



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	RITCHIE EXPLORATION, INC.		
Well	KOLLMAN 24D #1		
Field	BEAVER CLIFF SOUTHWEST		
County	WICHITA	State	KANSAS
Location:	API # : 15-203-20210-00-00		Other Services
	1845' FSL & 985' FEL W2 - NE - SE		CNL/CDL
	SEC 24 TWP 17S RGE 35W	Elevation	
Permanent Datum	GROUND LEVEL	Elevation	3159
Log Measured From	KELLY BUSHING 5' A.G.L.		K.B. 3164
Drilling Measured From	KELLY BUSHING		D.F. 3162
			G.L. 3159
Date	3/28/13		
Run Number	ONE		
Depth Driller	5035		
Depth Logger	5036		
Bottom Logged Interval	5034		
Top Log Interval	00		
Casing Driller	226		
Casing Logger	226		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000	
Density / Viscosity	9.3 / 53		
pH / Fluid Loss	10.0 / 9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.44 @ 58F		
Rmf @ Meas. Temp	0.33 @ 58F		
Rmc @ Meas. Temp	0.53 @ 58F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.20 @ 125F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	125F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	TERRY MCLEOD		

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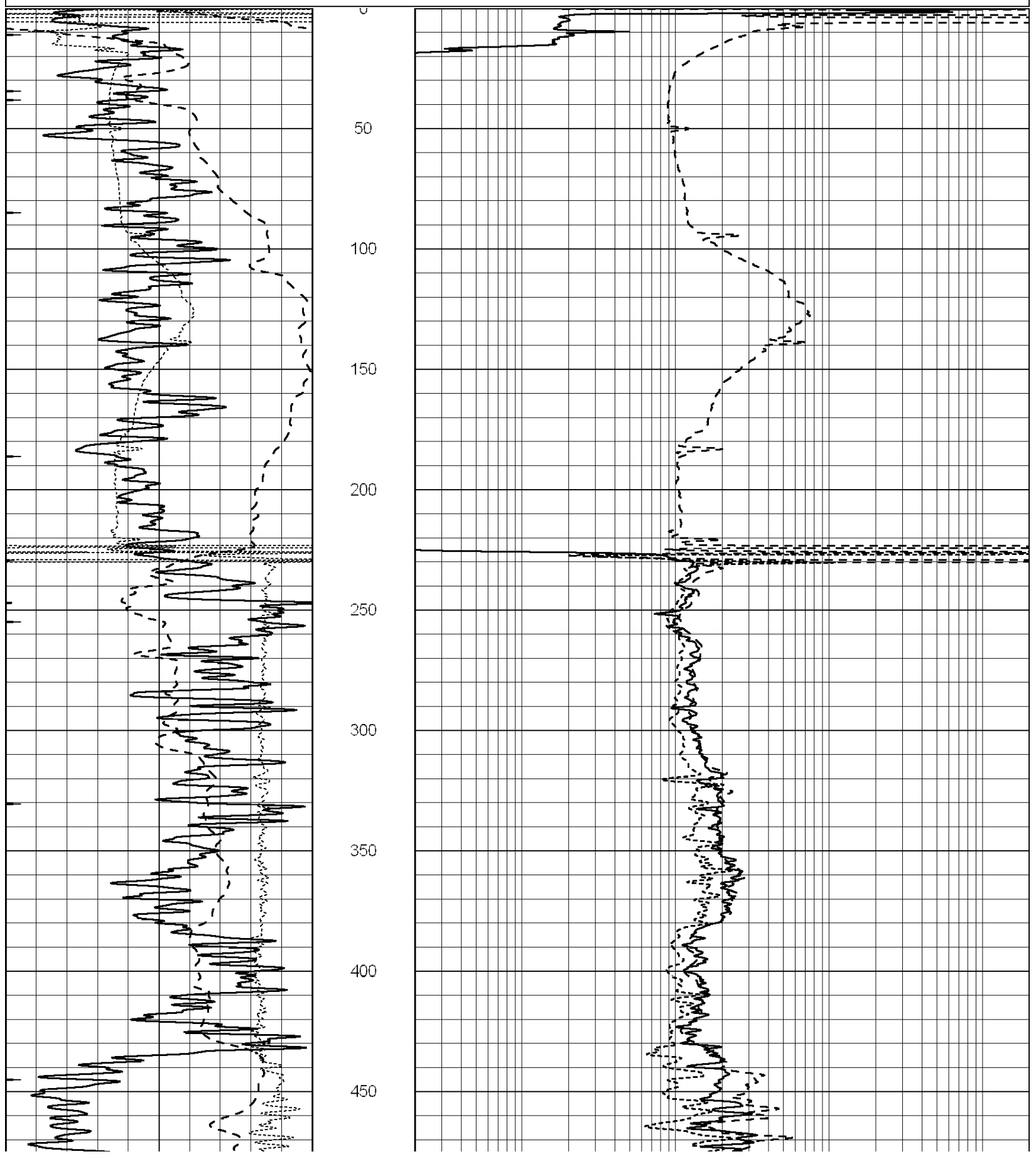
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

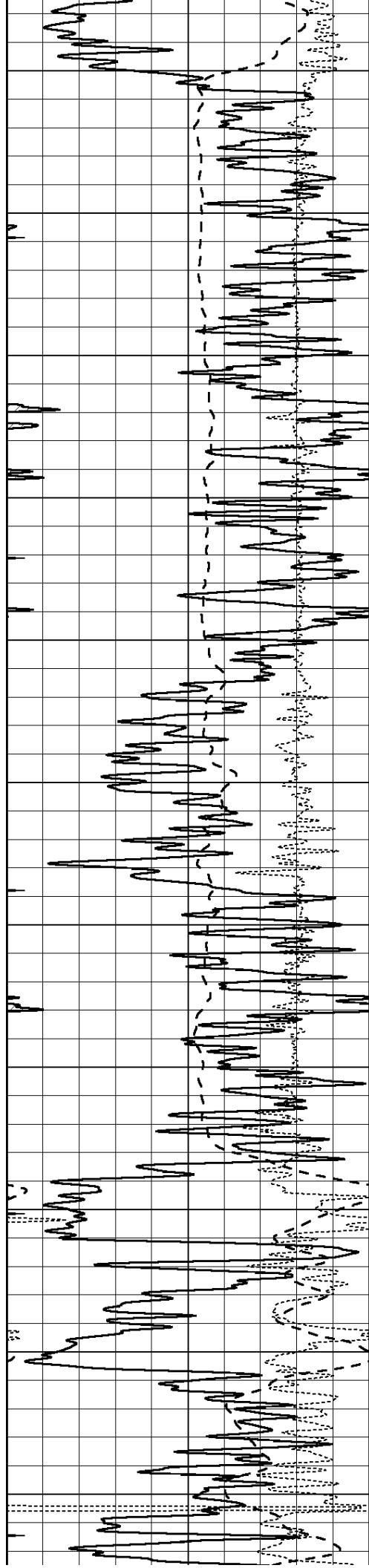
Comments

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: SCOTT CITY, KS. - WEST TO CO. LINE - NORTH 6 MILES WEST INTO AT THE TANK BATTERY

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





500

550

600

650

700

750

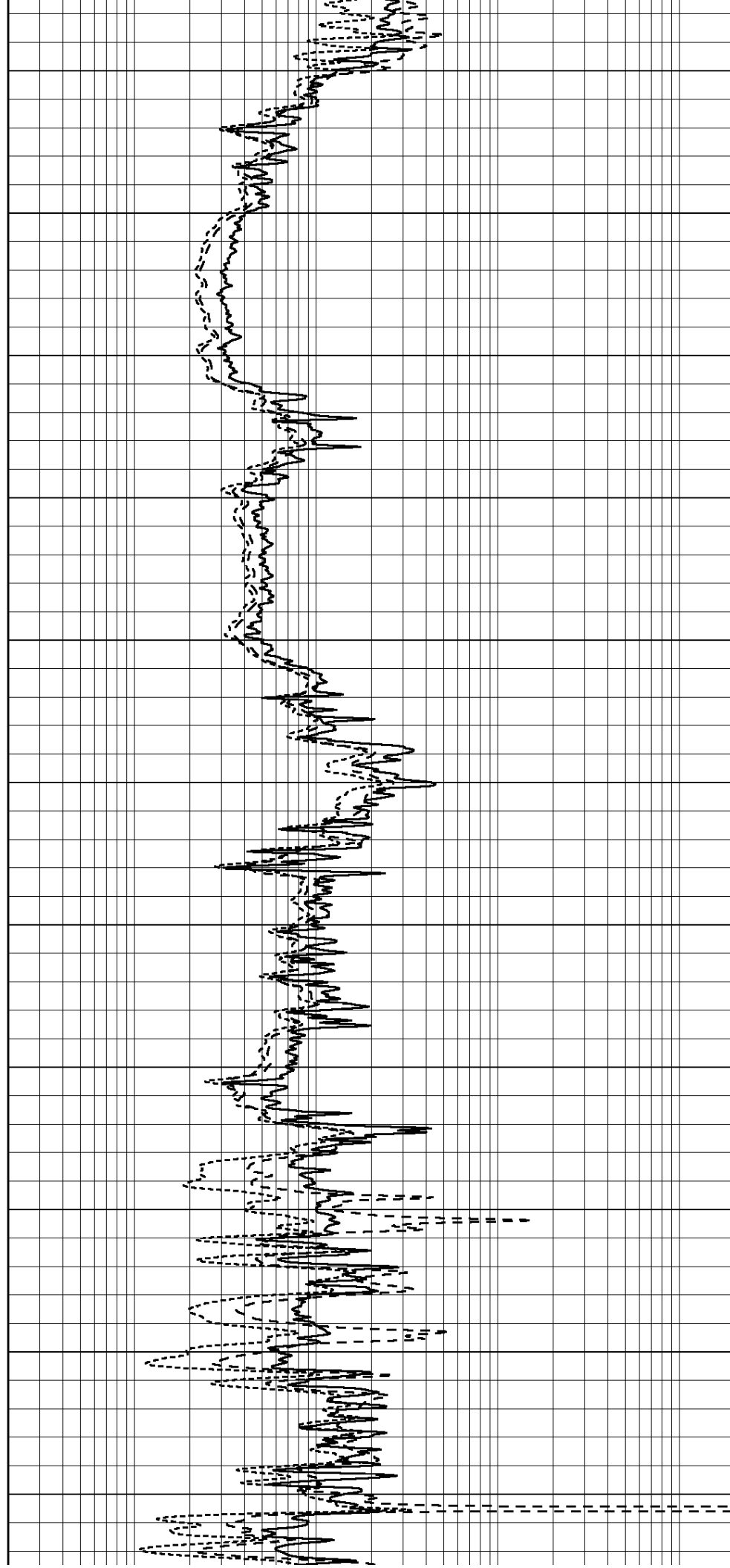
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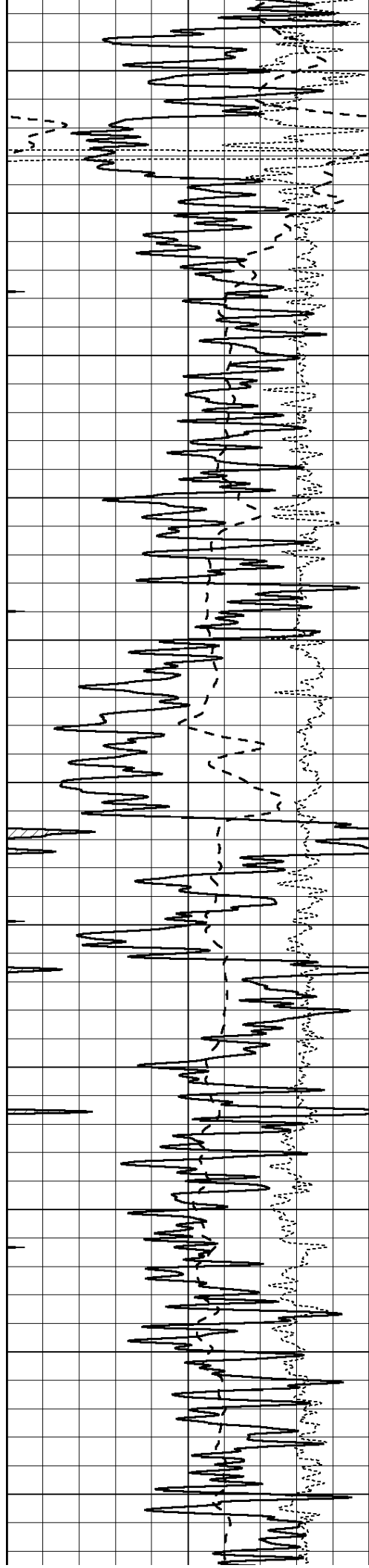
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900

950

1000





1050

1100

1150

1200

1250

1300

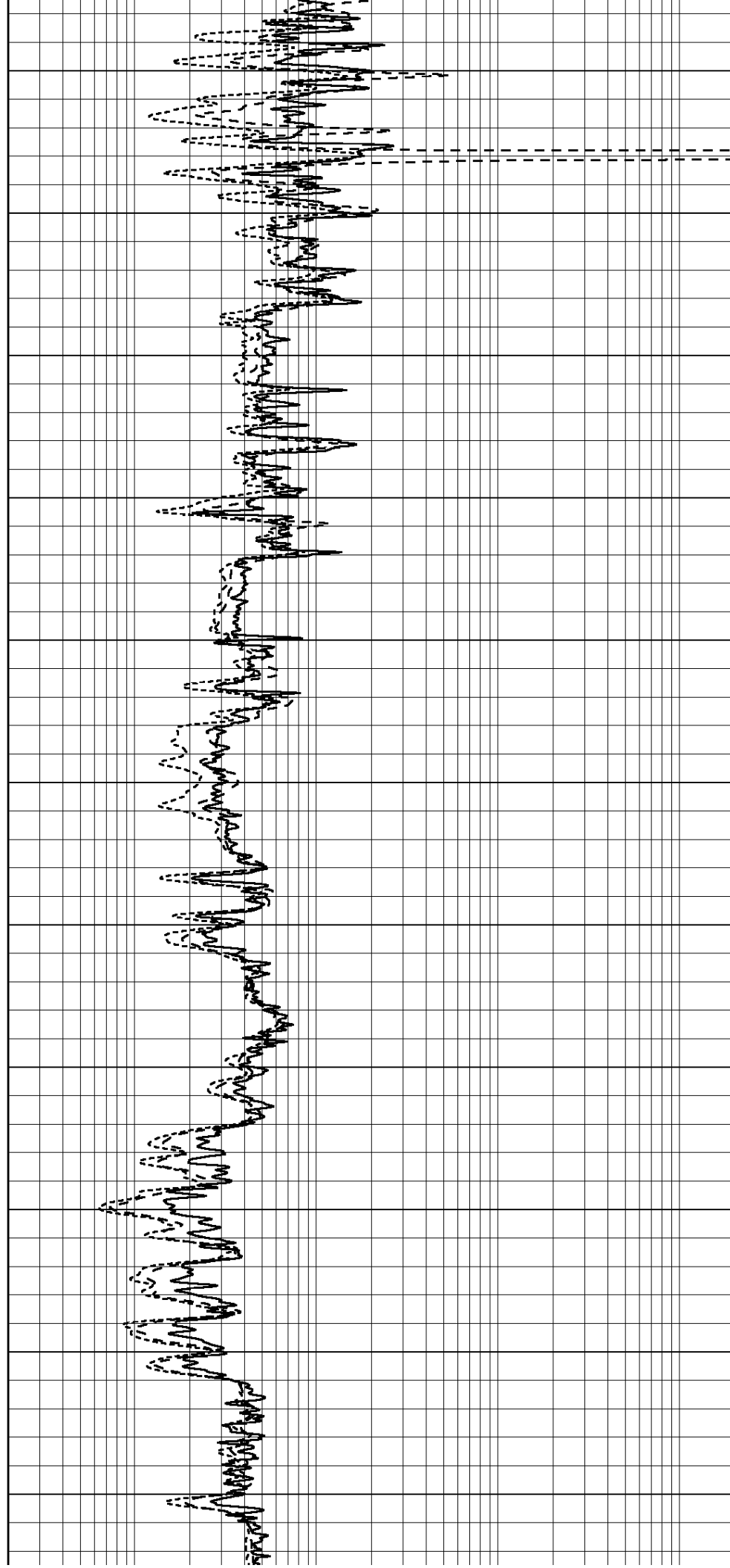
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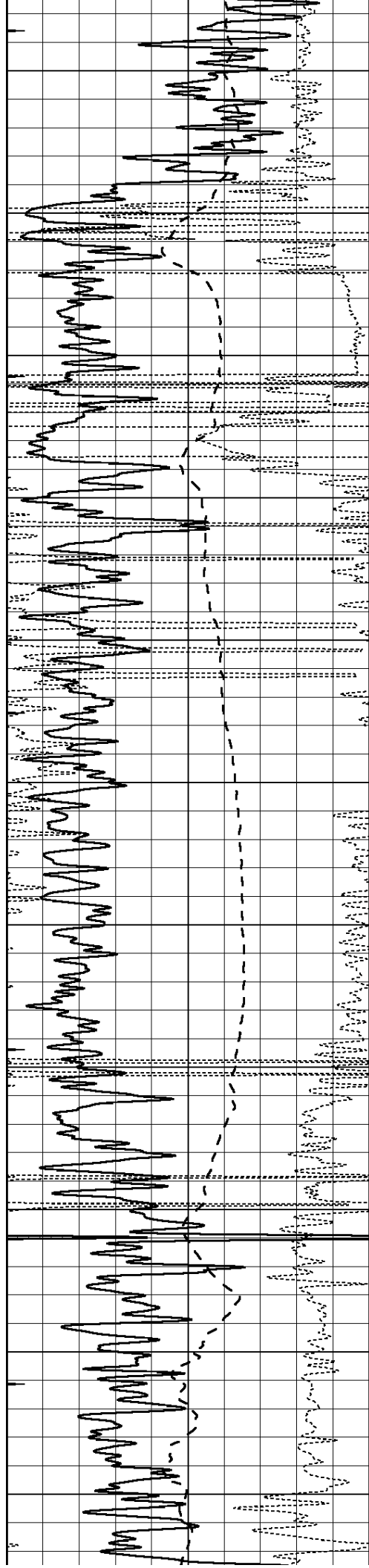
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1500

1550





1600

1650

1700

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1800

1850

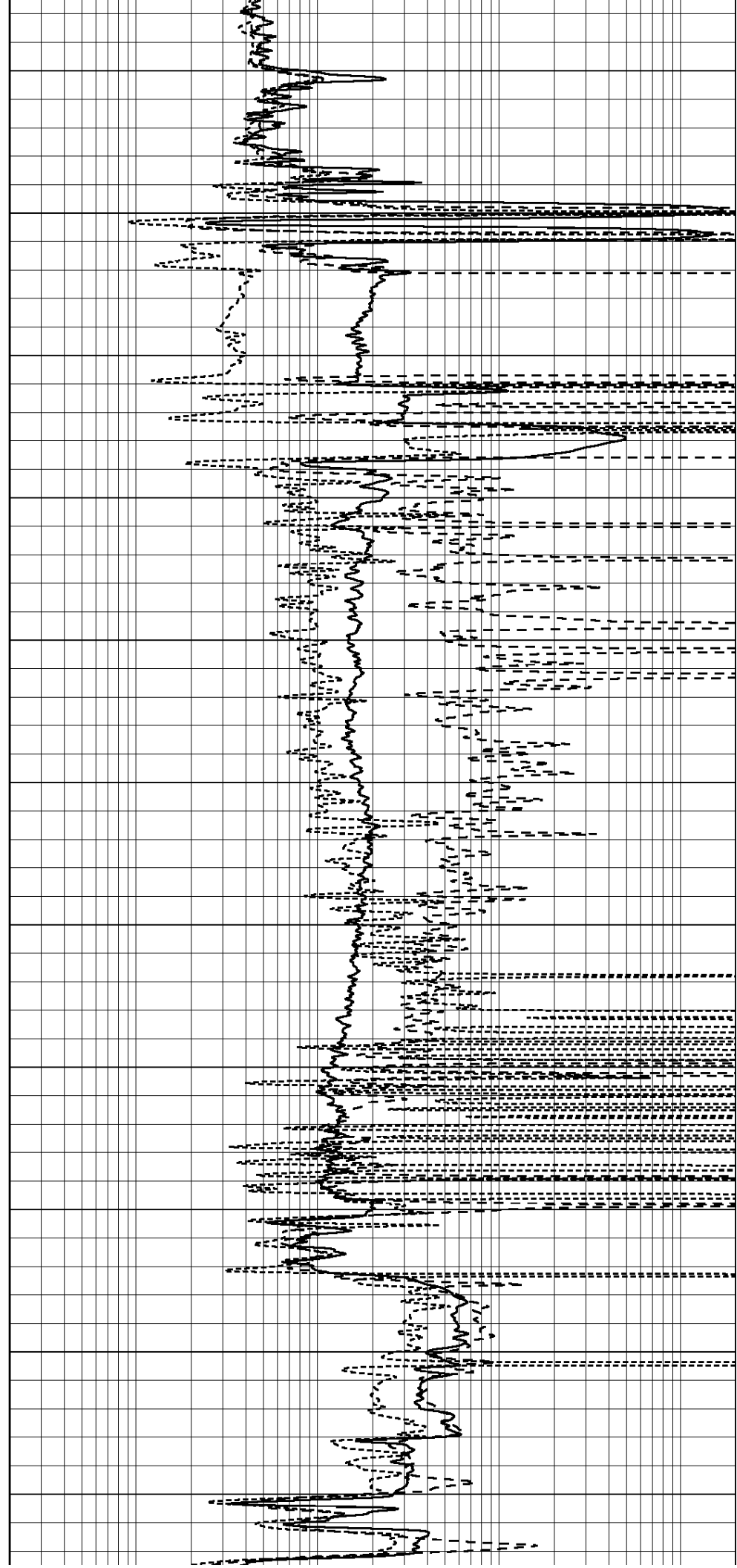
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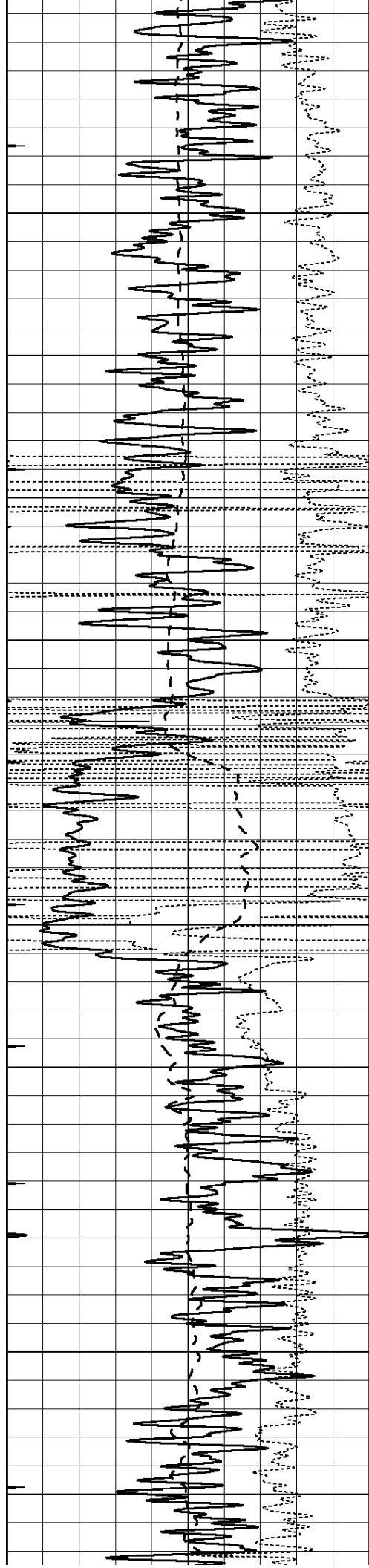
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2050

2100





2150

2200

2250

2300

2350

2400

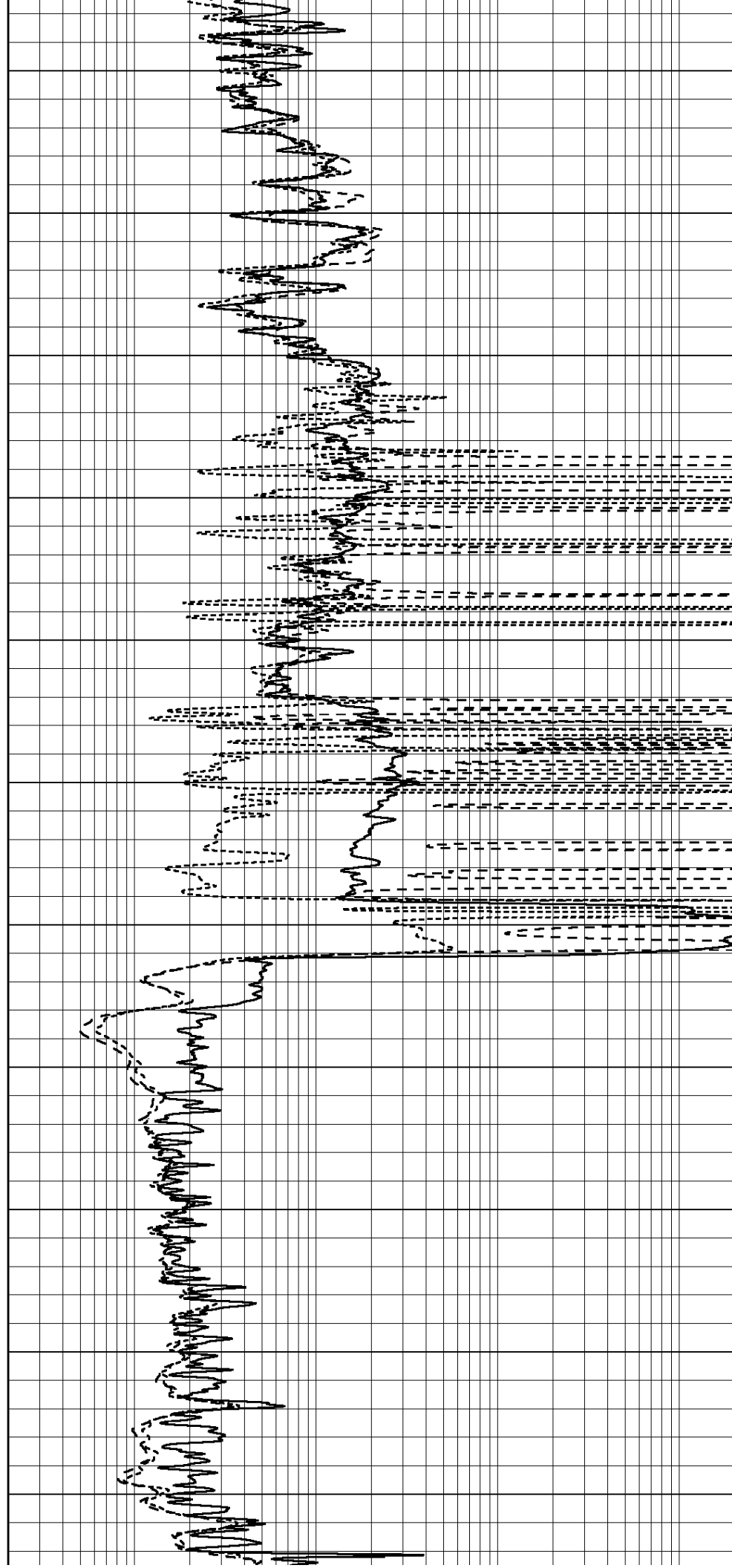
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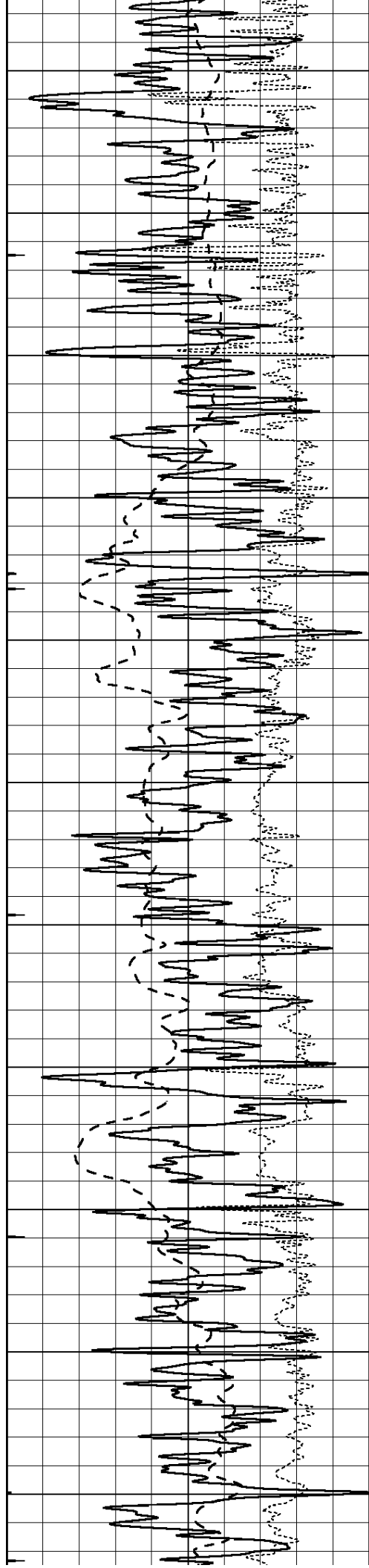
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2600

2650





2700

2750

2800

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2900

2950

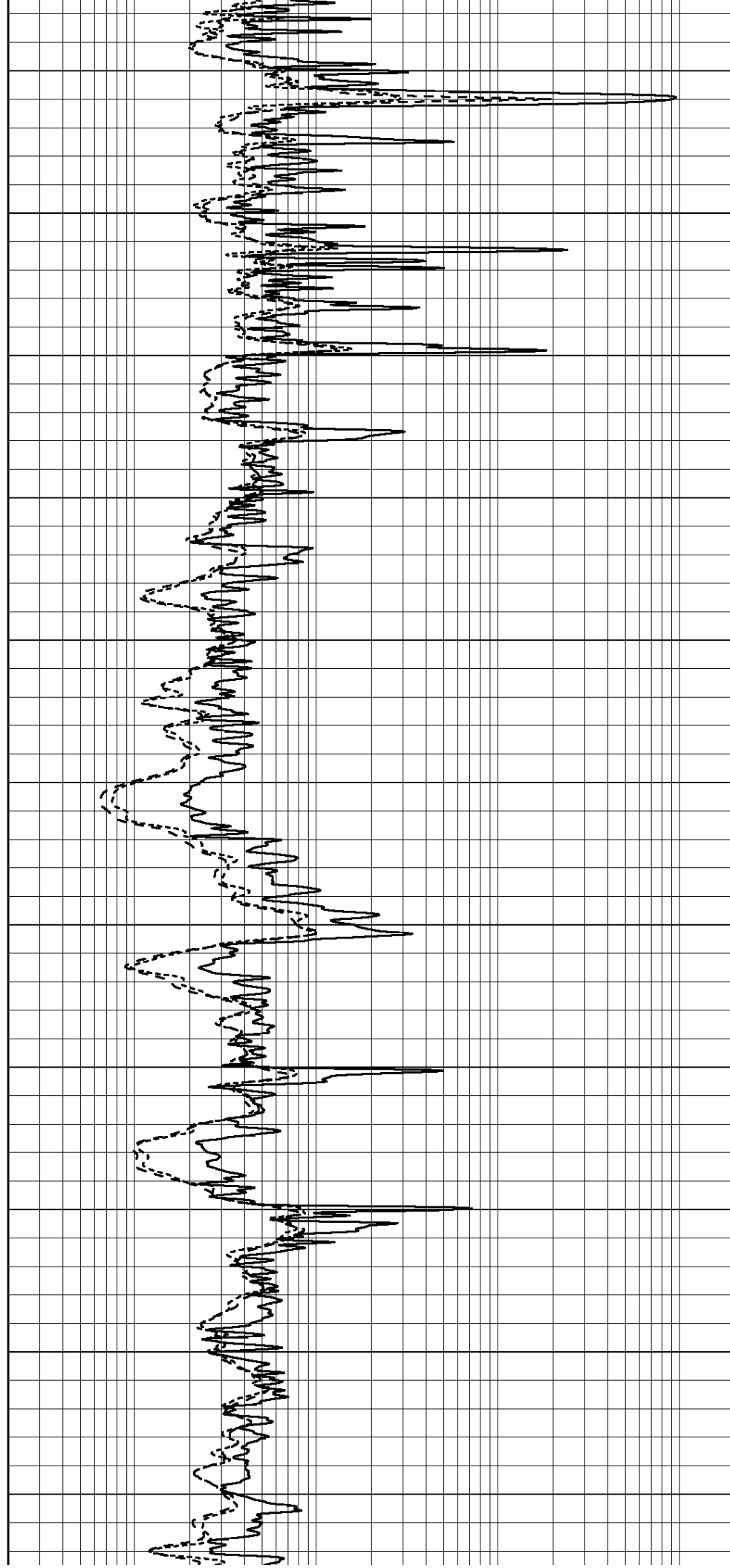
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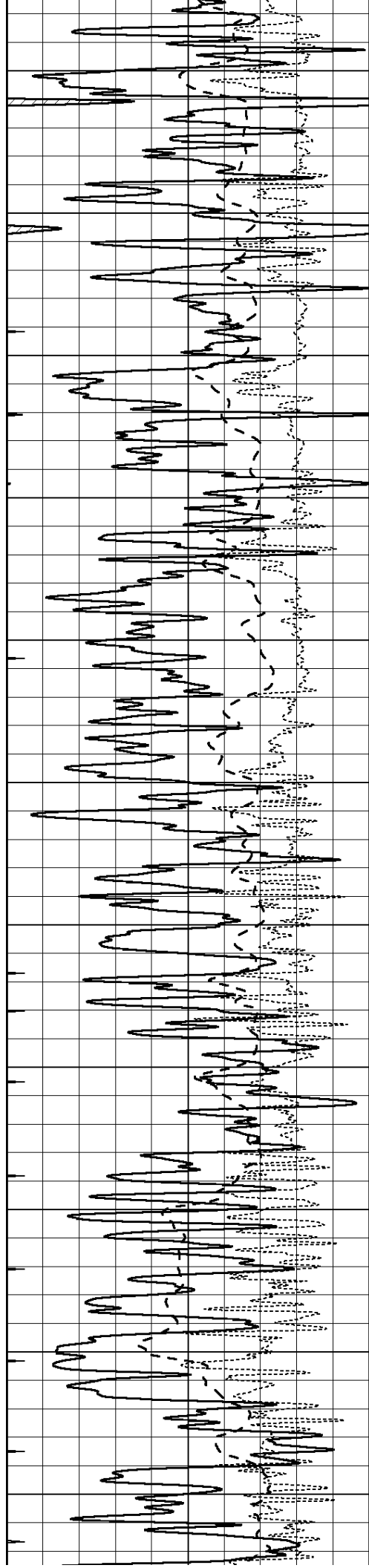
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3300

3350

3400

3450

3500

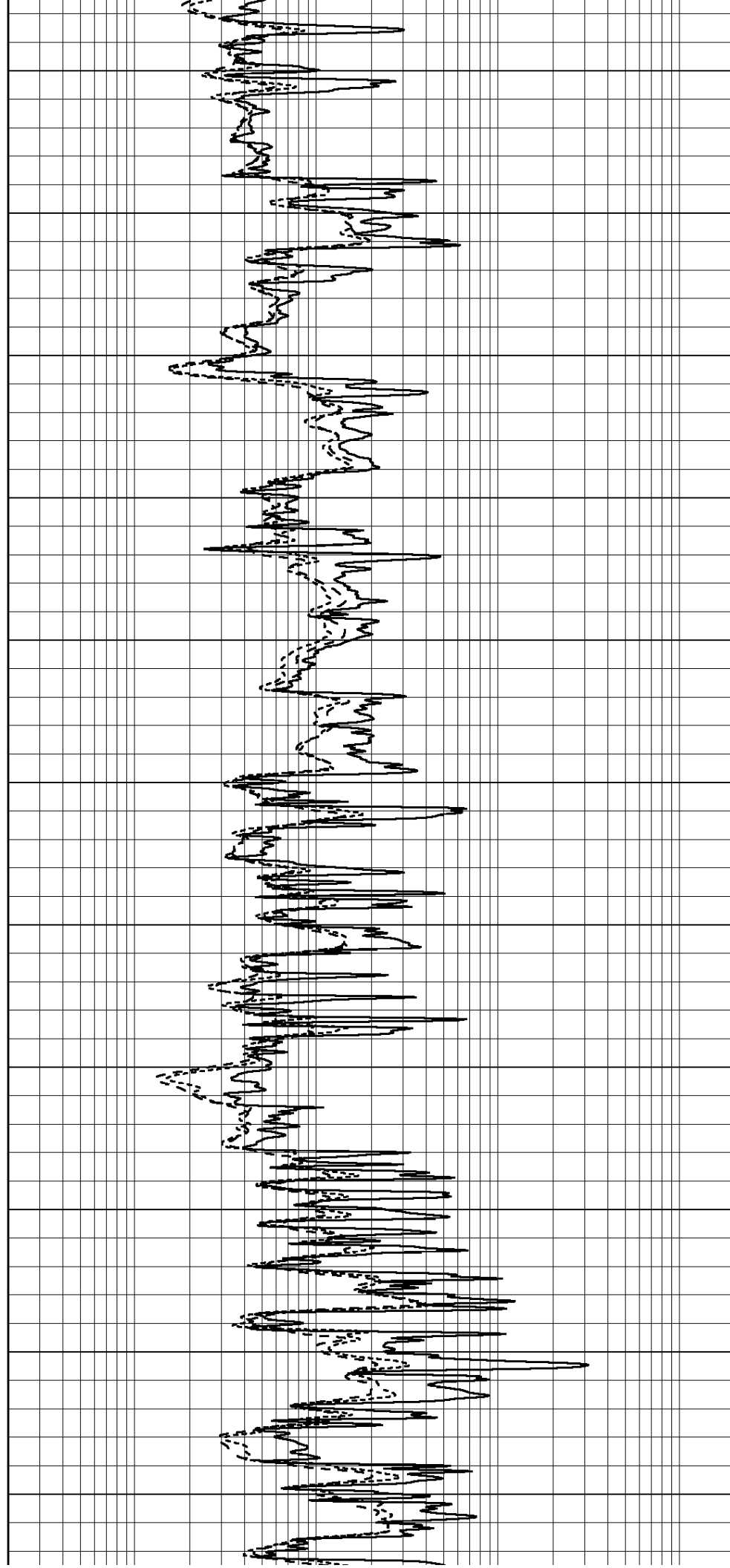
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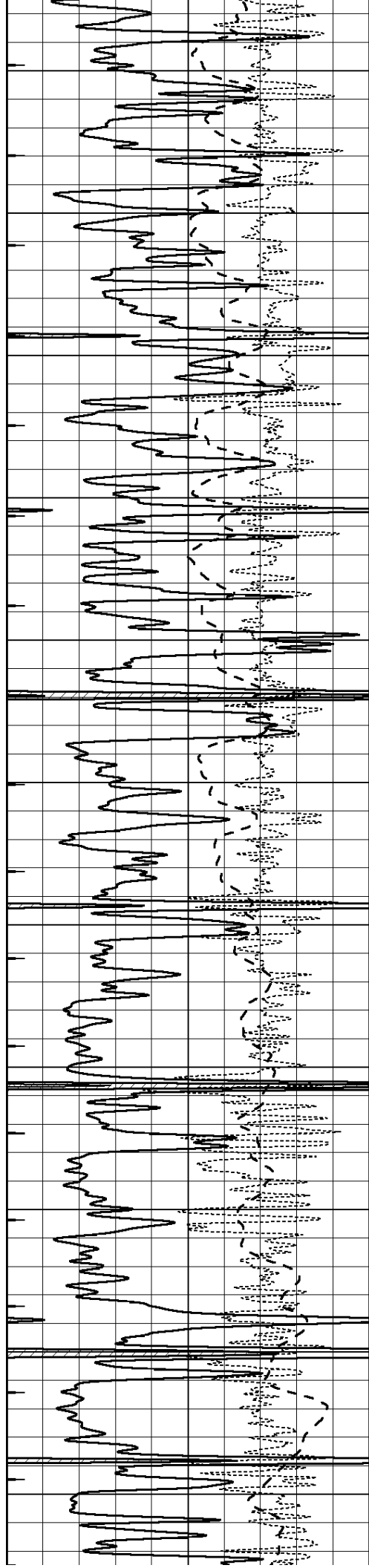
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3950

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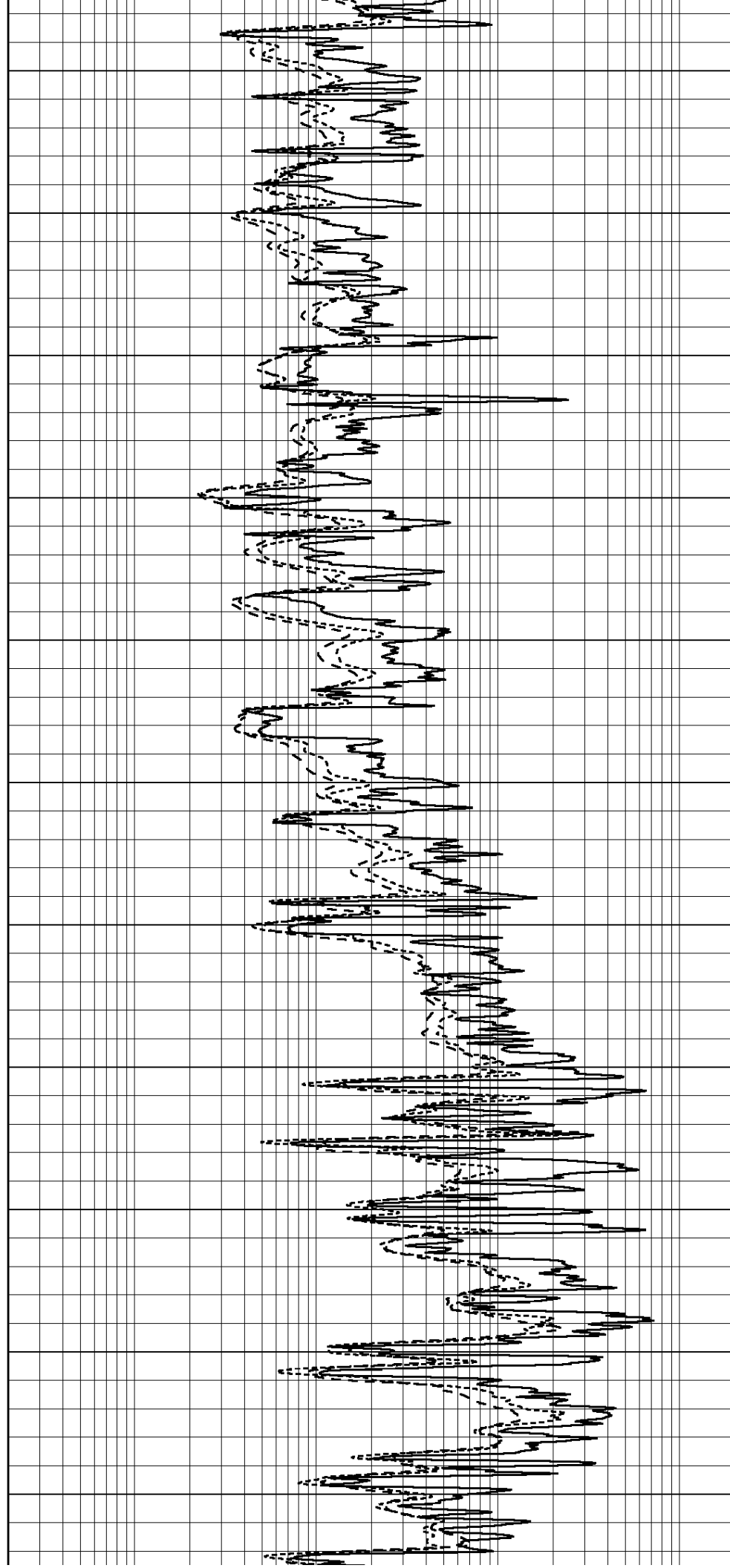
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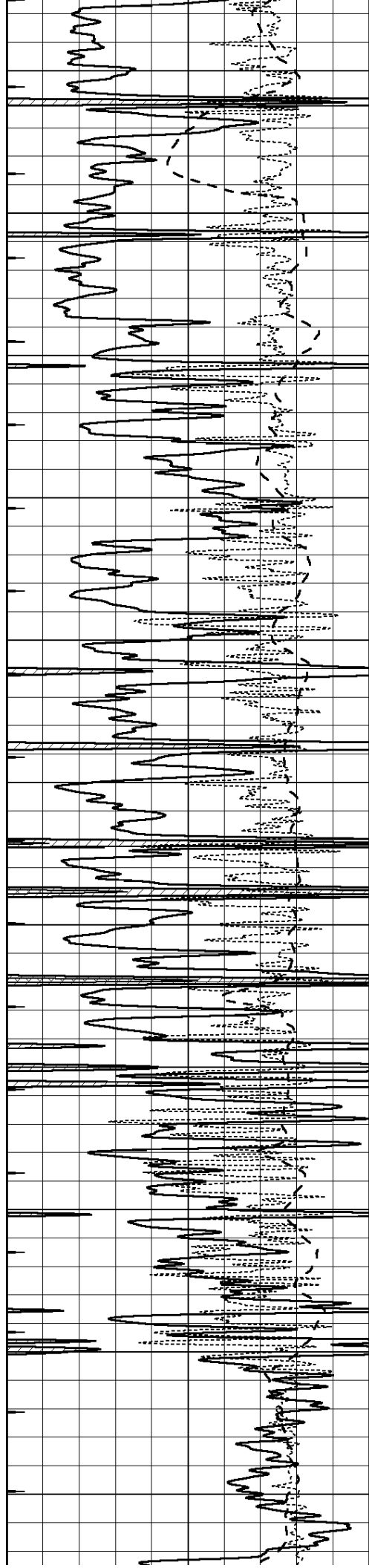
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4350

4400

4450

4500

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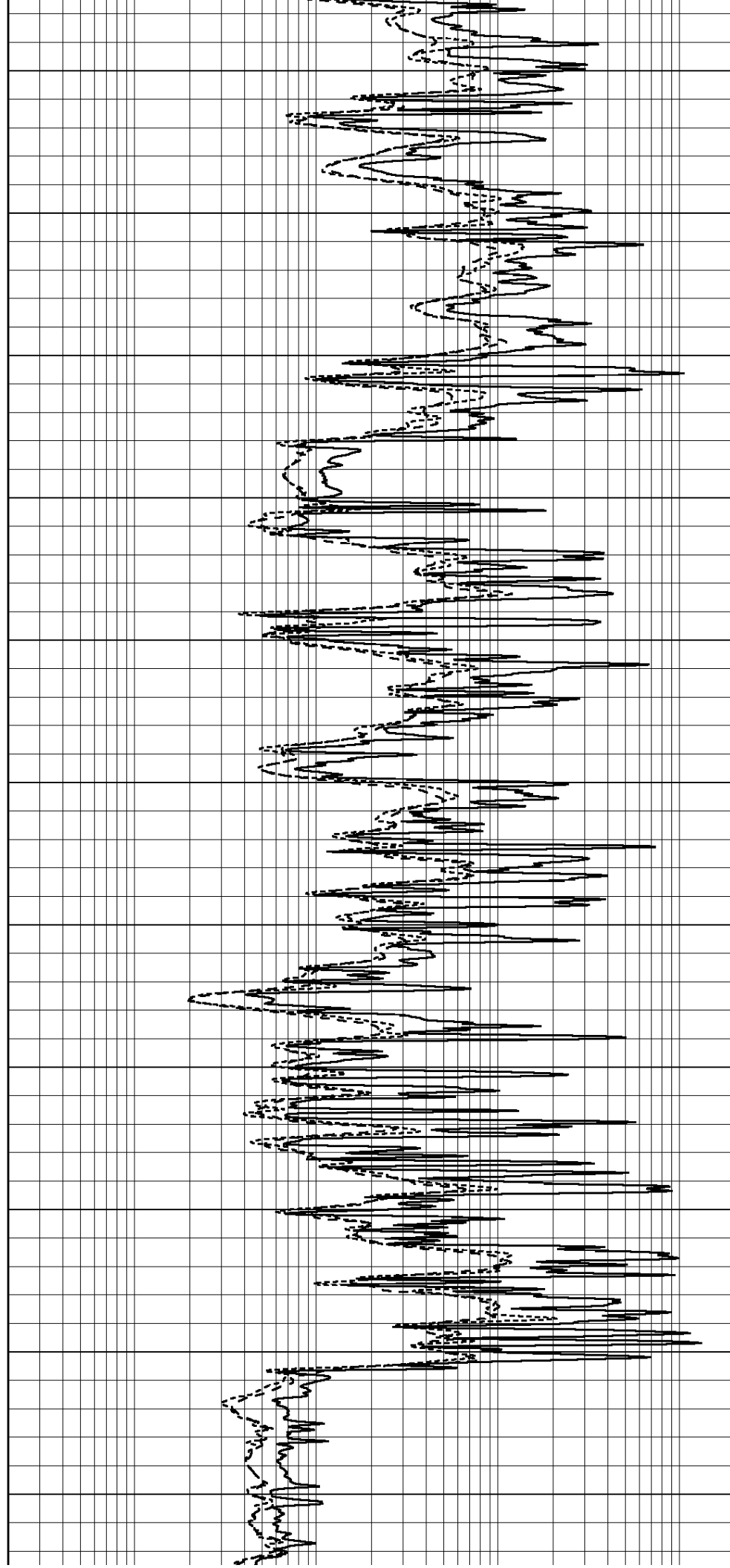
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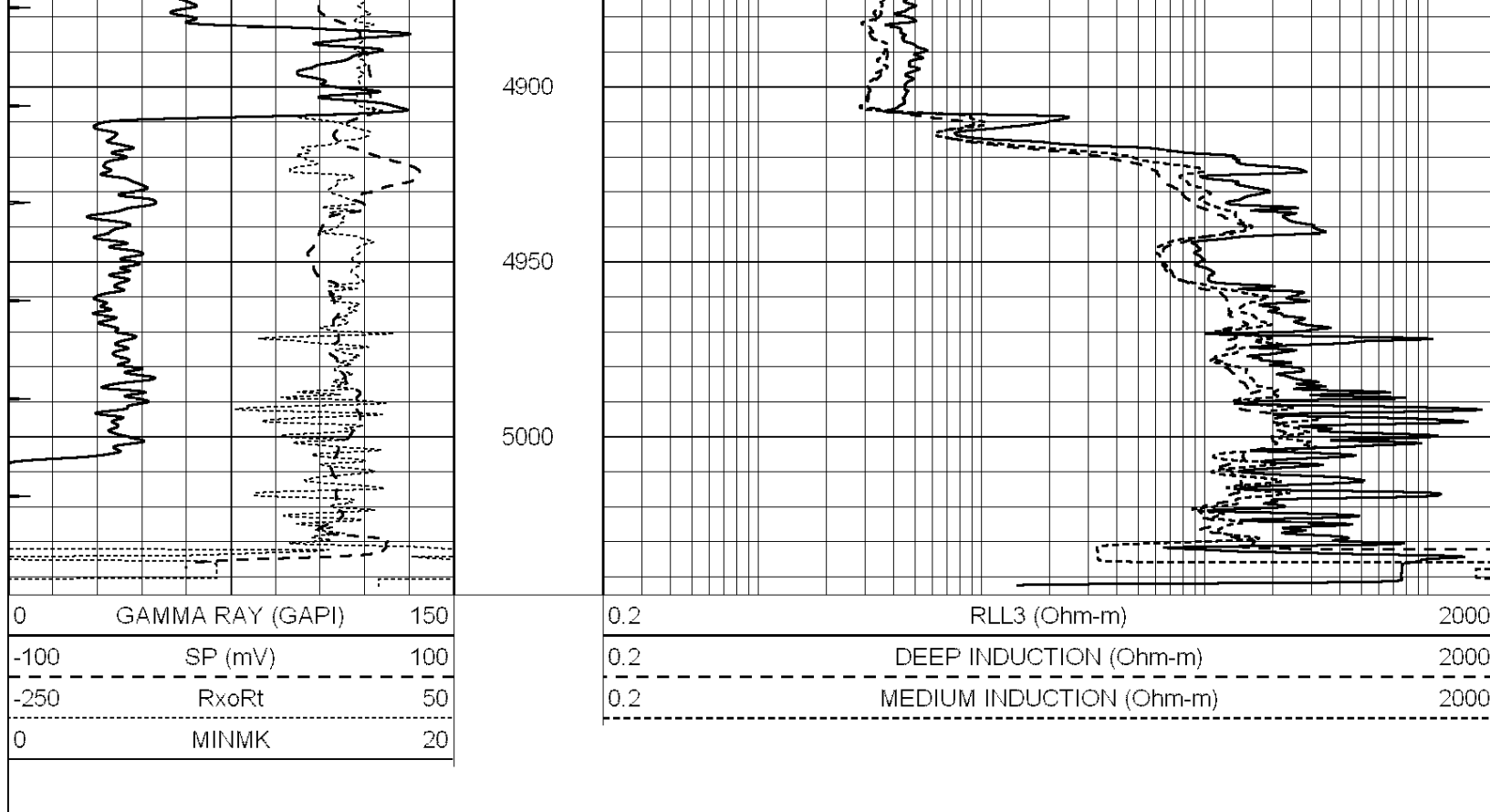
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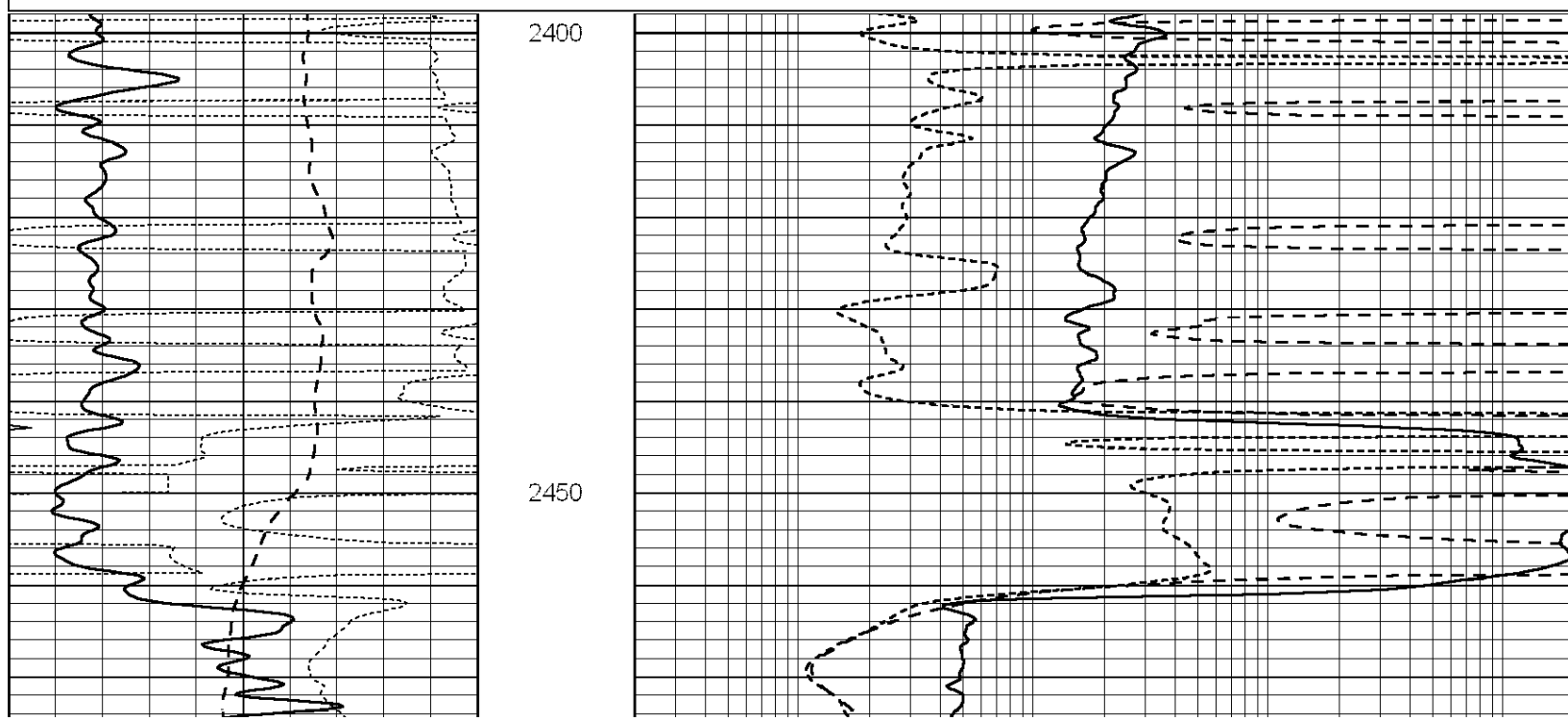
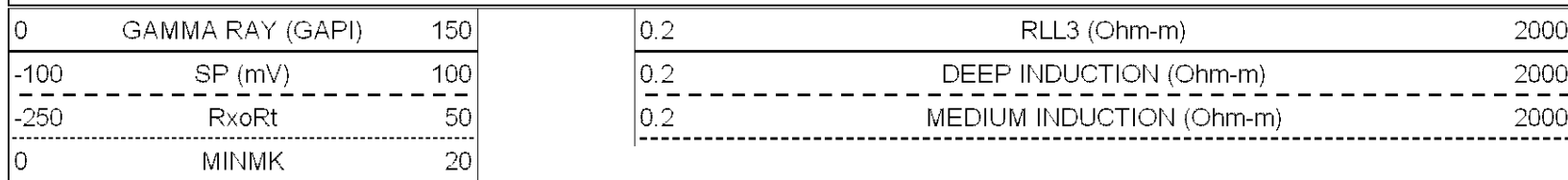
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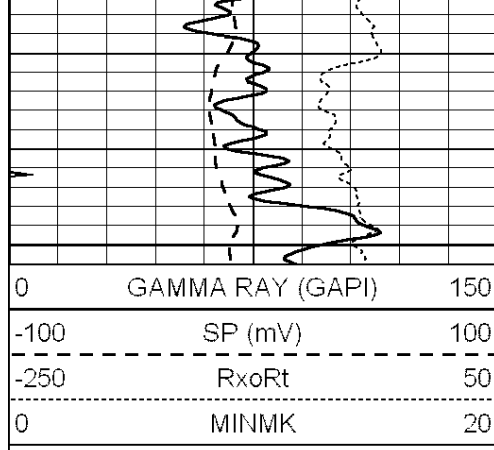
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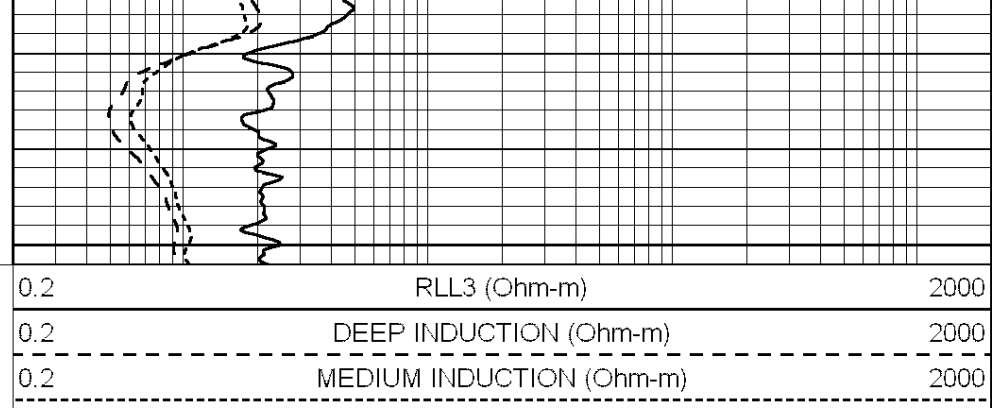


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Charted by: Depth in Feet scaled 1:240

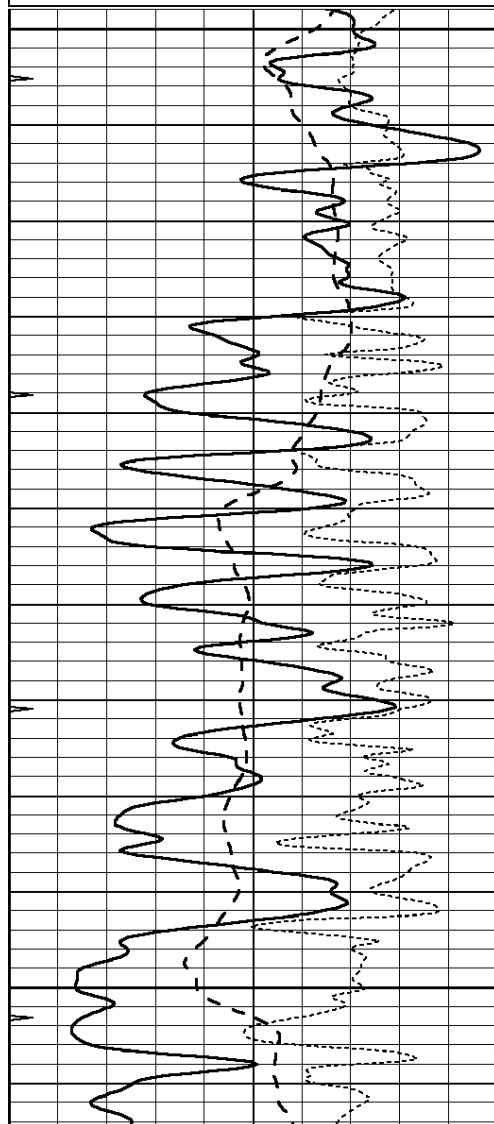
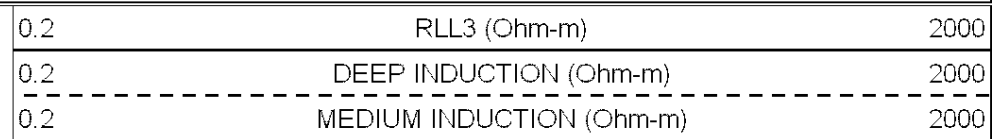
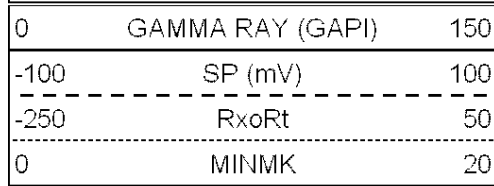




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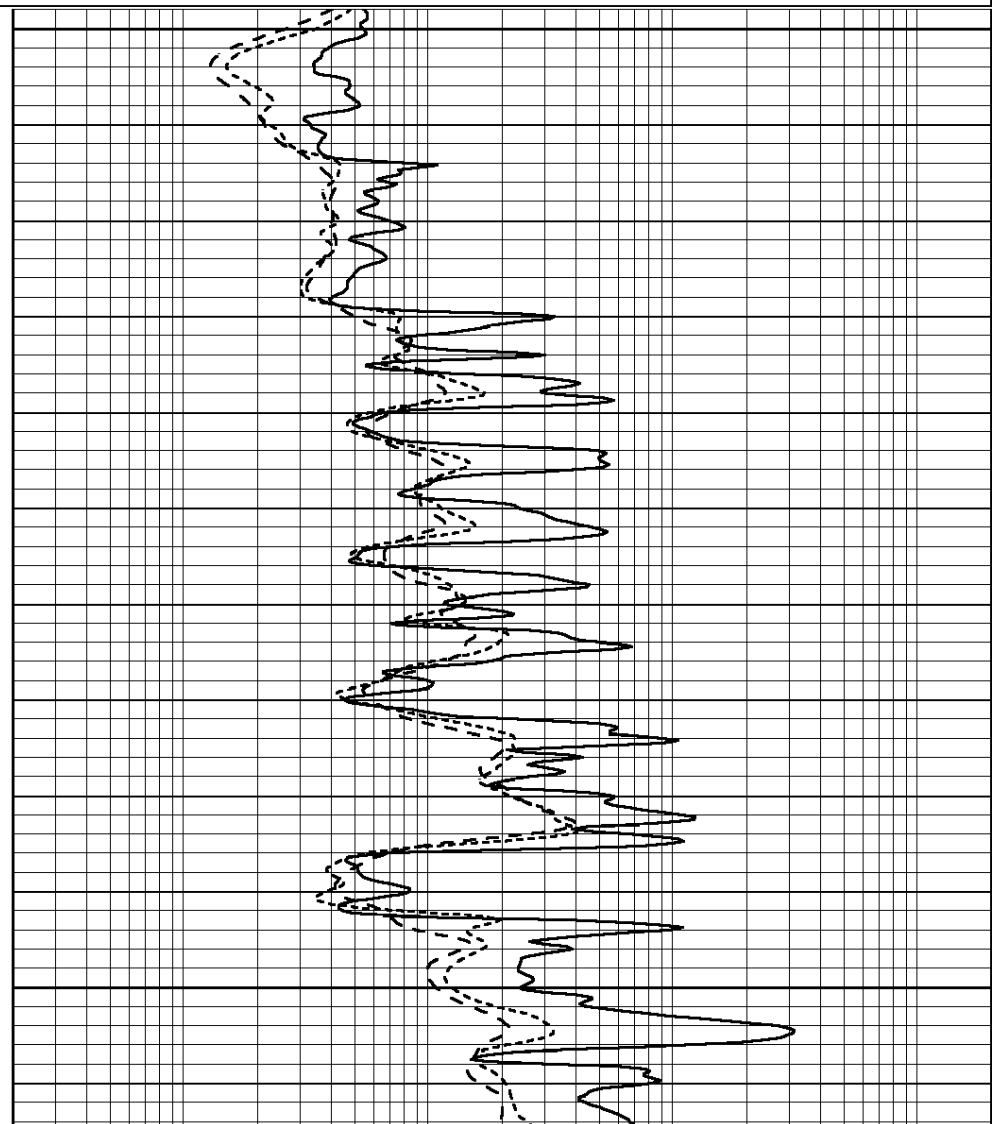
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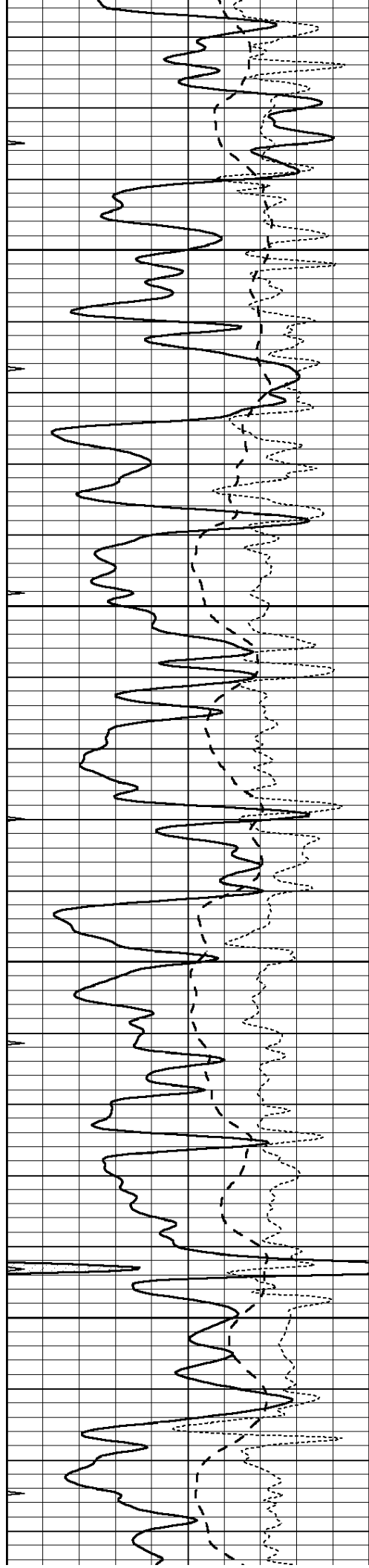


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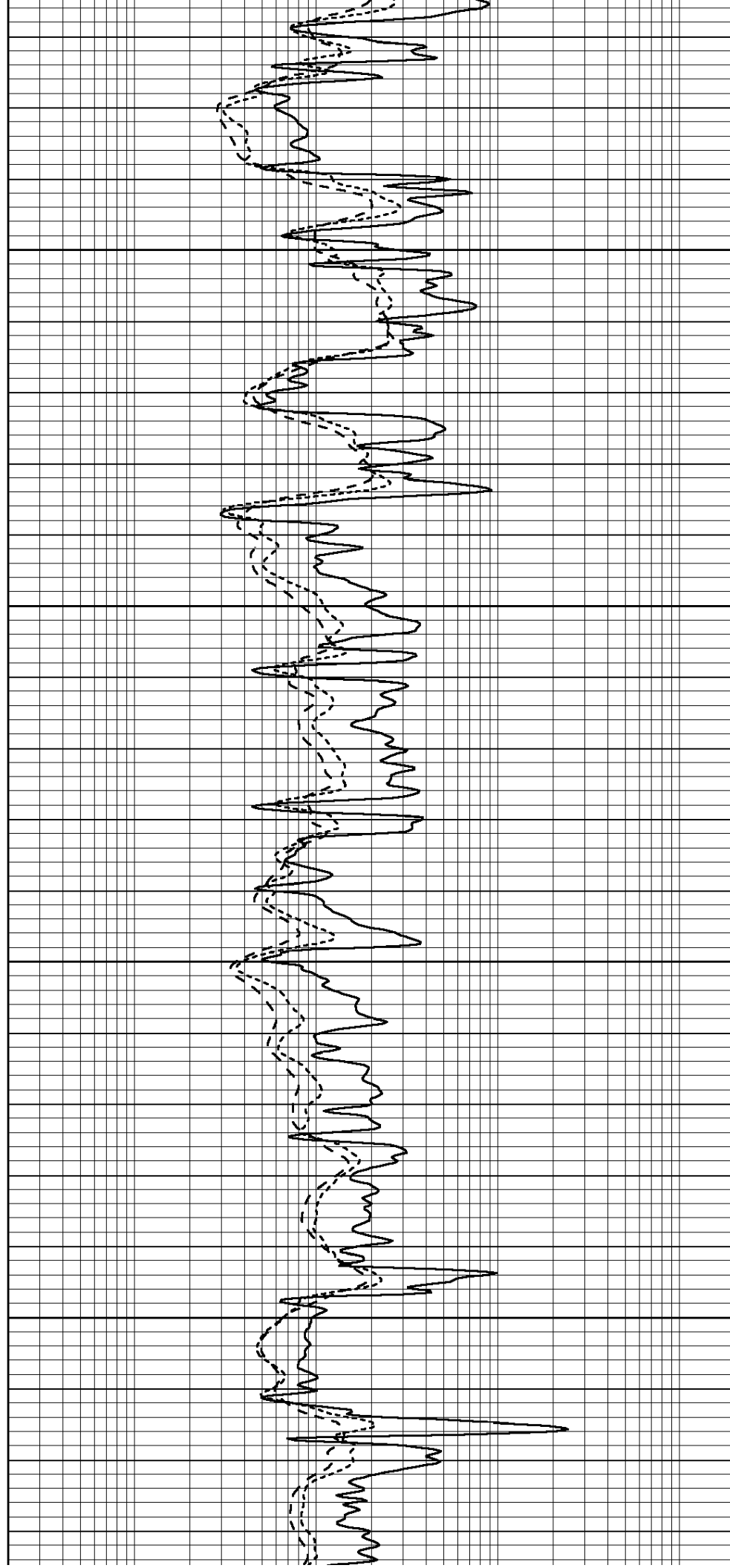


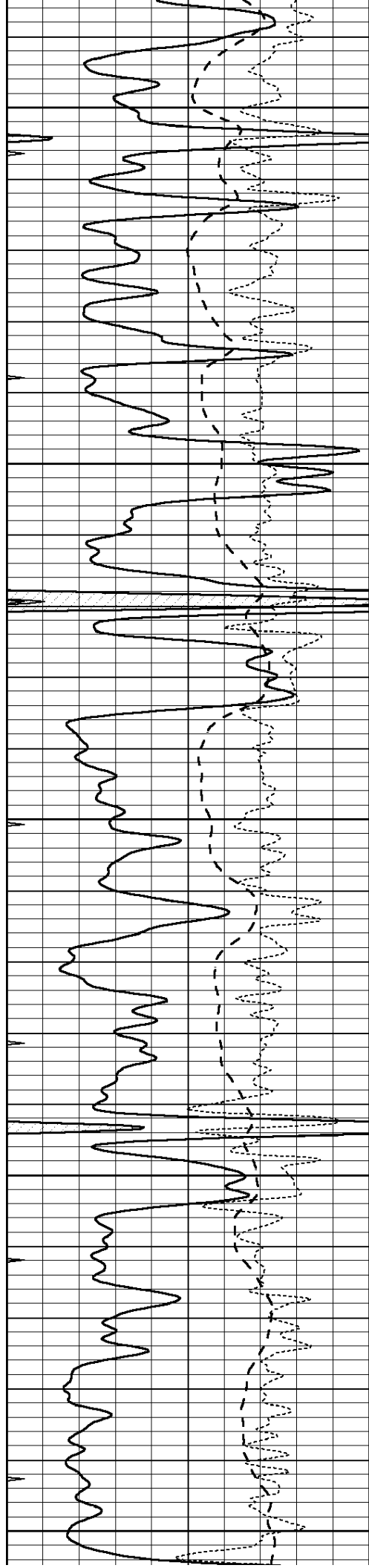
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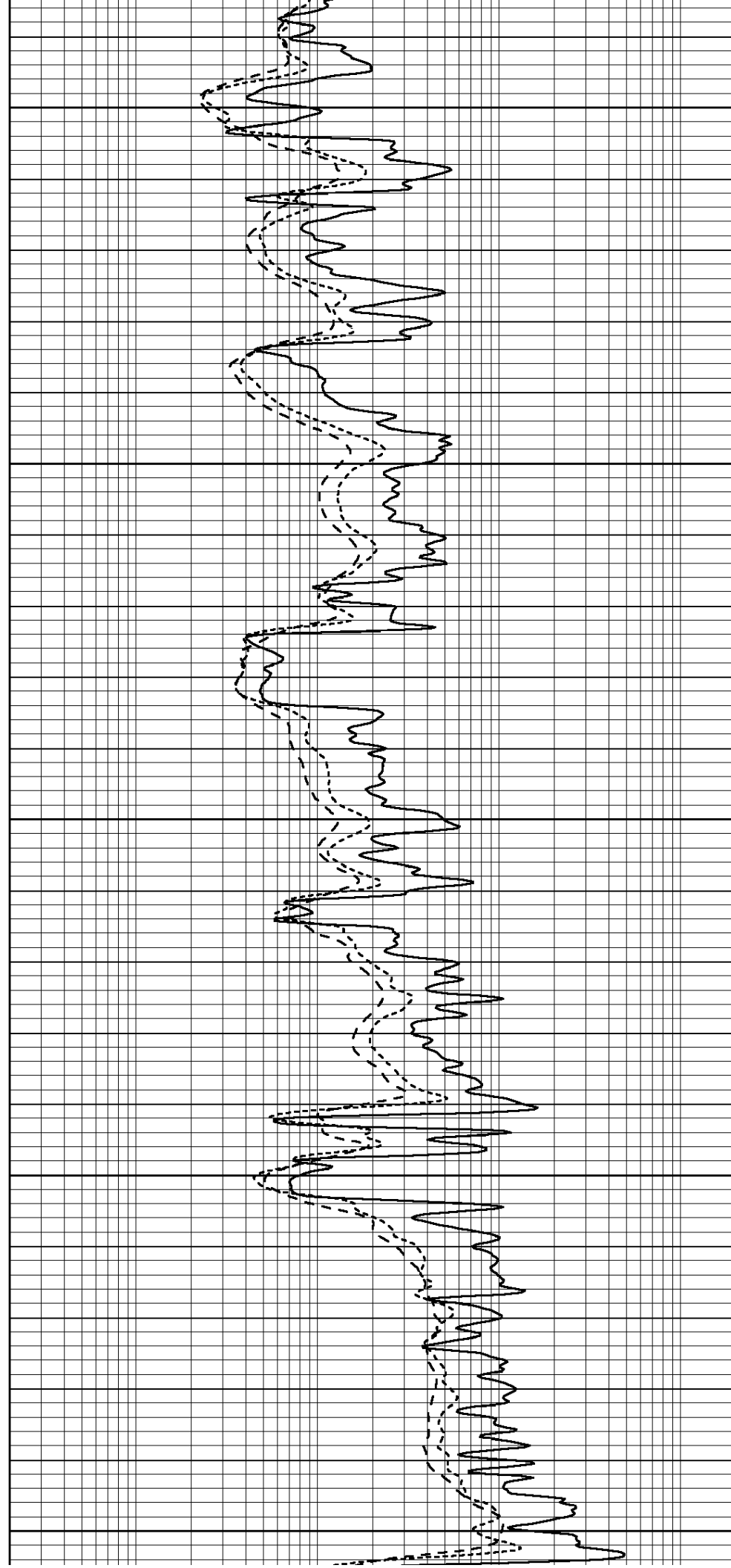
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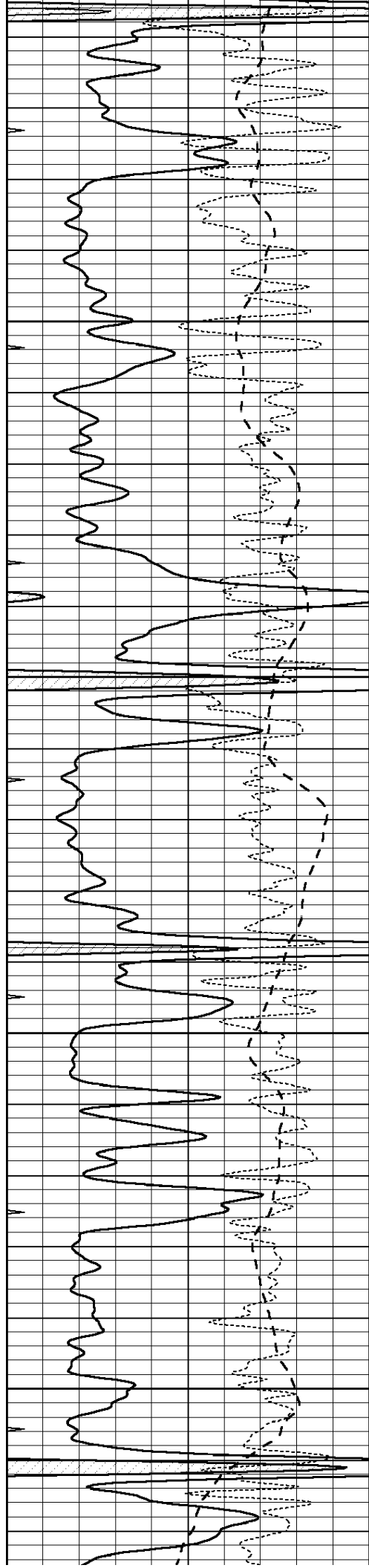
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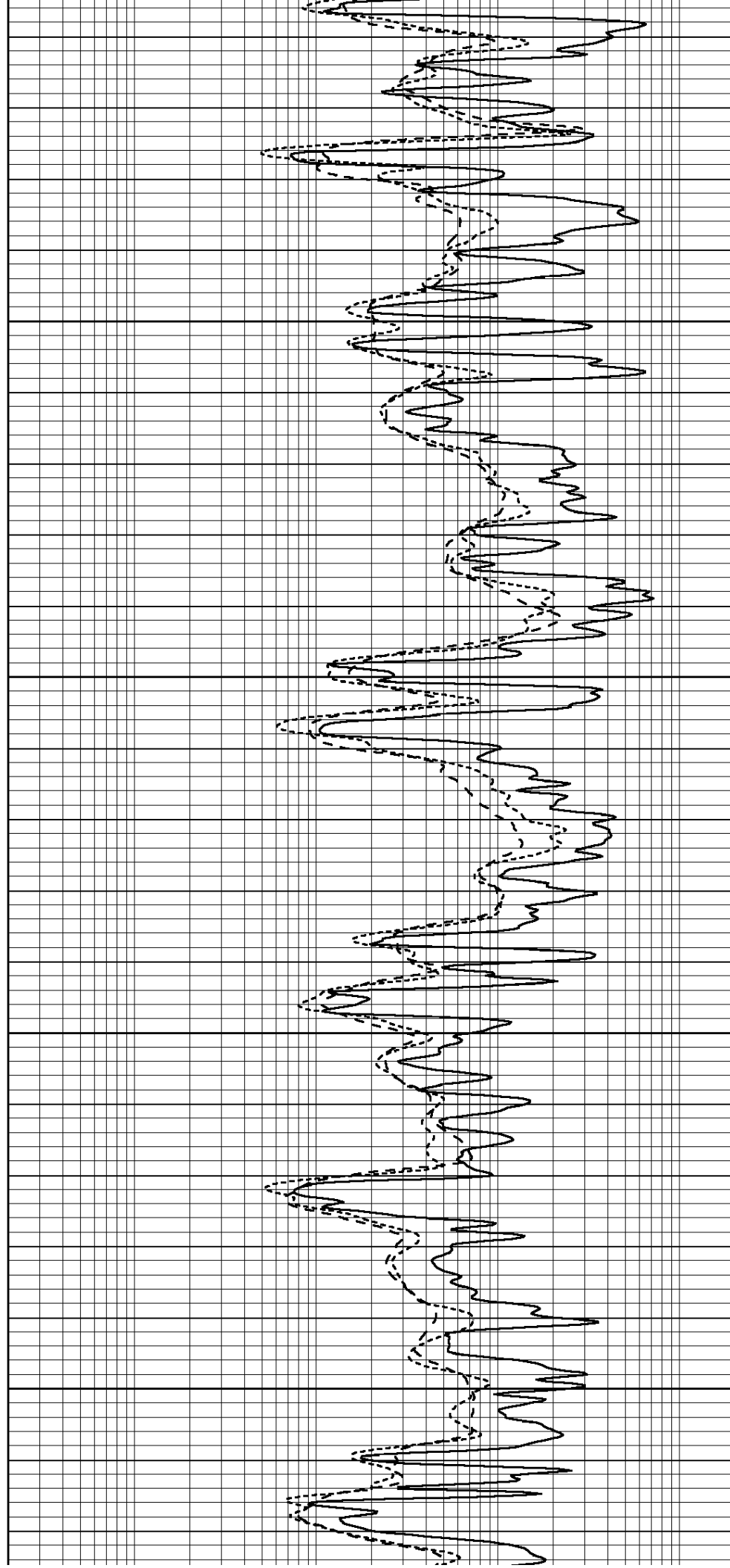


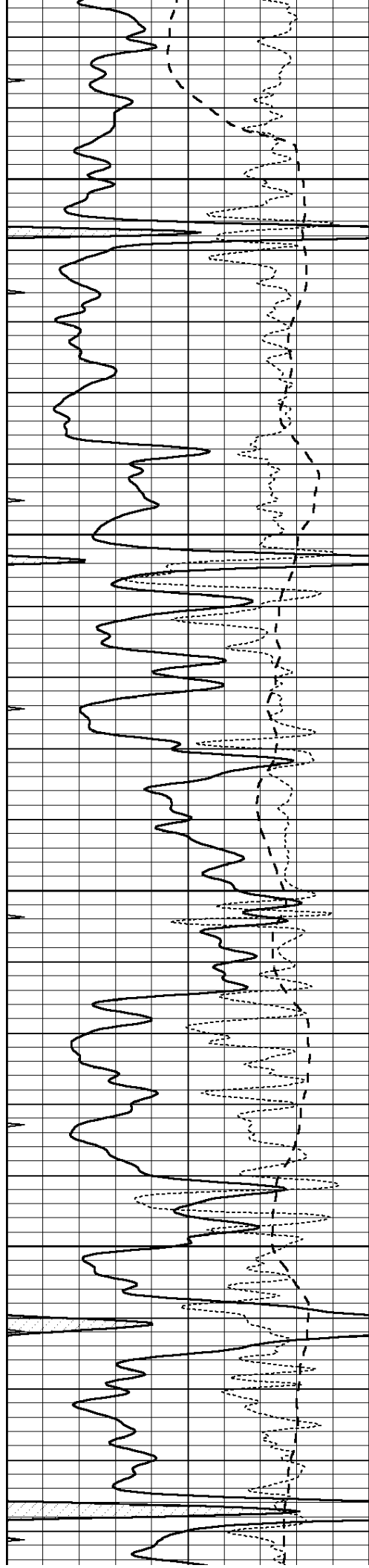
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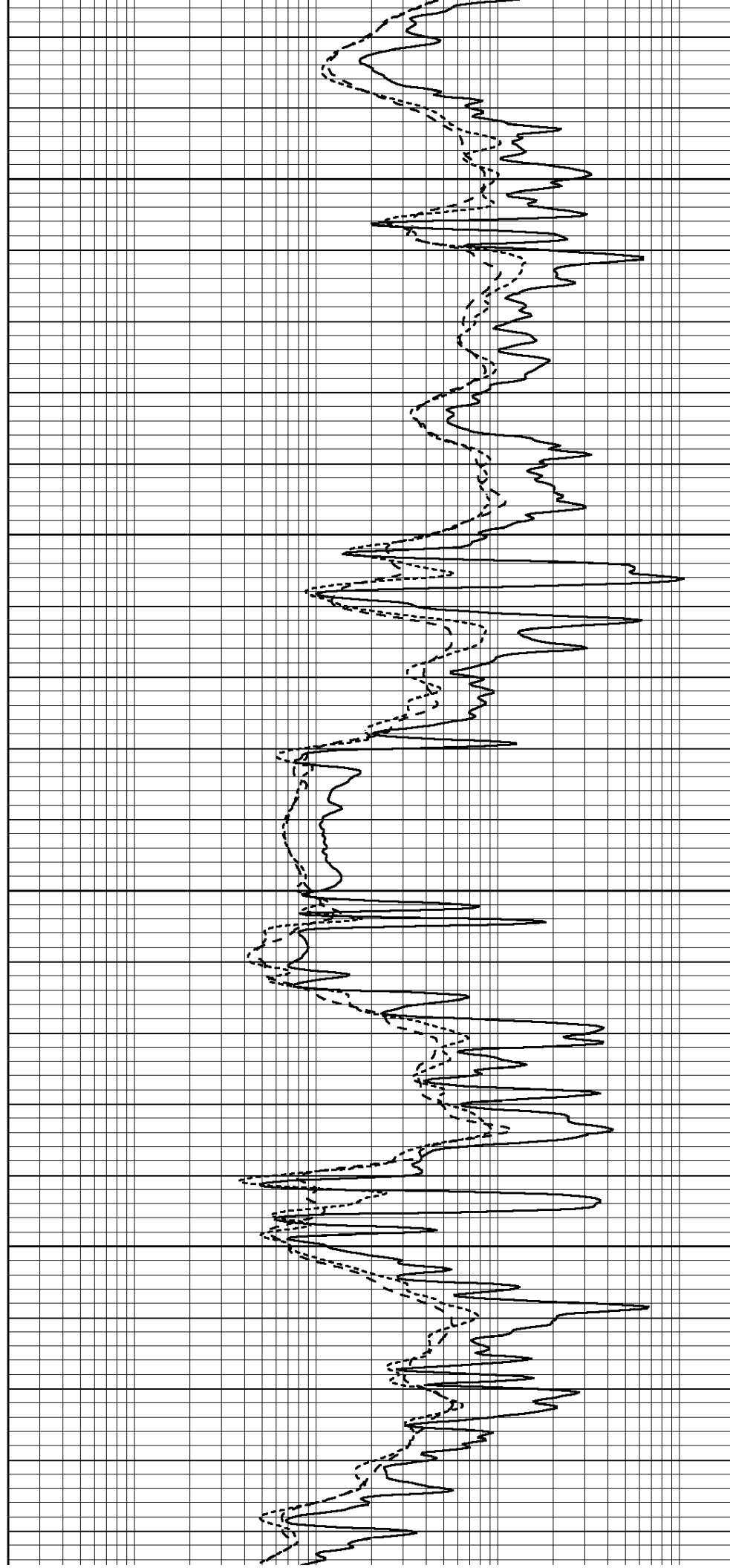


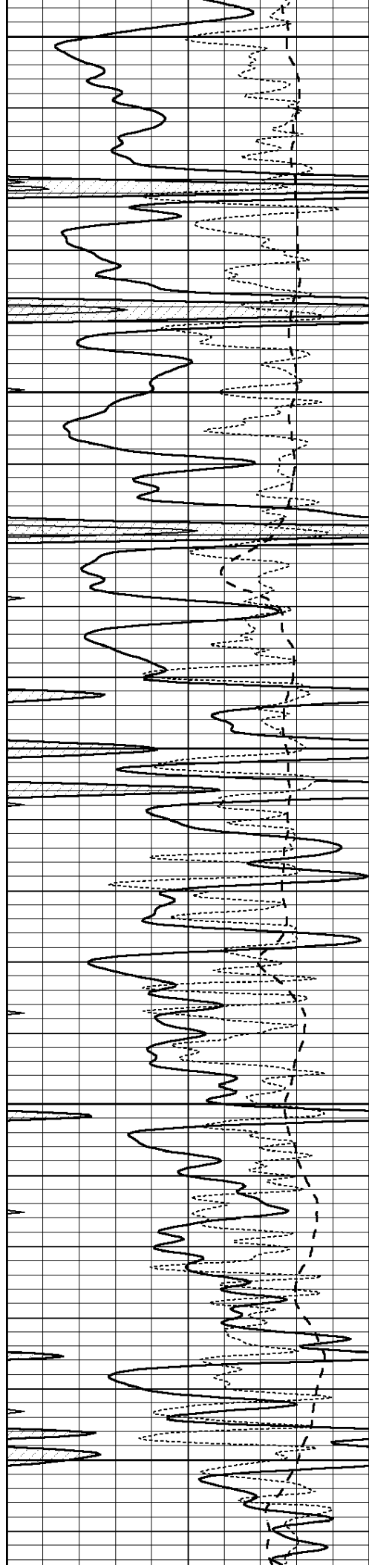
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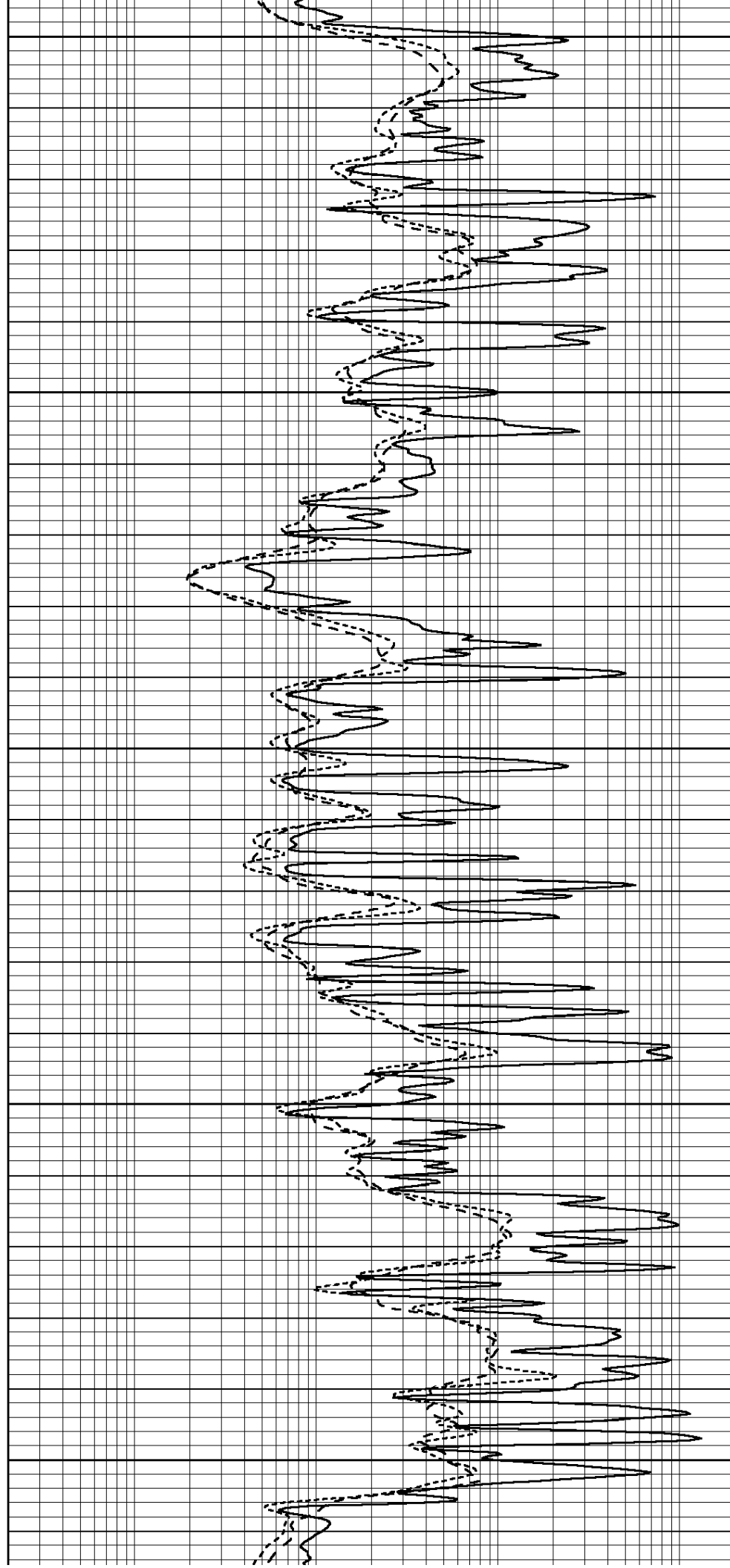
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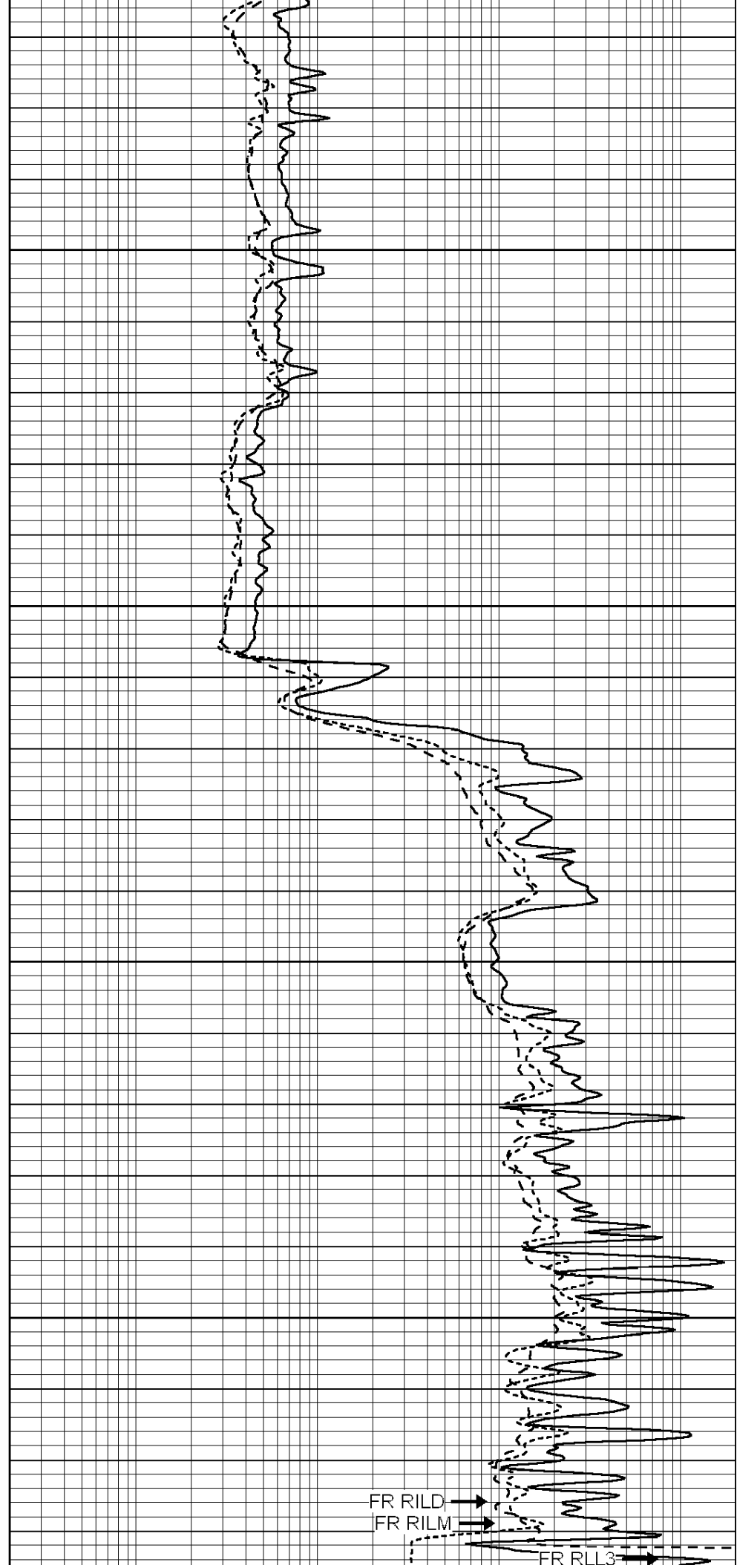
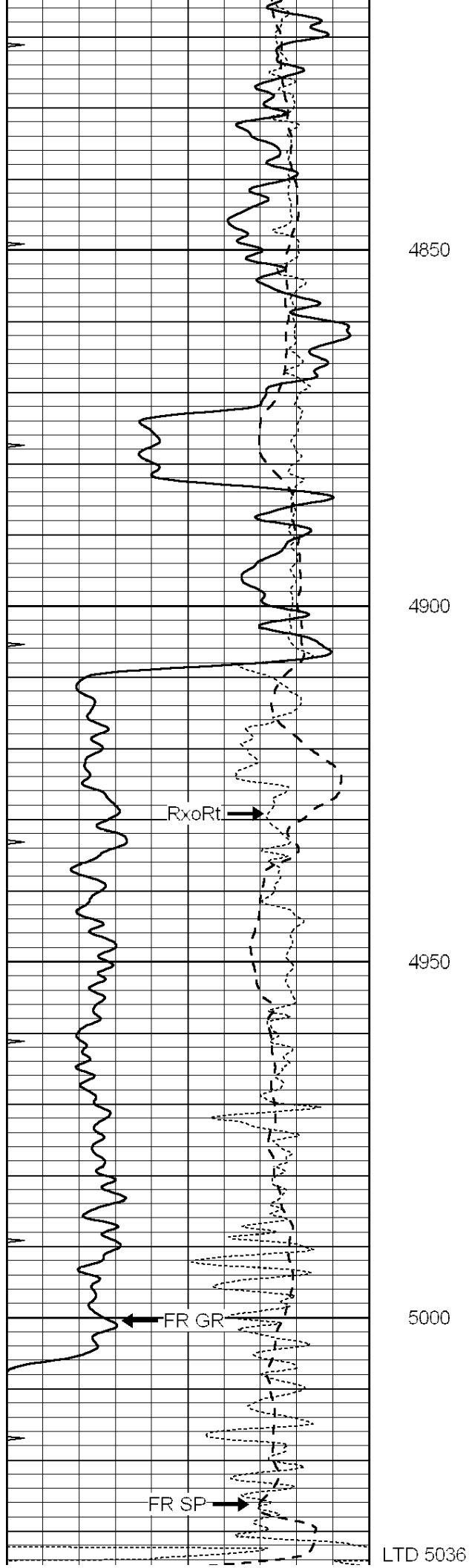
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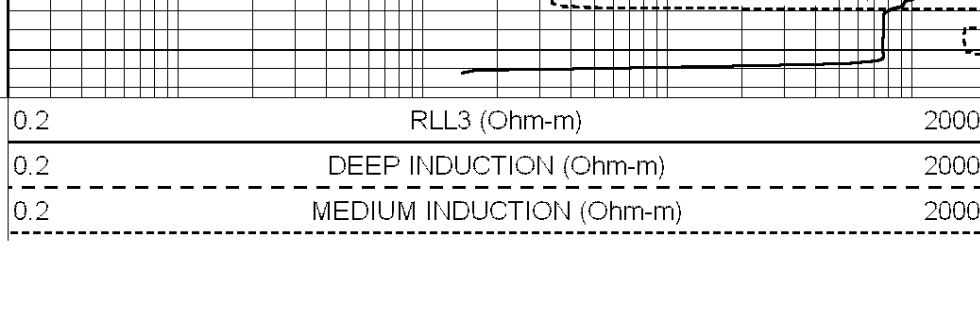
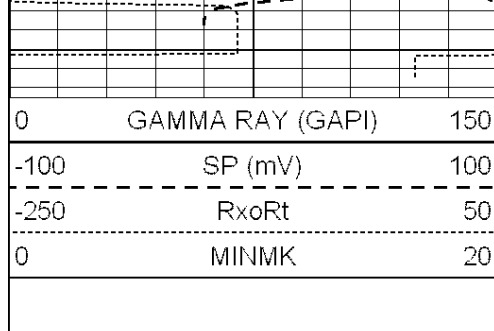
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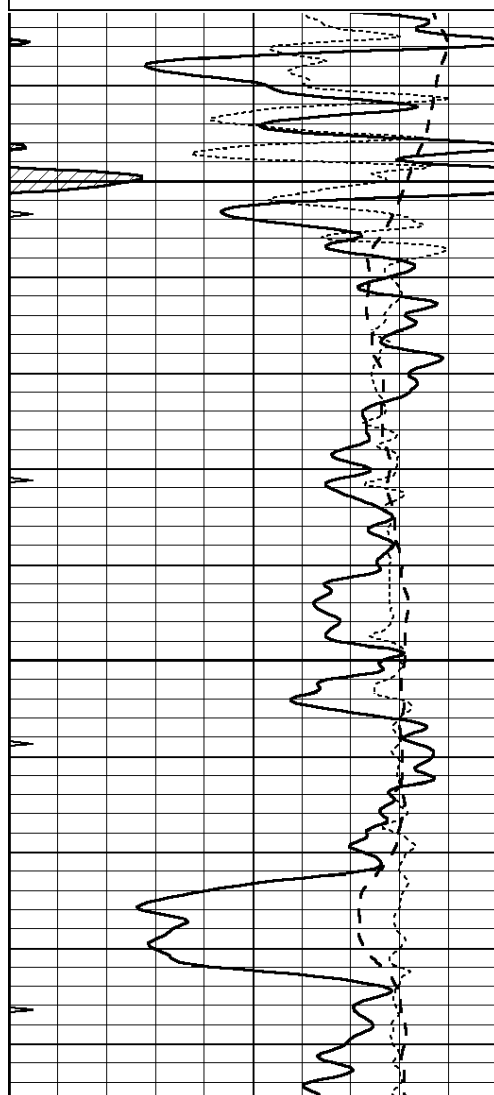
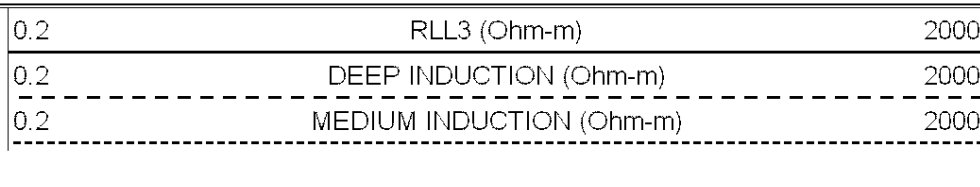
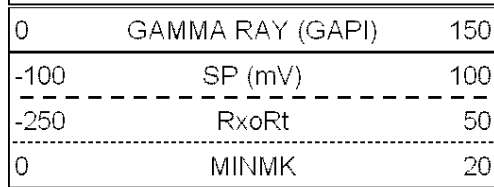






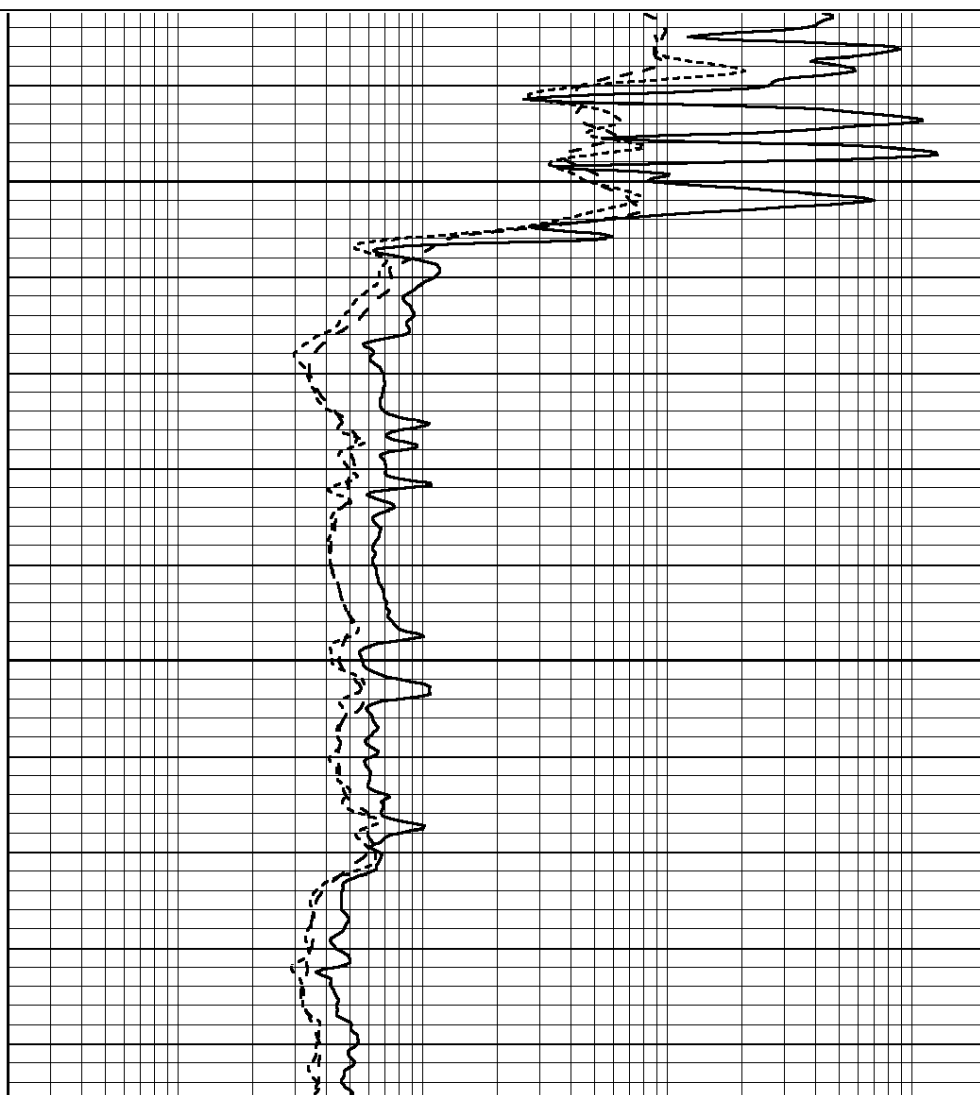
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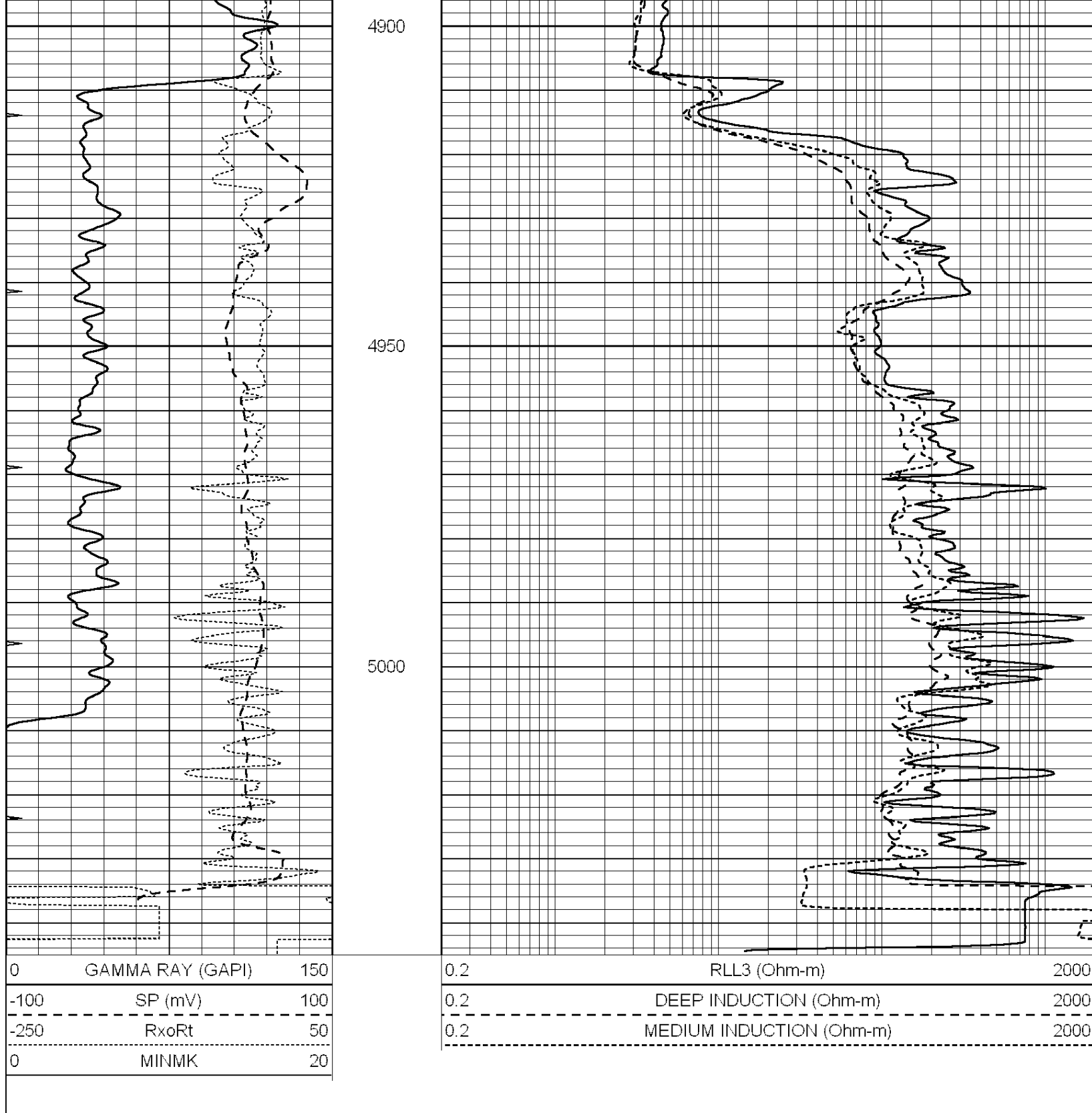
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 Charted by: Depth in Feet scaled 1:240



4800

4850





Calibration Report

Database File: 010846ddn.db
Dataset Pathname: pass3.6
Dataset Creation: Thu Mar 28 12:57:08 2013

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Tue Mar 26 01:01:54 2013
Downhole Cal Performed:	Sat Jan 19 19:51:38 2013
After Survey Verification Performed:	Sat Jan 19 19:51:38 2013

Surface Calibration				Readings		References		Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.793	0.790	V	0.000	400.000	mmho/m	620.000	0.000	
Medium	0.992	1.002	V	0.000	464.000	mmho/m	680.000	-48.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011	
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367	

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification			Readings		Targets		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report			
Serial-Model:		GEAR1-GEARHART	
Source / Verifier:		147 / 147	
Master Calibration Performed:		Mon Mar 25 23:10:31 2013	

Master Calibration				Density		Far Detector	Near Detector
Magnesium		1.710	g/cc			1205.77	610.74 cps
Aluminum		2.590	g/cc			271.21	419.72 cps
Spine Angle = 75.89				Density/Spine Ratio = 0.572			
	Size			Reading			
Small Ring	7.10	in		4.69	V		
Large Ring	14.00	in		6.52	V		

Compensated Neutron Calibration Report			
Serial Number:		NEU_4I	
Tool Model:		G	

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

Gamma Ray Calibration Report			
Serial Number:		GR5	

Tool Model:

OPEN

Performed:

Tue Mar 26 03:22:48 2013

Calibrator Value:

1.0

GAPI

Background Reading:

0.0

cps

Calibrator Reading:

1.0

cps

Sensitivity:

2.4000

GAPI/cps