



RADIAL CEMENT BOND LOG

| | |
|---------------------------|--------------------------------|
| FILE NO: CH140252J | COMPANY LARAMIE ENERGY LLC |
| API NO: 05045238070000 | WELL CC FEDERAL 0697-03-08E |
| | FIELD GRAND VALLEY |
| | COUNTY GARFIELD |
| | STATE COLORADO |

| | | |
|-----------|---|-----------------------|
| Ver. 4.11 | LOCATION: SHL: 1776.0' FWL & 1224.0' FEL SHL: 1776.0' FWL & 1224.0' FEL SEC 3 TWP 6S RGE 9TW | OTHER SERVICES RPM |
|-----------|---|-----------------------|

| | | | | |
|-------------------|----|-----------|------------|-------------|
| PERMANENT DATUM | GL | ELEVATION | 8428 FT | ELEVATIONS: |
| LOG MEASURED FROM | KB | 30 FT | ABOVE P.D. | KB 8458 FT |
| DRILL MEAS. FROM | KB | | | DF |
| | | | | GL 8428 FT |

| | | |
|------------------------|-------------|------------|
| DATE | 01-Sep-2018 | |
| RUN | 1 | 1 |
| SERVICE ORDER | US140252J | |
| DEPTH DRILLER | 9716 FT | |
| DEPTH LOGGER | 9664 FT | |
| BOTTOM LOGGED INTERVAL | 9664 FT | |
| TOP LOGGED INTERVAL | 30 FT | |
| TIME STARTED | 15:30 | |
| TIME FINISHED | 18:00 | |
| OPERATOR RIG TIME | 2.5 HOURS | |
| TYPE OF FLUID IN HOLE | WATER | |
| FLUID DENSITY | NA | |
| FLUID SALINITY | NA | |
| FLUID LEVEL | 62 FT | |
| LOGGED CEMENT TOP | 2276 FT | |
| WELLHEAD PRESSURE | 0 PSI | |
| MAXIMUM HOLE DEVIATION | NA | |
| NOMINAL LOGGING SPEED | 100 FPM | |
| MAX. RECORDED TEMP. | 258 DEGF | |
| REFERENCE LOG | NA | |
| REFERENCE LOG DATE | NA | |
| EQUIP. NO. | ML-4291 | GRAND JCT. |
| LOCATION | M. BAUKA | |
| RECORDED BY | NA | |
| WITNESSED BY | NA | |

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.

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELLBORE*

OPERATION 1: RAL/GR/CCL RUN CENTRALIZED

OPERATION 2: RPM/GR/CCL RUN IN PNC-3D MODE

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 7566' - 7586'

SJ: 9098' - 9118'

EQUIPMENT DATA

| RUN | TRIP | TOOL | SERIES NO. | SERIAL NO. | POSITION |
|-----|------|--------|------------|------------|-------------|
| 1 | 1 | RAL | 1426XA | 11871500 | CENTRALIZED |
| 1 | 1 | GR/CCL | 1355XA | 12670180 | CENTRALIZED |

MAIN PASS 0 PSI

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Updates: 1

Plotted: Sat Sep 1 18:05:06 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p012g02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 17.000 ft BOTTOM DEPTH: 9687.890 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 | 0.00 | | TOP | BOTTOM |

ANALOG RAL PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) | |
|---------------------------|----------------------------|---------|-------|---------------|--------|
| AMPLITUDE WINDOW (NEAR) | AMP WINDOW START (fgp1*) | 187 | us | TOP | BOTTOM |
| | AMP WINDOW START (fgp2*) | 187 | us | " | " |
| | AMP WINDOW START (fgp3*) | 187 | us | " | " |
| | AMP WINDOW START (fgp4*) | 187 | us | " | " |
| | AMP WINDOW START (fgp5*) | 187 | us | " | " |
| | AMP WINDOW START (fgp6*) | 187 | us | " | " |
| | AMP WINDOW START (fgp7*) | 187 | us | " | " |
| | AMP WINDOW START (fgp8*) | 187 | us | " | " |
| | AMP WINDOW START (fgpn*) | 187 | 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 | 200.465 | us | " | " |
| RAL TOOL DELAY | TOOL DELAY (str1*) | -67 | us | " | " |
| | TOOL DELAY (str2*) | -67 | us | " | " |
| | TOOL DELAY (str3*) | -67 | us | " | " |
| | TOOL DELAY (str4*) | -67 | us | " | " |
| | TOOL DELAY (str5*) | -67 | us | " | " |
| | TOOL DELAY (str6*) | -67 | us | " | " |
| | TOOL DELAY (str7*) | -67 | us | " | " |
| | TOOL DELAY (str8*) | -67 | us | " | " |
| | TOOL DELAY (strn*) | -67 | 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 | " | " |

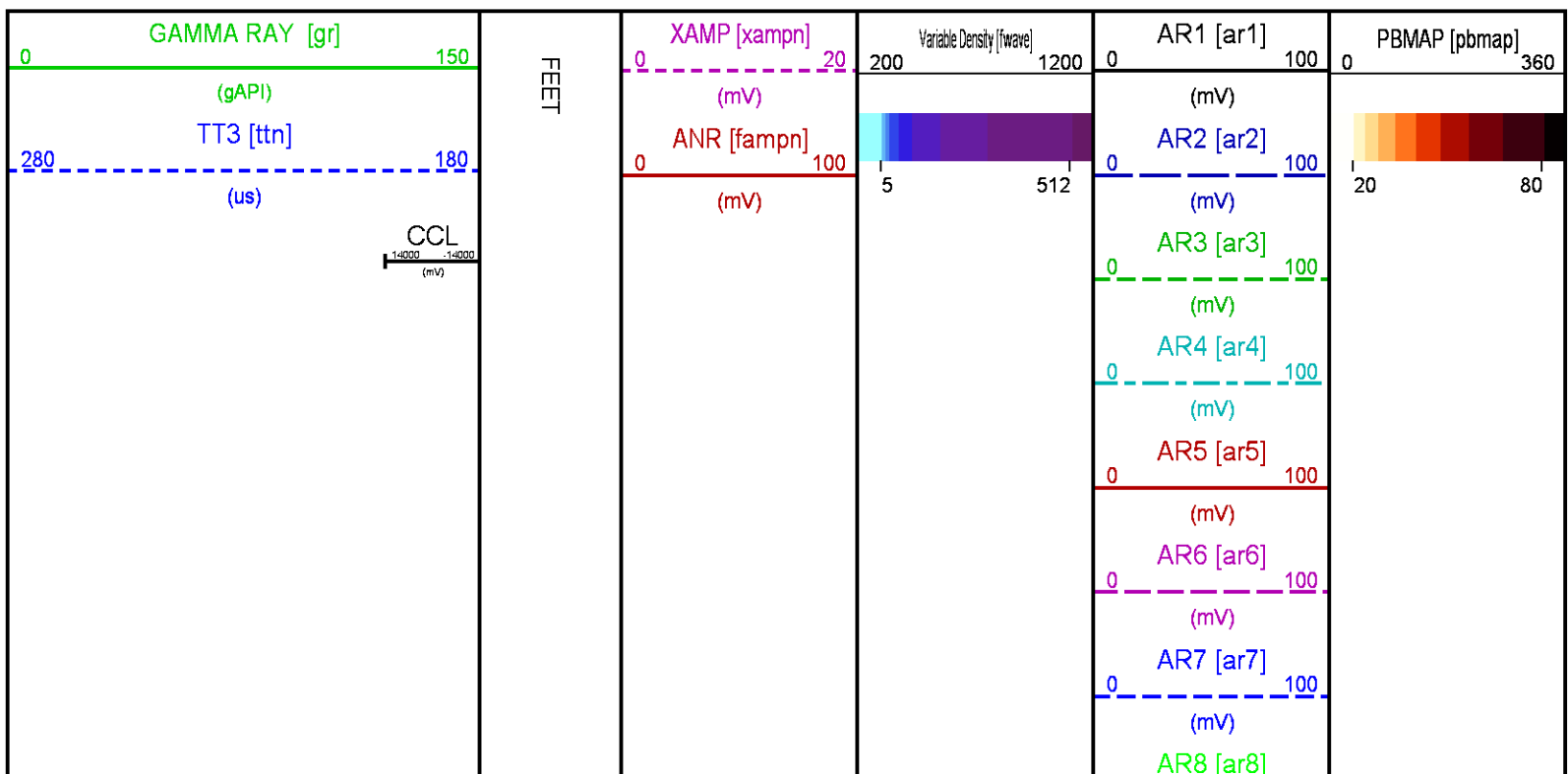
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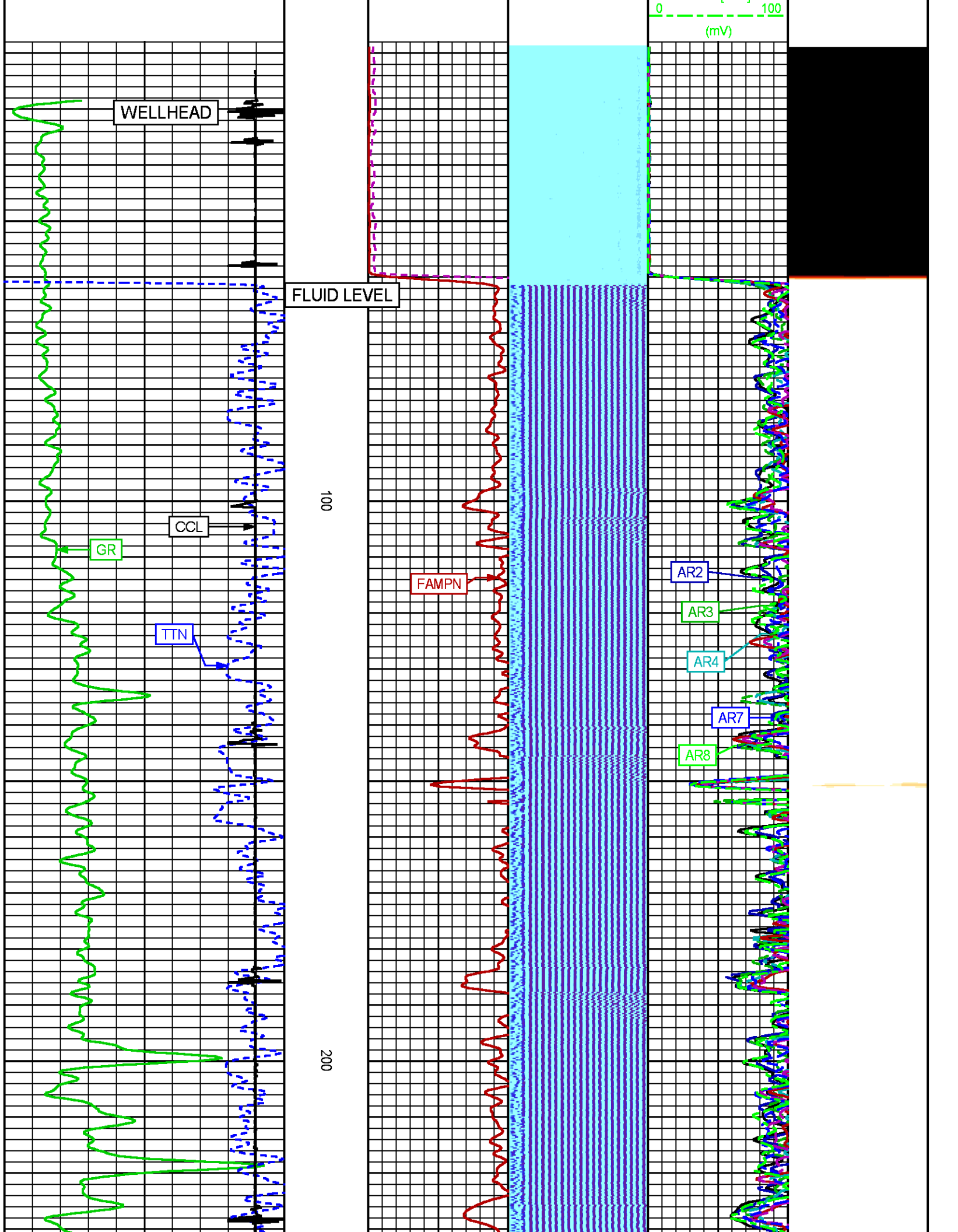
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|---------------------|---|
| F1:AR1 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R1 |
| F1:AR2 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R2 |
| F1:AR3 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R3 |
| F1:AR4 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R4 |
| F1:AR5 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R5 |
| F1:AR6 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R6 |
| F1:AR7 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R7 |
| F1:AR8 | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE T-R8 |
| F1:CCL | Sep 1 16:05:50 2018 | CASING COLLAR LOCATOR |
| F1:FAMPN | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE NEAR RECEIVER |
| F1:FWAVE | Sep 1 16:05:50 2018 | FAR WAVE FORM |
| F1:GR | Sep 1 16:05:50 2018 | GAMMA RAY |
| F1:PBMAP | Sep 1 16:05:50 2018 | PERCENT BOND CEMENT MAP |
| F1:TTN | Sep 1 16:05:50 2018 | TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER |
| F1:XAMPN | Sep 1 16:05:50 2018 | FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE |

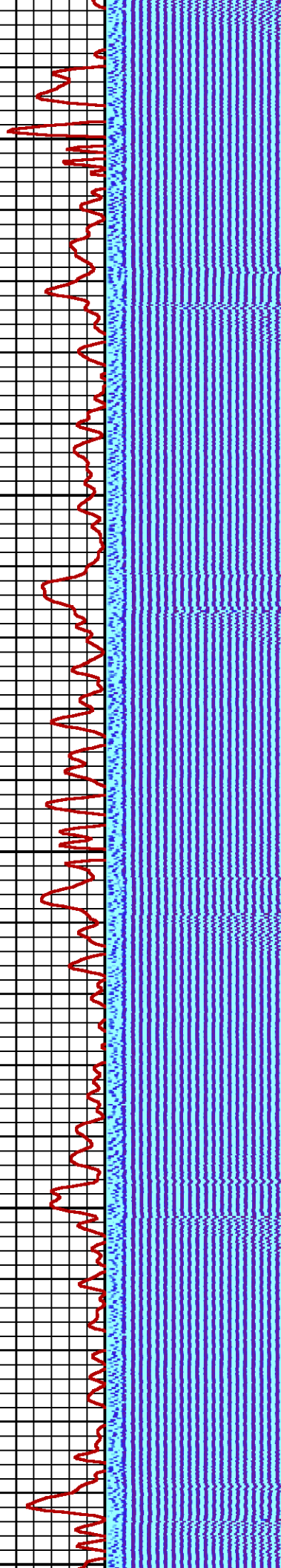
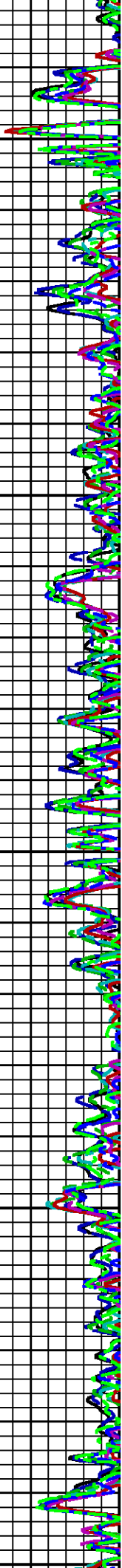
CURVE MEASURE POINT OFFSET

| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| AR1 | -11.25 | AR5 | -11.25 | CCL | -5.75 | XAMPN | -11.25 |
| 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 | | |

| | |
|----------------------|--|
| Presentation | : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/CC_FEDERAL_0697-03-08E_RAL_MAIN.fvpdf [5"/100' Scale] |
| Plot Interval | : 18.75 - 9695.75 Feet |
| | |
| Data File 1 | : F1 : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/45_LARAMIE_CC_FEDERAL_0697-03-08E_RAL_MAIN.xtf |
| Created On | : Sep 1 16:05:50 2018 |
| Company | : LARAMIE ENERGY LLC |
| Well | : CC_FEDERAL_0697-03-08E |
| Field | : GRAND VALLEY |
| File Interval | : 17 - 9697 Feet |
| OCT | : p012g |

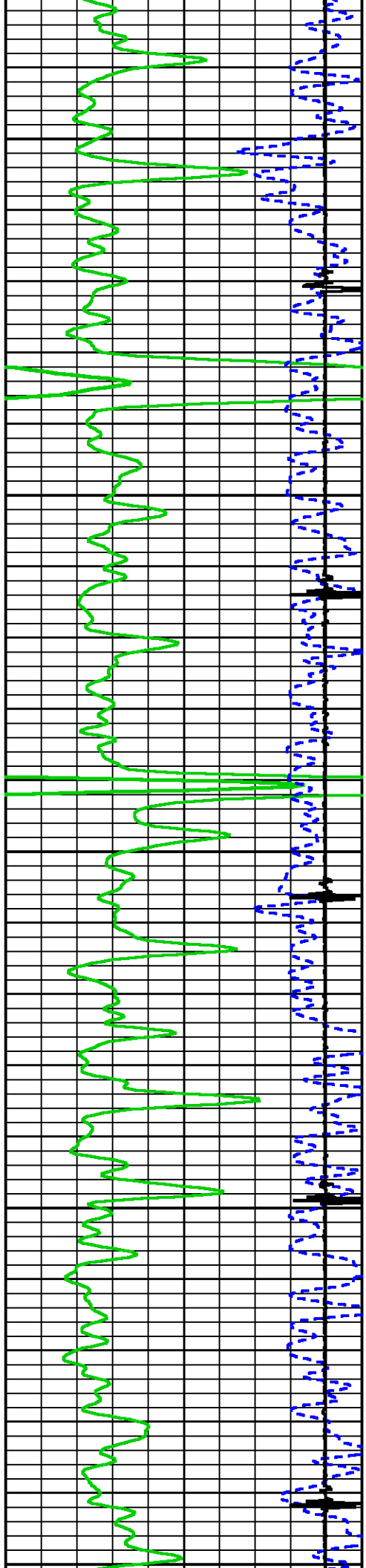


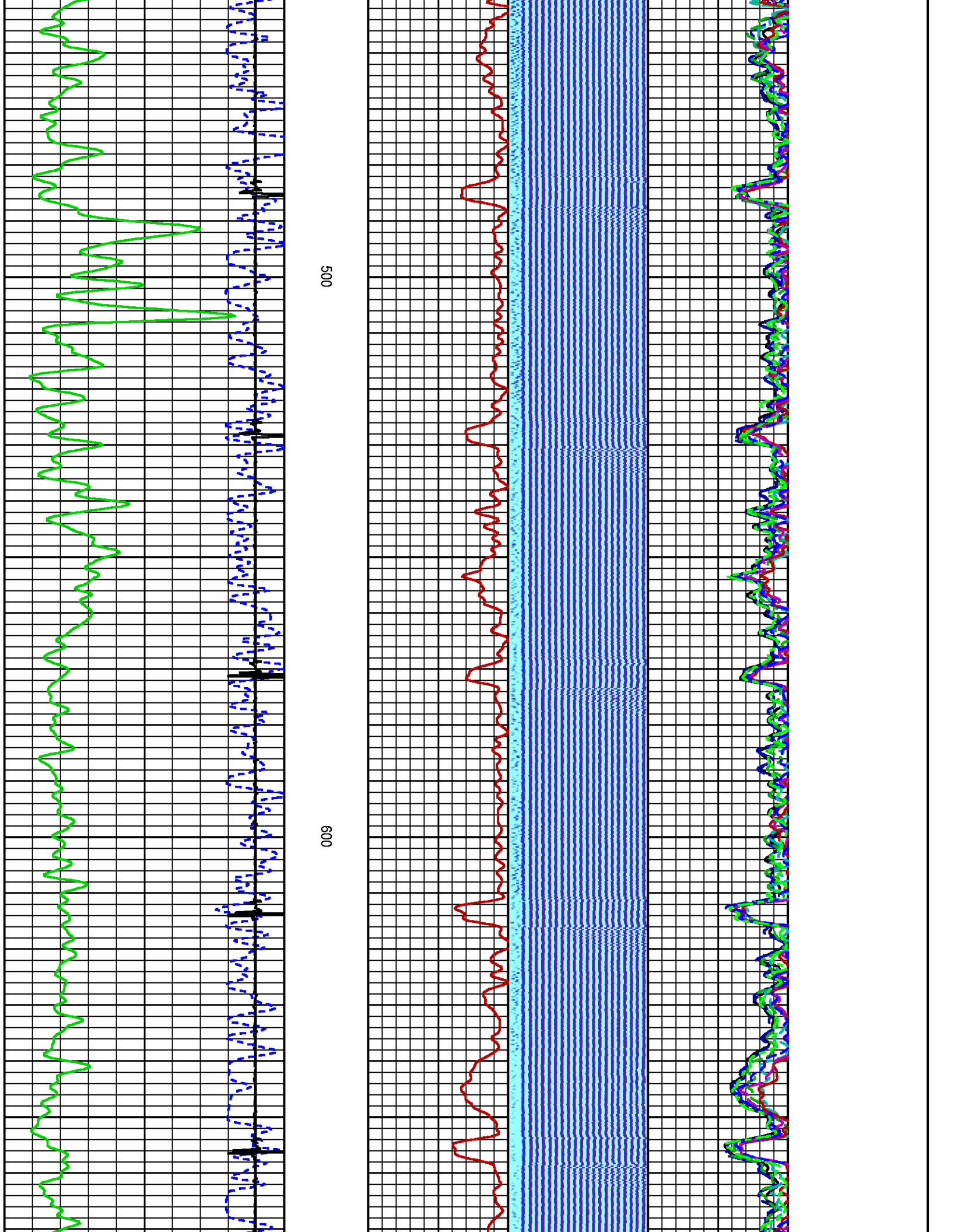


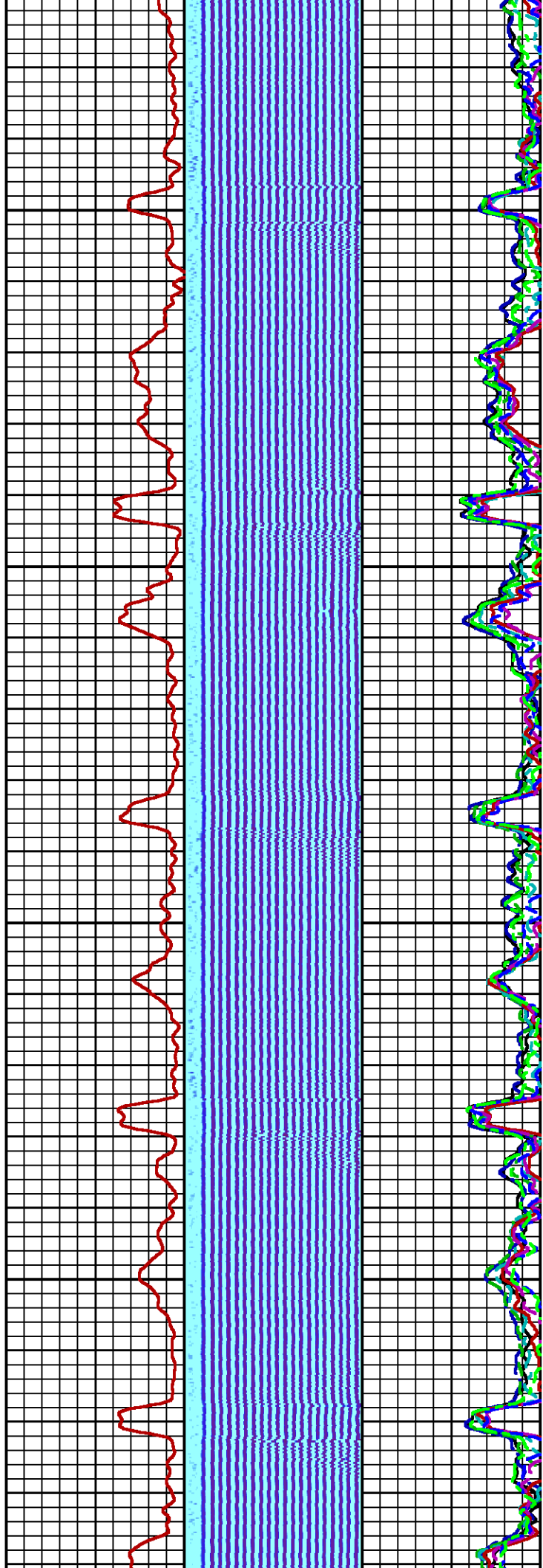


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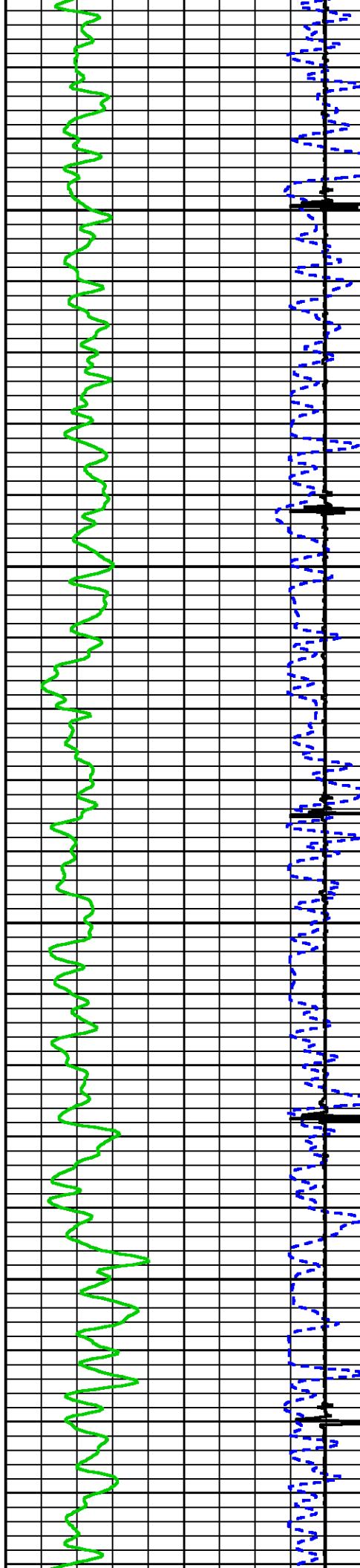


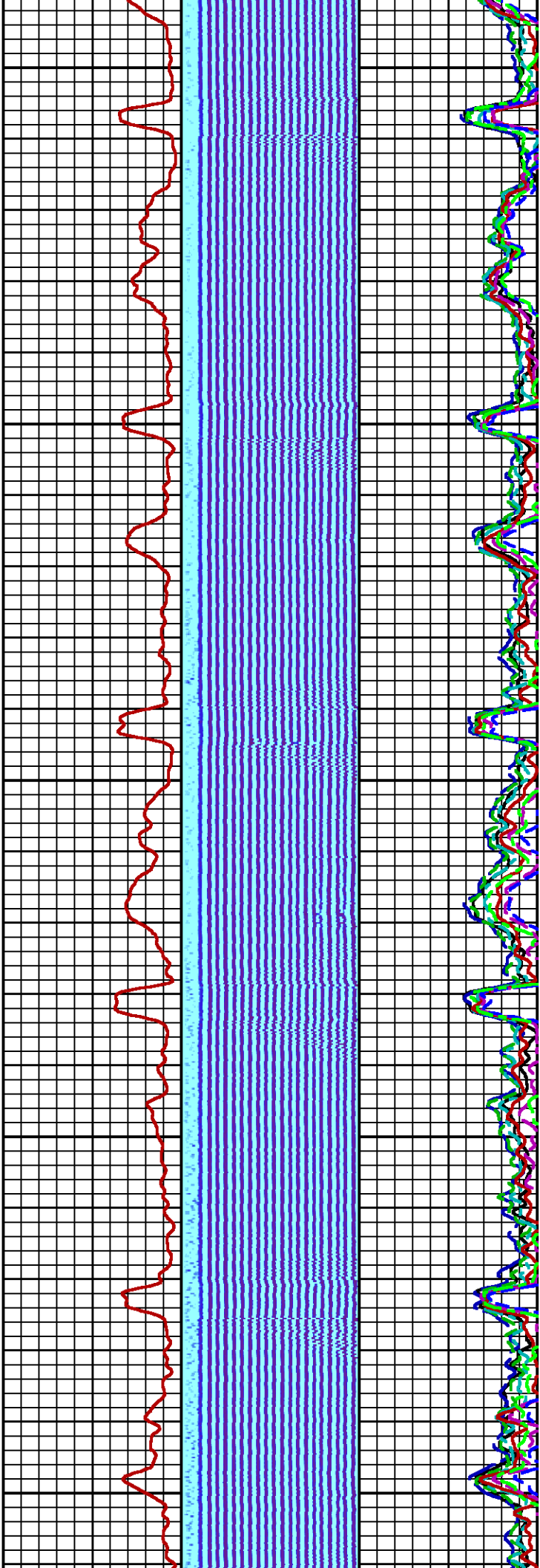




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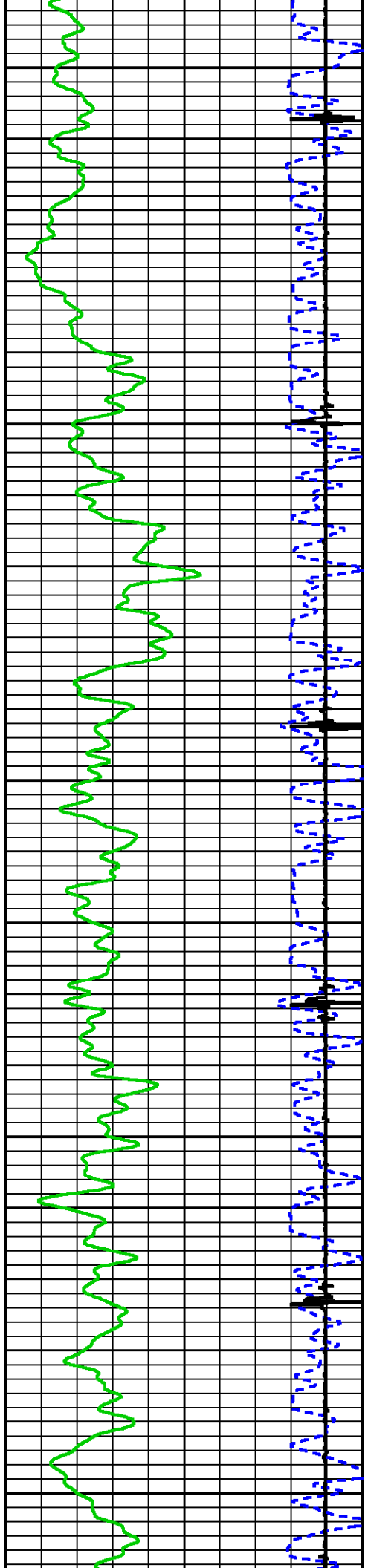


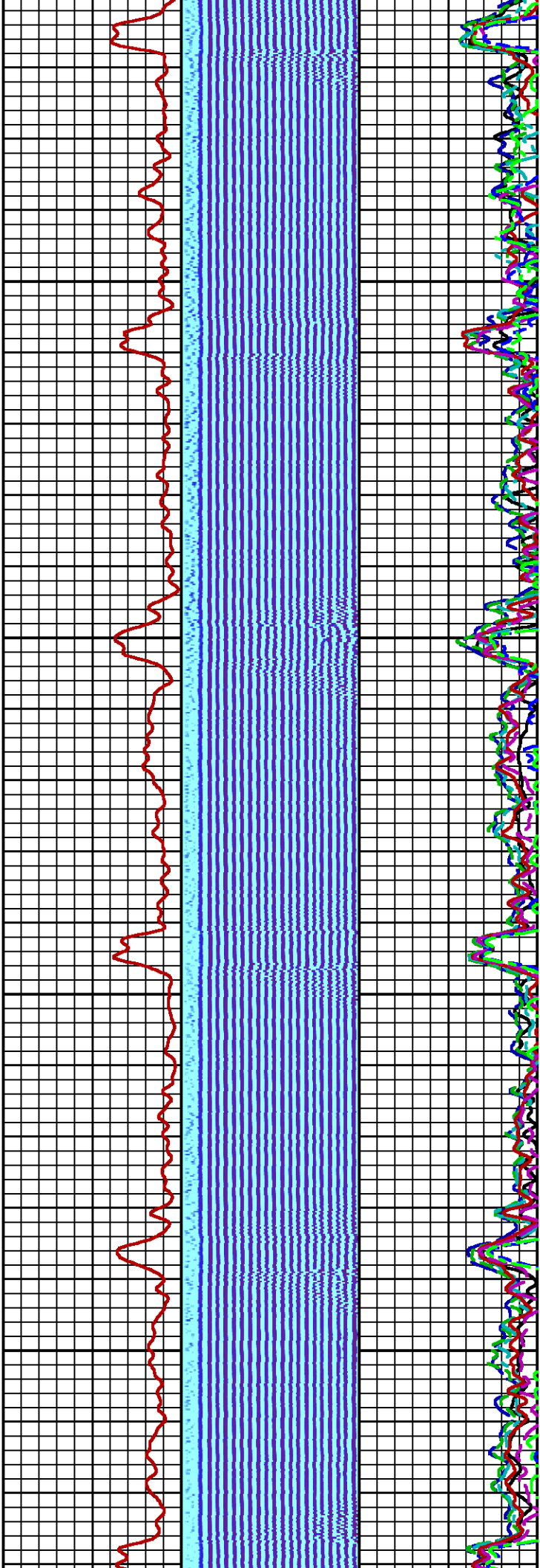


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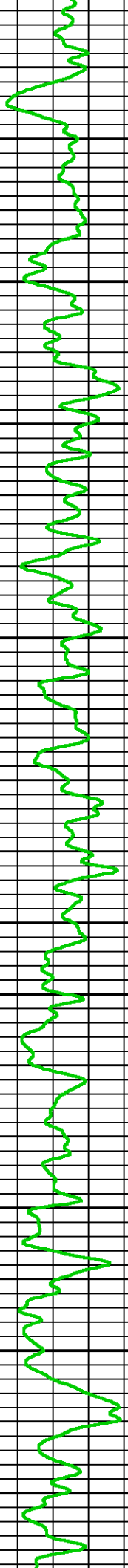
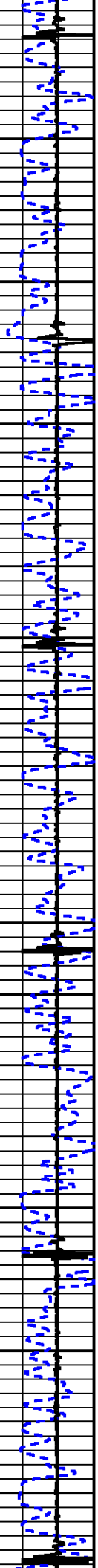
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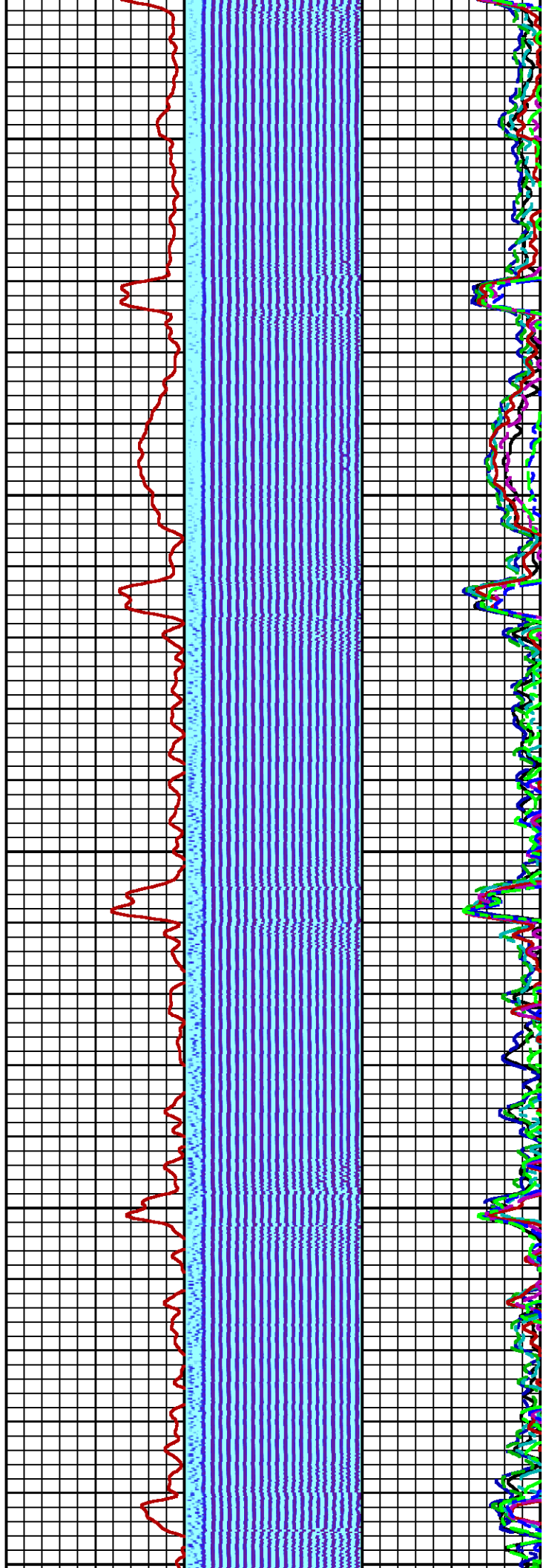




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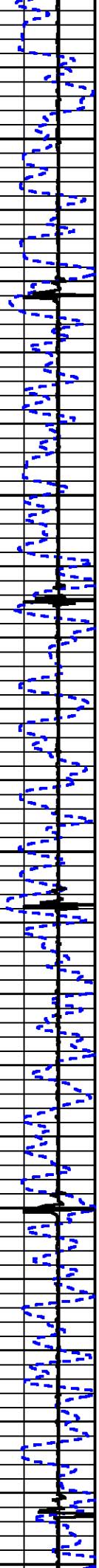
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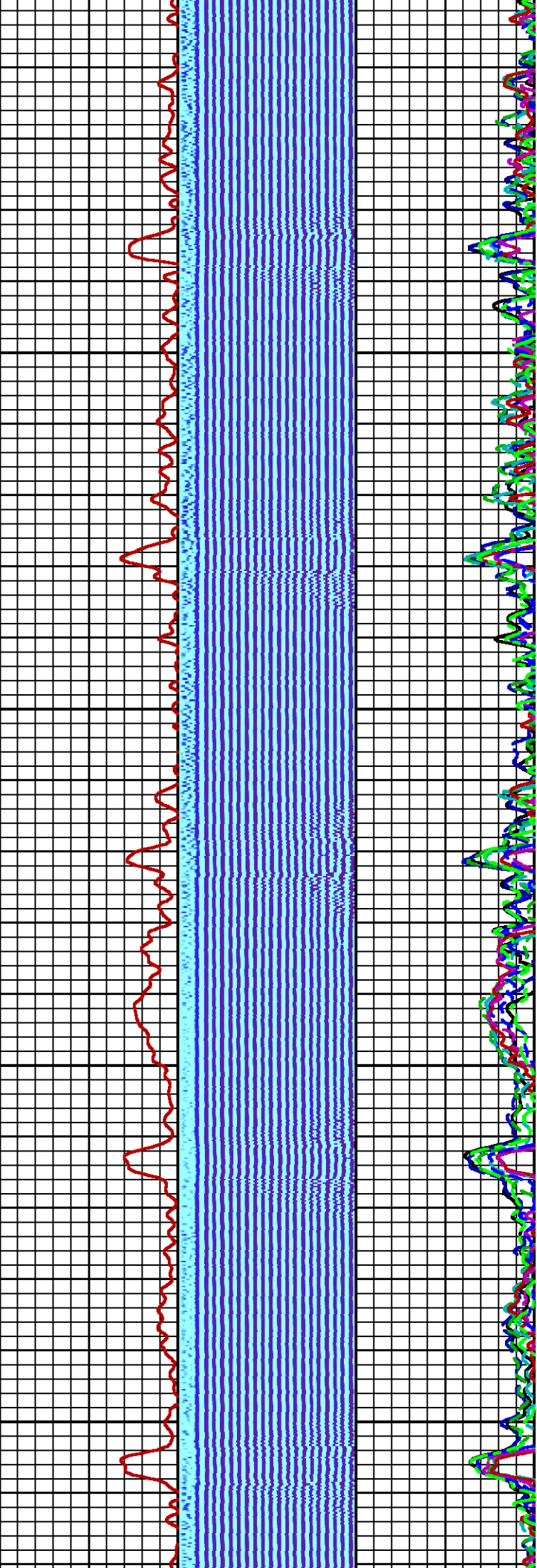




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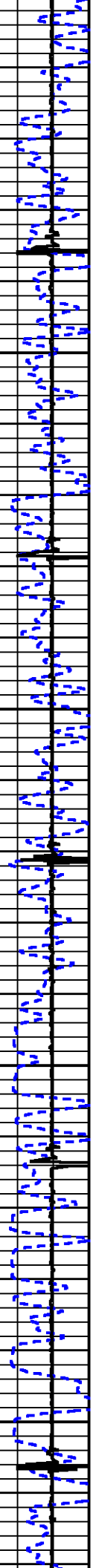
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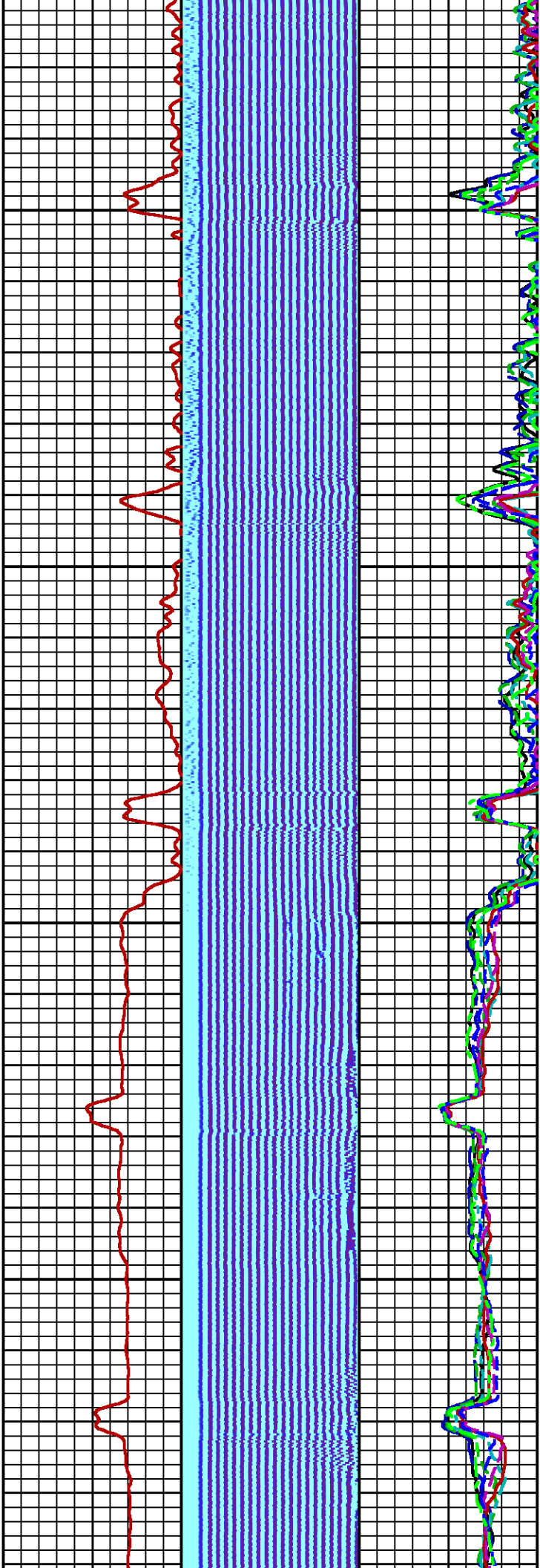




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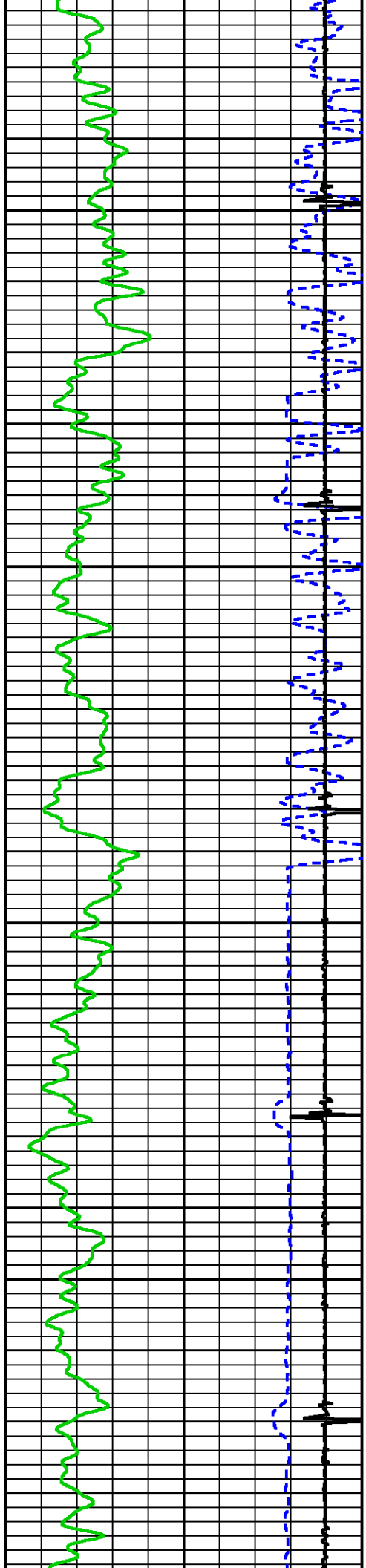
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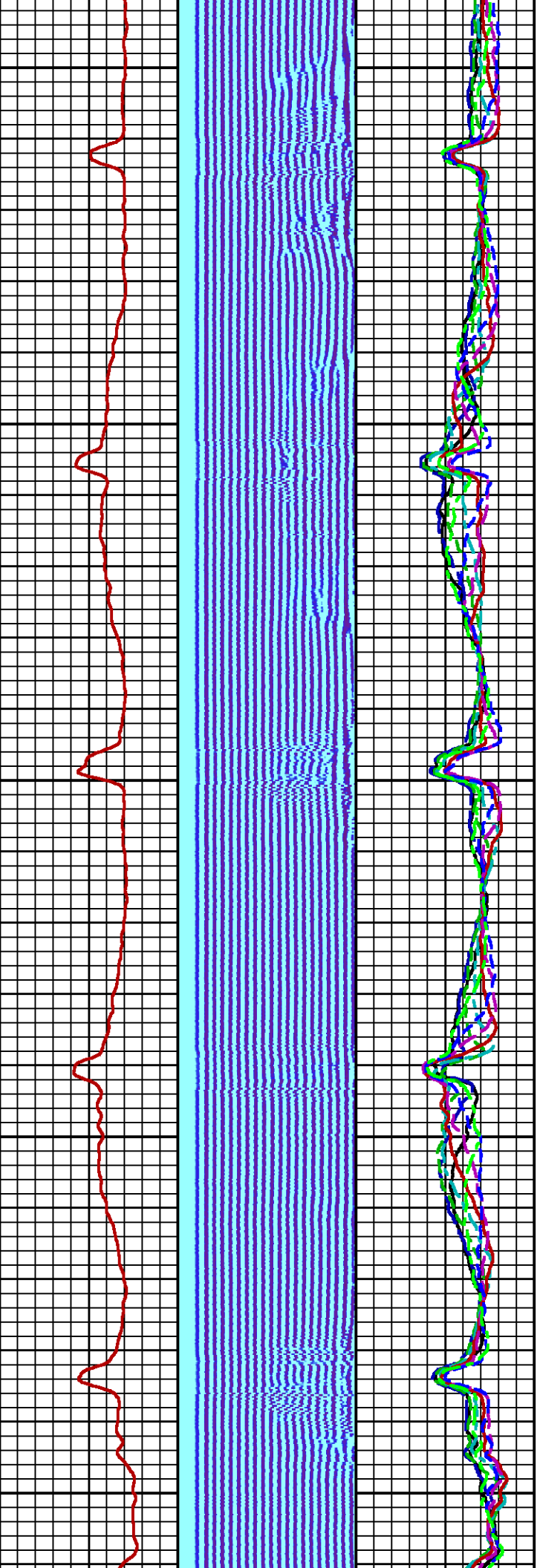




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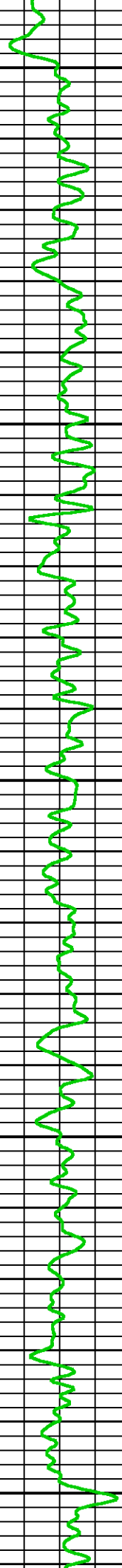
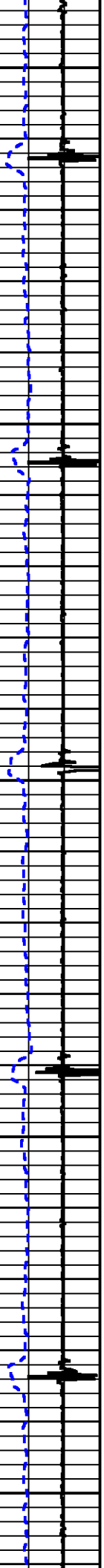


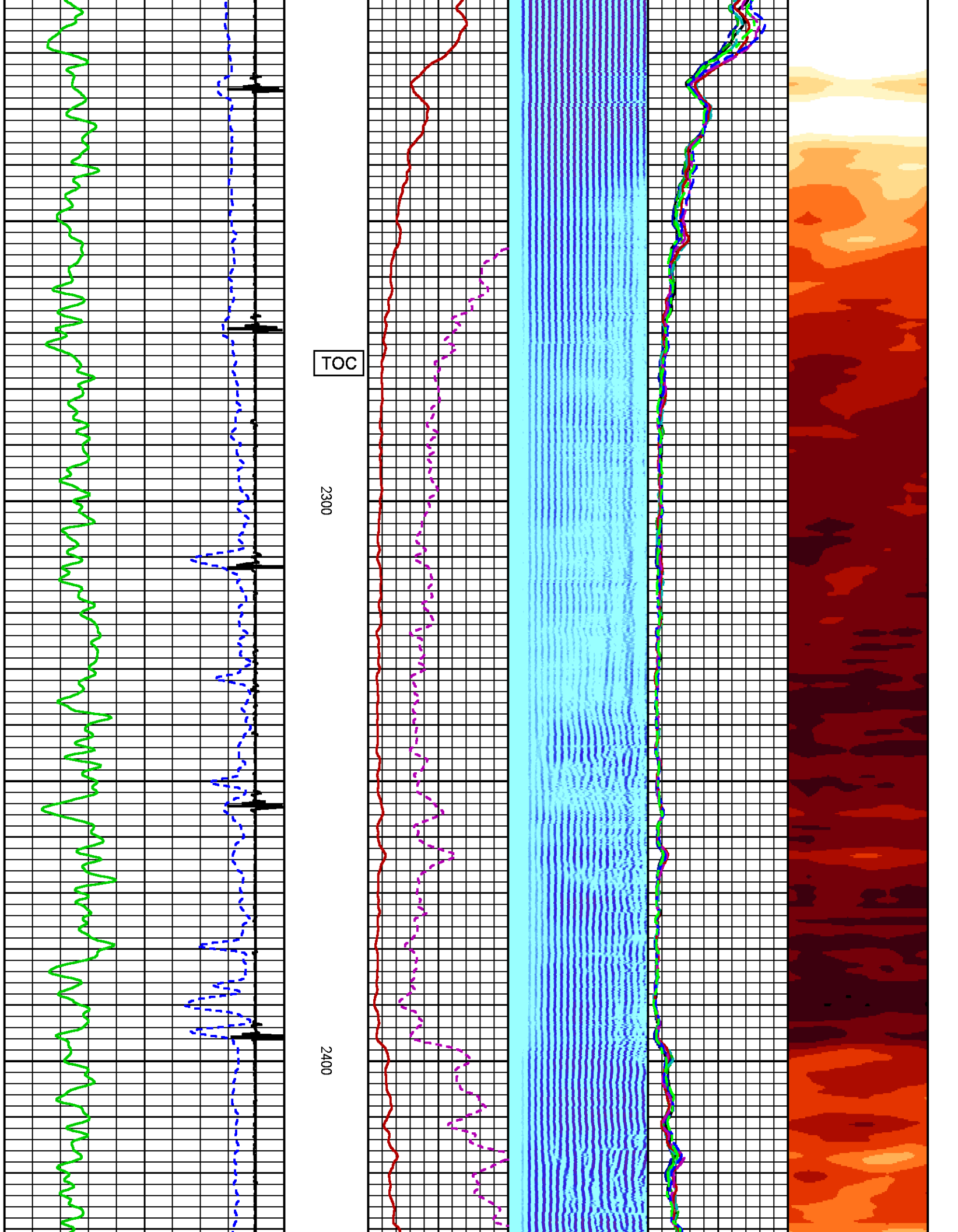


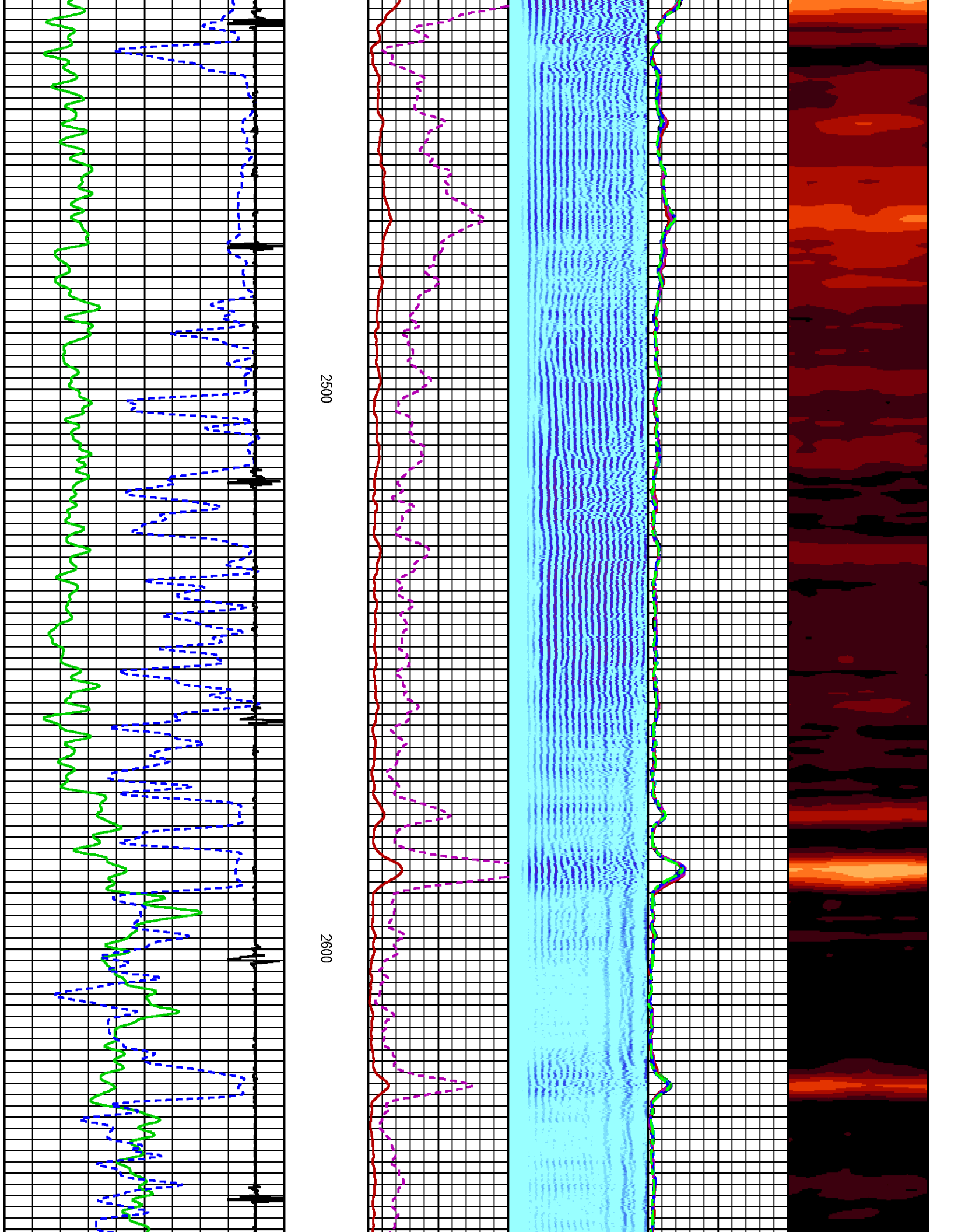
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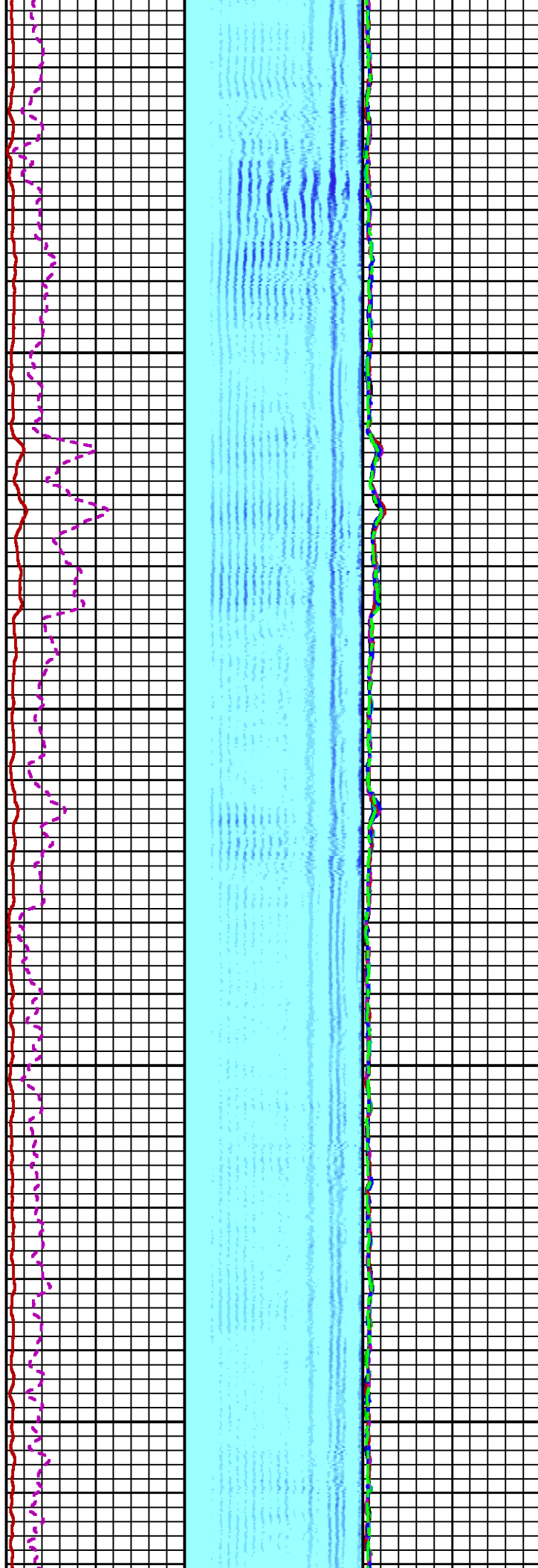
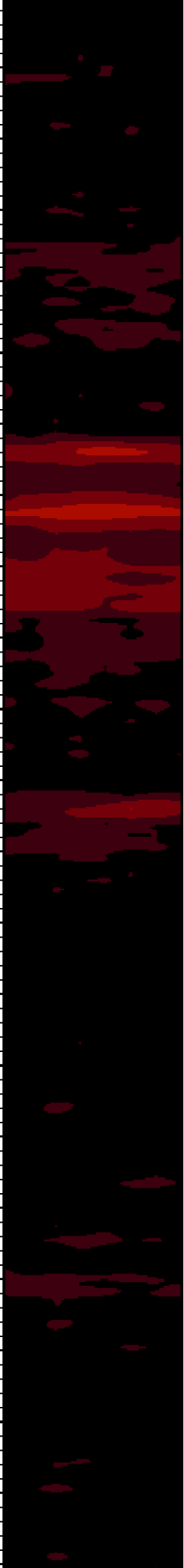
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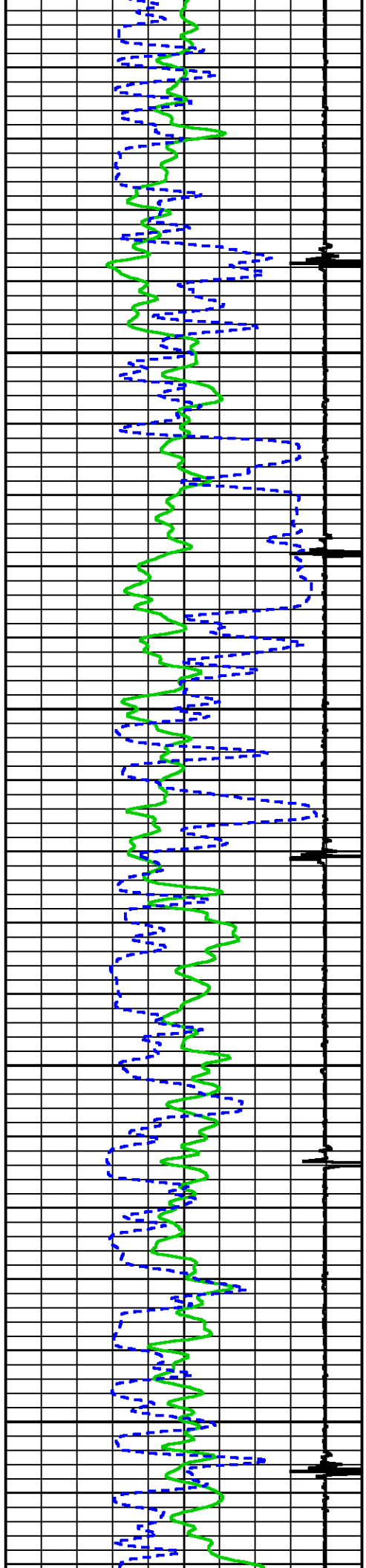


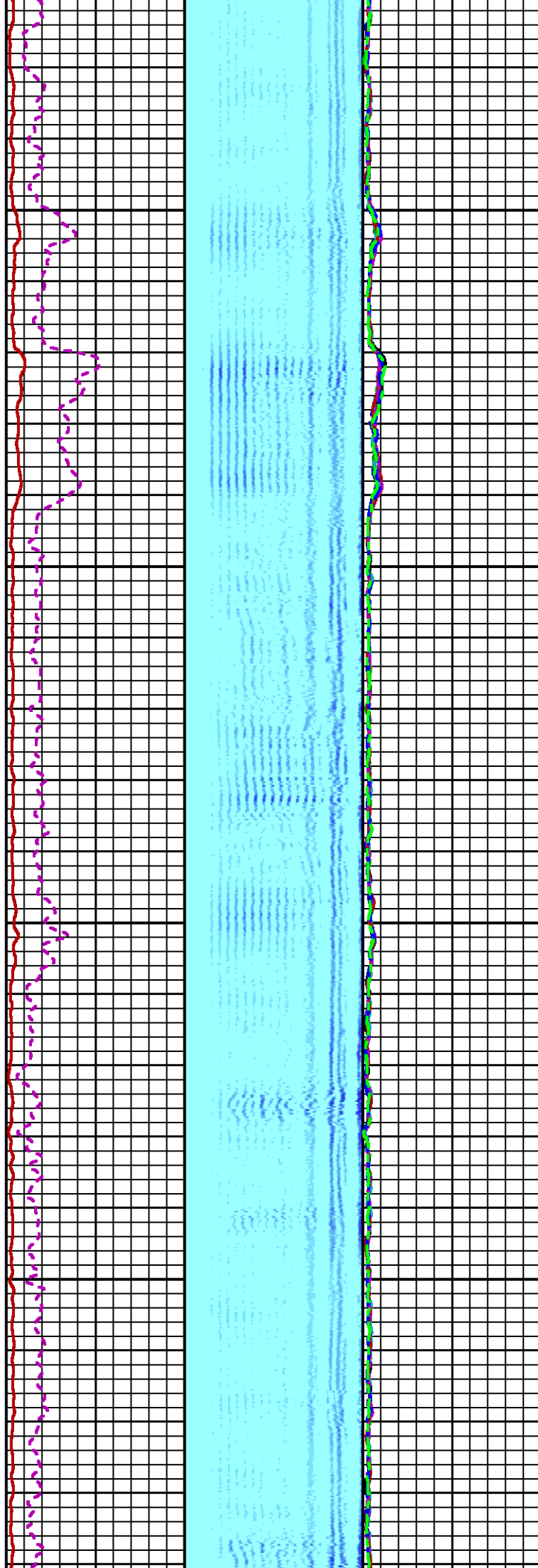
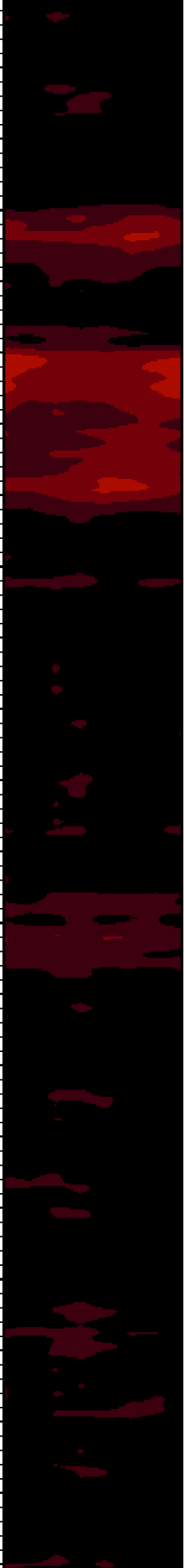




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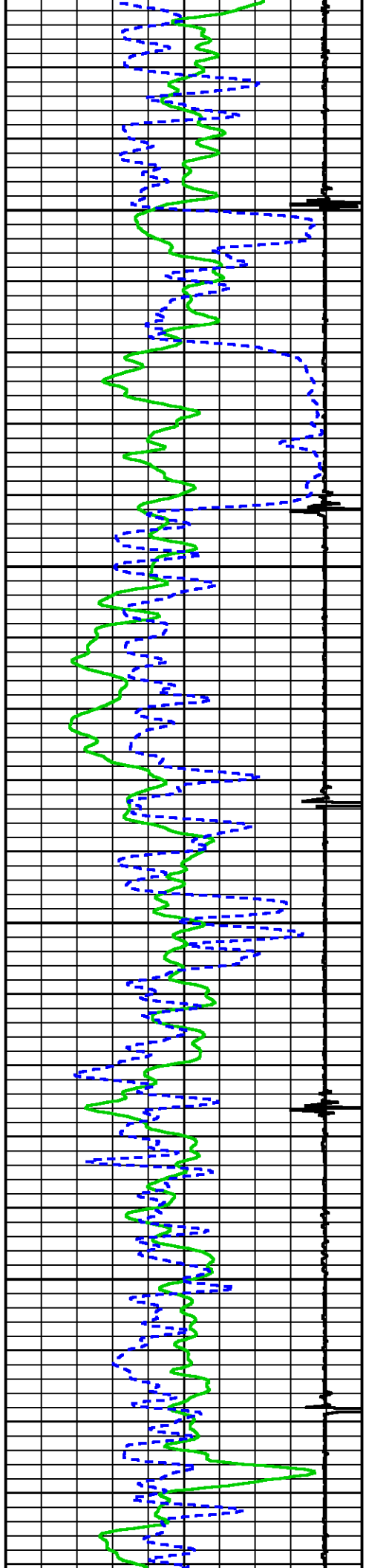
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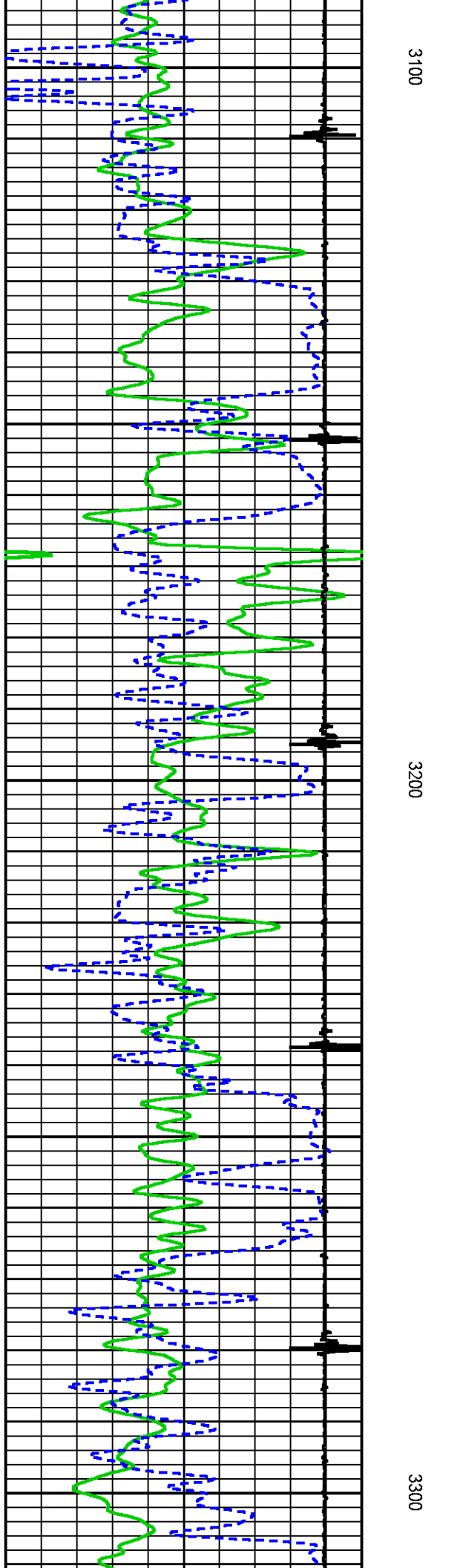
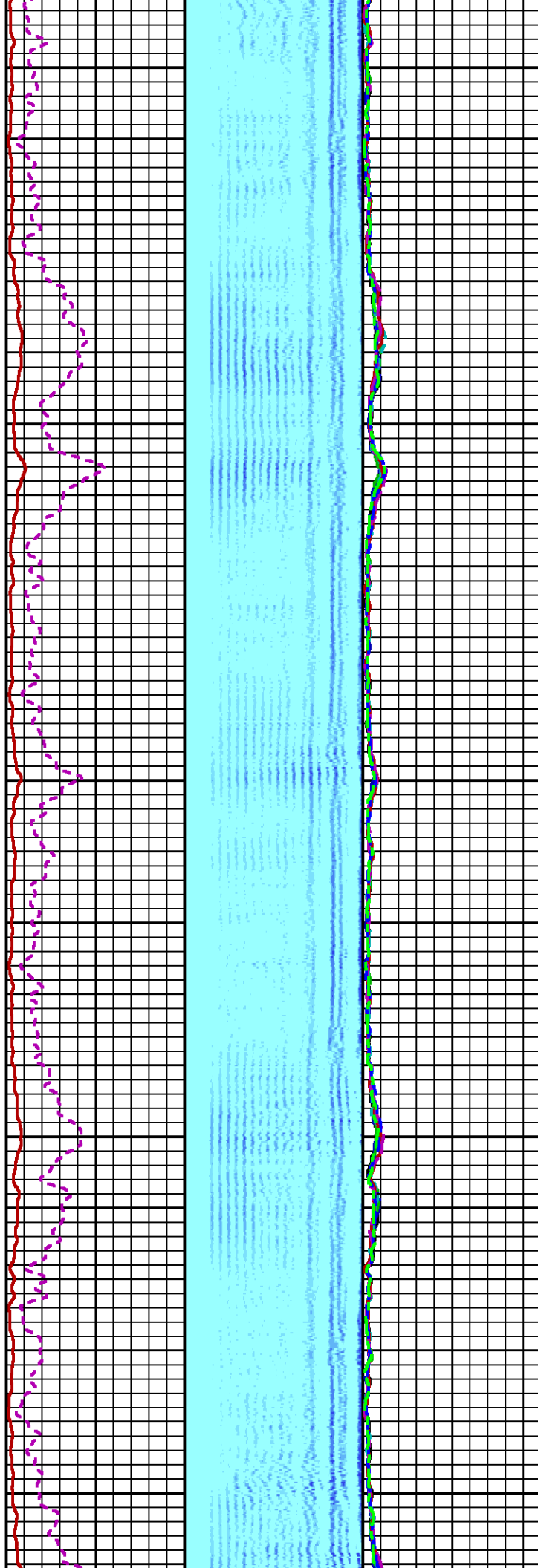
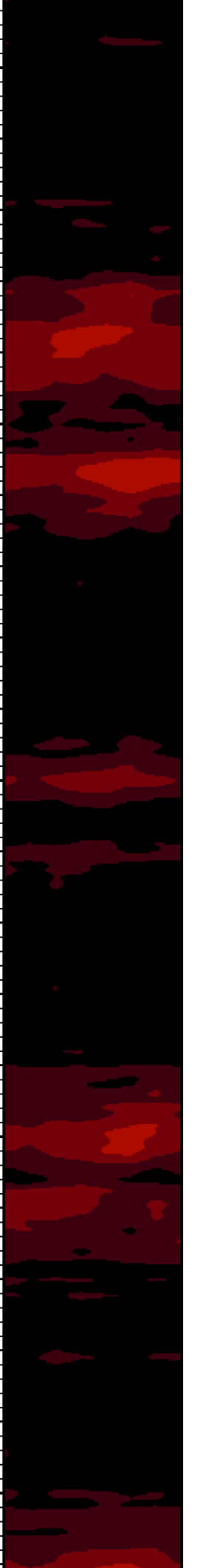


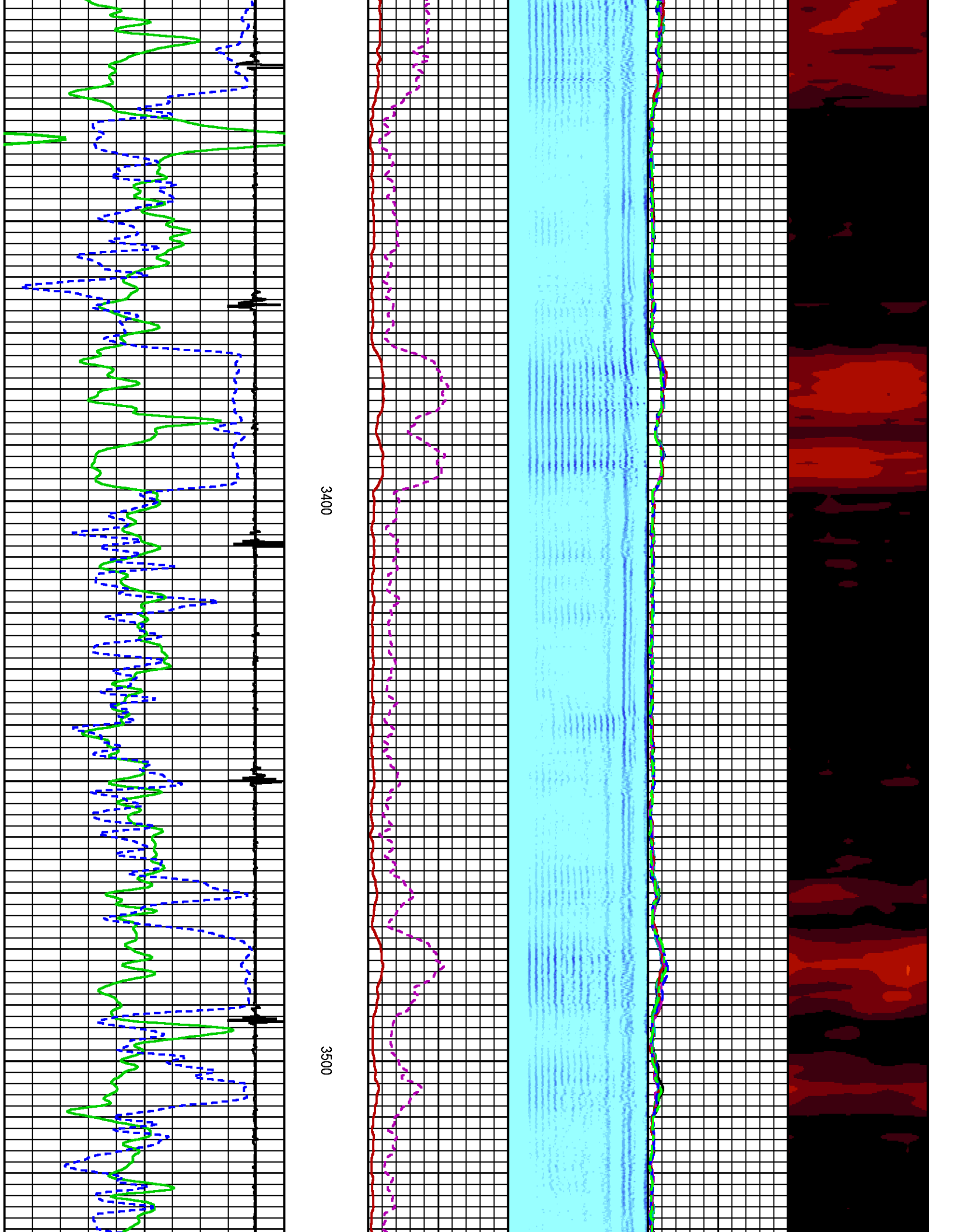


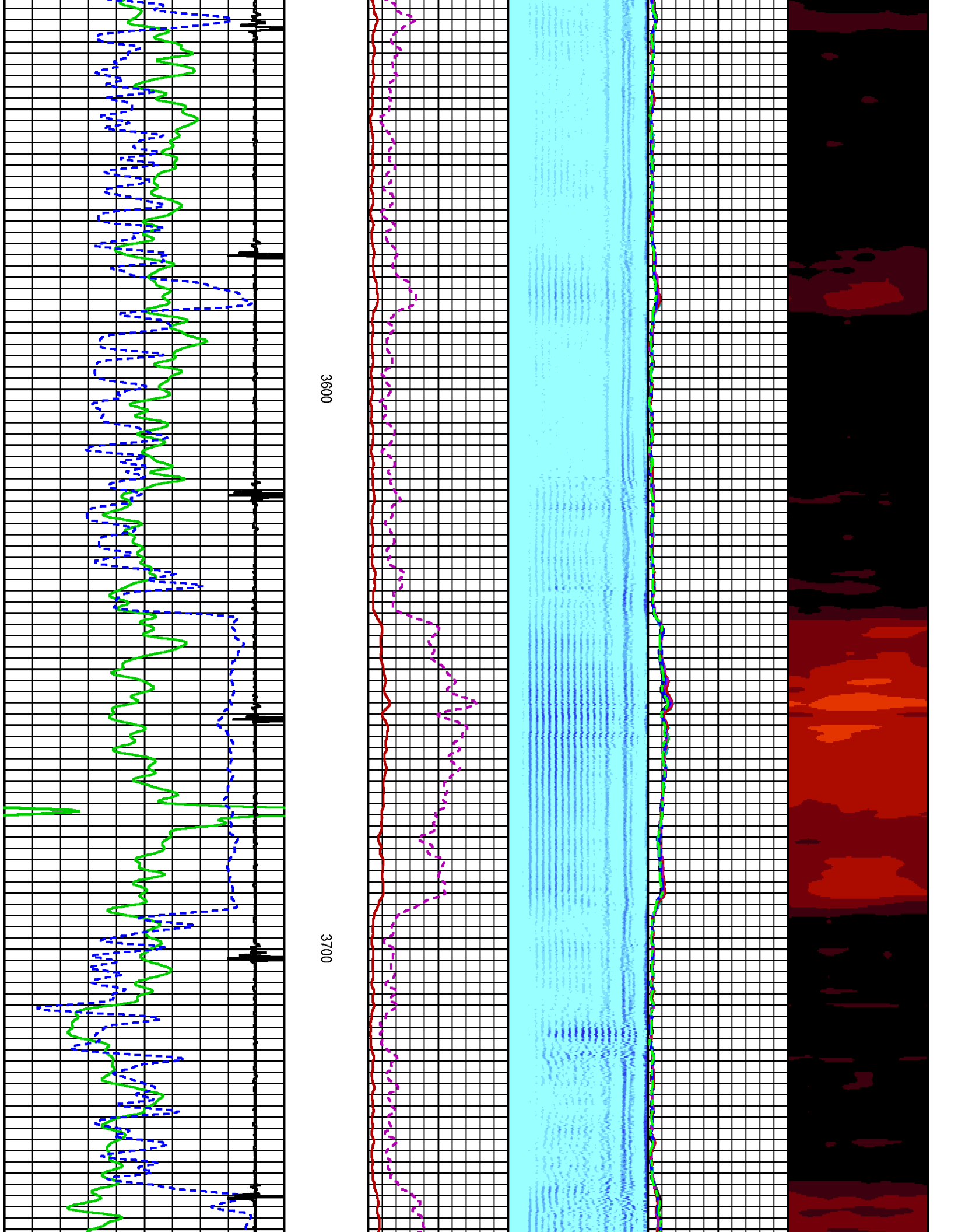
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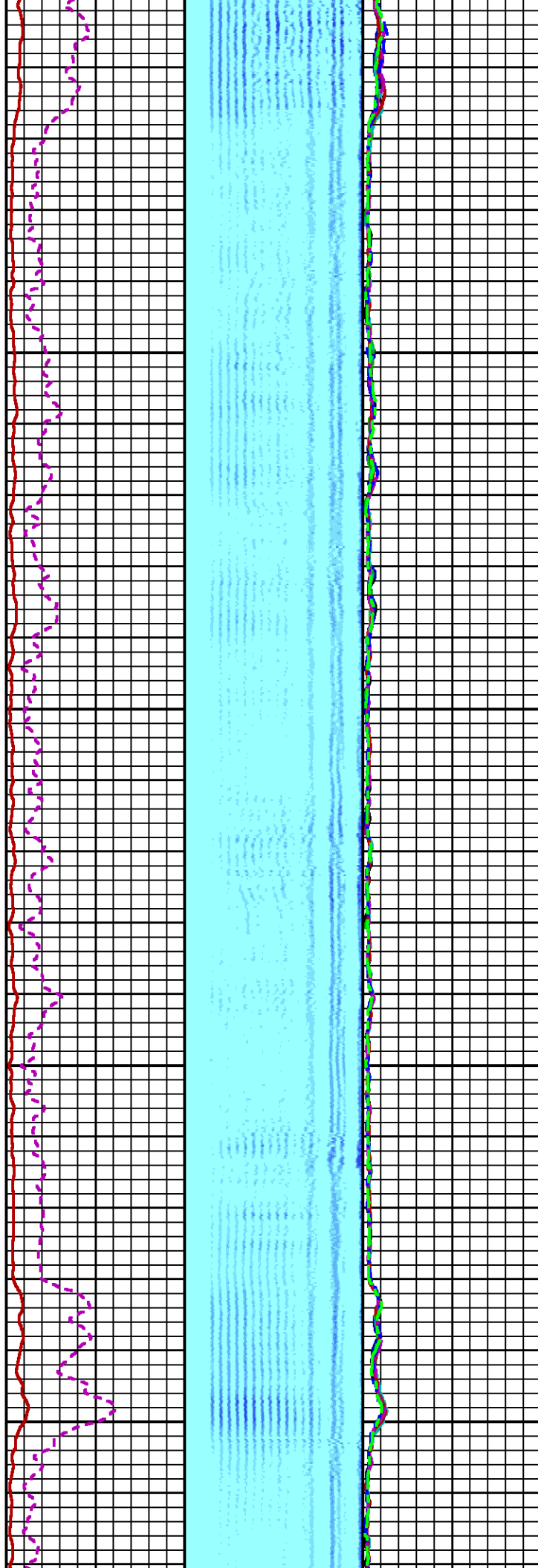
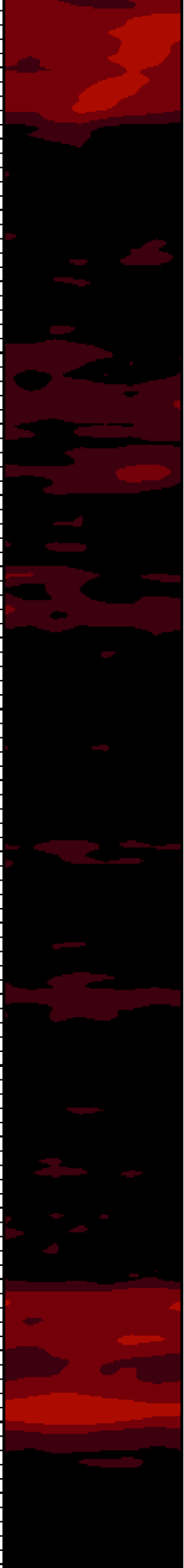
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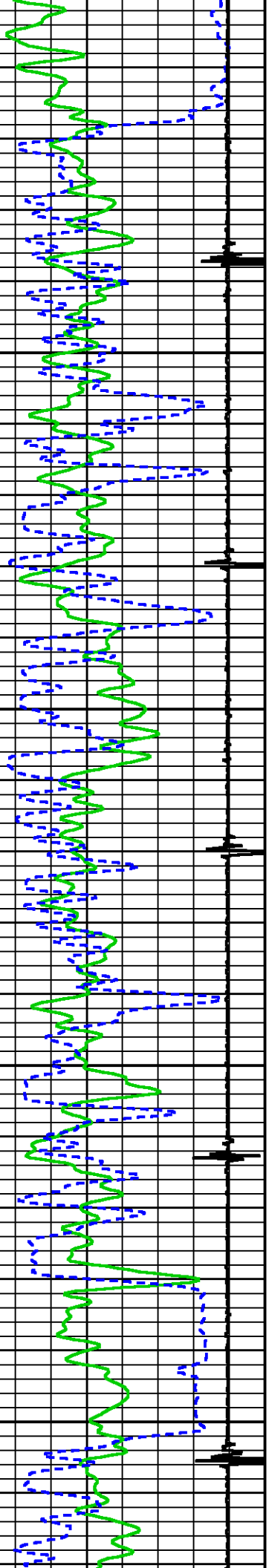


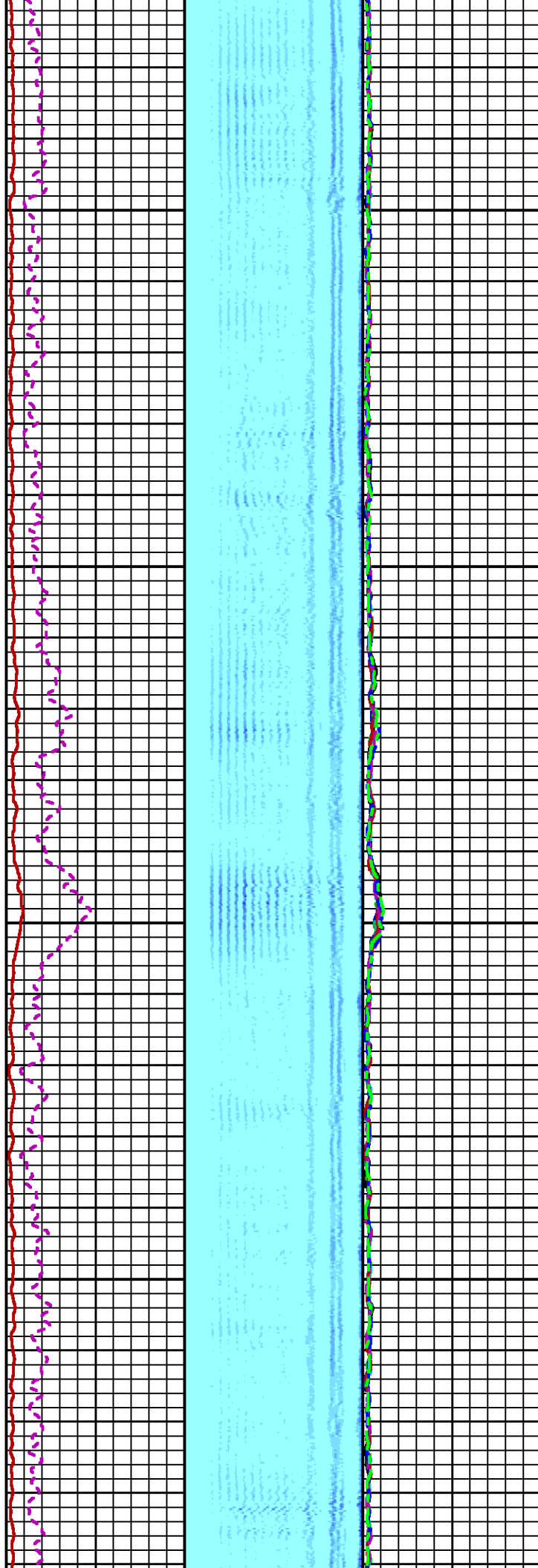
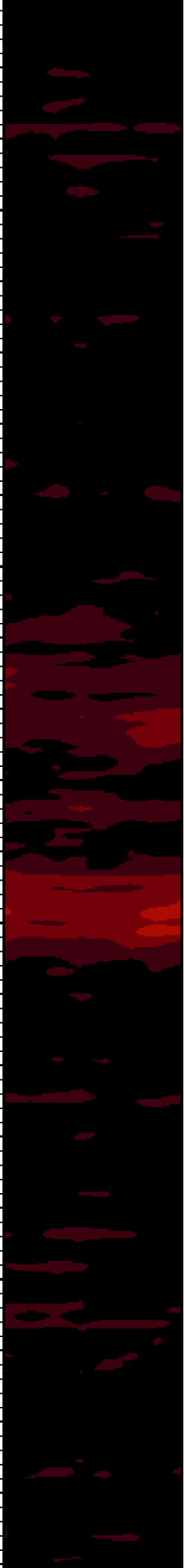




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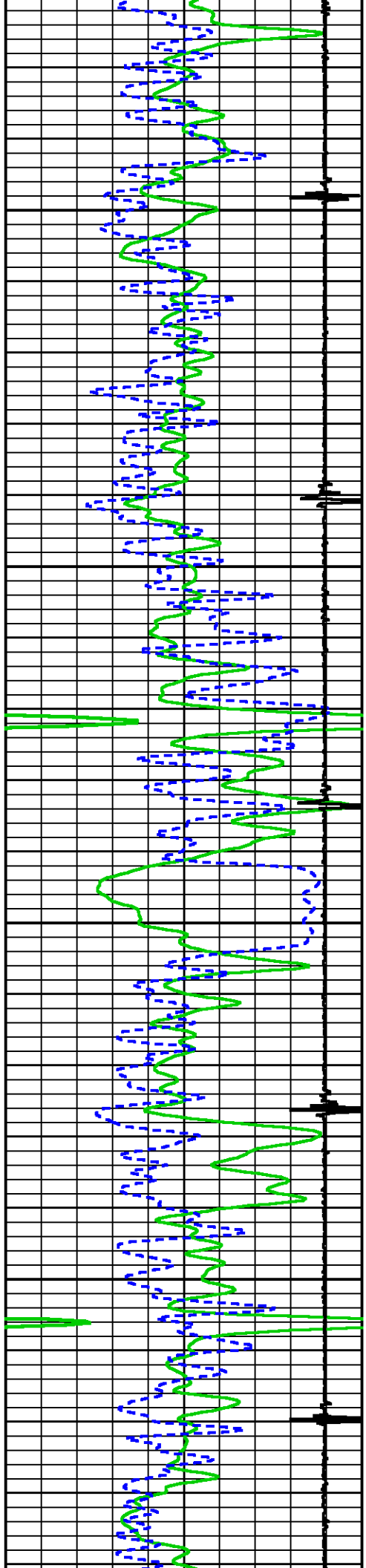
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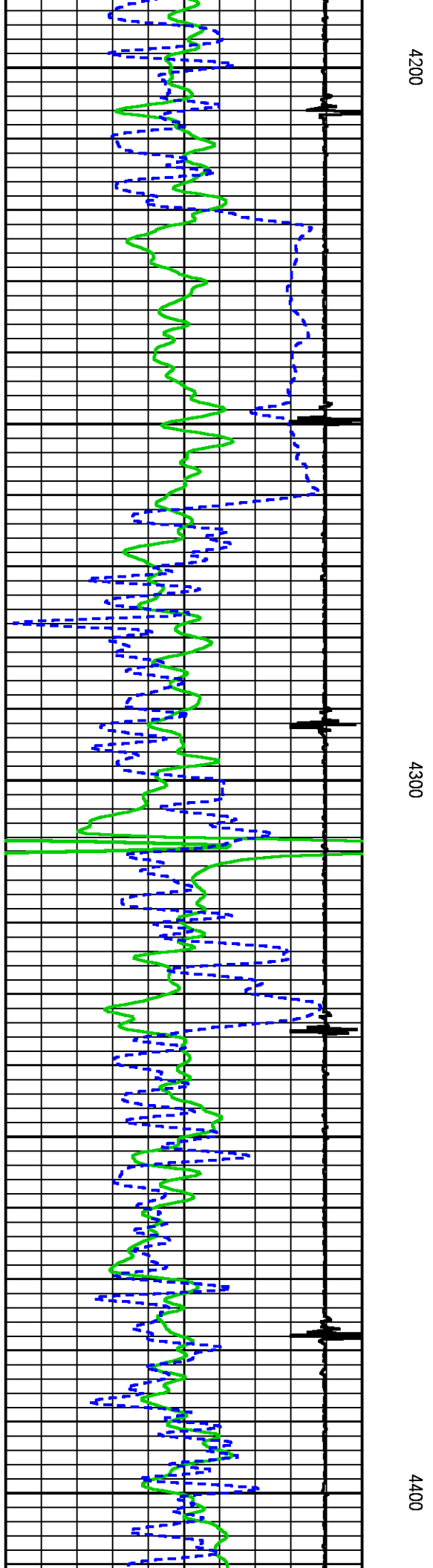
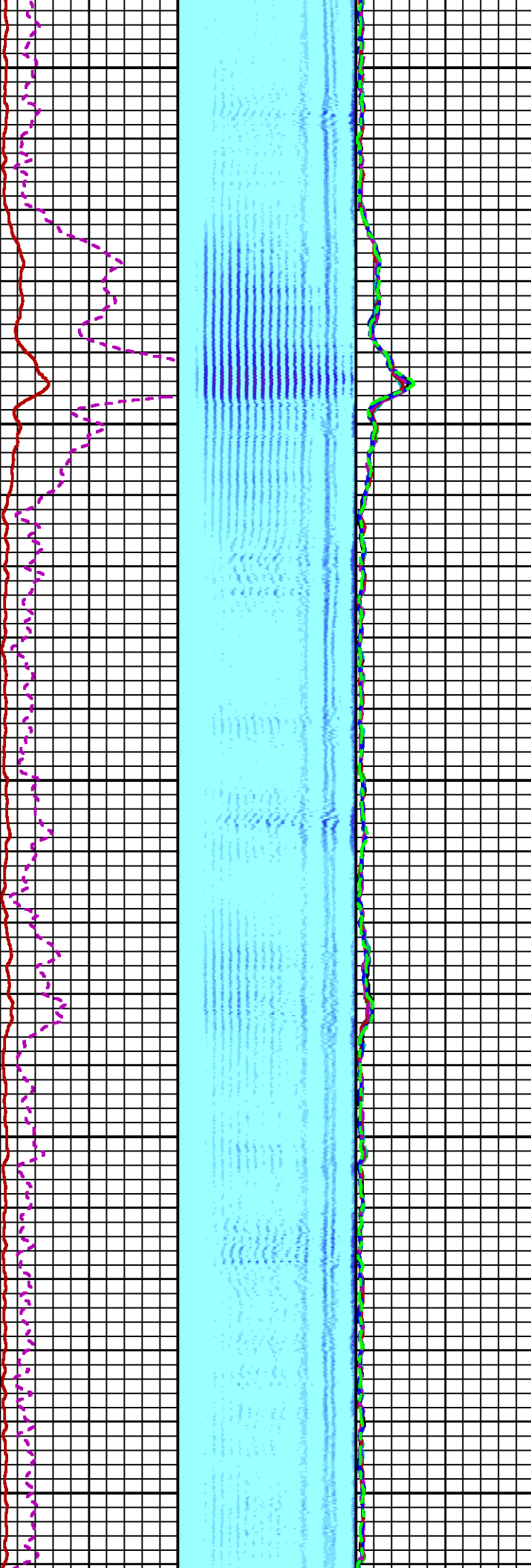
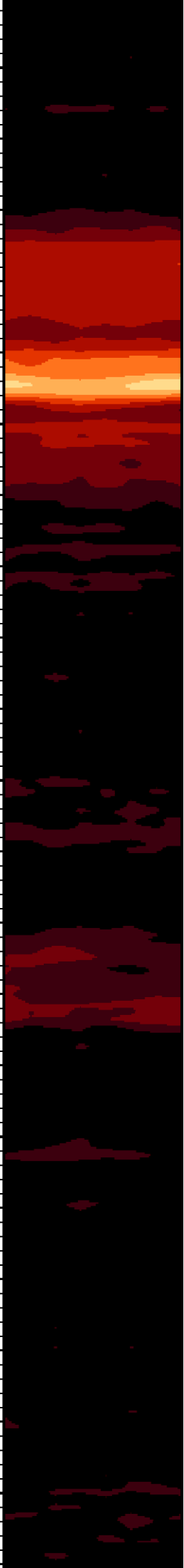


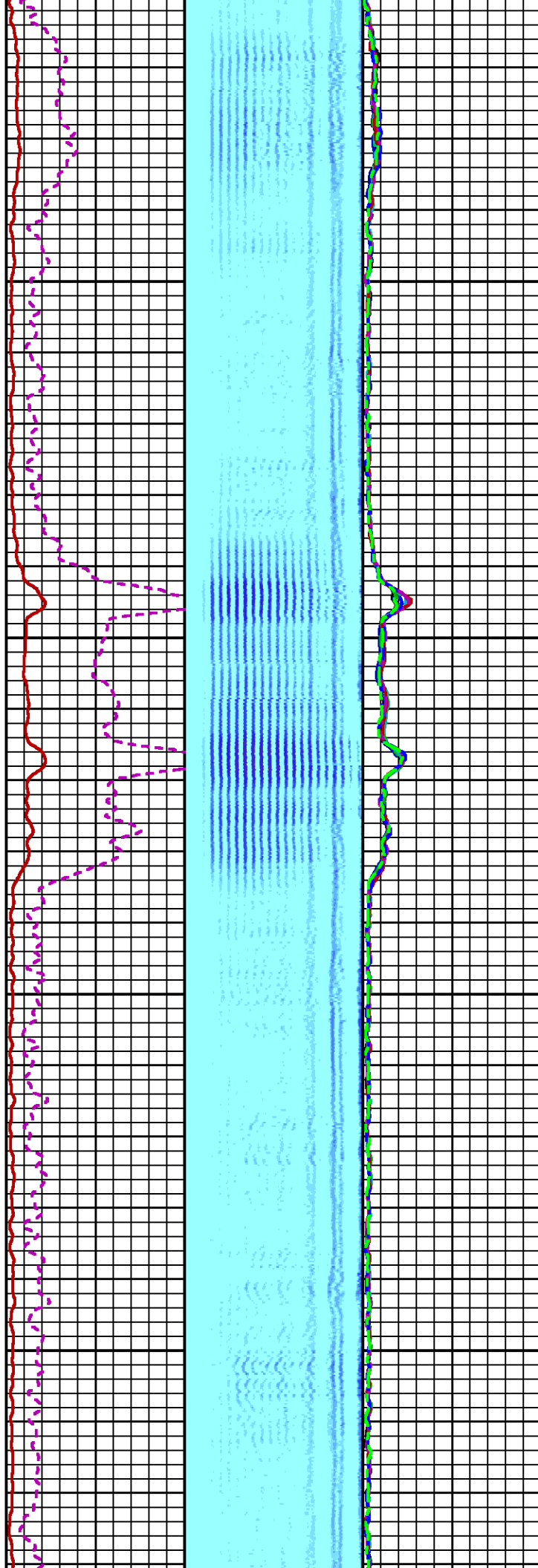
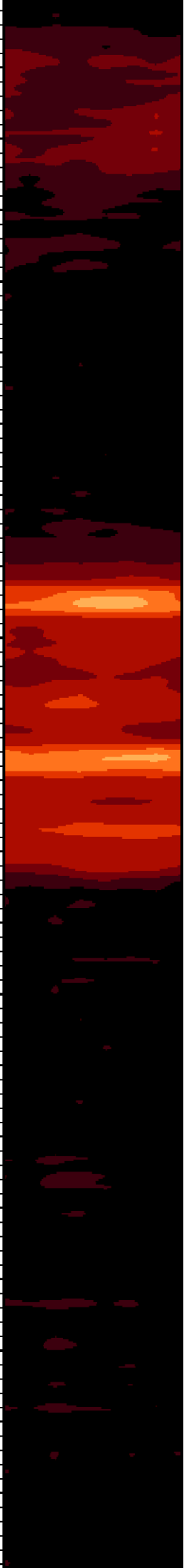


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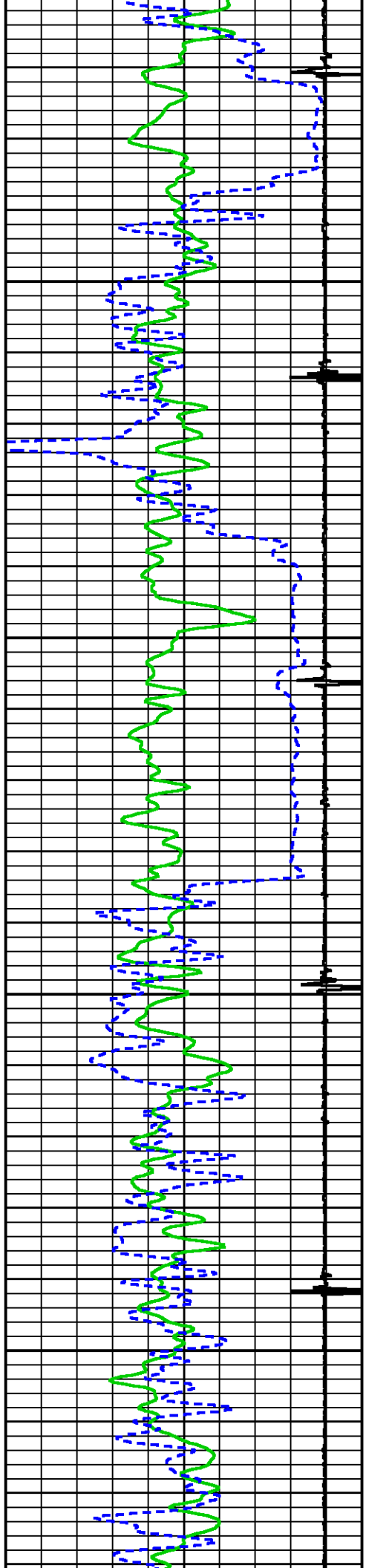


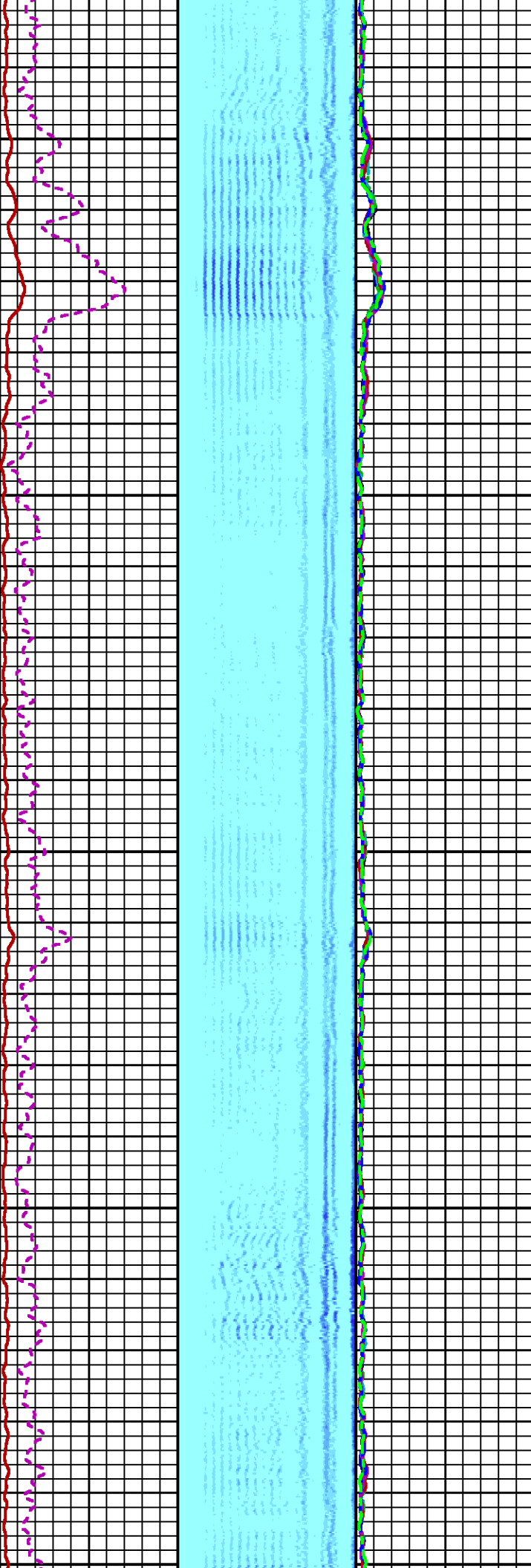
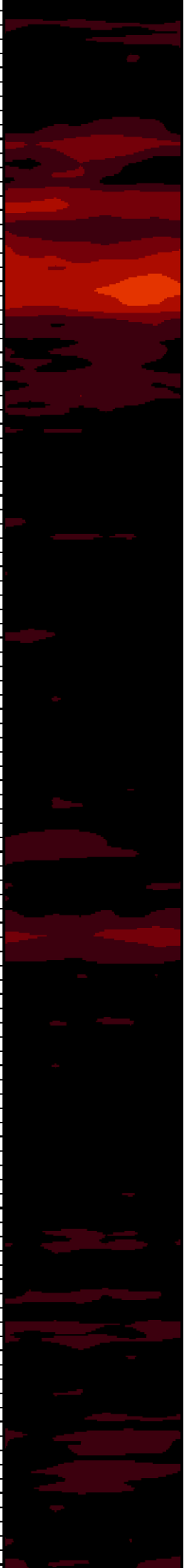




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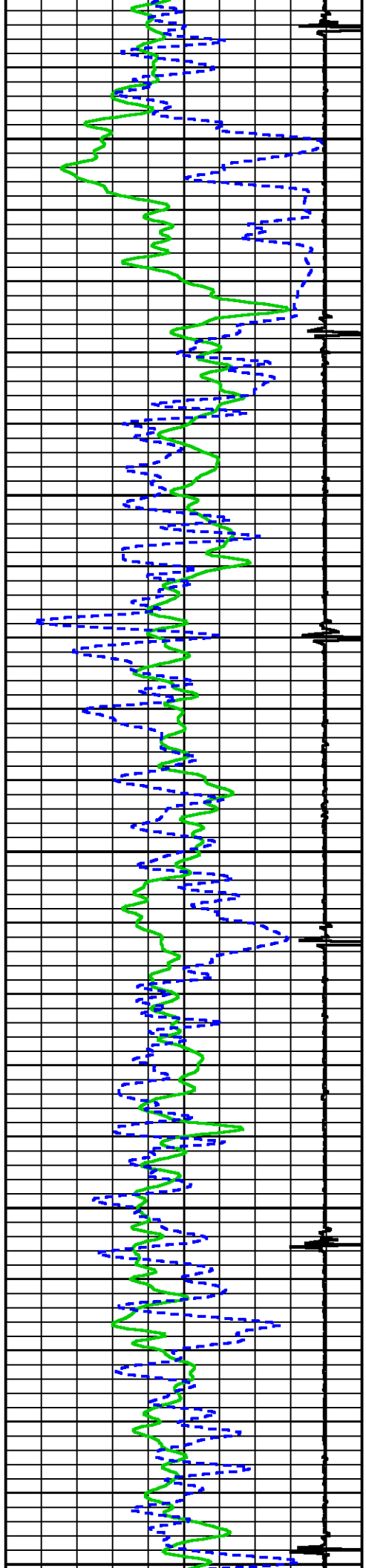
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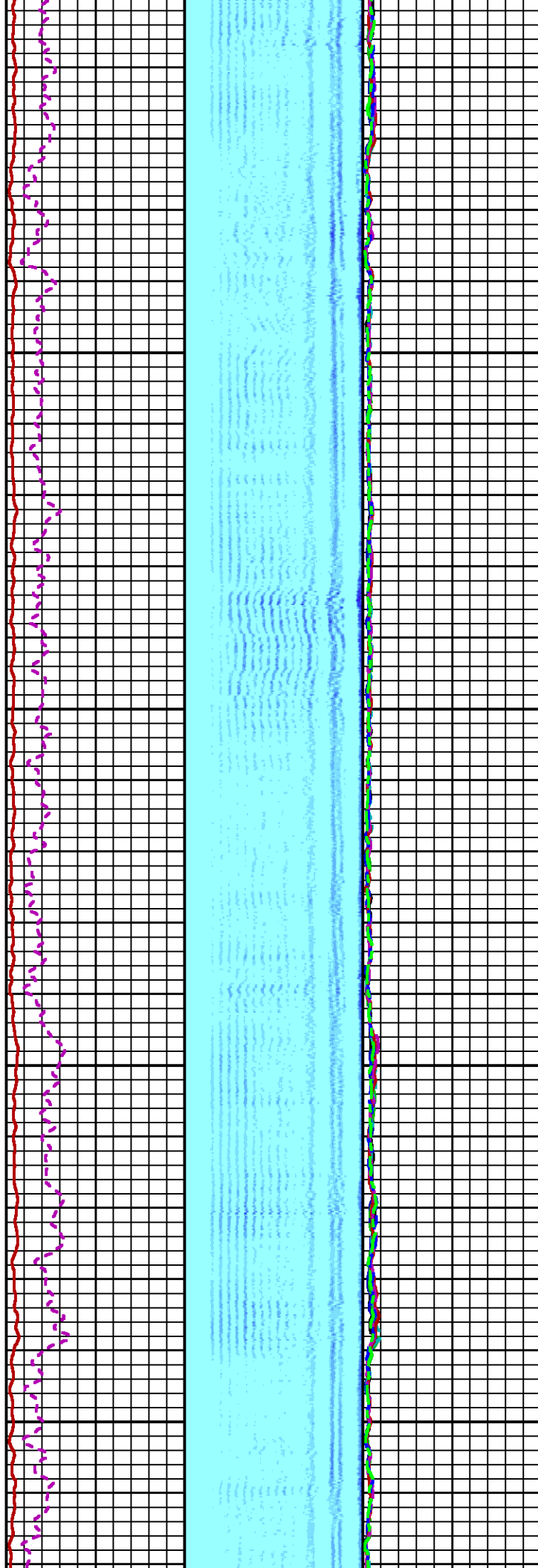
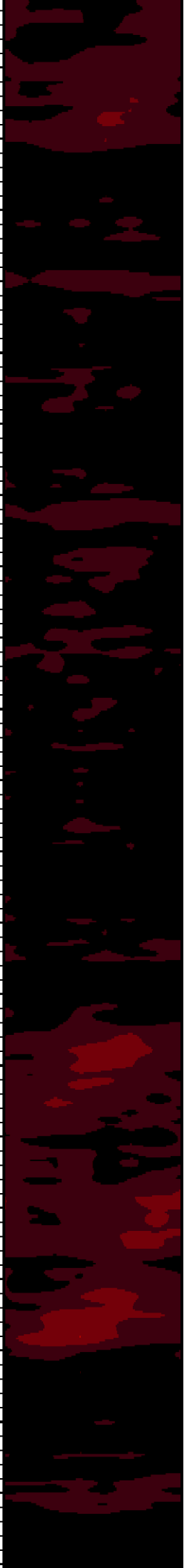




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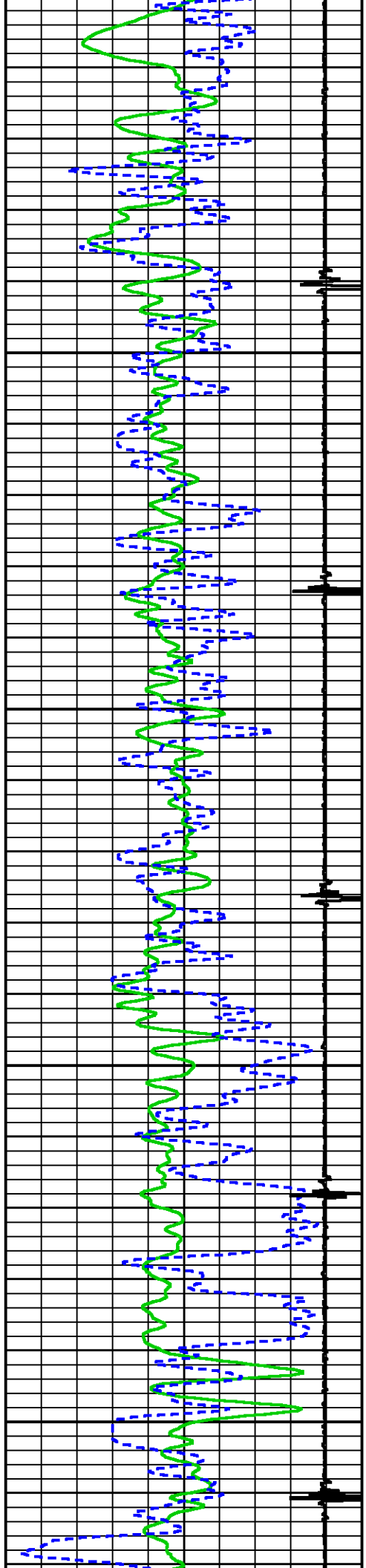
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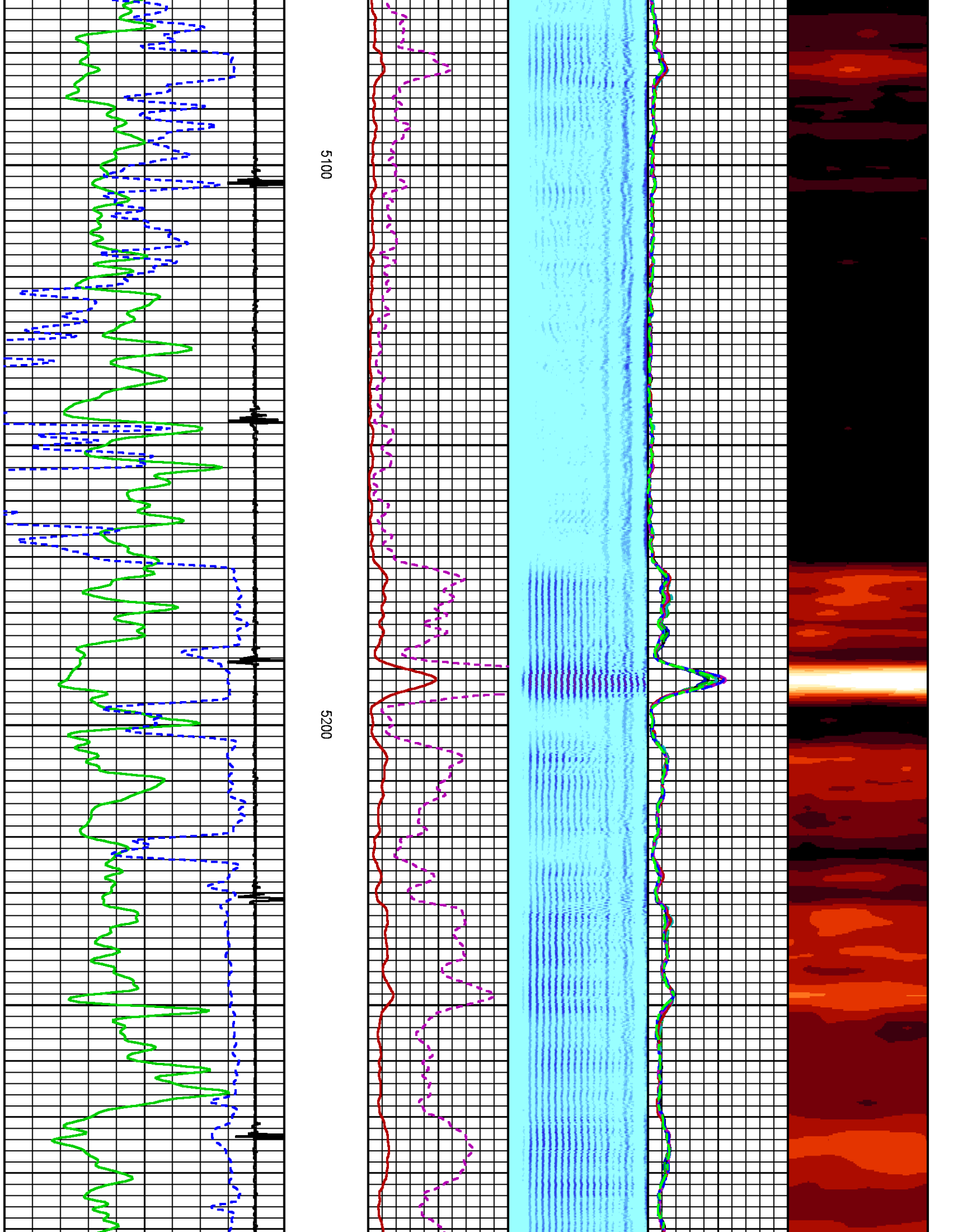


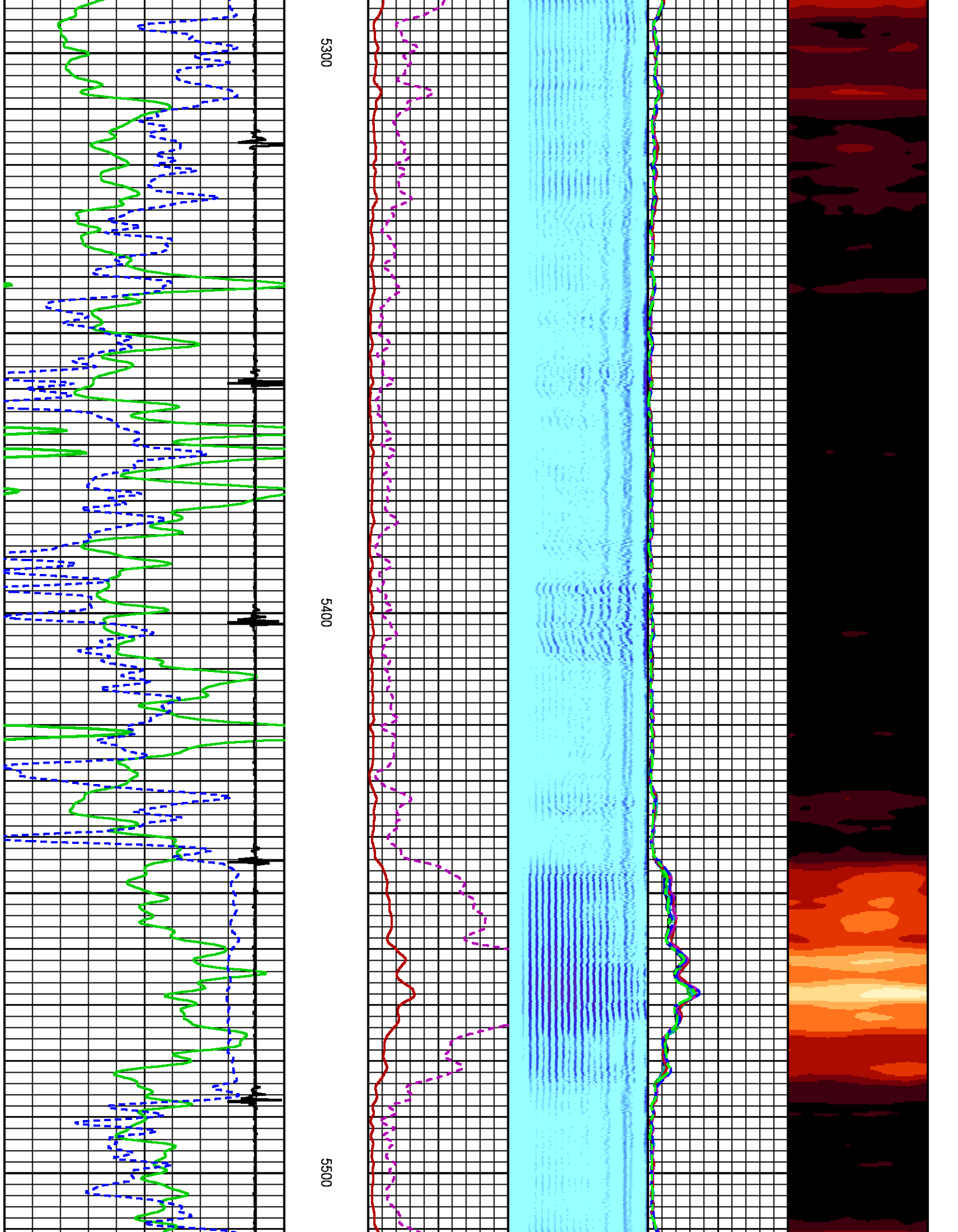


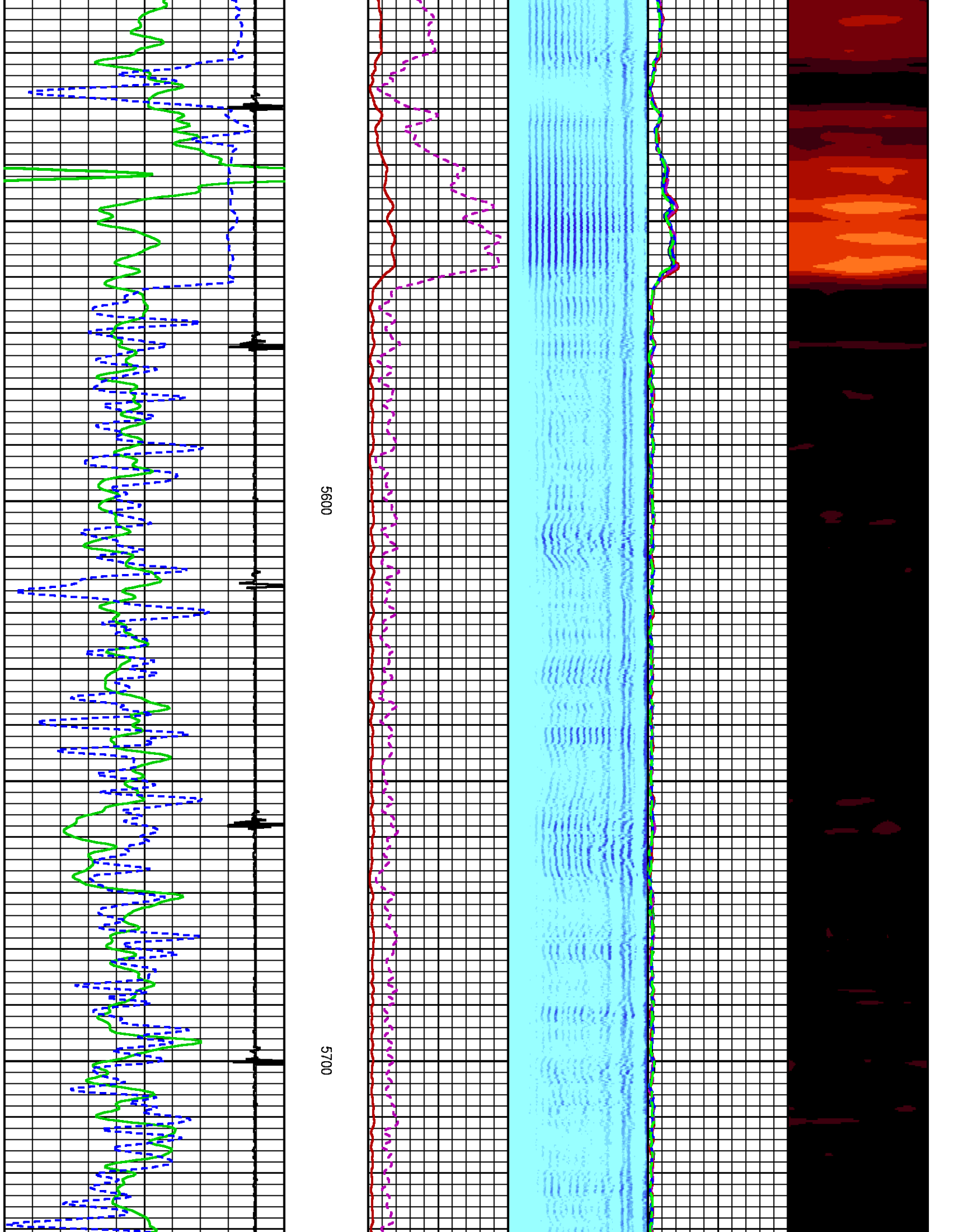
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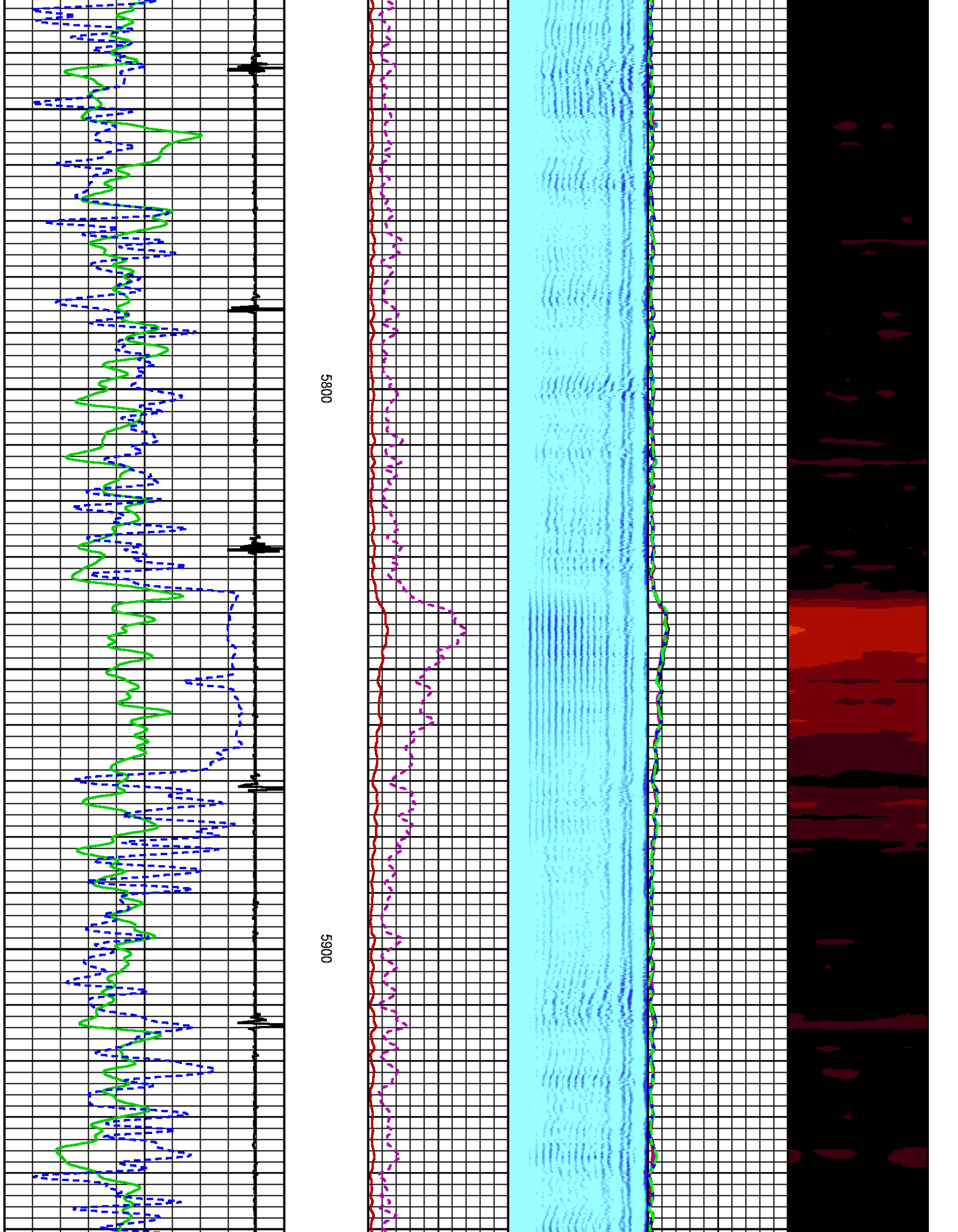
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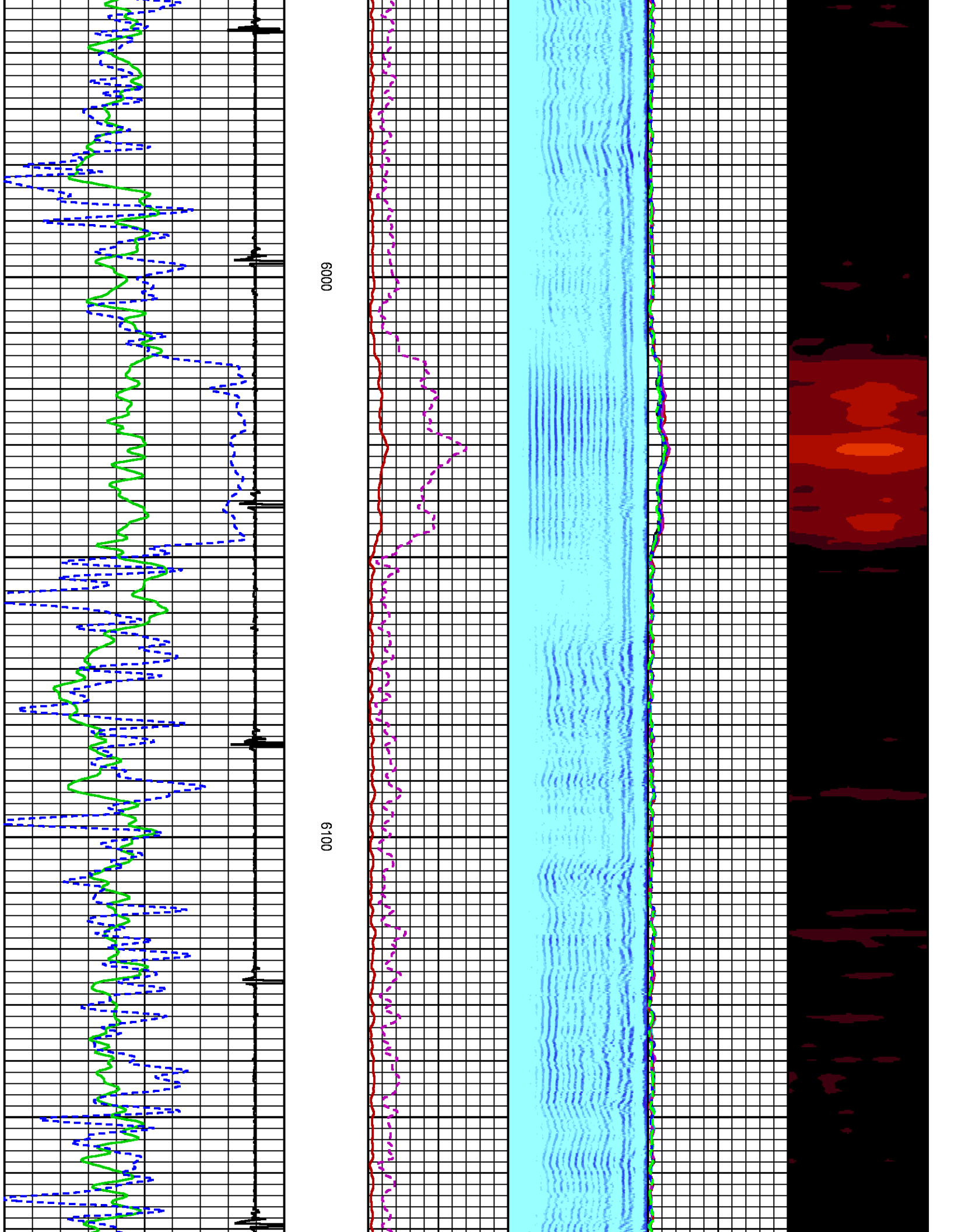


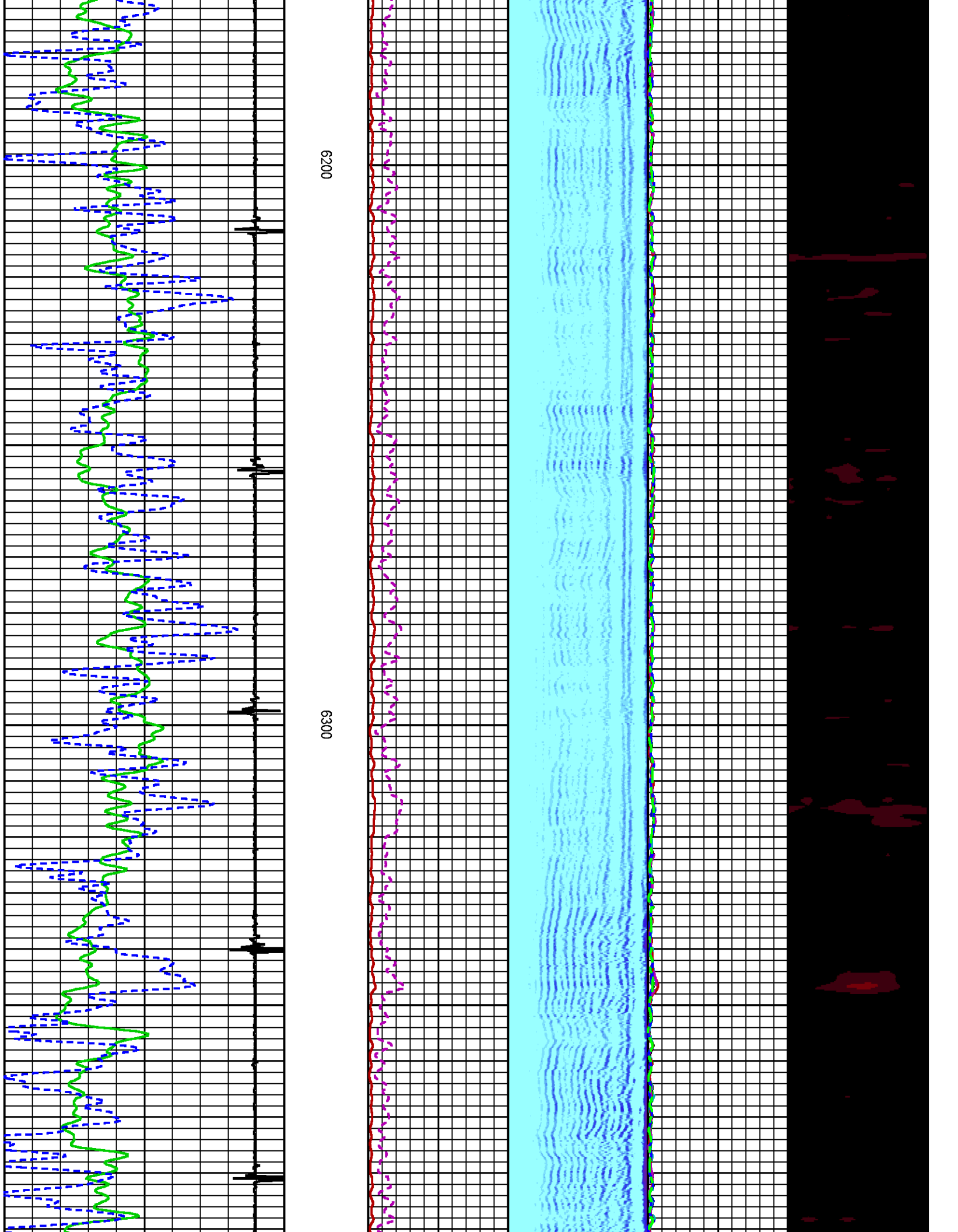


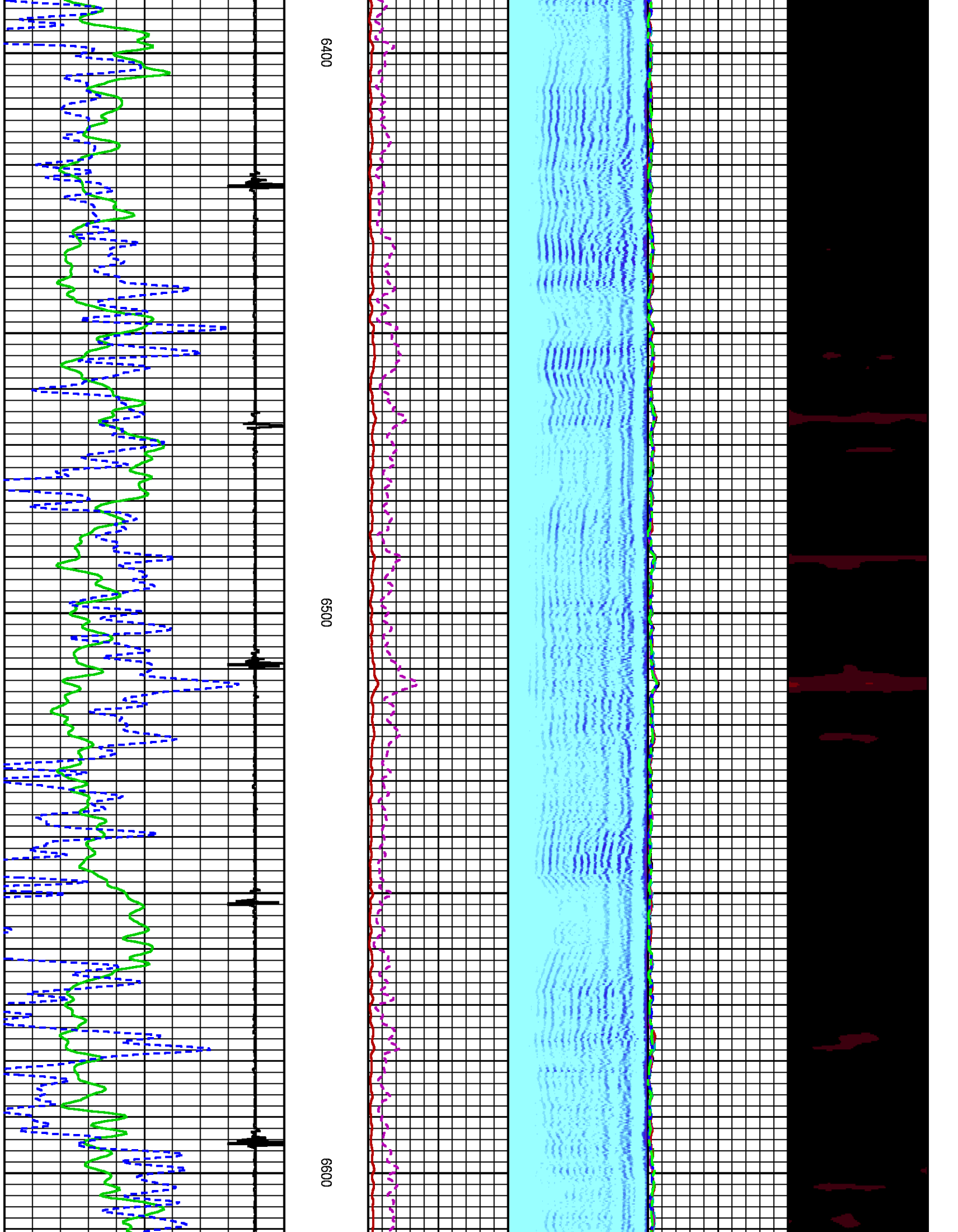


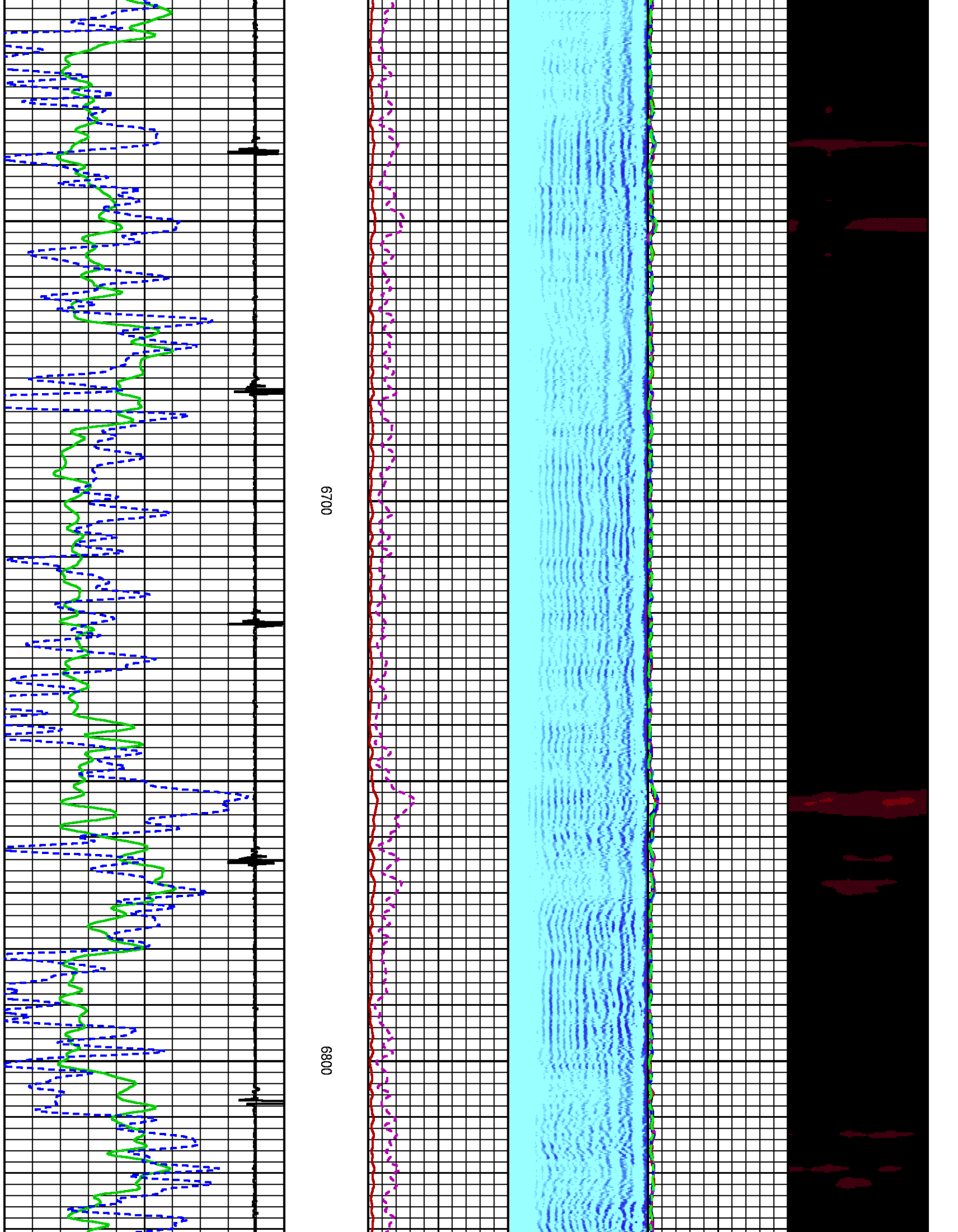


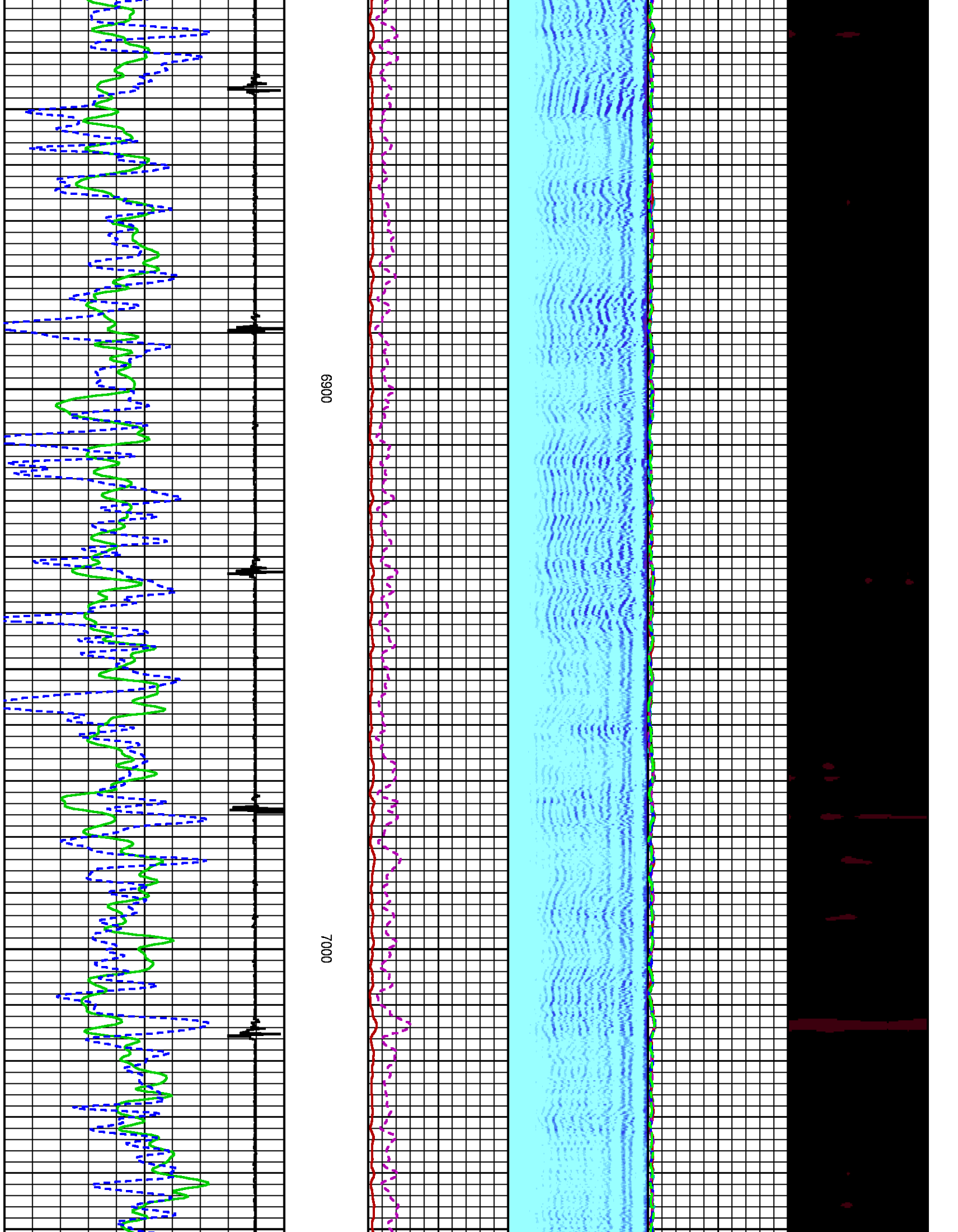


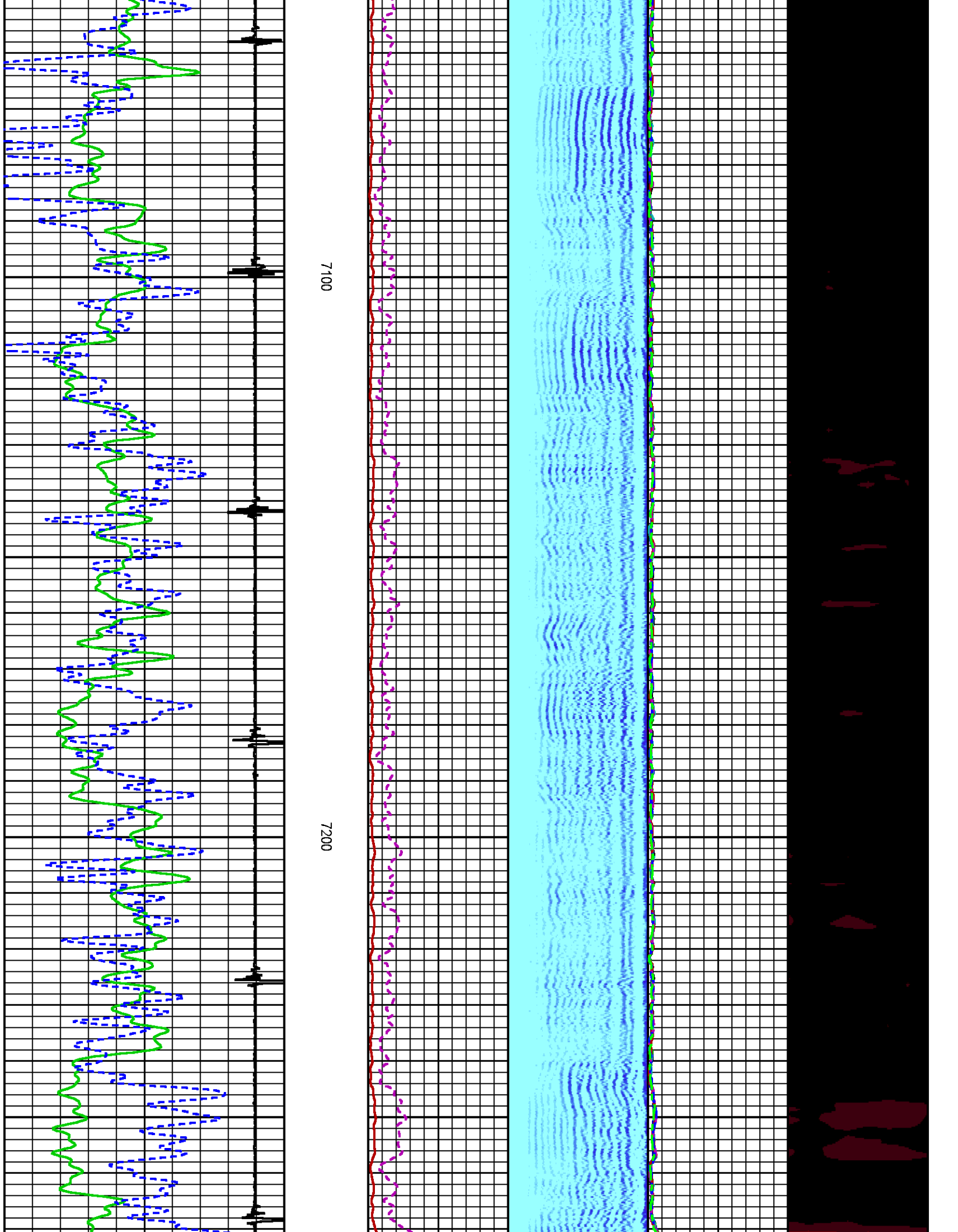


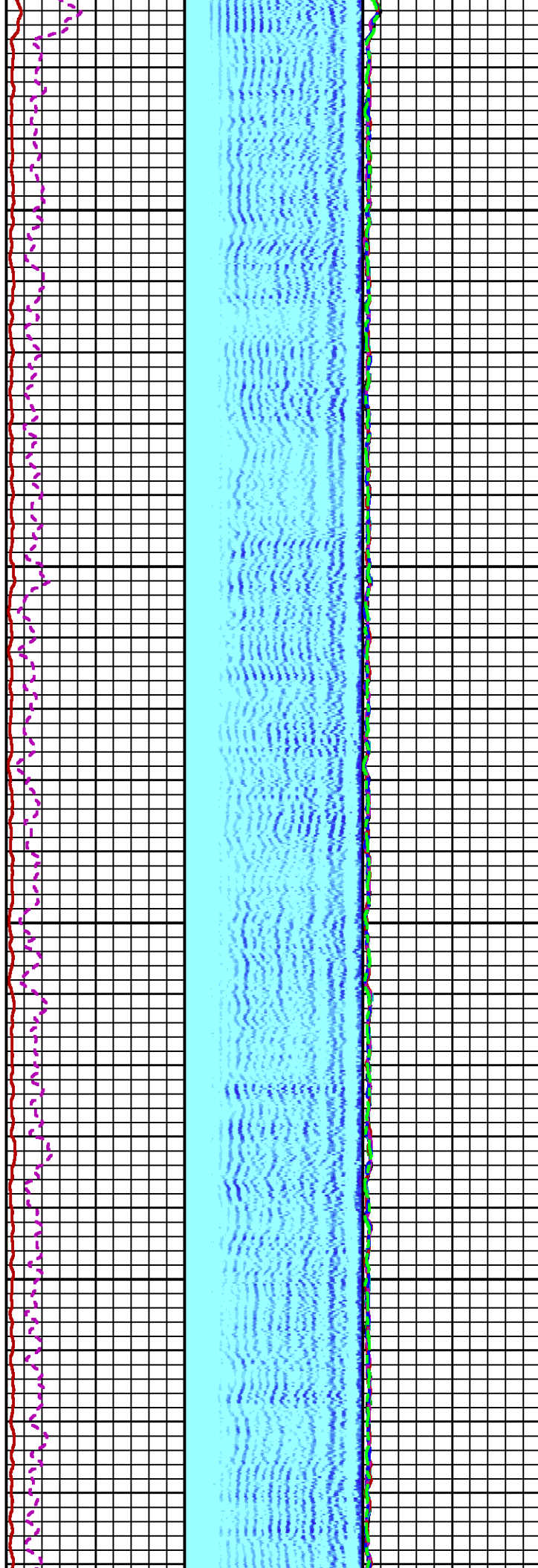
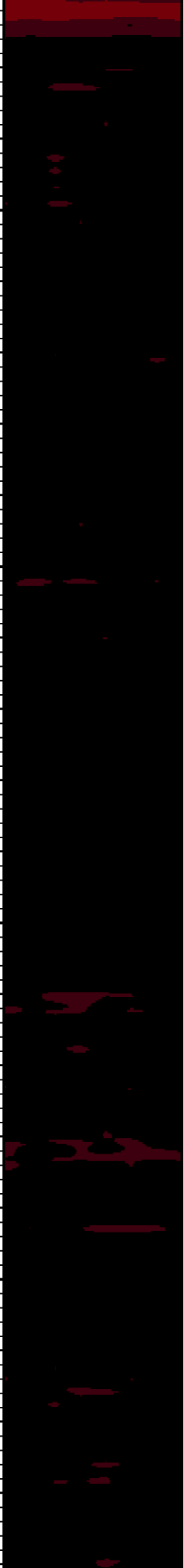






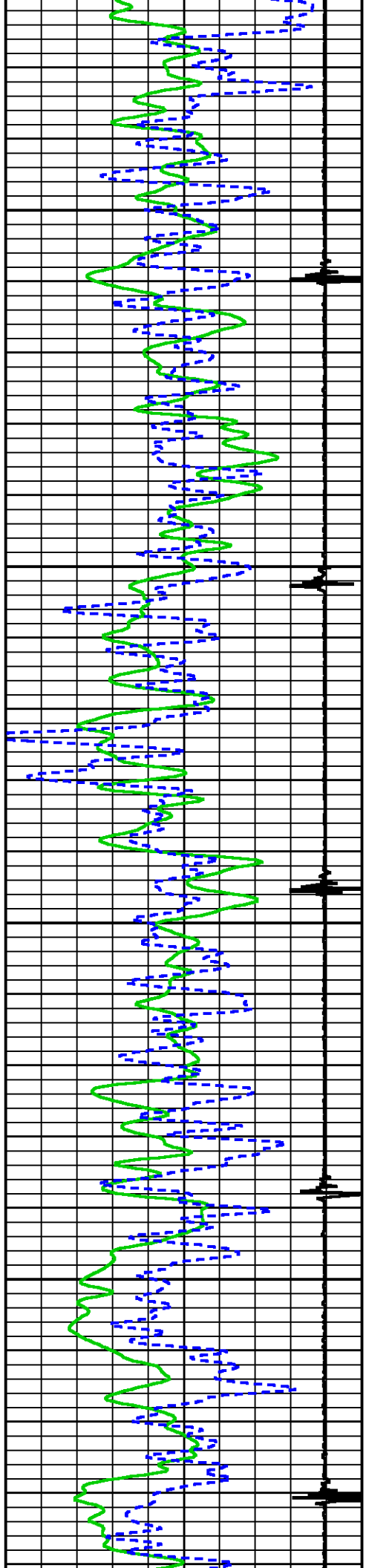


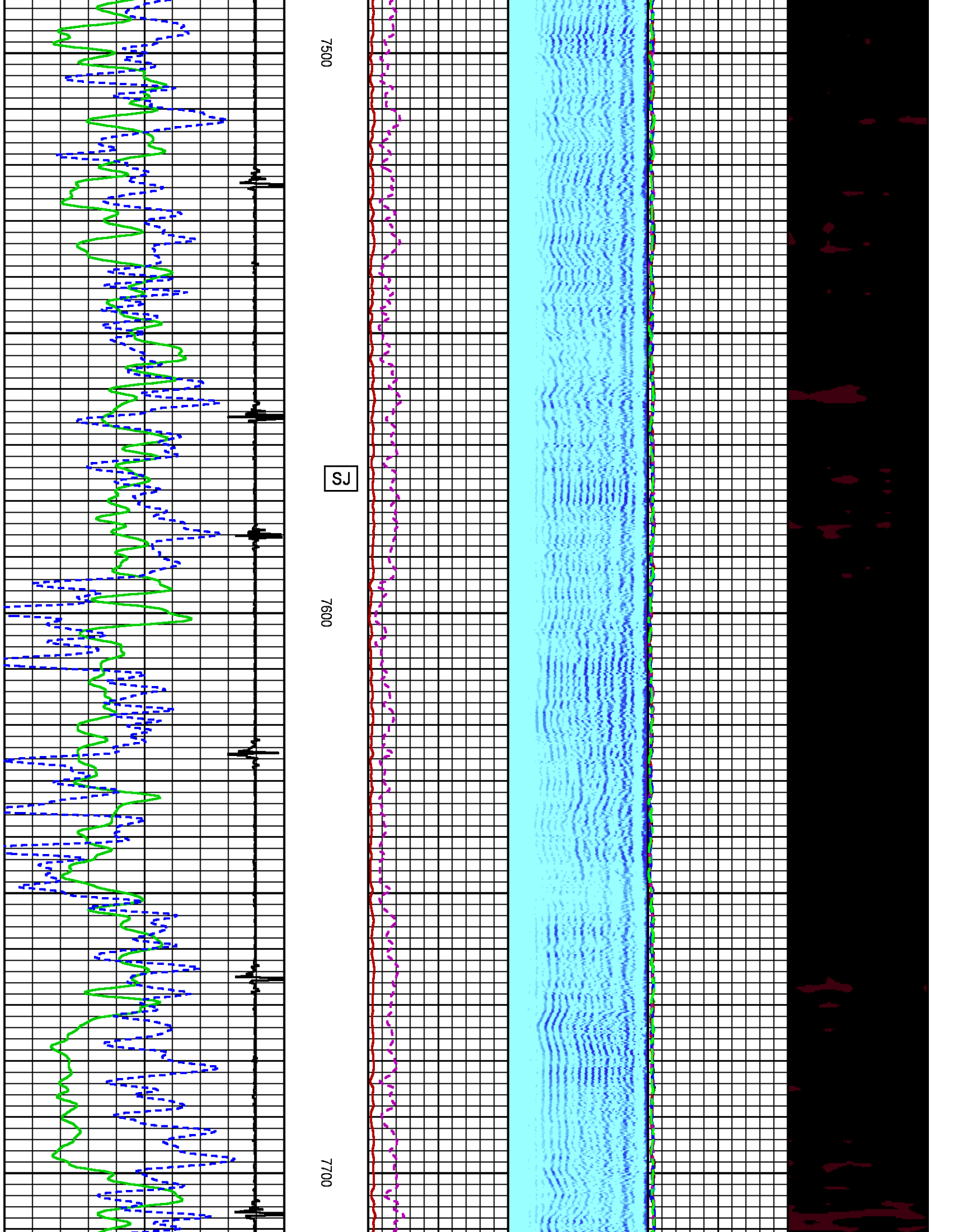


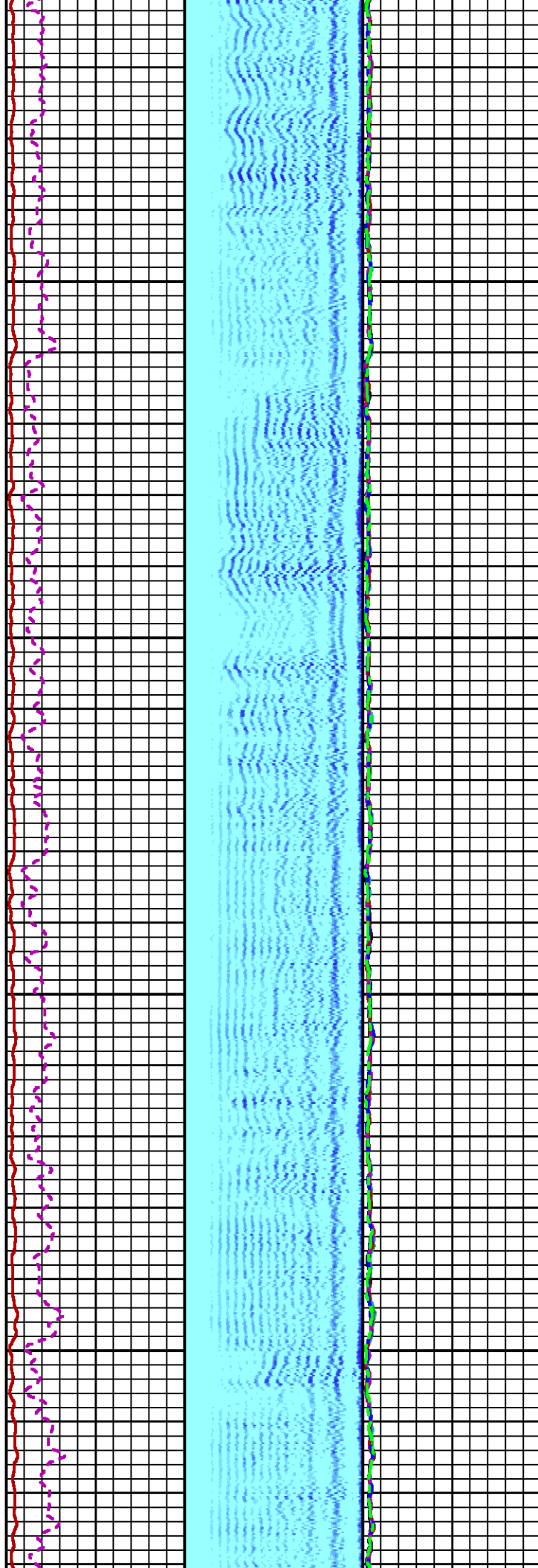
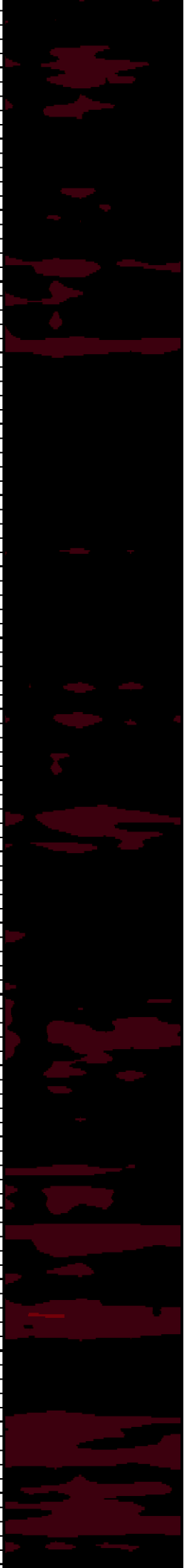


7300

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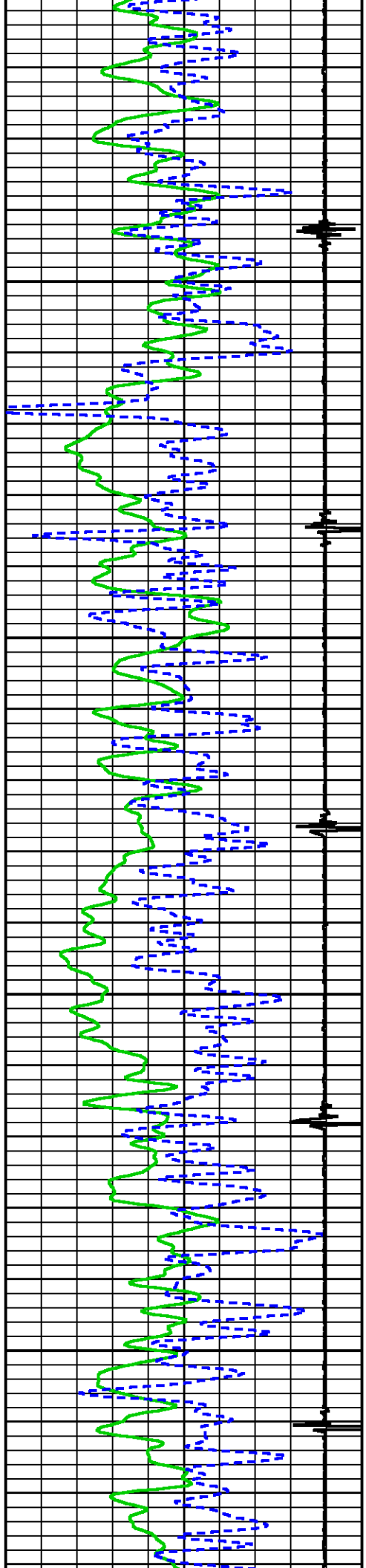


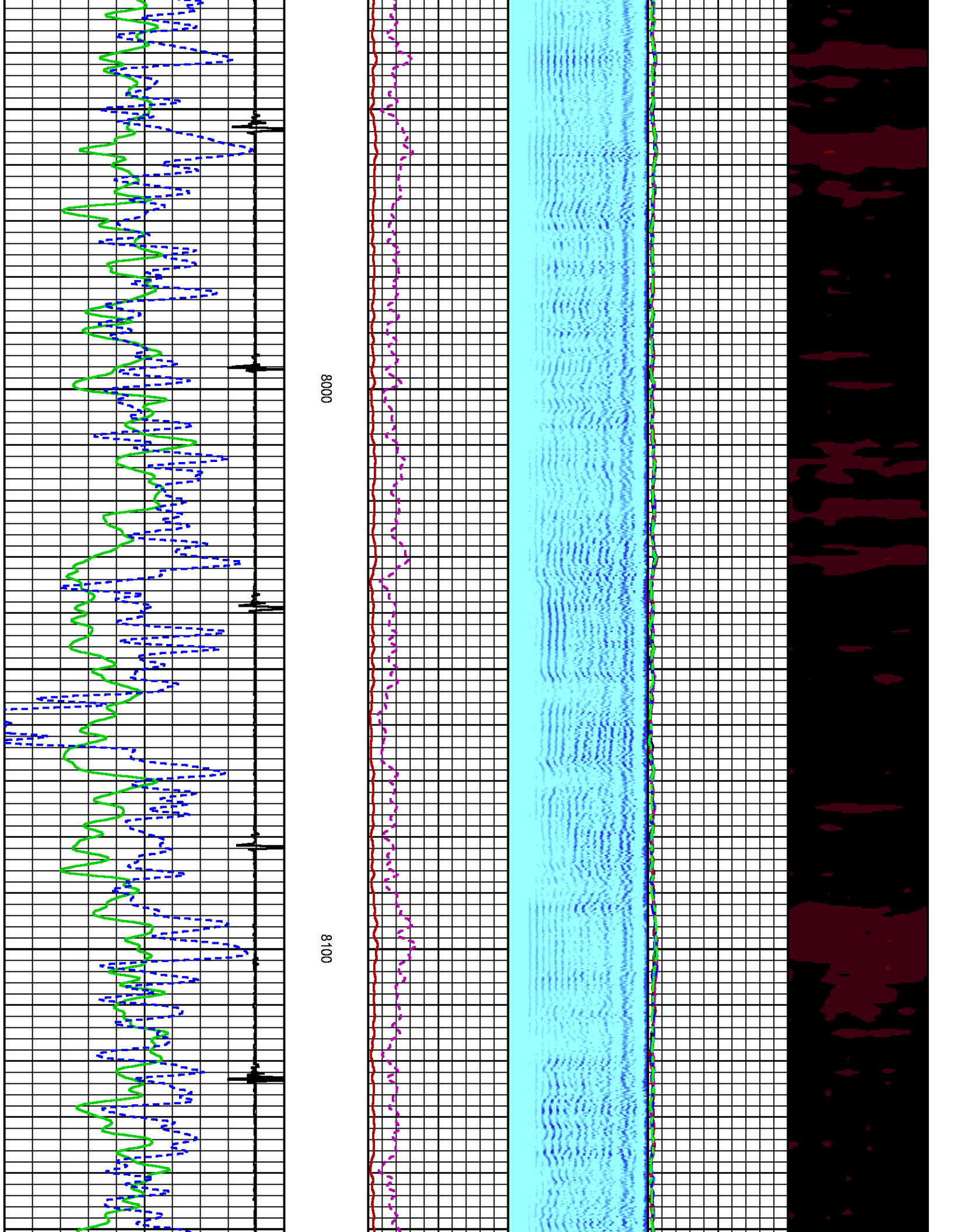


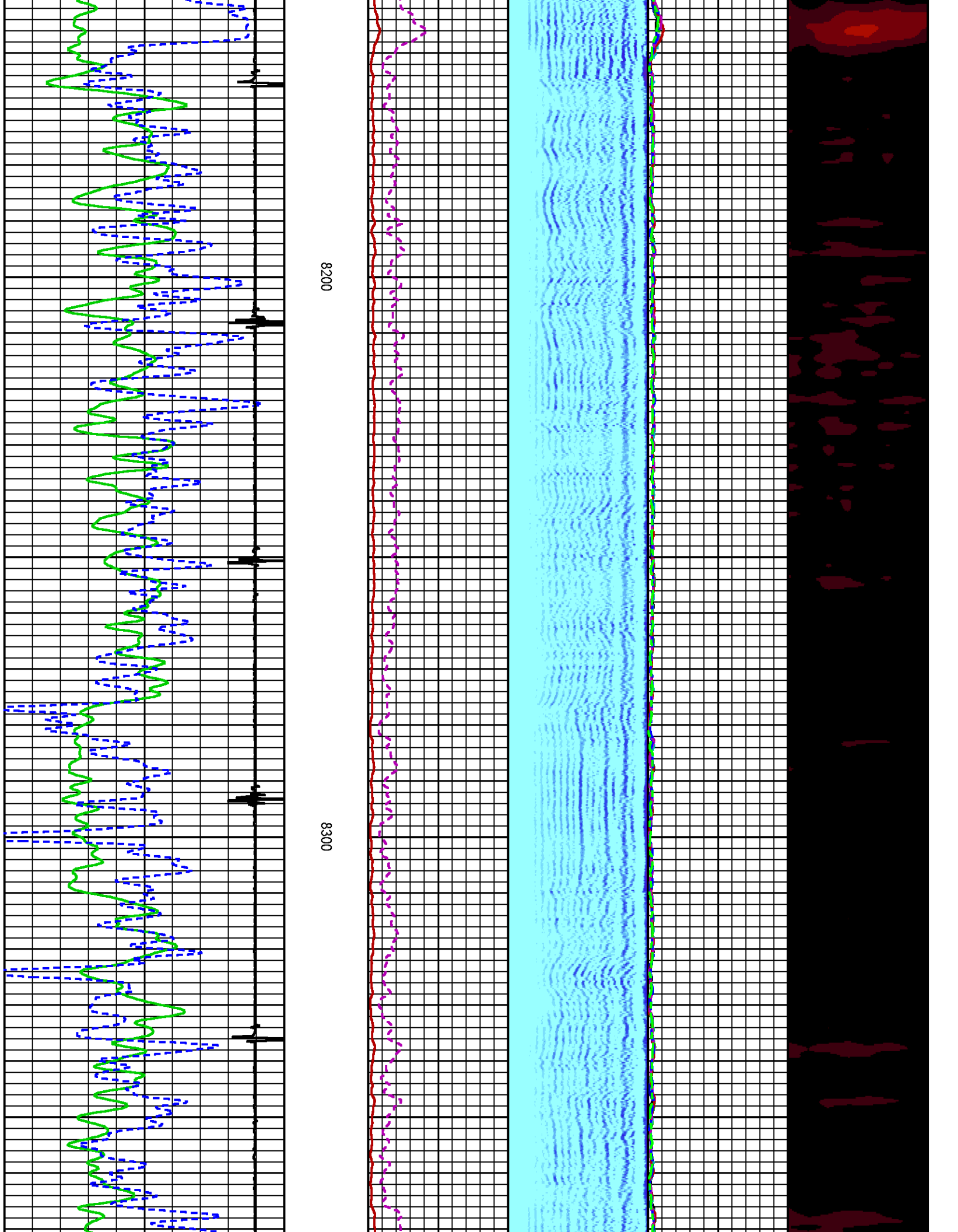


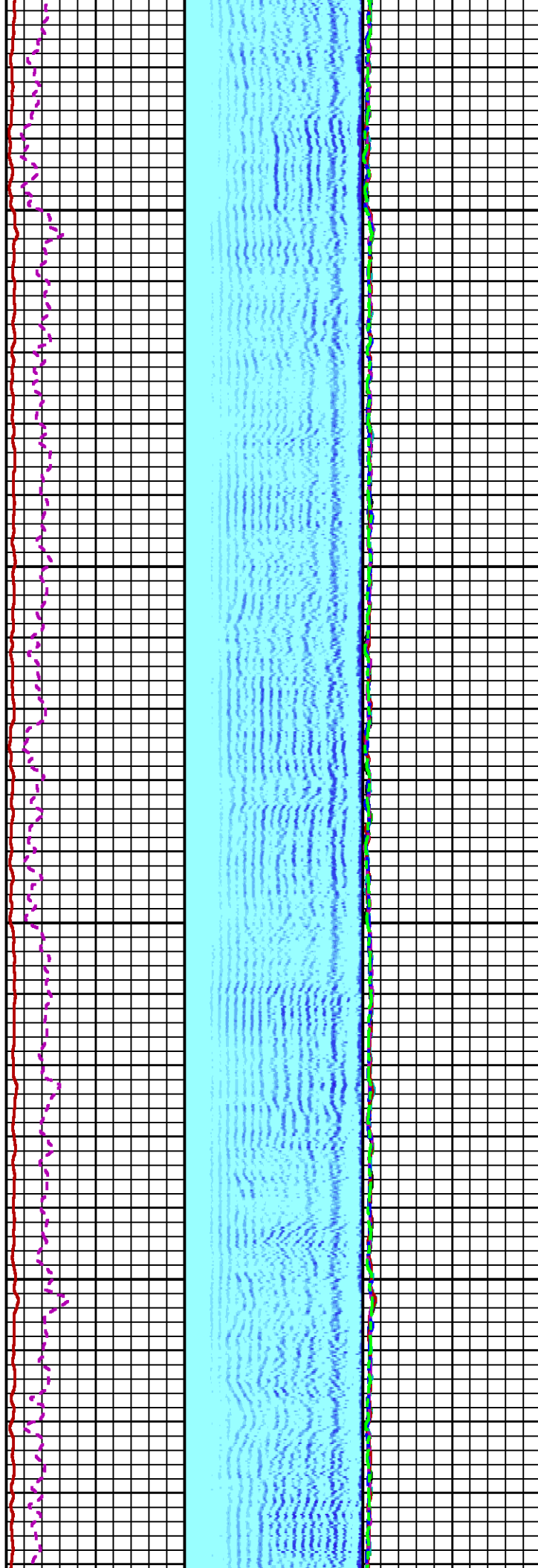
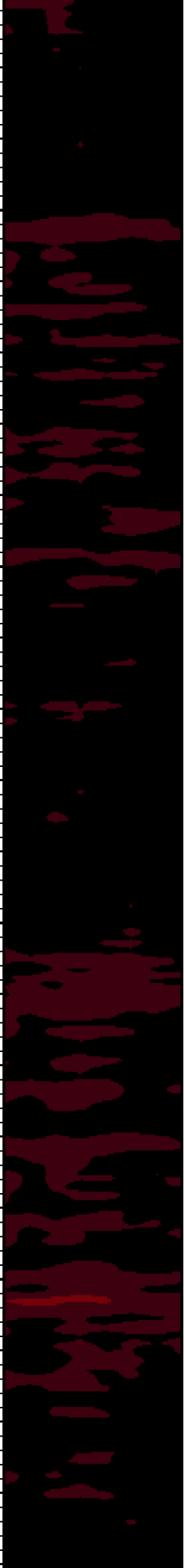
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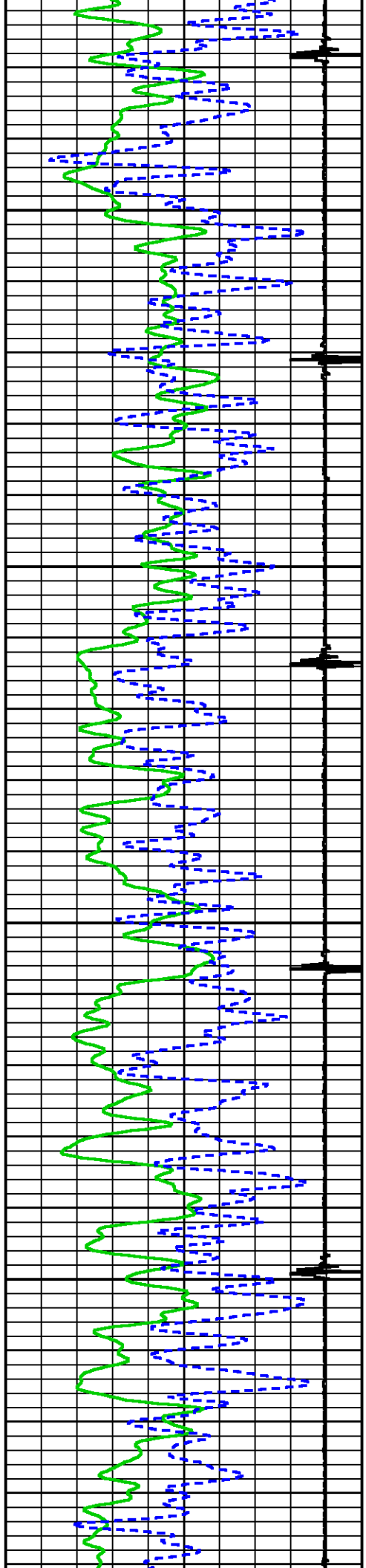


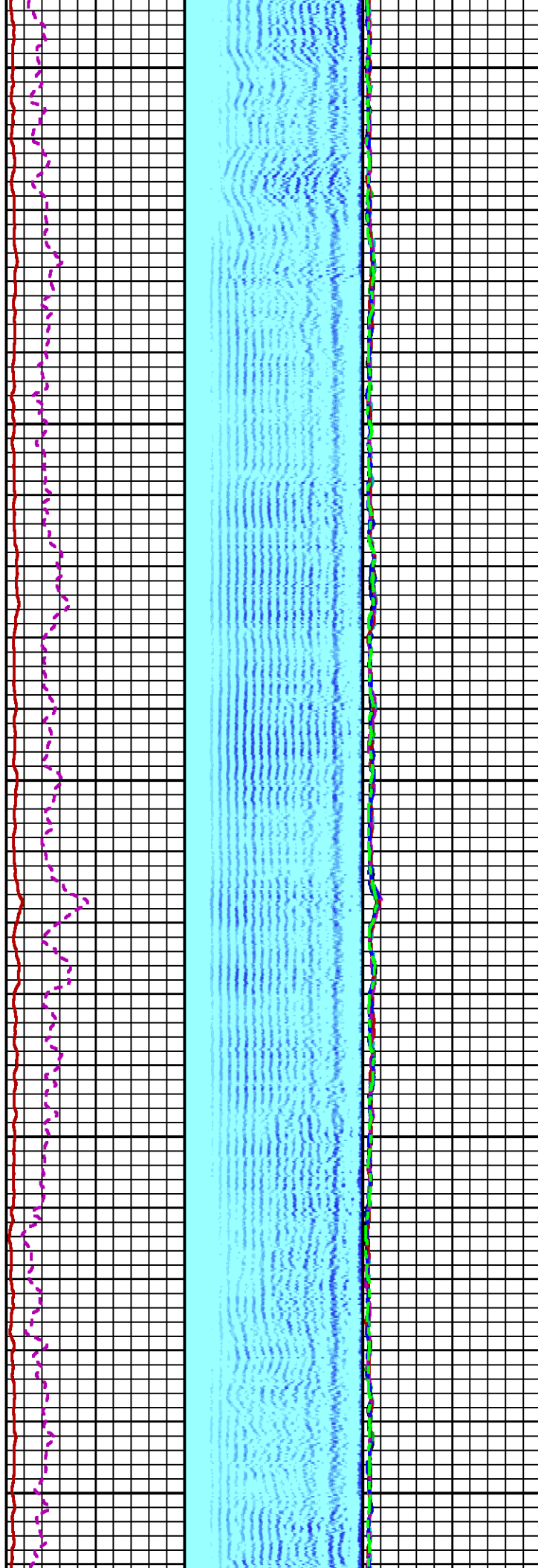
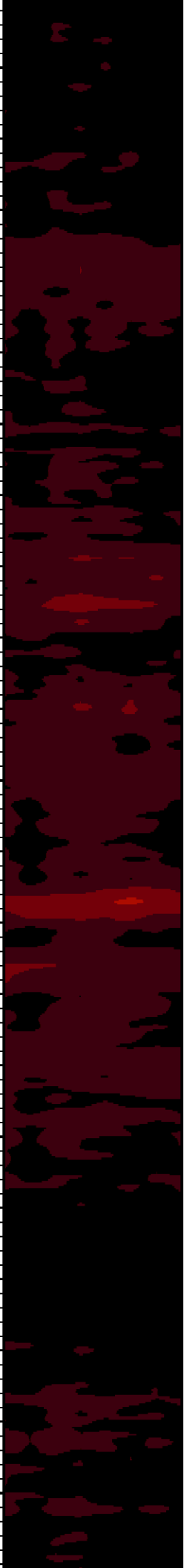




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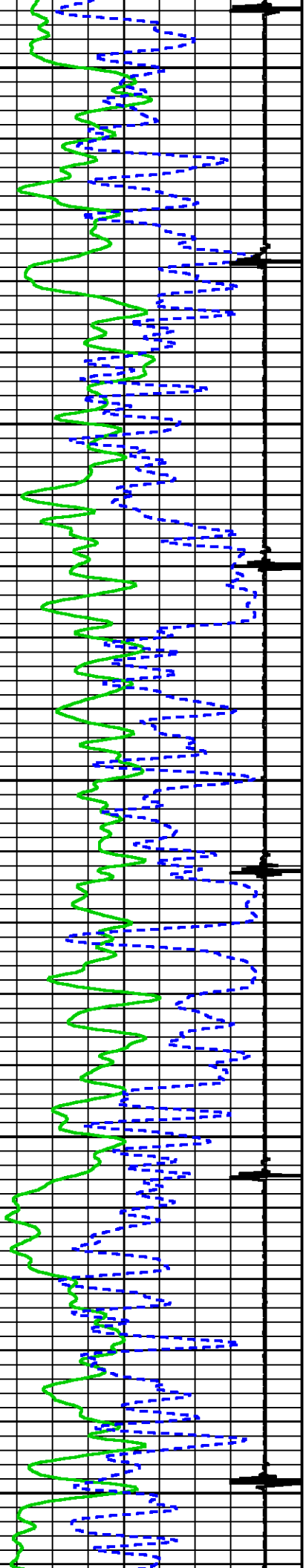


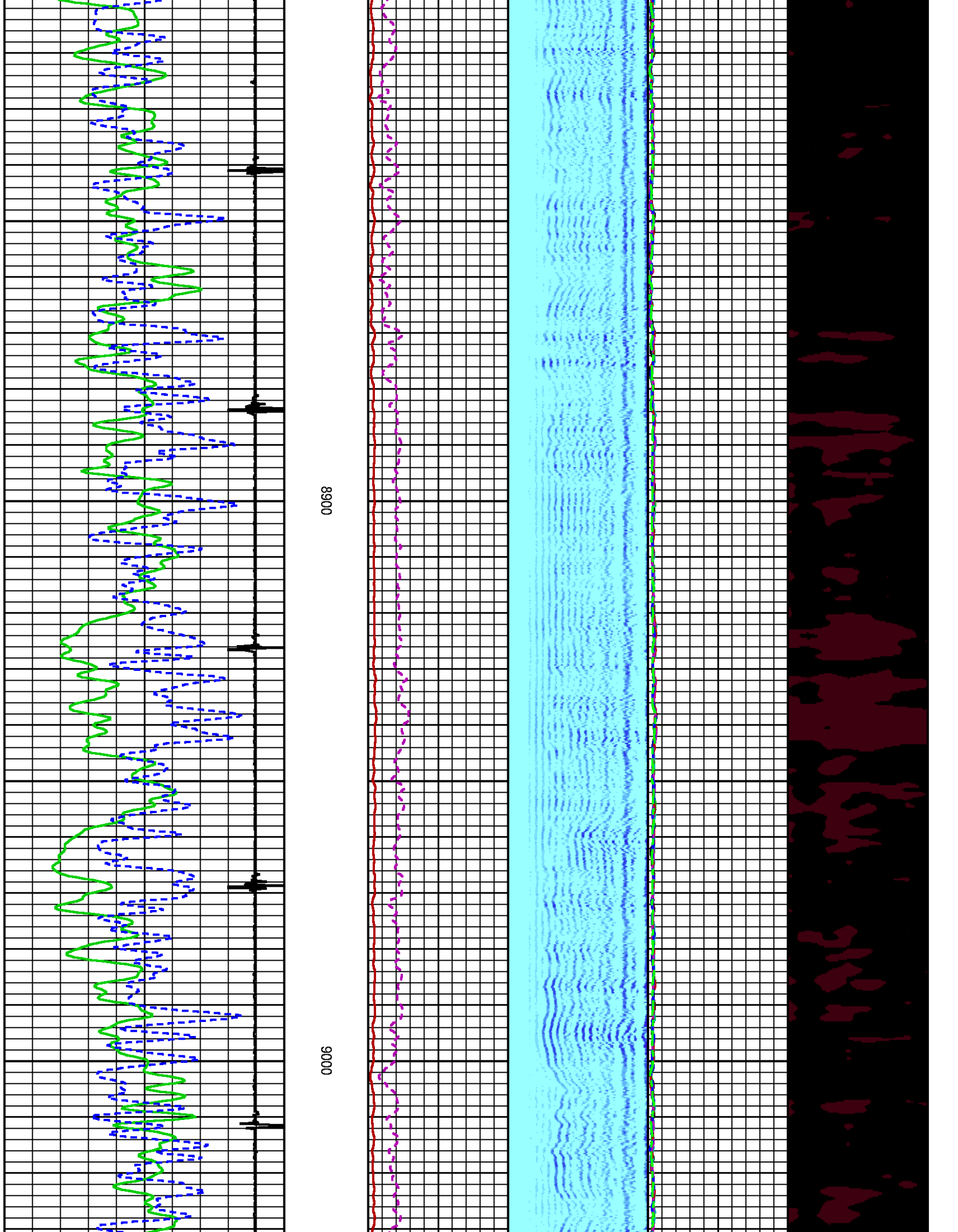


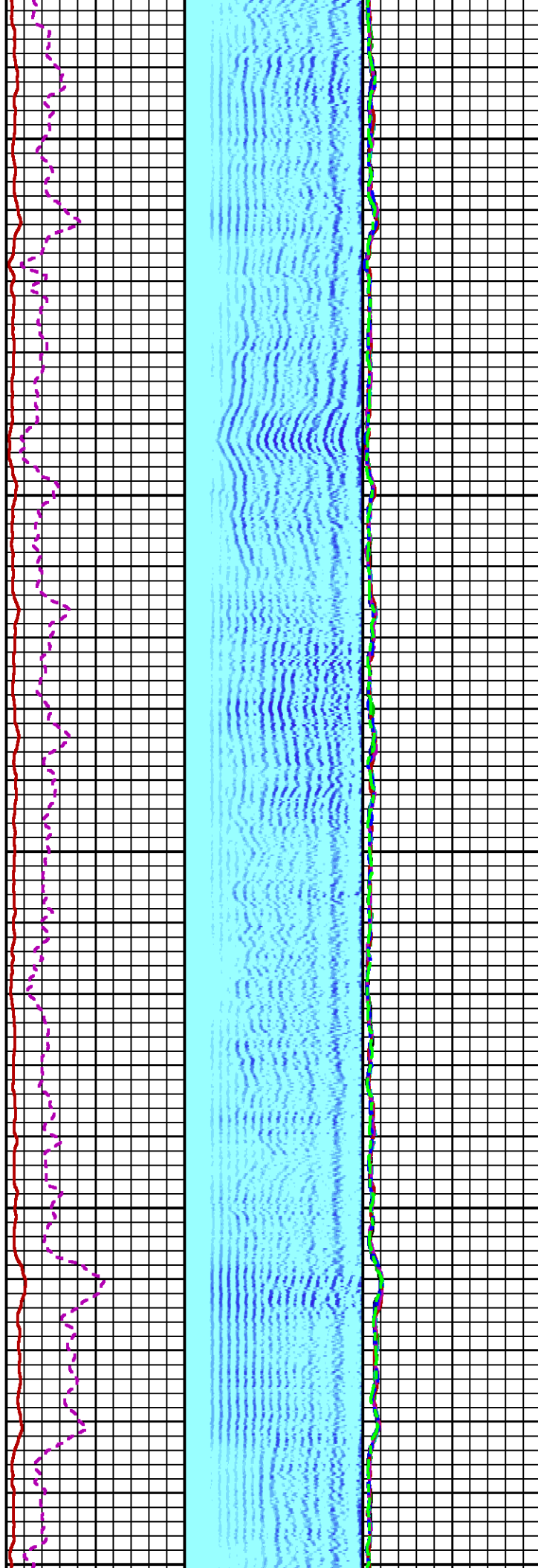
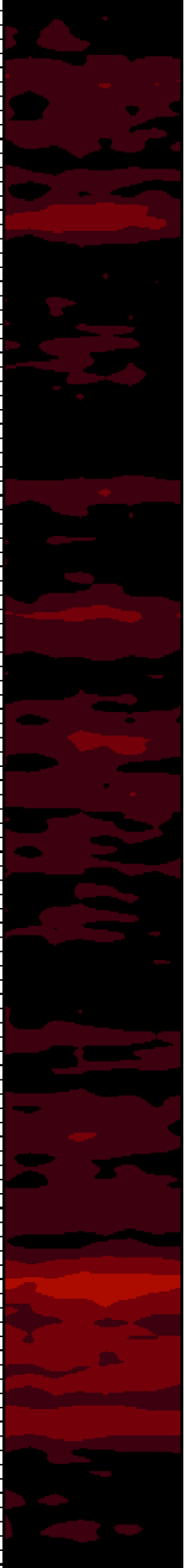
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8800



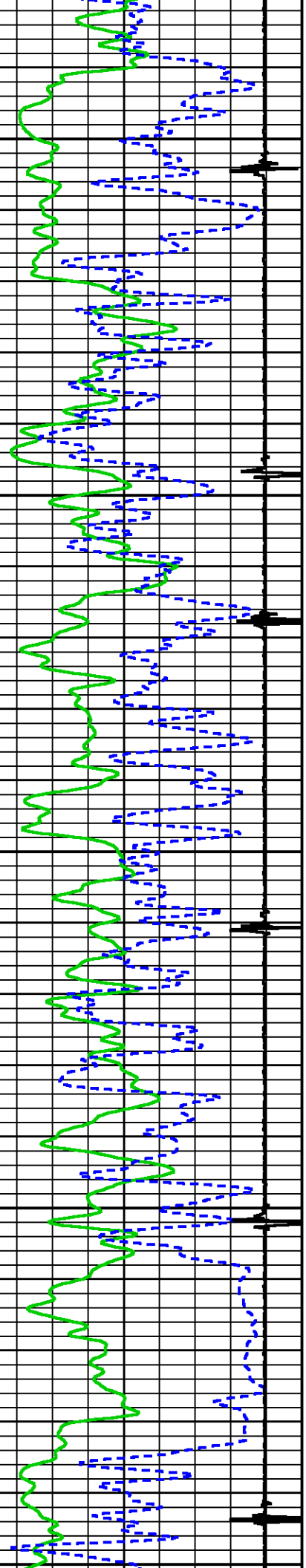


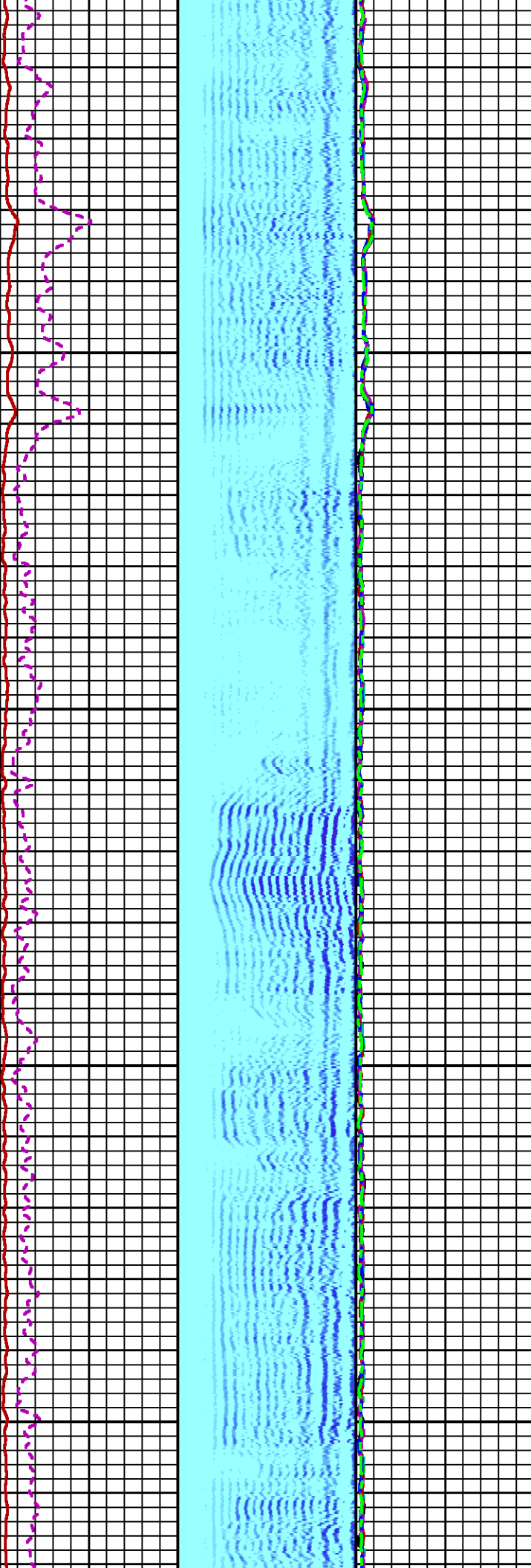
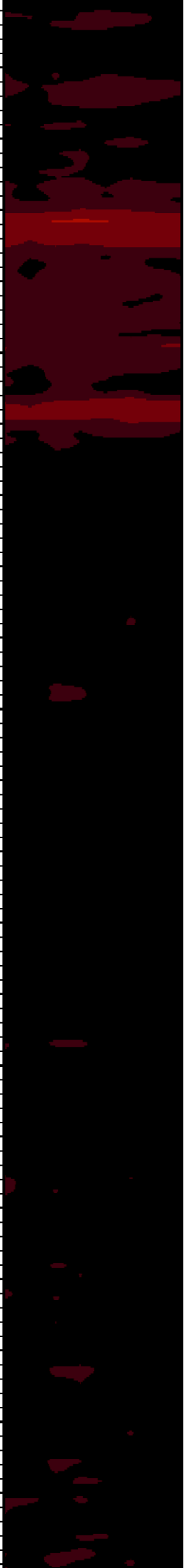


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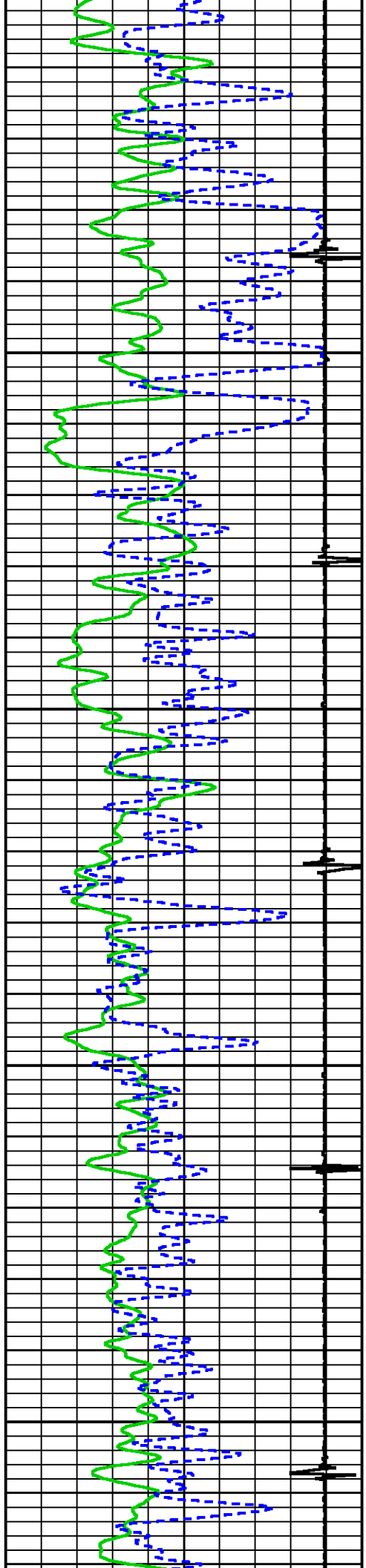
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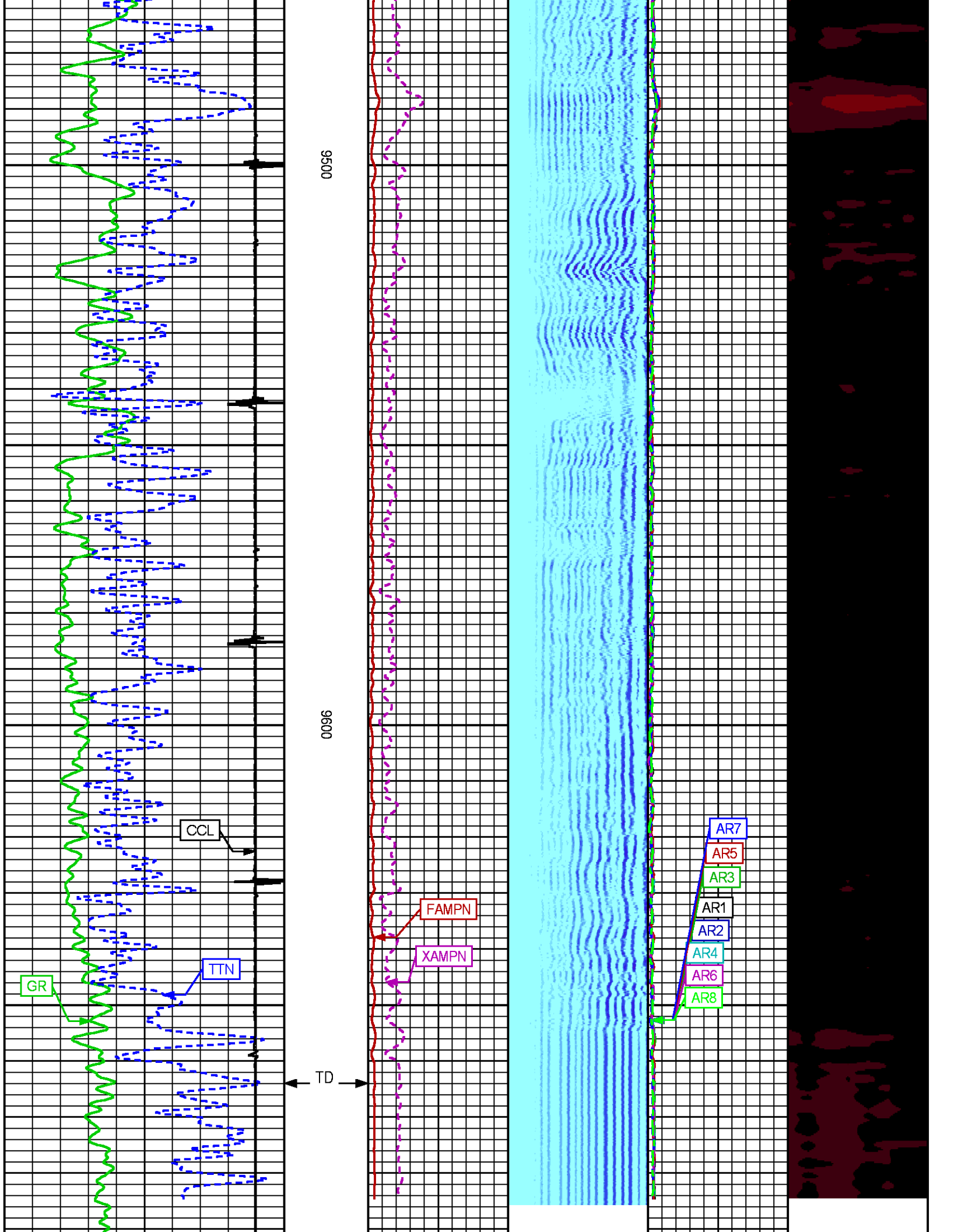


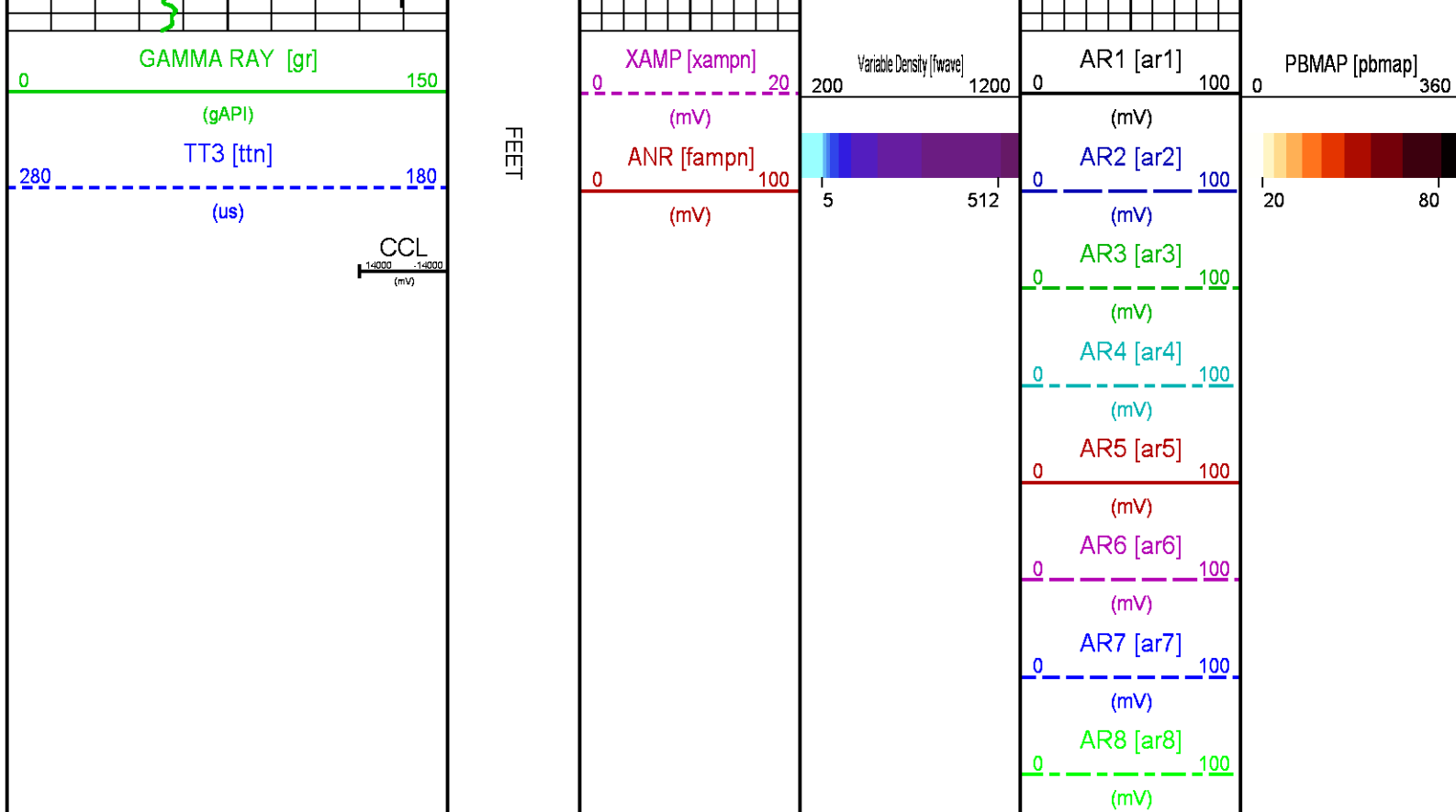


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9400







REPEAT PASS 0 PSI

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Updates: 1

Plotted: Sat Sep 1 18:06:28 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p012g01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 9425.250 ft BOTTOM DEPTH: 9681.750 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 | 0.00 | | TOP | BOTTOM |

ANALOG RAL PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) | |
|-------------------------|--------------------------|-------|-------|---------------|--------|
| AMPLITUDE WINDOW (NEAR) | AMP WINDOW START (fgp1*) | 187 | us | TOP | BOTTOM |
| | AMP WINDOW START (fgp2*) | 187 | us | " | " |
| | AMP WINDOW START (fgp3*) | 187 | us | " | " |
| | AMP WINDOW START (fgp4*) | 187 | us | " | " |

| | | | | | |
|---------------------------|----------------------------|---------|----|---|---|
| | AMP WINDOW START (fgp4*) | 187 | us | " | " |
| | AMP WINDOW START (fgp5*) | 187 | us | " | " |
| | AMP WINDOW START (fgp6*) | 187 | us | " | " |
| | AMP WINDOW START (fgp7*) | 187 | us | " | " |
| | AMP WINDOW START (fgp8*) | 187 | us | " | " |
| | AMP WINDOW START (fgpn*) | 187 | 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 | 200.465 | us | " | " |
| RAL TOOL DELAY | TOOL DELAY (str1*) | -67 | us | " | " |
| | TOOL DELAY (str2*) | -67 | us | " | " |
| | TOOL DELAY (str3*) | -67 | us | " | " |
| | TOOL DELAY (str4*) | -67 | us | " | " |
| | TOOL DELAY (str5*) | -67 | us | " | " |
| | TOOL DELAY (str6*) | -67 | us | " | " |
| | TOOL DELAY (str7*) | -67 | us | " | " |
| | TOOL DELAY (str8*) | -67 | us | " | " |
| BASELINE NOISE (NEAR) | TOOL DELAY (strn*) | -67 | us | " | " |
| | NOISE WINDOW START | 125 | us | " | " |
| | NOISE WINDOW LENGTH | 25 | us | " | " |

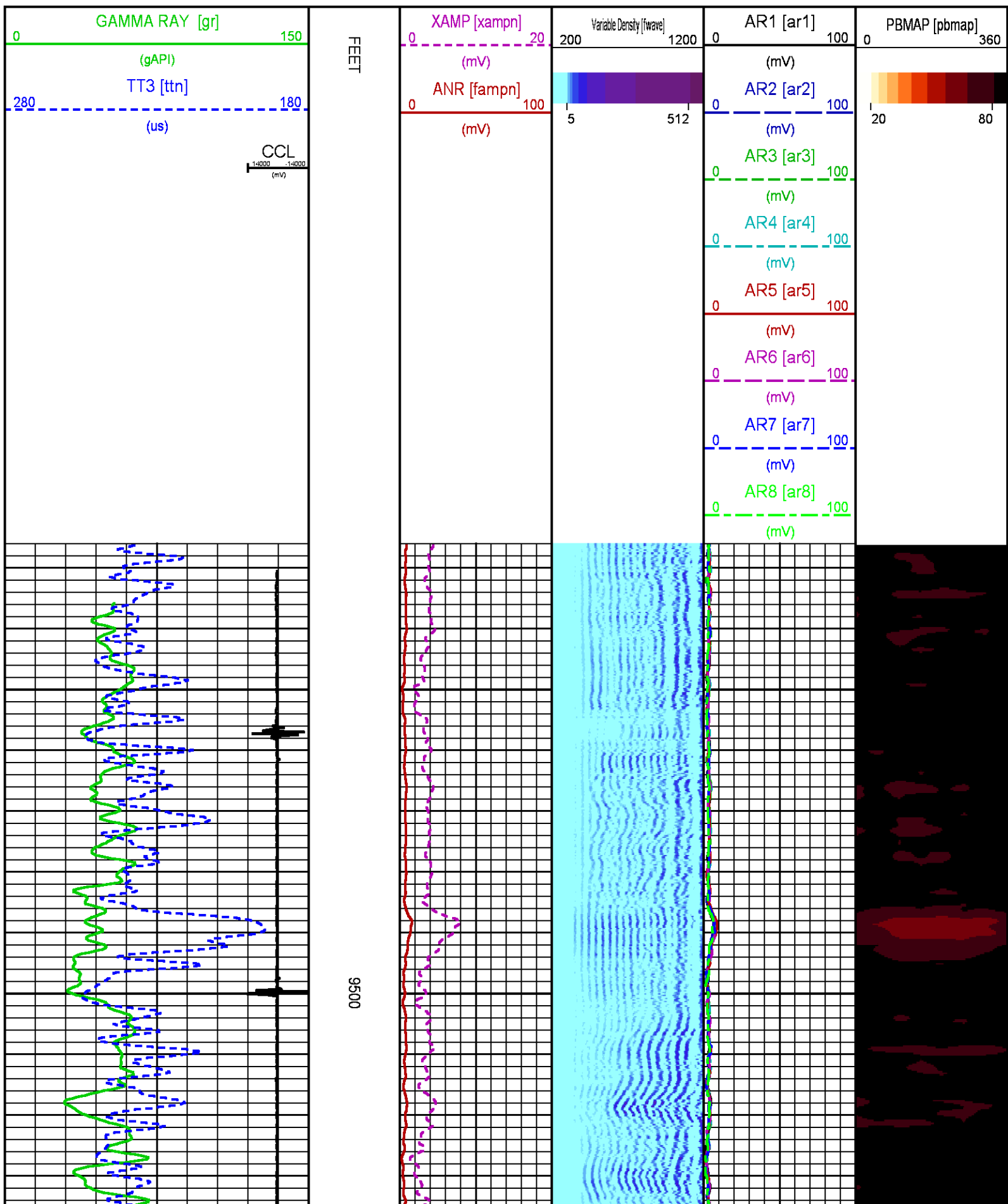
| PERCENT BOND CEMENT MAP | | | | | |
|-------------------------|---------------------|-------|-------|---------------|--------|
| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) | |
| RAL FREE PIPE AMPLITUDE | FREE AMP REC 1 | 80 | mV | TOP | BOTTOM |
| | FREE AMP REC 2 | 80 | mV | " |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

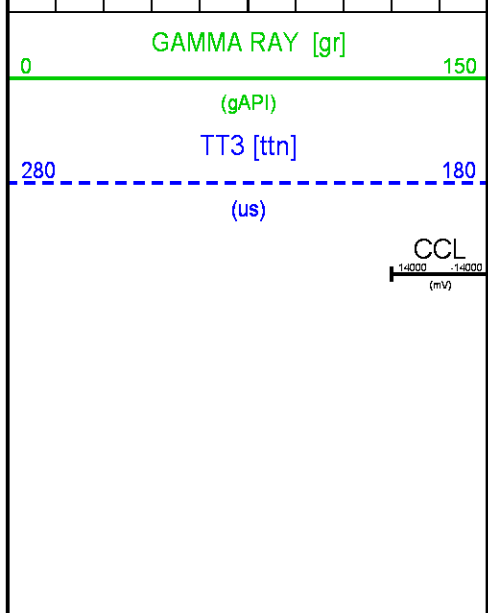
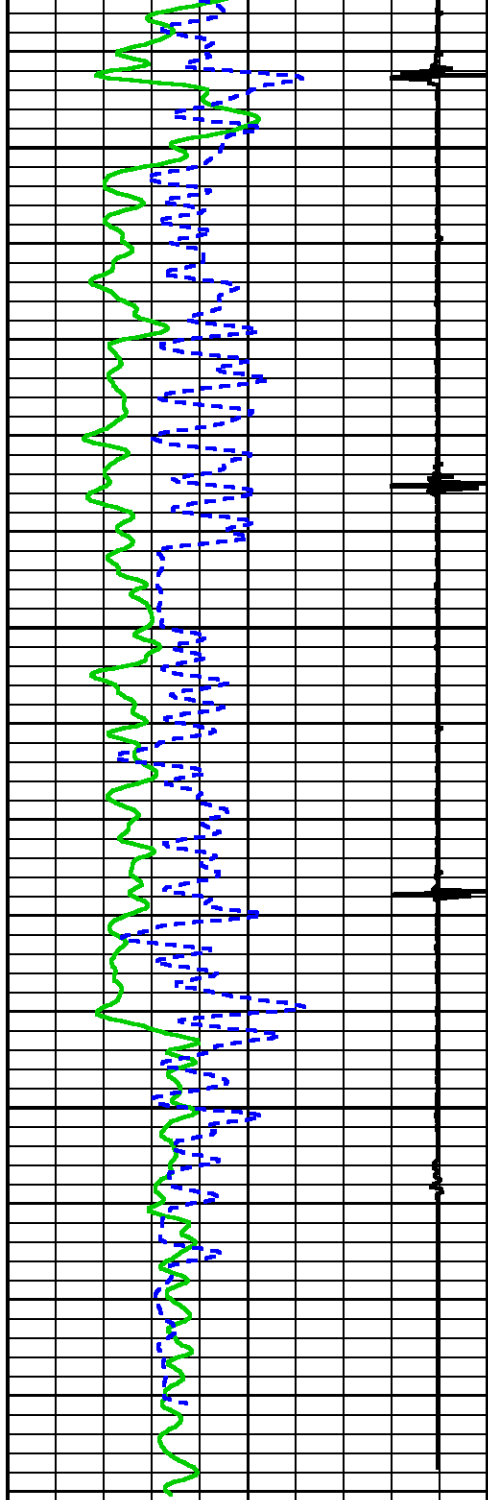
| CURVE DESCRIPTION REPORT | | |
|--------------------------|---------------------|---|
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
| F1:AR1 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R1 |
| F1:AR2 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R2 |
| F1:AR3 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R3 |
| F1:AR4 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R4 |
| F1:AR5 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R5 |
| F1:AR6 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R6 |
| F1:AR7 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R7 |
| F1:AR8 | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE T-R8 |
| F1:CCL | Sep 1 15:57:41 2018 | CASING COLLAR LOCATOR |
| F1:FAMPN | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE NEAR RECEIVER |
| F1:FWAVE | Sep 1 15:57:41 2018 | FAR WAVE FORM |
| F1:GR | Sep 1 15:57:41 2018 | GAMMA RAY |
| F1:PBMAP | Sep 1 15:57:41 2018 | PERCENT BOND CEMENT MAP |
| F1:TTN | Sep 1 15:57:41 2018 | TRAVELTIME FROM NEAR TRANSMITTER-RECEIVER |
| F1:XAMPN | Sep 1 15:57:41 2018 | FIXED GATE AMPLITUDE NEAR RECEIVER TIMES FIVE |

| CURVE MEASURE POINT OFFSET | | | | | | | |
|----------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
| AR1 | -11.25 | AR5 | -11.25 | CCL | -5.75 | XAMPN | -11.25 |
| 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 | | |

| | |
|---------------|---|
| Presentation | : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/ |
| | CC_FEDERAL_0697-03-08E_RAL_RÉPEAT.fvpdf [5"/100' Scale] |
| Plot Interval | : 9426 - 9692 Feet |

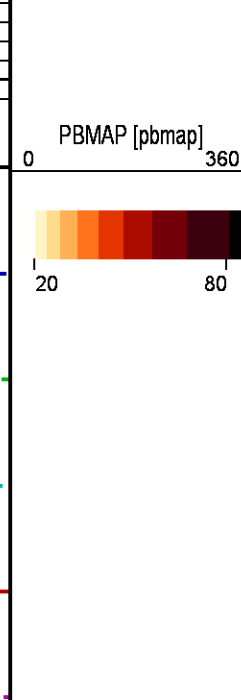
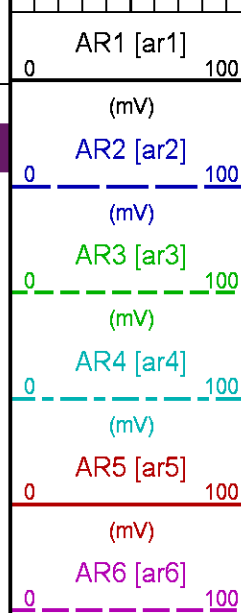
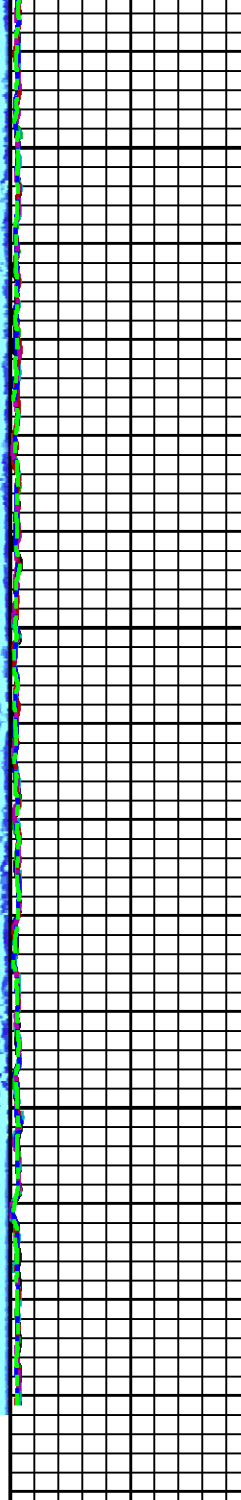
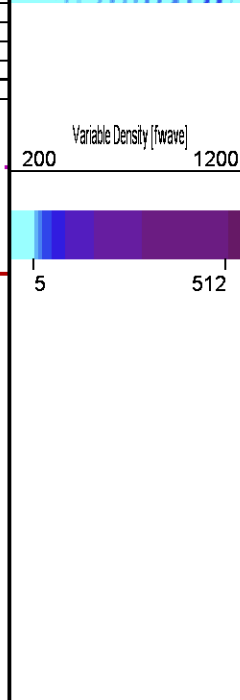
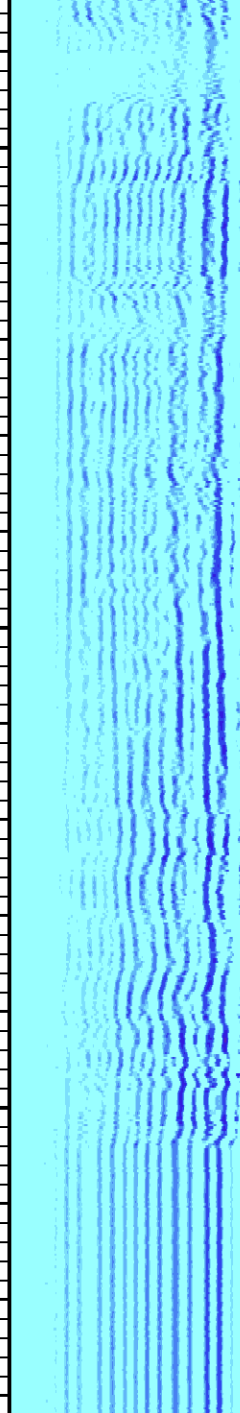
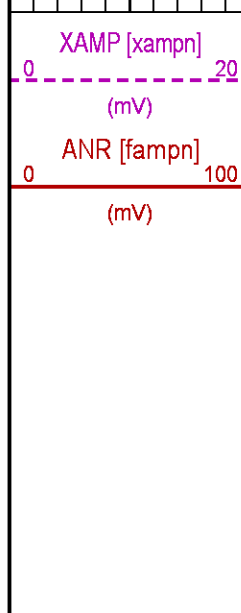
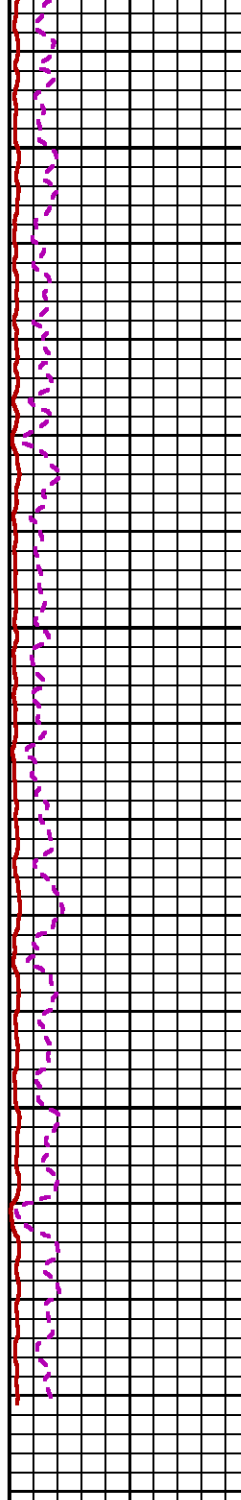
Data File 1 : F1 : SysA:/dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/45_LARAMIE_CC_FEDERAL_0697-03-08E_RAL_REPEAT.xtf
Created On : Sep 1 15:57:41 2018
Company : LARAMIE ENERGY LLC
Well : CC_FEDERAL_0697-03-08E
Field : GRAND VALLEY
File Interval : 9424.75 - 9693.25 Feet
OCT : p012g

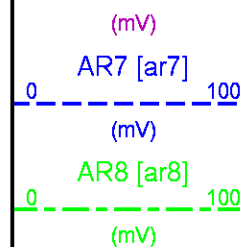




9600

FEET





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p012g.lp1

RAL PRIMARY CALIBRATION SUMMARY

TOOL #: 1426XA 11871500

DATE/TIME PERFORMED: Sat Sep 1 15:27:18 2018

UNIT #: 5753XD 111111

| | NEAR (mV) | RADIAL (mV) | FAR (mV) |
|---------|--------------|----------------|-------------|
| TARGETS | 100.00 | 100.00 | 150.00 |

| | NEAR | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | FAR | CAL |
|----------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| ZERO (mV) | -0.22 | -0.10 | -0.01 | -0.21 | -0.07 | -0.02 | -0.05 | 0.40 | -0.00 | -0.58 | -0.01 |
| AMP FLUID (mV) | 43 | 42 | 42 | 42 | 43 | 43 | 43 | 42 | 42 | 57 | 41 |
| TT (us) | 214 | 215 | 215 | 214 | 214 | 214 | 213 | 213 | 215 | 322 | 215 |
| M FACTOR | 2.33 | 2.39 | 2.39 | 2.35 | 2.34 | 2.34 | 2.34 | 2.42 | 2.39 | 2.58 | 2.42 |

RAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1426XA 11871500

DATE/TIME PERFORMED: Sat Sep 1 15:29:08 2018

DAYS SINCE CAL: 0

UNIT #: 5753XD 111111

CABLE #: ML4291 SMALL1

| | NEAR (mV) | R1 (mV) | R2 (mV) | R3 (mV) | R4 (mV) | R5 (mV) | R6 (mV) | R7 (mV) | R8 (mV) | FAR (mV) | CAL (mV) |
|---------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| ZERO | -1.13 | -1.17 | -0.64 | -1.46 | -1.37 | -0.88 | -0.96 | -0.16 | -0.42 | -1.80 | -0.03 |
| AMP AIR | 1.13 | 1.18 | 0.74 | 1.55 | 1.40 | 1.08 | 1.24 | 1.81 | 1.05 | 1.74 | 99.56 |

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1355XA 12670180

DATE/TIME PERFORMED: Thu Mar 29 16:39:27 2018

UNIT #: 4352 ML4352

CALB JIG #: 4702NK DA_228

| | BACKGROUND (cts) | CALBRTR ON (cts) | CR DIFF (cts/s) | MULT | BACKGROUND (gAPI) | CALBRTR ON (gAPI) | CALBRTR (gAPI) |
|----|---------------------|---------------------|--------------------|-------|----------------------|----------------------|-------------------|
| GR | 41.51 | 221.16 | 179.6 | 0.557 | 23.11 | 123.11 | 100 |

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1355XA 12670180

DATE/TIME PERFORMED: Thu Mar 29 16:50:56 2018

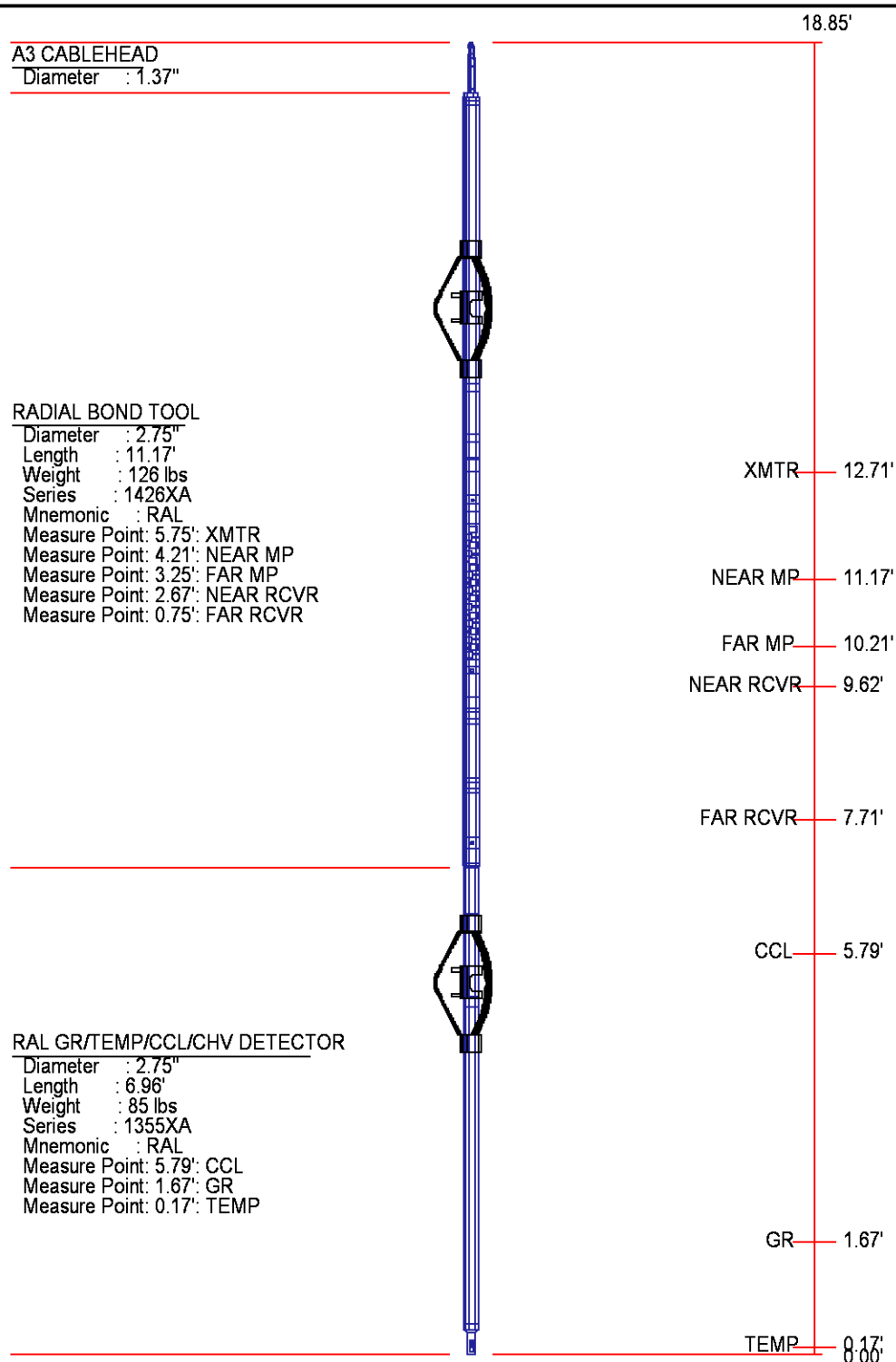
UNIT #: 4352 ML4352

VERI JIG #: 4702NK DA_228

| | BACKGROUND (cts) | CALBRTR ON (cts) | MULT | BACKGROUND (gAPI) | CALBRTR ON (gAPI) | DIFF. (gAPI) |
|----|---------------------|---------------------|-------|----------------------|----------------------|-----------------|
| GR | 40.09 | 214.13 | 0.557 | 22.32 | 119.20 | 96.88 |
| | | | | | | 90.00 110.00 |

INSTRUMENT CONFIGURATION

Source File: /dat1a/LARAMIE_CC_FEDERAL_0697-03-08E/p012g~RAL-tdg



TOTAL LENGTH: 18.85'
TOTAL WEIGHT: 227 lbs
MAX DIAMETER: 0'4.00"

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY LARAMIE ENERGY LLC
WELL CC FEDERAL 0697-03-08E
FIELD GRAND VALLEY
COUNTY GARFIELD **STATE** COLORADO

FILE NO:
CH140252J
API NO:
05045238070000

LOCATION:

SHL: 1776.0' FWL & 1224.0' FEL
SHL: 1776.0' FWL & 1224.0' FEL

SEC 3 **TWP** 6S **RGE** 97W

ELEVATIONS:

KB 8458 FT
DF
GL 8428 FT

DATE 01-Sep-2018