



**SONIC  
LOG**

Company BLACK STONE PETROLEUM, LLC  
 Well SWOB #1  
 Field OTIS-ALBERT  
 County RUSH  
 State KANSAS

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 Well SWOB #1  
 Field OTIS-ALBERT  
 County RUSH State KANSAS

Location: API # : 15-165-22144-00-00  
 405' FSL & 510' FWL  
 SEC 26 TWP 18S RGE 16W  
 Permanent Datum GROUND LEVEL Elevation 1962'  
 Log Measured From KELLY BUSHING 9' A.G.L.  
 Drilling Measured From KELLY BUSHING  
 Other Services CDL/CNL/DIL MEL  
 Elevation K.B. 1971  
 D.F. 1969  
 G.L. 1962

Date	04/17/17		
Run Number	TWO		
Depth Driller	3619		
Depth Logger	3595		
Bottom Logged Interval	3575		
Top Log Interval	300		
Casing Driller	8 5/8" @ 374		
Casing Logger	374		
Bit Size	8 3/4"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 47000 PPM	
Density / Viscosity	9.1/38		
pH / Fluid Loss	9.8/6.9		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.10@70		
Rmt @ Meas. Temp	.075@70		
Rmc @ Meas. Temp	.12@70		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.06@112		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	BOB BAYER		

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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 ELI WIRELINE, HAYS, KS. (785) 628-6395

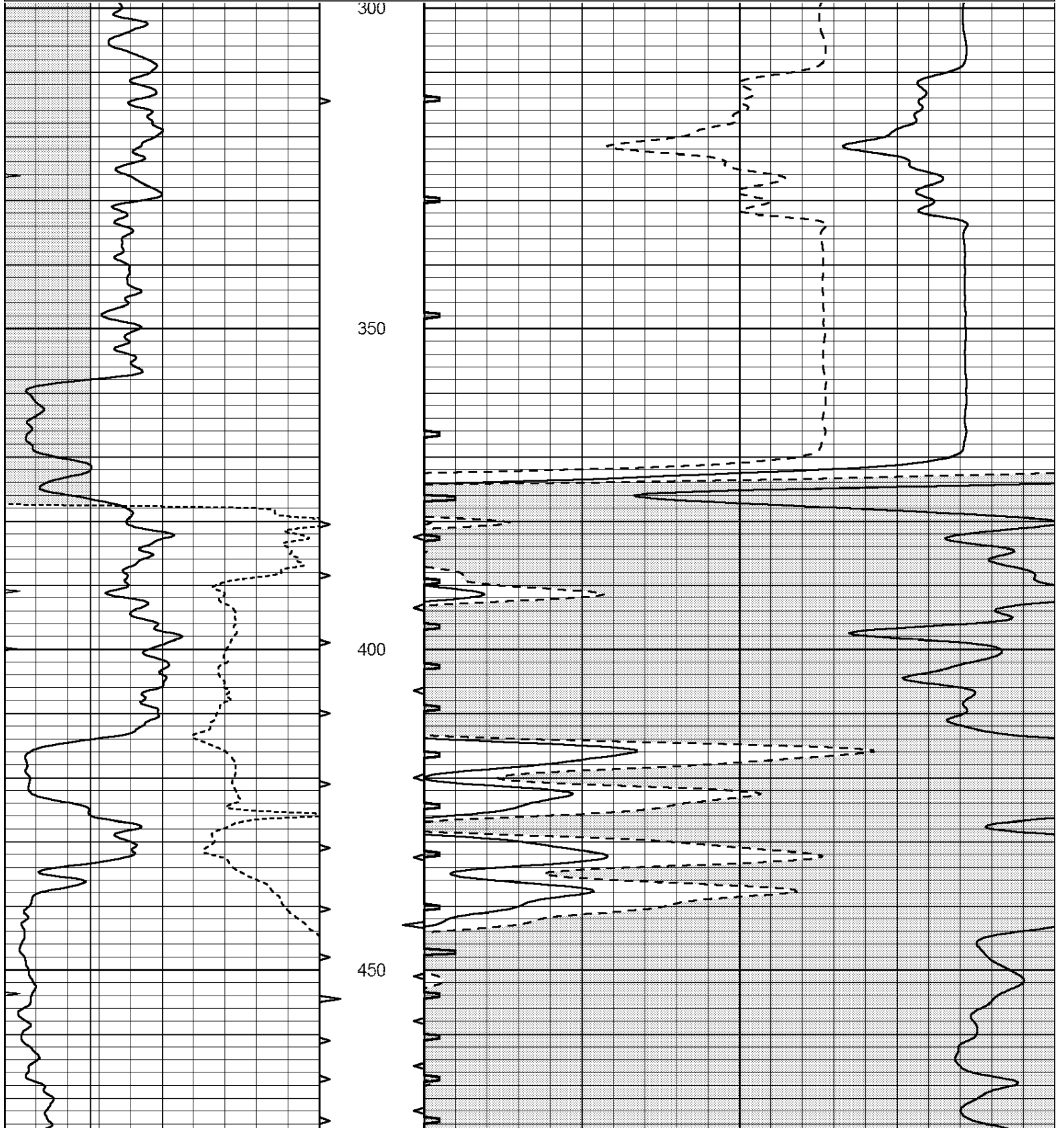
DIRECTIONS  
 96 HIGHWAY OUT OF RUSH CENTER EAST TO 380 RD.  
 SOUTH 3/4 MILE  
 EAST INTO.

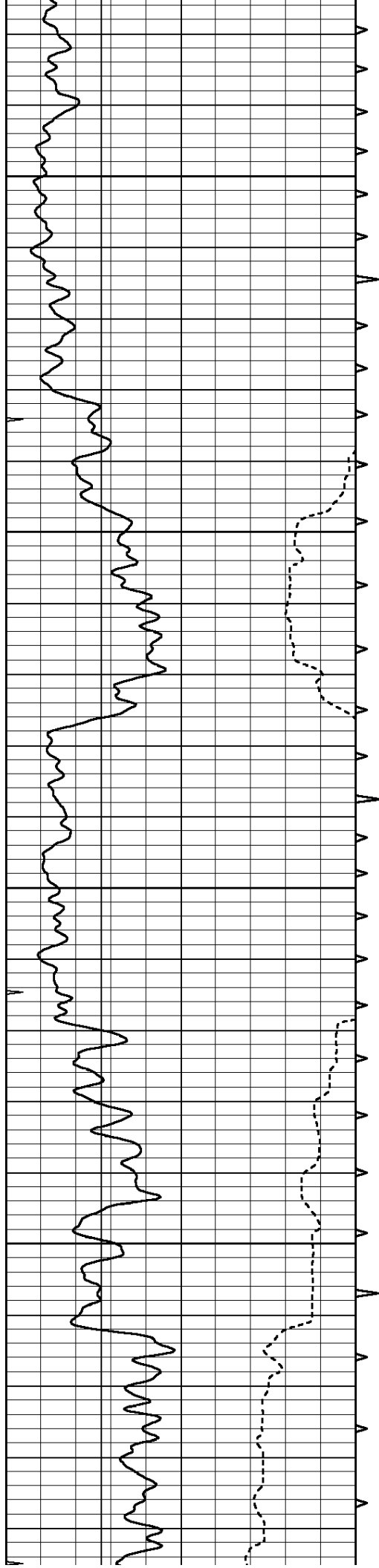


**MAIN PASS**

Database File: 1462ddn.db  
 Dataset Pathname: pass6.1  
 Presentation Format: \_slt  
 Dataset Creation: Tue Apr 18 00:43:49 2017 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

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



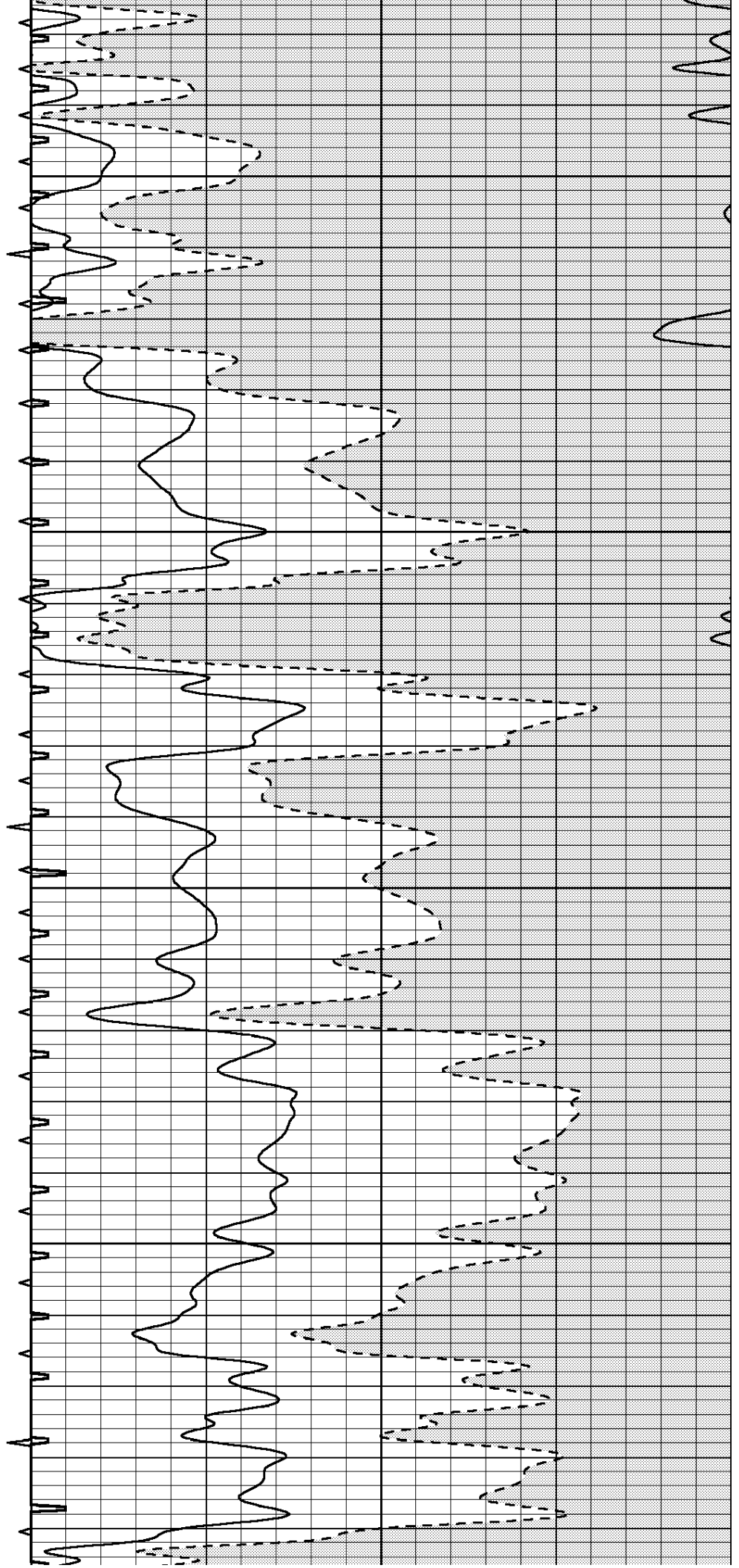


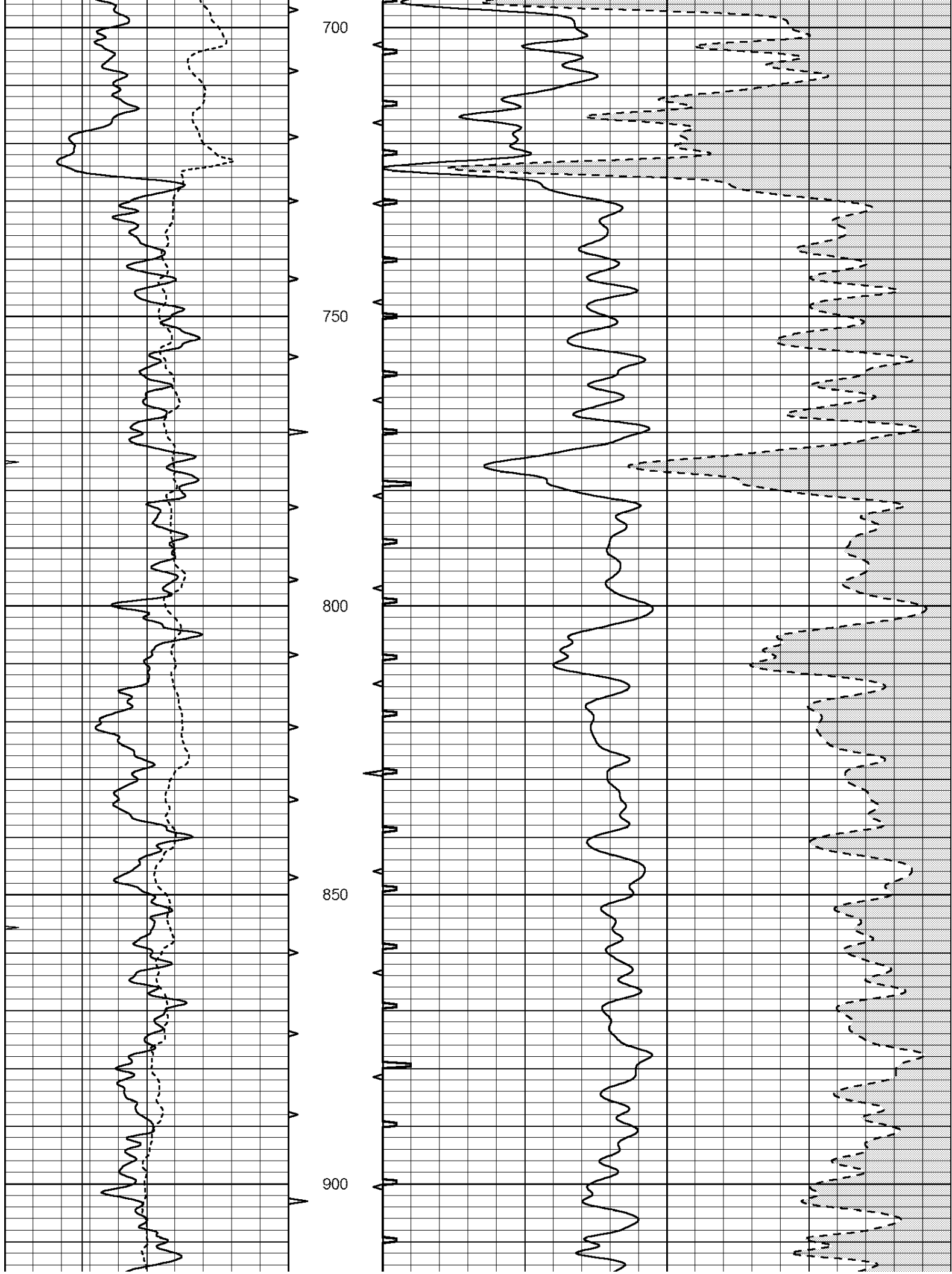
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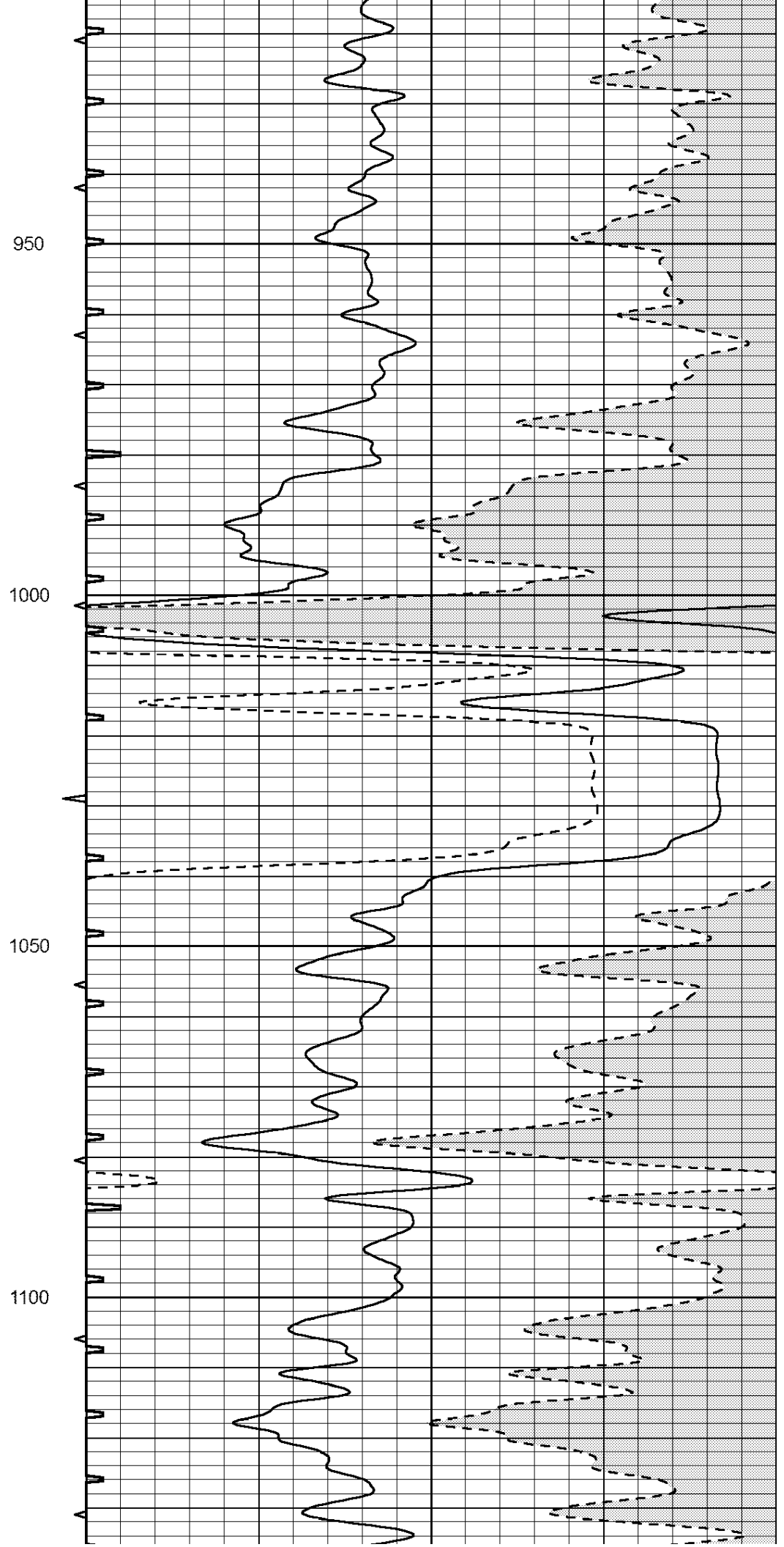
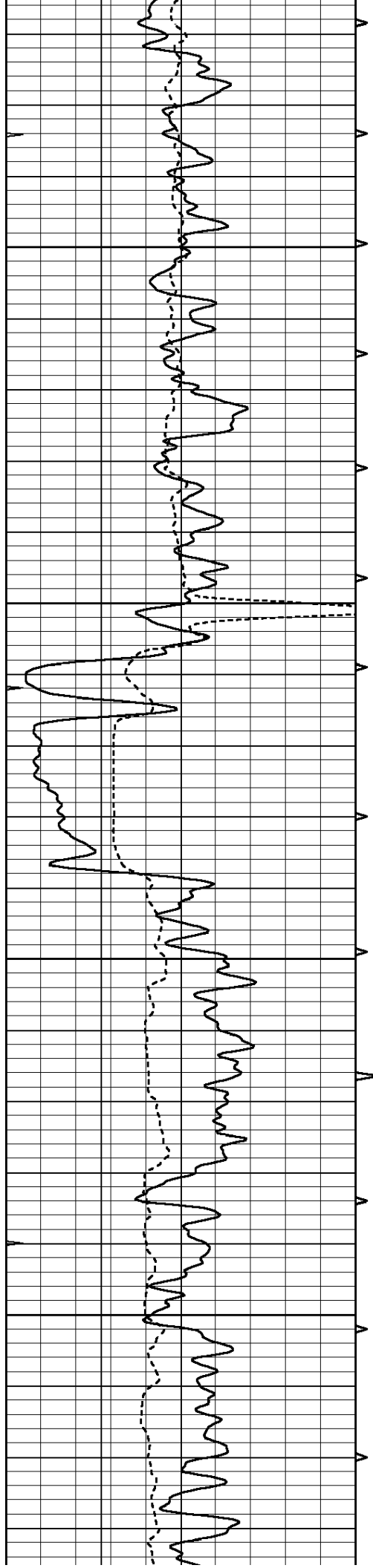
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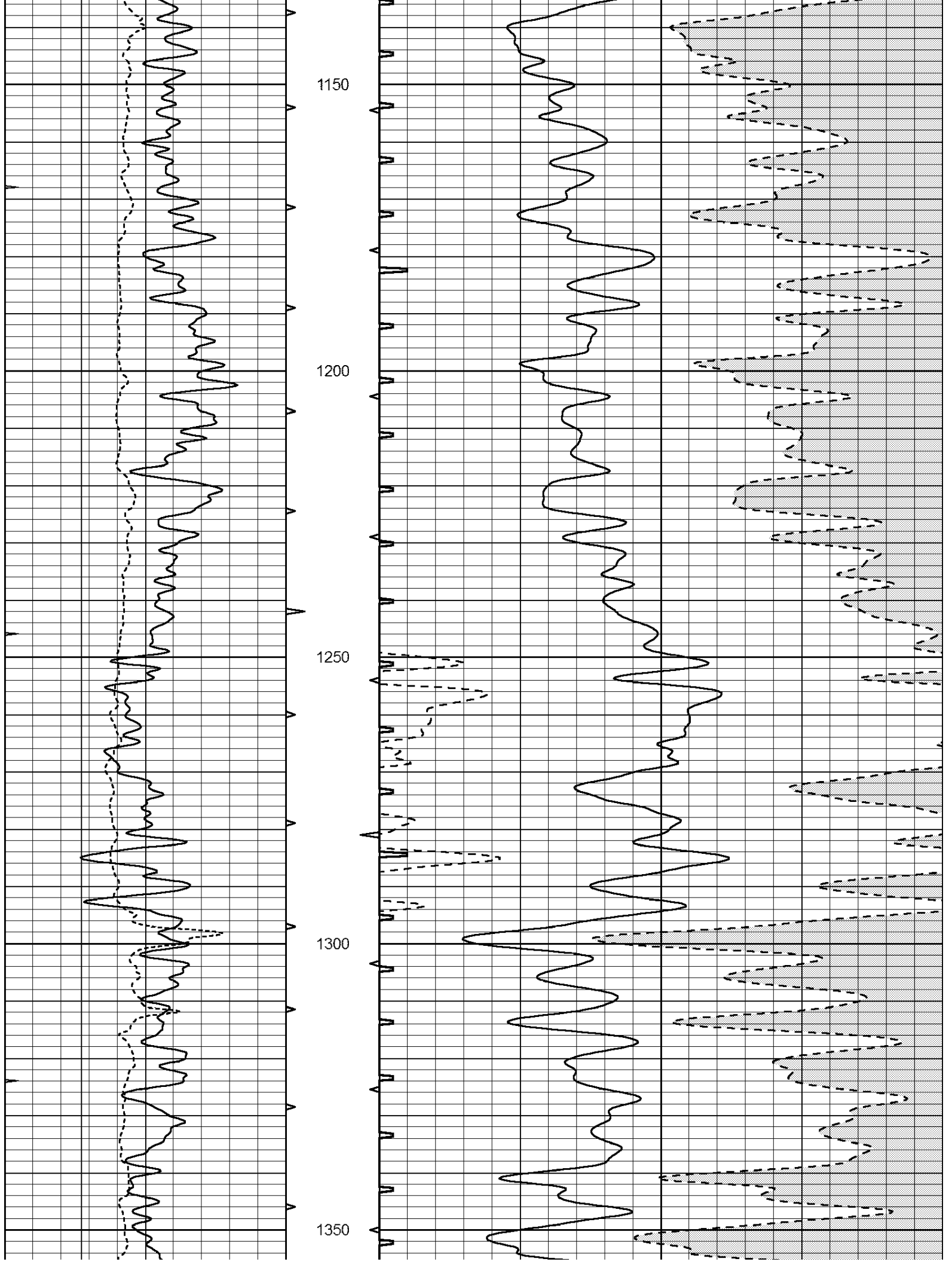
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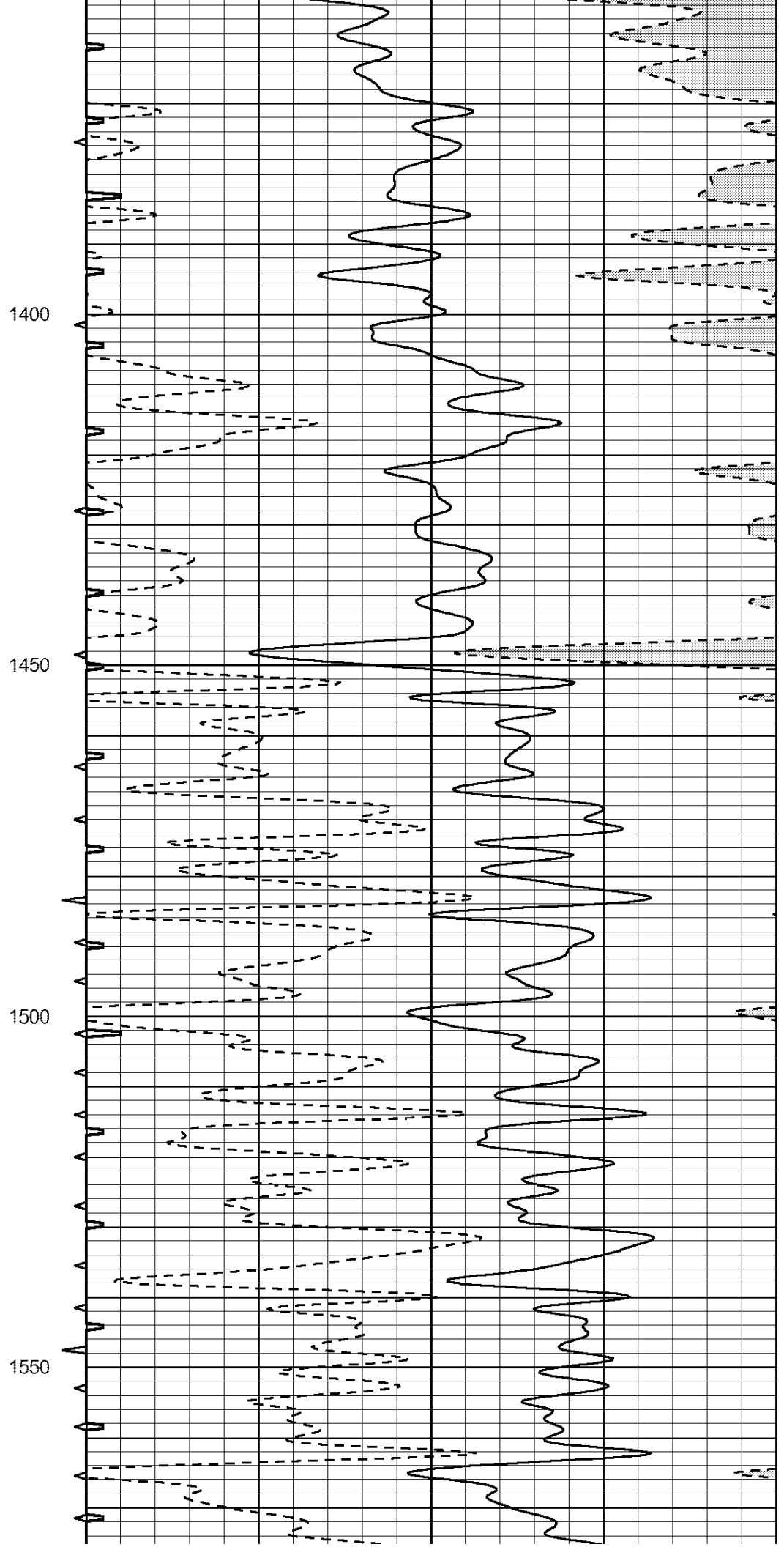
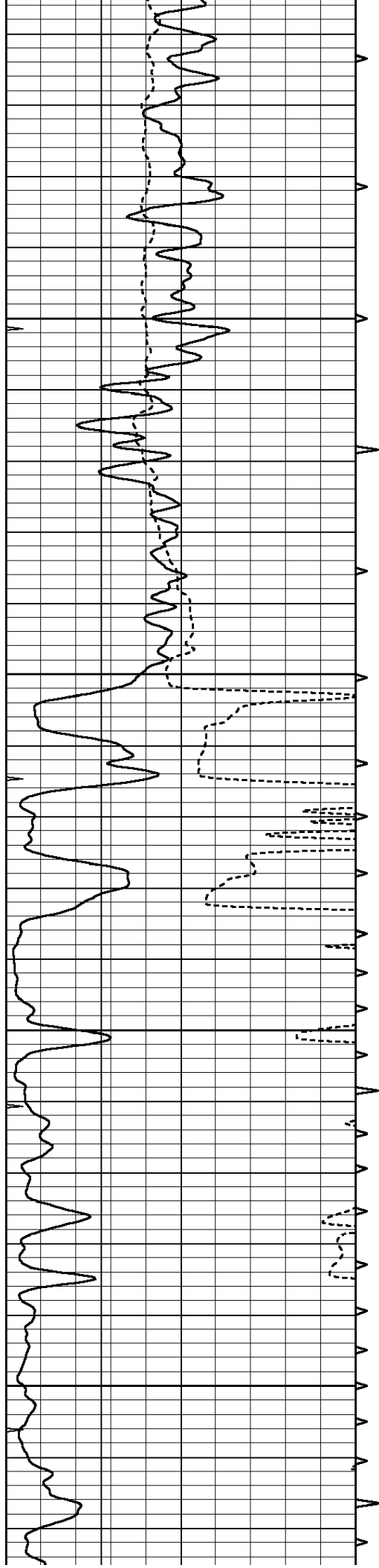
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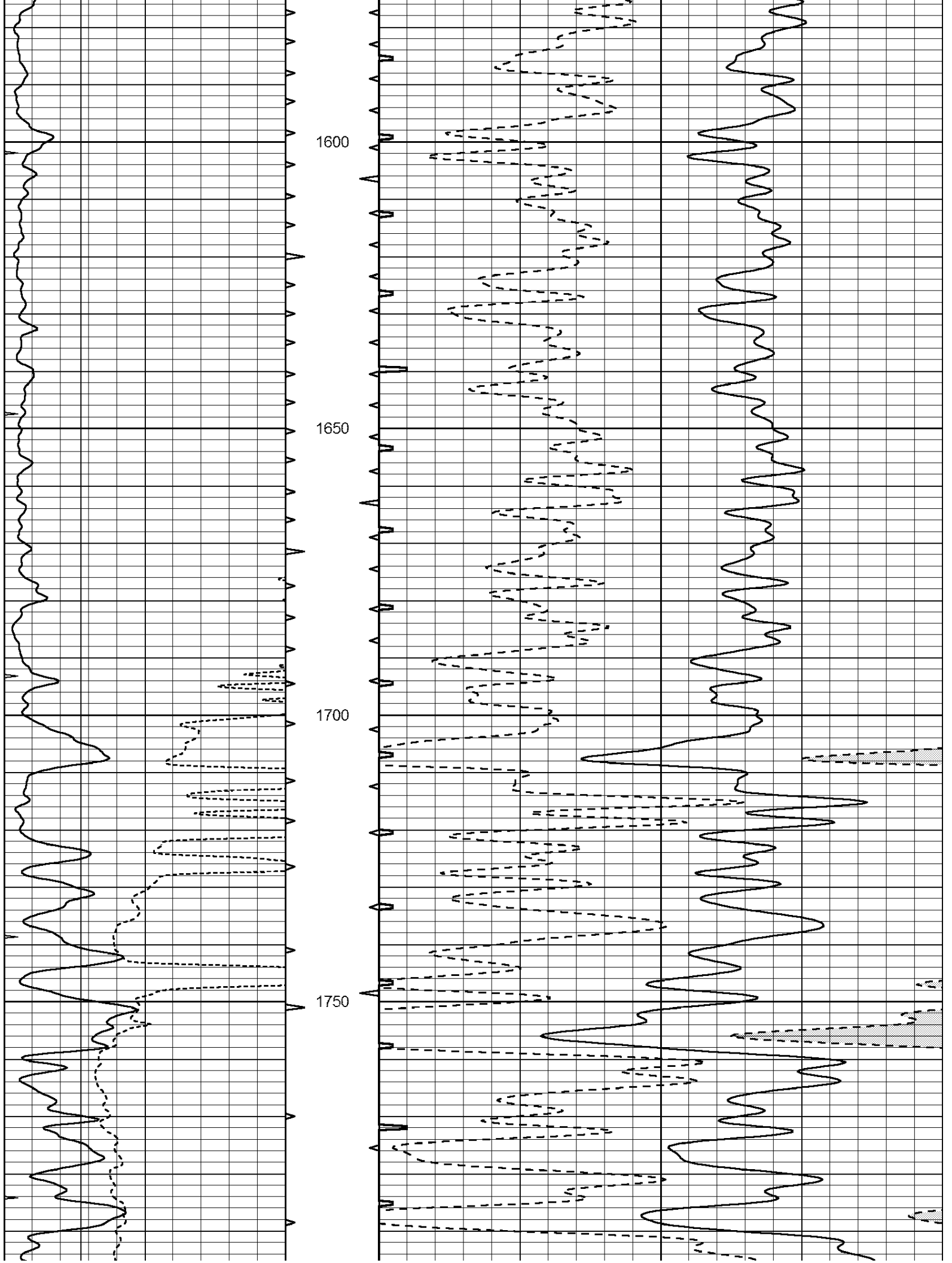


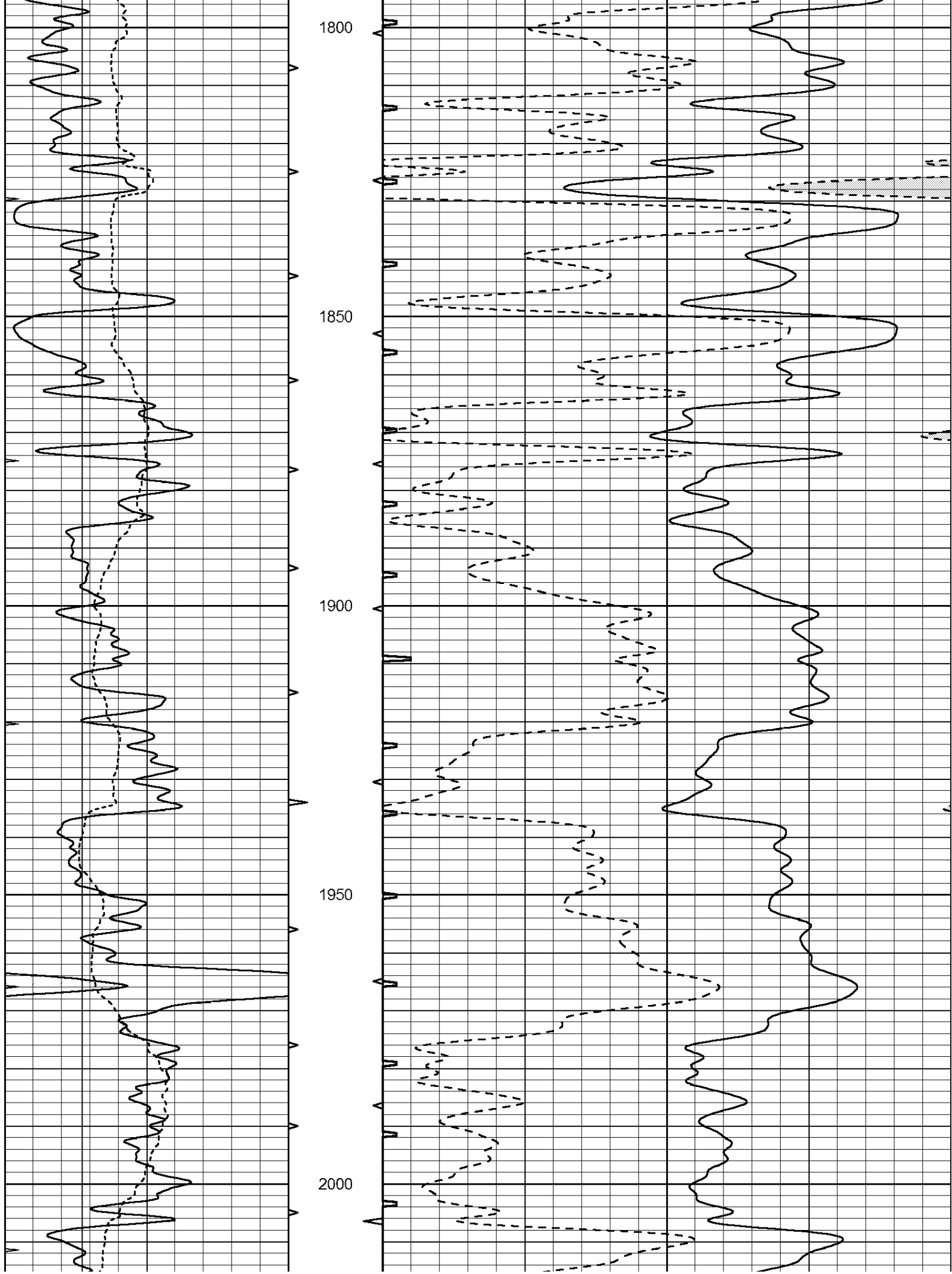


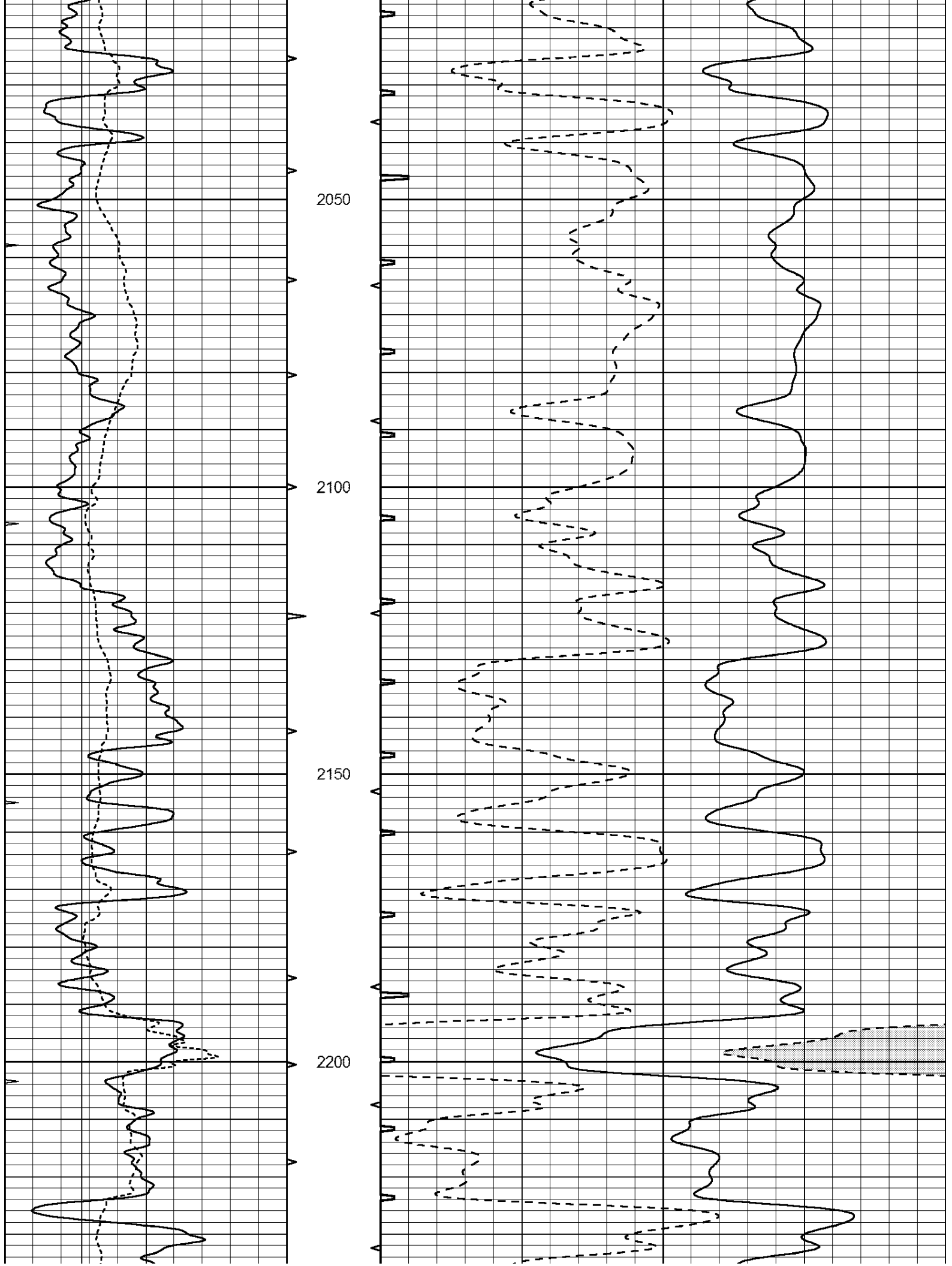


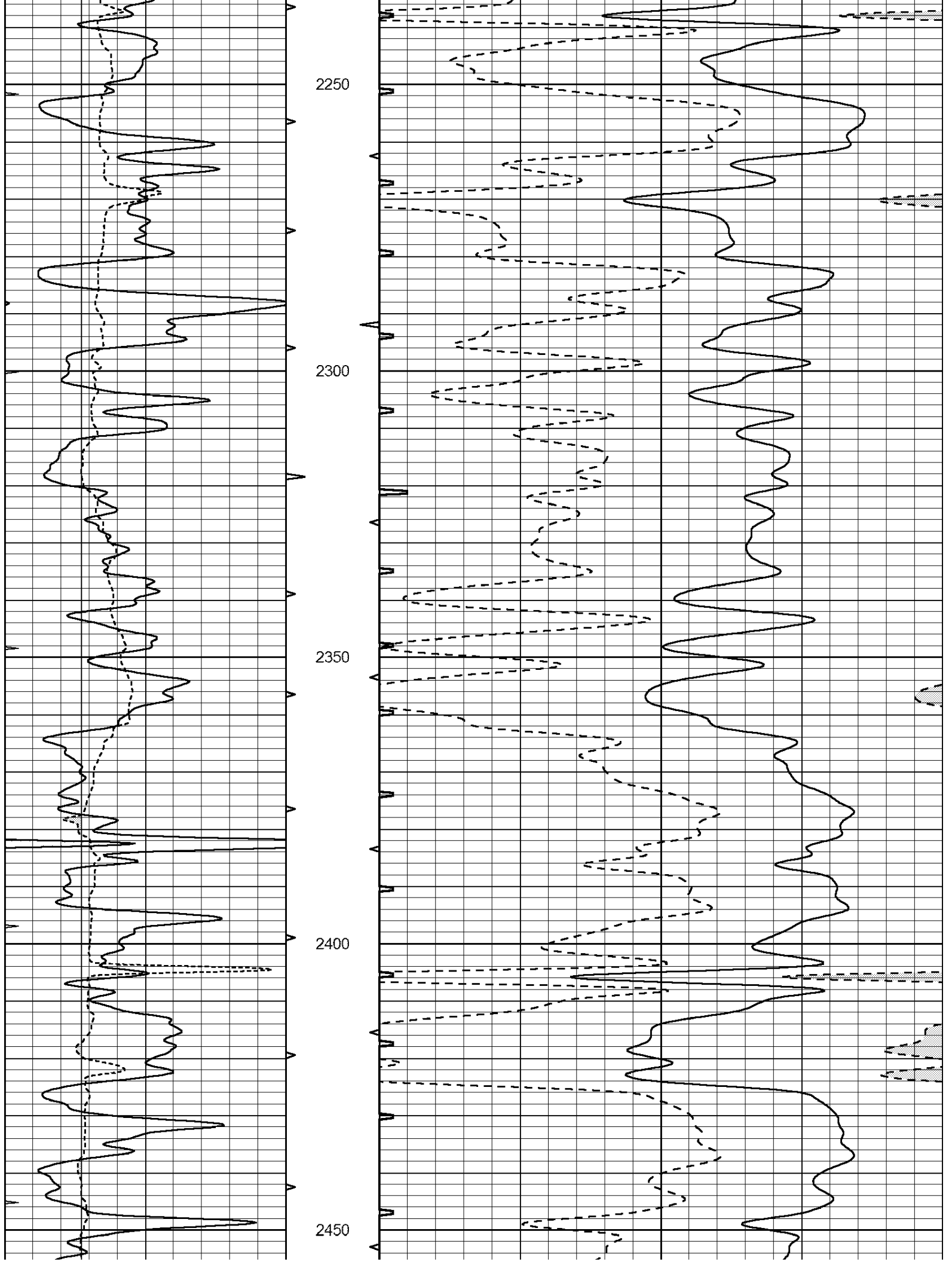


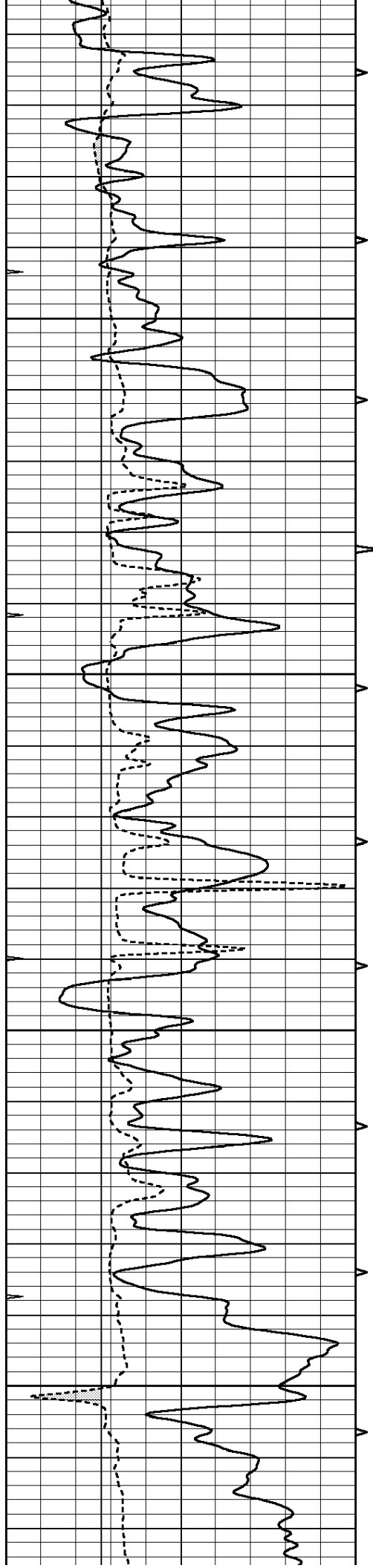










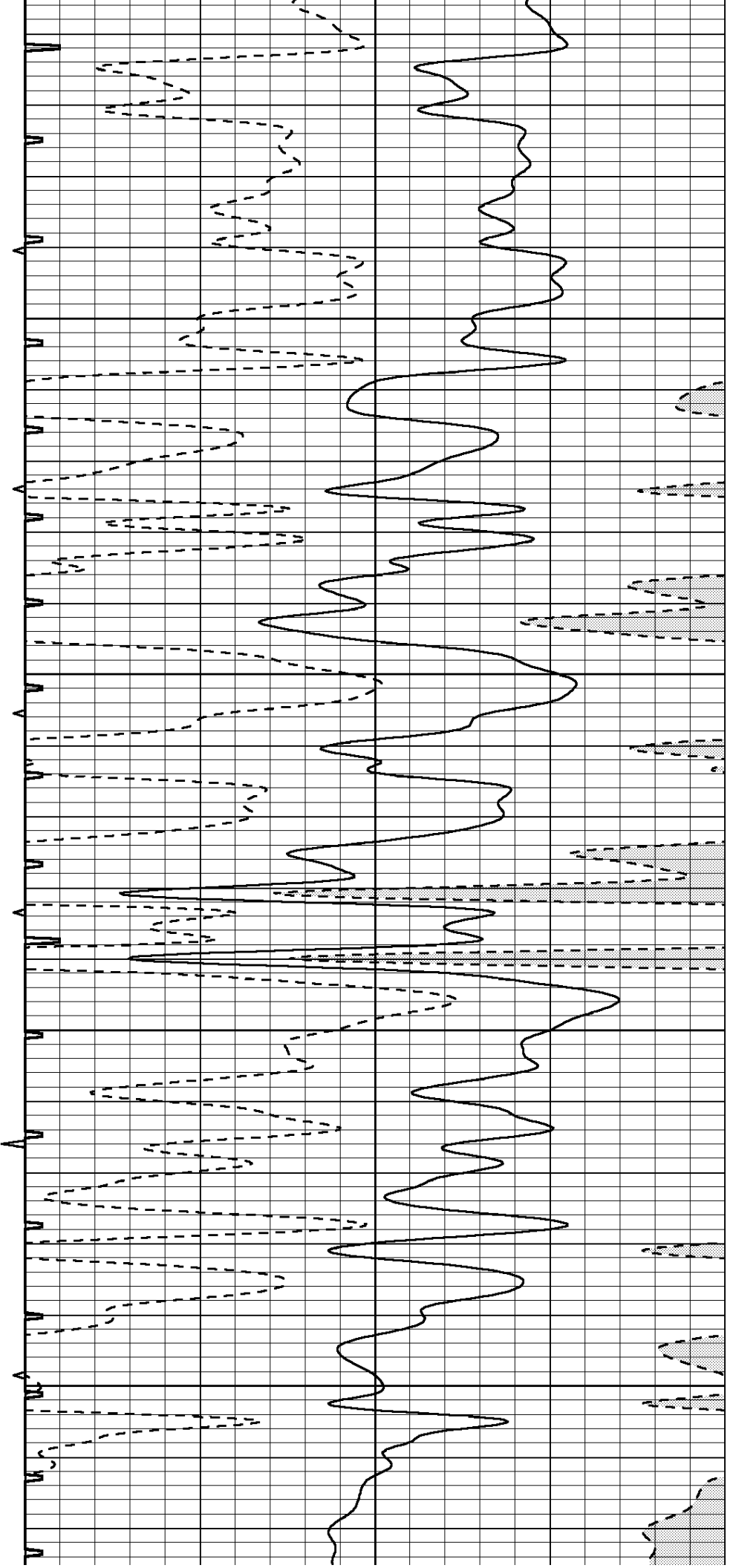


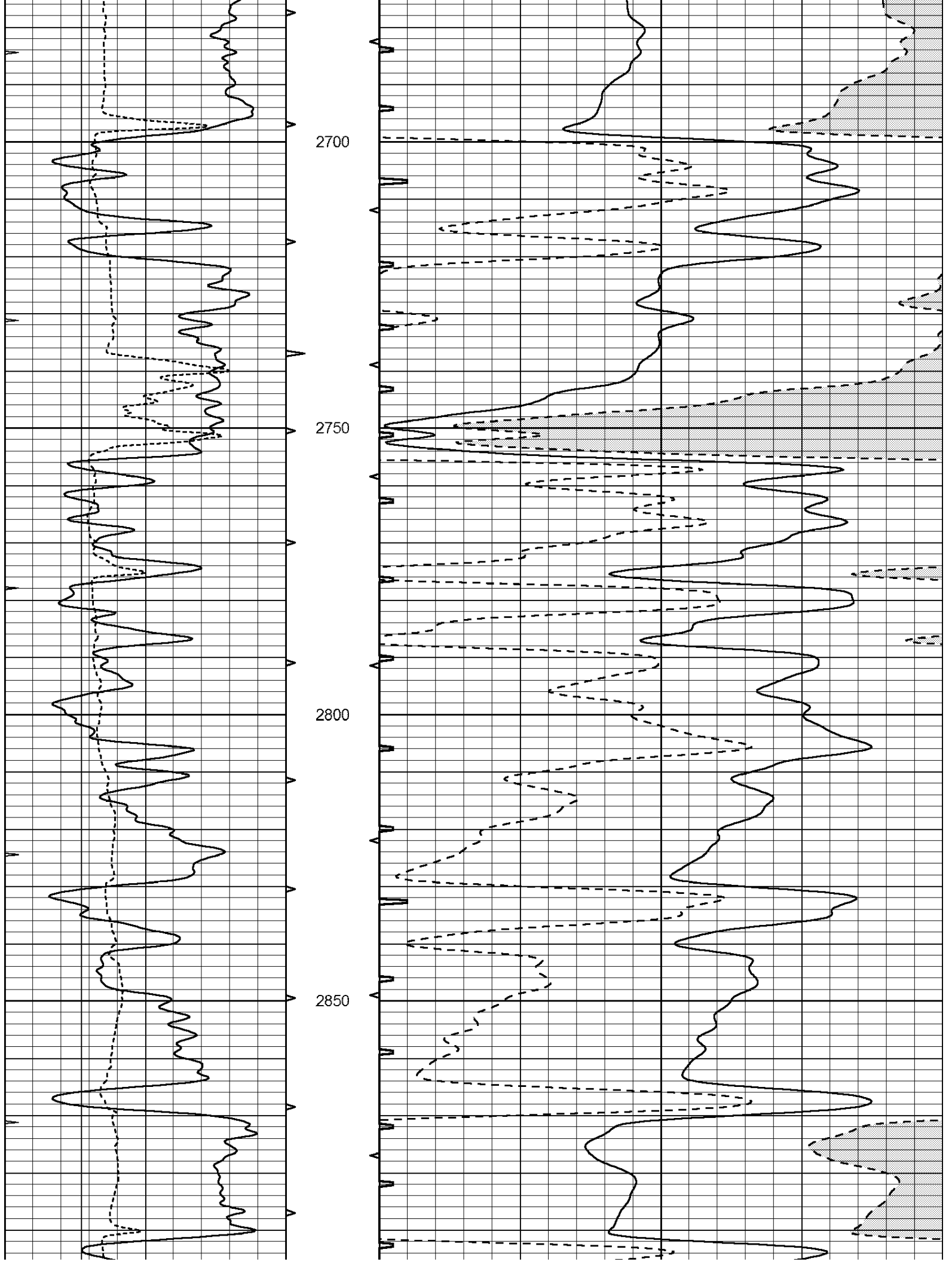
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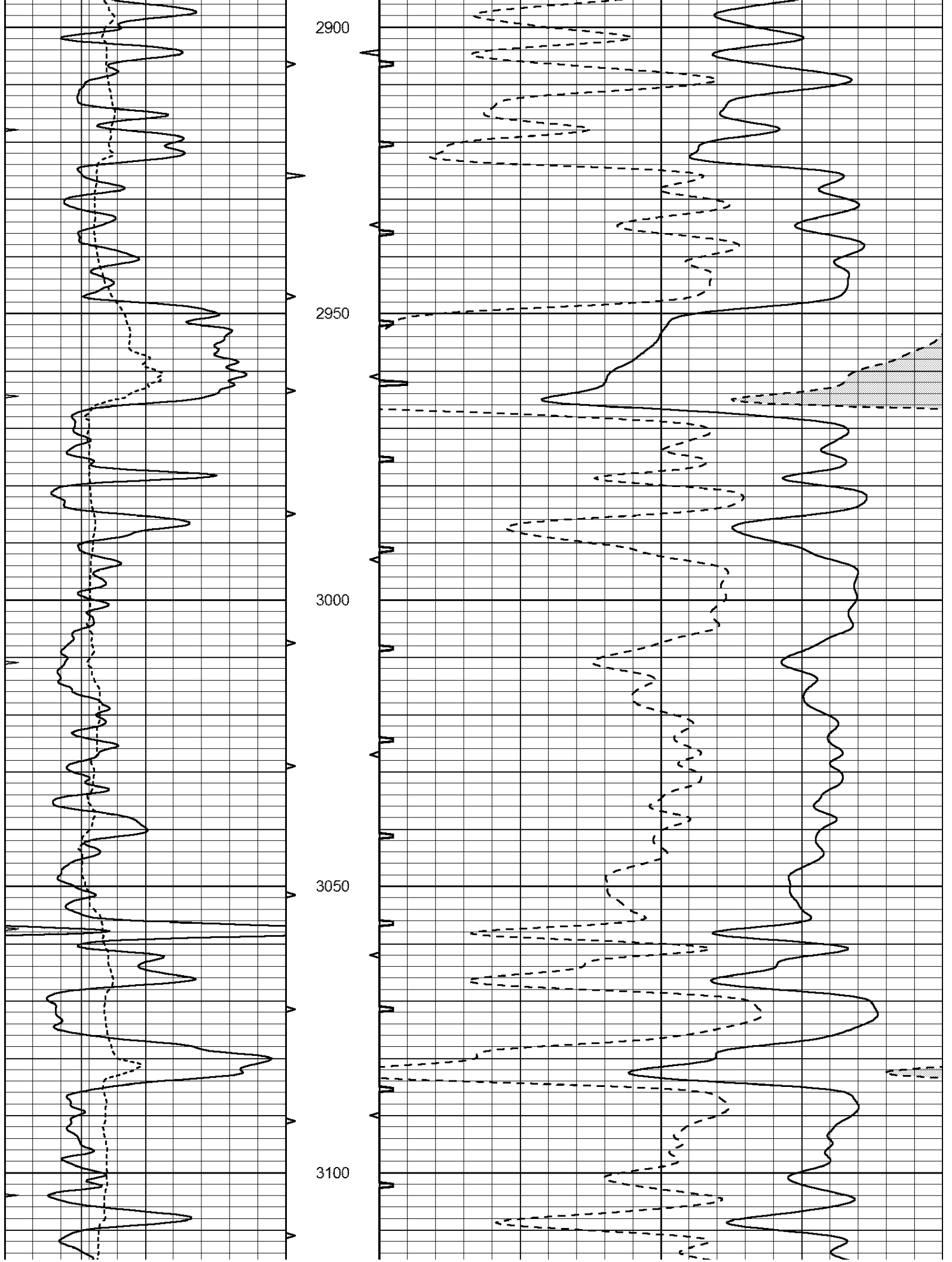
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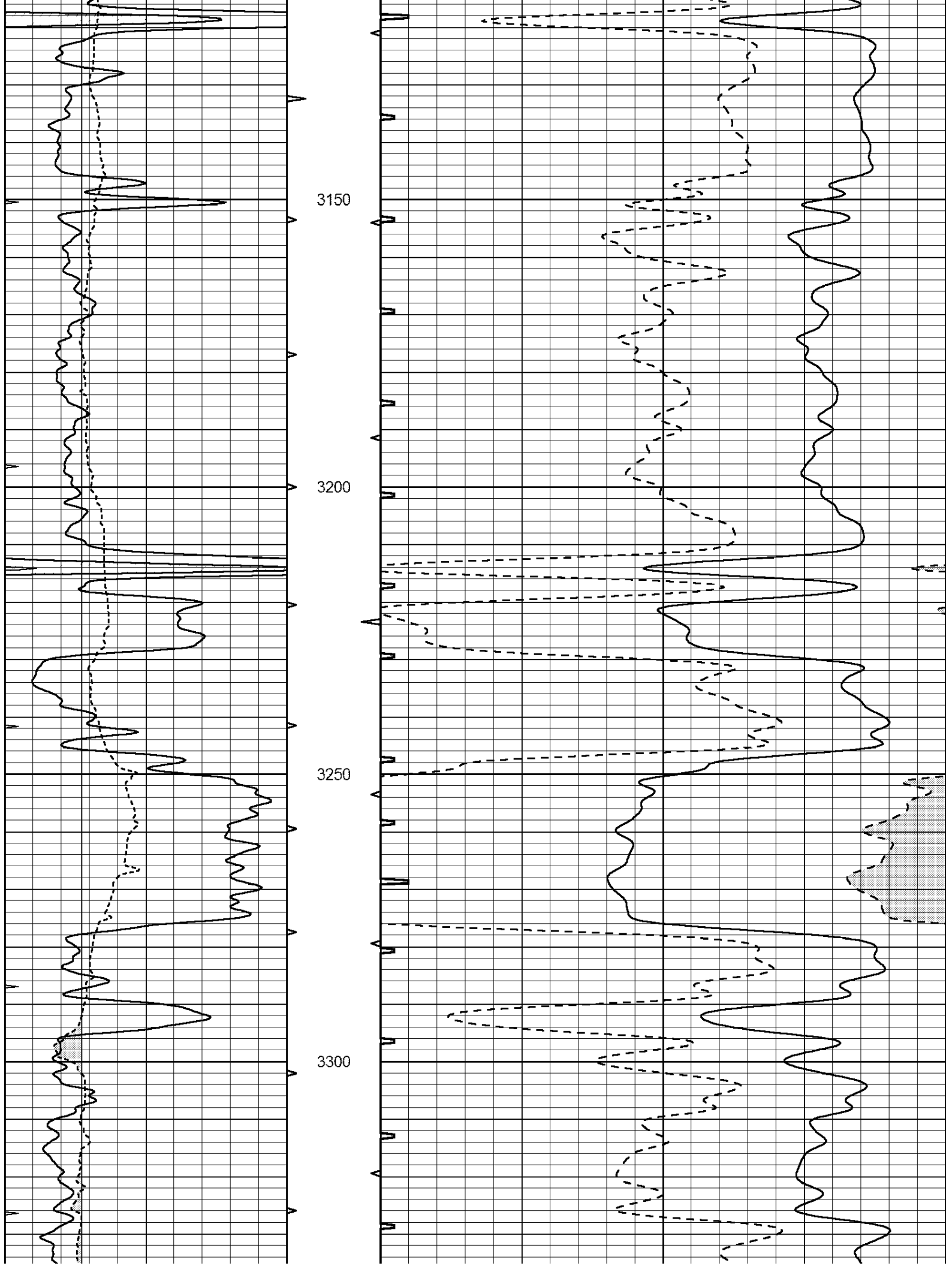
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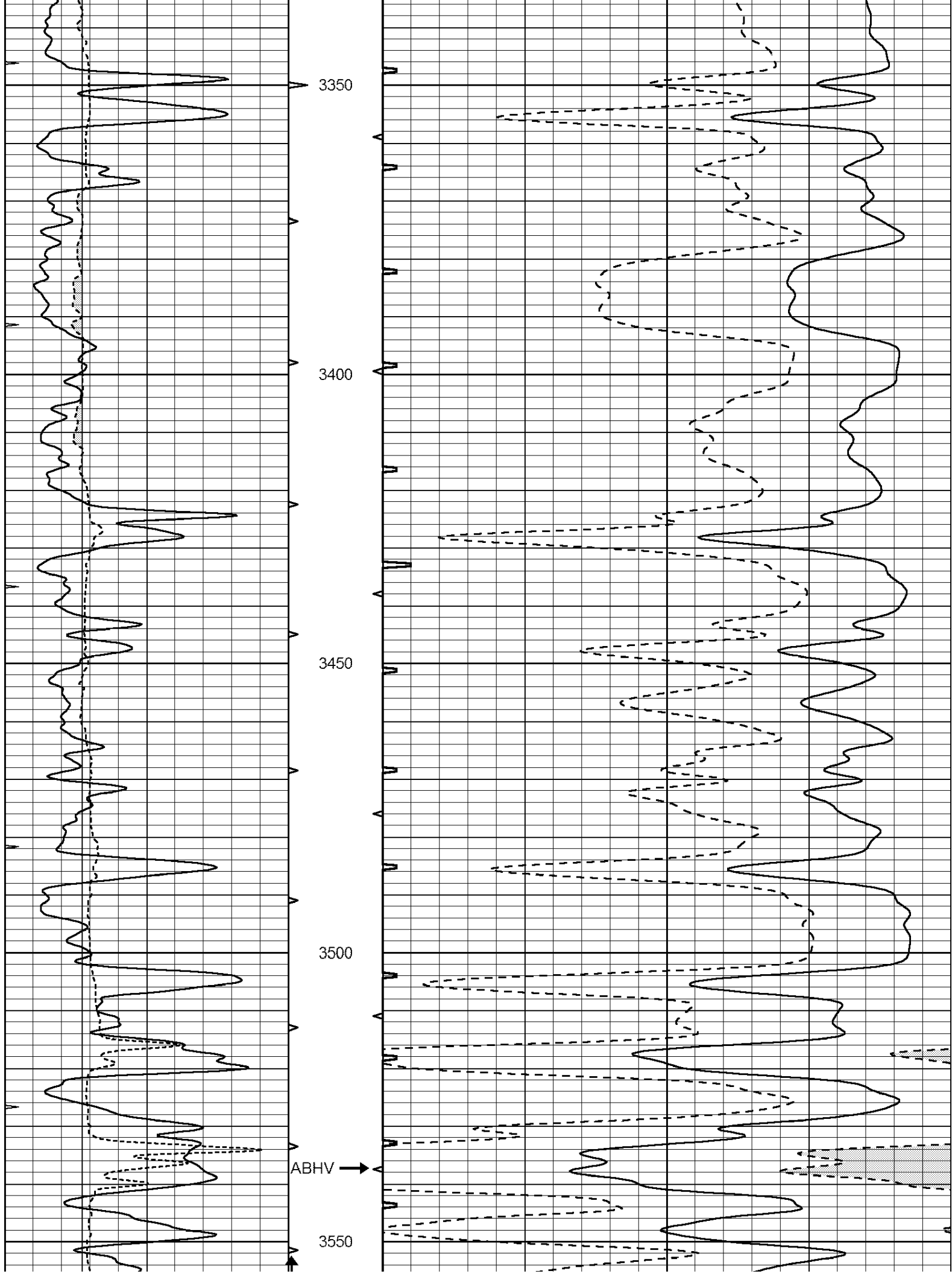
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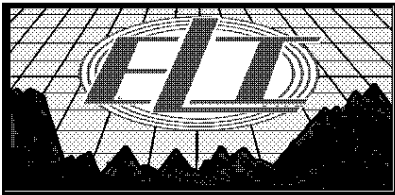
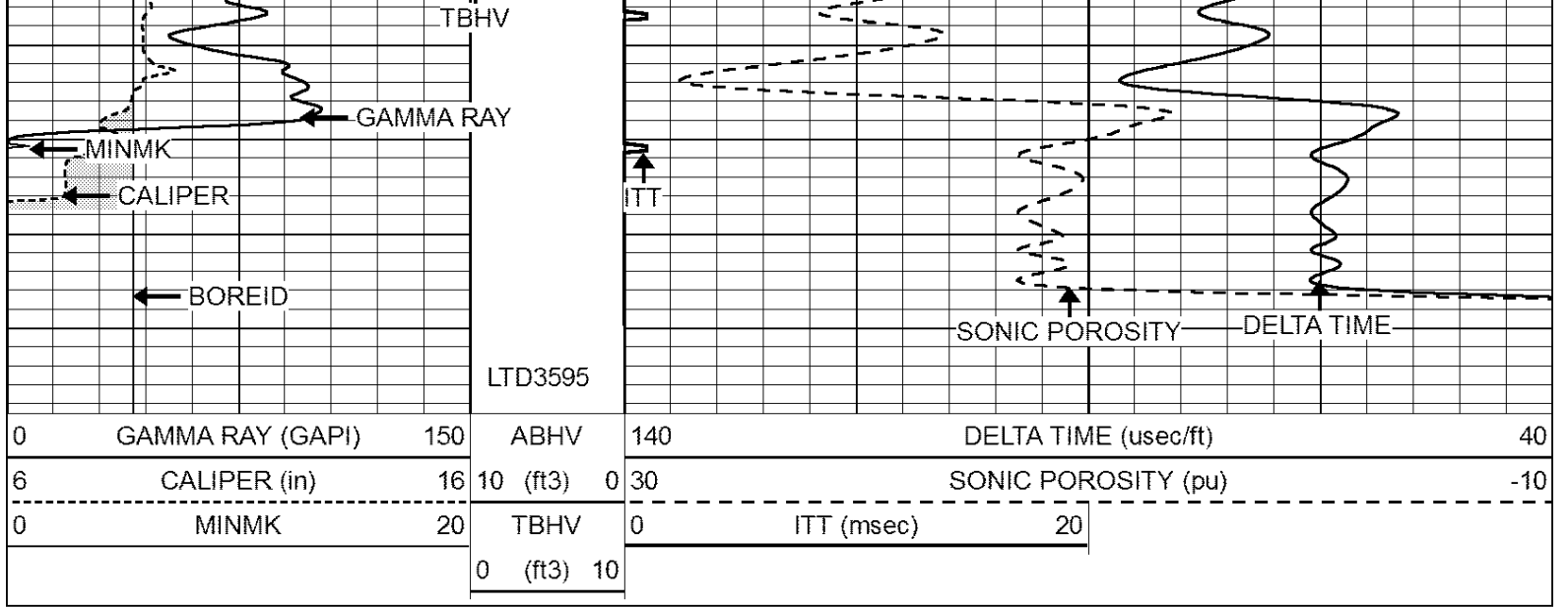








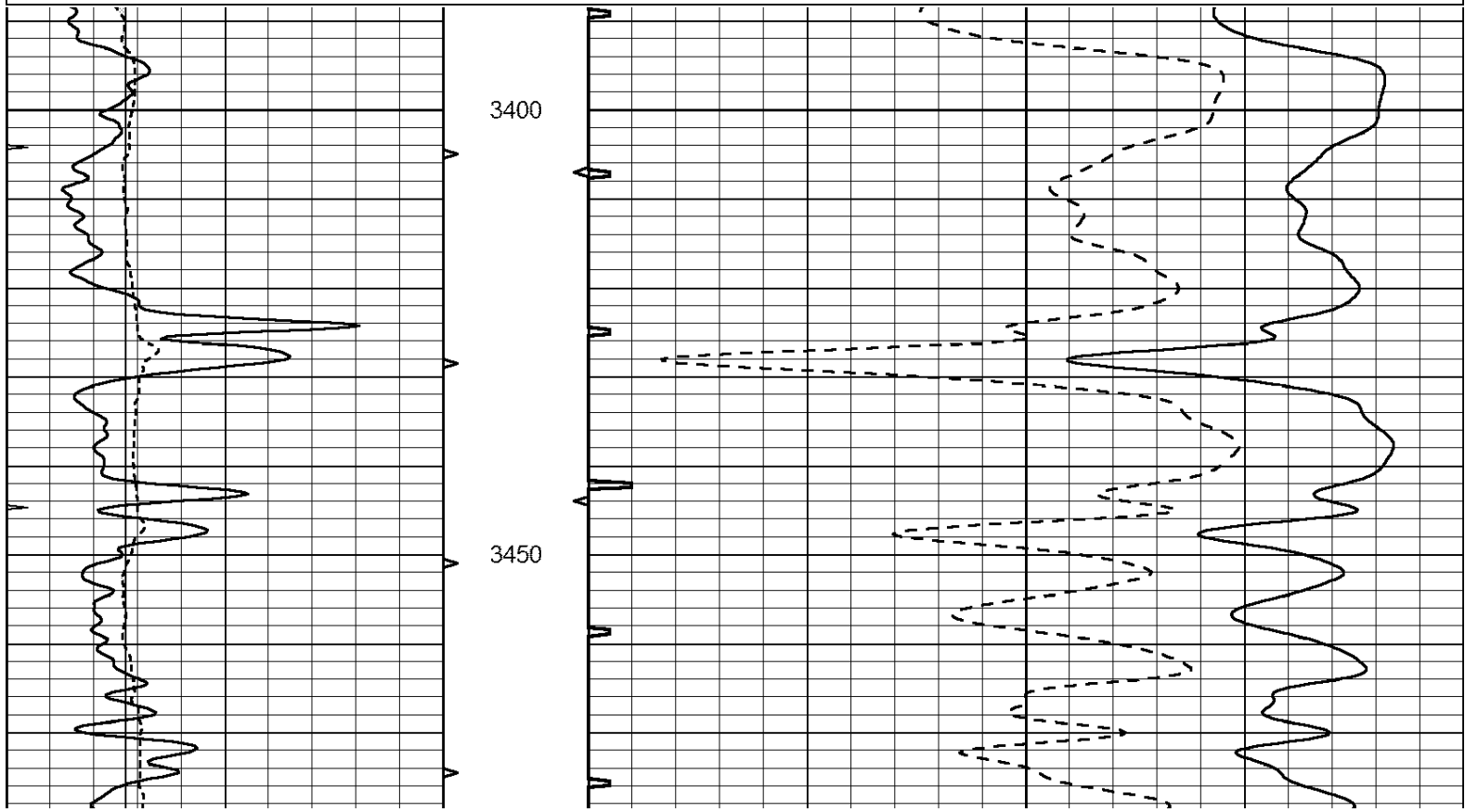


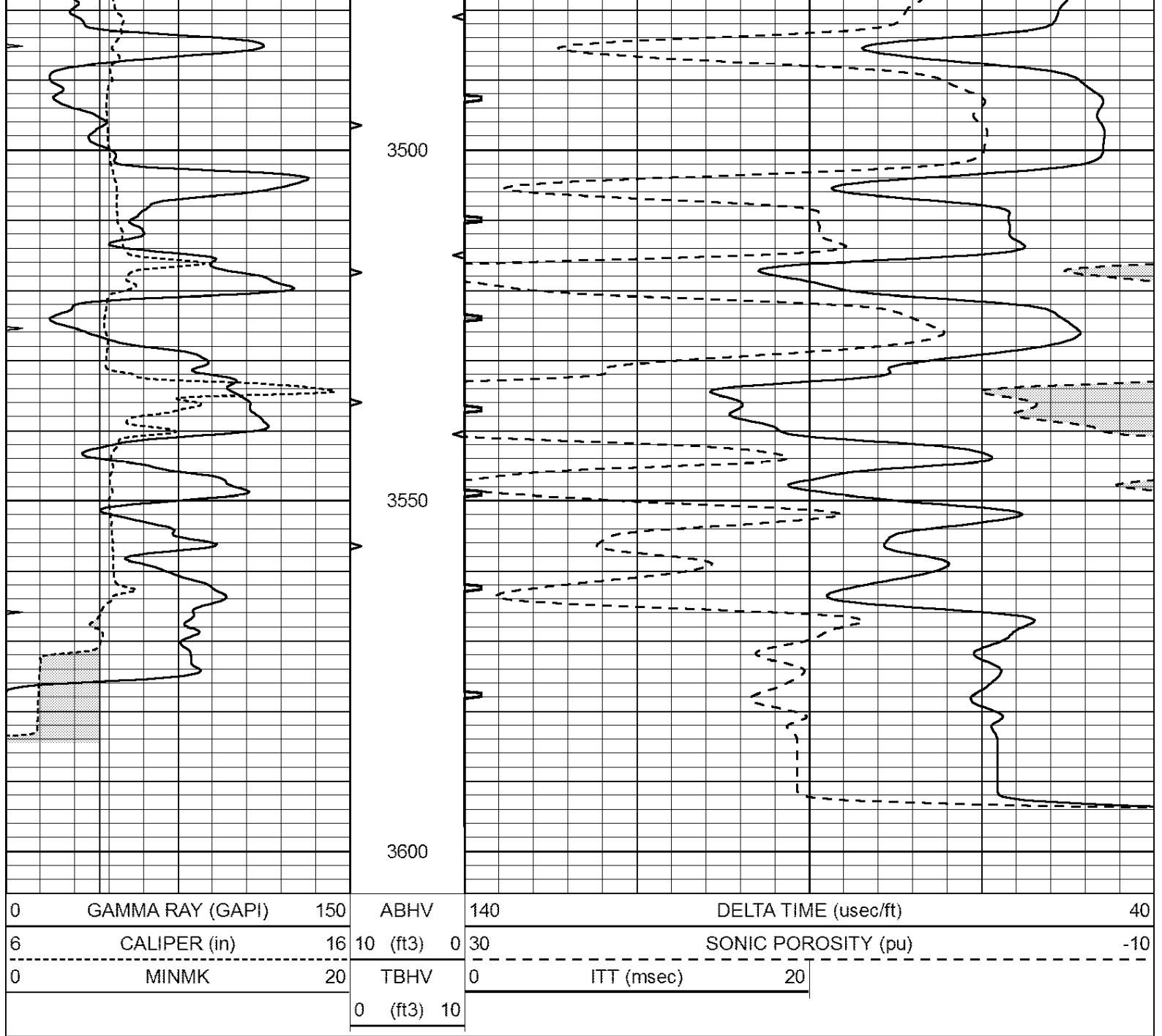


# REPEAT SECTION

Database File: 1462ddn.db  
 Dataset Pathname: pass5RP  
 Presentation Format: \_slt  
 Dataset Creation: Tue Apr 18 00:50:45 2017 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

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			





### Calibration Report

Database File: 1462ddn.db  
 Dataset Pathname: pass5RP  
 Dataset Creation: Tue Apr 18 00:50:45 2017 by Calc Open-Cased 090629

### MICRO Calibration Report

Serial Number: MICRO6  
 Tool Model: PROBE  
 Performed: Mon Apr 10 10:24:59 2017

Caliper Calibration: Gain=3.960      Offset=4.301

References	Low Cal	High Cal
Readings	7.000	14.000
	0.555	2.323

1.5" Calibration: Gain=38.075      Offset=0.400

References	Low Cal	High Cal
	0.000	20.000

References	0.000	20.000
Readings	0.004	1.196

2" Calibration:	Gain=48.000	Offset=0.800
	Low Cal	High Cal
References	0.000	20.000
Readings	0.006	0.913

Gamma Ray Calibration Report

Serial Number:	GR2	
Tool Model:	OPEN	
Performed:	Tue Mar 28 10:02:22 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3800	GAPI/cps