



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company LOTUS OPERATING CO., LLC.
Well RM STERLING #6
Field STRANATHAN
County BARBER
State KANSAS

Company LOTUS OPERATING COMPANY, LLC.
Well RM STERLING #6
Field STRANATHAN
County BARBER State KANSAS

Location: API #: 15-007-24010-0000
SEC 35 TWP 34S RGE 13W
Permanent Datum GROUND LEVEL Elevation 1455
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL/SON
Elevation
K.B. 1468
D.F. 1466
G.L. 1455

| | | | |
|------------------------------|---------------|---------------------|--|
| Date | 5/5/13 | | |
| Run Number | ONE | | |
| Depth Driller | 5600 | | |
| Depth Logger | 5601 | | |
| Bottom Logged Interval | 5599 | | |
| Top Log Interval | 0 | | |
| Casing Driller | 10 3/4"@261' | | |
| Casing Logger | 261' | | |
| Bit Size | 7 7/8" | | |
| Type Fluid in Hole | CHEMICAL MUD | CHLORIDES 3,000 PPM | |
| Density / Viscosity | 9.5/60 | | |
| pH / Fluid Loss | 11.0/9.0 | | |
| Source of Sample | FLOWLINE | | |
| Rim @ Meas. Temp | 0.75@89F | | |
| Rmf @ Meas. Temp | 0.56@89F | | |
| Rmc @ Meas. Temp | 0.90@89F | | |
| Source of Rmf / Rmc | MEASUREMENT | | |
| Rim @ BHT | 0.51@130F | | |
| Time Circulation Stopped | 2 HOURS | | |
| Time Logger on Bottom | | | |
| Maximum Recorded Temperature | 130F | | |
| Equipment Number | 4854 | | |
| Location | HAYS, KANSAS | | |
| Recorded By | JEFF GRONEMEG | | |
| Witnessed By | TIM HELLMAN | | |

<<< Fold Here >>>

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 "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
HARDTNER, KS - 2 1/2 MILES WEST FROM STOP SIGN - 2 MILES NORTH
WEST INTO

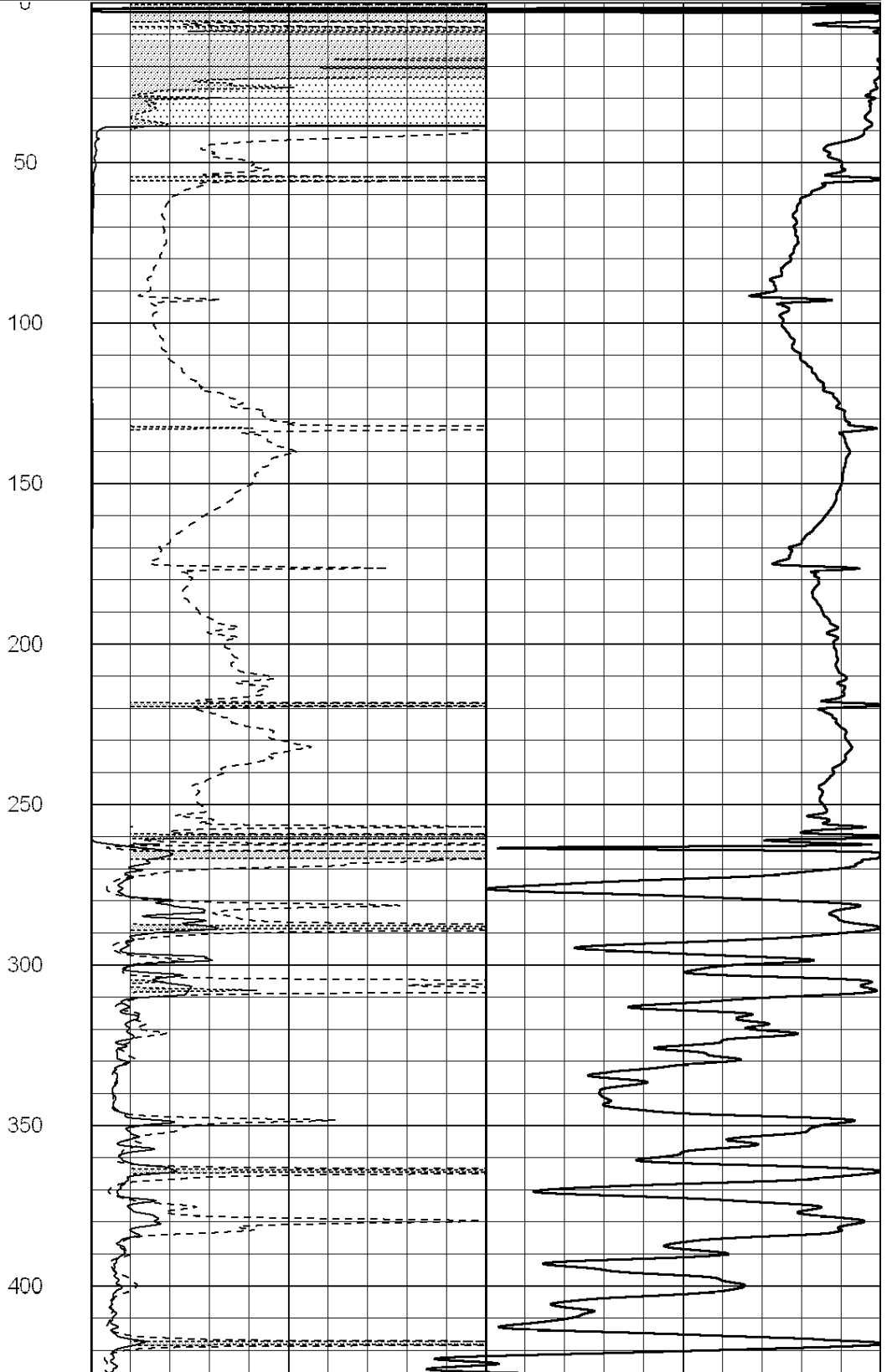
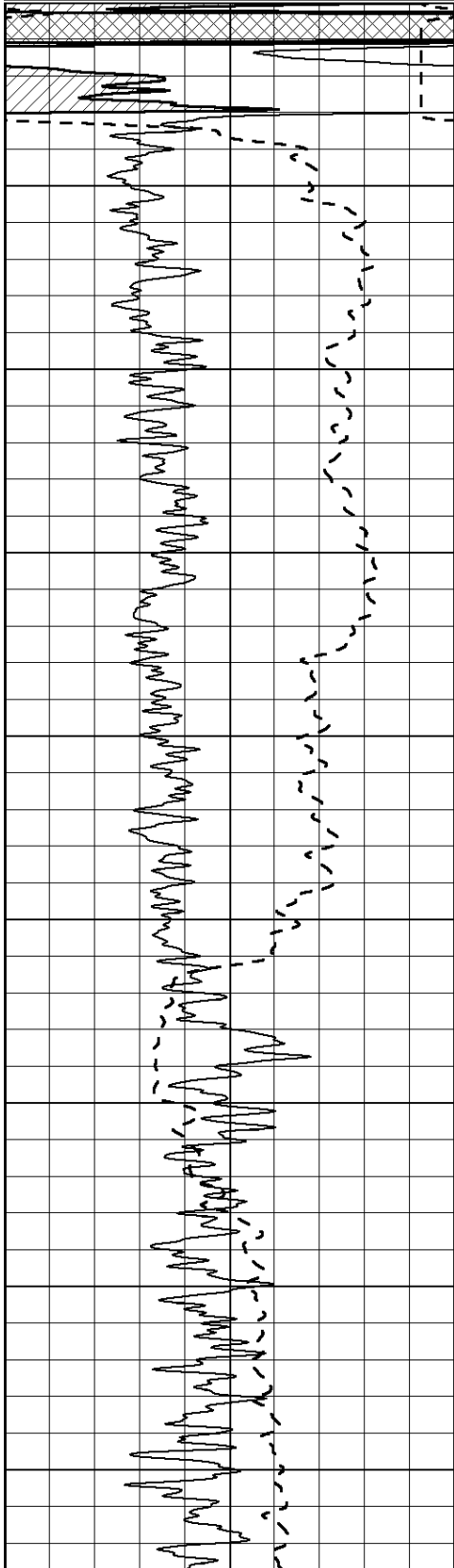
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 Dataset Pathname: pass3.4
 Presentation Format: _dil2
 Dataset Creation: Sun May 05 20:37:24 2013
 Charted by: Depth in Feet scaled 1:600

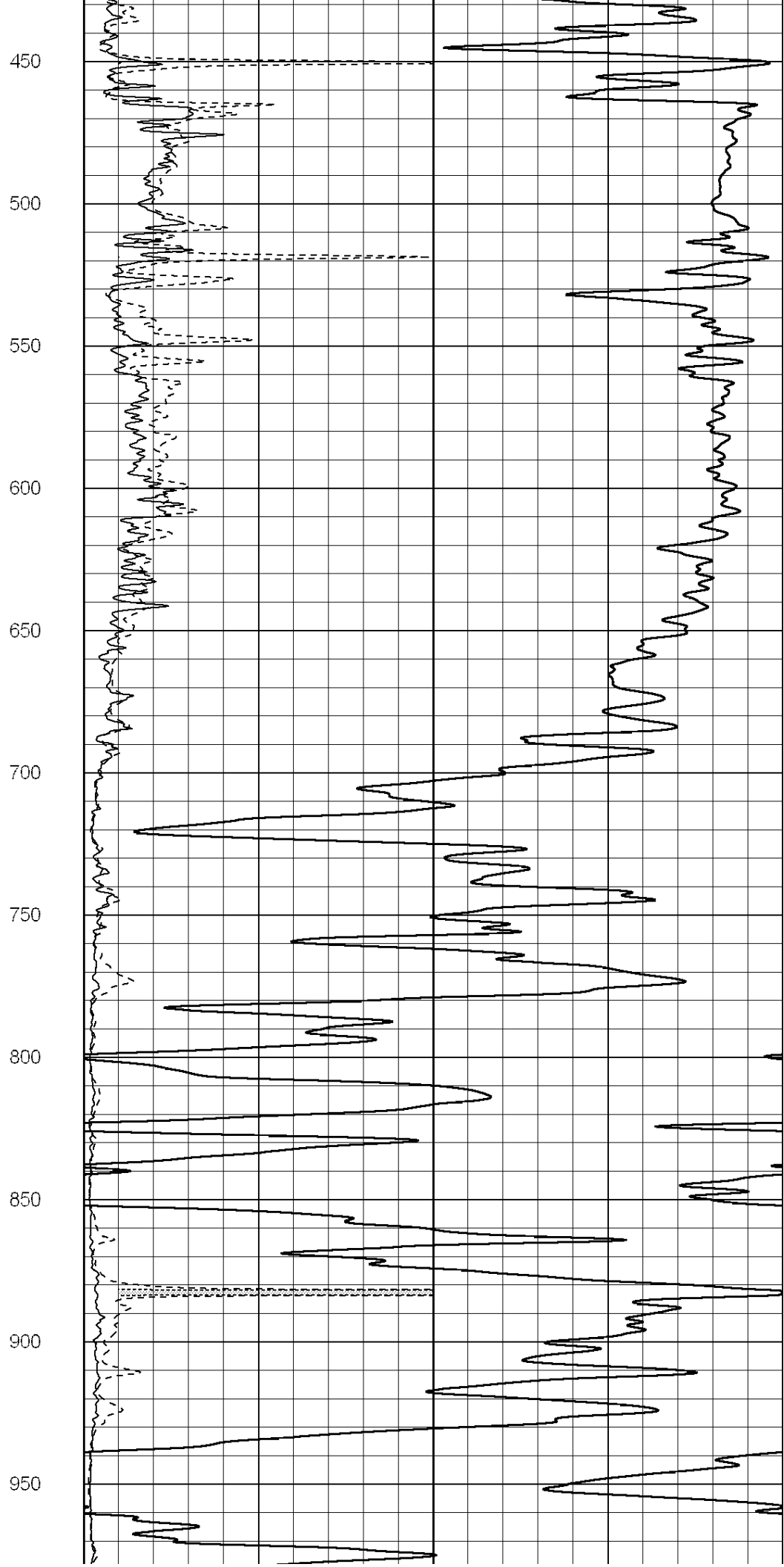
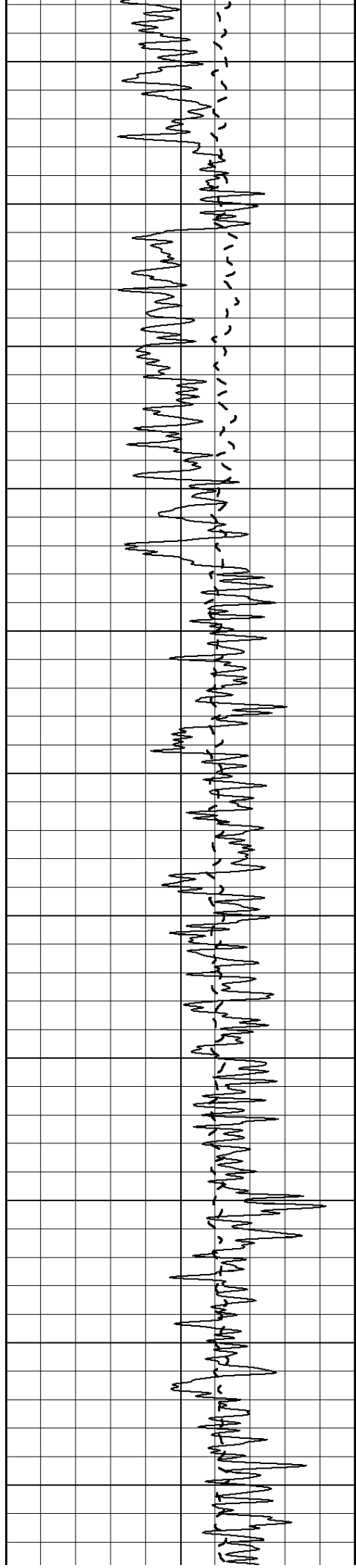
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|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -100 | SP (mV) | 100 |

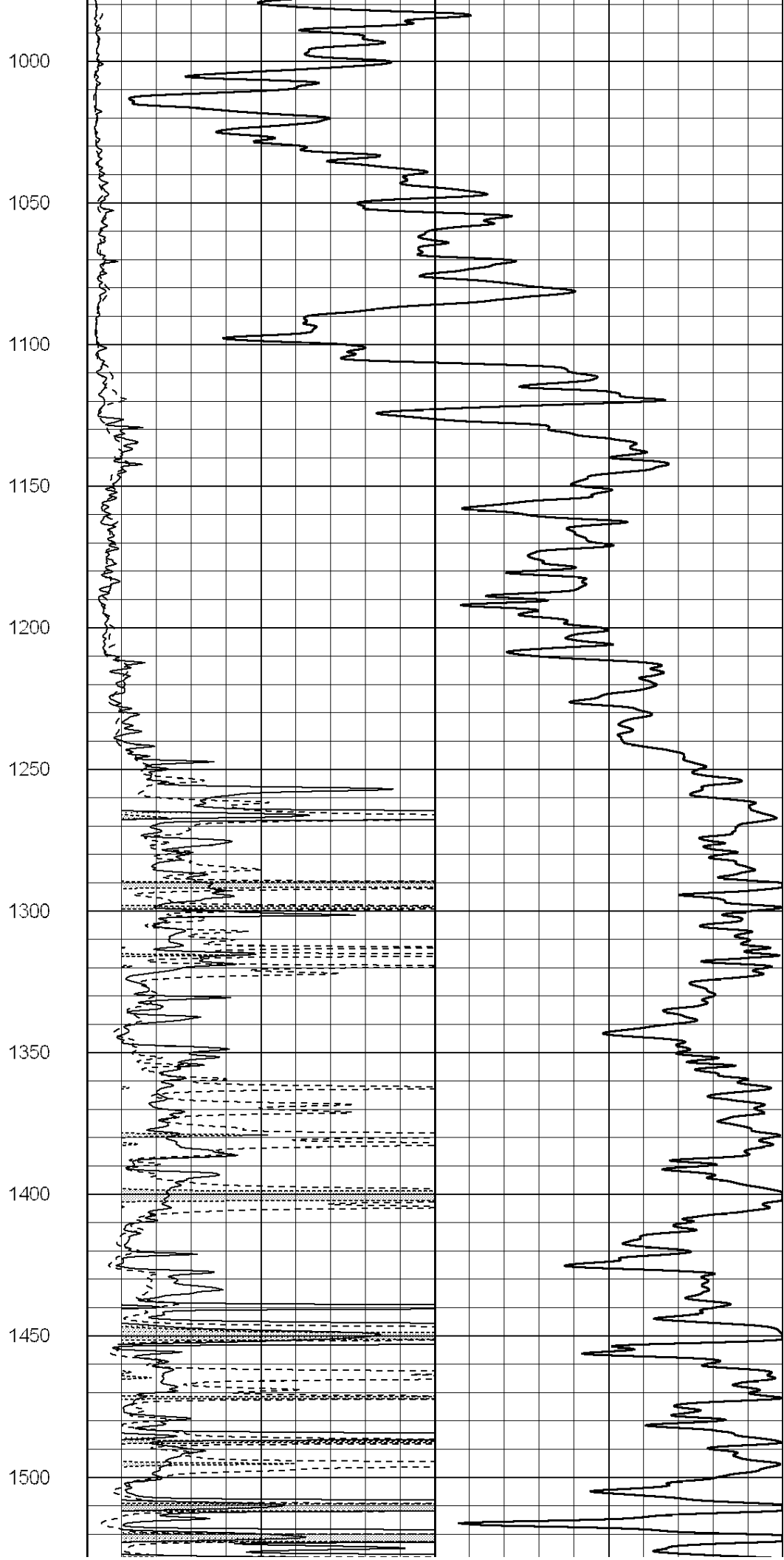
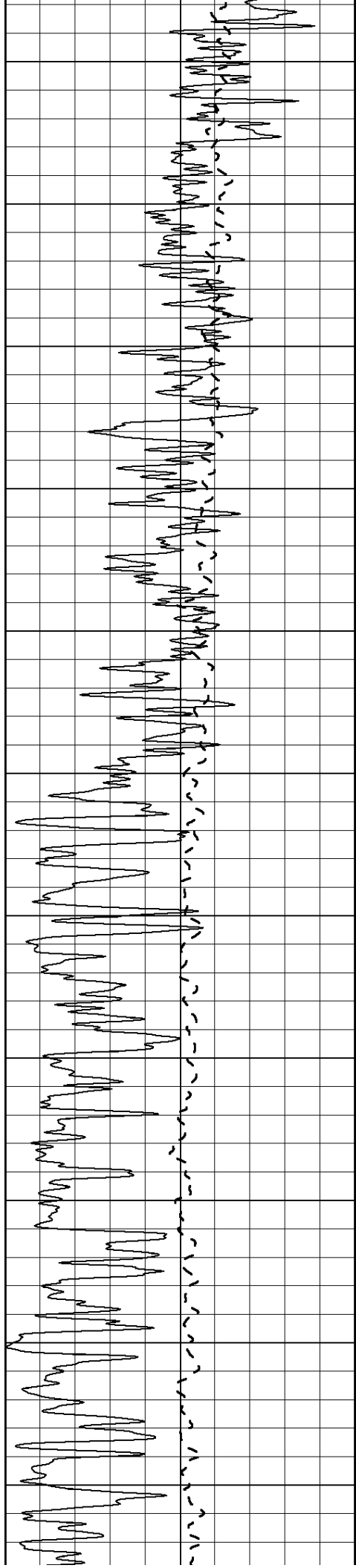
| | | |
|---|--------------|----|
| 0 | RLL3 (Ohm-m) | 50 |
| 0 | RILD (Ohm-m) | 50 |

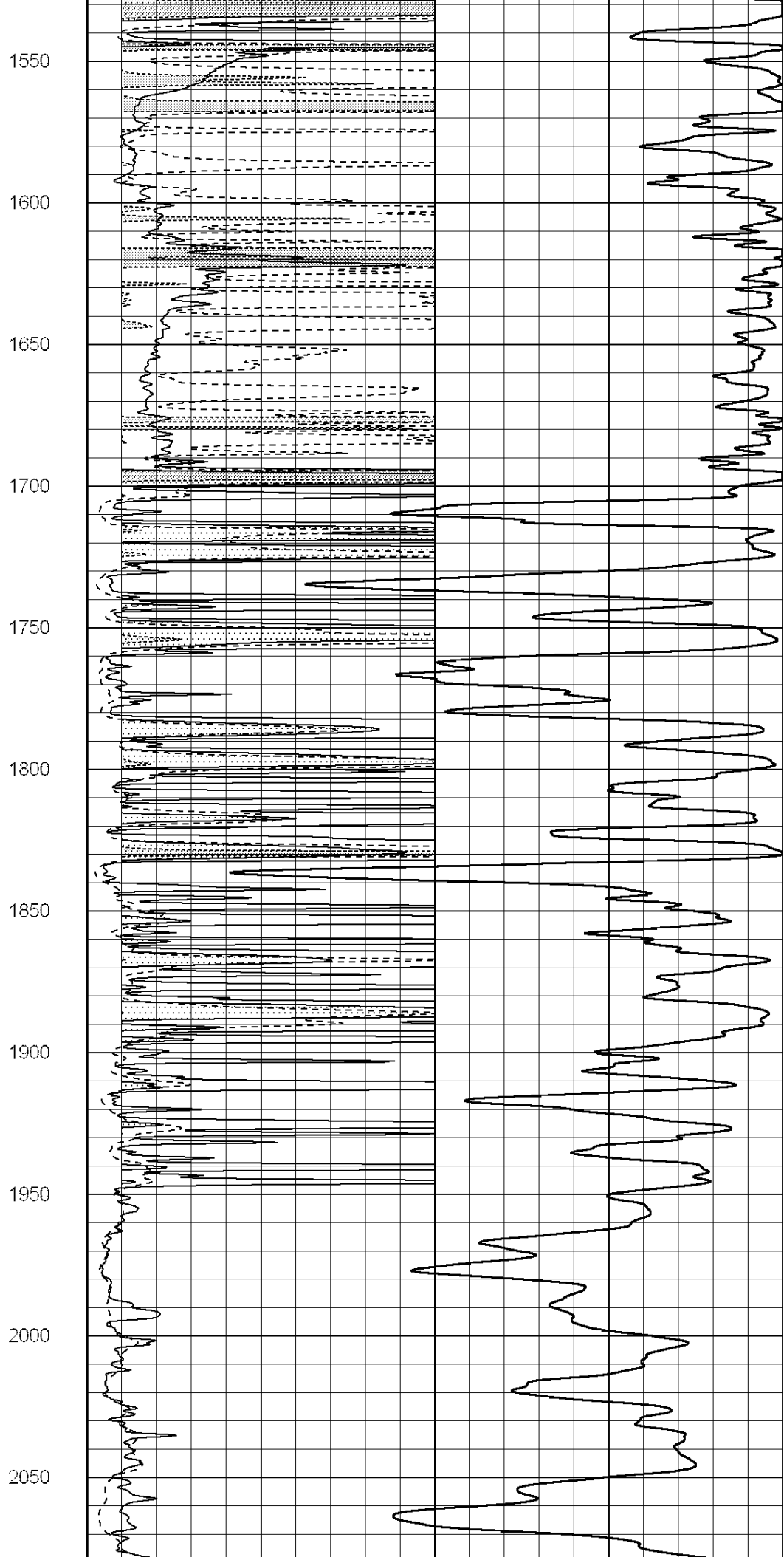
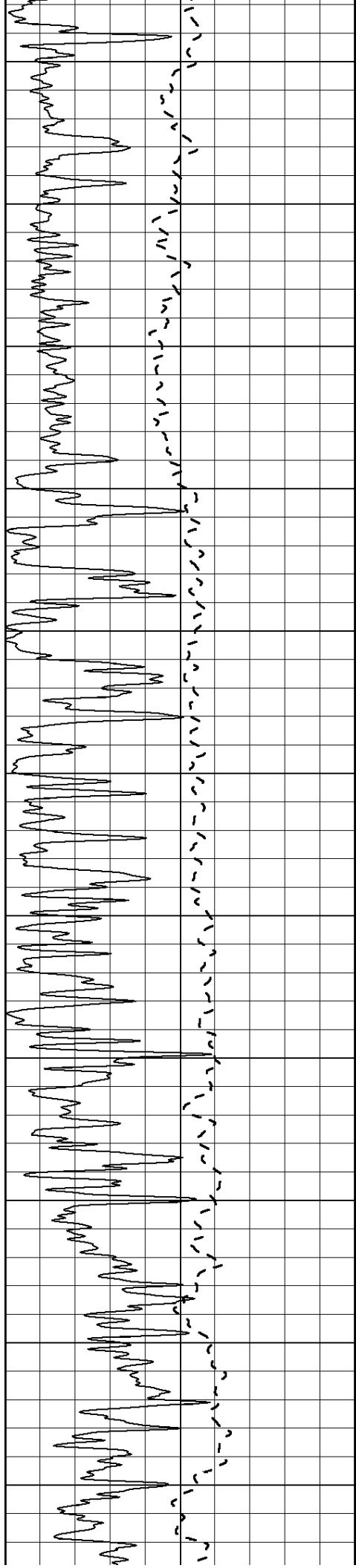
1000 CILD (mmho/m) 0

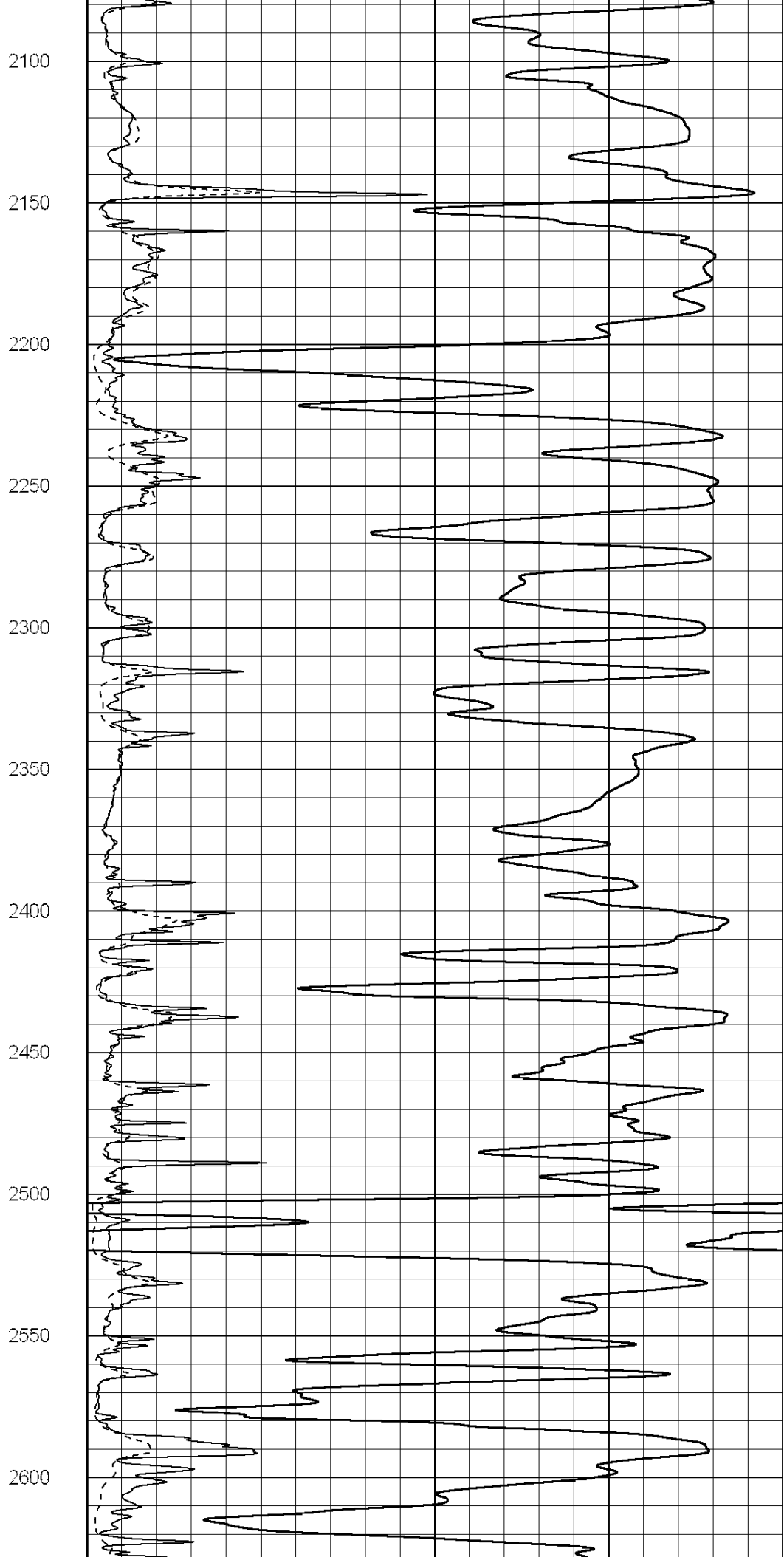
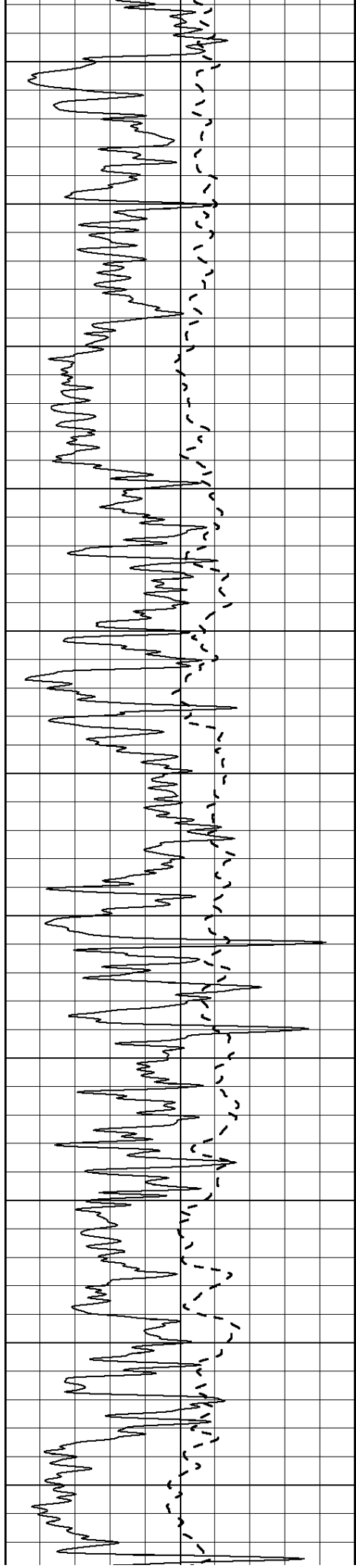
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|----|------------------|-----|
| 50 | RILD X10 (Ohm-m) | 500 |
| 50 | RLL3 X10 (Ohm-m) | 500 |

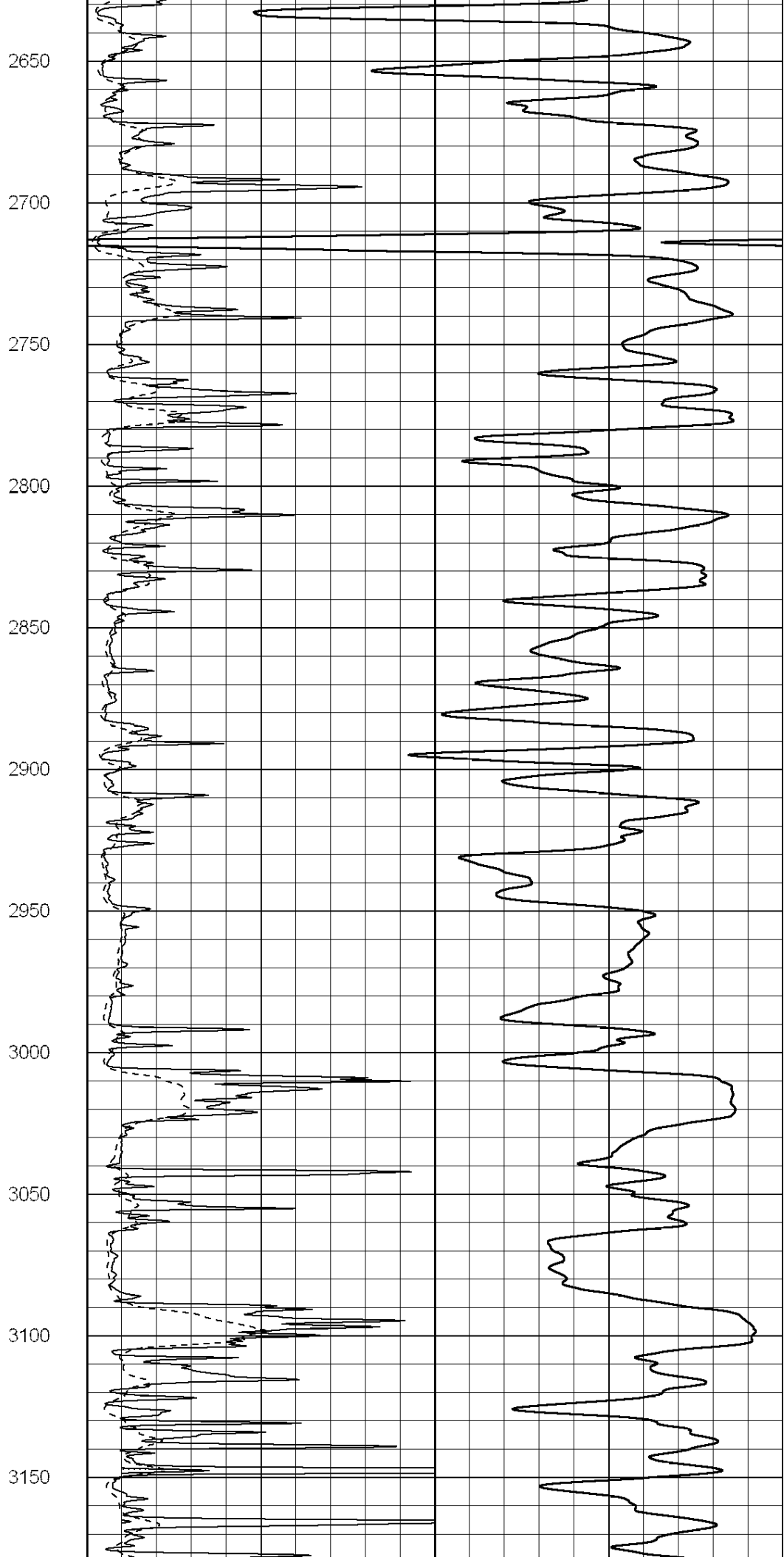
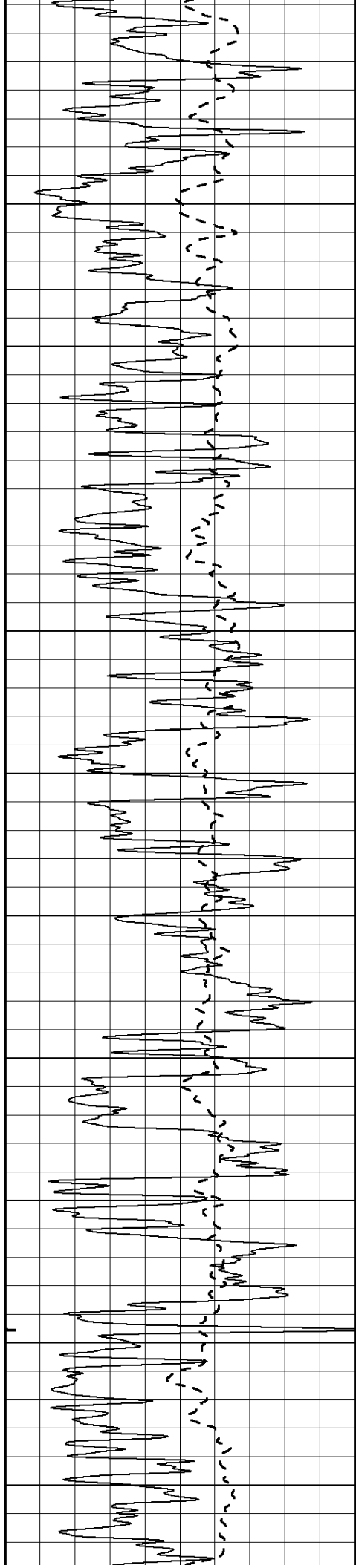


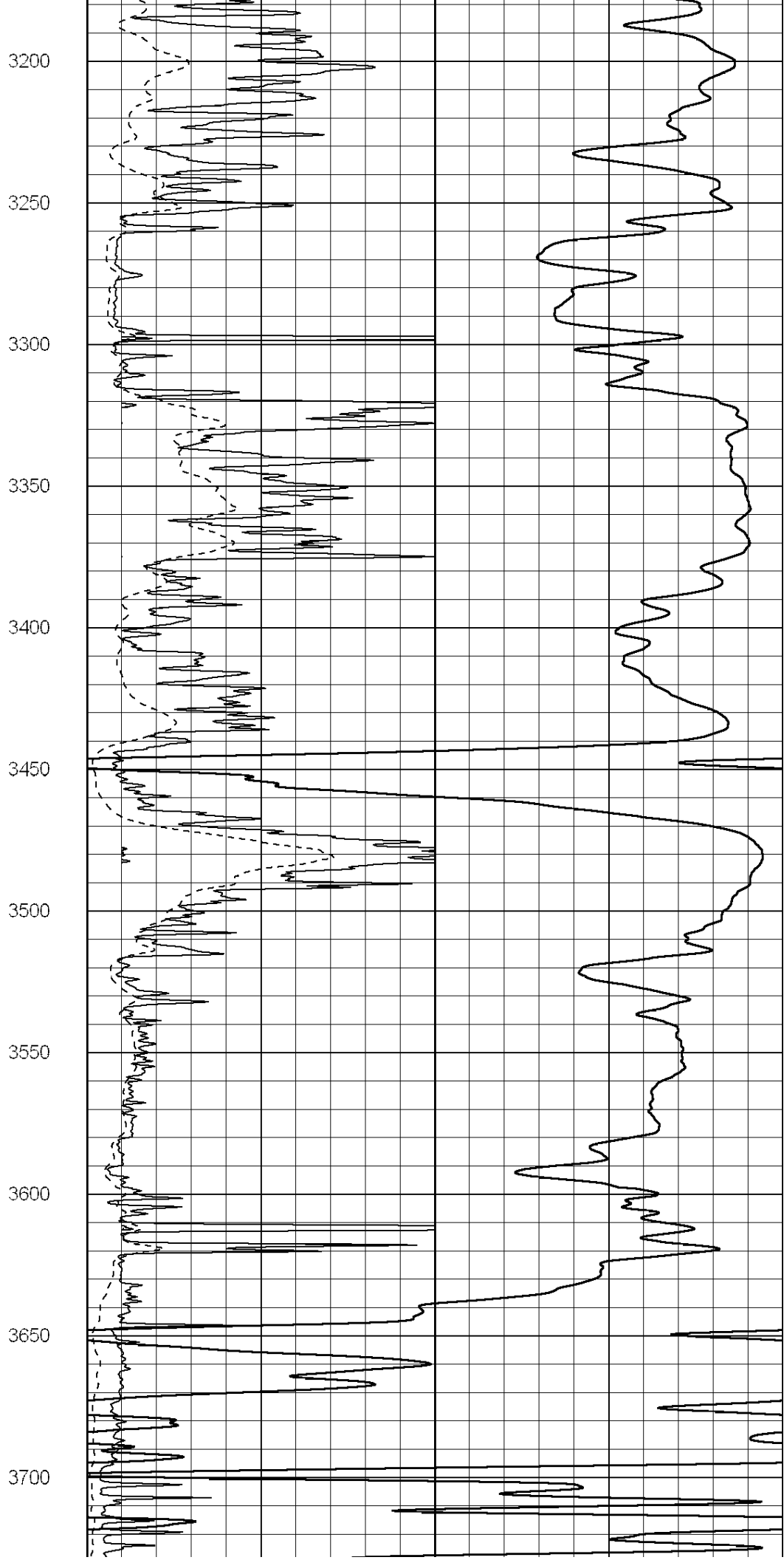
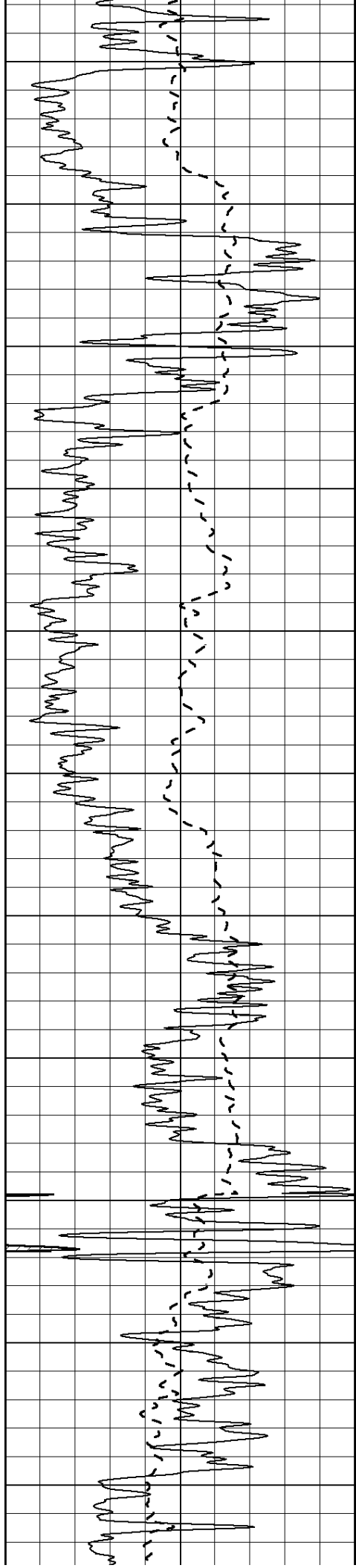


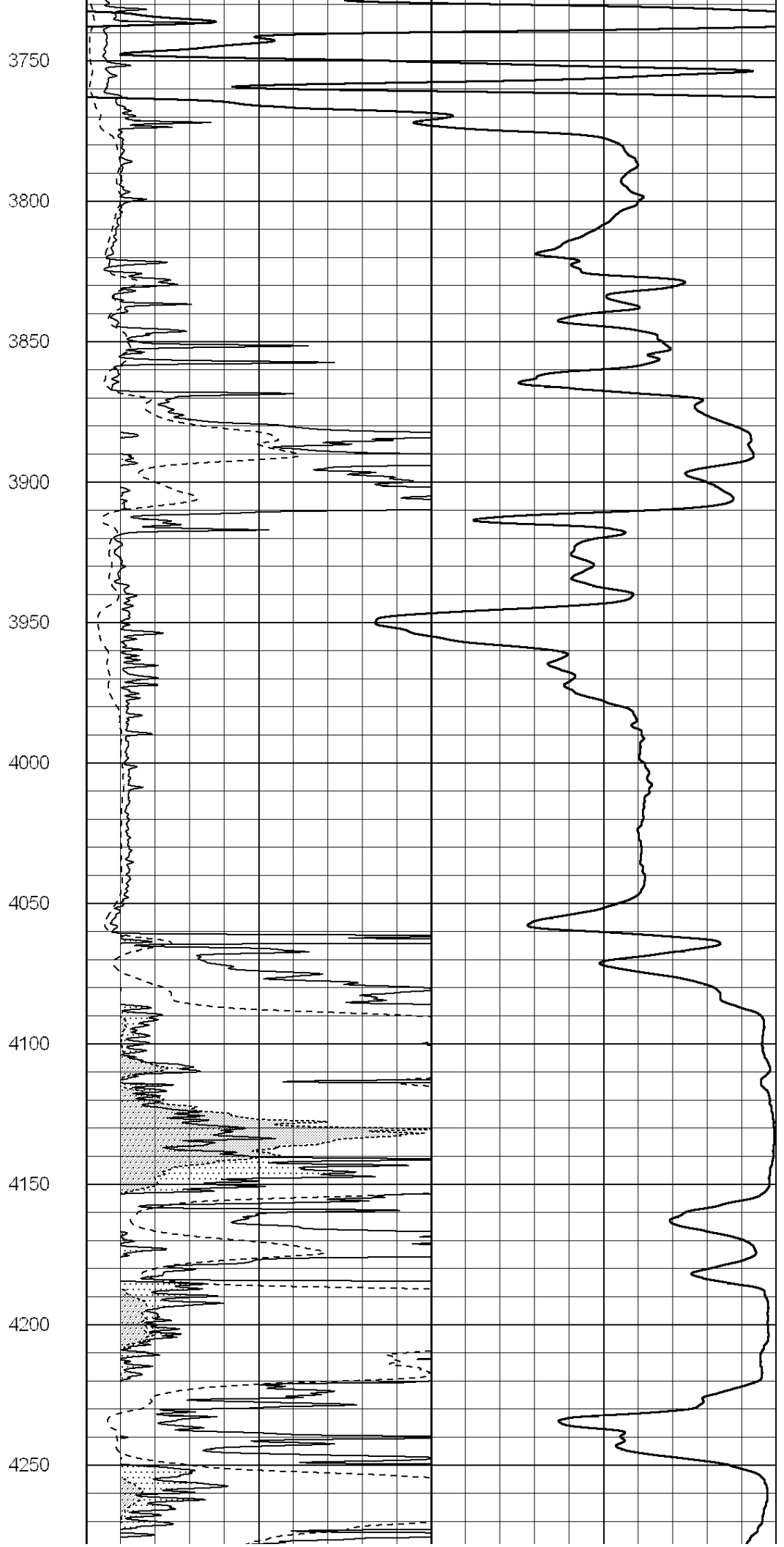
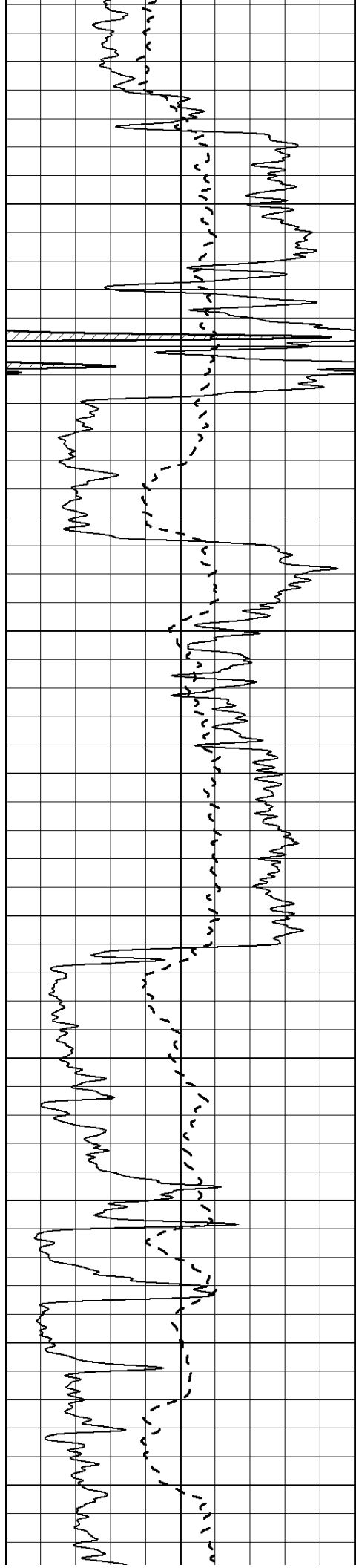


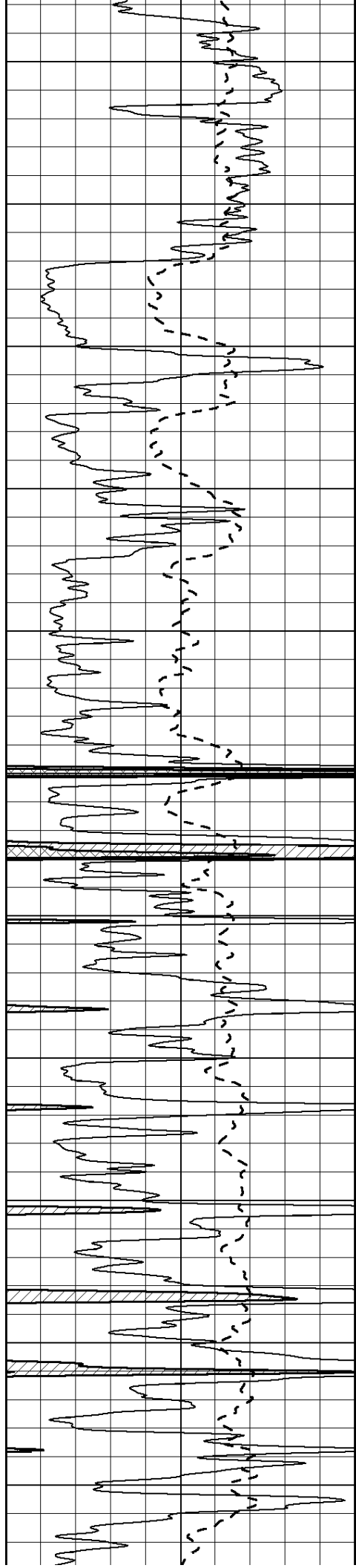












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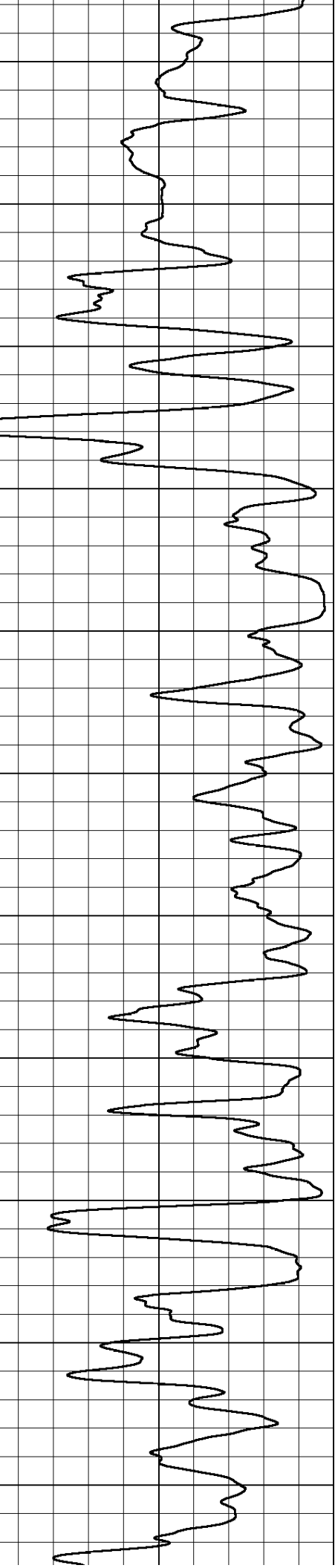
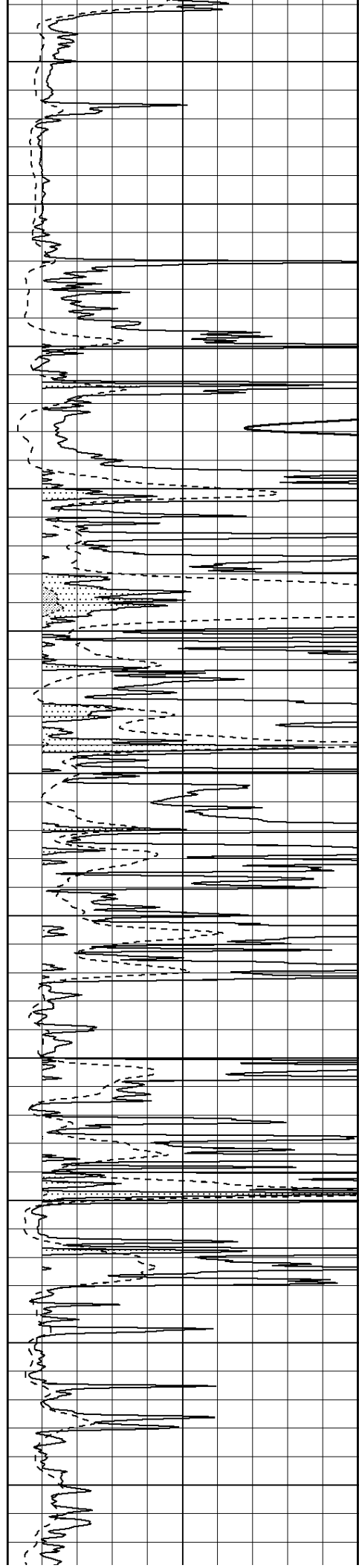
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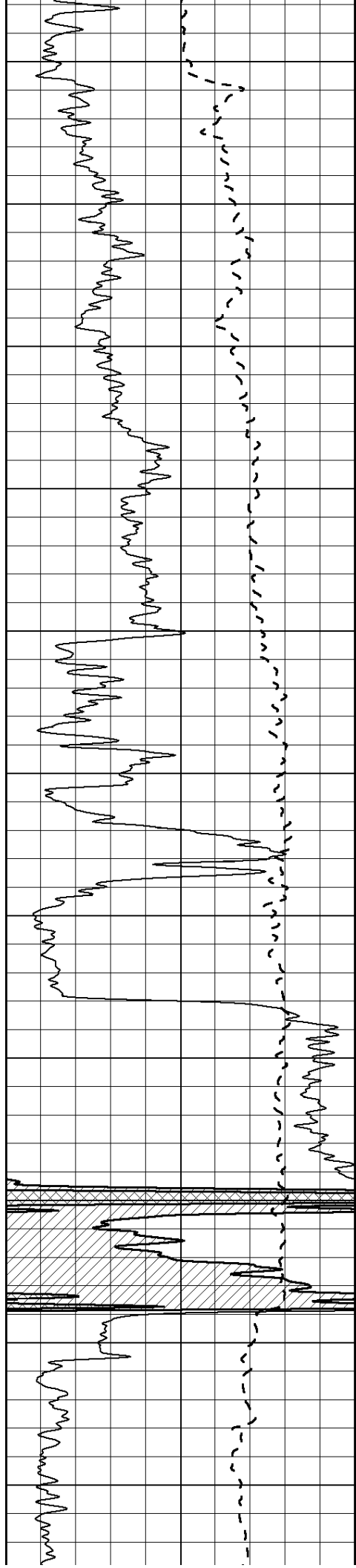
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5000

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5100

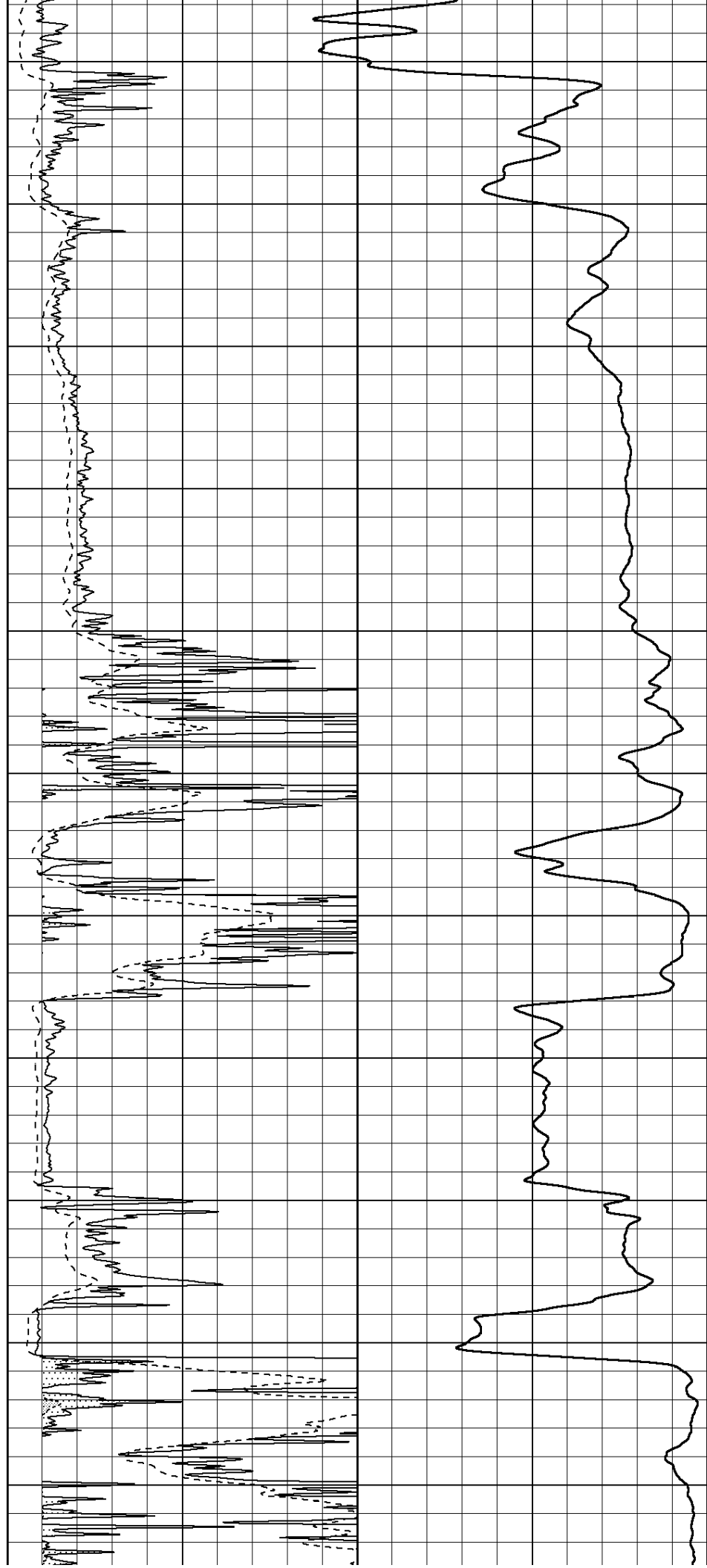
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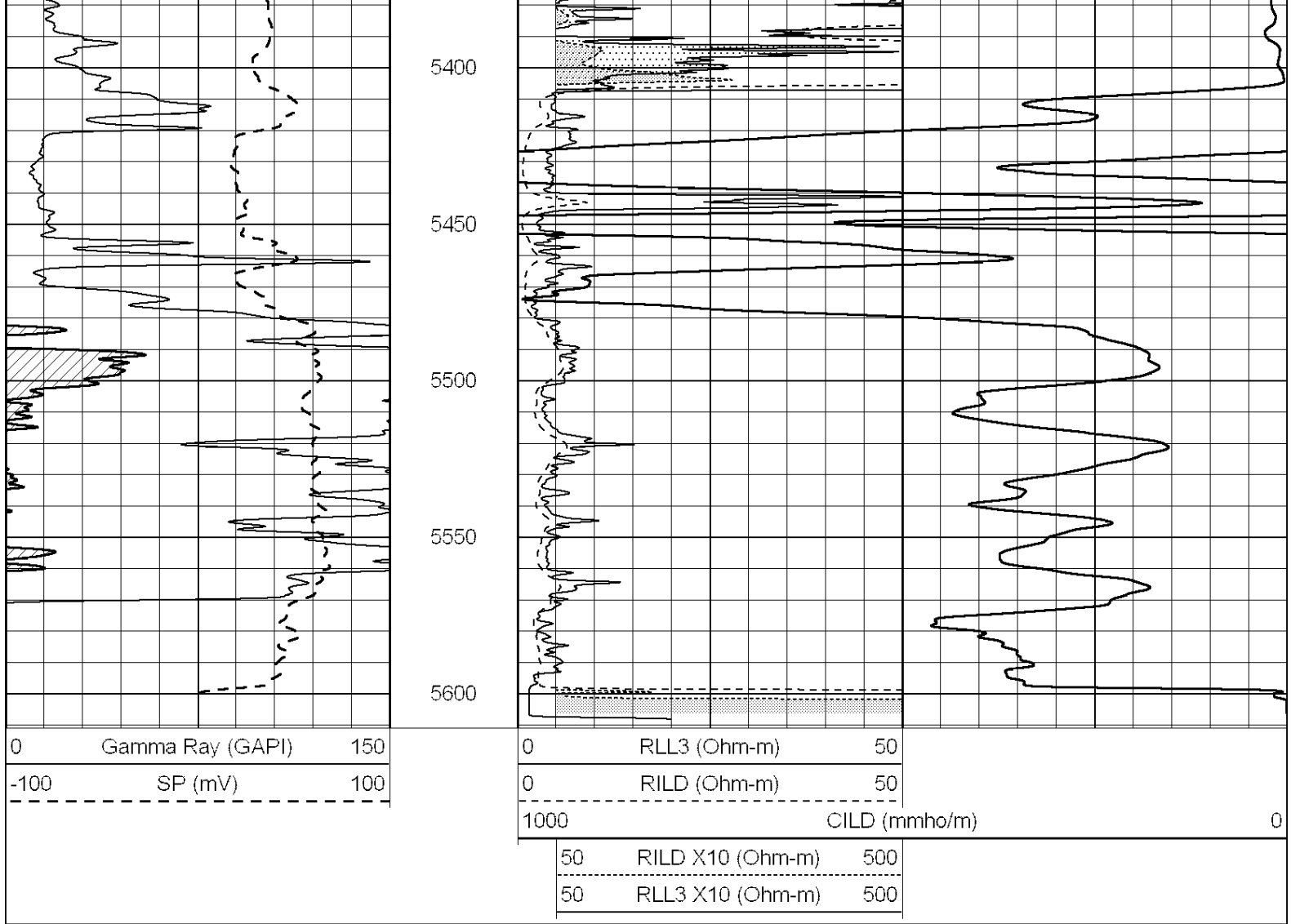
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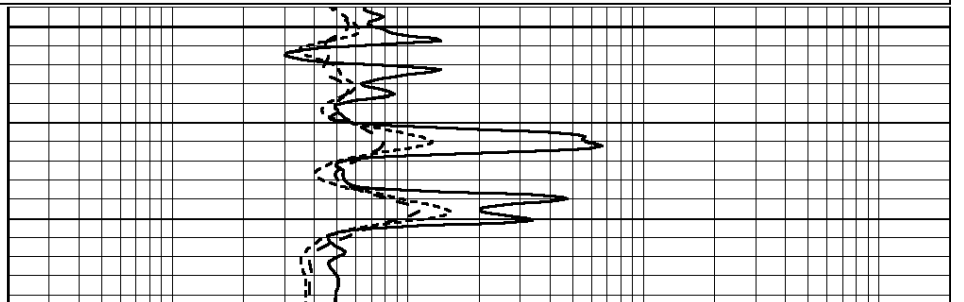
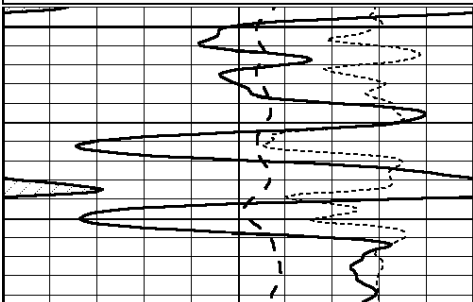


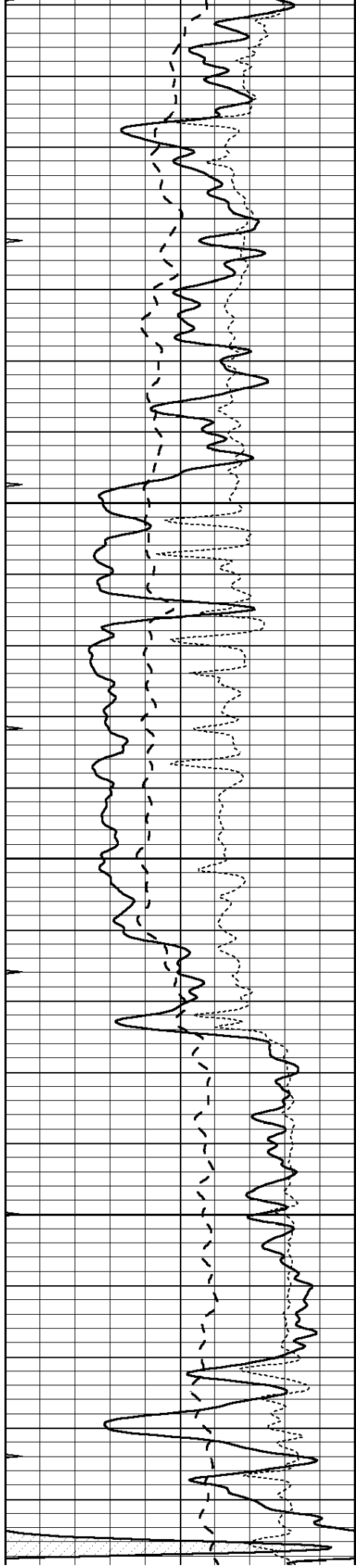
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Database File: 010301pe.db
 Dataset Pathname: pass3.2.1
 Presentation Format: _dil
 Dataset Creation: Sun May 05 18:58:03 2013
 Charted by: Depth in Feet scaled 1:240

| | | |
|------|------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | Rxo/Rt | 50 |
| 0 | MINMK | 20 |

| | | |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



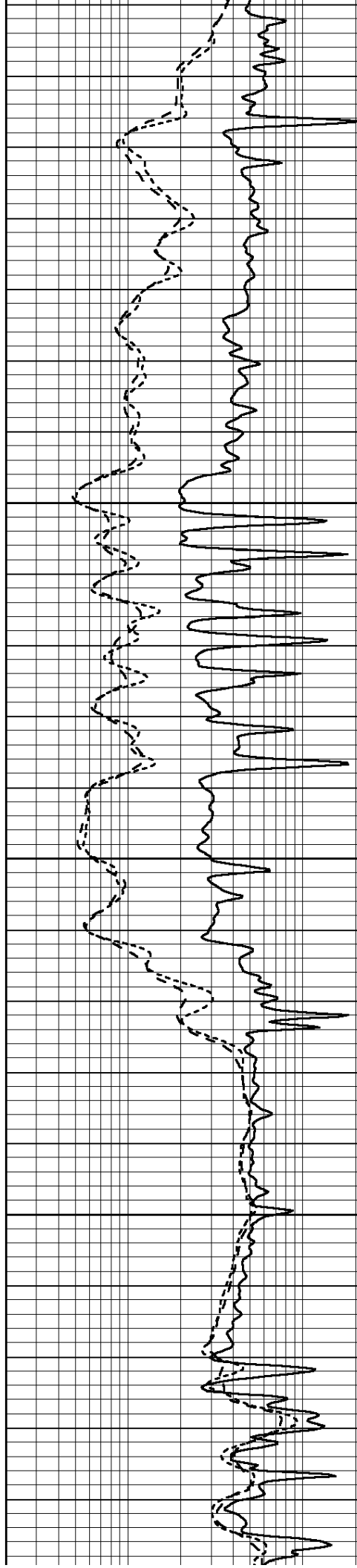


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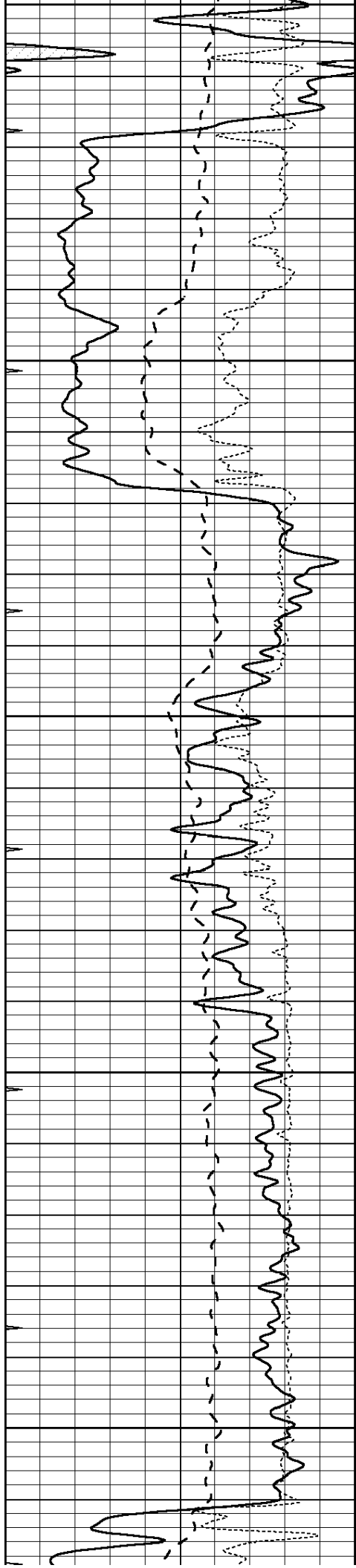


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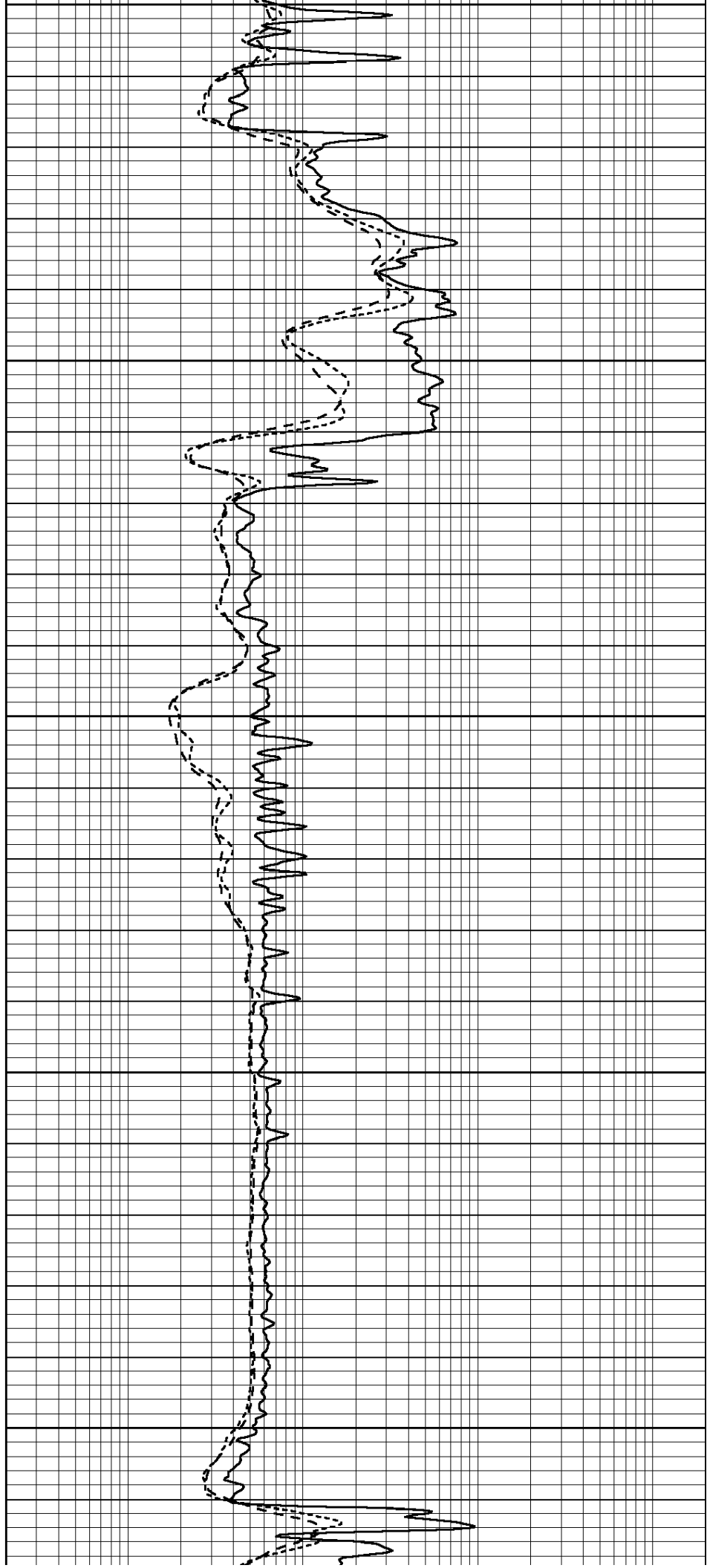
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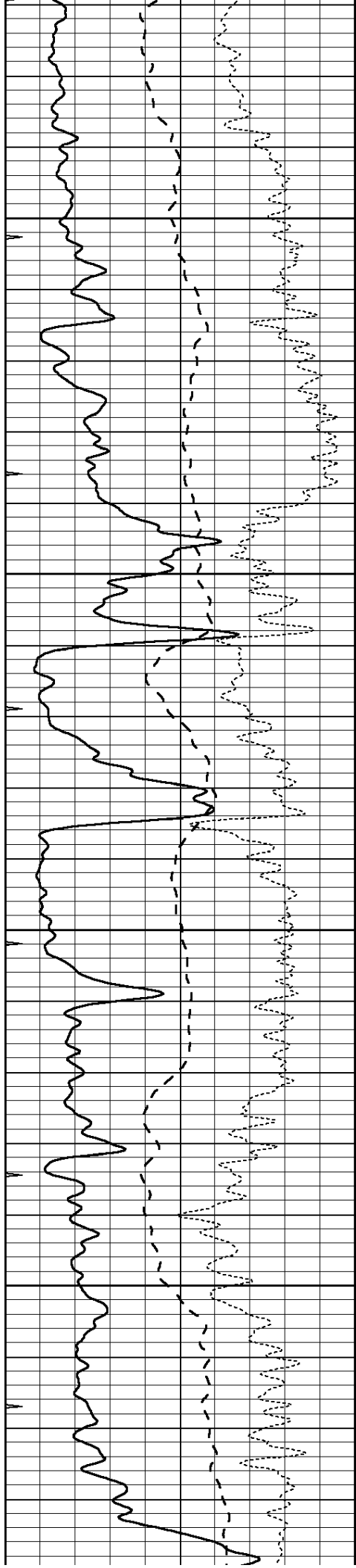
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4050



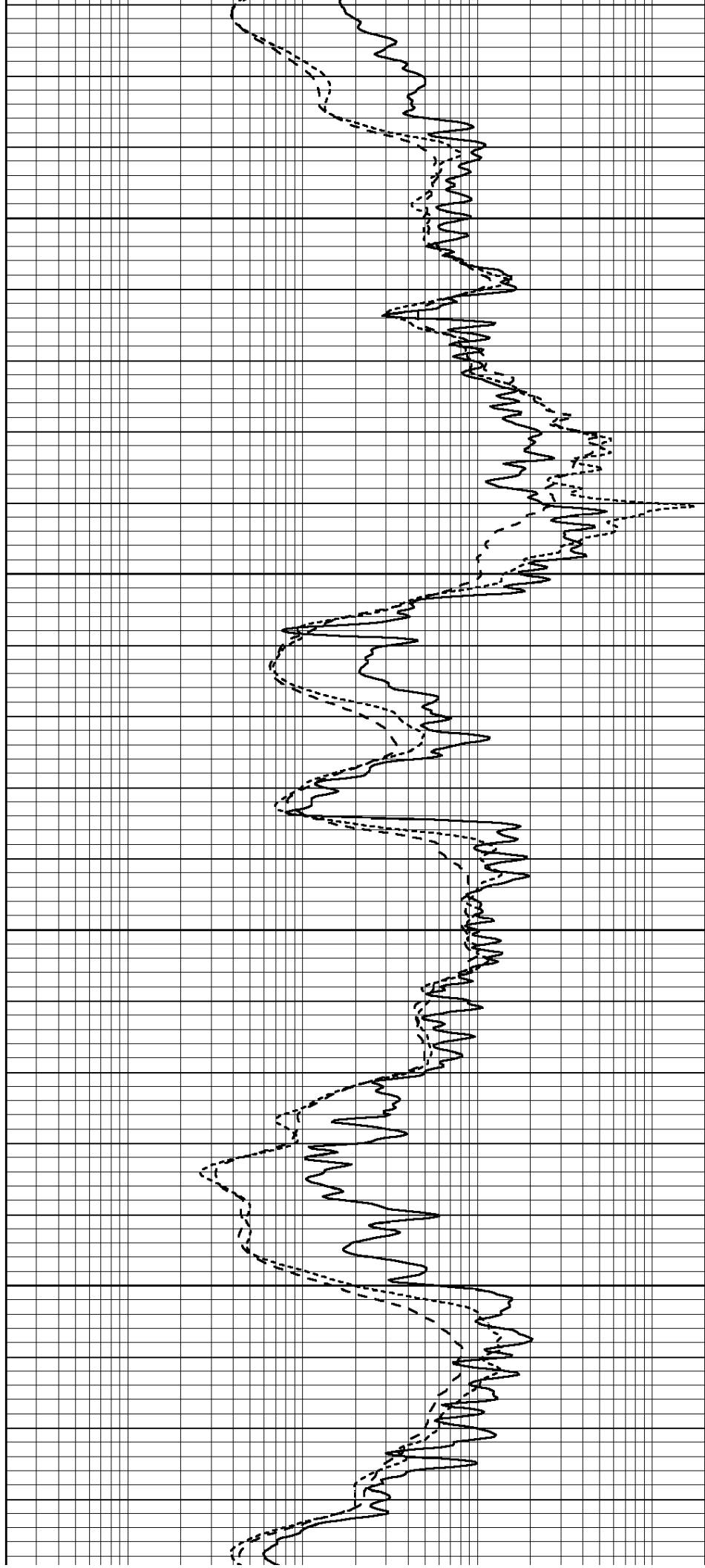


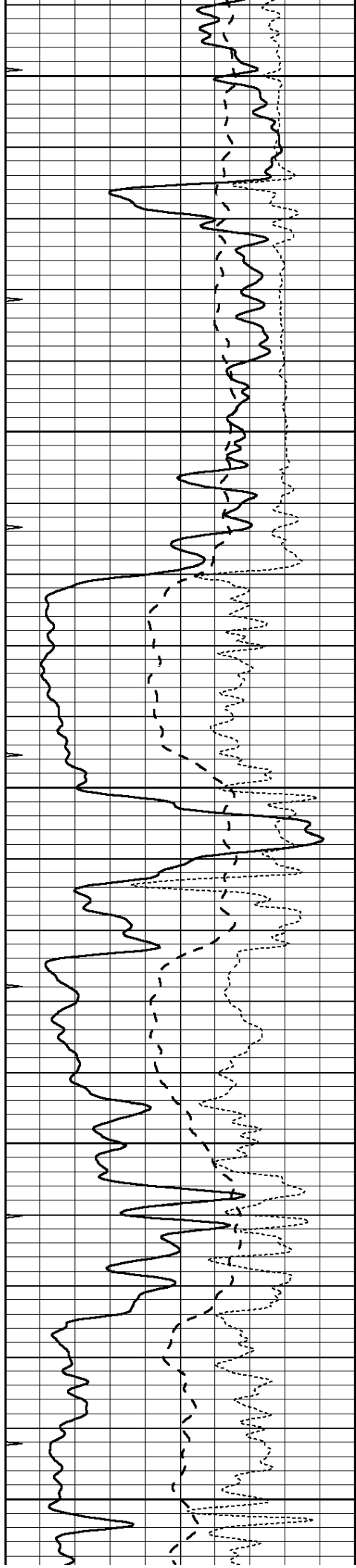
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4150

4200

4250





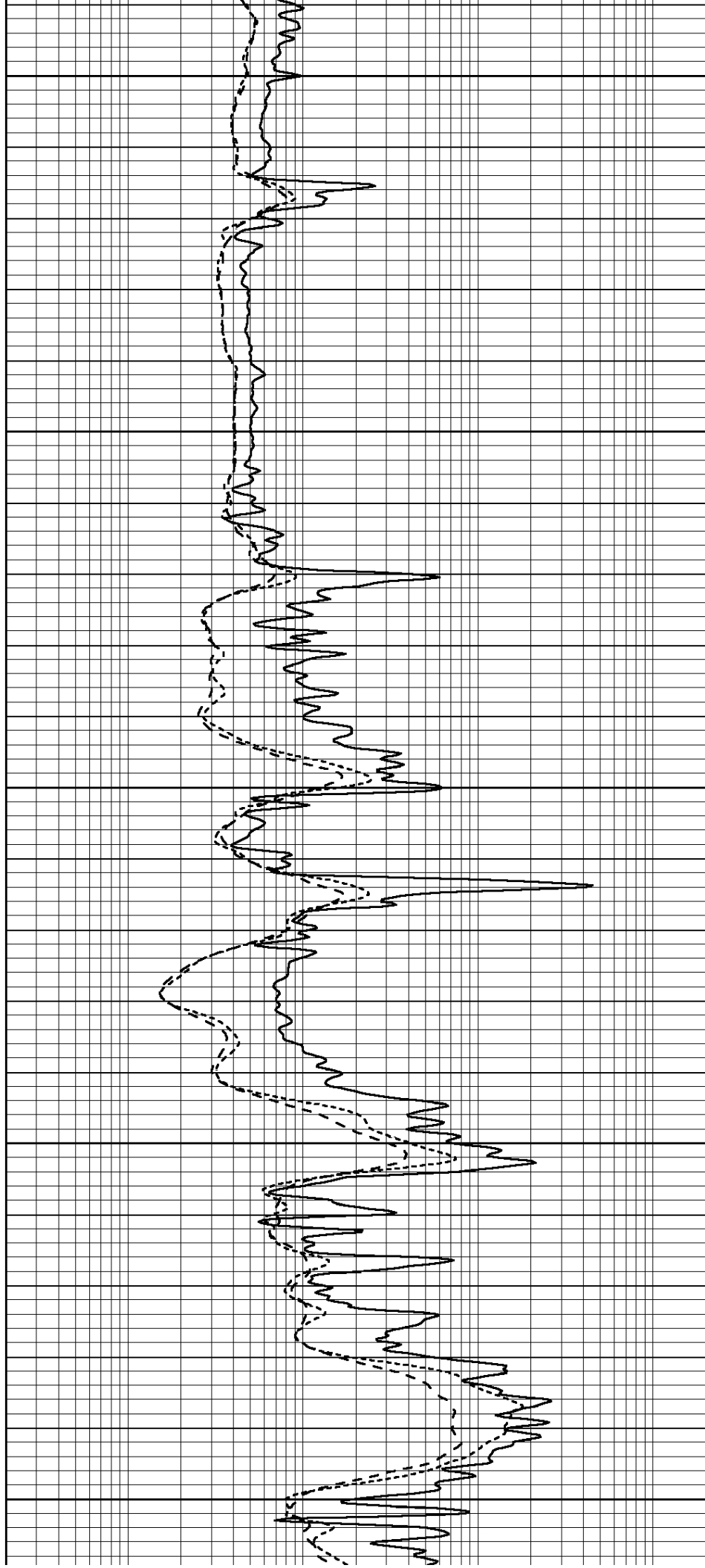
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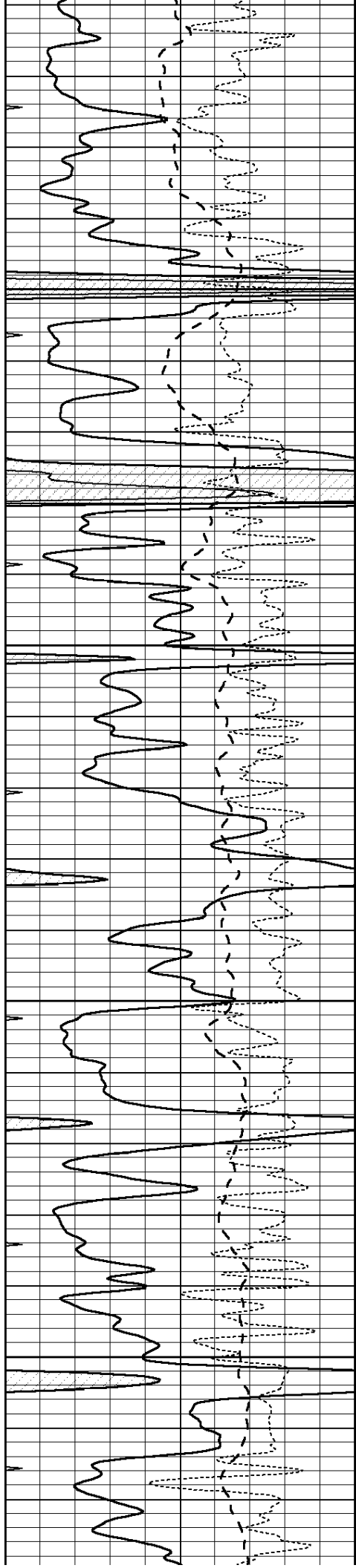
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4500



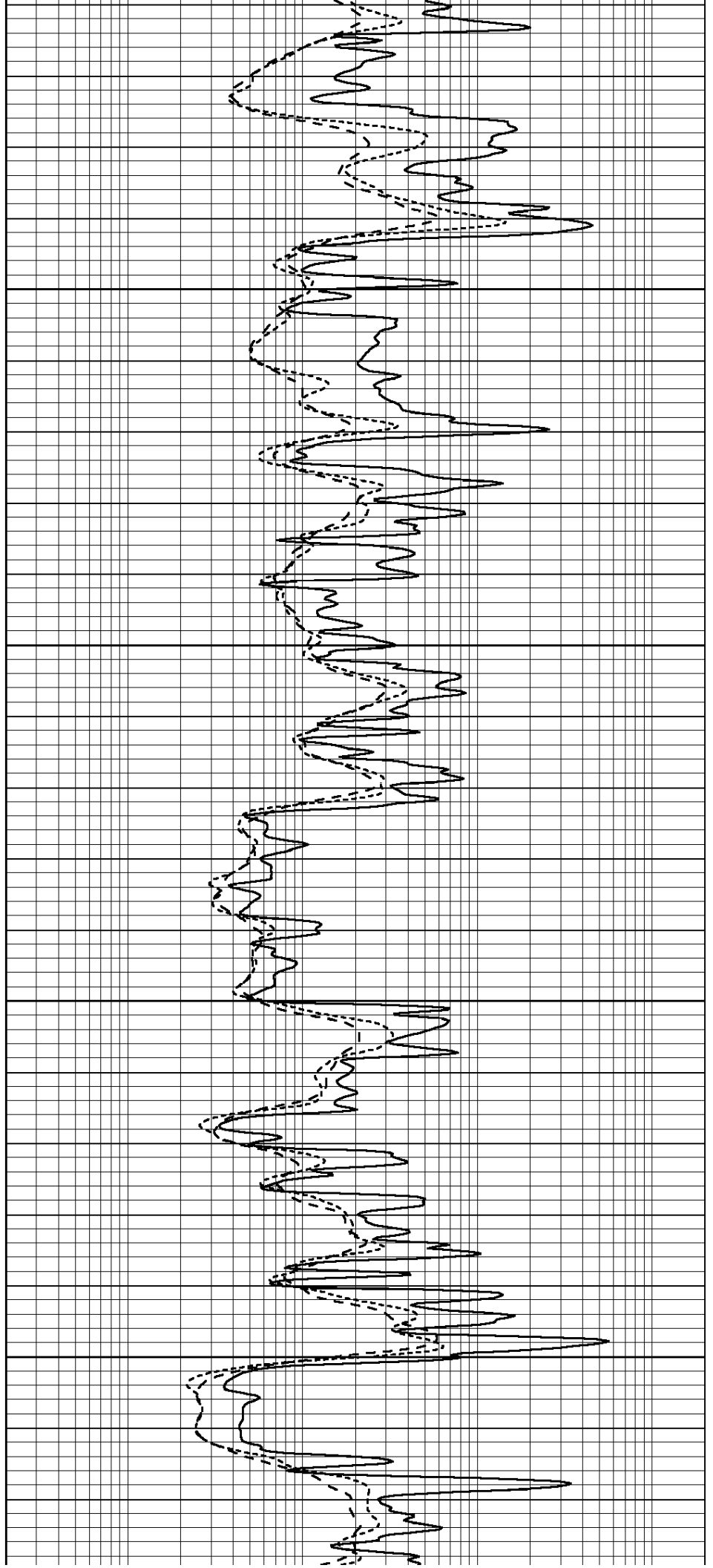


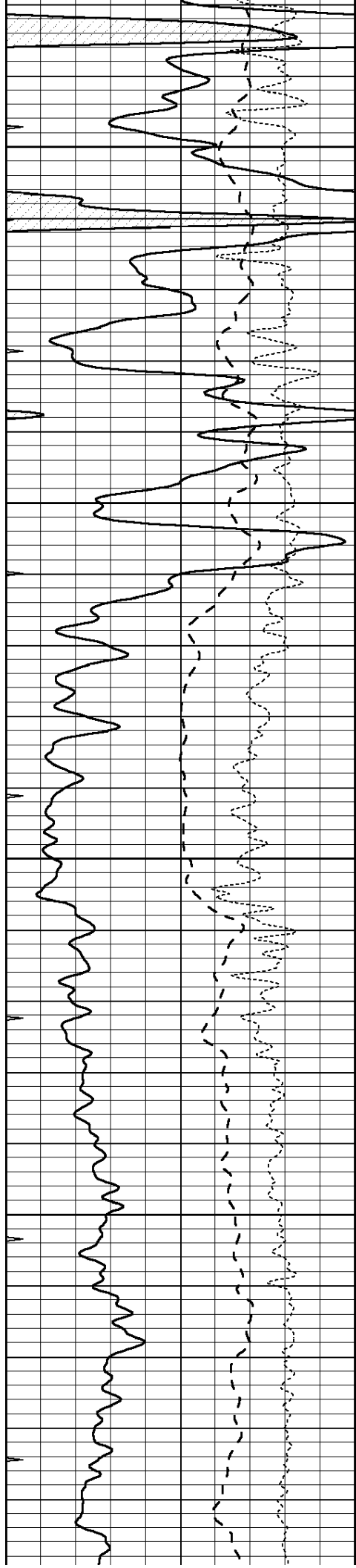
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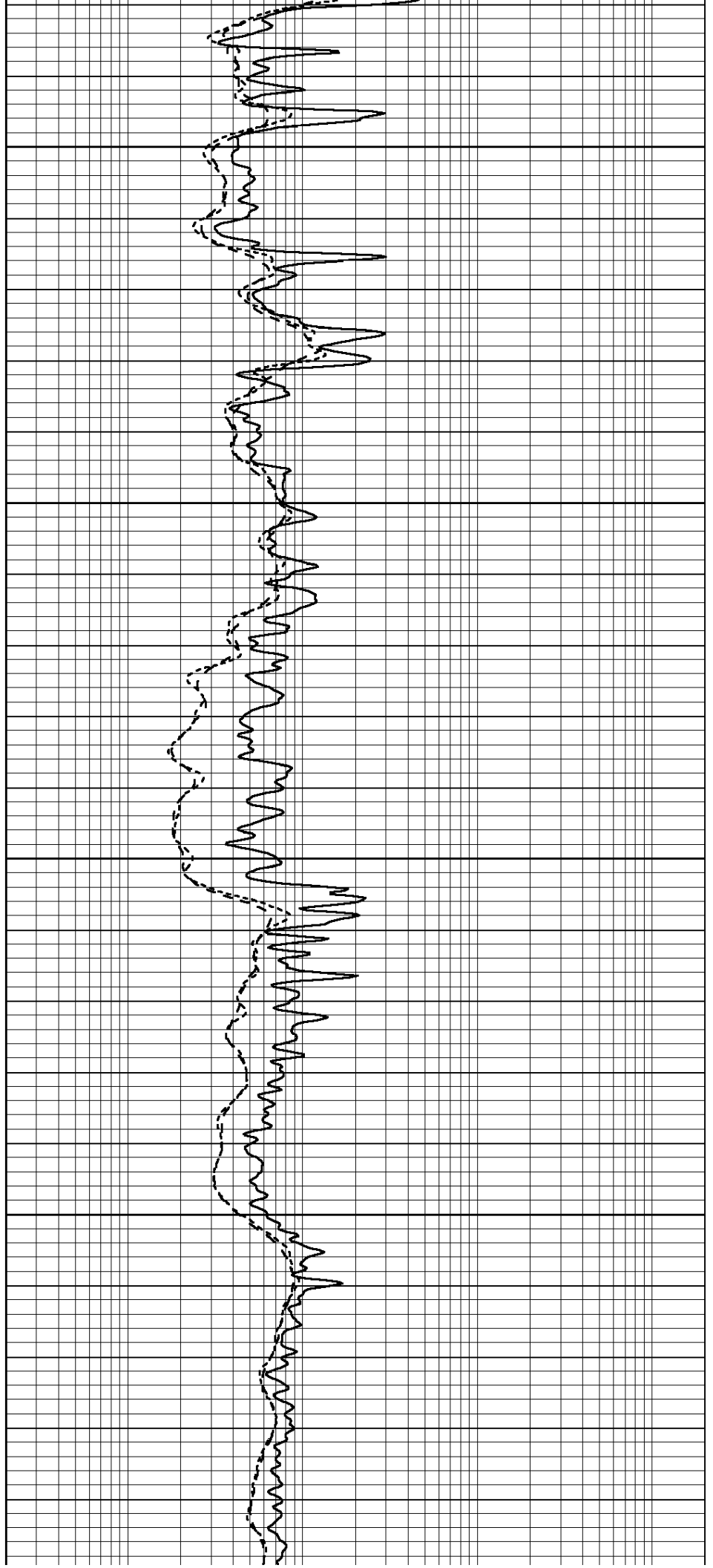


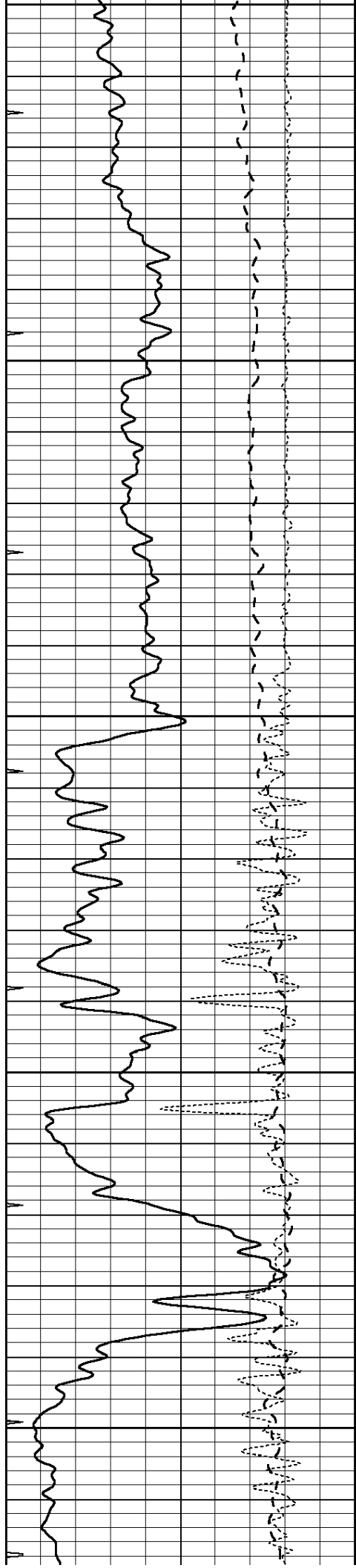
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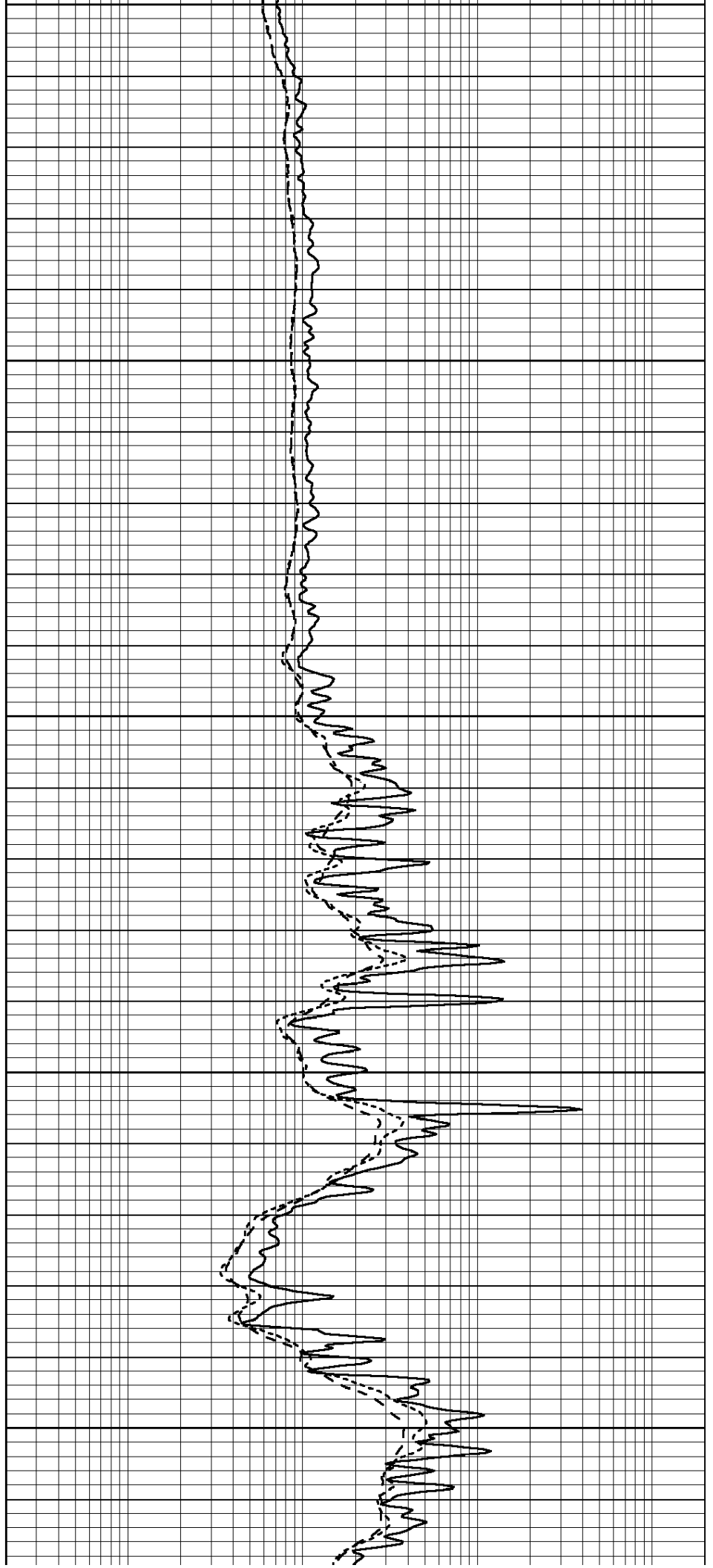
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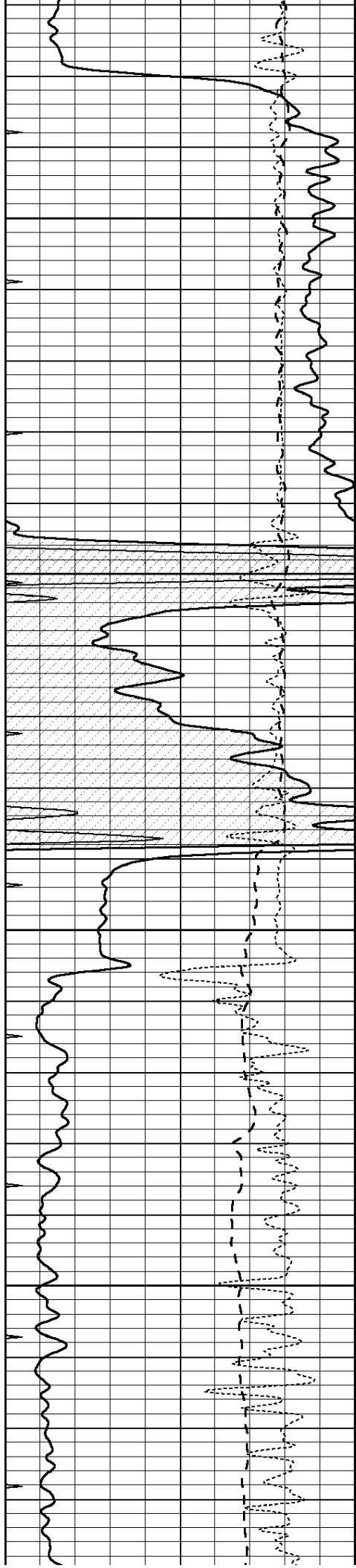
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5100

5150



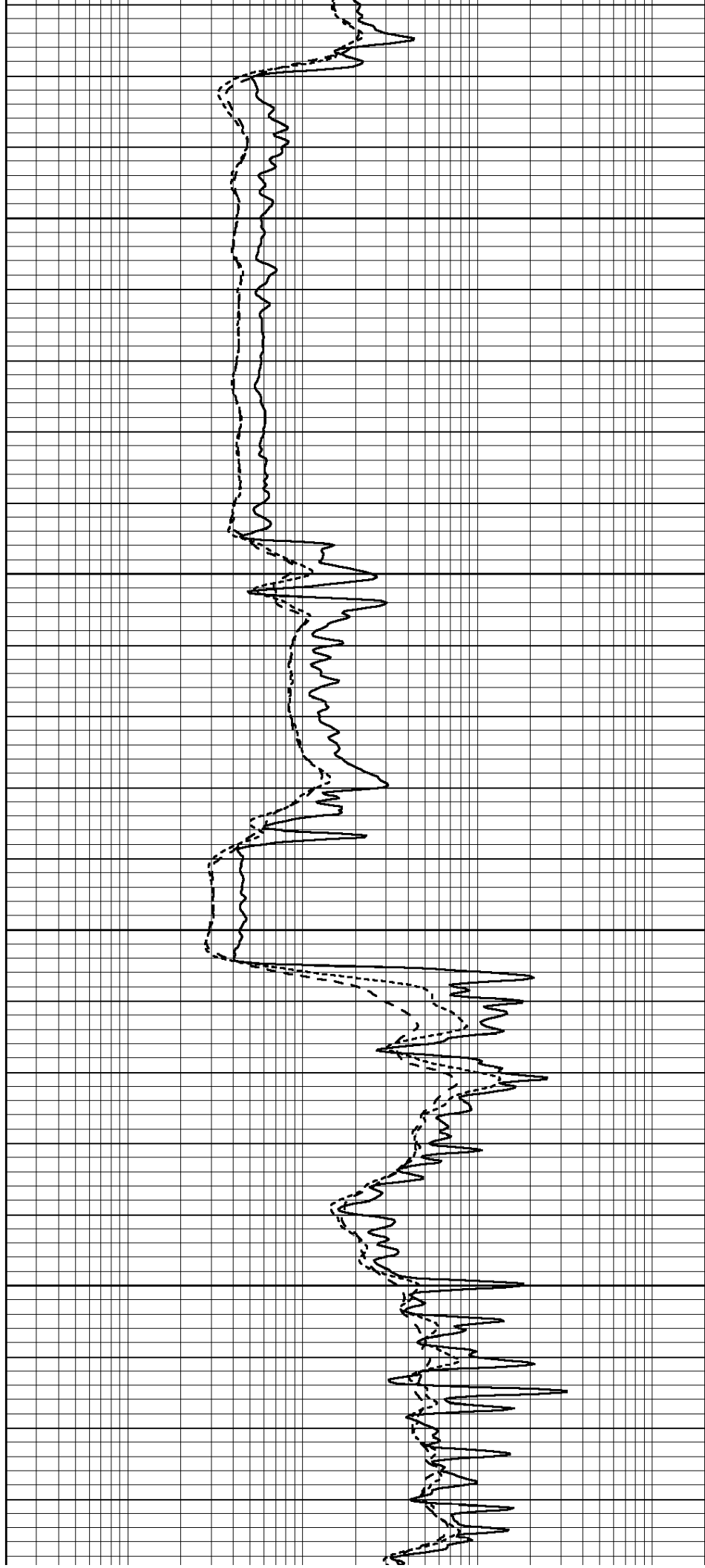


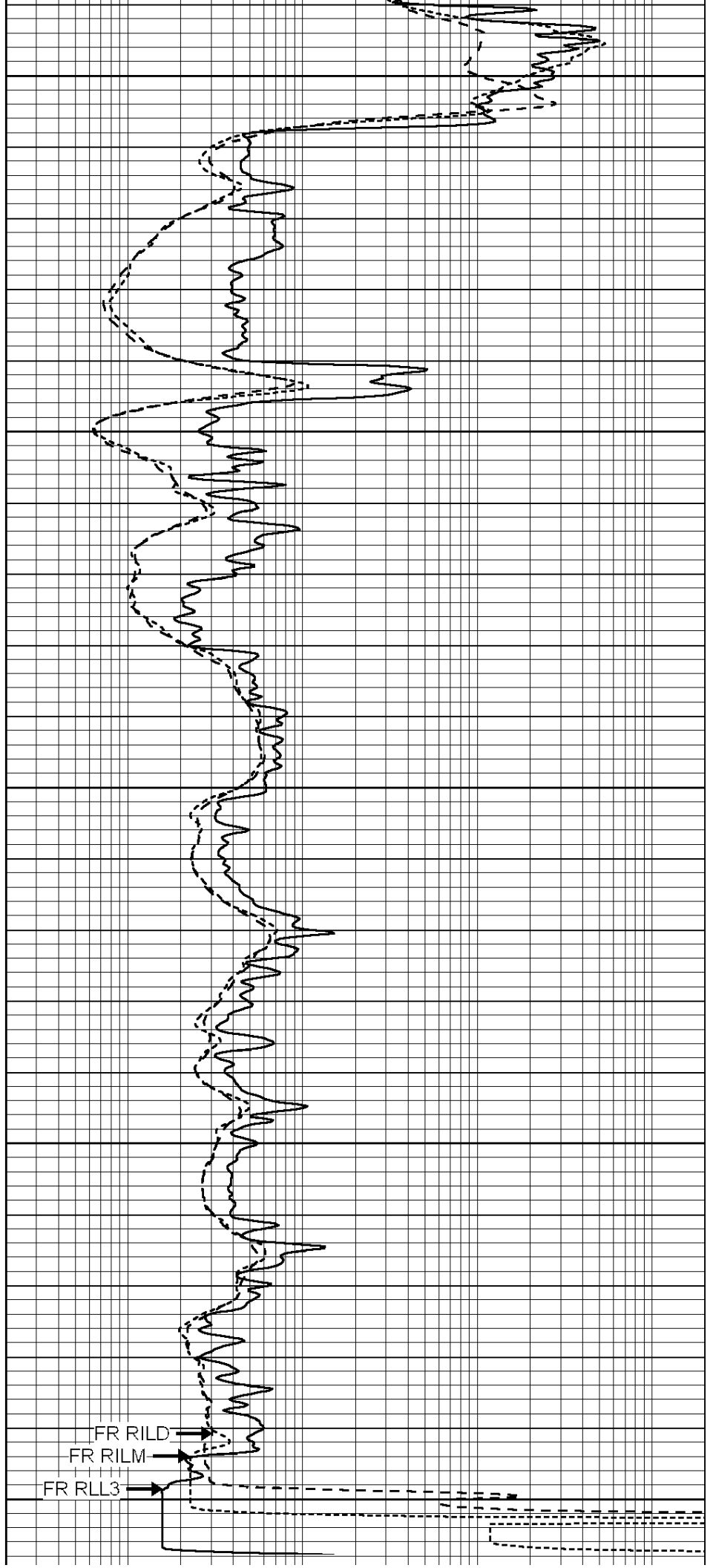
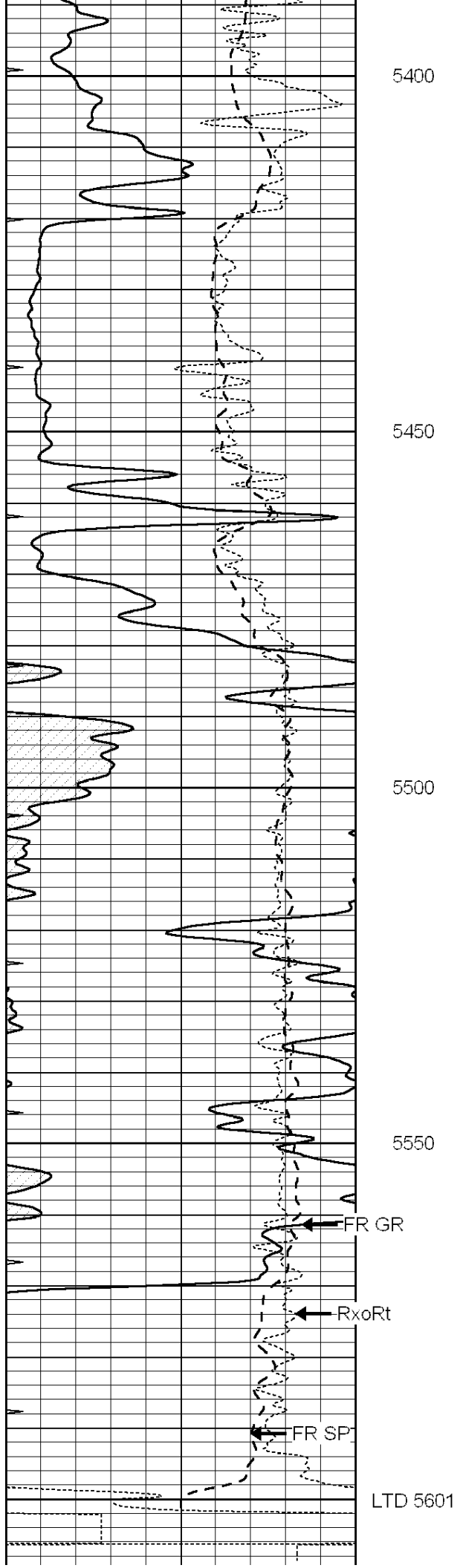
5200

5250

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5350





| | | |
|------|------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | Rxo/Rt | 50 |
| 0 | MINMK | 20 |

| | | |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



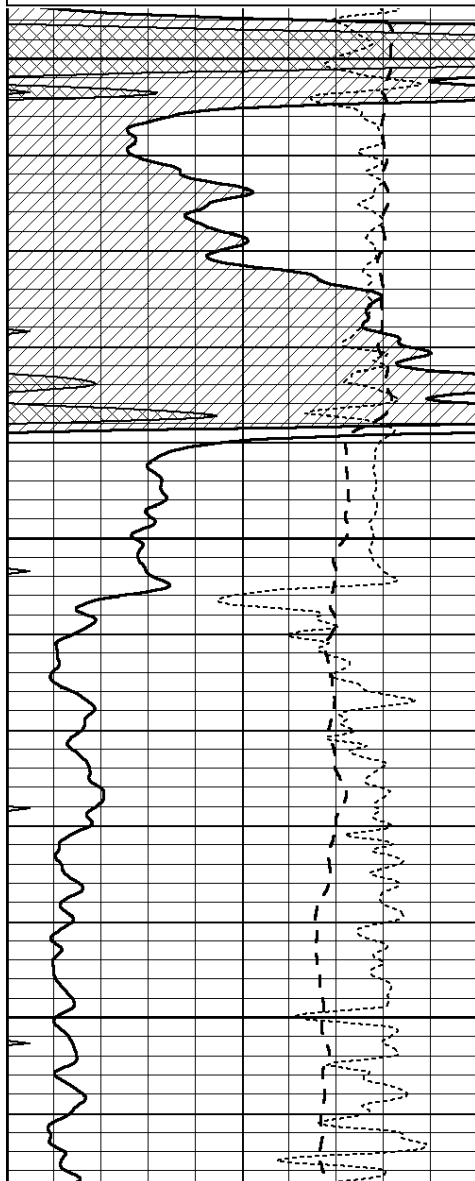
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REPEAT SECTION

Database File: 010301pe.db
 Dataset Pathname: pass2.2
 Presentation Format: _dil
 Dataset Creation: Sun May 05 19:06:51 2013 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

| | | |
|------|------------------|-----|
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| -100 | SP (mV) | 100 |
| -250 | Rxo/Rt | 50 |
| 0 | MINMK | 20 |

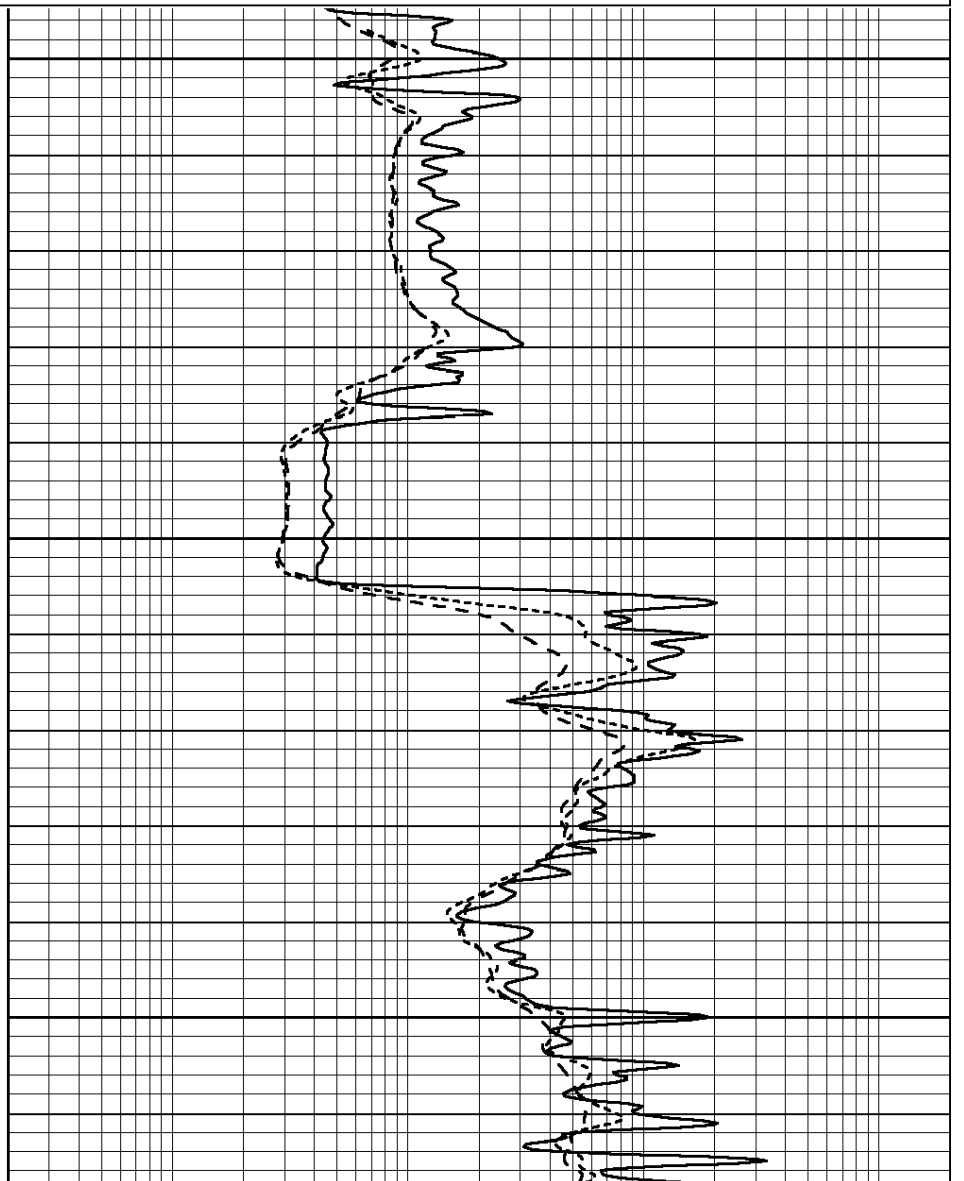
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|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

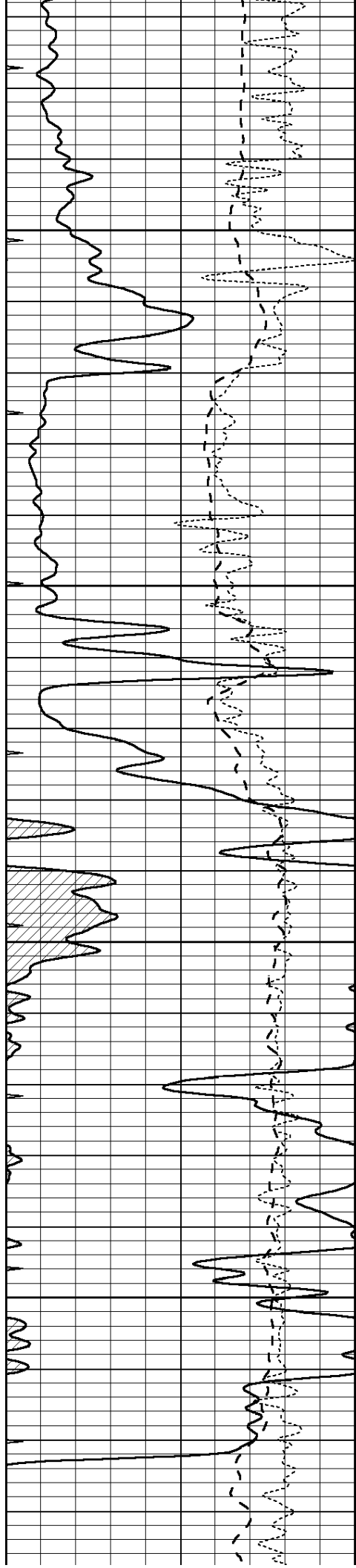


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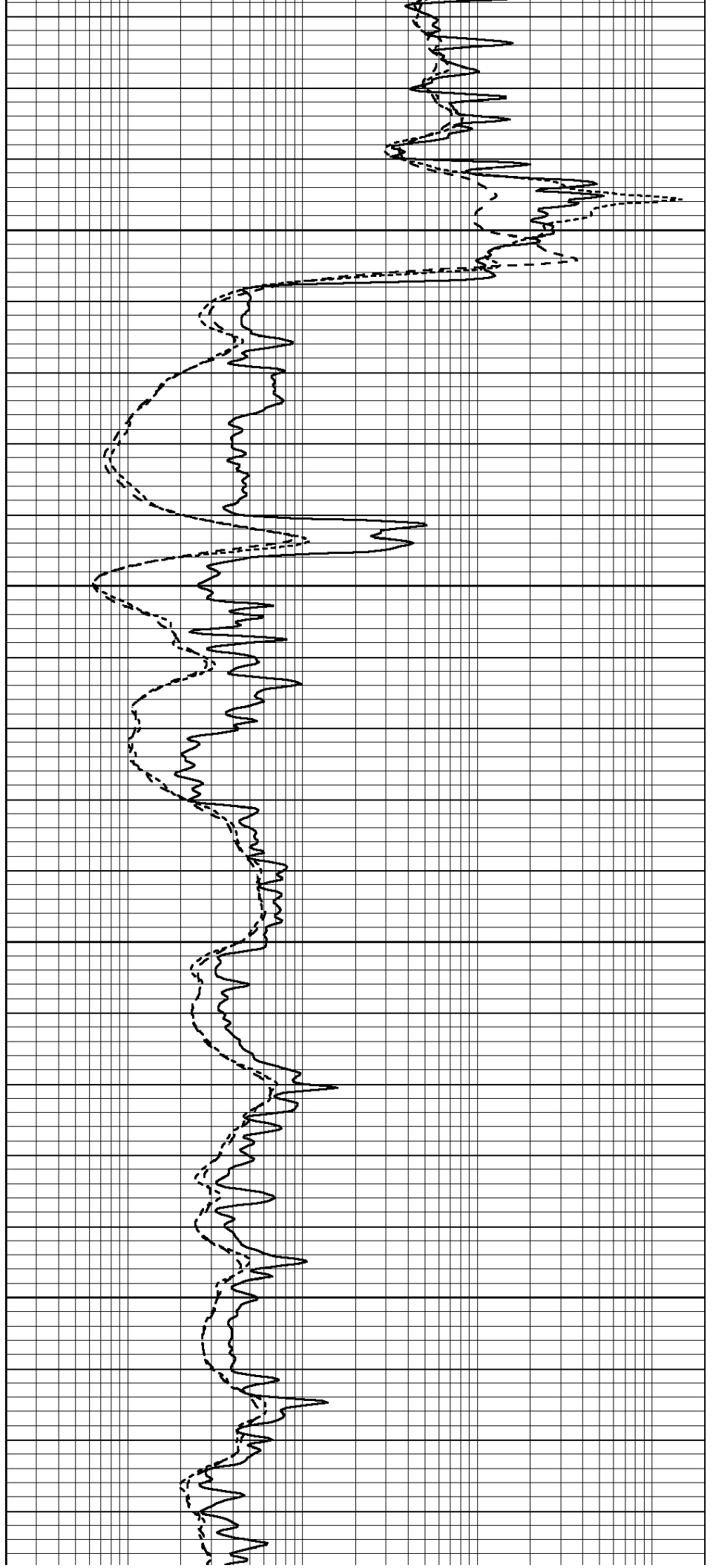


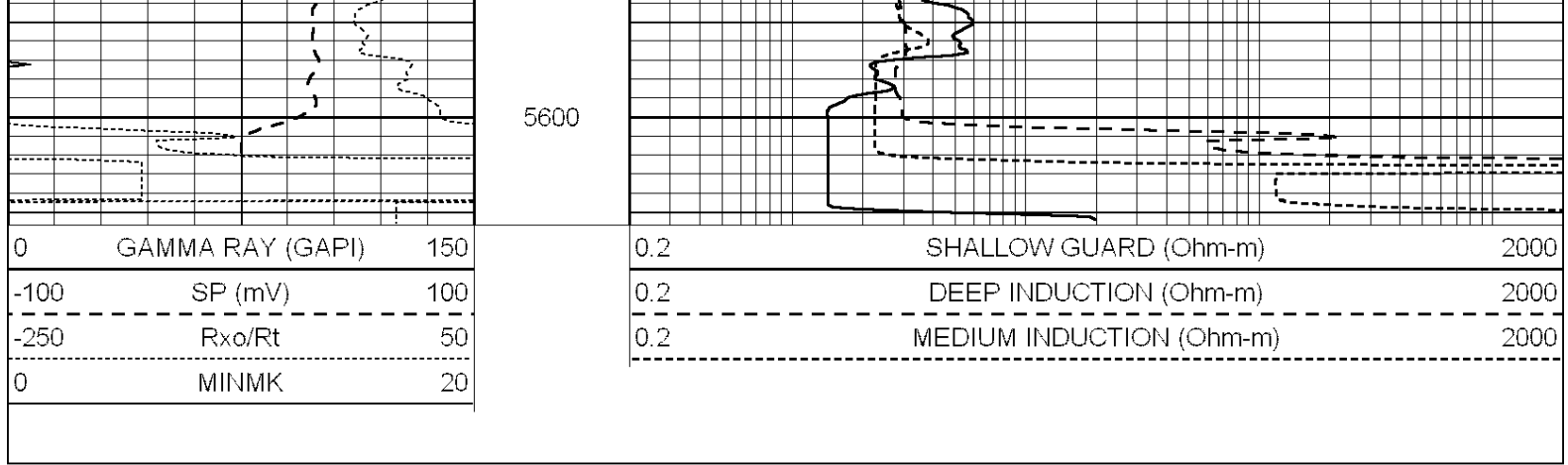
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5450

5500

5550





Calibration Report

Database File: 010301pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Sun May 05 20:37:24 2013

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Thu Apr 25 06:19:30 2013
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

| Loop: | Readings | | | | References | | Results | |
|-----------|----------|-------|---|-------|------------|--------|---------|---------|
| | Air | Loop | | | Air | Loop | m | b |
| Deep | -0.014 | 0.629 | V | 0.000 | 400.000 | mmho/m | 621.923 | -16.000 |
| Medium | 0.039 | 0.728 | V | 0.000 | 464.000 | mmho/m | 640.000 | -21.000 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.011 | 0.610 | V | 0.000 | 400.000 | mmho/m | 667.135 | -7.256 |
| Medium | 0.005 | 0.712 | V | 0.000 | 464.000 | mmho/m | 655.677 | -3.102 |

Downhole Calibration

| | Readings | | | | References | | Results | |
|--------|----------|--------|--------|---------|------------|--------|---------|-------|
| | Zero | Cal | | | Zero | Cal | m' | b' |
| Deep | 0.000 | 0.000 | mmho/m | 14.508 | 388.384 | mmho/m | 1.000 | 0.000 |
| Medium | 0.000 | 0.000 | mmho/m | 166.367 | 504.400 | mmho/m | 1.000 | 0.000 |
| LL3 | | 7.500 | V | | 1400.000 | Ohm-m | | |
| | | 0.000 | V | | 20.000 | Ohm-m | | |
| | | -7.200 | V | | 4000.000 | mmho-m | | |

After Survey Verification

| | Readings | | | | Targets | | Results | |
|--------|----------|-------|--------|-------|---------|--------|---------|-------|
| | Zero | Cal | | | Zero | Cal | m' | b' |
| Deep | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 |
| Medium | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 |
| LL3 | | 1.000 | Ohm-m | | 1.000 | Ohm-m | | |
| | | 0.000 | Ohm-m | | 0.000 | Ohm-m | | |
| | | 1.000 | mmho-m | | 1.000 | mmho-m | | |

Litho Density Calibration Report

Serial: 006 Model: PRB

| | Background | Magnesium | Aluminum | Sandstone | |
|-------------|------------|-------------|----------|---------------------|---------|
| Window 1 | 1686.6 | 11612.8 | 3932.0 | 12718.8 | cps |
| Window 2 | 1531.4 | 9204.7 | 3267.8 | 9851.9 | cps |
| Window 3 | 1198.3 | 4733.6 | 1952.5 | 4920.6 | cps |
| Window 4 | 317.3 | 321.2 | 325.9 | 303.6 | cps |
| Long Space | 0.0 | 7673.3 | 1736.4 | 8320.4 | cps |
| Short Space | 1.7 | 2548.5 | 1657.2 | 2628.8 | cps |
| Rho | | 1.7100 | 2.5900 | 1.3800 | g/cc |
| Pe | | 0.0000 | 2.5700 | 1.5500 | |
| Rib Angle | : 43.8 | Rib Slope | : 0.961 | Density/Spine Ratio | : 0.569 |
| Spine Angle | : 73.8 | Spine Slope | : 3.453 | Spine Intercept | : -18.1 |

| Before Survey Verification | | Performed Wed Dec 31 18:00:00 1969 | | | |
|----------------------------|-----|------------------------------------|--------|--------|------|
| Window 1 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 2 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 3 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 4 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Long Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Short Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Measured Rho | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Correction | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Pe | | | 0.0000 | 0.0000 | |

| After Survey Verification | | Performed Wed Dec 31 18:00:00 1969 | | | |
|---------------------------|-----|------------------------------------|--------|--------|------|
| Window 1 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 2 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 3 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 4 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Long Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Short Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Measured Rho | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Correction | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Pe | | | 0.0000 | 0.0000 | |

Compensated Neutron Calibration Report

| | |
|----------------|--------|
| Serial Number: | 070808 |
| Tool Model: | Probe |

| PRE-SURVEY VERIFICATION | | | | |
|-------------------------|----------|----------|--------|--|
| Detector | Readings | Measured | Target | |
| Short Space | cps | | | |
| Long Space | cps | pu | pu | |

| POST-SURVEY VERIFICATION | | | | |
|--------------------------|----------|----------|--------|--|
| Detector | Readings | Measured | Target | |
| Short Space | cps | | | |
| Long Space | cps | pu | pu | |

Gamma Ray Calibration Report

| | |
|----------------|--------------------------|
| Serial Number: | 070559 |
| Tool Model: | OPEN_GR |
| Performed: | Mon Apr 15 10:30:52 2013 |

Performed: Mon Apr 15 10:50:52 2015

| | | |
|---------------------|--------|----------|
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 0.3200 | GAPI/cps |