



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company WOOLSEY OPERATING COMPANY, LLC.  
Well GOTTSCCH #1  
Field STRANATHAN  
County BARBER State KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.  
Well GOTTSCCH #1  
Field STRANATHAN  
County BARBER  
State KANSAS

Location: API #: 15-007-24129-00-00  
1270' FNL & 1560' FEL  
SE - SE - NW - NE  
SEC 14 TWP 35S RGE 12W  
Permanent Datum GROUND LEVEL Elevation 1369  
Log Measured From KELLY BUSHING 12' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CNL/CDL  
PE  
Elevation  
K.B. 1381  
D.F. 1379  
G.L. 1369

Date	3-27-14		
Run Number	ONE		
Depth Driller	5505		
Depth Logger	5500		
Bottom Logged Interval	5498		
Top Log Interval	00		
Casing Driller	13 3/8" @ 223'		
Casing Logger	220'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,800 PPM	
Density / Viscosity	9.2/55		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.56 @ 83F		
Rmf @ Meas. Temp	0.42 @ 83F		
Rmc @ Meas. Temp	0.67 @ 83F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	0.43 @ 108F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	108F		
Equipment Number	860		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	BILL KLAVER		

<<< 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. - 1 SOUTH TO STATE LINE RD. - EAST 3 1/2 MILES NORTH INTO

0 Gamma Ray (GAPI) 150

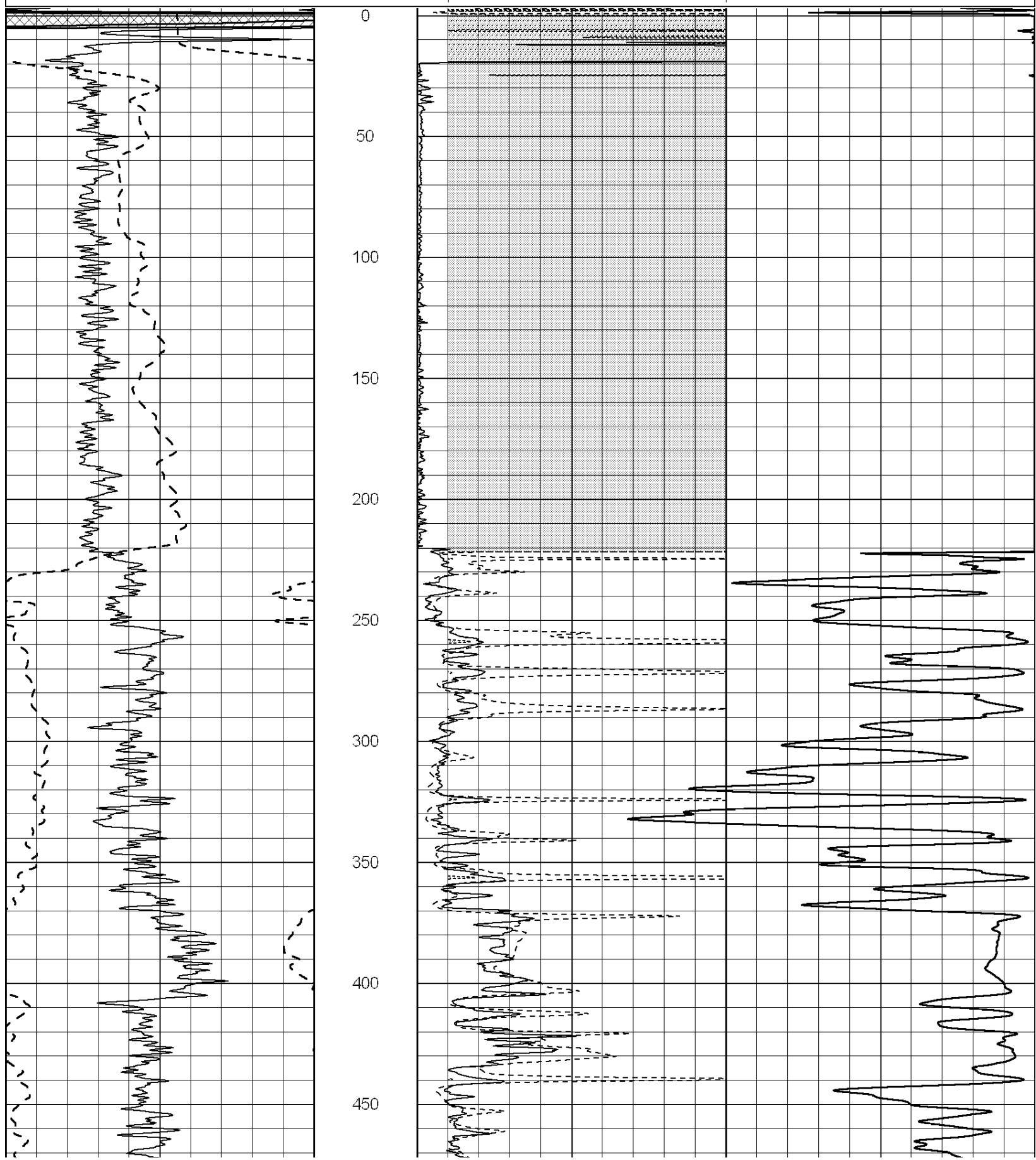
0 RLL3 (Ohm-m) 50

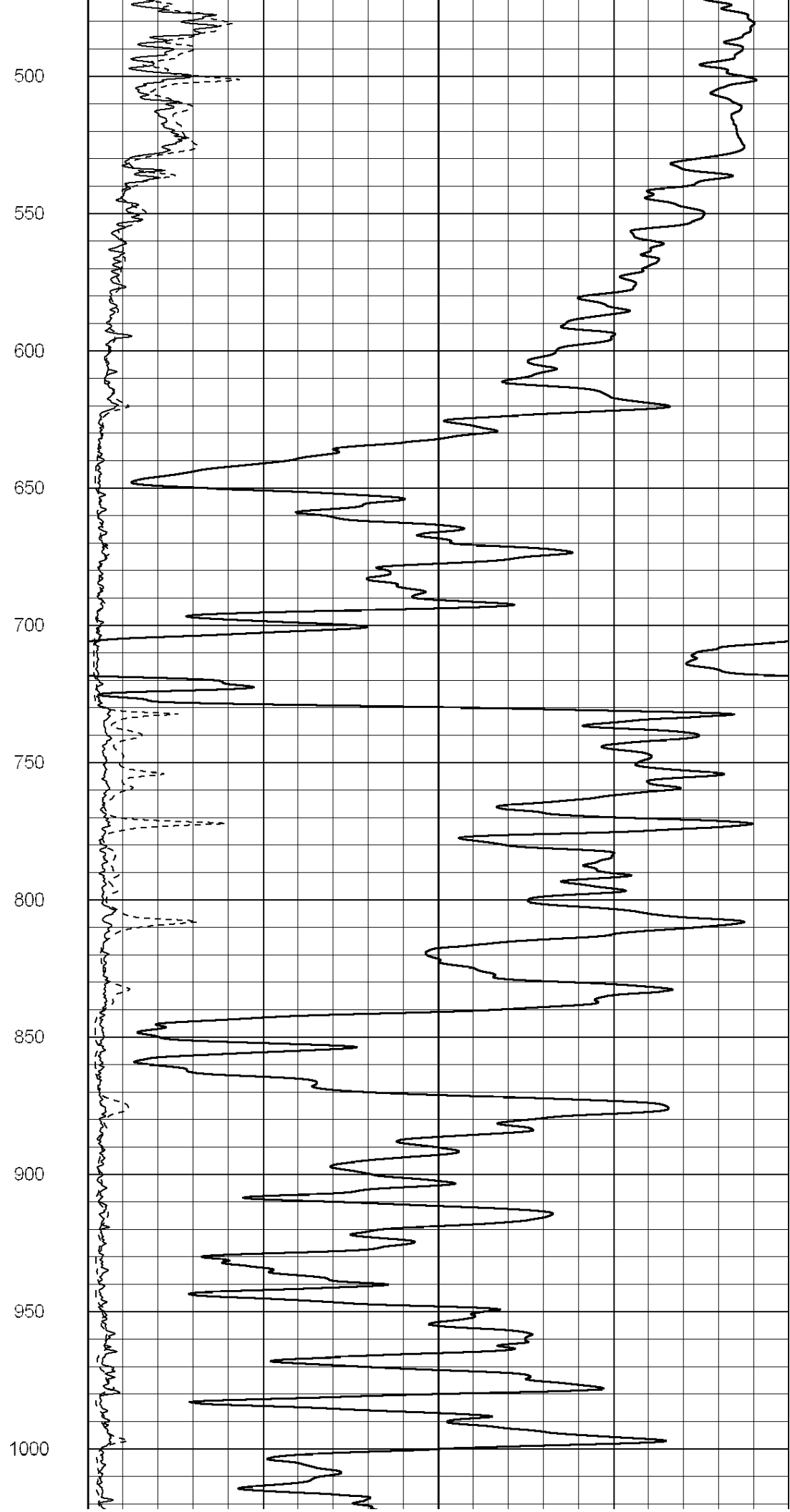
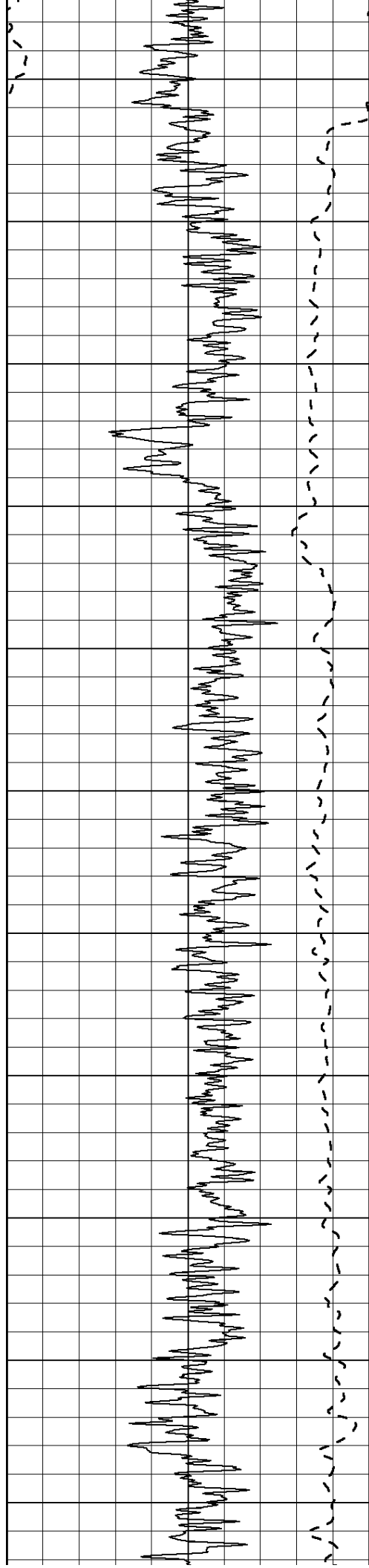
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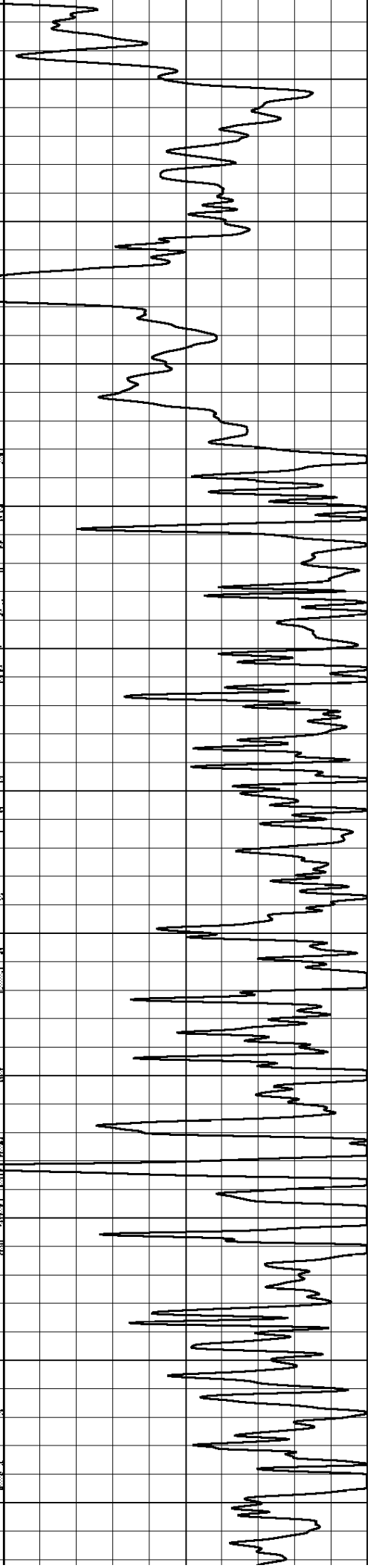
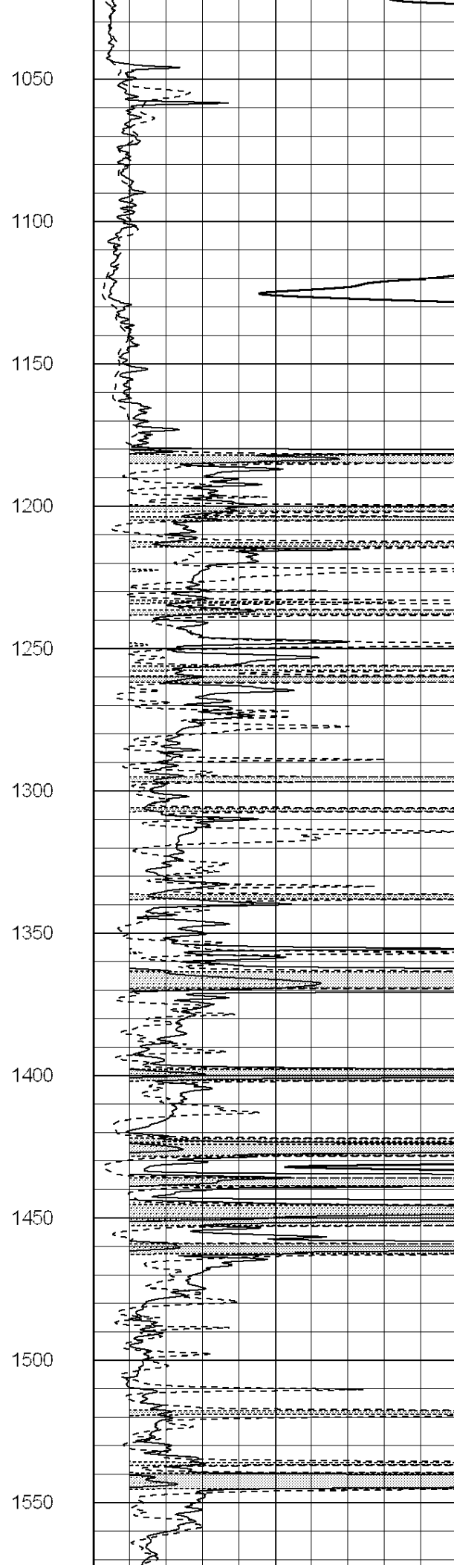
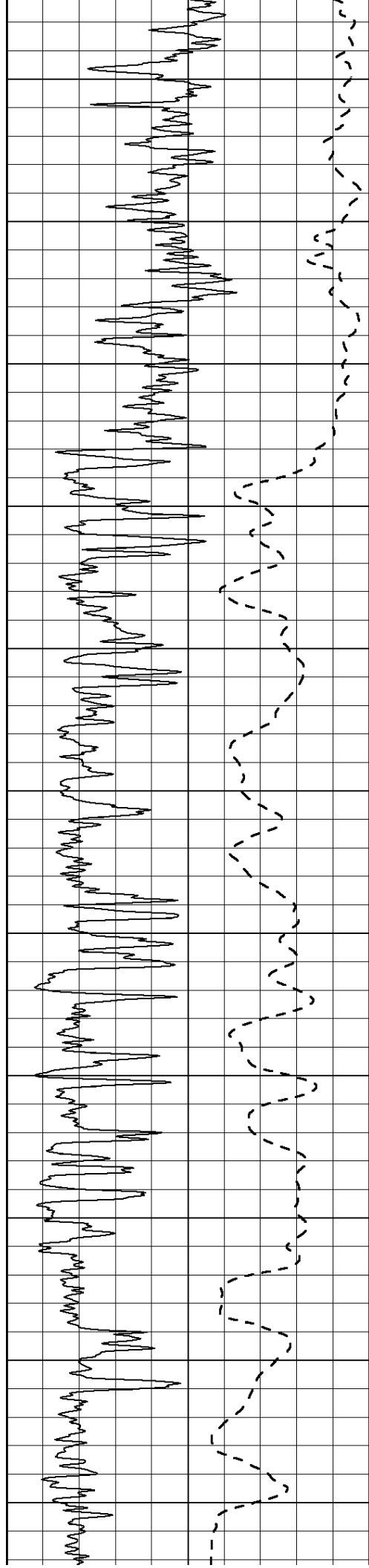
1000 CILD (mmho/m) 0

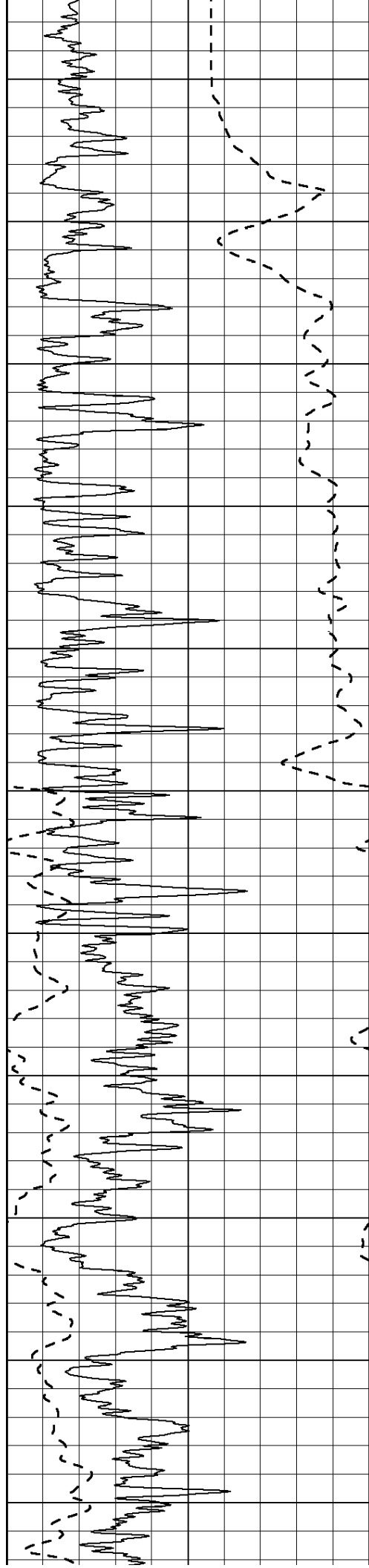
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50 RLL3 X10 (Ohm-m) 500

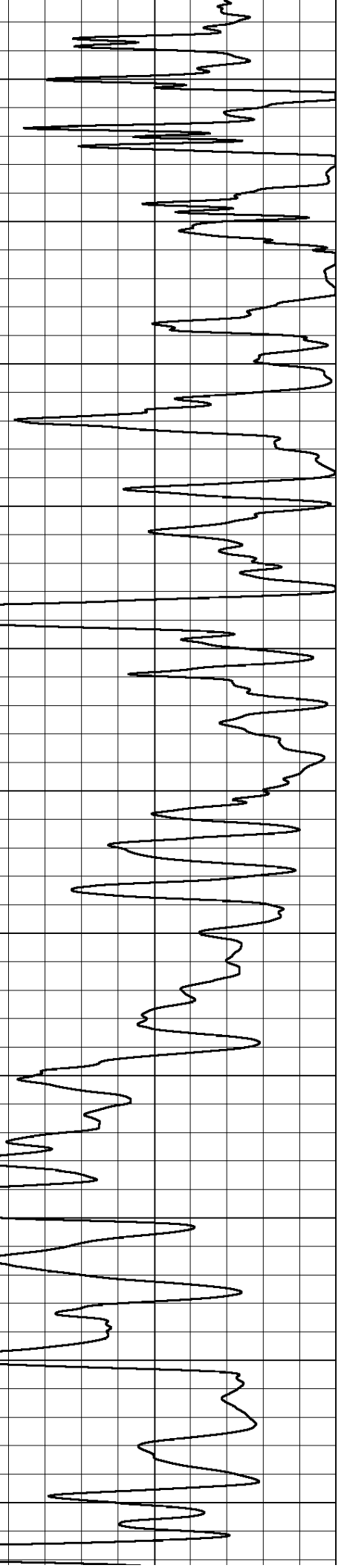
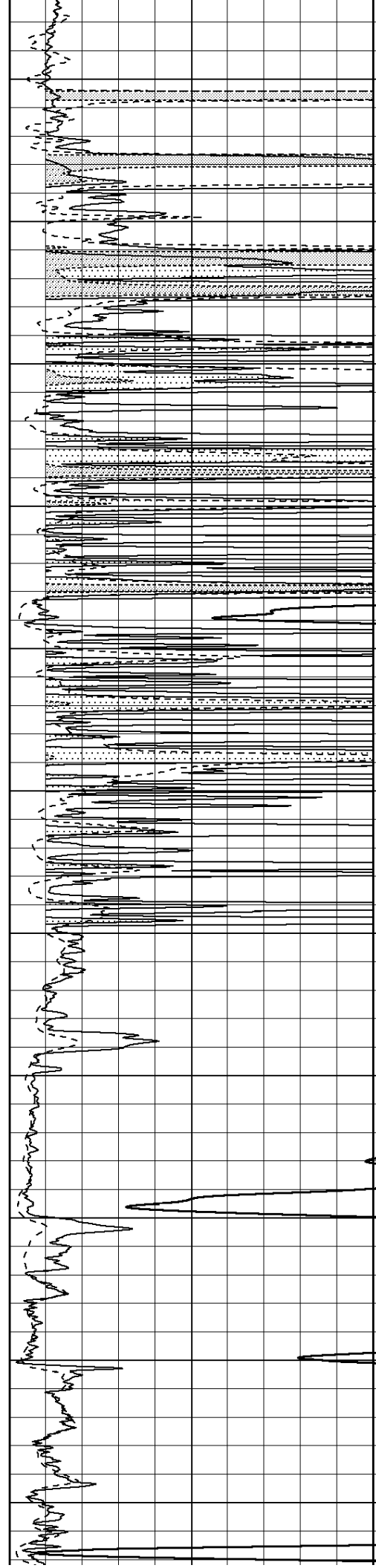


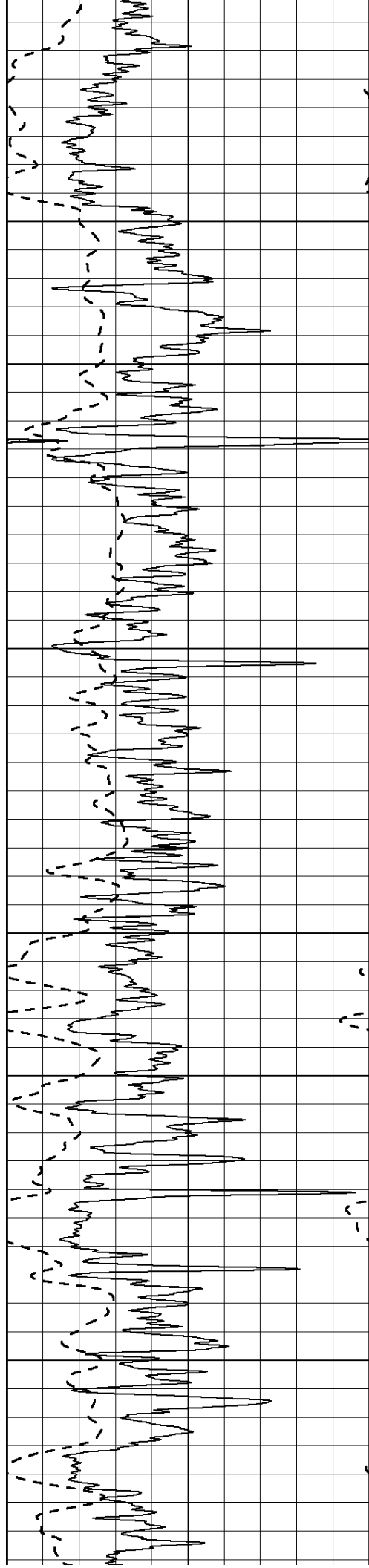






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1900  
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2050  
2100





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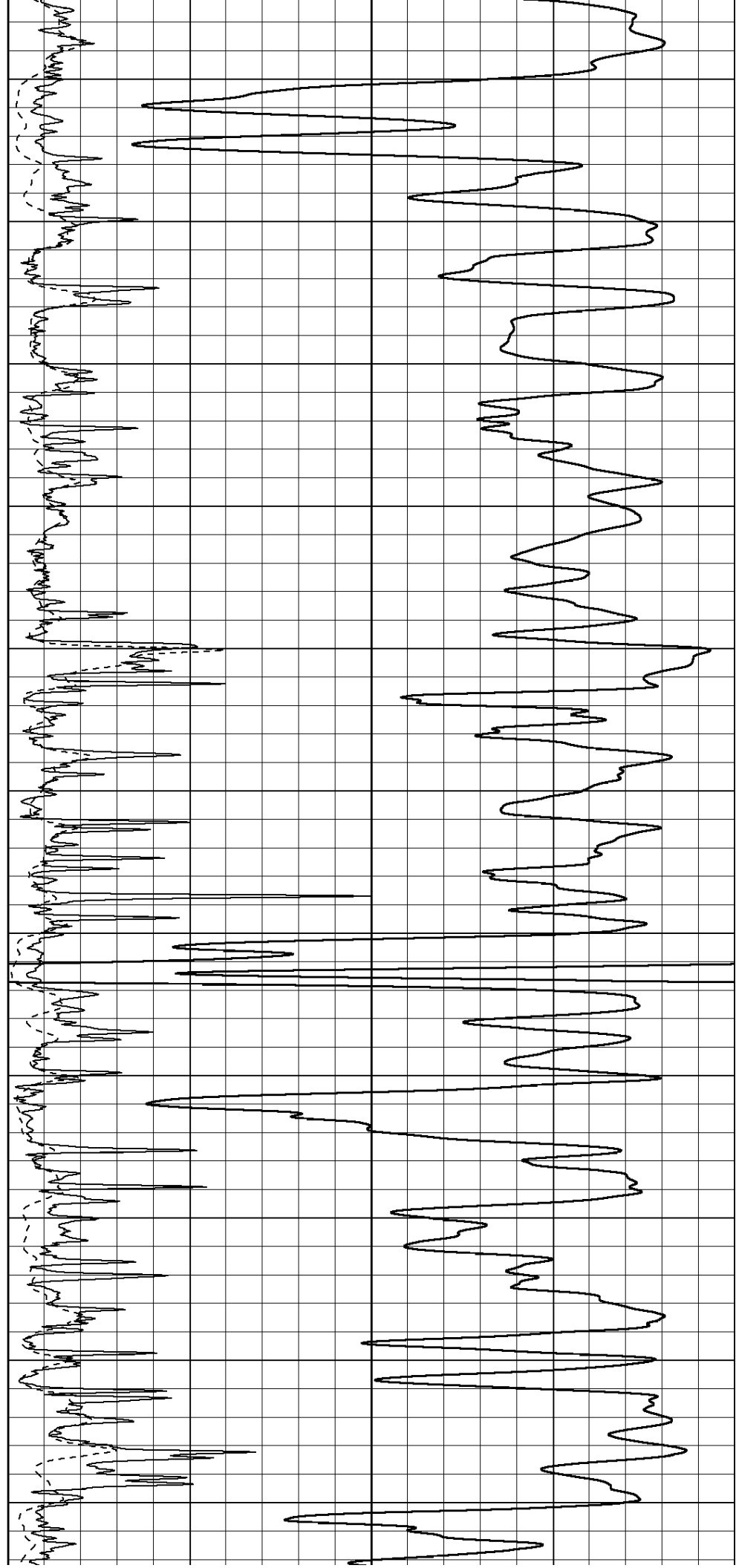
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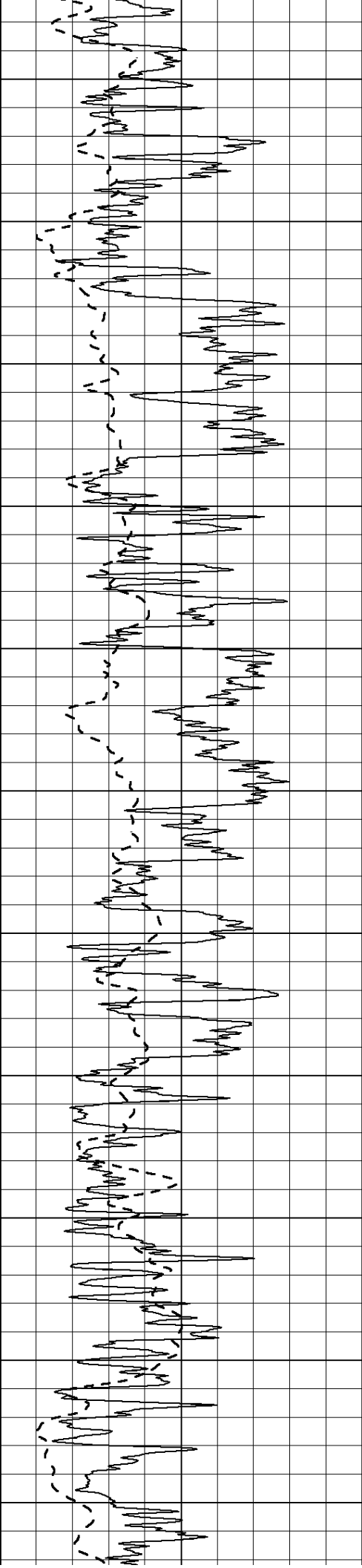
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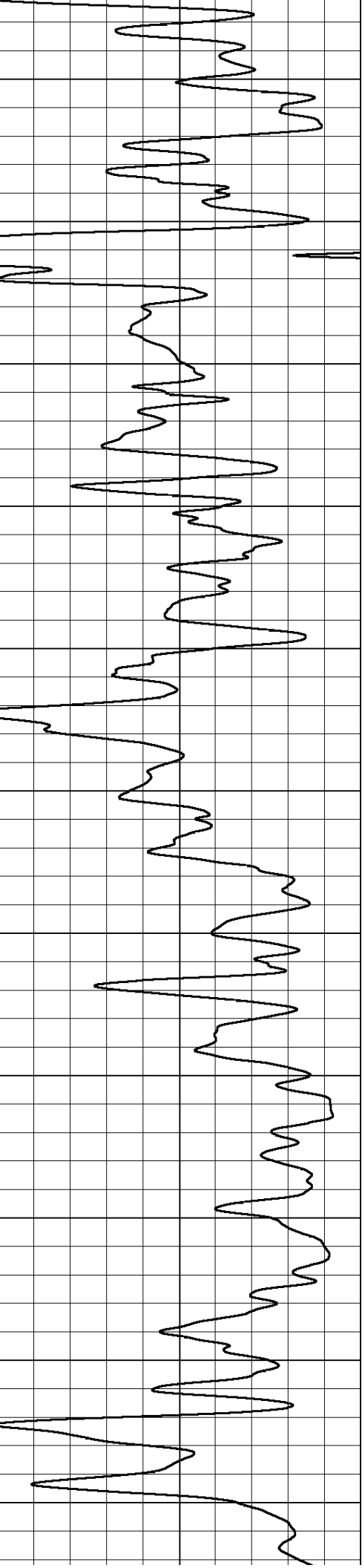
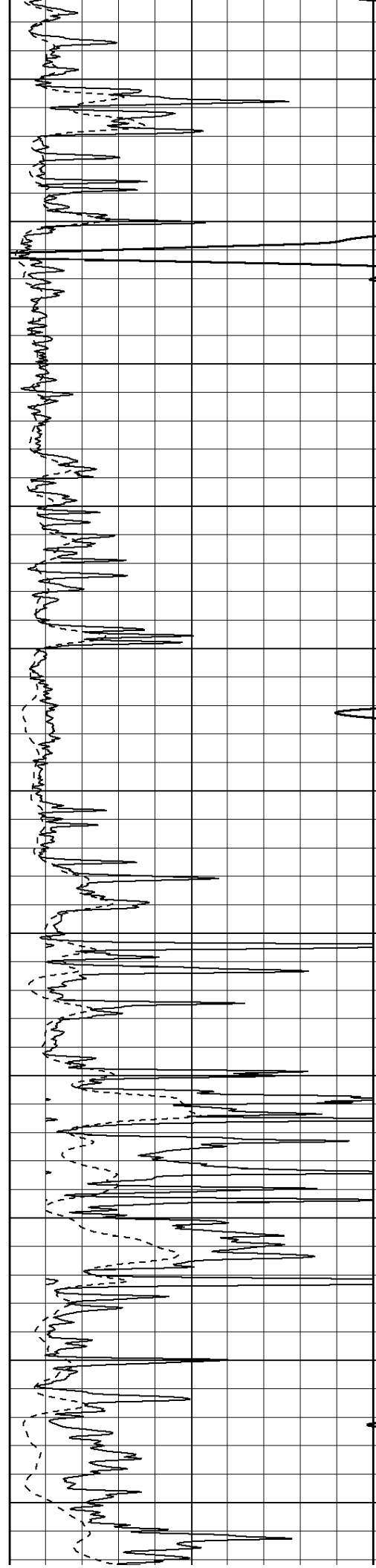
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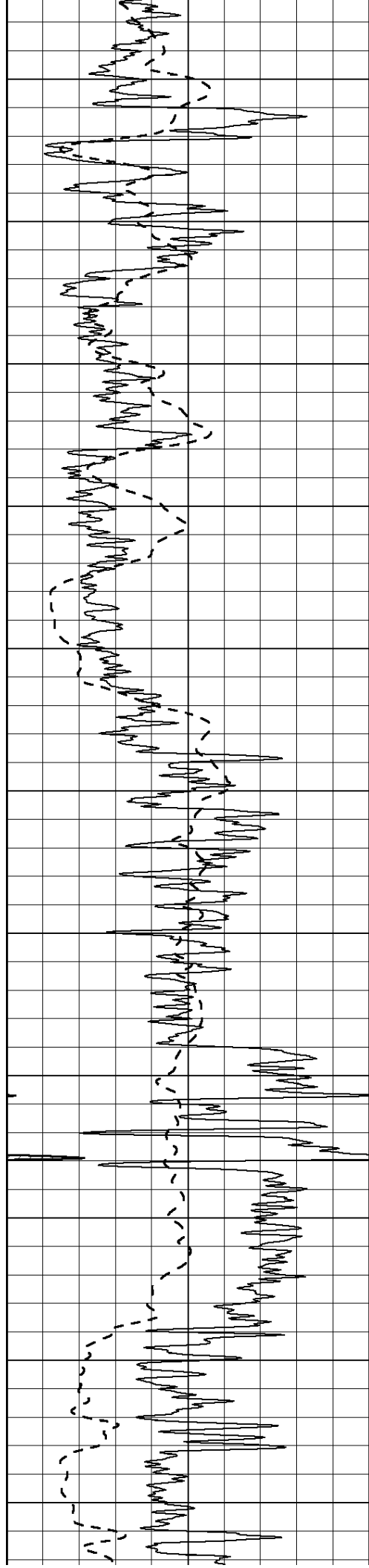
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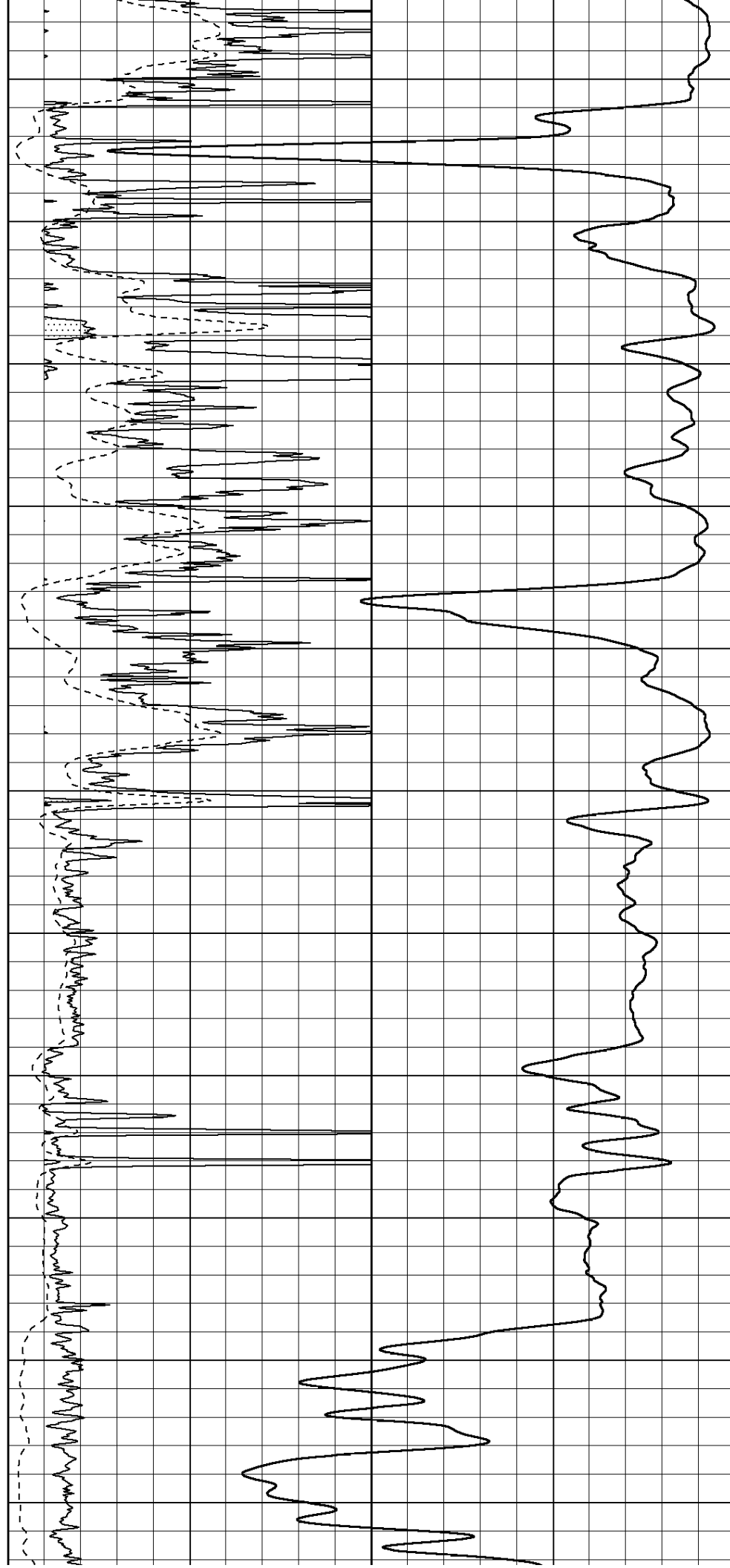
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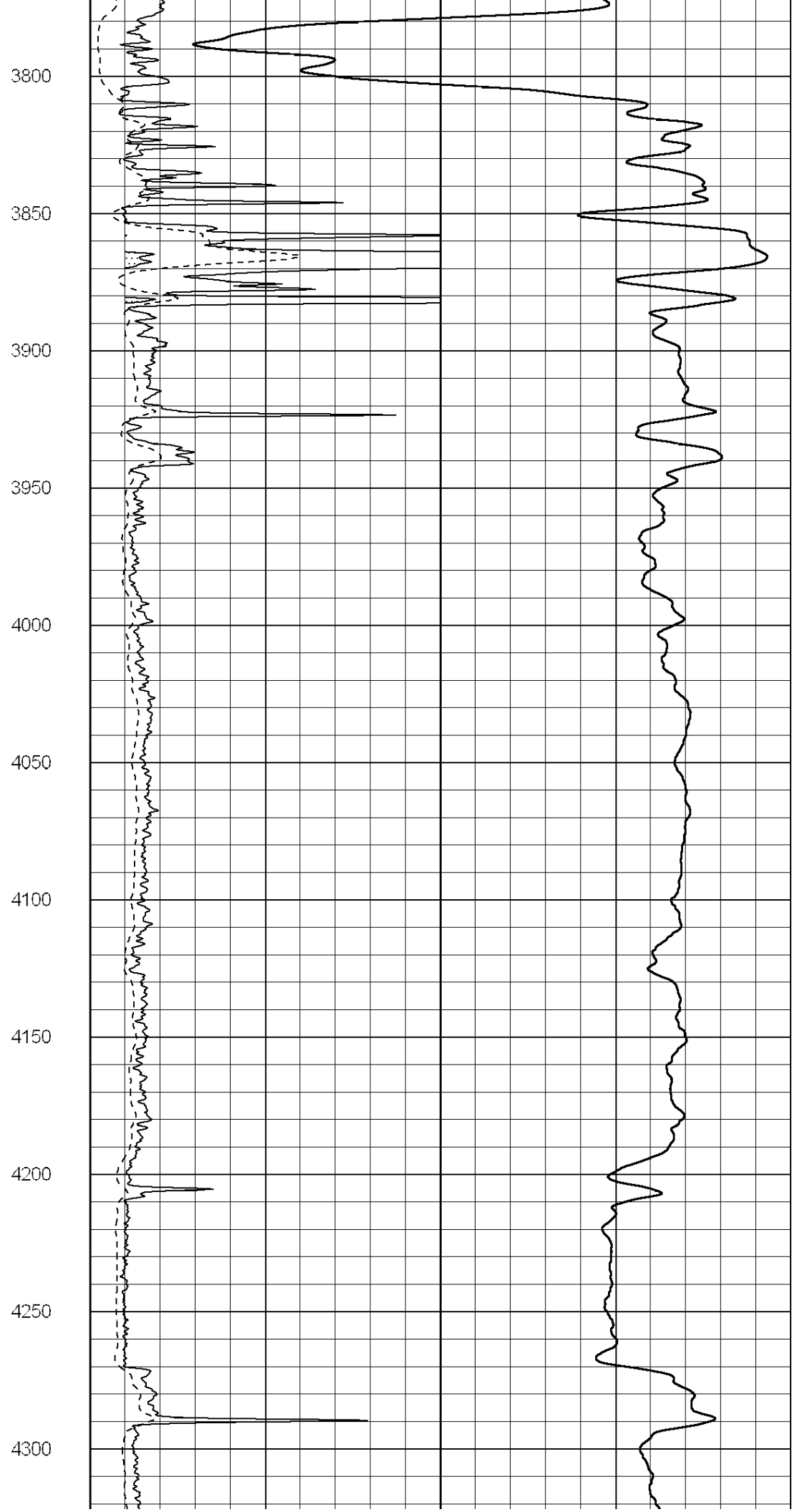
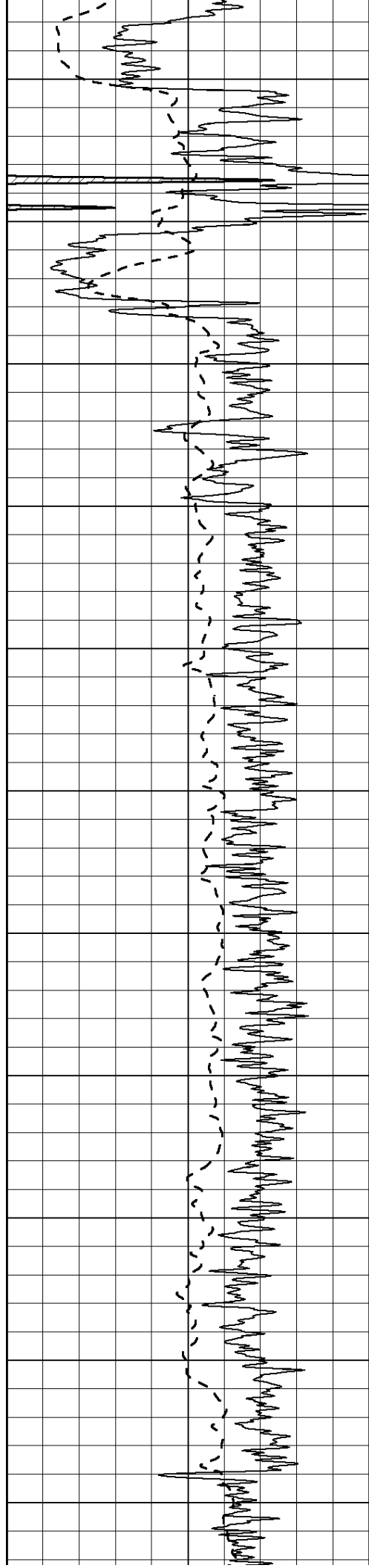
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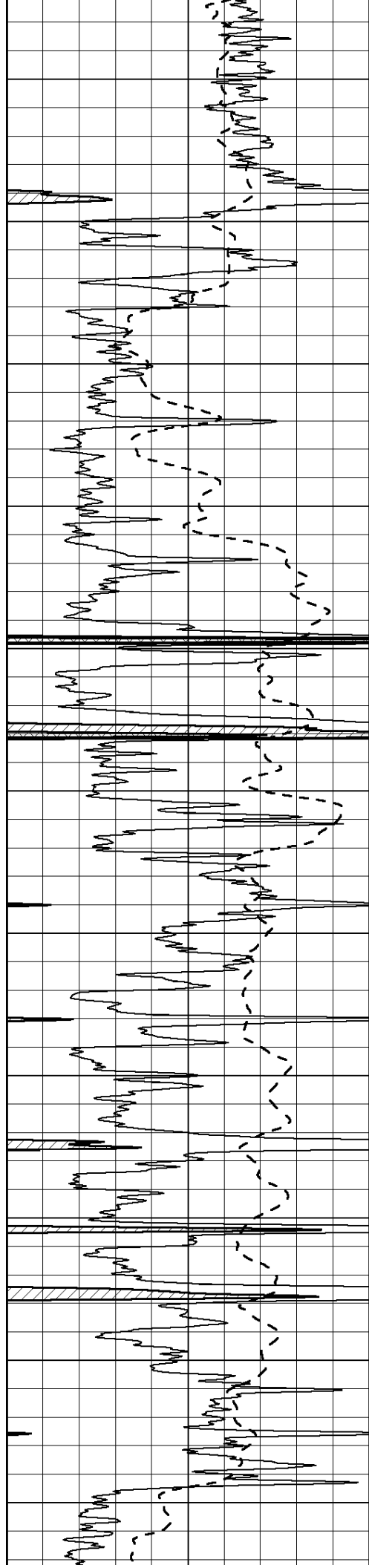
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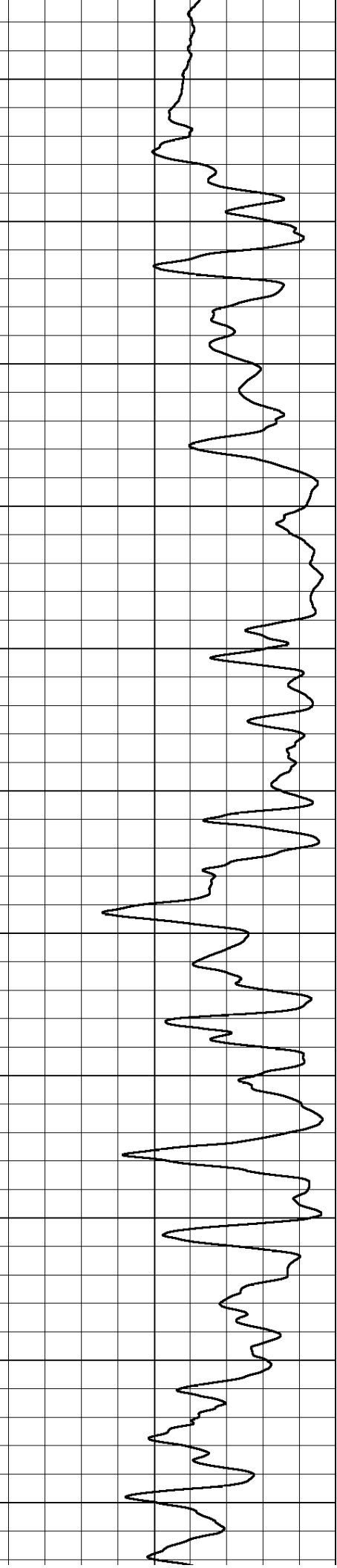
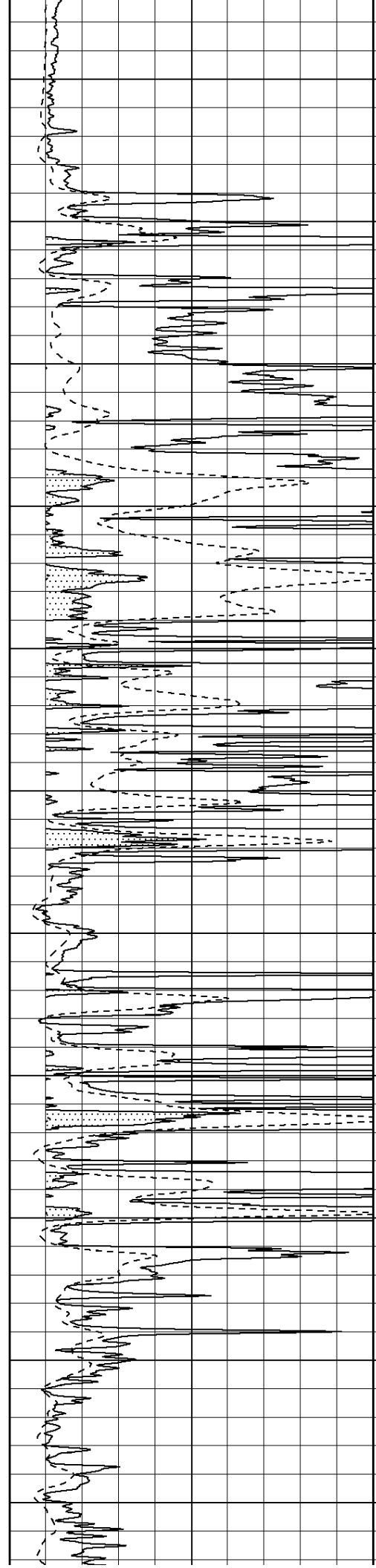


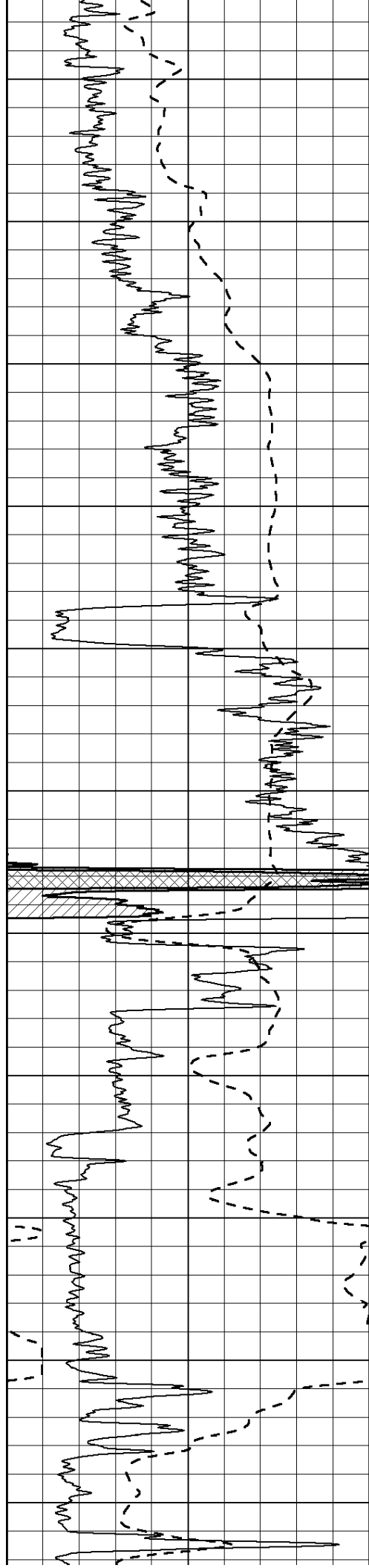






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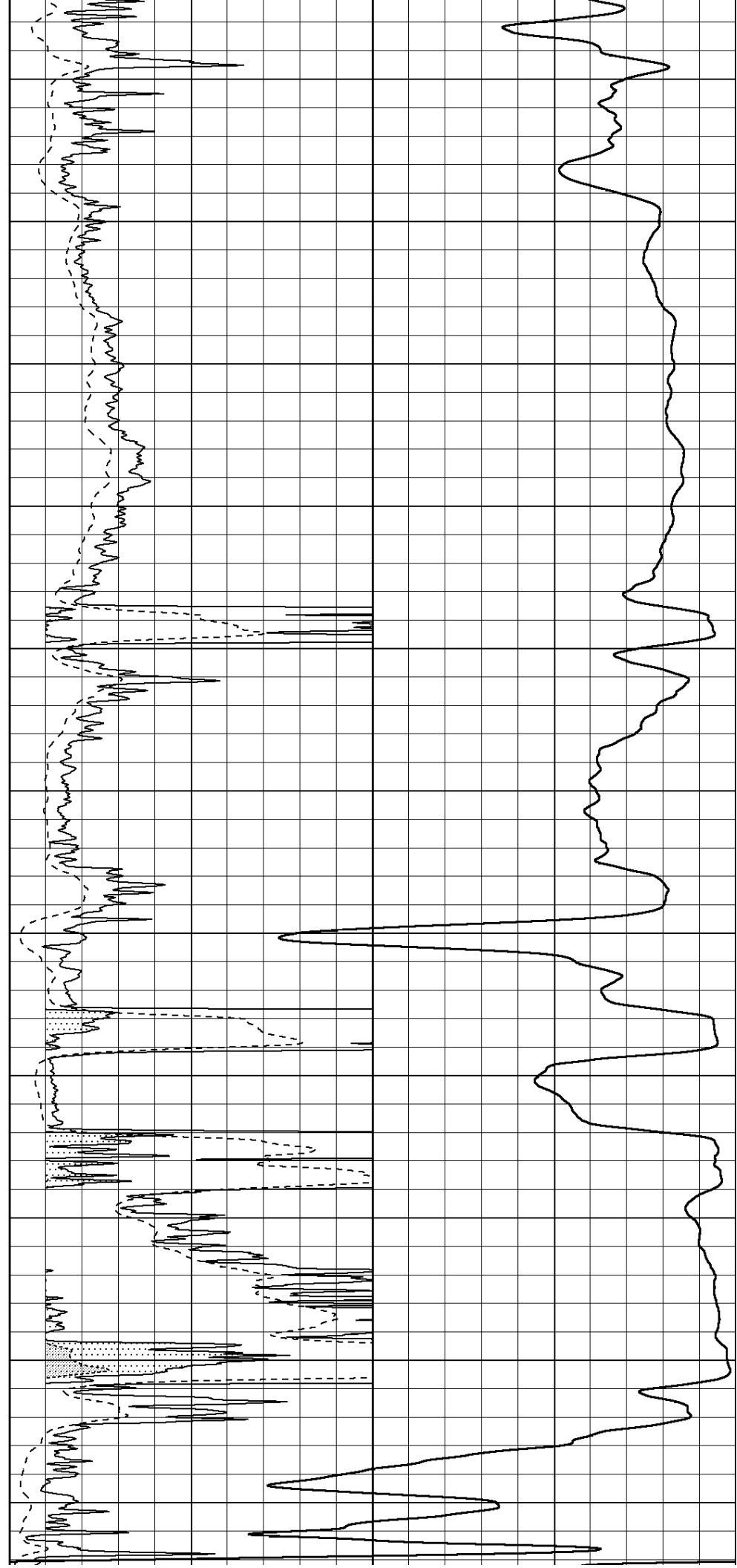
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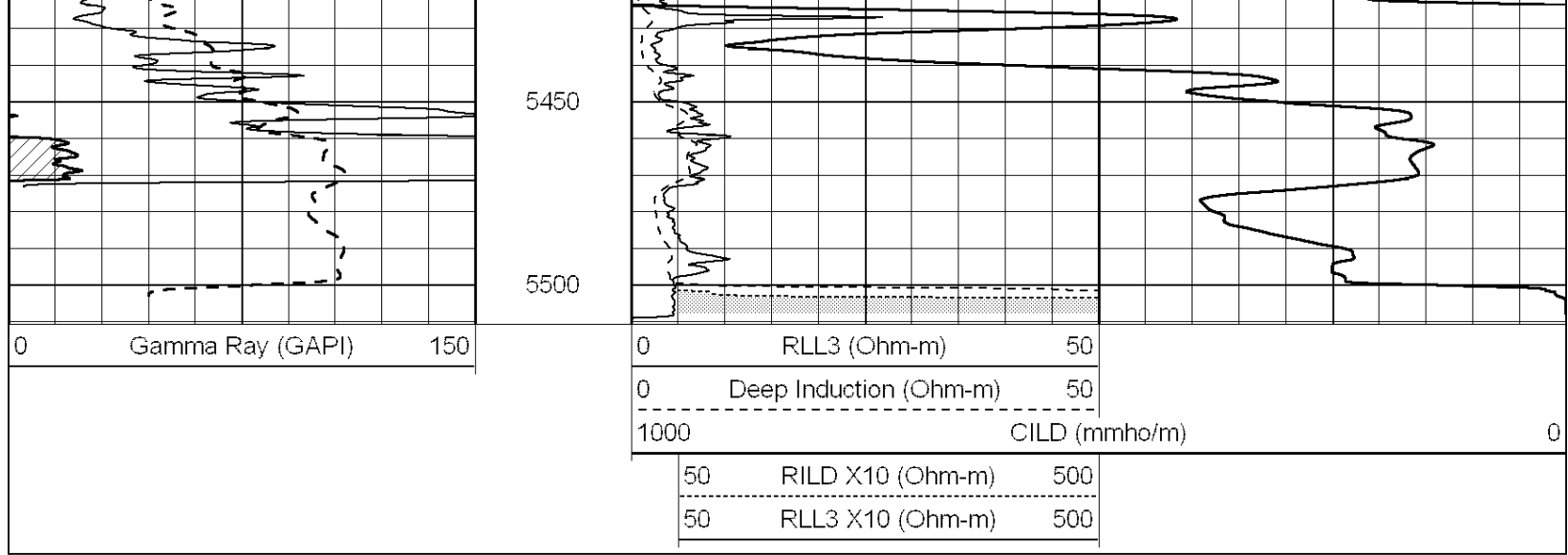
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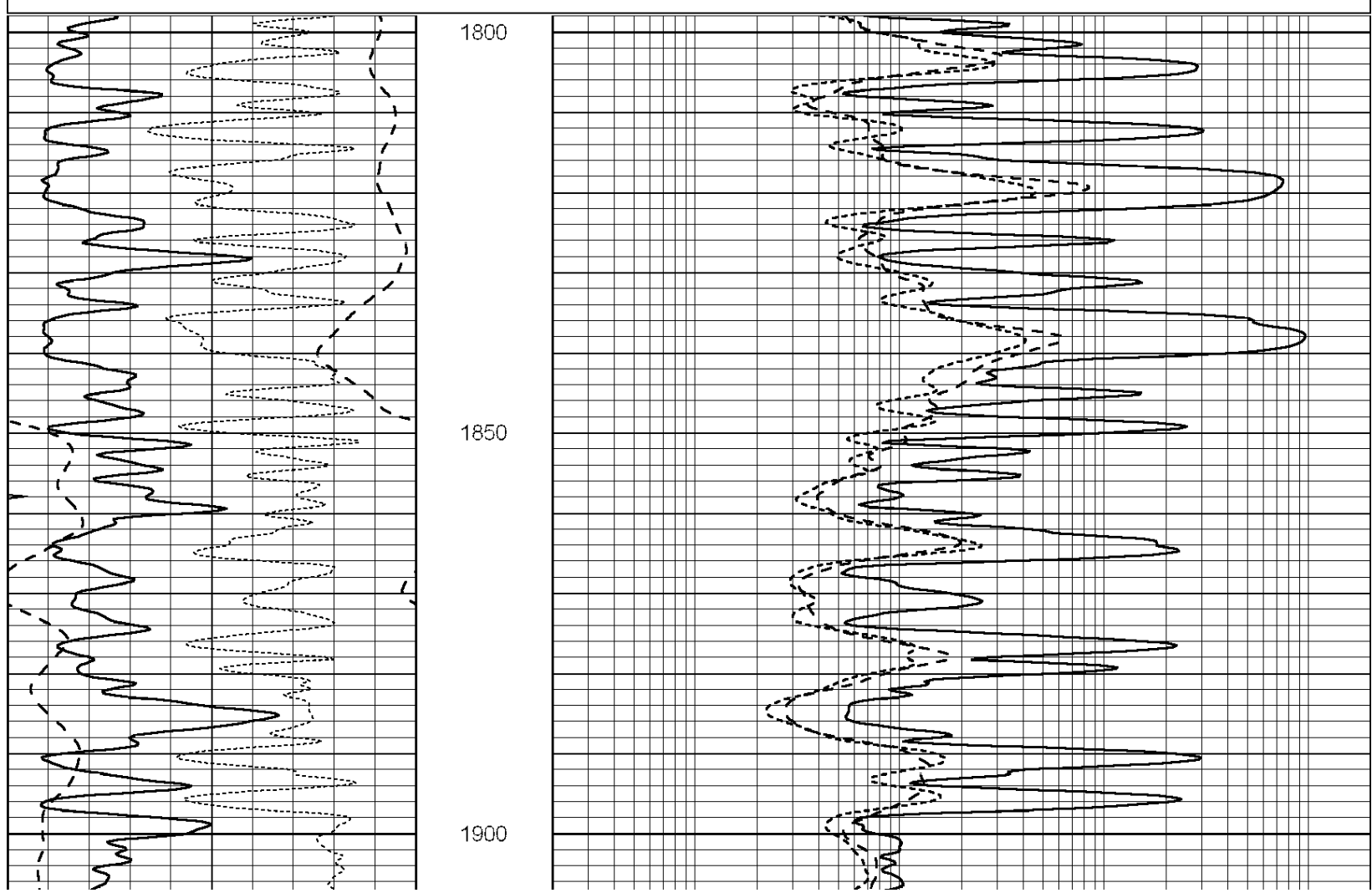
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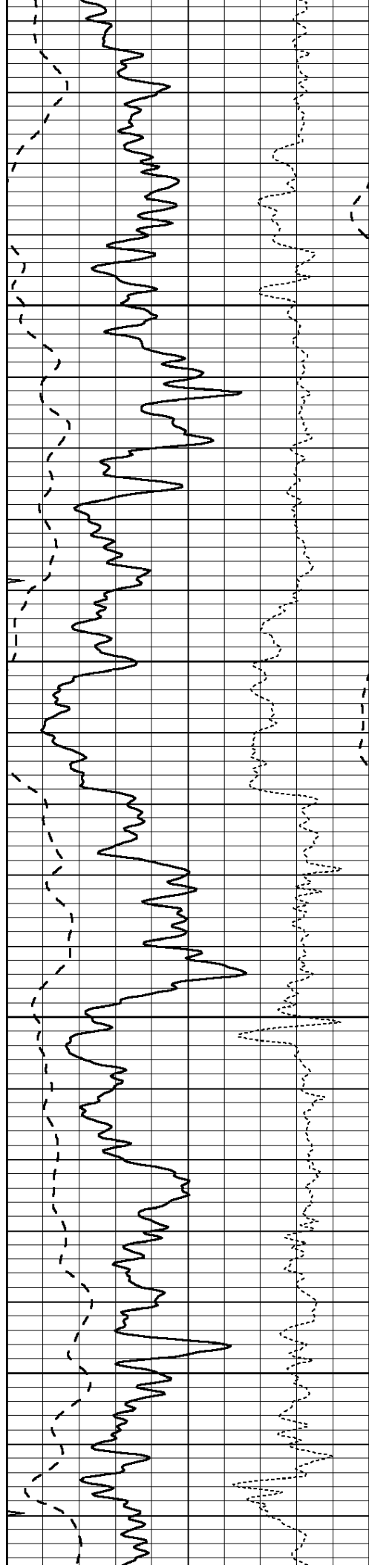
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 Presentation Format: \_dil  
 Dataset Creation: Thu Mar 27 19:15:36 2014 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



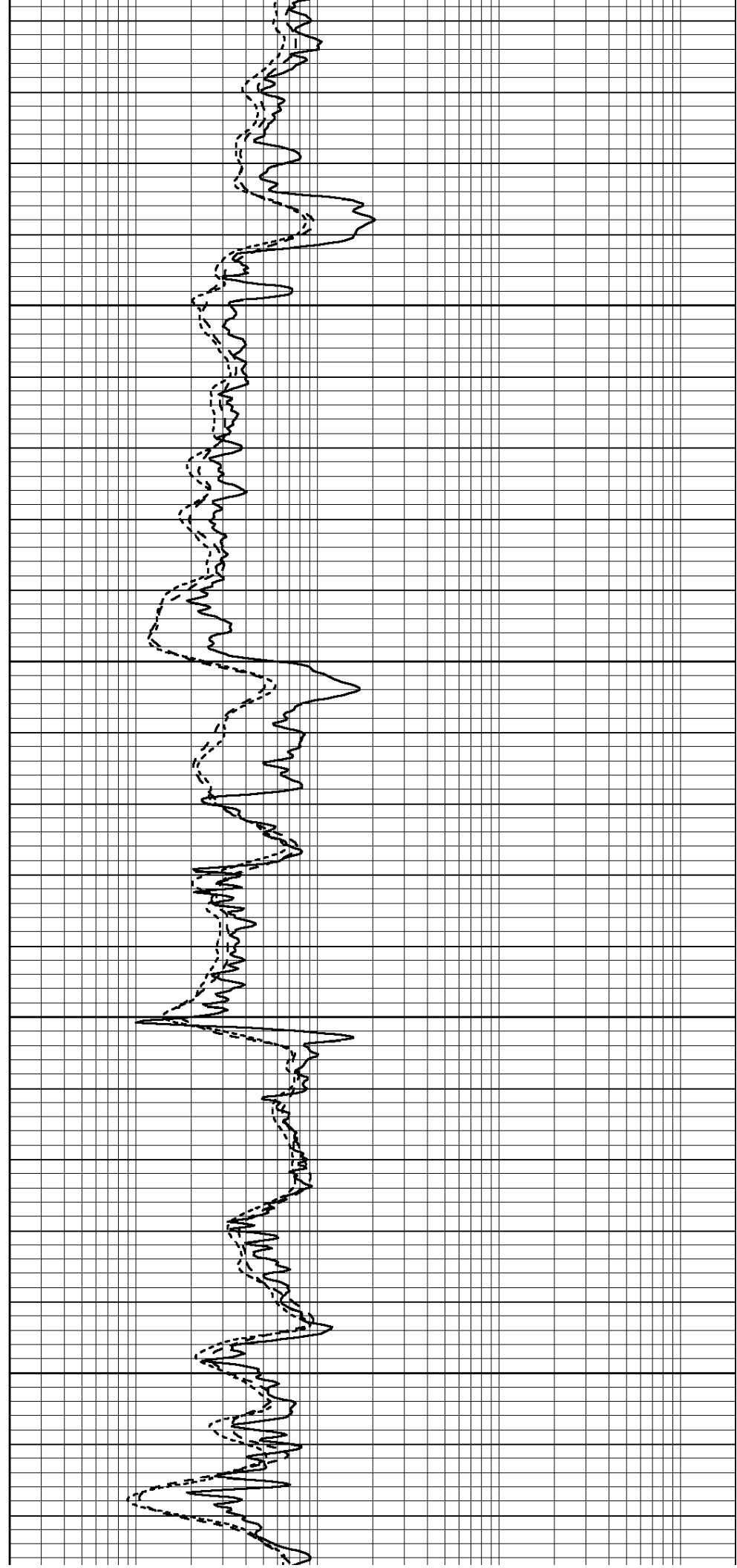


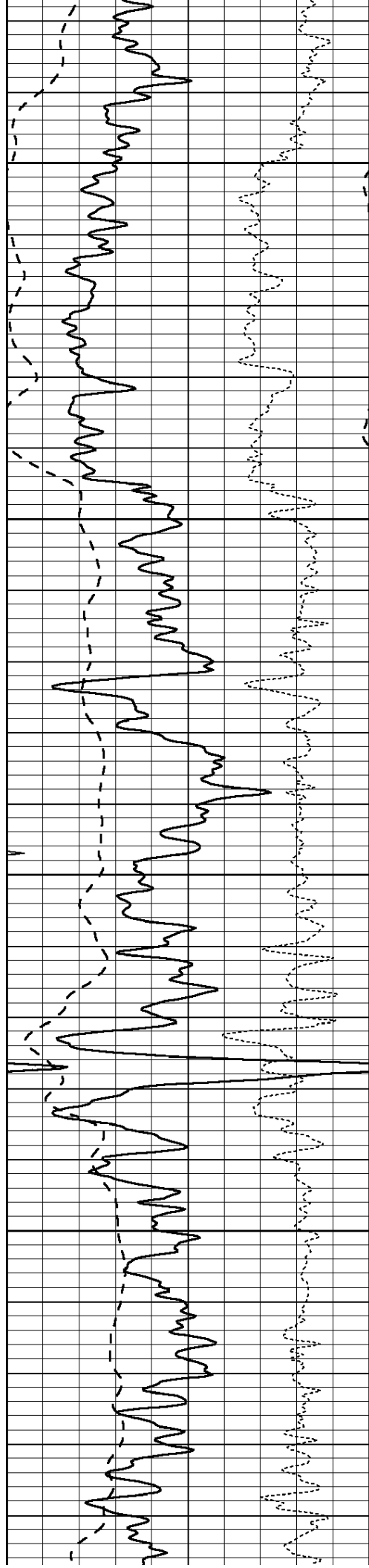
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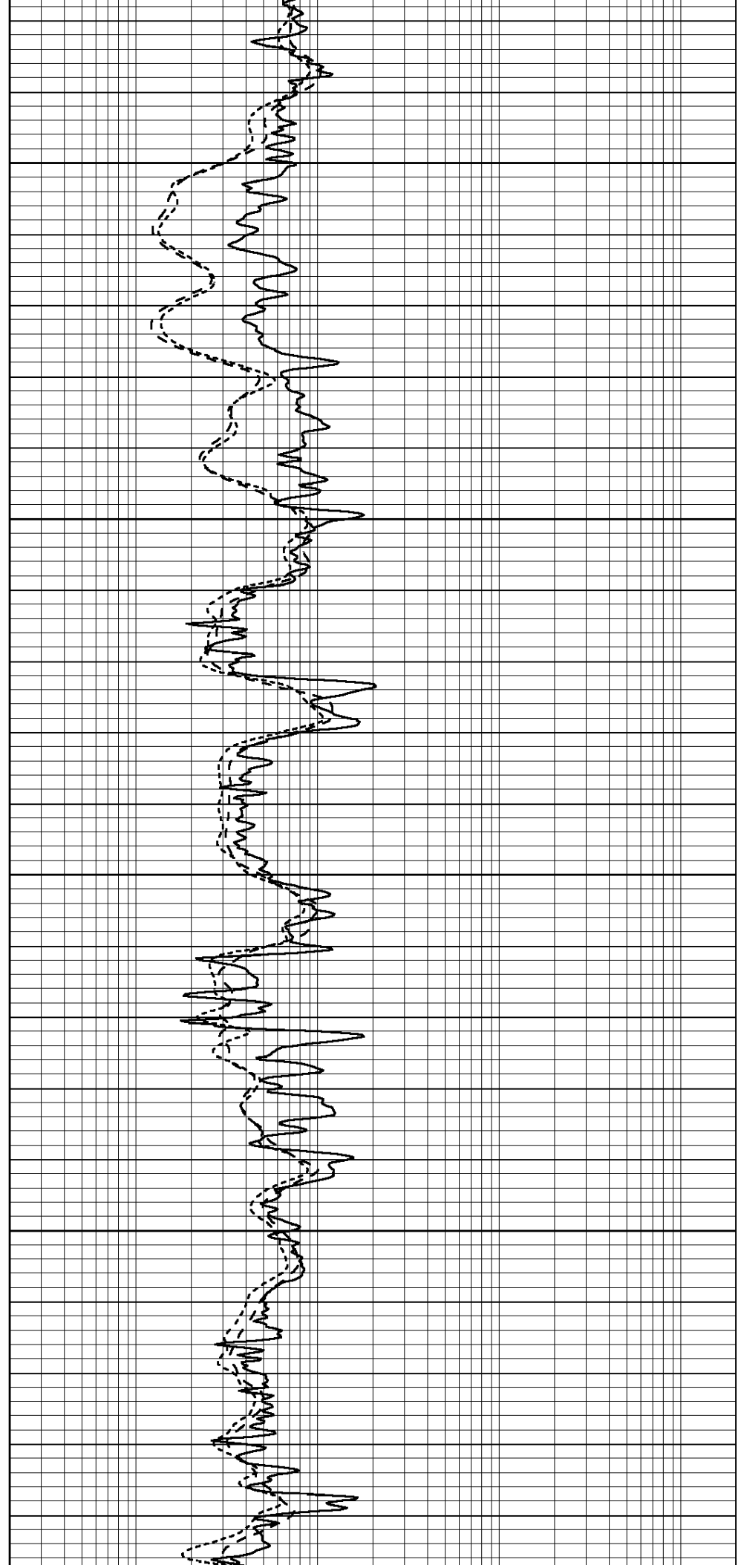


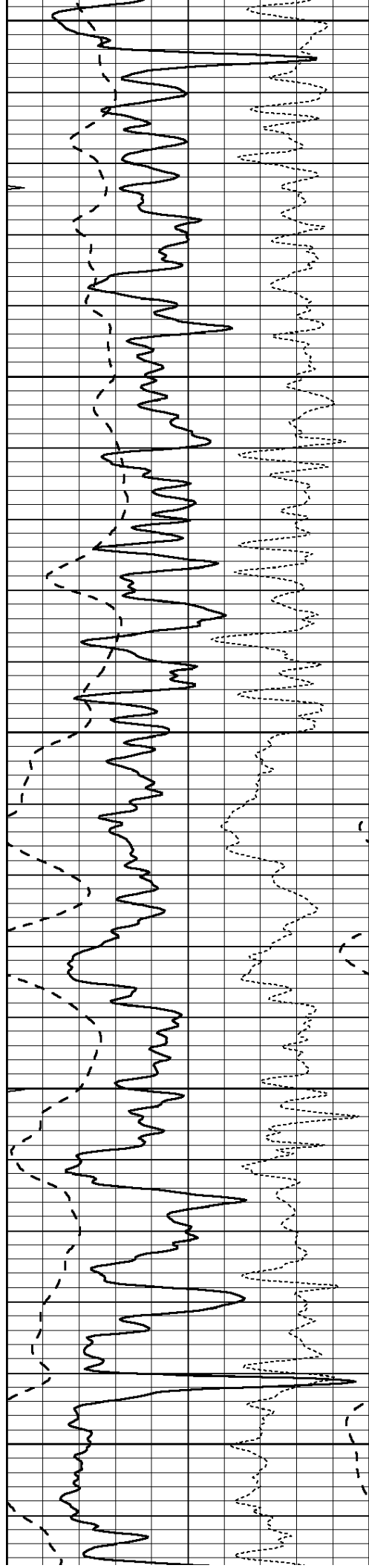
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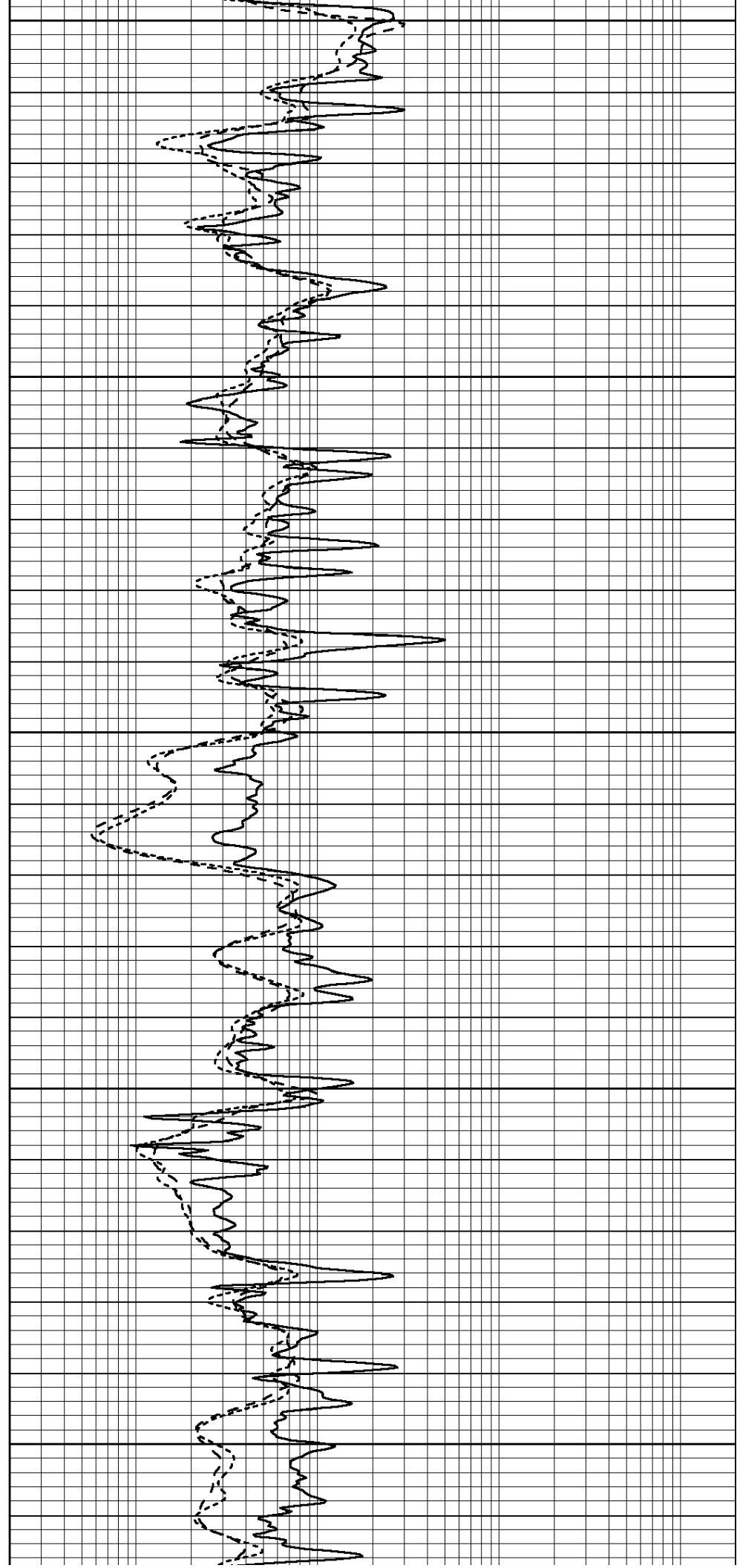
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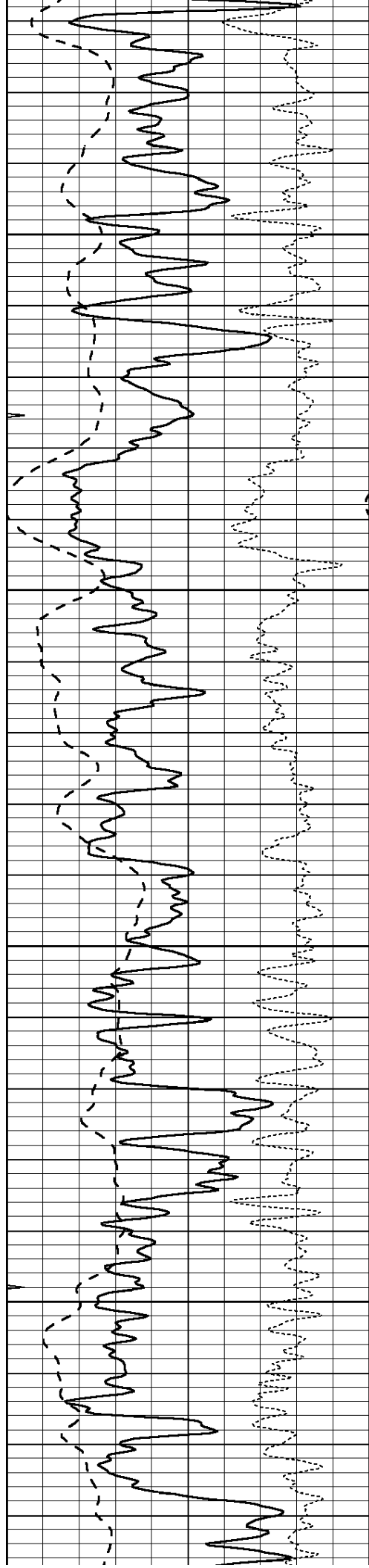
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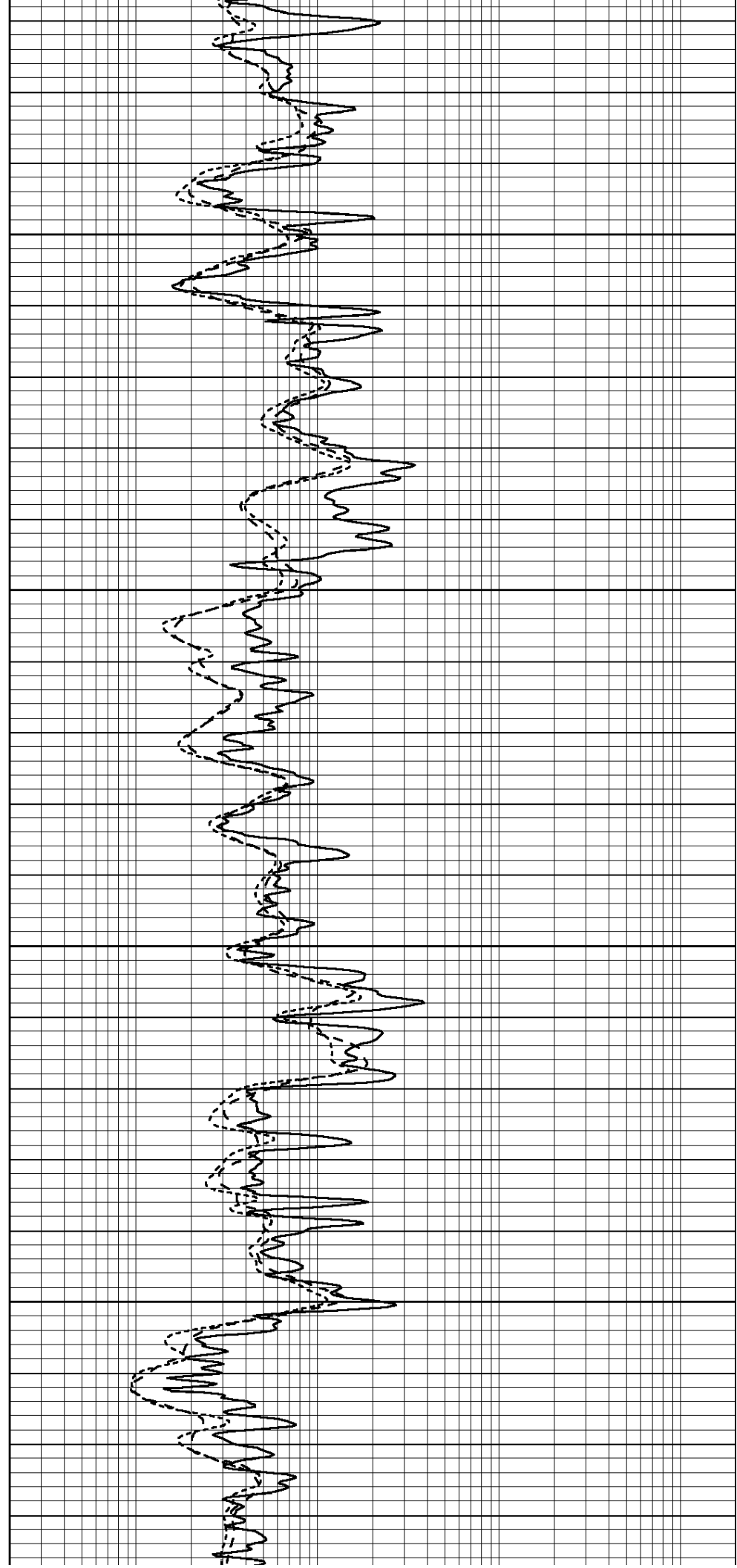


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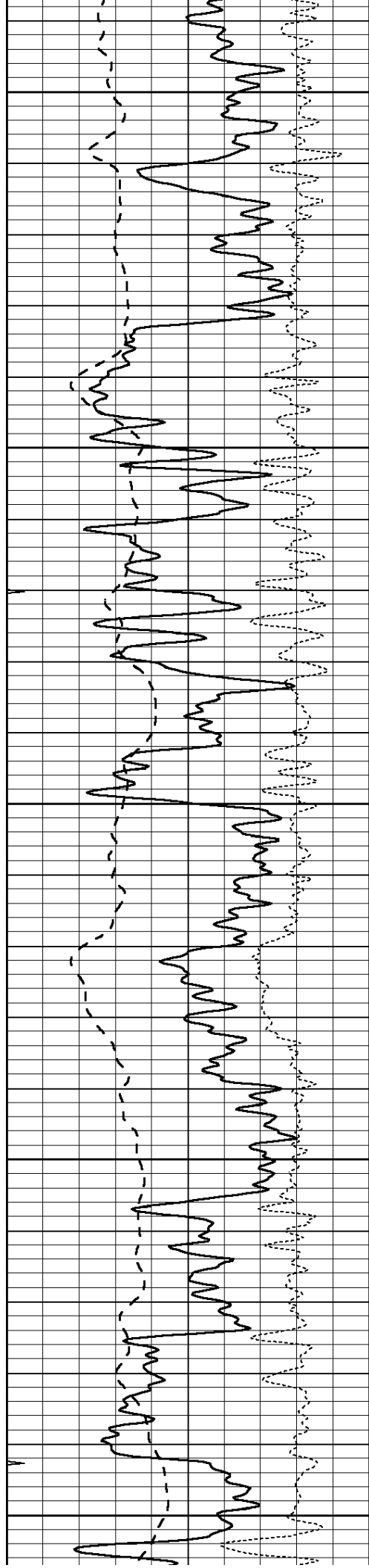
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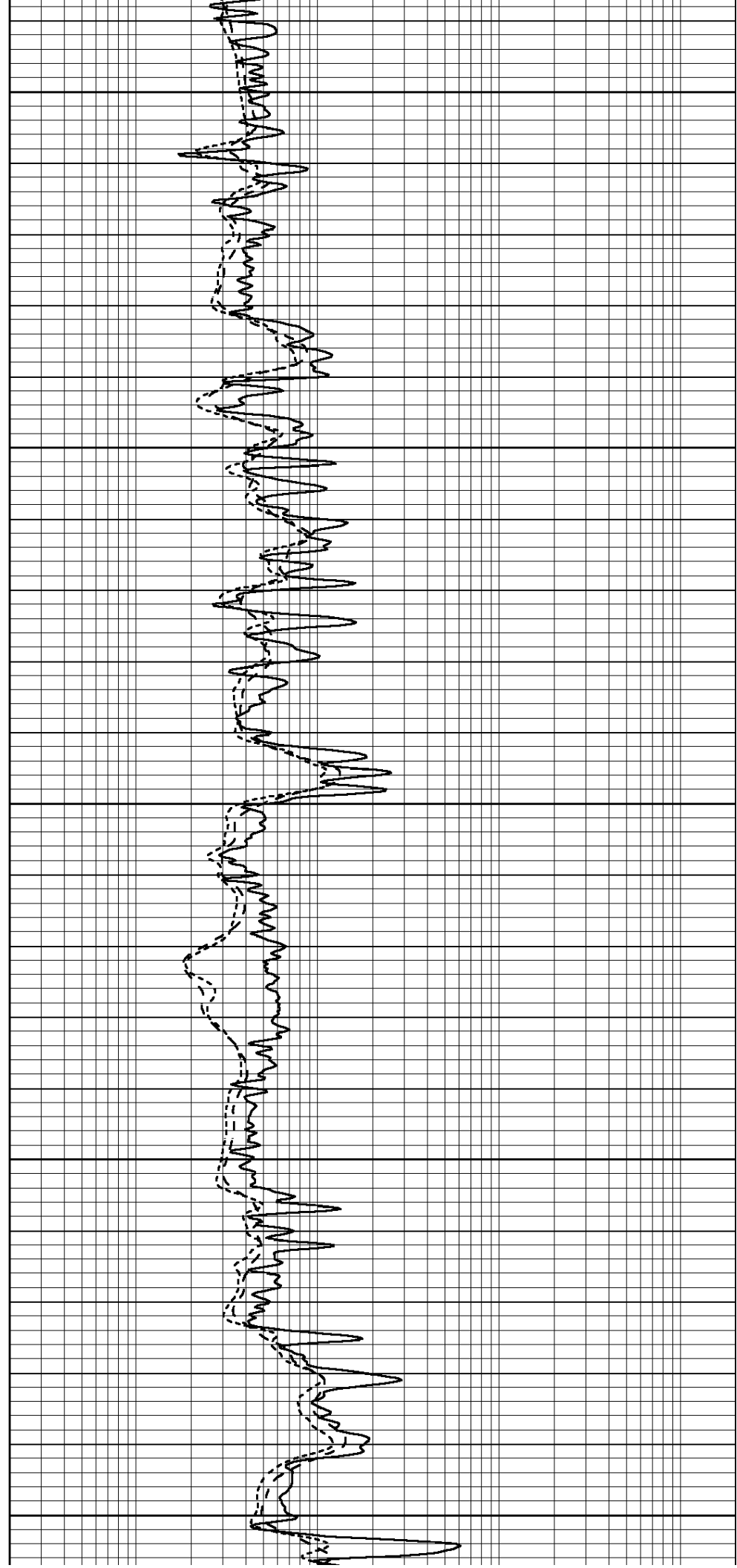
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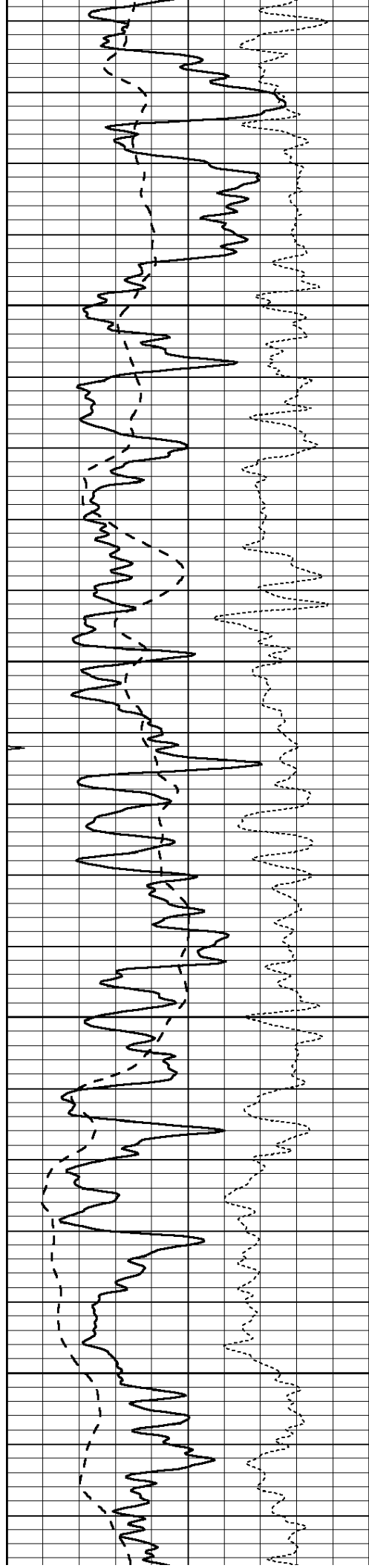
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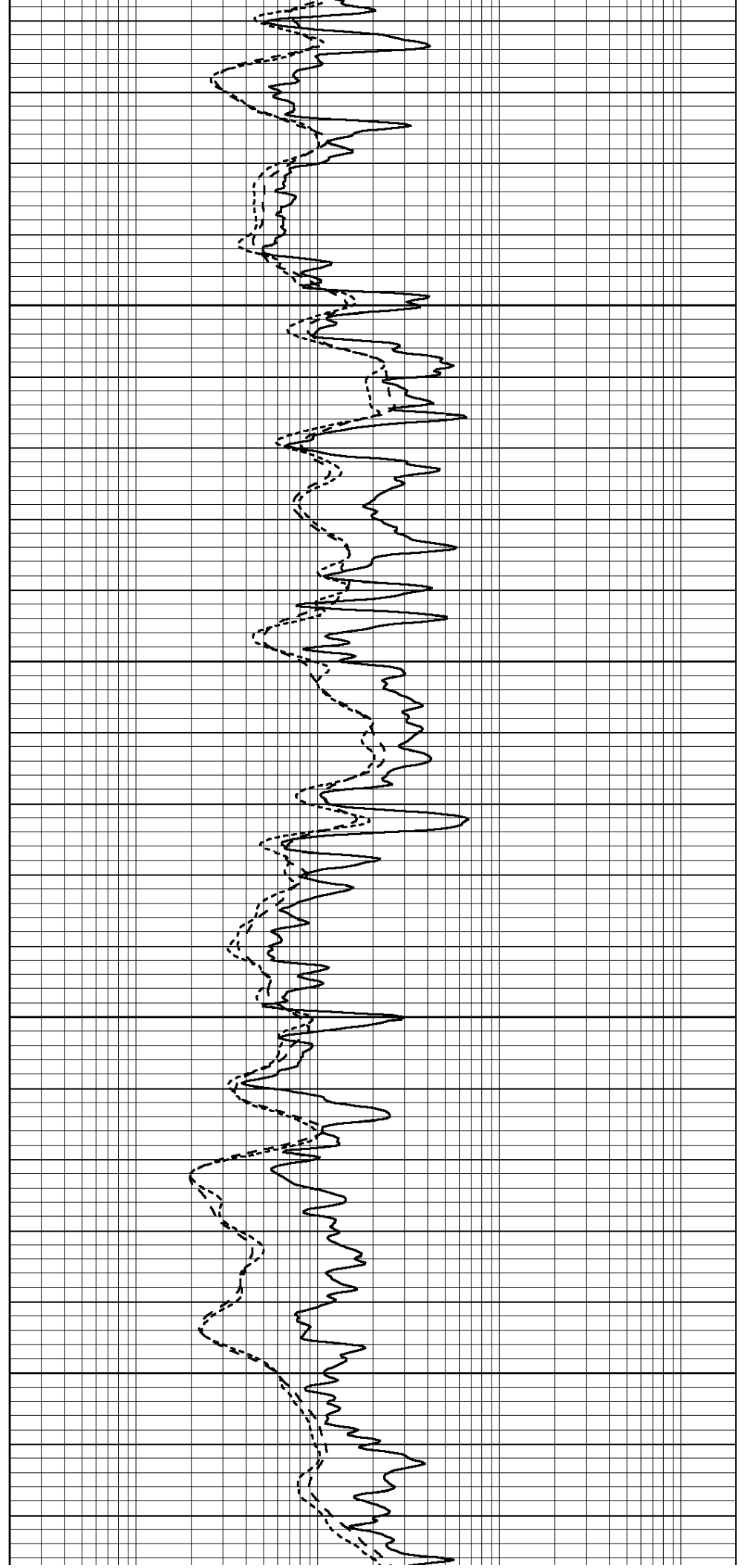


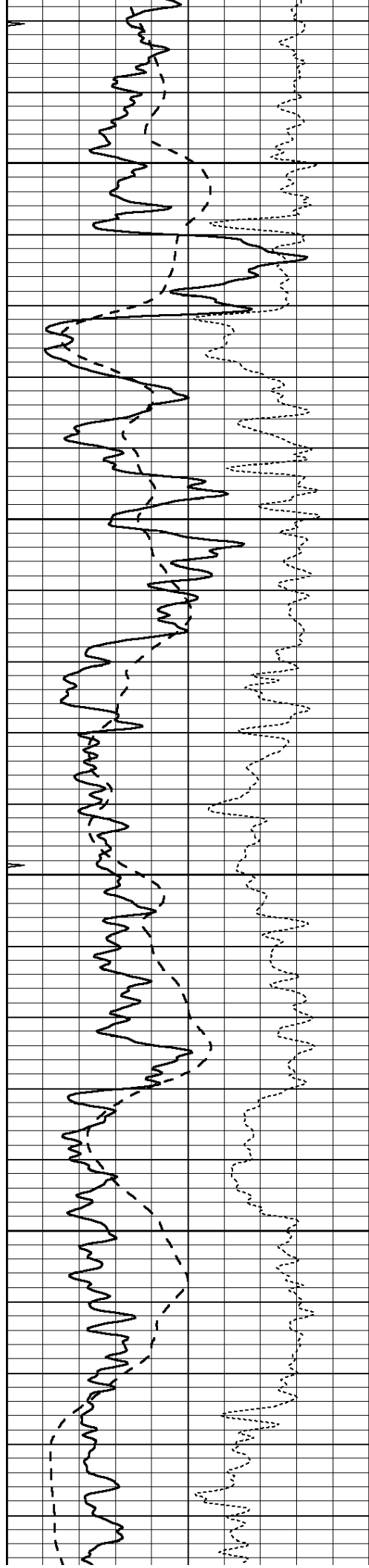
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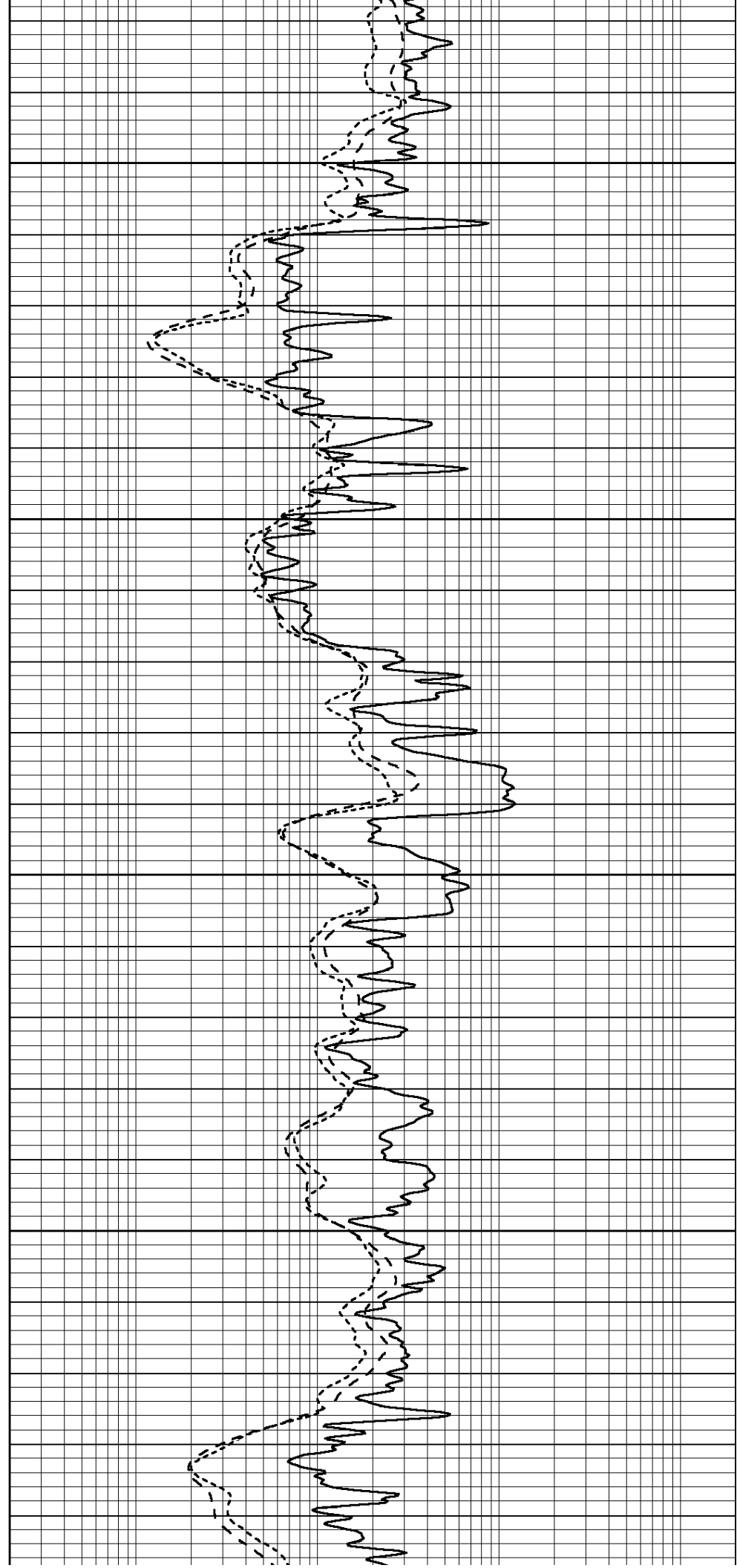


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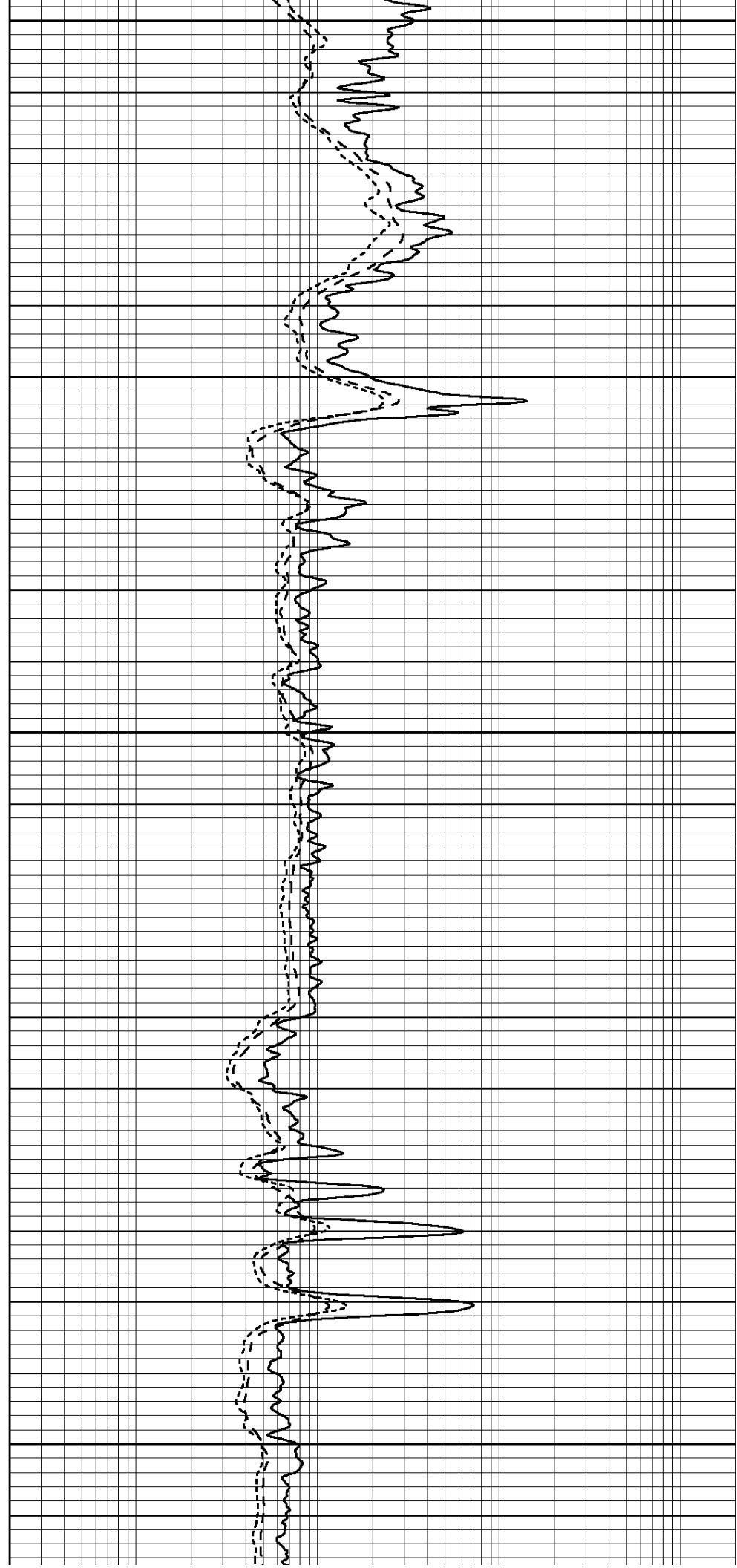
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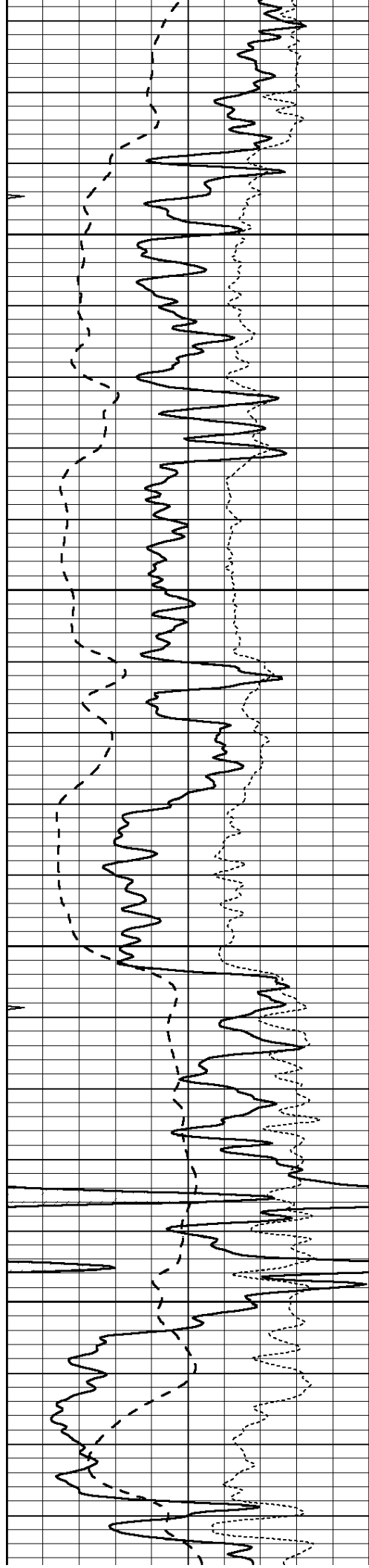
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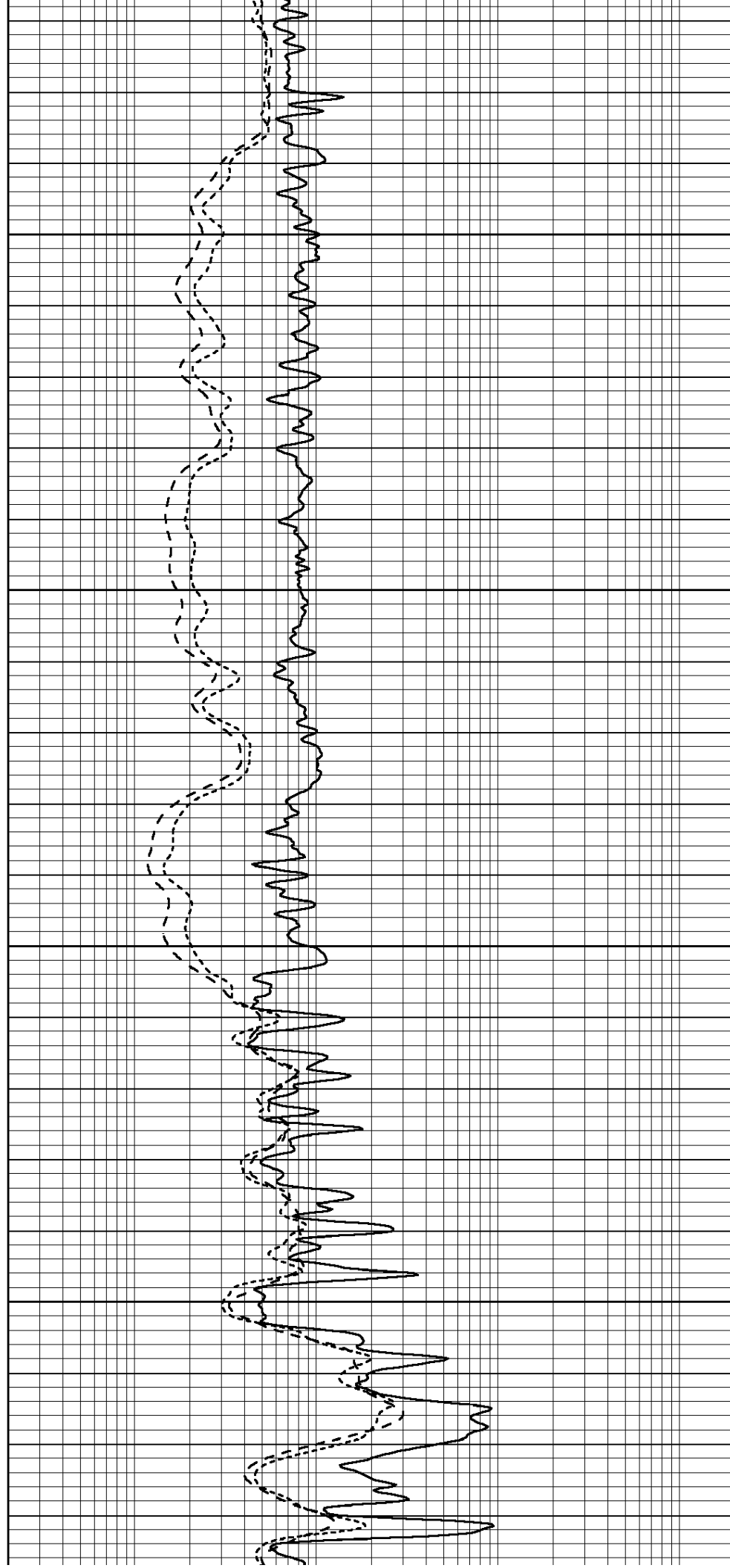


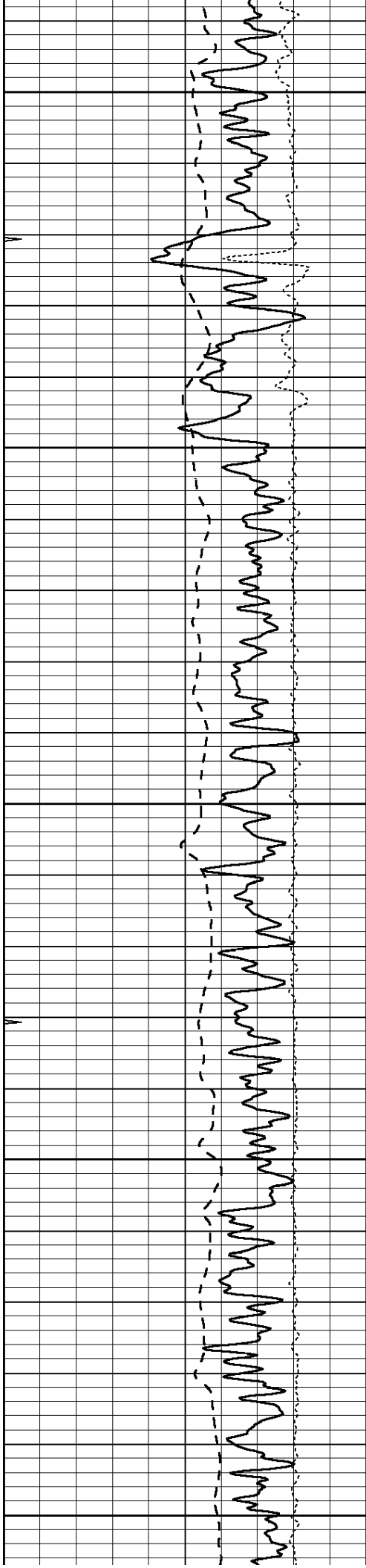
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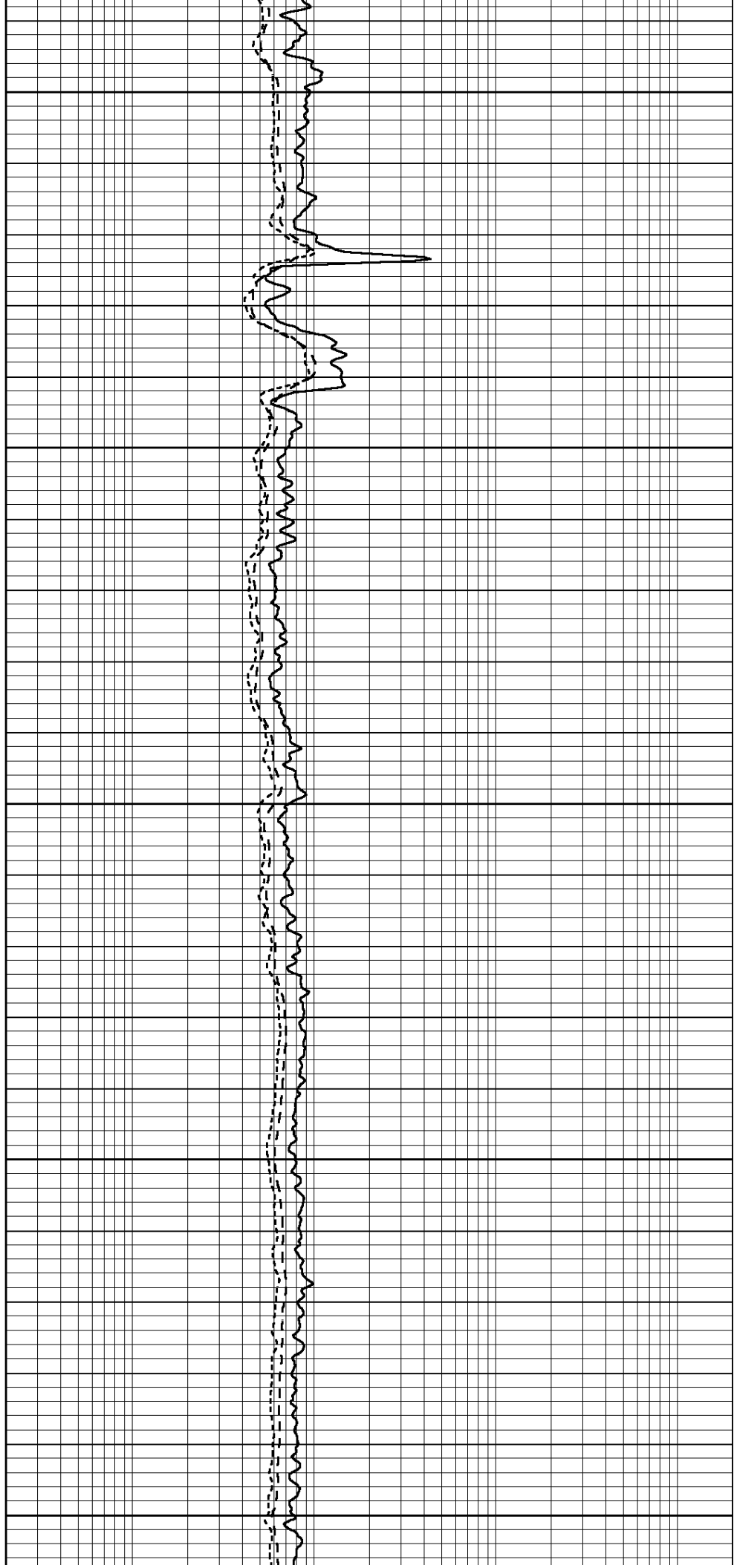
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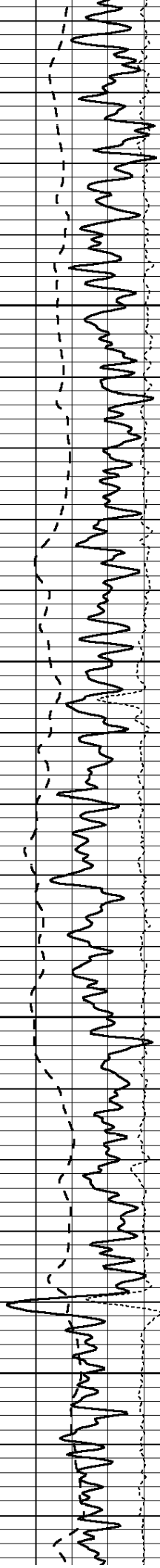
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4100





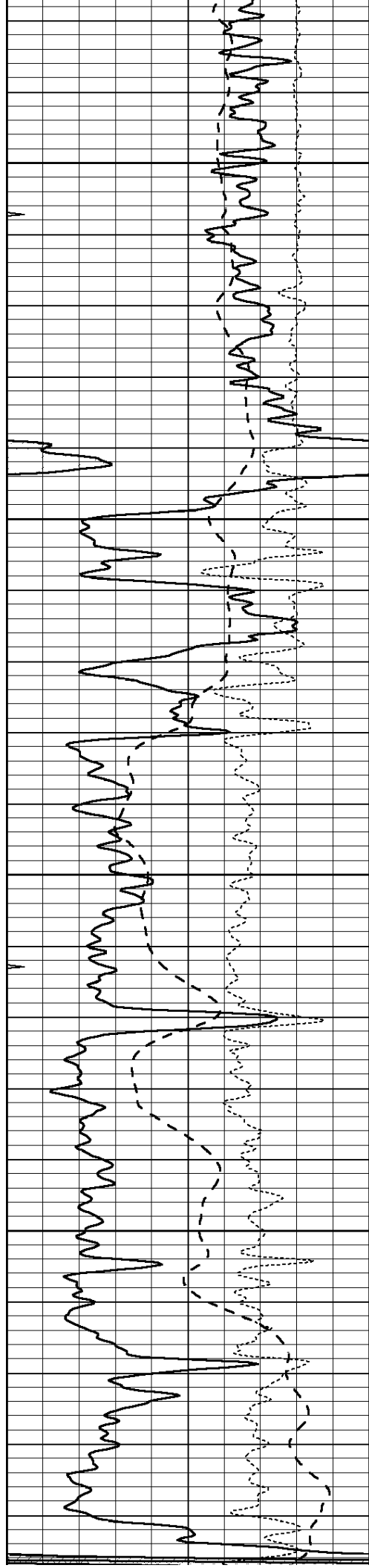
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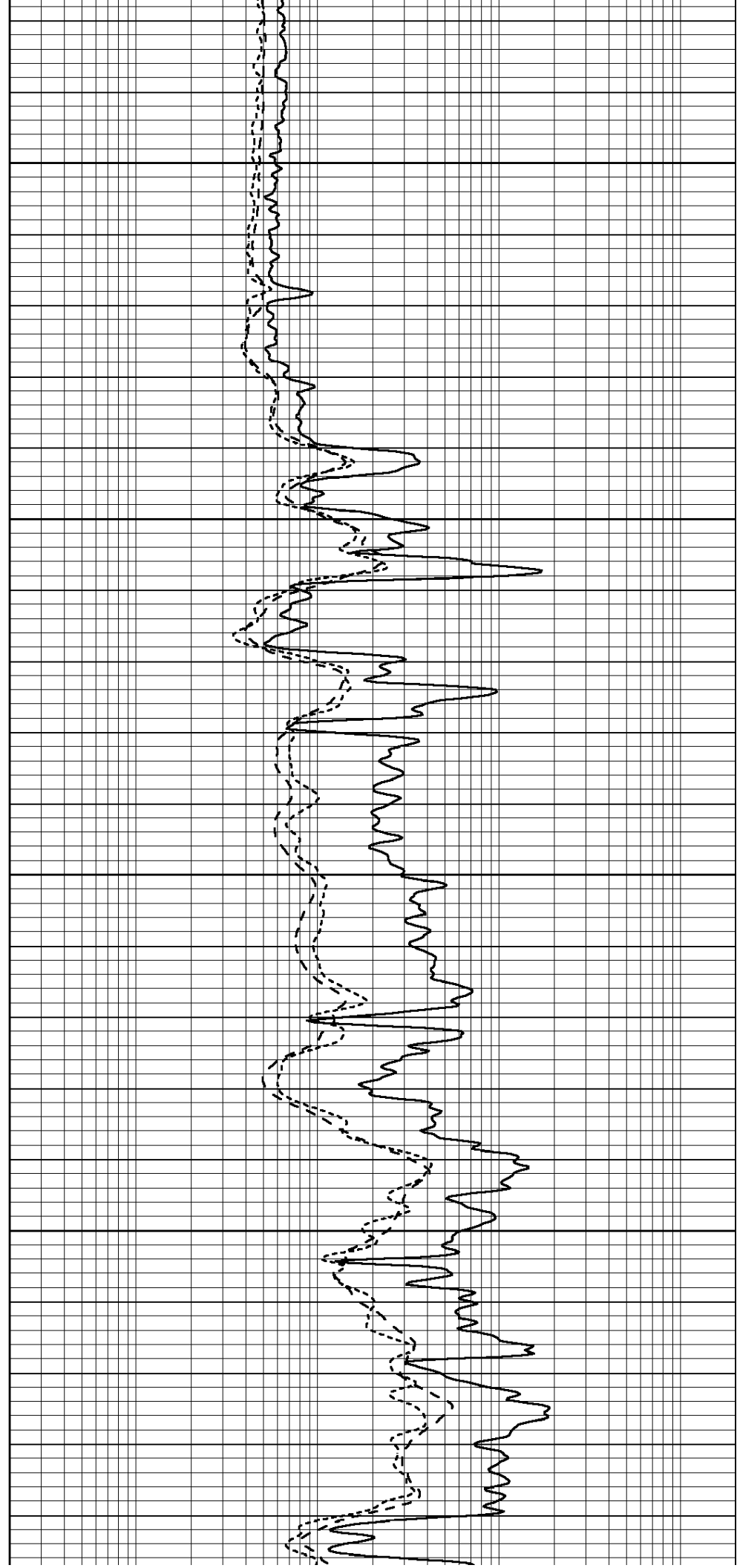


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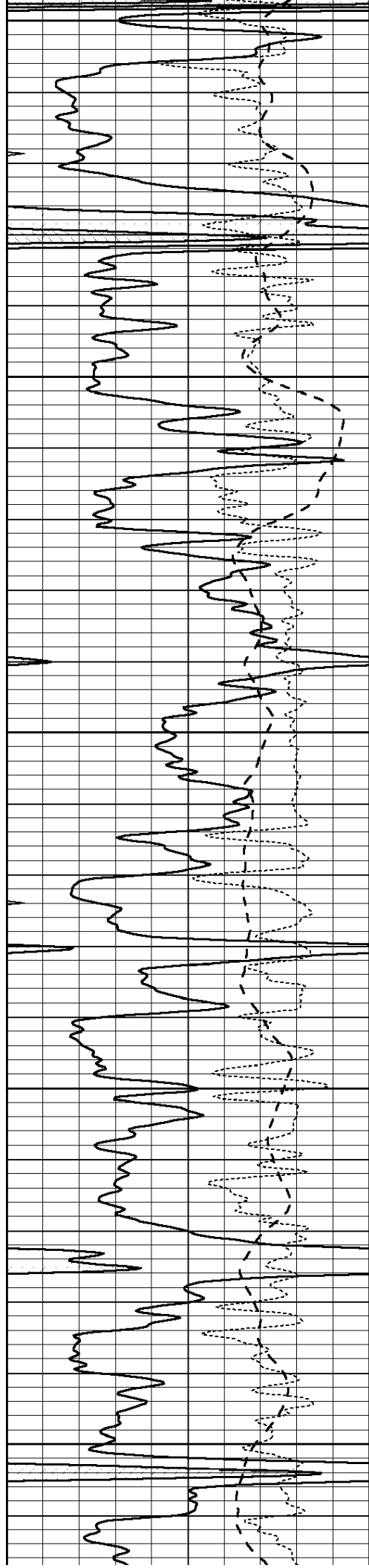
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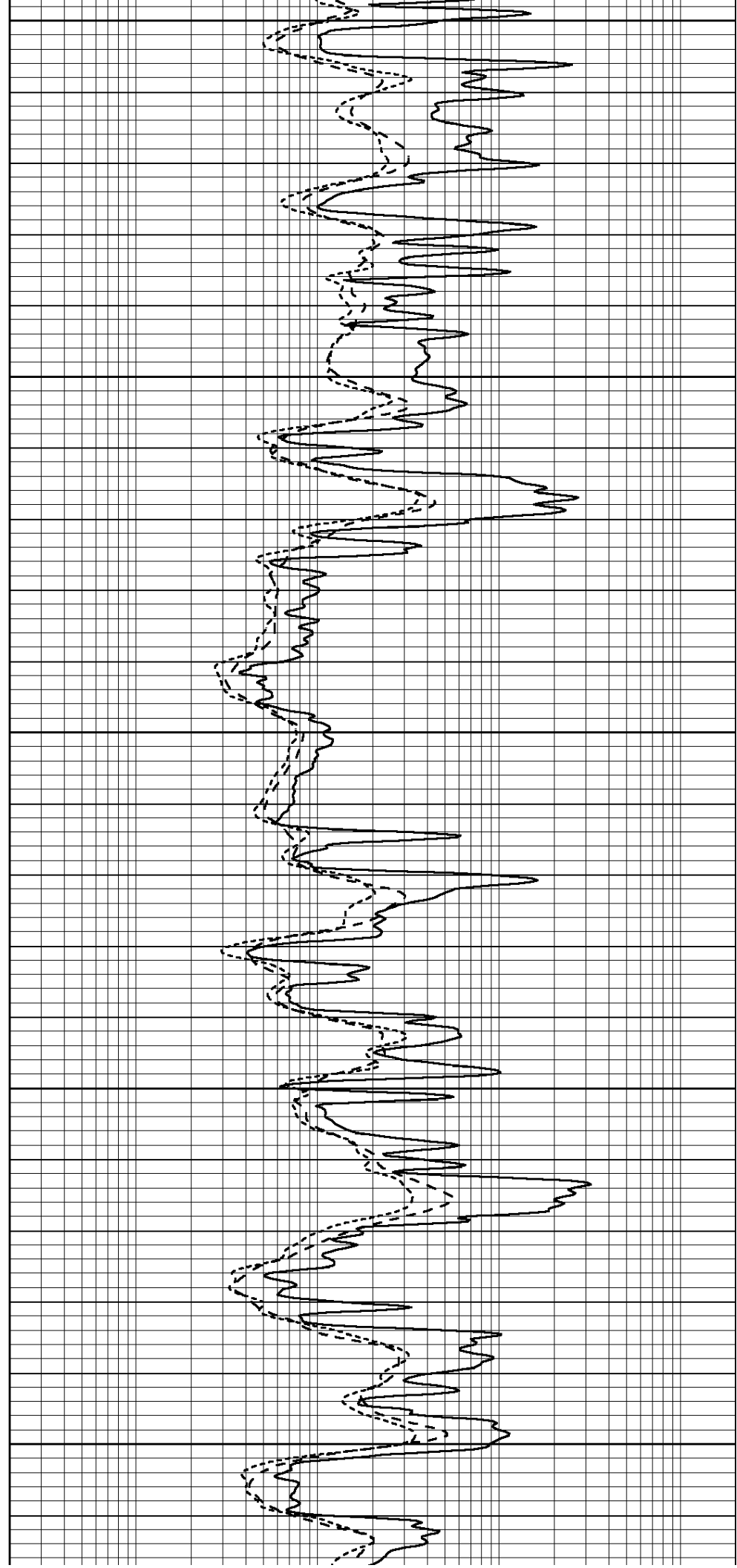
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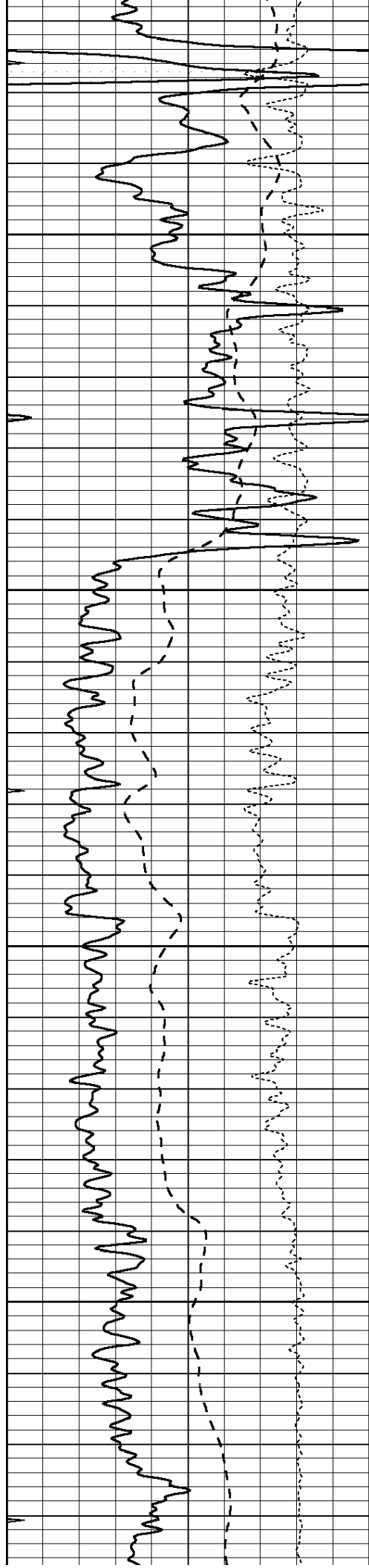
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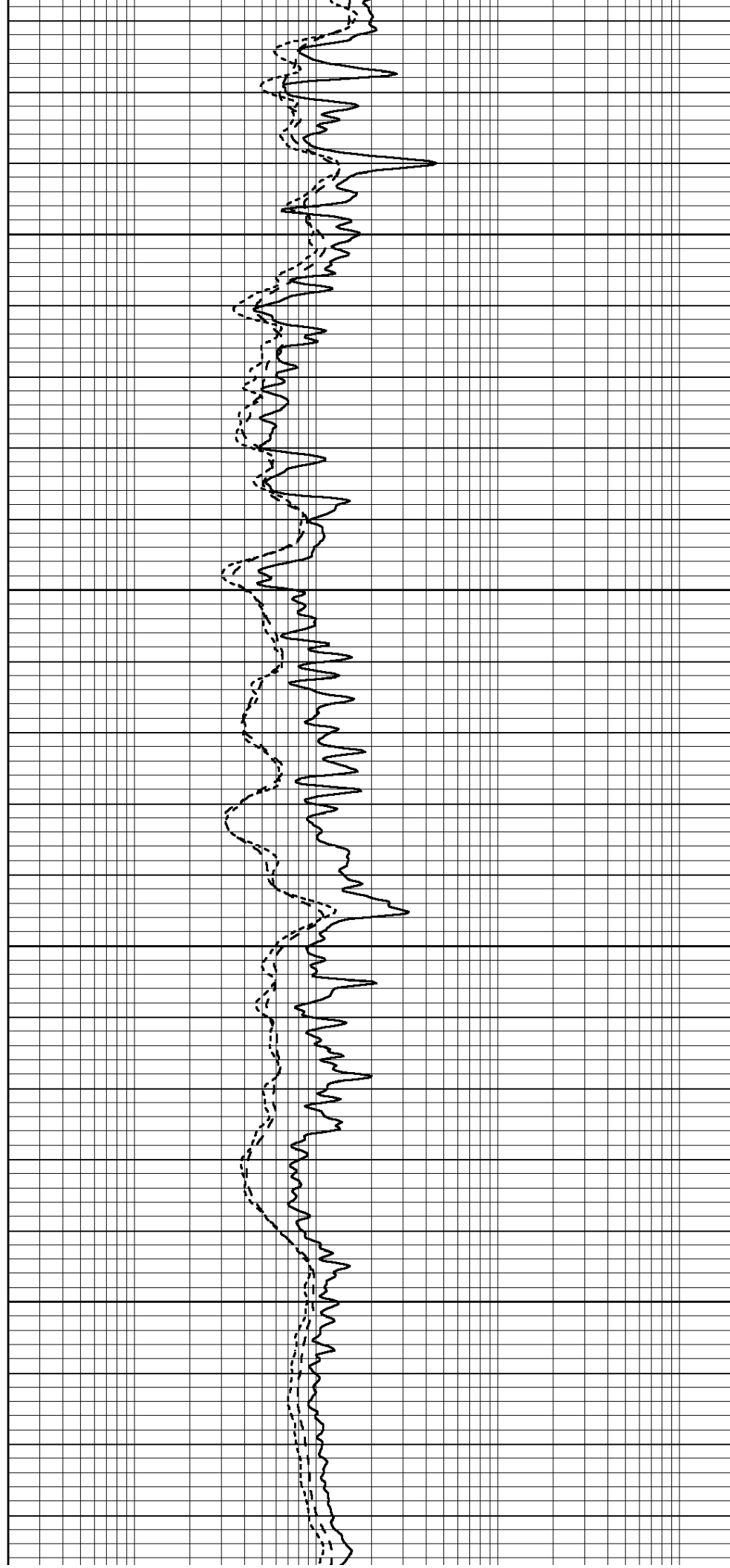


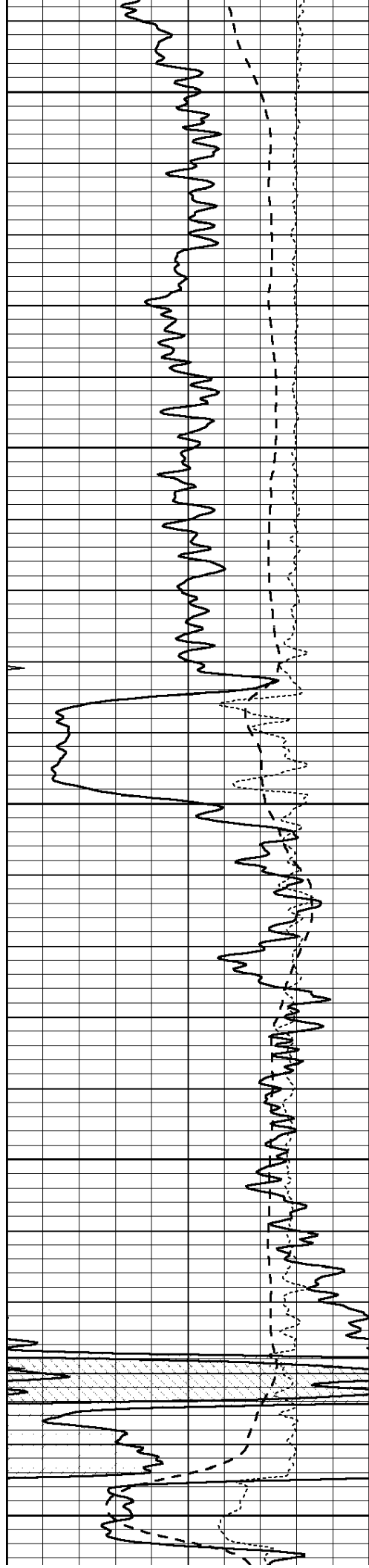
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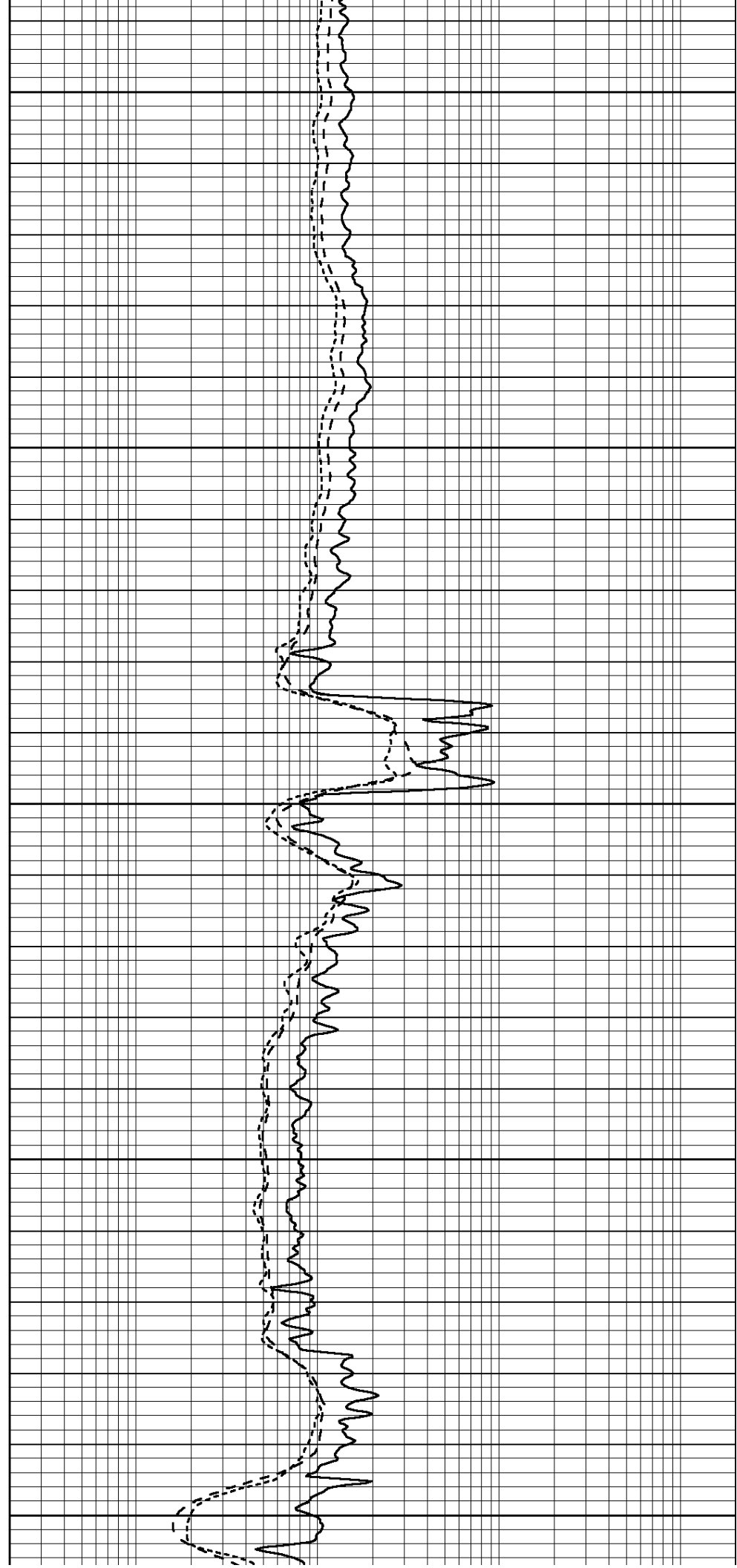
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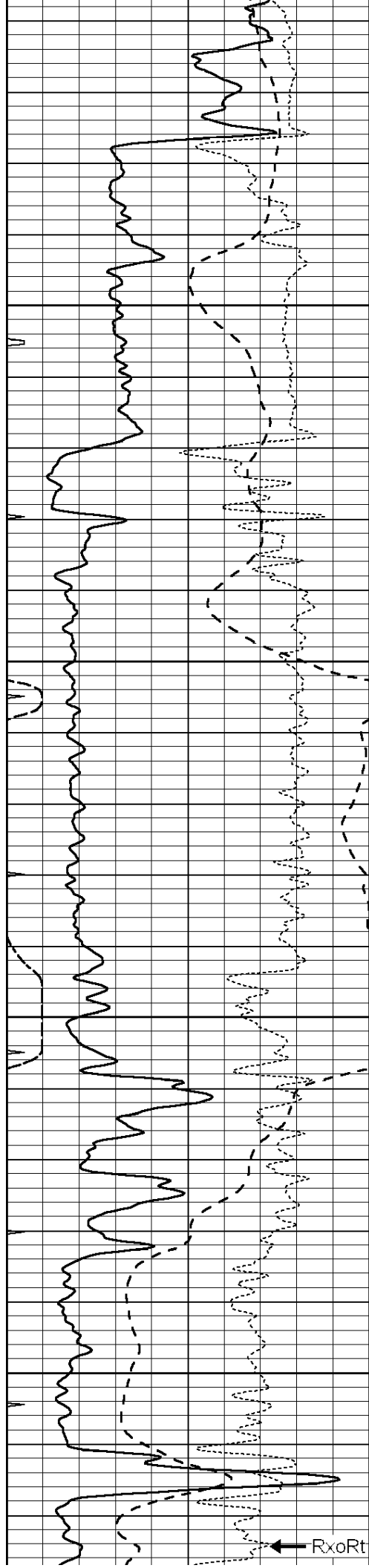
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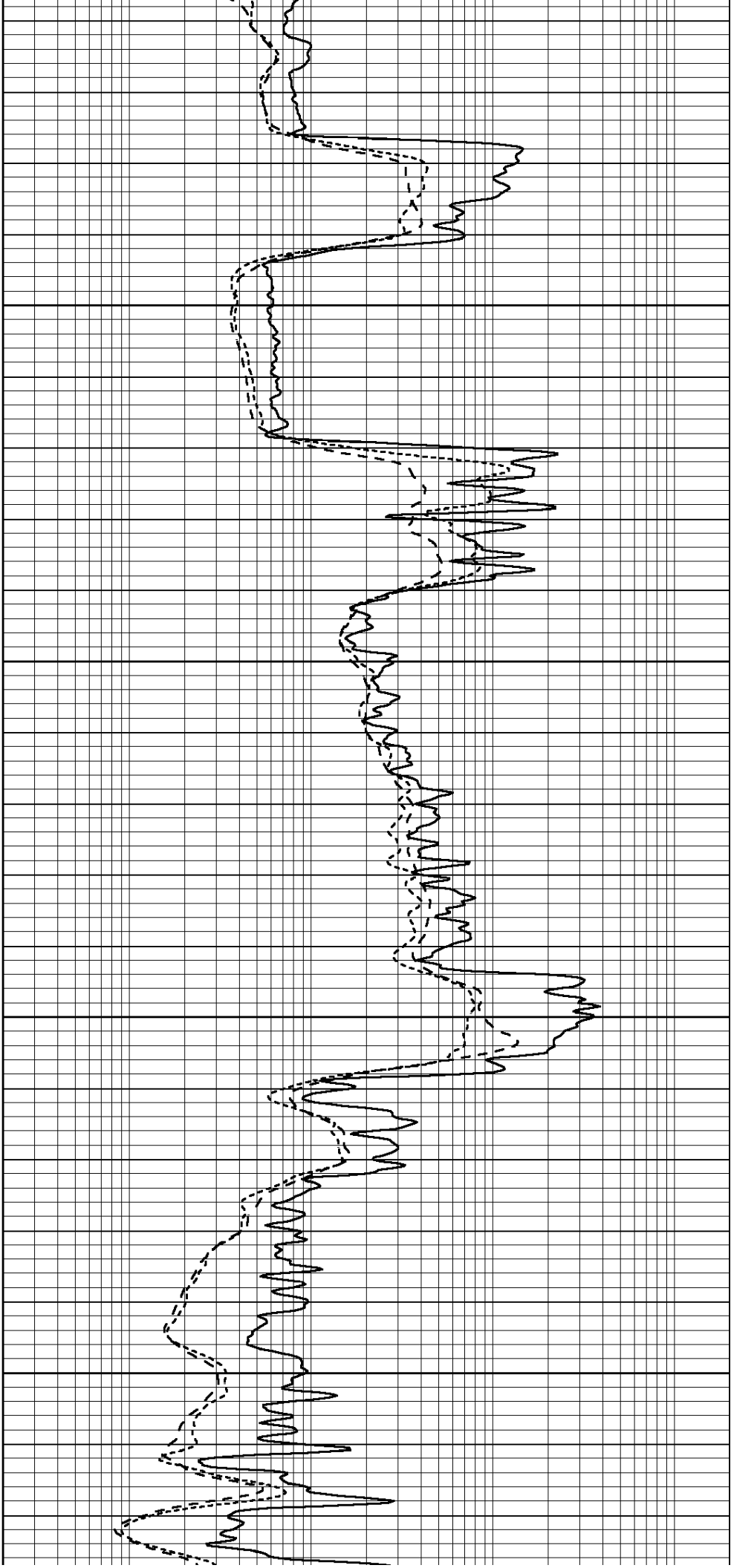
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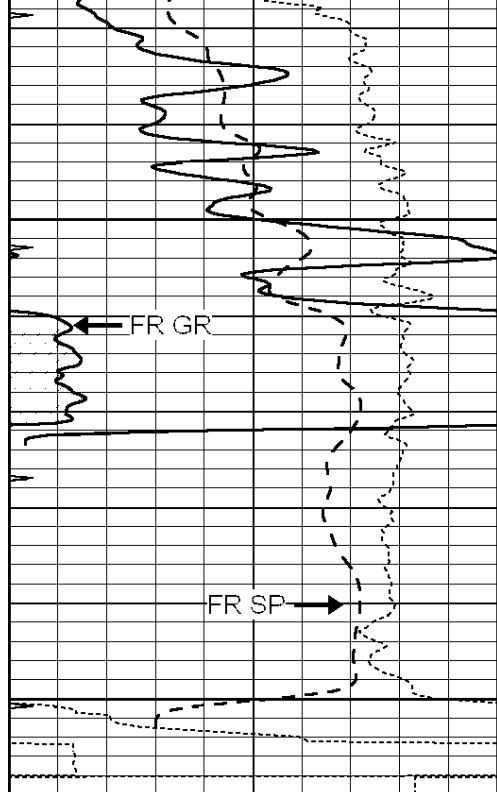
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← RxoRt

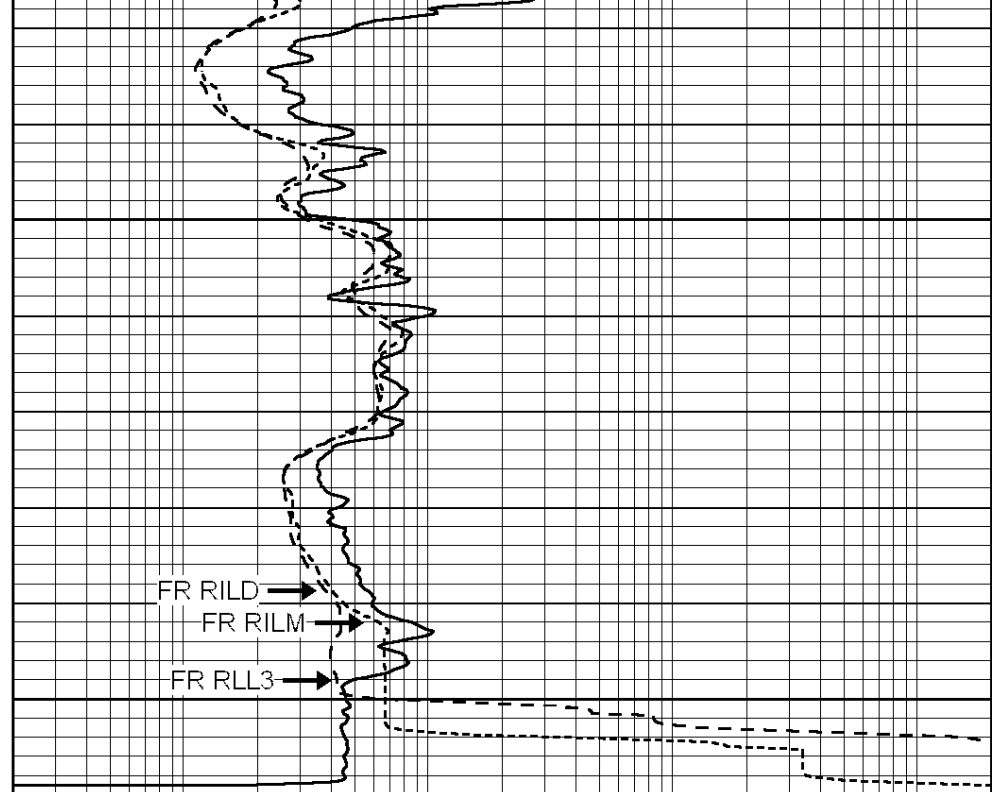




5450

LTD  
5500

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

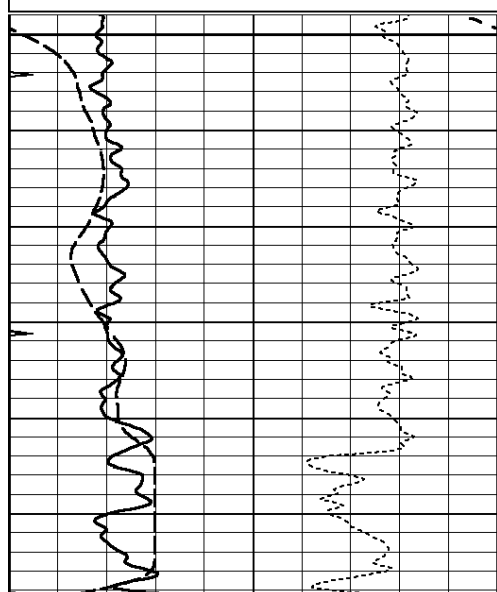


0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Database File: 24126pe.db  
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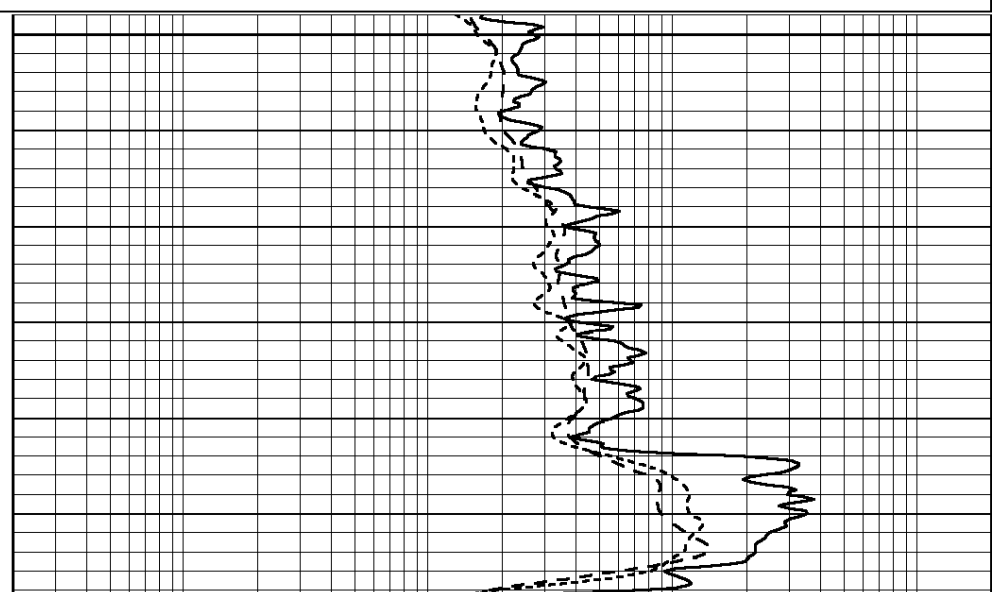
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

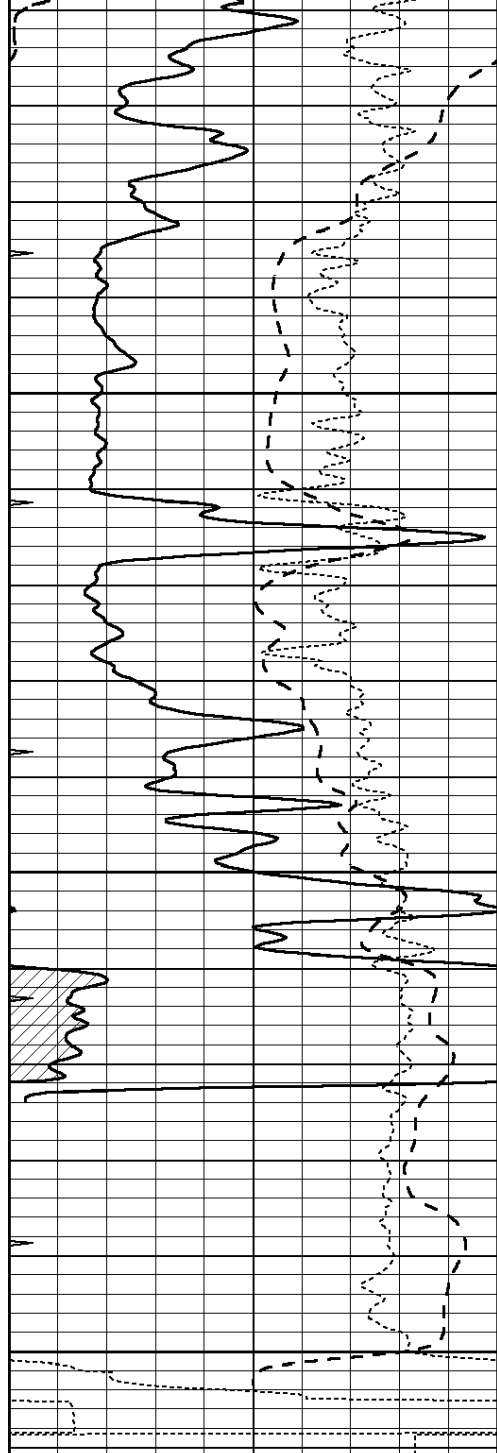
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



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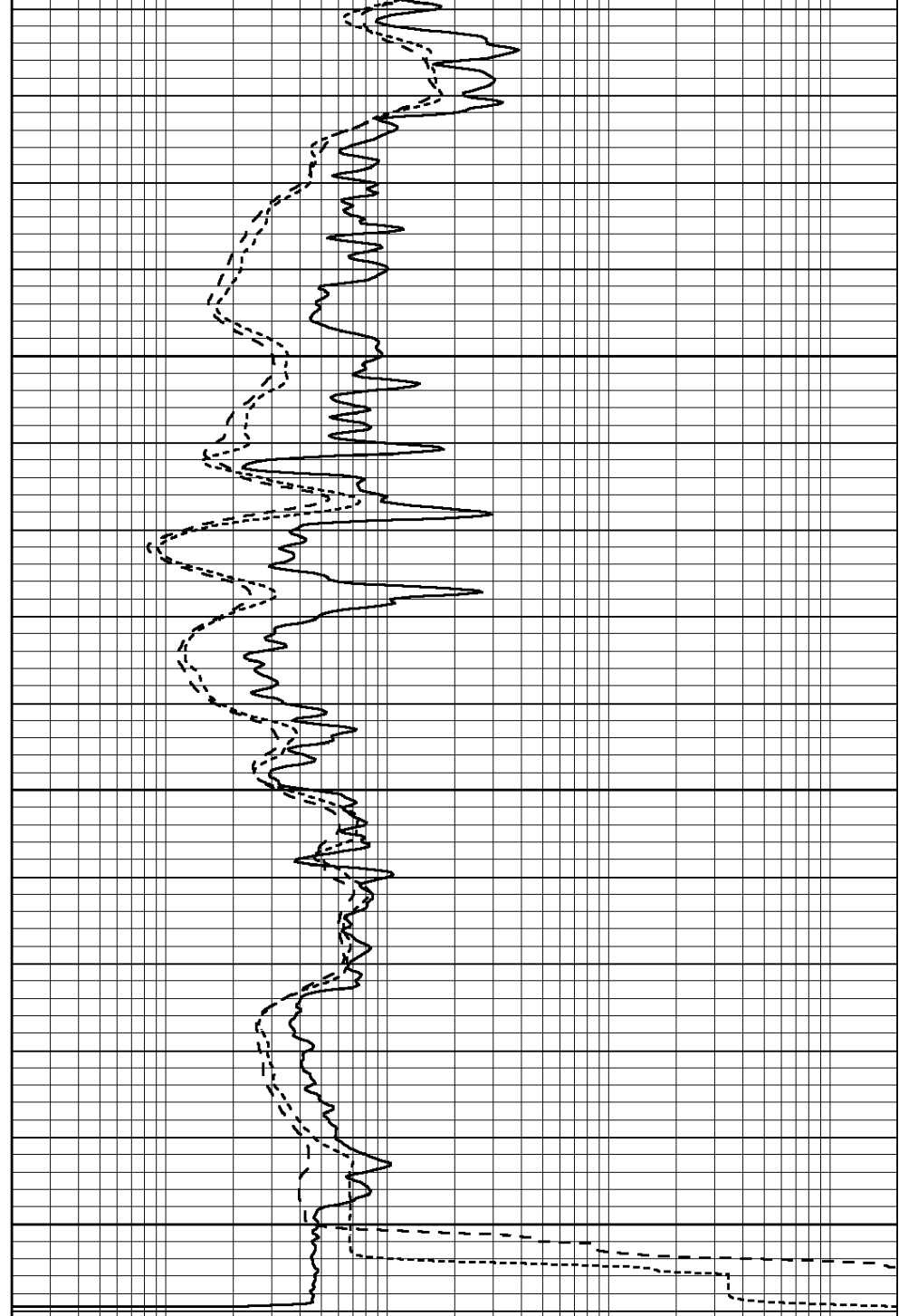


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 24126pe.db  
 Dataset Pathname: pass3.5  
 Dataset Creation: Thu Mar 27 19:15:36 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR  
 Performed: Wed Mar 05 17:42:55 2014

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	570.000	3.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Litho Density Calibration Report  
Serial: 001    Model: PRB  
Performed Tue Jul 03 11:37:32 2007

Litho Density Calibration								
	Background	Magnesium		Aluminum		Sandstone		
Window 1	2170.6	9915.1		3855.3		11241.6		cps
Window 2	2029.2	8716.5		3483.5		9750.8		cps
Window 3	1665.0	4929.7		2356.8		5332.0		cps
Window 4	493.3	492.1		490.0		486.8		cps
Long Space	0.0	6687.3		1454.3		7721.6		cps
Short Space	1.9	2149.3		1403.9		2354.5		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe				2.5700		1.5500		
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio				: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept				: -18.7

Caliper		
	Readings	Reference
Low Ref	3.5	8.3
High Ref	5.4	14.0
	Gain: 2.9	Offset: -1.2

Compensated Neutron Calibration Report

Serial Number: 080620  
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: 7  
Tool Model: Probe1  
Performed: Tue Mar 04 10:47:15 2014

Calibrator Value: 1.0    GAPI

Background Reading: 0.0    cps  
Calibrator Reading: 1.0    cps

Sensitivity: 0.4500    GAPI/cps