

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company **CHIEFTAIN OIL COMPANY, INC.**  
Well **MOLZ #23**  
Field **STRANATHAN**  
County **BARBER** State **KANSAS**

Company **CHIEFTAIN OIL COMPANY, INC.**  
Well **MOLZ #23**  
Field **STRANATHAN**  
County **BARBER**  
State **KANSAS**

Location: **API # : 15-007-24101**  
**715' FNL & 1670' FWL**  
**SEC 10 TWP 35S RGE 12W**  
Permanent Datum **GROUND LEVEL** Elevation **1432**  
Log Measured From **KELLY BUSHING 13' A.G.L.**  
Drilling Measured From **KELLY BUSHING**  
Other Services **CDL/CNL/PE MICRO**  
Elevation **K.B. 1445**  
**D.F. G.L. 1432**

Date	11-18-13
Run Number	TW0
Depth Driller	5645
Depth Logger	5628
Bottom Logged Interval	5626
Top Log Interval	00
Casing Driller	304
Casing Logger	305
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1 / 75
pH / Fluid Loss	10.0 / 8.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.55 @ 78F
Rmf @ Meas. Temp	0.41 @ 78F
Rmc @ Meas. Temp	0.66 @ 78F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.330 @ 131F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	131F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	ARDEN RATZLAFF

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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

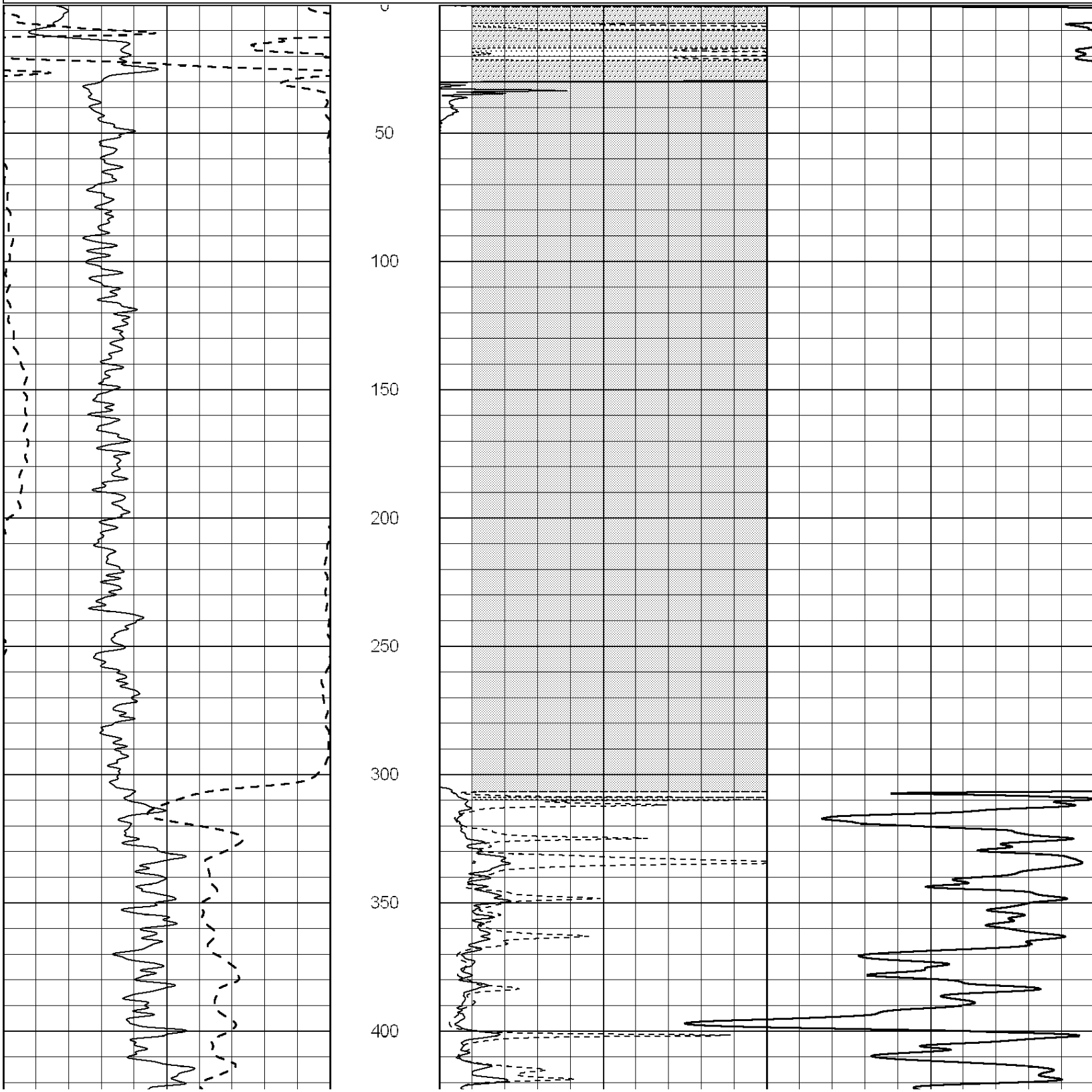
NABORS COMPLETION & PRODUCTION SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: HARTDNER, E TO ROWDY RD., 1N, 1W, S INTO.

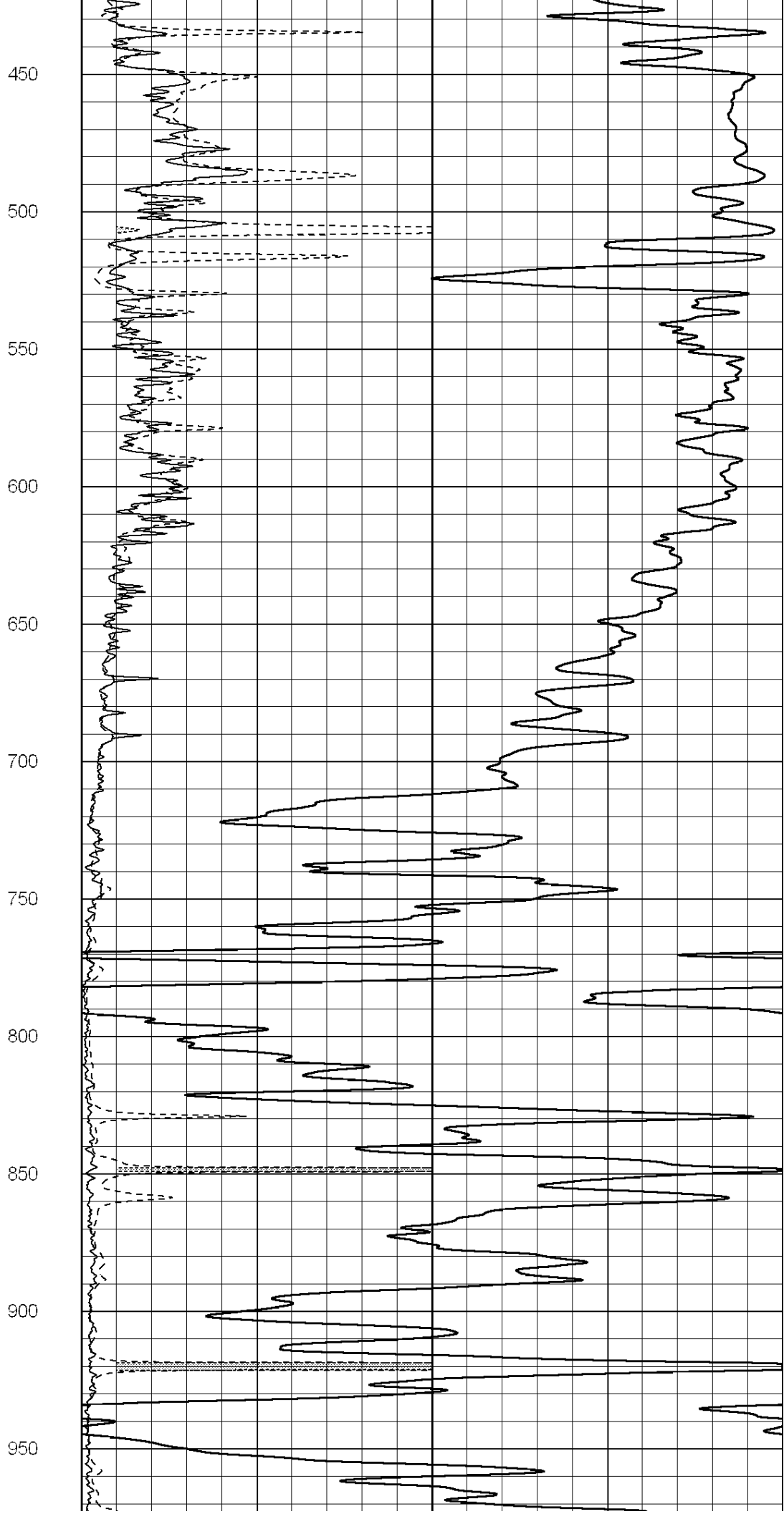
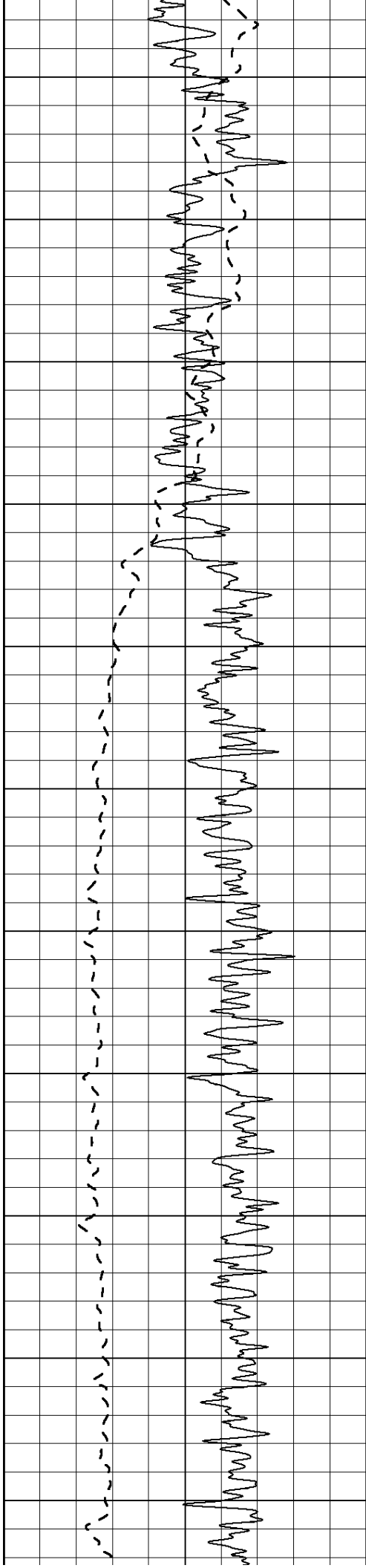


**MAIN SECTION**

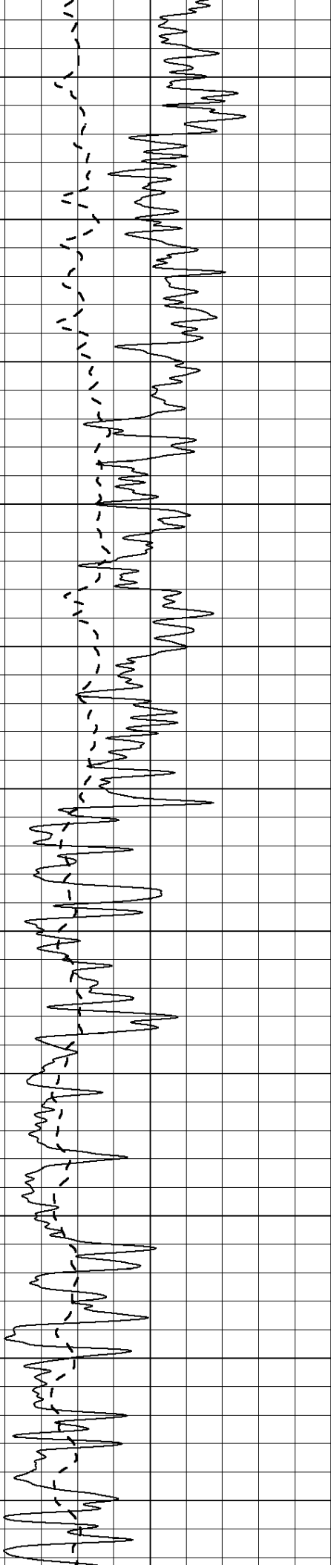
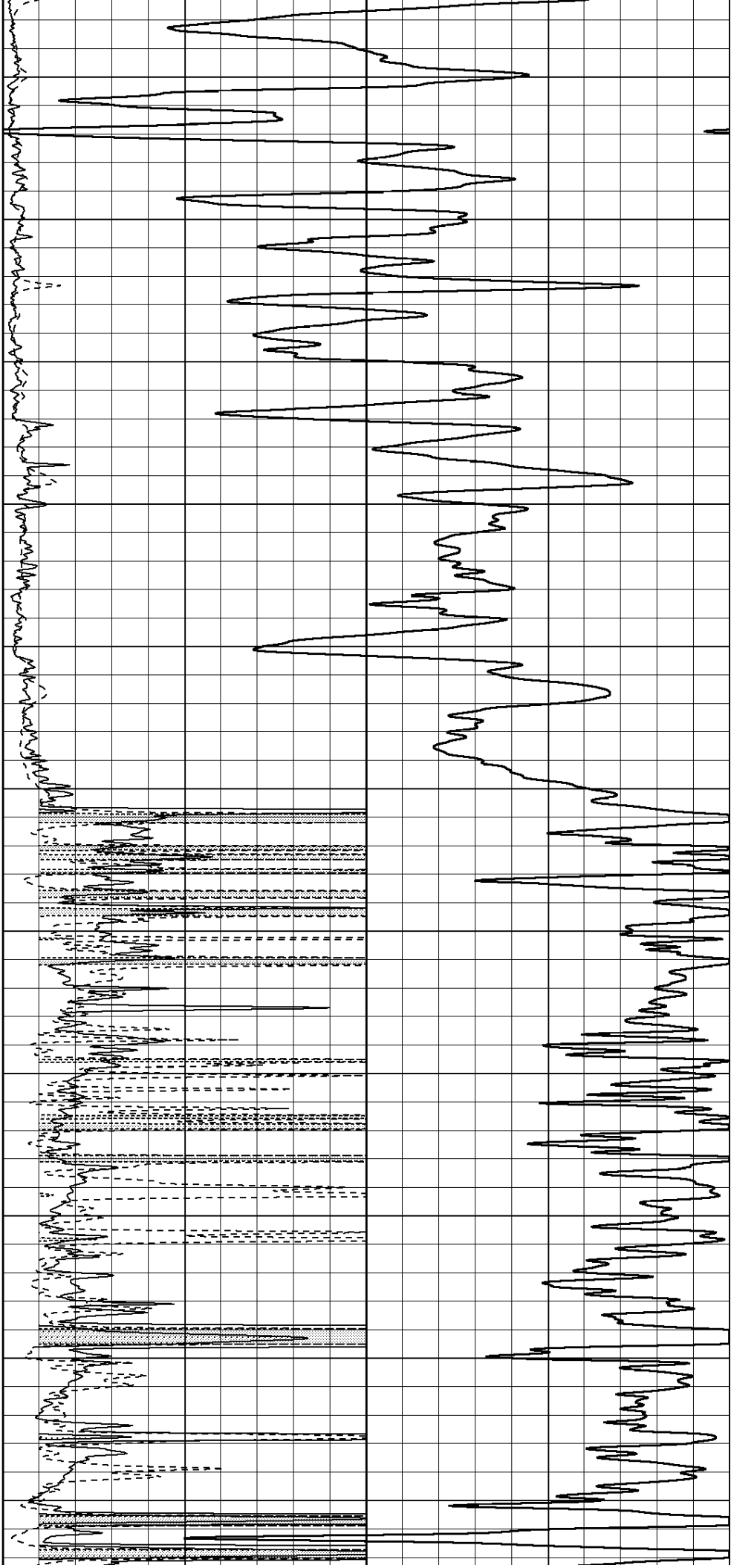
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 Presentation Format: \_dil2  
 Dataset Creation: Tue Nov 19 01:42:48 2013  
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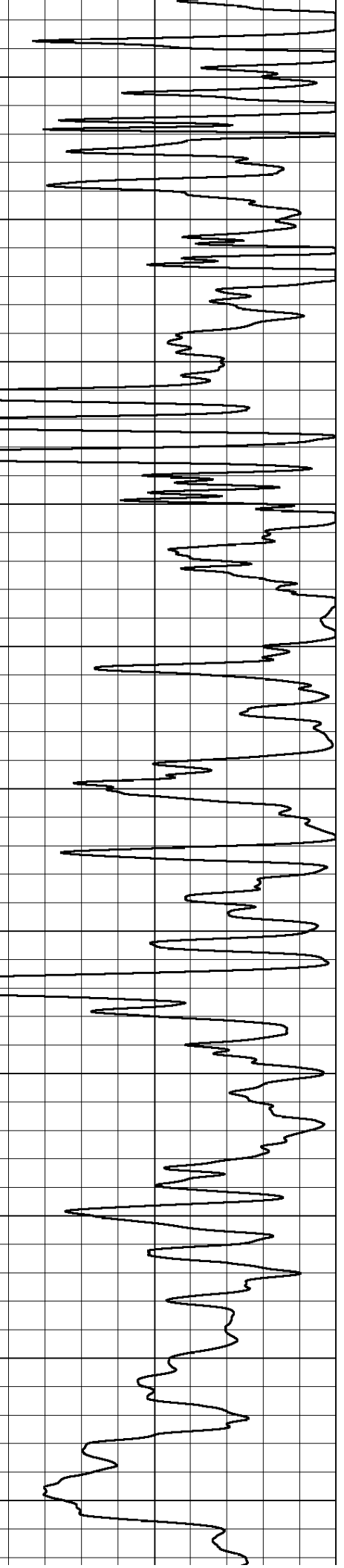
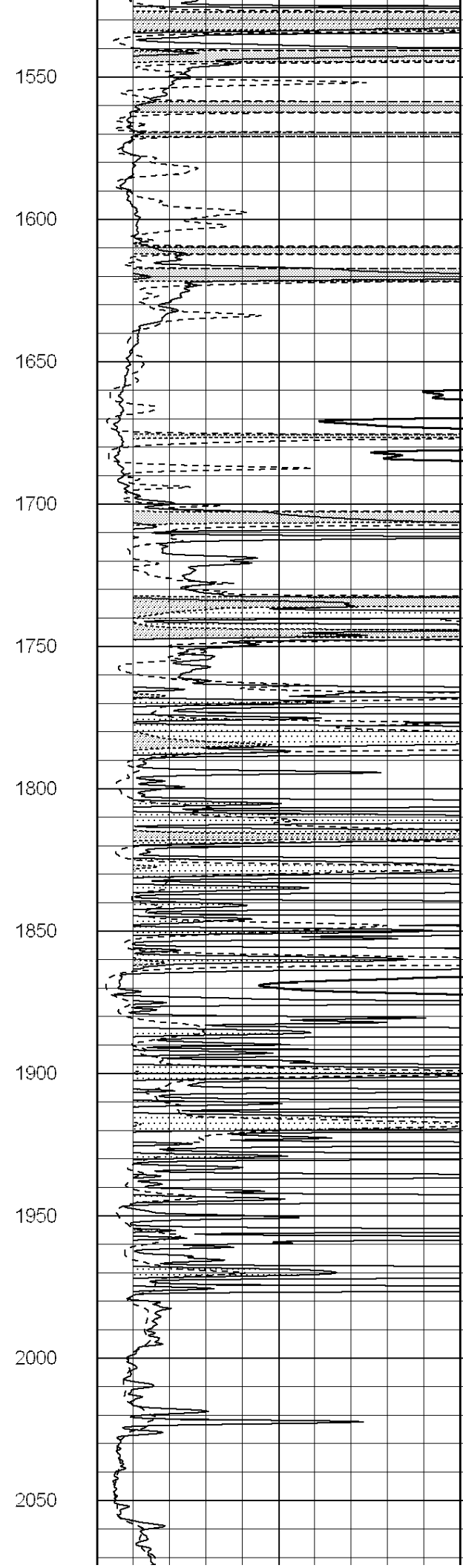
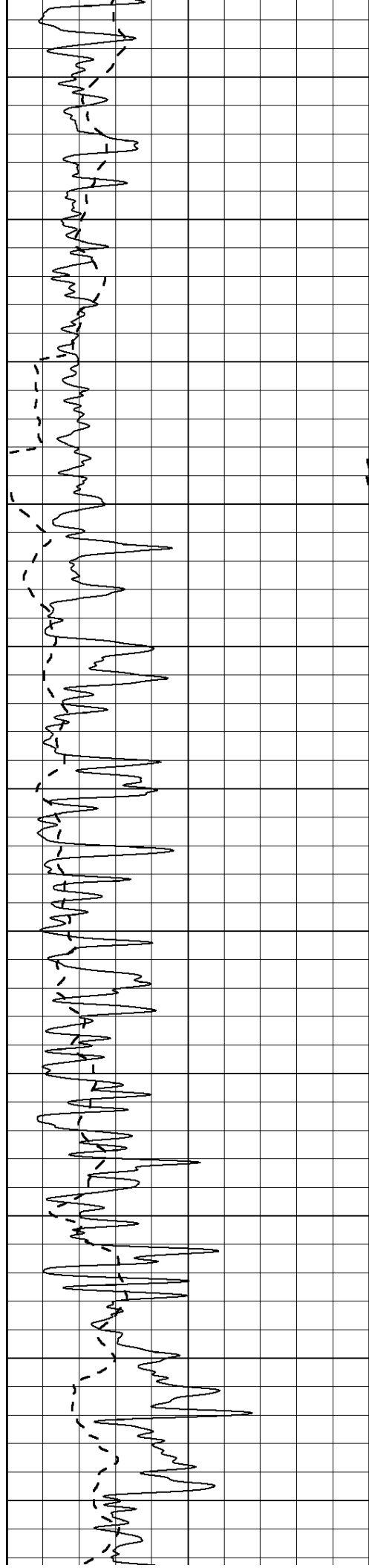
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			0	Deep Induction (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

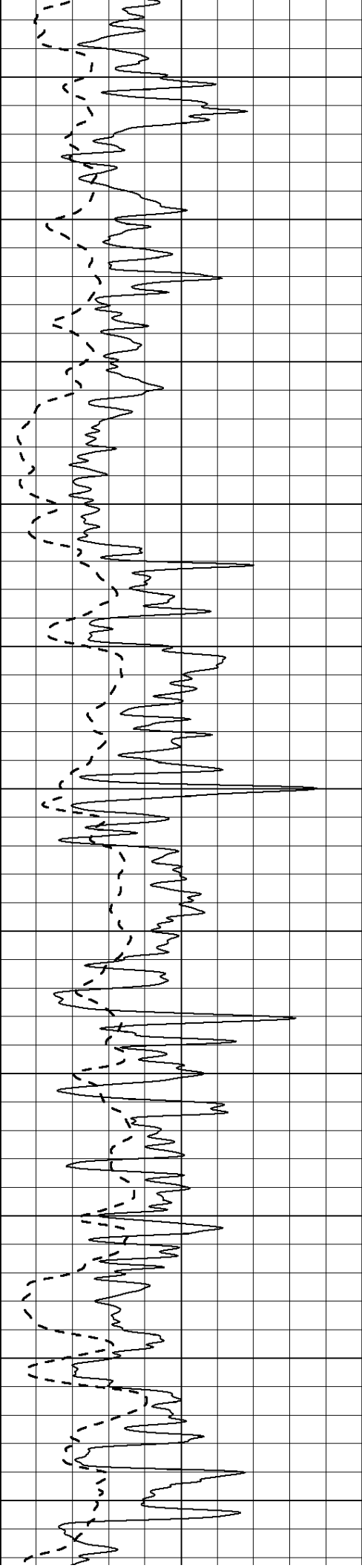




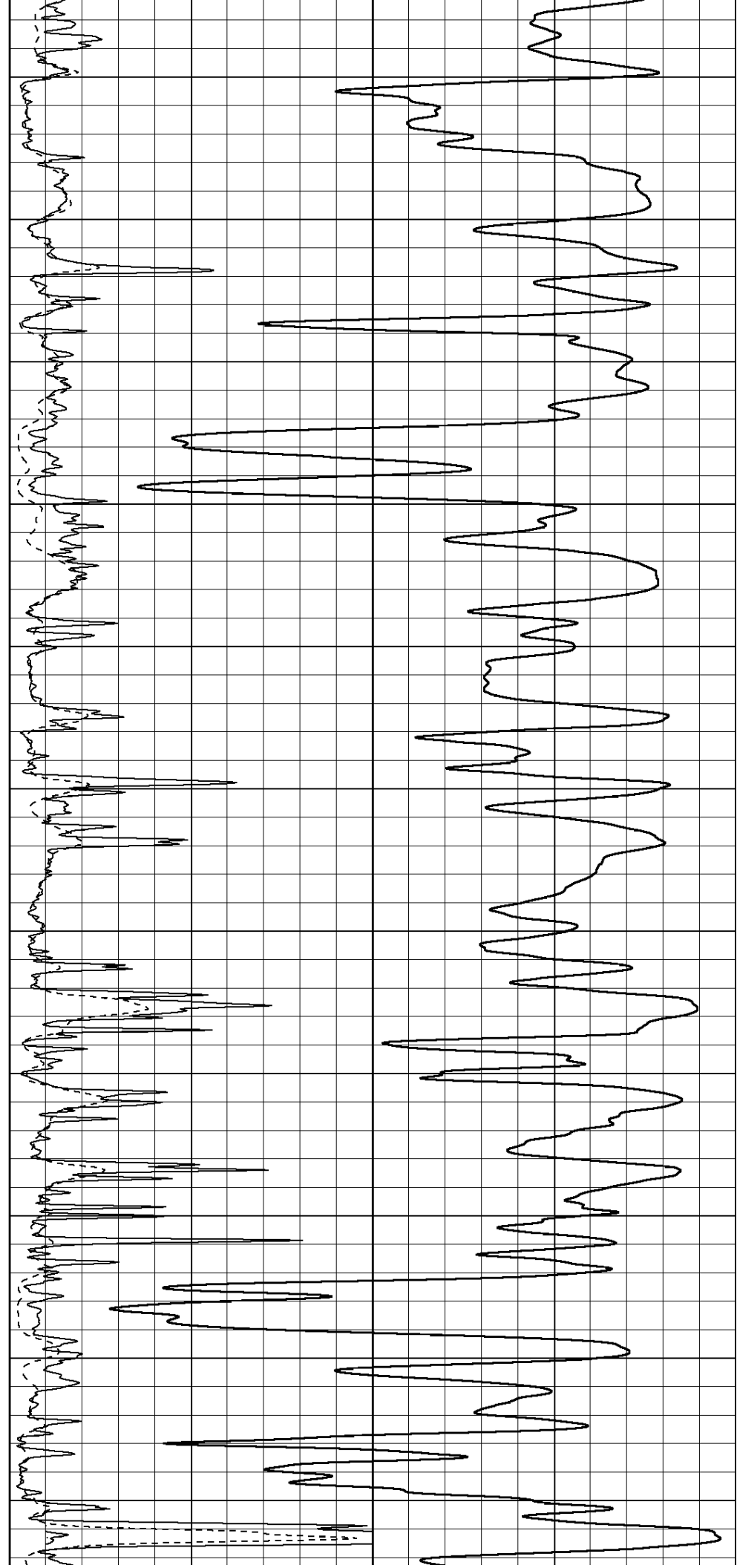
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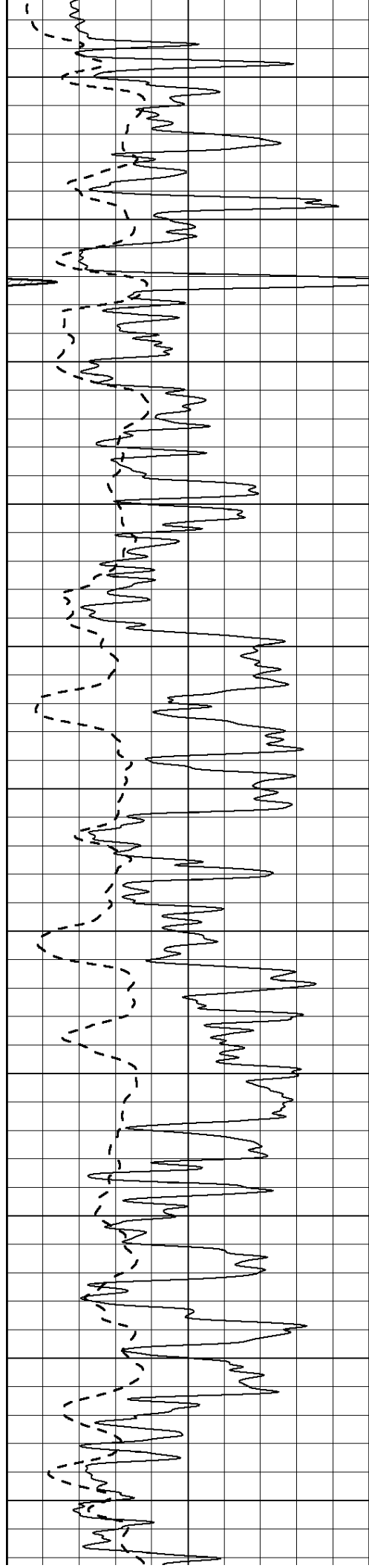






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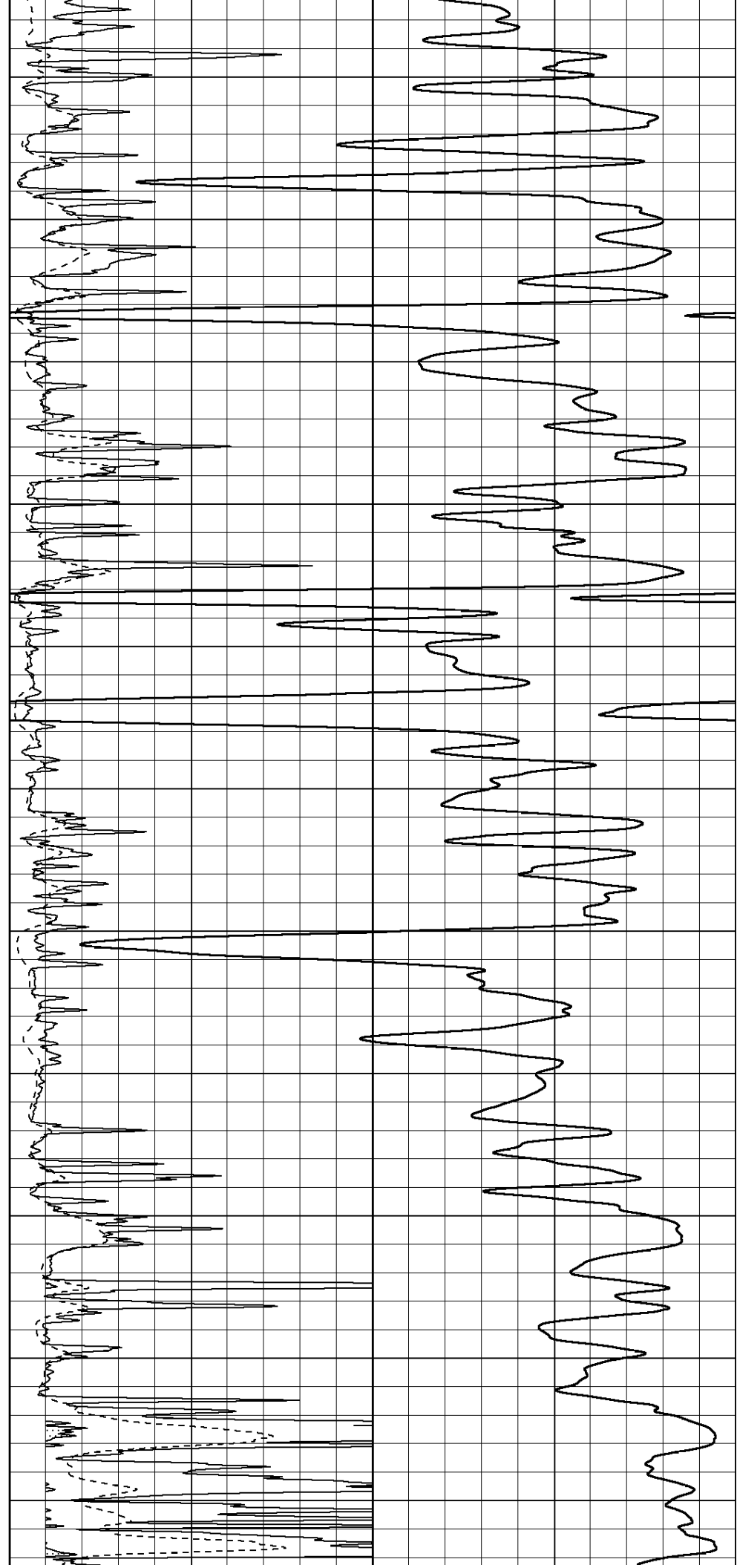
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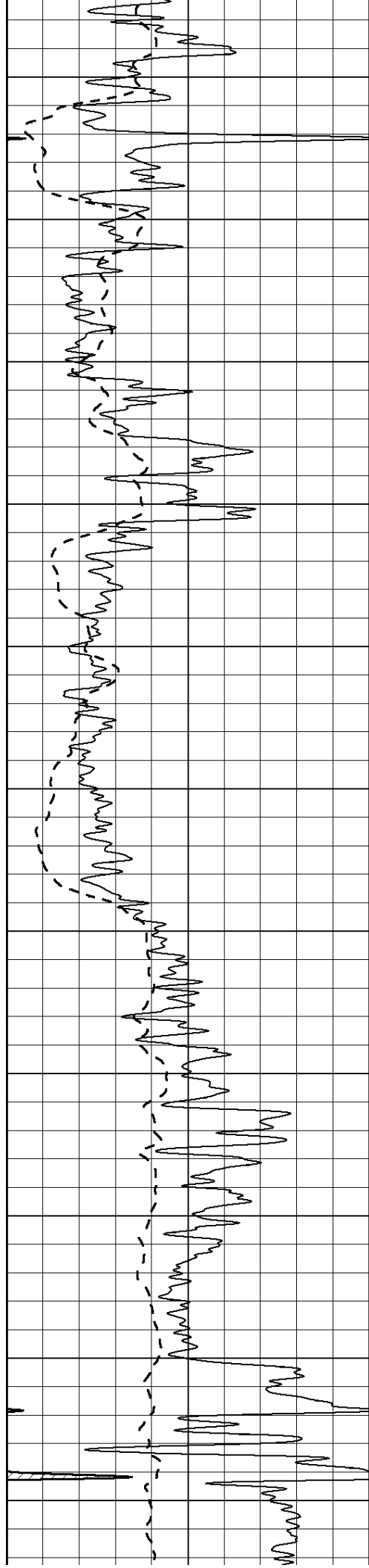
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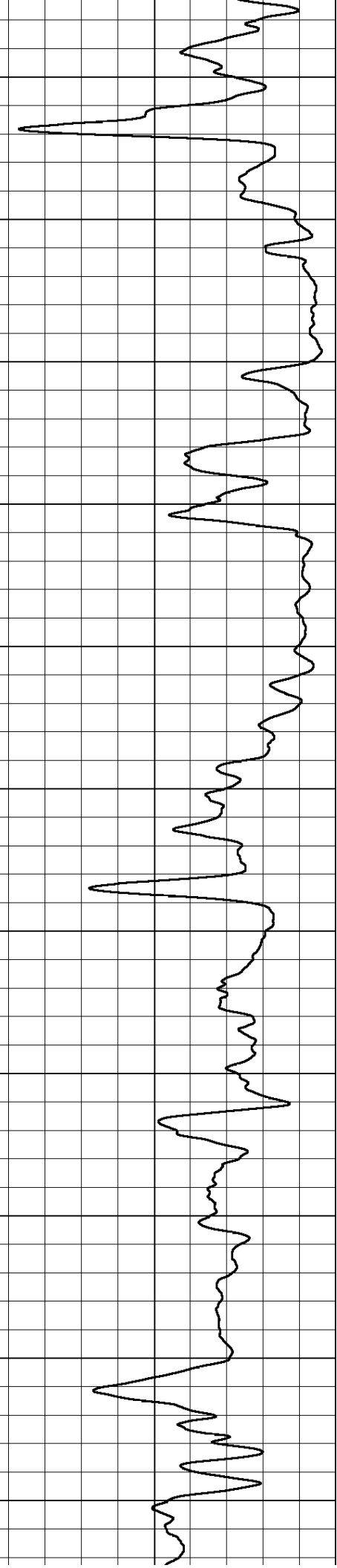
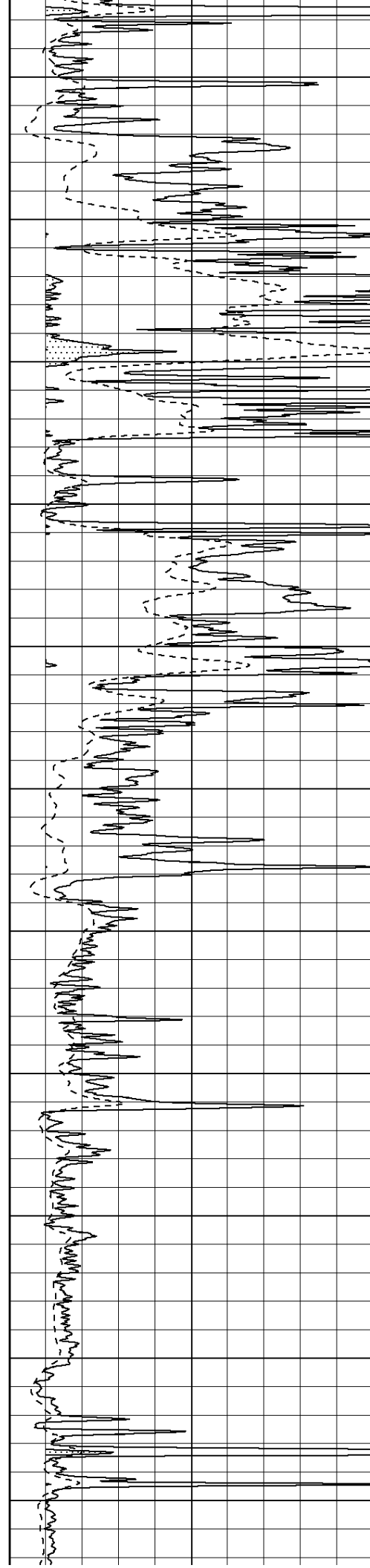
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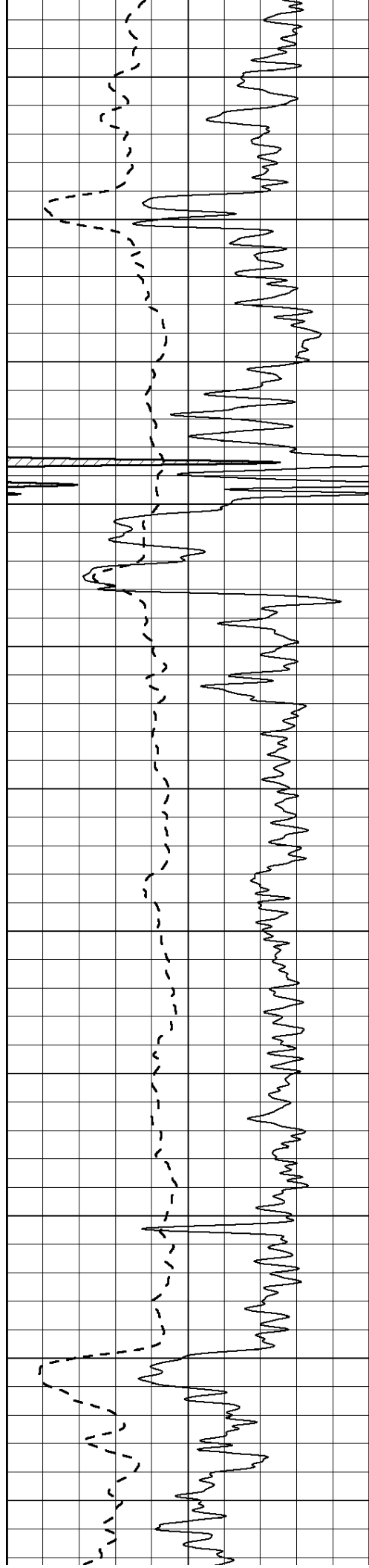
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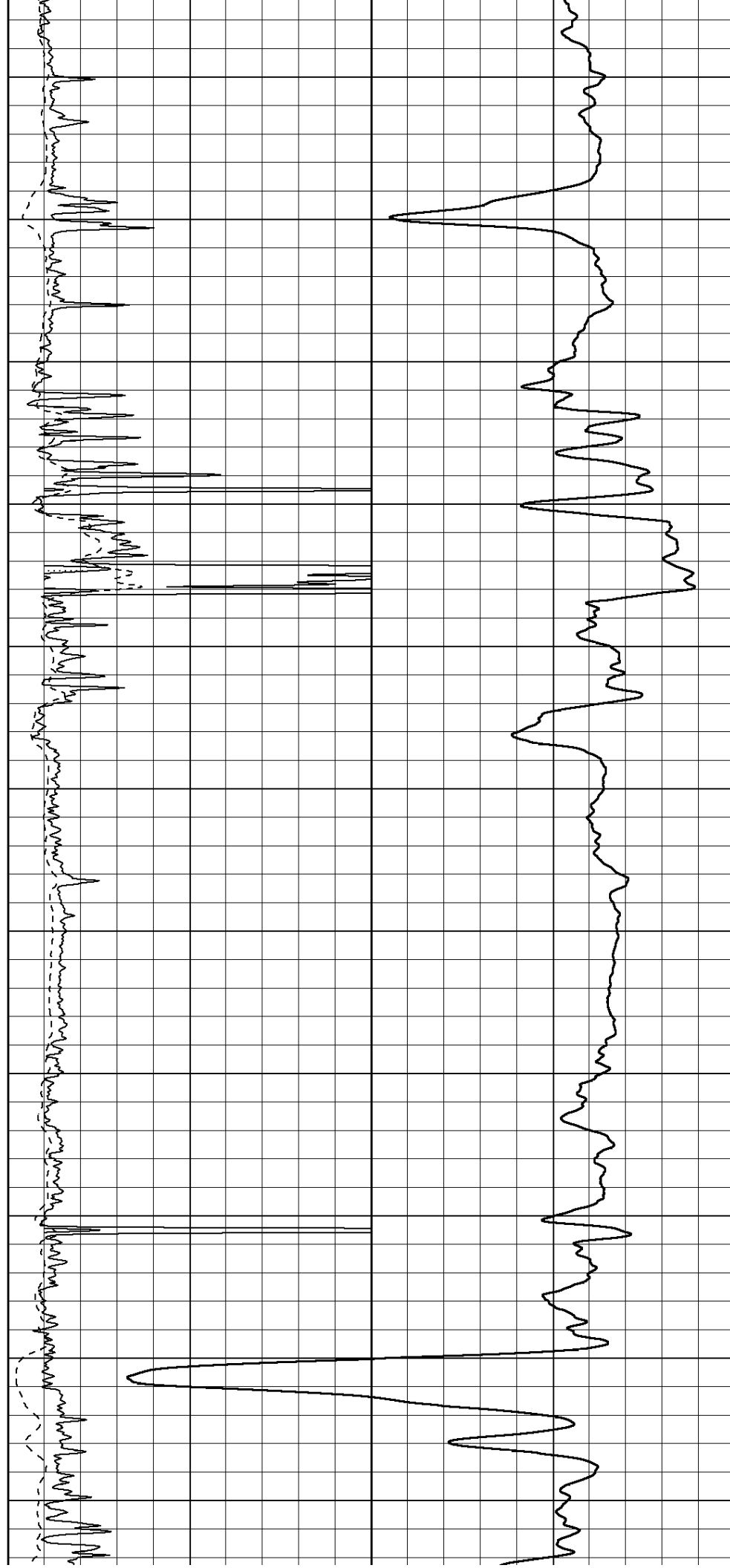
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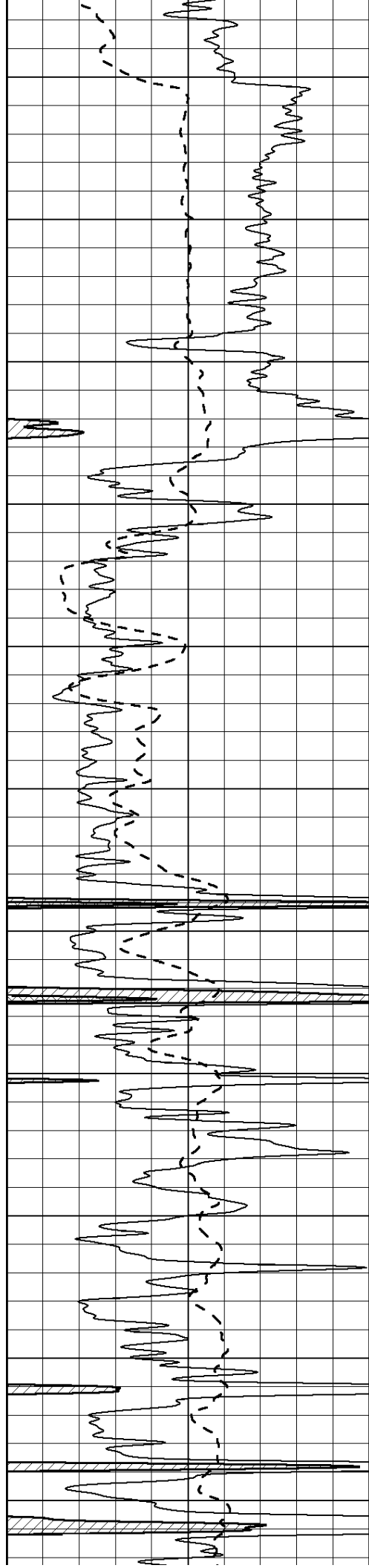
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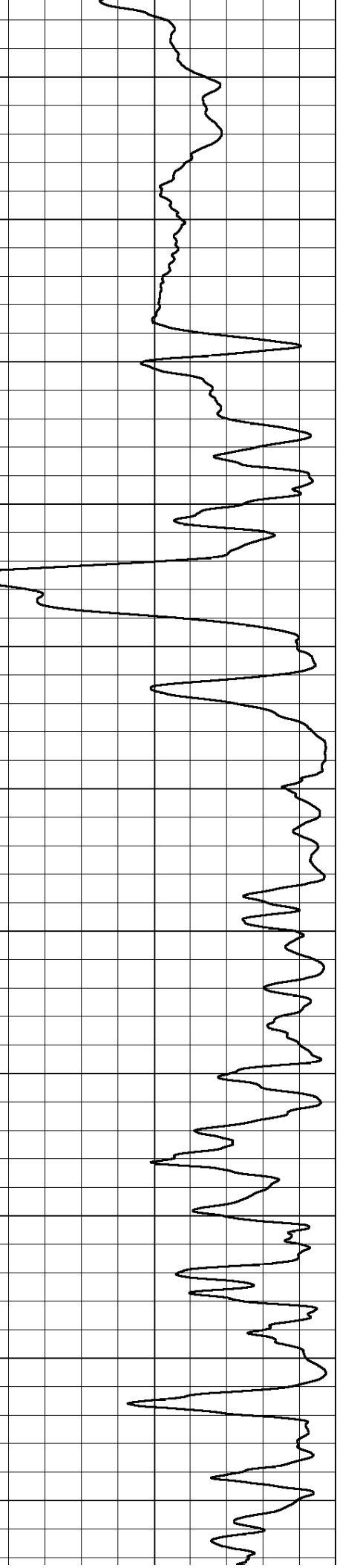
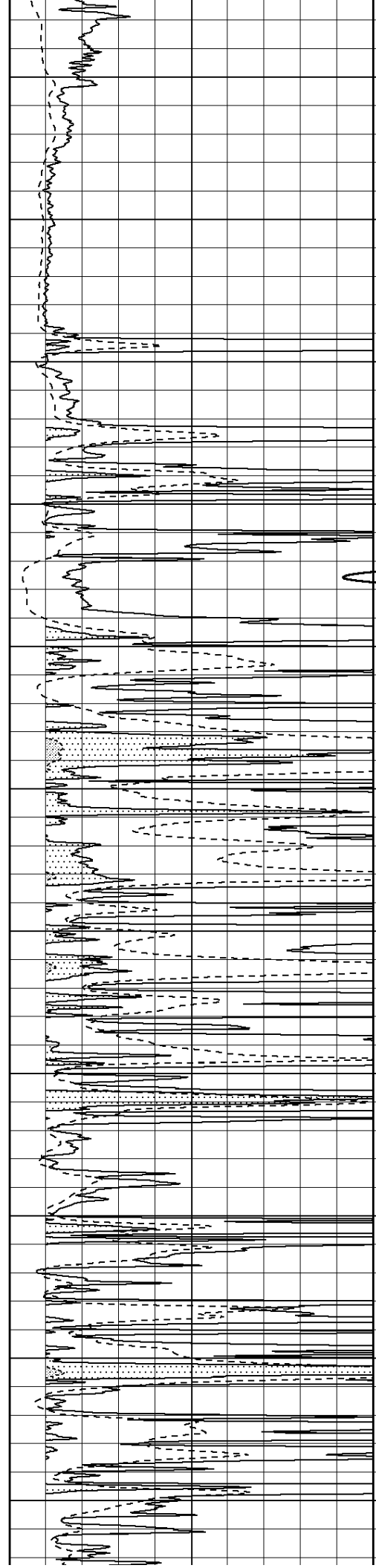
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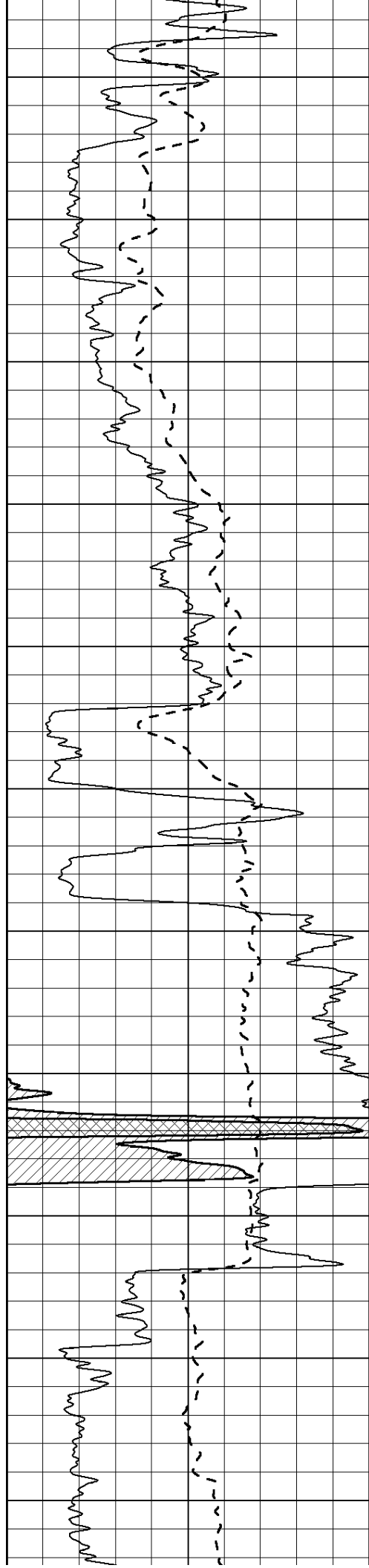
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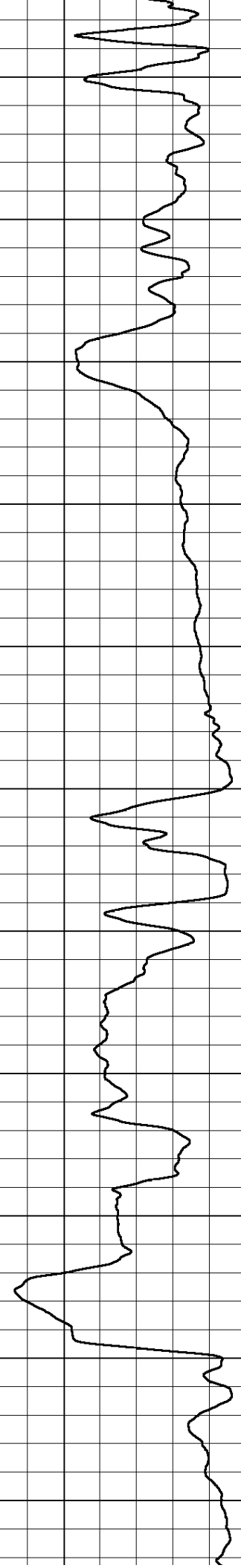
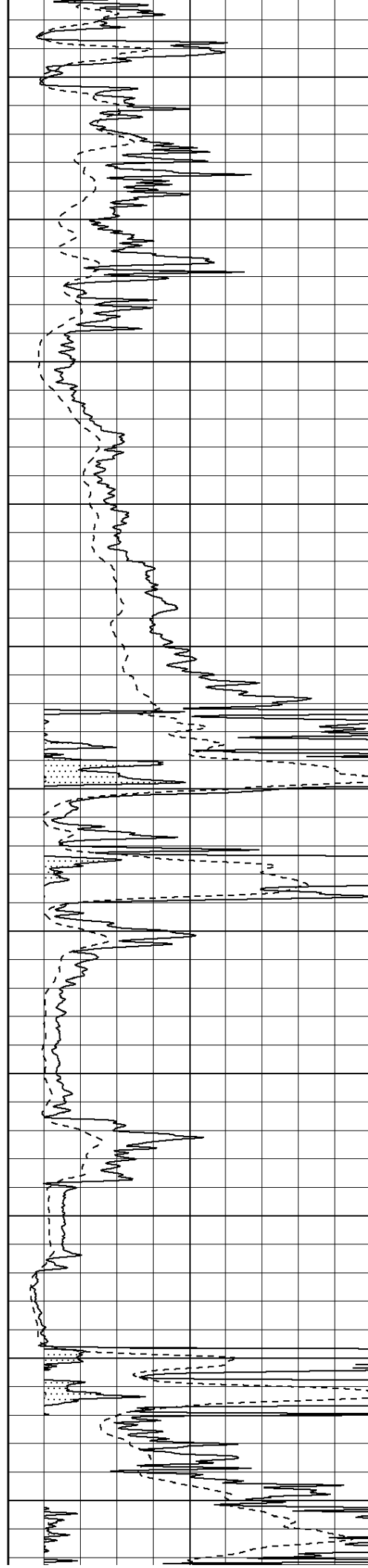


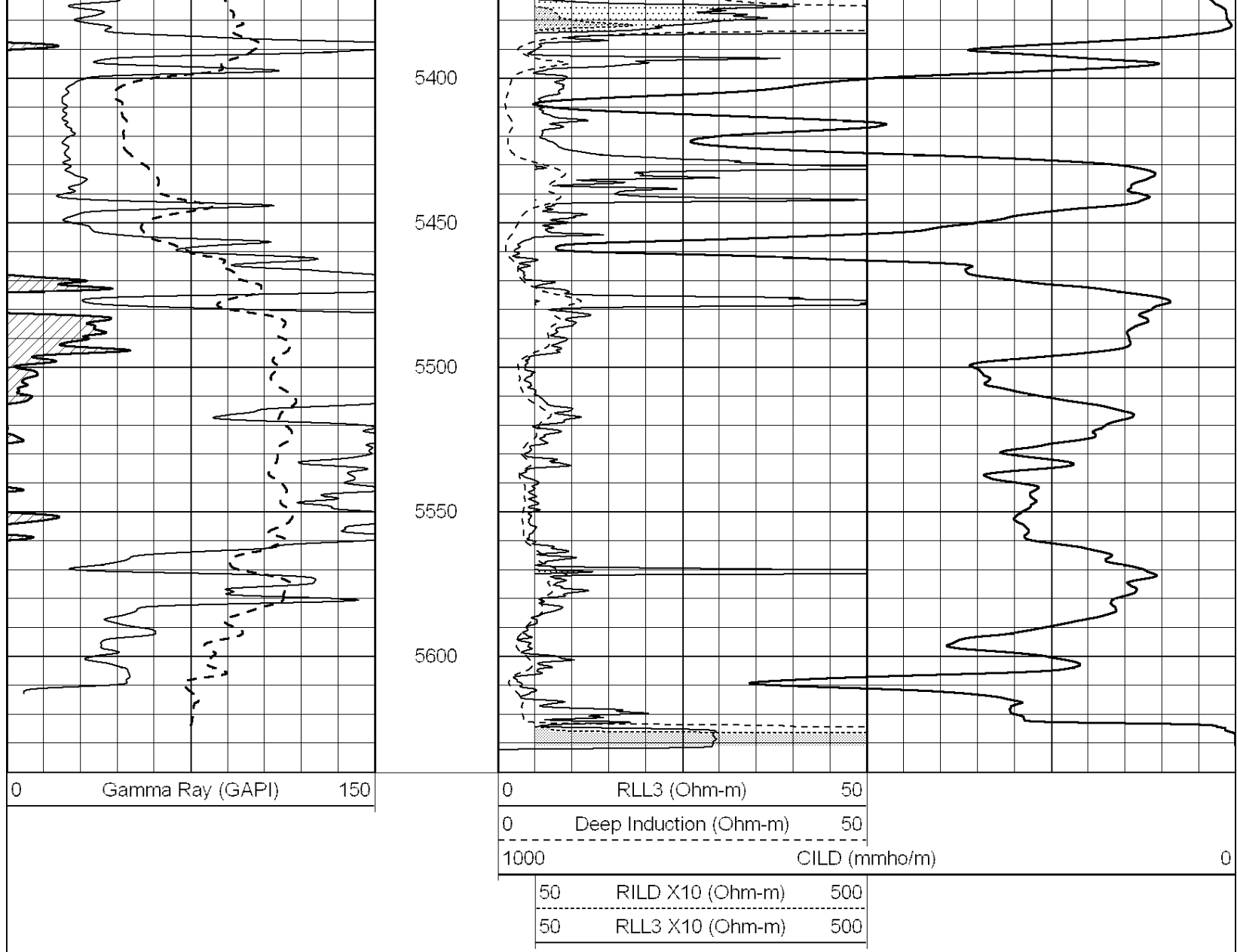
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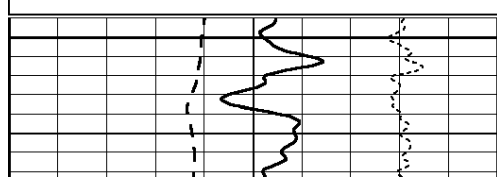




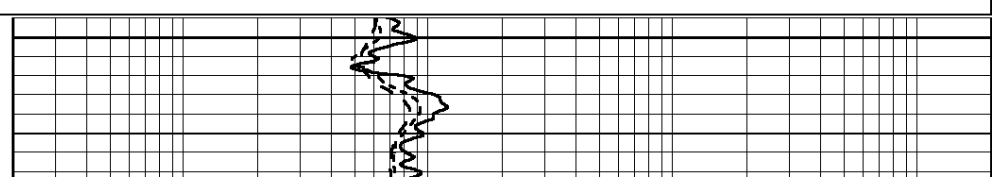
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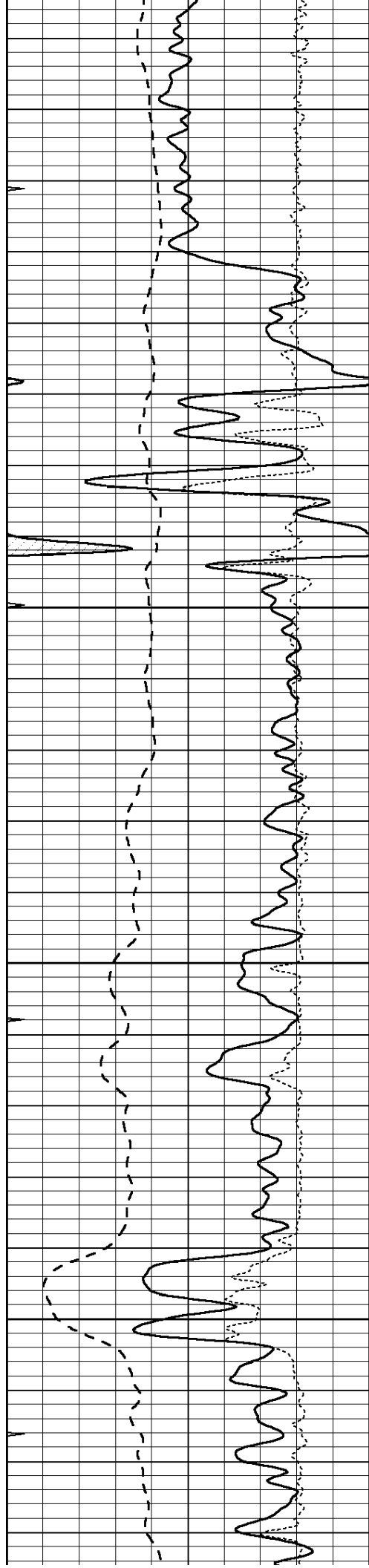
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 Presentation Format: \_dil  
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0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



3600



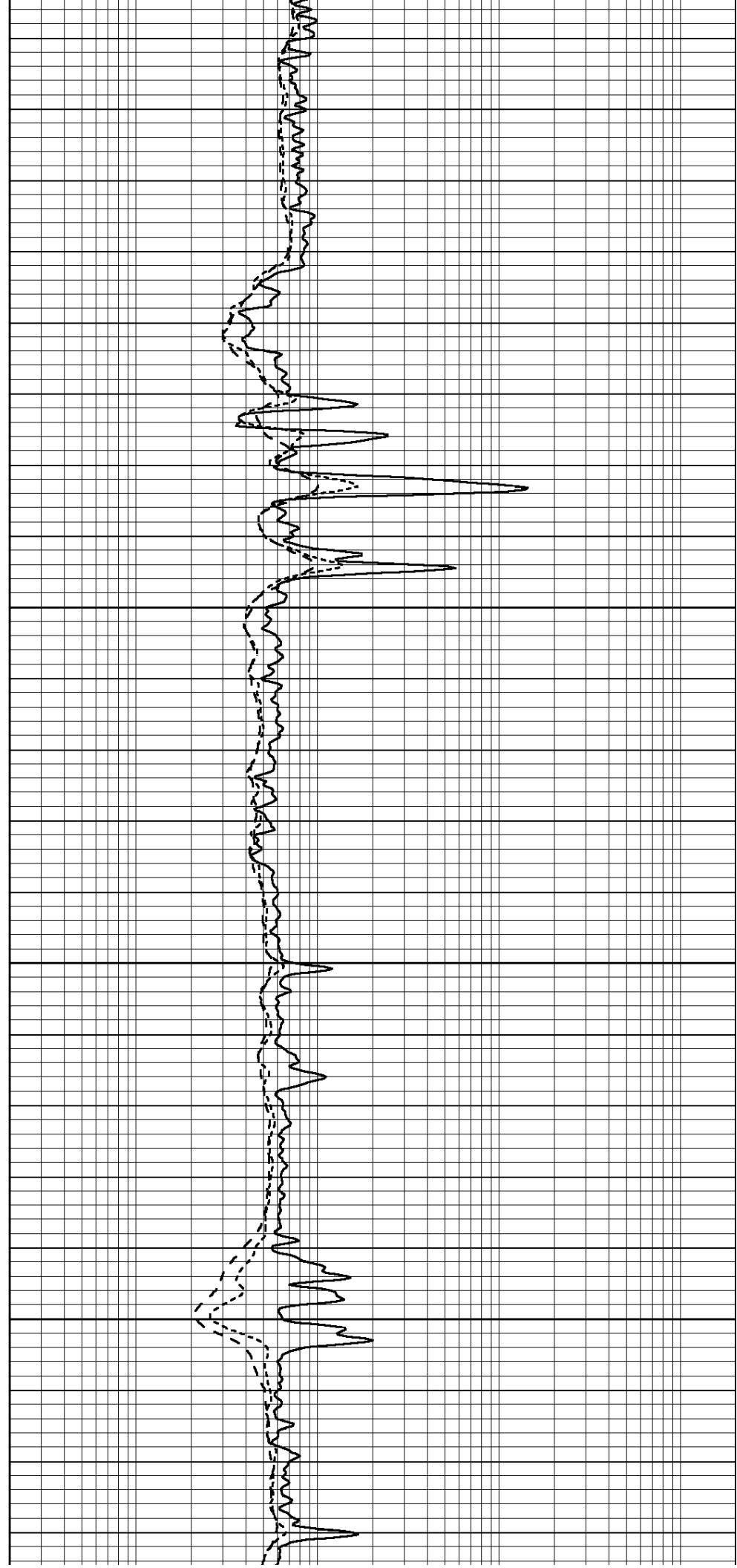


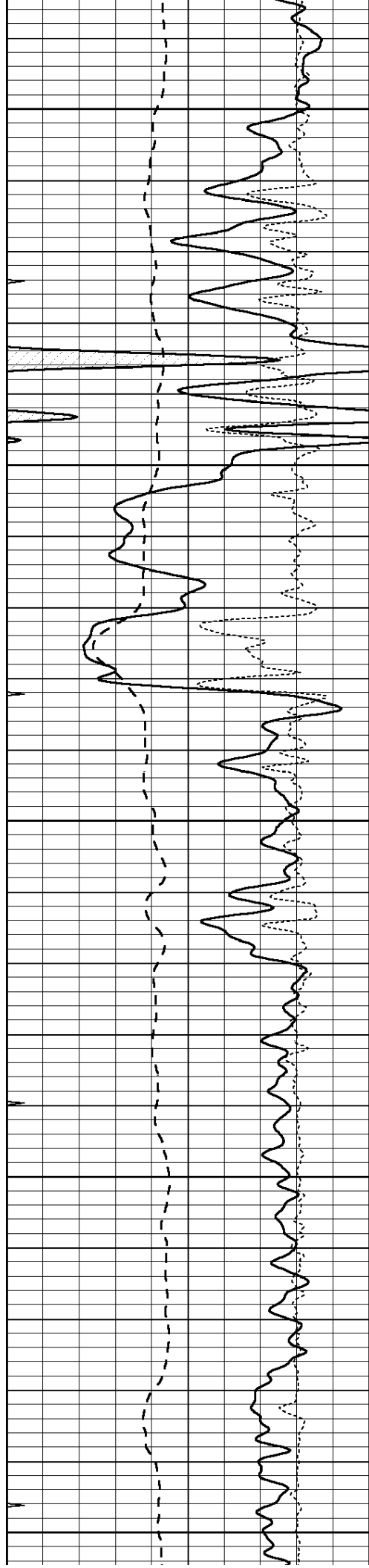
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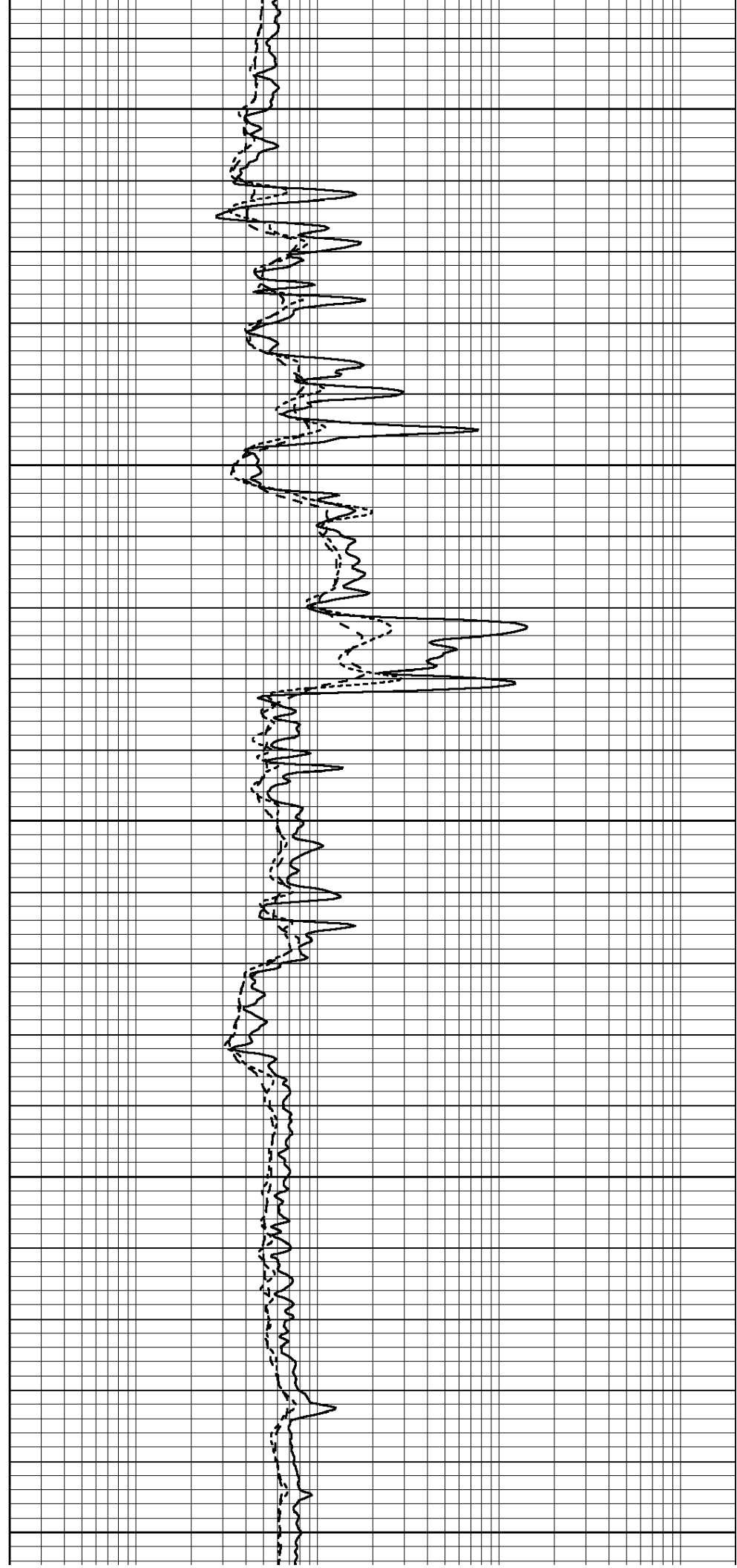
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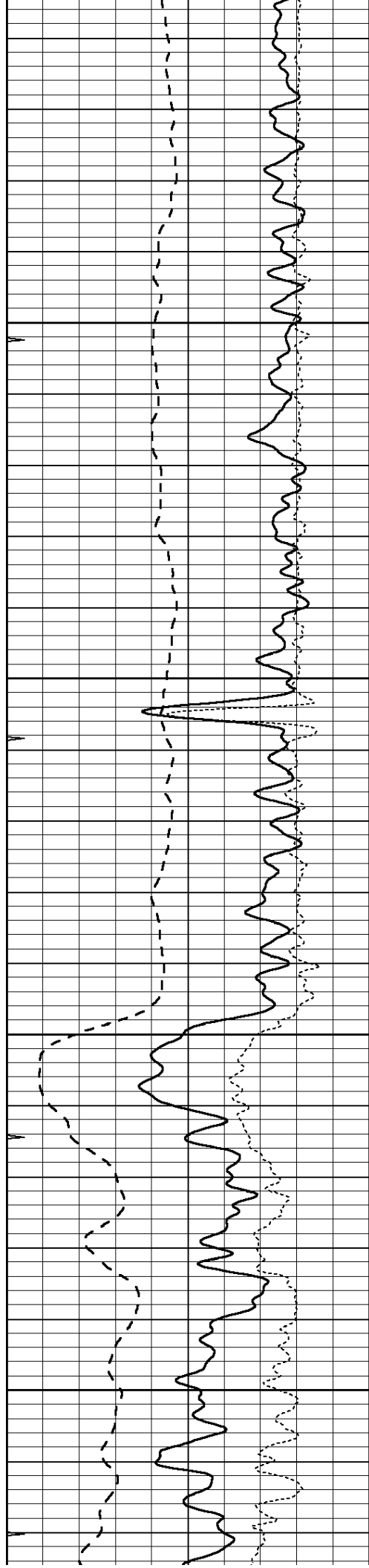
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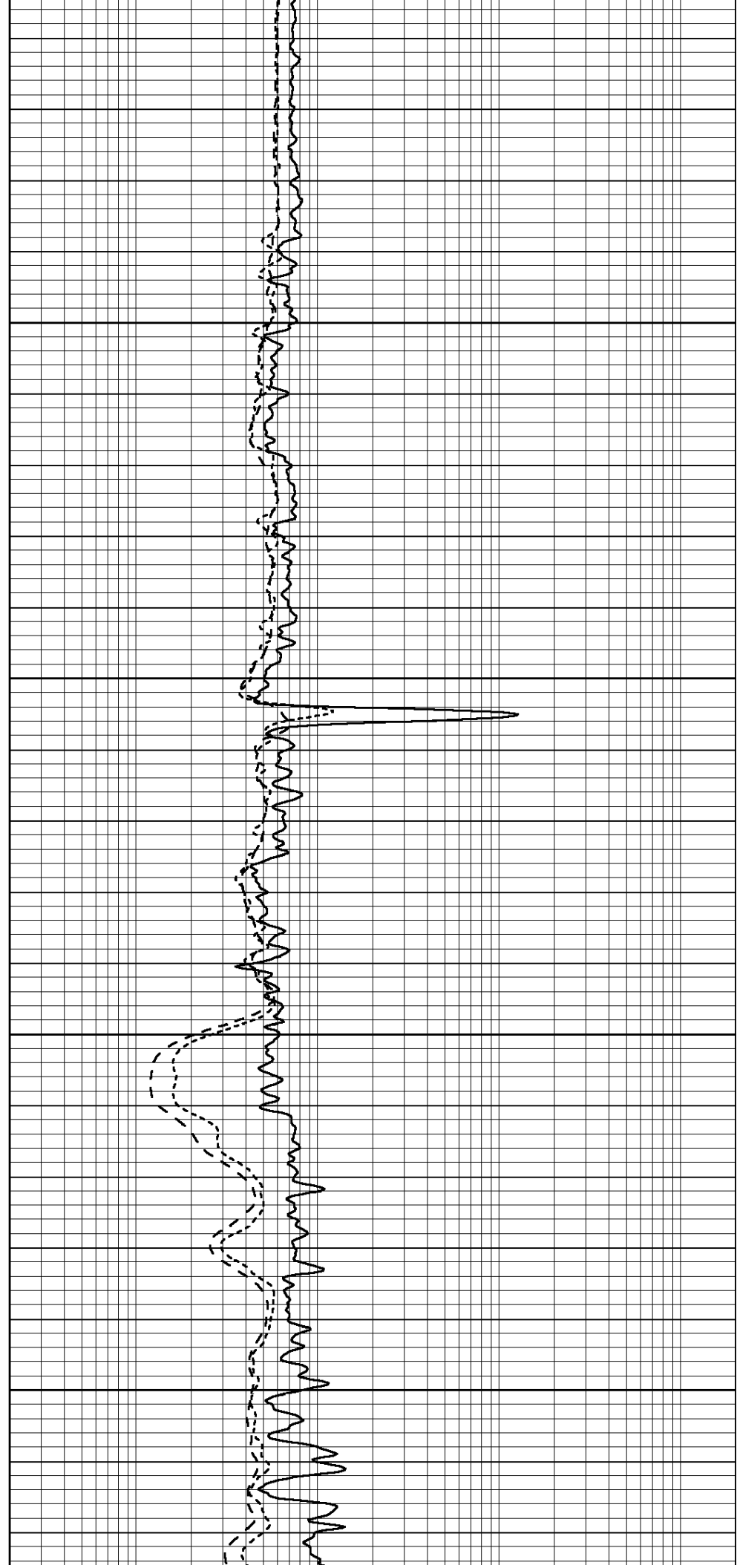


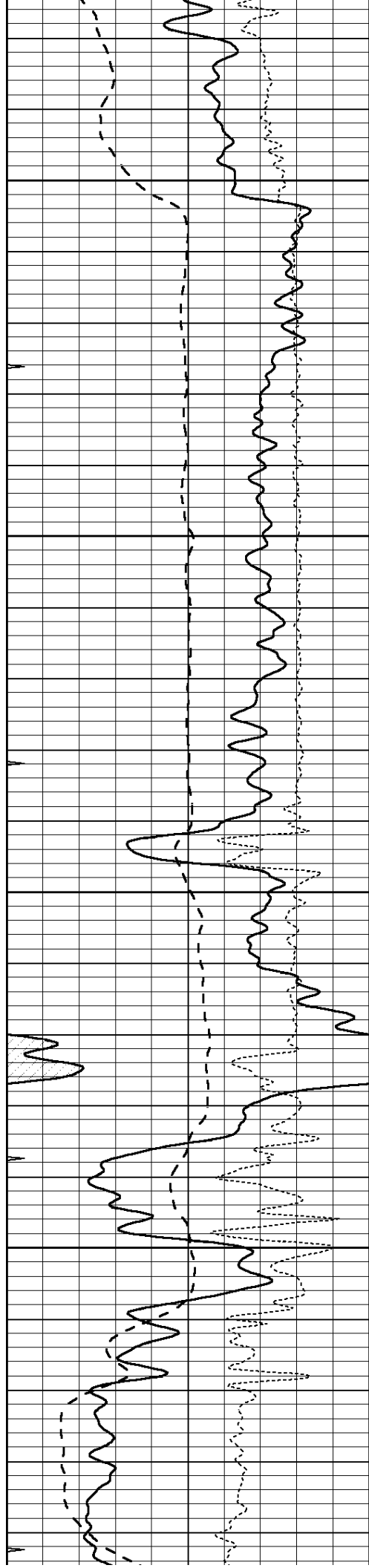
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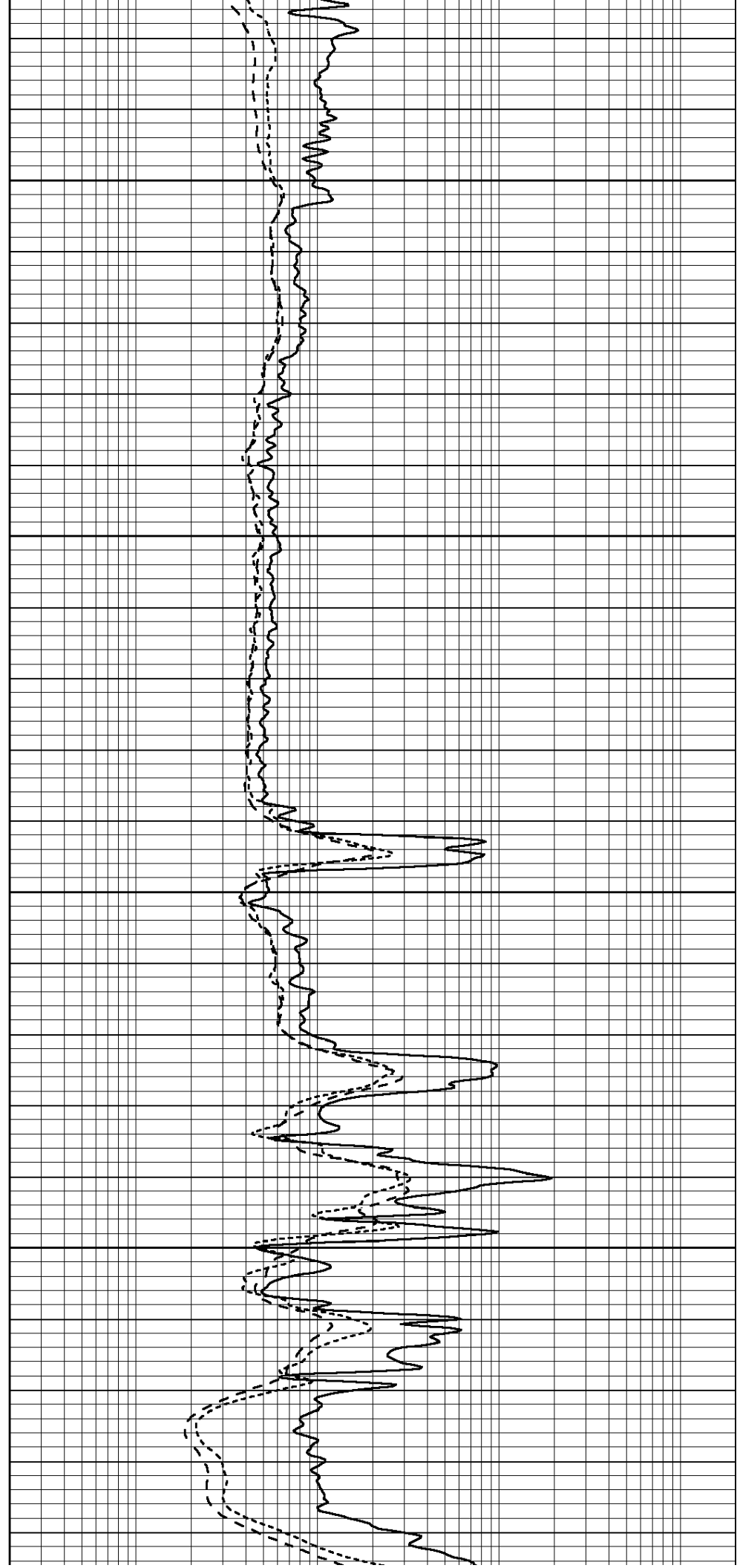


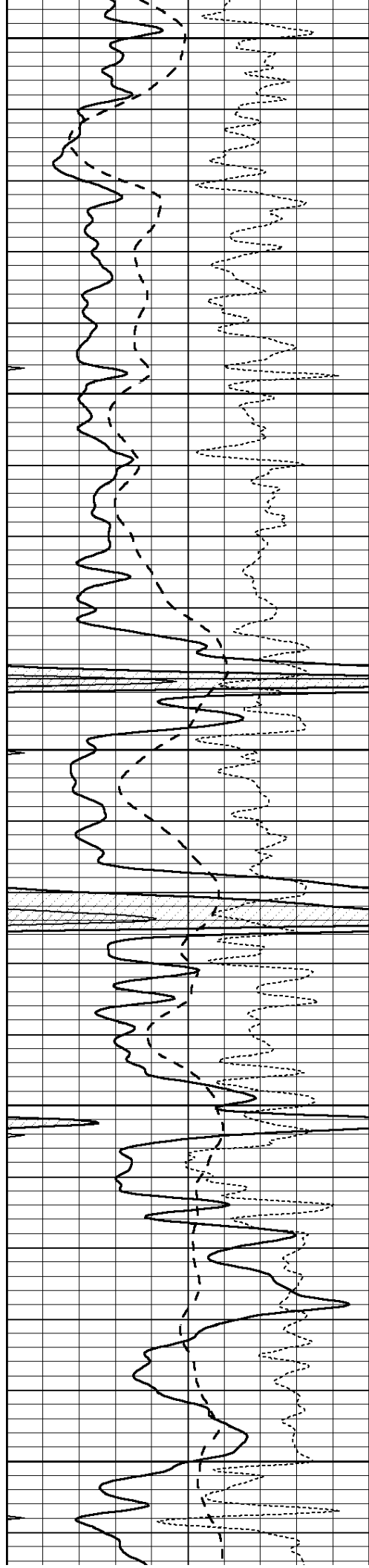
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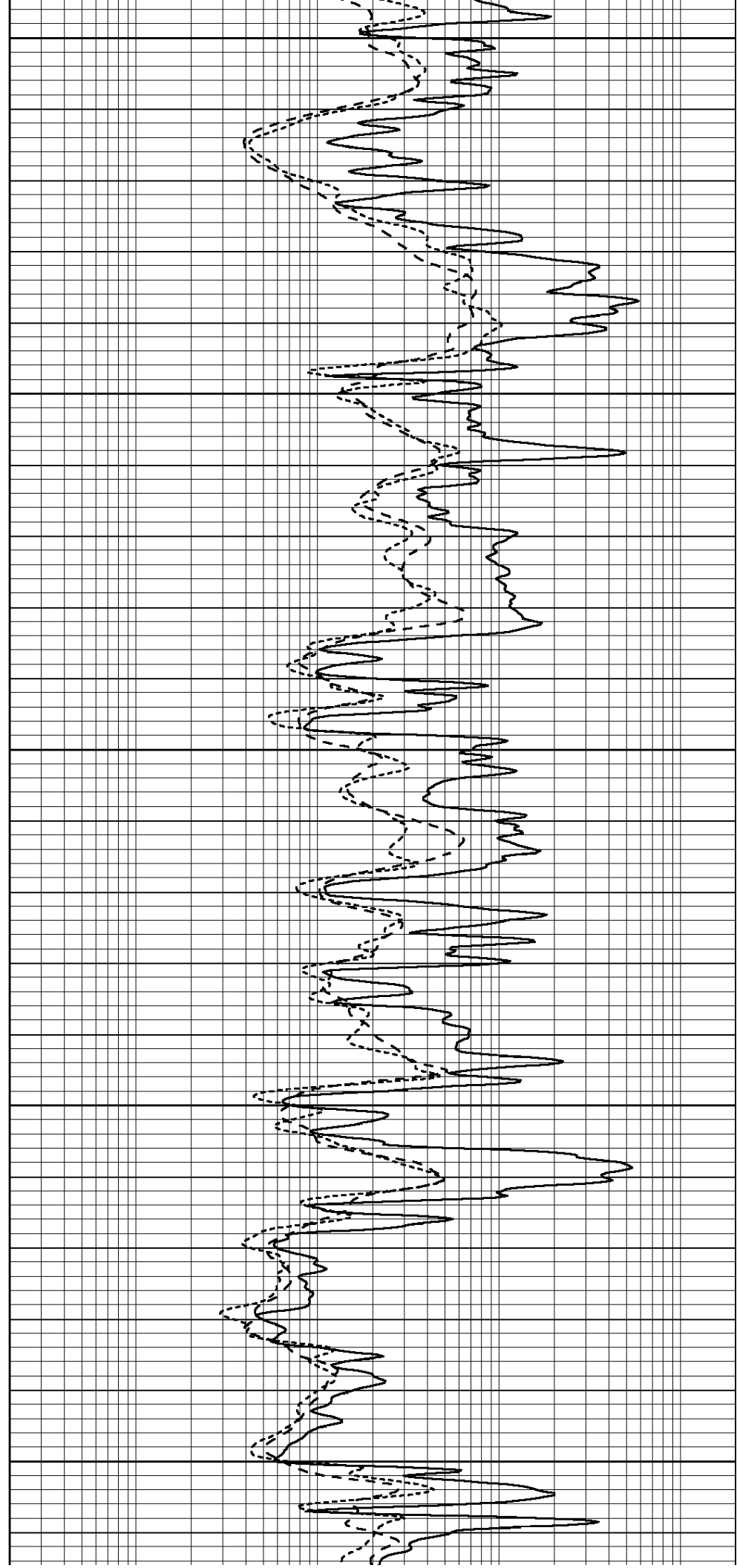
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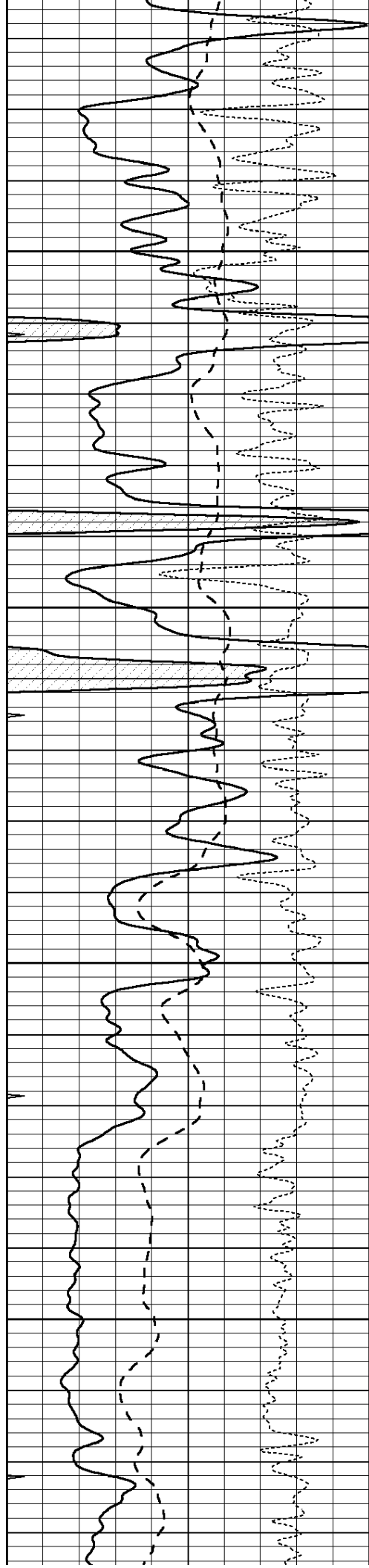
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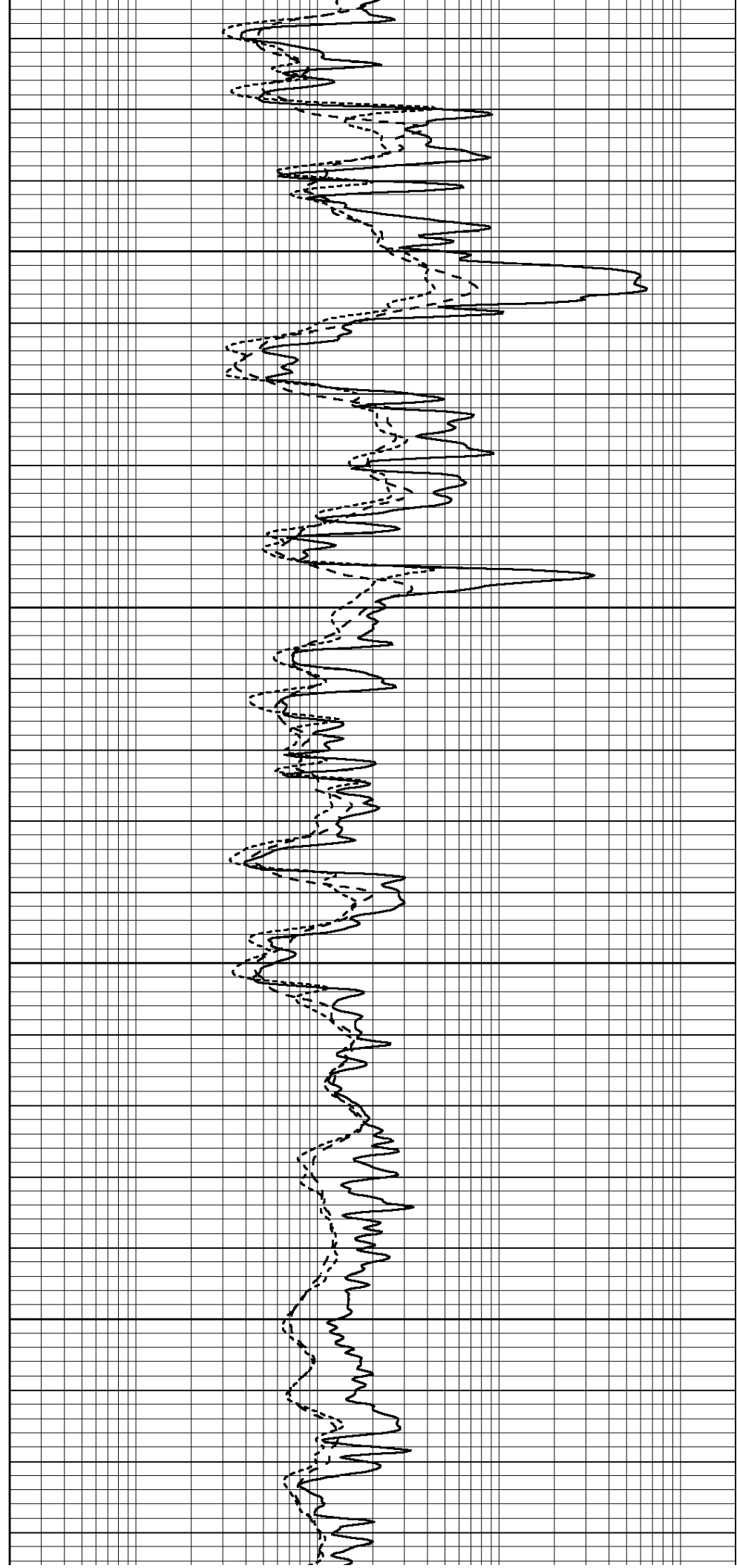


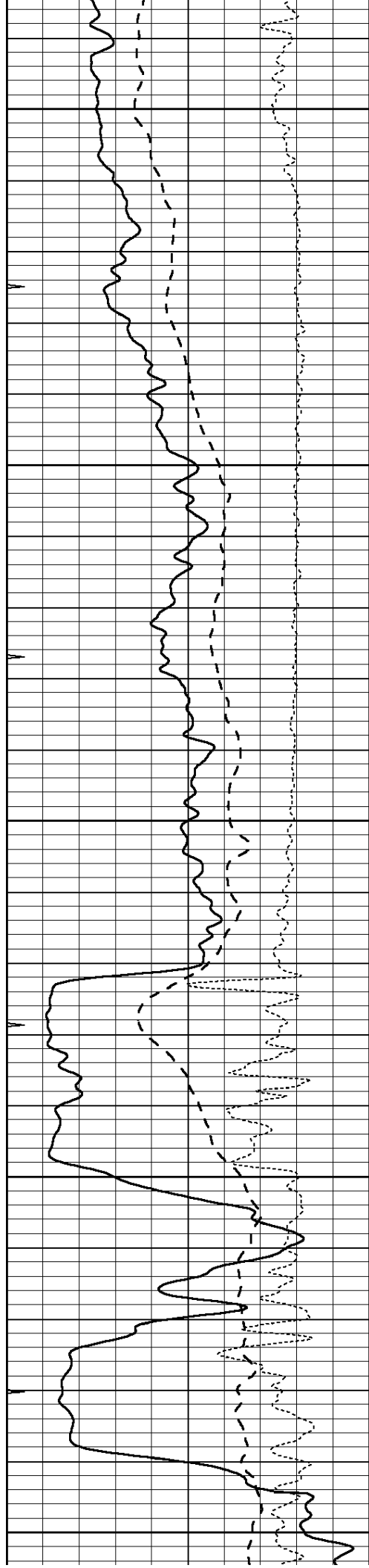
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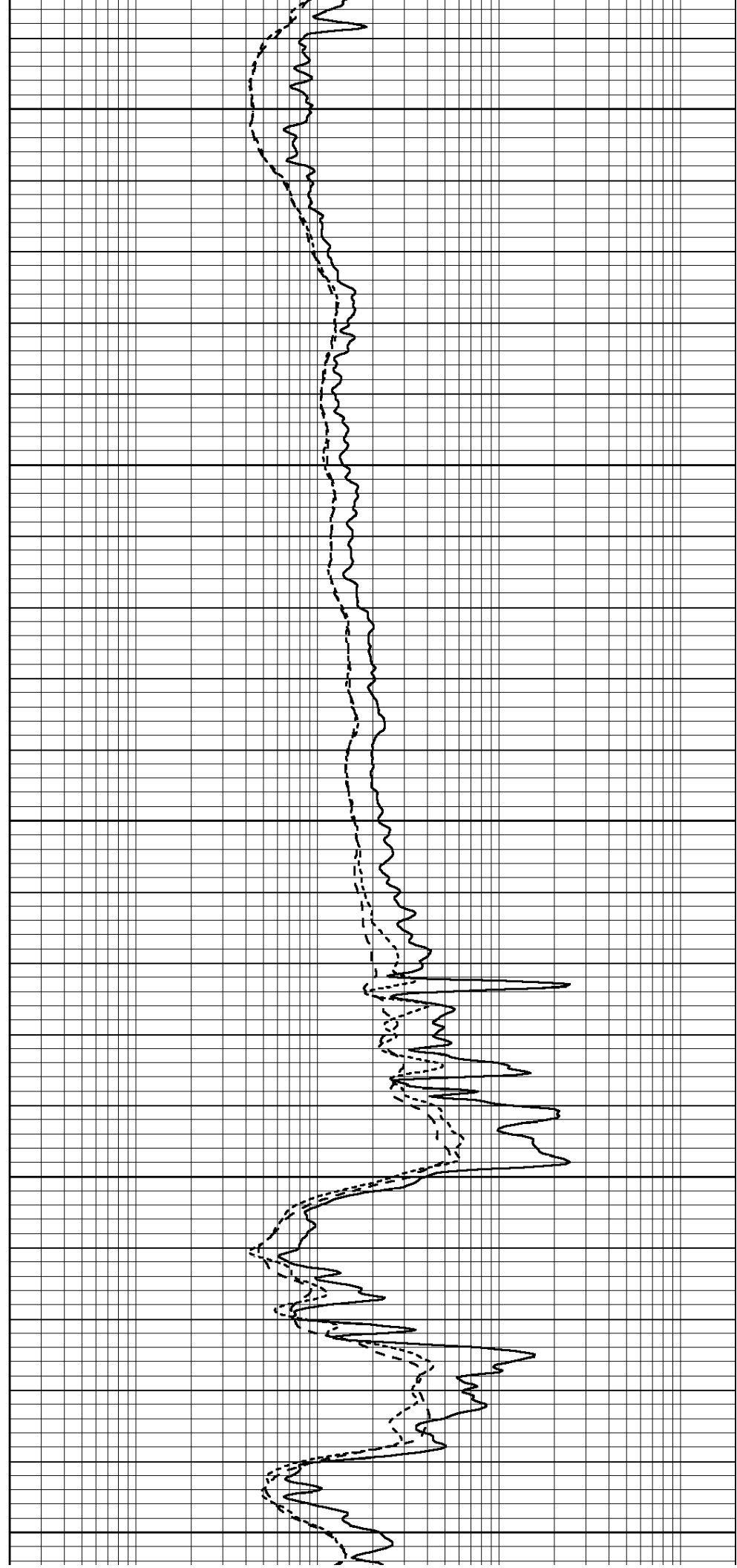
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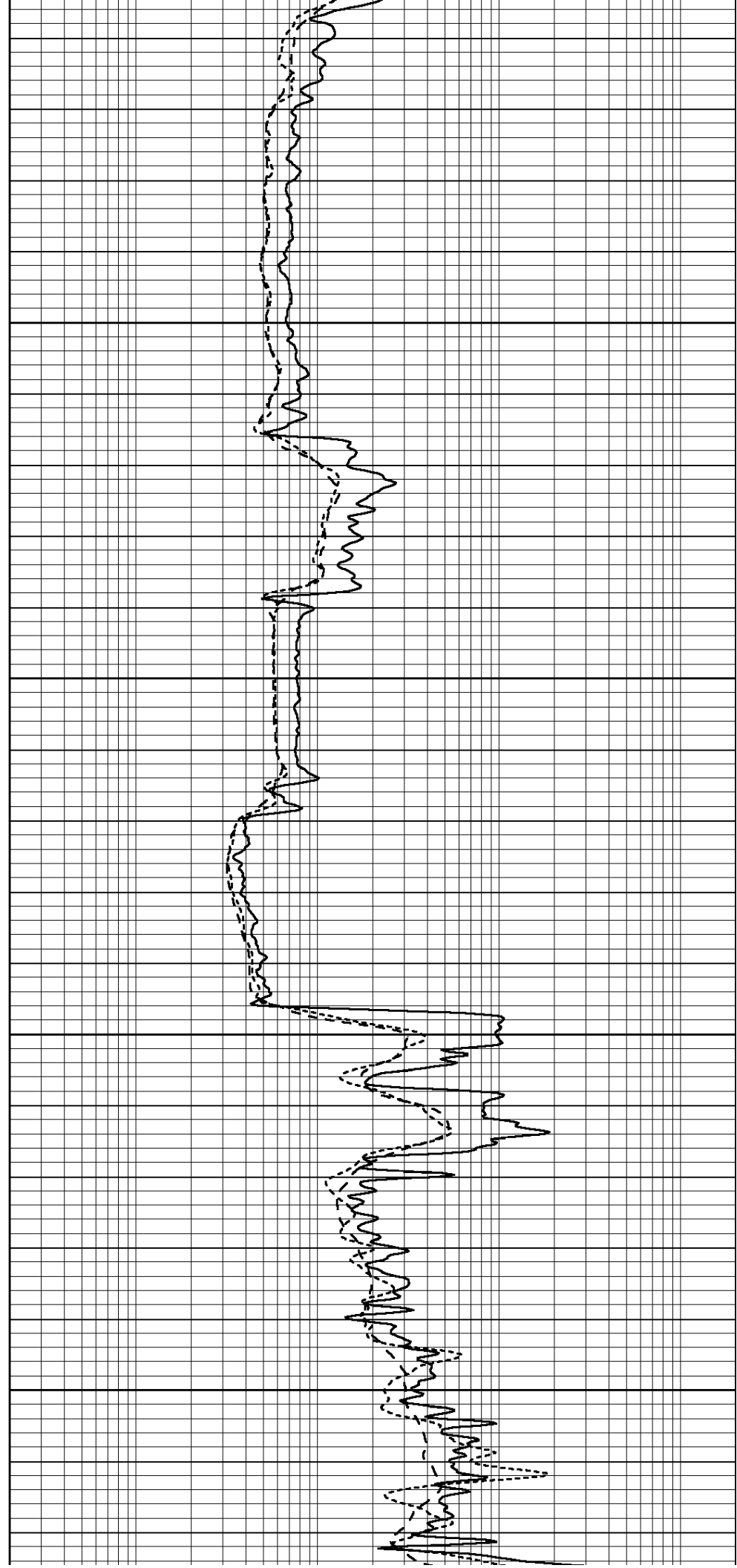


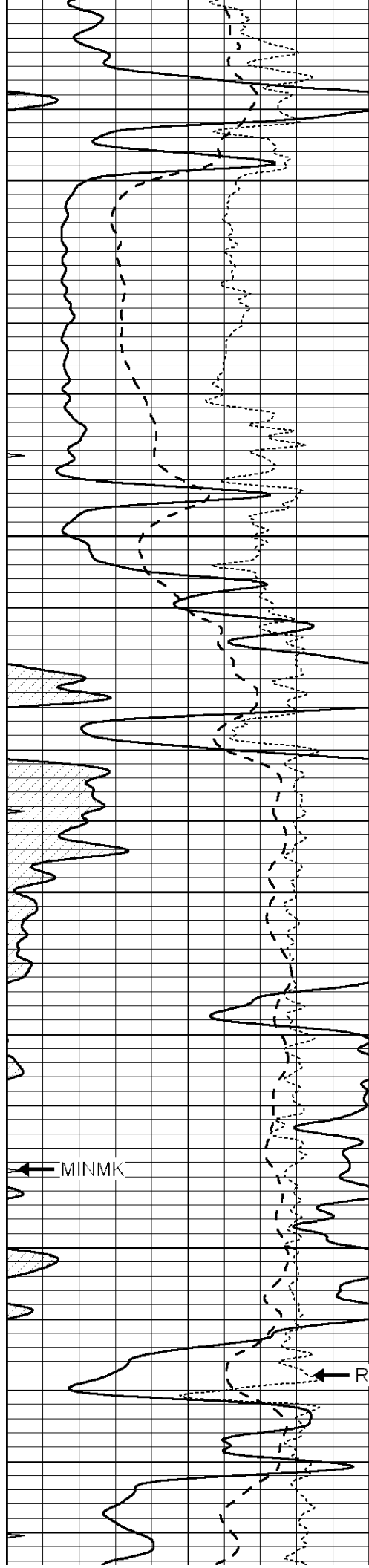
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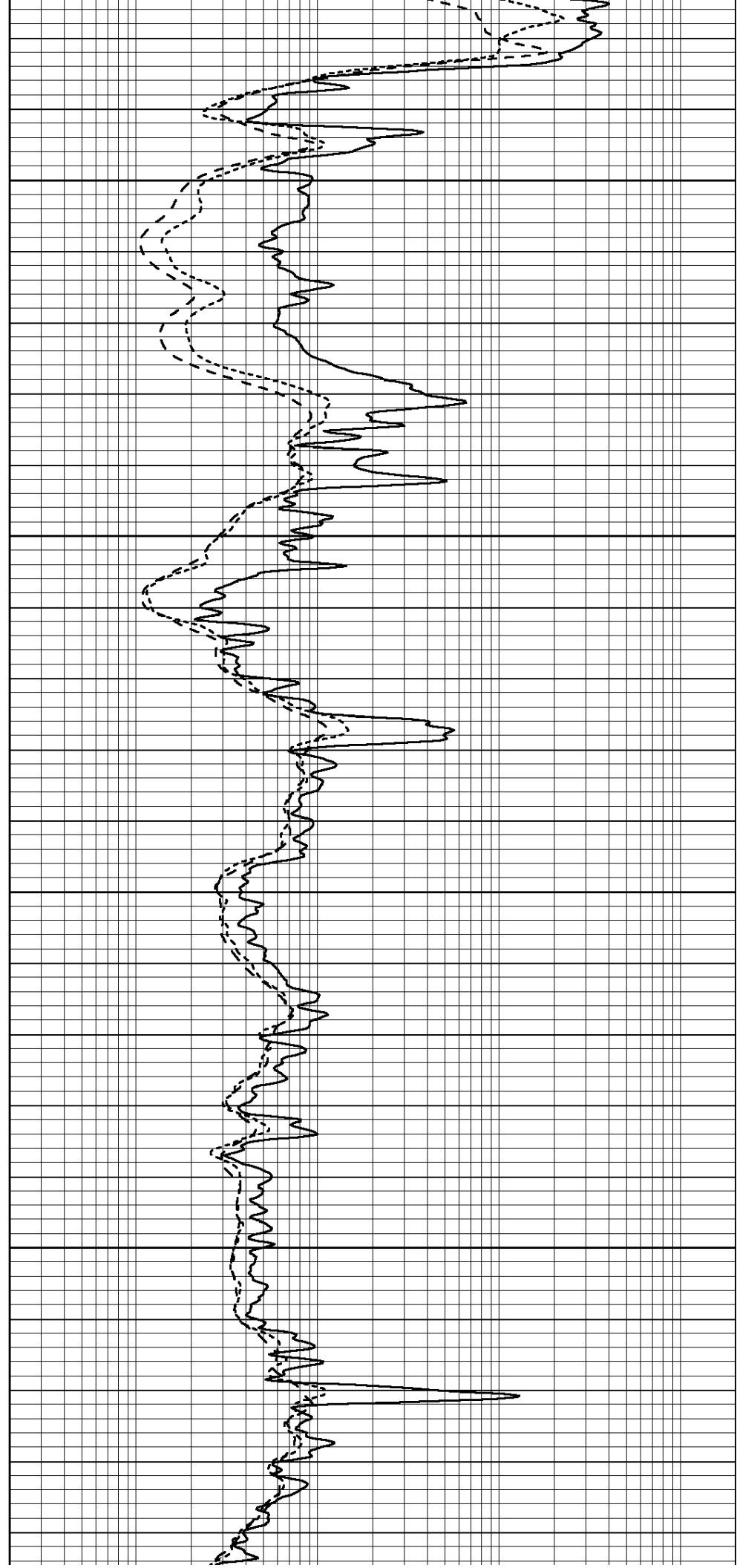


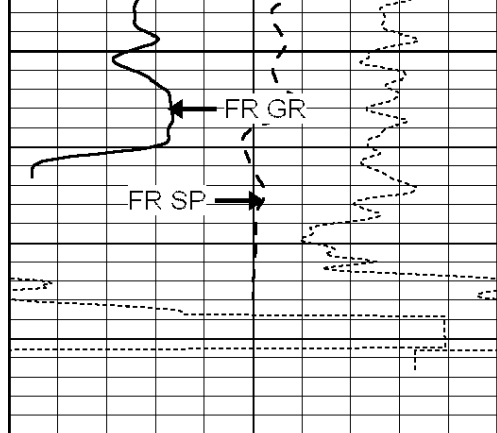
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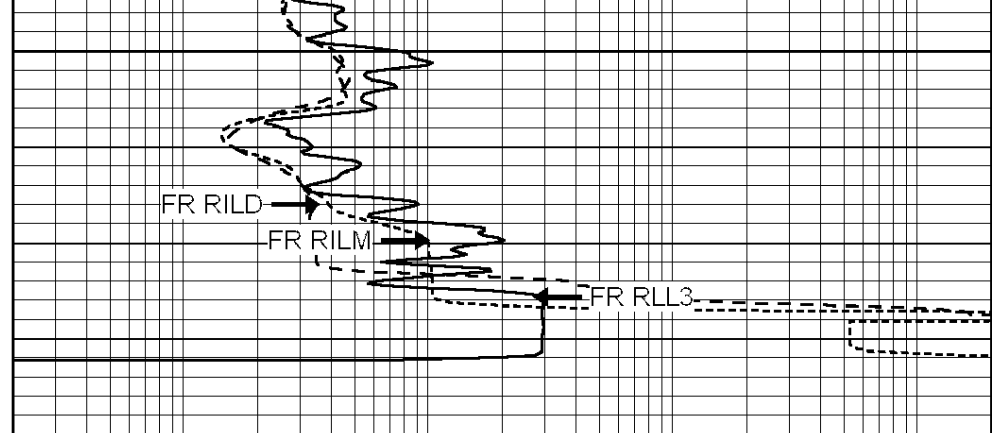




5600

--- TD ---

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

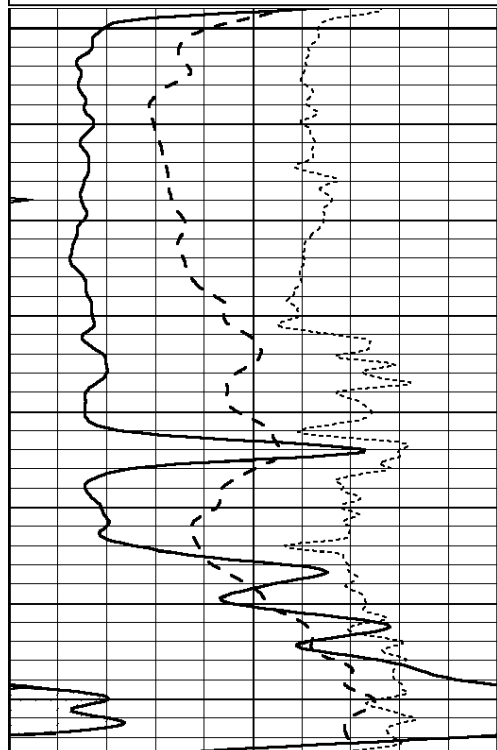


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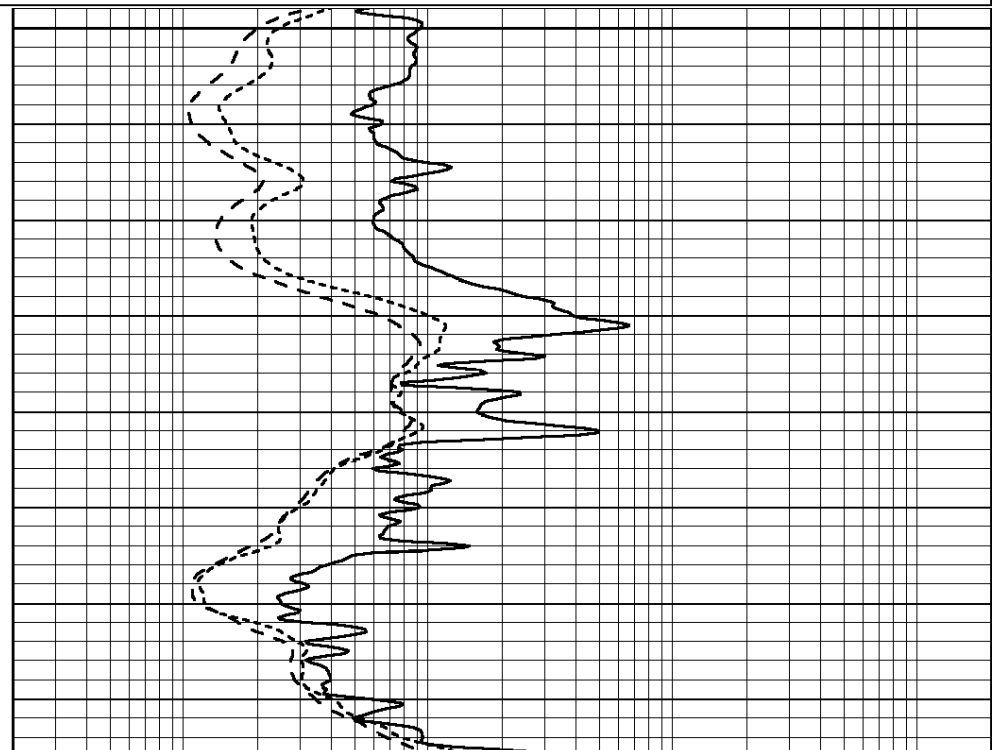
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-250	RxoRt	50
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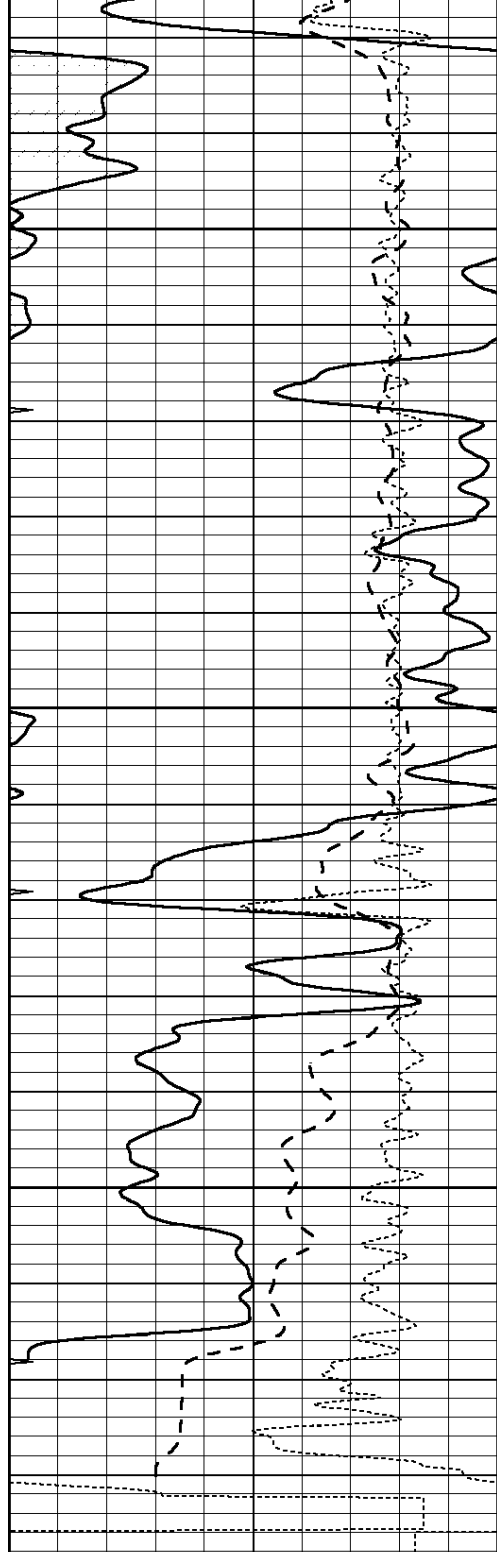
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0.2	DEEP INDUCTION (Ohm-m)	2000
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5400

5450



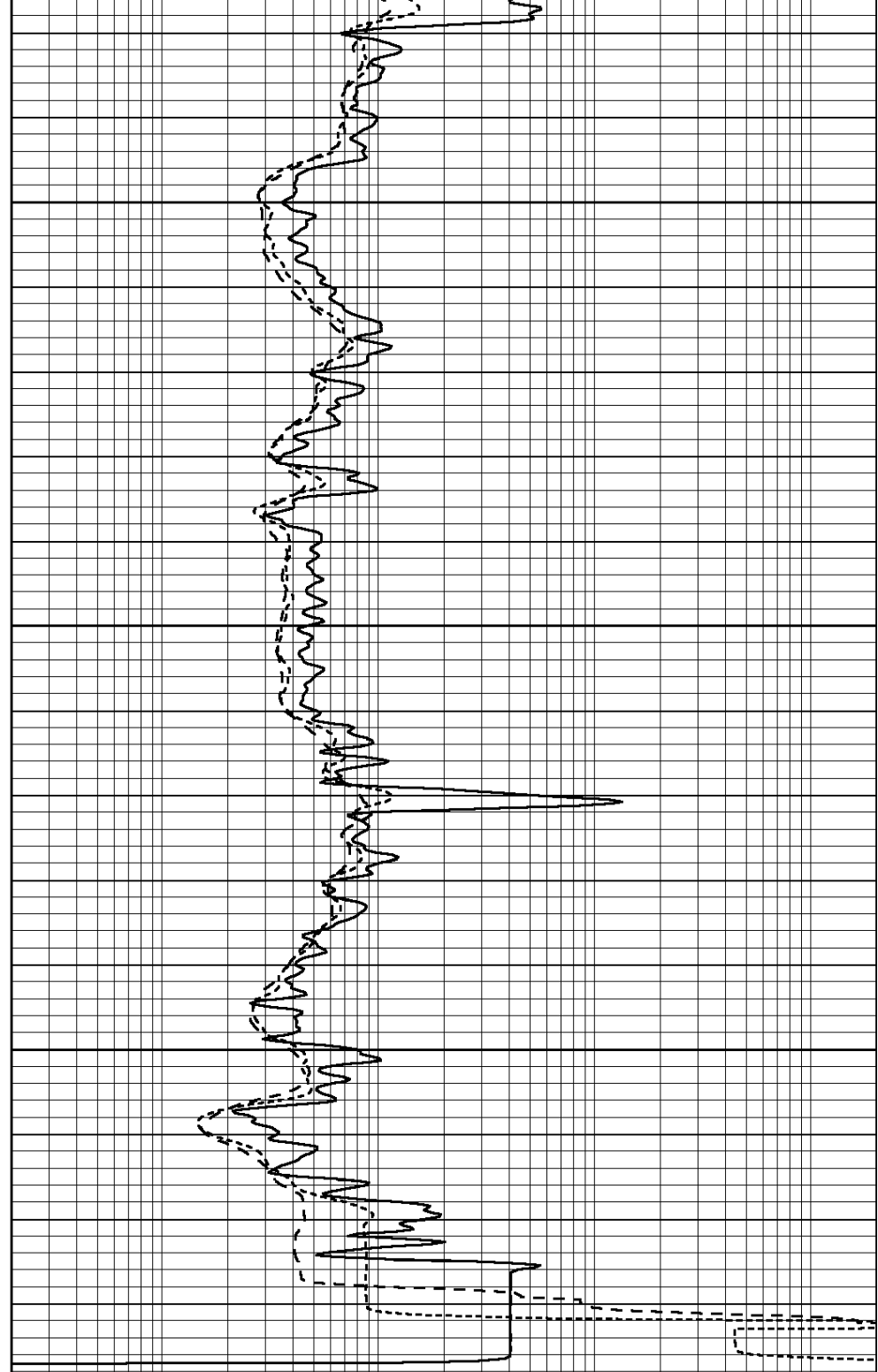


5500

5550

5600

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

Calibration Report

Database File: 012040pdn.db  
 Dataset Pathname: pass10.A  
 Dataset Creation: Tue Nov 19 01:42:48 2013

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	540.000	12.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	620.000	-10.000
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

Gamma Ray Calibration Report

Serial Number: GR1  
 Tool Model: OPEN  
 Performed: Tue Nov 19 01:01:03 2013  
  
 Calibrator Value: 1.0 GAPI  
  
 Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps  
  
 Sensitivity: 0.3200 GAPI/cps