



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company	CORTEZ HEARTLAND		
Well	SMITH #1		
Field	FREELAND		
County	PAWNEE	State	KANSAS
Location:	API # : 15-145-21591		Other Services
660' FNL & 1980' FEL		CDL/CNL	
SEC 5 TWP 21S RGE 19W		Elevation	
Permanent Datum	GROUND LEVEL	Elevation	2160
Log Measured From	KELLY BUSHING 13' A.G.L.	D.F.	K.B. 2173
Drilling Measured From	KELLY BUSHING	G.L.	2160
Date	9-18-09		
Run Number	ONE		
Depth Driller	4400		
Depth Logger	4392		
Bottom Logged Interval	4390		
Top Log Interval	00		
Casing Driller	435		
Casing Logger	436		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4 / 42		
pH / Fluid Loss	8.0 / 17.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.44 @ 91F		
Rinf @ Meas. Temp	0.33 @ 91F		
Rmc @ Meas. Temp	0.53 @ 91F		
Source of Rinf / Rmc	MEASURED		
Rim @ BHT	.340 @ 119F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	2:00 A.M.		
Maximum Recorded Temperature	119F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	JAKE ENGEL		

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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

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: ROZEL, & 280TH AVE, 4 1/2N , 1 1/2W, S INTO.



SUPERIOR
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MAIN SECTION

Database File: 004256ddn.db
Dataset Pathname: pass4.1
Presentation Format: dil2
Dataset Creation: Sat Sep 19 03:54:08 2009 by Calc Open-Cased 051020
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

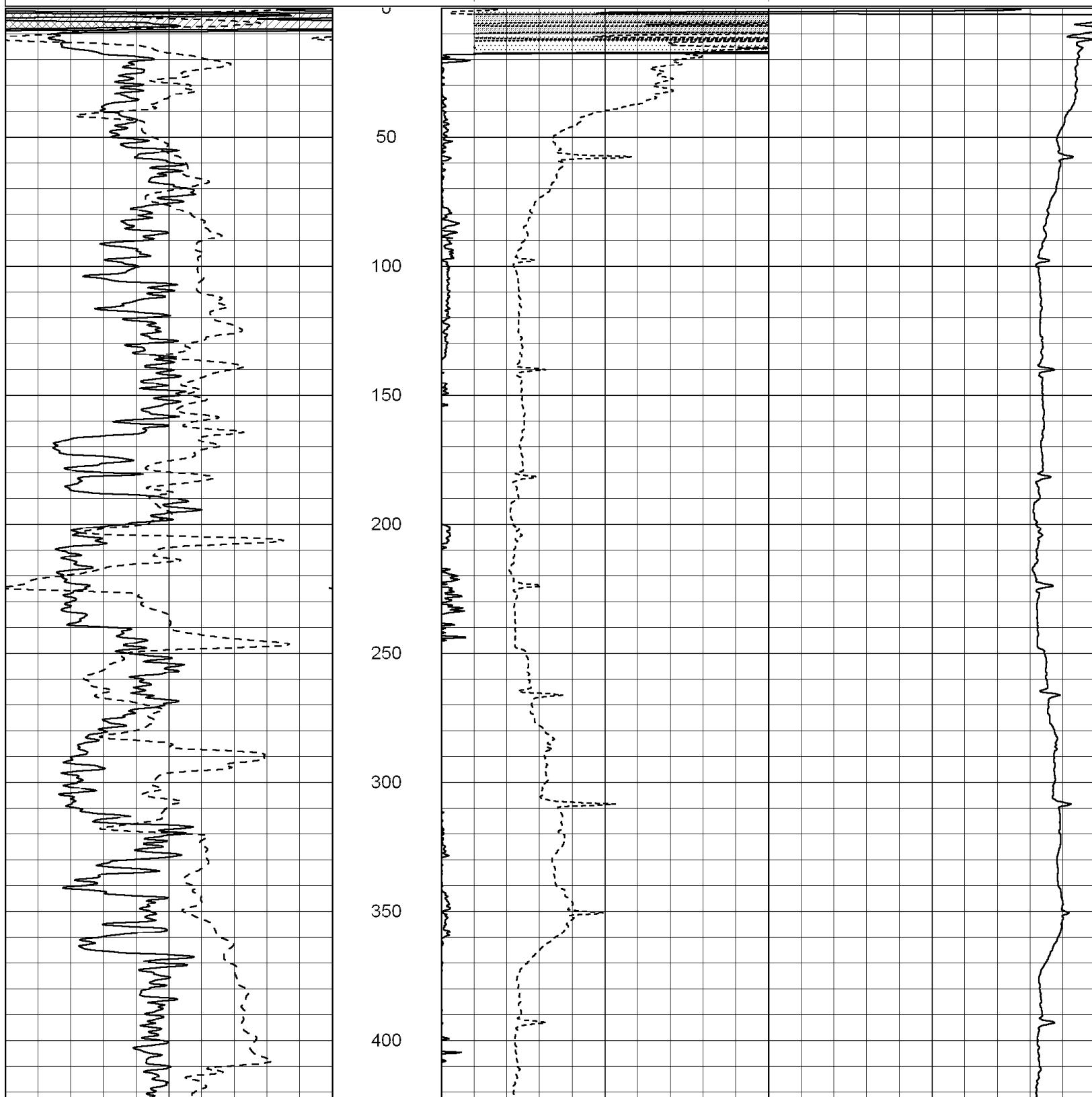
0	RLL3 (Ohm-m)	50
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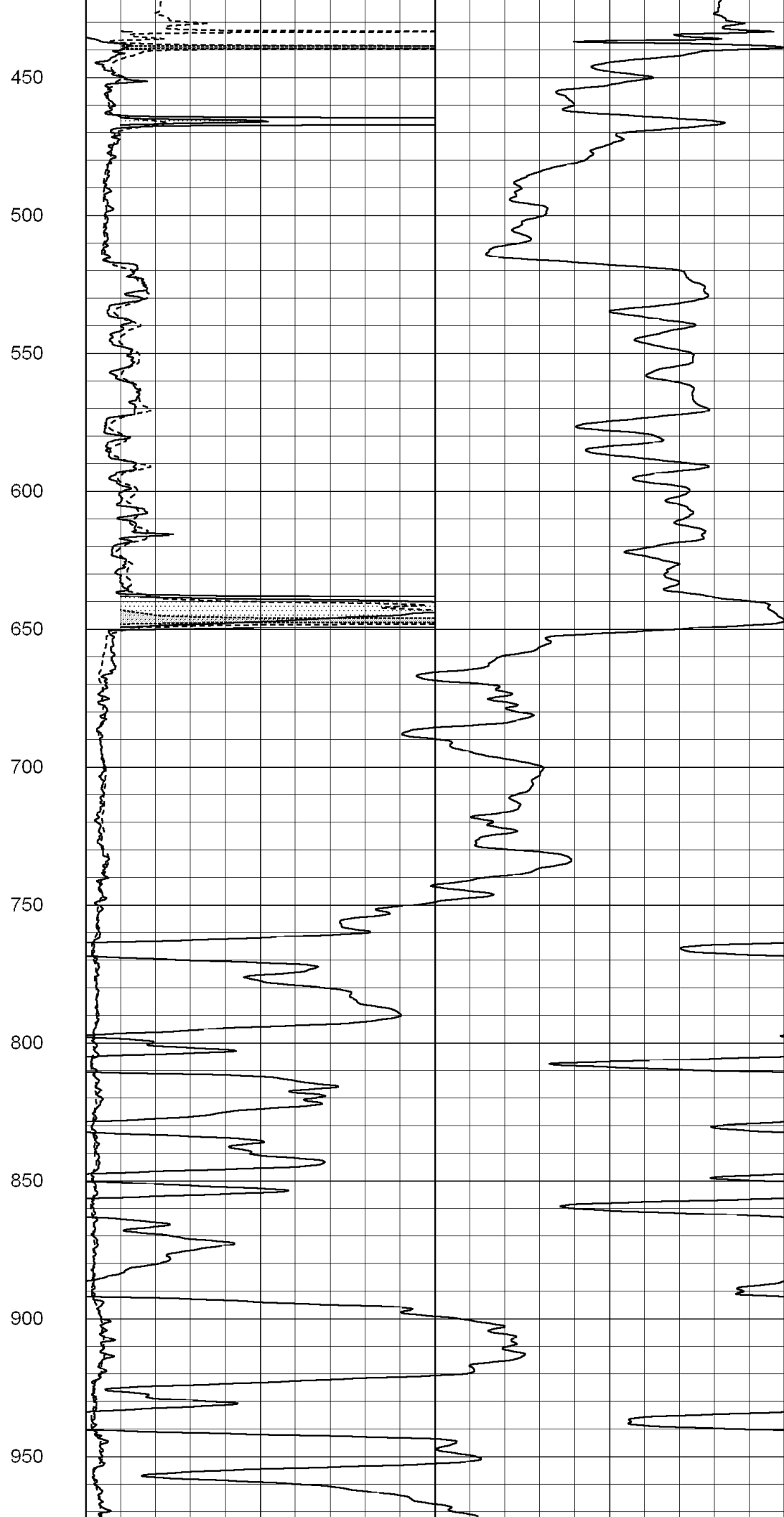
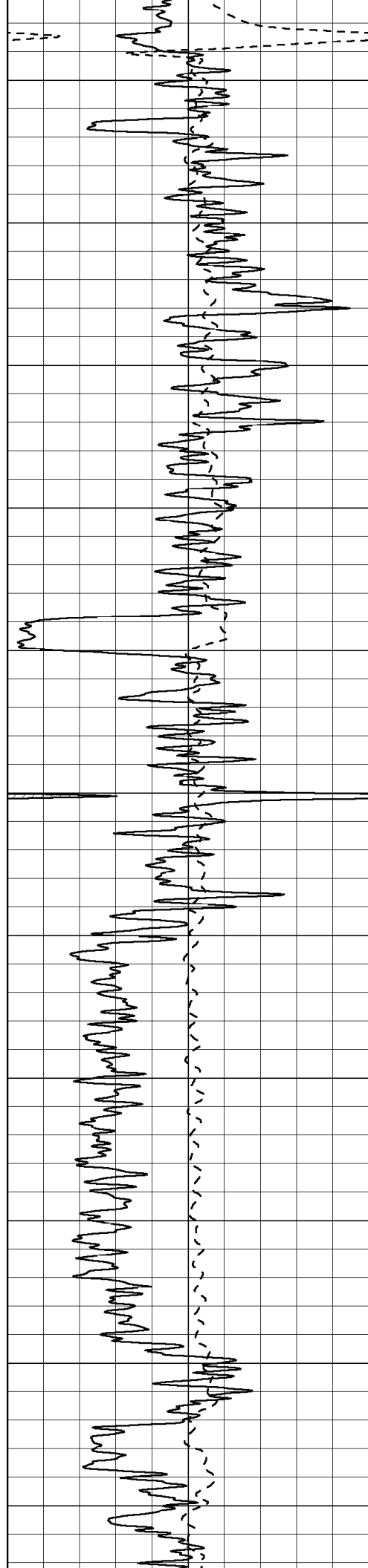
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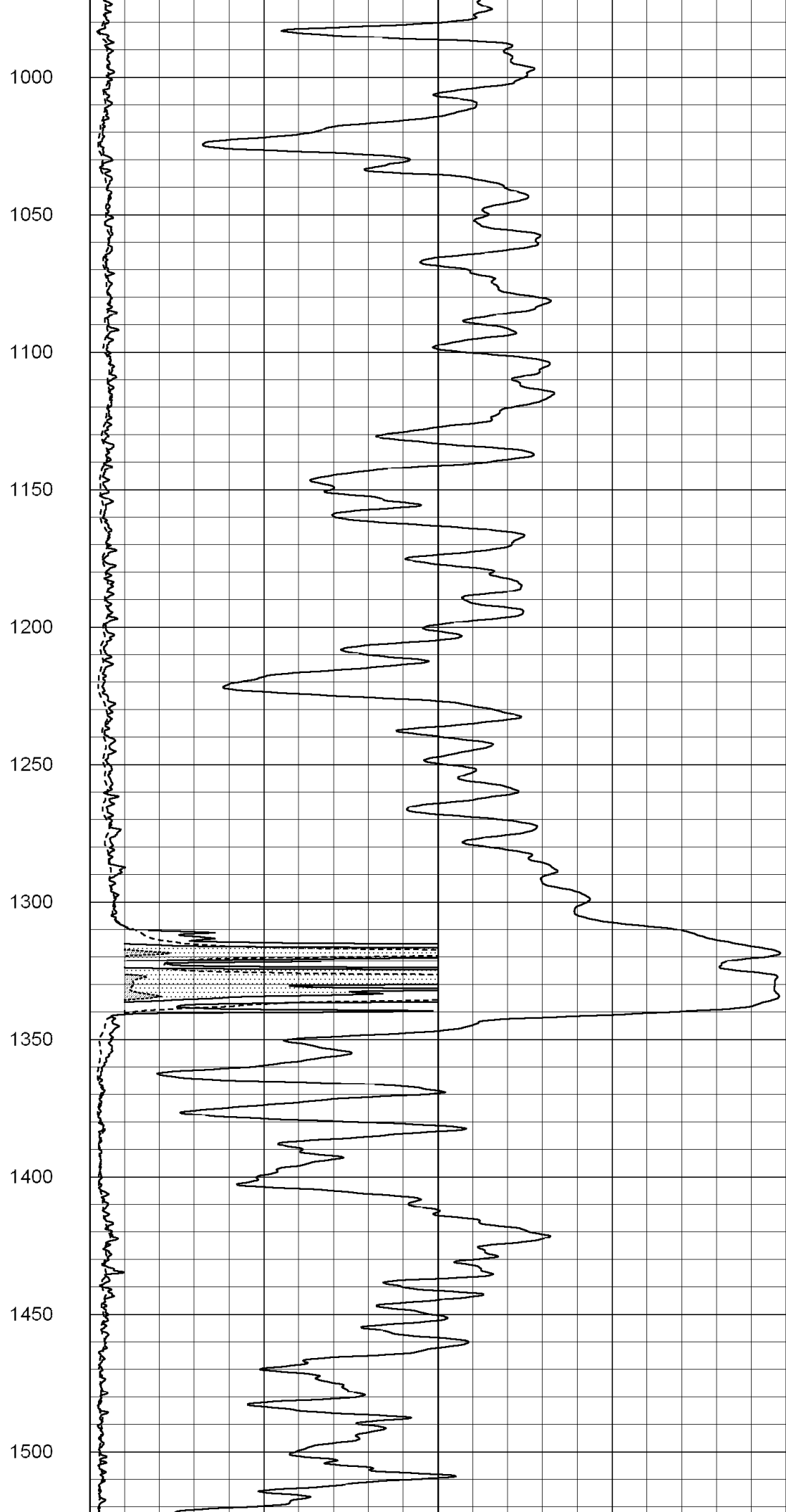
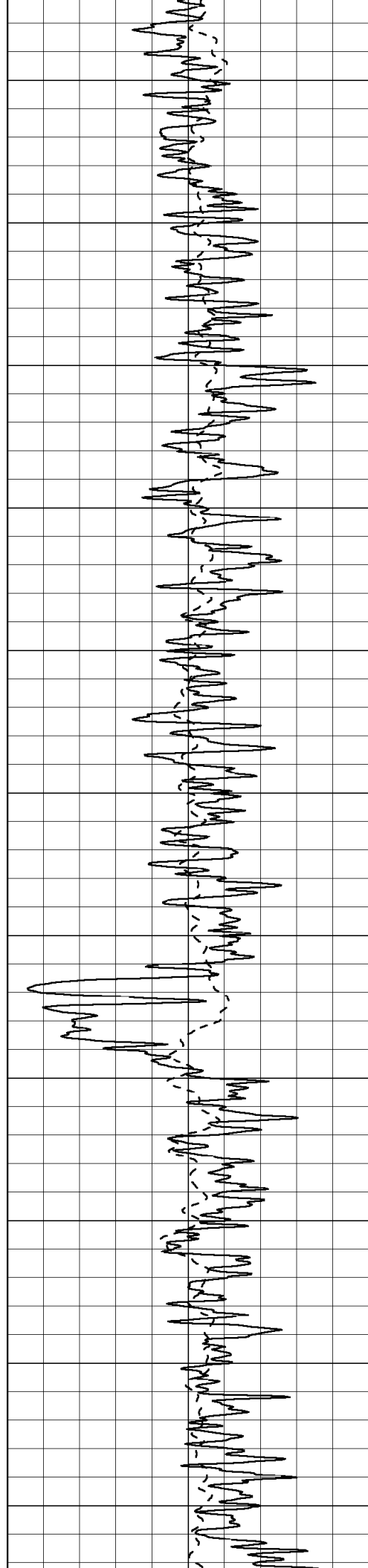
1000	CILD (mmho-m)	0
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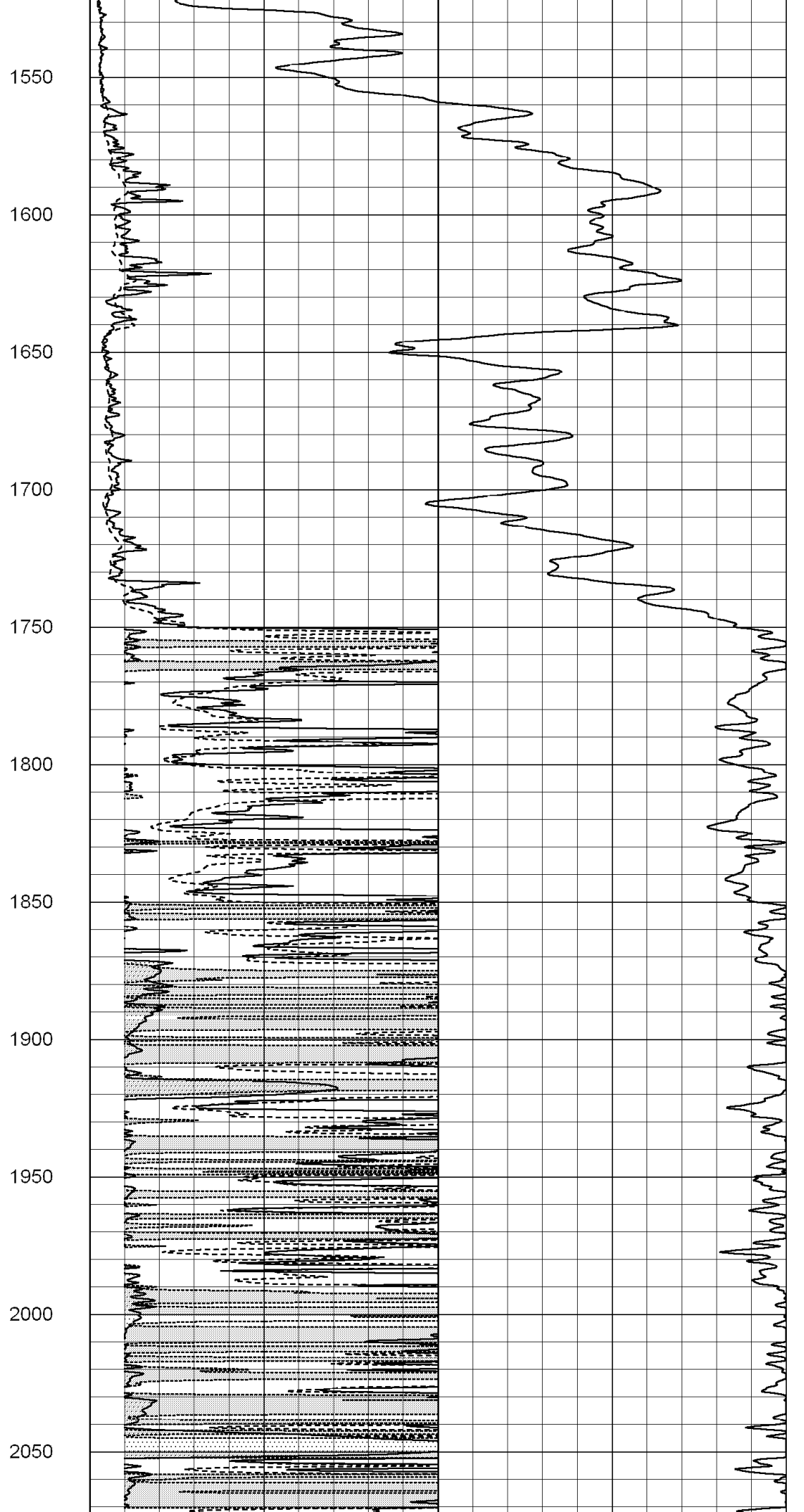
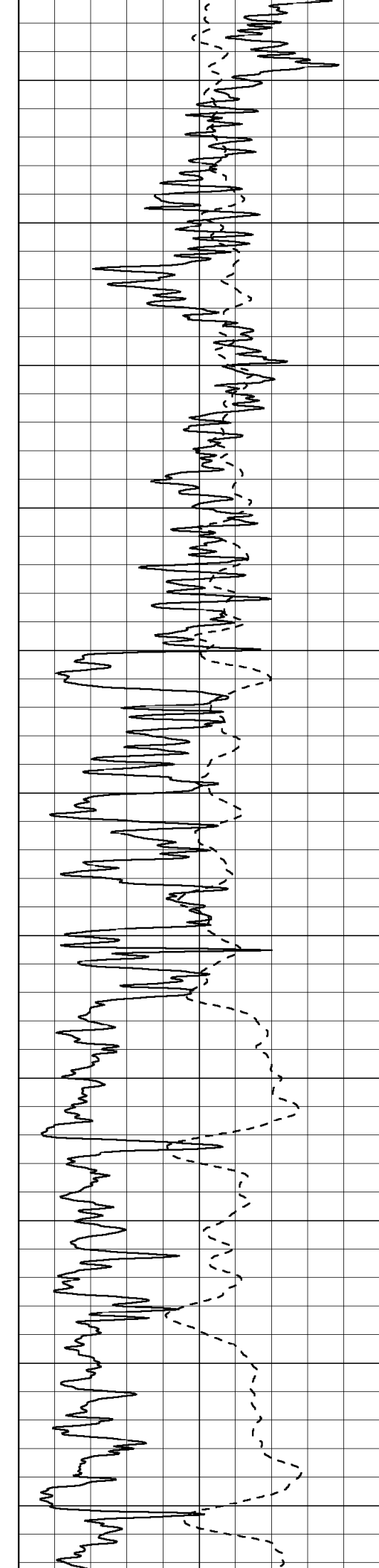
50	RILD X10 (Ohm-m)	500
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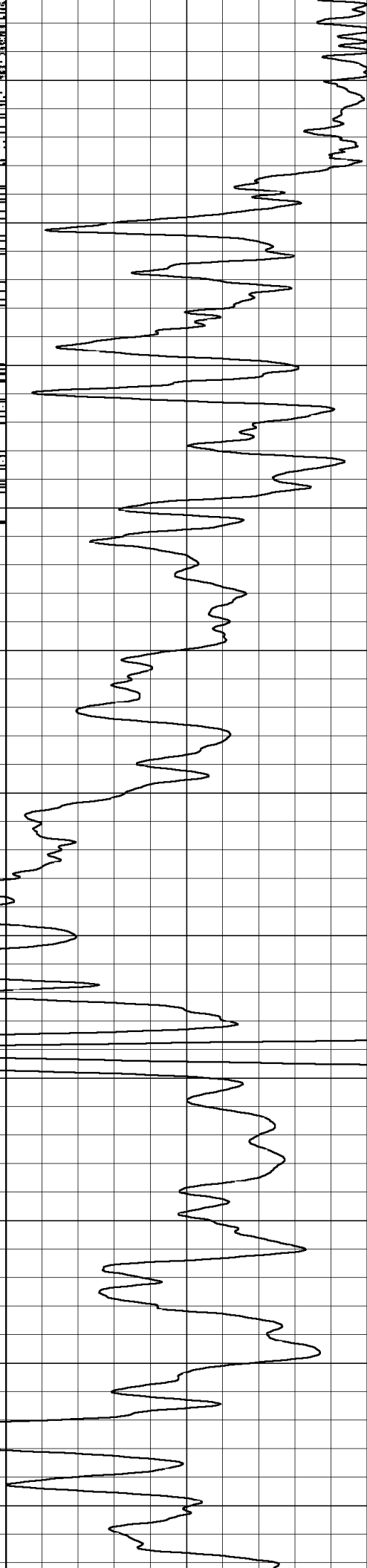
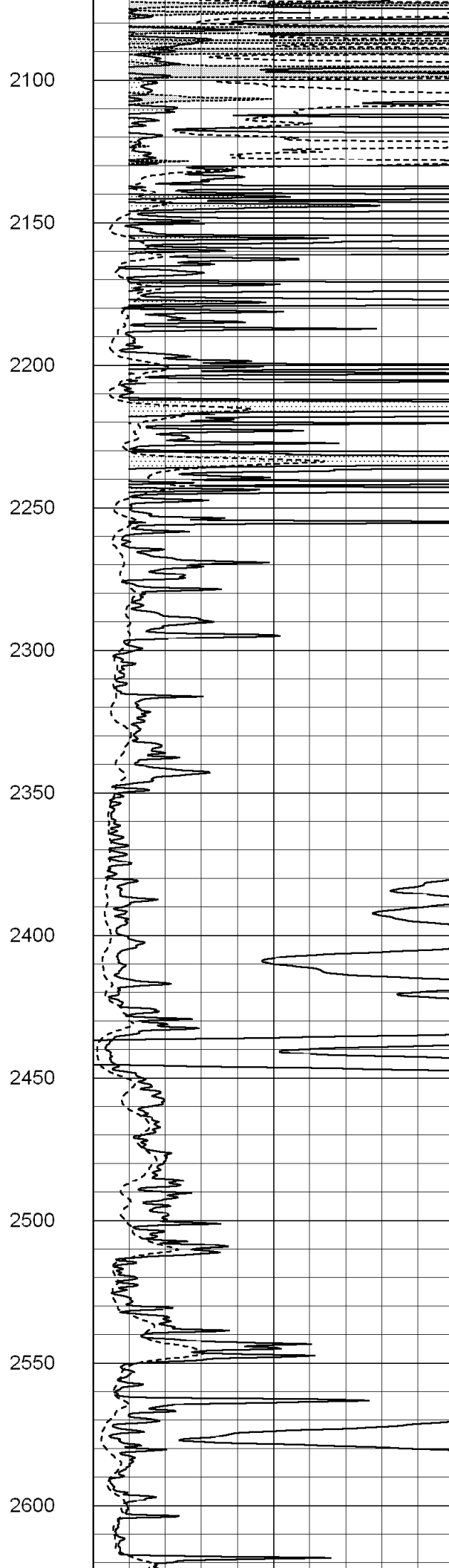
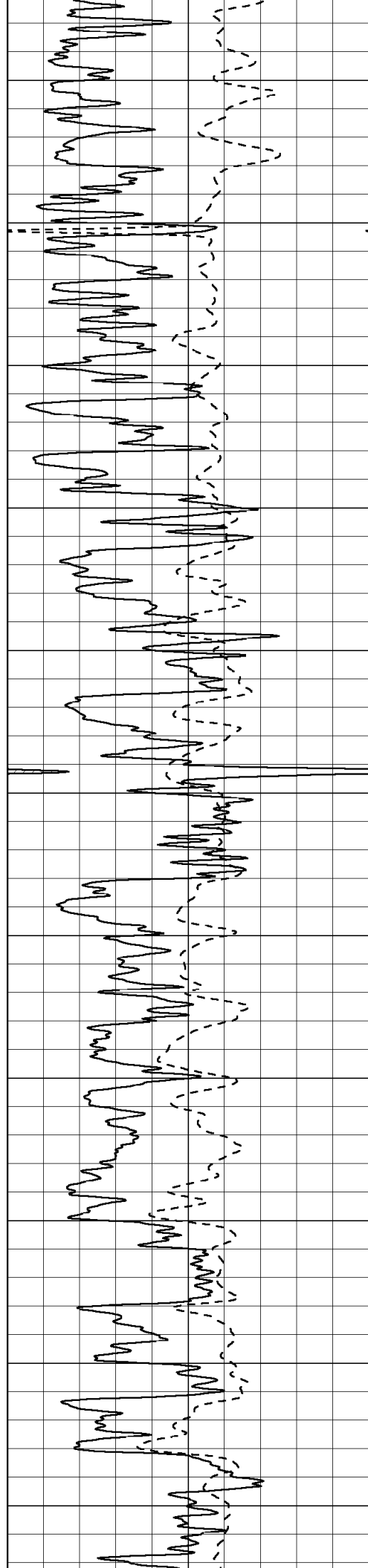
50	RLL3 X10 (Ohm-m)	500
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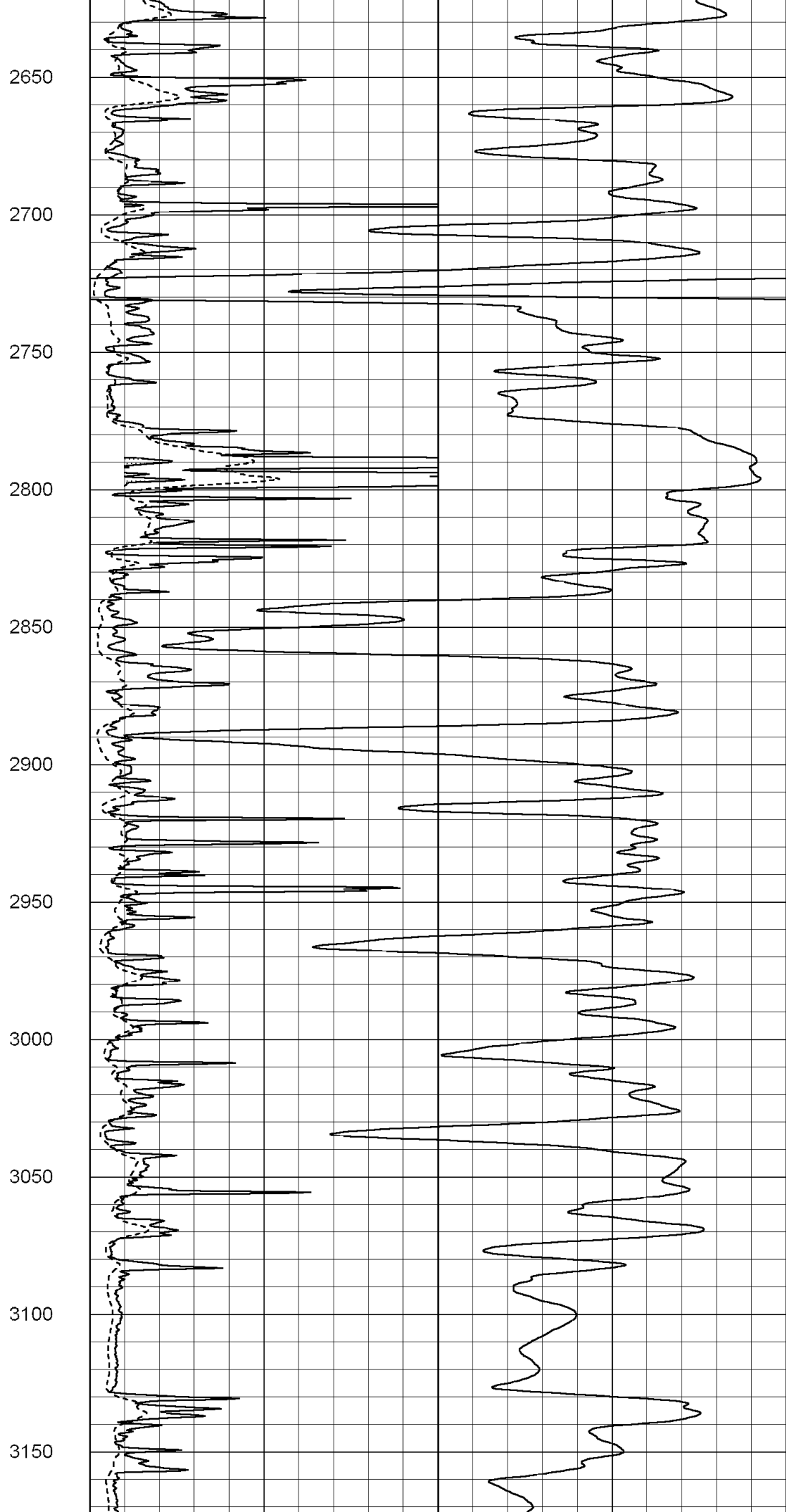
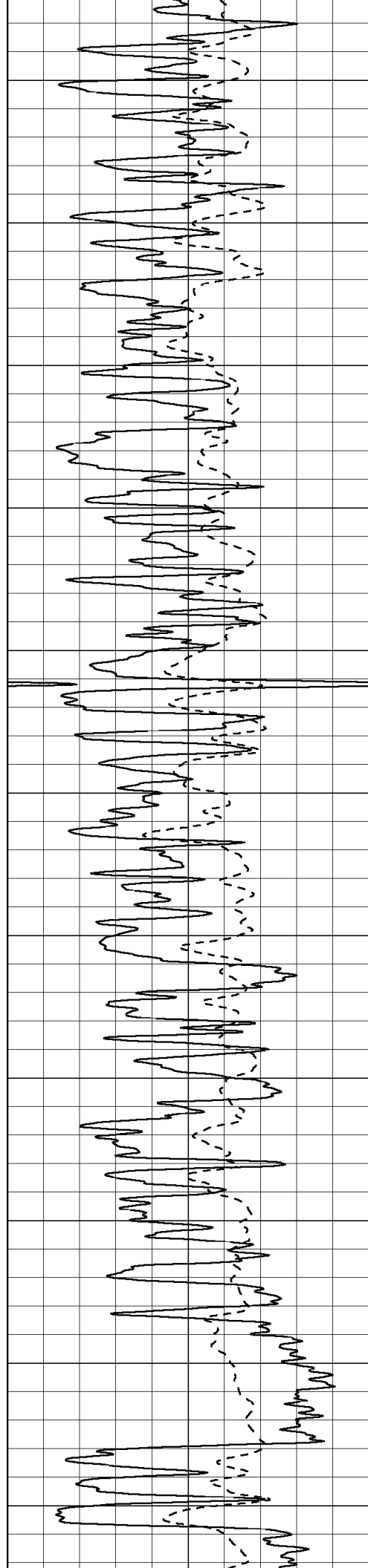


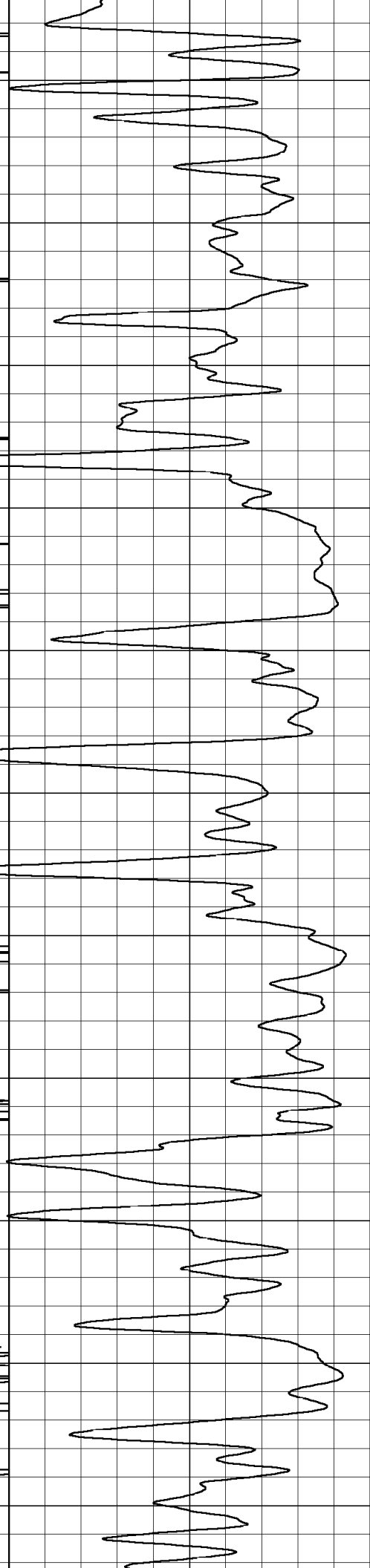
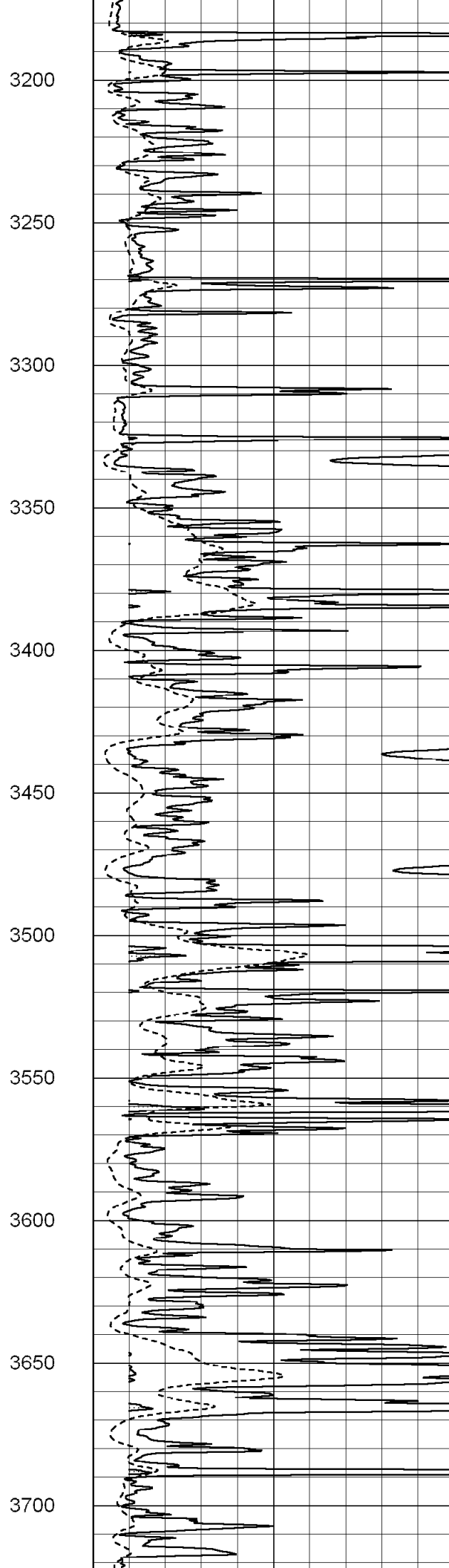
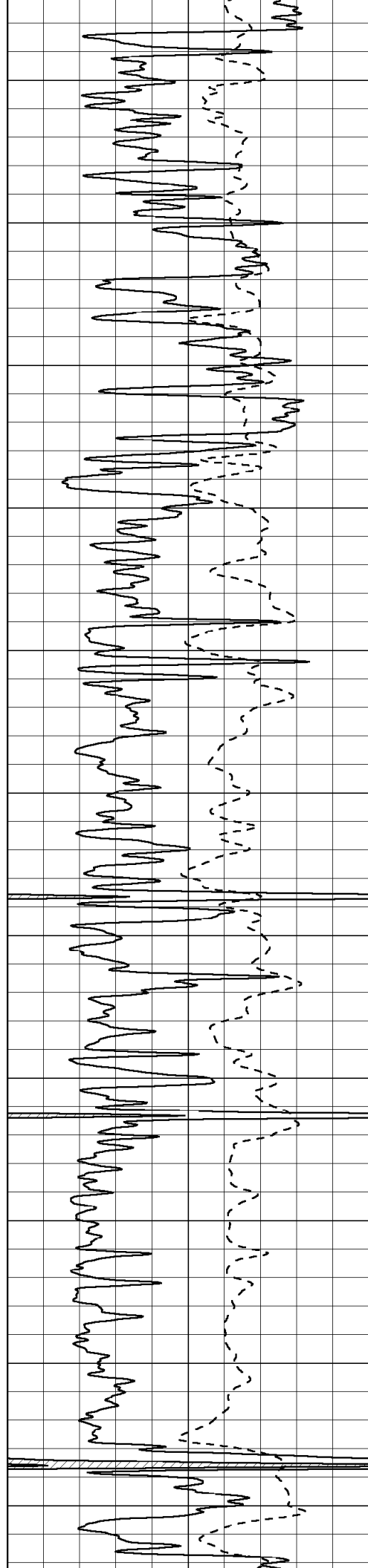


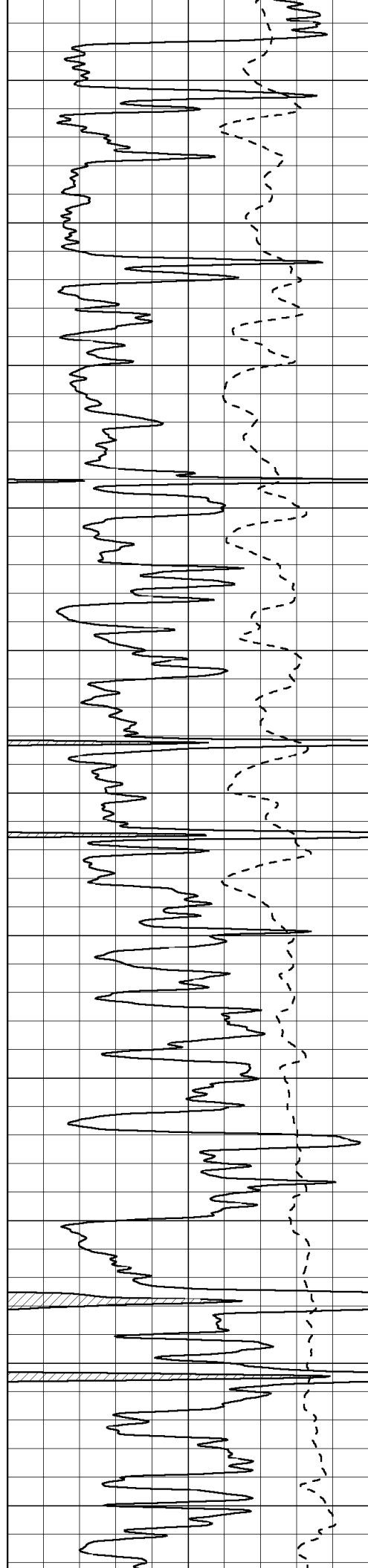












3750

3800

3850

3900

3950

4000

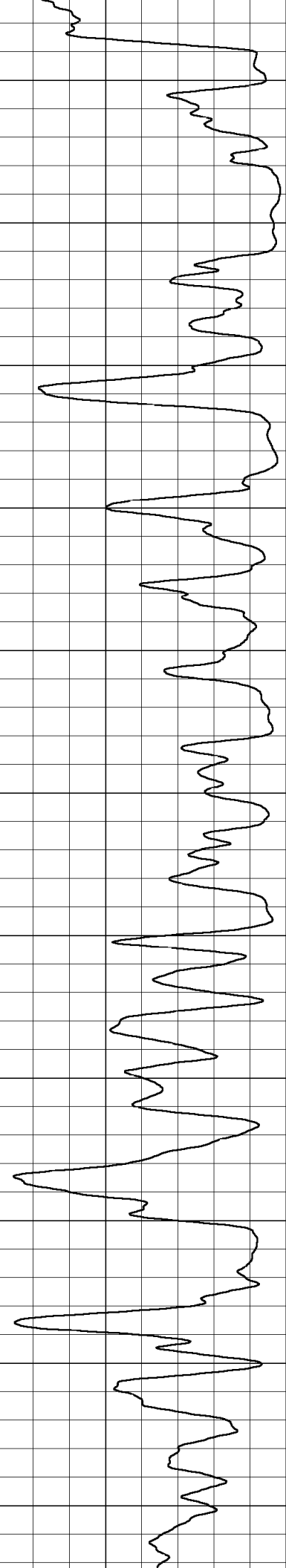
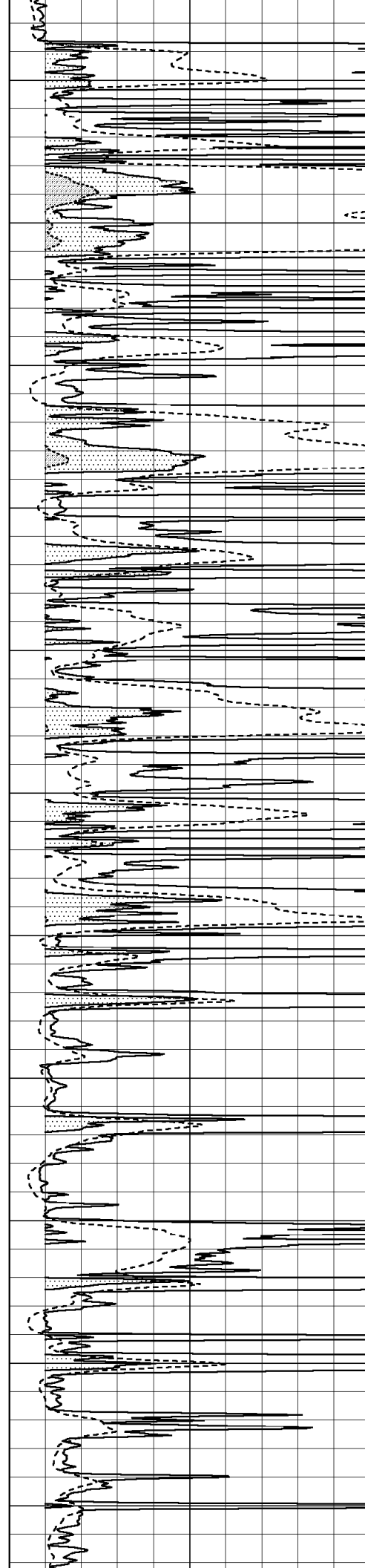
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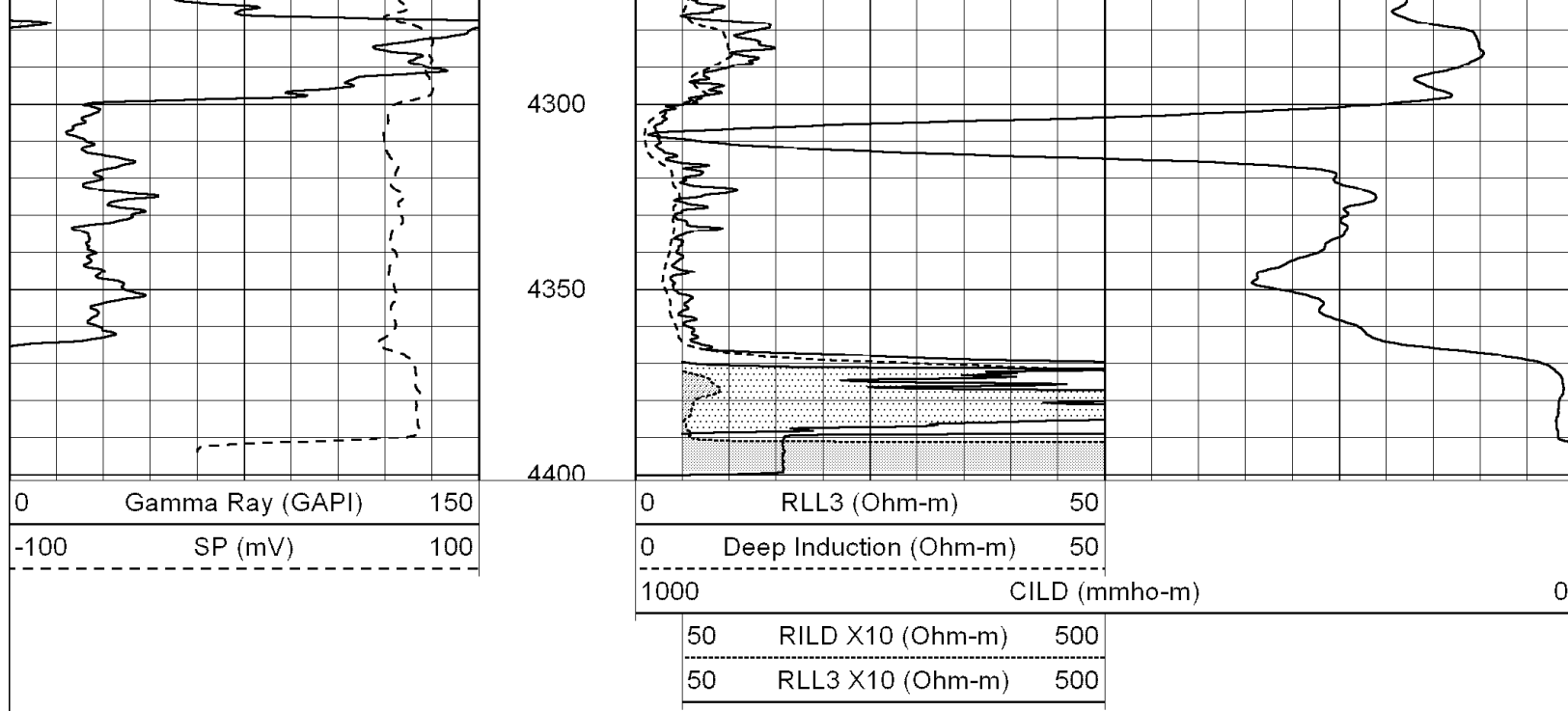
4100

4150

4200

4250



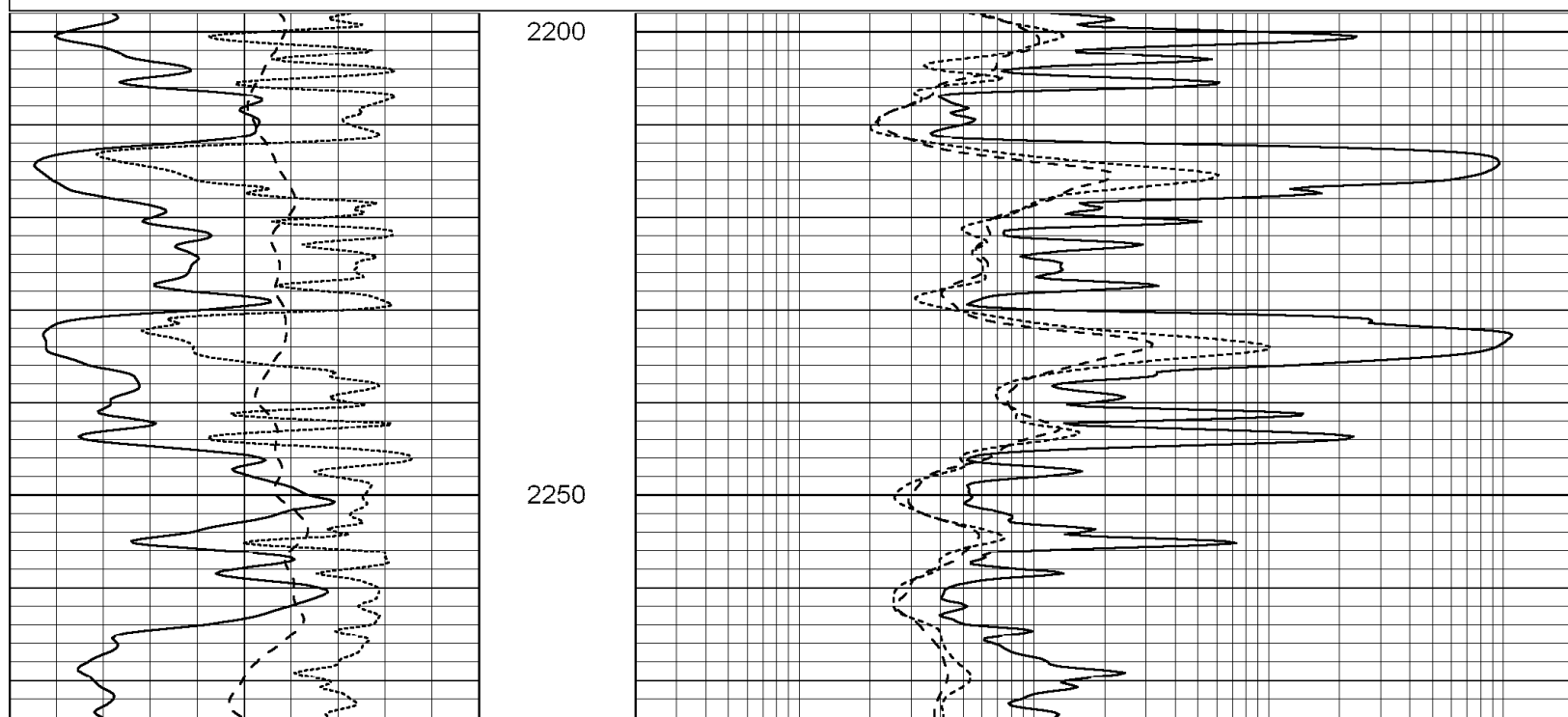


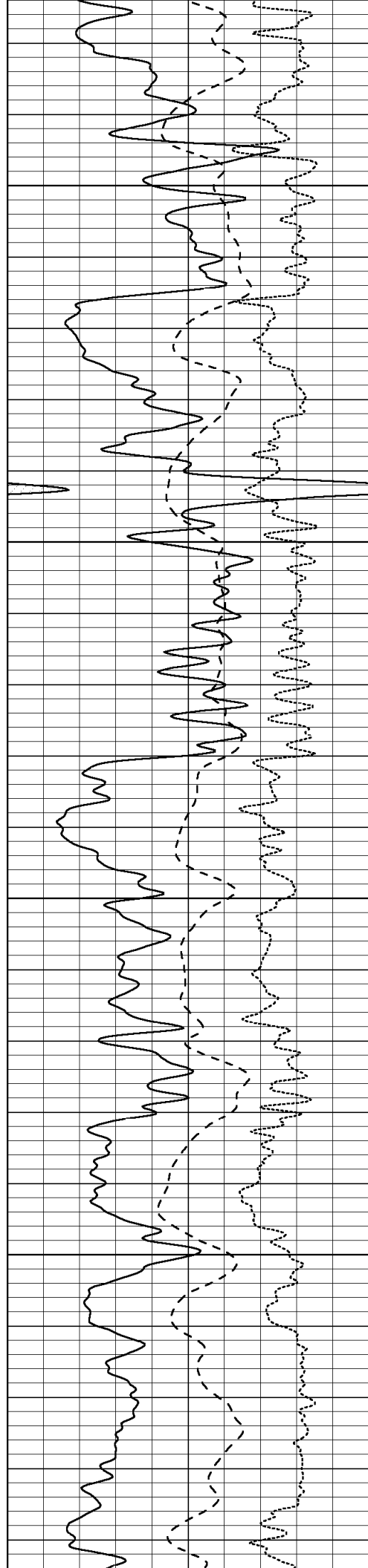
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MAIN SECTION

Database File: 004256ddn.db
 Dataset Pathname: pass4.1
 Presentation Format: dil
 Dataset Creation: Sat Sep 19 03:54:08 2009 by Calc Open-Cased 051020
 Charted by: Depth in Feet scaled 1:240

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



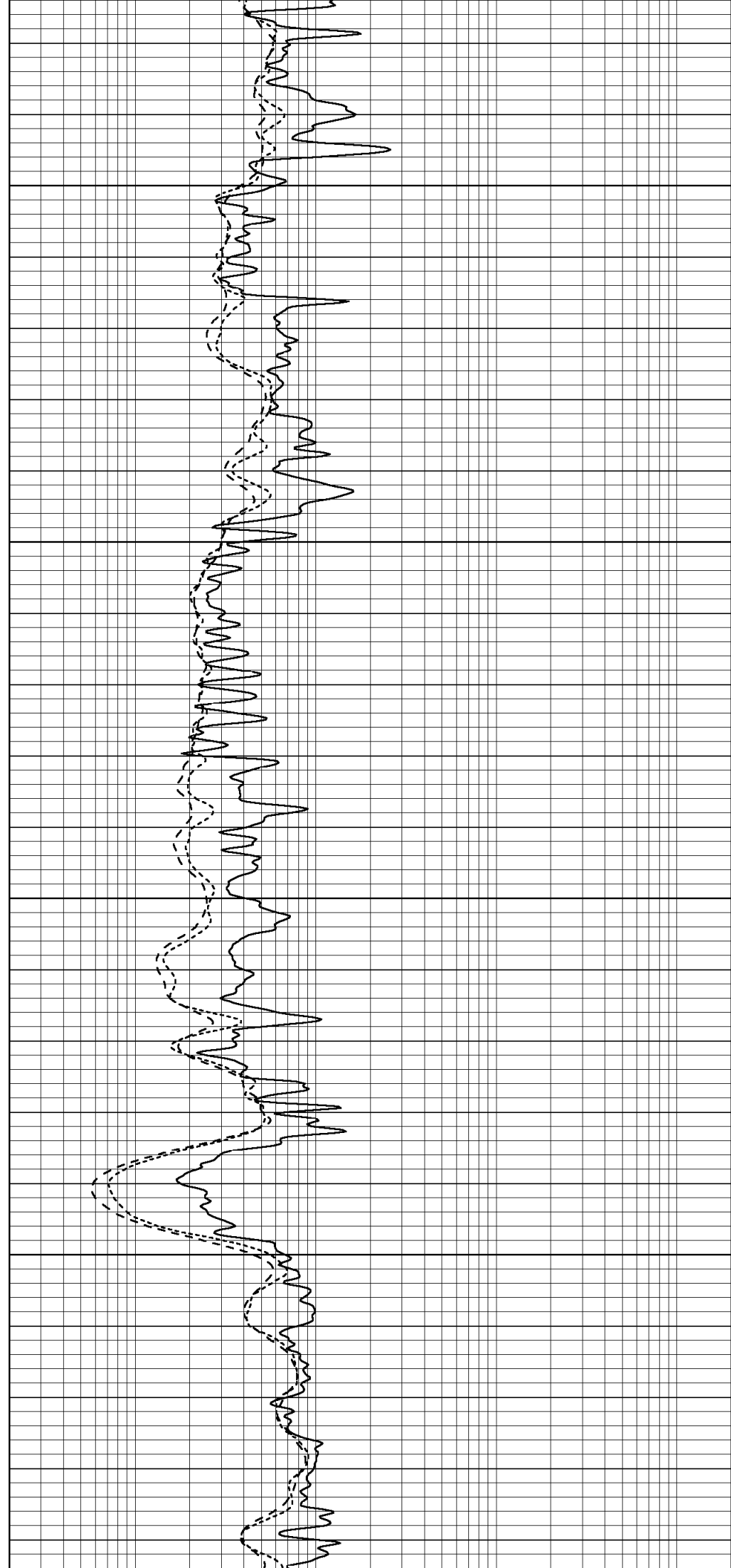


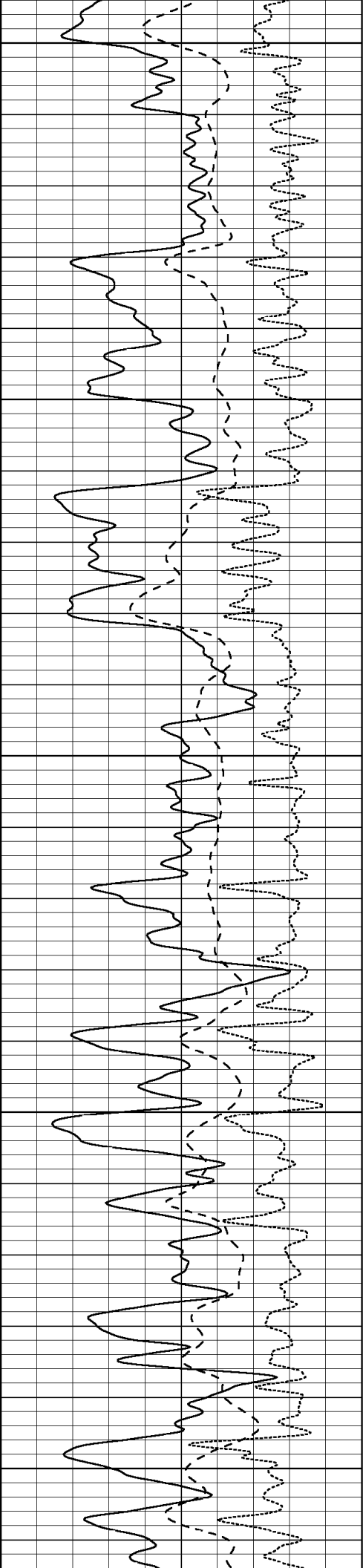
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2350

2400

2450





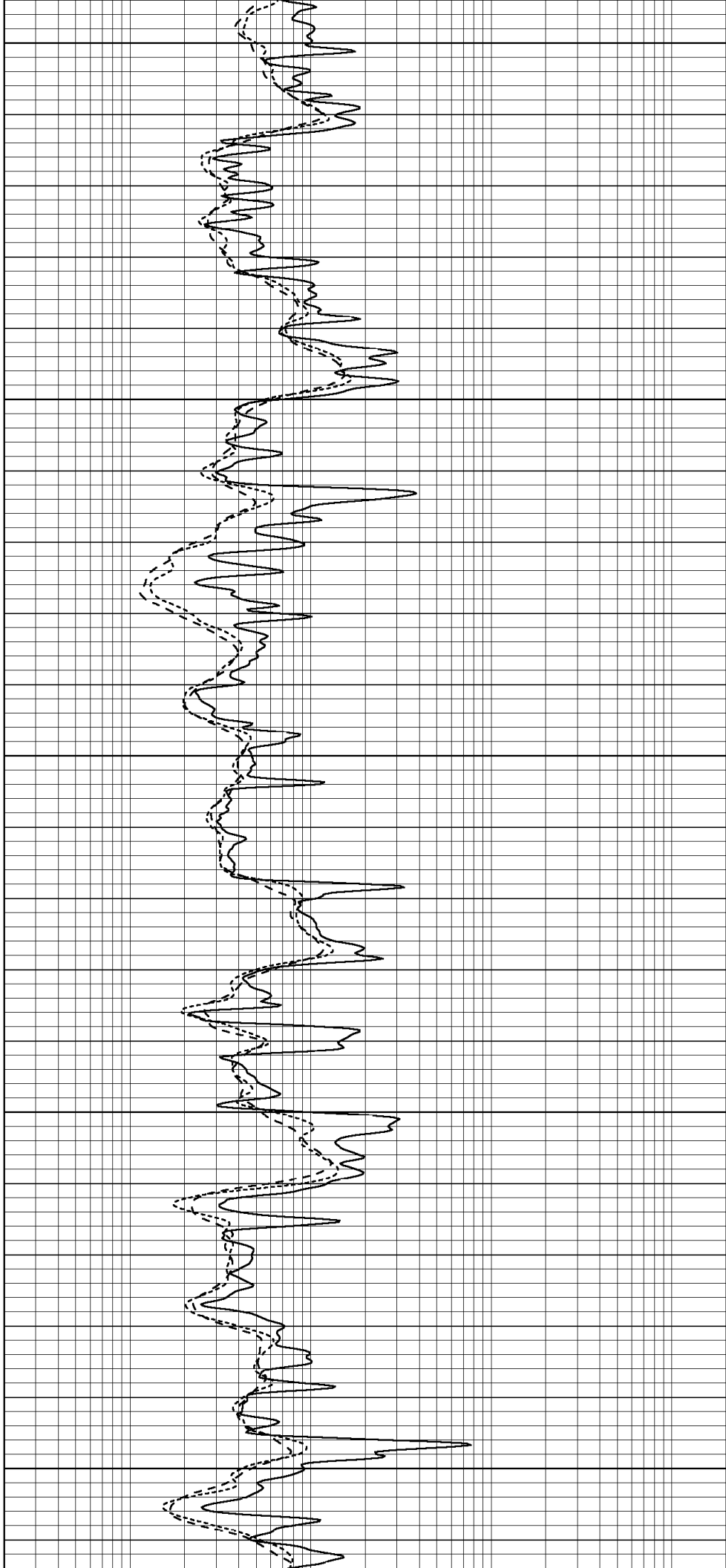
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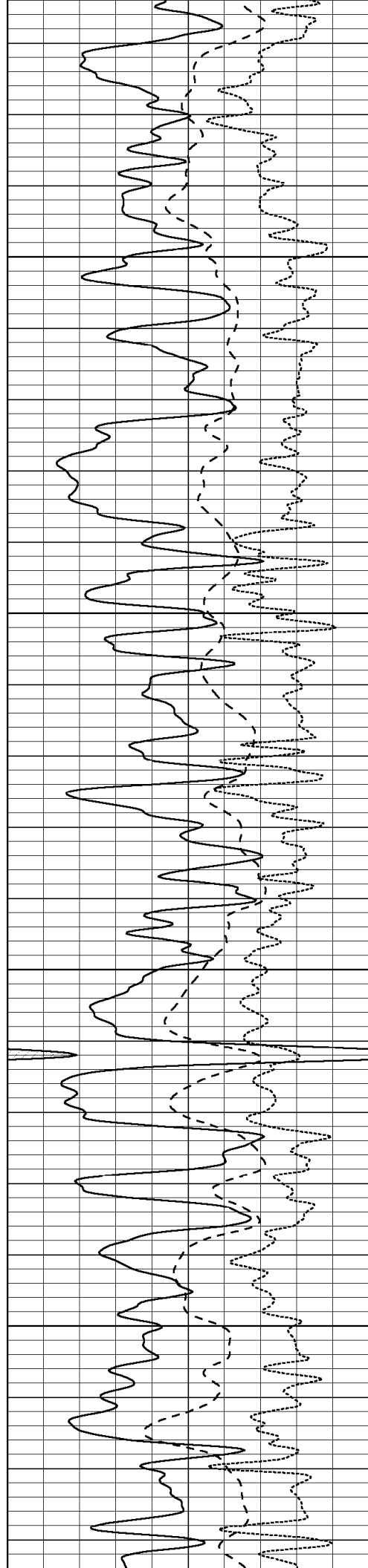
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2600

2650

2700



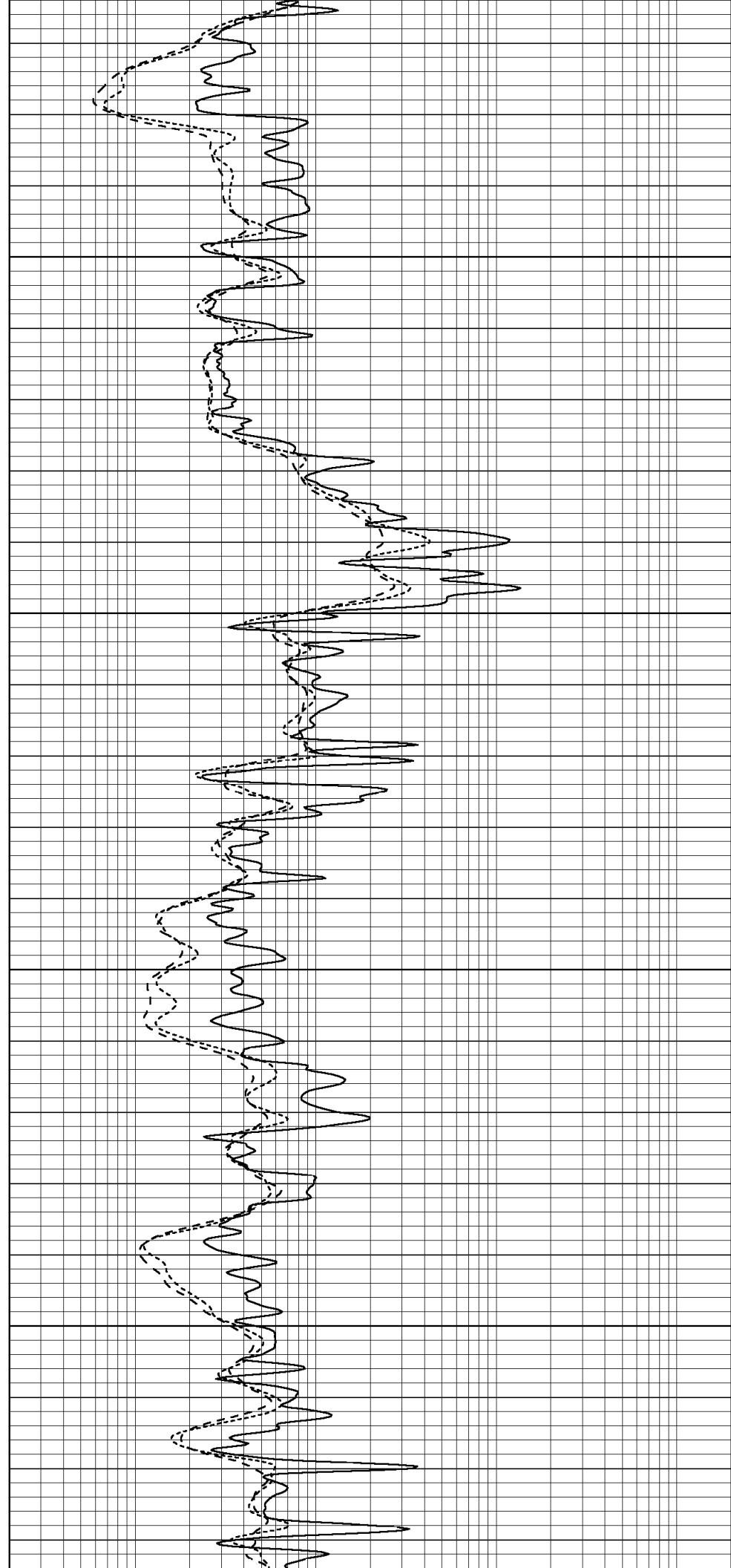


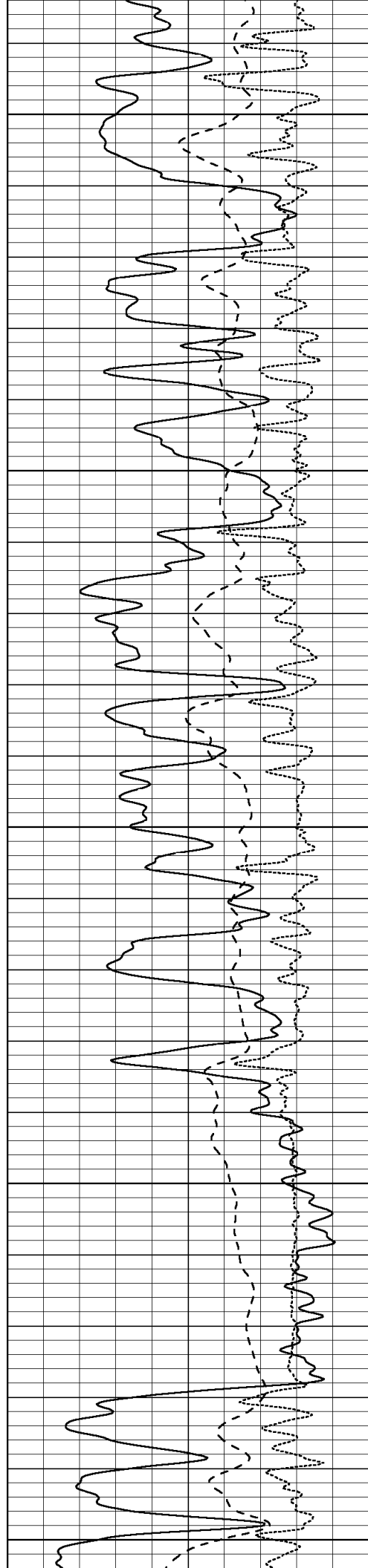
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2800

2850

2900





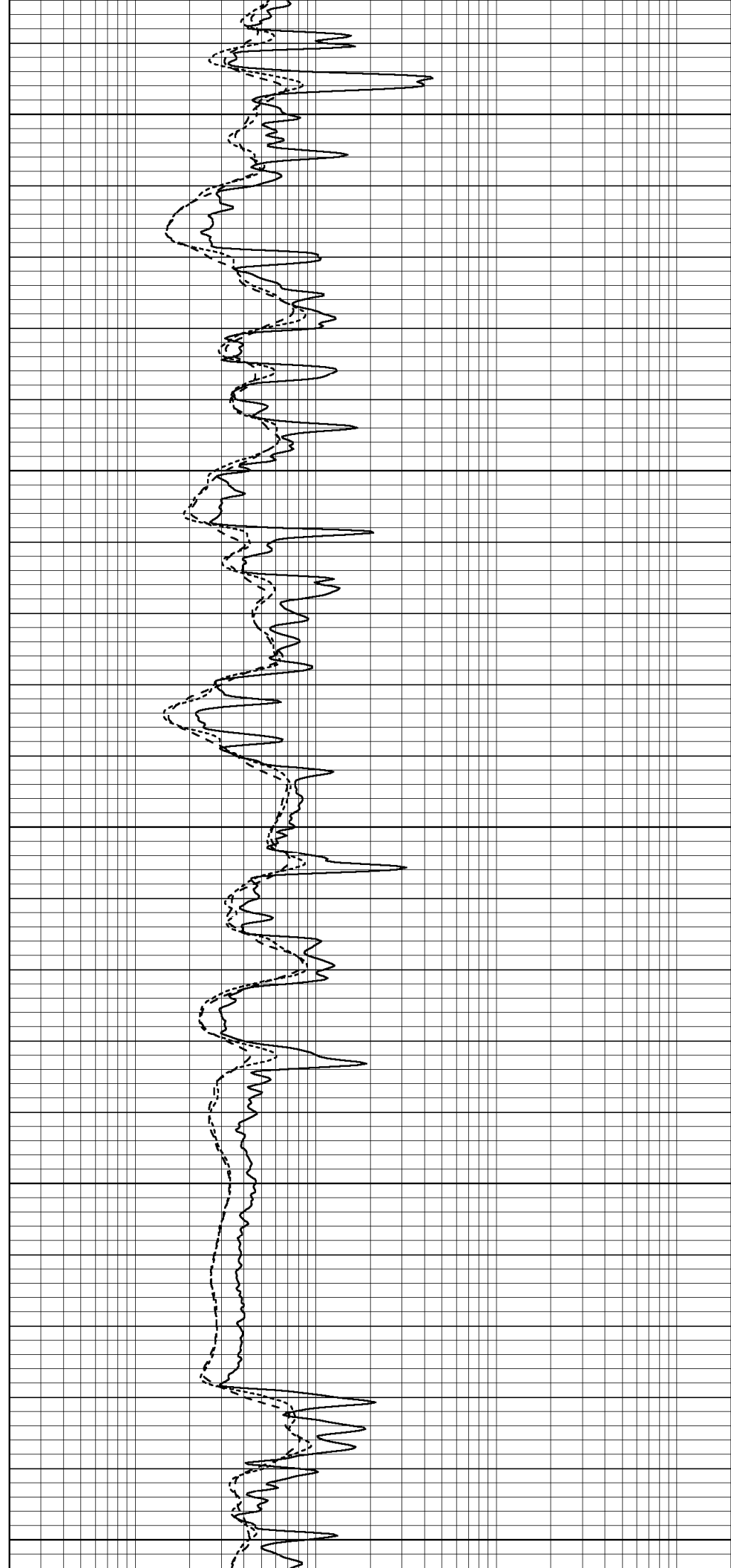
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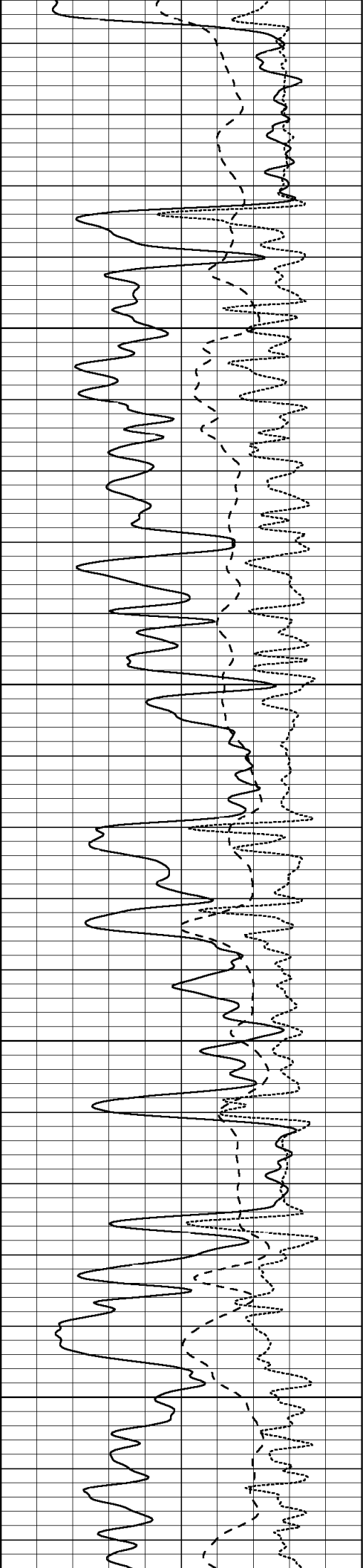
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3050

3100

3150



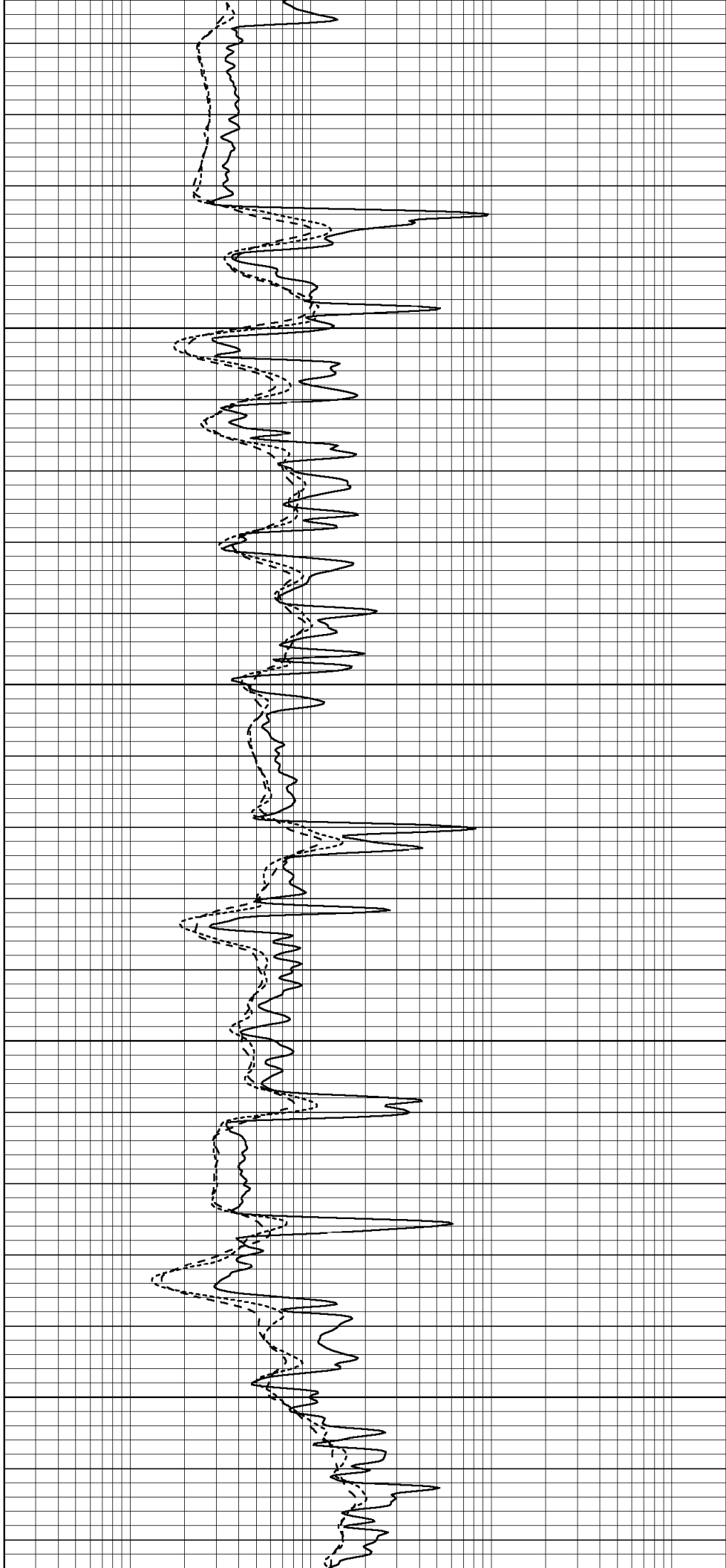


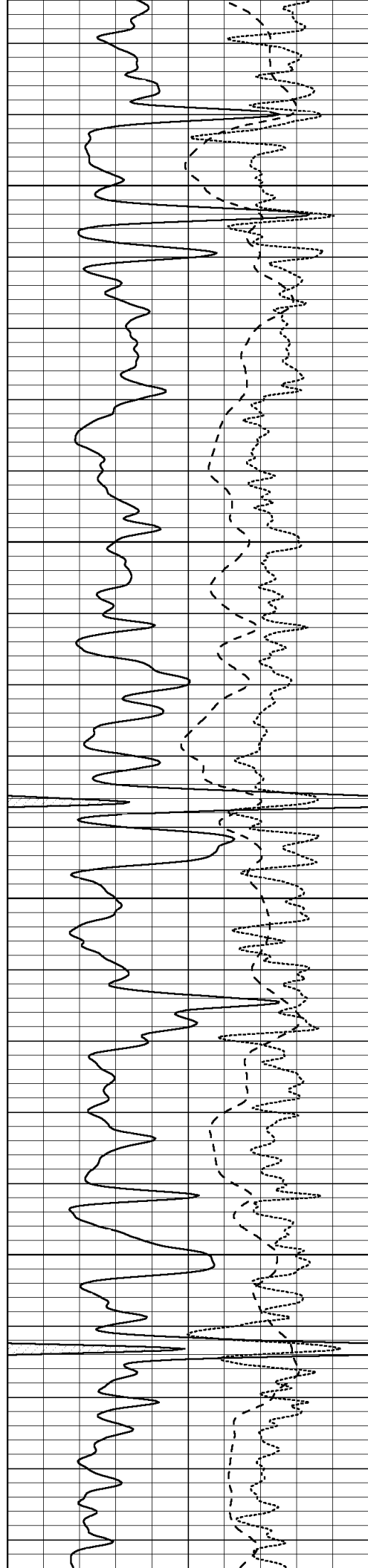
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3250

3300

3350



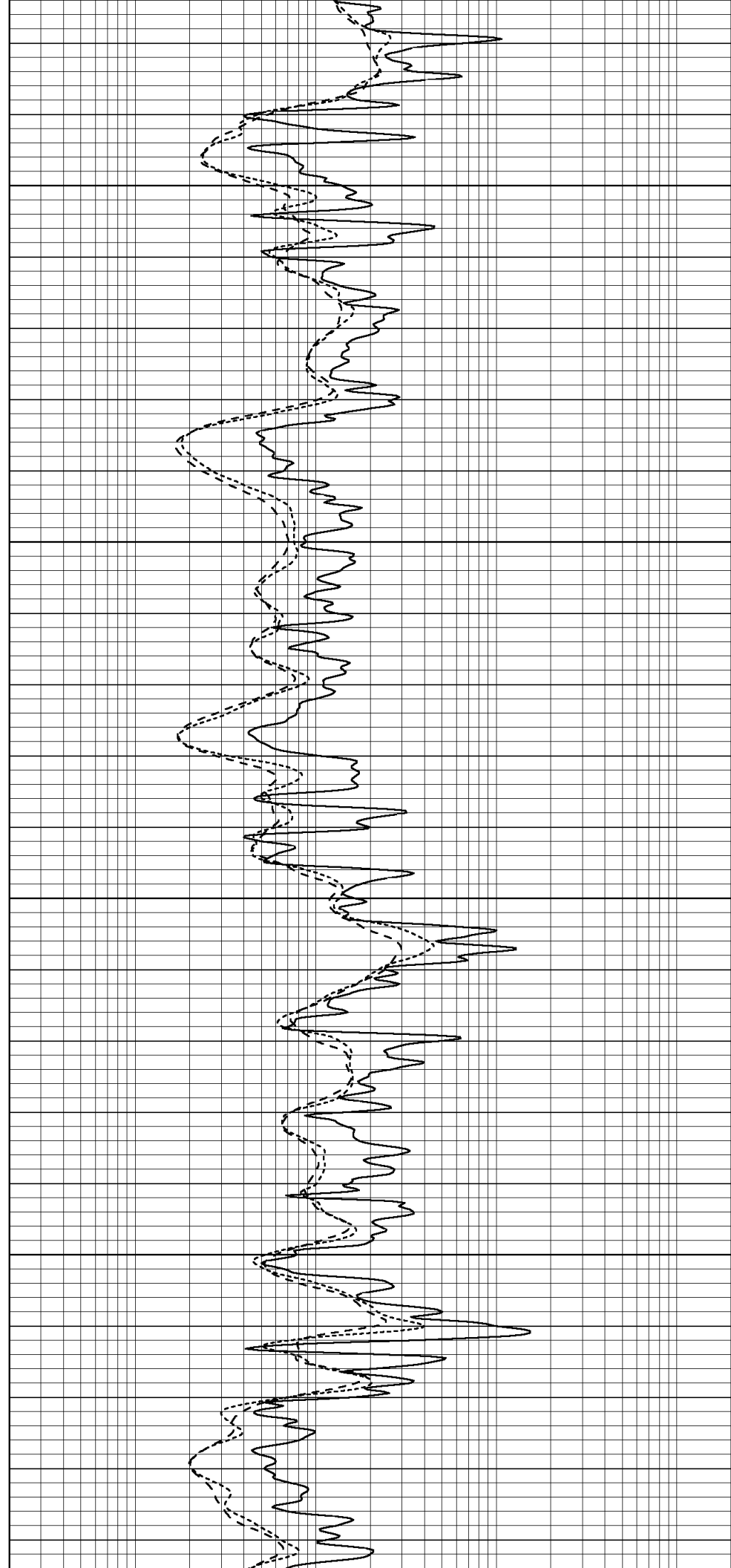


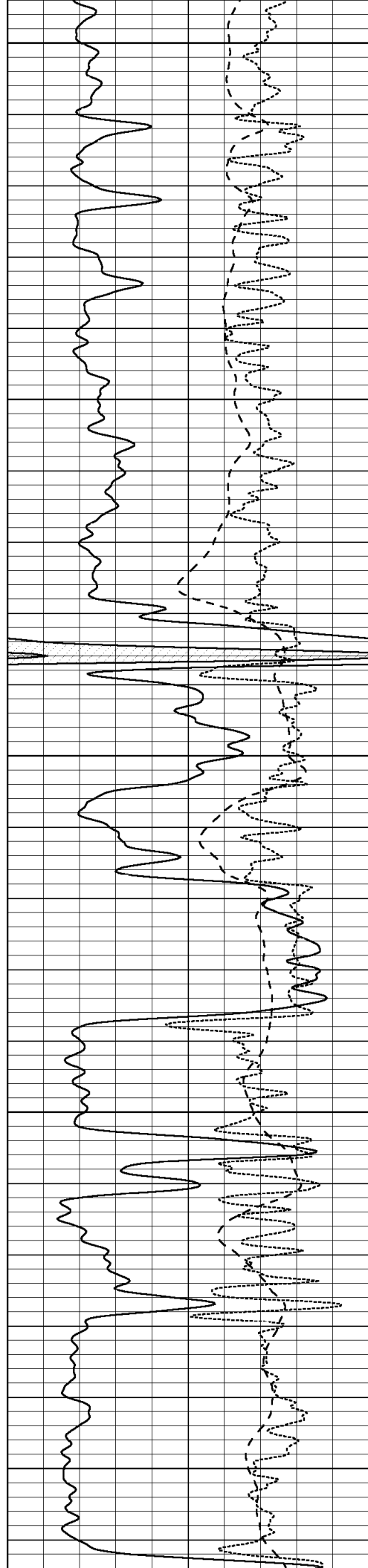
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3450

3500

3550





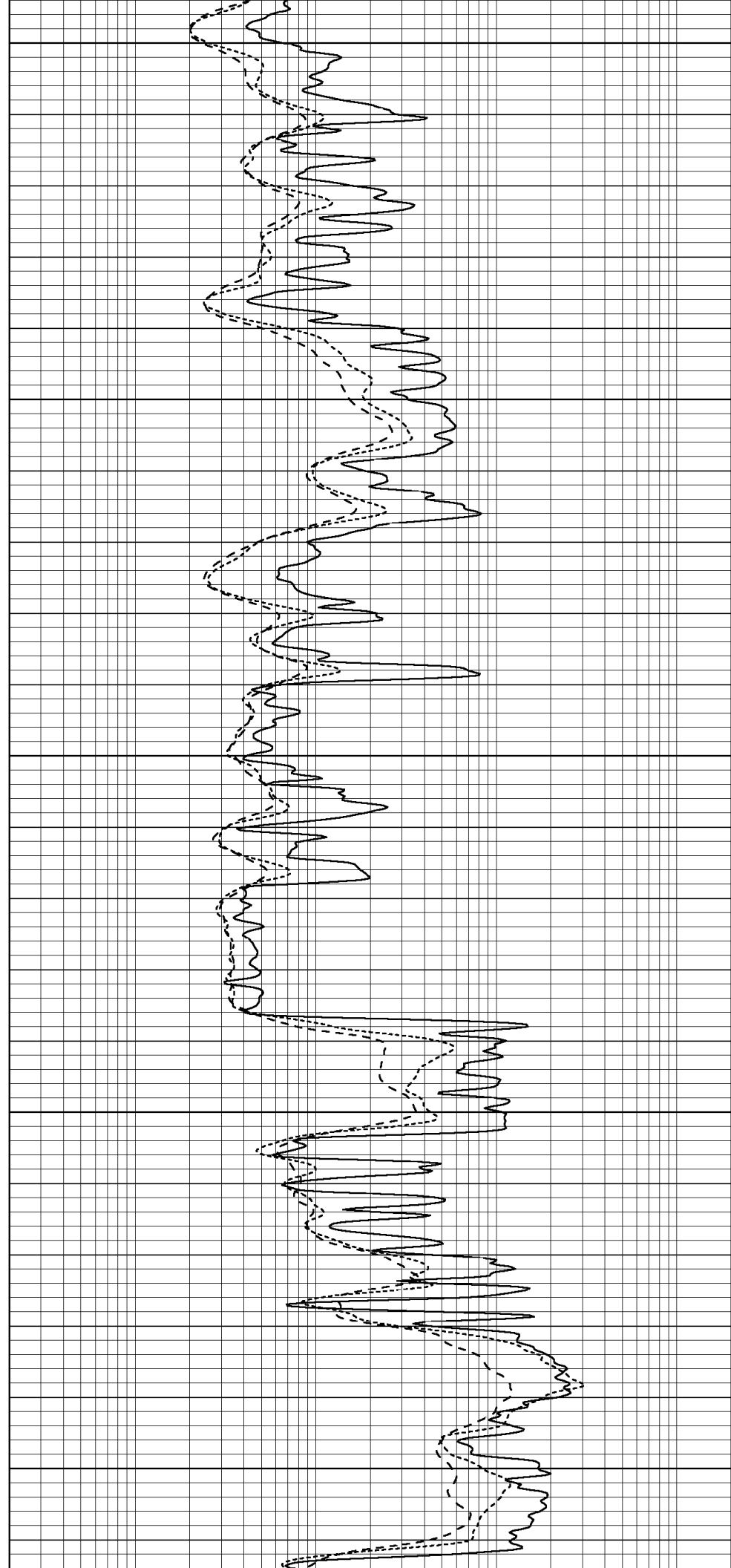
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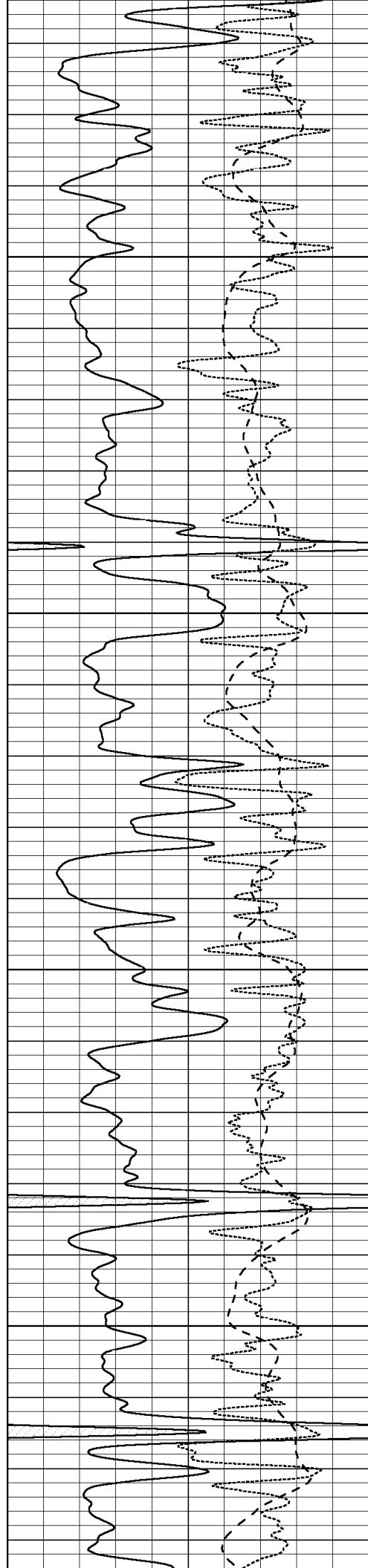
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3700

3750

3800



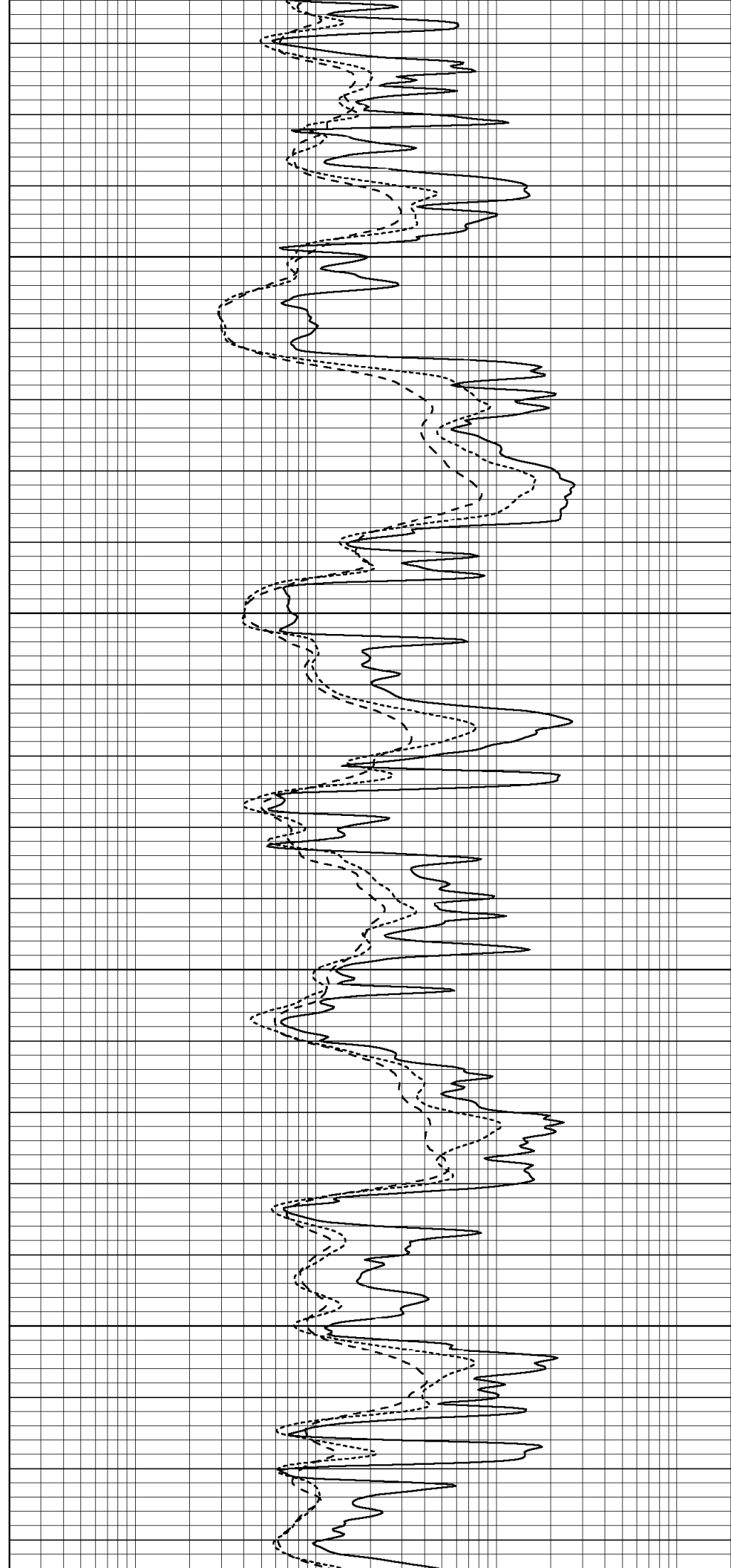


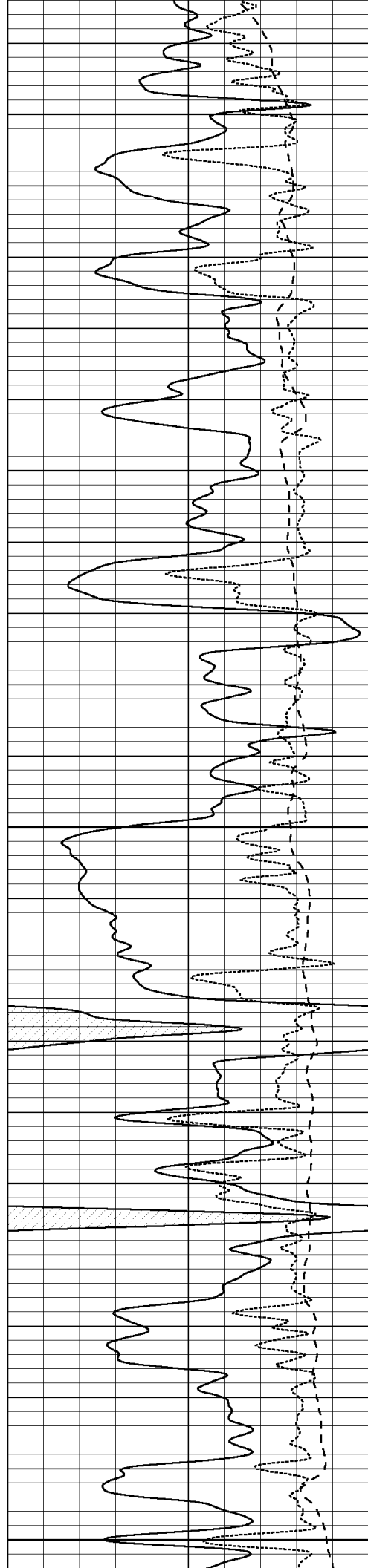
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3900

3950

4000





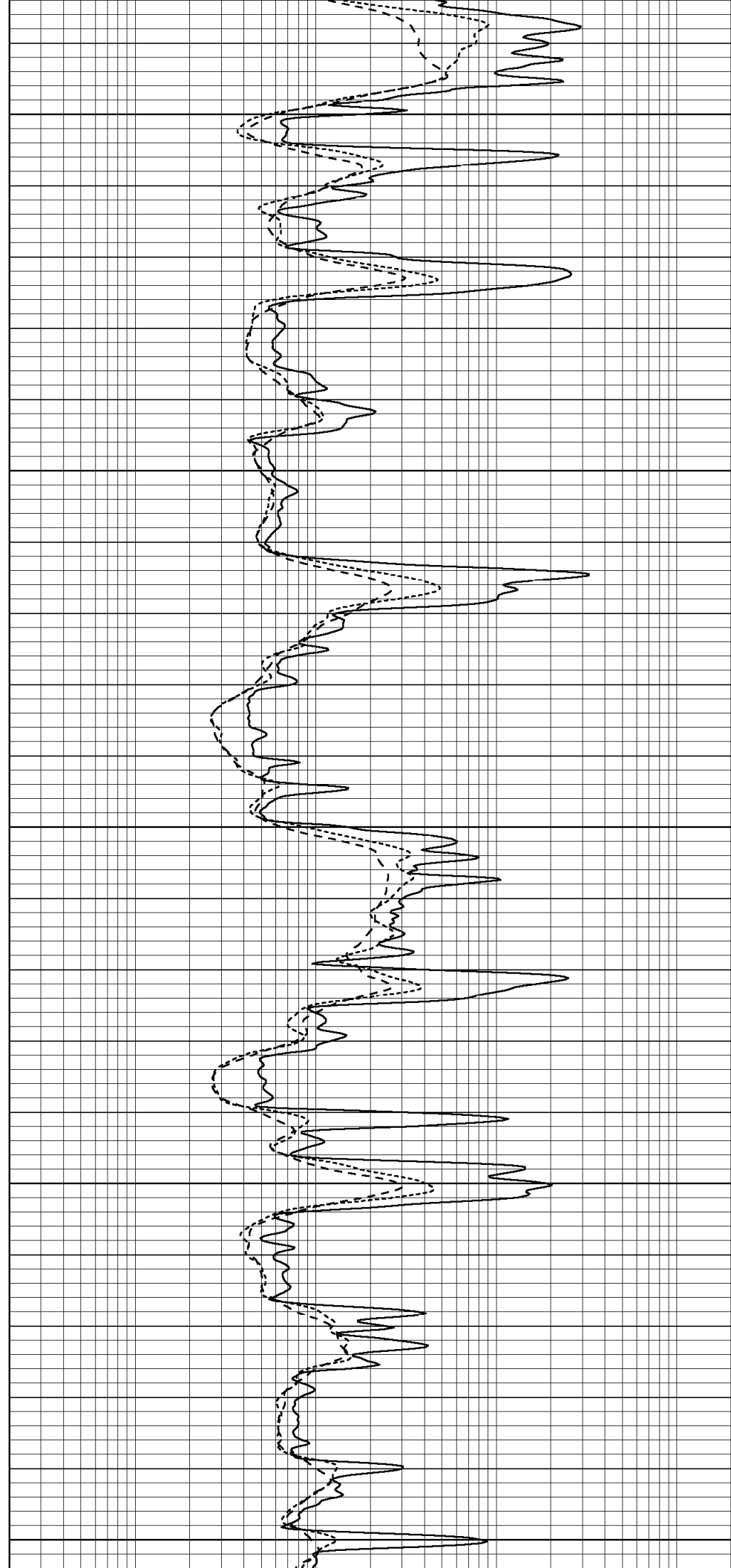
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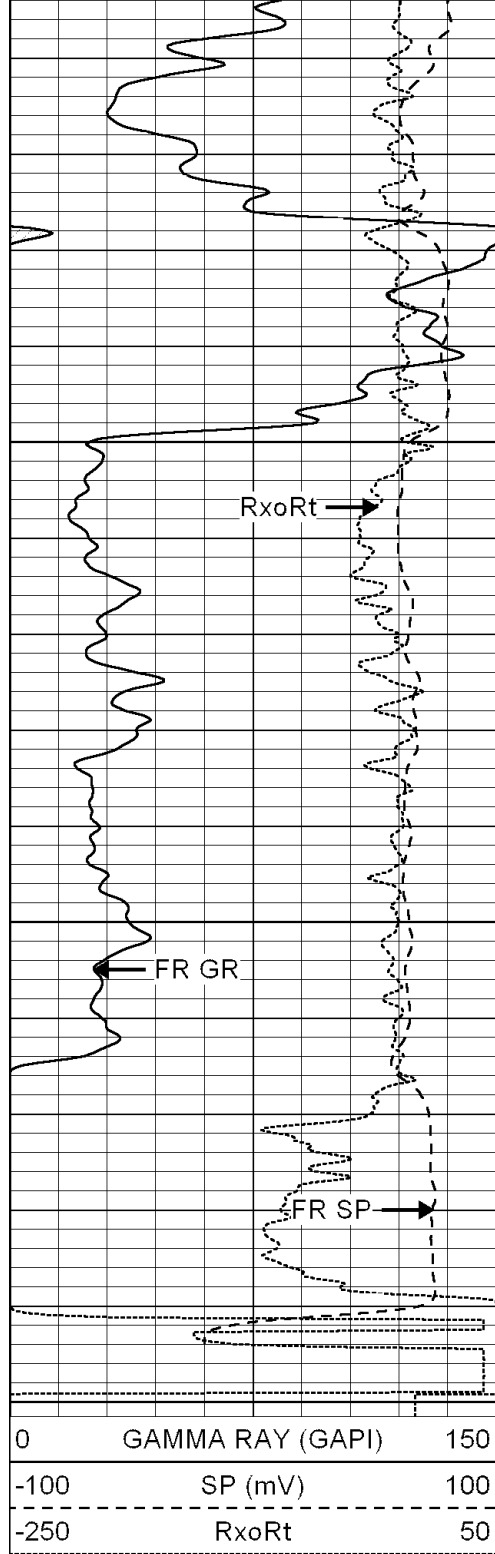
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4150

4200

4250



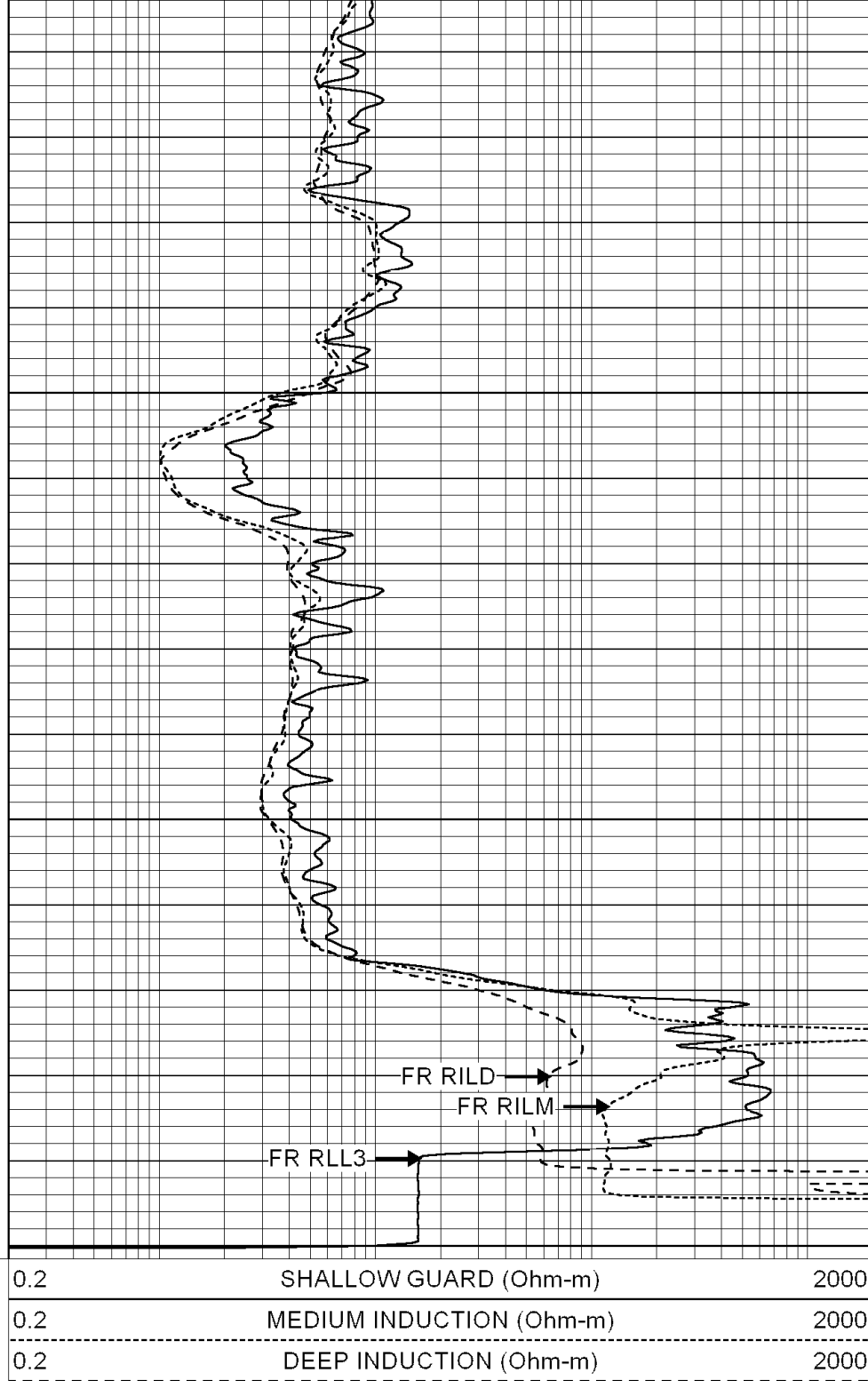


4300

4350

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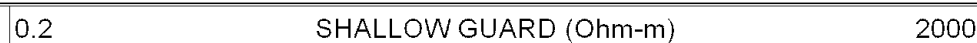
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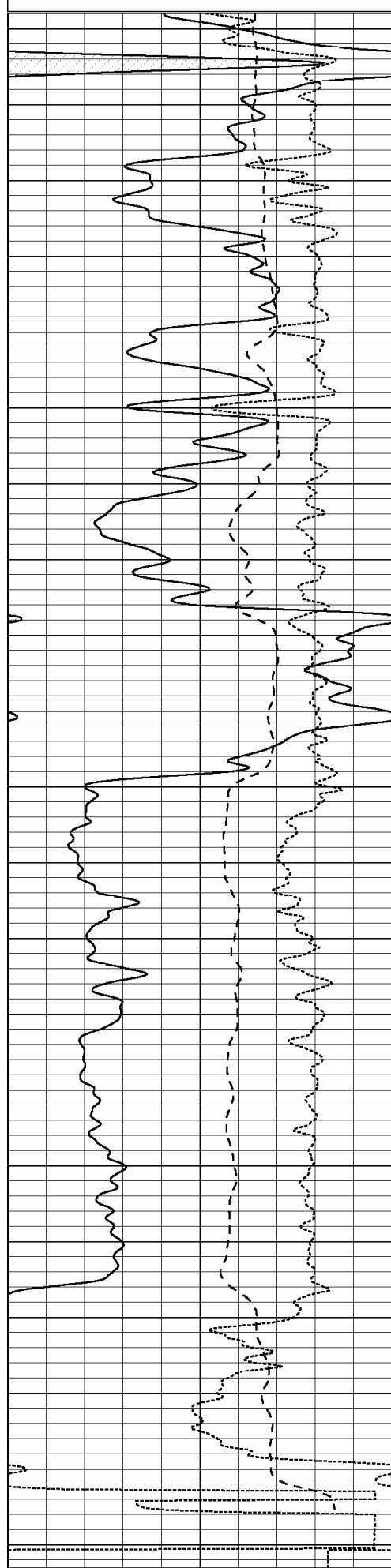
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REPEAT SECTION

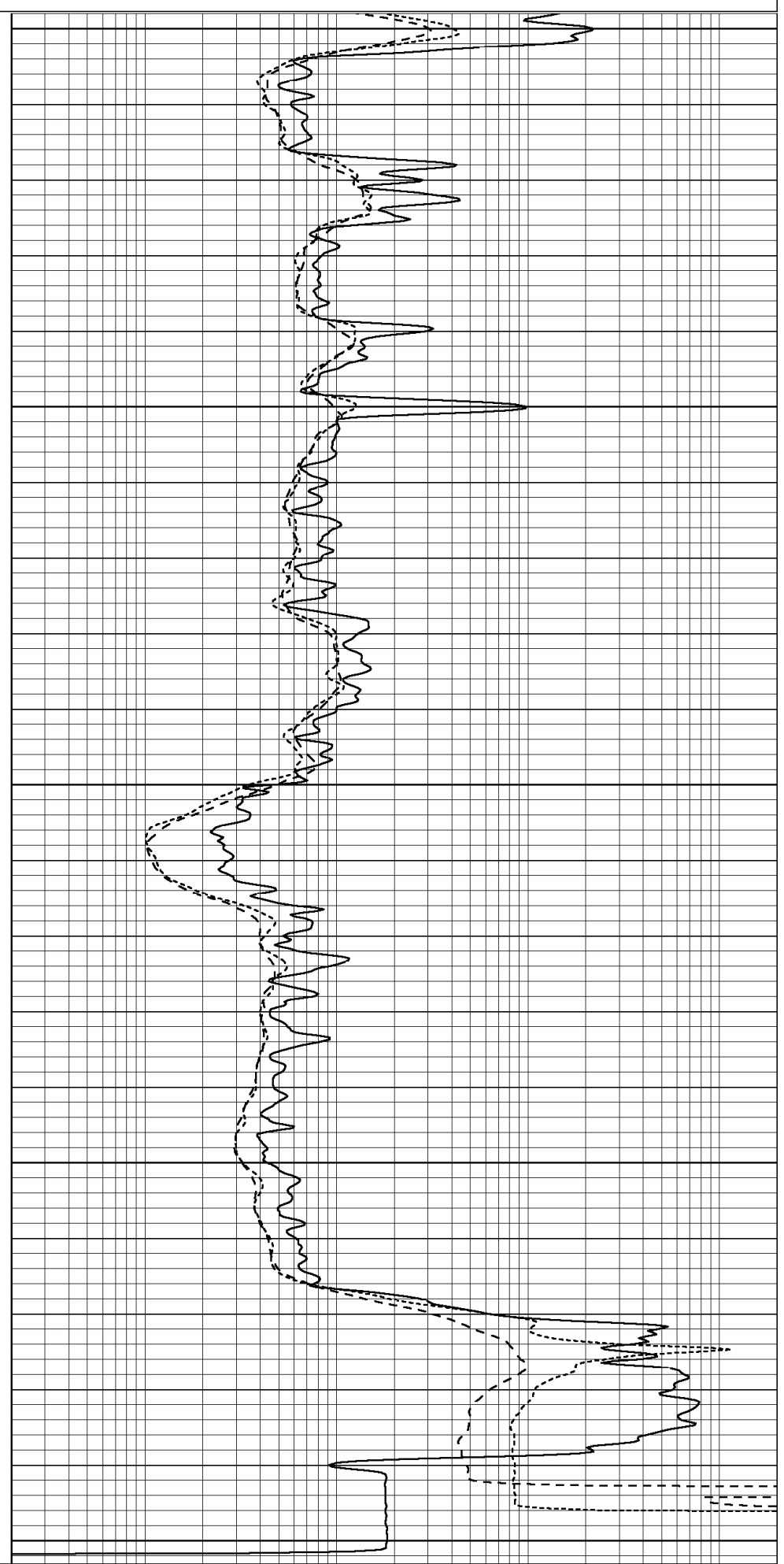
Database File: 004256ddn.db
 Dataset Pathname: pass2.A
 Presentation Format: dil
 Dataset Creation: Sat Sep 19 04:23:52 2009 by Calc Open-Cased 051020
 Charted by: Depth in Feet scaled 1:240



-100 SP (mV) 100
-250 RxoRt 50



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



Serial Number:	GR5
Tool Model:	OPEN
Performed:	Thu Sep 17 08:10:47 2009

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5500	GAPI/cps