



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company WOOLSEY OPERATING CO., LLC.
Well RICKE "A" #2
Field MAYBERRY NORTH
County BARBER
State KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.
Well RICKE "A" #2
Field MAYBERRY NORTH
County BARBER State KANSAS

Location: API # : 15-007-24171-0000
1980' FNL & 330' FWL
W/2 - SW - NW
SEC 13 TWP 34S RGE 11W
Permanent Datum GROUND LEVEL Elevation 1396
Log Measured From KELLY BUSHING 12' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
Elevation
K.B. 1408
D.F. 1406
G.L. 1396

Date	5/23/14
Run Number	ONE
Depth Driller	5210
Depth Logger	5208
Bottom Logged Interval	5206
Top Log Interval	00
Casing Driller	13 3/8" @ 225'
Casing Logger	224
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/58
pH / Fluid Loss	9.0/10.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.700 @ 80F
Rmf @ Meas. Temp	.525 @ 80F
Rmc @ Meas. Temp	.840 @ 80F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.441 @ 127F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	2:15 P.M.
Maximum Recorded Temperature	127F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	BILL KLAVER

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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

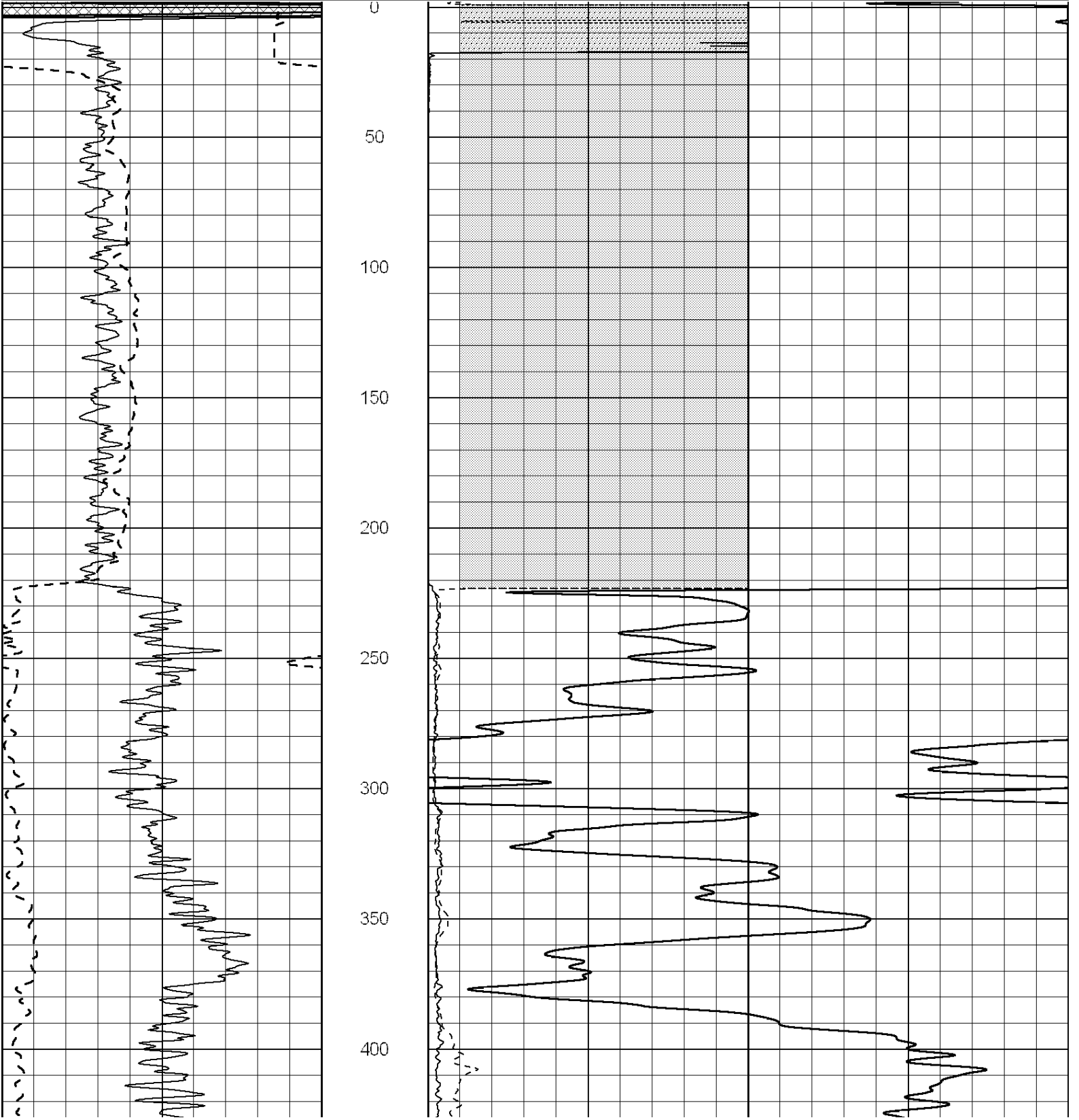
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
MEDICINE LODGE, KS., 9S. ON HWY 281 TO "GERLANE RD.", 2E. TO "NORTHSTAR RD.", 5 1/2 S. & E.
&S. TO "BETHEL RD.", 2 1/2S., E. INTO

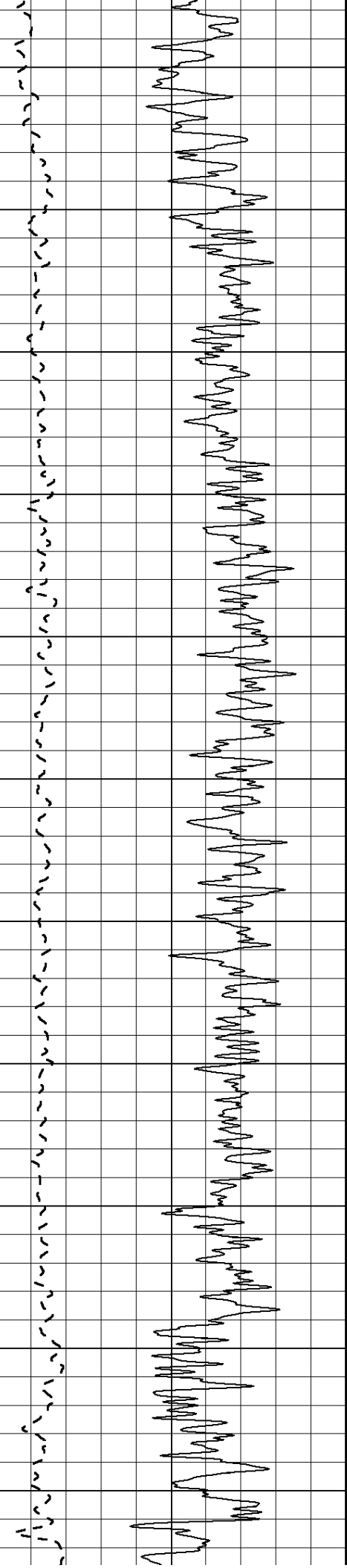


MAIN SECTION

Database File: 24160pe.db
 Dataset Pathname: pass3.9
 Presentation Format: dil2
 Dataset Creation: Fri May 23 16:47:31 2014 by Calc SOC 120430
 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)	
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

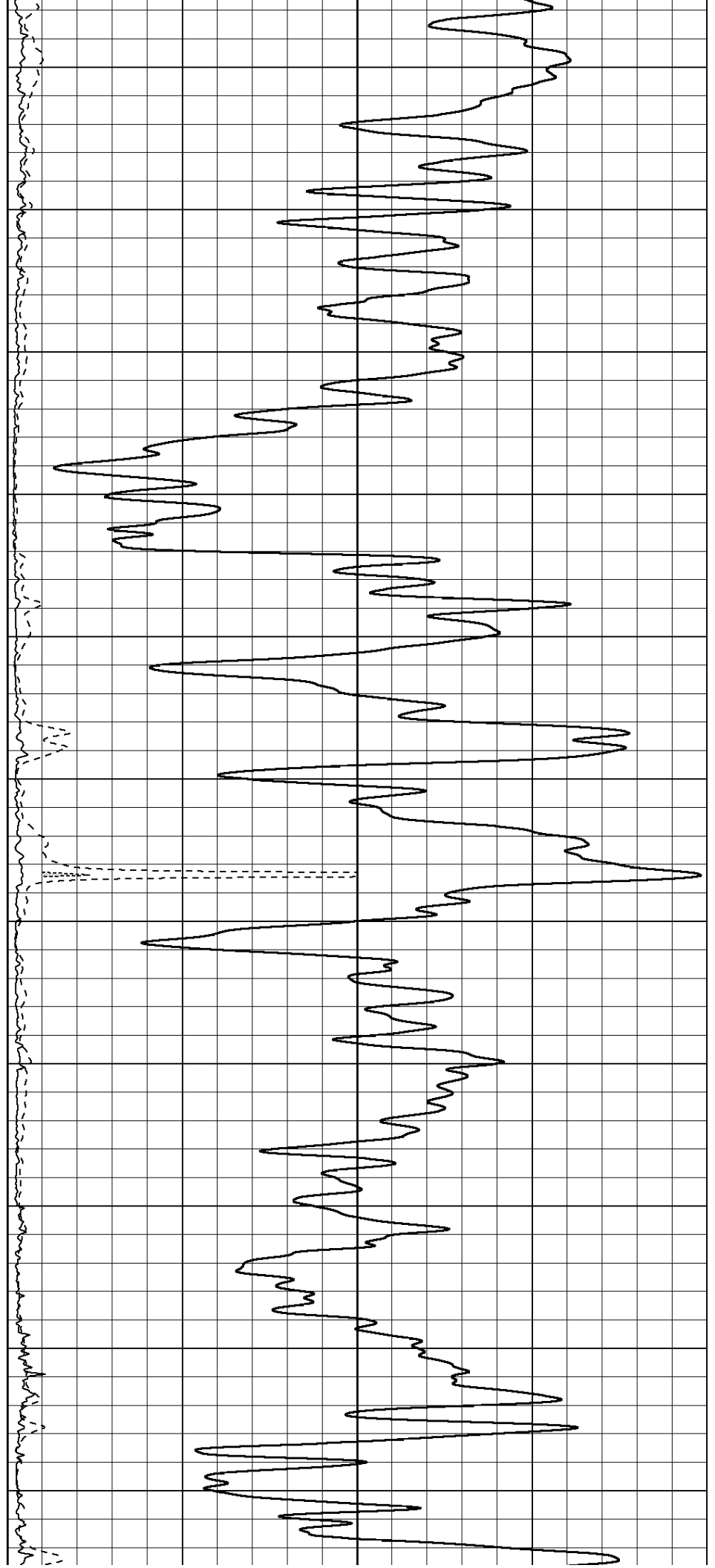
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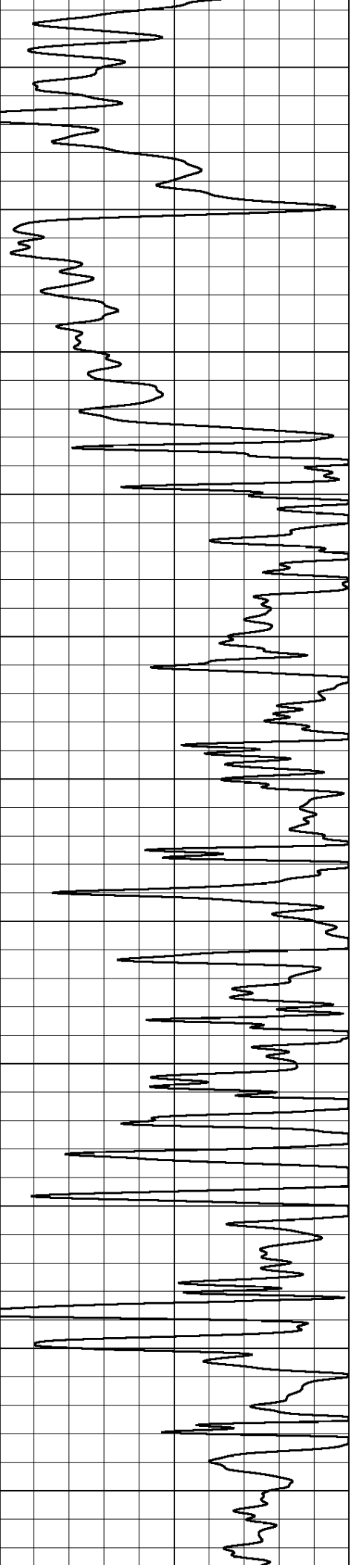
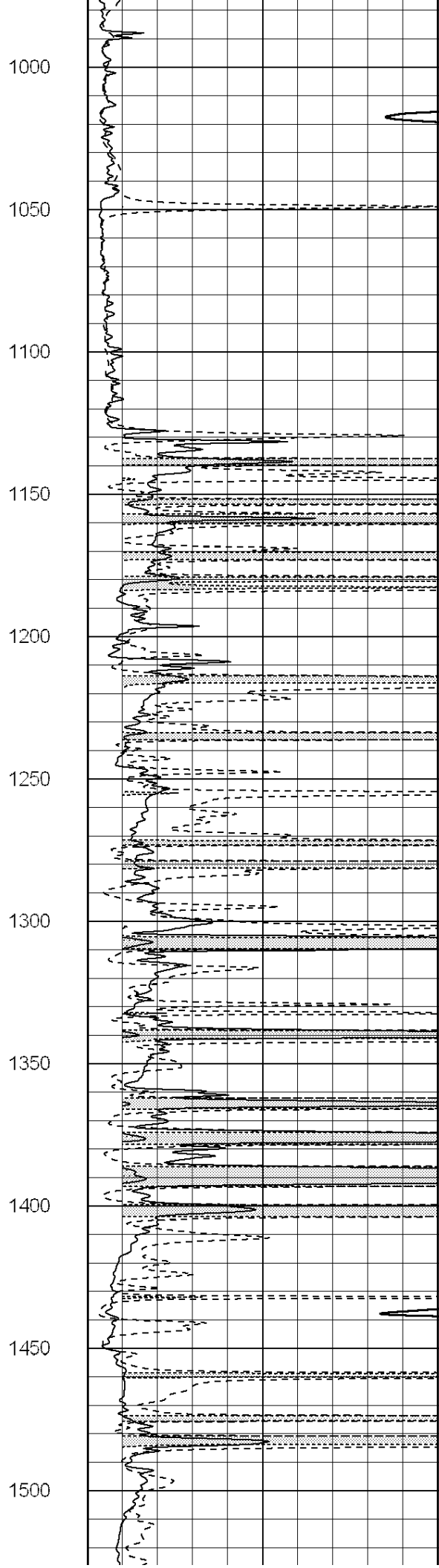
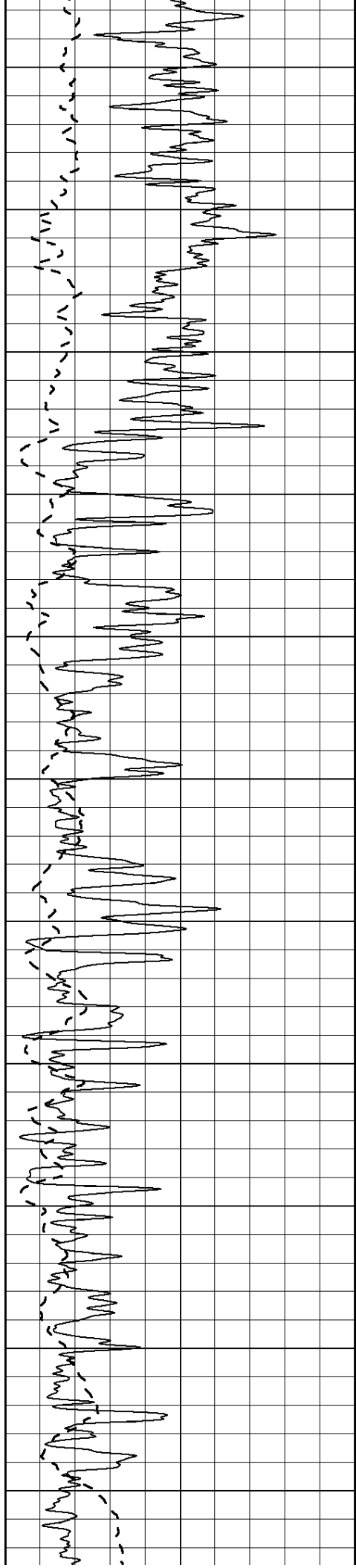
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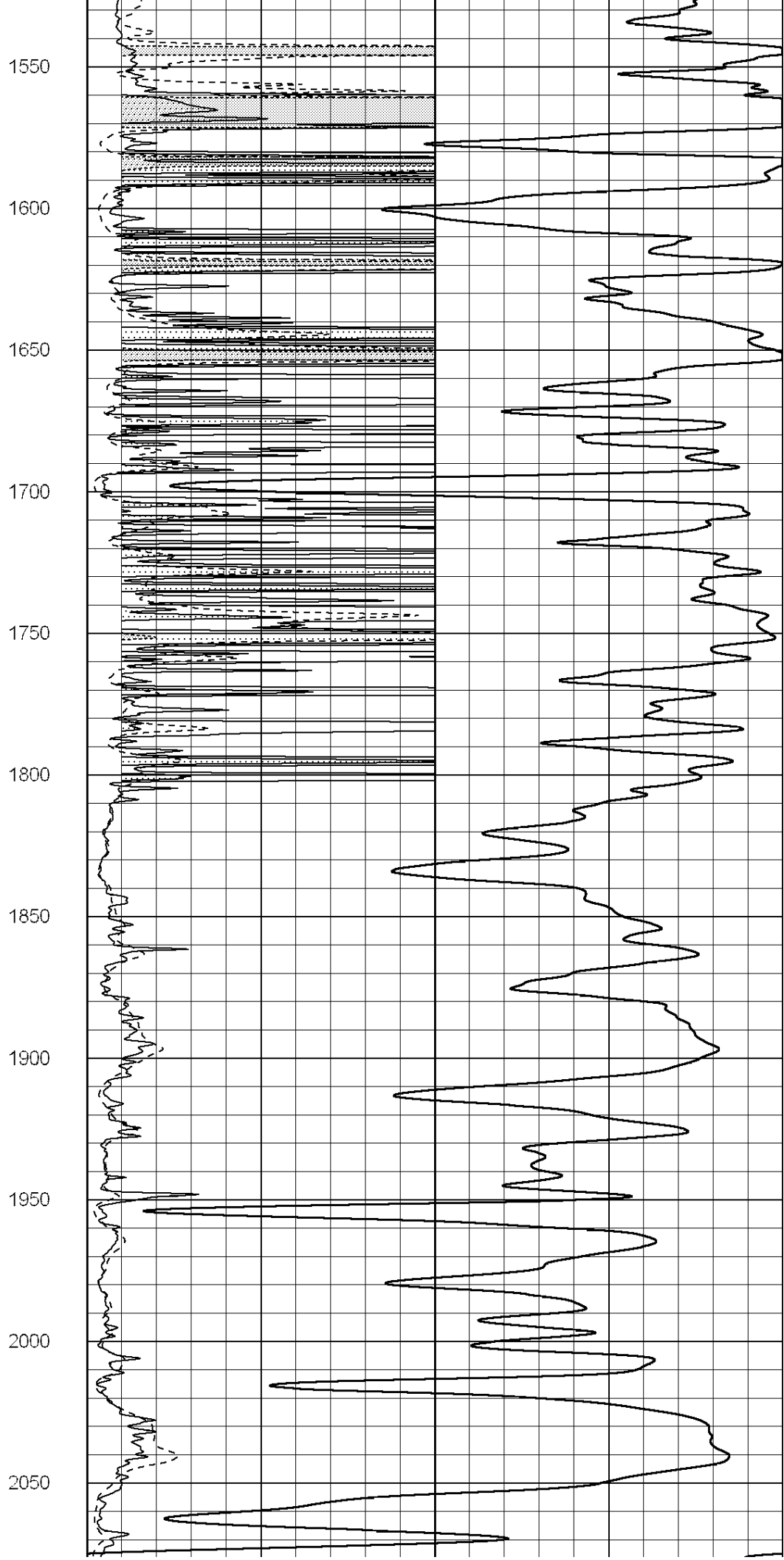
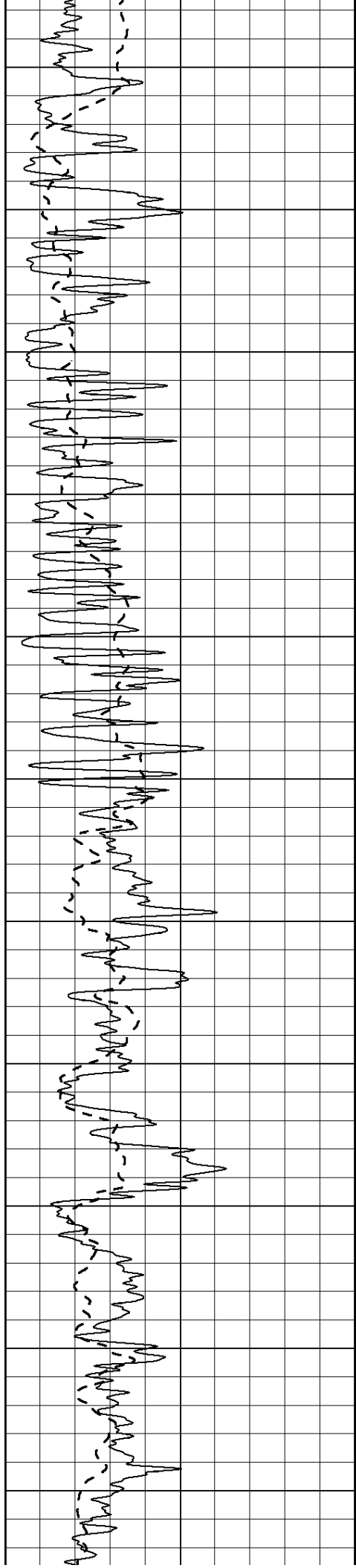
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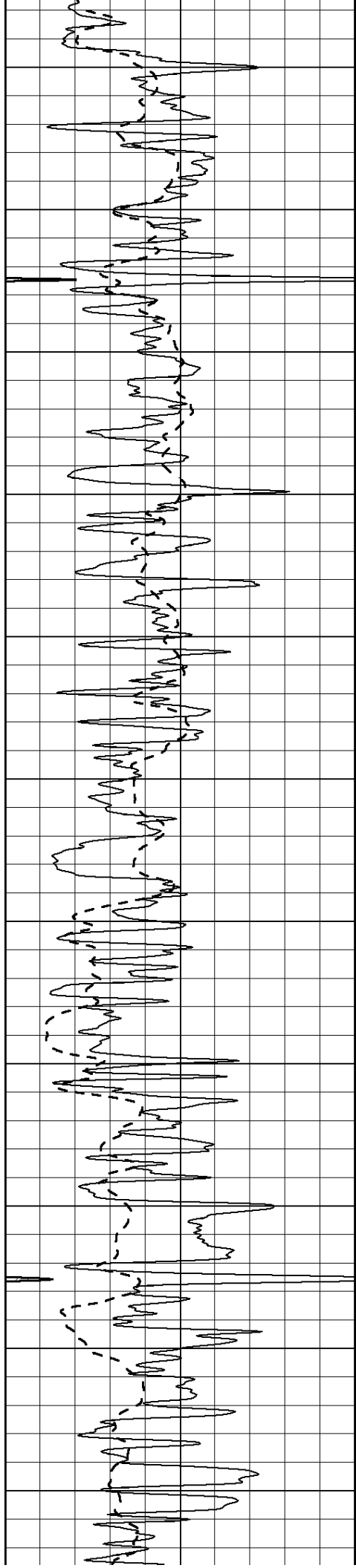
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950









2100

2150

2200

2250

2300

2350

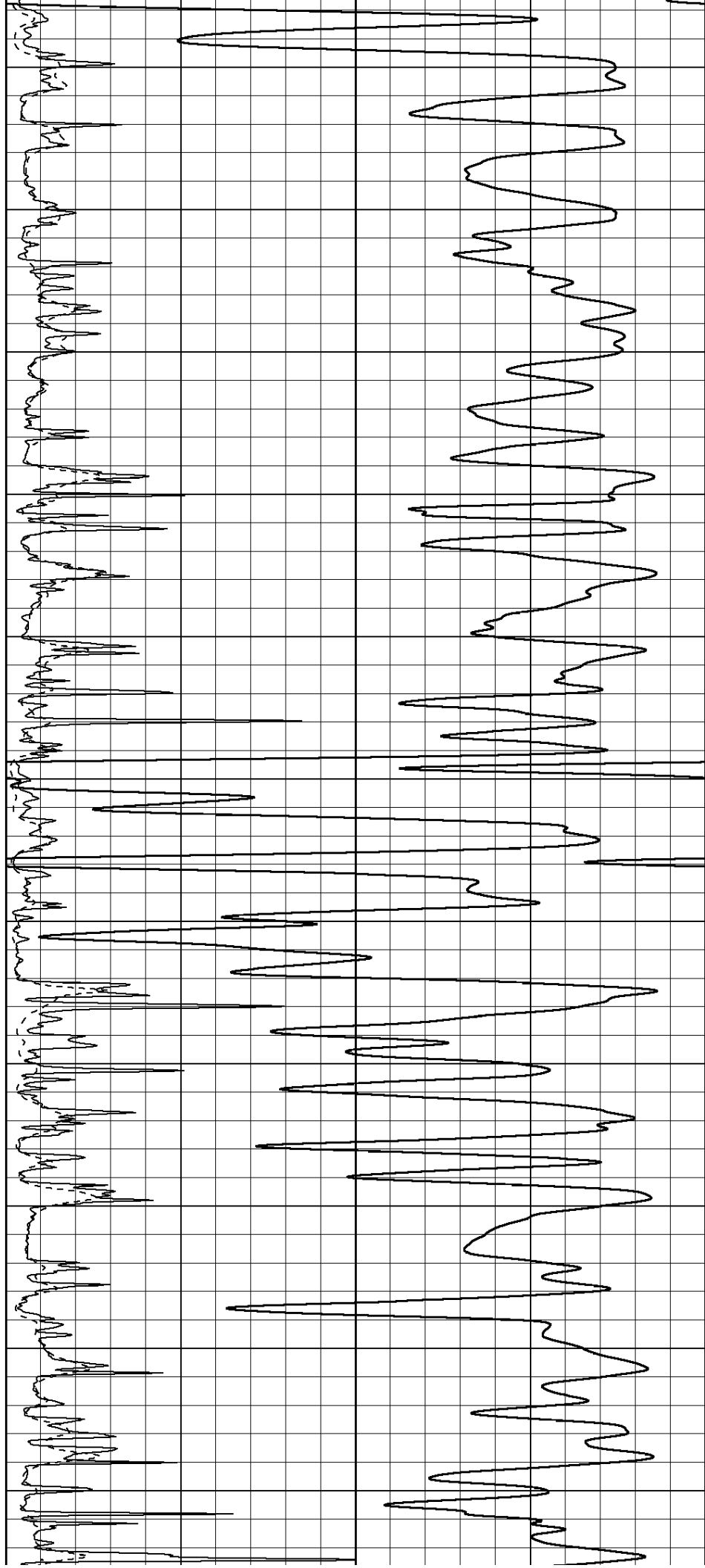
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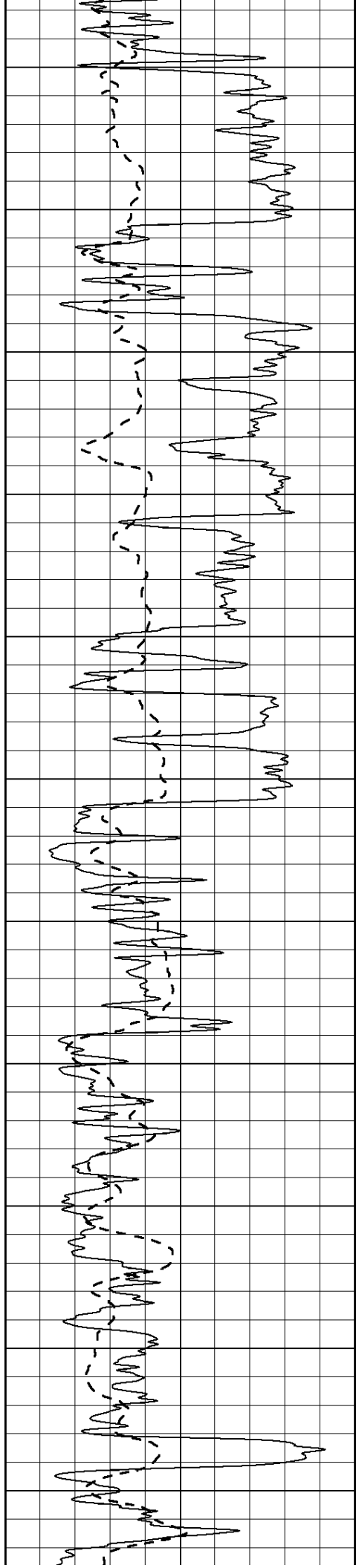
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2600





2650

2700

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2800

2850

2900

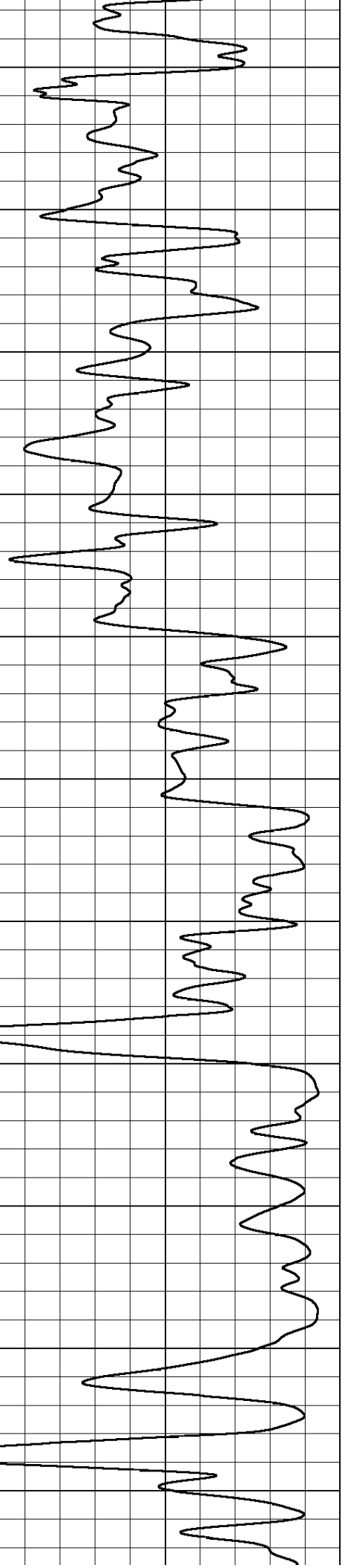
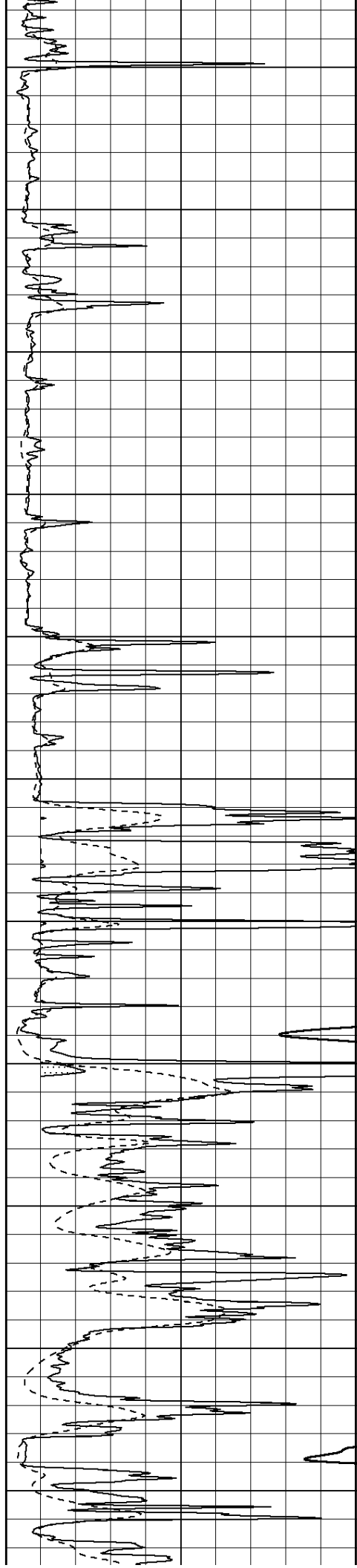
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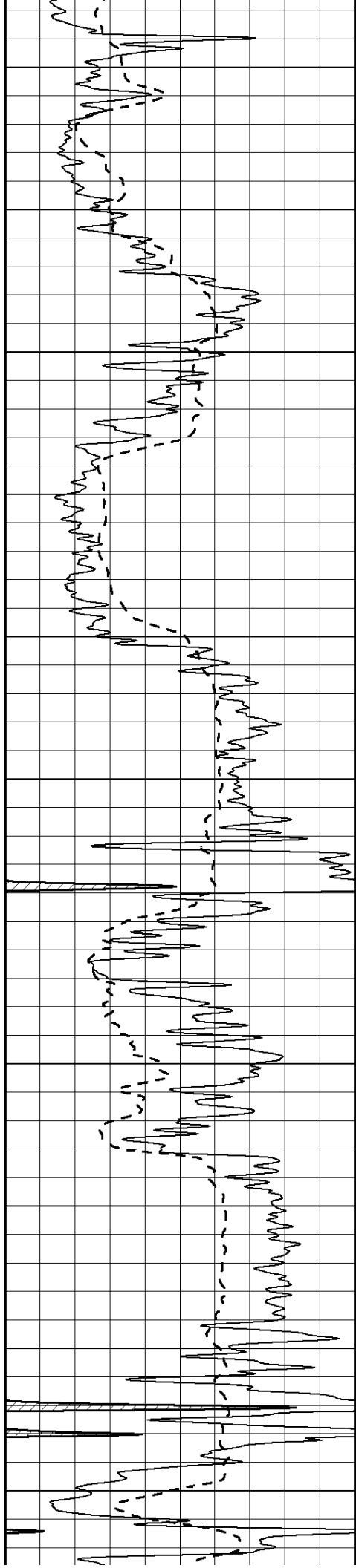
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3150





3200

3250

3300

3350

3400

3450

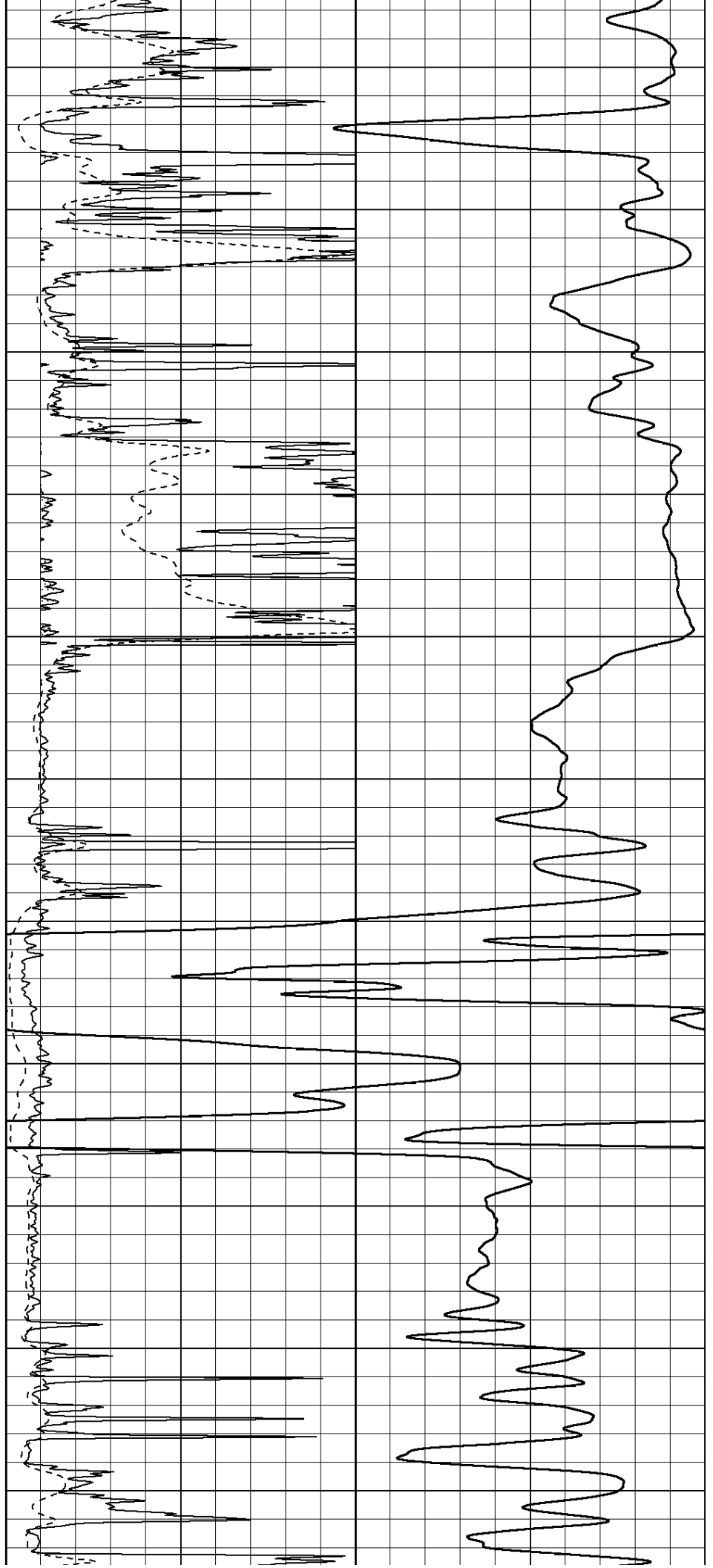
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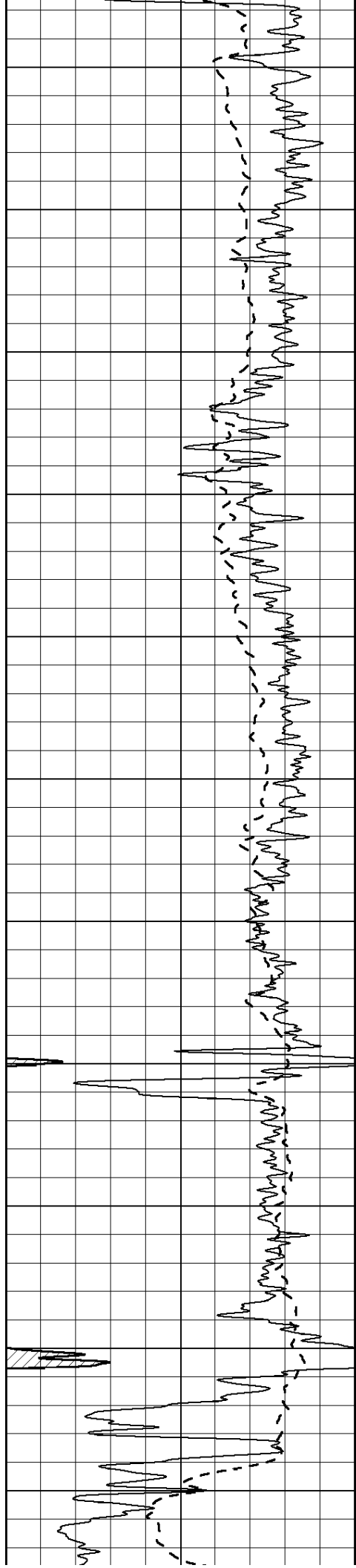
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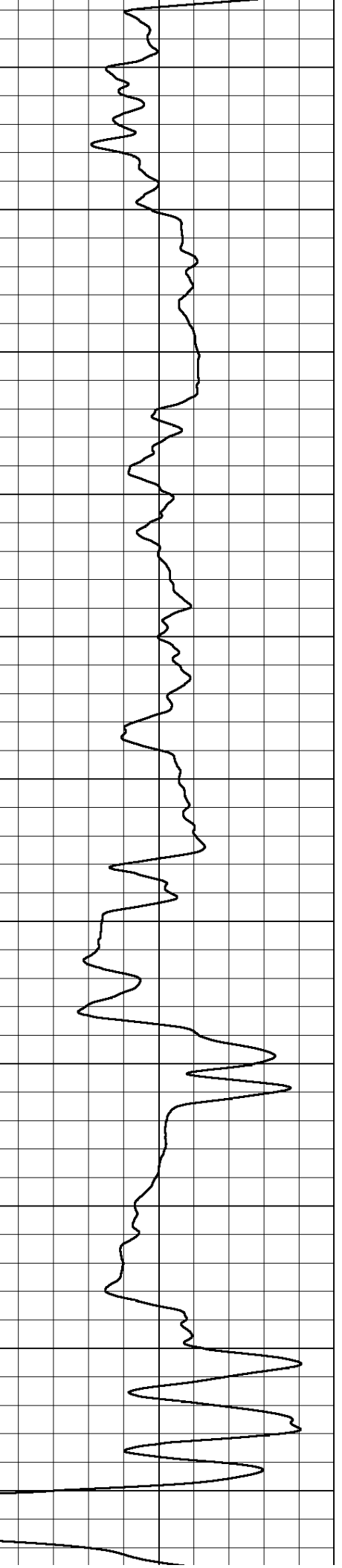
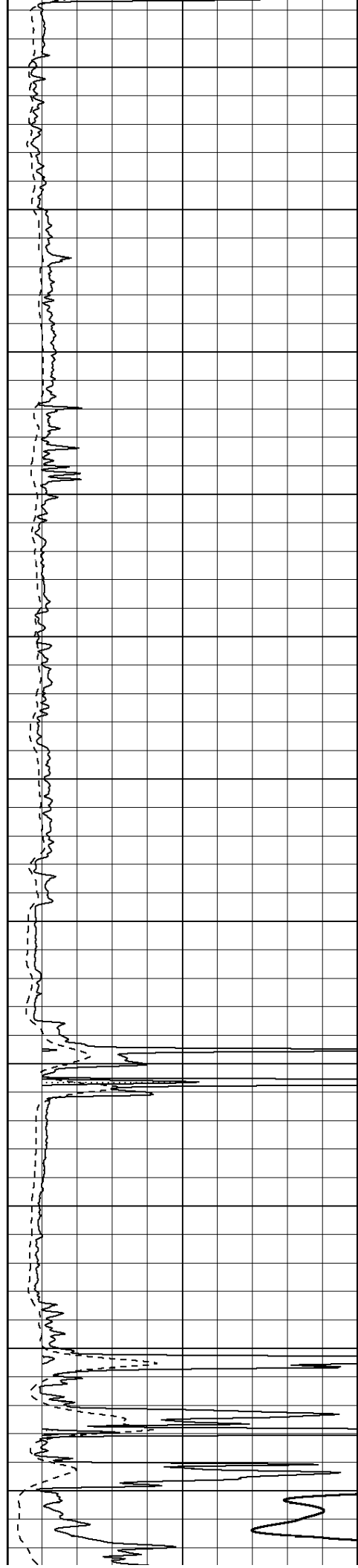
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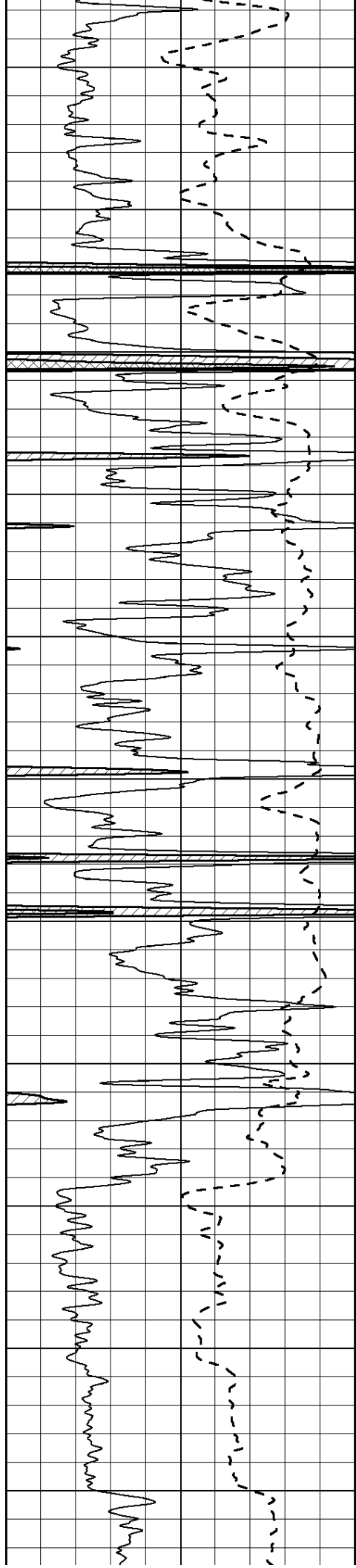
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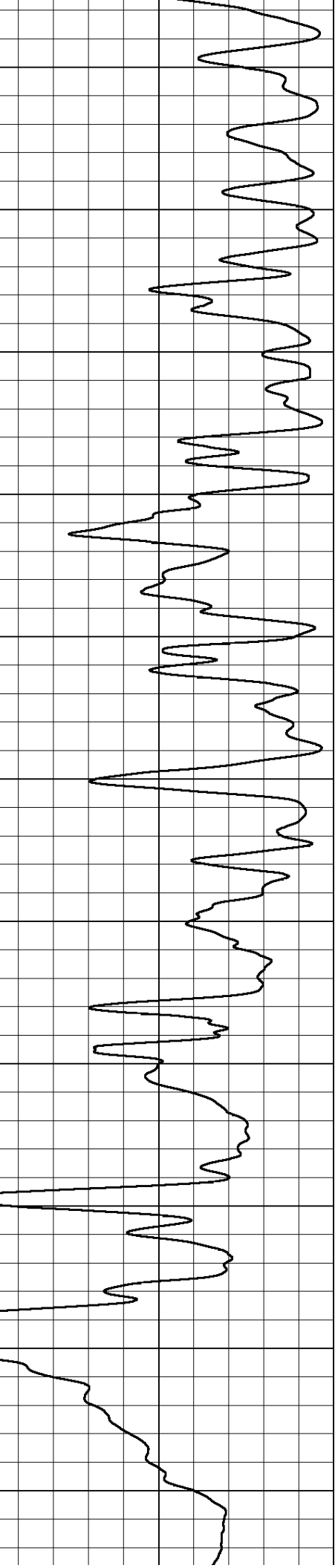
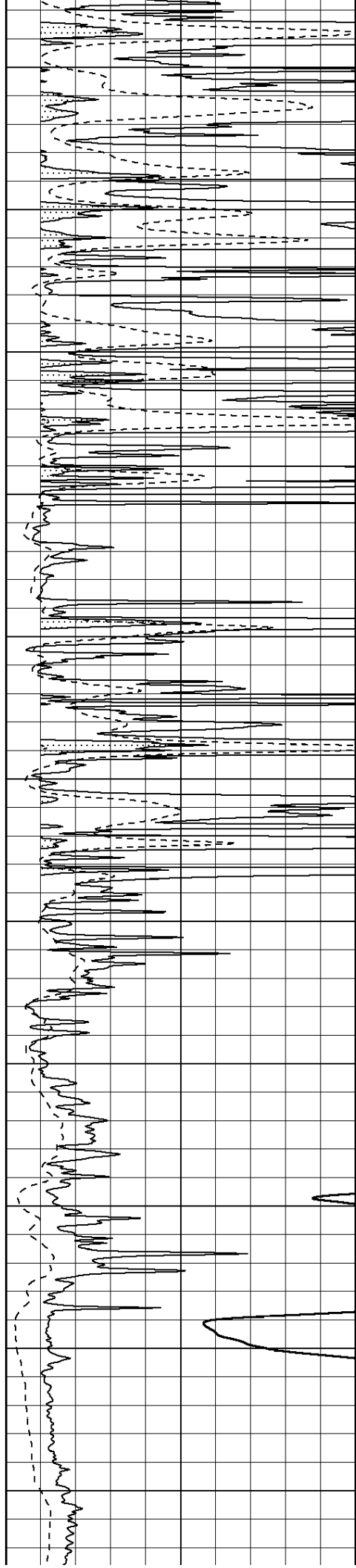
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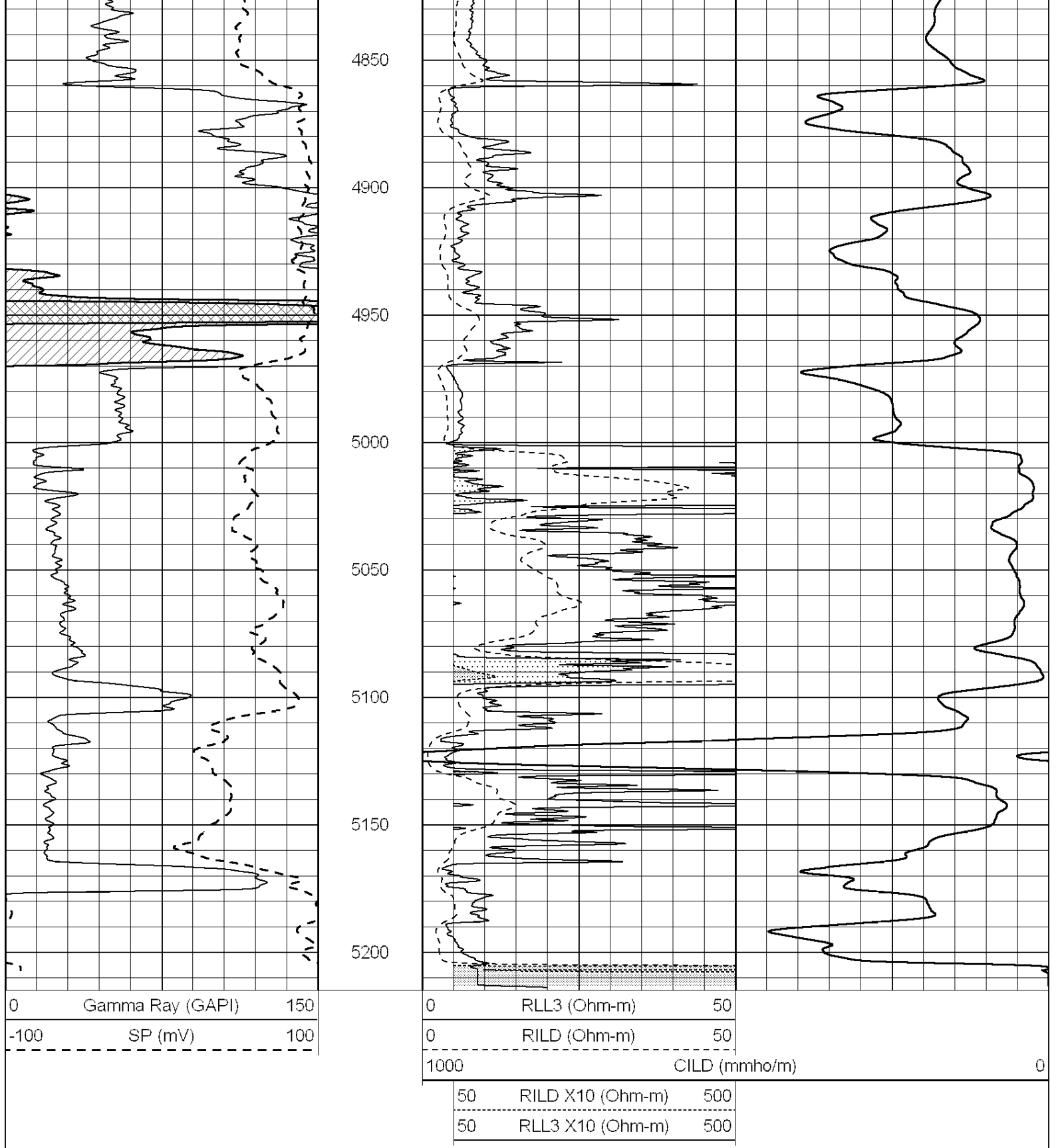
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MAIN SECTION

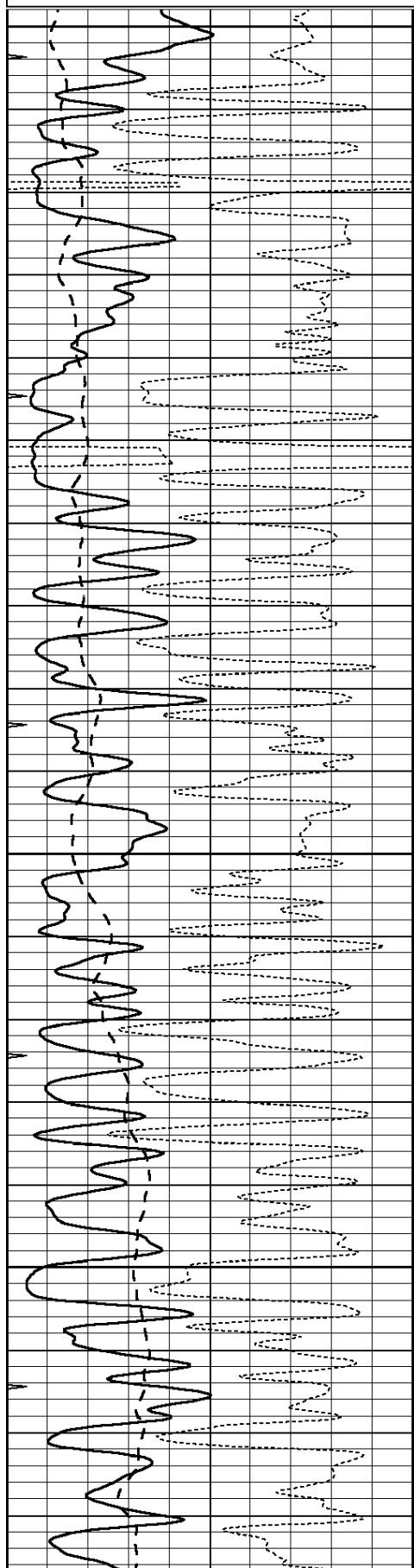
Database File: 24160pe.db
 Dataset Pathname: pass3.9
 Presentation Format: _dil
 Dataset Creation: Fri May 23 16:47:31 2014 by Calc SOC 120430

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

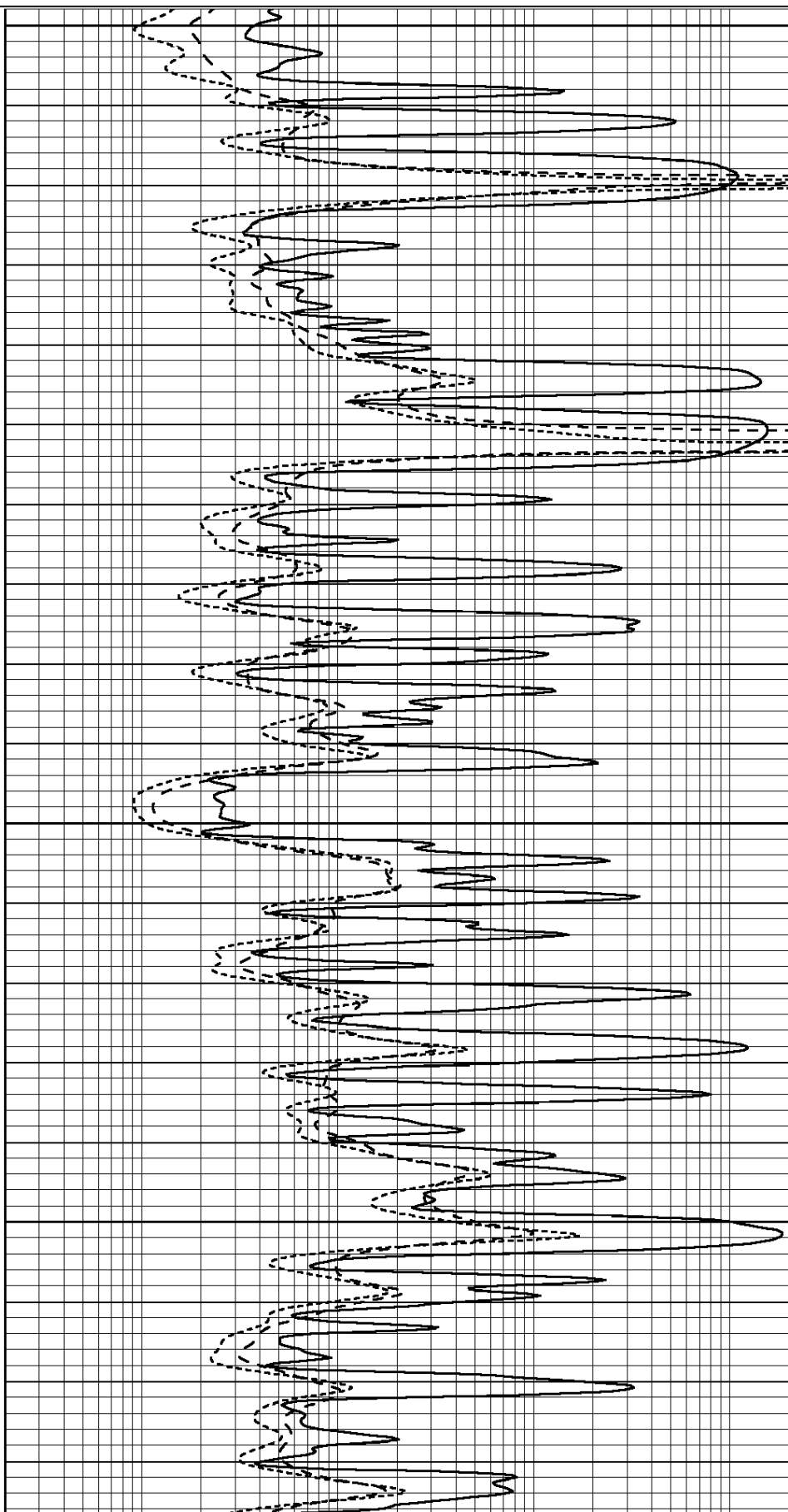


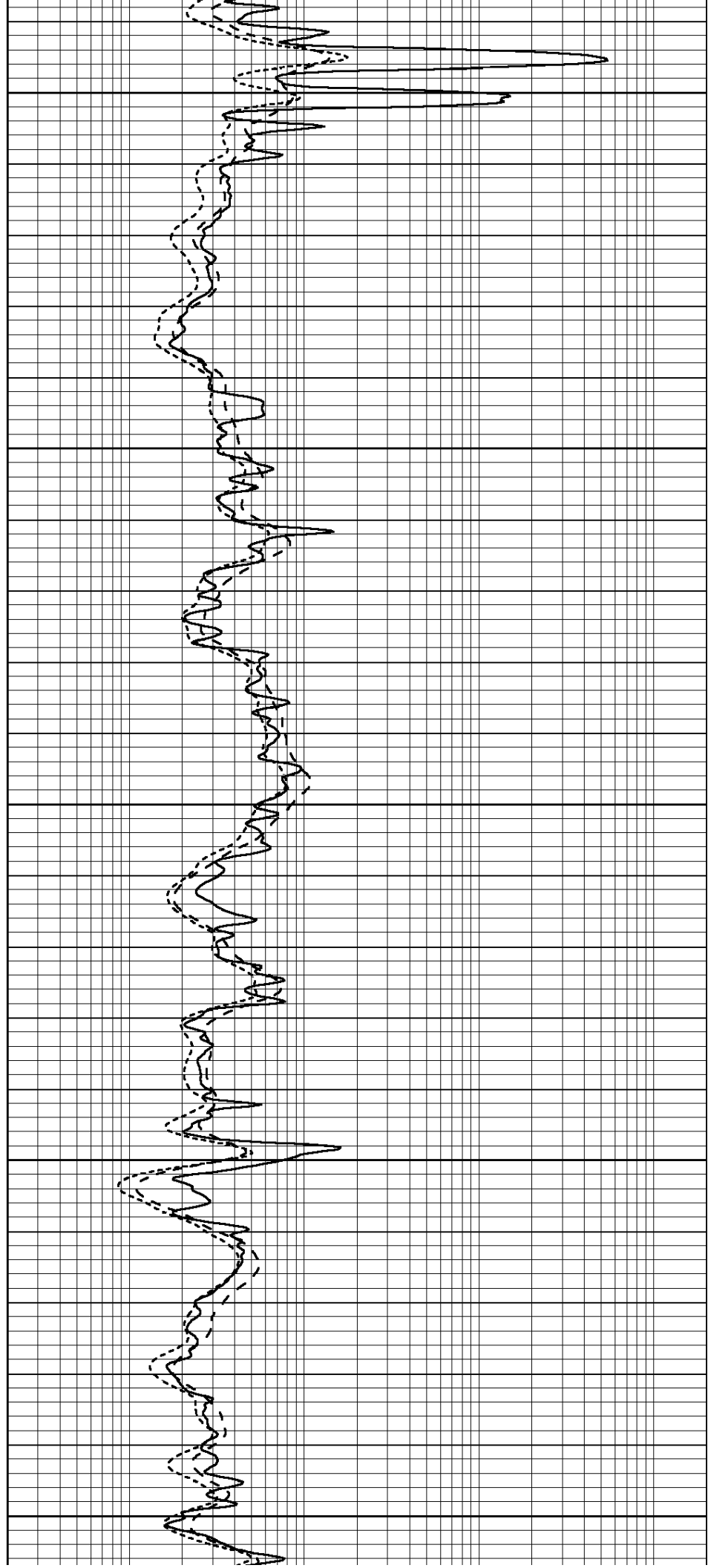
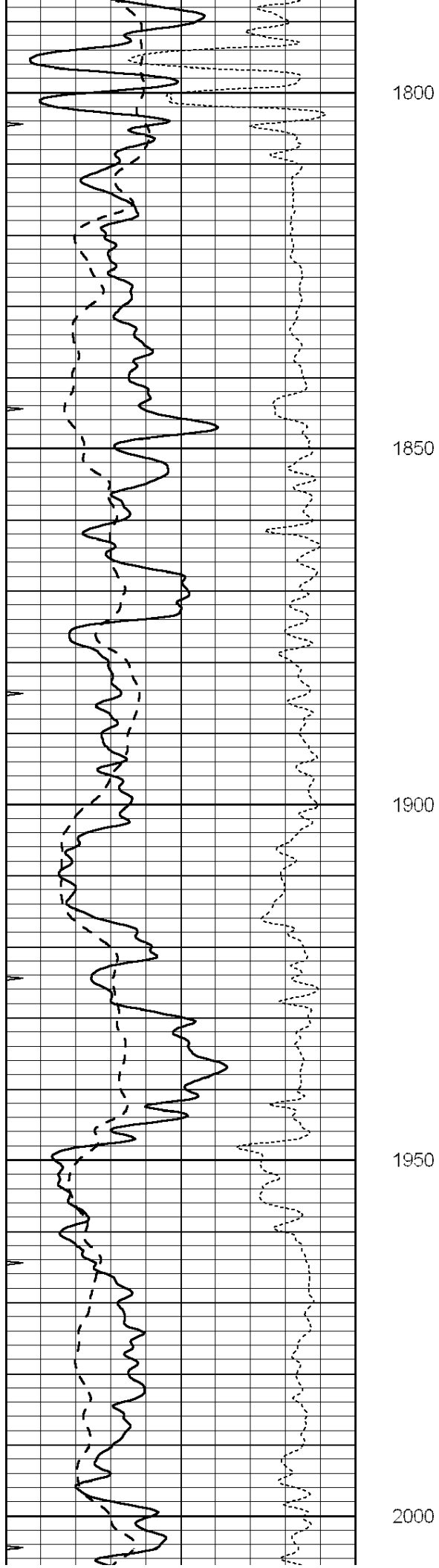
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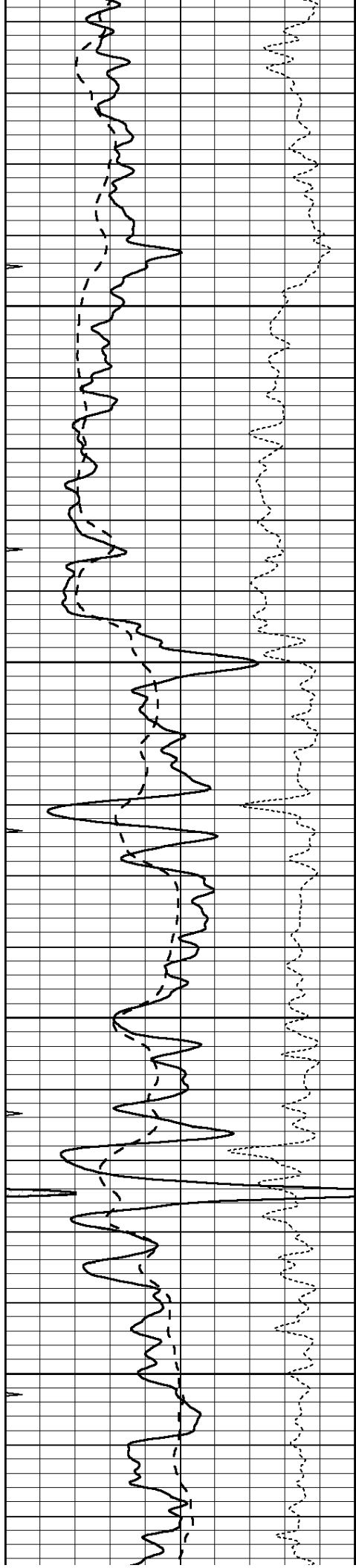
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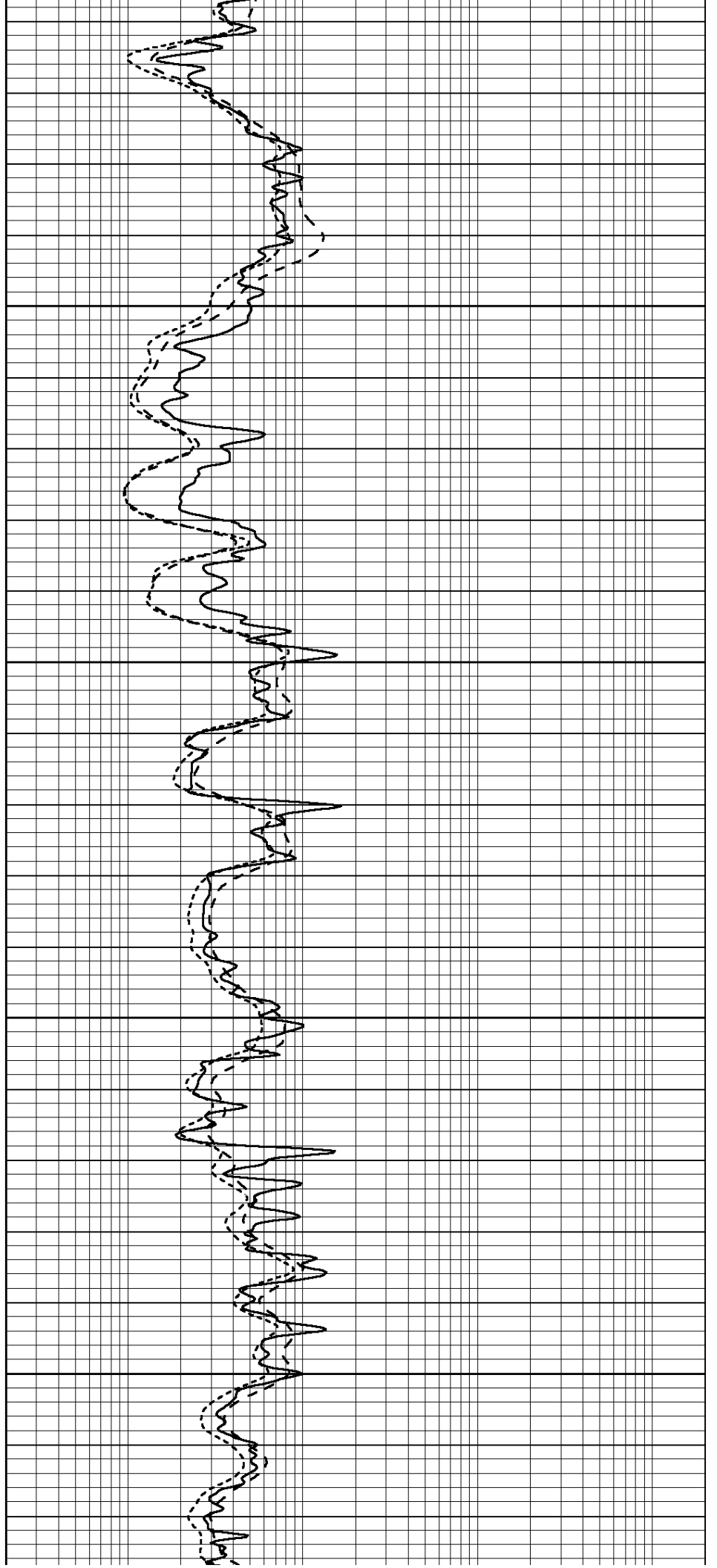


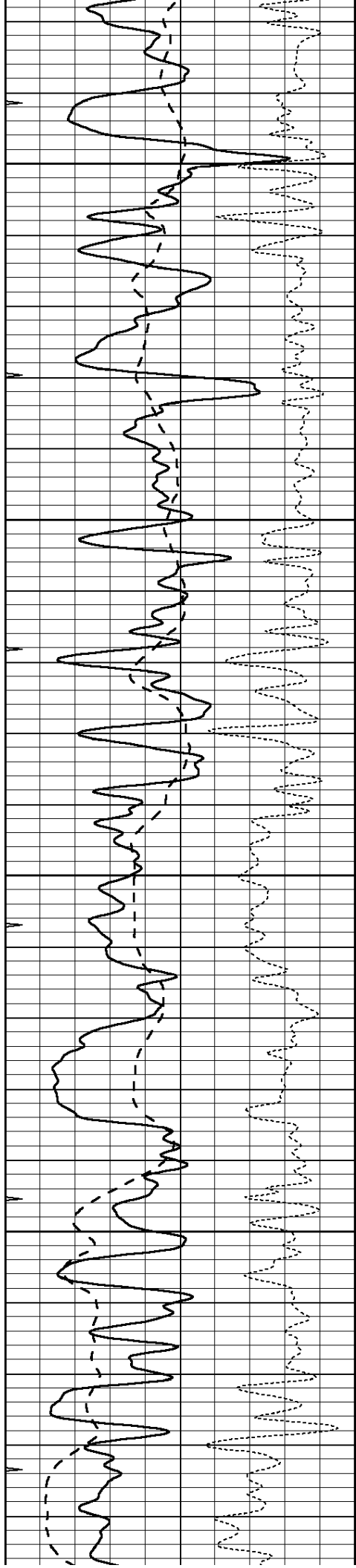
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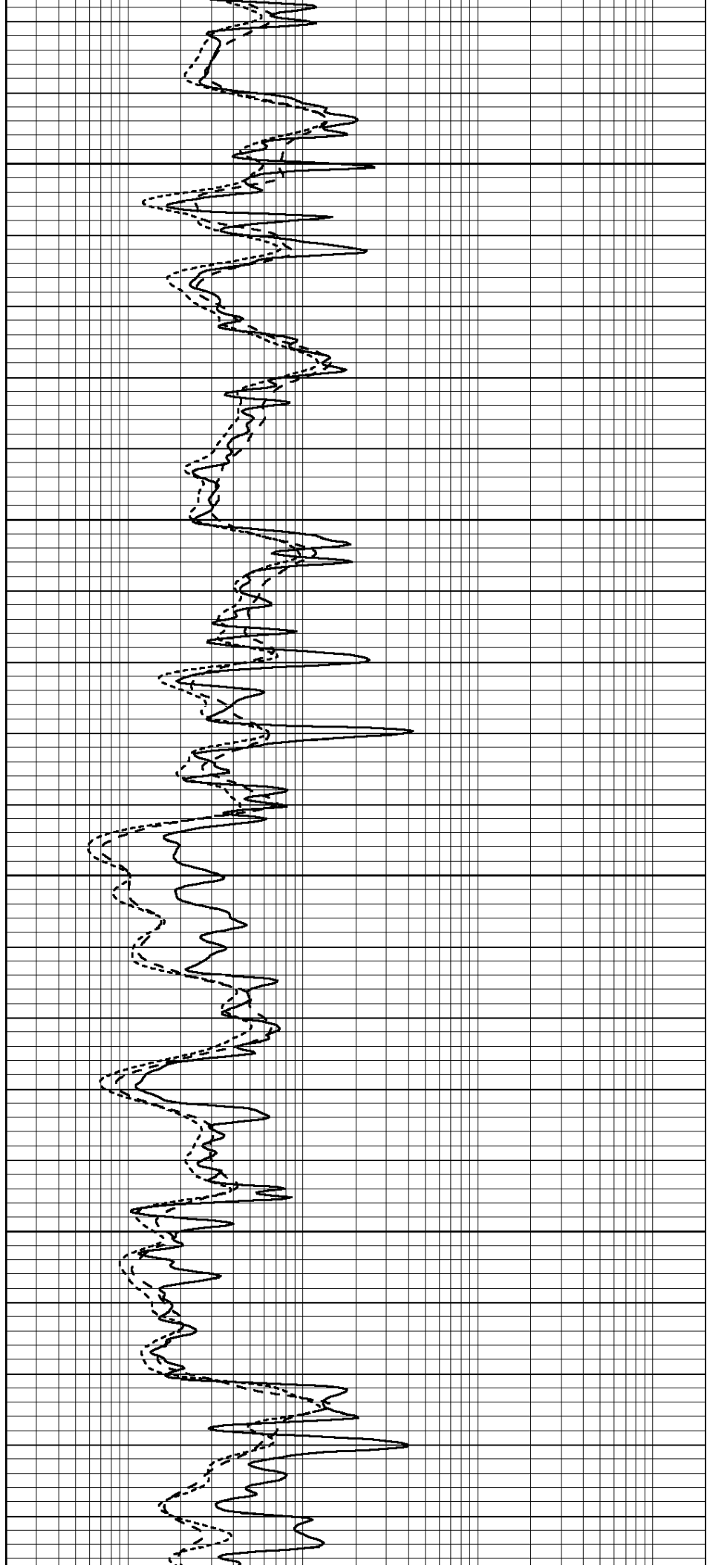


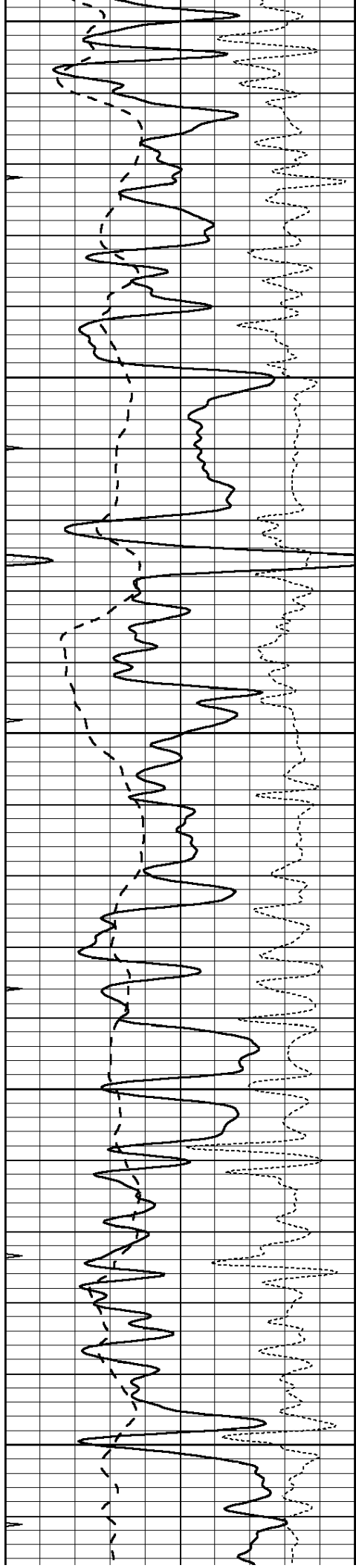
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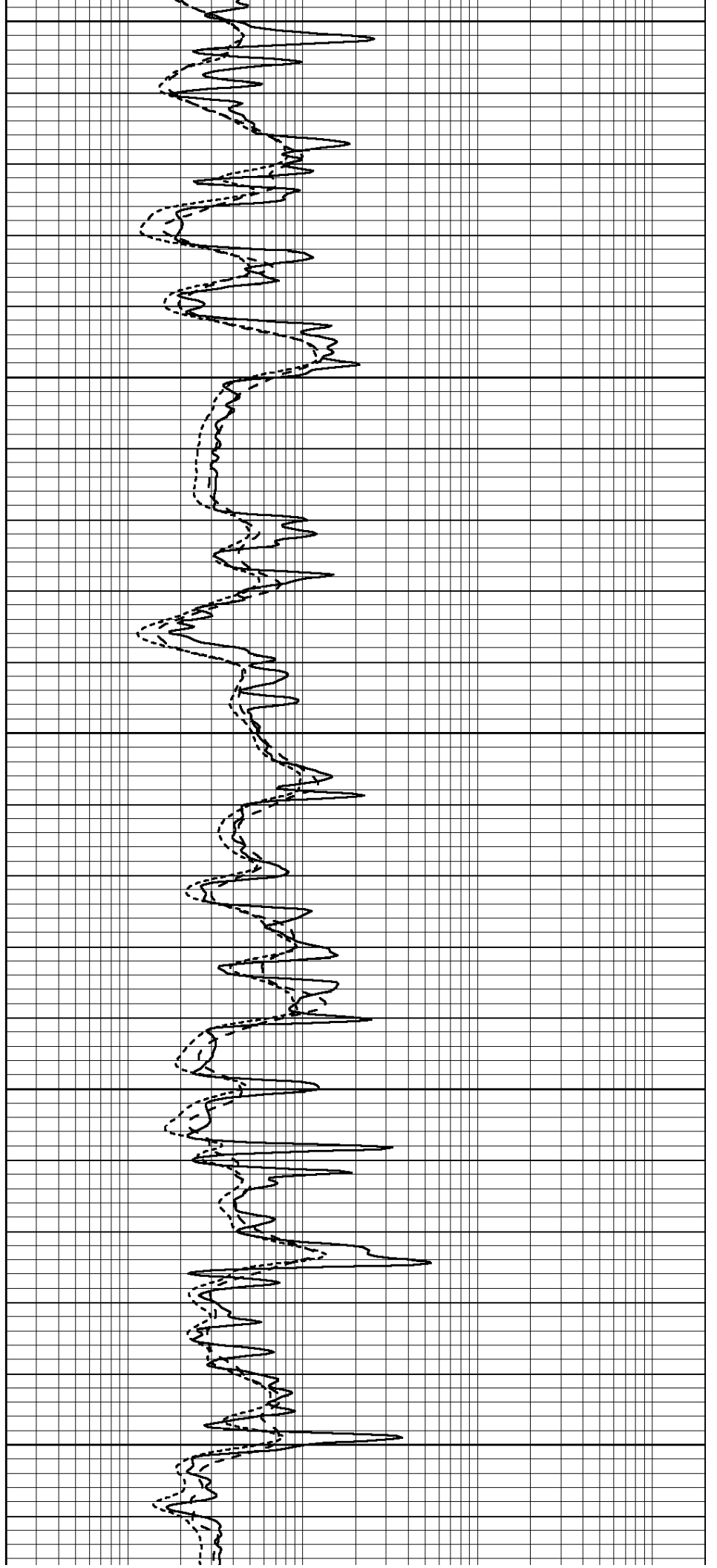
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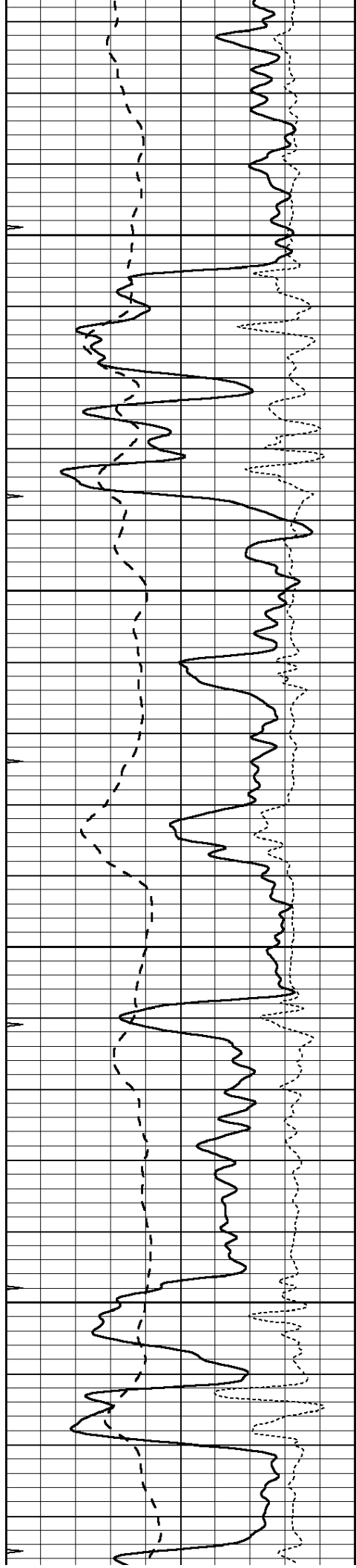
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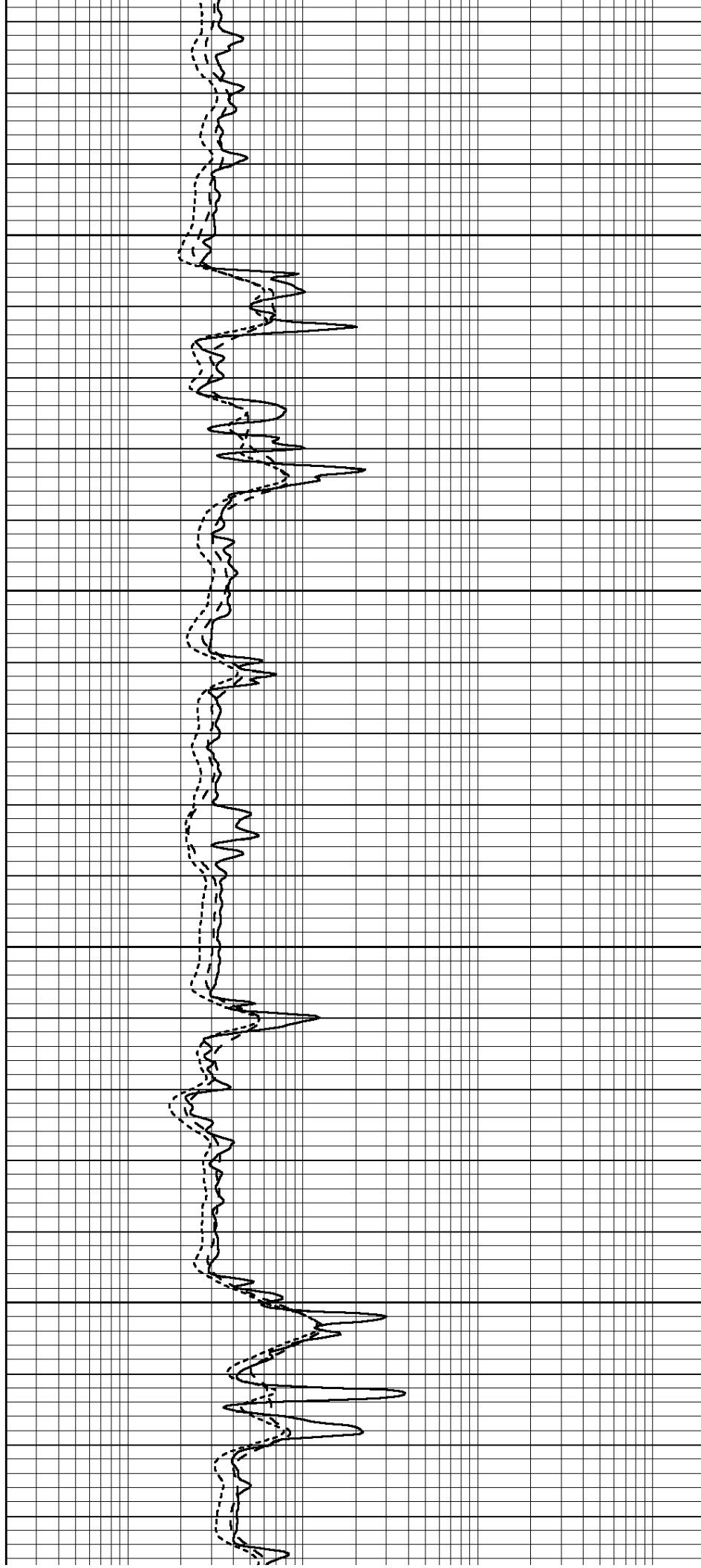


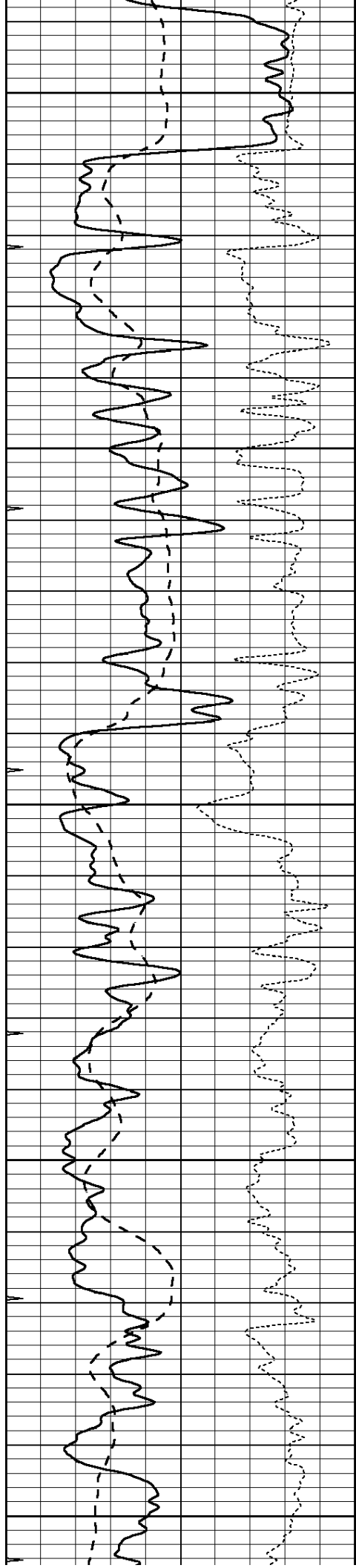
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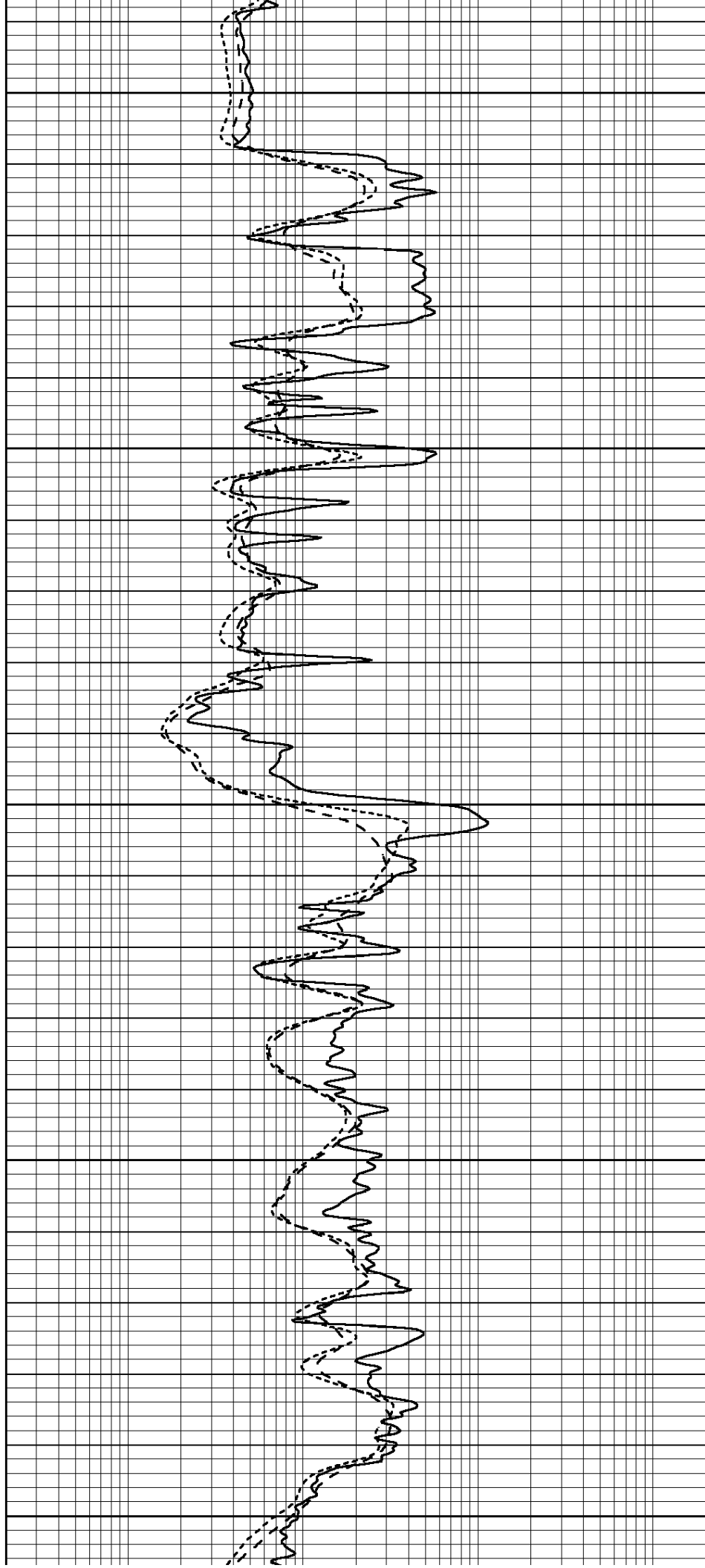
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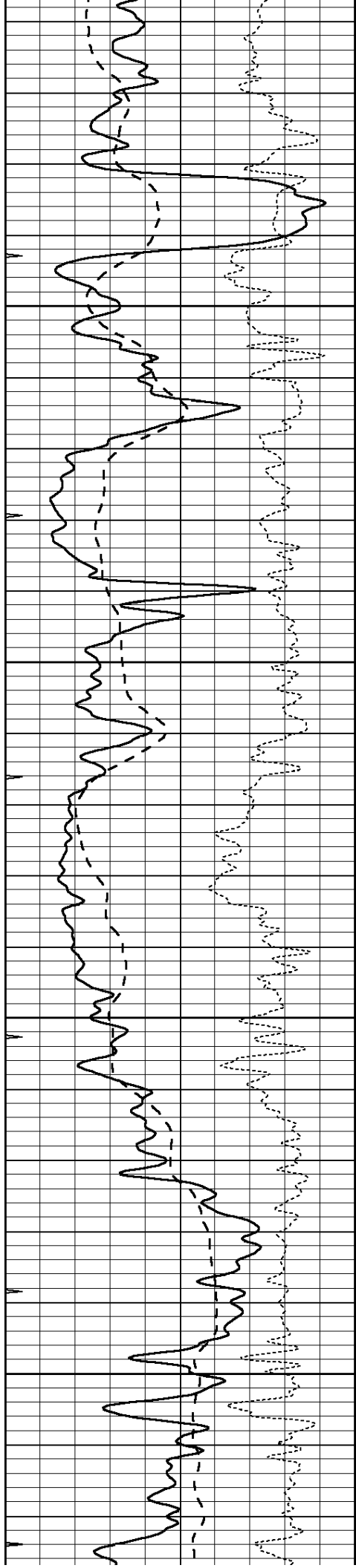
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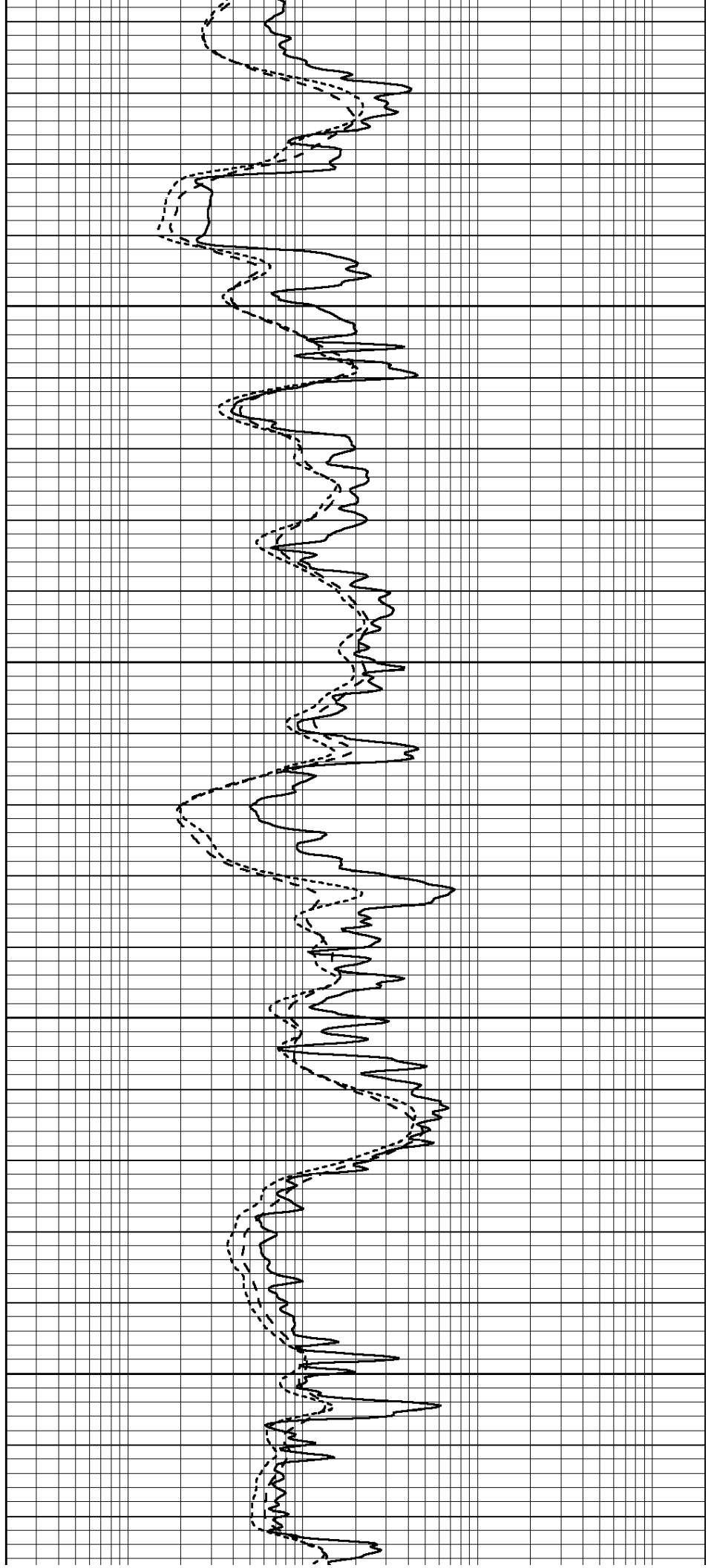


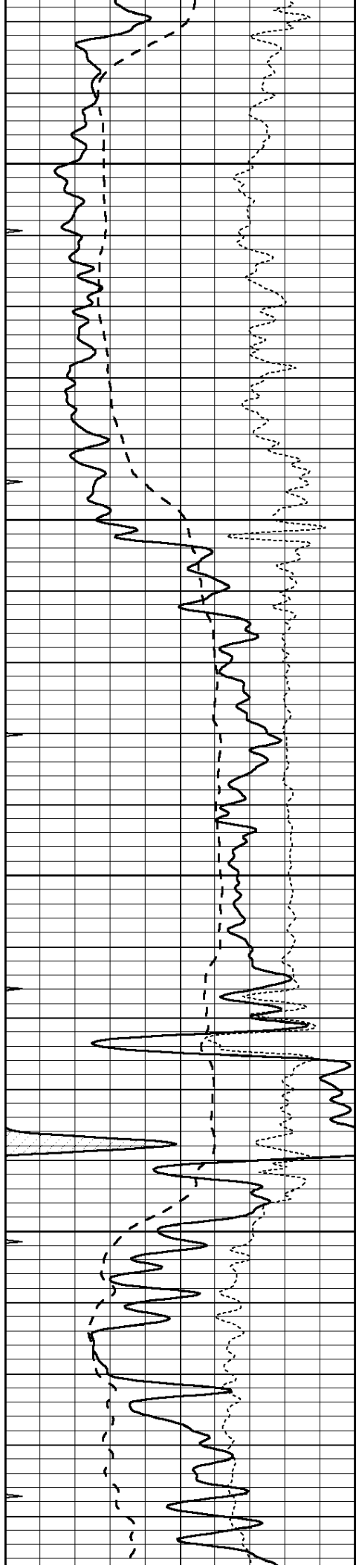
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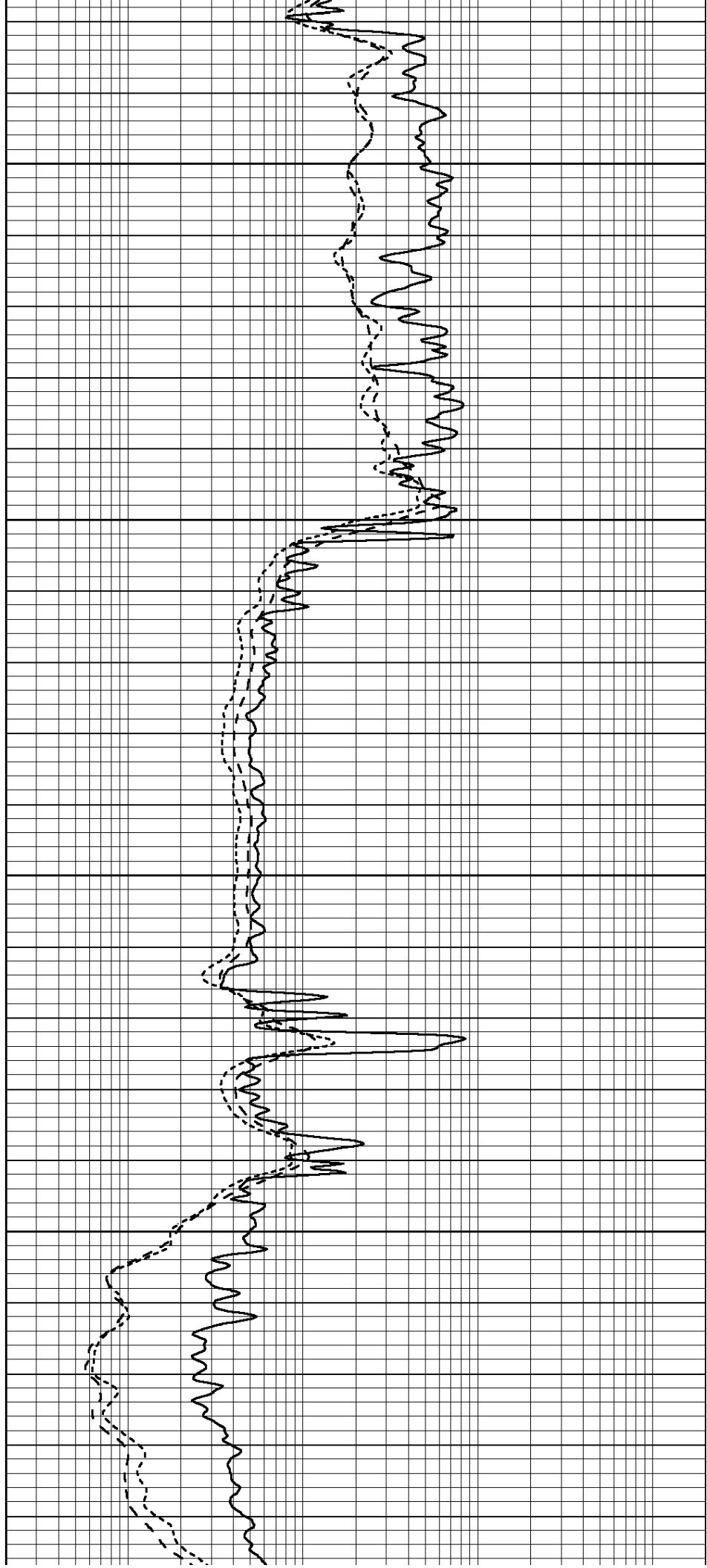


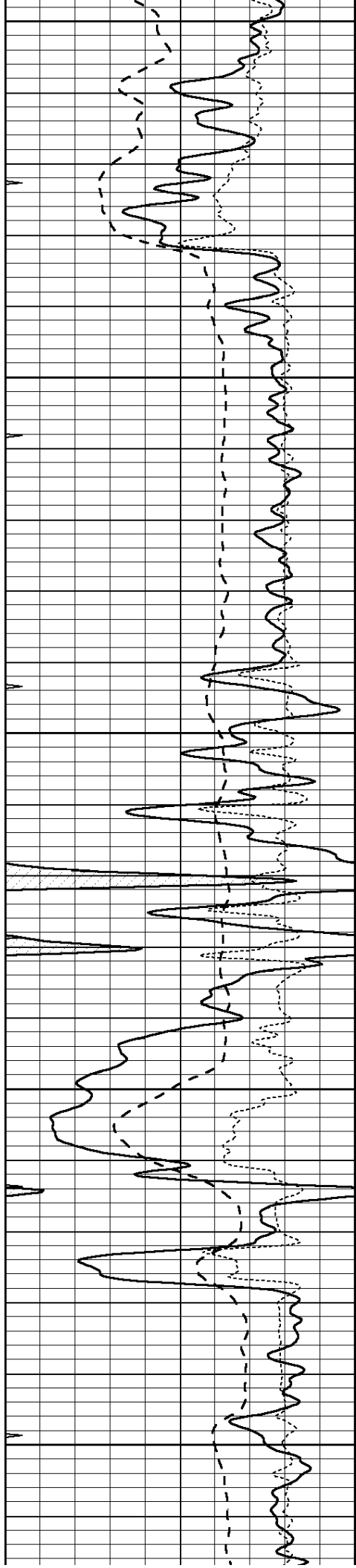
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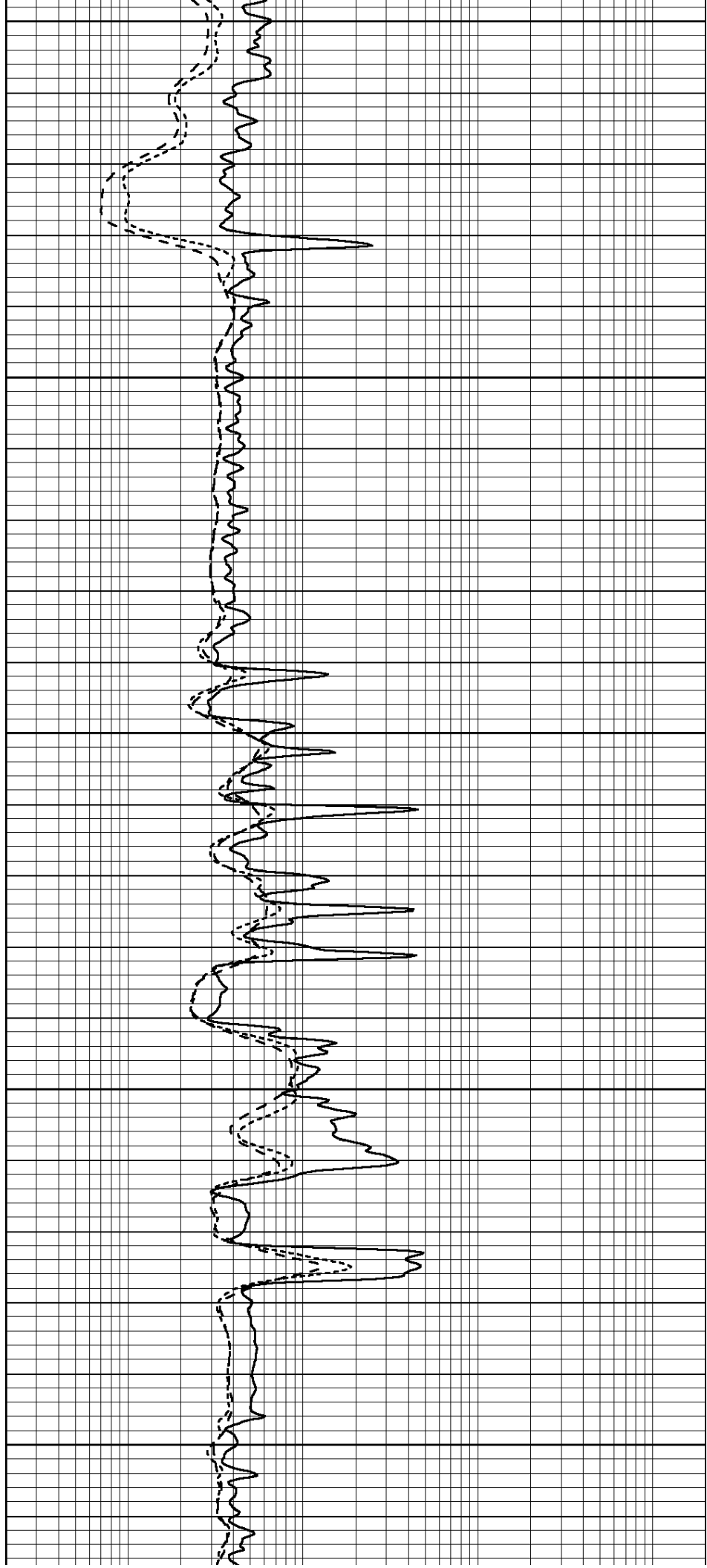
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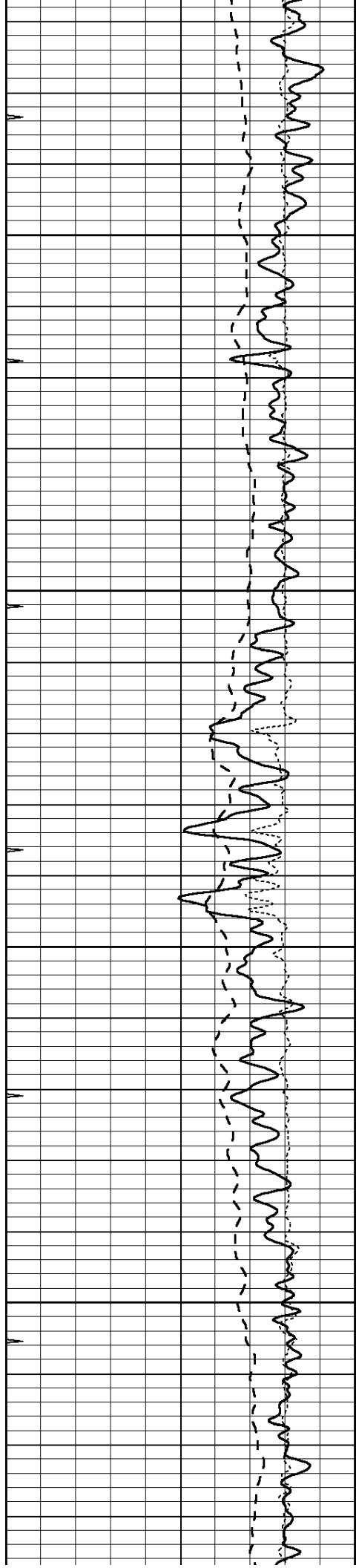
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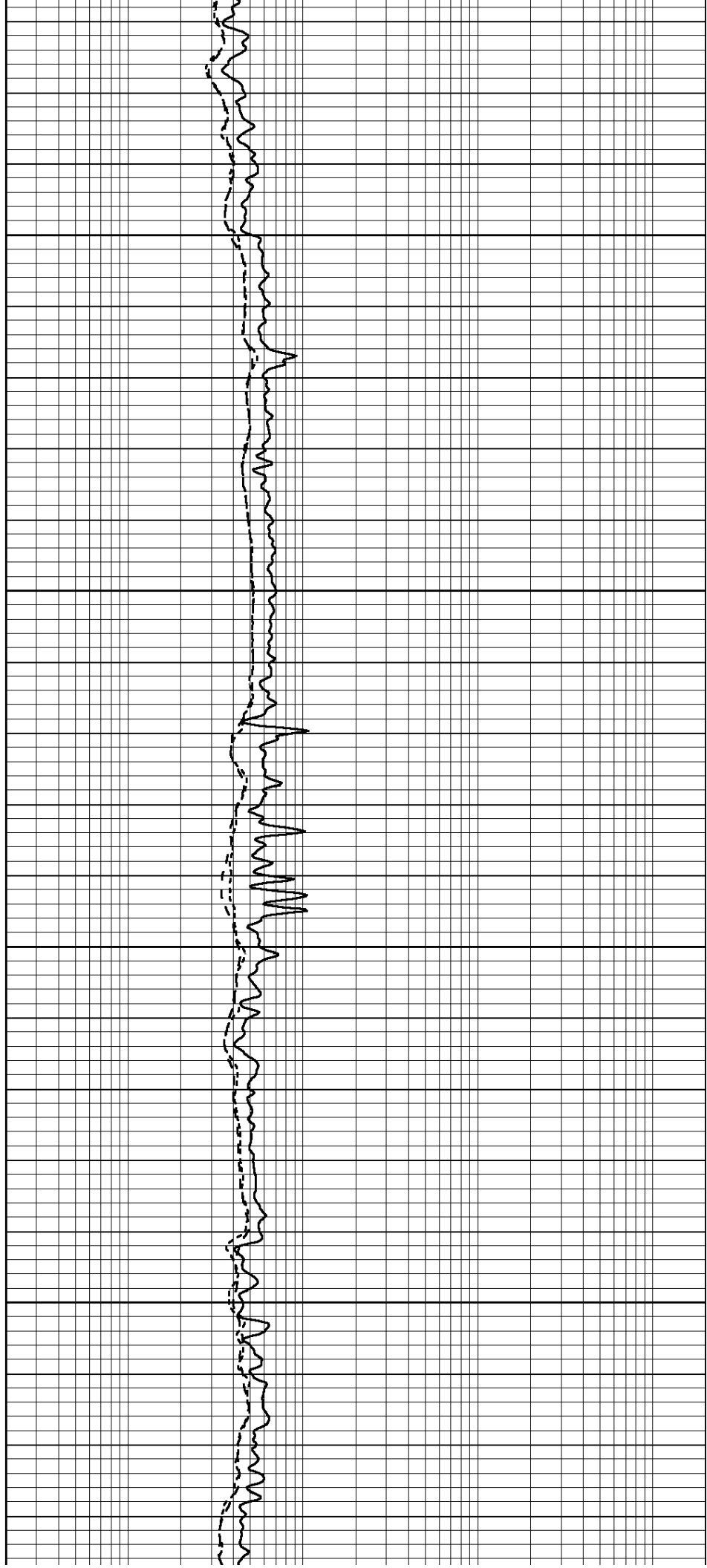


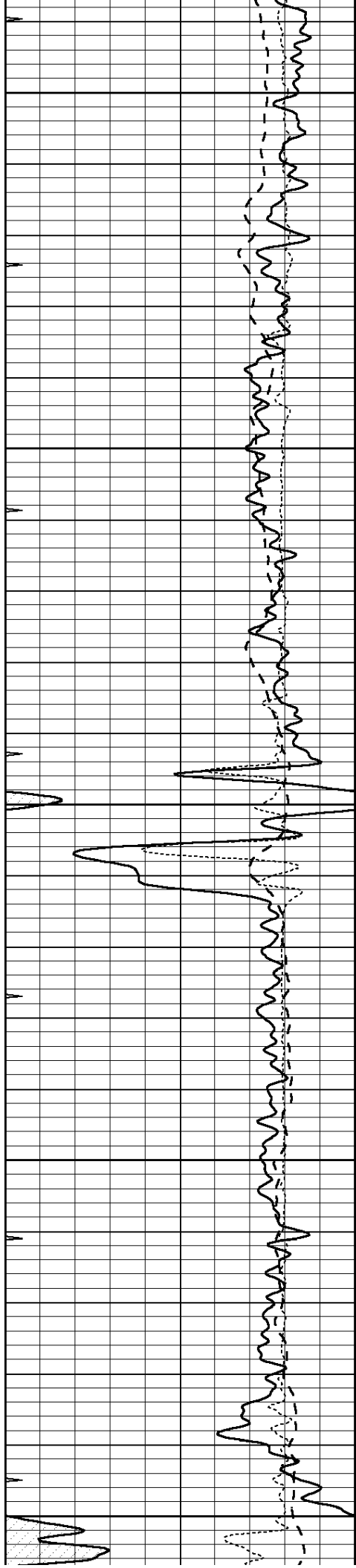
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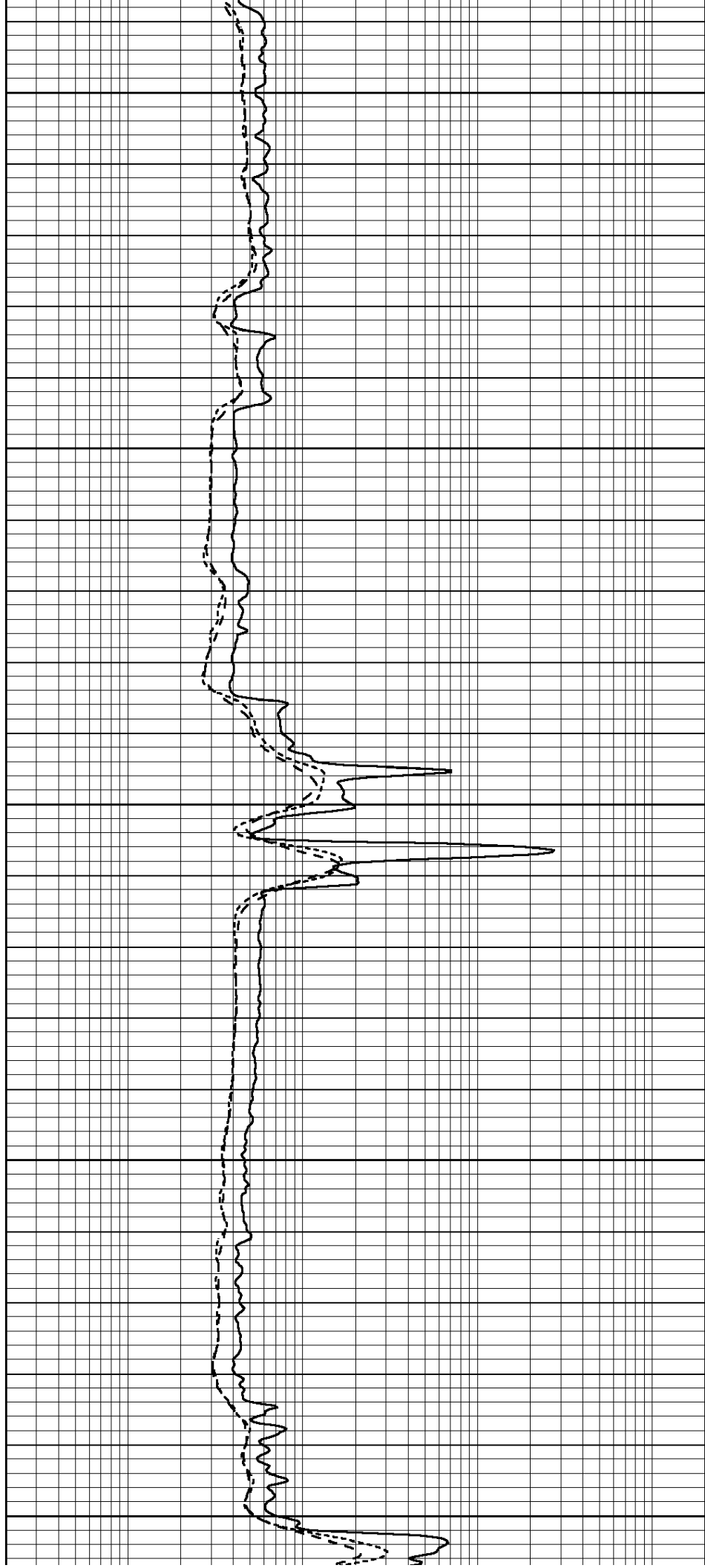
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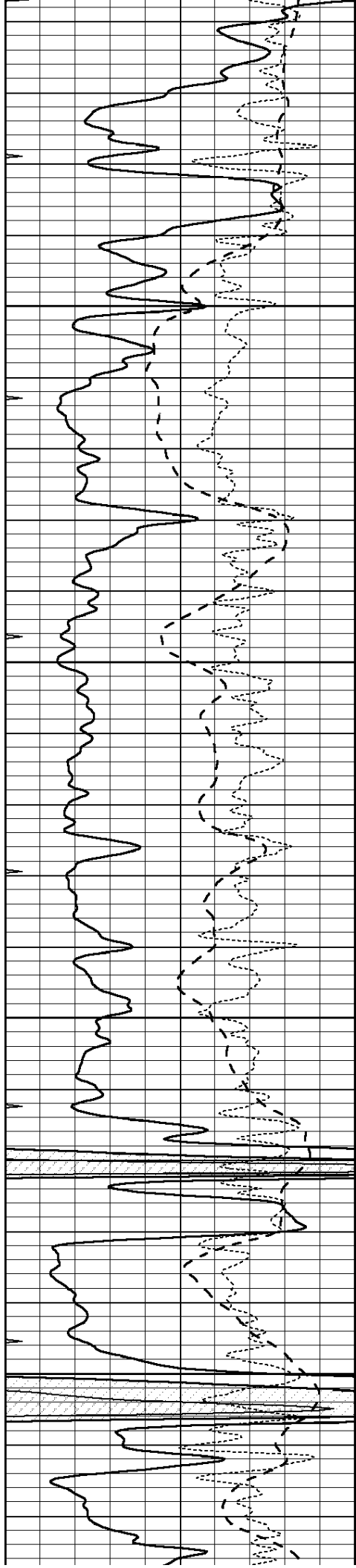
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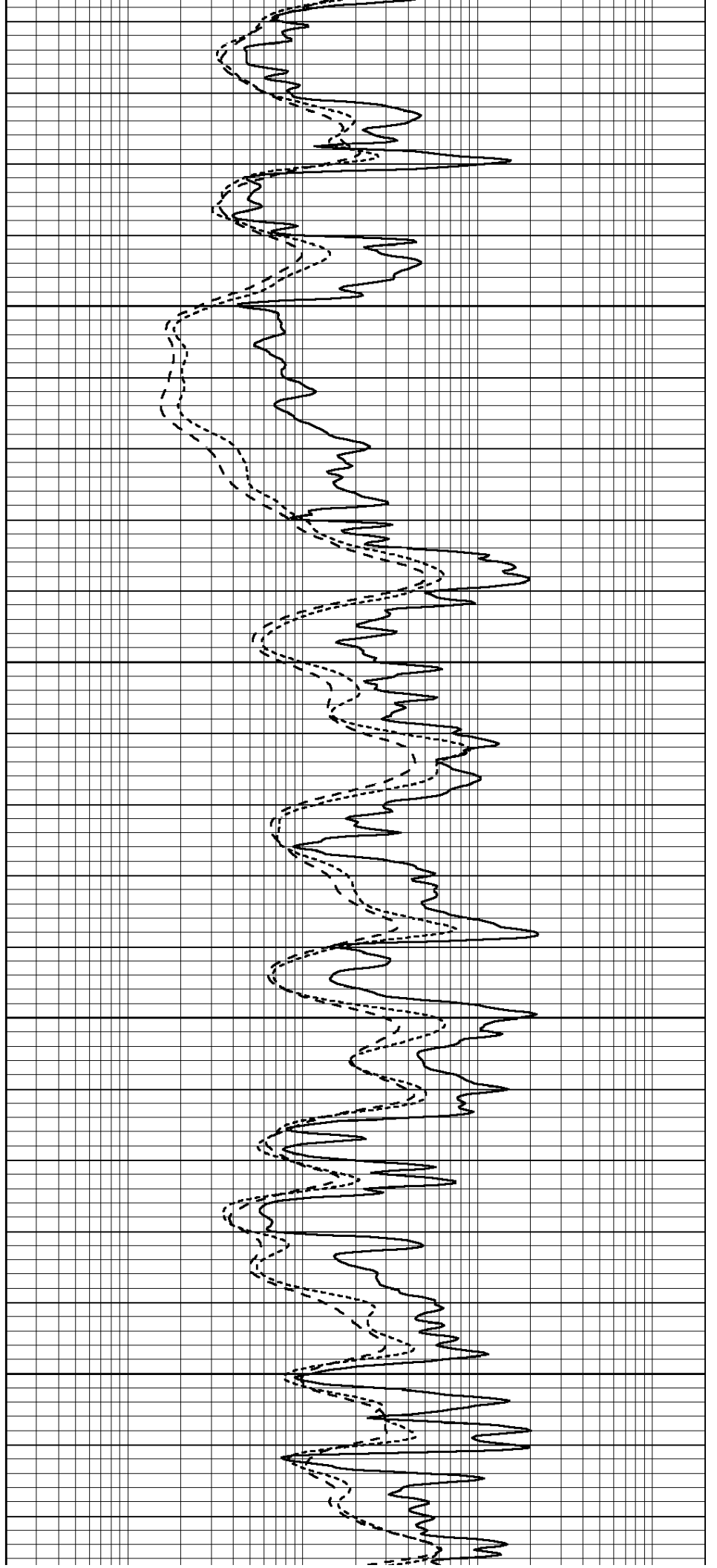


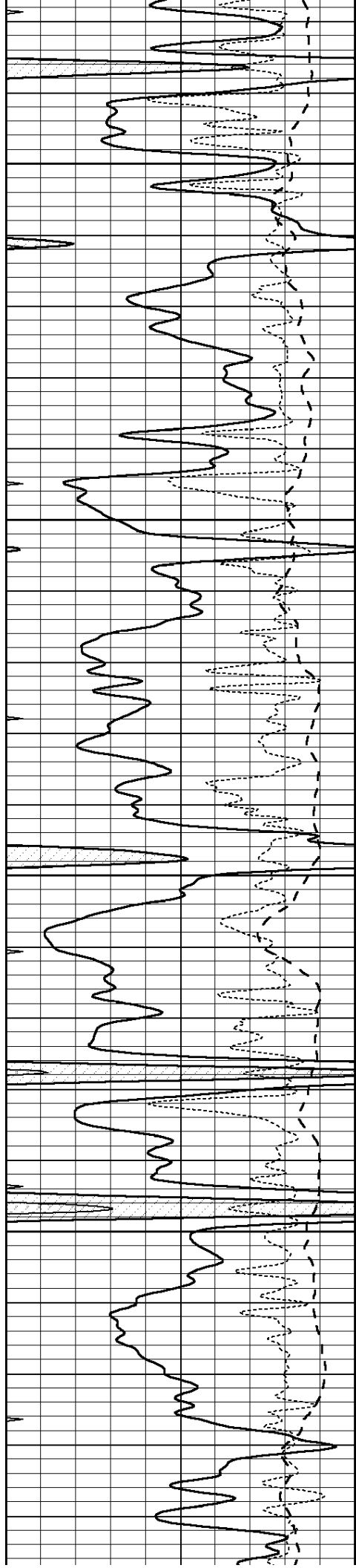
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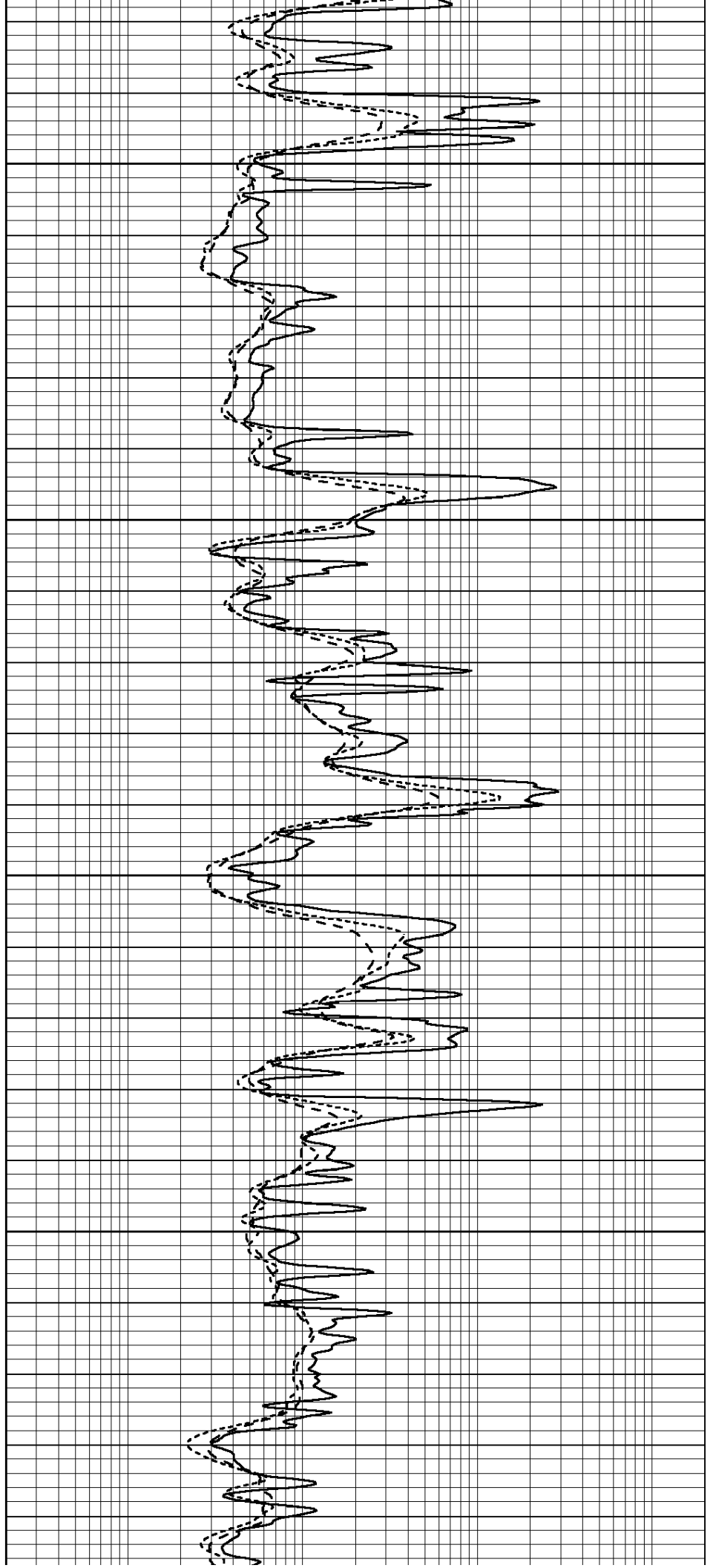


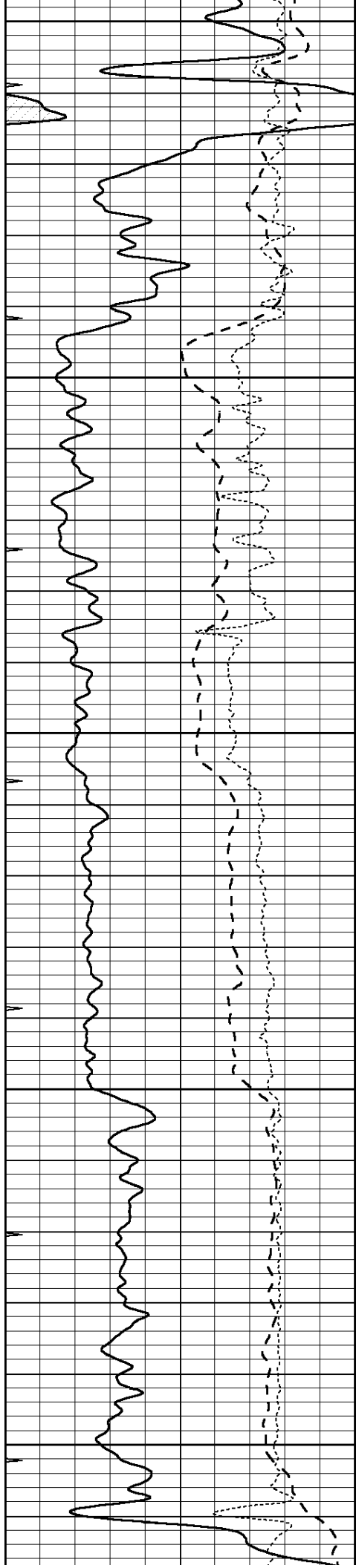
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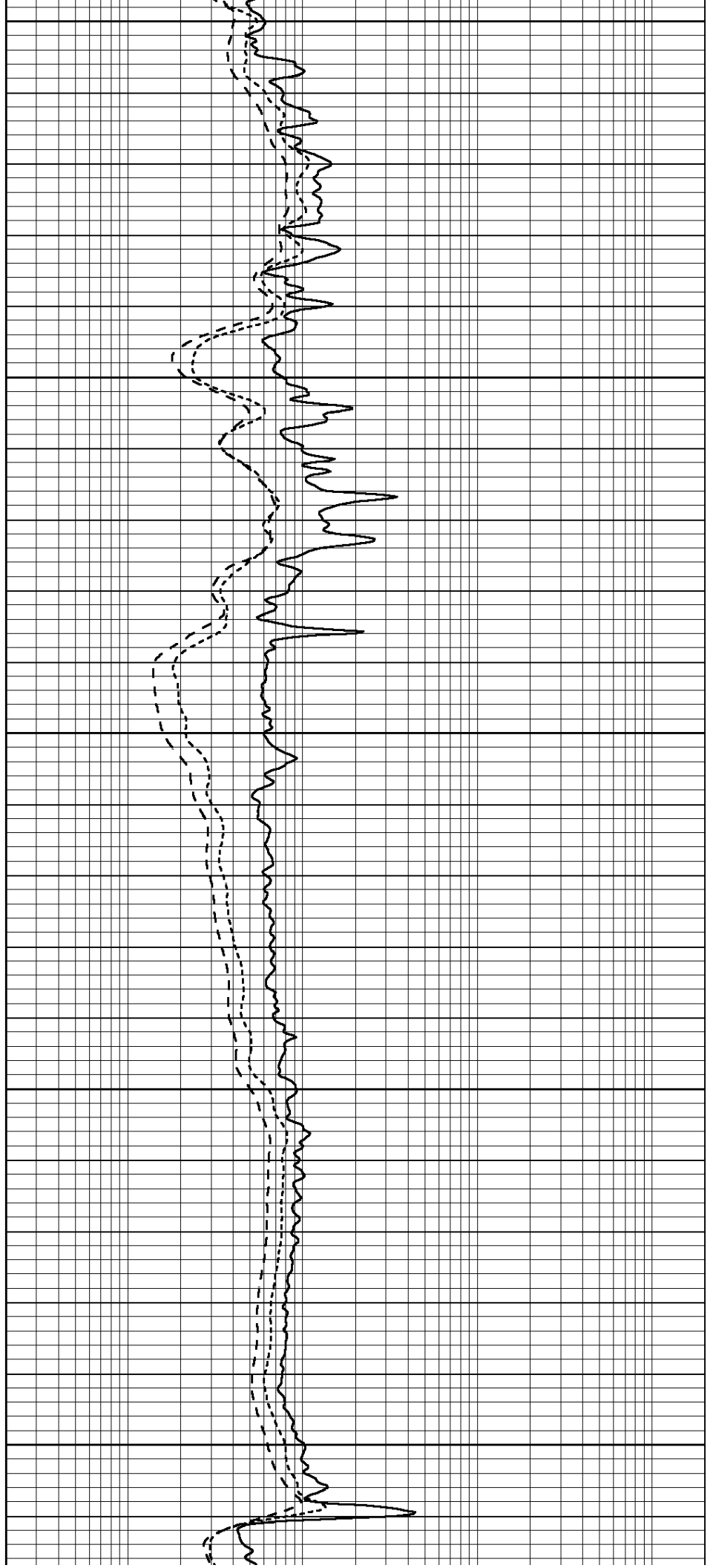
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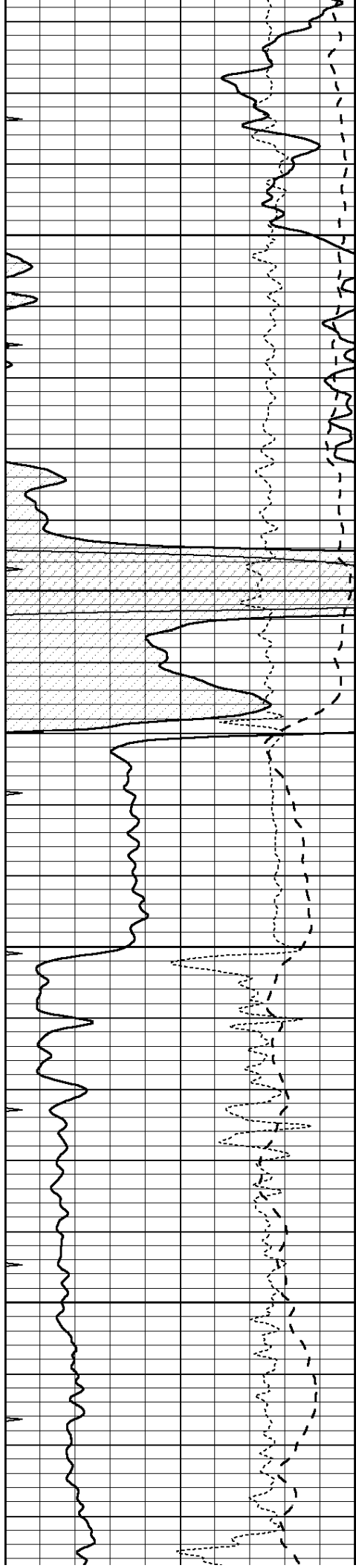
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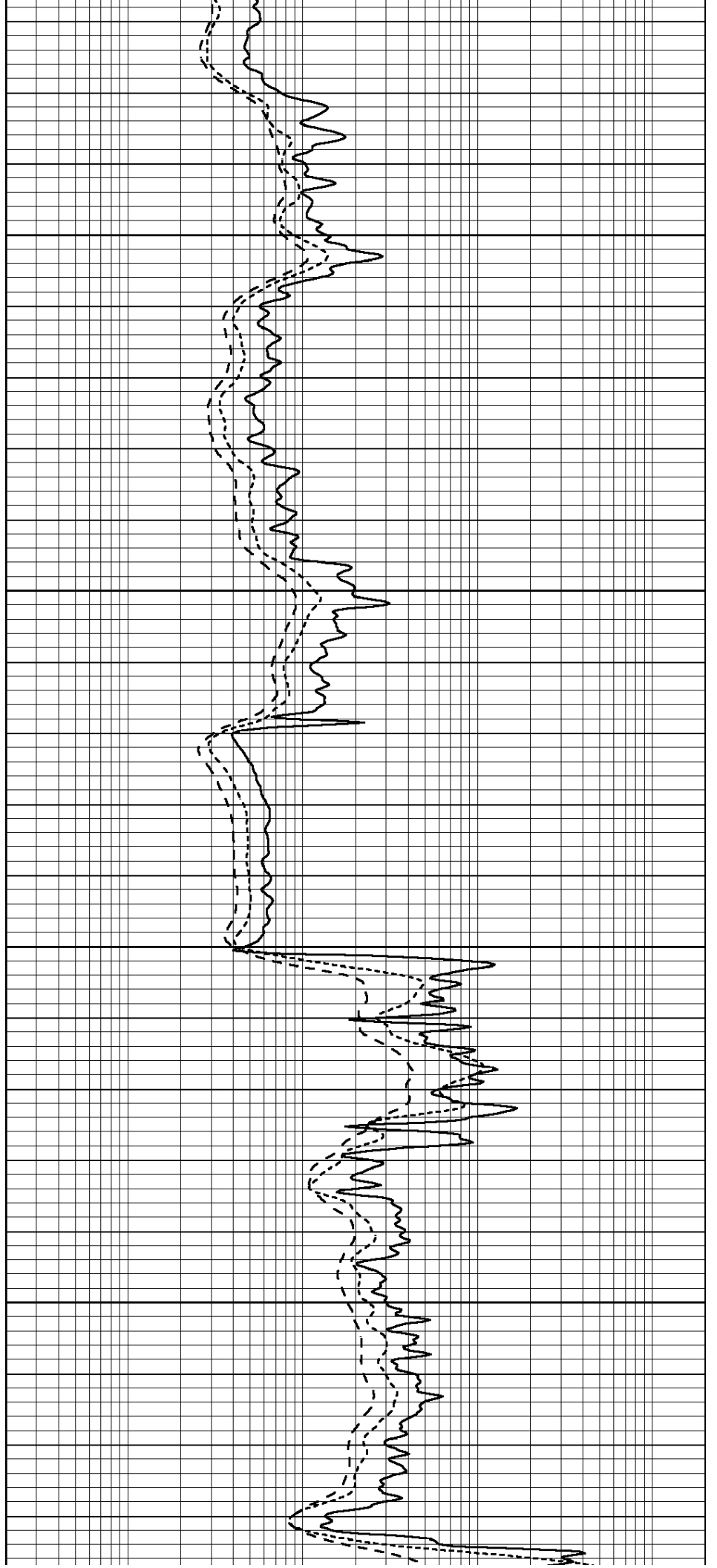


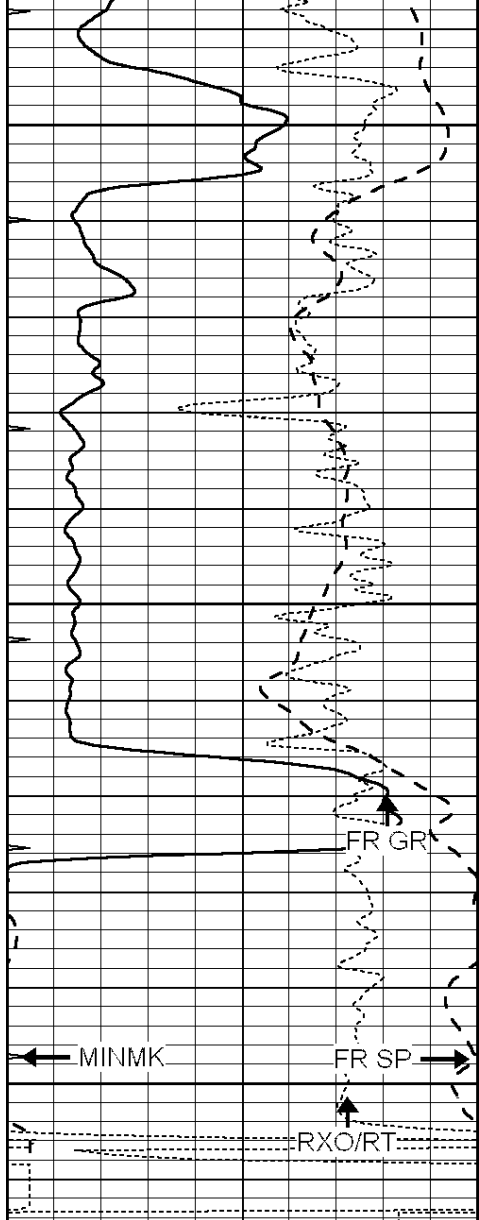
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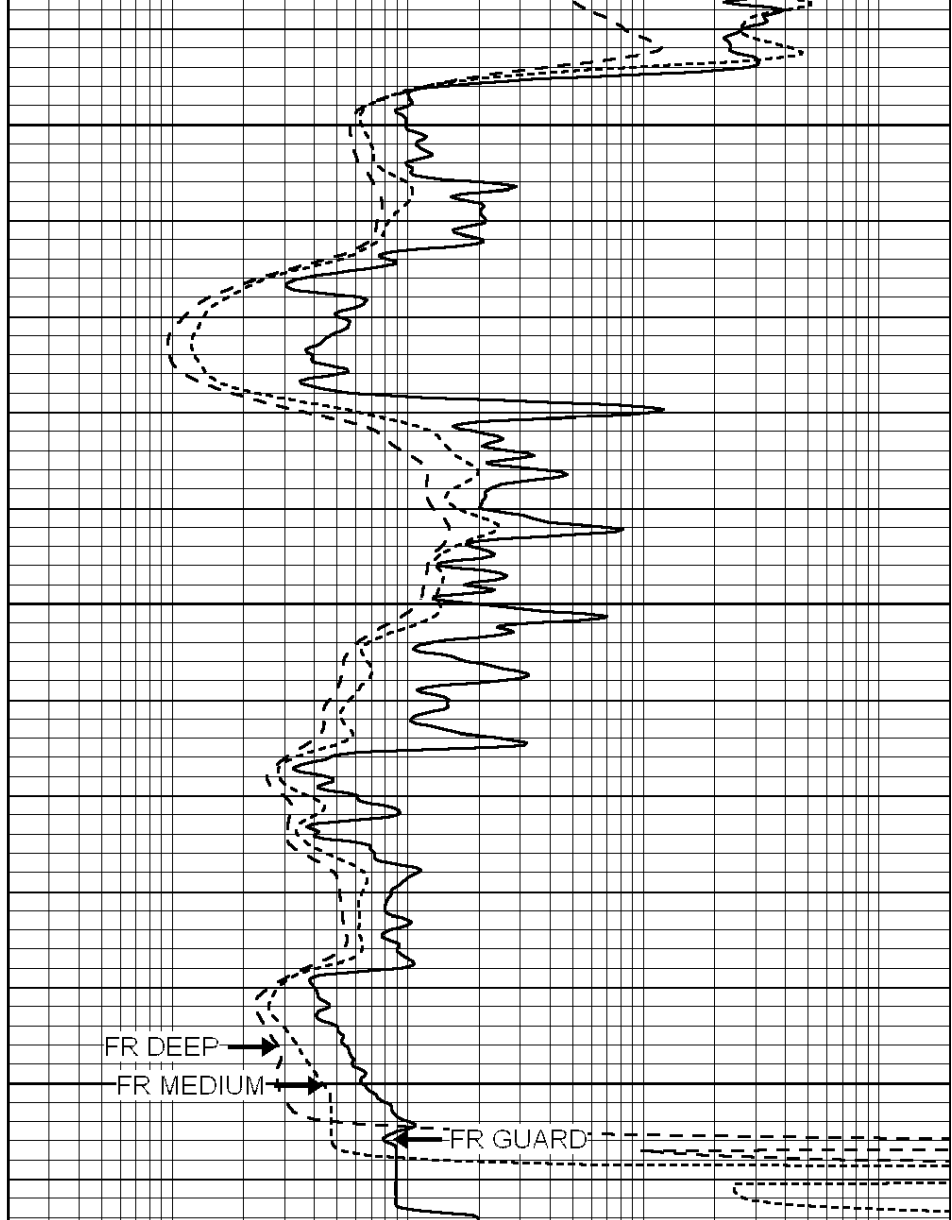
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5100
5150
5200
LTD 5208

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

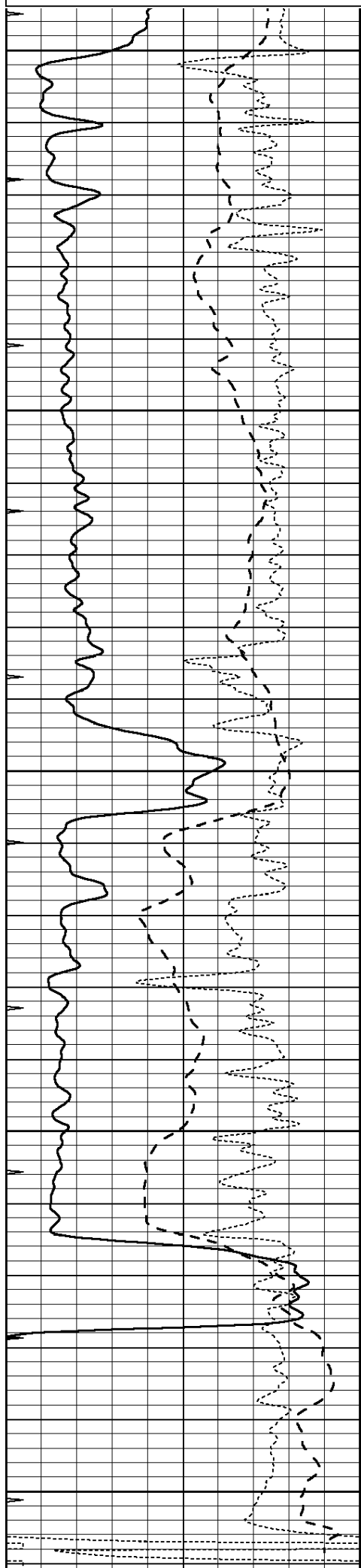


REPEAT SECTION

Database File: 24160pe.db
 Dataset Pathname: pass2.7
 Presentation Format: _dil
 Dataset Creation: Fri May 23 16:34:34 2014 by Calc SOC 120430
 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



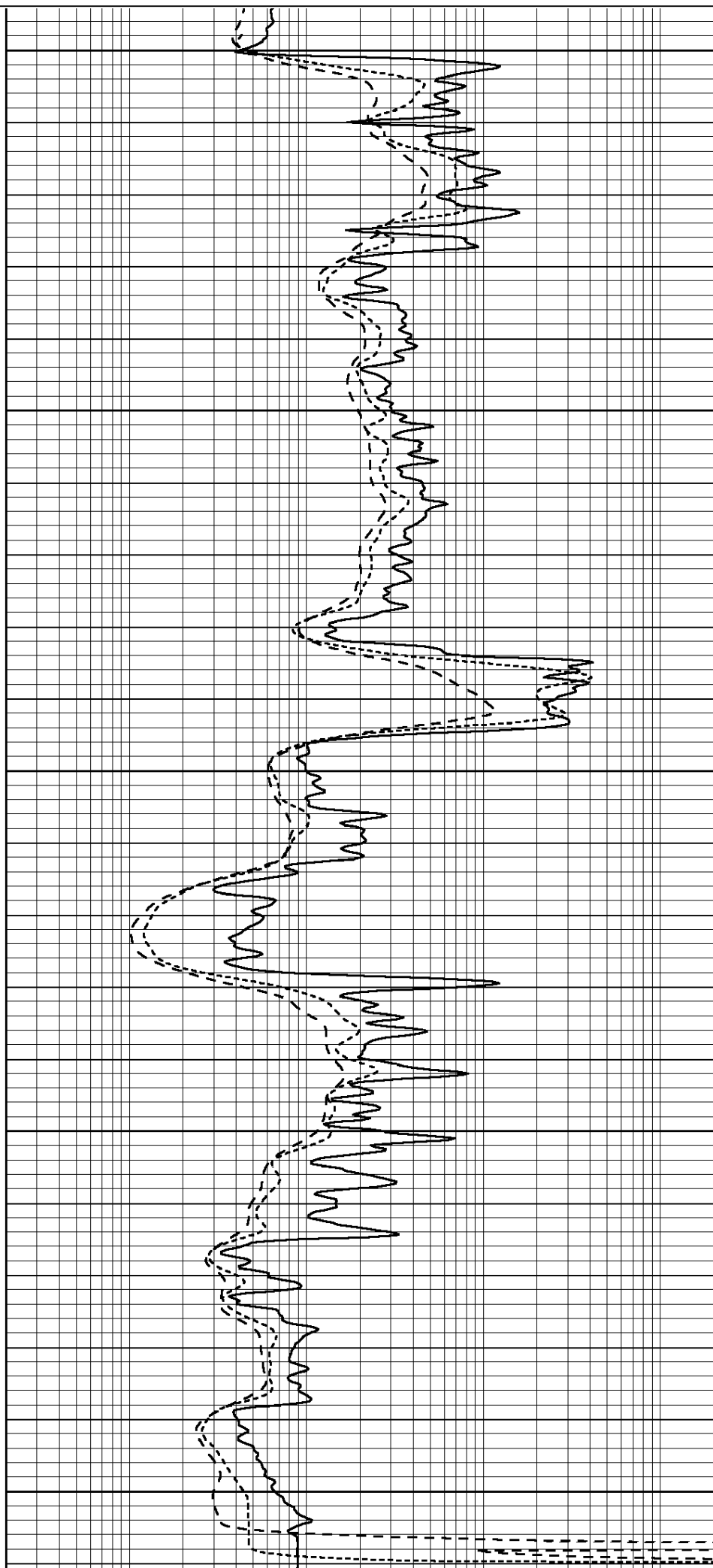
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5050

5100

5150

5200



0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

Calibration Report

Database File: 24160pe.db
 Dataset Pathname: pass3.9
 Dataset Creation: Fri May 23 16:47:31 2014 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Sat May 03 21:20:05 2014
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop			Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	740.000	-18.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	650.000	-24.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256	
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102	

Downhole Calibration

	Readings				References			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000	
LL3		7.500	V		1400.000	Ohm-m			
		0.000	V		20.000	Ohm-m			
		-7.200	V		4000.000	mmho-m			

After Survey Verification

	Readings				Targets			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000	
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000	
LL3		1.000	Ohm-m		1.000	Ohm-m			
		0.000	Ohm-m		0.000	Ohm-m			
		1.000	mmho-m		1.000	mmho-m			

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration

Performed Mon Jun 03 09:36:56 2013

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1417.6	10391.4	3464.6	11537.5	cps
Window 2	1295.0	8959.7	3050.1	9816.4	cps
Window 3	1105.1	5464.2	2051.0	5838.8	cps
Window 4	315.0	317.7	312.9	319.8	cps

Long Space	0.0	7664.6	1755.0	8521.3	cps
Short Space	1.8	1582.4	1040.8	1699.4	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.574
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept	: -17.0

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

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: 070558
Tool Model: OPEN_GR
Performed: Thu May 15 06:08:02 2014

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity:

0.2800

GAPI/cps