



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company	EDISON OPERATING COMPANY, LLC	Location:	API # : 15-185-23843-0000	Other Services CDL/CNL/PE MEL/SON
Well	RIXON #1-16	SEC 16 TWP 24S RGE 13W		
Field	WILDCAT	Permanent Datum	GROUND LEVEL	Elevation
County	STAFFORD	Log Measured From	KELLY BUSHING 5' A.G.L.	K.B. 1923
State	KANSAS	Drilling Measured From	KELLY BUSHING	D.F. 1921
				G.L. 1918
Date	12/13/13	Run Number	ONE	
Depth Driller	4218	Depth Logger	4219	
Bottom Logged Interval	4217	Top Log Interval	0	
Casing Driller	8 5/8"@325'	Casing Logger	300'	
Bit Size	7 7/8"	Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 14,300 PPM
Density / Viscosity	9.4/56	pH / Fluid Loss	9.5/14.4	
Source of Sample	FLOWLINE	Rim @ Meas. Temp	0.28@82F	
Rmf @ Meas. Temp	0.21@82F	Rmc @ Meas. Temp	0.34@82F	
Source of Rmf / Rmc	MEASUREMENT	Rim @ BHT	0.19@118F	
Time Circulation Stopped	2 HOURS	Time Logger on Bottom	118F	
Maximum Recorded Temperature	860	Equipment Number	HAYS, KANSAS	
Location	JEFF GRONEWEG	Recorded By	ADAM NIGHSWONGER	
Witnessed By				

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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.

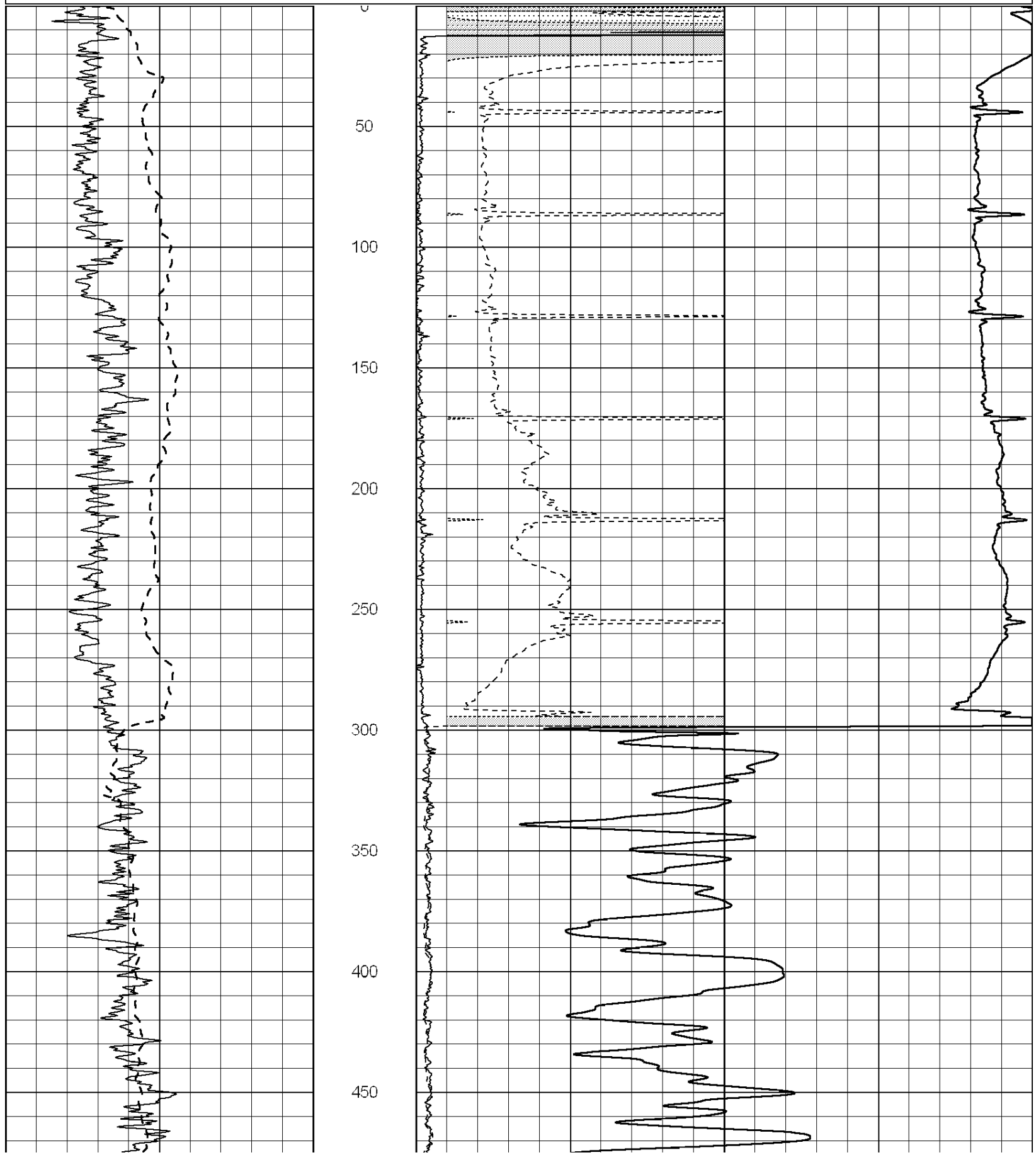
Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
ST. JOHN, KS - SOUTH TO INTERSECTION OF HWY 281 & 50 - 1 MILE WEST
1/2 NORTH - WEST INTO

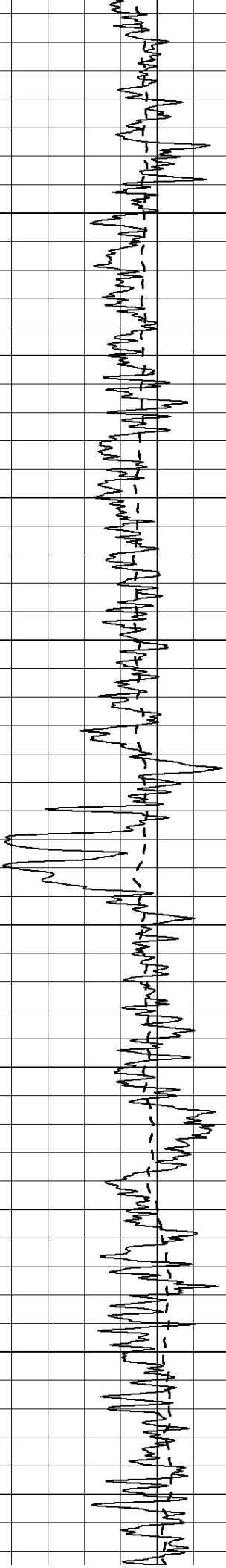
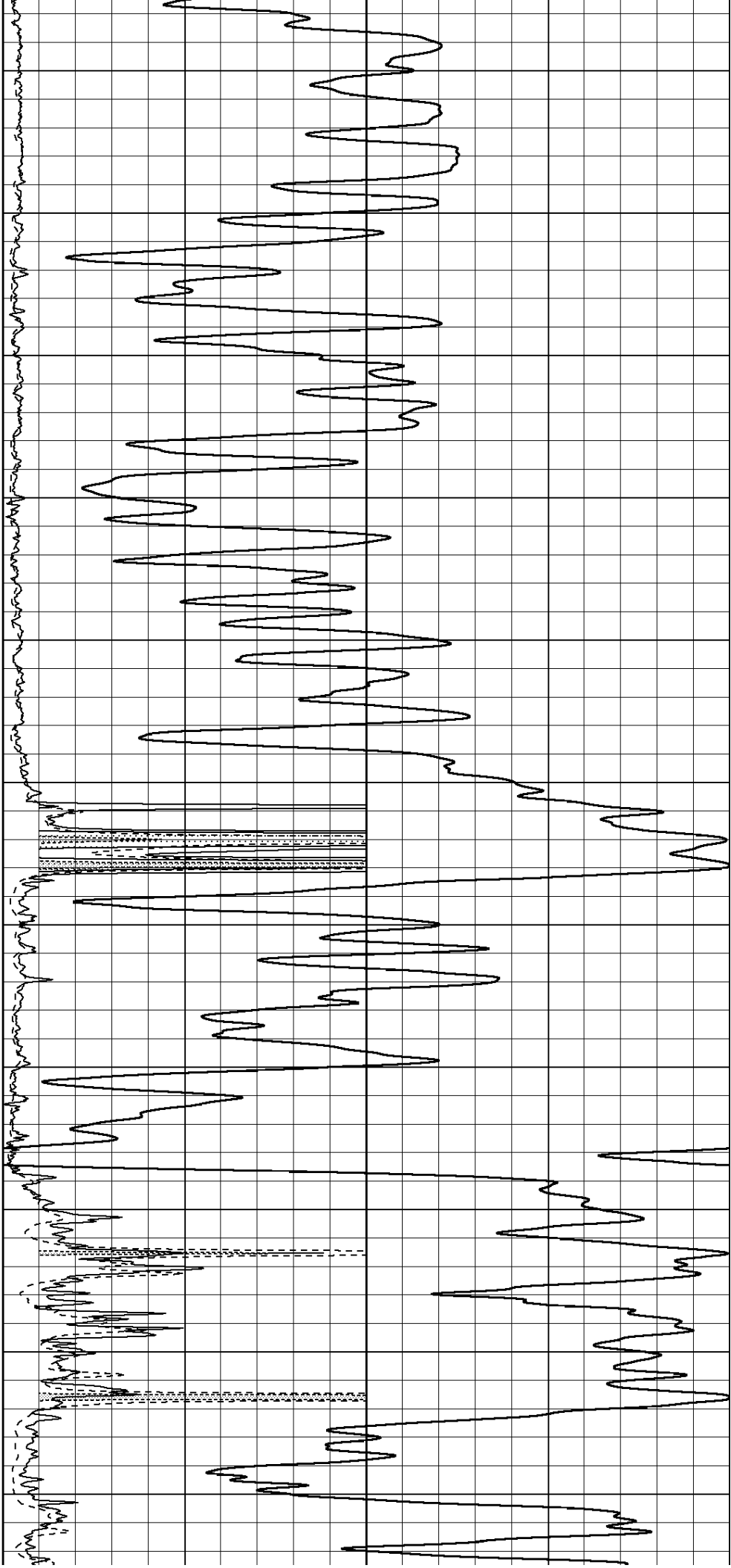
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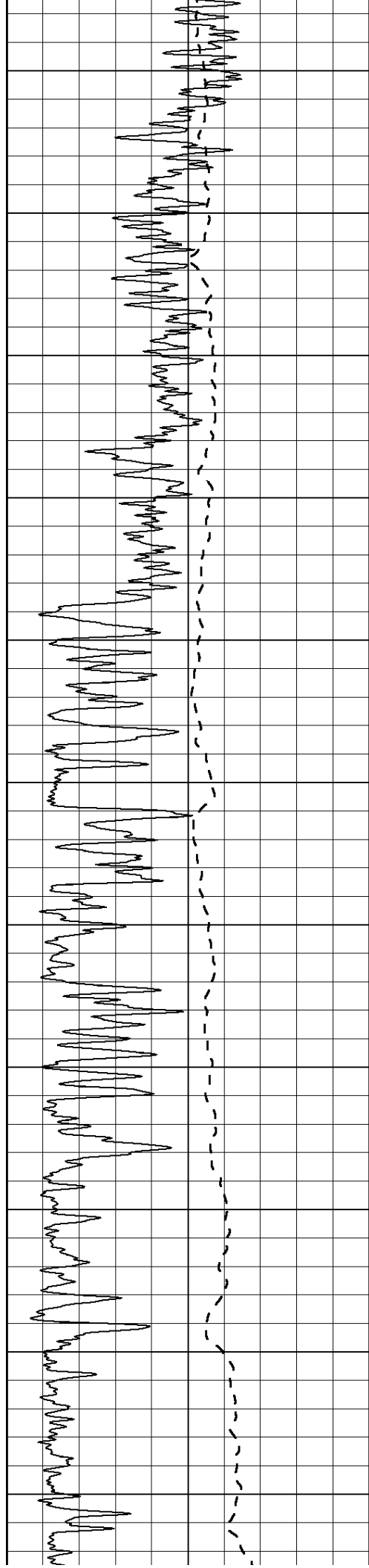
Depth in Feet scaled 1:600

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	



500 550 600 650 700 750 800 850 900 950 1000





1050

1100

1150

1200

1250

1300

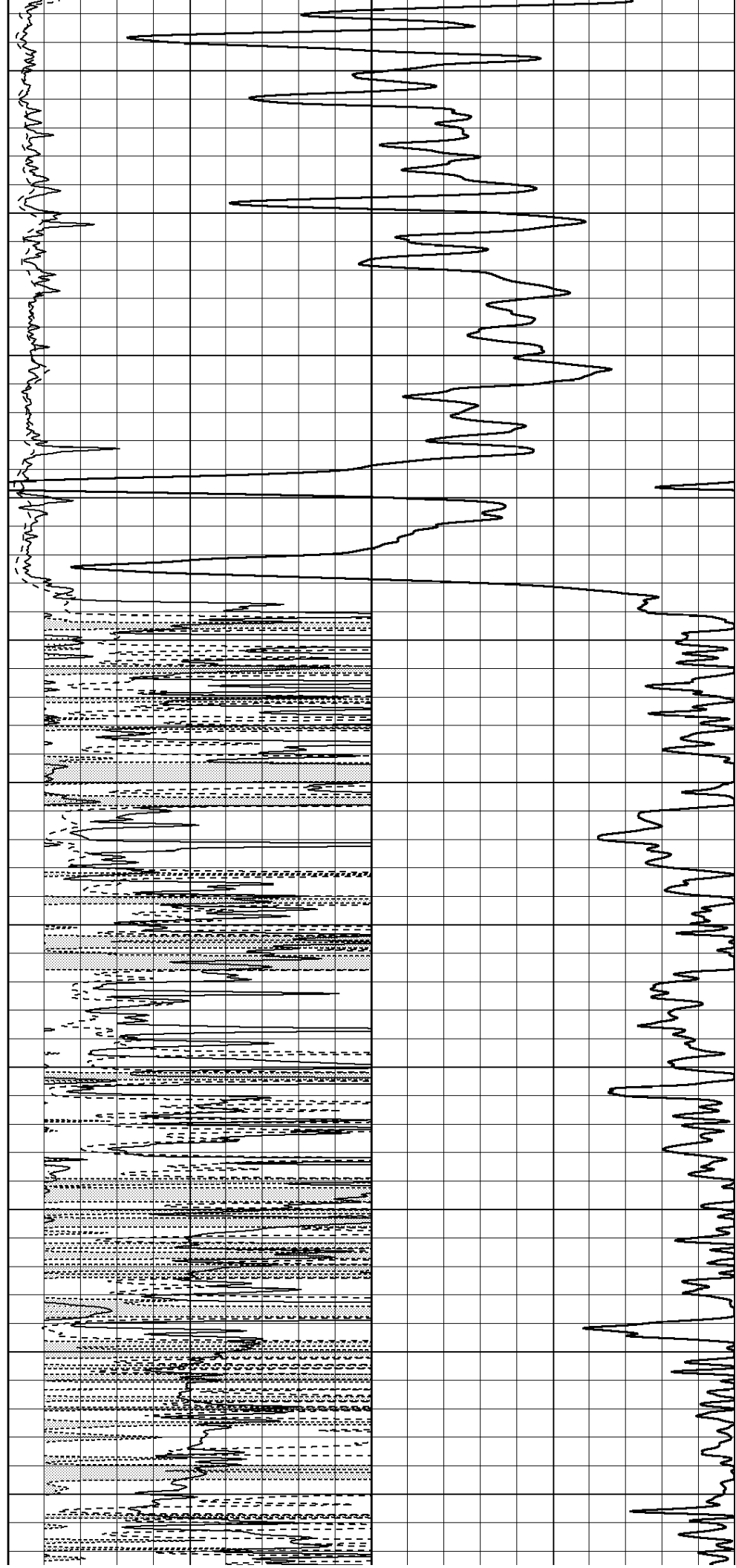
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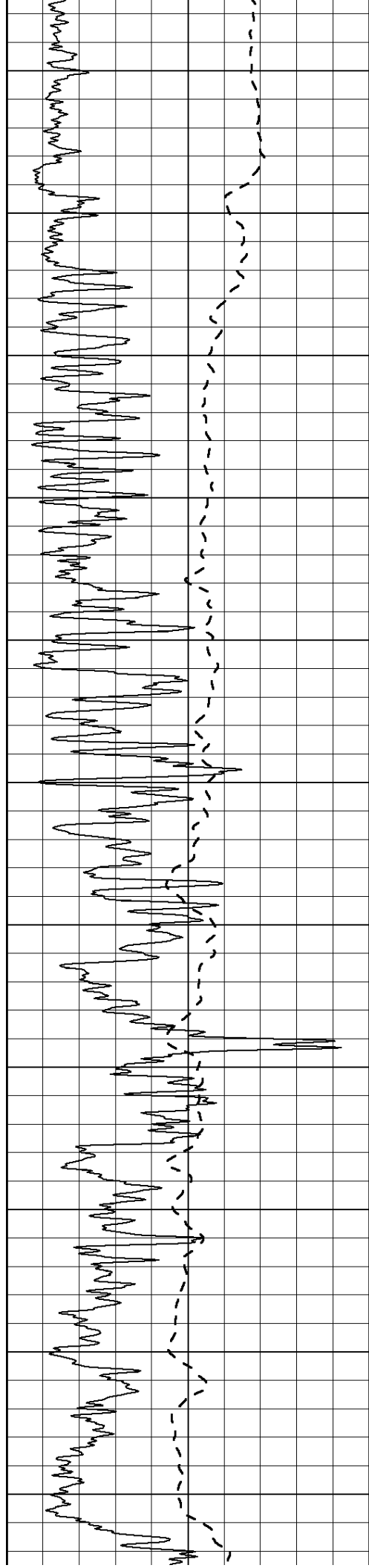
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1450

1500

1550





1600

1650

1700

1750

1800

1850

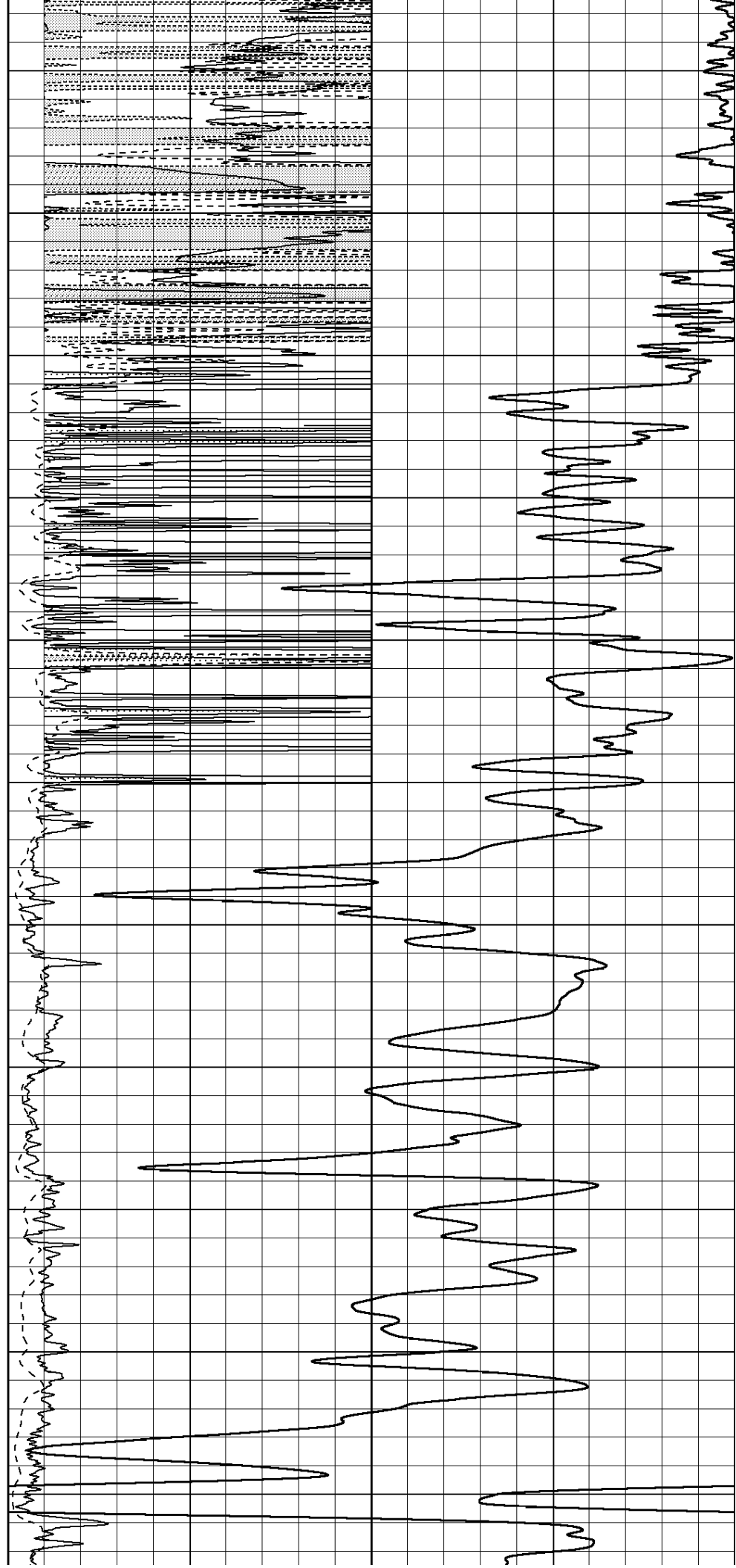
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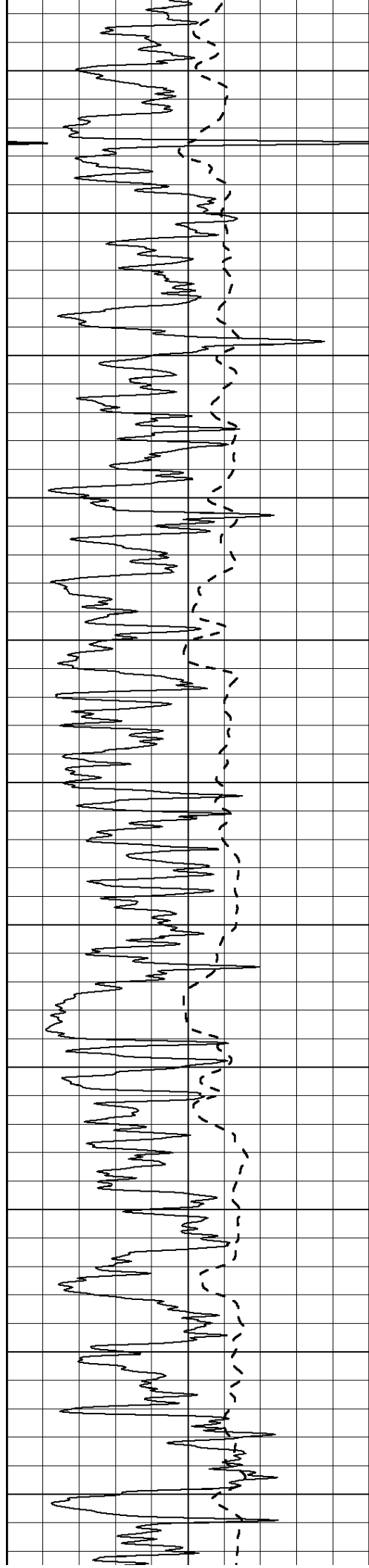
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2000

2050

2100





2150

2200

2250

2300

2350

2400

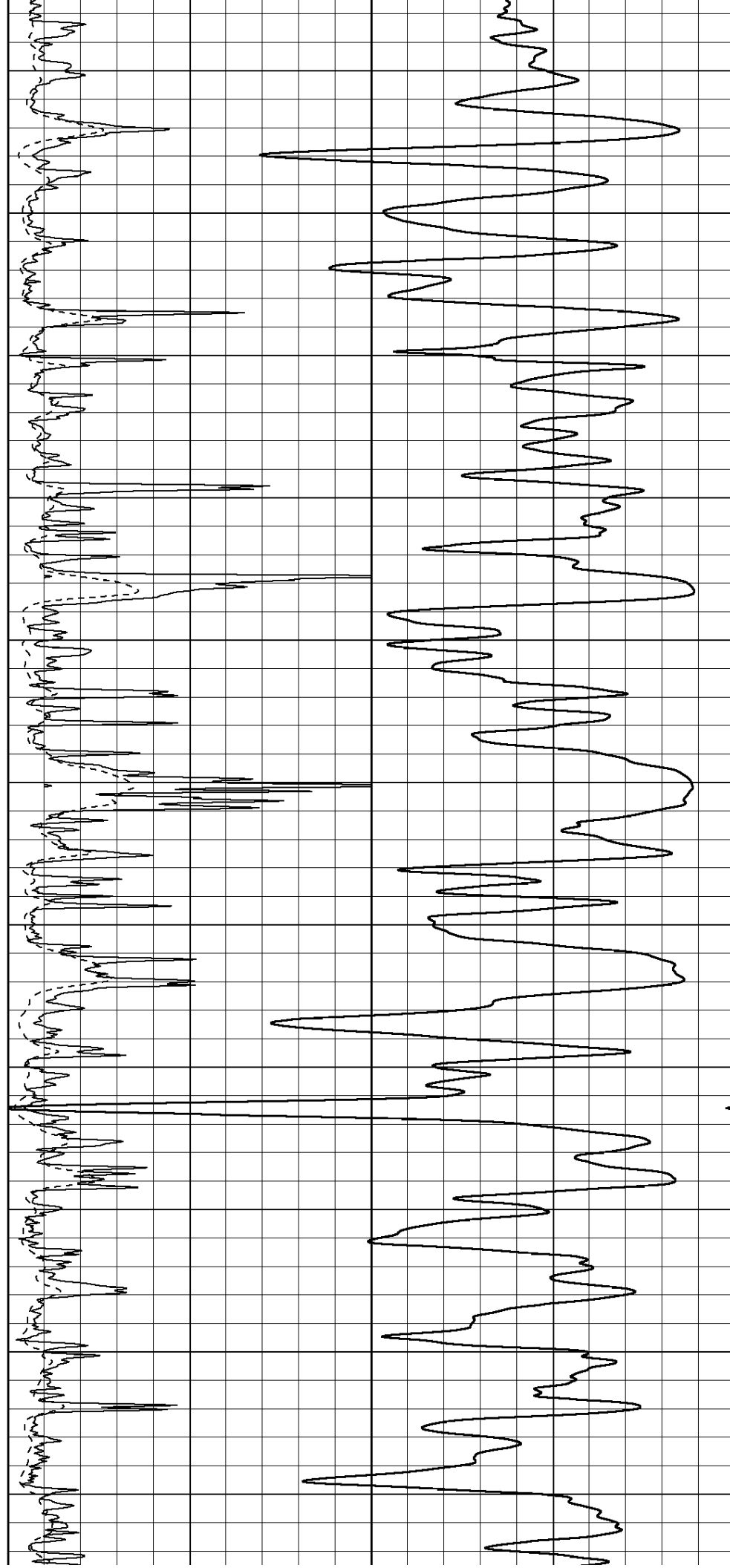
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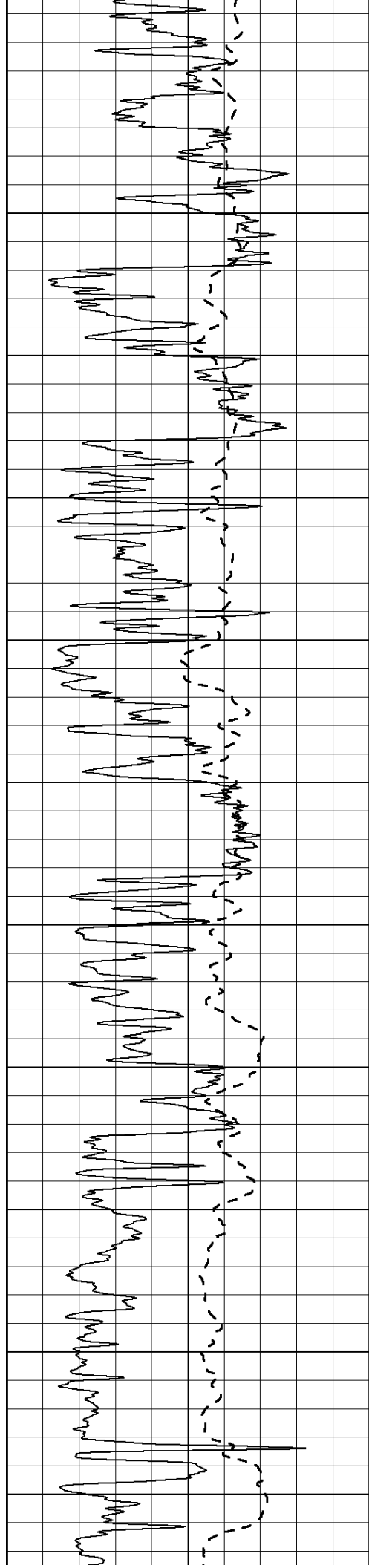
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2550

2600

2650





2700

2750

2800

2850

2900

2950

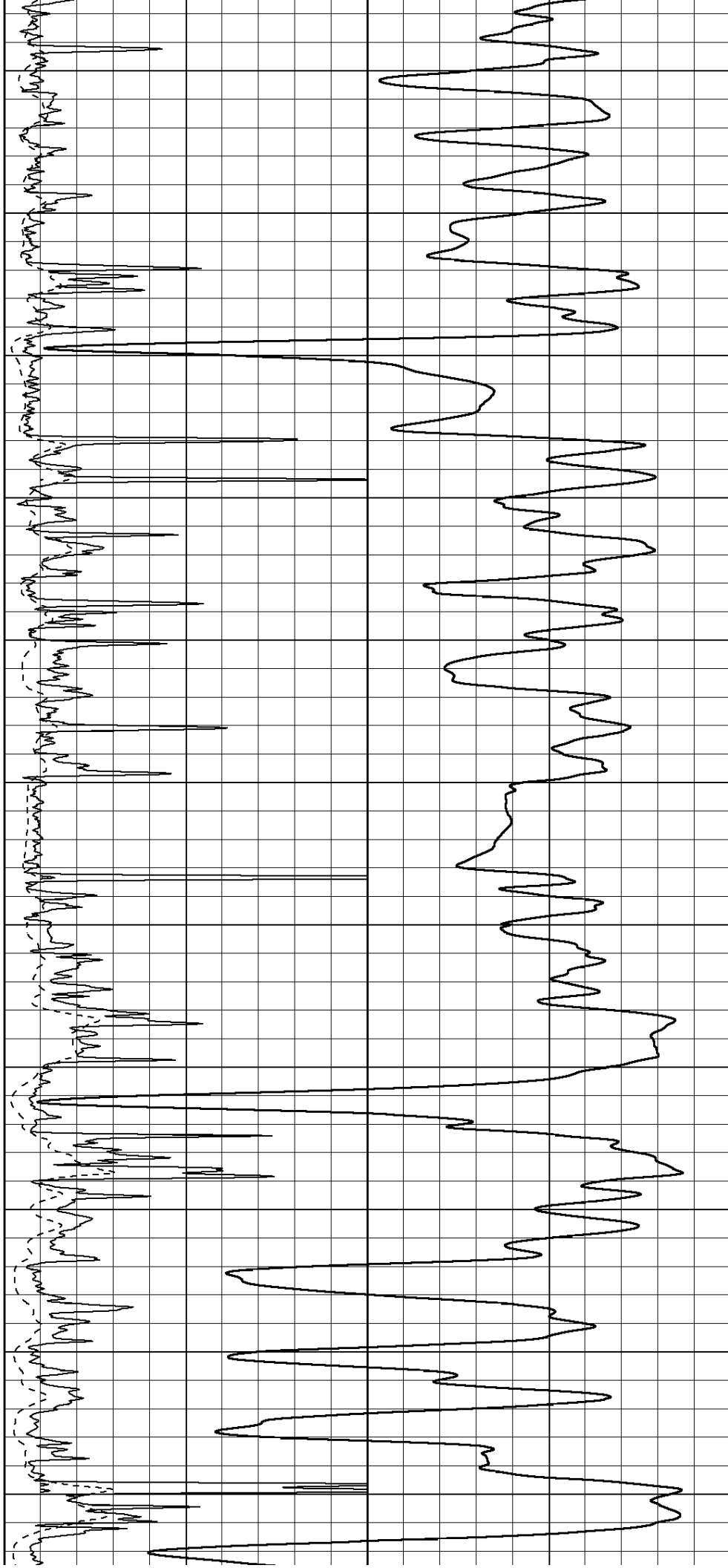
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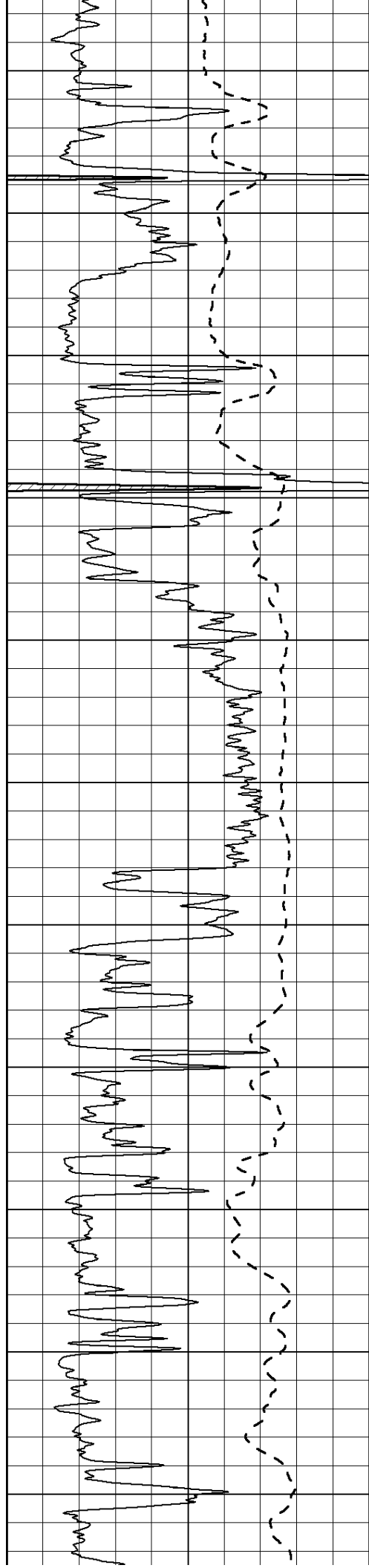
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3100

3150

3200





3250

3300

3350

3400

3450

3500

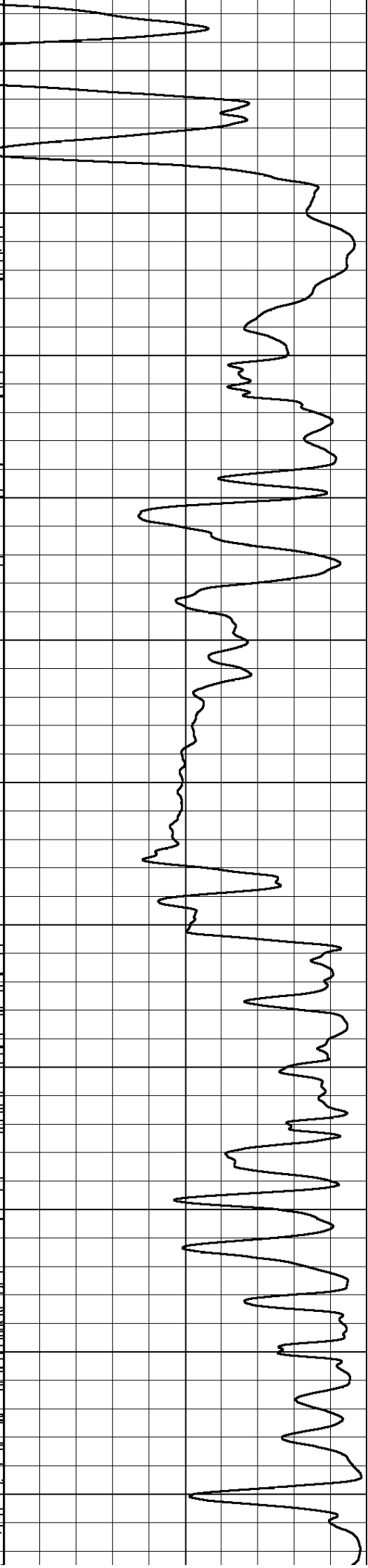
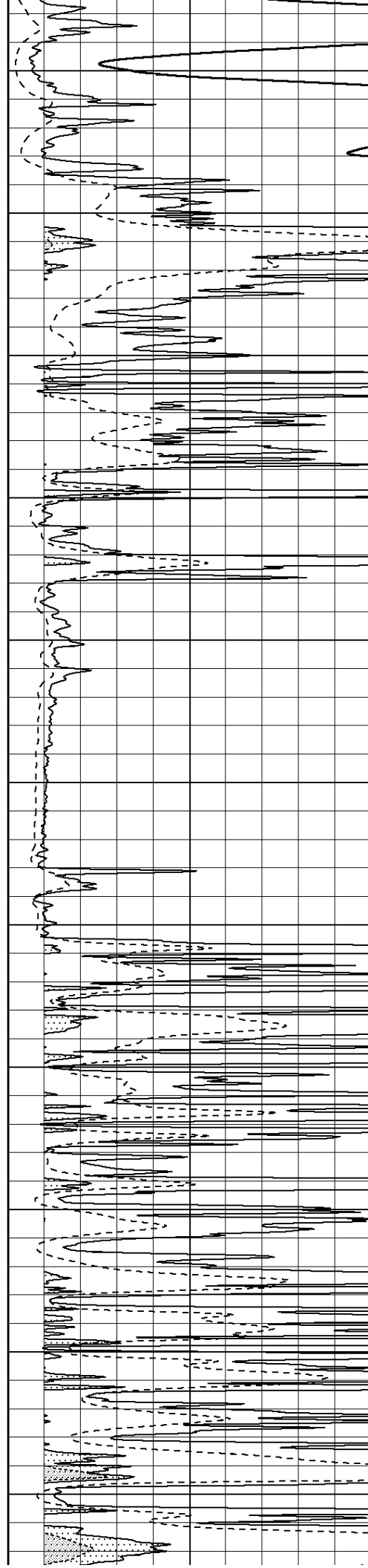
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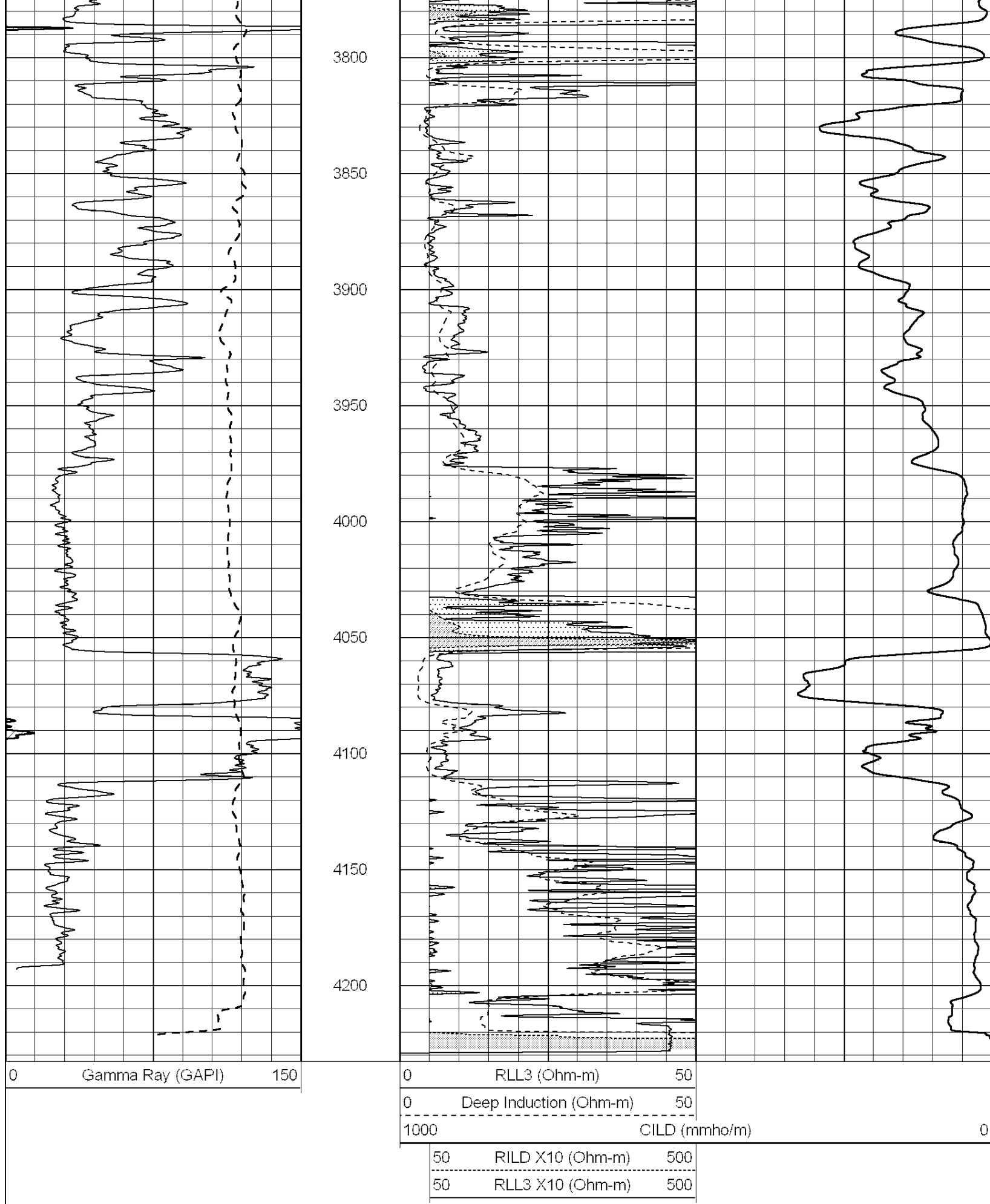
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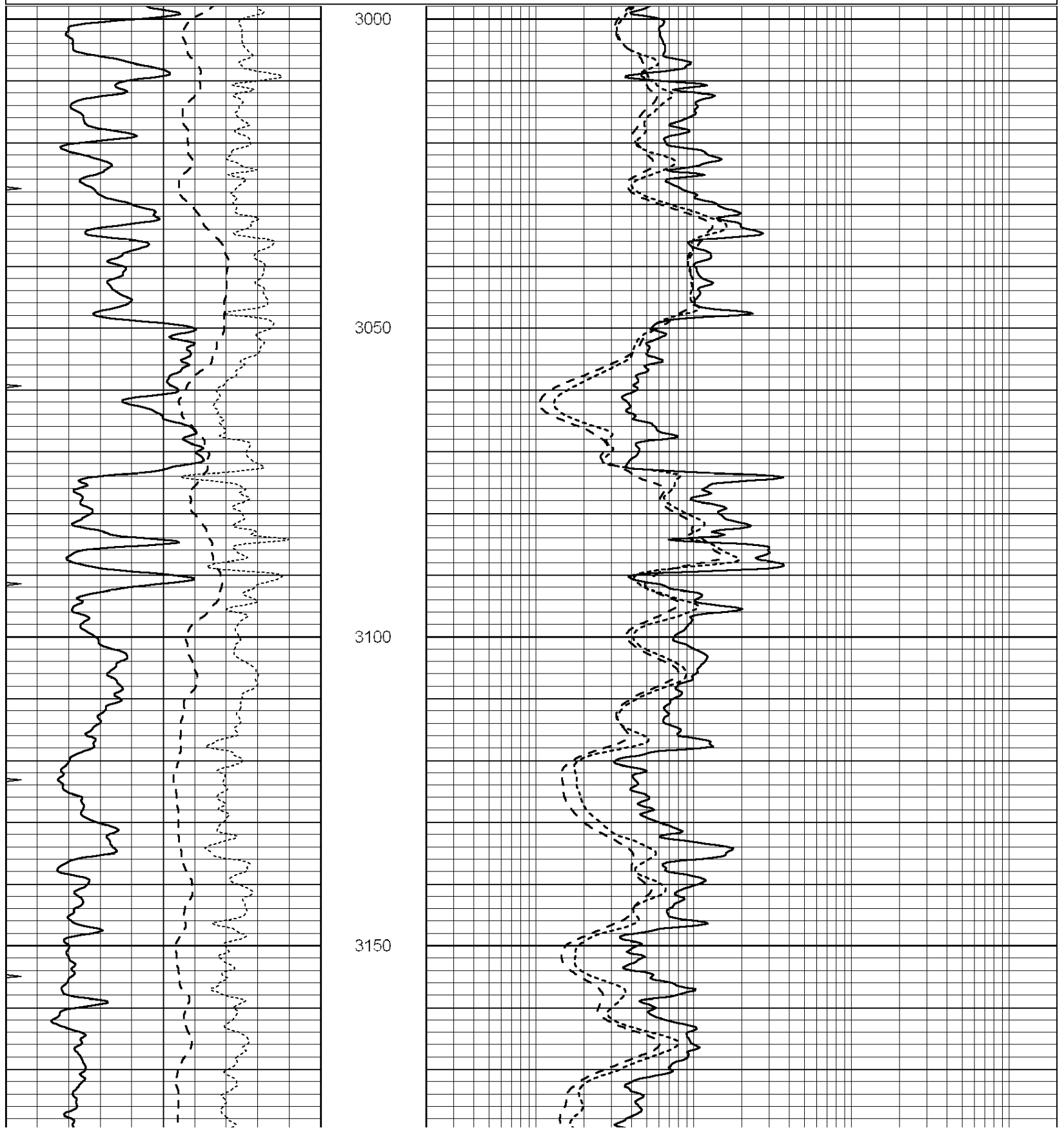
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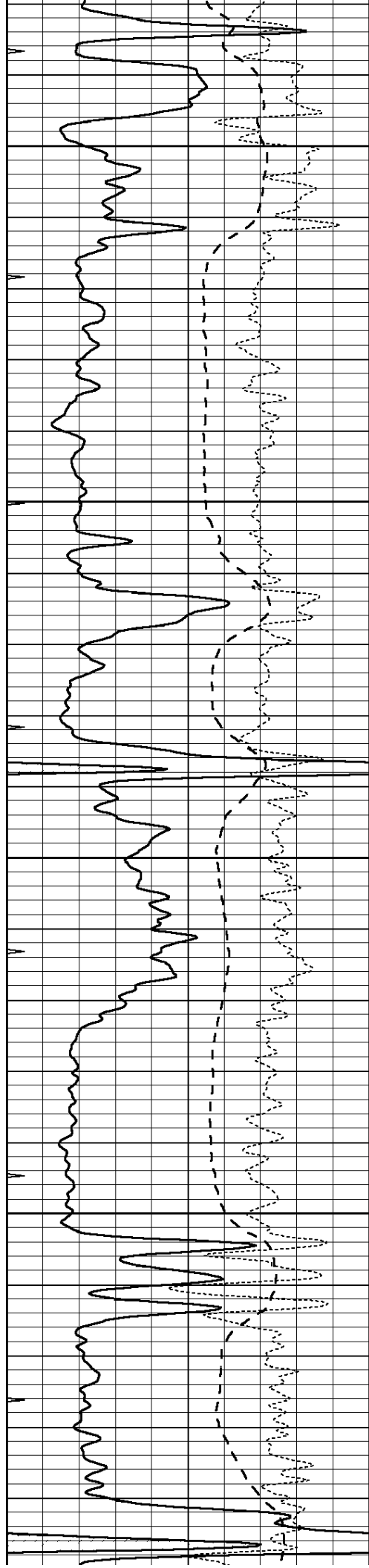
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0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



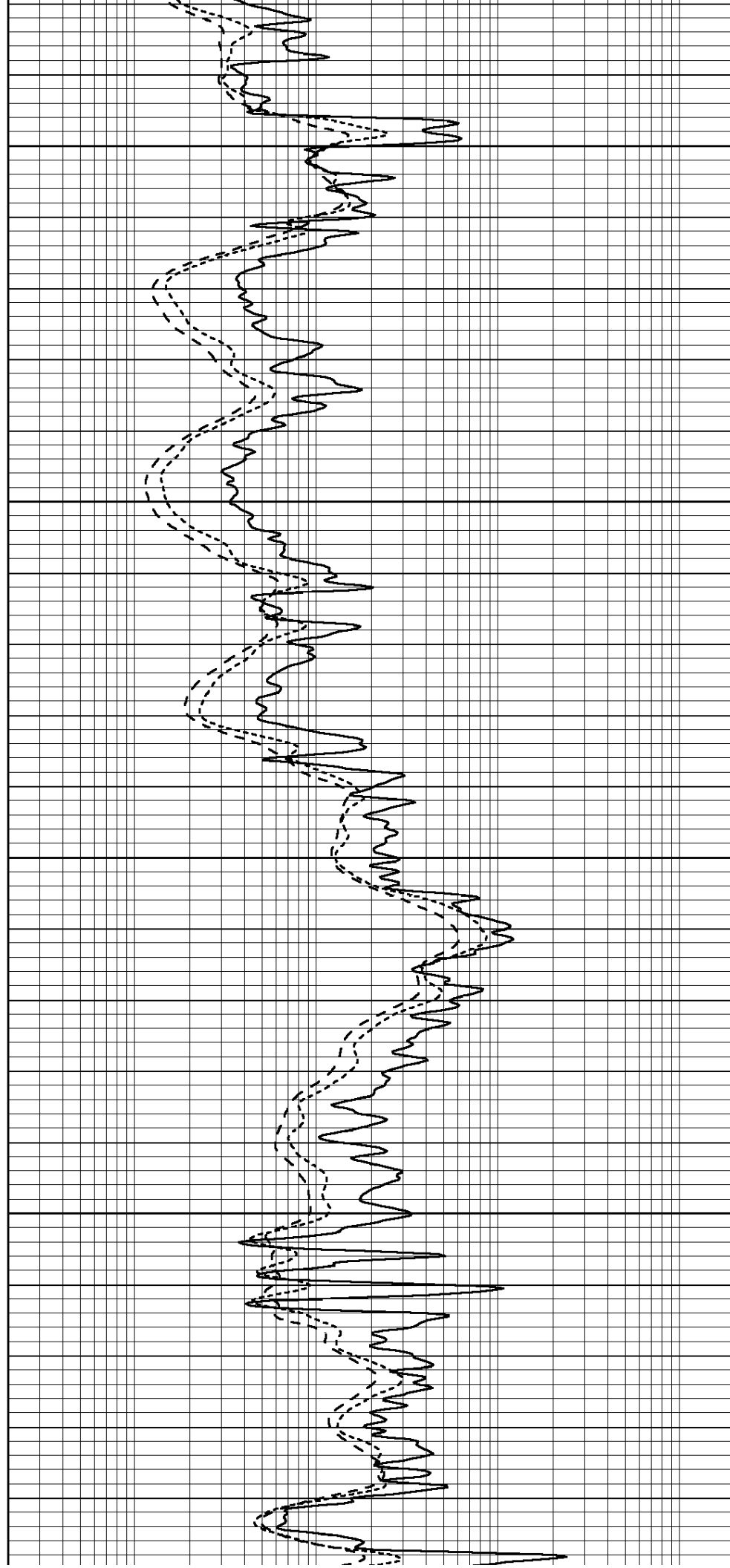


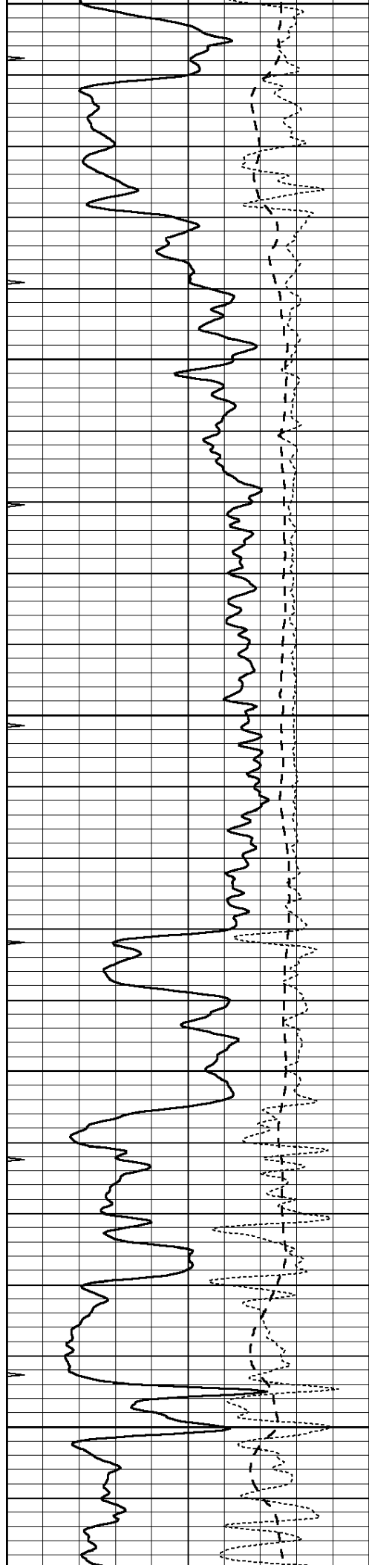
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3350





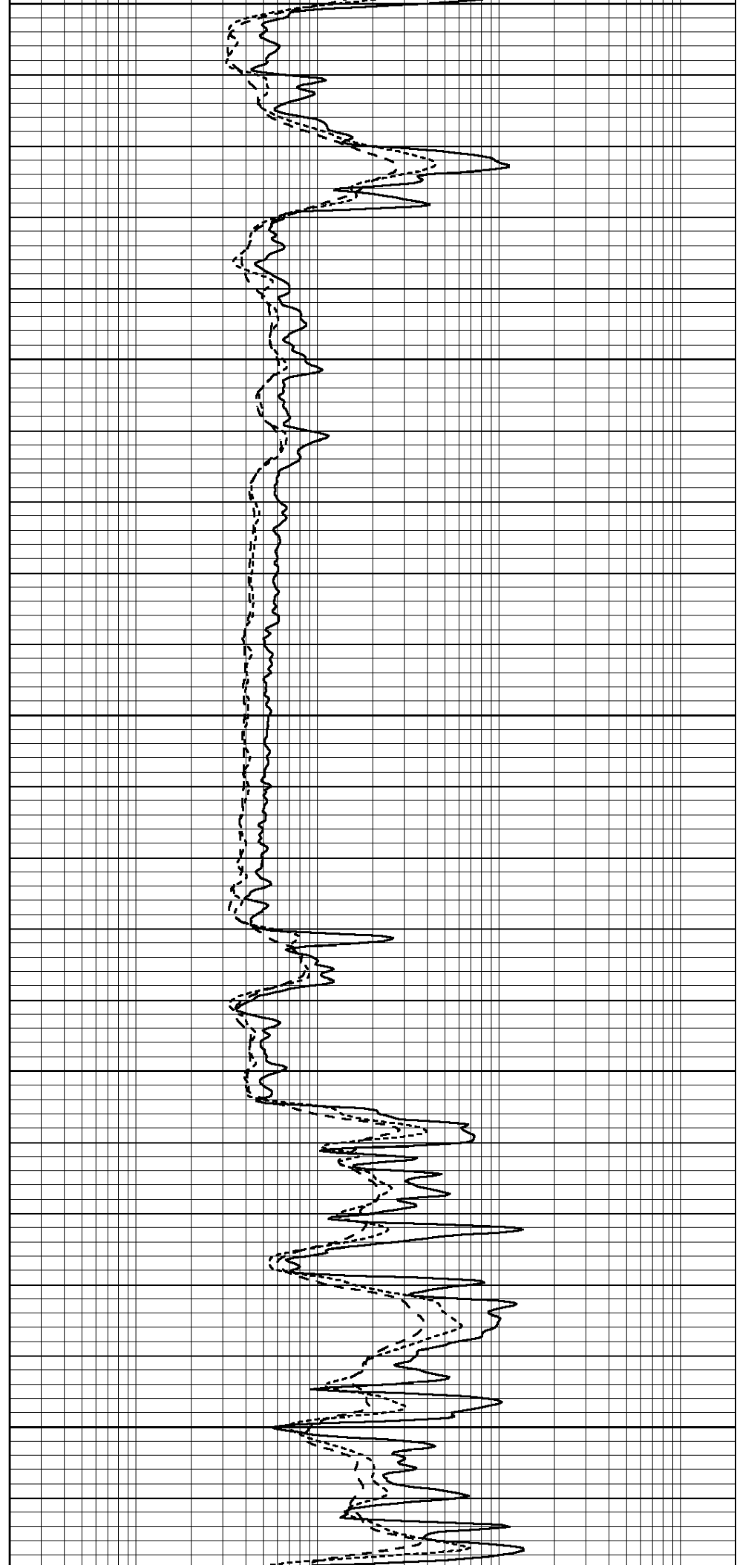
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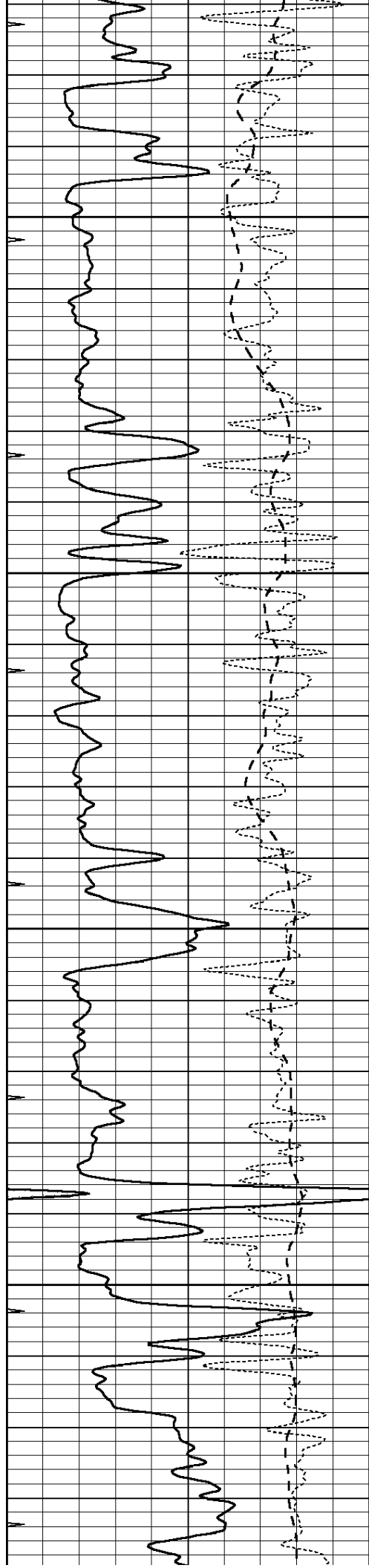
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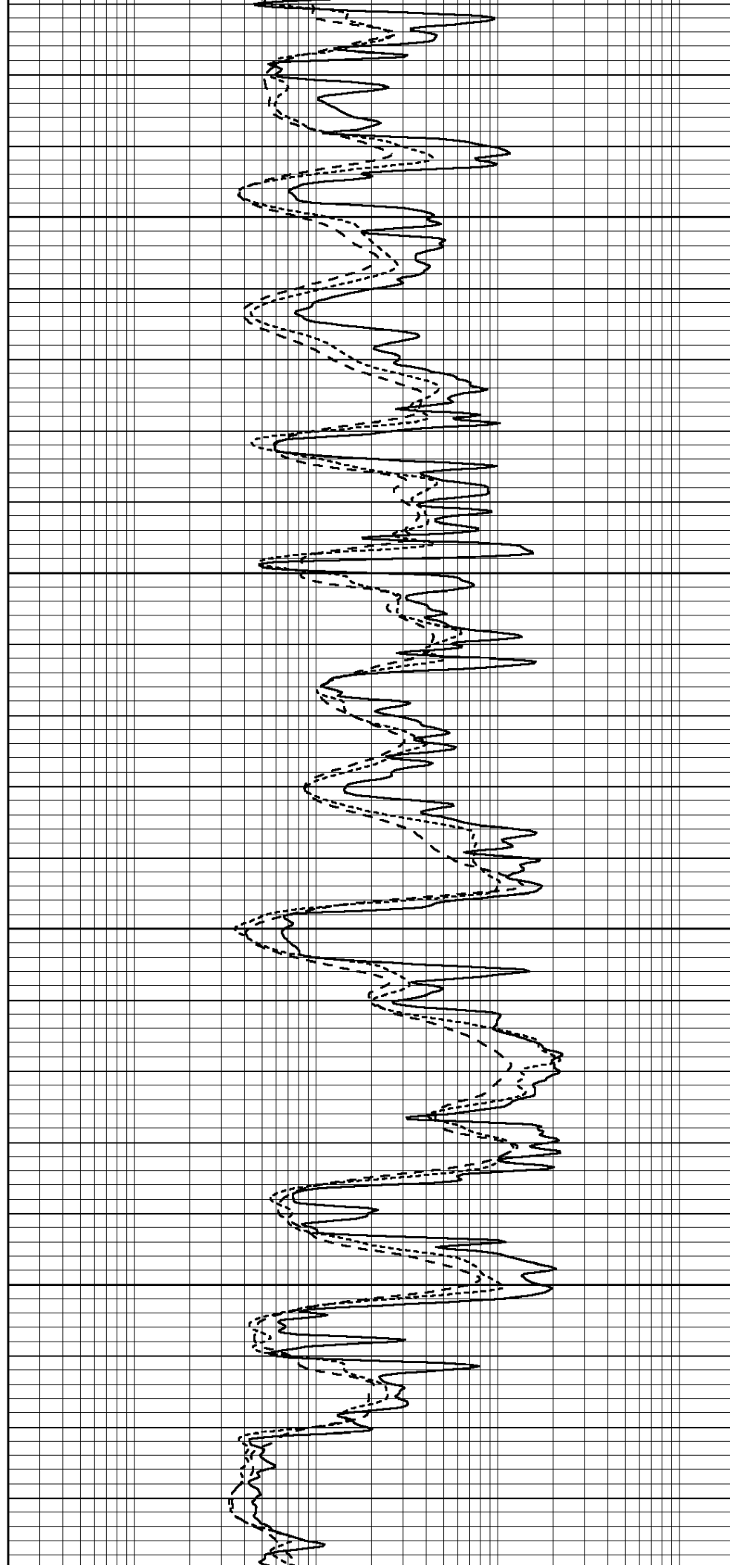


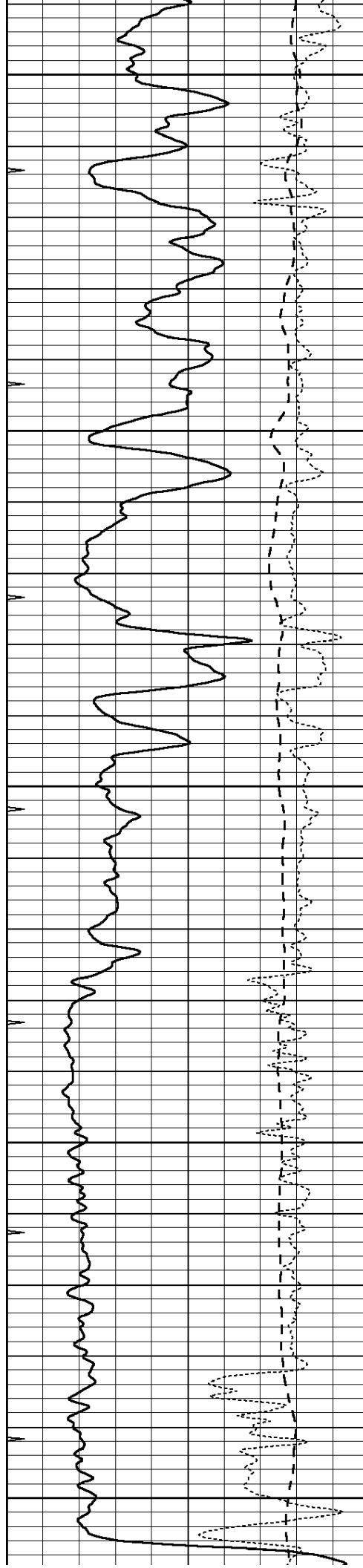
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3800





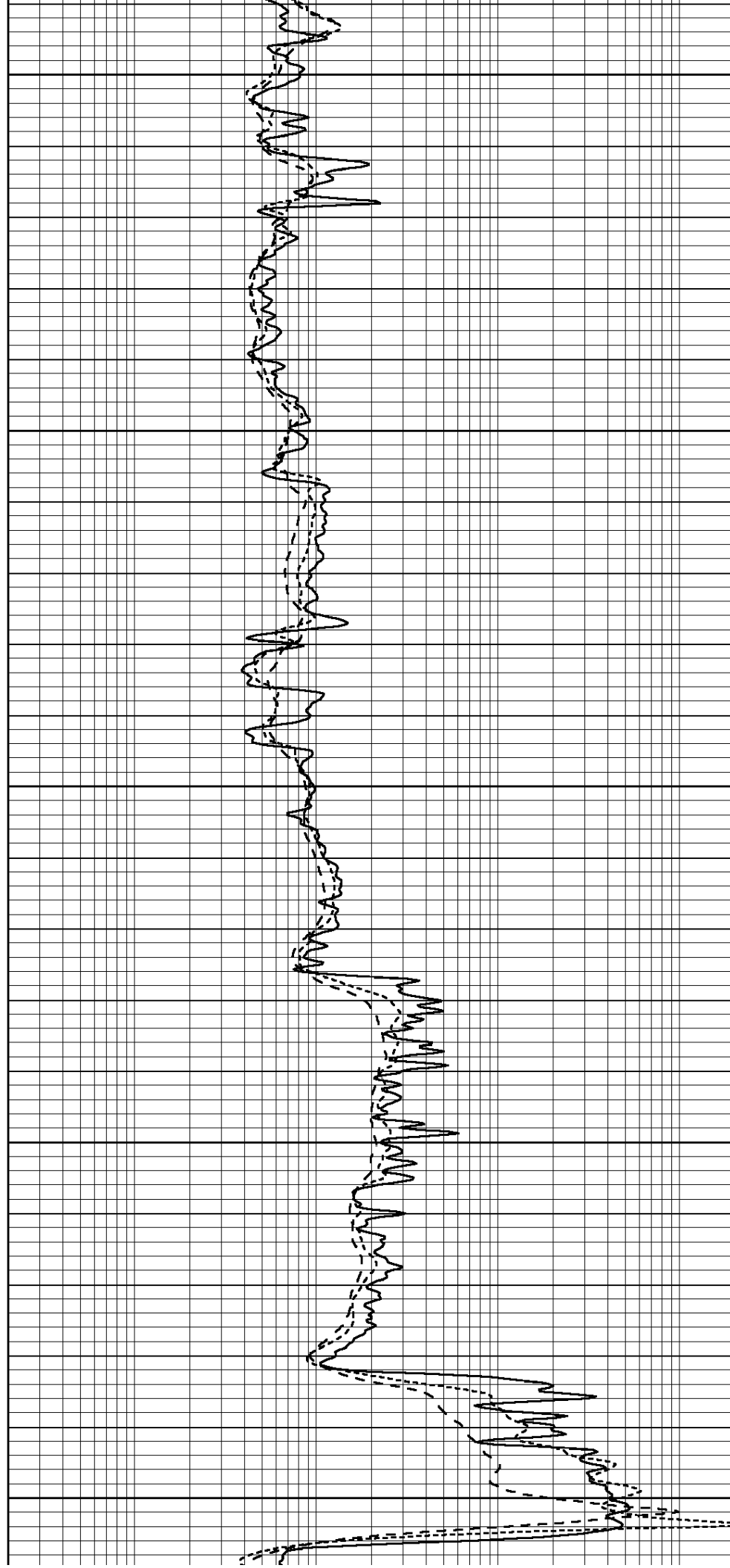
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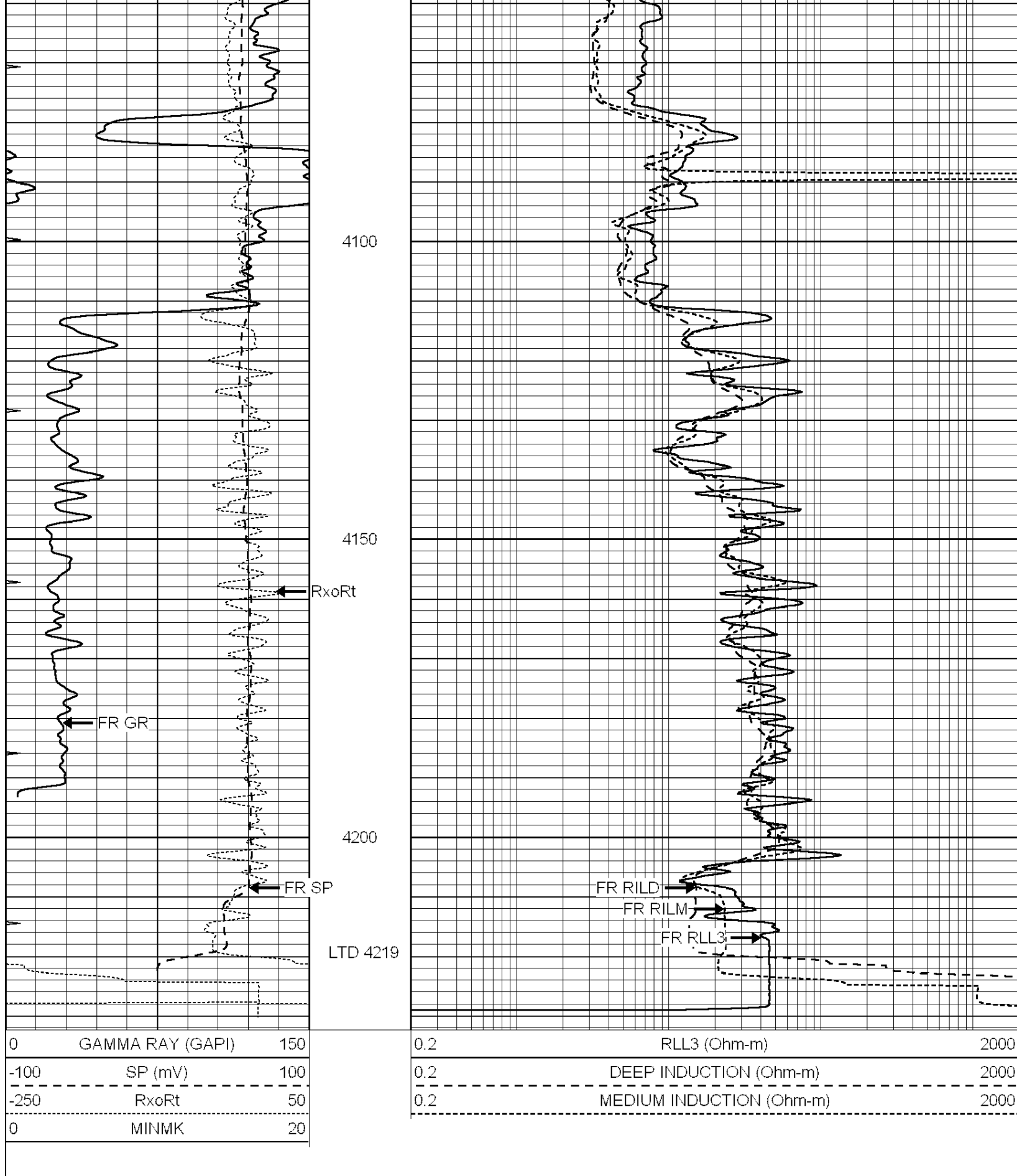
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3950

4000

4050





Database File:

22205pe.db

Dataset Pathname:

pass2.2

Presentation Format:

_dil

Dataset Creation:

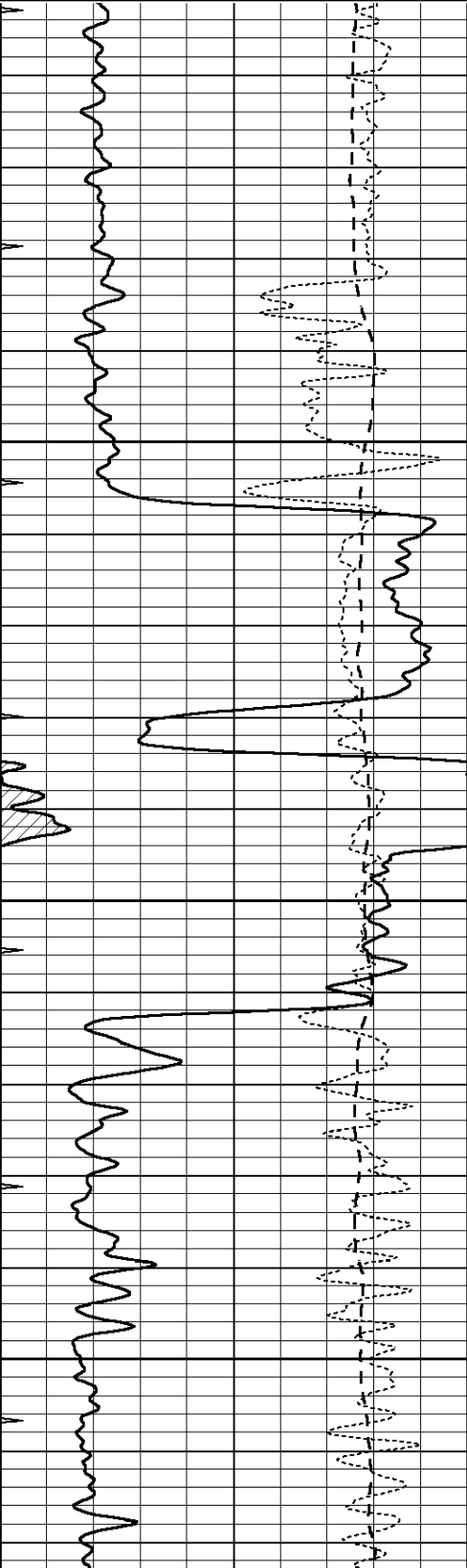
Fri Dec 13 05:50:49 2013 by Calc Open-Cased 090629

Charted by:

Depth in Feet scaled 1:240

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

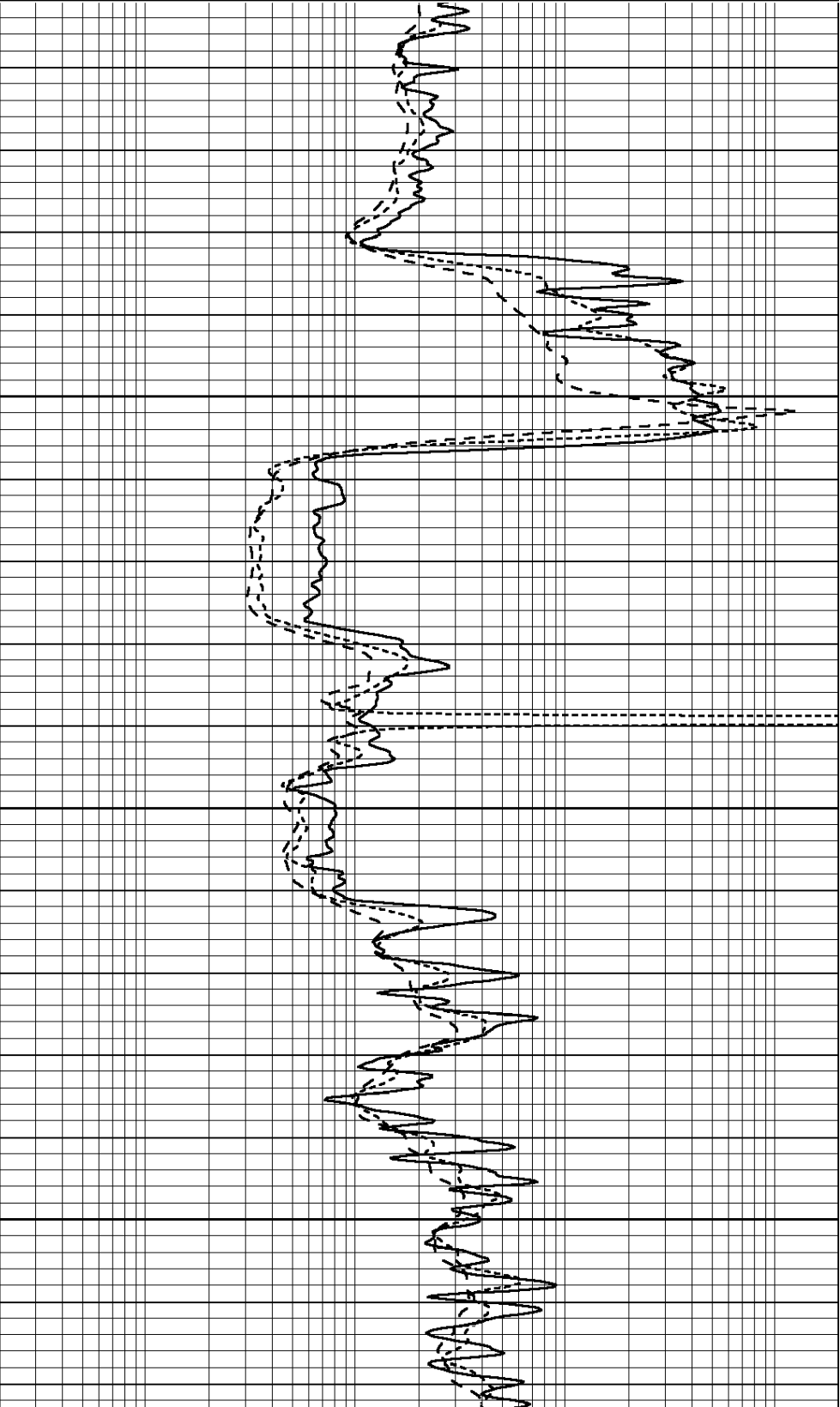
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

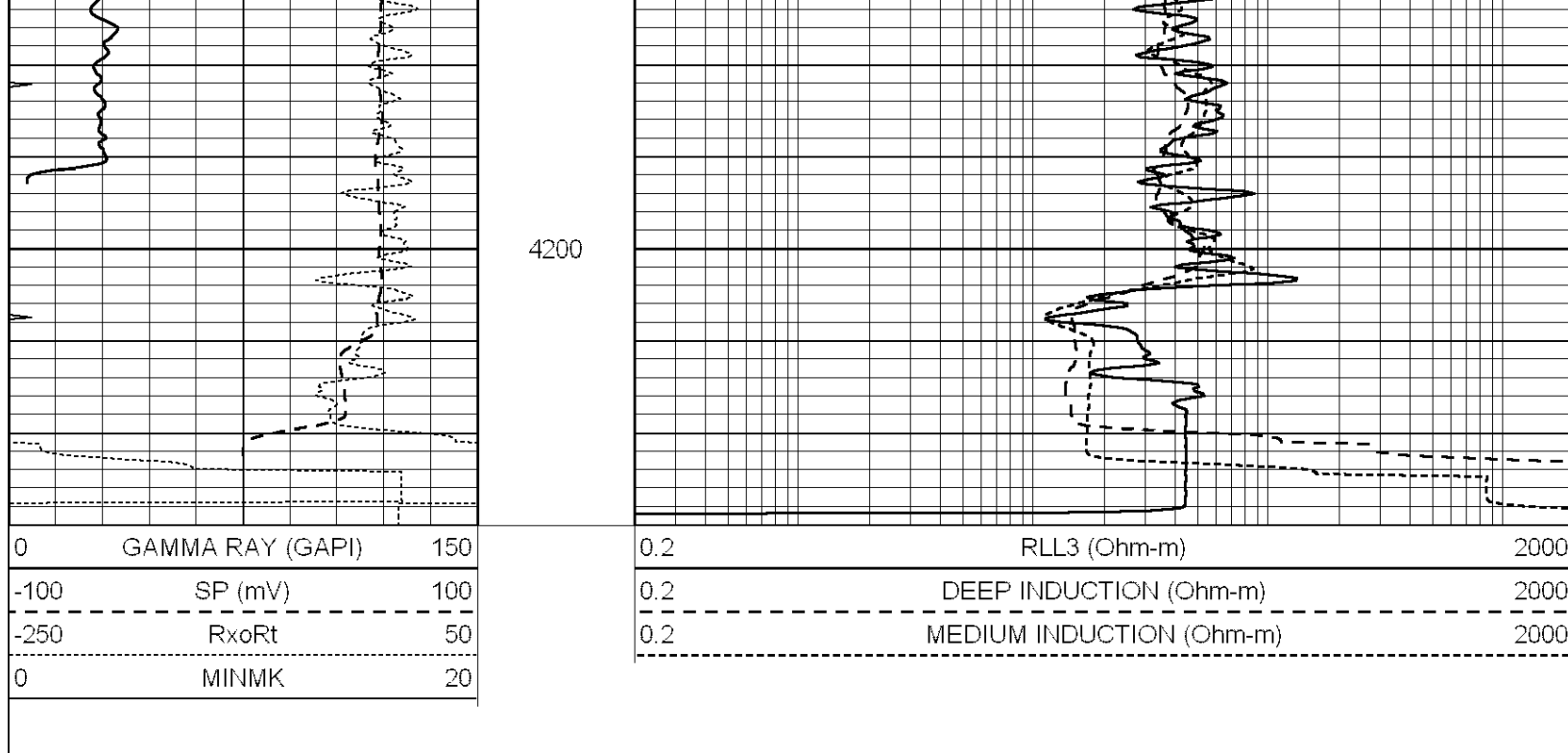


4050

4100

4150





Calibration Report

Database File: 22205pe.db
 Dataset Pathname: pass4.4
 Dataset Creation: Fri Dec 13 08:45:38 2013

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Sun Nov 24 23:25:37 2013

		Readings		References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	580.000	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	cps
Window 2	2029.2	8716.5	3483.5	9750.8	cps
Window 3	1665.0	4929.7	2356.8	5332.0	cps
Window 4	493.3	492.1	490.0	486.8	cps
Long Space	0.0	6687.3	1454.3	7721.6	cps
Short Space	1.9	2149.3	1403.9	2354.5	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	Readings	Reference		
Low Ref	3.5	8.3		
High Ref	5.4	14.0		
	Gain: 2.9		Offset: -1.2	
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:	Sun Dec 08 11:23:31 2013			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.4000	GAPI/cps		