



# SONIC LOG

|                              |                                                                 |                                     |                                      |
|------------------------------|-----------------------------------------------------------------|-------------------------------------|--------------------------------------|
| Company                      | RJM COMPANY                                                     | Company                             | RJM COMPANY                          |
| Well                         | K & C MILLER #1                                                 | Well                                | K & C MILLER #1                      |
| Field                        | UNKNOWN                                                         | Field                               | UNKNOWN                              |
| County                       | BARTON                                                          | County                              | BARTON                               |
| State                        | KANSAS                                                          | State                               | KANSAS                               |
| Location:                    | AP1 # : 15-009-26225-00-00<br>NE/SE/NW/NE<br>980 FNL & 1560 FEL |                                     | Other Services<br>CDL/CNL/MEL<br>DIL |
| Permanent Datum              | SEC 10 TWP 19S RGE 12W                                          | Elevation                           |                                      |
| Log Measured From            | GROUND LEVEL                                                    | Elevation                           | 1823                                 |
| Drilling Measured From       | KELLY BUSHING 8' A.G.L.<br>KELLY BUSHING                        | K.B. 1831<br>D.F. 1829<br>G.L. 1823 |                                      |
| Date                         | 08/08/18                                                        |                                     |                                      |
| Run Number                   | TWO                                                             |                                     |                                      |
| Depth Driller                | 3488                                                            |                                     |                                      |
| Depth Logger                 | 3488                                                            |                                     |                                      |
| Bottom Logged Interval       | 3479                                                            |                                     |                                      |
| Top Log Interval             | 50                                                              |                                     |                                      |
| Casing Driller               | 8 5/8@ 292                                                      |                                     |                                      |
| Casing Logger                | 292                                                             |                                     |                                      |
| Bit Size                     | 7 7/8"                                                          |                                     |                                      |
| Type Fluid in Hole           | CHEMICAL MUD                                                    | CHLORIDES 6000 PPM                  |                                      |
| Density / Viscosity          | 9.1/48                                                          |                                     |                                      |
| pH / Fluid Loss              | 9.5/10.4                                                        |                                     |                                      |
| Source of Sample             | FLOWLINE                                                        |                                     |                                      |
| Rm @ Meas. Temp              | .80@70                                                          |                                     |                                      |
| Rmt @ Meas. Temp             | .60@70                                                          |                                     |                                      |
| Rmc @ Meas. Temp             | .96@70                                                          |                                     |                                      |
| Source of Rmt / Rmc          | MEASURED                                                        |                                     |                                      |
| Rm @ BHT                     | .50@111                                                         |                                     |                                      |
| Time Circulation Stopped     | 2 HOURS                                                         |                                     |                                      |
| Time Logger on Bottom        | ///                                                             |                                     |                                      |
| Maximum Recorded Temperature | 111F                                                            |                                     |                                      |
| Equipment Number             | 4010                                                            |                                     |                                      |
| Location                     | HAYS, KANSAS                                                    |                                     |                                      |
| Recorded By                  | GUS PFANENSTIEL                                                 |                                     |                                      |
| Witnessed By                 | WYATT URBAN                                                     |                                     |                                      |

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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

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

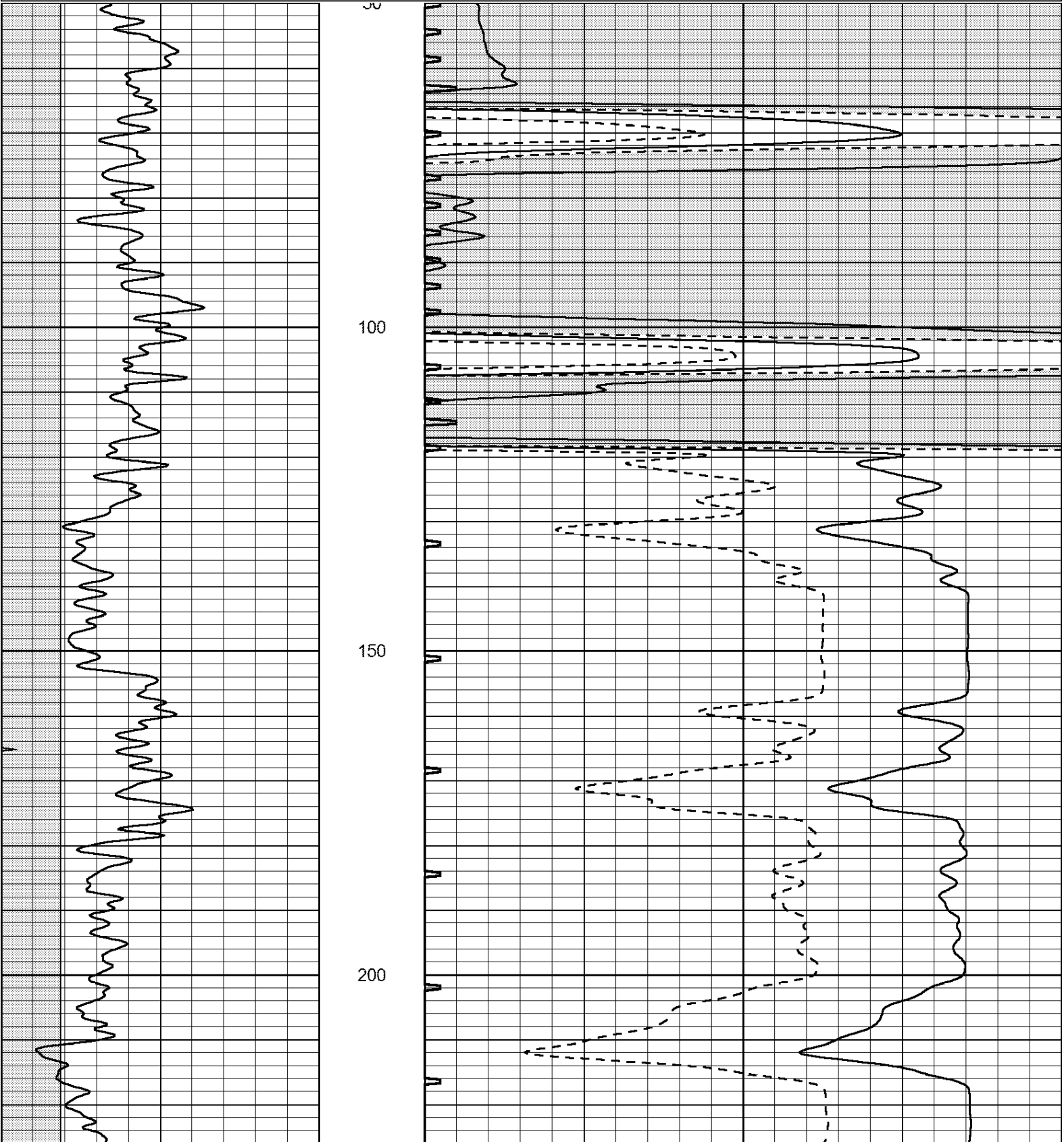
DIRECTIONS  
BARTON COLLEGE BLACKTOP AND 156 NORTH TO 40 RD.  
1.5 EAST, SOUTH INTO.

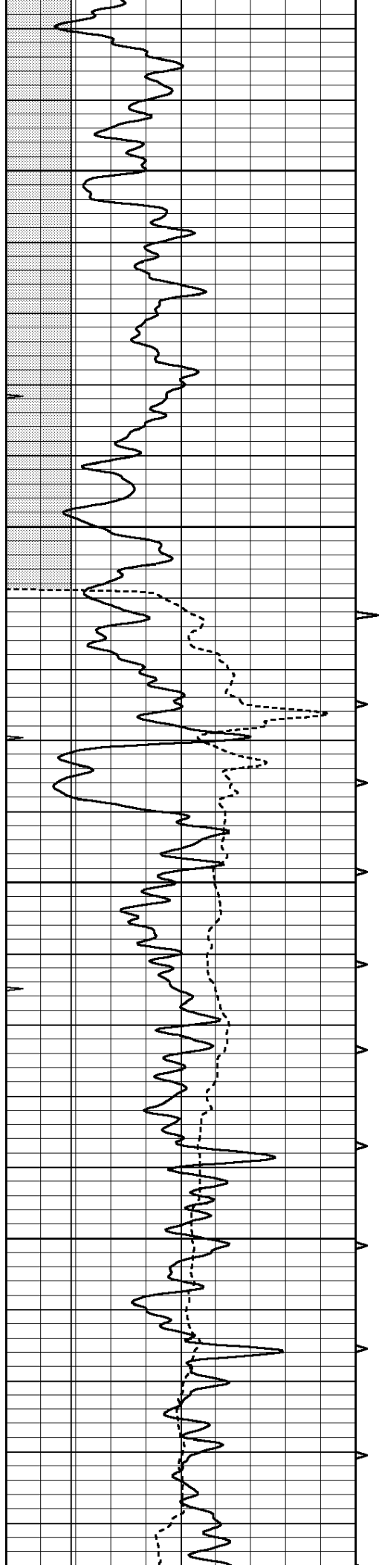


# MAIN PASS

Database File: 2700pe.db  
Dataset Pathname: pass5  
Presentation Format: \_slt  
Dataset Creation: Wed Aug 08 09:44:21 2018 by Log Open-Cased 090629  
Charted by: Depth in Feet scaled 1:240

|   |                  |     |            |     |                      |     |
|---|------------------|-----|------------|-----|----------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV       | 140 | DELTA TIME (usec/ft) | 40  |
| 6 | CALIPER (in)     | 16  | 10 (ft3) 0 | 30  | SONIC POROSITY (pu)  | -10 |
| 0 | MINMK            | 20  | TBHV       | 0   | ITT (msec)           | 20  |
|   |                  |     | 0 (ft3) 10 |     |                      |     |



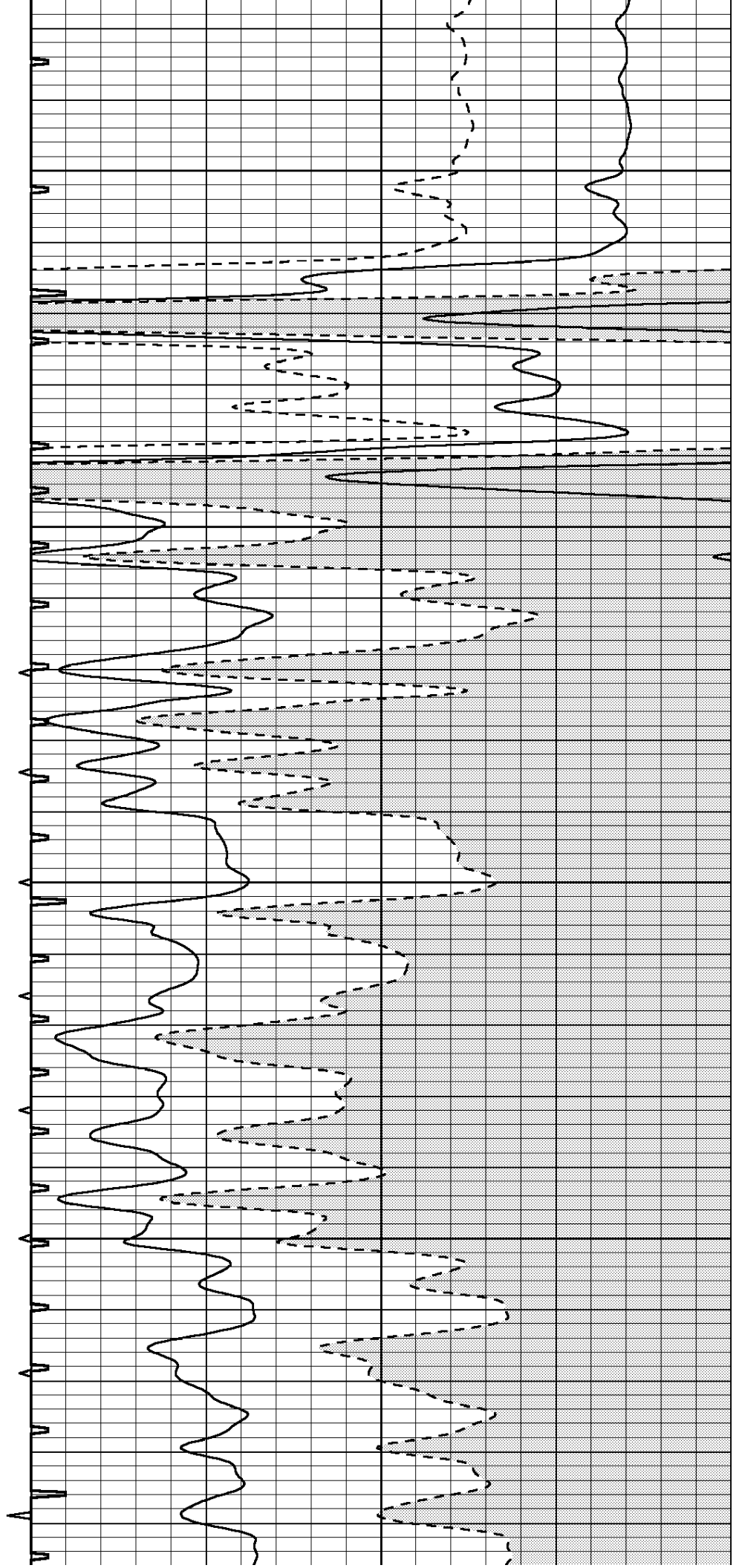


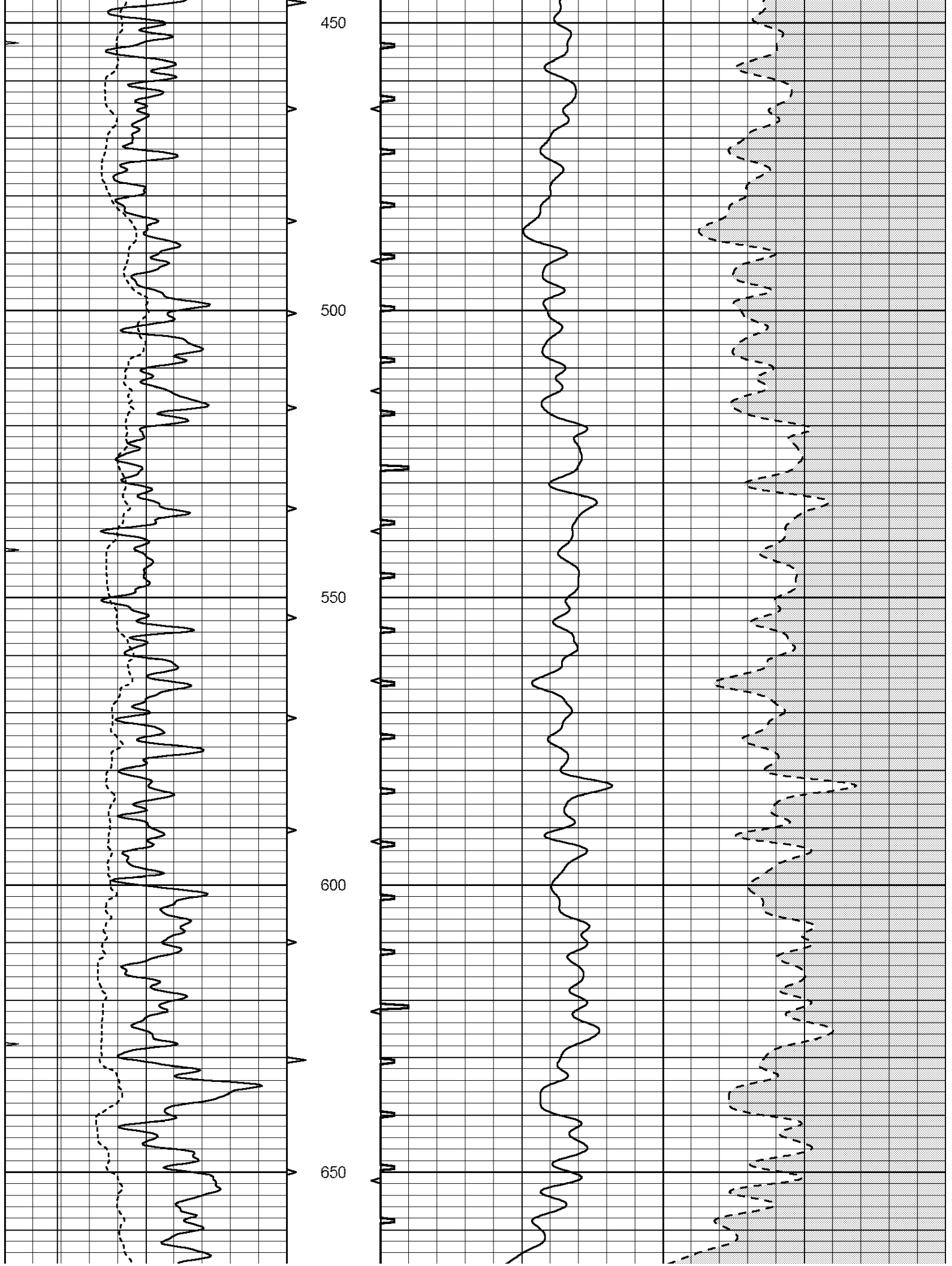
250

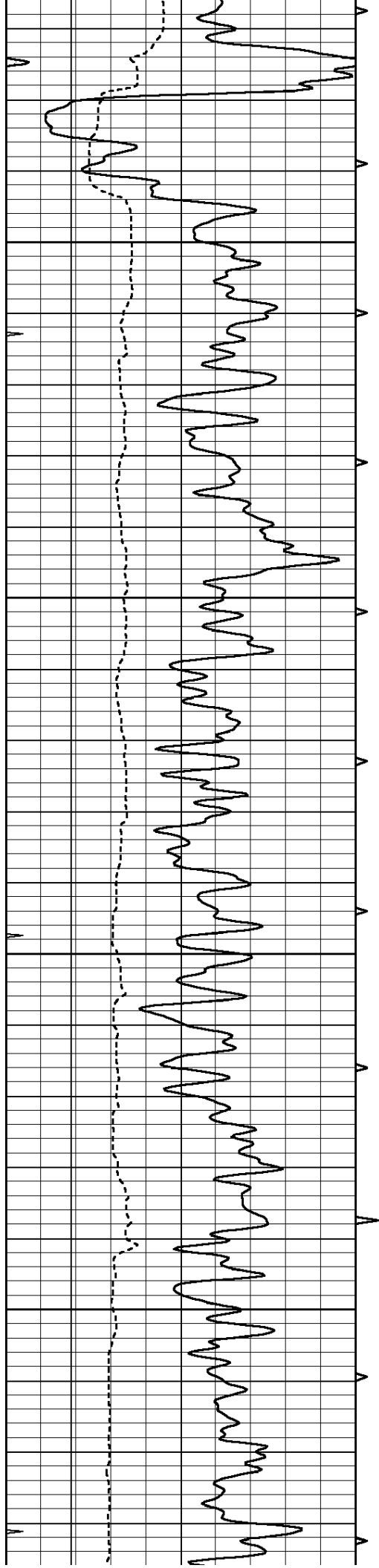
300

350

400





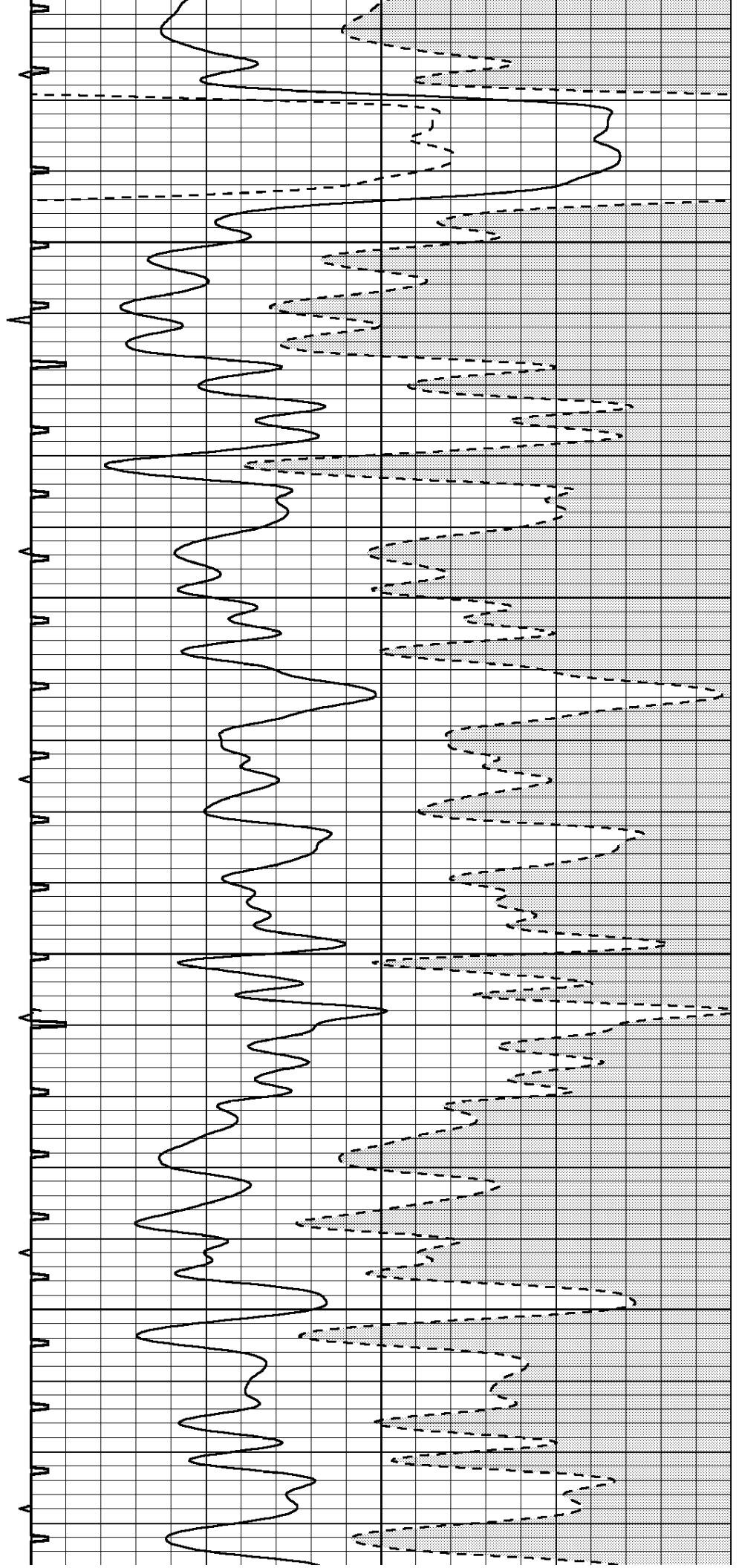


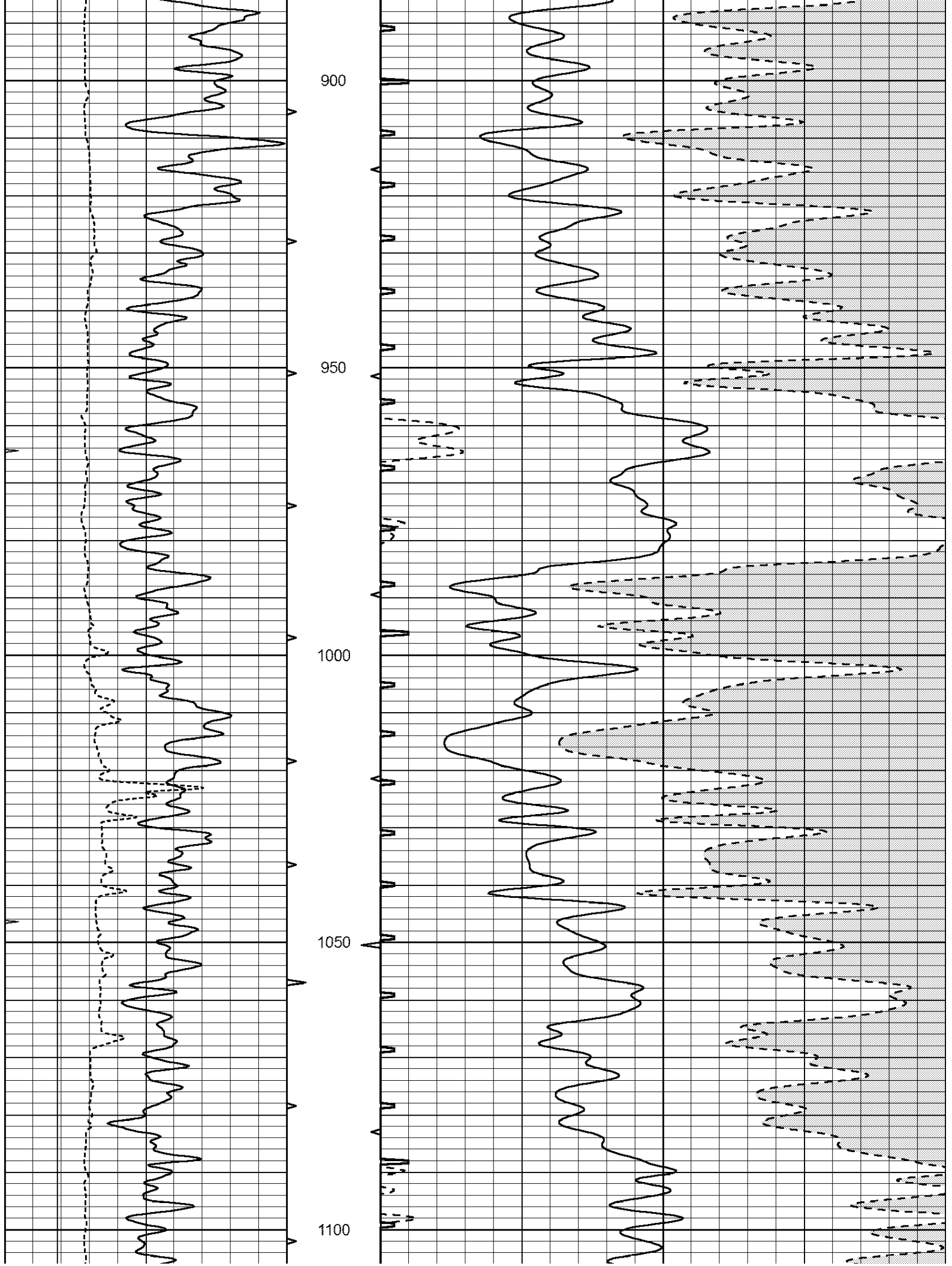
700

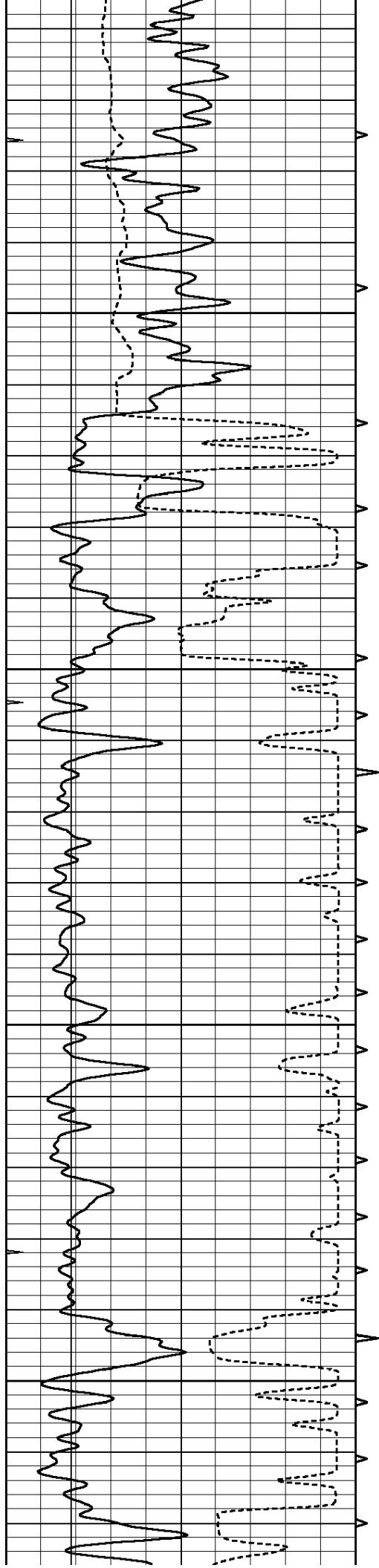
750

800

850





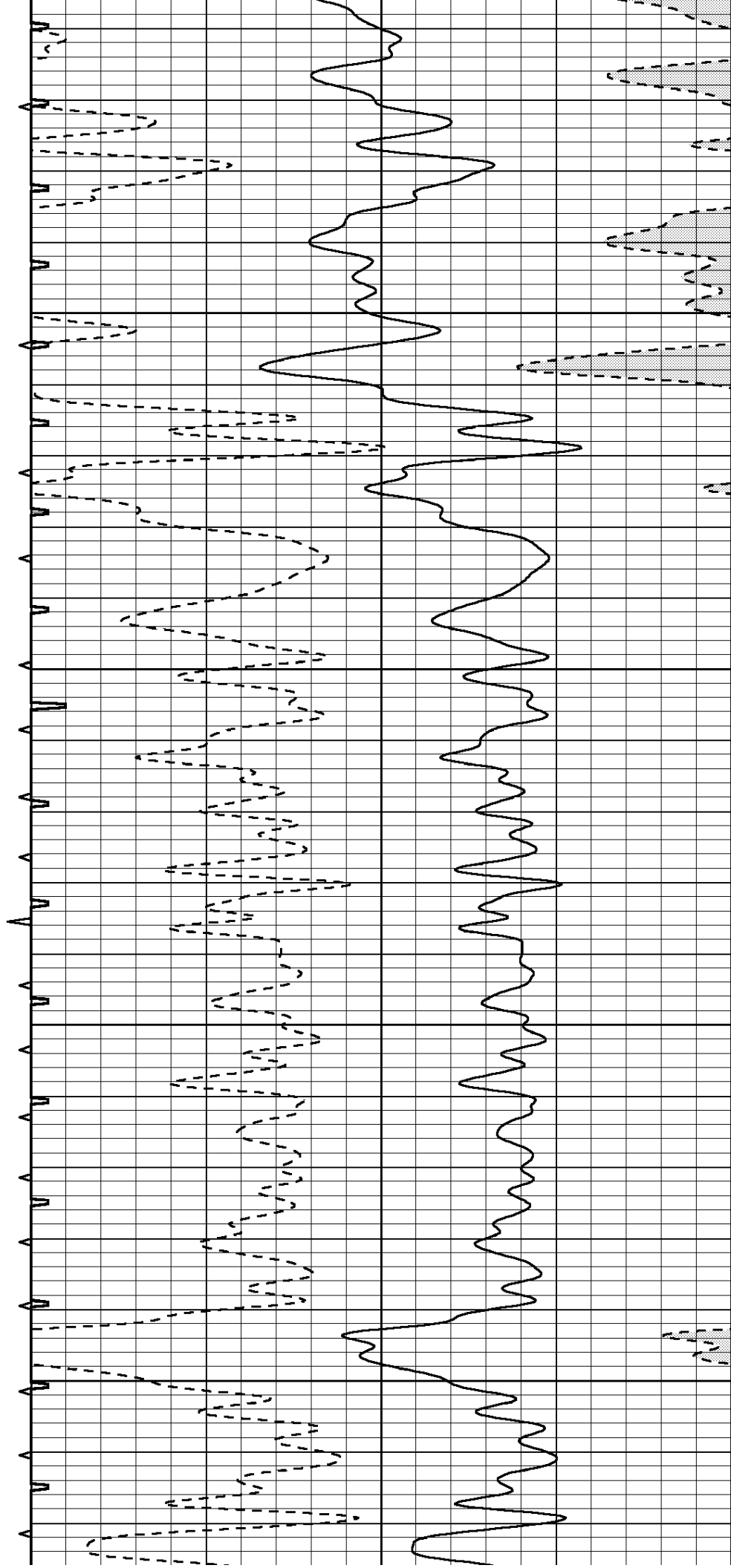


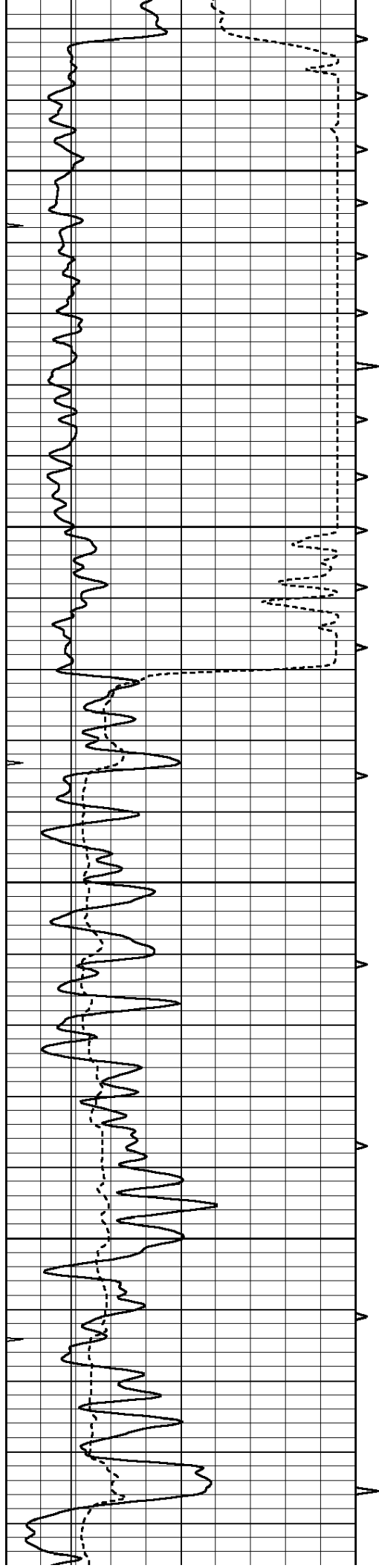
1150

1200

1250

1300



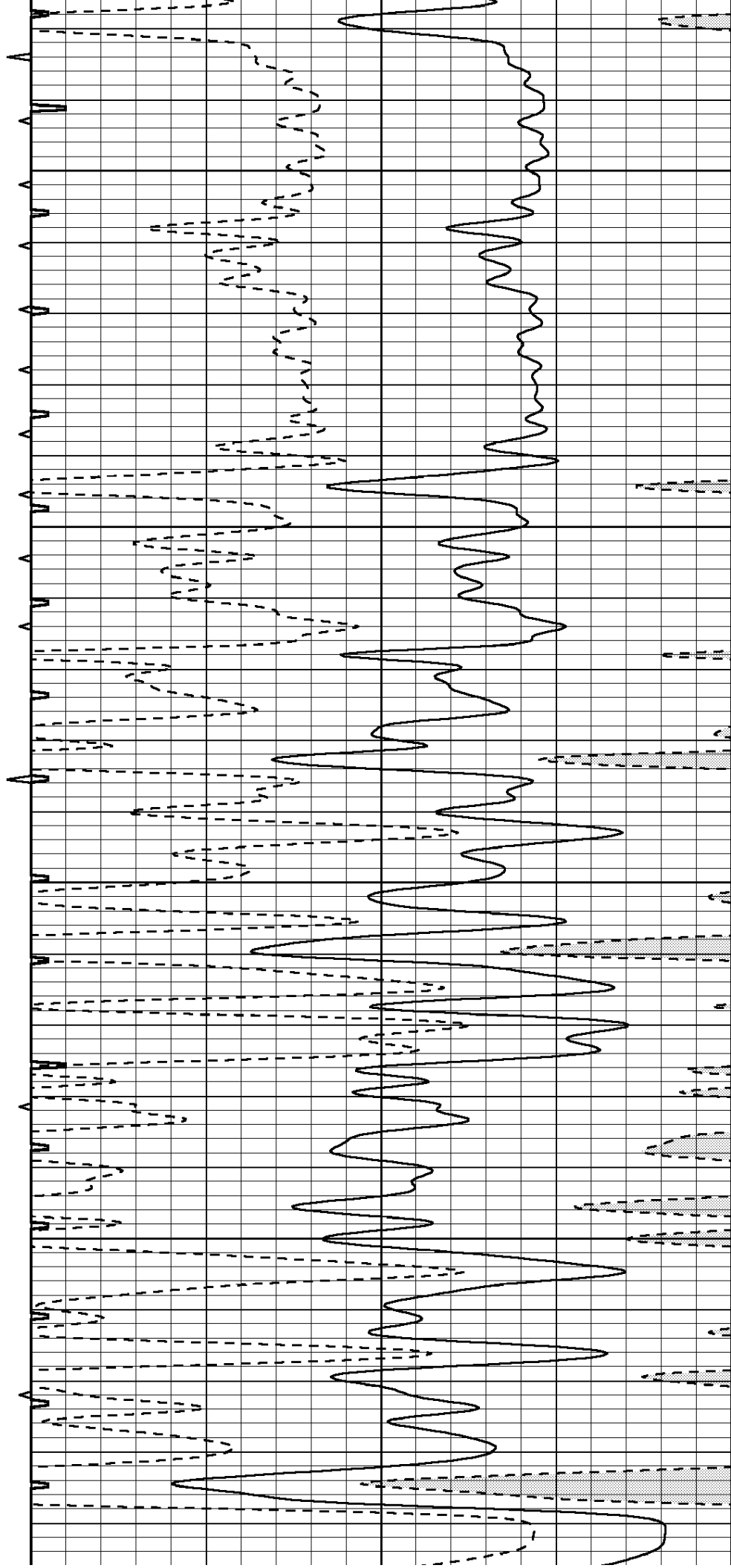


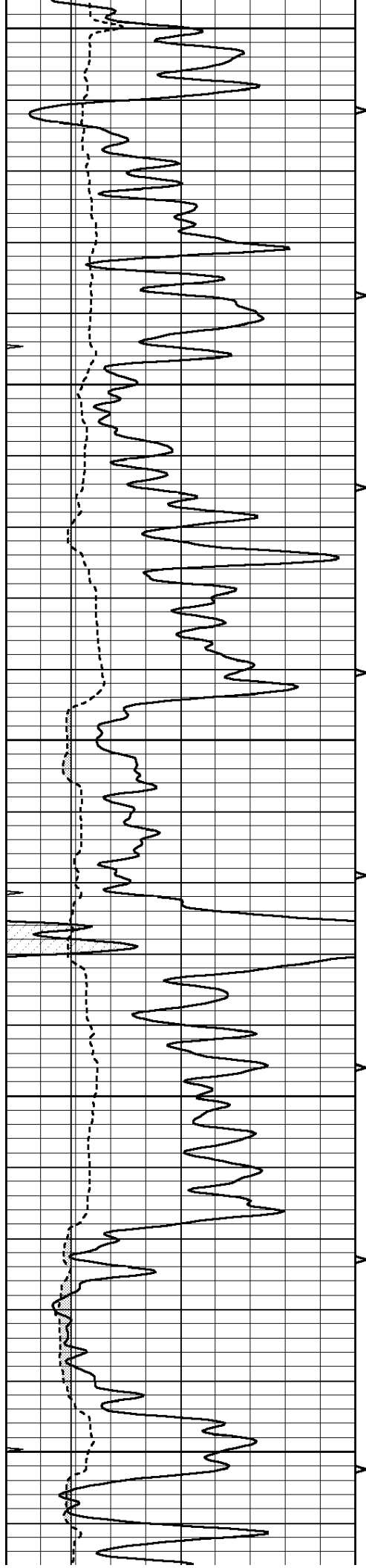
1350

1400

1450

1500





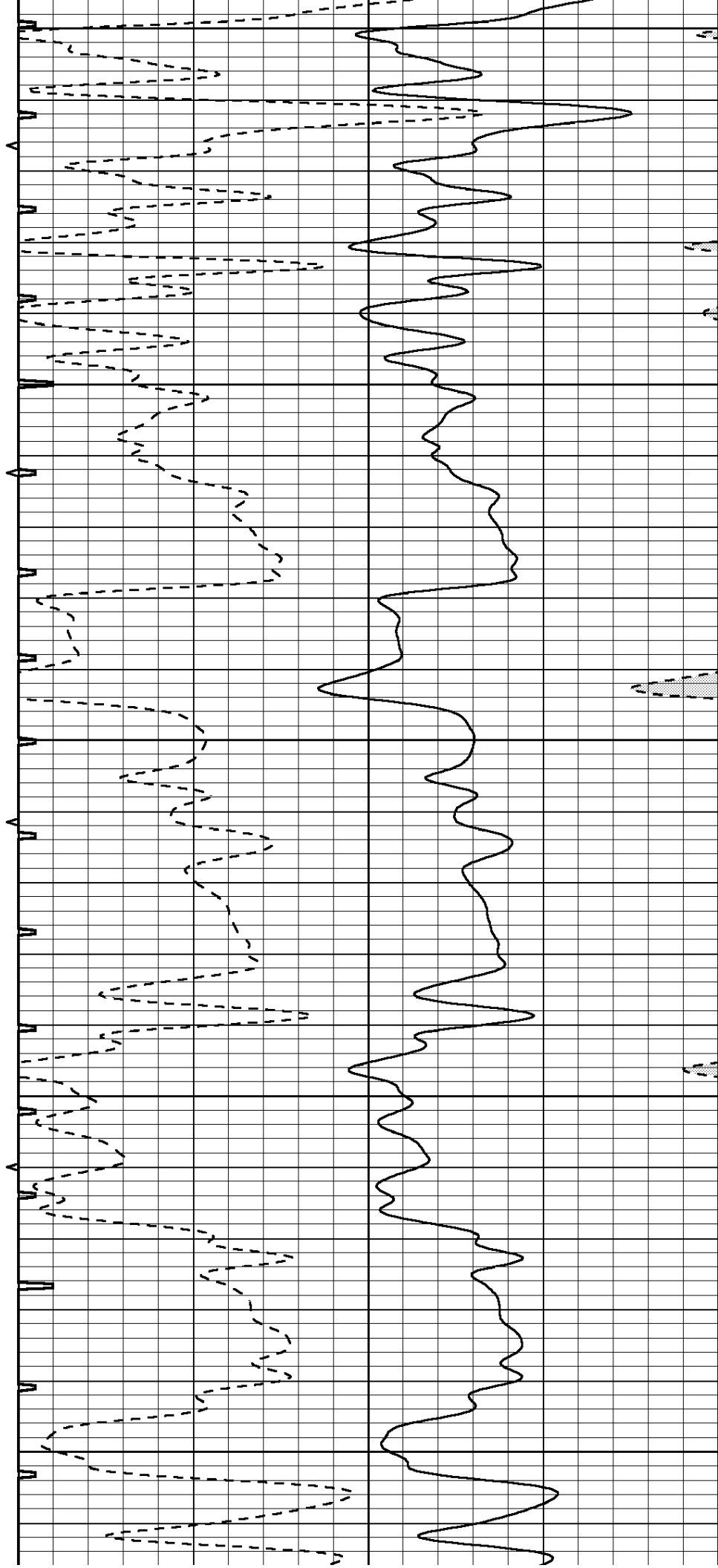
1550

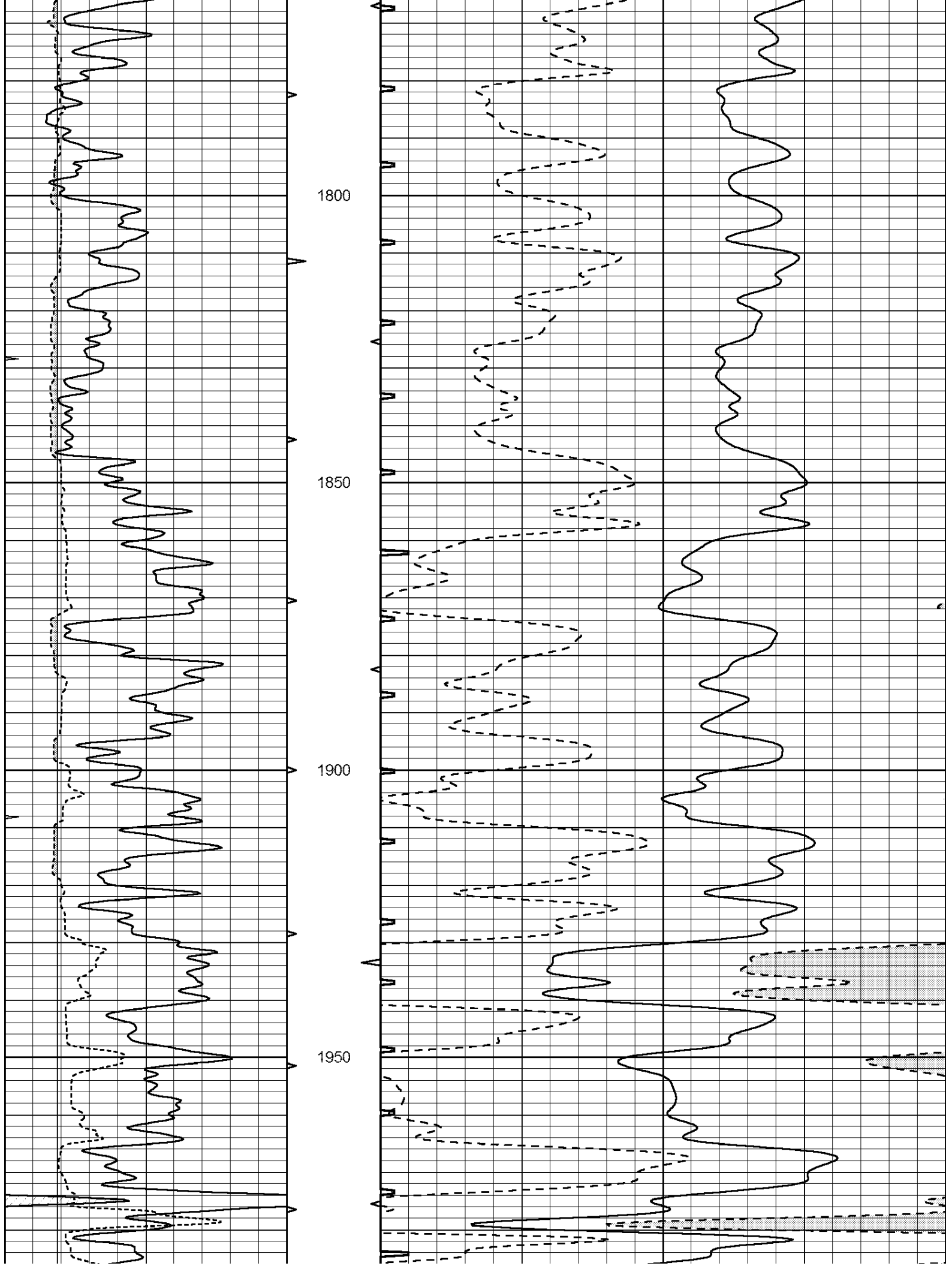
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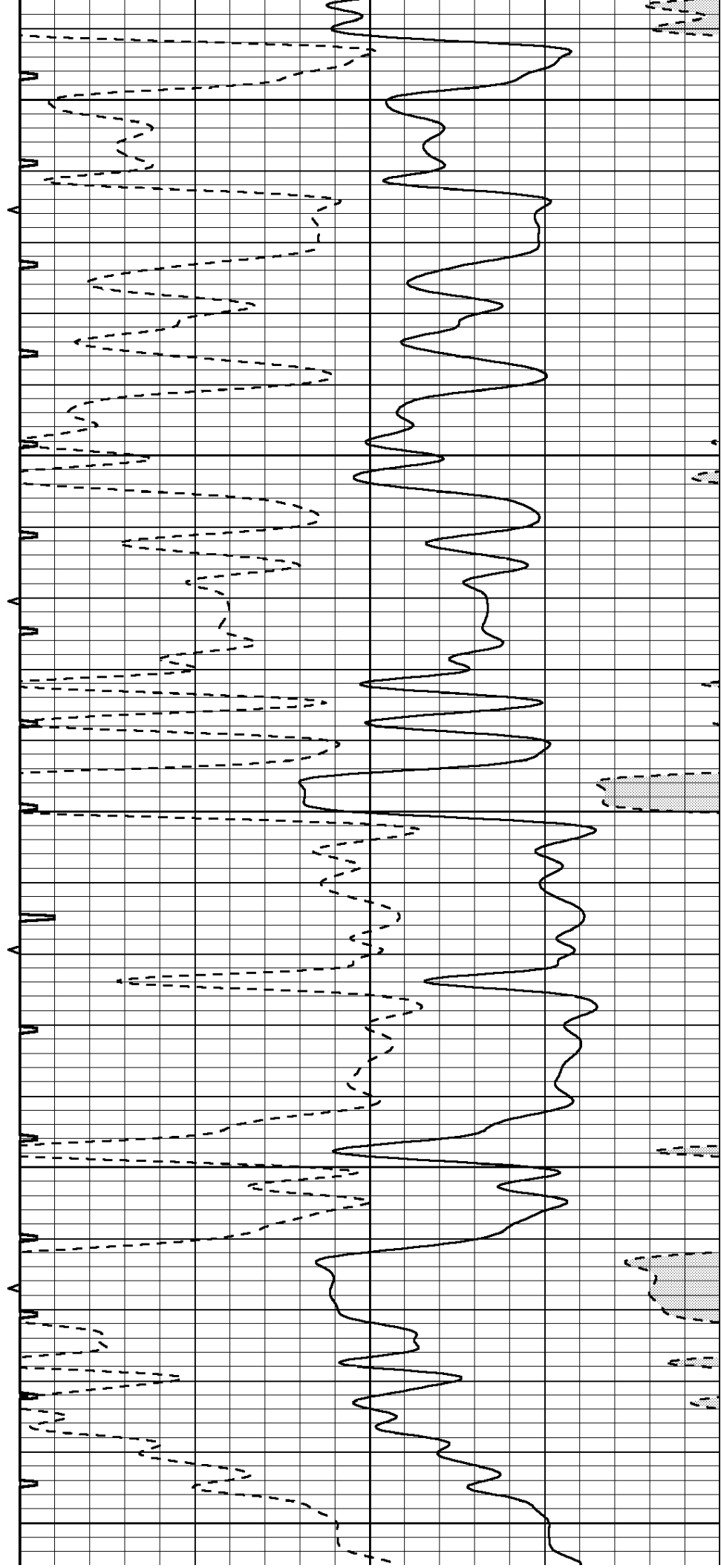
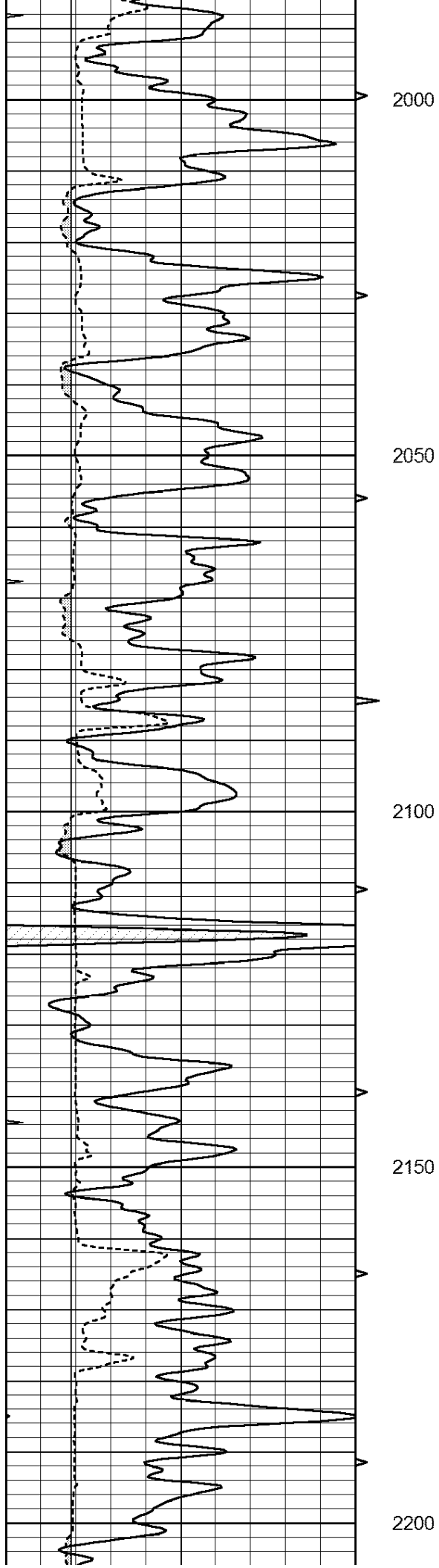
1650

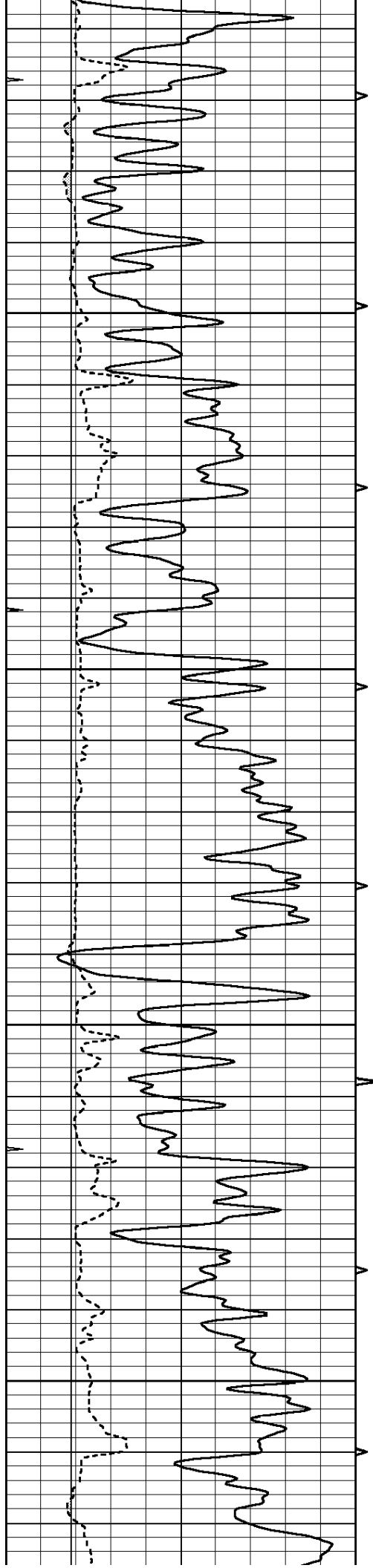
1700

1750







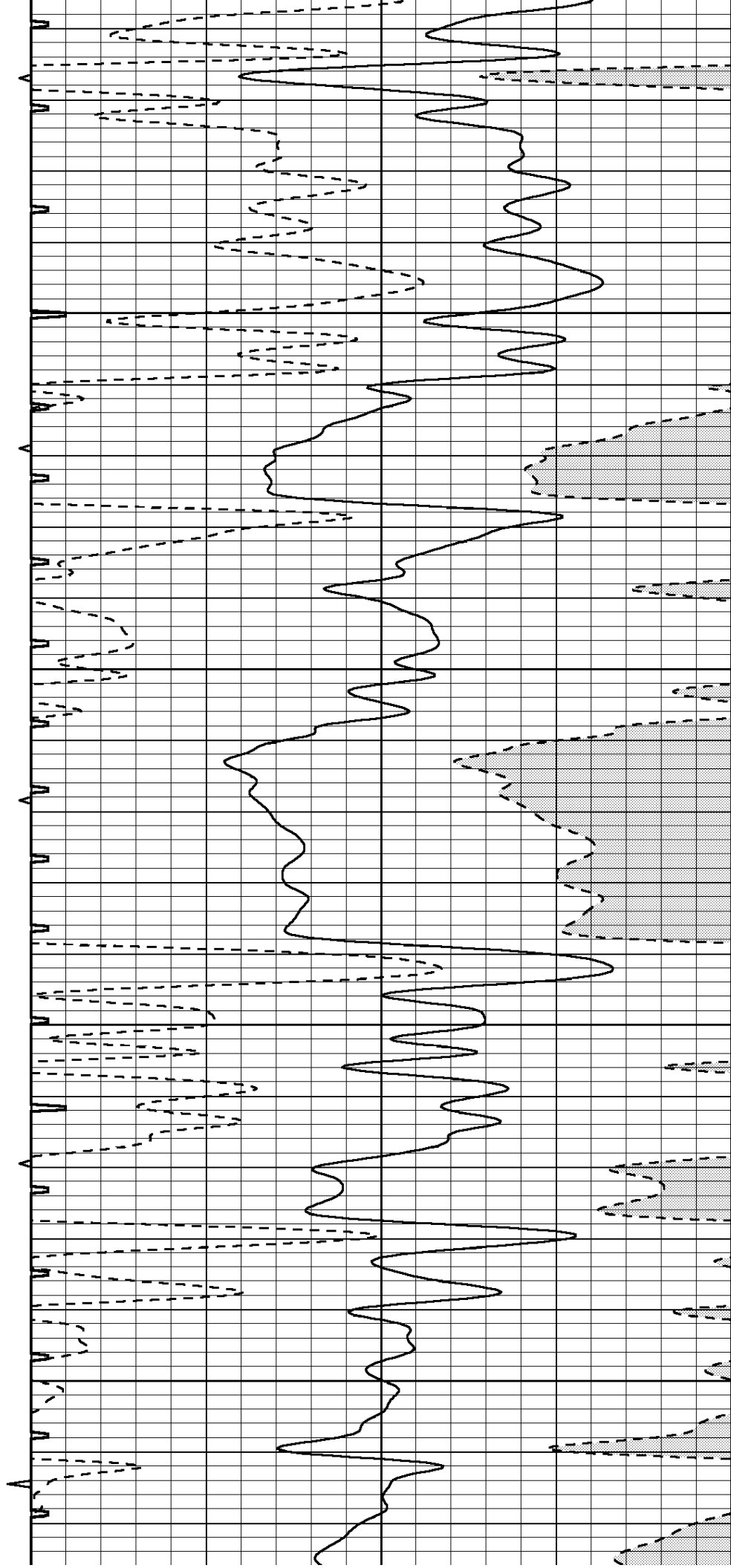


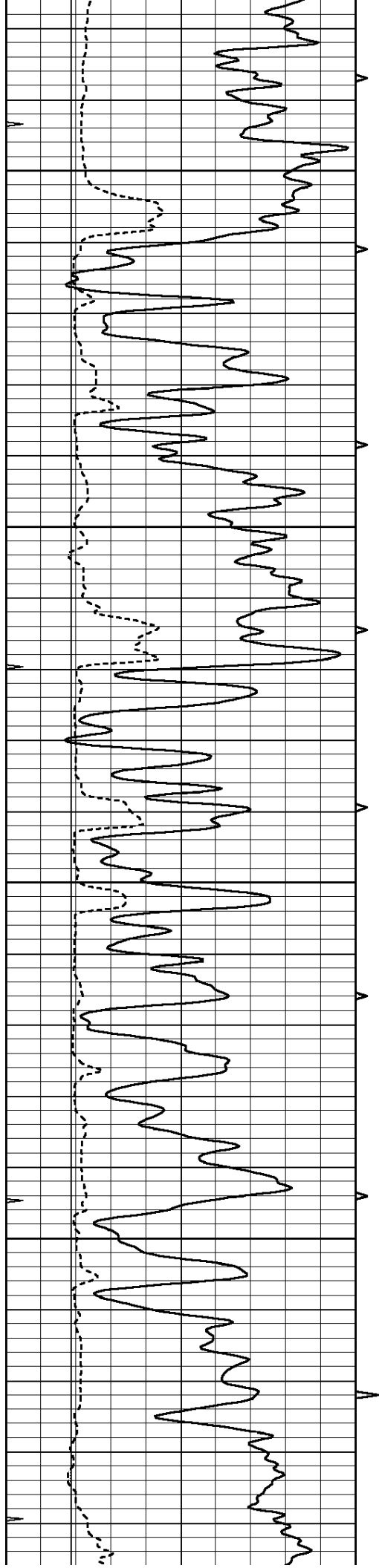
2250

2300

2350

2400



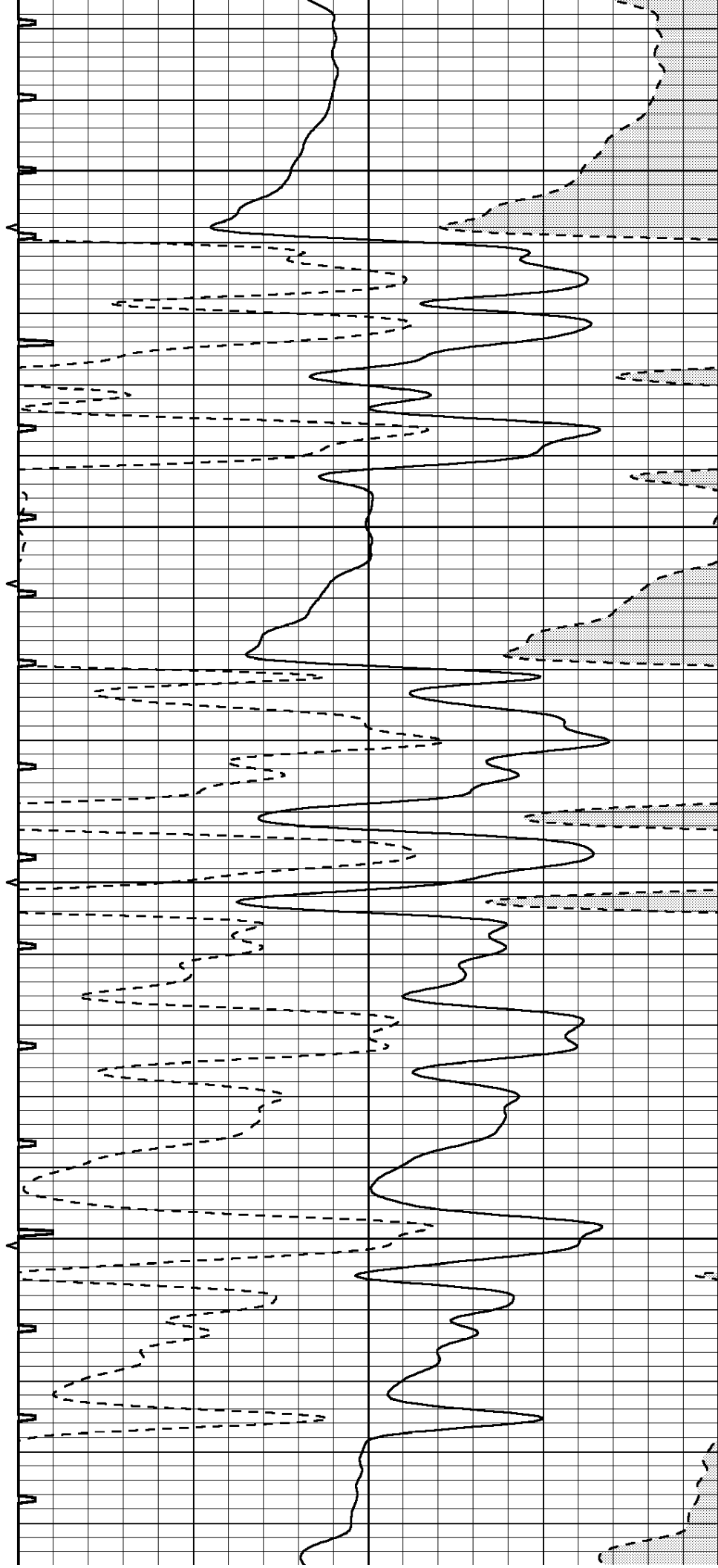


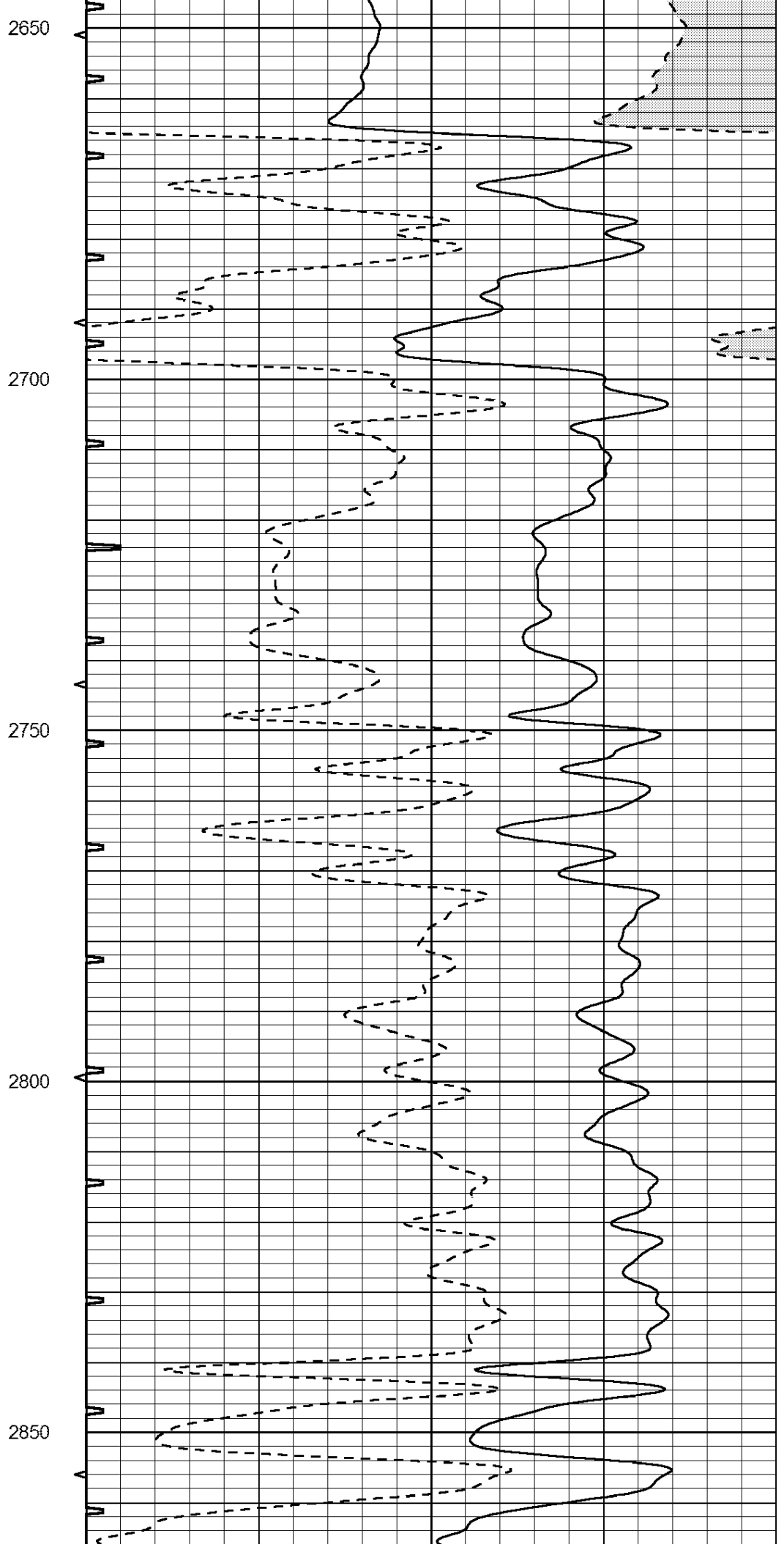
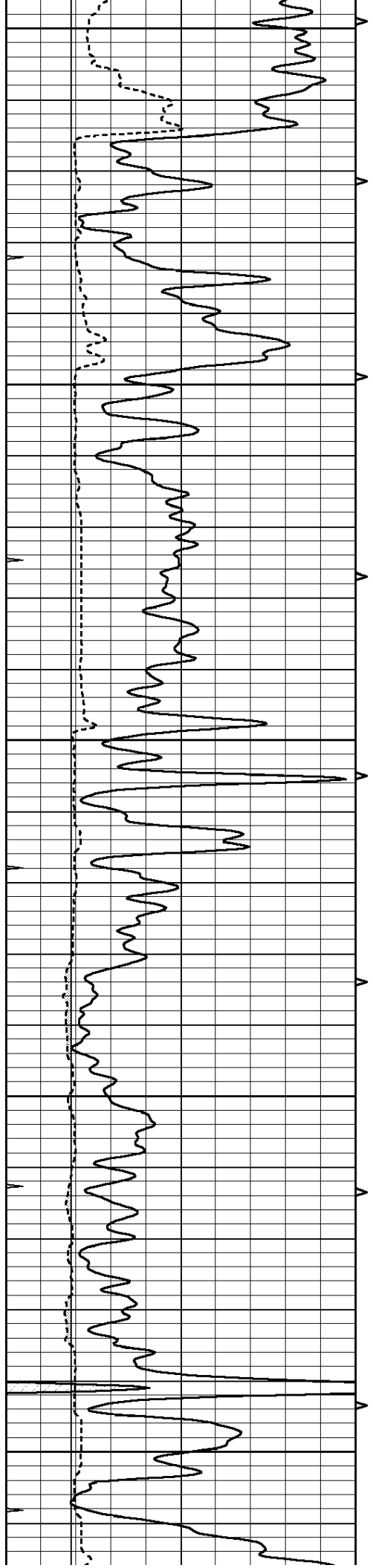
2450

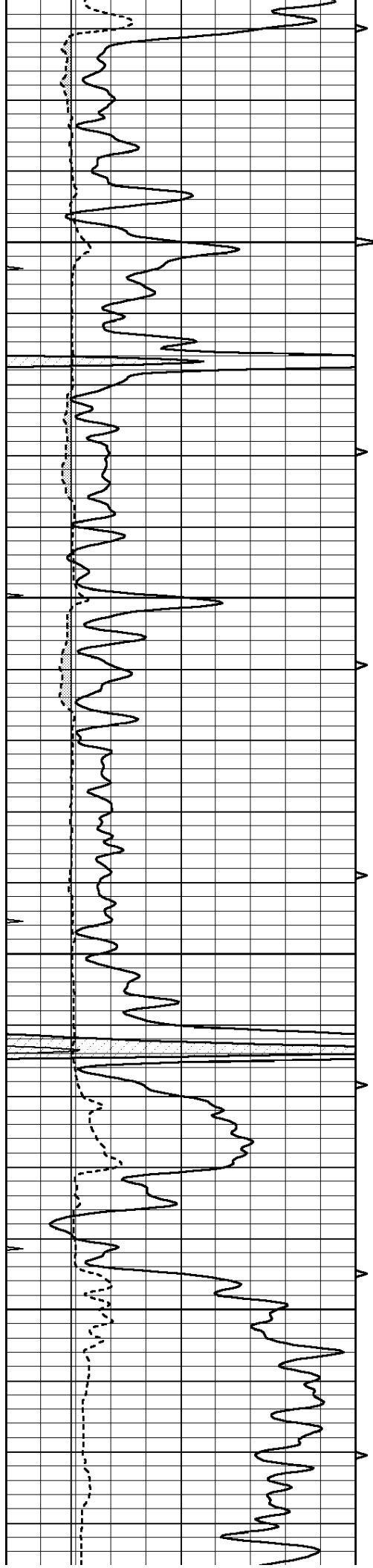
2500

2550

2600





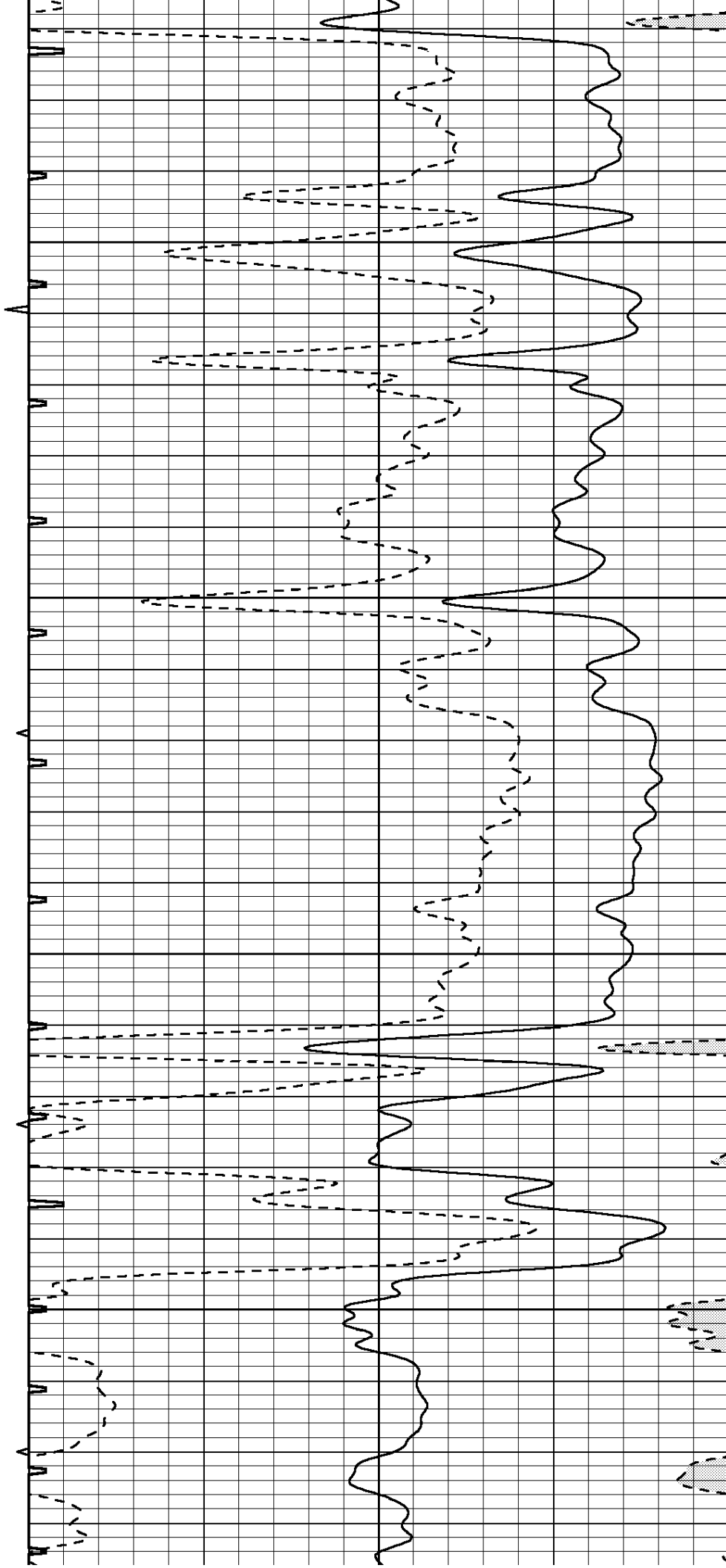


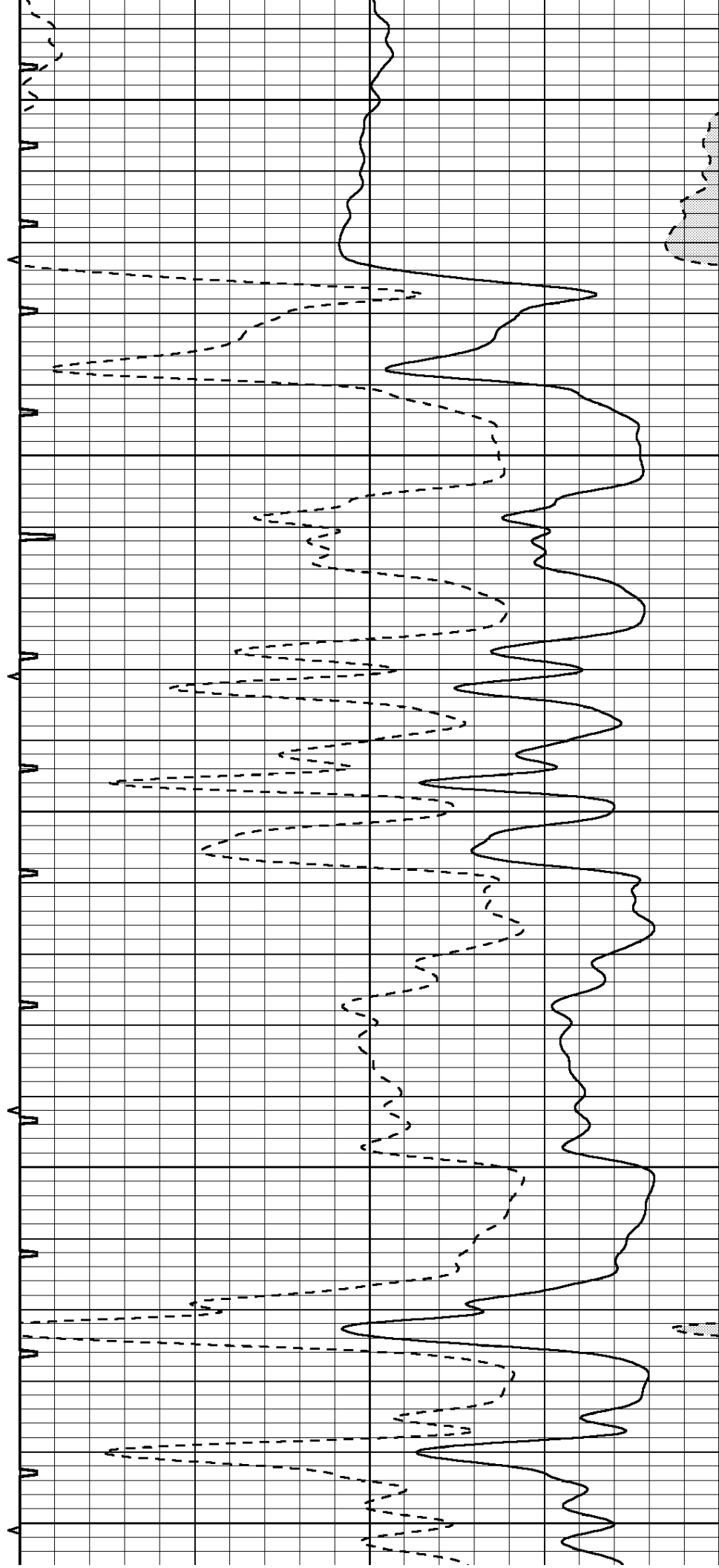
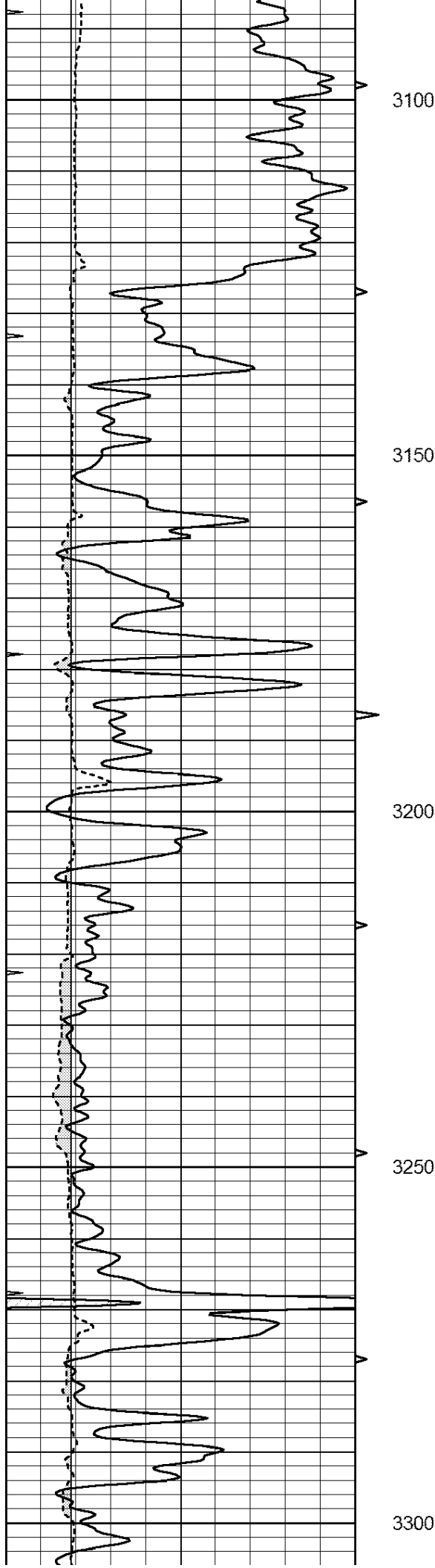
2900

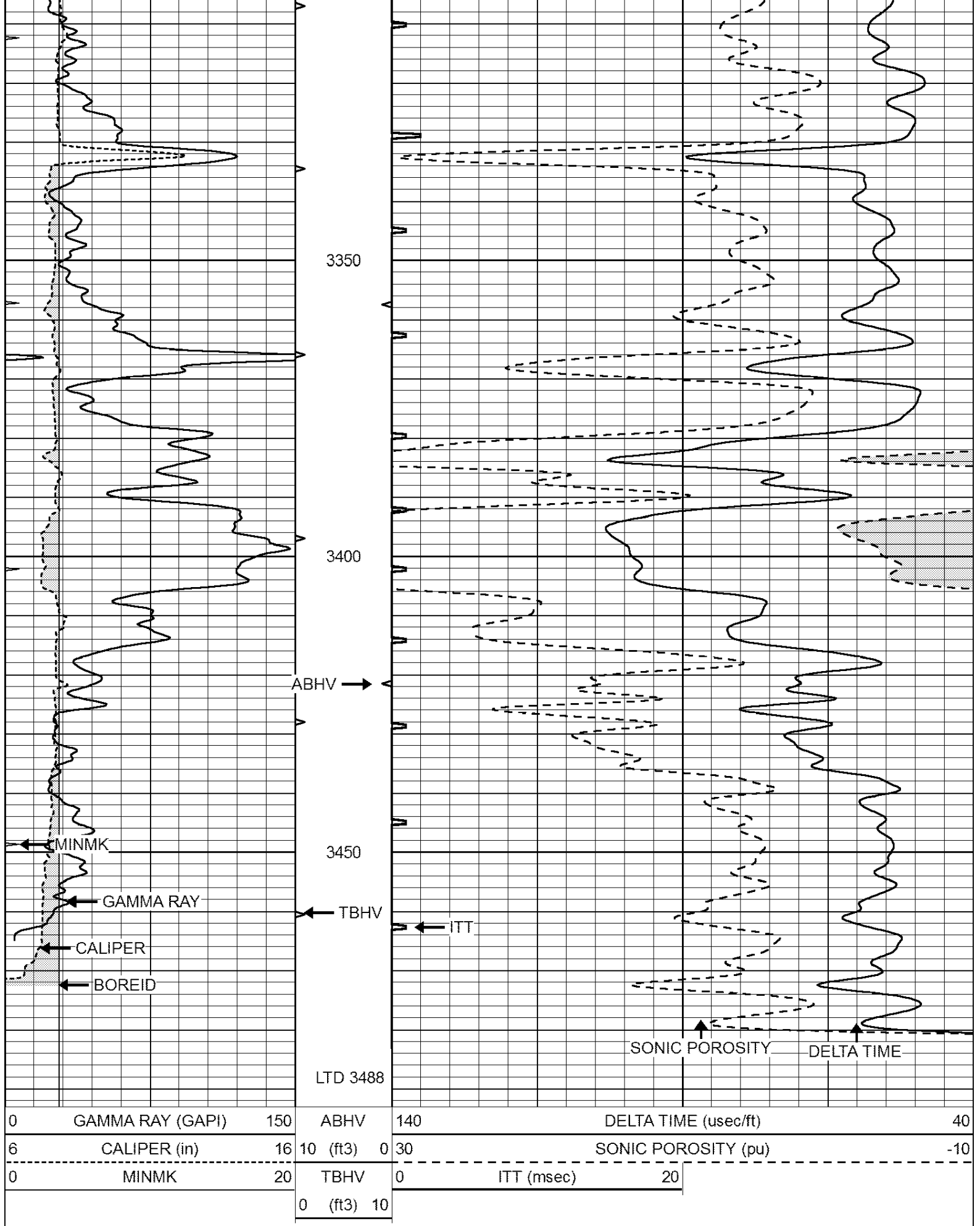
2950

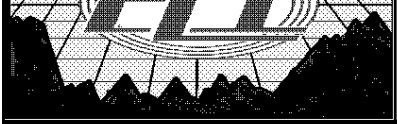
3000

3050





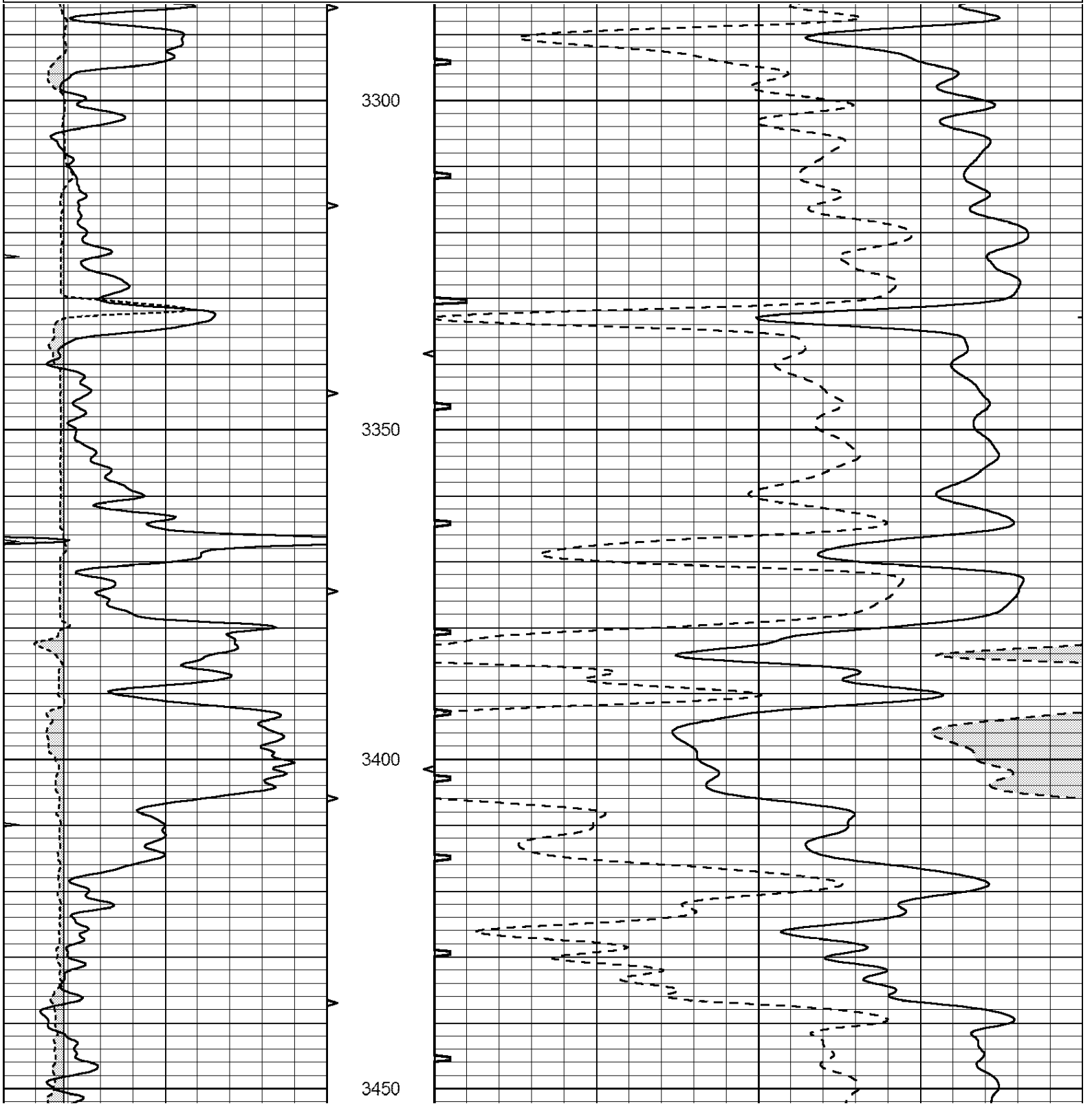


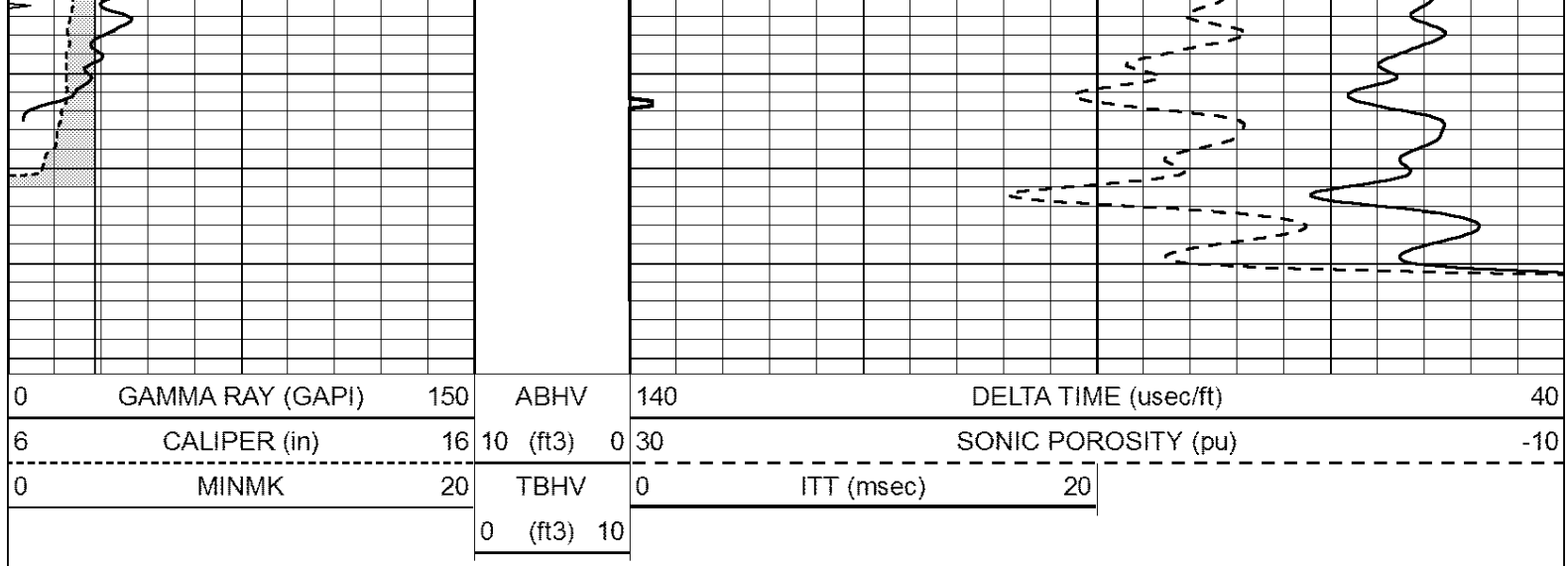


# REPEAT SECTION

Database File: 2700pe.db  
Dataset Pathname: pass4  
Presentation Format: \_slt  
Dataset Creation: Wed Aug 08 09:35:38 2018 by Log Open-Cased 090629  
Charted by: Depth in Feet scaled 1:240

|   |                  |     |            |     |                      |     |
|---|------------------|-----|------------|-----|----------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV       | 140 | DELTA TIME (usec/ft) | 40  |
| 6 | CALIPER (in)     | 16  | 10 (ft3) 0 | 30  | SONIC POROSITY (pu)  | -10 |
| 0 | MINMK            | 20  | TBHV       | 0   | ITT (msec)           | 20  |
|   |                  |     | 0 (ft3) 10 |     |                      |     |





### Calibration Report

Database File: 2700pe.db  
Dataset Pathname: pass4  
Dataset Creation: Wed Aug 08 09:35:38 2018 by Log Open-Cased 090629

### MICRO Calibration Report

Serial Number: MICRO3  
Tool Model: PROBE  
Performed: Wed Aug 08 09:13:43 2018

Caliper Calibration: Gain=3.840 Offset=-7.902

|            |         |          |
|------------|---------|----------|
|            | Low Cal | High Cal |
| References | 7.000   | 14.000   |
| Readings   | 3.622   | 5.514    |

1.5" Calibration: Gain=120.000 Offset=0.400

|            |         |          |
|------------|---------|----------|
|            | Low Cal | High Cal |
| References | 0.000   | 20.000   |
| Readings   | 0.004   | 0.228    |

2" Calibration: Gain=110.553 Offset=0.220

|            |         |          |
|------------|---------|----------|
|            | Low Cal | High Cal |
| References | 0.000   | 20.000   |
| Readings   | 0.005   | 0.175    |

### Gamma Ray Calibration Report

Serial Number: GR5  
Tool Model: OPEN  
Performed: Mon Jul 02 20:05:37 2018

Calibrator Value: 1.0 GAPI

|                     |     |     |
|---------------------|-----|-----|
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |

Sensitivity: 0.9600 GAPI/cps