



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company		WHITE & ELLIS DRILLING INC.			
Well		CHAIN RANCH A #1			
Field		AMBER CREEK SOUTH			
County		BARBER		State	KANSAS
Location:		API # : 15-007-24161-00-00		Other Services CNL/CDL/PE MEL SONIC	
SEC 12 TWP 31S RGE 12W					
Permanent Datum	GROUND LEVEL	Elevation	1598		
Log Measured From	KELLY BUSHING 10' A.G.L.				
Drilling Measured From	KELLY BUSHING				
Date	5-7-14				
Run Number	ONE				
Depth Driller	4675				
Depth Logger	4670				
Bottom Logged Interval	4668				
Top Log Interval	00				
Casing Driller	13 3/8" @ 337'				
Casing Logger	350'				
Bit Size	7 7/8"				
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 34.00 PPM			
Density / Viscosity	9.4/71				
pH / Fluid Loss	11.5/9.0				
Source of Sample	FLOWLINE				
Rim @ Meas. Temp	0.60 @ 96F				
Rmf @ Meas. Temp	0.45 @ 96F				
Rmc @ Meas. Temp	0.72 @ 96F				
Source of Rmf / Rmc	MEASUREMENT				
Rim @ BHT	0.47 @ 122F				
Time Circulation Stopped	2 HOURS				
Time Logger on Bottom					
Maximum Recorded Temperature	122F				
Equipment Number	860				
Location	HAYS, KANSAS				
Recorded By	IAN MABB				
Witnessed By	DAVID GOULD				

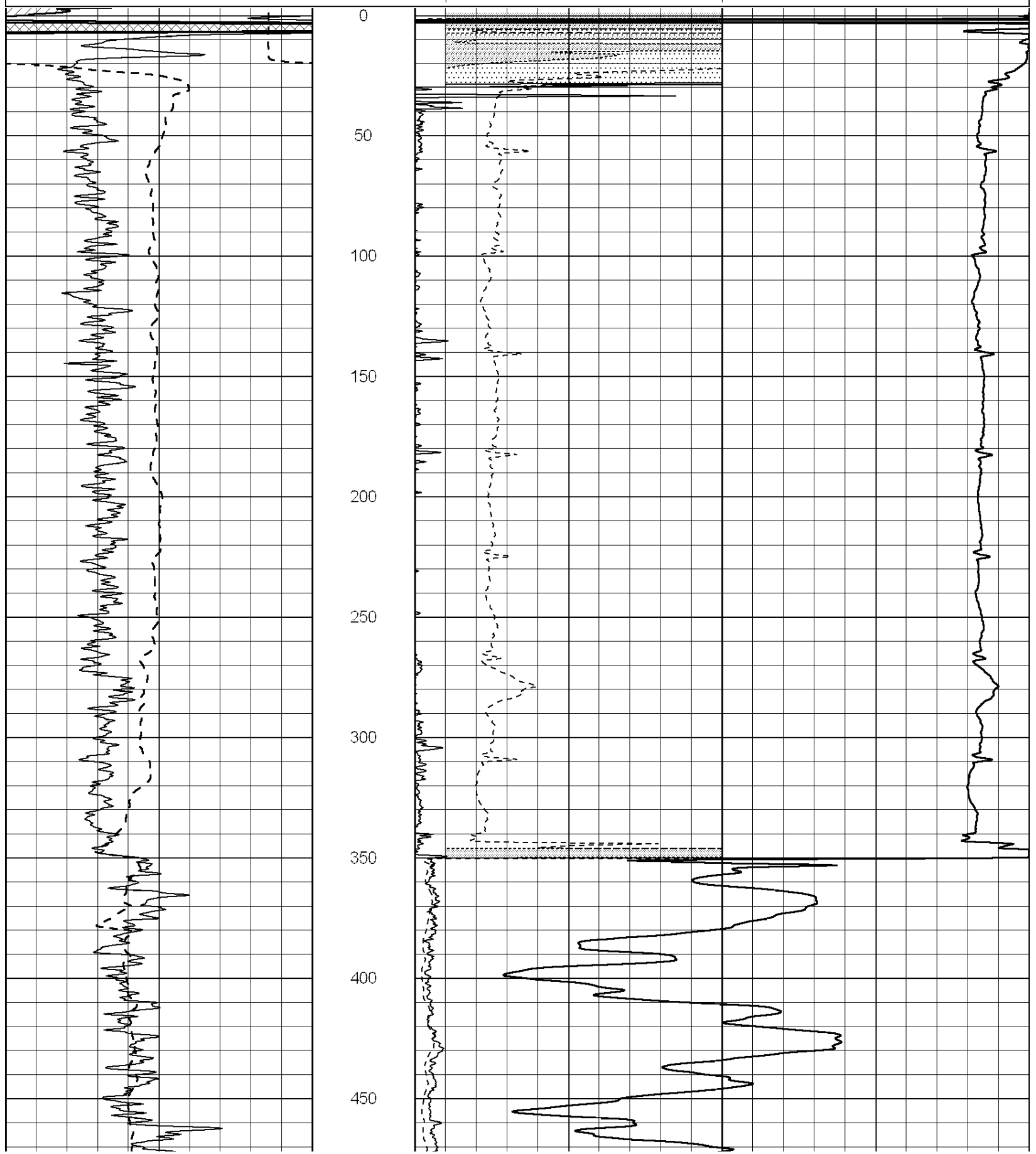
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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:
SAWYER, KS. - 10 MILES SOUTH TO 99 SPRINGS RD. - NE 1/2 MILE GAILLANDIA RD. - EAST 1/2 MILE - 1
1/2 MILE SOUTH INTO

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	



500

550

600

650

700

750

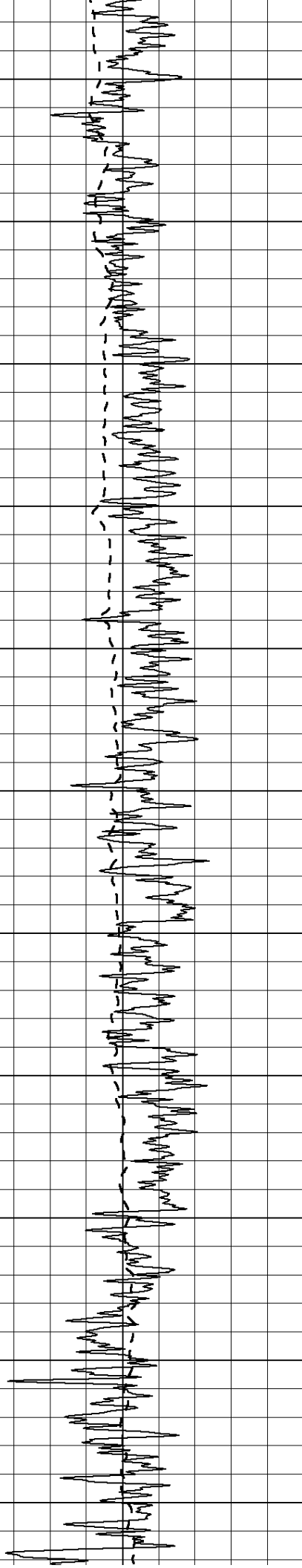
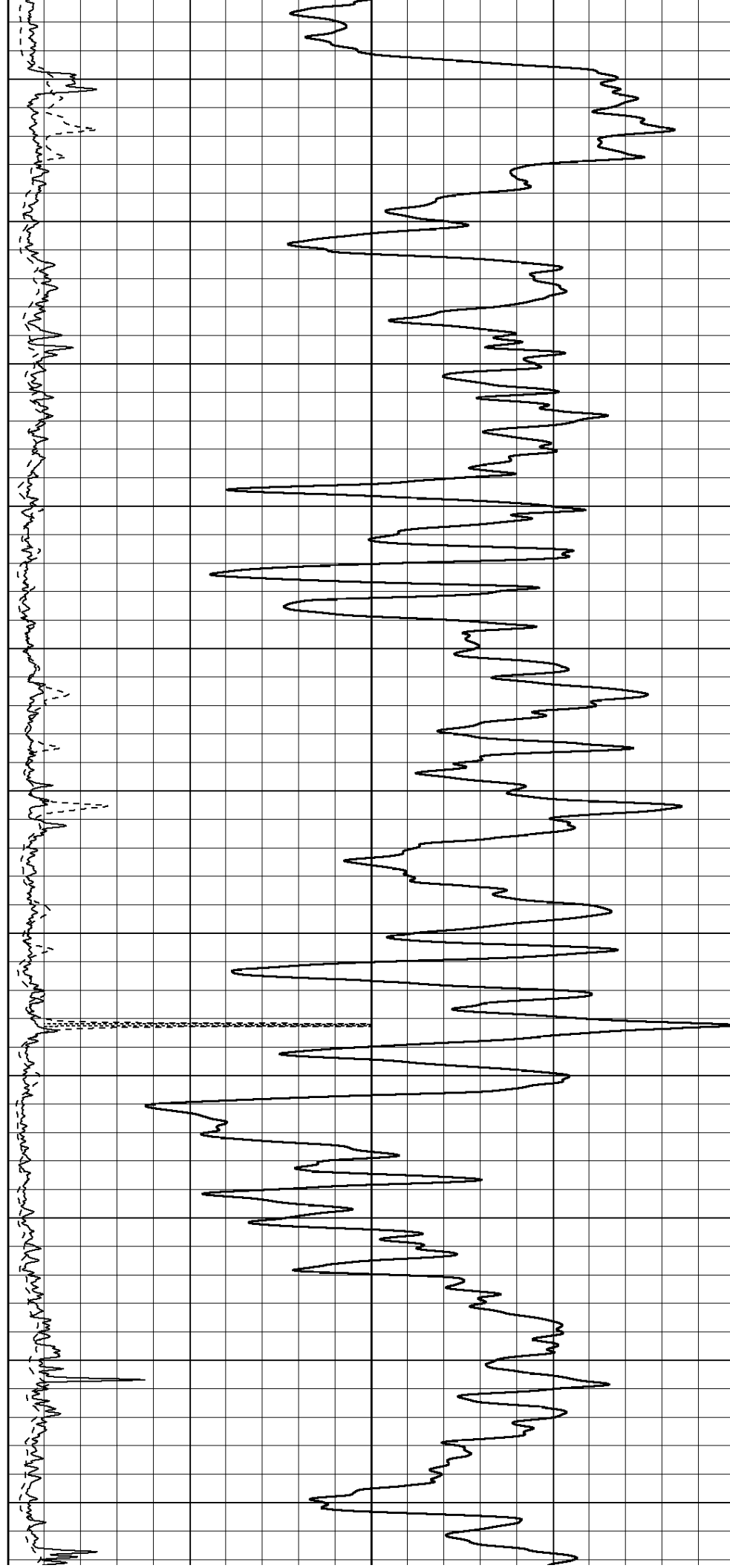
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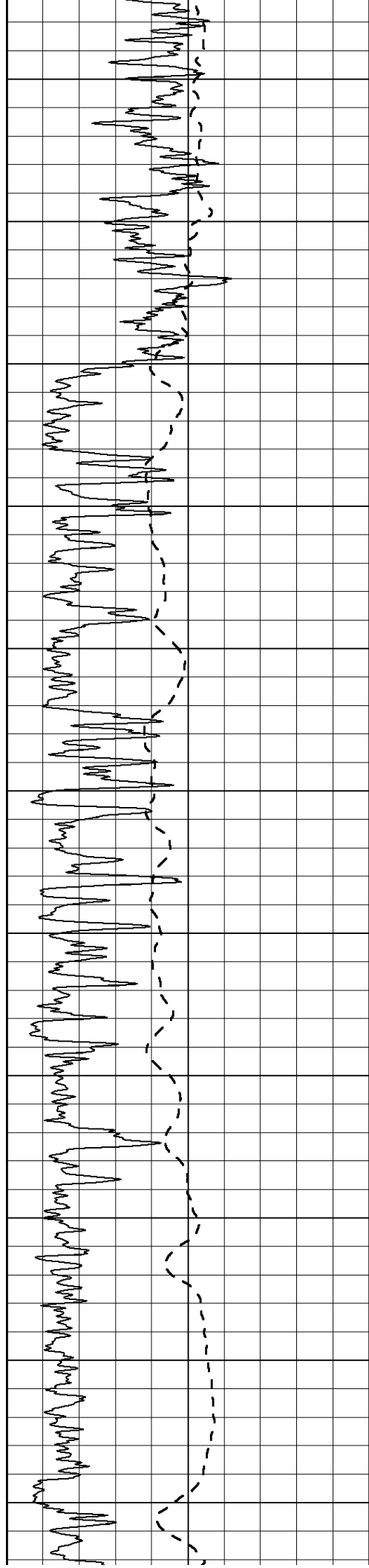
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900

950

1000





1050

1100

1150

1200

1250

1300

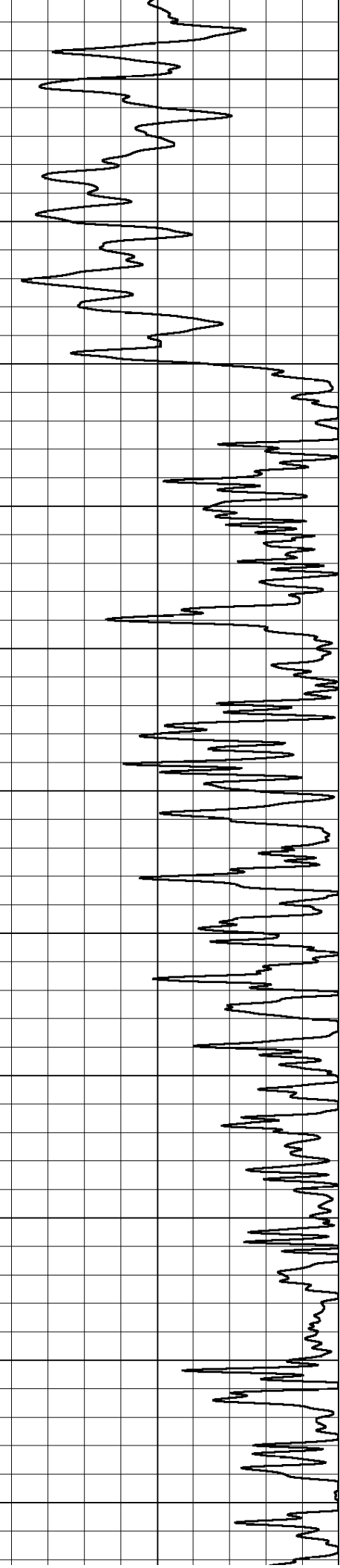
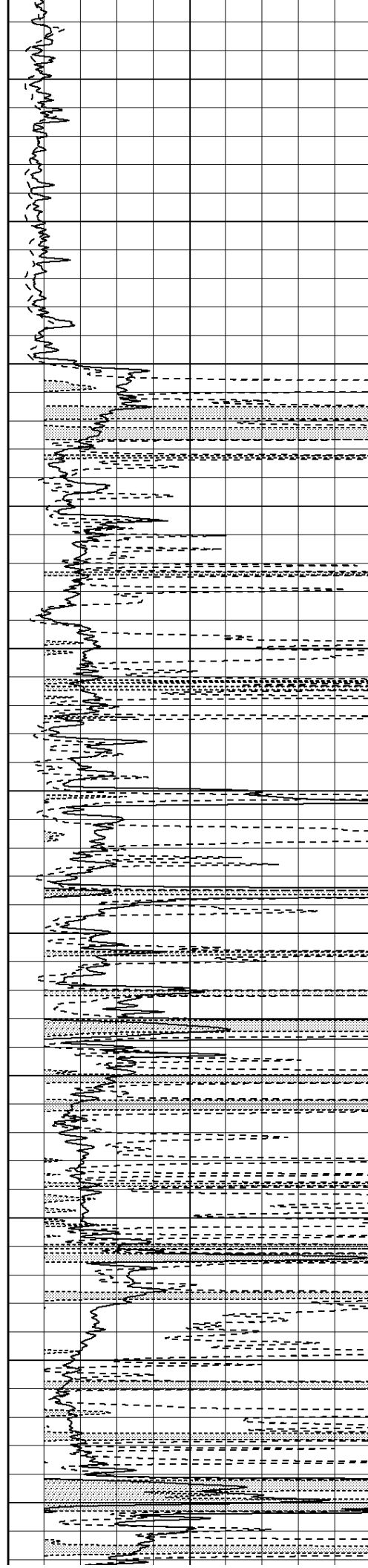
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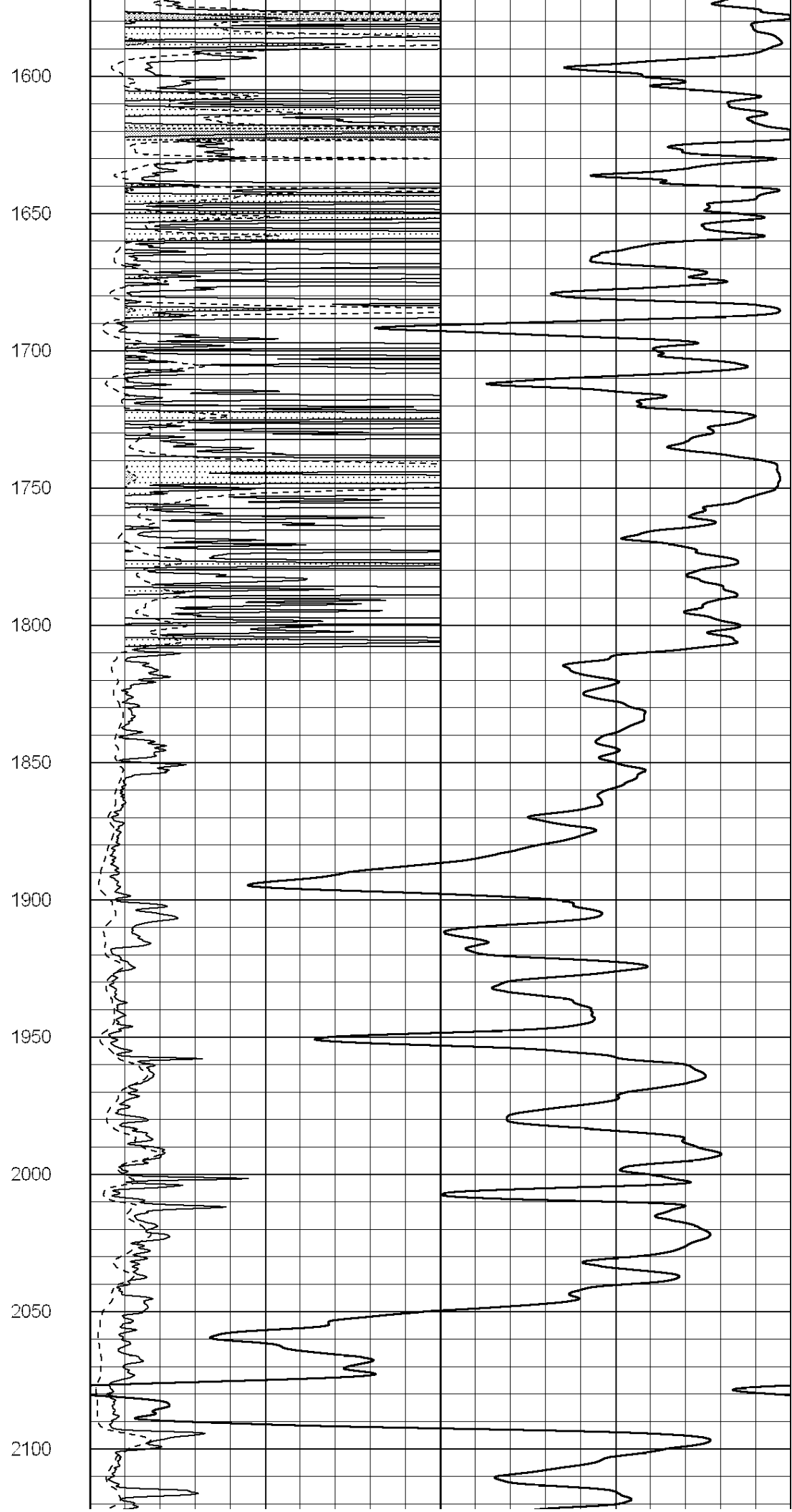
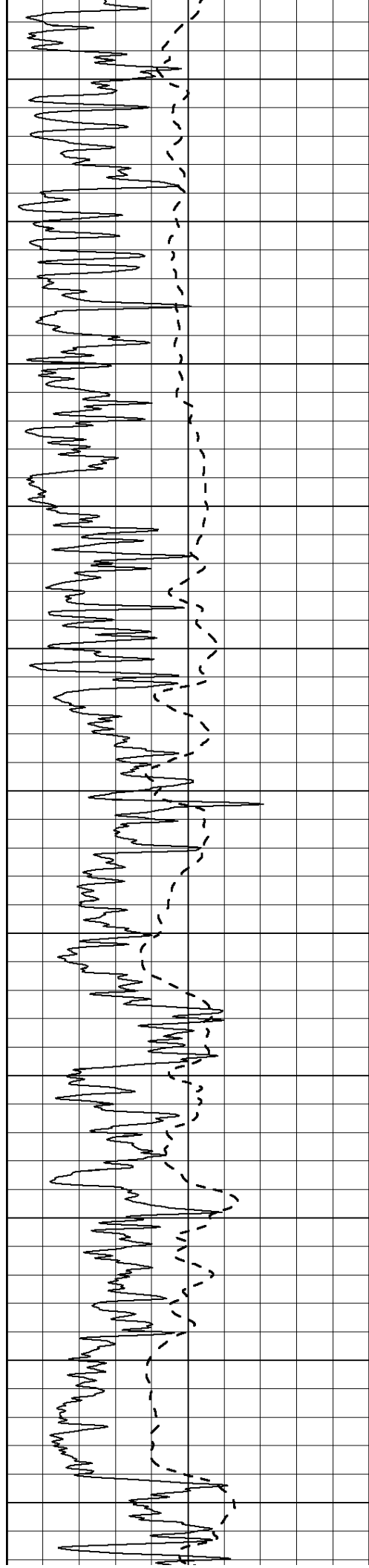
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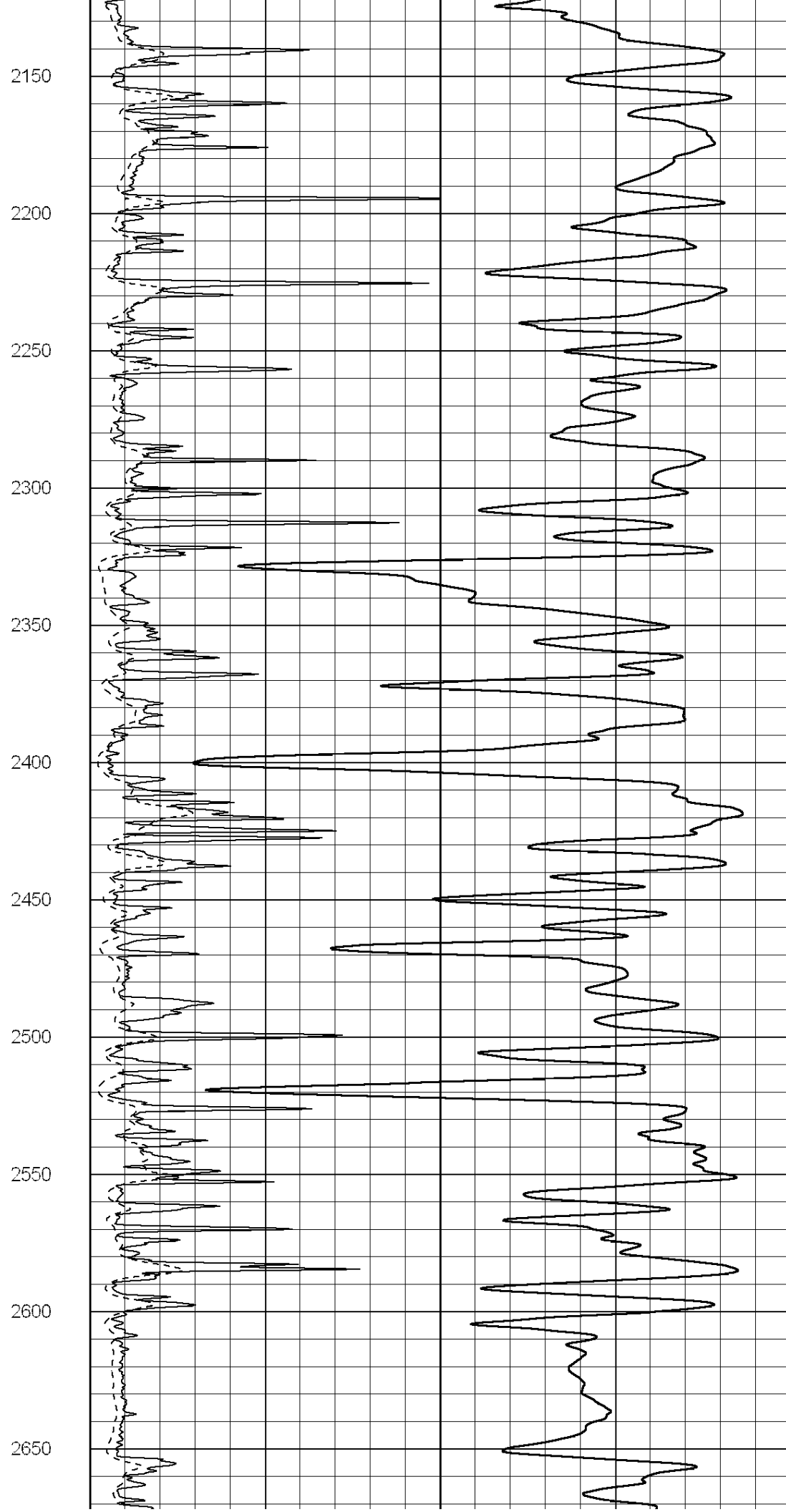
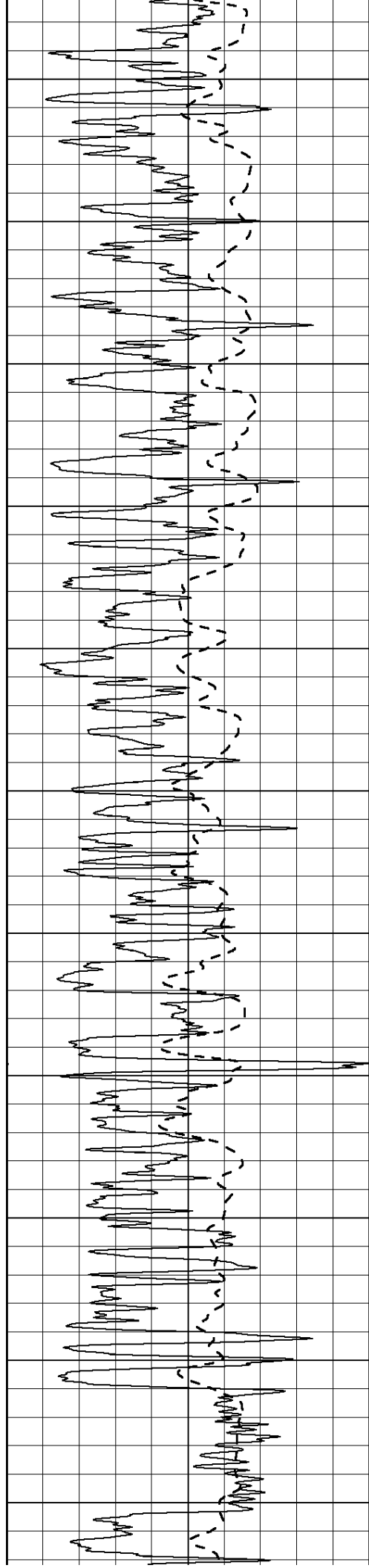
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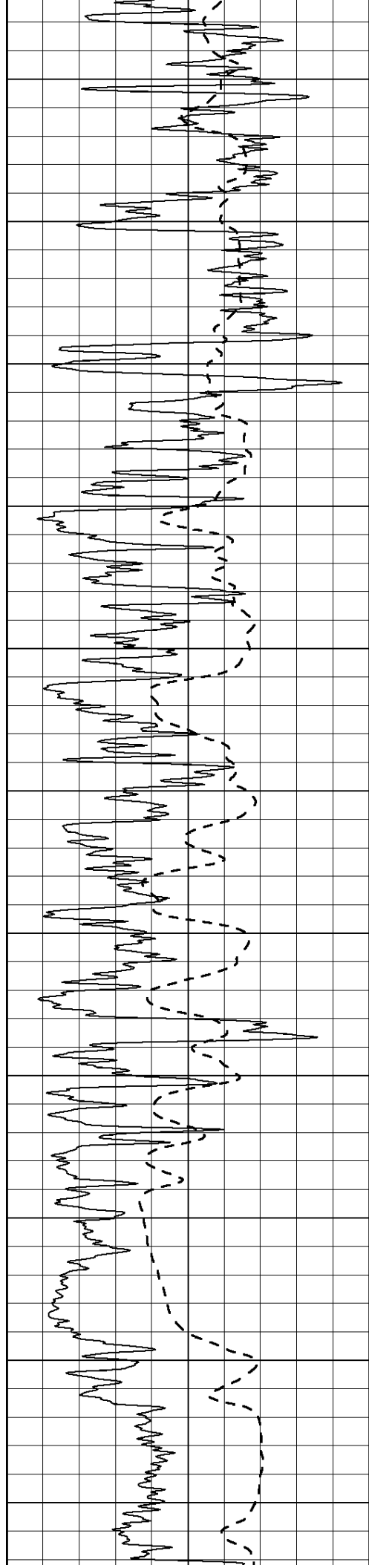
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1550









2700

2750

2800

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2900

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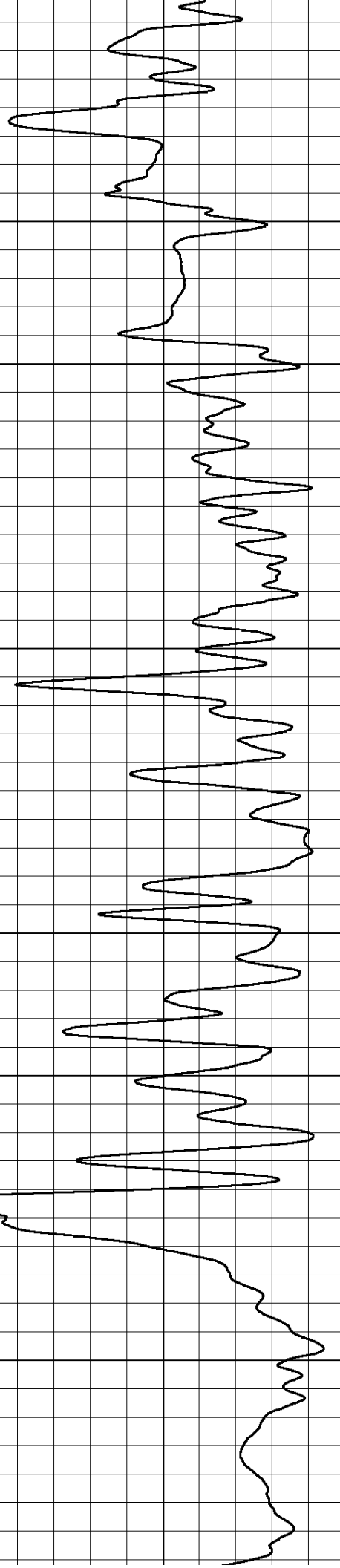
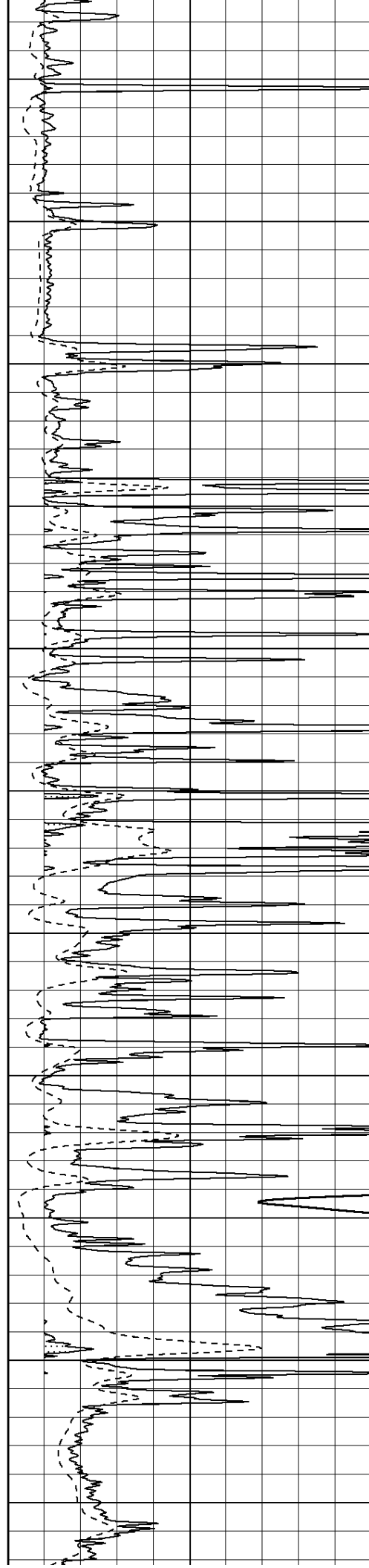
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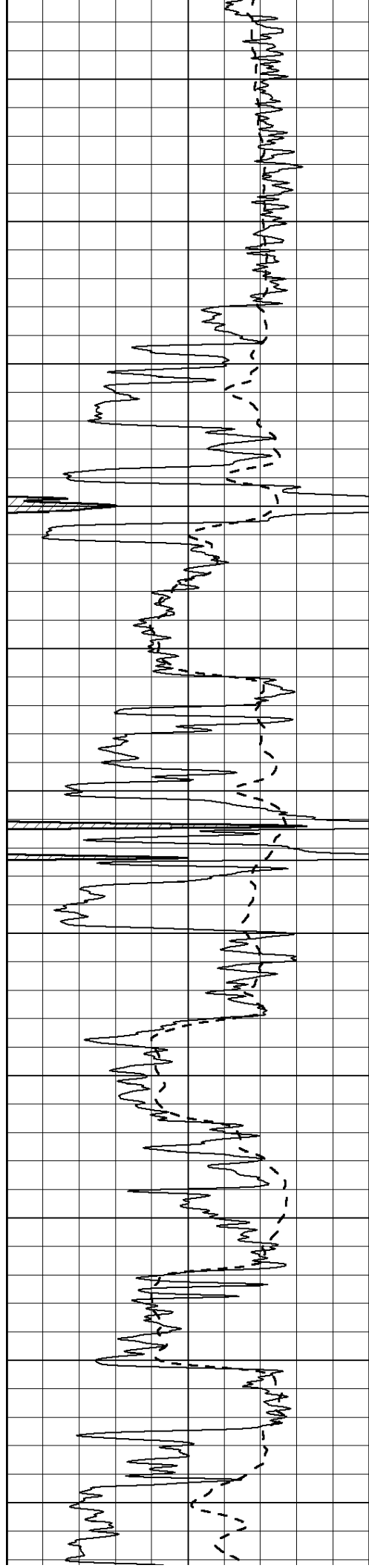
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3250

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3400

3450

3500

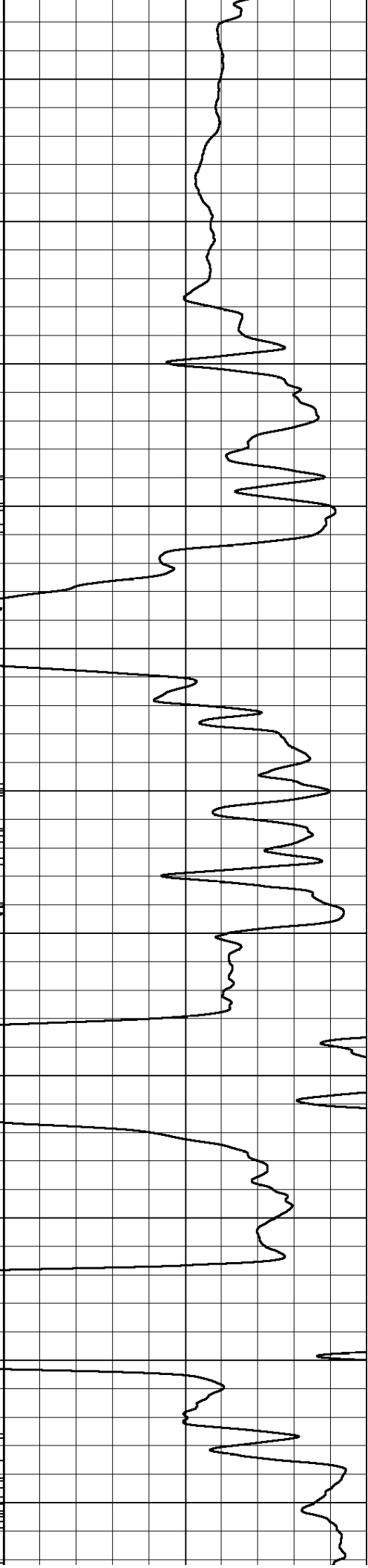
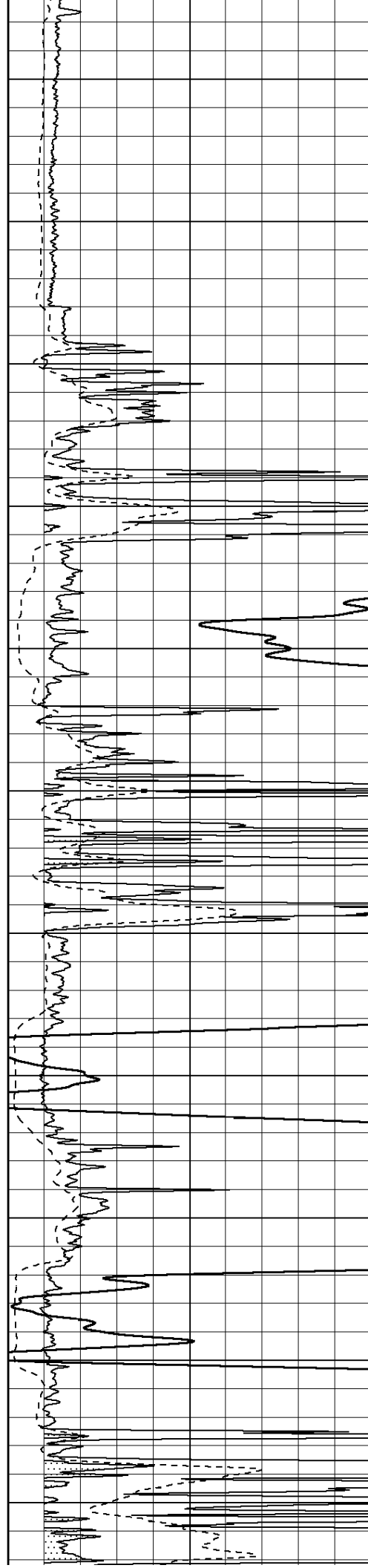
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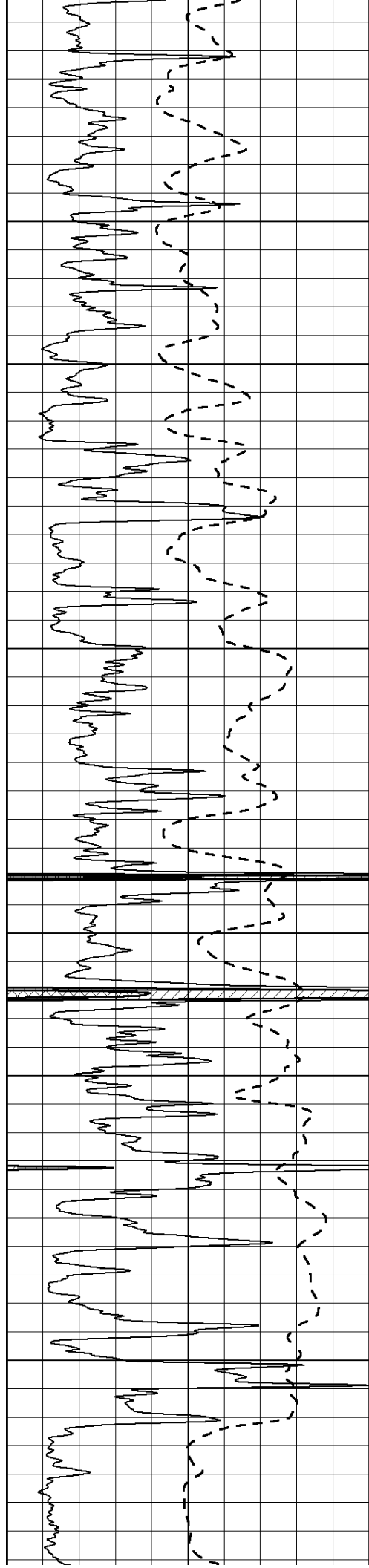
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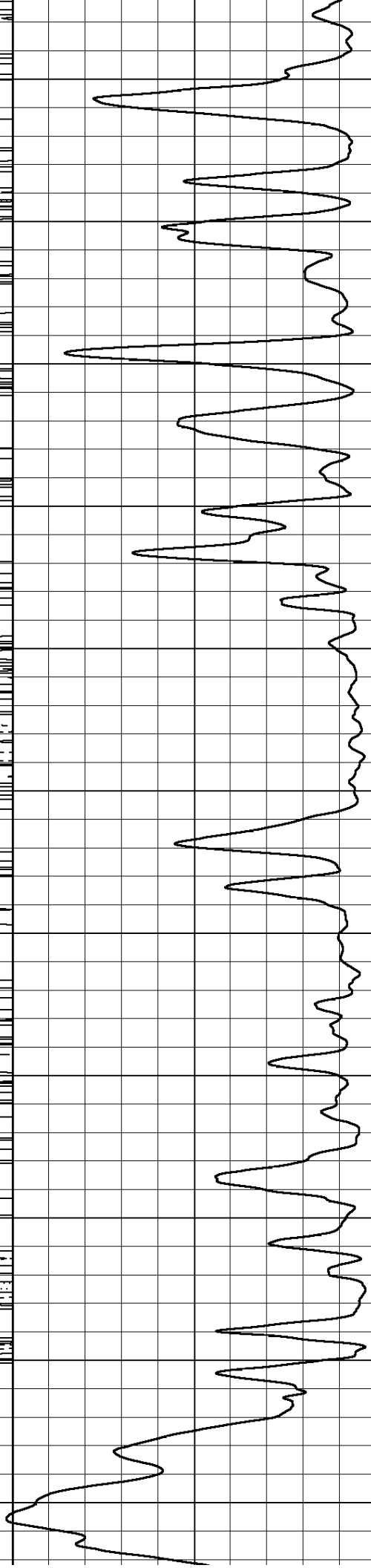
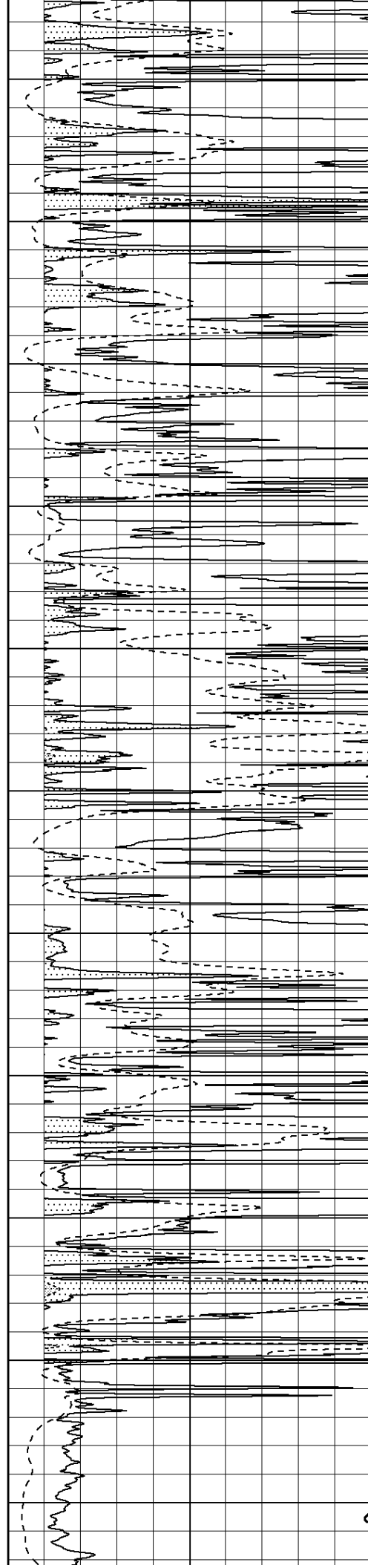
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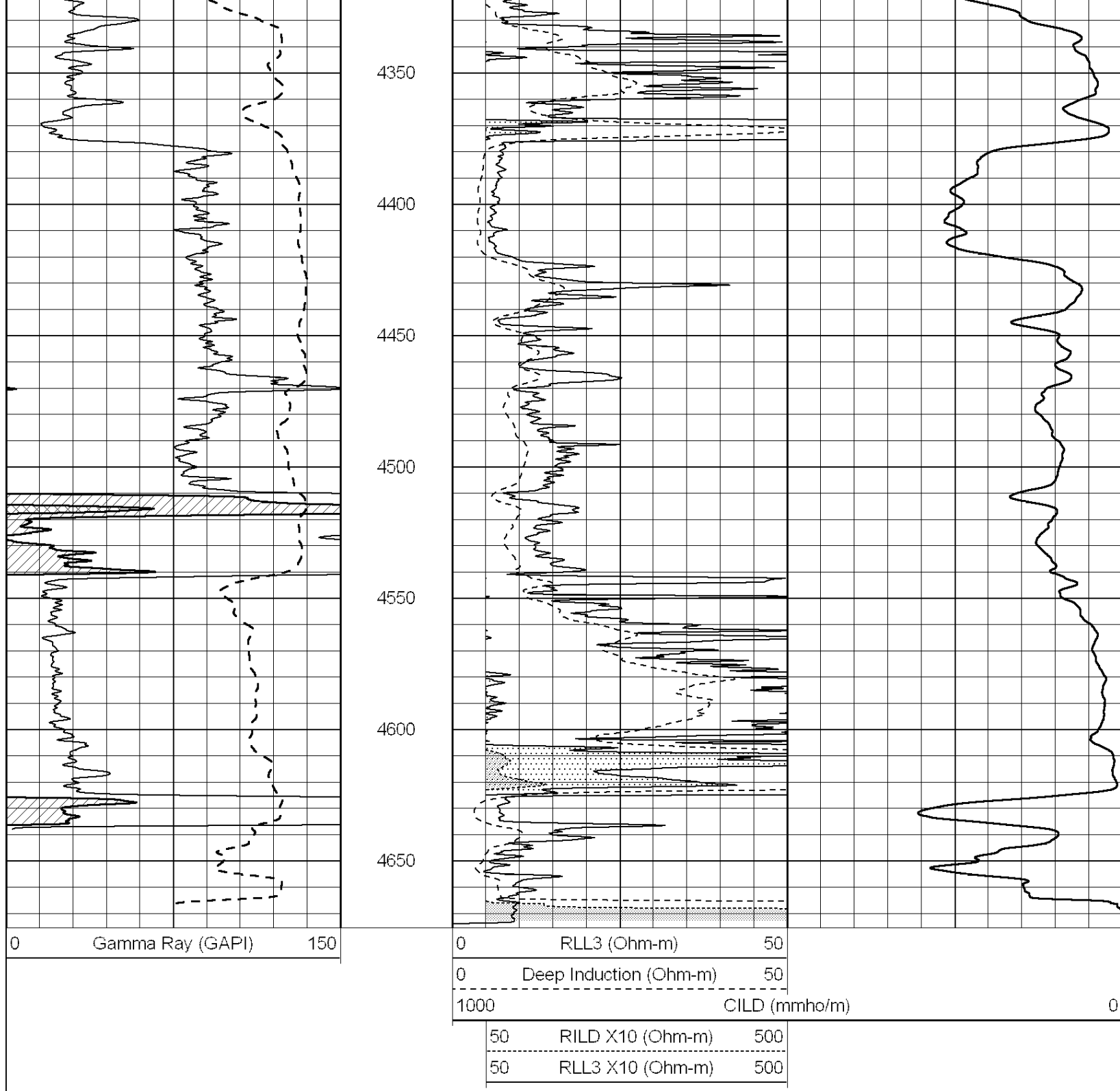
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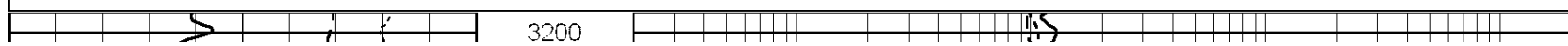
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3850
3900
3950
4000
4050
4100
4150
4200
4250
4300

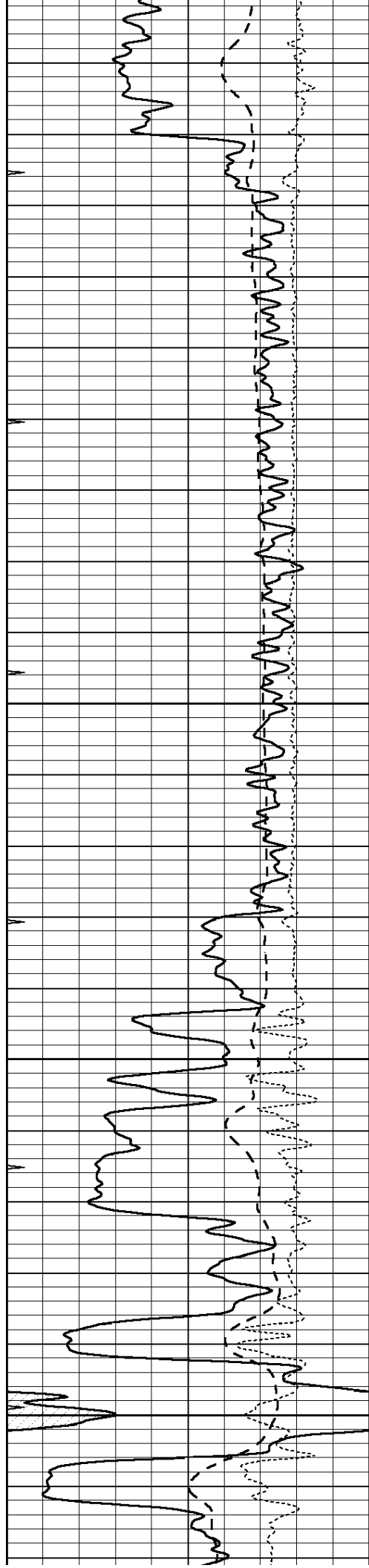




Database File: 24427pe.db
 Dataset Pathname: pass3.3
 Presentation Format: _dil
 Dataset Creation: Wed May 07 14:42:01 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



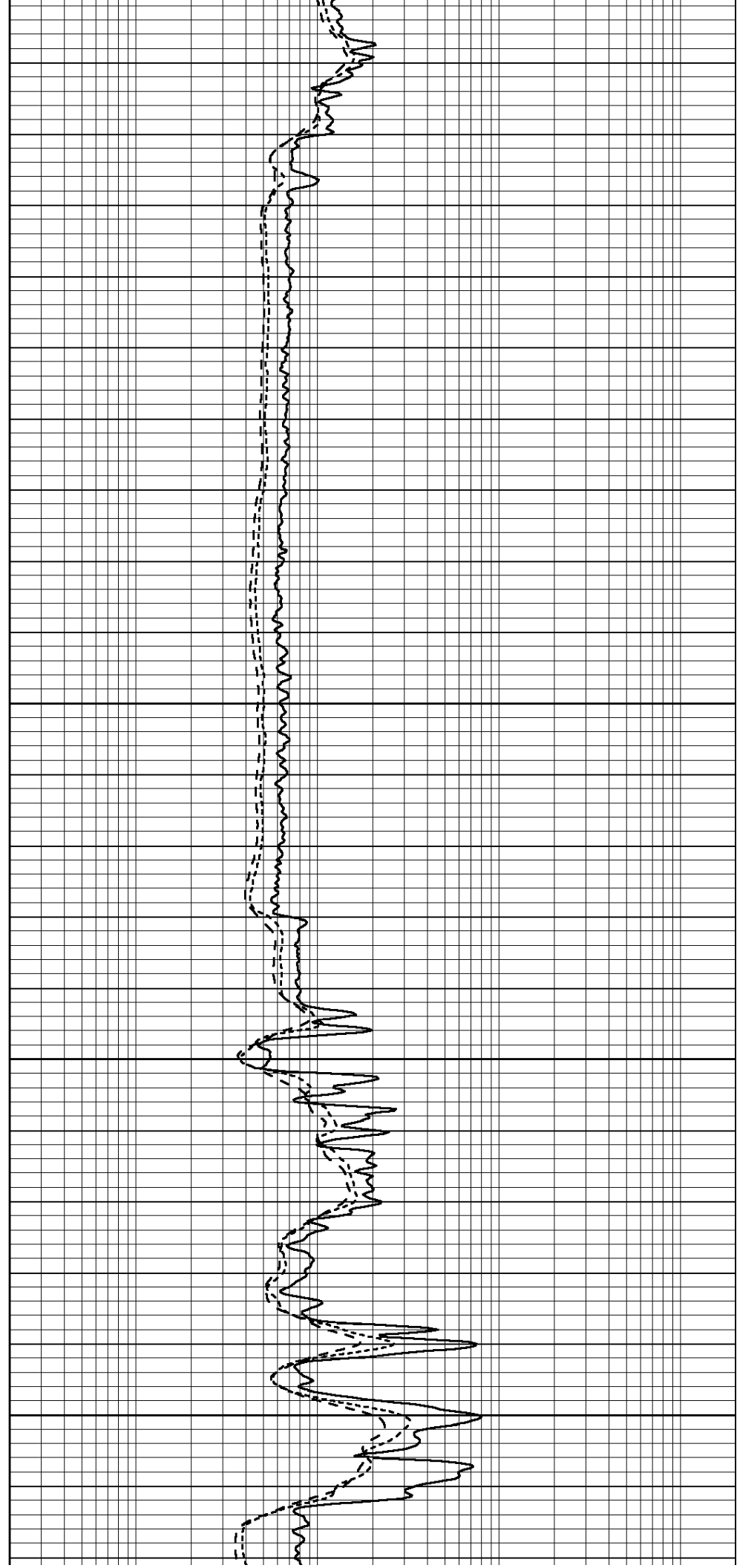


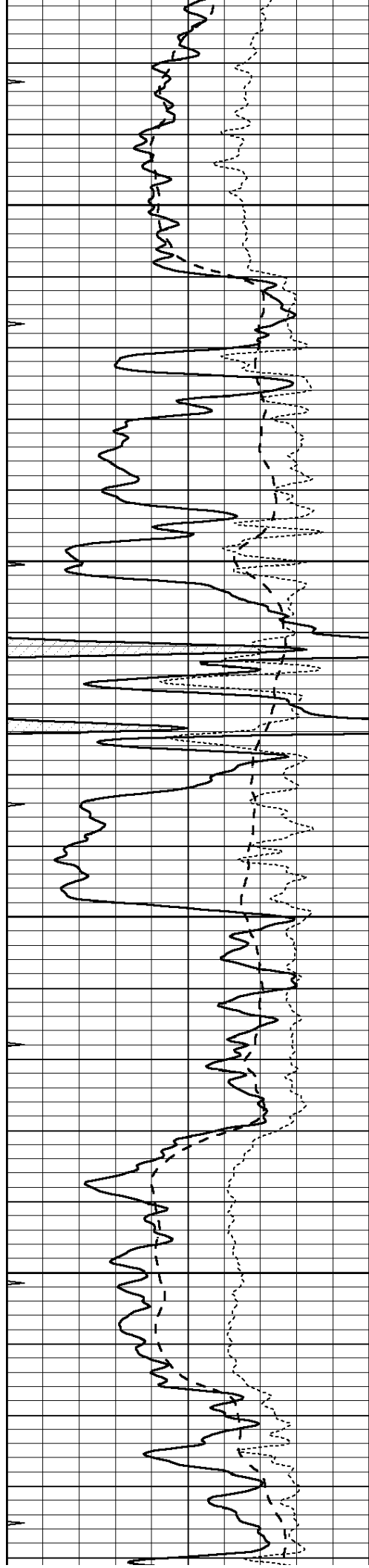
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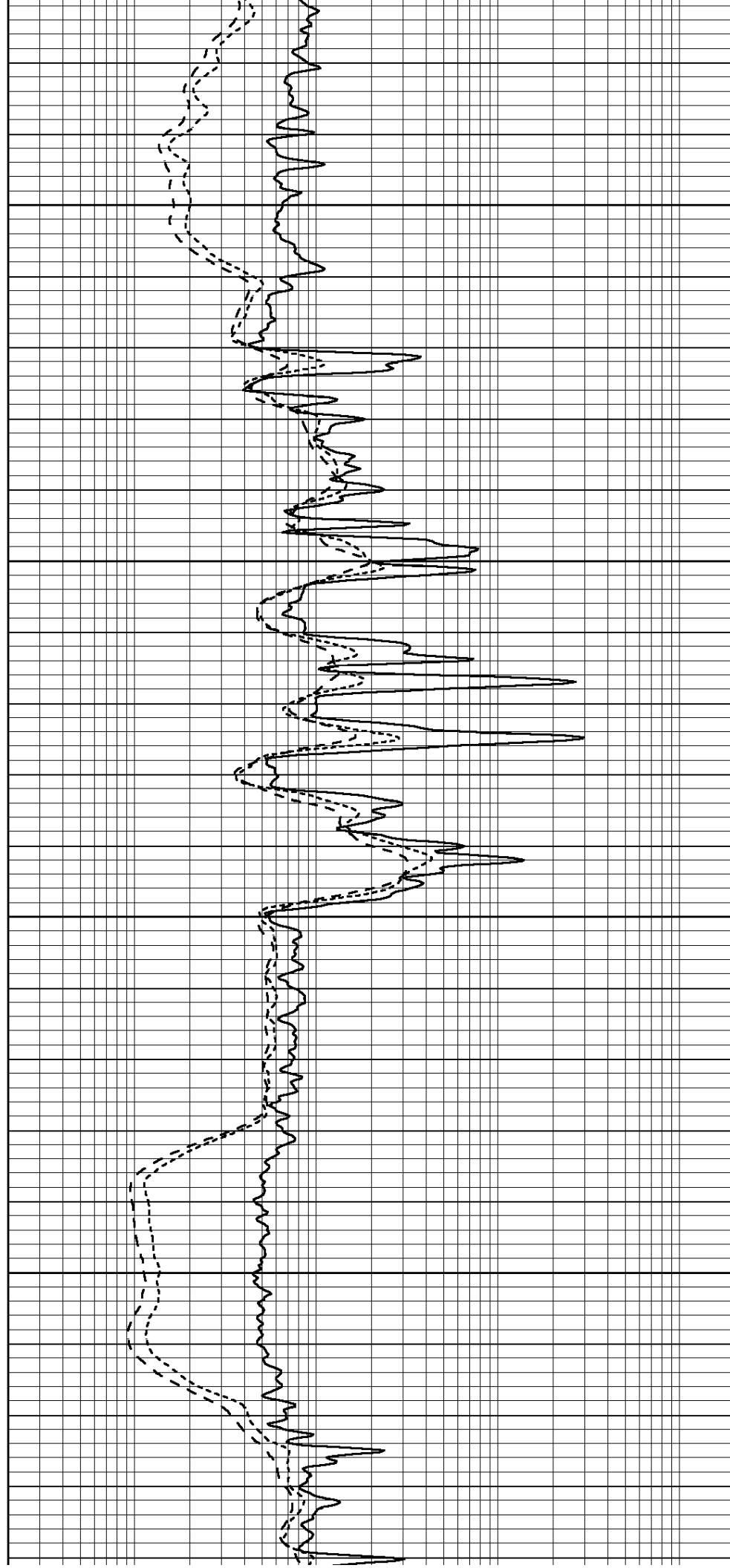


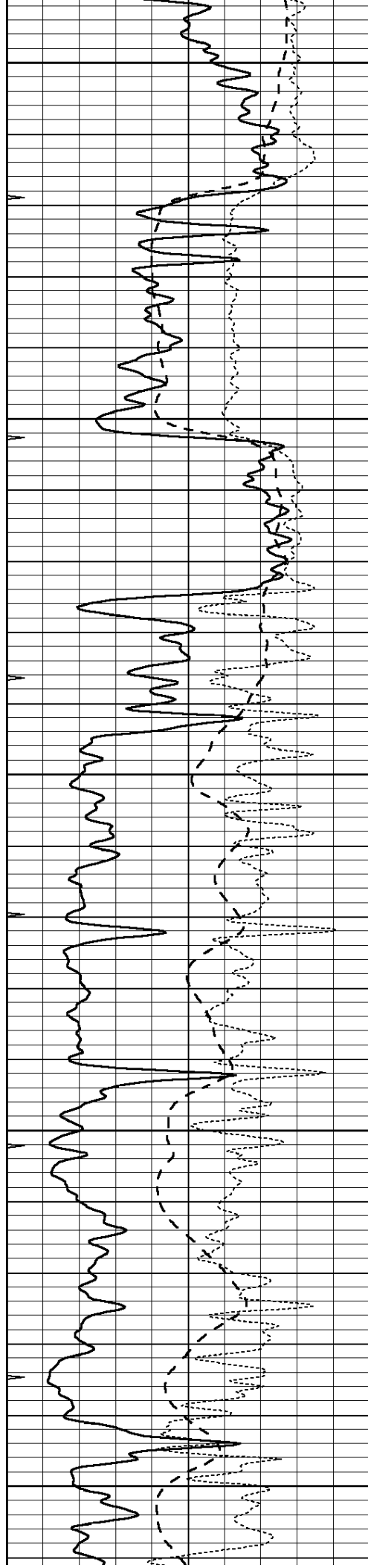
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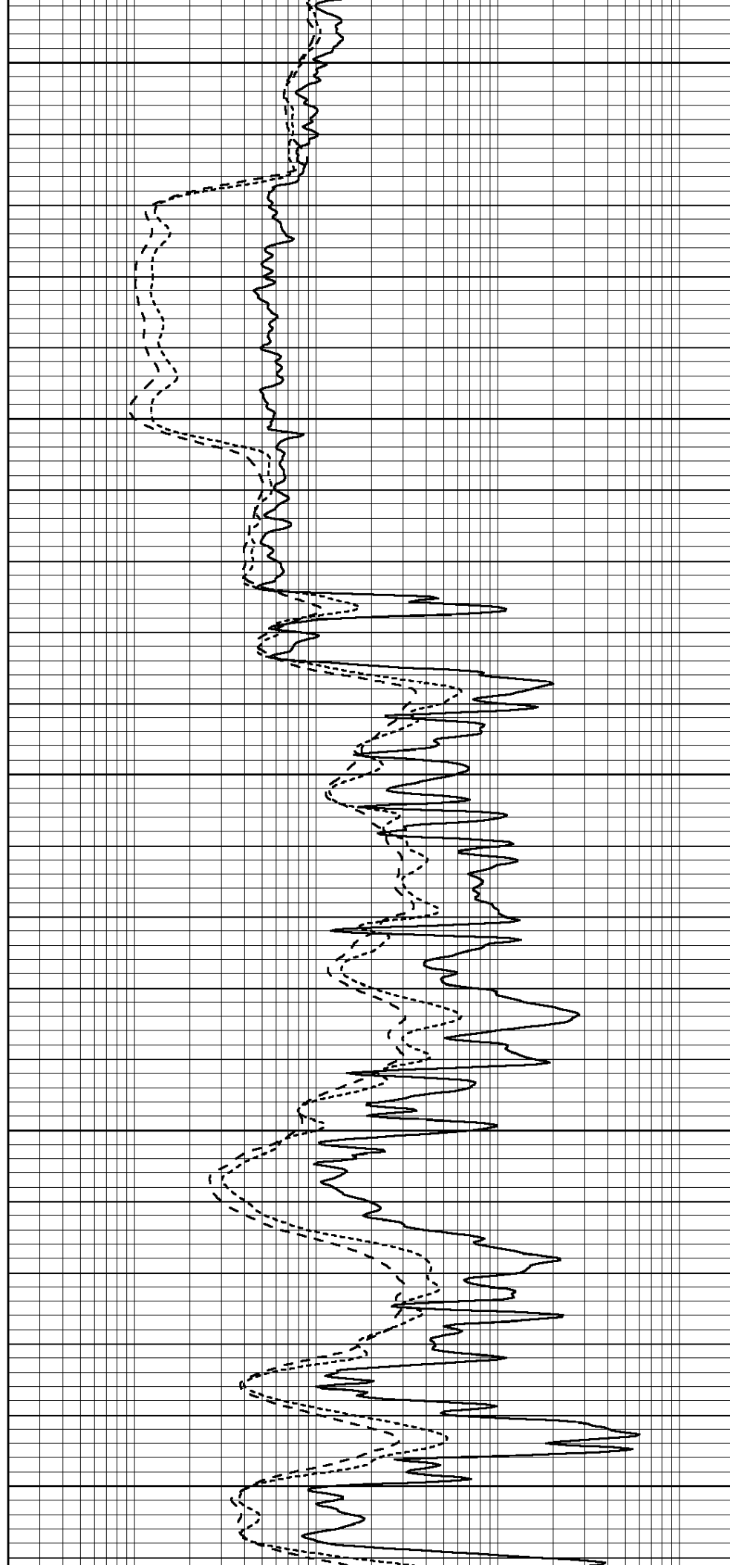
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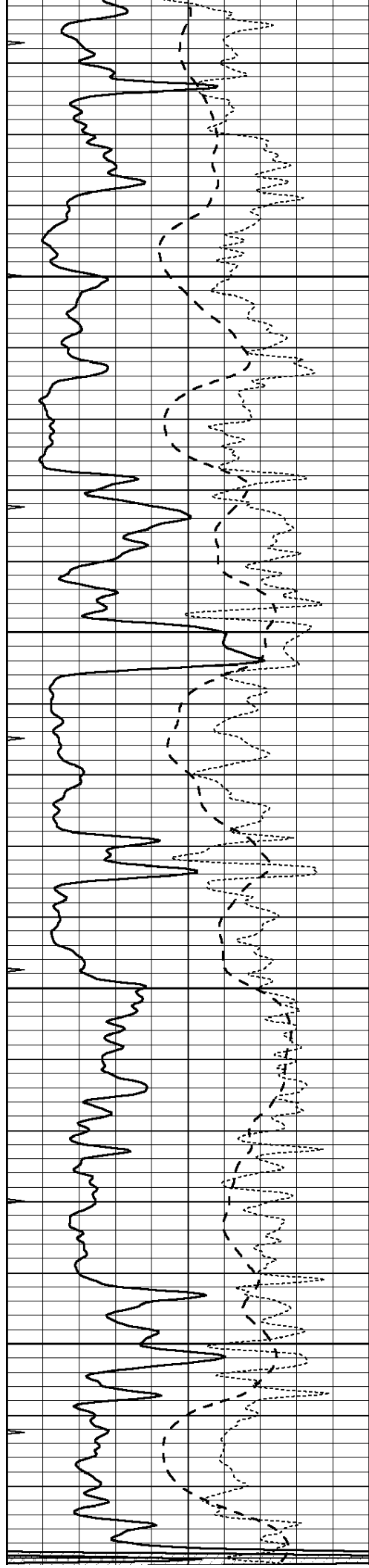
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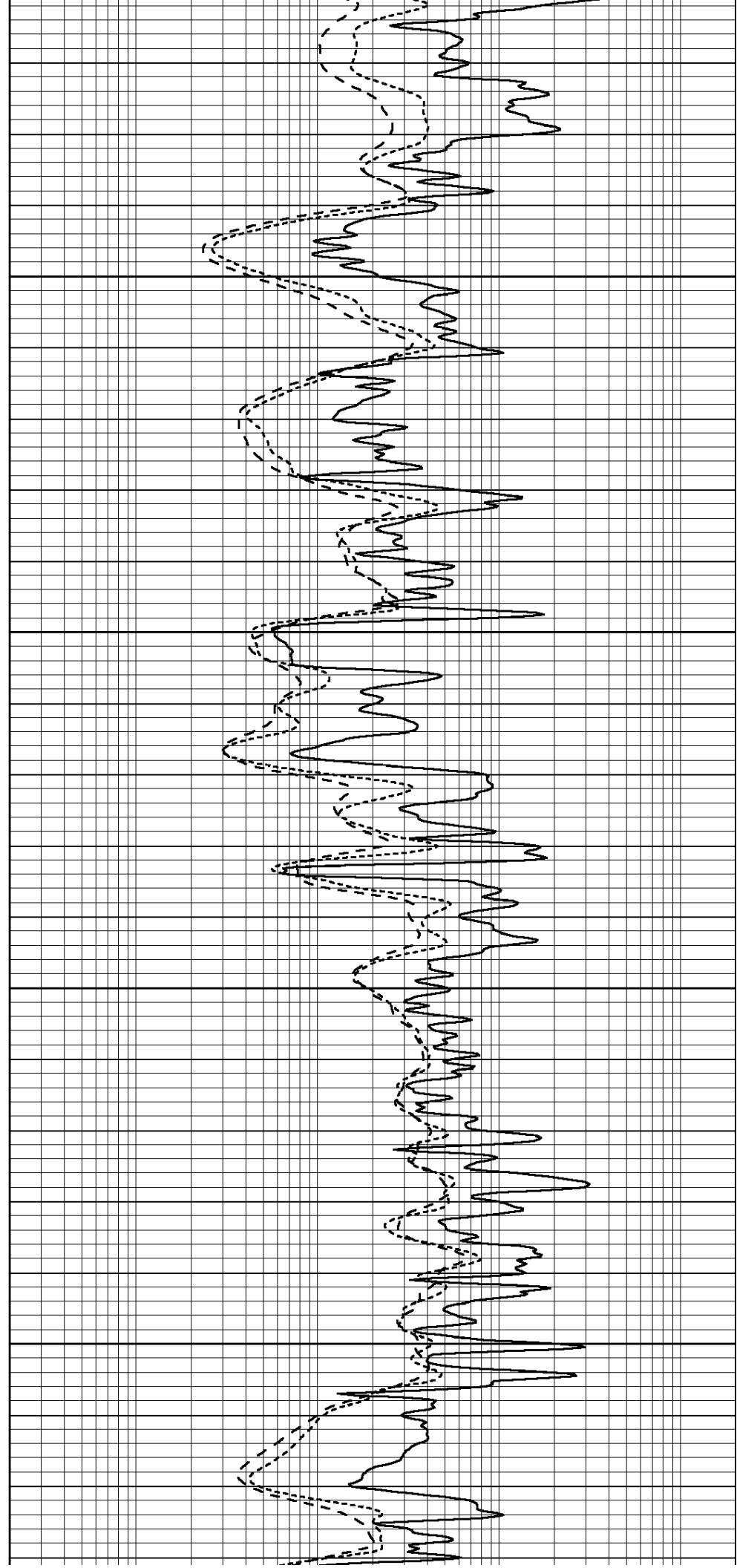


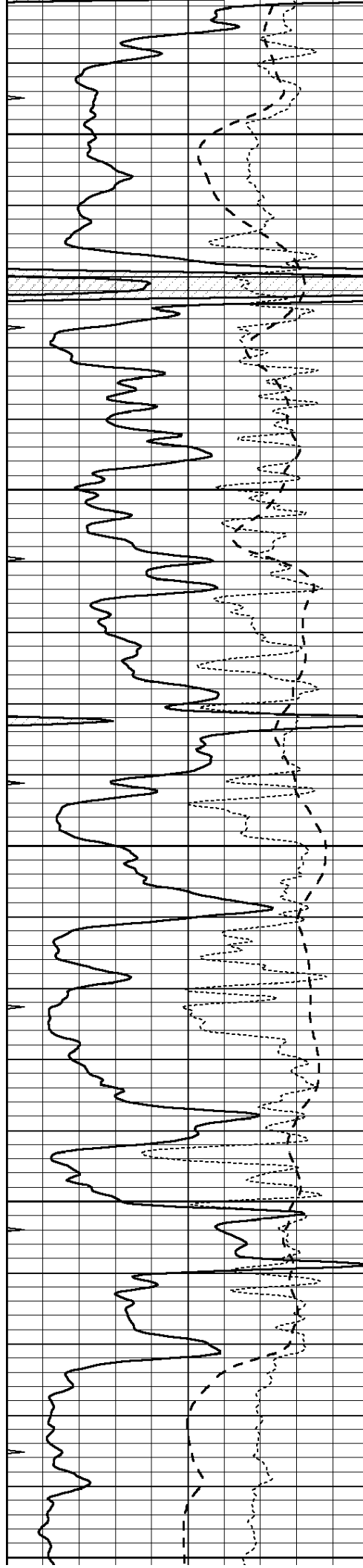
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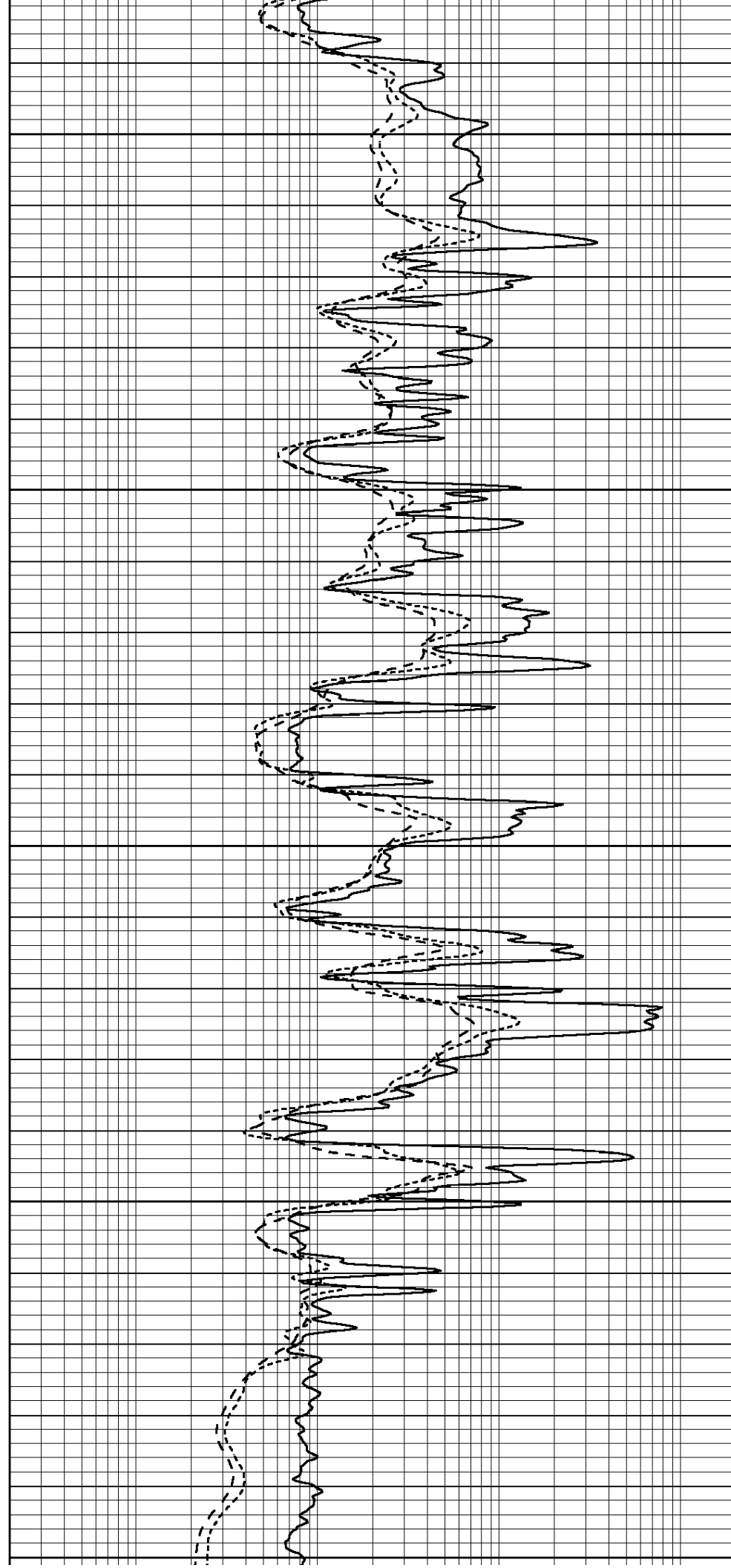
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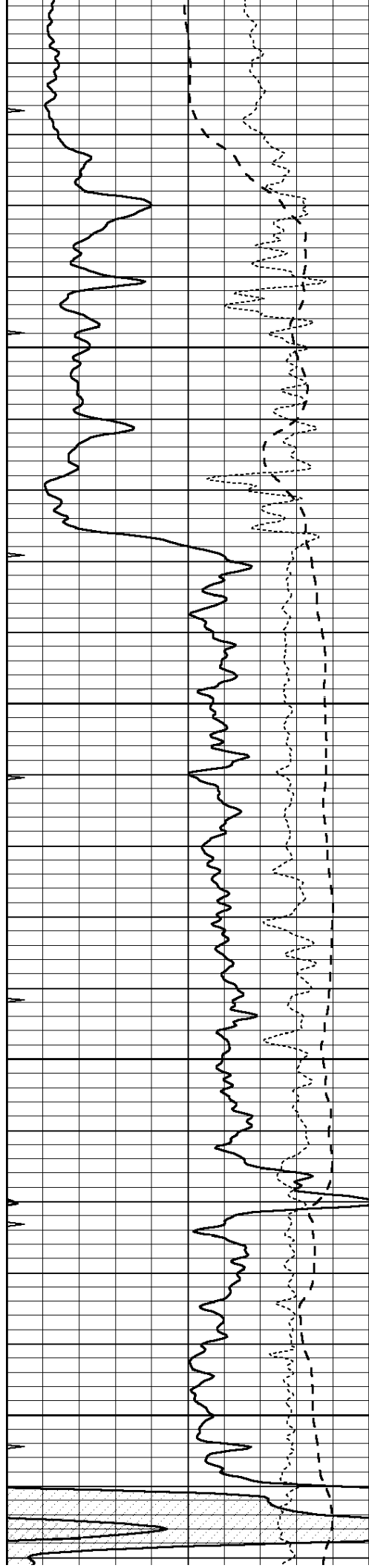
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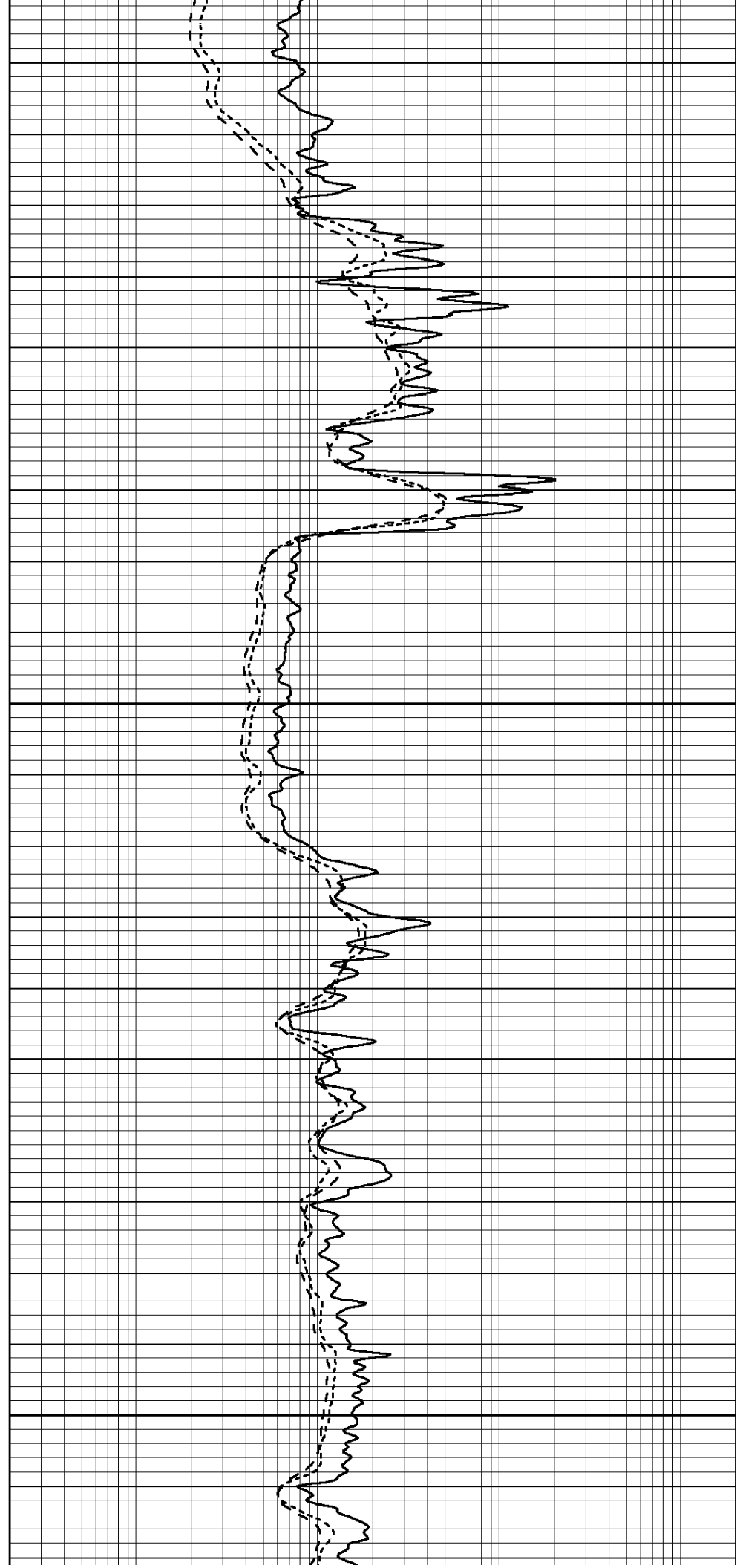


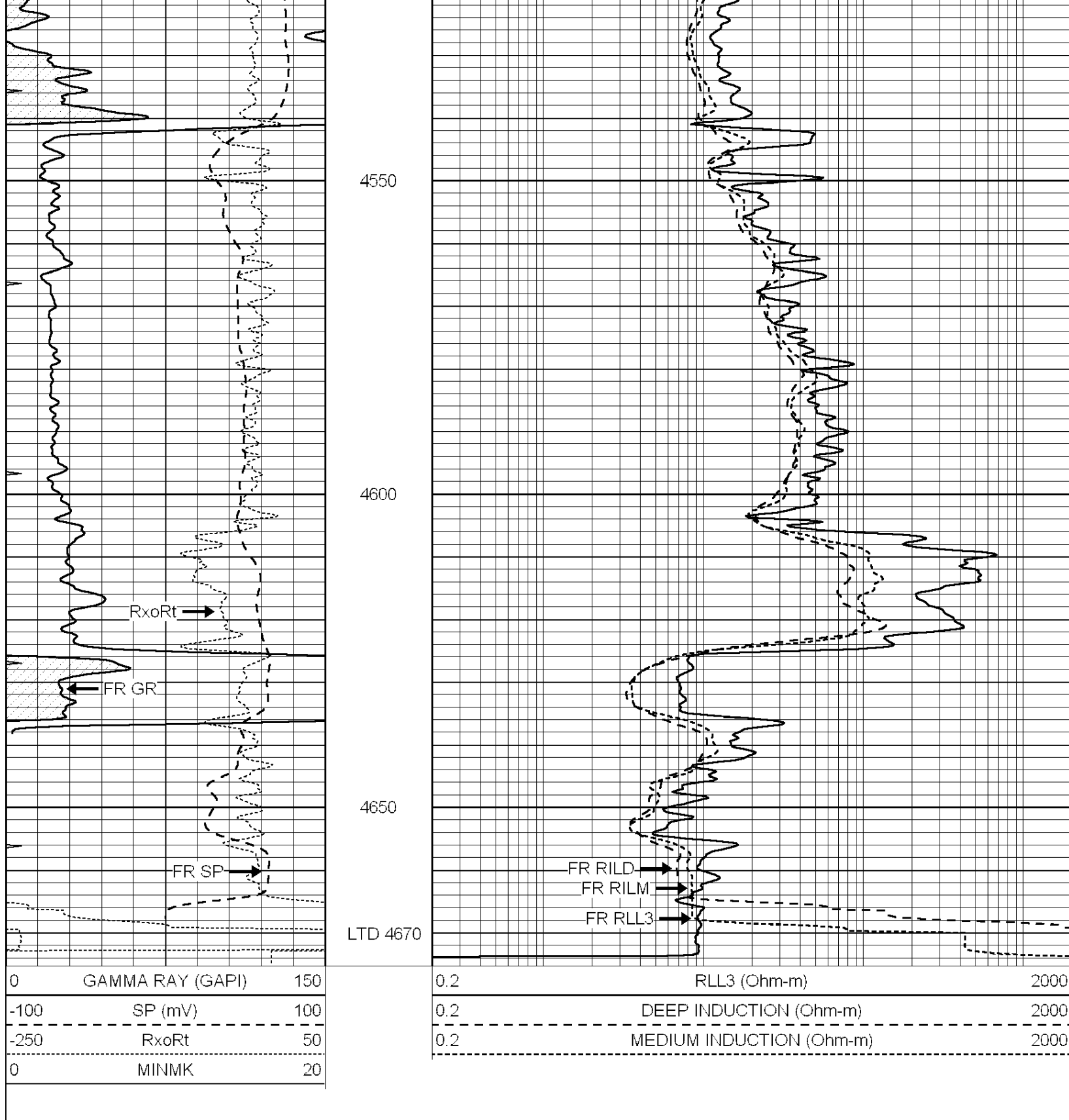
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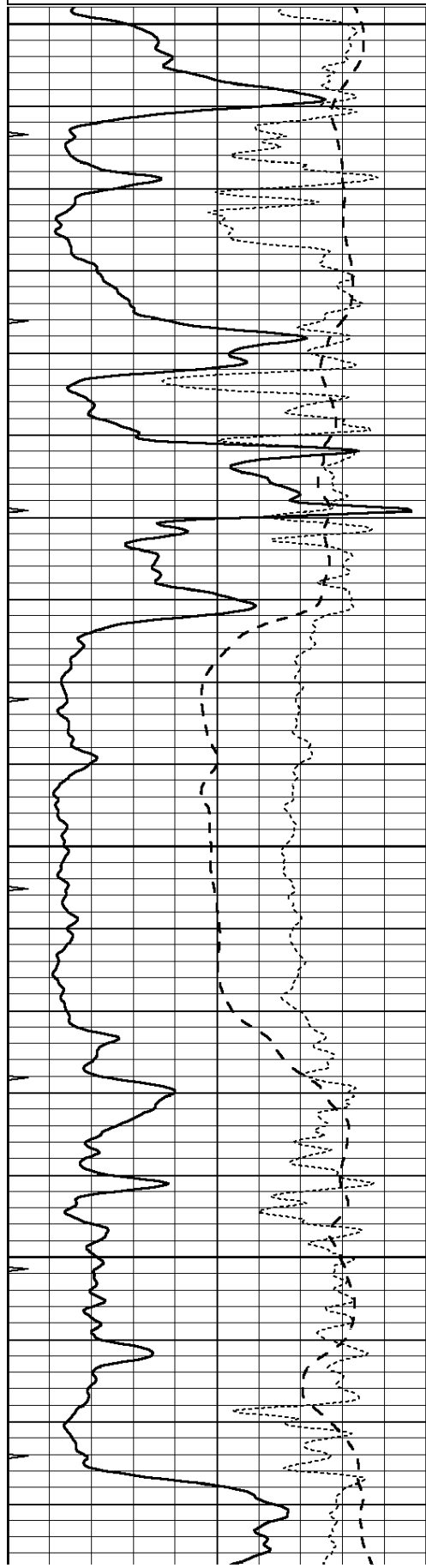


REPEAT SECTION

Database File: 24427pe.db
Dataset Pathname: pass2.2.1
Presentation Format: _dil
Dataset Creation: Wed May 07 13:25:01 2014 by Calc Open-Cased 090629

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

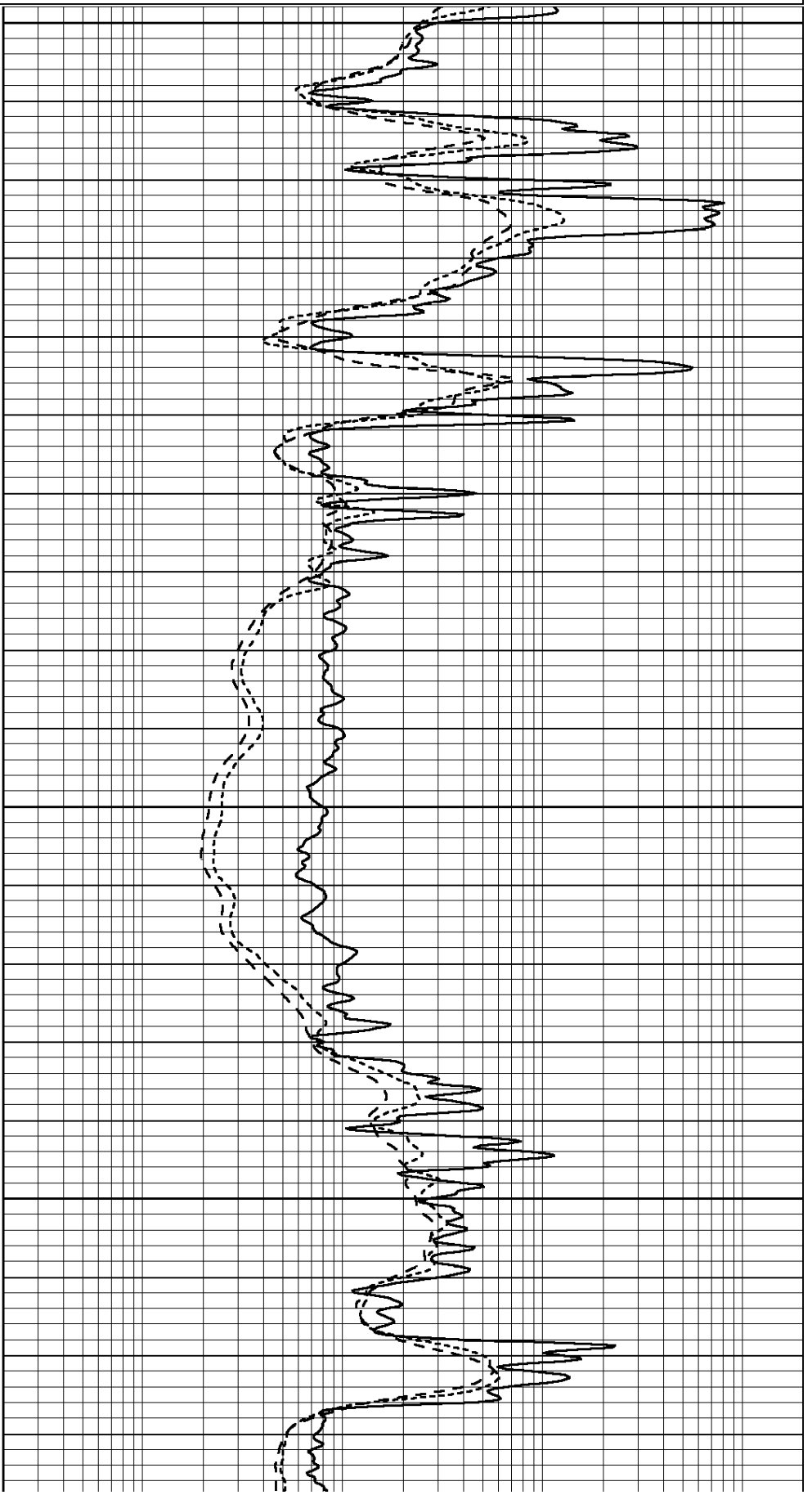


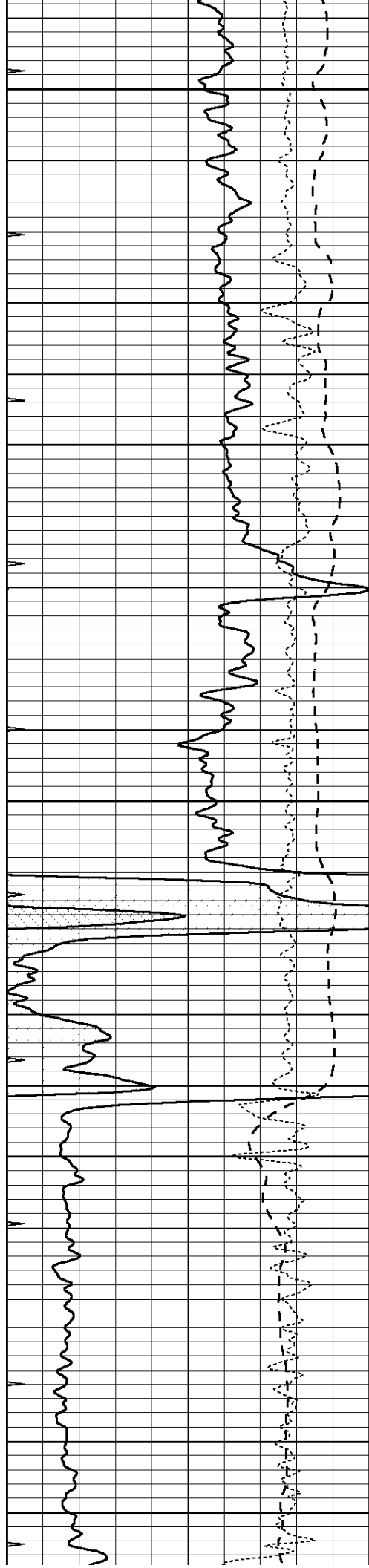
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4250

4300

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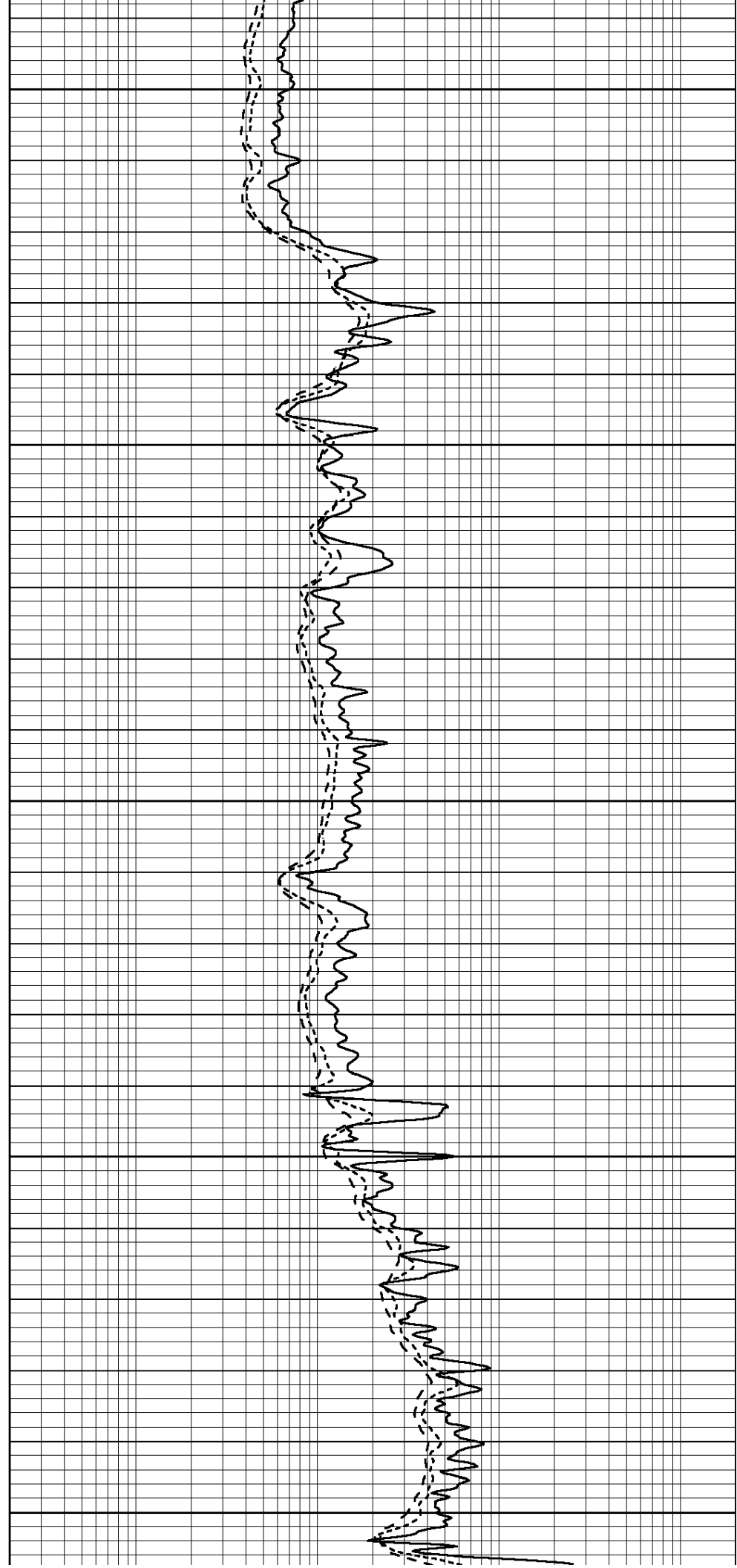
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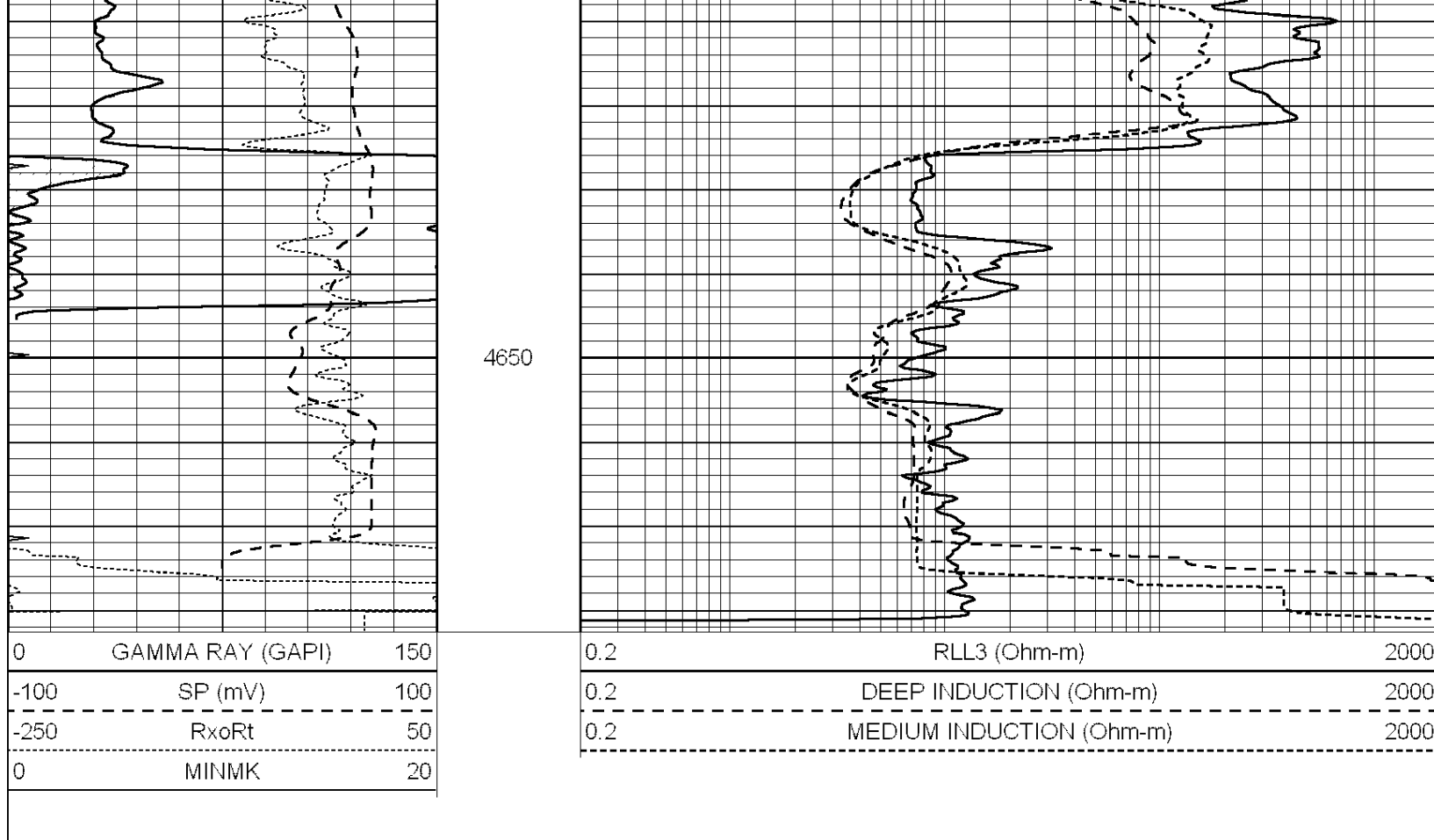
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4500

4550

4600





Calibration Report		
Database File:	24427pe.db	
Dataset Pathname:	pass3.3	
Dataset Creation:	Wed May 07 14:42:01 2014 by Calc Open-Cased 090629	

Dual Induction Calibration Report								
Serial-Model: Performed:			DIL3-GEAR Fri Apr 18 20:58:05 2014					
Readings			References			Results		
Loop:	Air	Loop	Air	Loop		m	b	
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	6.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	5.000
Internal:	Zero	Cal	Zero	Cal		m	b	
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Litho Density Calibration Report	
Serial: 001	Model: PRB
Performed Tue Jul 03 11:37:32 2007	

Litho Density Calibration				
	Background	Magnesium	Aluminum	Sandstone
Window 1	2170.6	9915.1	3855.3	11241.6
Window 2	2029.2	8716.5	3483.5	9750.8
Window 3	1665.0	4929.7	2356.8	5332.0
Window 4	493.3	492.1	490.0	486.8
Long Space	0.0	6687.3	1454.3	7721.6
Short Space	1.9	2149.3	1403.9	2351.5

Short Space	1.0	2140.0	1400.0	2004.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept	: -18.7
Caliper					
Low Ref	Readings	Reference			
High Ref	3.5	8.3			
	5.4	14.0			
	Gain: 2.0		Offset: 1.5		
Compensated Neutron Calibration Report					
		Serial Number:	080620		
		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:	7				
Tool Model:	Probe1				
Performed:	Fri Apr 18 20:57:05 2014				
Calibrator Value:	1.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	1.0	cps			
Sensitivity:	0.4500	GAPI/cps			