



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	WOOLSEY OPERATING CO. LLC.	Company	WOOLSEY OPERATING COMPANY, LLC.
Well	TUCKER GU "A" #4	Well	TUCKER GU "A" #4
Field	SPICER	Field	SPICER
County	BARBER	County	BARBER
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-007-23941-0000 1650' FSL & 660' FWL	Other Services CDL/CNL/PE	
Permanent Datum	GROUND LEVEL	Elevation	1434
Log Measured From	KELLY BUSHING 10' A.G.L.		
Drilling Measured From	KELLY BUSHING		
SEC 28 TWP 33S RGE 10W			
Date	9/19/12		
Run Number	ONE		
Depth Driller	5052		
Depth Logger	5050		
Bottom Logged Interval	5048		
Top Log Interval	00		
Casing Driller	8 5/8"@215'		
Casing Logger	215		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,500 PPM	
Density / Viscosity	9.1/54		
pH / Fluid Loss	9.5/10.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@78F		
Rmt @ Meas. Temp	.675@78F		
Rmc @ Meas. Temp	1.08@78F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.557@126F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	8:00 A.M.		
Maximum Recorded Temperature	126F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SCOTT ALBERG		

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
SHARON, KS., 7 S. ON "TRI CITY " BLKTOP TO "KOCHIA RD.", 1W., 1/2N., E. INTO



SUPERIOR
Hays,
Kansas

MAIN SECTION

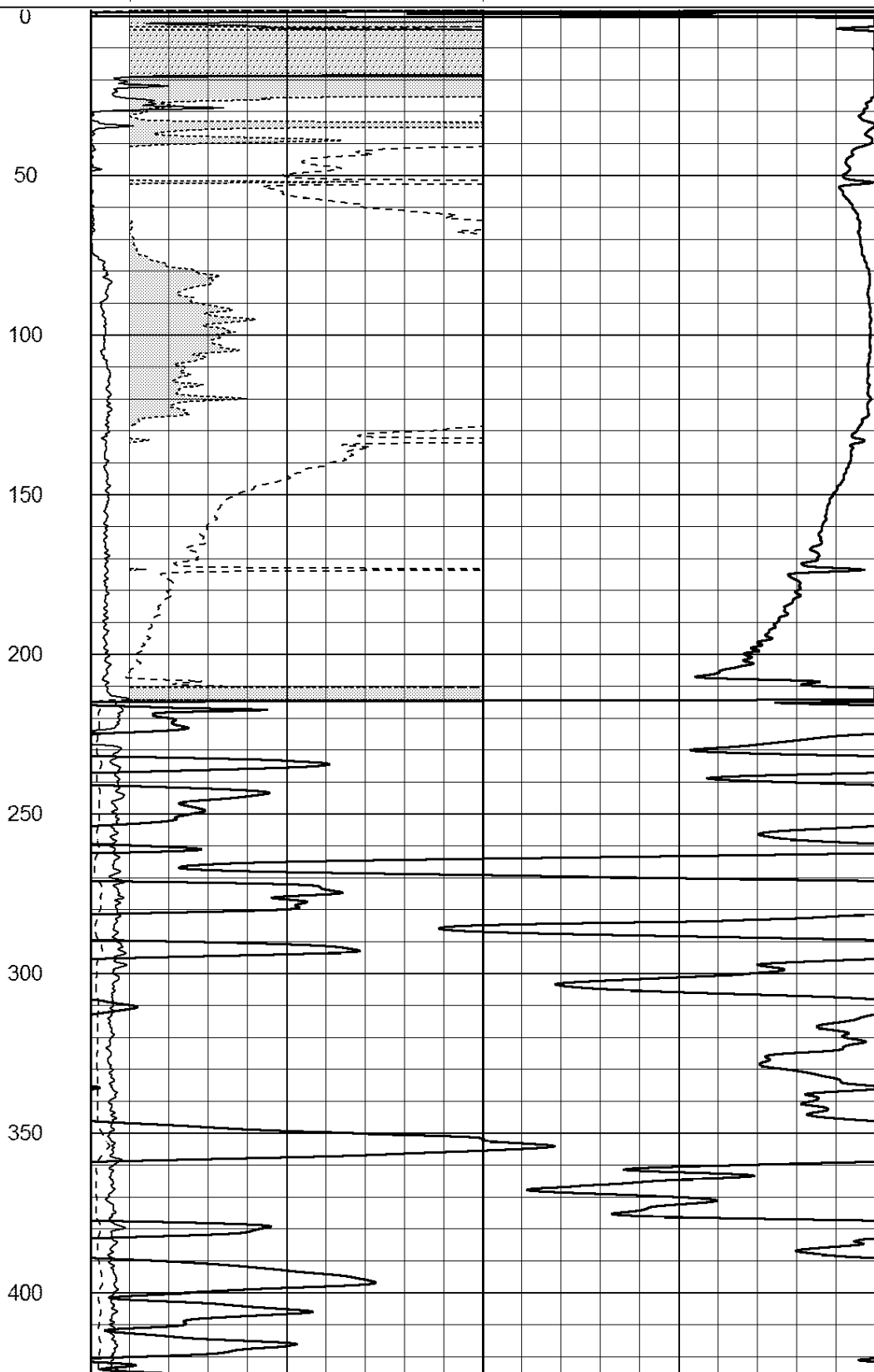
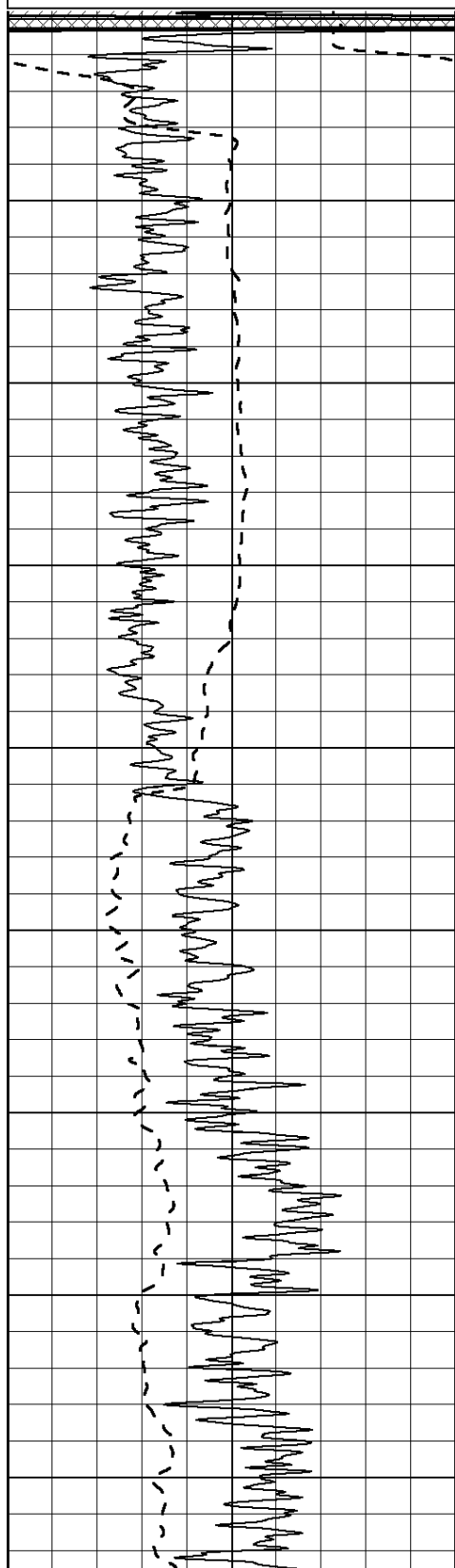
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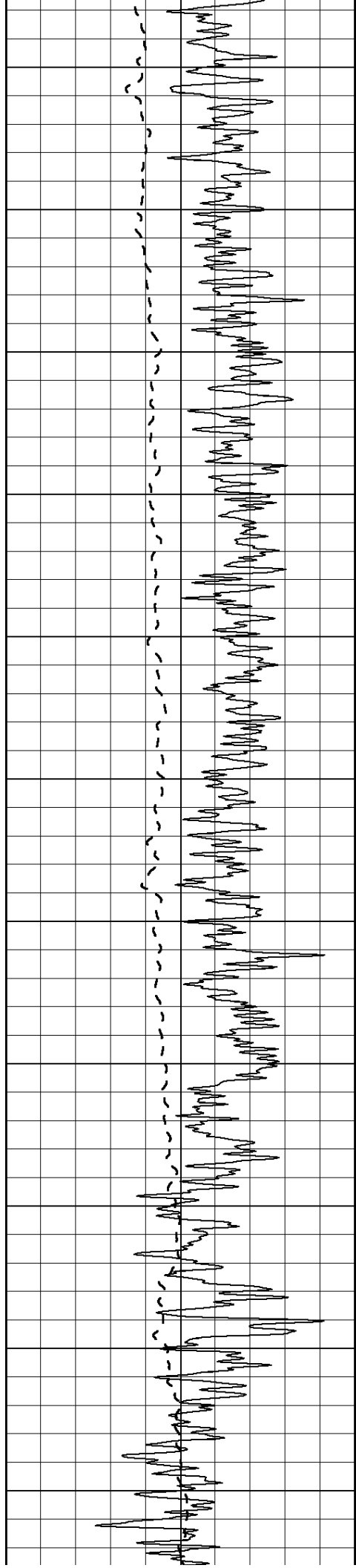
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-100	SP (mV)	100

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





450

500

550

600

650

700

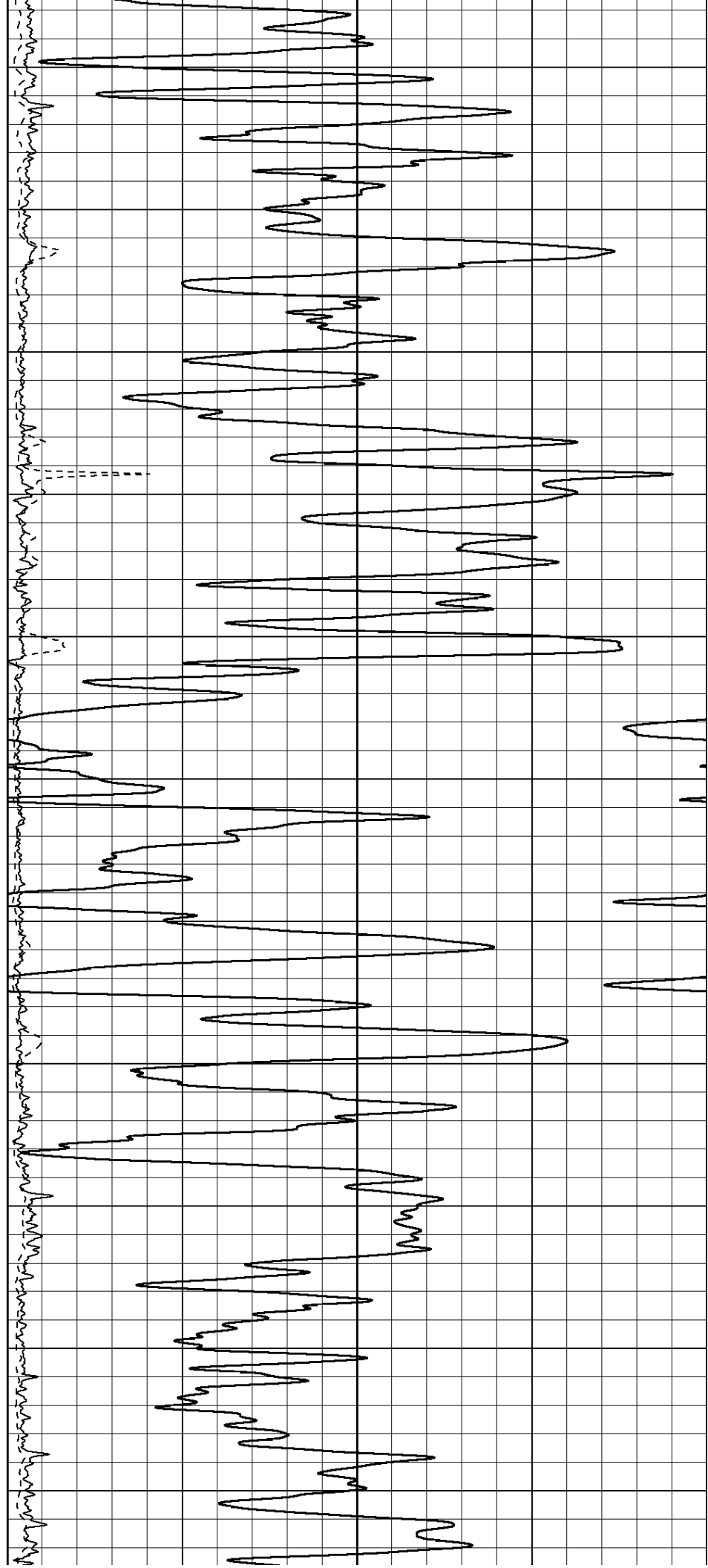
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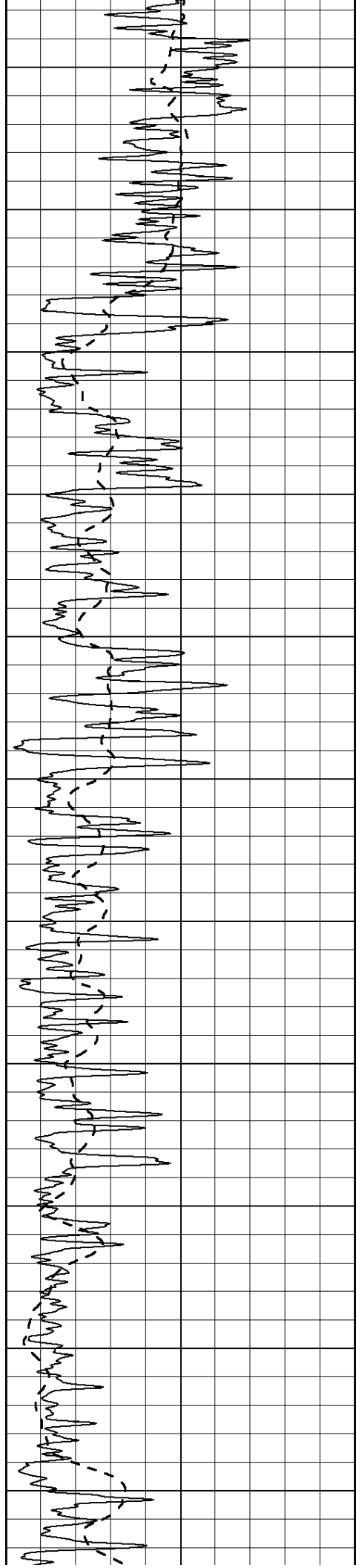
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850

900

950





1000

1050

1100

1150

1200

1250

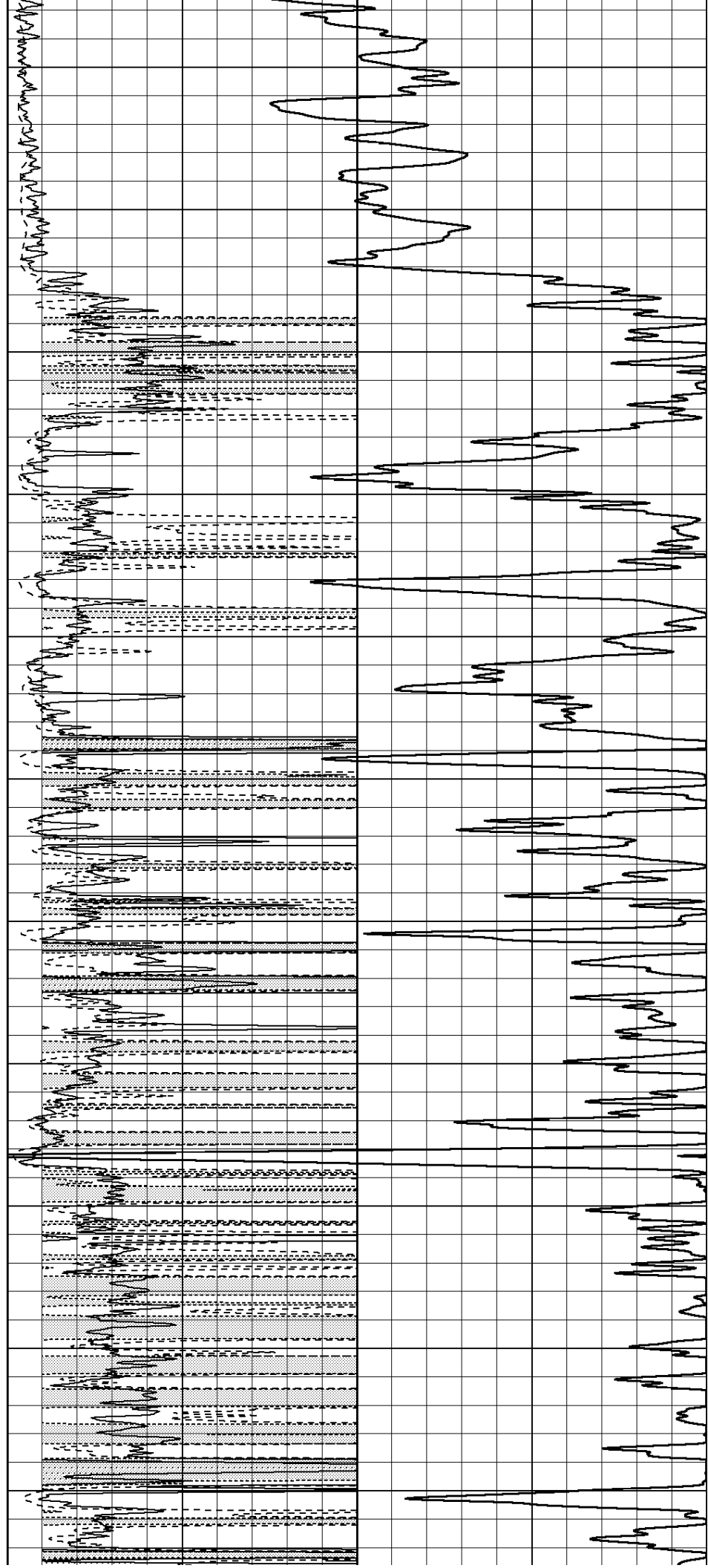
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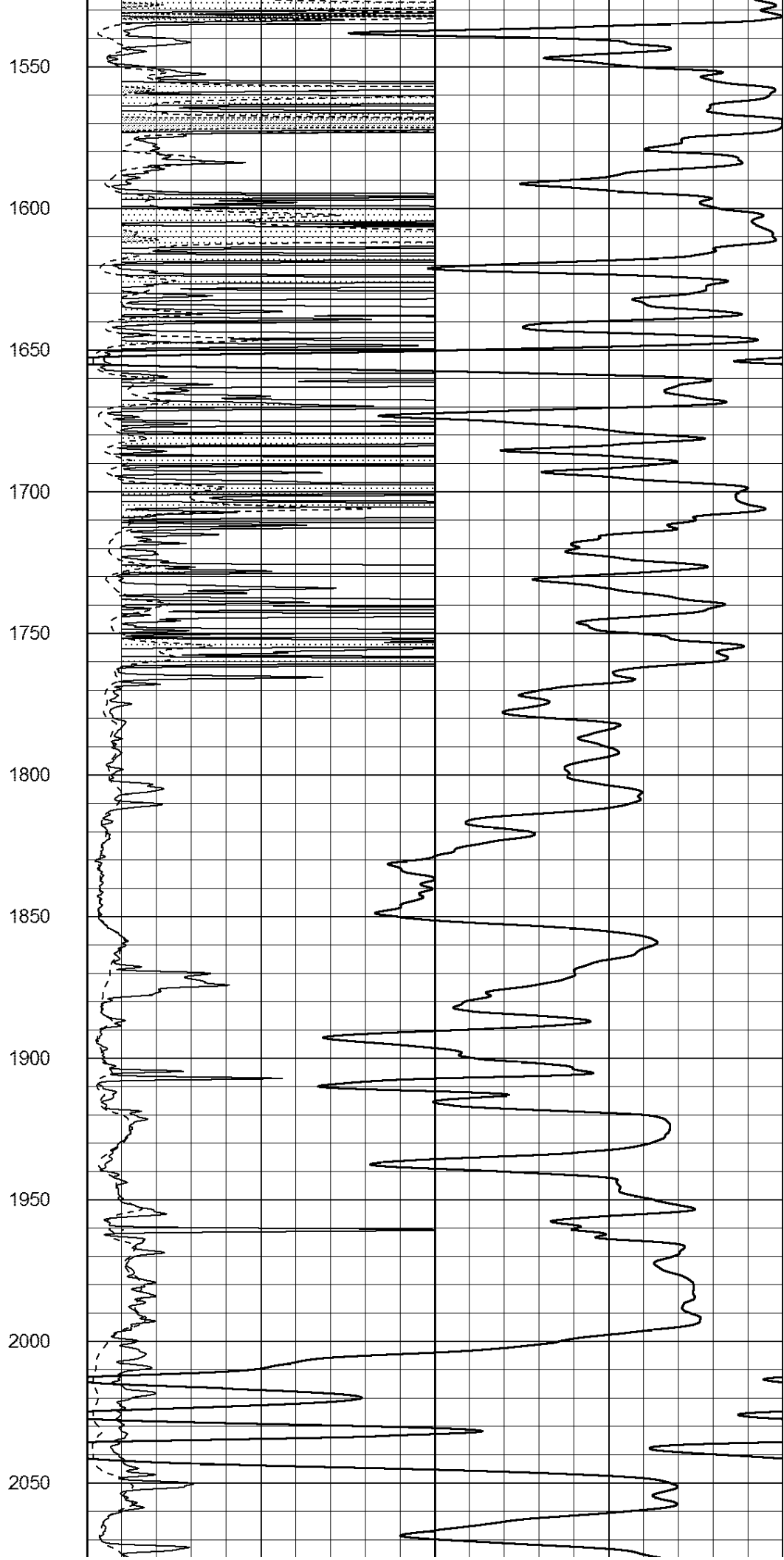
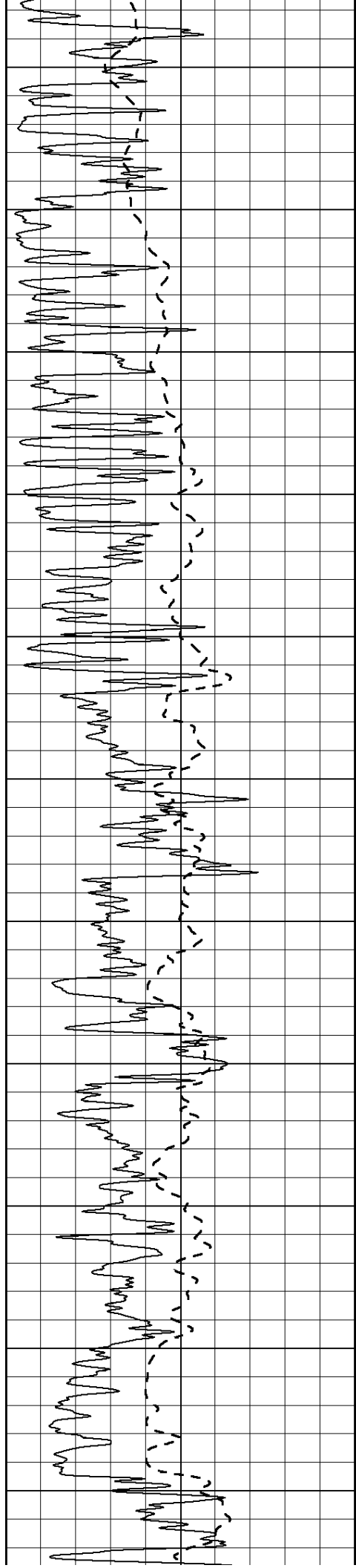
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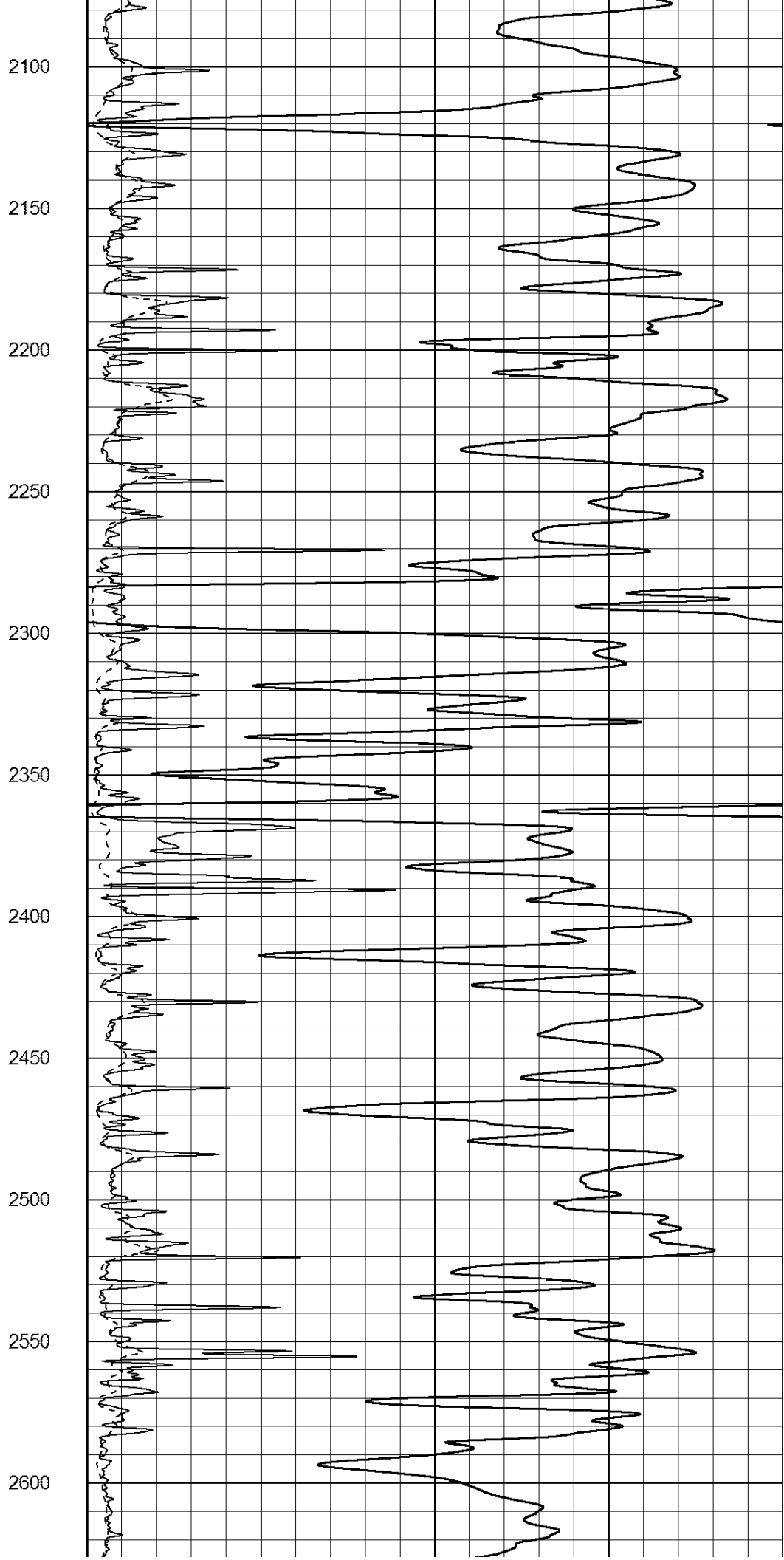
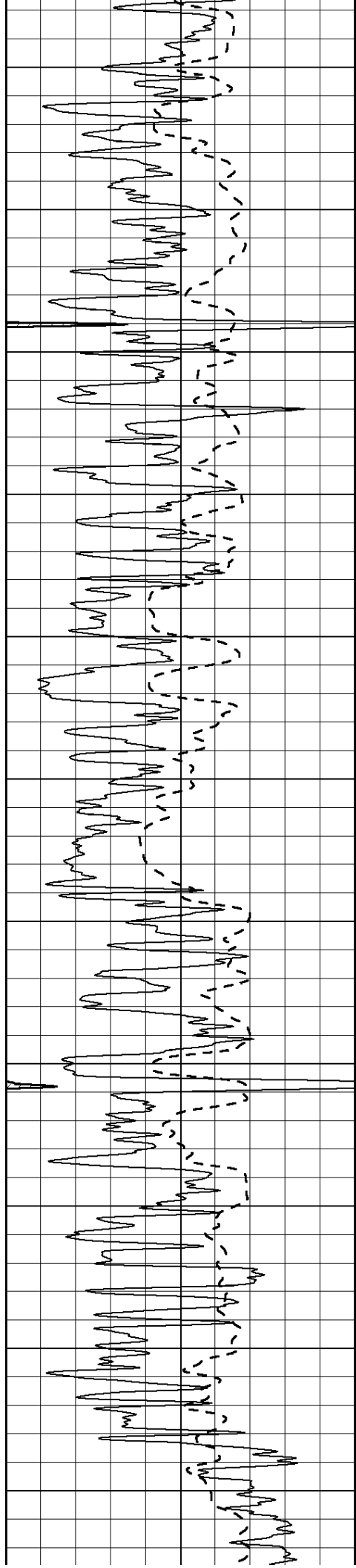
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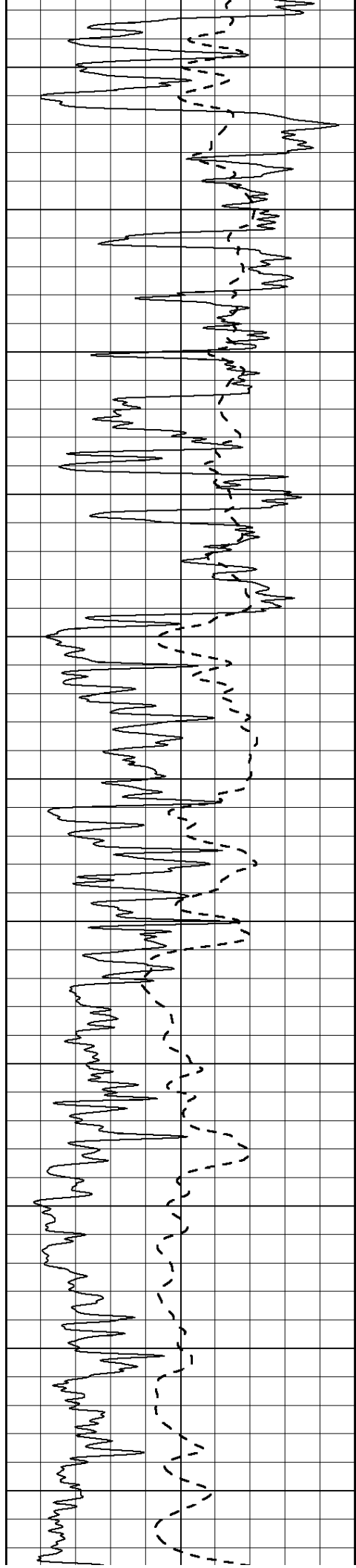
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2650

2700

2750

2800

2850

2900

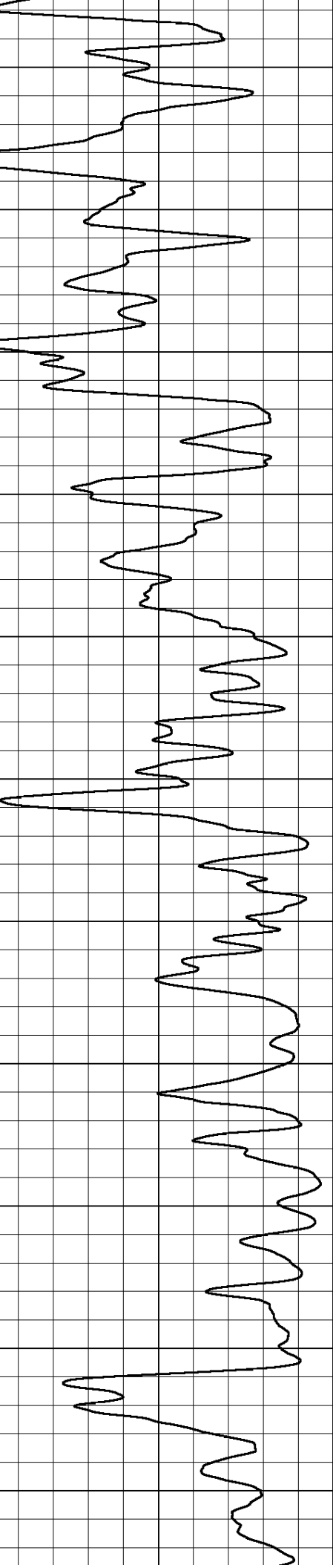
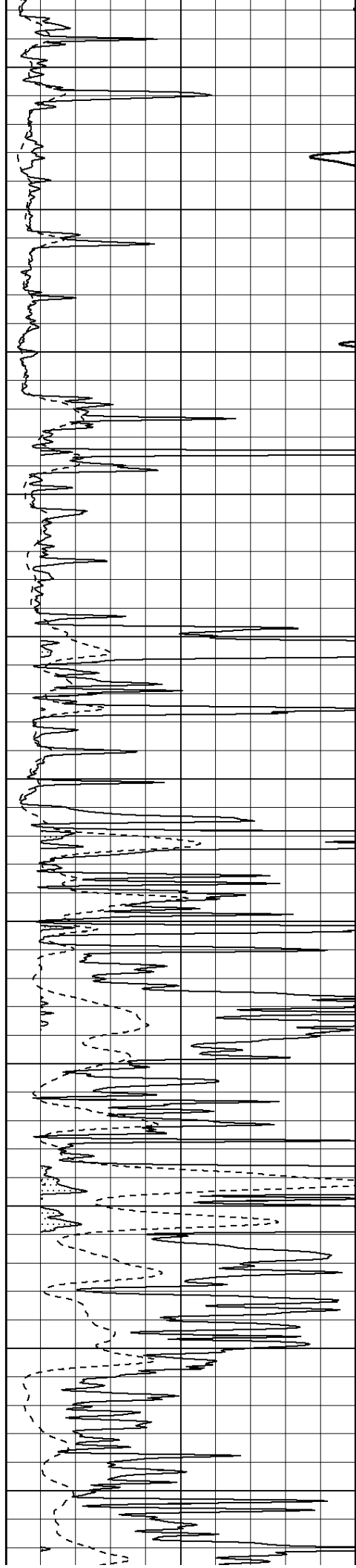
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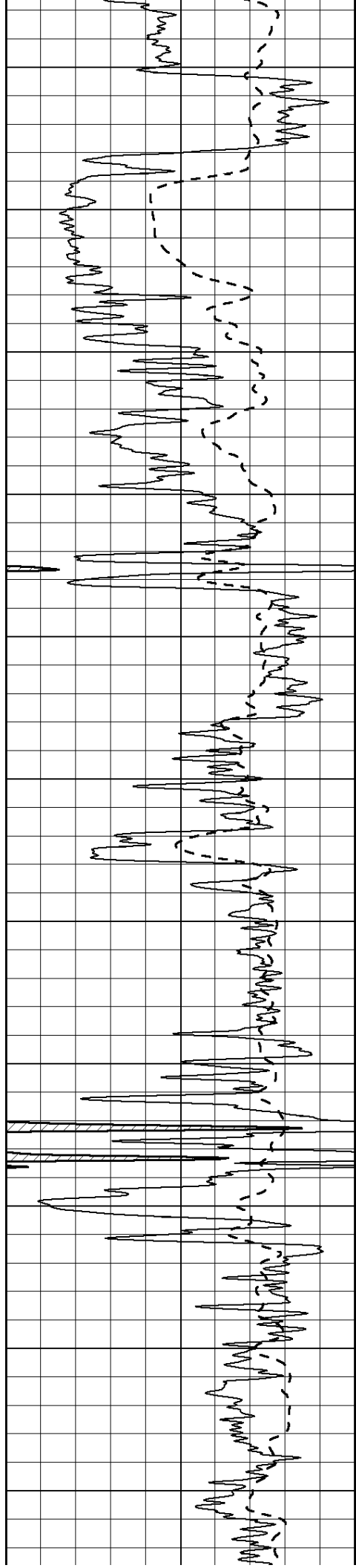
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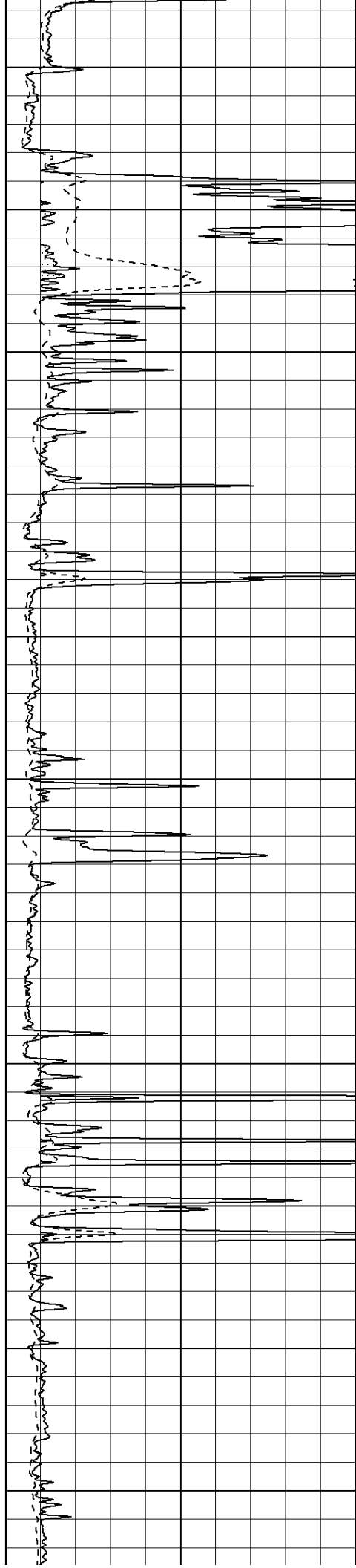
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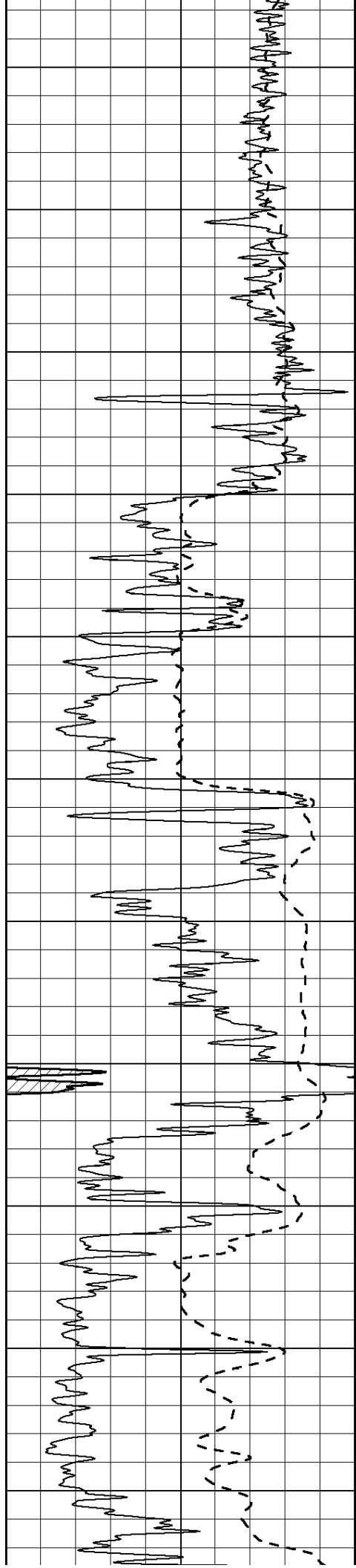
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3200 3250 3300 3350 3400 3450 3500 3550 3600 3650 3700





3750

3800

3850

3900

3950

4000

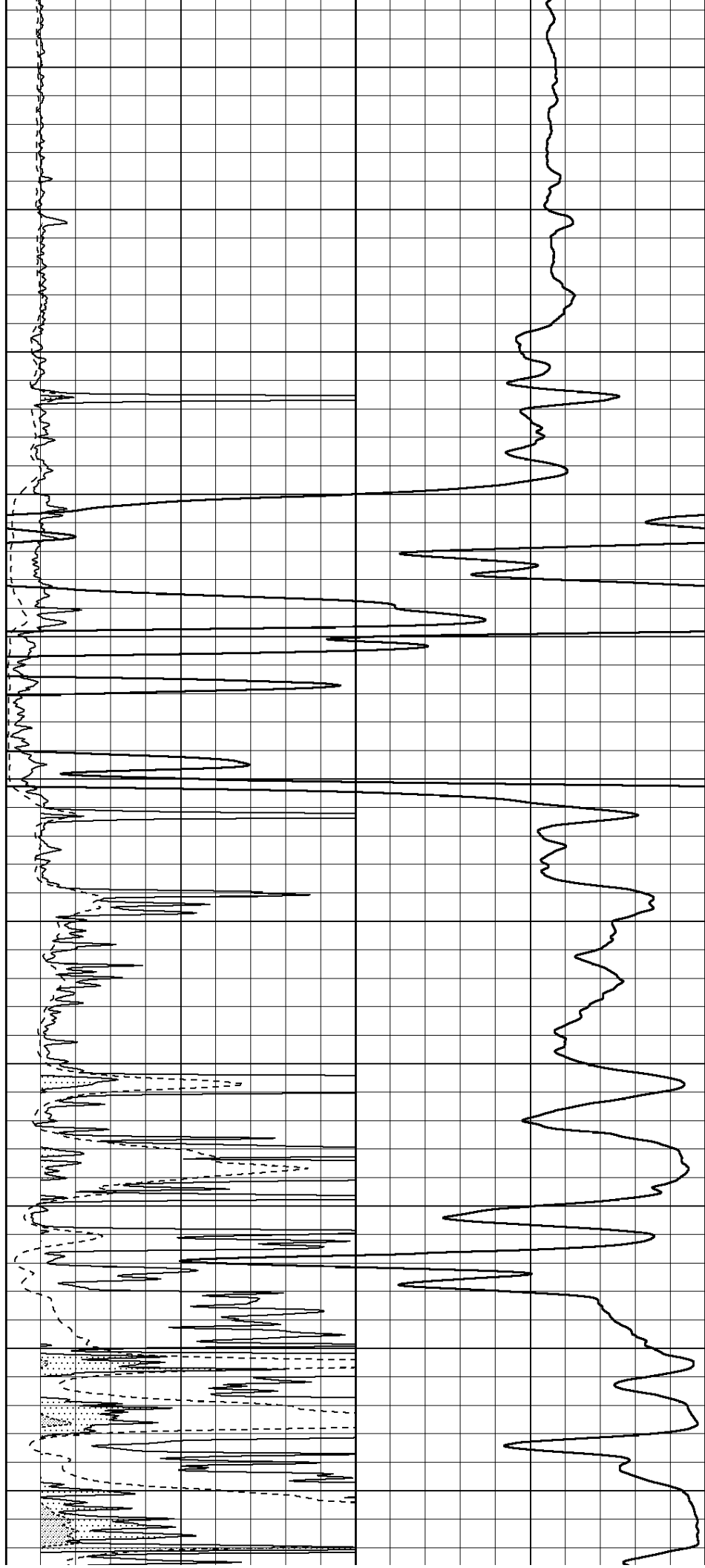
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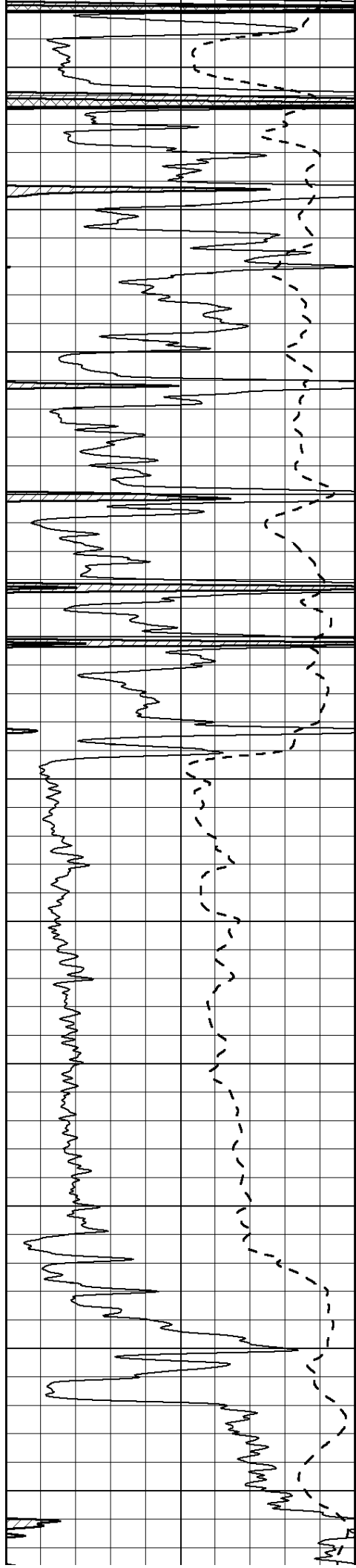
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4350

4400

4450

4500

4550

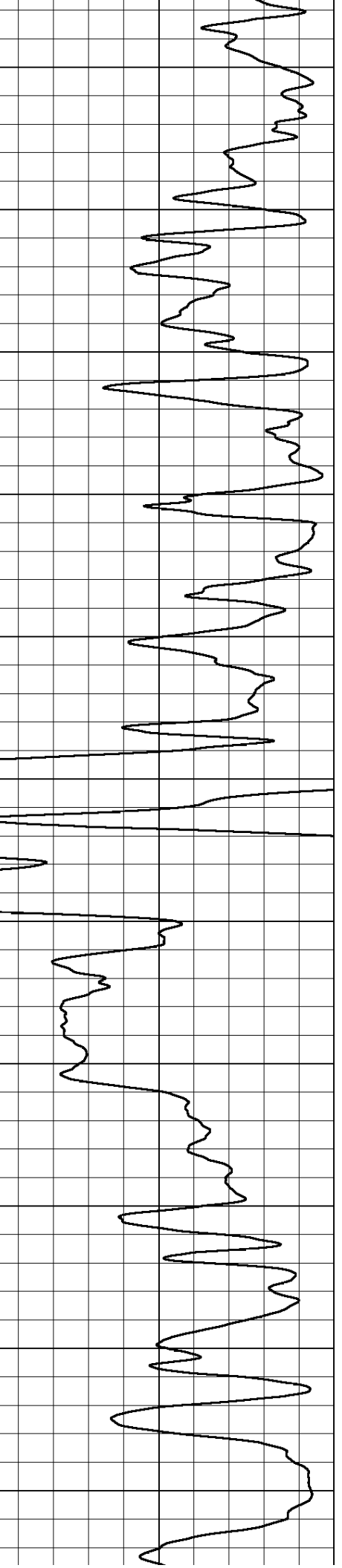
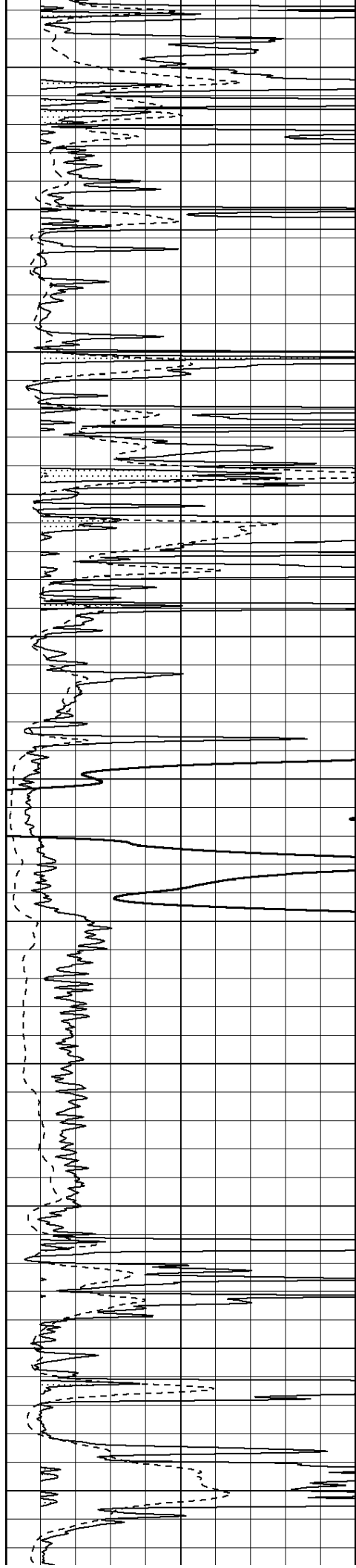
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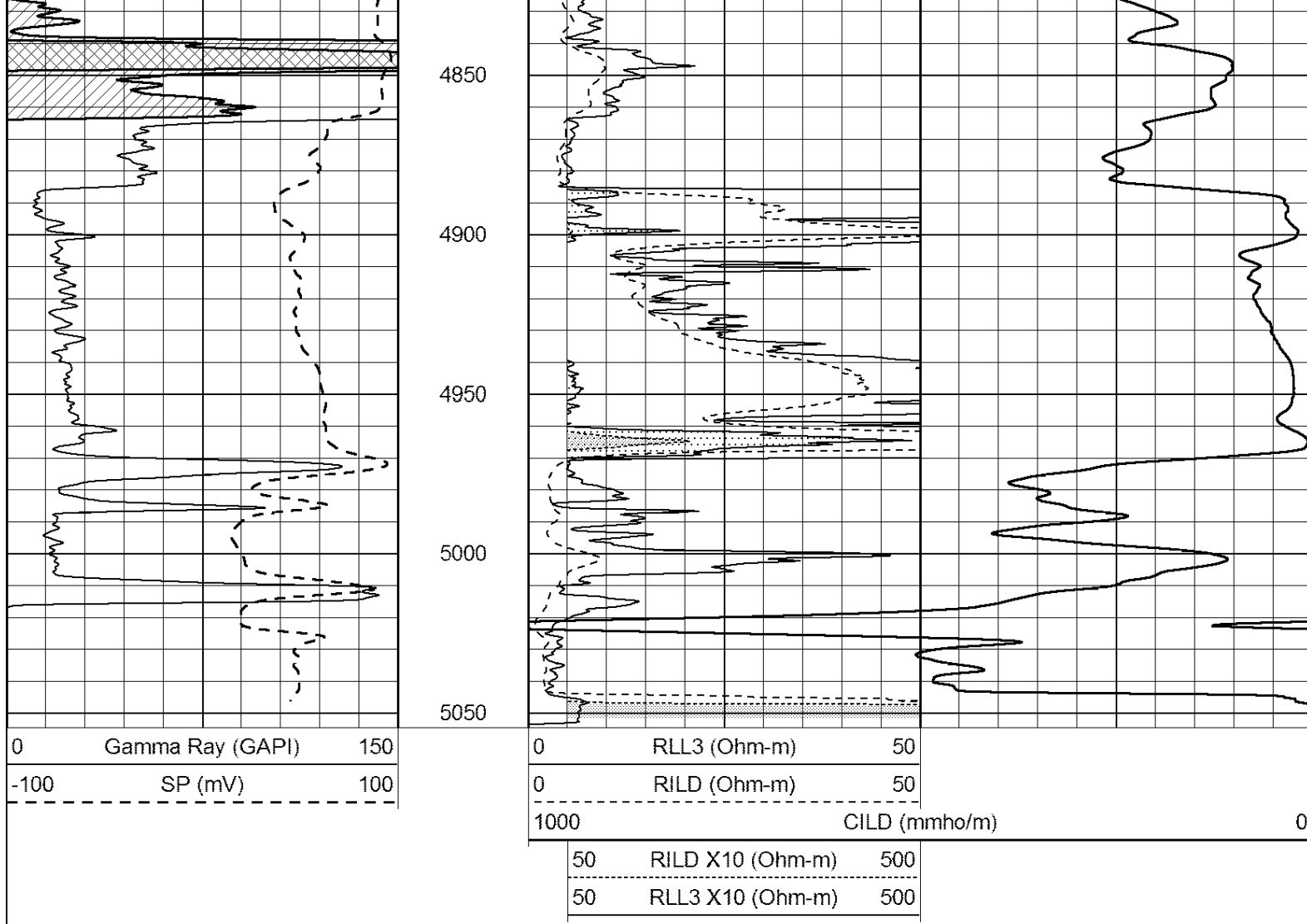
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4800





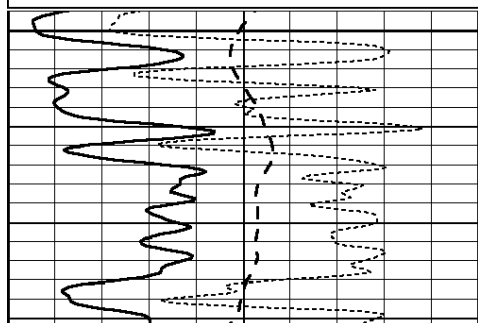
SUPERIOR
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MAIN SECTION

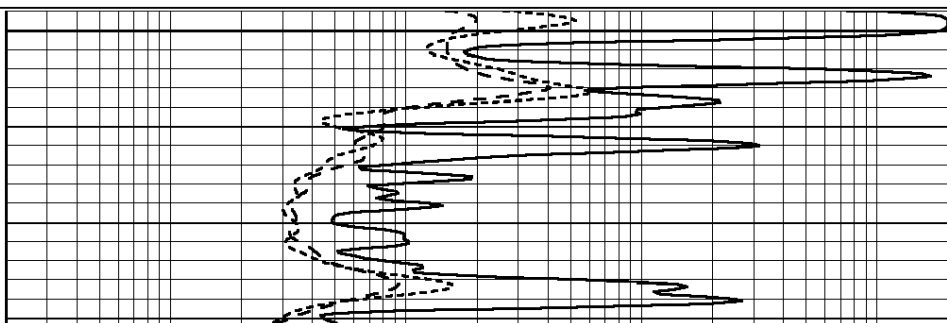
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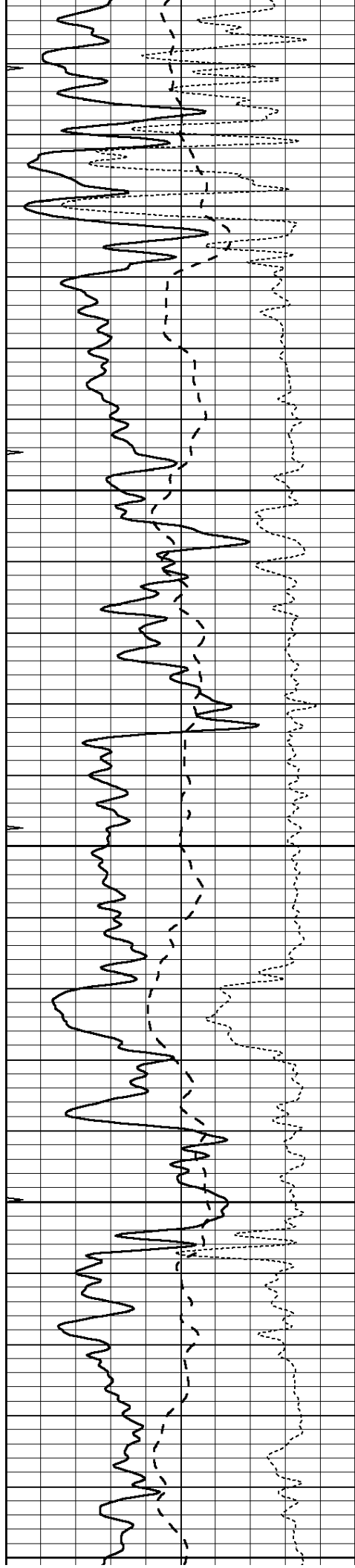
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



1700





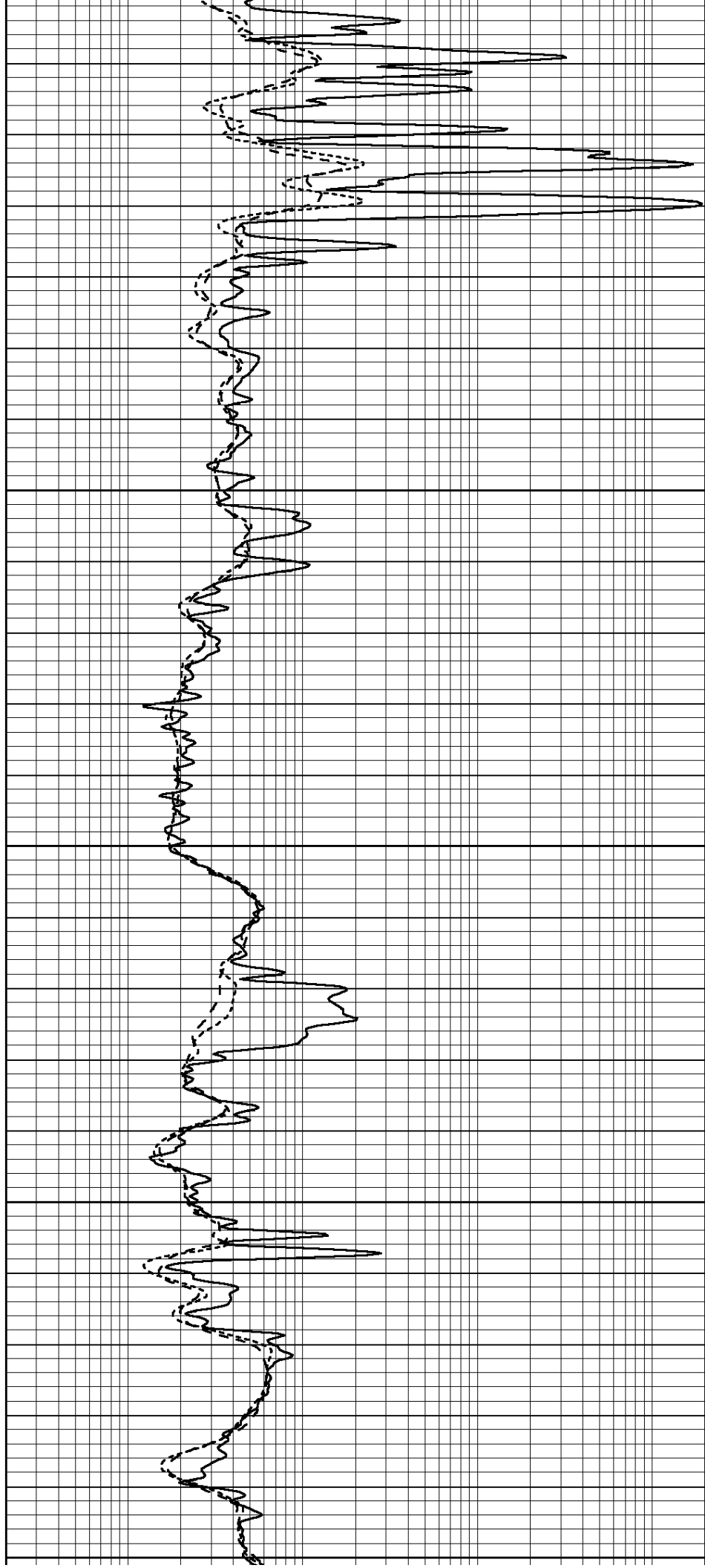
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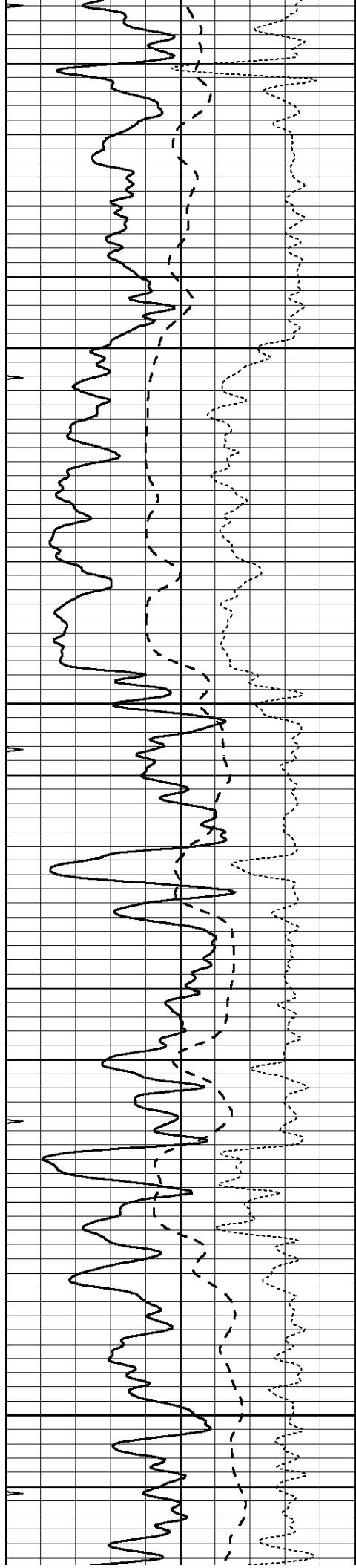
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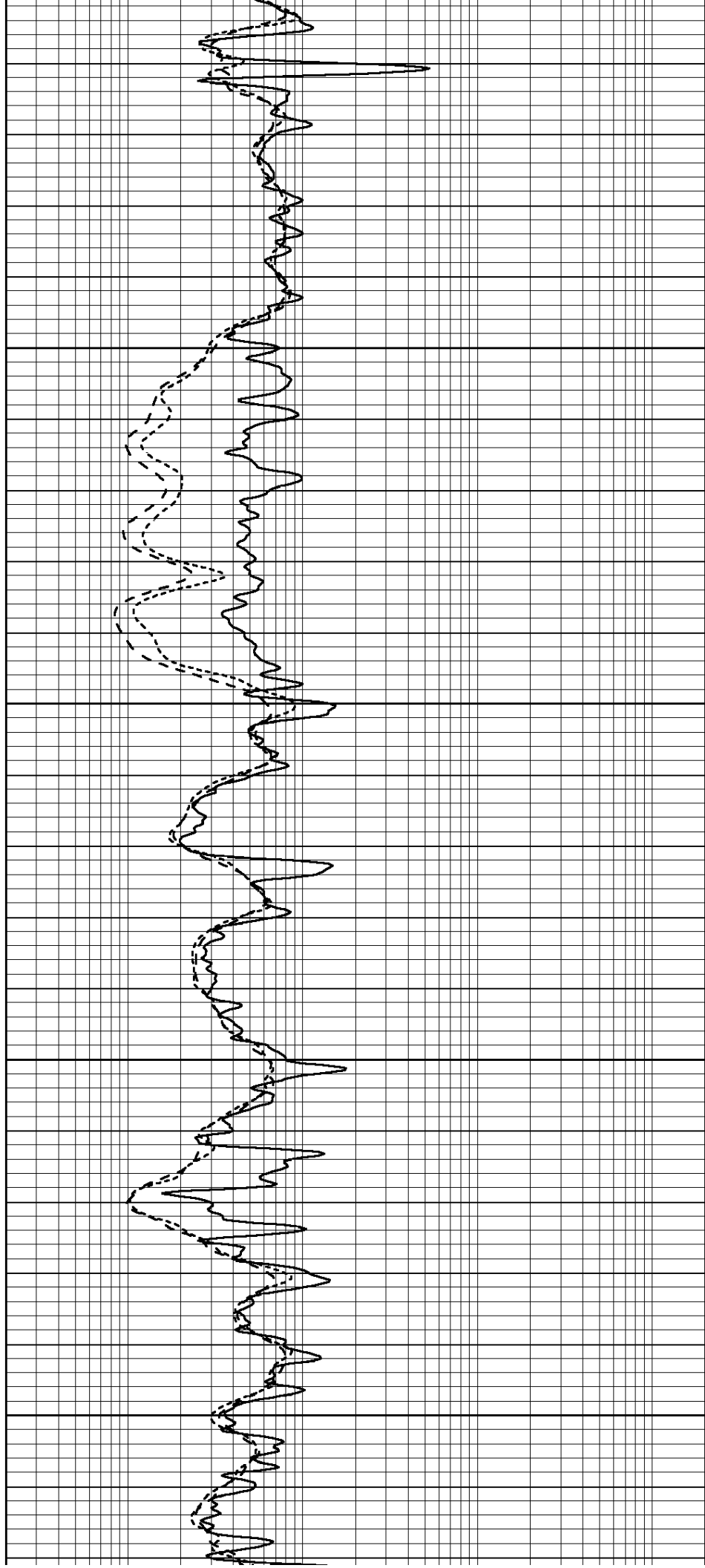


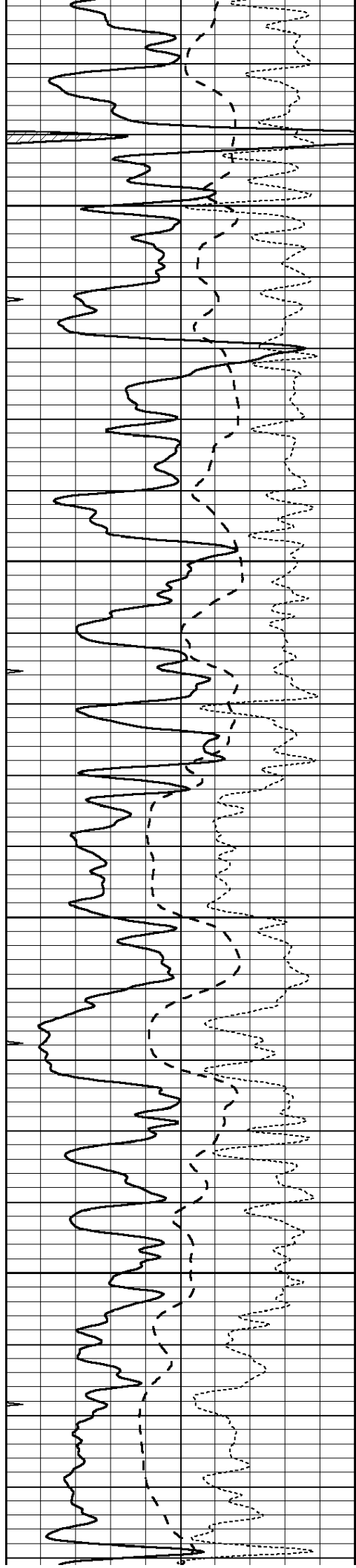
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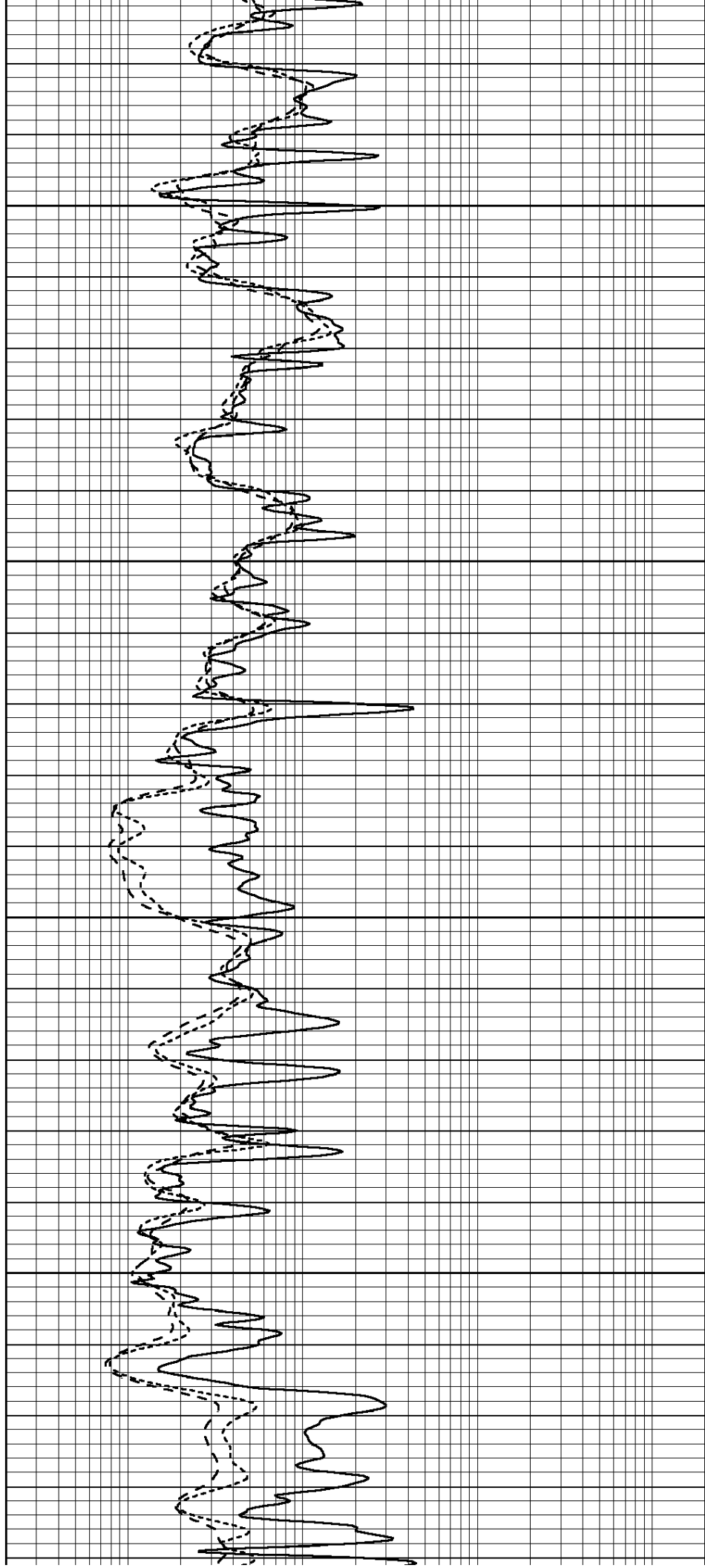


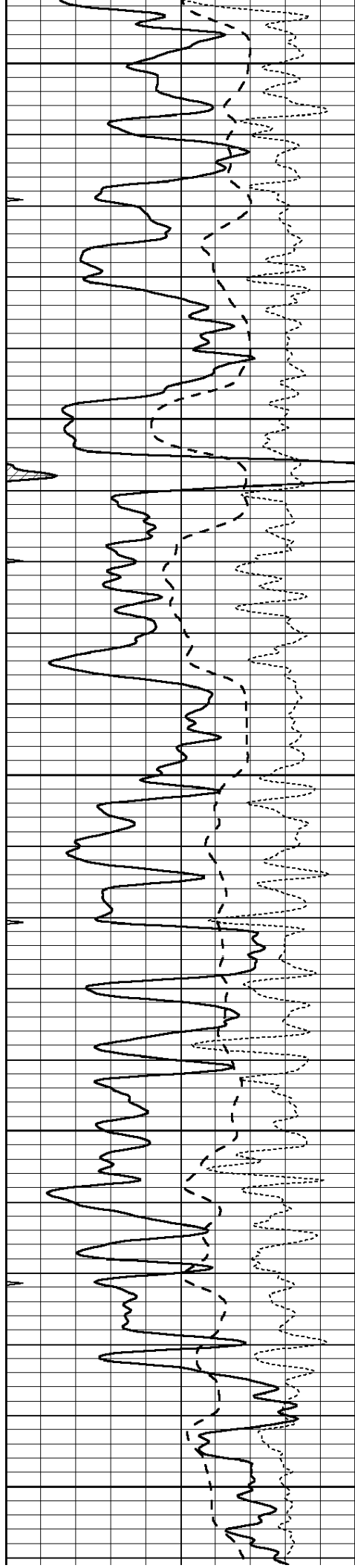
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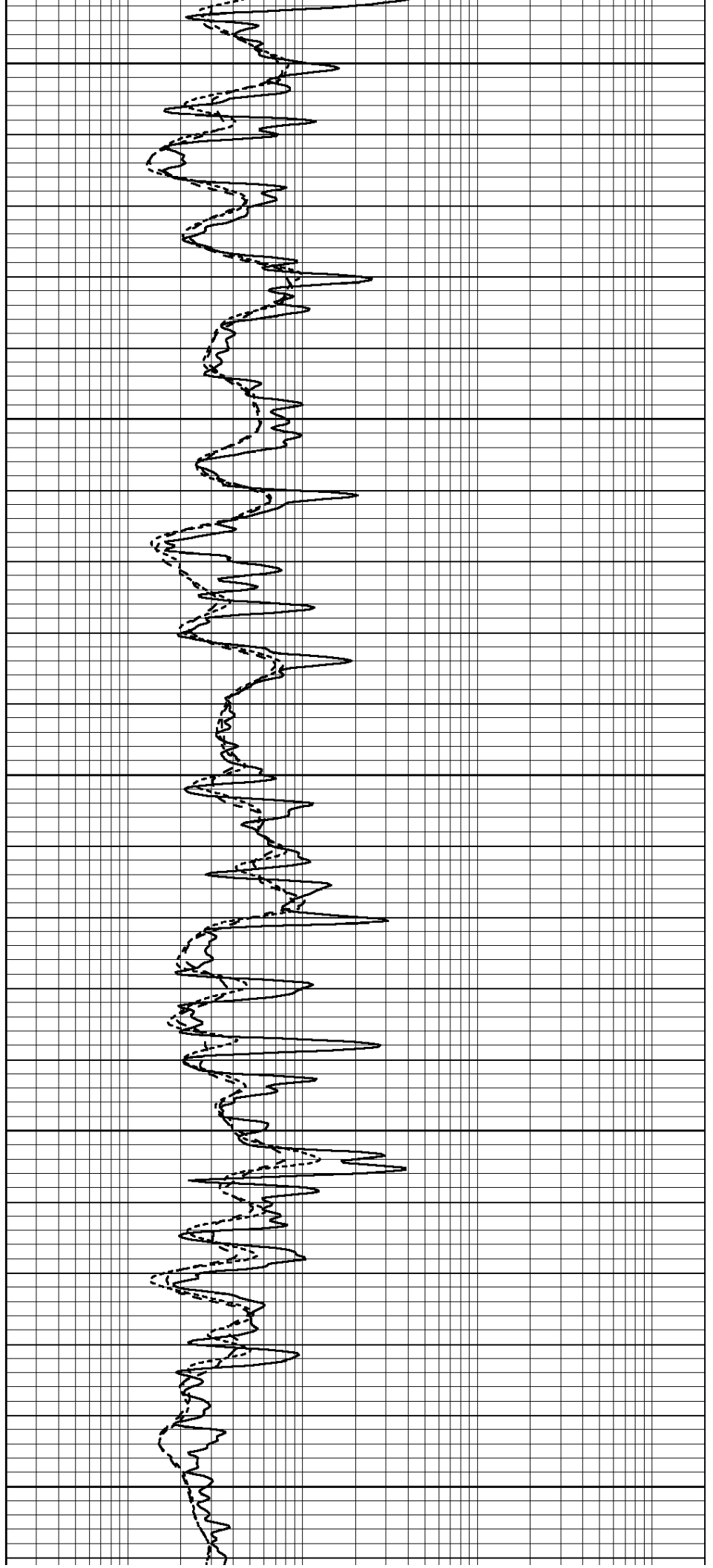
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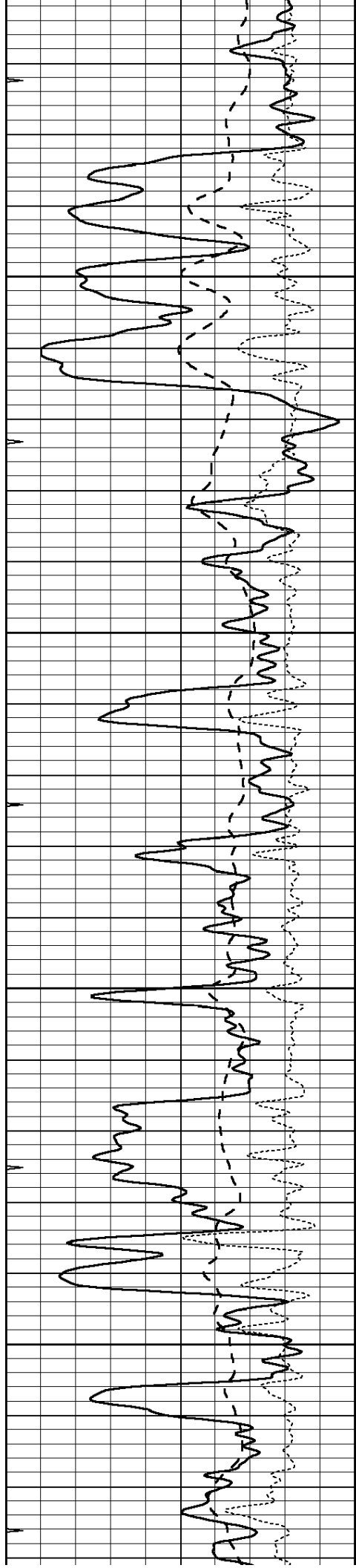
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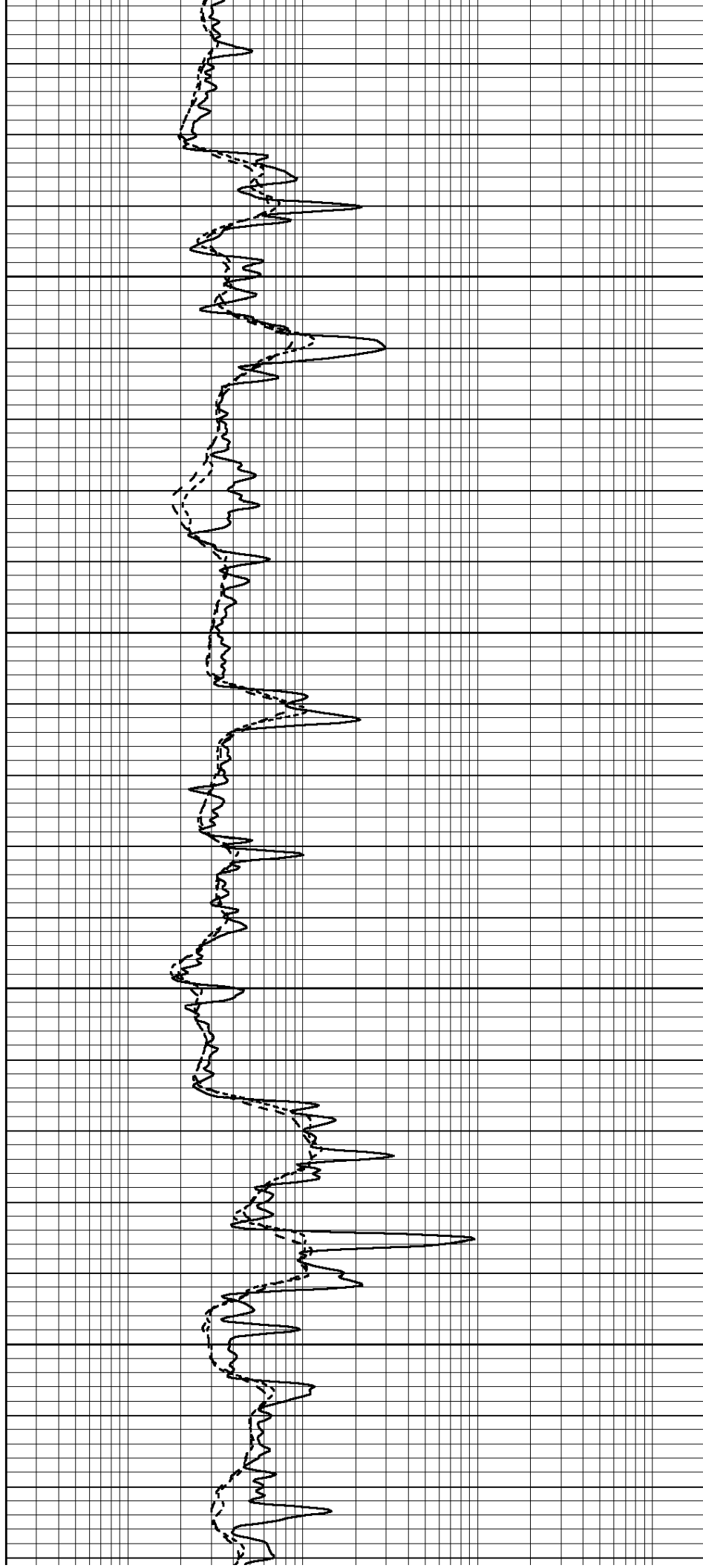


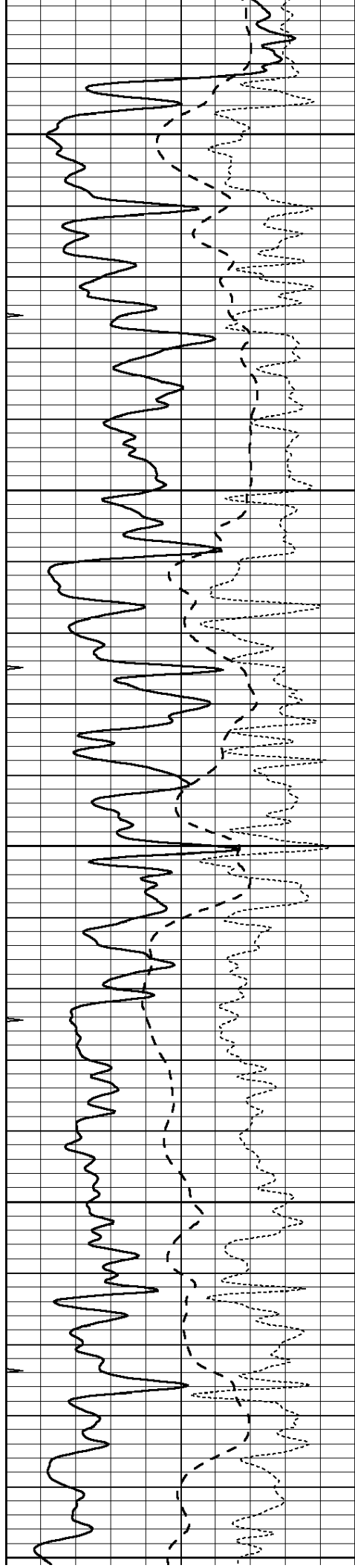
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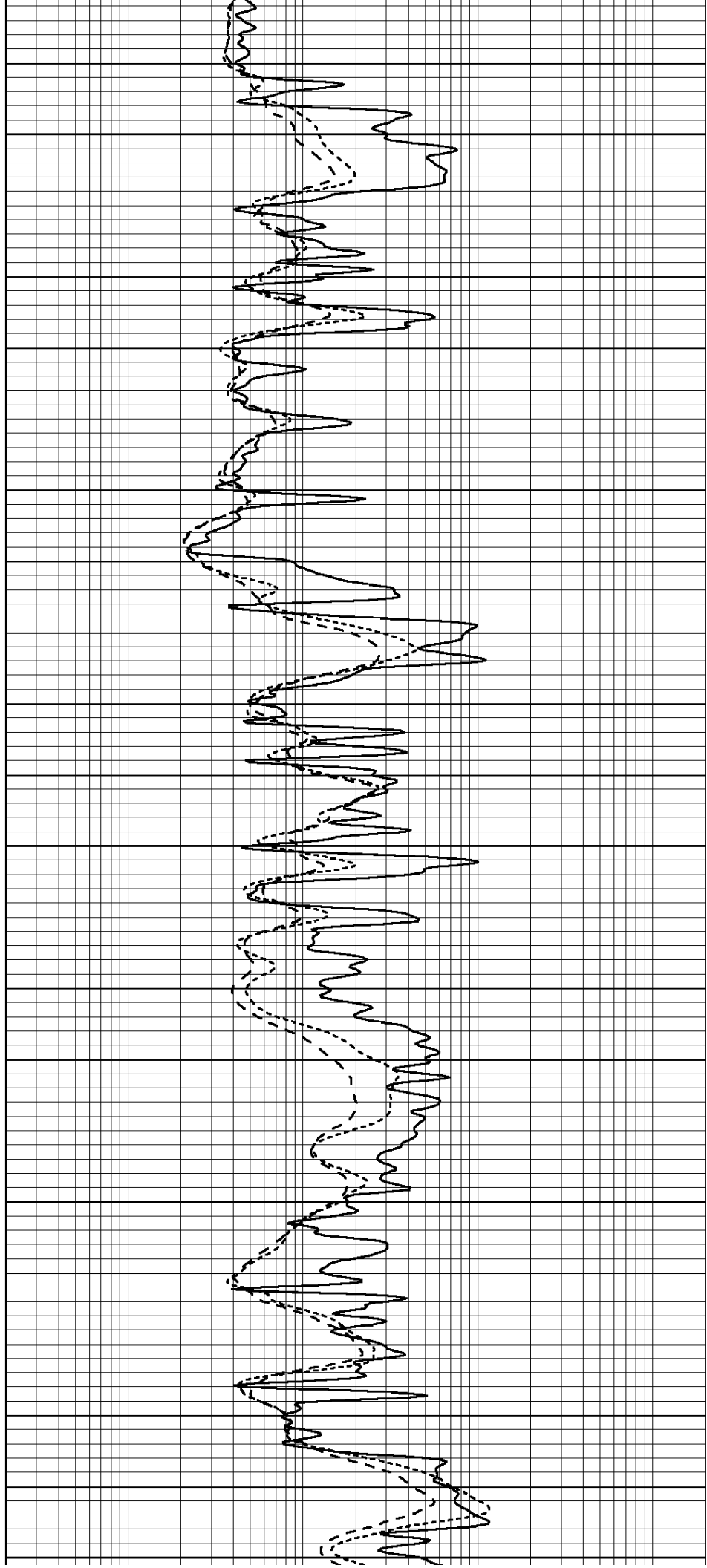
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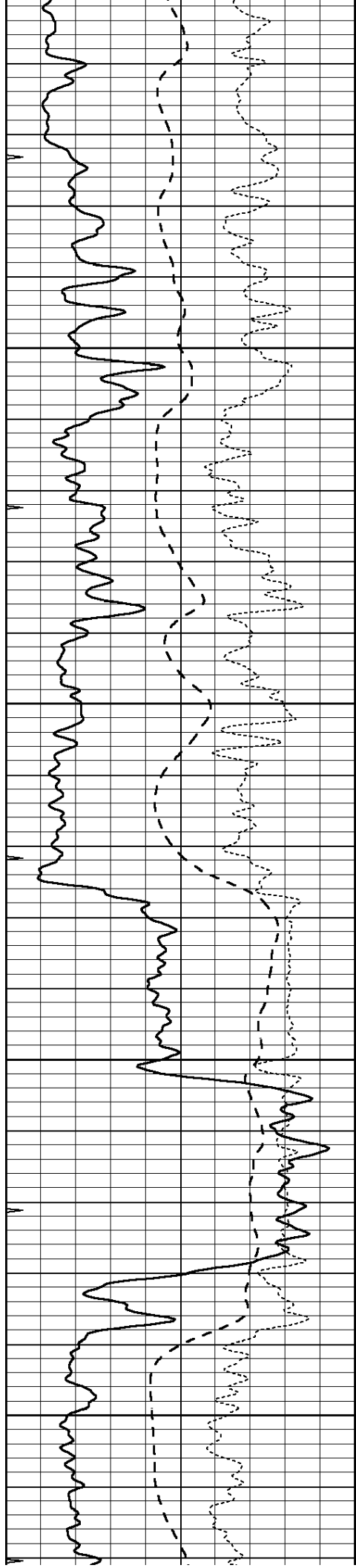
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3050



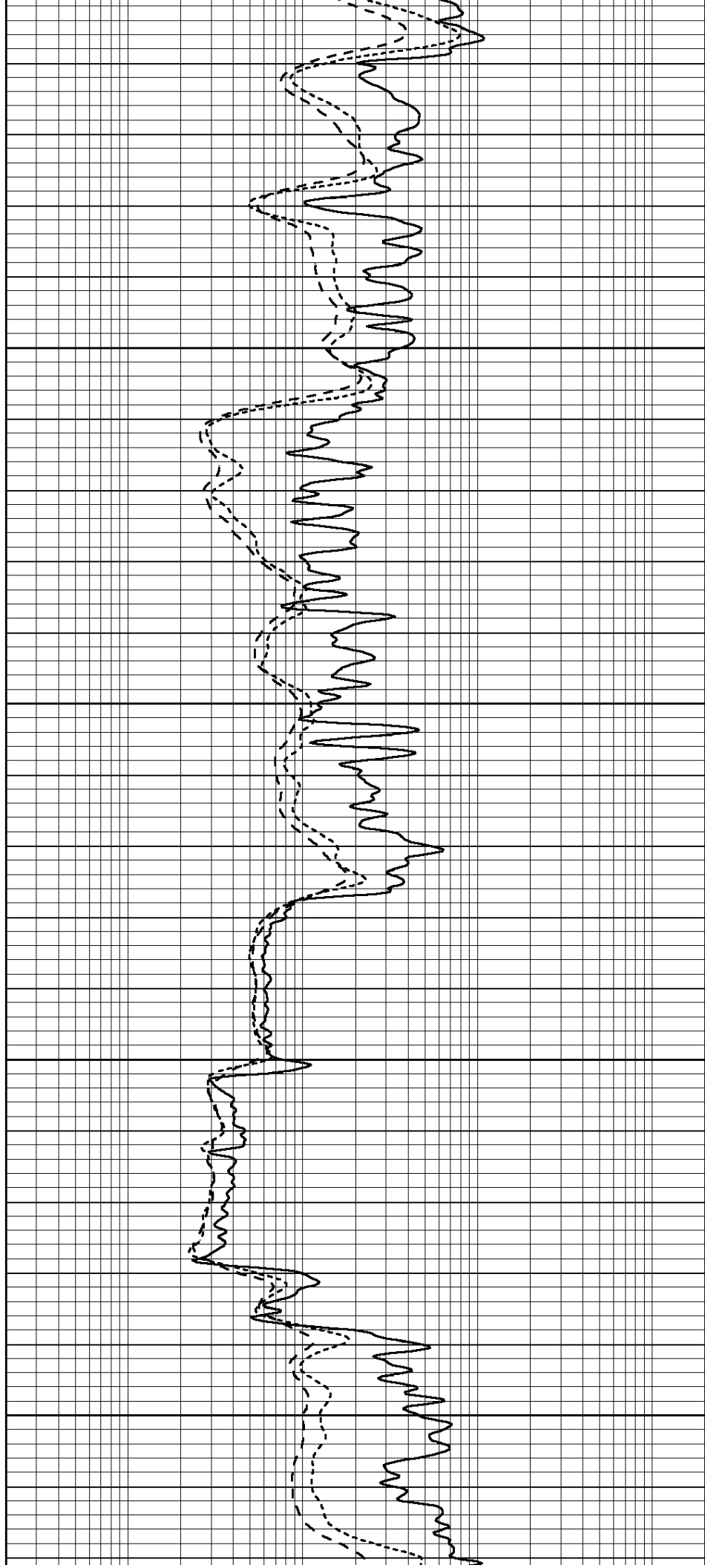


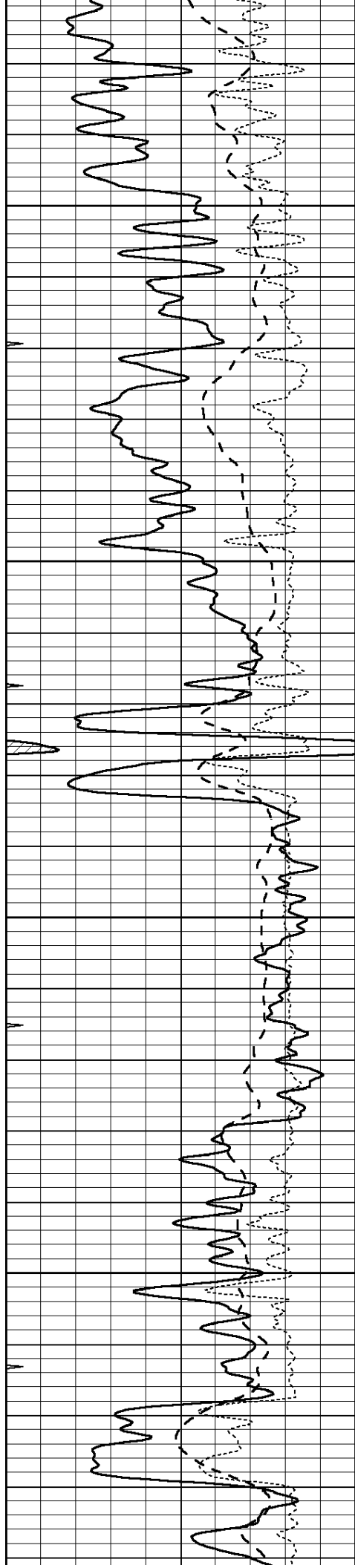
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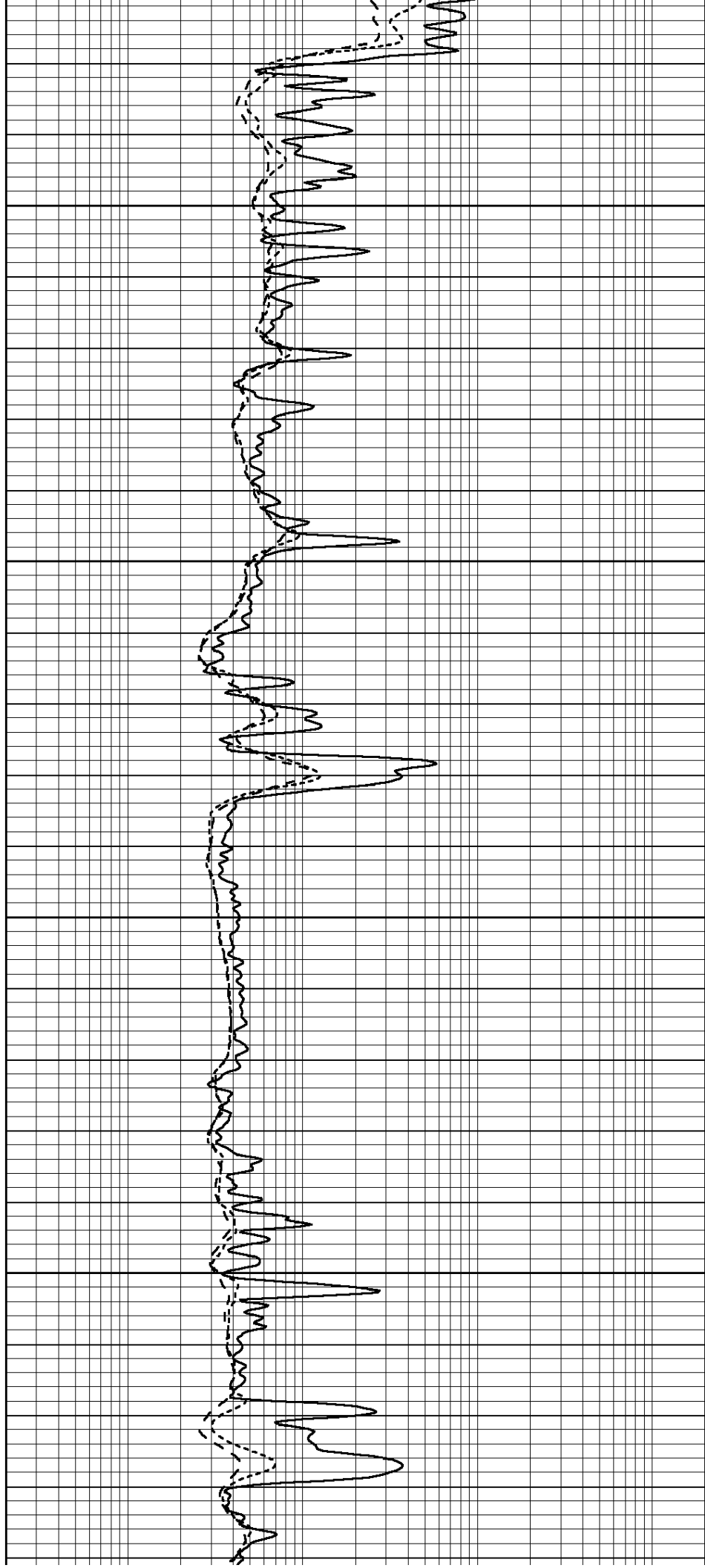


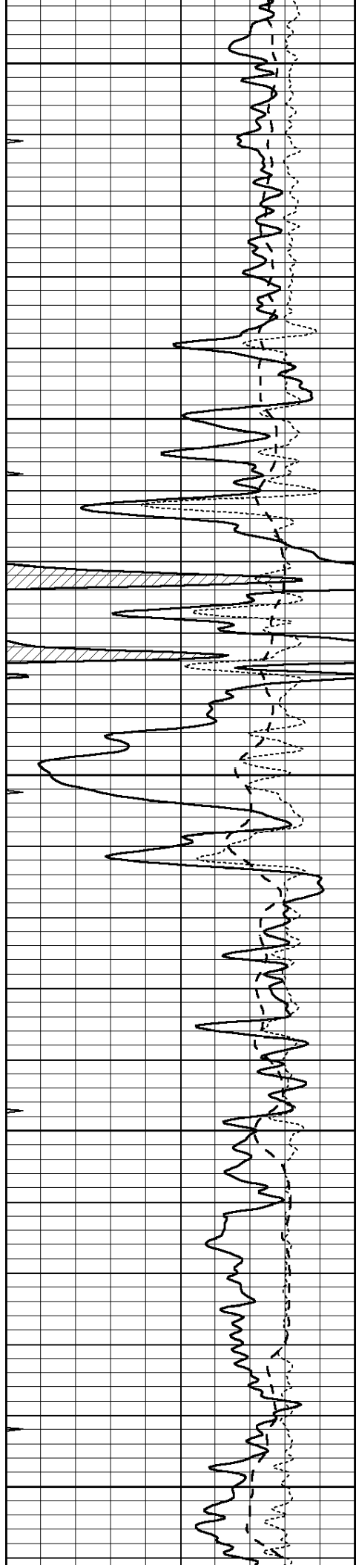
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3450





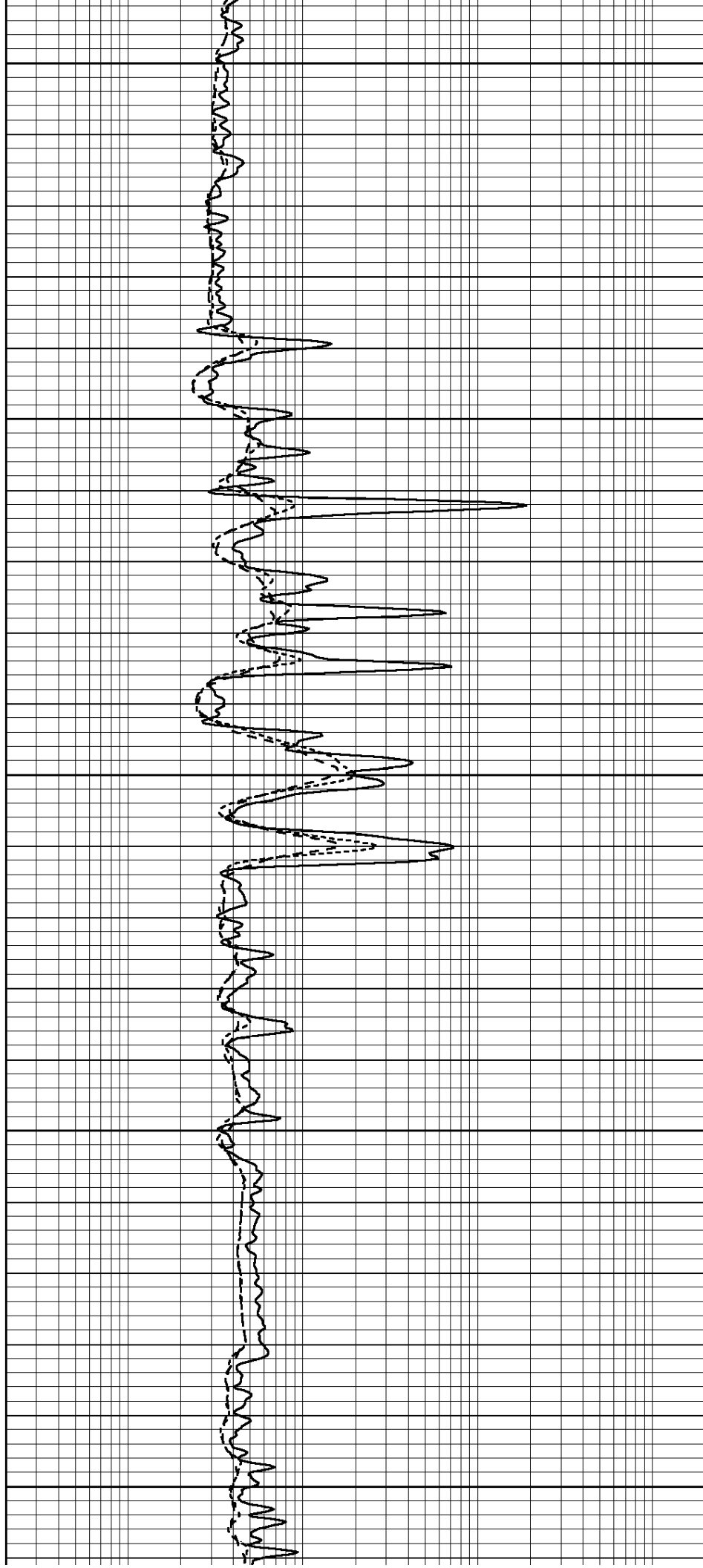
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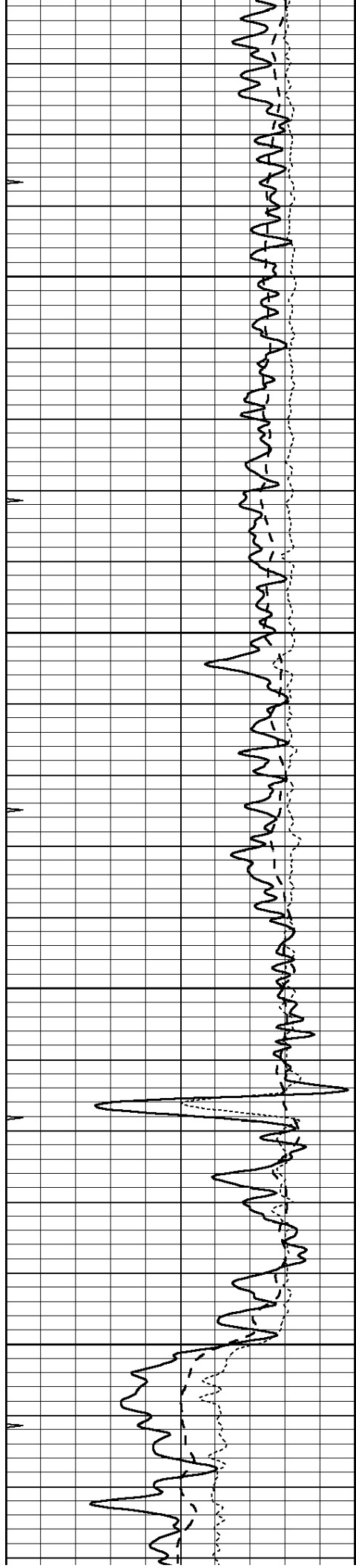
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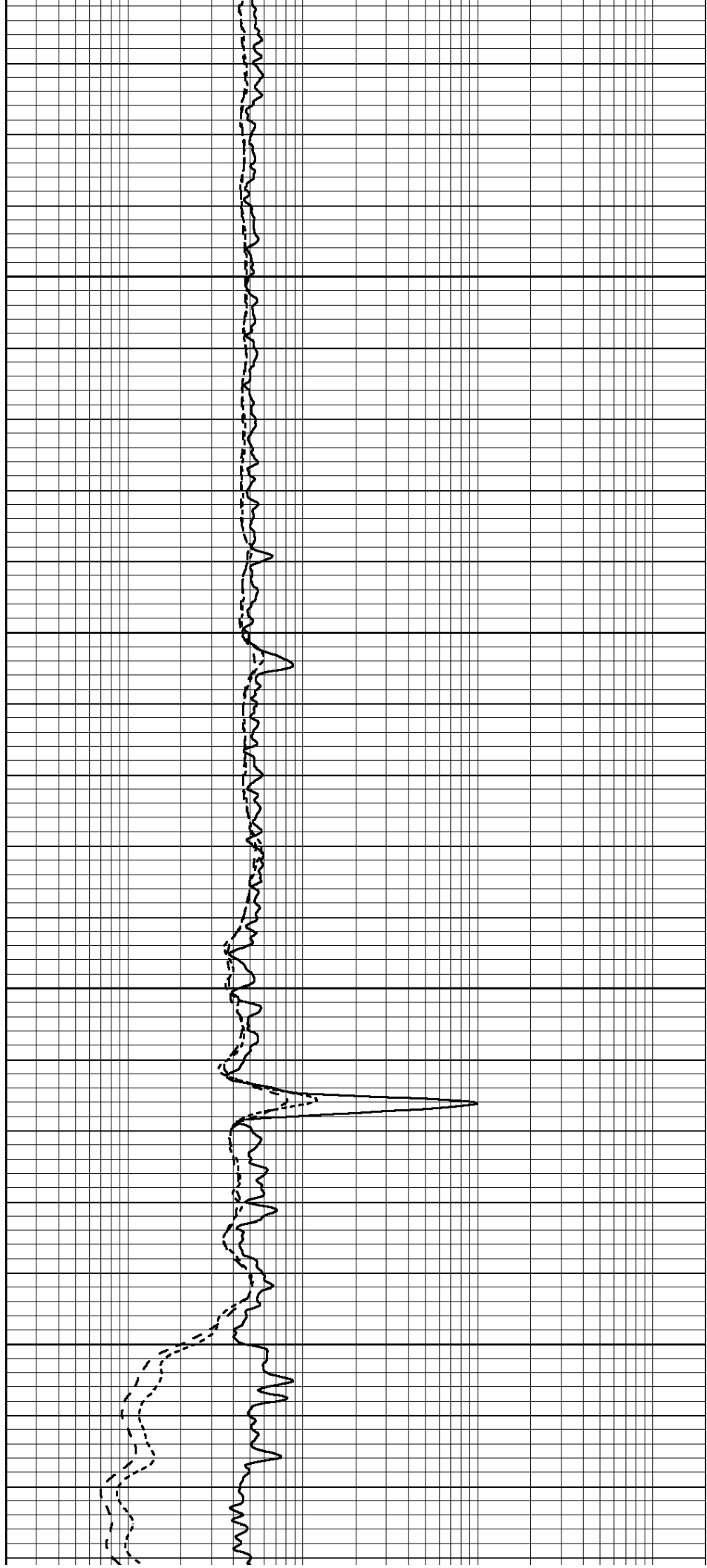


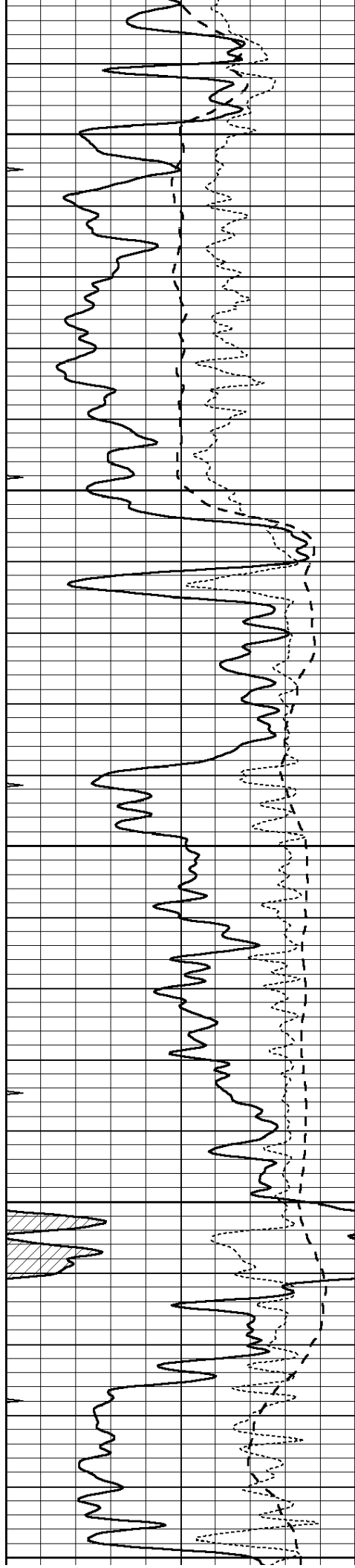
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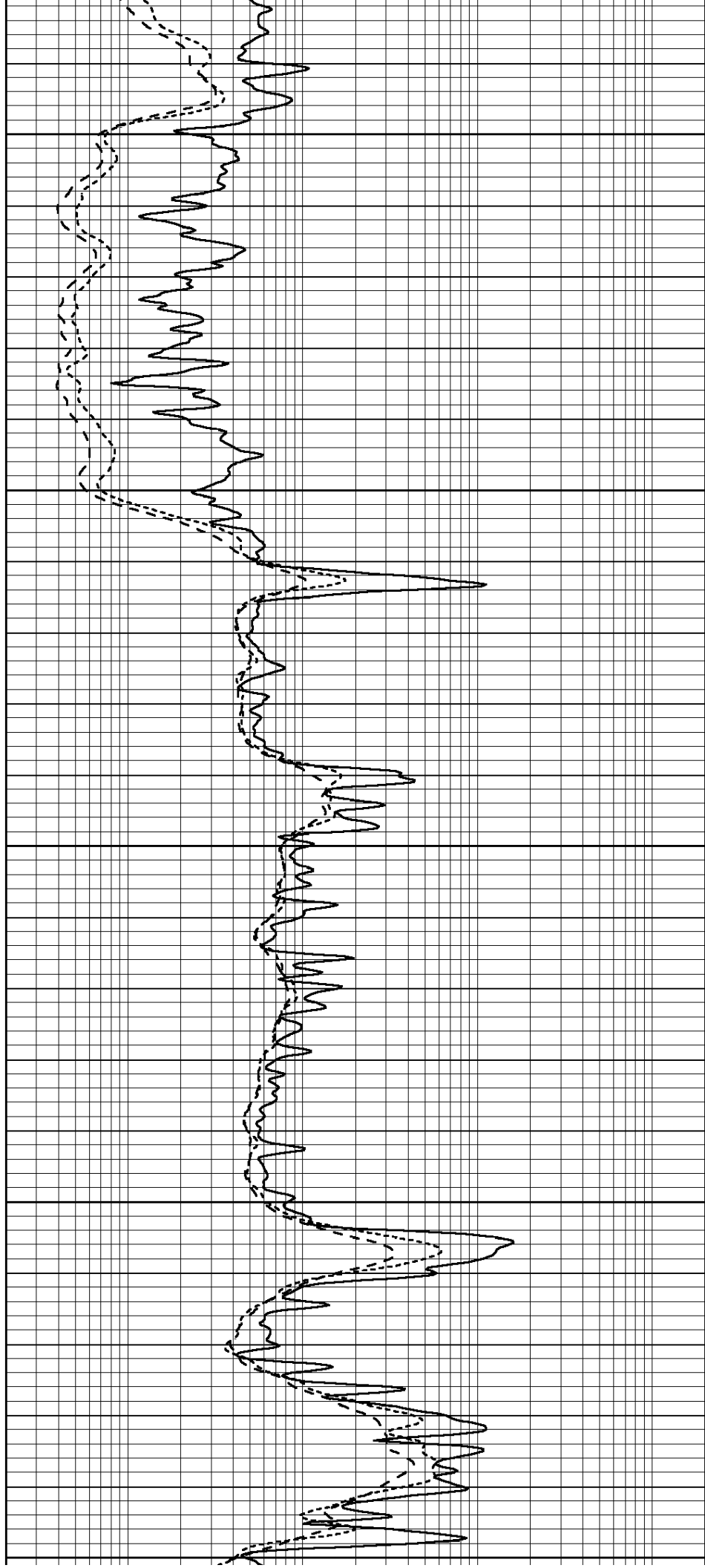
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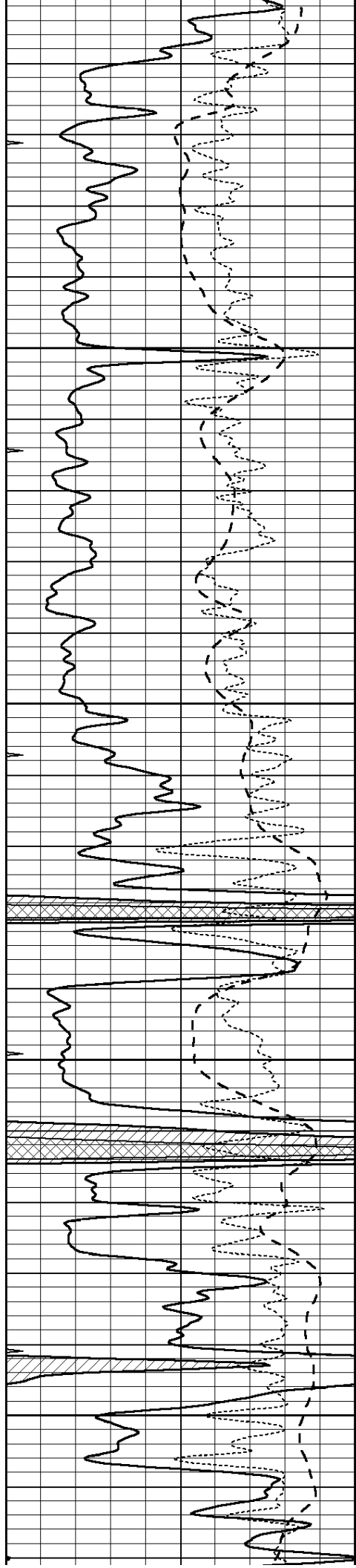
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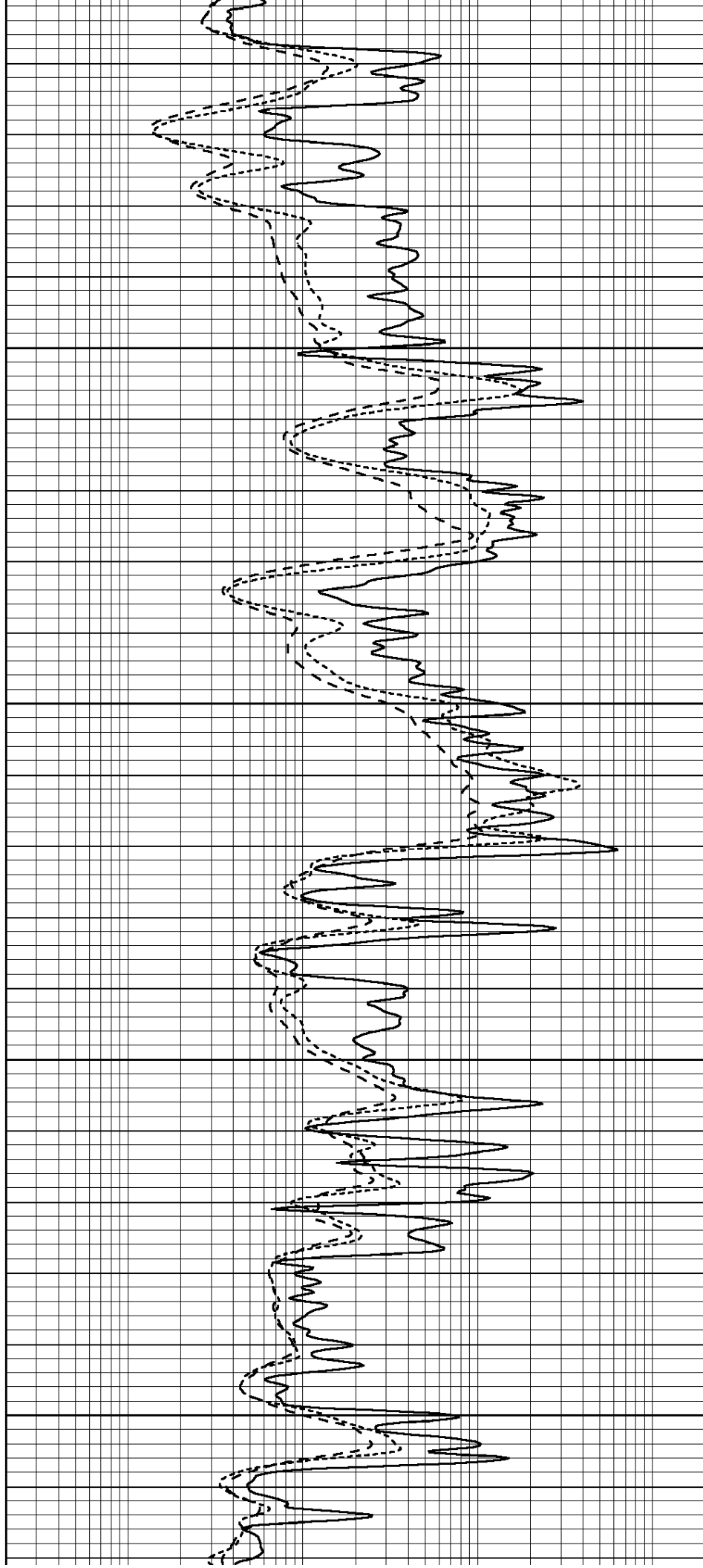


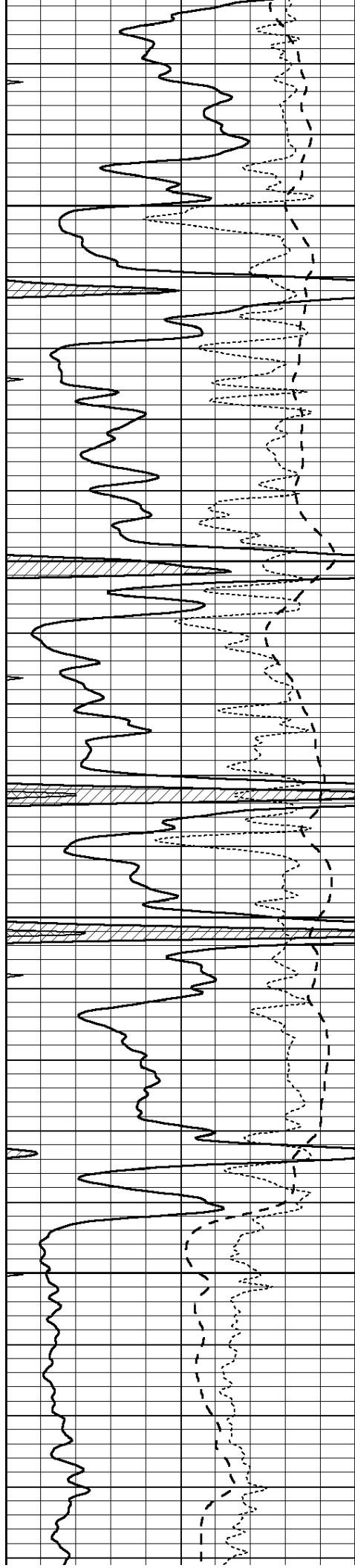
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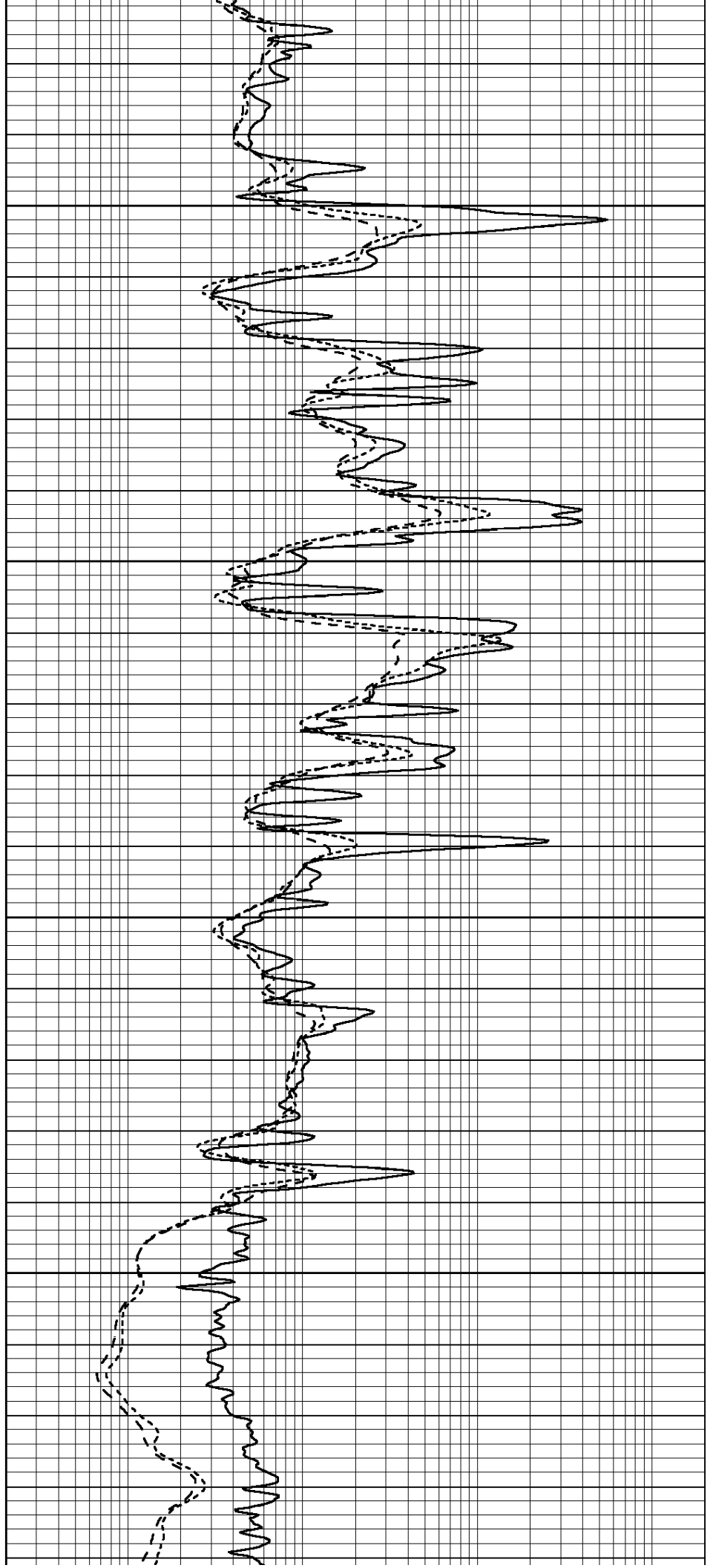


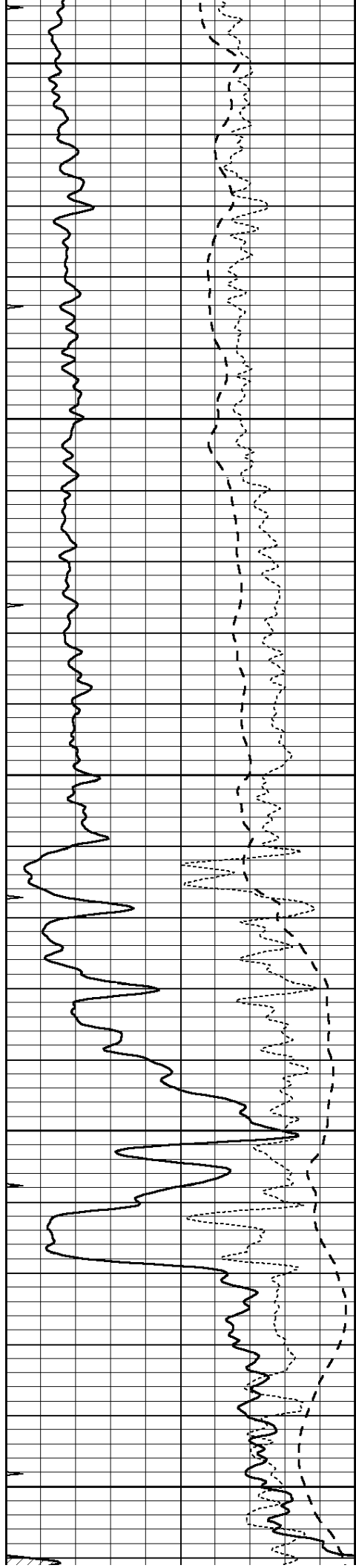
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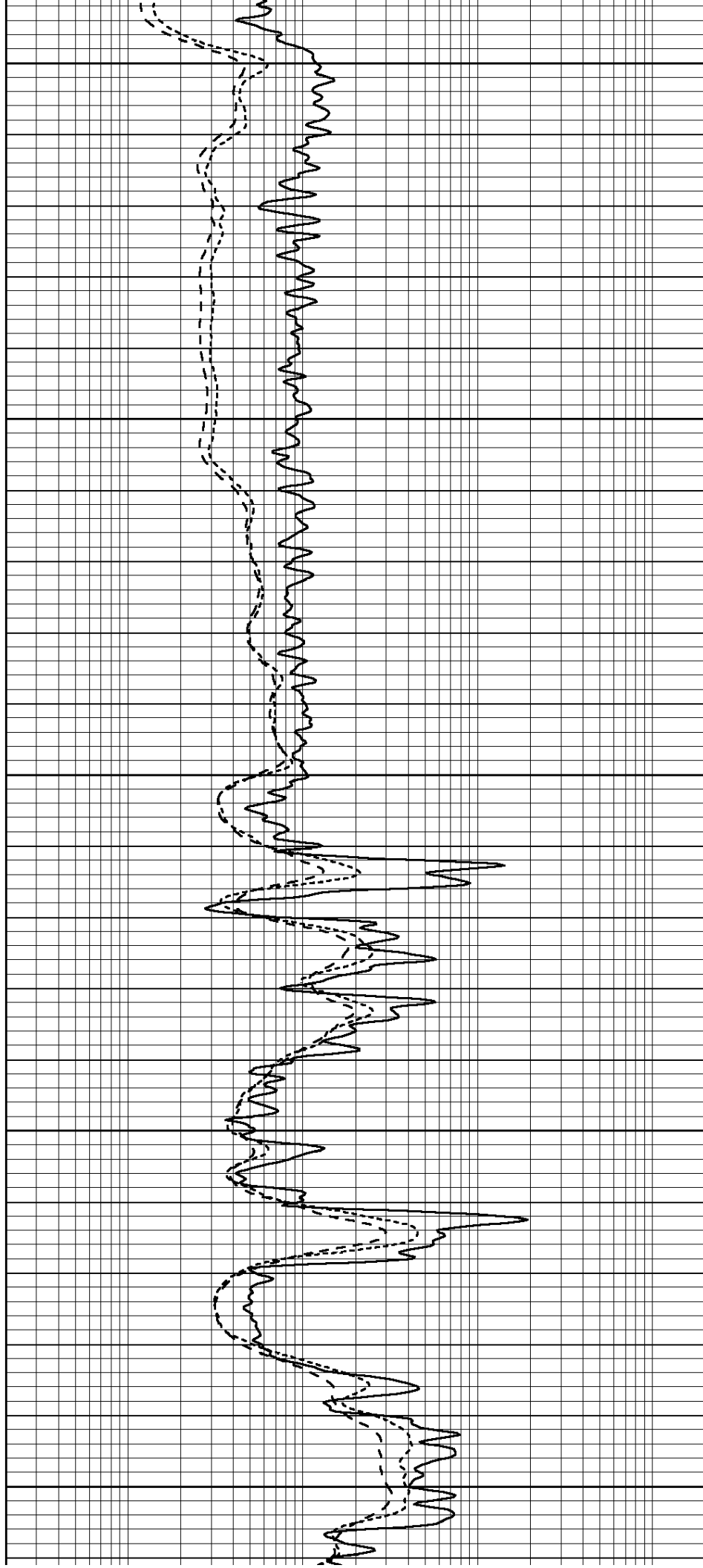
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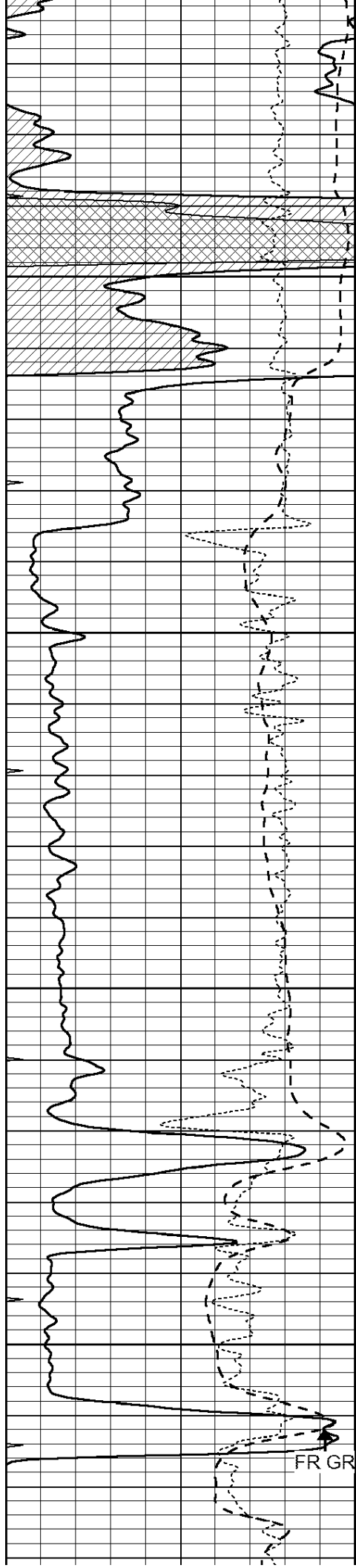
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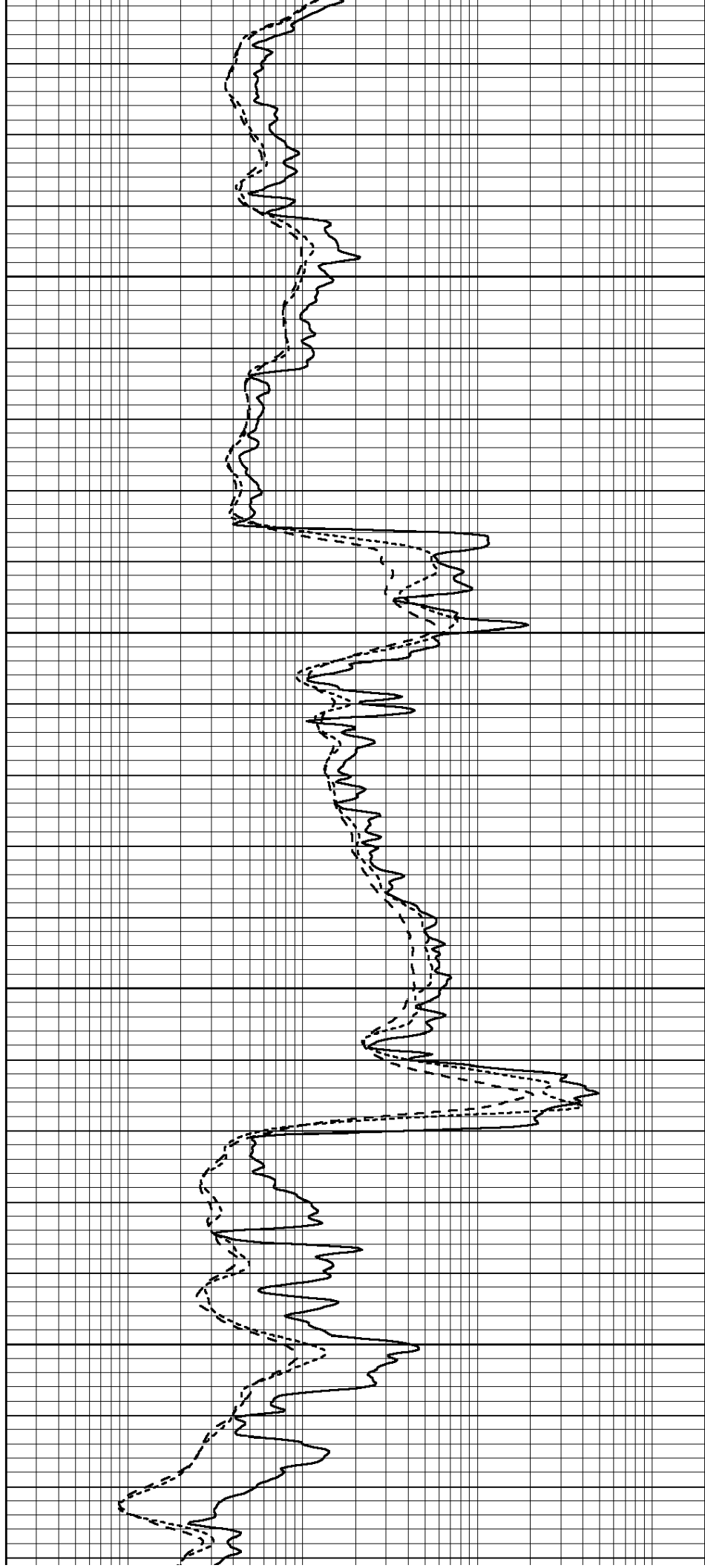
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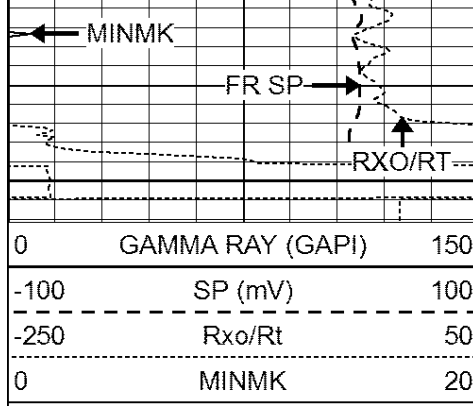
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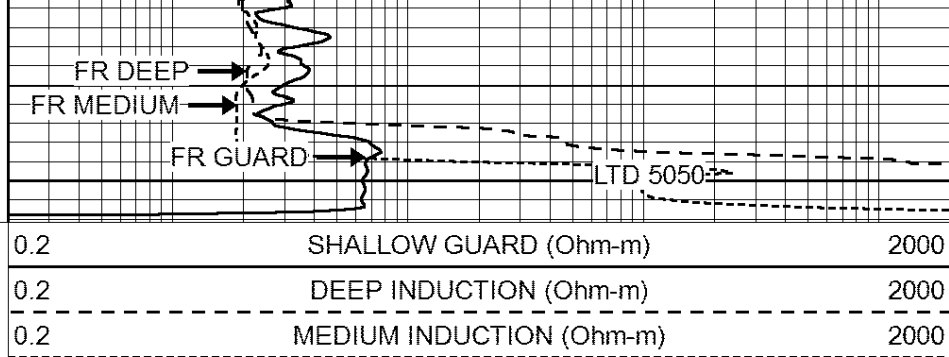
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FR GR





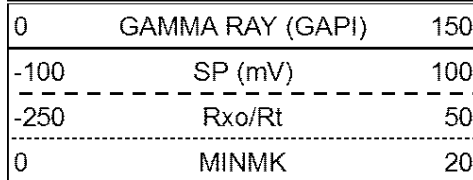
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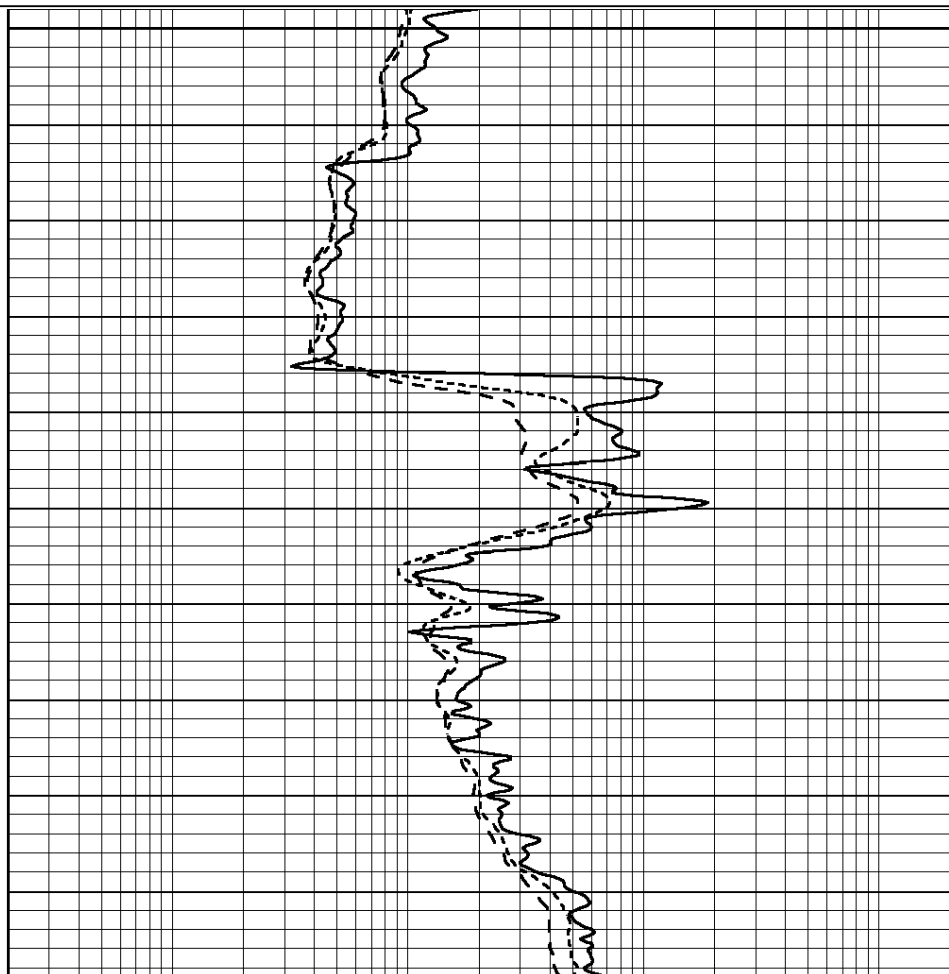
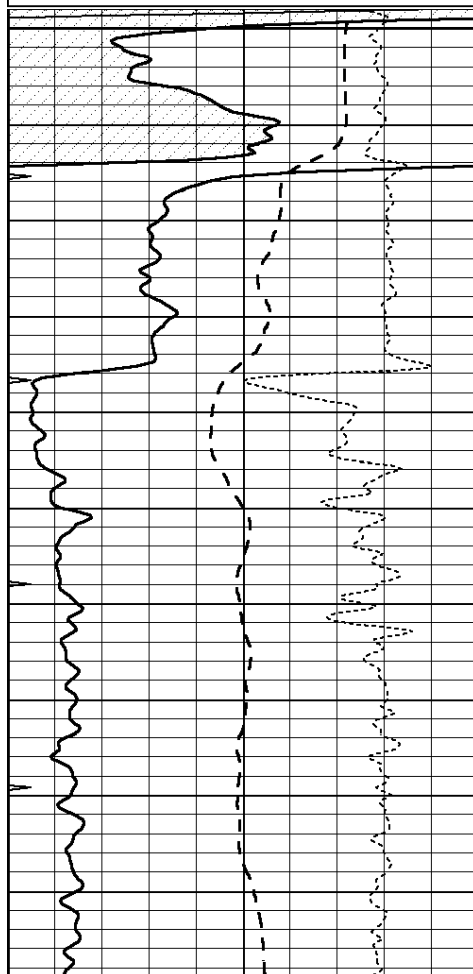
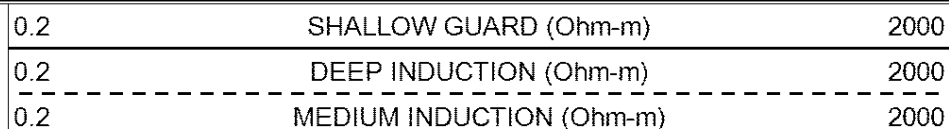
REPEAT SECTION

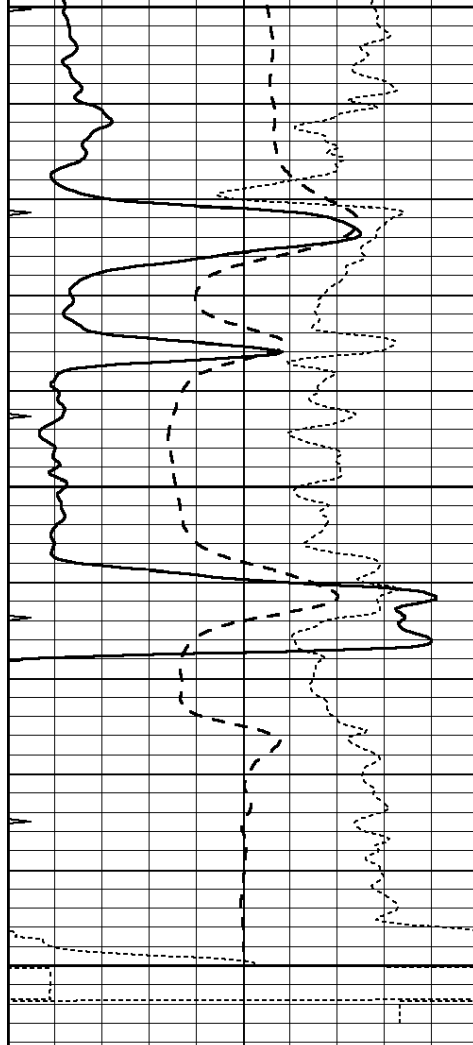
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Charted by: Depth in Feet scaled 1:240



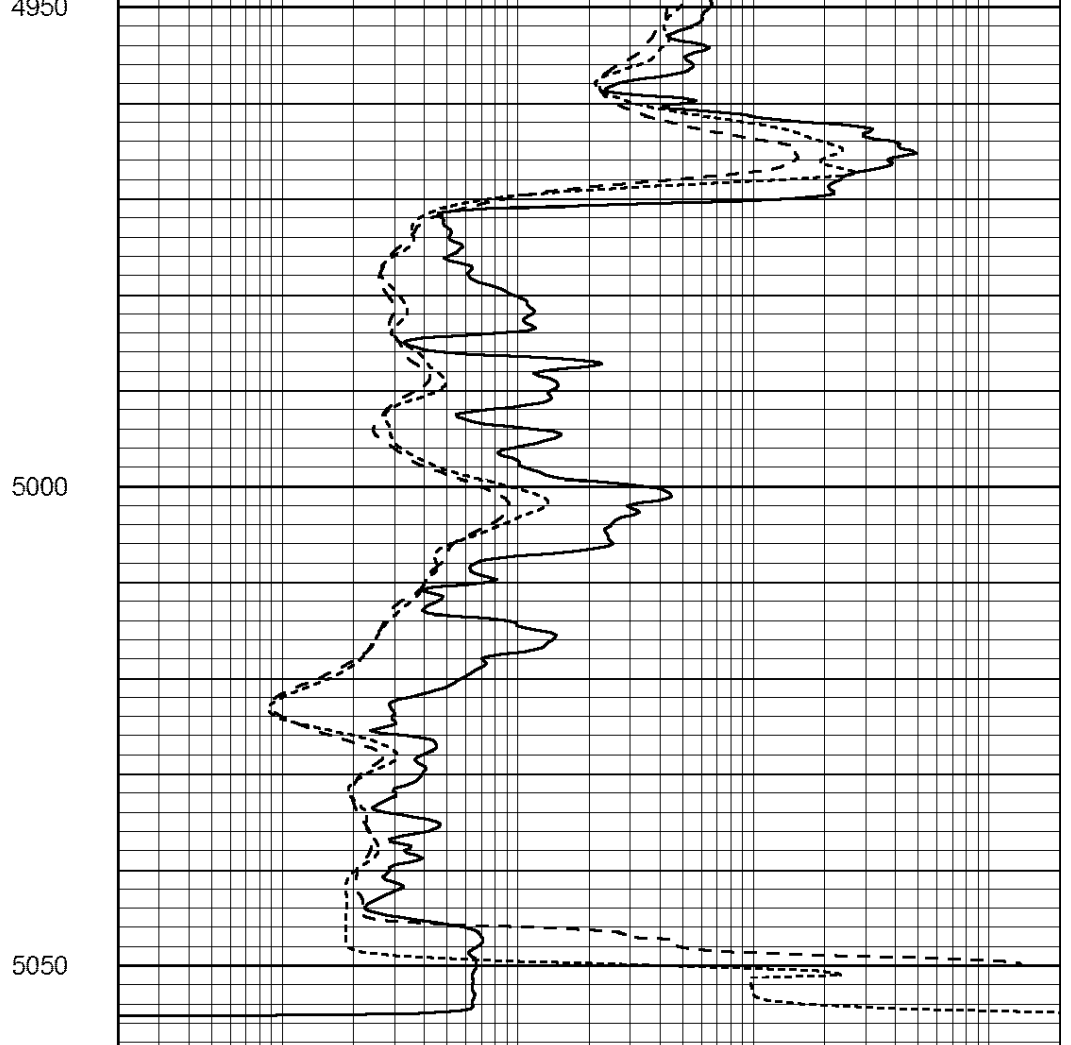
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4900





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

Calibration Report

Database File: 409677pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Wed Sep 19 09:48:49 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Wed Sep 19 06:32:38 2012

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	12.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-6.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report
 Serial: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration					
	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			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

Caliper	Readings	Reference	
Low Ref	3.5	7.0	
High Ref	5.5	15.0	
	Gain: 4.2		Offset: -7.6

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 Sep 17 04:54:29 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps