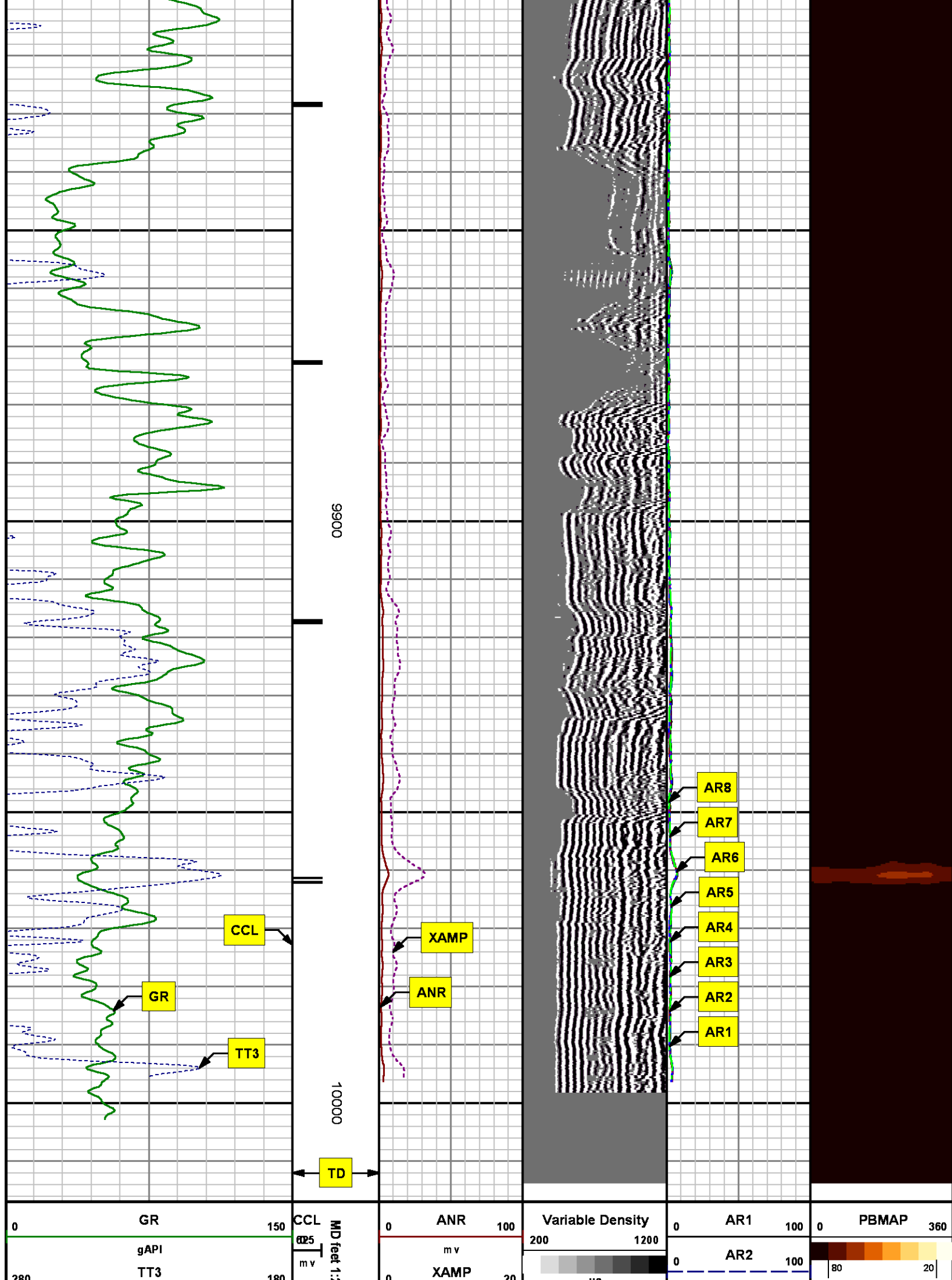












The diagram illustrates the timing of various signals. The top trace, labeled 'uSec', shows a single pulse from 0 to 100. The middle trace, labeled 'mV', shows a single pulse from 0 to 240. The bottom trace, labeled 'us', shows eight pulses labeled AR3 through AR8, each from 0 to 100.

*REPEAT SECTION*  
*0 PSI*

| MEASUREMENT TYPE | PARAMETER             | VALUE   | UNITS   | TOP      | BOTTOM    |
|------------------|-----------------------|---------|---------|----------|-----------|
| RAL              | Amp Gate Start Far    | 305.000 | usec    | 9685.061 | 10013.061 |
| RAL              | Amp Gate Start Near   | 195.000 | usec    | 9685.061 | 10013.061 |
| RAL              | Amp Gate Start Radial | 195.000 | usec    | 9685.061 | 10013.061 |
| RAL              | Amp Gate Width Far    | 25.000  | usec    | 9685.061 | 10013.061 |
| RAL              | Amp Gate Width Near   | 25.000  | usec    | 9685.061 | 10013.061 |
| RAL              | Amp Gate Width Radial | 25.000  | usec    | 9685.061 | 10013.061 |
| RAL              | casing od             | 4.500   | inches  | 9685.061 | 10013.061 |
| RAL              | casing wt             | 11.600  | lbm/ft  | 9685.061 | 10013.061 |
| RAL              | FB Start Far          | 291.900 | usec    | 9685.061 | 10013.061 |
| RAL              | FB Start Near         | 175.391 | usec    | 9685.061 | 10013.061 |
| RAL              | FB Start Radial       | 175.391 | usec    | 9685.061 | 10013.061 |
| RAL              | FB Thresh Far         | 10.000  | mv      | 9685.061 | 10013.061 |
| RAL              | FB Thresh Near        | 4.000   | mv      | 9685.061 | 10013.061 |
| RAL              | FB Thresh Radial      | 4.000   | mv      | 9685.061 | 10013.061 |
| RAL              | Fluid Travel Time     | 200.000 | usec/ft | 9685.061 | 10014.002 |

## DEPTH OFFSETS

(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |     |     |     |     |      |
|--------|--------------|-----------------|-----|-----|-----|-----|------|
|        |              | ACAL            | ANR | AR1 | AR2 | AR3 | AR4  |
|        |              | AR5             | AR6 | AR7 | AR8 | CHV | FPR2 |
| 1426XA | -16.750      |                 |     |     |     |     |      |

1426XA -15.750  
2459XA -11.340  
2459XA -9.490  
2459XA -4.090

|      |      |      |      |      |      |
|------|------|------|------|------|------|
| FPR3 | FPR5 | TT3  | TTR1 | TTR2 | TTR3 |
| TTR4 | TTR5 | TTR6 | TTR7 | TTR8 | XAMP |
| AFAR | SIG  | TT5  |      |      |      |
| CCL  |      |      |      |      |      |
| GR   |      |      |      |      |      |
| NEU  |      |      |      |      |      |

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

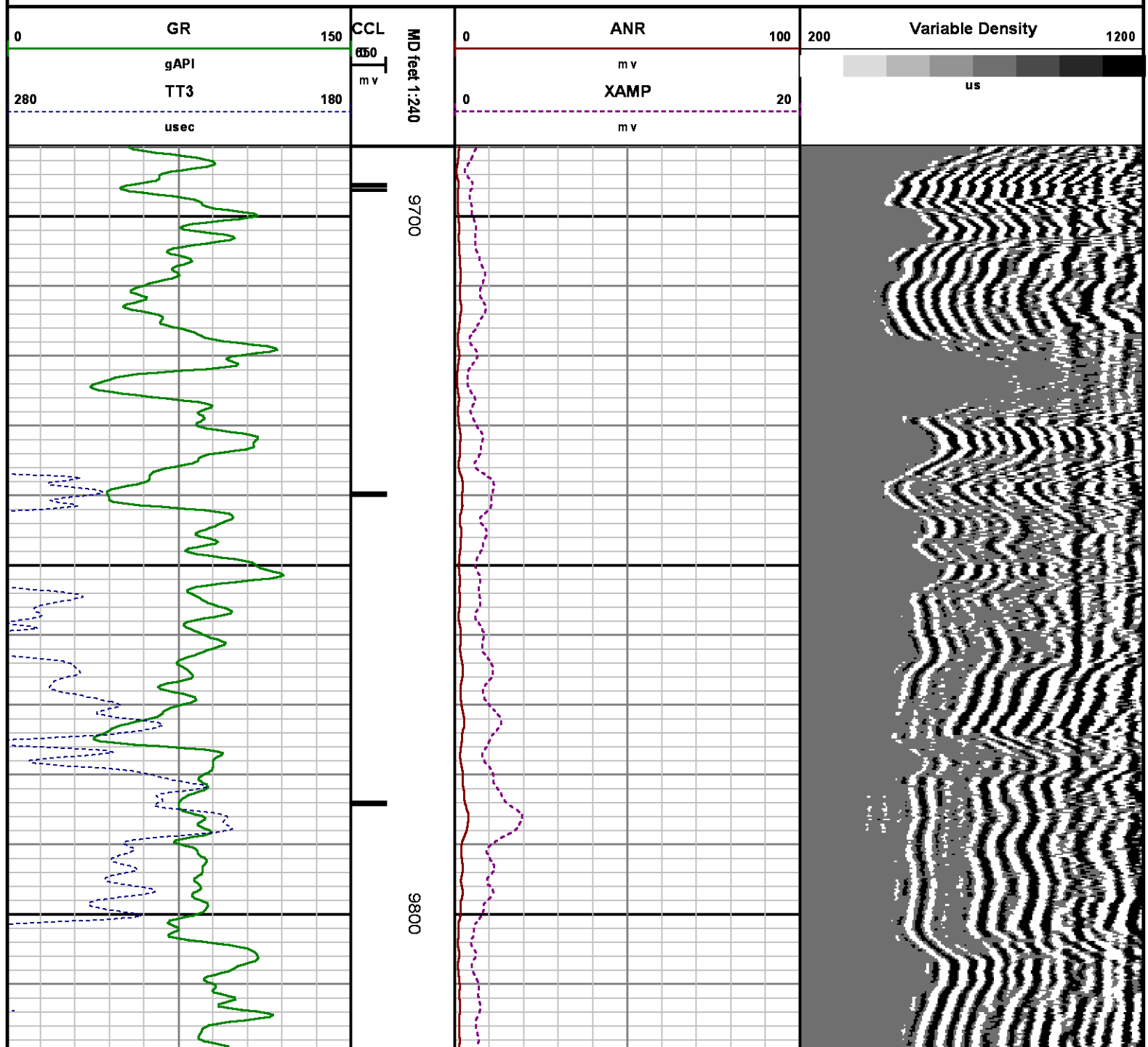
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File Name : d:\well\data\wpx\federal ner 434-32\434cbl\repeat.xtf

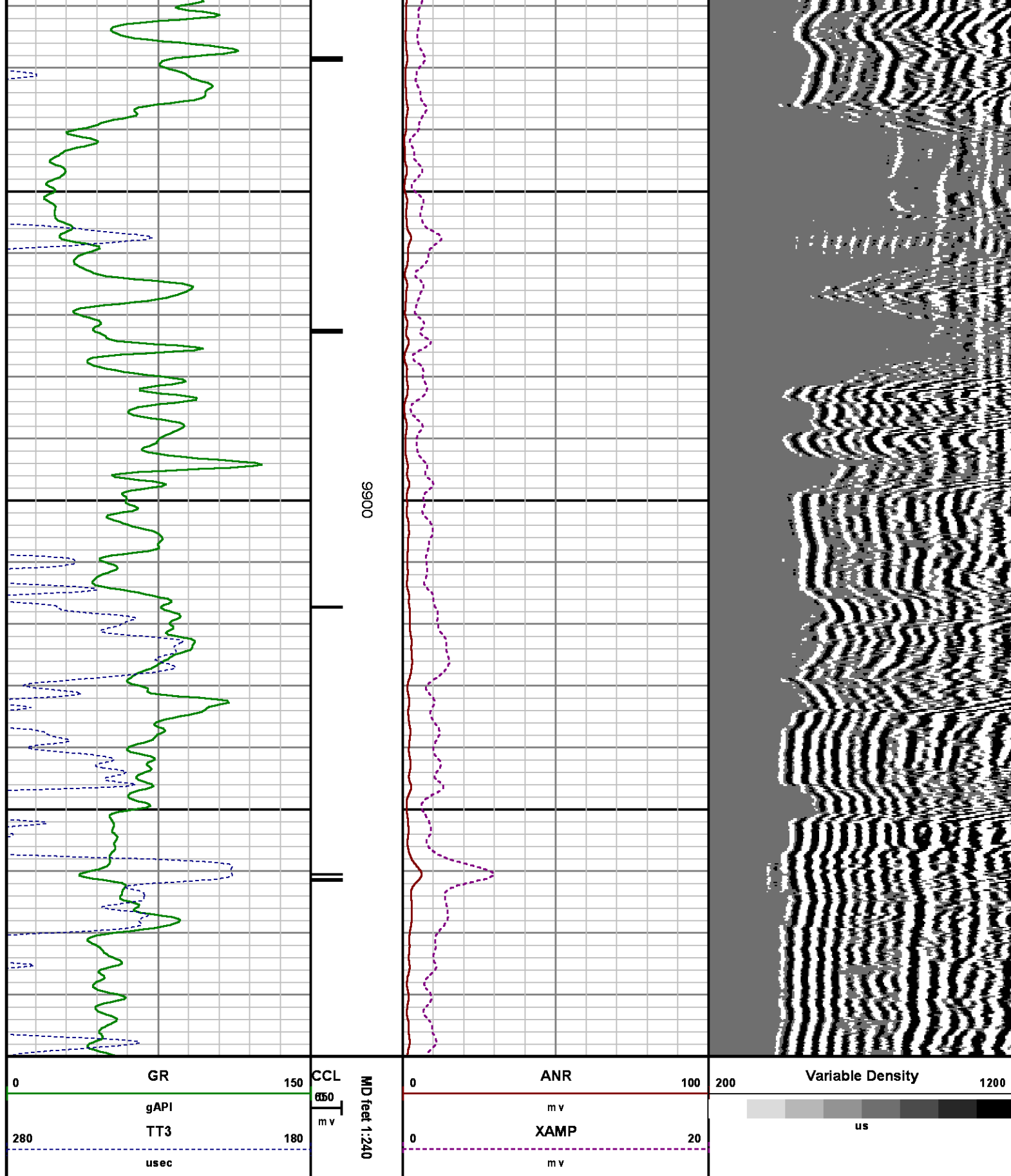
Mode : PlotMgr 5.4.504

Interval : 9690.00 - 9990.00 feet UP

Created : 5/13/2014 1:23:54 PM







## CALIBRATION SUMMARY

# RALSHP

Shop Calibration: C:\case\calver\RALSHP\496M13\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue May 13 11:59:44 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M13

Tool Delay [usec] -52.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

| RECEIVER       | Travel Time [usec] | Amp. Gate Start [usec] | Amp. Gate Width [usec] | Zero Gate Start [usec] | Zero Gate Width [usec] | Zero Amp. [mV] | Amp Ref. [mV] | Shop Factor |
|----------------|--------------------|------------------------|------------------------|------------------------|------------------------|----------------|---------------|-------------|
| CAL Pulse      | 219                | 216                    | 30                     | 166                    | 25                     | 0.193          | 100.00        | 0.31        |
| 3 Ft. Receiver | 218                | 216                    | 30                     | 166                    | 25                     | 1.315          | 100.00        | 0.31        |
| 5 Ft. Receiver | 327                | 325                    | 30                     | 266                    | 25                     | 1.015          | 150.00        | 0.34        |
| Radial #1      | 218                | 216                    | 30                     | 166                    | 24                     | 0.846          | 100.00        | 0.30        |
| Radial #2      | 218                | 216                    | 30                     | 166                    | 24                     | 0.867          | 100.00        | 0.30        |
| Radial #3      | 218                | 216                    | 30                     | 166                    | 24                     | 0.858          | 100.00        | 0.31        |
| Radial #4      | 218                | 216                    | 30                     | 166                    | 24                     | 1.061          | 100.00        | 0.31        |
| Radial #5      | 218                | 216                    | 30                     | 166                    | 24                     | 1.194          | 100.00        | 0.31        |
| Radial #6      | 218                | 216                    | 30                     | 166                    | 24                     | 1.307          | 100.00        | 0.31        |
| Radial #7      | 216                | 216                    | 30                     | 166                    | 24                     | 0.601          | 100.00        | 0.30        |
| Radial #8      | 218                | 216                    | 30                     | 166                    | 24                     | 0.844          | 100.00        | 0.30        |

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496M13\_fid.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue May 13 12:01:10 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M13

Tool Delay [usec] -52.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

| RECEIVER       | Zero Gate Start [usec] | Zero Gate Width [usec] | Zero Amp. [mV] | Full Amp. [mV] | Wellsite Factor | Amp. Ref [mV] |
|----------------|------------------------|------------------------|----------------|----------------|-----------------|---------------|
| CAL Pulse      | 166                    | 25                     | 0.025          | 0.000          | 1.00            | 100.000       |
| 3 Ft. Receiver | 200                    | 30                     | 2.219          |                |                 |               |
| 5 Ft. Receiver | 317                    | 30                     | 2.102          |                |                 |               |
| Radial #1      | 200                    | 30                     | 1.524          |                |                 |               |
| Radial #2      | 200                    | 30                     | 1.616          |                |                 |               |
| Radial #3      | 200                    | 30                     | 1.796          |                |                 |               |
| Radial #4      | 200                    | 30                     | 1.787          |                |                 |               |
| Radial #5      | 200                    | 30                     | 2.027          |                |                 |               |
| Radial #6      | 200                    | 30                     | 2.190          |                |                 |               |
| Radial #7      | 200                    | 30                     | 1.760          |                |                 |               |
| Radial #8      | 200                    | 30                     | 1.675          |                |                 |               |

# GAMMA RAY

Calibration File: C:\case\calver\GR\45608.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 09:48:12 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

| Calibrator # | Background<br>[cps] | Calibrator On<br>[cps] | Multiplicative | Background<br>[api] | Calibrator On<br>[api] | Differential<br>[api] |
|--------------|---------------------|------------------------|----------------|---------------------|------------------------|-----------------------|
| S2K WA612    | 97.82               | 367.47                 | 0.686          | 67.11               | 252.11                 | 185.00                |

Verification File: C:\case\calver\GR\45608.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu May 08 09:49:43 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

| Calibrator # | Background<br>[cps] | Calibrator On<br>[cps] | Multiplicative | Background<br>[api] | Calibrator On<br>[api] | Differential<br>[api] |
|--------------|---------------------|------------------------|----------------|---------------------|------------------------|-----------------------|
| S2K WA612    | 98.76               | 372.44                 | 0.686          | 67.76               | 255.53                 | 187.77                |

# TOOL DIAGRAM

## OTA SHORT CABLE HEAD

### PROBE 2 3/4 DUAL RECEIVER RADII

|               |                 |
|---------------|-----------------|
| Series        | 1426XA          |
| Mnemonic      | PROB            |
| Diameter      | 2.75"           |
| Length        | 11.17'          |
| Measure Point | 0.75' FAR RCVR  |
| Measure Point | 2.67' NEAR RCVR |
| Measure Point | 5.75' XMIT      |
| Temp Rating   | 350.00 °F       |
| Press Rating  | 18000.00 PSI    |



24.23'

XMIT 18.05'

NEAR RCVR 14.97'

FAR RCVR 13.05'

CCL 11.34'

| Probe GR/CCL/NEU |           |
|------------------|-----------|
| Series           | 2459XA    |
| Mnemonic         | PROB      |
| Diameter         | 2.75"     |
| Length           | 9.42'     |
| Measure Point    | 1.21' NEU |
| Measure Point    | 6.60' GR  |
| Measure Point    | 8.46' CCL |

GR 9.49'

NEU 4.09'

0.00'



| CENTRALIZER |          |
|-------------|----------|
| Series      | RALCENT  |
| Mnemonic    | CENT     |
| Diameter    | 3.12"    |
| Weight      | 20.00 lb |

**Total Length: 24.23'**  
**Total Weight: Not Available**  
**Max Diameter: 0' 3.12"**



Baker Atlas

CASE

|         |                    |       |    |
|---------|--------------------|-------|----|
| Company | WPX ENERGY         |       |    |
| Well    | FEDERAL NER 434-32 |       |    |
| Field   | RULISON            |       |    |
| County  | GARFIELD           | State | CO |

|          |                |
|----------|----------------|
| File No: | CH085759       |
| API No:  | 05045217780000 |

|                                       |            |
|---------------------------------------|------------|
| Location                              | Elevations |
| SHL: 168' FNL & 2598' FWL (5 7S 93W)  | KB 7629 ft |
| BHL: 346' FSL & 1766' FEL (32 6S 93W) | DF         |
|                                       | GL 7603 ft |
| SEC 32 TWP 6S RGE 93W                 |            |

|             |
|-------------|
| 32 6S 93W   |
| RU 23-5 PAD |
| NABORS 576  |