



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company LOTUS OPERATING COMPANY, LLC. Well #3 PLATT "A" Field HARDTNER County BARBER State KANSAS		Company LOTUS OPERATING COMPANY, LLC. Well #3 PLATT "A" Field HARDTNER County BARBER State KANSAS		Location: API # : 15-007-23974-0000 1485' FSL & 1320' FEL SEC 1 TWP 35S RGE 13W Permanent Datum GROUND LEVEL Elevation 1461 Log Measured From KELLY BUSHING 17' A.G.L. Drilling Measured From KELLY BUSHING Other Services CDL/CNL/PE MEL/SONIC Elevation K.B. 1478 D.F. 1476 G.L. 1461	
Date	12/13/12				
Run Number	ONE				
Depth Driller	5619				
Depth Logger	5518				
Bottom Logged Interval	5516				
Top Log Interval	3700				
Casing Driller	10 3/4" @ 285'				
Casing Logger	282				
Bit Size	7 7/8"				
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,000 PPM			
Density / Viscosity	9.3/52				
pH / Fluid Loss	9.5/10.4				
Source of Sample	FLOWLINE				
Rm @ Meas. Temp	.540 @ 85F				
Rmf @ Meas. Temp	.405 @ 85F				
Rmc @ Meas. Temp	.648 @ 84F				
Source of Rmf / Rmc	MEASUREMENT				
Rm @ BHT	.350 @ 131F				
Time Circulation Stopped	3 HOURS				
Time Logger on Bottom	6:00 A.M.				
Maximum Recorded Temperature	131F				
Equipment Number	4854				
Location	HAYS, KANSAS				
Recorded By	JEFF LUEBBERS				
Witnessed By	TIM HELLMAN				

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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, KANSAS (785) 628-6395
 DIRECTIONS
 HARDTNER, KS. 1N. TO "DRIFTWOOD RD.", 1W. TO CURVE, 1/2S., W. INTO

Database File:

010032pe.db

Dataset Pathname:

pass3.8

Presentation Format:

dil2

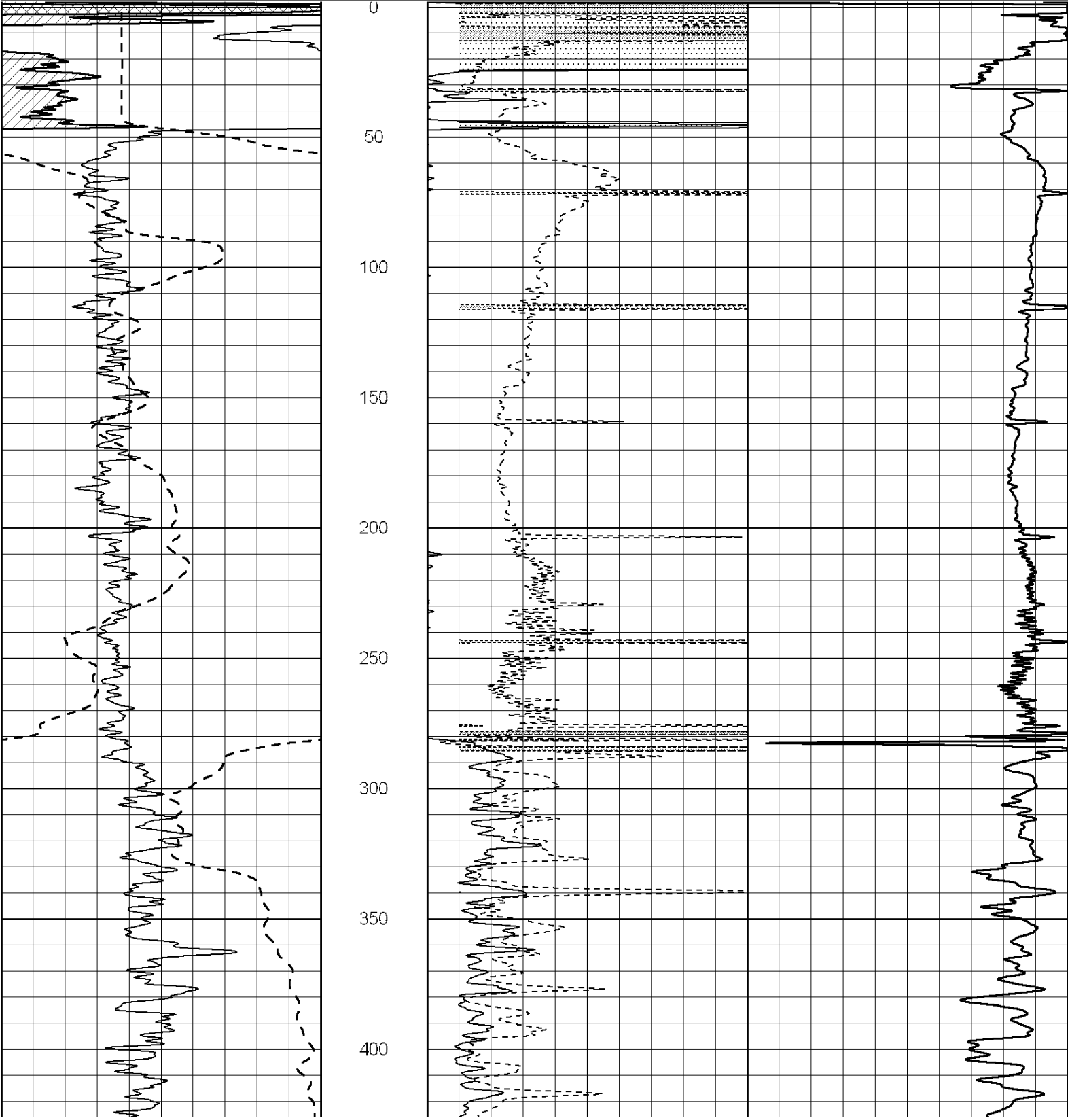
Dataset Creation:

Thu Dec 13 08:10:12 2012

Charted by:

Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50	
-100	SP (mV)	100	0	RILD (Ohm-m)	50	
-----			1000			CILD (mmho/m) 0
			50	RILD X10 (Ohm-m)	500	
			50	RLL3 X10 (Ohm-m)	500	



450

500

550

600

650

700

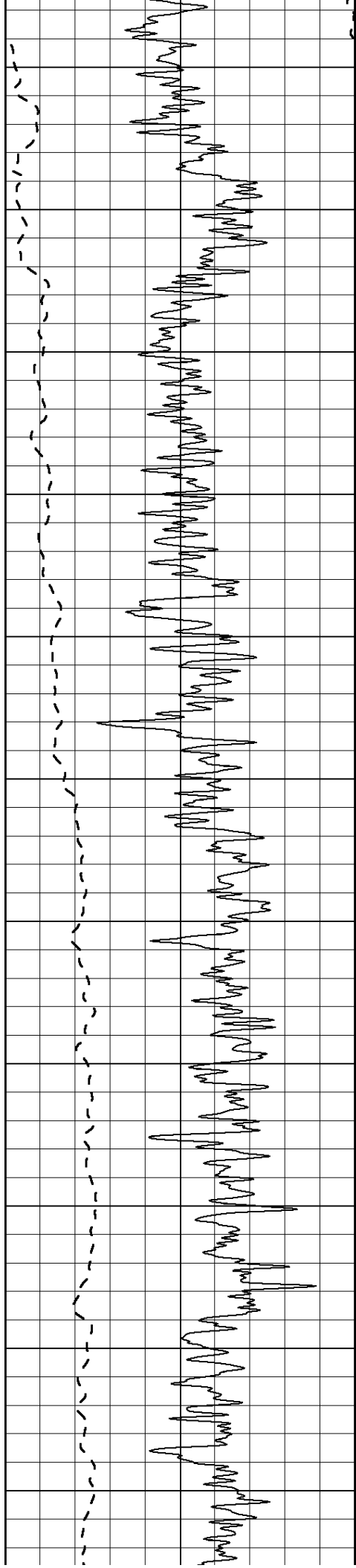
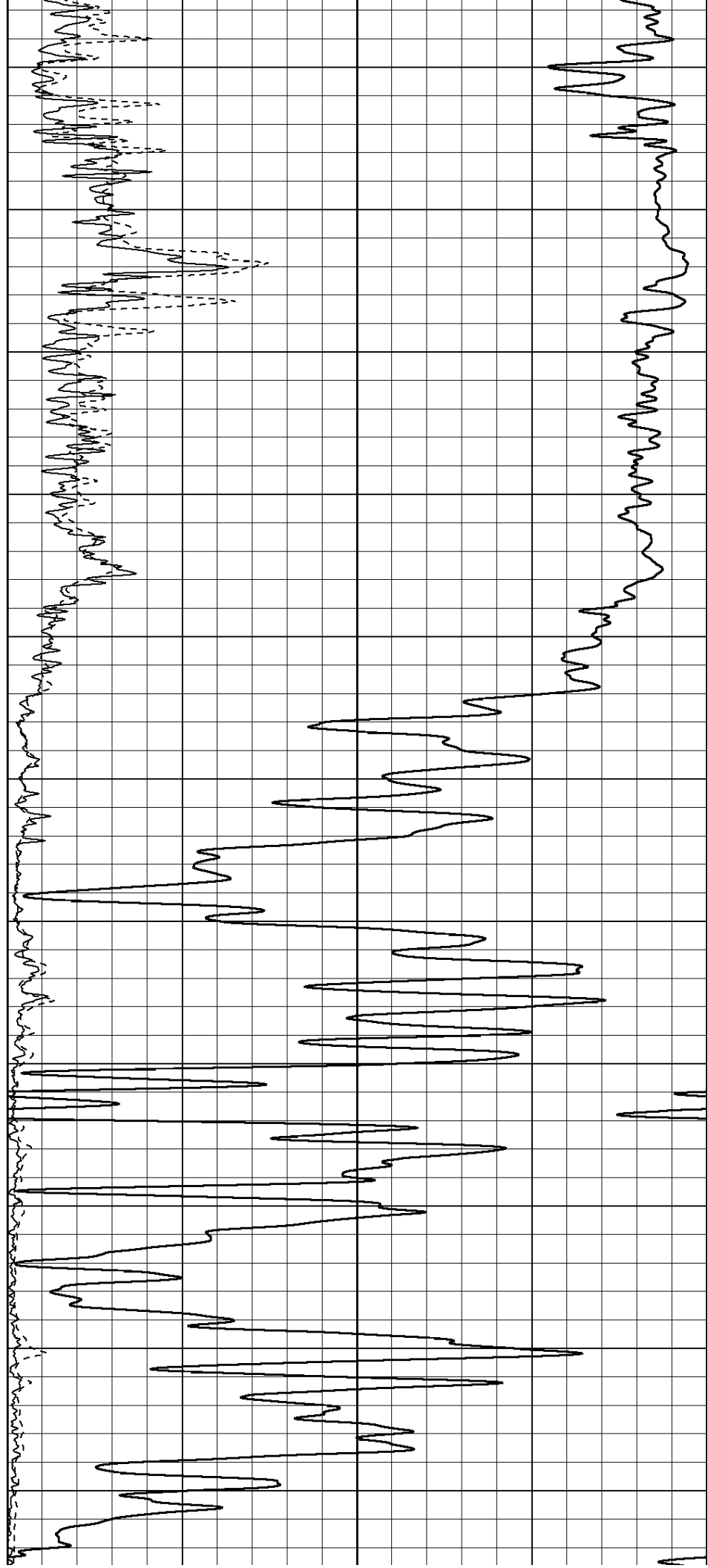
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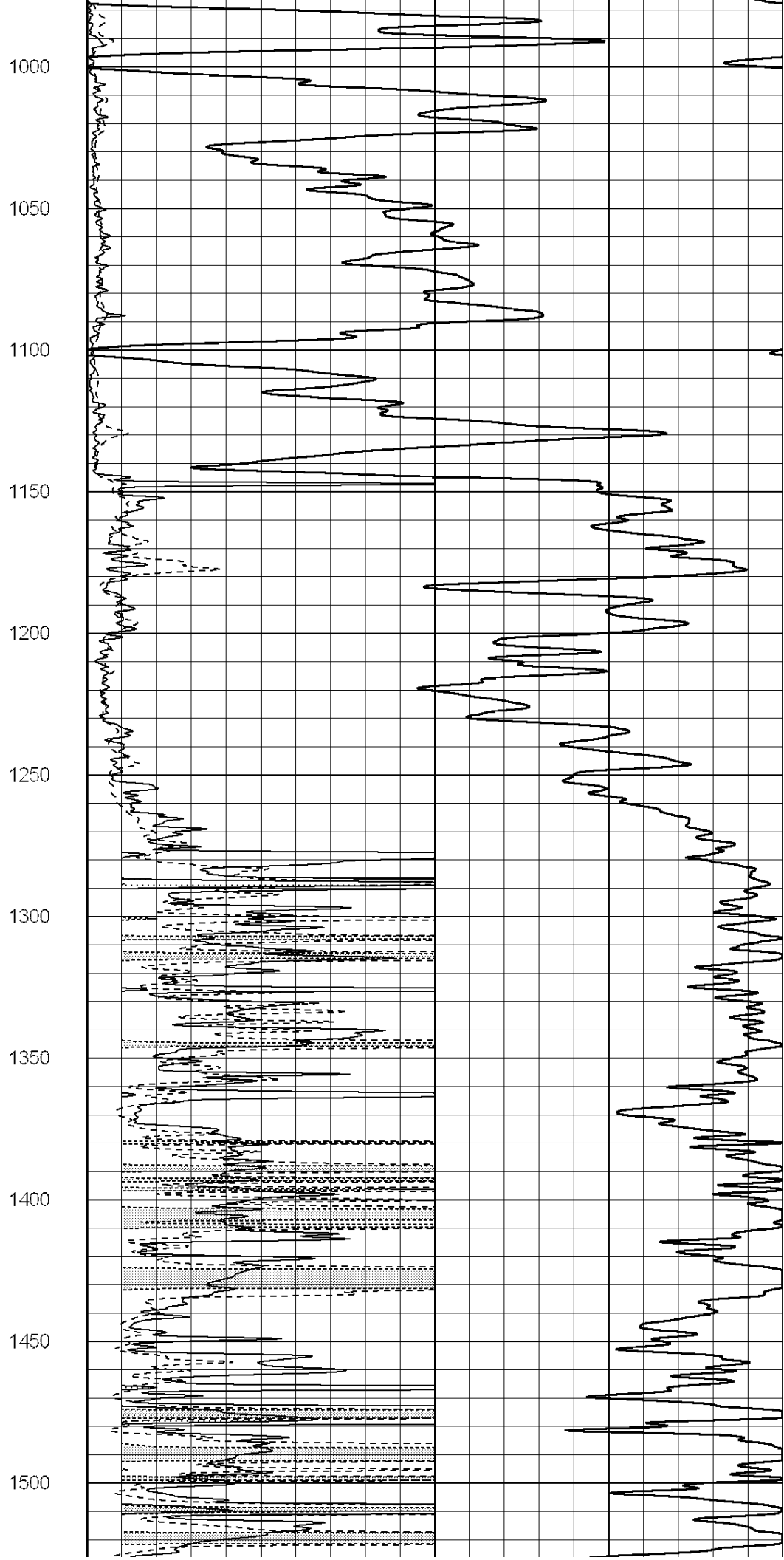
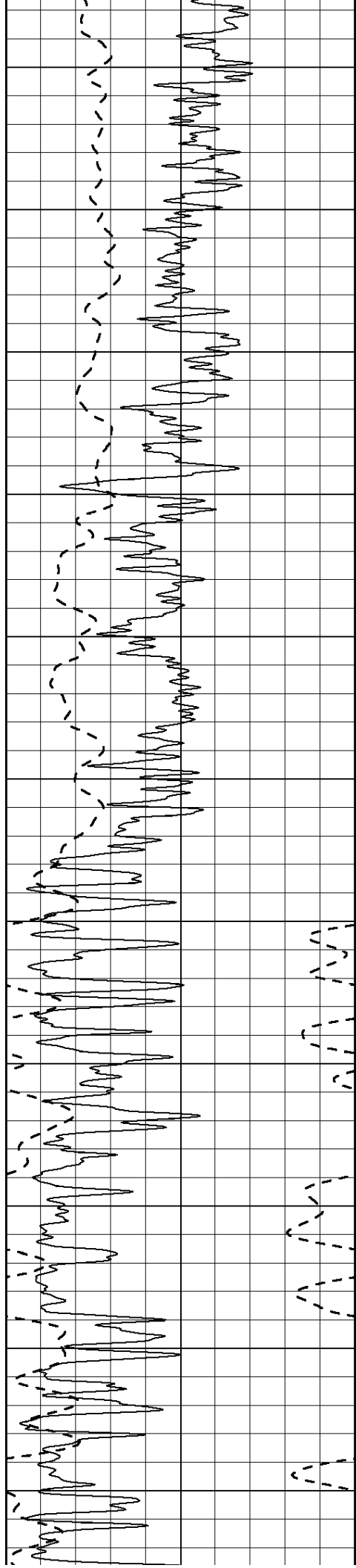
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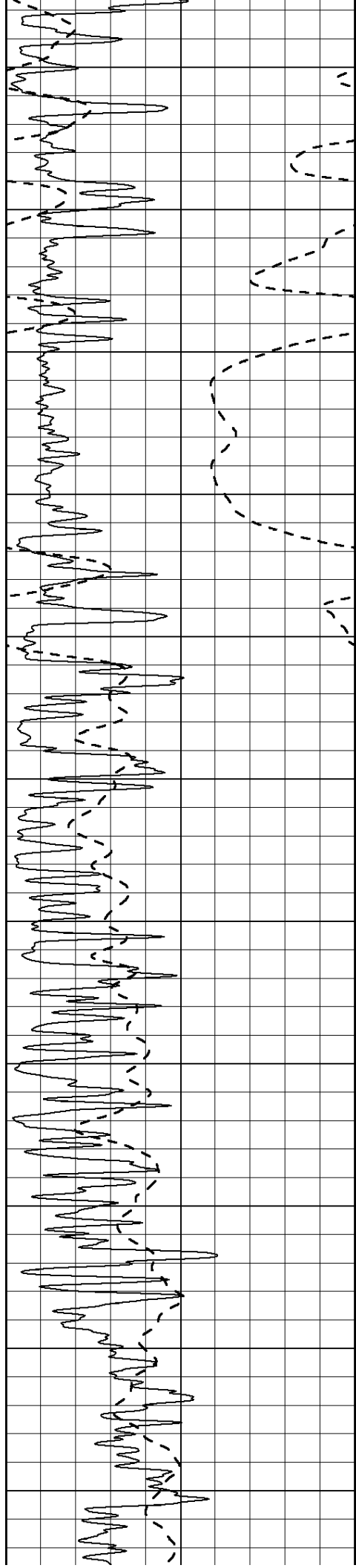
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900

950







1550

1600

1650

1700

1750

1800

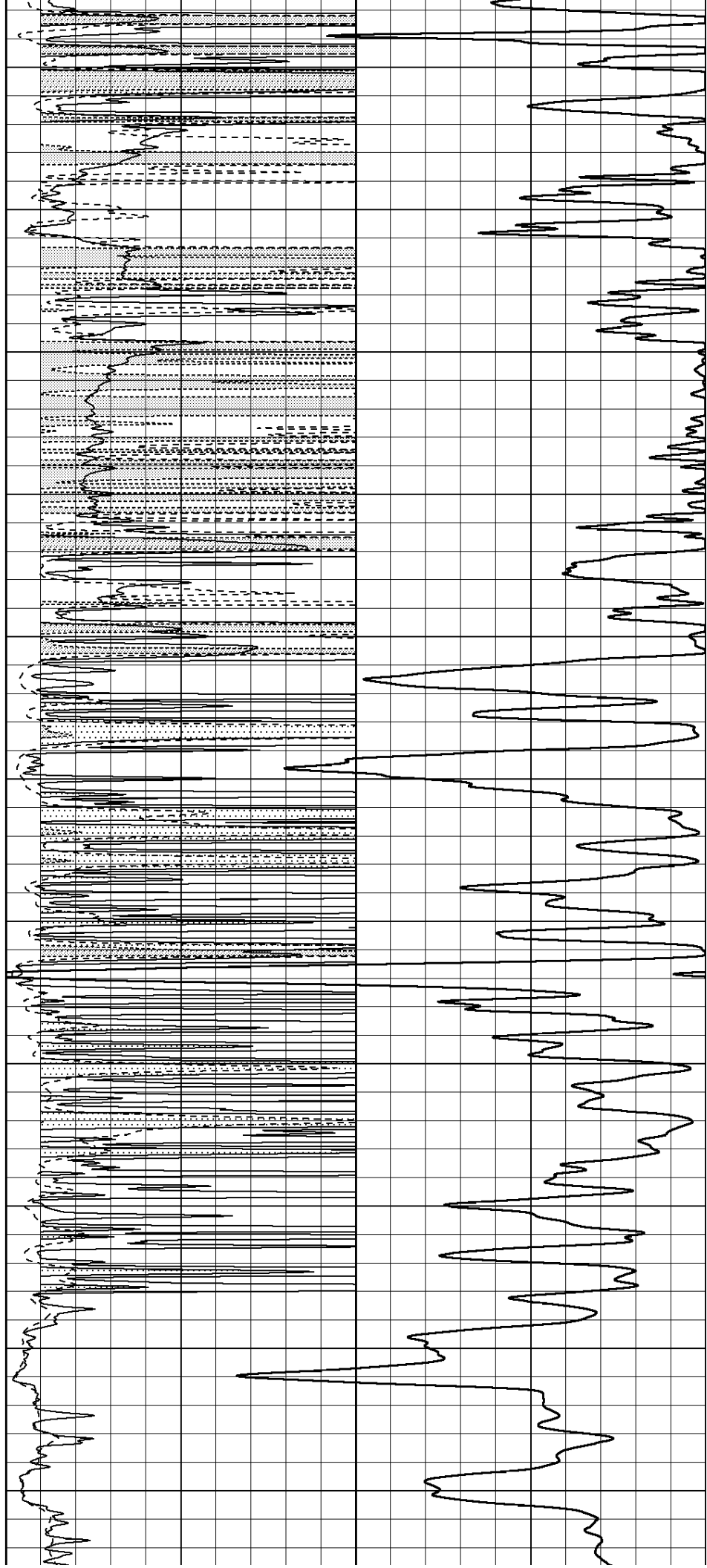
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2000

2050



2100

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2200

2250

2300

2350

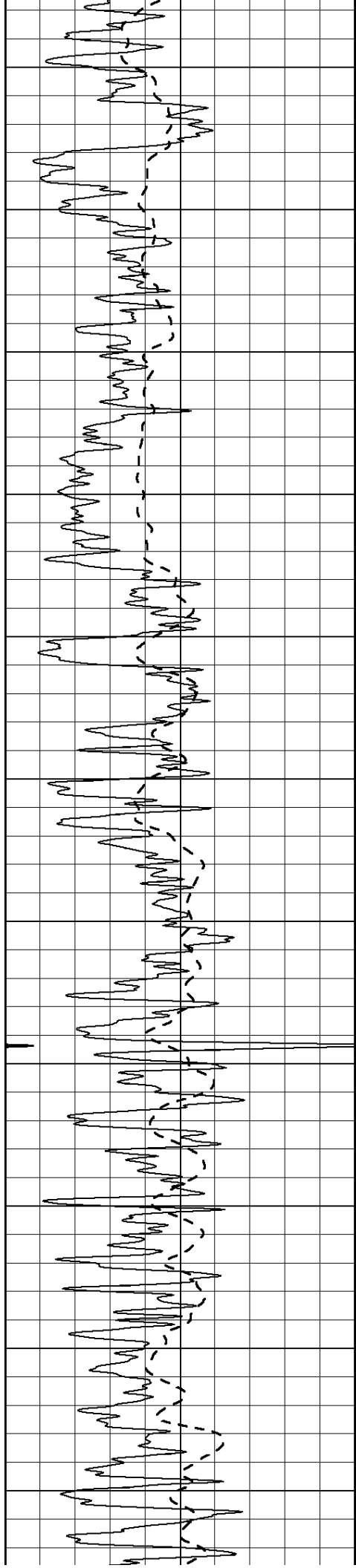
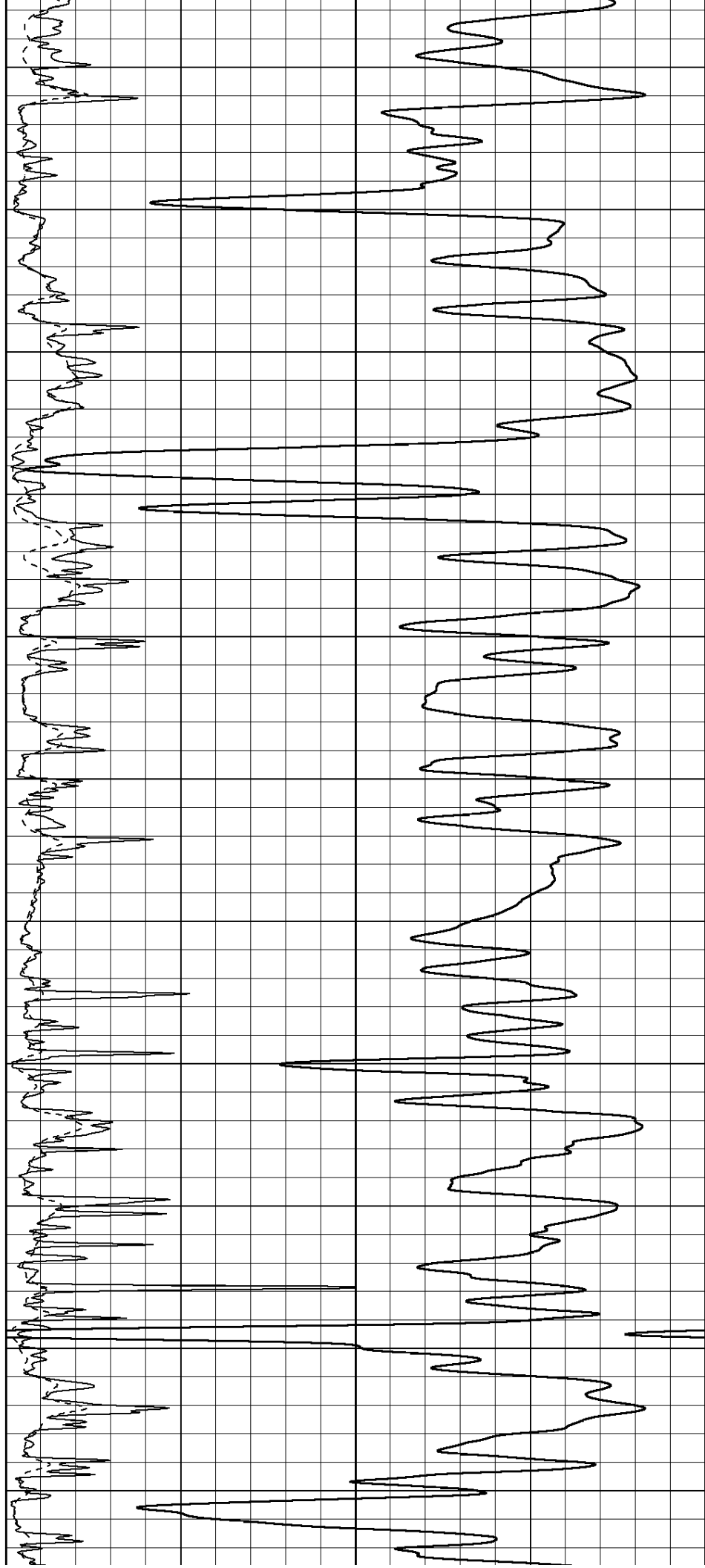
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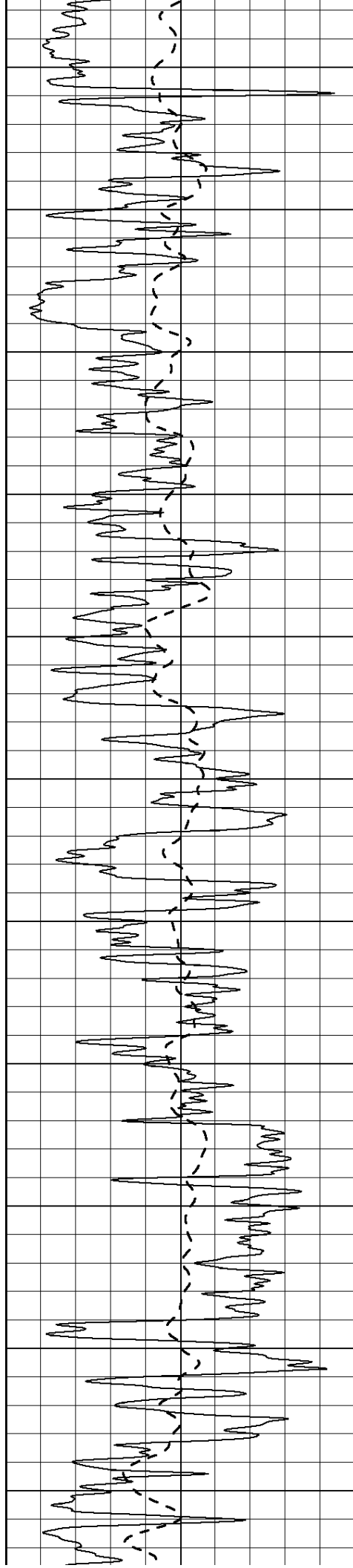
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2600





2650

2700

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2850

2900

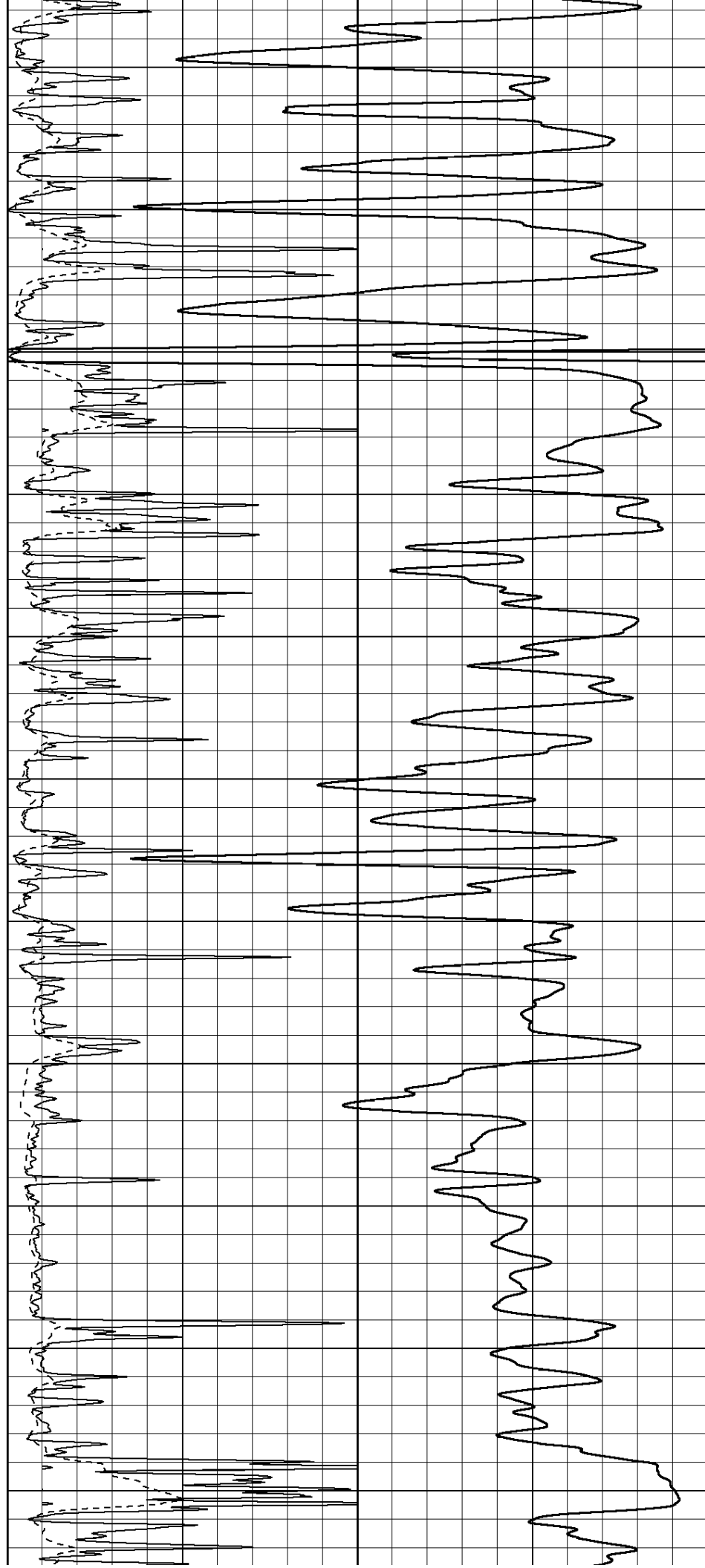
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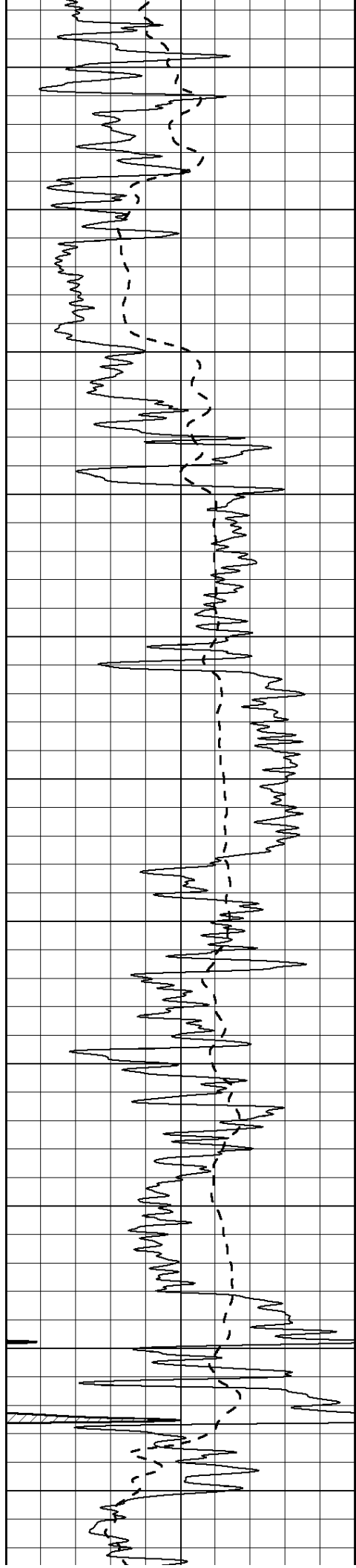
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3100

3150





3200

3250

3300

3350

3400

3450

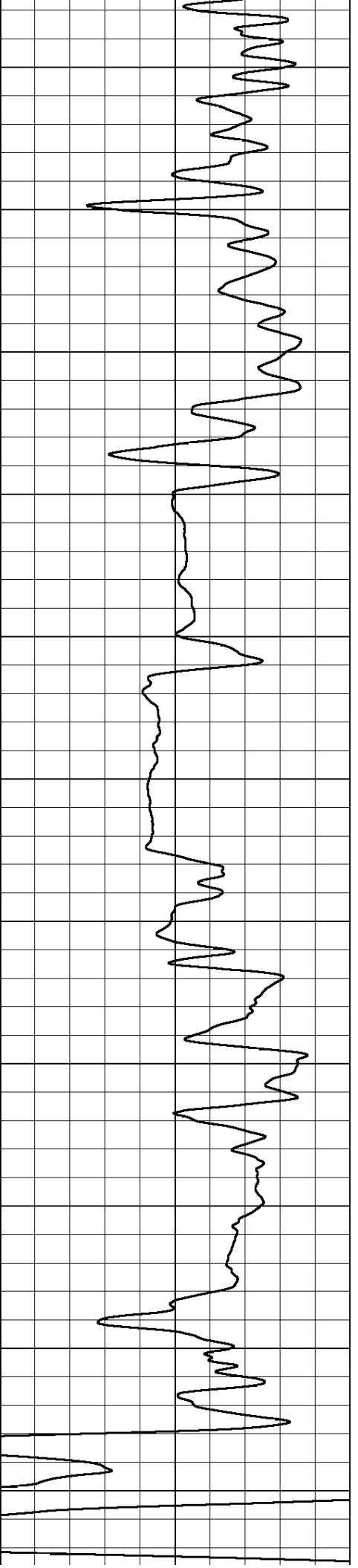
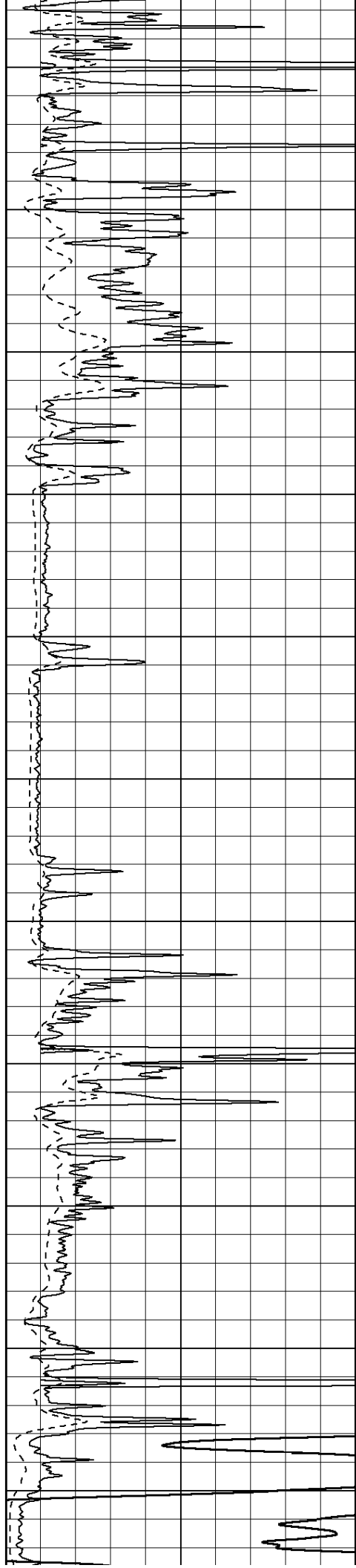
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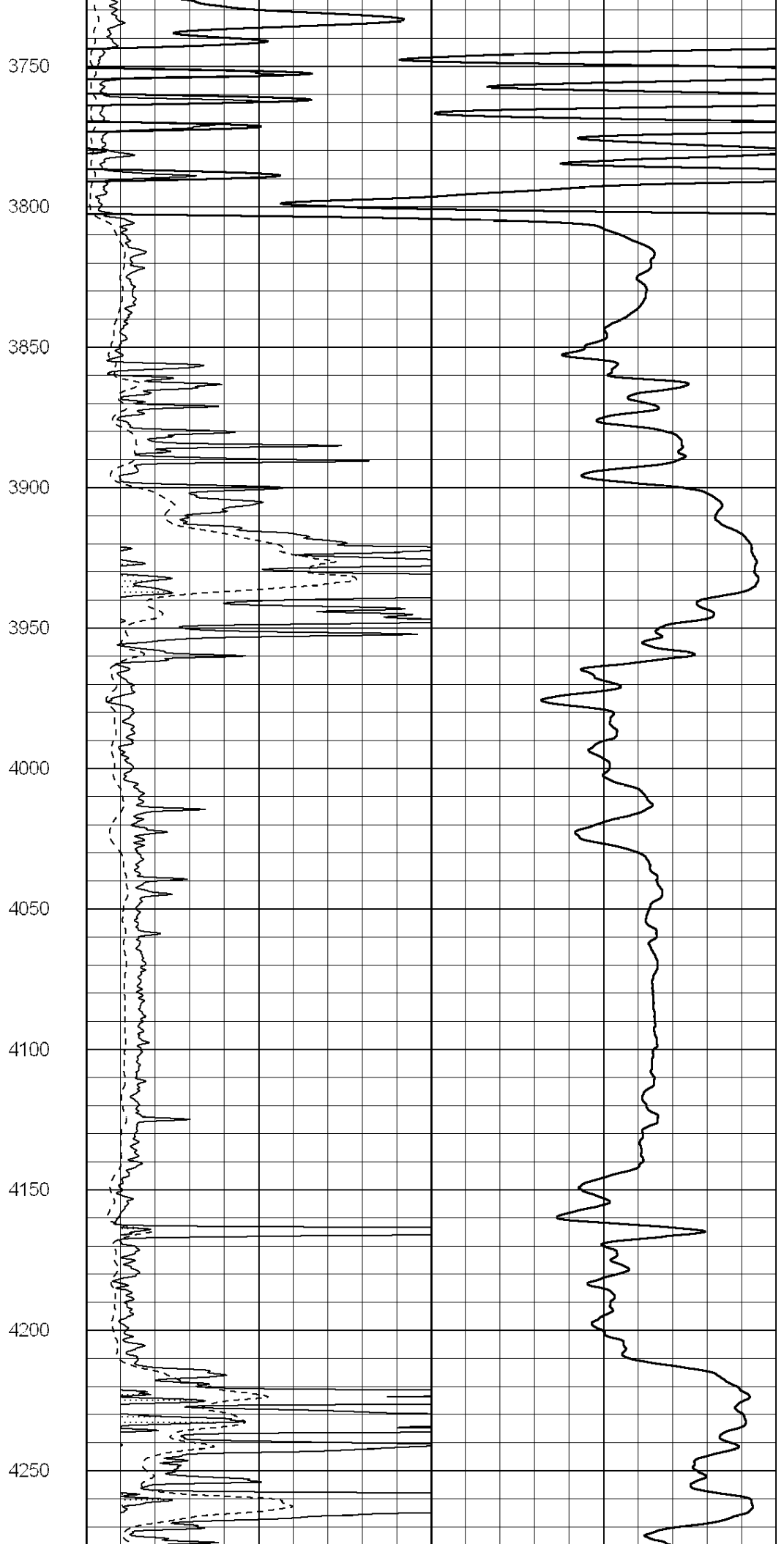
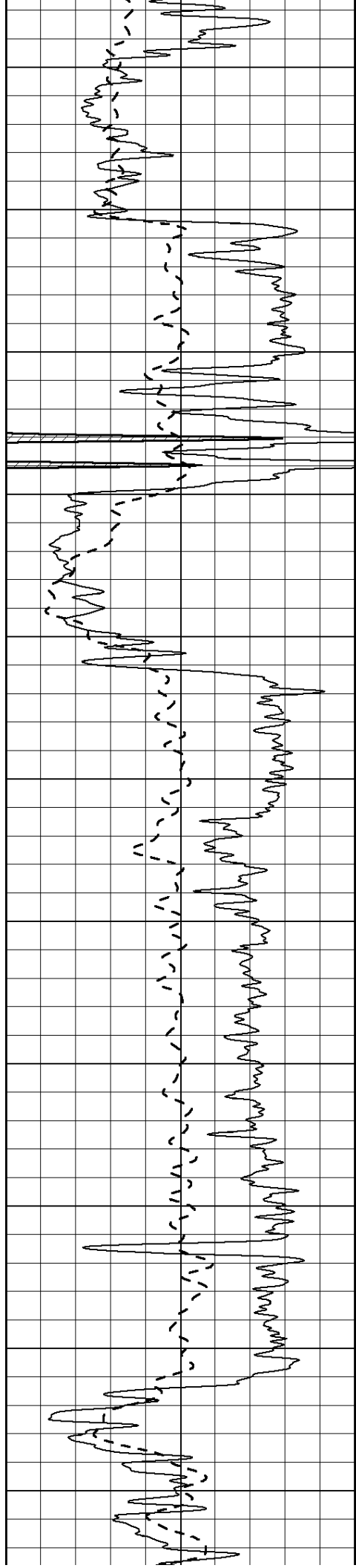
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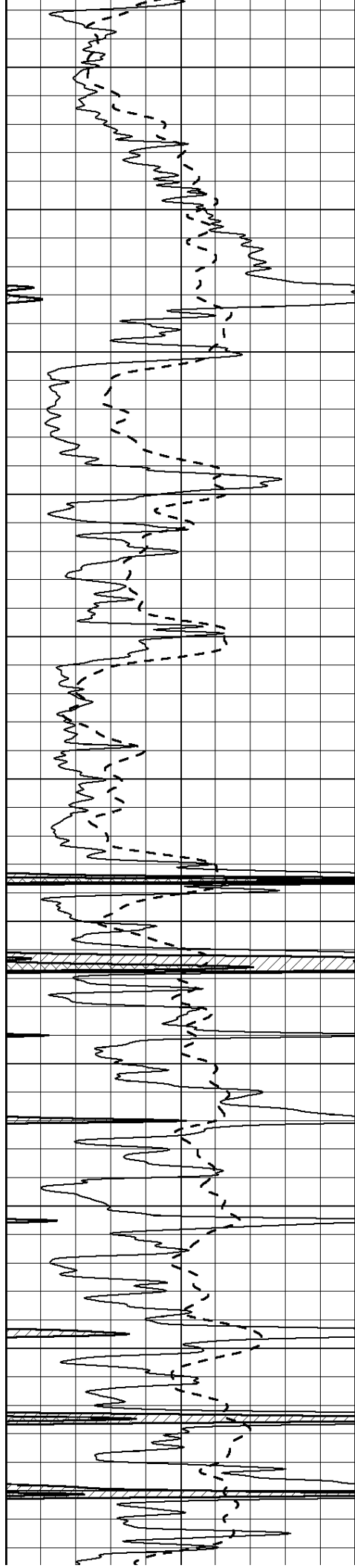
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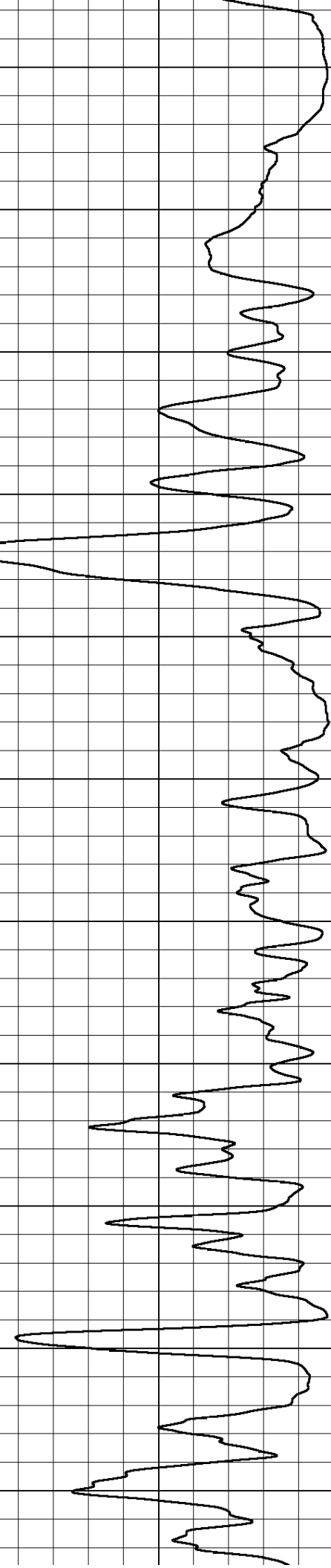
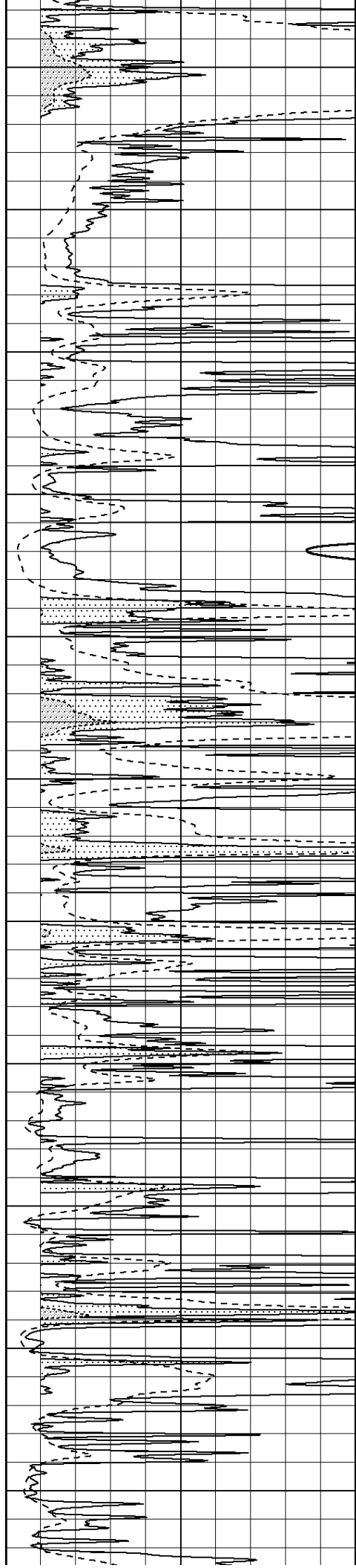
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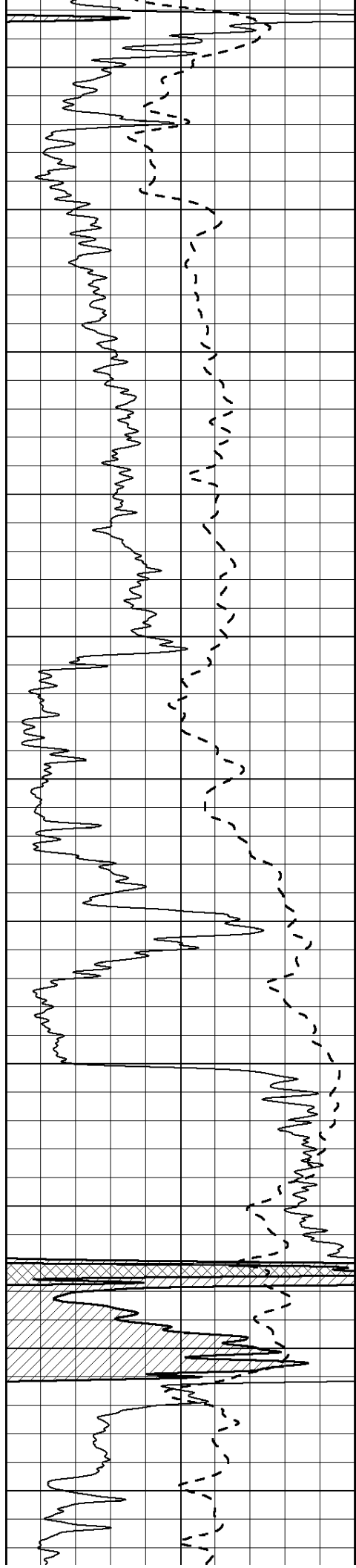
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4850

4900

4950

5000

5050

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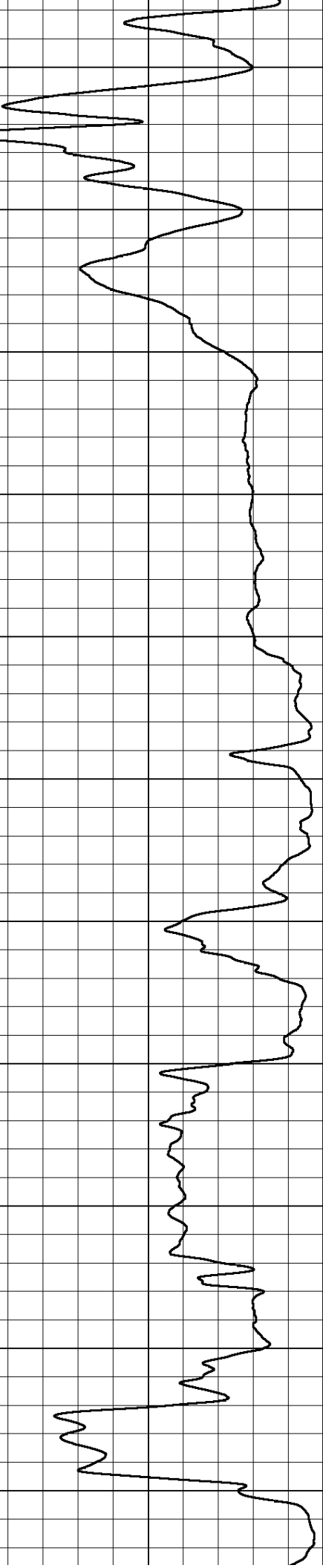
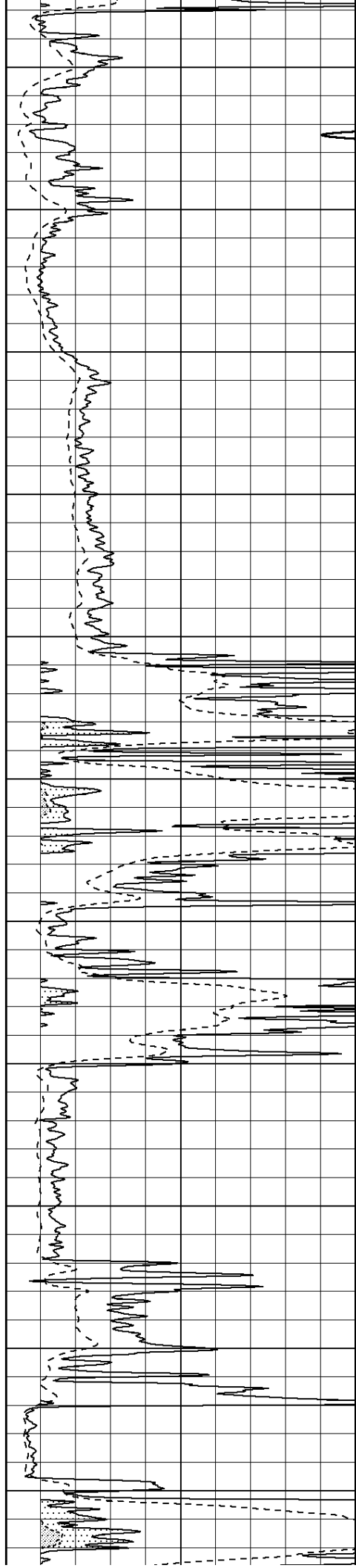
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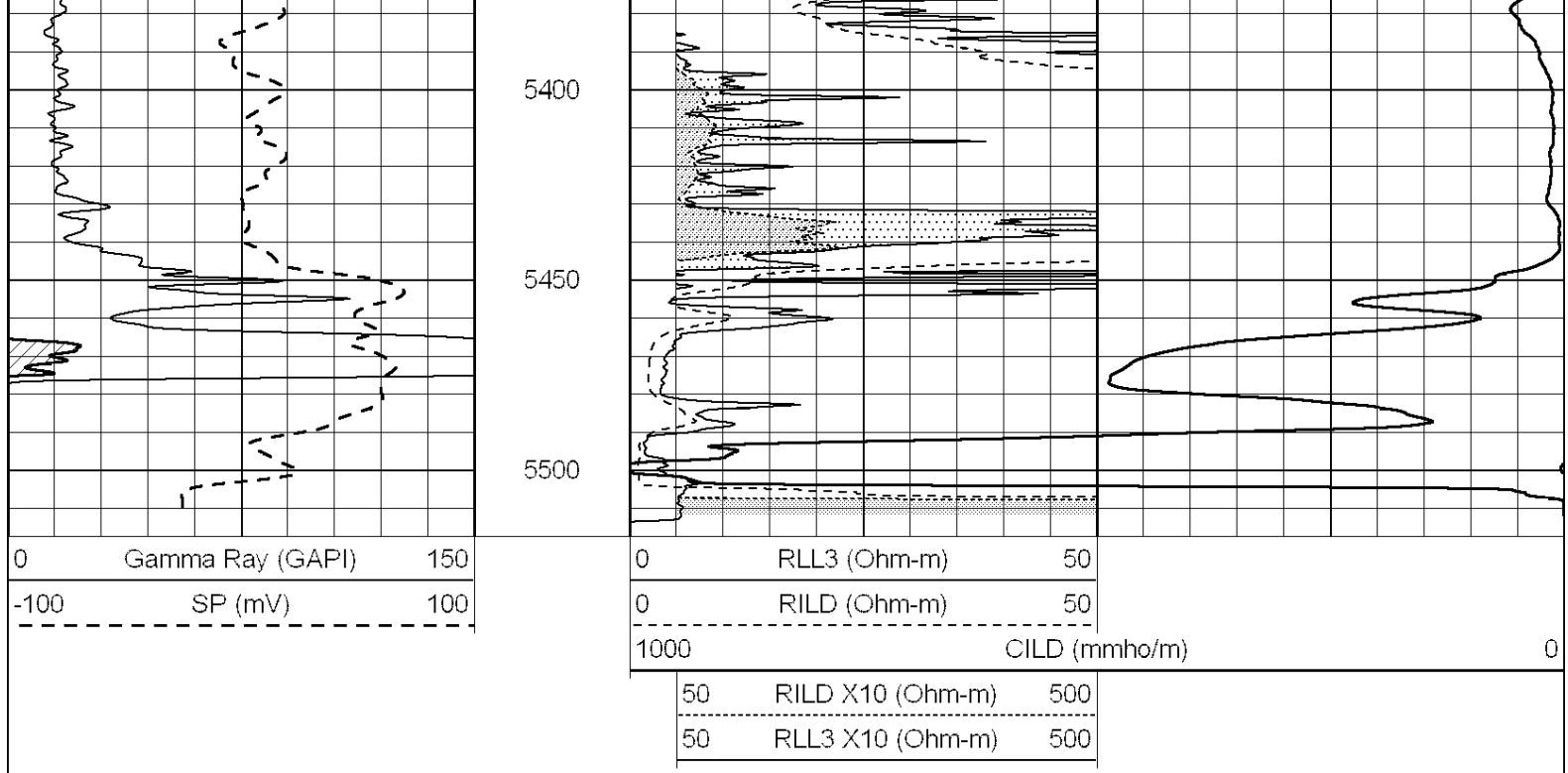
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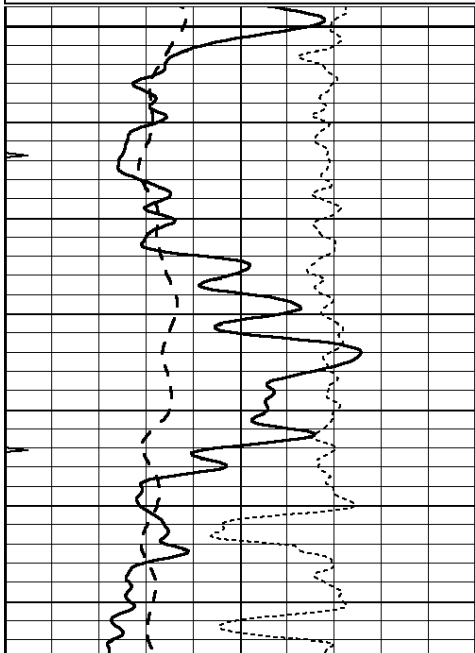
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MAIN SECTION

Database File: 010032pe.db
Dataset Pathname: pass3.8
Presentation Format: dil
Dataset Creation: Thu Dec 13 08:10:12 2012
Charted by: Depth in Feet scaled 1:240

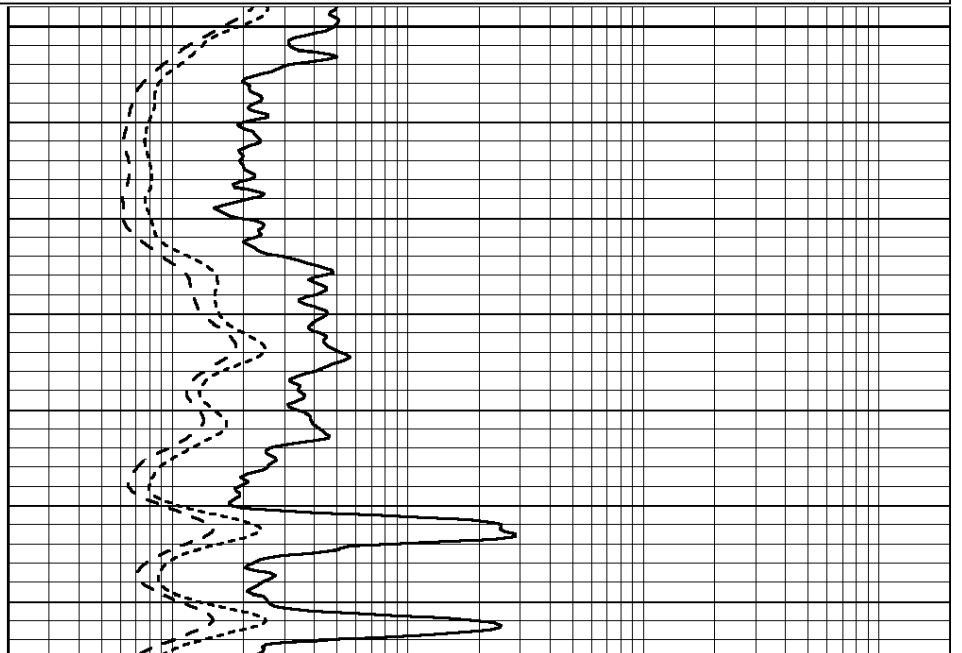
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

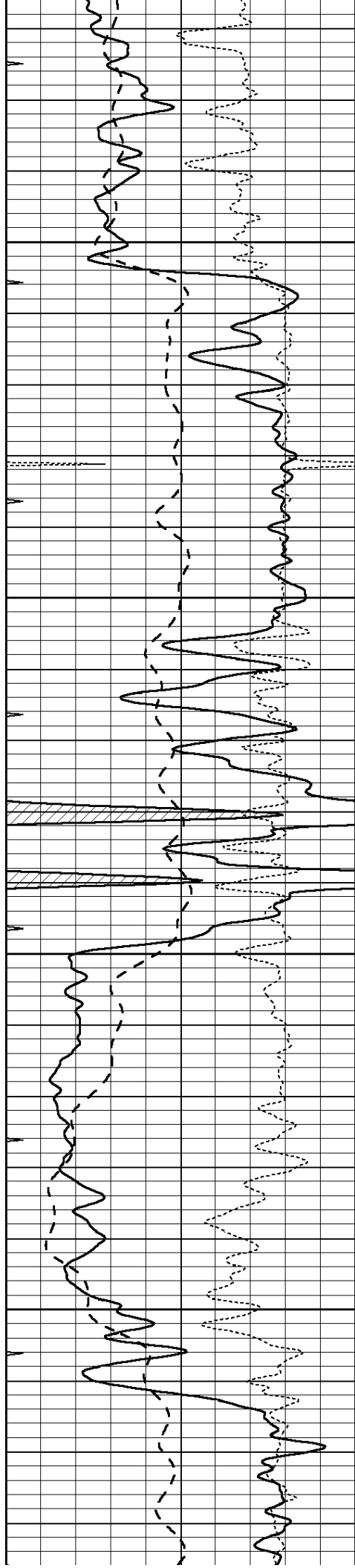
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3700

3750



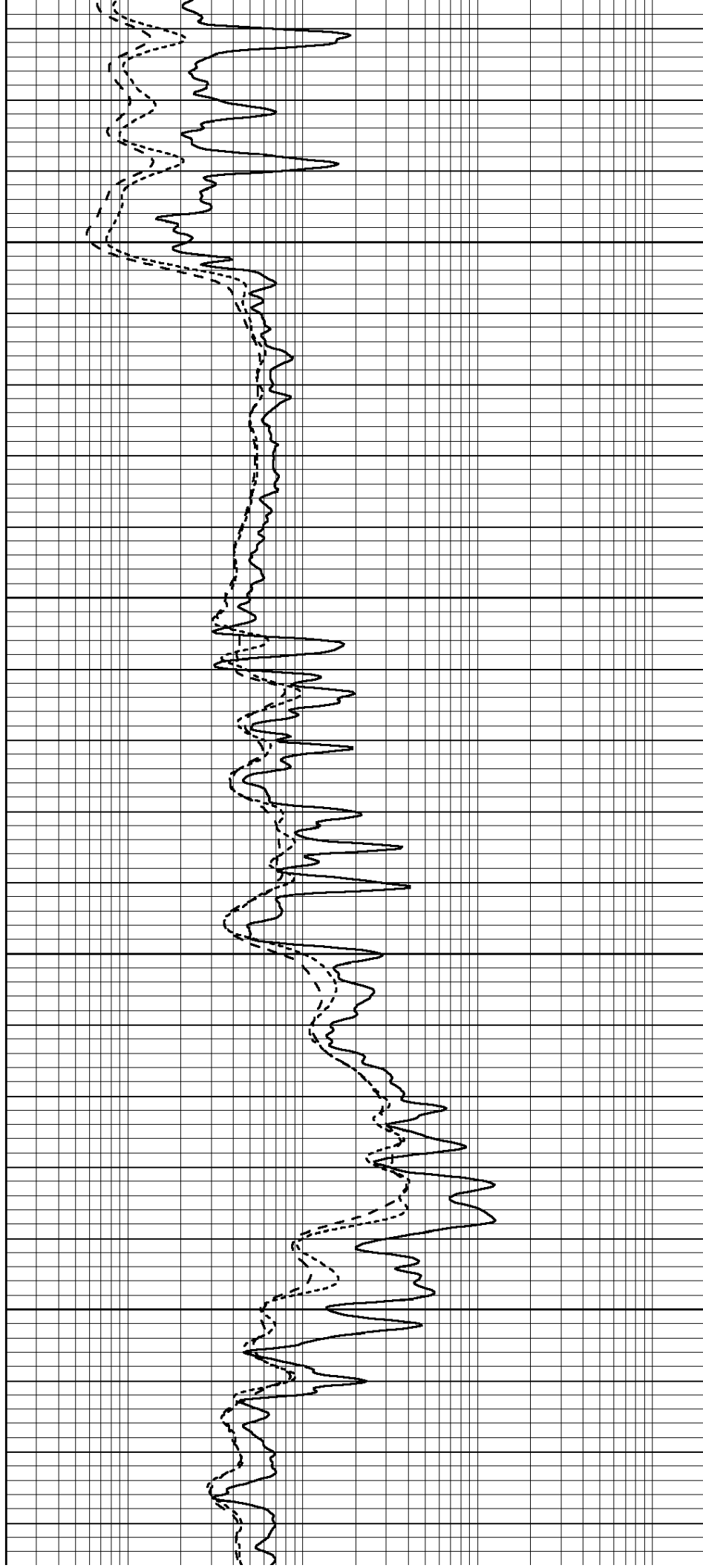


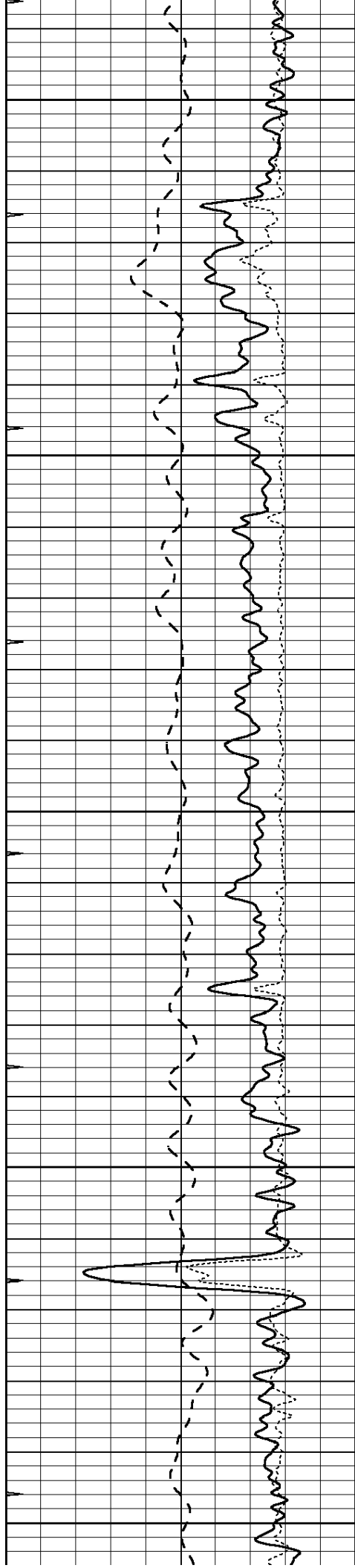
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3900

3950





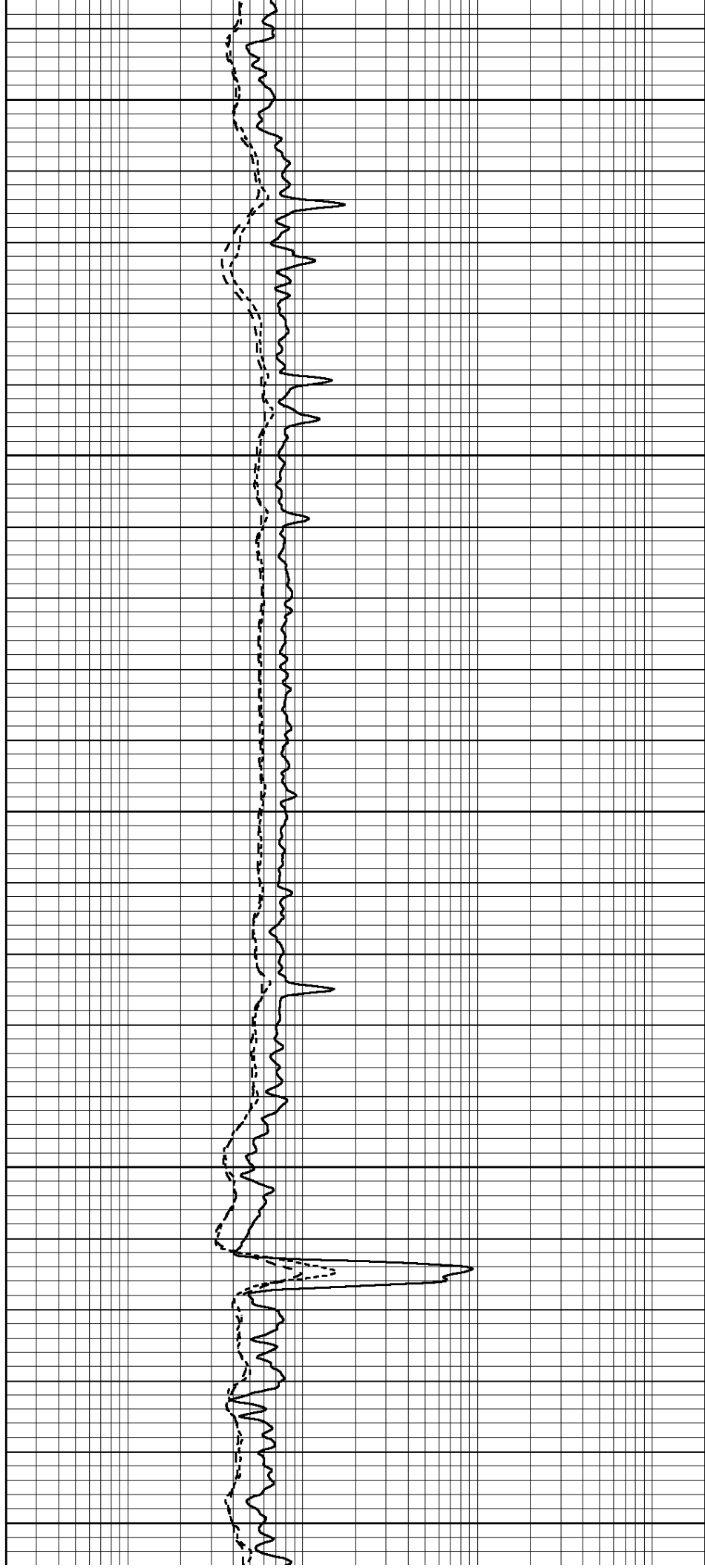
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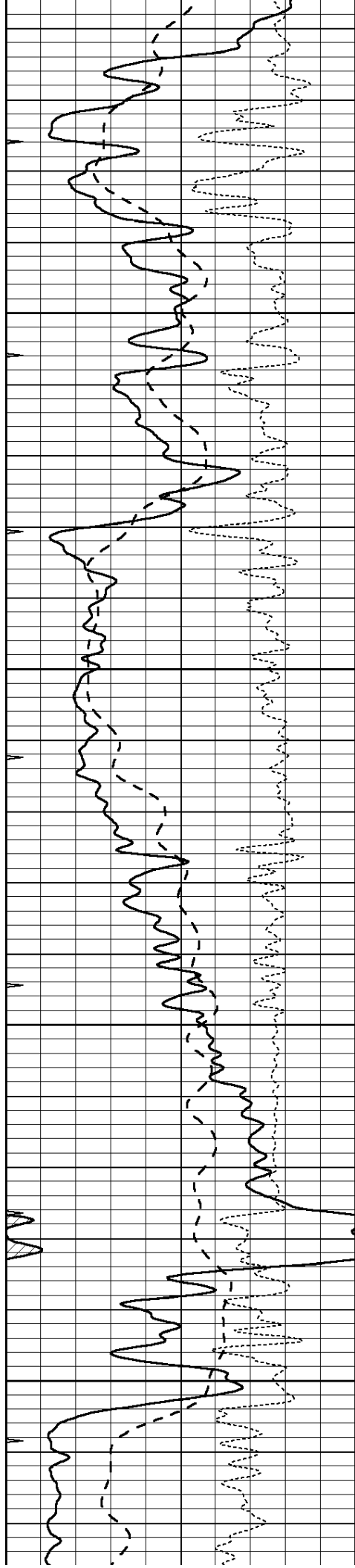
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4200



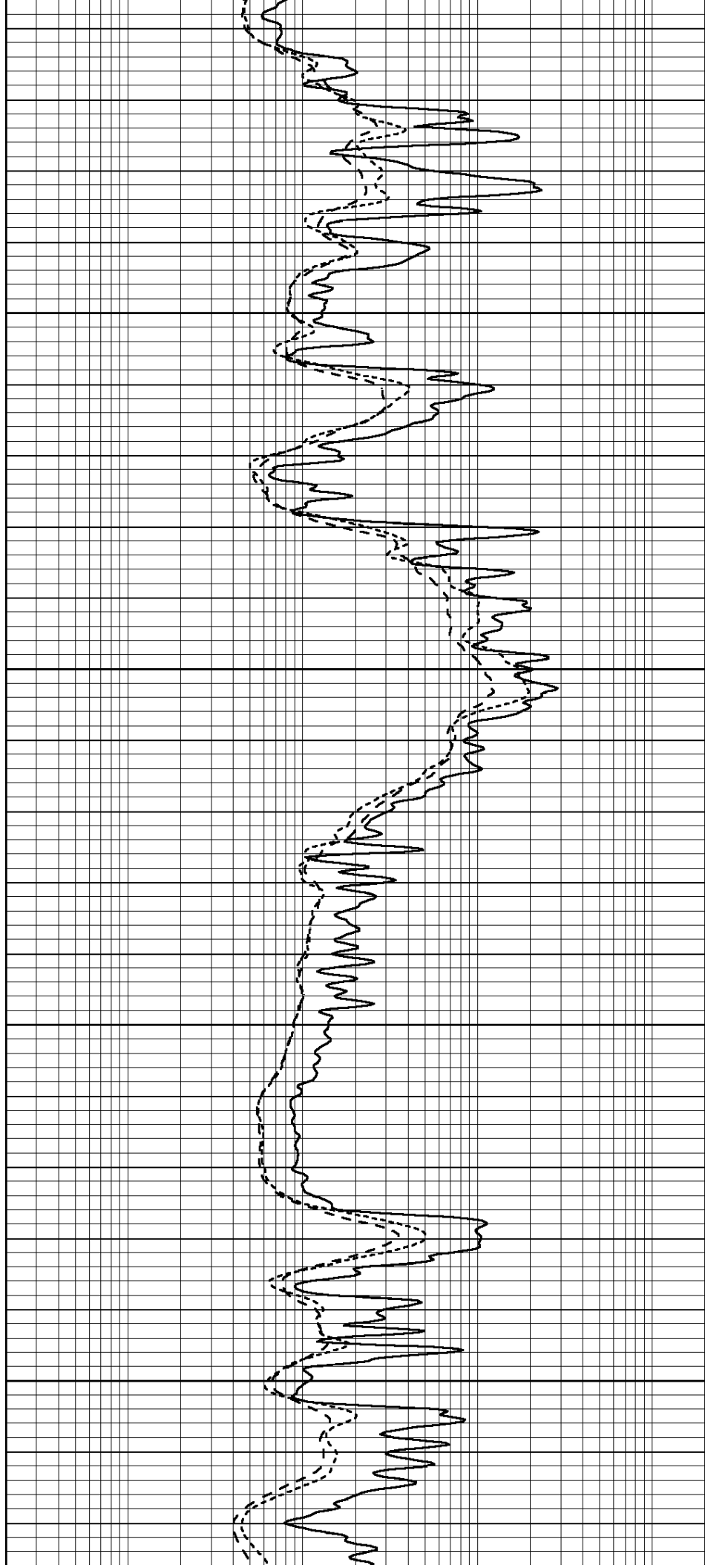


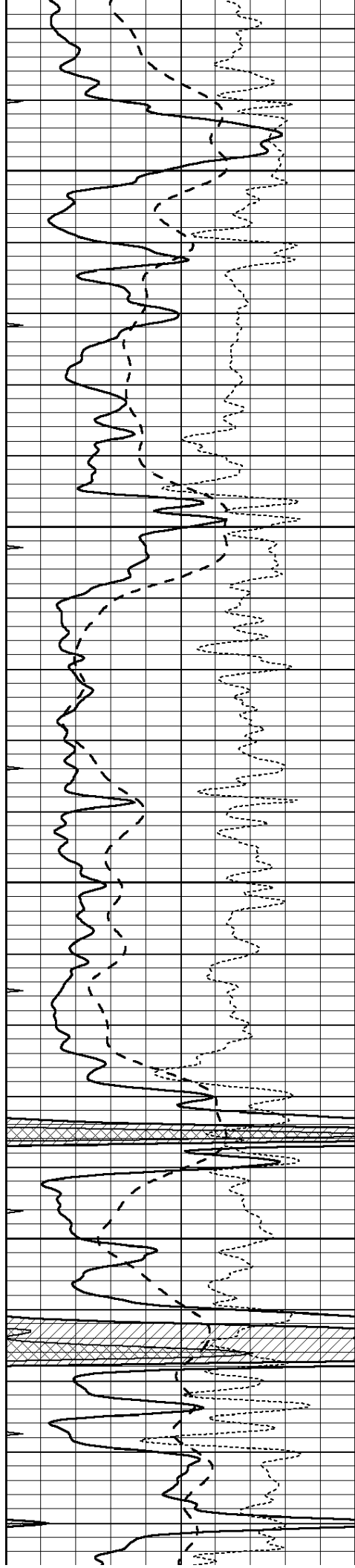
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4400



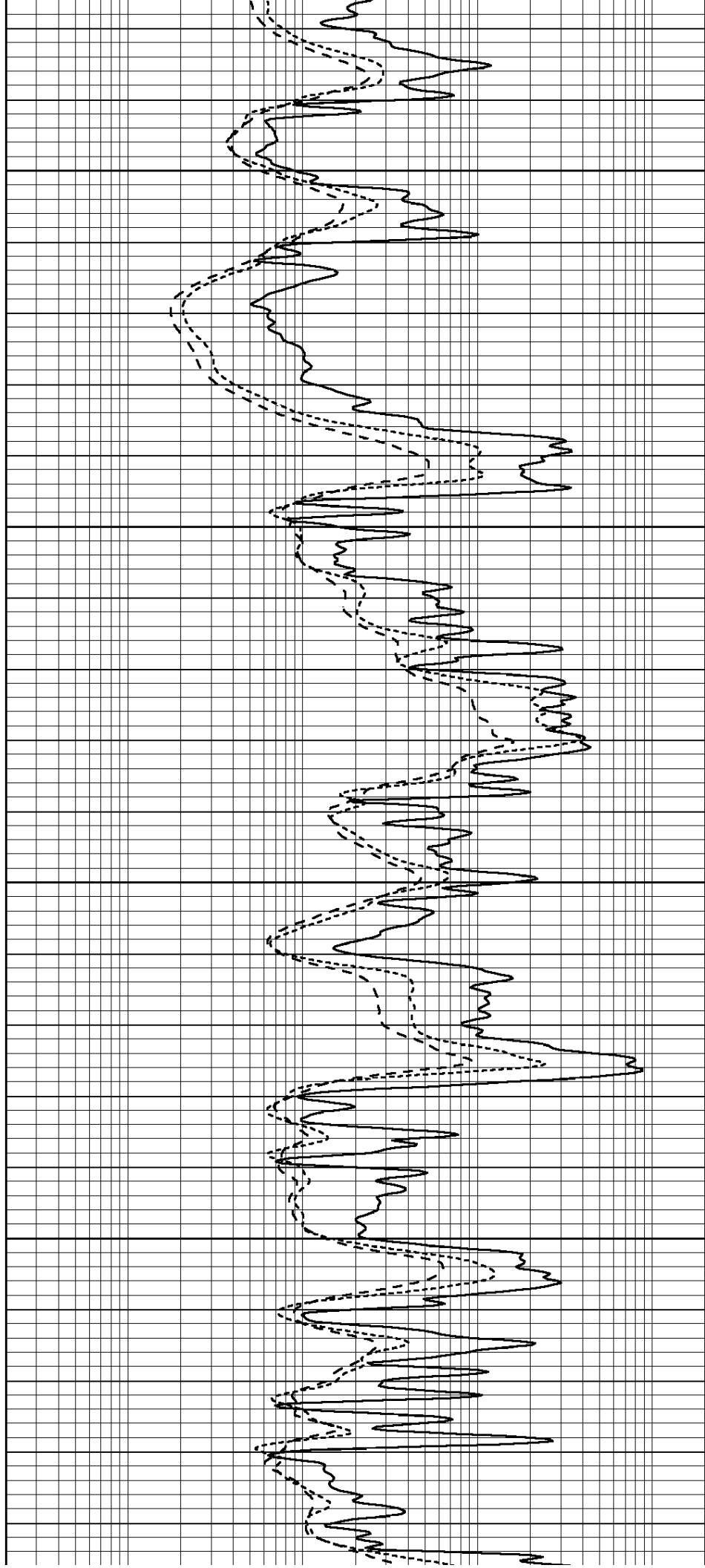


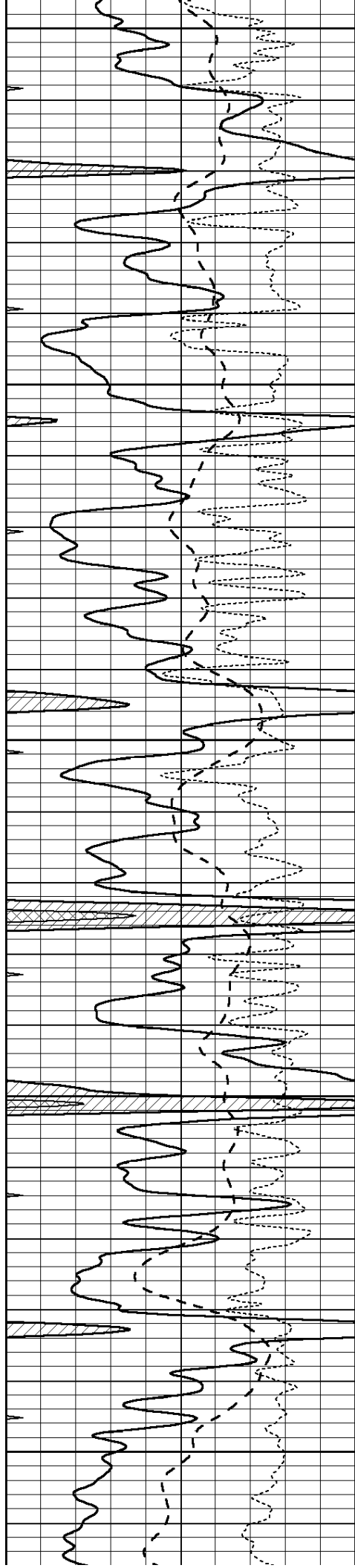
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4600





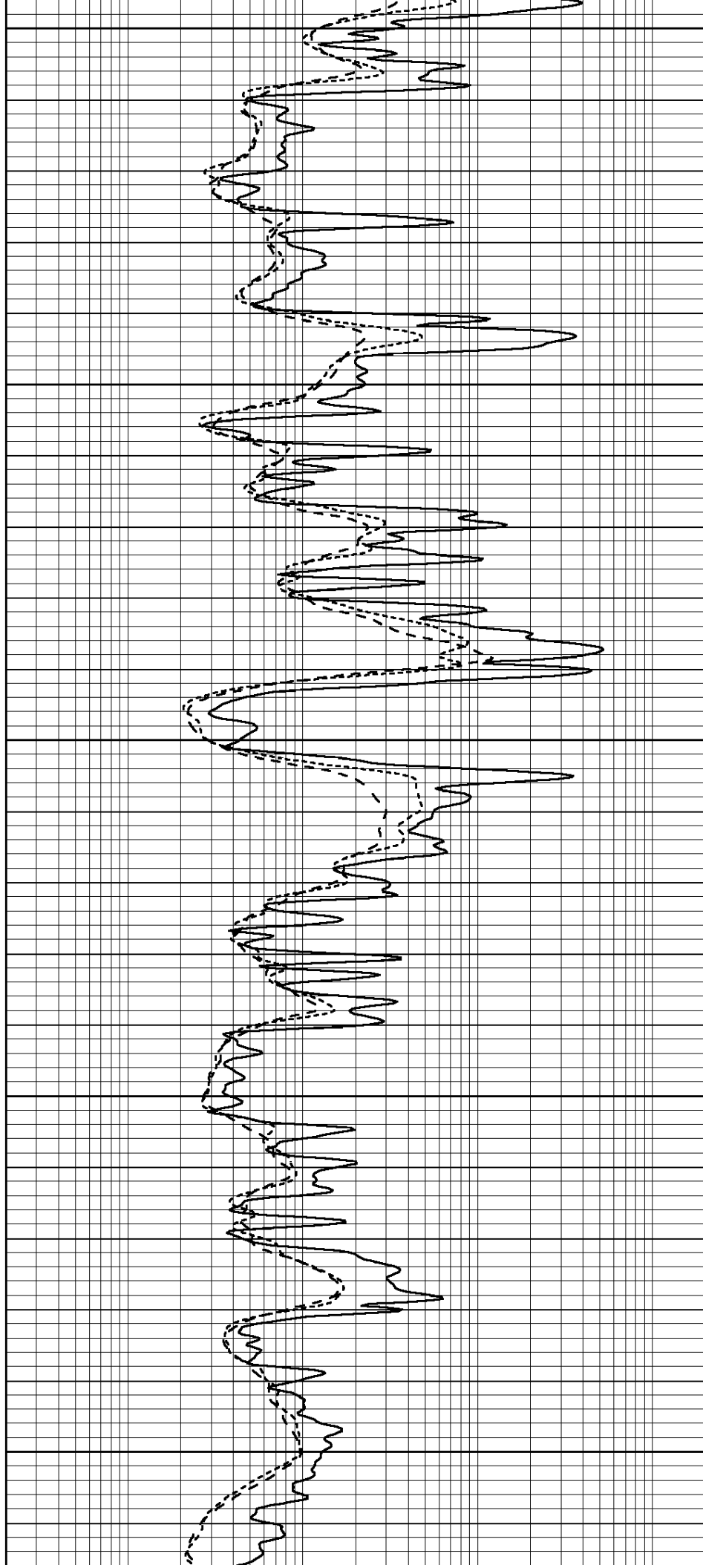
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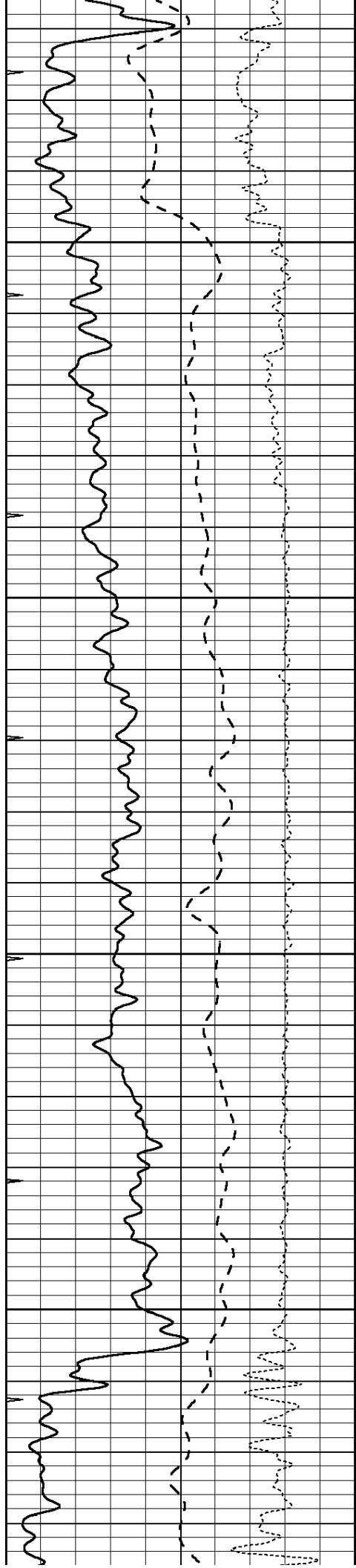
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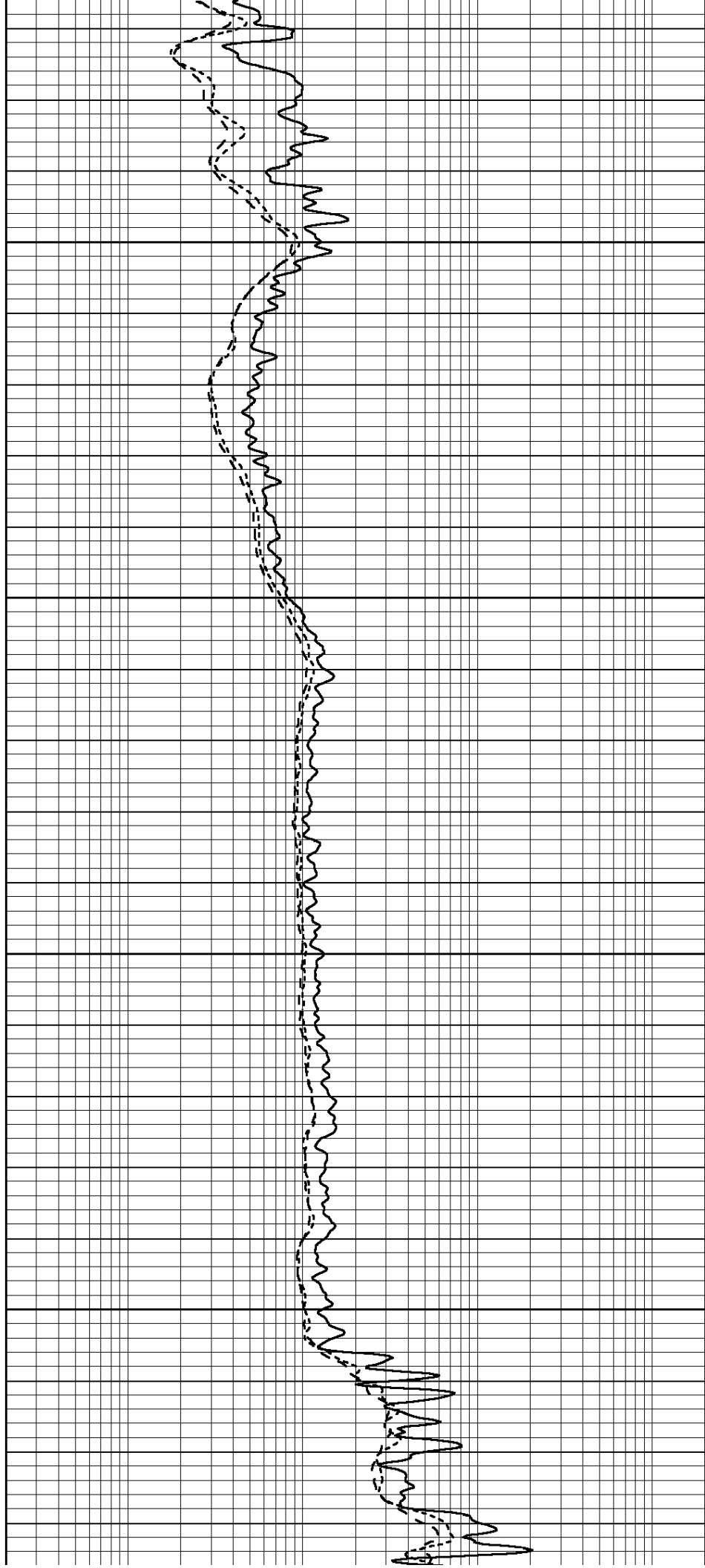


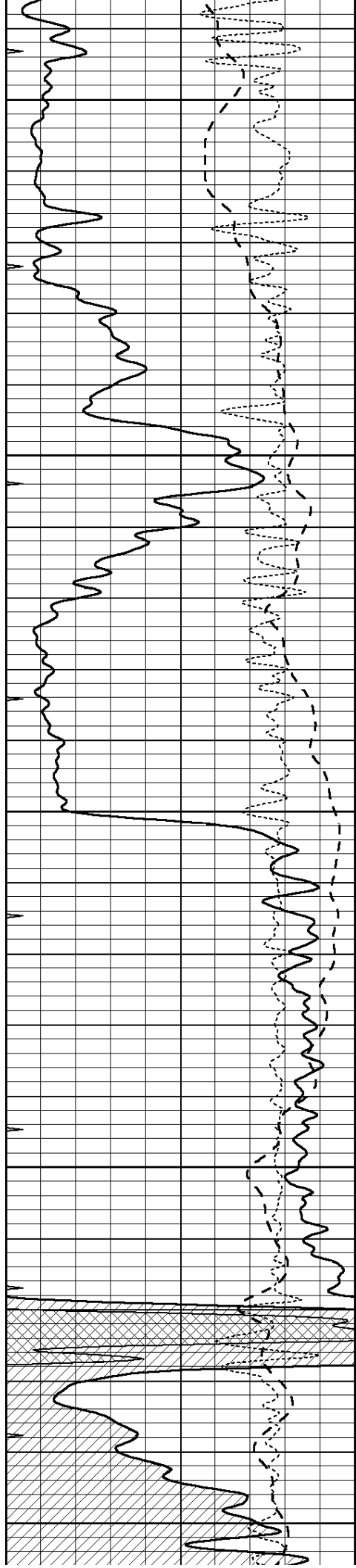
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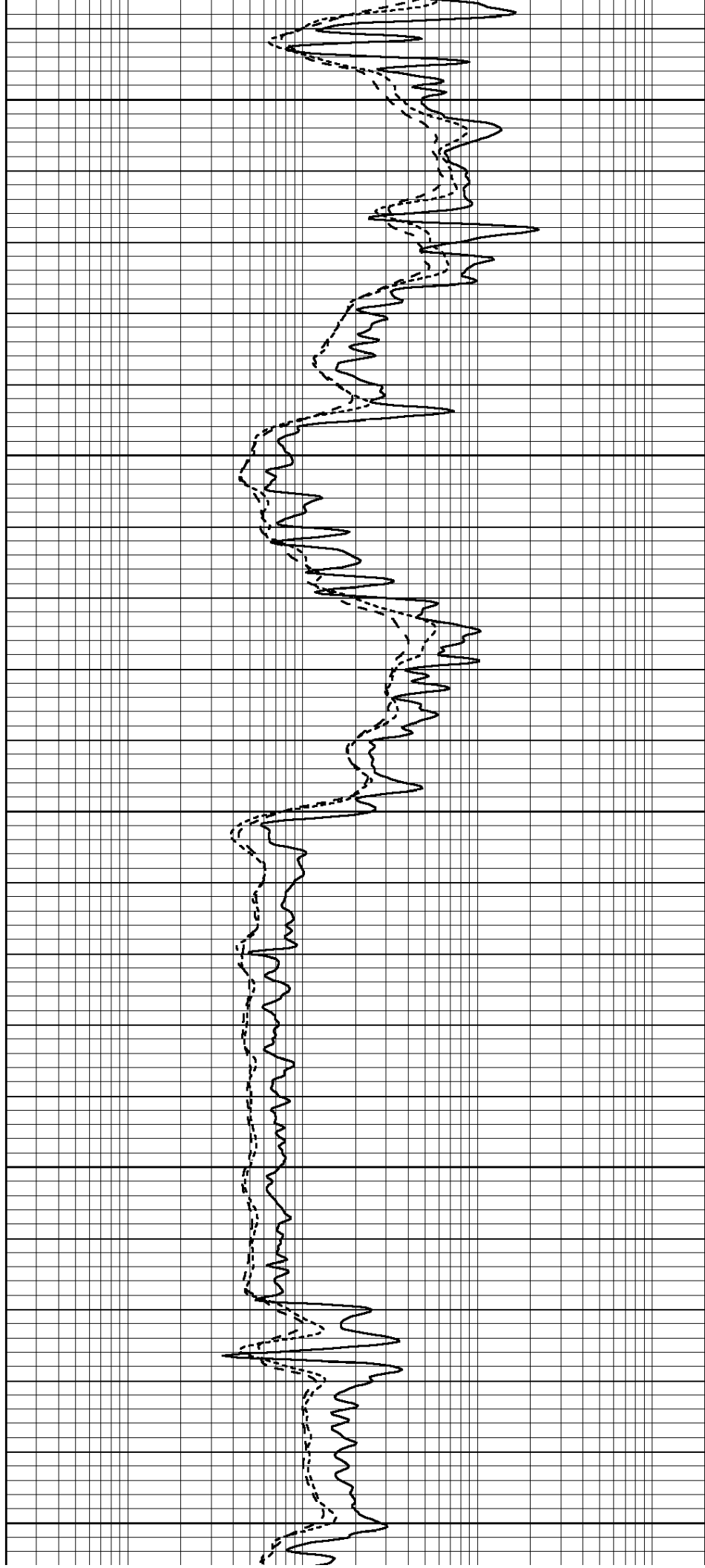
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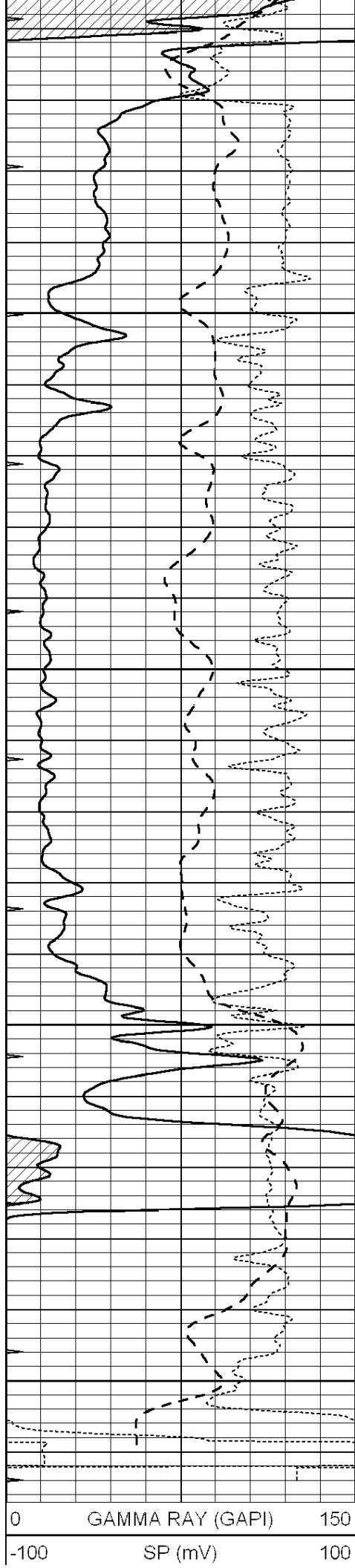
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5200

5250

5300



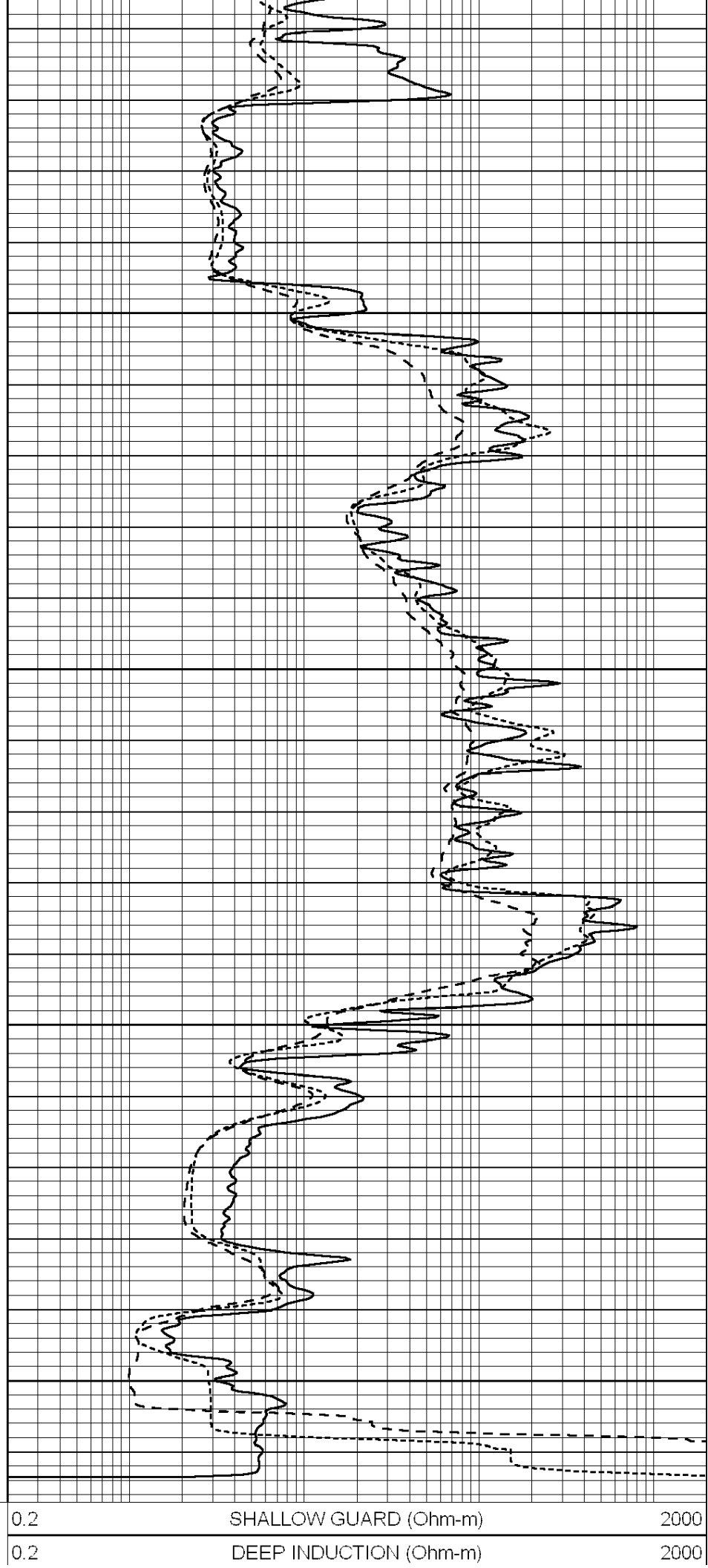


5350

5400

5450

5500



-250	Rxo/Rt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000
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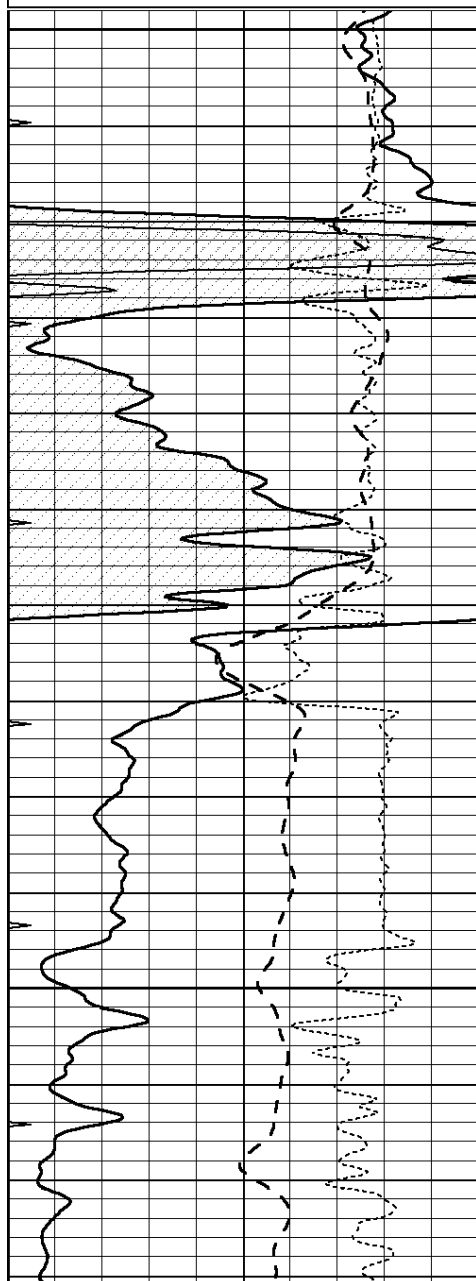
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REPEAT SECTION

Database File: 010032pe.db
Dataset Pathname: pass2.10
Presentation Format: dil
Dataset Creation: Thu Dec 13 09:27:55 2012
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

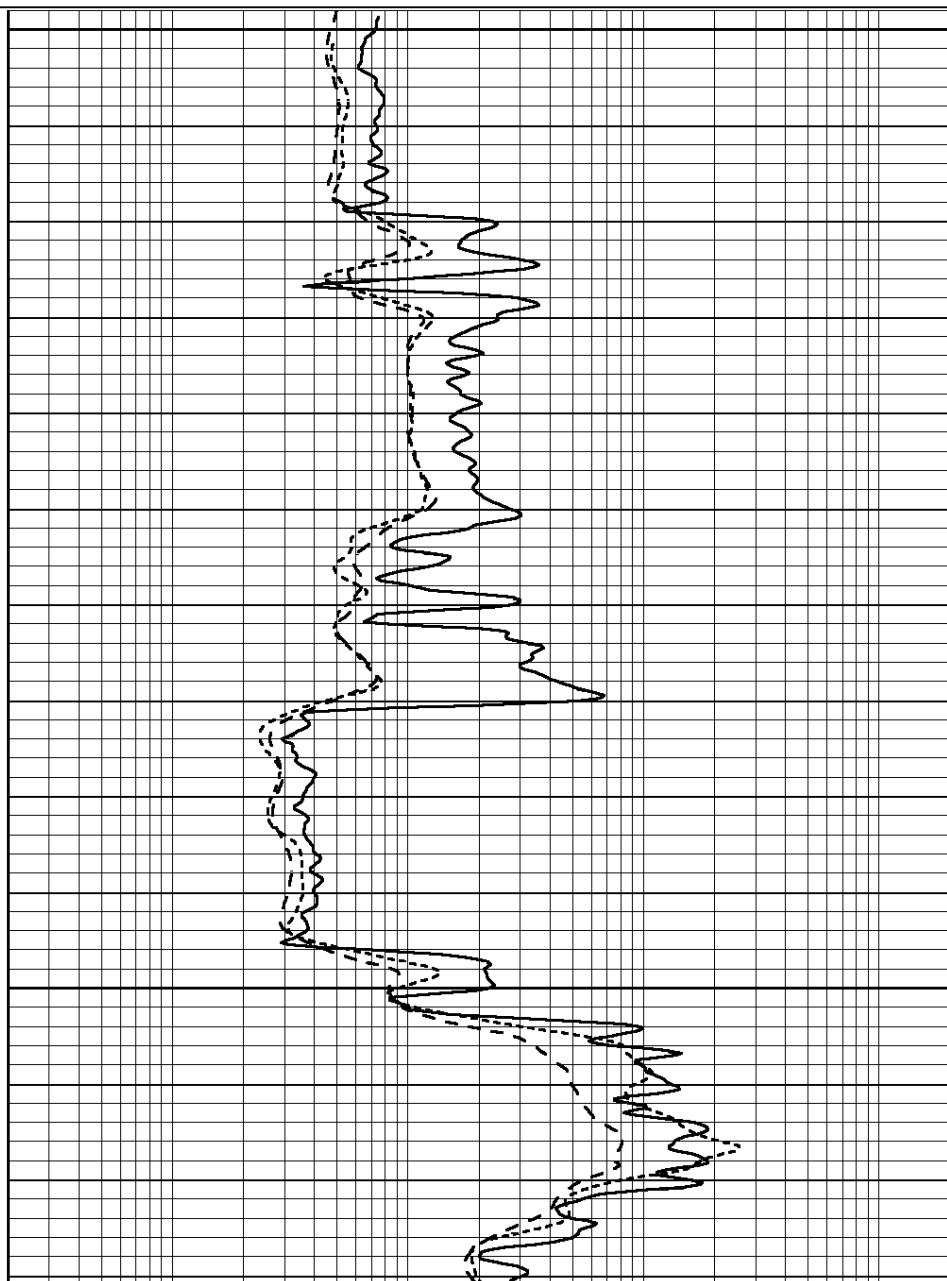
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

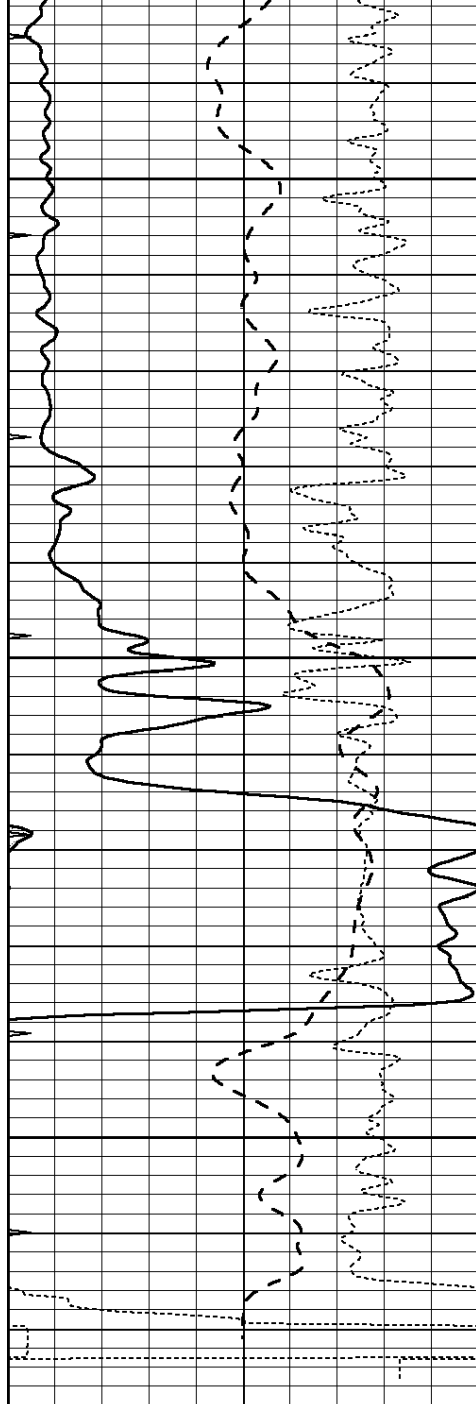


5250

5300

5350



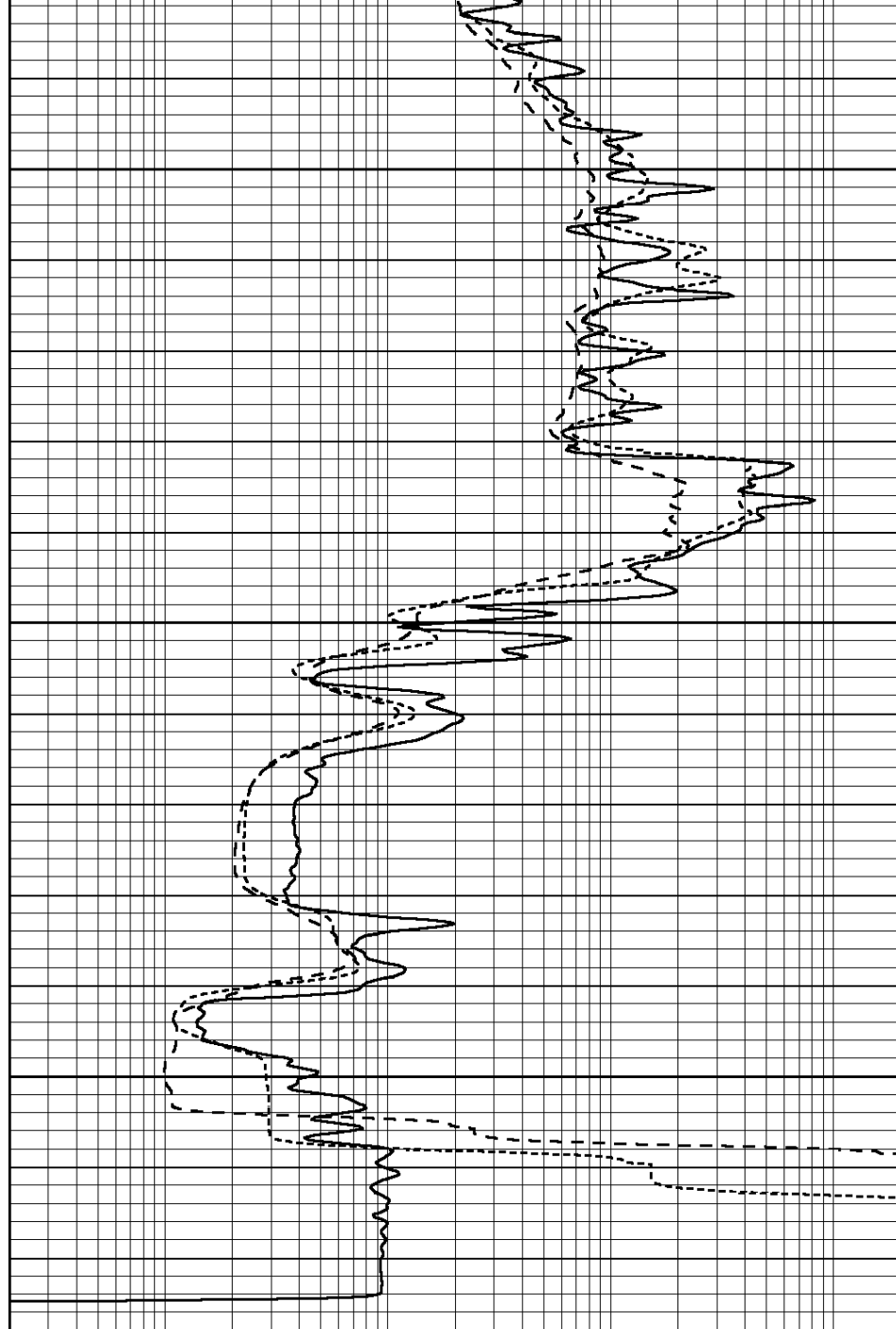


5400

5450

5500

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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

Calibration Report

Database File: 010032pe.db
 Dataset Pathname: pass3.8
 Dataset Creation: Thu Dec 13 08:10:12 2012

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Surface Cal Performed: Thu Dec 13 07:15:30 2012
 Downhole Cal Performed: Fri Mar 21 02:34:00 2003
 After Survey Verification Performed: Tue Apr 13 17:49:23 2010

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	10.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	740.000	2.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Downhole Calibration								
Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.503	0.050	V	500.000	2.000	Ohm-m	250.000	-4.000

After Survey Verification								
Readings				Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Litho Density Calibration Report								
Serial: 006			Model: PRB					

Master Calibration				Performed Sun Aug 15 09:48:41 2010				
	Background	Magnesium		Aluminum		Sandstone		
Window 1	1686.6	11612.8		3932.0		12718.8		cps
Window 2	1531.4	9204.7		3267.8		9851.9		cps
Window 3	1198.3	4733.6		1952.5		4920.6		cps
Window 4	317.3	321.2		325.9		303.6		cps
Long Space	0.0	7673.3		1736.4		8320.4		cps
Short Space	1.7	2548.5		1657.2		2628.8		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe		0.0000		2.5700		1.5500		
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio				: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept				: -18.1

Before Survey Verification				Performed Wed Dec 31 18:00:00 1969				
Window 1	0.0	0.0		0.0		0.0		cps
Window 2	0.0	0.0		0.0		0.0		cps
Window 3	0.0	0.0		0.0		0.0		cps
Window 4	0.0	0.0		0.0		0.0		cps
Long Space	0.0	0.0		0.0		0.0		cps
Short Space	0.0	0.0		0.0		0.0		cps
Measured Rho		0.0000		0.0000		0.0000		g/cc
Measured Correction		0.0000		0.0000		0.0000		g/cc
Measured Pe				0.0000		0.0000		

After Survey Verification				Performed Wed Dec 31 18:00:00 1969				
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Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	
Compensated Neutron Calibration Report					
Serial Number:		070808			
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:		070559			
Tool Model:		OPEN_GR			
Performed:		Wed Nov 28 18:32:17 2012			
Calibrator Value:		1.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		1.0	cps		
Sensitivity:		0.3000	GAPI/cps		