



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company	CHIEFTAIN OIL CO., INC.	Company	CHIEFTAIN OIL COMPANY, INC.
Well	SALLY #2	Well	SALLY #2
Field	SCHUPBACH SOUTHWEST	Field	SCHUPBACH SOUTHWEST
County	BARBER	County	BARBER
State	KANSAS	State	KANSAS
Location:	API # : 15-007-23471-0000 1490' FSL & 430' FEL SW - SE - NE - SE	Other Services CDL/CNL PE	
SEC 4 TWP 34S RGE 11W			
Permanent Datum	GROUND LEVEL	Elevation	1355
Log Measured From	KELLY BUSHING 10' A.G.L.	K.B. 1365 D.F. 1363 G.L. 1355	
Drilling Measured From	KELLY BUSHING		
Date	12-22-09		
Run Number	ONE		
Depth Driller	4895		
Depth Logger	4895		
Bottom Logged Interval	4893		
Top Log Interval	0		
Casing Driller	328		
Casing Logger	327		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4 / 64	CHLORIDES 5,000	
pH / Fluid Loss	10.5 / 8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.75 @ 70F		
Rinf @ Meas. Temp	0.56 @ 70F		
Rmc @ Meas. Temp	0.90 @ 70F		
Source of Rinf / Rmc	MEASURED		
Rim @ BHT	0.42 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	JEFF GRONEWEG		
Witnessed By	ARDEN RATZLAFF		

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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

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: MEDICINE LODGE, KS - SOUTH 11 MILES TO TALBOTT RD
2 MILES EAST TO NORTHSTAR RD - 1 MILE SOUTH - 1 MILE EAST - NORTH INTO

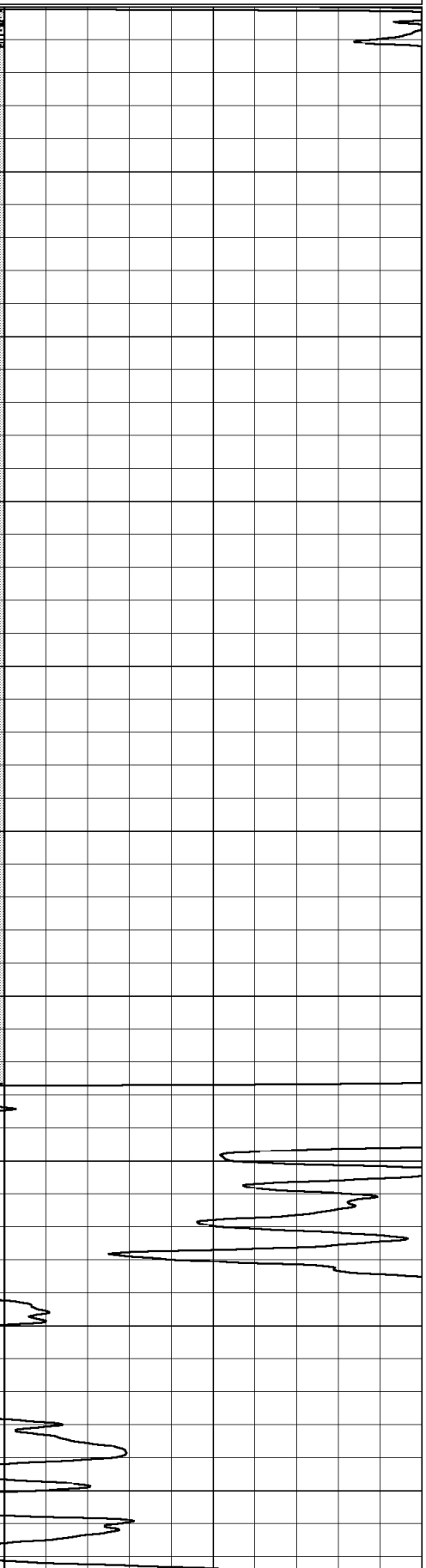
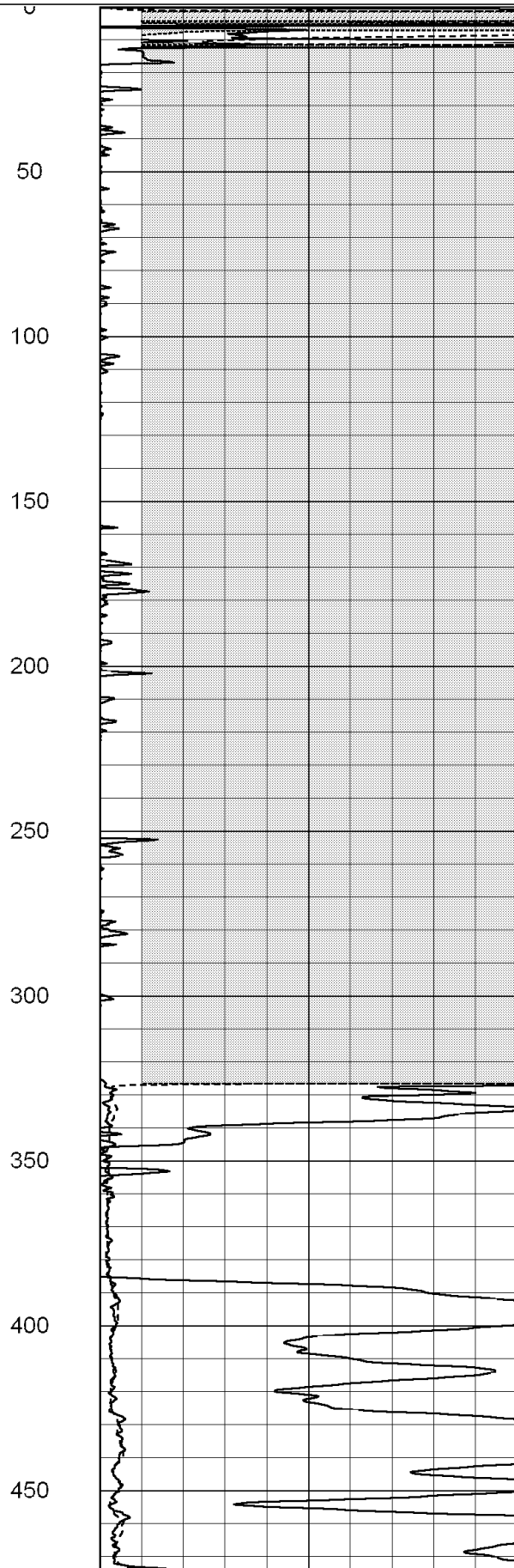
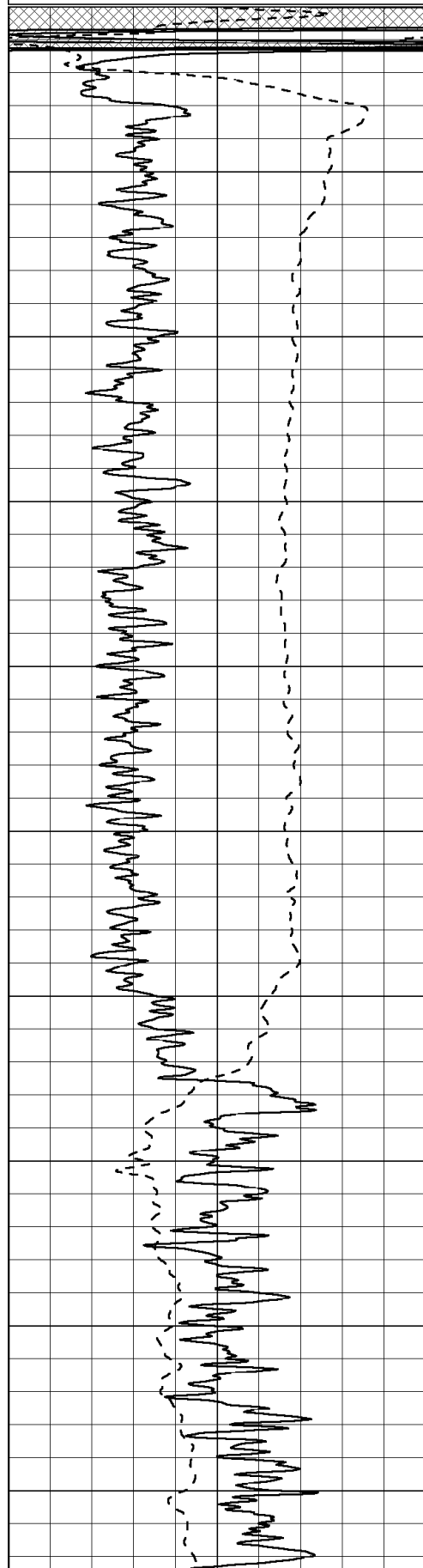
Charted by:

Depth in Feet scaled 1:600

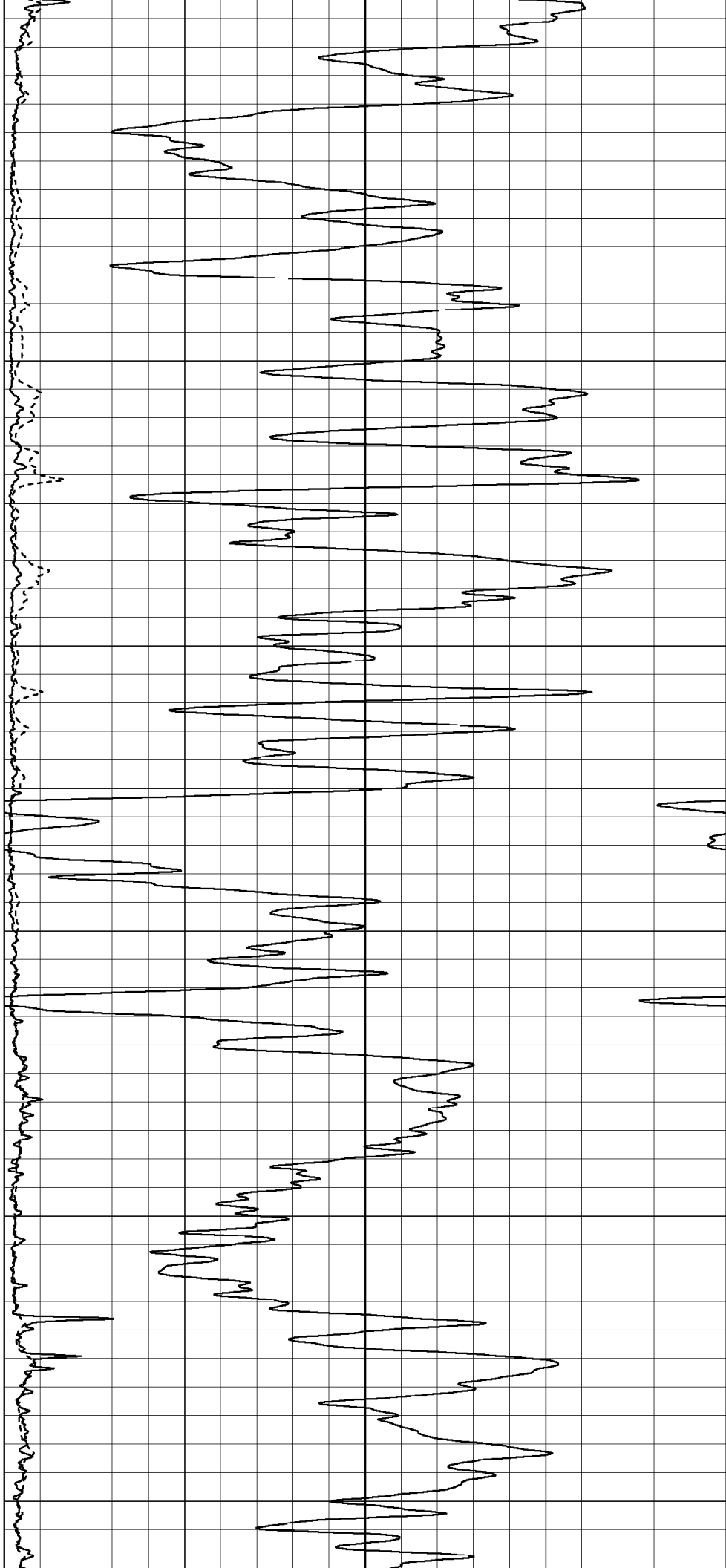
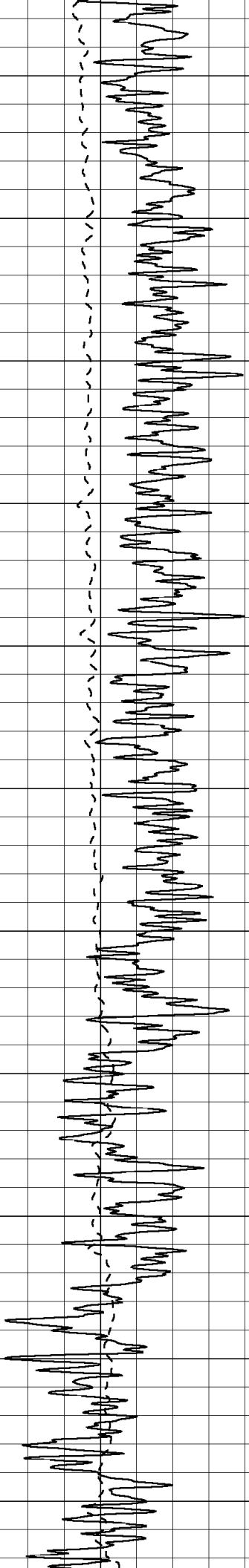
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

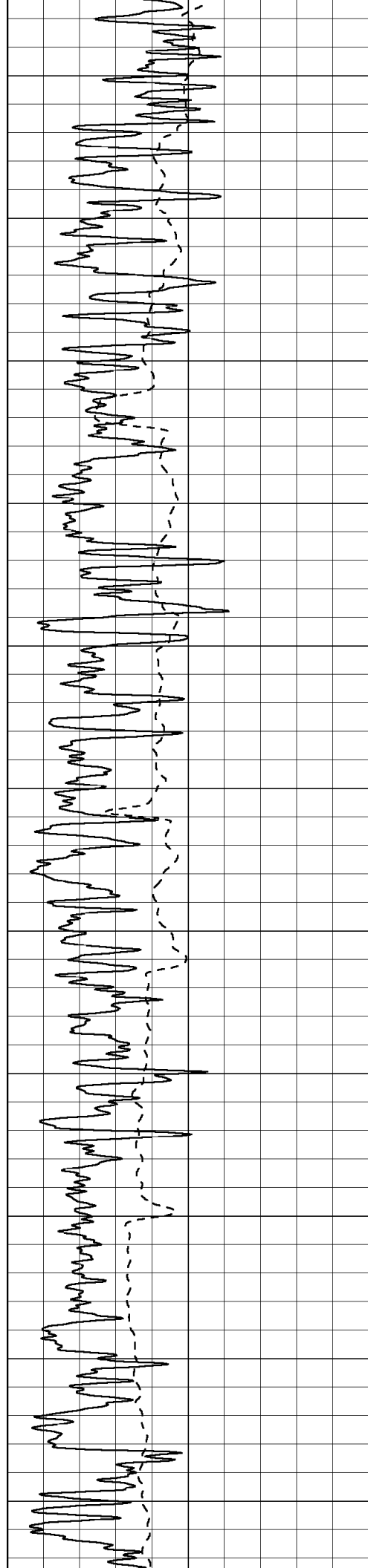
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
1000	CILD (mmho-m)	
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

0



500
550
600
650
700
750
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850
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950
1000





1050

1100

1150

1200

1250

1300

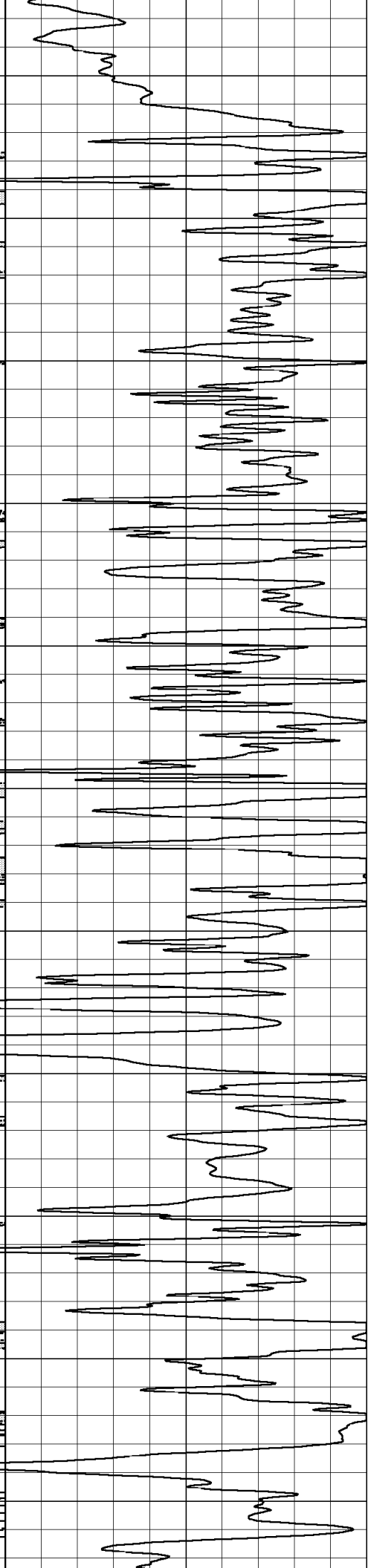
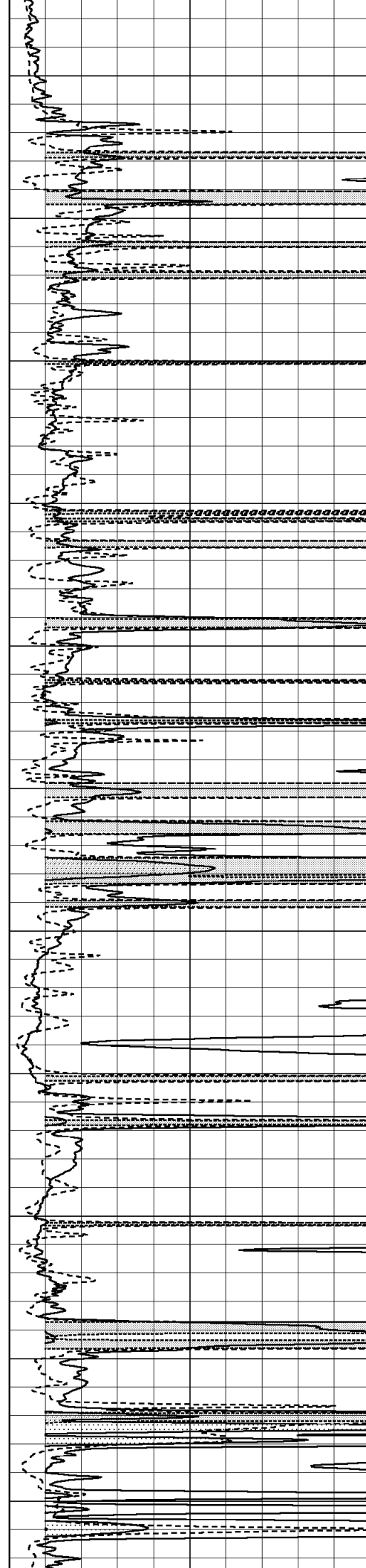
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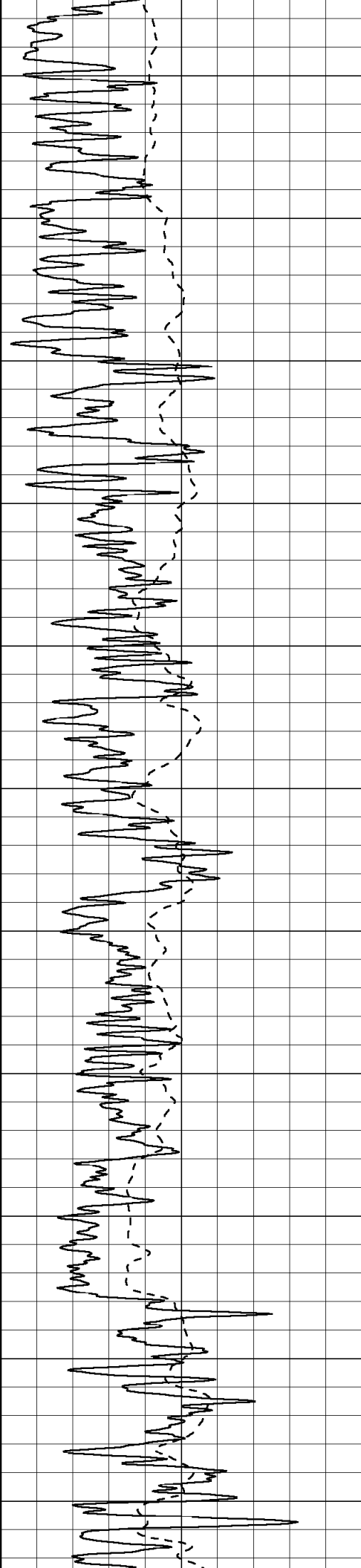
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1500

1550





1600

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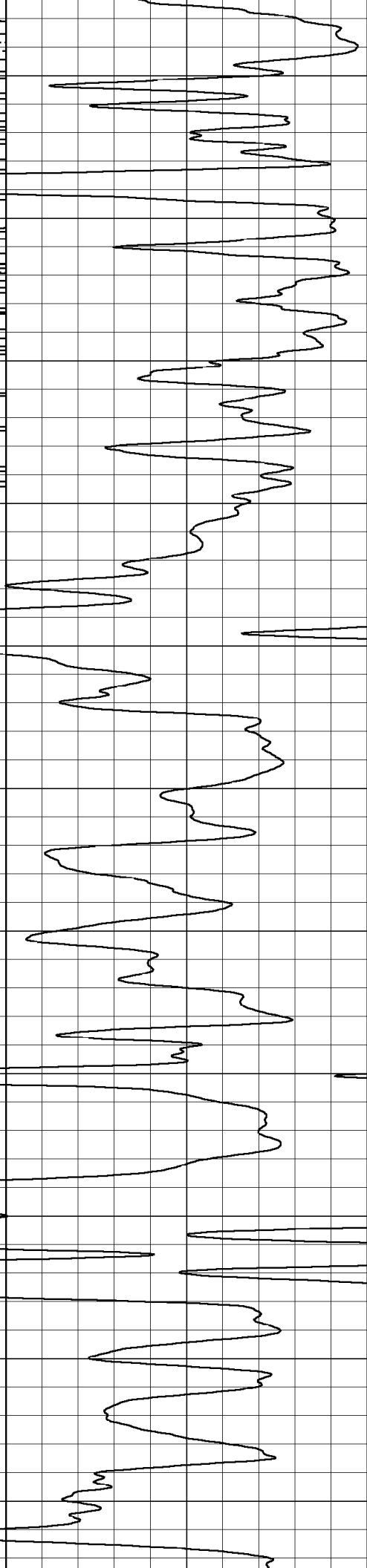
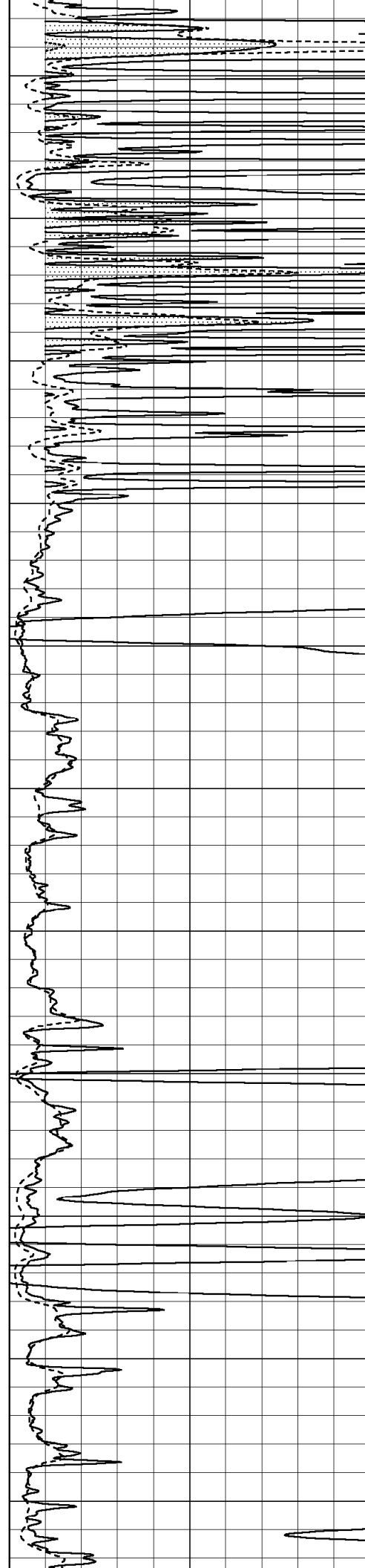
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1950

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2050

2100



2150

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2300

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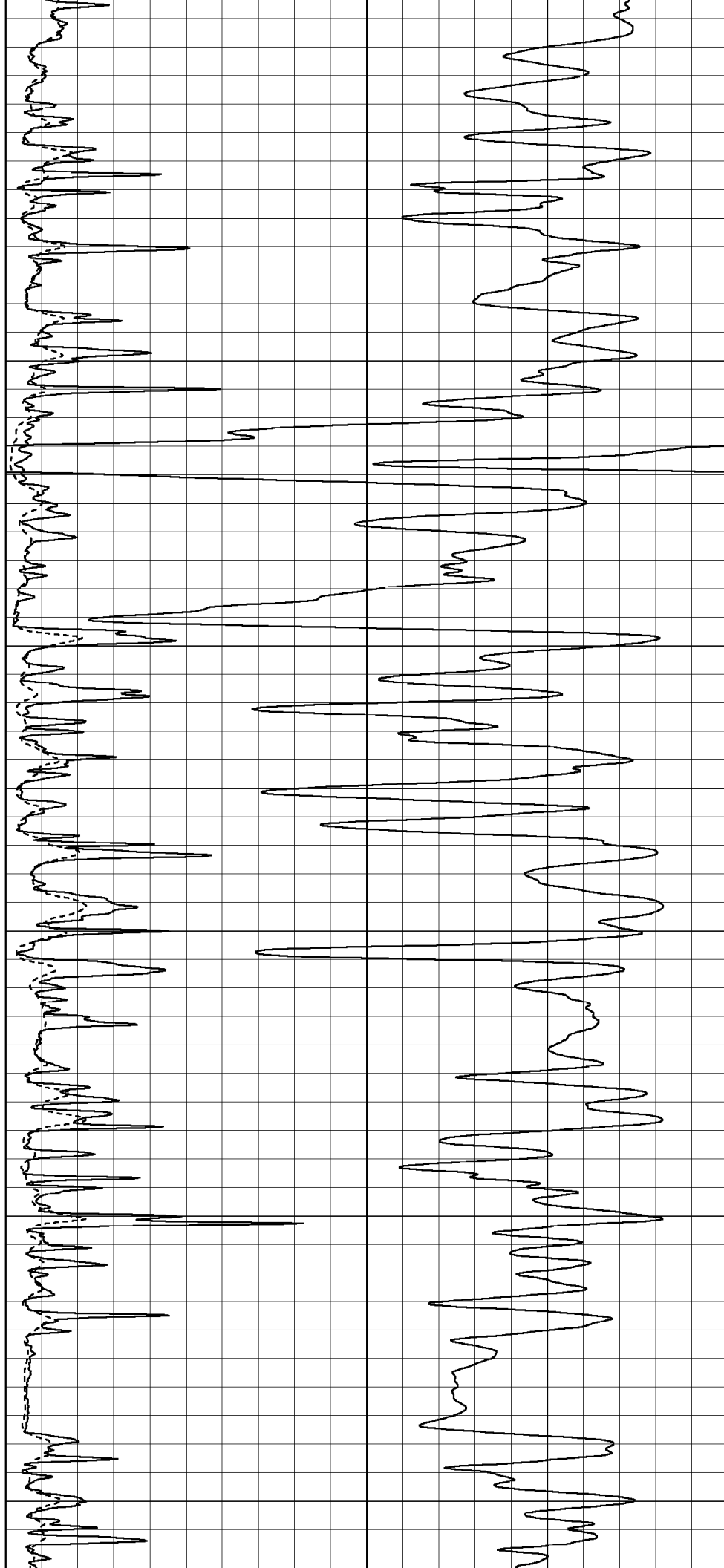
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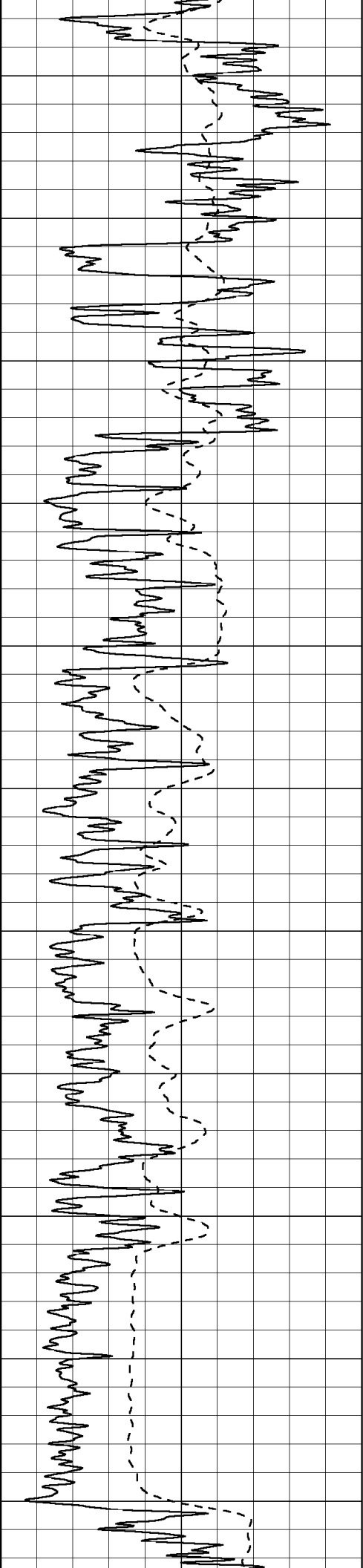
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2550

2600

2650





2700

2750

2800

2850

2900

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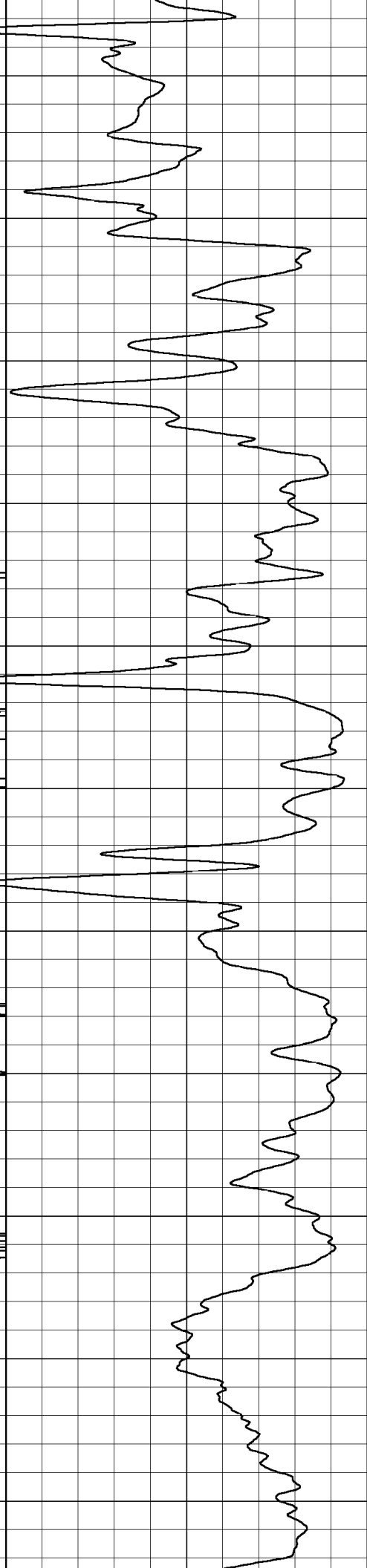
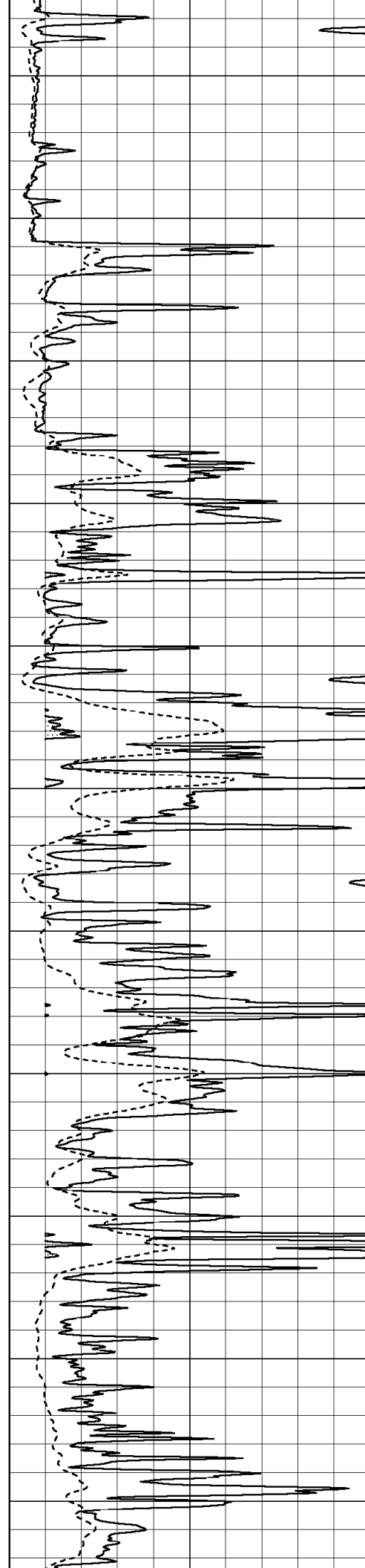
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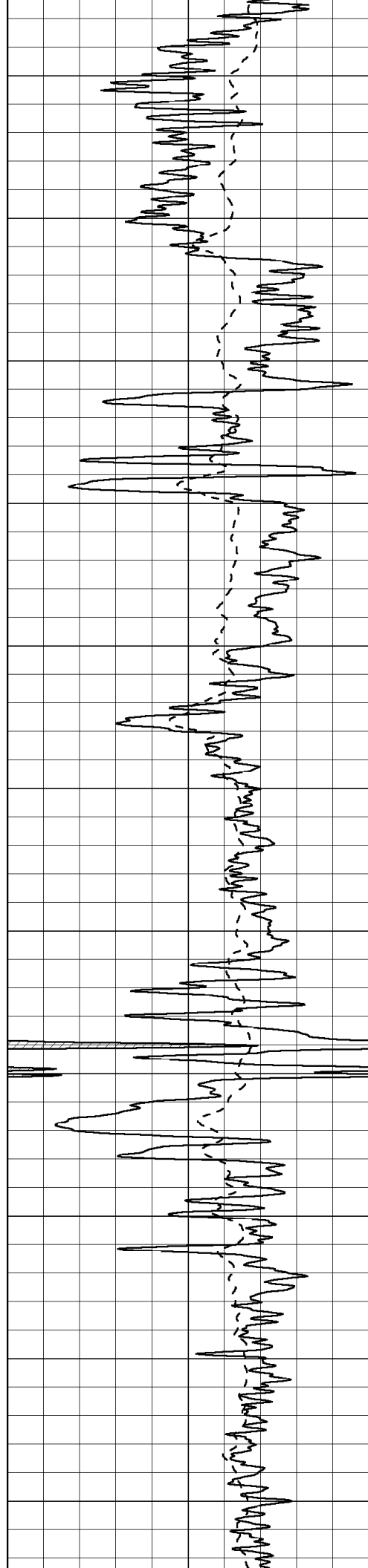
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3100

3150

3200





3250

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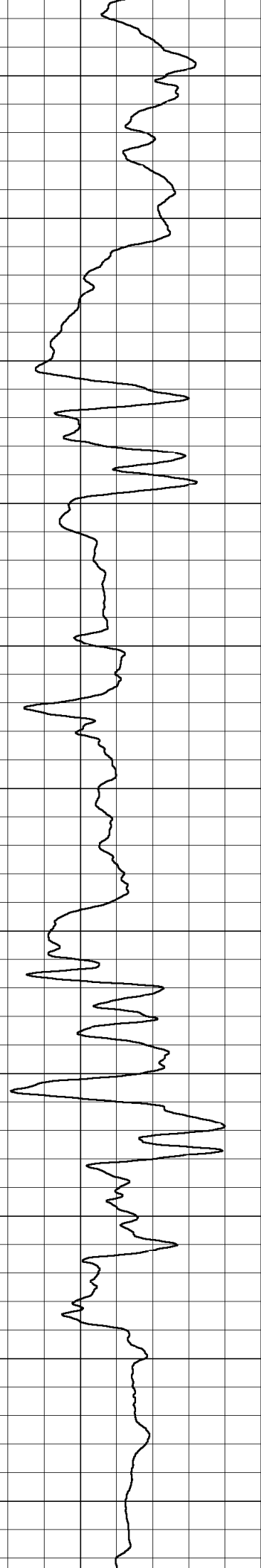
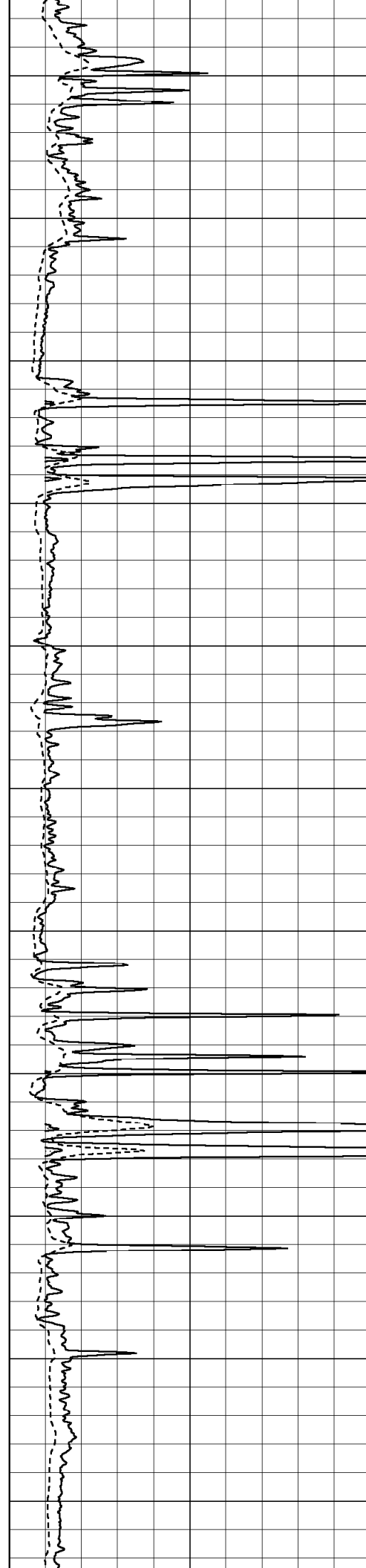
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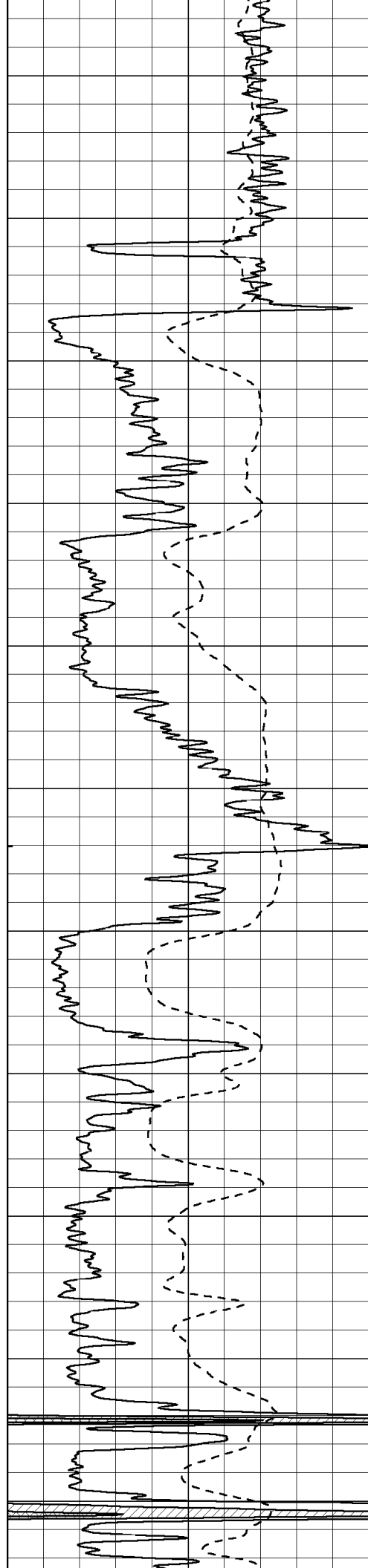
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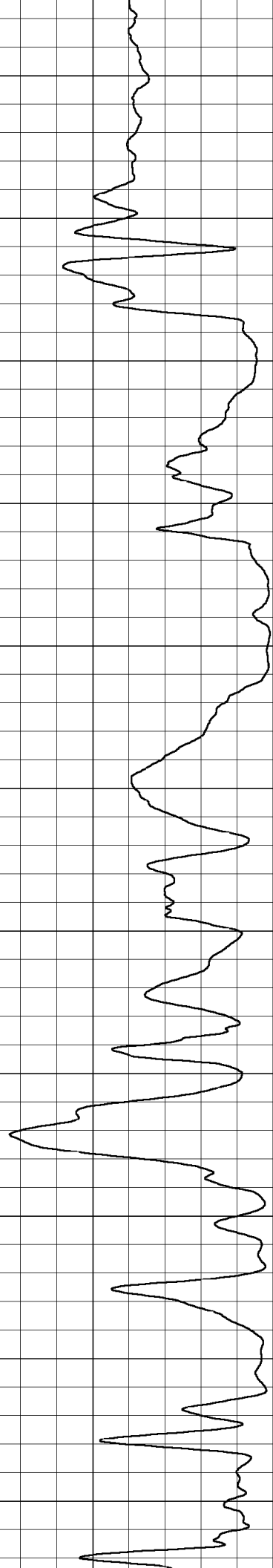
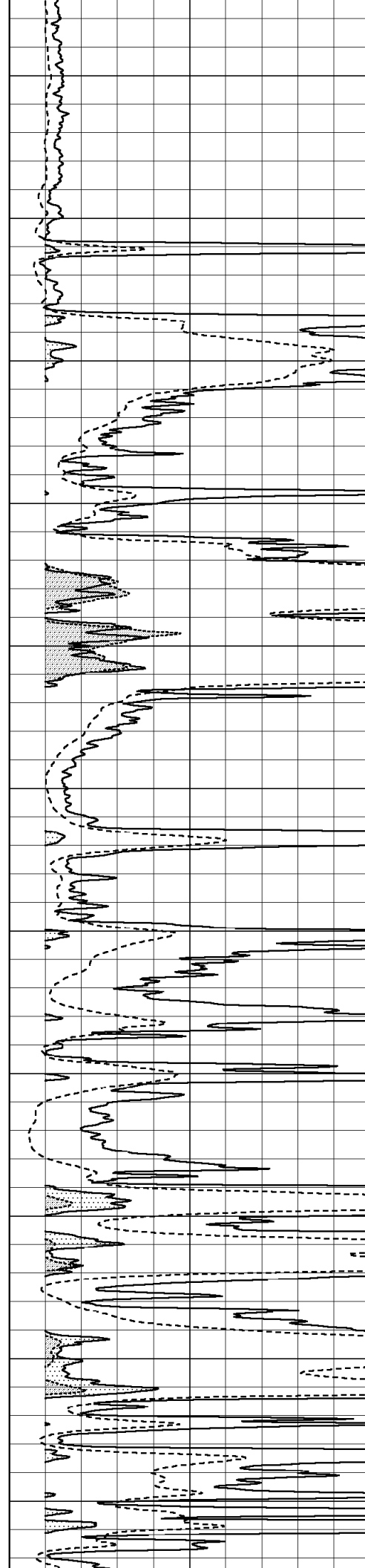
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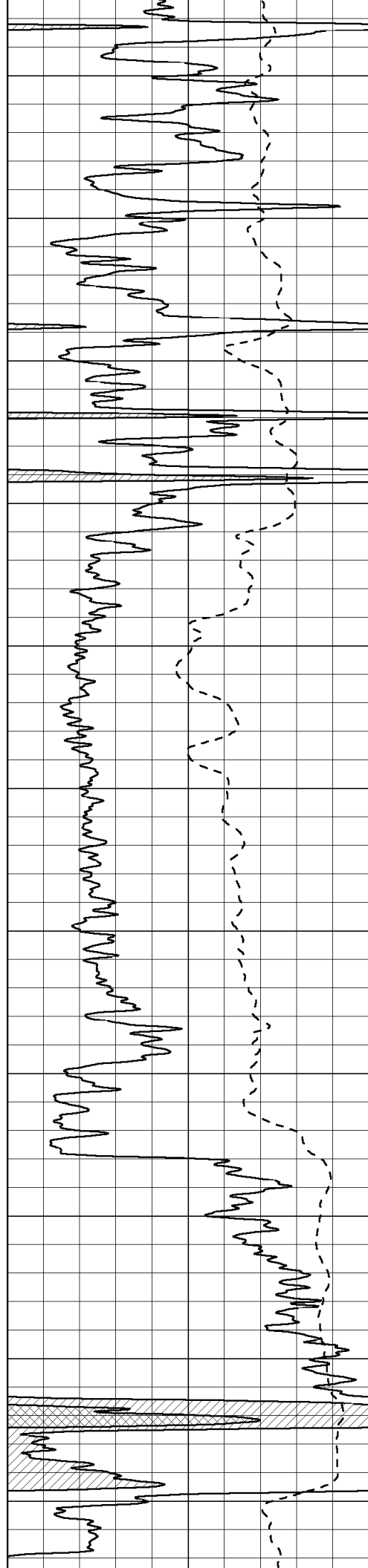
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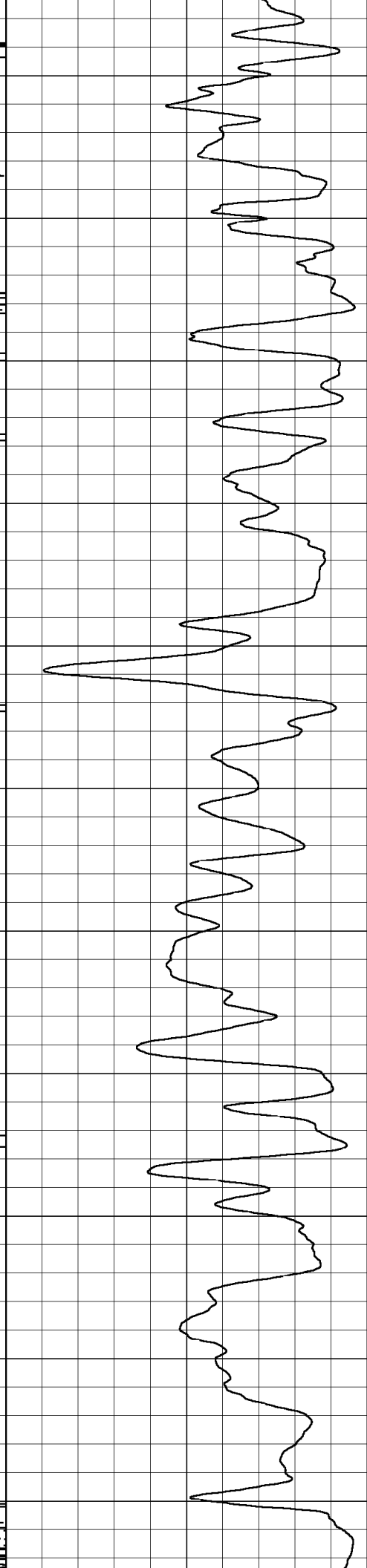
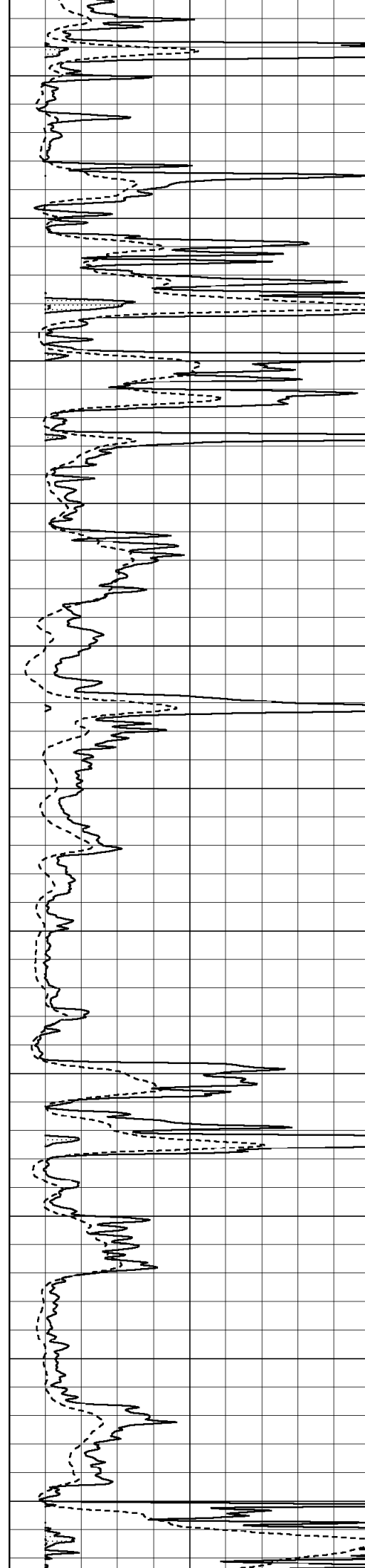
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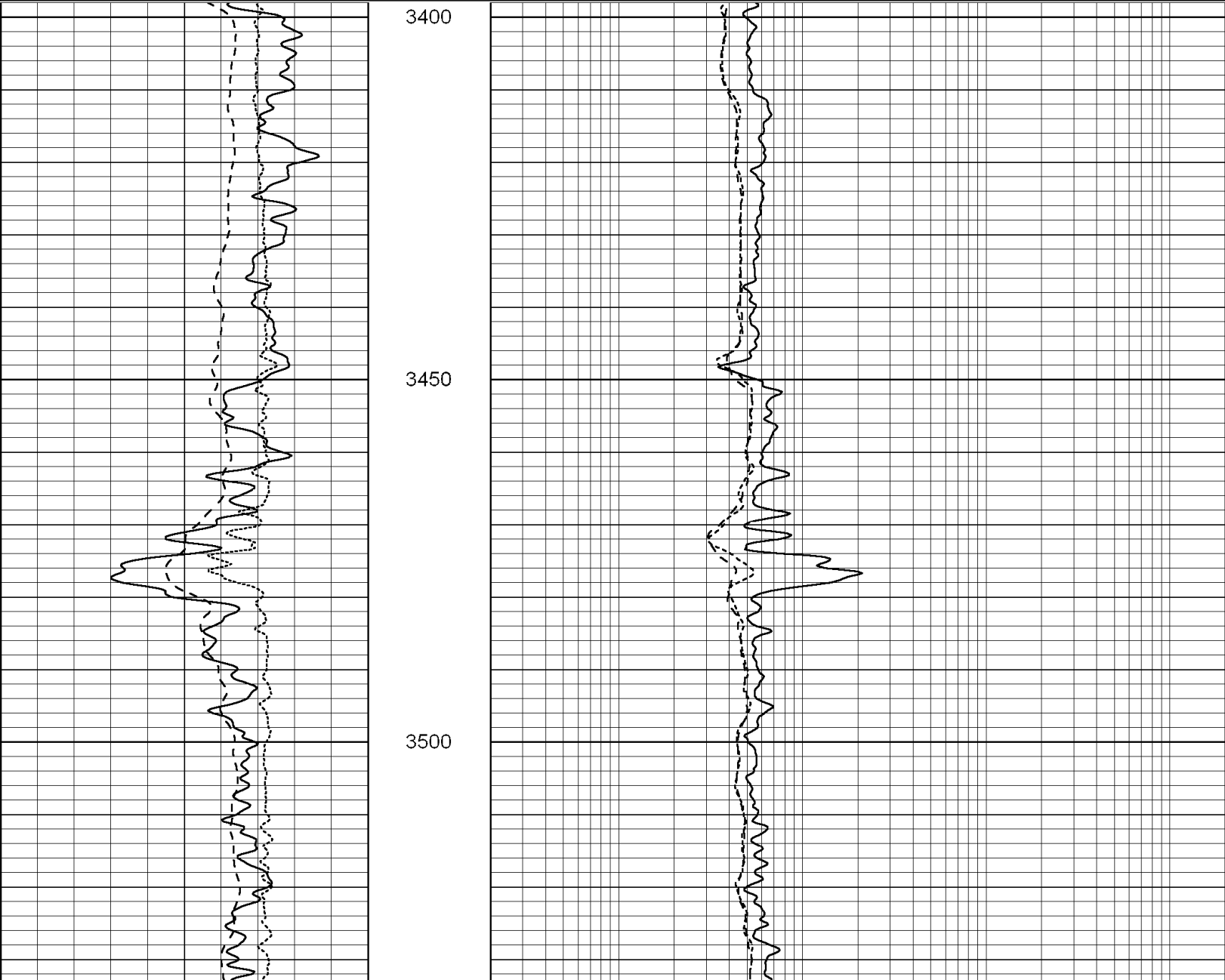
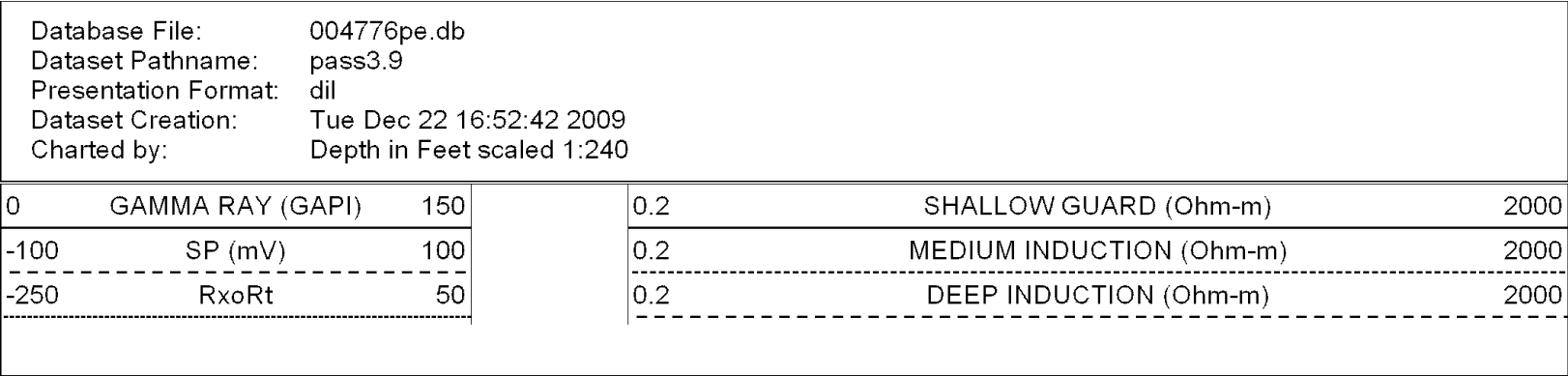
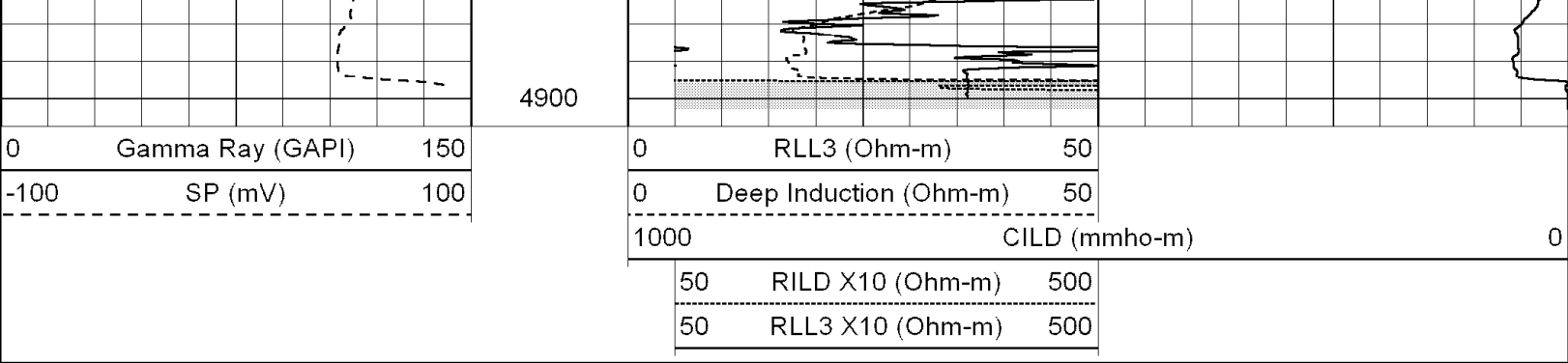
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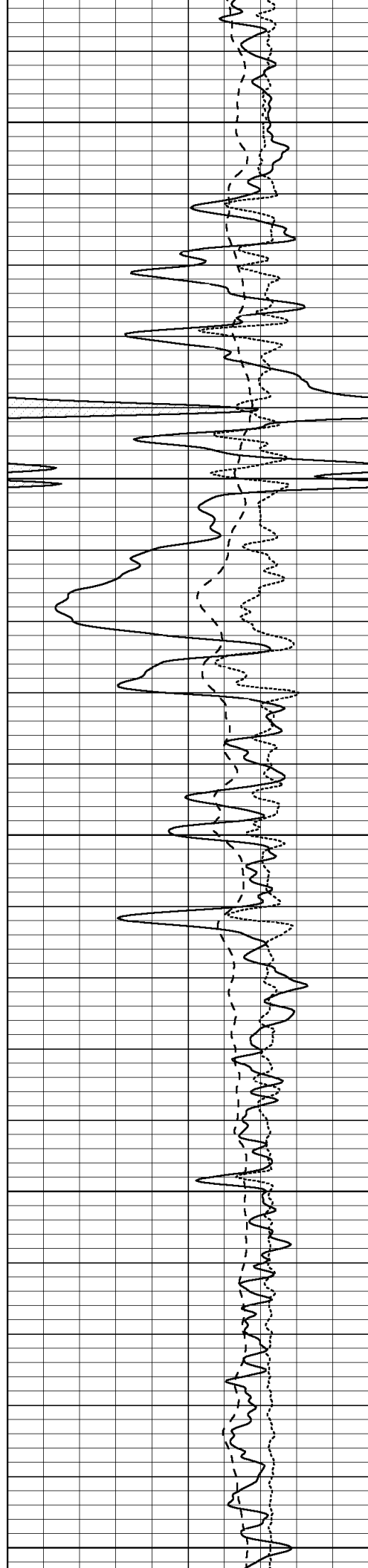
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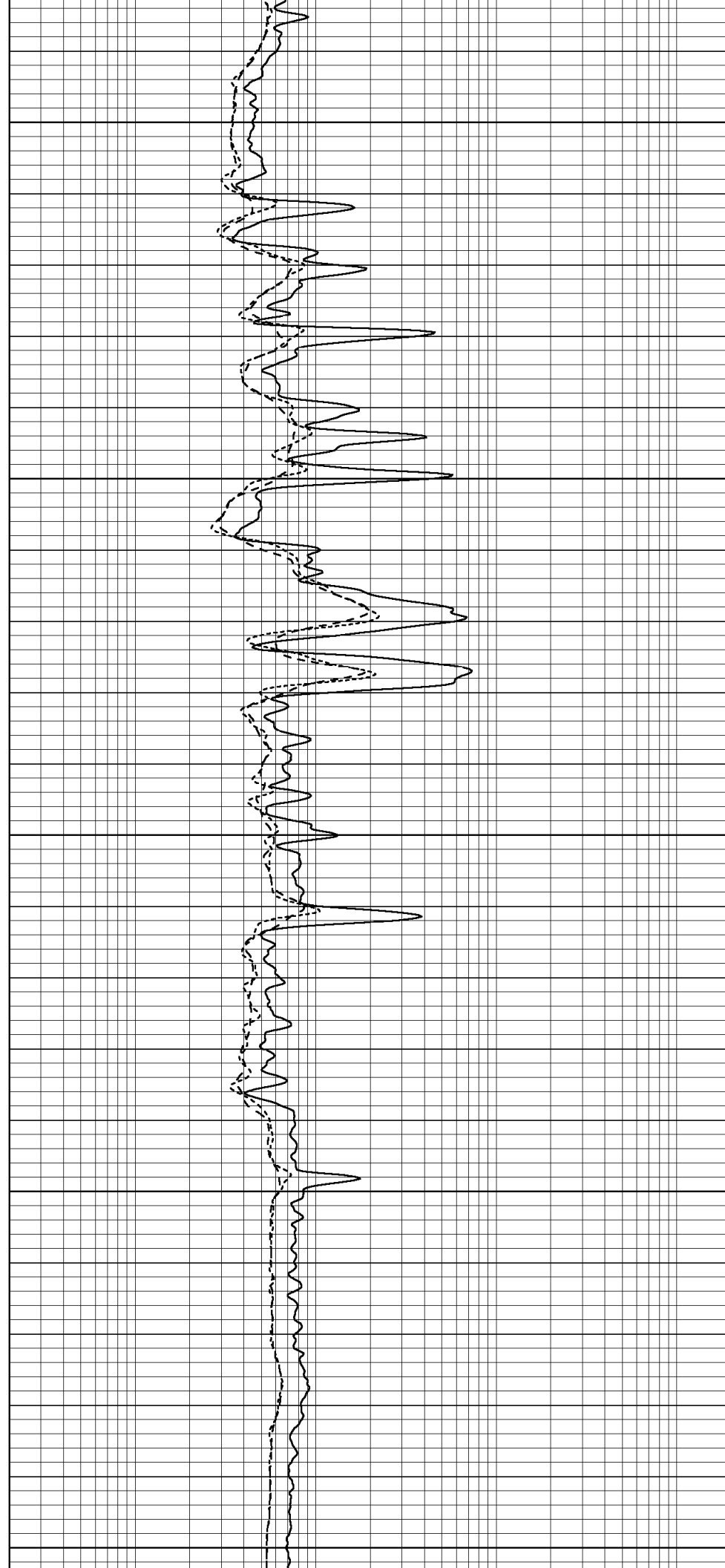
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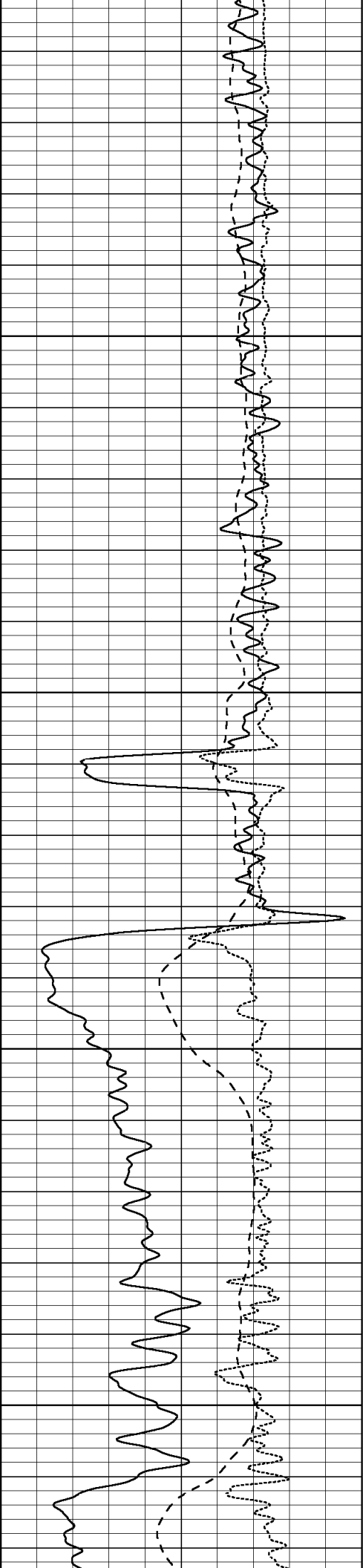
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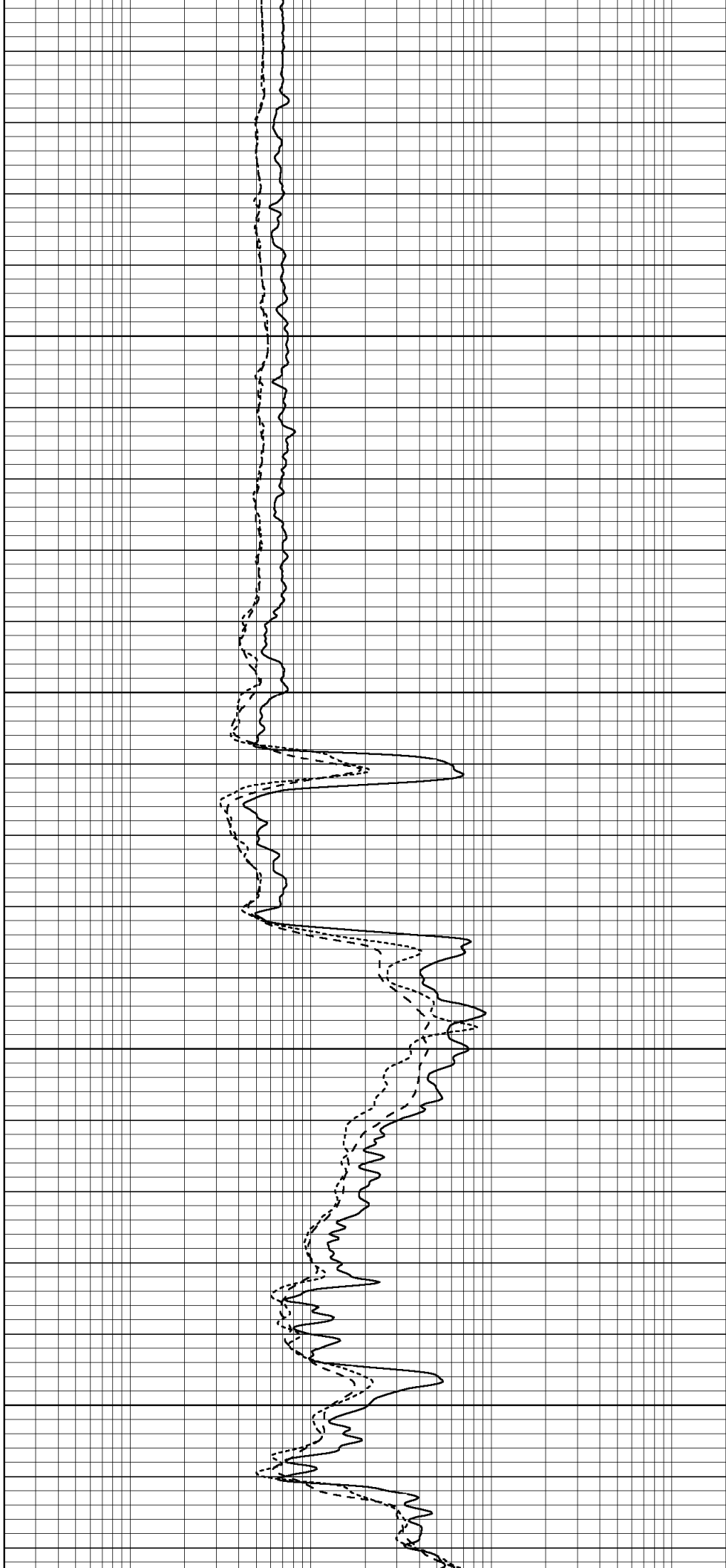


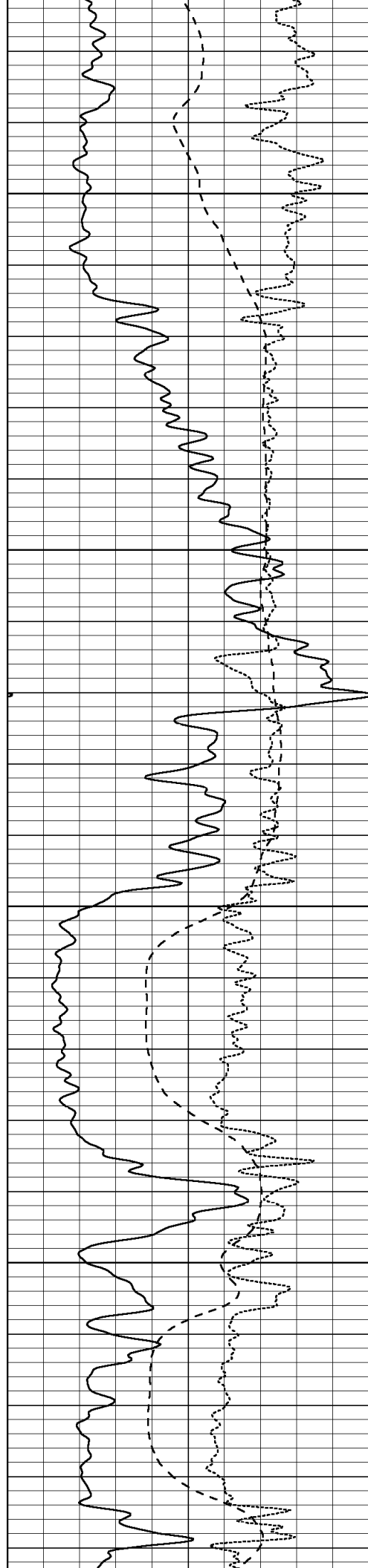
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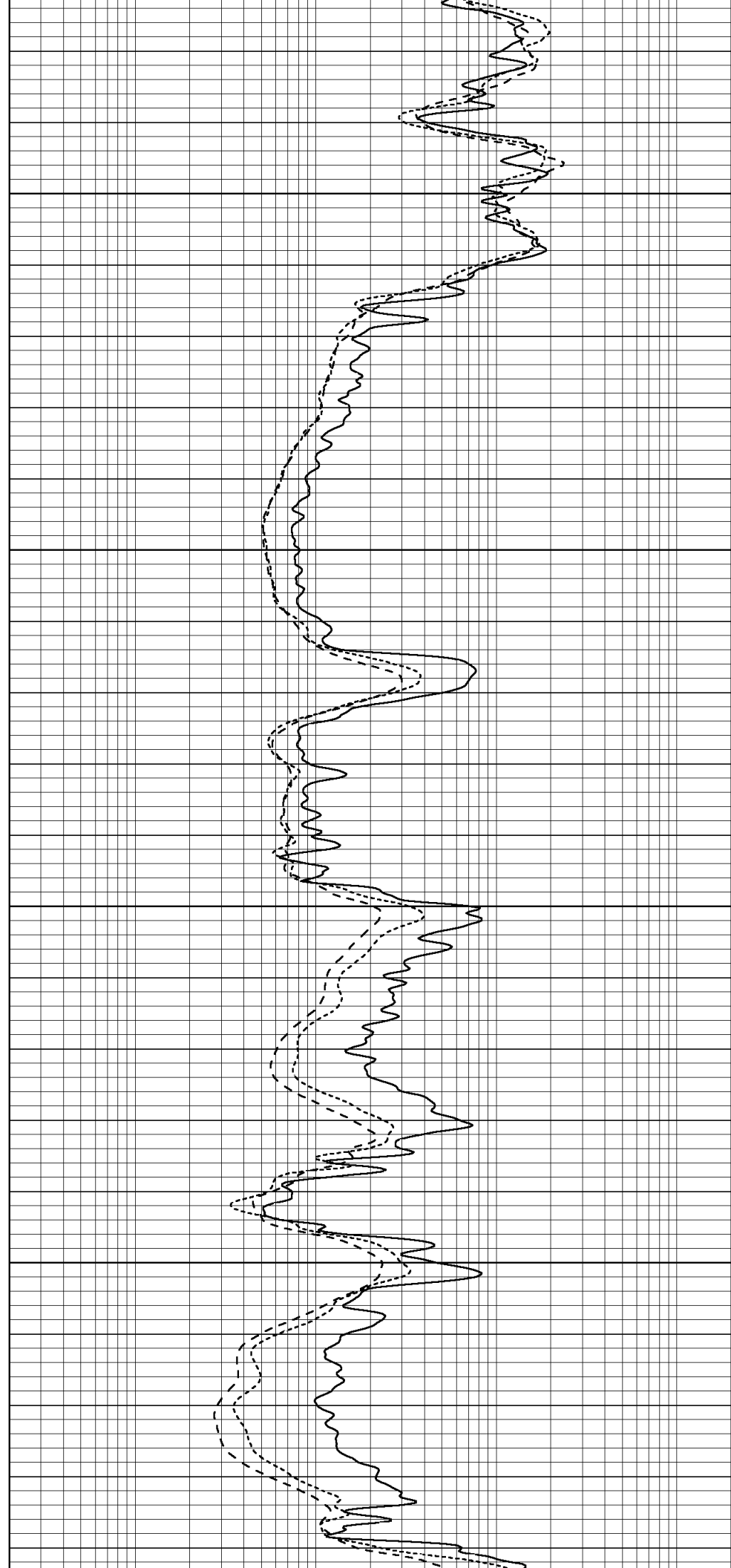


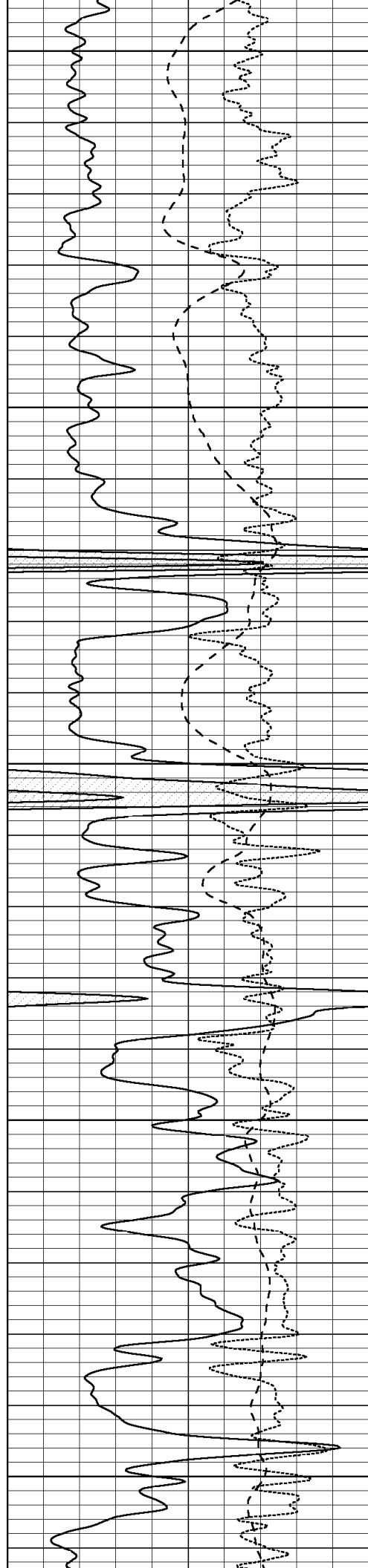
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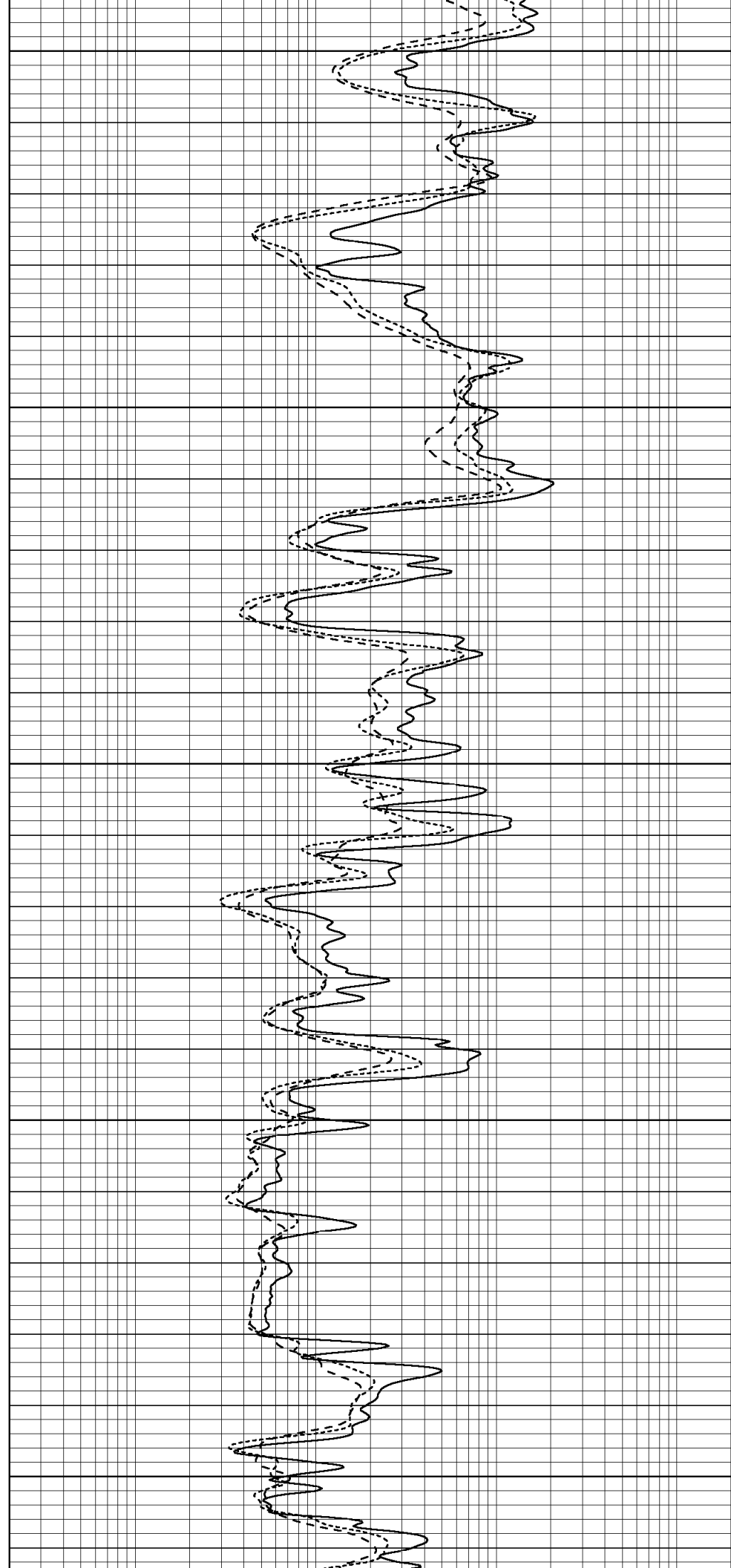
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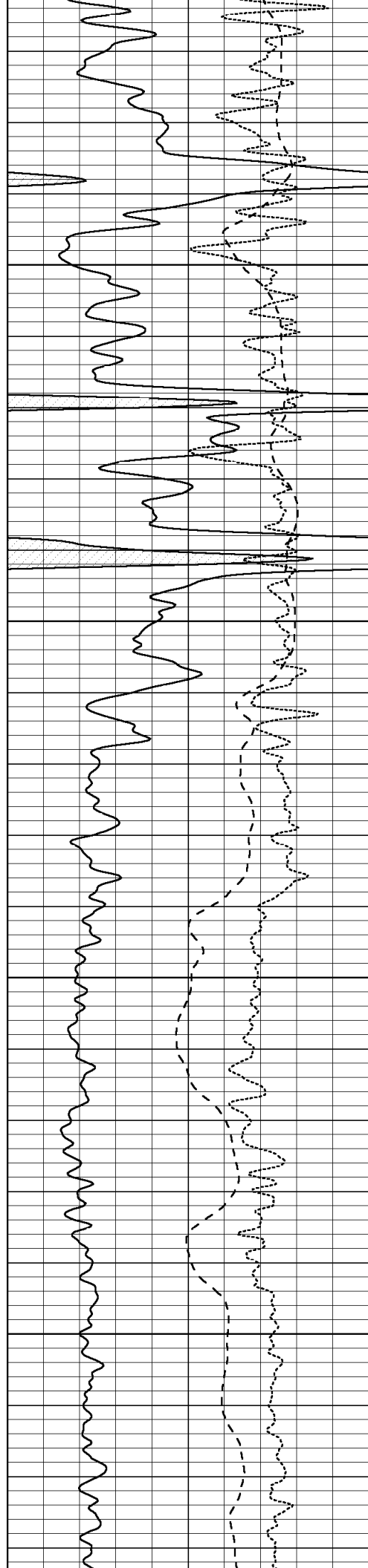
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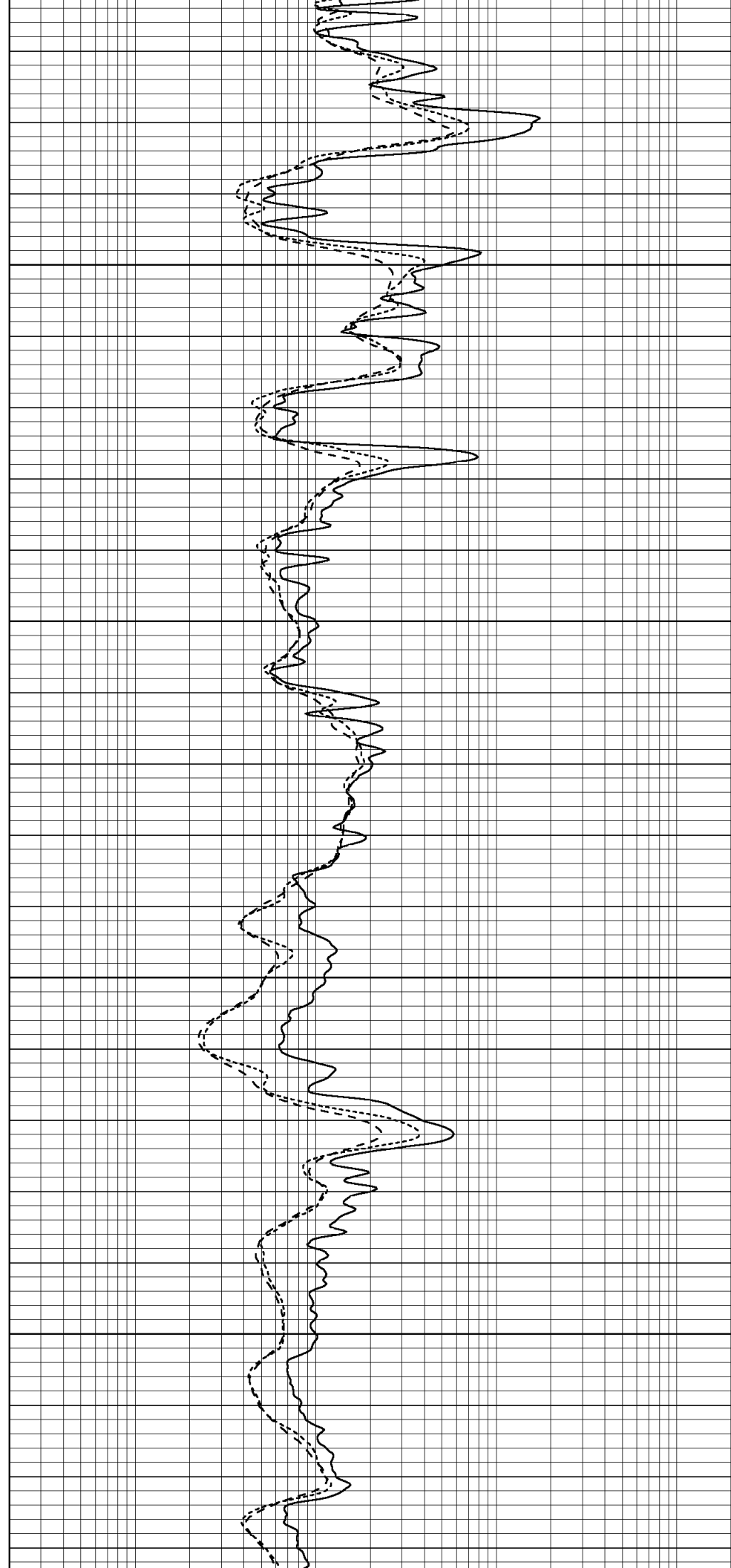


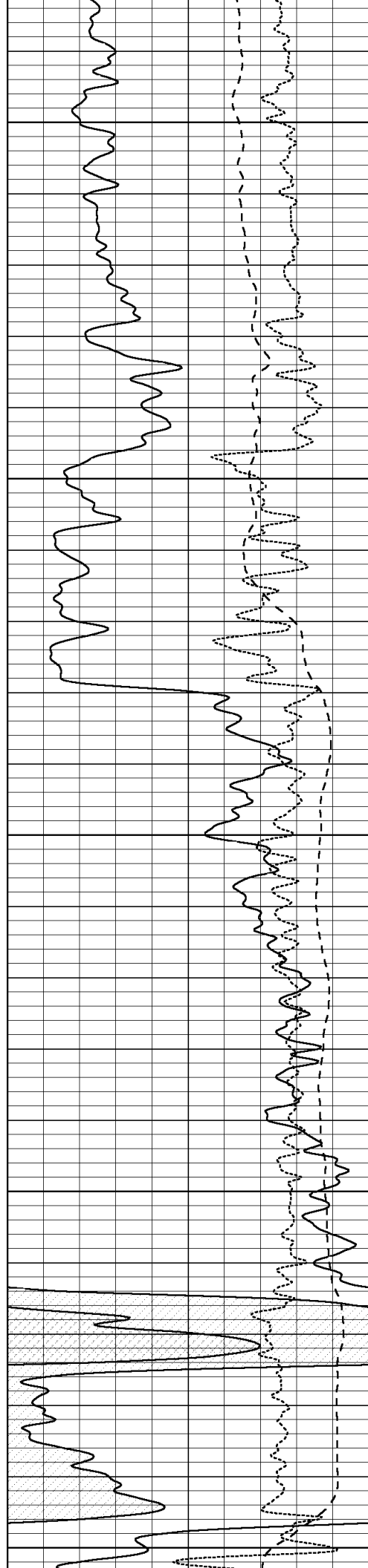
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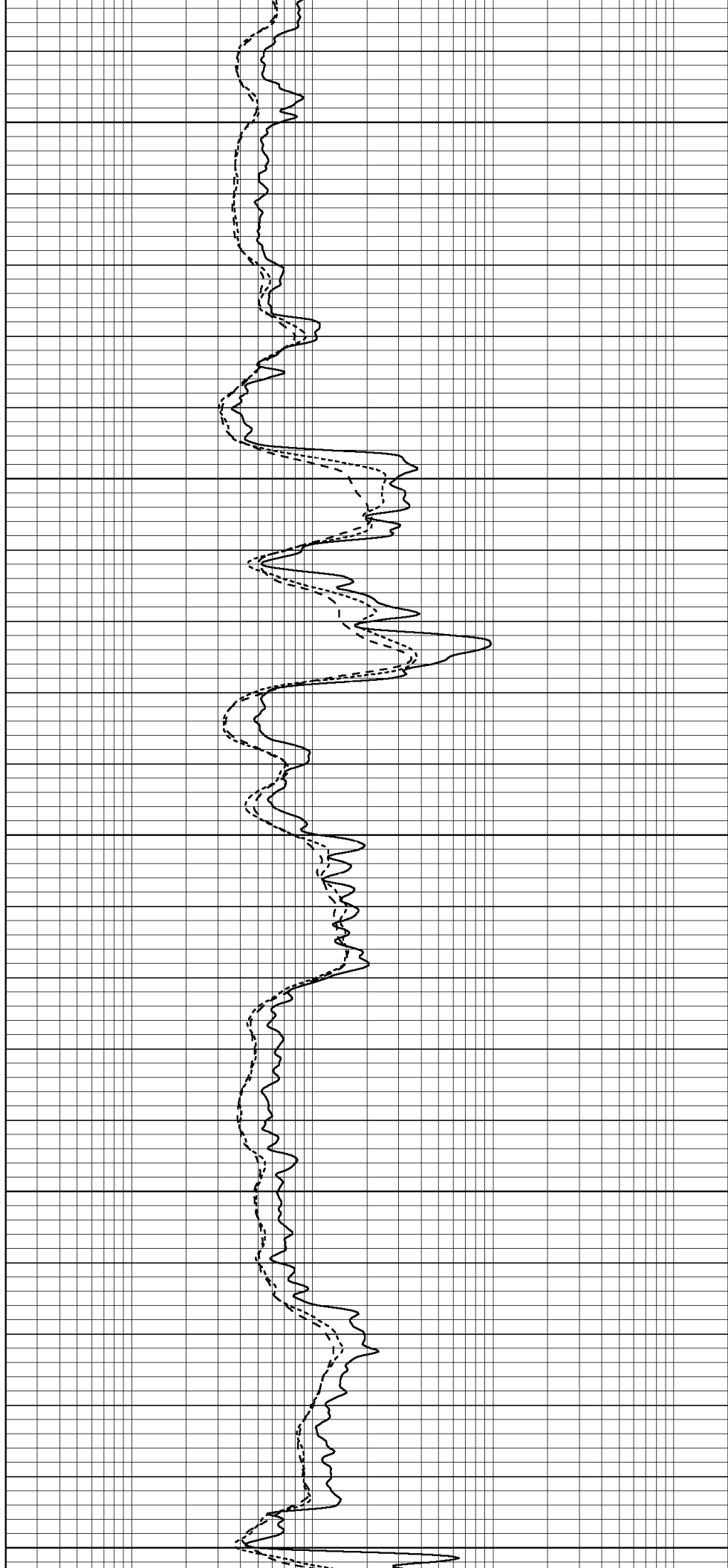
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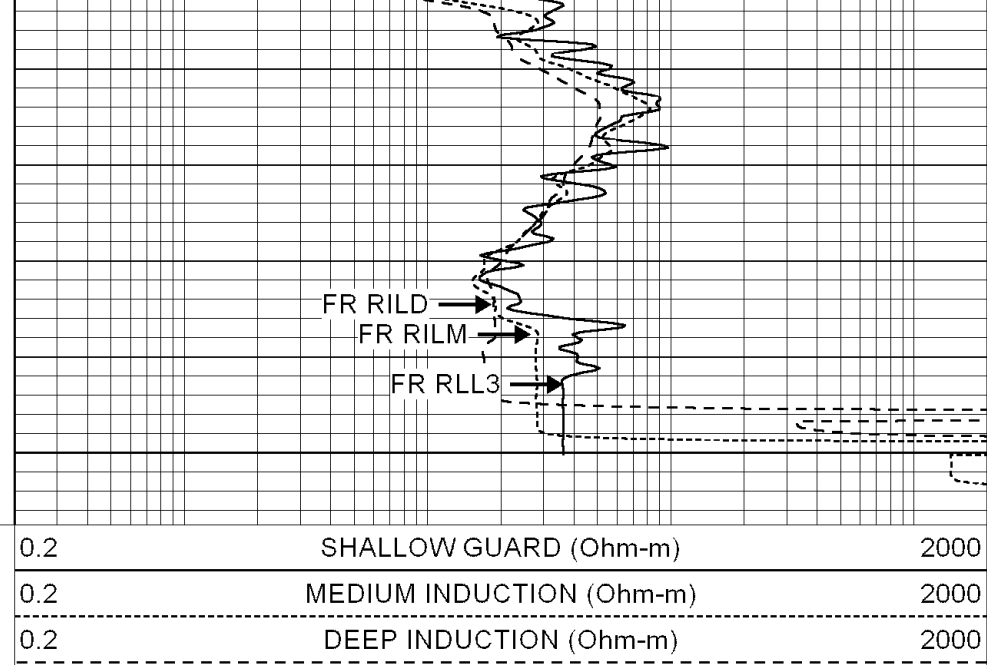
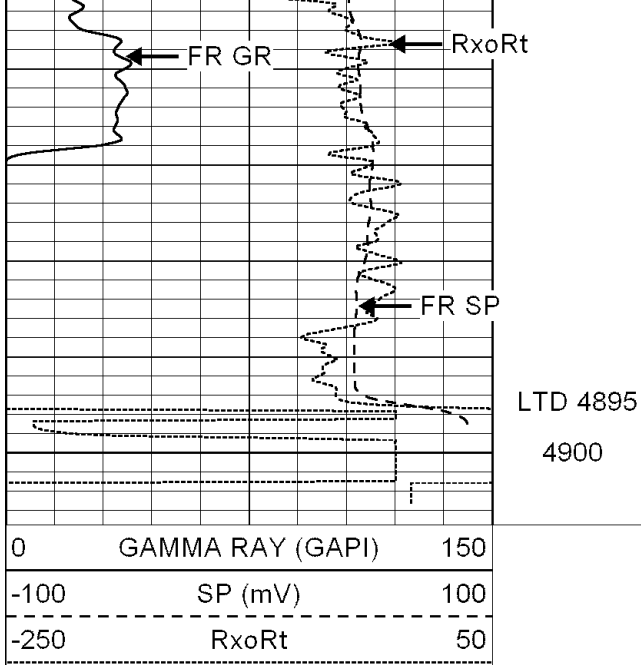
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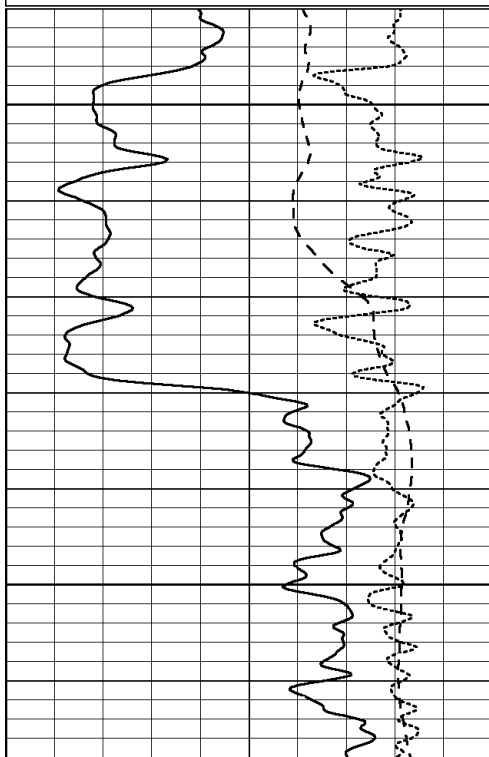
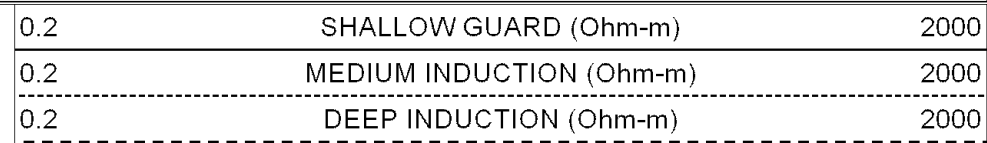
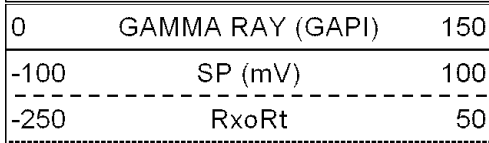




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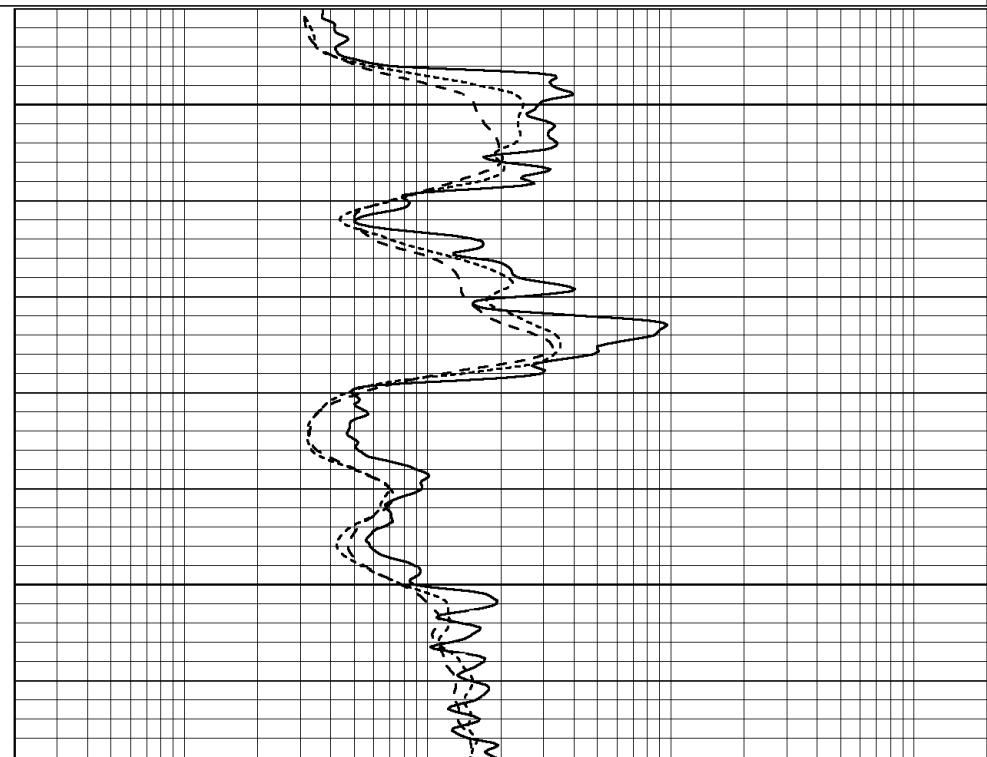
REPEAT SECTION

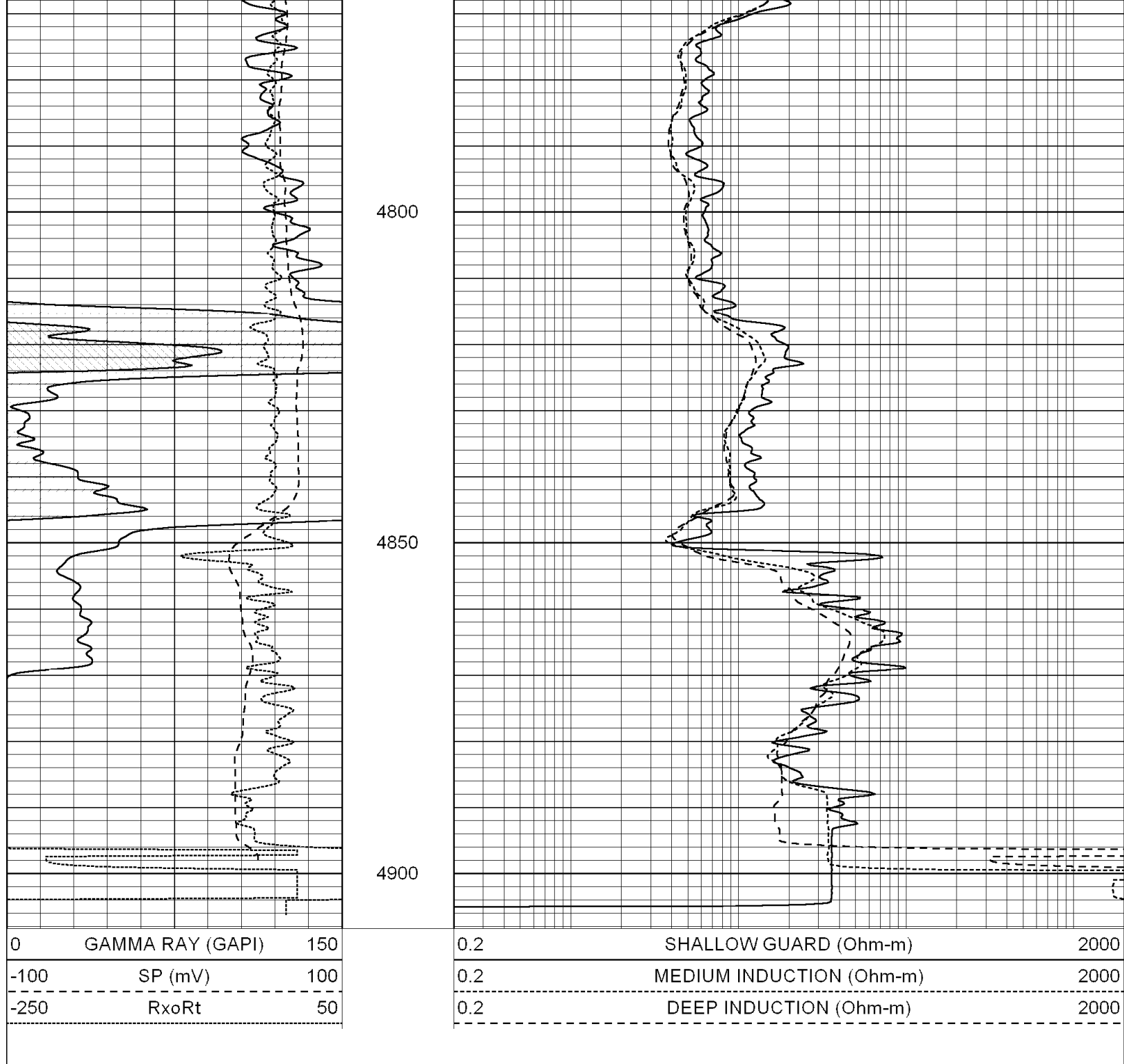
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 Dataset Pathname: pass2.4
 Presentation Format: dil
 Dataset Creation: Tue Dec 22 16:06:35 2009
 Charted by: Depth in Feet scaled 1:240



4700

4750





Calibration Report

Database File: 004776pe.db
Dataset Pathname: pass3.9
Dataset Creation: Tue Dec 22 16:52:42 2009

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
Performed: Thu Dec 17 09:24:10 2009

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho-m	560.000	-6.000
Medium	-0.005	0.737	V	0.000	462.500	mmho-m	540.000	-9.000

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: 001N Model: PRB Performed Thu Feb 19 10:38:42 2009								
Litho Density Calibration								
	Background	Magnesium		Aluminum		Sandstone		
Window 1	2080.2	9593.5		3703.6		10485.8		cps
Window 2	1939.2	8381.9		3330.8		9041.6		cps
Window 3	1579.9	4661.6		2233.5		4878.9		cps
Window 4	468.5	471.8		467.8		474.5		cps
Long Space	0.0	6442.8		1391.7		7102.4		cps
Short Space	0.0	2030.6		1370.8		2273.3		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe				2.5700		1.5500		
Rib Angle	: 45.6	Rib Slope	: 1.022	Density/Spine Ratio			: 0.556	
Spine Angle	: 75.6	Spine Slope	: 3.900	Spine Intercept			: -20.9	
Caliper								
	Readings	Reference						
Low Ref	3.2	6.6						
High Ref	4.9	14.0						
	Gain: 4.3			Offset: -6.7				
Compensated Neutron Calibration Report								
	Serial Number:		NEU_11					
	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:		GR5					
	Tool Model:		OPEN					
	Performed:		Thu Dec 17 10:25:53 2009					
	Calibrator Value:		1.0		GAPI			
	Background Reading:		0.0		cps			
	Calibrator Reading:		1.0		cps			
	Sensitivity:		0.5800		GAPI/cps			