



CEMENT BOND LOG
GAMMA RAY CCL VDL

| | | | |
|------------------------|---------------------------------|--------|-----------------------|
| Company | GREAT WESTERN OPERATING COMPANY | | |
| Well | COLORADO STATE #2 | | |
| Field | BLACK HOLLOW | | |
| County | WELD | | |
| State | COLORADO | | |
| Location: | API # : 05-123--05454 | | Other Services |
| | SESE | | NONE |
| Permanent Datum | SEC 36 | TWP 8N | RGE 67W |
| Log Measured From | GL | | Elevation 5,129' |
| Drilling Measured From | KB | | Elevation K.B. 5,139' |
| | KB | | D.F. 5,138' |
| | | | G.L. 5,129' |

| | |
|------------------------|-----------------|
| Date | 10 JUNE 2019 |
| Run Number | ONE |
| Depth Driller | 9,027' |
| Depth Logger | 8,200' |
| Bottom Logged Interval | 8,200' |
| Top Log Interval | SURFACE |
| Open Hole Size | N/A |
| Type Fluid | WATER |
| Density / Viscosity | 8.34 PPG |
| Max. Recorded Temp. | N/A |
| Estimated Cement Top | SEE LOG |
| Time Well Ready | ROA |
| Time Logger on Bottom | 11:00 |
| Equipment Number | 25 |
| Location | PLATTEVILLE, CO |
| Recorded By | B. TURNBULL |
| Witnessed By | B. ELLIS |

| Borehole Record | | | | Tubing Record | | | |
|-------------------|--------|------|----|---------------|--------|---------|--------|
| Run Number | Bit | From | To | Size | Weight | From | To |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Casing Record | Size | | | Wgt/Ft | | Top | Bottom |
| Surface String | 9-5/8" | | | 36# | | SURFACE | 324' |
| Prot. String | | | | | | | |
| Production String | 5-1/2" | | | 17# | | SURFACE | 9,022' |
| 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

CEMENT BOND LOG RECORDED AS PER CUSTOMER REQUEST
LOG RECORDED UNDER 0 PSI INDUCED SURFACE PRESSURE
CORRELATED TO PREVIOUS LOG RECORDED ON 6-8-19

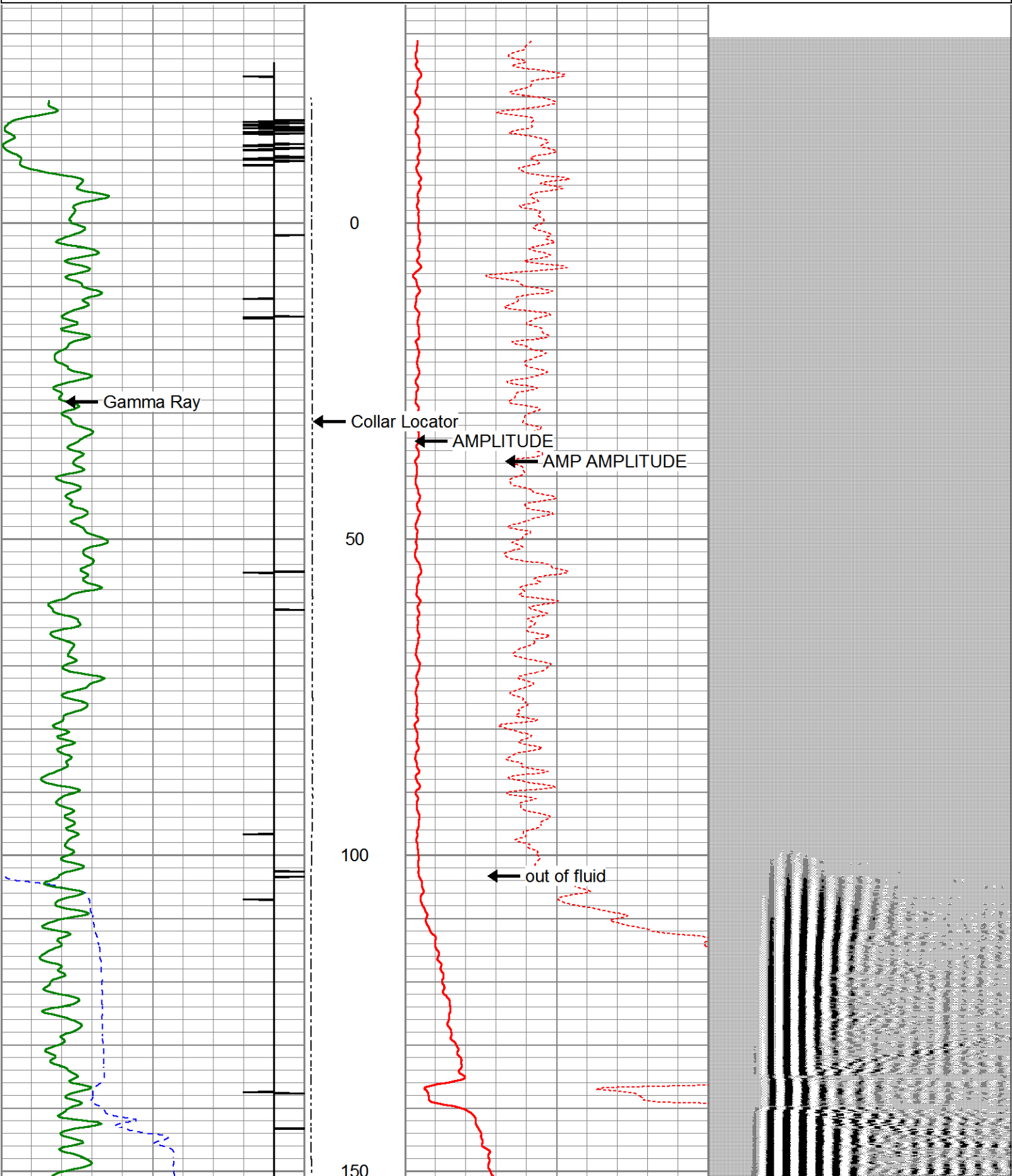
THANK YOU FOR CHOOSING KLX ENERGY SERVICES

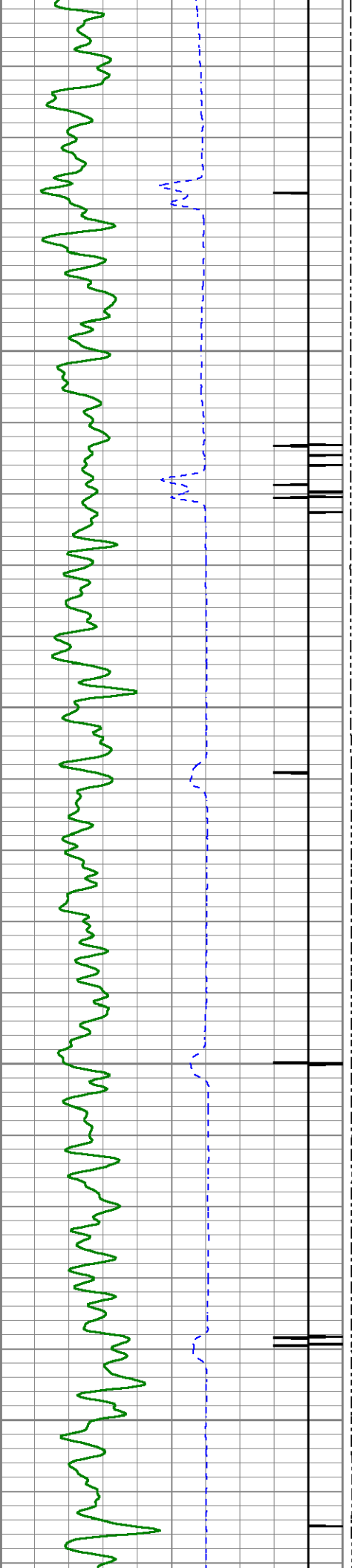


MAIN PASS

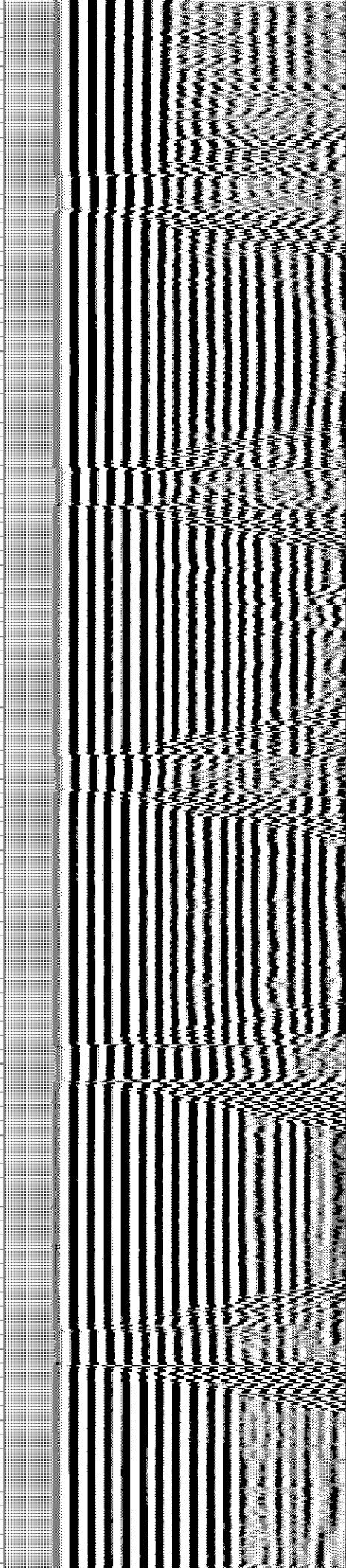
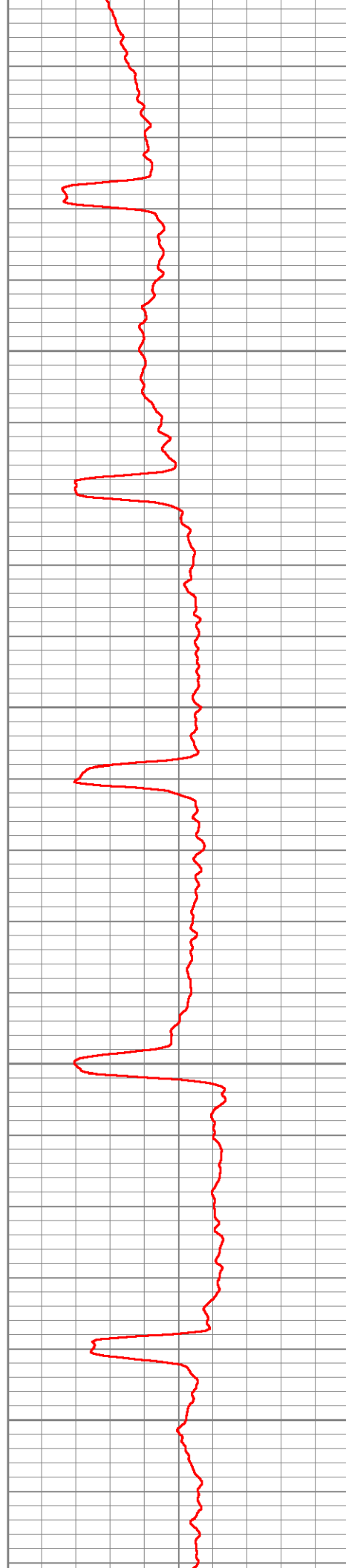
| | |
|---------------------|----------------------------|
| Database File | gw_cbl_costate2_6-10-19.db |
| Dataset Pathname | pass14 |
| Presentation Format | cbl_drs |
| Dataset Creation | Mon Jun 10 11:05:46 2019 |
| Charted by | Depth in Feet scaled 1:240 |

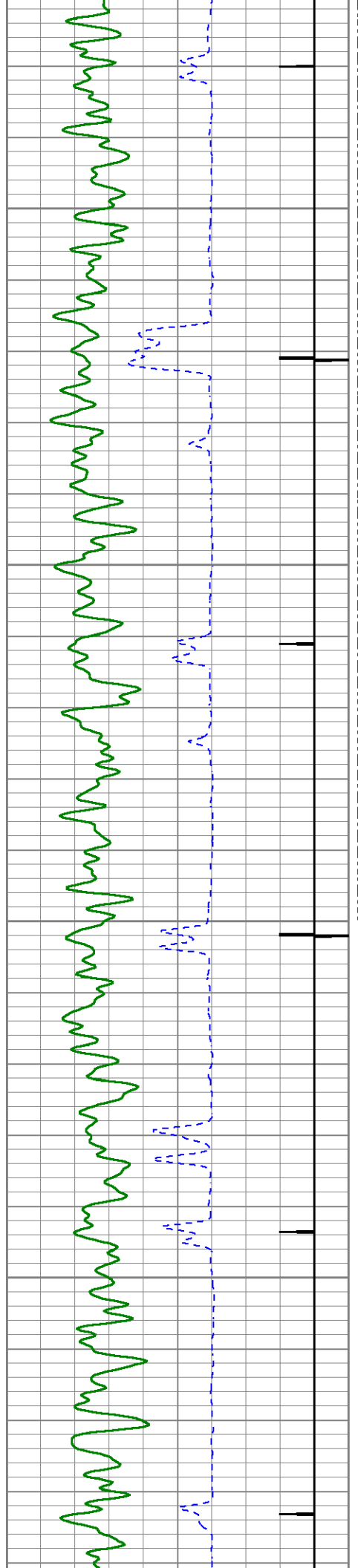
| | | | | | | | | | |
|-----|--------------------|-----|------|---------|--------------------|----------------|-----|------------|------|
| 400 | TRAVEL TIME (usec) | 200 | LTEN | 0 | AMP AMPLITUDE (mV) | 10 | 200 | VDL (usec) | 1200 |
| 9 | Collar Locator | -1 | 0 | (lb2000 | 0 | AMPLITUDE (mV) | 100 | | |
| 0 | Gamma Ray (GAPI) | 150 | | | | | | | |





150
200
250
300
350



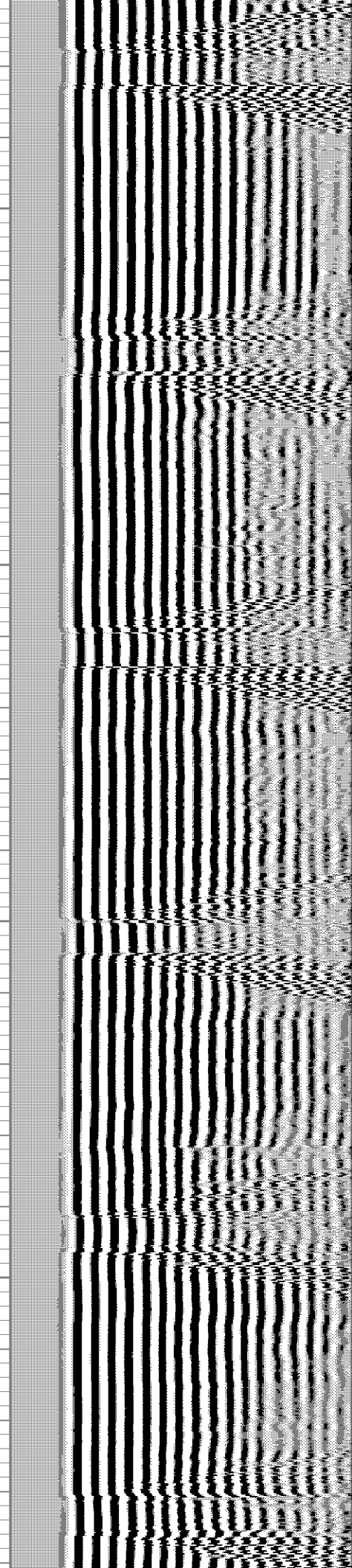
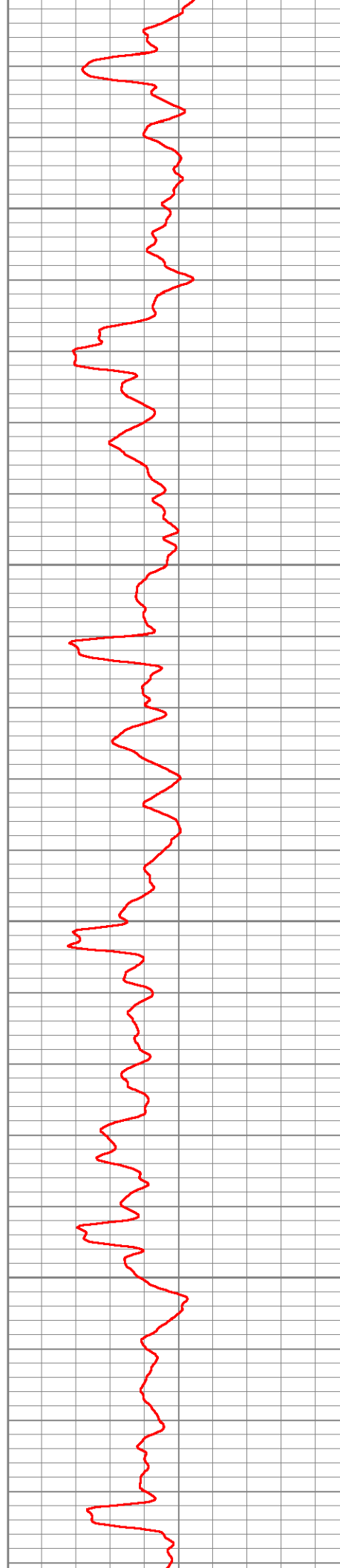


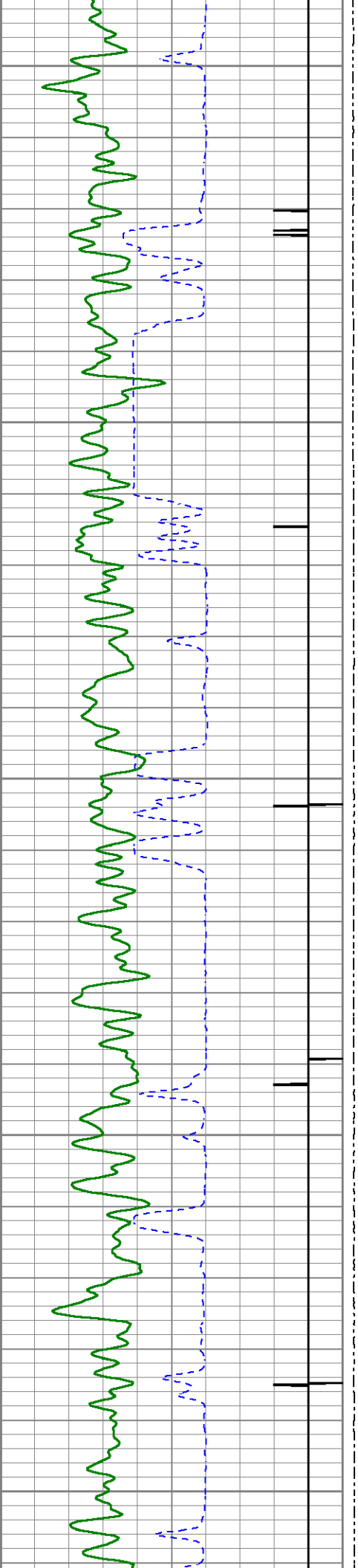
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450

500

550





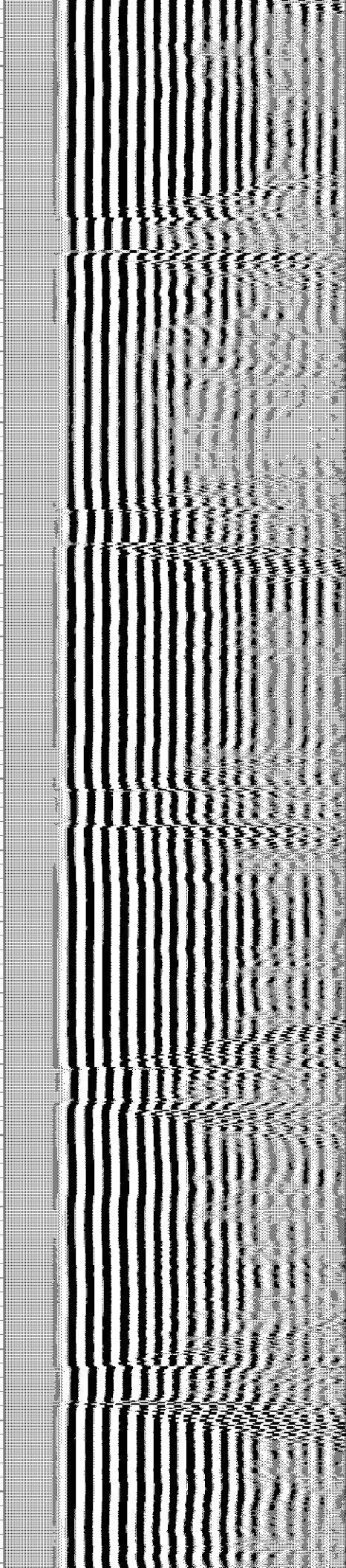
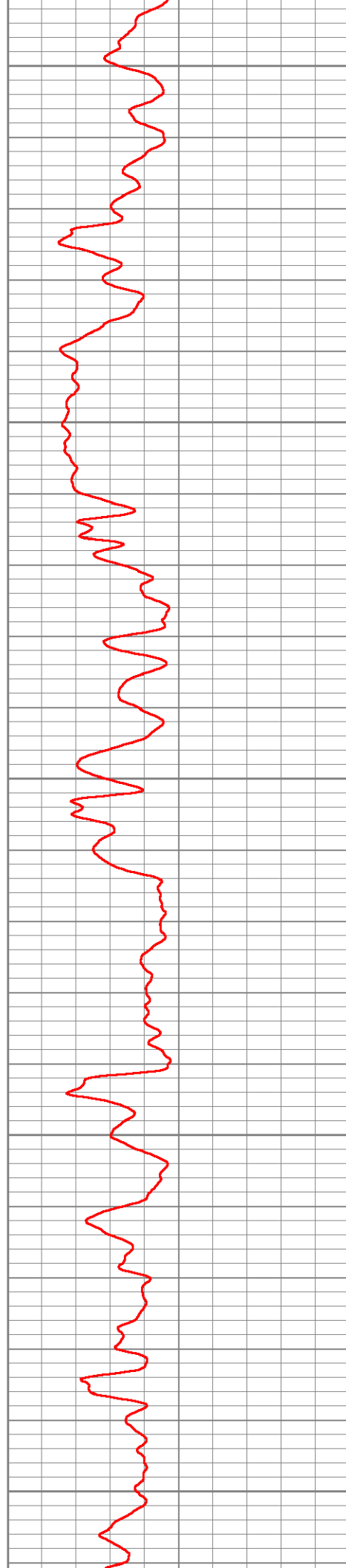
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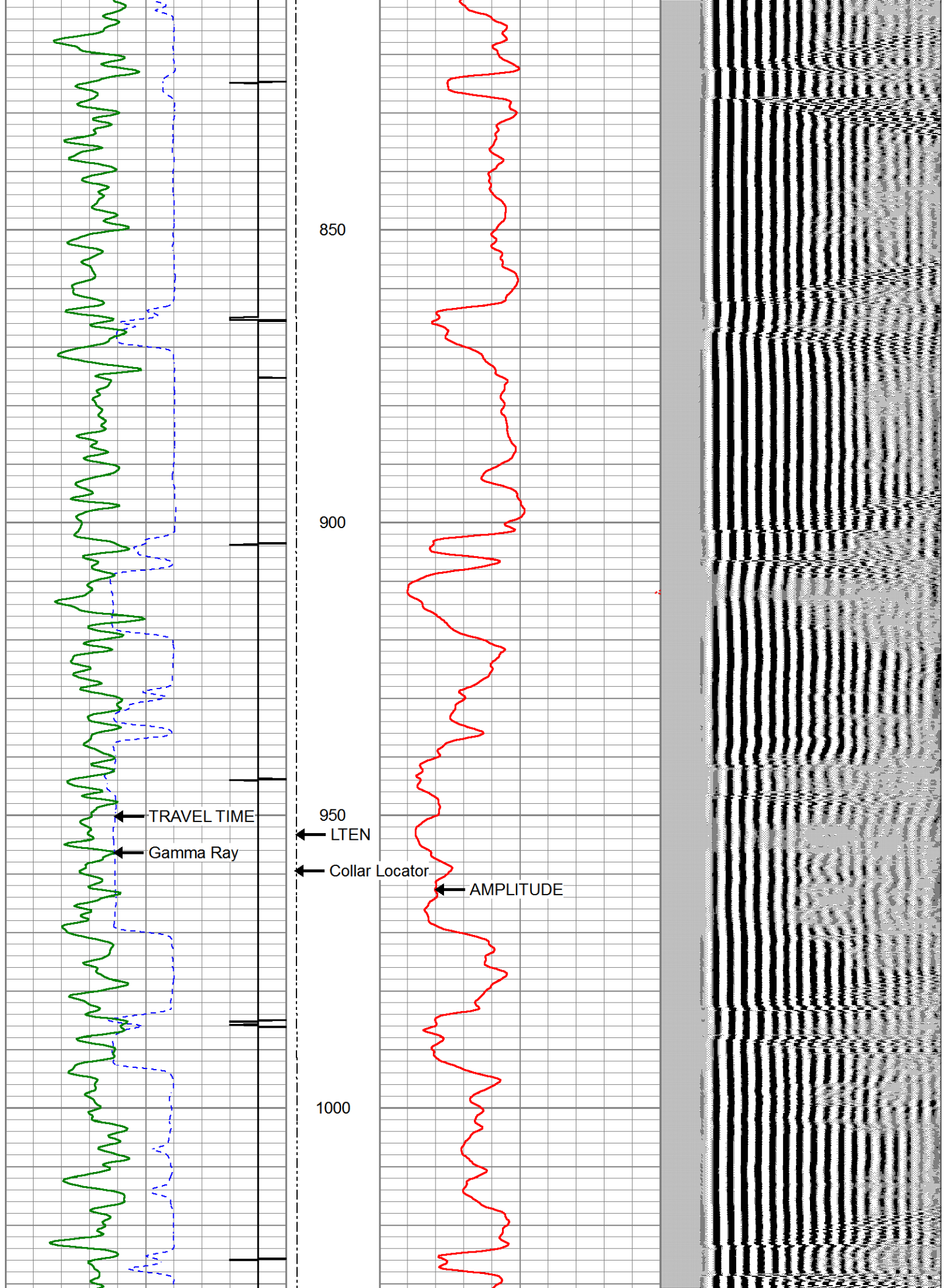
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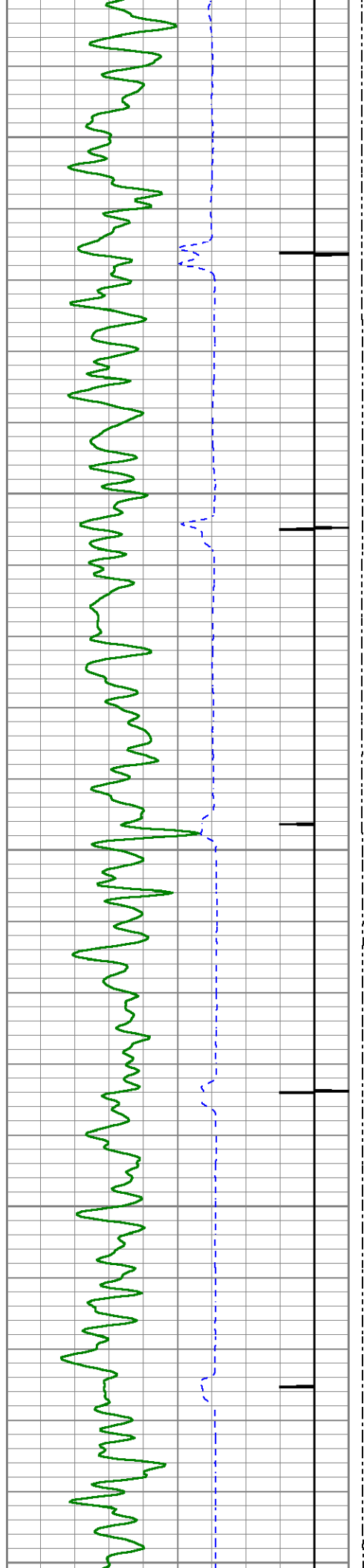
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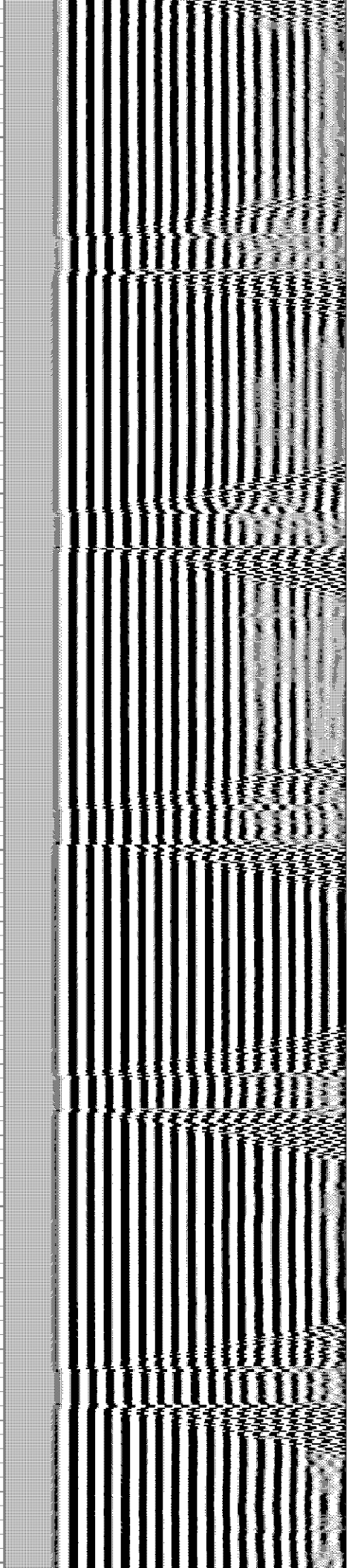
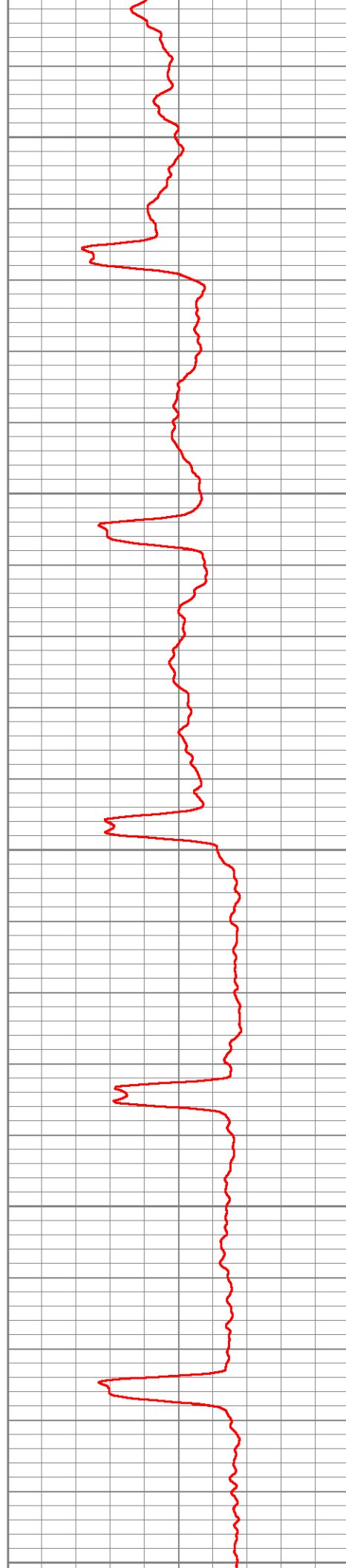
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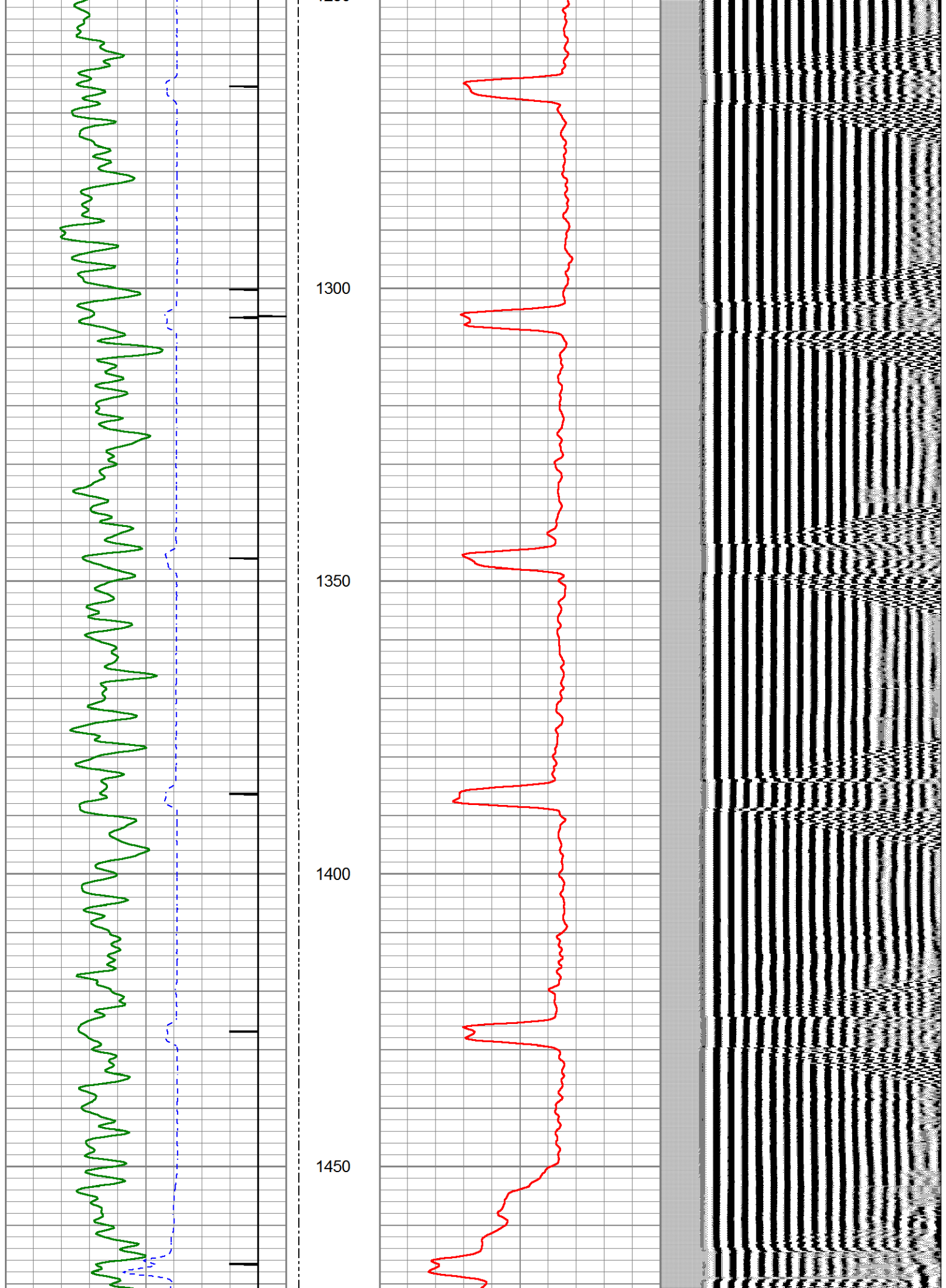
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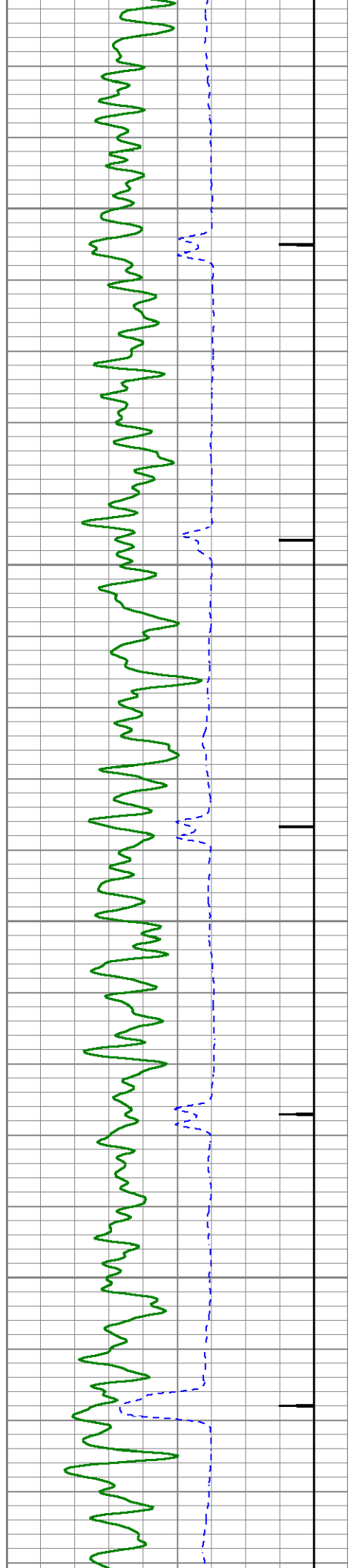
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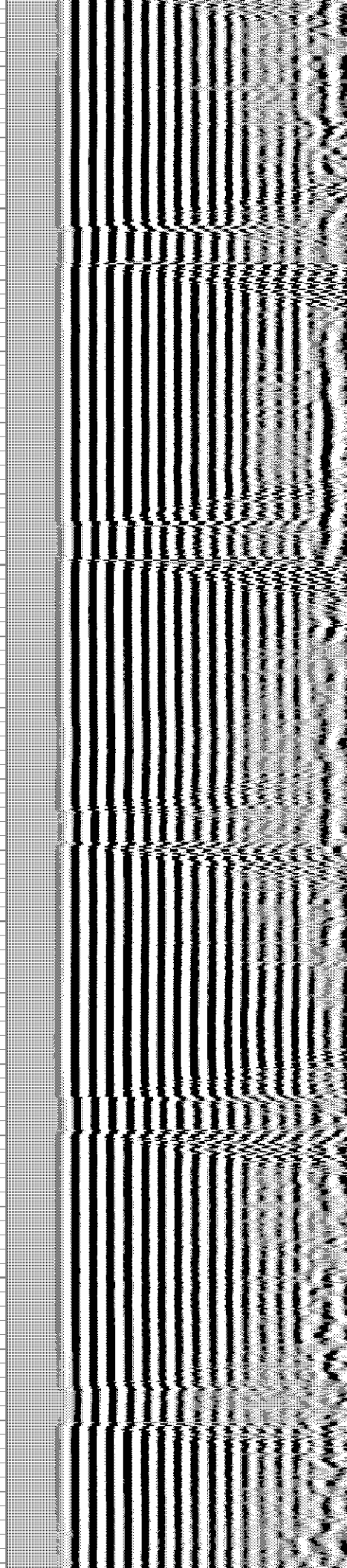
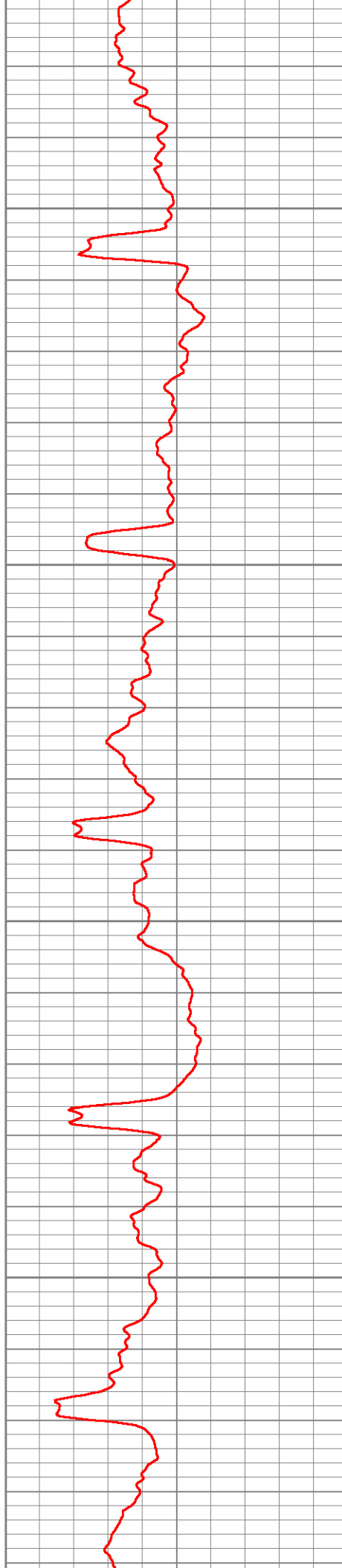


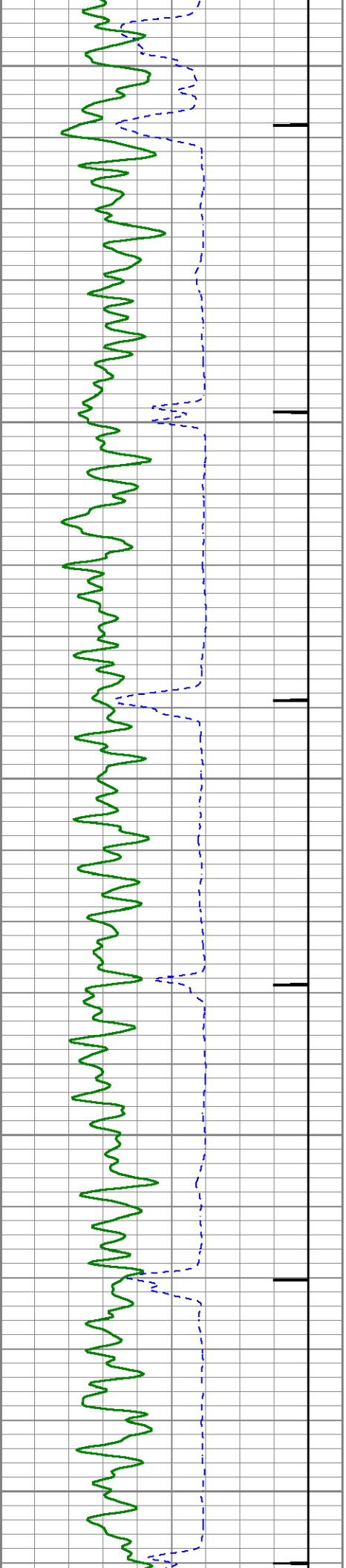
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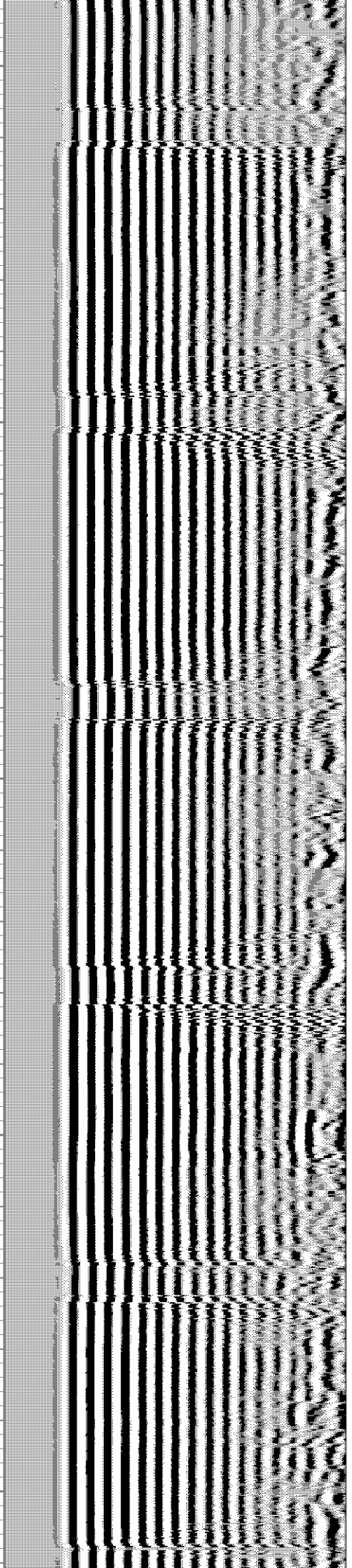
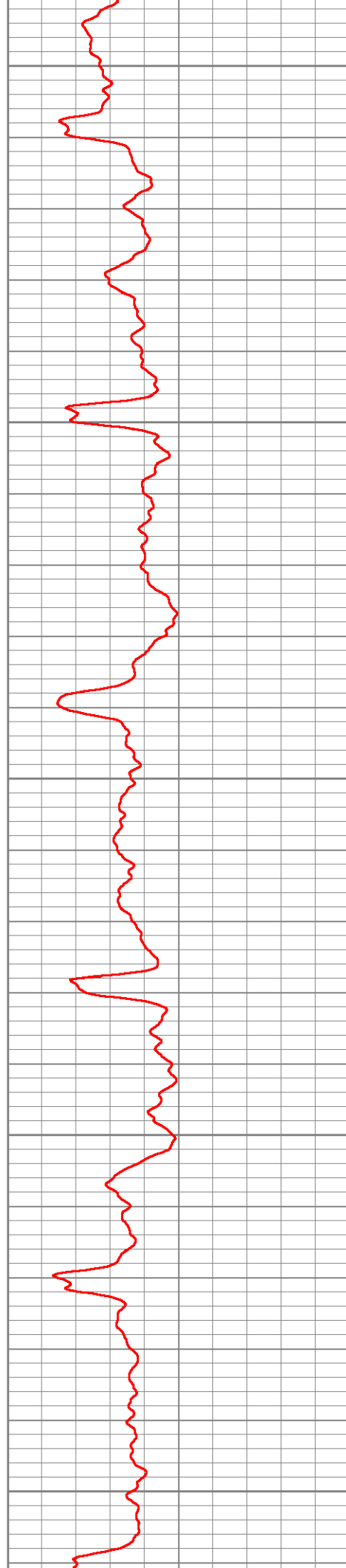
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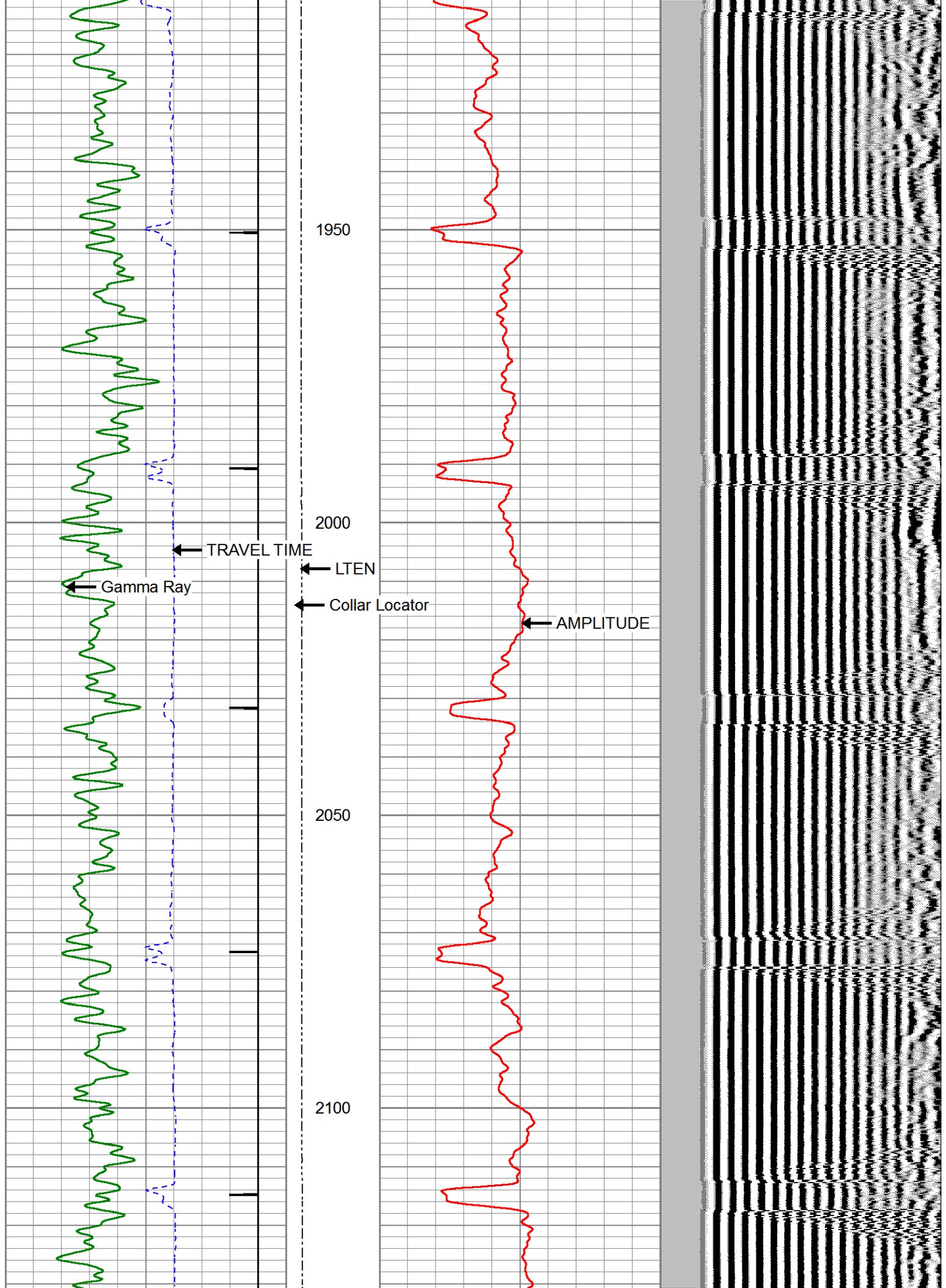
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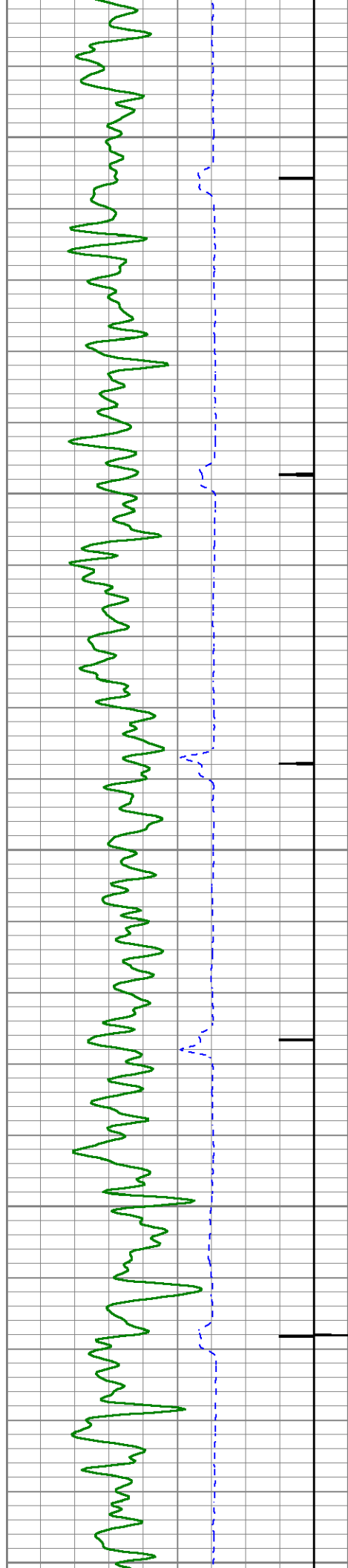
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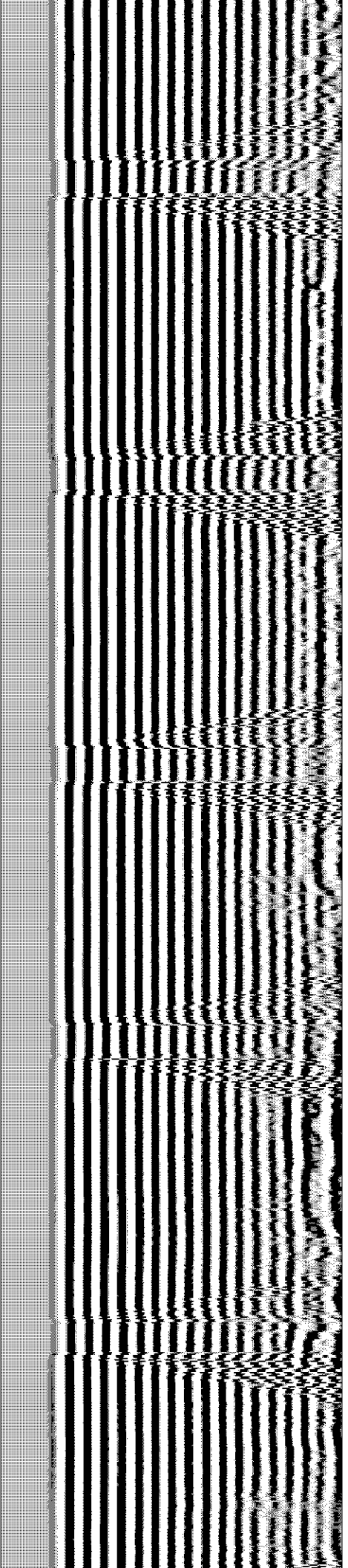
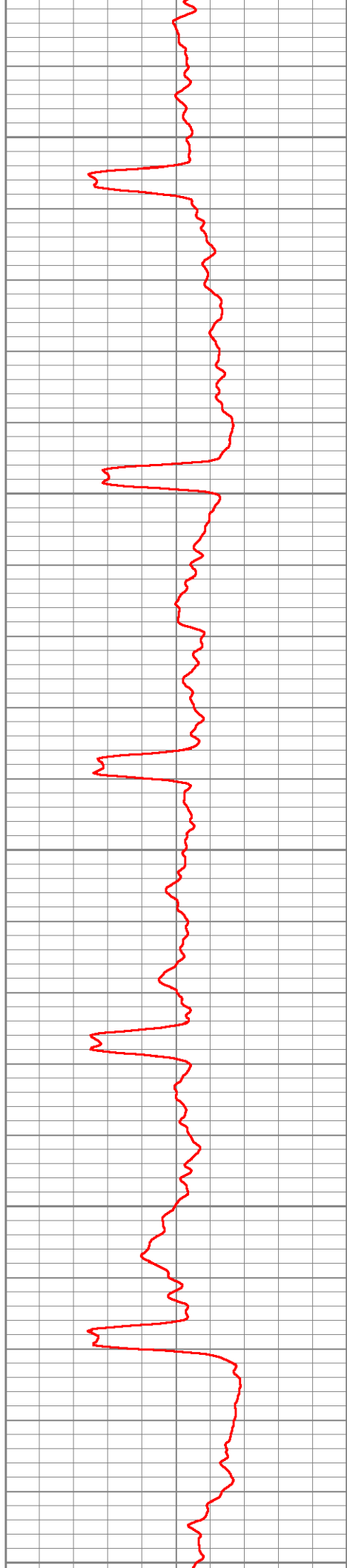
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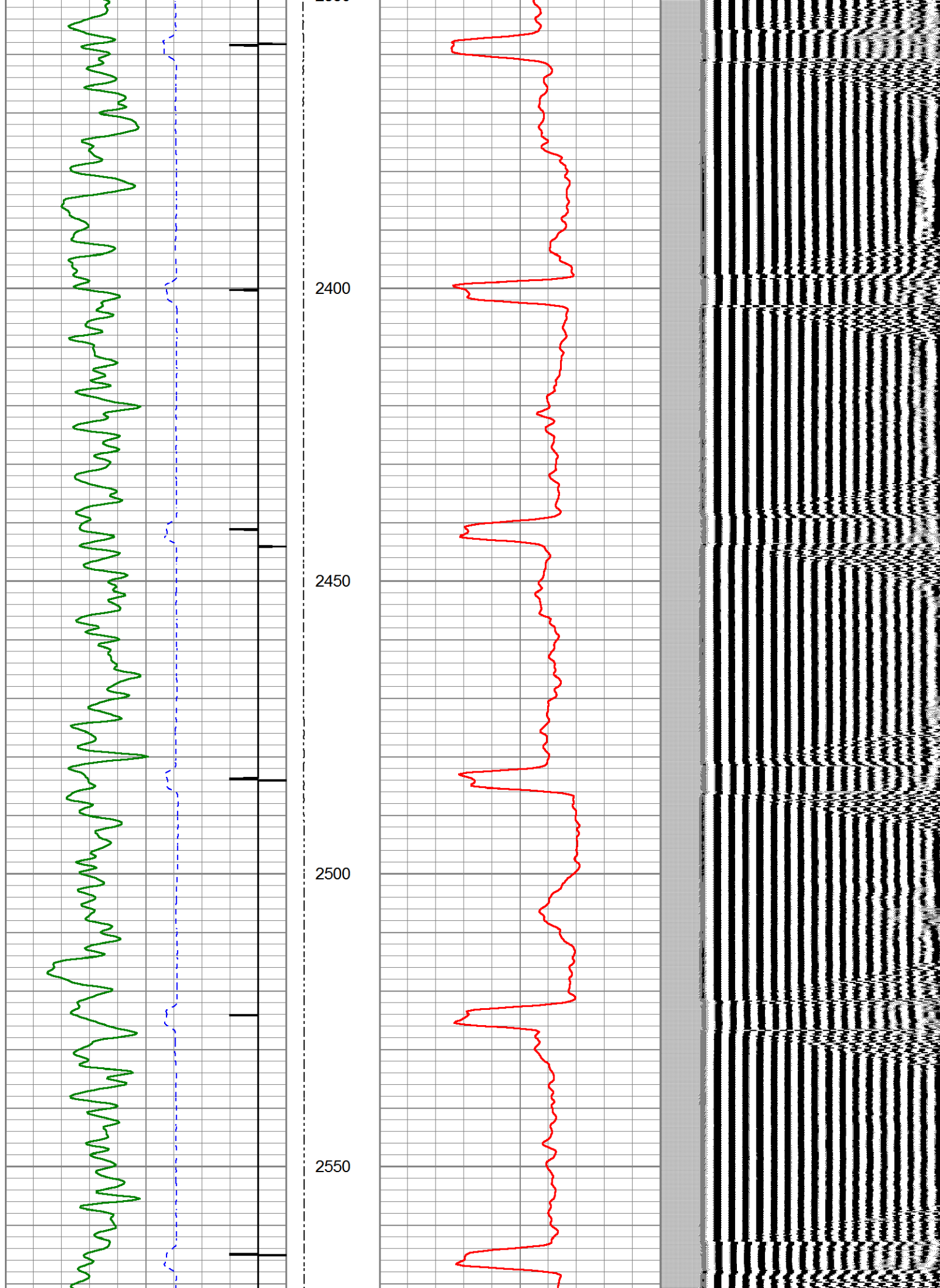
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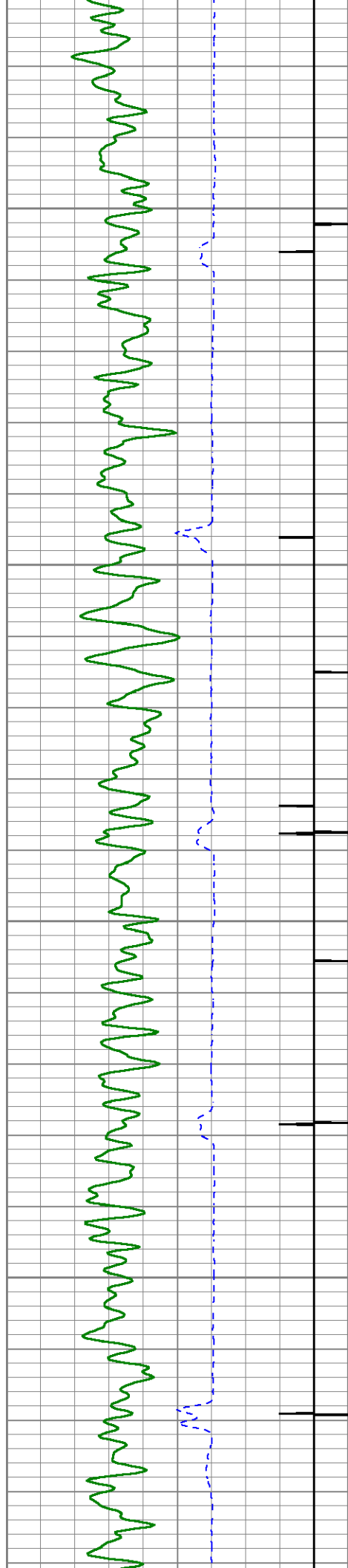
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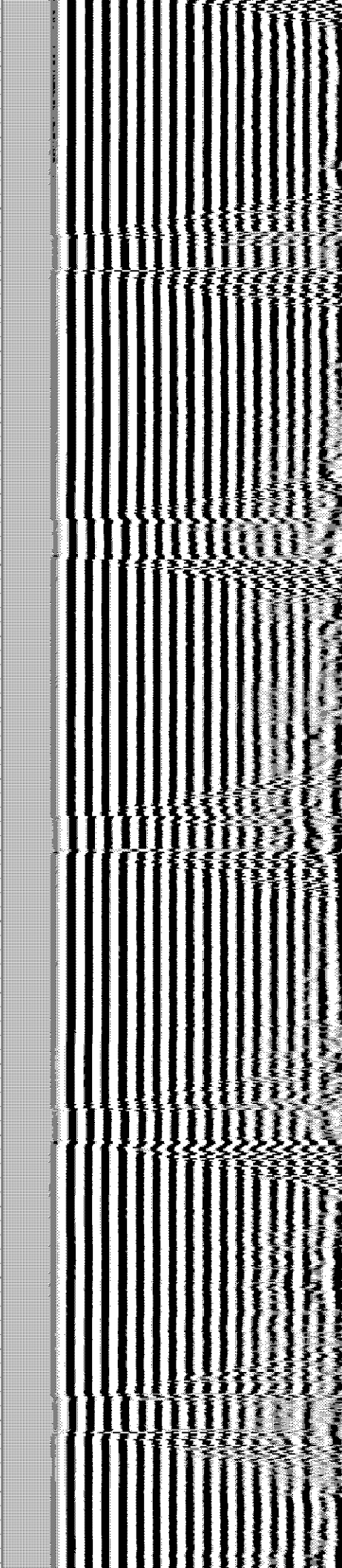
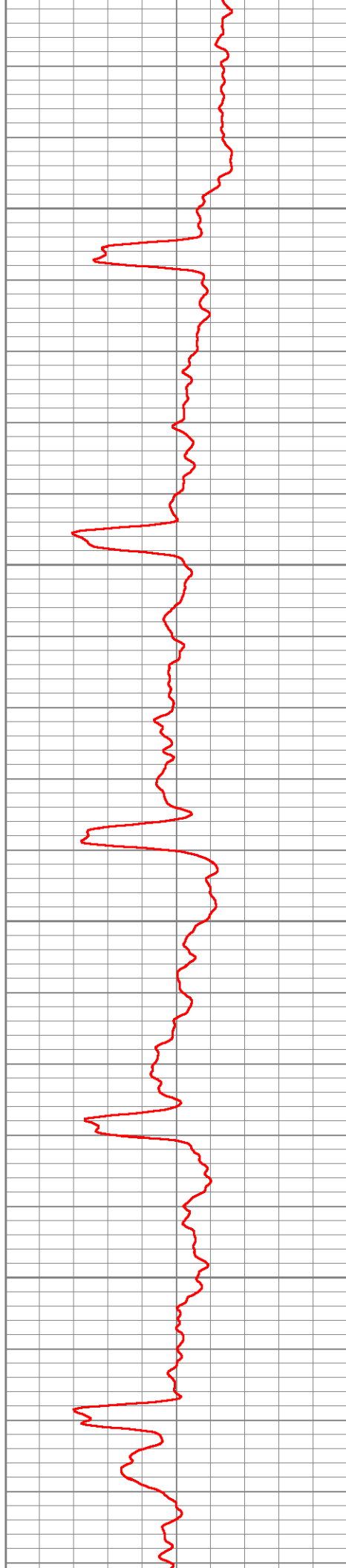


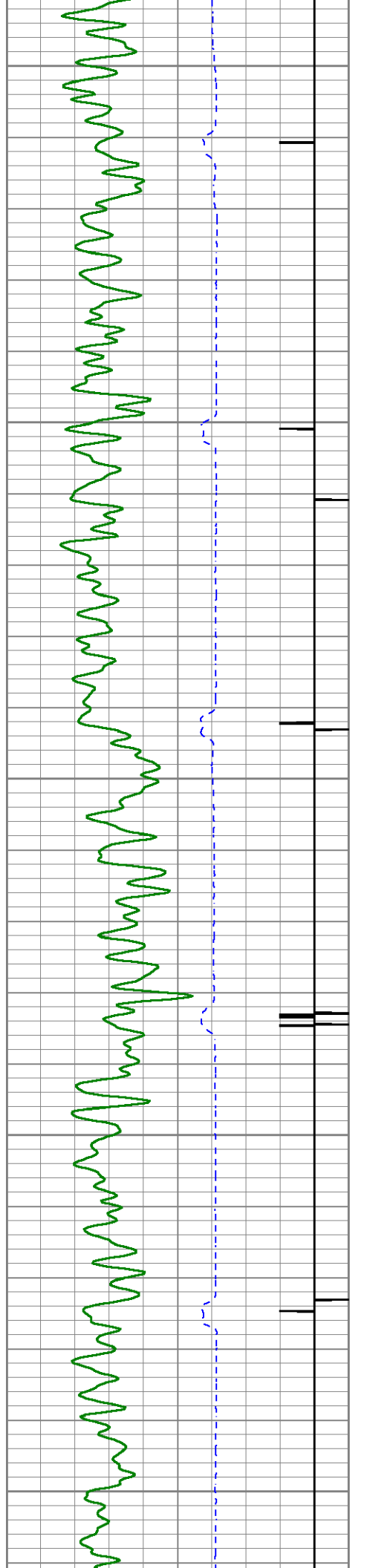
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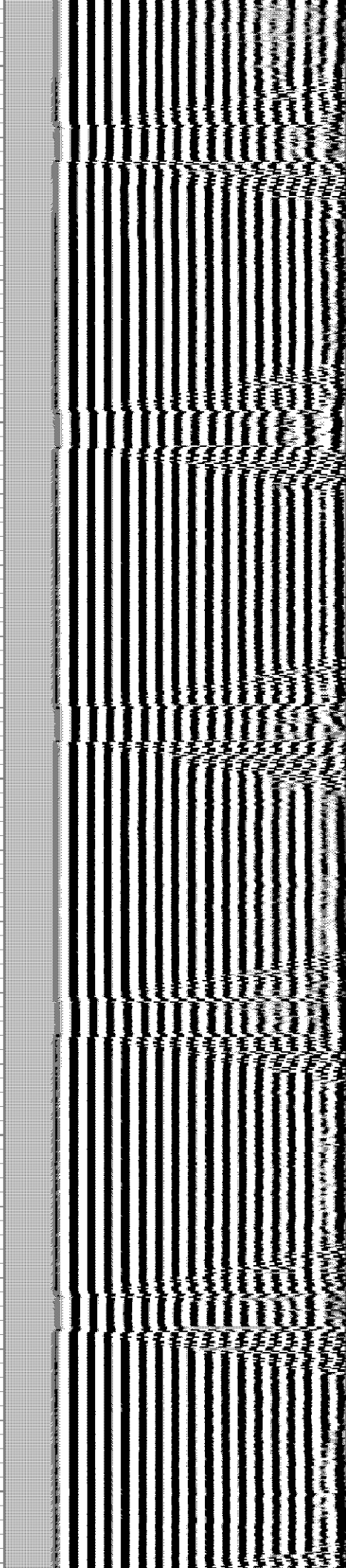
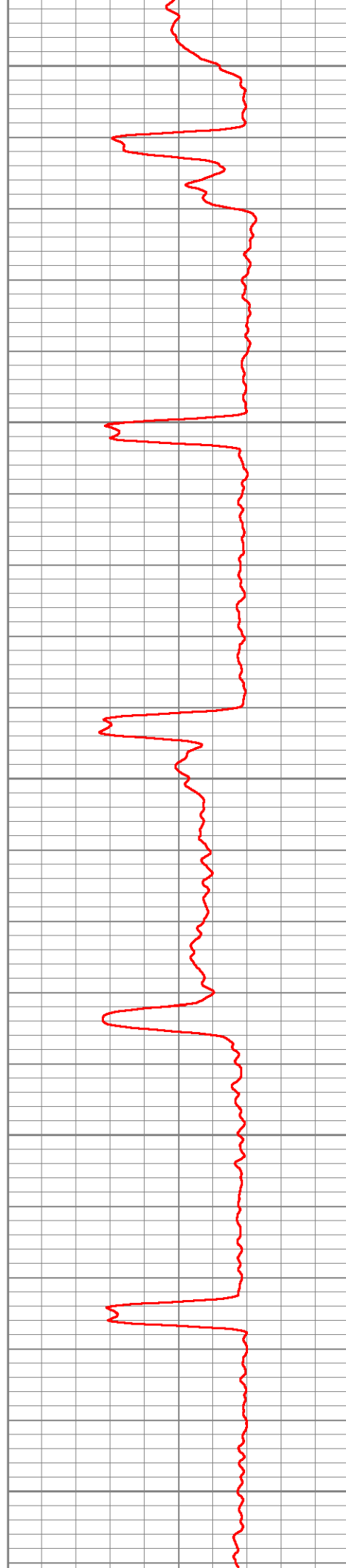
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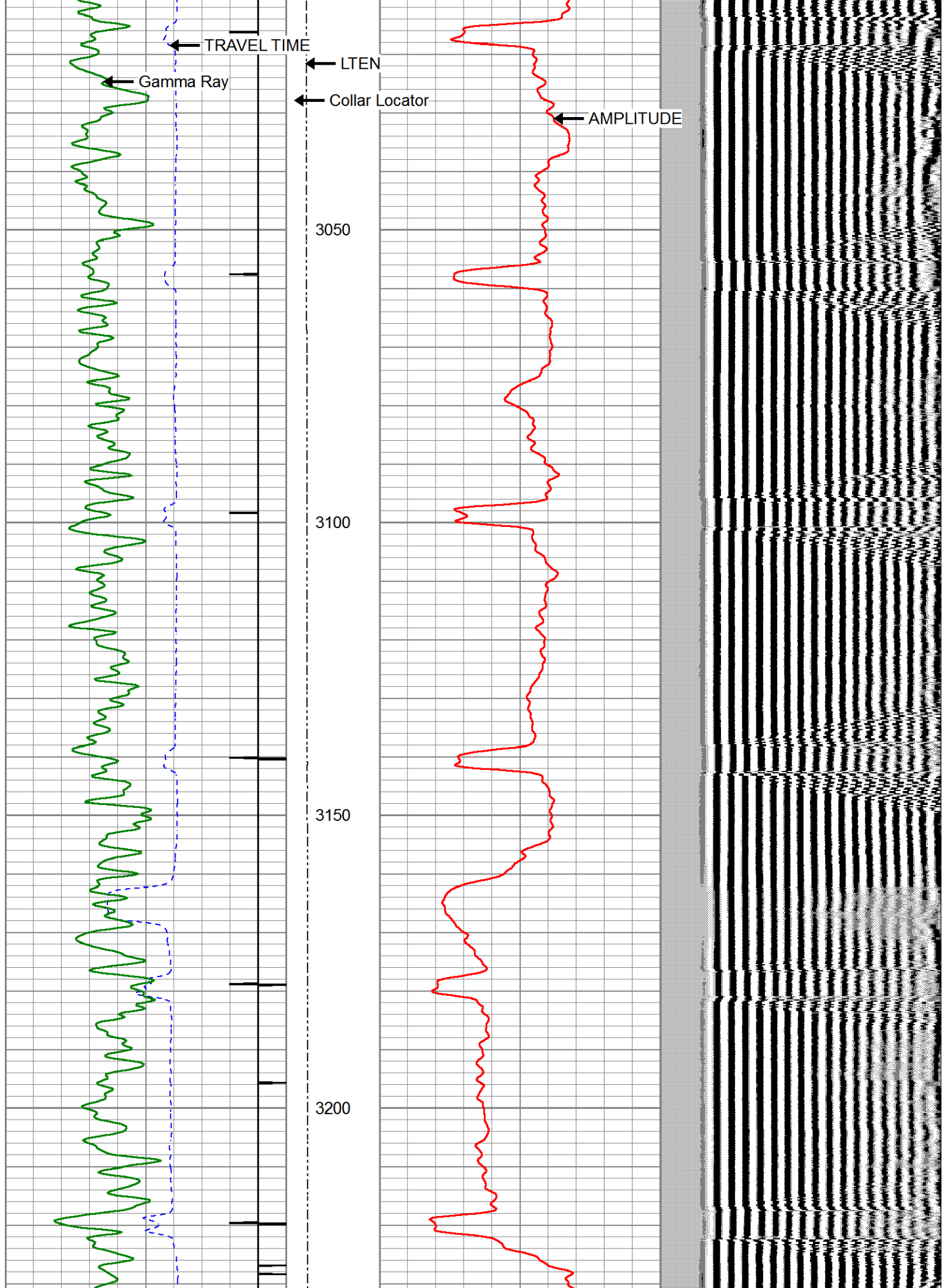
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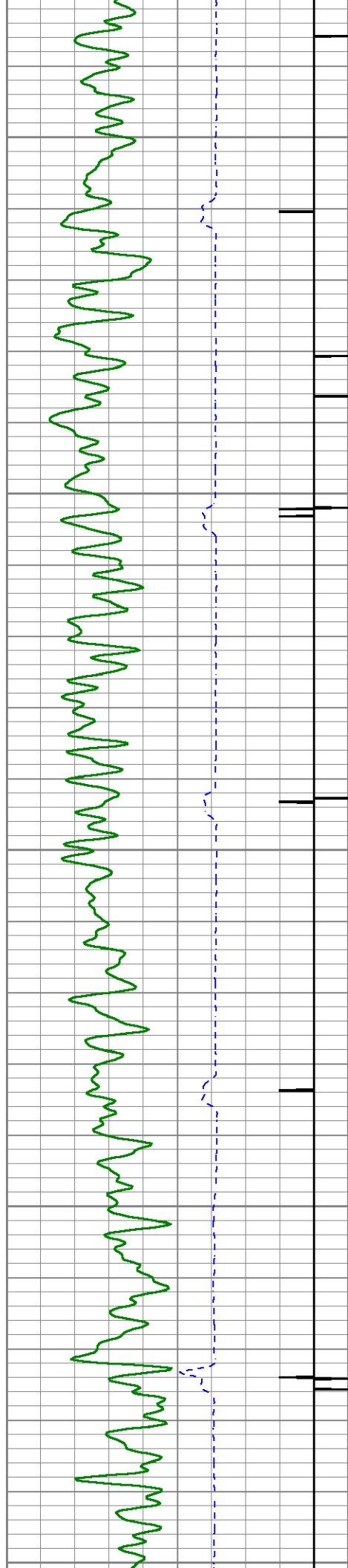
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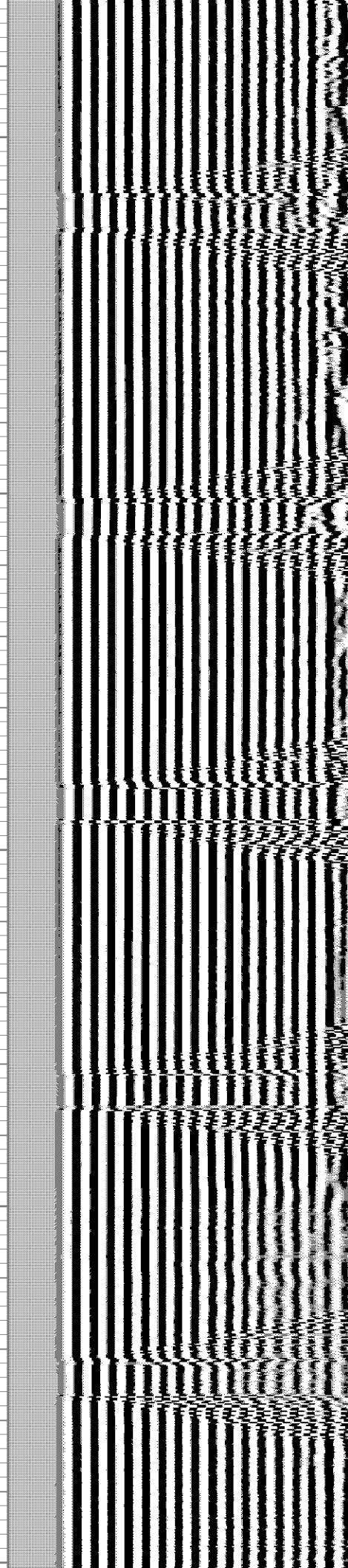
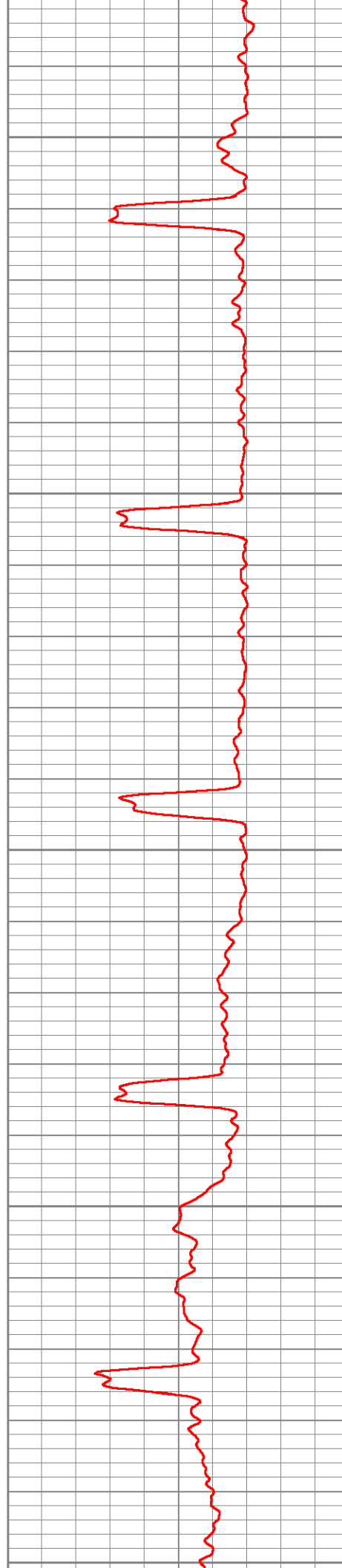
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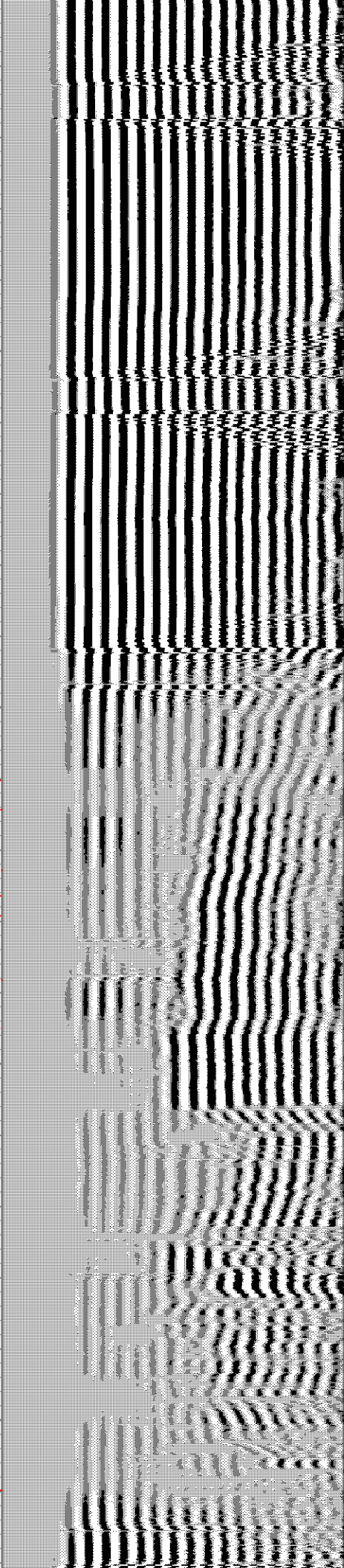
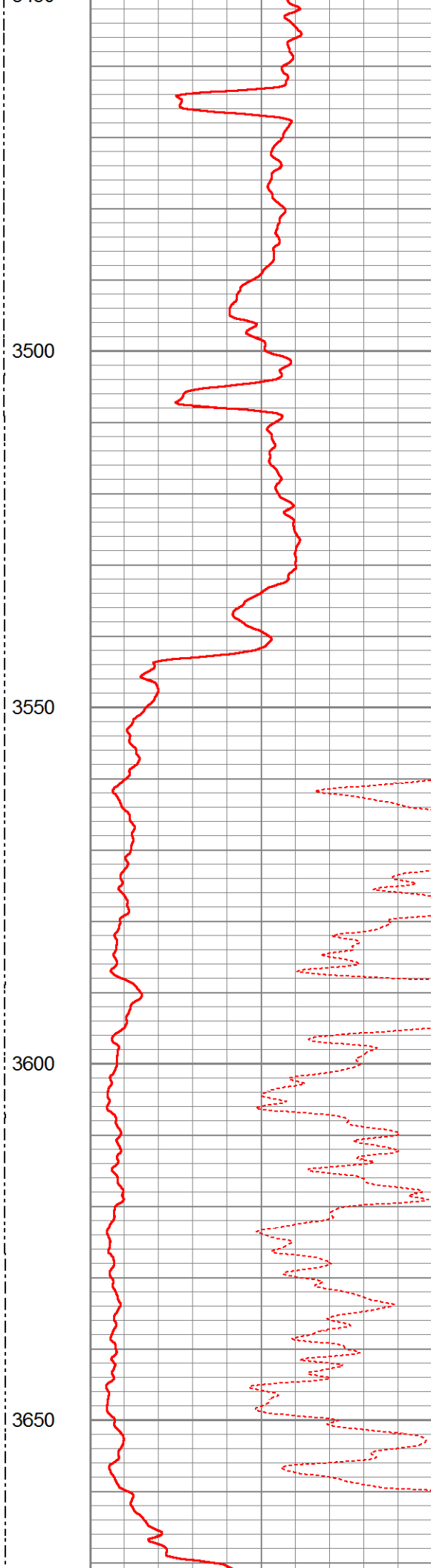
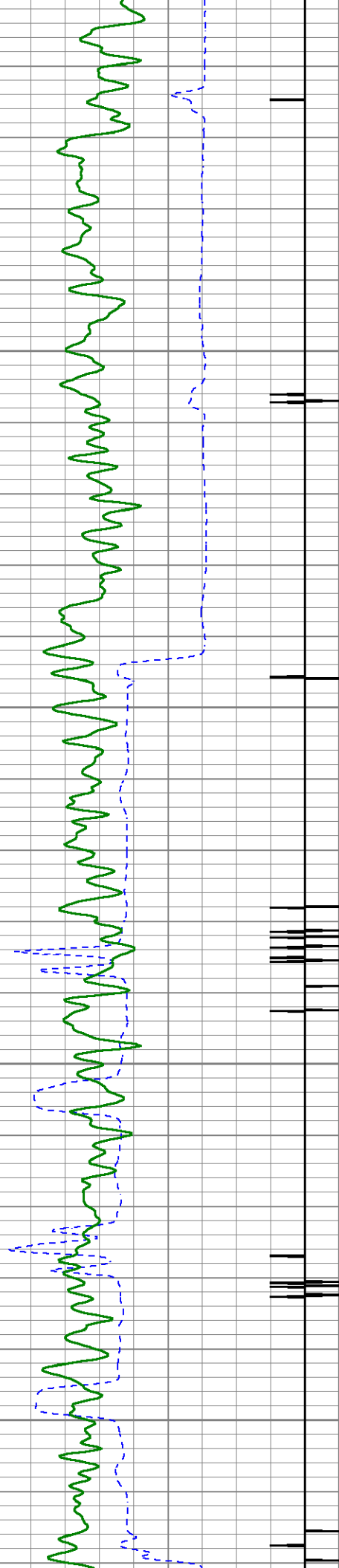
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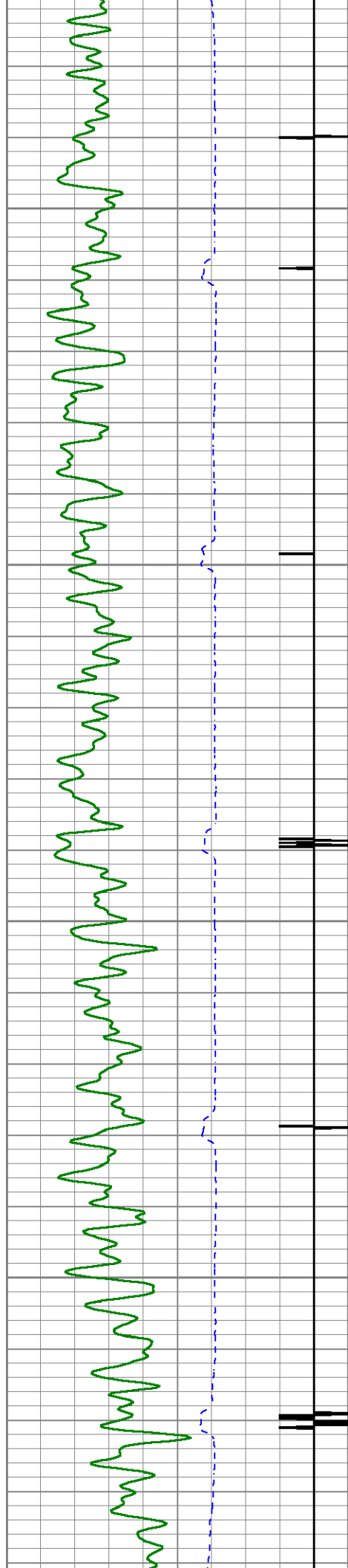
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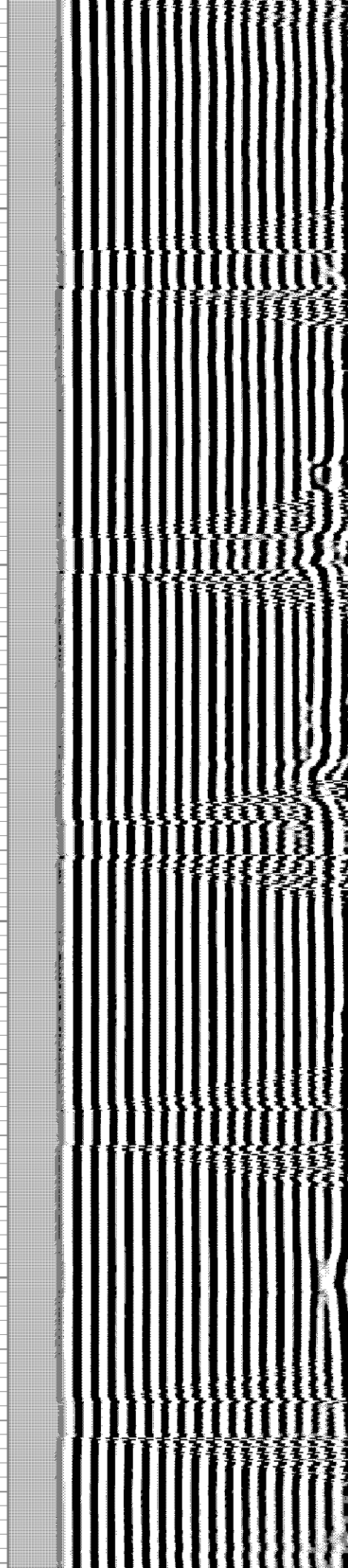
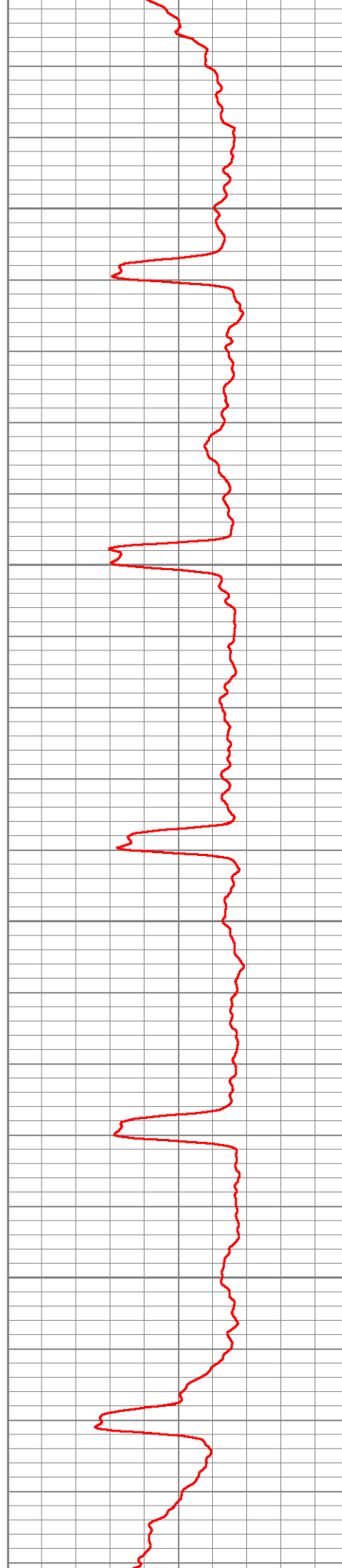


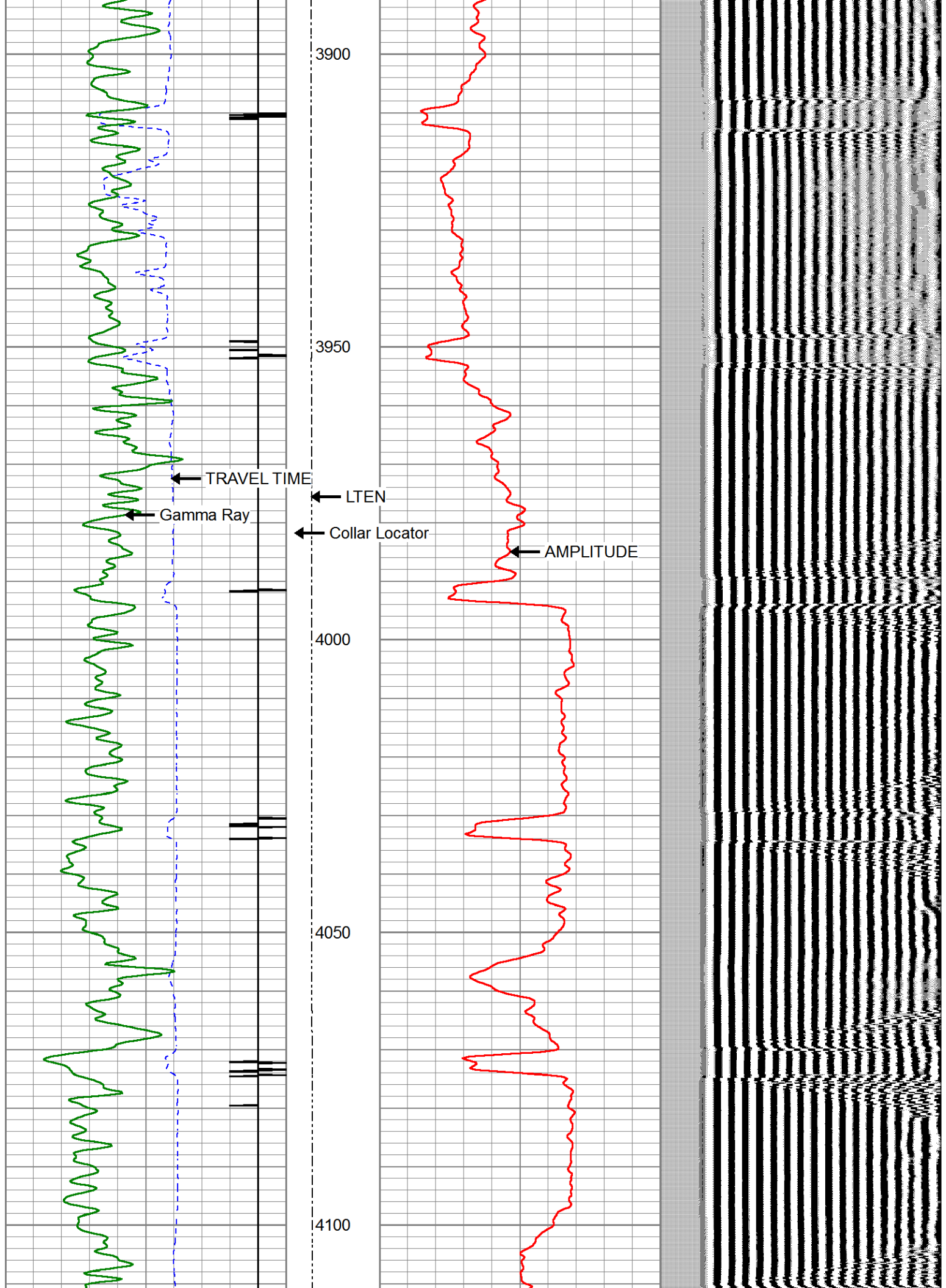
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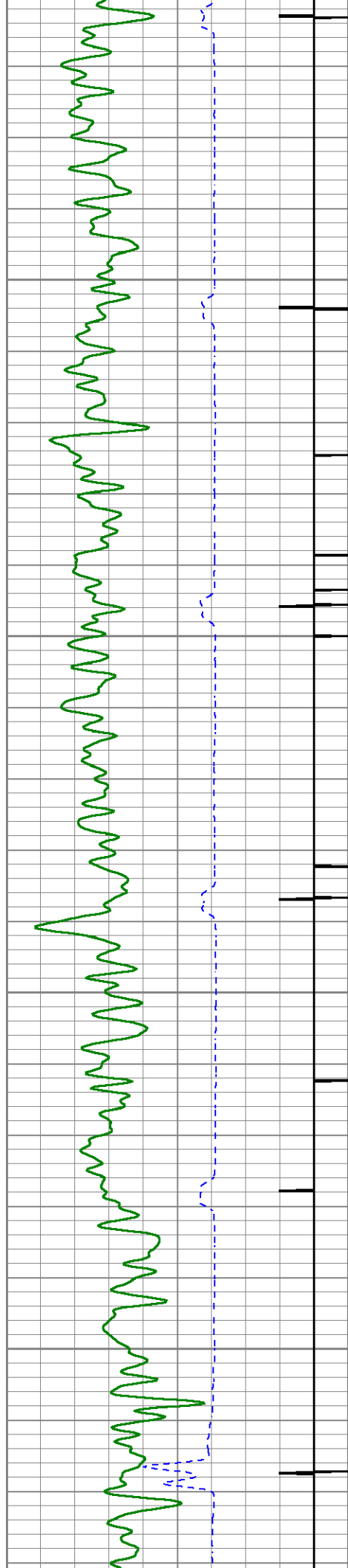
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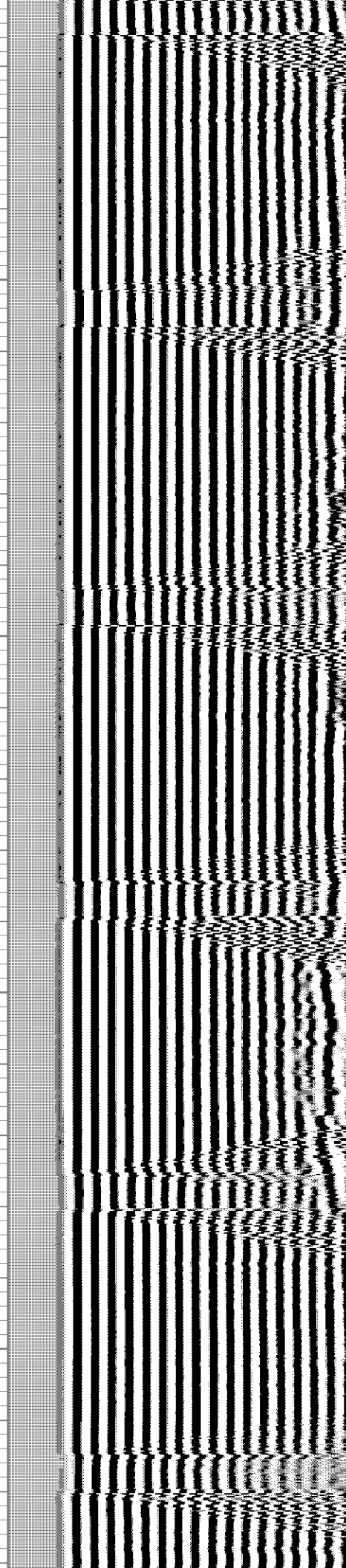
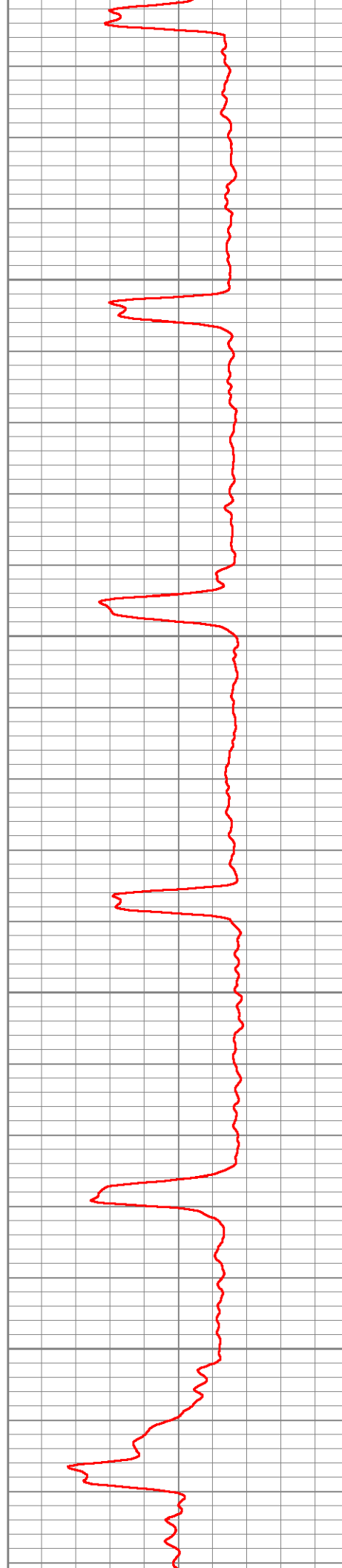


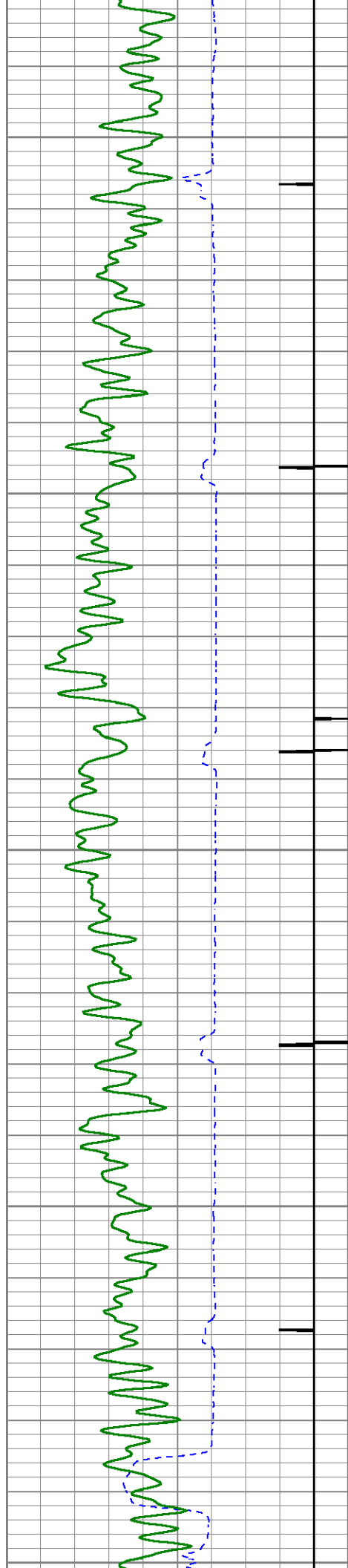
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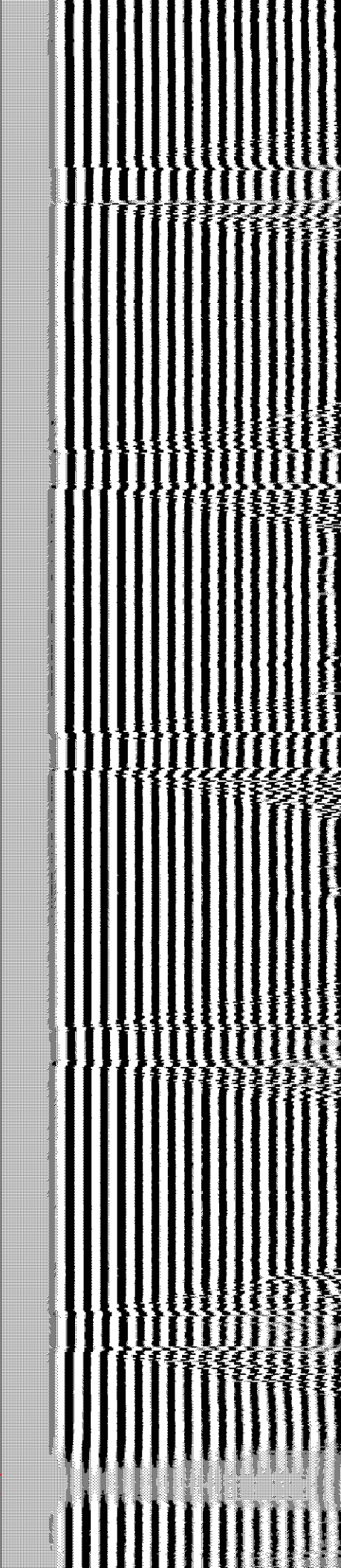
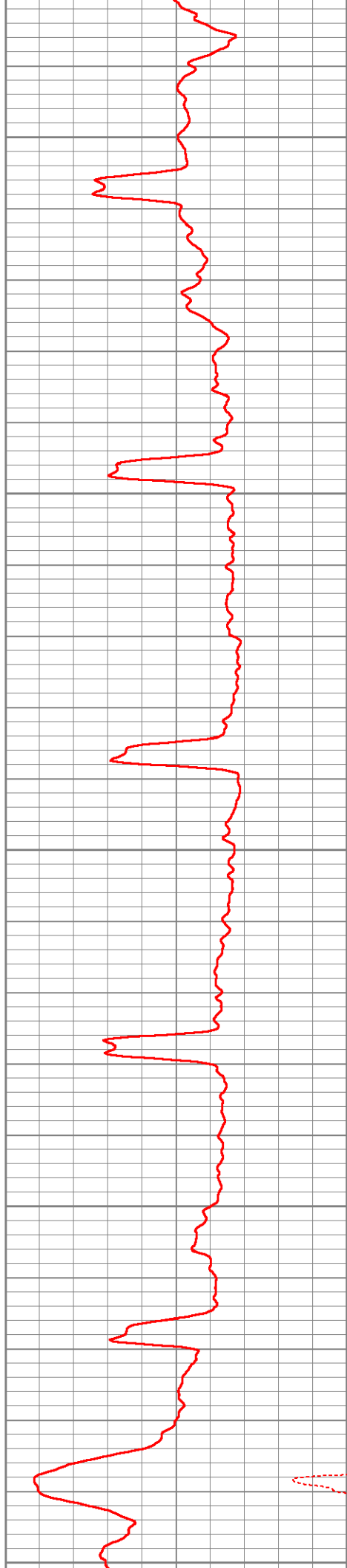
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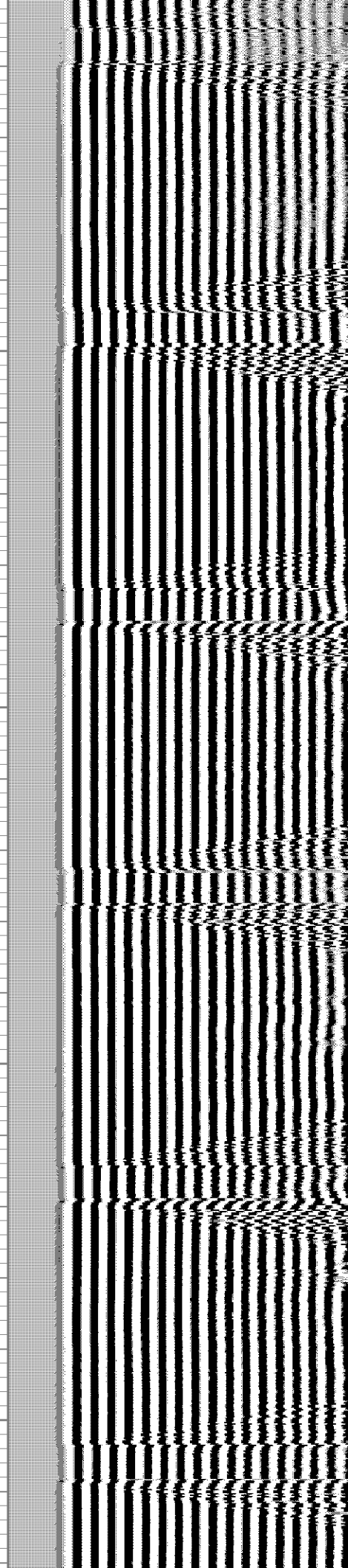
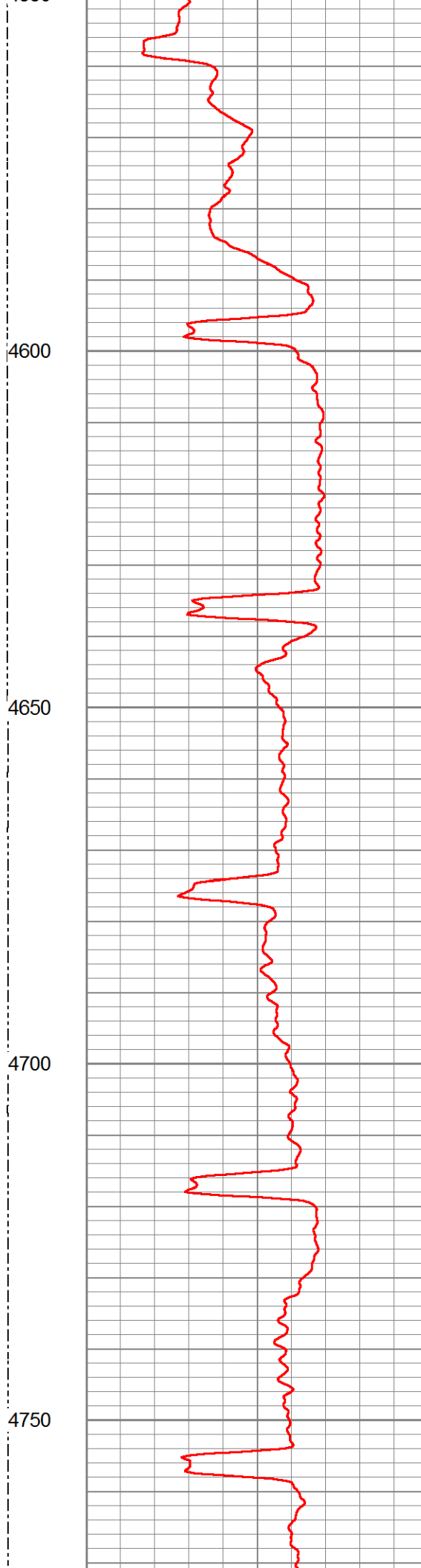
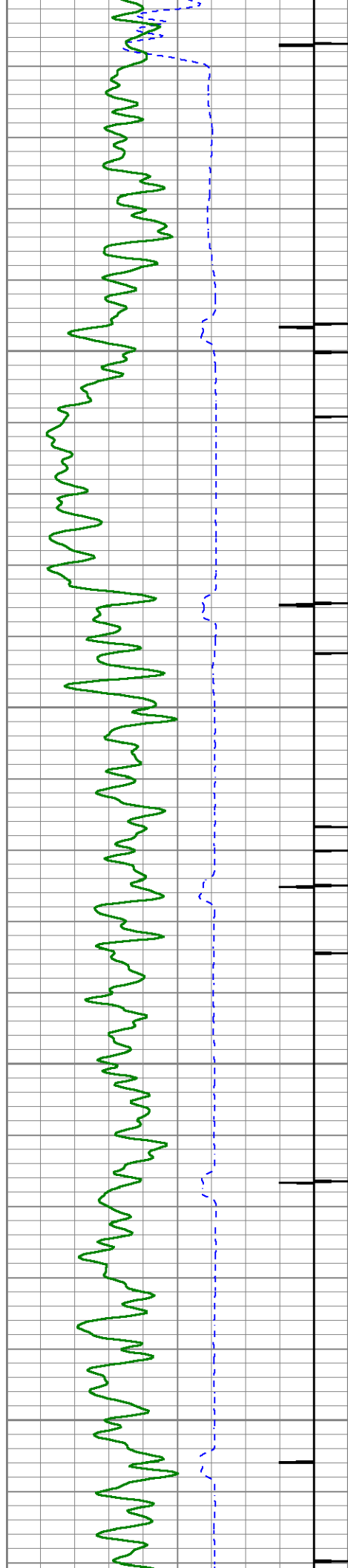
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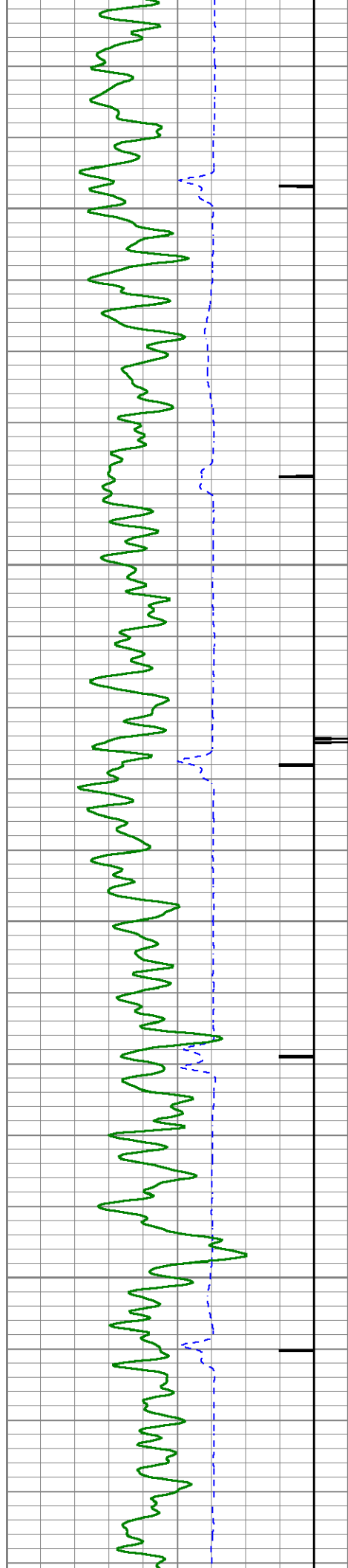
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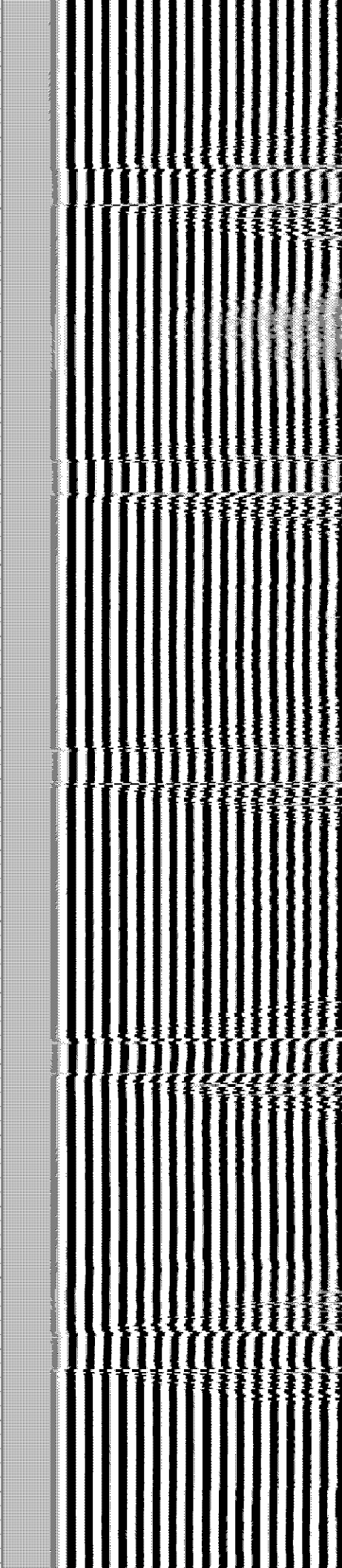
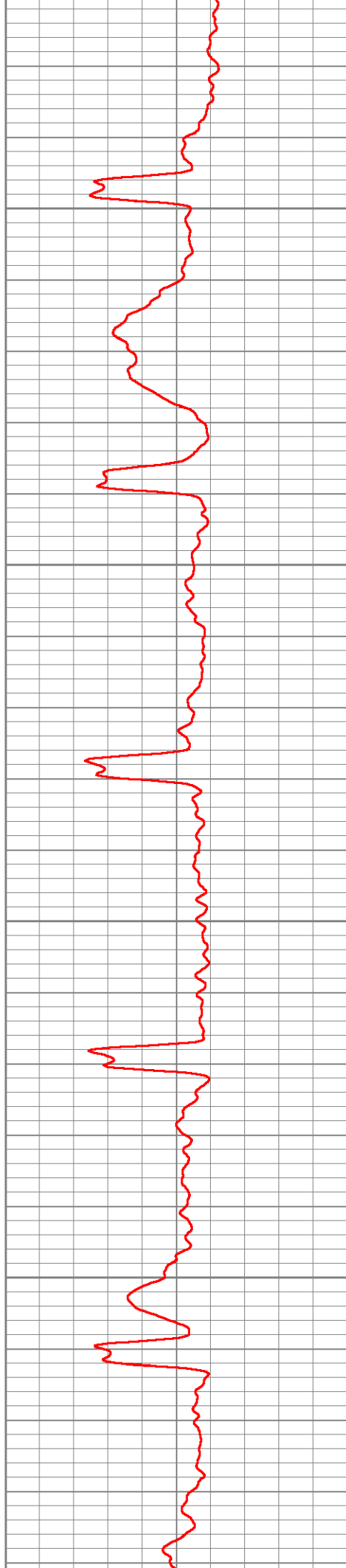


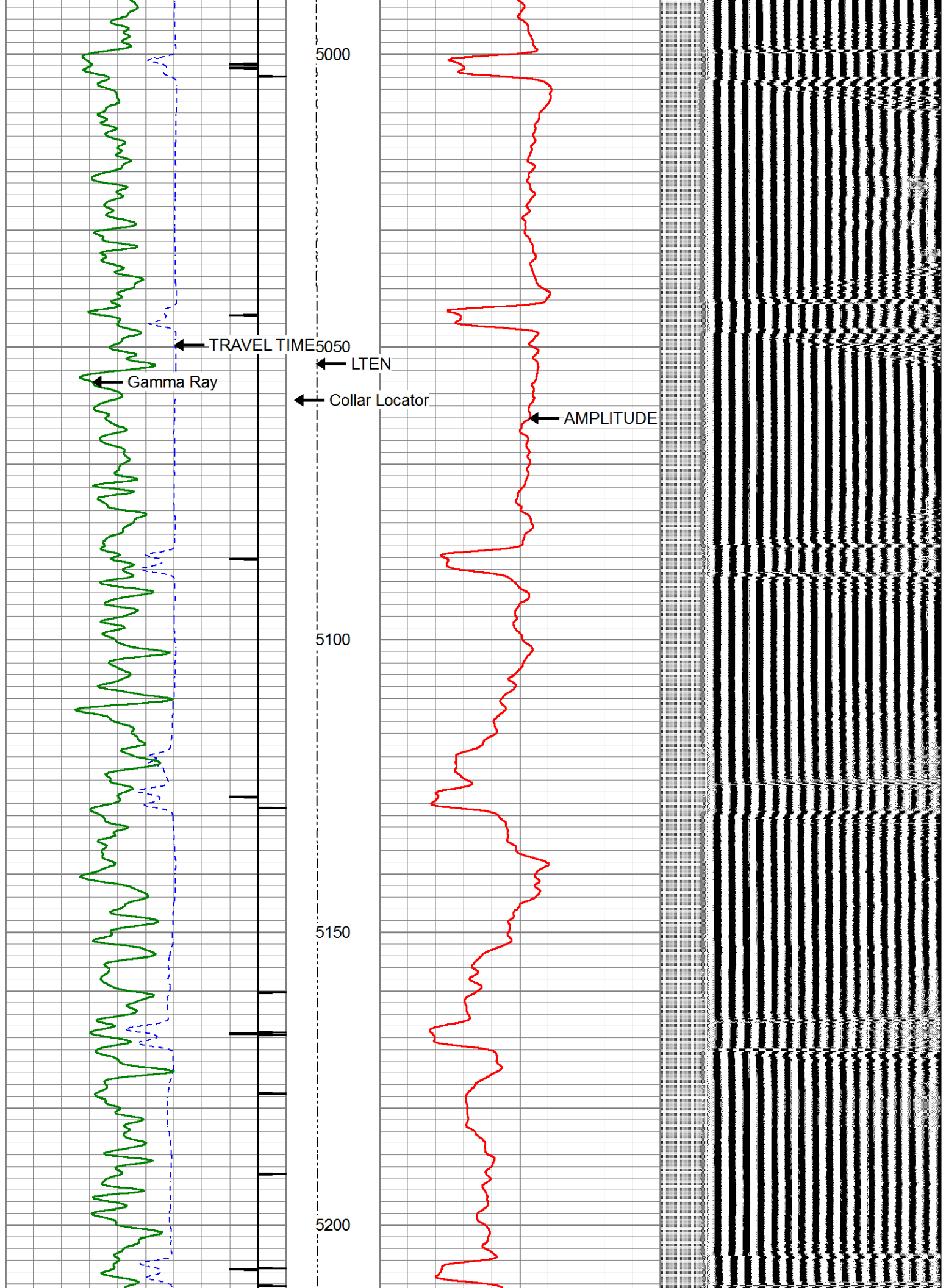
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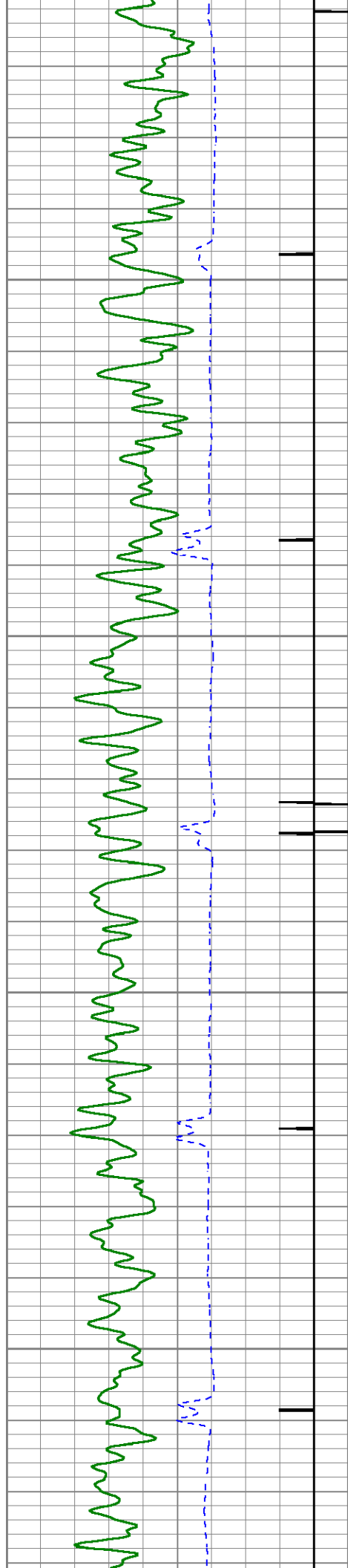
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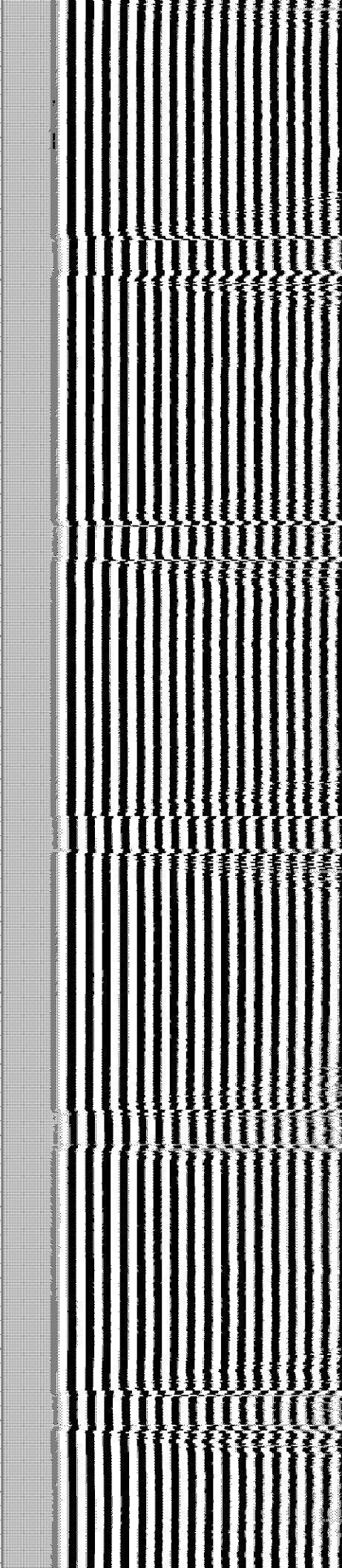
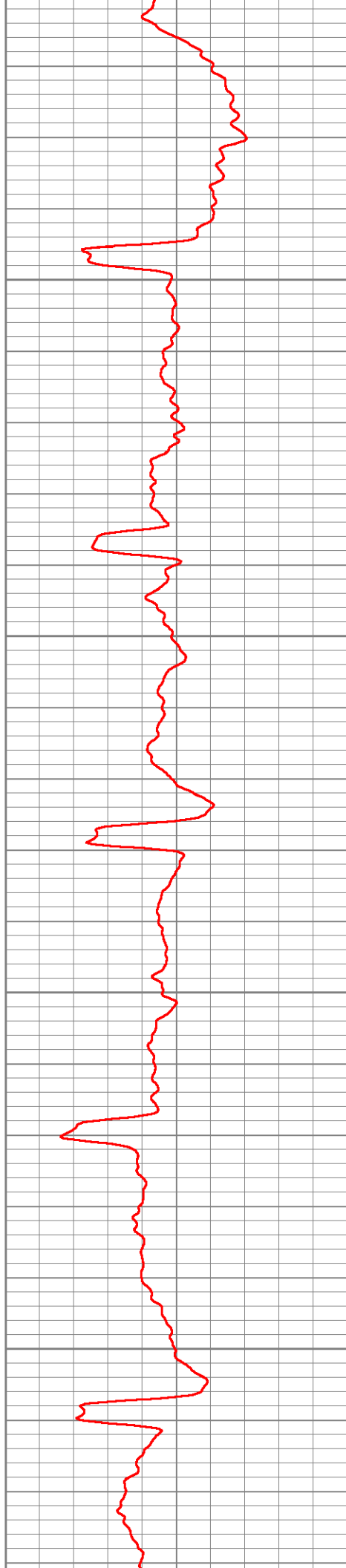


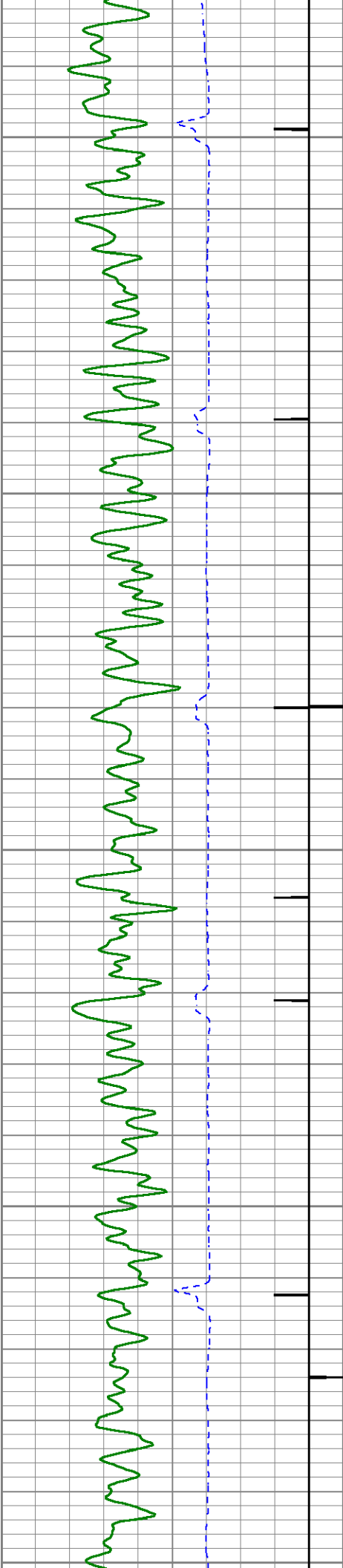
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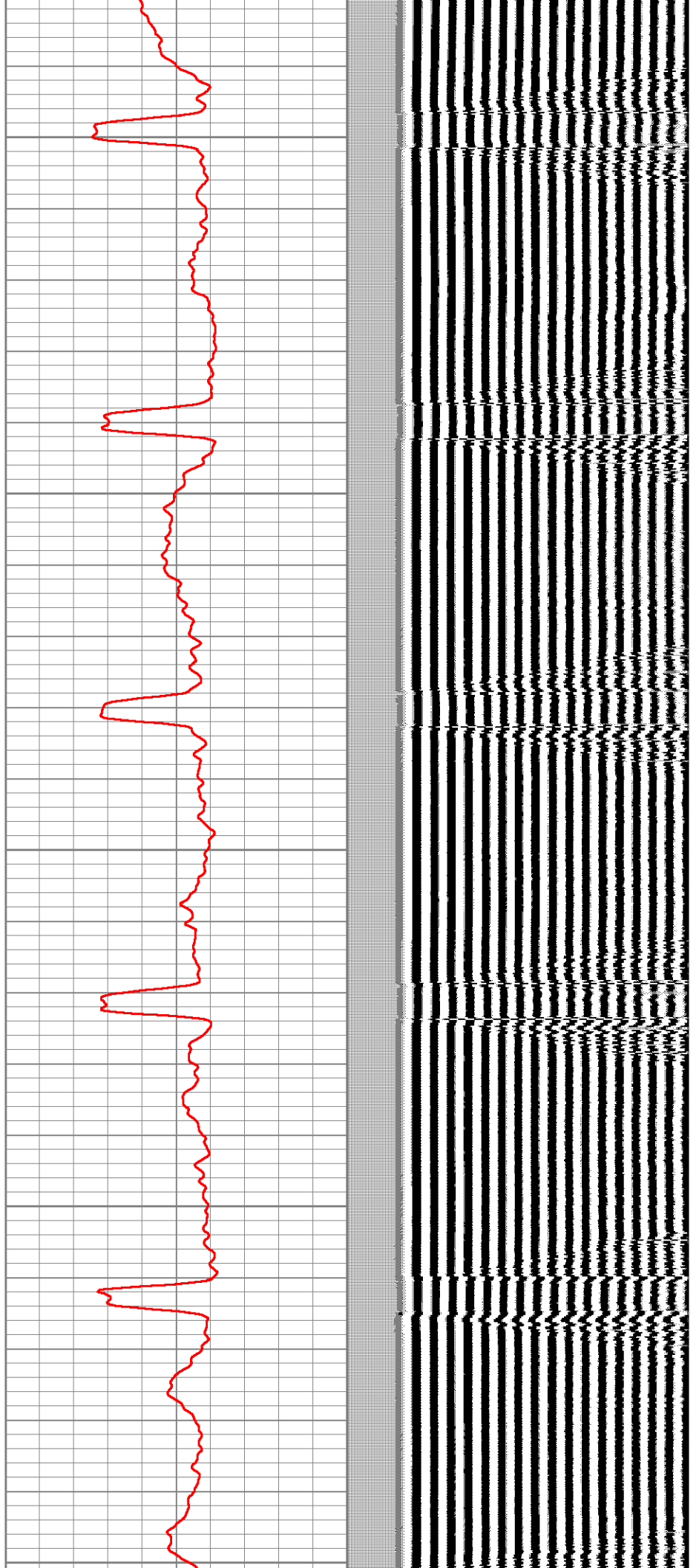
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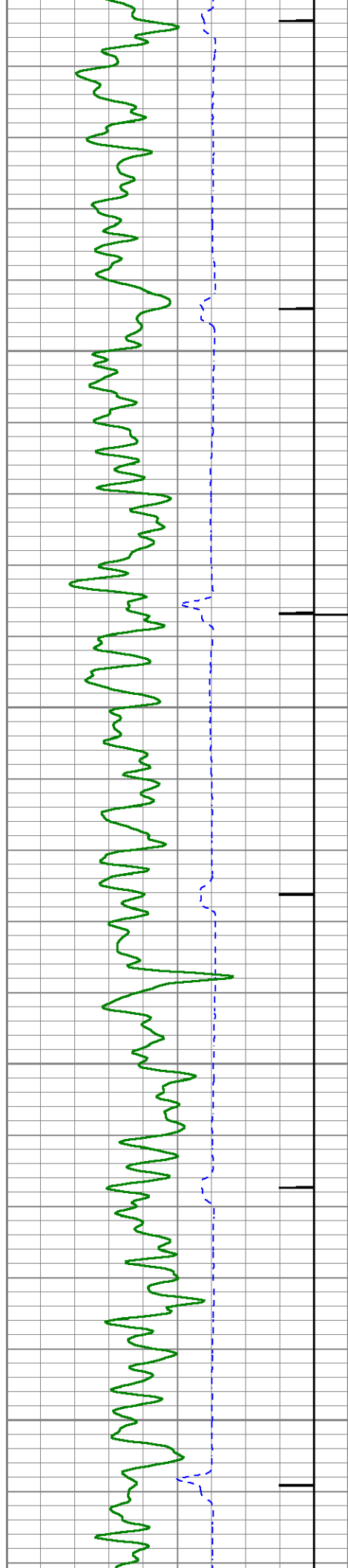
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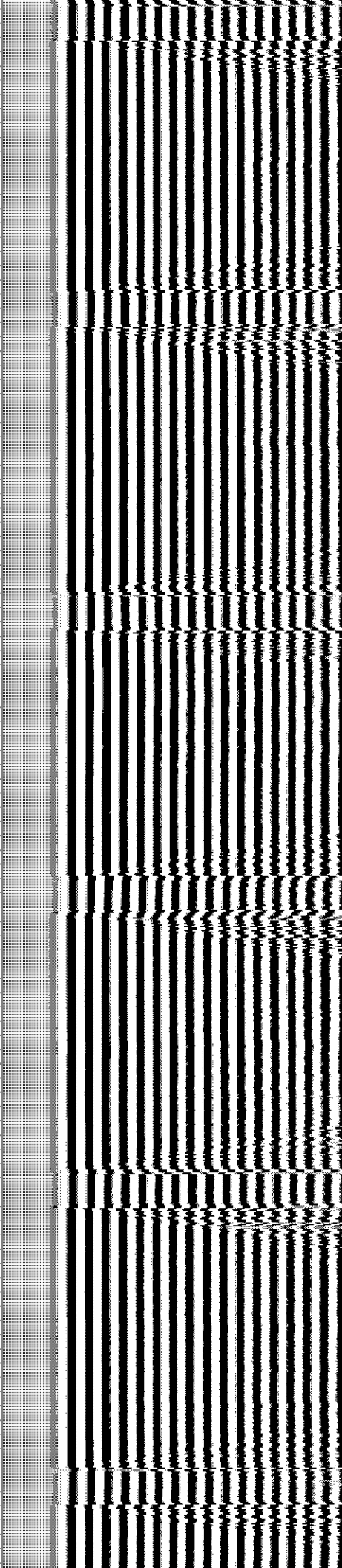
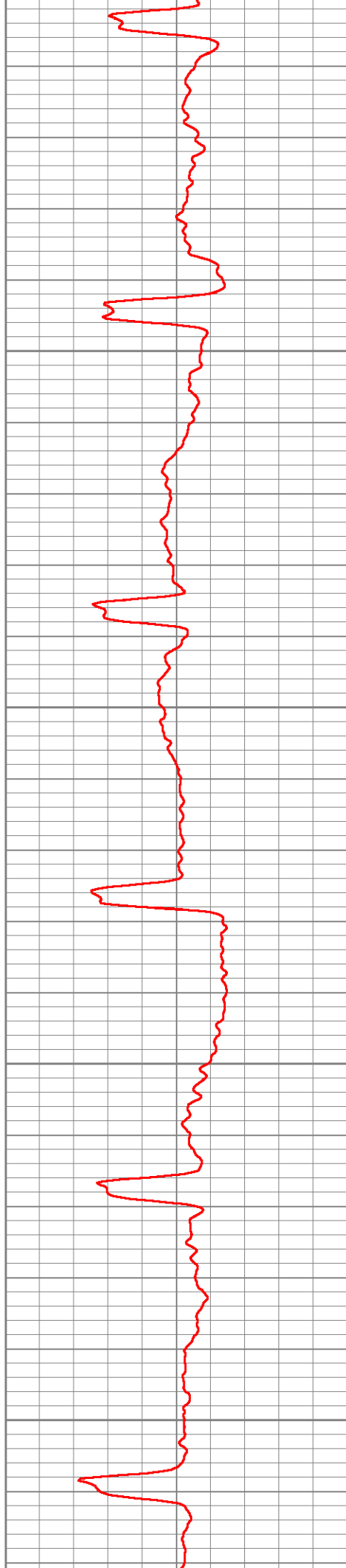
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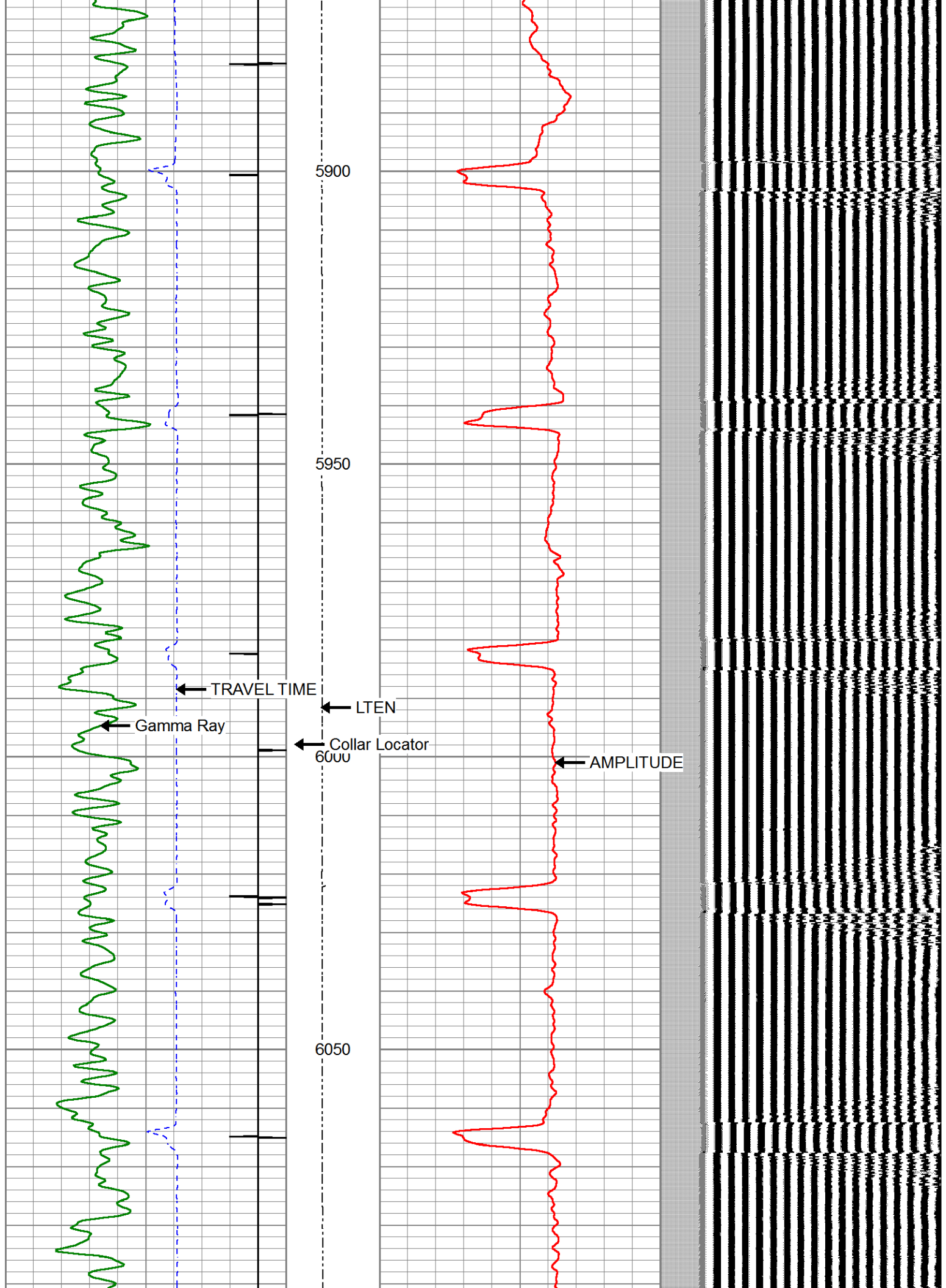
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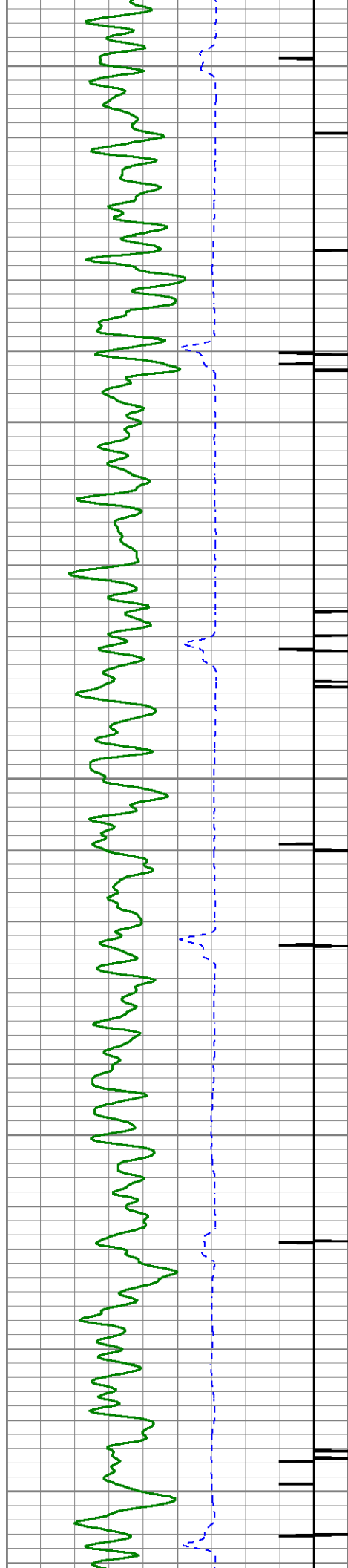




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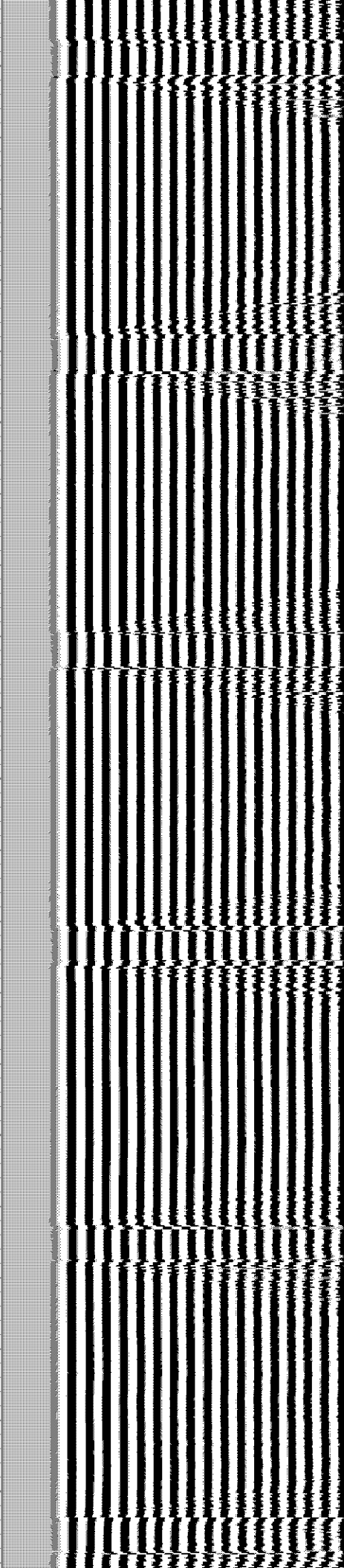
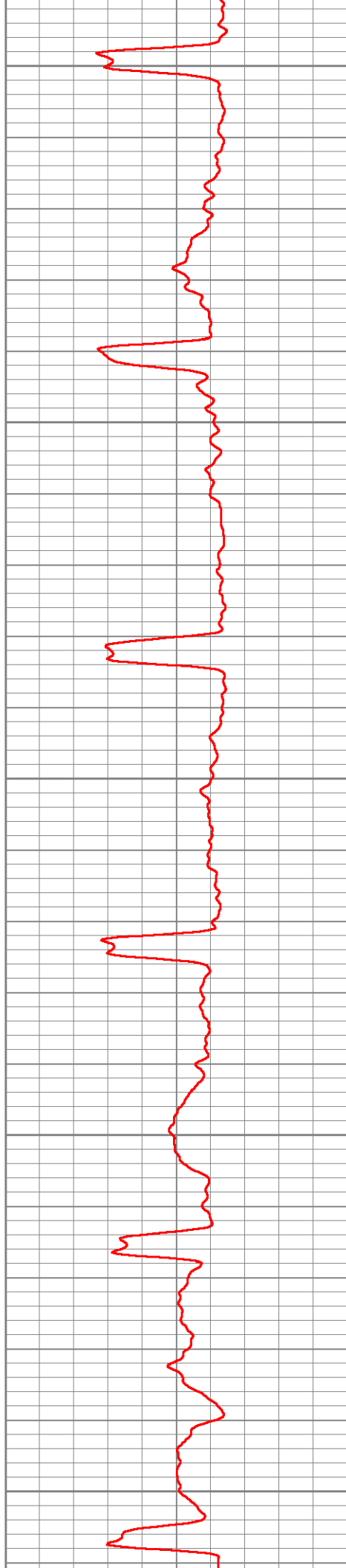
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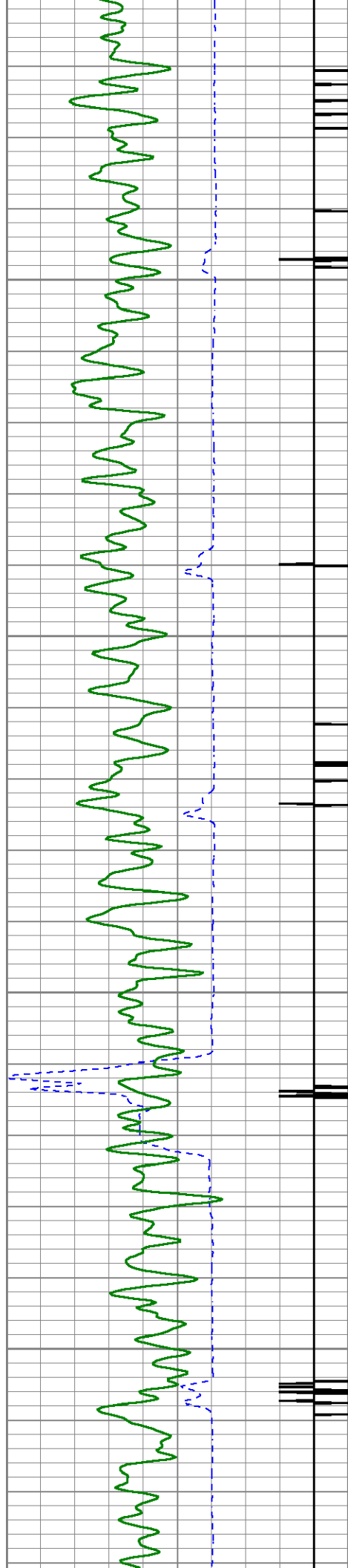
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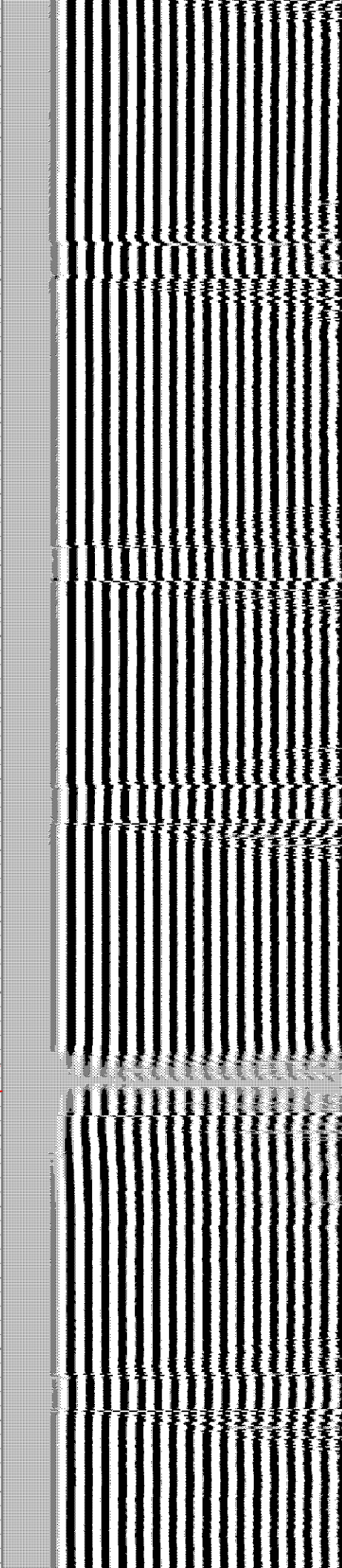
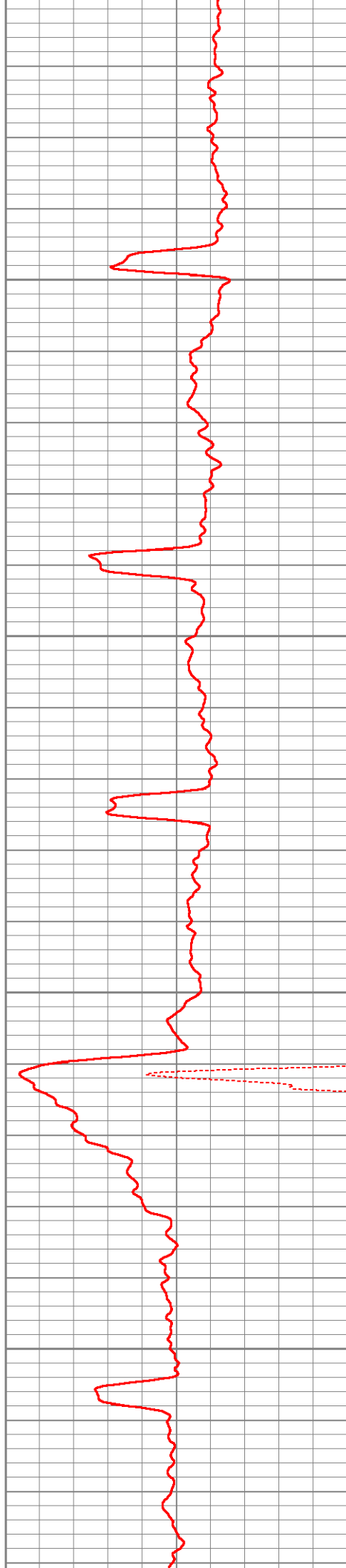


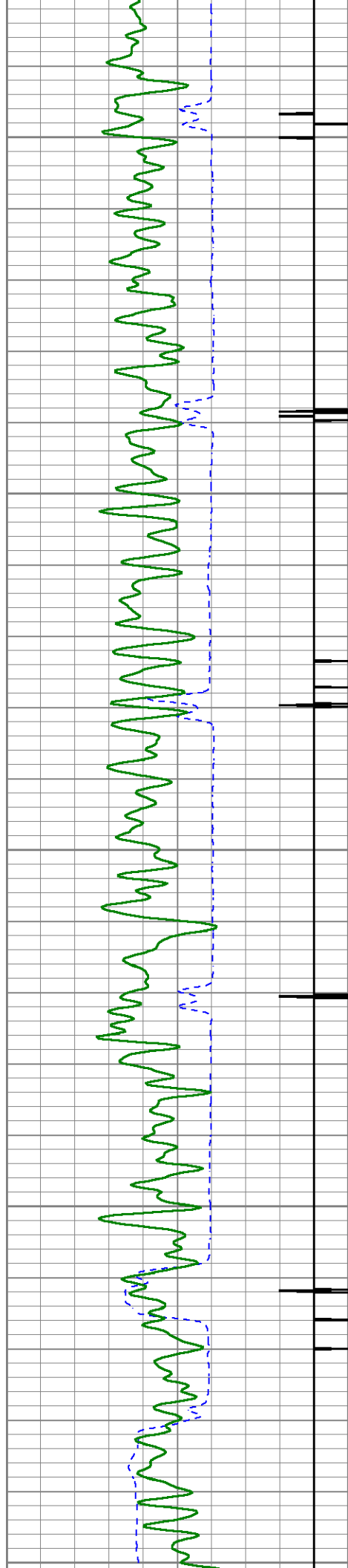
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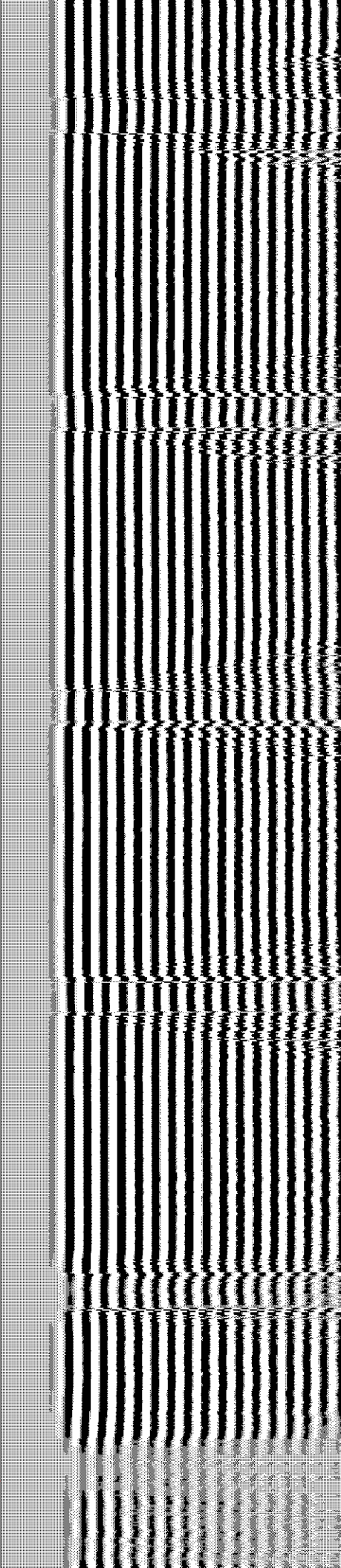
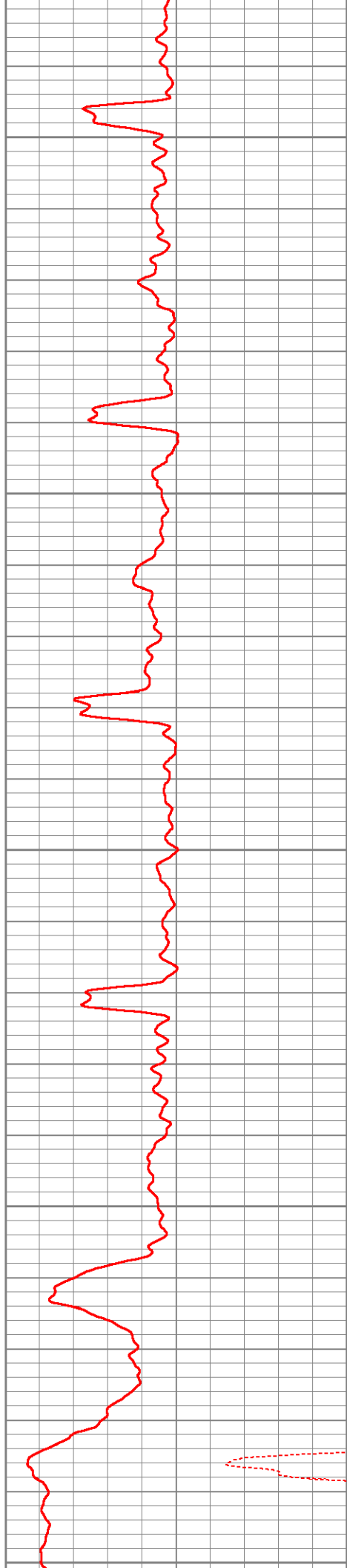
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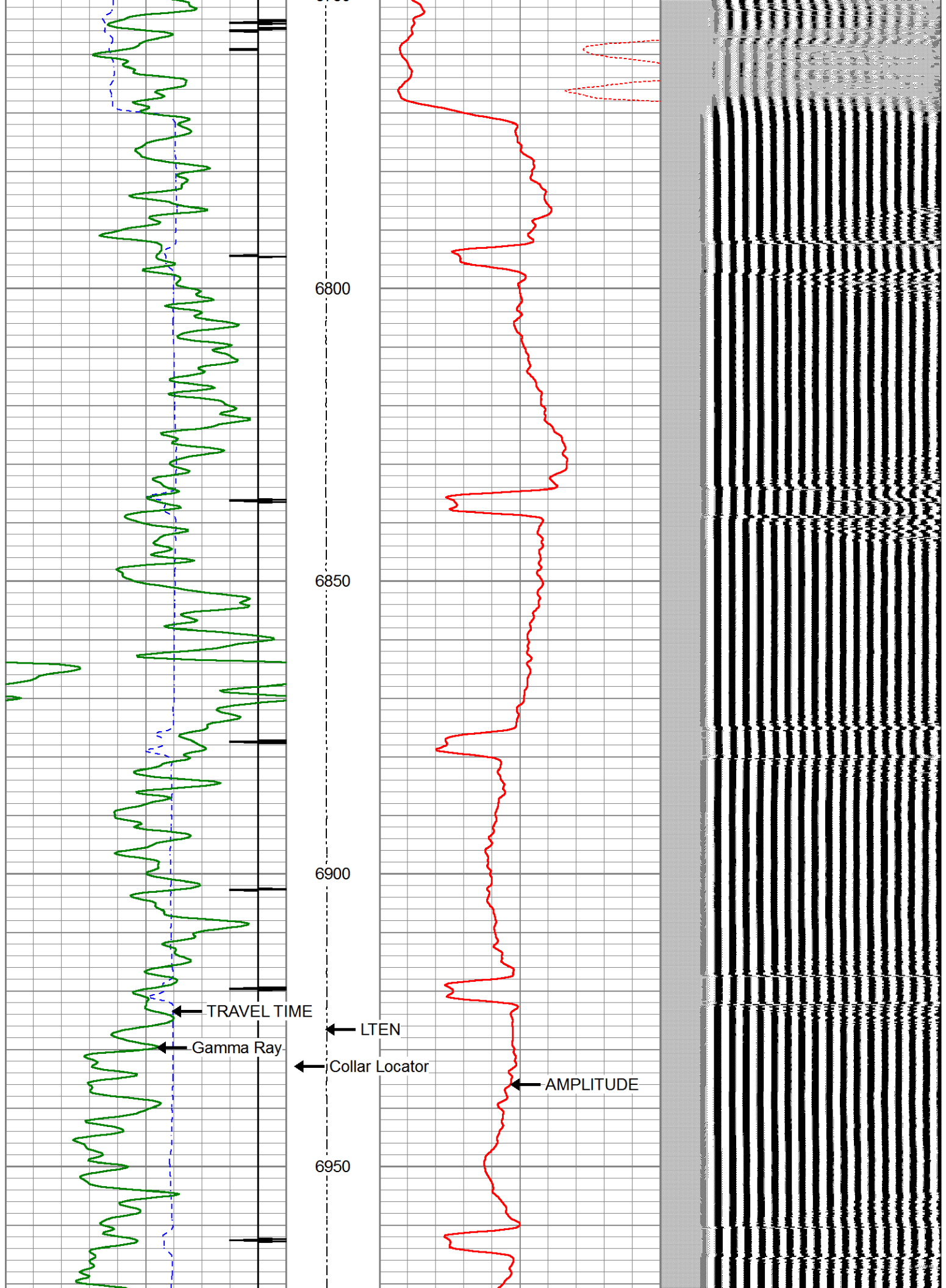
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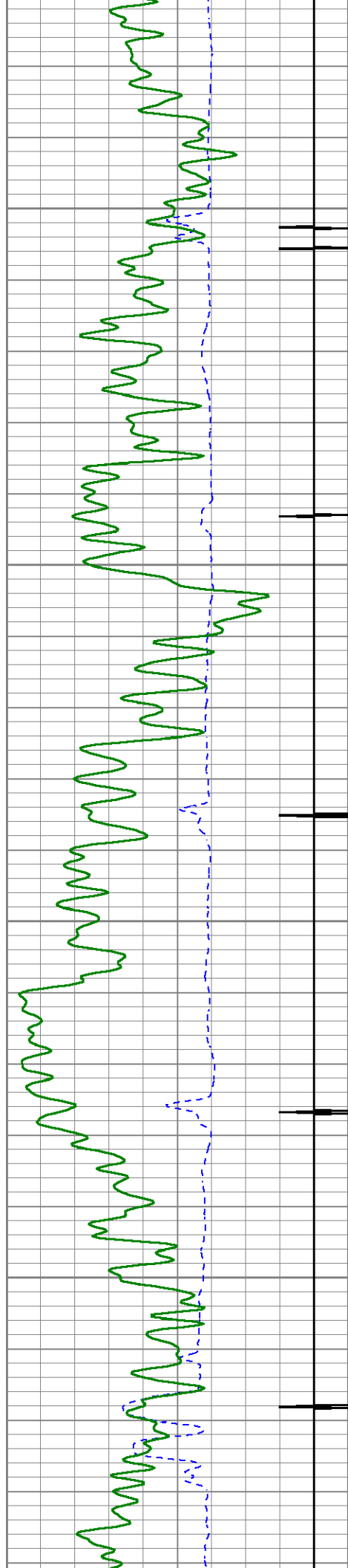
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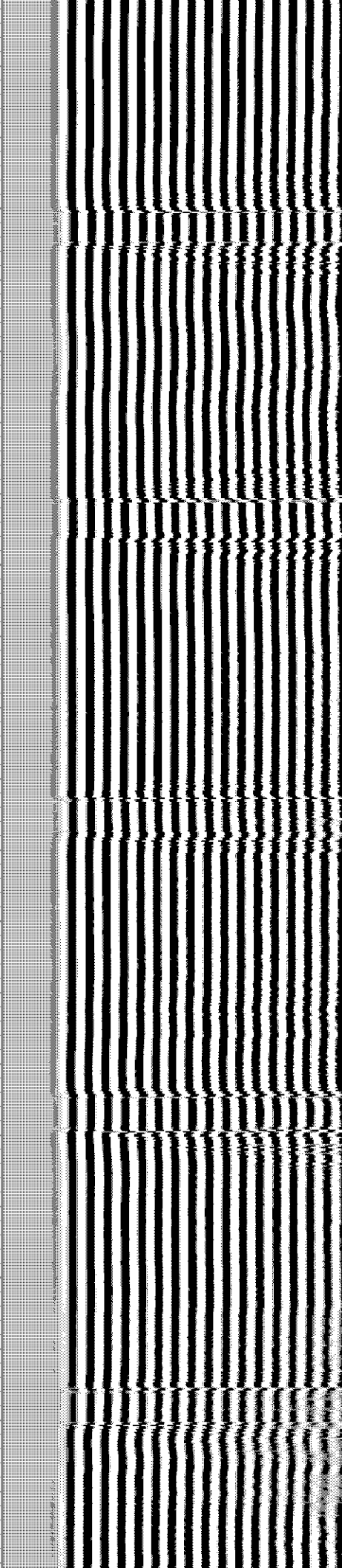
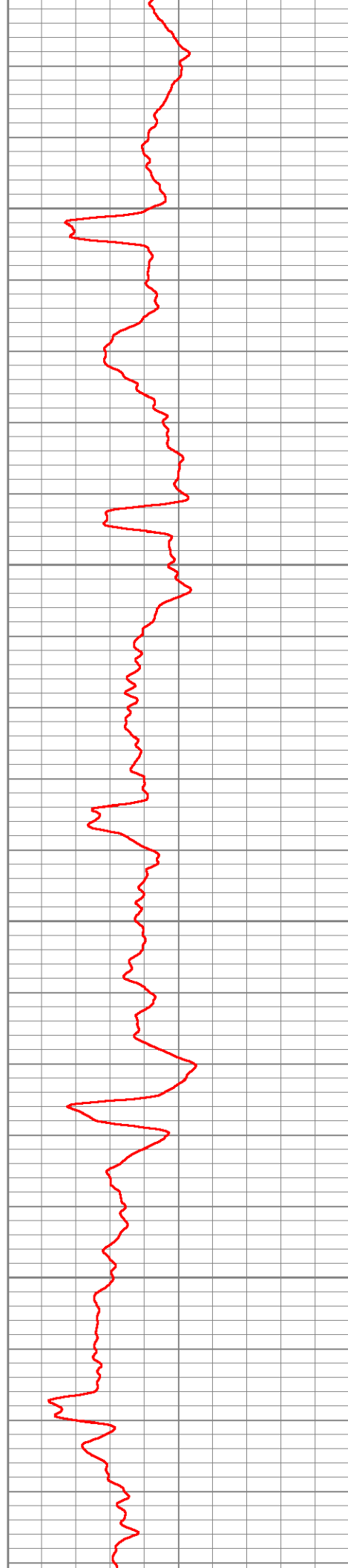


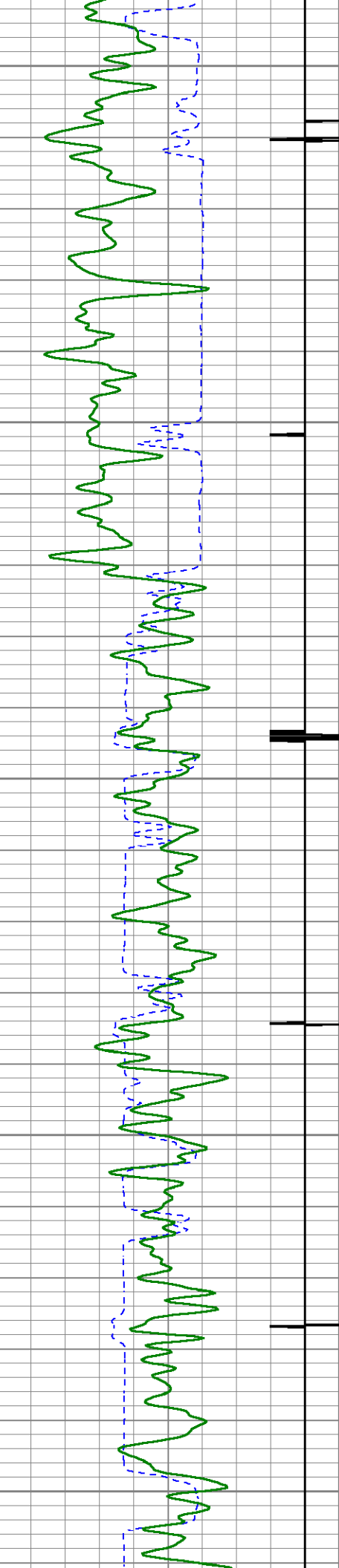
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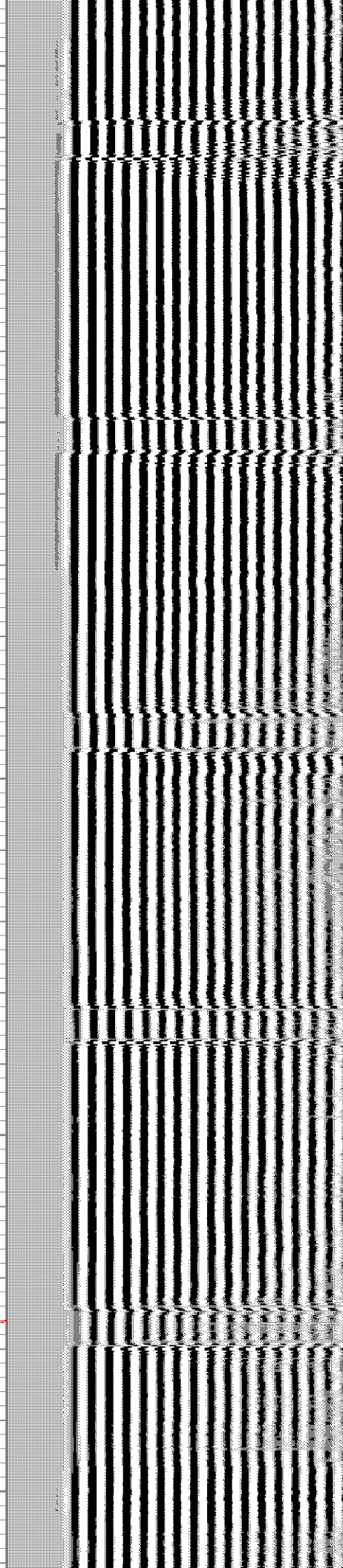
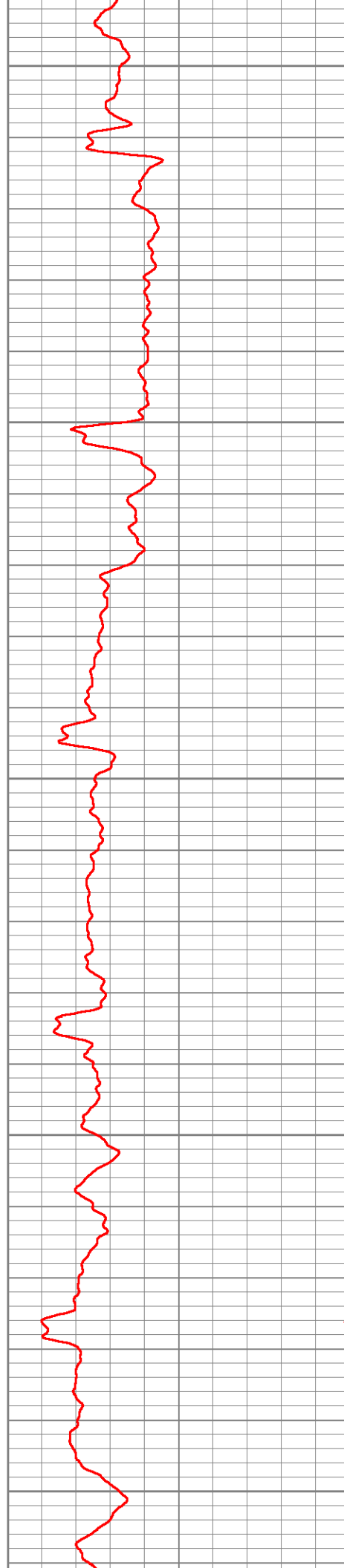
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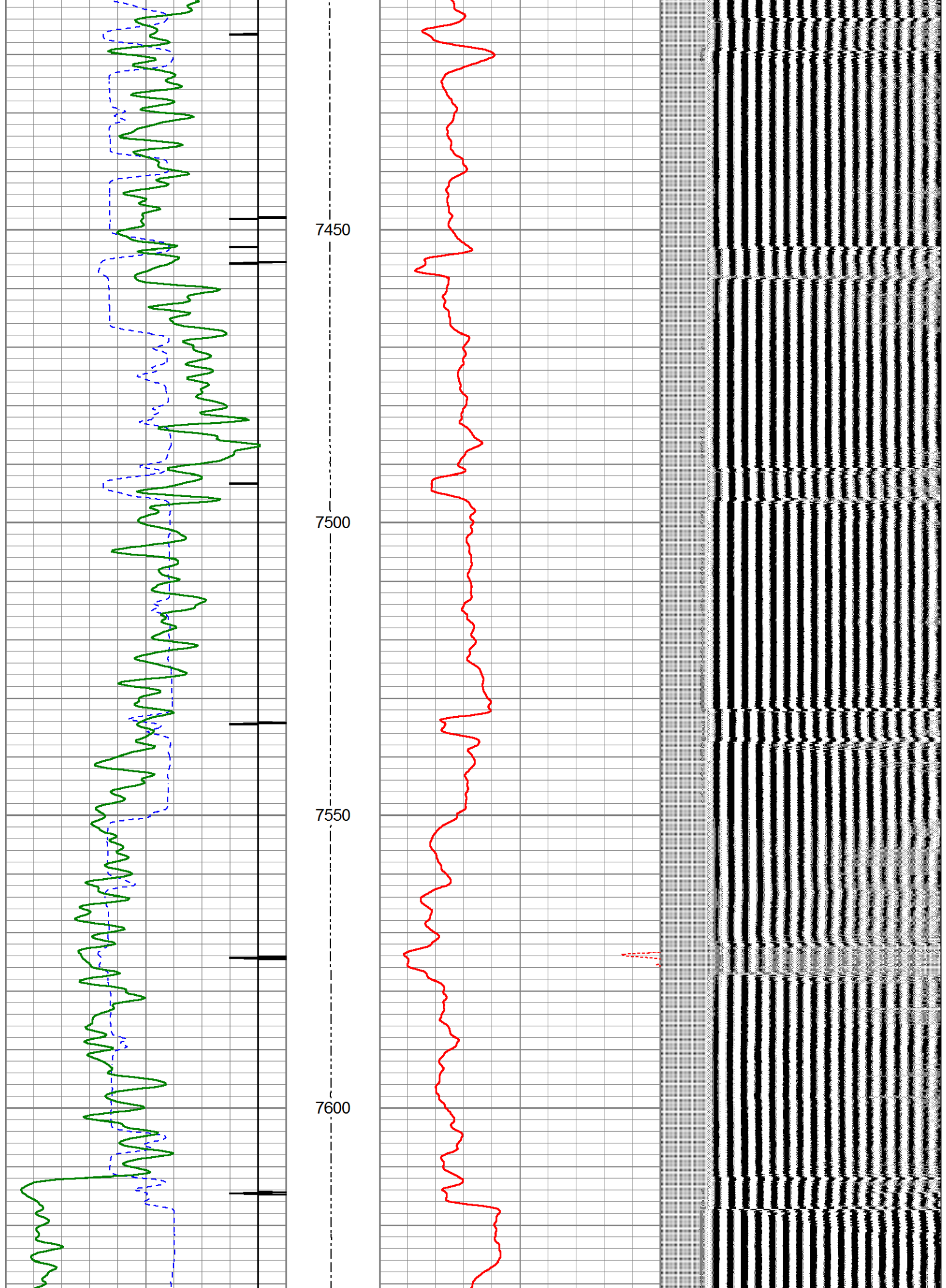
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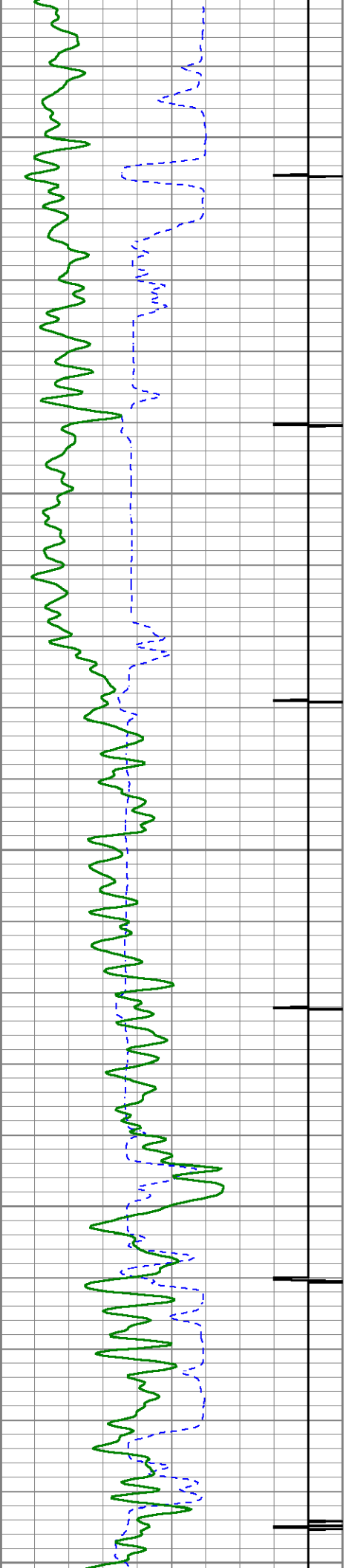
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7400







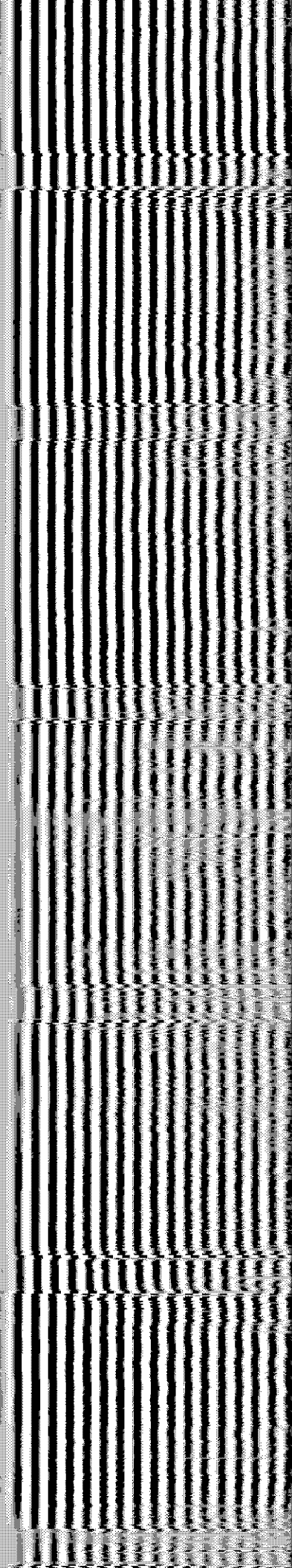
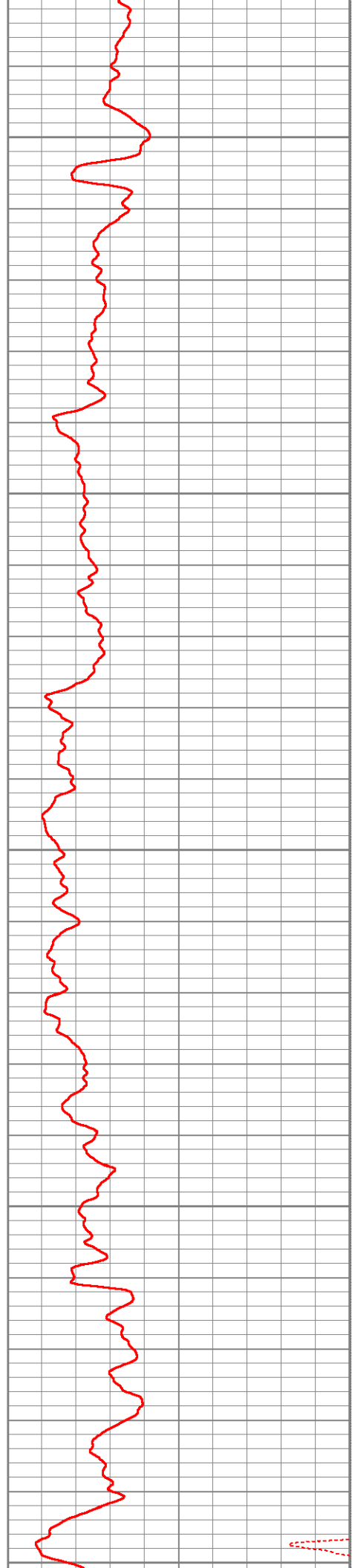
7650

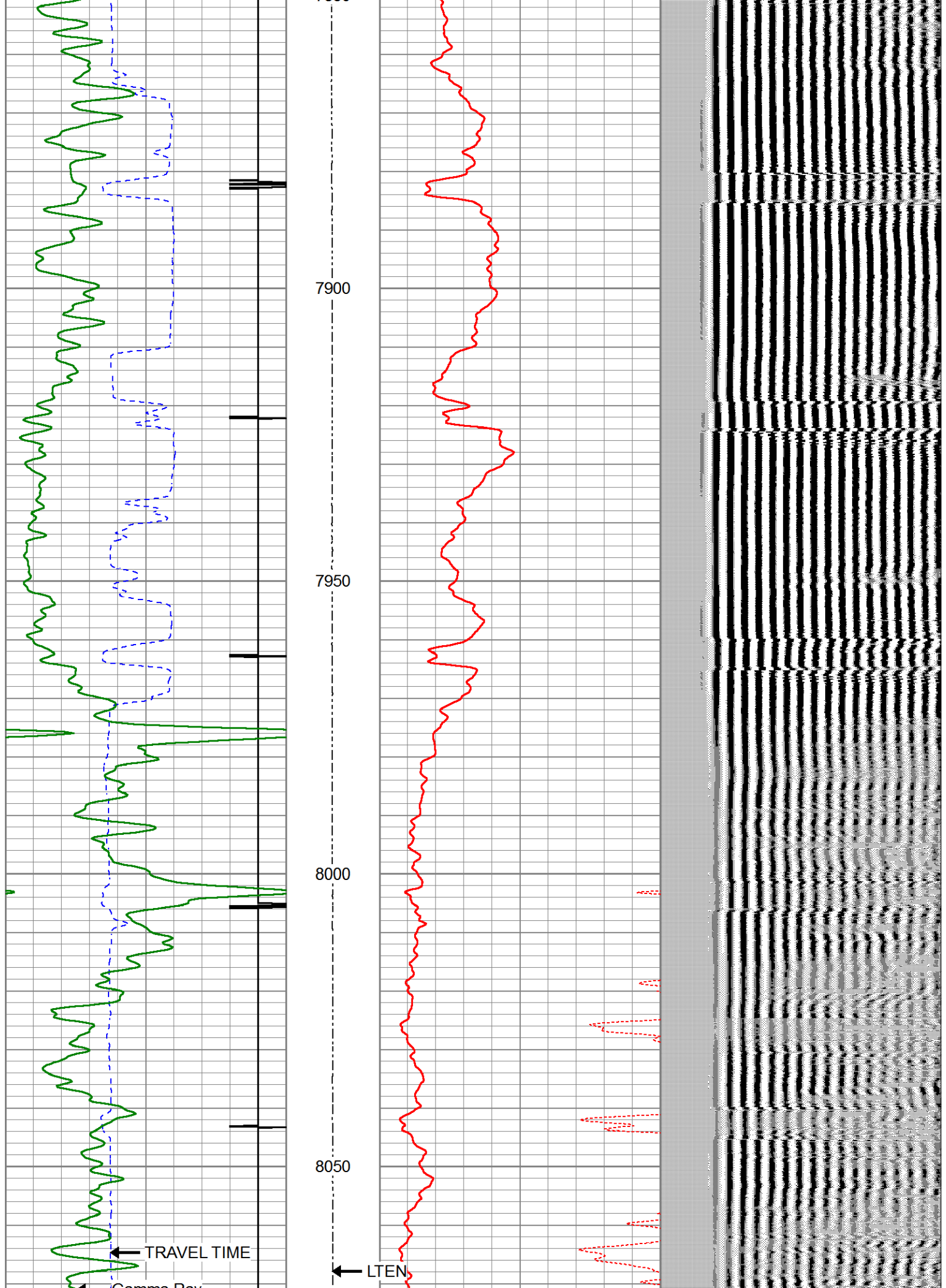
7700

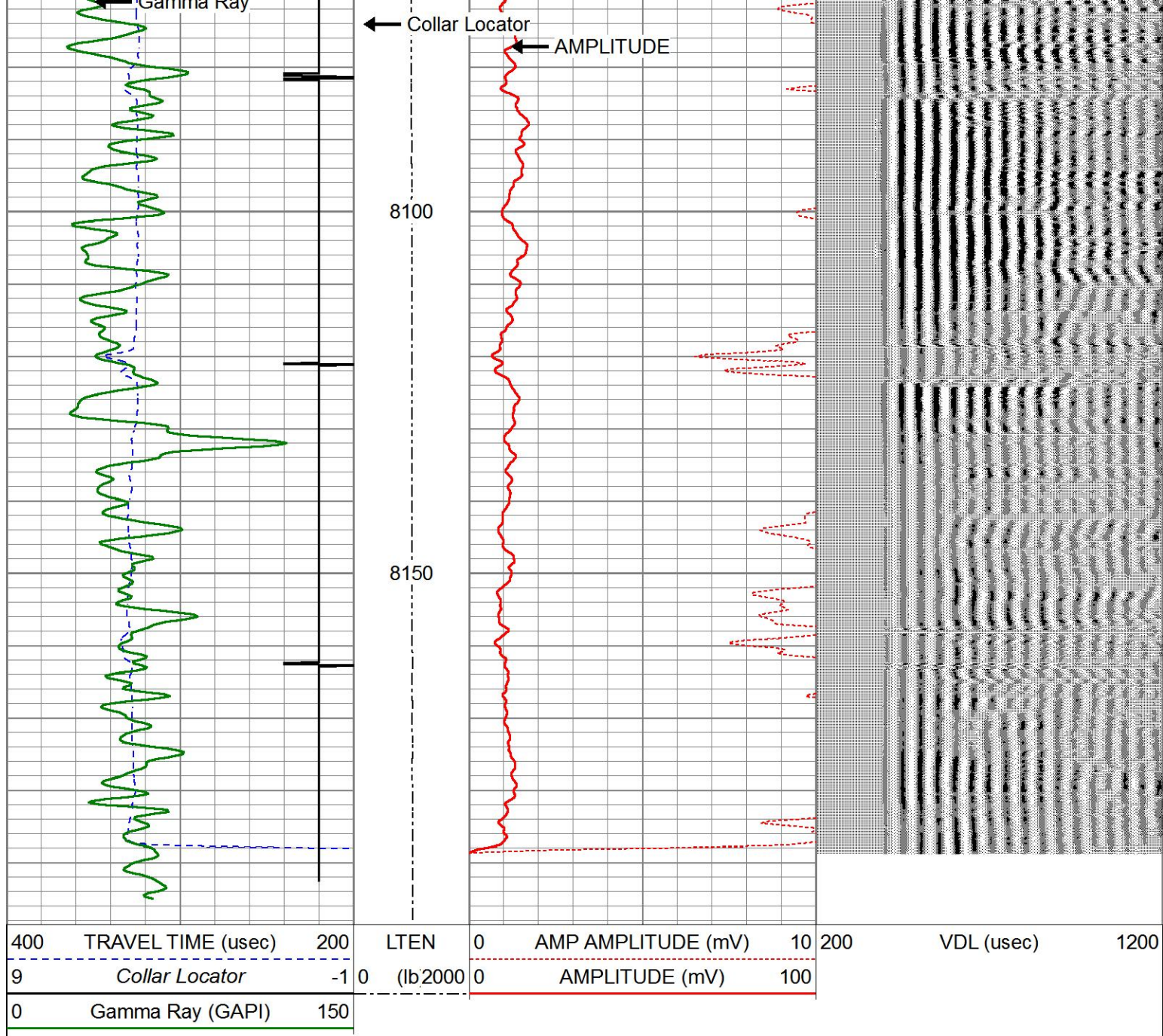
7750

7800

7850

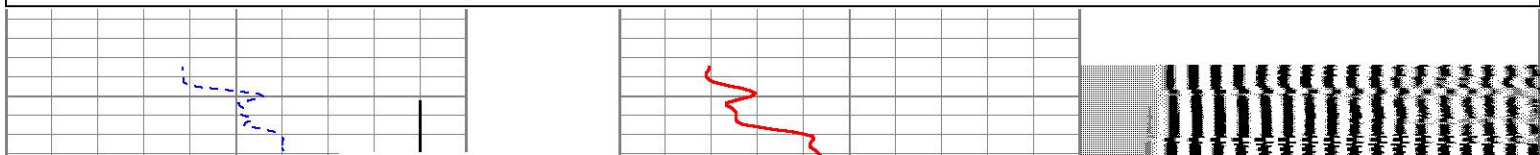
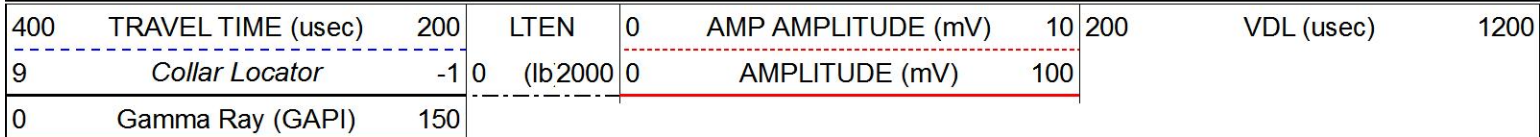


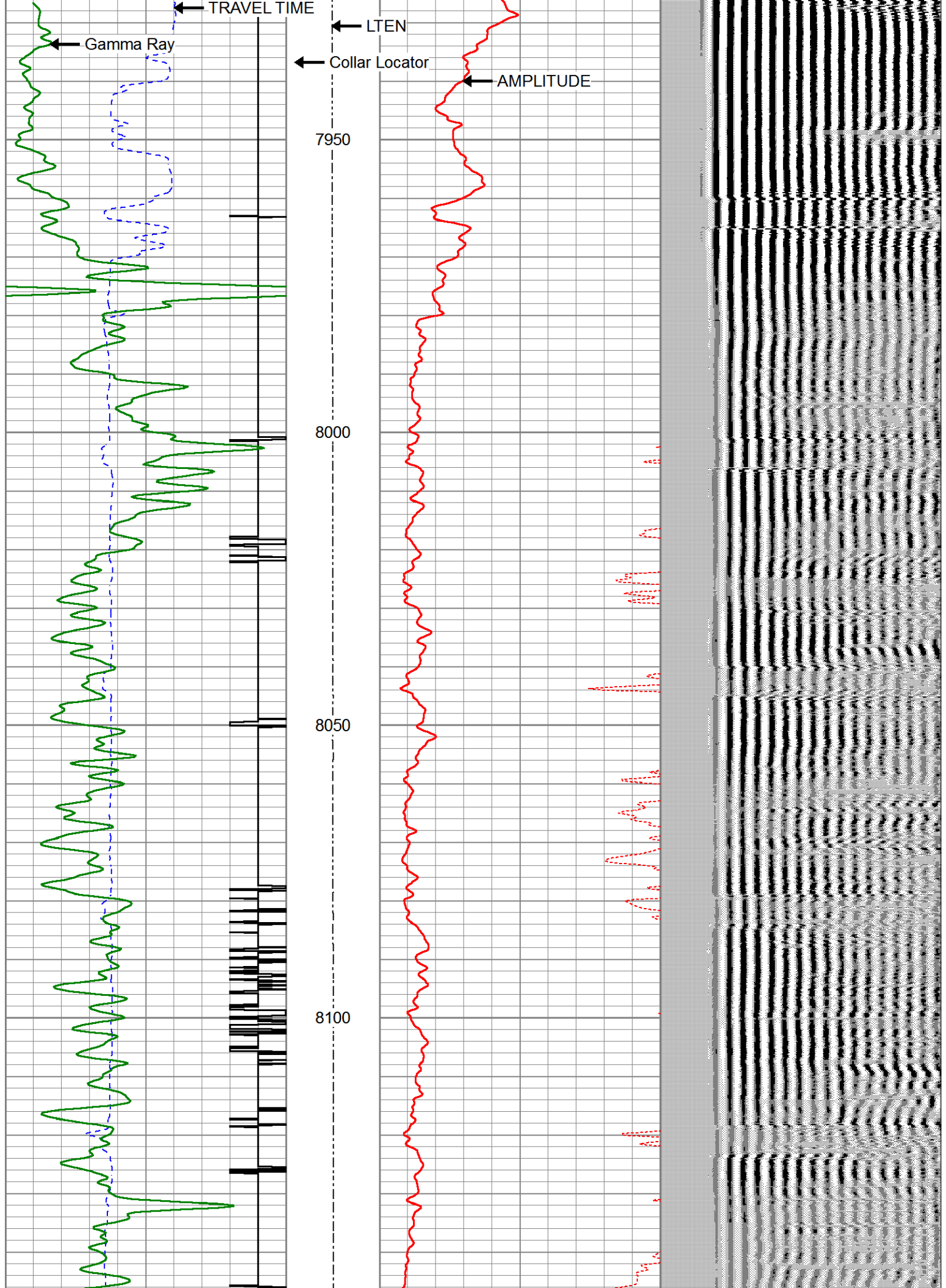


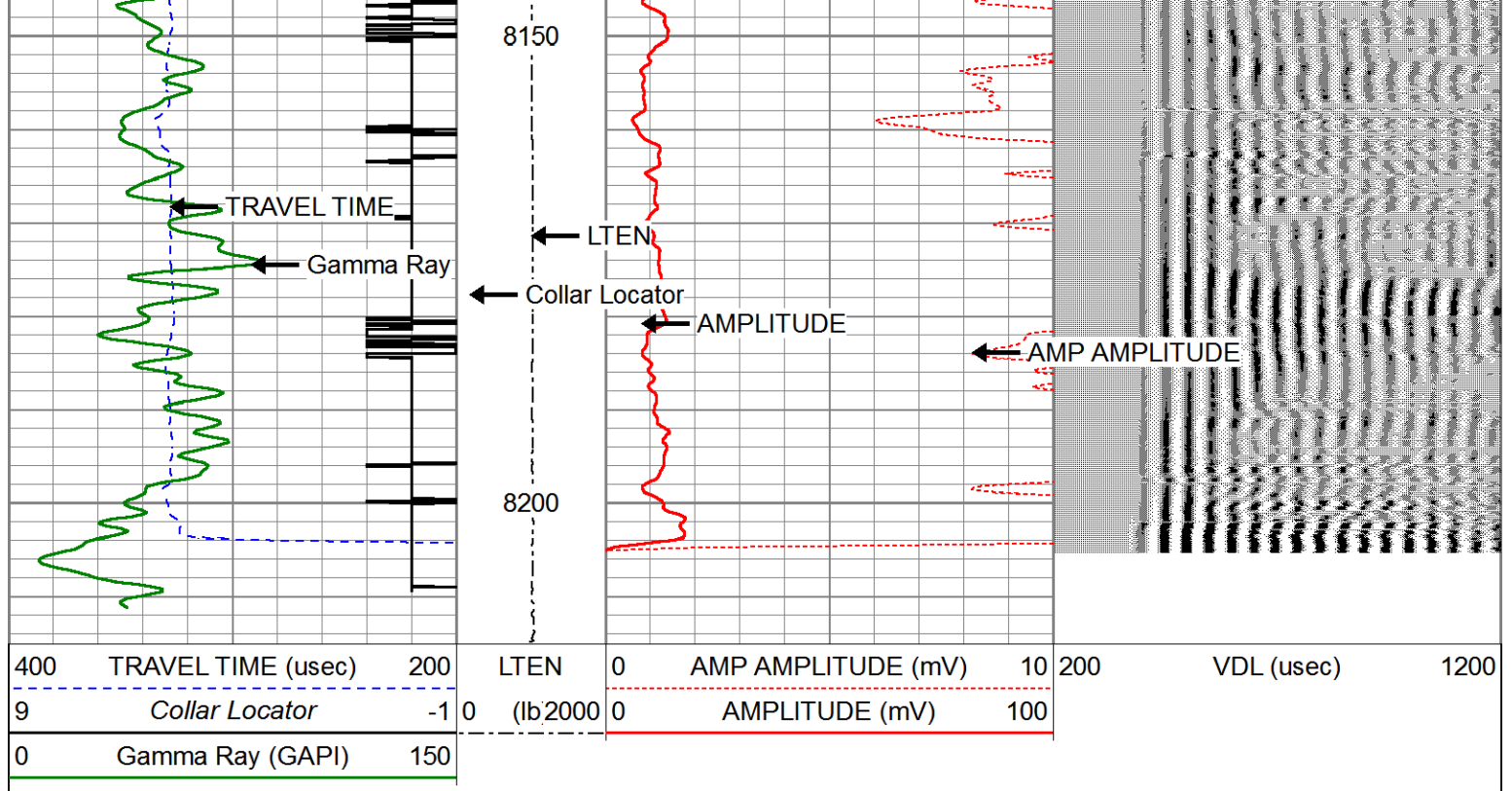


REPEAT PASS

Database File gw_cbl_costate2_6-10-19.db
 Dataset Pathname pass13
 Presentation Format cbl_drs
 Dataset Creation Mon Jun 10 10:59:53 2019
 Charted by Depth in Feet scaled 1:240







| Calibration Report | | | | | | |
|--|----------------------------|--------------------------|--------|-----|----------|--|
| Database File | gw_cbl_costate2_6-10-19.db | | | | | |
| Dataset Pathname | pass14 | | | | | |
| Dataset Creation | Mon Jun 10 11:05:46 2019 | | | | | |
| Gamma Ray Calibration Report | | | | | | |
| Type / Serial: | | Probe275dig / 080827 | | | | |
| SHOP CALIBRATION | | Tue Oct 21 11:39:19 2008 | | | | |
| | Counts/Sec. | Gain | Offset | Jig | Units | |
| Background | 0.0 | | | | cps | |
| Calibrator | 1.0 | | | | cps | |
| | | 0.6250 | | | GAPI/cps | |
| PRIMARY VERIFICATION | | | | | | |
| Background | 0.0 | | | | cps | |
| Calibrator | 0.0 | | | | cps | |
| Difference | | | | 0.0 | GAPI | |
| BEFORE SURVEY VERIFICATION | | | | | | |
| Background | 0.0 | | | | cps | |
| Calibrator | 0.0 | | | | cps | |
| Difference | | | | 0.0 | GAPI | |
| AFTER SURVEY VERIFICATION | | | | | | |
| Background | 0.0 | | | | cps | |
| Calibrator | 0.0 | | | | cps | |
| Difference | | | | 0.0 | GAPI | |
| Segmented Cement Bond Log Calibration Report | | | | | | |
| Serial Number: | 080840 | | | | | |
| Tool Model: | Probe 2.75 Radii W/Temp | | | | | |
| Calibration Casing Diameter: | 5.500 | in | | | | |

Calibration Depth:

2889.933

ft

Master Calibration, performed Mon Jun 10 10:25:00 2019:


| | Raw (v) | | Calibrated (mv) | | Results | |
|-----|---------|-------|-----------------|---------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | 0.004 | 0.436 | 0.000 | 71.921 | 166.458 | -0.601 |
| CAL | 0.004 | 0.604 | | | | |
| 5' | 0.004 | 0.386 | 0.000 | 71.921 | 187.899 | -0.686 |
| SUM | | | | | | |
| S1 | 0.004 | 0.289 | 0.000 | 100.000 | 350.310 | -1.270 |
| S2 | 0.004 | 0.329 | 0.000 | 100.000 | 307.277 | -1.110 |
| S3 | 0.004 | 0.420 | 0.000 | 100.000 | 240.425 | -0.883 |
| S4 | 0.004 | 0.406 | 0.000 | 100.000 | 248.363 | -0.873 |
| S5 | 0.004 | 0.390 | 0.000 | 100.000 | 258.782 | -0.945 |
| S6 | 0.004 | 0.369 | 0.000 | 100.000 | 273.568 | -0.972 |
| S7 | 0.004 | 0.406 | 0.000 | 100.000 | 248.446 | -0.886 |
| S8 | 0.004 | 0.422 | 0.000 | 100.000 | 238.869 | -0.866 |

Internal Reference Calibration, performed (Not Performed):

| | Raw (v) | | Calibrated (v) | | Results | |
|-----|---------|-------|----------------|-------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| CAL | 0.000 | 0.000 | 0.004 | 0.604 | 1.000 | 0.000 |

Air Zero Calibration, performed Mon Jun 10 10:05:02 2019:

| | Raw (v) | | Calibrated (v) | | Results | |
|-----|---------|--|----------------|--|---------|--|
| | Zero | | Zero | | Offset | |
| 3' | 0.000 | | 0.000 | | 0.000 | |
| 5' | 0.000 | | 0.000 | | 0.000 | |
| SUM | | | | | | |
| S1 | 0.000 | | 0.000 | | 0.000 | |
| S2 | 0.000 | | 0.000 | | 0.000 | |
| S3 | 0.000 | | 0.000 | | 0.000 | |
| S4 | 0.000 | | 0.000 | | 0.000 | |
| S5 | 0.000 | | 0.000 | | 0.000 | |
| S6 | 0.000 | | 0.000 | | 0.000 | |
| S7 | 0.000 | | 0.000 | | 0.000 | |
| S8 | 0.000 | | 0.000 | | 0.000 | |

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|----------|-------------|---|---|-------------|-----------|-------------|
| HeadVolt | 15.69 |  | CHD-Titan Titan 1 7/16" GO Cablehead | 1.00 | 1.44 | 5.00 |
| Temp | 12.84 | | | | | |

| Tool Name | Start Depth (ft) | End Depth (ft) | Length (ft) | Weight (lb) | O.D. (in) |
|---|------------------|----------------|-------------|-------------|-----------|
| WVFS8 | 10.61 | | | | |
| WVFS7 | 10.61 | | | | |
| WVFS6 | 10.61 | | | | |
| WVFS5 | 10.61 | | | | |
| WVFS4 | 10.61 | | | | |
| WVFS3 | 10.61 | | | | |
| WVFS2 | 10.61 | | | | |
| WVFS1 | 10.61 | | | | |
| WVFCAL | 10.61 | | | | |
| WVF3FT | 10.61 | | | | |
| WVF5FT | 9.61 | | | | |
| HEADVOLT | 6.36 | | | | |
| CCL | 5.44 | | | | |
| GR | 1.42 | | | | |
| Dataset: gw_cbl_costate2_6-10-19.db: field/well/run1/pass14 Total length: 16.75 ft Total weight: 152.00 lb O.D.: 2.75 in | | | | | |