



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company ATLAS OPERATING, LLC
Well GREEN #3
Field SPIVEY - GRABS - BASIL
County HARPER
State KANSAS

Company ATLAS OPERATING, LLC
Well GREEN #3
Field SPIVEY - GRABS - BASIL
County HARPER State KANSAS

Location: API # : 15-077-21702-0000
1250' FNL & 1668' FEL
SEC 32 TWP 31S RGE 9W
Permanent Datum GROUND LEVEL Elevation 1607
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
PE/MEL
Elevation
K.B. 1617
D.F. 1615
G.L. 1607

Date	10/27/10
Run Number	ONE
Depth Driller	4600
Depth Logger	4598
Bottom Logged Interval	4596
Top Log Interval	0
Casing Driller	8 5/8"@254'
Casing Logger	254'
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1/50
pH / Fluid Loss	9.5/10.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.80@90F
Rmf @ Meas. Temp	0.60@90F
Rmc @ Meas. Temp	0.96@90F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	0.59@121F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	121F
Equipment Number	0836
Location	HAYS, KANSAS
Recorded By	JEFF GRONEMEG
Witnessed By	RYAN SEIB
	SEAN DEENIHAN

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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
ATTICA, KS - 4 MILES WEST TO RD 150 - 4 1/2 MILES NORTH
WEST INTO AT RED GATE - STAIGHT SOUTH OF TANK BATTERY

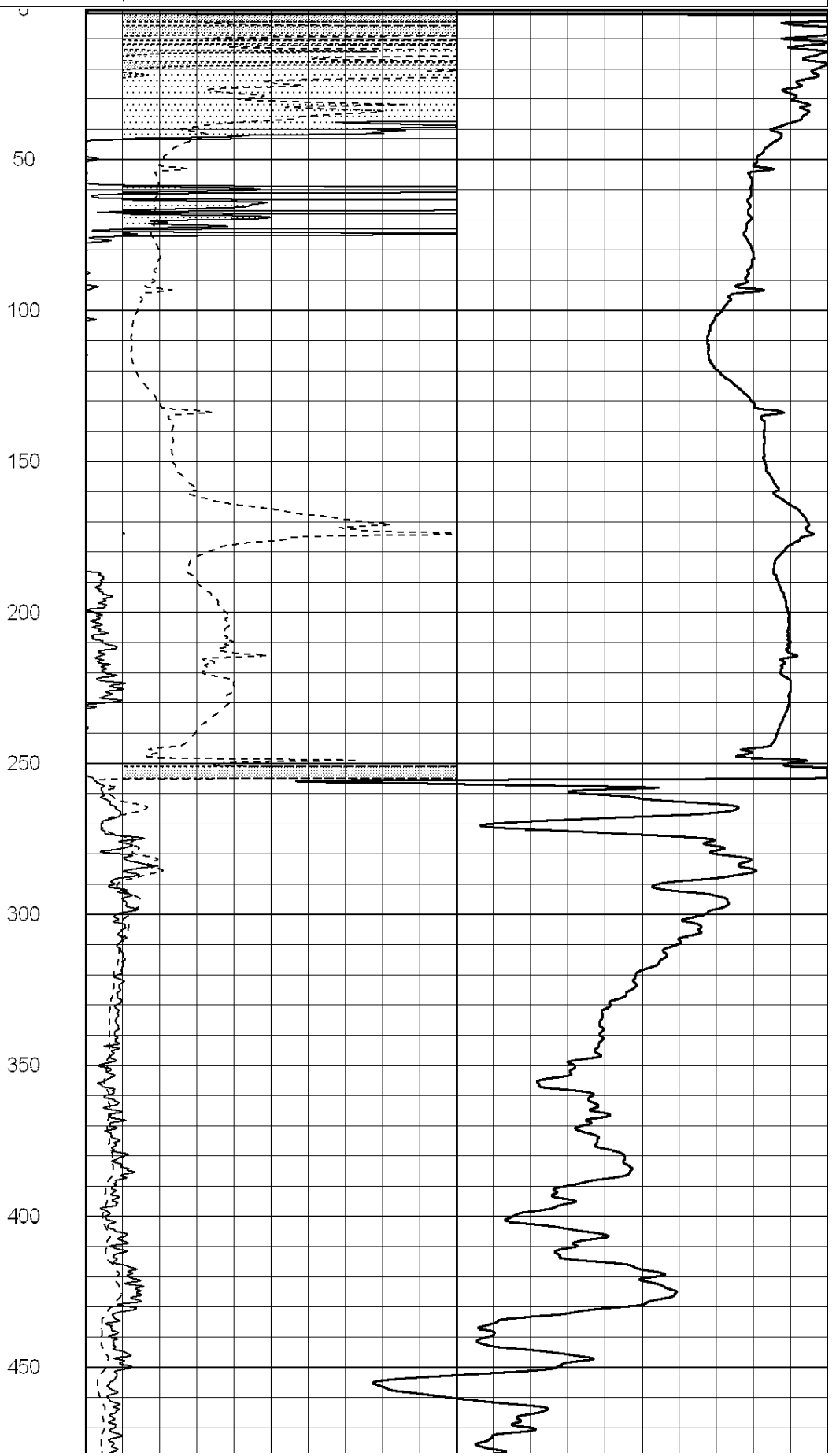
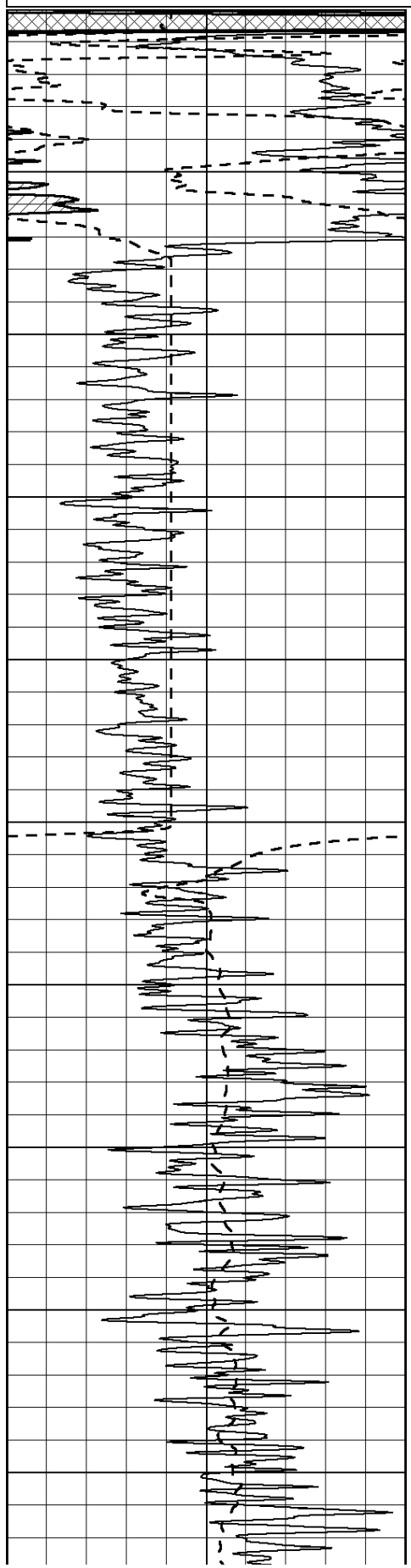
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Charted by: Depth in Feet scaled 1:600

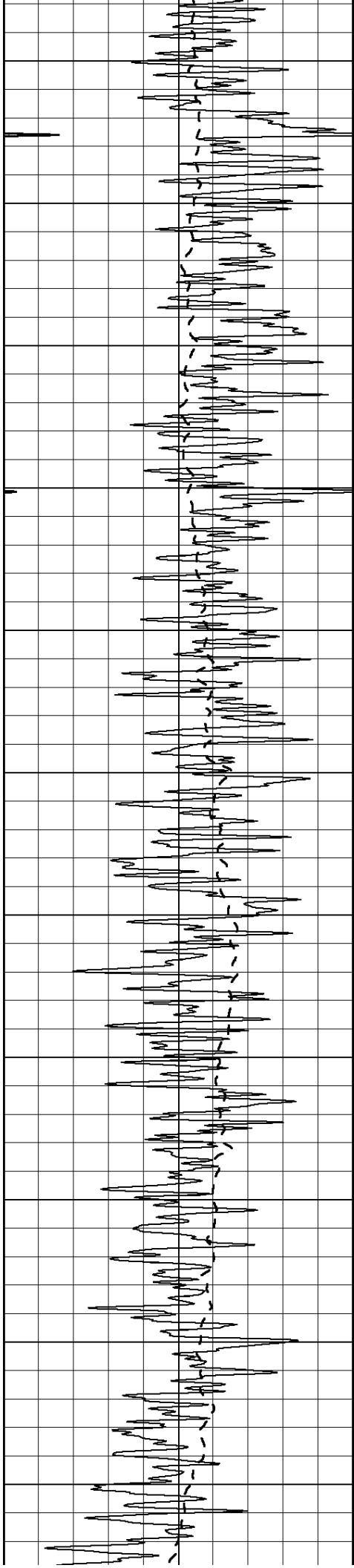
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

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





500

550

600

650

700

750

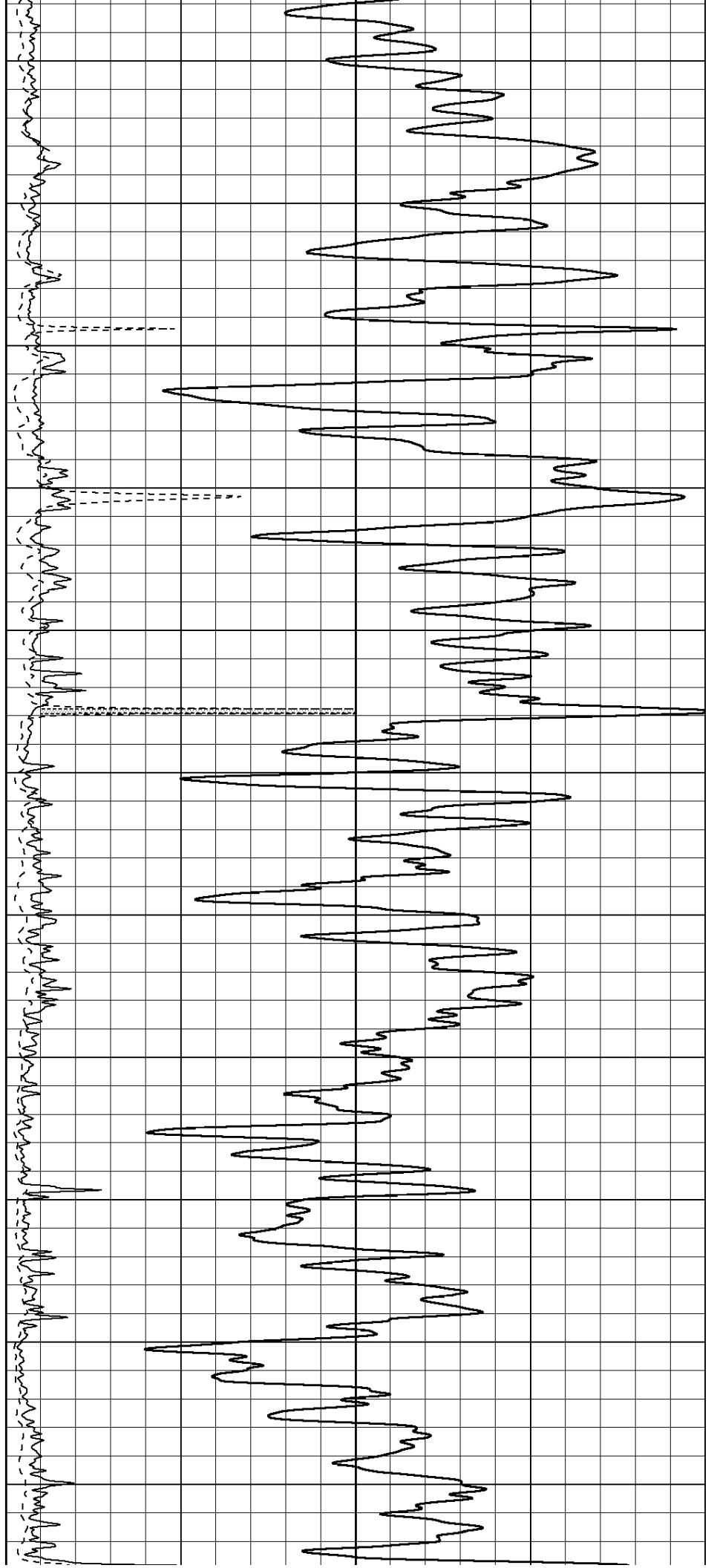
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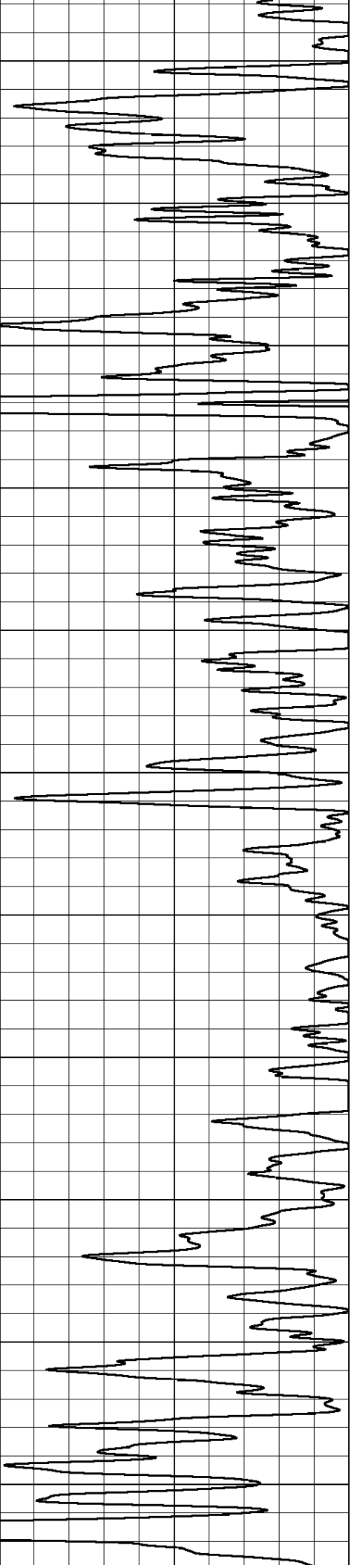
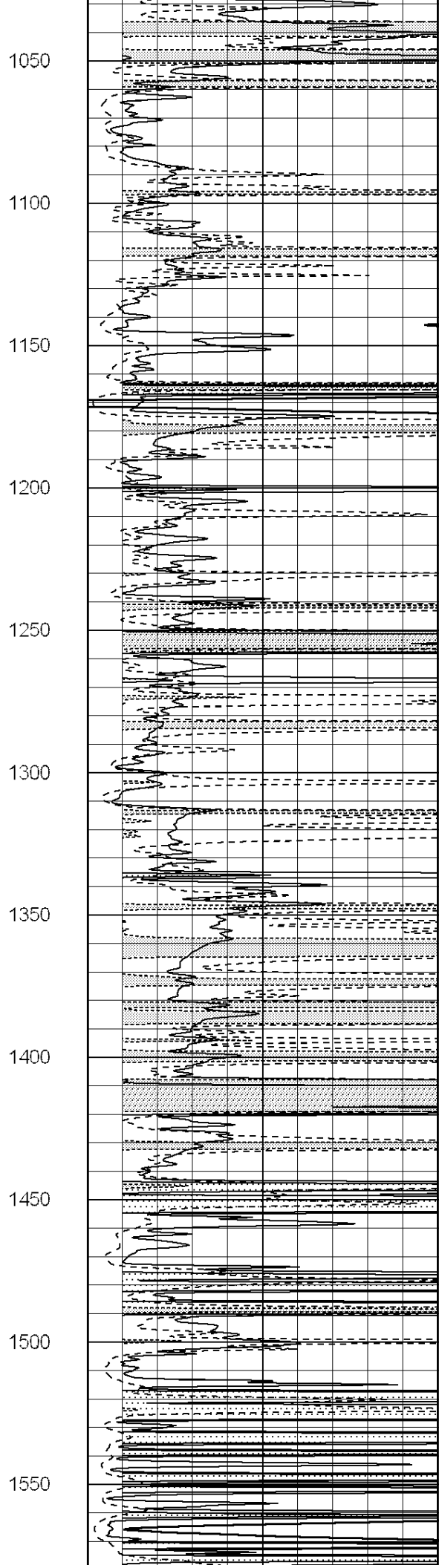
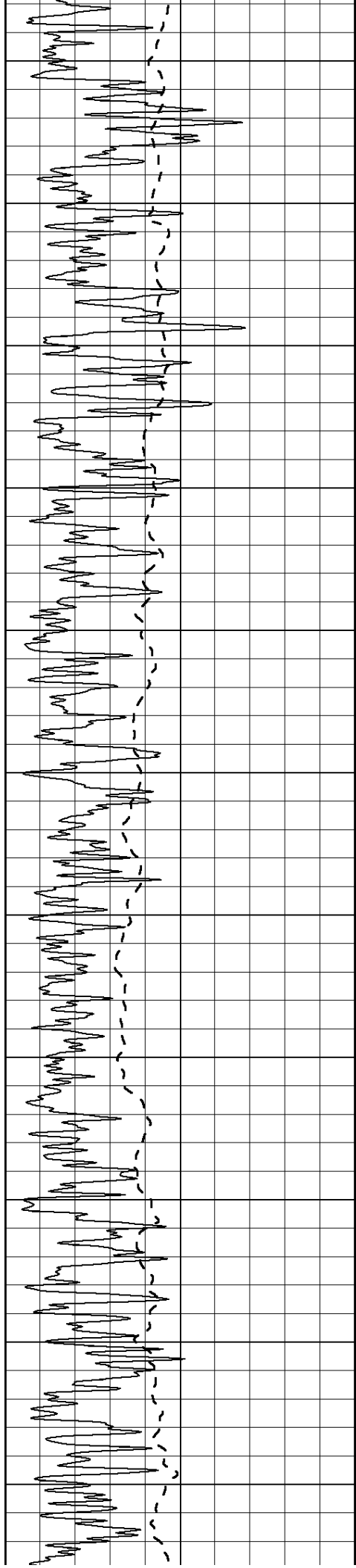
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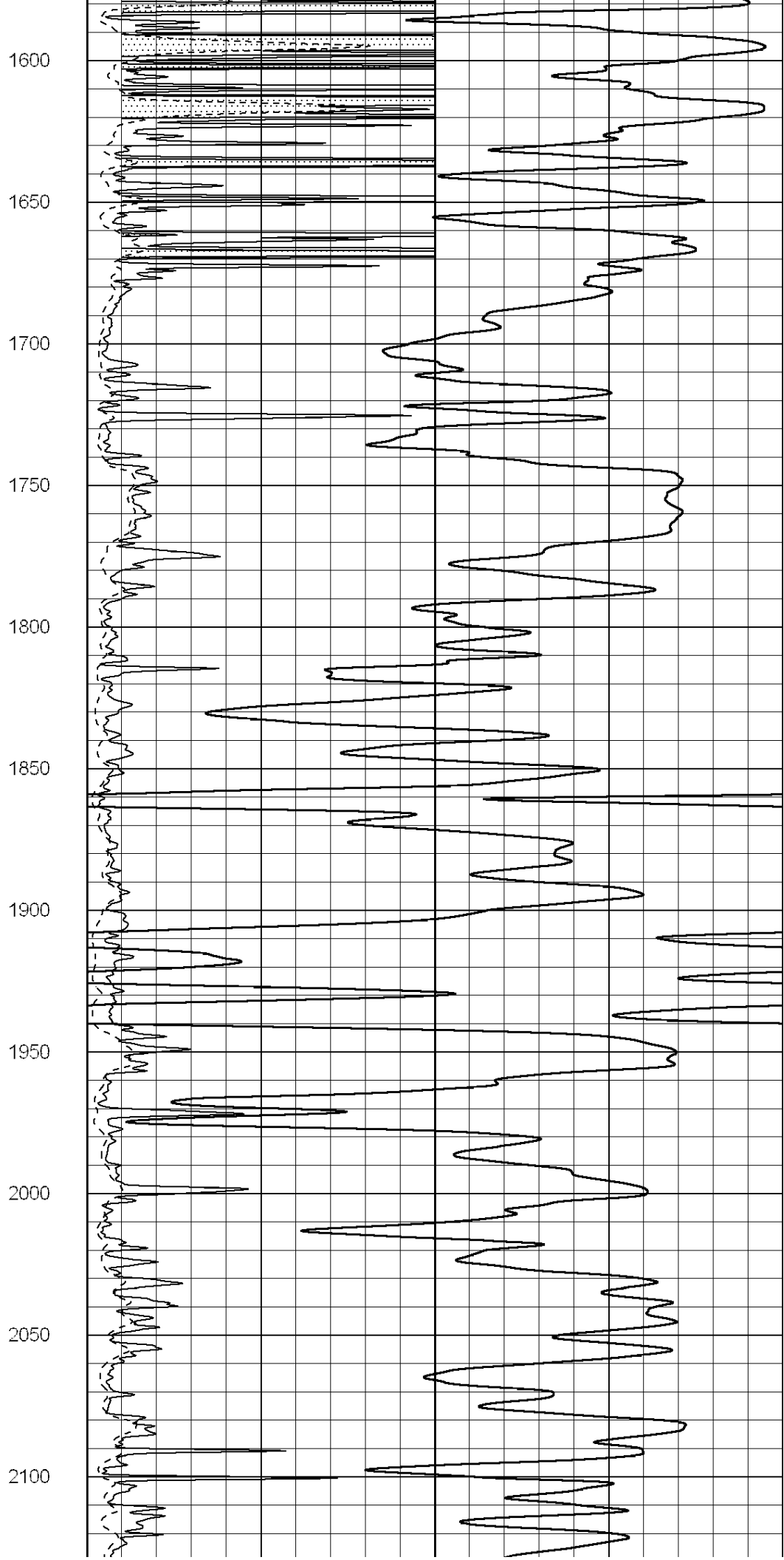
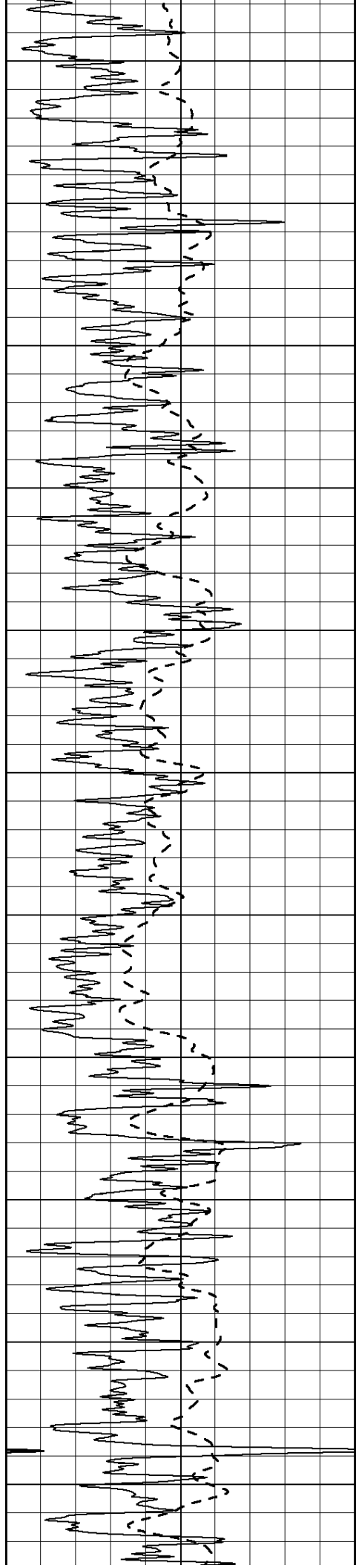
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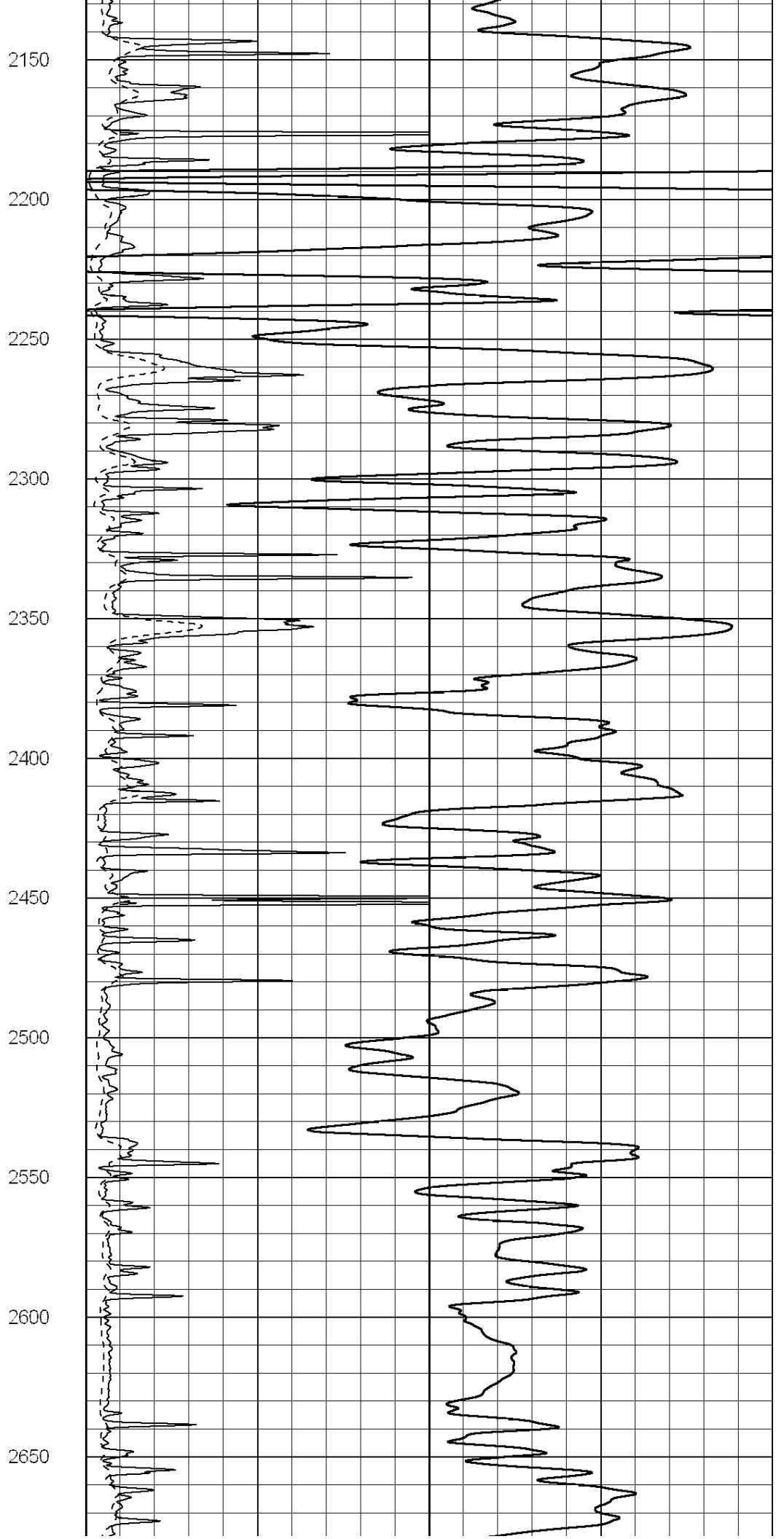
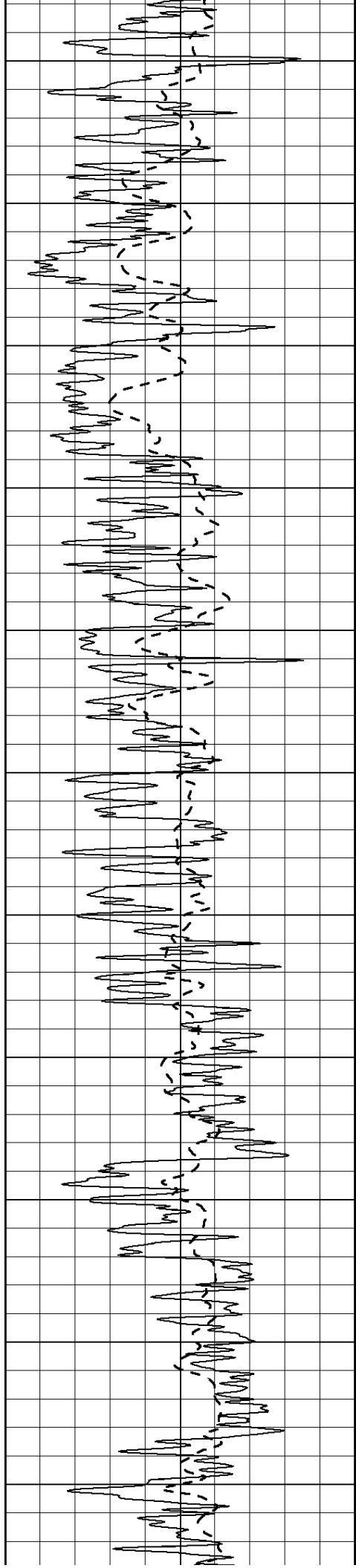
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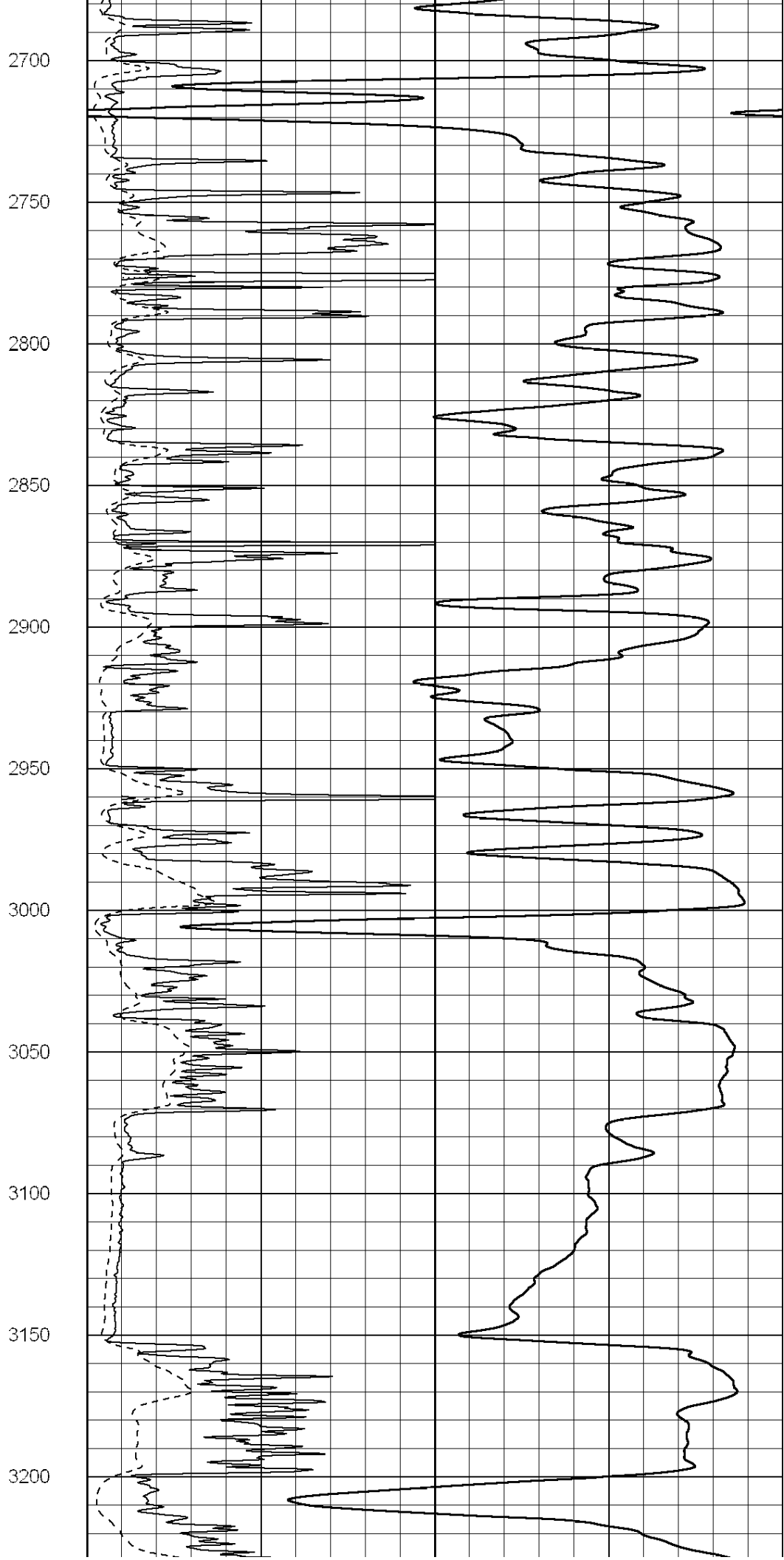
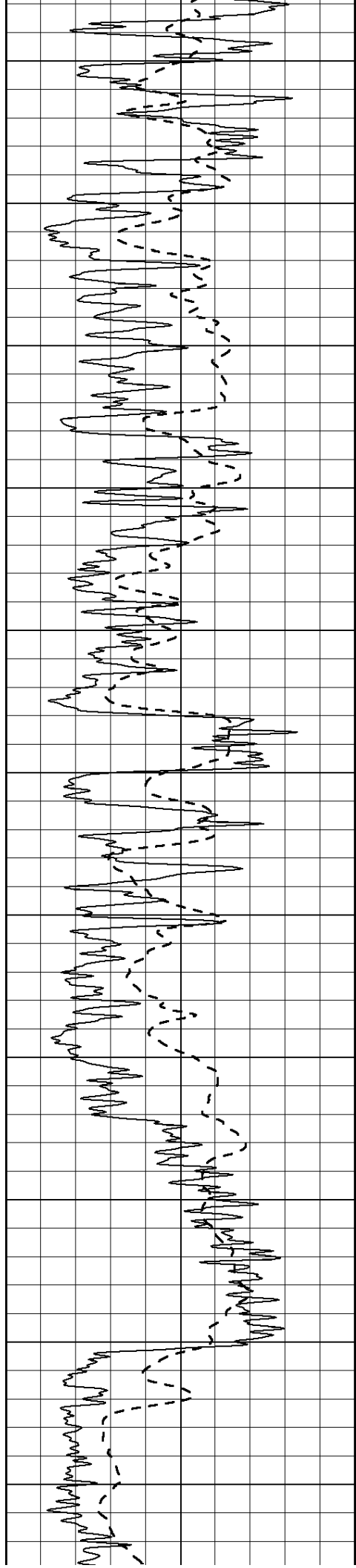
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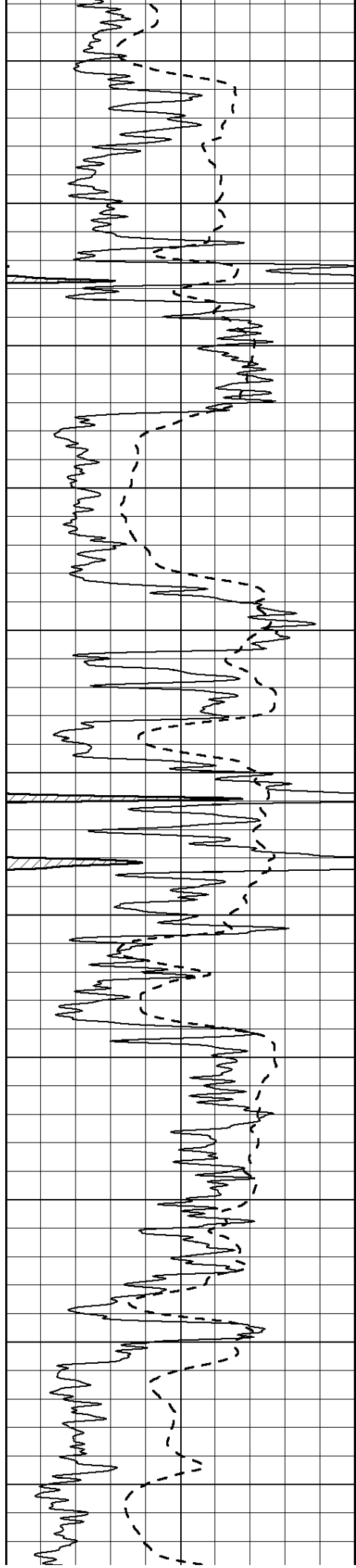




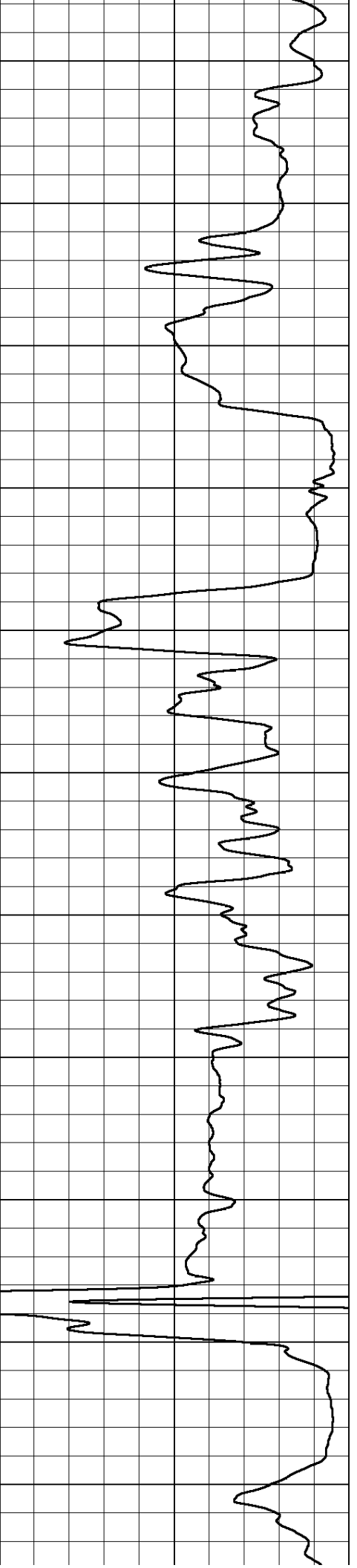
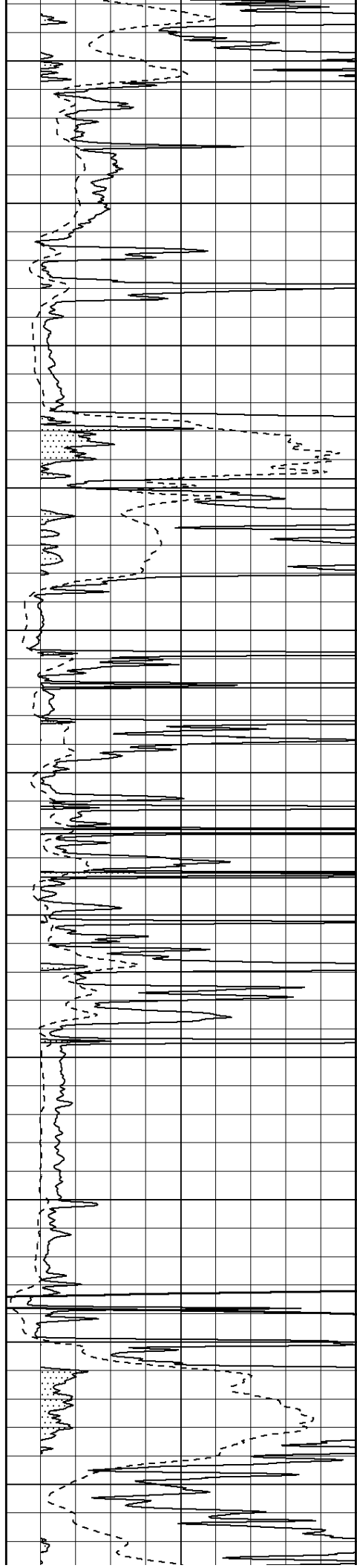


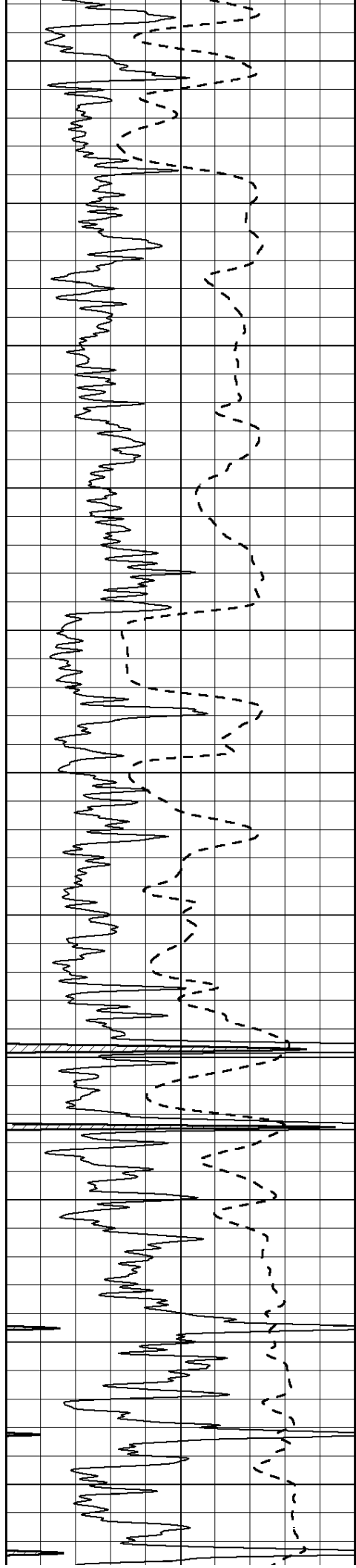




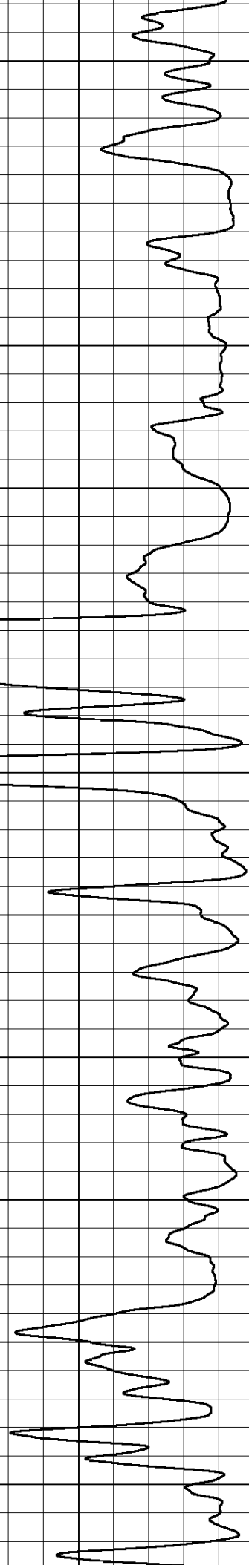
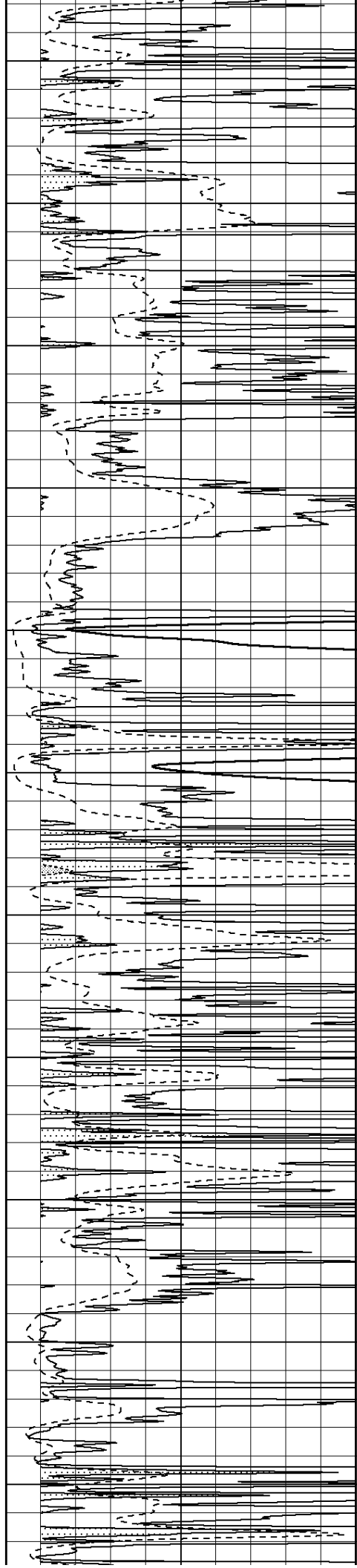


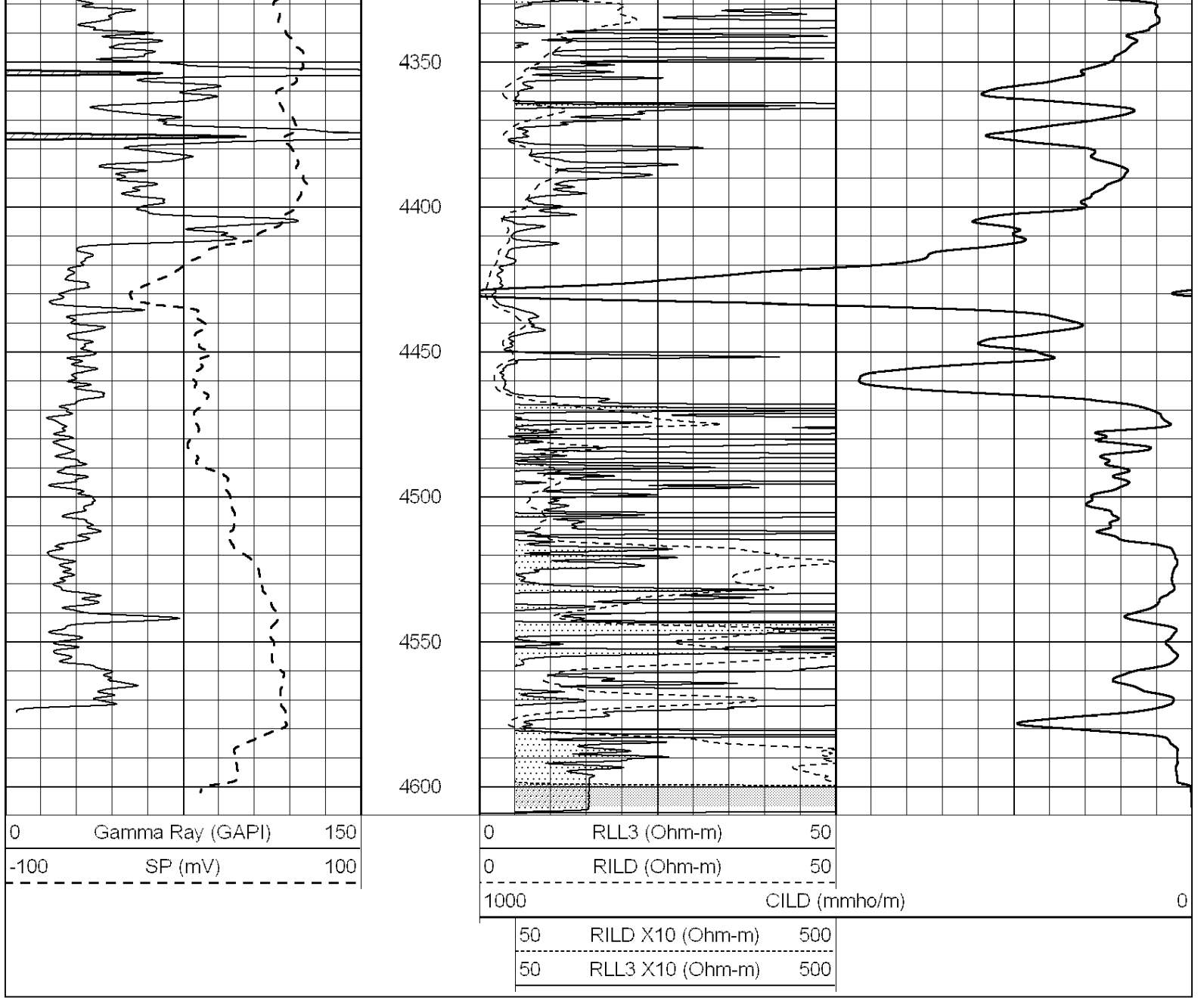
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3650
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3750



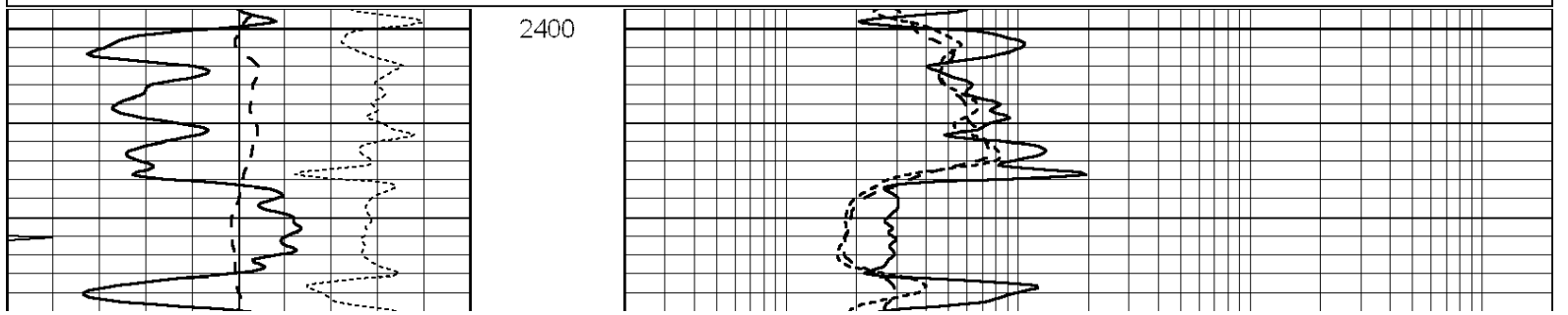
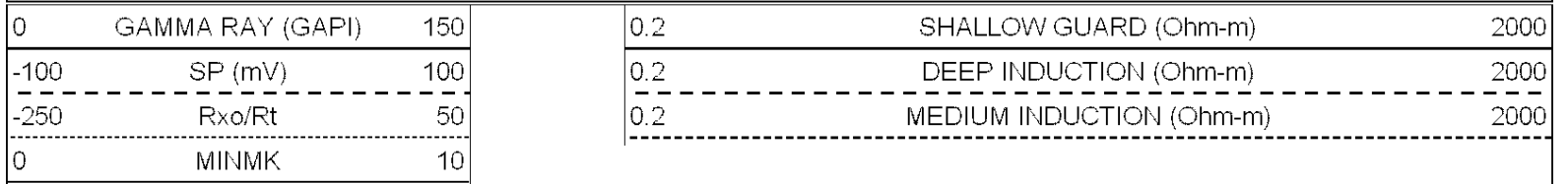


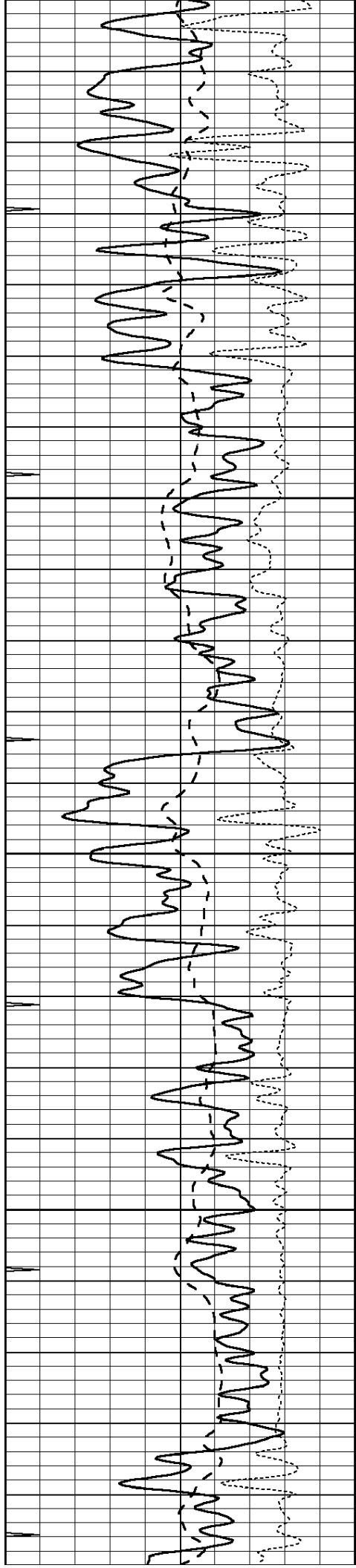
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3950
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4050
4100
4150
4200
4250
4300





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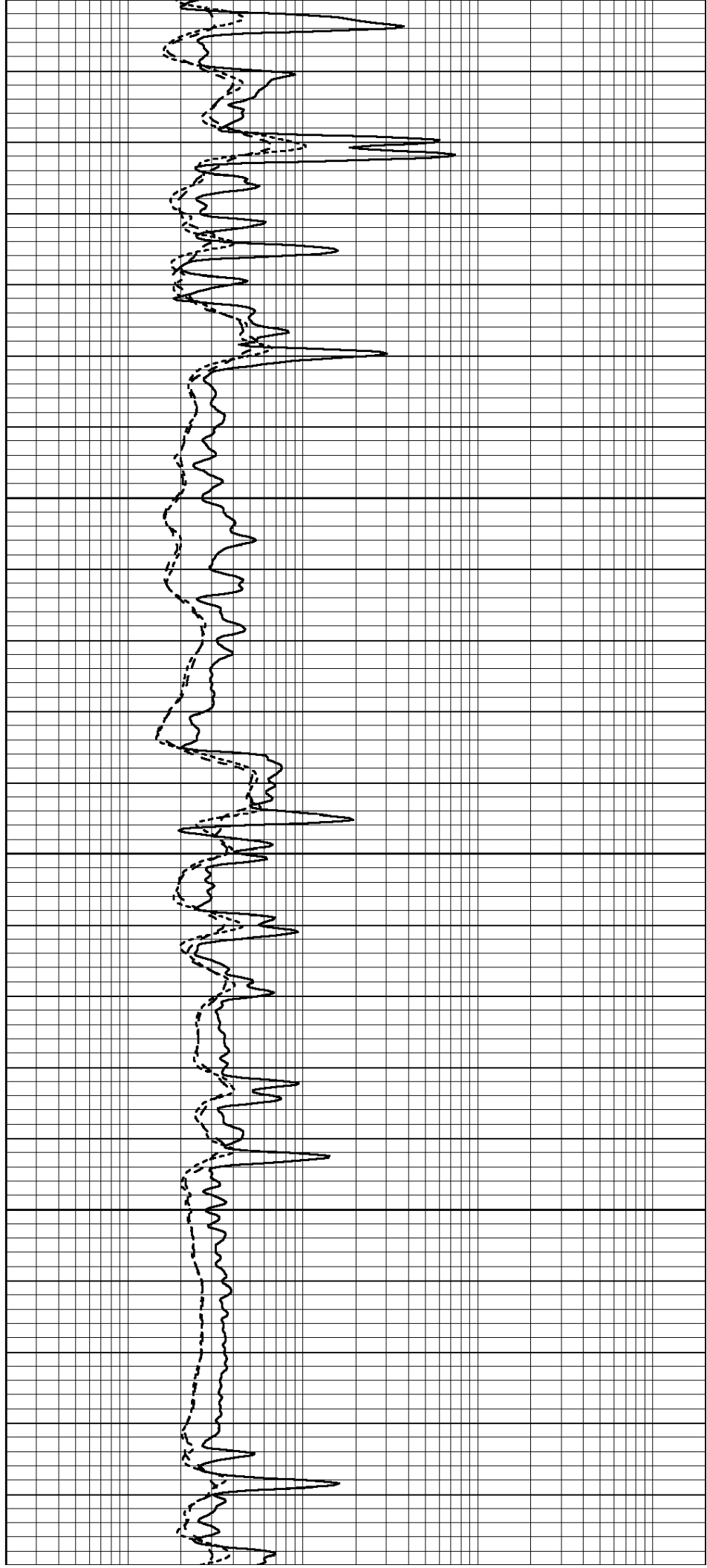
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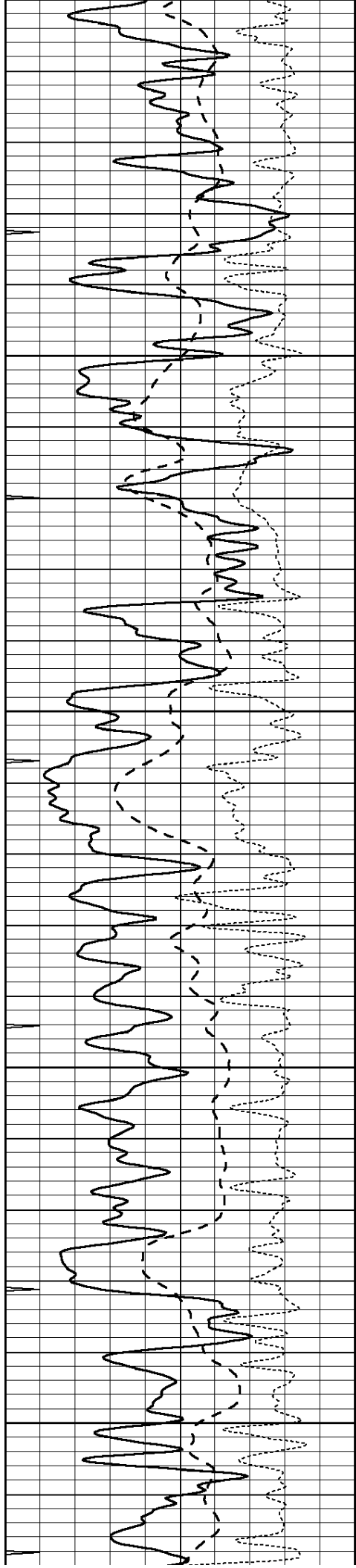
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2650





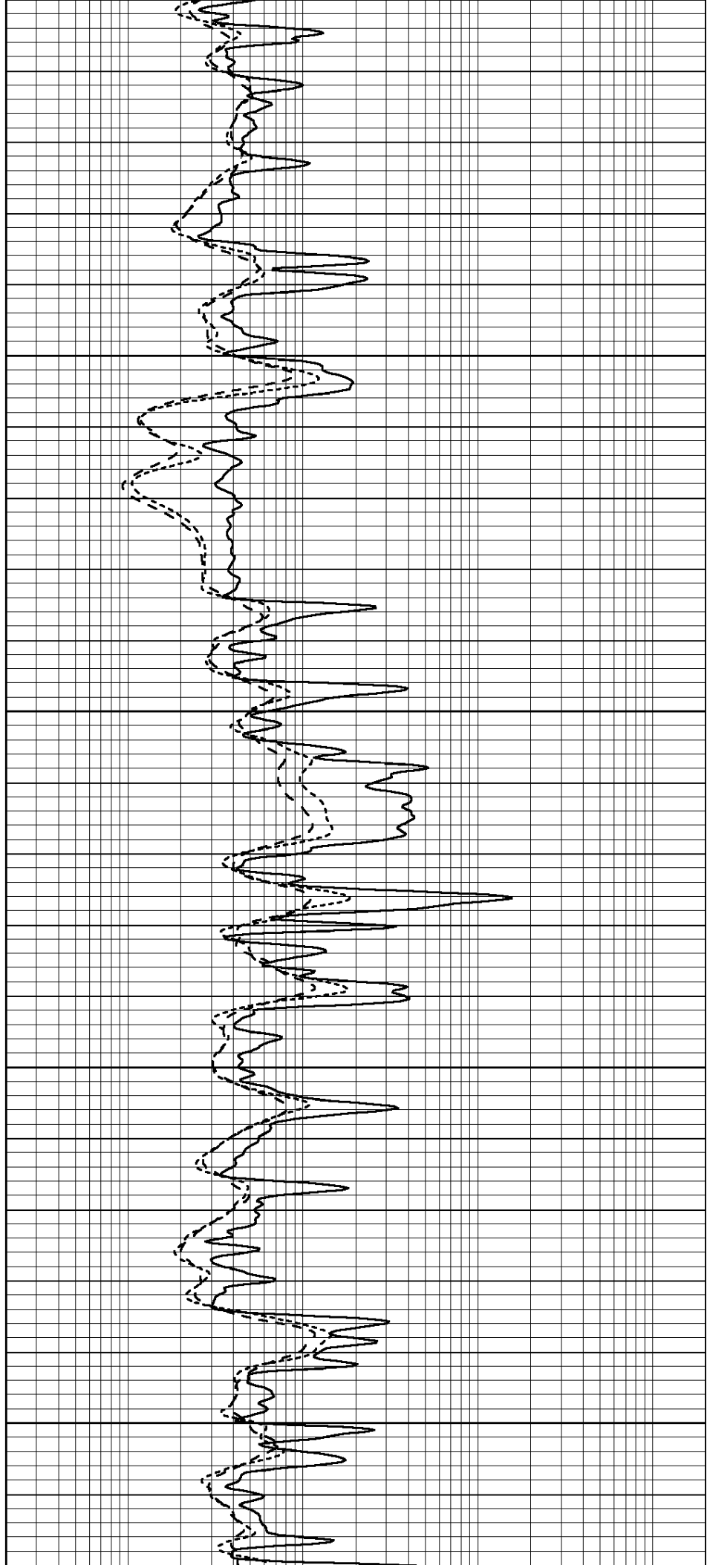
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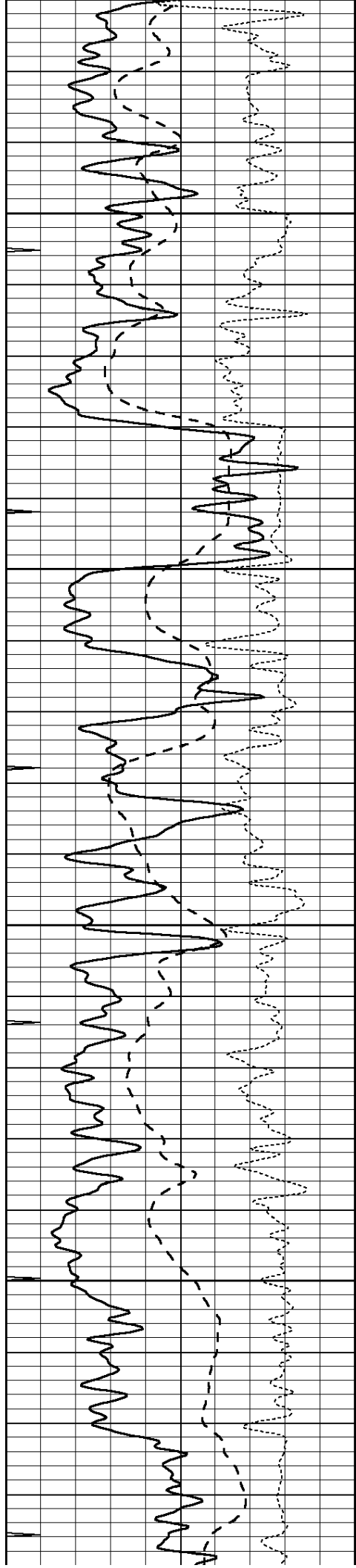
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2850



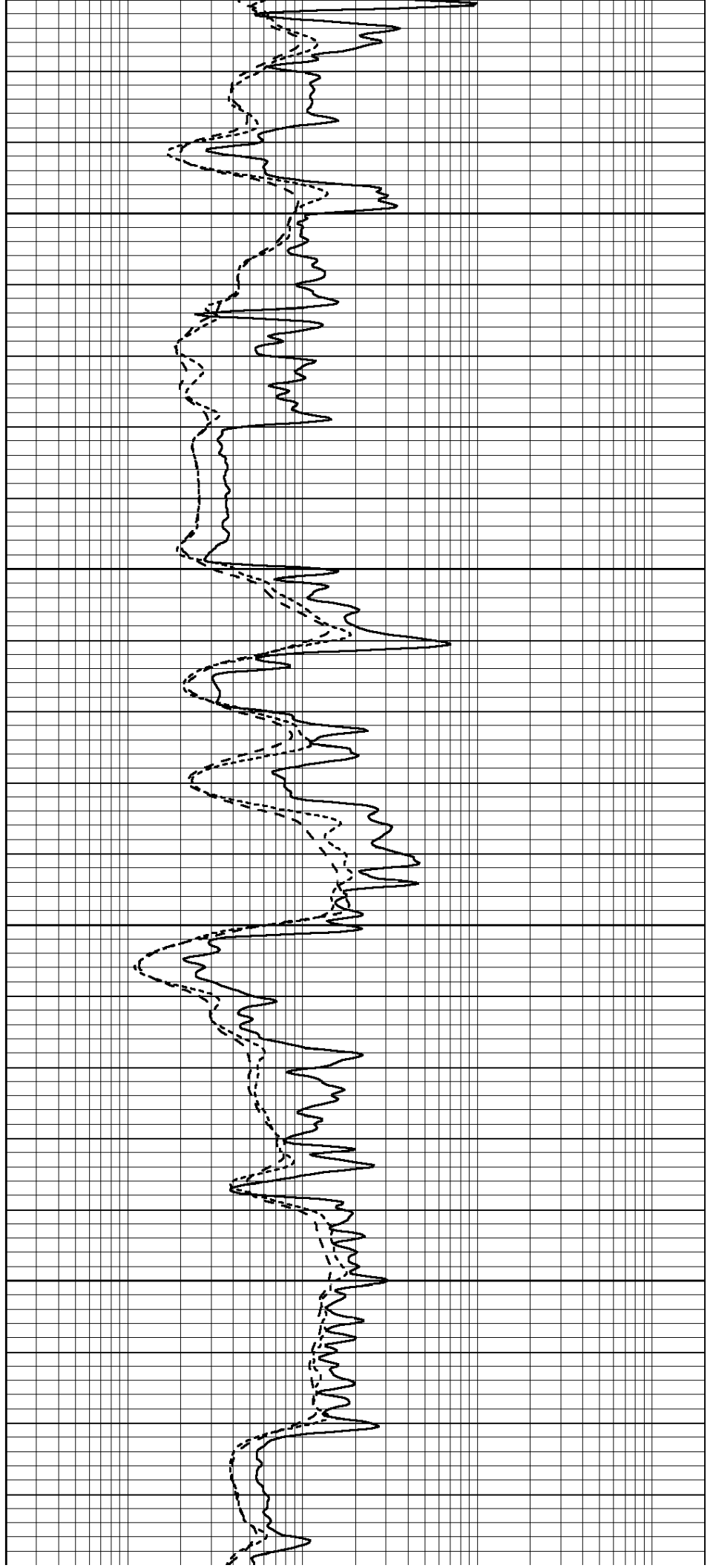


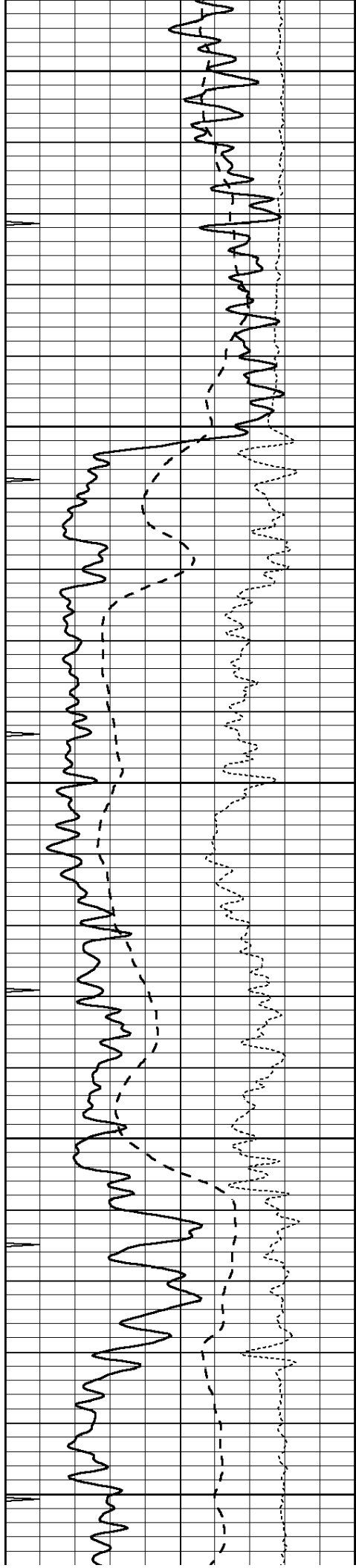
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3050





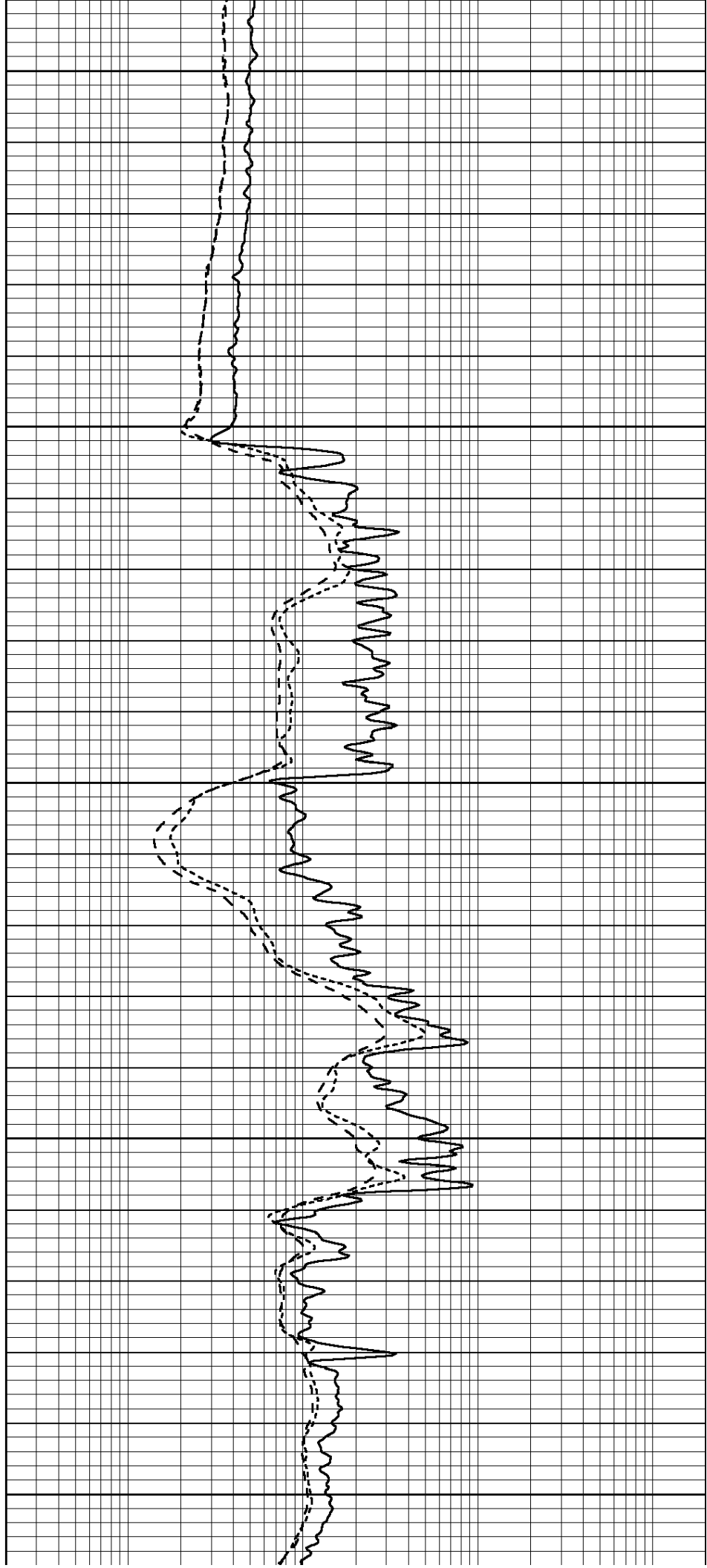
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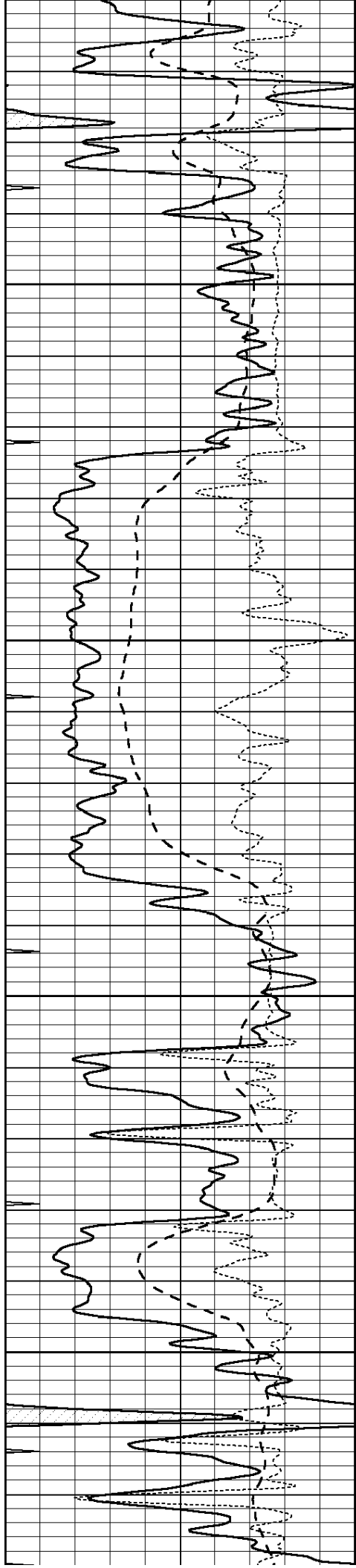
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3300



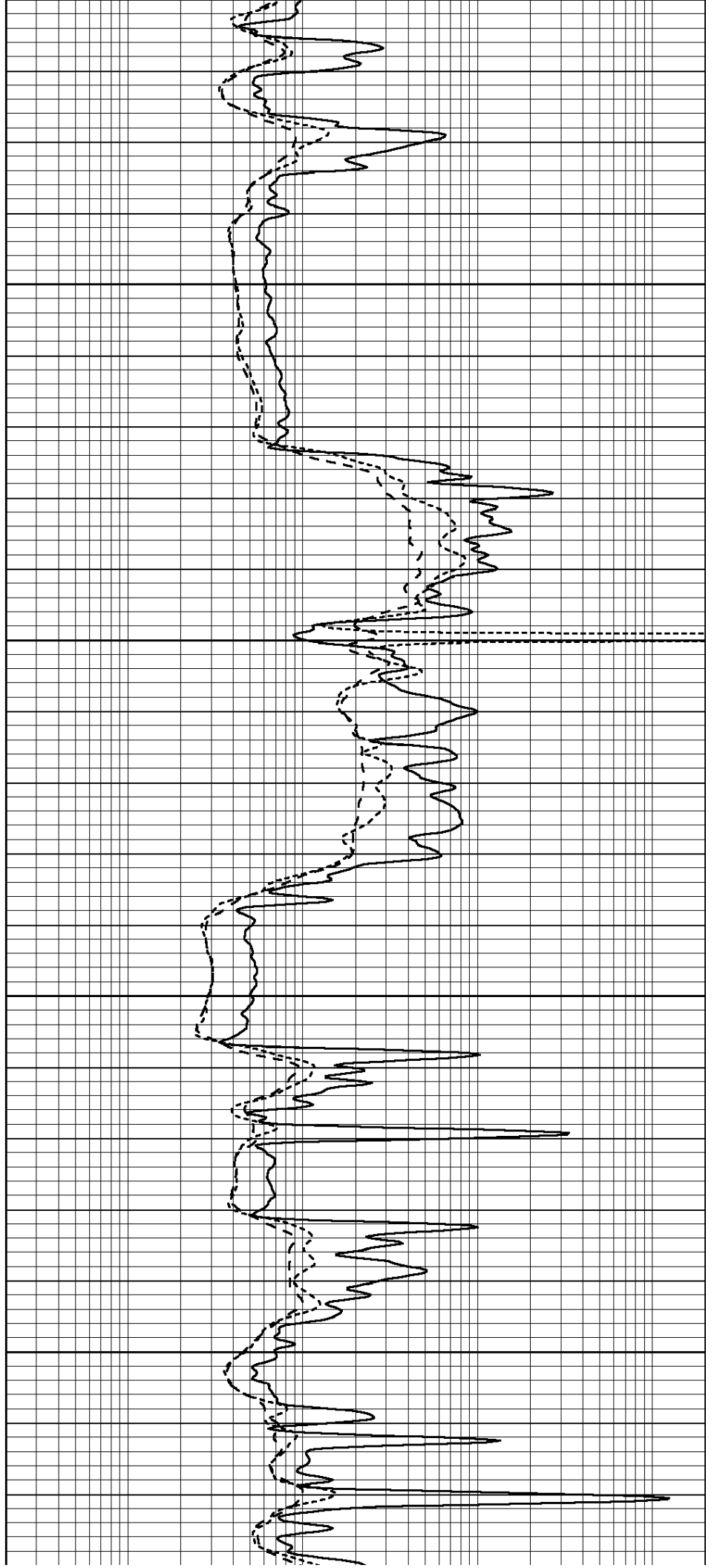


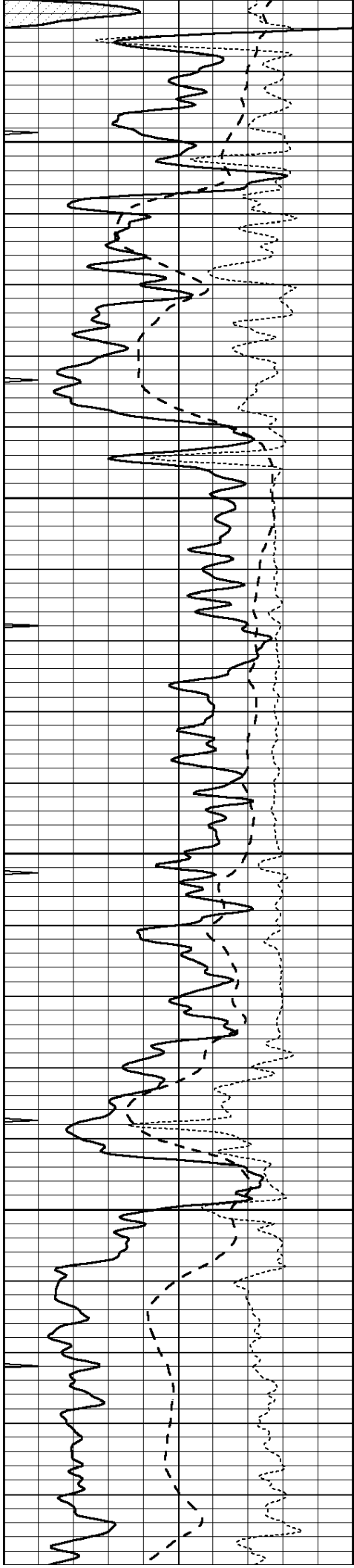
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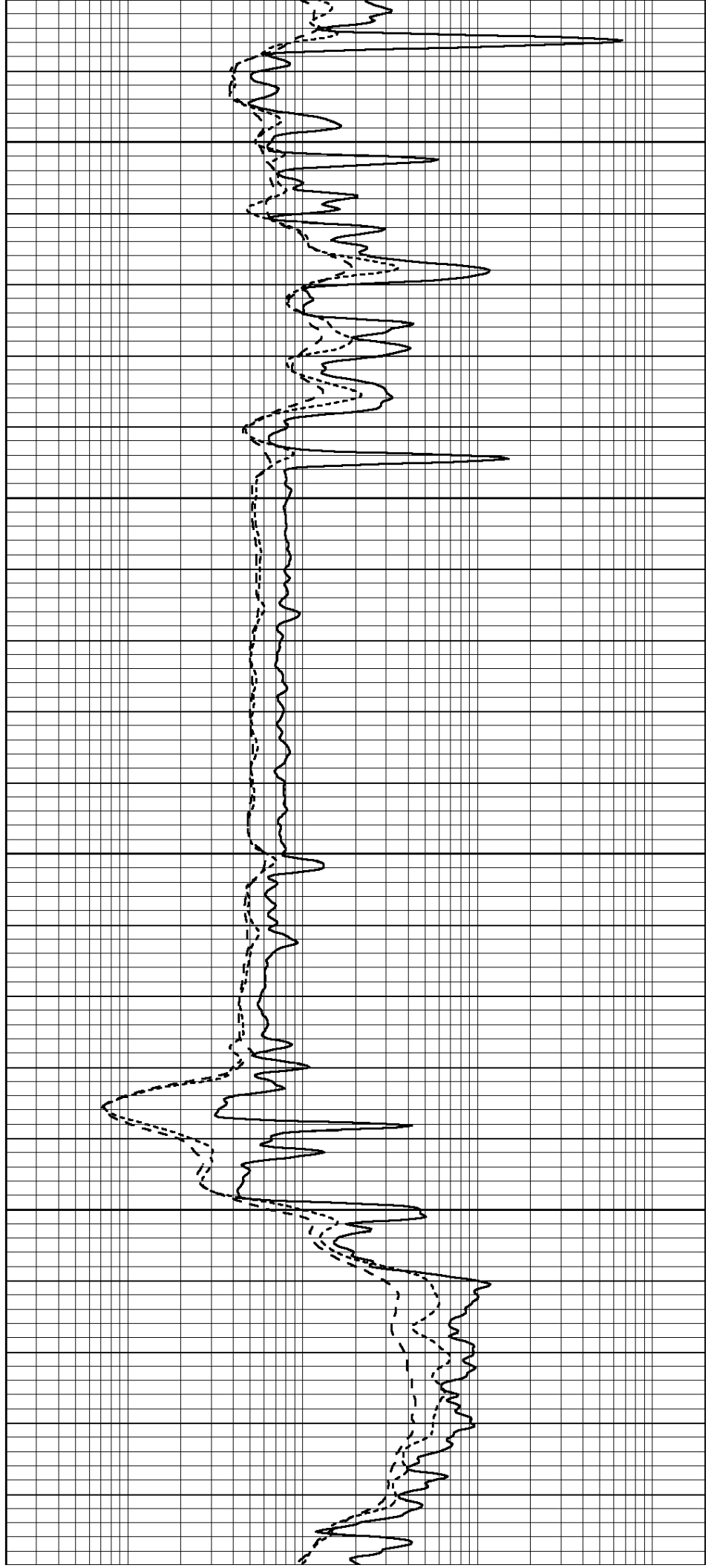
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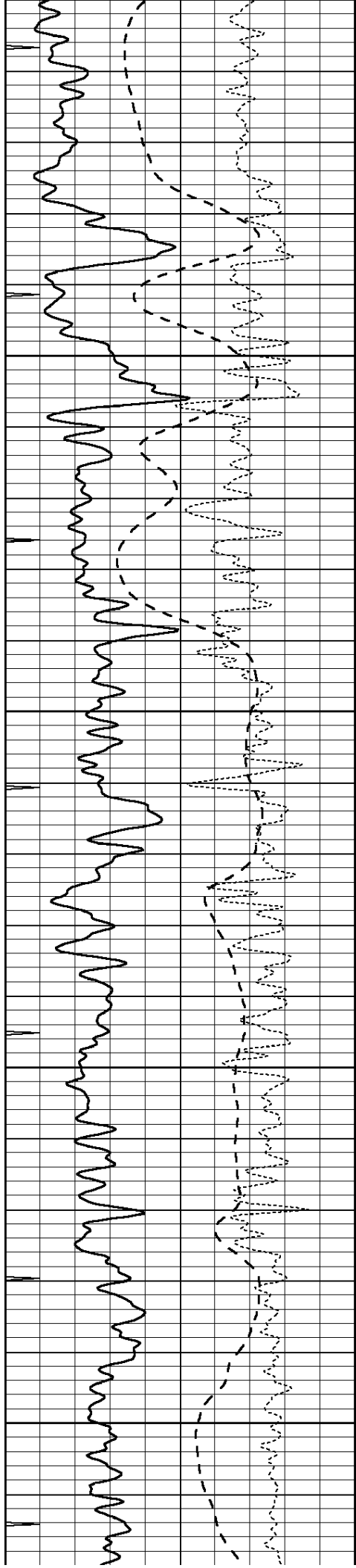
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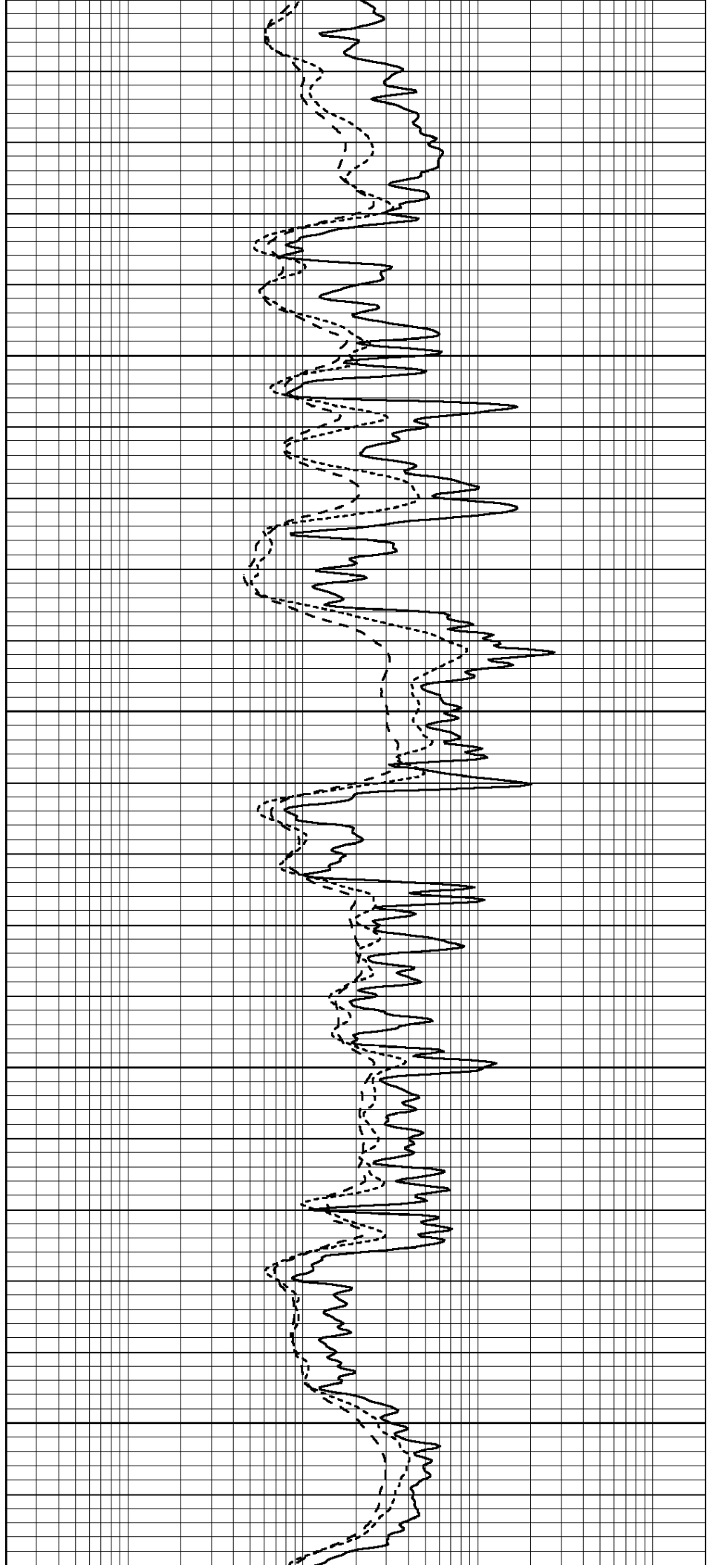
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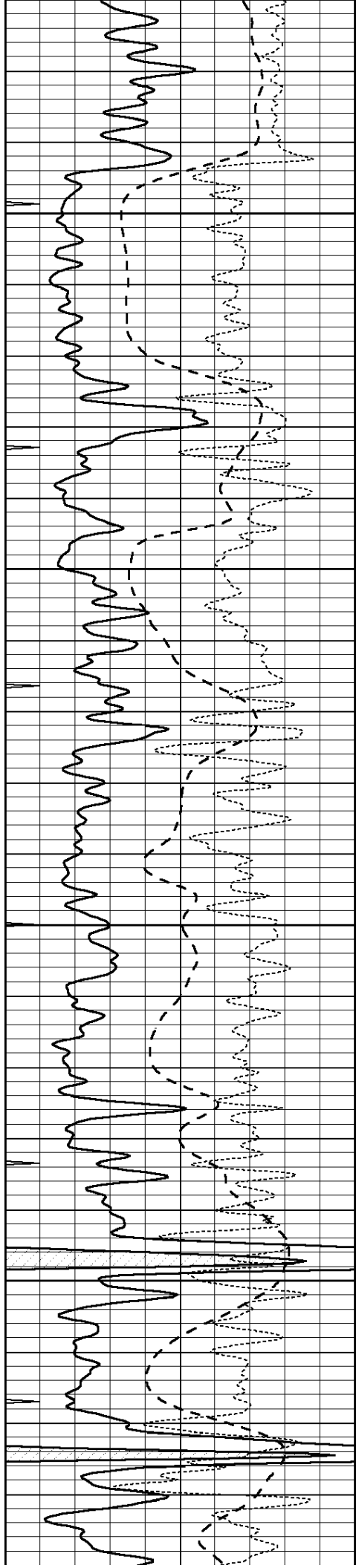
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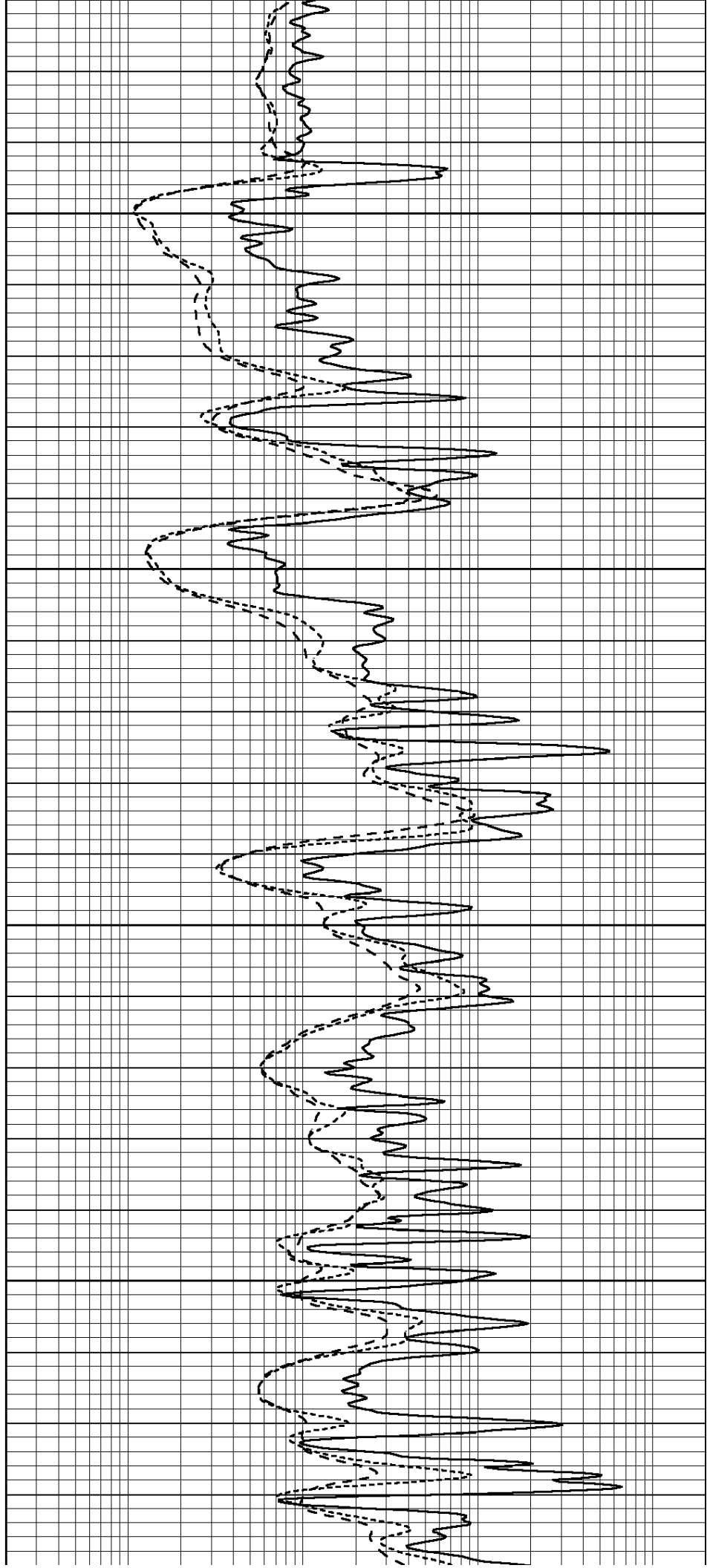


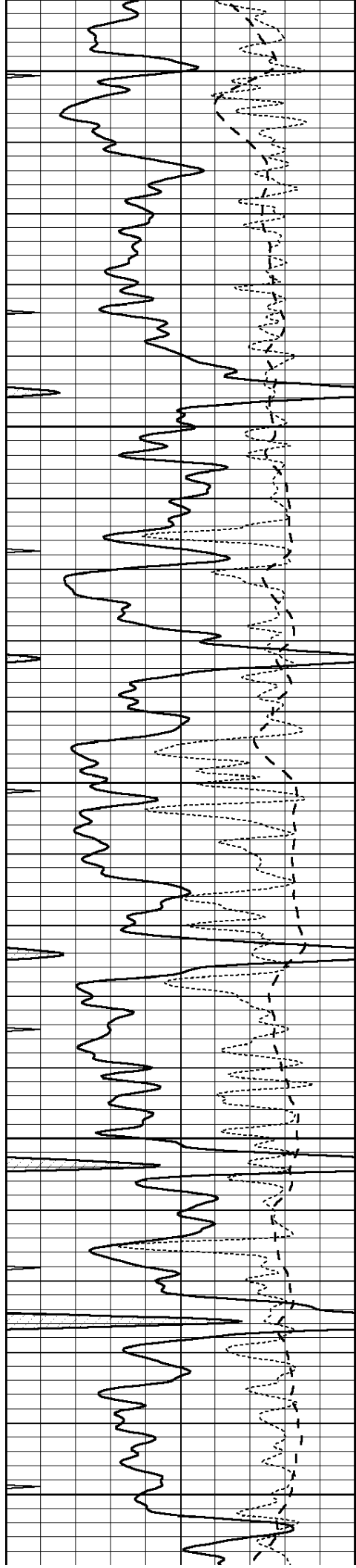
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4100

4150





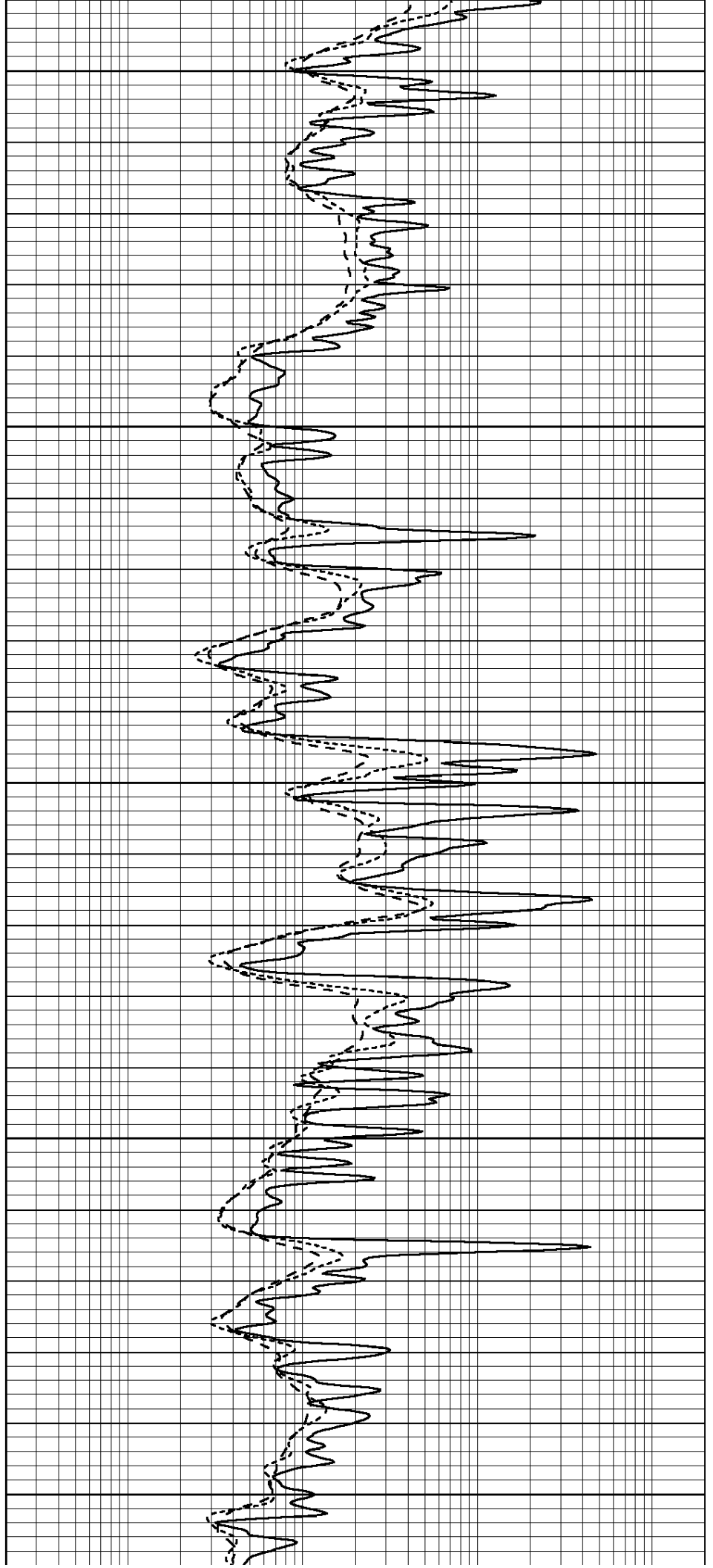
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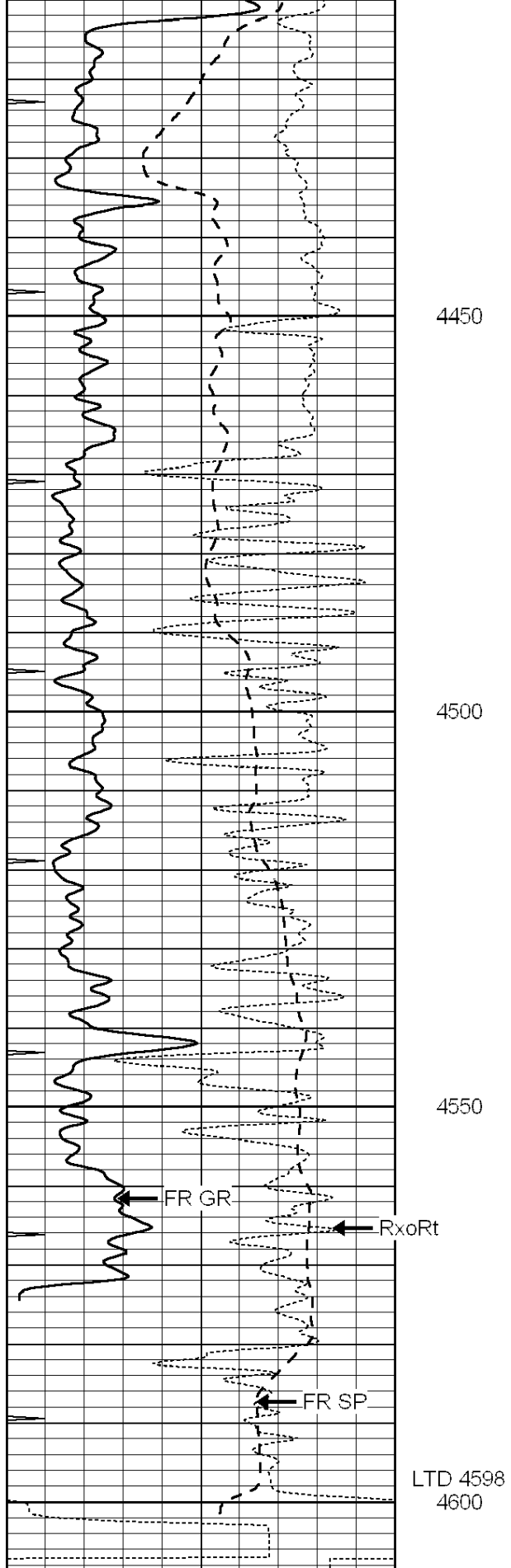
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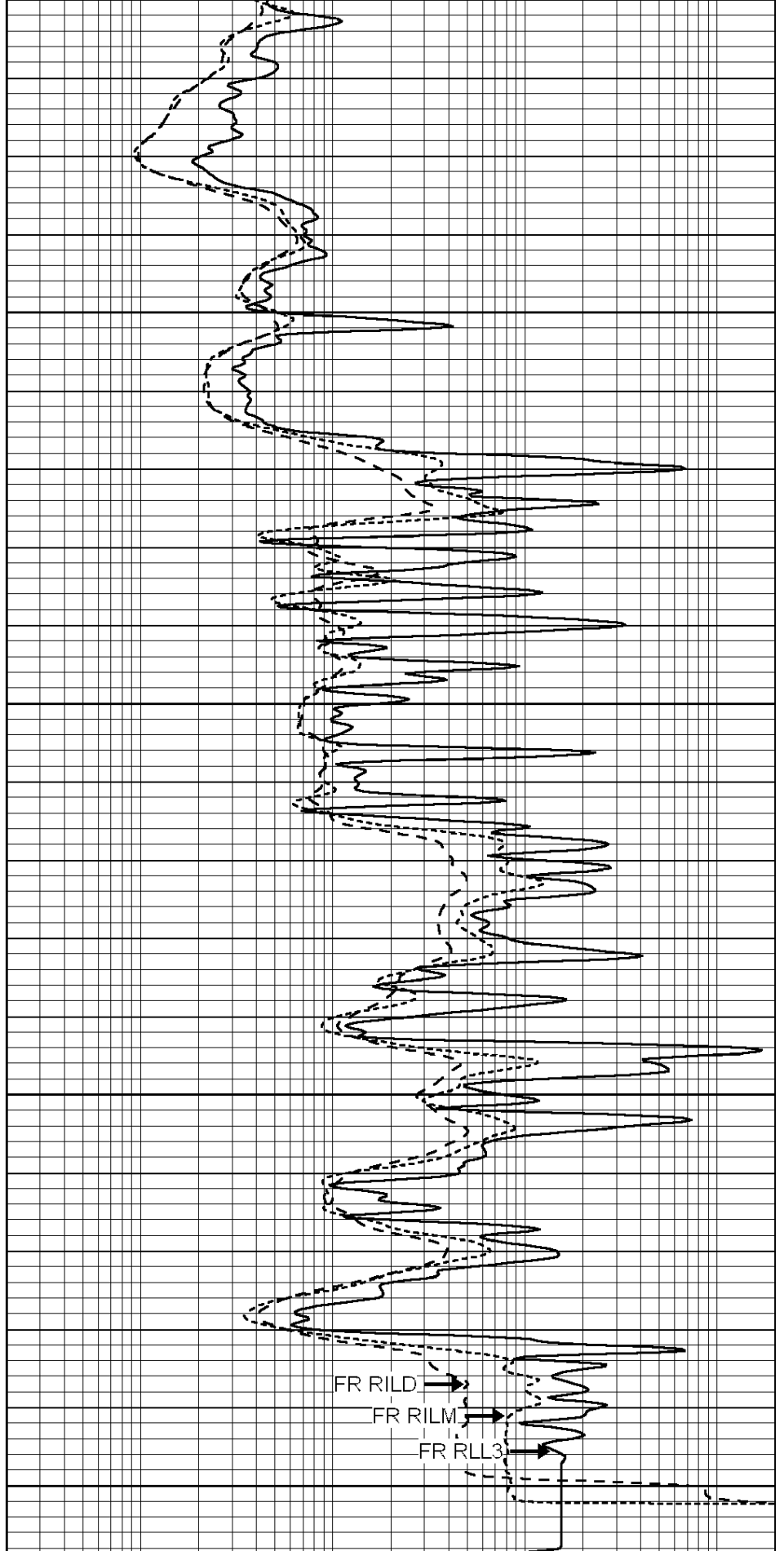
4400





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

LTD 4598
4600



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



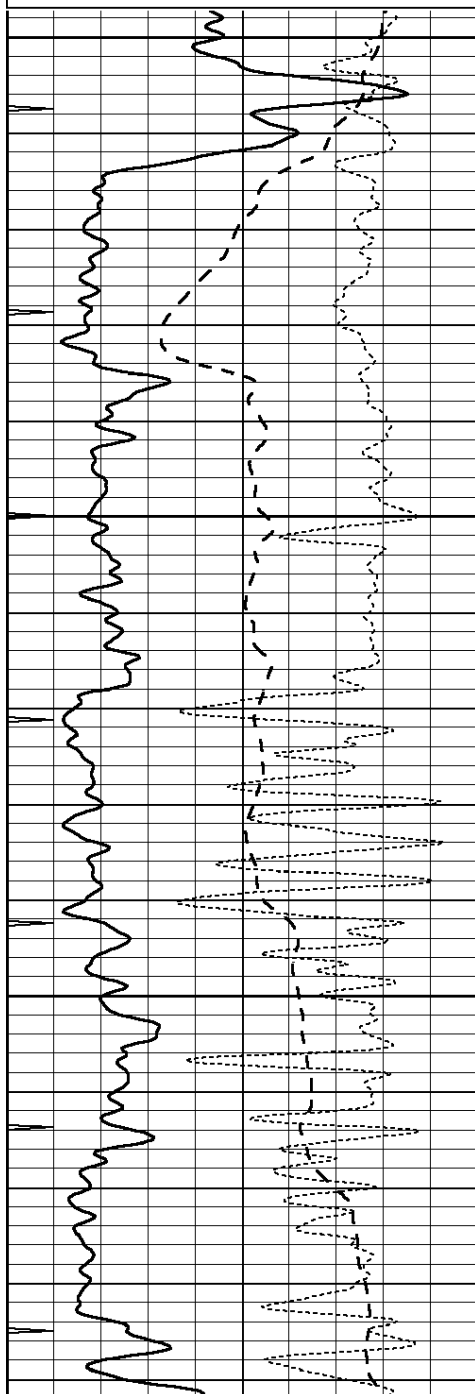
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 005987ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: dil
 Dataset Creation: Sat Oct 02 14:17:02 2010 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

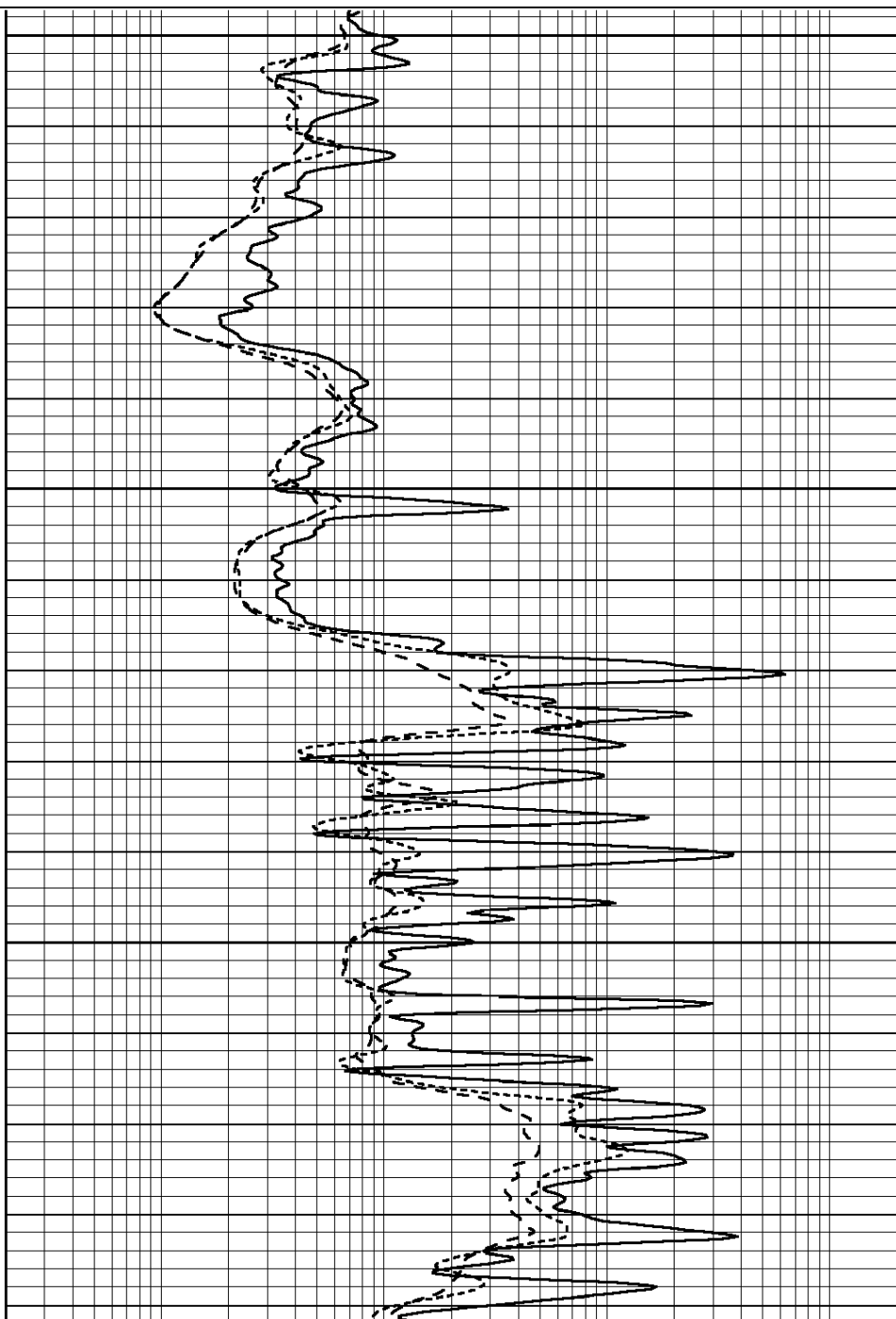
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

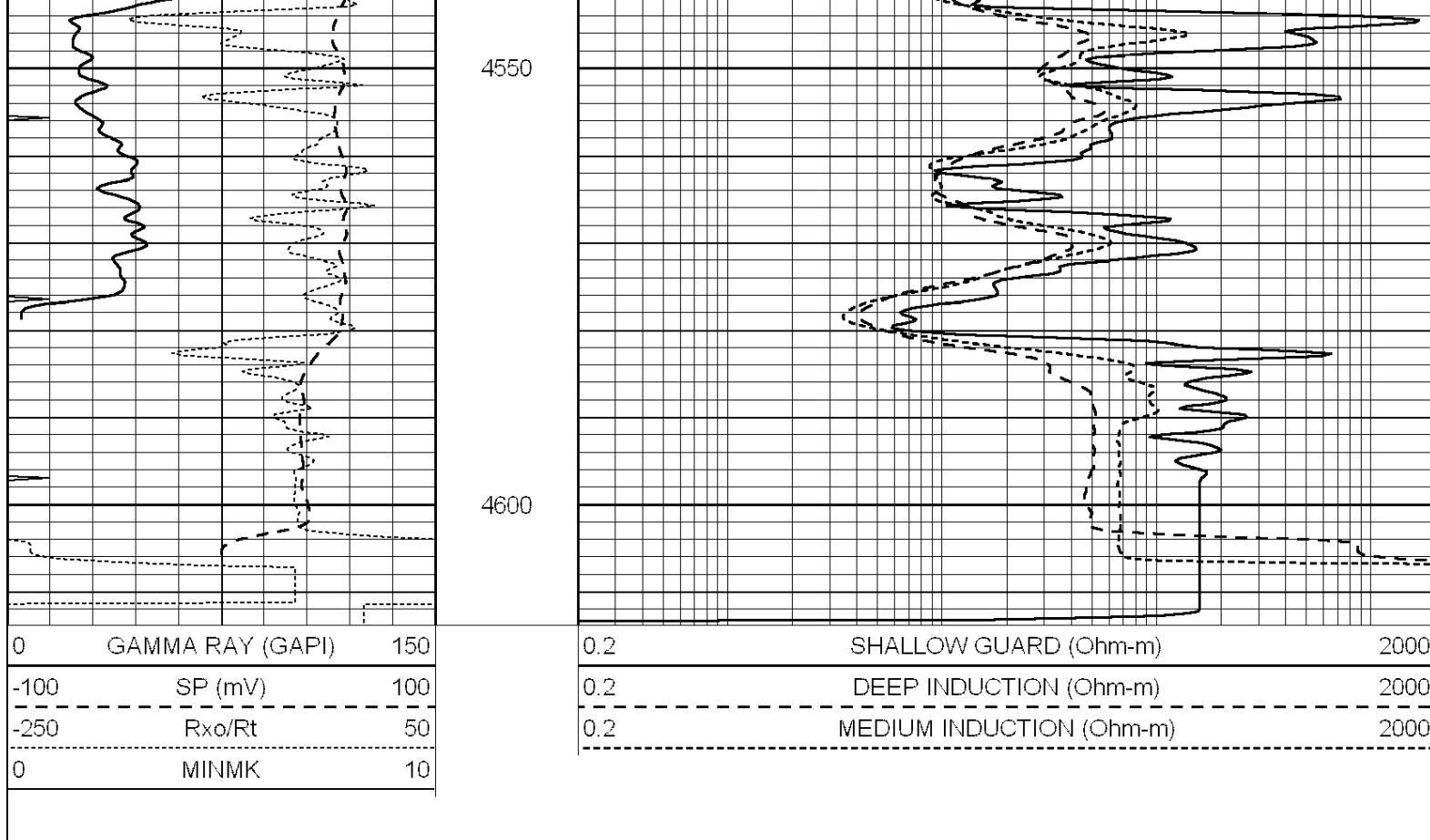


4400

4450

4500





Calibration Report

Database File: 005987ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Sat Oct 02 15:07:34 2010 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL6-GEAR
 Performed: Wed Sep 29 05:31:59 2010

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.001	0.644	V	0.000	400.000	mmho/m	660.000	0.000
Medium	0.020	0.738	V	0.000	462.500	mmho/m	740.000	-21.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	V	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	V	0.000	1.000	mmho/m	1.000	0.000

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	1.2	7.1	
High Ref	3.2	14.0	
	Gain: 3.5		Offset: 2.8

Compensated Neutron Calibration Report

Serial Number:	NEU_4I
Tool Model:	G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	996.00 cps	1000.00 cps	1.0000
Long Space	977.00 cps	1000.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR3
Tool Model:	OPEN
Performed:	Wed Sep 29 08:29:30 2010
Calibrator Value:	200.0 GAPI
Background Reading:	3.0 cps
Calibrator Reading:	186.0 cps
Sensitivity:	1.8500 GAPI/cps