



**SUPERIOR
Hays,
Kansas**

**DUAL
INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.
Well #1 JACOBS-WOOD
Field
County HASKELL
State KANSAS

Company RITCHIE EXPLORATION, INC.
Well #1 JACOBS-WOOD
Field
County HASKELL State KANSAS

Location: 660' FNL & 660' FEL
API # : 15-081-21887-00-00
Other Services
CDL/CNL
Elevation
K.B. 2838
D.F. 2836
G.L. 2827

Date	2-4-10		
Run Number	ONE		
Depth Driller	5700		
Depth Logger	5708		
Bottom Logged Interval	5706		
Top Log Interval	0		
Casing Driller	8 5/8" @ 1670'		
Casing Logger	1665		
Bit Size	7 7/8		
Type Fluid In Hole	CHEMICAL MUD	CHLORIDES 3300 PPM	
Density / Viscosity	9.3/62		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.90 @ 70F		
Rmf @ Meas. Temp	.675 @ 70F		
Rmc @ Meas. Temp	1.08 @ 70F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.480 @ 131F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	131F		
Equipment Number	680		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	TERRY MCLEOD		

<<< 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 SUPERIOR WELL SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
COPELAND KS., W. SIDE OF TOWN TO BLACKTOP, 5 S. TO INTERSECTION
2 W. - 1/4 S. - W. INTO

Charted by:

Depth in Feet scaled 1:600

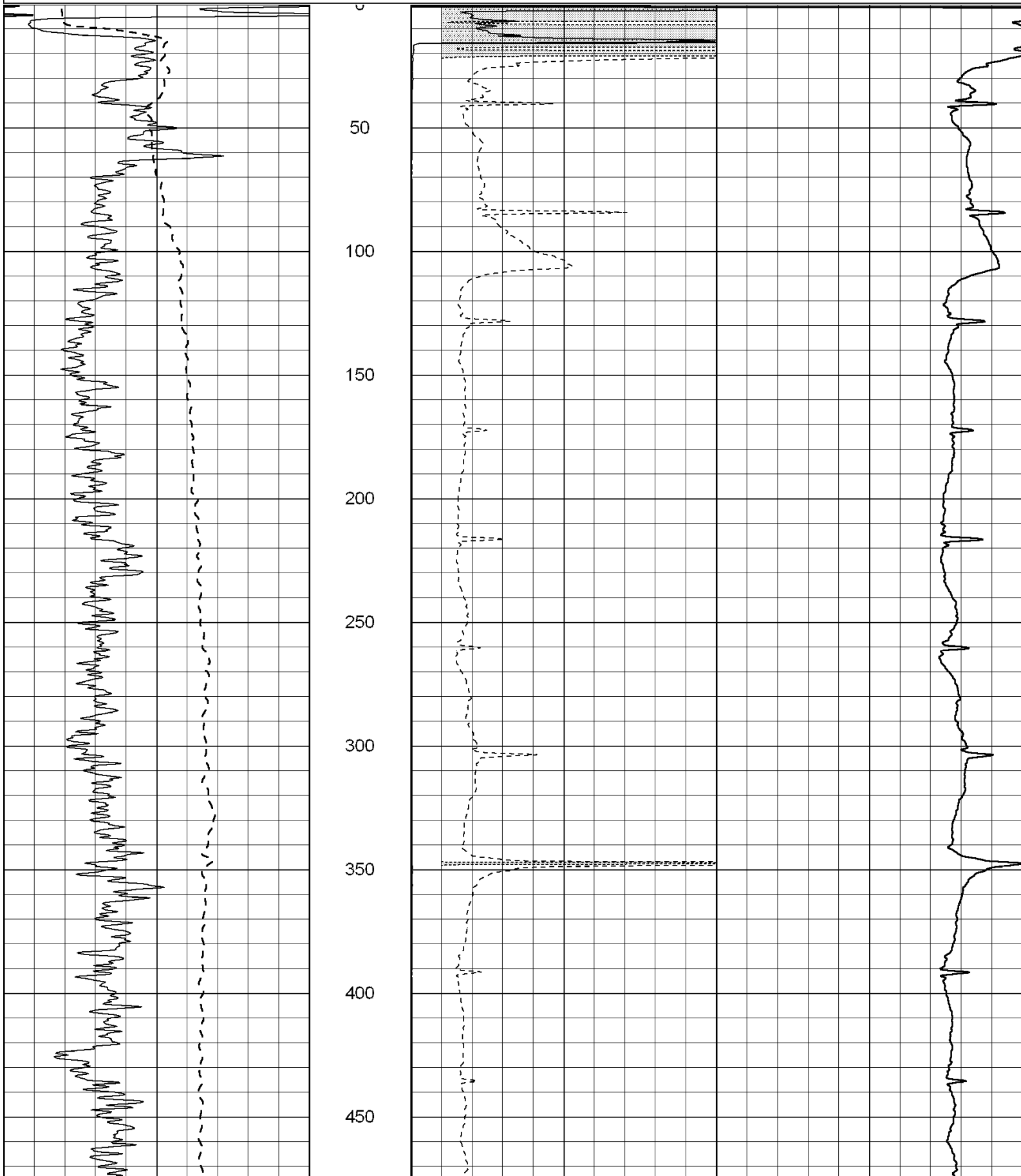
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-100	SP (mV)	100

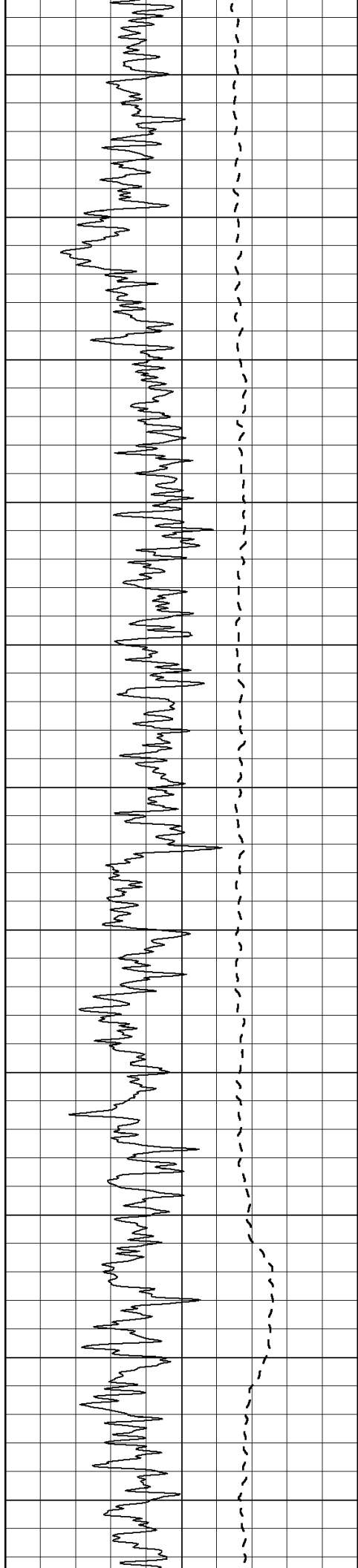
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0	Deep Induction (Ohm-m)	50

1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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500

550

600

650

700

750

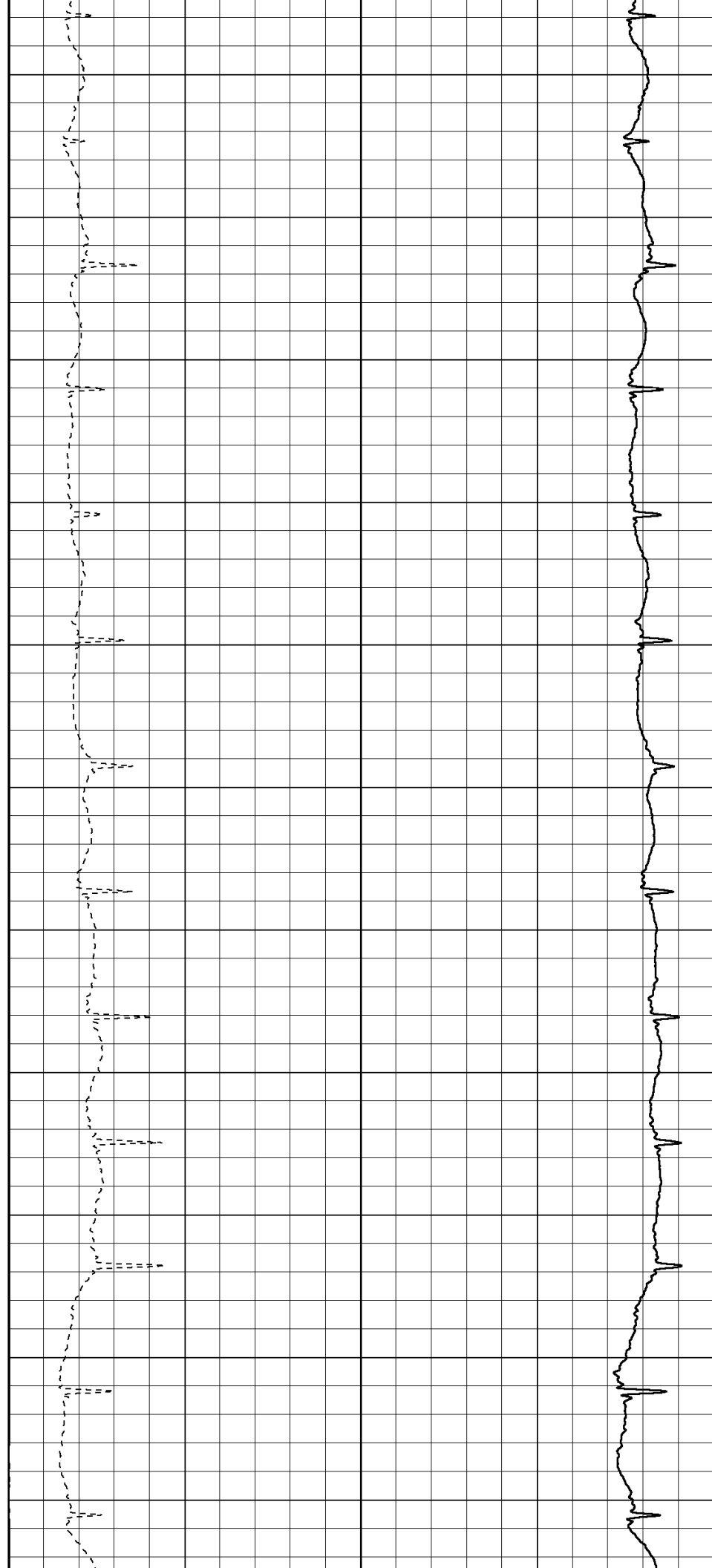
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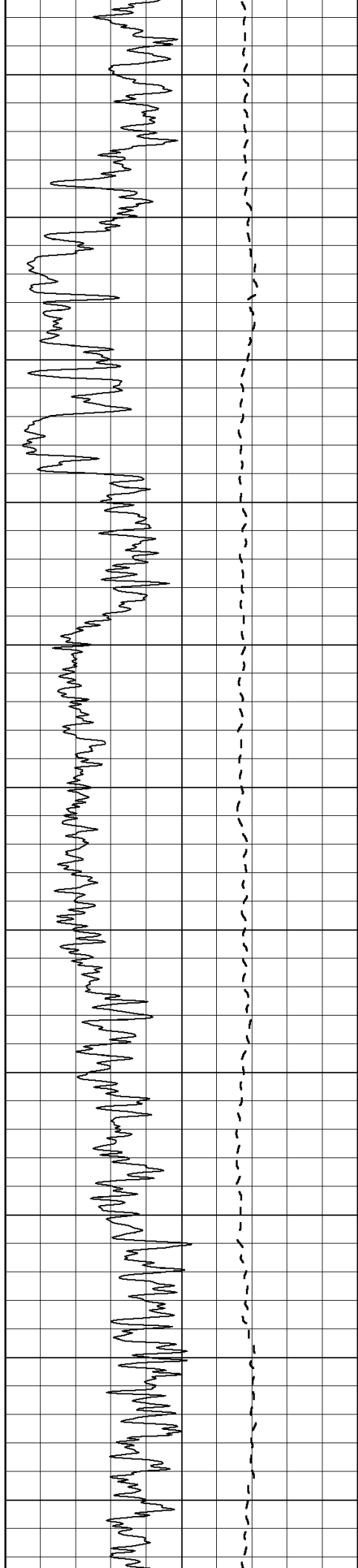
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900

950

1000





1050

1100

1150

1200

1250

1300

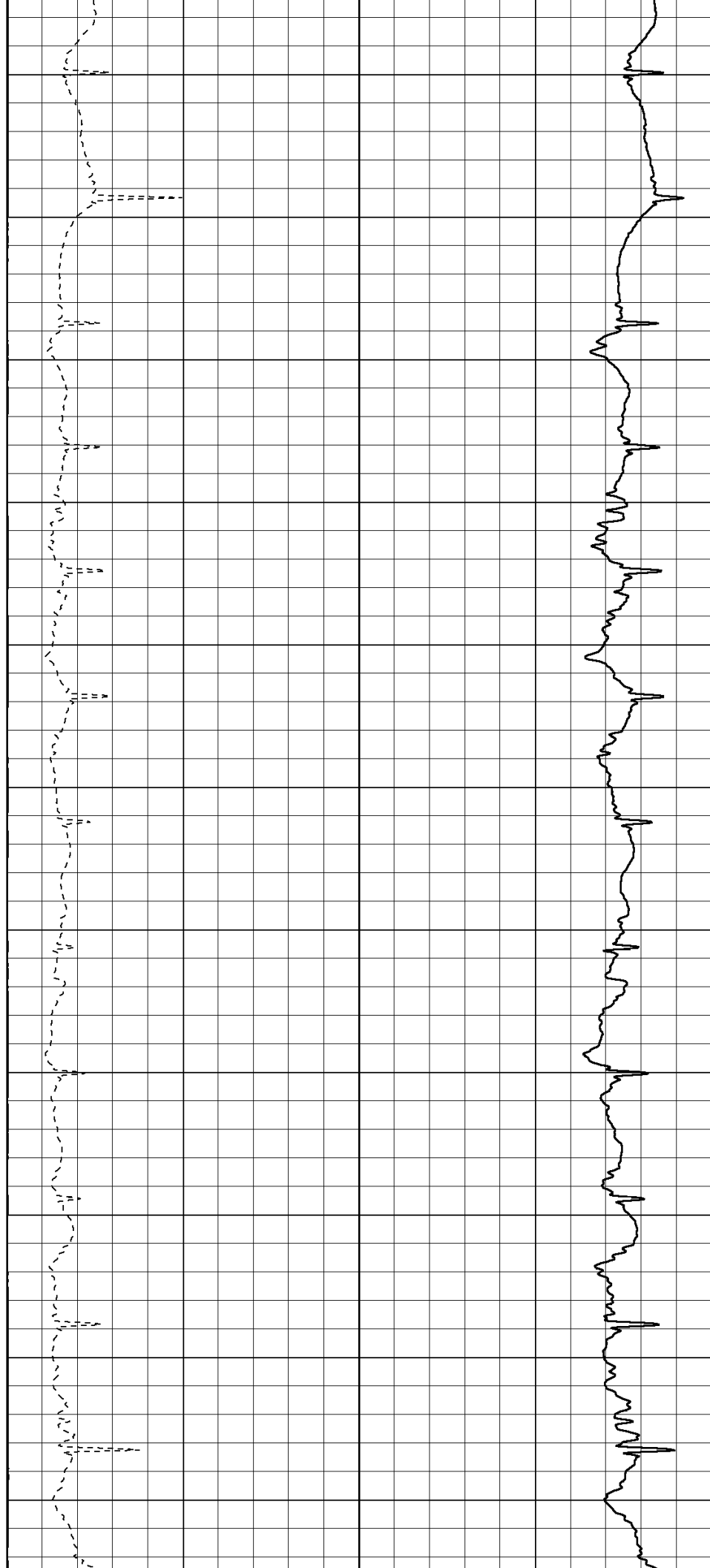
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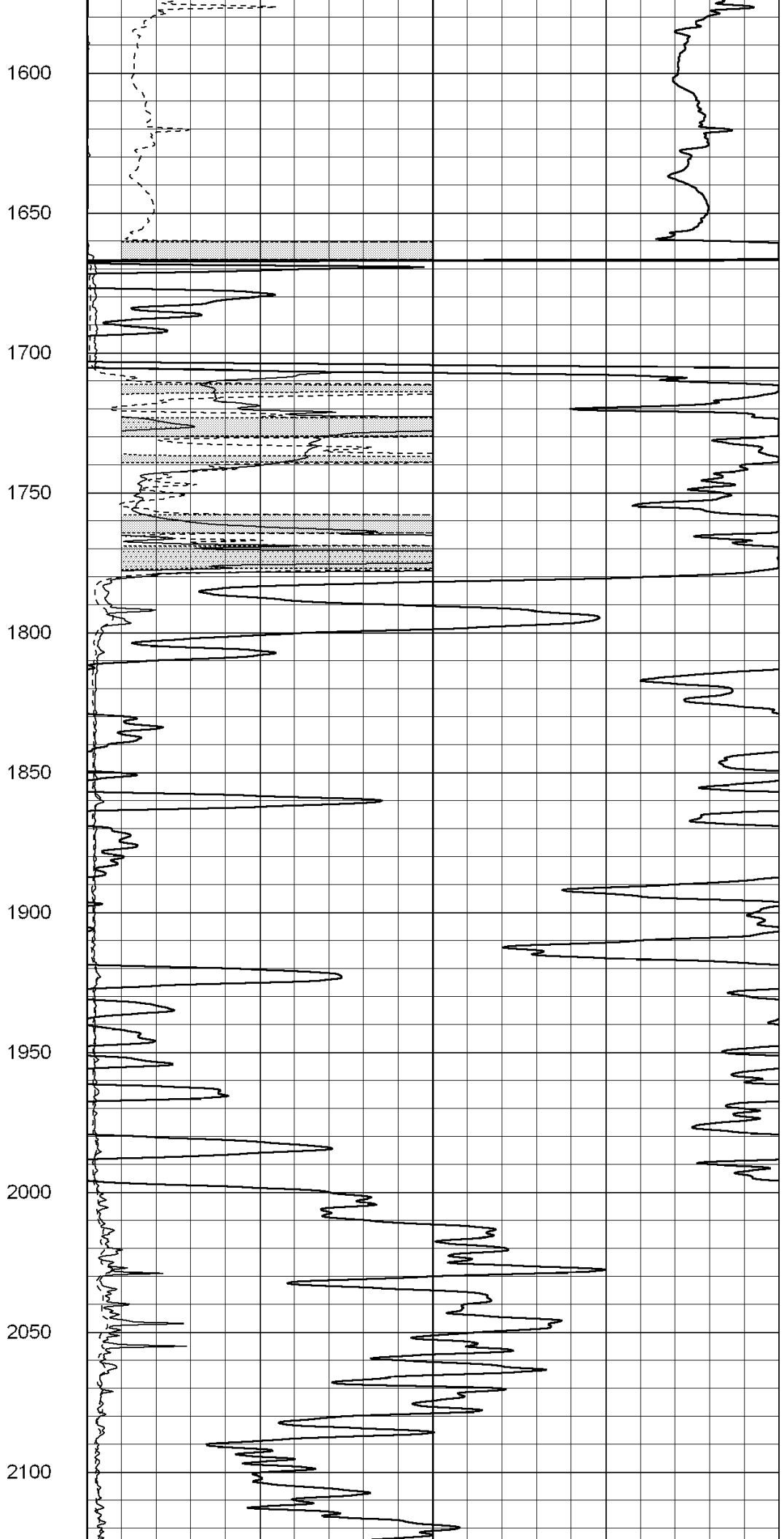
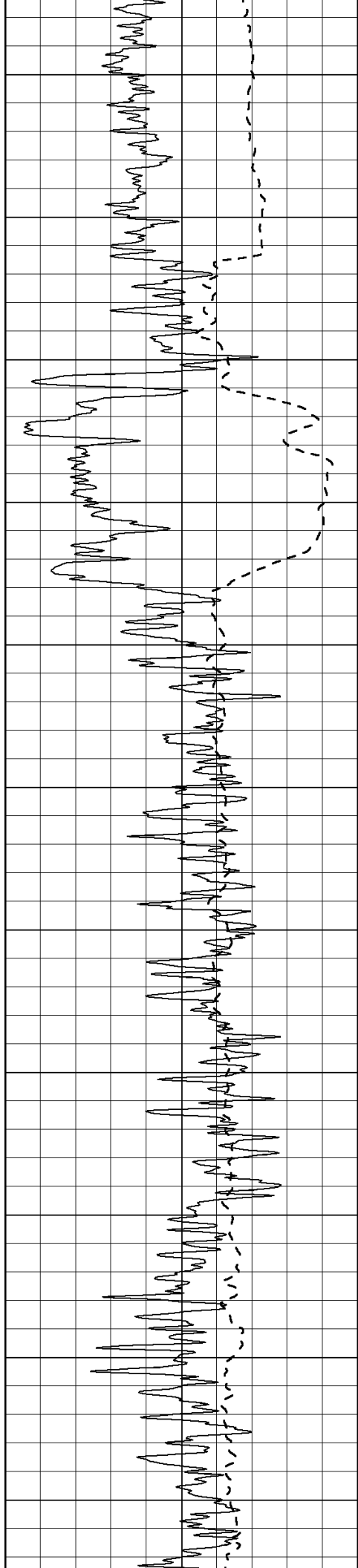
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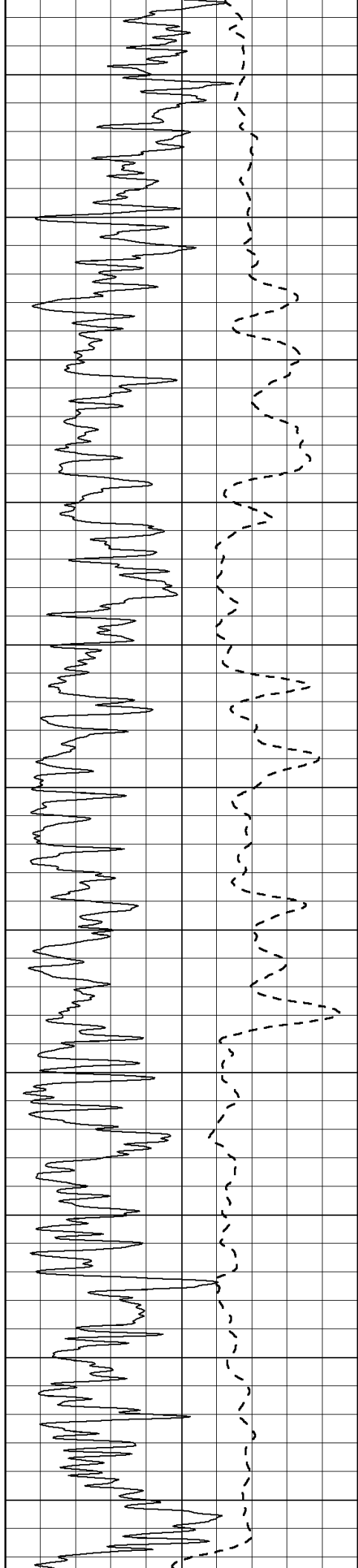
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1500

1550







2150

2200

2250

2300

2350

2400

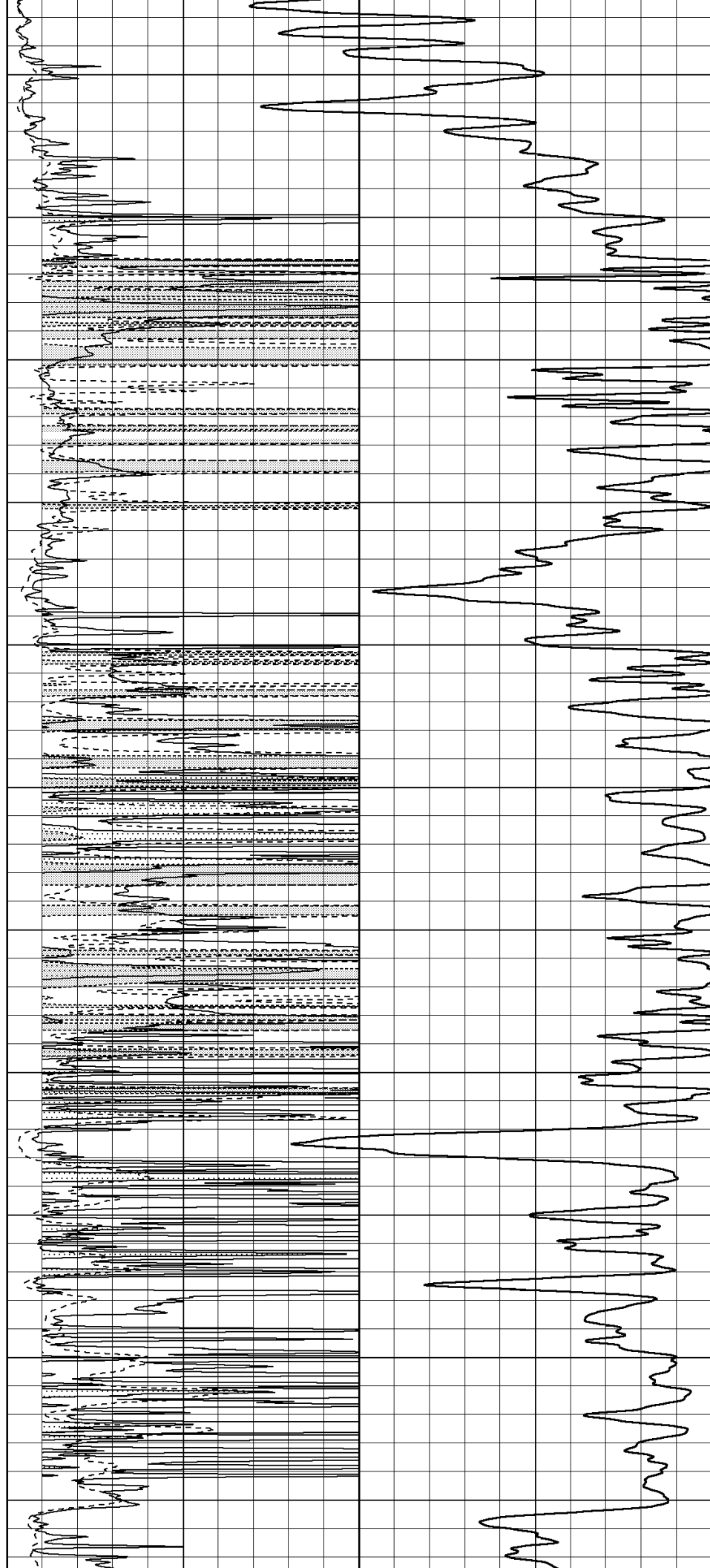
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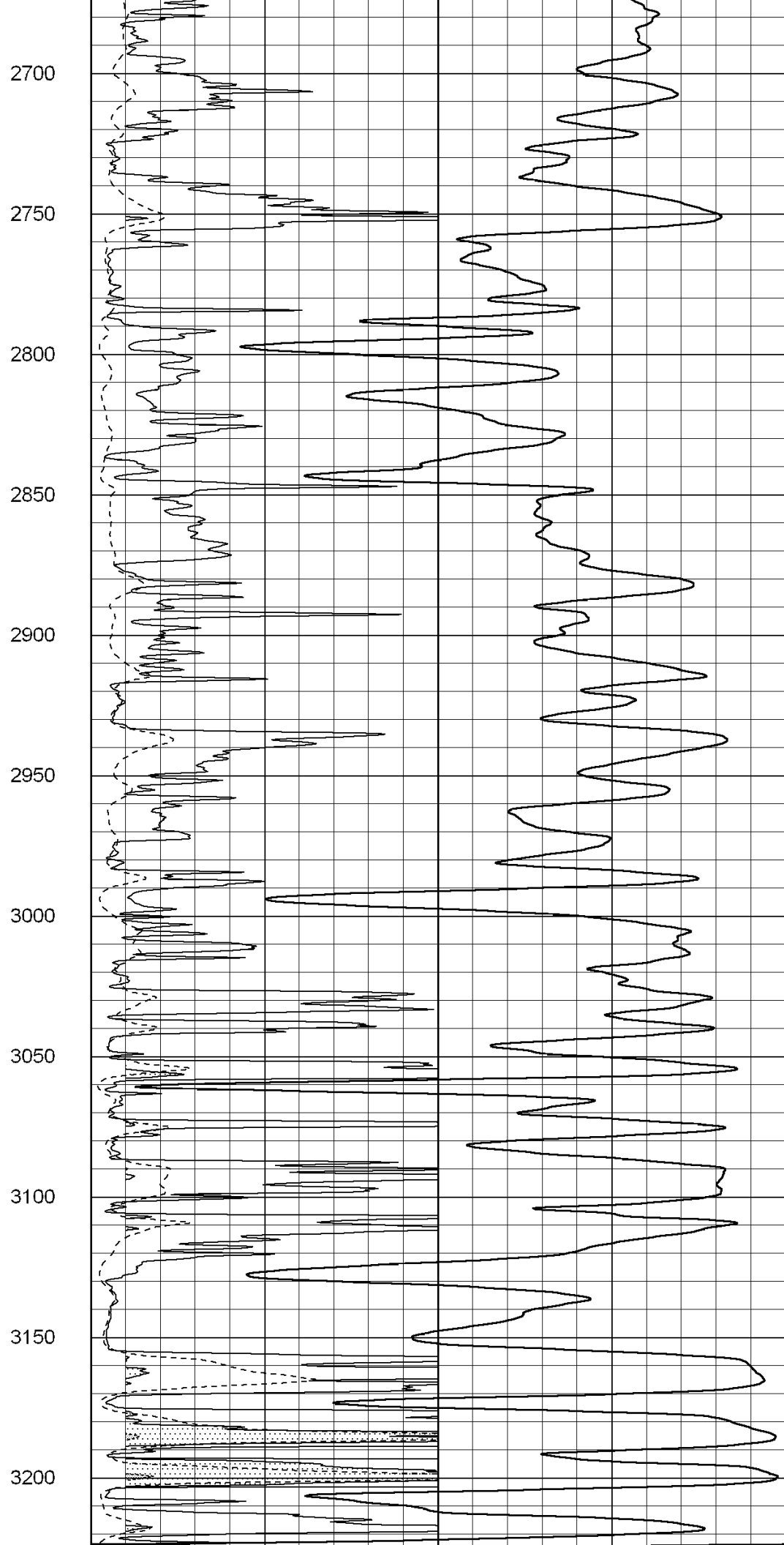
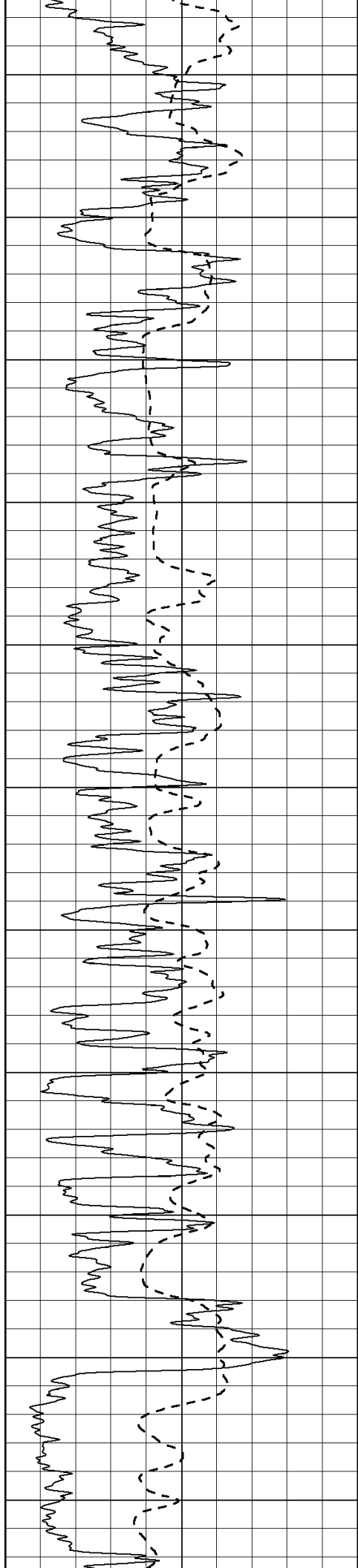
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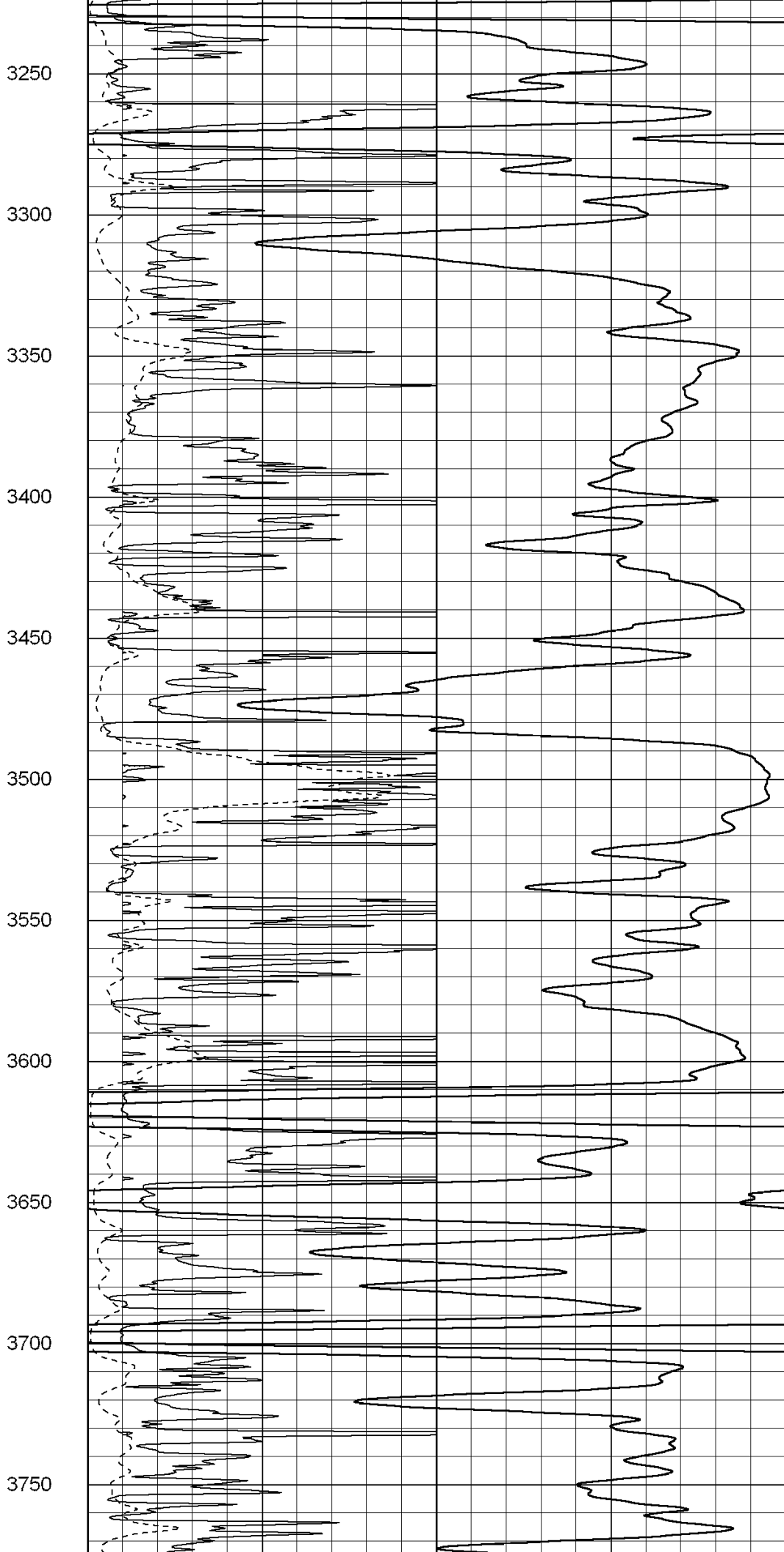
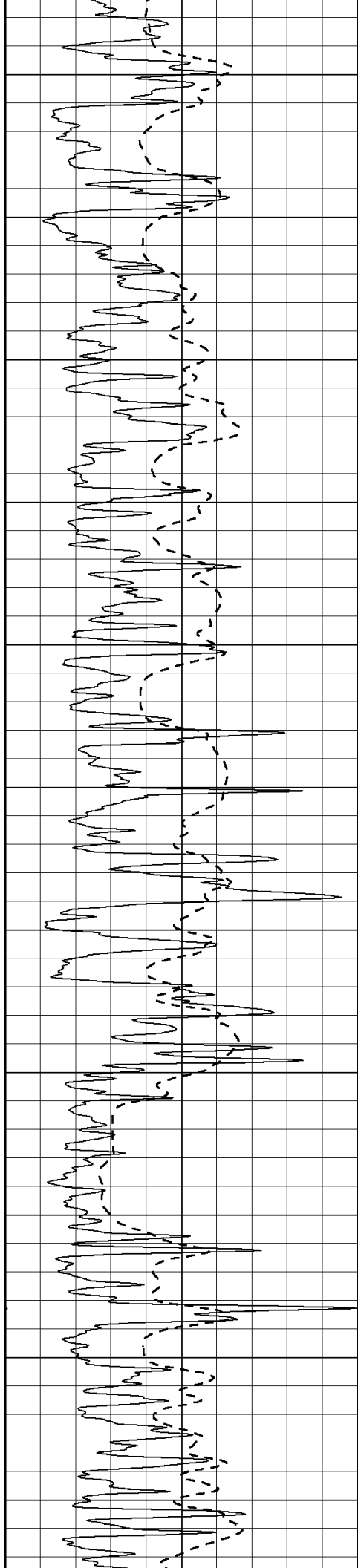
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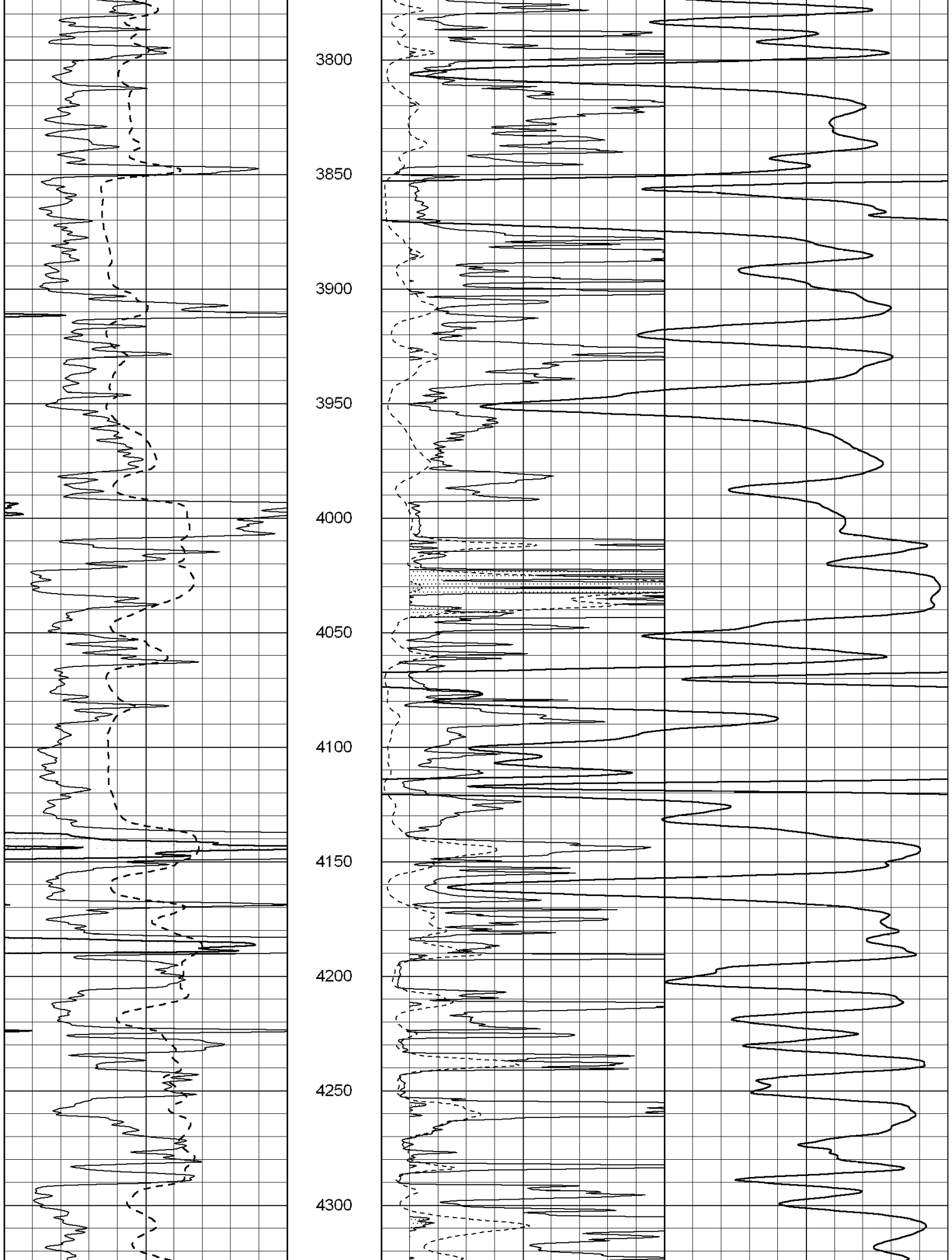
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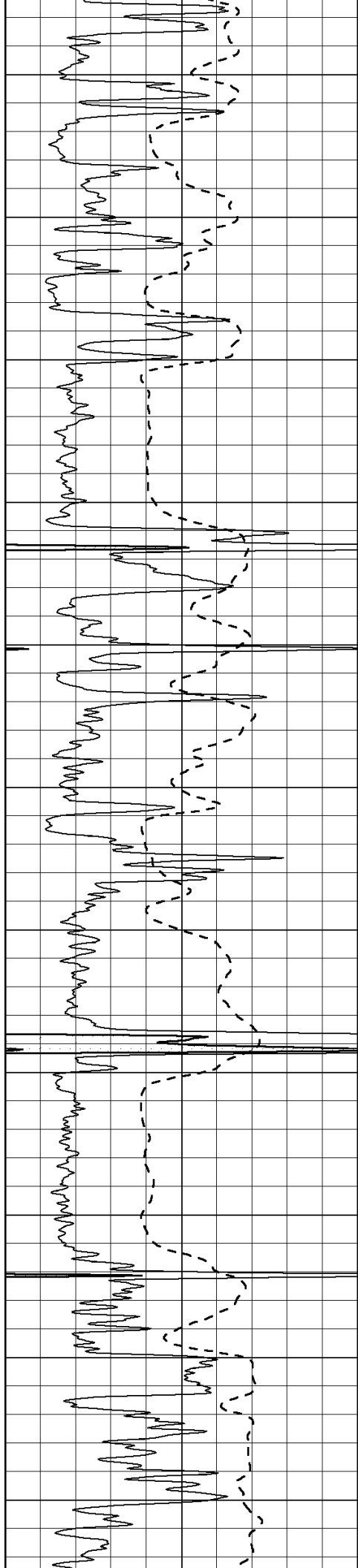
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4400

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4500

4550

4600

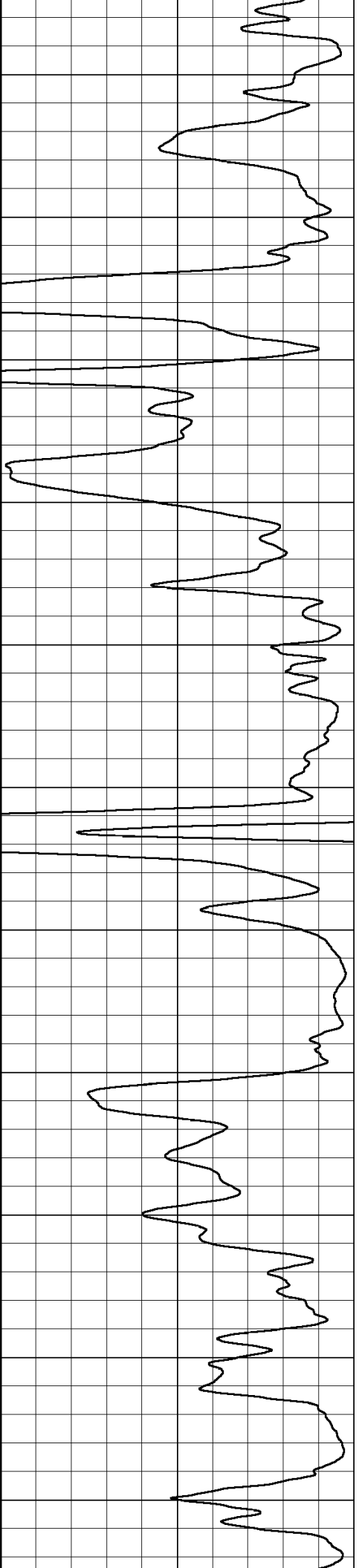
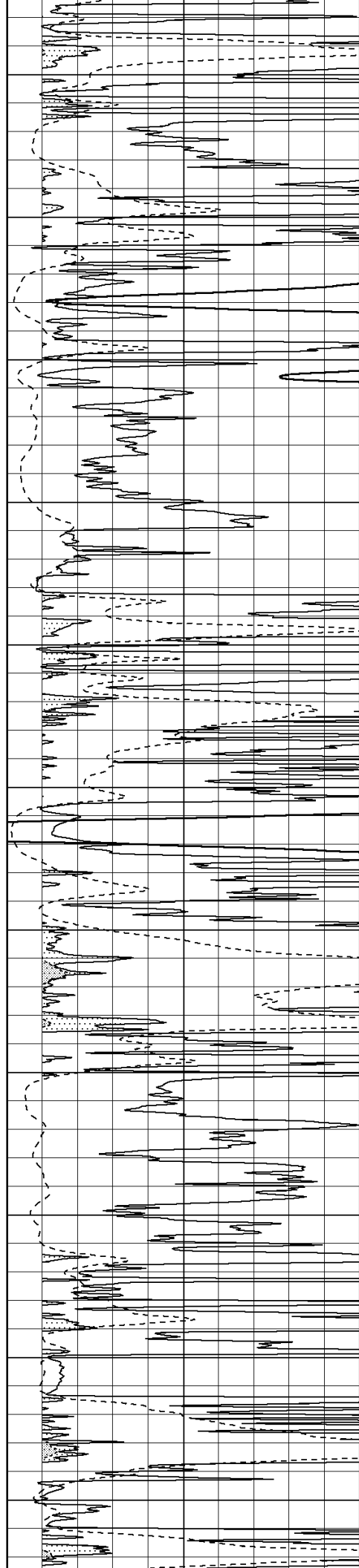
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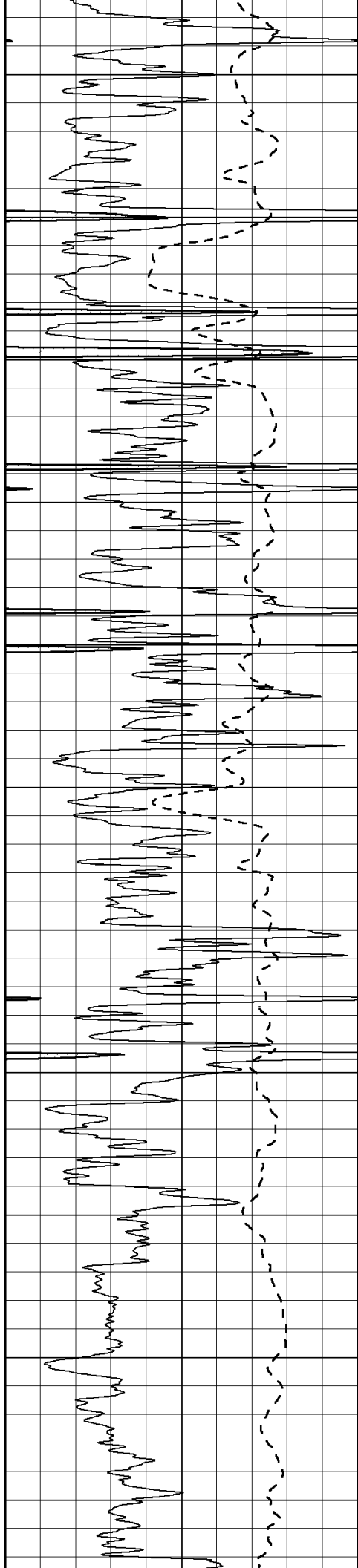
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4800

4850





4900

4950

5000

5050

5100

5150

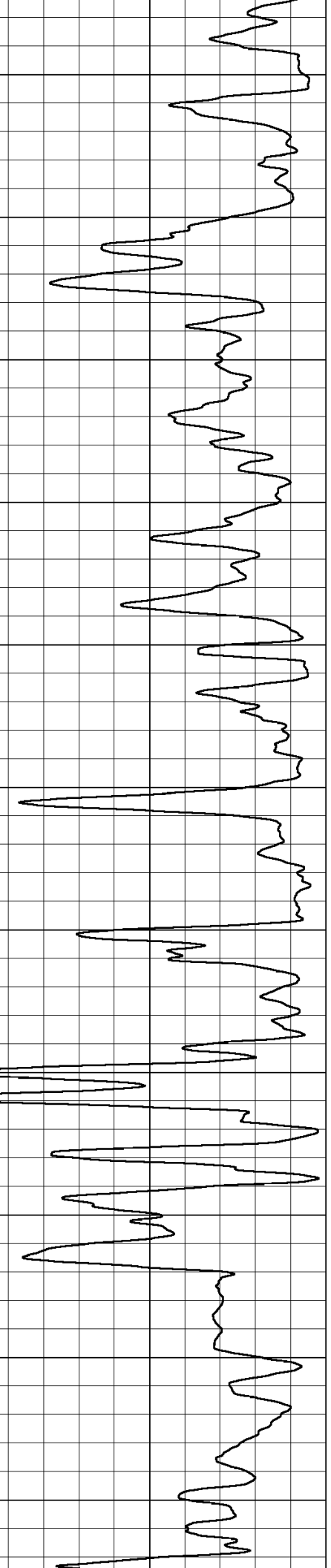
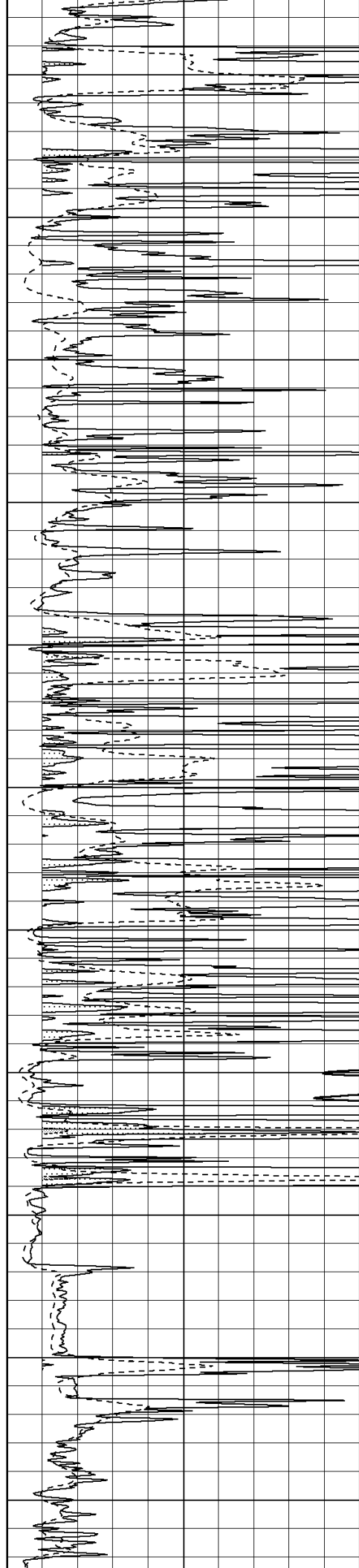
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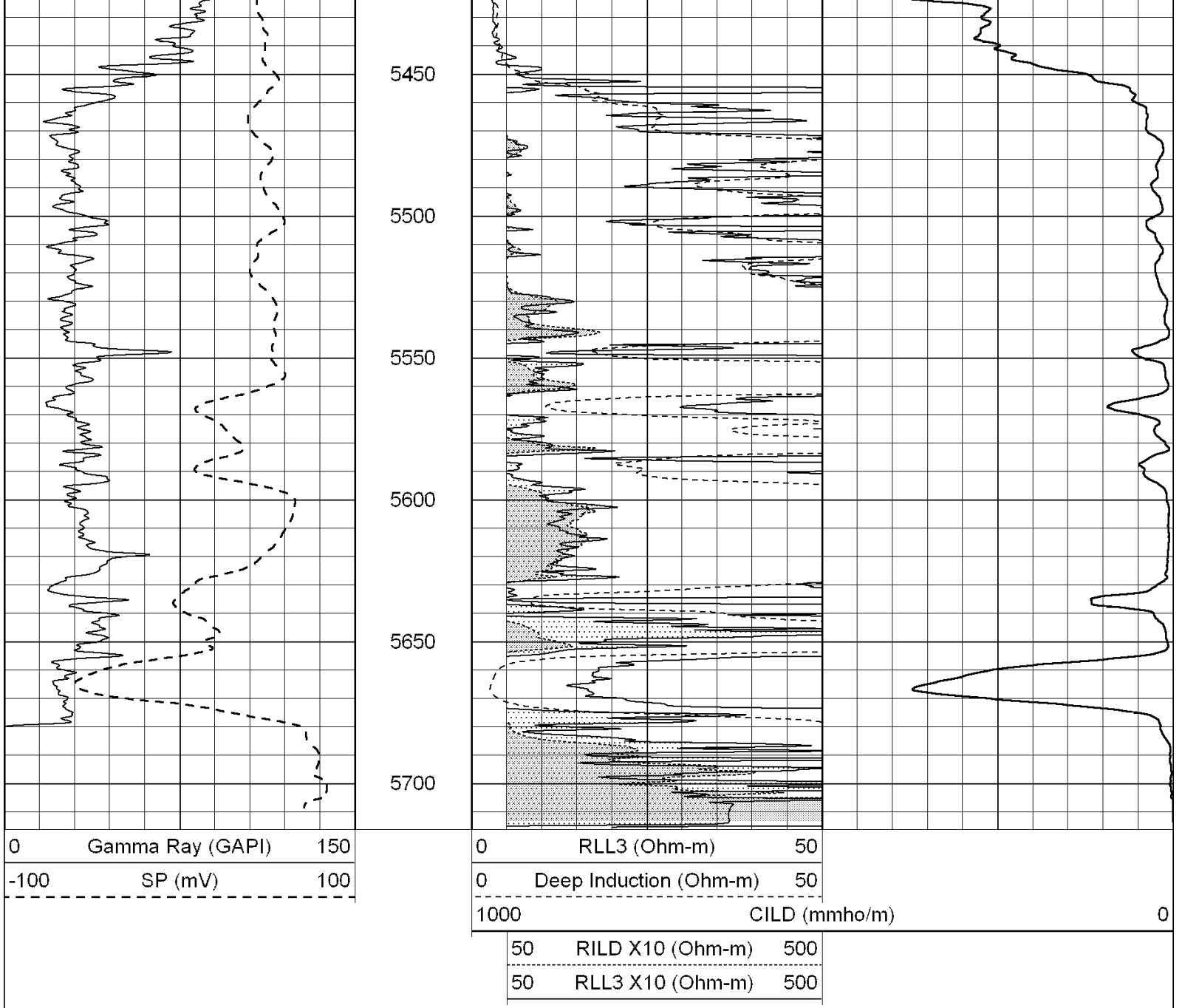
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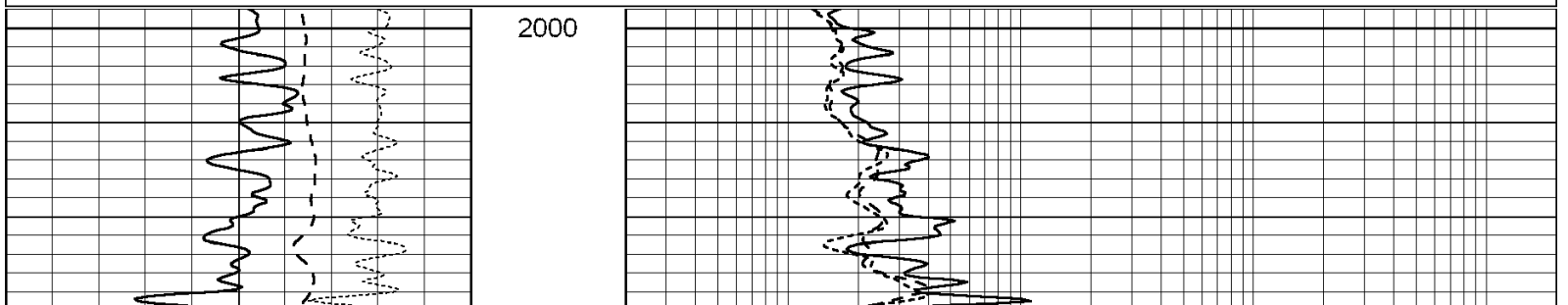
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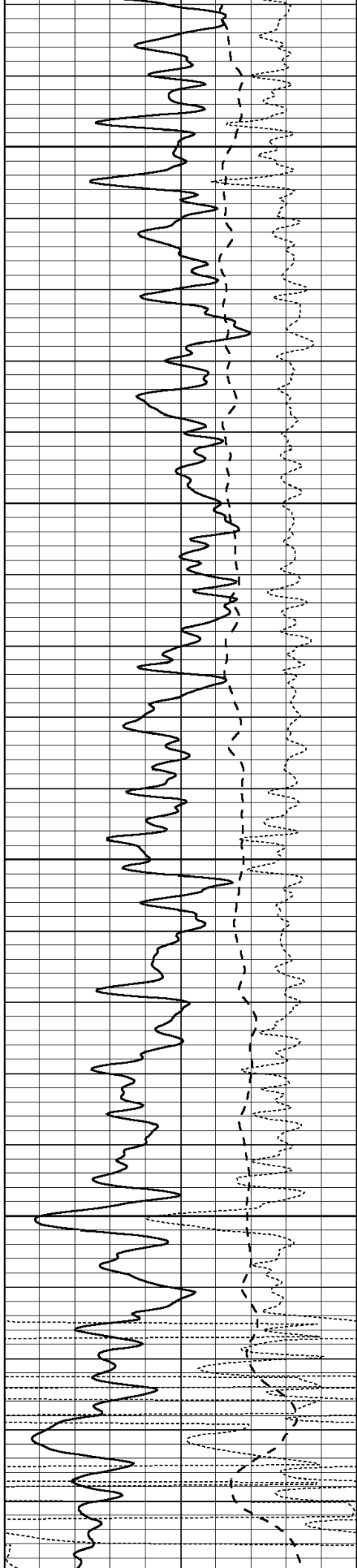




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 Dataset Pathname: pass4.2
 Presentation Format: _dil
 Dataset Creation: Thu Feb 04 23:43:22 2010 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0</td> <td style="width: 85%;">GAMMA RAY (GAPI)</td> <td style="width: 10%; text-align: right;">150</td> </tr> <tr> <td style="text-align: center;">-100</td> <td>SP (mV)</td> <td style="text-align: right;">100</td> </tr> <tr> <td style="text-align: center;">-250</td> <td>Rxo/Rt</td> <td style="text-align: right;">50</td> </tr> </table>	0	GAMMA RAY (GAPI)	150	-100	SP (mV)	100	-250	Rxo/Rt	50	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0.2</td> <td style="width: 85%;">SHALLOW GUARD (Ohm-m)</td> <td style="width: 10%; text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>MEDIUM INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>DEEP INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> </table>	0.2	SHALLOW GUARD (Ohm-m)	2000	0.2	MEDIUM INDUCTION (Ohm-m)	2000	0.2	DEEP INDUCTION (Ohm-m)	2000	
0	GAMMA RAY (GAPI)	150																		
-100	SP (mV)	100																		
-250	Rxo/Rt	50																		
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0.2	DEEP INDUCTION (Ohm-m)	2000																		





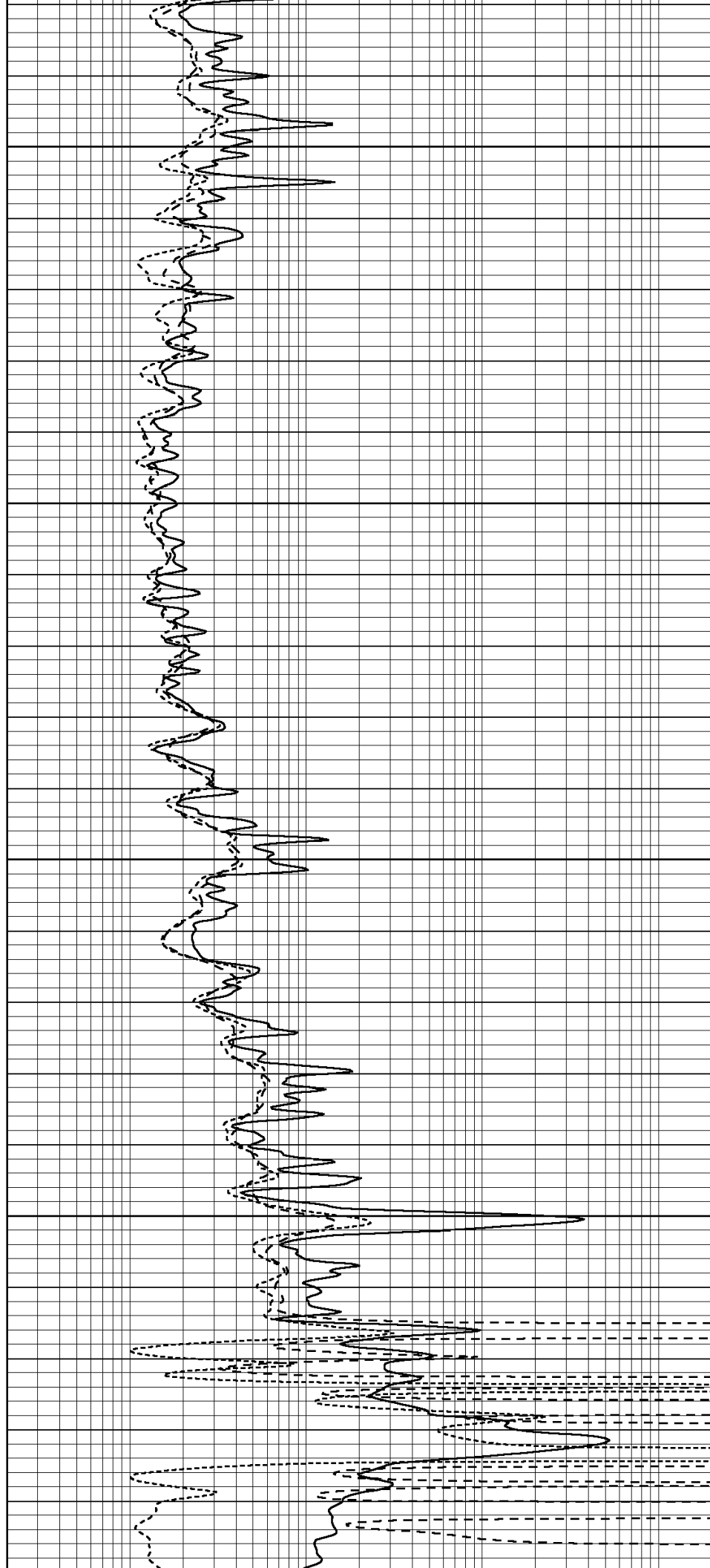
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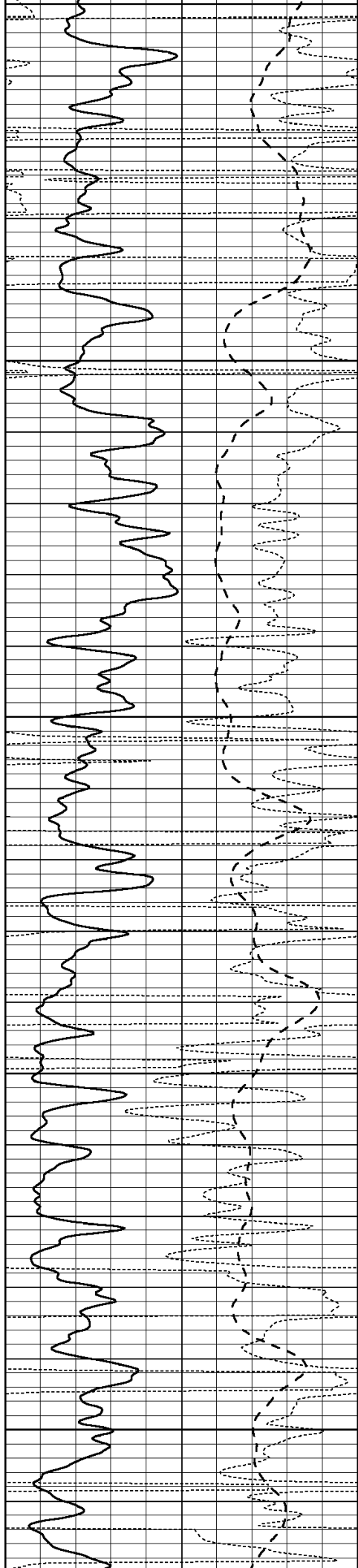
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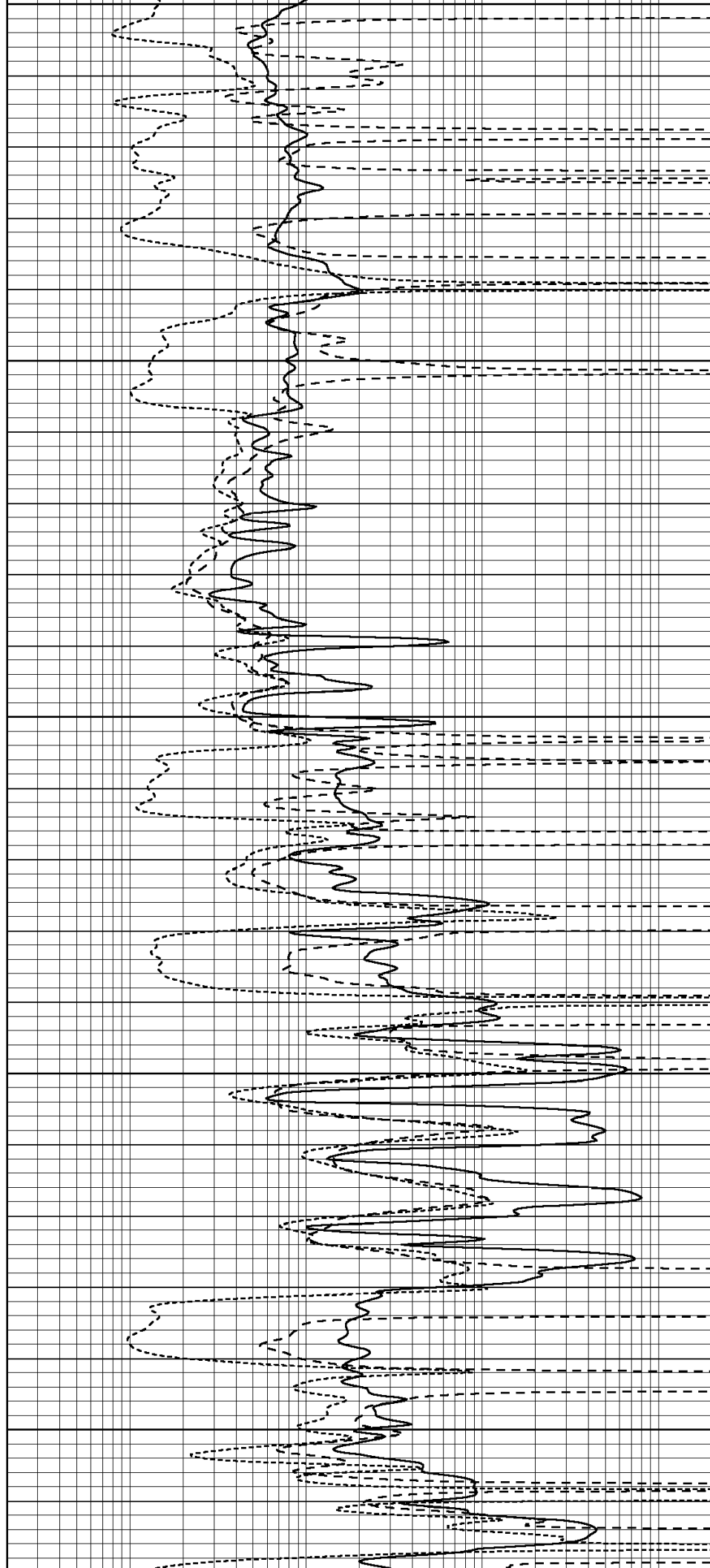
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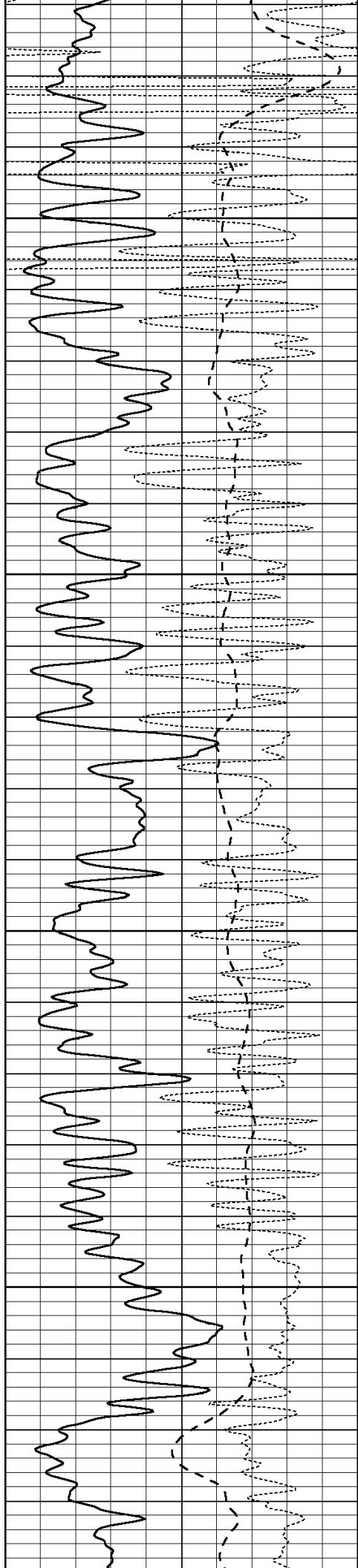
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2400

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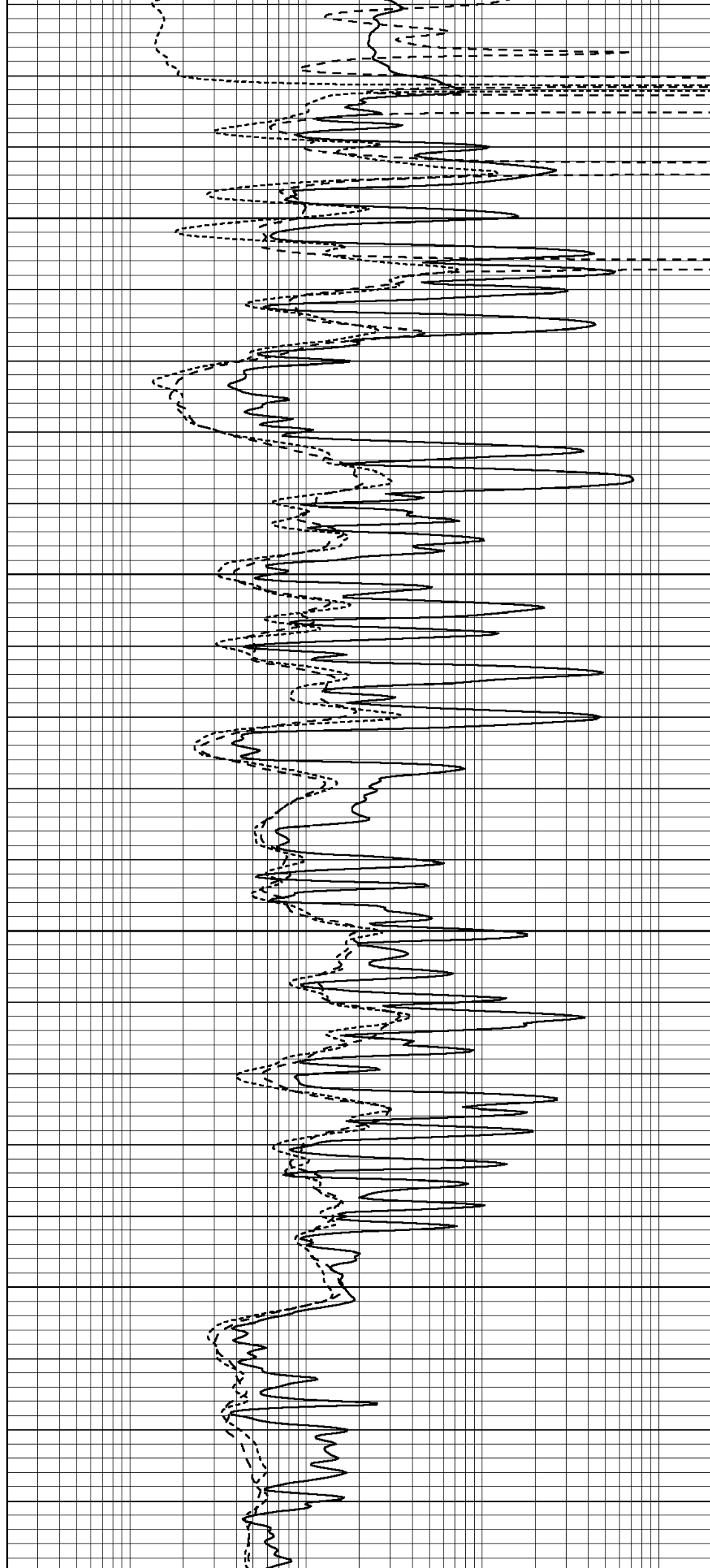


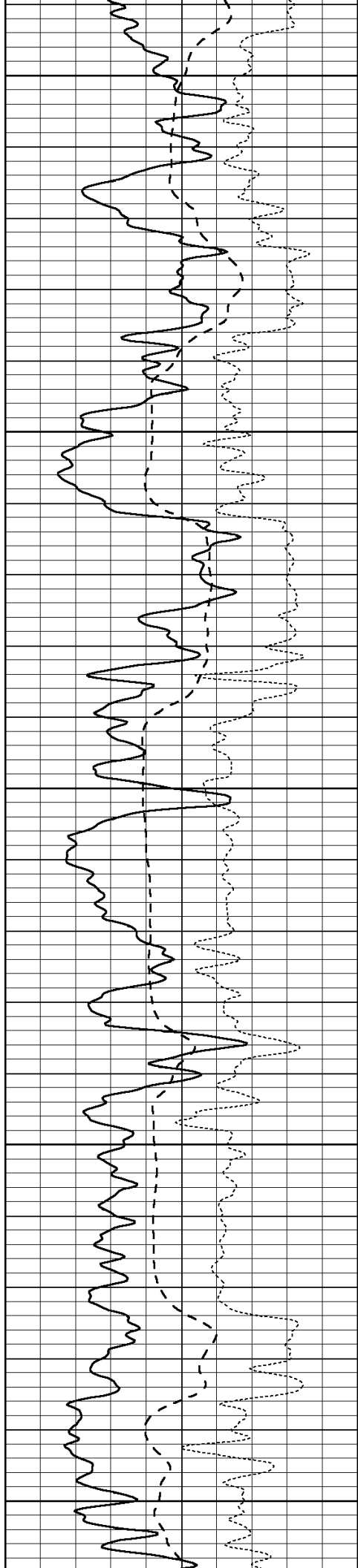
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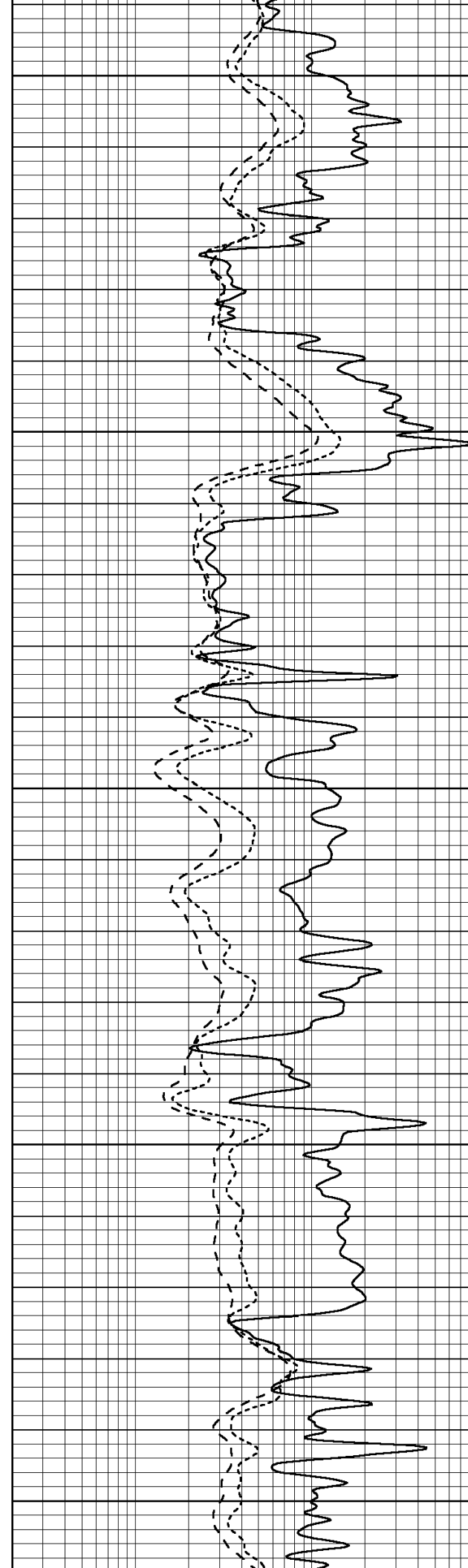
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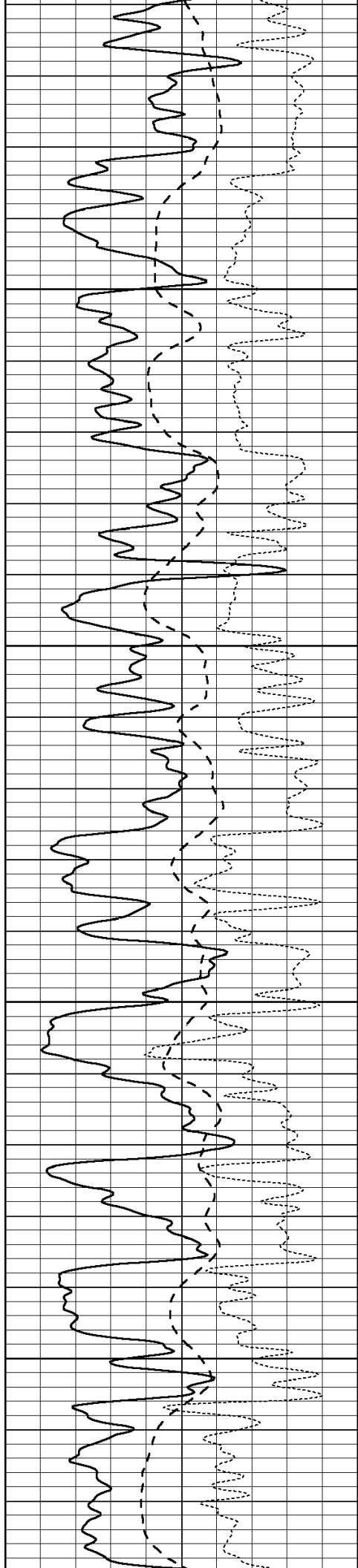
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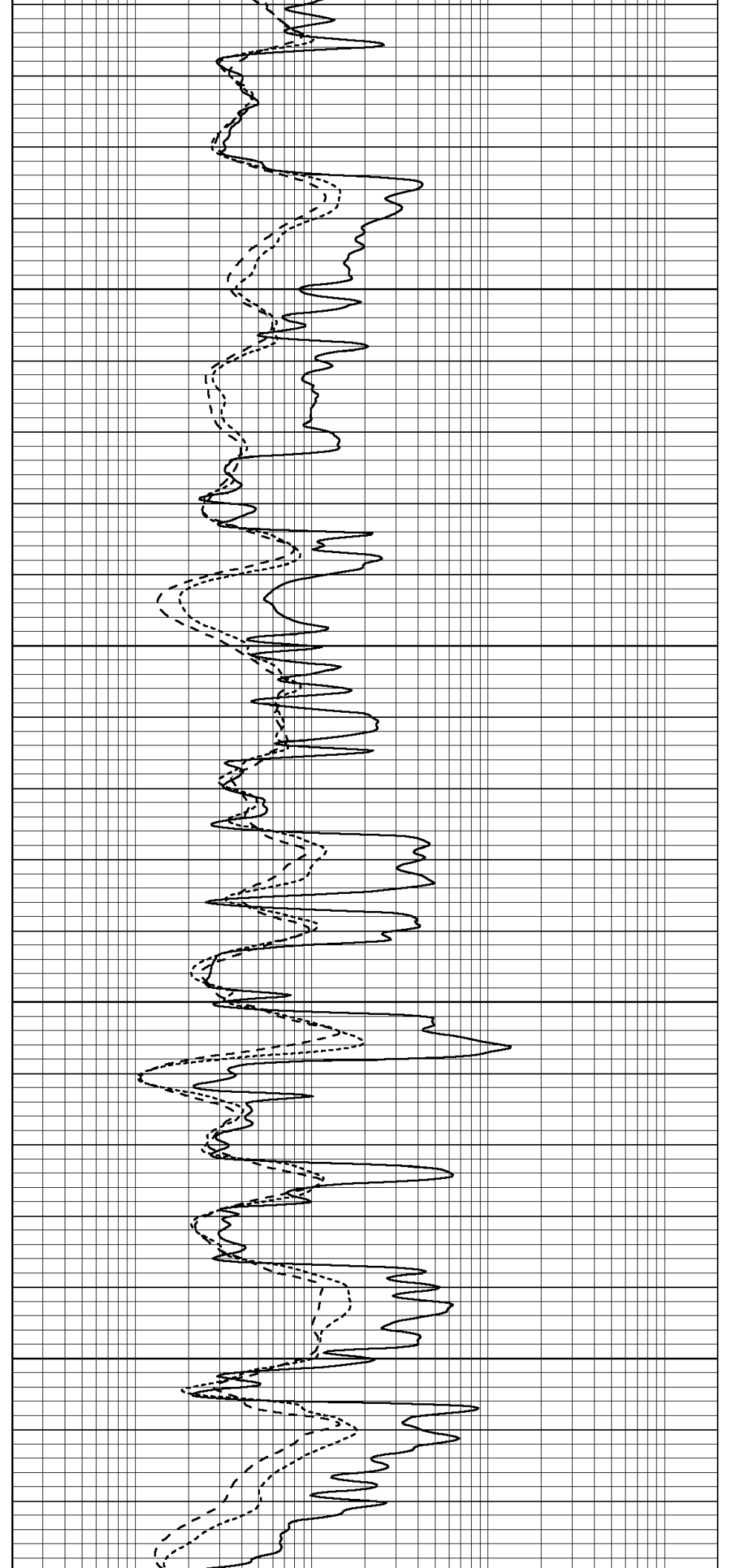


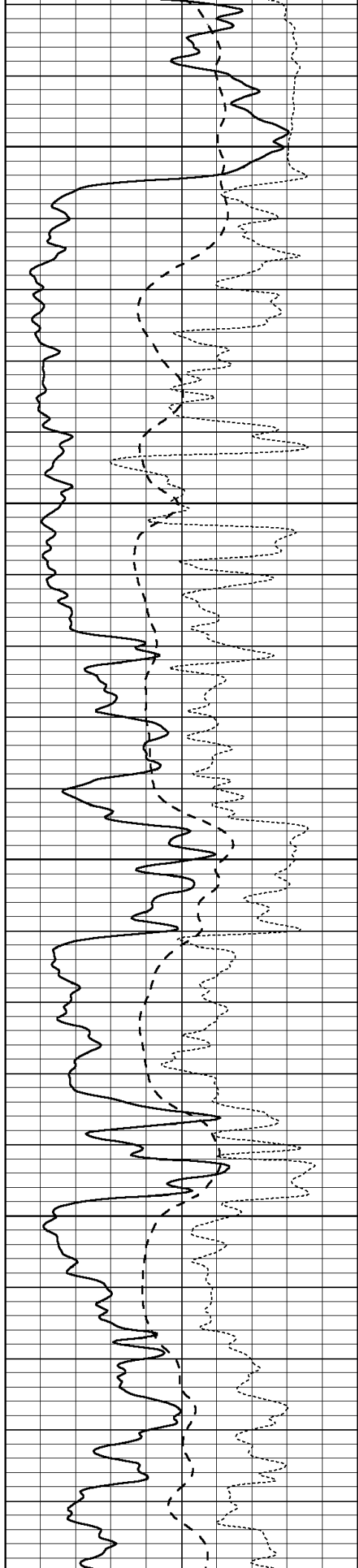
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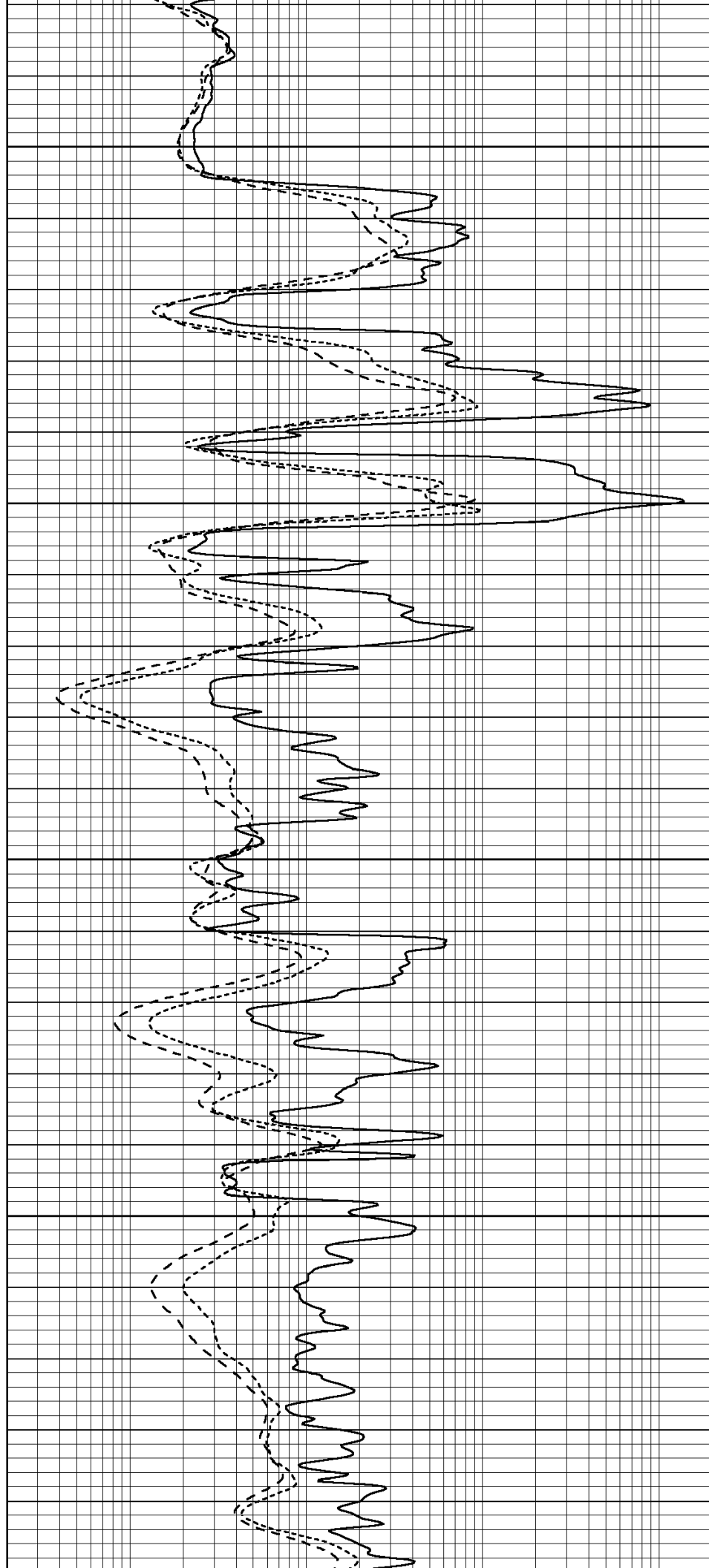
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3300

3350



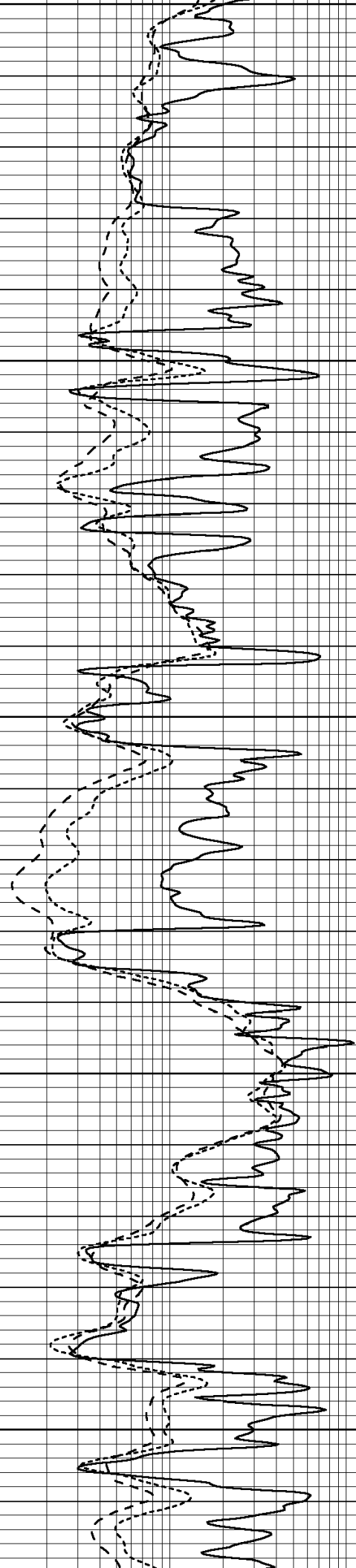
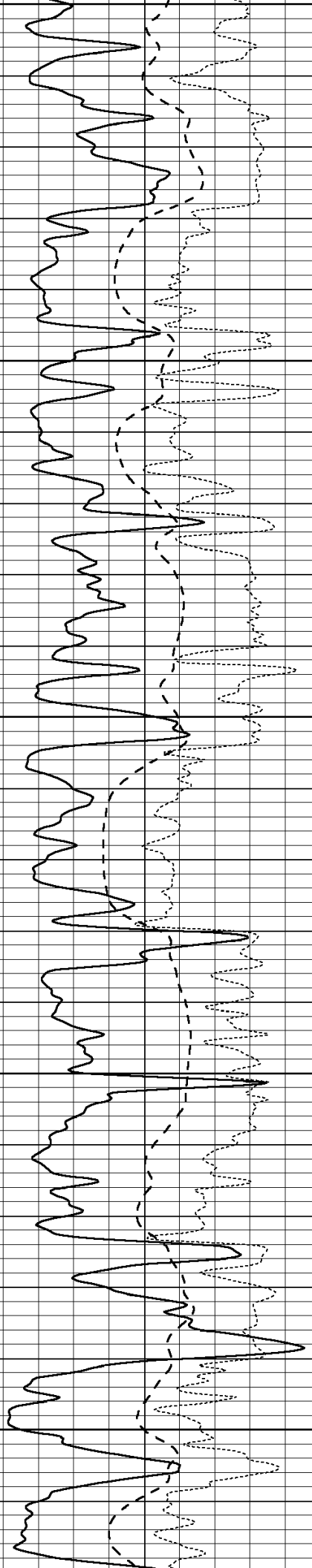
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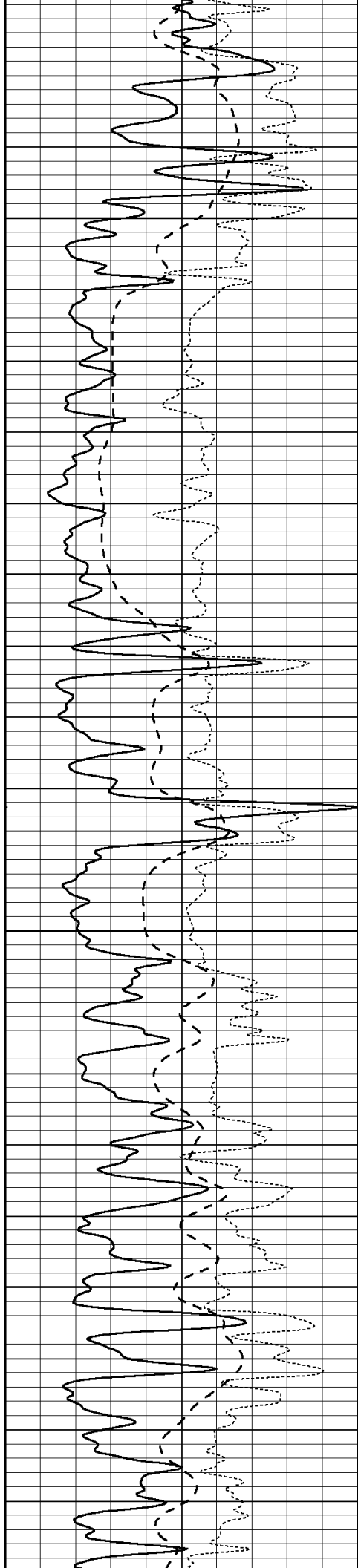
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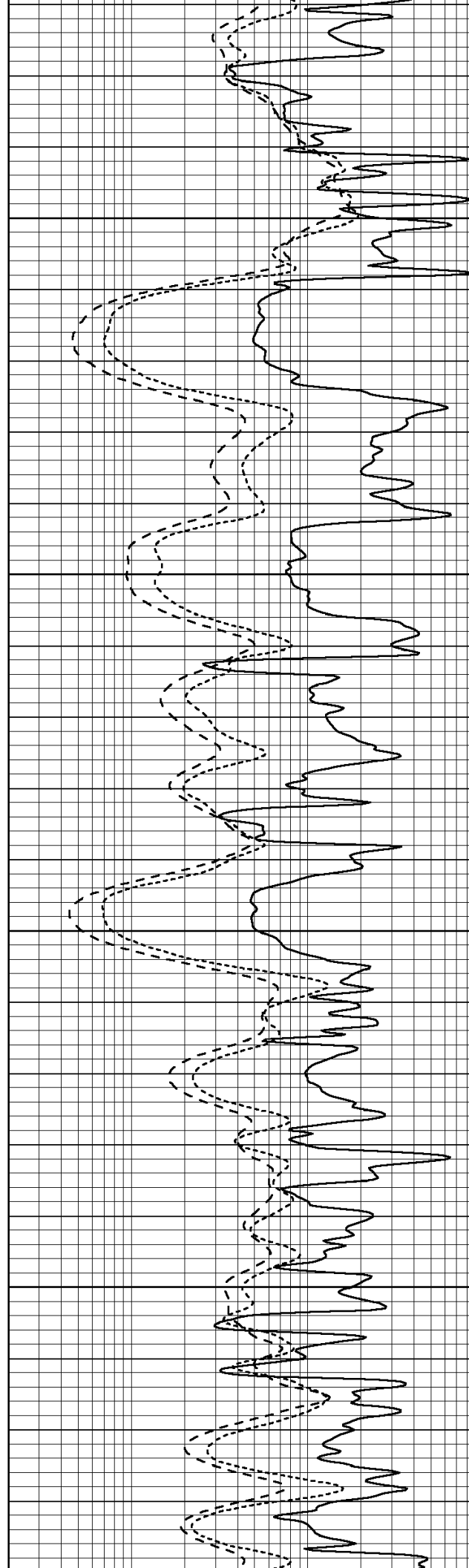


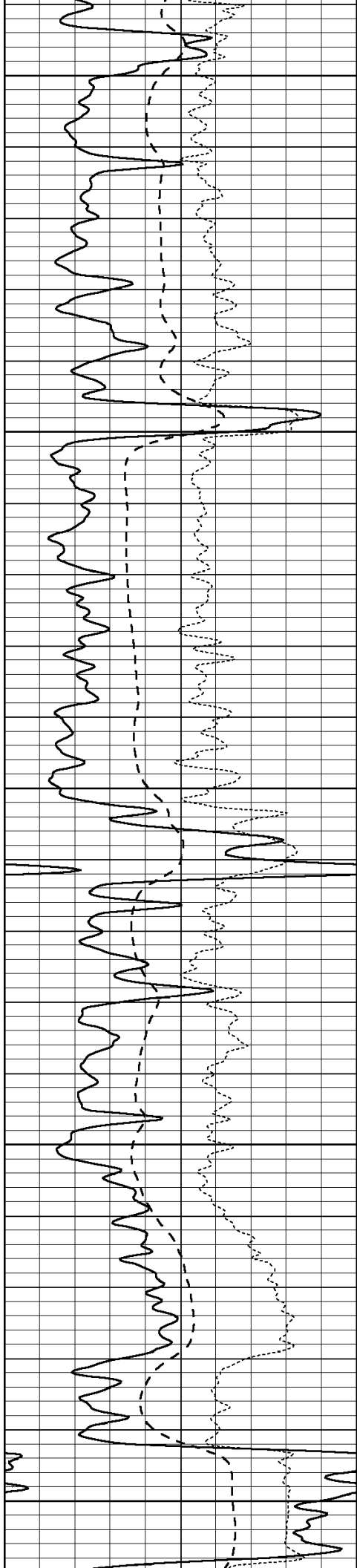
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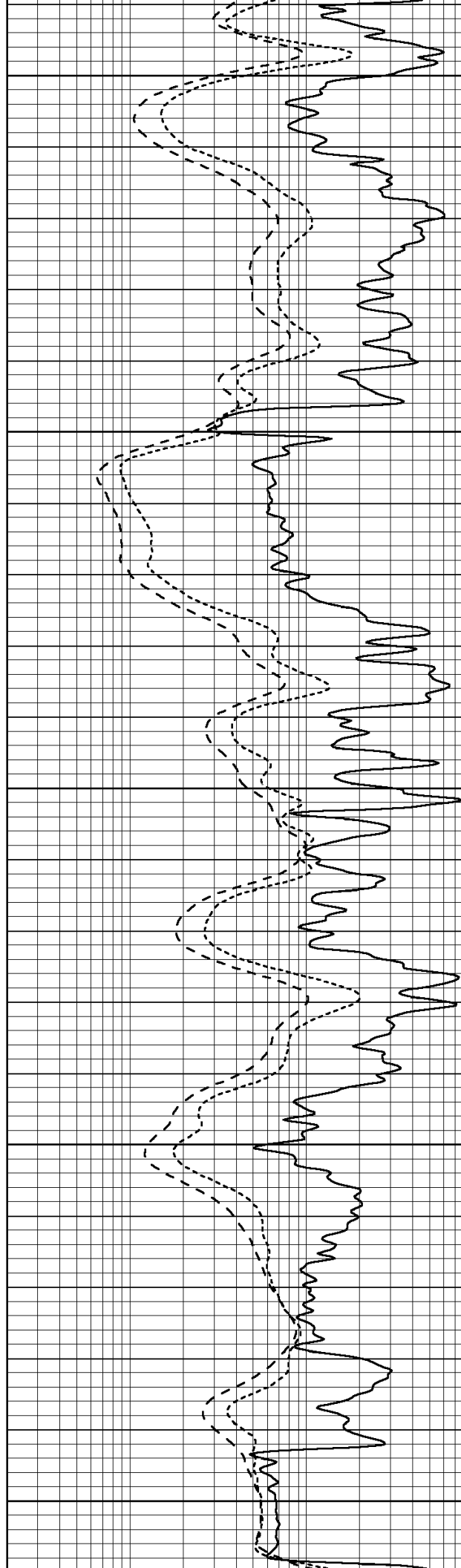
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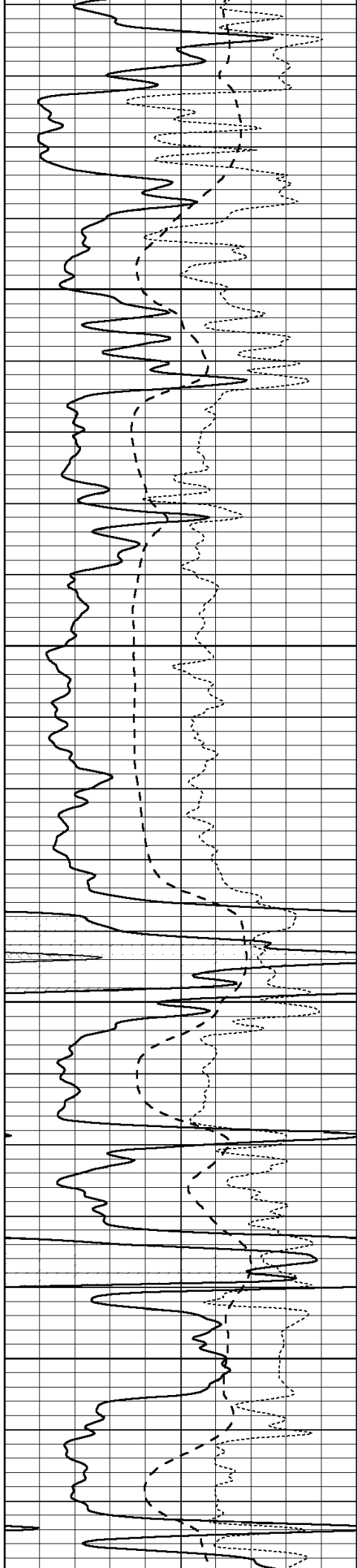
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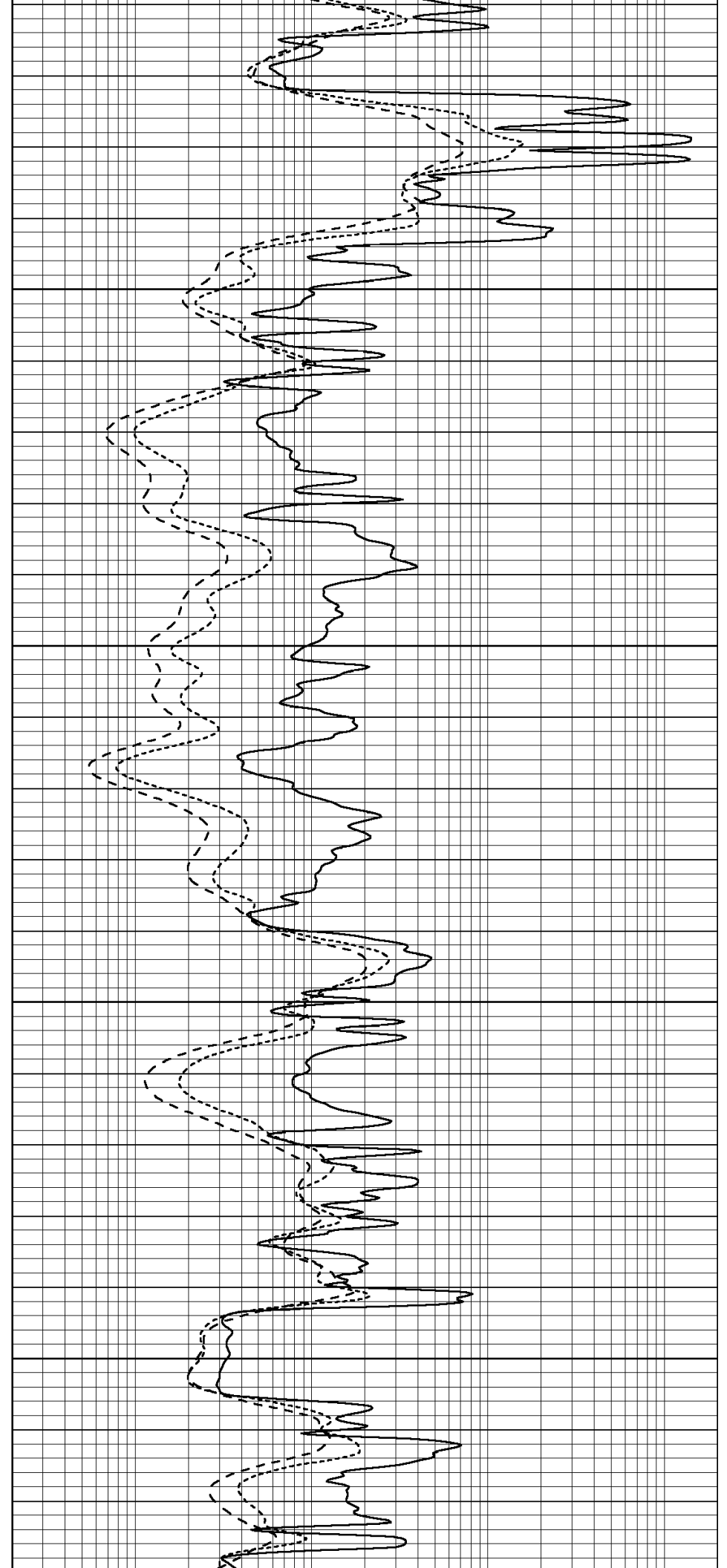


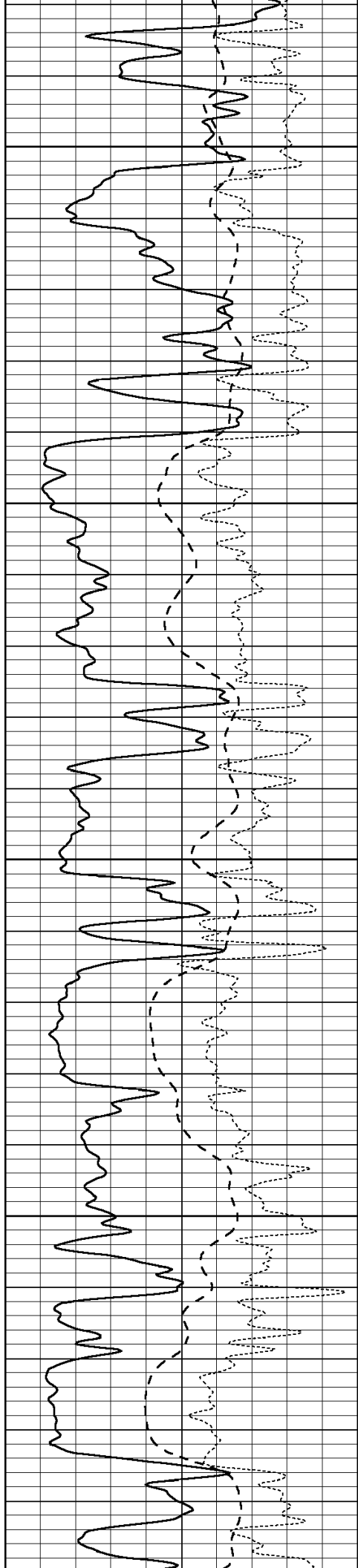
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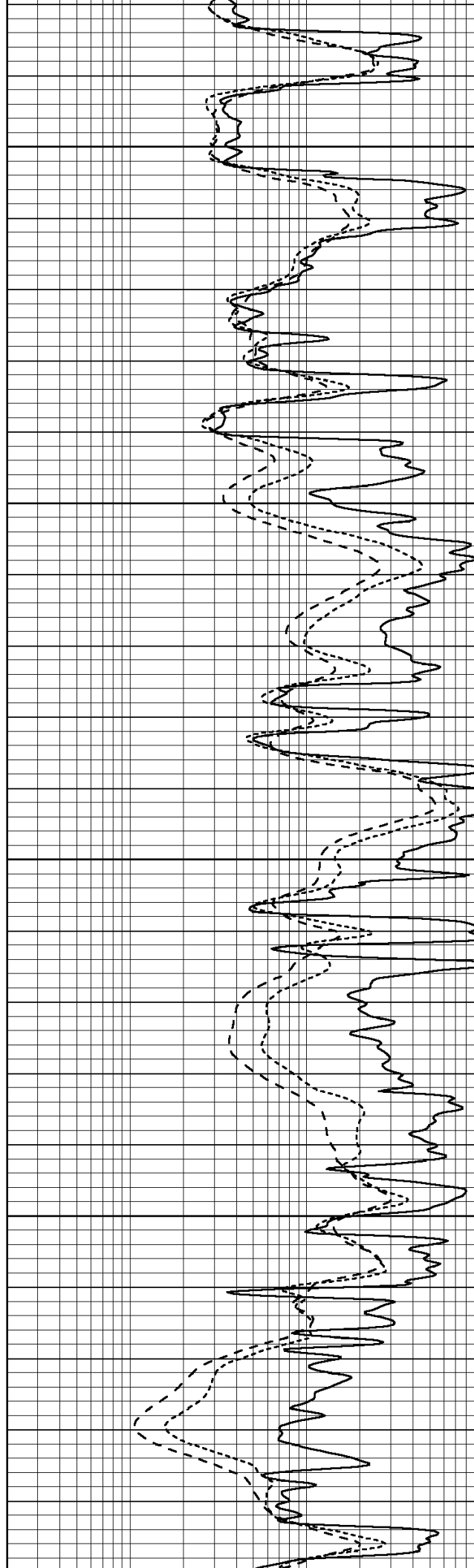
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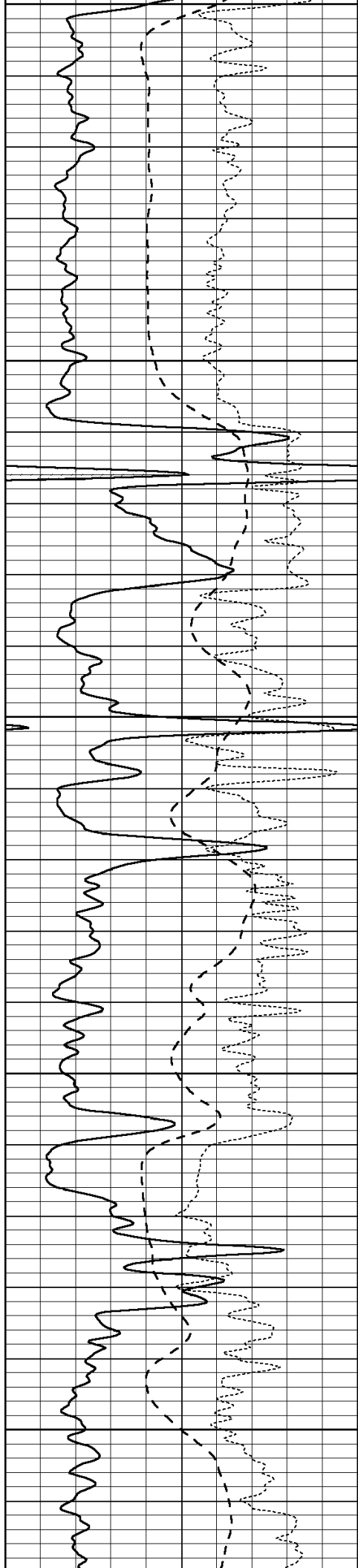
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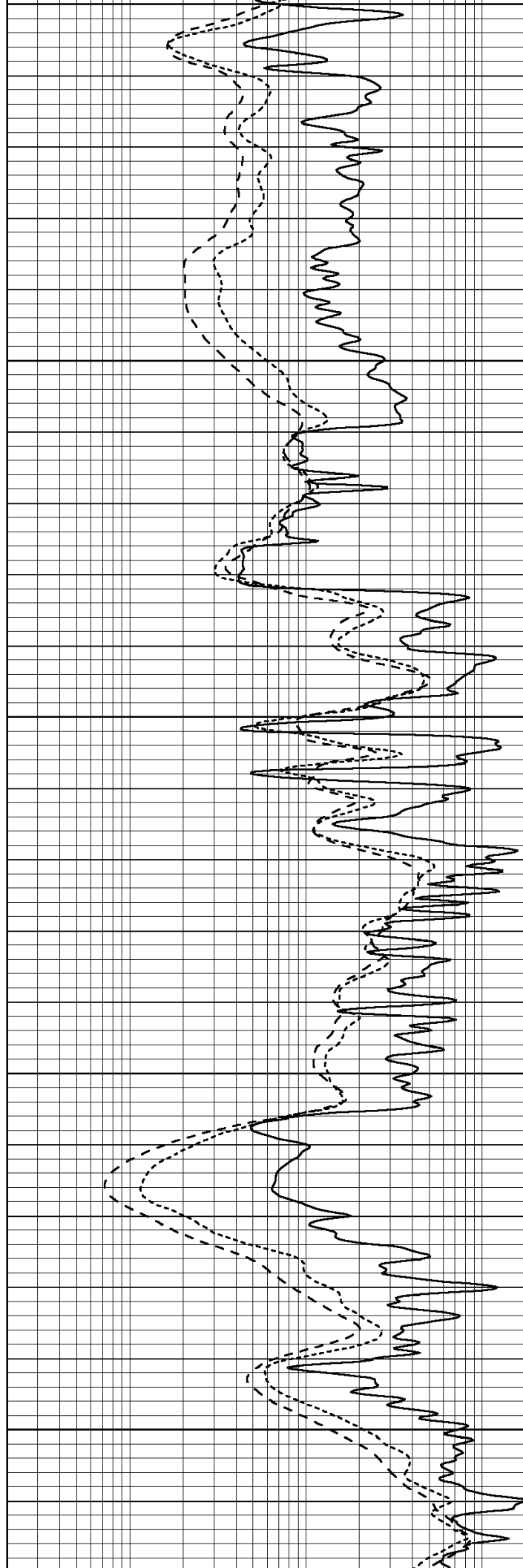
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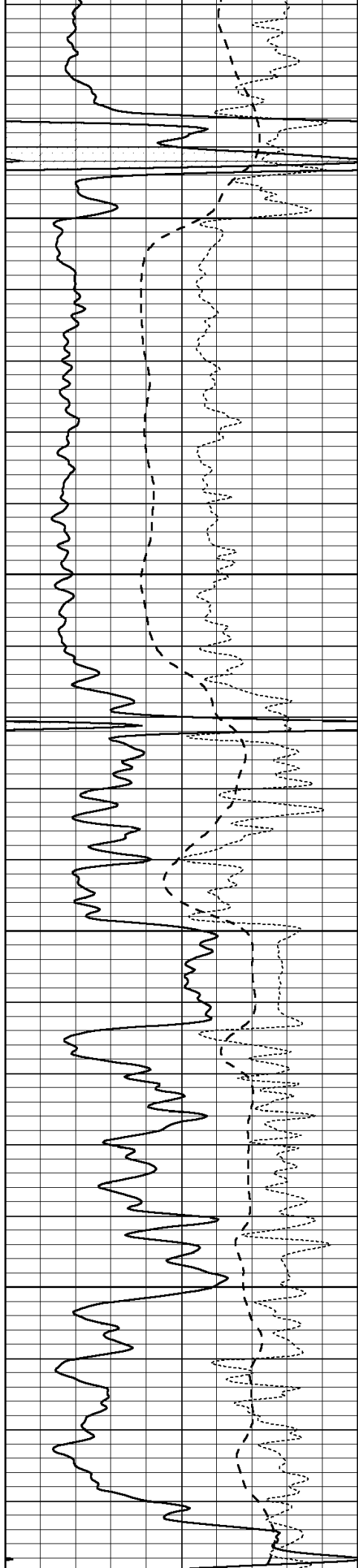
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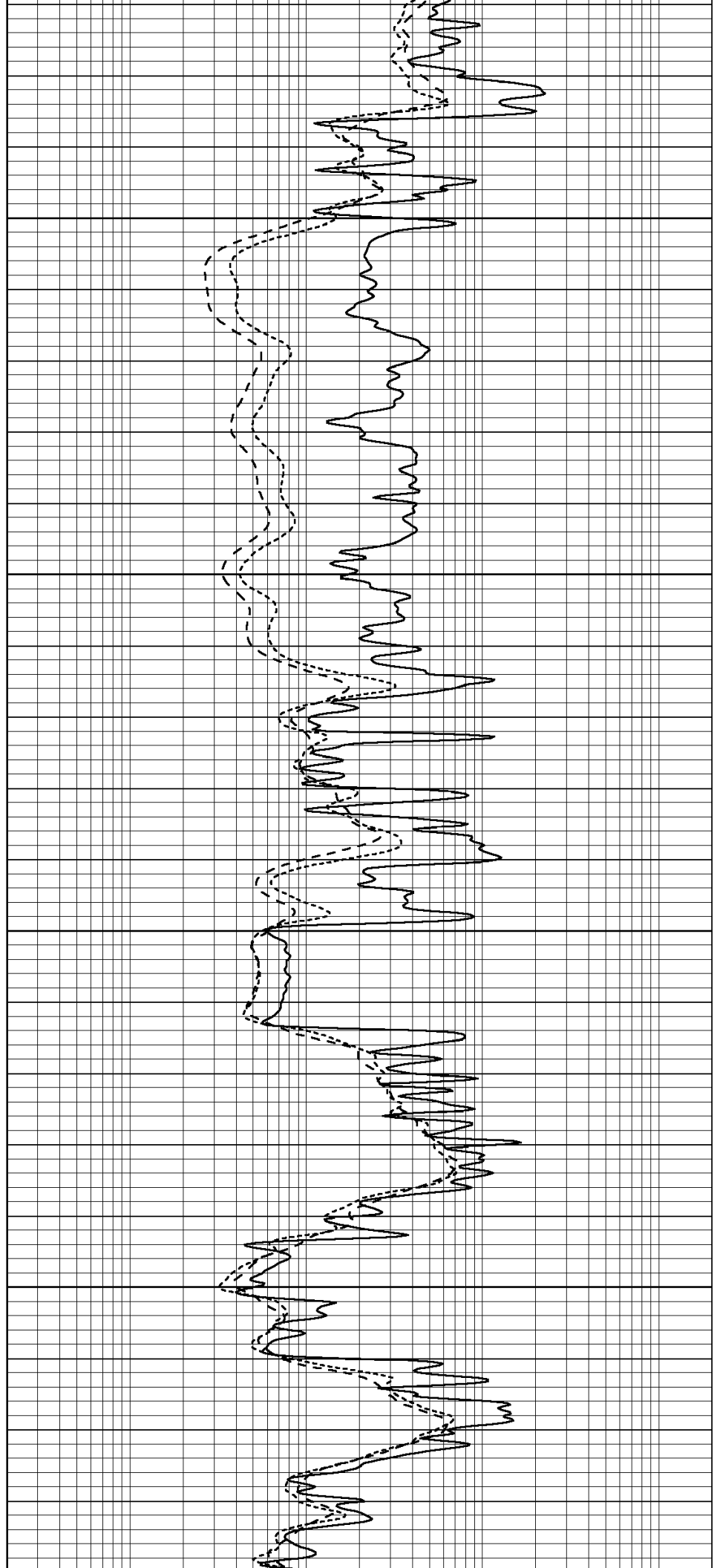


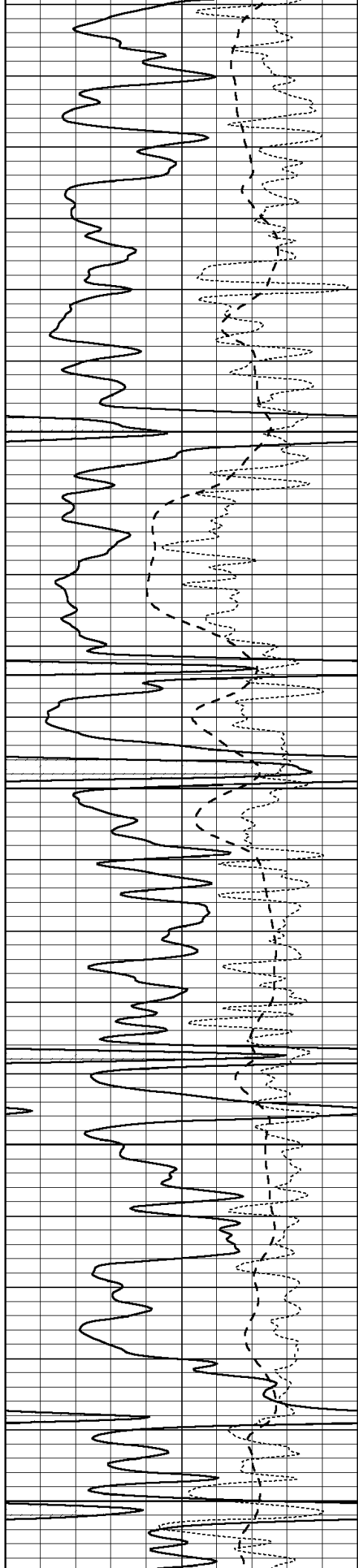
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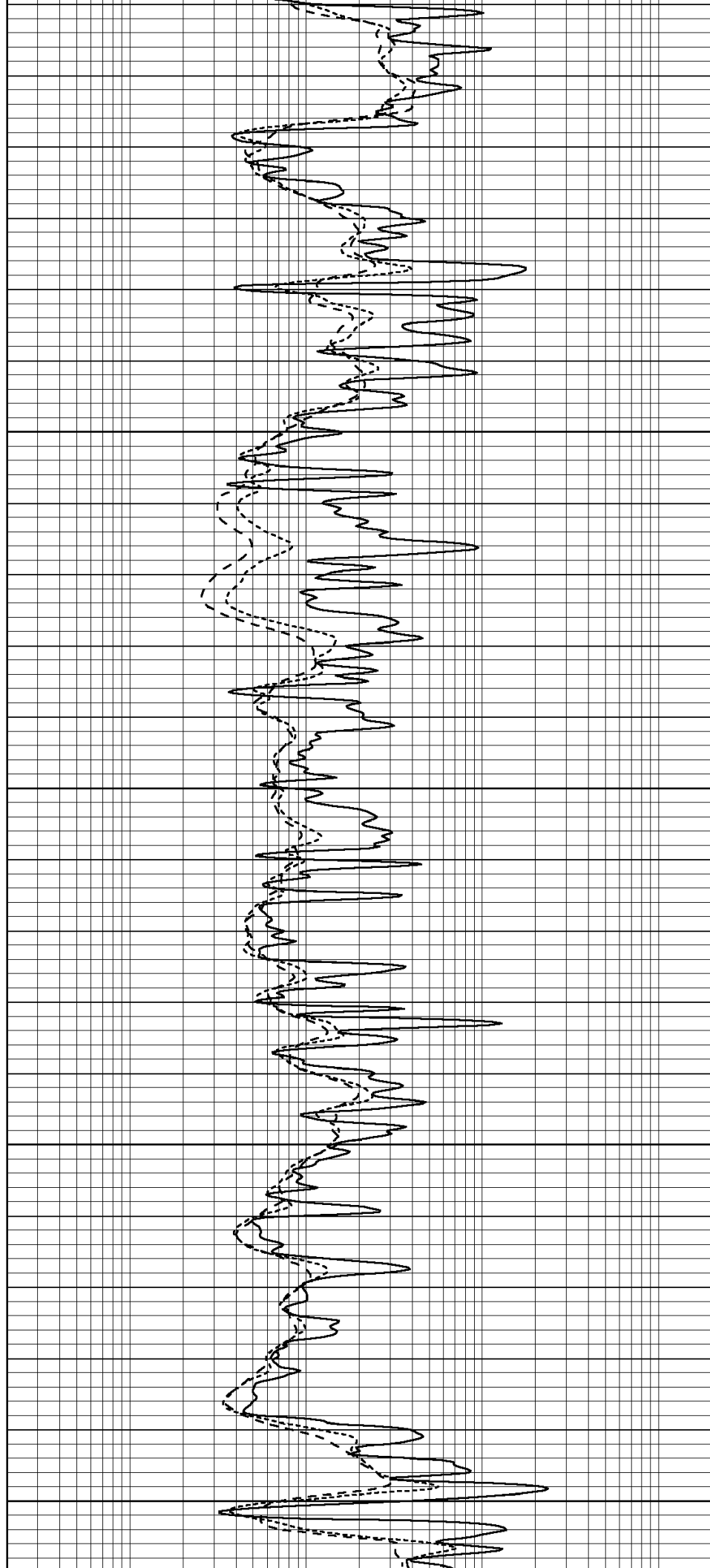
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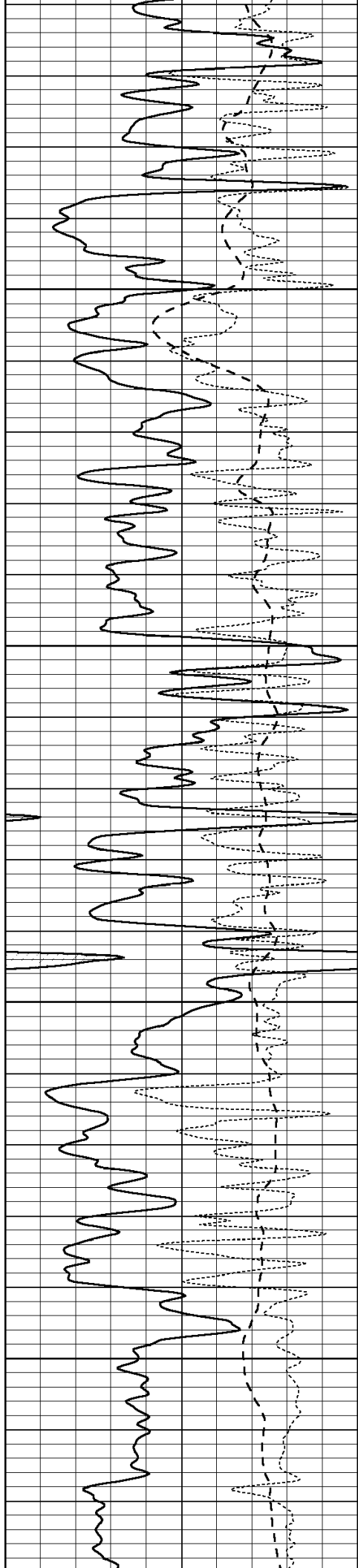
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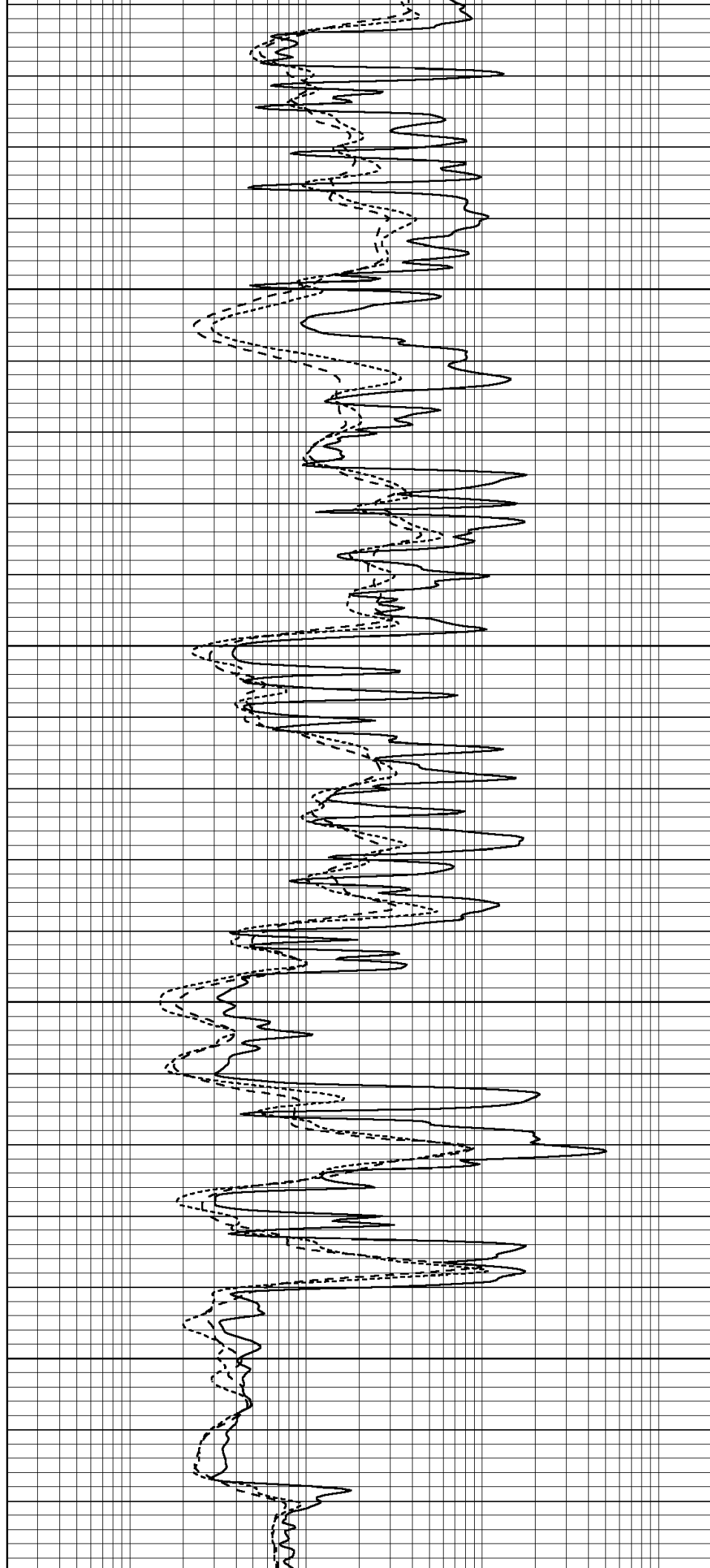


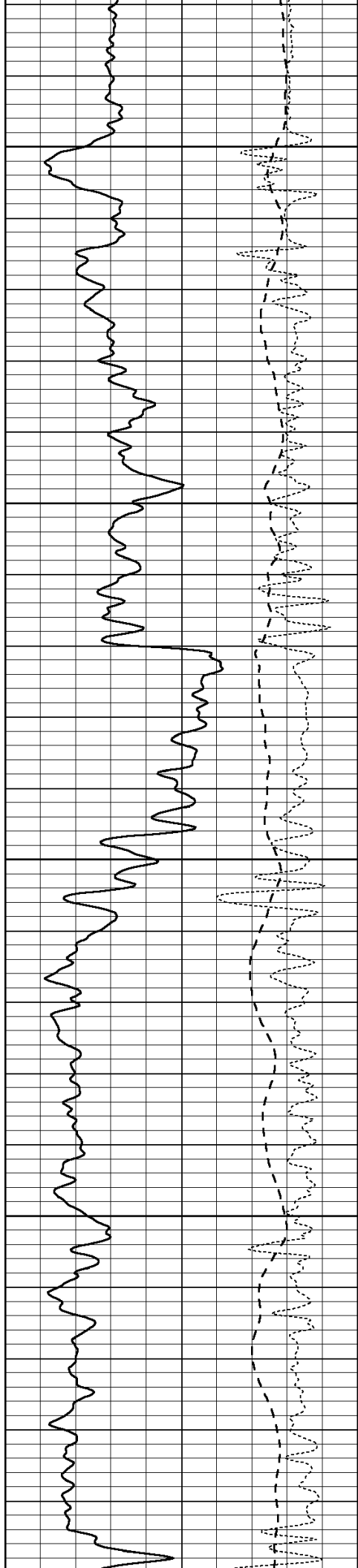
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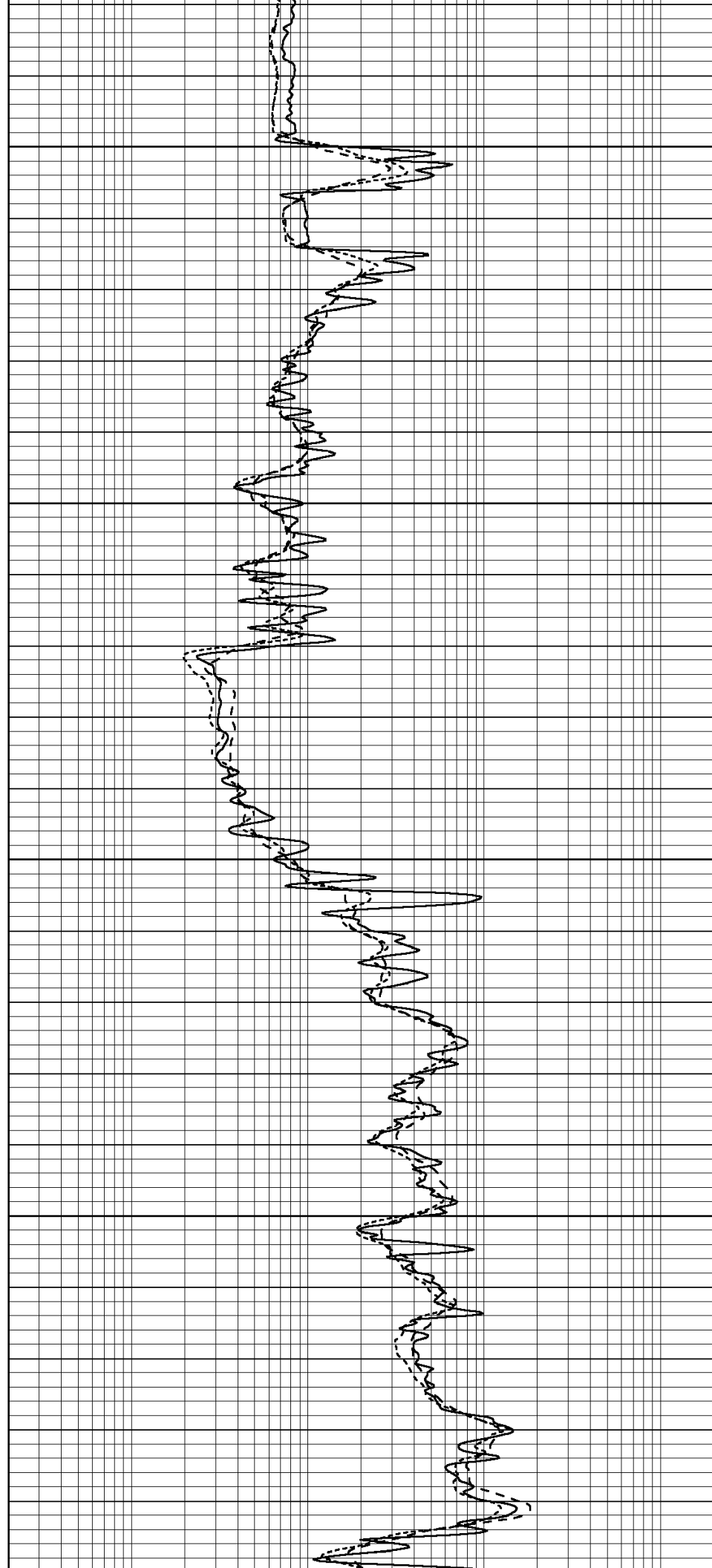
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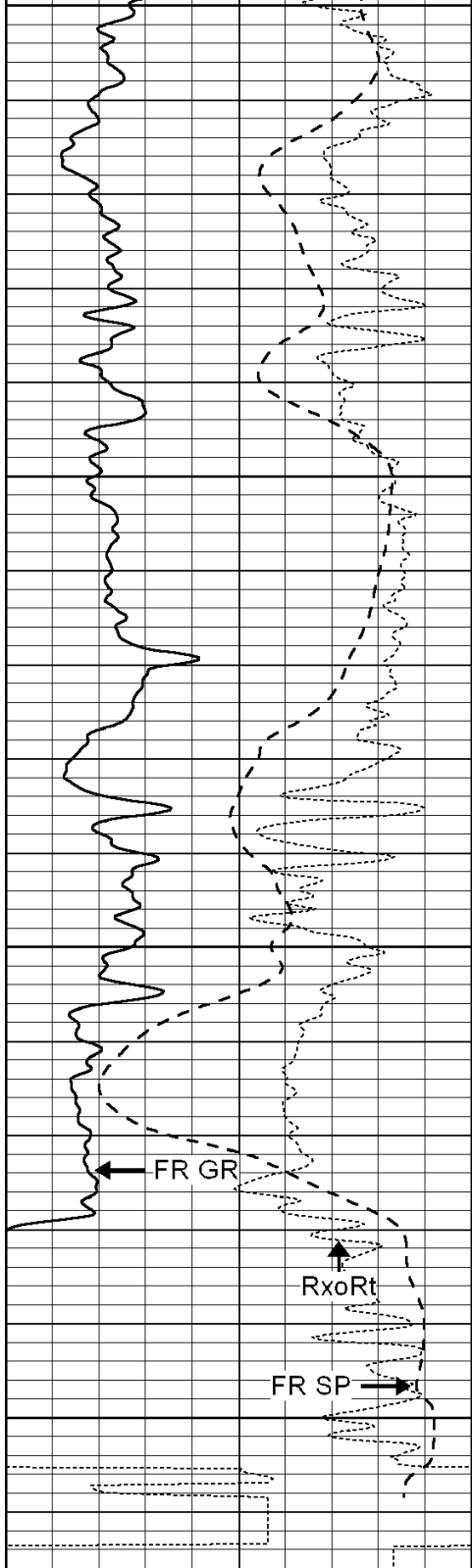
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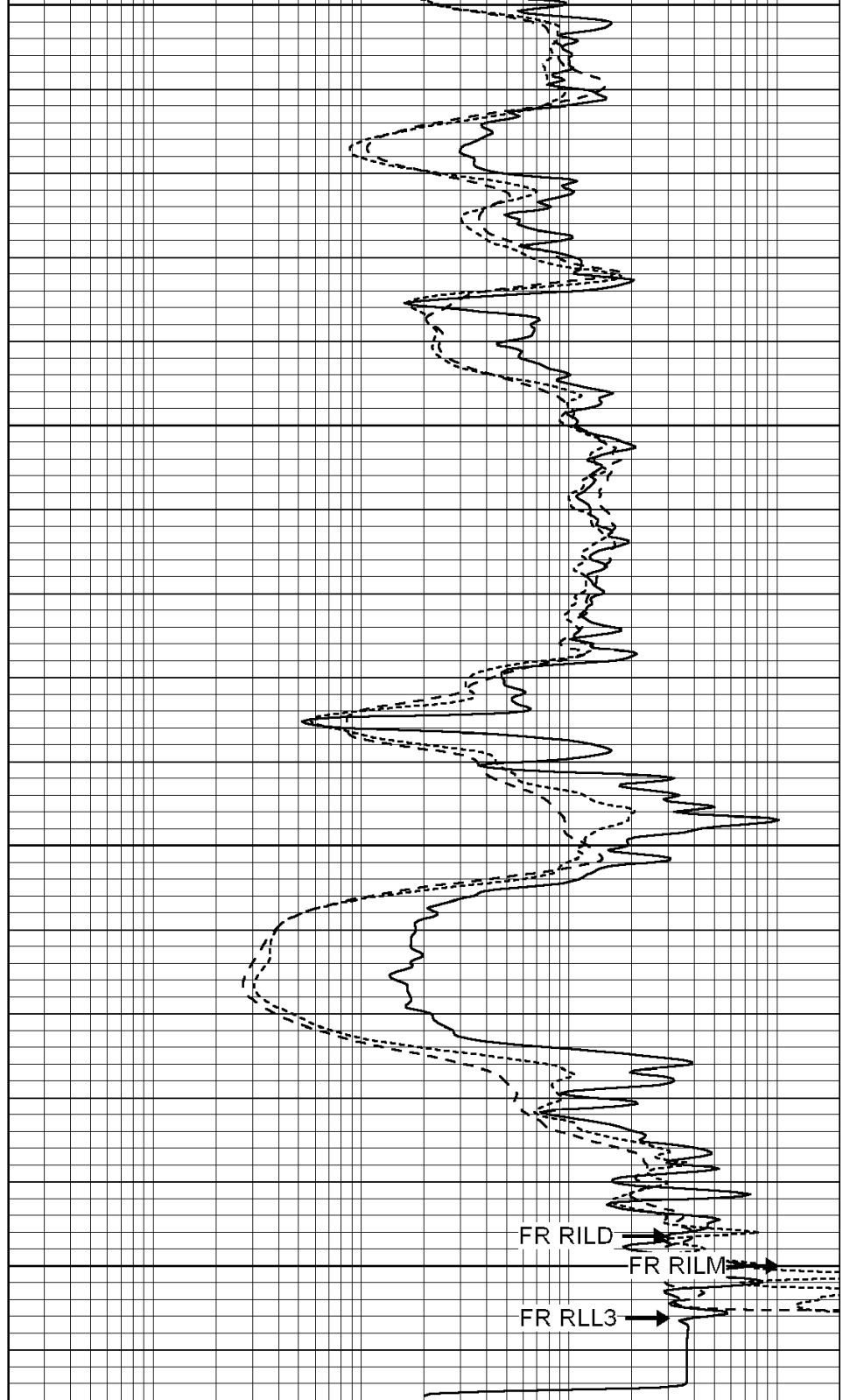
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5550
5600
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5700
LTD 5708

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

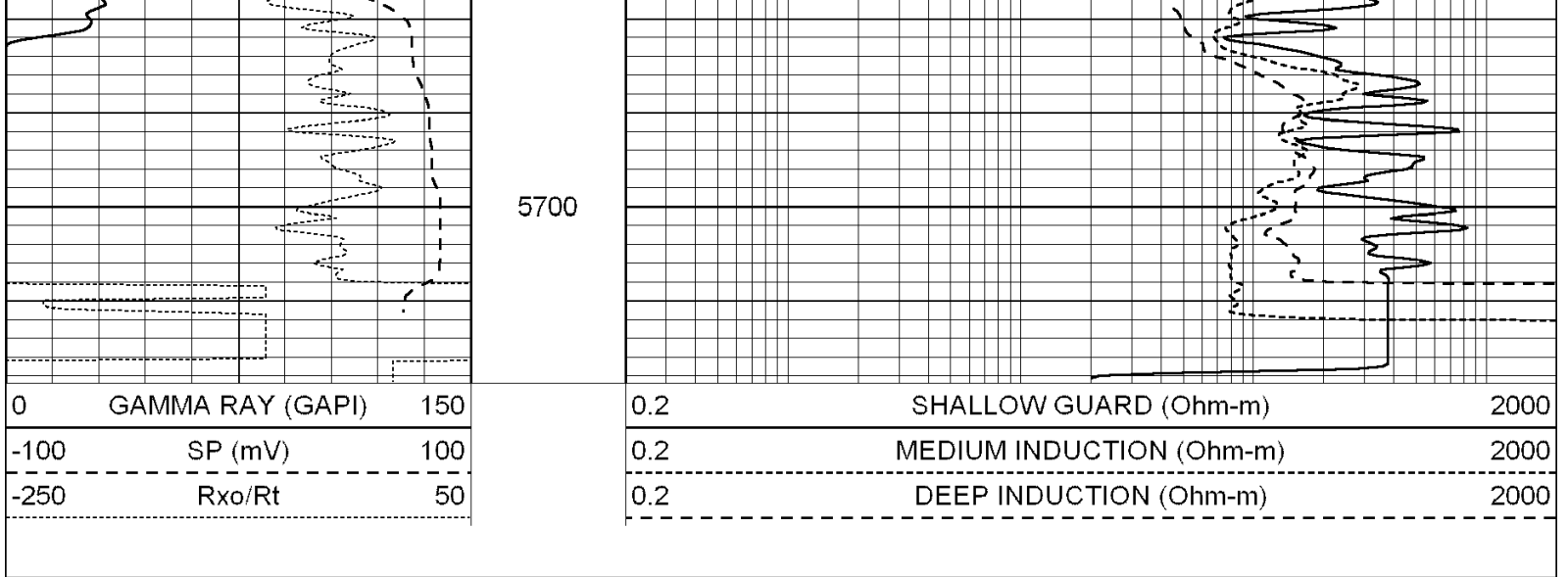


0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



SUPERIOR
Hays,
Kansas

REPEAT SECTION



Calibration Report

Database File: 004858ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Fri Feb 05 00:00:15 2010 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Fri Aug 01 06:33:19 2008
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop			Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730	
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619	
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739	

Downhole Calibration

	Readings				References			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000	
LL3		7.500	V		1500.000	Ohm-m			
		0.000	V		20.000	Ohm-m			
		-6.500	V		3800.000	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			

Compensated Density Calibration Report

Serial-Model:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Fri Mar 06 10:44:04 2009

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1127.25	444.45	cps
Aluminum	2.600	g/cc	260.89	307.54	cps
Spine Angle = 75.88			Density/Spine Ratio = 0.590		
	Size		Reading		
Small Ring	8.00	in	4.15	V	
Large Ring	14.00	in	5.96	V	

Compensated Neutron Calibration Report

Serial Number:	5I
Tool Model:	G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR6
Tool Model:	OPEN
Performed:	Tue Nov 10 08:32:36 2009
Calibrator Value:	150.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	276.0 cps
Sensitivity:	0.5535 GAPI/cps