



RADIAL CEMENT BOND LOG

| | | | |
|------------------------|--------------------------|-----------|--|
| Company | ANADARKO PETROLEUM CORP. | | |
| Well | NRC 16-8 | | |
| Field | WATTENBERG | | |
| County | WELD | State | COLORADO |
| Location: | API # : 05-123-31335 | | Other Services |
| Permanent Datum | SEC 8 | TWP 1N | RGE 67W |
| Log Measured From | GL | Elevation | 5057 |
| Drilling Measured From | KB 15' | | K.B. 5072' D.F. 5071' G.L. 5057' |
| | SW SE | | |

| | | | |
|------------------------|---------------|--|--|
| Date | 1/11/2019 | | |
| Run Number | 1 | | |
| Depth Driller | 8660' | | |
| Depth Logger | 4900' | | |
| Bottom Logged Interval | 4900' | | |
| Top Log Interval | SURFACE | | |
| Open Hole Size | N/A | | |
| Type Fluid | H2O | | |
| Density / Viscosity | ~8.3# | | |
| Max. Recorded Temp. | N/A | | |
| Estimated Cement Top | 4874' / 1000' | | |
| Time Well Ready | ROA | | |
| Time Logger on Bottom | 0810 | | |
| Equipment Number | W-054 | | |
| Location | WINDSOR | | |
| Recorded By | MCDANIEL | | |
| Witnessed By | RAUL REYES | | |

| Borehole Record | | | | Tubing Record | | | |
|-------------------|-----|--------|----|---------------|--------|---------|--------|
| Run Number | Bit | From | To | Size | Weight | From | To |
| Casing Record | | | | | | | |
| Surface String | | 8-5/8" | | Wgt/Ft | | Top | Bottom |
| Prot. String | | | | 24# | | SURFACE | 1011' |
| Production String | | 4-1/2" | | 11.6# | | SURFACE | 8647' |
| Liner | | | | | | | |

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

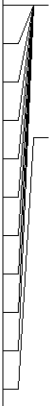
Comments

LOG WAS NOT CORRELATED TO ANY OTHER LOG
 LOG WAS RAN WITH 0 PSI @ SURFACE
 TOOL CALIBRATED TO FREE PIPE @ 4824'
 SHOP CALIBRATION PERFORMED ON 1/10/2019
 THANK YOU FOR USING CUTTERS WIRELINE SERVICE

| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|--------|-------------|-----------|---------------------------------|----------|---------|---------|
| | | | Standard Standard Cable Head | 1.00 | 1.69 | 1.00 |

WV3FT 8.69
 WVFCAL 8.69
 WVFS1 8.69
 WVFS2 8.69
 WVFS3 8.69
 WVFS4 8.69
 WVFS5 8.69
 WVFS6 8.69
 WVFS7 8.69
 WVFS8 8.69
 WV5FT 7.69

8.69
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 7.69



RBT-Probe (110217)
 Probe 2.75" Radii Bond Tool

8.75 2.75 90.00

CCL

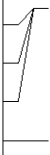
3.50

GR-275D_INC (275D_with_INC)
 2-3/4" GR-CCL with Inclination

4.50 2.75

IntTemp 2.00
 ACCX 1.83
 ACCY 1.83
 ACCZ 1.83
 GR 0.83

2.00
 1.83
 1.83
 1.83
 0.83



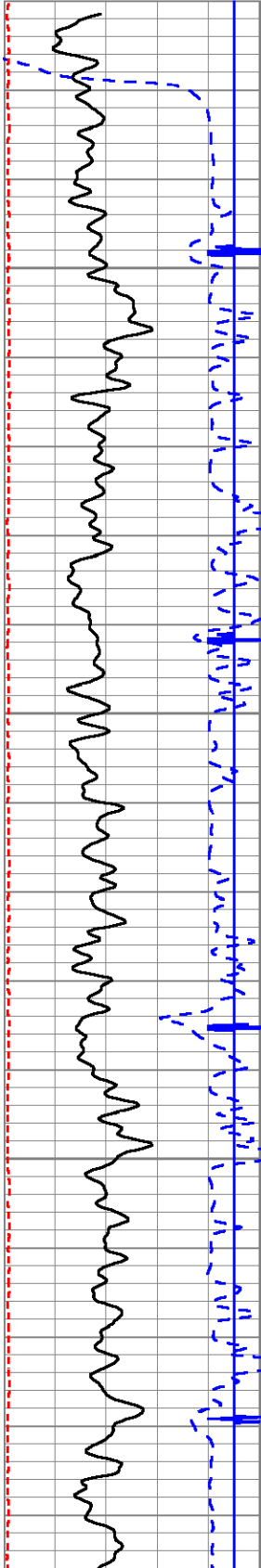
Dataset: anadarkonrc16-8.db: field/well/run1/pass5
 Total Length: 14.25 ft
 Total Weight: 91.00 lb
 O.D. 2.75 in

Database File: anadarkonrc16-8.db
 Dataset Pathname: pass5
 Presentation Format: scbl_inc
 Dataset Creation: Fri Jan 11 08:06:34 2019 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240

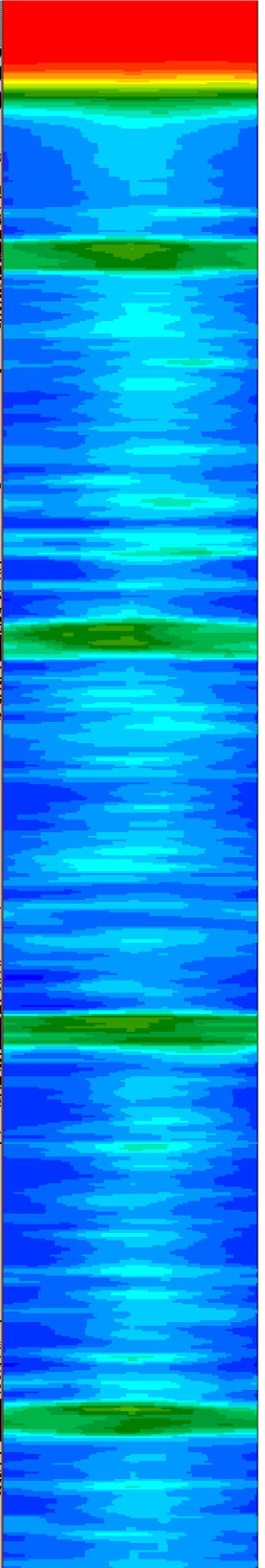
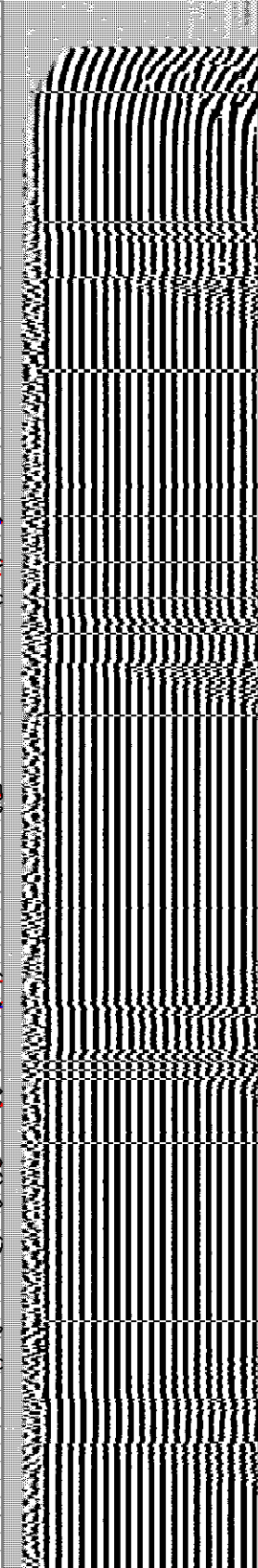
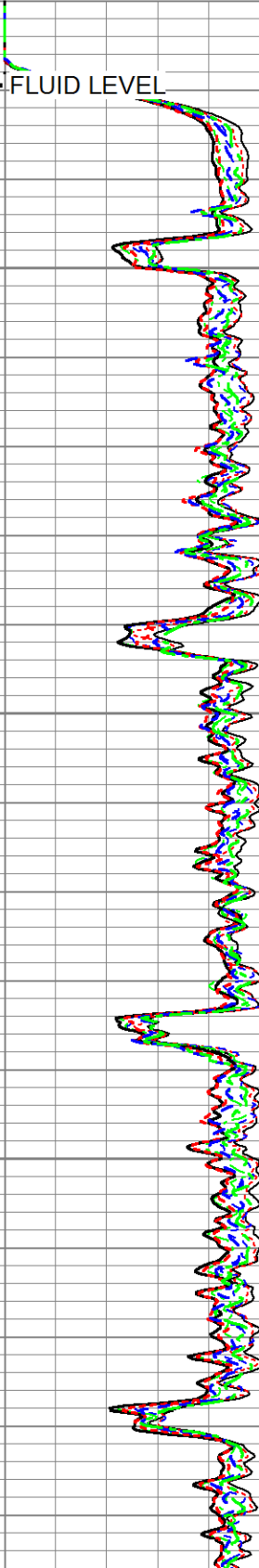
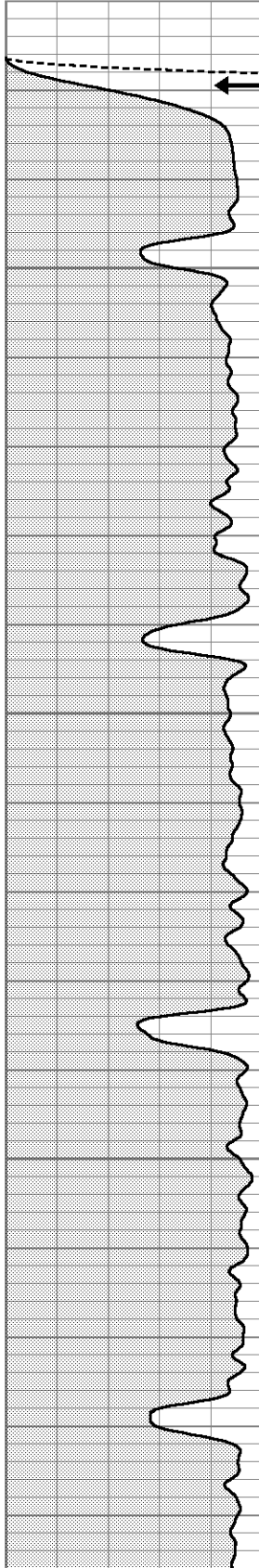
| | | |
|-----|---------------|-----|
| 325 | TT (usec) | 225 |
| -9 | CCL | 1 |
| 0 | GR (GAPI) | 150 |
| 0 | DEVIATION (°) | 50 |
| 150 | GR (GAPI) | 300 |

| | | | | | |
|---|-------------|-----|---|-------|-----|
| 0 | AMP (mV) | 100 | 0 | AMPS1 | 100 |
| 0 | AMPx10 (mV) | 10 | 0 | AMPS2 | 100 |
| 0 | | | 0 | AMPS3 | 100 |
| 0 | | | 0 | AMPS4 | 100 |
| 0 | | | 0 | AMPS5 | 100 |
| 0 | | | 0 | AMPS6 | 100 |
| 0 | | | 0 | AMPS7 | 100 |
| 0 | | | 0 | AMPS8 | 100 |

| | | | | | |
|-----|-----|------|---|------------|-----|
| 200 | VDL | 1200 | 1 | Cement Map | 8 |
| 0 | | | 0 | | 100 |



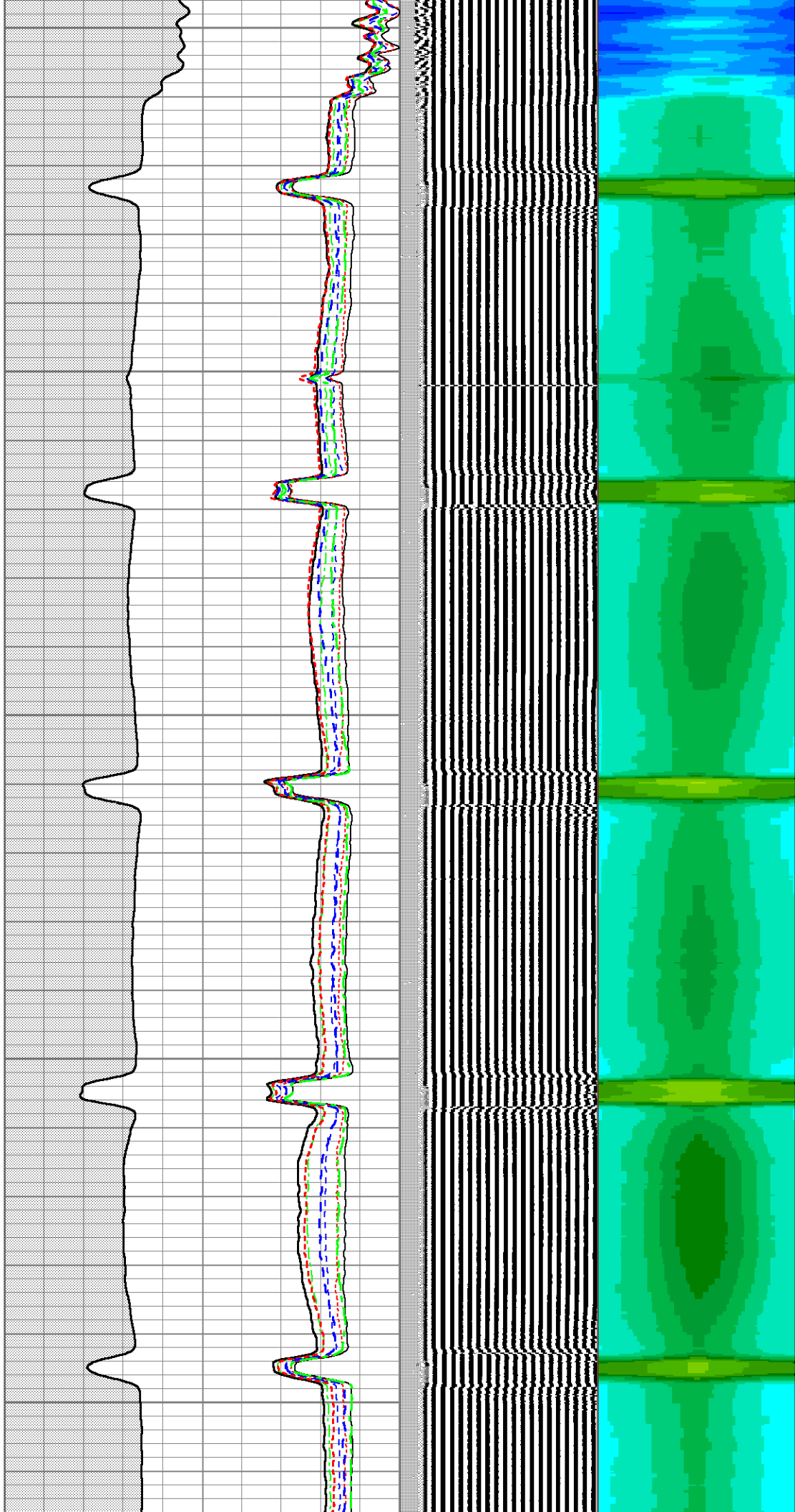
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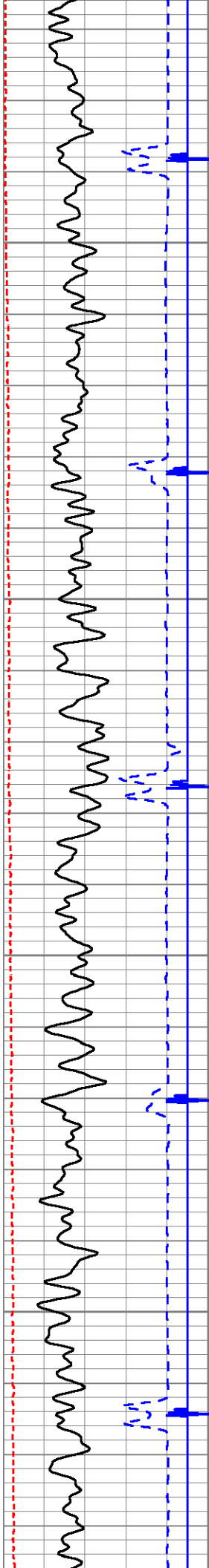


200

300

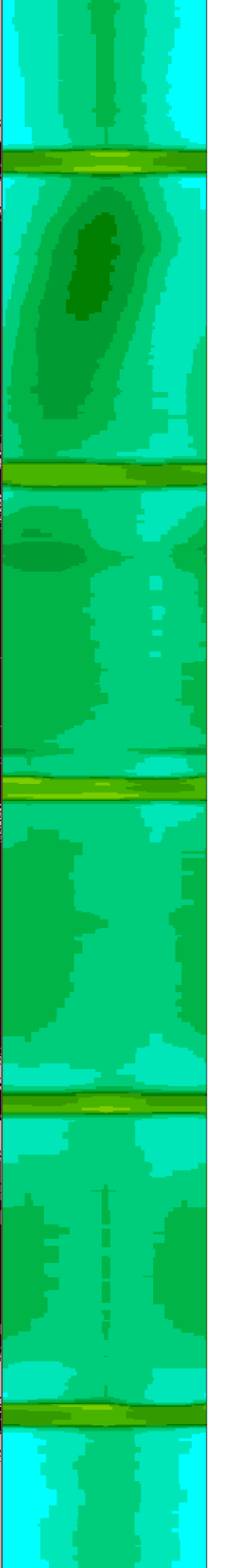
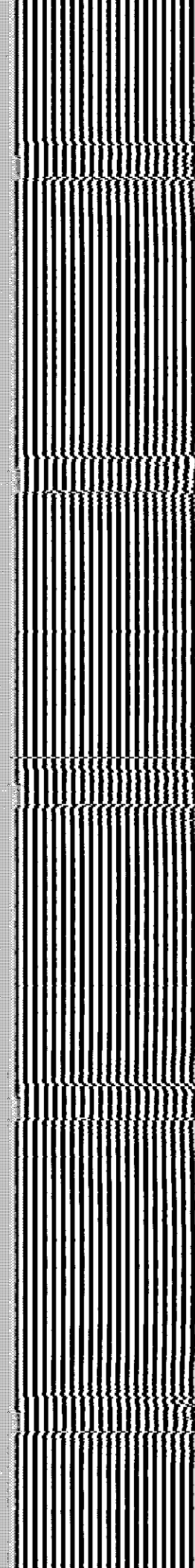
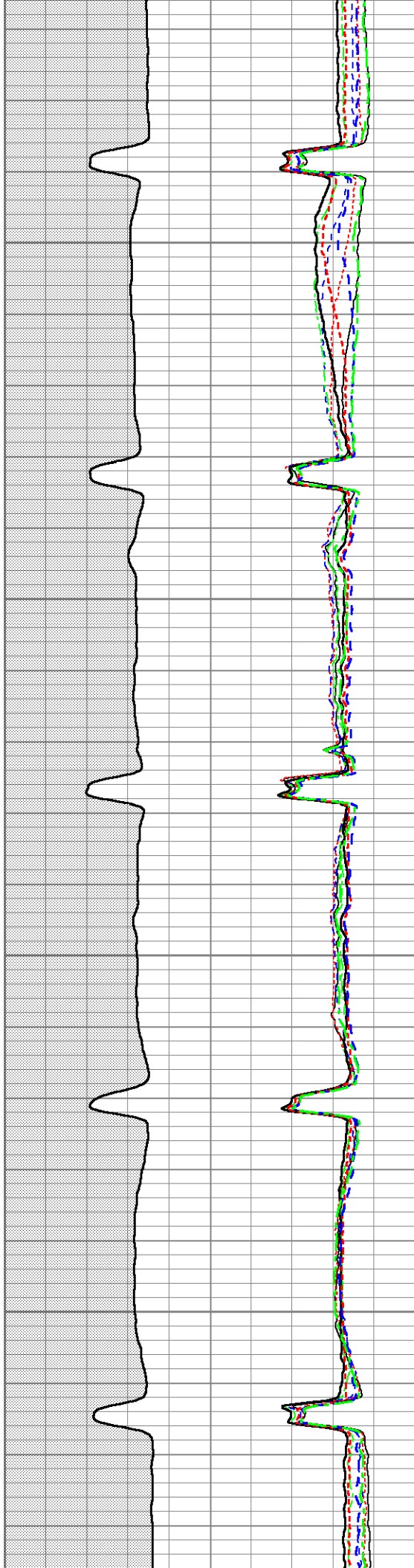
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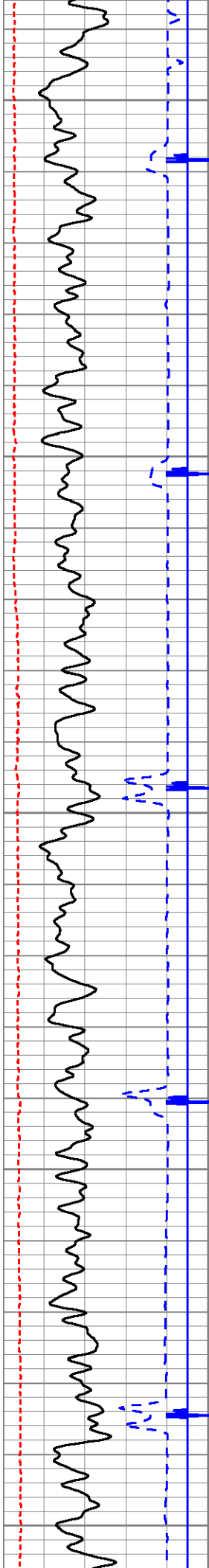




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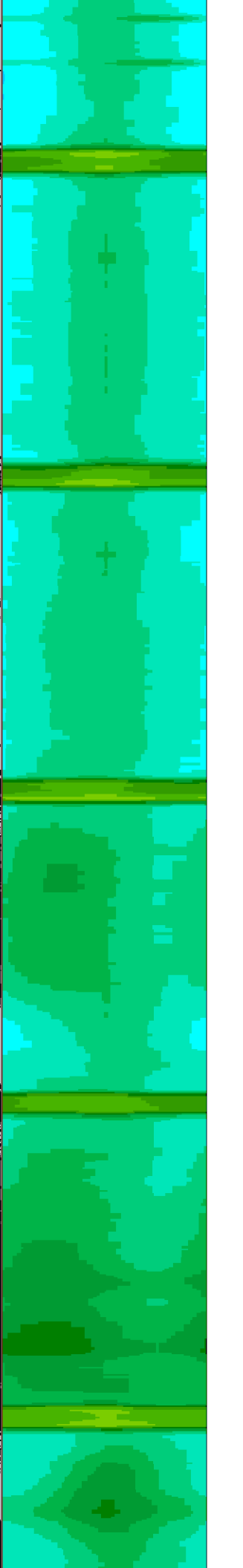
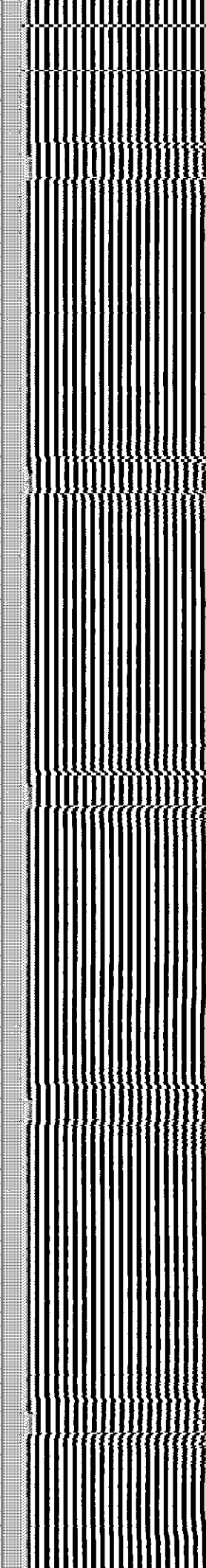
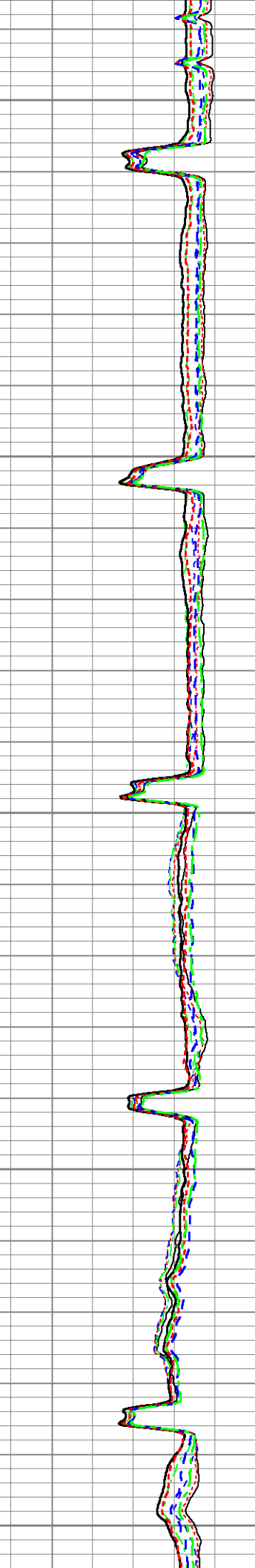
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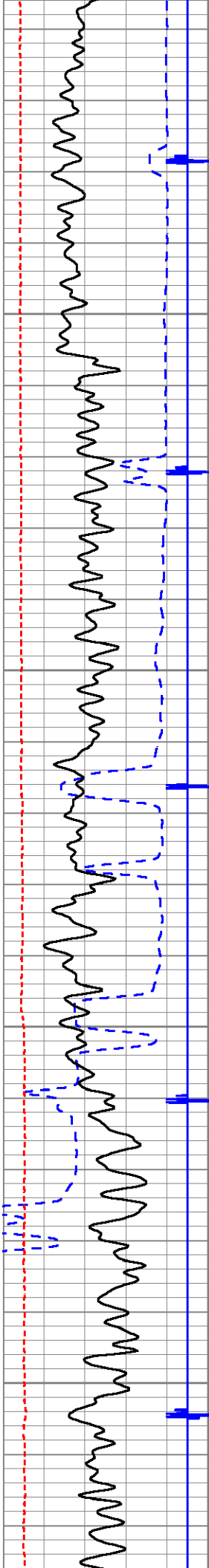




700

800

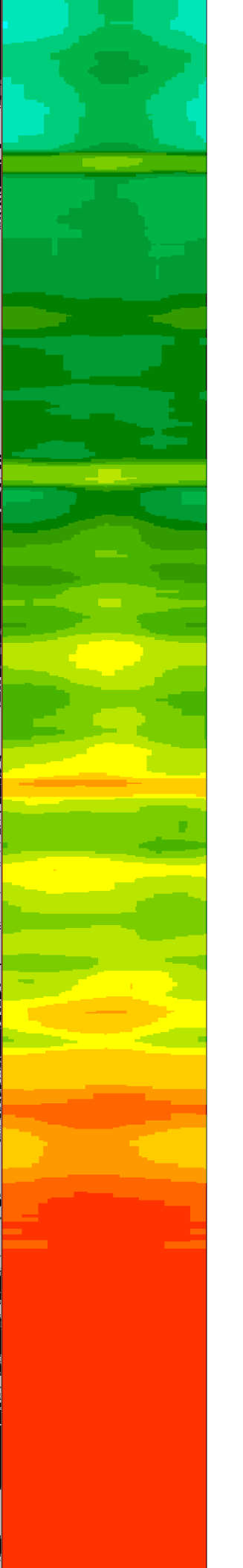
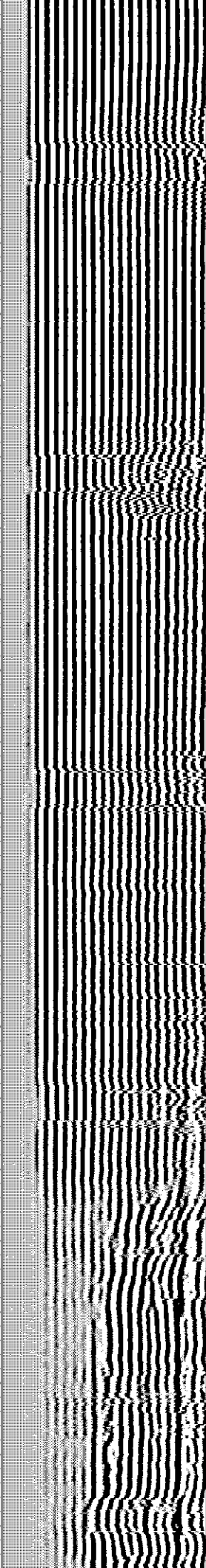
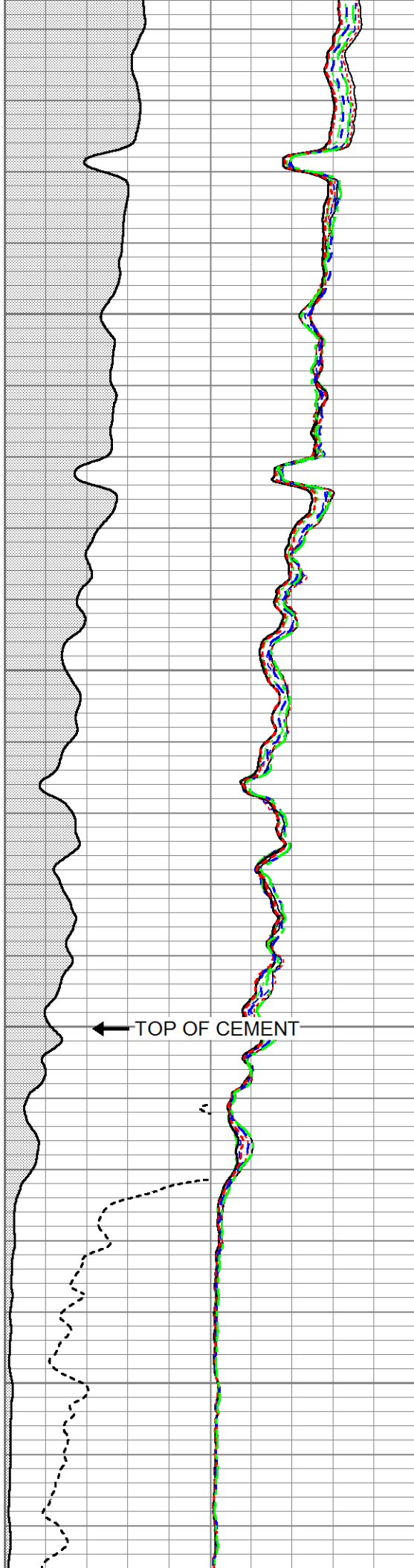


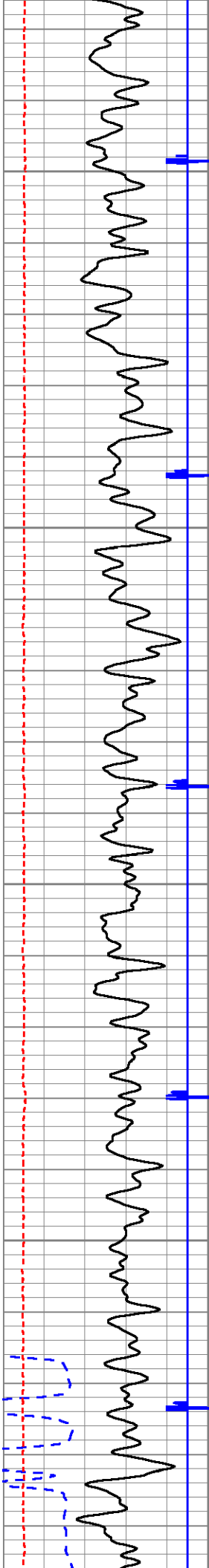


900

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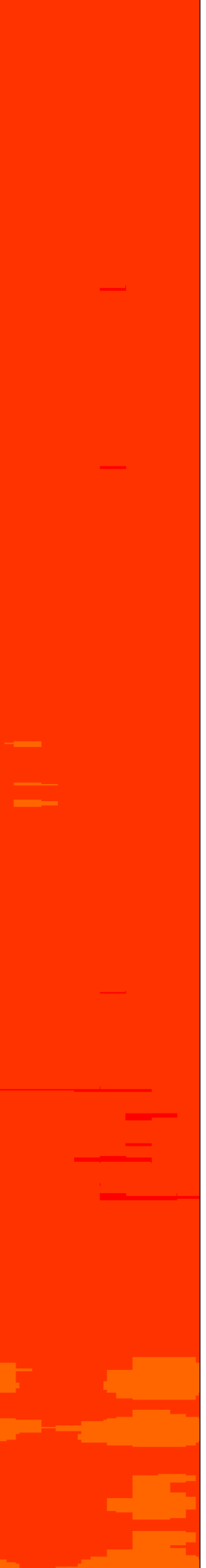
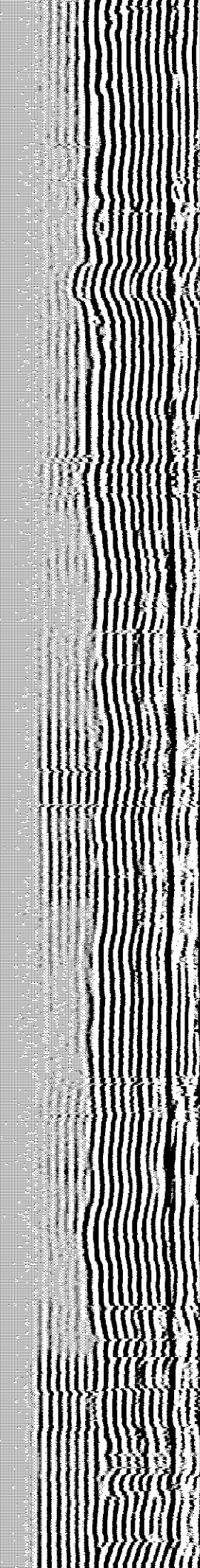
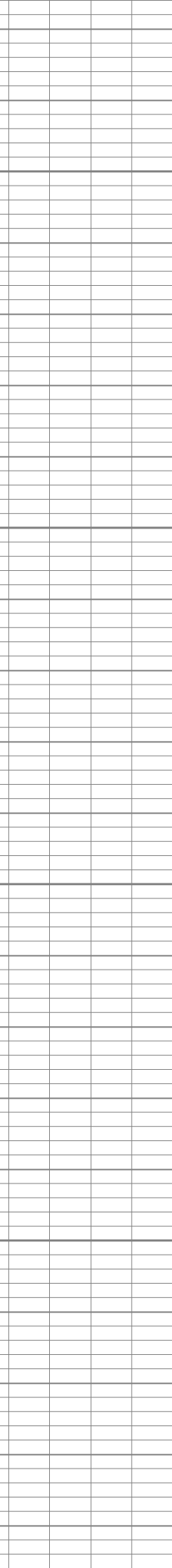
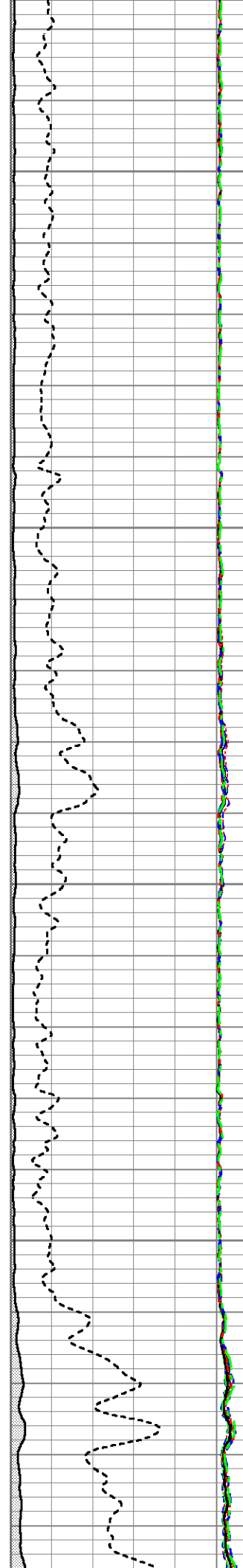
← TOP OF CEMENT

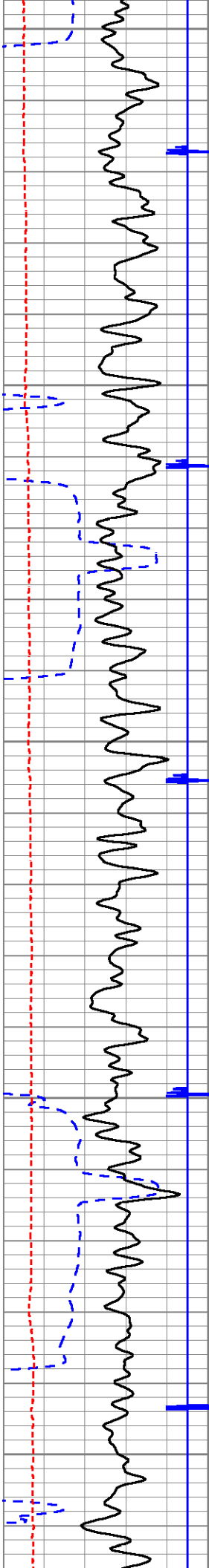




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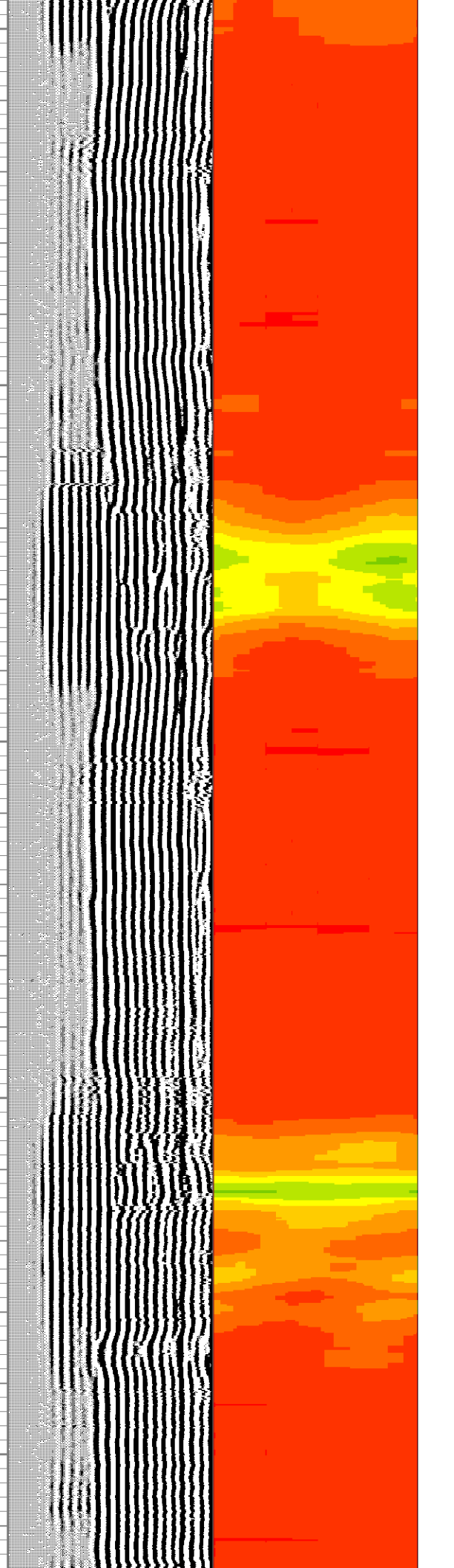
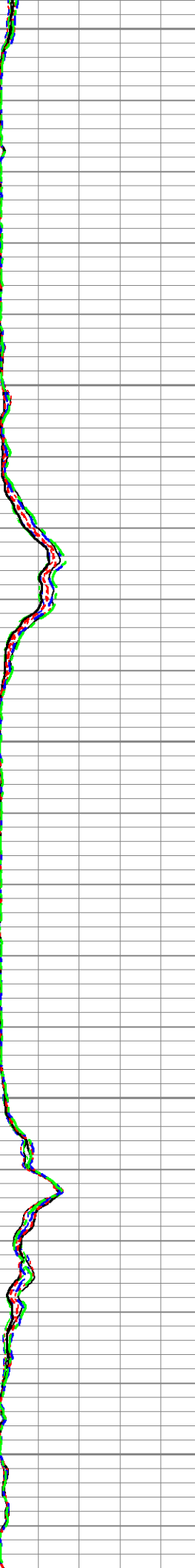
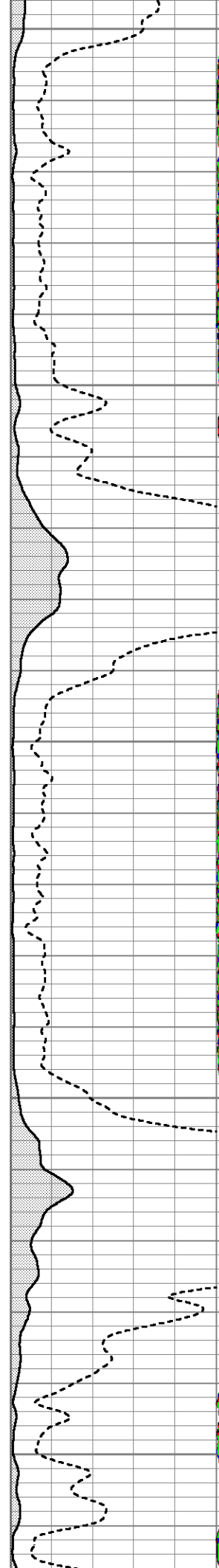


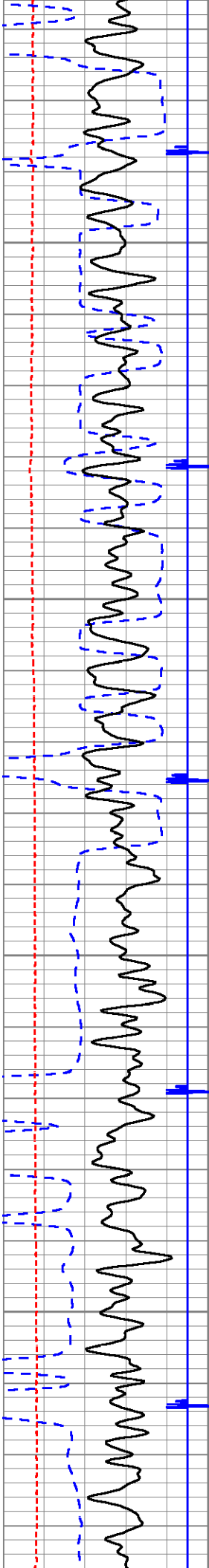


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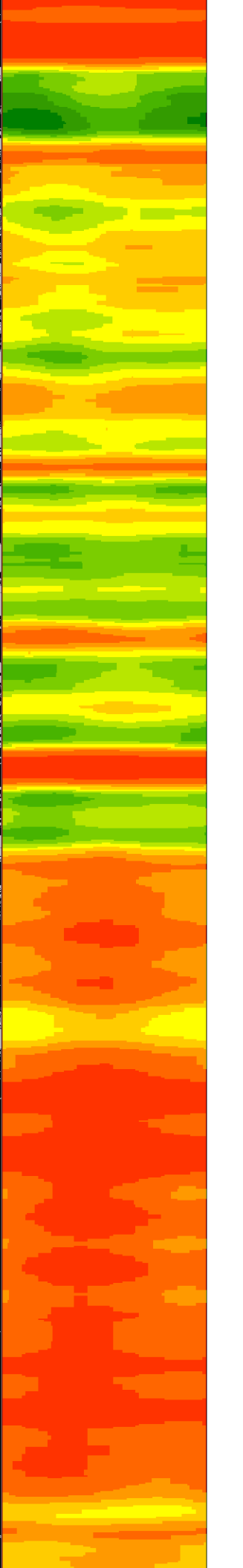
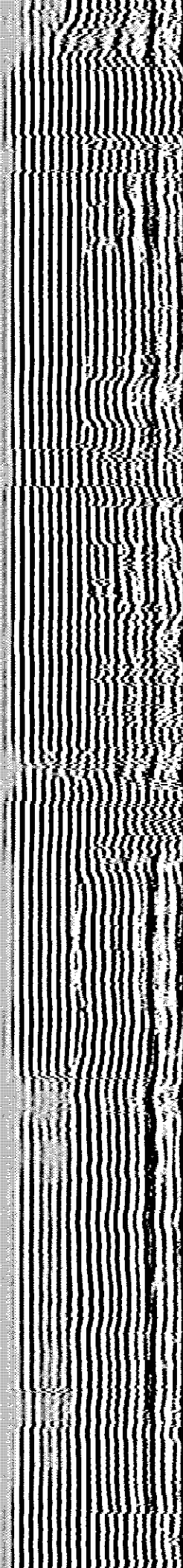
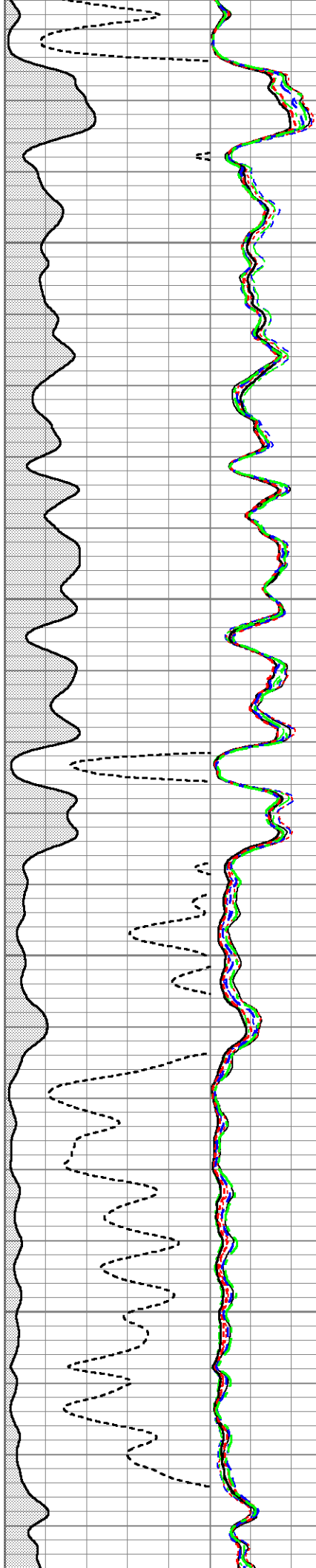
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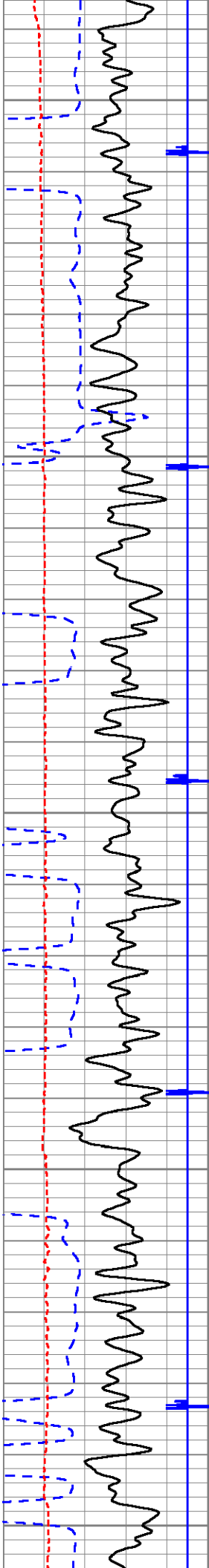




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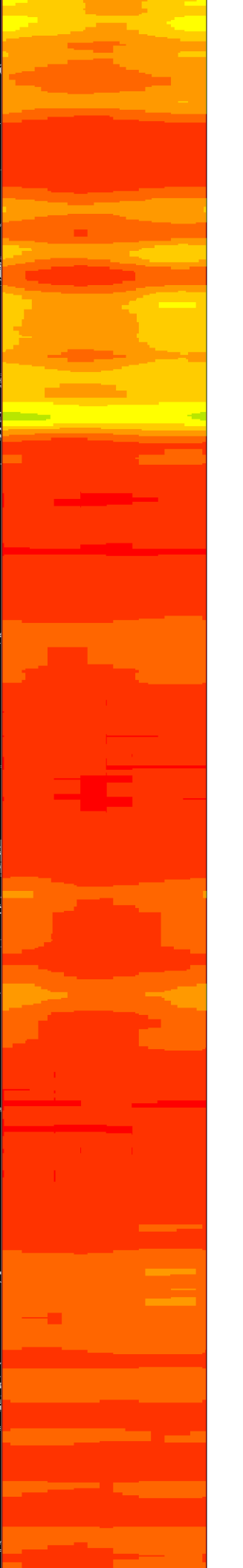
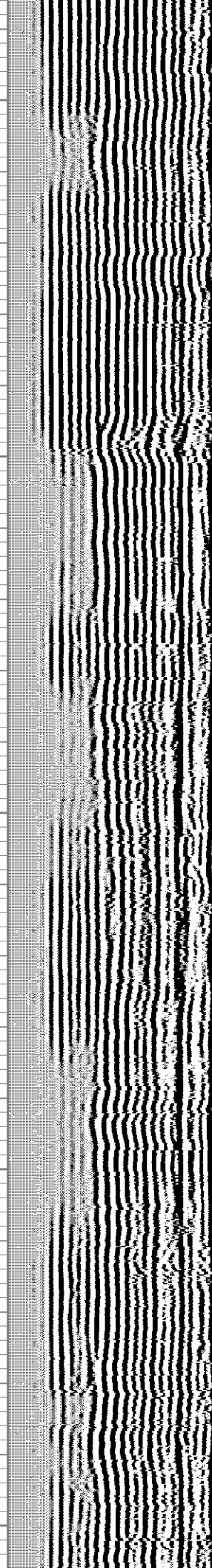
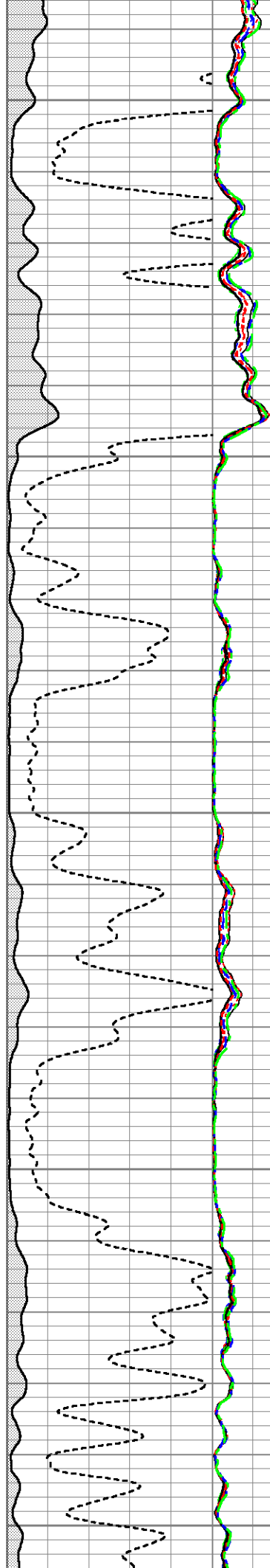
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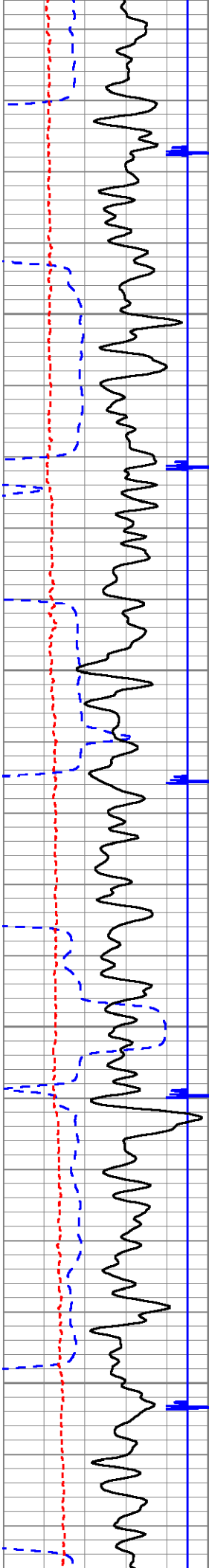




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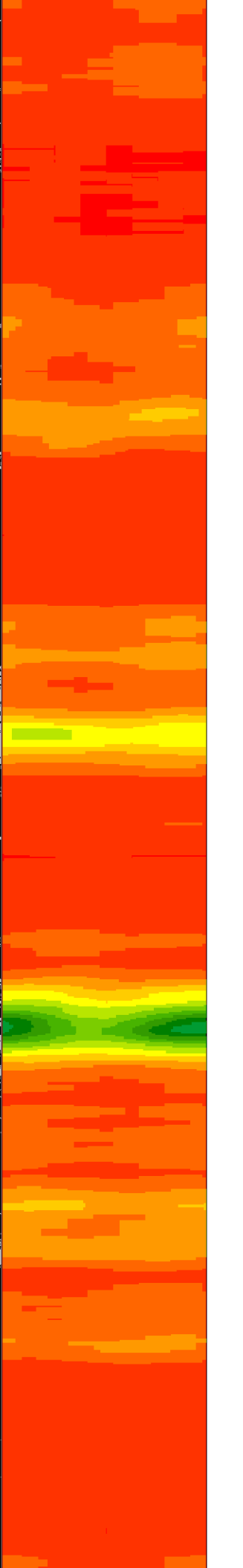
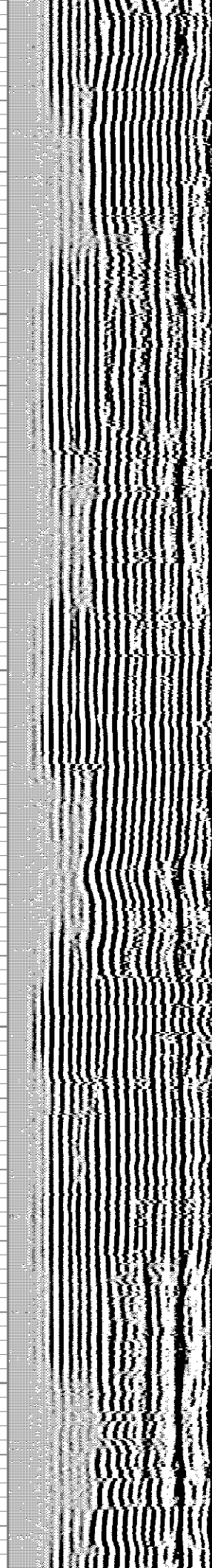
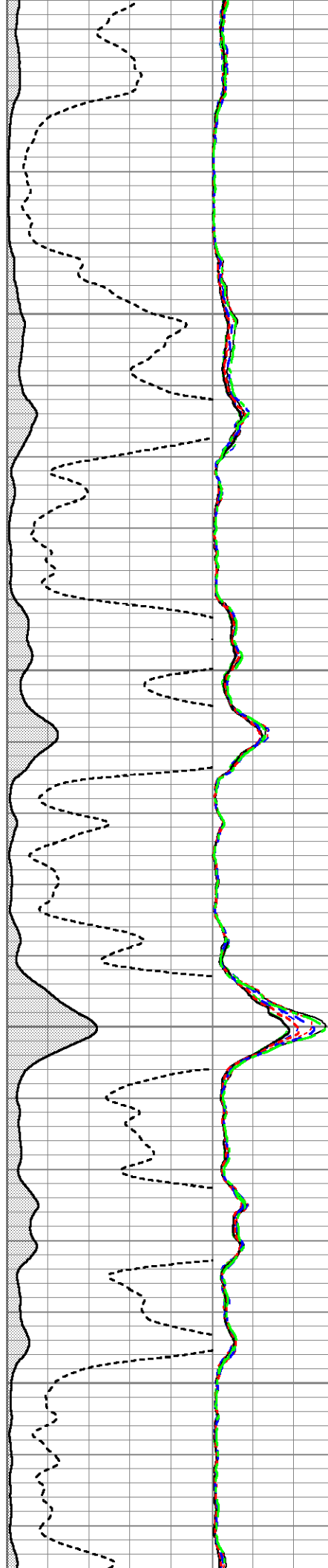
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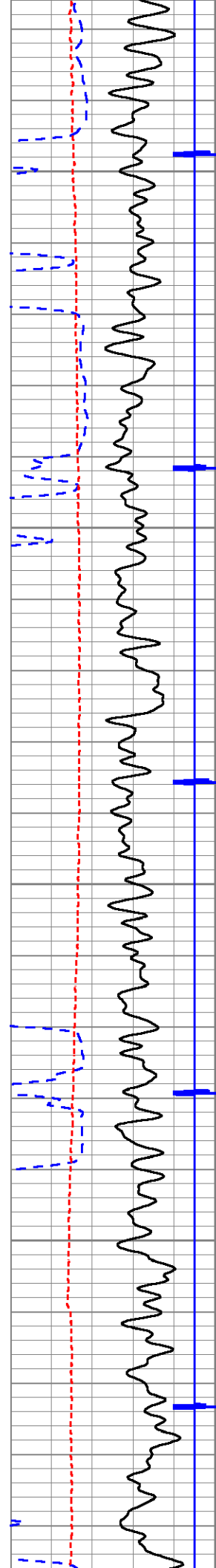




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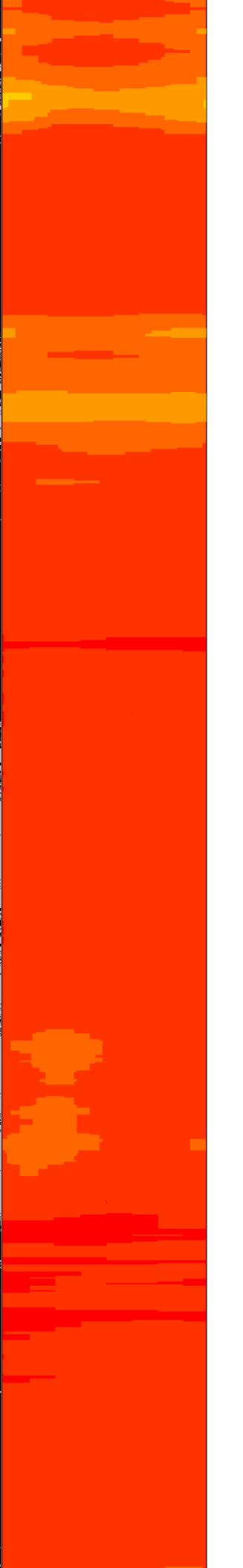
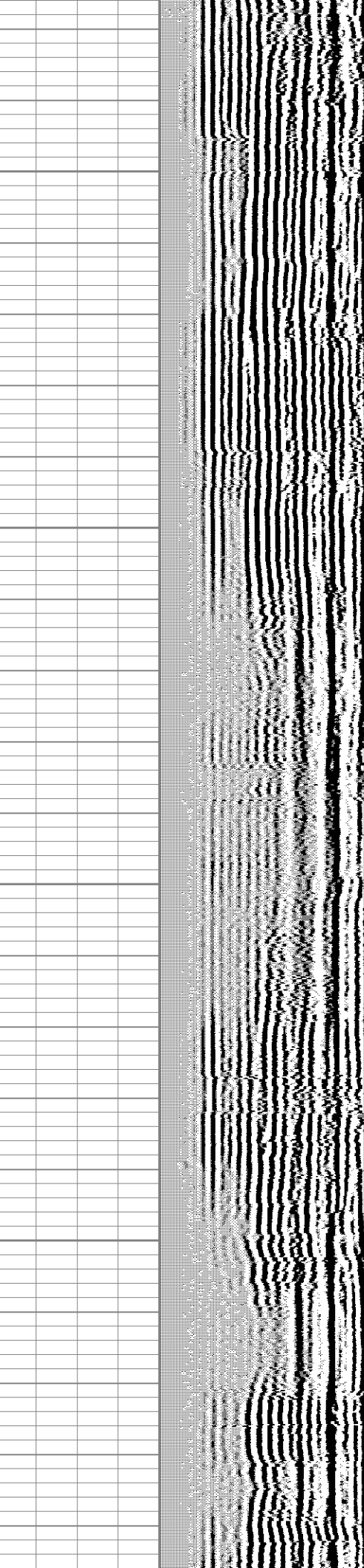
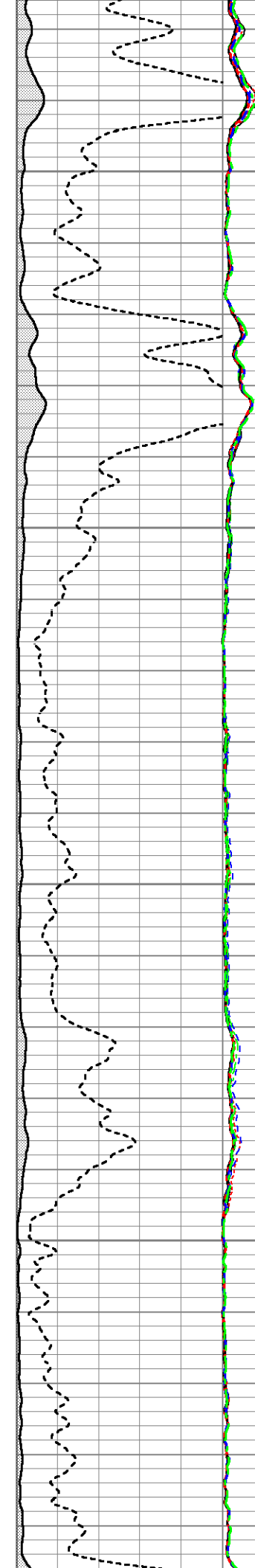
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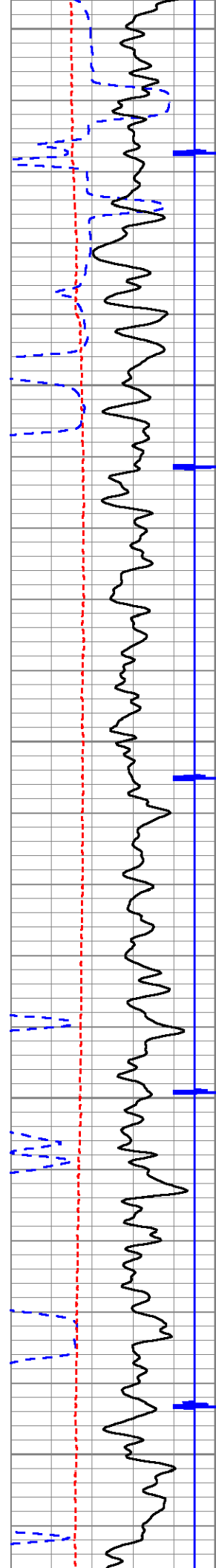




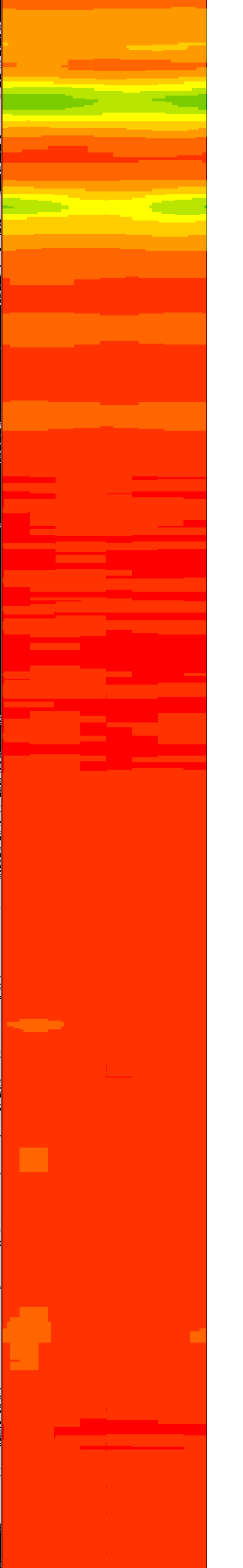
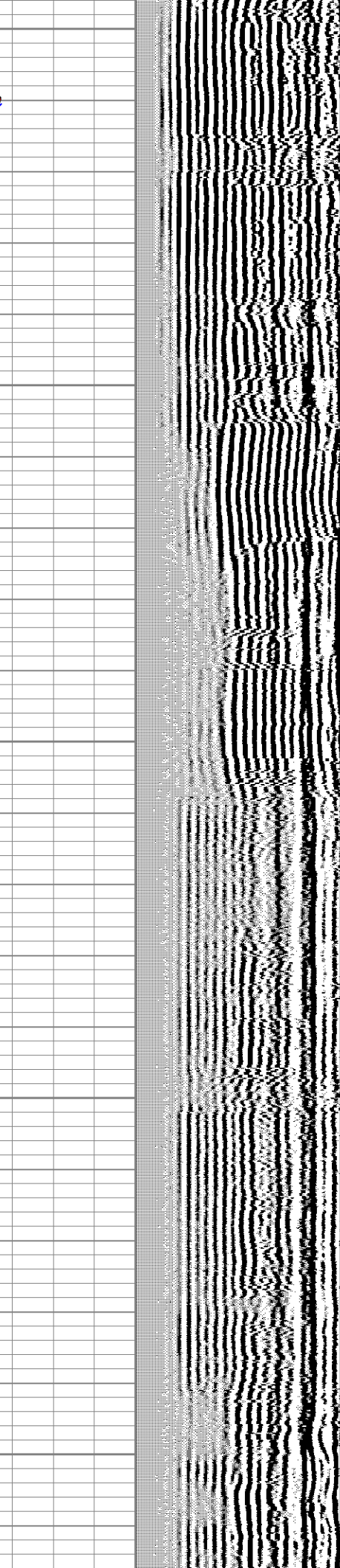
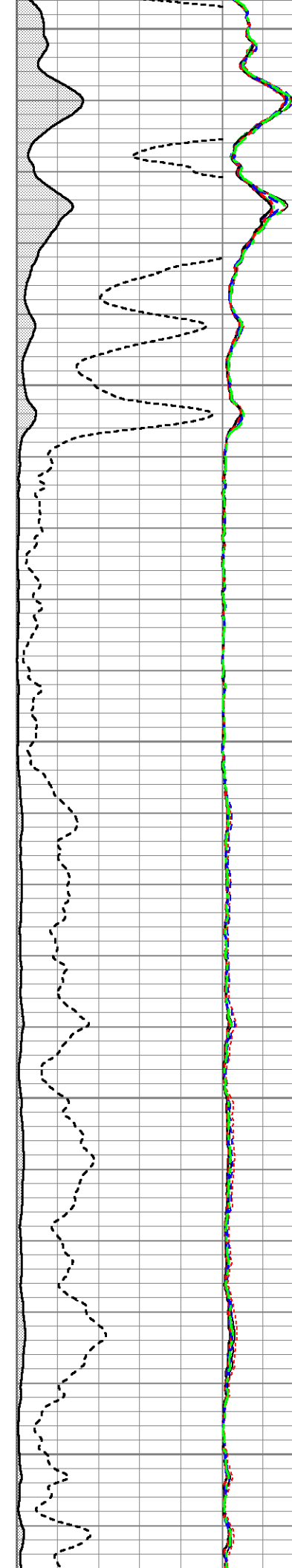
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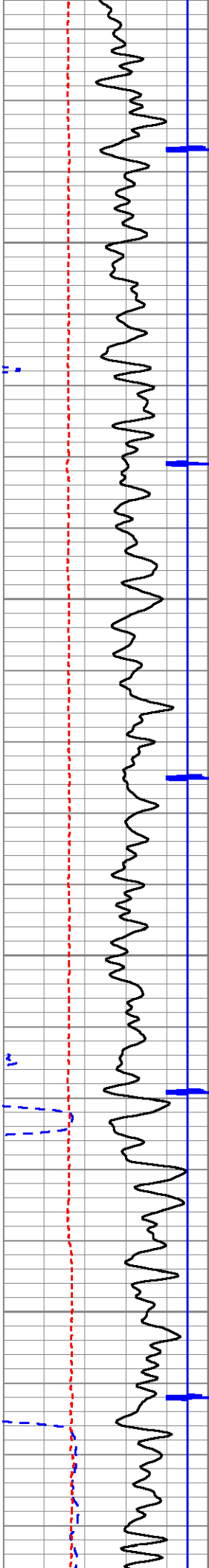
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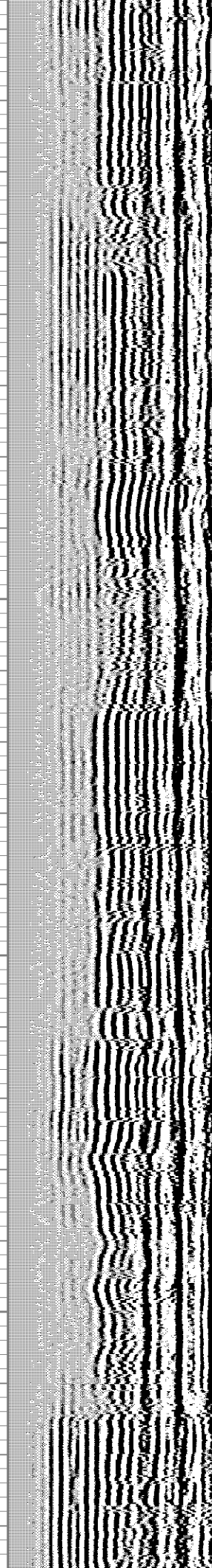
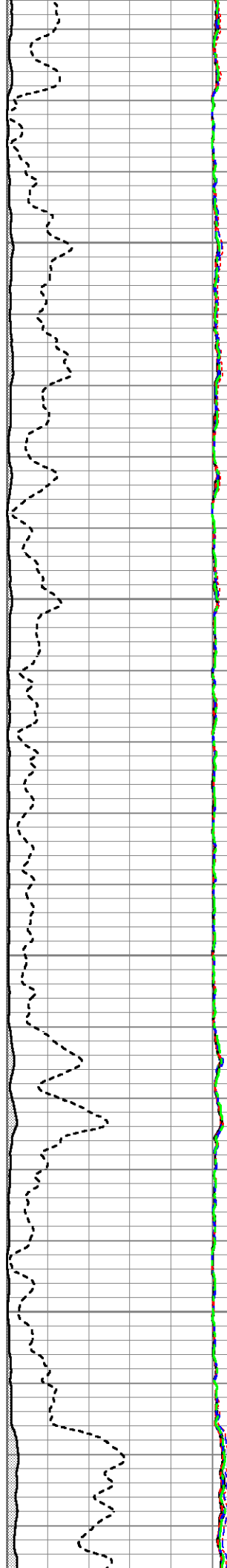
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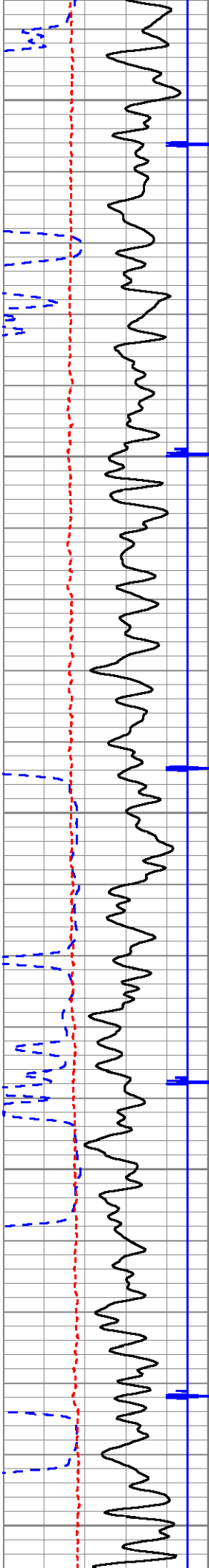




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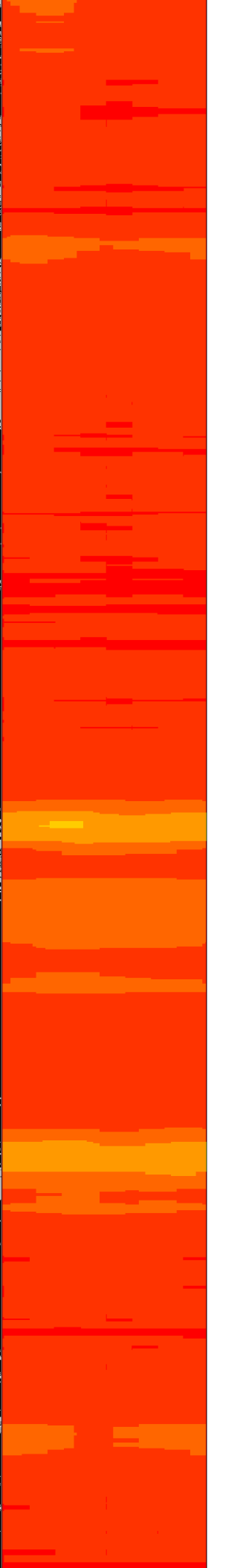
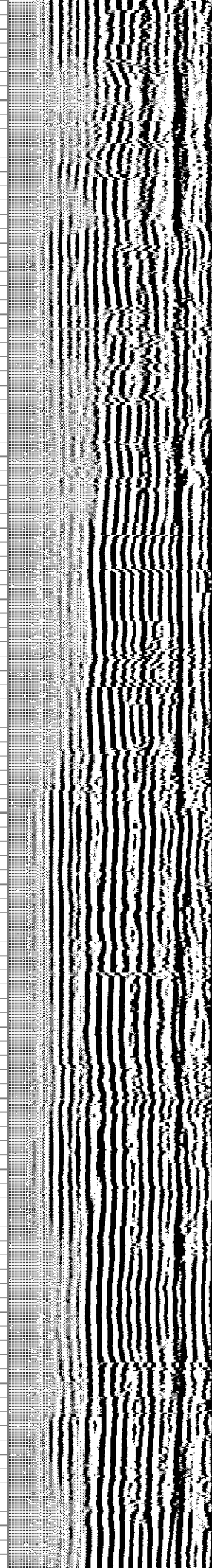
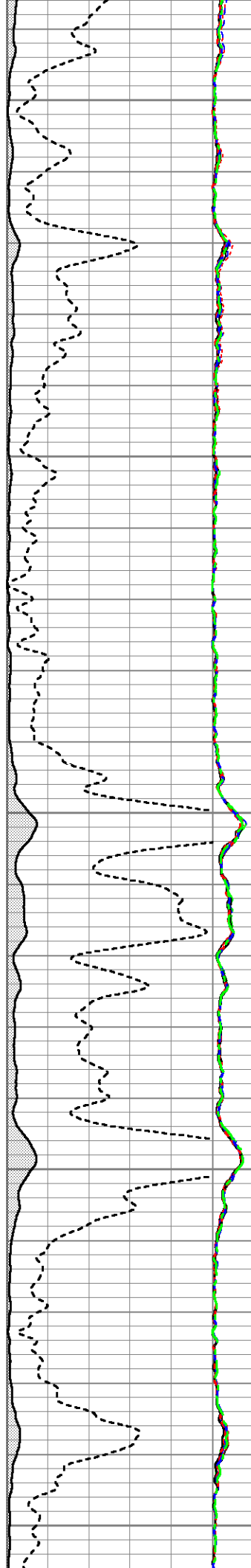
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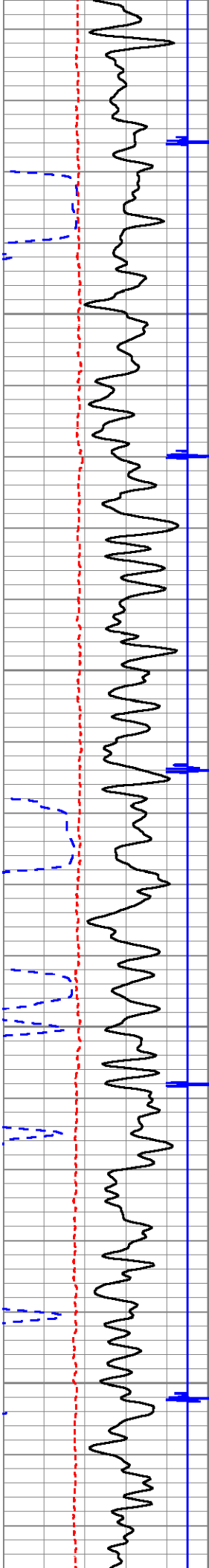




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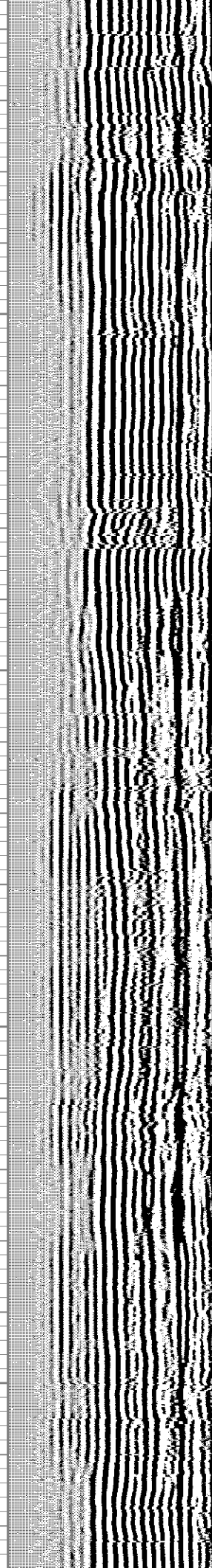
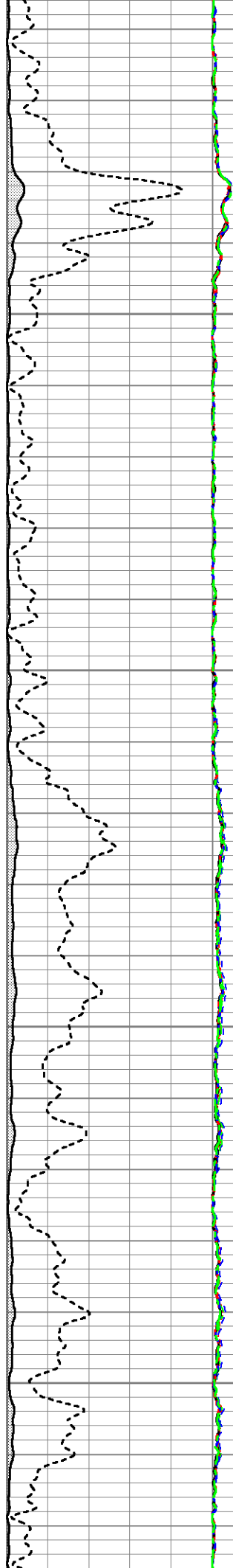
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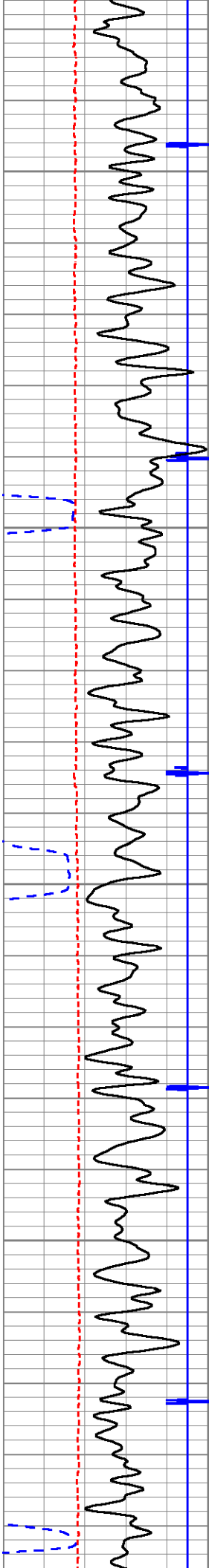




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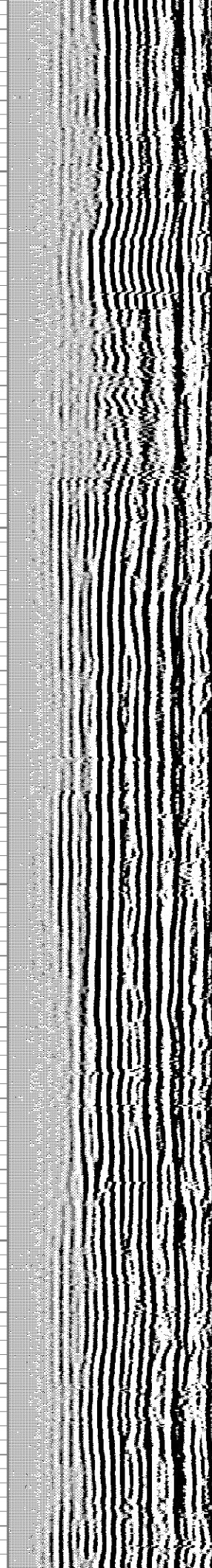
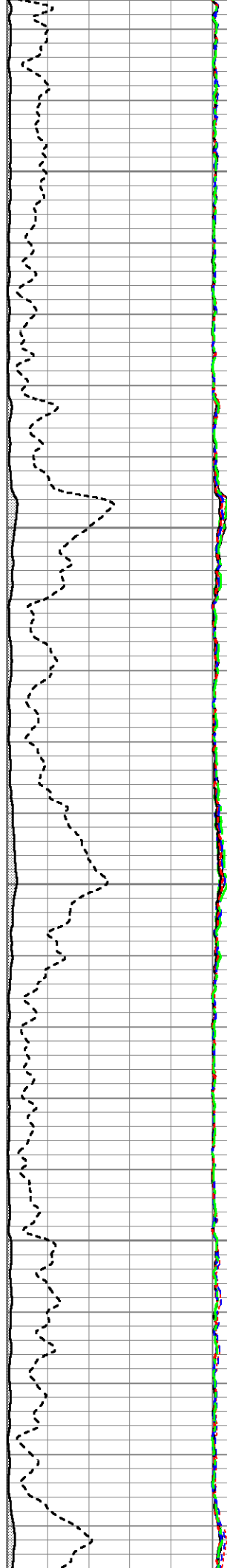
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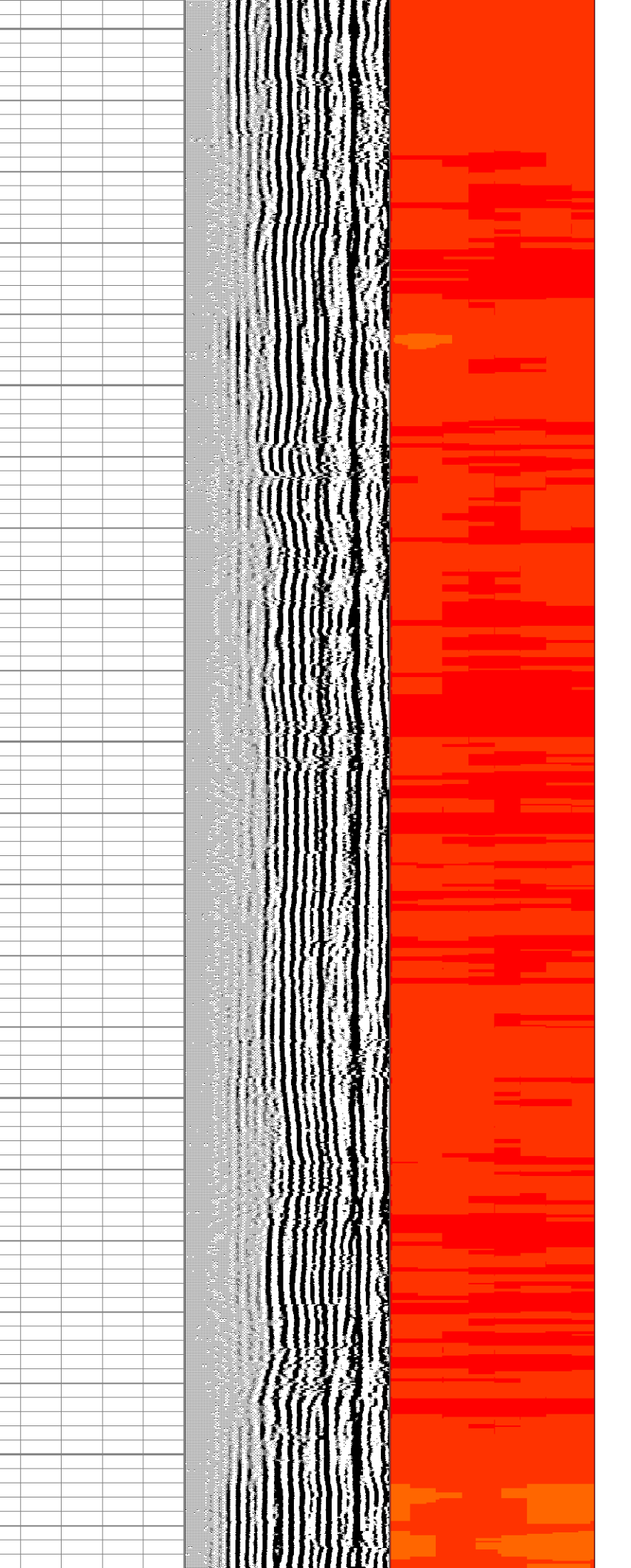
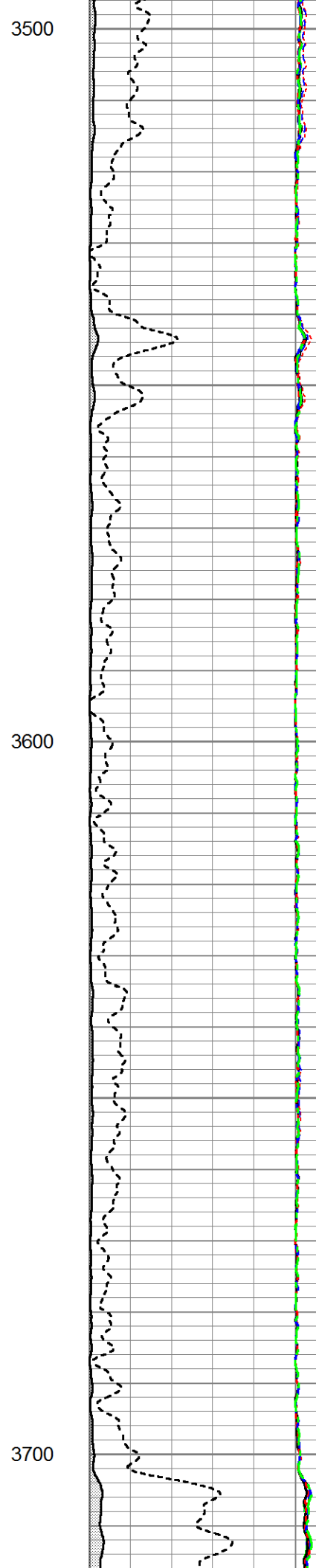
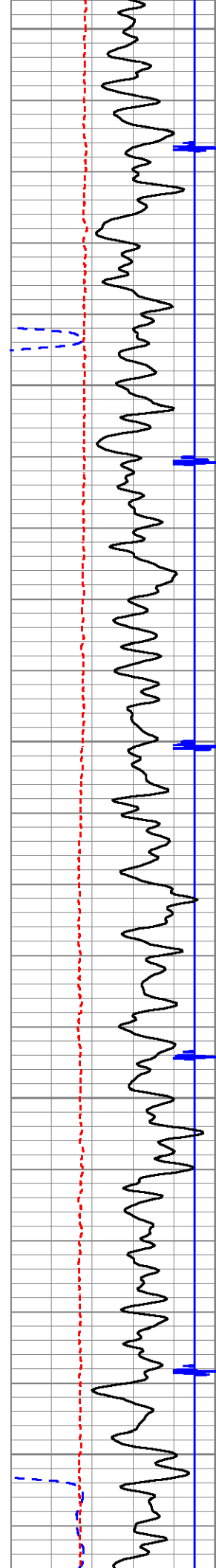


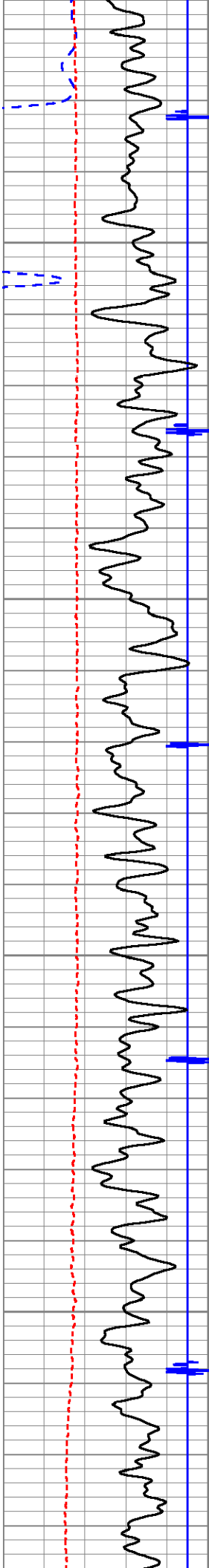


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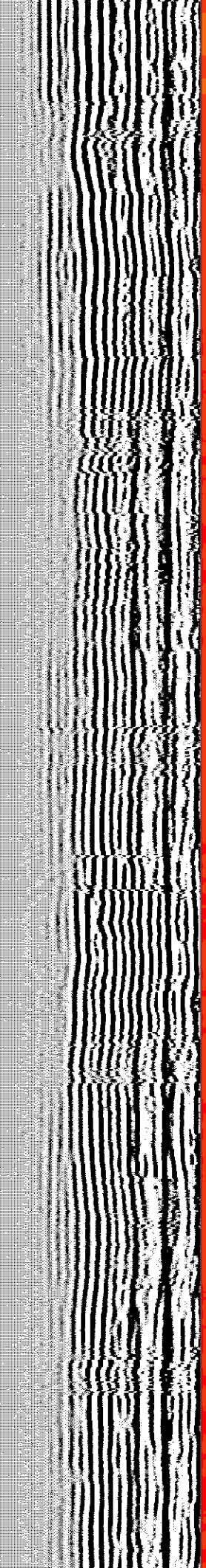
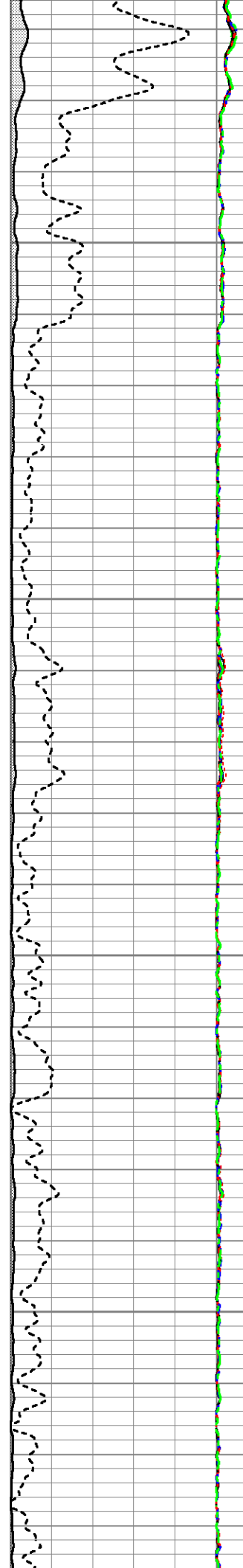


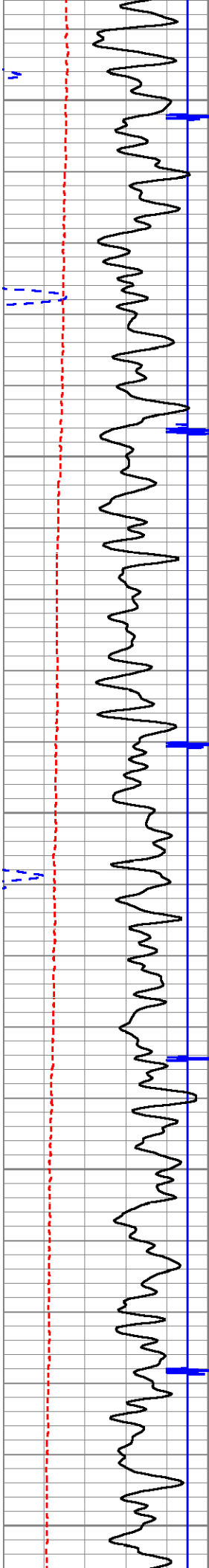




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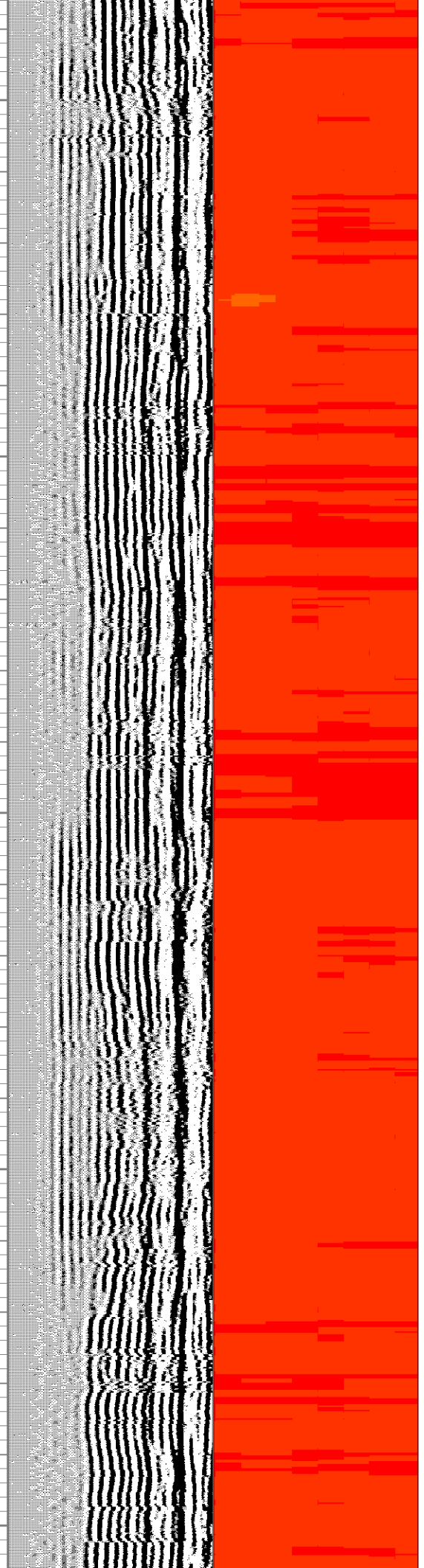
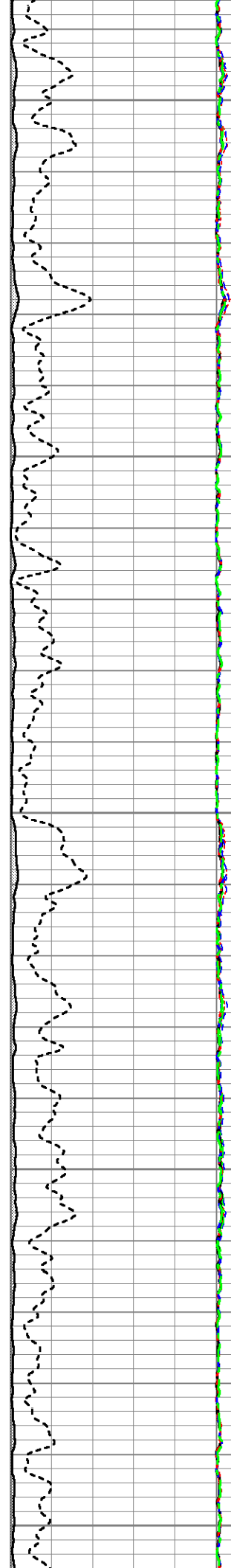
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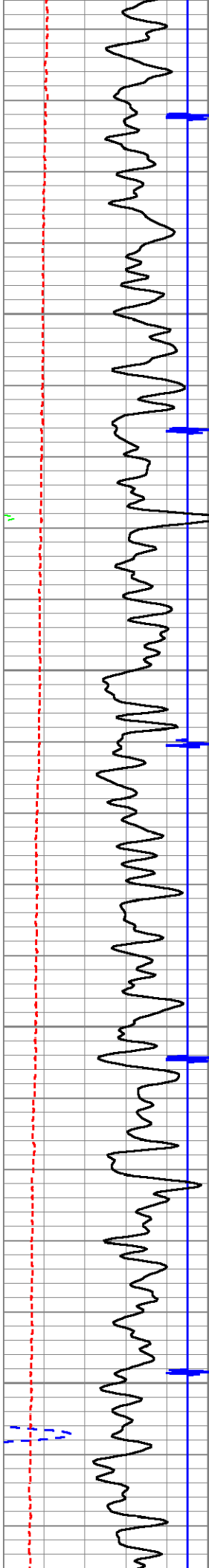




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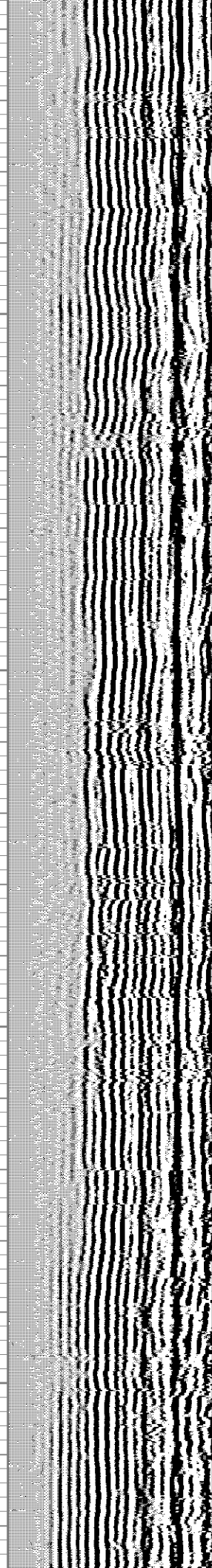
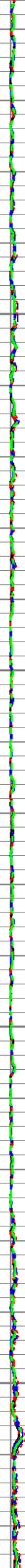
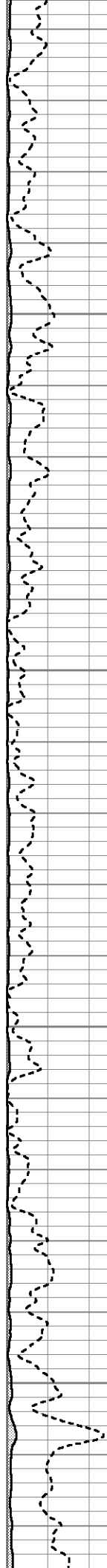
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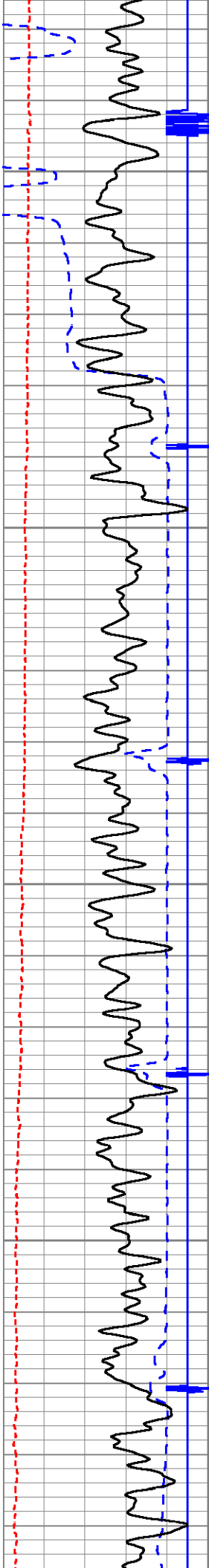




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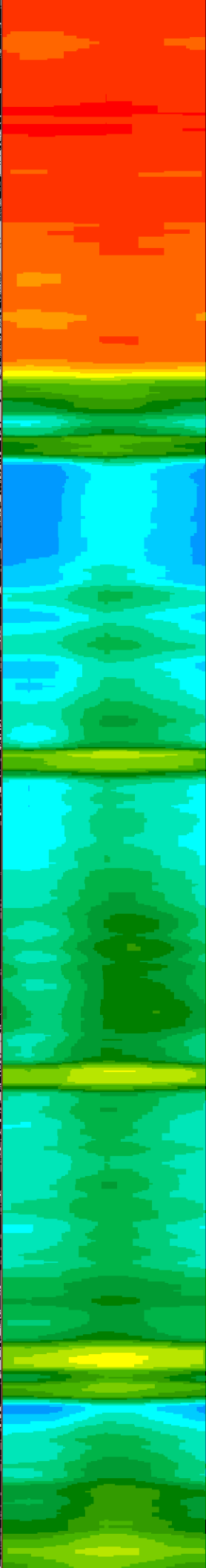
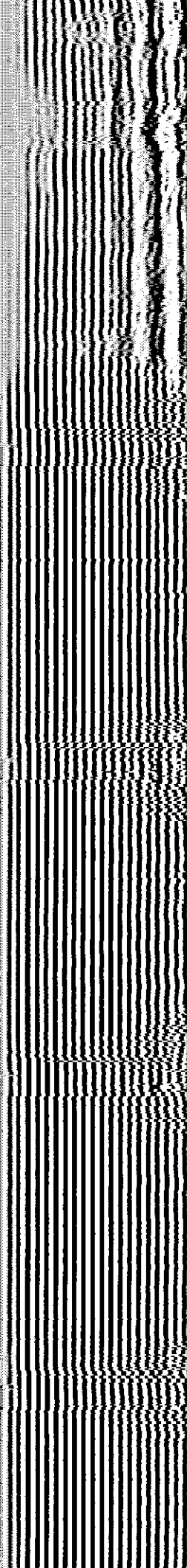
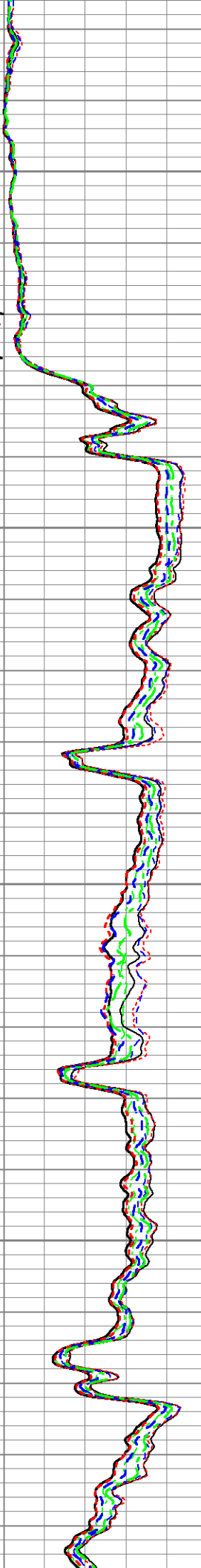
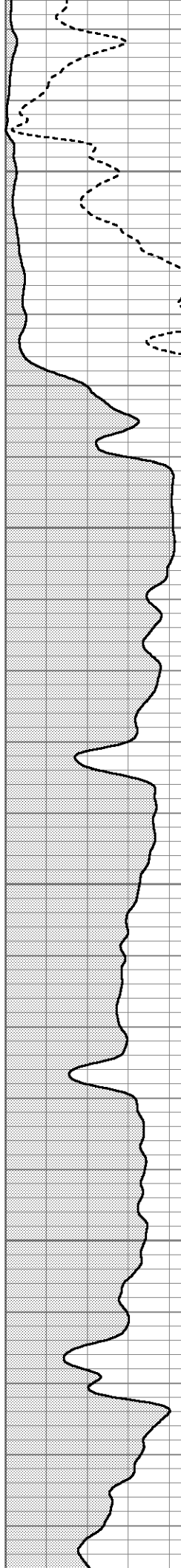
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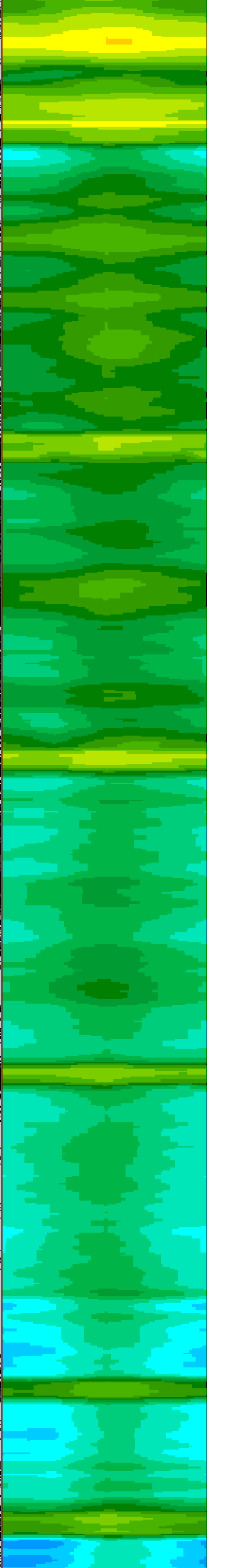
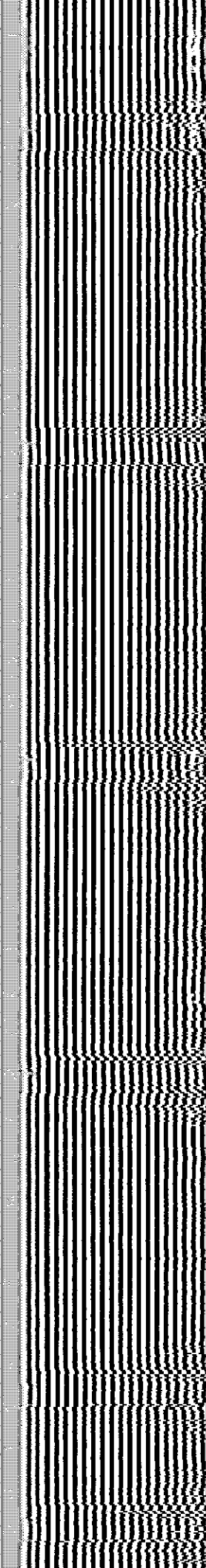
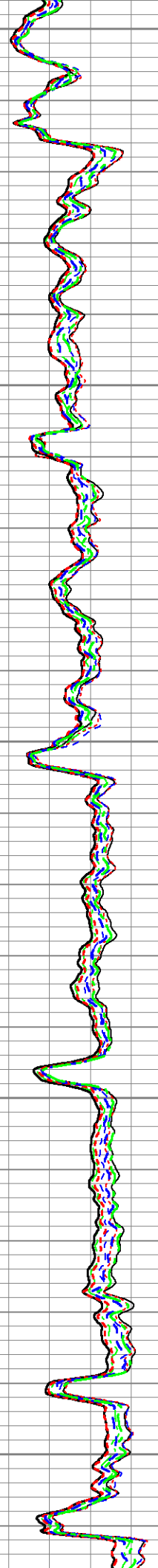
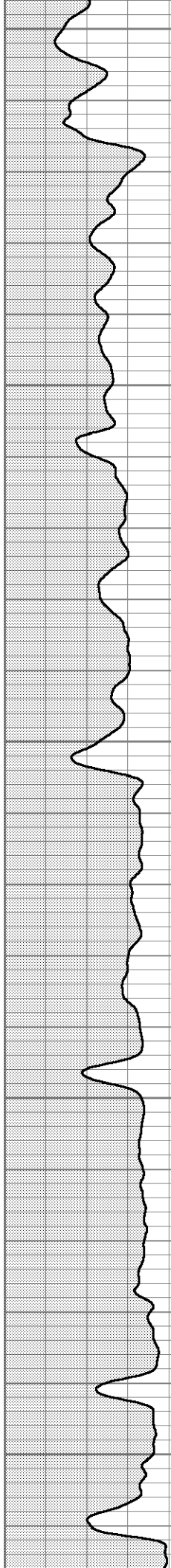
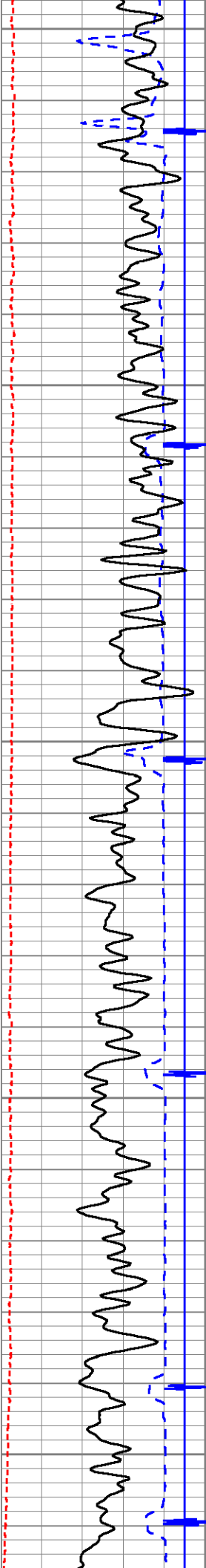
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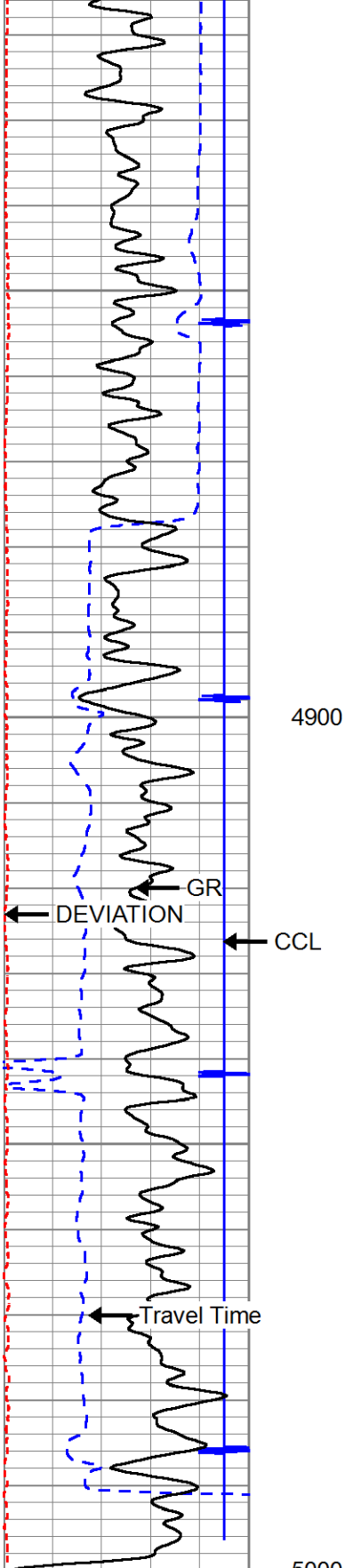


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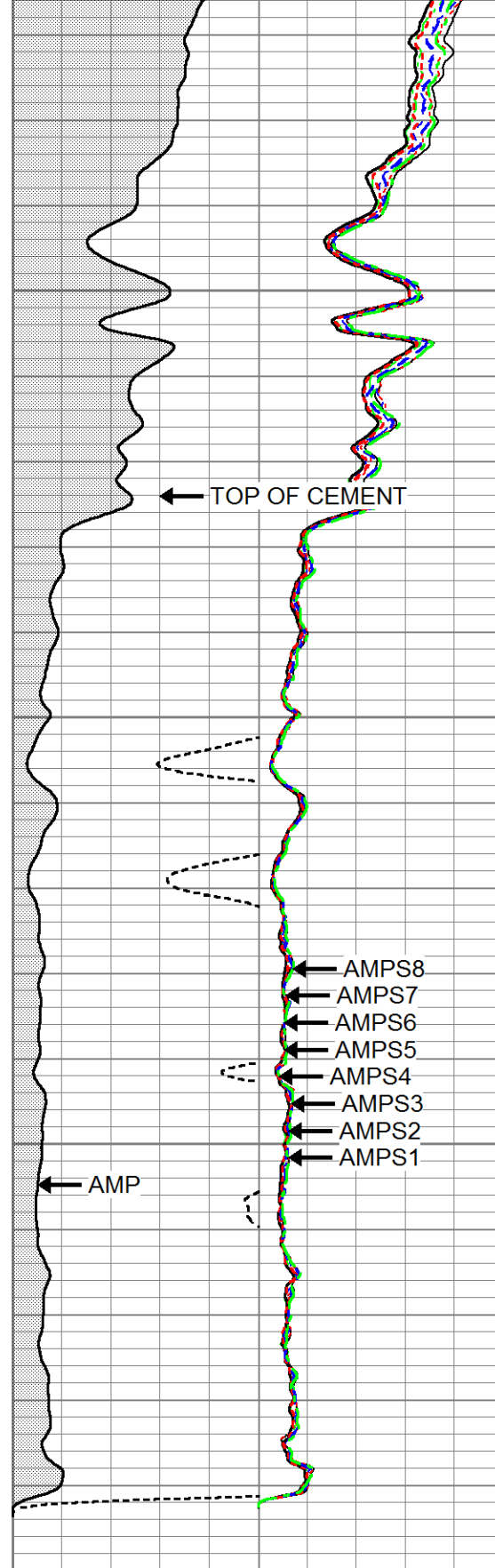
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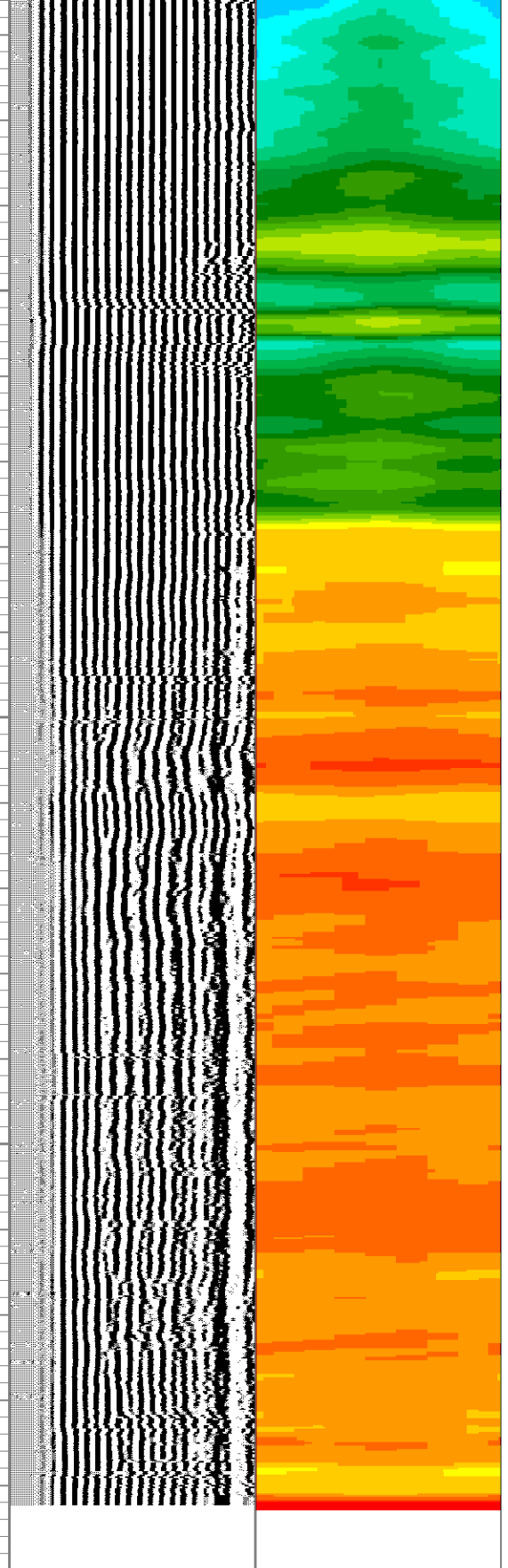




| | | |
|-----|---------------|-----|
| 325 | TT (usec) | 225 |
| -9 | CCL | 1 |
| 0 | GR (GAPI) | 150 |
| 0 | DEVIATION (°) | 50 |
| 150 | GR (GAPI) | 300 |



| | | |
|---|-------------|-----|
| 0 | AMP (mV) | 100 |
| 0 | AMPx10 (mV) | 10 |
| 0 | AMPS1 | 100 |
| 0 | AMPS2 | 100 |
| 0 | AMPS3 | 100 |
| 0 | AMPS4 | 100 |
| 0 | AMPS5 | 100 |
| 0 | AMPS6 | 100 |
| 0 | AMPS7 | 100 |
| 0 | AMPS8 | 100 |



| | | |
|-----|------------|------|
| 200 | VDL | 1200 |
| 1 | Cement Map | 8 |
| 0 | | 100 |



| | |
|---------|--------------------------|
| Company | ANADARKO PETROLEUM CORP. |
| Well | NRC 16-8 |
| Field | WATTENBERG |
| County | WELD |
| State | COLORADO |