



SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	RITCHIE EXPLORATION, INC.		
Well	ARCH #3		
Field	WILDCAT		
County	FORD	State	KANSAS
Location:	AP1 # : 15-057-20776-0000		Other Services
SEC 32 TWP 28S RGE 23W		CDL/CNL	
Permanent Datum	GROUND LEVEL	Elevation	2507
Log Measured From	KELLY BUSHING 11' A.G.L.	K.B. 2518	D.F. 2516
Drilling Measured From	KELLY BUSHING	G.L. 2507	
Date	1/9/12		
Run Number	ONE		
Depth Driller	5325		
Depth Logger	5325		
Bottom Logged Interval	5301		
Top Log Interval	00		
Casing Driller	8 5/8"@350'		
Casing Logger	346		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,400 PPM	
Density / Viscosity	9.3/53		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.600@64F		
Rmt @ Meas. Temp	.450@64F		
Rmc @ Meas. Temp	.720@64F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.300@128F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	8:45 A.M.		
Maximum Recorded Temperature	128F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	MAX LOVELY	GARY ROWE	

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
FORD, KS., 1/2N. ON HWY 400 TO "SADDLE RD.", 5W. TO "120 RD.", 6S., W. INTO



SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File: 008135ddn.db
Dataset Pathname: pass3.8
Presentation Format: dil2
Dataset Creation: Mon Jan 09 10:34:40 2012
Charted by: Depth in Feet scaled 1:600

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

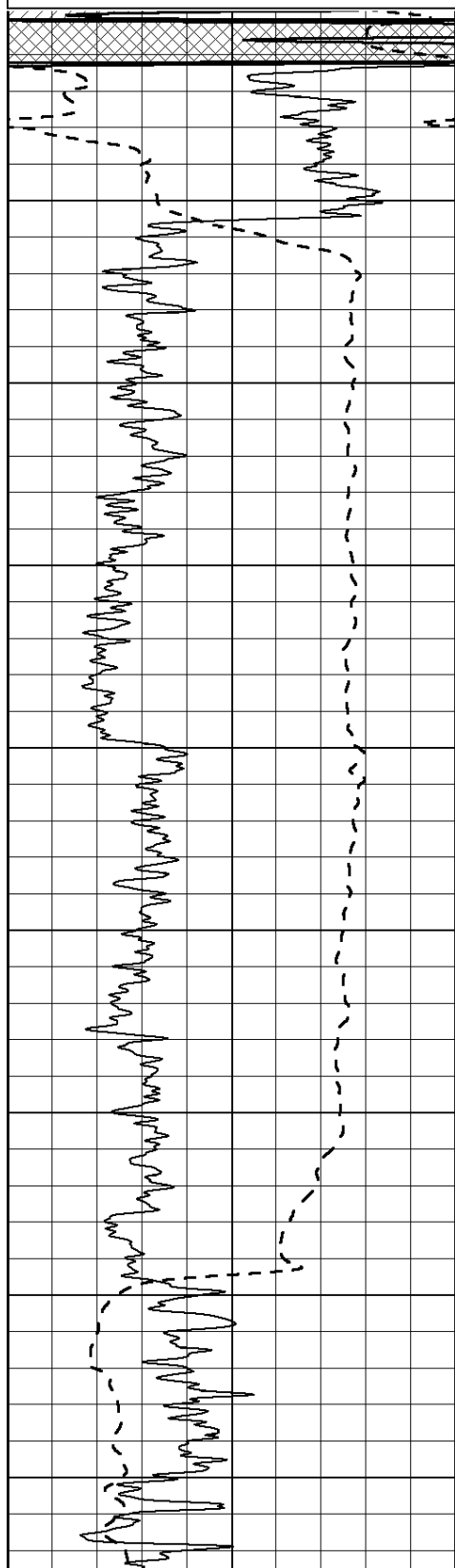
0	RLL3 (Ohm-m)	50
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0	RILD (Ohm-m)	50
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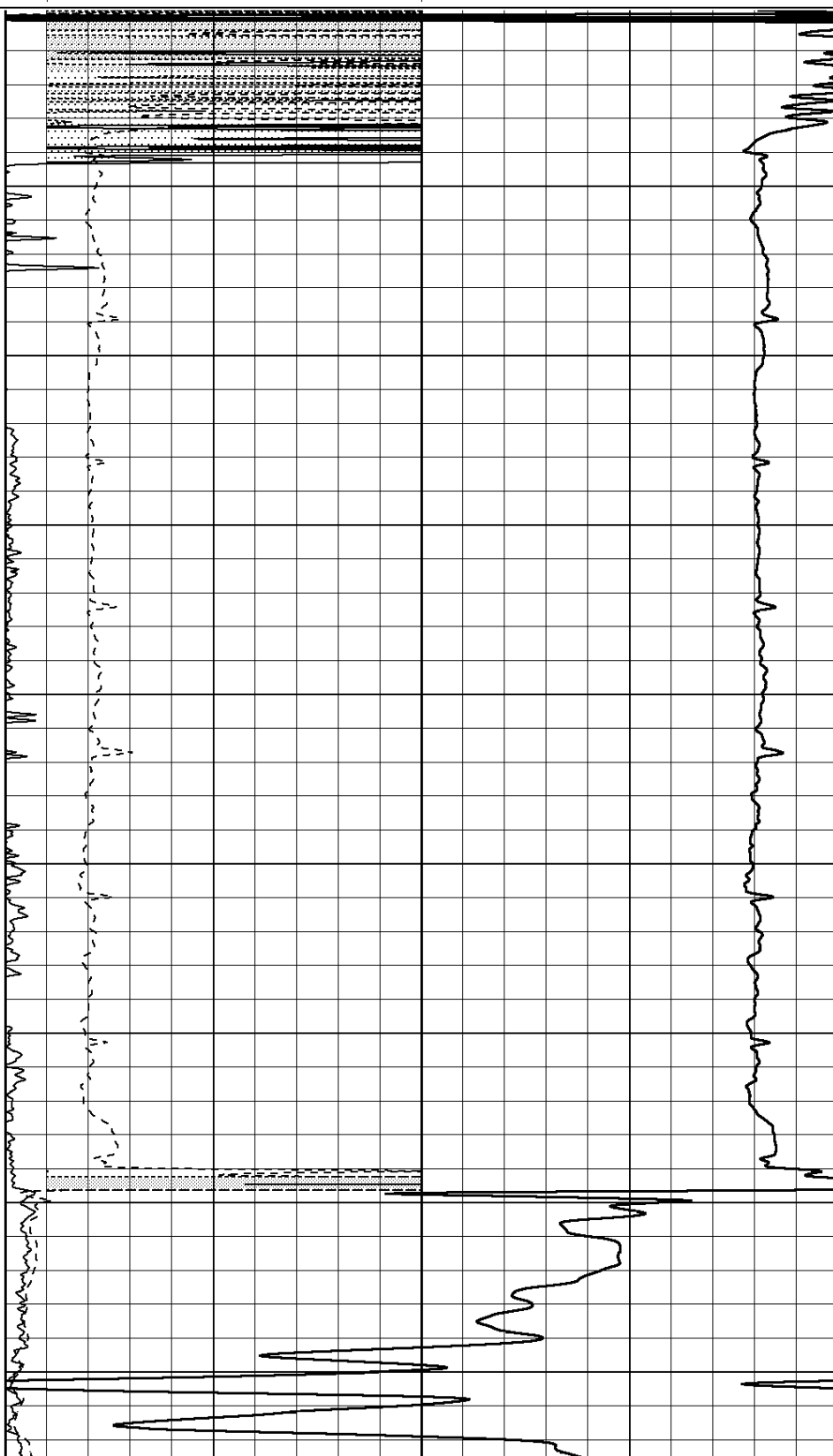
1000	CILD (mmho/m)	0
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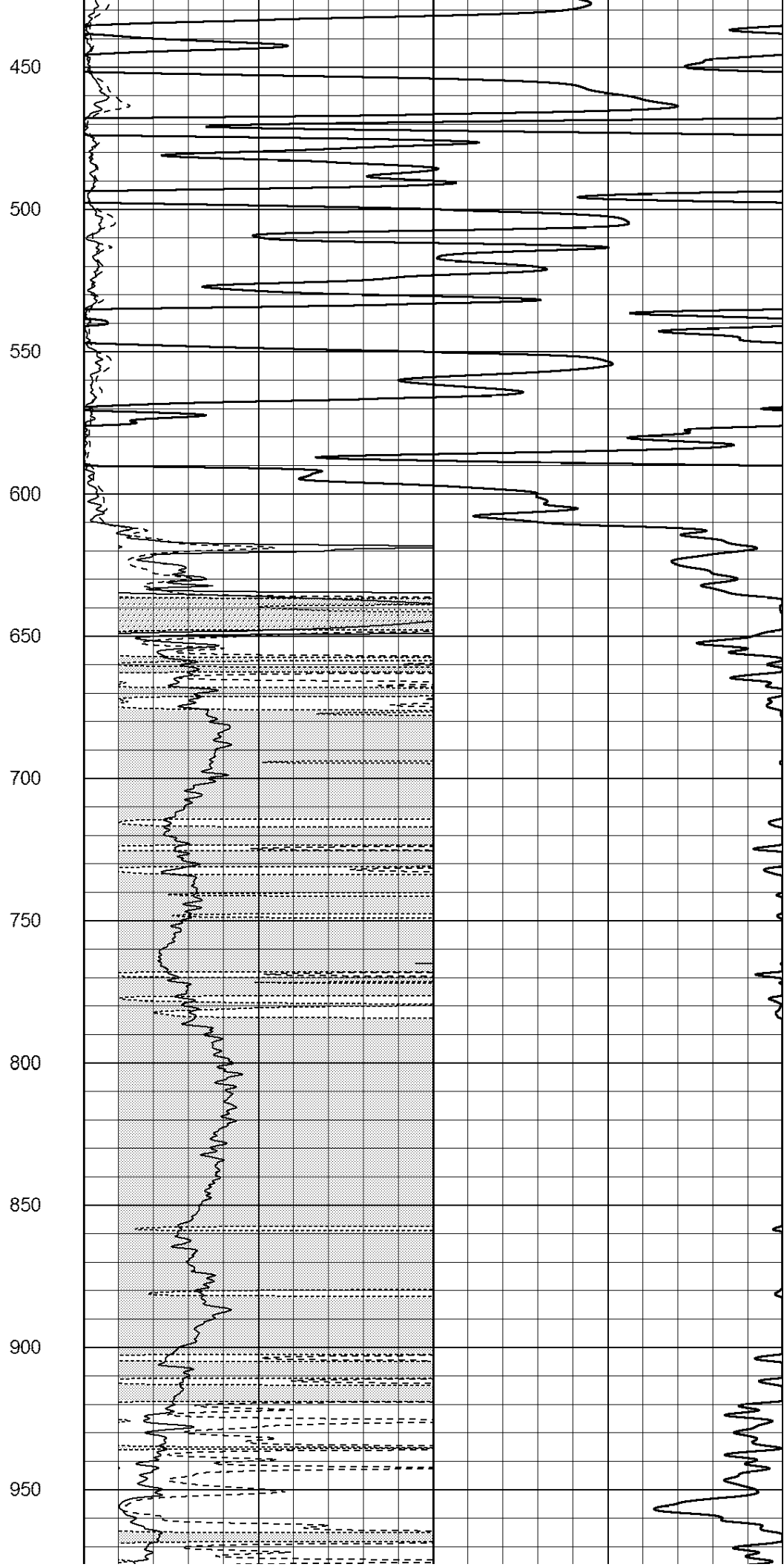
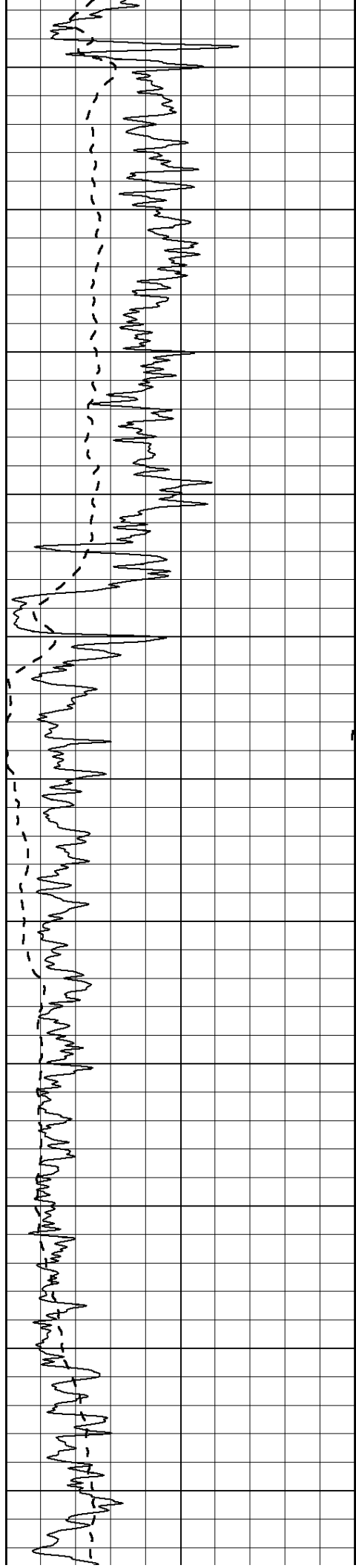
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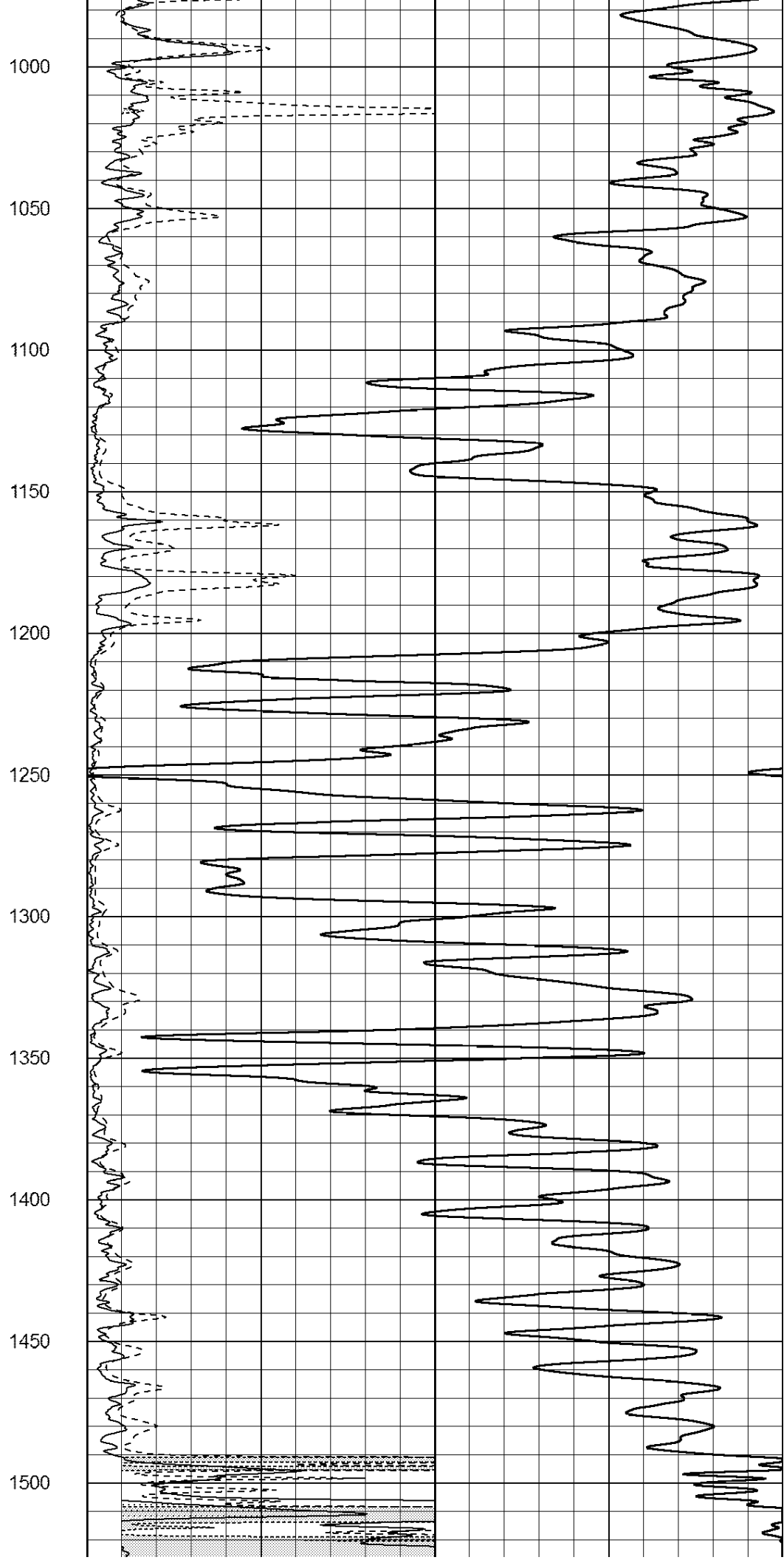
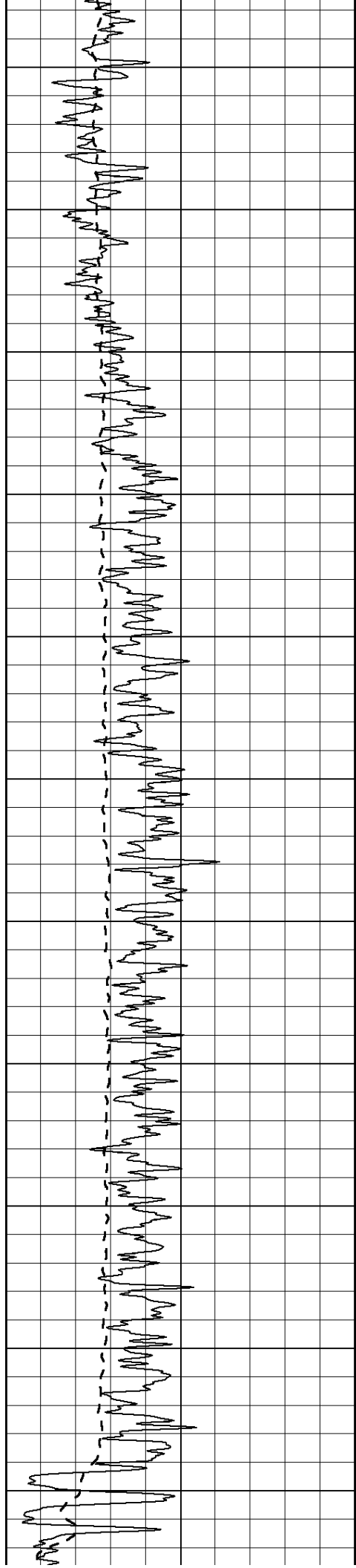
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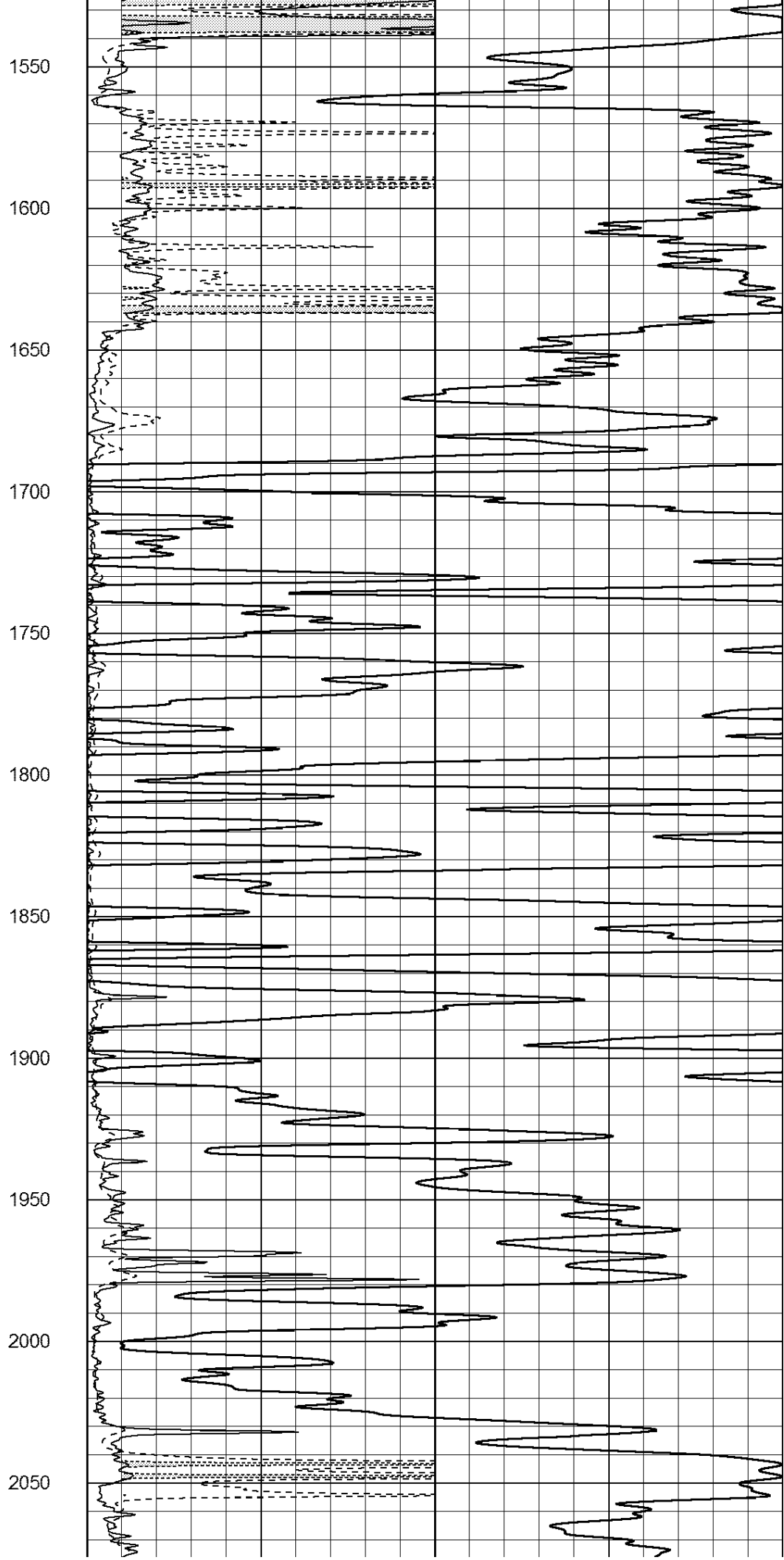
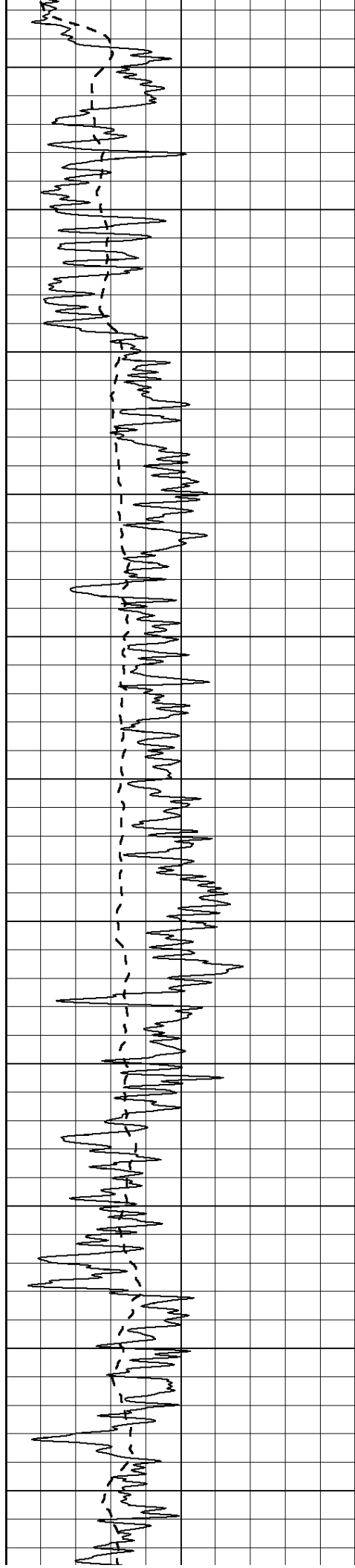


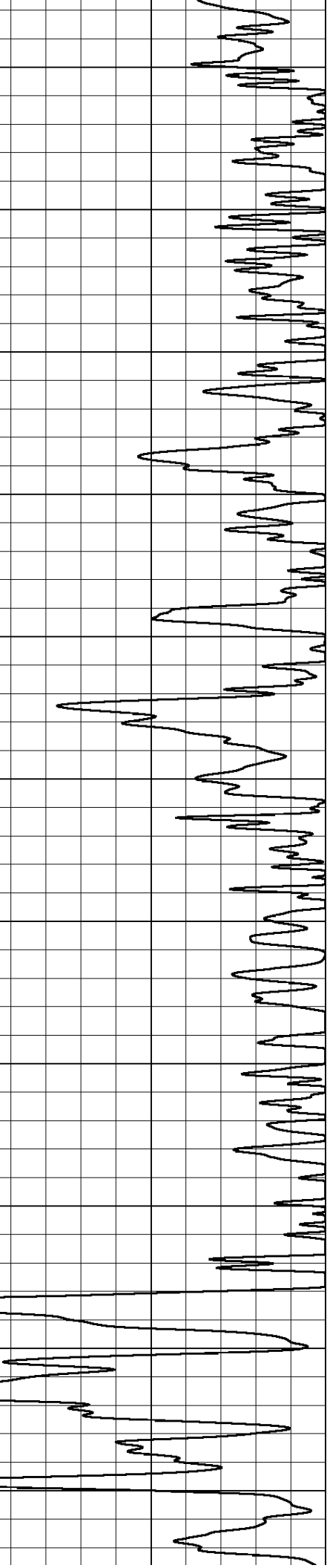
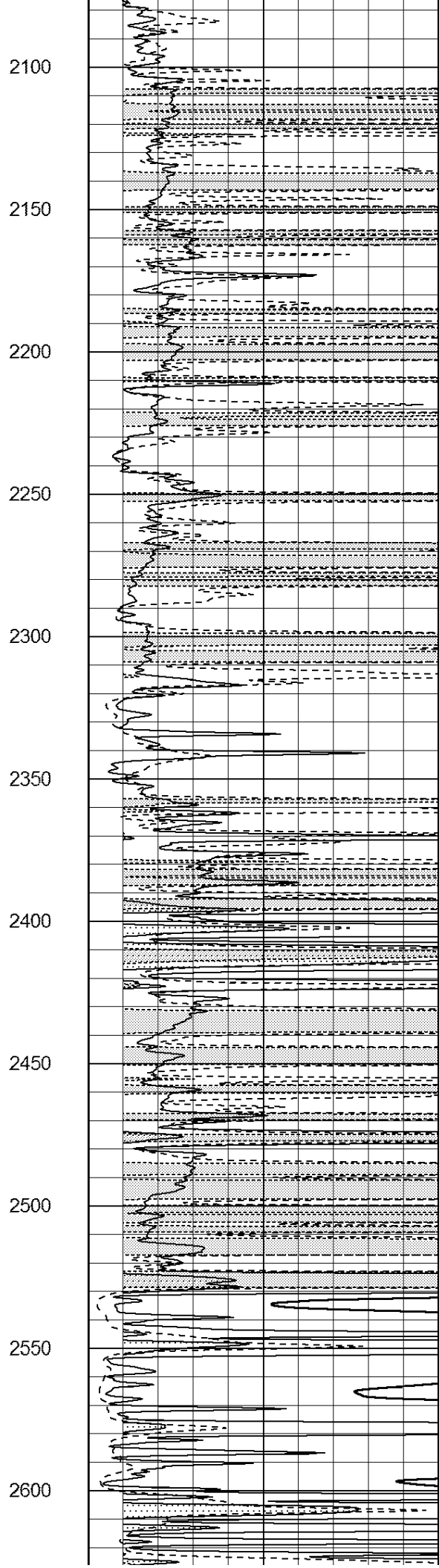
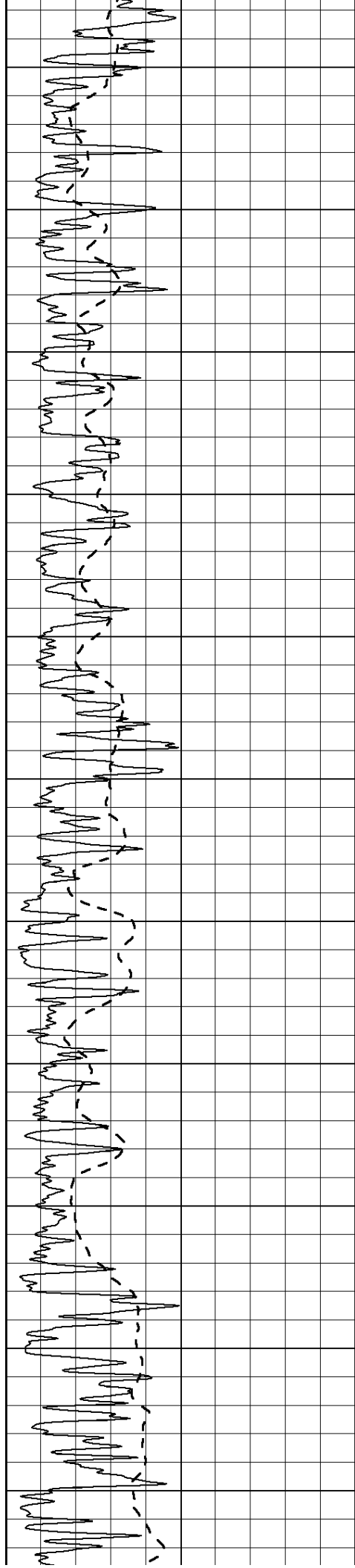
0
50
100
150
200
250
300
350
400

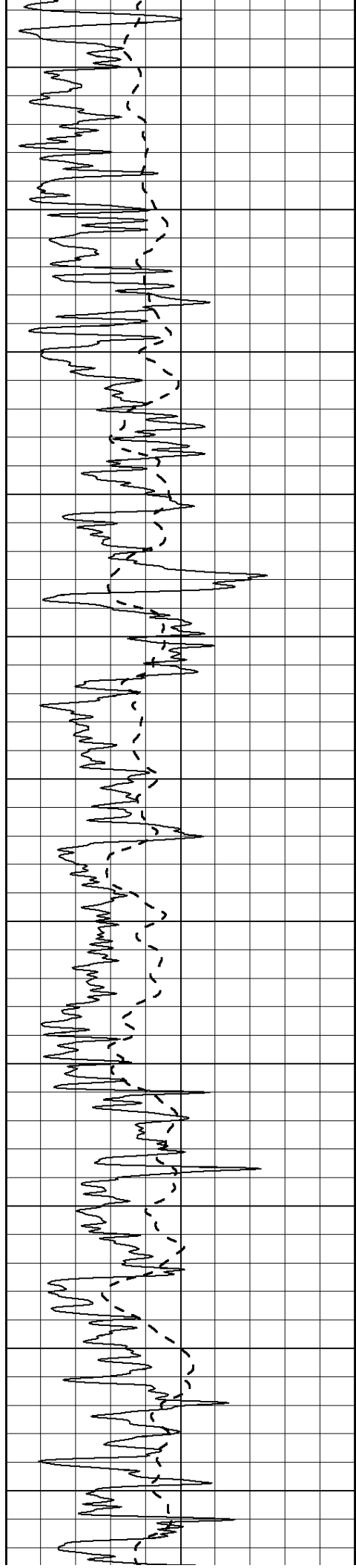












2650

2700

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2800

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2900

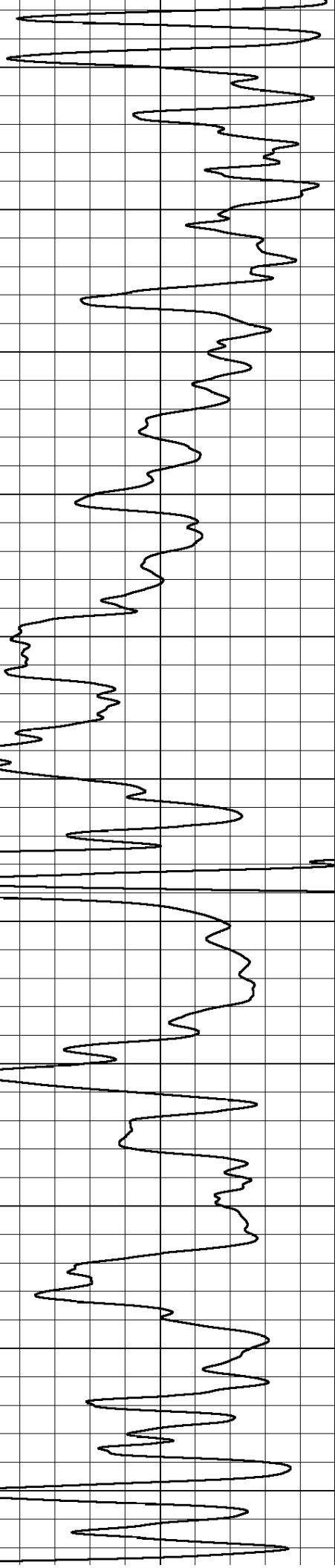
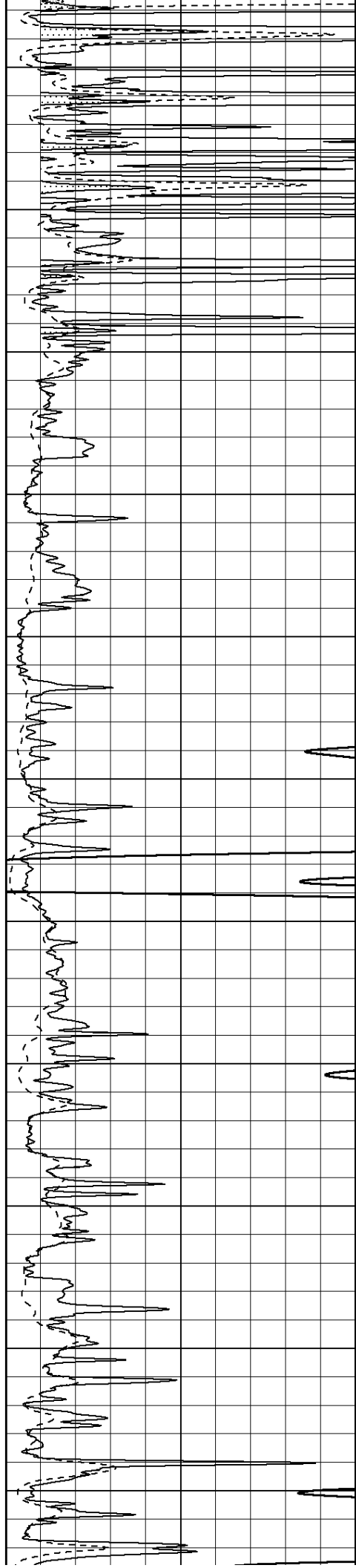
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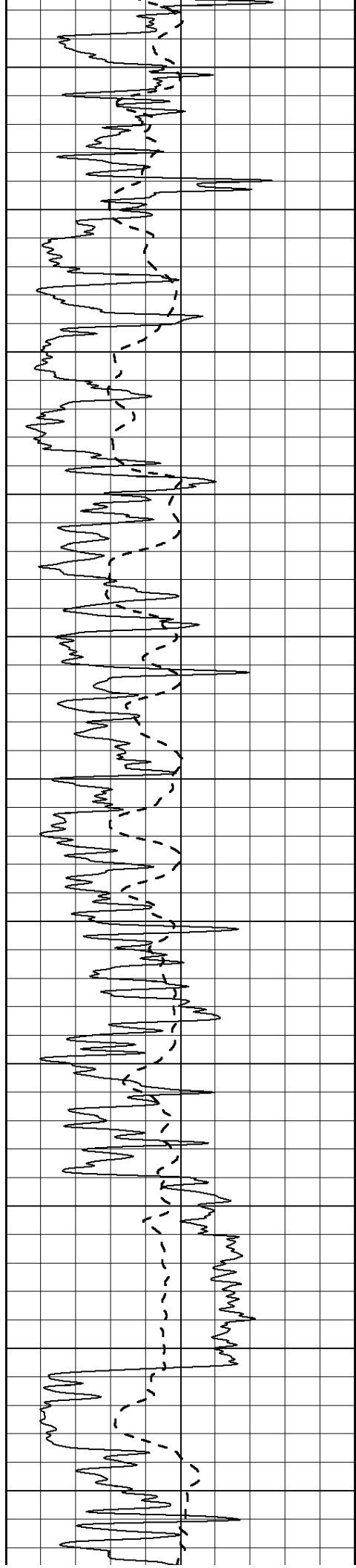
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3050

3100

3150





3200

3250

3300

3350

3400

3450

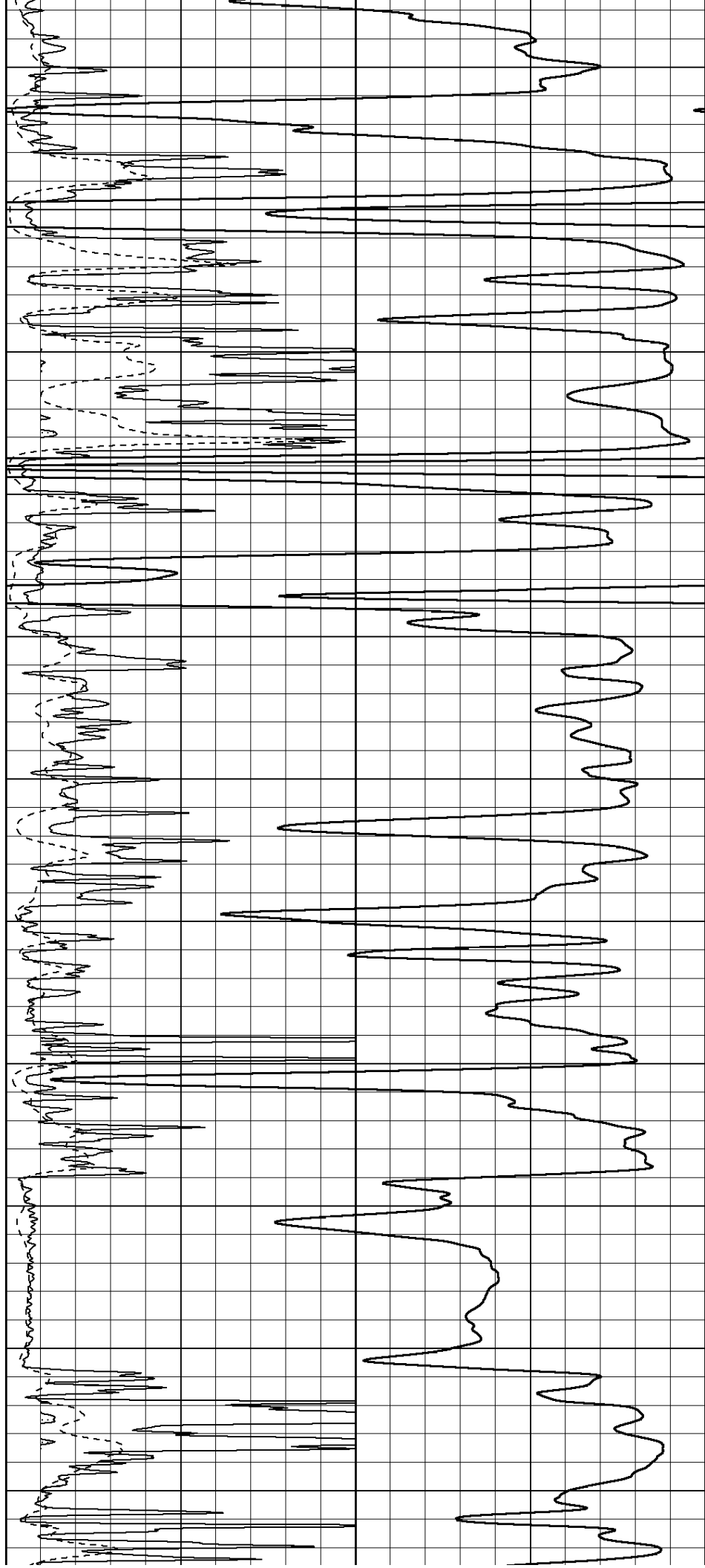
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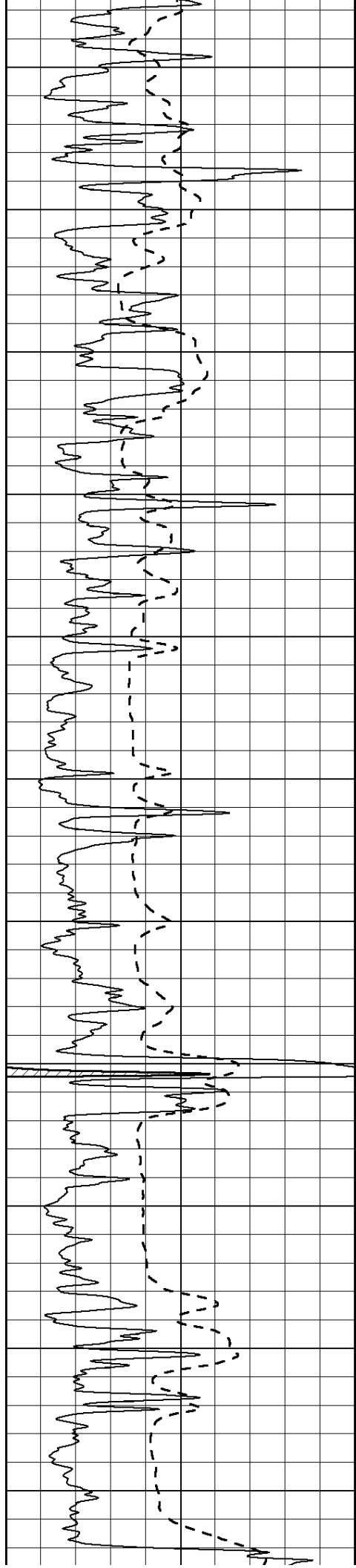
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3600

3650

3700





3750

3800

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3900

3950

4000

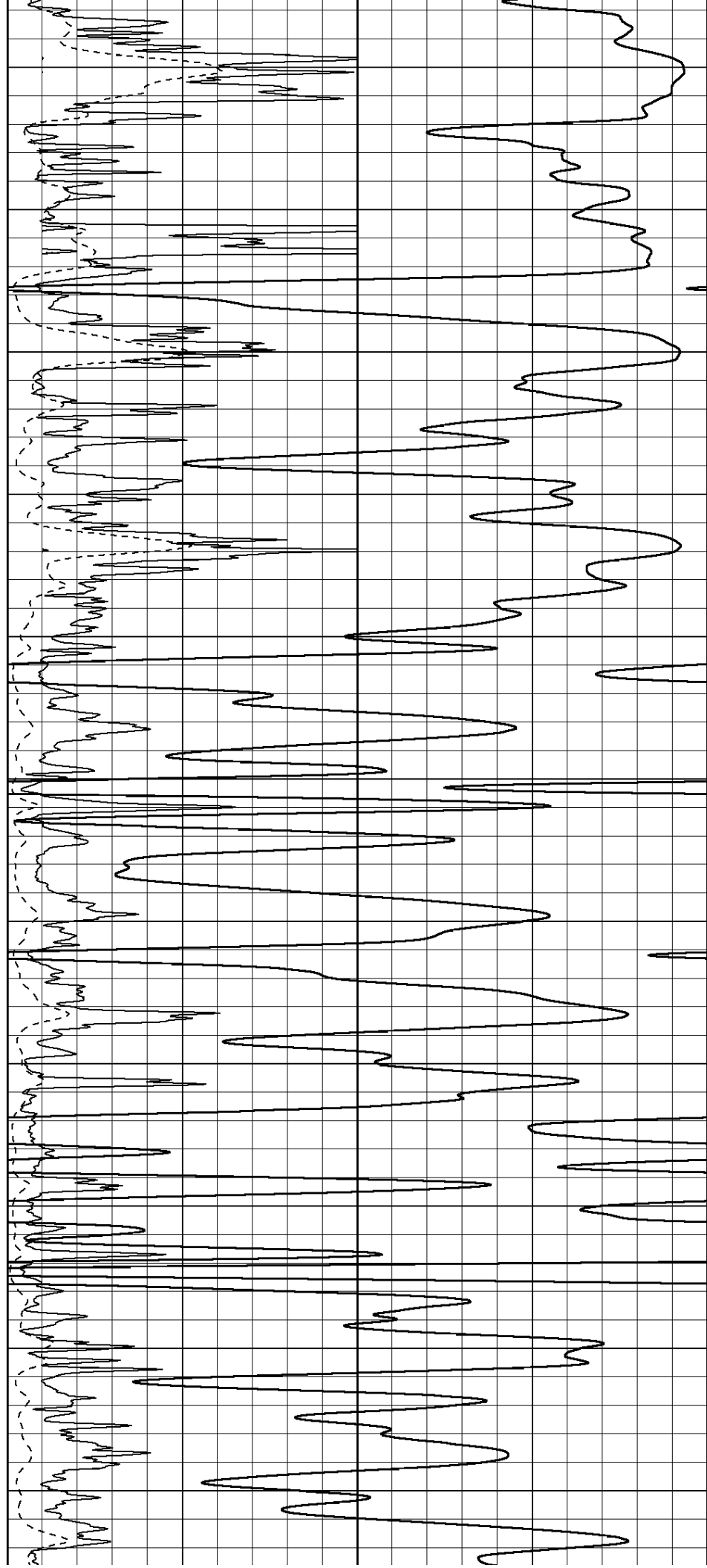
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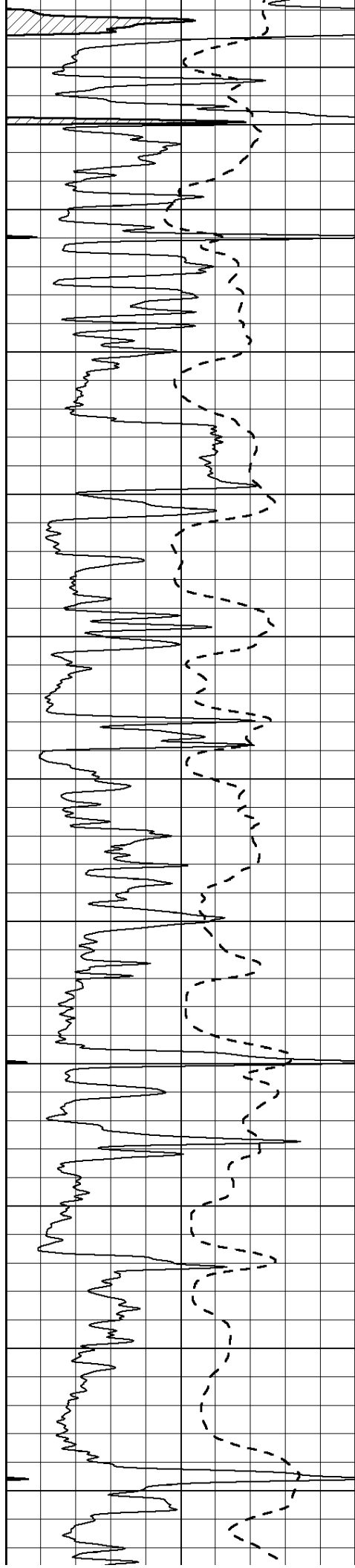
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4150

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4250





4300

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4450

4500

4550

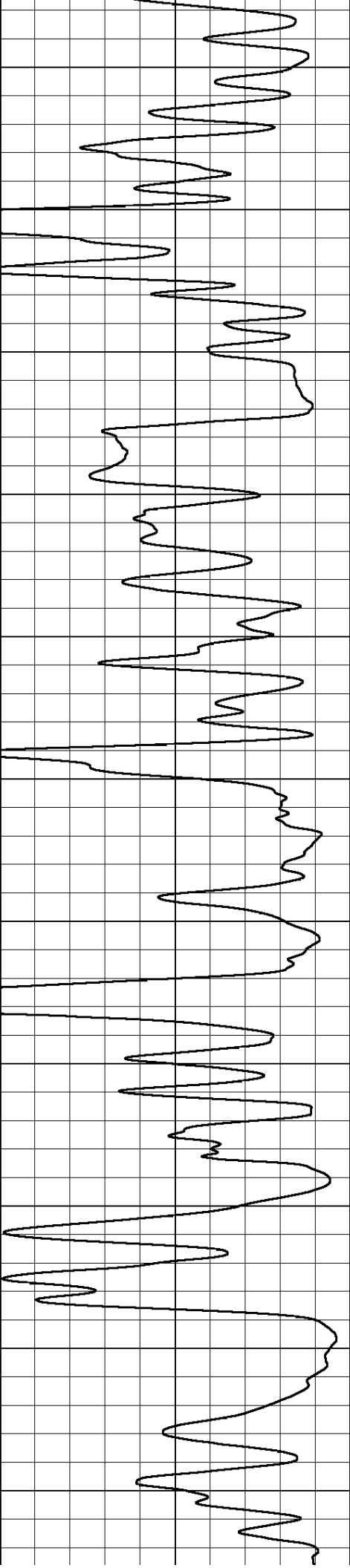
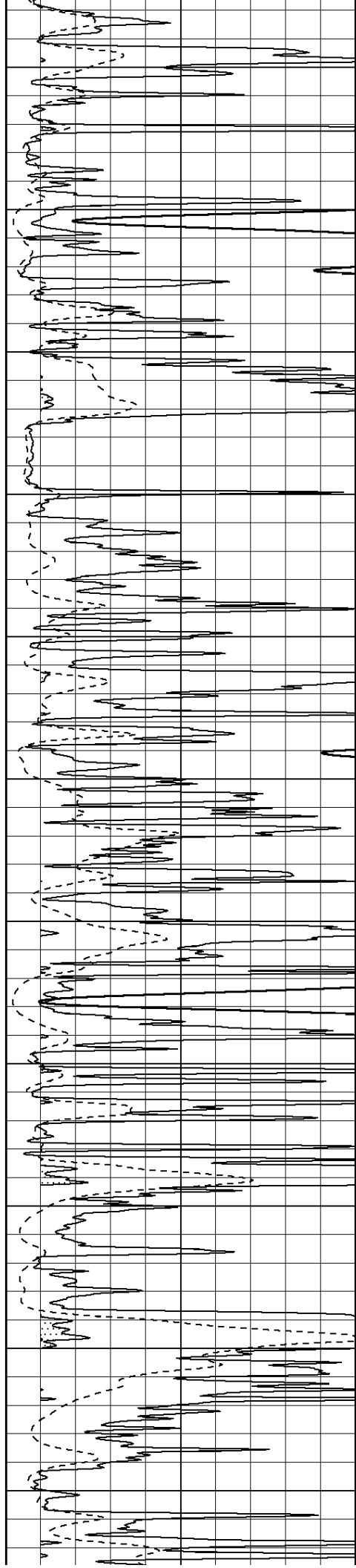
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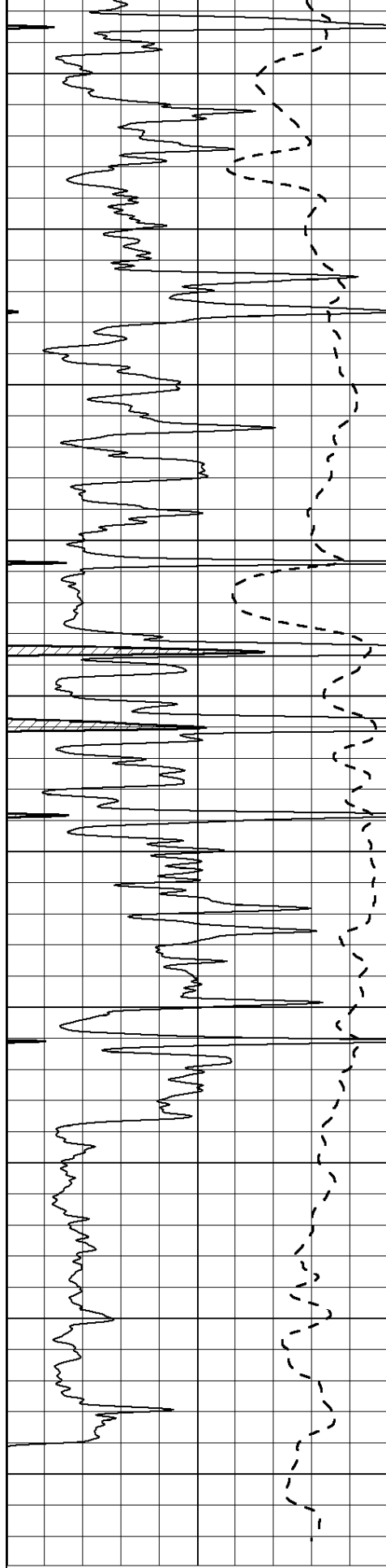
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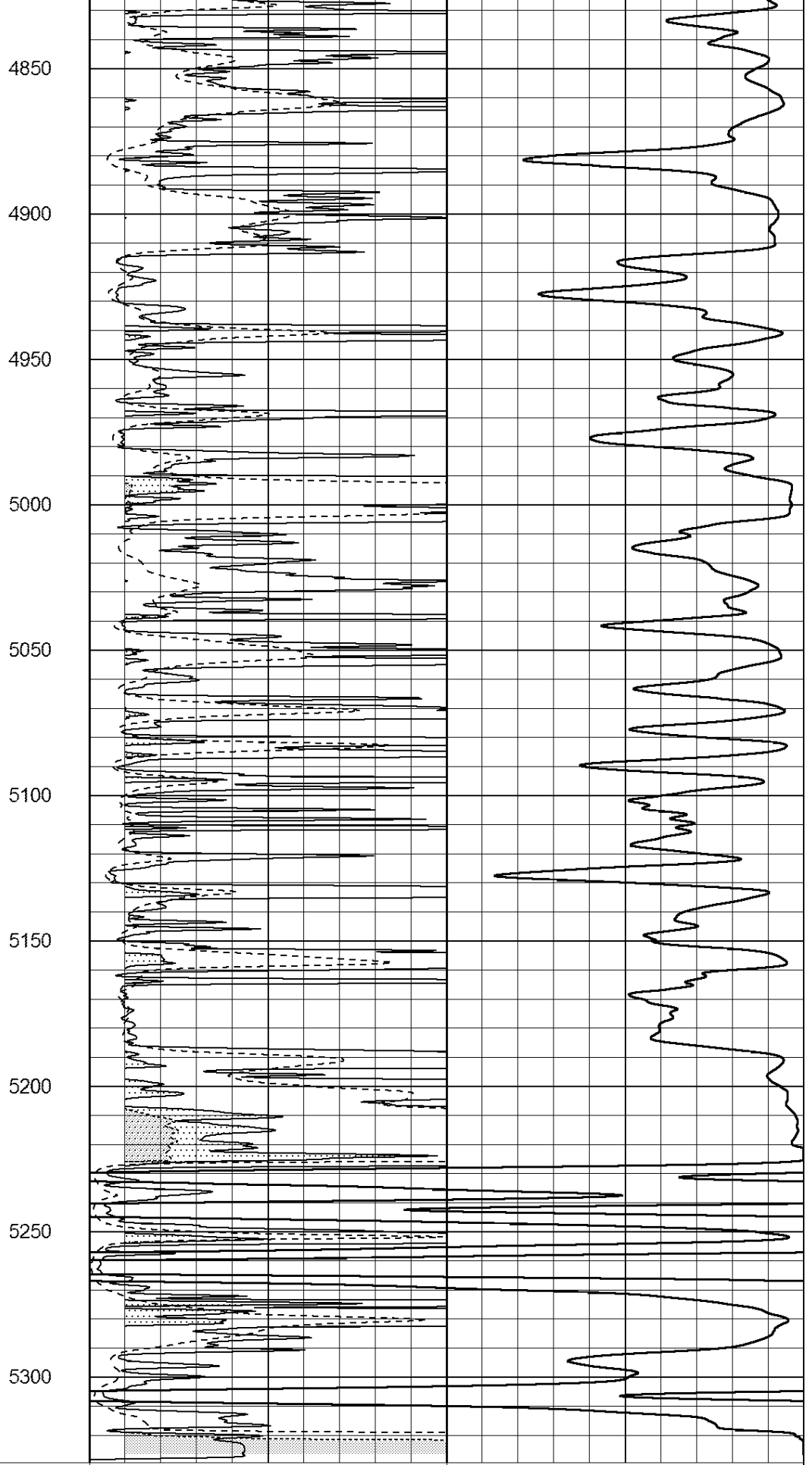
4750

4800





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



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



SUPERIOR

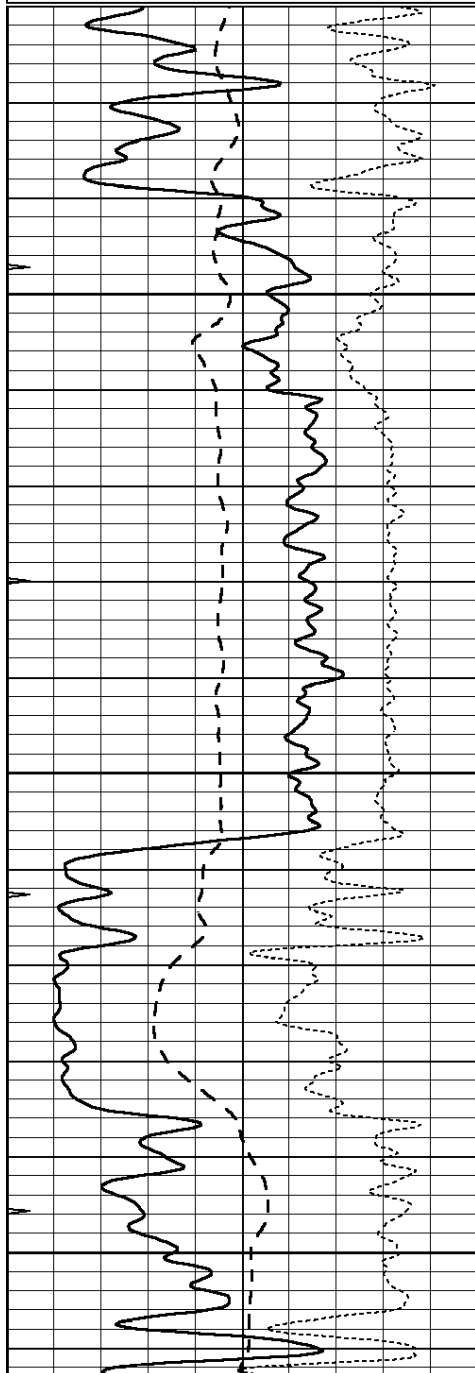
Hays,
Kansas

MAIN SECTION

Database File: 008135ddn.db
Dataset Pathname: pass3.8
Presentation Format: dil
Dataset Creation: Mon Jan 09 10:34:40 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

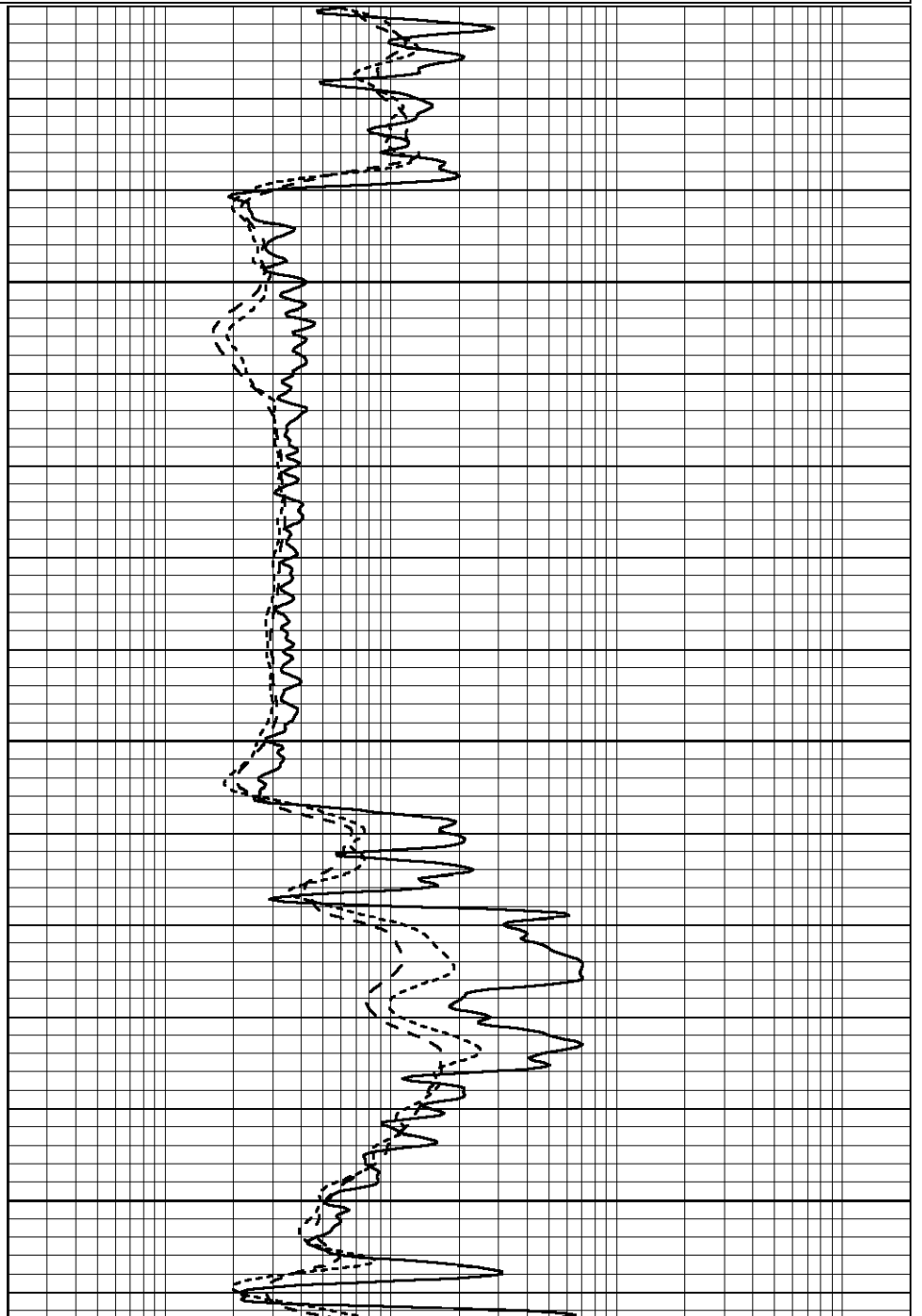
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

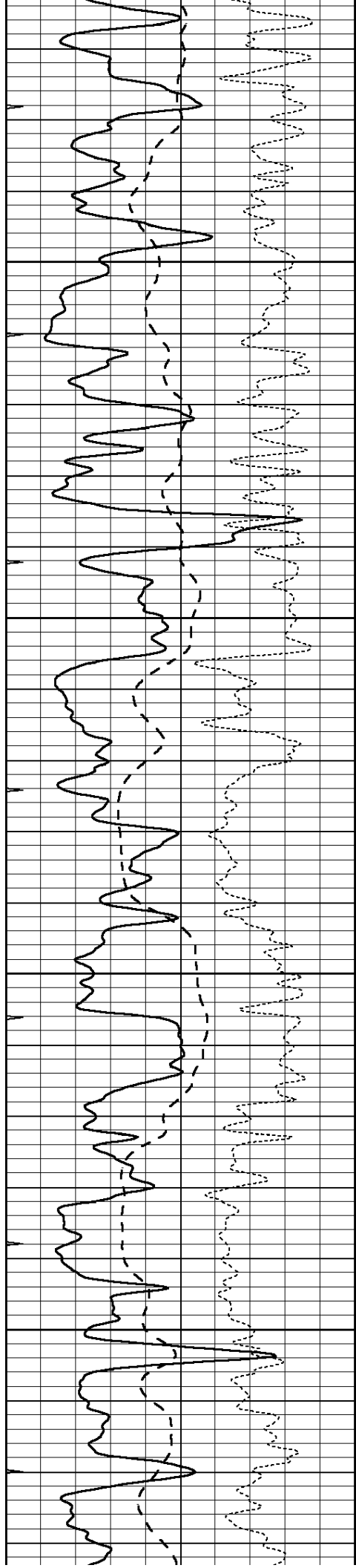


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3650

3700



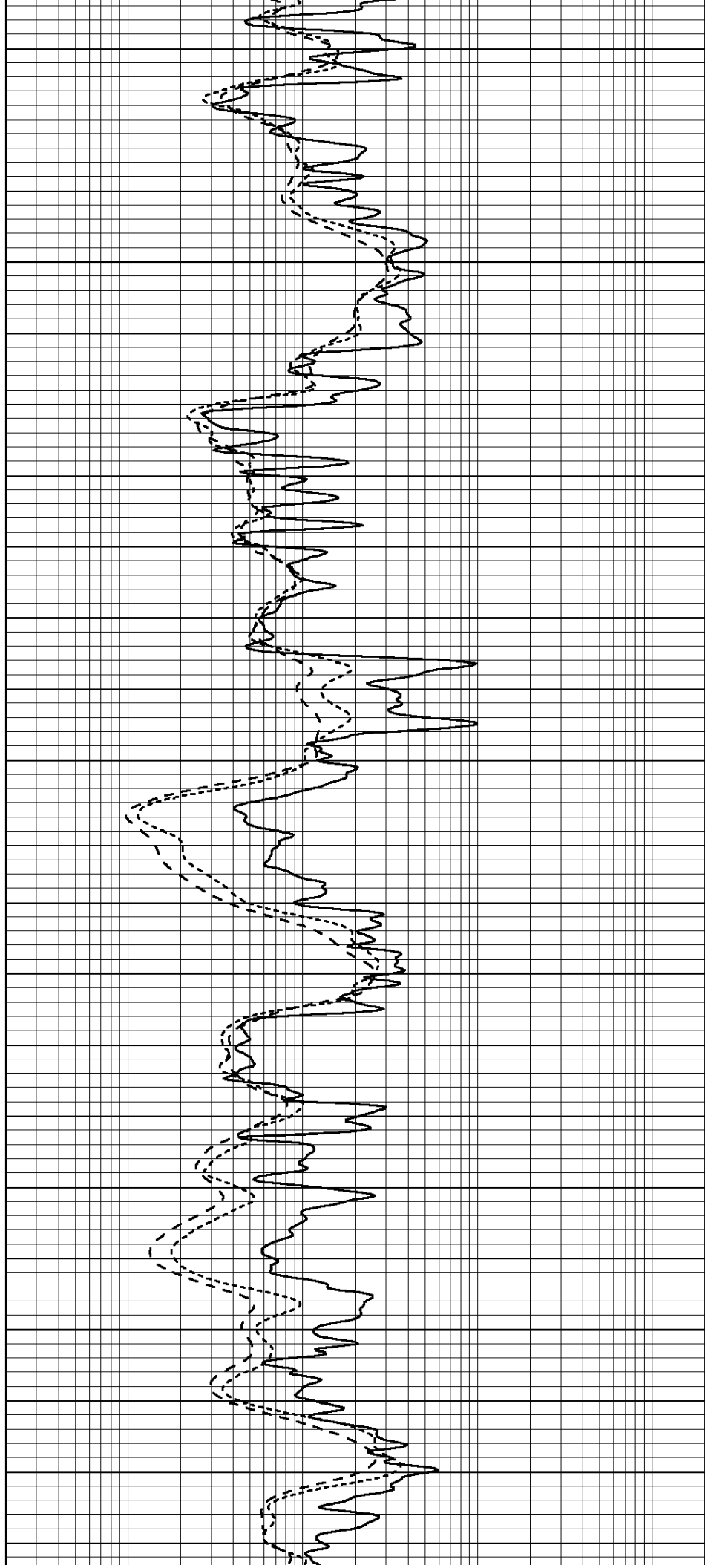


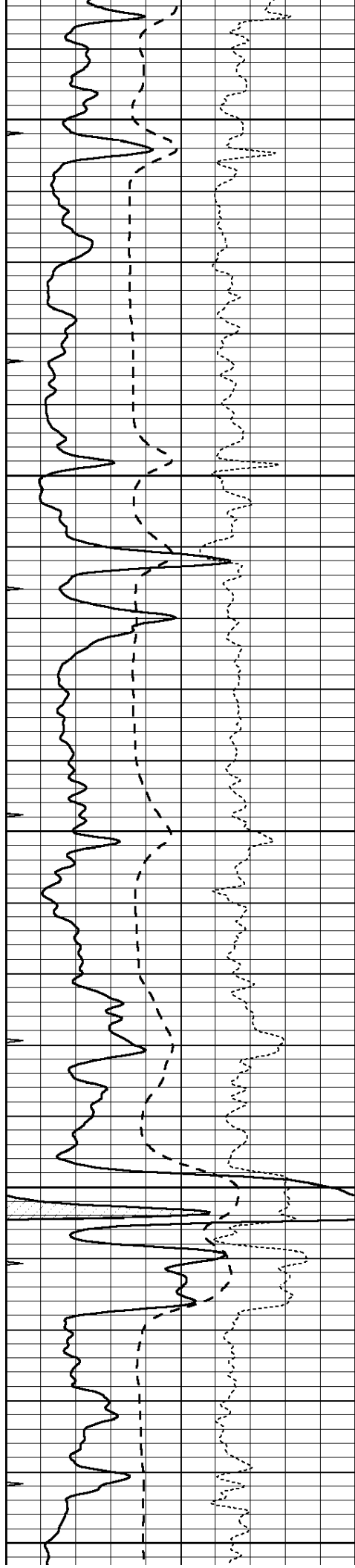
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3800

3850

3900





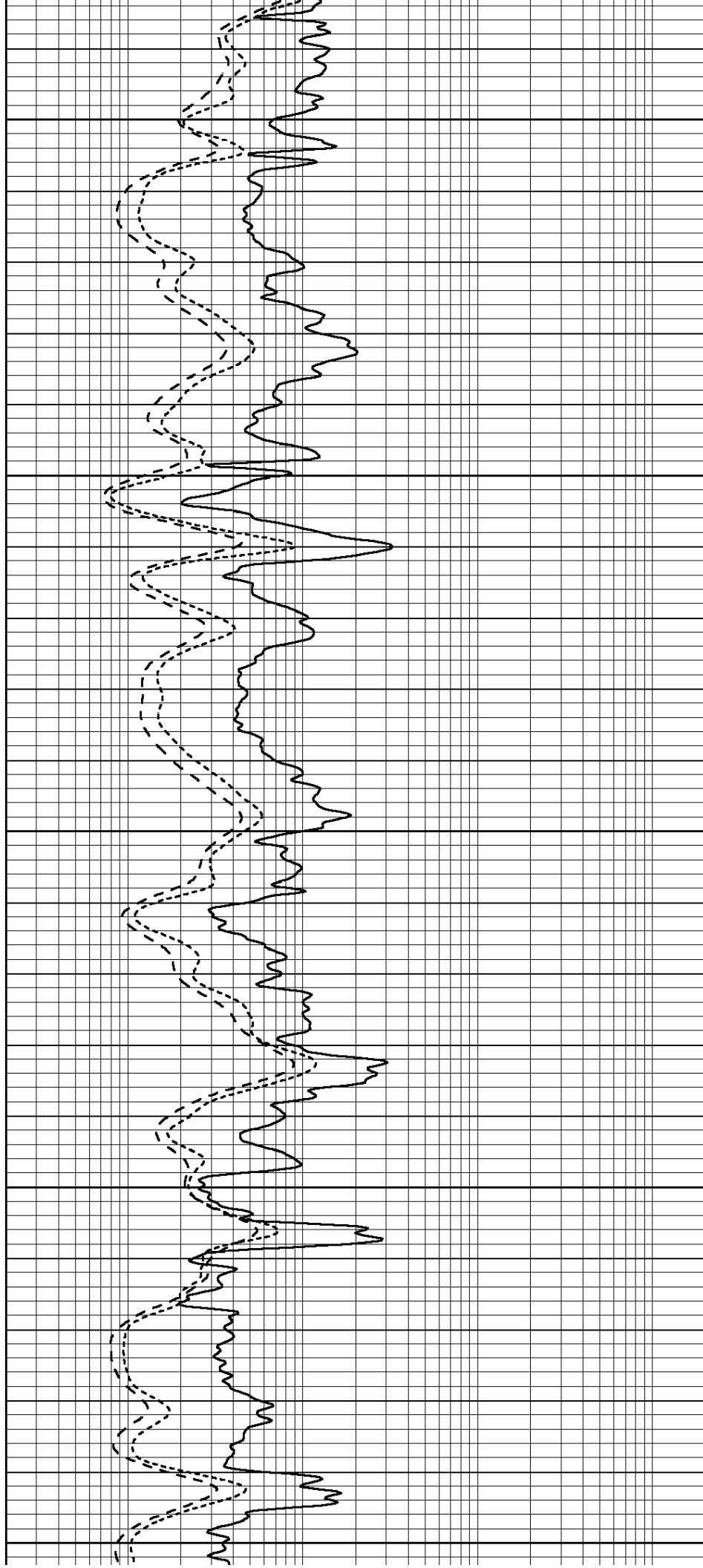
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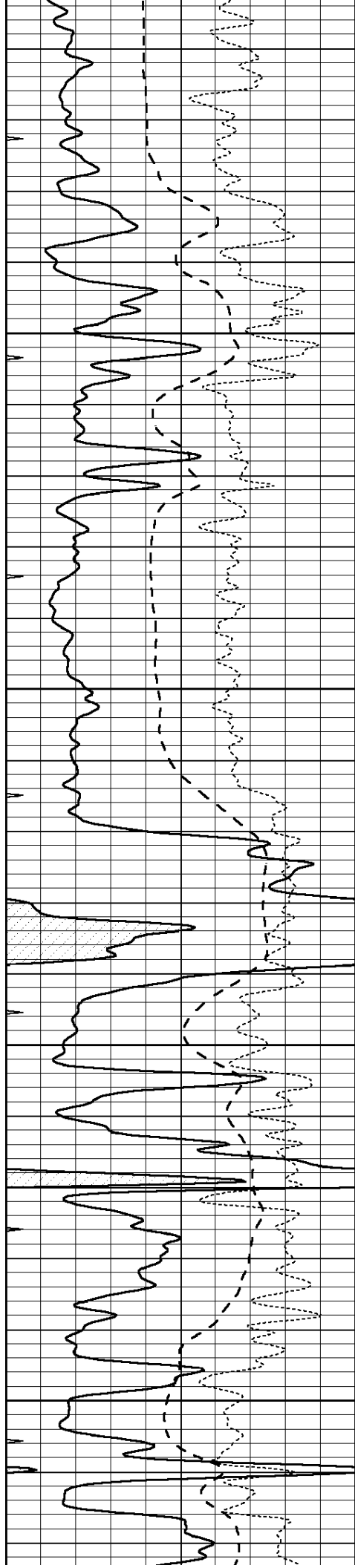
4000

4050

4100

4150



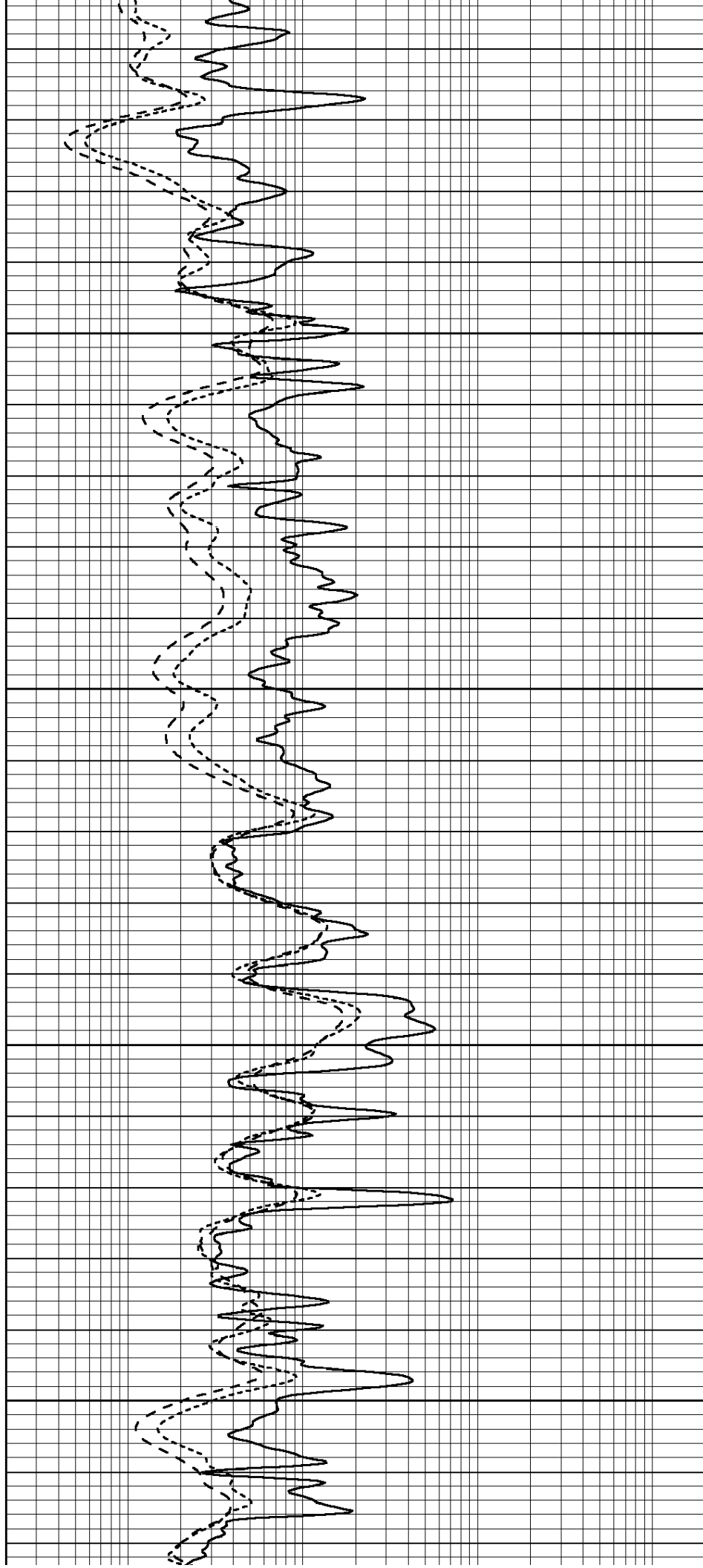


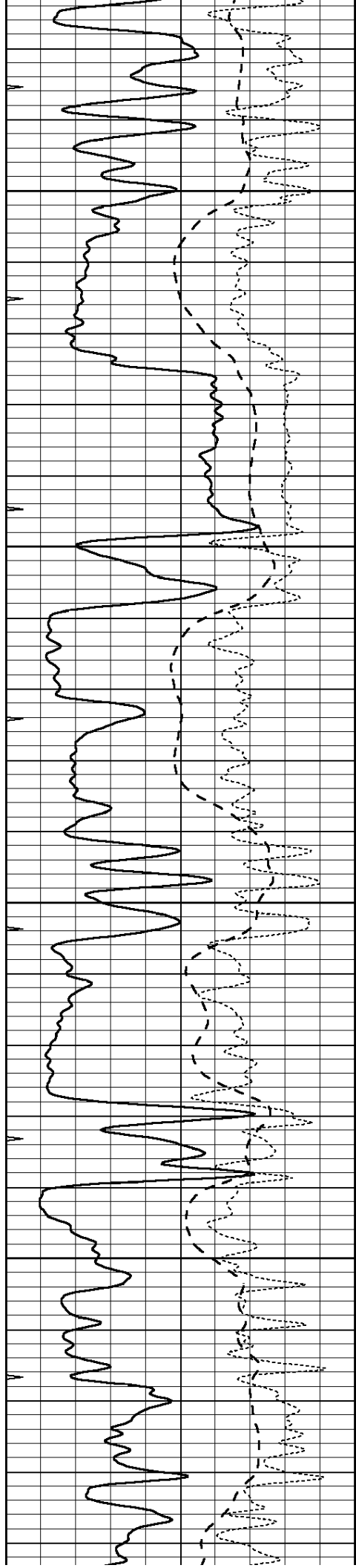
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4250

4300

4350



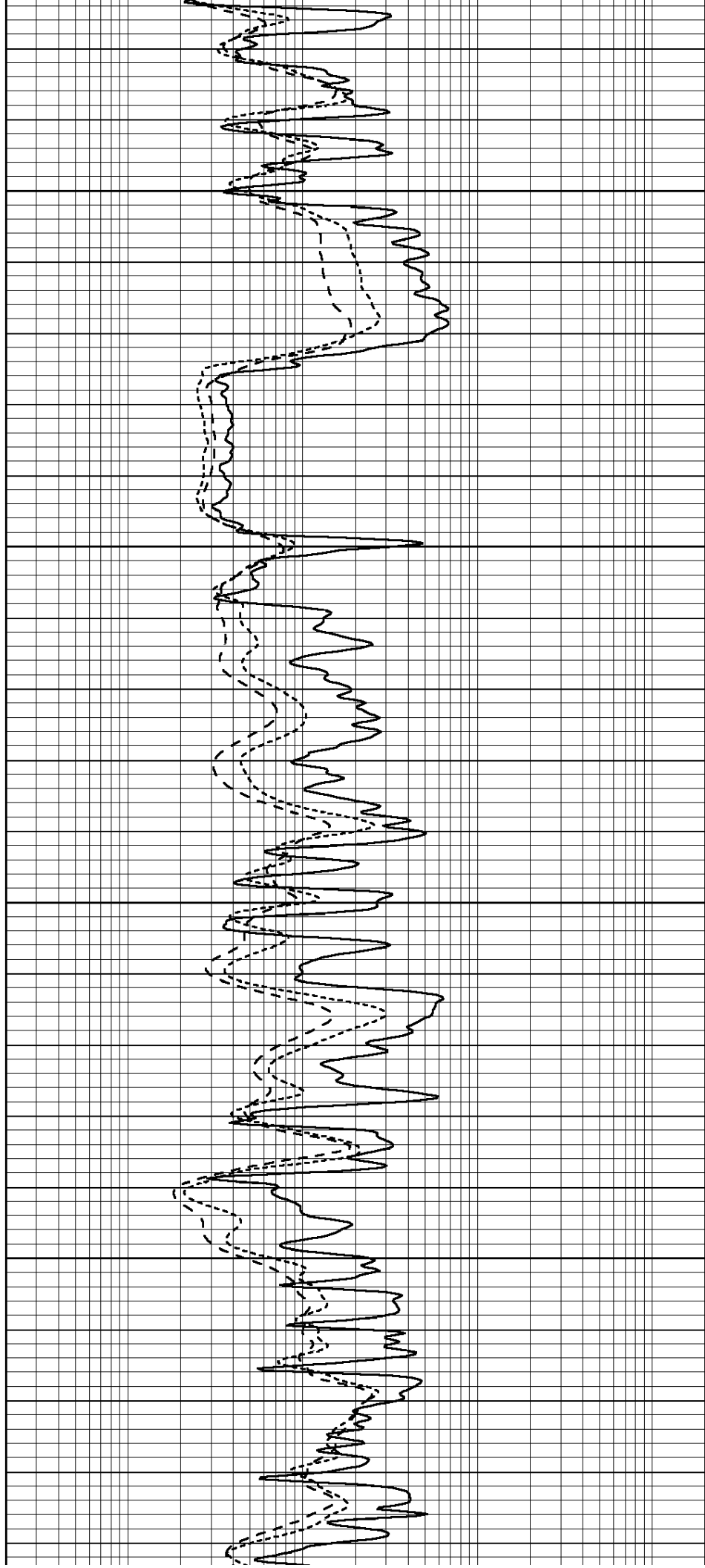


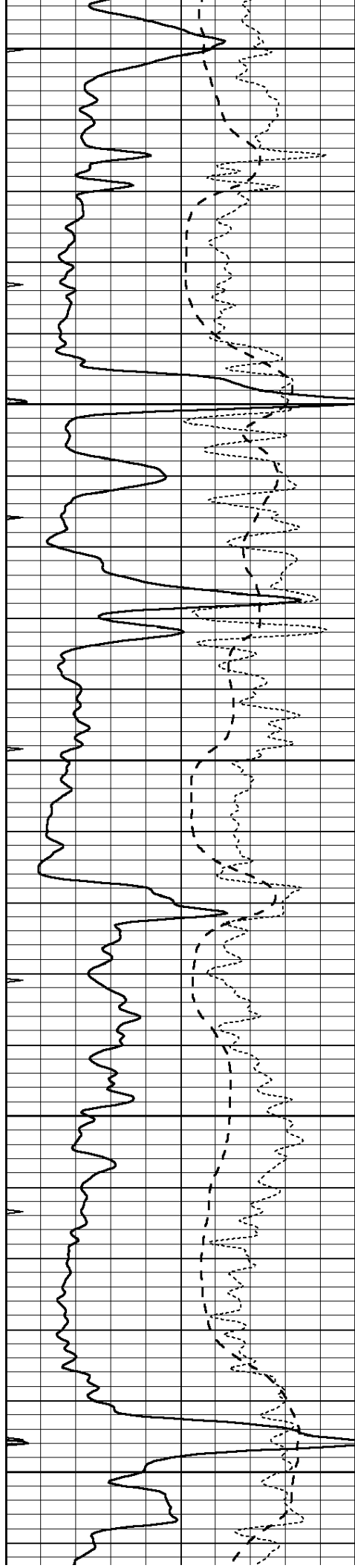
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4500

4550





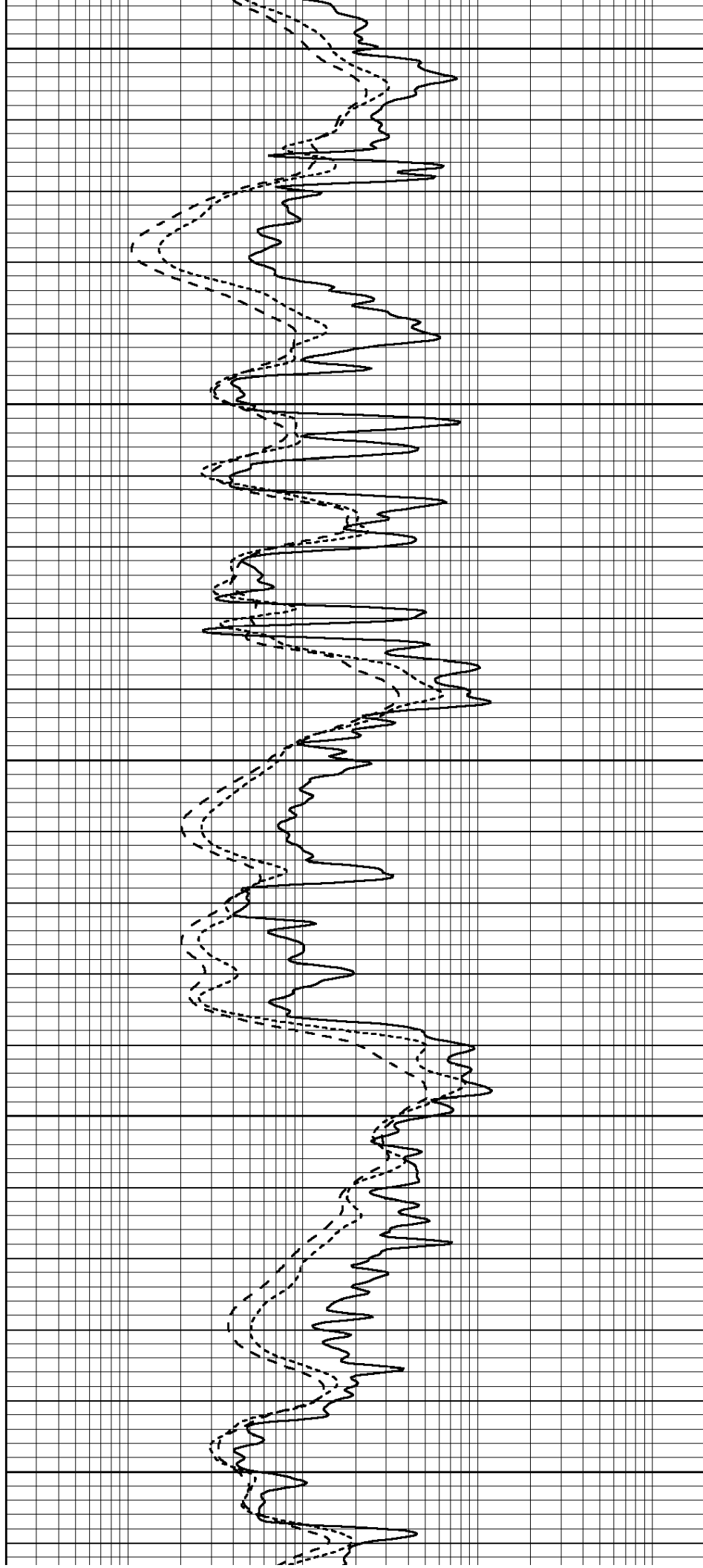
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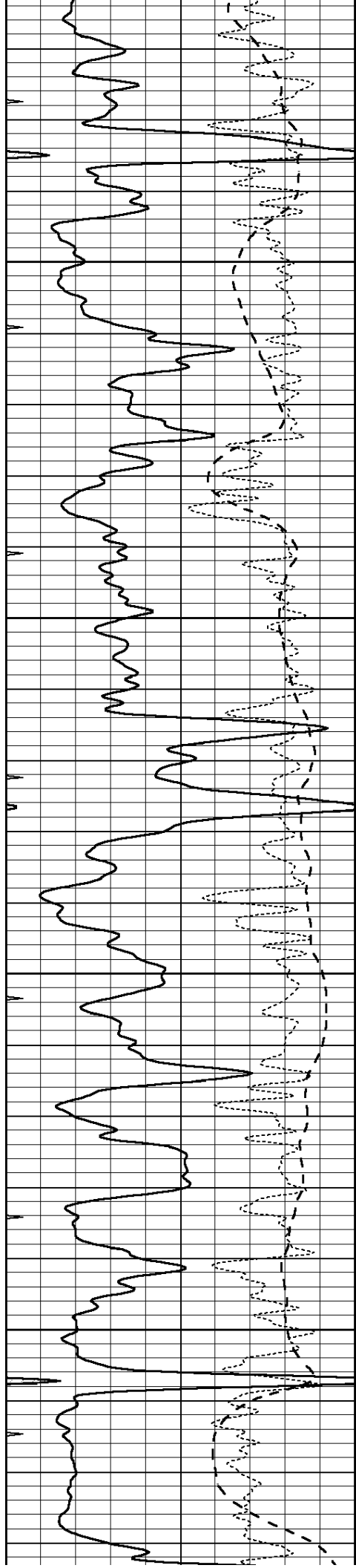
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4800



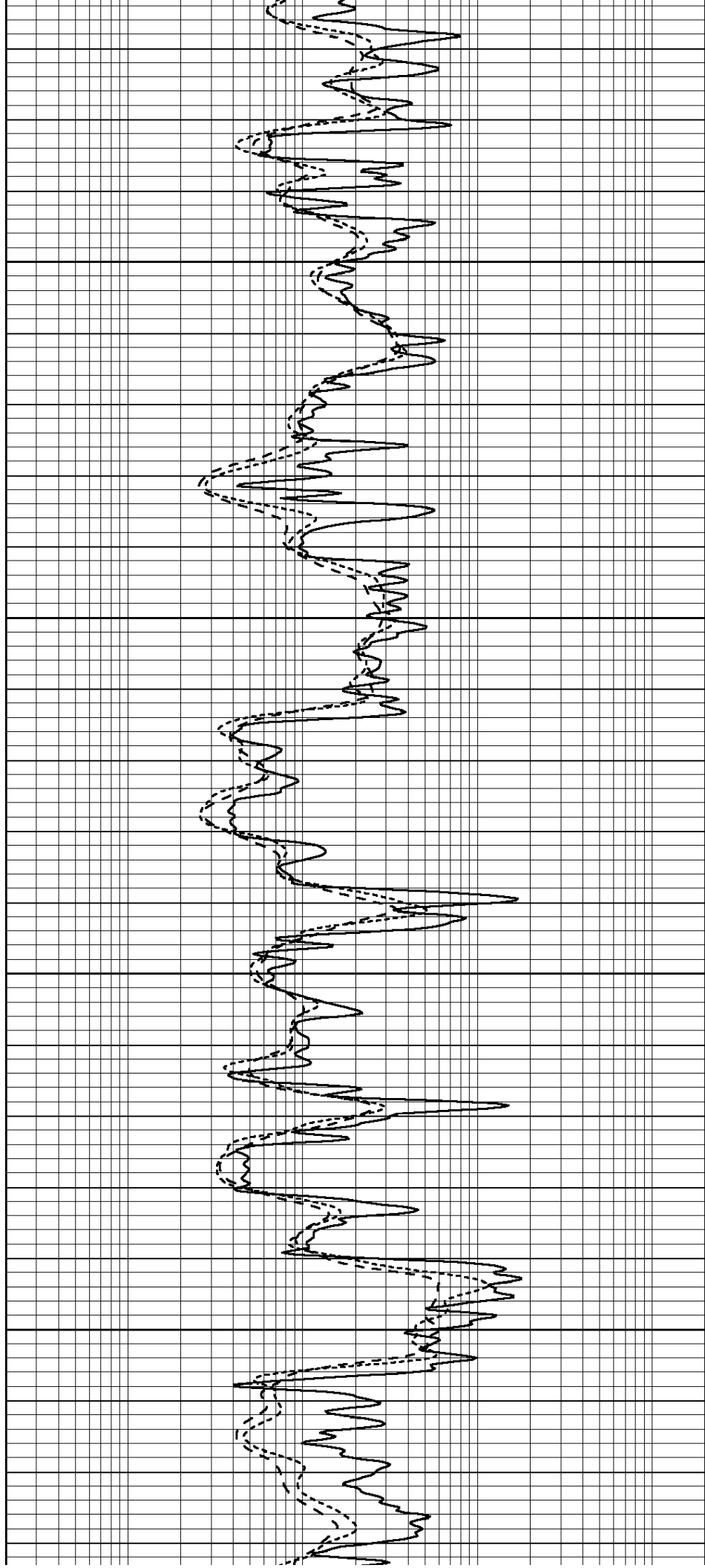


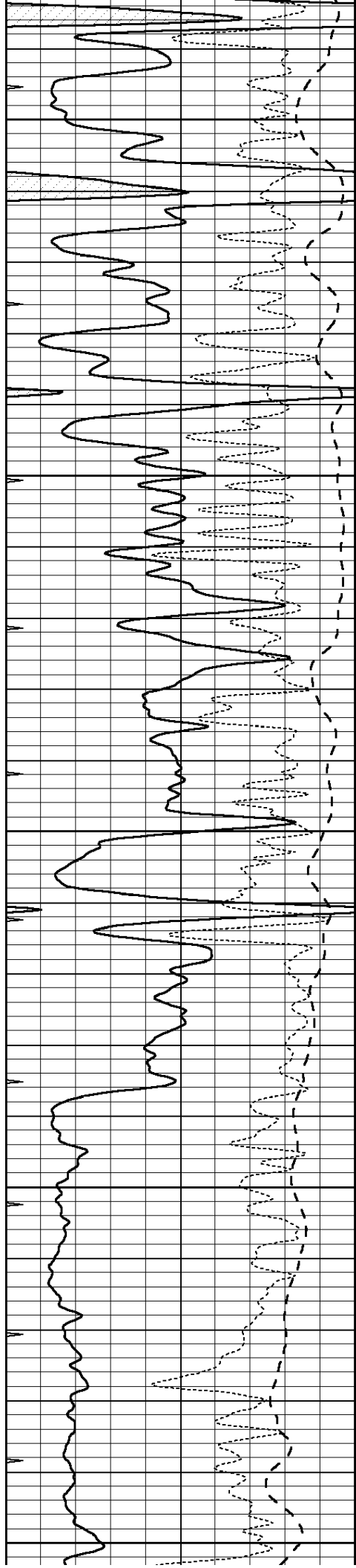
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5000





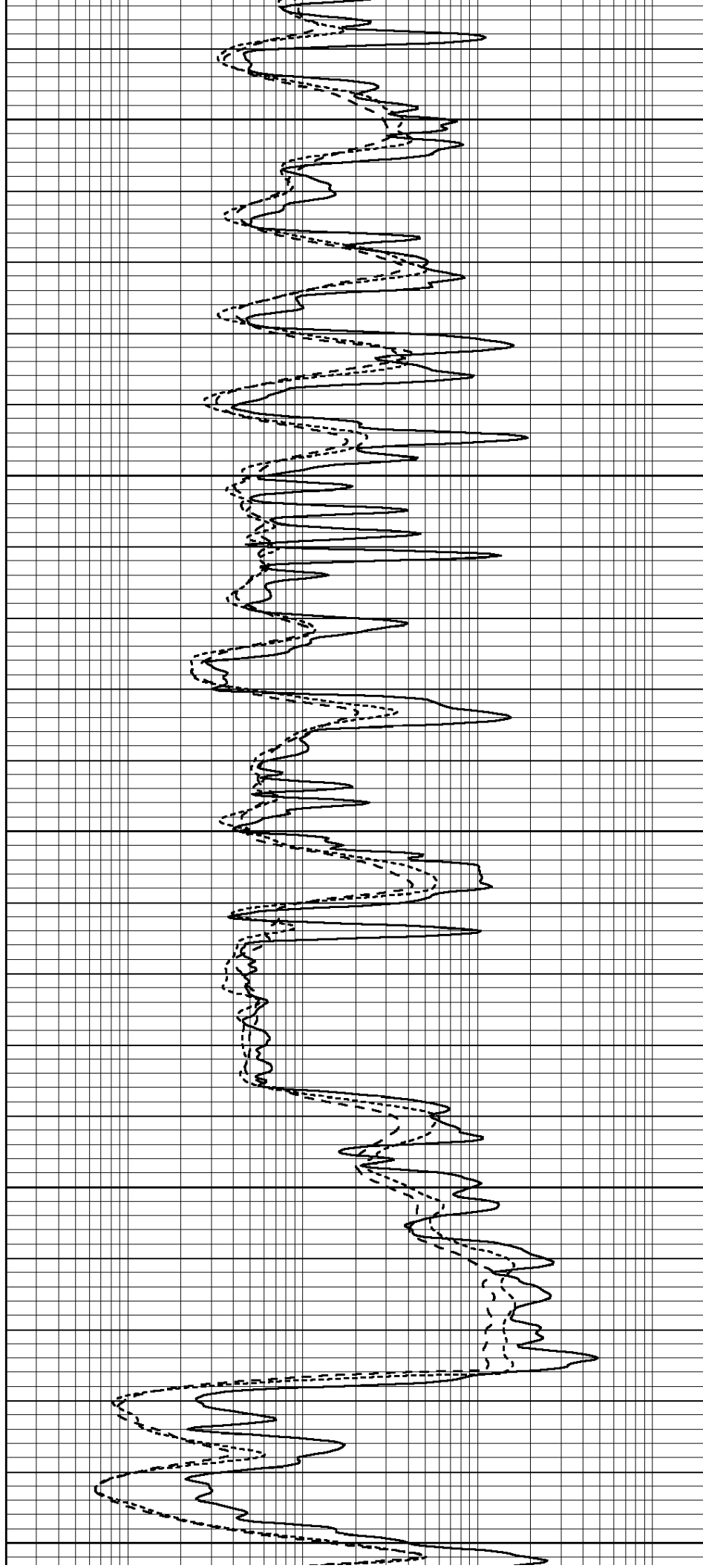
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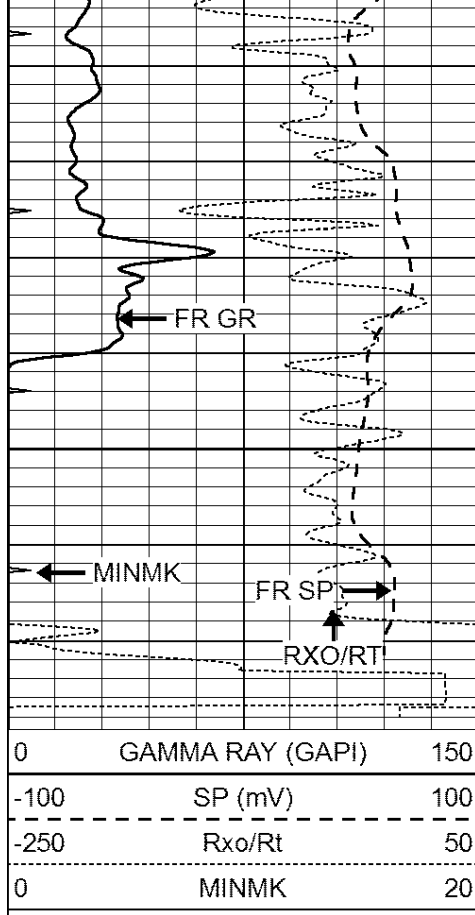
5100

5150

5200

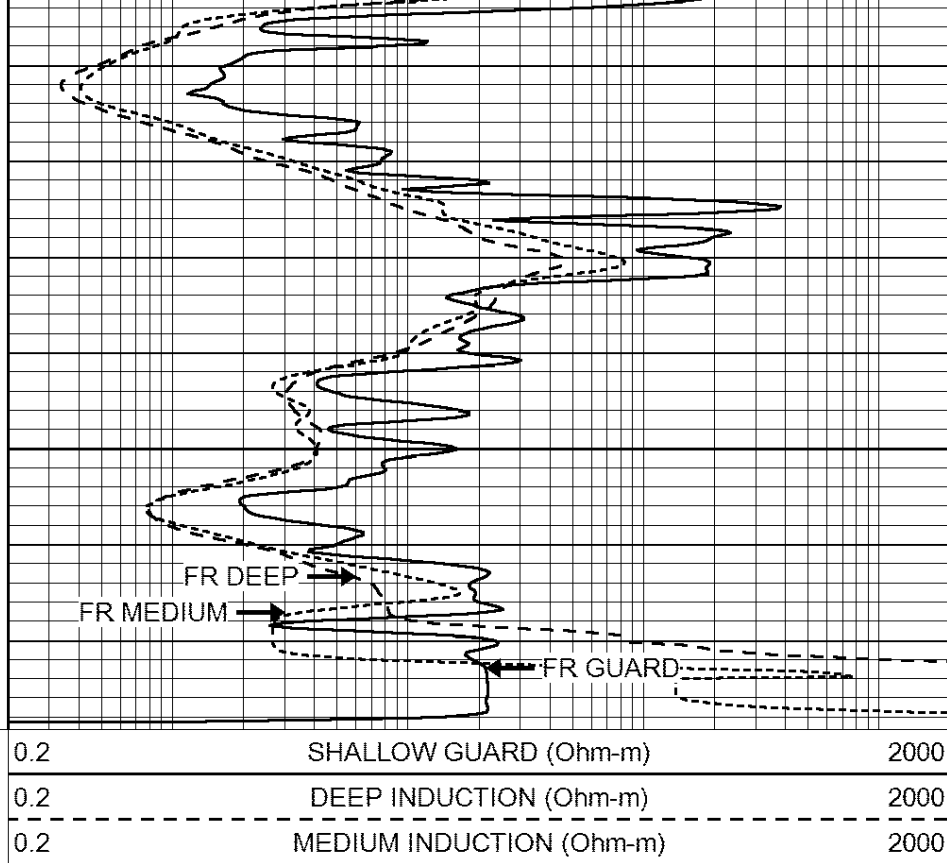
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5300

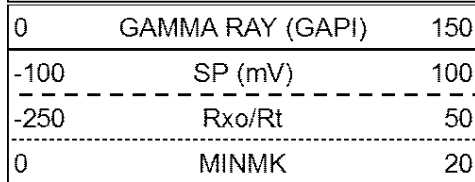
LTD 5325



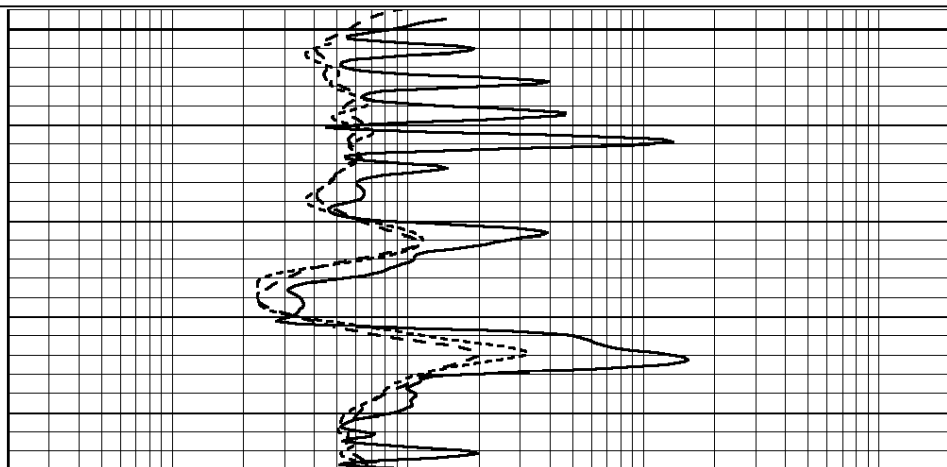
SUPERIOR
Hays,
Kansas

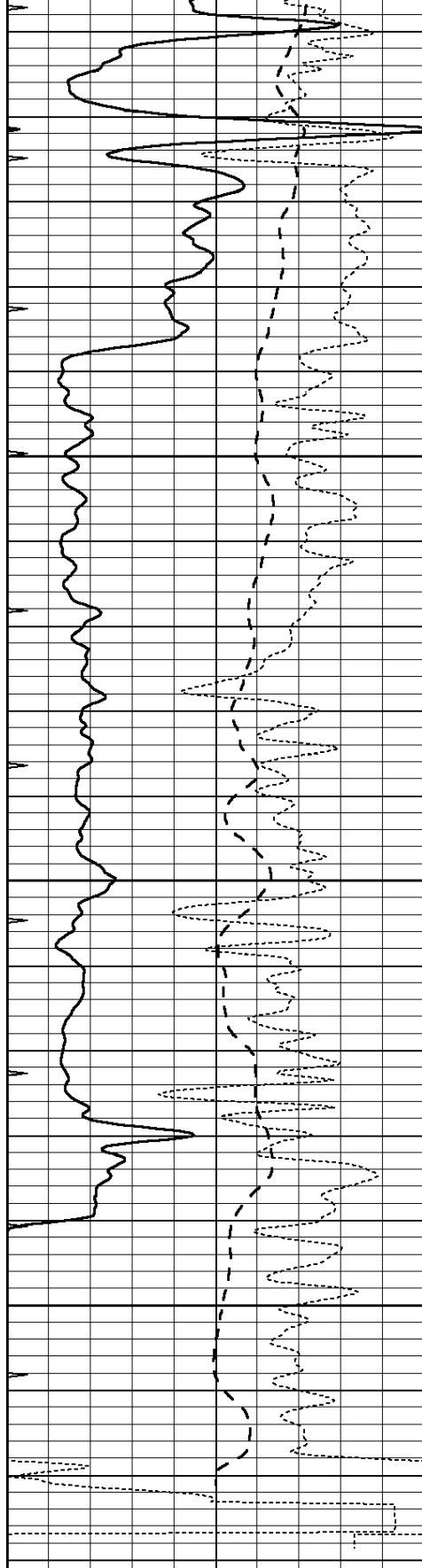
REPEAT SECTION

Database File: 008135ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: cil
 Dataset Creation: Mon Jan 09 09:08:22 2012
 Charted by: Depth in Feet scaled 1:240



5100





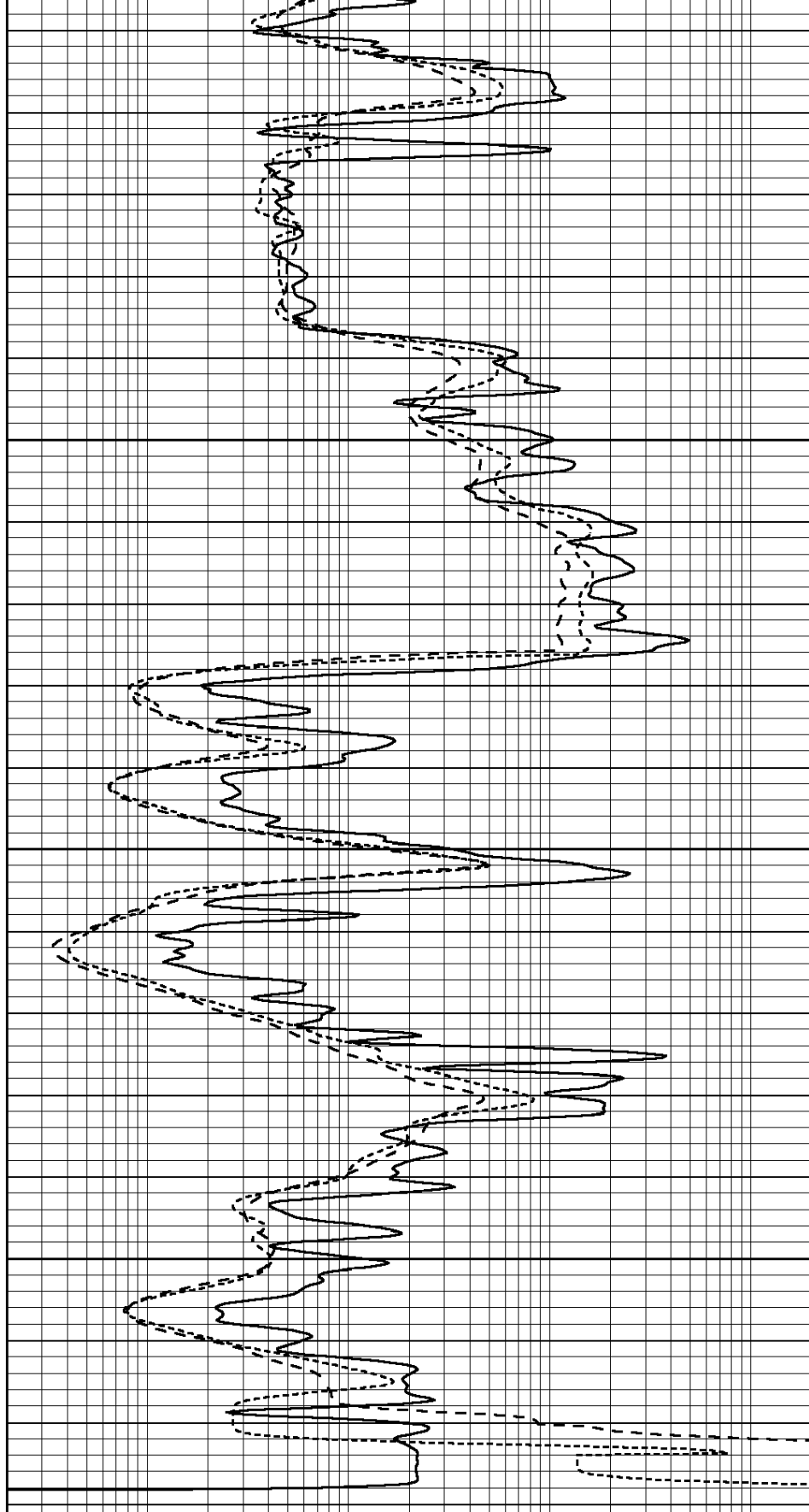
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

5150

5200

5250

5300



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

Database File: 008135ddn.db
Dataset Pathname: pass3.8
Dataset Creation: Mon Jan 09 10:34:40 2012

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Mon Jan 09 06:51:29 2012

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-8.000
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

Litho Density Calibration Report

Serial: 004N Model: PRB
Performed Tue Sep 08 13:49:55 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1535.8	11161.3	3721.6	12498.8	cps
Window 2	1402.6	9435.7	3219.7	10417.7	cps
Window 3	1077.6	4422.0	1779.2	4753.4	cps
Window 4	337.3	342.8	337.4	343.7	cps
Long Space	0.0	8033.1	1817.0	9015.1	cps
Short Space	1.2	1671.8	1138.1	1813.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.5	Rib Slope	: 1.017	Density/Spine Ratio	: 0.573
Spine Angle	: 75.5	Spine Slope	: 3.865	Spine Intercept	: -19.7

Caliper

	Readings	Reference
Low Ref	2.6	8.6
High Ref	4.8	15.0
Gain: 3.0		Offset: 0.7

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: Mon Jan 09 08:35:01 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps