



FILE NO:

COMPANY

TEP ROCKY MOUNTAIN LLC  
YOUBERG RU 311-7

API NO:

WELL  
FIELD

RULISON

05045232350000

COUNTY

GARFIELD

STATE COLORADO

Ver. 4.06

LOCATION:

SHL: 1990' FNL & 1901' FWL  
BHL: 268' FNL & 902' FWLOTHER SERVICES  
RPM

SEC 7 TWP 7S RGE 93W

PERMANENT DATUM  
LOG MEASURED FROM  
GL ELEVATION 7339 FT  
KB 24 FT ABOVE P.D.  
DRILL. MEAS. FROM KBELEVATIONS:  
KB 7363 FT  
DF  
GL 7339 FT

DATE 21-OCT-2016

RUN 1 TRIP 1

SERVICE ORDER US109699

DEPTH DRILLER 9758 FT

DEPTH LOGGER 9746 FT

BOTTOM LOGGED INTERVAL 9744 FT

TOP LOGGED INTERVAL 24 FT

TIME STARTED 8:00

TIME FINISHED 11:00

OPERATOR RIG TIME 3 HRS

TYPE OF FLUID IN HOLE WATER

FLUID DENSITY NA

FLUID SALINITY NA

FLUID LEVEL 56 FT

LOGGED CEMENT TOP SEE LOG

WELLHEAD PRESSURE 0 PSI

MAXIMUM HOLE DEVIATION NA

NOMINAL LOGGING SPEED 100 FMN

MAX. RECORDED TEMP. 242 DEGF

REFERENCE LOG NA

REFERENCE LOG DATE NA

EQUIP. NO. LOCATION HL-6670 WOODWARD

RECORDED BY MMENTZER

WITNESSED BY MR. KYLE KOHL

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    | 1124 FT |
| 8.75 IN  | 1124 FT | 9758 FT |

## CASING RECORD

| SIZE     | WEIGHT    | GRADE | FROM | TO      |
|----------|-----------|-------|------|---------|
| 9.625 IN | -         | -     | 0 FT | 1124 FT |
| 4.5 IN   | 11.6 LB/F | -     | 0 FT | 9758 FT |

## REMARKS

RUN 1 TRIP 1: \*2 OPERATIONS IN WELL\*

\*\*OPERTION 1: RAL/GR/CCL RUN CENTRALIZED\*\*

WELL LOGGED WITH 0 PSI ON THE WELLHEAD

BHT: 242 DEGF

SHORT JOINT: 6115' - 6137'

CREW: K.NUTTER, J.PENA

## EQUIPMENT DATA

| RUN | TRIP | TOOL   | SERIES NO. | SERIAL NO. | POSITION    |
|-----|------|--------|------------|------------|-------------|
| 1   | 1    | RAL    | 1426 XA    | 10154957   | CENTRALIZED |
| 1   | 1    | GR/CCL | 1355 XA    | 110827     | CENTRALIZED |

MAIN LOG 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1,36 Patches: 9  
Plotted: Wed Oct 26 15:29:03 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP\_YOUBERG\_RU\_311\_77/n012g02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 10.000 ft BOTTOM DEPTH: 9744.000 ft

| SYMMETRIC FILTER |           |            |       |               |        |
|------------------|-----------|------------|-------|---------------|--------|
| MEASUREMENT TYPE | PARAMETER | VALUE      | UNITS | INTERVAL (ft) |        |
| GR               | FILTER () | medium (1) |       | TOP           | BOTTOM |
| AMPLITUDE        | FILTER () | medium (1) |       | "             | "      |
| TRAVEL TIME      | FILTER () | medium (1) |       | "             | "      |

| RAL CCL PROCESSING |           |       |       |               |        |
|--------------------|-----------|-------|-------|---------------|--------|
| MEASUREMENT TYPE   | PARAMETER | VALUE | UNITS | INTERVAL (ft) |        |
| CCL FLOOR          | CCL FLOOR | 0     |       | TOP           | BOTTOM |

| ANALOG RAL PROCESSING     |                            |         |       |               |        |
|---------------------------|----------------------------|---------|-------|---------------|--------|
| MEASUREMENT TYPE          | PARAMETER                  | VALUE   | UNITS | INTERVAL (ft) |        |
| AMPLITUDE WINDOW (NEAR)   | AMP WINDOW START (fgpn*)   | 182     | us    | TOP           | BOTTOM |
|                           | AMP WINDOW LENGTH          | 25      | us    | "             | "      |
| TRAVEL TIME WINDOW (NEAR) | TT WINDOW START (ttn*)     | 160     | us    | "             | "      |
|                           | TT WINDOW LENGTH           | 500     | us    | "             | "      |
|                           | FIRST BRK THRESHOLD (ttn*) | 4       | mV    | "             | "      |
| RAL CASING PARAMETERS     | PPT NEAR                   | 200.391 | us    | "             | "      |
| RAL TOOL DELAY            | TOOL DELAY (strn*)         | -75     | us    | "             | "      |
| BASELINE NOISE (NEAR)     | NOISE WINDOW START         | 125     | us    | "             | "      |
|                           | NOISE WINDOW LENGTH        | 25      | us    | "             | "      |

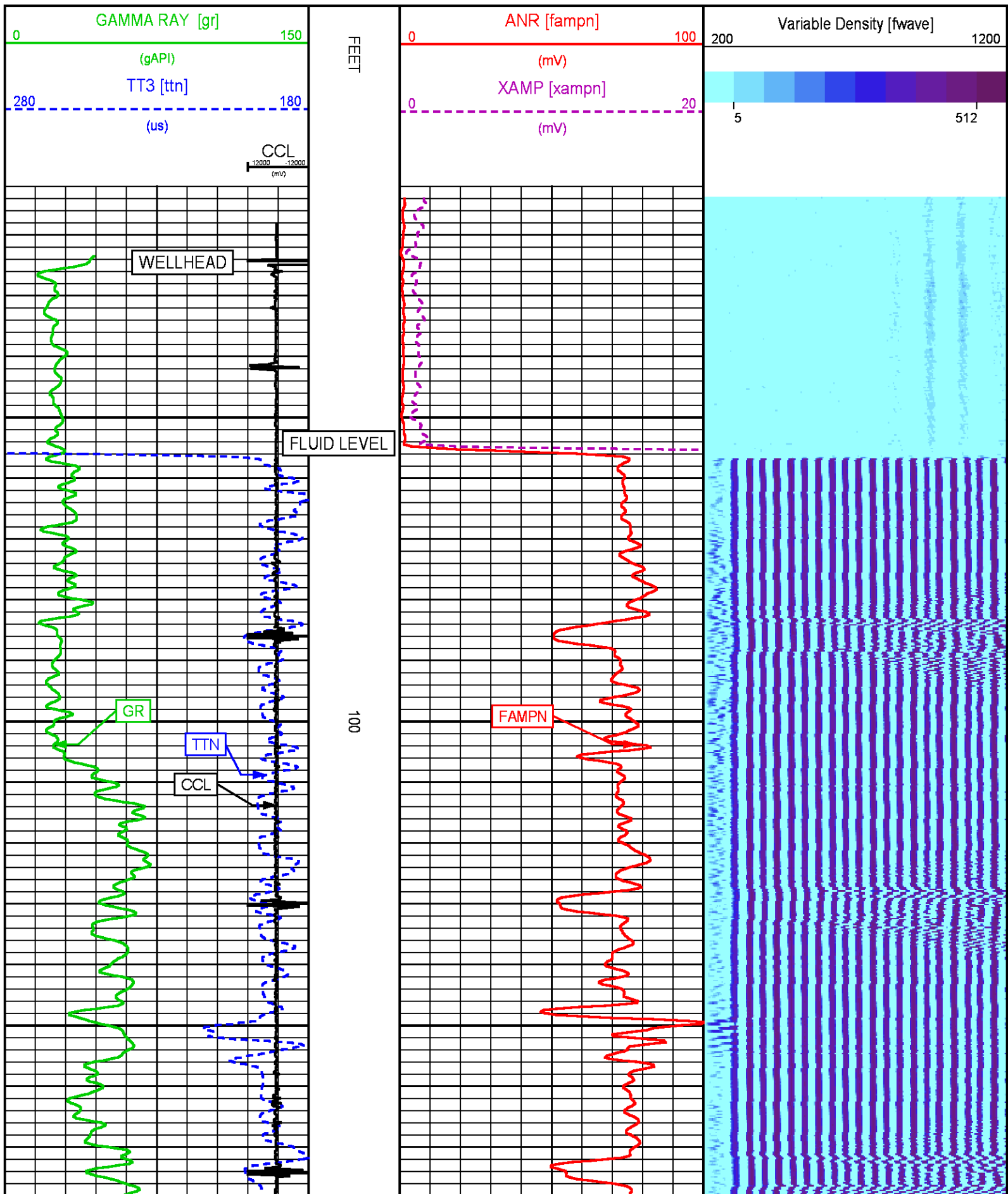
CURVE DESCRIPTION REPORT

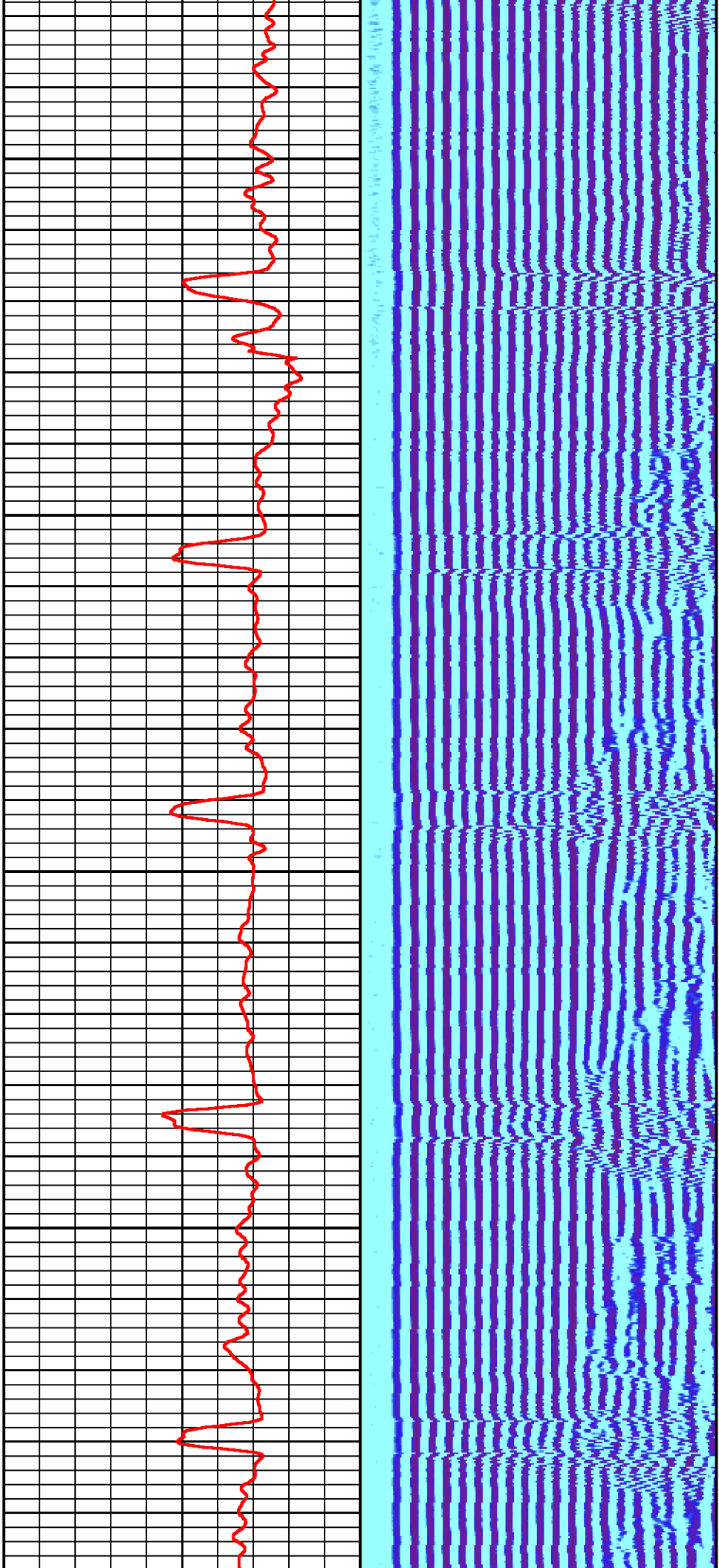
| CURVE NAME | CREATION DATE        | CURVE DESCRIPTION                             |
|------------|----------------------|---|
| F1:CCL     | Oct 21 09:22:56 2016 | CASING COLLAR LOCATOR                         |
| F1:FAMPN   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER            |
| F1:FWAVE   | Oct 21 09:22:56 2016 | FAR WAVE FORM                                 |
| F1:GR      | Oct 21 09:22:56 2016 | GAMMA RAY                                     |
| F1:TTN     | Oct 21 09:22:56 2016 | TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER     |
| F1:XAMPN   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE |

| CURVE MEASURE POINT OFFSET |             |       |             |       |             |       |             |
|----------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CURVE                      | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
| CCL                        | 5.75        | GR    | 1.75        | XAMPN | 11.25       |       |             |
| FAMPN                      | 11.25       | TTN   | 11.25       |       |             |       |             |

Presentation : cpu6728:/dat1a/TEP\_YOUBERG\_RU\_311\_77/ral\_cbl+01-MAIN-RAL\_MN\_311-5.fvpdf [5"/100' Scale]  
Plot Interval : 13.75 - 9756.5 Feet

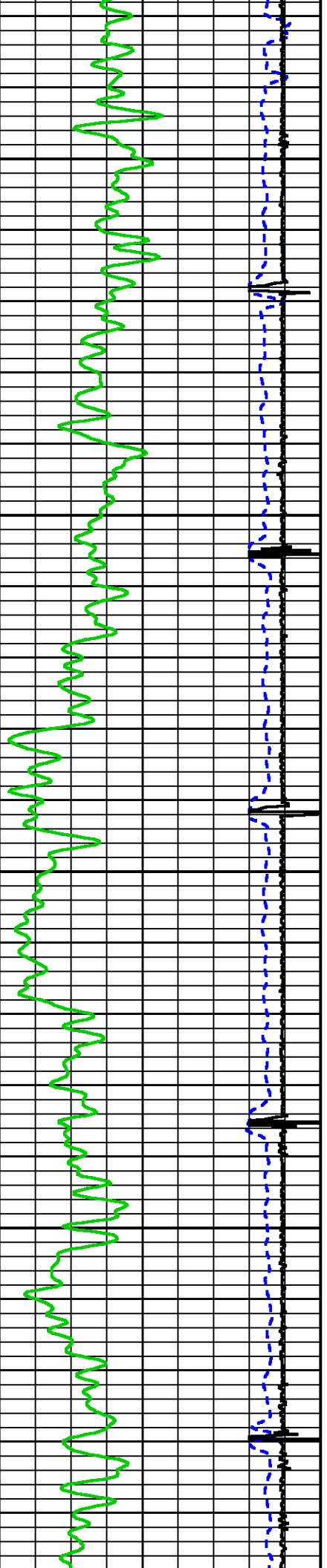
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Created On : Oct 21 09:22:56 2016  
Company : TEP ROCKY MOUNTAIN LLC  
Well : YOUBERG RU 311-7  
Field : RULISON  
File Interval : 10 - 9758 Feet  
OCT : n012g



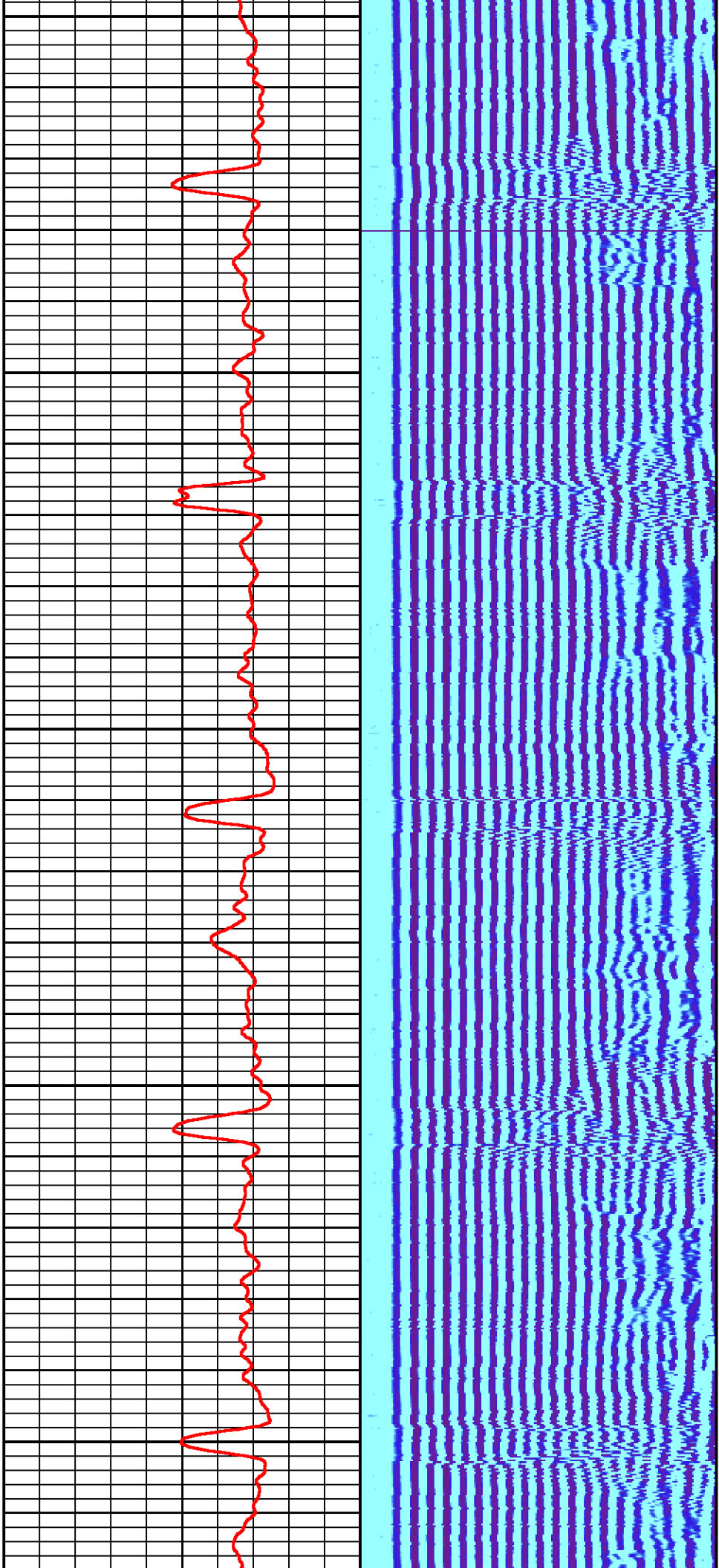


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300



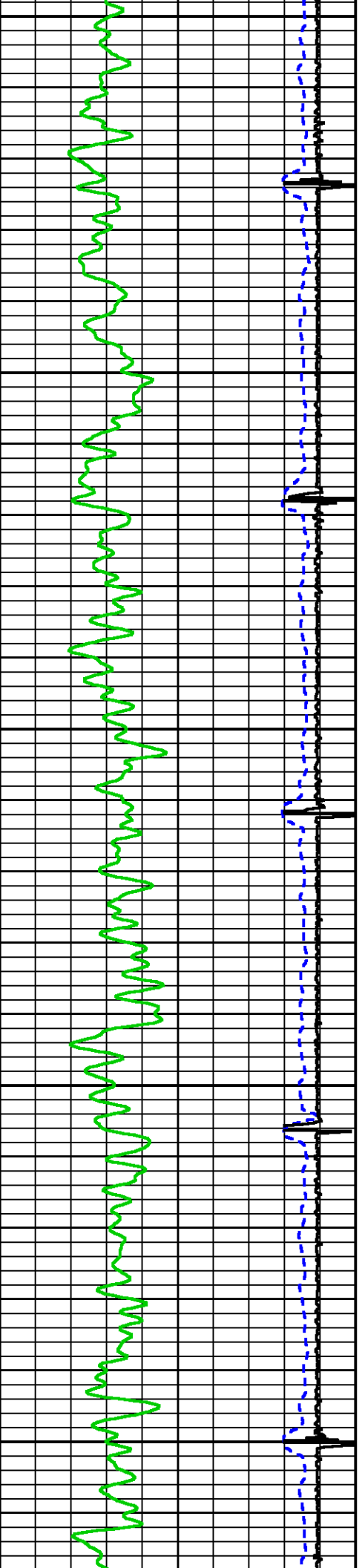


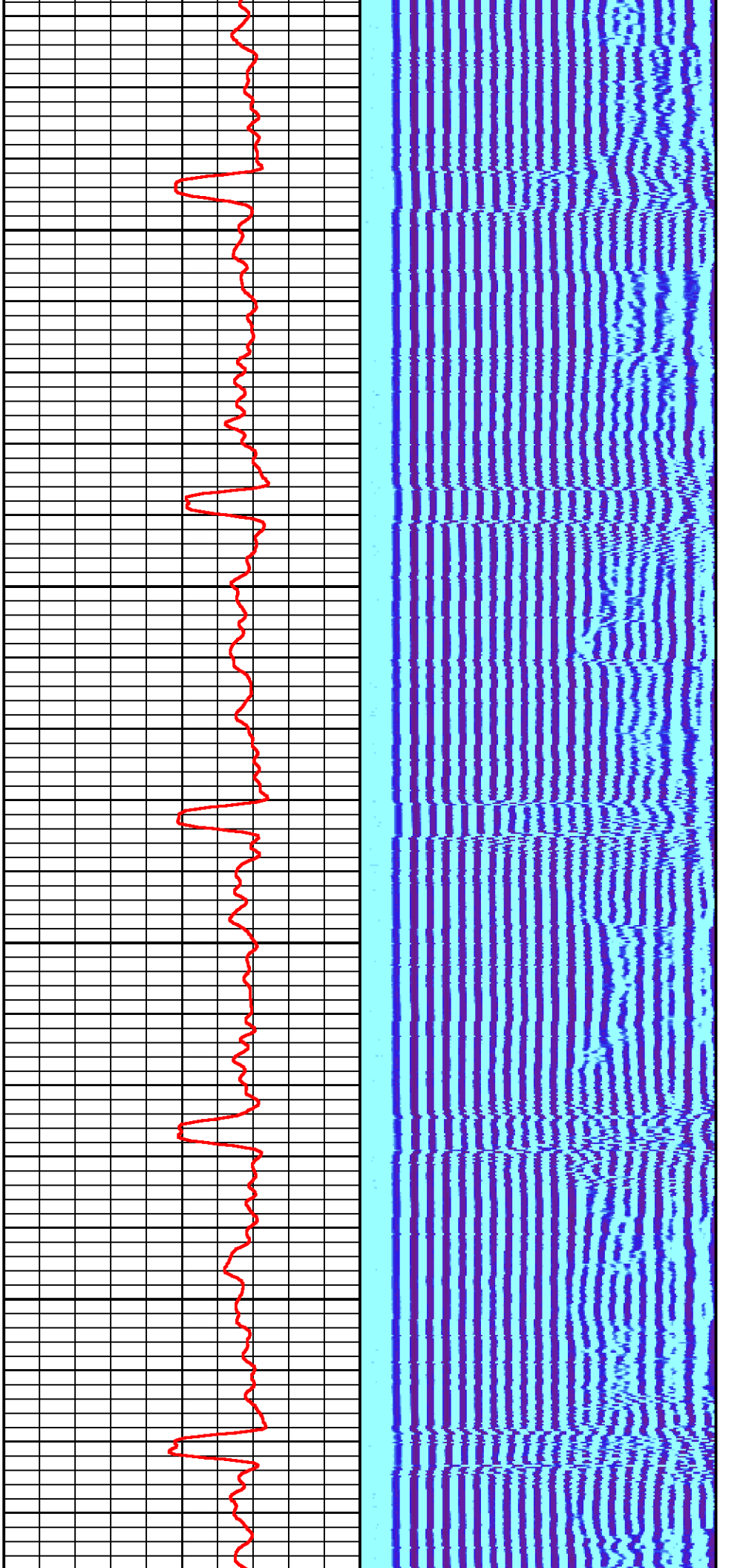


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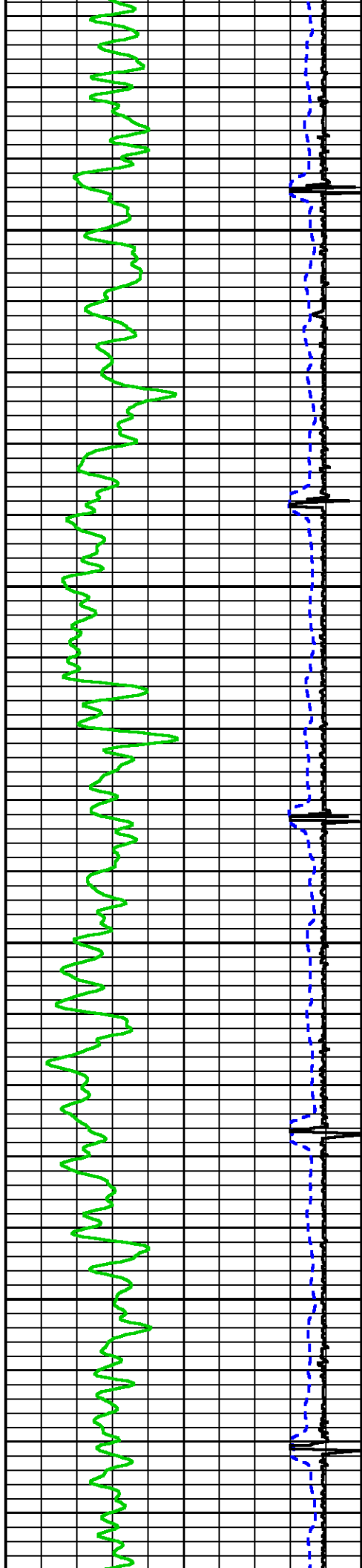
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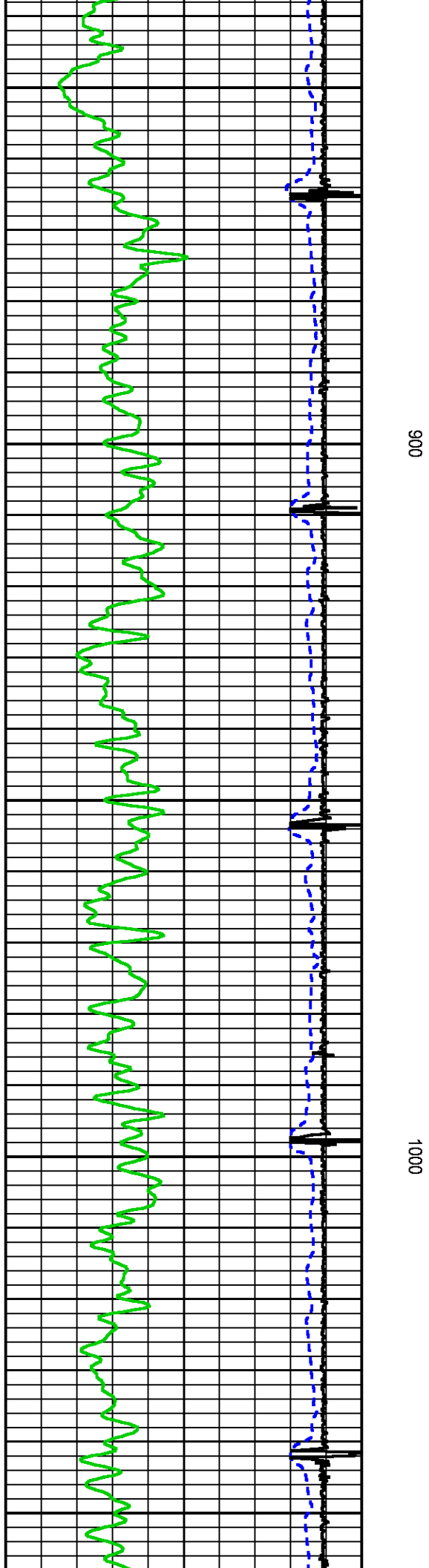
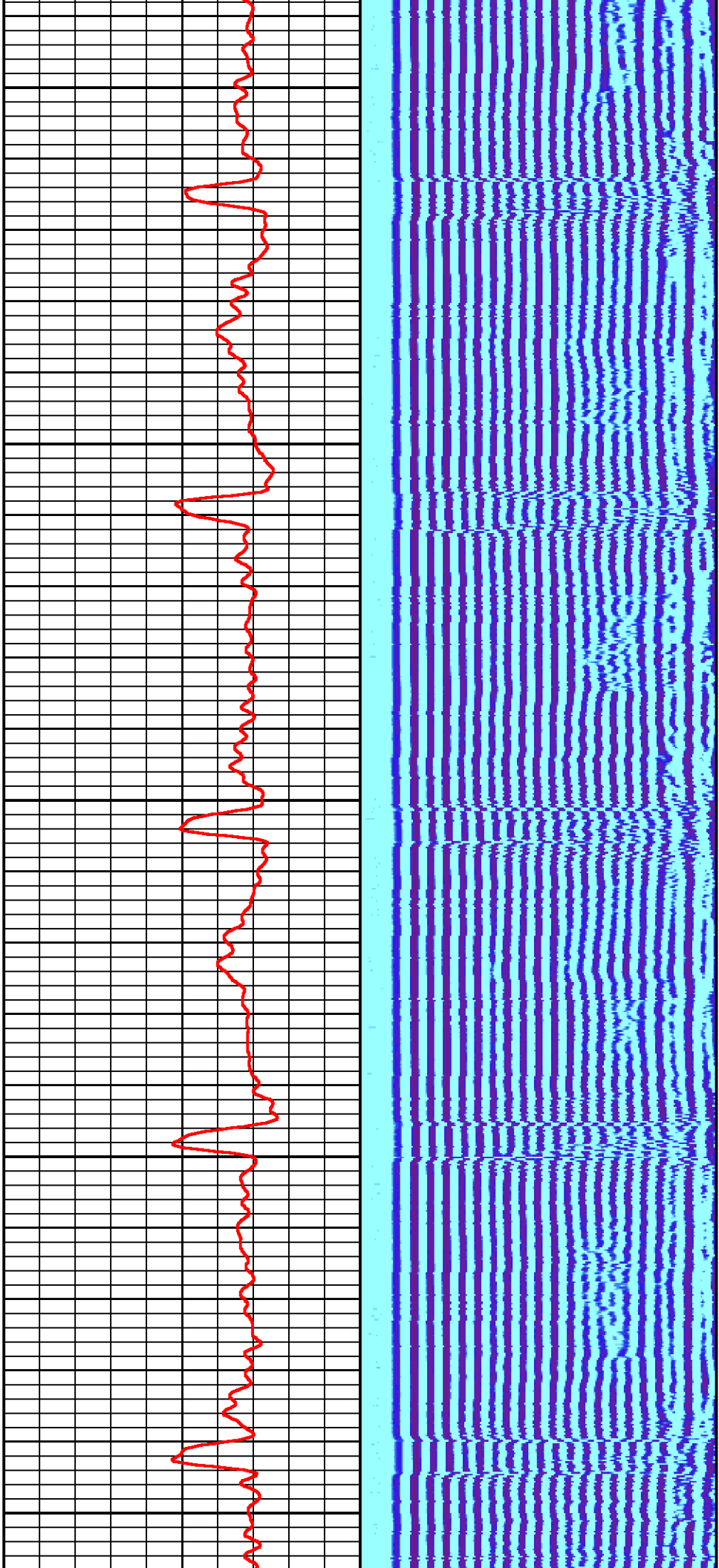


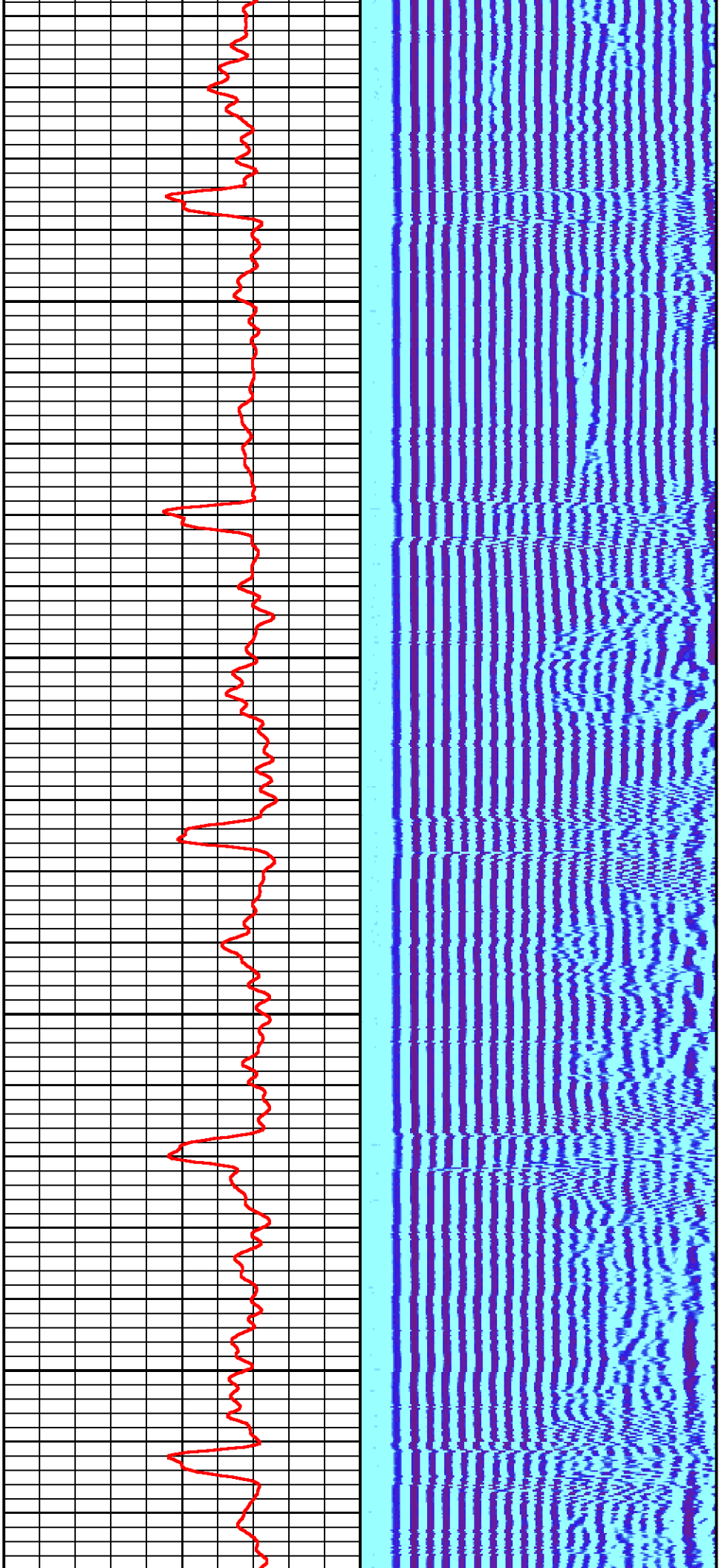


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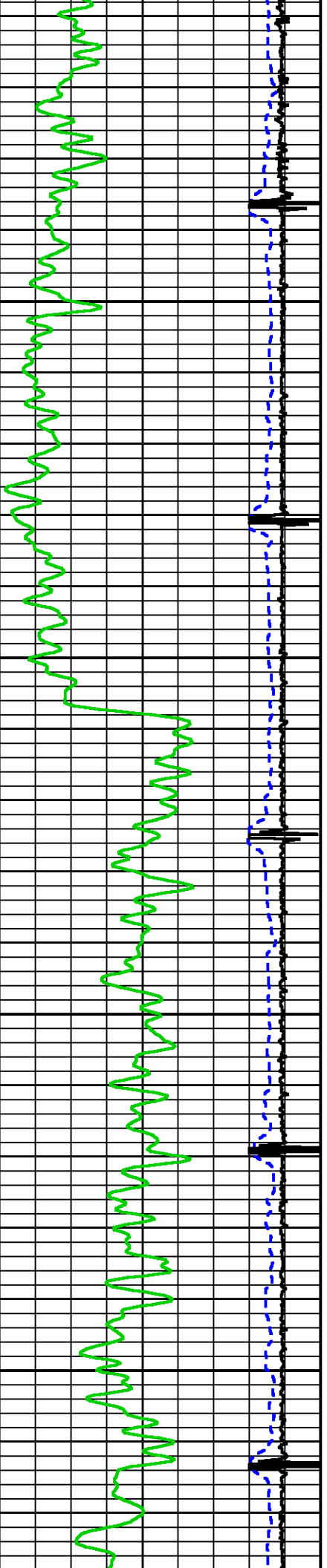




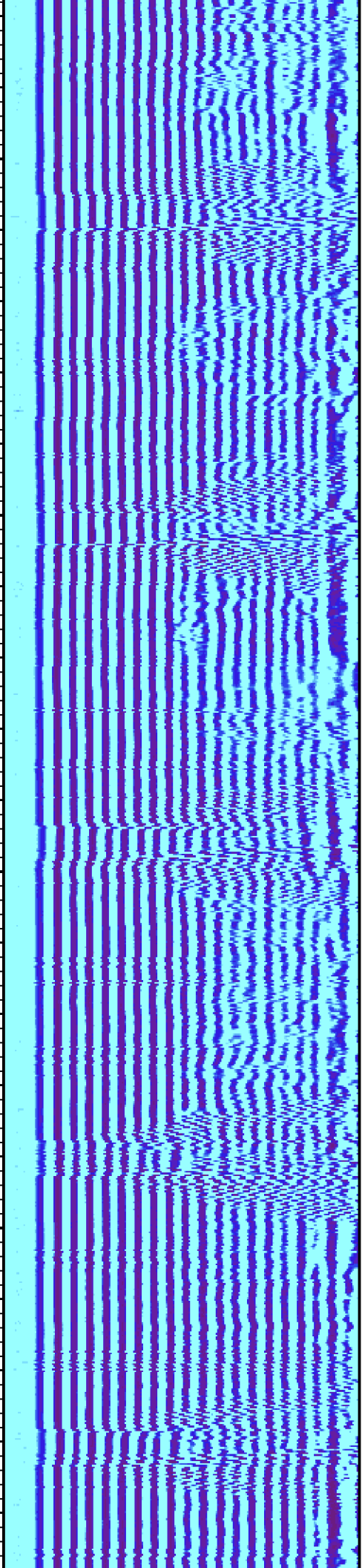


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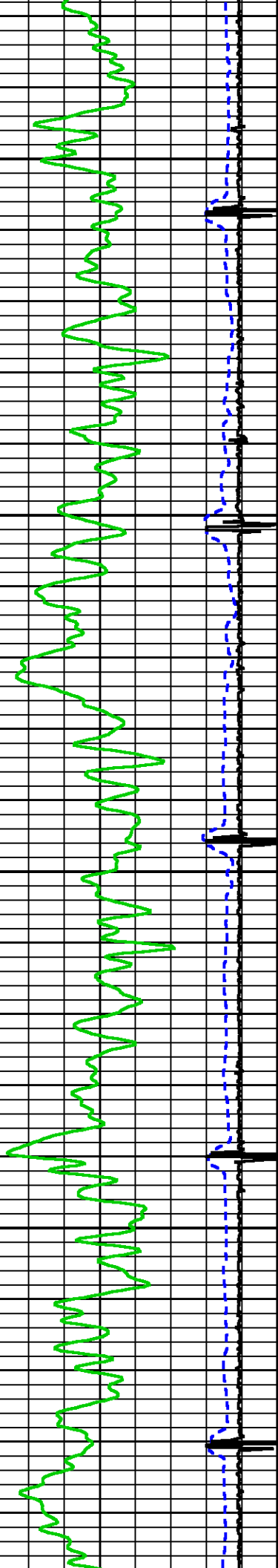


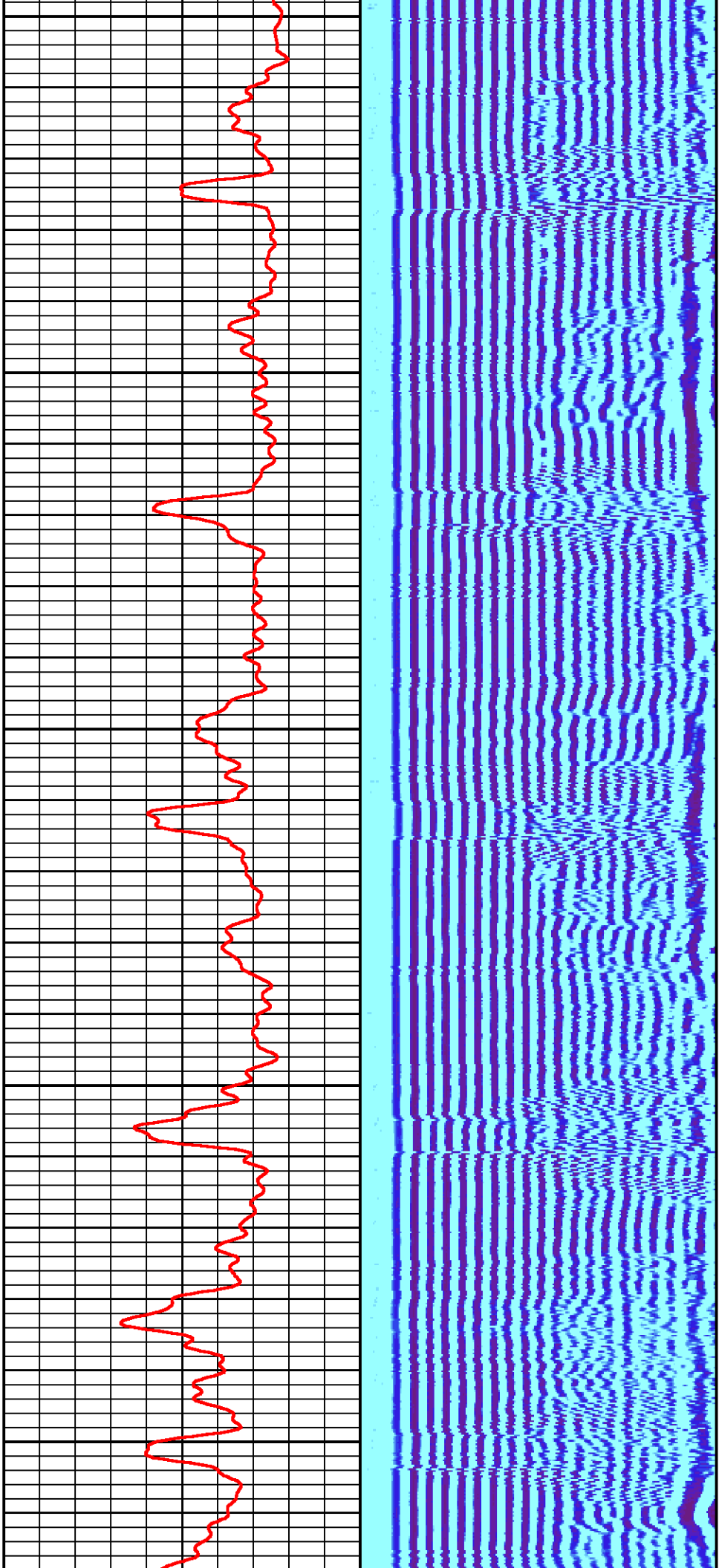




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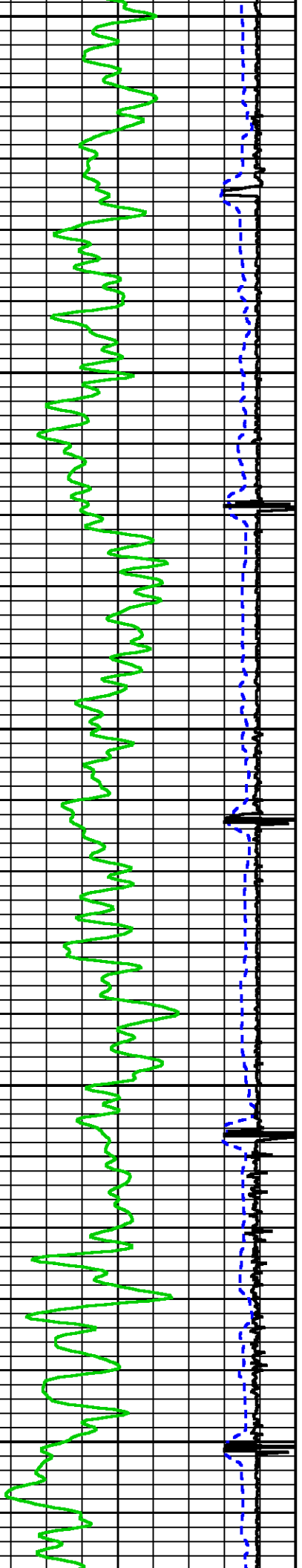


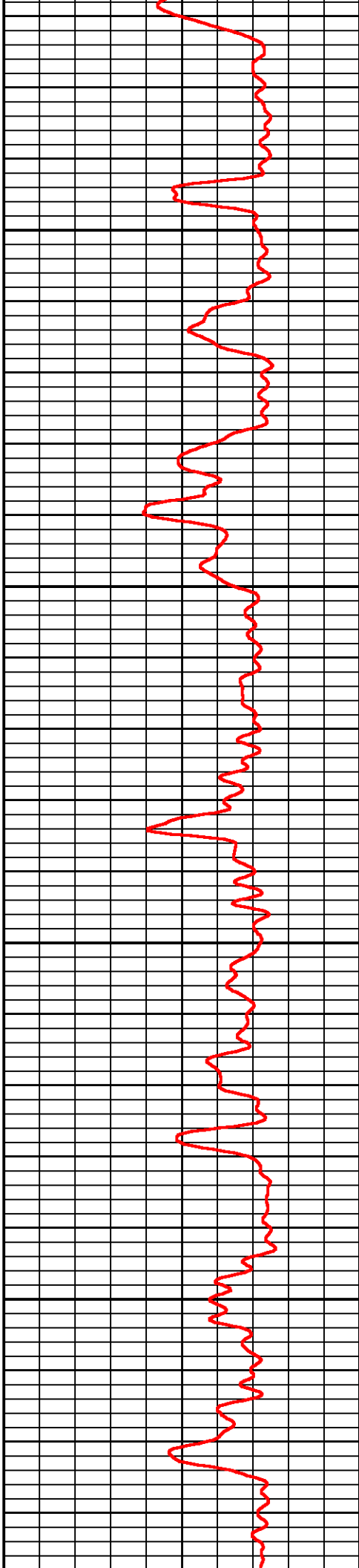
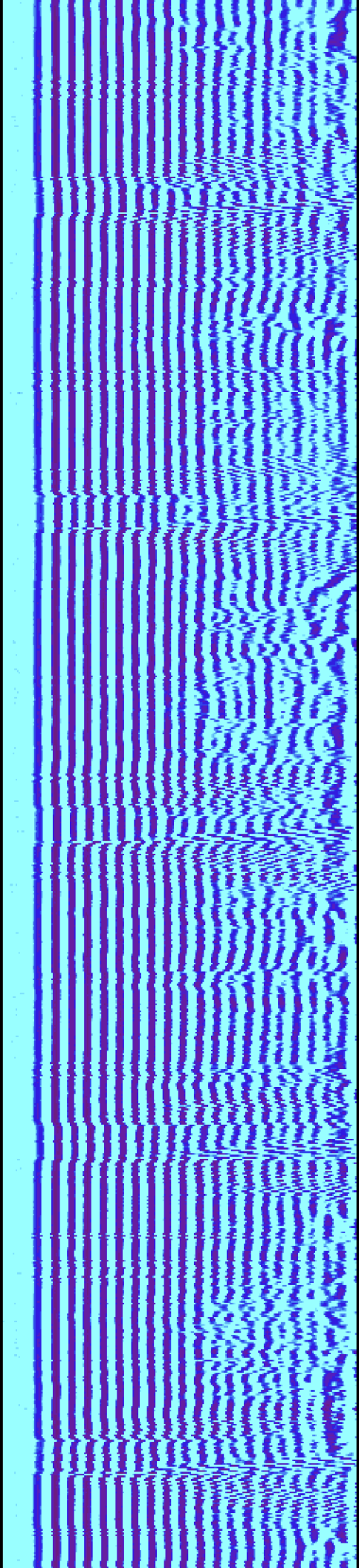


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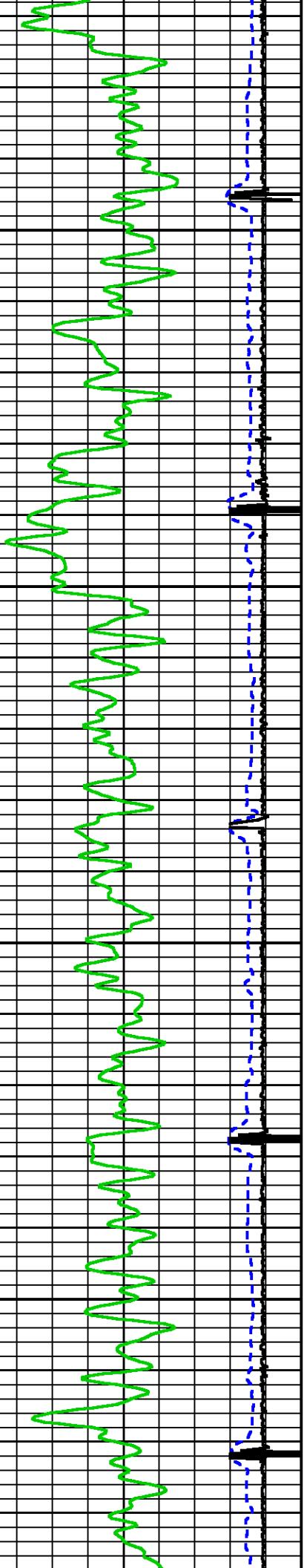
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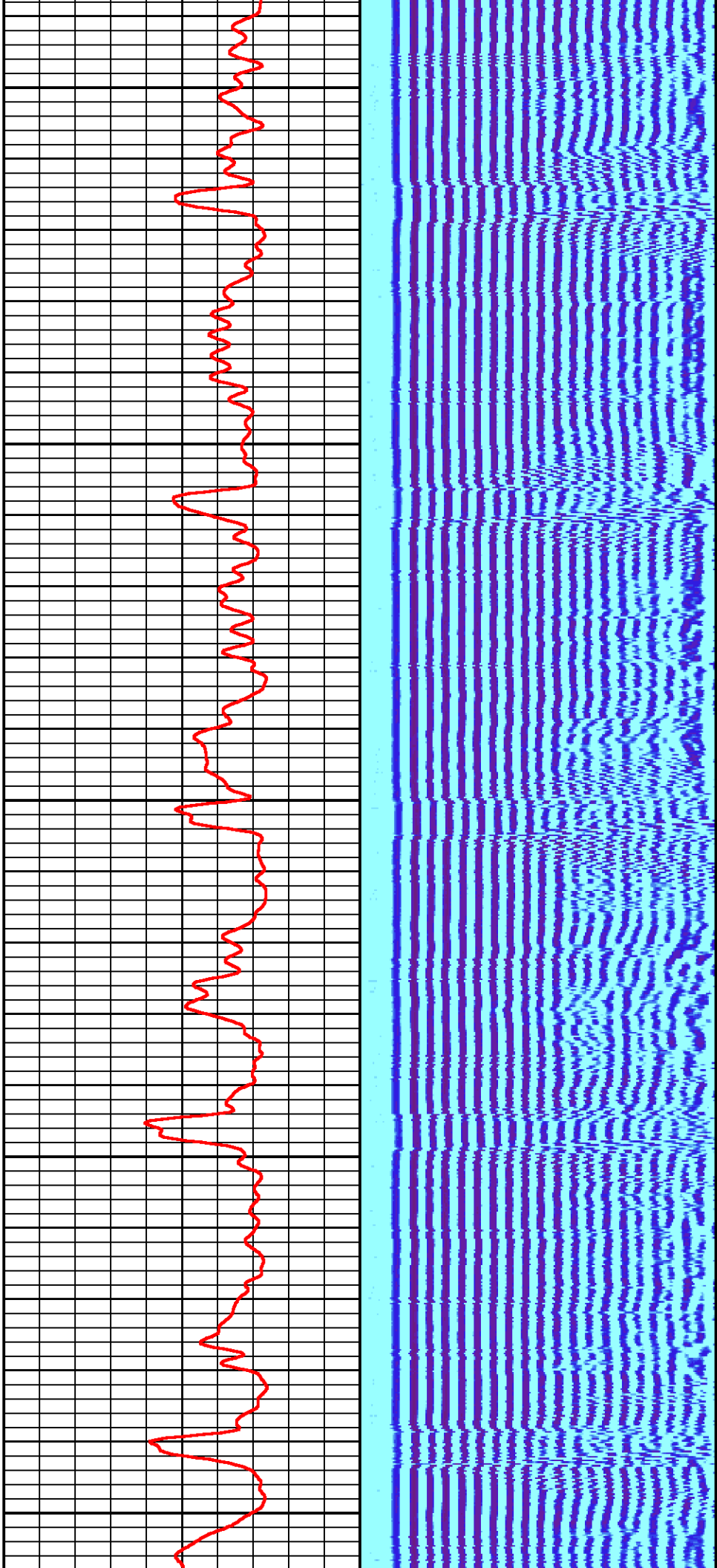


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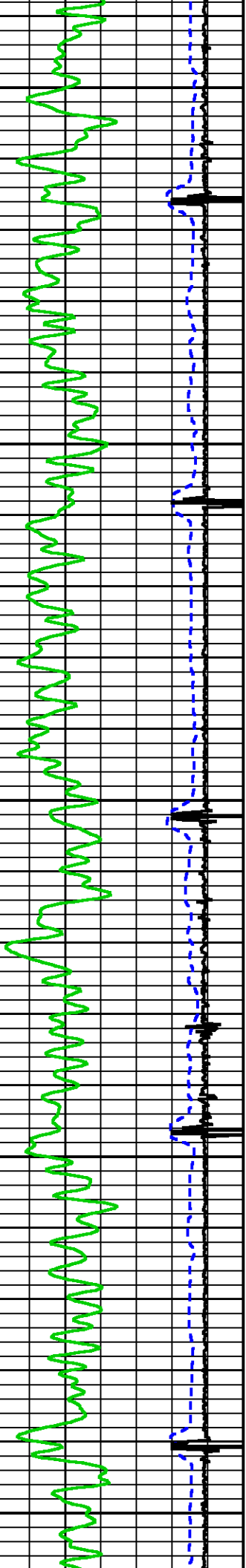


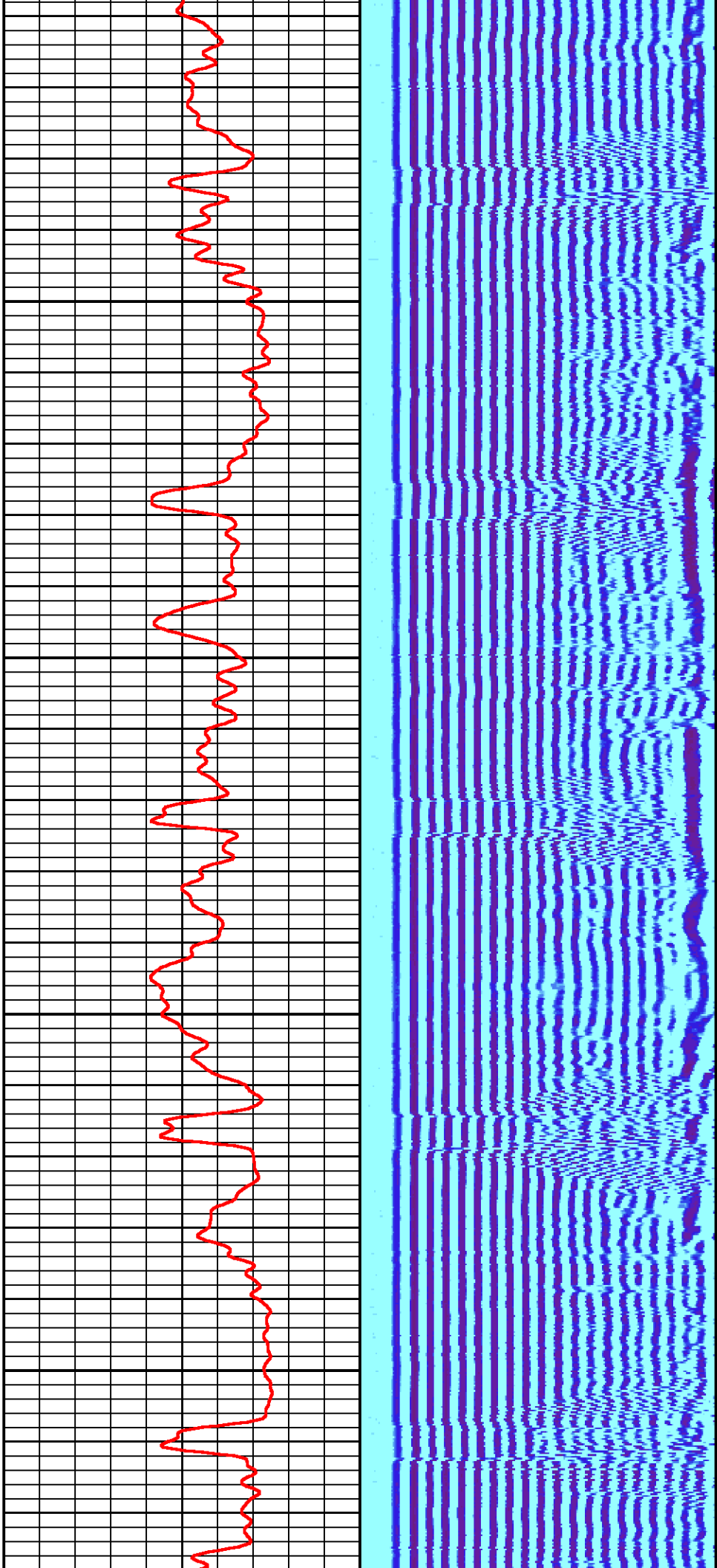




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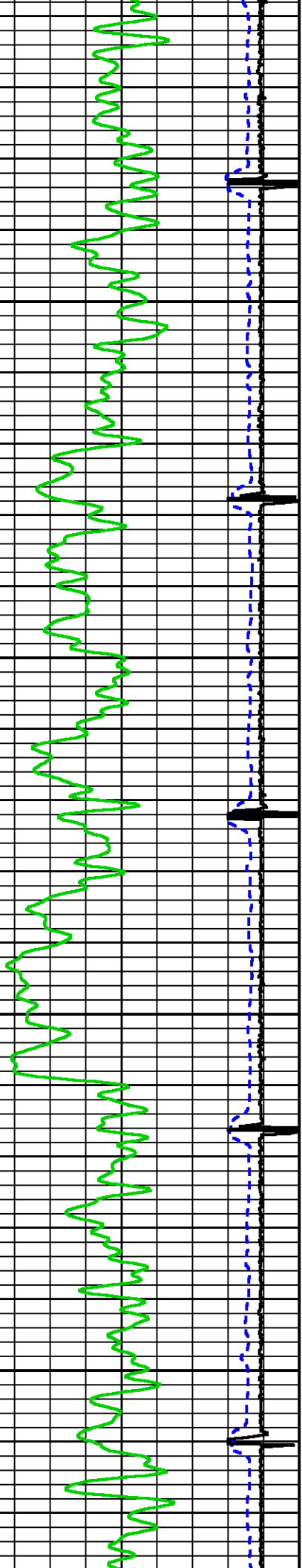
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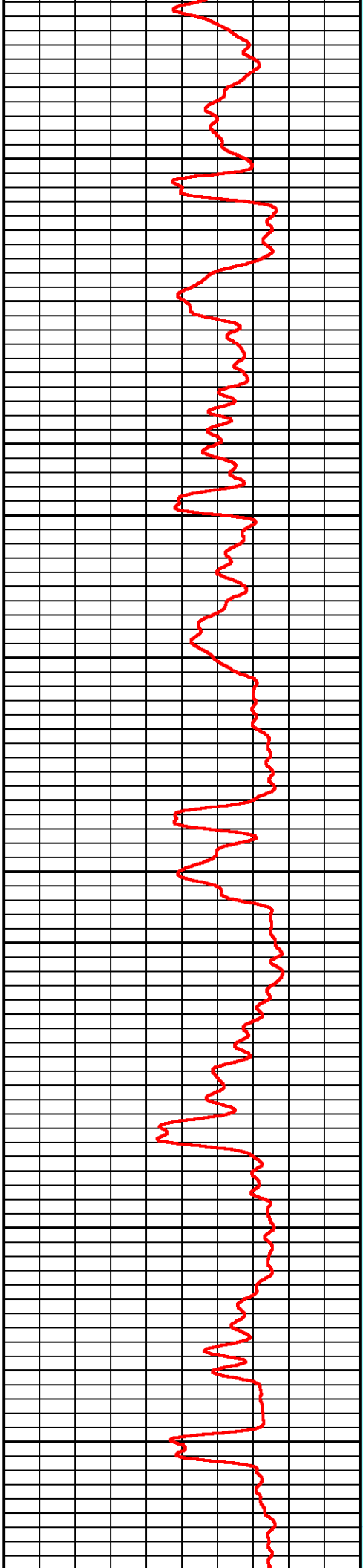
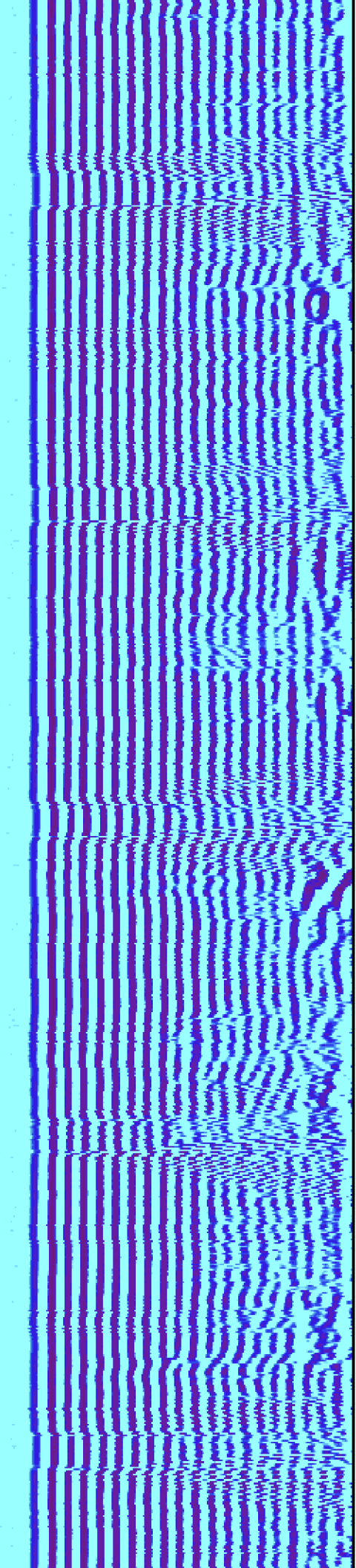




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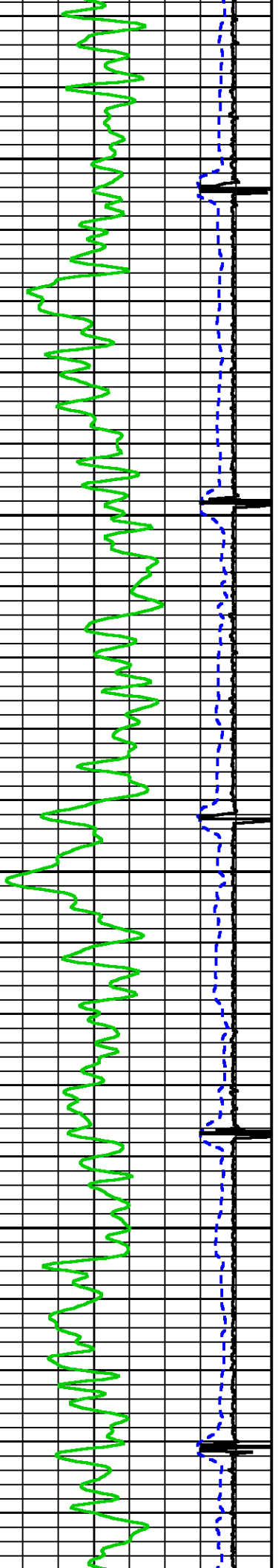
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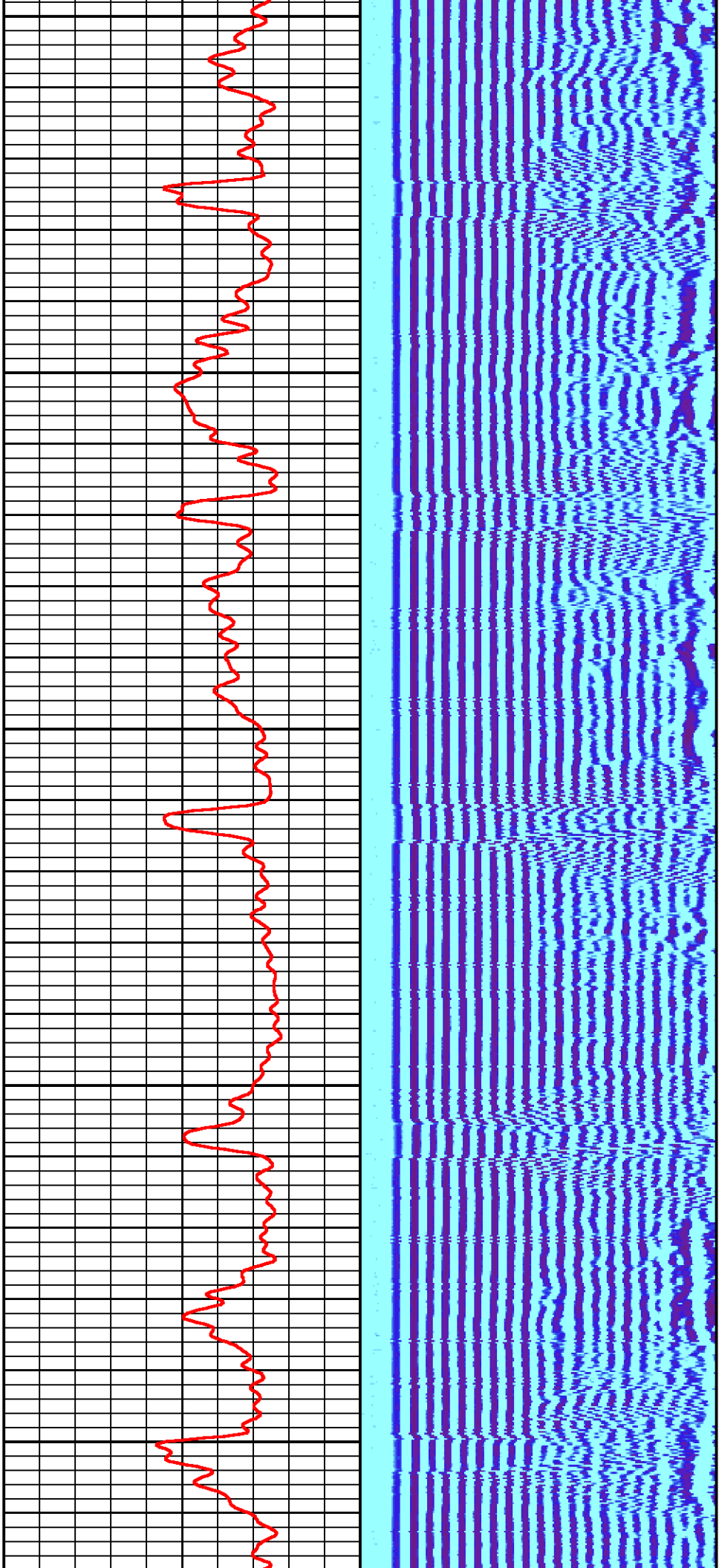




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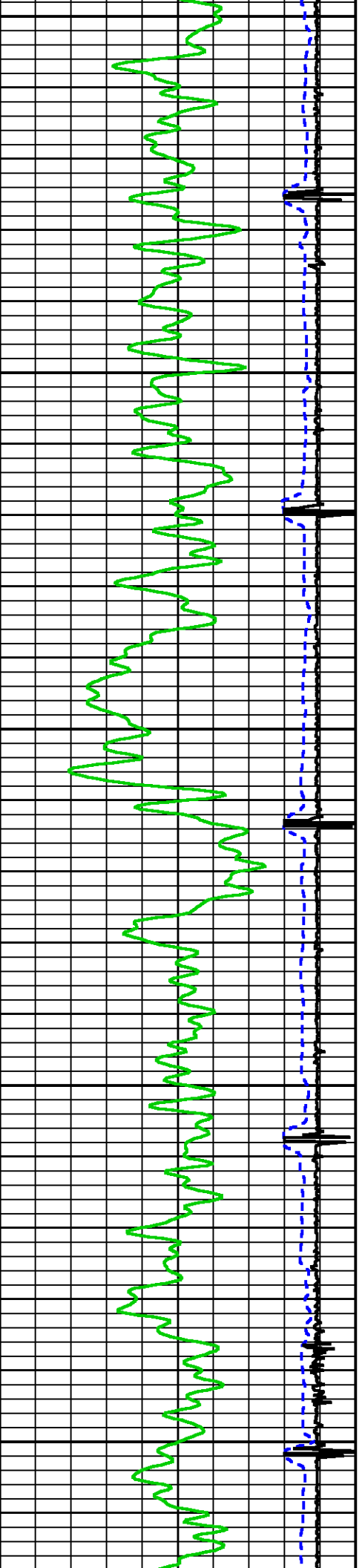




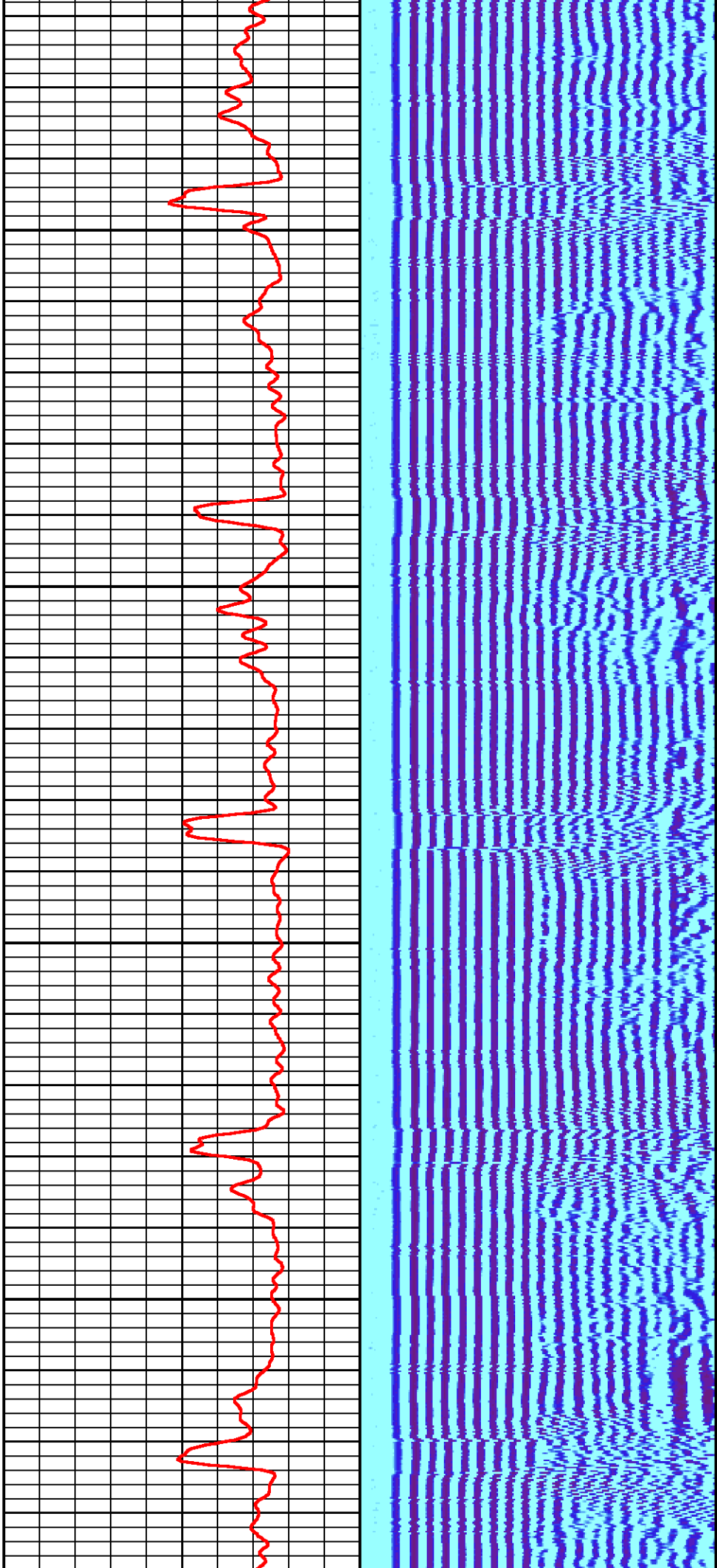
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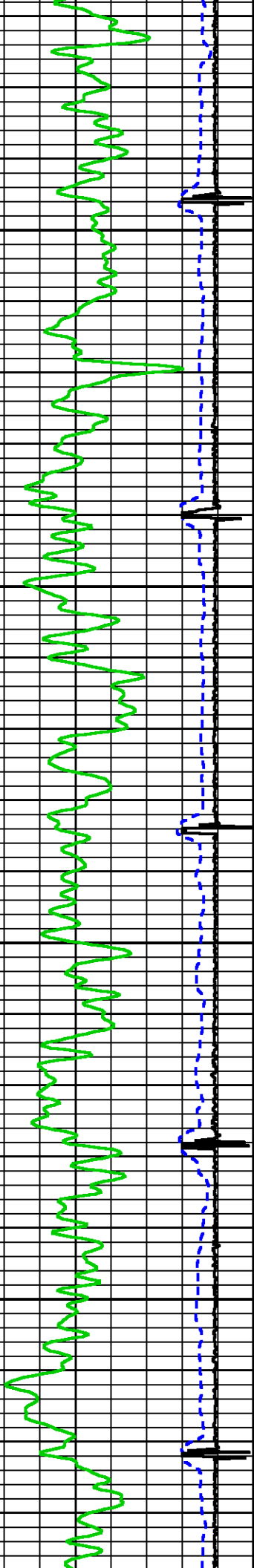


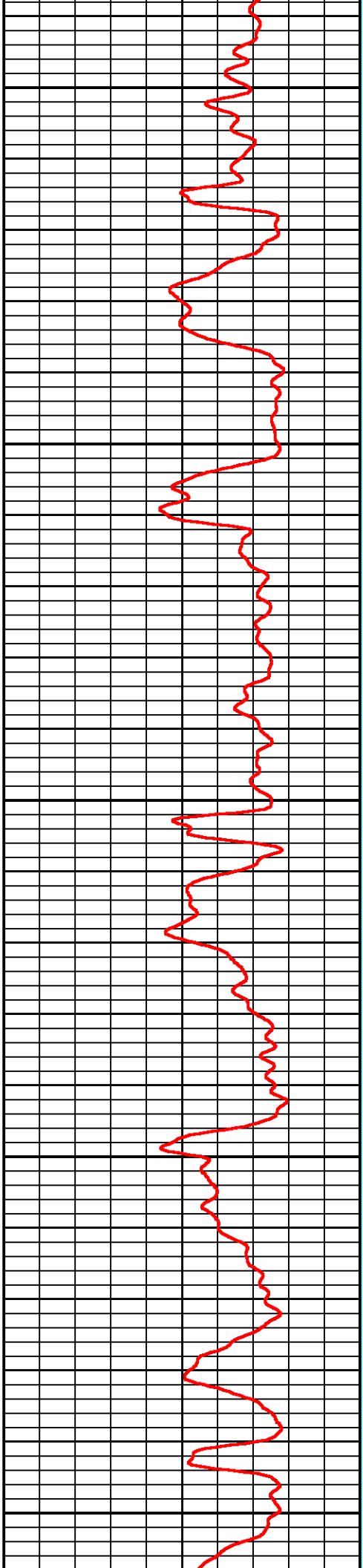
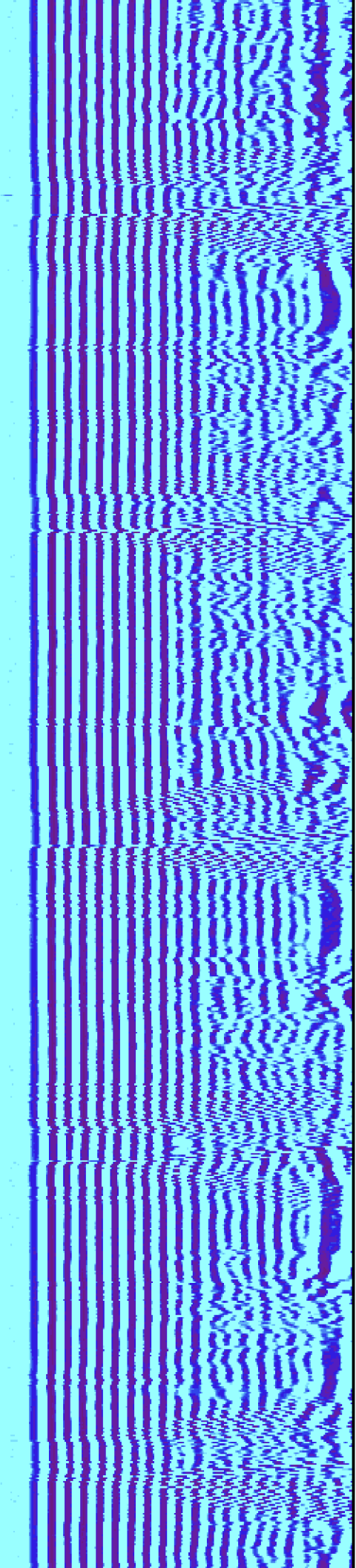




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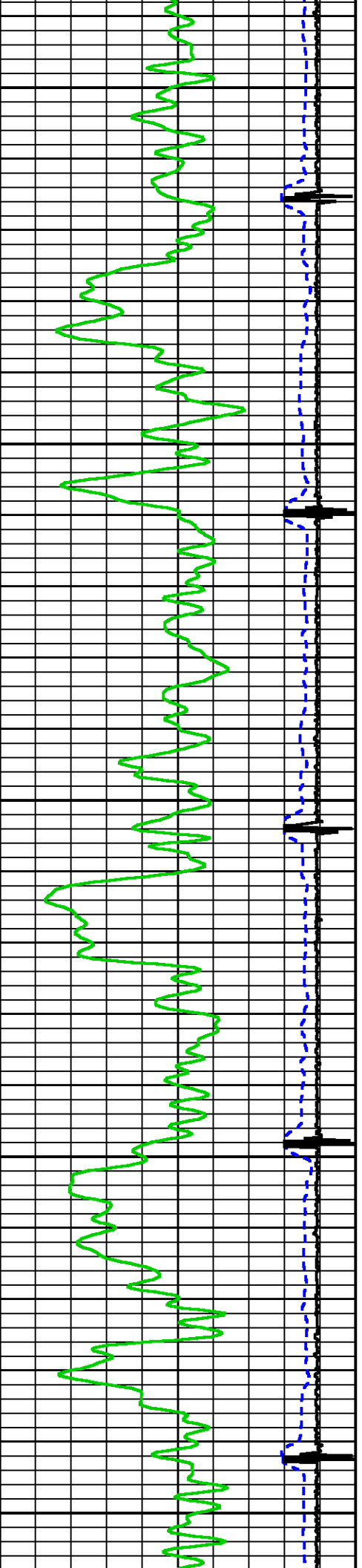
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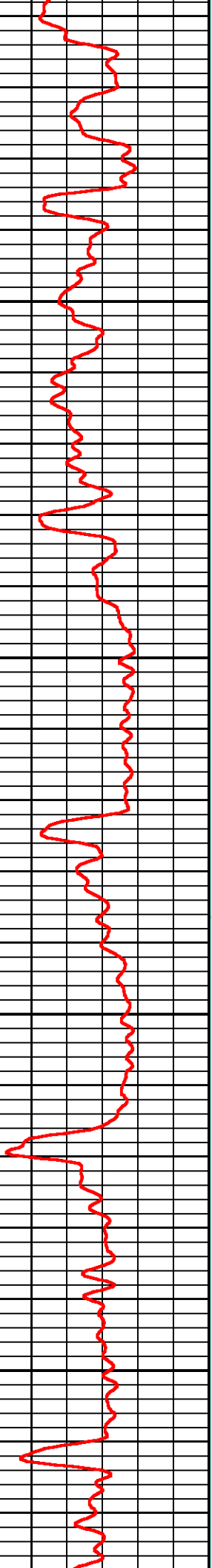
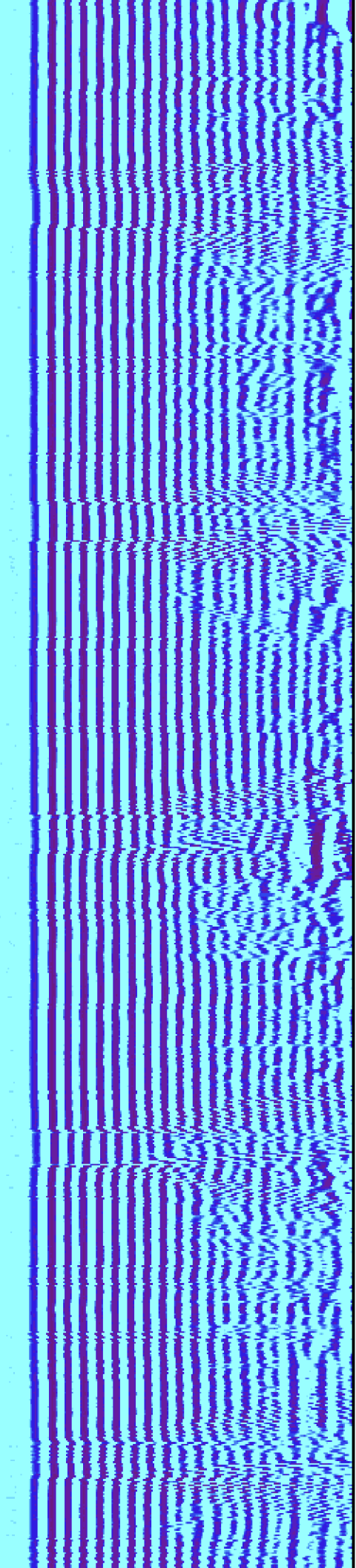




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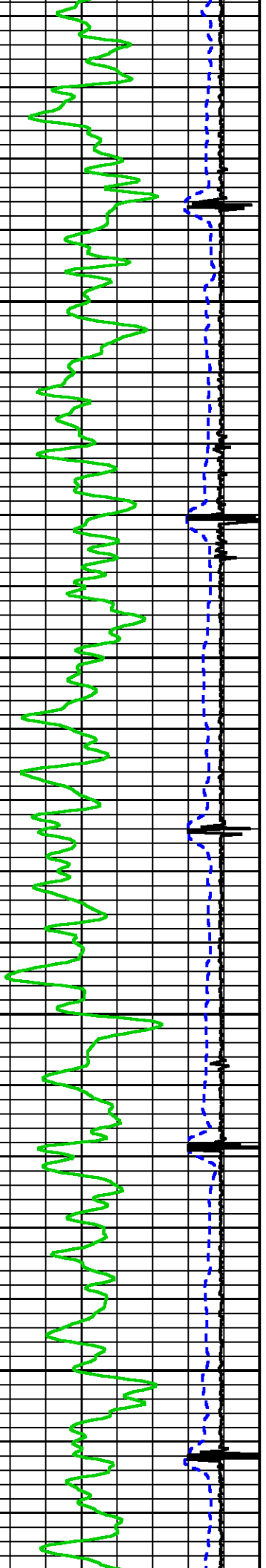
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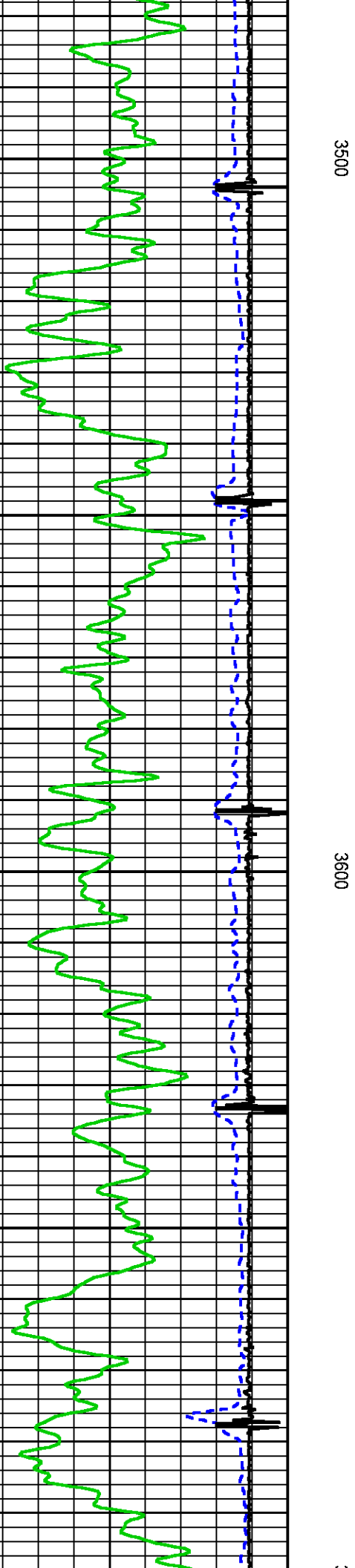
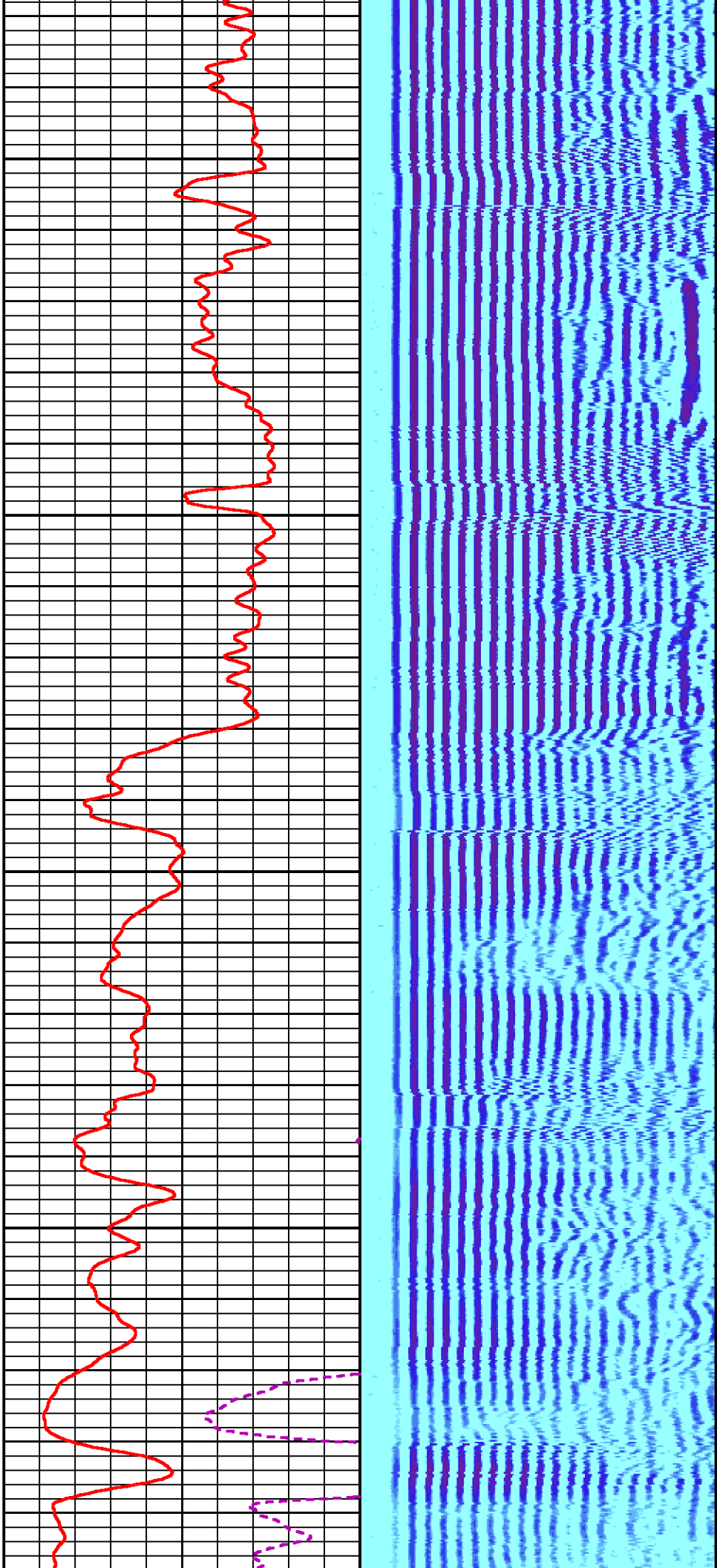


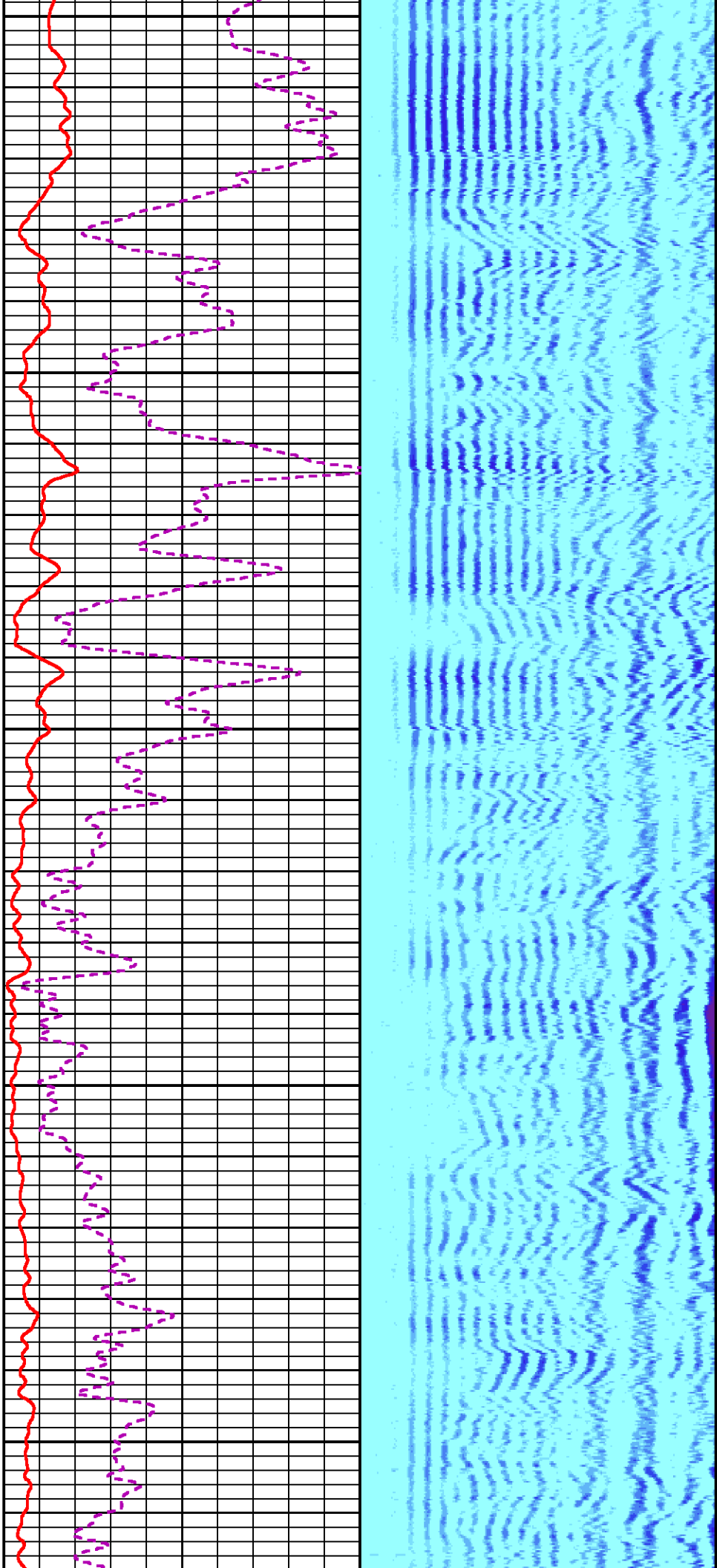
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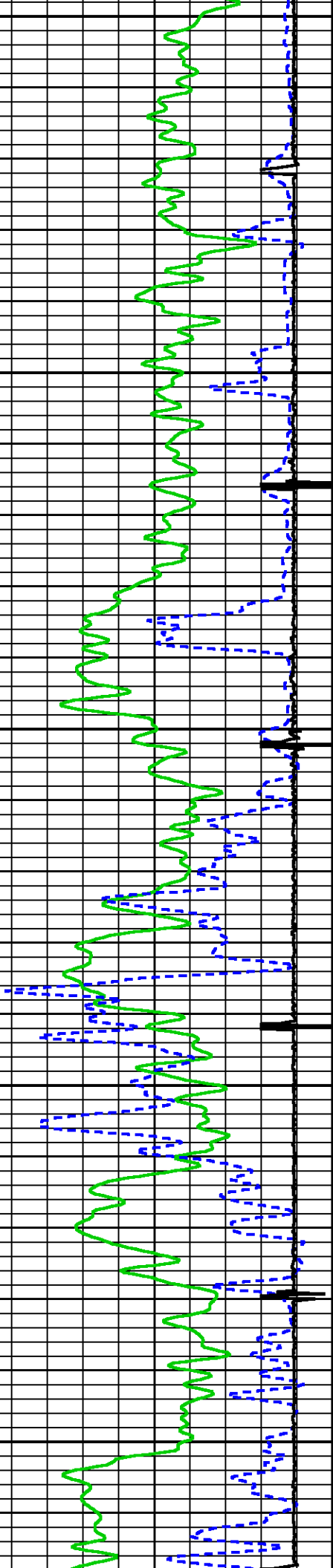


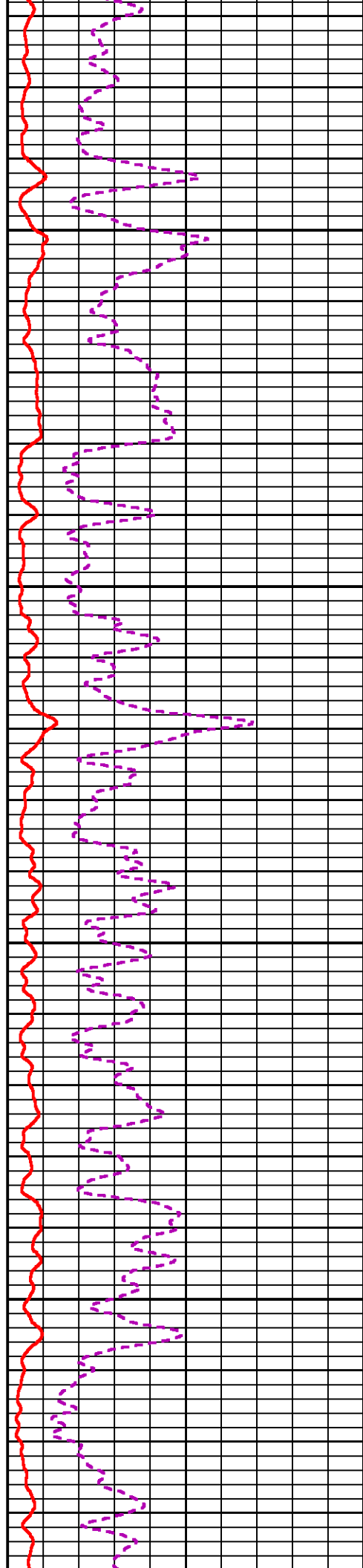
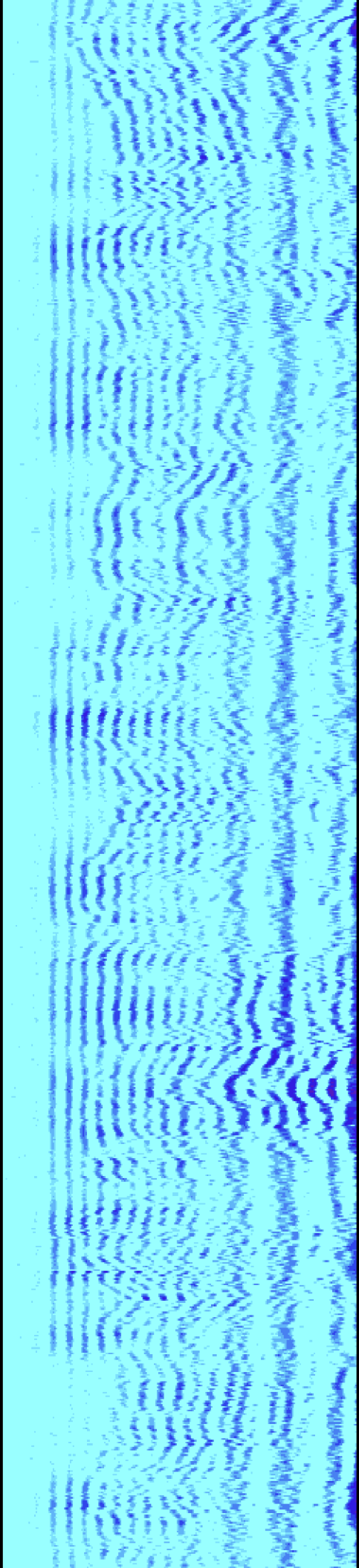


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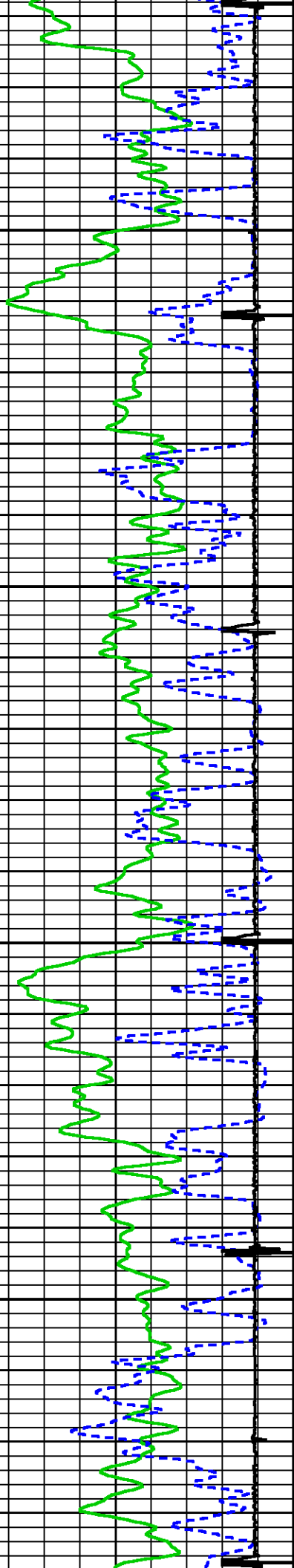
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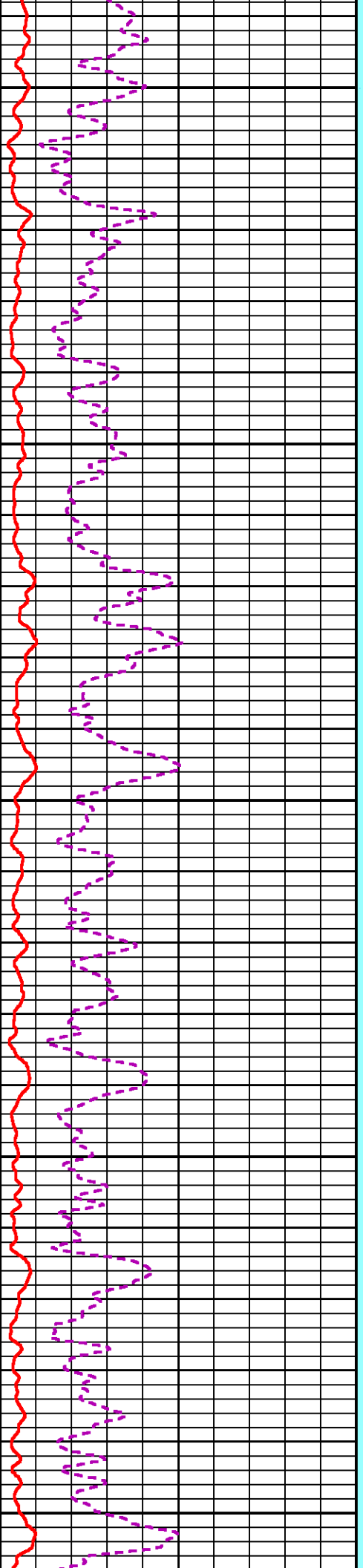
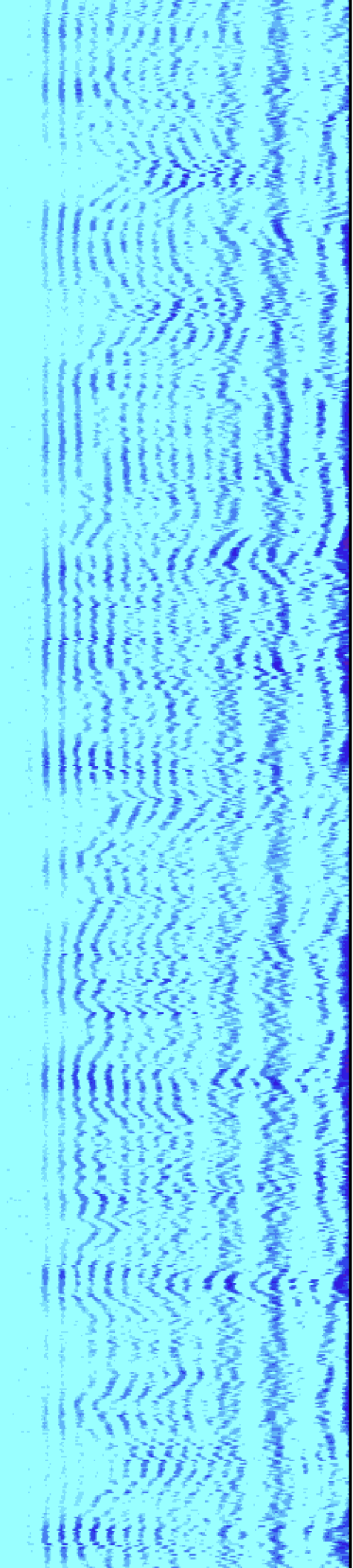




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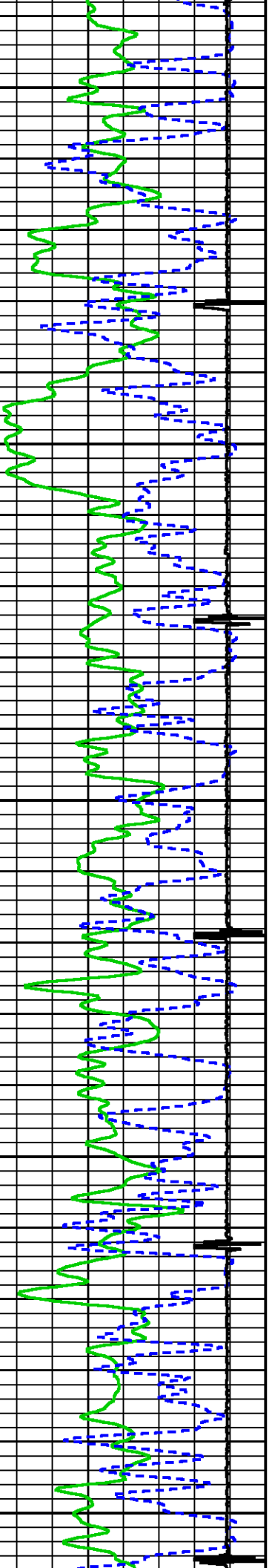
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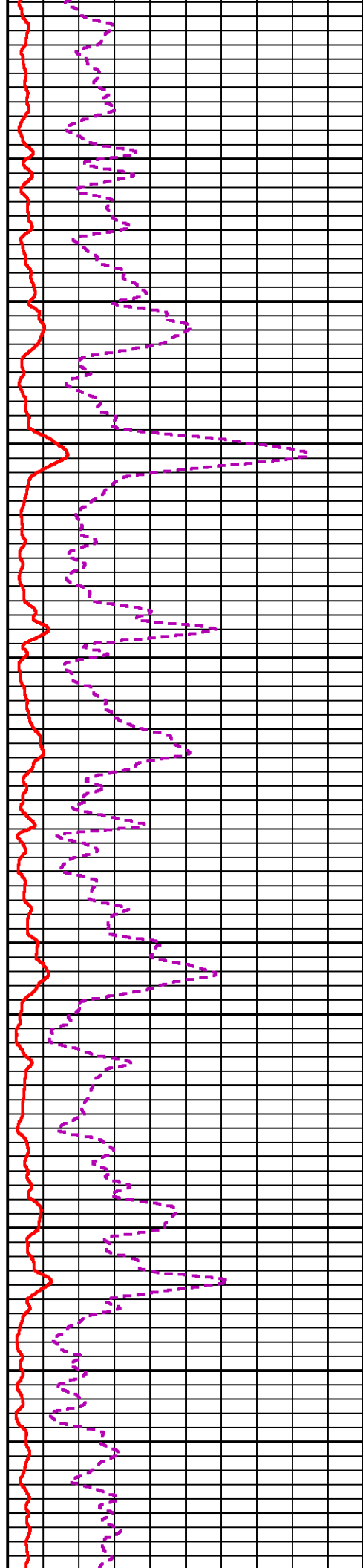
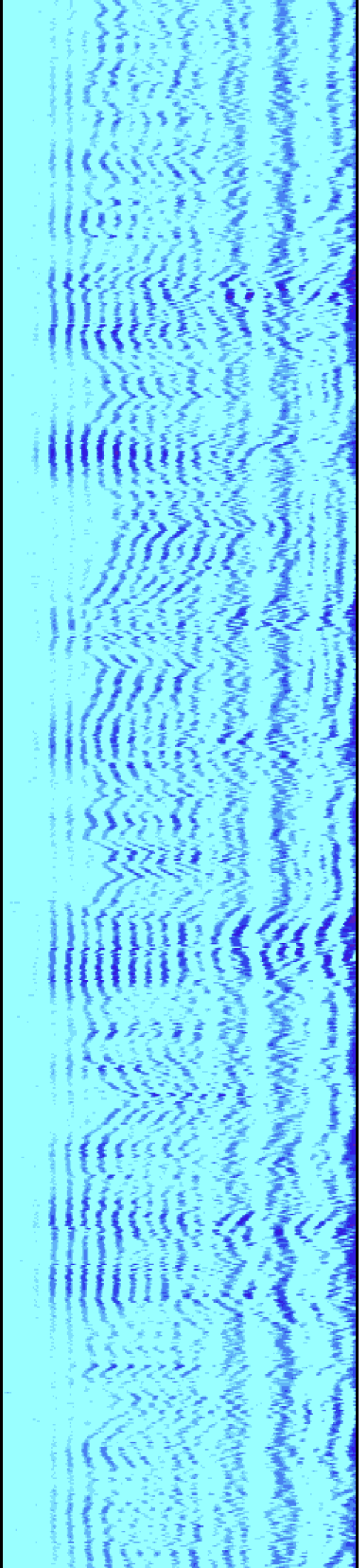


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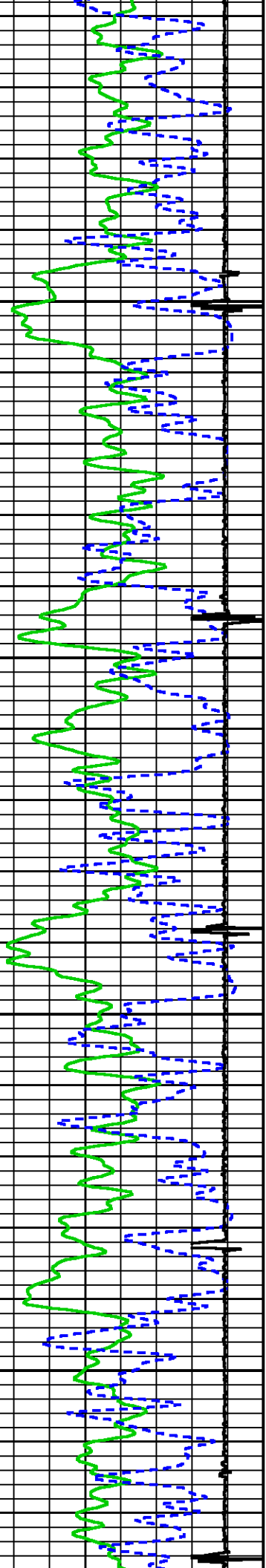


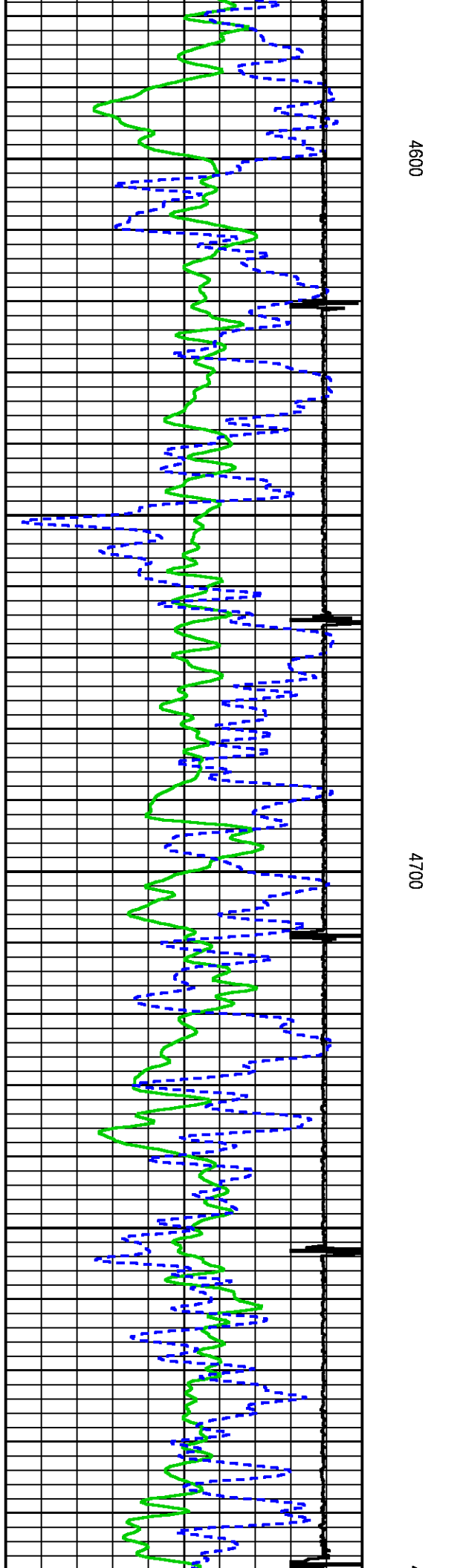
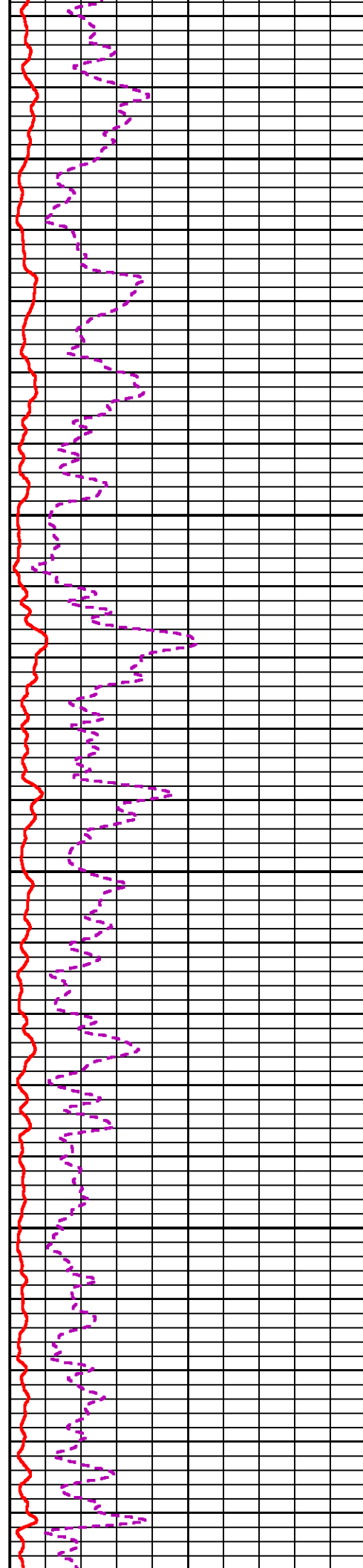
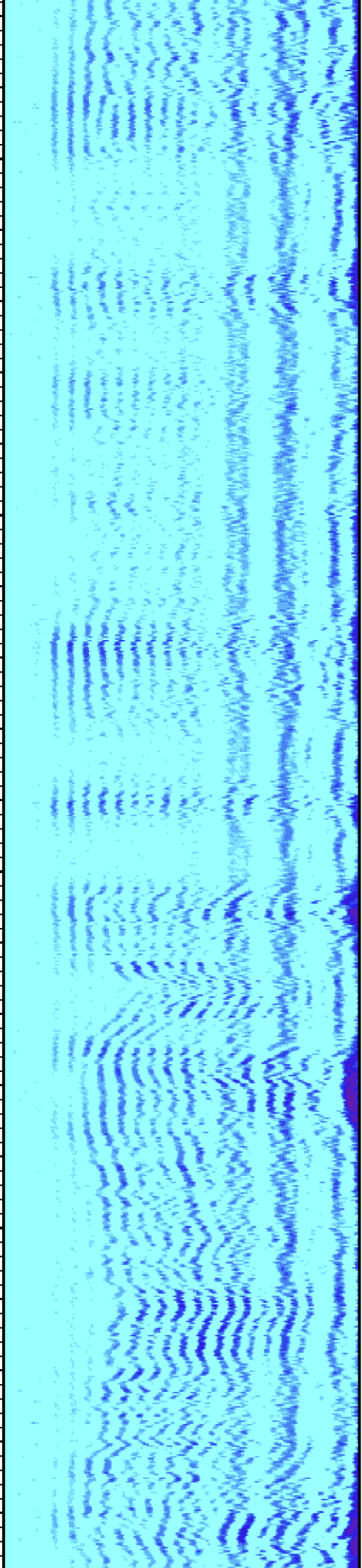


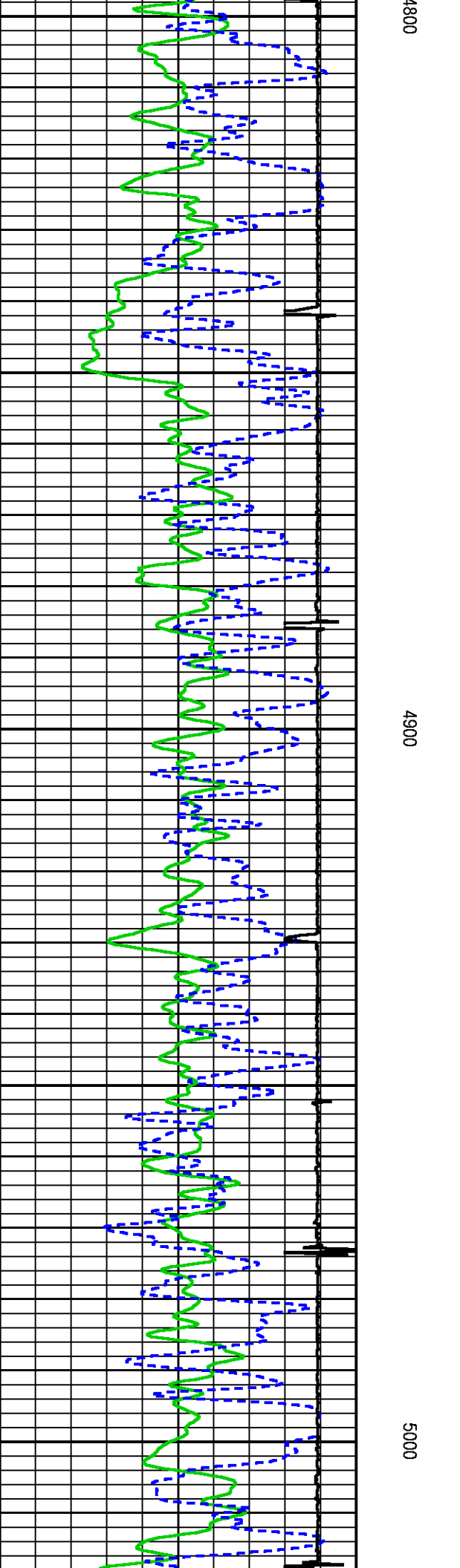
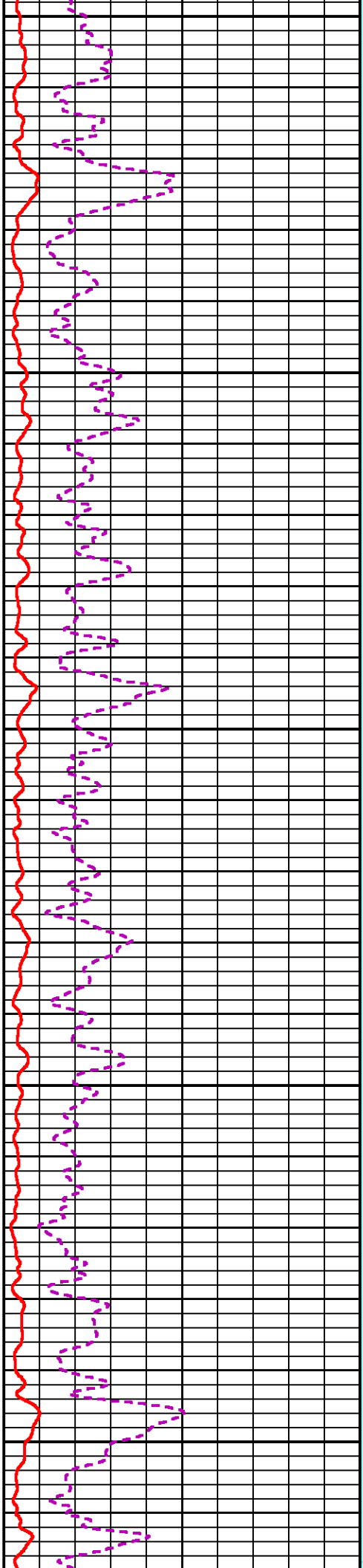
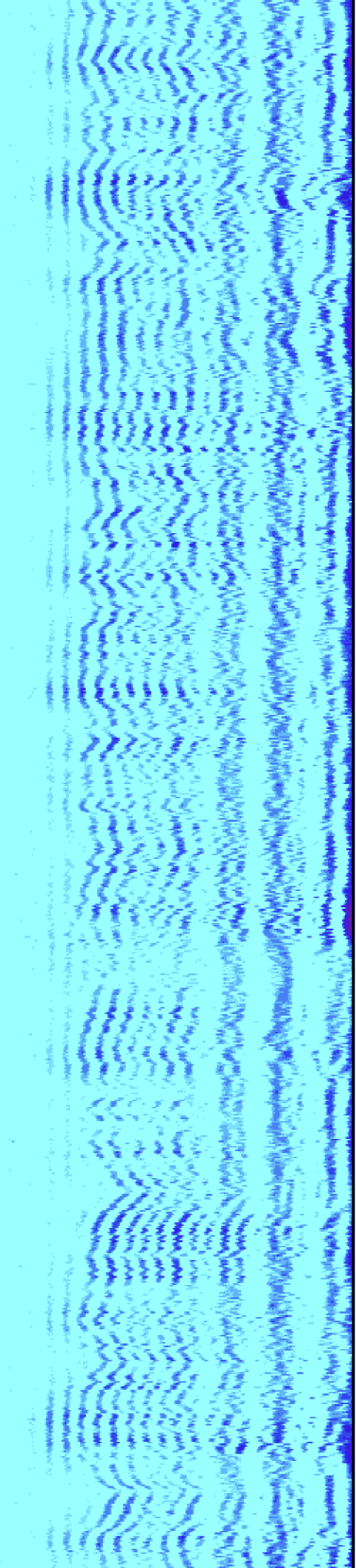


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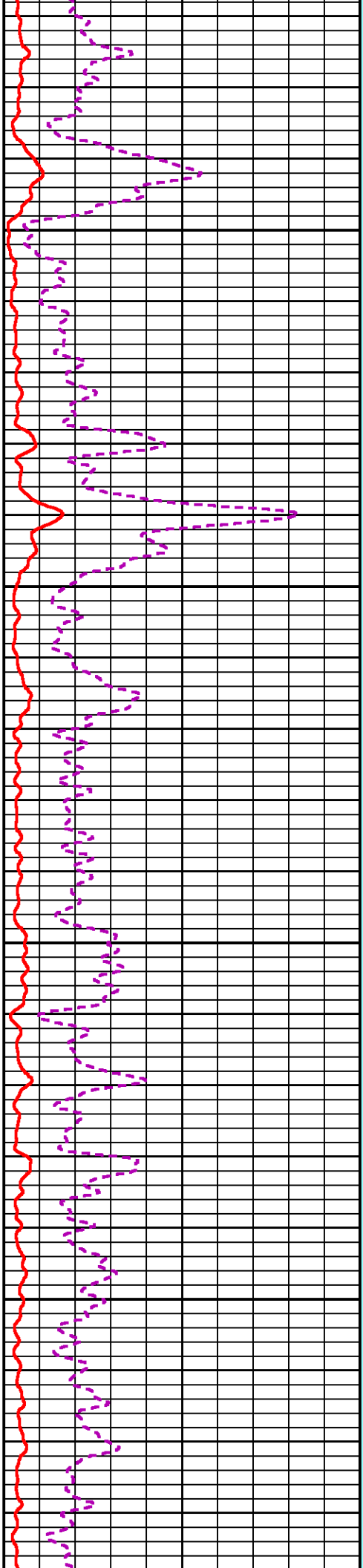
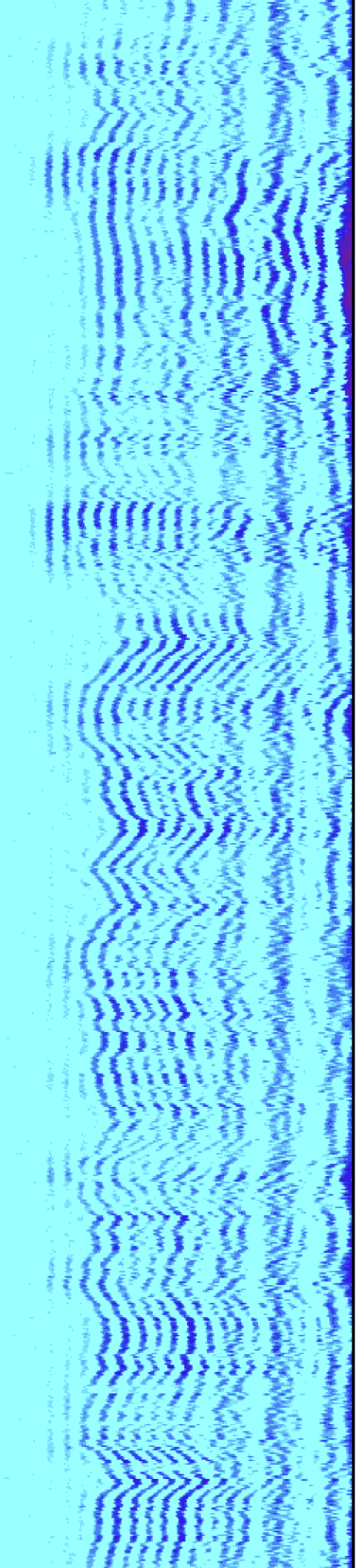
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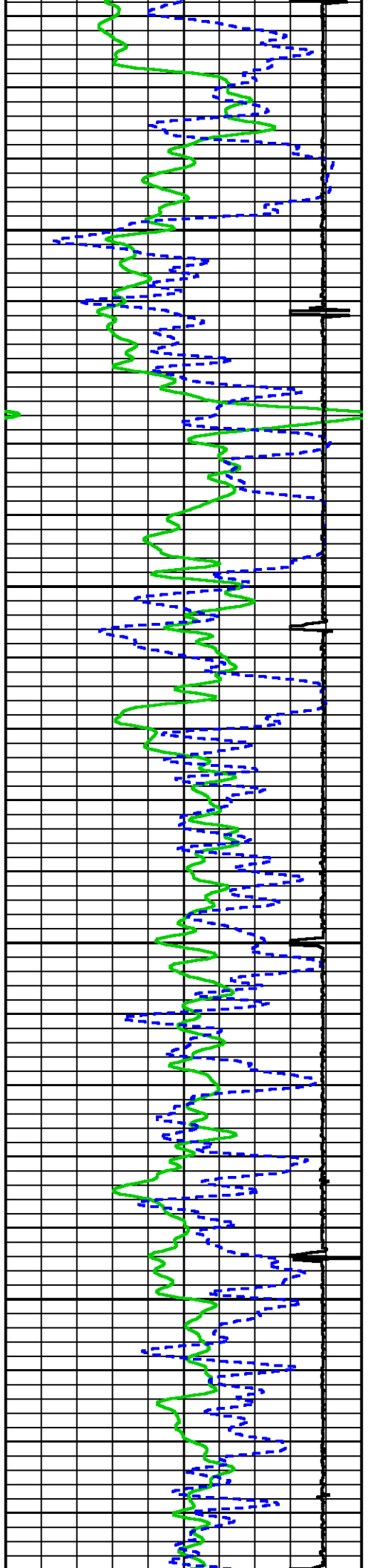


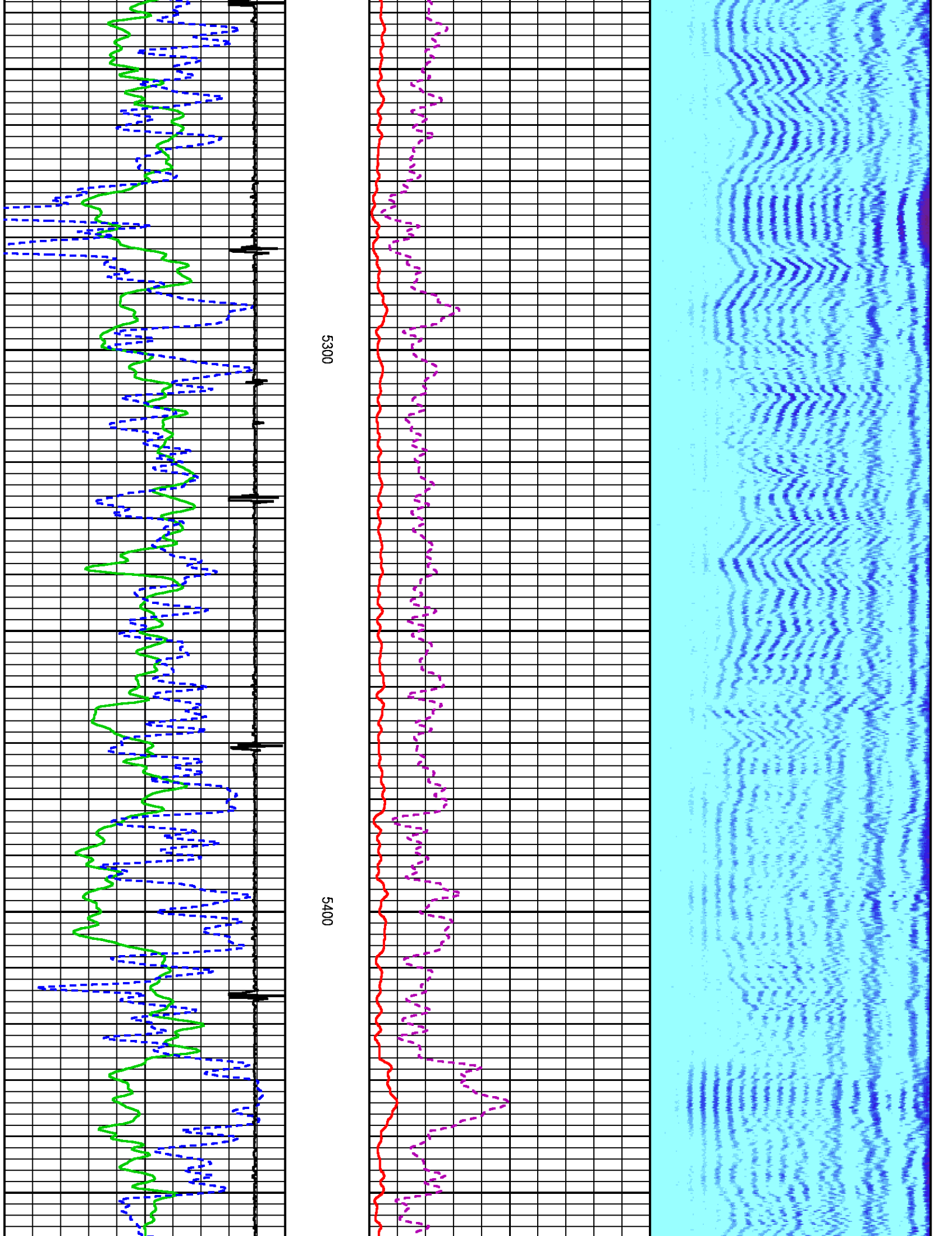


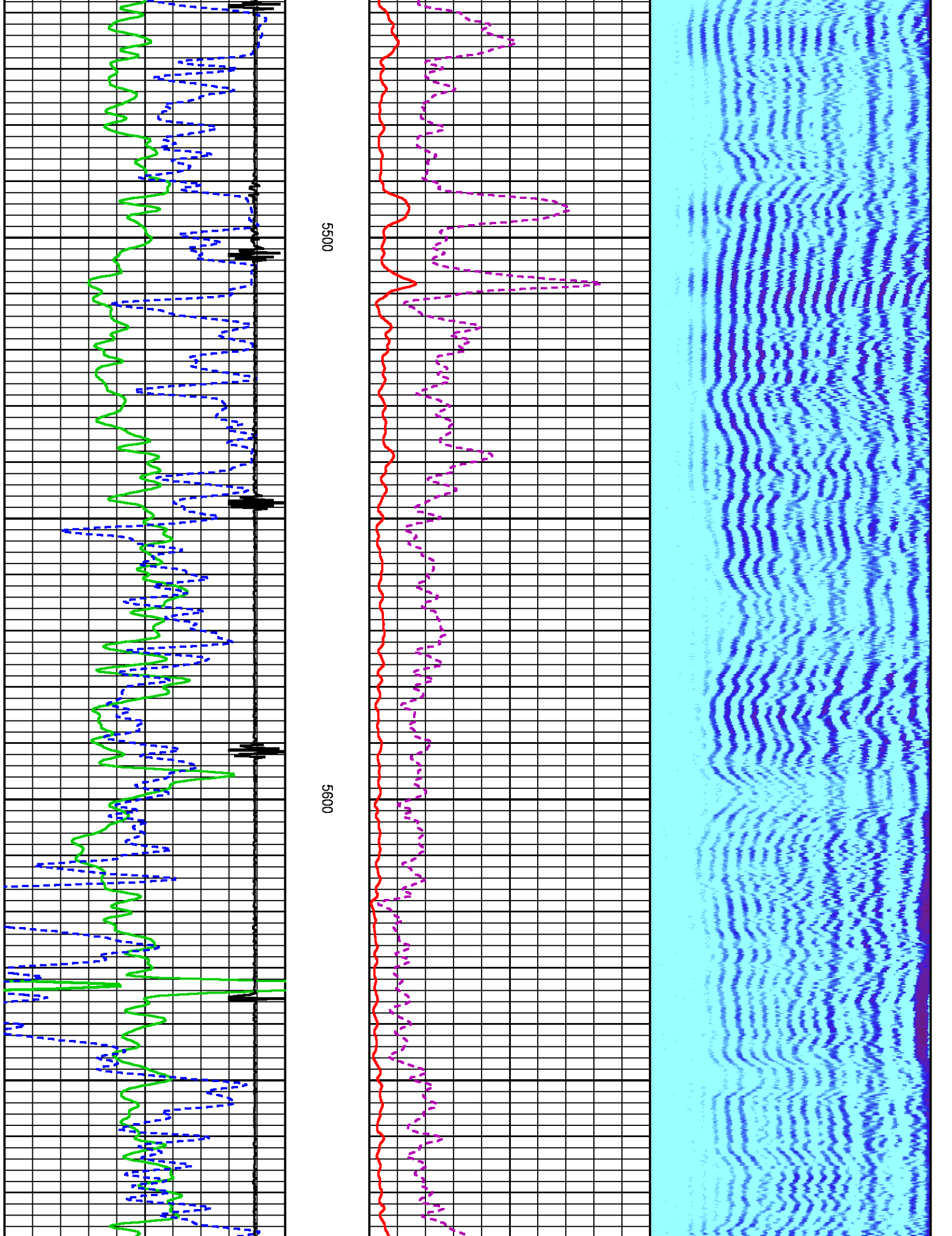


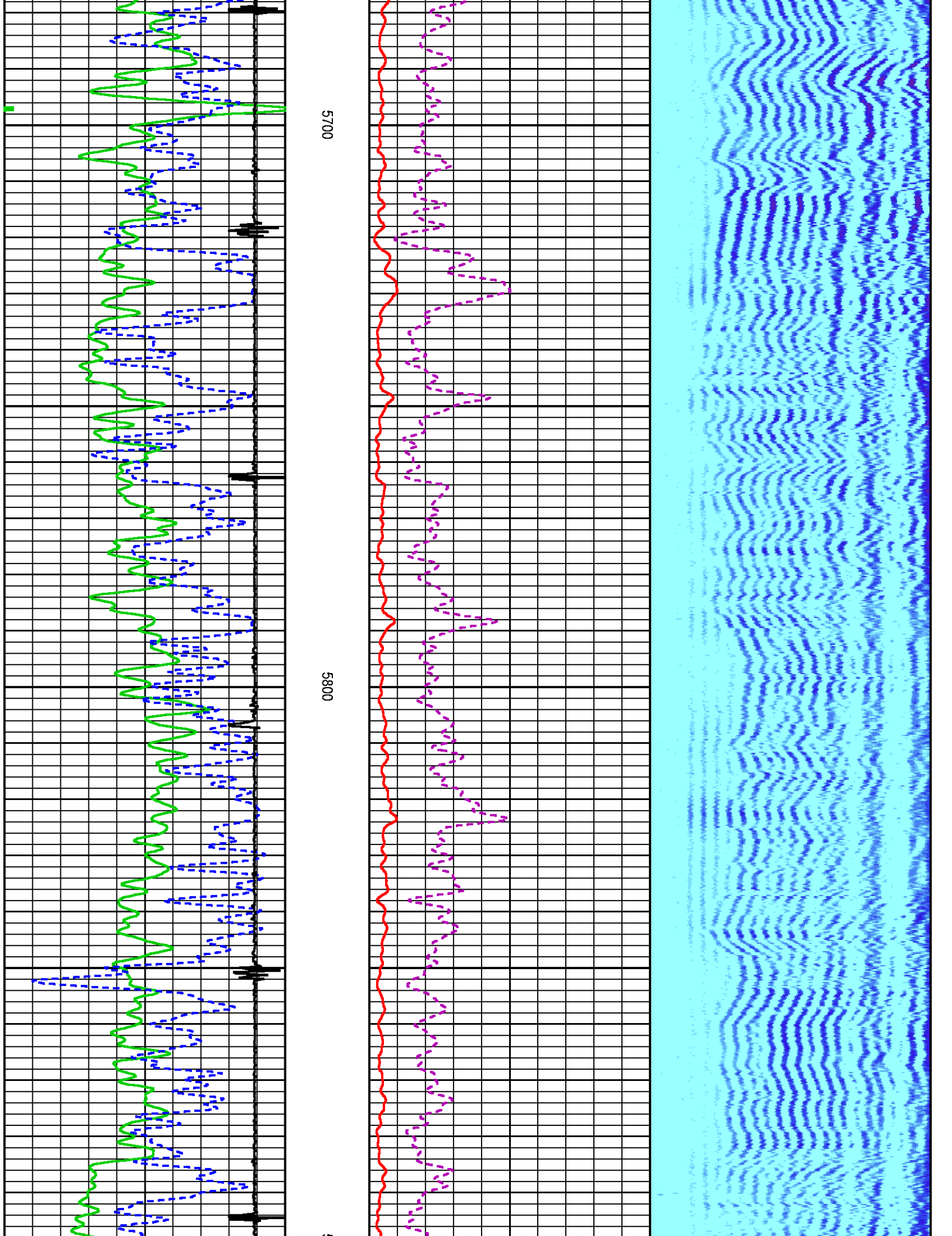
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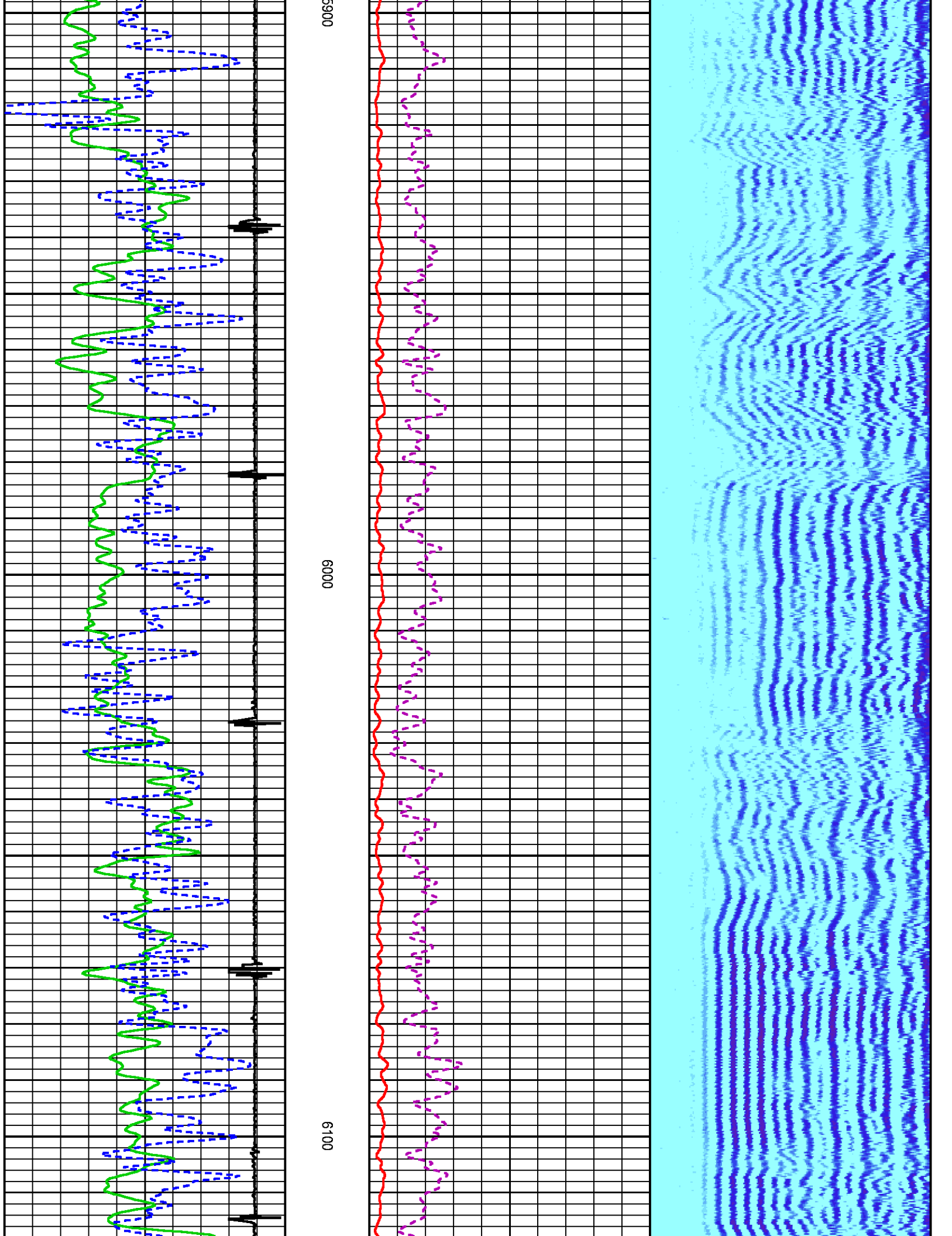


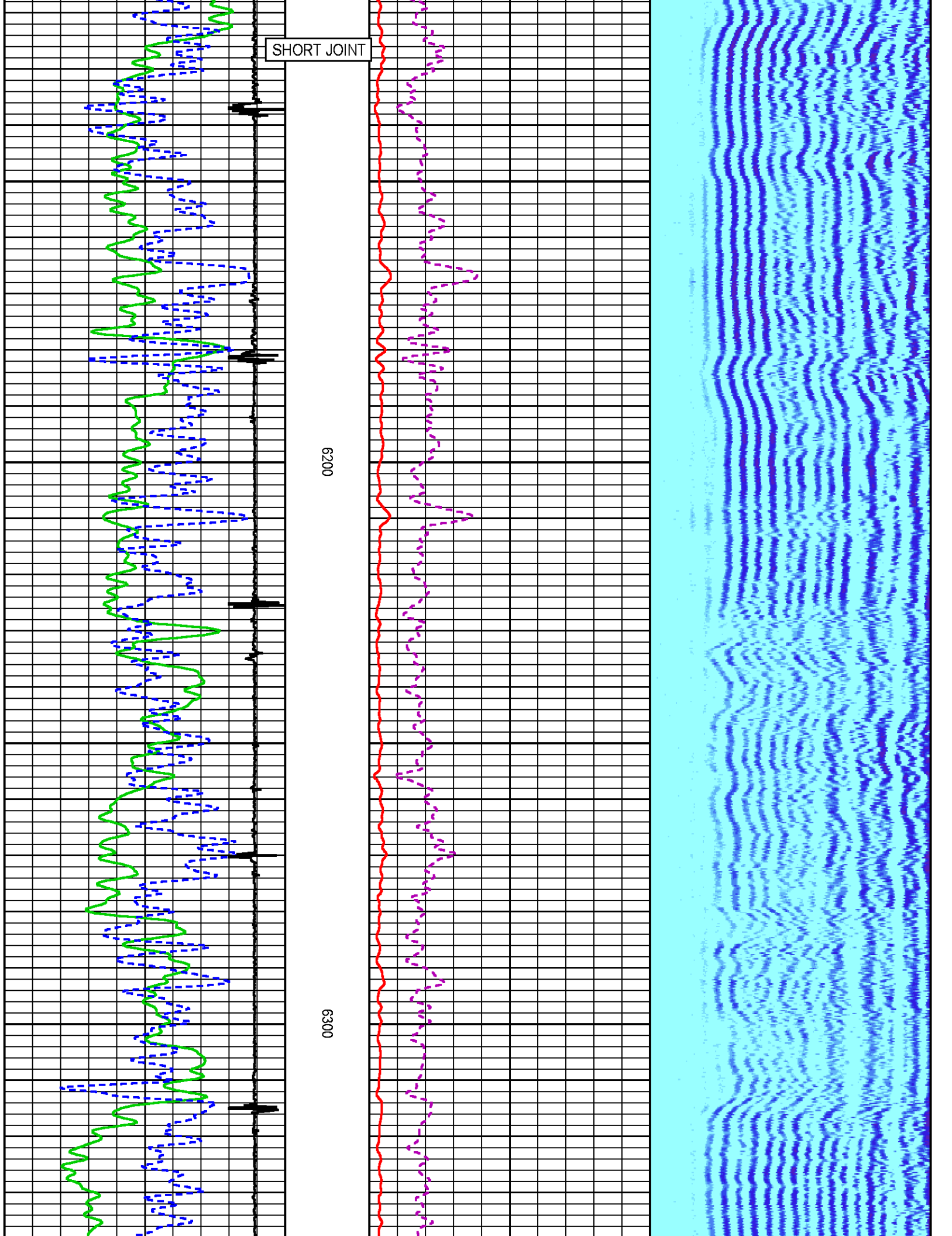


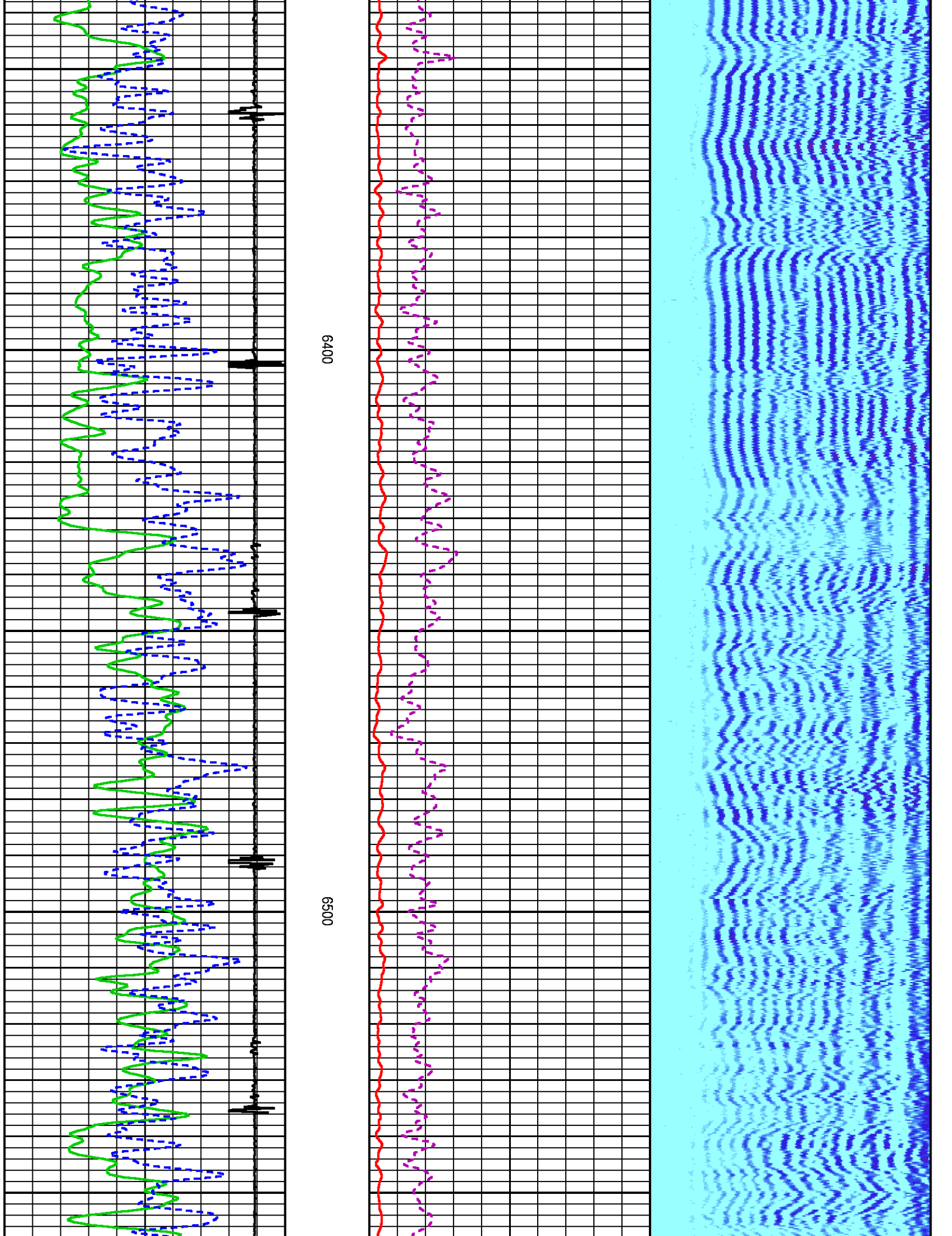




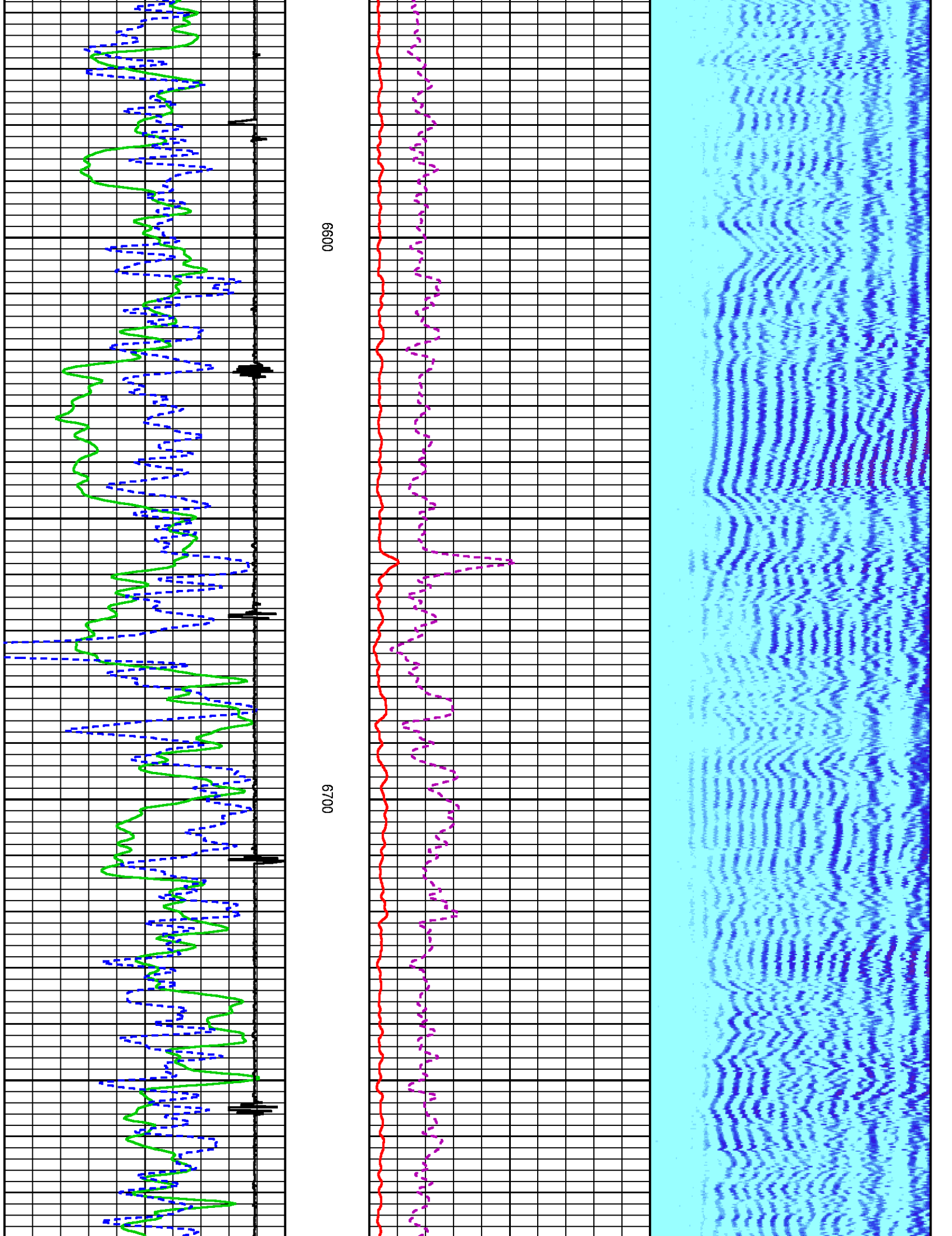


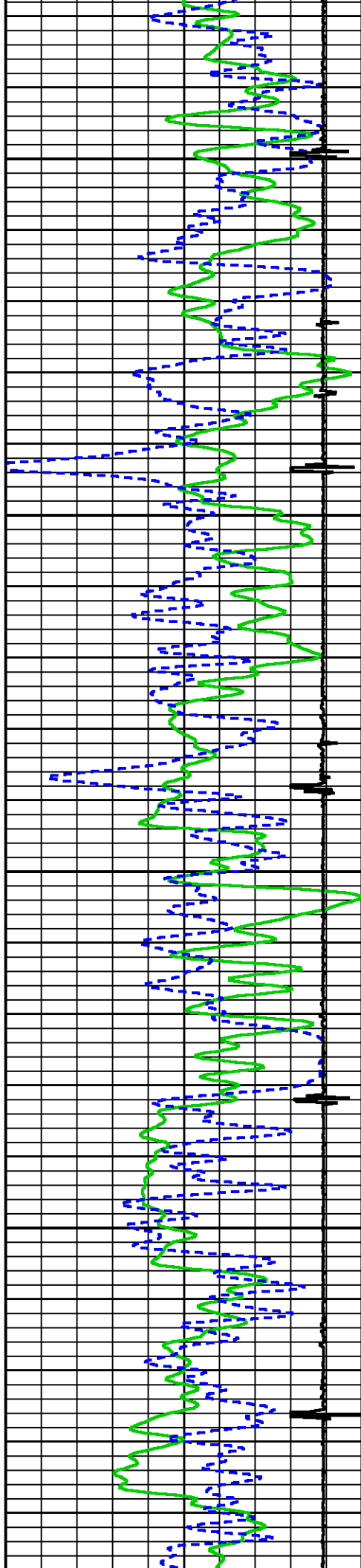






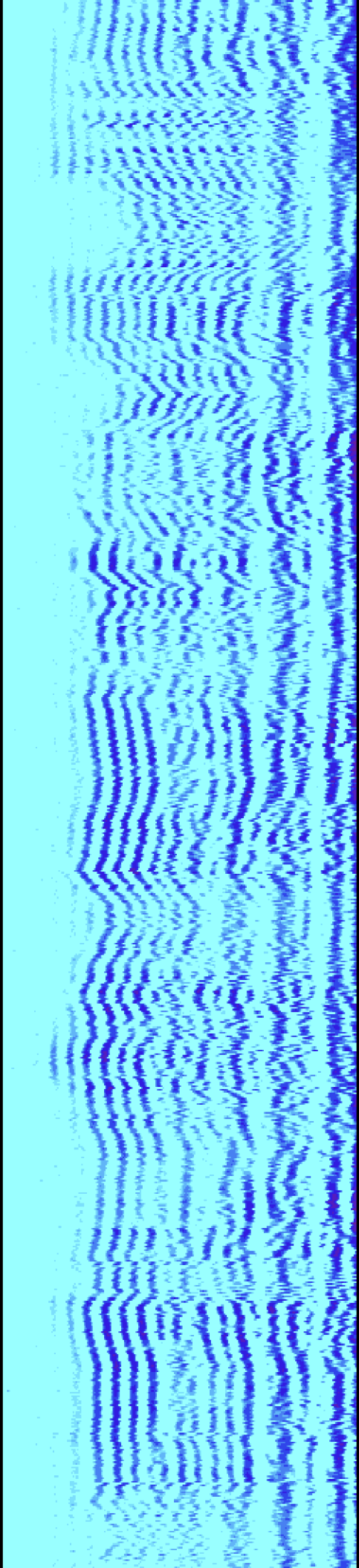
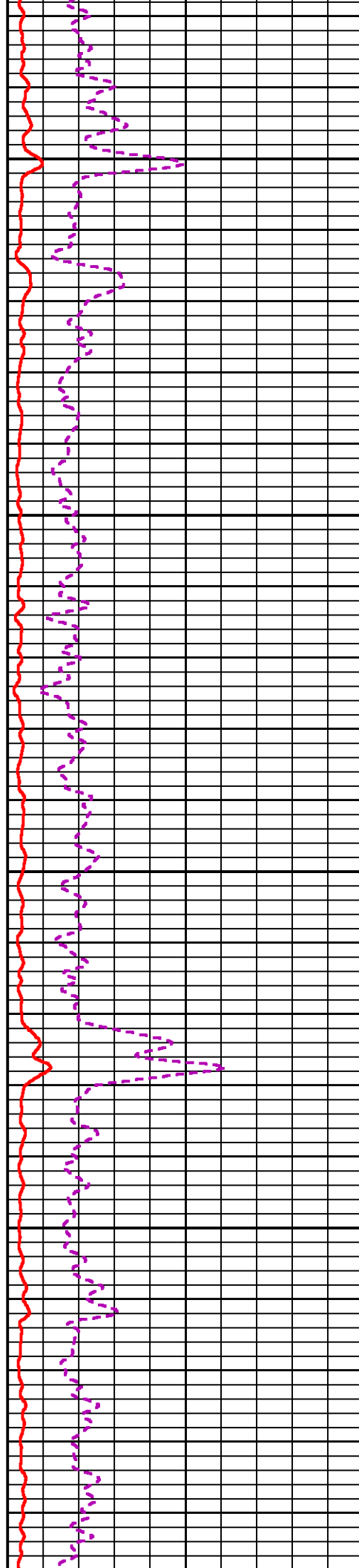


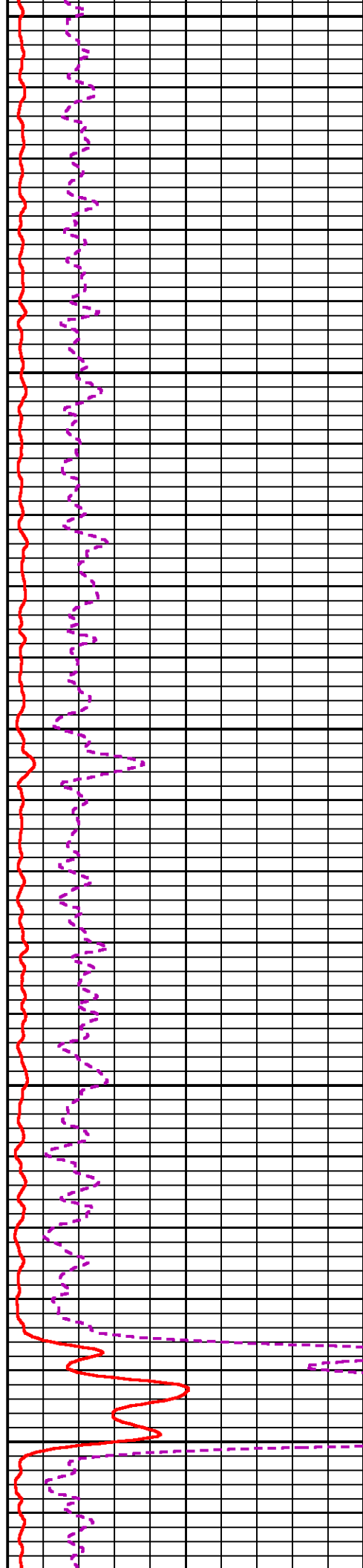
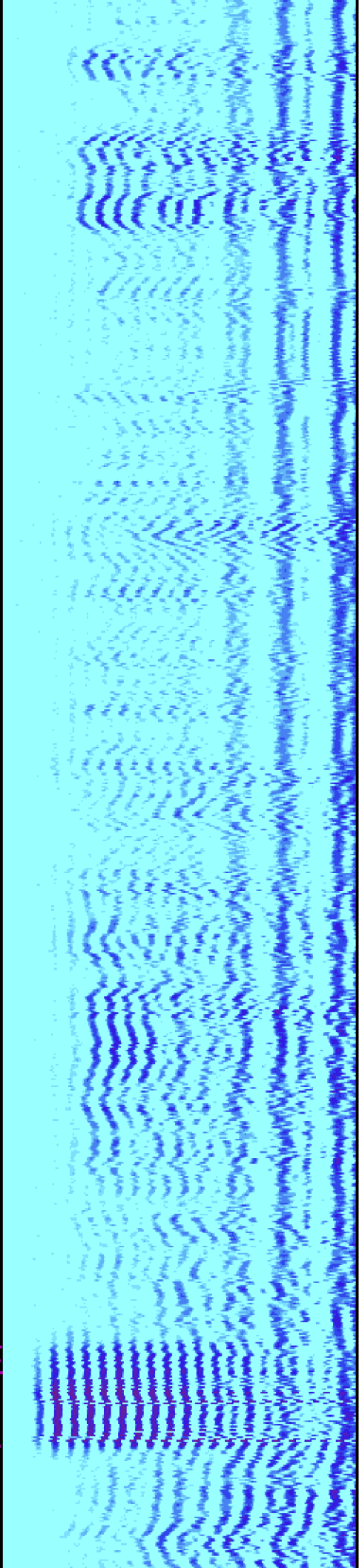




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6900

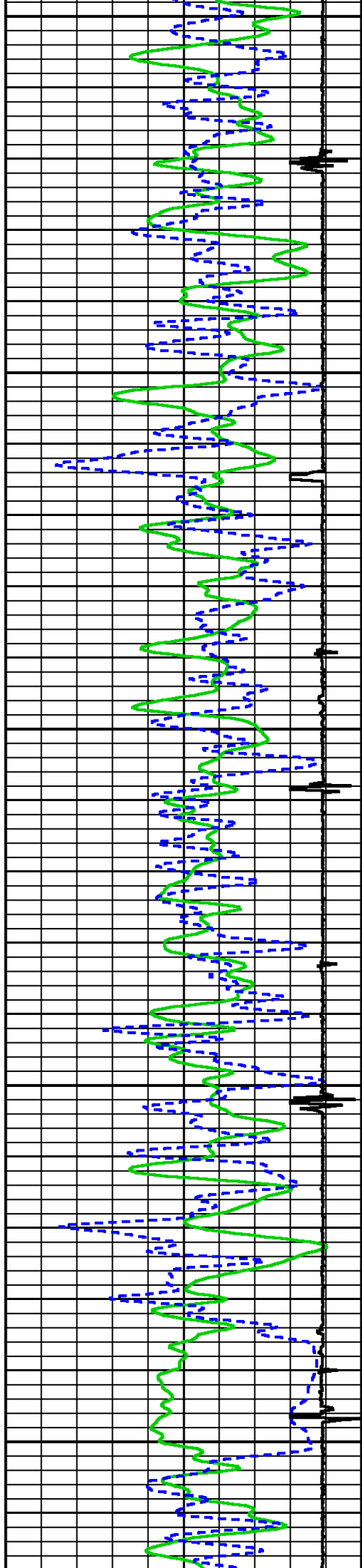


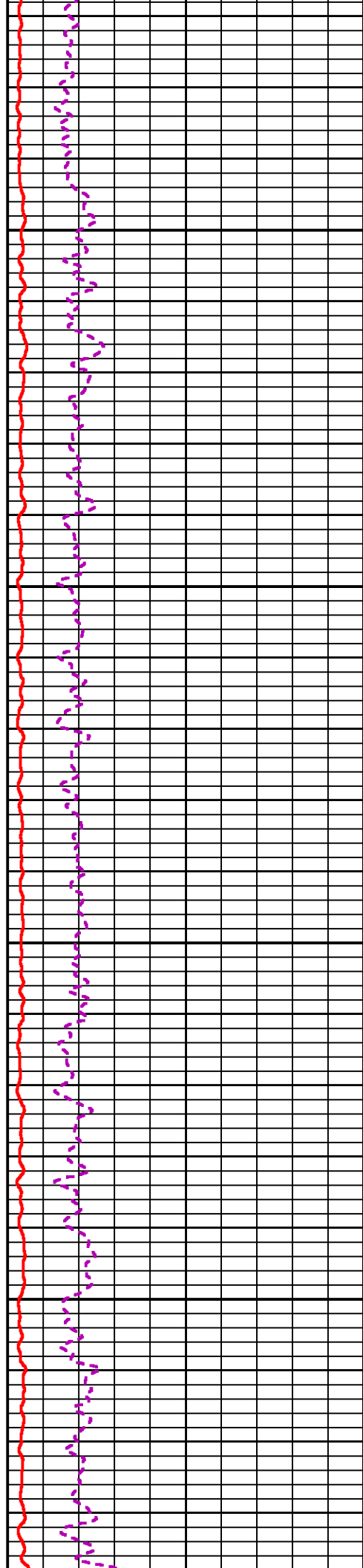
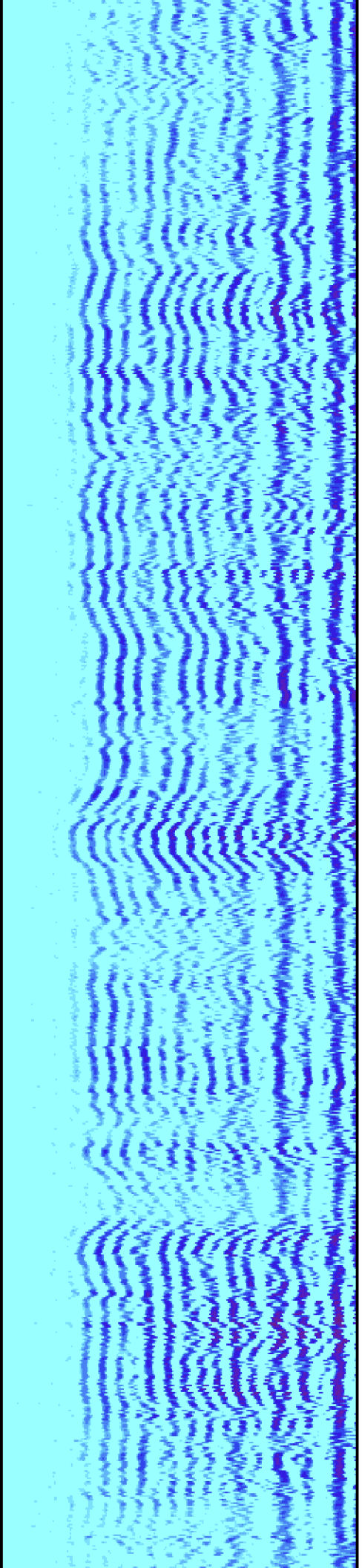


7000

7100

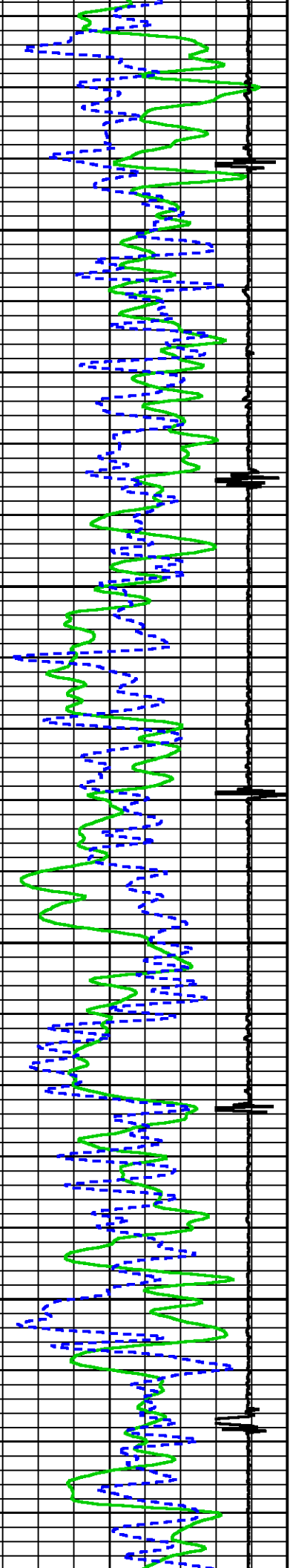
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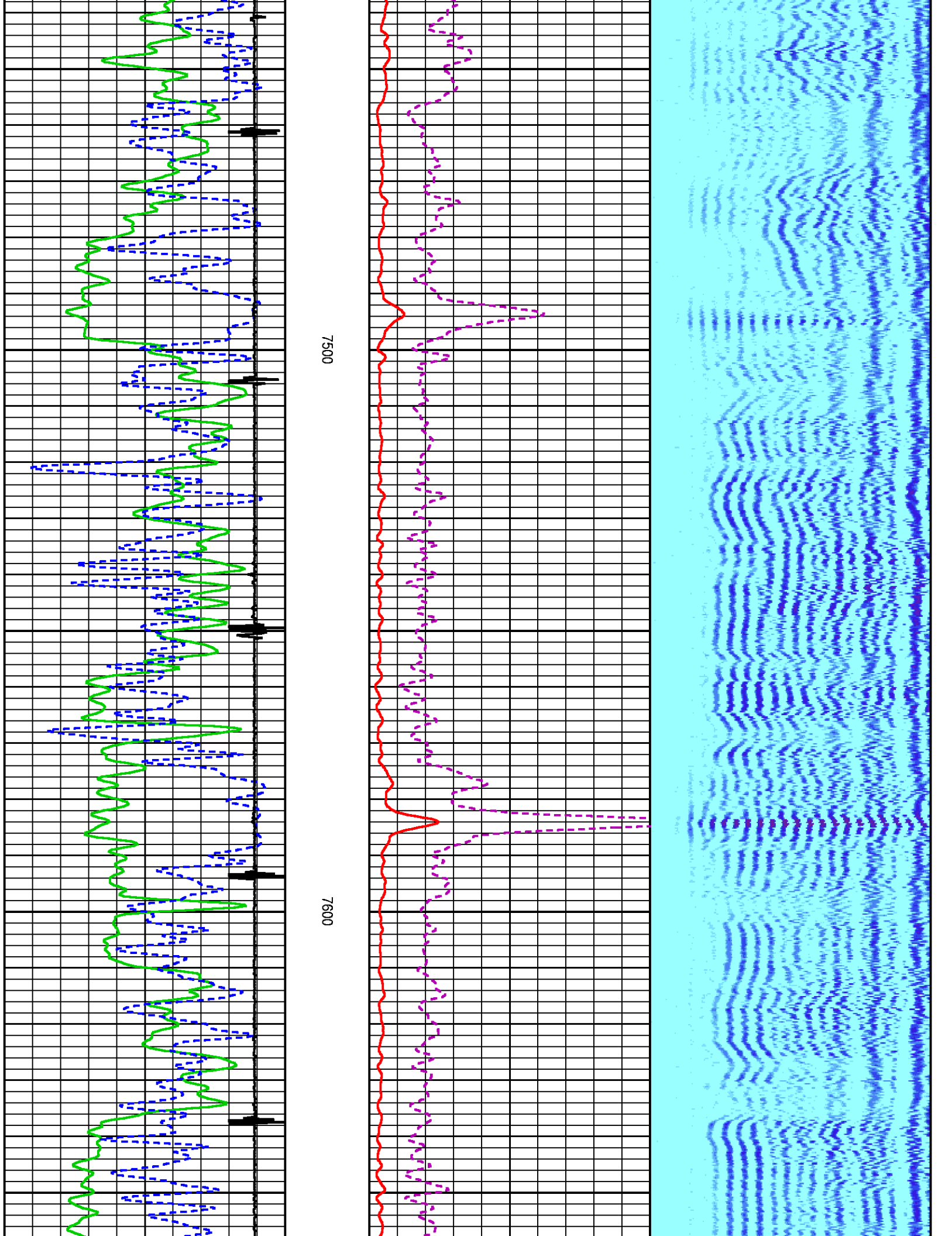


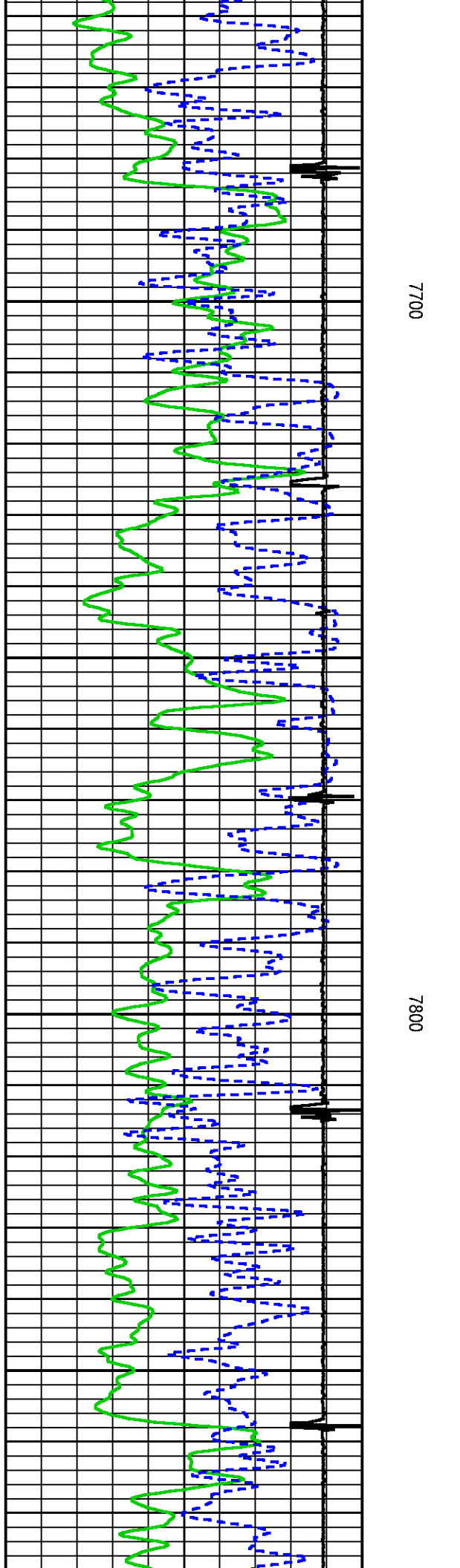
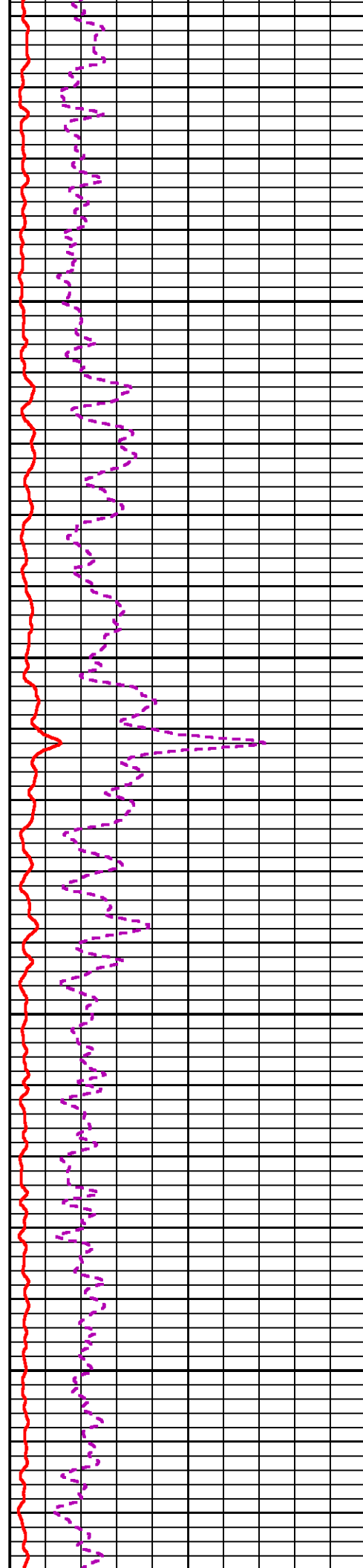
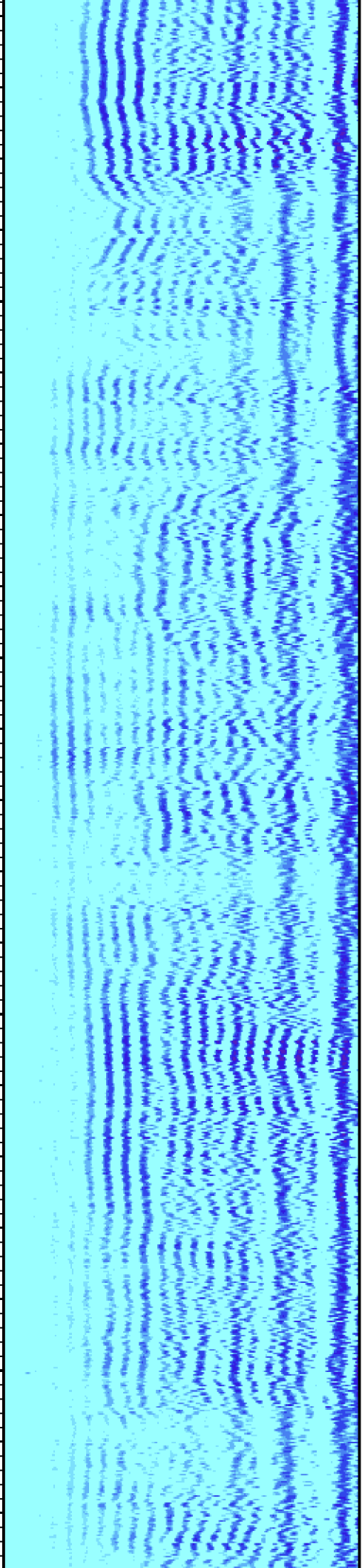
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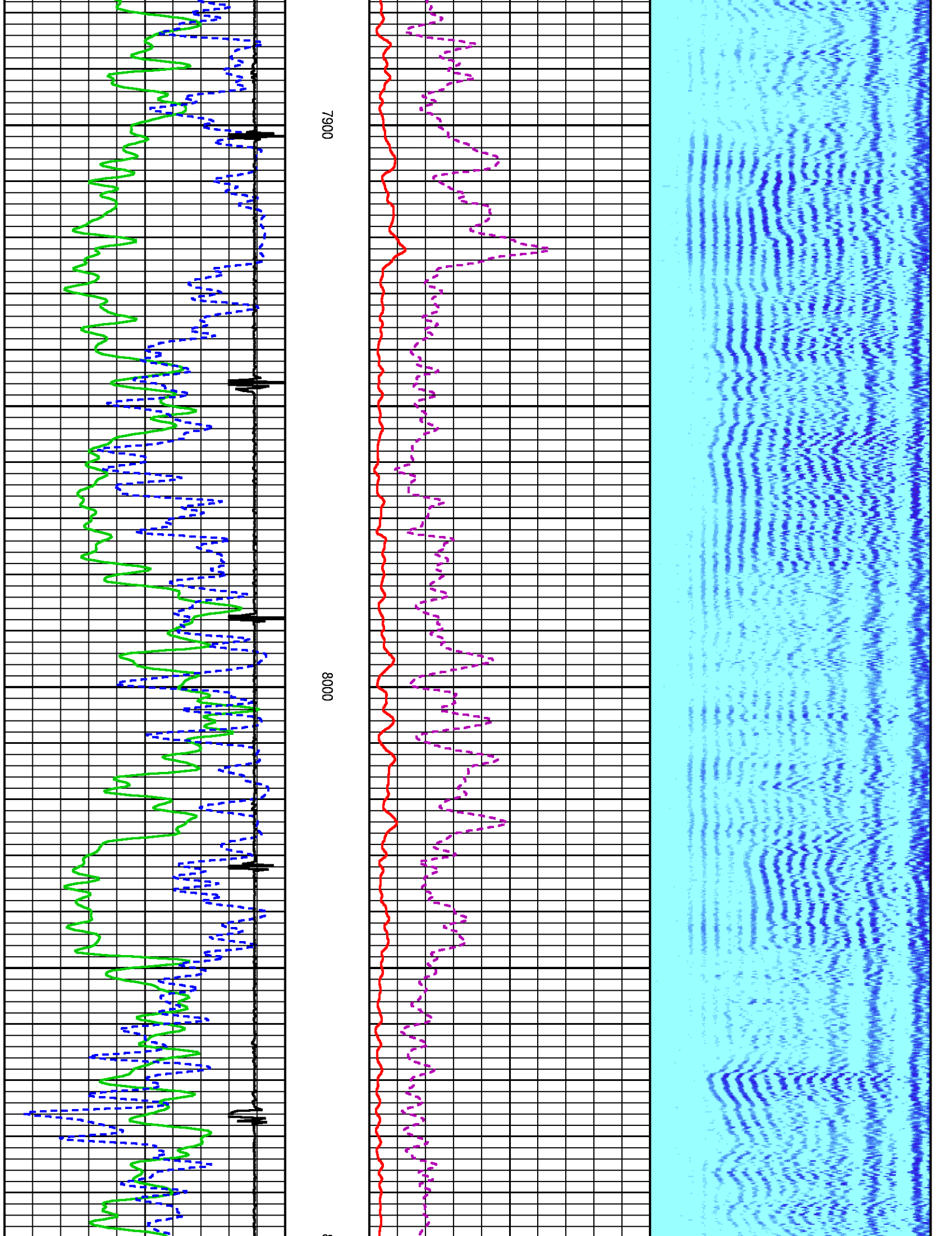
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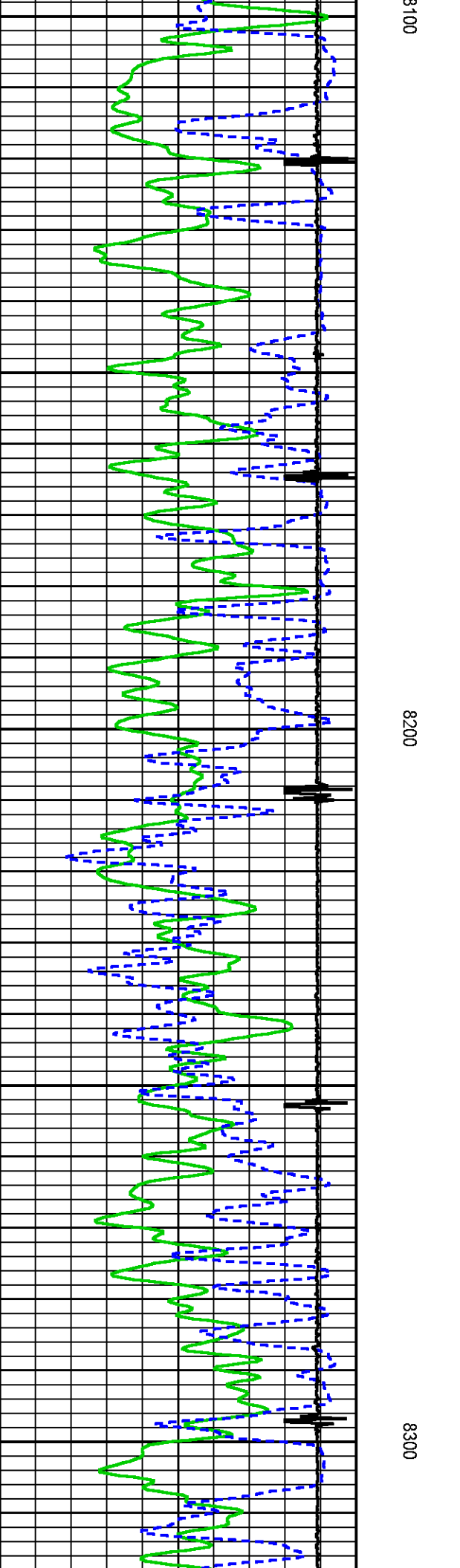
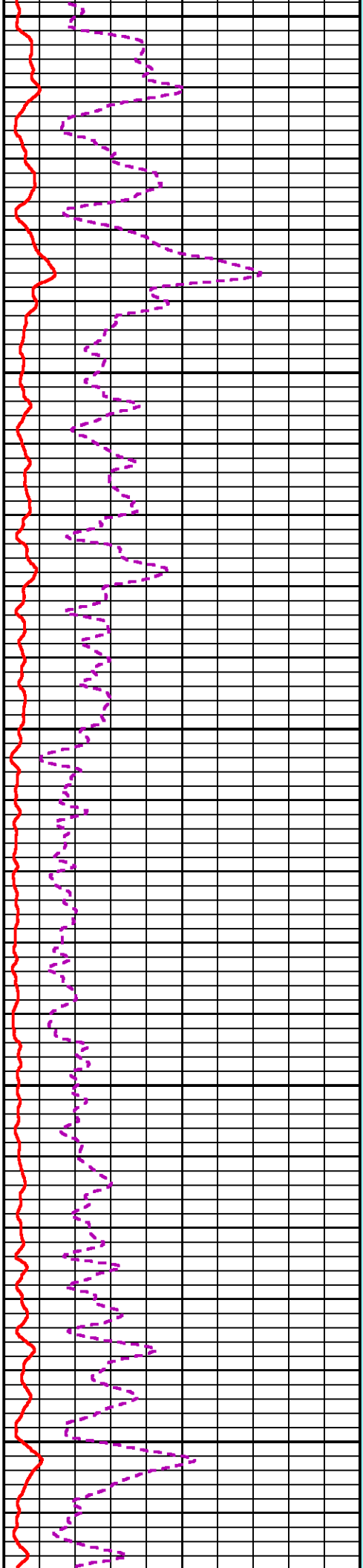
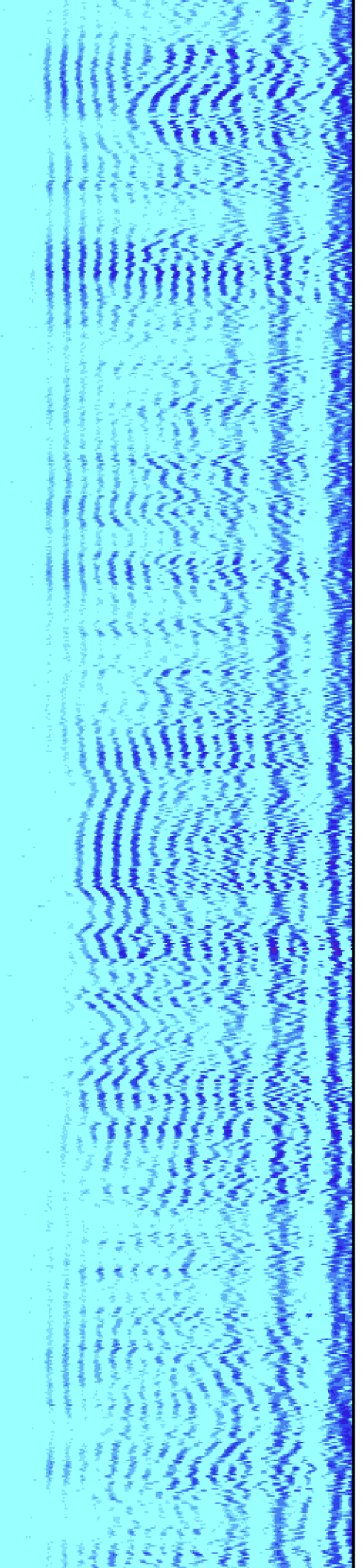




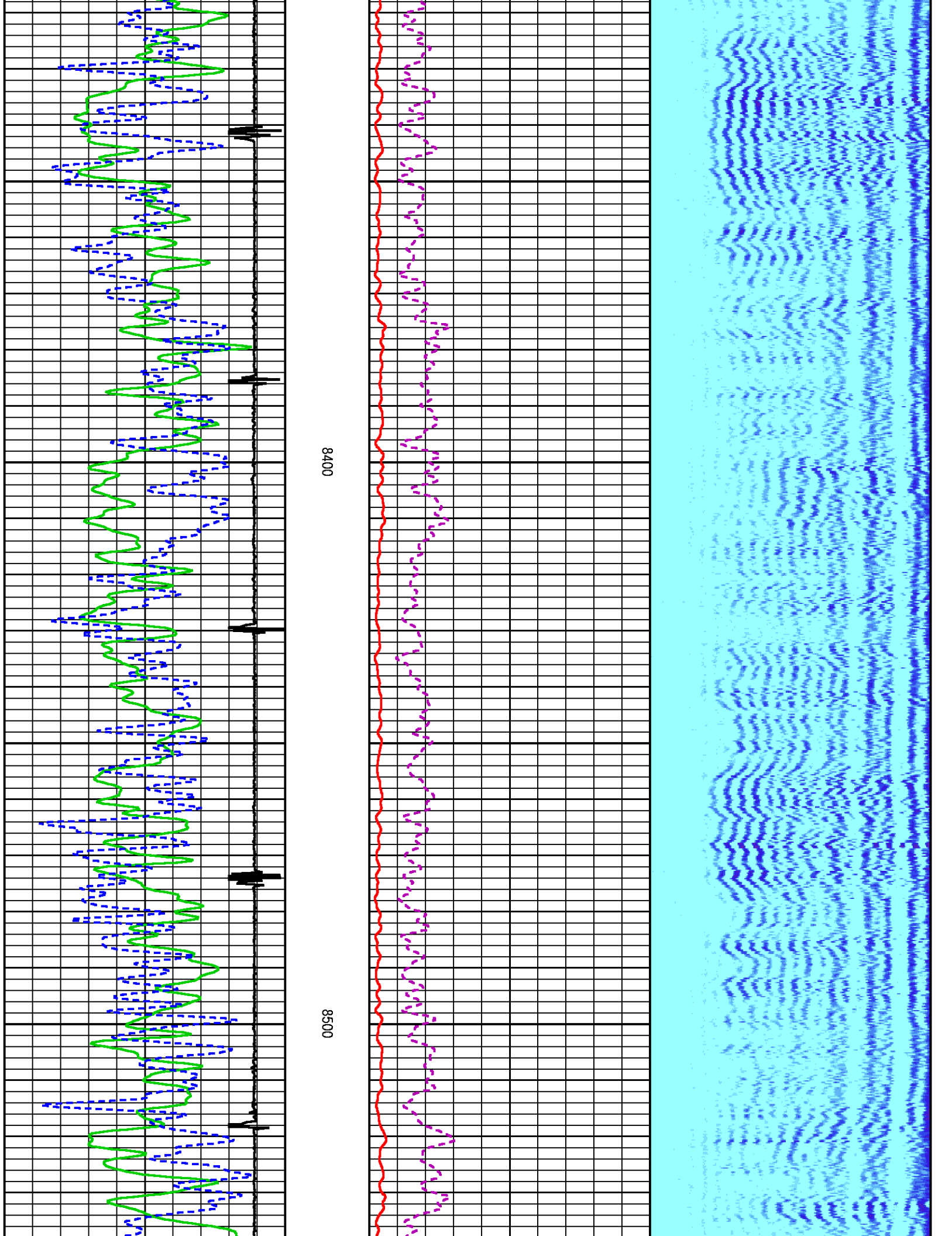


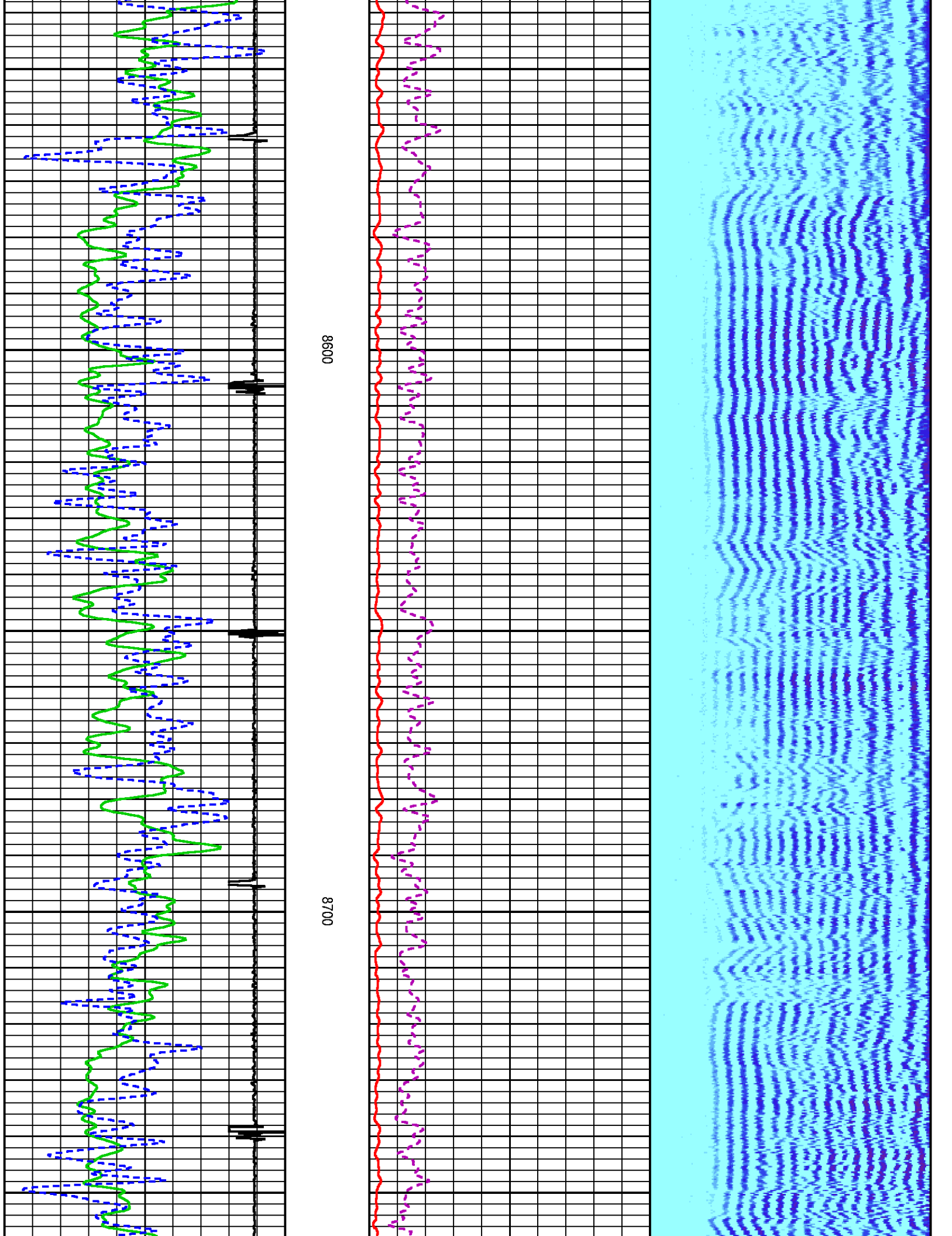


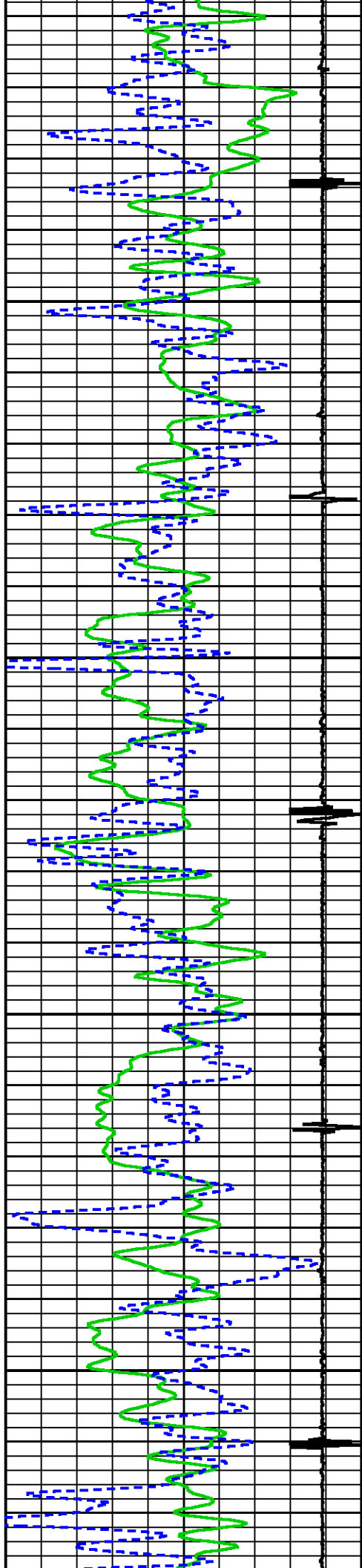






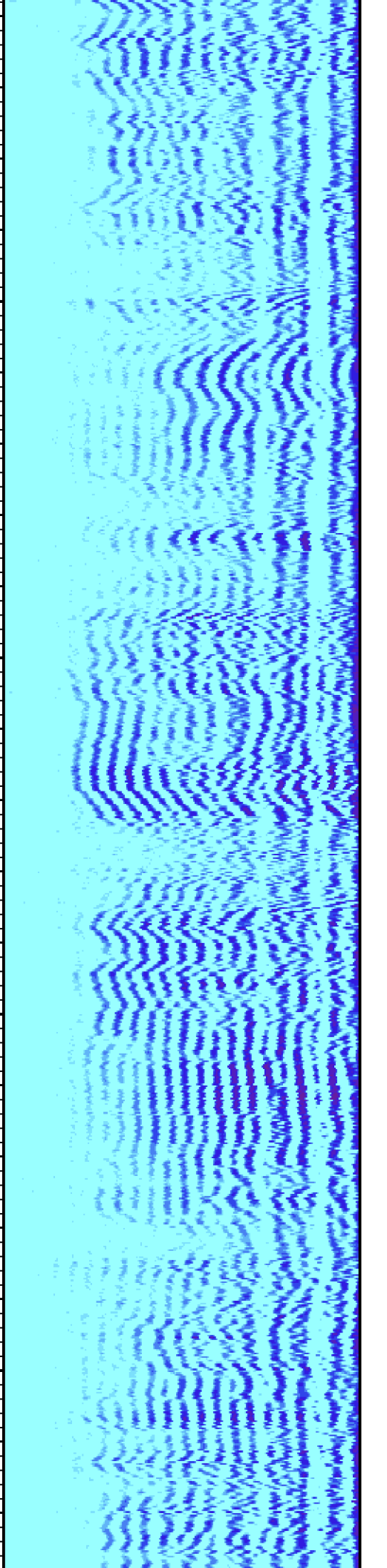
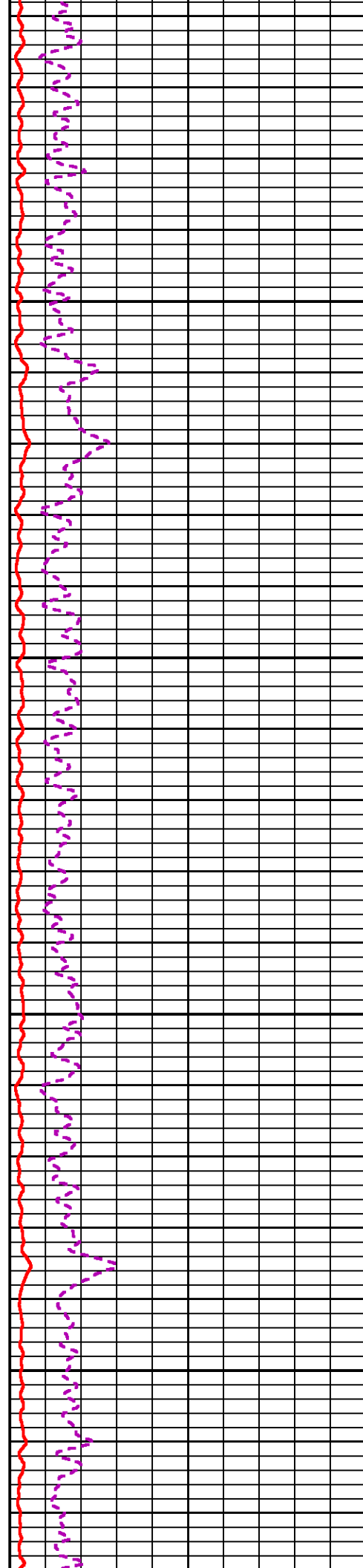


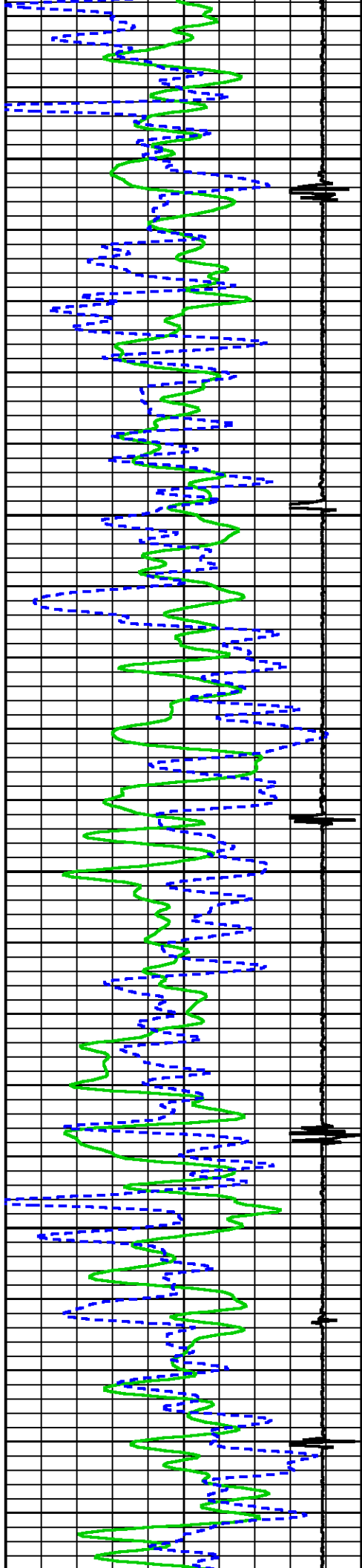




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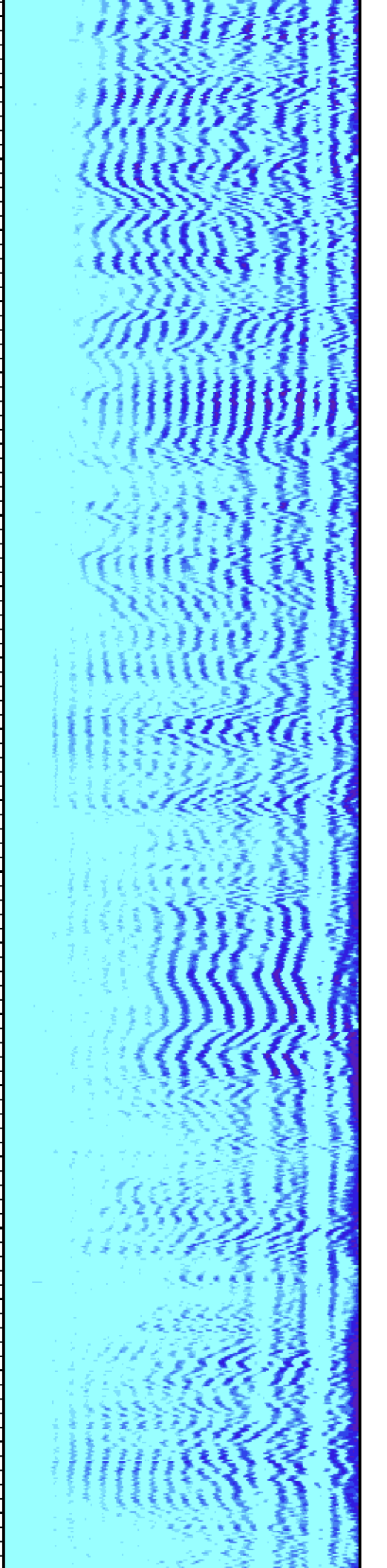
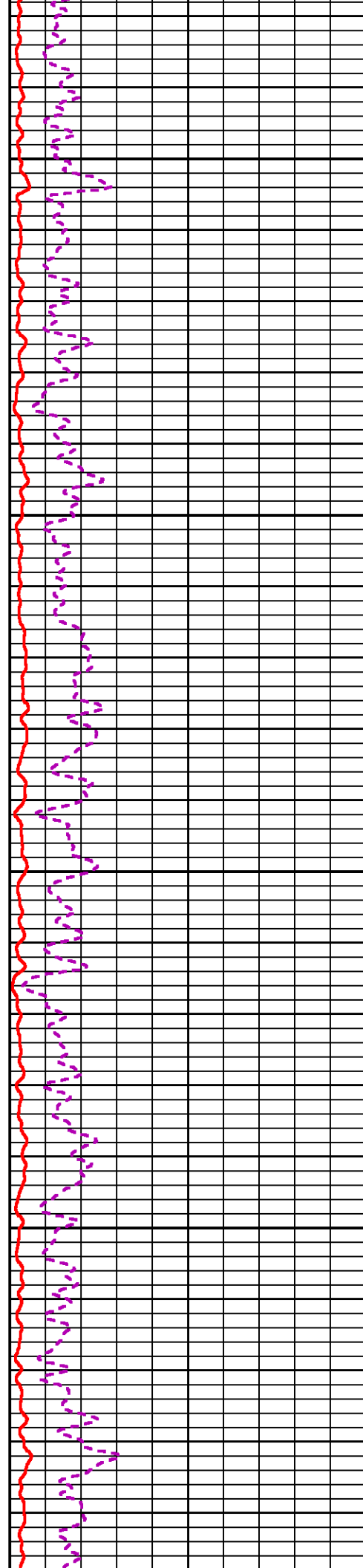
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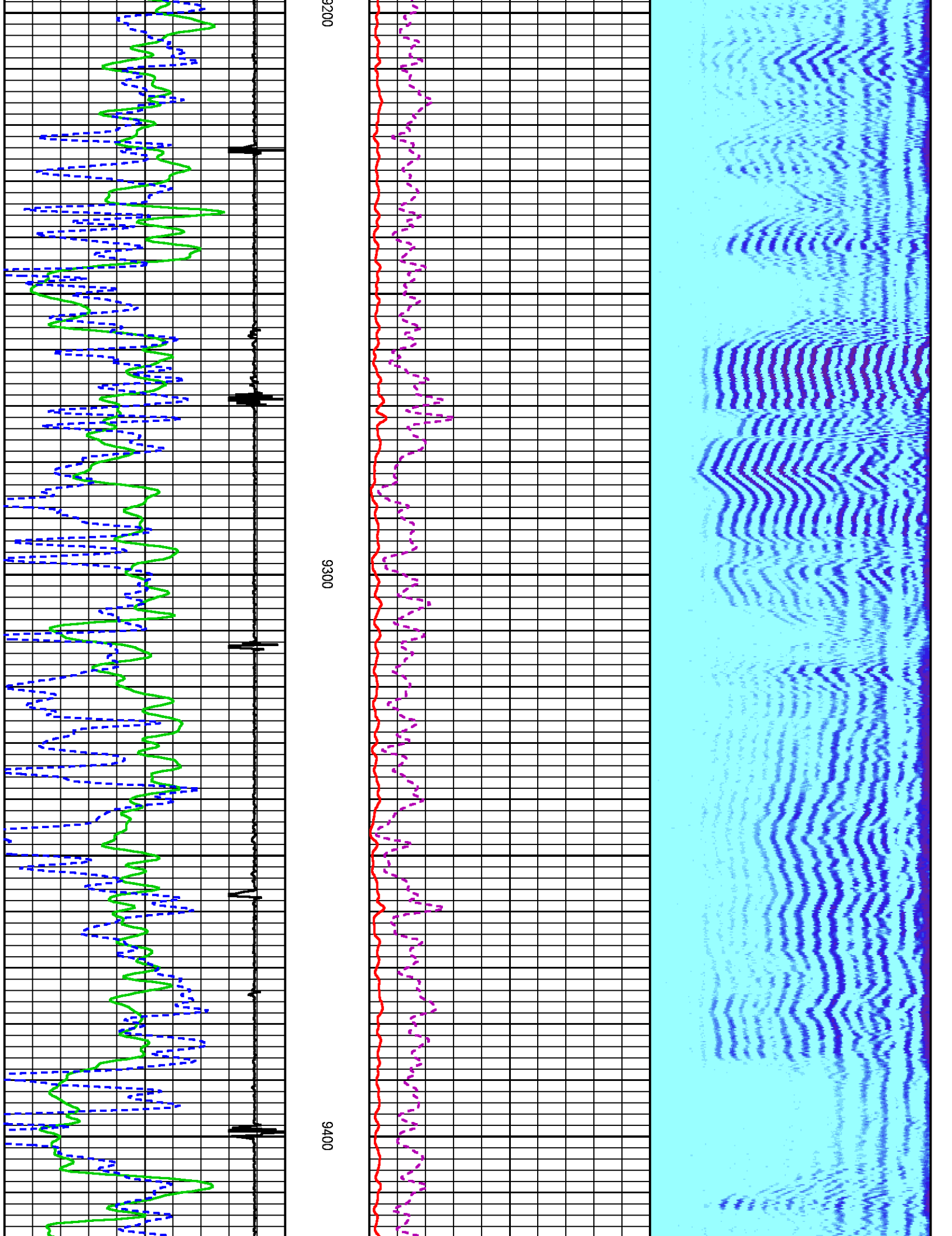


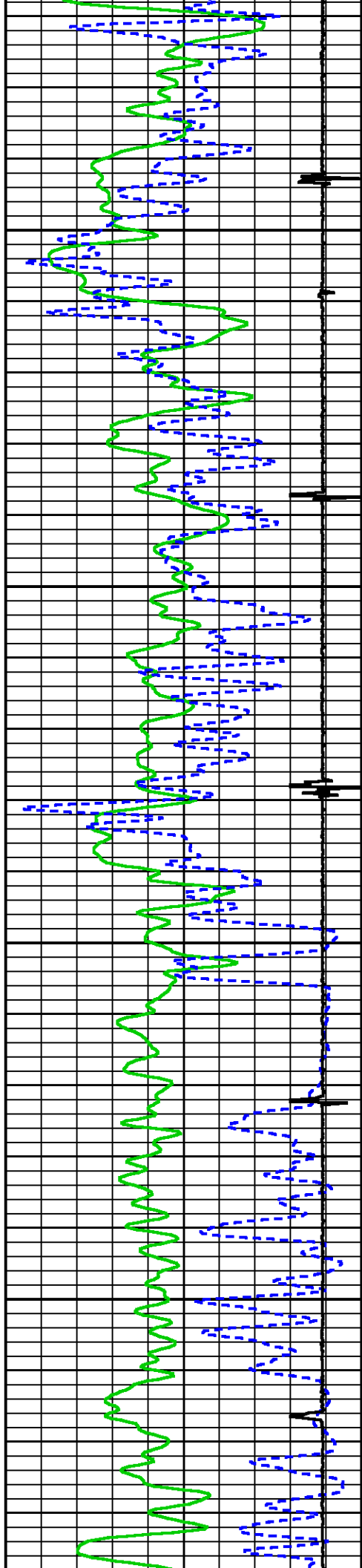
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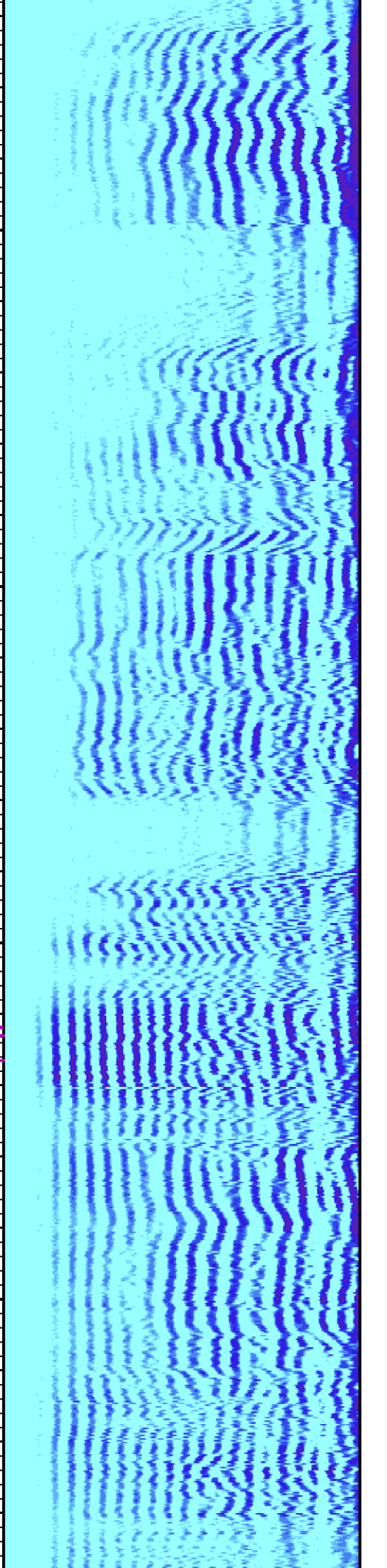
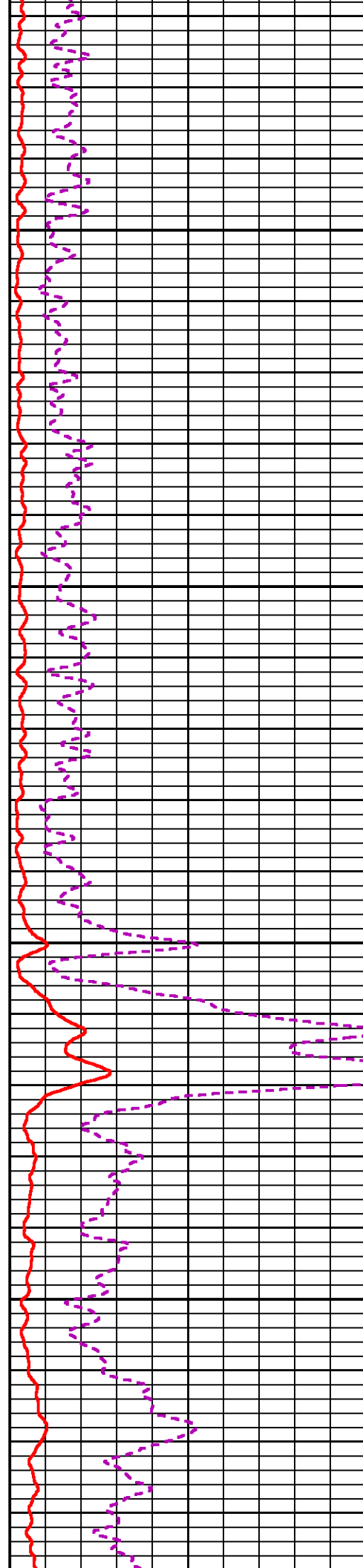


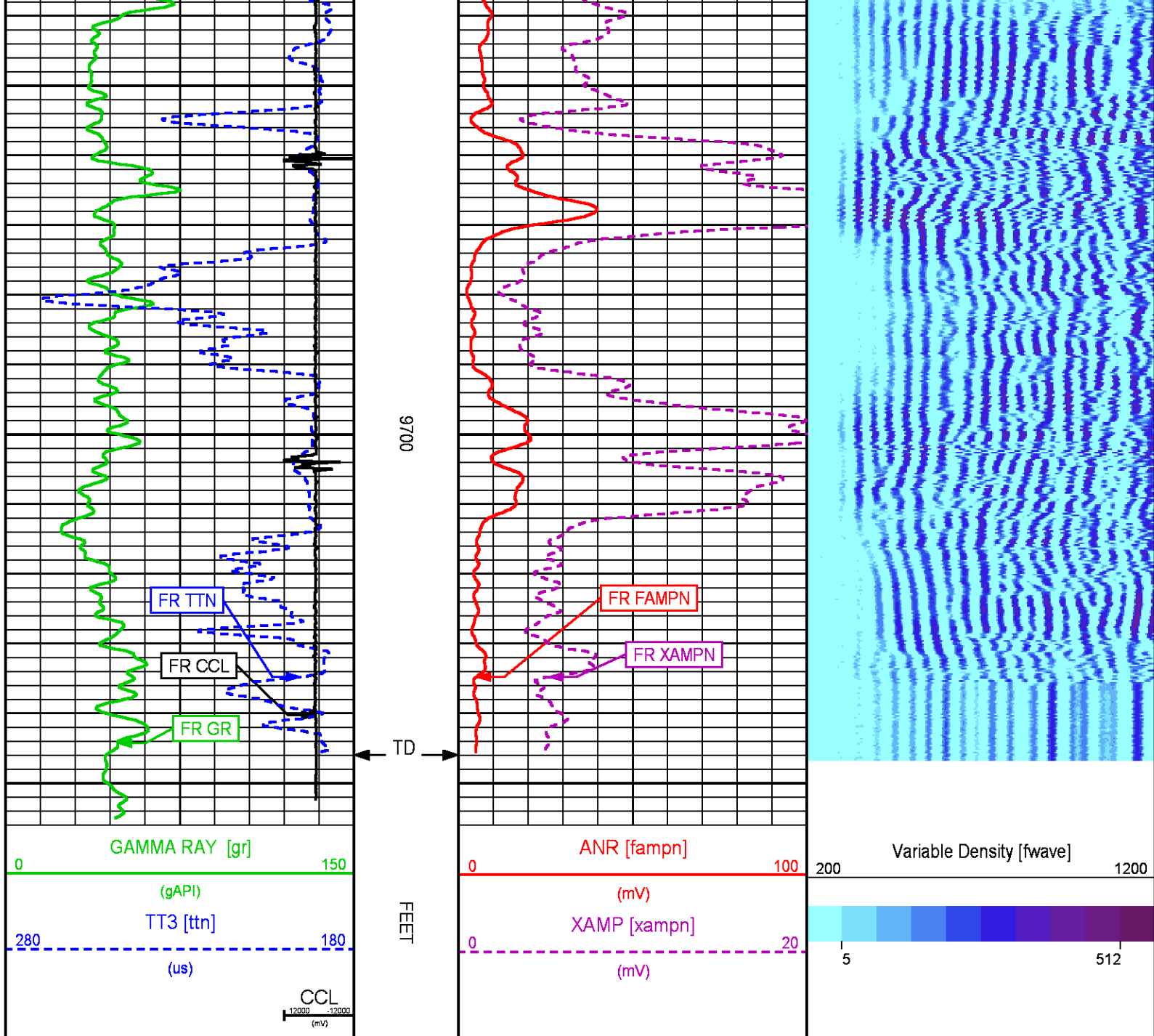




9500

9600





REPEAT LOG 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1,36 Patches: 9

Plotted: Wed Oct 26 15:29:59 2016

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP\_YOUBERG RU 311\_77/n012g01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 9452.250 ft BOTTOM DEPTH: 9757.250 ft

# SYMMETRIC FILTER

| MEASUREMENT TYPE | PARAMETER  | VALUE      | UNITS | INTERVAL (ft) |        |
|------------------|------------|------------|-------|---------------|--------|
| GR               | FILTER ( ) | medium (1) |       | TOP           | BOTTOM |
| AMPLITUDE        | FILTER ( ) | medium (1) |       | "             | "      |
| TRAVEL TIME      | FILTER ( ) | medium (1) |       | "             | "      |

## RAL CCL PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |        |
|------------------|-----------|-------|-------|---------------|--------|
| CCL FLOOR        | CCL FLOOR | 0     |       | TOP           | BOTTOM |

## ANALOG RAL PROCESSING

| MEASUREMENT TYPE          | PARAMETER                  | VALUE   | UNITS | INTERVAL (ft) |        |
|---------------------------|----------------------------|---------|-------|---------------|--------|
| AMPLITUDE WINDOW (NEAR)   | AMP WINDOW START (fgpn*)   | 182     | us    | TOP           | BOTTOM |
|                           | AMP WINDOW LENGTH          | 25      | us    | "             | "      |
| TRAVEL TIME WINDOW (NEAR) | TT WINDOW START (ttn*)     | 160     | us    | "             | "      |
|                           | TT WINDOW LENGTH           | 500     | us    | "             | "      |
|                           | FIRST BRK THRESHOLD (ttn*) | 4       | mV    | "             | "      |
| RAL CASING PARAMETERS     | PPT NEAR                   | 200.391 | us    | "             | "      |
| RAL TOOL DELAY            | TOOL DELAY (strn*)         | -75     | us    | "             | "      |
| BASELINE NOISE (NEAR)     | NOISE WINDOW START         | 125     | us    | "             | "      |
|                           | NOISE WINDOW LENGTH        | 25      | us    | "             | "      |

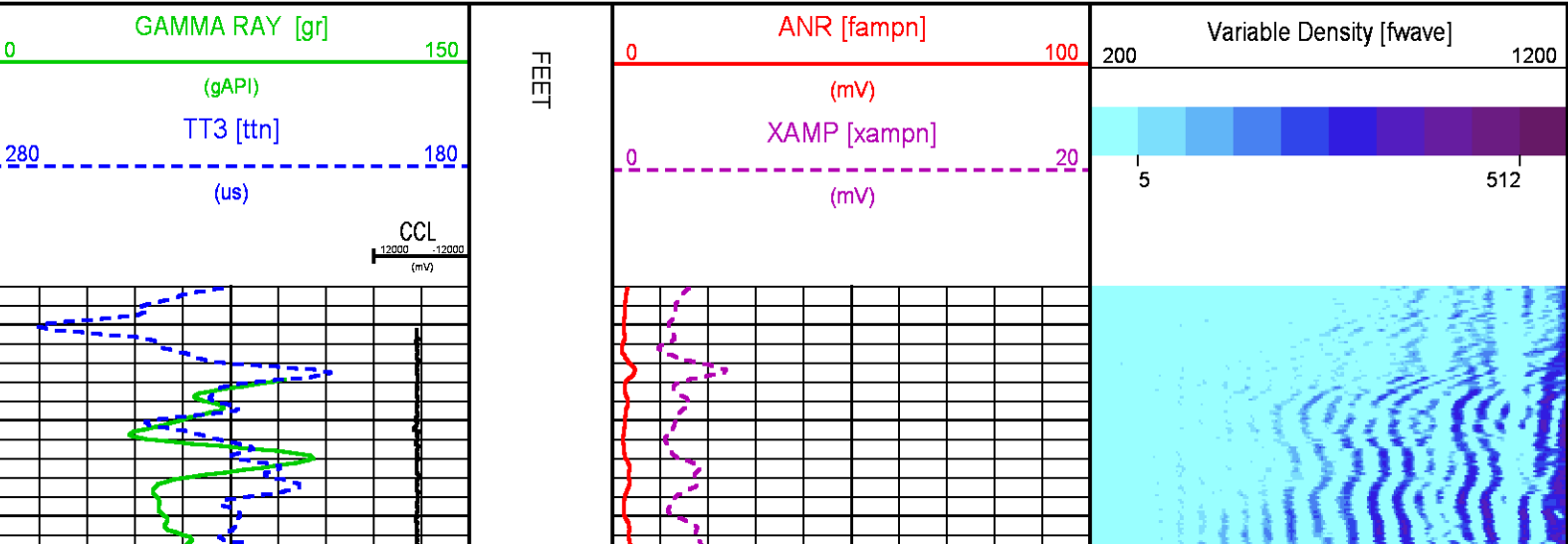
## CURVE DESCRIPTION REPORT

| CURVE NAME | CREATION DATE        | CURVE DESCRIPTION                             |
|------------|----------------------|---|
| F1:CCL     | Oct 21 09:12:47 2016 | CASING COLLAR LOCATOR                         |
| F1:FAMPN   | Oct 21 09:12:47 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER            |
| F1:FWAVE   | Oct 21 09:12:47 2016 | FAR WAVE FORM                                 |
| F1:GR      | Oct 21 09:12:47 2016 | GAMMA RAY                                     |
| F1:TTN     | Oct 21 09:12:47 2016 | TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER     |
| F1:XAMPN   | Oct 21 09:12:47 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE |

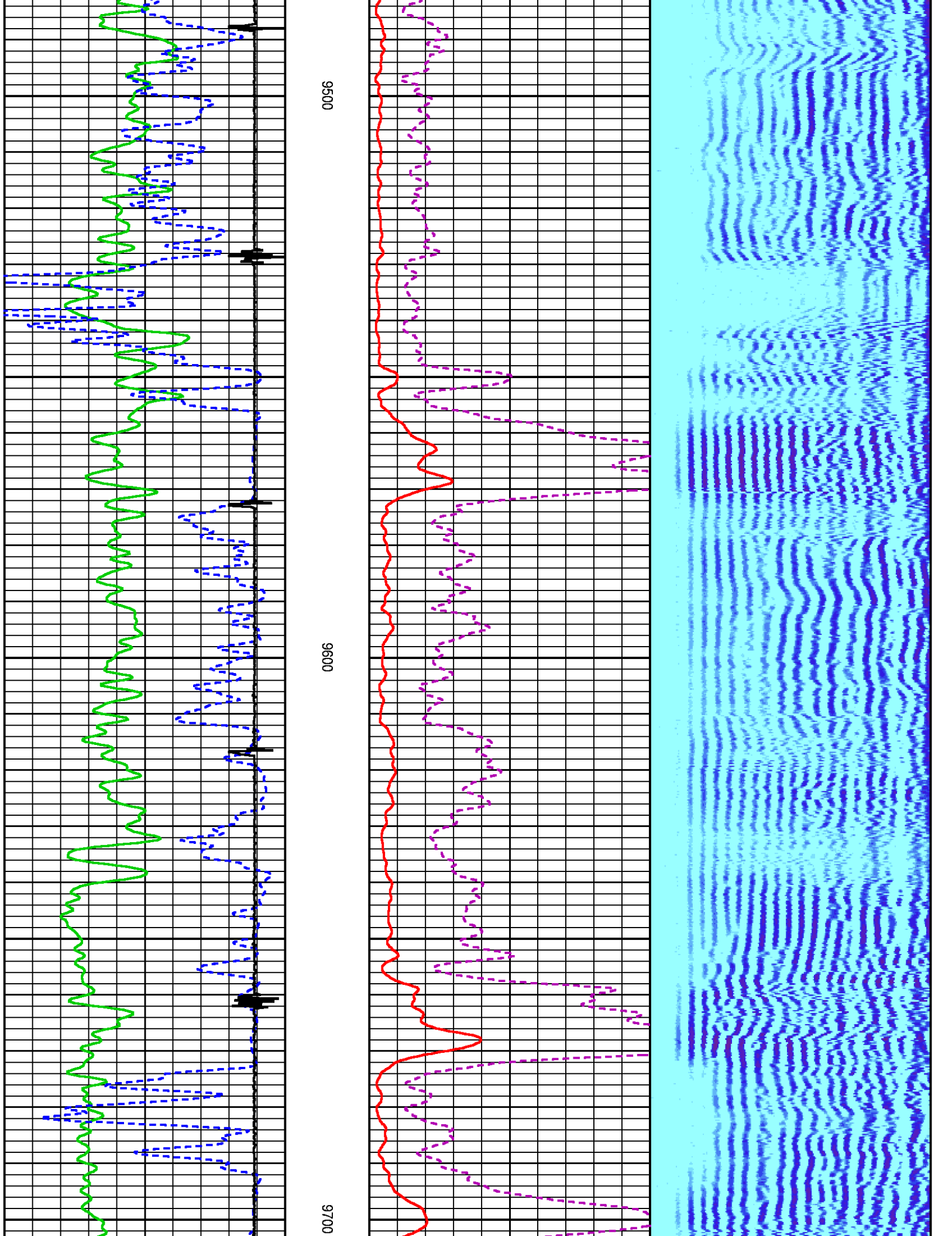
## CURVE MEASURE POINT OFFSET

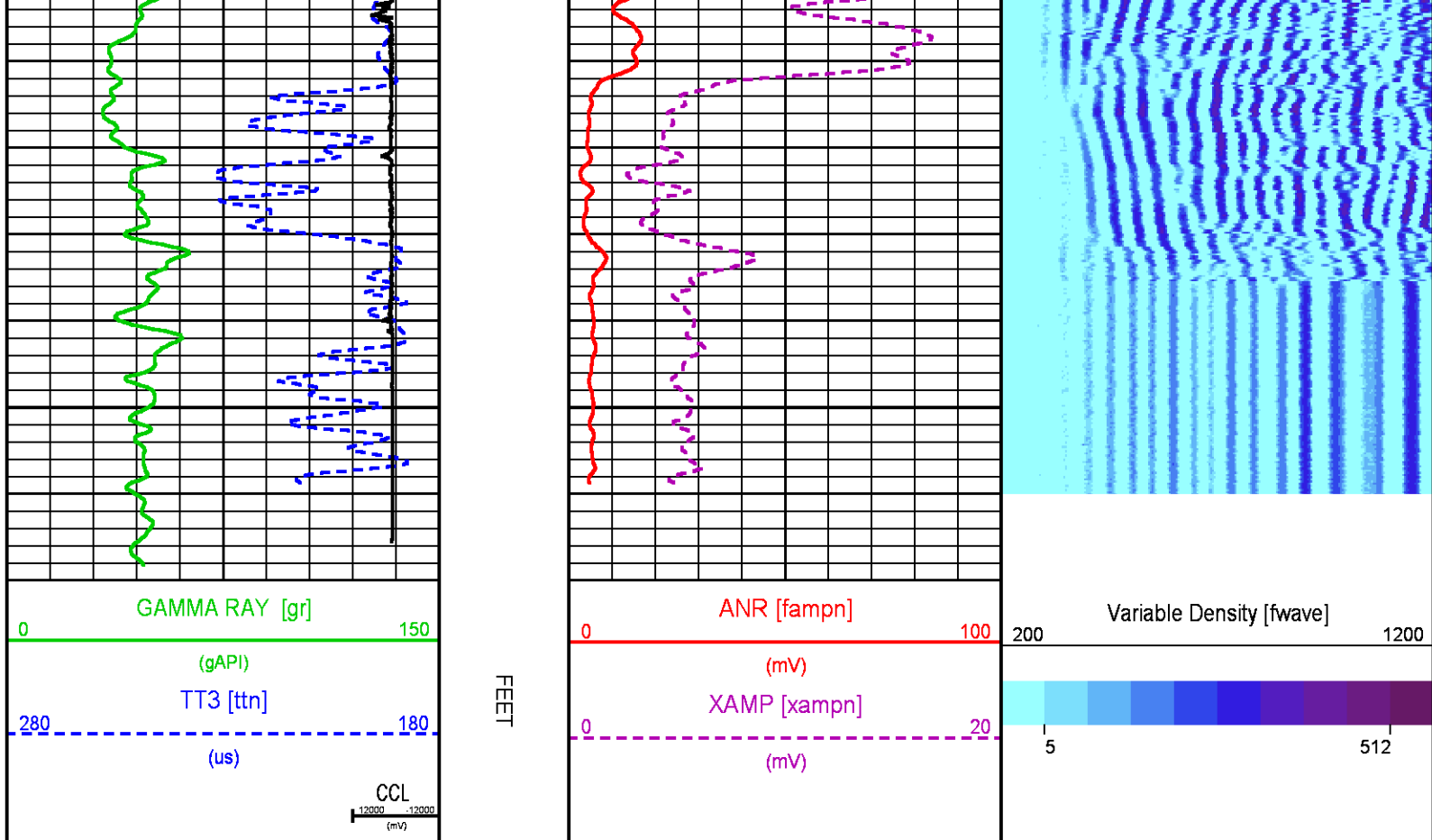
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CCL   | 5.75        | GR    | 1.75        | XAMPN | 11.25       |       |             |
| FAMPN | 11.25       | TTN   | 11.25       |       |             |       |             |

|                      |  |
|----------------------|--|
| <b>Presentation</b>  | : cpu6728:/dat1a/TEP_YOUBERG_RU_311_77/ral_cbl+01-REPEAT-RAL_RPT_311-5.fvpdf [5"/100' Scale] |
| <b>Plot Interval</b> | : 9456 - 9769.75 Feet  |
| <b>Data File 1</b>   | : F1 : cpu6728:/dat1a/TEP_YOUBERG_RU_311_77/RAL_RPT_311.xtf                                  |
| <b>Created On</b>    | : Oct 21 09:12:47 2016   |
| <b>Company</b>       | : TEP ROCKY MOUNTAIN LLC   |
| <b>Well</b>          | : YOUBERG RU 311-7   |
| <b>Field</b>         | : RULISON  |
| <b>File Interval</b> | : 9455 - 9771.25 Feet  |
| <b>OCT</b>           | : n012g  |









## SECONDARY MAIN 0 PSI

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1,36 Patches: 9

Plotted: Wed Oct 26 15:26:07 2016

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/TEP\_YOUBERG\_RU\_311\_77/n012g02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 10.000 ft BOTTOM DEPTH: 9744.000 ft

#### SYMMETRIC FILTER

| MEASUREMENT TYPE | PARAMETER | VALUE      | UNITS | INTERVAL (ft) |        |
|------------------|-----------|------------|-------|---------------|--------|
| GR               | FILTER () | medium (1) |       | TOP           | BOTTOM |
| AMPLITUDE        | FILTER () | medium (1) |       | "             | "      |
| TRAVEL TIME      | FILTER () | medium (1) |       | "             | "      |

#### RAL CCL PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |        |
|------------------|-----------|-------|-------|---------------|--------|
| CCL FLOOR        | CCL FLOOR | 0     |       | TOP           | BOTTOM |

#### ANALOG RAL PROCESSING

| MEASUREMENT TYPE        | PARAMETER                | VALUE | UNITS | INTERVAL (ft) |        |
|-------------------------|--------------------------|-------|-------|---------------|--------|
| AMPLITUDE WINDOW (NEAR) | AMP WINDOW START (fgp1*) | 182   | us    | TOP           | BOTTOM |
|                         | AMP WINDOW START (fgp2*) | 182   | us    | "             | "      |

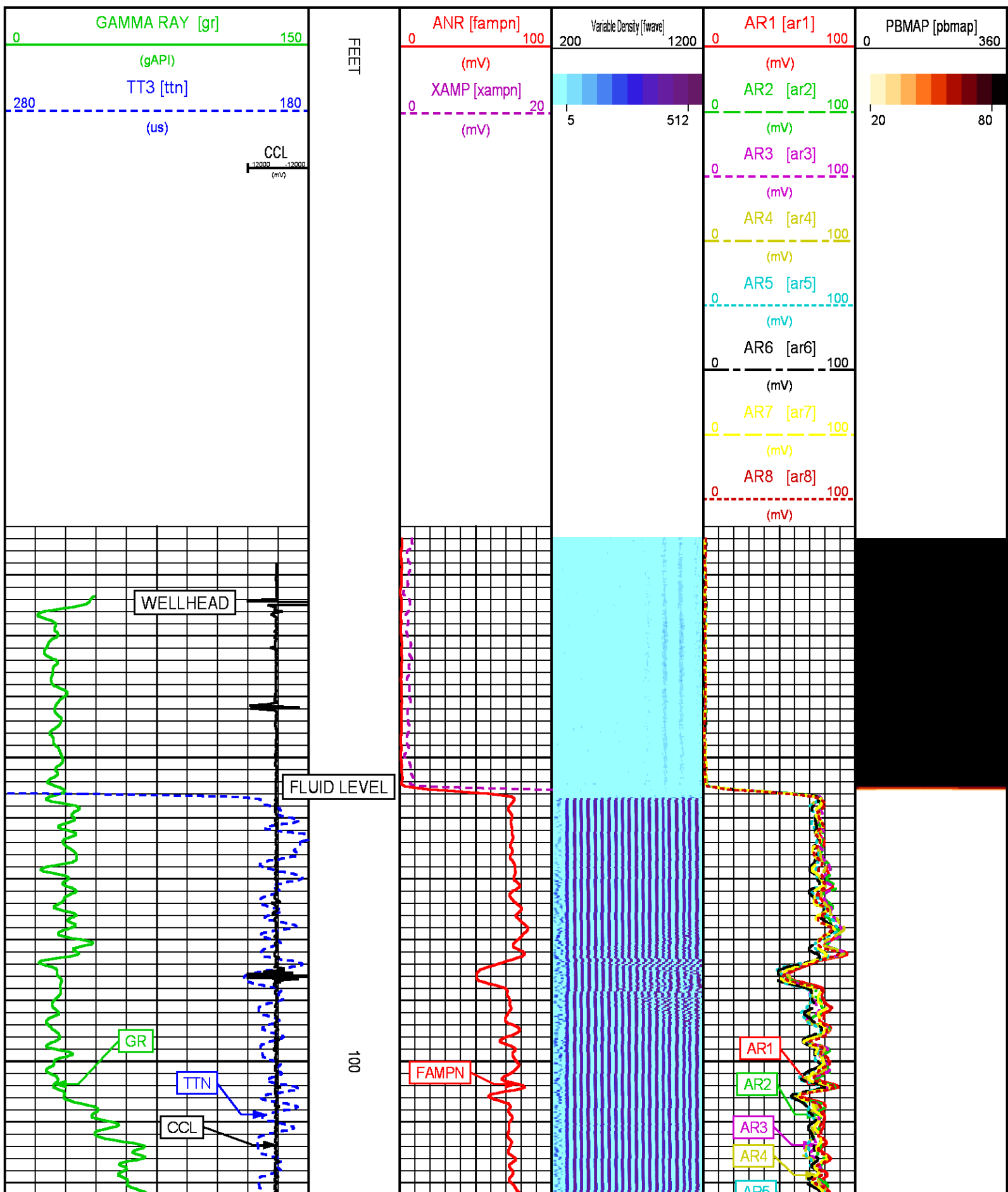
|                           |                            |         |    |   |   |
|---------------------------|----------------------------|---------|----|---|---|
|                           | AMP WINDOW START (fgp2*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp3*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp4*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp5*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp6*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp7*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgp8*)   | 182     | us | " | " |
|                           | AMP WINDOW START (fgpn*)   | 182     | us | " | " |
|                           | AMP WINDOW LENGTH          | 25      | us | " | " |
| TRAVEL TIME WINDOW (NEAR) | TT WINDOW START (ttn*)     | 160     | us | " | " |
|                           | TT WINDOW LENGTH           | 500     | us | " | " |
|                           | FIRST BRK THRESHOLD (ttn*) | 4       | mV | " | " |
| RAL CASING PARAMETERS     | PPT NEAR                   | 200.391 | us | " | " |
| RAL TOOL DELAY            | TOOL DELAY (str1*)         | -75     | us | " | " |
|                           | TOOL DELAY (str2*)         | -75     | us | " | " |
|                           | TOOL DELAY (str3*)         | -75     | us | " | " |
|                           | TOOL DELAY (str4*)         | -75     | us | " | " |
|                           | TOOL DELAY (str5*)         | -75     | us | " | " |
|                           | TOOL DELAY (str6*)         | -75     | us | " | " |
|                           | TOOL DELAY (str7*)         | -75     | us | " | " |
|                           | TOOL DELAY (str8*)         | -75     | us | " | " |
|                           | TOOL DELAY (strn*)         | -75     | us | " | " |
| BASELINE NOISE (NEAR)     | NOISE WINDOW START         | 125     | us | " | " |
|                           | NOISE WINDOW LENGTH        | 25      | us | " | " |

| PERCENT BOND CEMENT MAP |                     |       |       |               |        |
|-------------------------|---------------------|-------|-------|---------------|--------|
| MEASUREMENT TYPE        | PARAMETER           | VALUE | UNITS | INTERVAL (ft) |        |
| RAL FREE PIPE AMPLITUDE | FREE AMP REC 1      | 80    | mV    | TOP           | BOTTOM |
|                         | FREE AMP REC 2      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 3      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 4      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 5      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 6      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 7      | 80    | mV    | "             | "      |
|                         | FREE AMP REC 8      | 80    | mV    | "             | "      |
| RAL FULL BOND AMPLITUDE | FULL BOND AMP REC 1 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 2 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 3 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 4 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 5 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 6 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 7 | 2     | mV    | "             | "      |
|                         | FULL BOND AMP REC 8 | 2     | mV    | "             | "      |

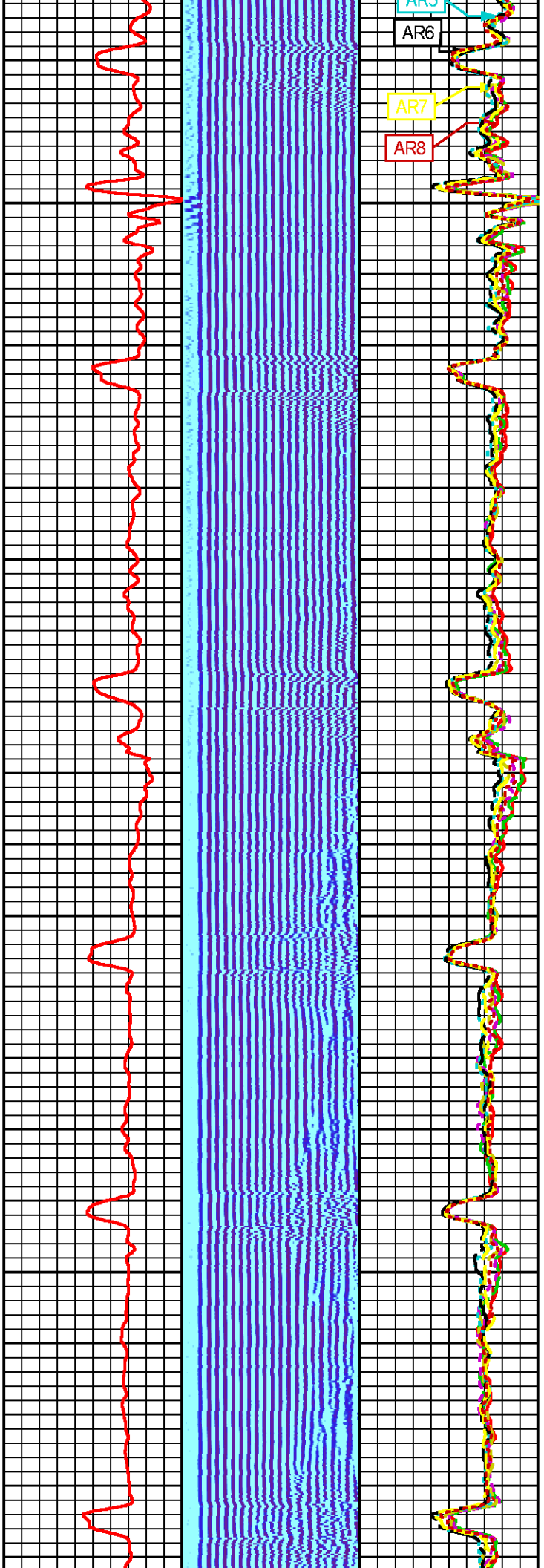
| CURVE DESCRIPTION REPORT |                      |   |
|--------------------------|----------------------|---|
| CURVE NAME               | CREATION DATE        | CURVE DESCRIPTION                             |
| F1:AR1                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R1                     |
| F1:AR2                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R2                     |
| F1:AR3                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R3                     |
| F1:AR4                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R4                     |
| F1:AR5                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R5                     |
| F1:AR6                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R6                     |
| F1:AR7                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R7                     |
| F1:AR8                   | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE T-R8                     |
| F1:CCL                   | Oct 21 09:22:56 2016 | CASING COLLAR LOCATOR                         |
| F1:FAMPN                 | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER            |
| F1:FWAVE                 | Oct 21 09:22:56 2016 | FAR WAVE FORM                                 |
| F1:GR                    | Oct 21 09:22:56 2016 | GAMMA RAY                                     |
| F1:PBMAP                 | Oct 21 09:22:56 2016 | PERCENT BOND CEMENT MAP                       |
| F1:TTN                   | Oct 21 09:22:56 2016 | TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER     |
| F1:XAMPN                 | Oct 21 09:22:56 2016 | FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE |

| CURVE MEASURE POINT OFFSET |             |       |             |       |             |
|----------------------------|-------------|-------|-------------|-------|-------------|
| CURVE                      | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
| AR1                        | 11.25       | AR5   | 11.25       | CCL   | 5.75        |
| AR2                        | 11.25       | AR6   | 11.25       | FAMPN | 11.25       |
| AR3                        | 11.25       | AR7   | 11.25       | GR    | 1.75        |
| AR4                        | 11.25       | AR8   | 11.25       | TTN   | 11.25       |
|                            |             |       |             | XAMPN | 11.25       |

Data File 1 : F1 : cpu6728:/dat1a/TEP\_YOUBERG\_RU\_311\_77/RAL\_MN\_311.xtf  
Created On : Oct 21 09:22:56 2016  
Company : TEP ROCKY MOUNTAIN LLC  
Well : YOUBERG RU 311-7  
Field : RULISON  
File Interval : 10 - 9758 Feet  
OCT : n012g

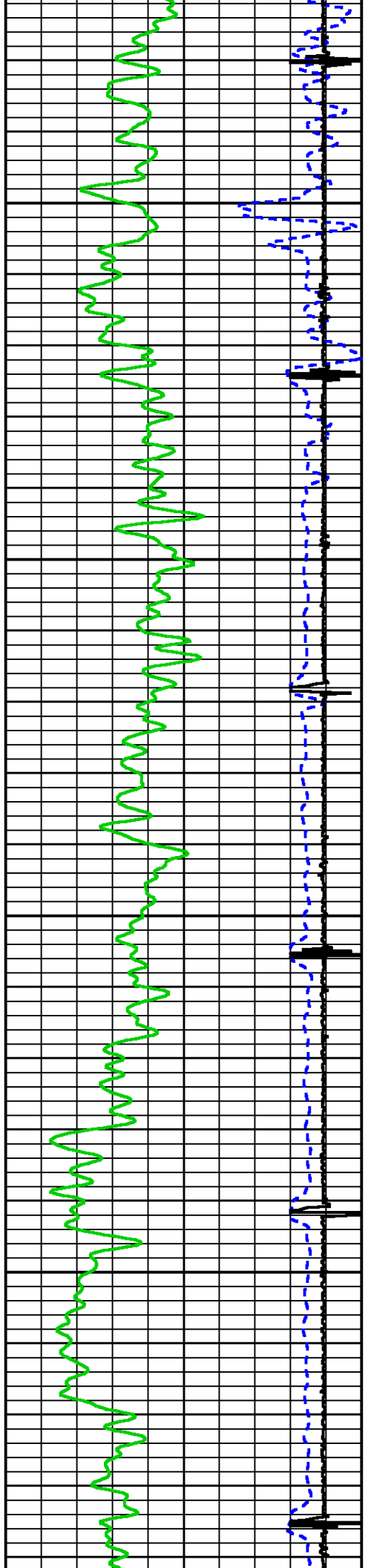


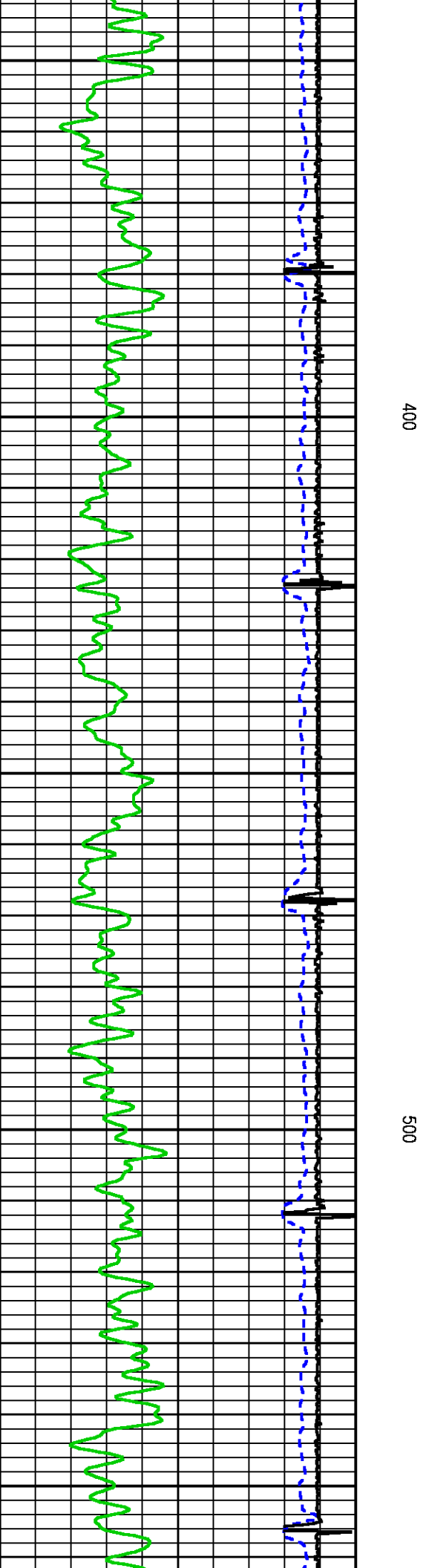
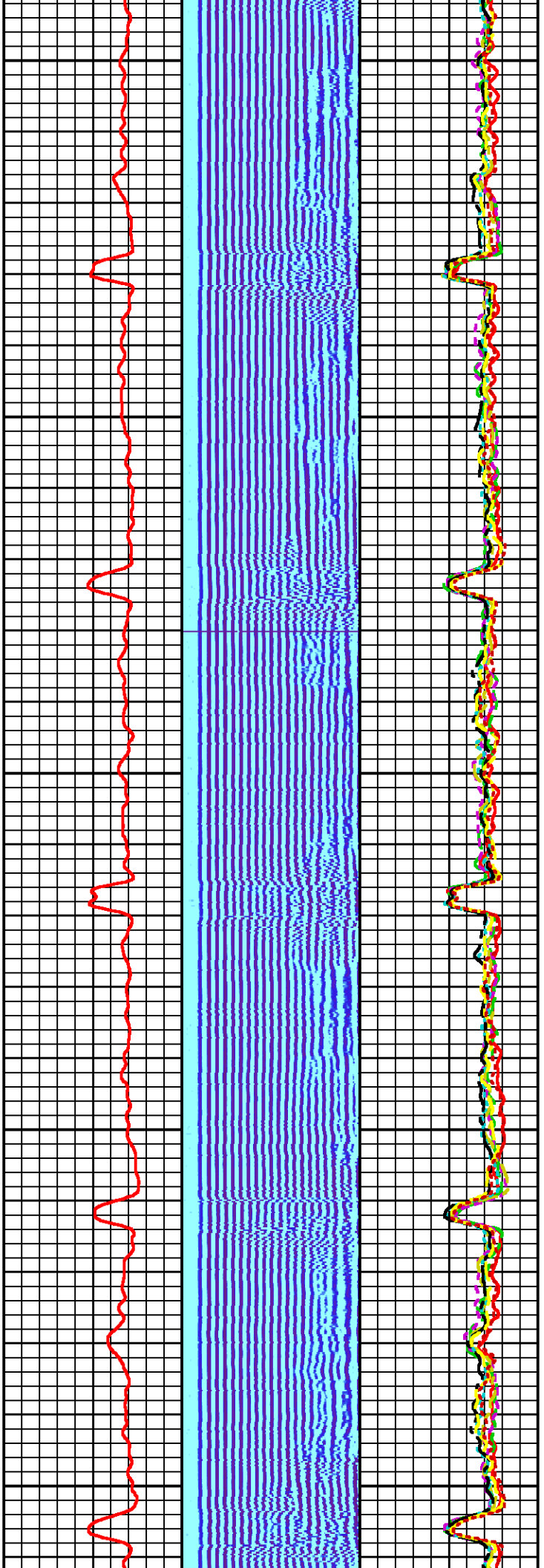


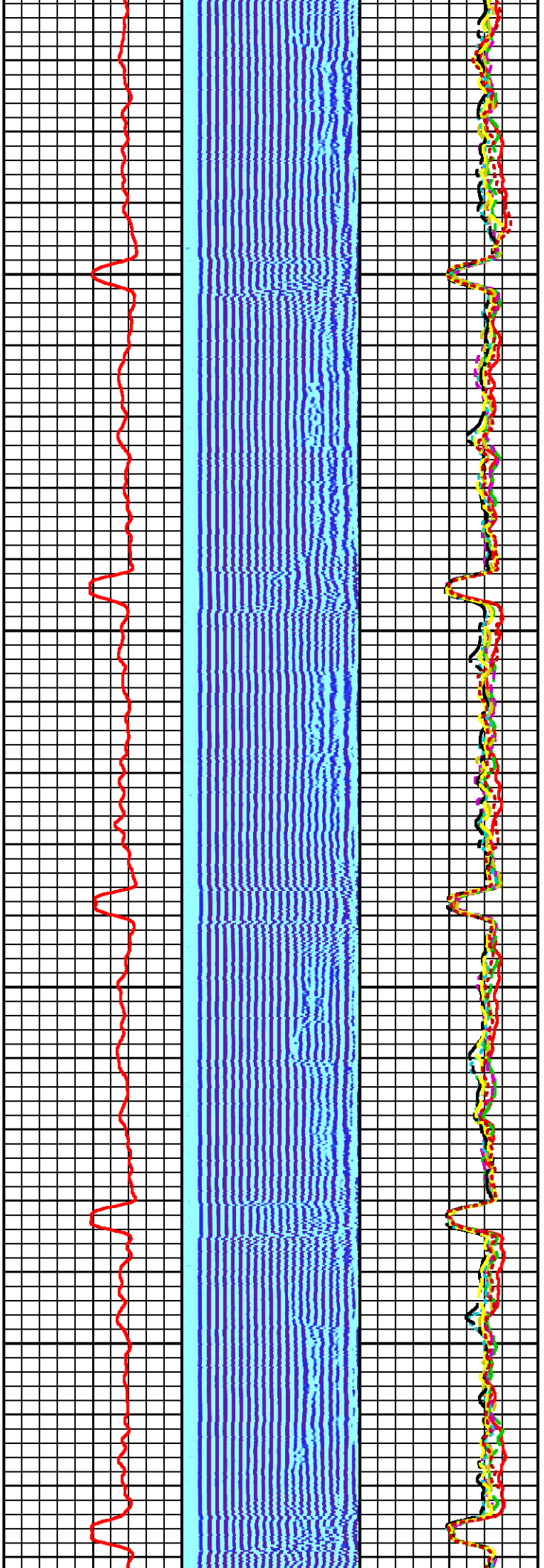


200

300

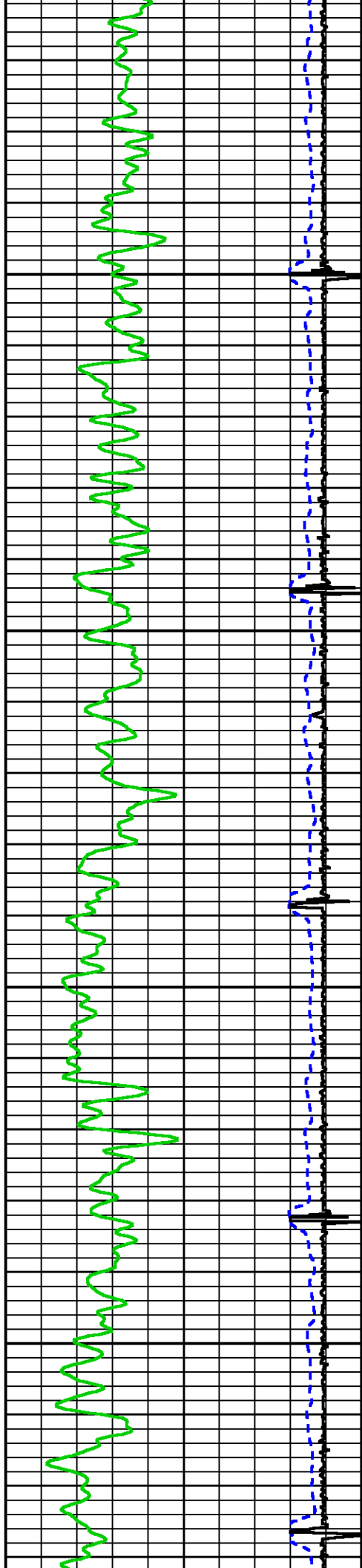


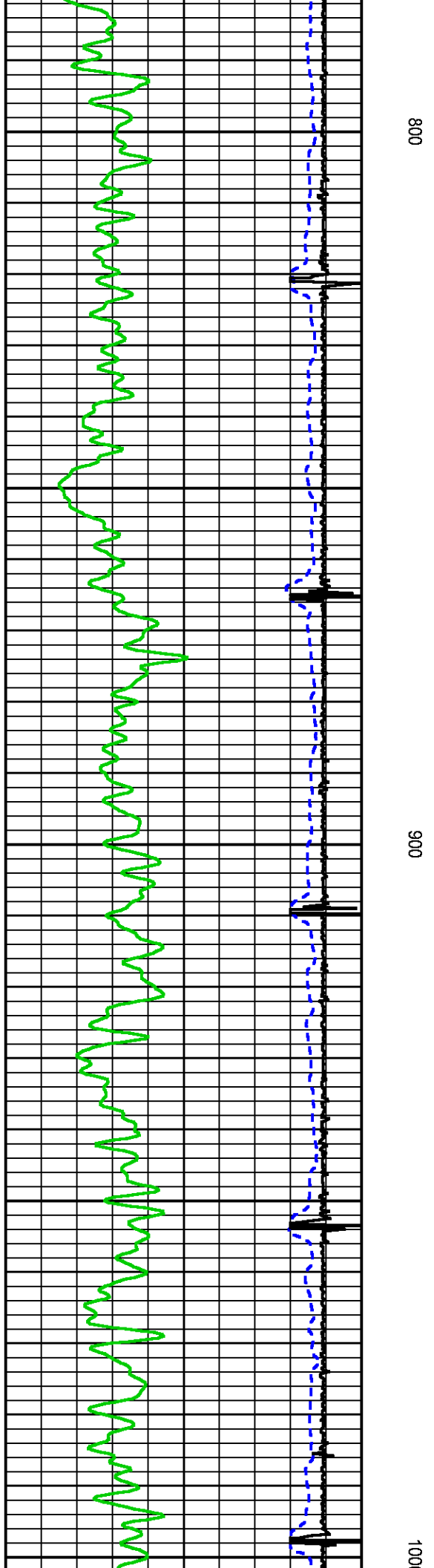
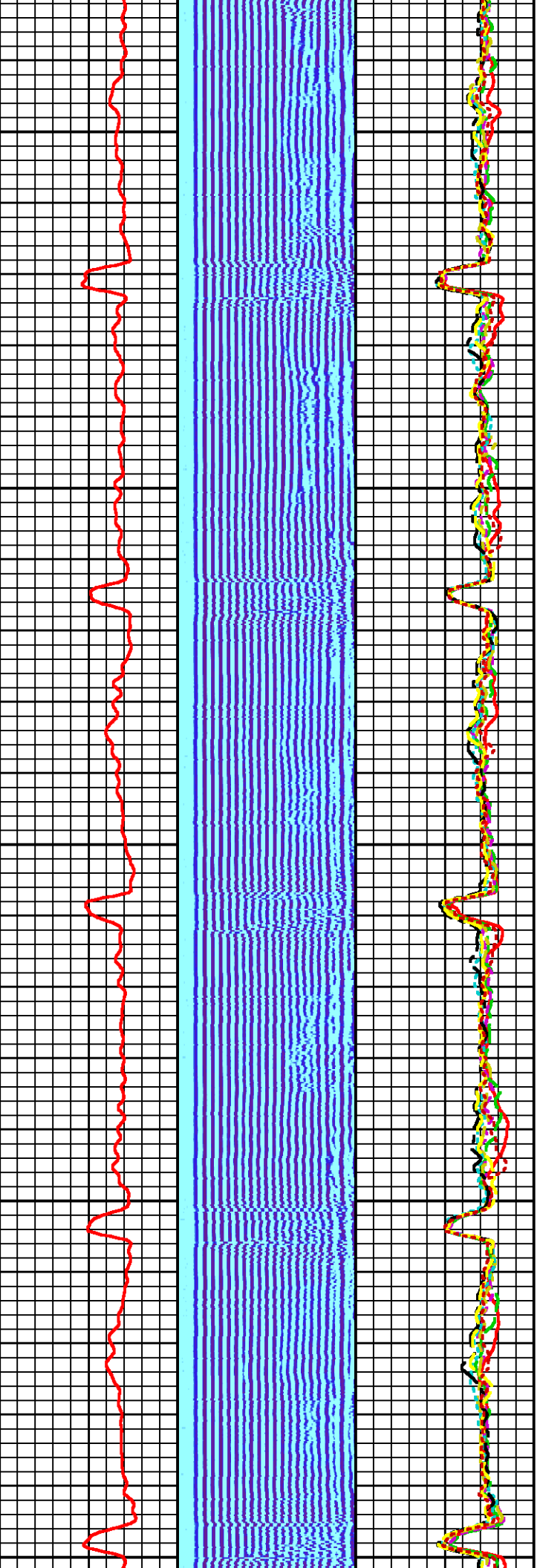




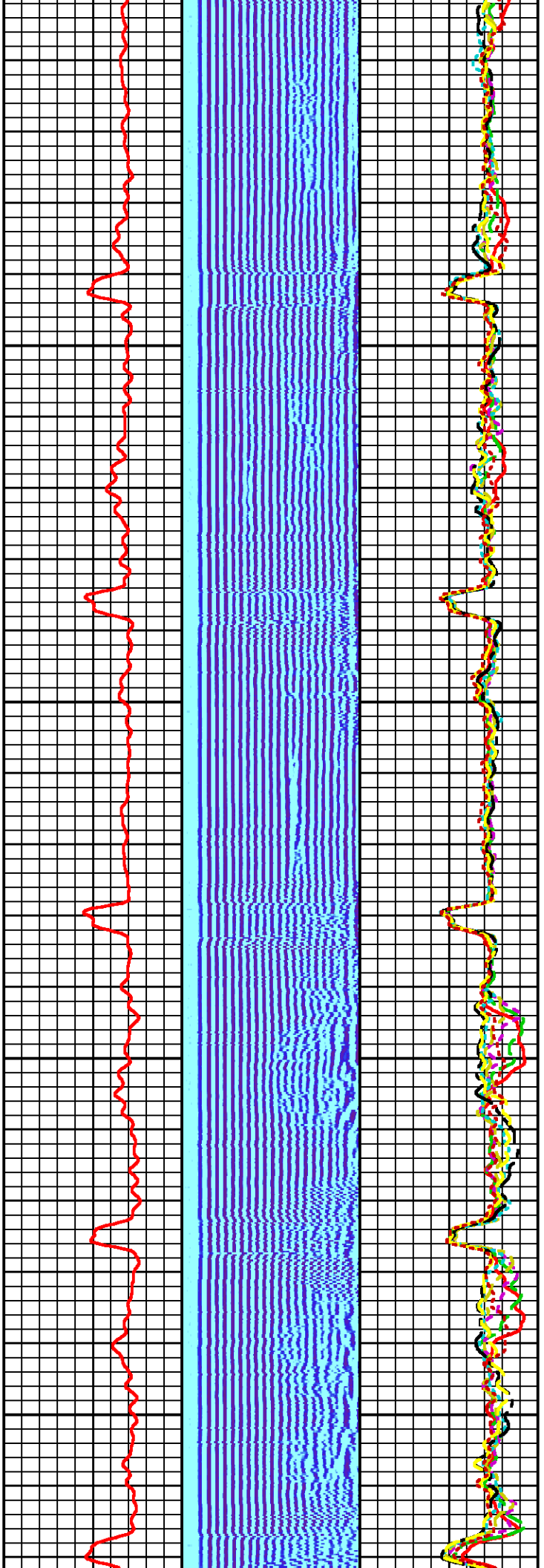
600

700





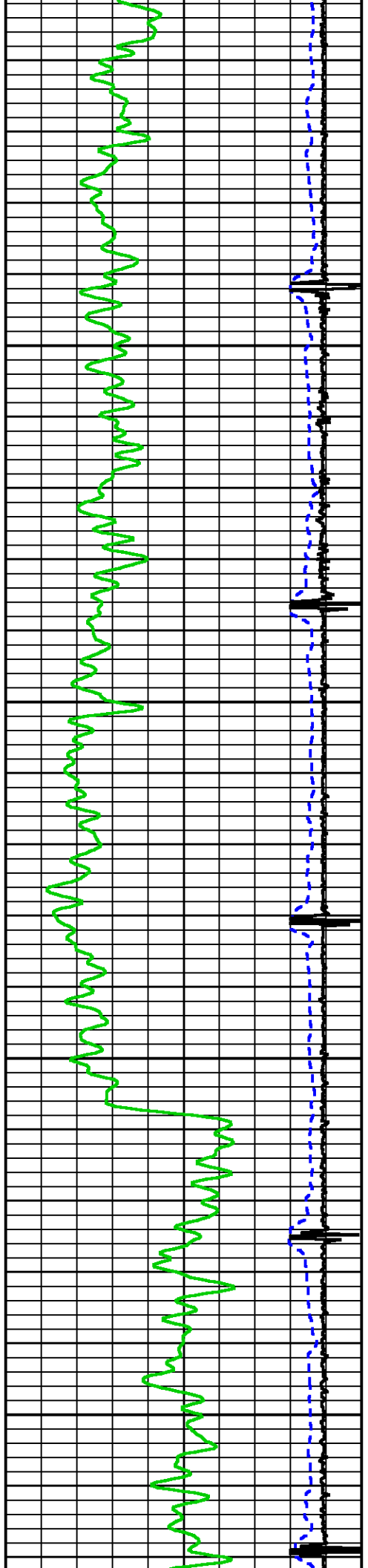


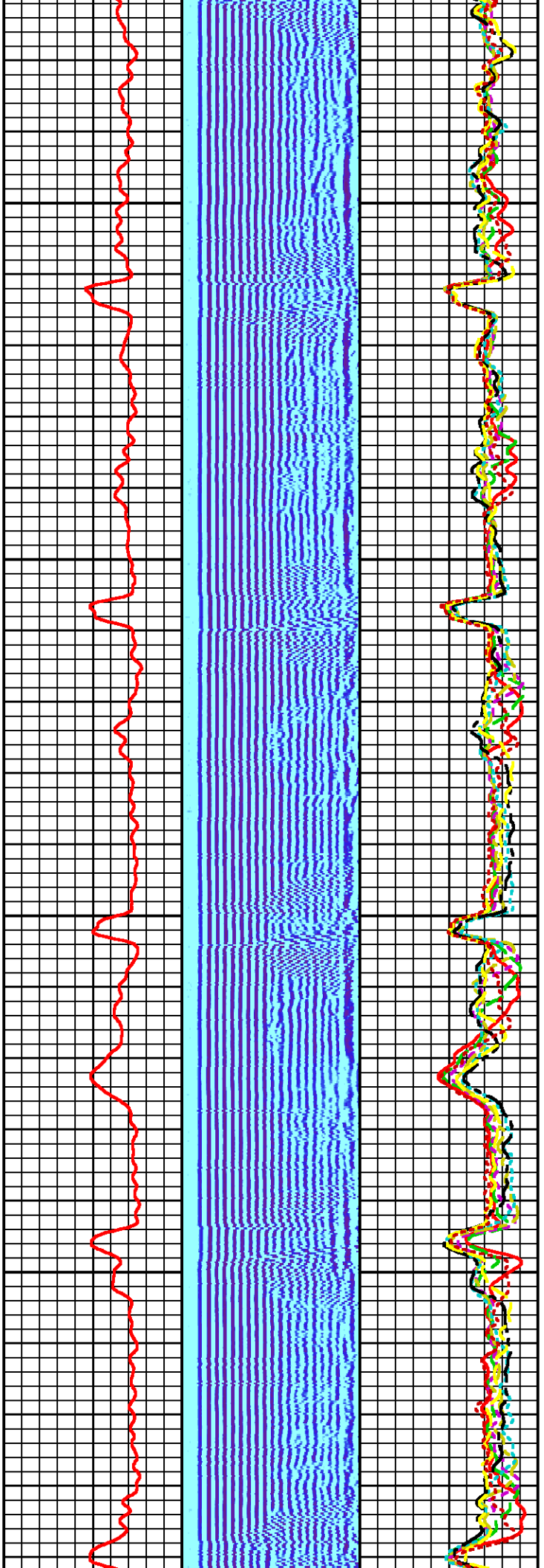


0

1100

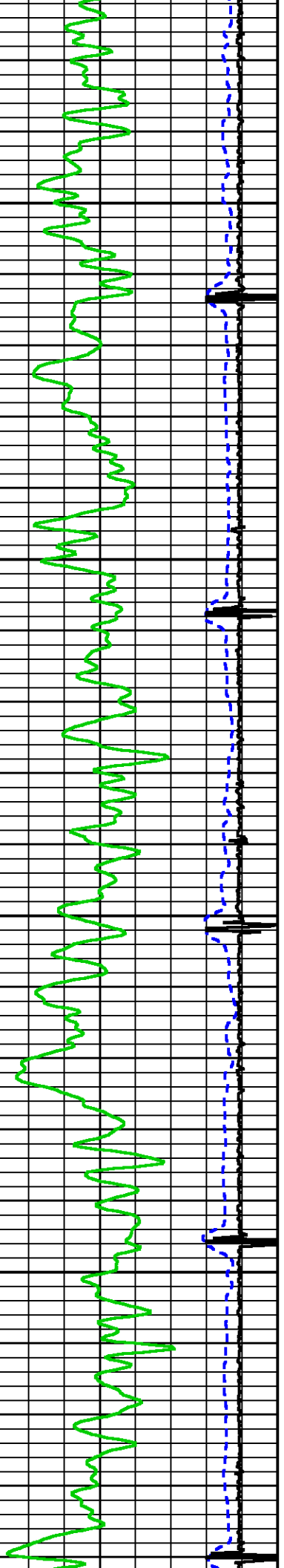
1200

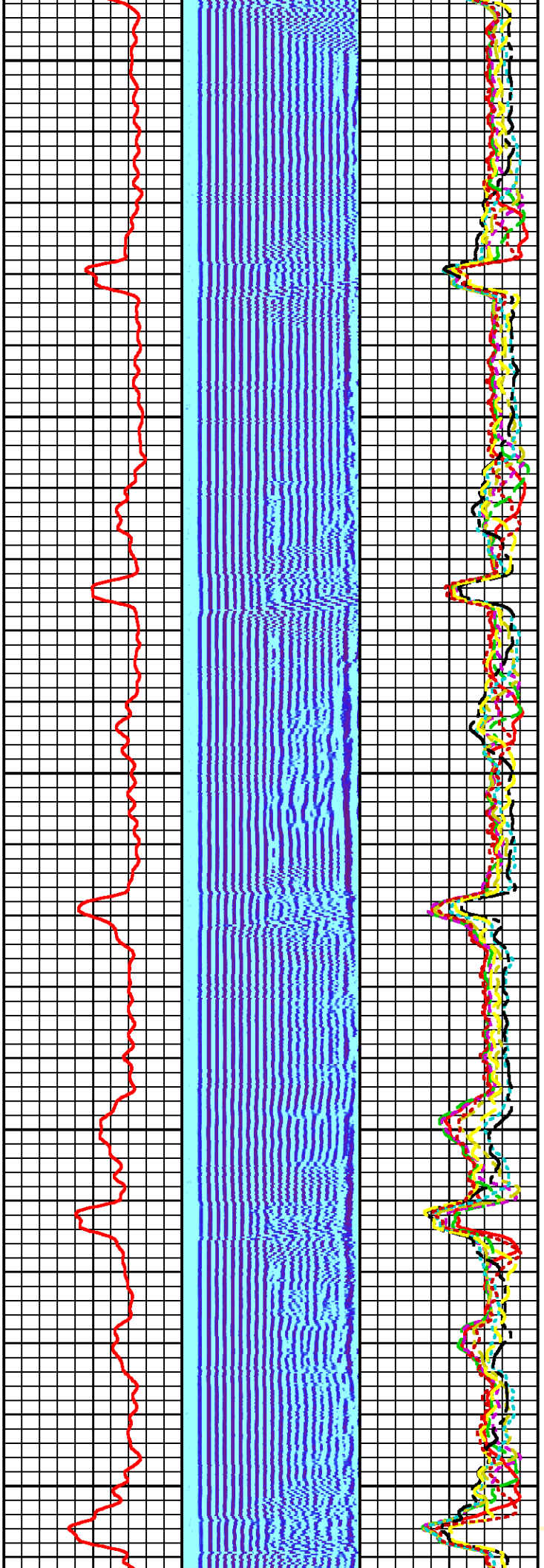




1300

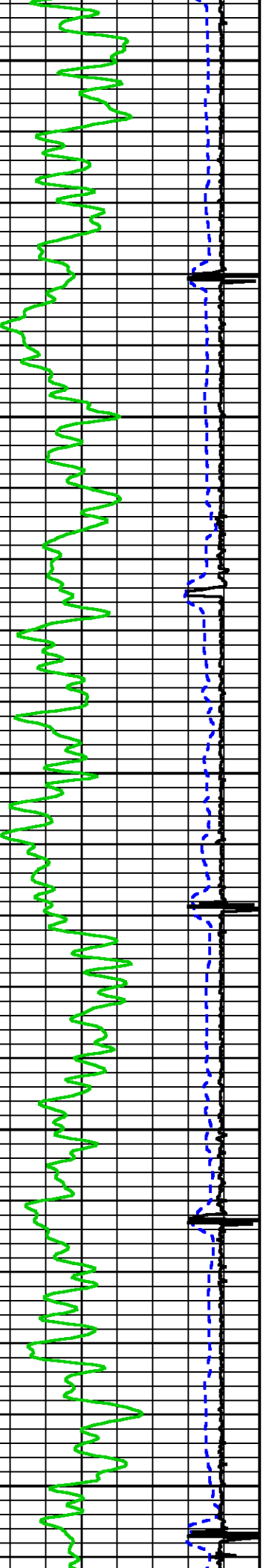
1400

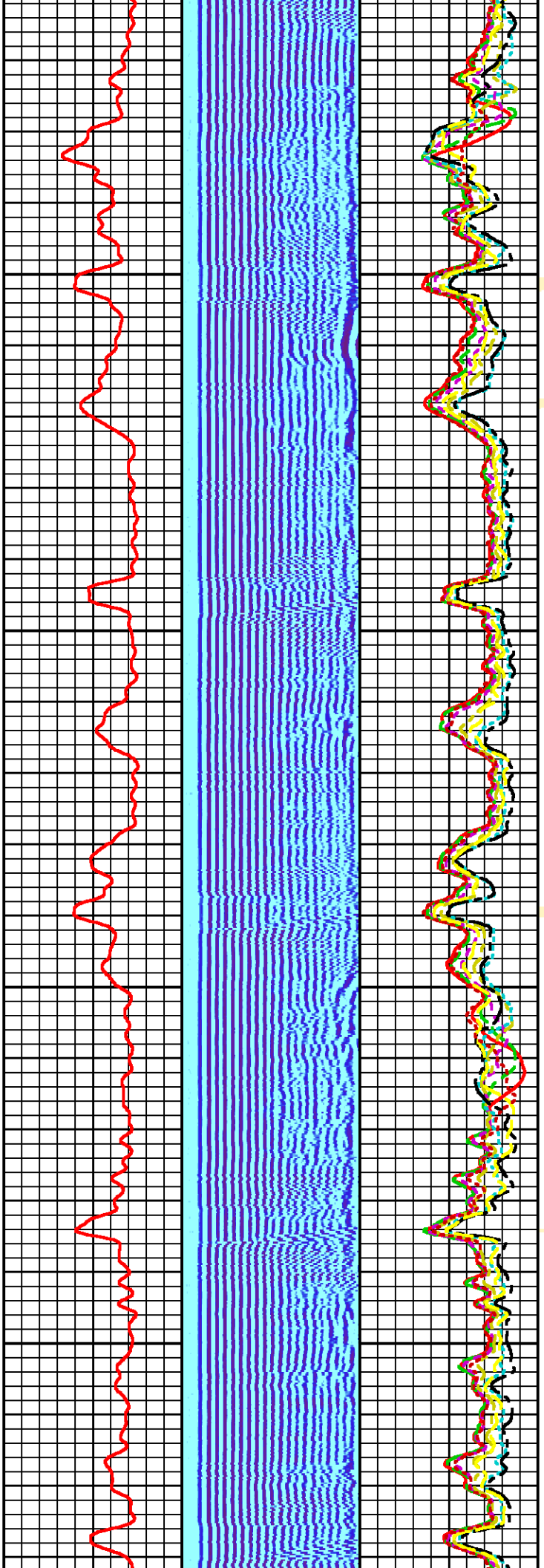




1500

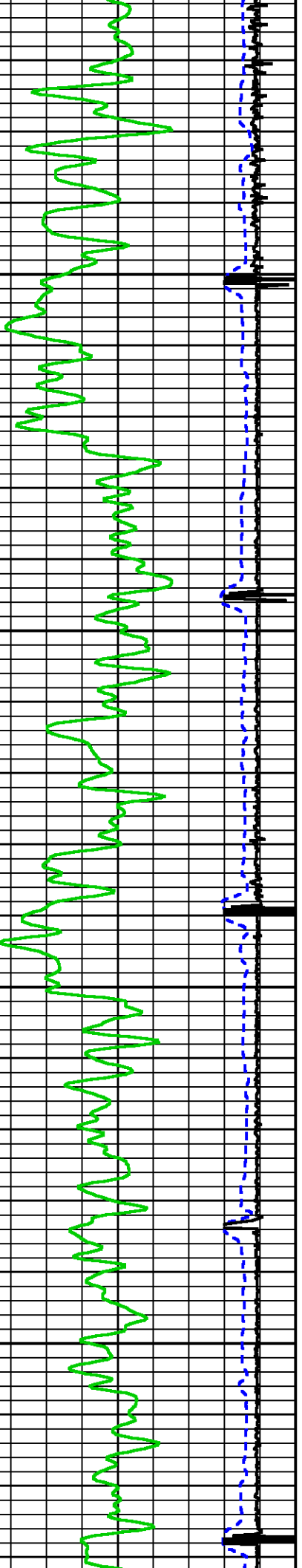
1600



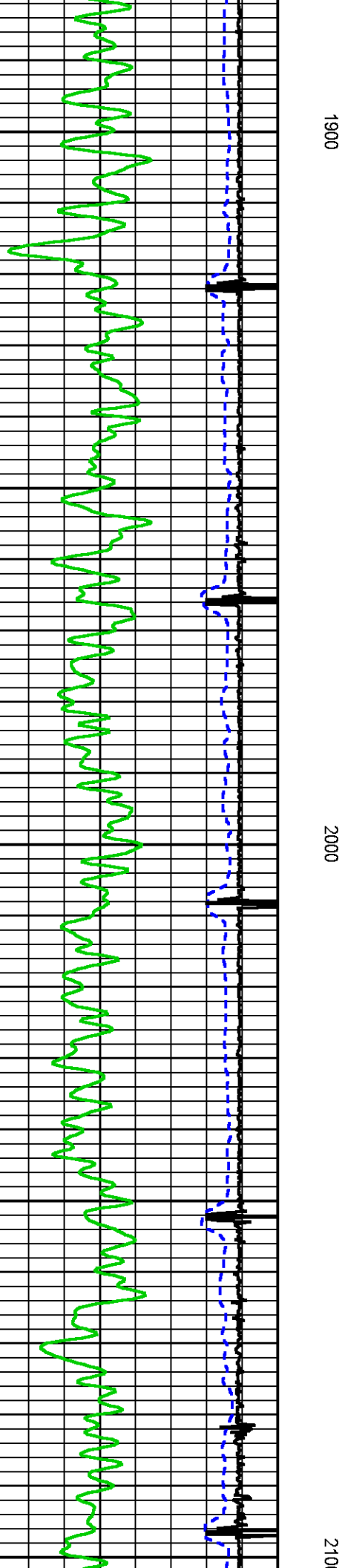
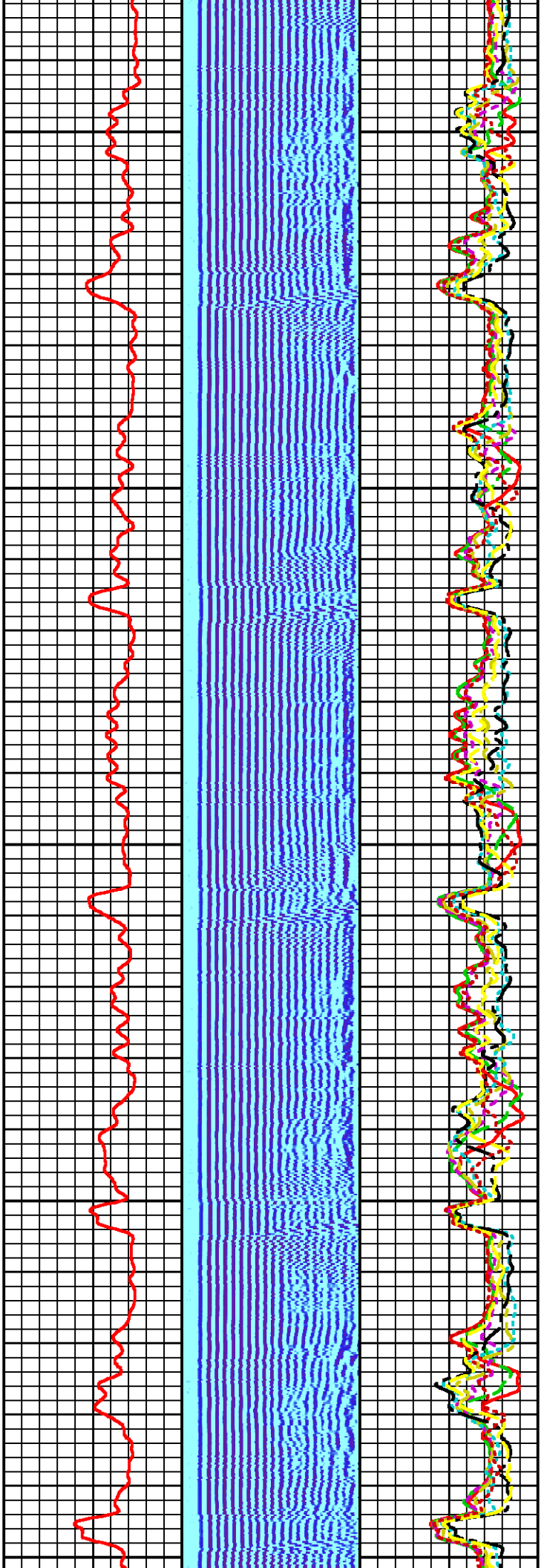


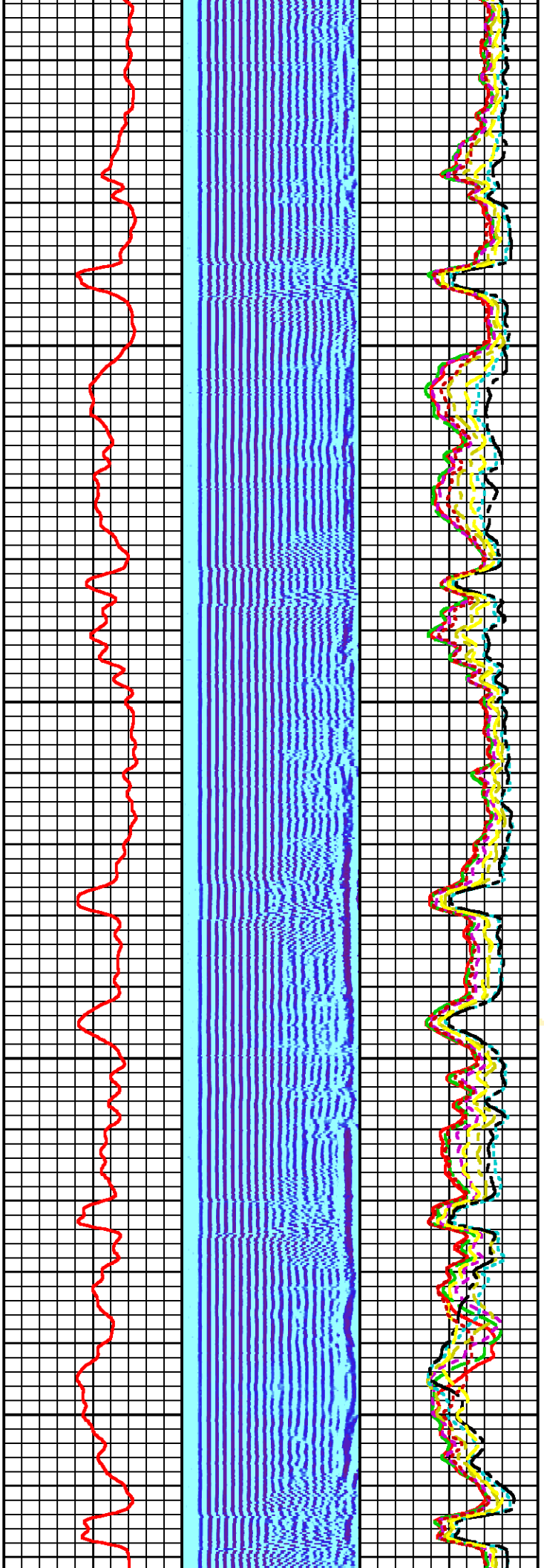
1700

1800

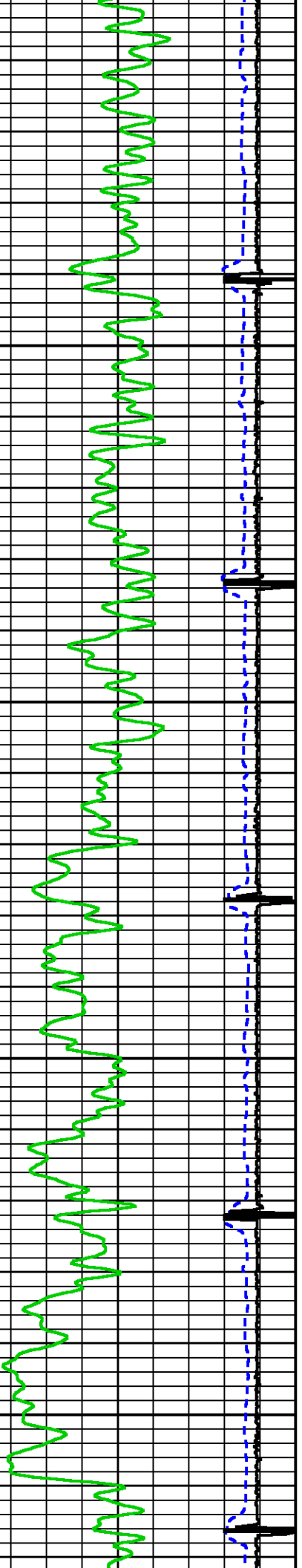


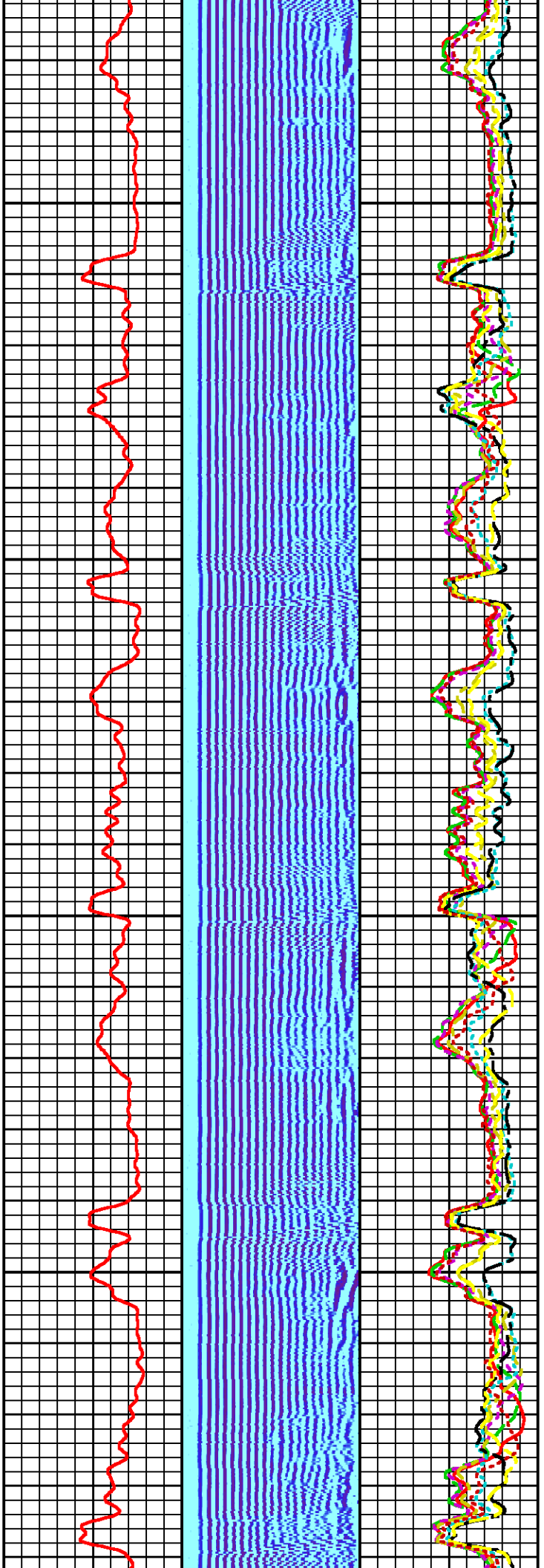






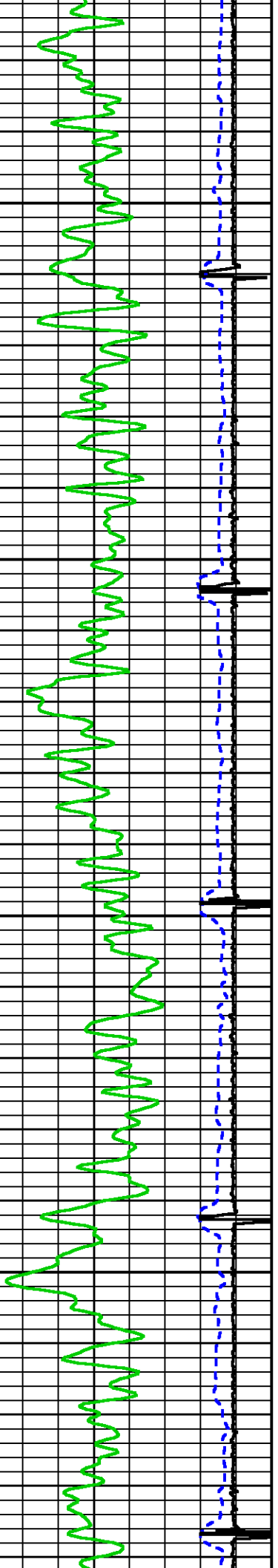
2200 2300

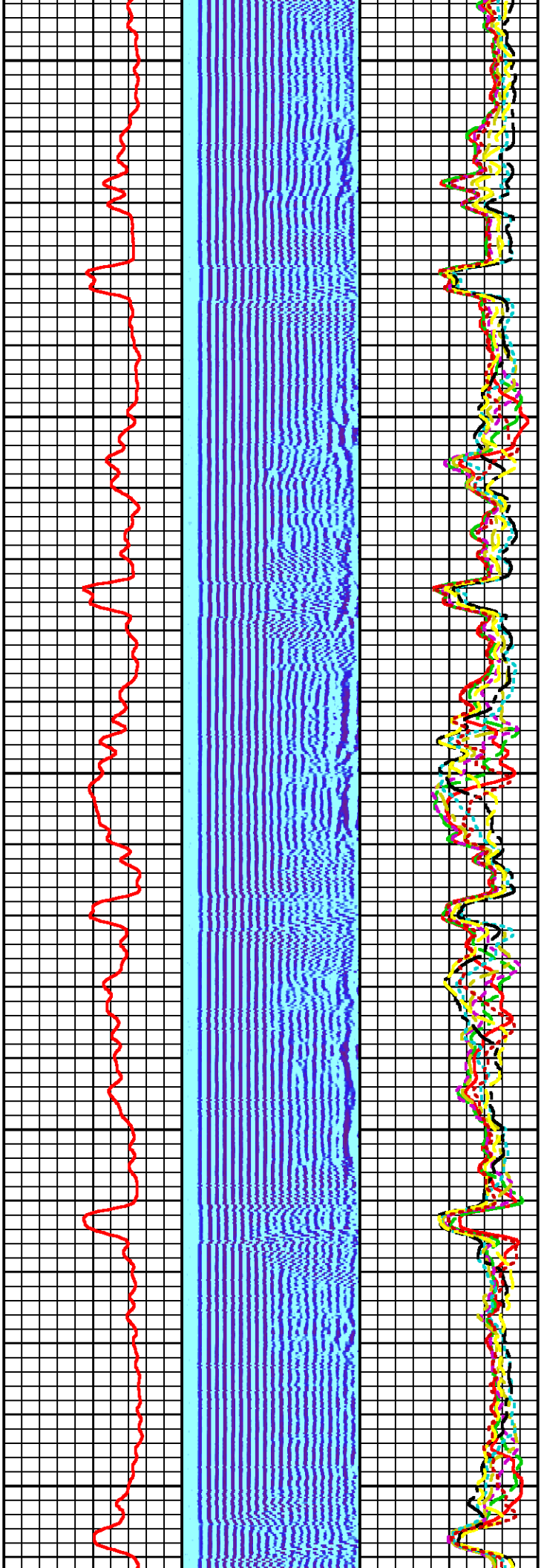




2400

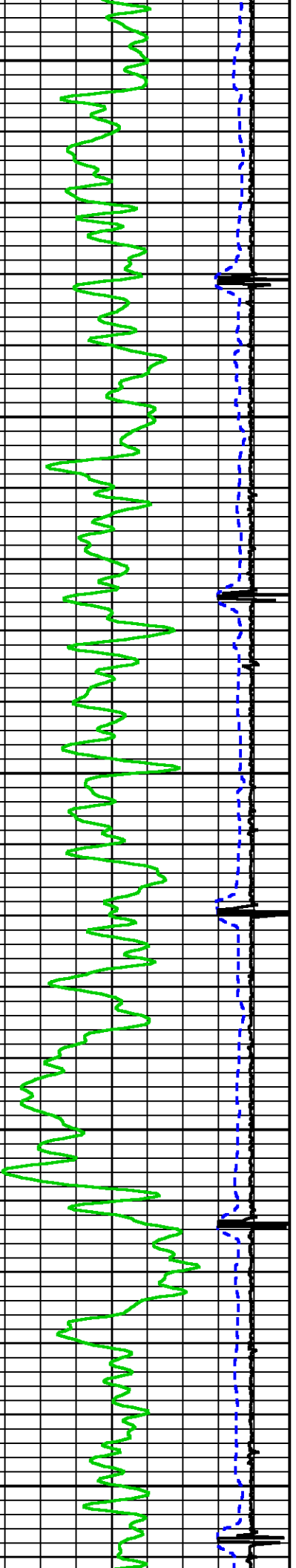
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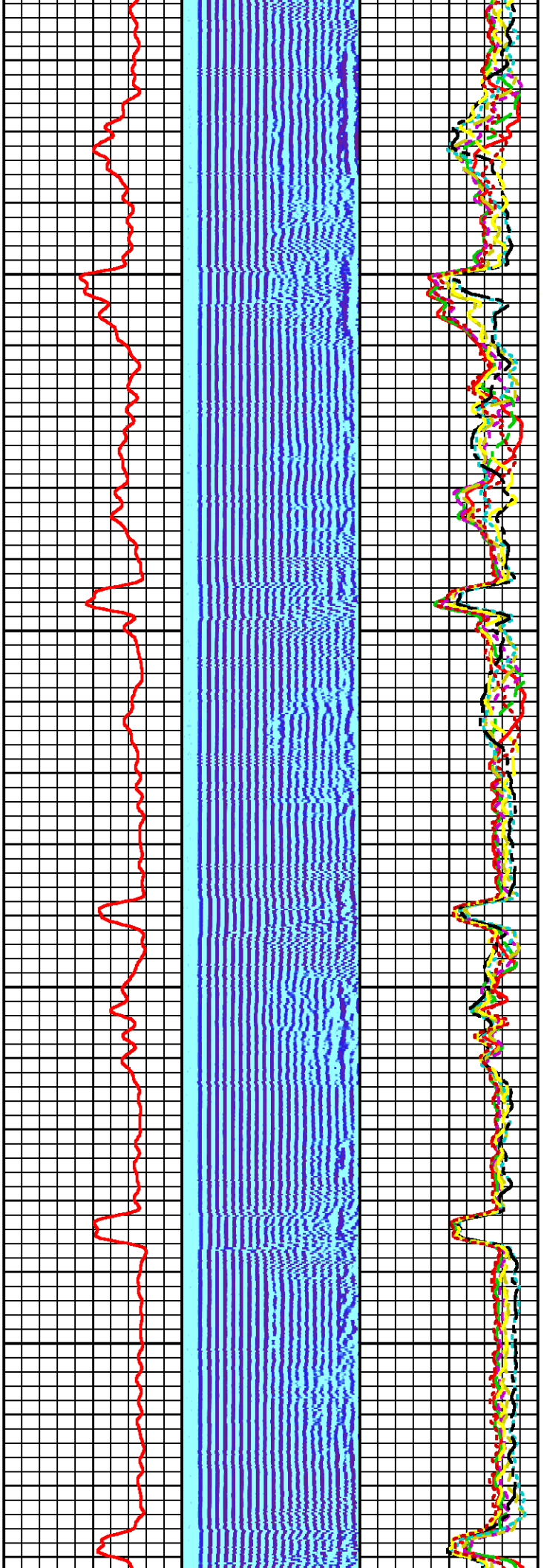


2600

2700

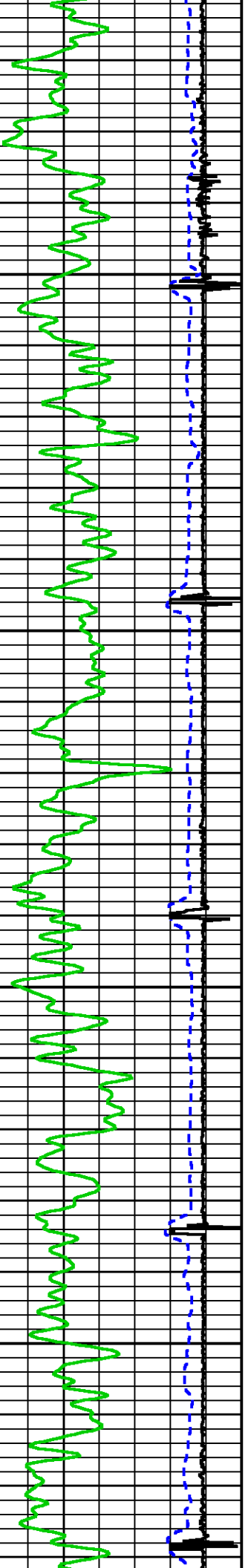


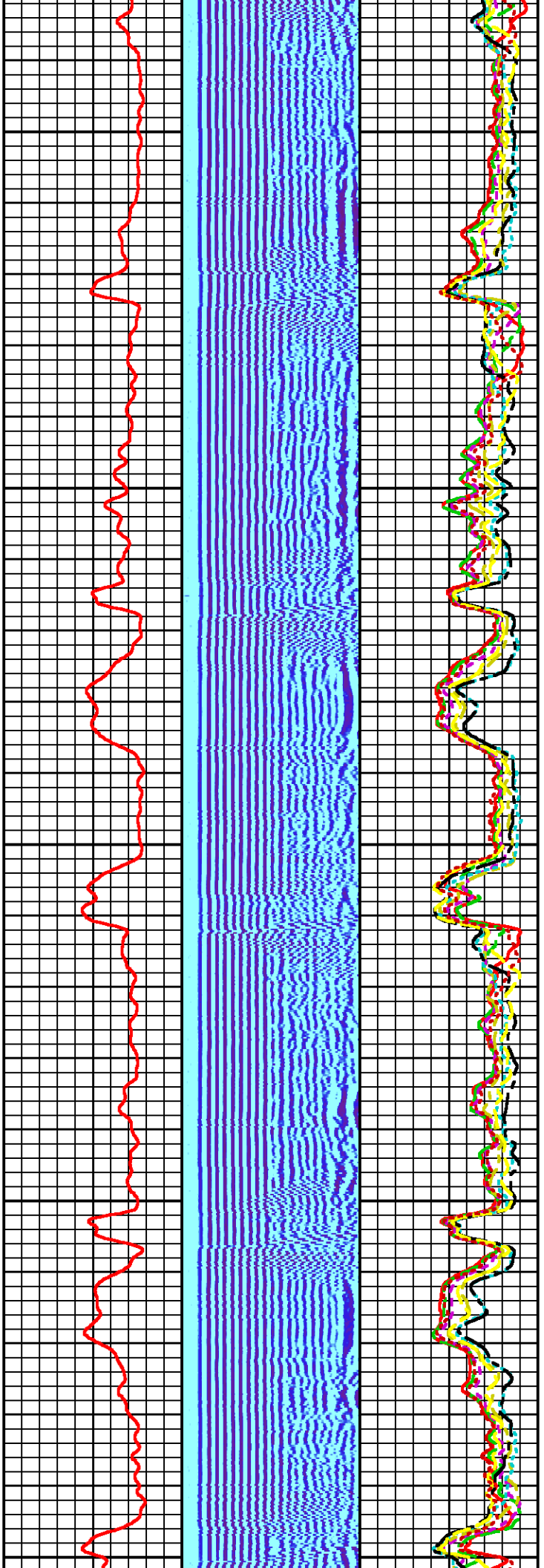




2800

2900

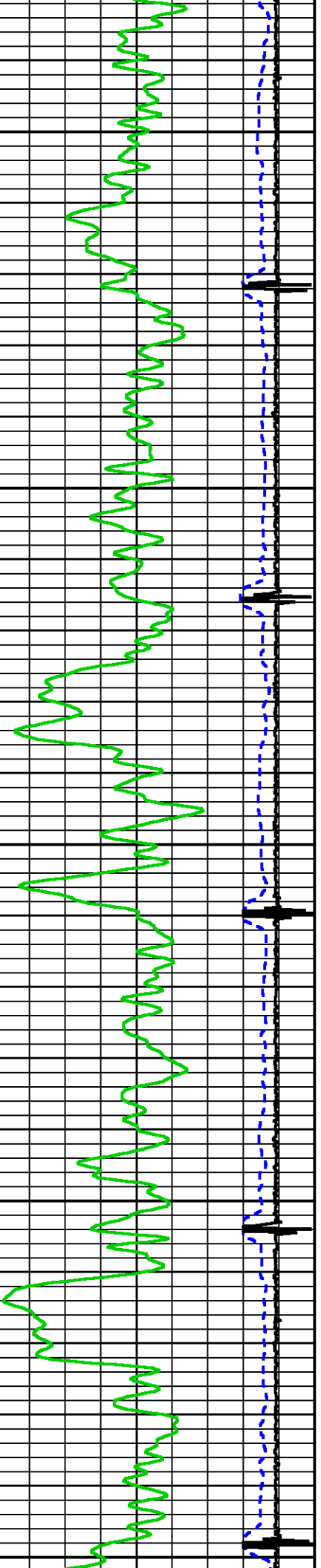


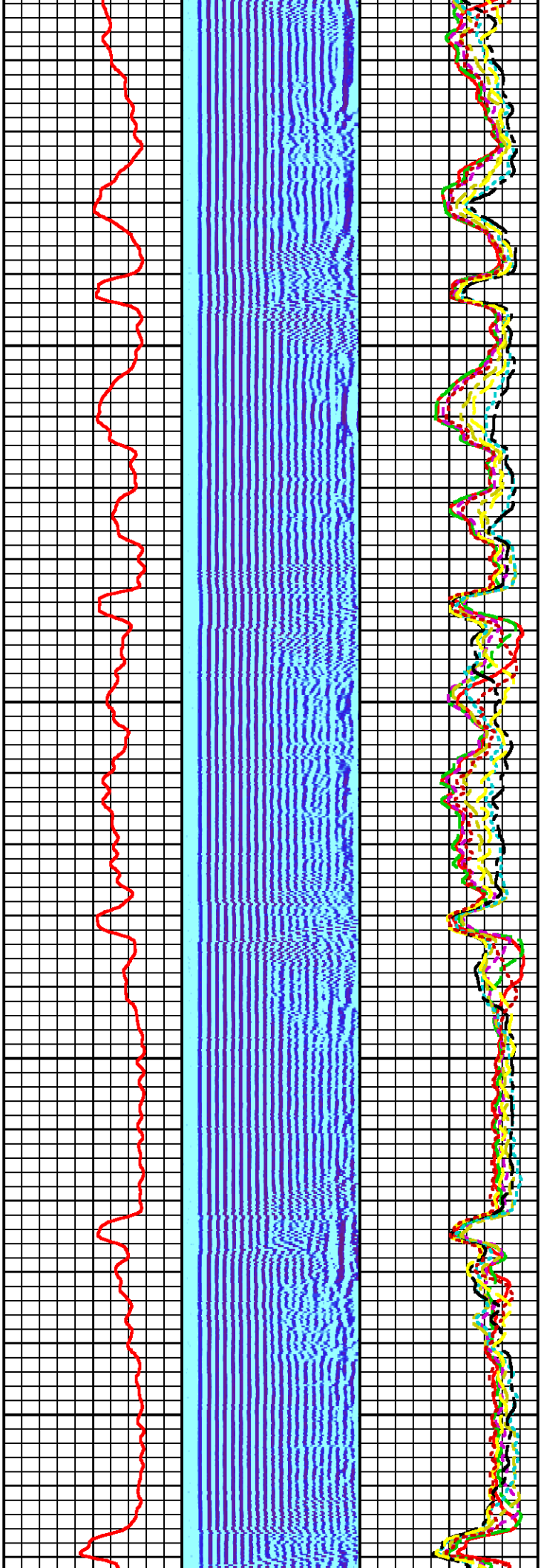


3000

3100

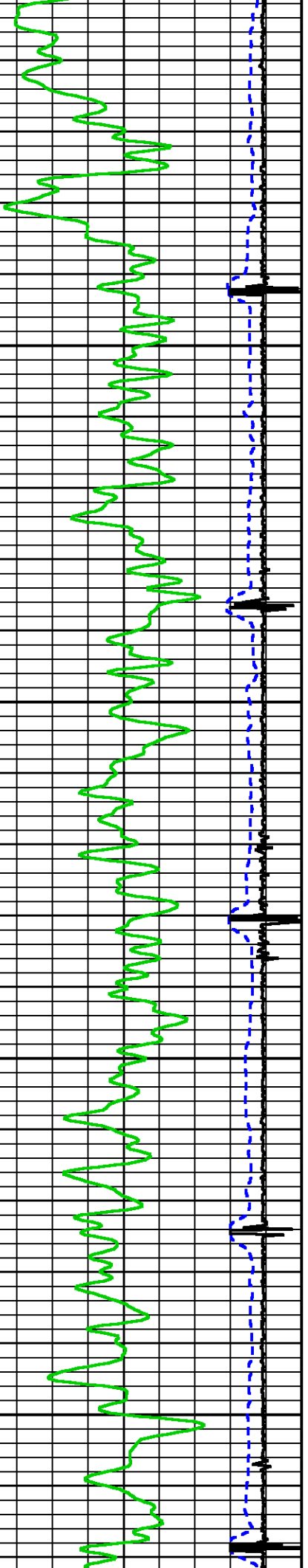
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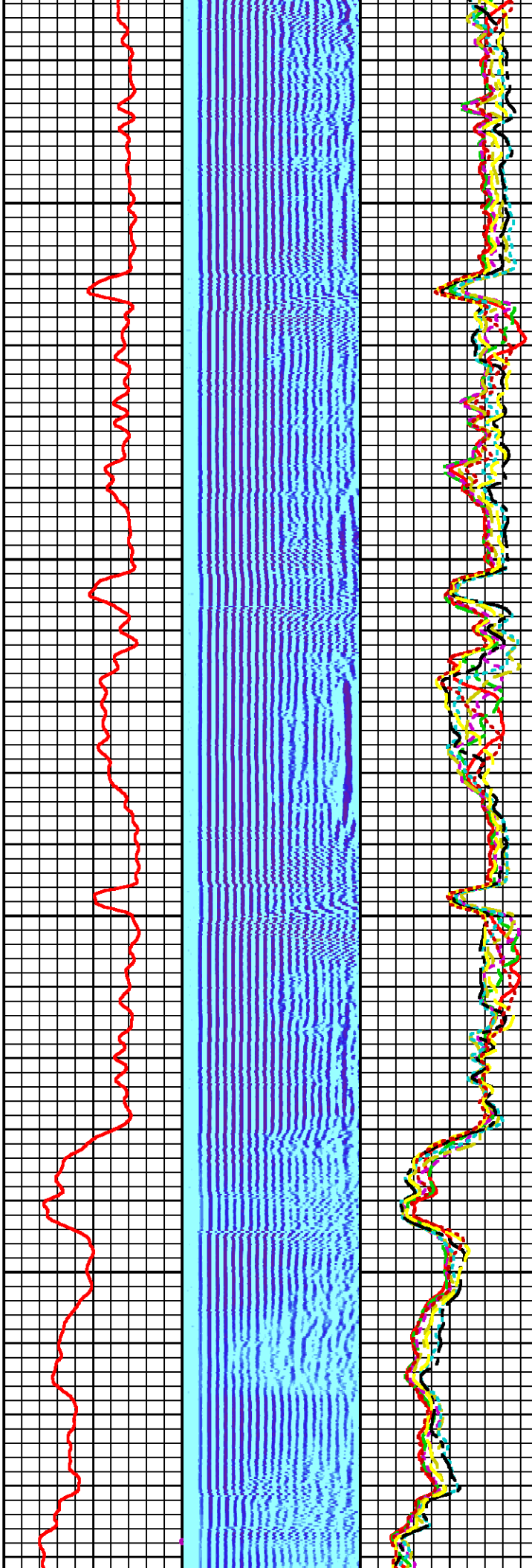
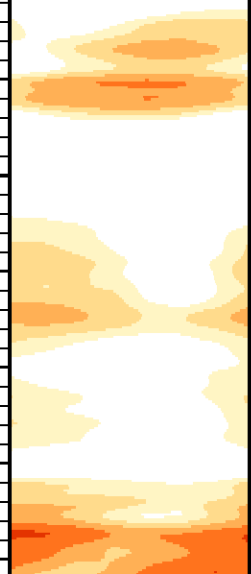




3300

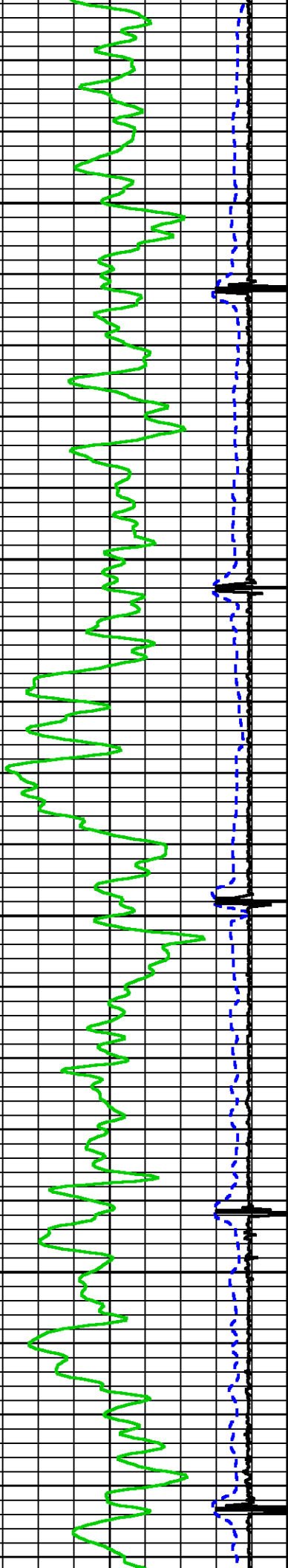
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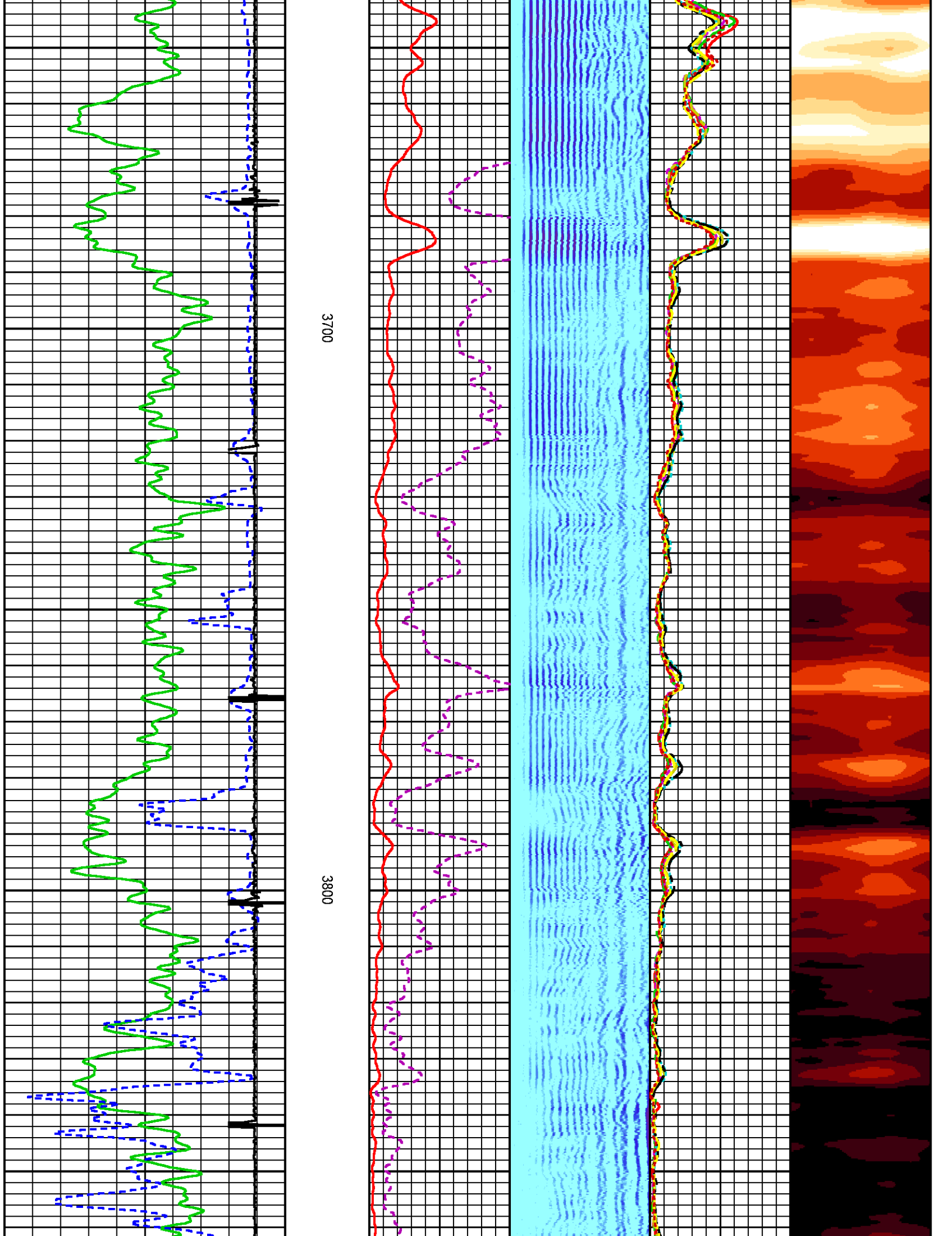


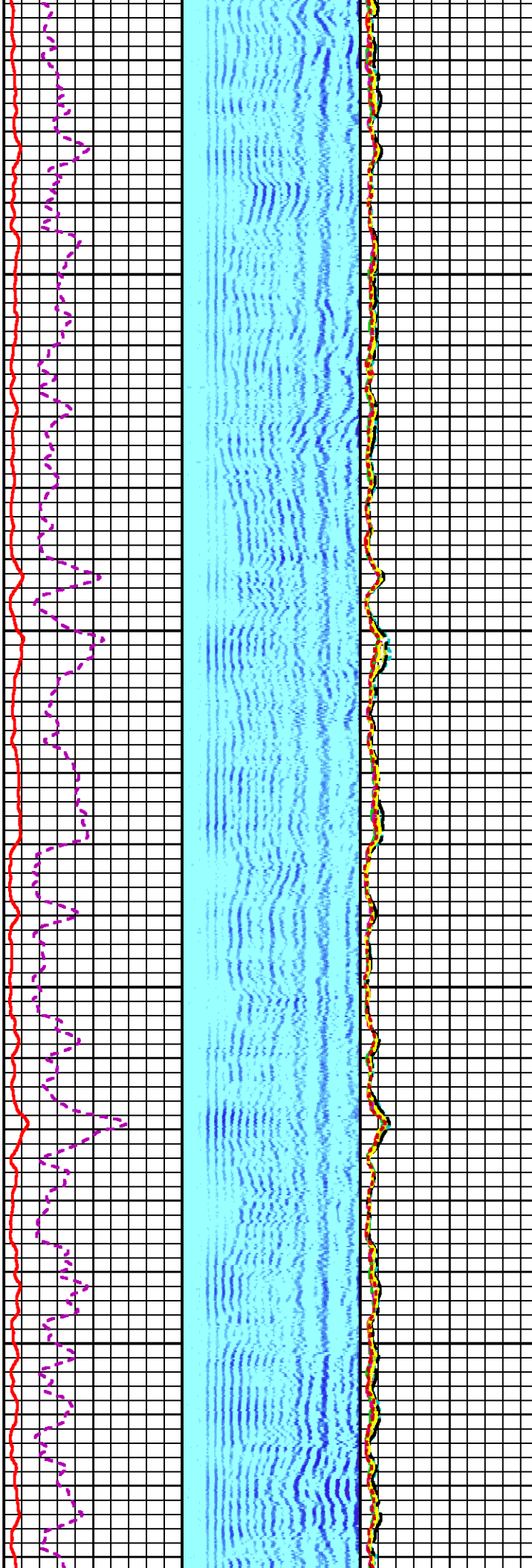
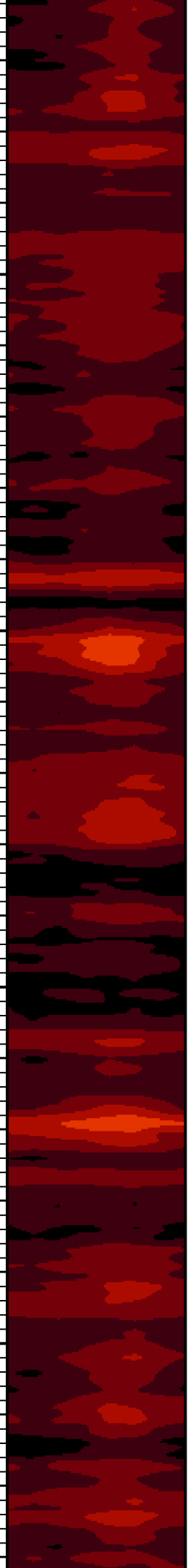
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3600



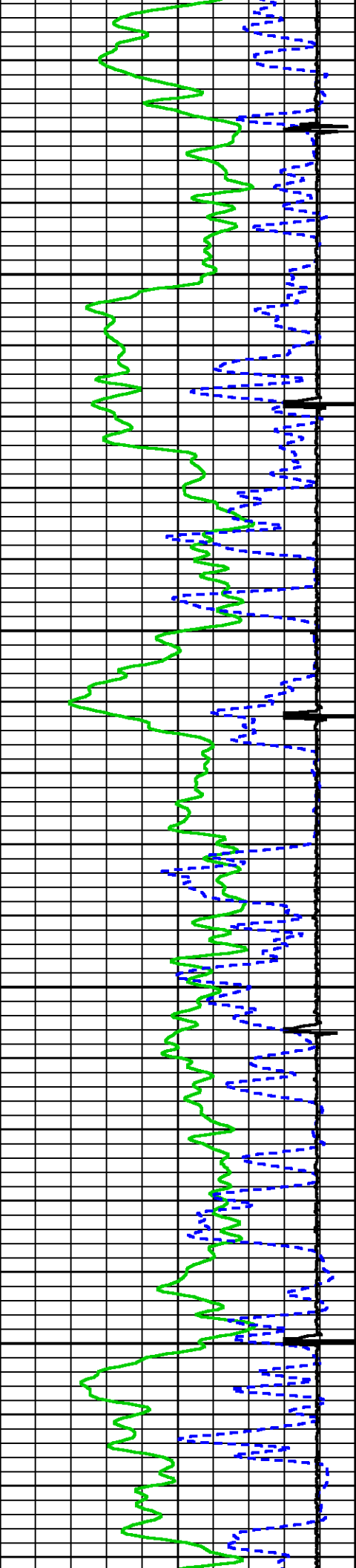


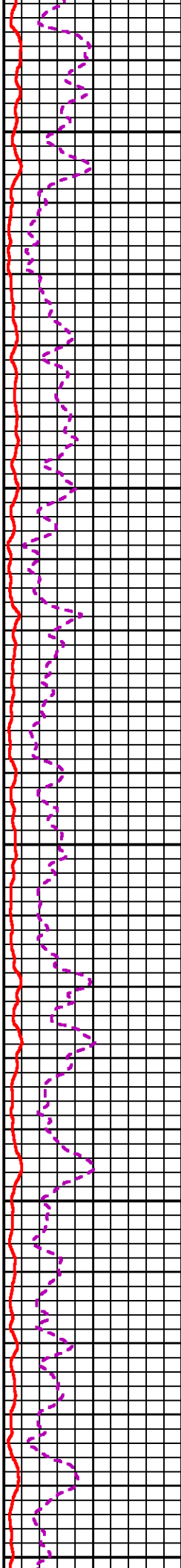
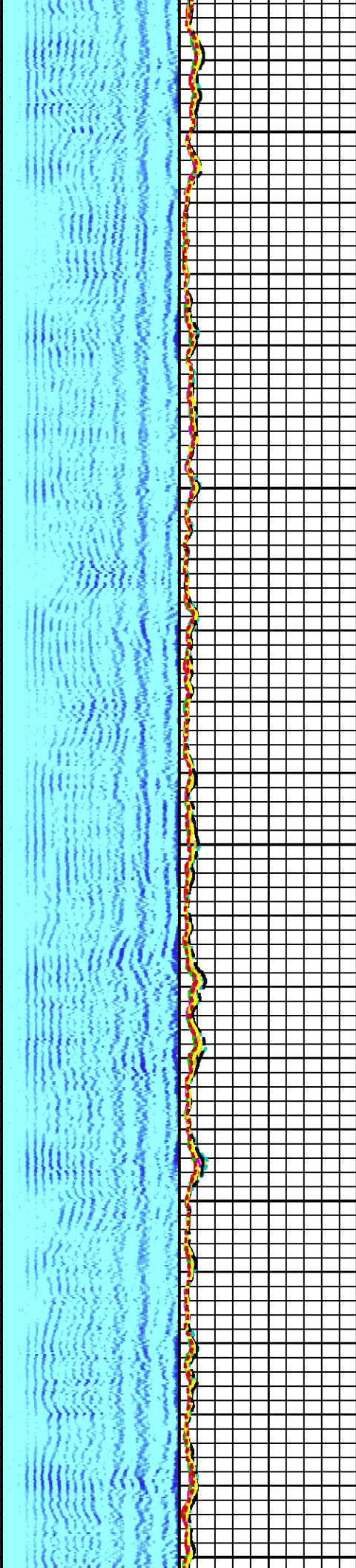




3900

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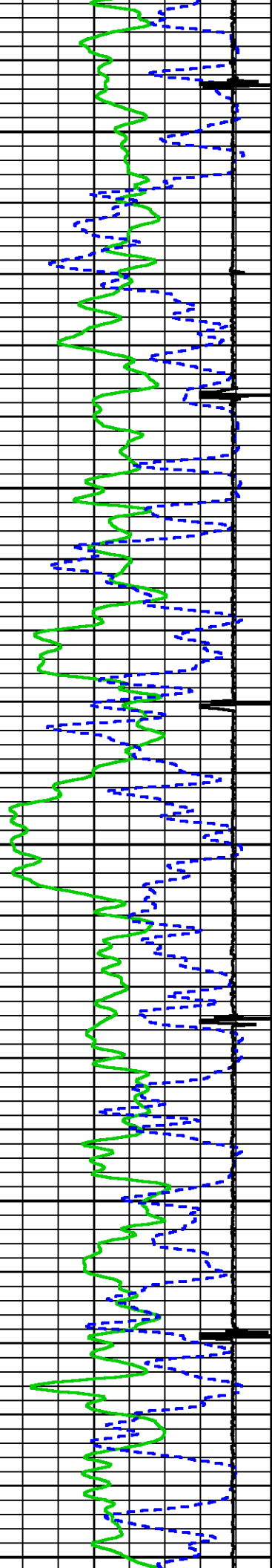


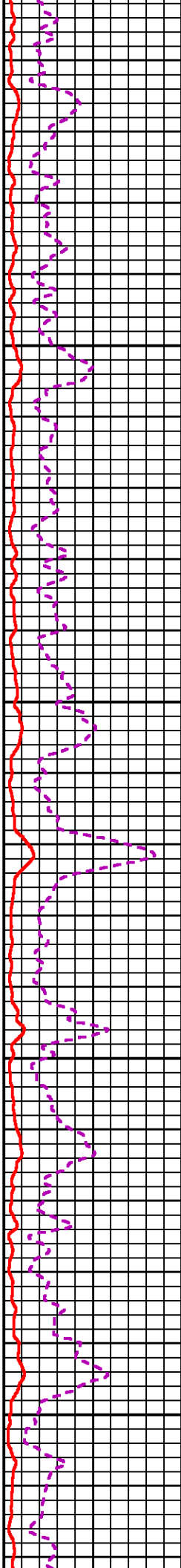
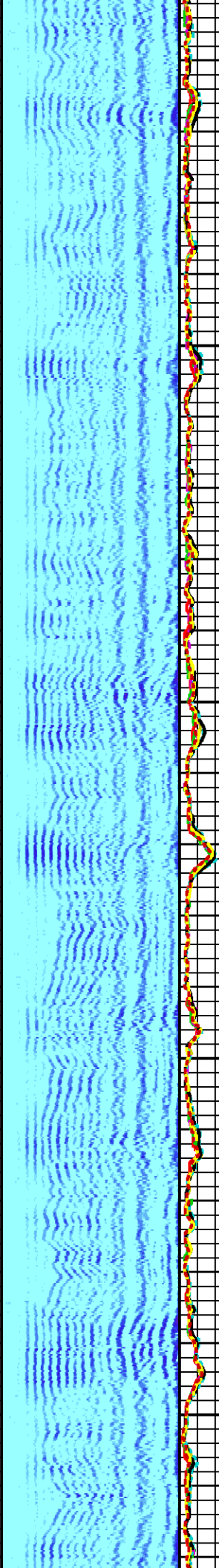


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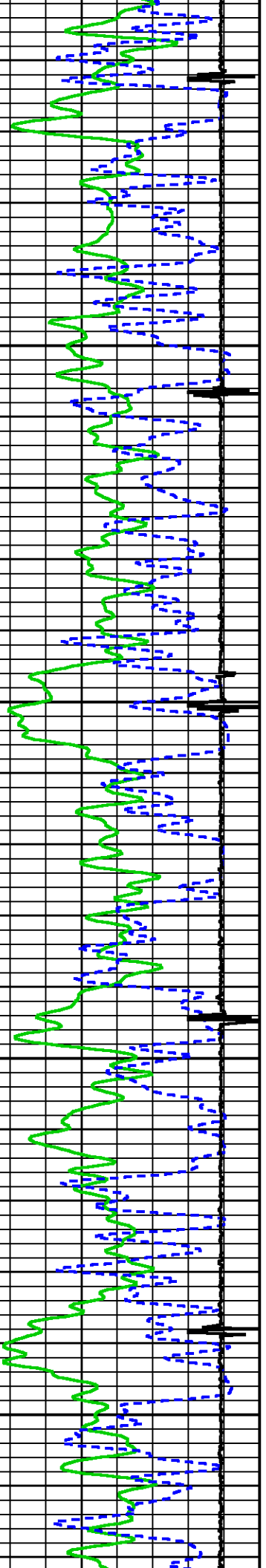
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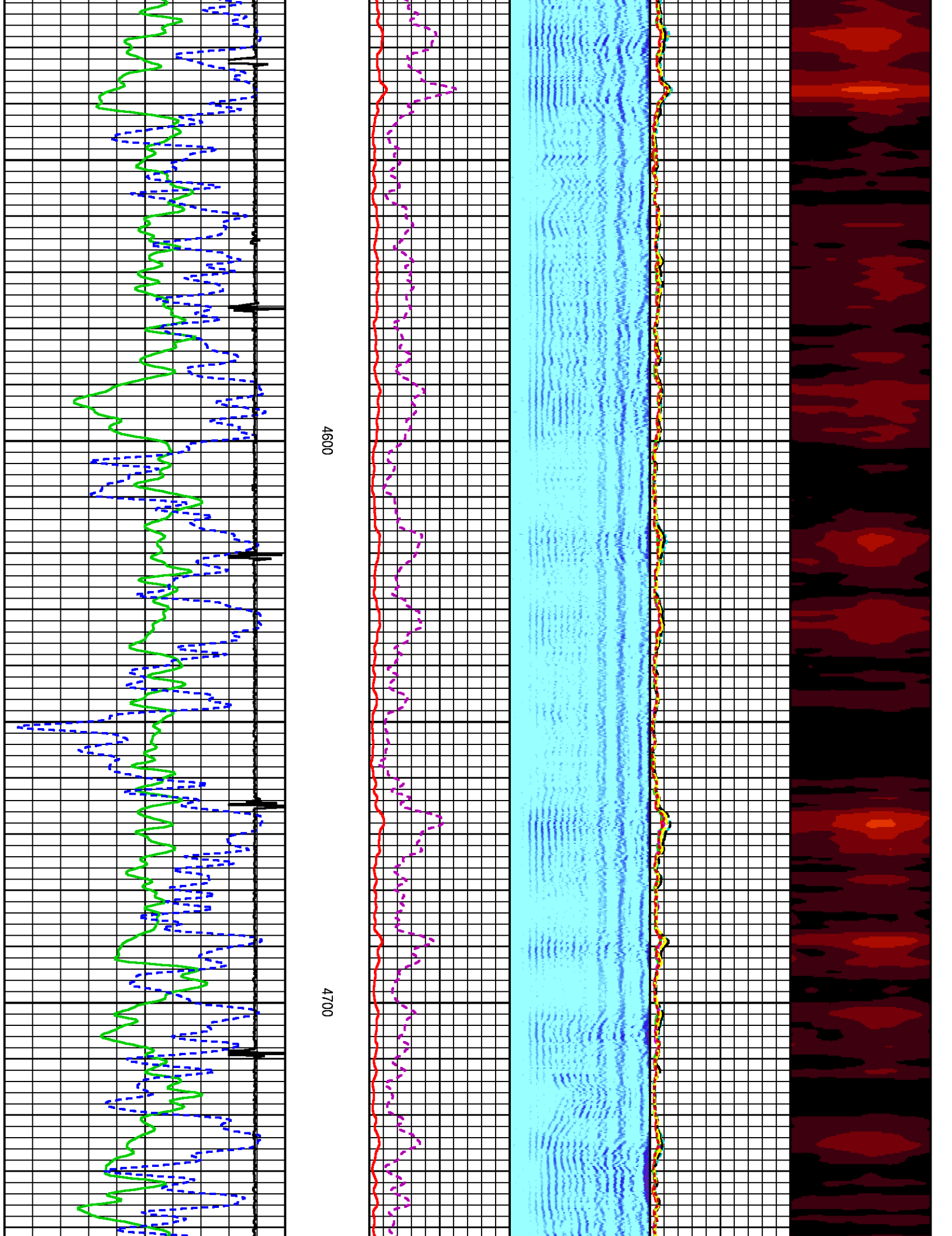


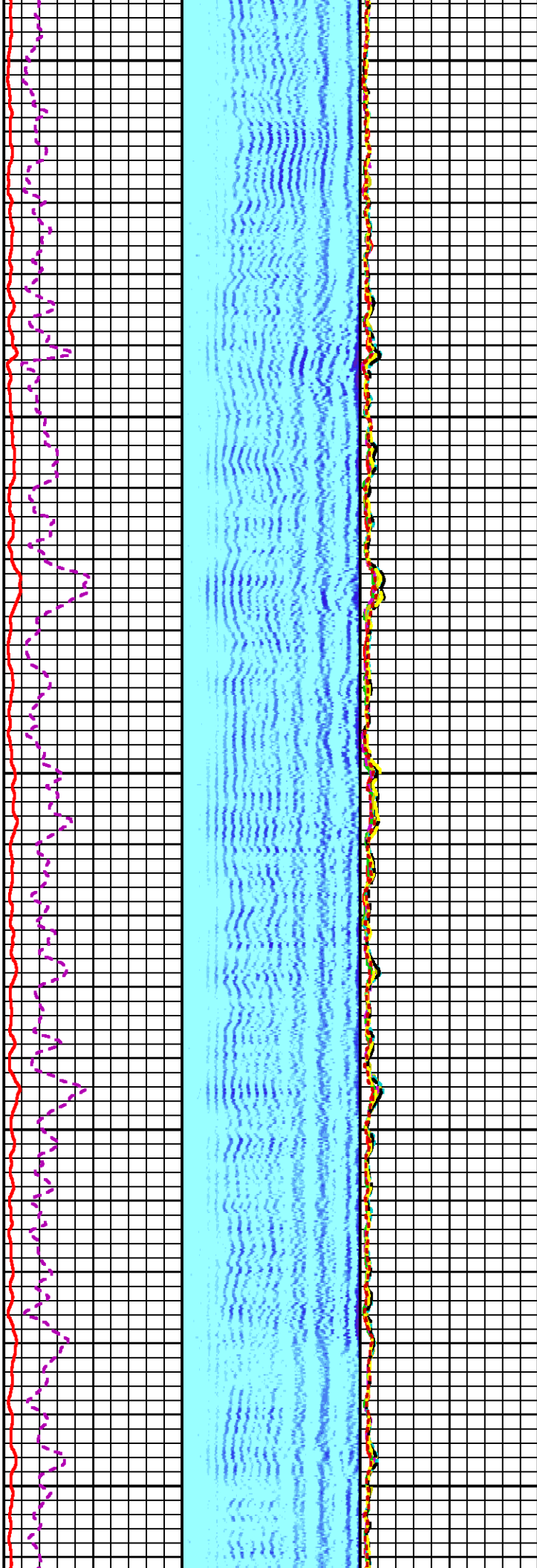
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4500



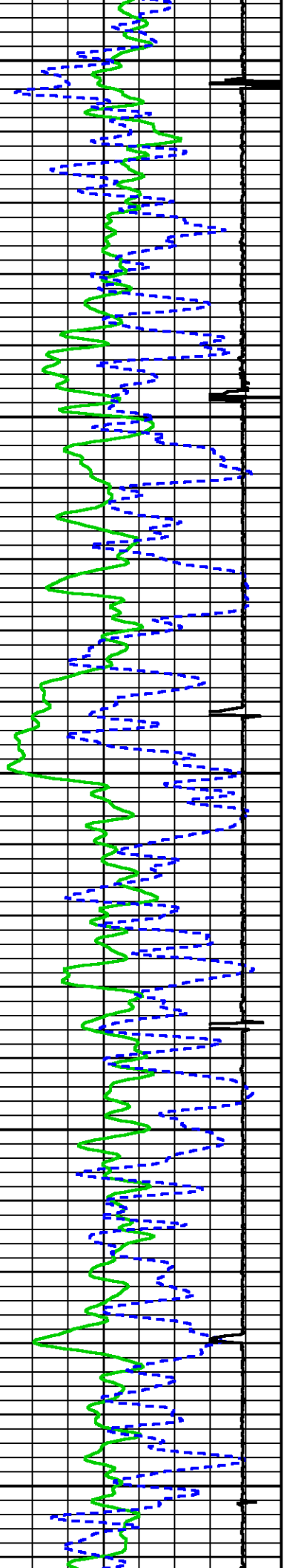


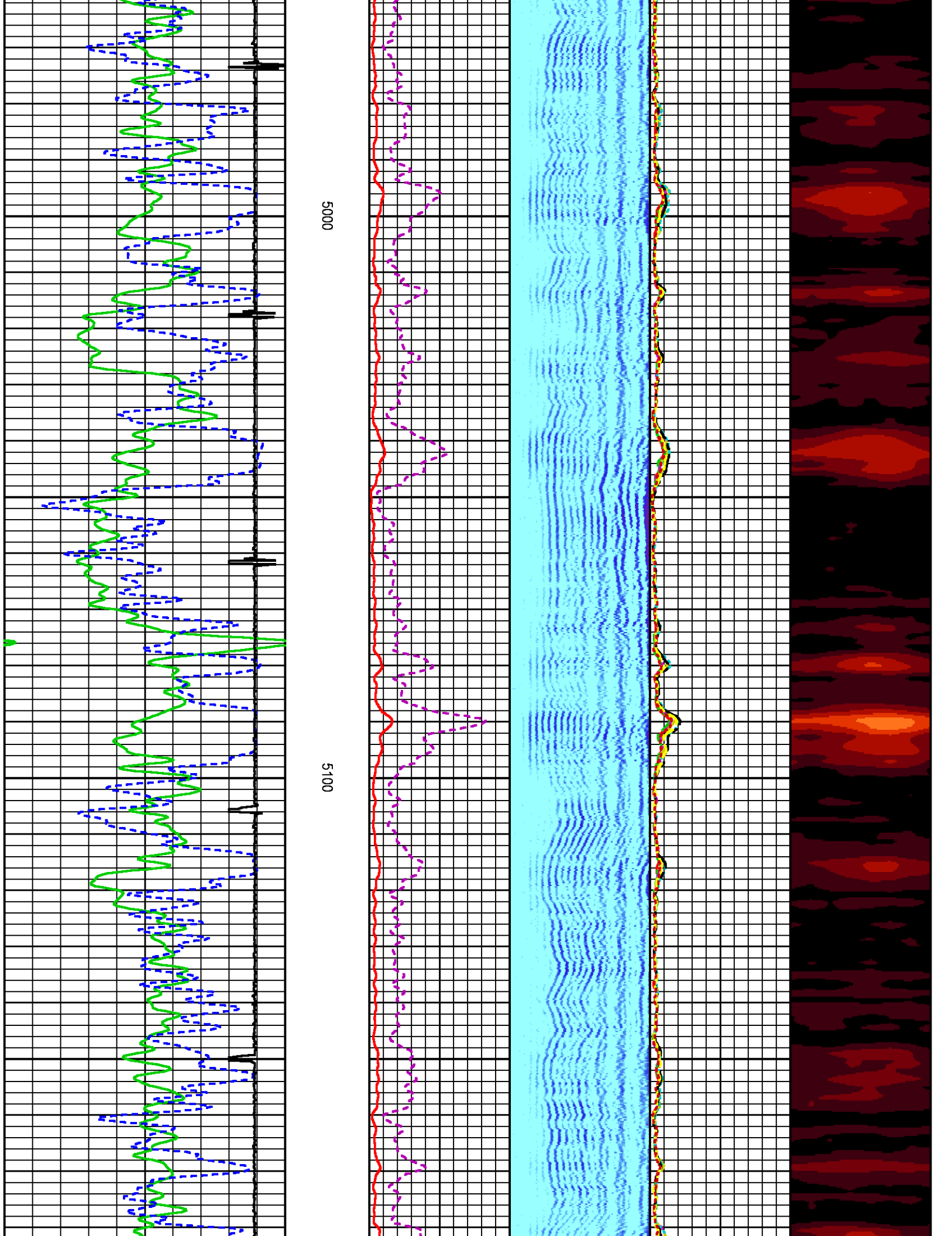


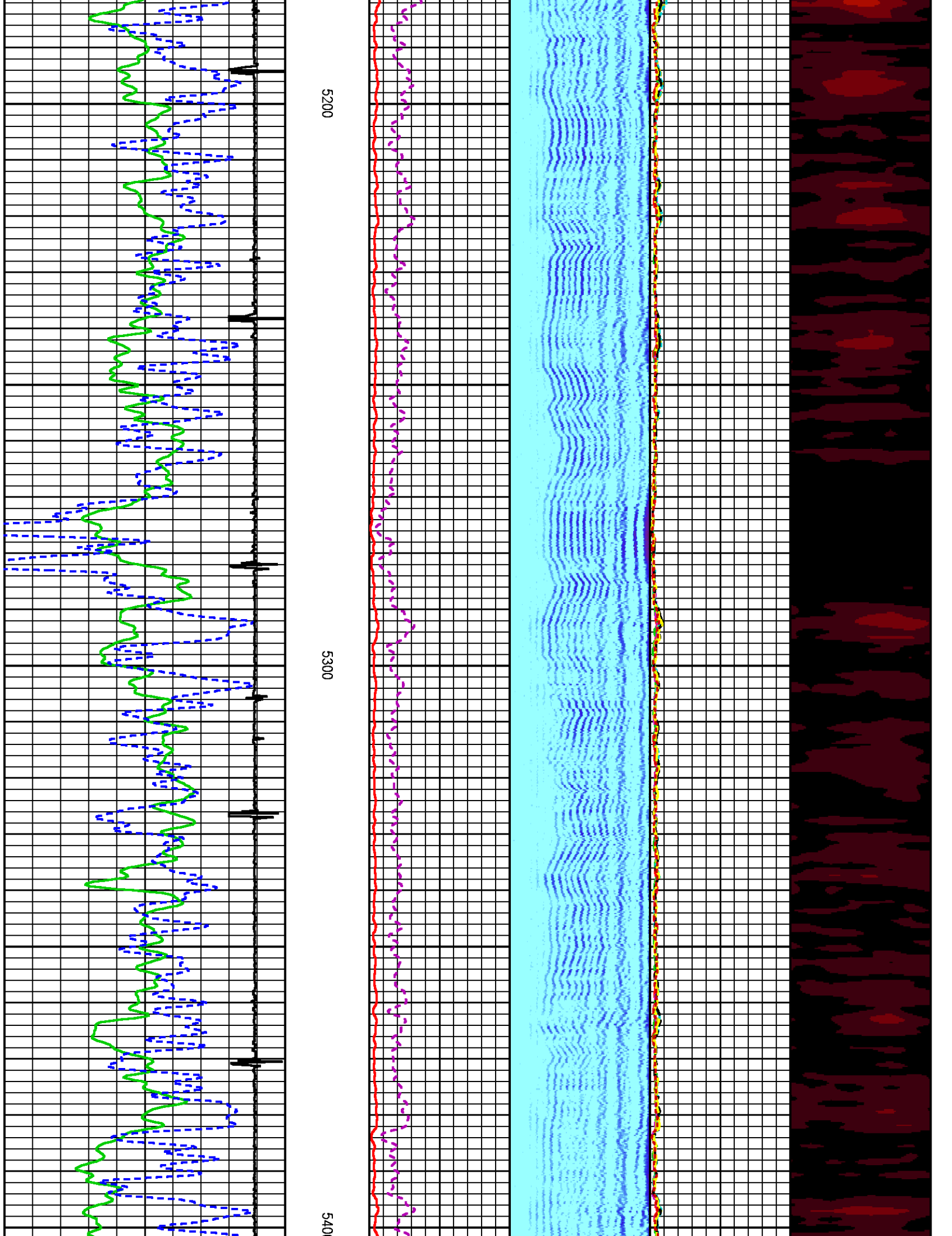


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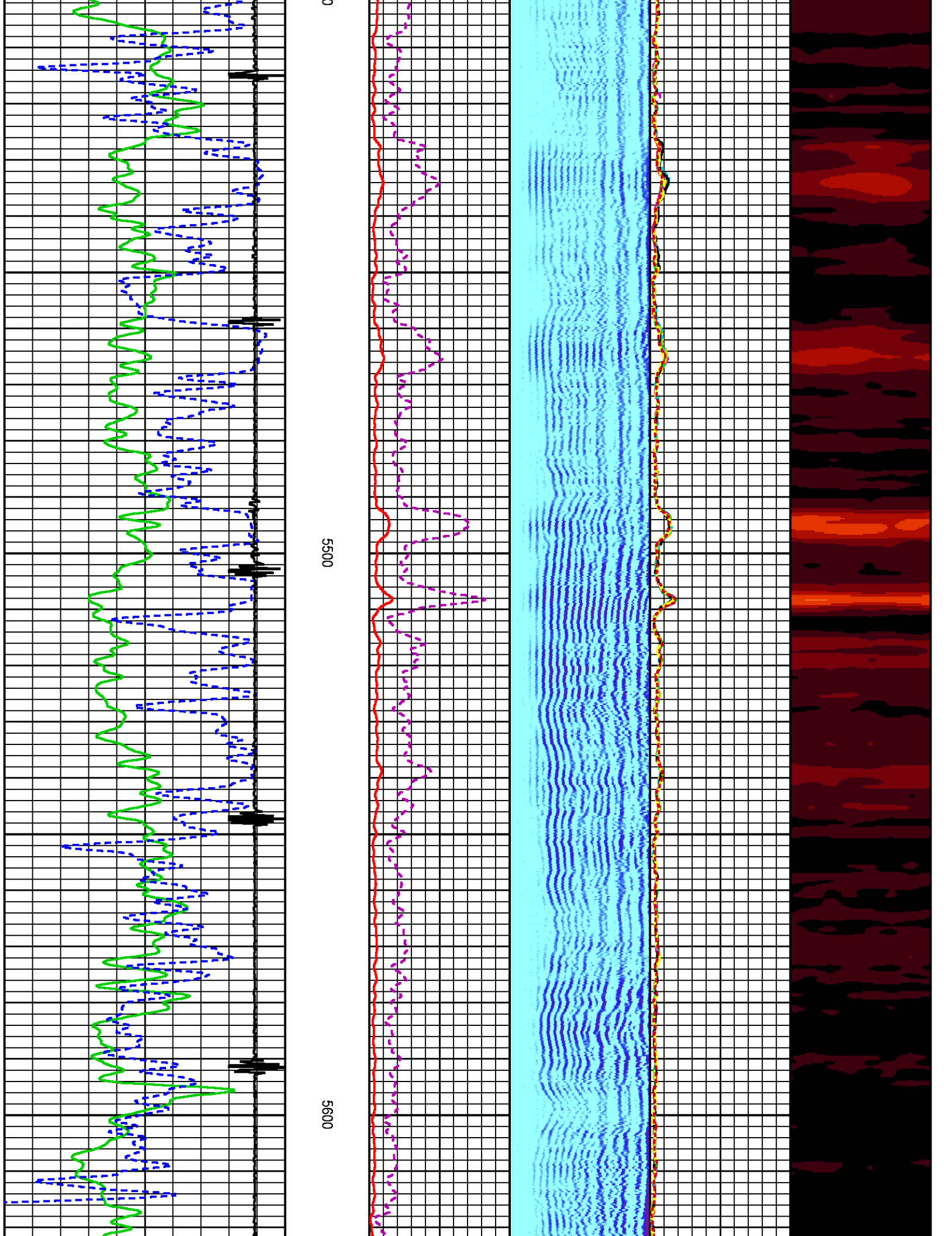
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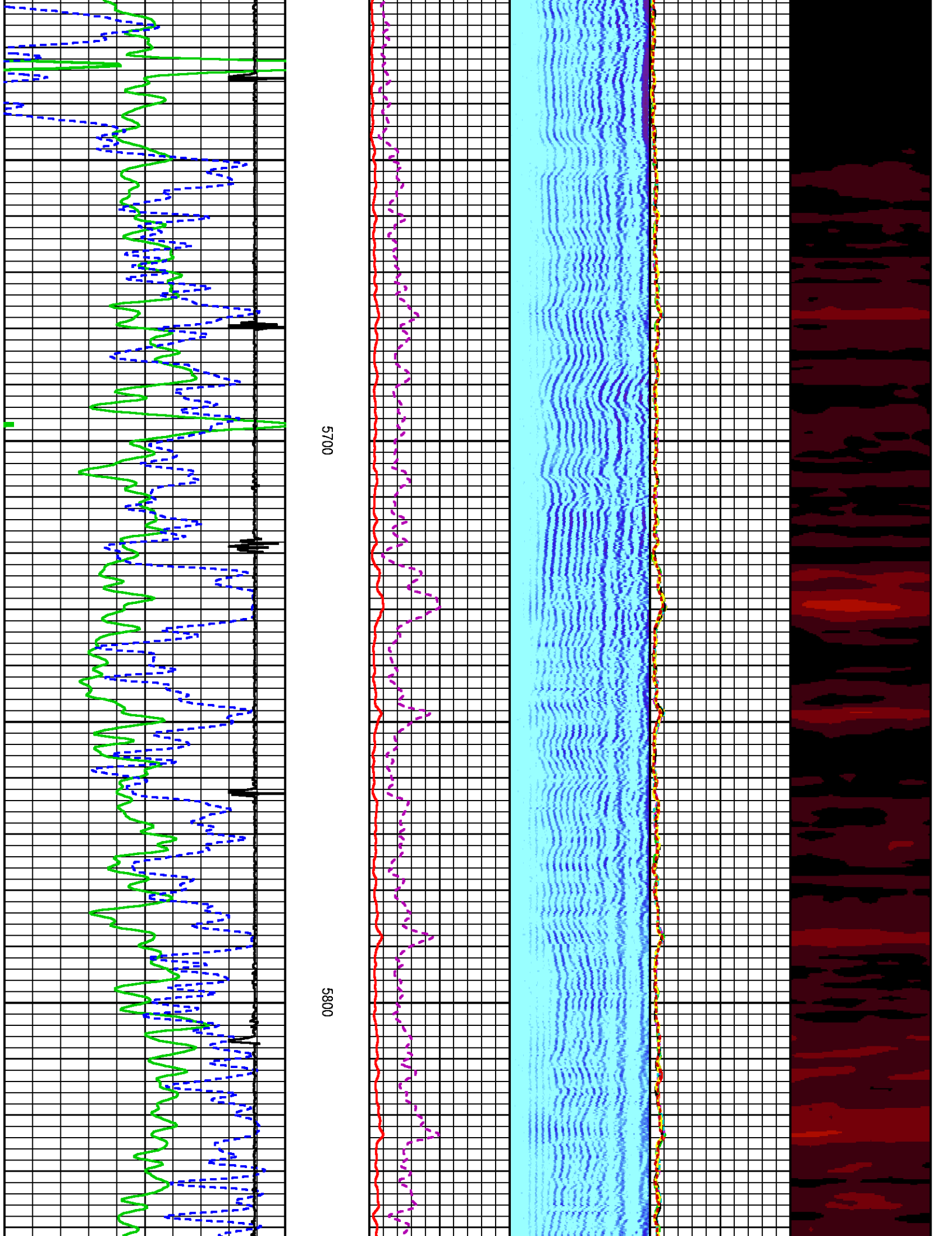


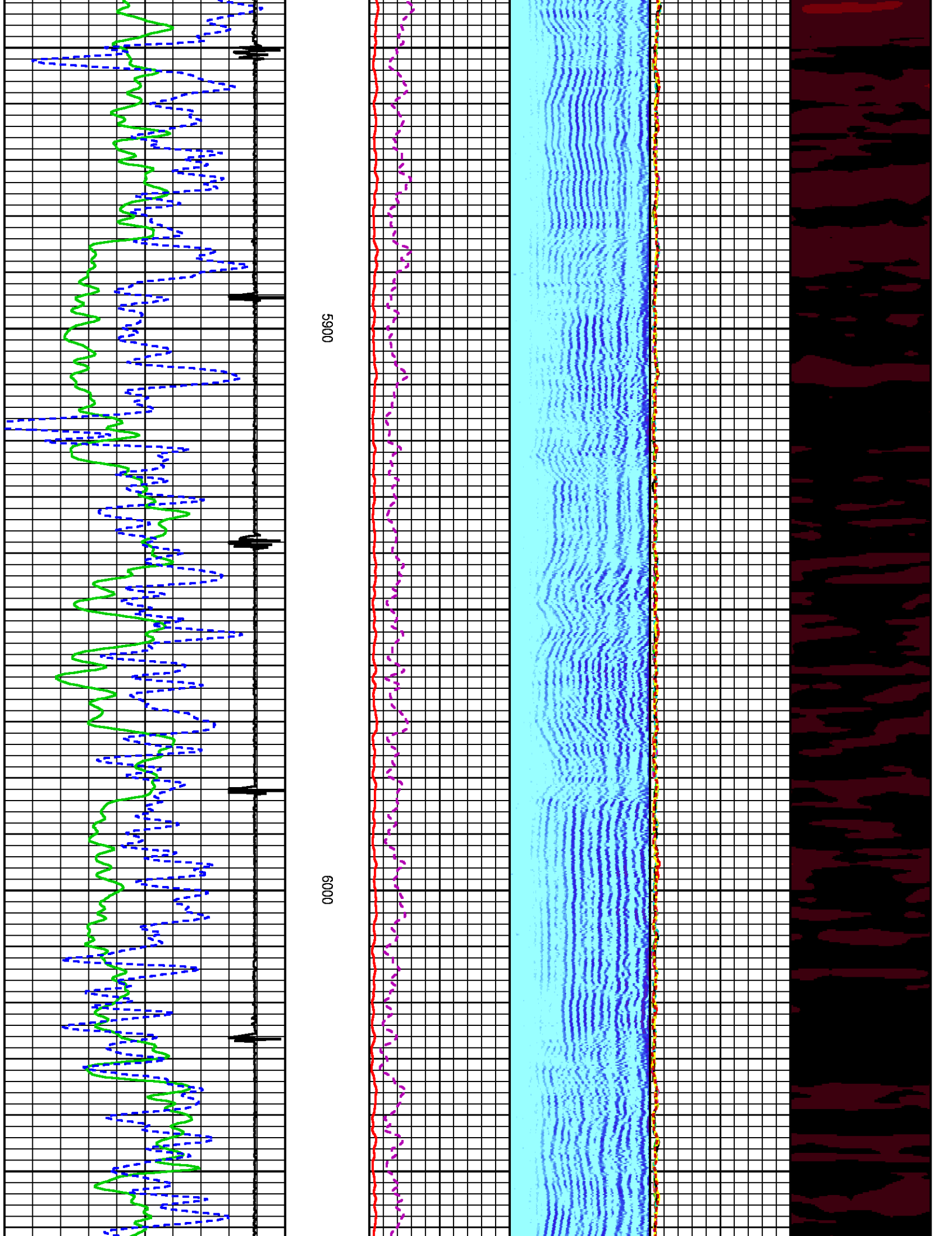


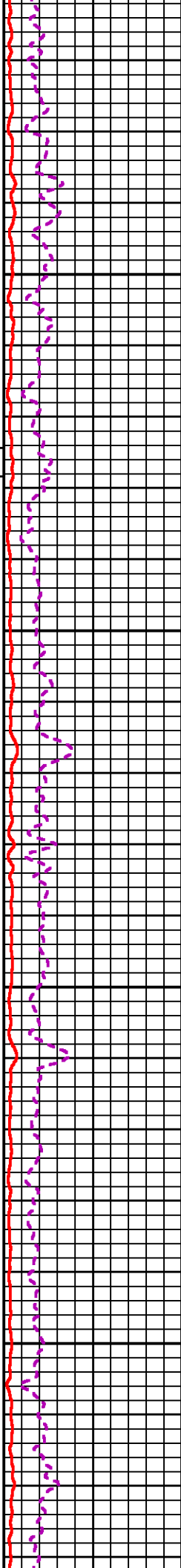
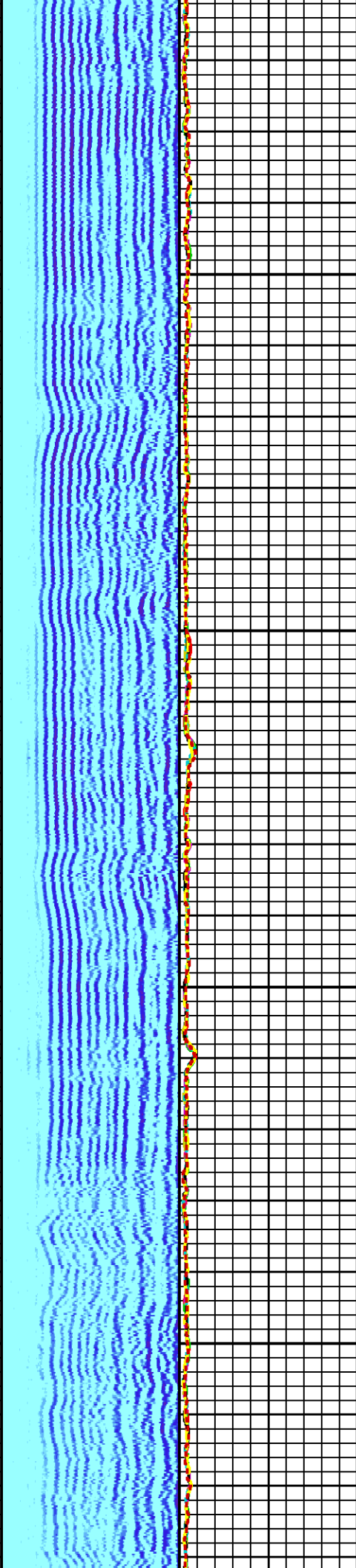








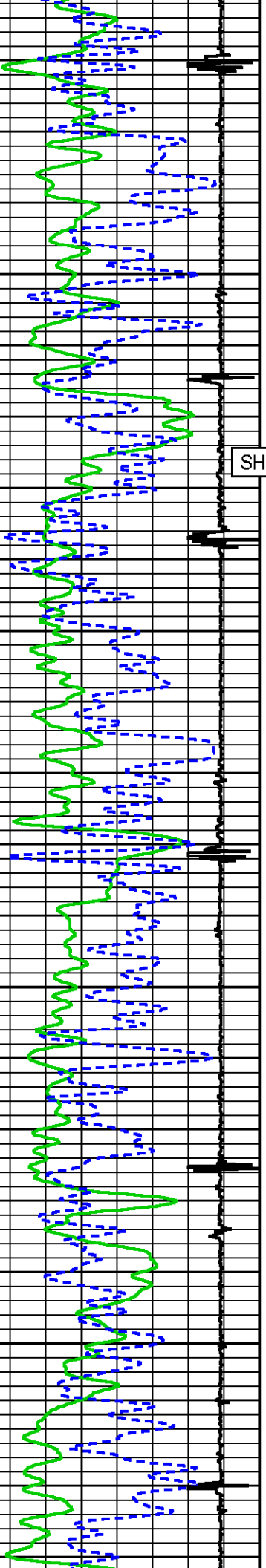




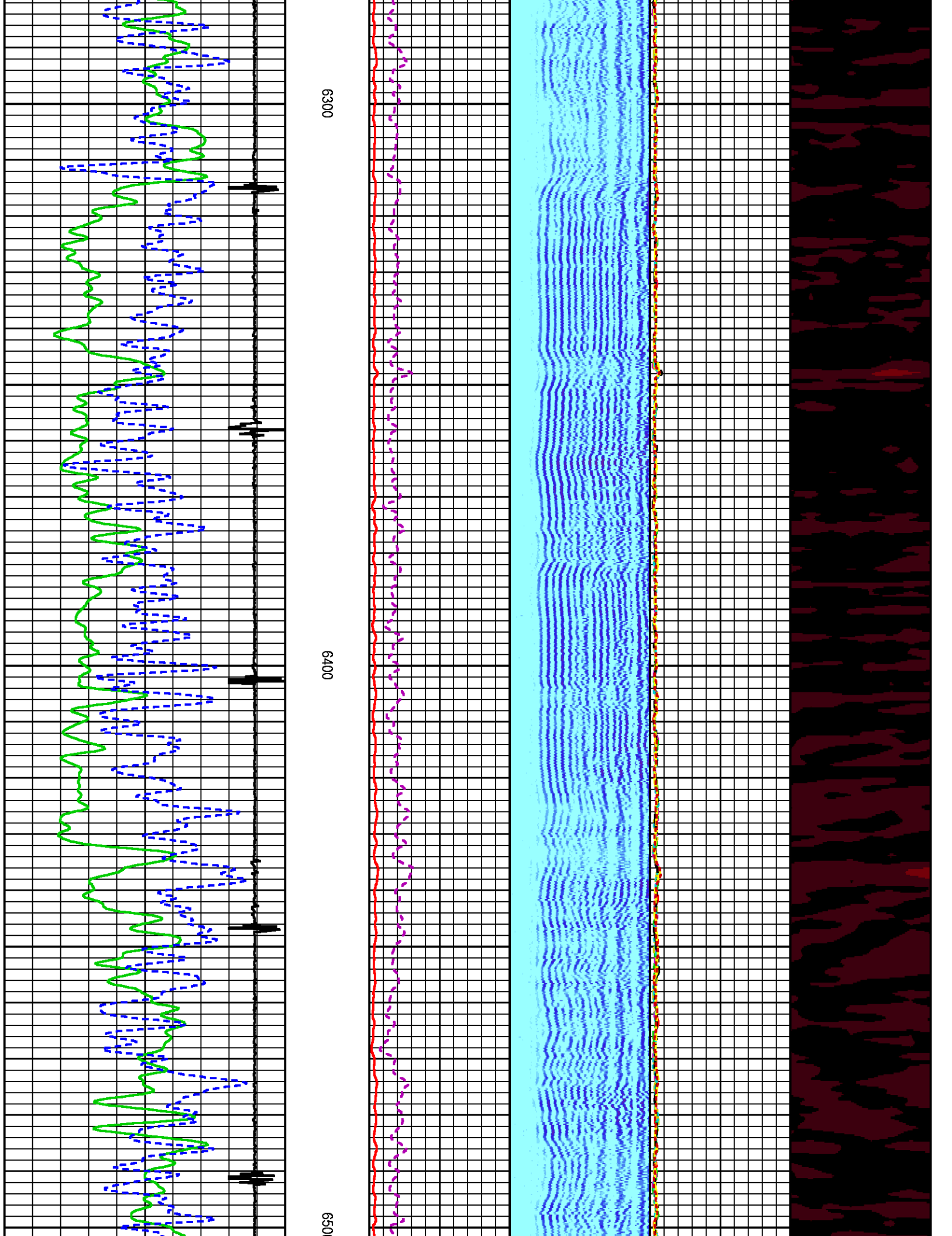
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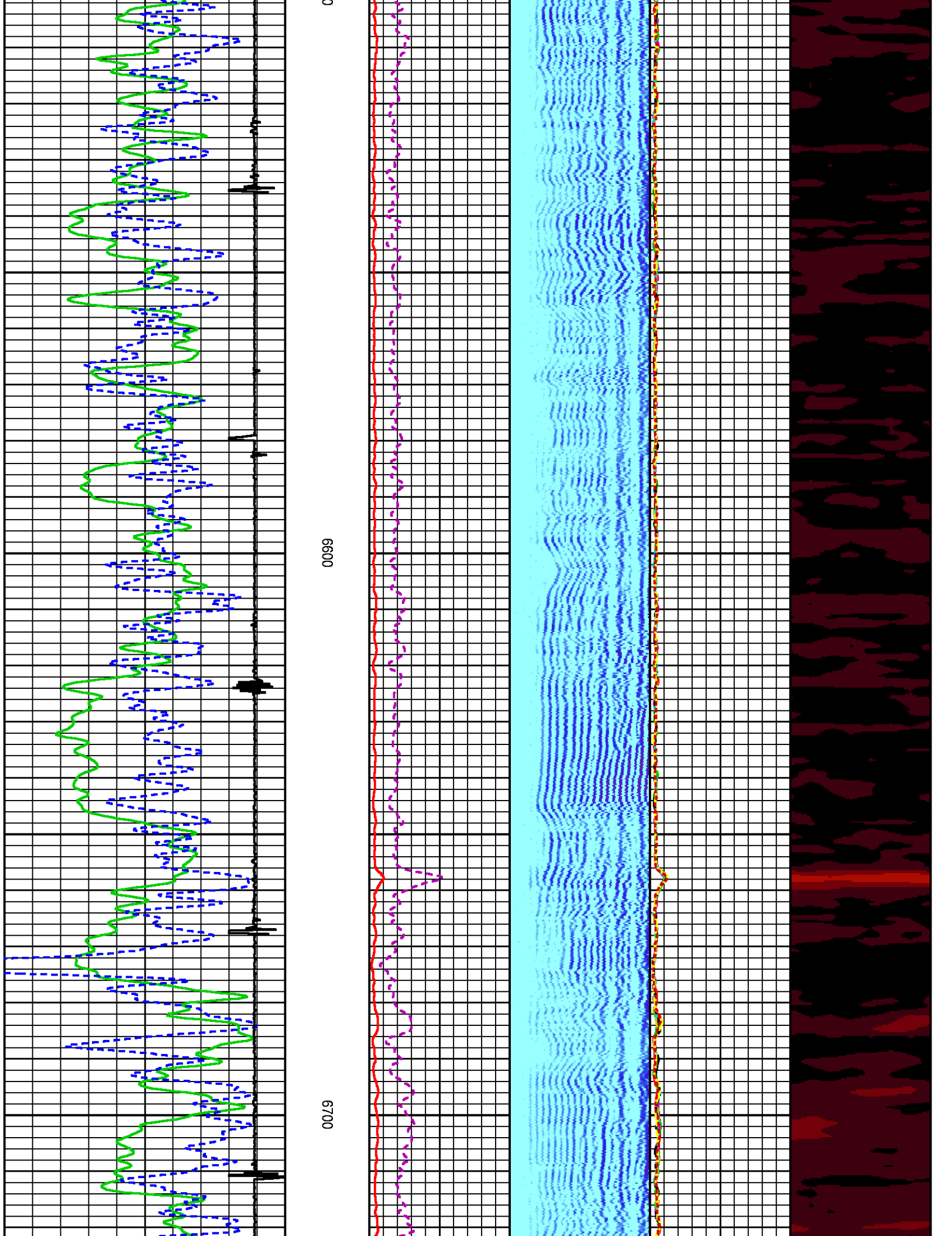
SHORT JOINT

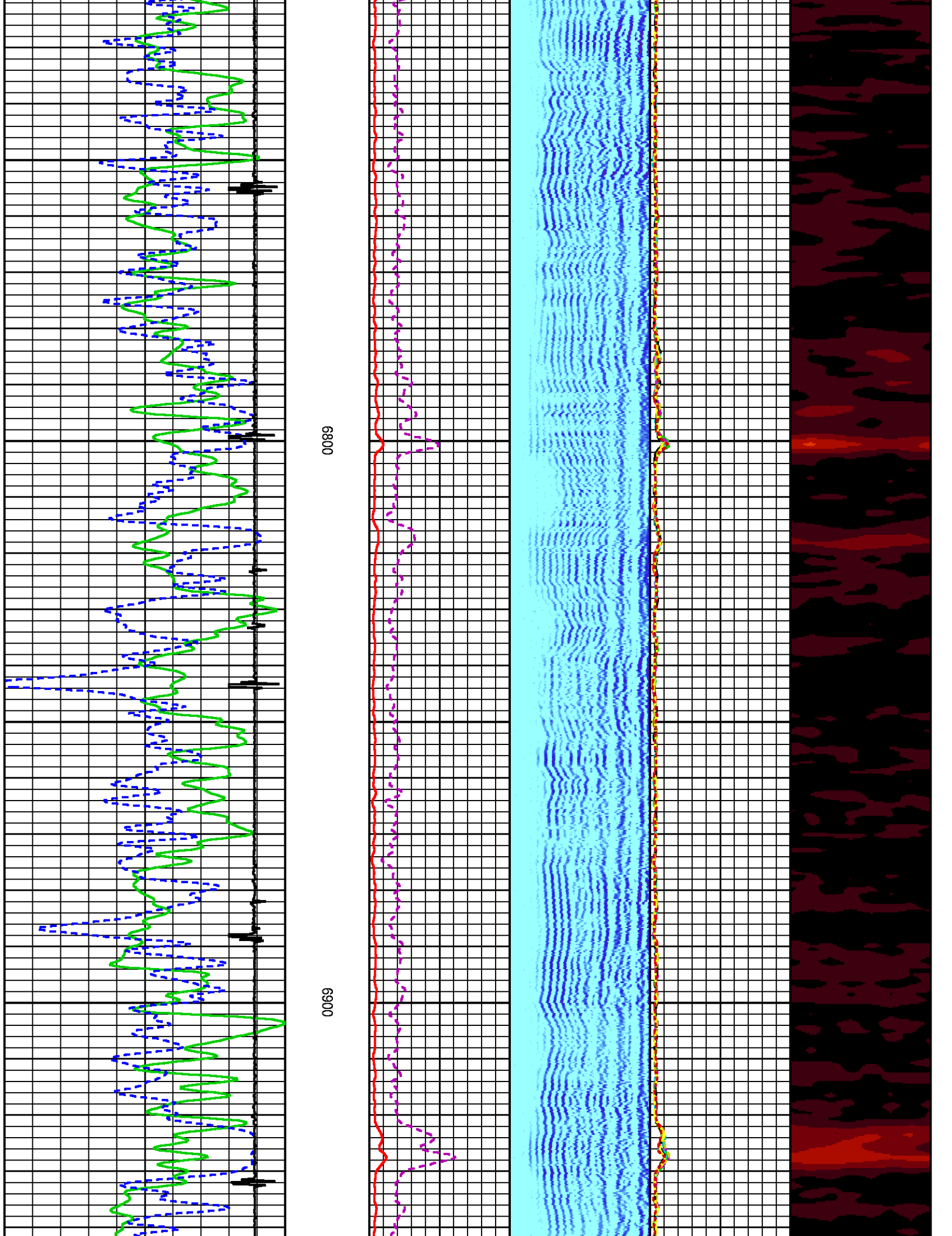
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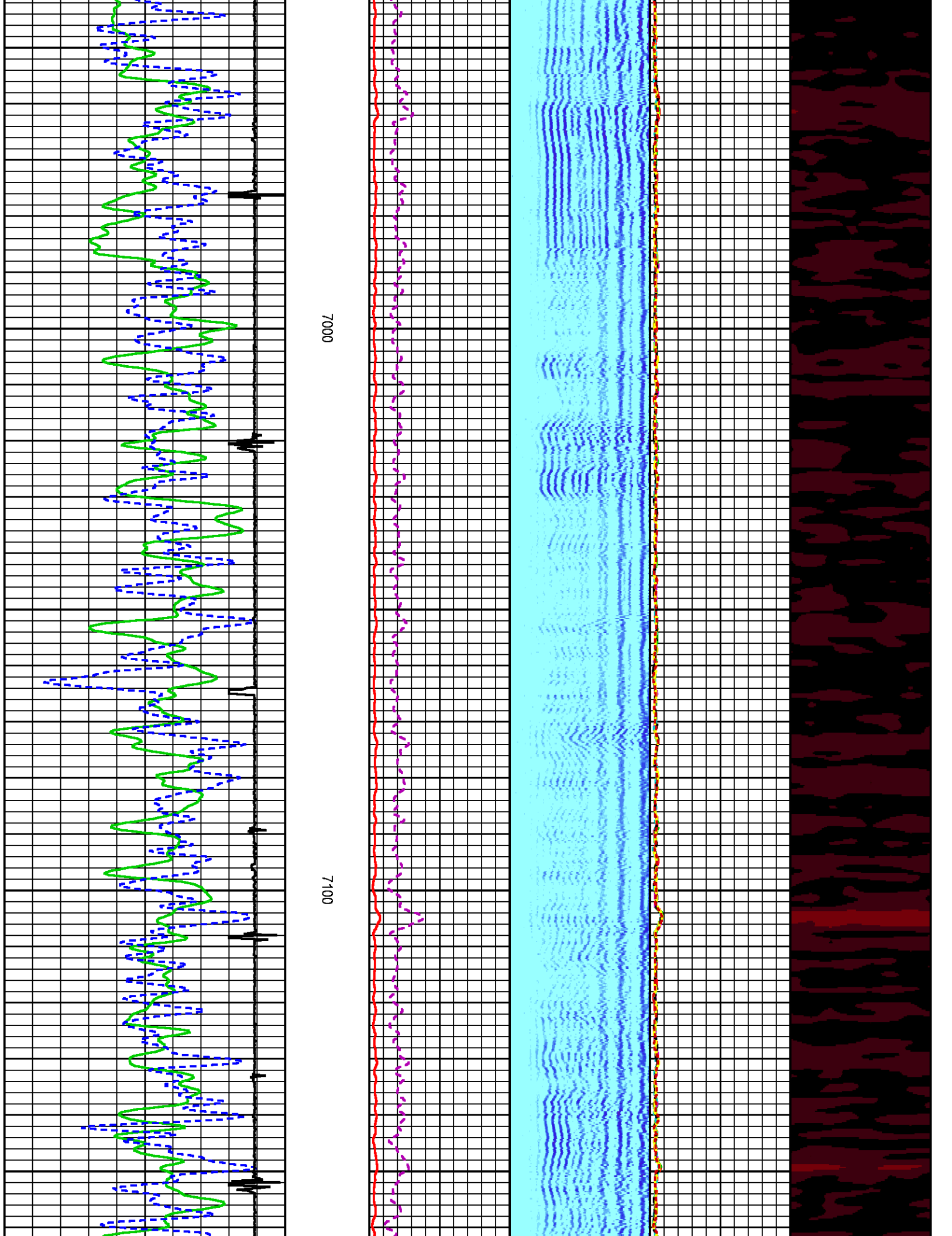




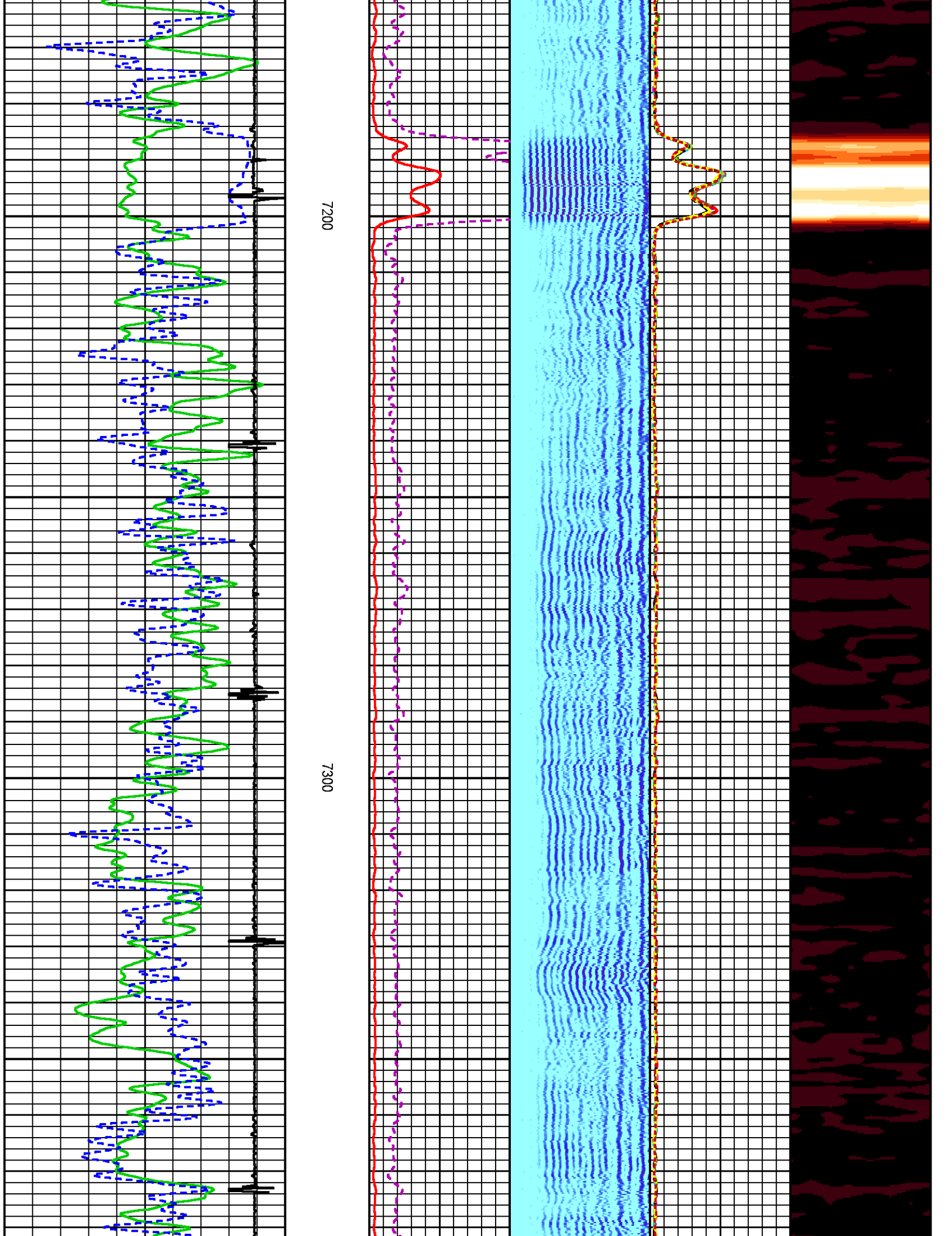


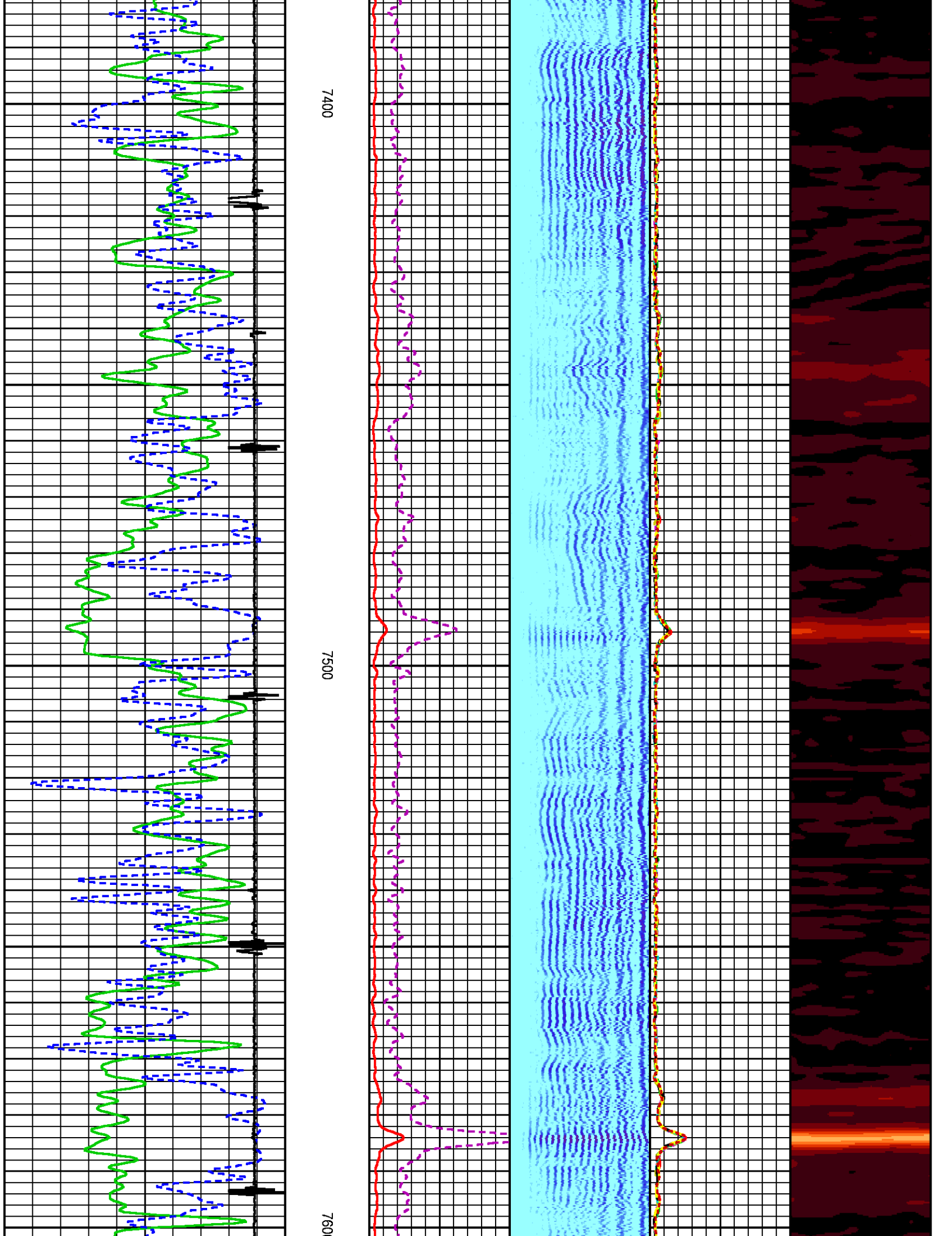


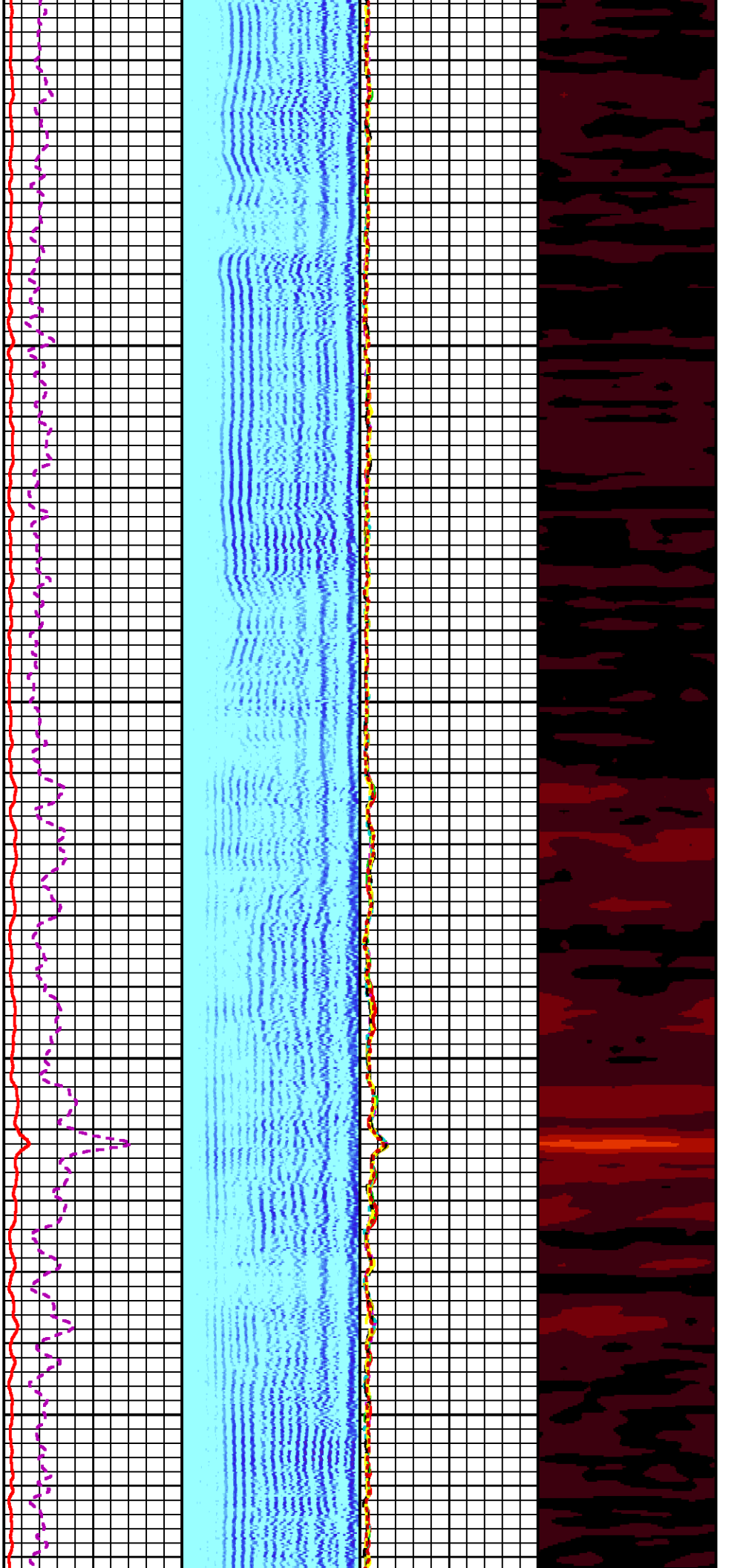




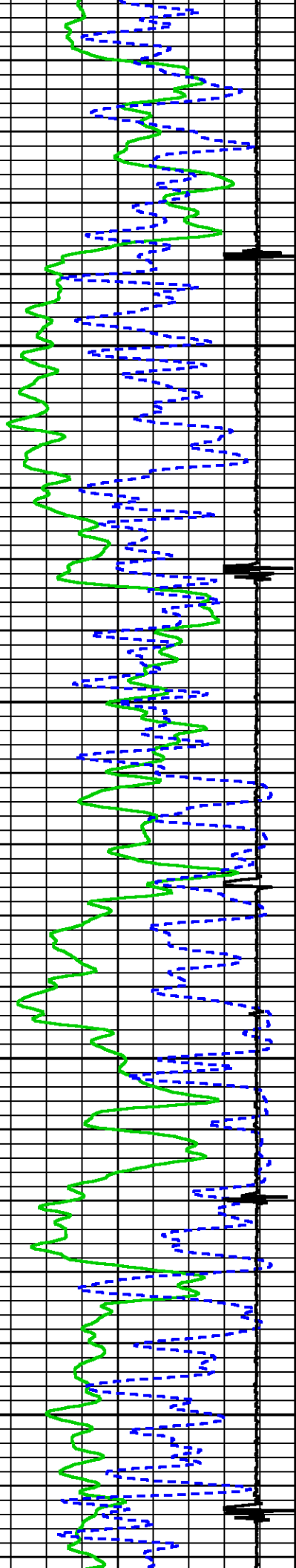


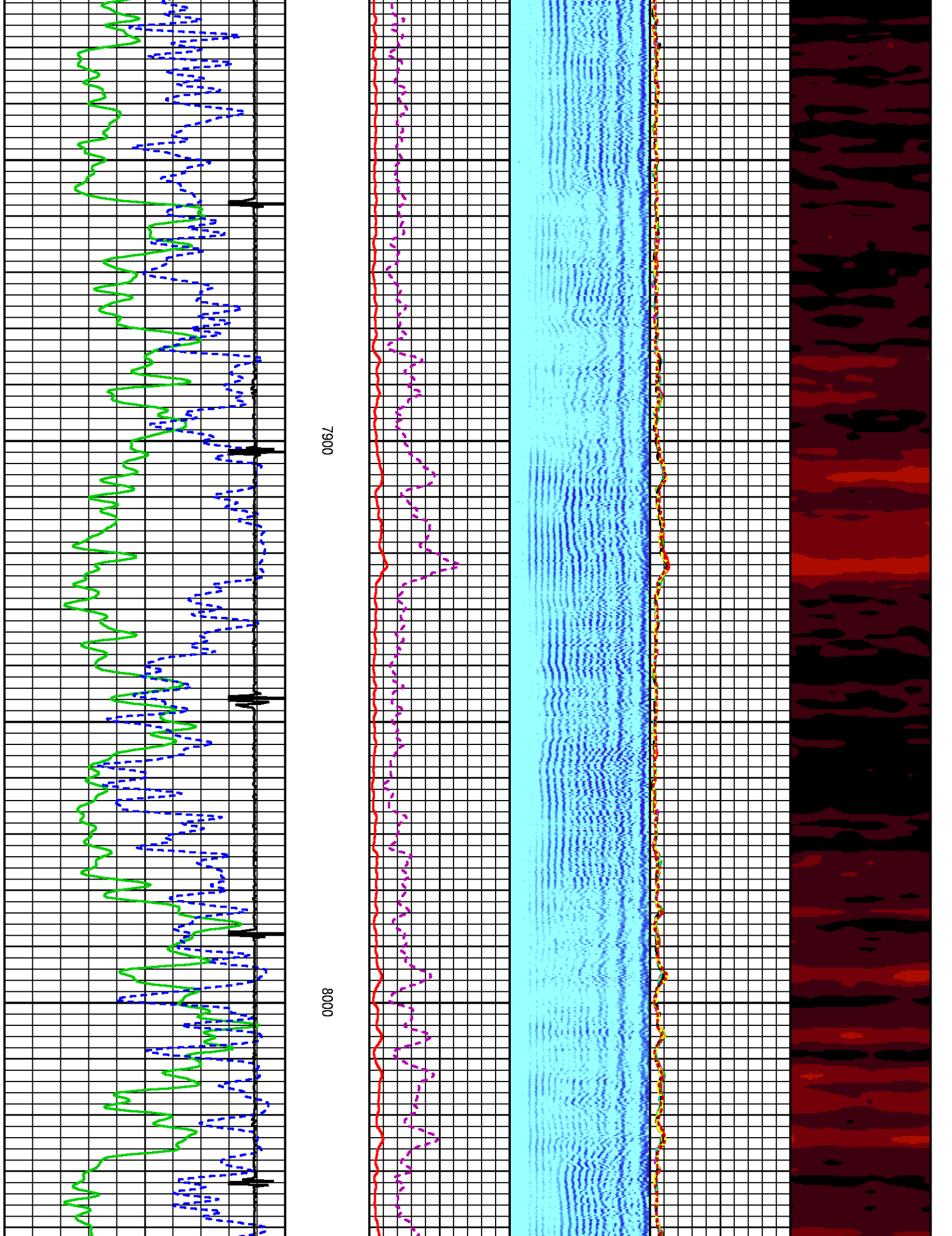




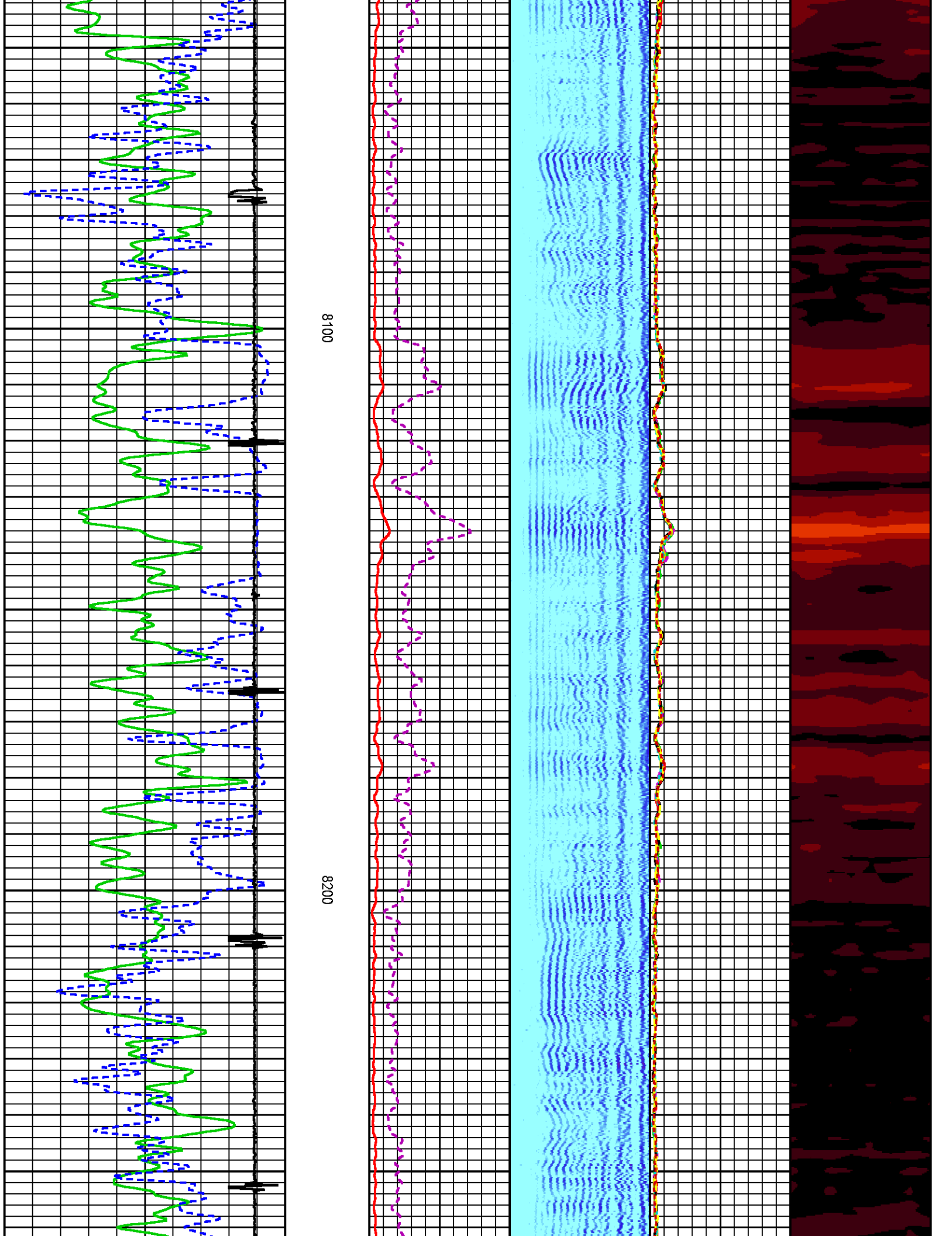


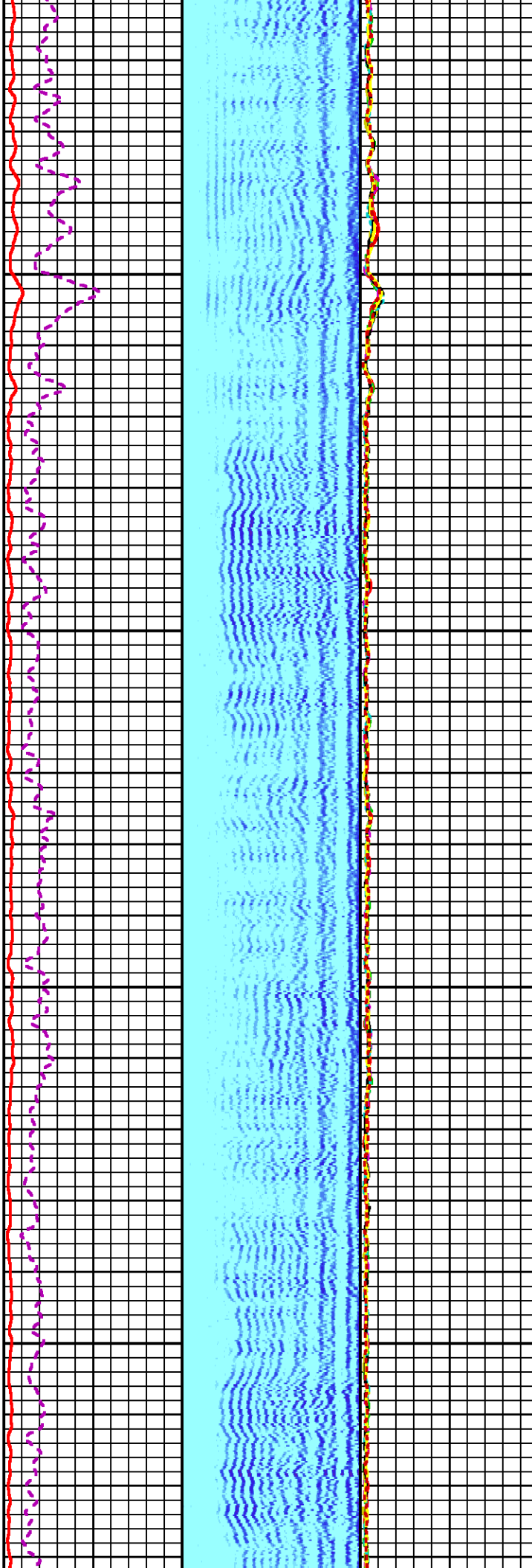
7700 7800





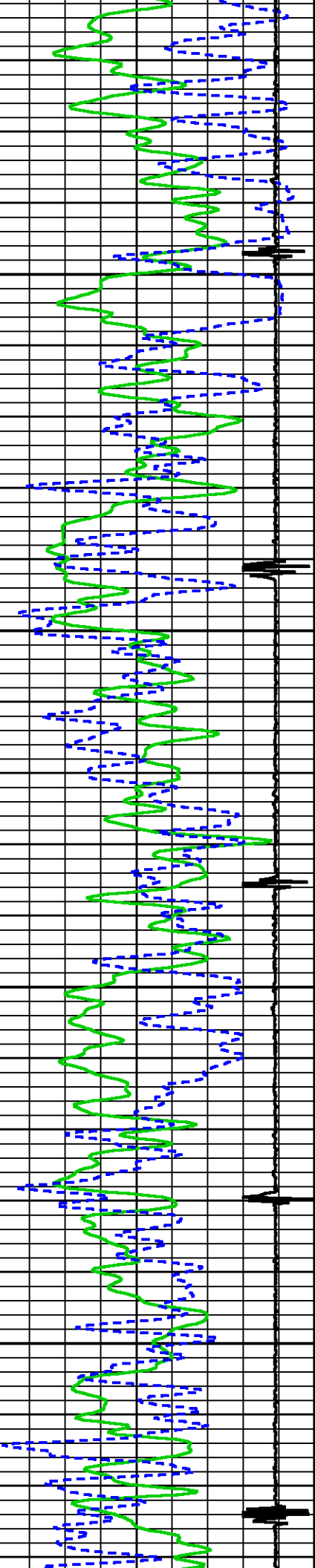


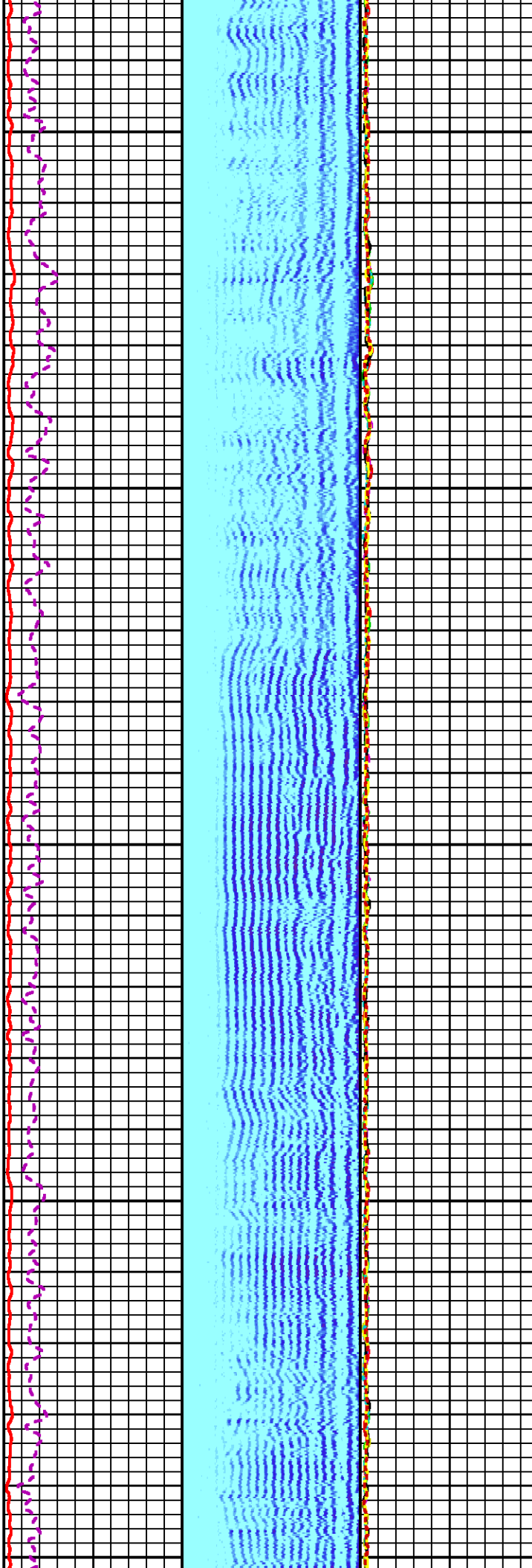
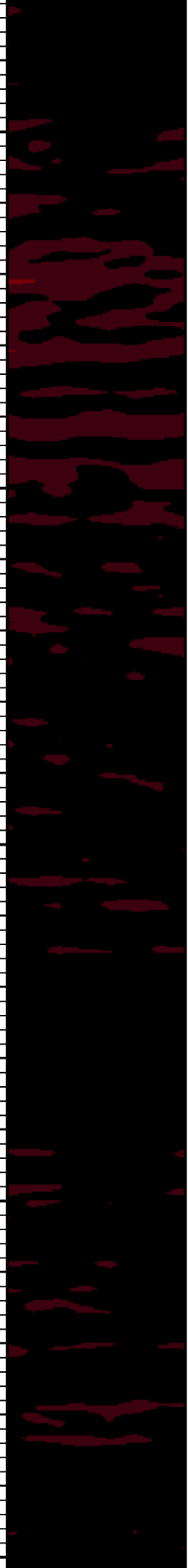




8300

8400

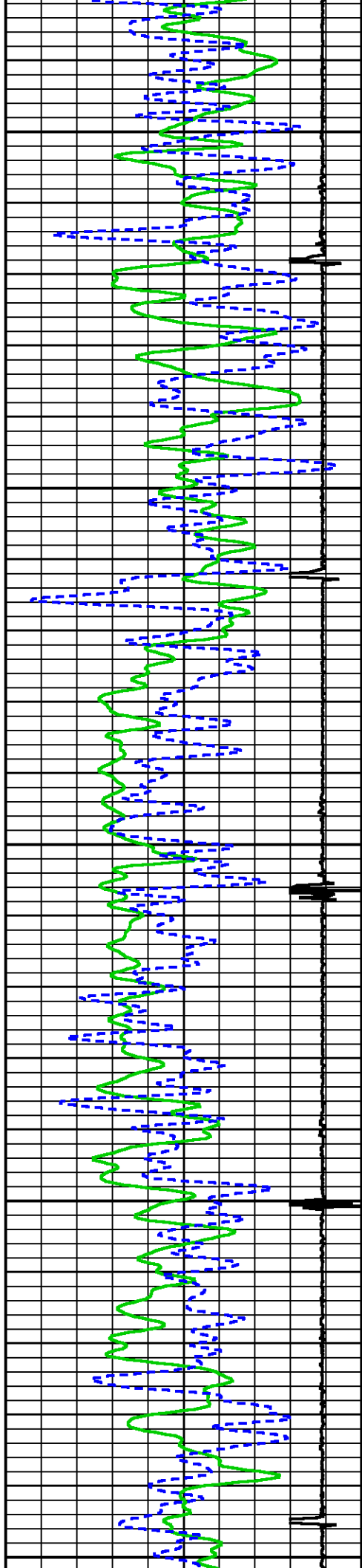


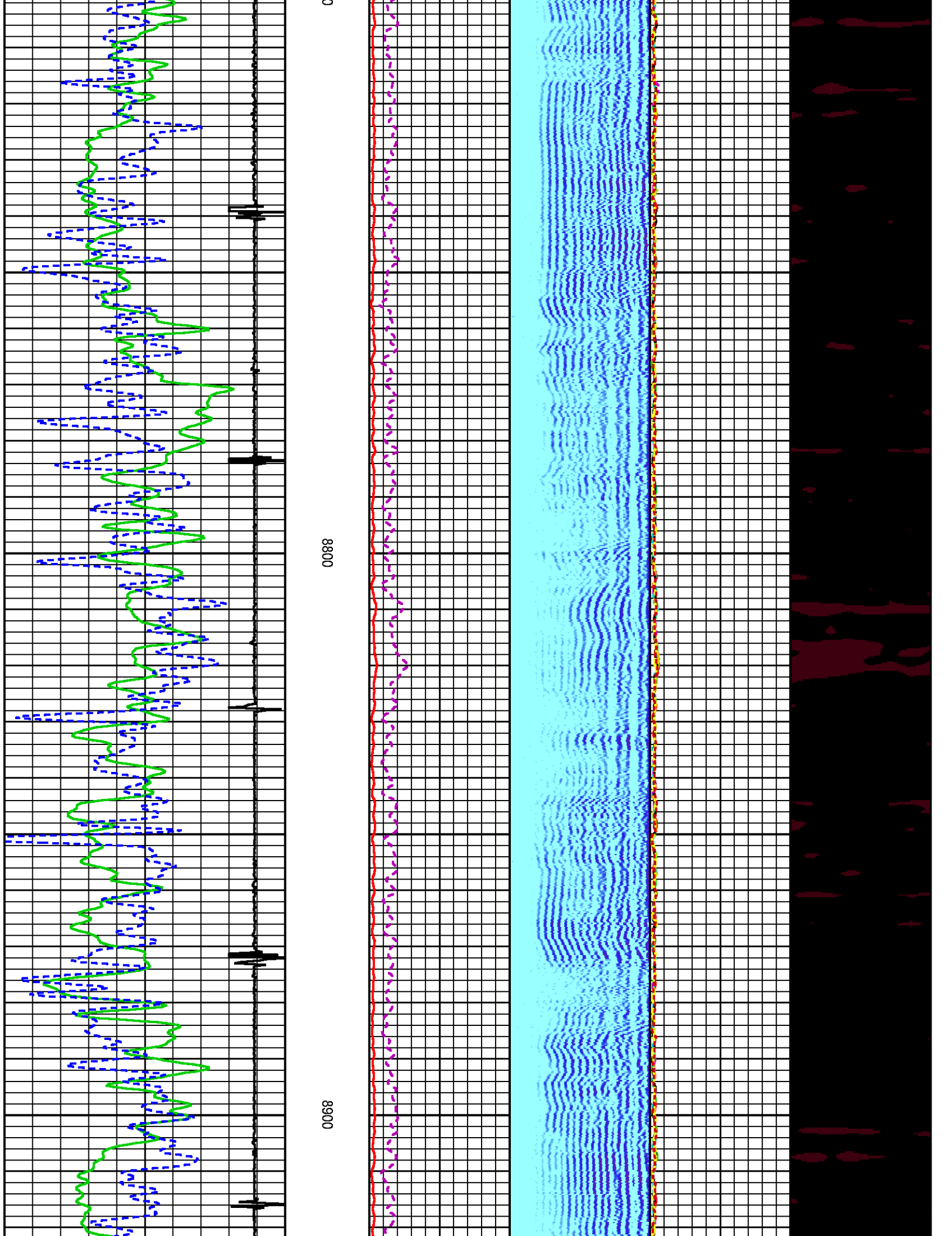


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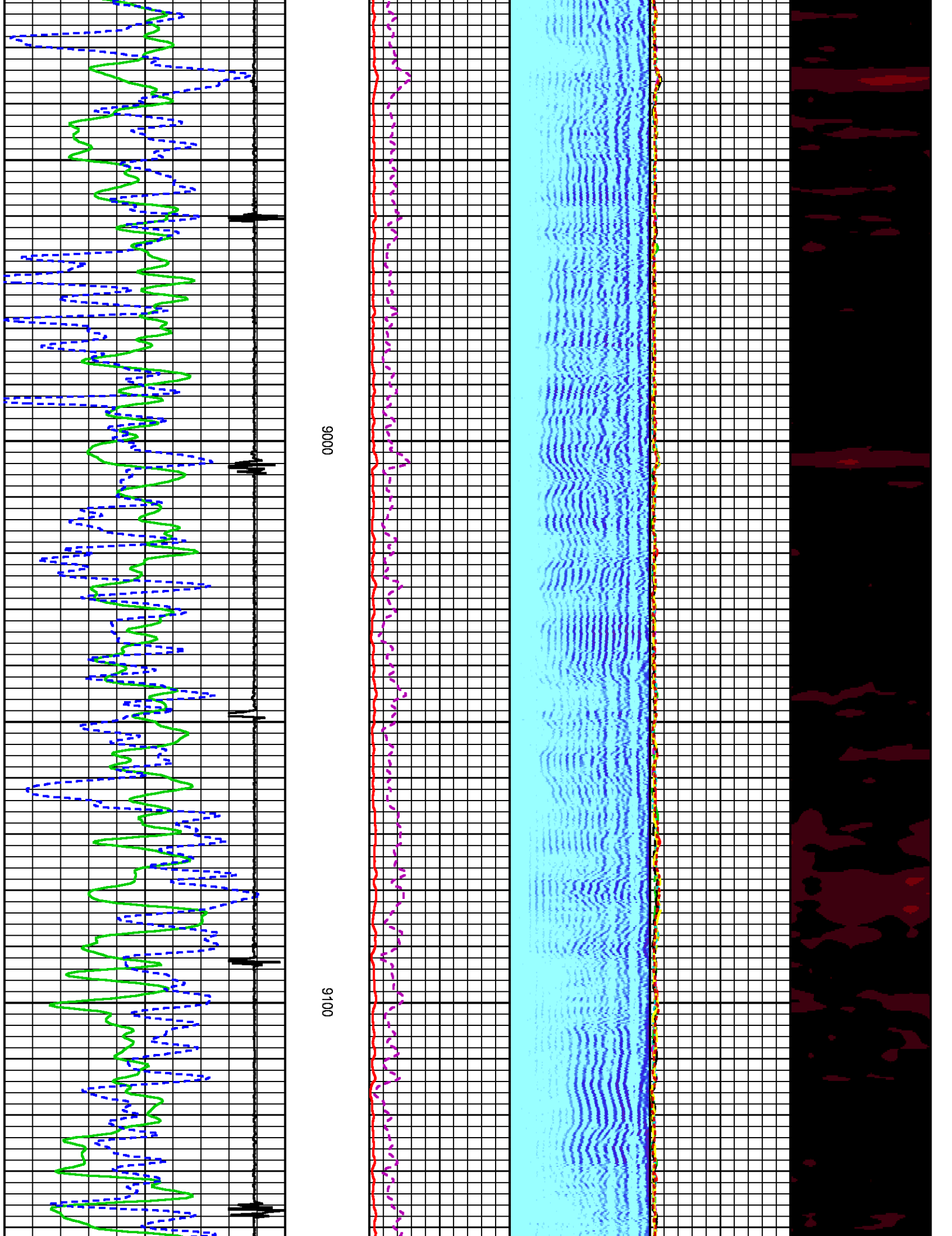
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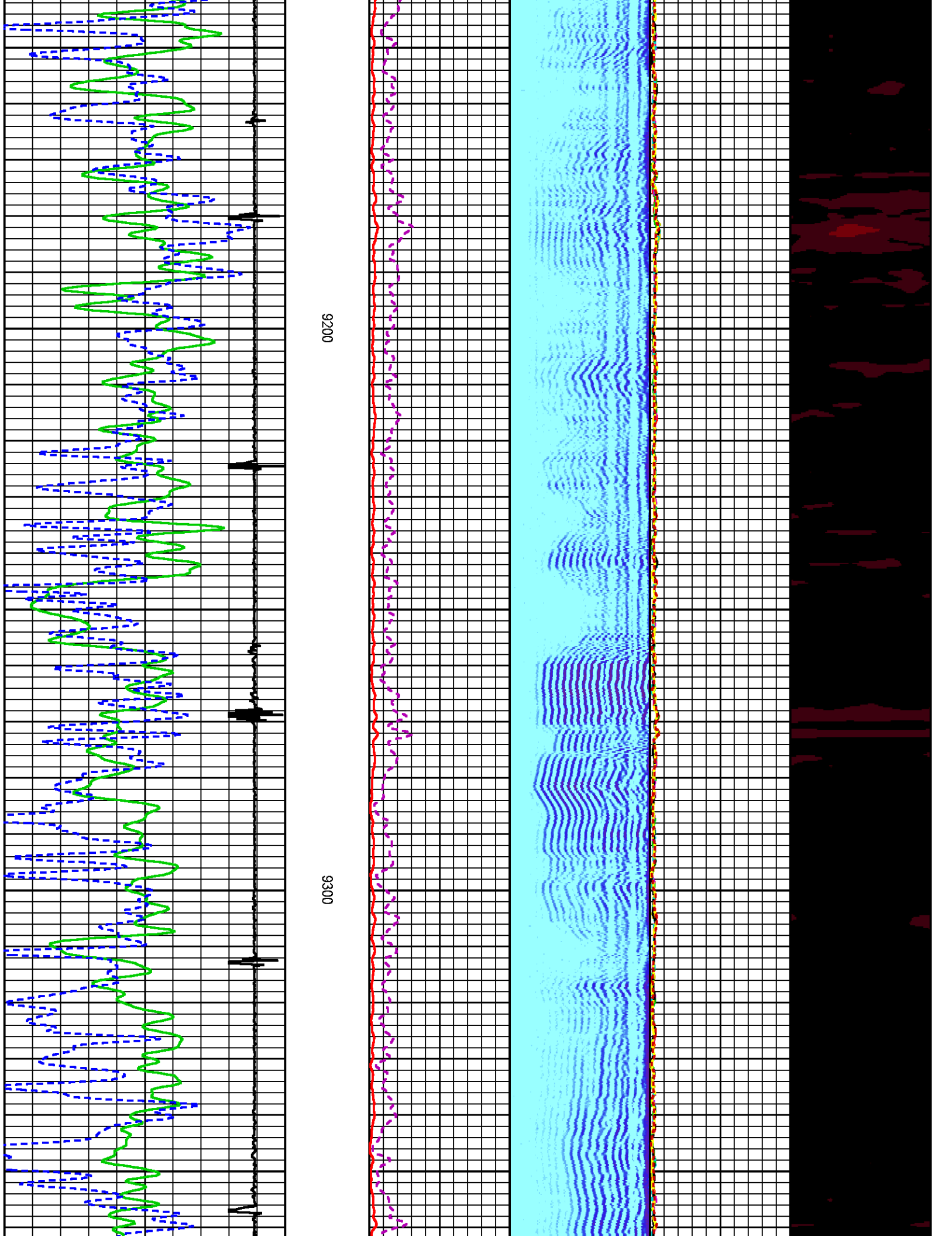
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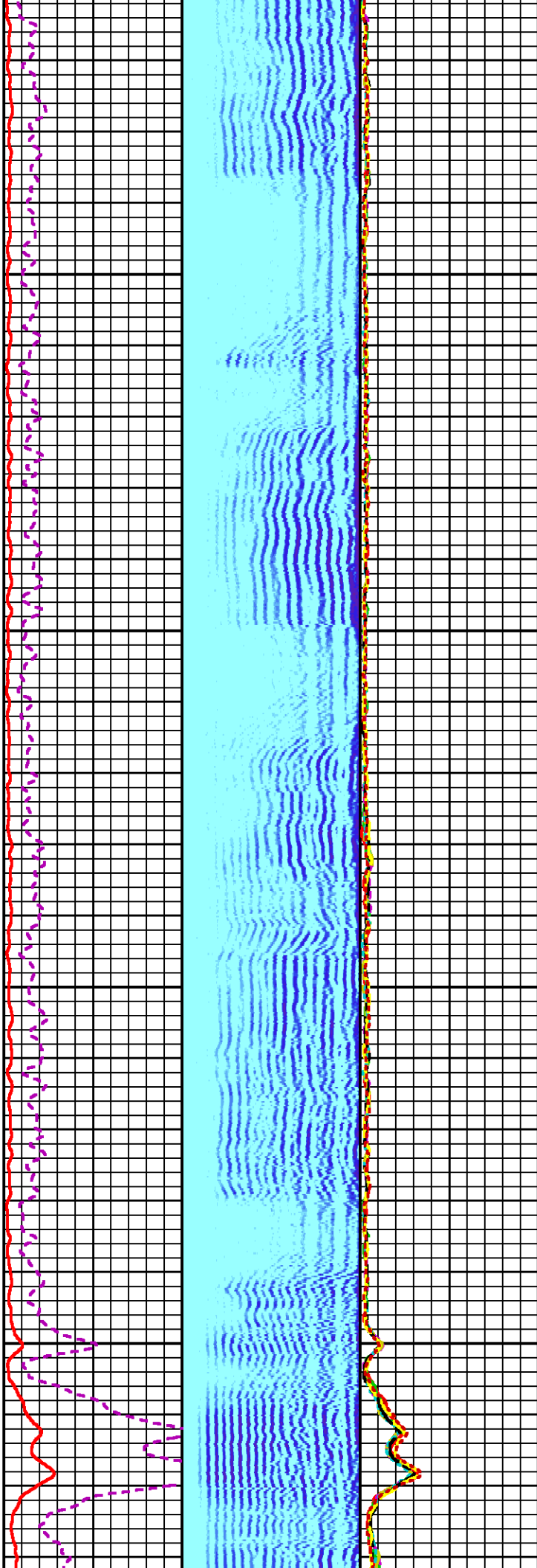






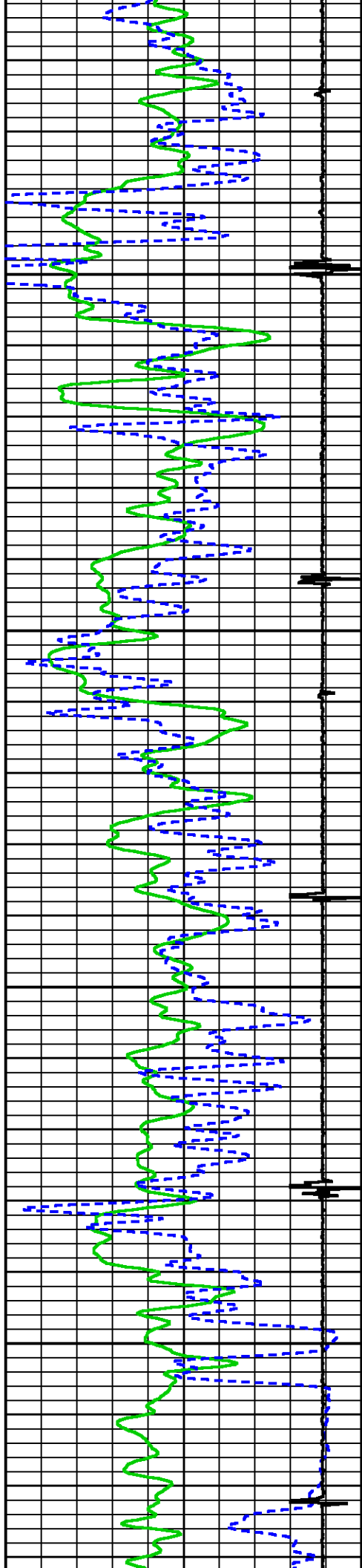


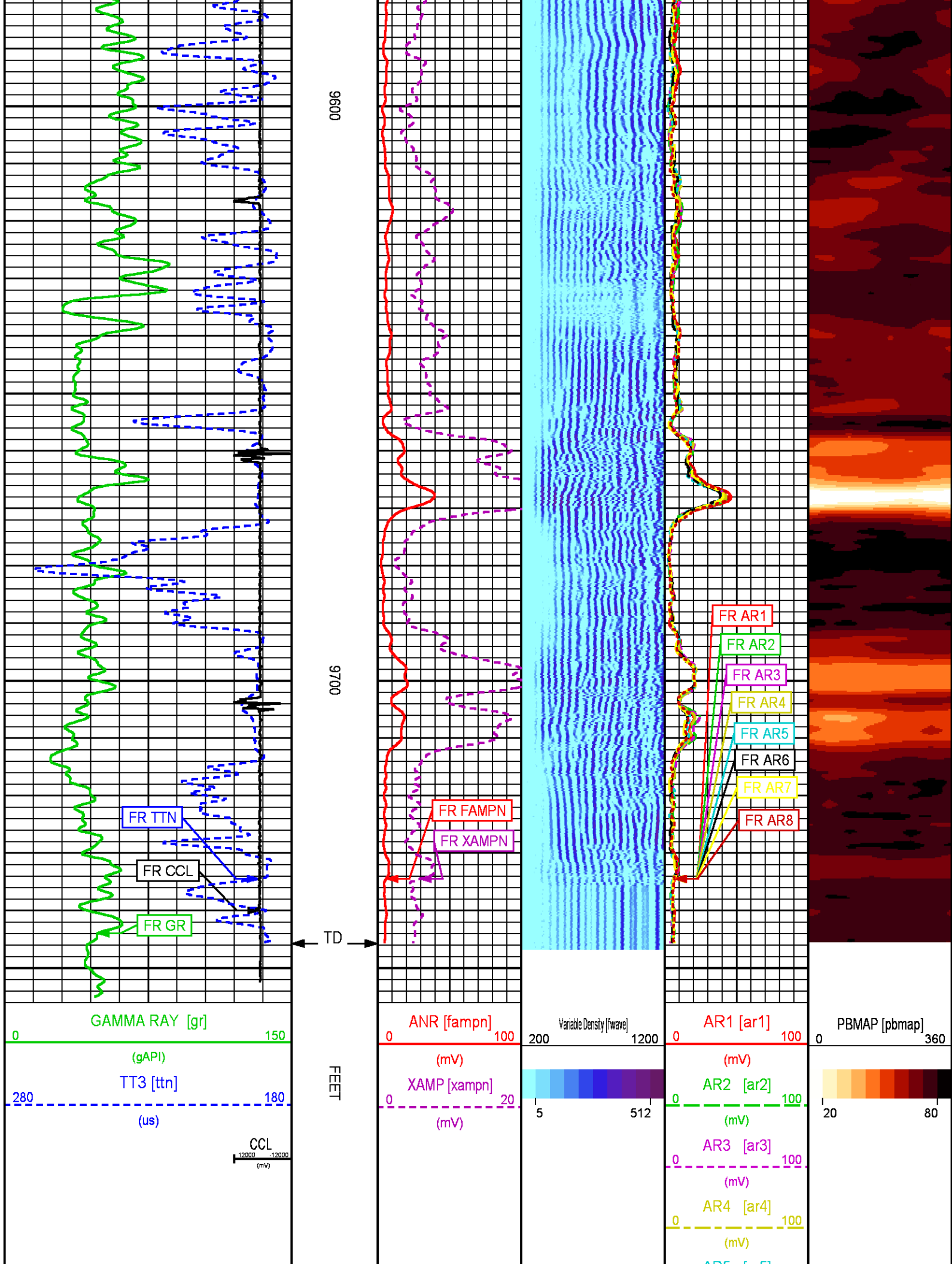




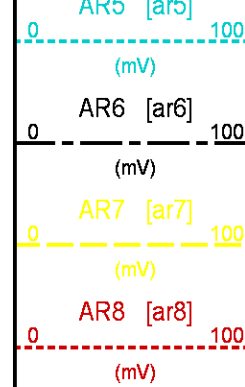
9400

9500









## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/TEP\_YOUBERG\_RU\_311\_77/n012g.tp1

### RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 10154957

DATE/TIME PERFORMED: Fri Oct 21 08:29:41 2016

UNIT #: 3880TA HL6670

|         | NEAR<br>(mV) | RADIAL<br>(mV) | FAR<br>(mV) |
|---------|--------------|----------------|-------------|
| TARGETS | 100.00       | 100.00         | 150.00      |

|                | NEAR | R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | FAR  | CAL  |
|----------------|------|------|------|------|------|------|------|------|------|------|------|
| ZERO (mV)      | 1.79 | 2.74 | 2.51 | 2.46 | 2.48 | 2.40 | 2.33 | 2.51 | 2.32 | 6.13 | 0.14 |
| AMP FLUID (mV) | 85   | 84   | 85   | 86   | 85   | 84   | 83   | 82   | 83   | 114  | 88   |
| TT (us)        | 213  | 212  | 212  | 212  | 212  | 213  | 213  | 212  | 214  | 320  | 213  |
| M FACTOR       | 1.20 | 1.23 | 1.21 | 1.20 | 1.21 | 1.22 | 1.24 | 1.26 | 1.24 | 1.40 | 1.14 |

### RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 10154957

DATE/TIME PERFORMED: Fri Oct 21 08:32:32 2016

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

CABLE #: 6670sm SMALL6670

|         | NEAR<br>(mV) | R1<br>(mV) | R2<br>(mV) | R3<br>(mV) | R4<br>(mV) | R5<br>(mV) | R6<br>(mV) | R7<br>(mV) | R8<br>(mV) | FAR<br>(mV) | CAL<br>(mV) |
|---------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| ZERO    | -0.07        | -0.40      | -0.40      | -0.27      | -0.50      | -0.16      | -0.39      | -0.44      | -0.40      | 0.69        | -0.08       |
| AMP AIR | 1.78         | 1.56       | 1.89       | 1.78       | 2.01       | 2.04       | 1.97       | 1.86       | 1.93       | 1.03        | 100.68      |

| SHOP<br>M FACTOR | SHOP<br>A FACTOR | WIRELINE<br>FACTOR |
|------------------|------------------|--------------------|
| 1.14             | 0.00             | 0.99               |

### GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 110827

DATE/TIME PERFORMED: Mon Oct 17 17:13:52 2016

UNIT #: 3882TD HL6741

CALB JIG #: 4702NK BA-856

BACKGROUND CALBRTR ON CR DIFF MULT BACKGROUND CALBRTR ON CALBRTR

|    | (cts) | (cts)  | (cts/s) |       | (gAPI) | (gAPI) | (gAPI) |
|----|-------|--------|---------|-------|--------|--------|--------|
| GR | 38.04 | 233.16 | 195.1   | 0.513 | 19.50  | 119.50 | 100    |

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 110827

DATE/TIME PERFORMED: Mon Oct 17 17:15:00 2016

UNIT #: 3882TD HL6741

VERI JIG #: 4702NK BA-856

|    | BACKGROUND<br>(cts) | CALBRTR ON<br>(cts) | MULT  | BACKGROUND<br>(gAPI) | CALBRTR ON<br>(gAPI) | DIFF.<br>(gAPI) |
|----|---------------------|---------------------|-------|----------------------|----------------------|-----------------|
| GR | 39.20               | 238.58              | 0.513 | 20.09                | 122.28               | 102.19          |
|    |                     |                     |       |                      |                      | 90.00 110.00    |

## INSTRUMENT CONFIGURATION

Source File: /dat1a/TEP\_YOUBERG\_RU\_421\_7/n012g~tdg

### CABLEHEAD

Diameter : 2.75"  
Length : 2.25'  
Weight : 10 lbs  
Series : CABL234

### RADIAL BOND TOOL

Diameter : 2.75"  
Length : 11.17'  
Weight : 126 lbs  
Series : 1426XA  
Mnemonic : RAL  
Measure Point: 4.21': NEAR RCVR  
Measure Point: 3.25': FAR RCVR

### RAL GR/TEMP/CCL/CHV DETECTOR

Diameter : 2.75"  
Length : 6.96'  
Weight : 85 lbs  
Series : 1355XA  
Mnemonic : RAL  
Measure Point: 5.79': CCL  
Measure Point: 1.67': GR  
Measure Point: 0.17': TEMP



20.38'

NEAR RCVR 11.17'


FAR RCVR 10.21'

CCL 5.79'

GR 1.67'

TEMP 0.17'

TOTAL LENGTH: 20.38'  
TOTAL WEIGHT: 235 lbs  
MAX DIAMETER: 0'4.00"

|  |         |                        |                |                |
|--|---------|------------------------|----------------|----------------|
|  | COMPANY | TEP ROCKY MOUNTAIN LLC |                | FILE NO:       |
|  | WELL    | YOUBERG RU 311-7       |                |                |
|  | FIELD   | RULISON                |                | API NO:        |
|  | COUNTY  | GARFIELD               | STATE COLORADO | 05045232350000 |
| LOCATION:  |         | ELEVATIONS:            |                |                |
| SHL: 1990' FNL & 1901' FWL   |         | KB 7363 FT             |                |                |
| BHL: 268' FNL & 902' FWL   |         | DF                     |                |                |
| SEC 7 TWP 7S RGE 93W   |         | GL 7339 FT             |                |                |
|  |         | DATE                   |                | 21-OCT-2016    |