



**SUPERIOR  
Hays,  
Kansas**

**DUAL  
INDUCTION  
LOG**

Company LOTUS OPERATING COMPANY, LLC.  
Well ROSE #3  
Field STRANATHAN  
County BARBER State KANSAS

Company LOTUS OPERATING COMPANY, LLC.  
Well ROSE #3  
Field STRANATHAN  
County BARBER  
State KANSAS

Location: API #: 15-007-23921  
50' S OF  
E/2 - NE - SE  
SEC 25 TWP 34S RGE 12W  
Permanent Datum GROUND LEVEL Elevation 1404  
Log Measured From KELLY BUSHING 13' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
SONIC/MEL  
Elevation  
K.B. 1417  
D.F.  
G.L. 1404

Date	8-8-12
Run Number	ONE
Depth Driller	5425
Depth Logger	5426
Bottom Logged Interval	5424
Top Log Interval	00
Casing Driller	1140
Casing Logger	1140
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.5 / 48
pH / Fluid Loss	9.0 / 11.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.75 @ 86F
Rmf @ Meas. Temp	0.56 @ 86F
Rmc @ Meas. Temp	0.90 @ 86F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.500 @ 129F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	11:45 A.M.
Maximum Recorded Temperature	129F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	TIM HELLMAN

<<< Fold Here >>>

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: MEDICINE LODGE, S TO HAWKINS RD., 1/2S, W INTO.

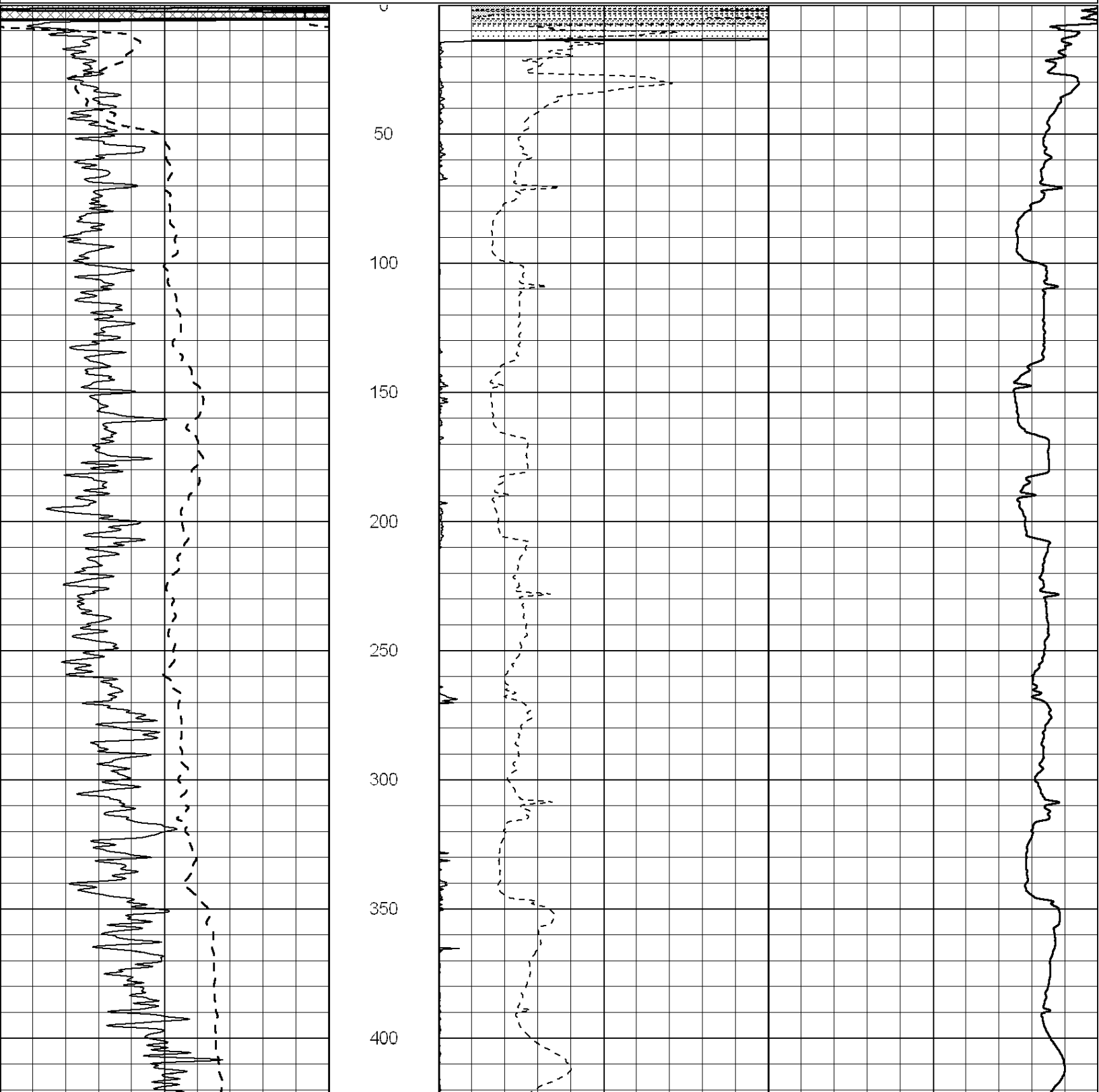


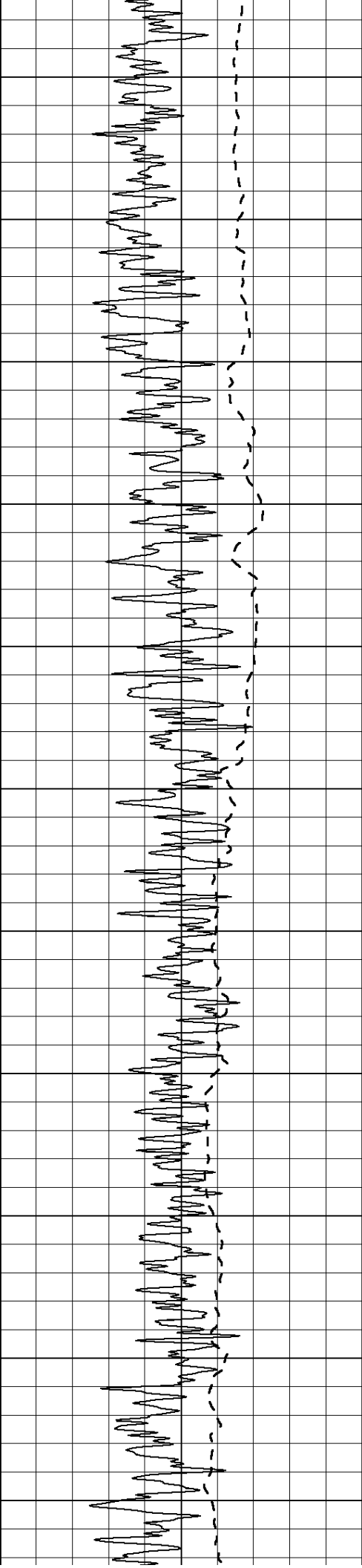
**SUPERIOR  
Hays,  
Kansas**

**MAIN SECTION**

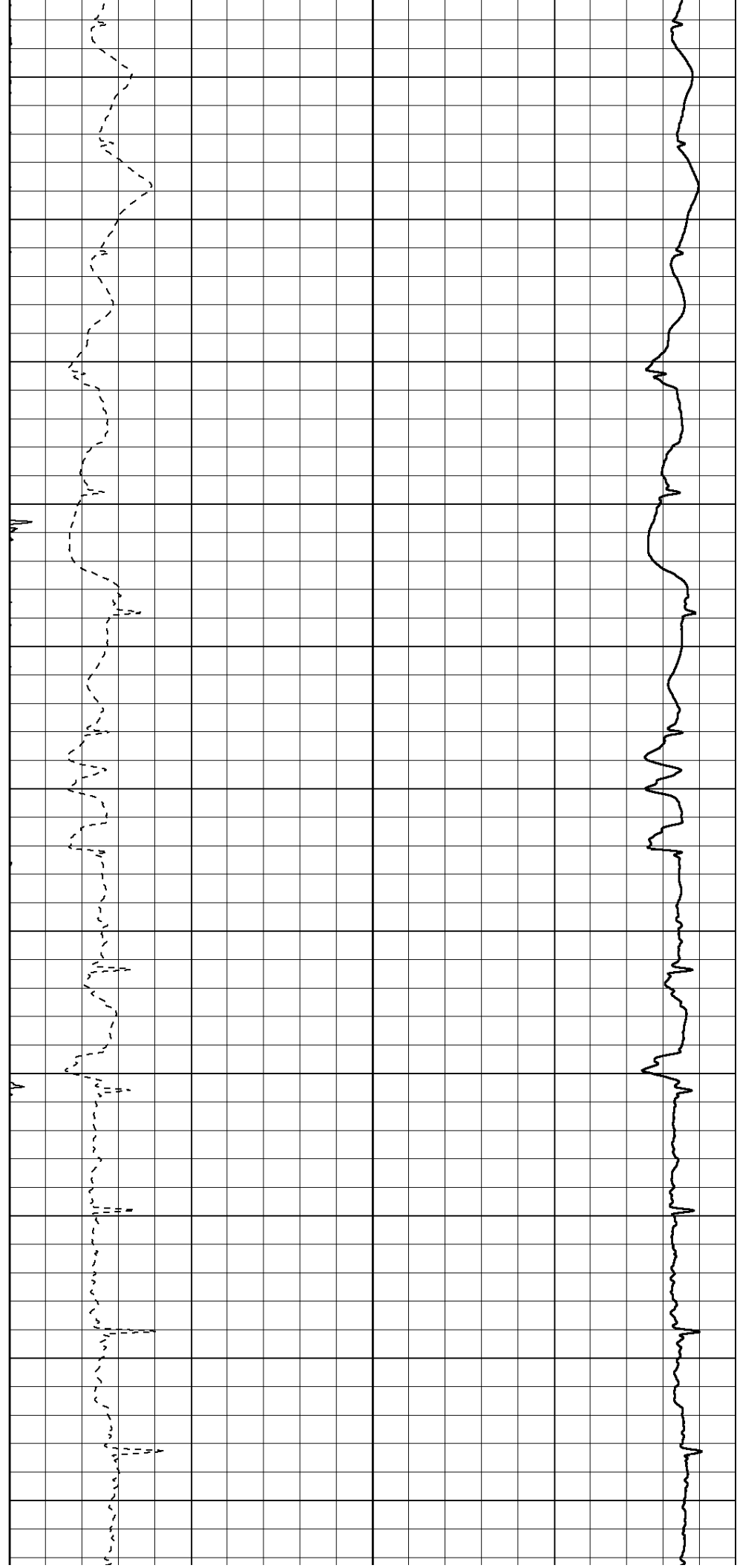
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 Dataset Creation: Wed Aug 08 14:30:03 2012  
 Charted by: Depth in Feet scaled 1:600

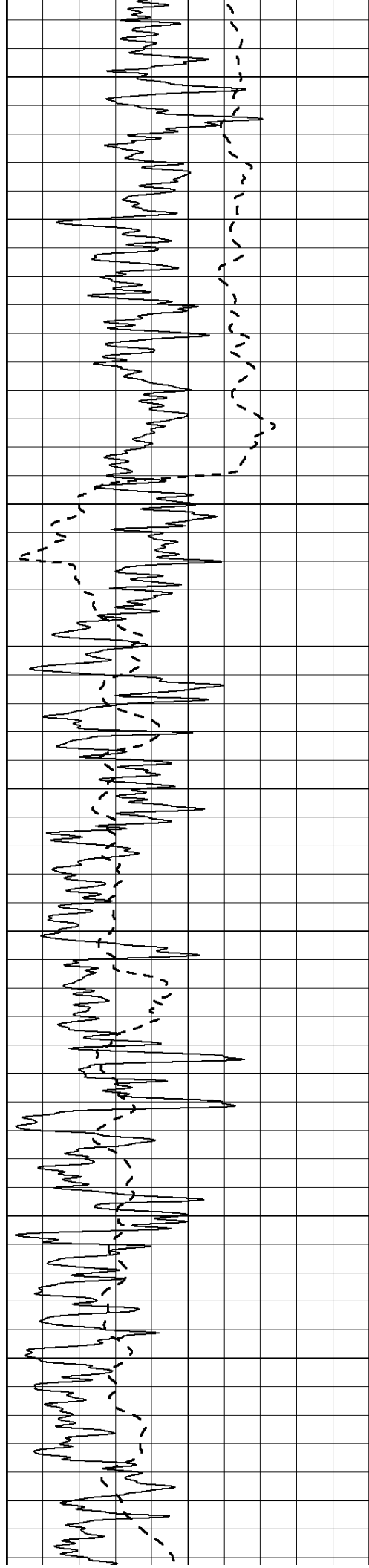
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			0	Deep Induction (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500



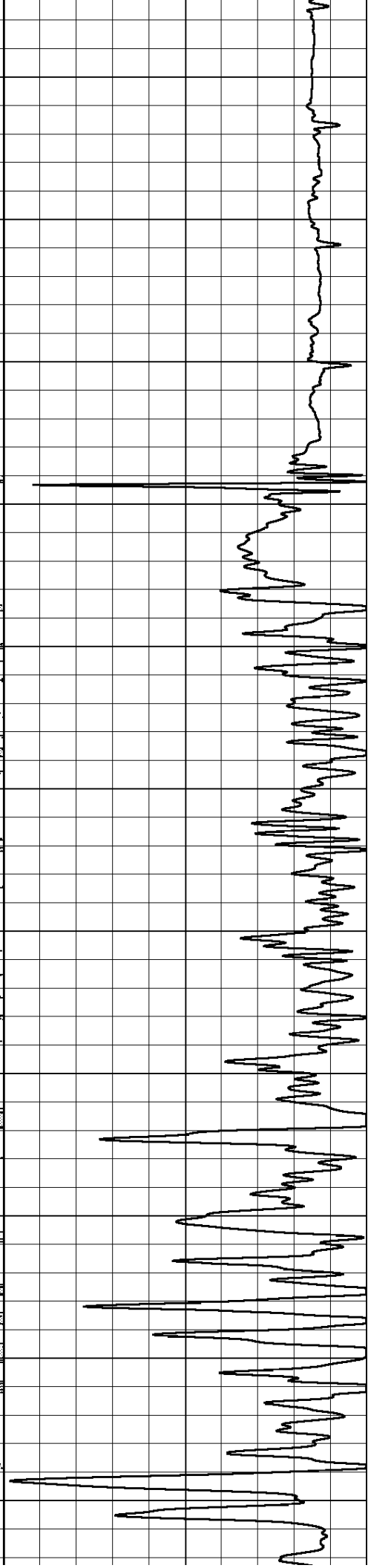
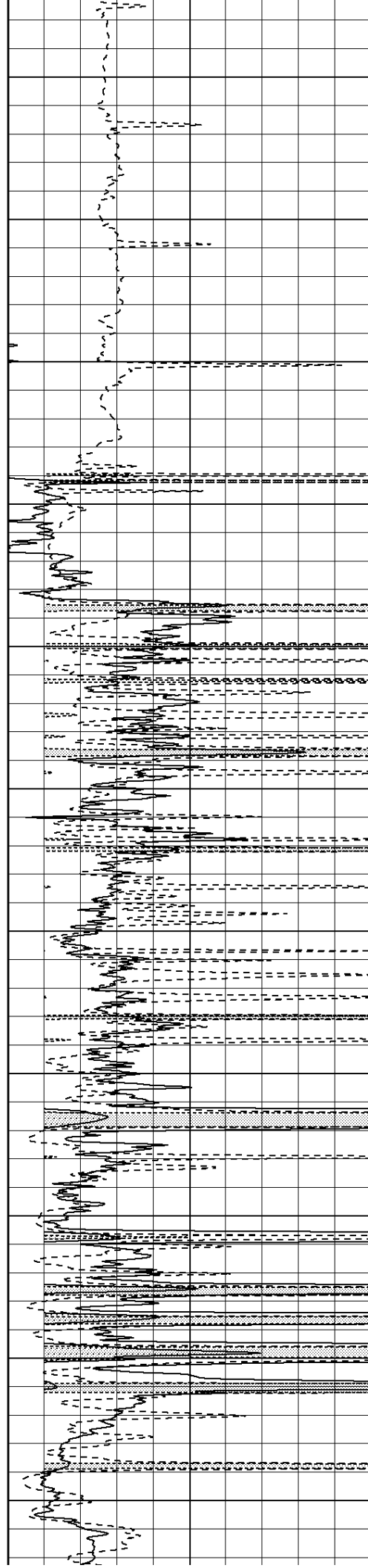


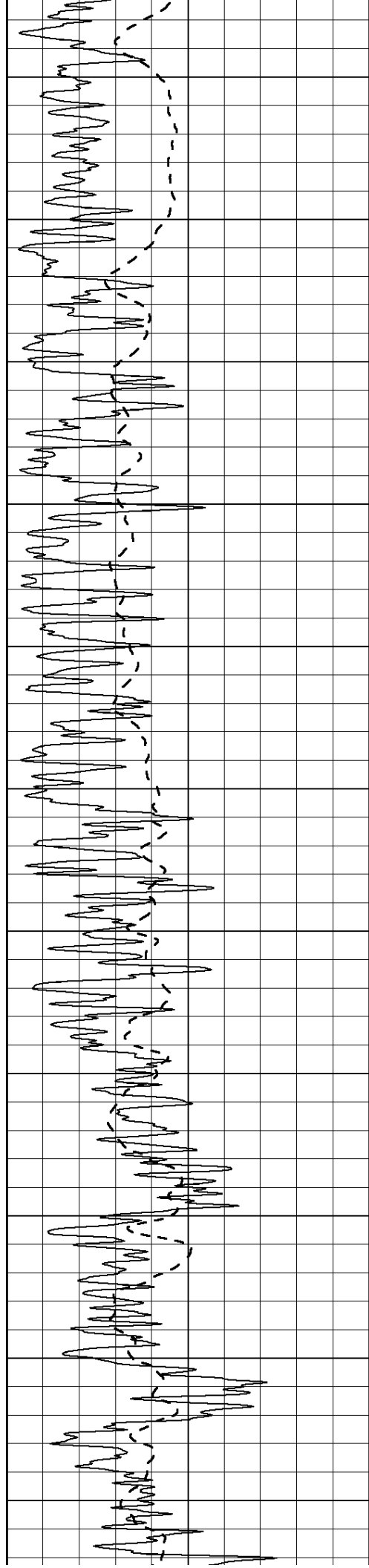
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1400  
1450  
1500





1550

1600

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1700

1750

1800

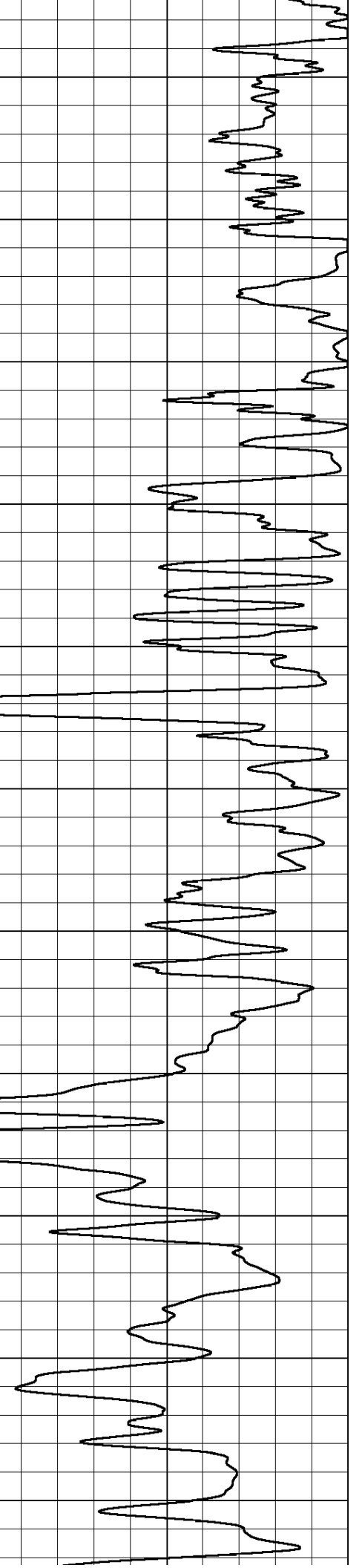
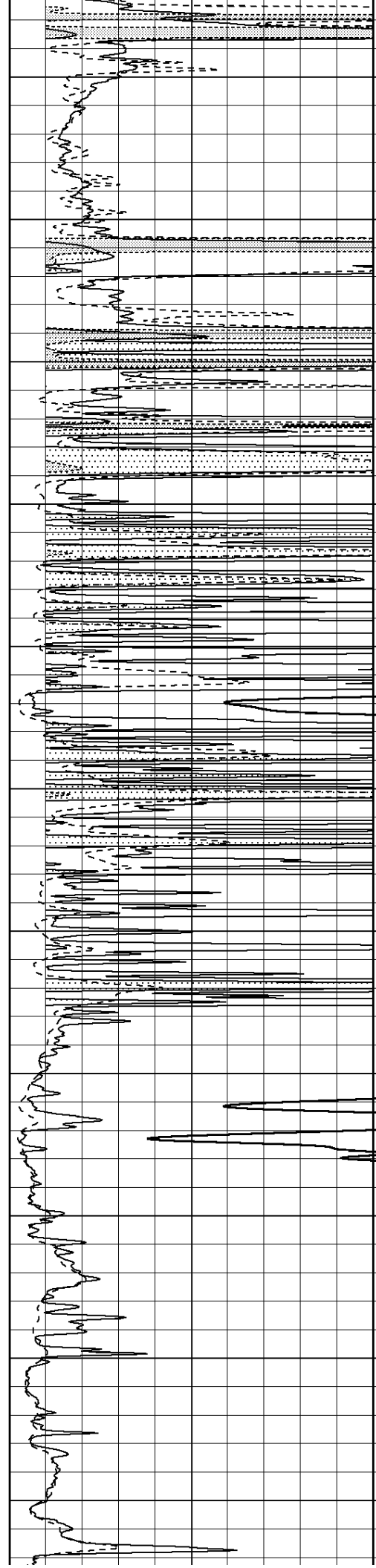
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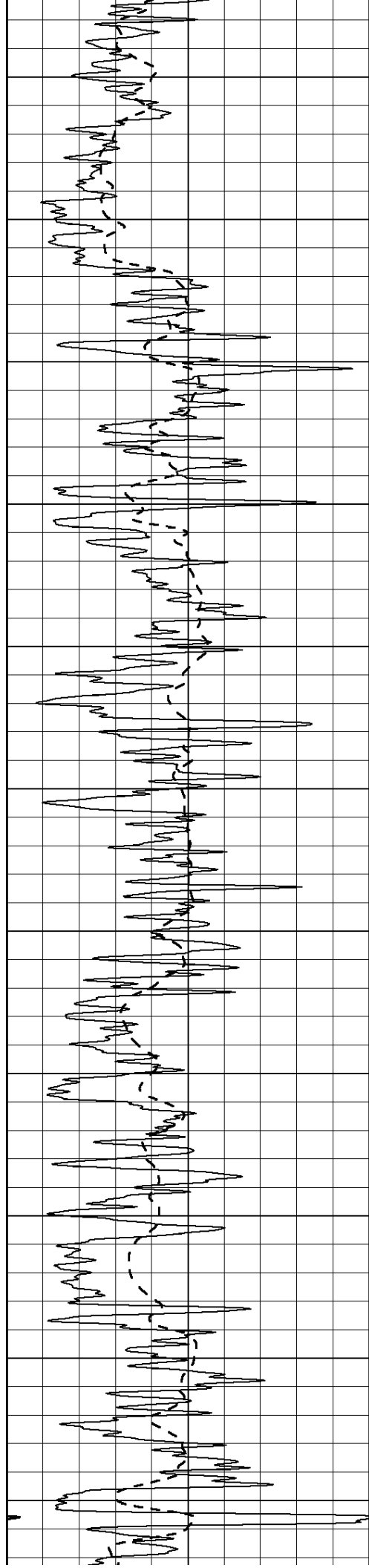
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2350

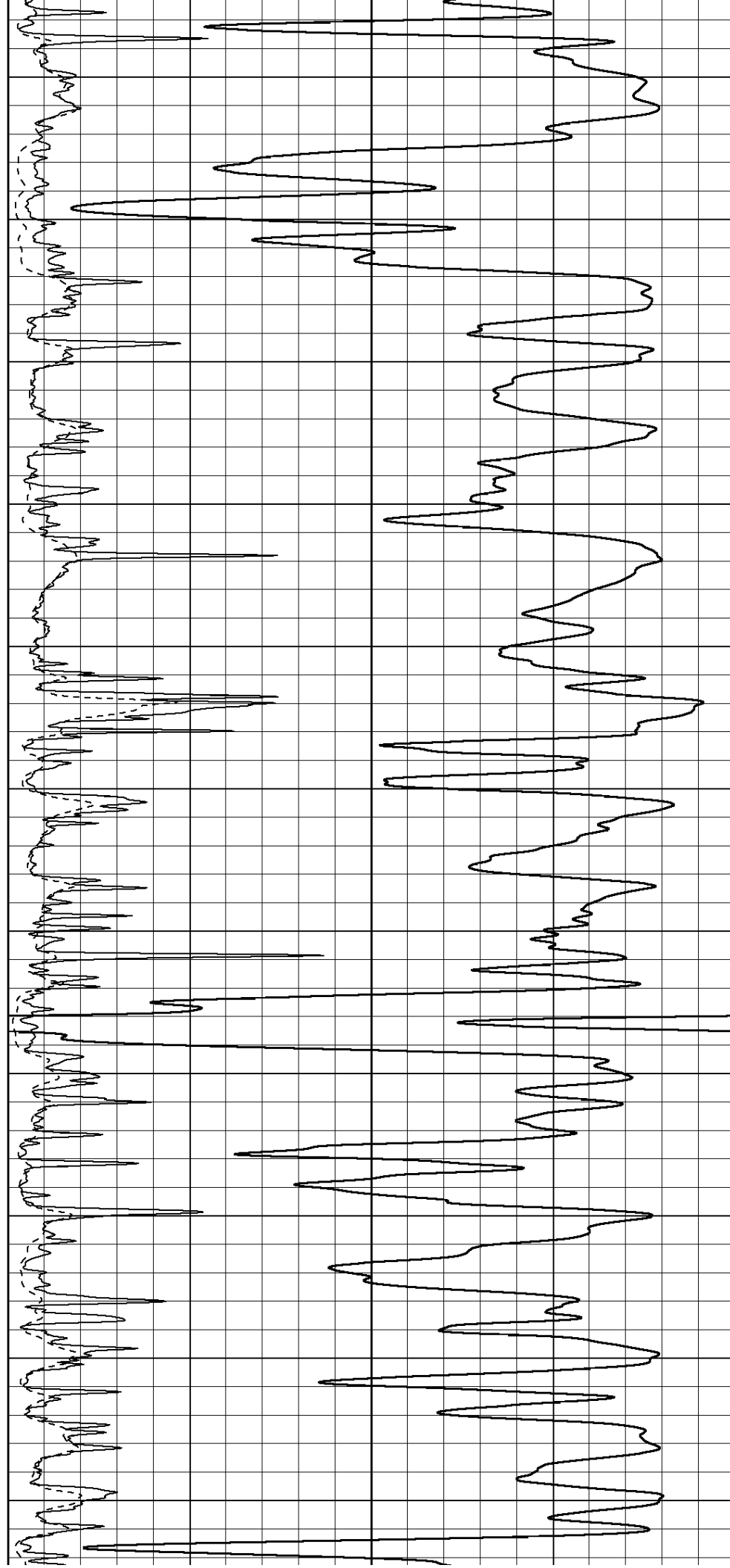
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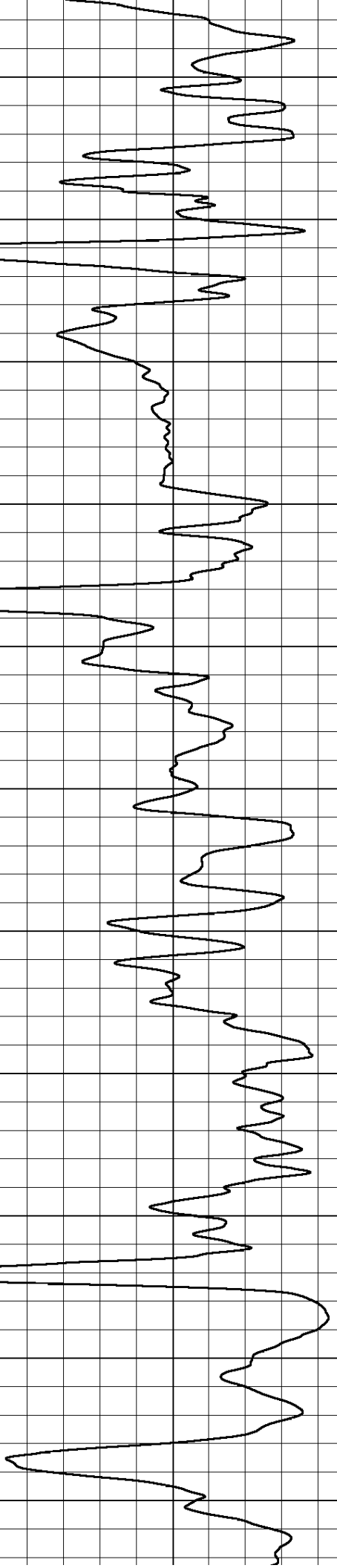
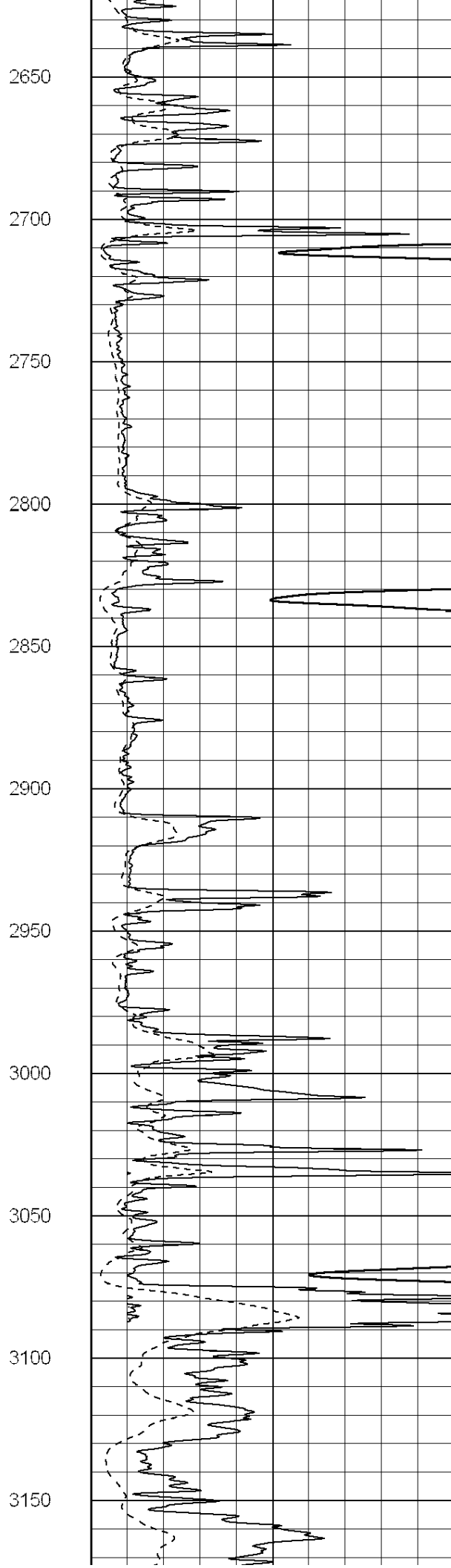
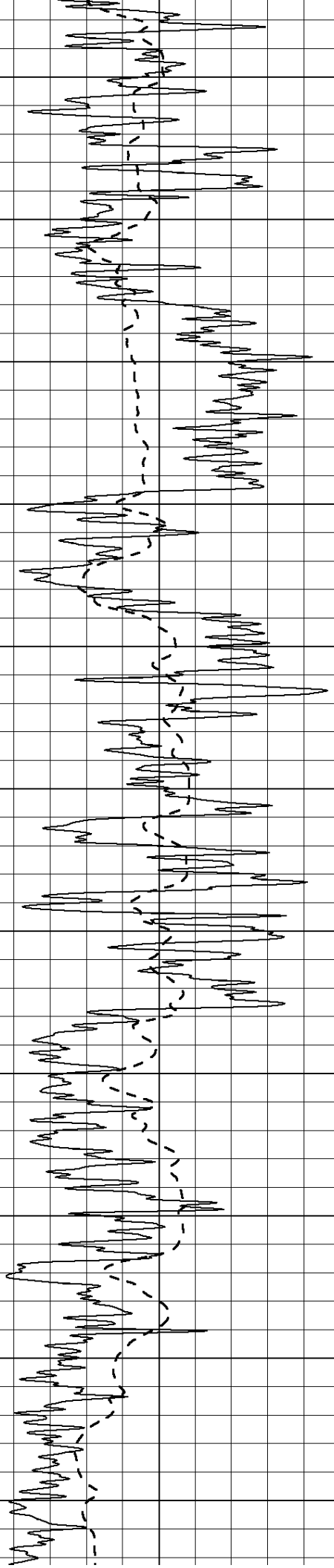
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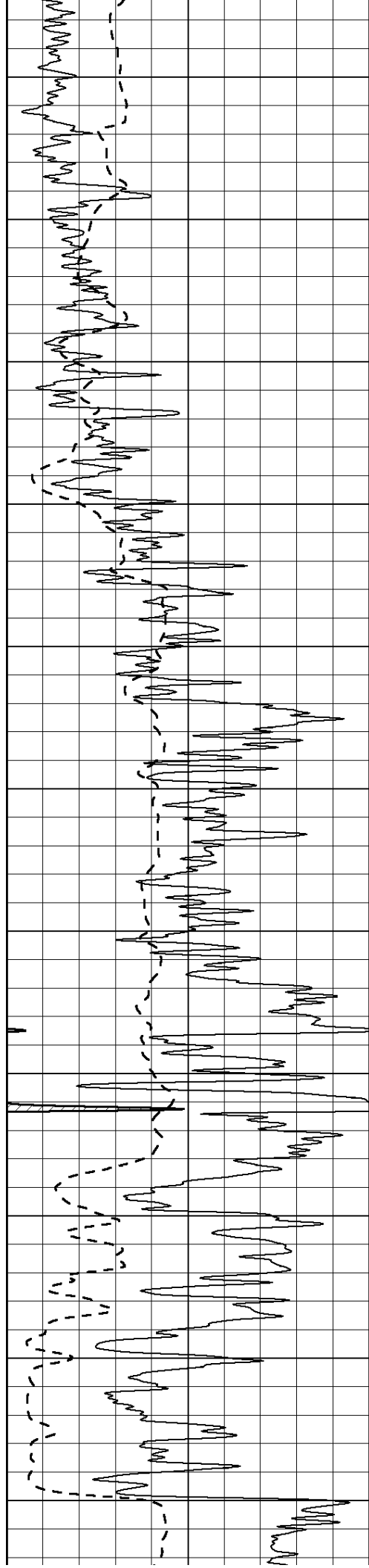
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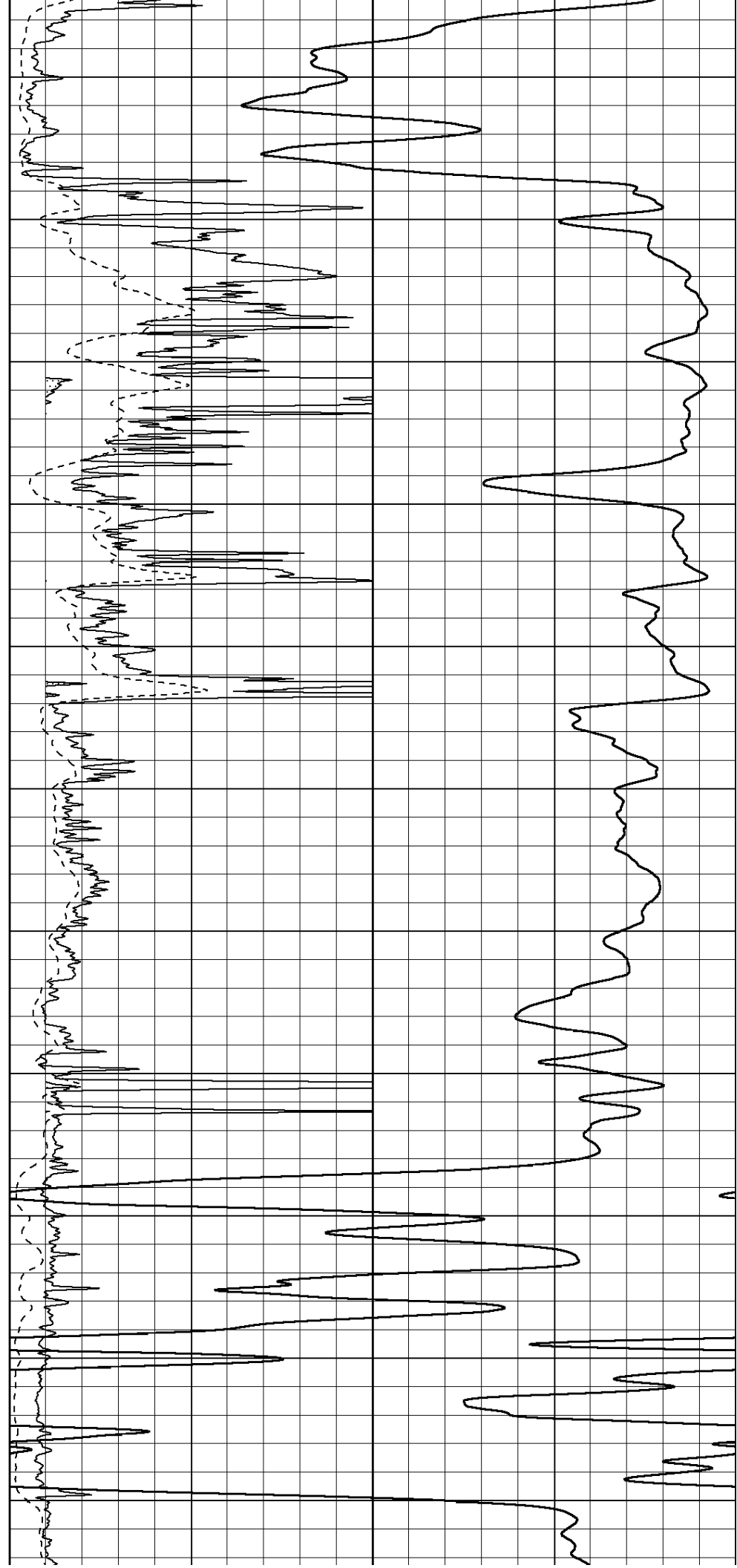
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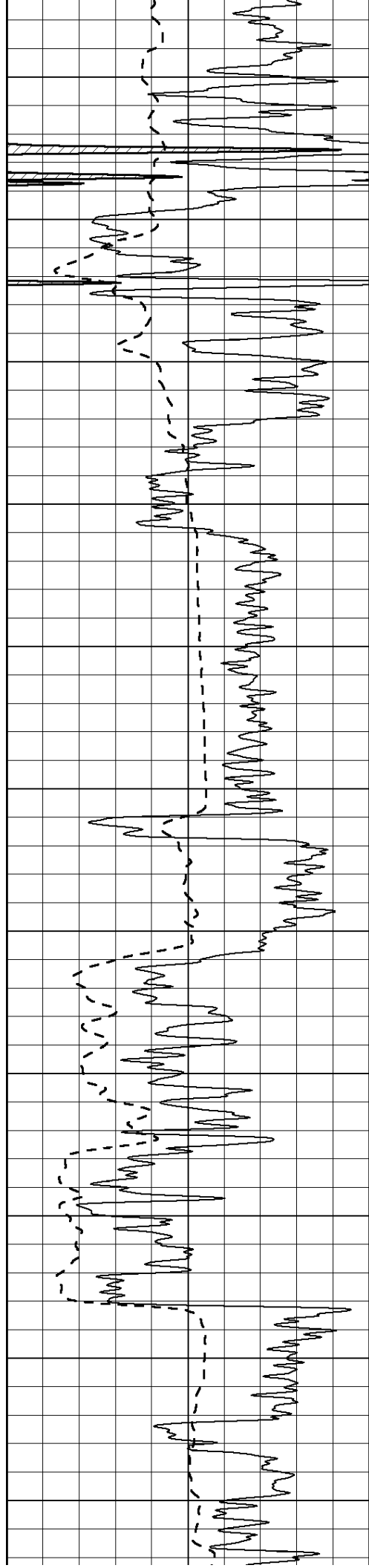






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3750

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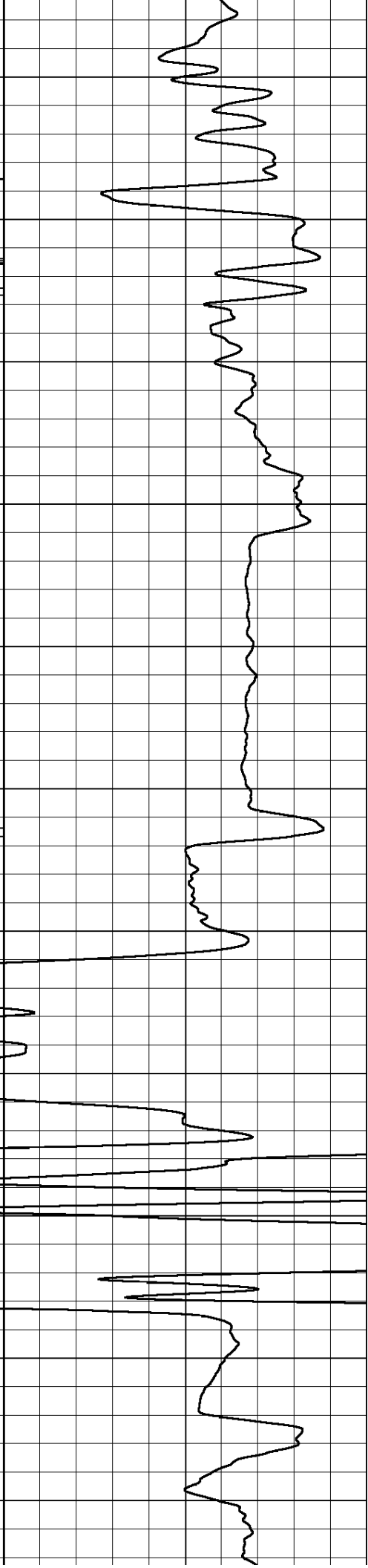
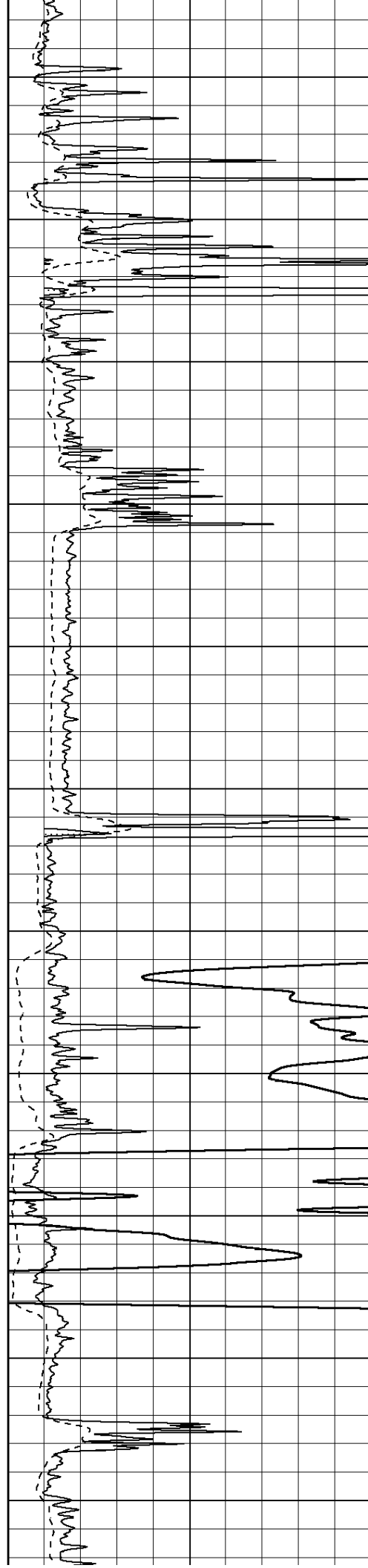
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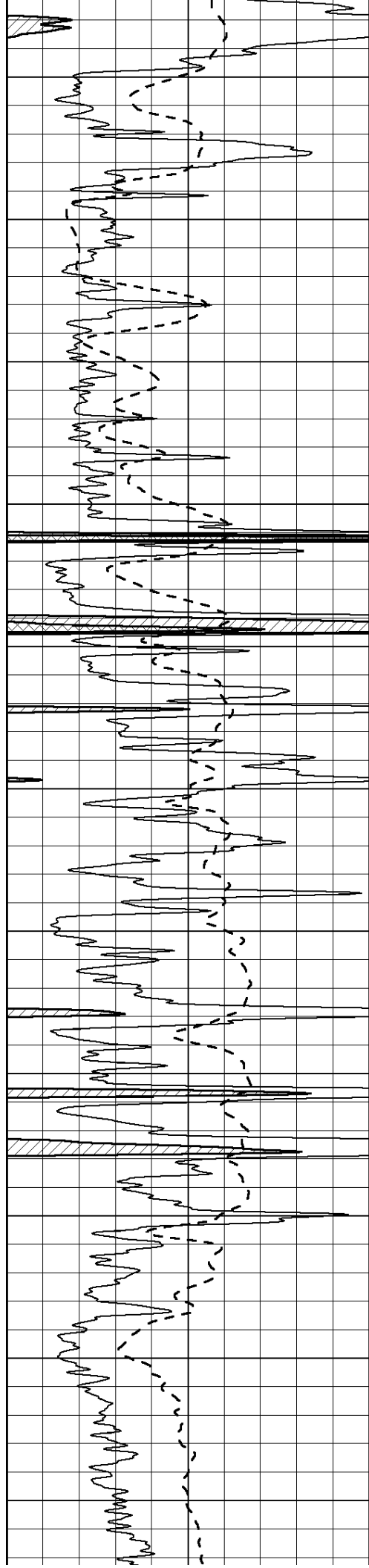
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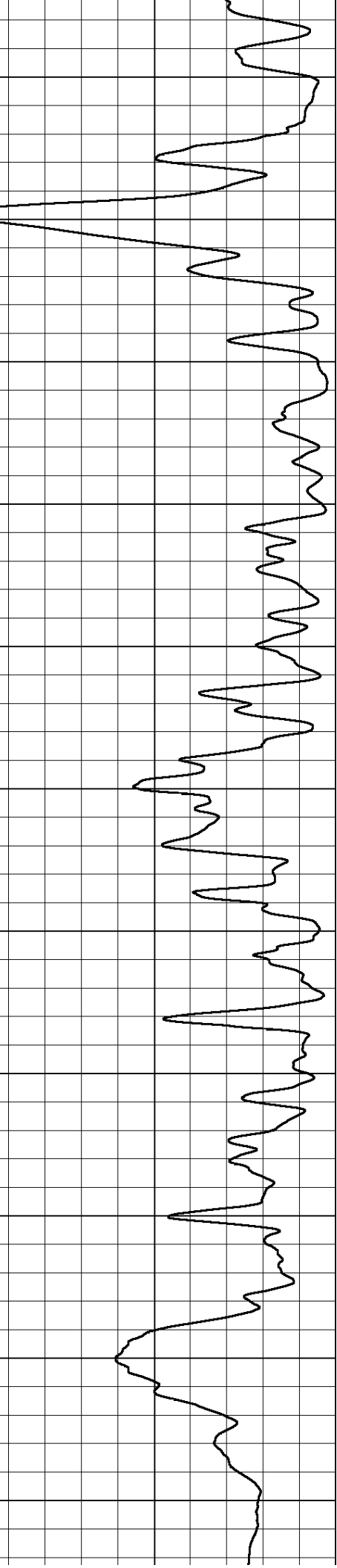
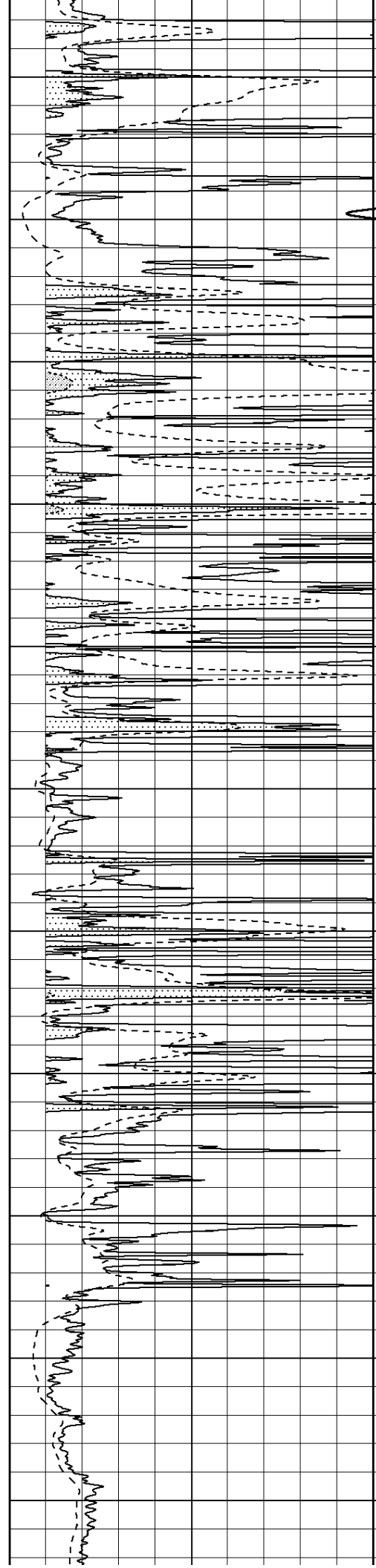
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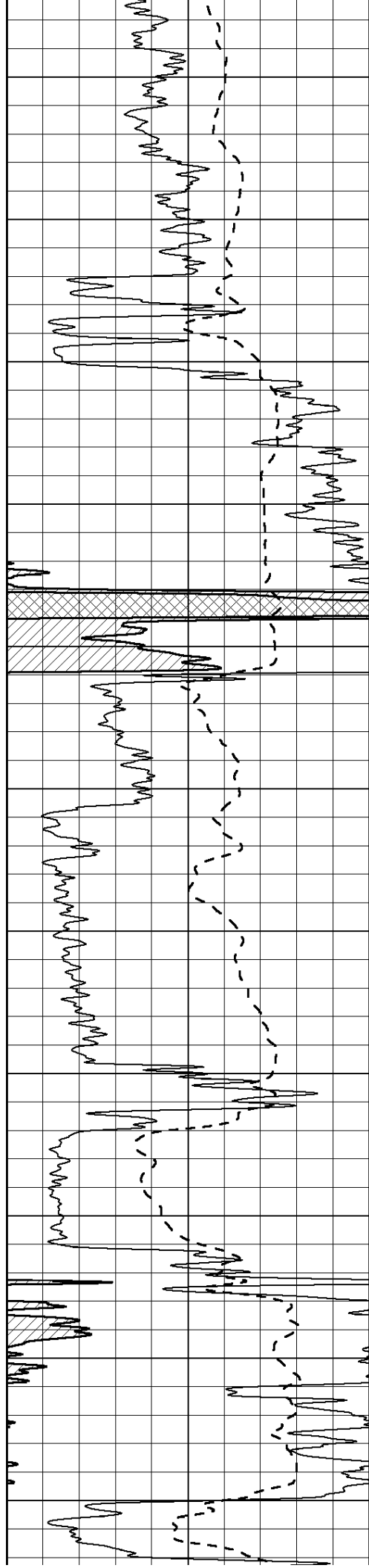
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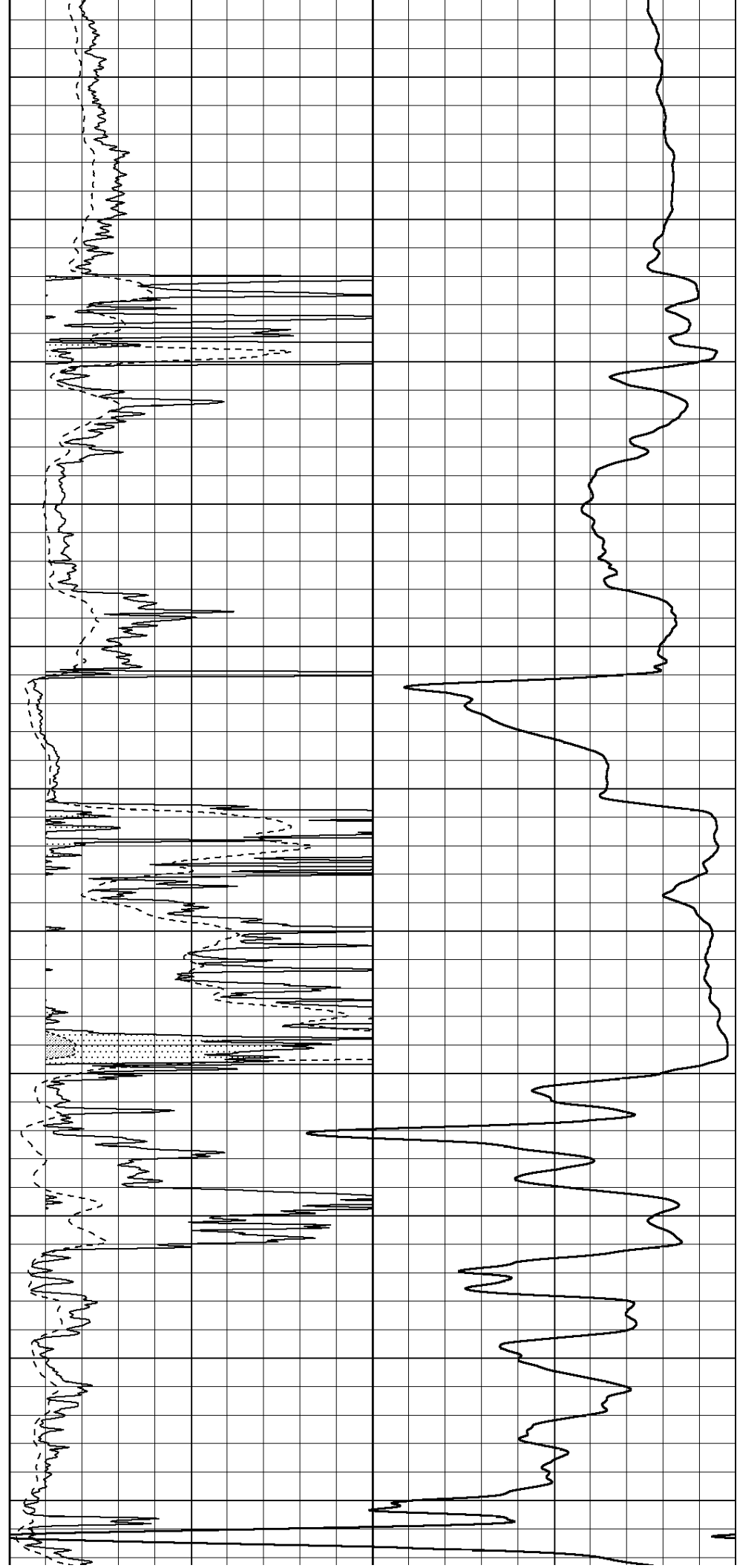


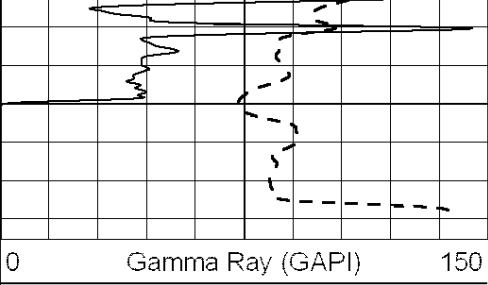
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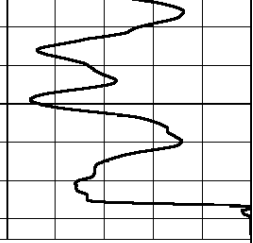
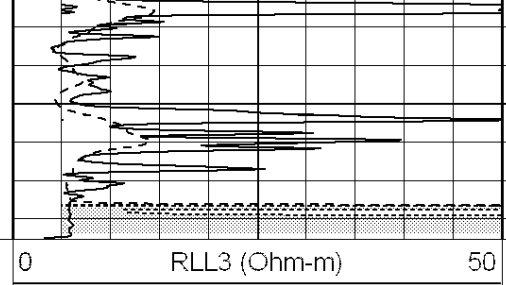


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5100  
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5200  
5250  
5300  
5350





5400



0 Gamma Ray (GAPI) 150

0 RLL3 (Ohm-m) 50

0 Deep Induction (Ohm-m) 50

1000 CILD (mmho/m) 0

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500



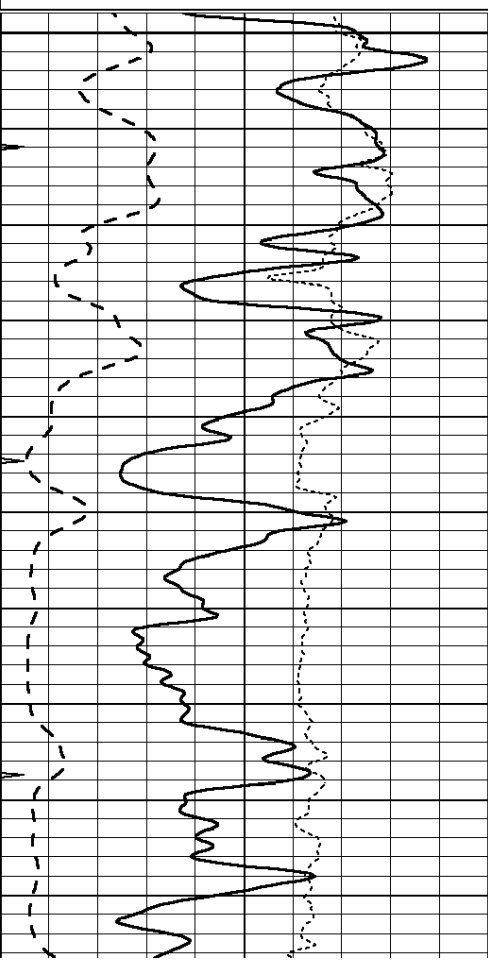
SUPERIOR  
Hays,  
Kansas

# MAIN SECTION

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 Presentation Format: dil  
 Dataset Creation: Wed Aug 08 14:30:03 2012  
 Charted by: Depth in Feet scaled 1:240

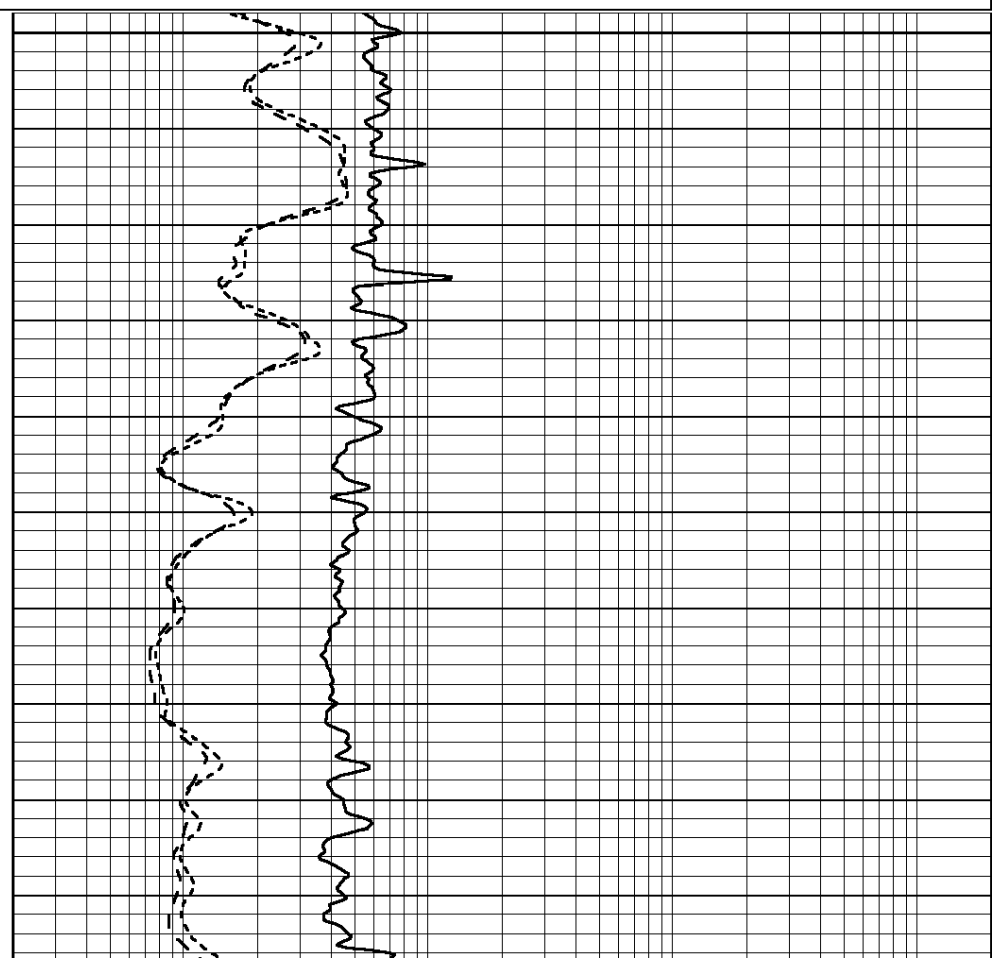
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

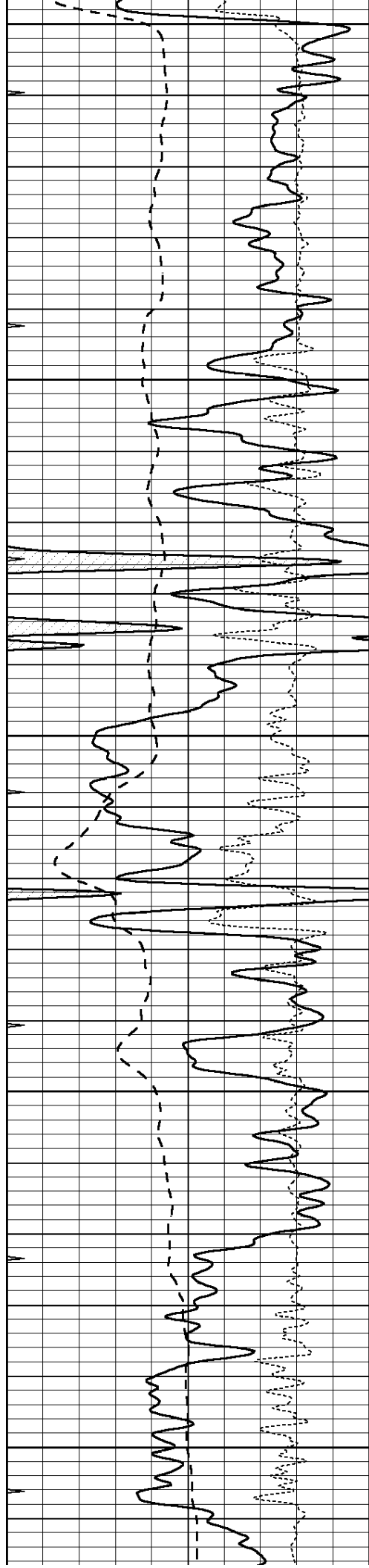
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3600

3650





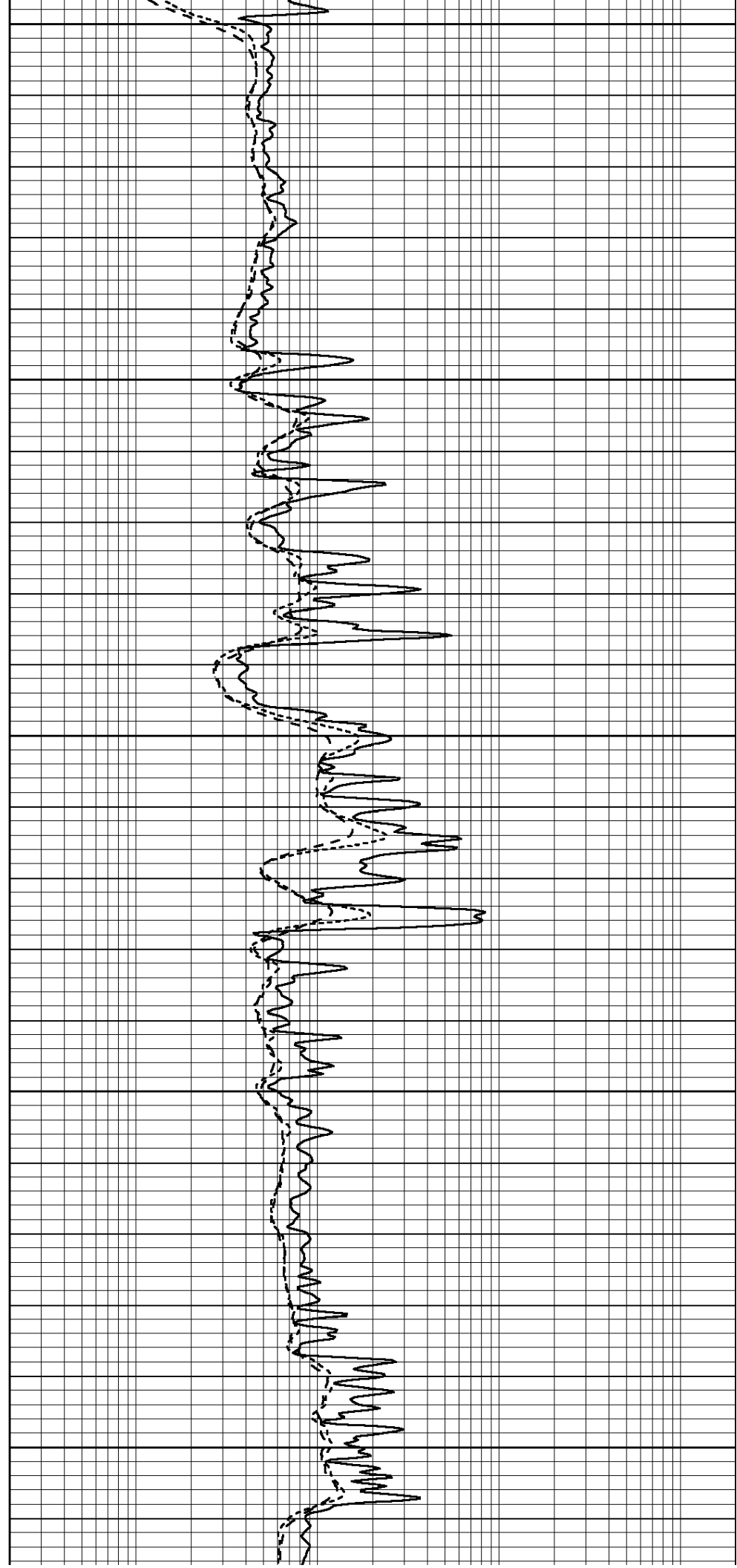
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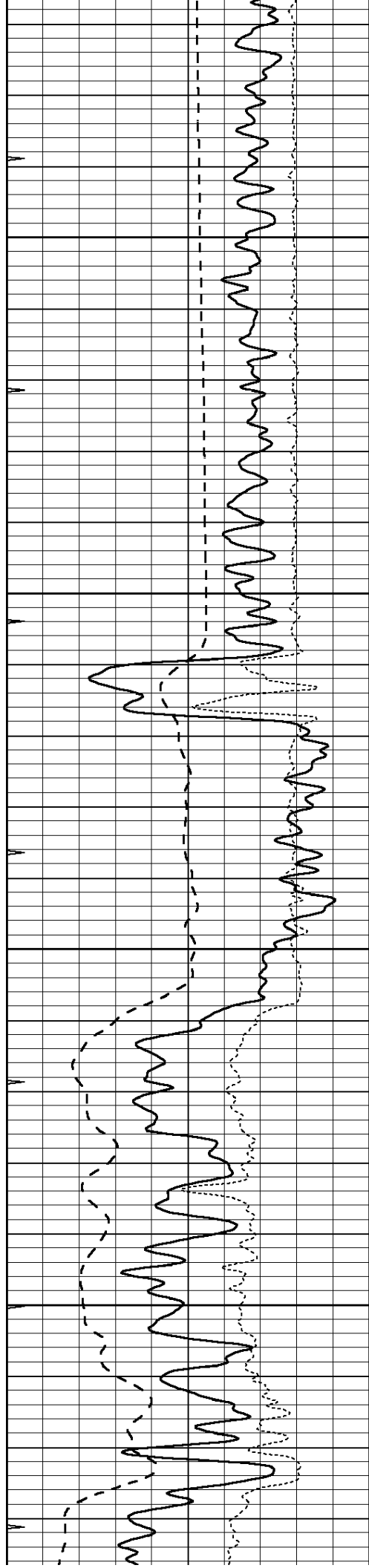
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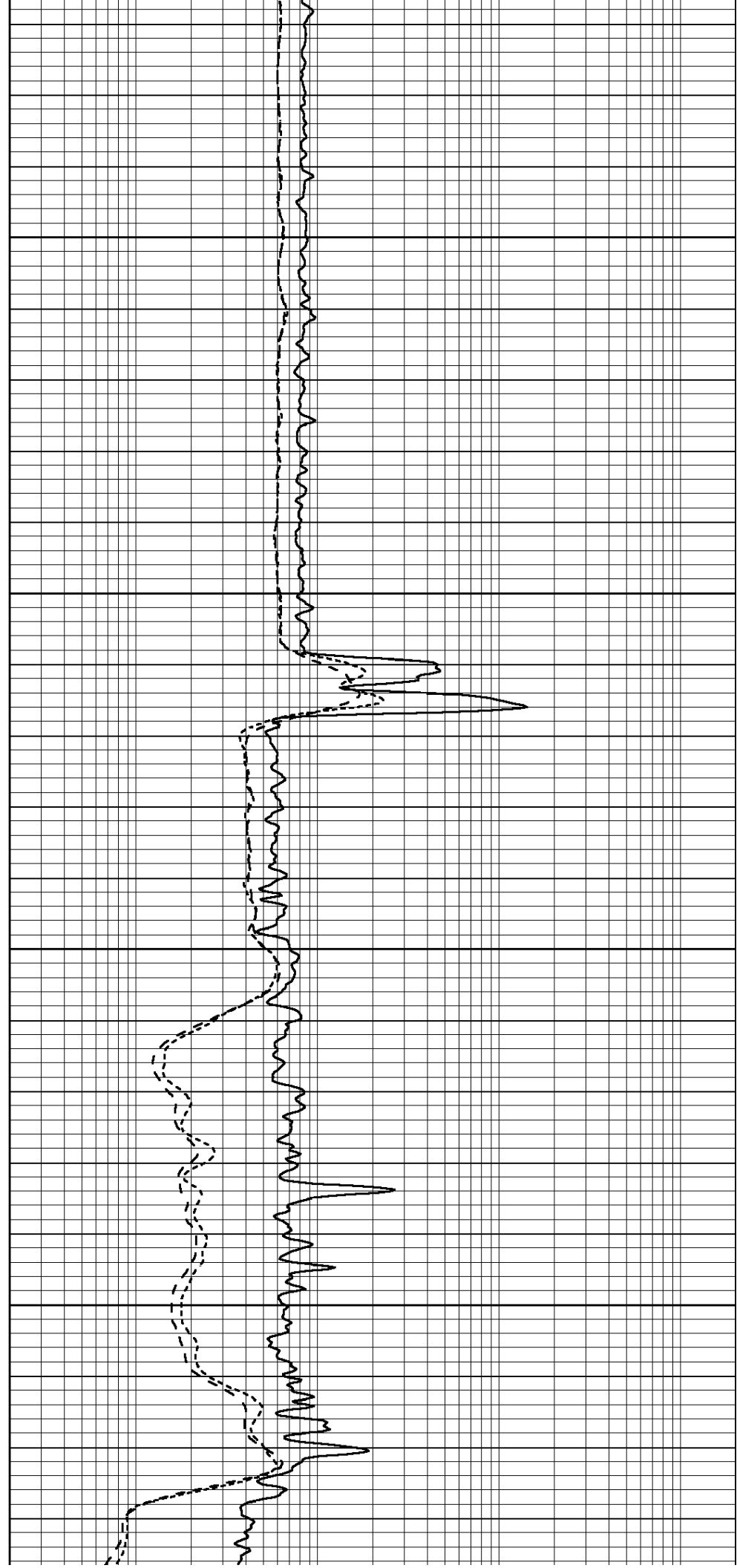


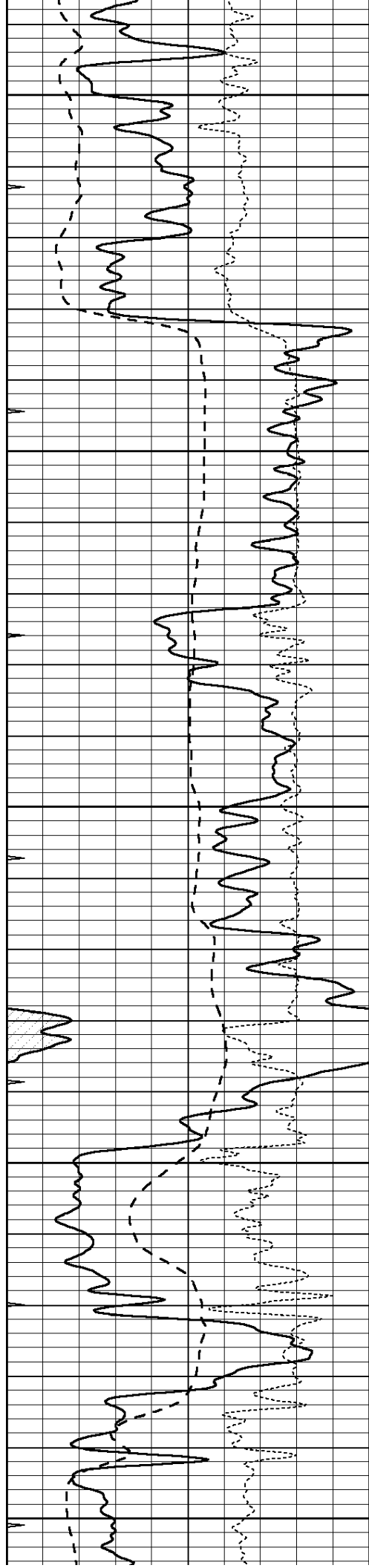
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4050

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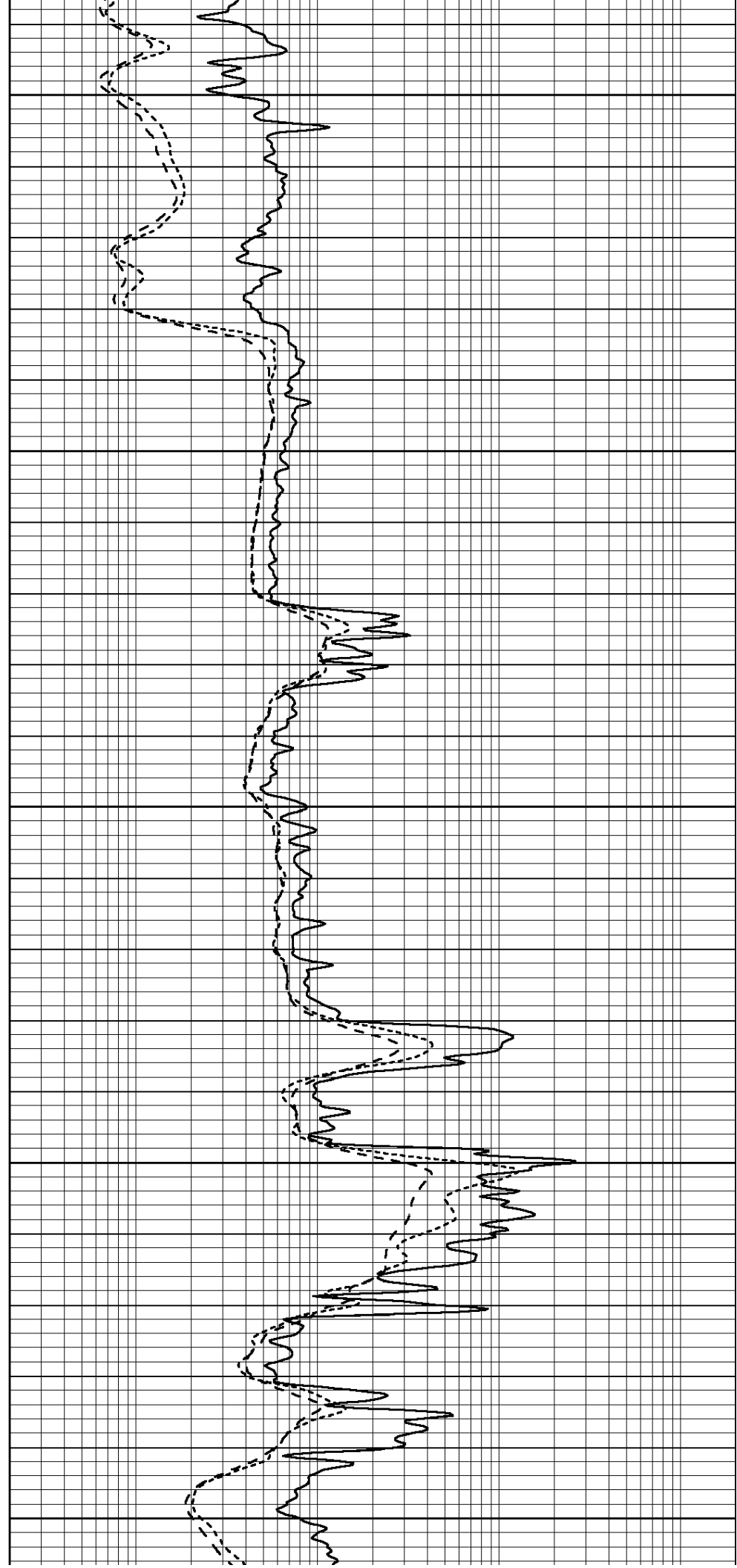
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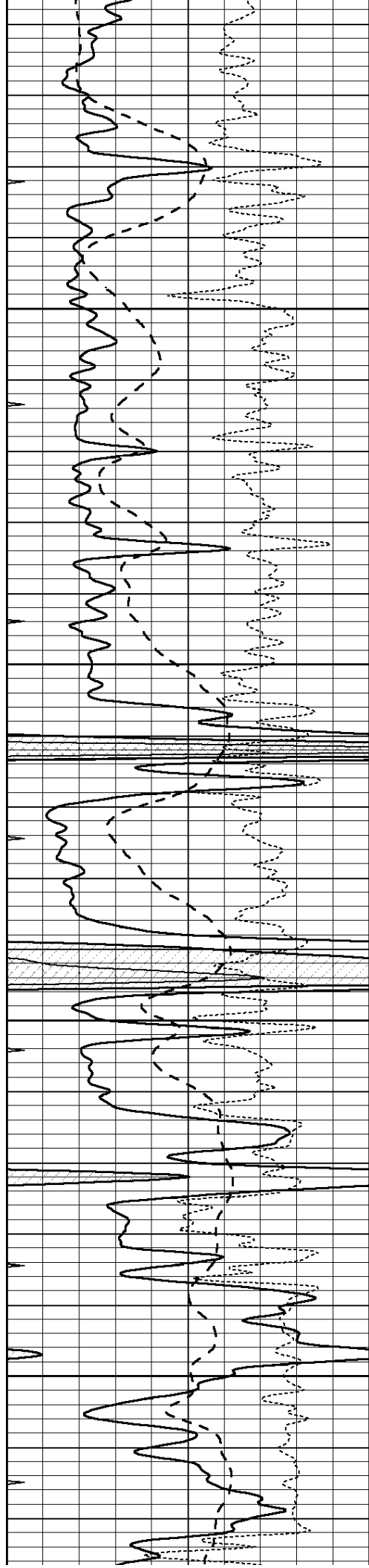
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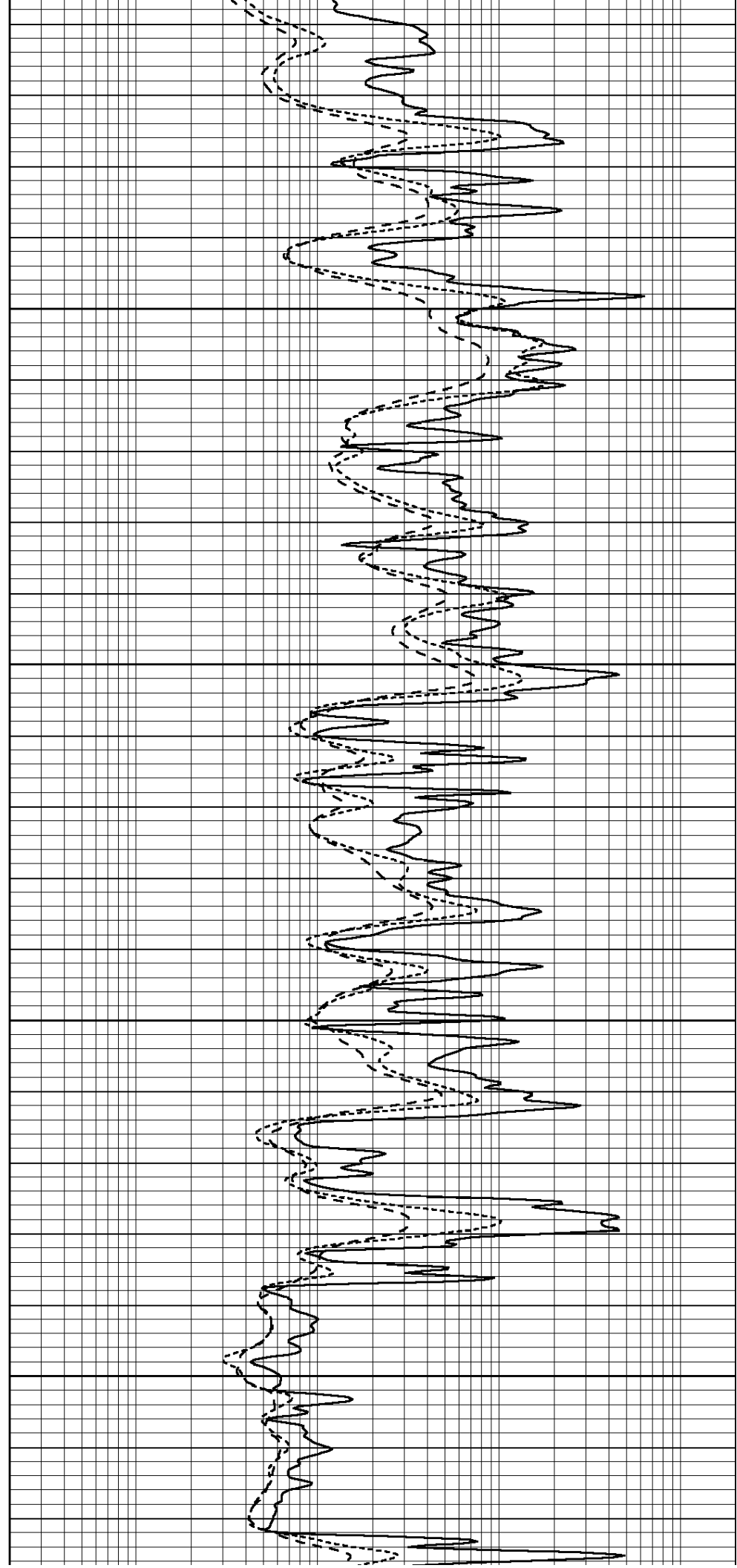


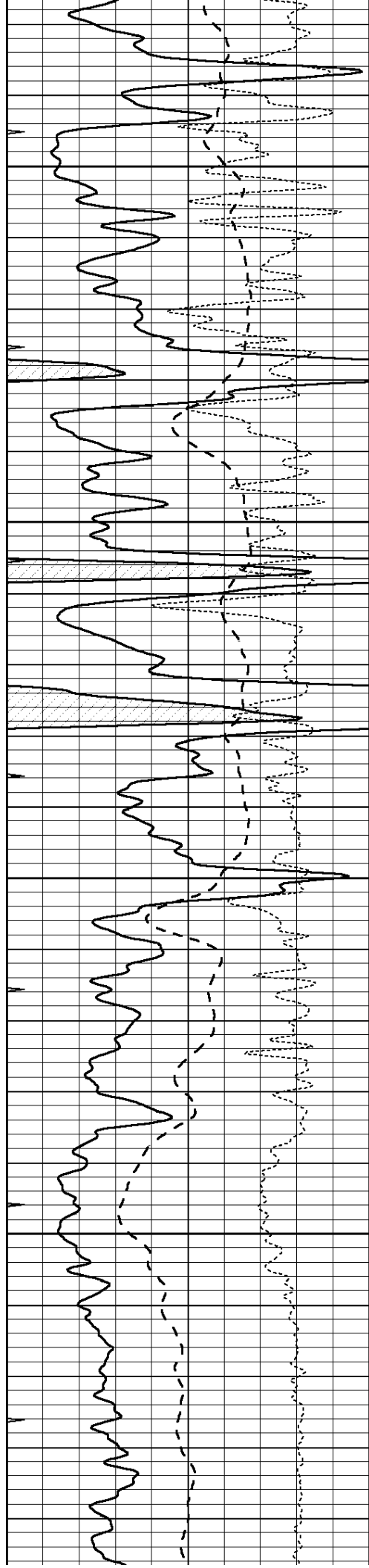
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4550



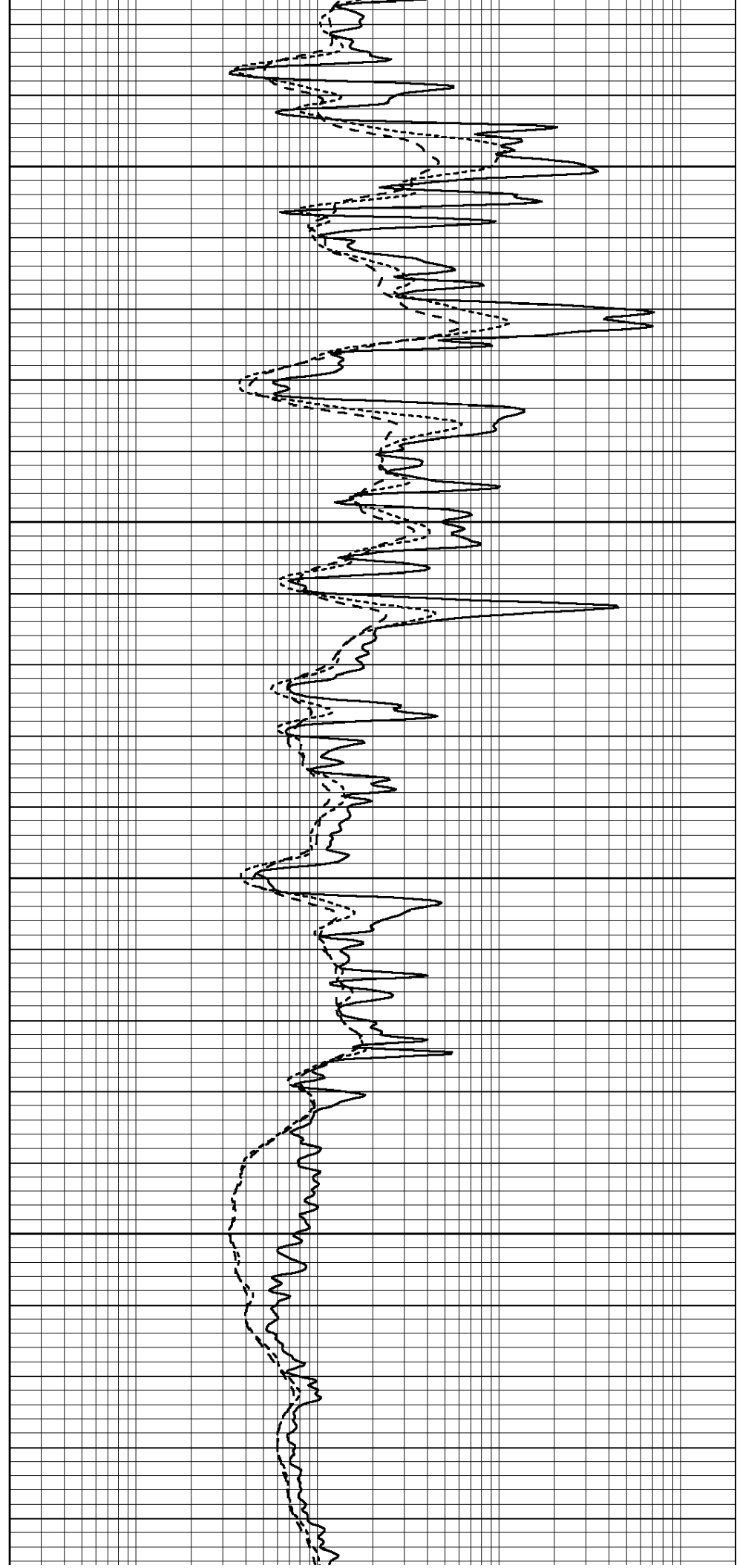


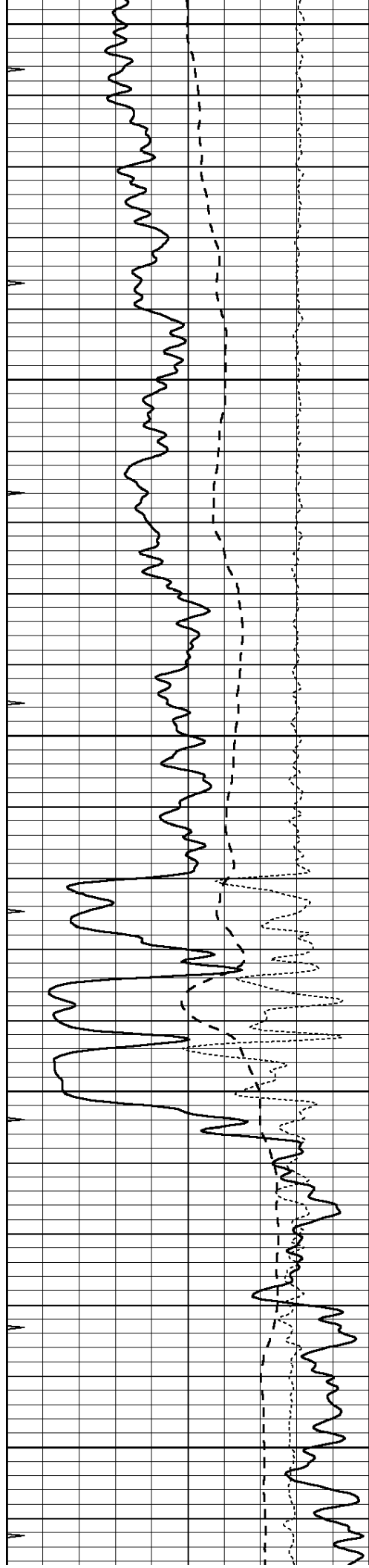
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4750





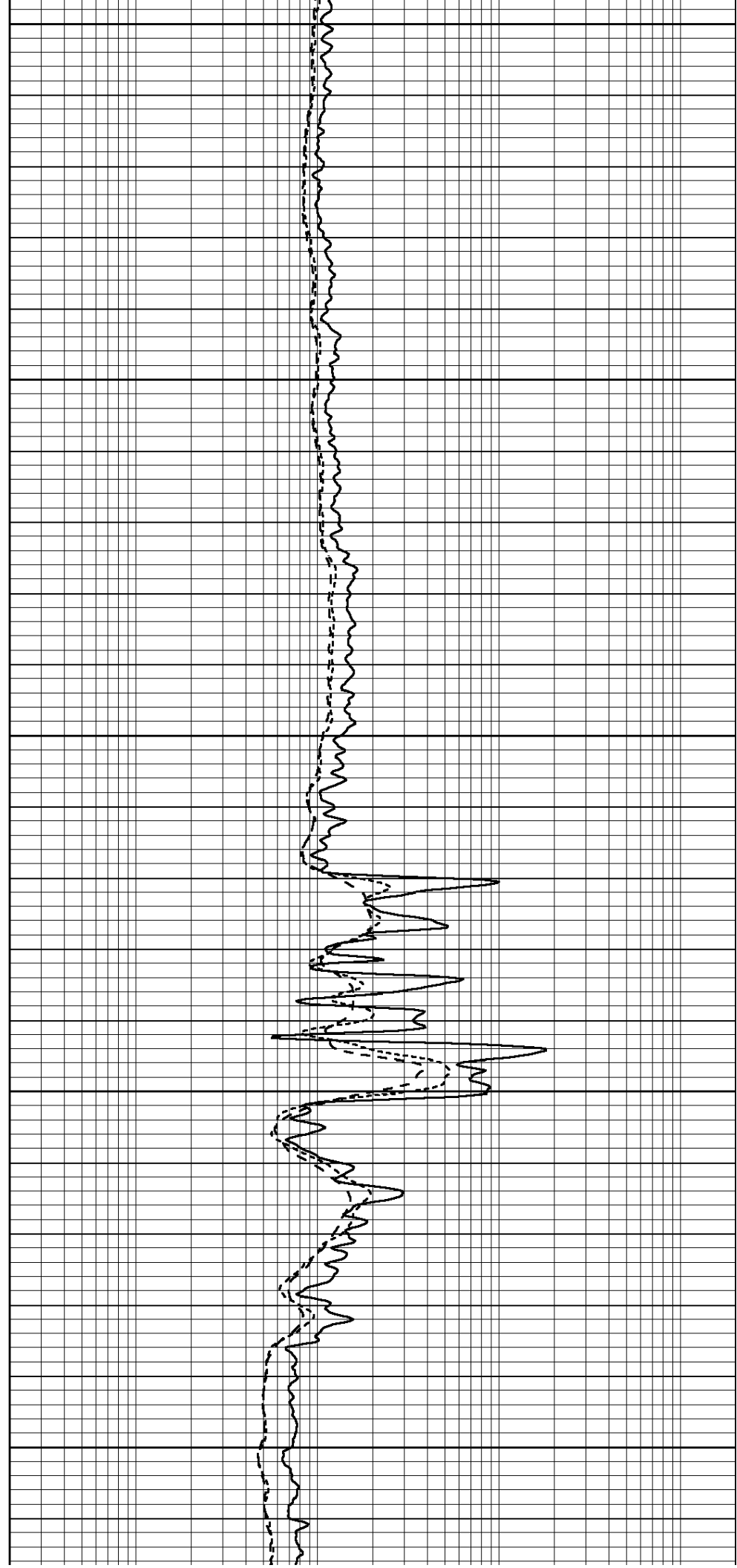
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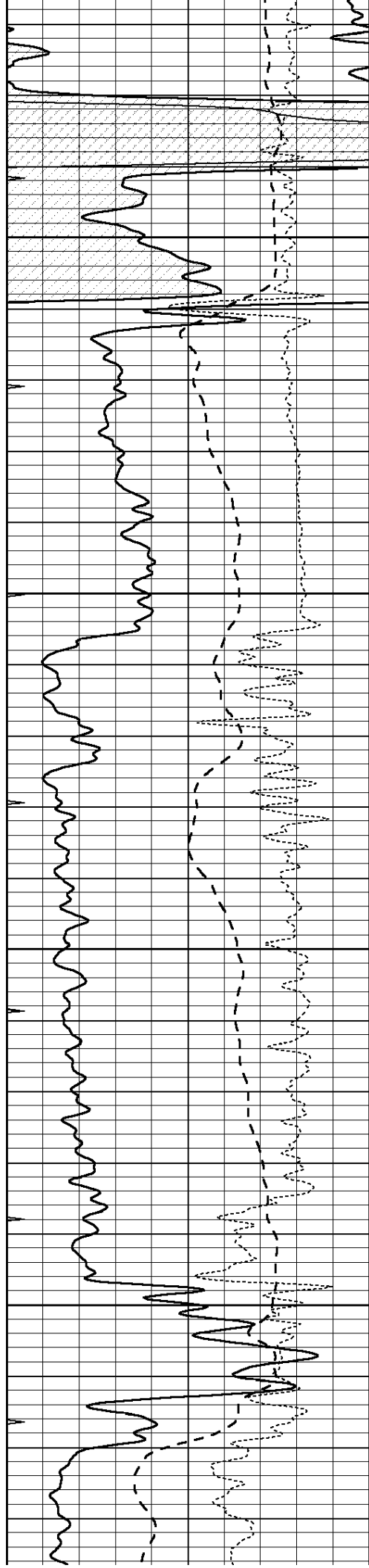
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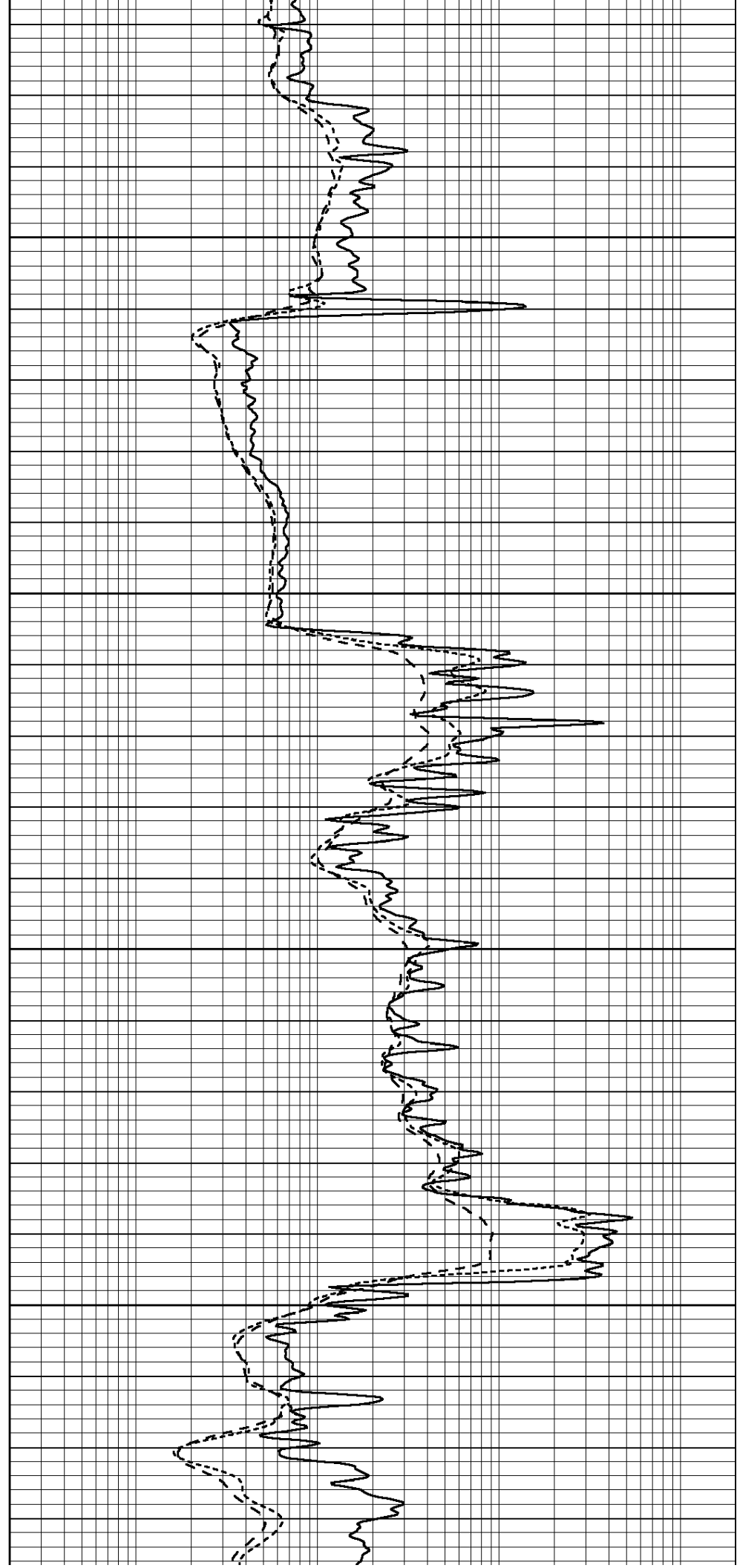


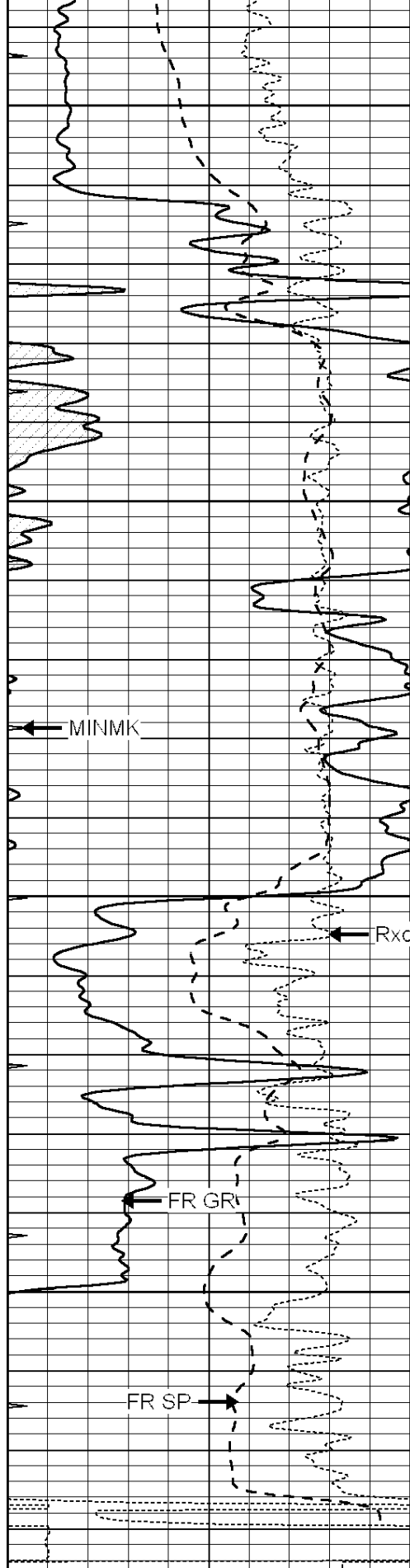
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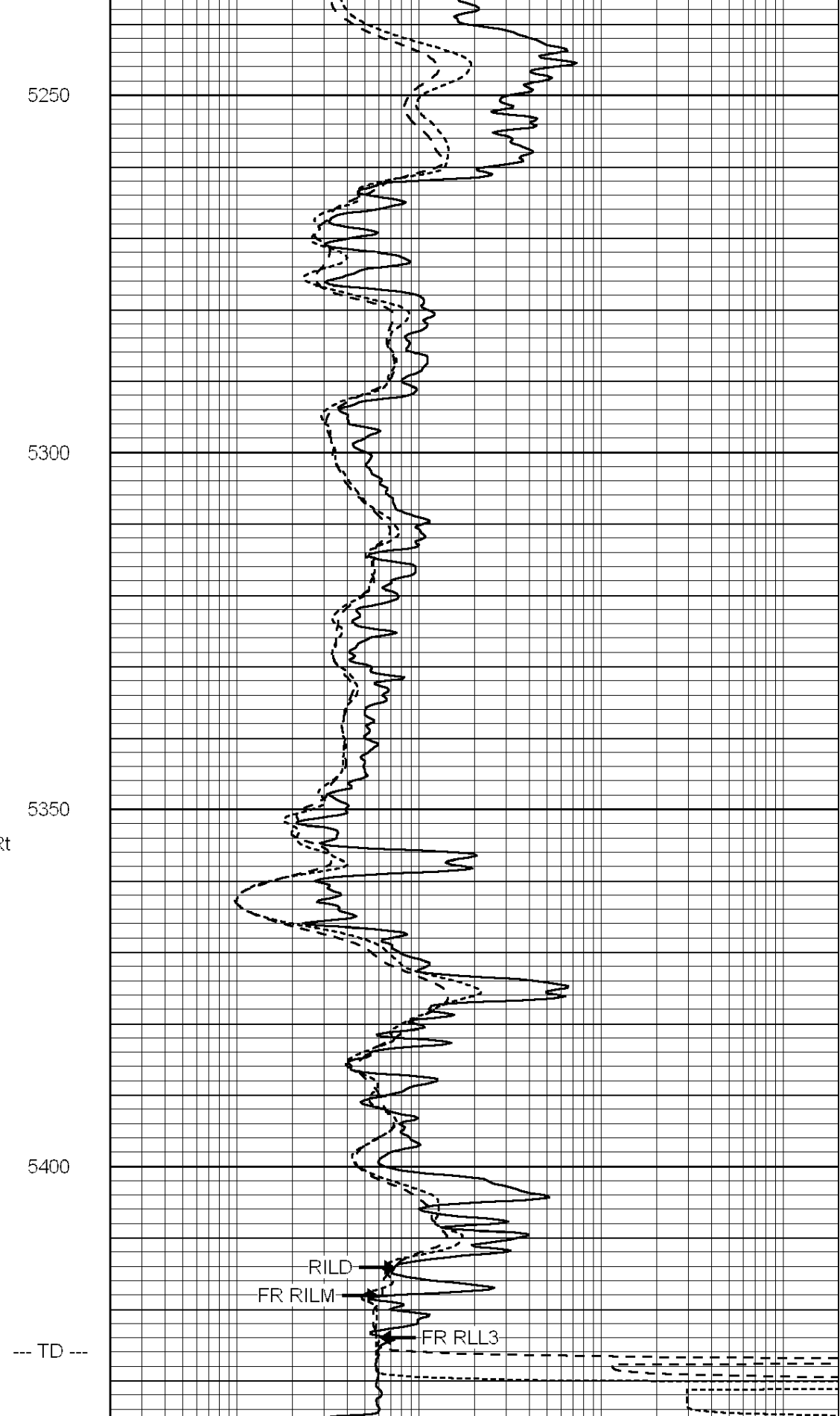
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0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

MINMK

RxoRt

FR GR

FR SP

--- TD ---

RILD

FR RILM

FR RLL3



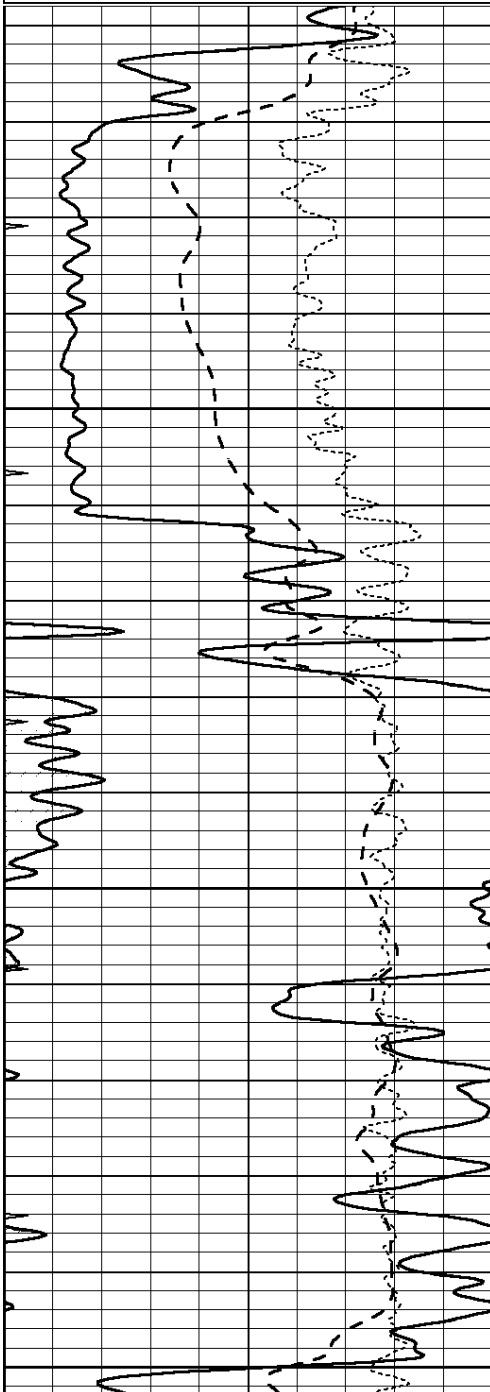
SUPERIOR  
Hays,  
Kansas

# REPEAT SECTION

Database File: 009571pdn.db  
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 Presentation Format: dil  
 Dataset Creation: Wed Aug 08 14:38:01 2012  
 Charted by: Depth in Feet scaled 1:240

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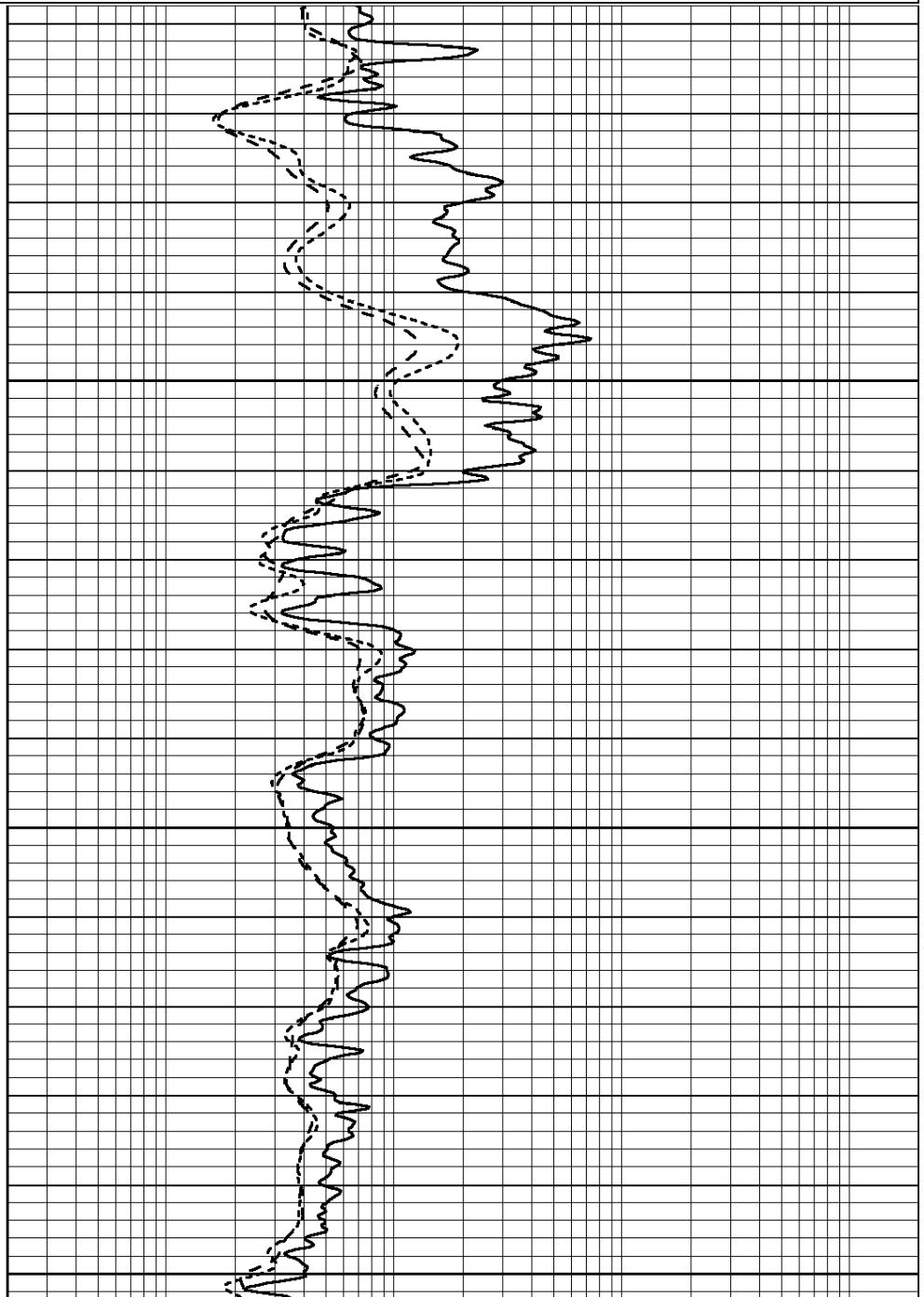
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

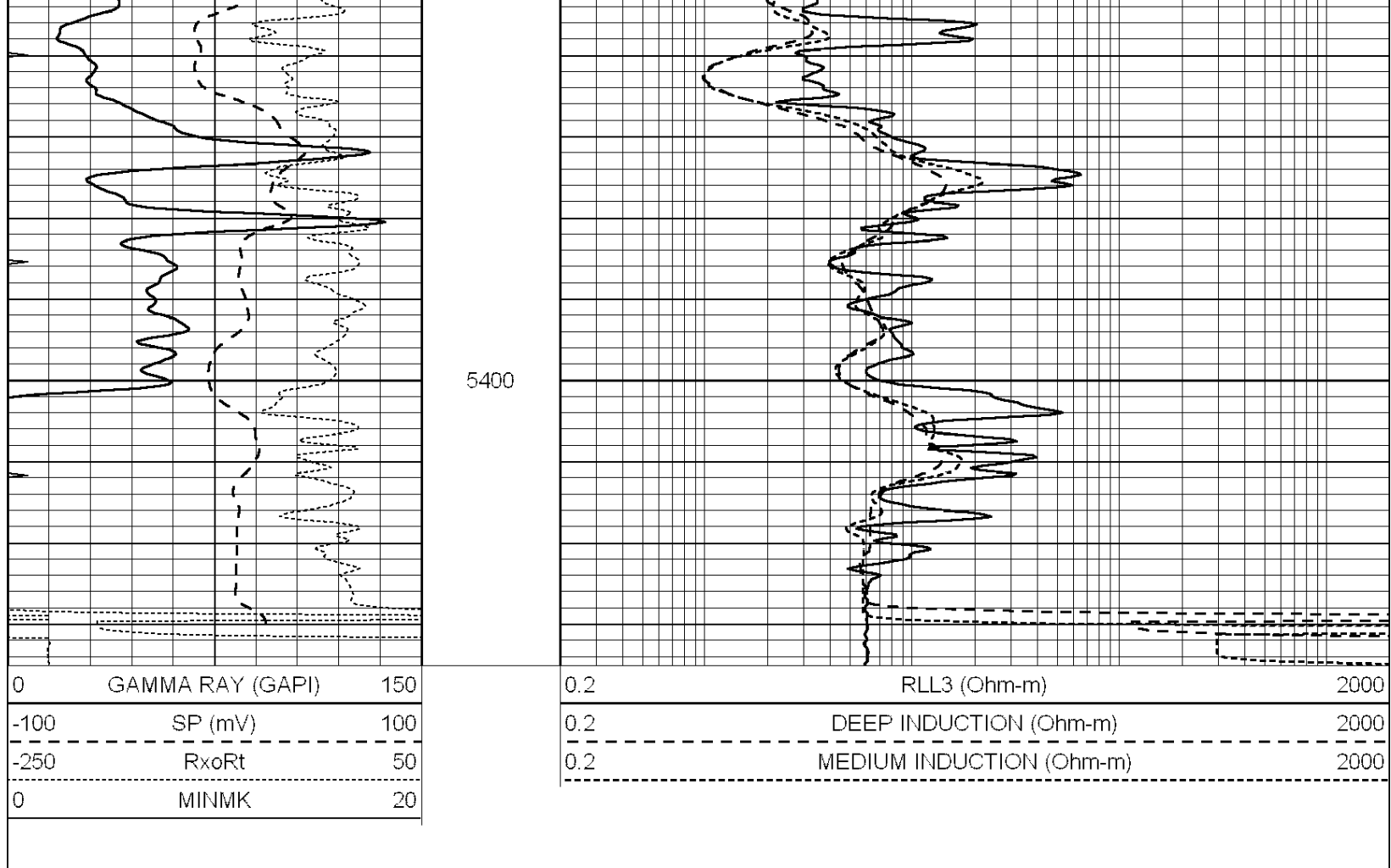


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5300

5350





### Calibration Report

Database File: 009571pdr.db  
 Dataset Pathname: pass3.3  
 Dataset Creation: Wed Aug 08 14:30:03 2012

### Dual Induction Calibration Report

Serial-Model: DIL5-GEAR  
 Performed: Wed Aug 08 11:44:05 2012

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	490.000	-12.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	530.000	-12.000
Internal:	Zero		Cal	Zero		Cal	m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

### Litho Density Calibration Report

Serial: 002 Model: PRB  
 Performed Mon Apr 02 17:56:53 2012

#### Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	872.3	7266.3	2292.6	7931.5	cps
Window 2	822.9	5957.5	1958.0	6389.6	cps
Window 3	670.4	3219.9	1211.9	3388.2	cps
Window 4	201.6	201.4	202.2	201.6	cps

vwindow 4	201.0	201.1	202.5	204.0	cps
Long Space	0.0	5134.6	1135.0	5566.6	cps
Short Space	1.1	994.2	674.4	1059.2	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 45.6	Rib Slope	: 1.020	Density/Spine Ratio	: 0.569
Spine Angle	: 75.6	Spine Slope	: 3.888	Spine Intercept	: -18.3

Caliper	Readings	Reference	
Low Ref	2.0	7.5	
High Ref	3.0	12.0	
	Gain: 4.5		Offset: -1.5

Compensated Neutron Calibration Report

Serial Number:	NUE_2I
Tool Model:	G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR2
Tool Model:	OPEN
Performed:	Wed Aug 08 12:25:11 2012
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	740.0 cps
Sensitivity:	0.7500 GAPI/cps