



Radial Cement Bond
Gamma Ray
Casing Collar Log

| | | | |
|--------------------------------|--------------------|--------------------------------|--|
| Company TEP Rocky Mountain LLC | | Company TEP Rocky Mountain LLC | |
| Well | Federal WMC 432-20 | Well | Federal WMC 432-20 |
| Field | Rulison | Field | Rulison |
| County | Garfield | County | Garfield |
| State | Colorado | State | Colorado |
| Location: | | API # : 05-045-24490 | Other Services |
| SEC 17 TWP 7S RGE 93W | | | |
| Permanent Datum | Ground Level | Elevation | 8868 FT |
| Log Measured From | Kelly Bushing | | |
| Drilling Measured From | Kelly Bushing | Elevation | K.B. 8898 FT D.F. 8898 FT G.L. 8868 FT |
| Date | 03-JAN-2023 | | |
| Run Number | One | | |
| Depth Driller | 11358 FT | | |
| Depth Logger | 11251 FT | | |
| Bottom Logged Interval | 11242 FT | | |
| Top Log Interval | Surface | | |
| Open Hole Size | 8.75" | | |
| Type Fluid | Water | | |
| Density / Viscosity | 8.34 Lb/Gal | | |
| Max. Recorded Temp. | 259°F | | |
| Estimated Cement Top | See Log | | |
| Time Well Ready | ROA | | |
| Time Logger on Bottom | 14:00 | | |
| Equipment Number | 8045 | | |
| Location | Grand Junction | | |
| Recorded By | A. Ellsworth | | |
| Witnessed By | D. Welsh | | |
| Borehole Record | | Tubing Record | |
| Run Number | Bit | From | To |
| | | Size | Weight |
| | | | From |
| | | | To |
| Casing Record | Size | Wgt/Ft | Top |
| Surface String | 9-5/8" | 36 | Surface |
| Prot. String | | | |
| Production String | 4-1/2" | 11.6 | Surface |
| Liner | | | 11358 FT |

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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 ran as per customer request
Depth referenced to Kelly Bushing at 30 FT
Marker joint logged from 6894 FT to 6904 FT

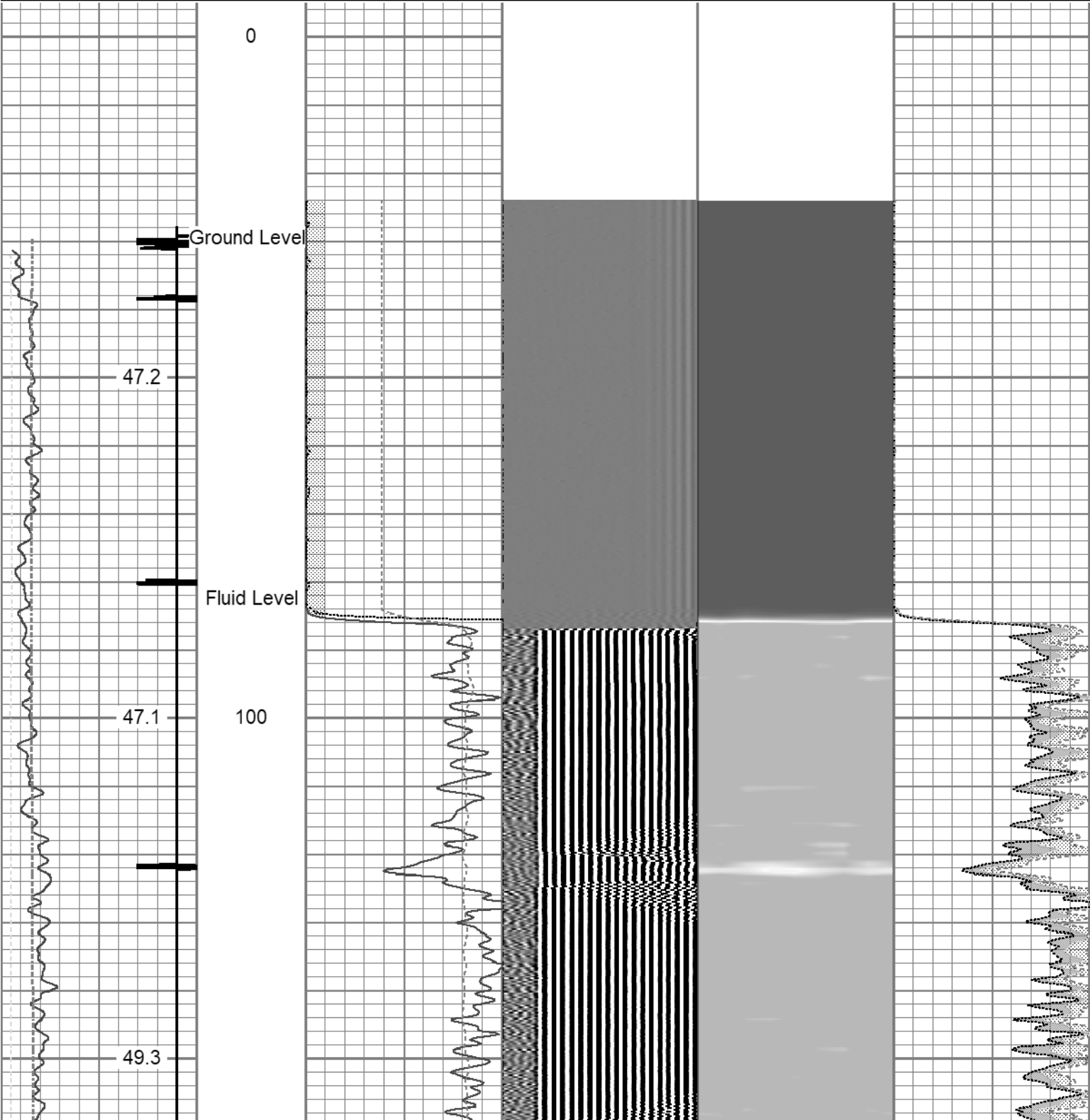
Thank you for choosing The Wireline Group!

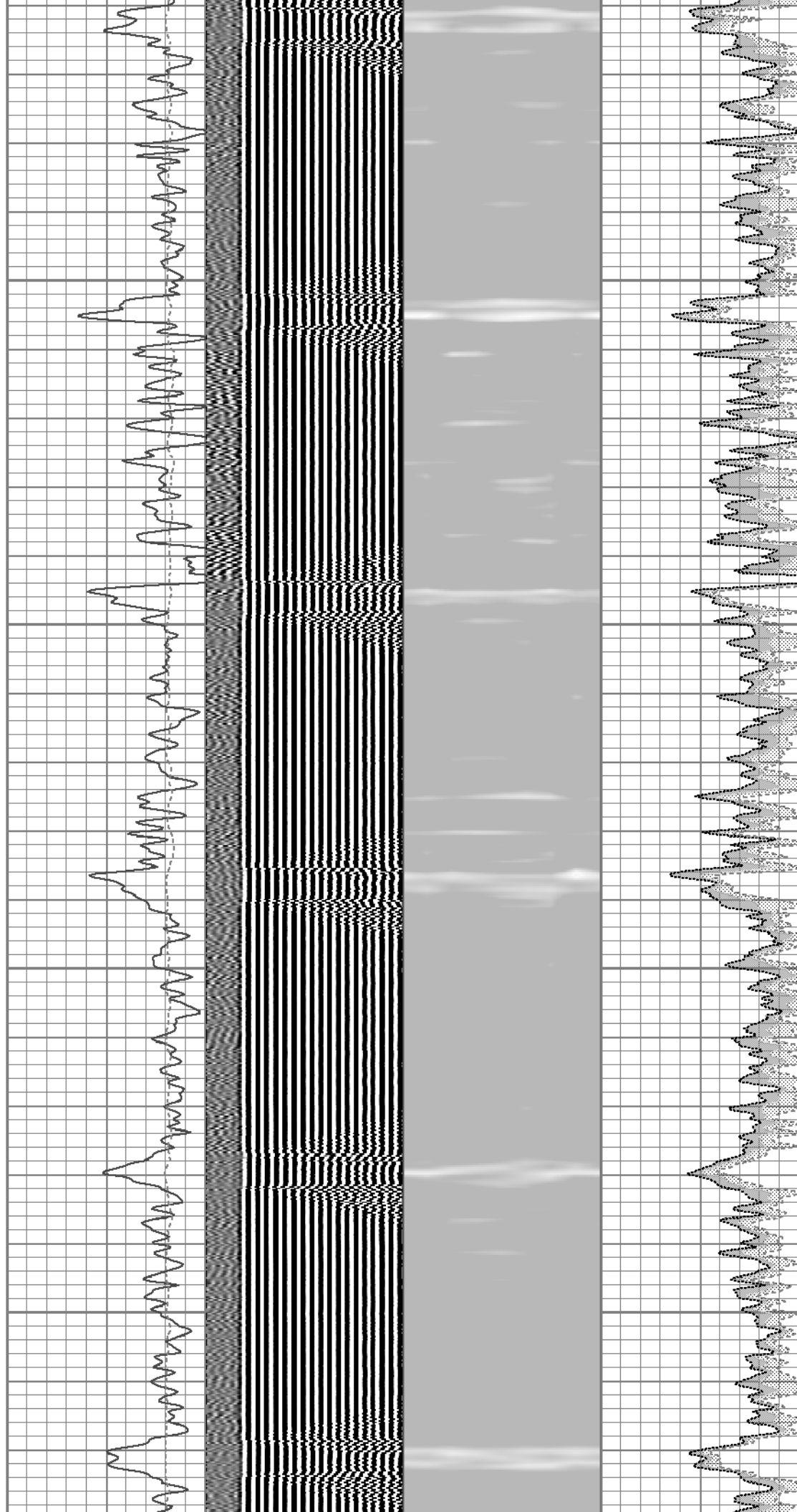
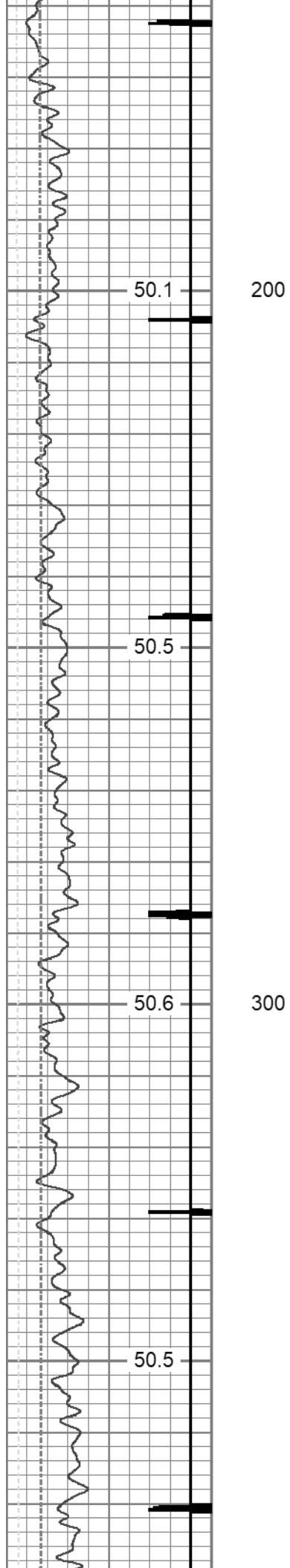


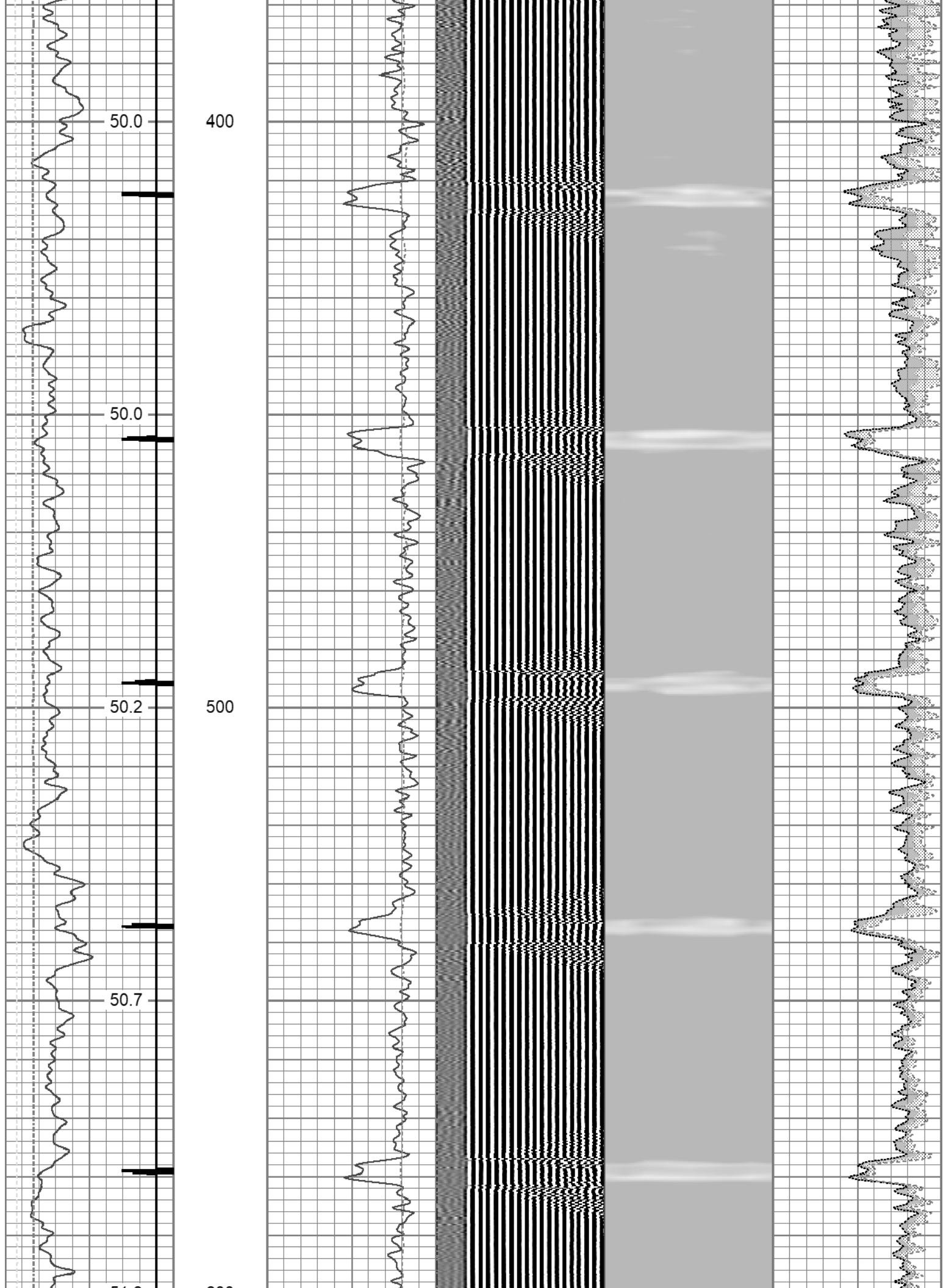
Main Pass 5" = 100'

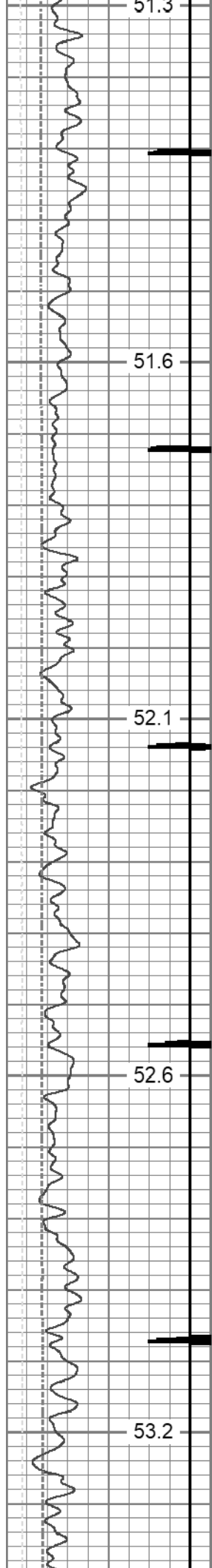
| | |
|---------------------|-------------------------------------|
| Database File | tep_wmc fed 432-20_rcbl_1-3-2023.db |
| Dataset Pathname | main |
| Presentation Format | twgrcbl |
| Dataset Creation | Tue Jan 03 15:34:43 2023 |
| Charted by | Depth in Feet scaled 1:240 |

| | | | | | |
|-------------------|--|------------------|-------------------------|------------|-------------------|
| Gamma Ray | | 3' Amplitude | 5' Variable Density Log | Sector Map | Average Amplitude |
| 0 (GAPI) 200 | | 0 (mV) 100 | 200 (usec) 1200 | | 0 120 |
| Line Tension | | 3' Amplitude x 5 | | | Minimum Amplitude |
| 0 (lb) 4000 | | 0 (mV) 20 | | | 0 120 |
| -9 CCL 1 | | 3' Travel Time | | | Maximum Amplitude |
| 0 Temp (degF) 300 | | 650 (usec) 150 | | | 0 120 |









51.3

51.6

52.1

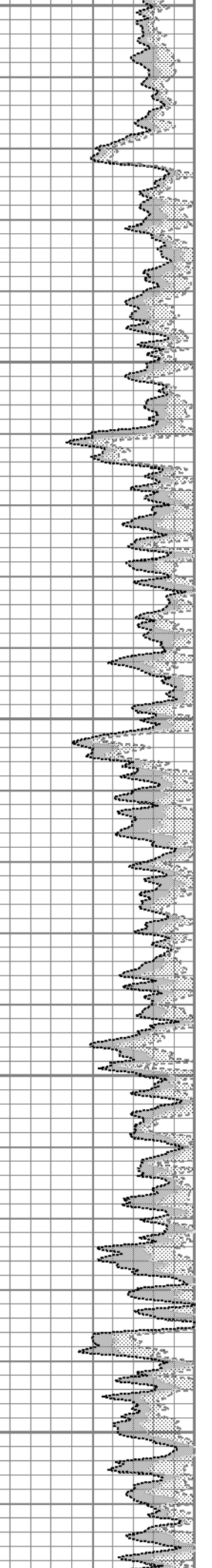
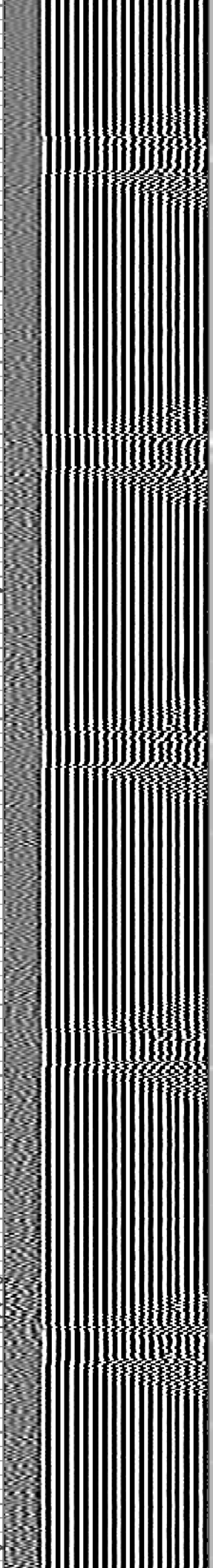
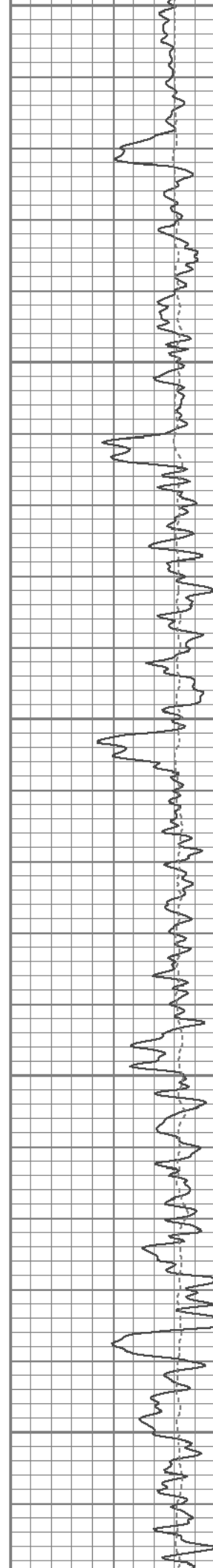
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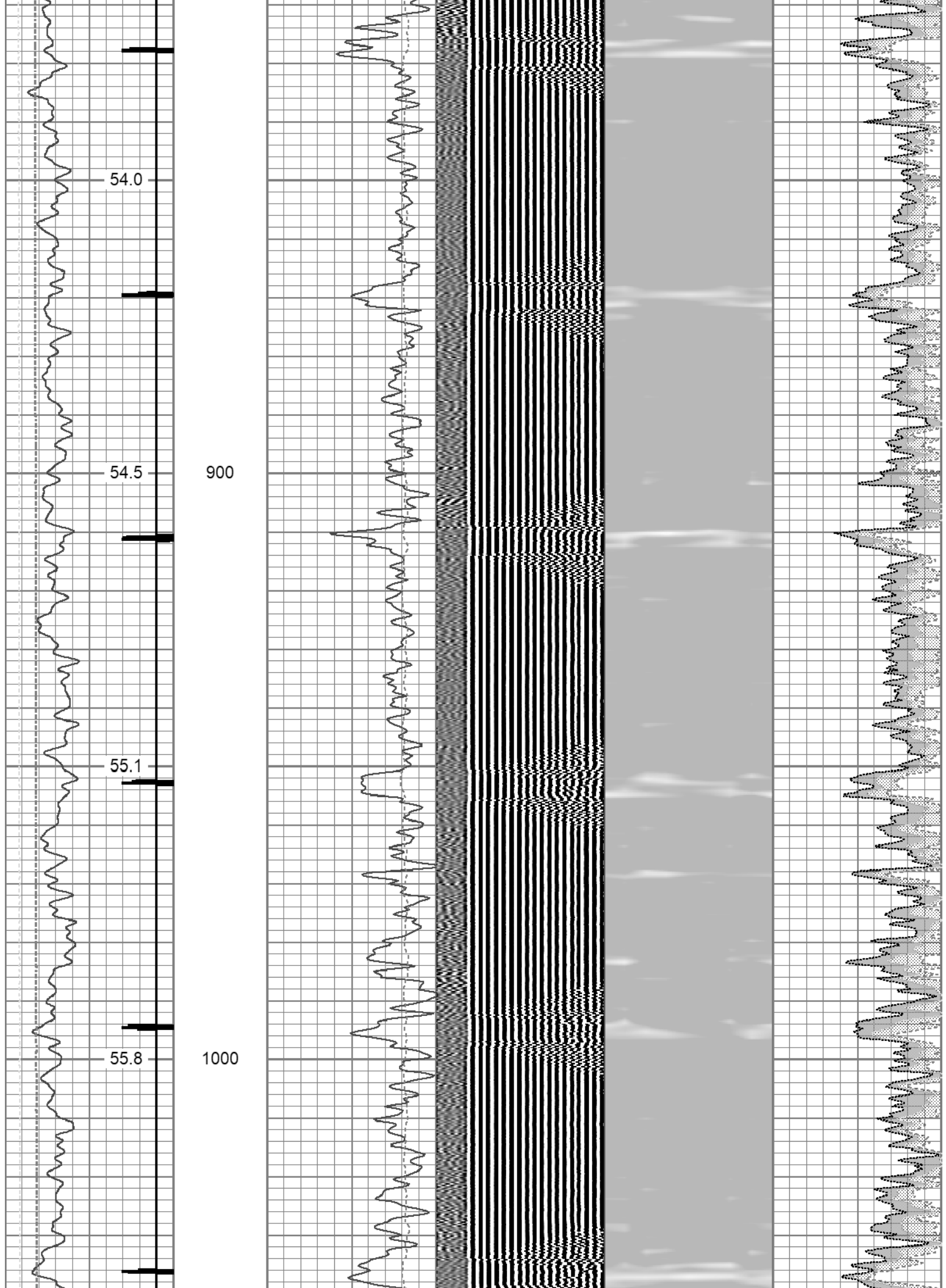
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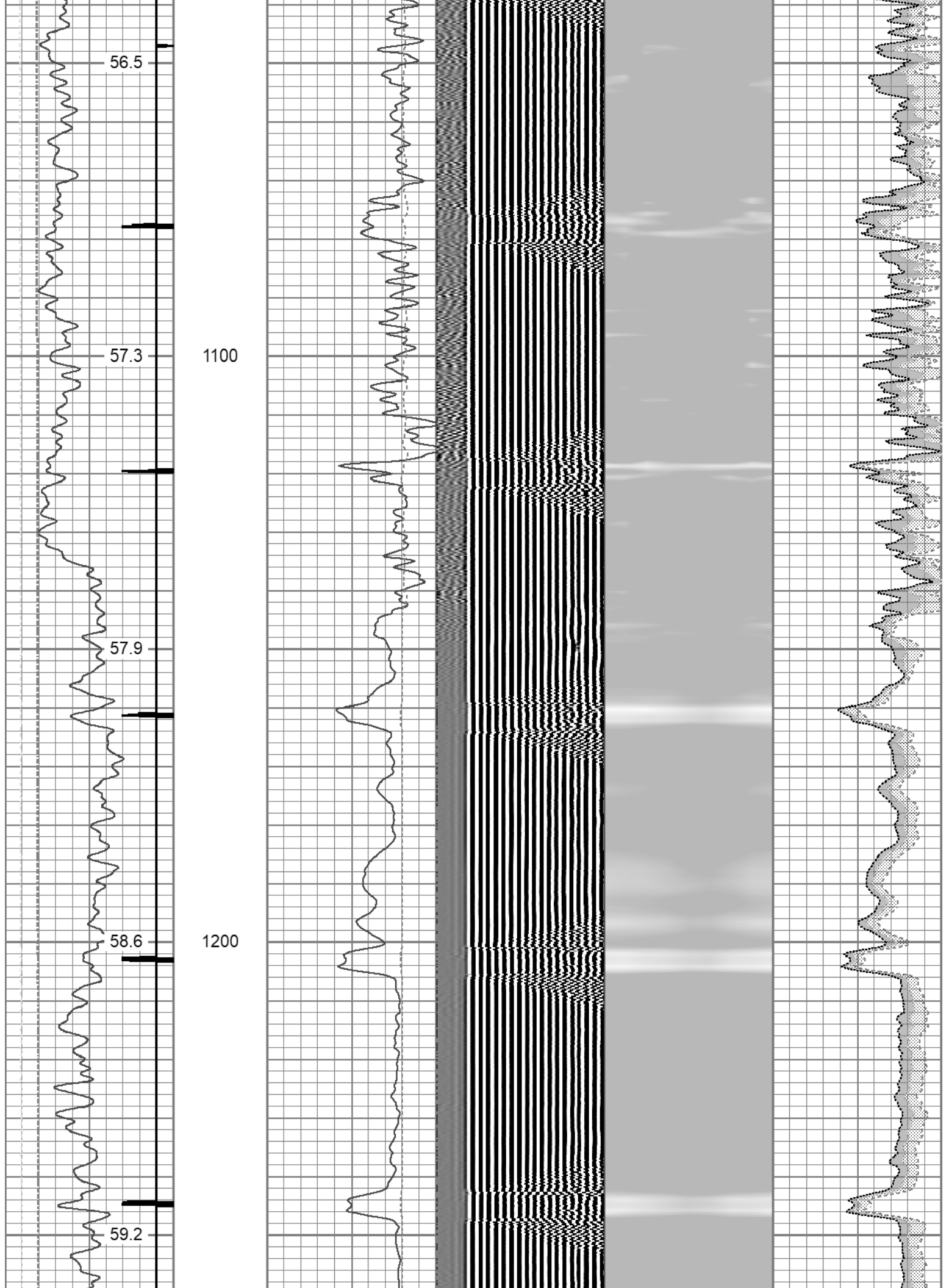
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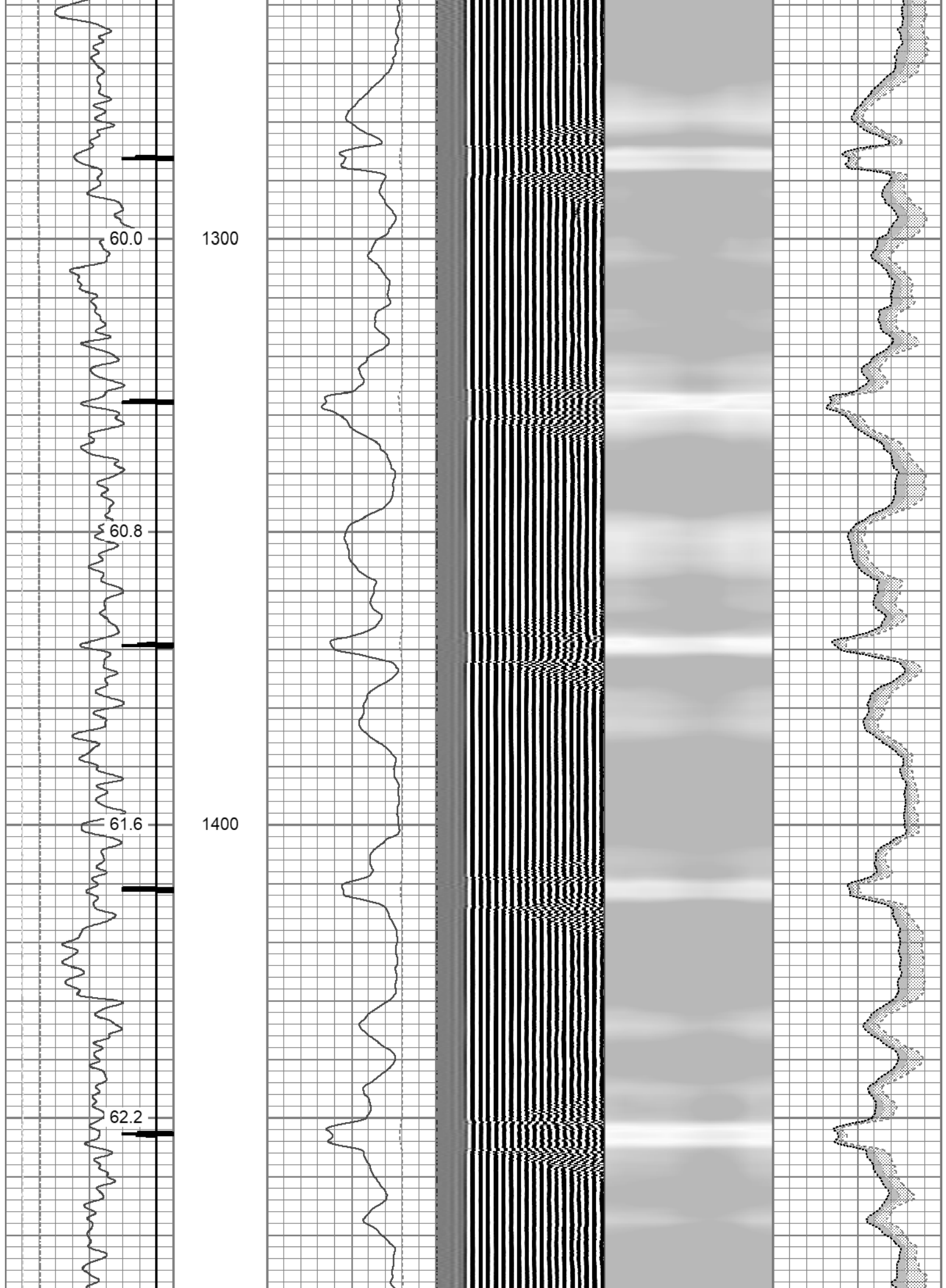
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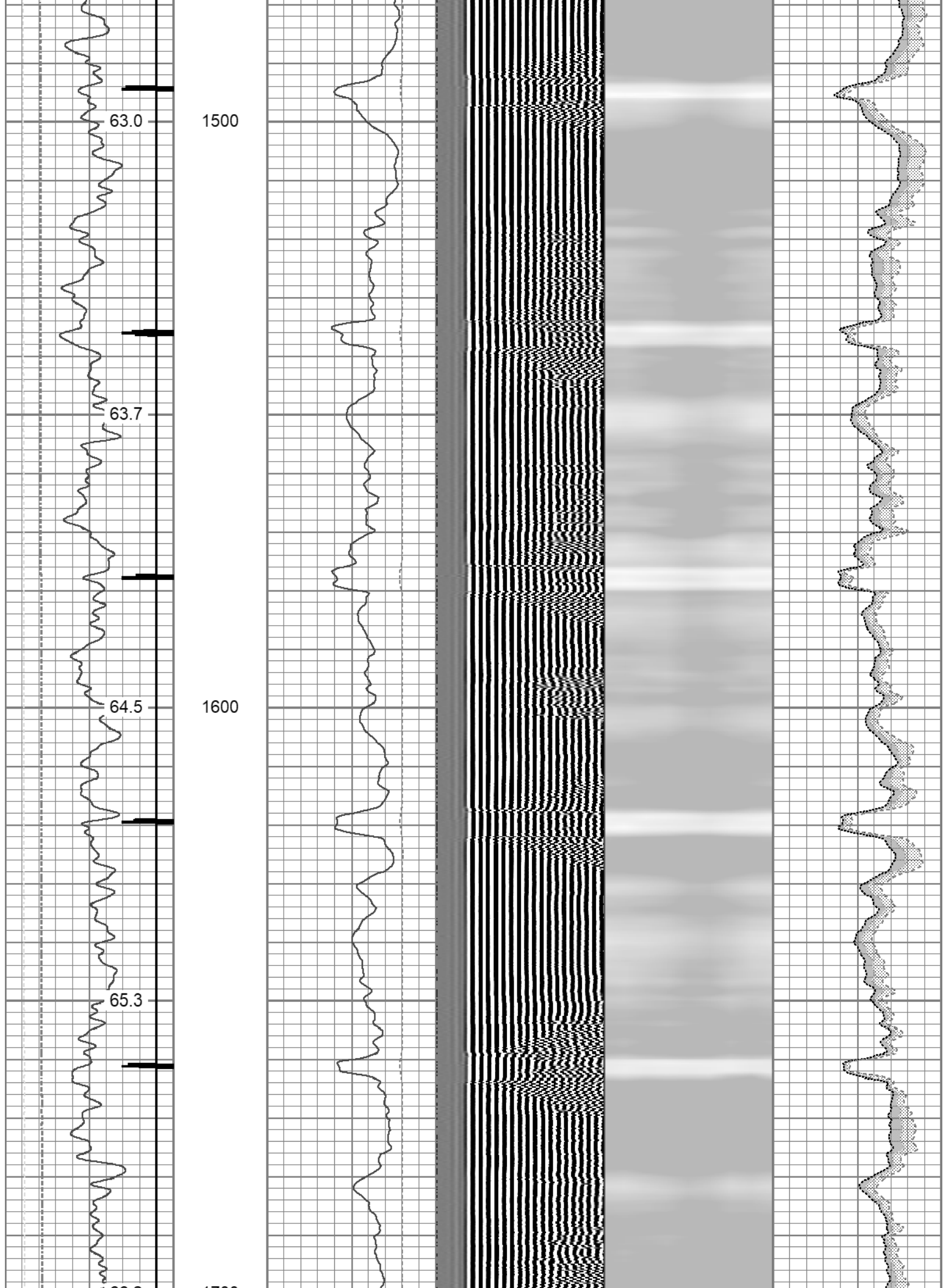
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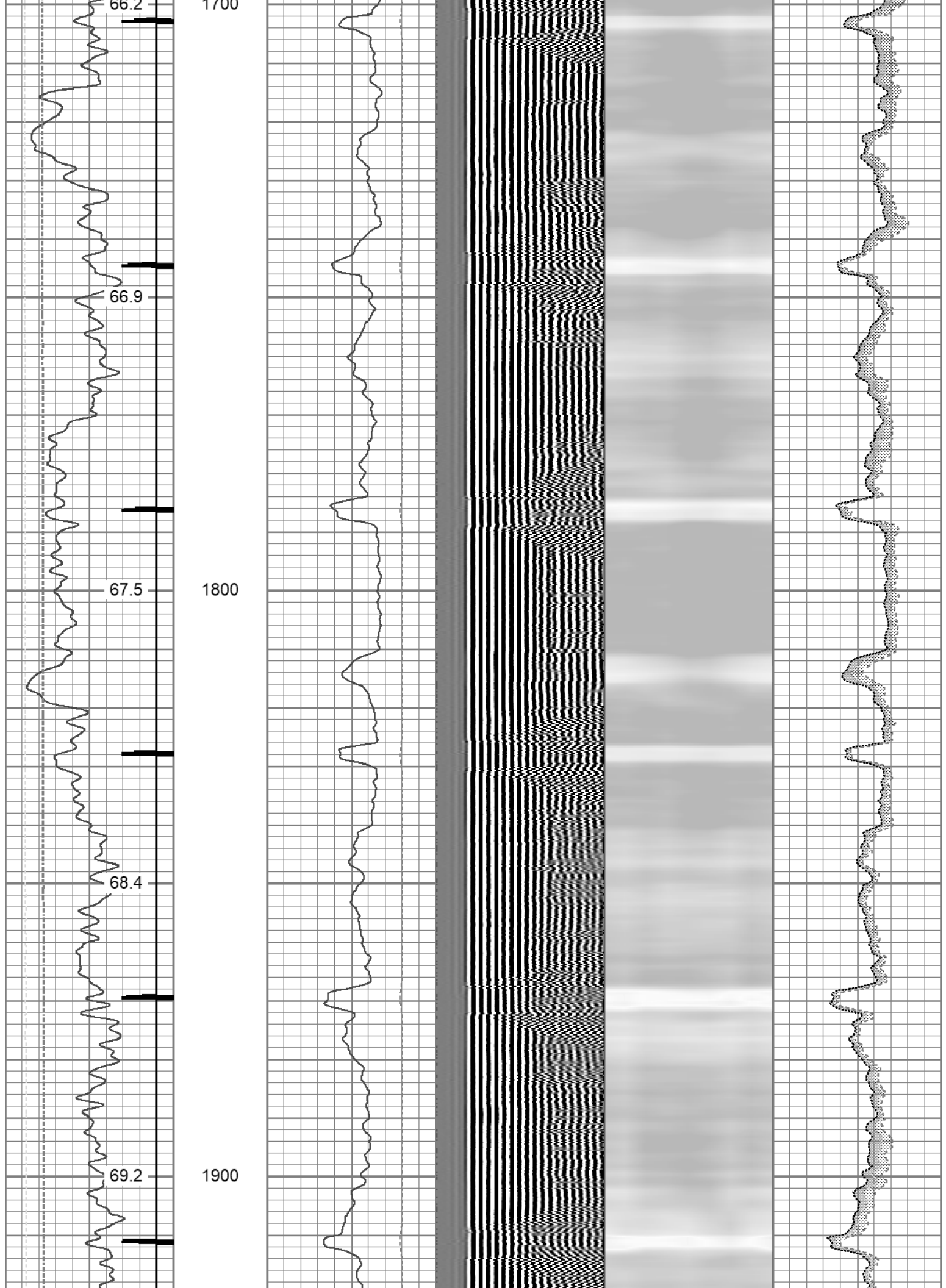


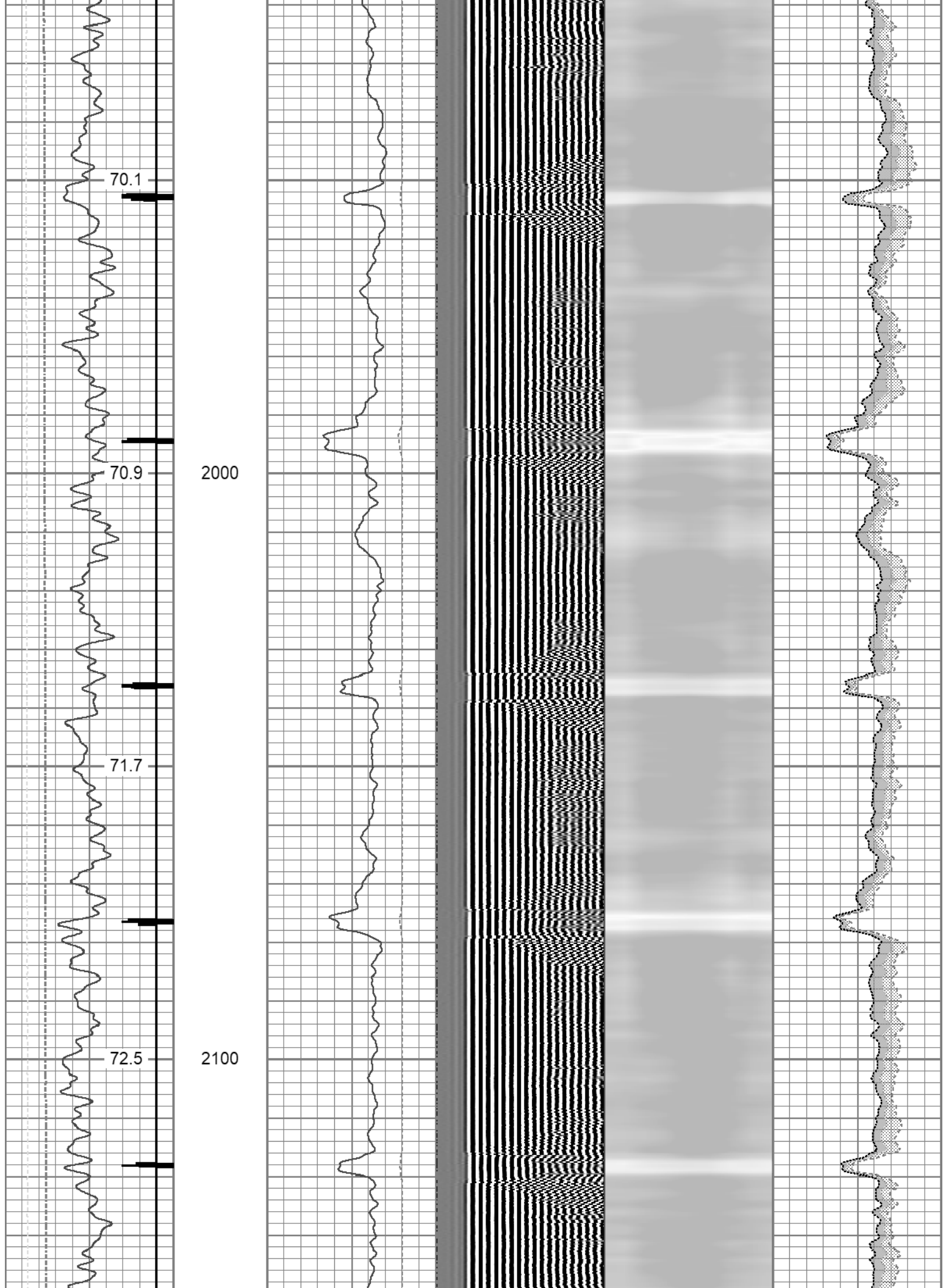


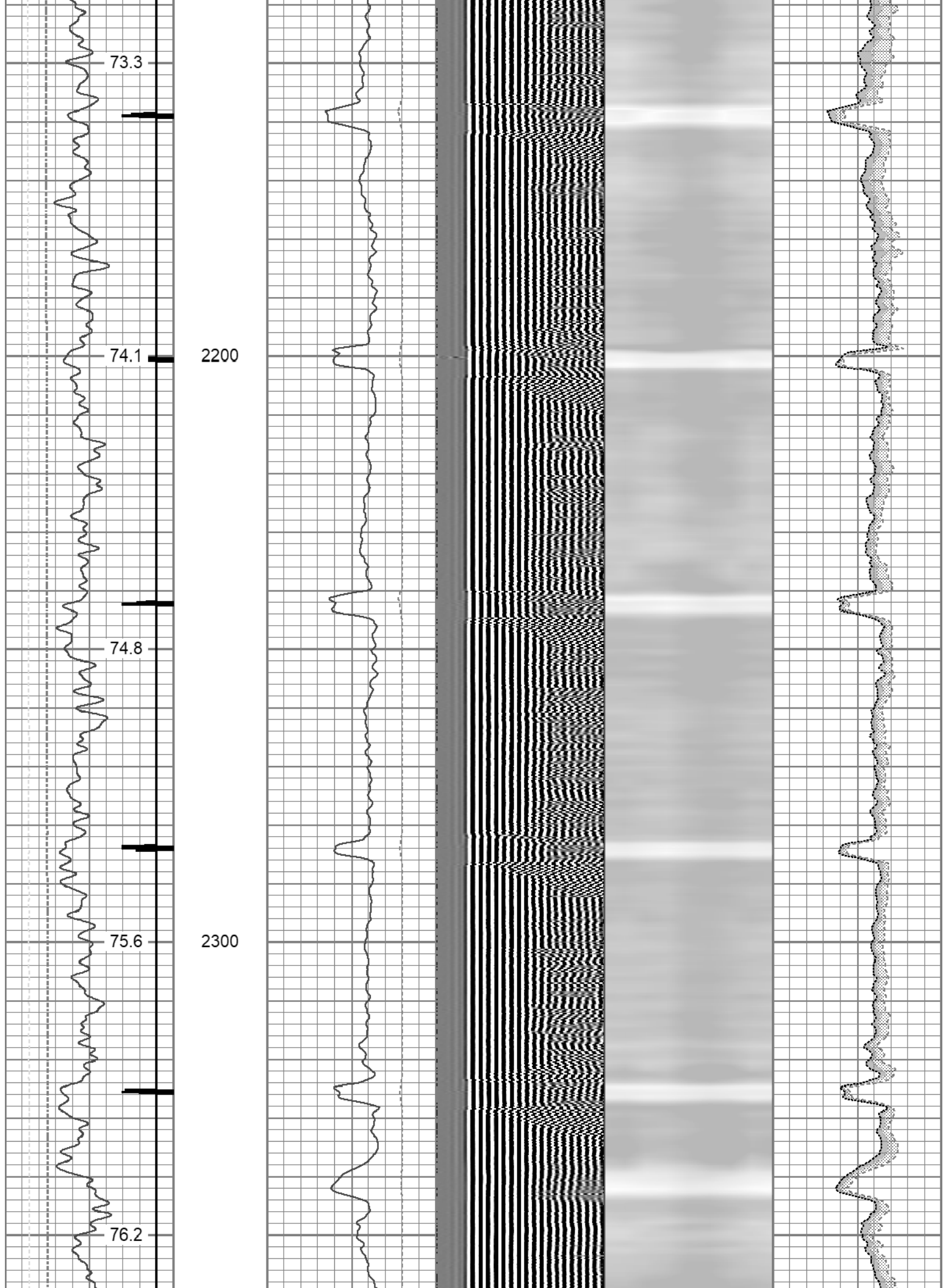


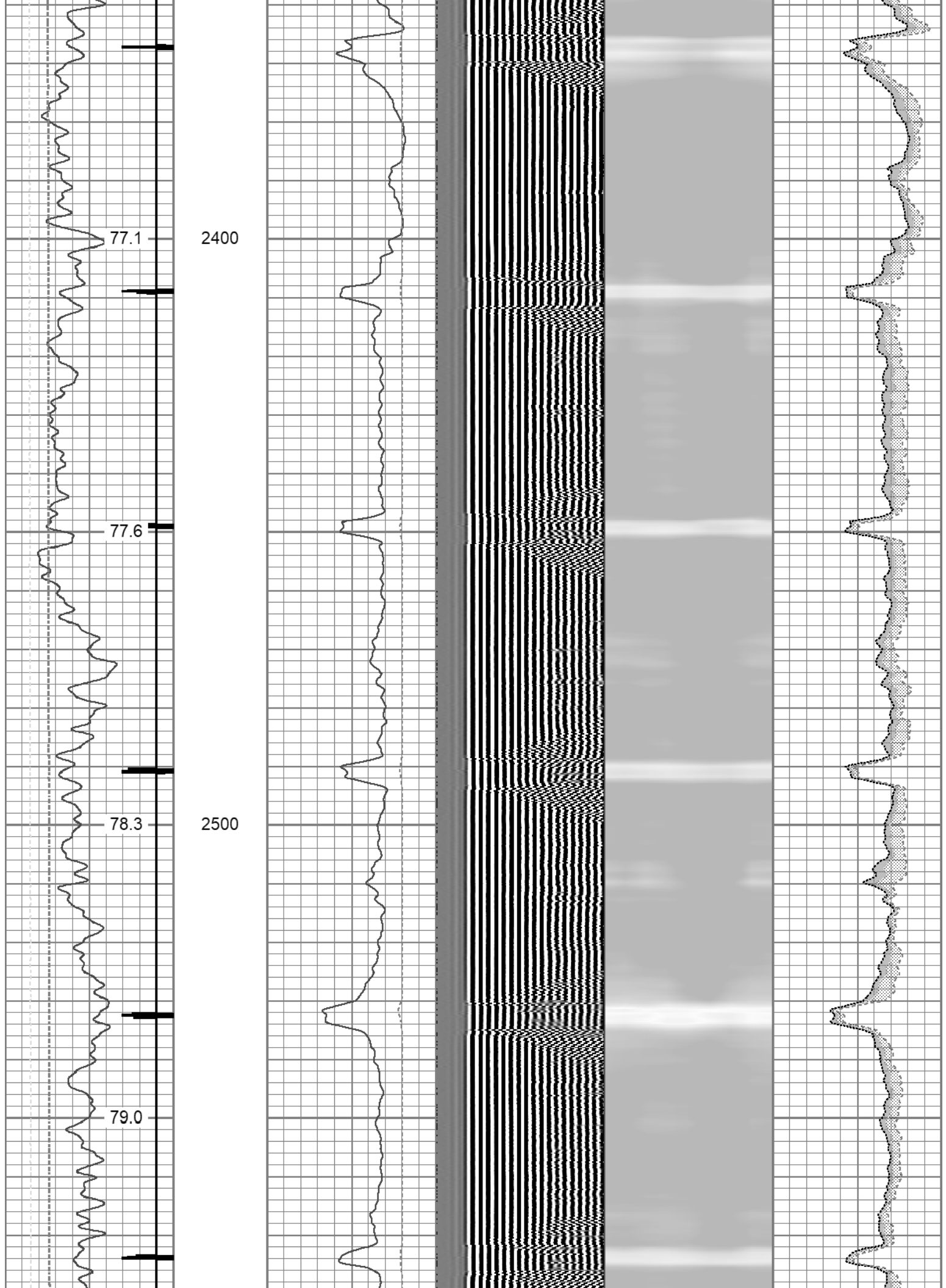


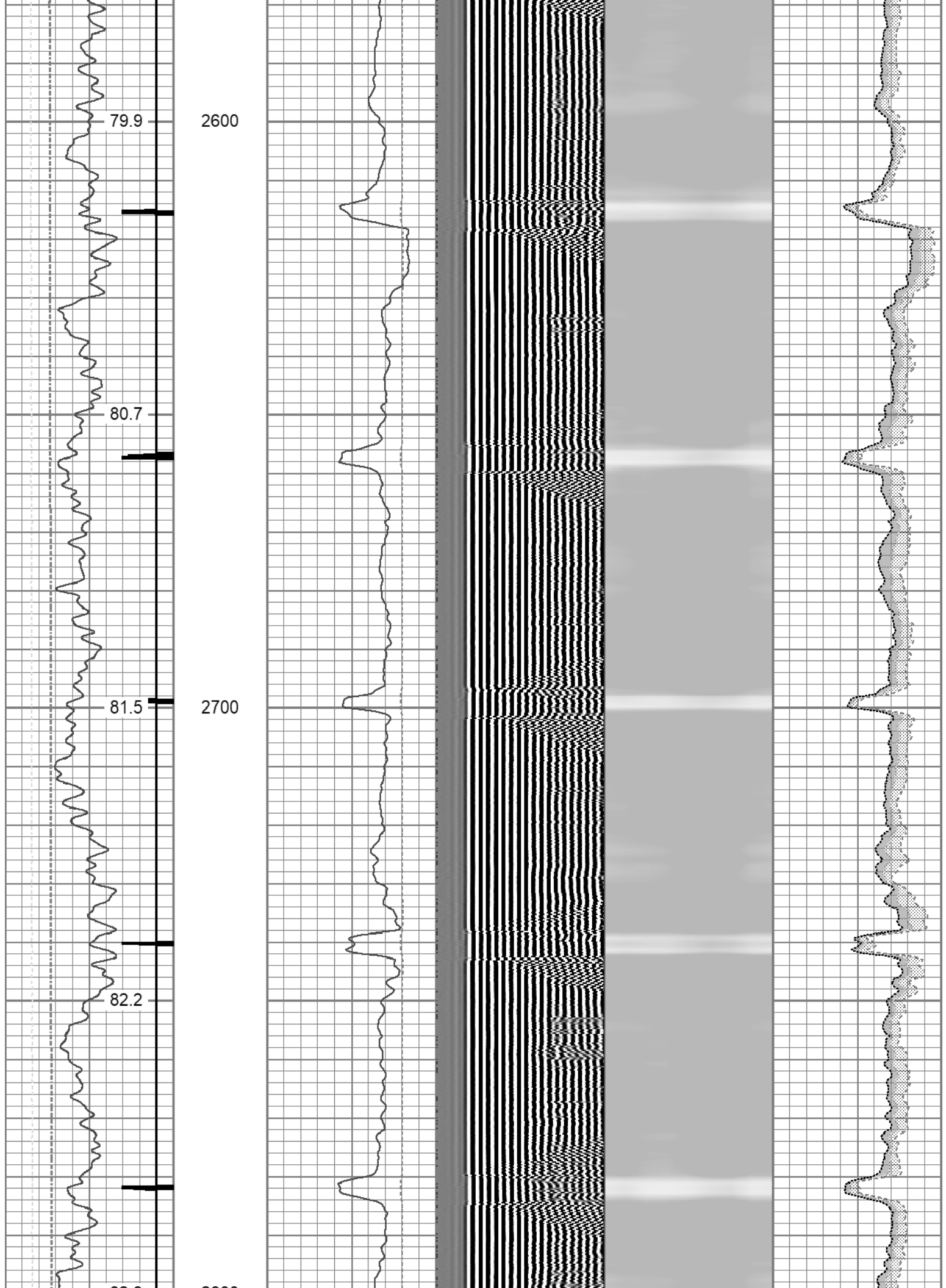


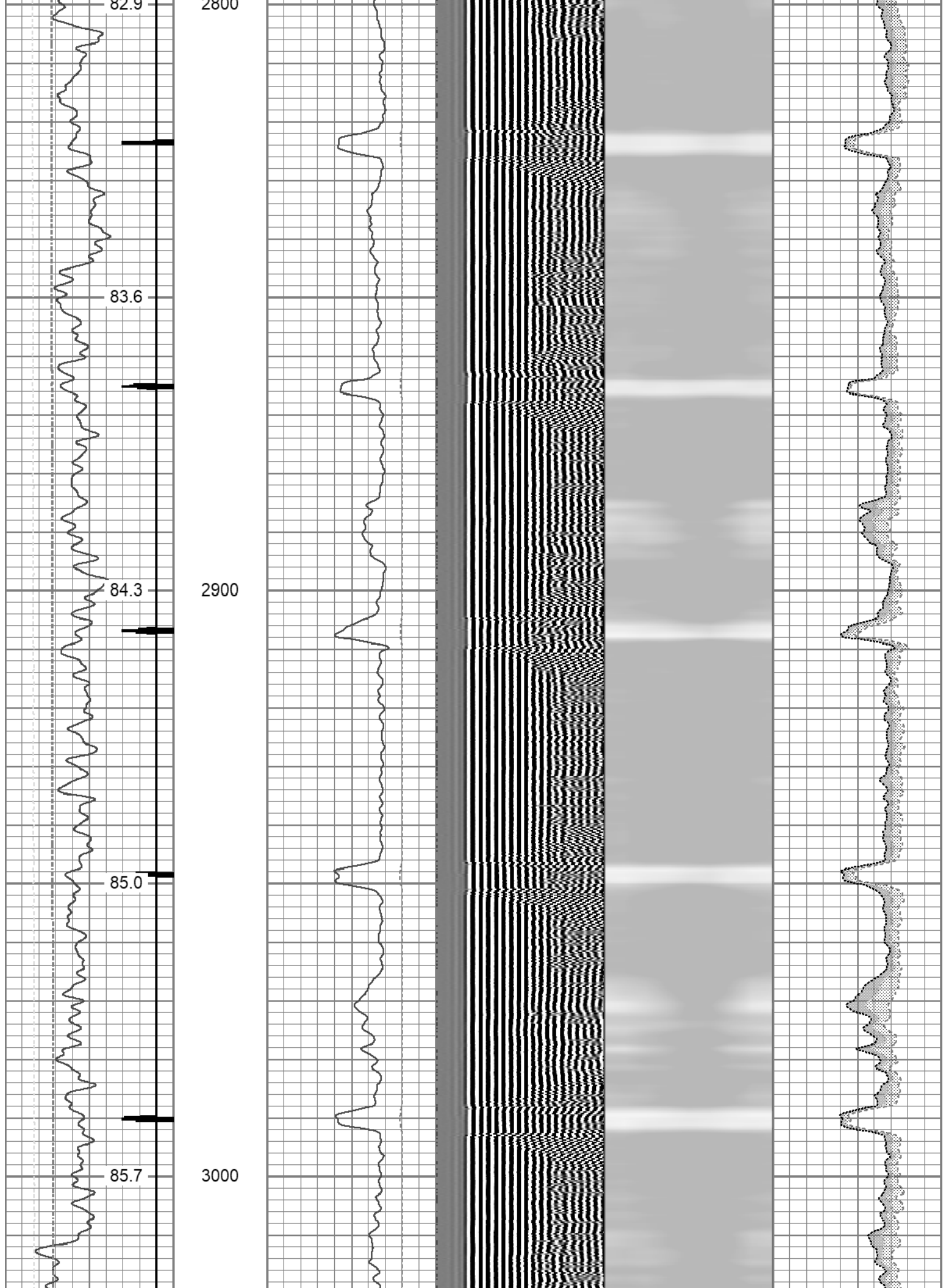


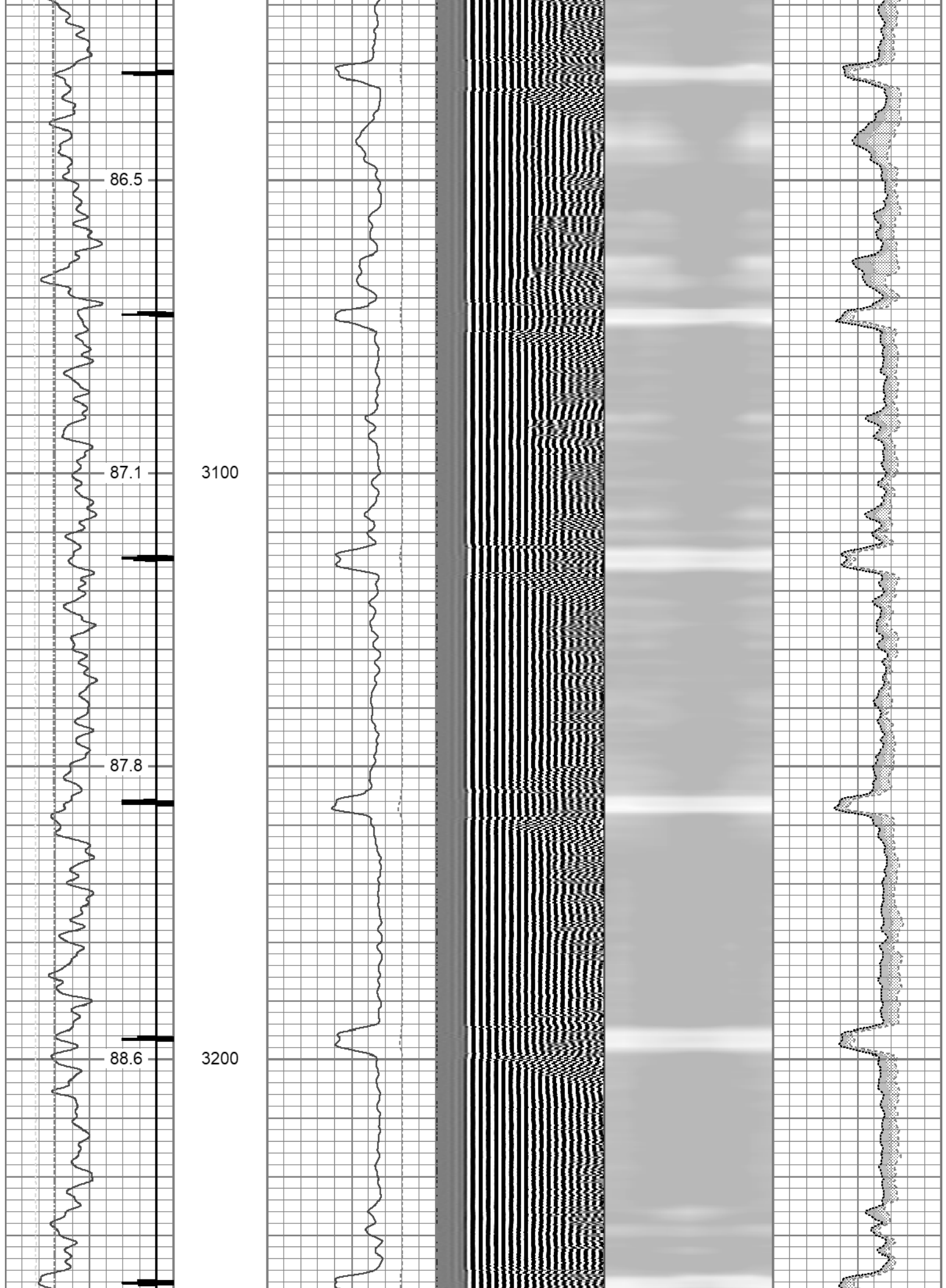


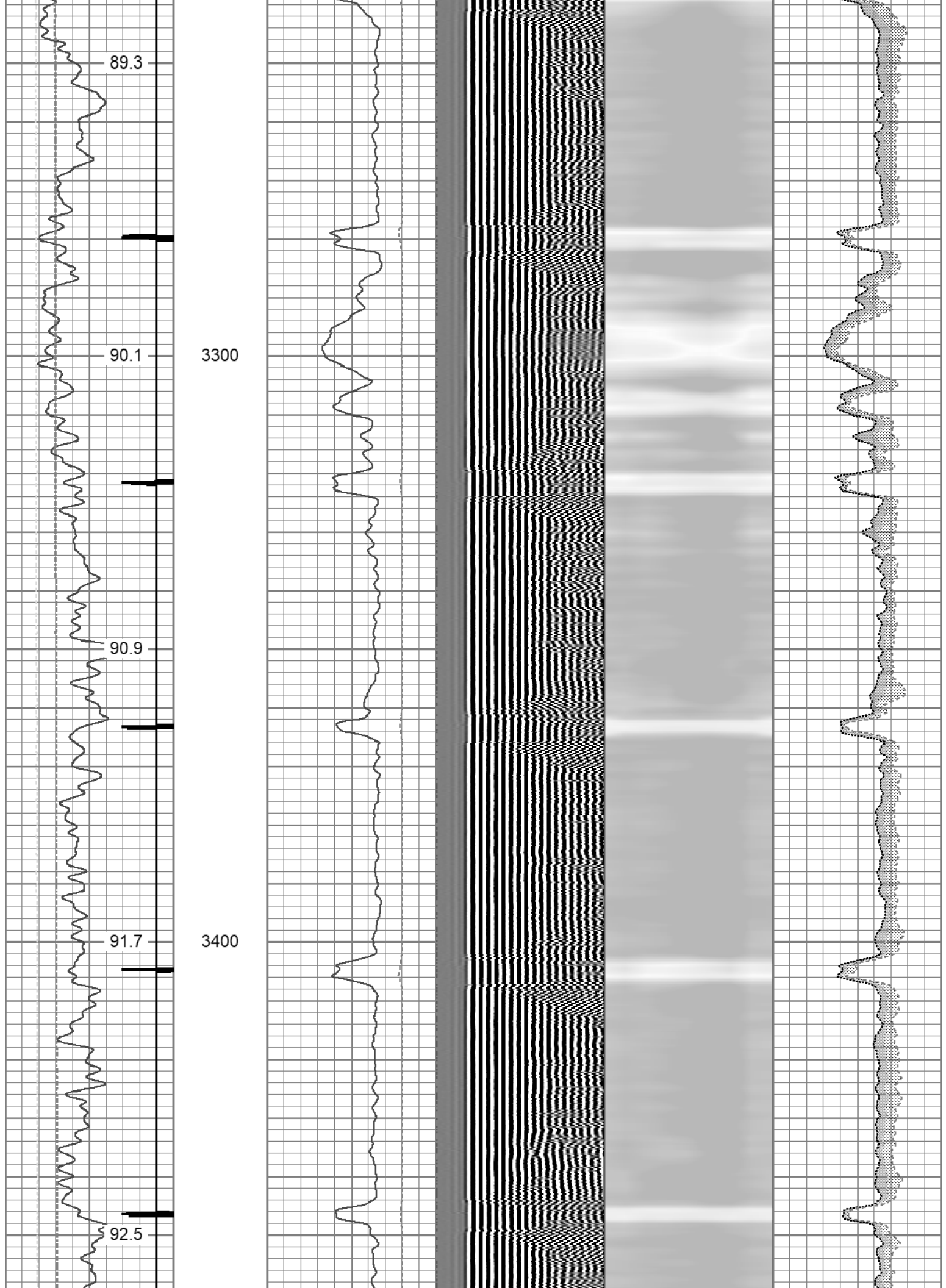


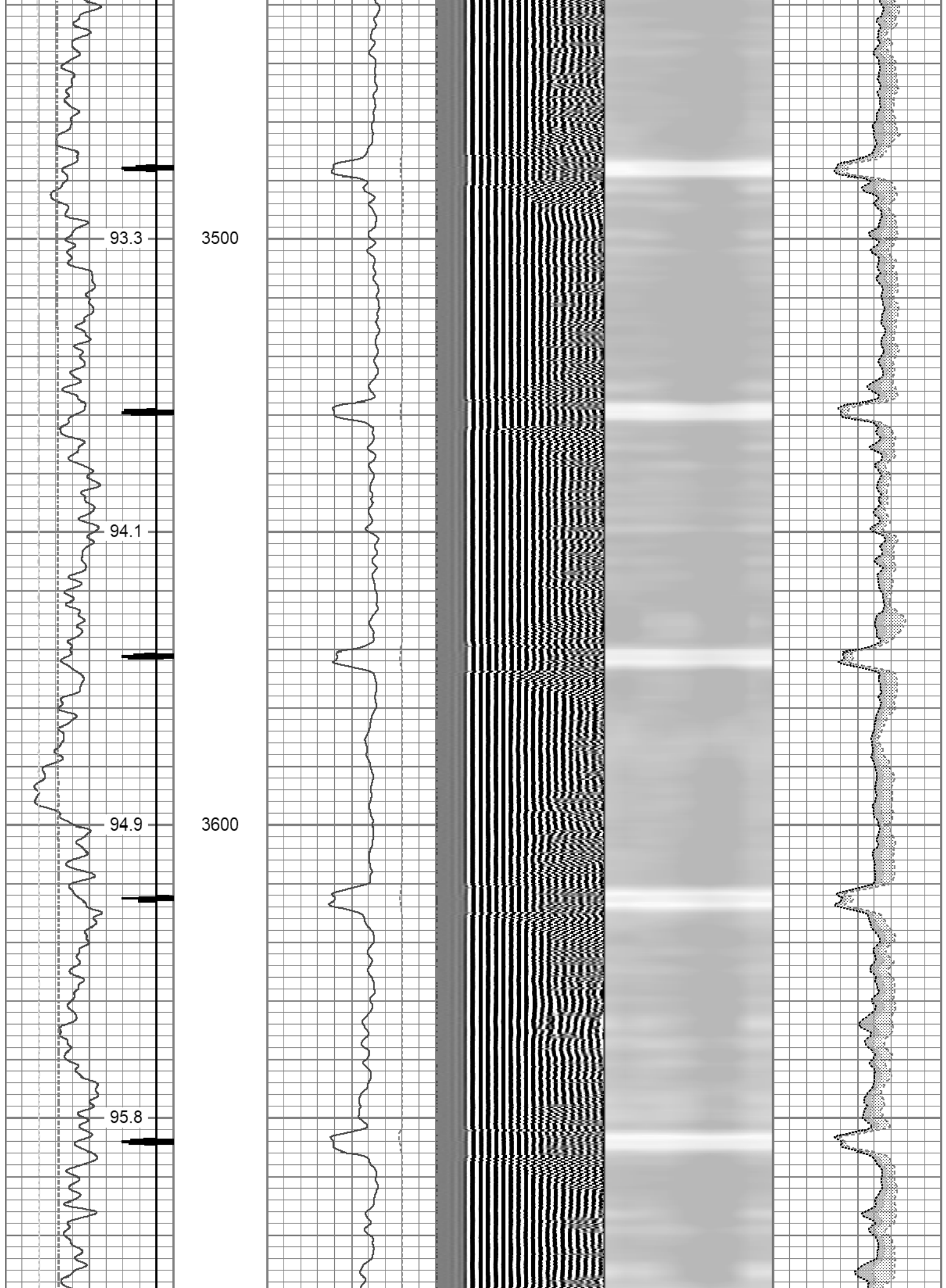


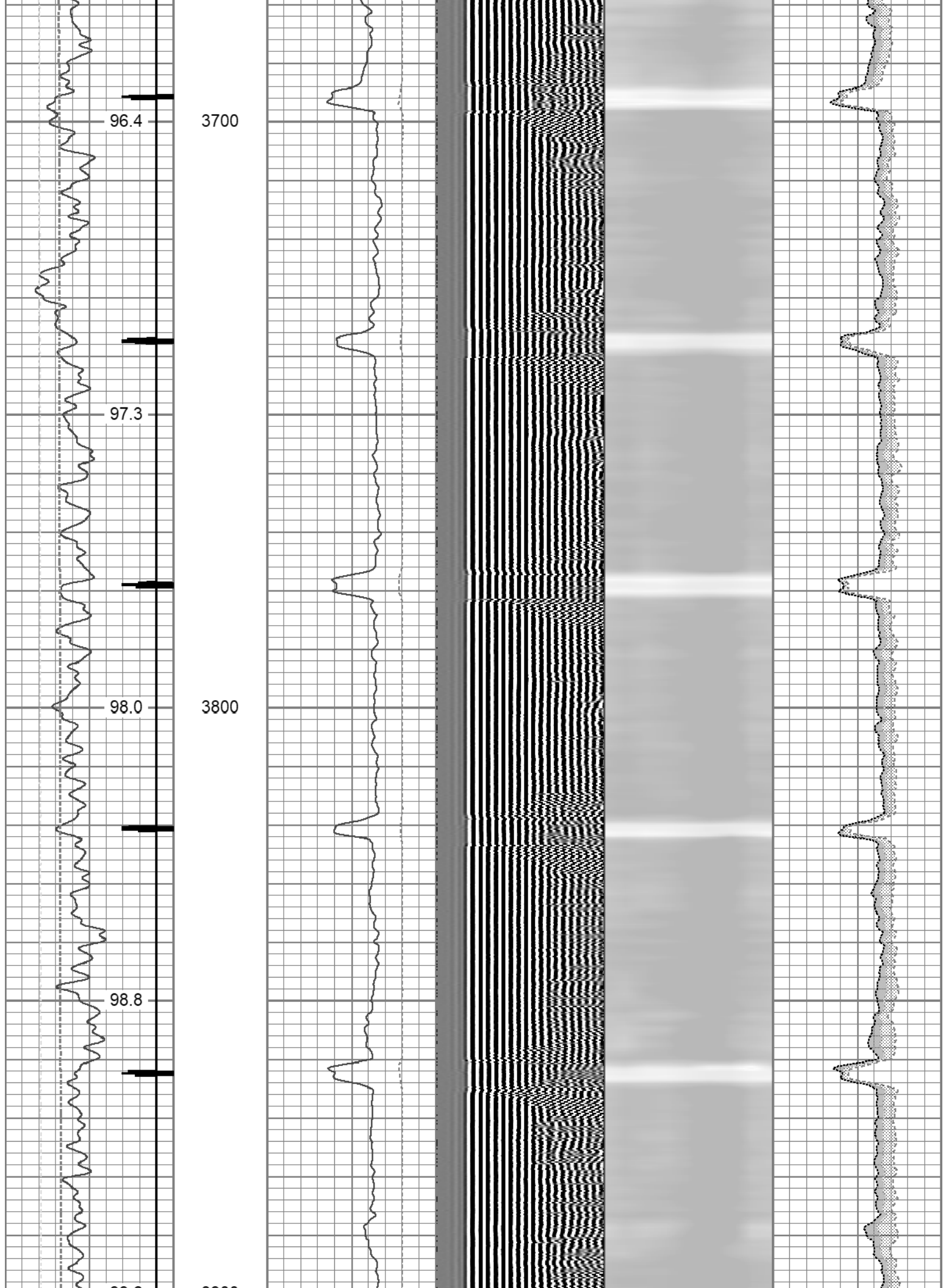


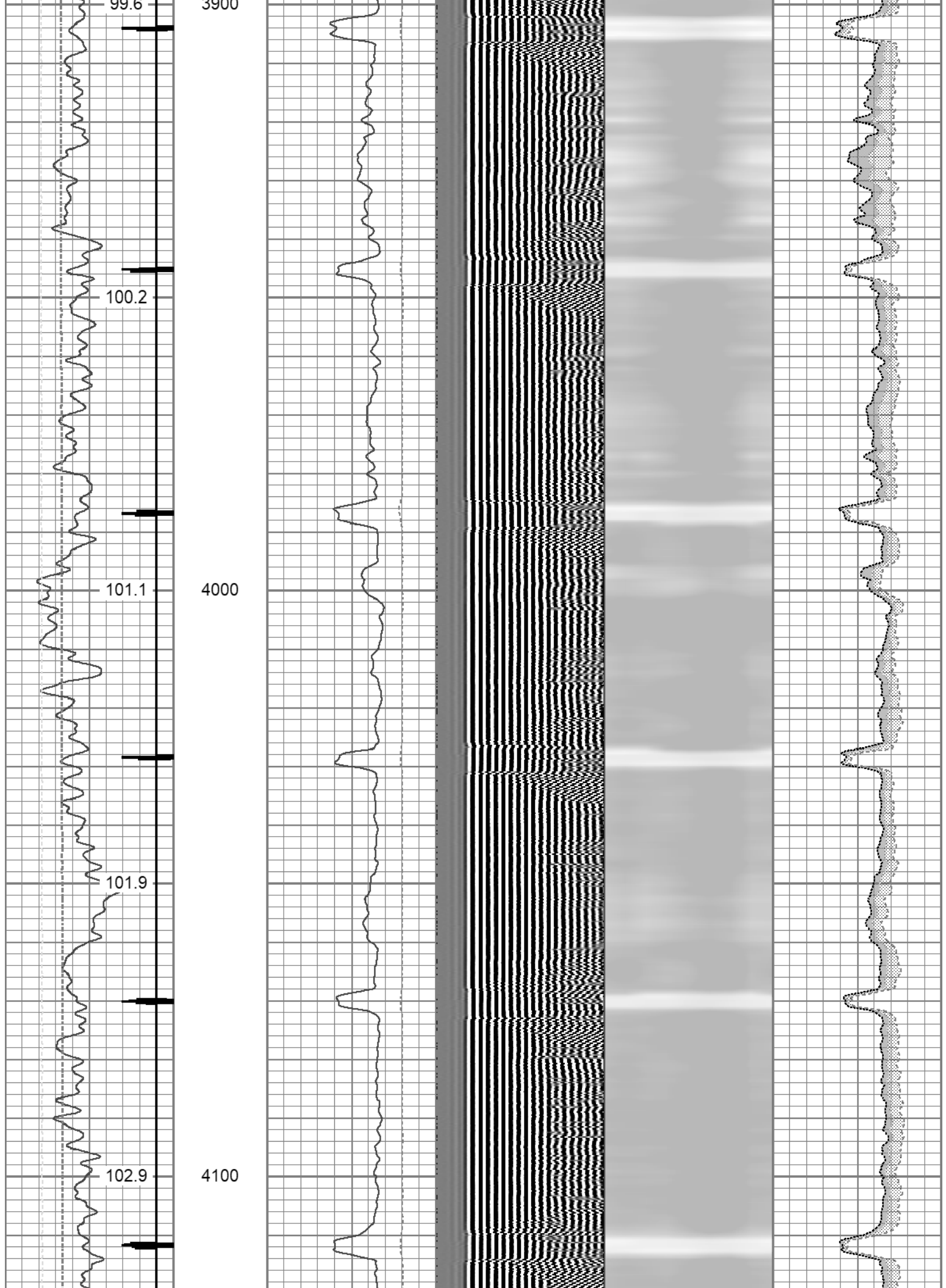


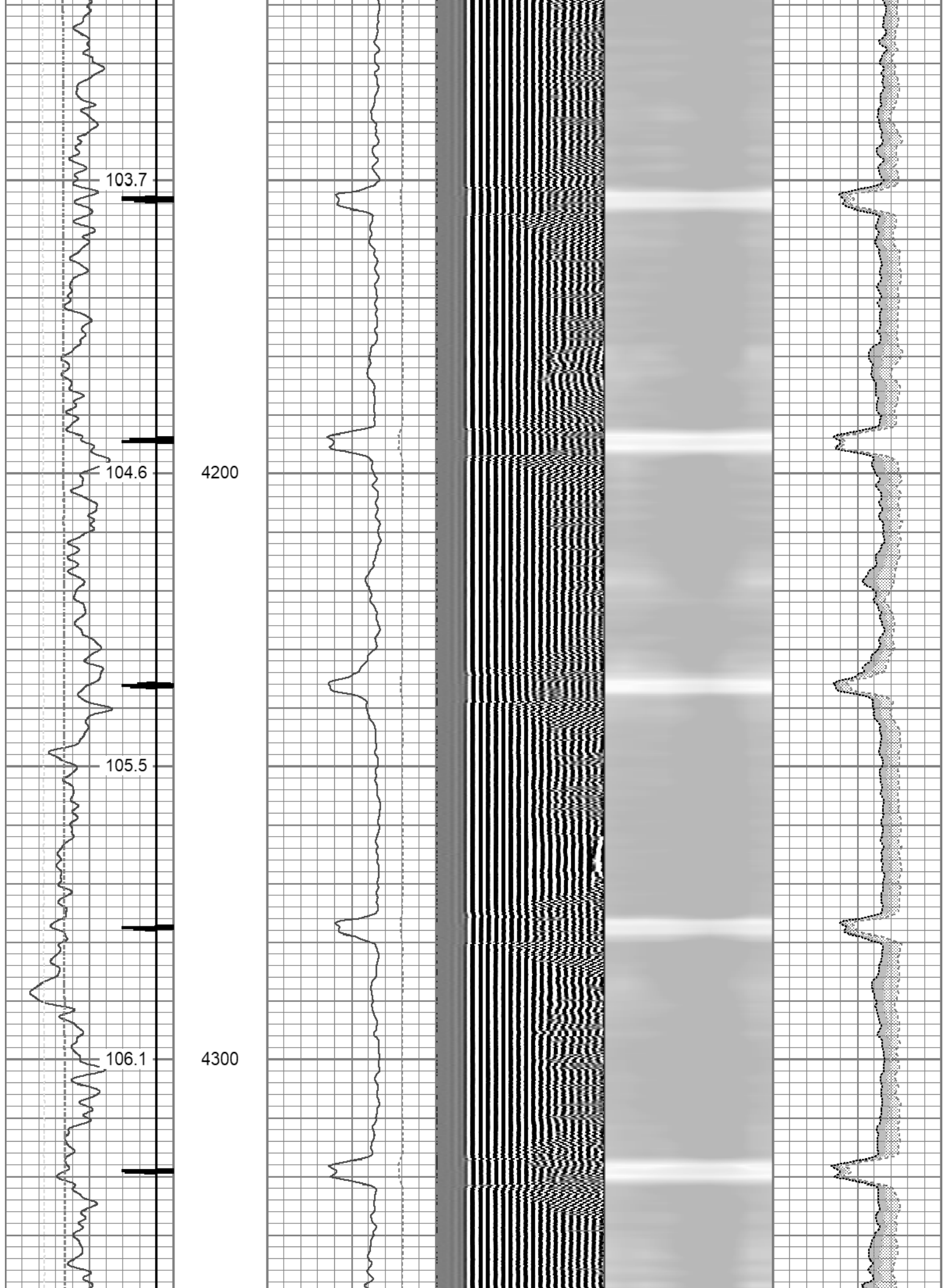


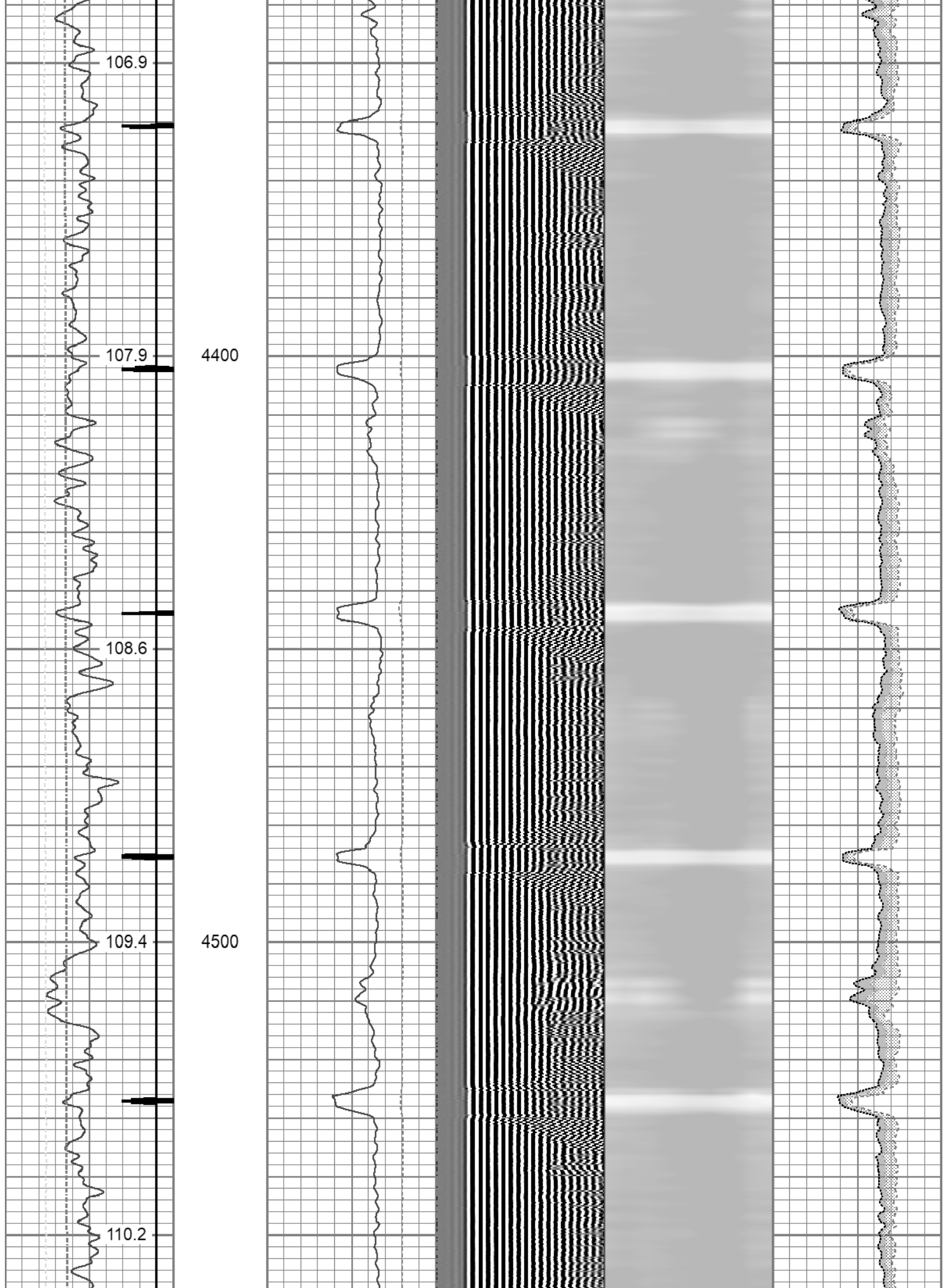




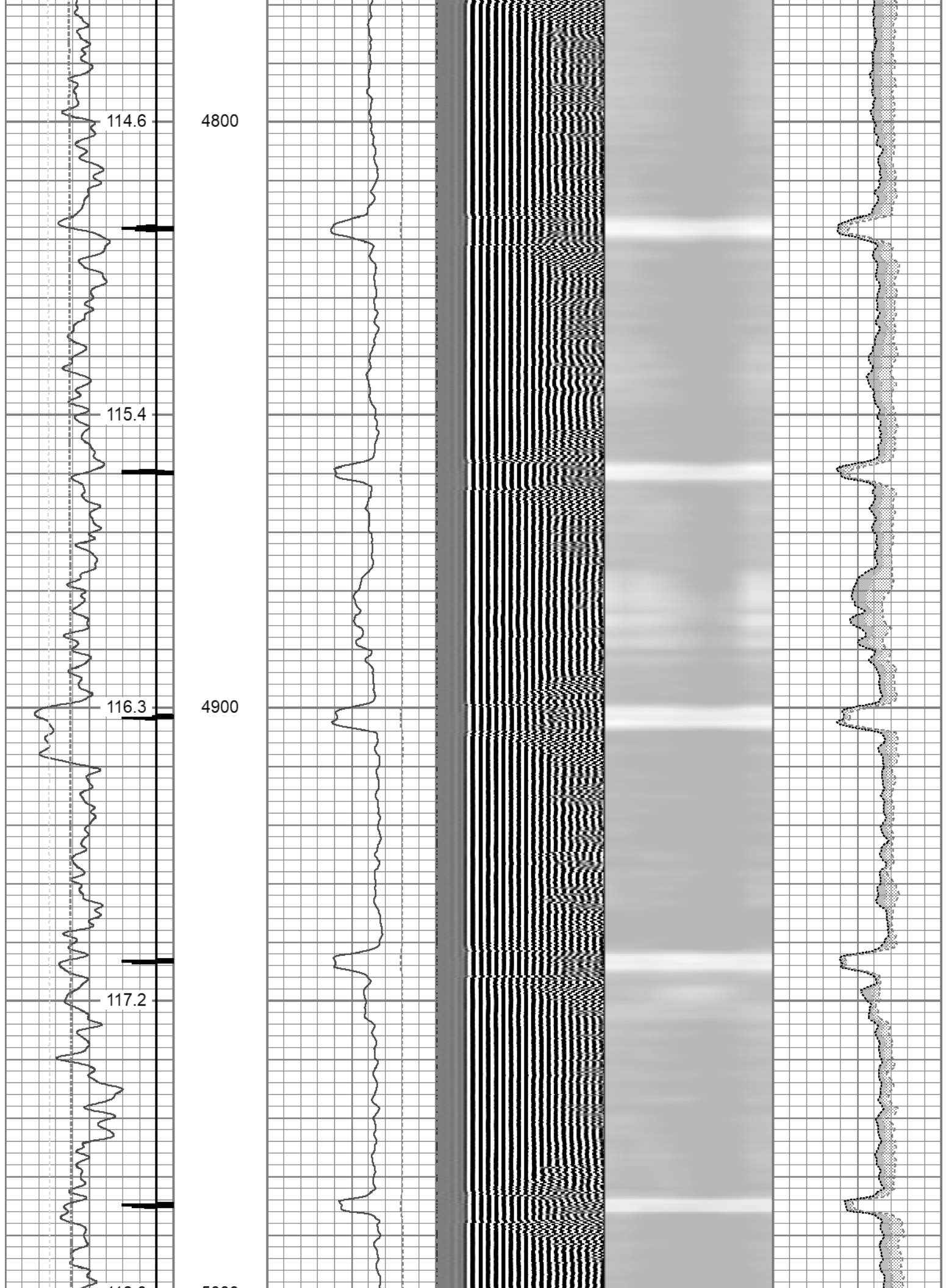


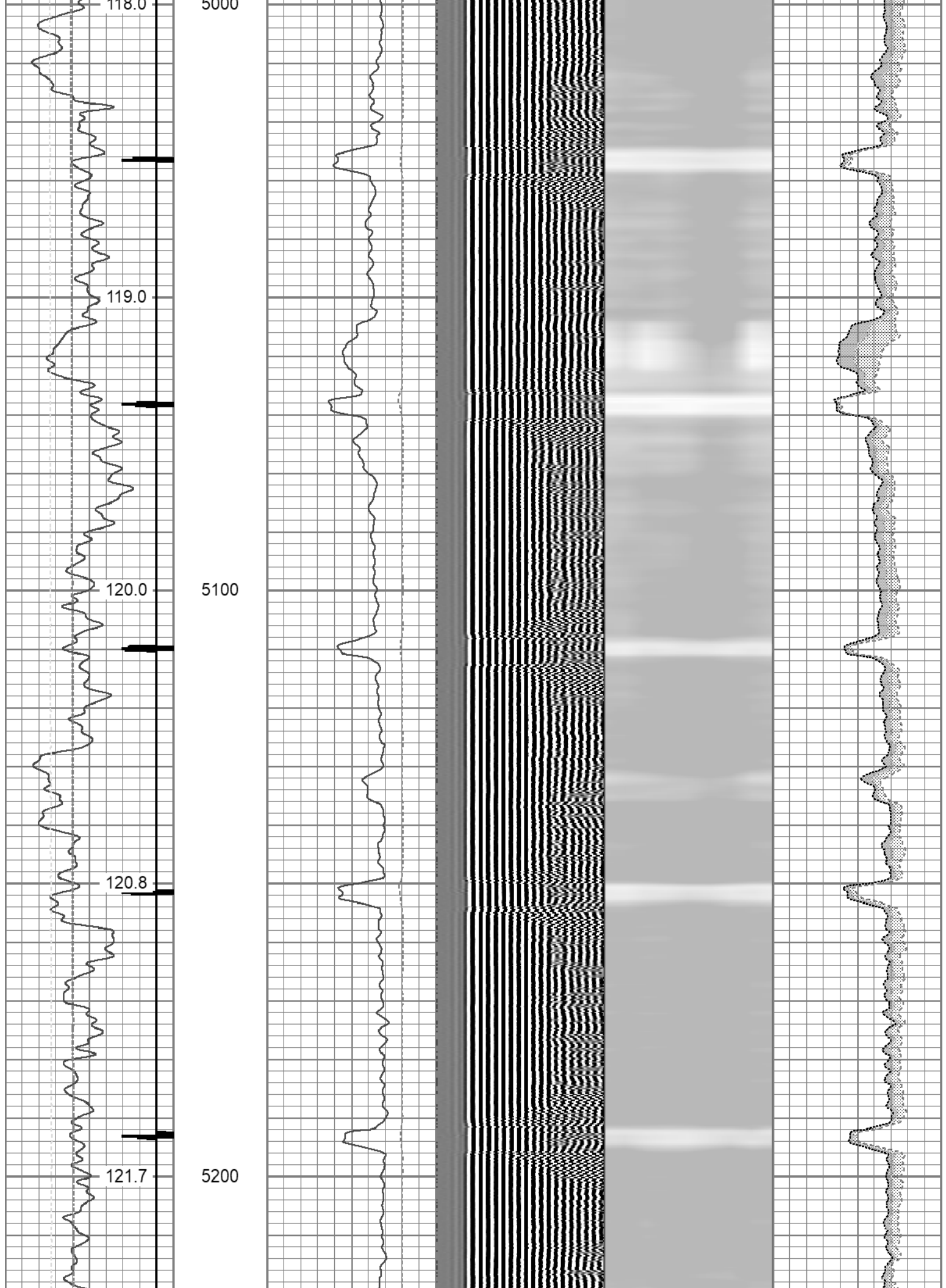


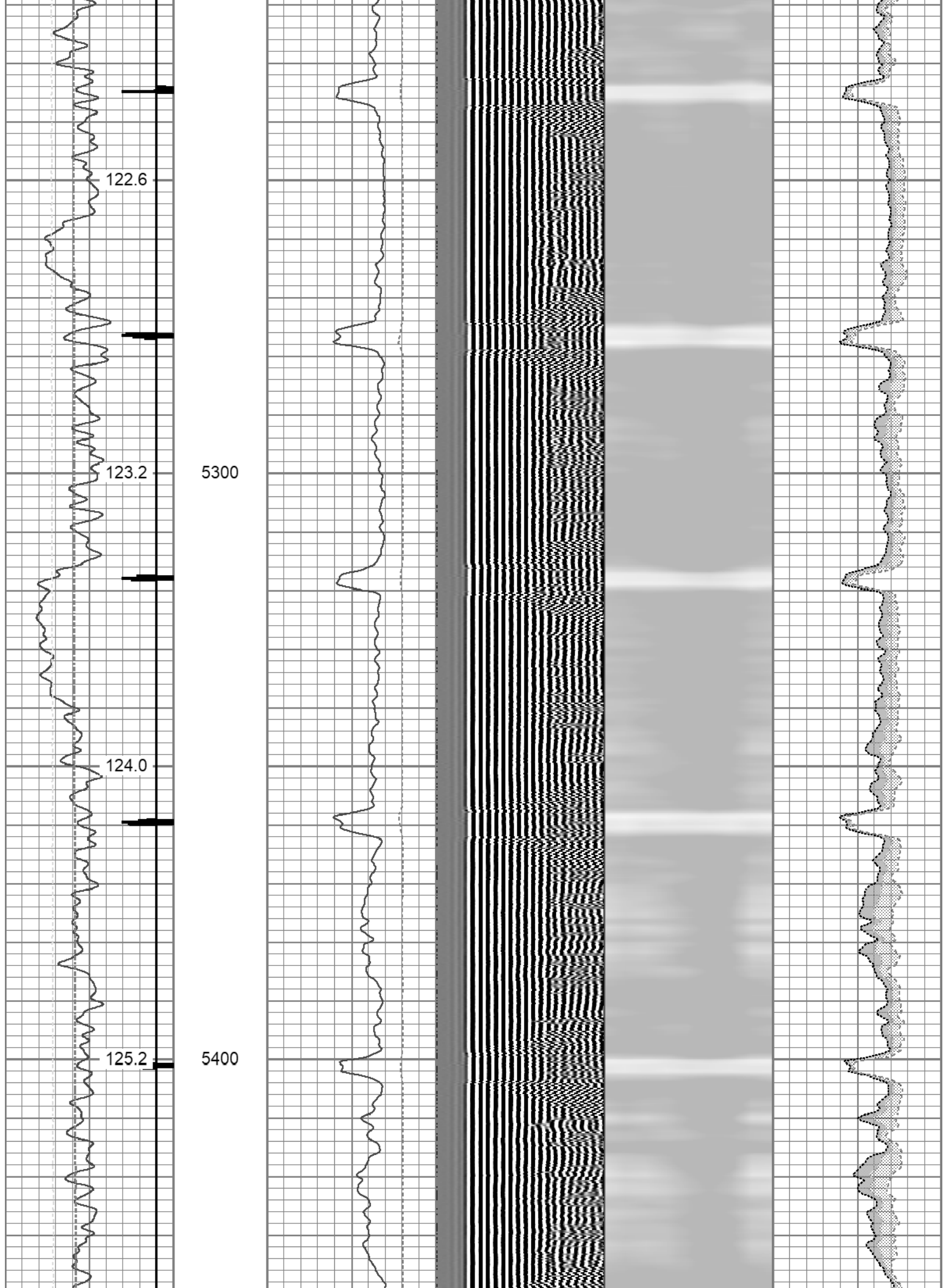




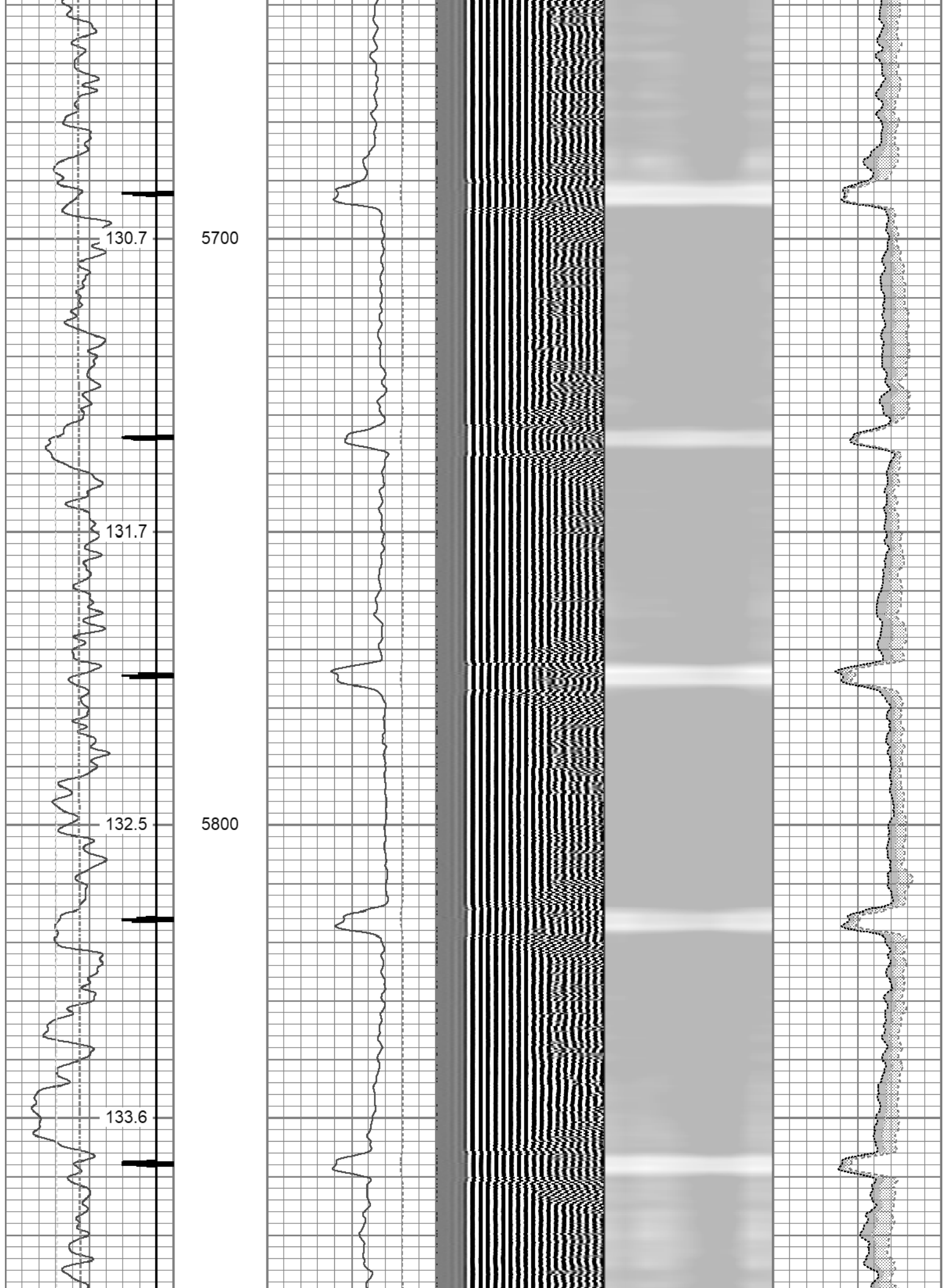


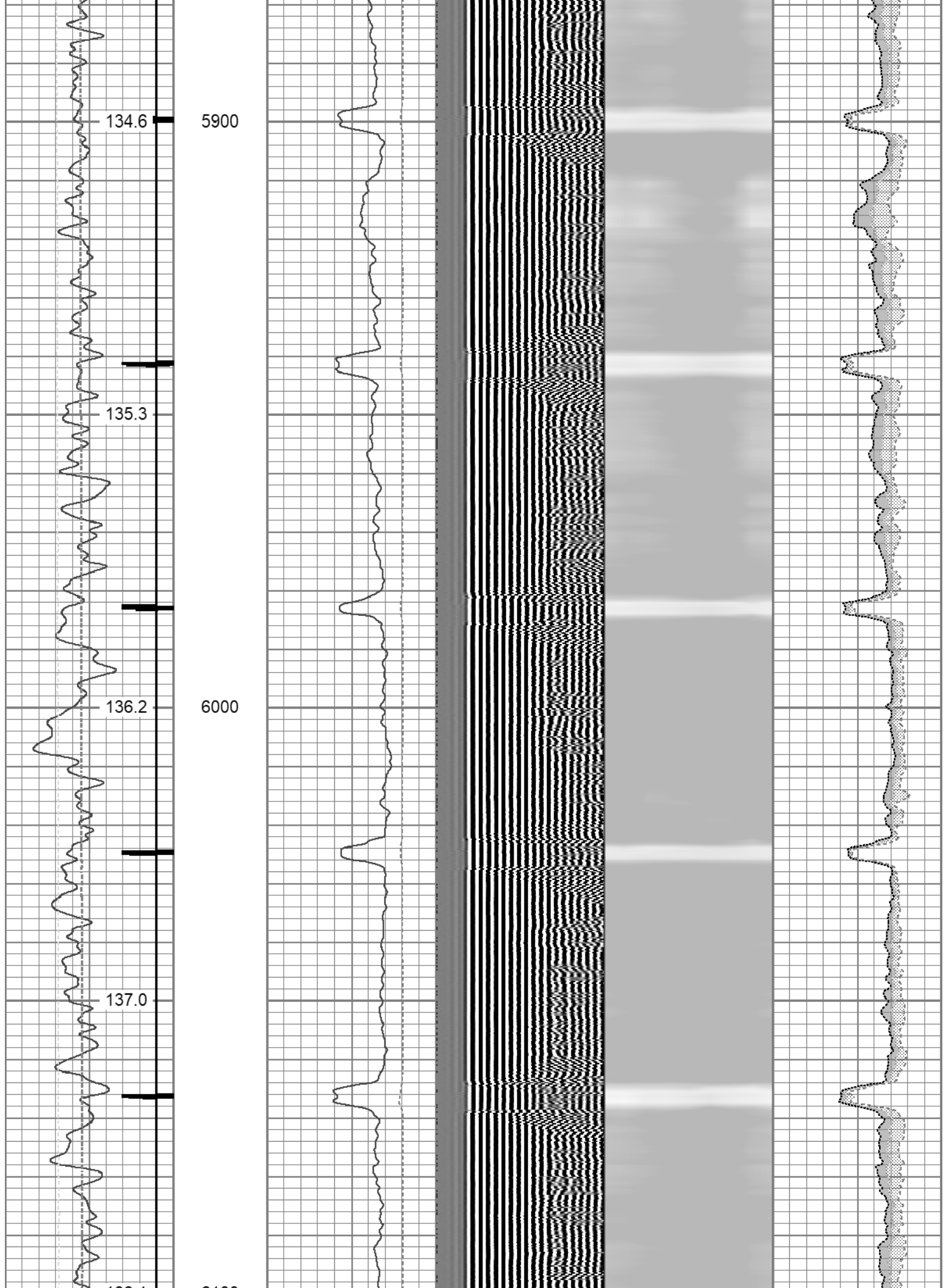


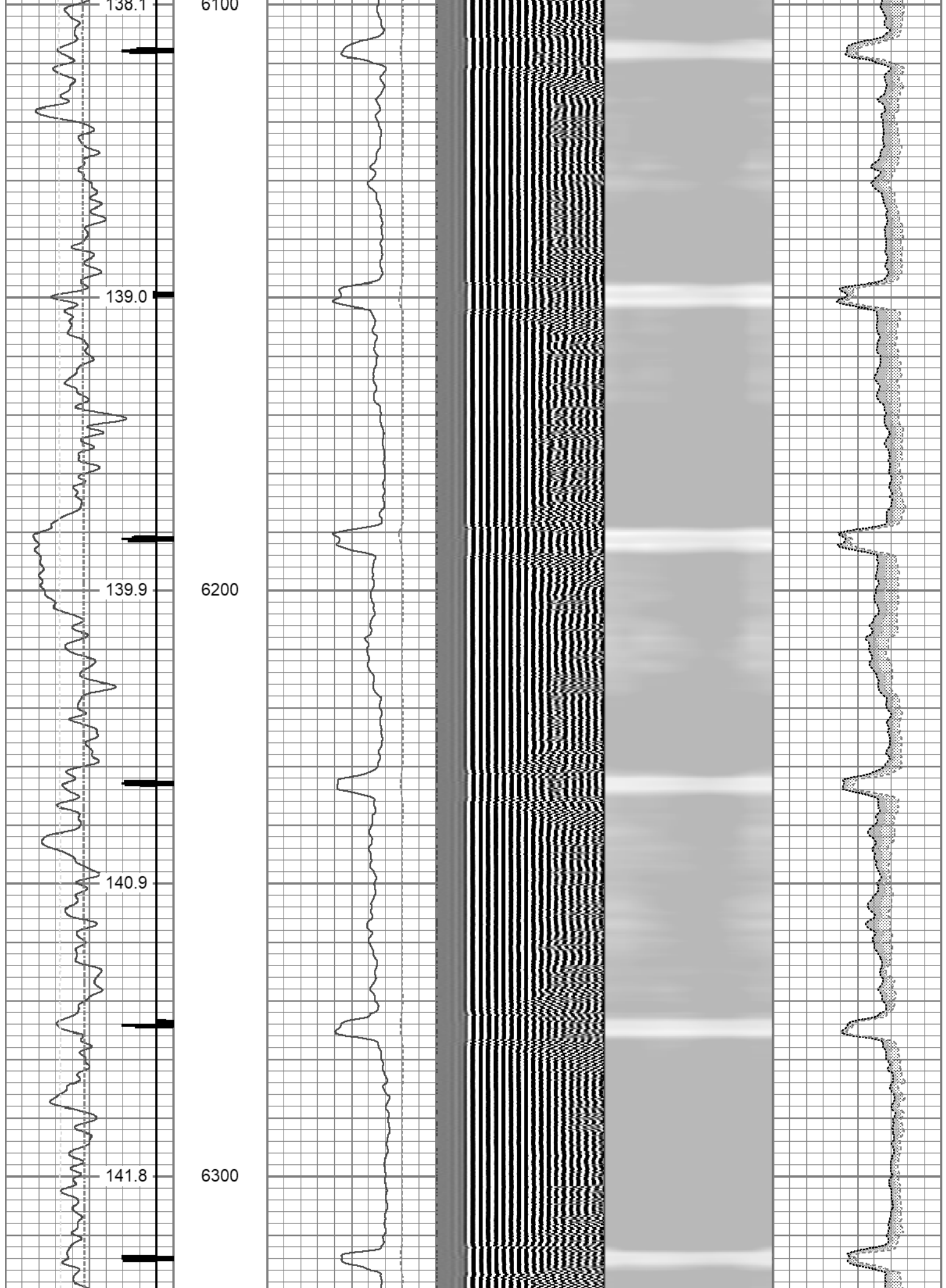


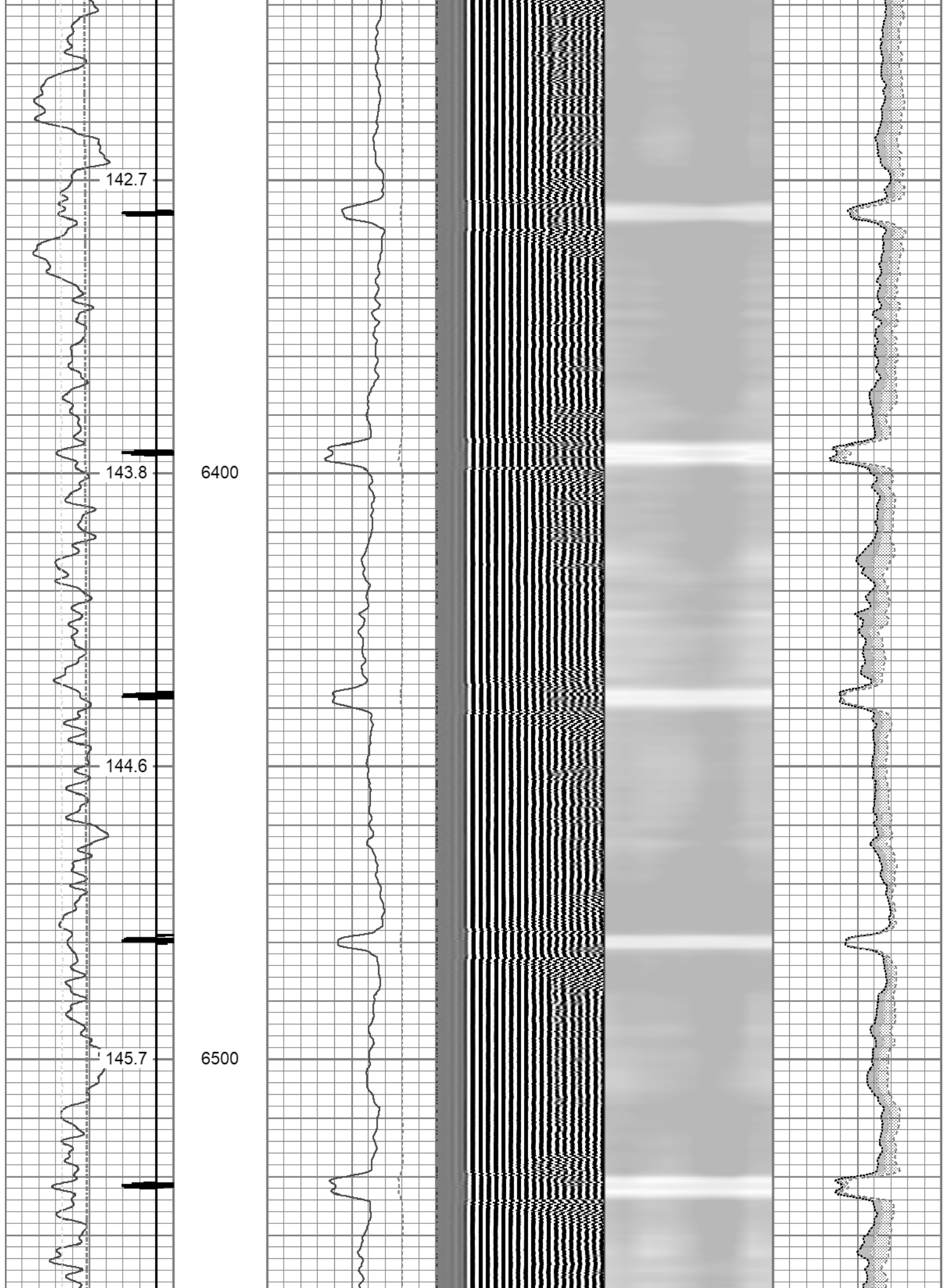


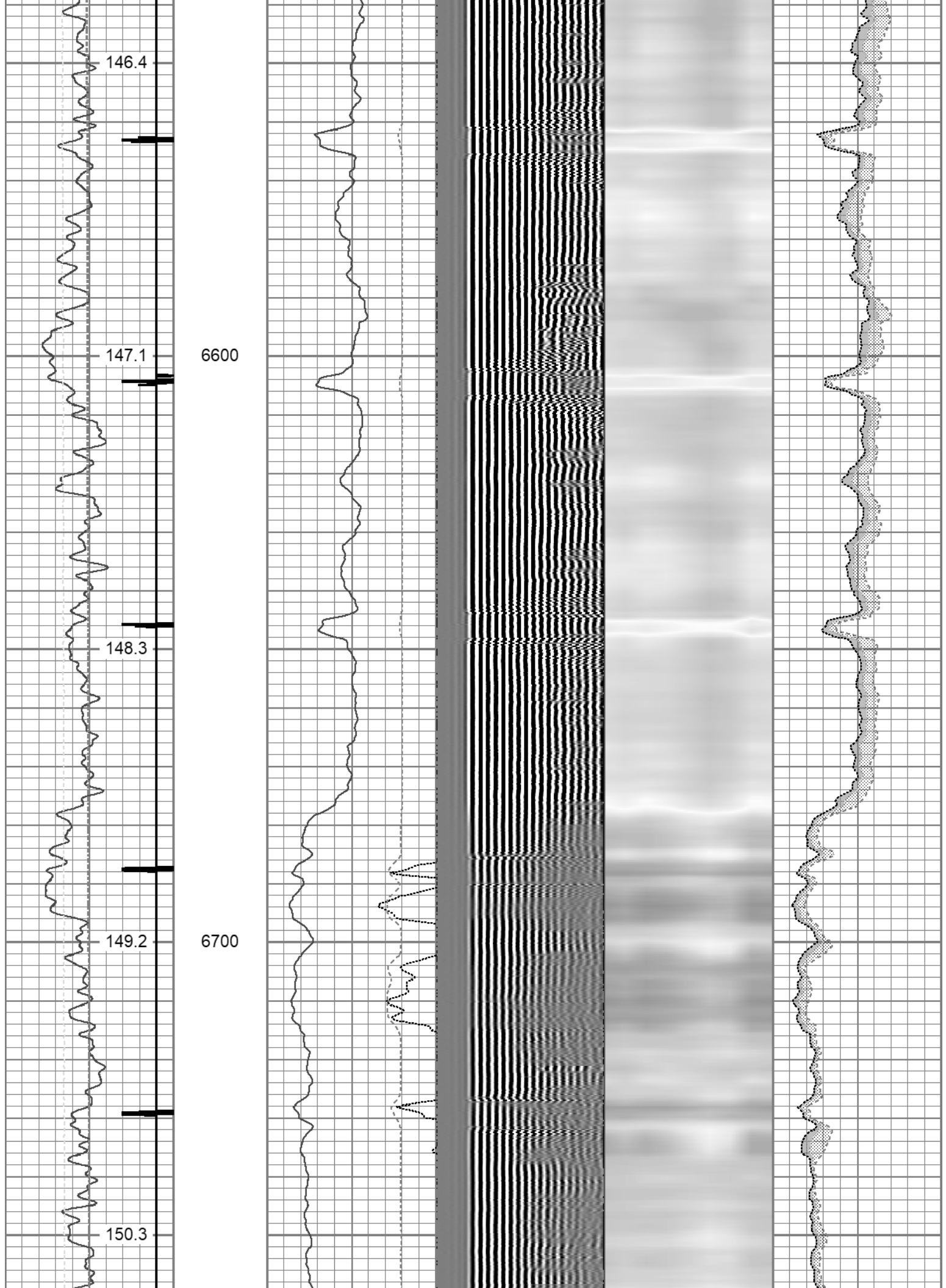


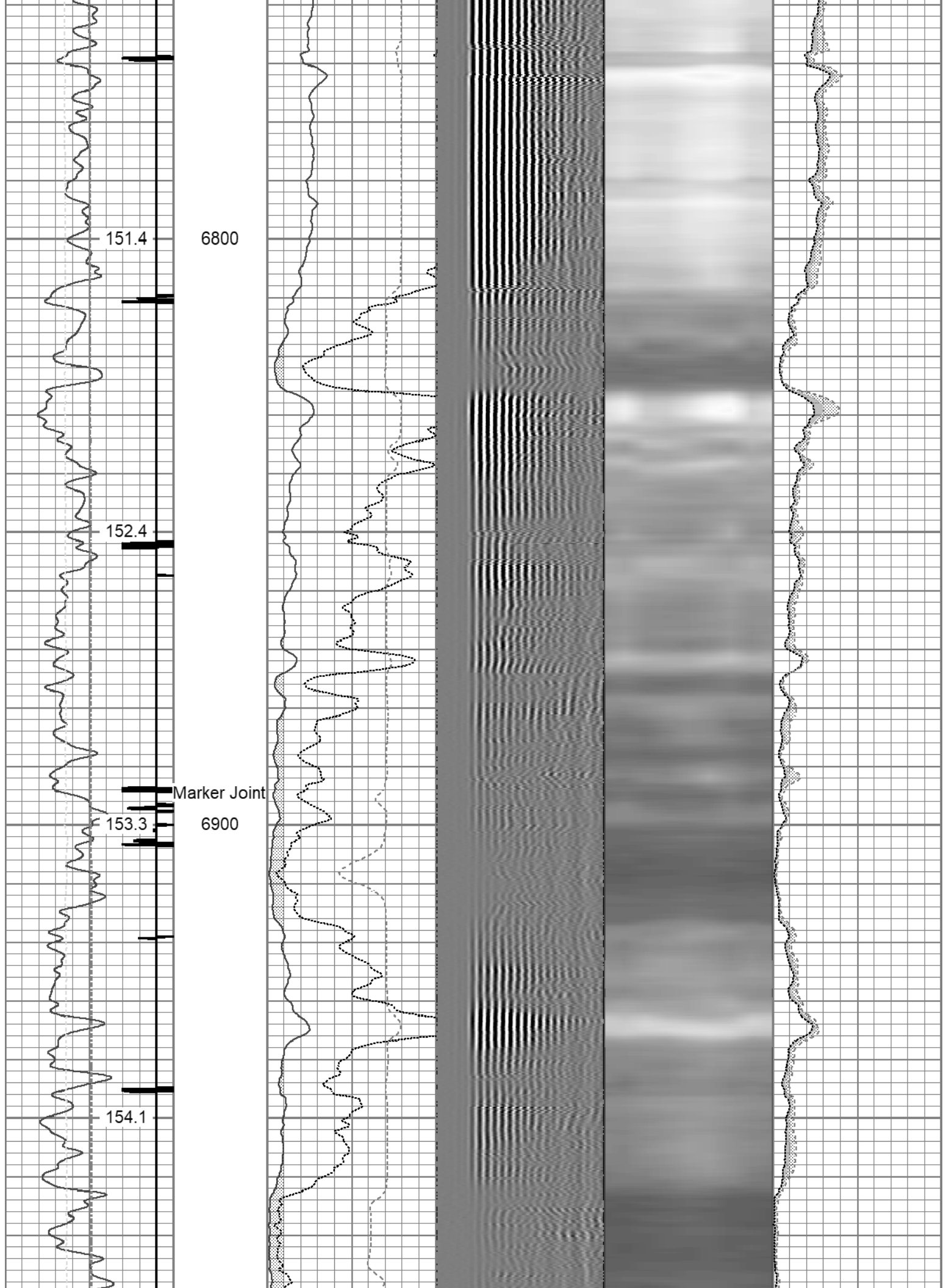


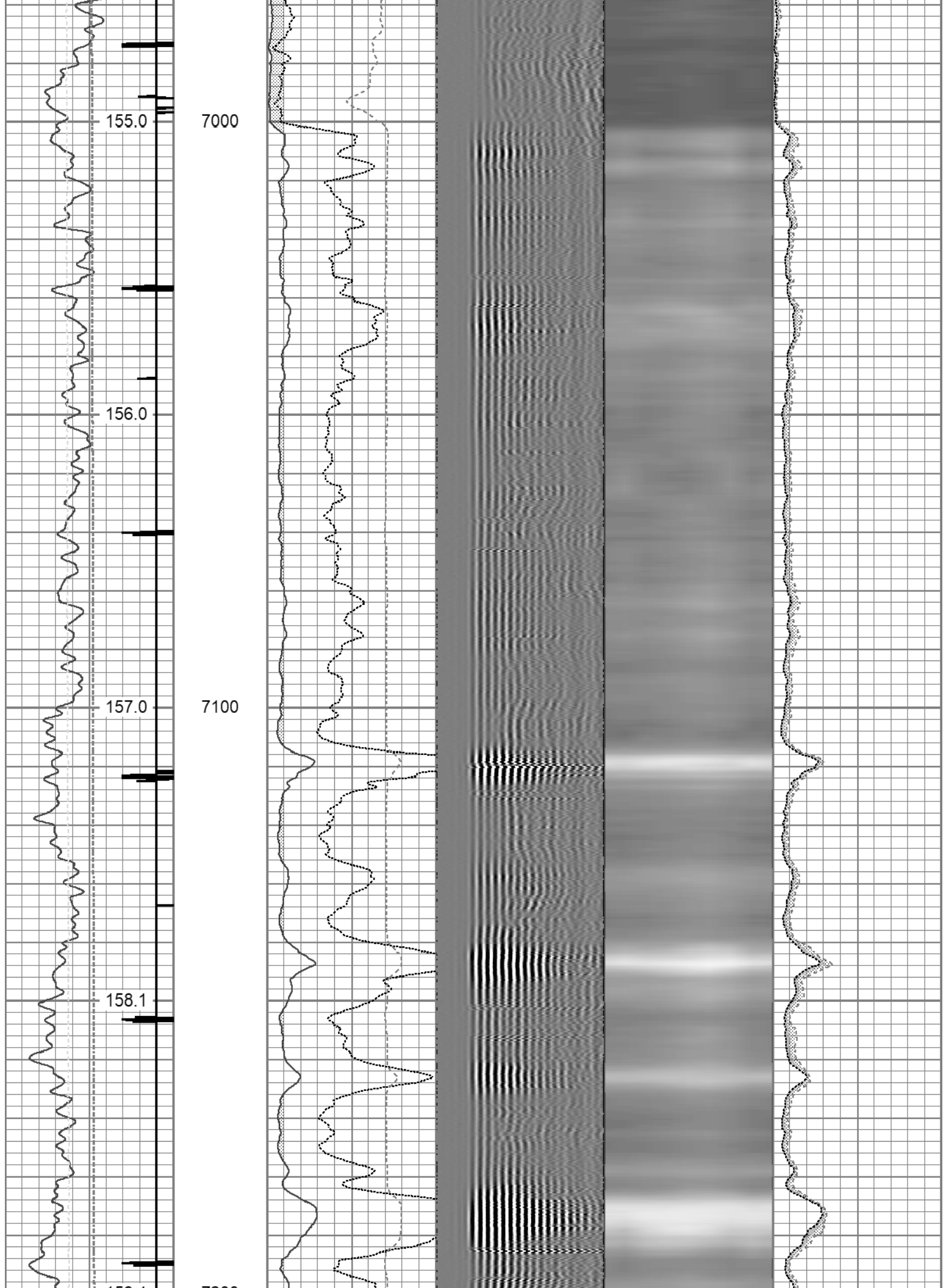


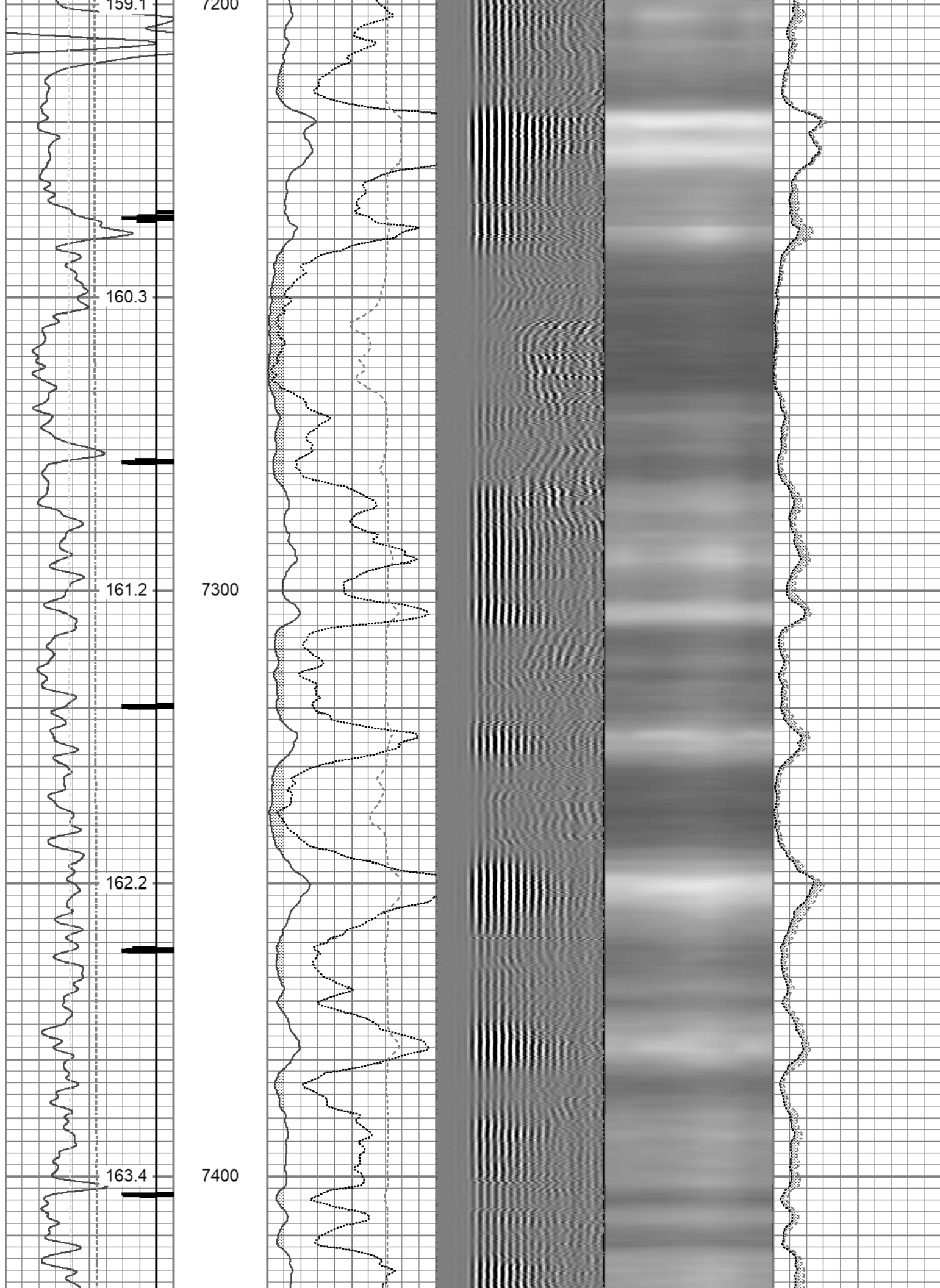


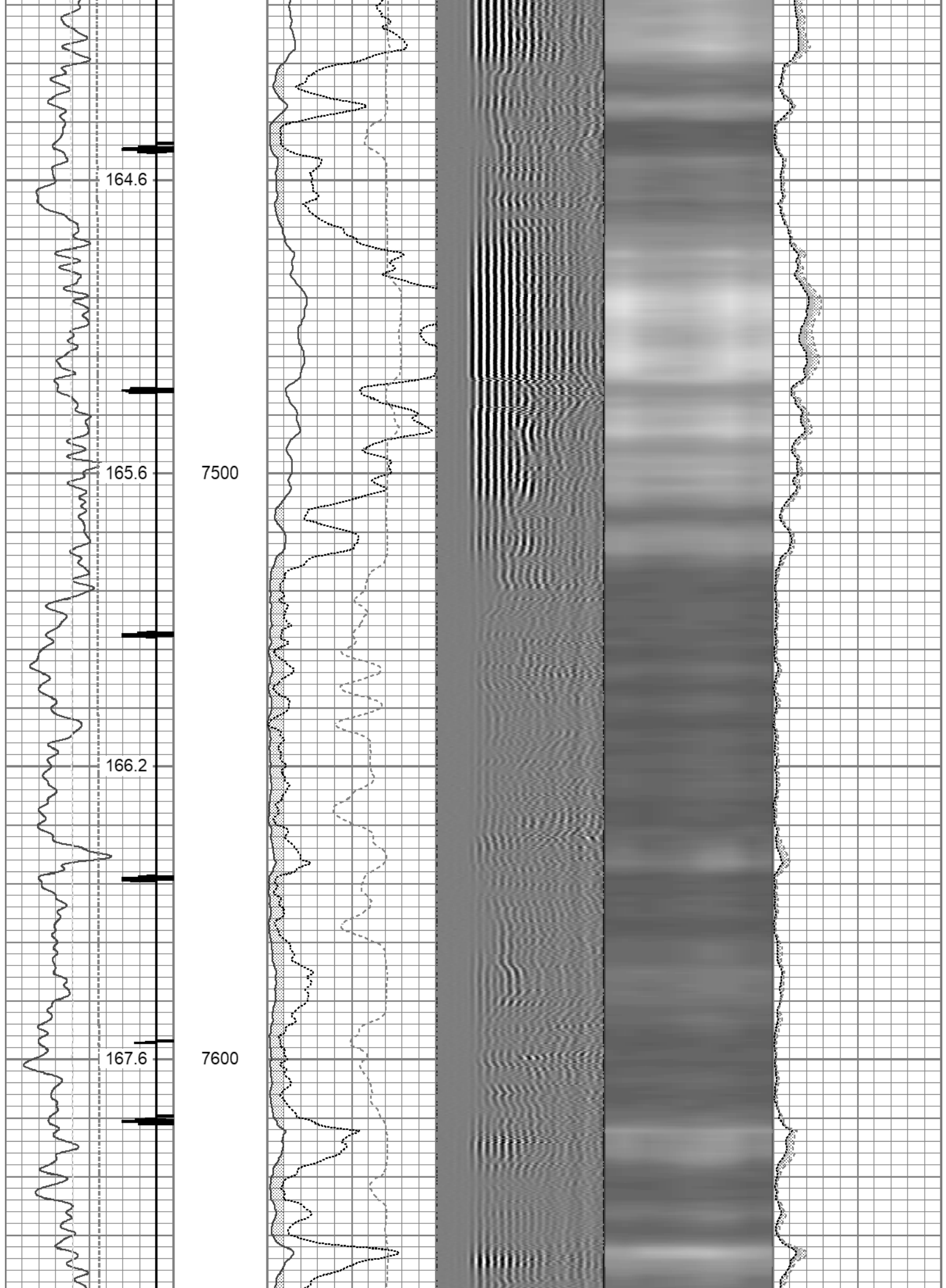


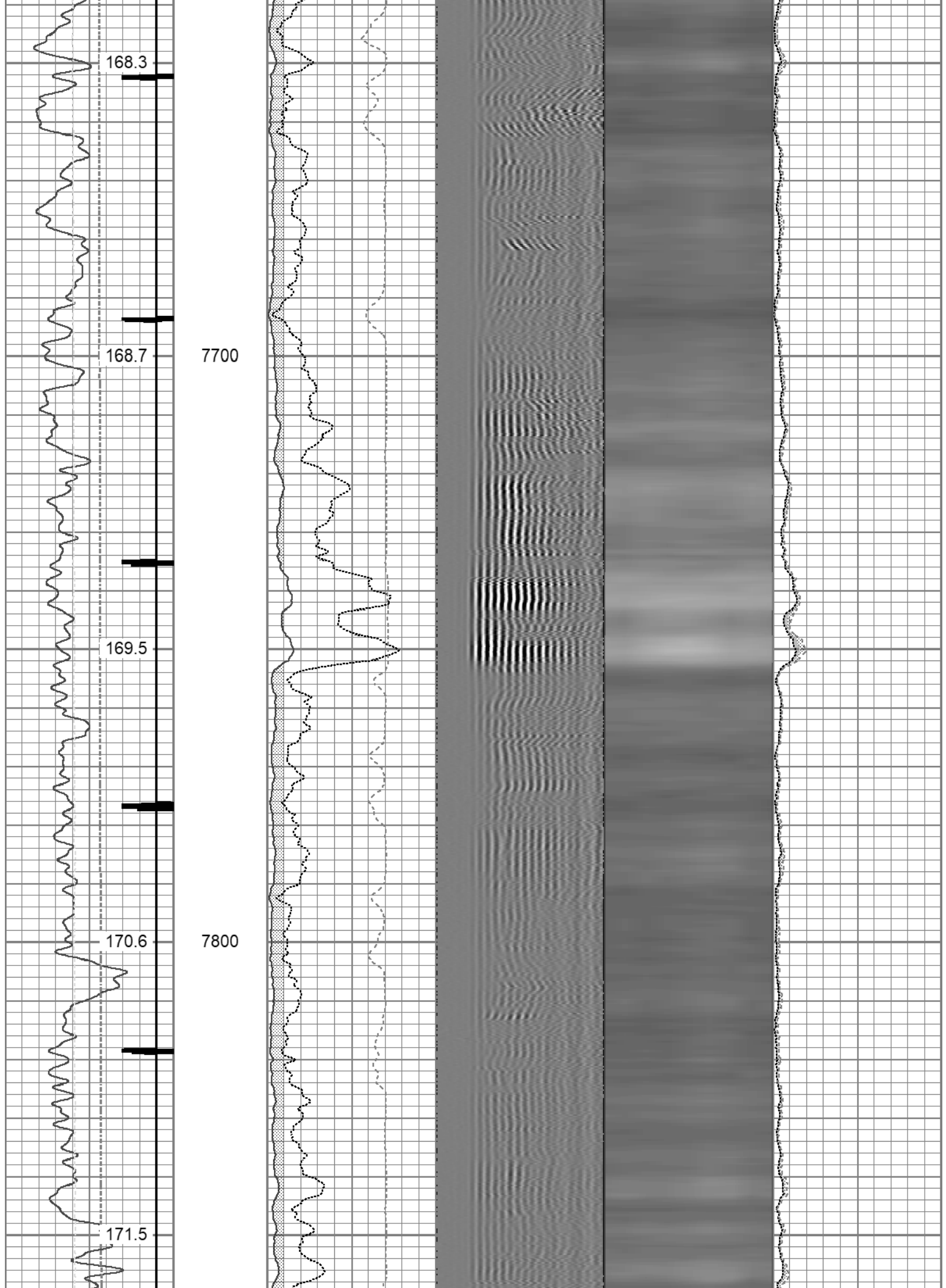


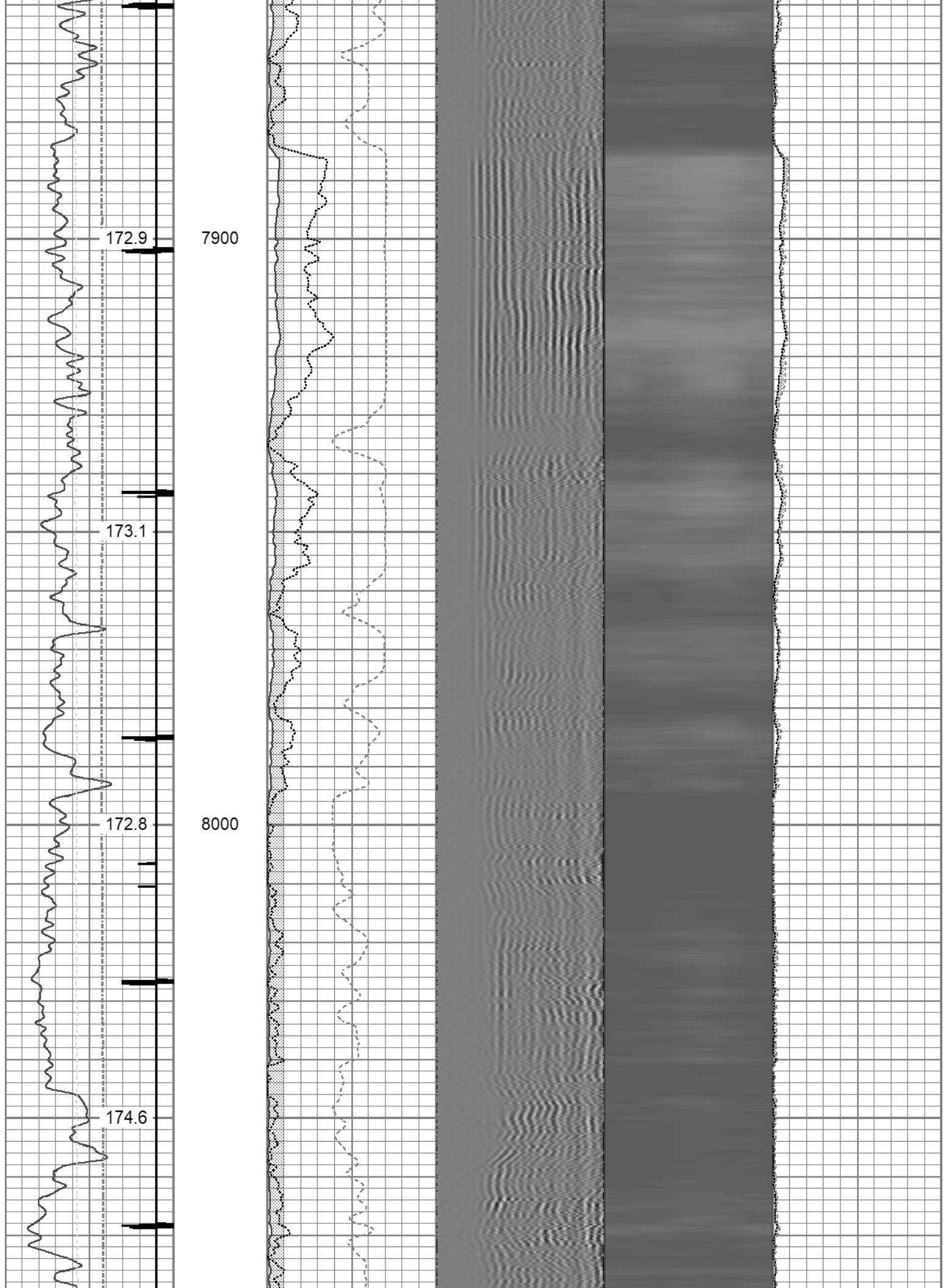


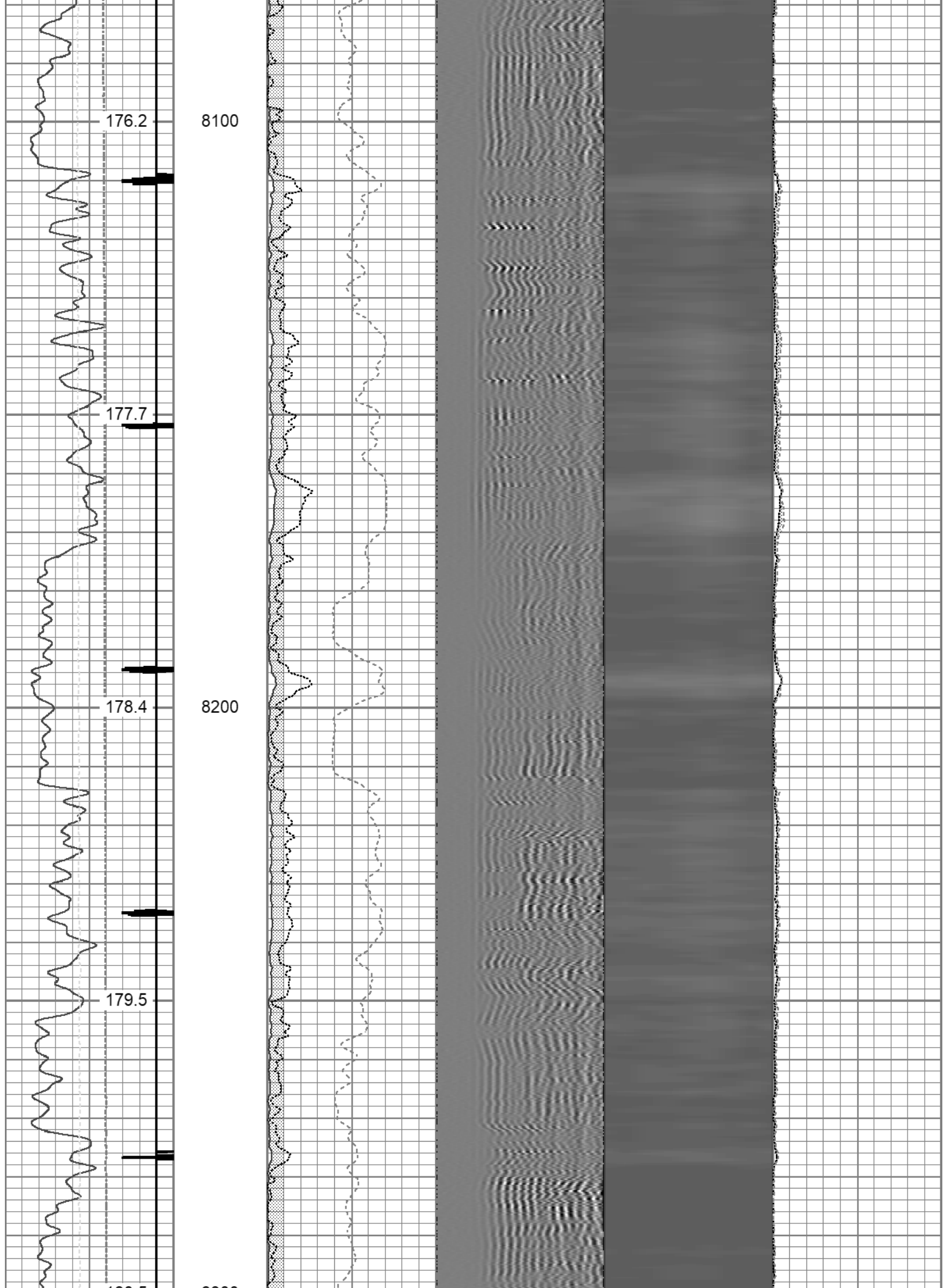


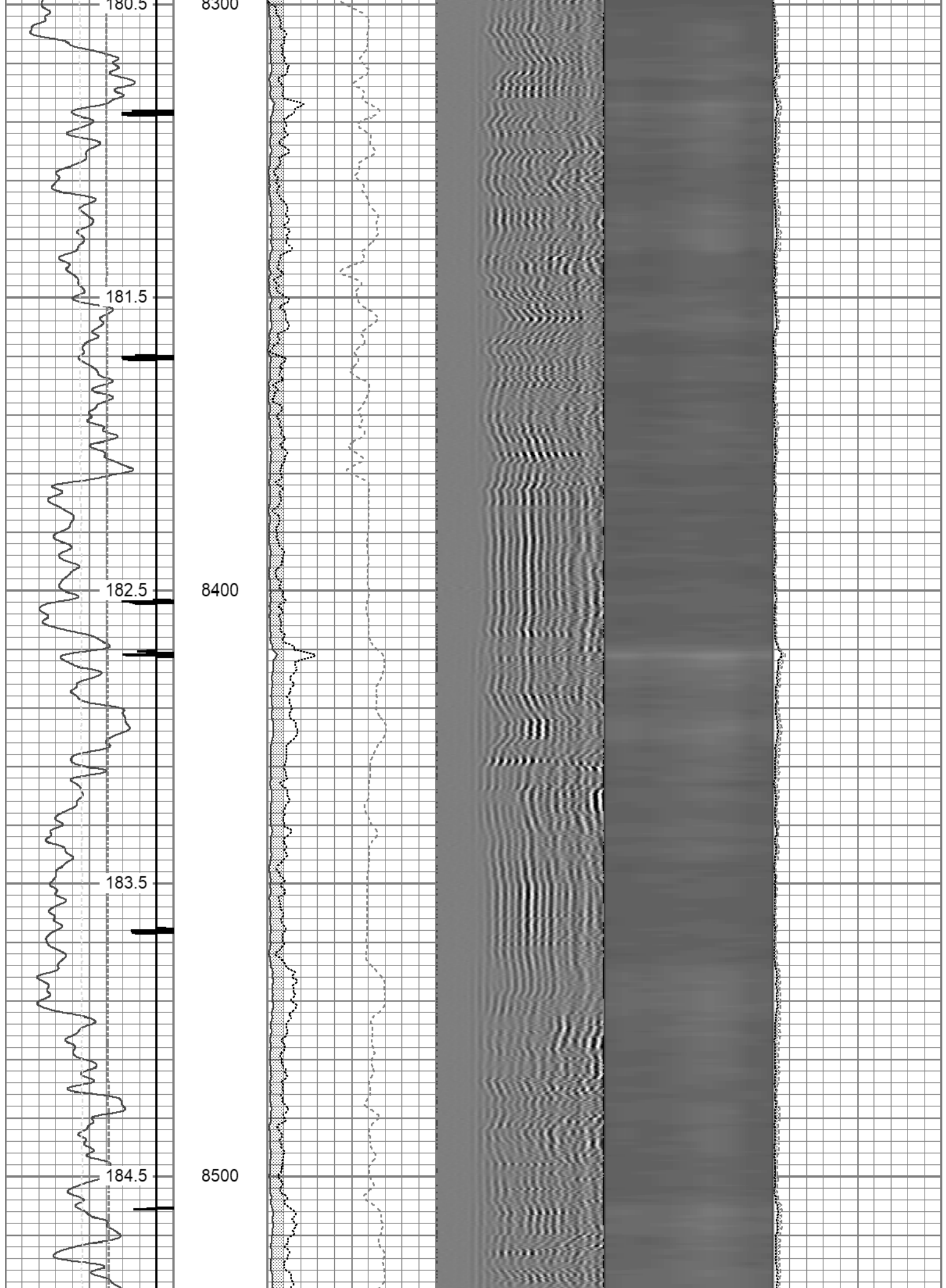


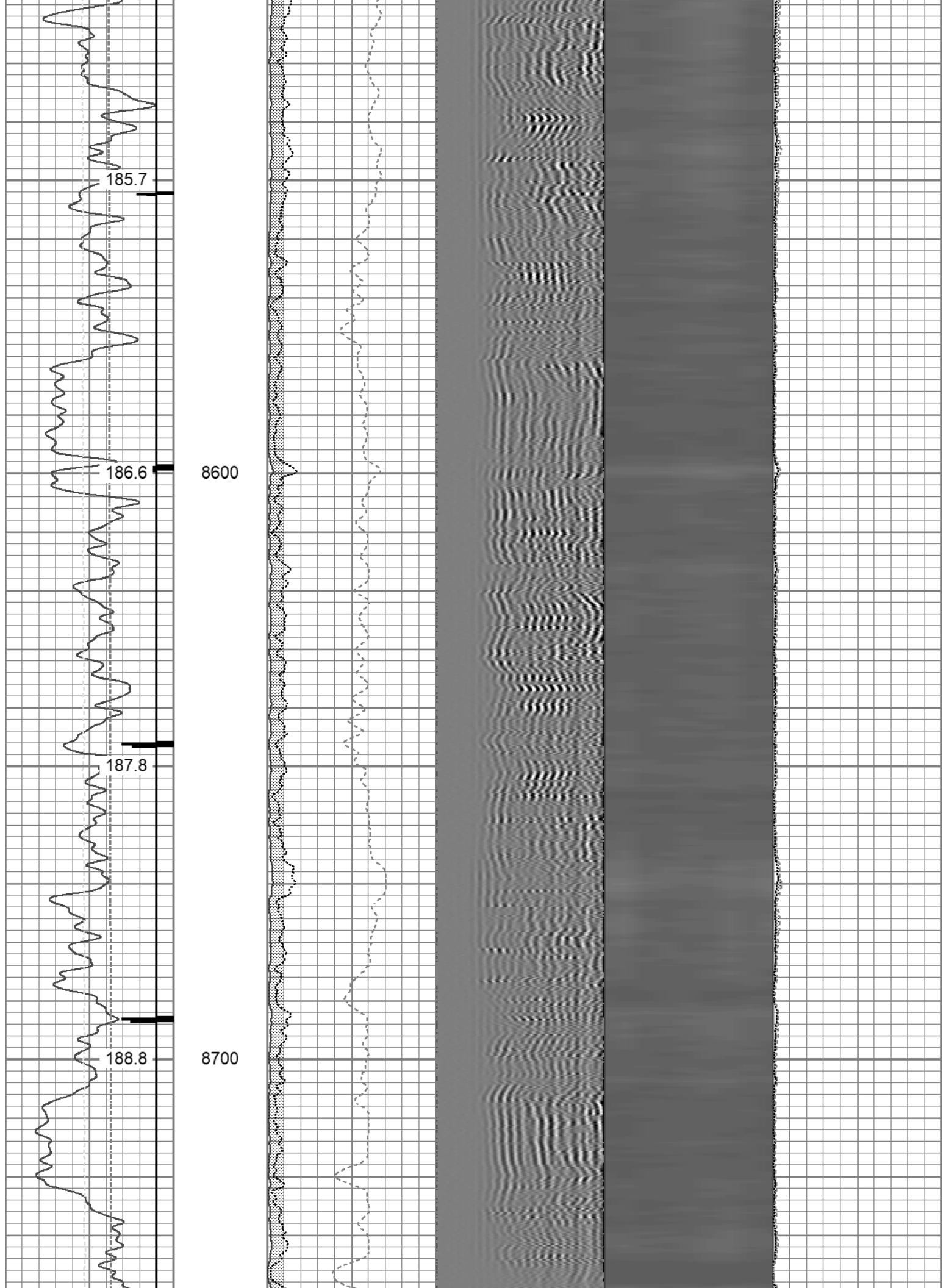


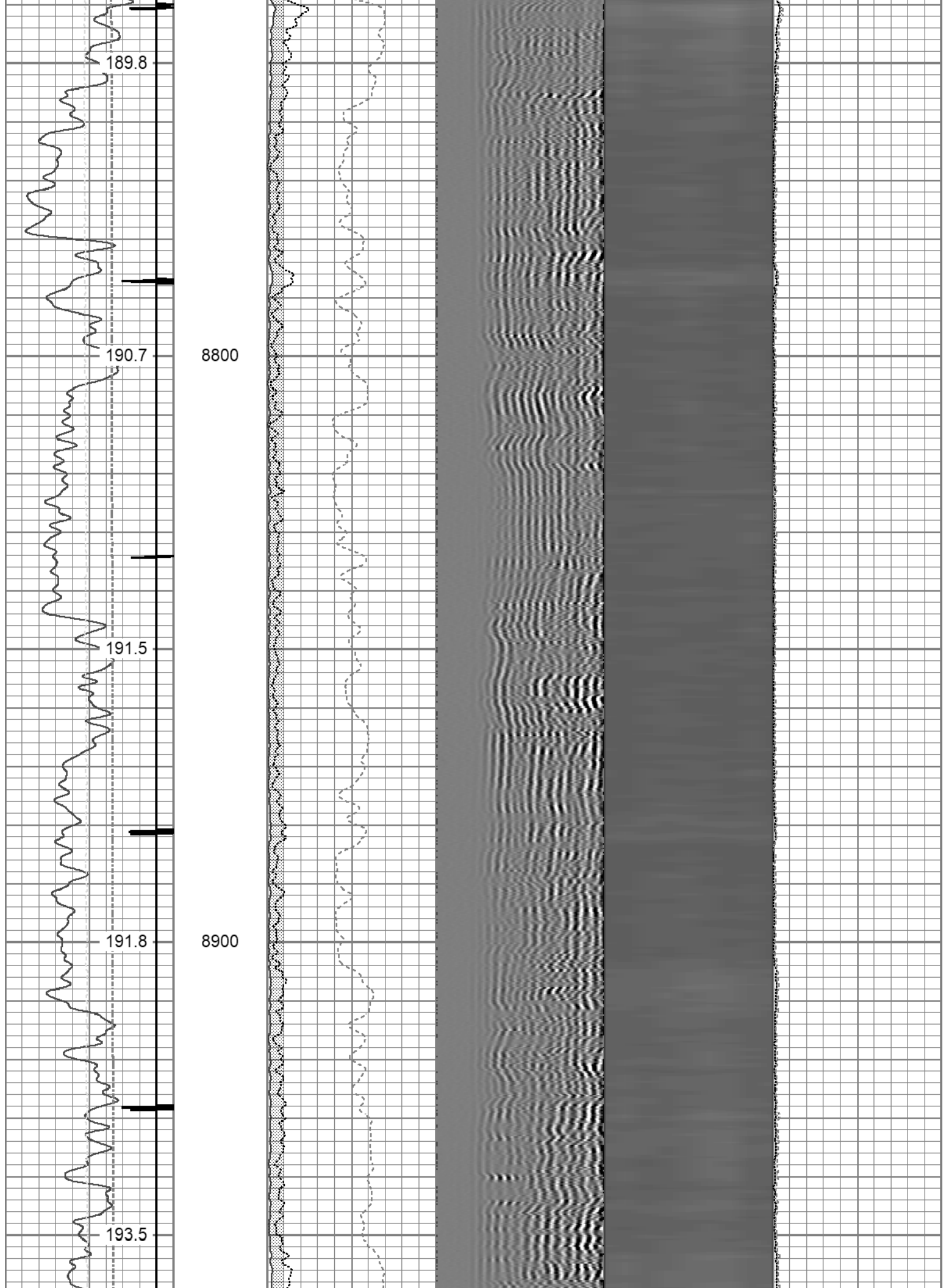


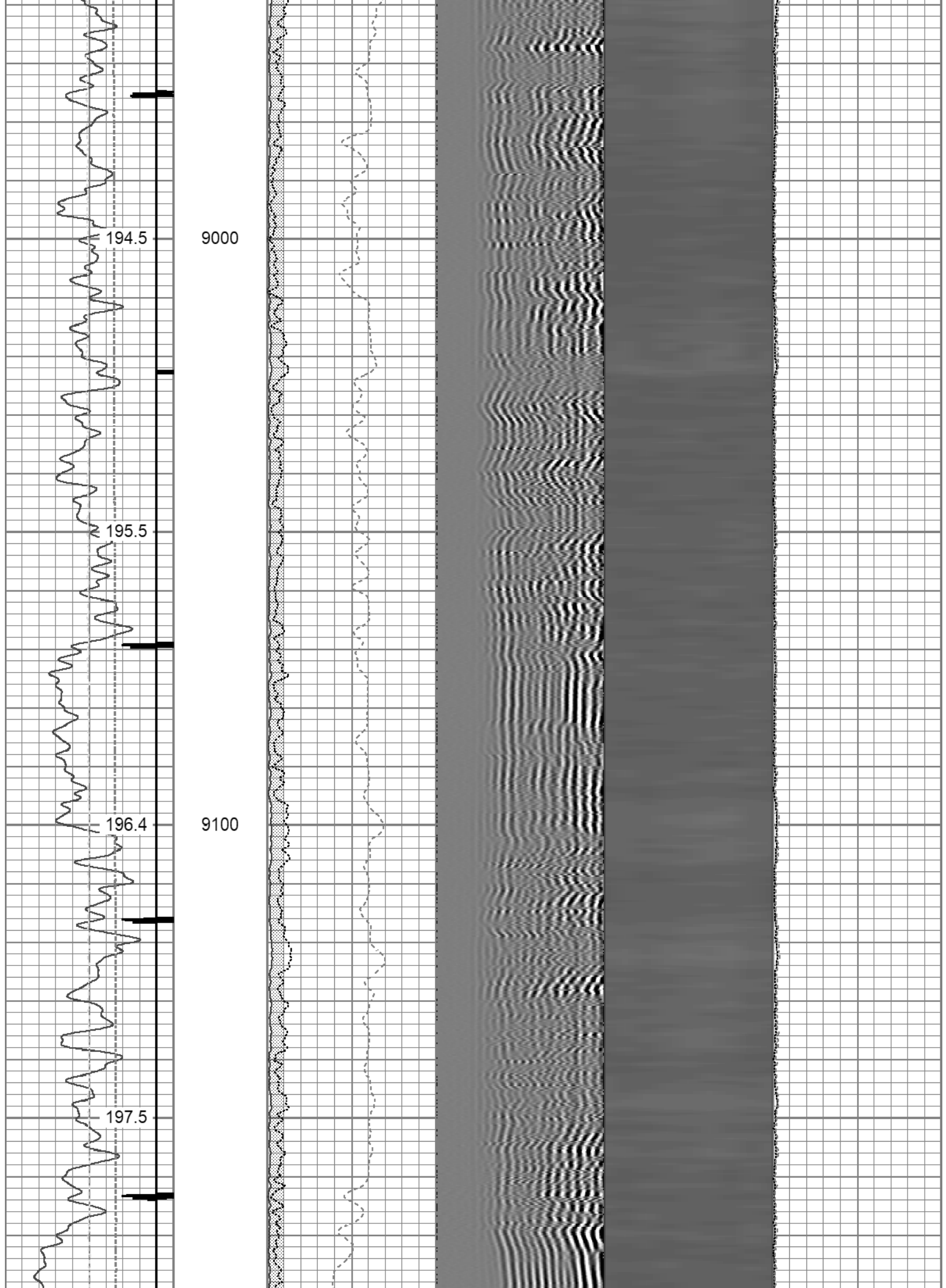


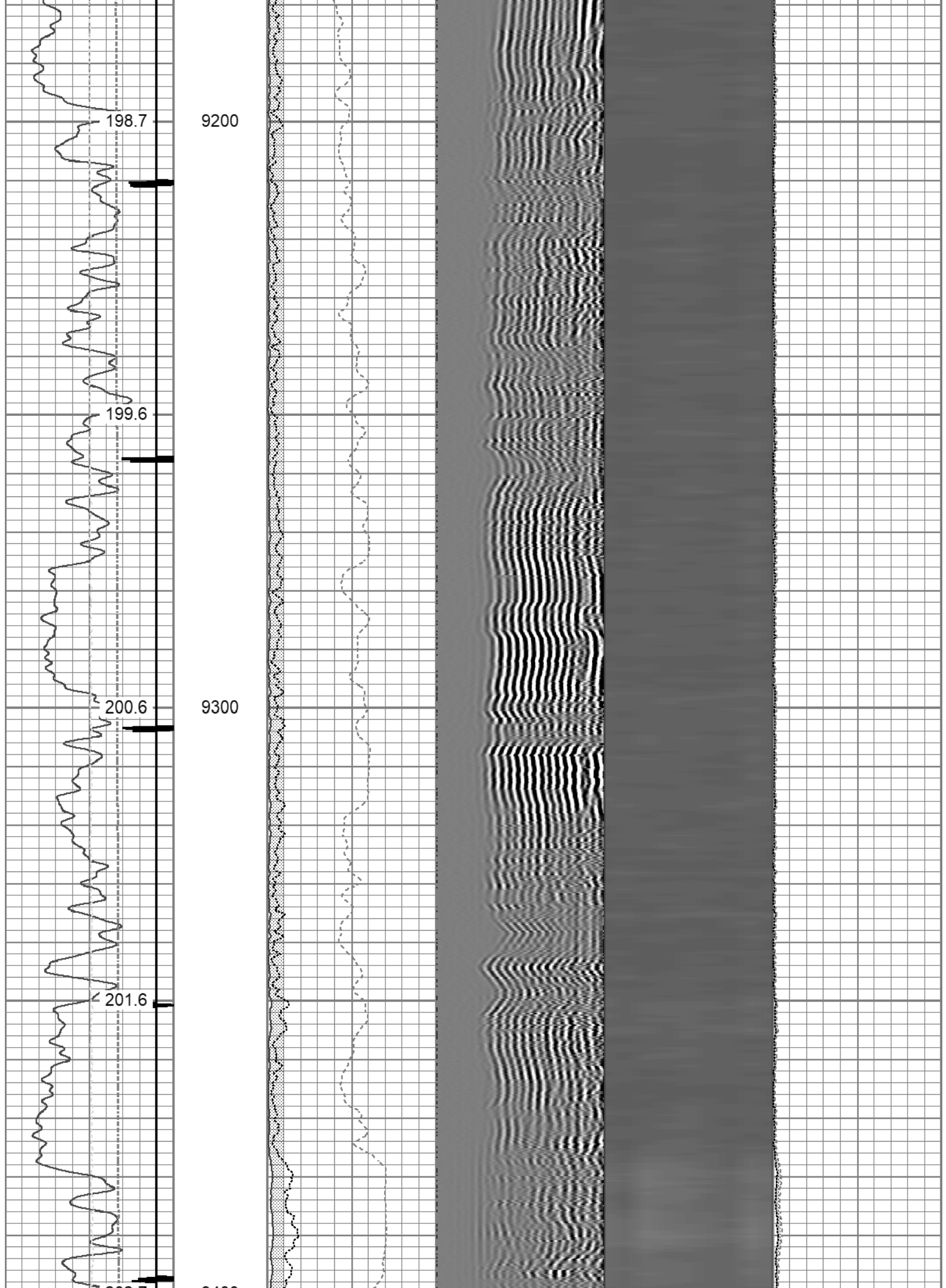


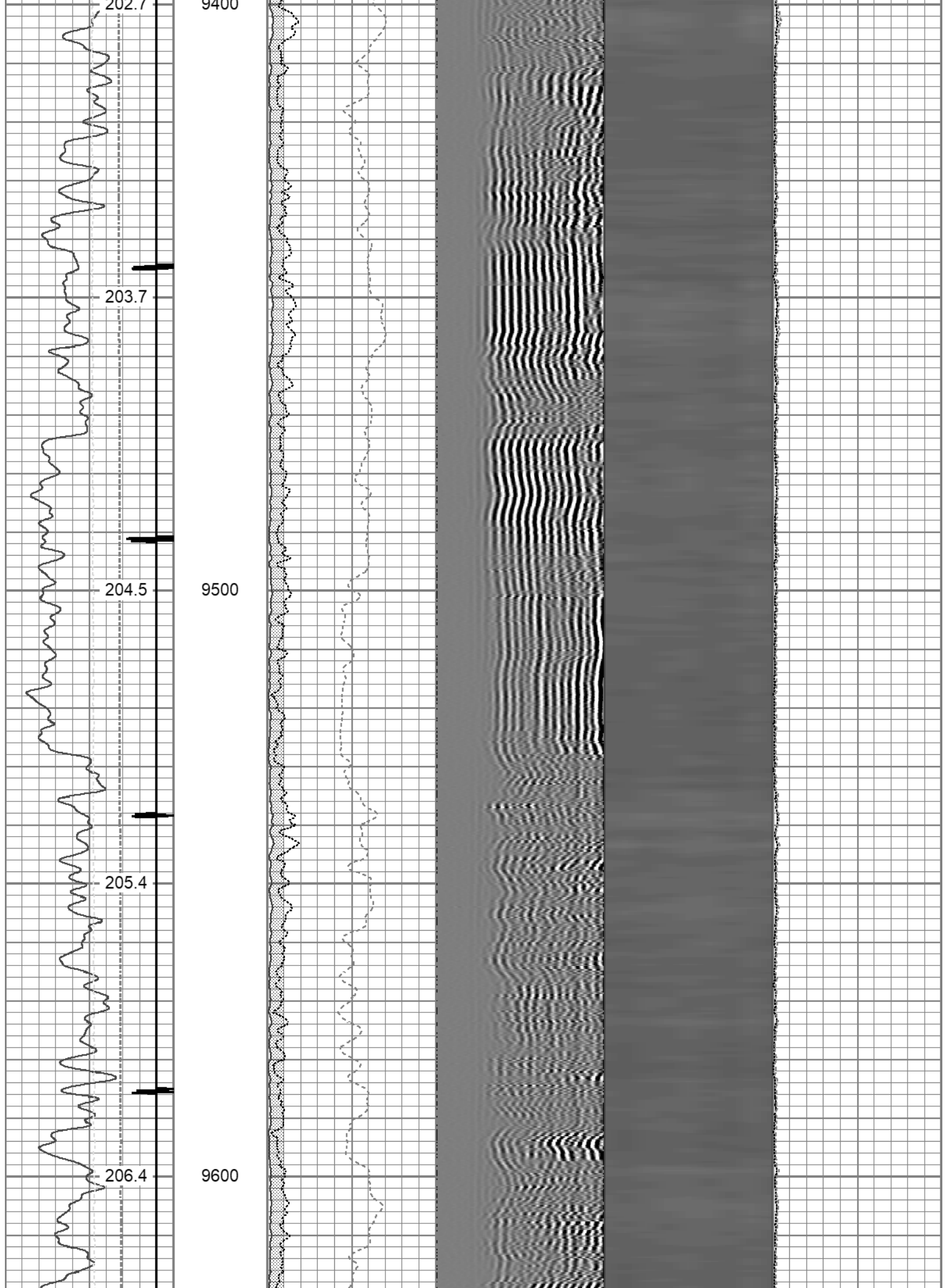


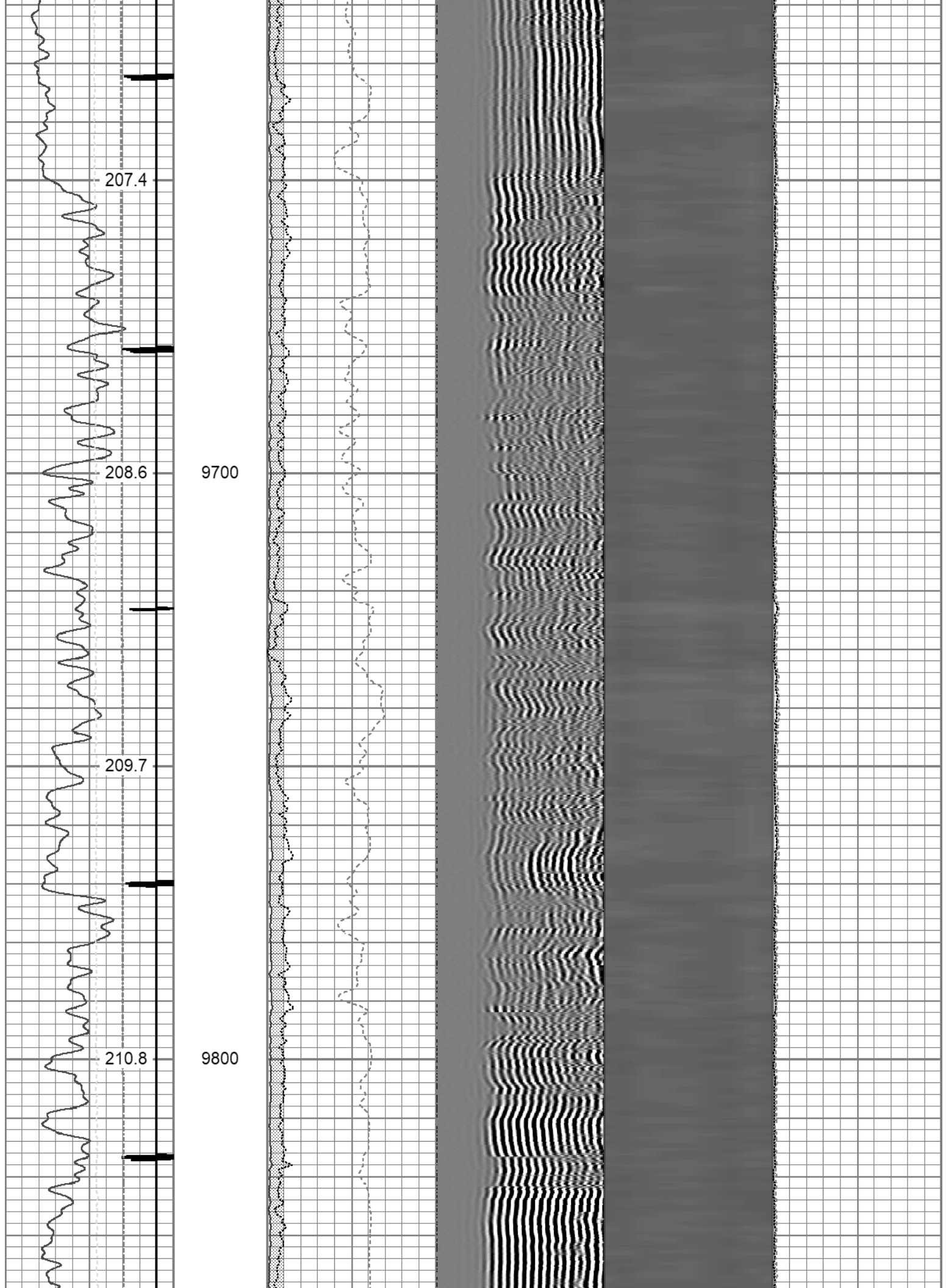


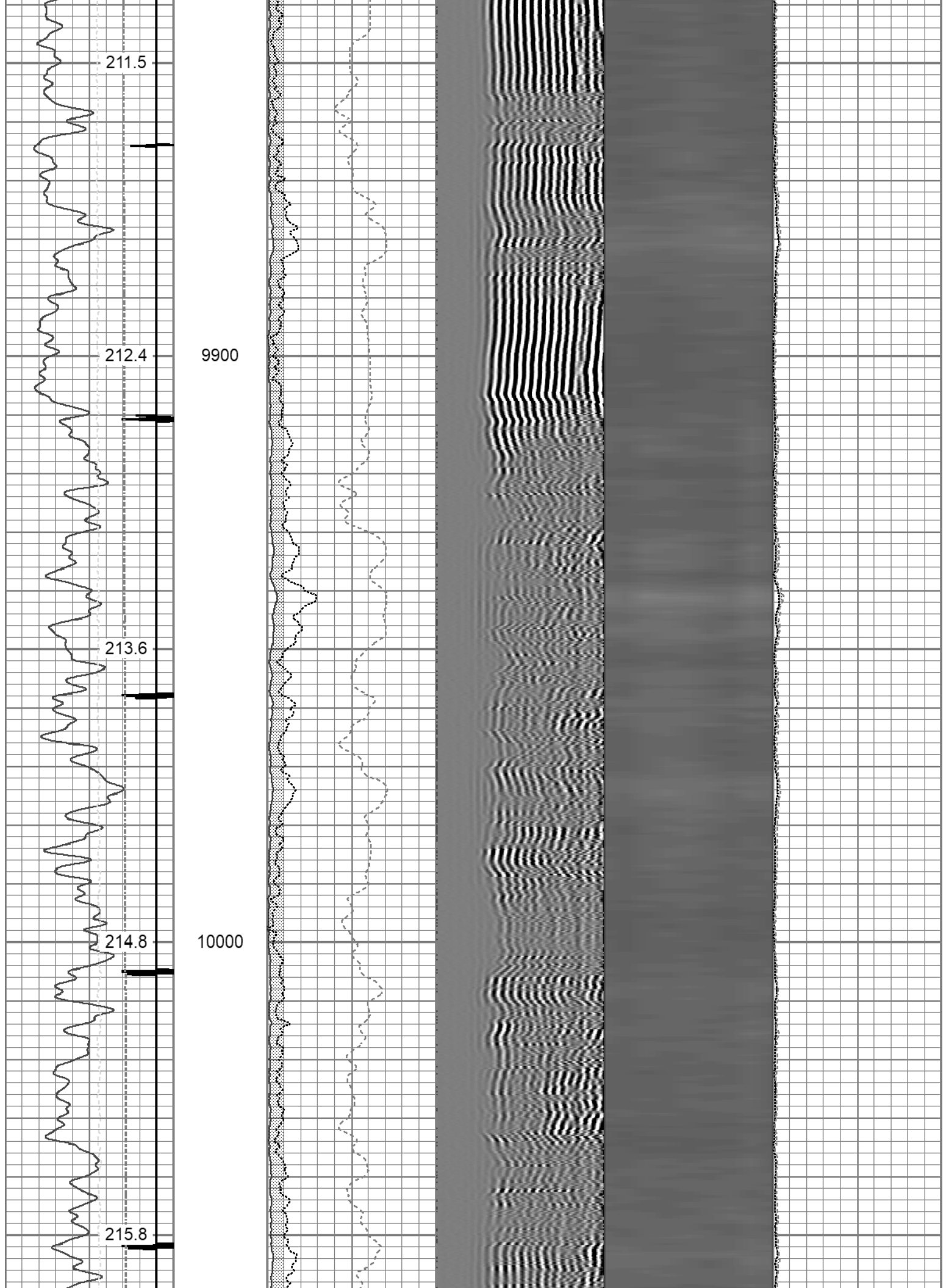


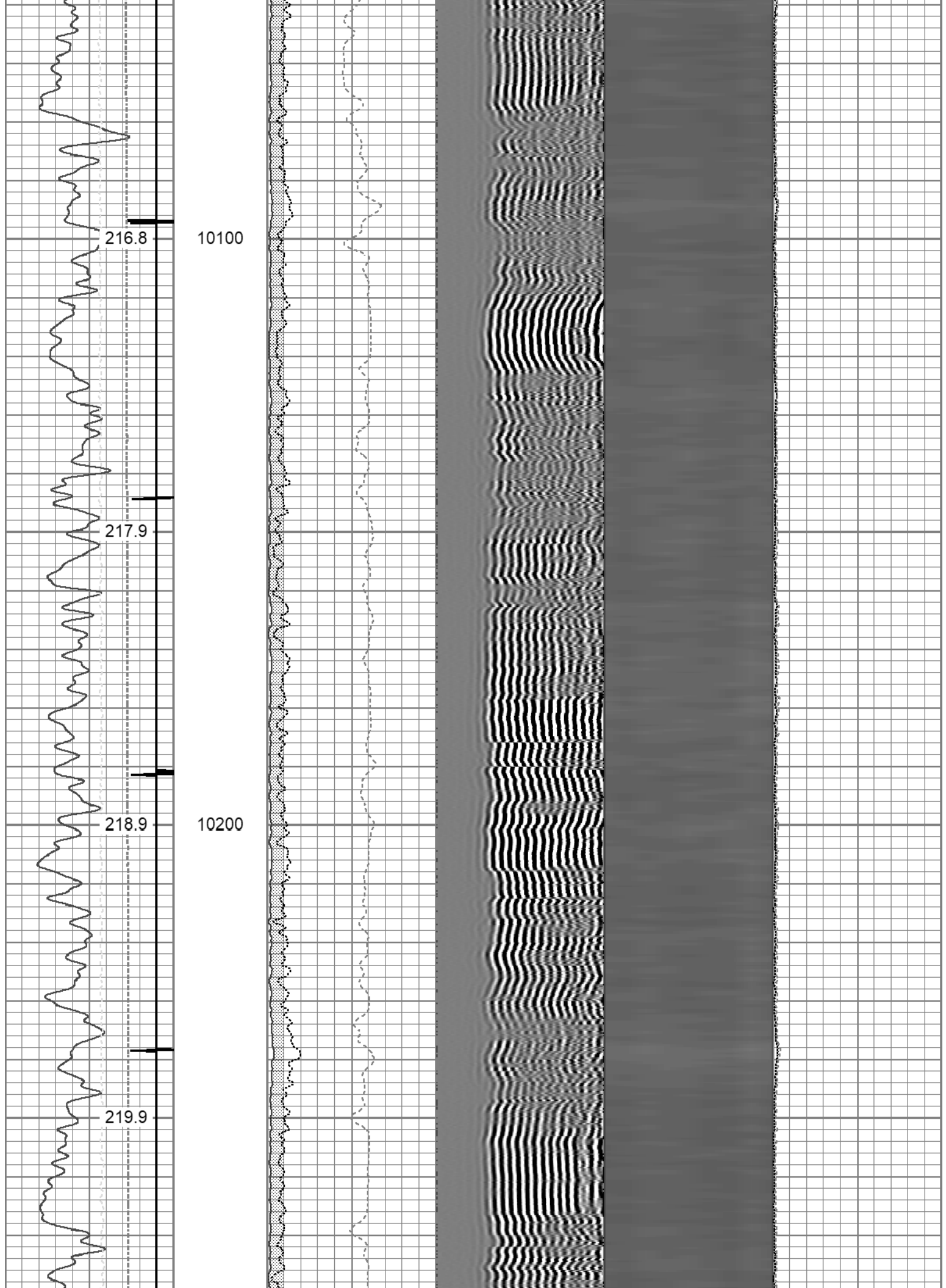


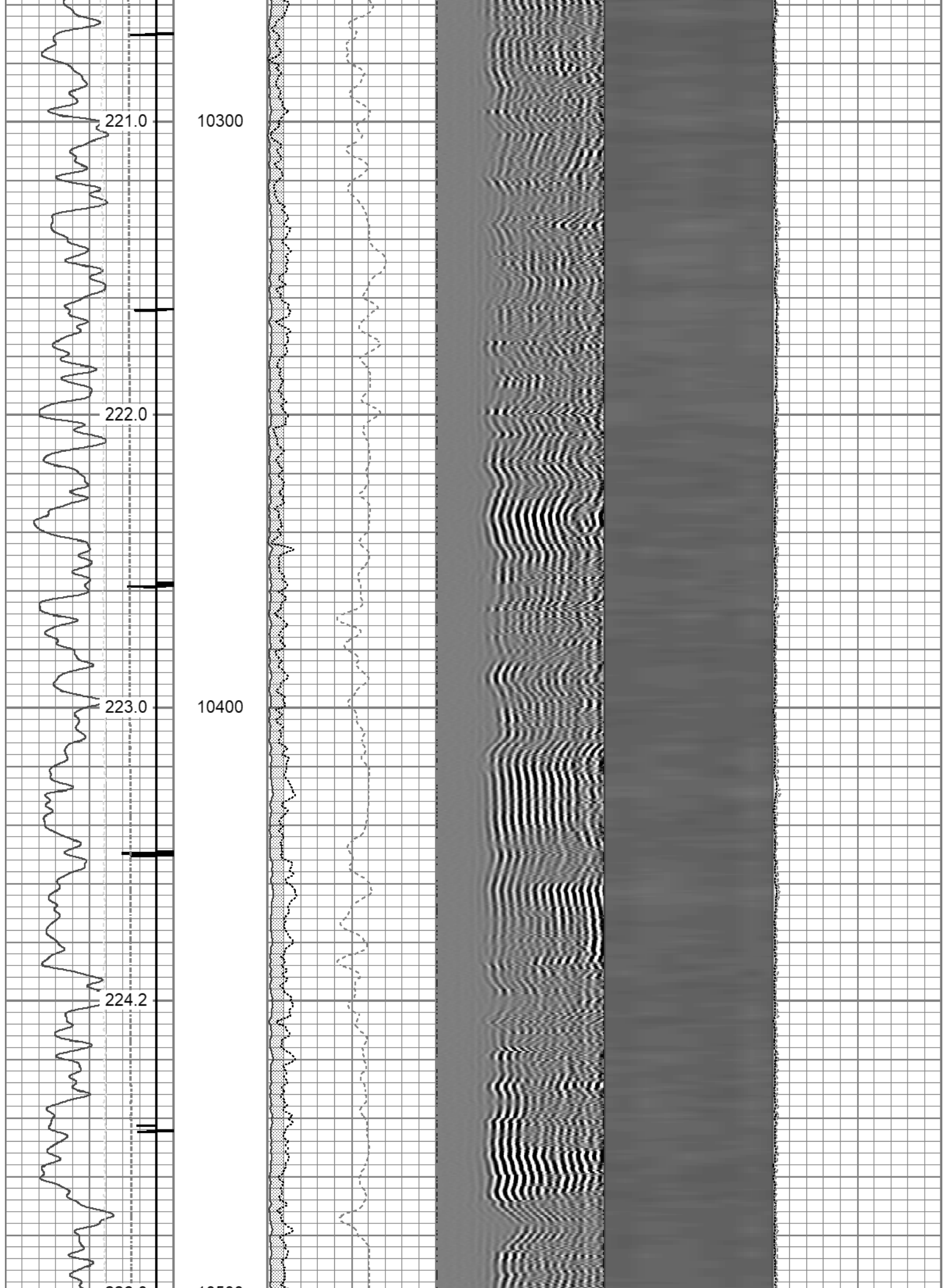


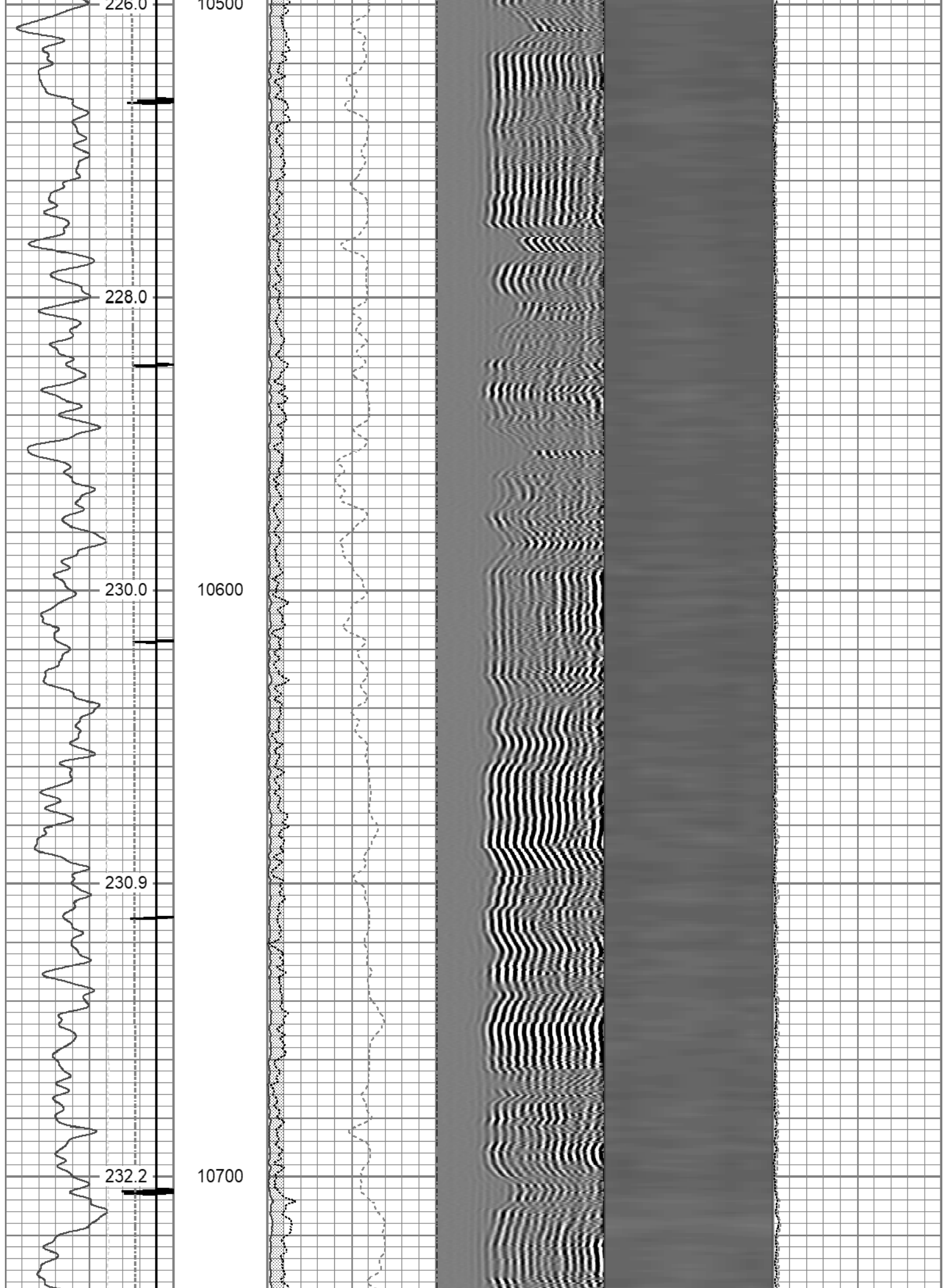


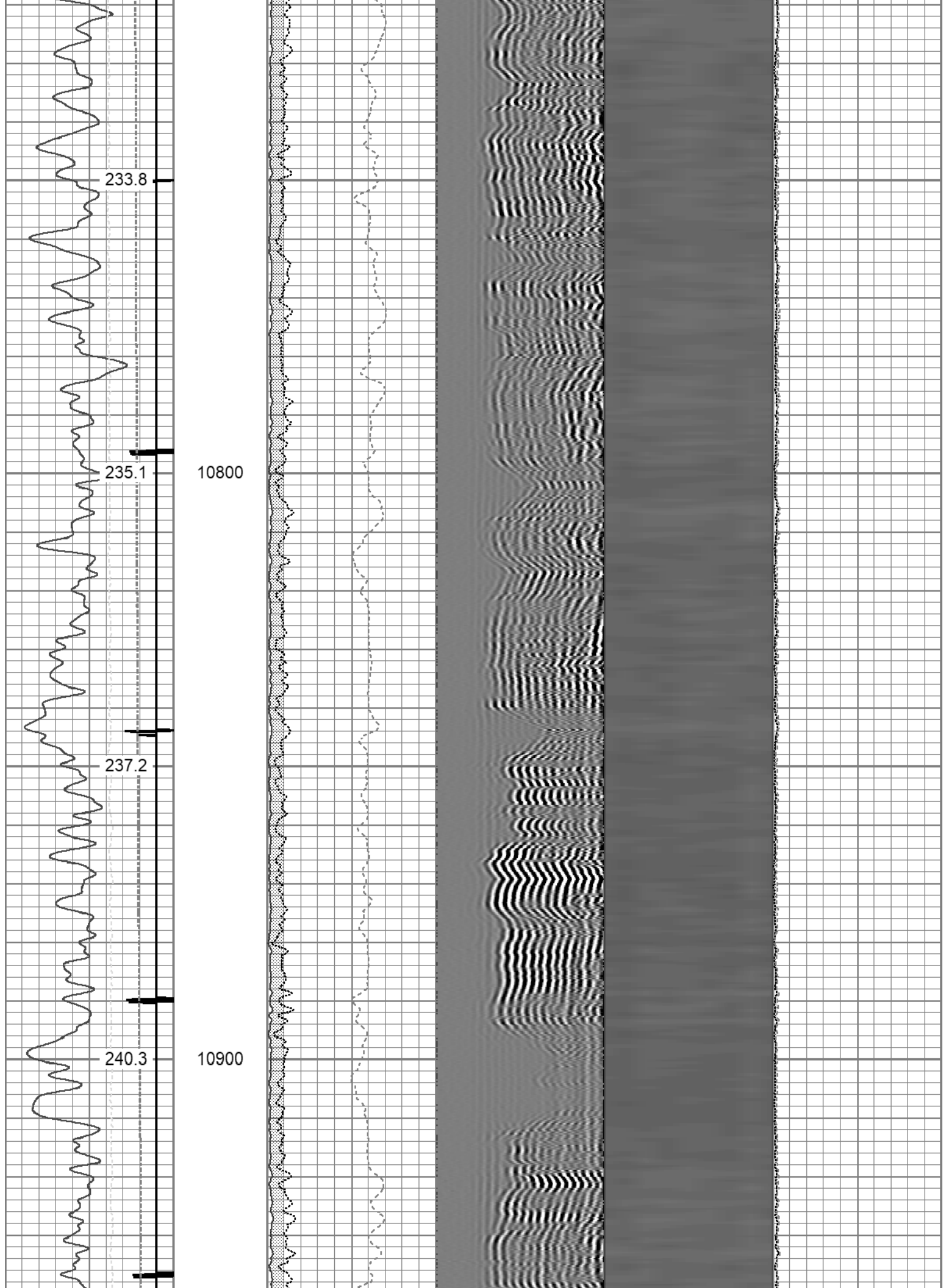


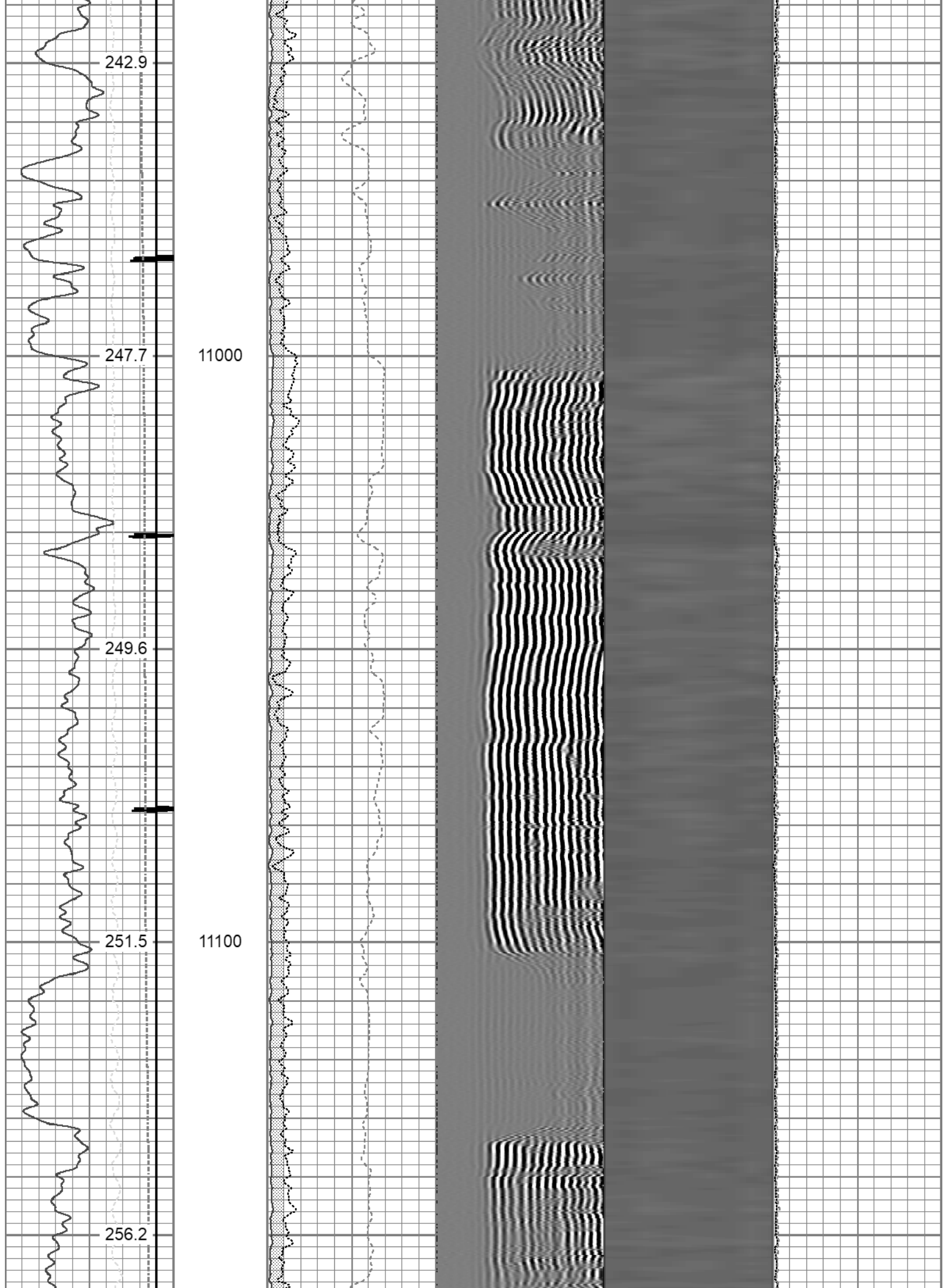


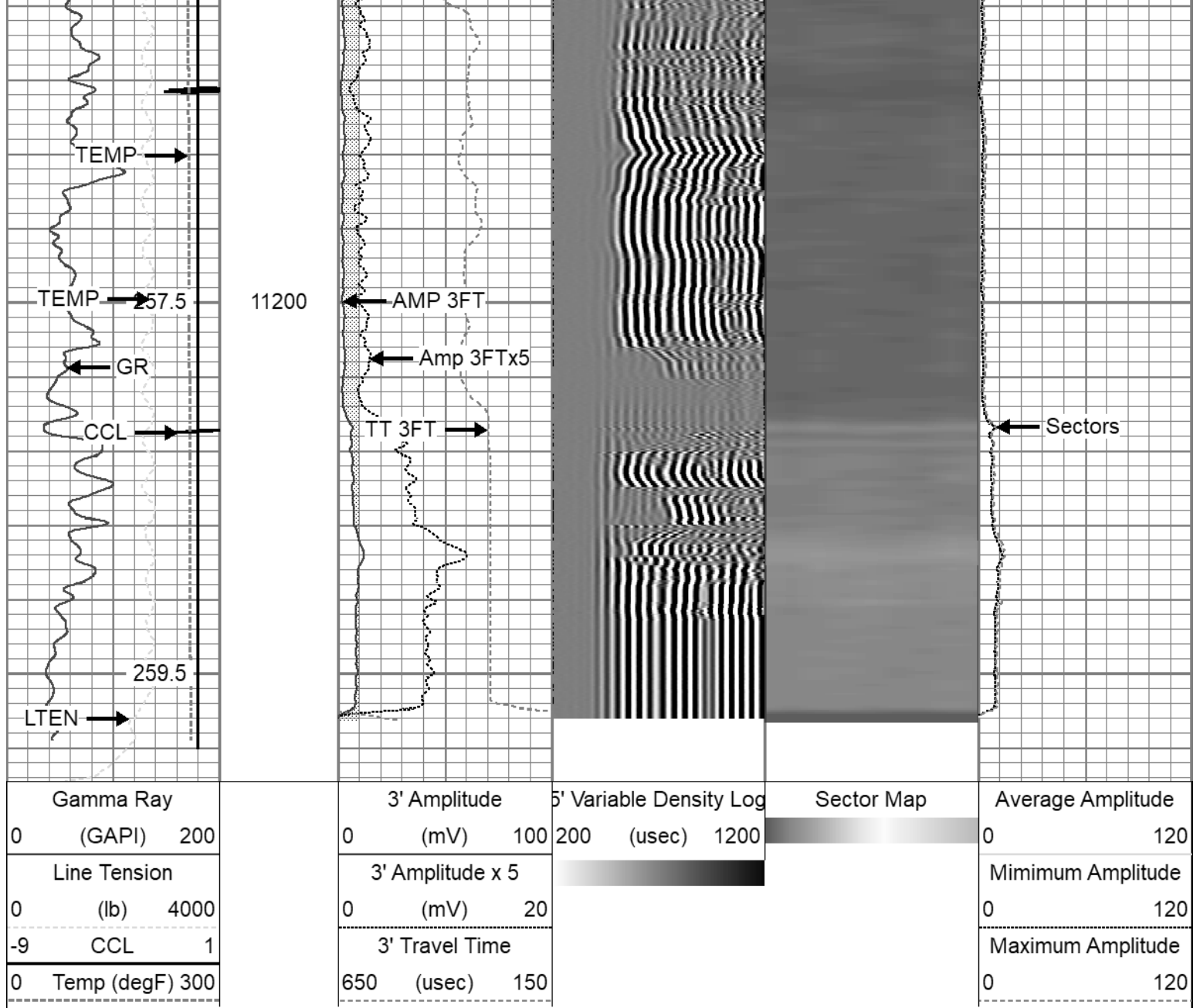






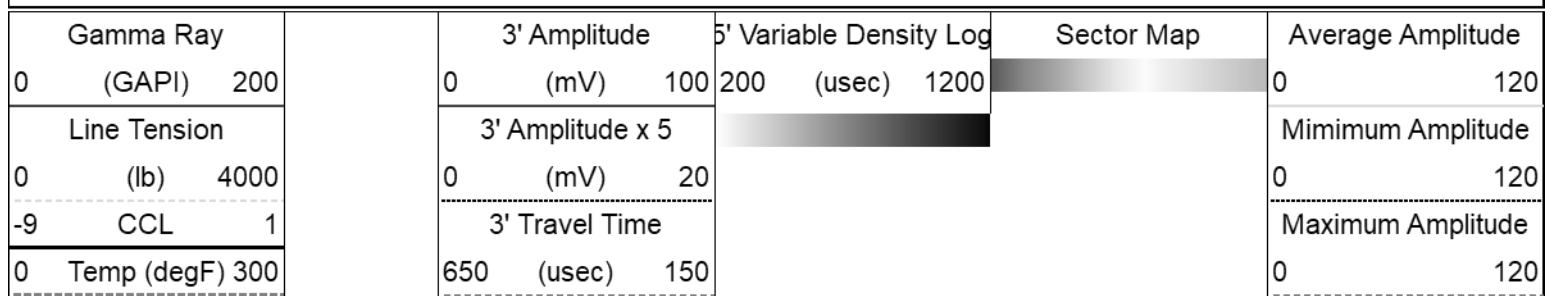


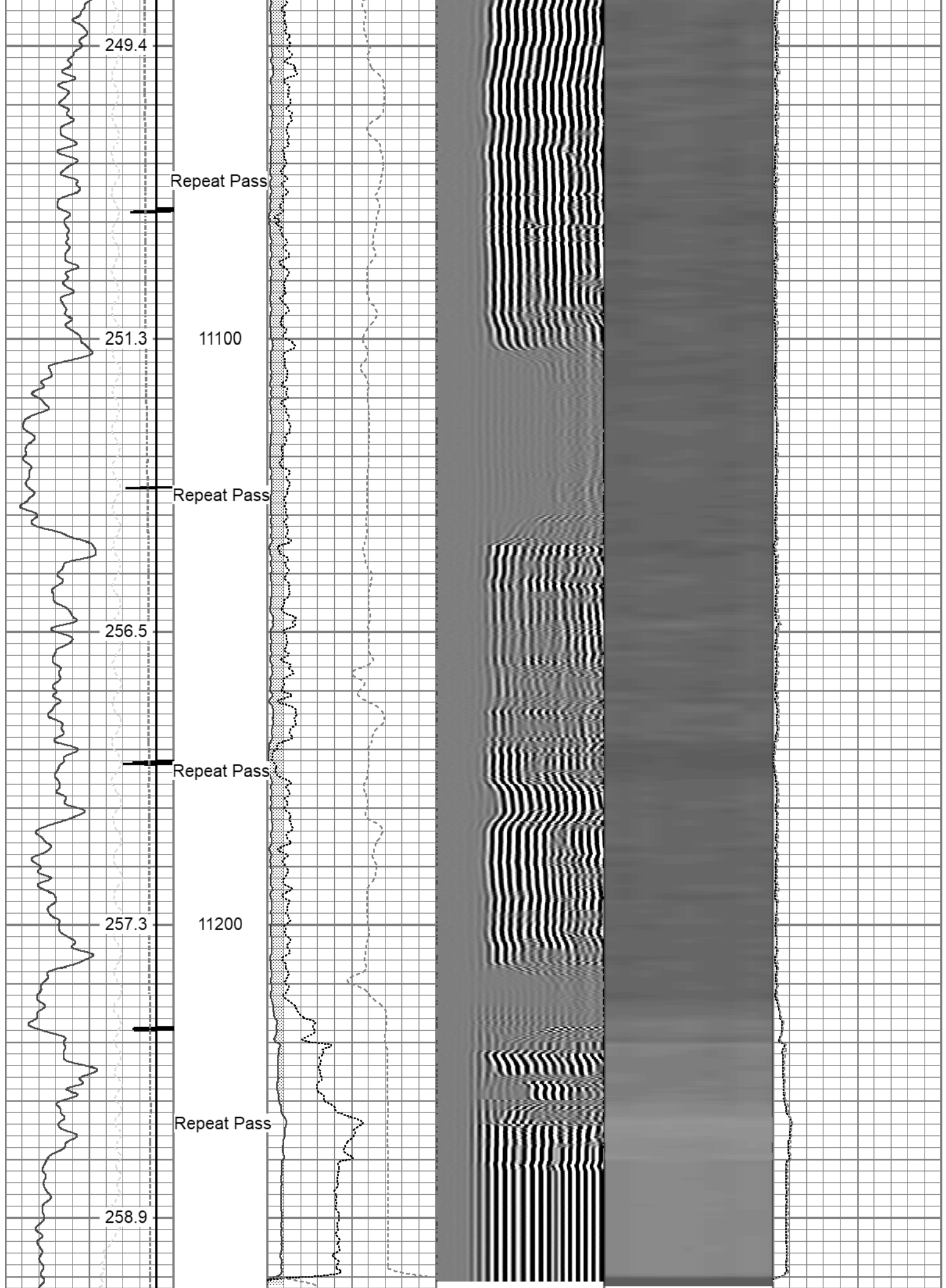




Repeat Pass 5" = 100'

Database File tep_wmc fed 432-20_rcbl_1-3-2023.db
 Dataset Pathname repeat
 Presentation Format twgrcbl
 Dataset Creation Tue Jan 03 15:28:52 2023
 Charted by Depth in Feet scaled 1:240



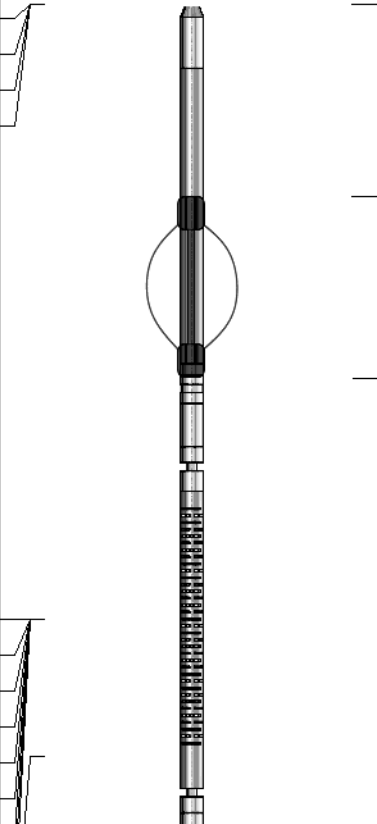
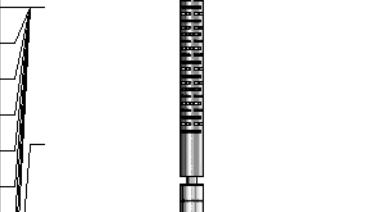


| | | | | | | |
|-------------------|--|------------------|-------------------------|------------|-------------------|--|
| | | | | | | |
| Gamma Ray | | 3' Amplitude | 5' Variable Density Log | Sector Map | Average Amplitude | |
| 0 (GAPI) 200 | | 0 (mV) 100 | 200 (usec) 1200 | | 0 120 | |
| Line Tension | | 3' Amplitude x 5 | | | Minimum Amplitude | |
| 0 (lb) 4000 | | 0 (mV) 20 | | | 0 120 | |
| -9 CCL 1 | | 3' Travel Time | | | Maximum Amplitude | |
| 0 Temp (degF) 300 | | 650 (usec) 150 | | | 0 120 | |

| | | | | | | |
|--|-------------------------------------|----------|-----------------|---------|---------|--------|
| Calibration Report | | | | | | |
| Database File | tep_wmc fed 432-20_rcbl_1-3-2023.db | | | | | |
| Dataset Pathname | main | | | | | |
| Dataset Creation | Tue Jan 03 15:34:43 2023 | | | | | |
| Gamma Ray Calibration Report | | | | | | |
| Serial Number: | FW1311-93 | | | | | |
| Tool Model: | GCT275-0000 | | | | | |
| Performed: | Thu Dec 29 18:15:38 2022 | | | | | |
| Calibrator Value: | 168.0 | GAPI | | | | |
| Background Reading: | 69.0 | cps | | | | |
| Calibrator Reading: | 299.3 | cps | | | | |
| Sensitivity: | 0.7294 | GAPI/cps | | | | |
| Segmented Cement Bond Log Calibration Report | | | | | | |
| Serial Number: | FW1312-30 | | | | | |
| Tool Model: | Probe275acc | | | | | |
| Calibration Casing Diameter: | 4.500 | in | | | | |
| Calibration Depth: | 278.924 | ft | | | | |
| Master Calibration, performed Tue Jan 3 07:14:00 2023: | | | | | | |
| | Raw (v) | | Calibrated (mv) | | Results | |
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | 0.004 | 0.511 | 0.000 | 81.196 | 147.744 | -0.671 |
| CAL | 0.003 | 0.764 | | | | |
| 5' | 0.013 | 0.470 | 0.000 | 81.196 | 189.928 | -2.321 |
| SUM | | | | | | |
| S1 | 0.005 | 0.516 | 0.000 | 100.000 | 185.992 | -1.072 |
| S2 | 0.007 | 0.547 | 0.000 | 100.000 | 179.809 | -1.220 |
| S3 | 0.004 | 0.492 | 0.000 | 100.000 | 179.337 | -0.921 |
| S4 | 0.005 | 0.532 | 0.000 | 100.000 | 175.506 | -0.867 |
| S5 | 0.004 | 0.528 | 0.000 | 100.000 | 172.552 | -0.669 |
| S6 | 0.005 | 0.528 | 0.000 | 100.000 | 172.189 | -0.946 |
| S7 | 0.006 | 0.551 | 0.000 | 100.000 | 176.780 | -1.127 |
| S8 | 0.004 | 0.486 | 0.000 | 100.000 | 186.883 | -0.747 |
| Internal Reference Calibration, performed (Not Performed): | | | | | | |
| | Raw (v) | | Calibrated (v) | | Results | |
| | Zero | Cal | Zero | Cal | Gain | Offset |

| | | | | | | |
|--|---------|-------|----------------|-------|---------|-------|
| CAL | 0.000 | 0.000 | 0.003 | 0.764 | 1.000 | 0.000 |
| Air Zero Calibration, performed Mon Jan 2 11:33:52 2023: | | | | | | |
| | 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 | |

| | | | | | | |
|---------------------------------|--------------------------|------------|----------|-----------|-----|--|
| Inclinometer Calibration Report | | | | | | |
| Performed: | Thu Jul 28 15:46:49 2022 | | | | | |
| | Low Read. | High Read. | Low Ref. | High Ref. | | |
| X Accelerometer | -931.00 | 904.00 | -1.00 | 1.00 | gee | |
| Y Accelerometer | -899.00 | 884.00 | -1.00 | 1.00 | gee | |
| Z Accelerometer | 1.47 | 886.18 | 0.00 | 1.00 | gee | |

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|------------|-------------|---|--|-------------|-----------|-------------|
| GCT_FMWR | 13.85 |  | | | | |
| mSec_Count | 13.85 | | | | | |
| RBT_Status | 13.85 | | | | | |
| Error_Ct | 13.85 | | | | | |
| | | | SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer | 1.33 | 3.25 | 10.00 |
| | | | RBT8acc-Probe275acc (FW1312-30) 2.75" Radial Corrosion with accelerometer | 8.75 | 2.75 | 110.00 |
| WVFS8 | 9.35 |  | | | | |
| WVFS7 | 9.35 | | | | | |
| WVFS6 | 9.35 | | | | | |
| WVFS5 | 9.35 | | | | | |
| WVFS4 | 9.35 | | | | | |
| WVFS3 | 9.35 | | | | | |

| Tool Joint / Component | Length (ft) | Weight (lb) | O.D. (in) | Notes |
|--|-------------|-------------|-----------|---|
| WVFS2 | 9.35 | | | |
| WVFS1 | 9.35 | | | |
| WVF3FT | 9.35 | | | |
| WVF5FT | 8.35 | | | |
| RBT_ACCZ | 5.10 | | | |
| RBT_ACCY | 5.10 | | | |
| RBT_ACCX | 5.10 | | | |
| GCT_HV | 5.10 | | | |
| WVFSYNC | 5.10 | | | |
| WVFCAL | 5.10 | | | |
| CCL\$2 | 4.14 | | | |
| CCL\$1 | 4.14 | | | |
| GCT_Temp | 3.59 | | | |
| GR | 2.72 | | | |
| GCT_IntTemp | 2.00 | | | |
| SO BS CENT-2750-4500 | 1.33 | 3.25 | 10.00 | Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer |
| GC-GCT275-0000 (FW1311-93) | 4.77 | 2.75 | 55.00 | Probe 2.75" Gamma Ray - CCL w/ Temp |
| Plug-FA108-0000 | 0.33 | 1.38 | 1.00 | 1.38" Bull Plug |
| Dataset: tep_wmc fed 432-20_rcbl_1-3-2023.db: field/well/run1/main Total length: 13.85 ft Total weight: 186.00 lb O.D.: 3.25 in | | | | |