



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.
Well DURLER 14B NO. 1
Field WILDCAT
County FORD State KANSAS

Company RITCHIE EXPLORATION, INC.
Well DURLER 14B NO. 1
Field WILDCAT
County FORD
State KANSAS

Location: 2200' FNL & 1120' FWL
API #: 15-057-20884-00-00
Other Services
CNL/CDL
Elevation
K.B. 2462
D.F. 2460
G.L. 2452

Date	04/01/2013		
Run Number	ONE		
Depth Driller	5120		
Depth Logger	5121		
Bottom Logged Interval	5119		
Top Log Interval	00		
Casing Driller	369		
Casing Logger	368		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5.000	
Density / Viscosity	9.25 / 69		
pH / Fluid Loss	9.0 / 10.4		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.70 @ 80 F		
Rmf @ Meas. Temp	.56 @ 80 F		
Rmc @ Meas. Temp	.84 @ 80 F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.44 @ 126 F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	7:30 P.M.		
Maximum Recorded Temperature	126 F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	MIKE GARRISON		
Witnessed By	MAKLIN ARMSTRONG		

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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: FORT DODGE KS- 2 MILES EAST ON HWY 400 TO 117 RD, 2 SOUTH TO PRIMROSE RD, 1 WEST, NORTH INTO

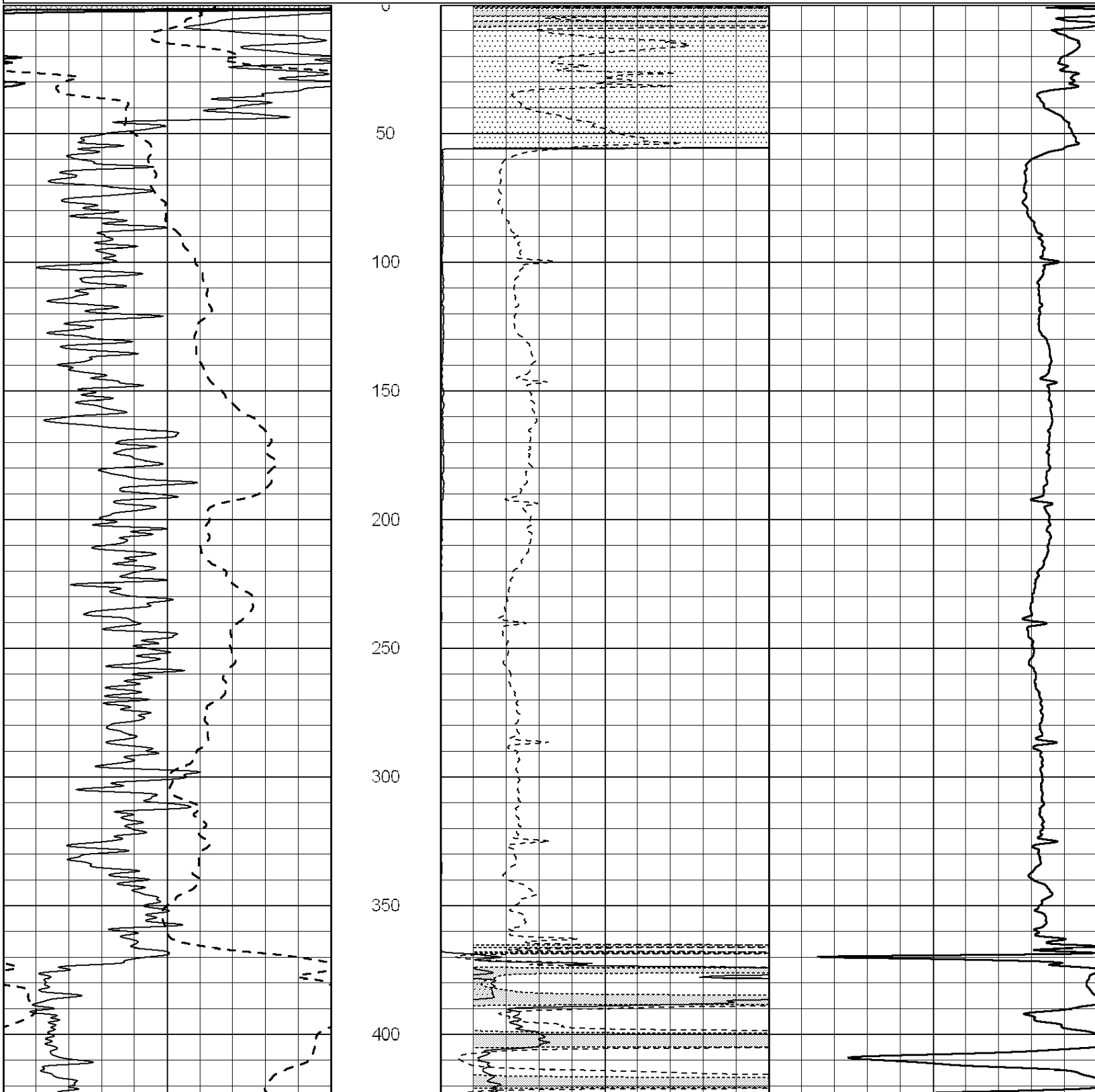


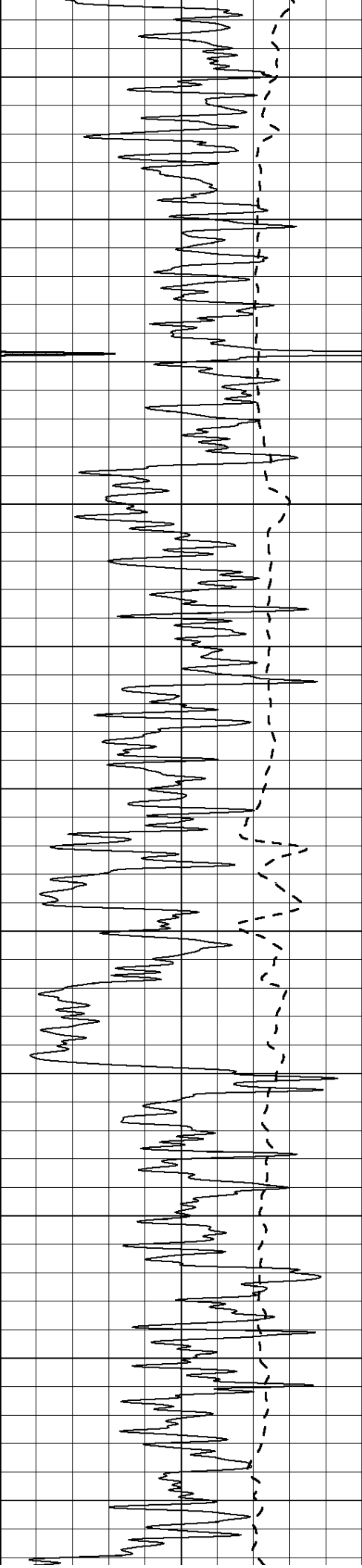
**COMPLETION
& PRODUCTION**

MAIN SECTION

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 Dataset Pathname: pass3.1.1
 Presentation Format: dil2
 Dataset Creation: Mon Apr 01 21:05:27 2013 by Calc Open-Cased 090629
 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





450

500

550

600

650

700

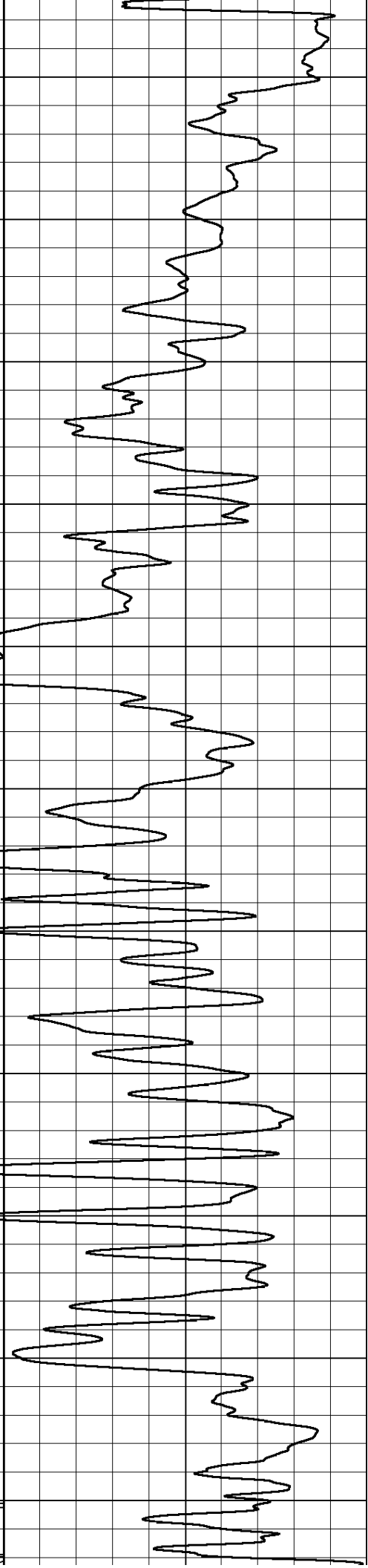
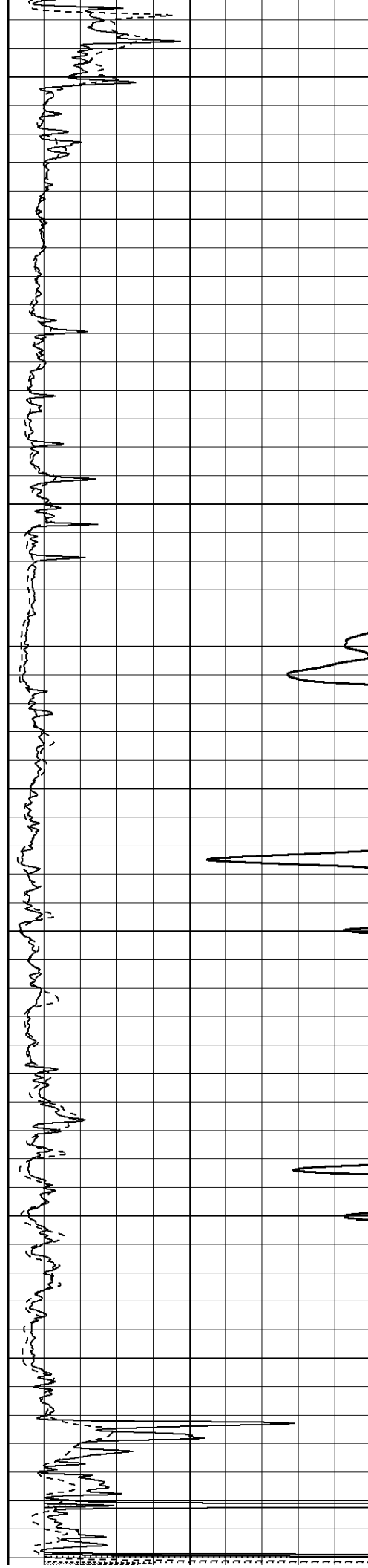
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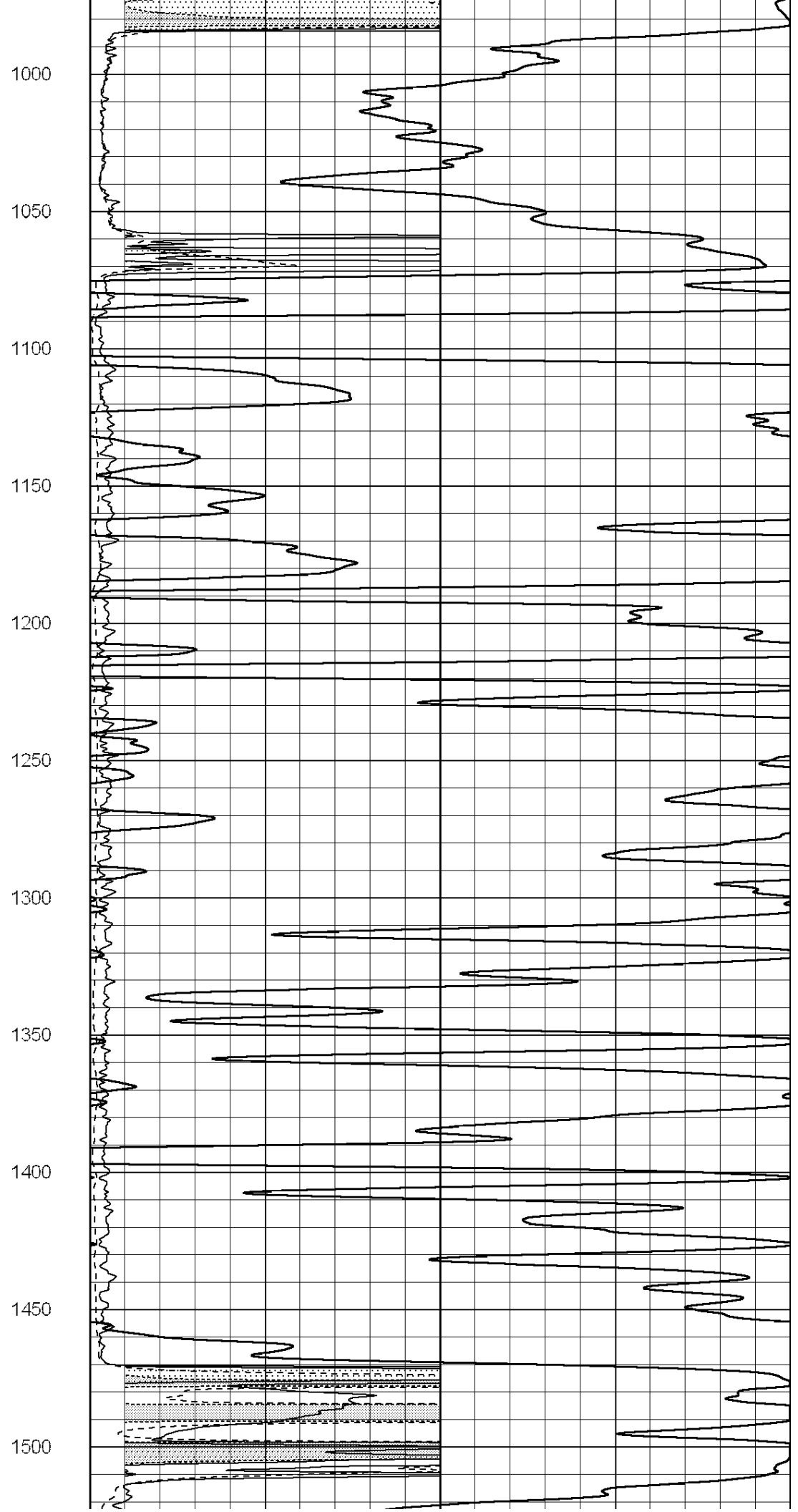
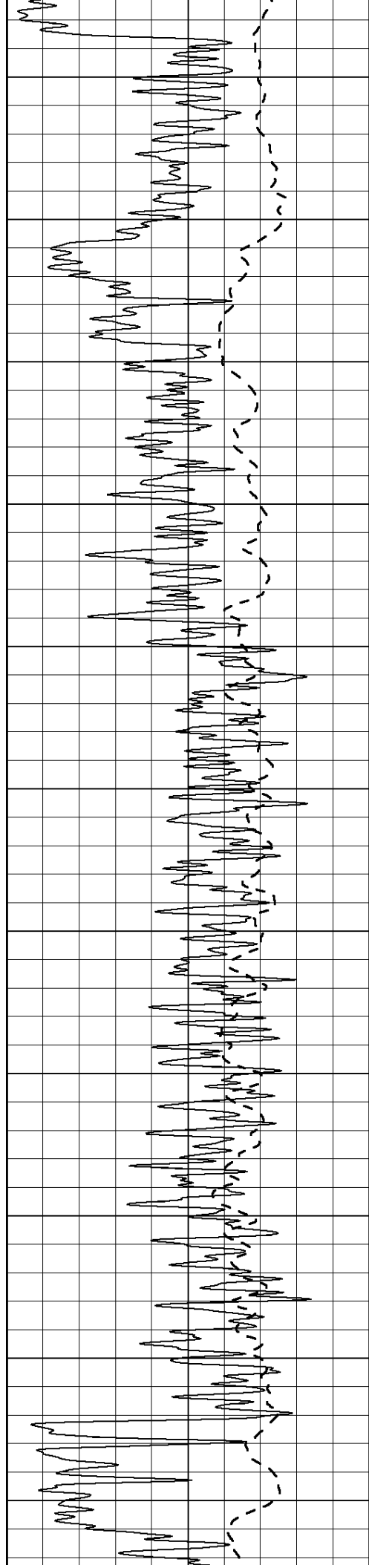
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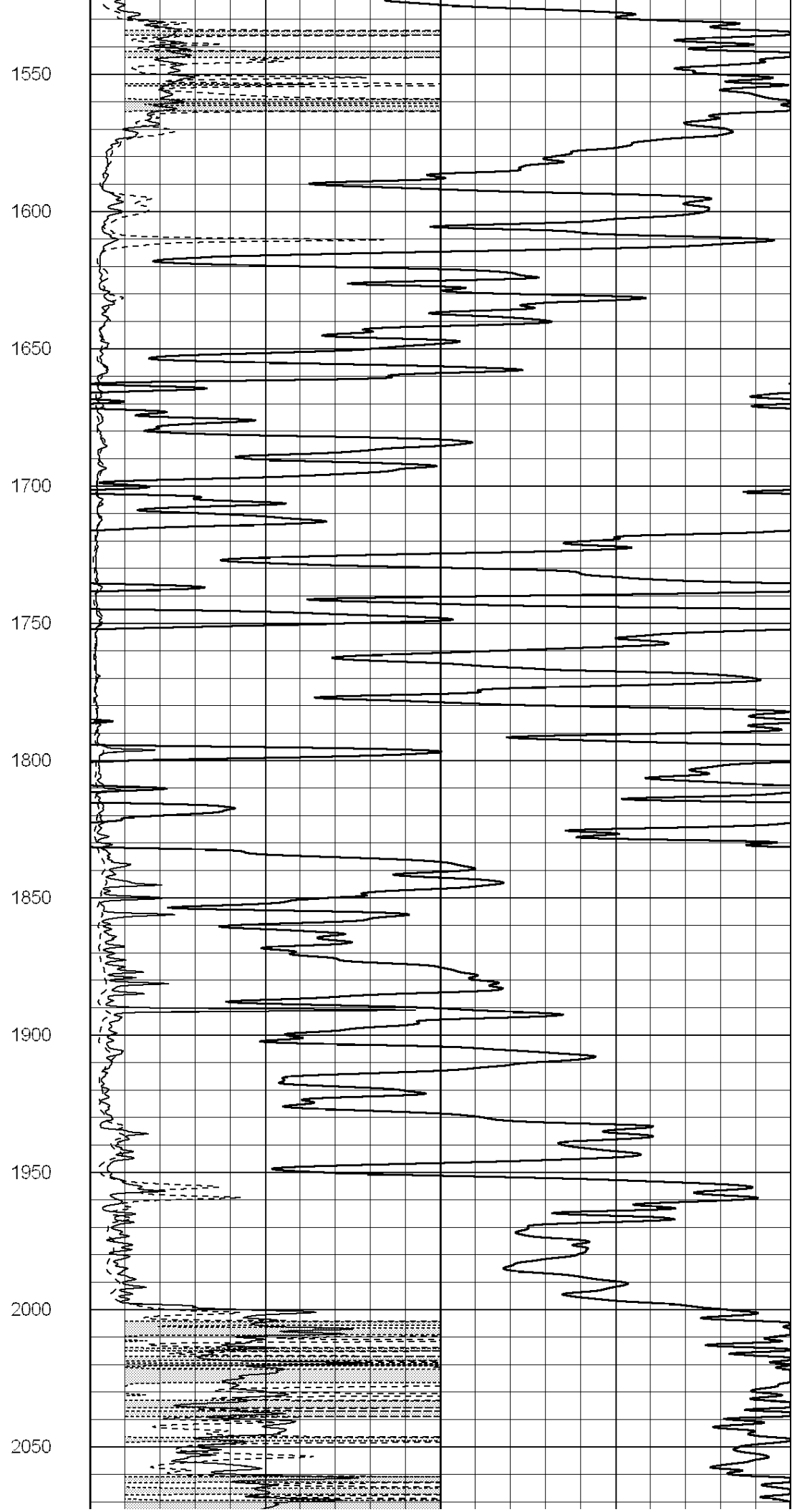
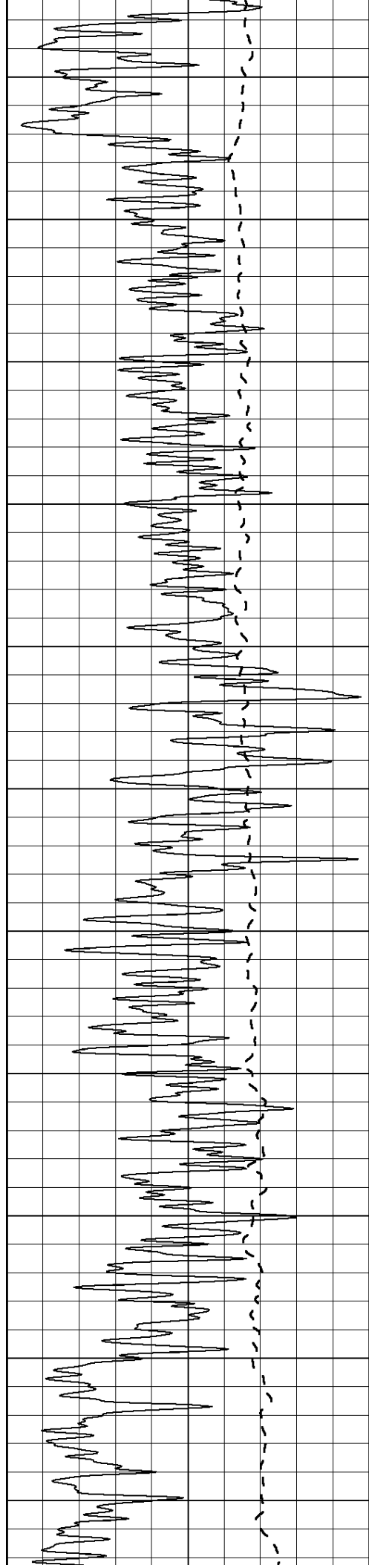
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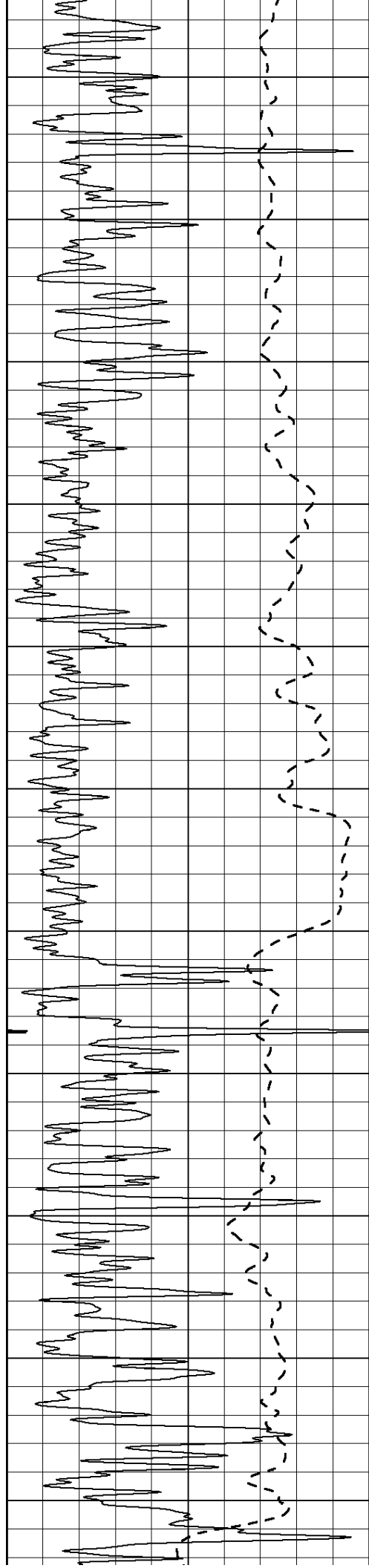
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2300

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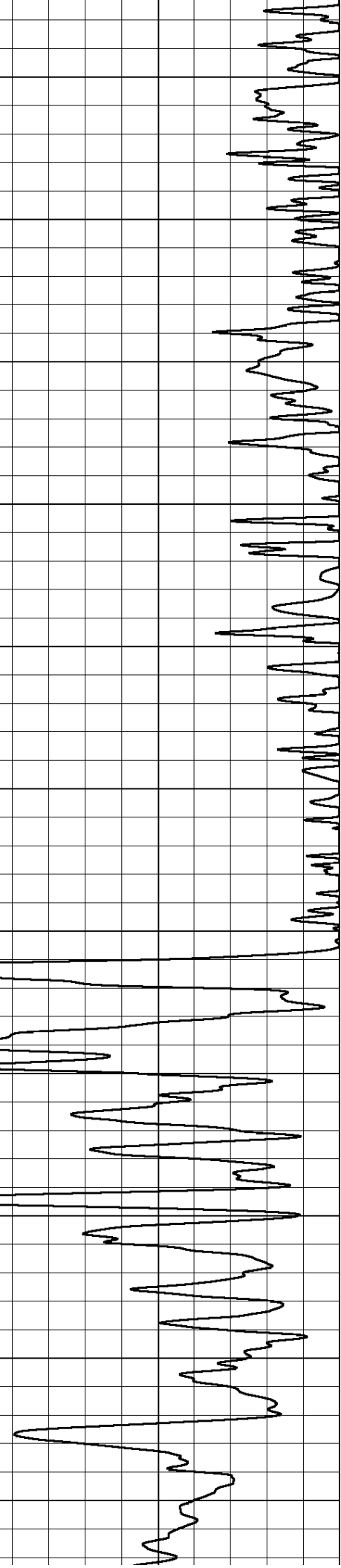
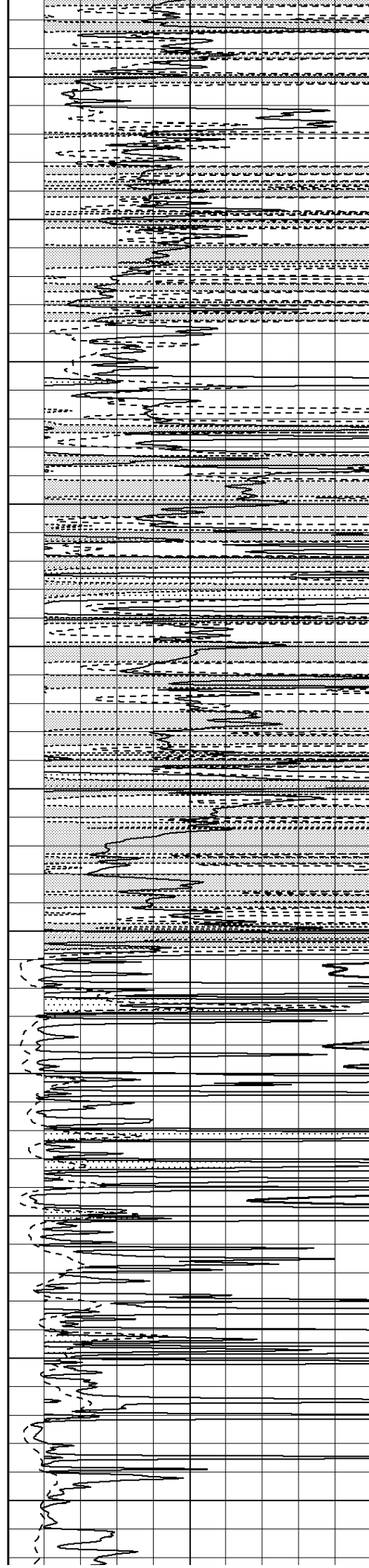
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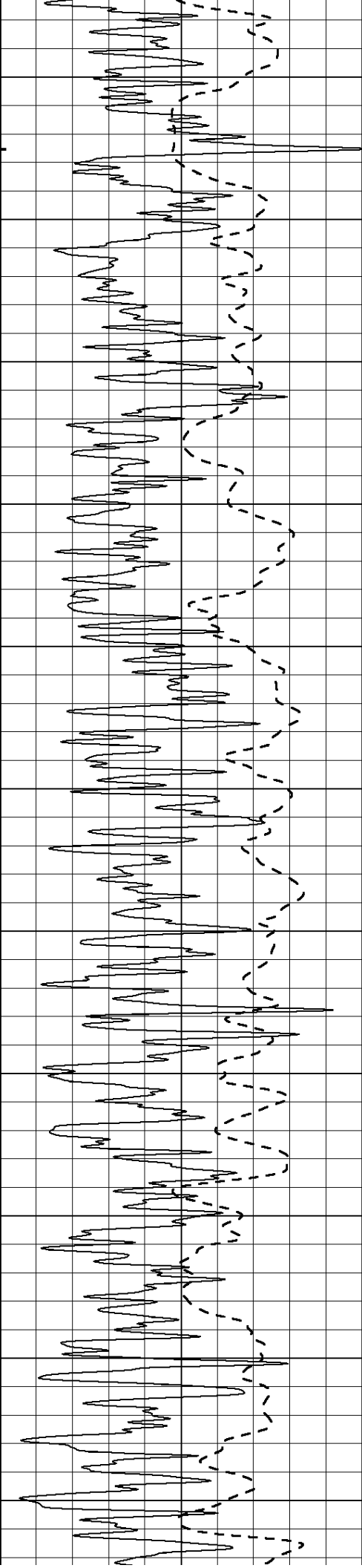
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2600





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2700

2750

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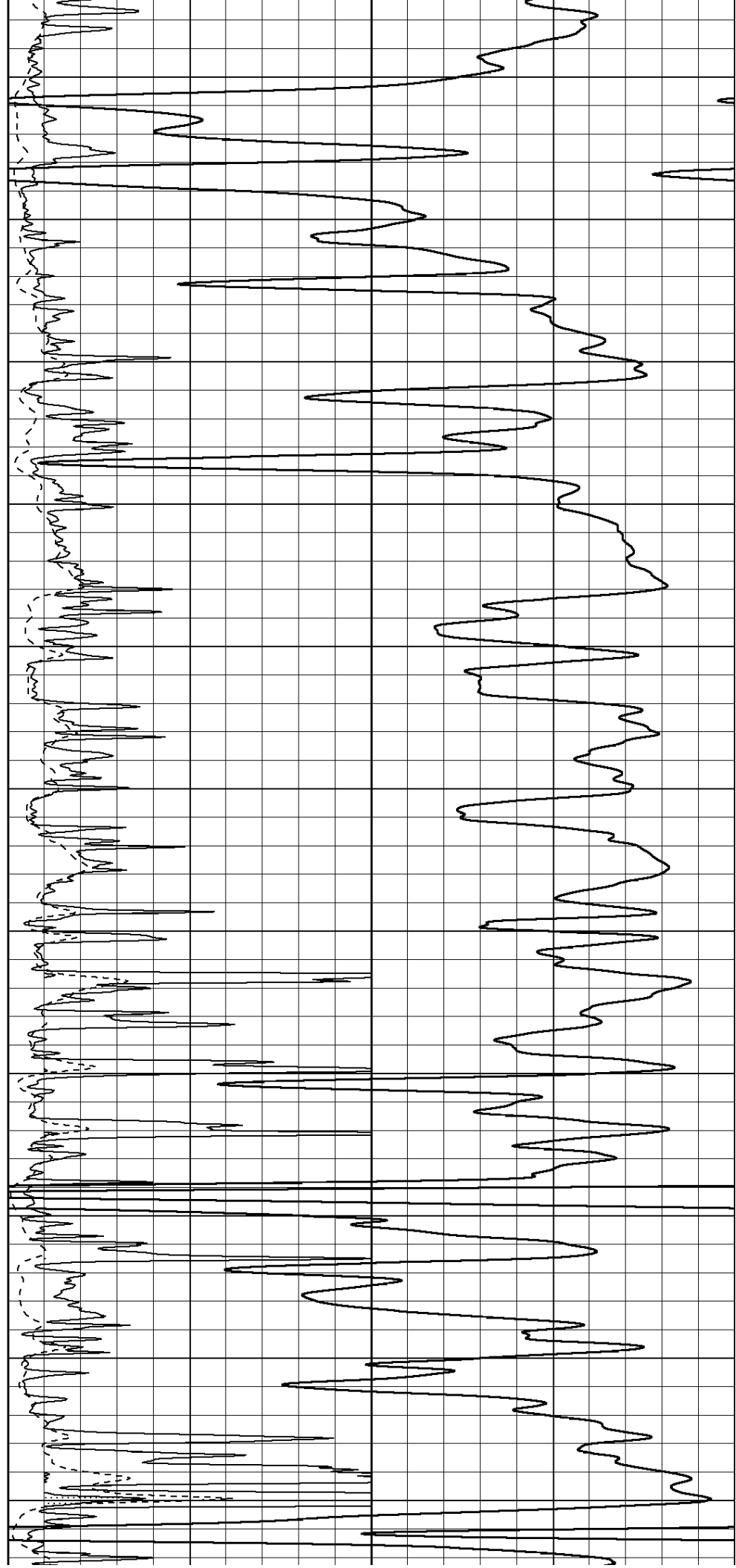
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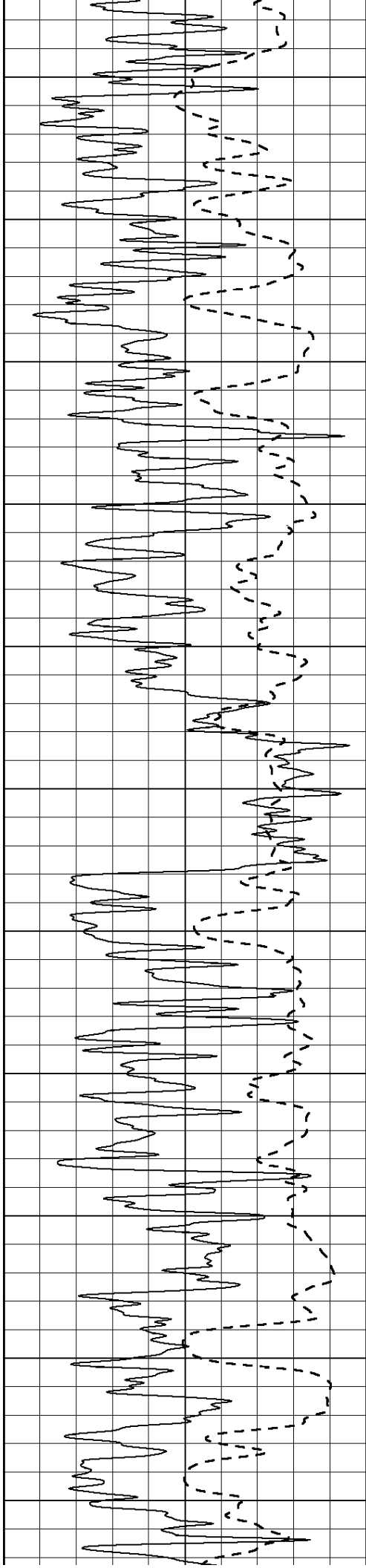
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3250

3300

3350

3400

3450

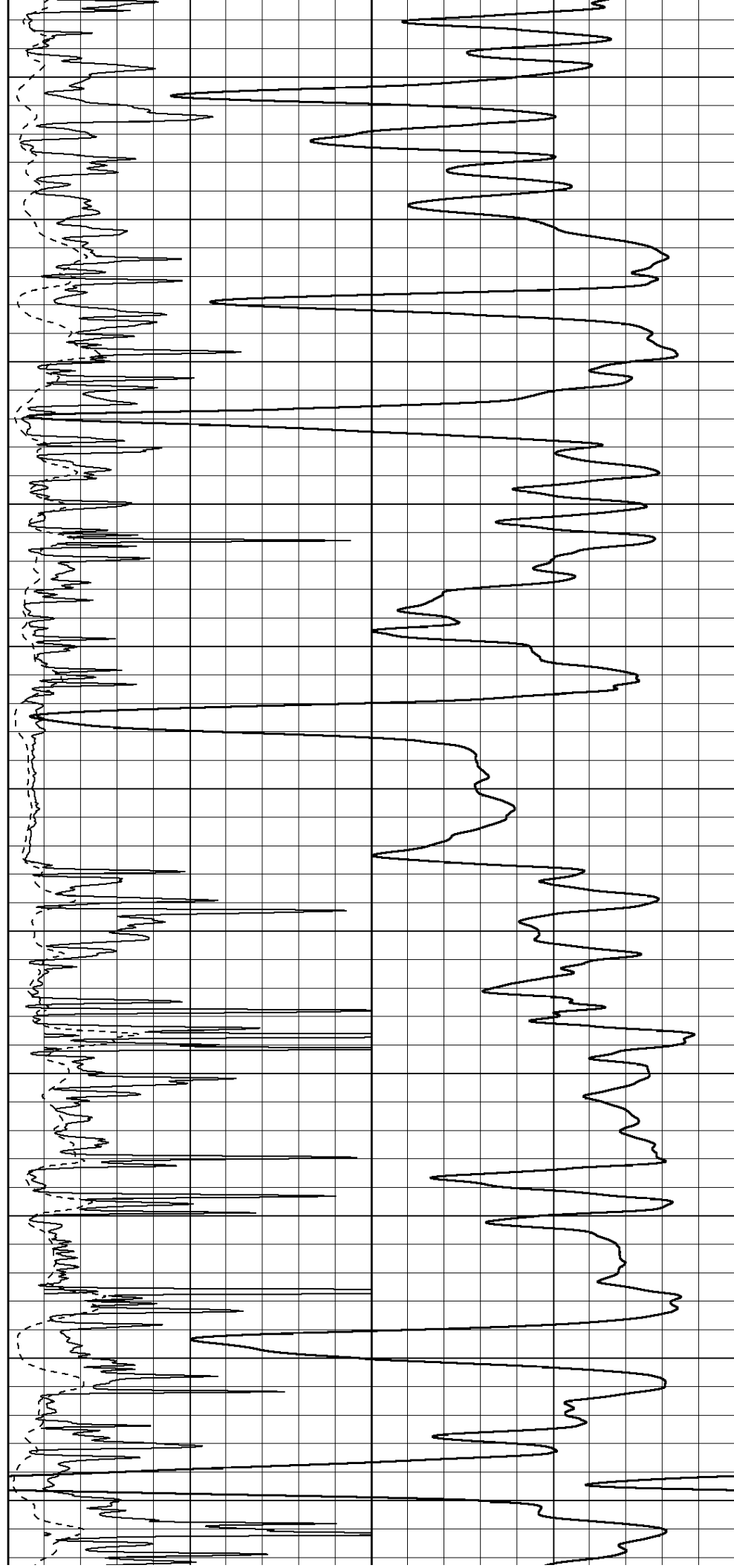
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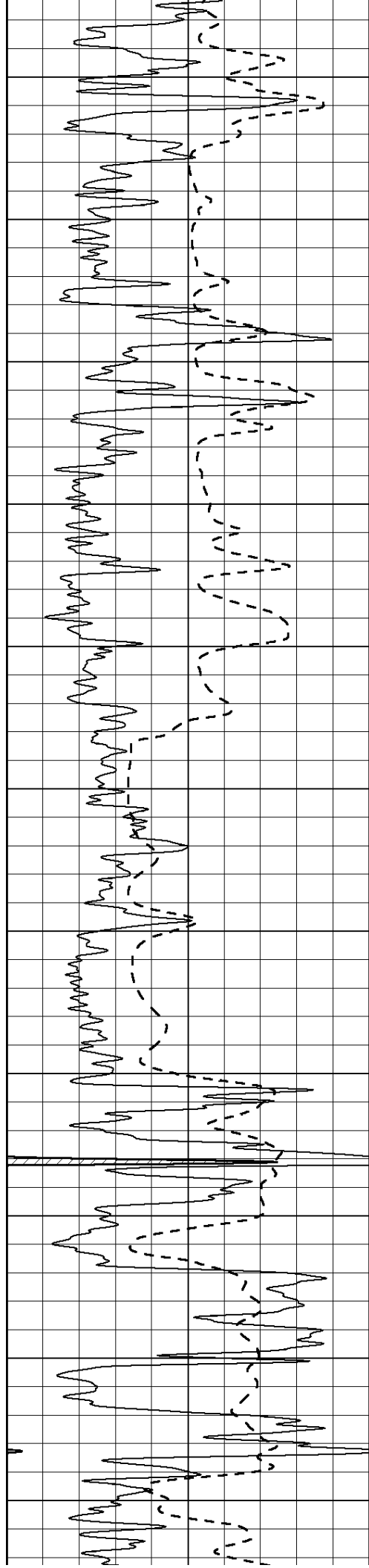
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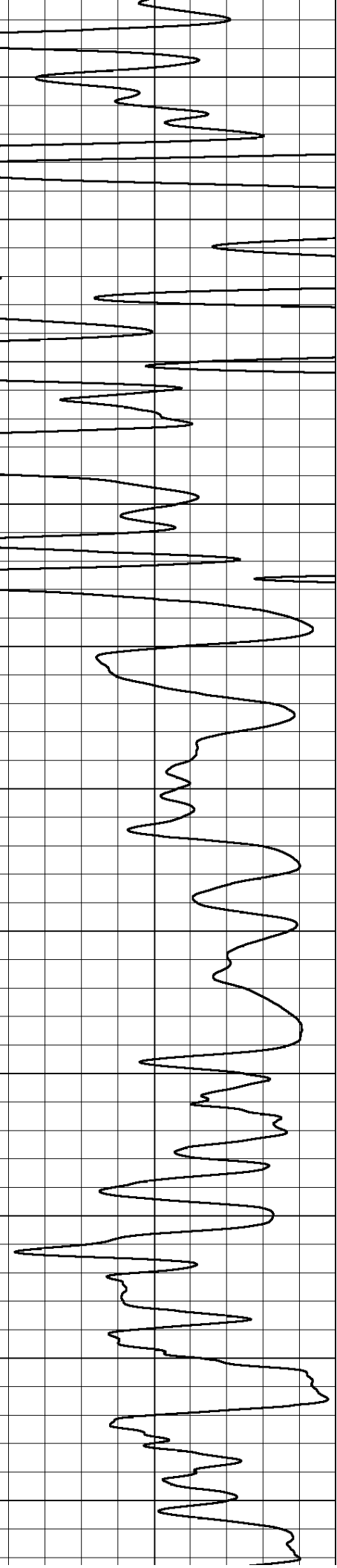
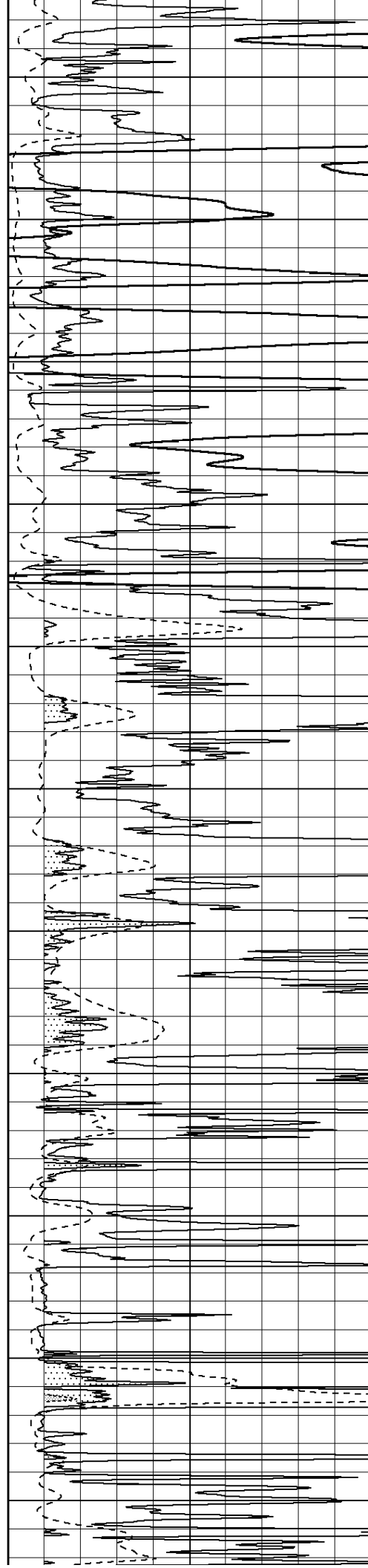
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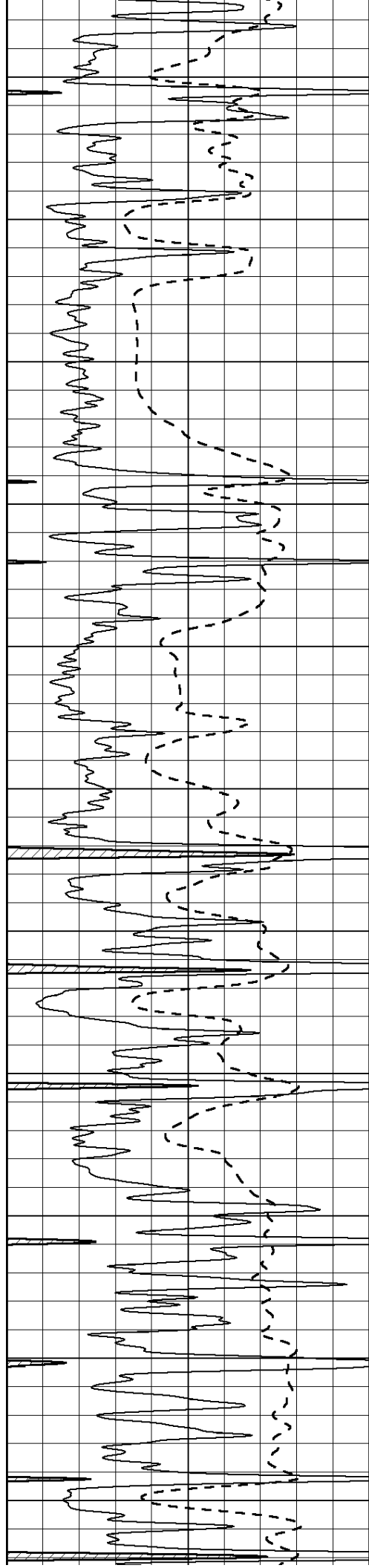
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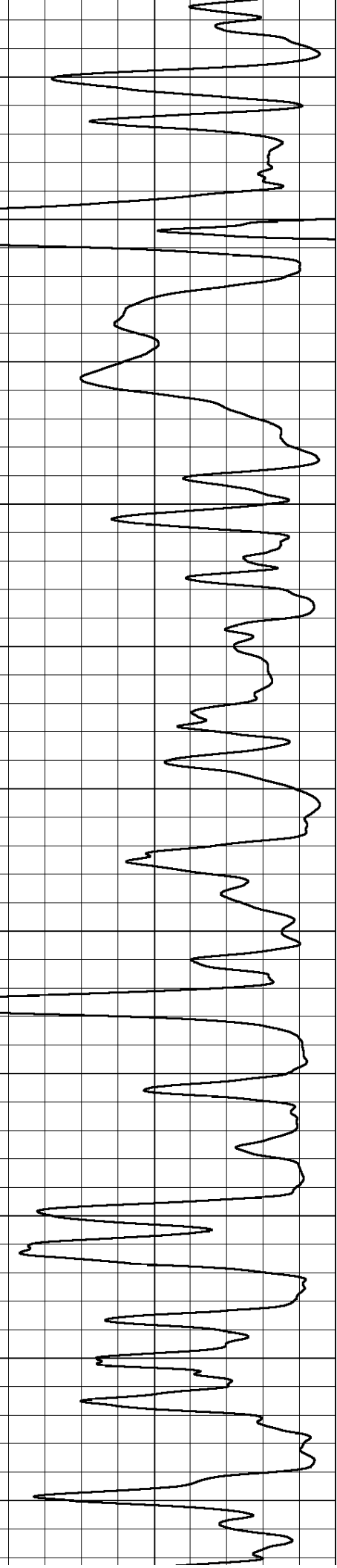
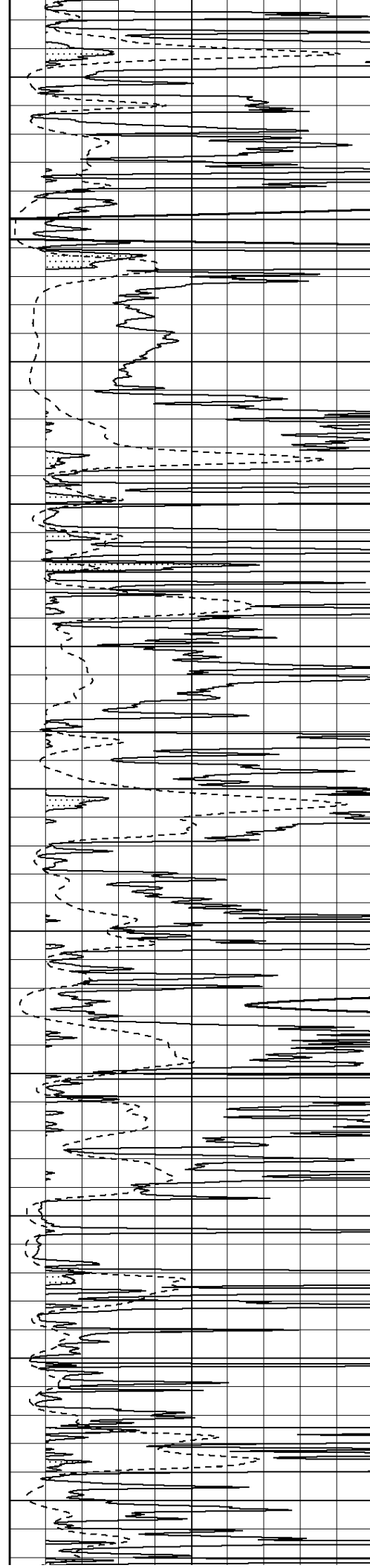


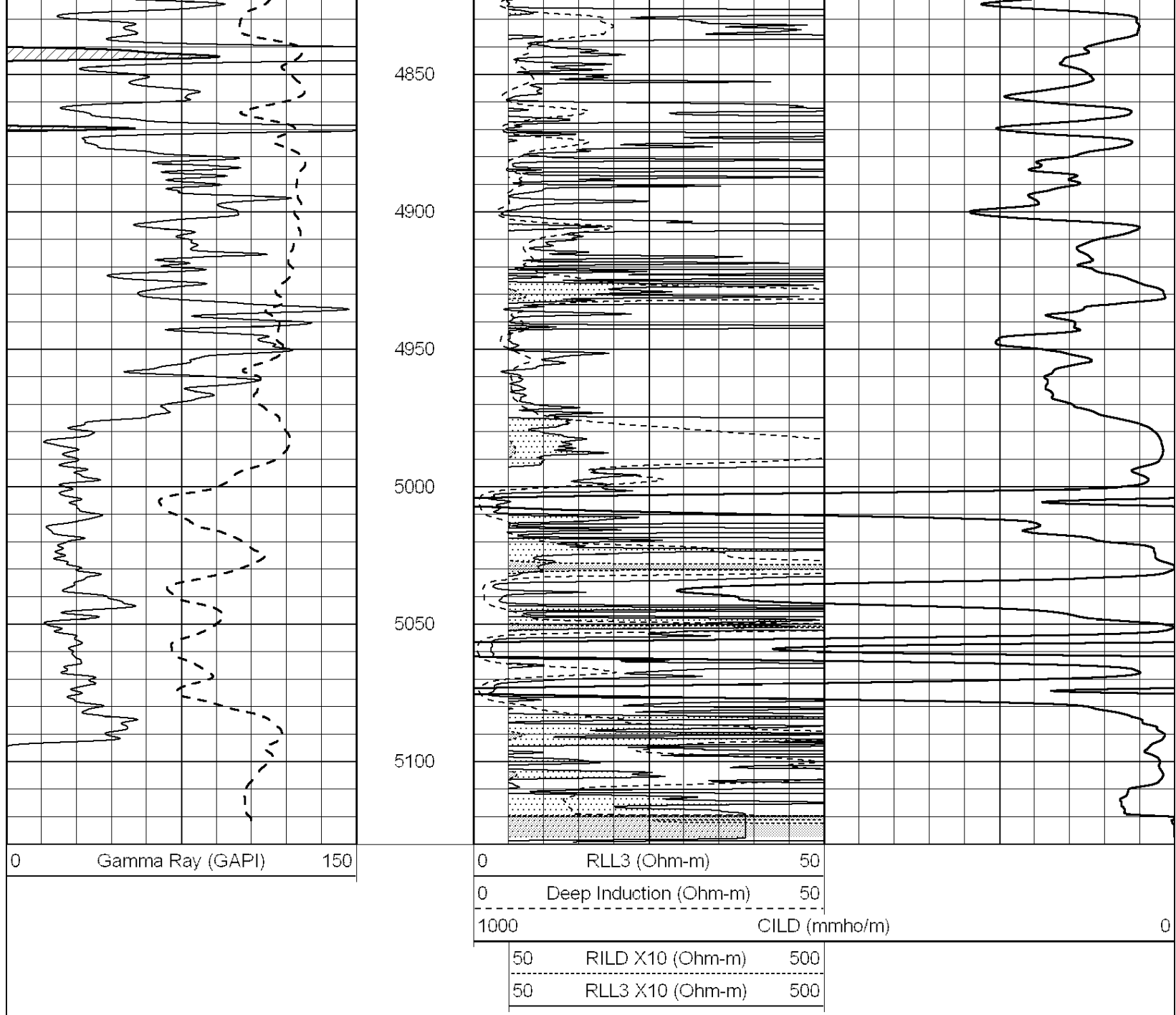
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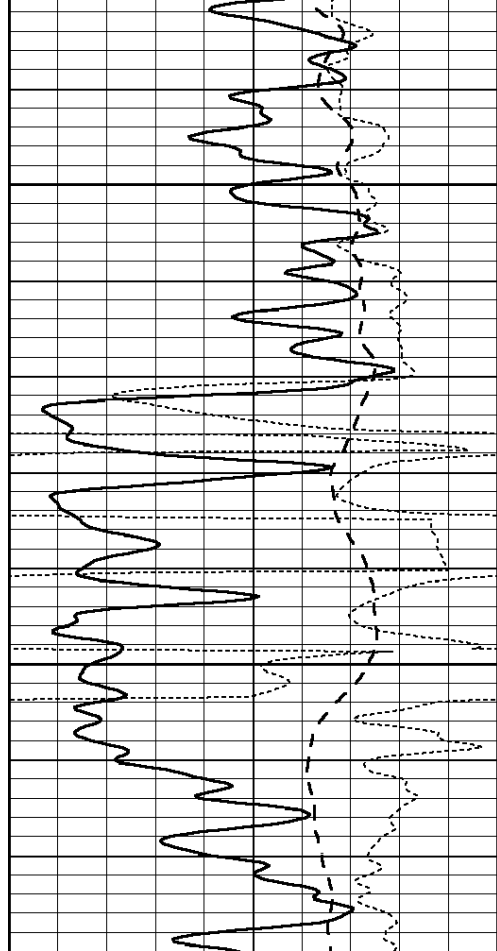


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MAIN SECTION

Database File: 010976dildn.db
 Dataset Pathname: pass3.1.1
 Presentation Format: dil
 Dataset Creation: Mon Apr 01 21:05:27 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

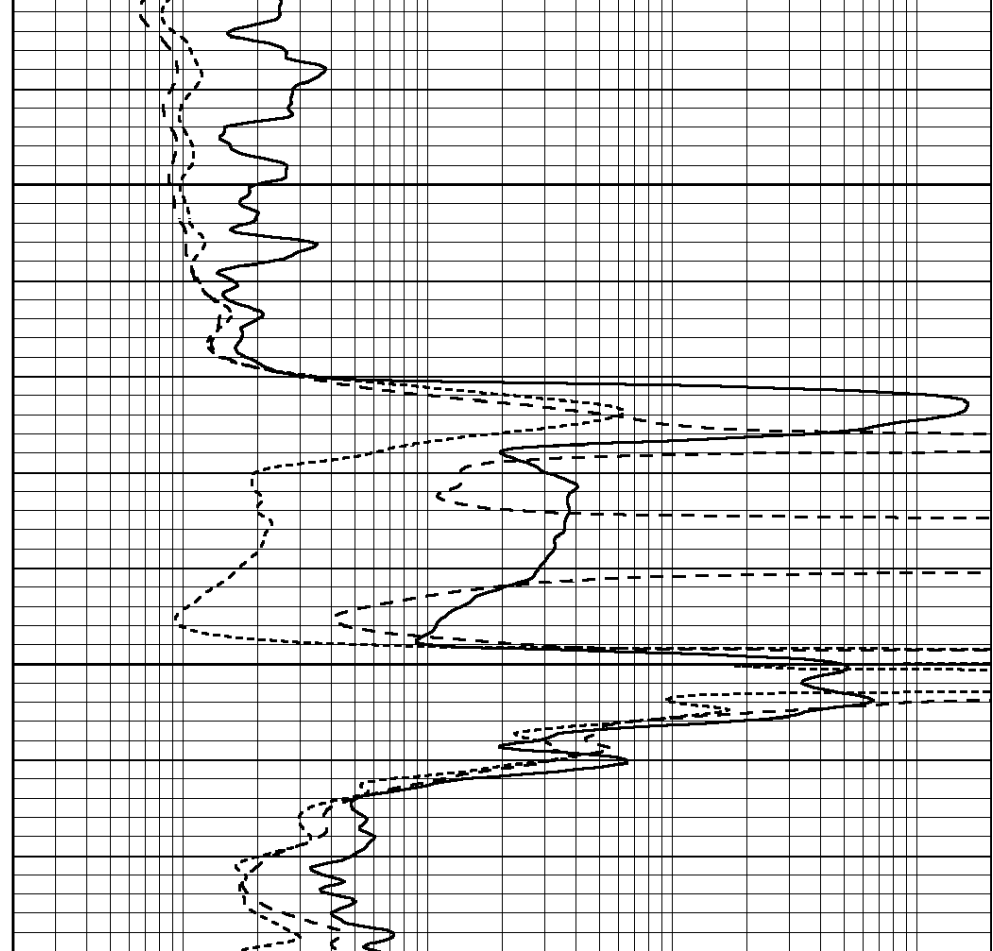
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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



1450

1500

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

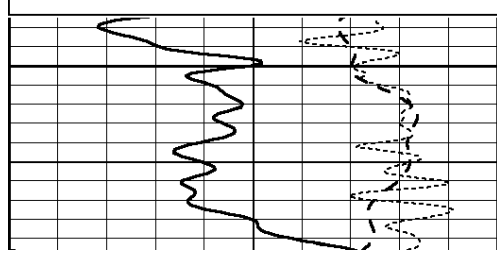


MAIN SECTION

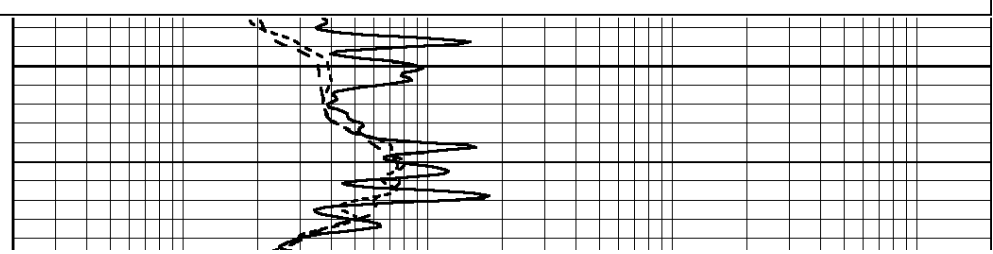
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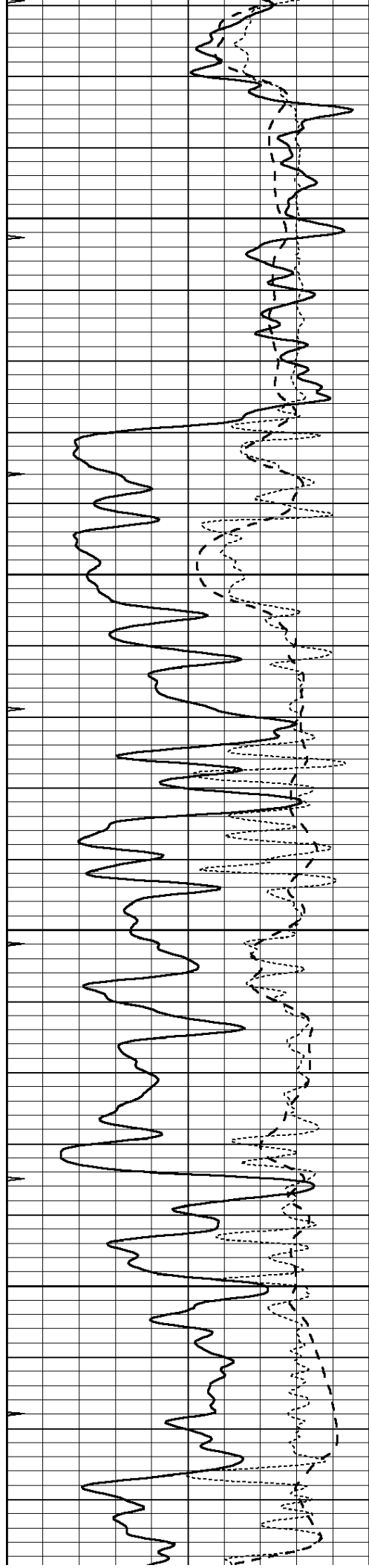
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



3400



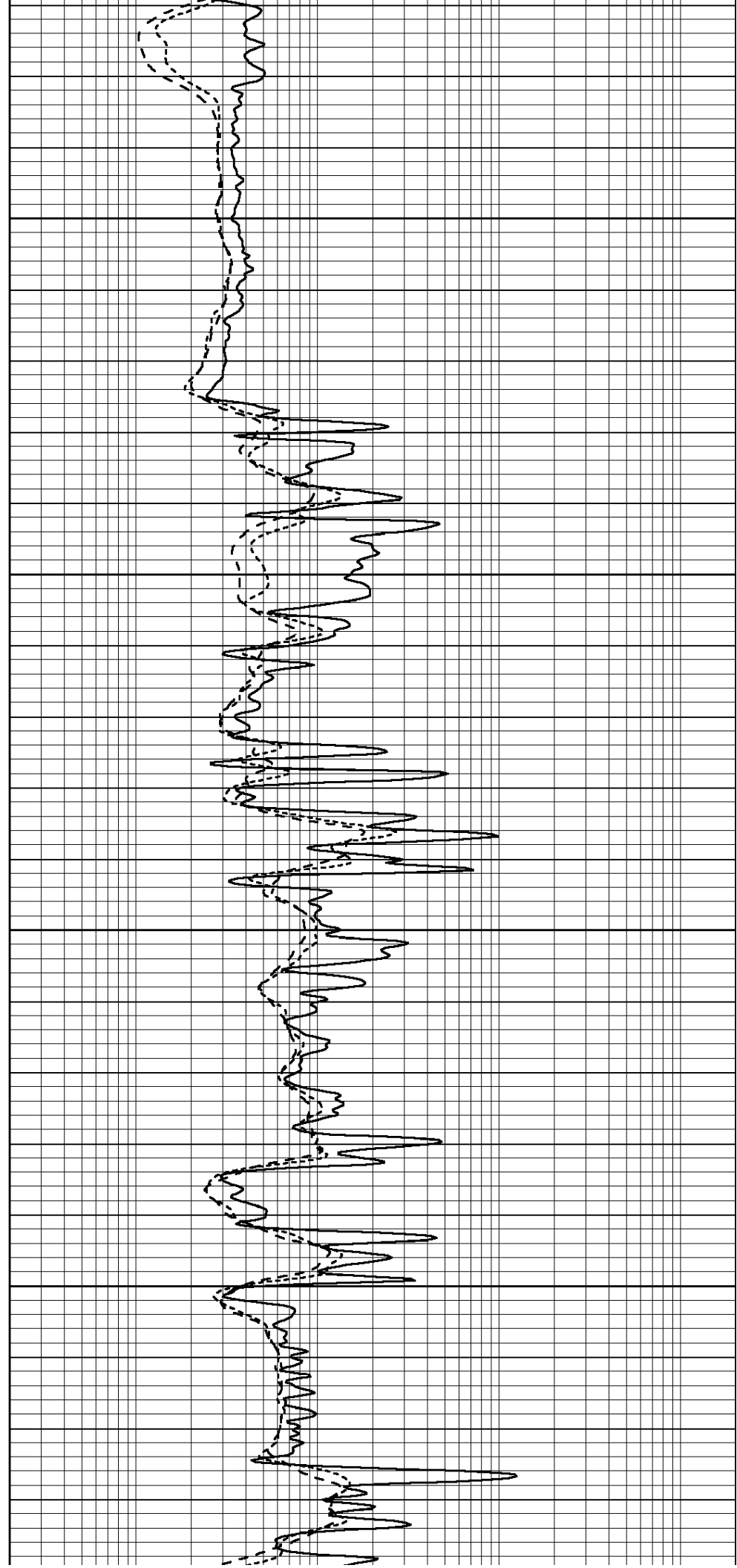


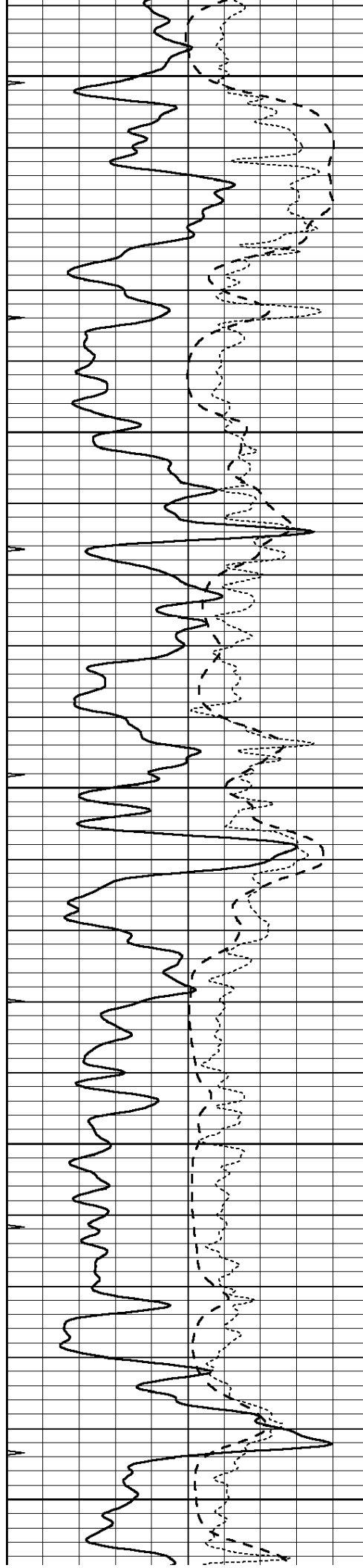
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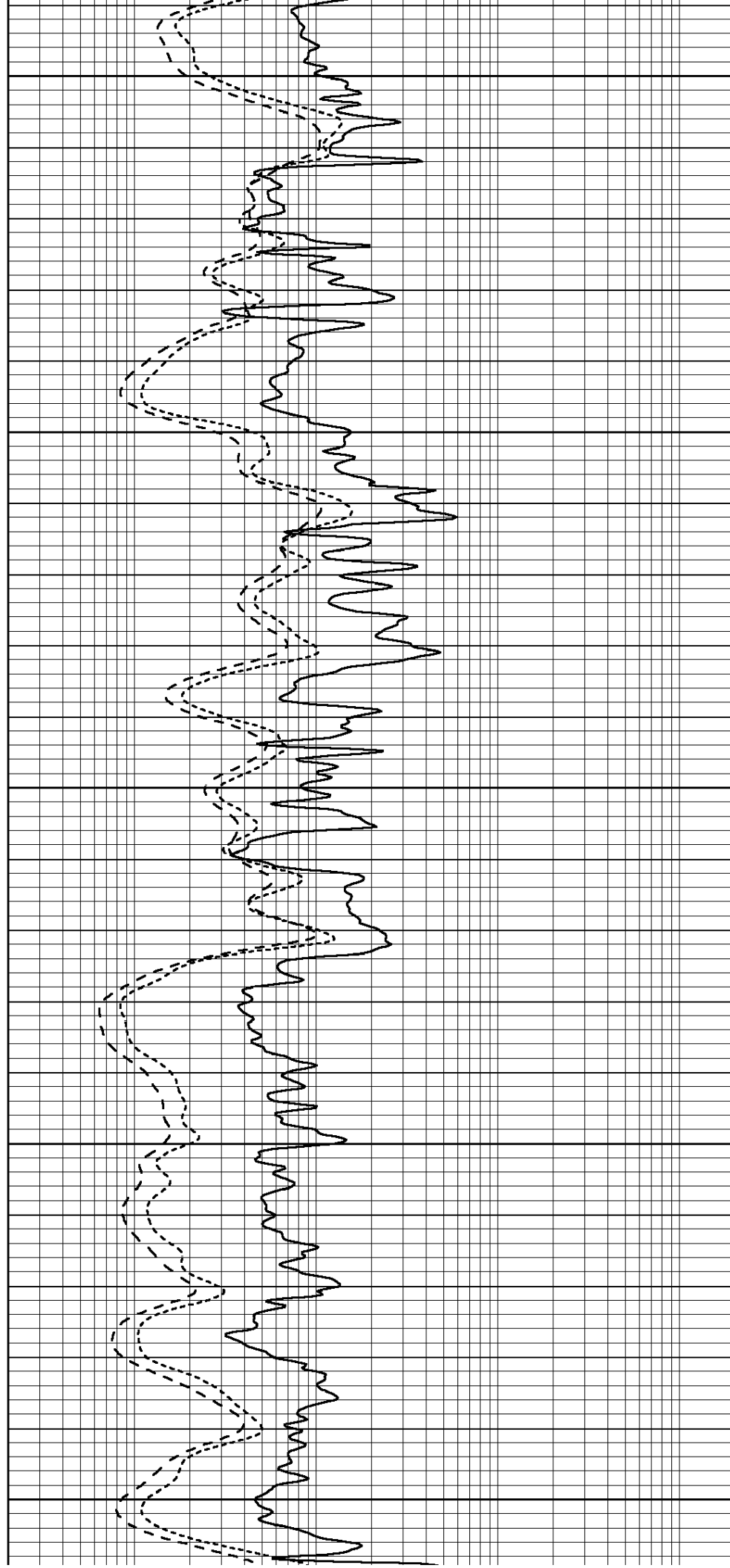
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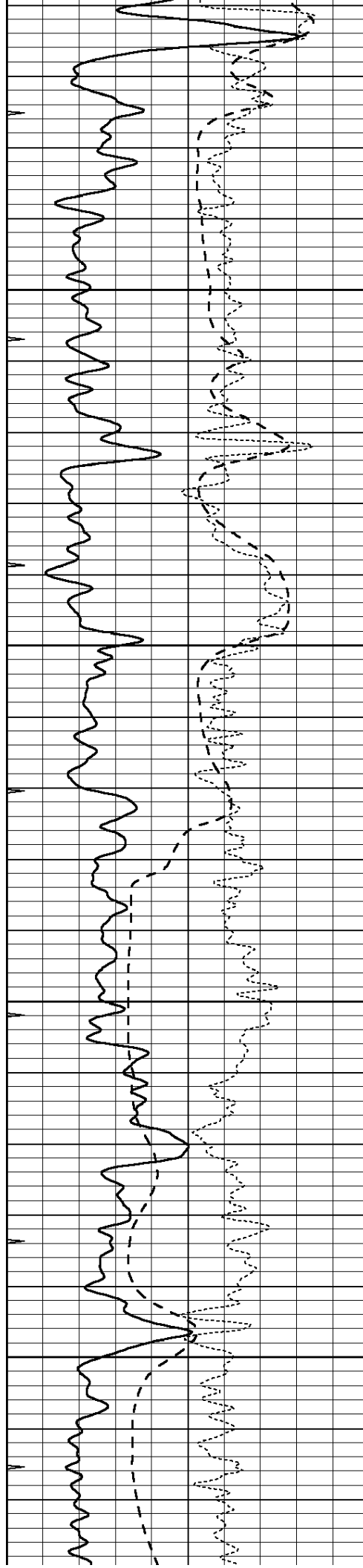
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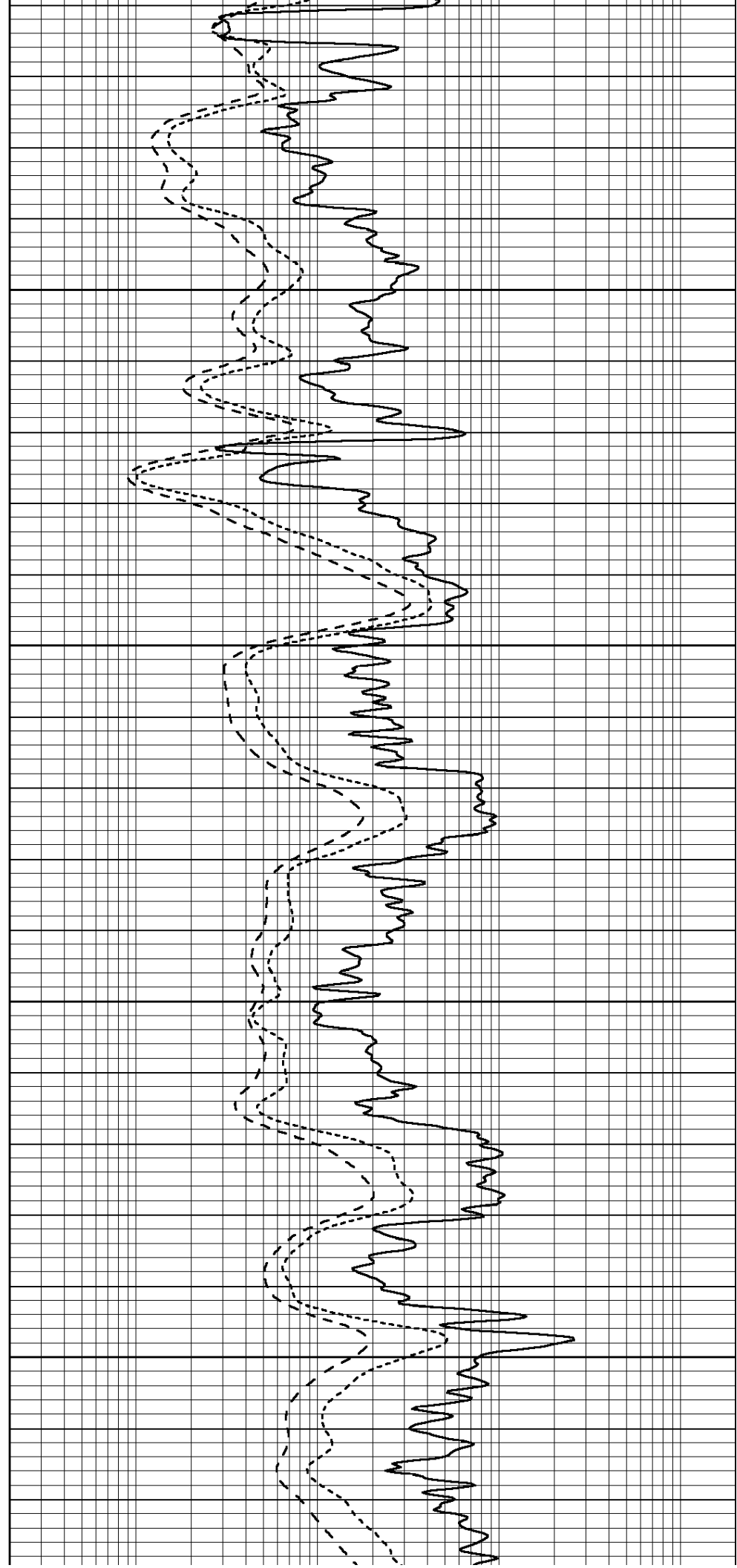


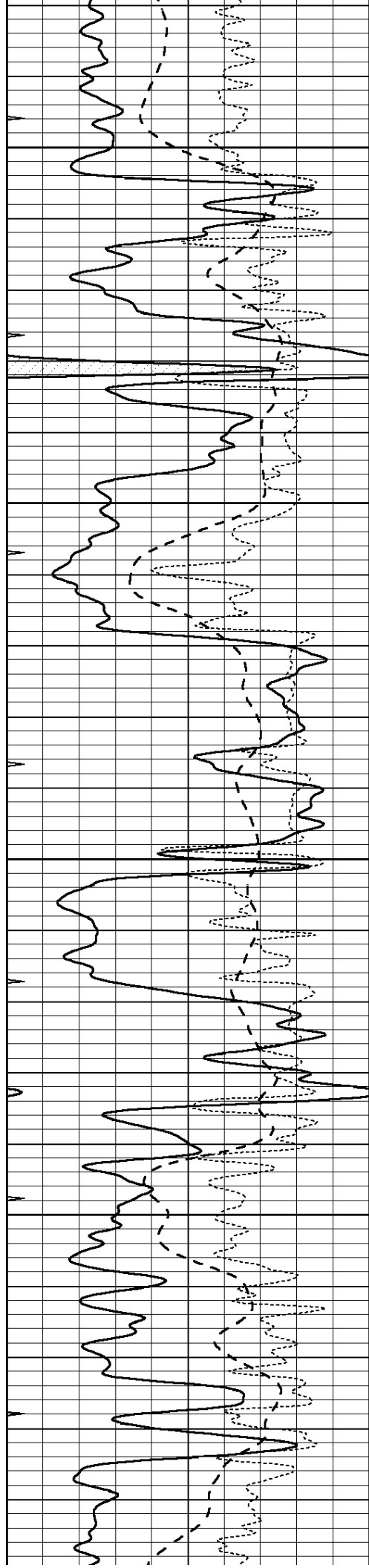
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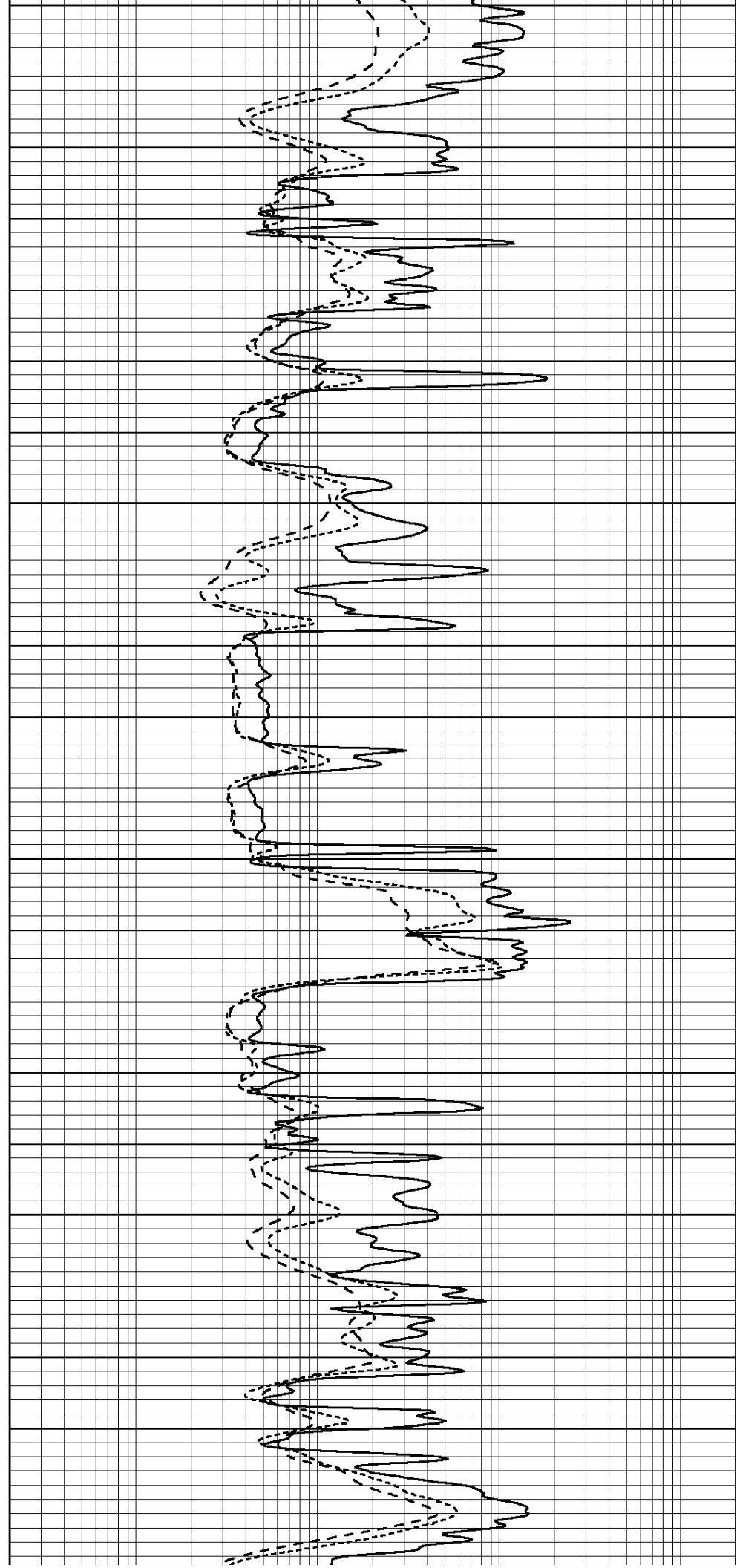


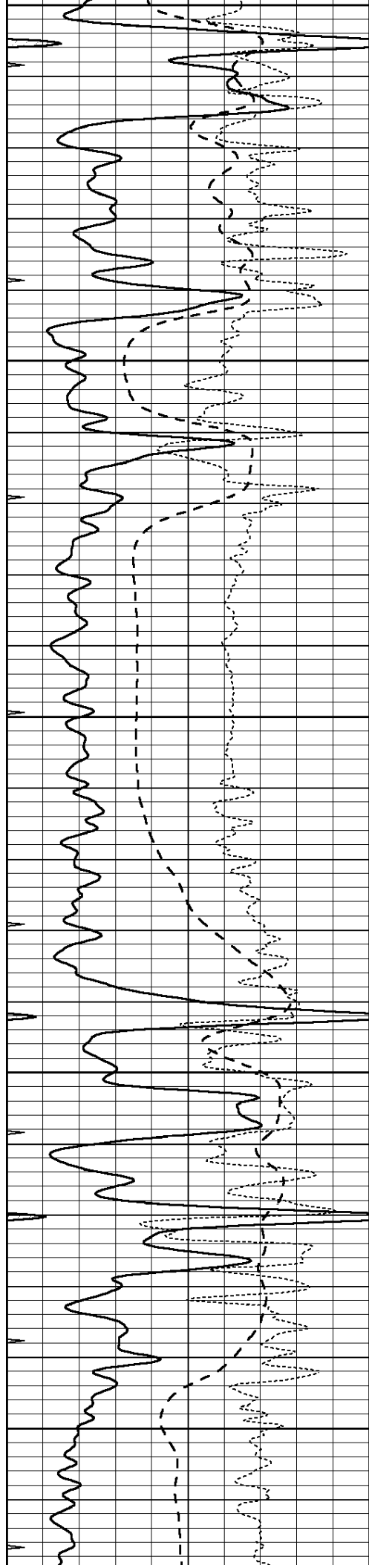
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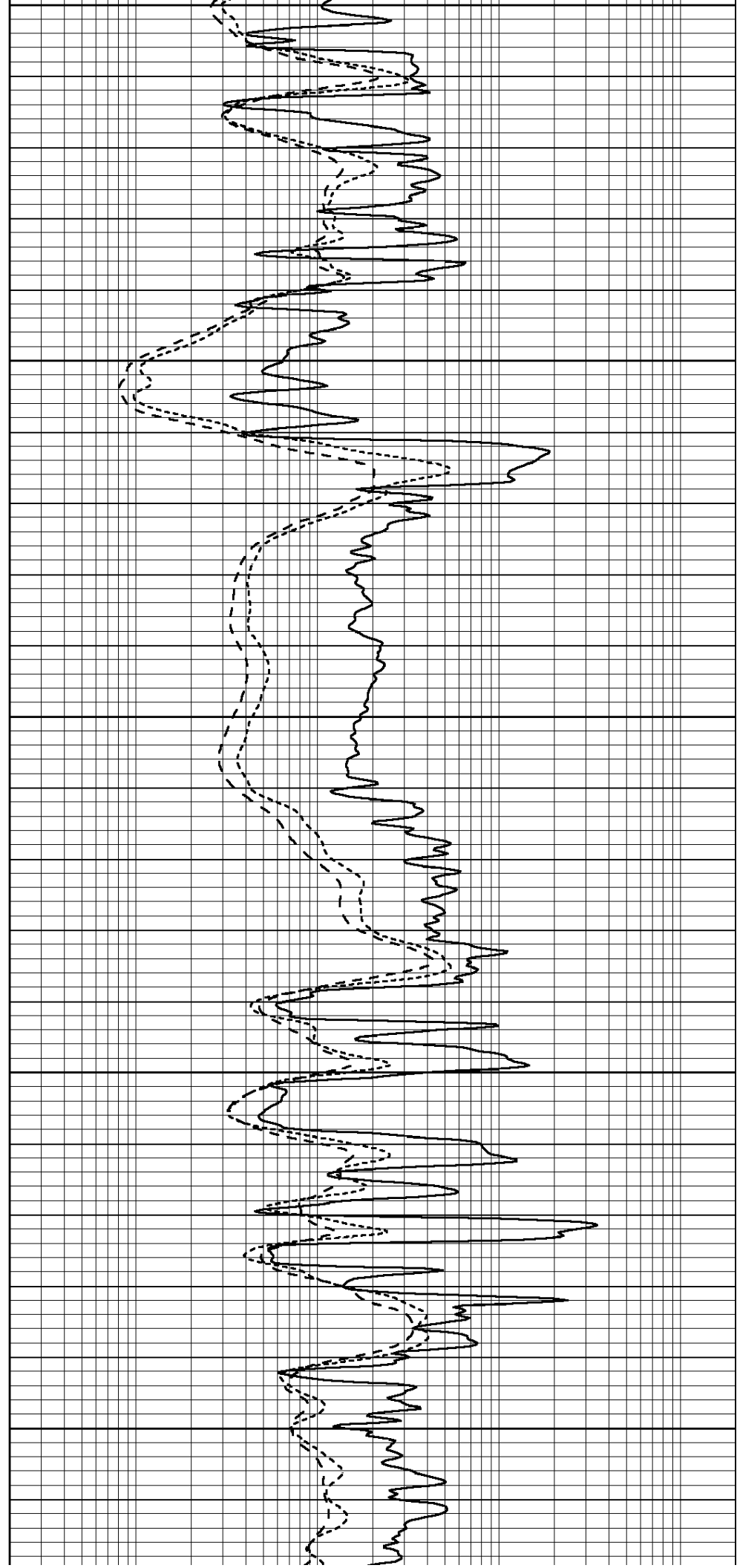
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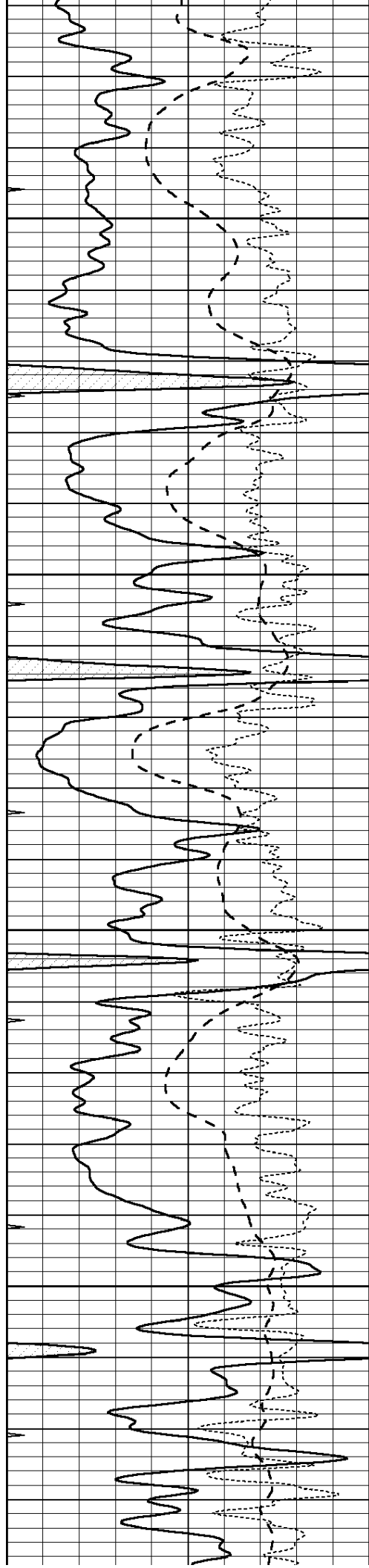
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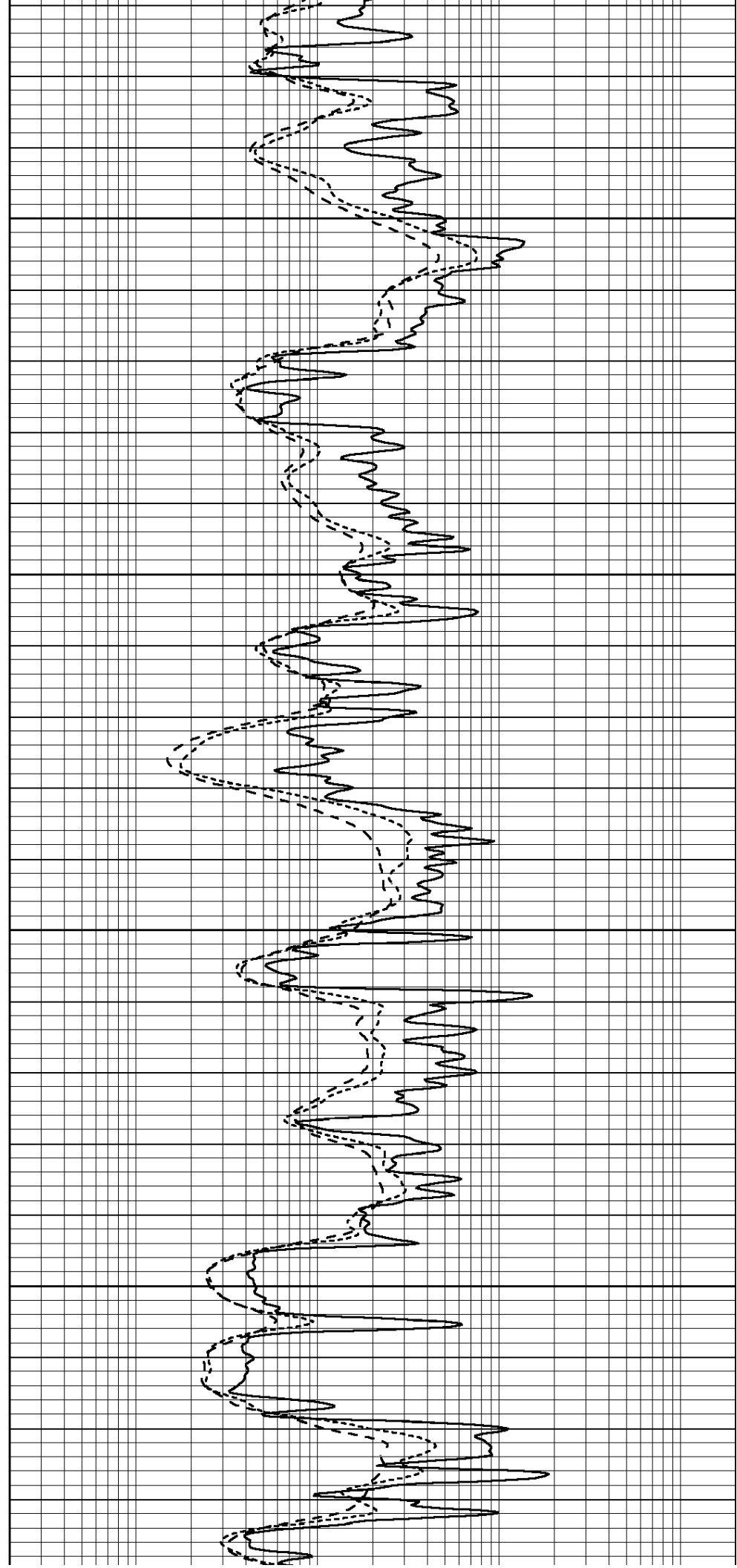


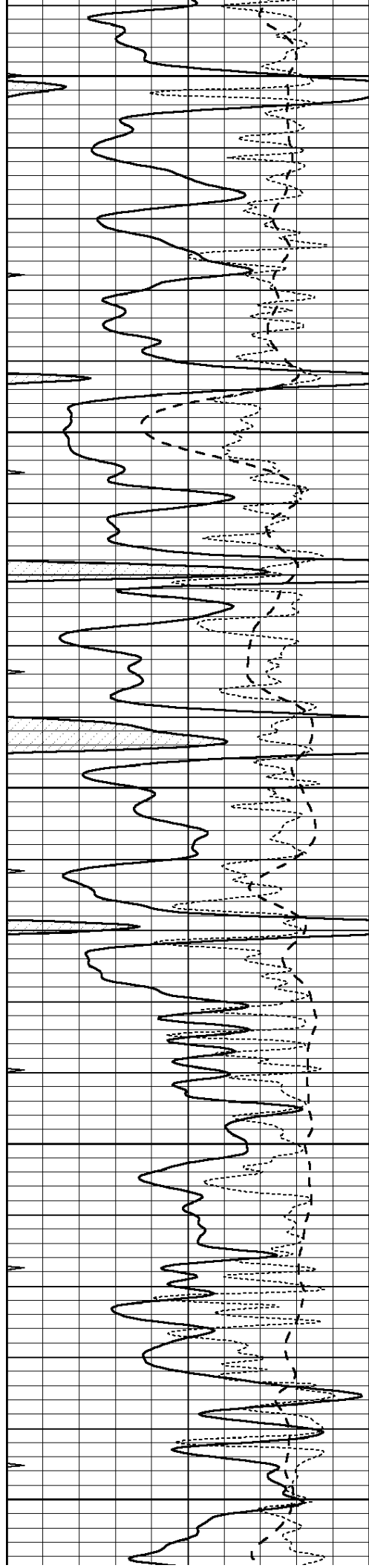
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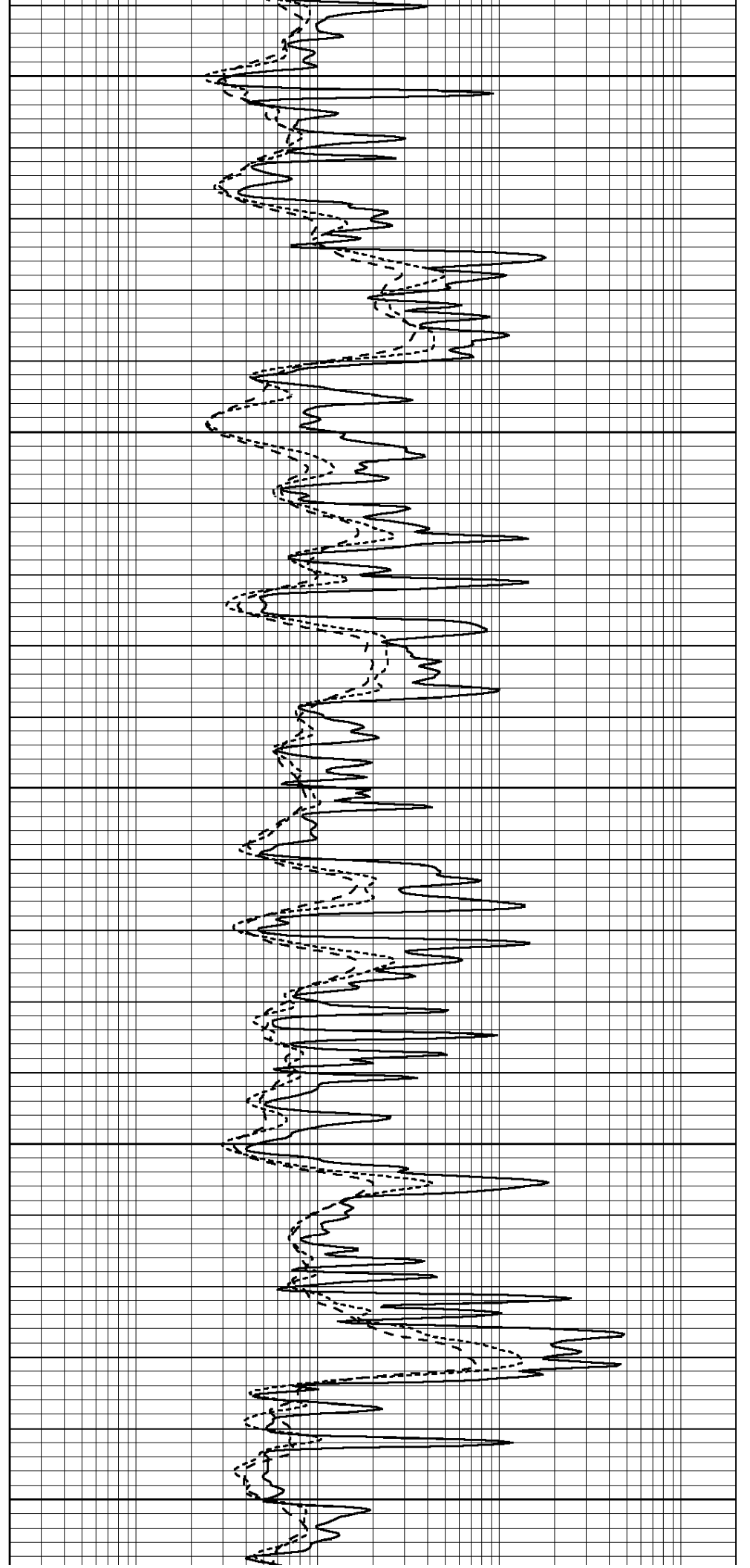
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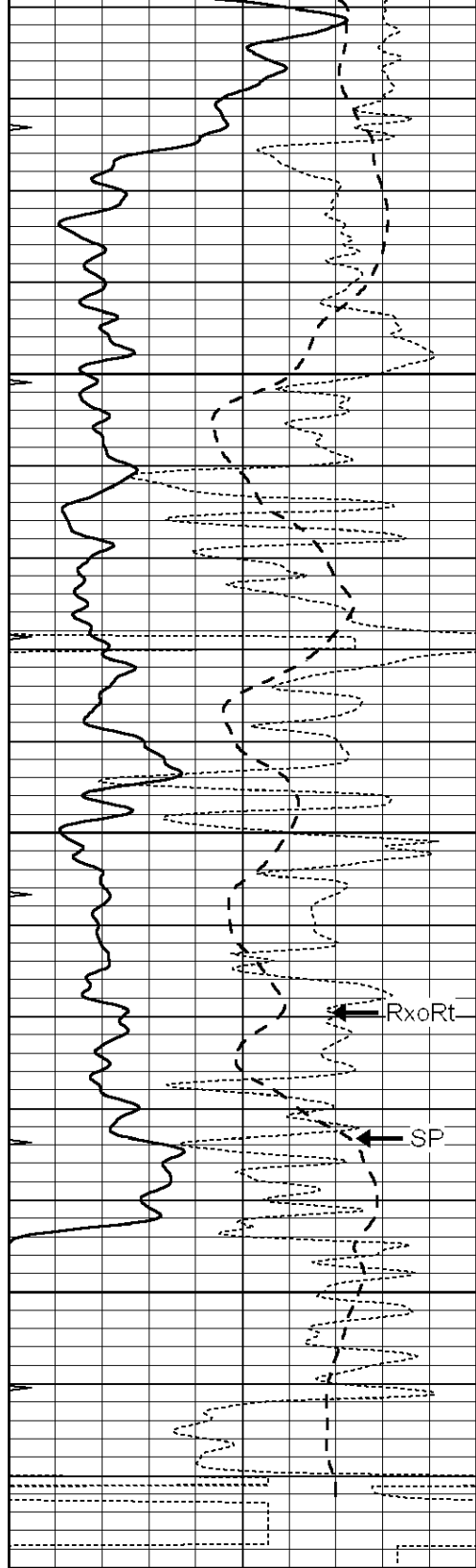
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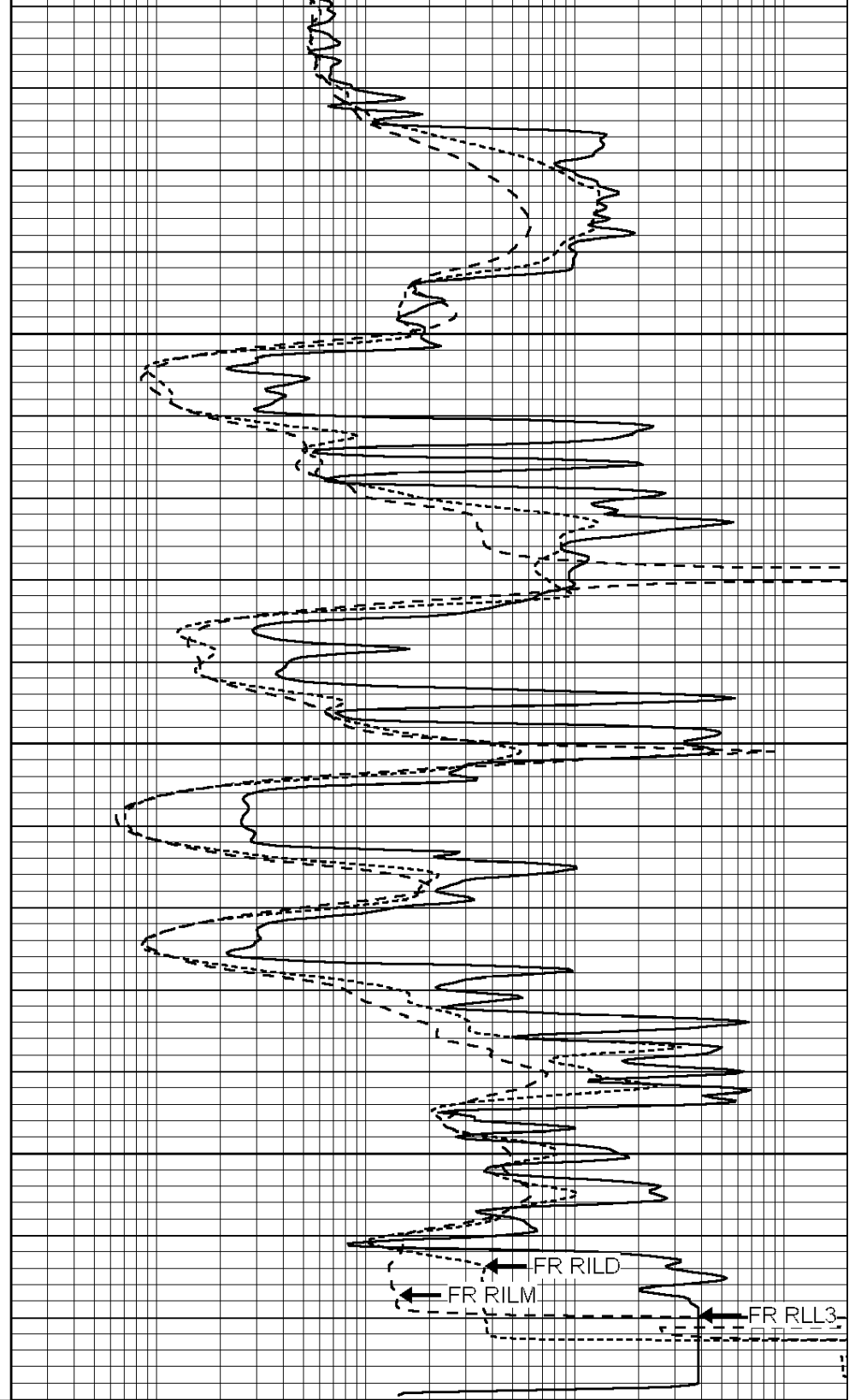
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

5000

5050

5100

LTD 5121



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



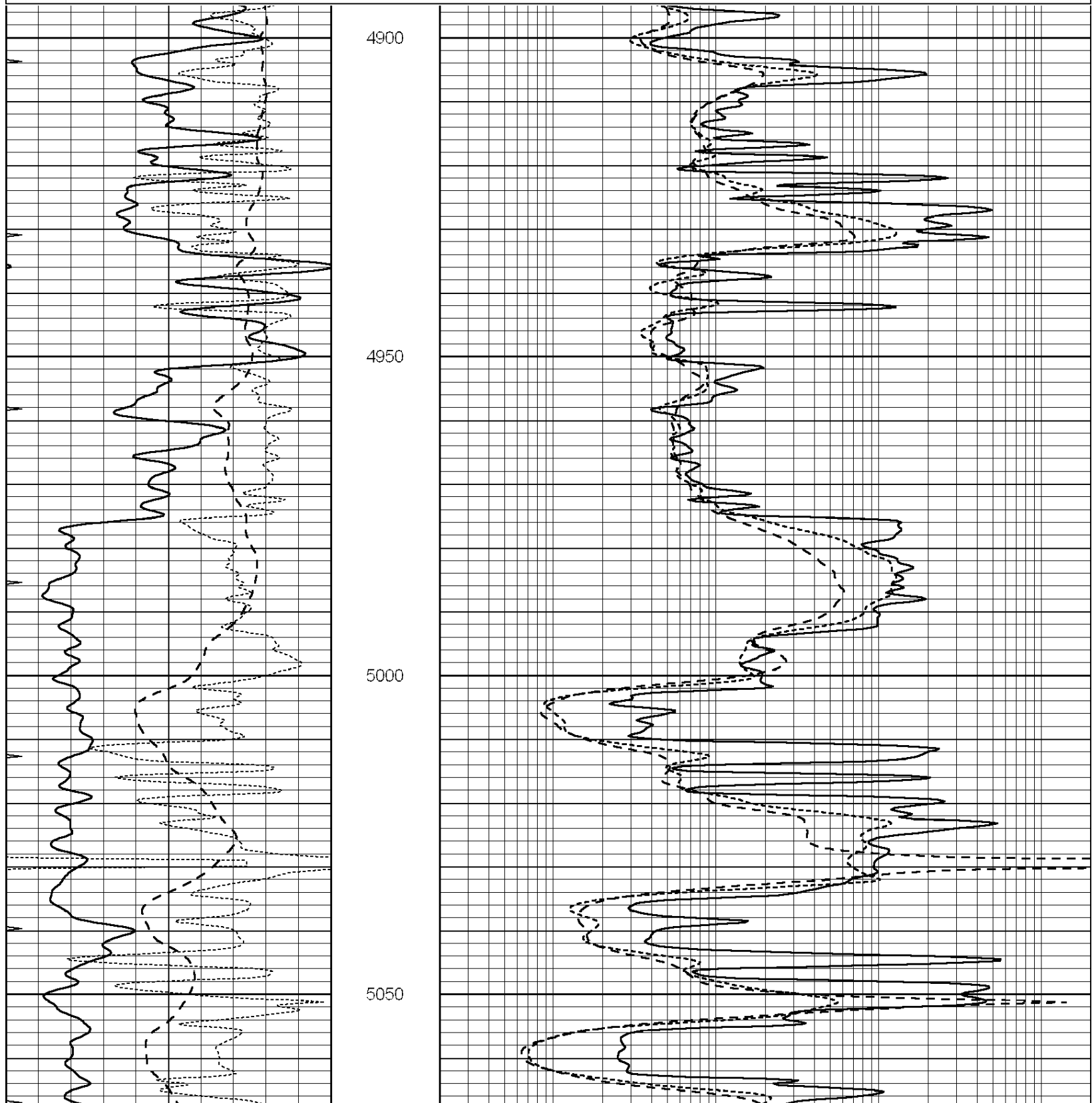
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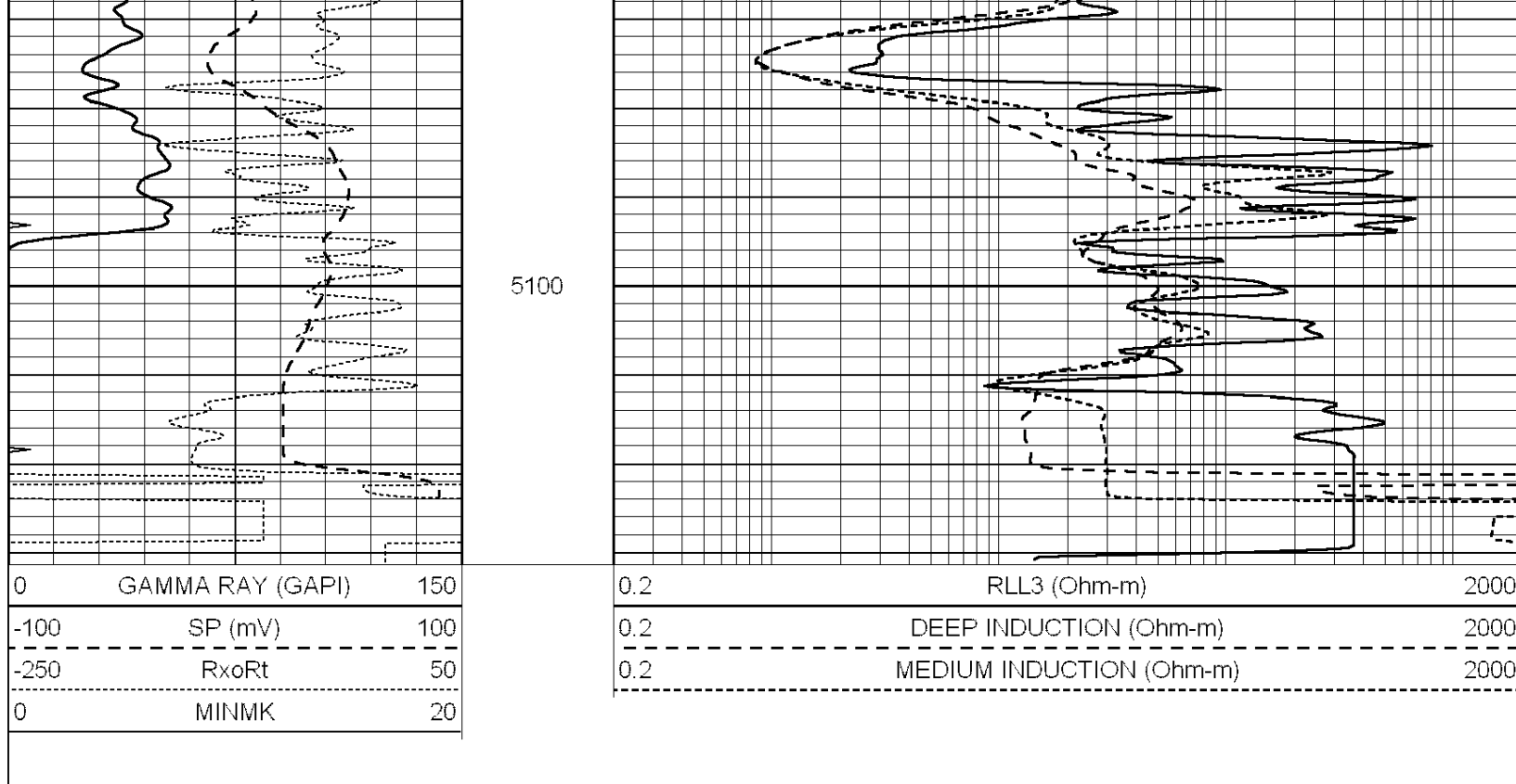
REPEAT SECTION

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 Presentation Format: dil
 Dataset Creation: Mon Apr 01 20:03:12 2013 by Calc Open-Cased 090629
 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





Calibration Report

Database File: 010976dildn.db
 Dataset Pathname: pass3.1.1
 Dataset Creation: Mon Apr 01 21:05:27 2013 by Calc Open-Cased 090629

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

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	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	V	Zero	Cal	mmho/m	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	V	Zero	Cal	mmho/m	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

	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		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: 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