



# NABORS

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**SONIC  
LOG**

Company		MULL DRILLING COMPANY, INC.	
Well	APC - BETTY #1-27		
Field			
County	CHEYENNE	State	COLORADO
Location:	APL # : 05-017-07779-0000		Other Services CDL/CNL/PE DIL/MEL
Permanent Datum	865' FSL & 1878' FEL SW/4 - SE/4	SEC 27 TWP 16S RGE 45W	Elevation K.B. 4238 D.F. 4236 G.L. 4227
Log Measured From	GROUND LEVEL Elevation 4227		
Drilling Measured From	KELLY BUSHING 11' A.G.L. KELLY BUSHING		
Date	1/23/14		
Run Number	TWO		
Depth Driller	5490		
Depth Logger	5494		
Bottom Logged Interval	5484		
Top Log Interval	300		
Casing Driller	8 5/8" @ 343		
Casing Logger	339		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.3/58		
pH / Fluid Loss	10.5/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 72F		
Rmt @ Meas. Temp	.56 @ 72F		
Rmc @ Meas. Temp	.89 @ 72F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.42 @ 129F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	129F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONEWEG		
Witnessed By	PHIL ASKEY		

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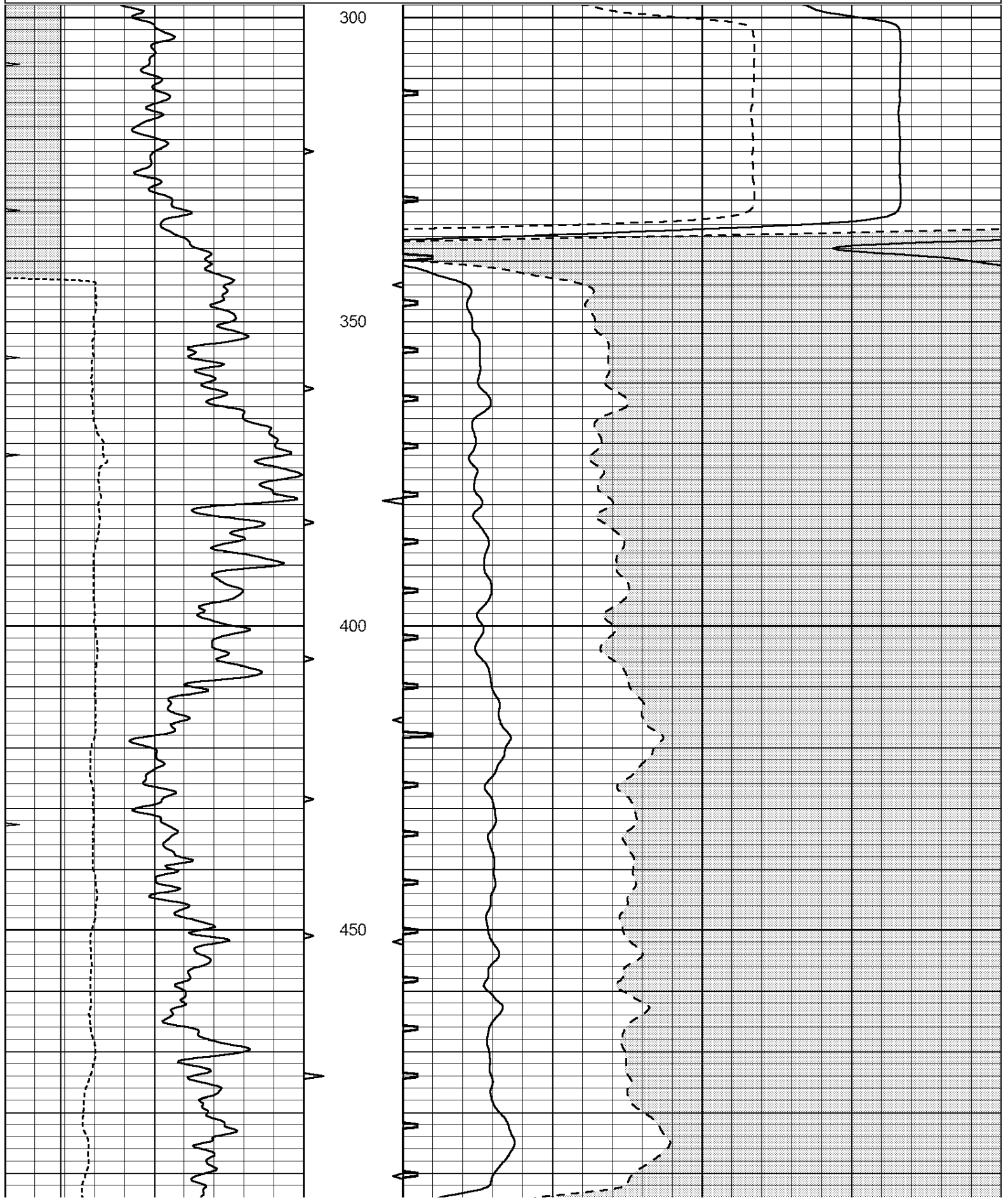
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

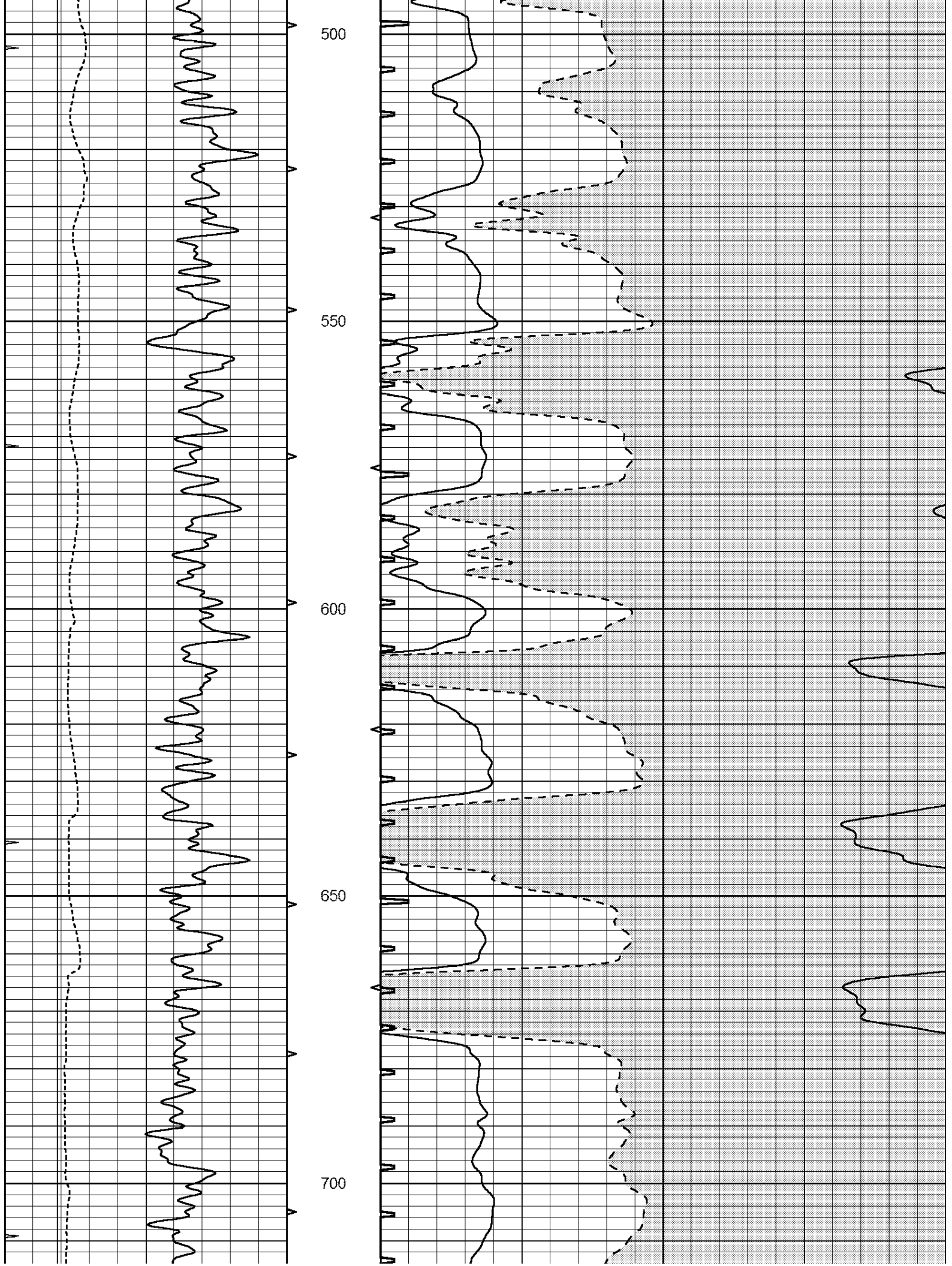
## Comments

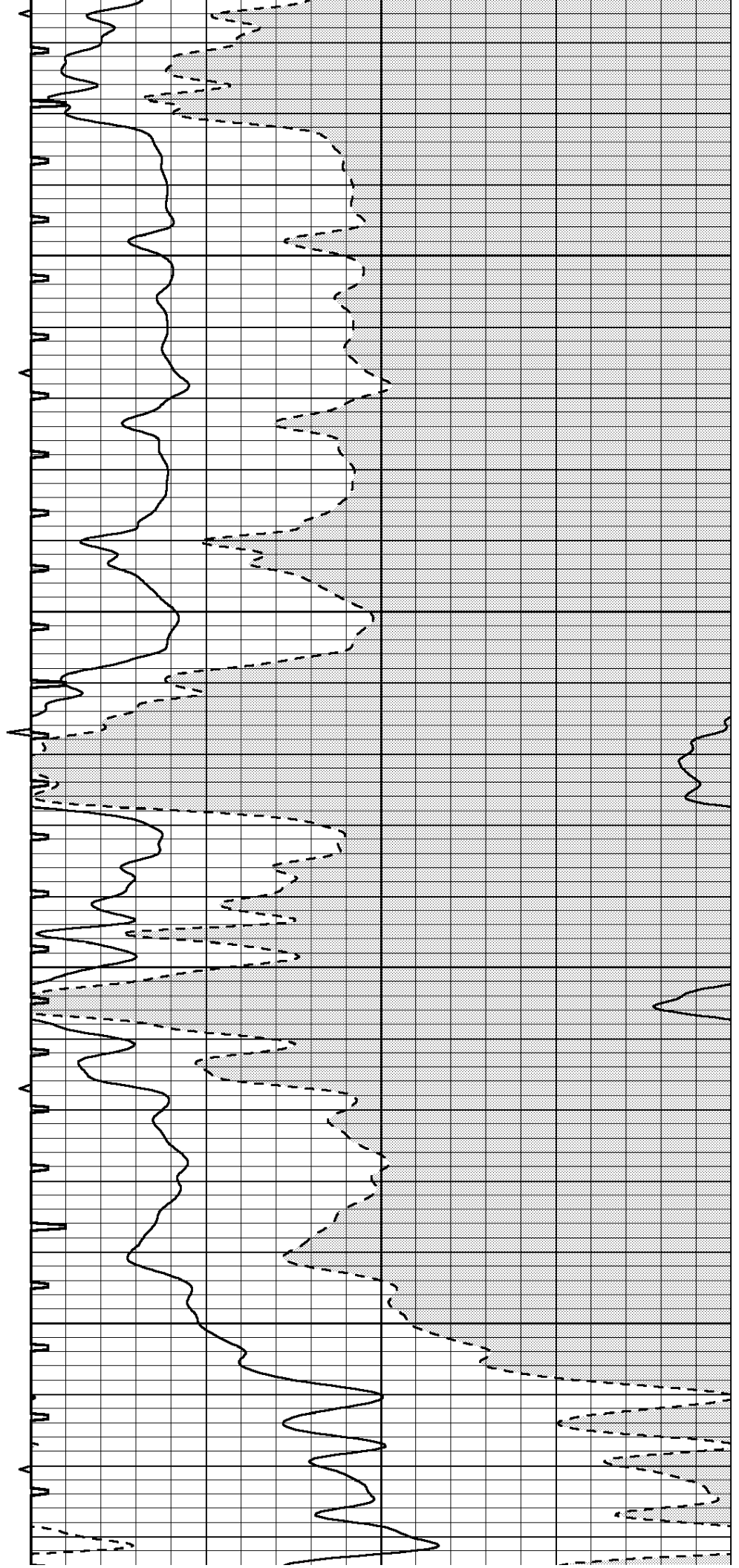
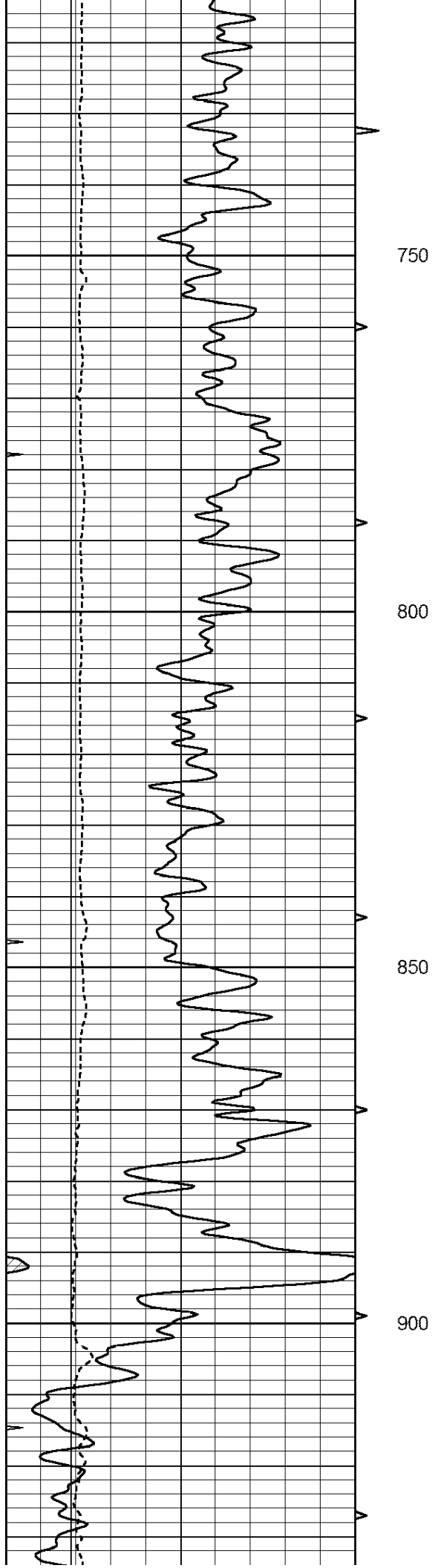
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395  
DIRECTIONS:  
CHEYENNE WELLS, COLORADO - 14 MILES SOUTH ON HWY 385 TO RD C  
6 MILES WEST TO T IN ROAD - 1/2 MILE SOUTH - WEST INTO

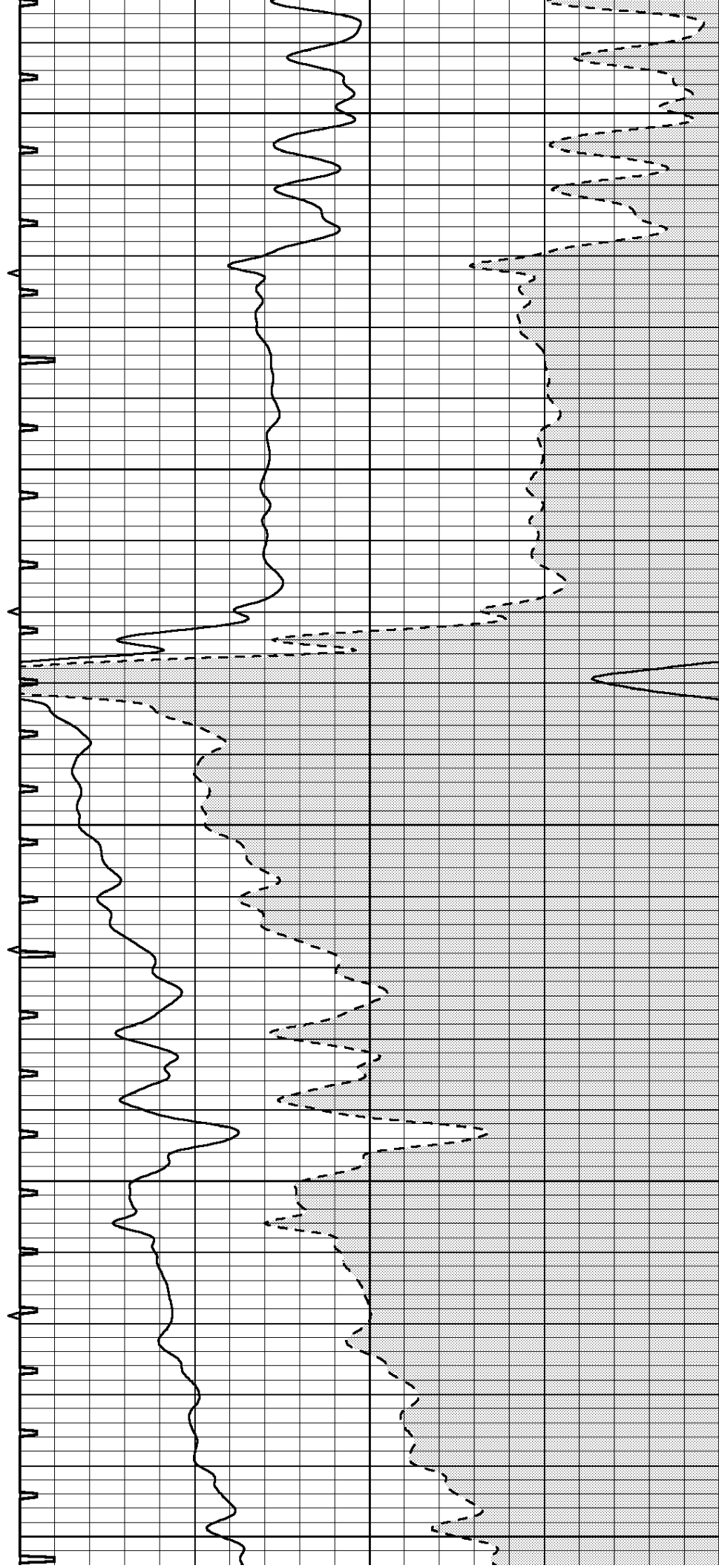
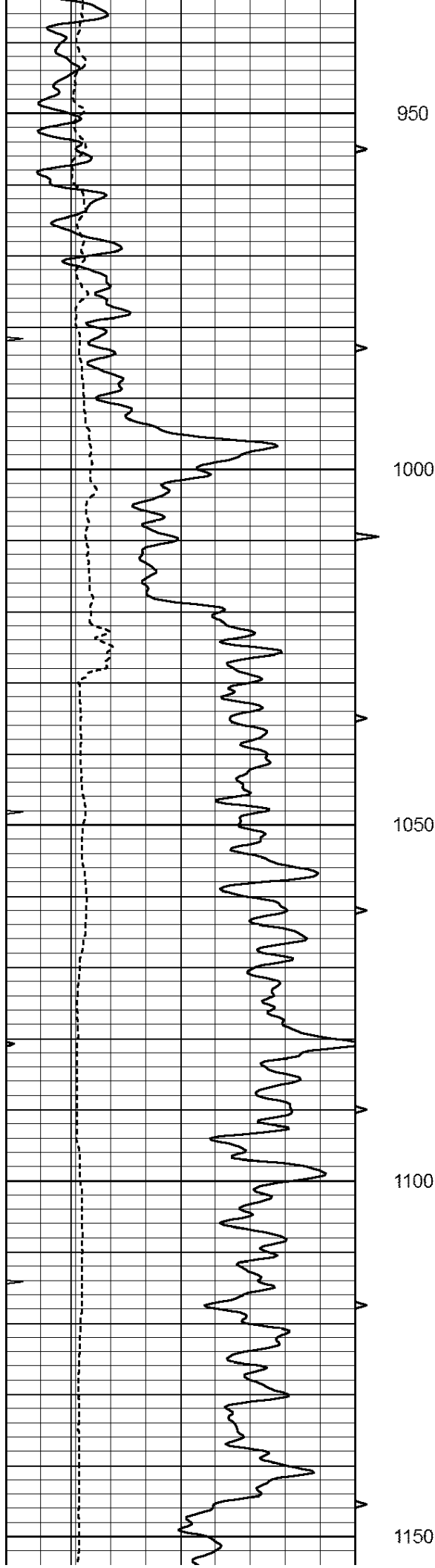
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Dataset Creation: Thu Jan 23 15:48:11 2014 by Calc Open-Cased 090629  
Charted by: Depth in Feet scaled 1:240

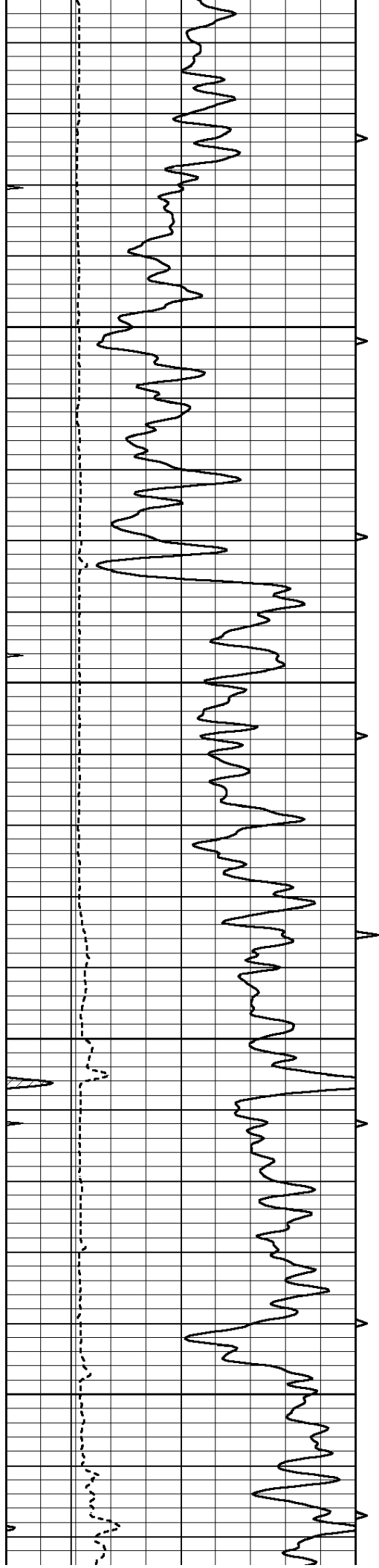
Charted by:		Depth in Feet scaled 1:1.25				
0	GAMMA RAY (GAPI)	150	ABHV	140	DELTA TIME (usec/ft)	40
6	CALIPER (in)	16	10 (ft3) 0	30	SONIC POROSITY (pu)	-10
0	MINMK	20	TBHV	0	ITT (msec)	20
			0 (ft3) 10			









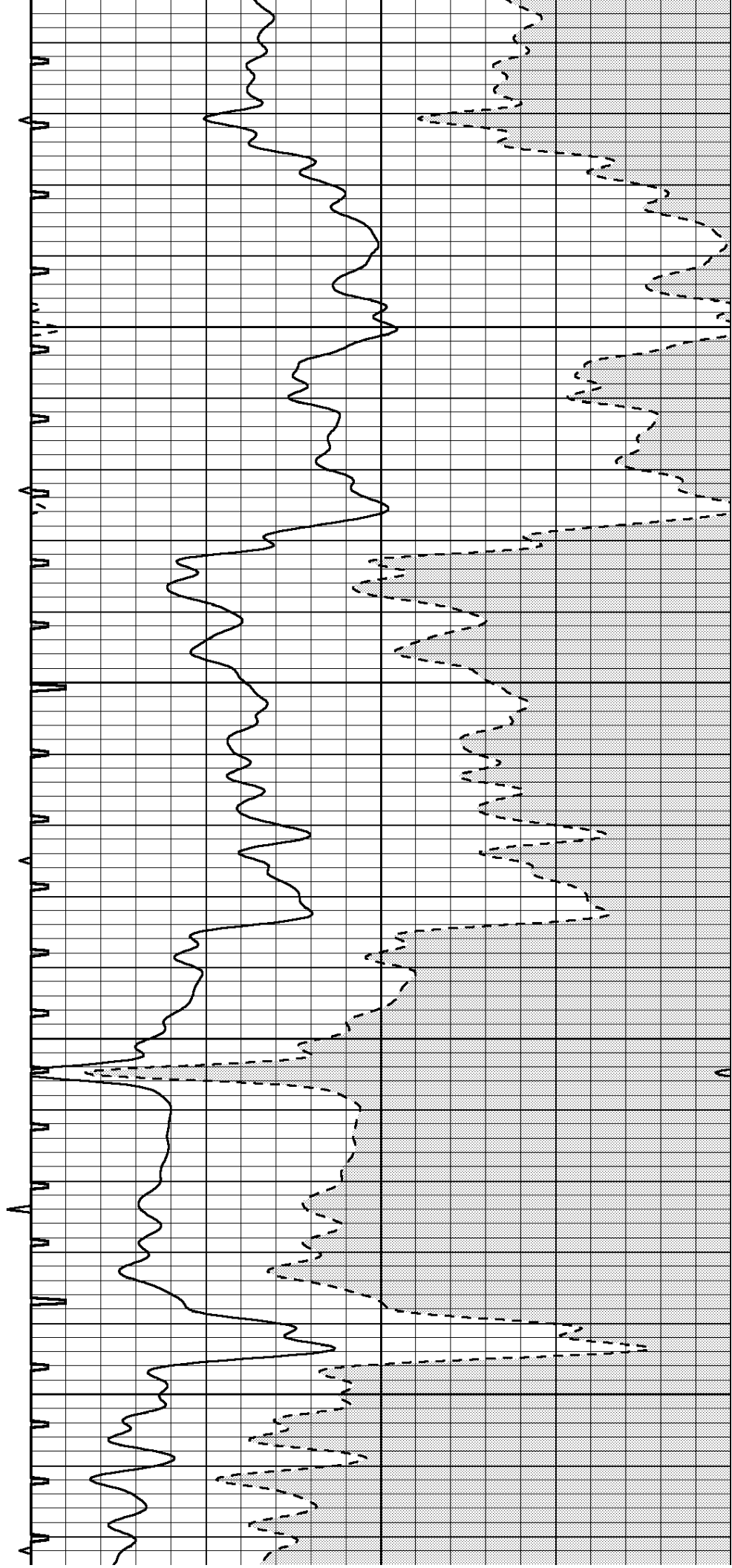


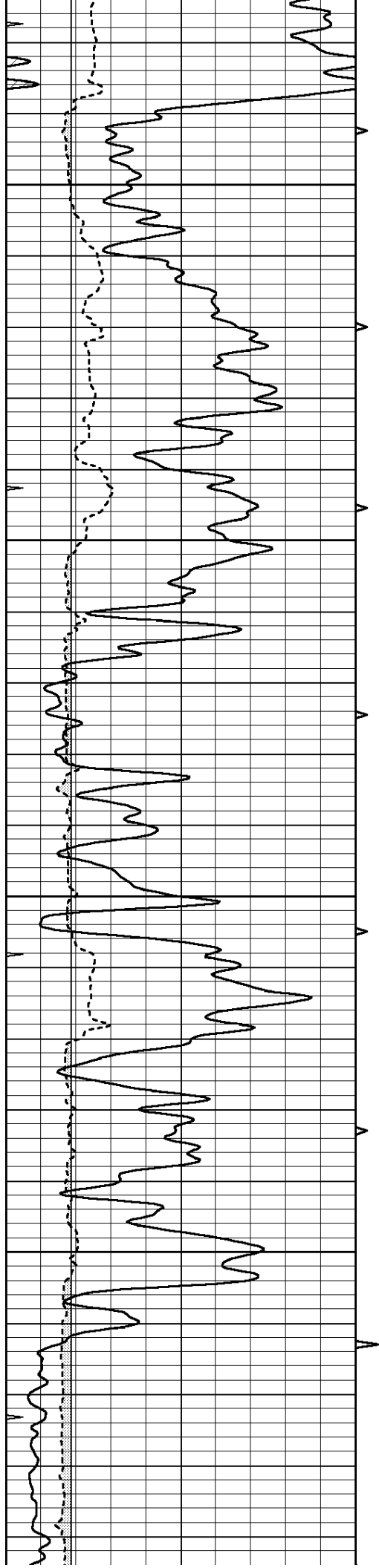
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1250

1300

1350



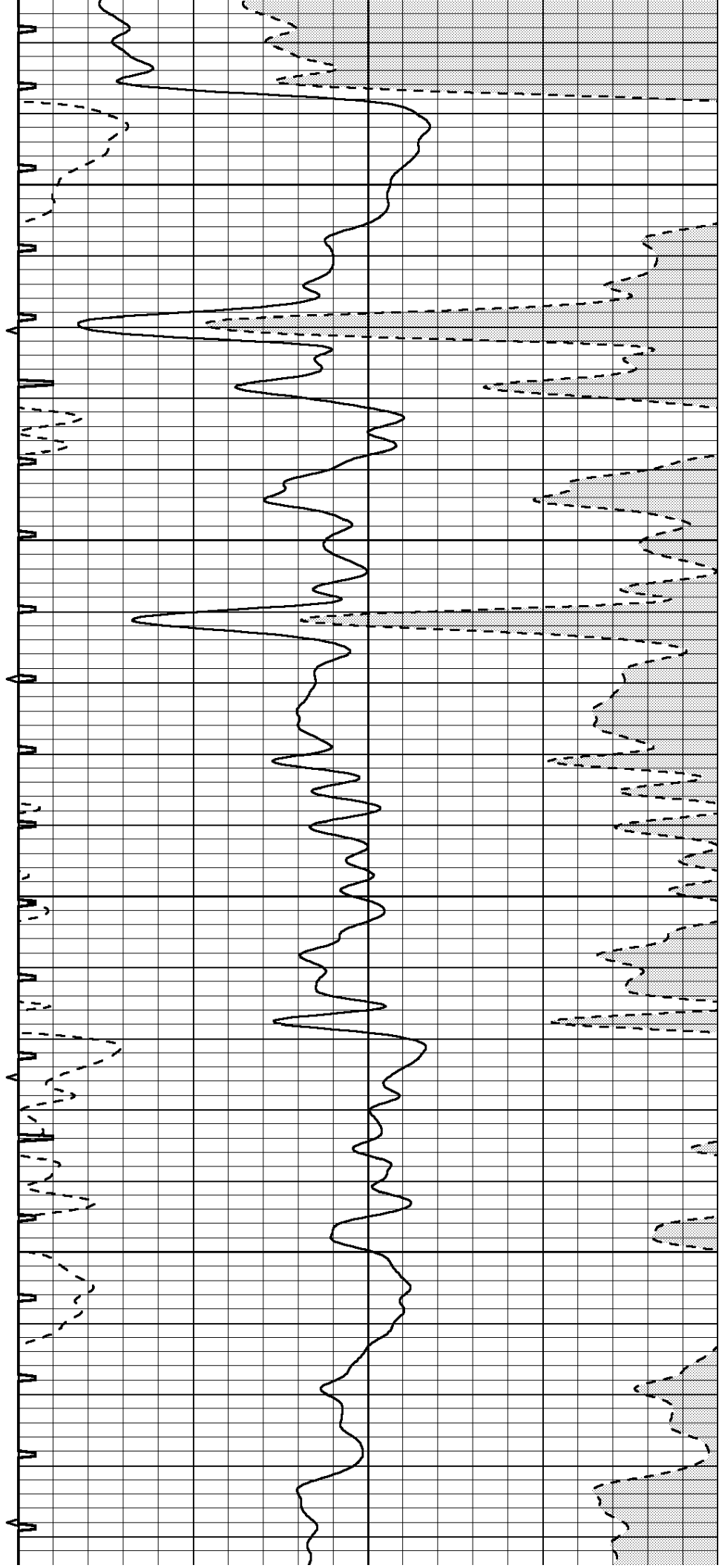


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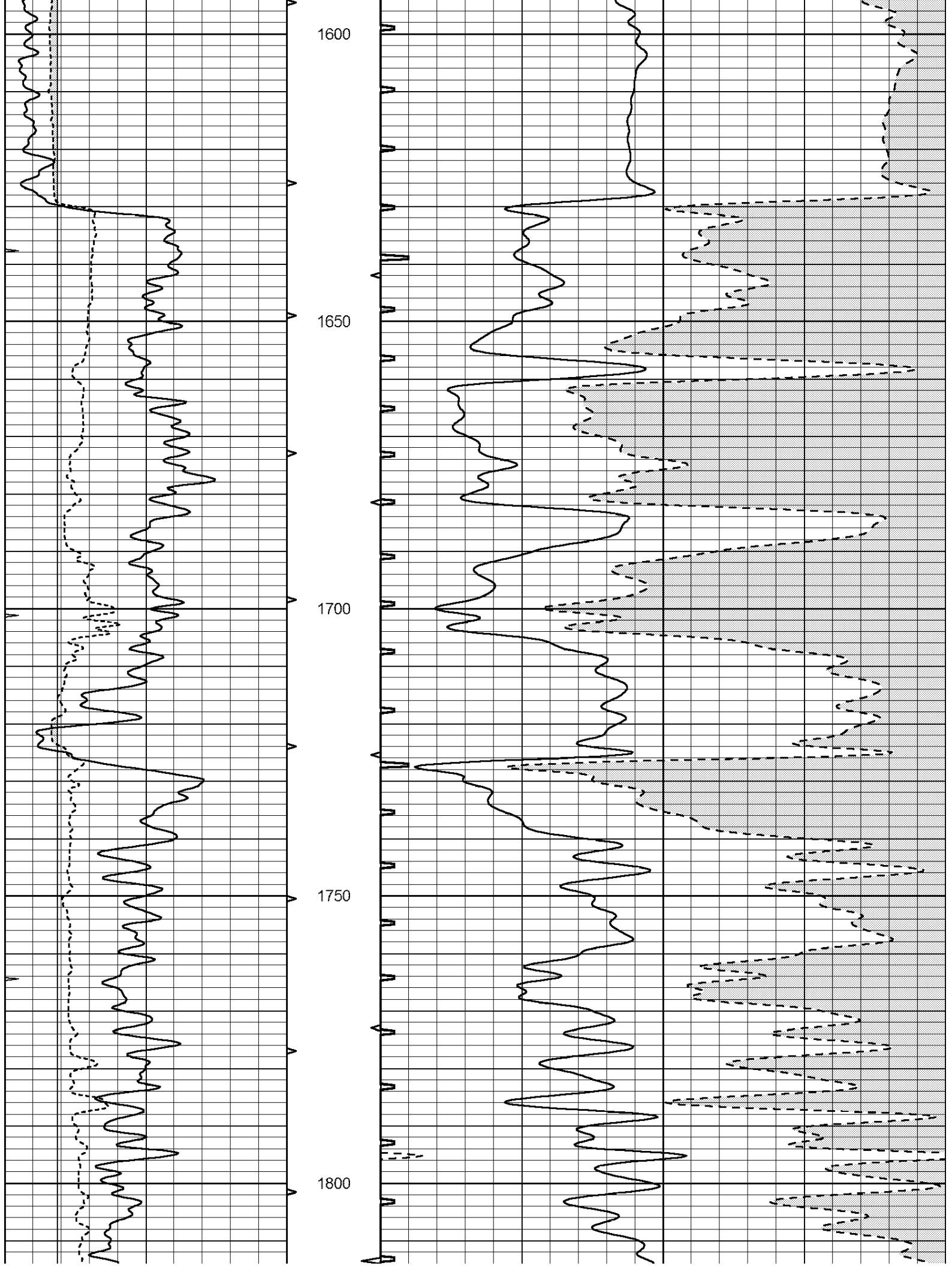
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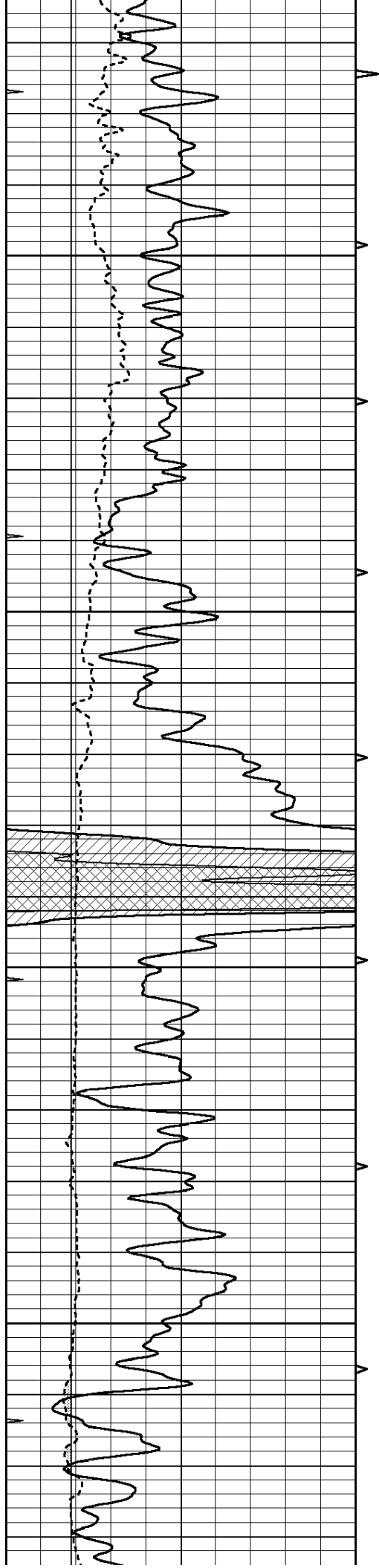
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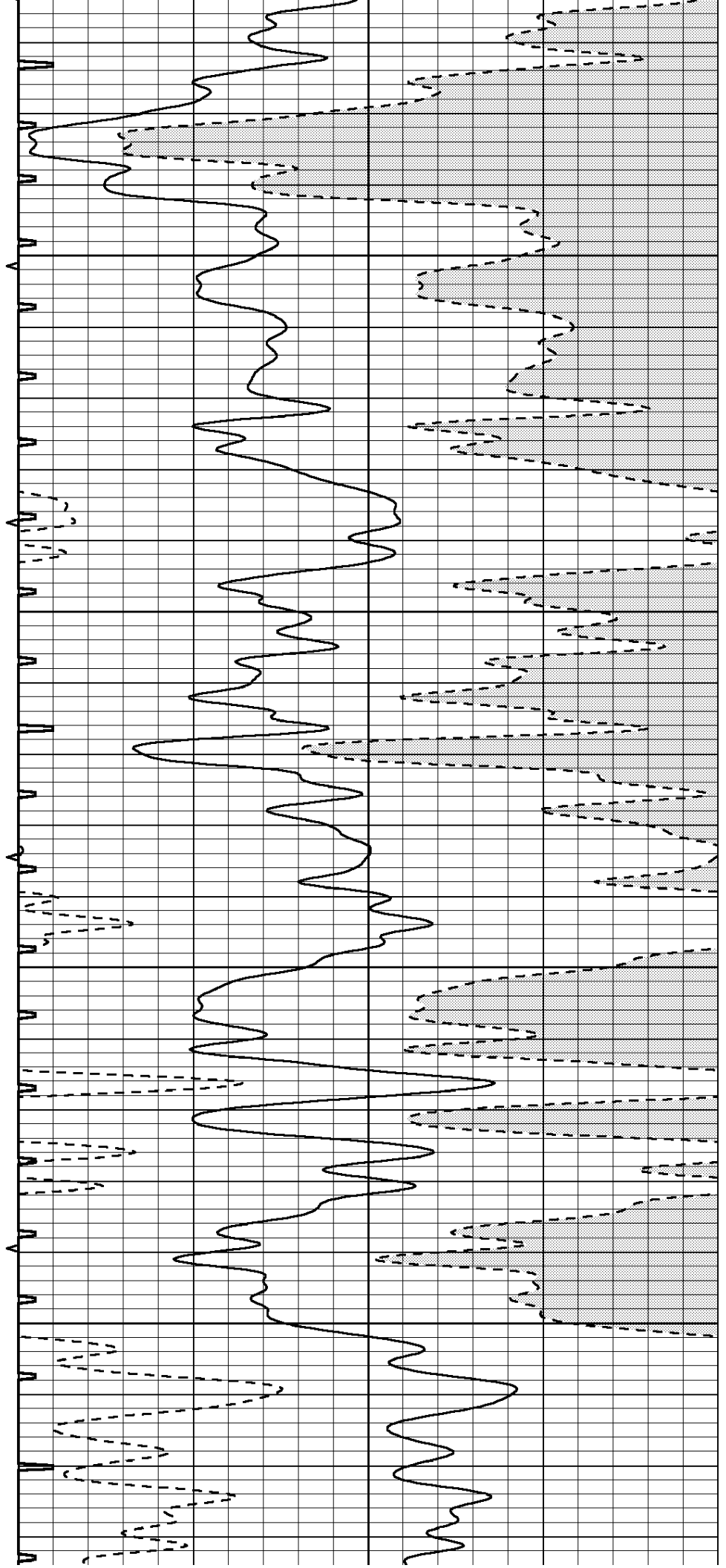


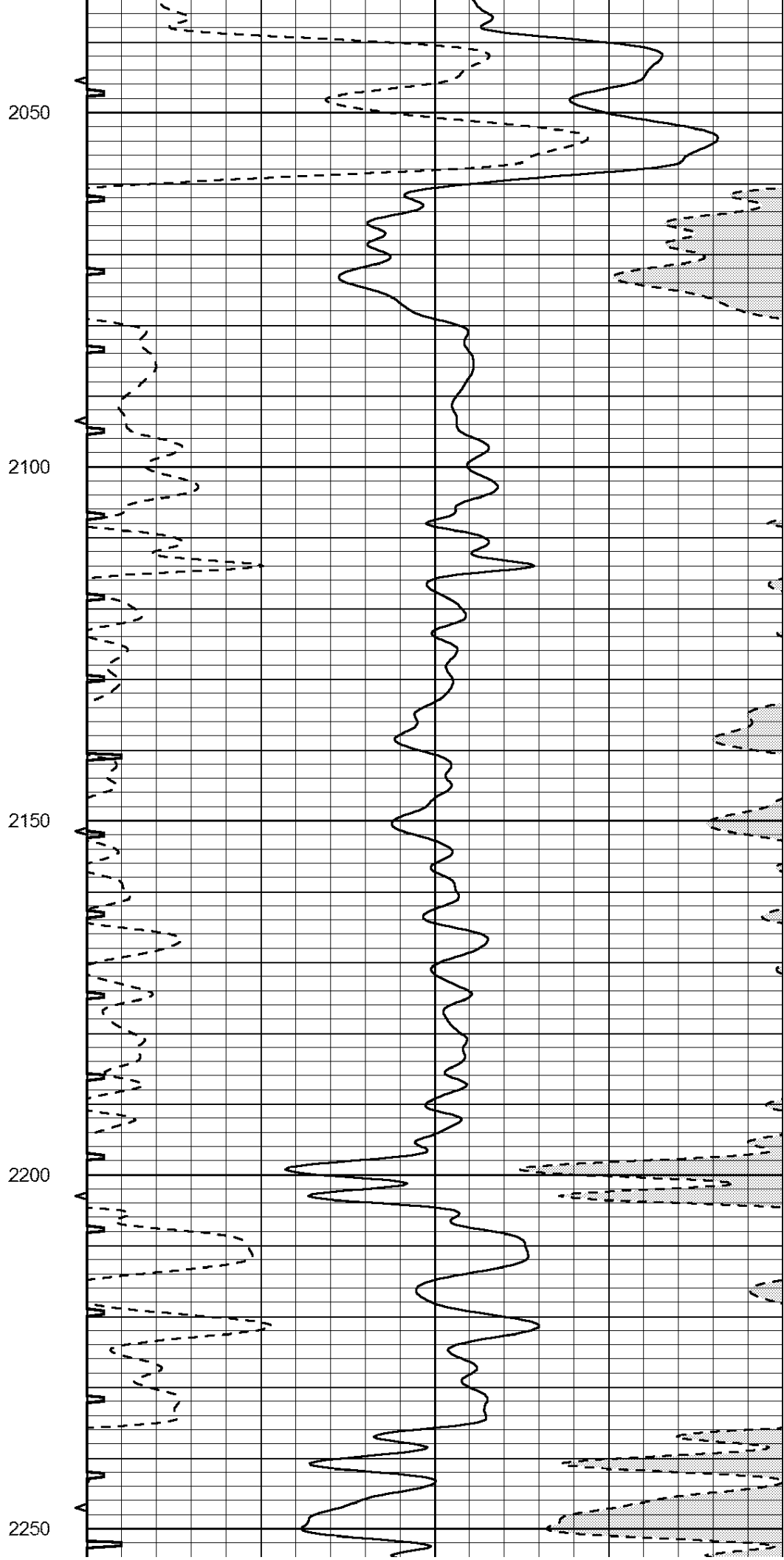
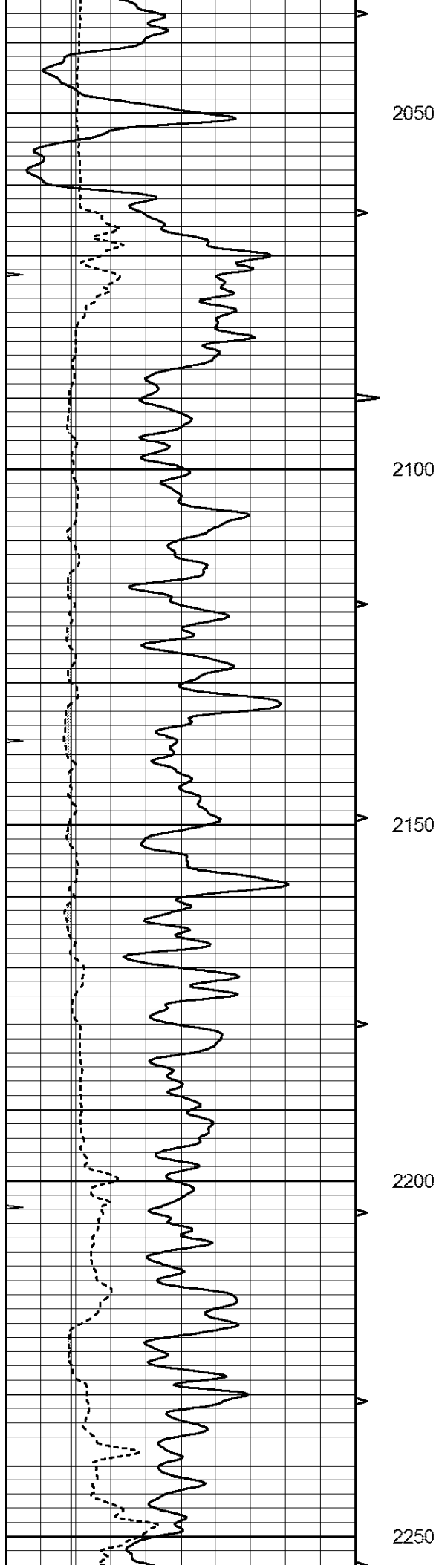
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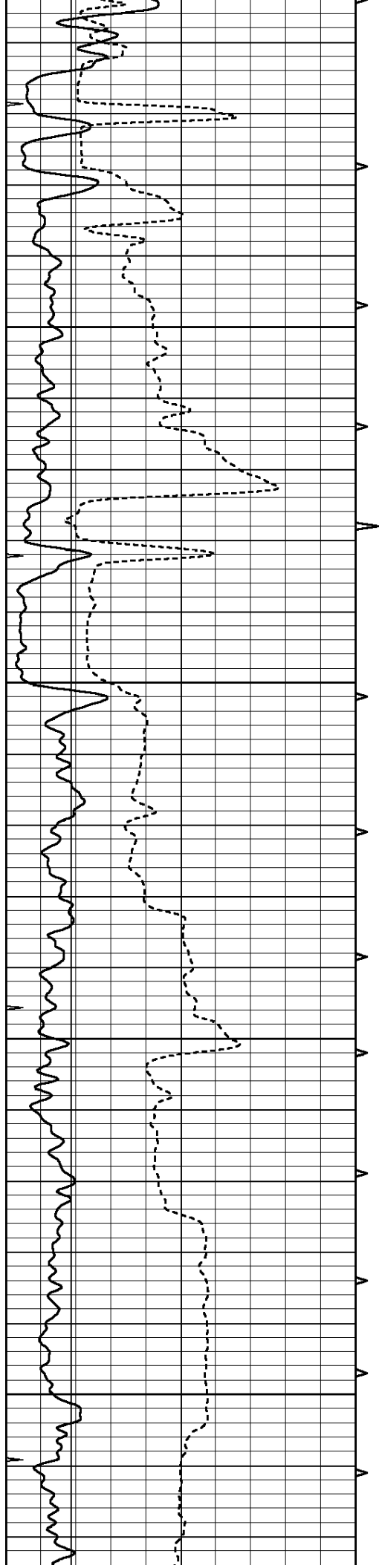
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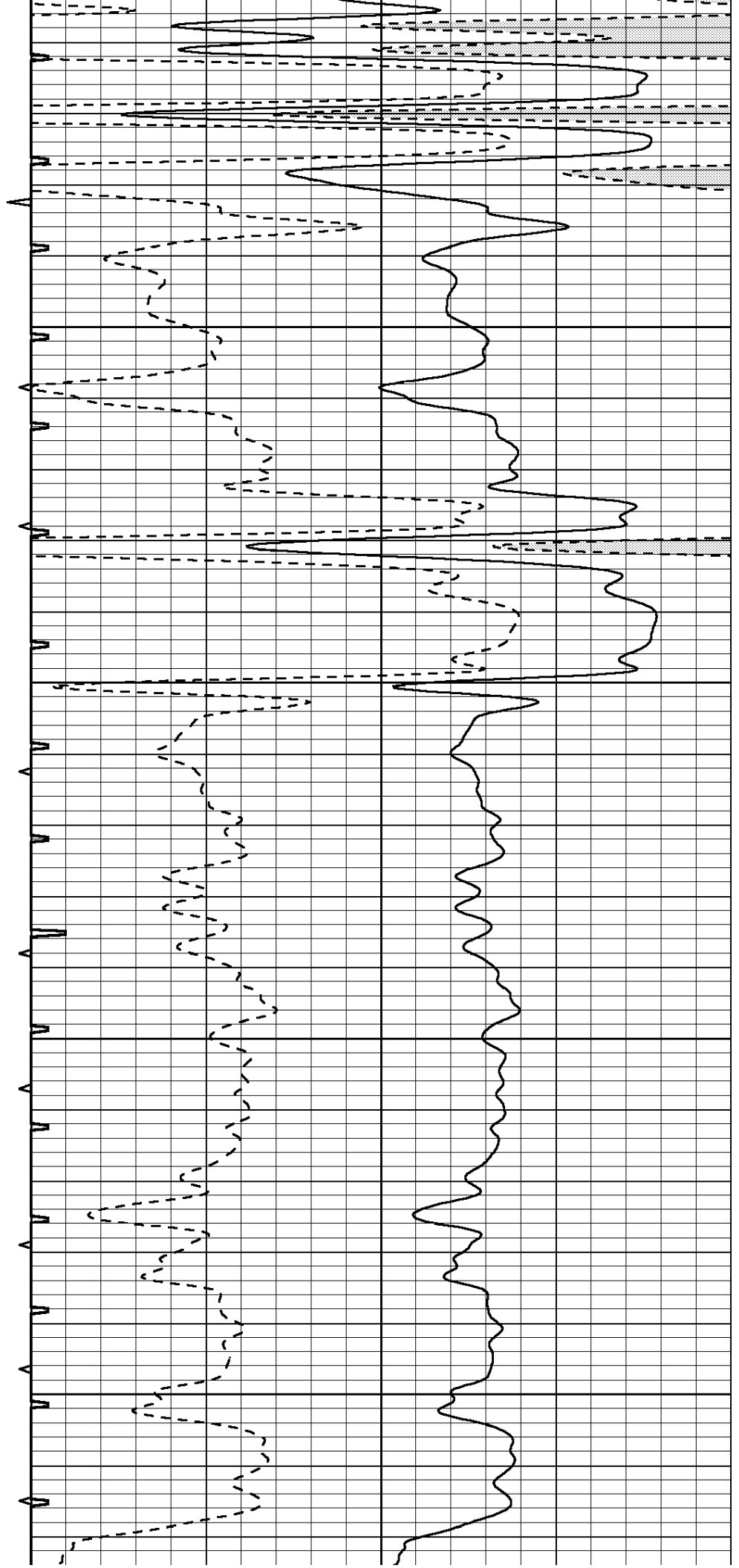


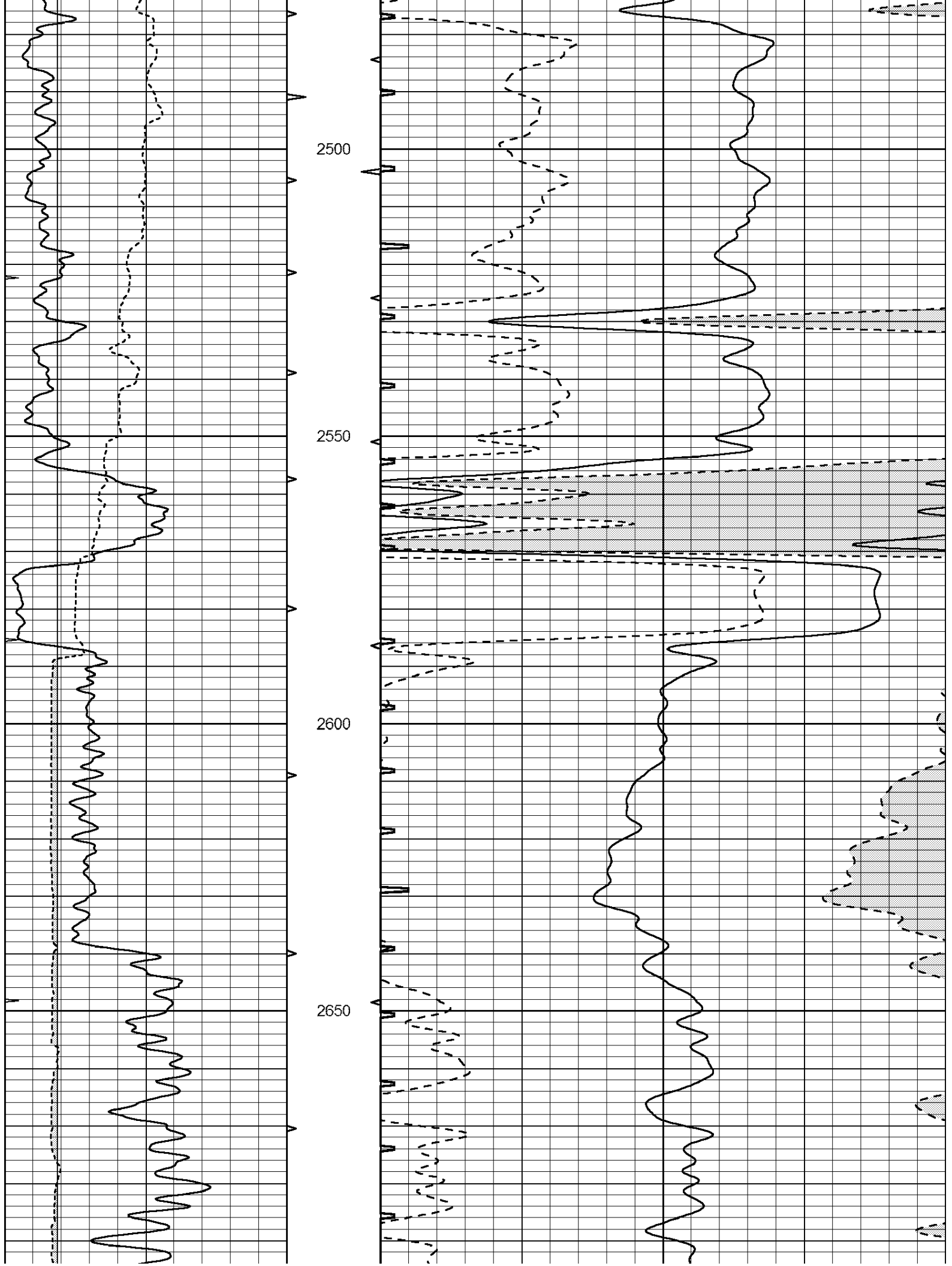
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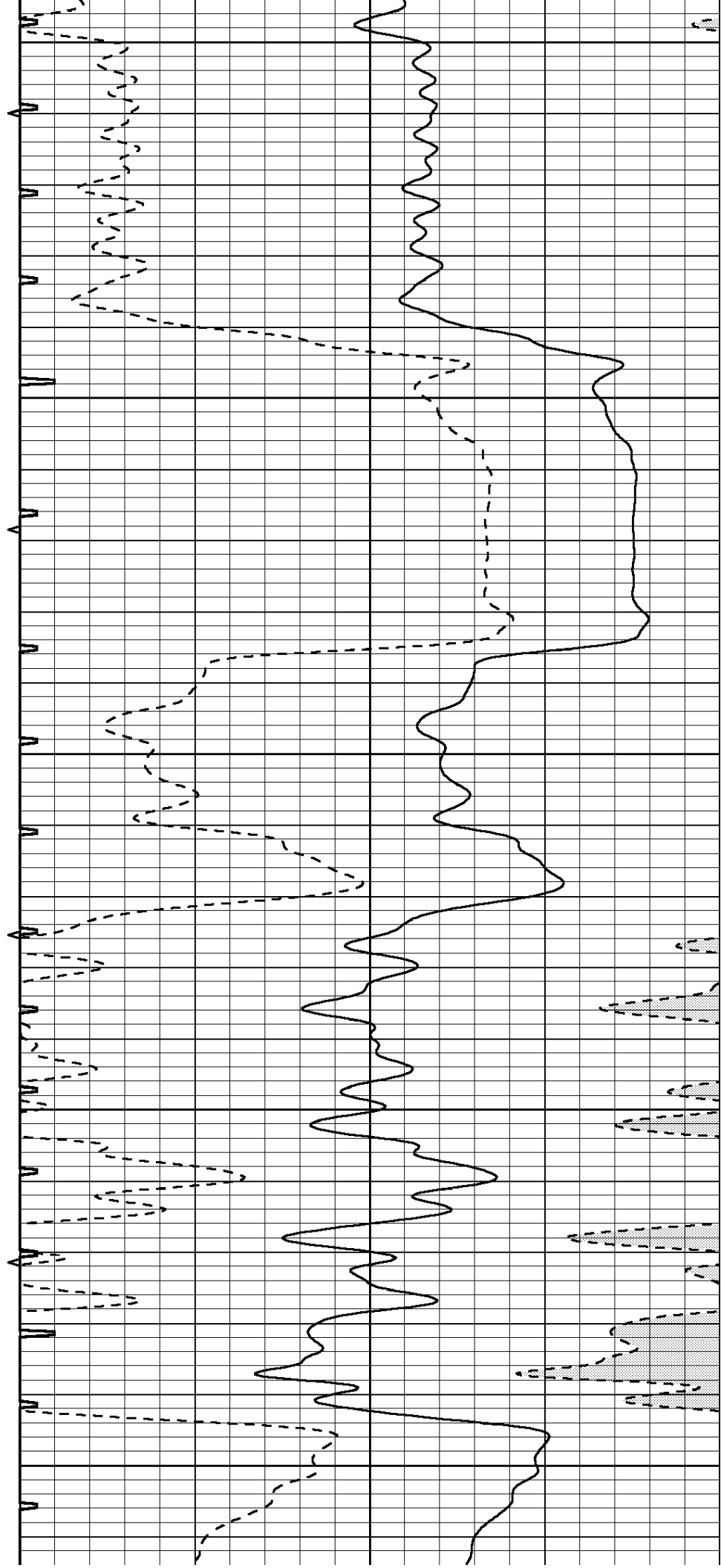
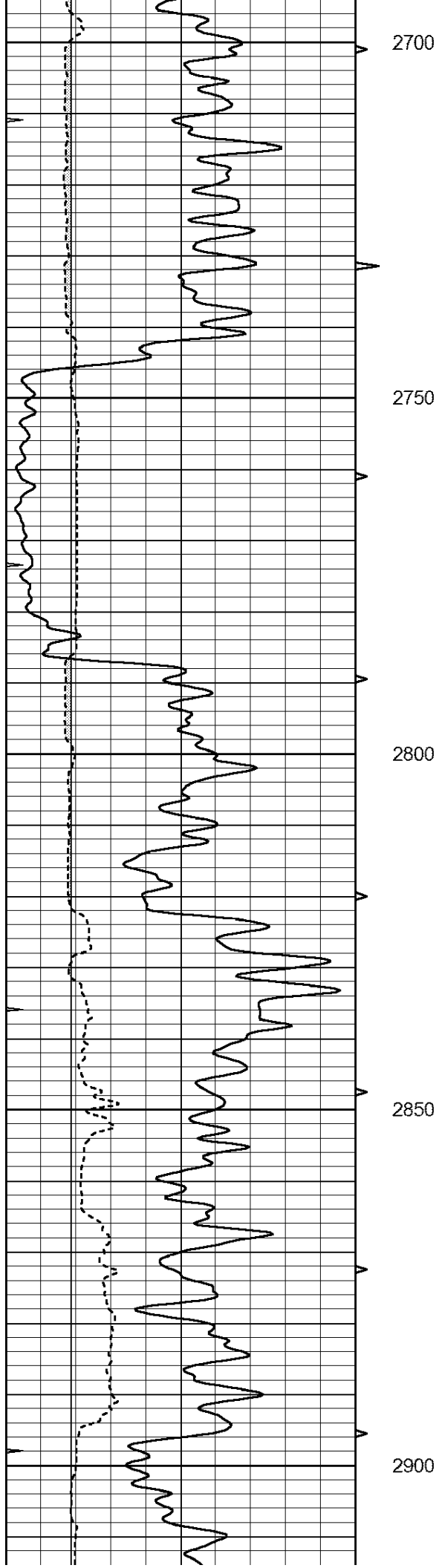
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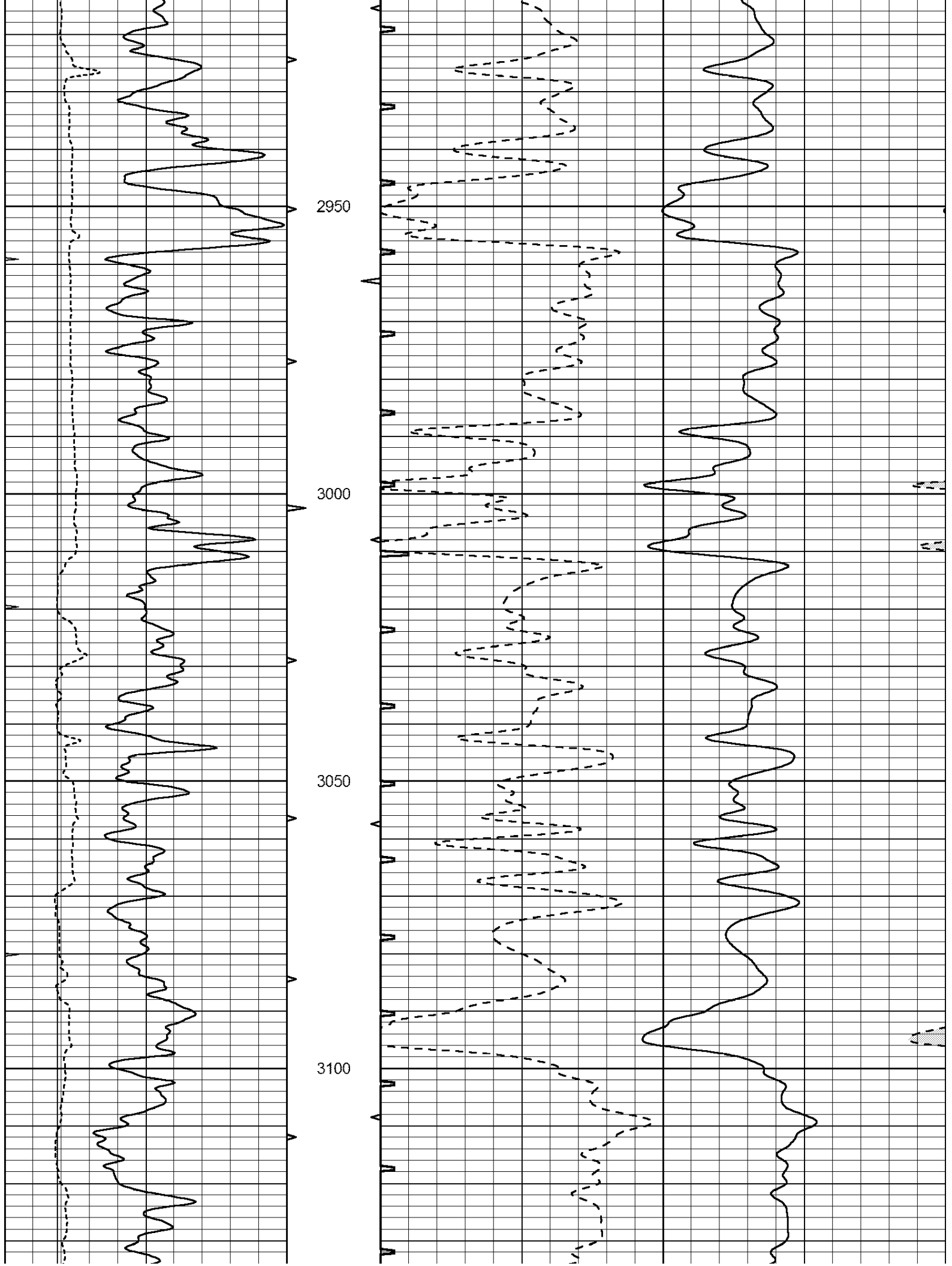
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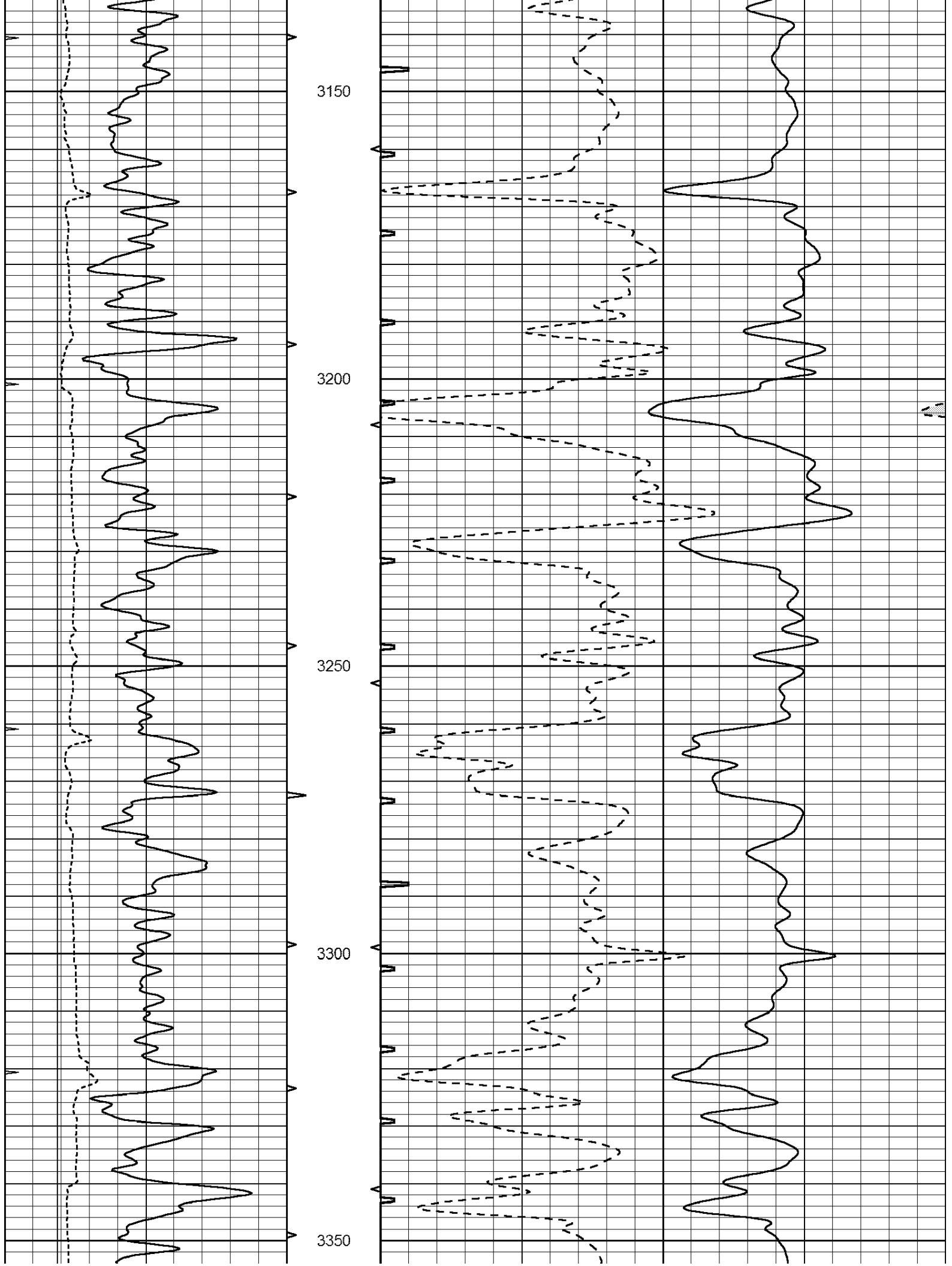
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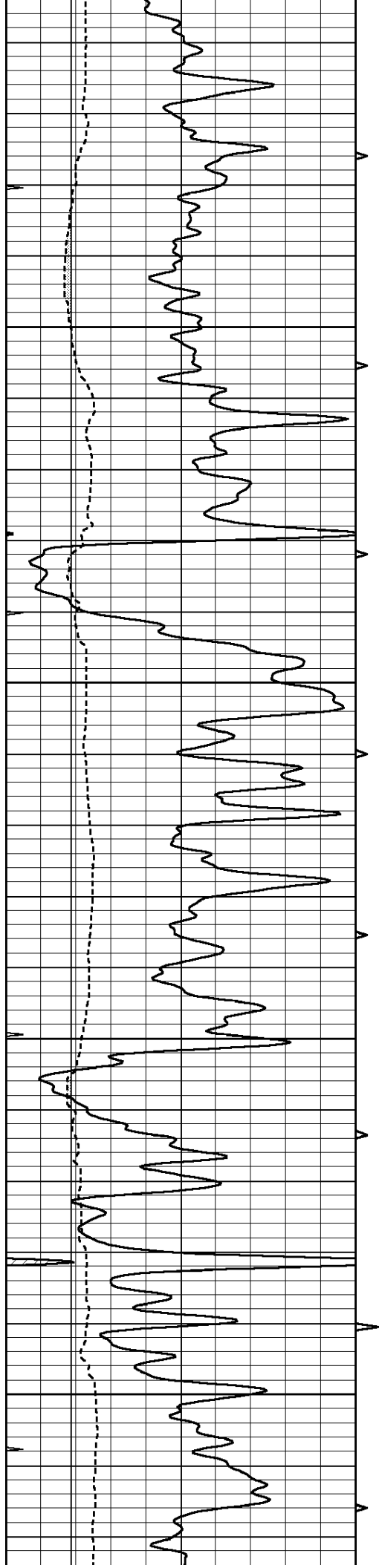










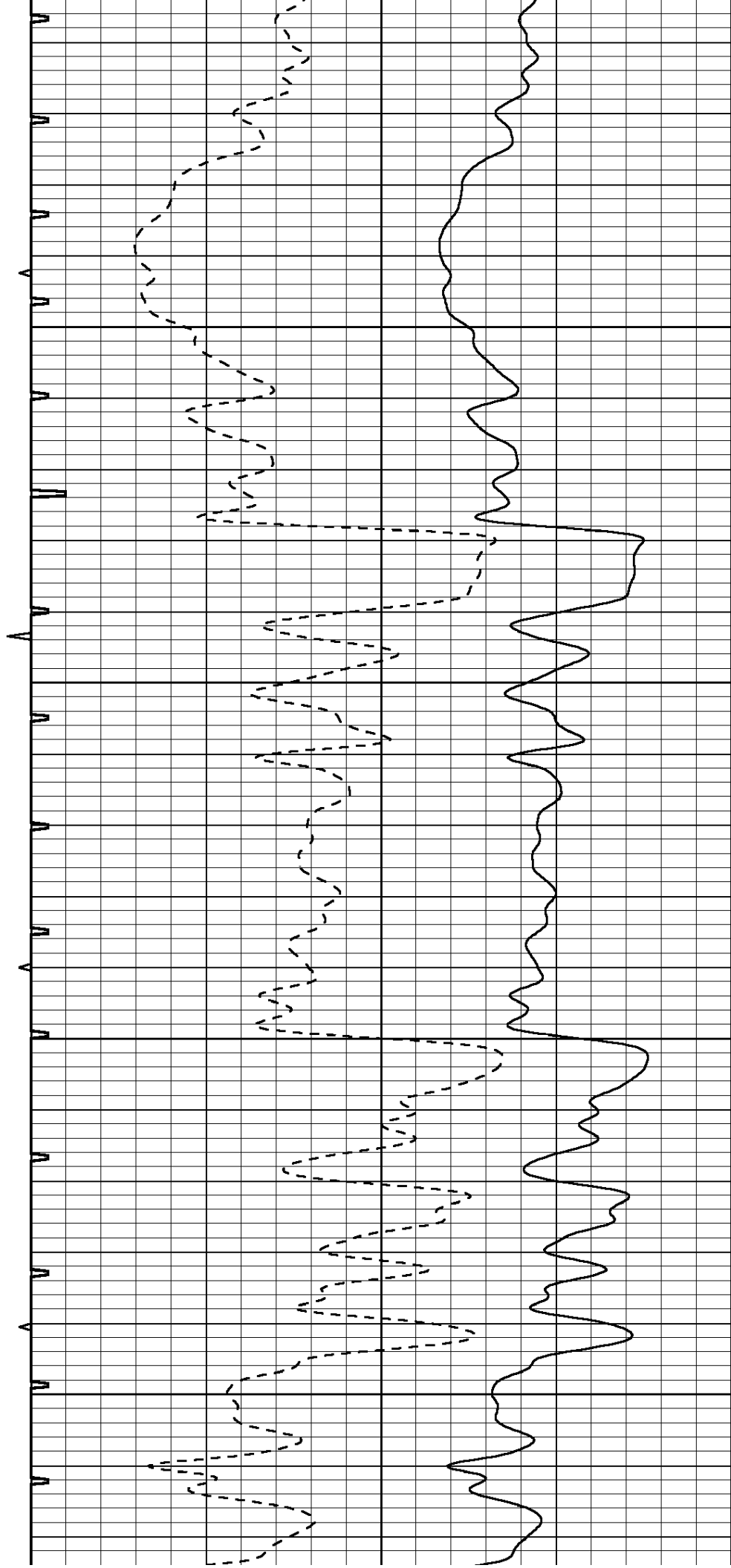


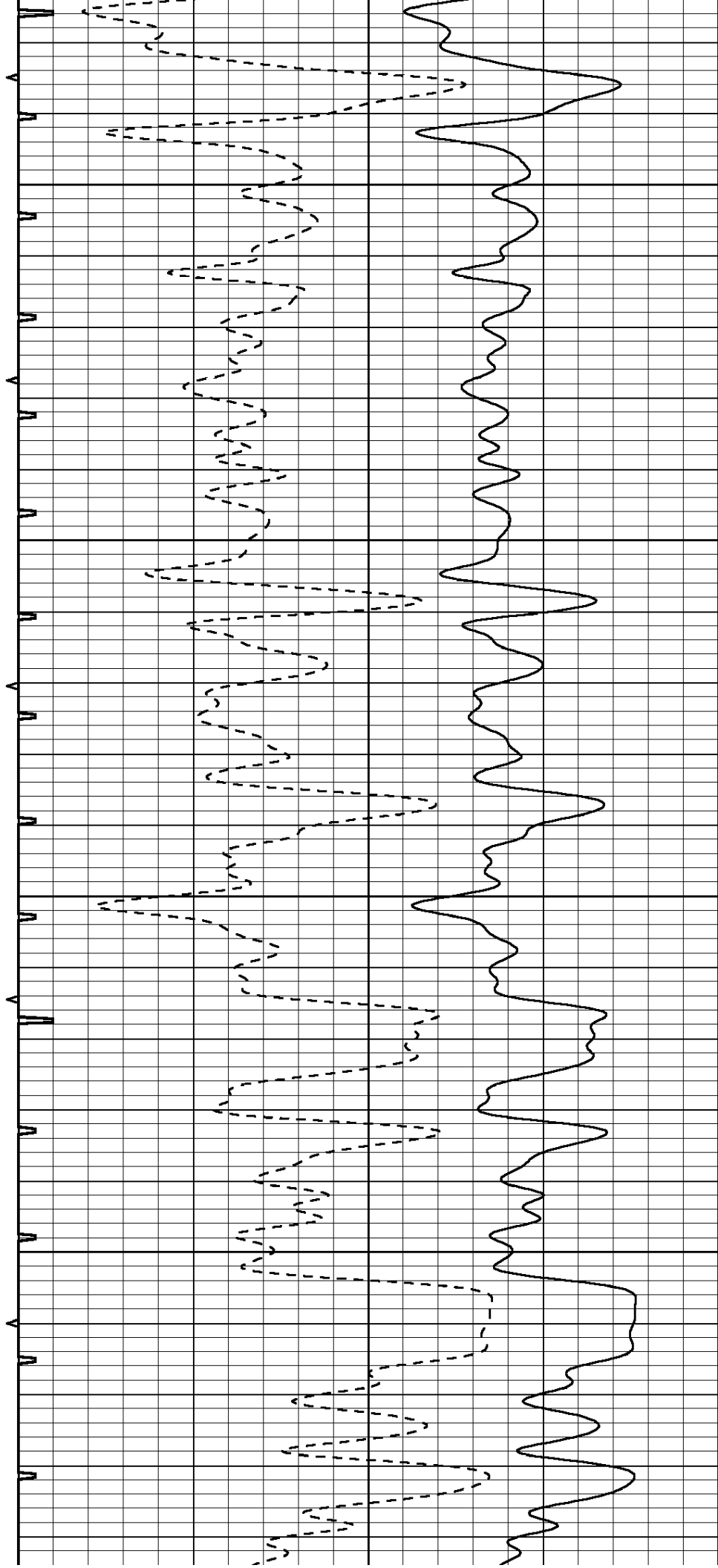
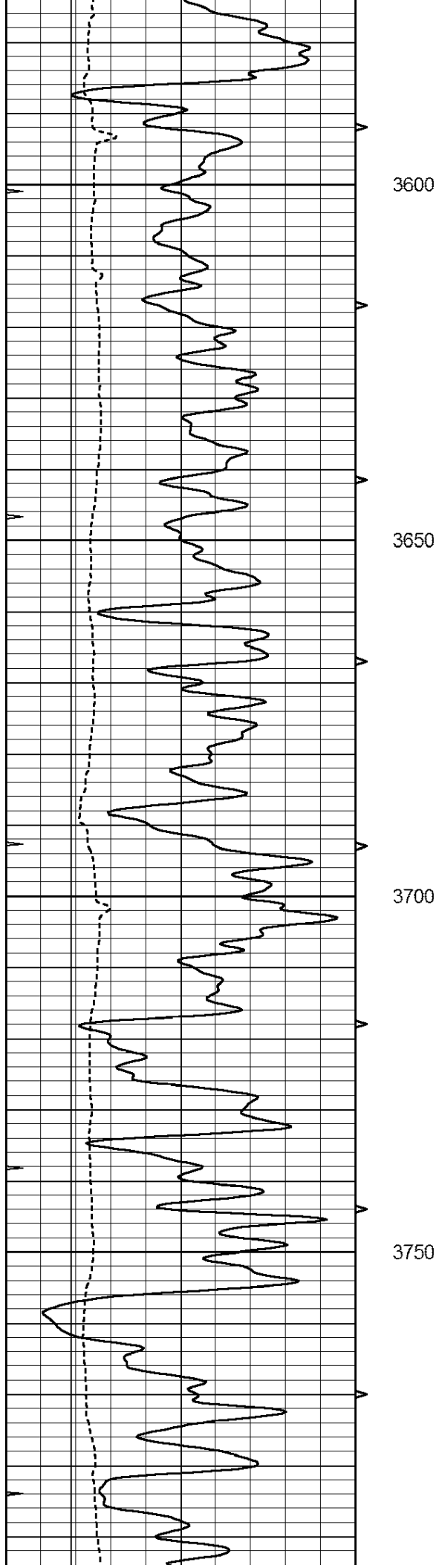
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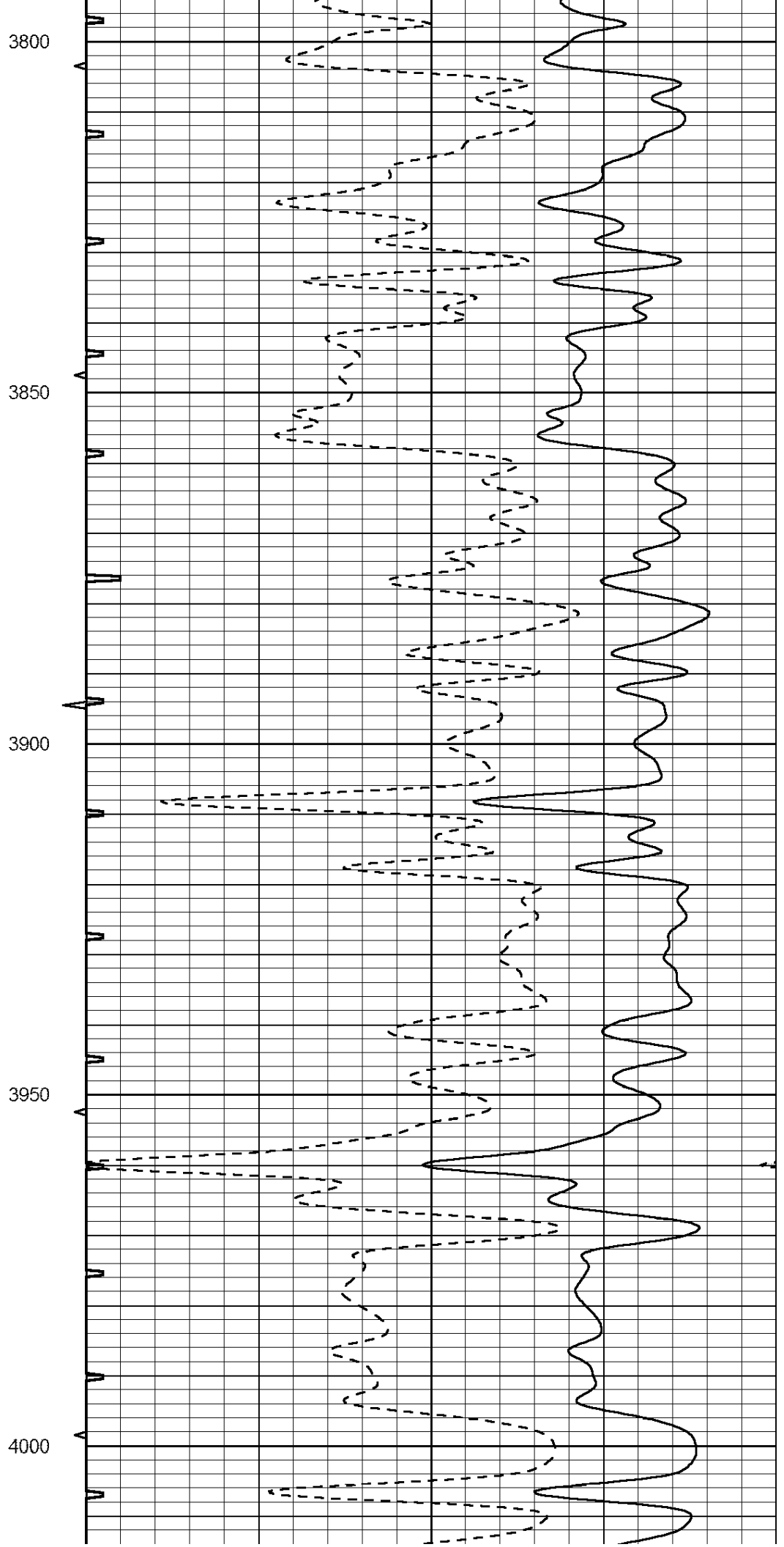
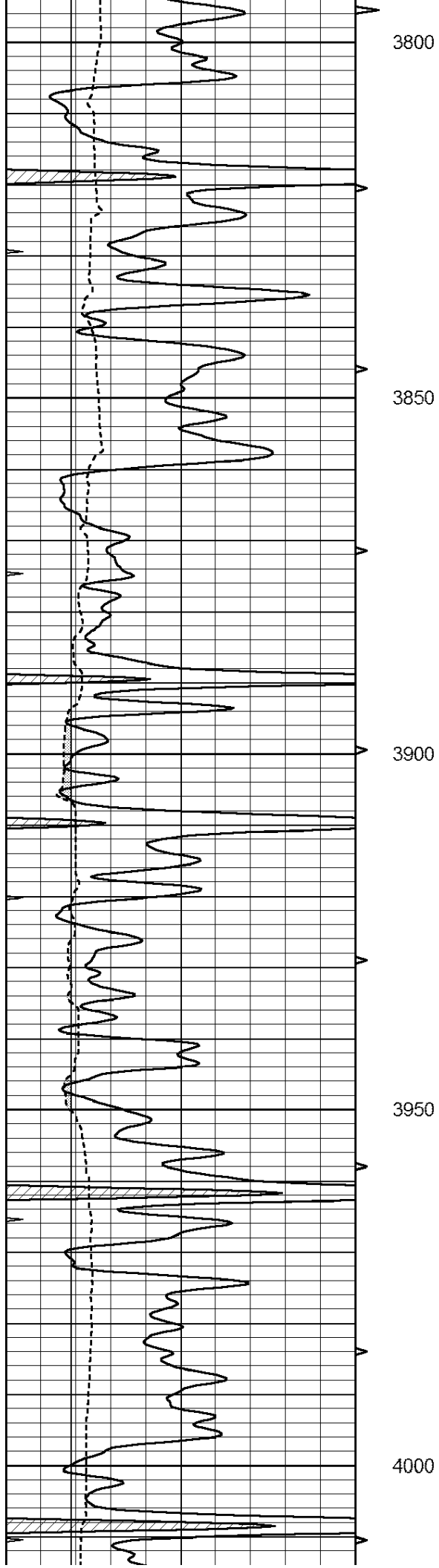
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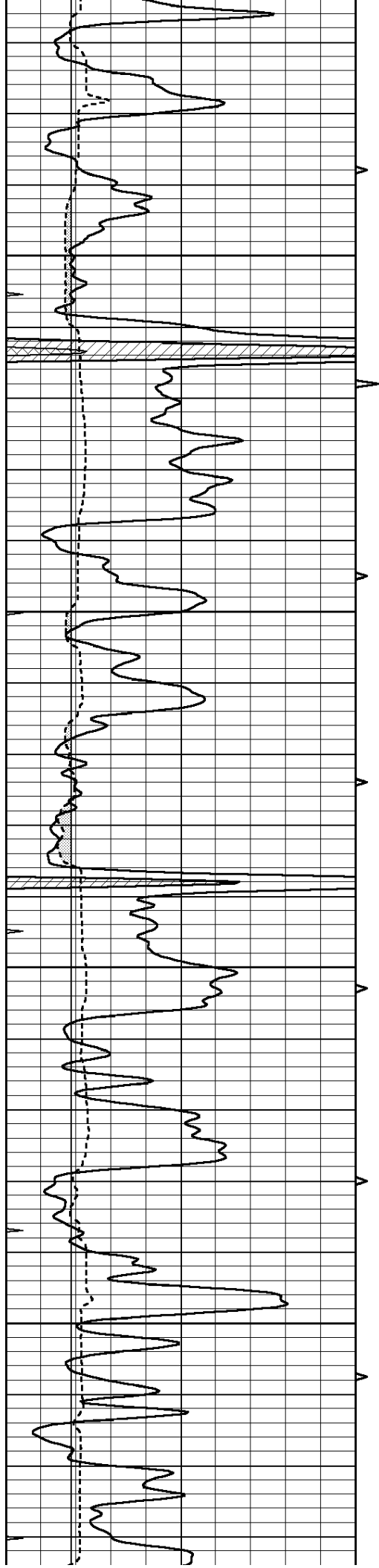
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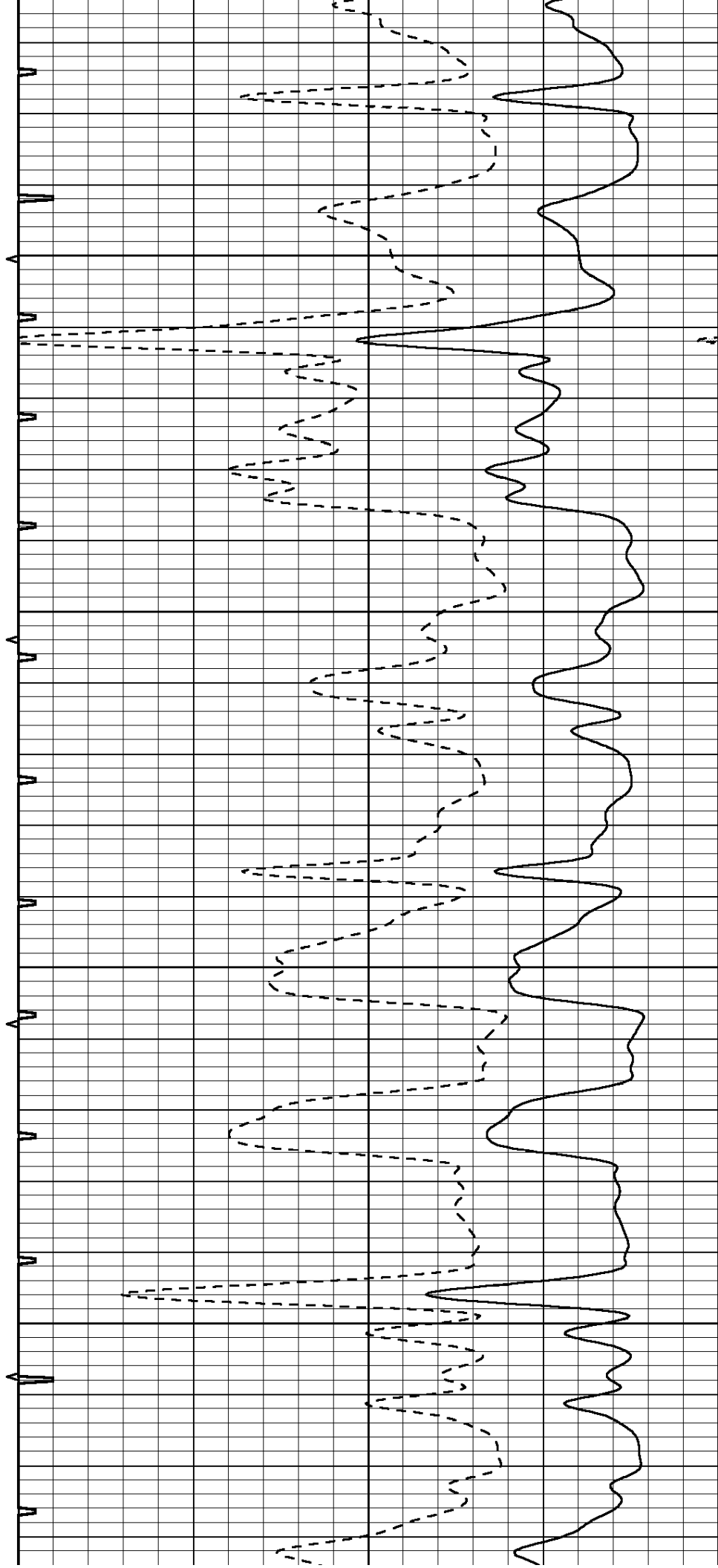


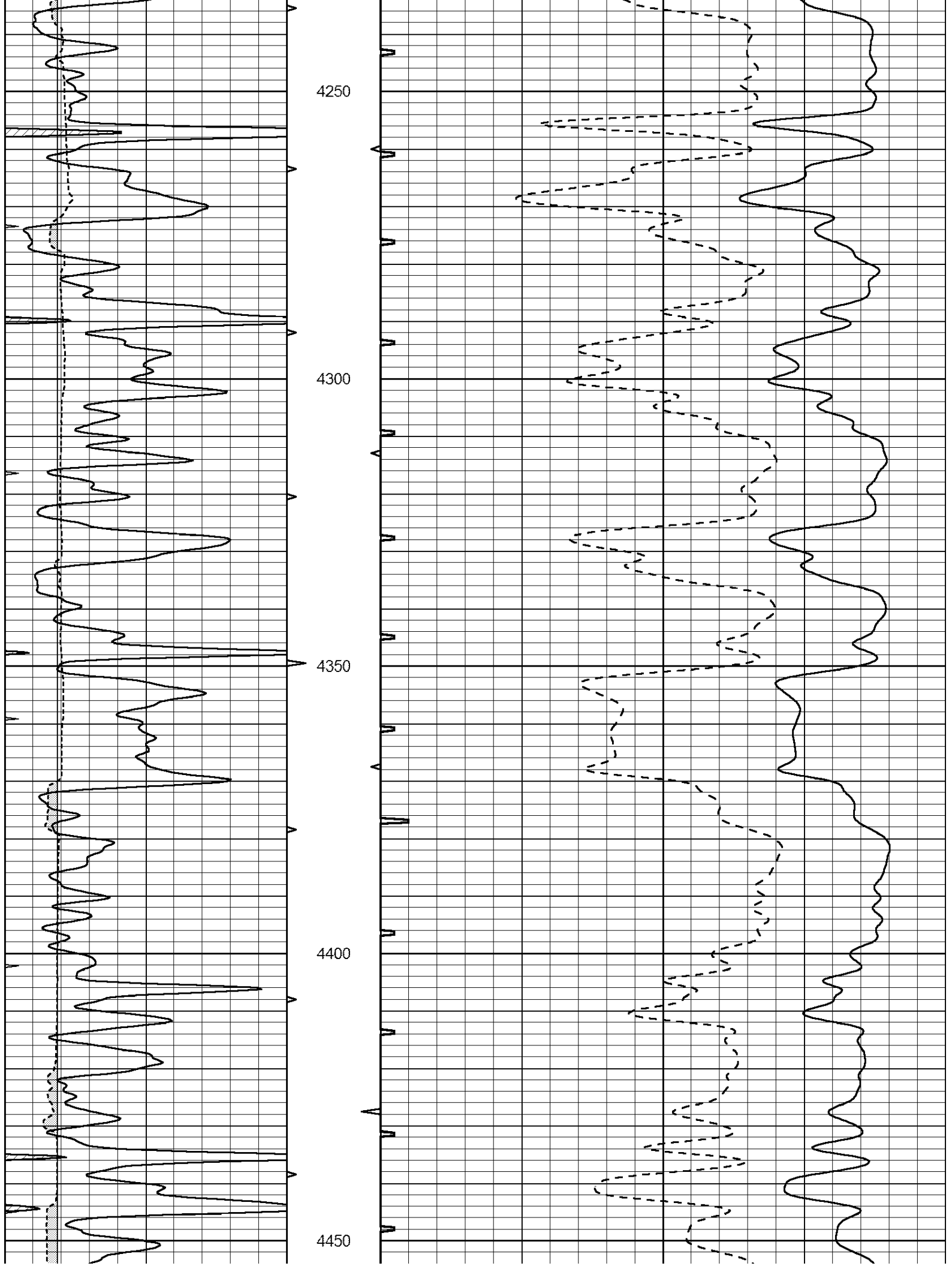
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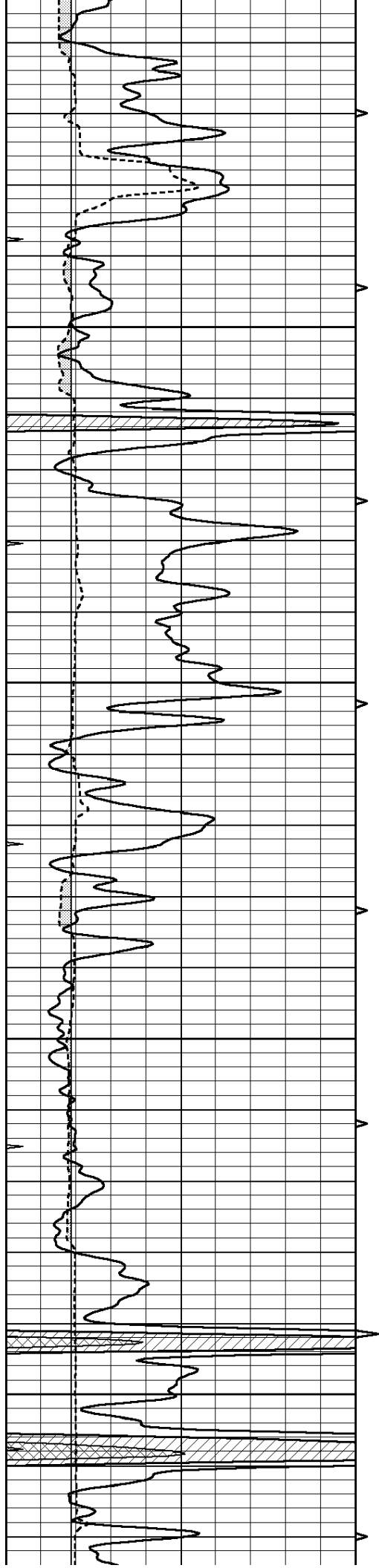
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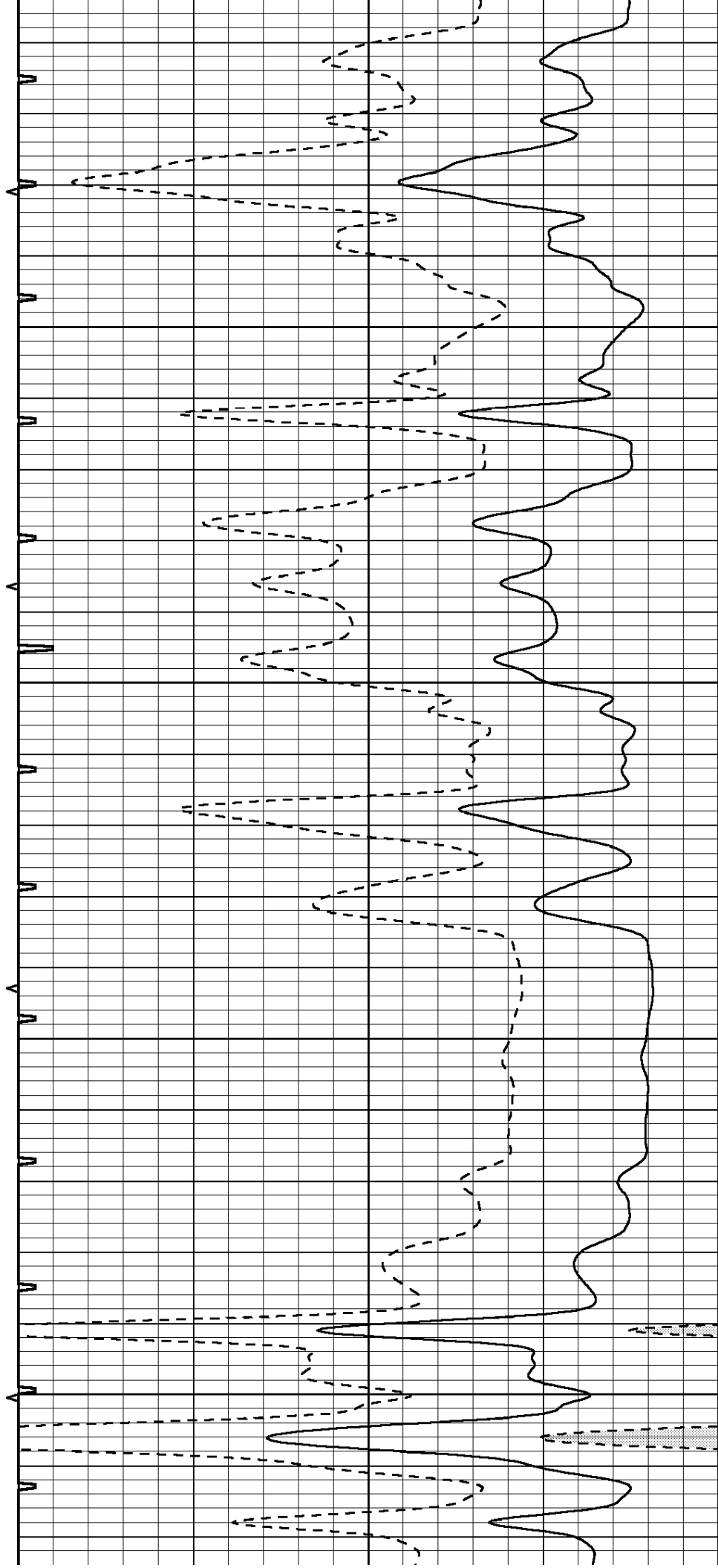


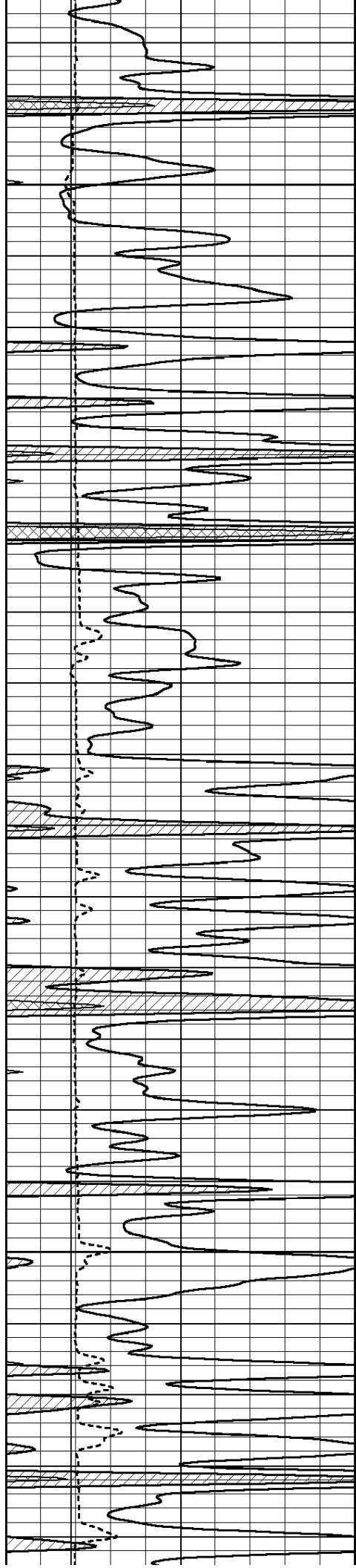
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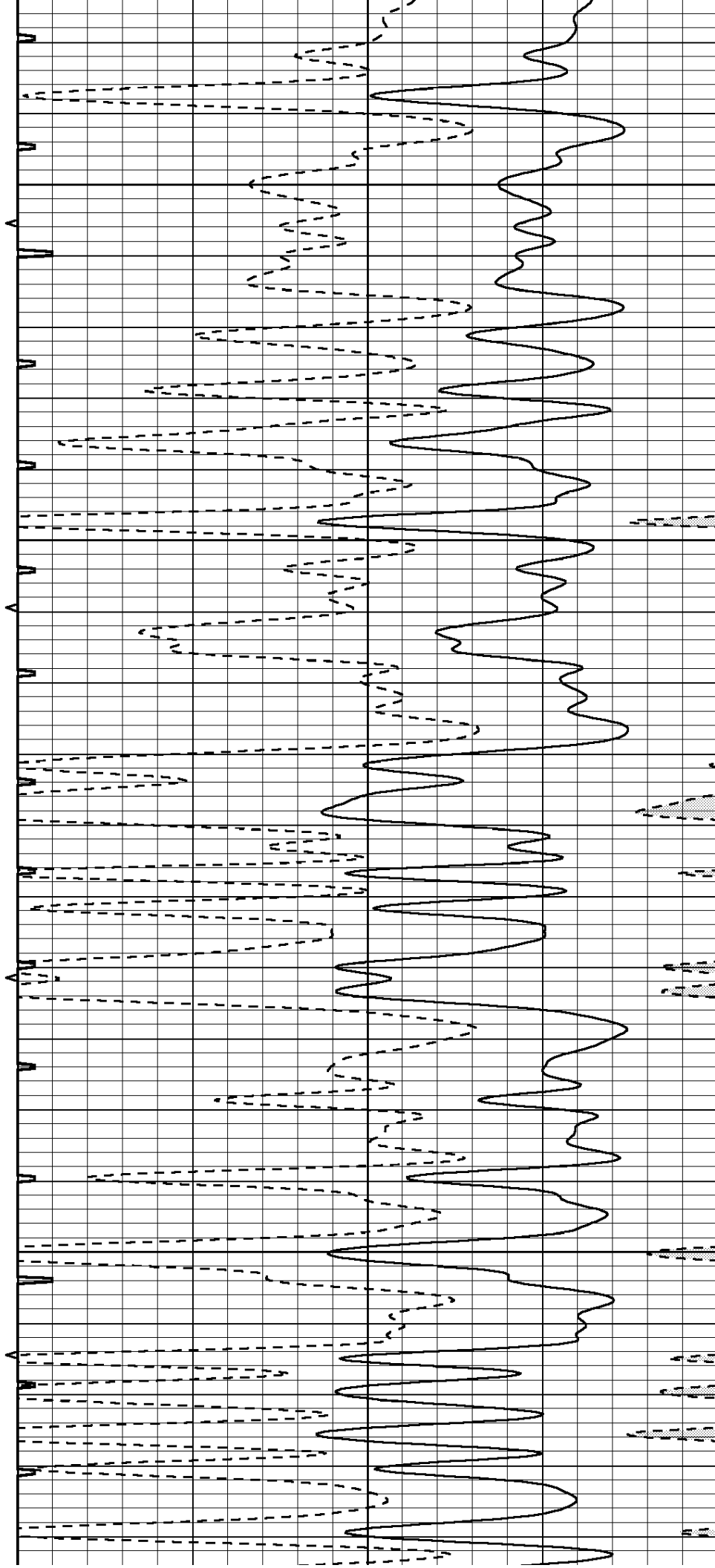


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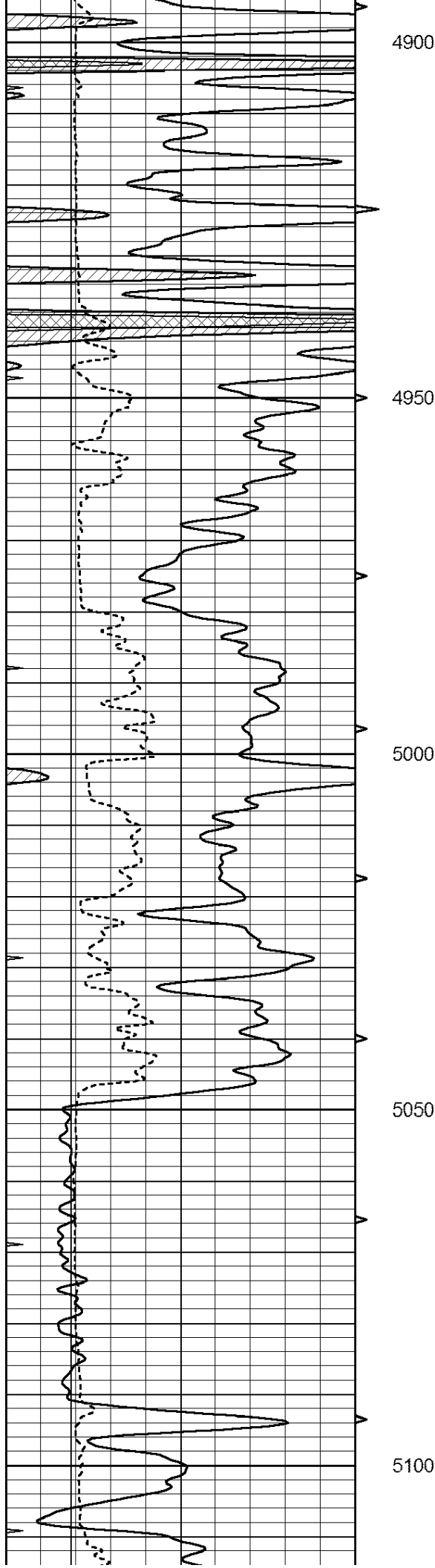
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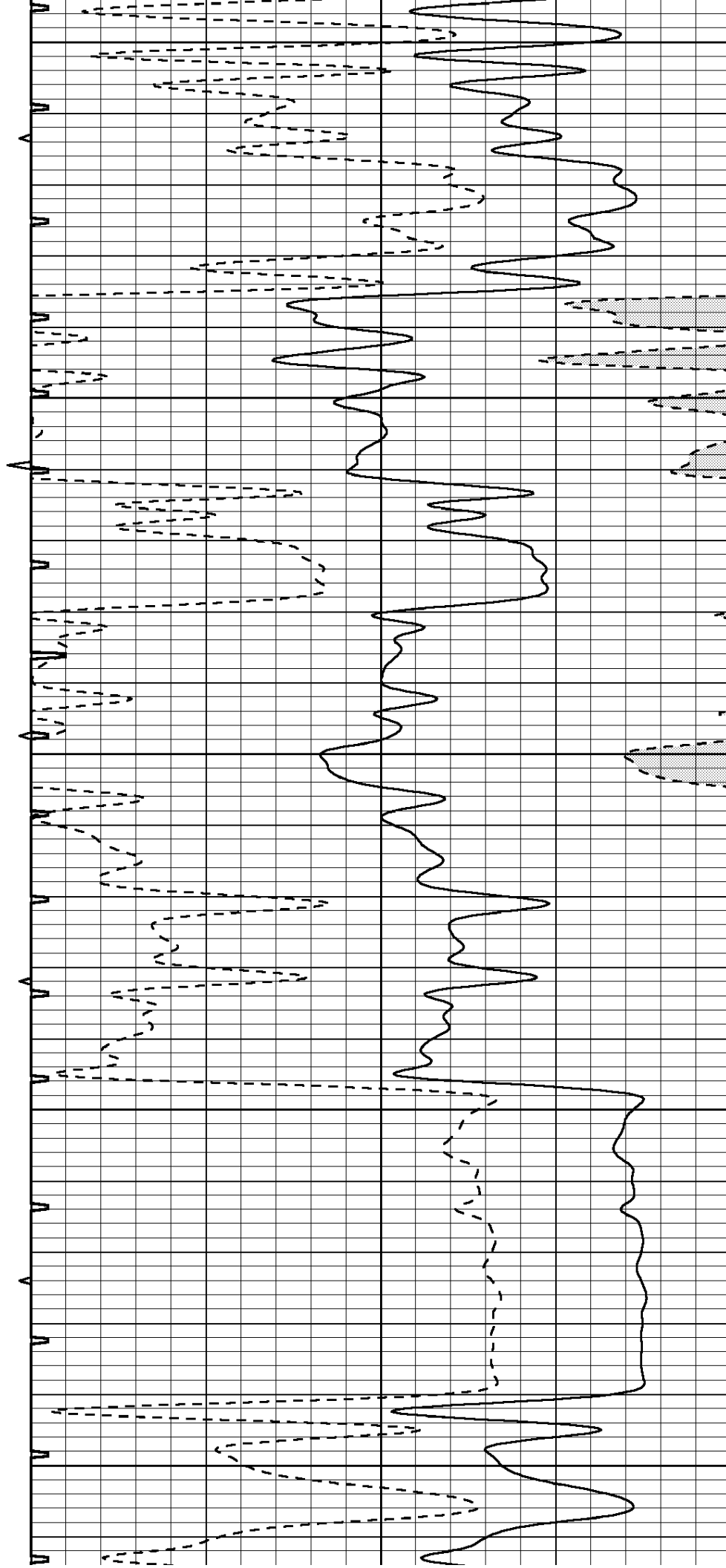
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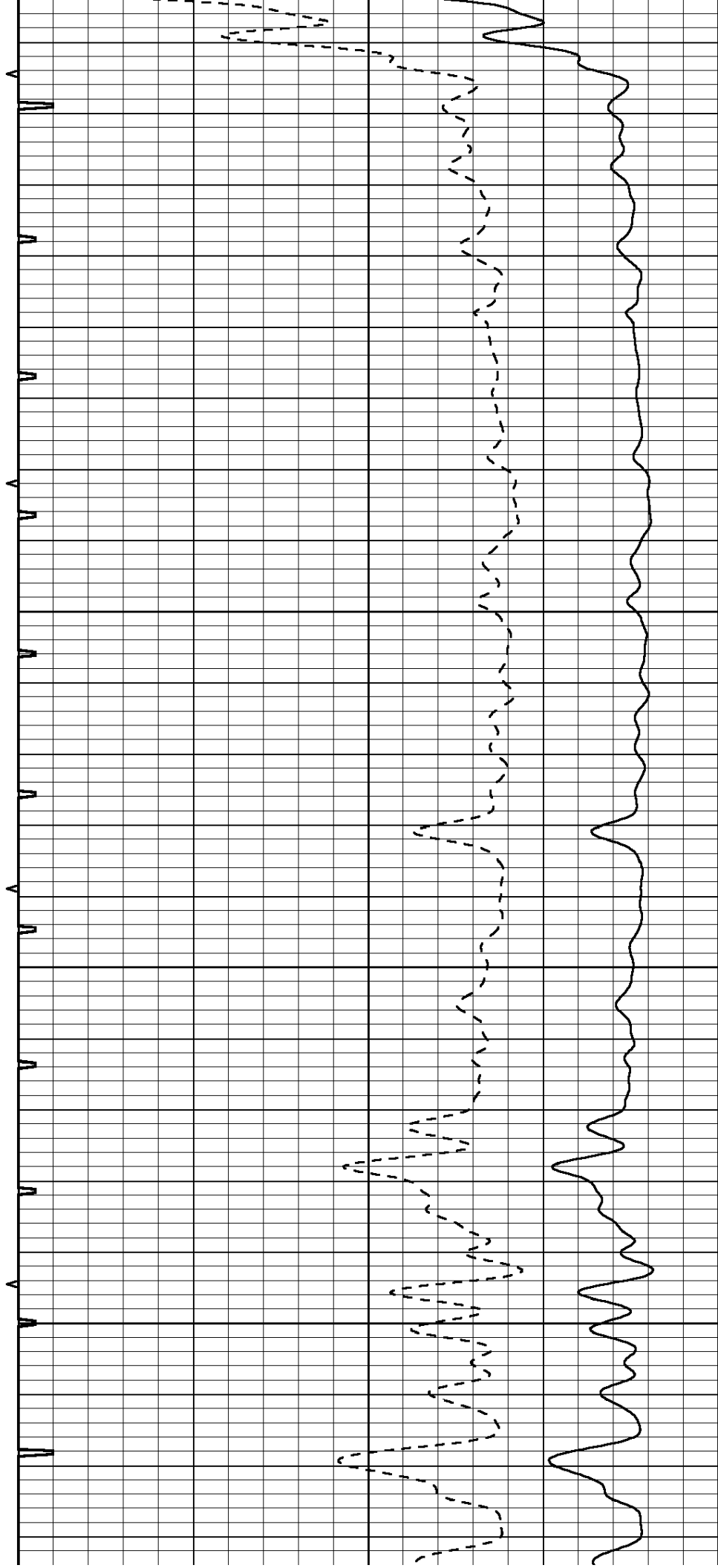
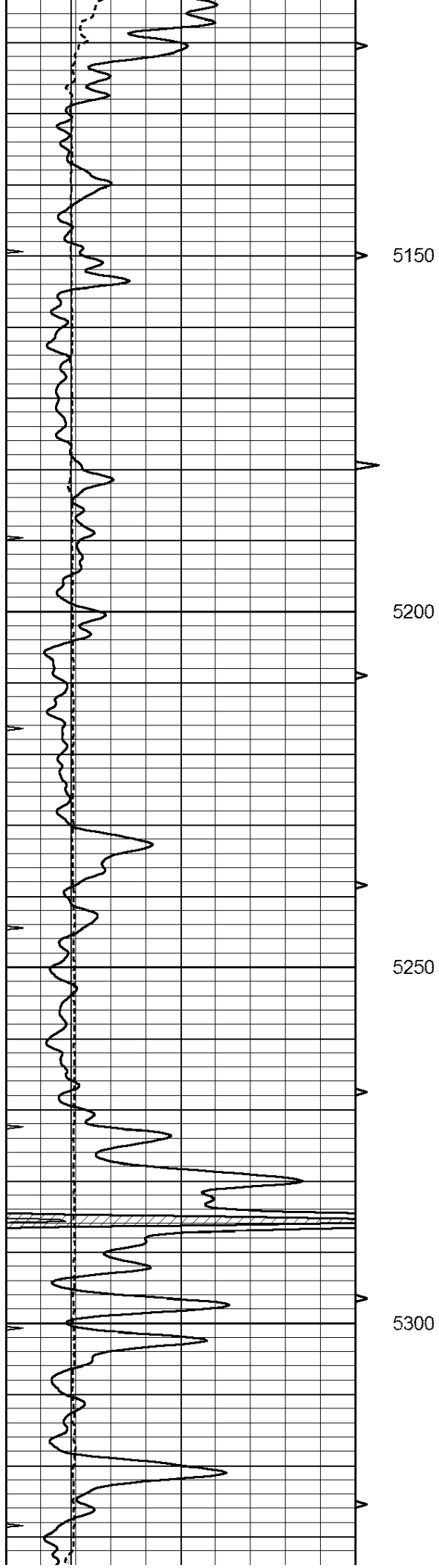
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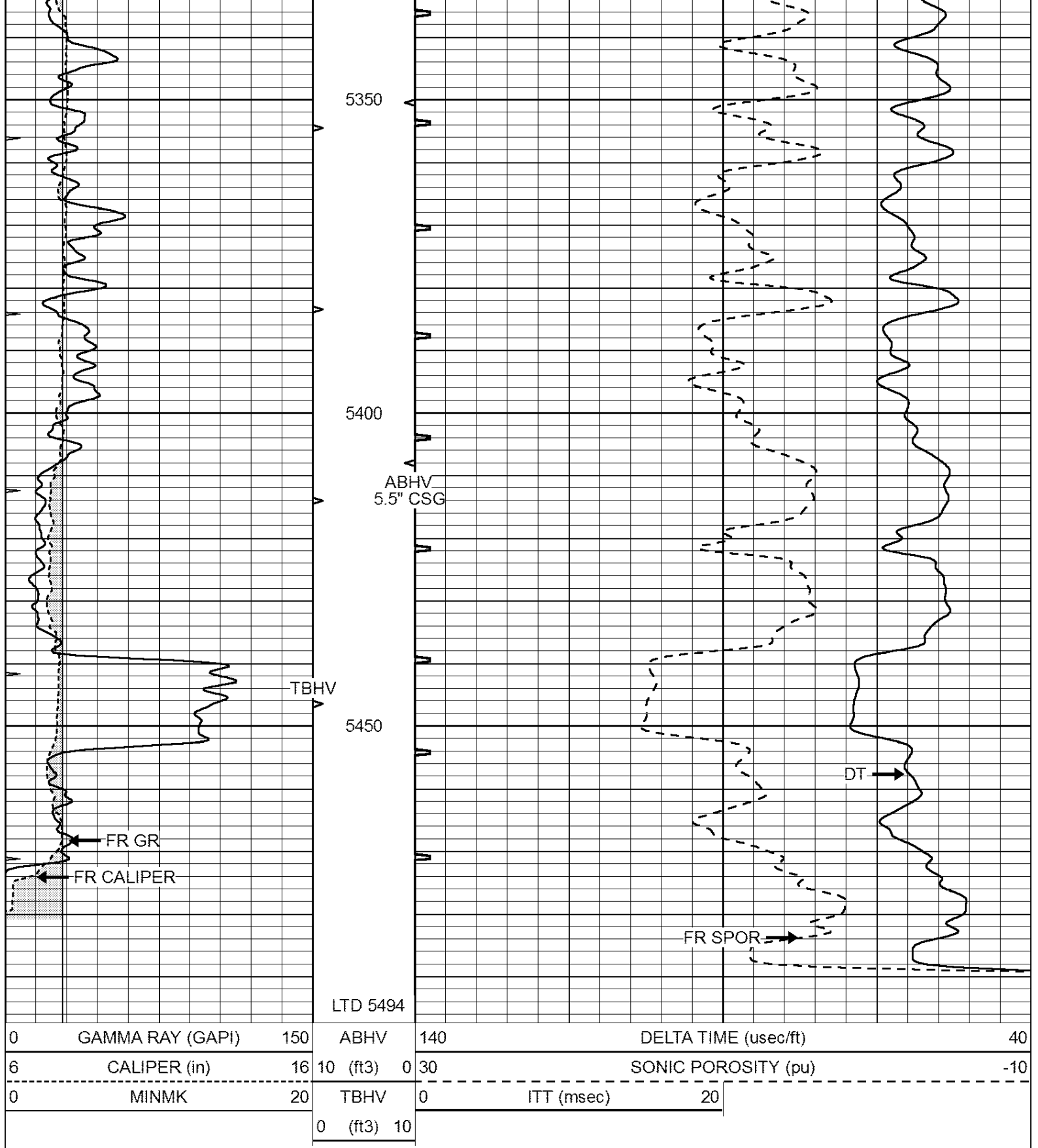
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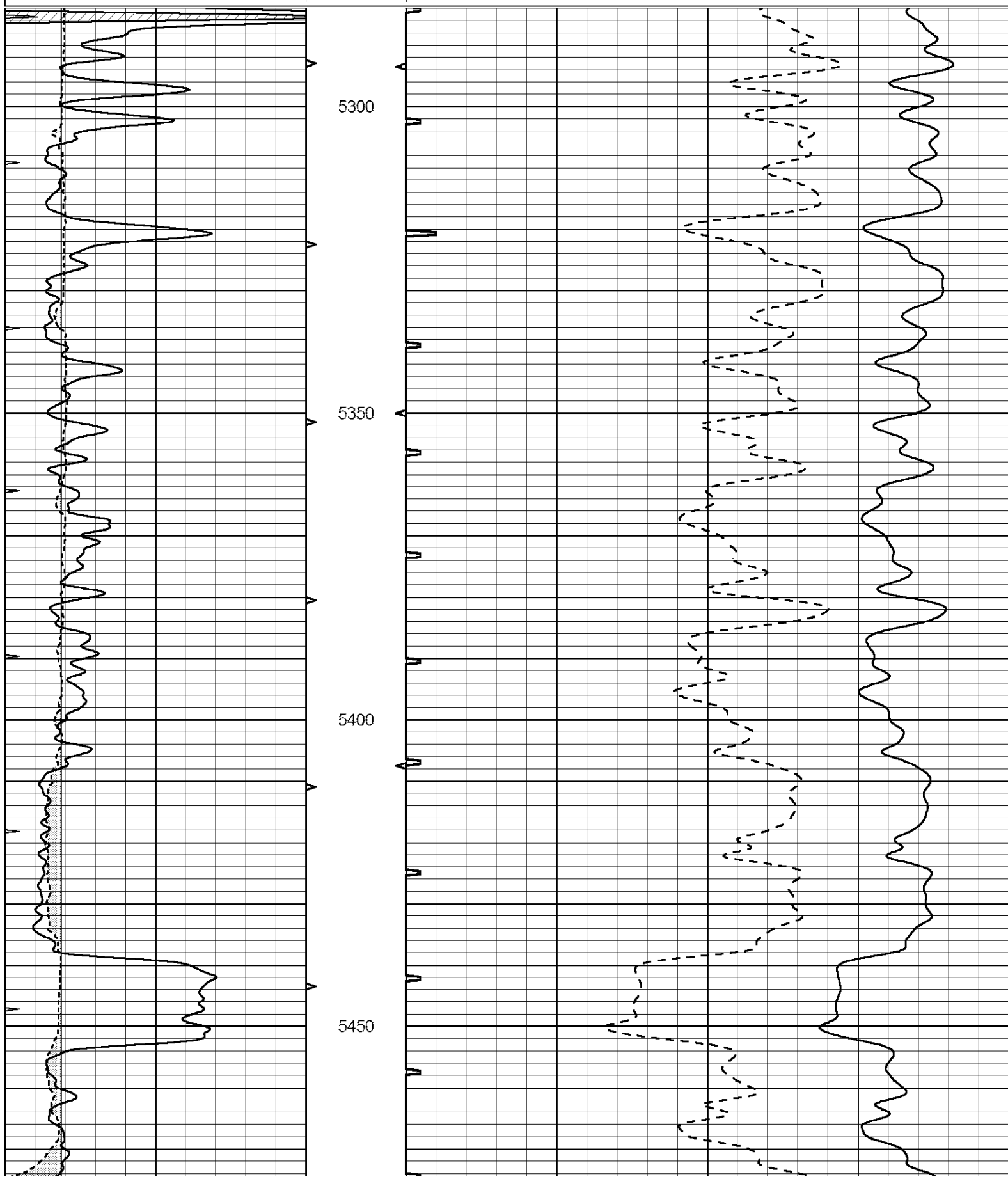


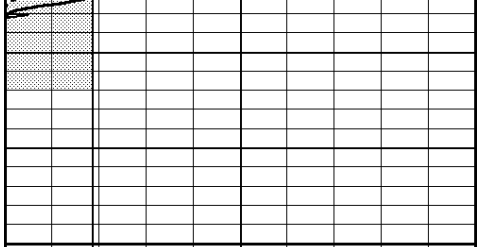
**NABORS**  
COMPLETION  
& PRODUCTION  
SERVICES CO.

# REPEAT SECTION

Database File: 23879pe.db  
Dataset Pathname: pass6  
Presentation Format: slt

0	GAMMA RAY (GAPI)	150	ABHV	140	DELTA TIME (usec/ft)	40
6	CALIPER (in)	16	10 (ft3) 0	30	SONIC POROSITY (pu)	-10
0	MINMK	20	TBHV	0	ITT (msec)	20
			0 (ft3) 10			





5500

0 GAMMA RAY (GAPI) 150

6 CALIPER (in) 16

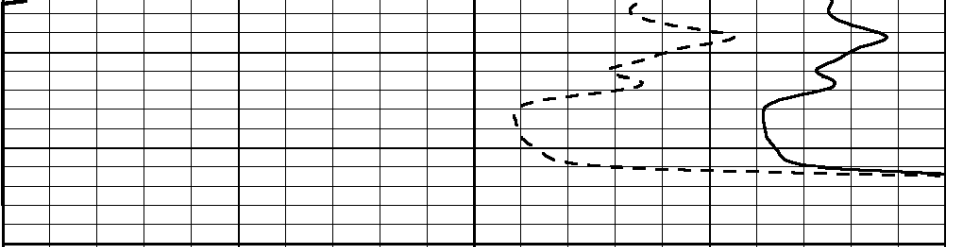
0 MINMK 20

ABHV

10 (ft3) 0

TBHV

0 (ft3) 10



140 DELTA TIME (u sec/ft) 40

30 SONIC POROSITY (pu) -10

0 ITT (msec) 20