



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	RITCHIE EXPLORATION, INC.		
Well	DERSTEIN 8D NO 1		
Field			
County	FORD	State	KANSAS
Location:	API # : 15-057-20875-0000		Other Services
	N2 - NW - SE 2305' FSL & 1860' FEL		CNL/CDL
	SEC 8 TWP 28S RGE 22W		Elevation
Permanent Datum	GROUND LEVEL	Elevation	2412
Log Measured From	KELLY BUSHING 12' A.G.L.		K.B. 2424
Drilling Measured From	KELLY BUSHING		D.F. 2422
			G.L. 2412
Date	02/12/2013		
Run Number	ONE		
Depth Driller	5230		
Depth Logger	5234		
Bottom Logged Interval	5232		
Top Log Interval	00		
Casing Driller	396		
Casing Logger	393		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	2.000
Density / Viscosity	9.4 /48		
pH / Fluid Loss	10.0 / 8.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.6 @ 65F		
Rmf @ Meas. Temp	.48 @ 65F		
Rmc @ Meas. Temp	.72 @ 65F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.30 @ 127F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	9 :30 A.M.		
Maximum Recorded Temperature	127F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	MIKE GARRISON		
Witnessed By	MACKLIN 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 CO.
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: FORD, KS- .7 SOUTH ON BLACKTOP SE OF TOWN, EAST INTO

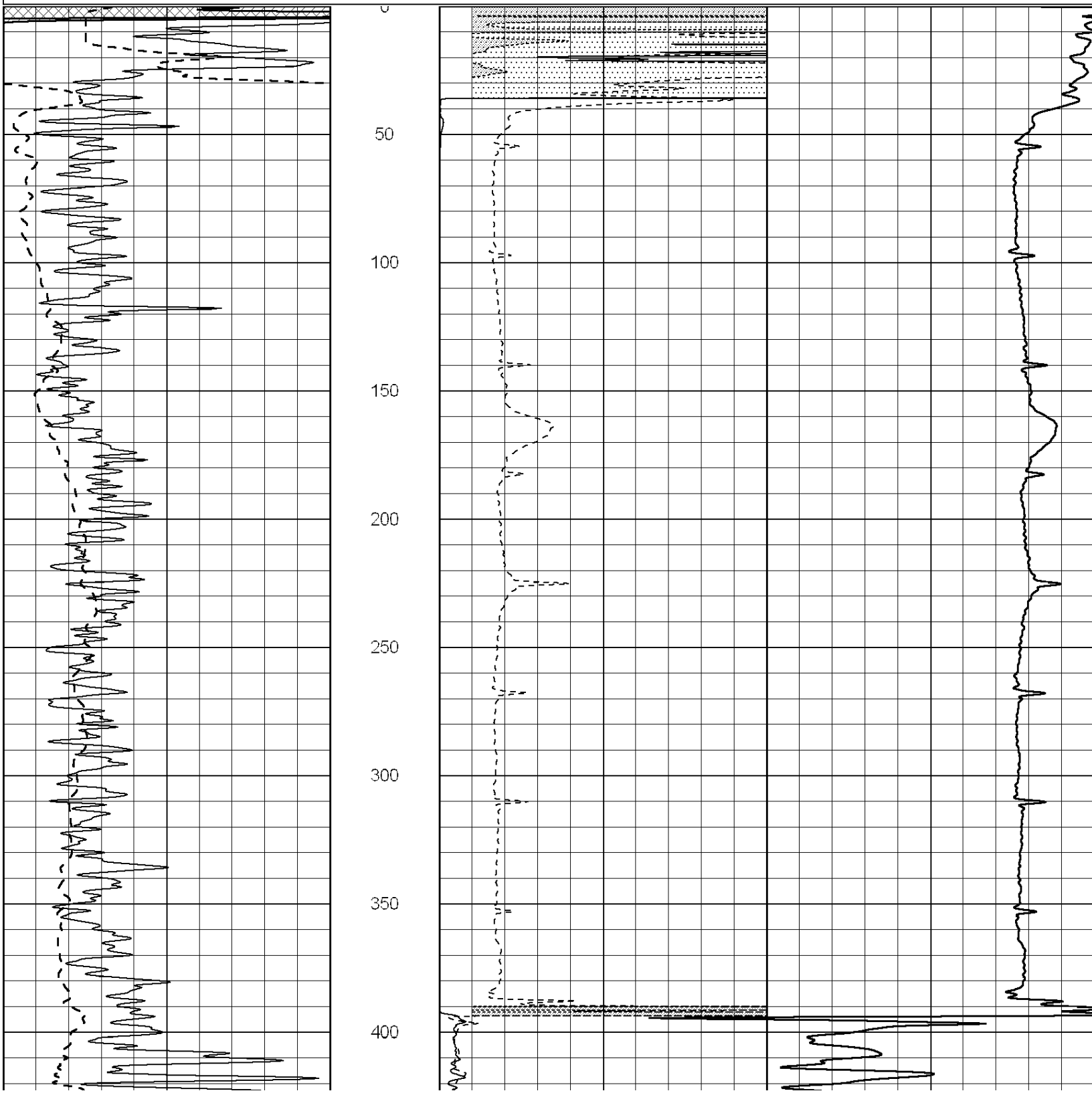


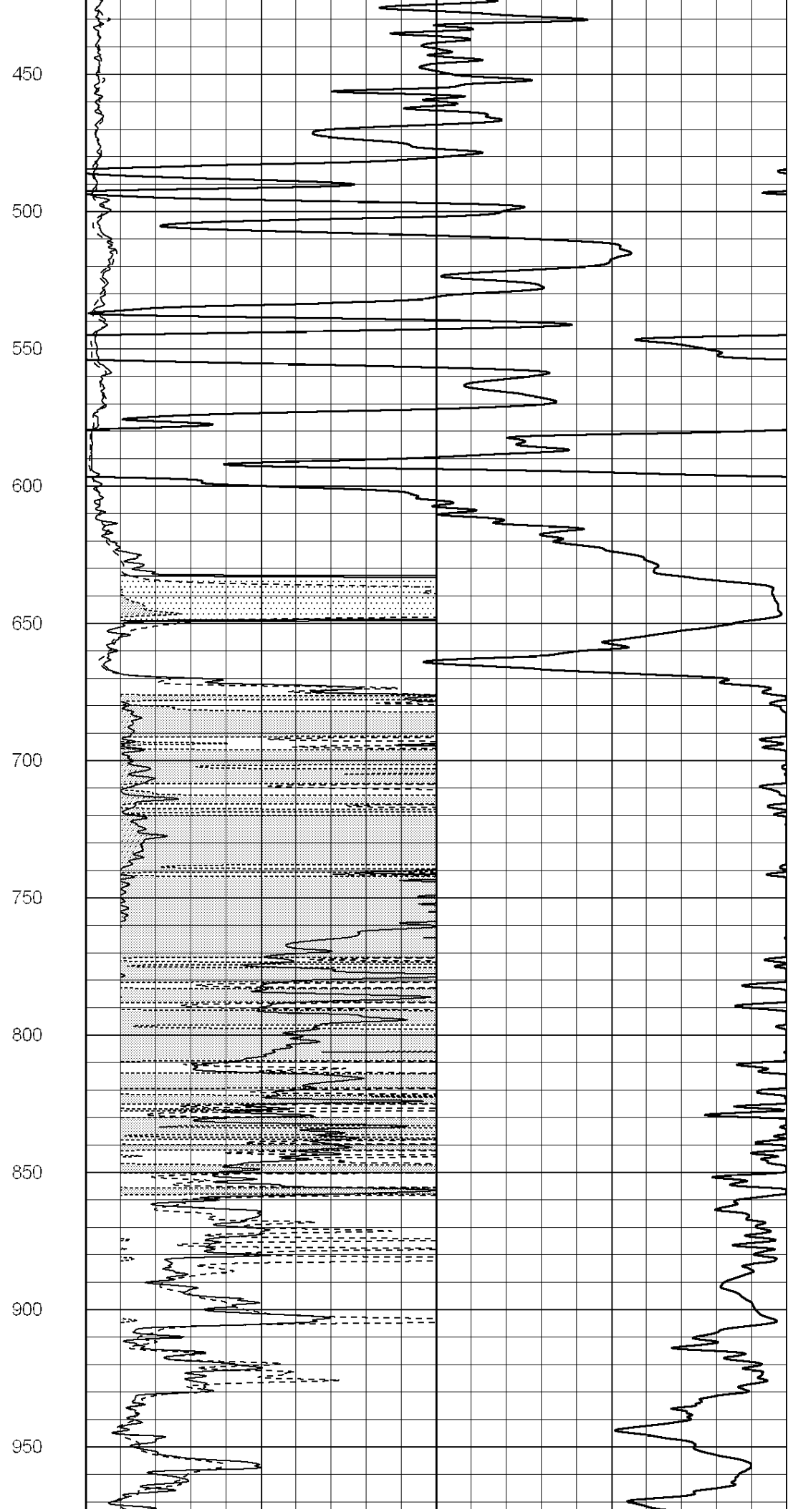
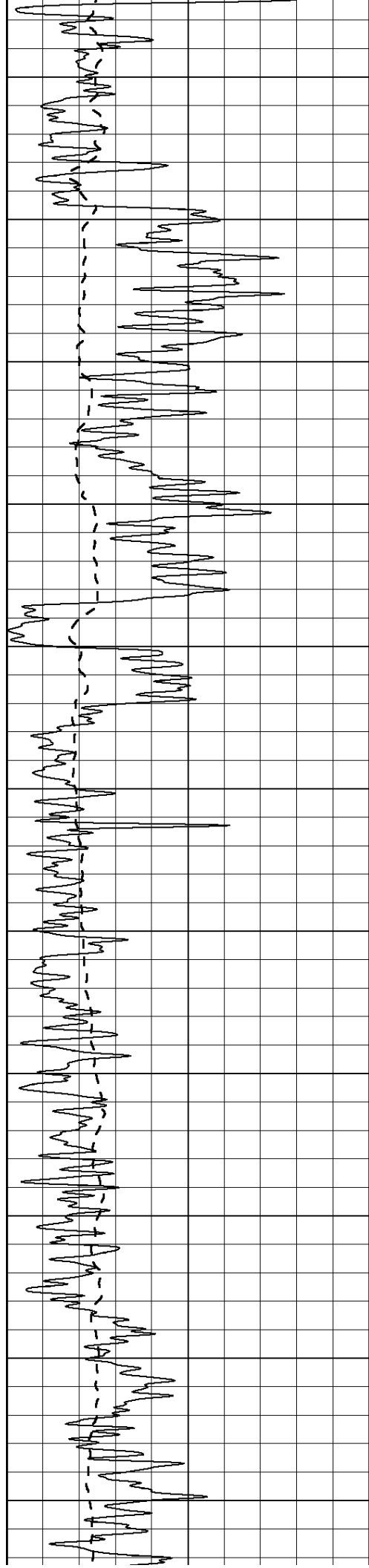
**COMPLETION
& PRODUCTION**

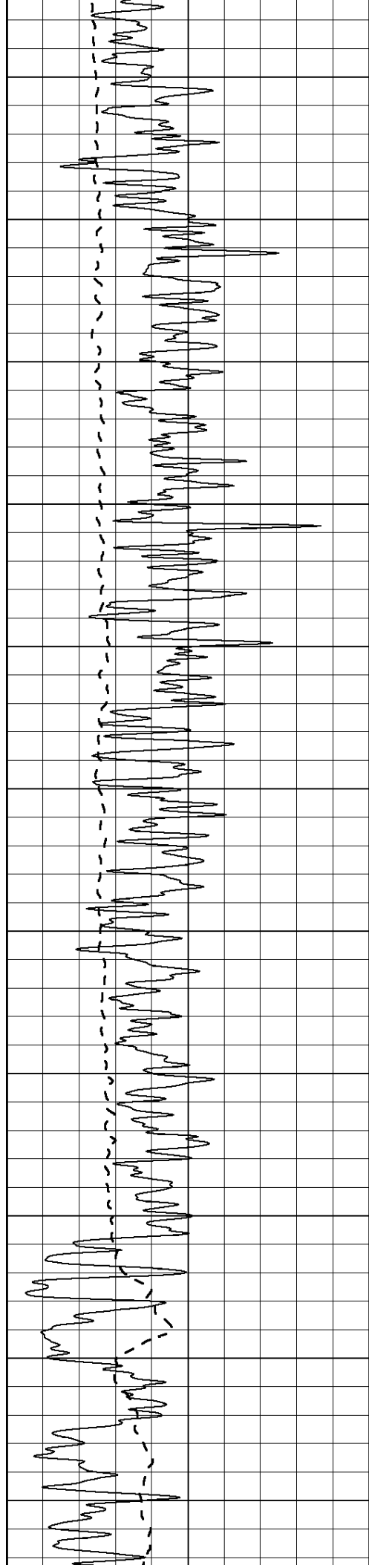
MAIN SECTION

Database File: 010670dildn.db
 Dataset Pathname: pass3.2
 Presentation Format: dil2
 Dataset Creation: Tue Feb 12 11:13:35 2013 by Calc Open-Cased 090629
 Charted by: 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







1000

1050

1100

1150

1200

1250

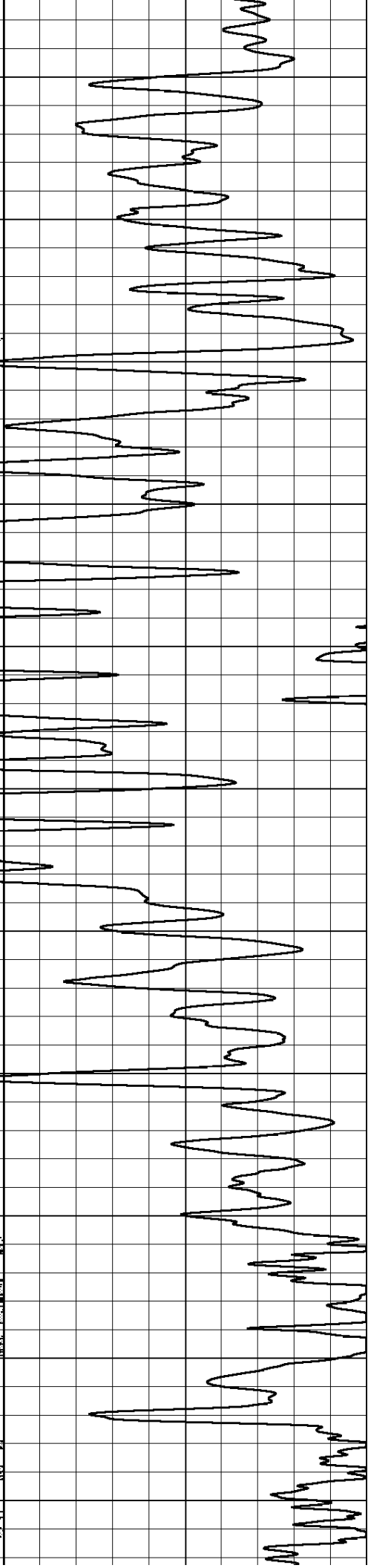
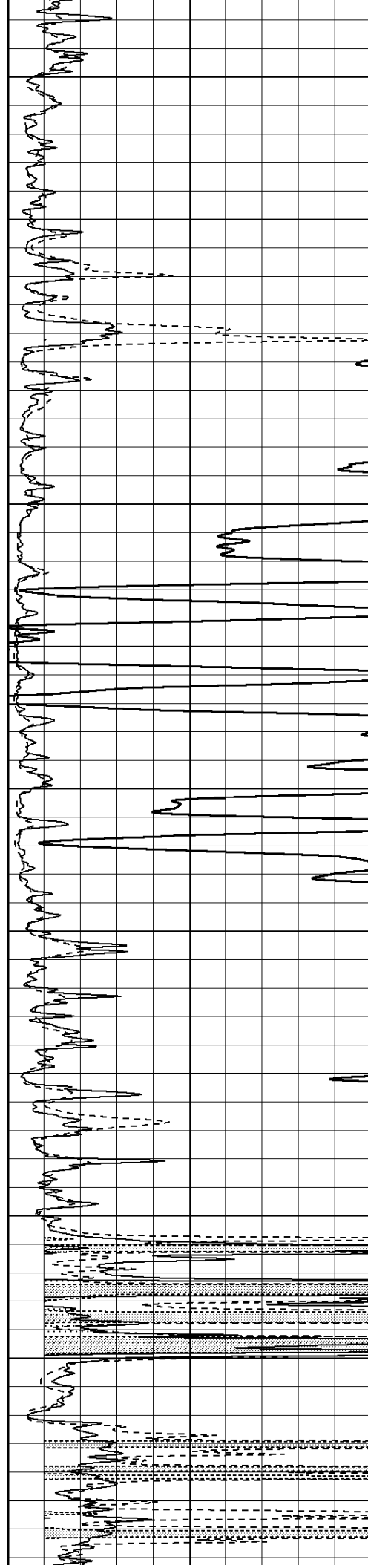
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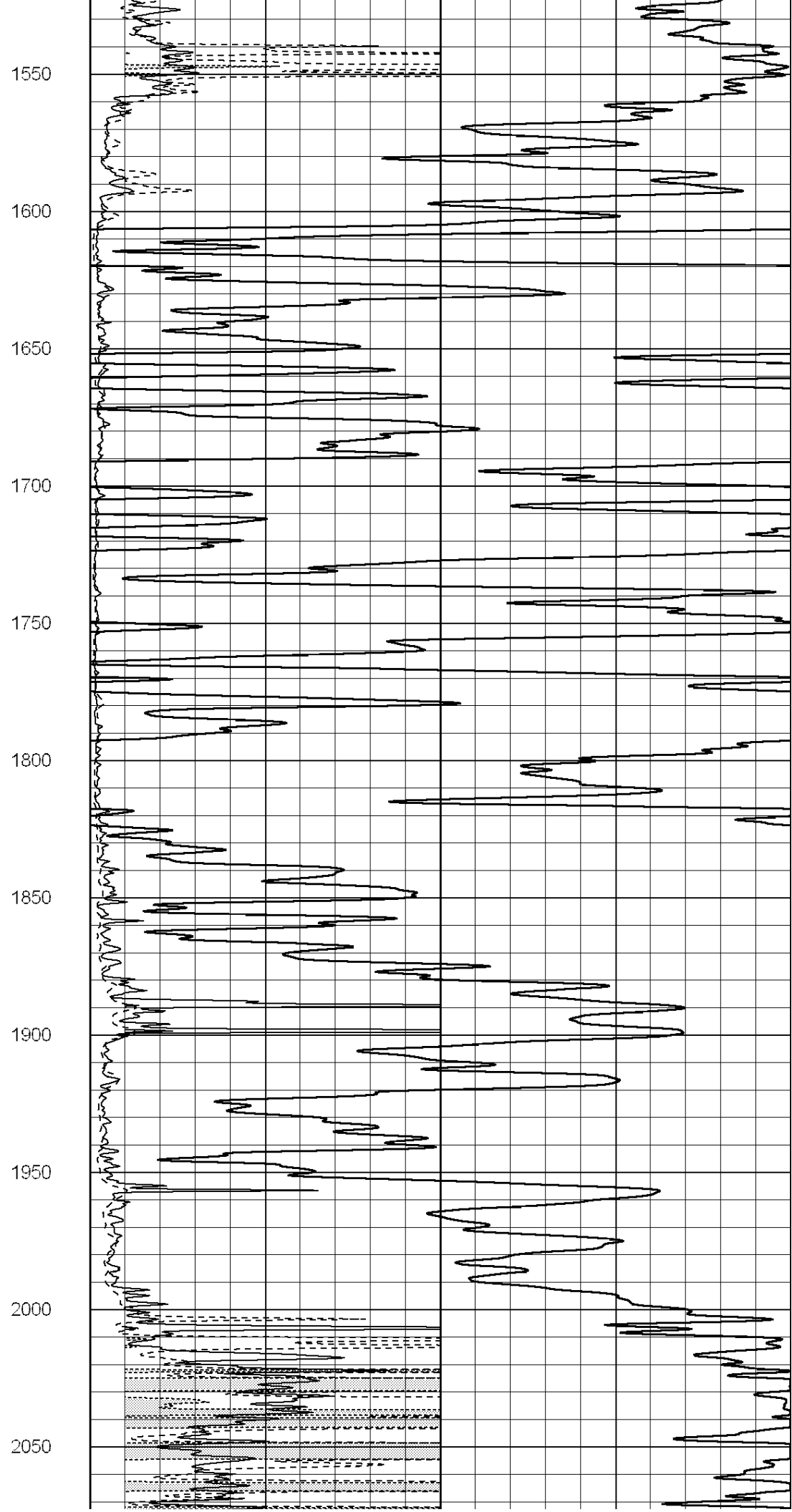
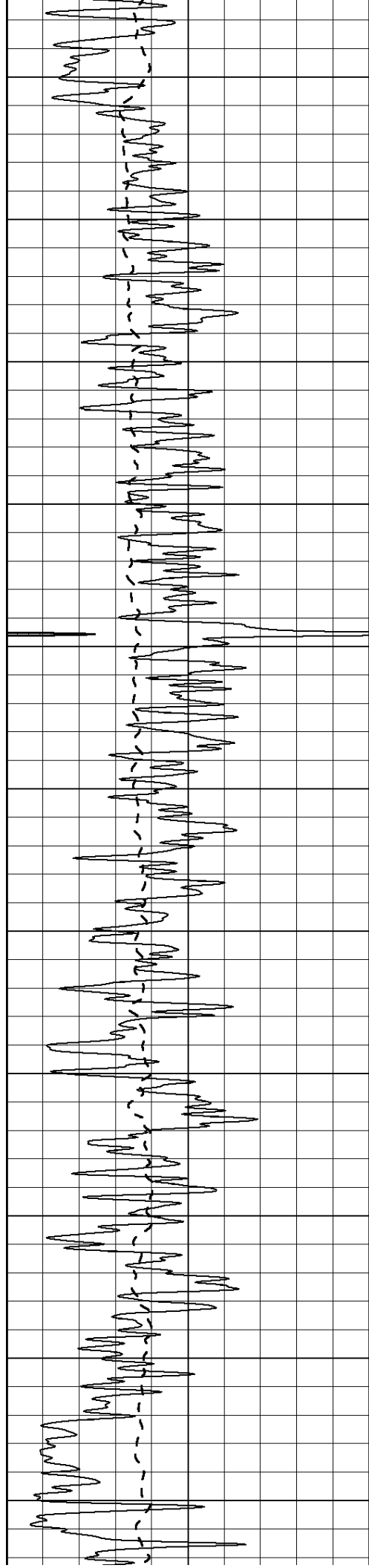
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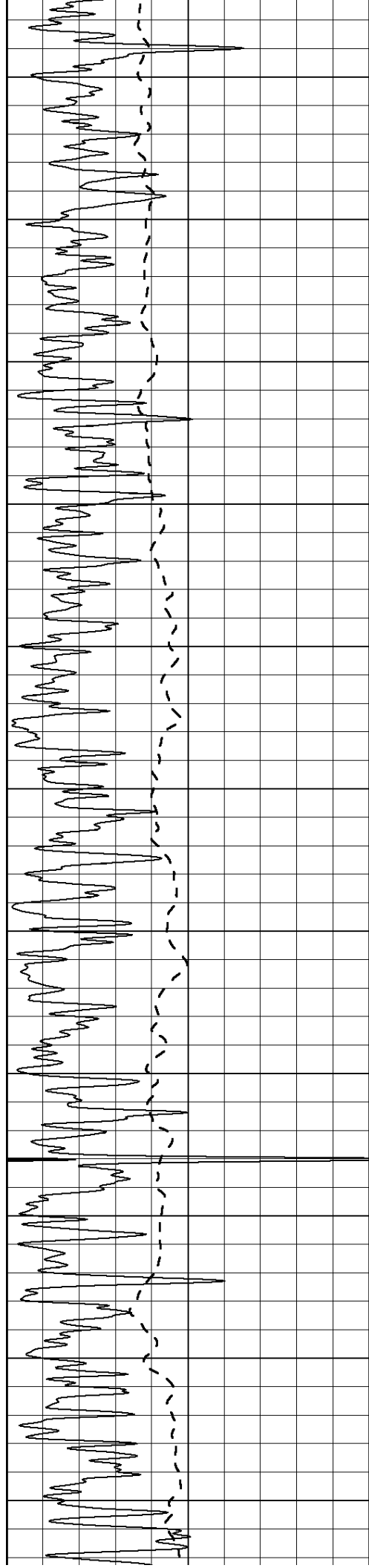
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1500







2100

2150

2200

2250

2300

2350

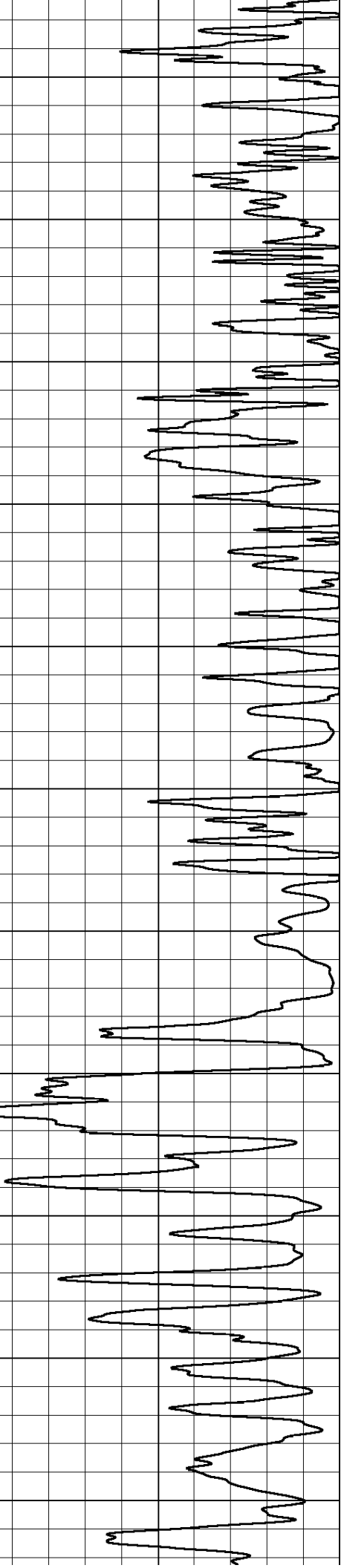
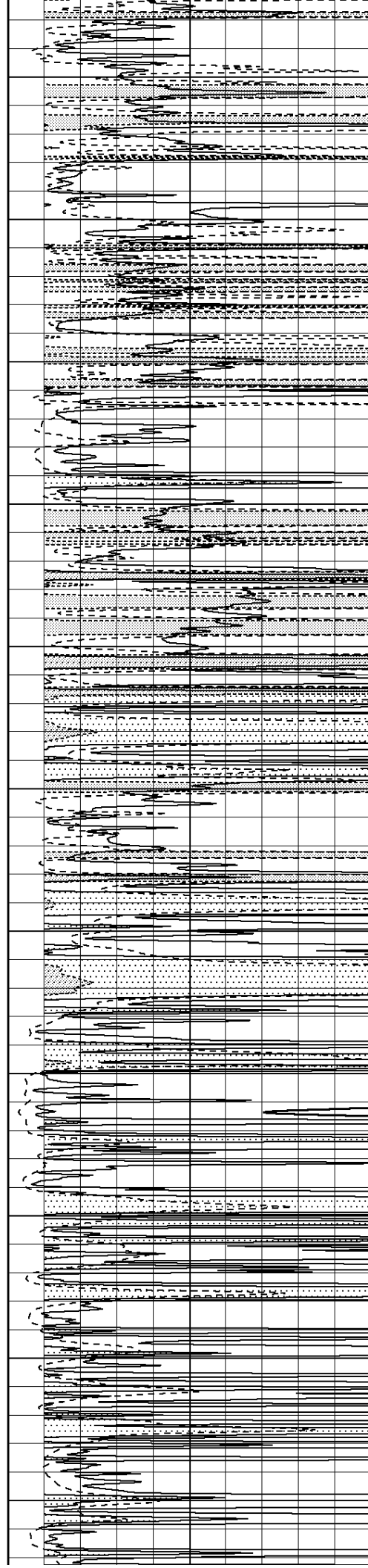
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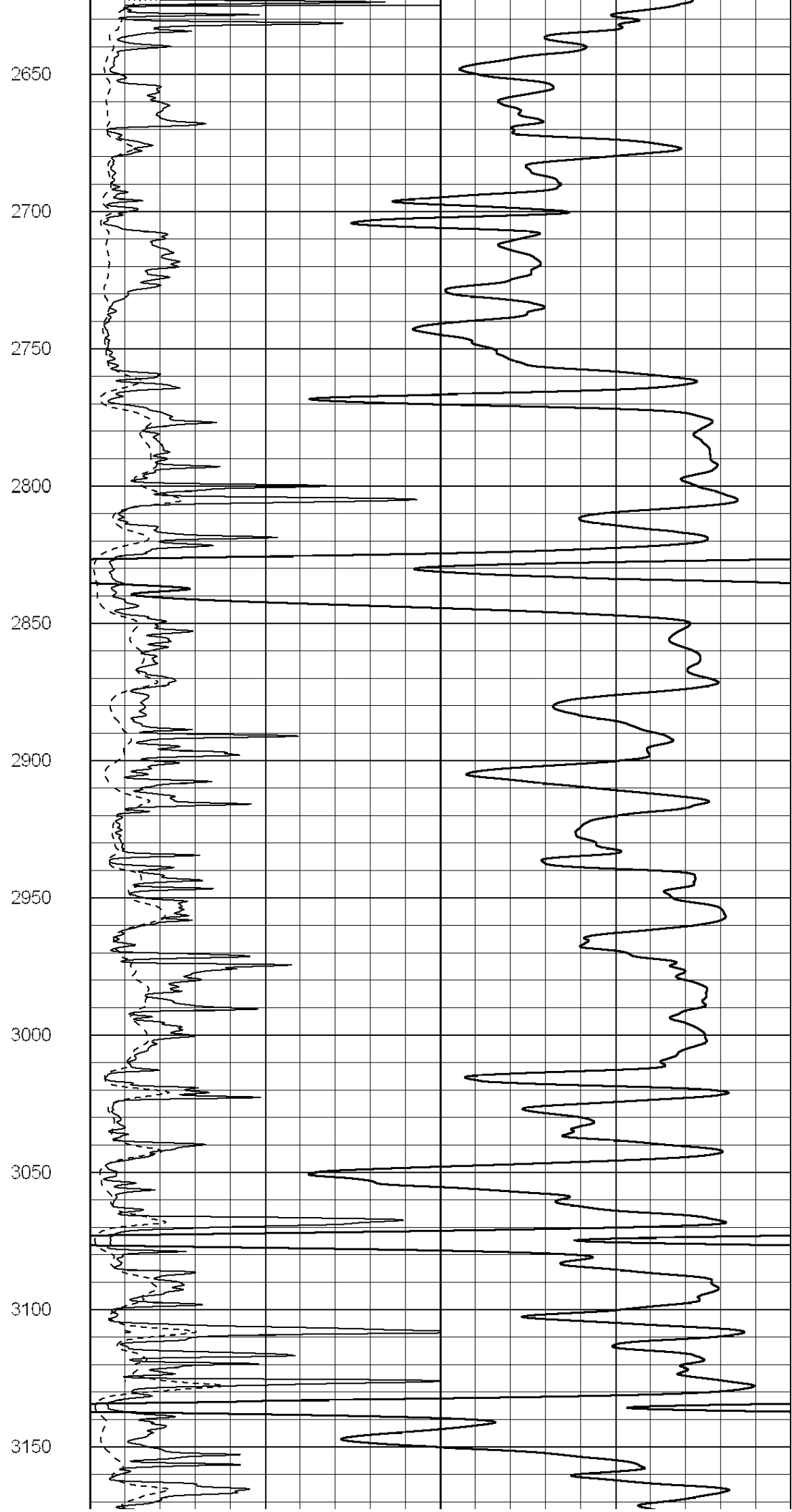
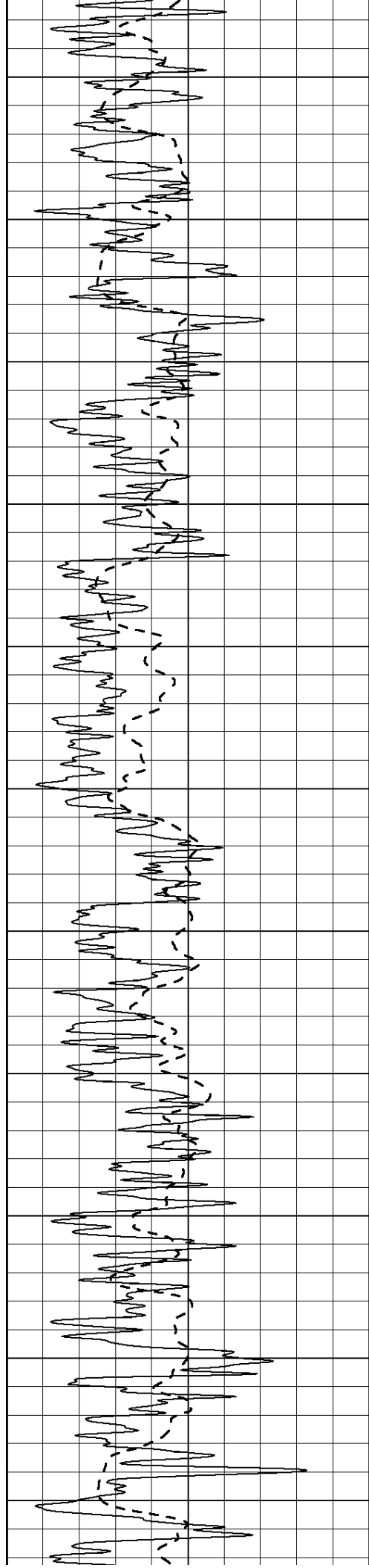
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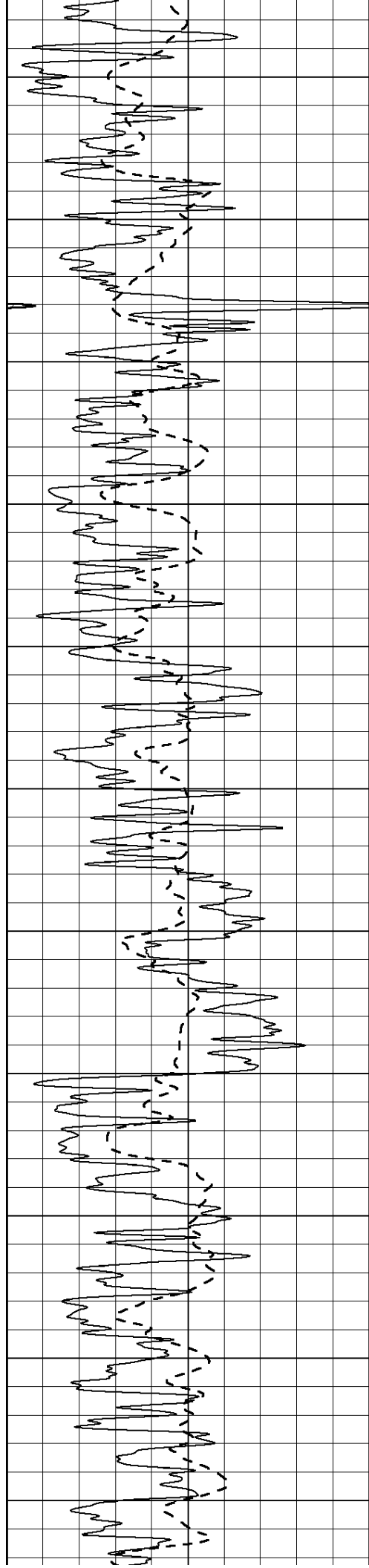
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2600







3200

3250

3300

3350

3400

3450

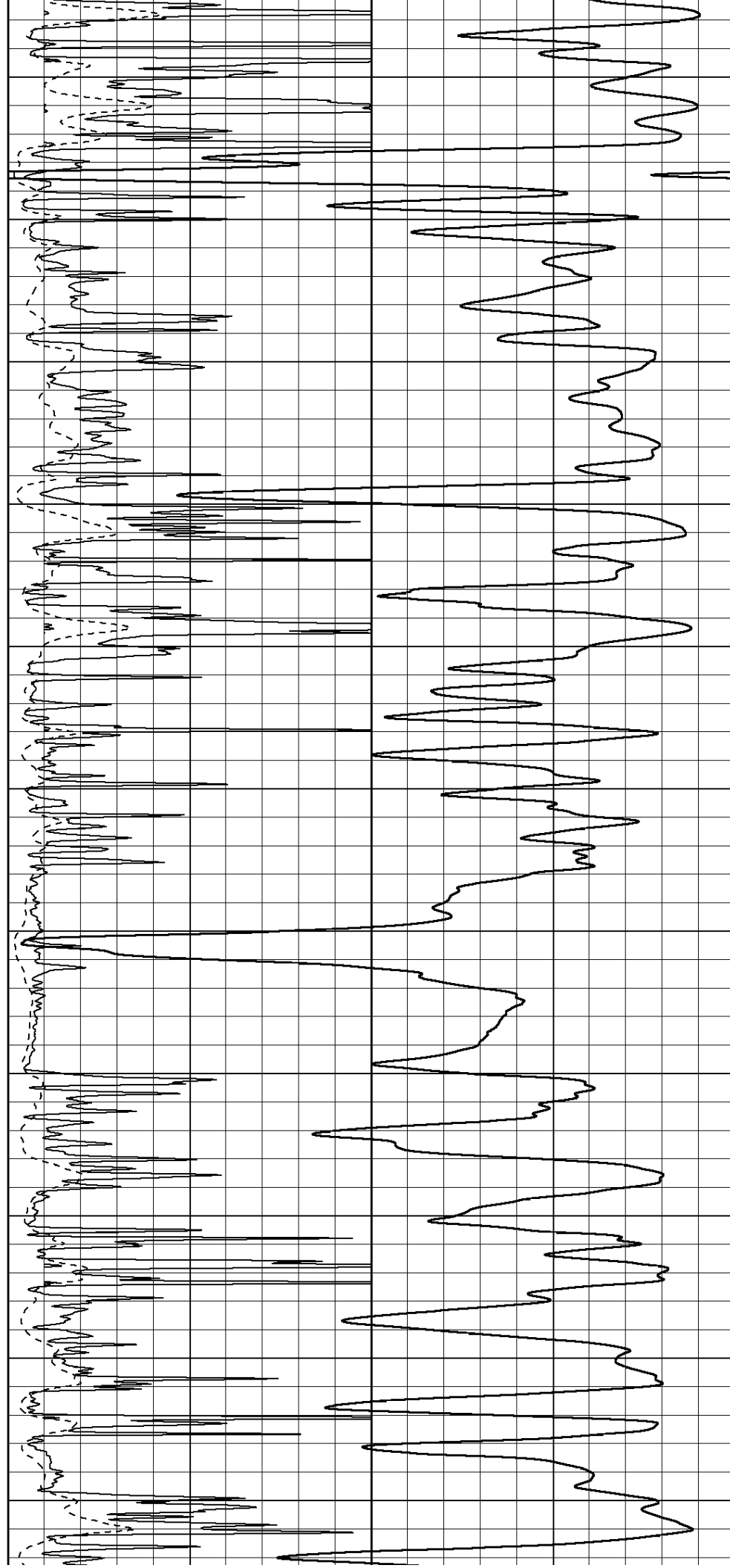
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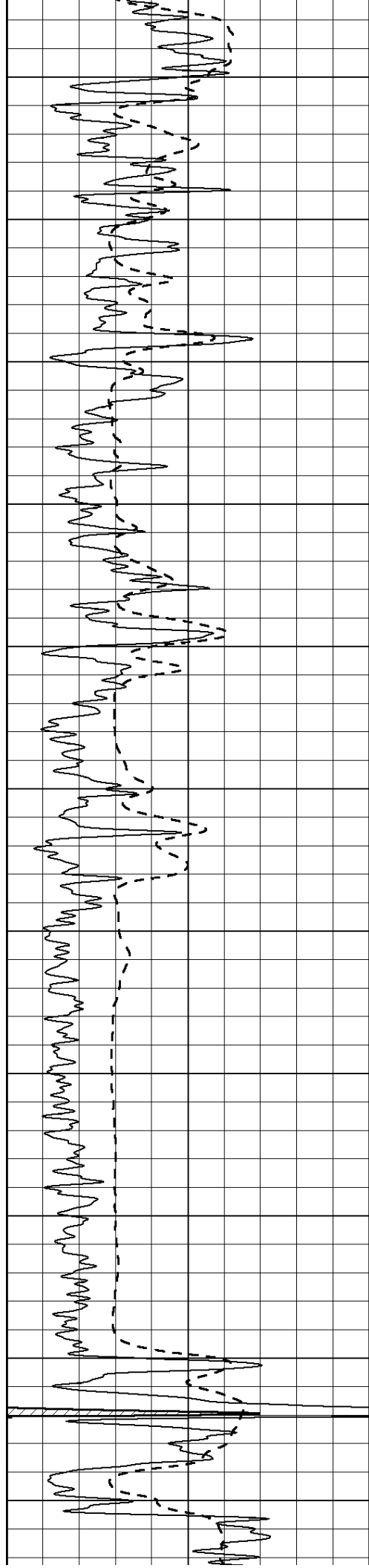
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3900

3950

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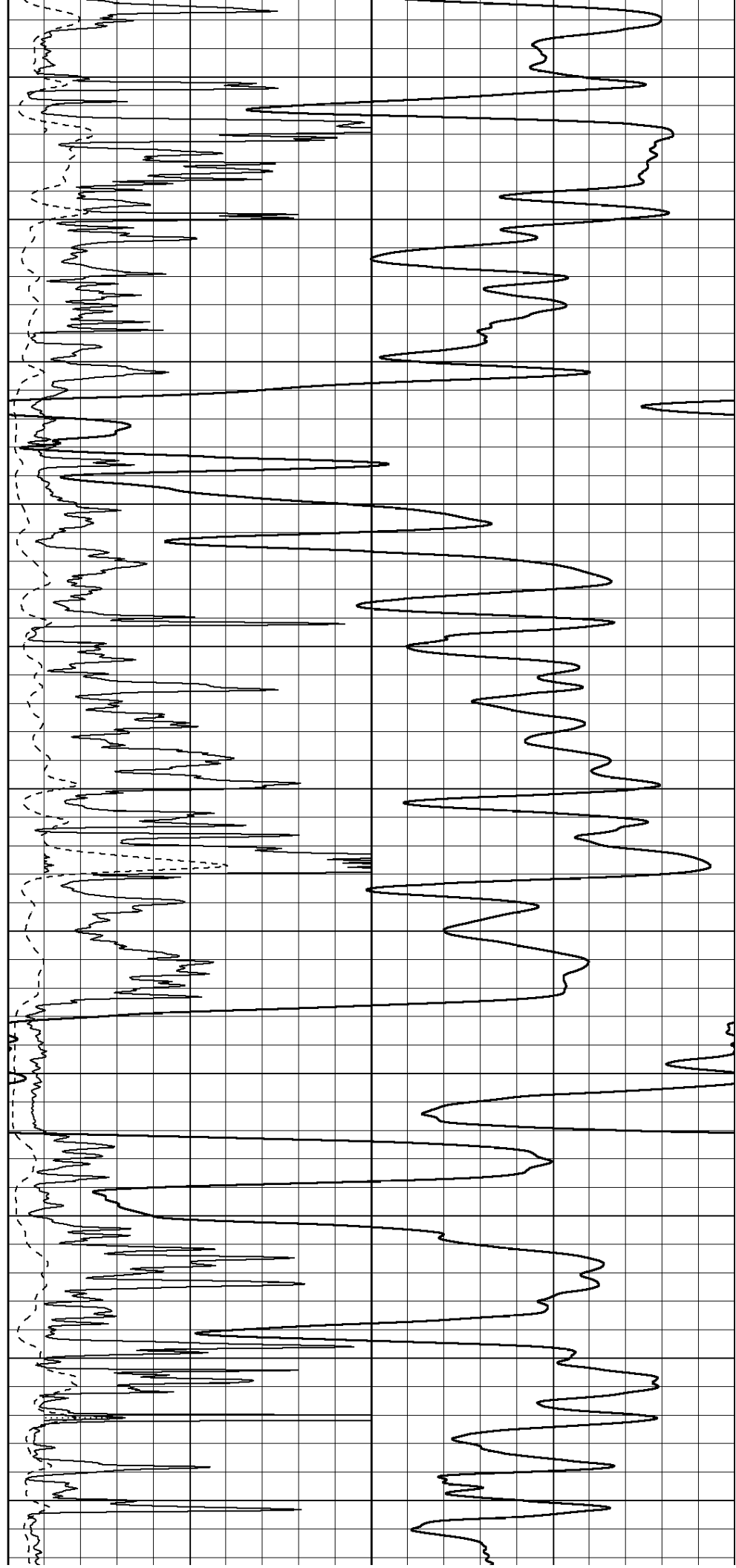
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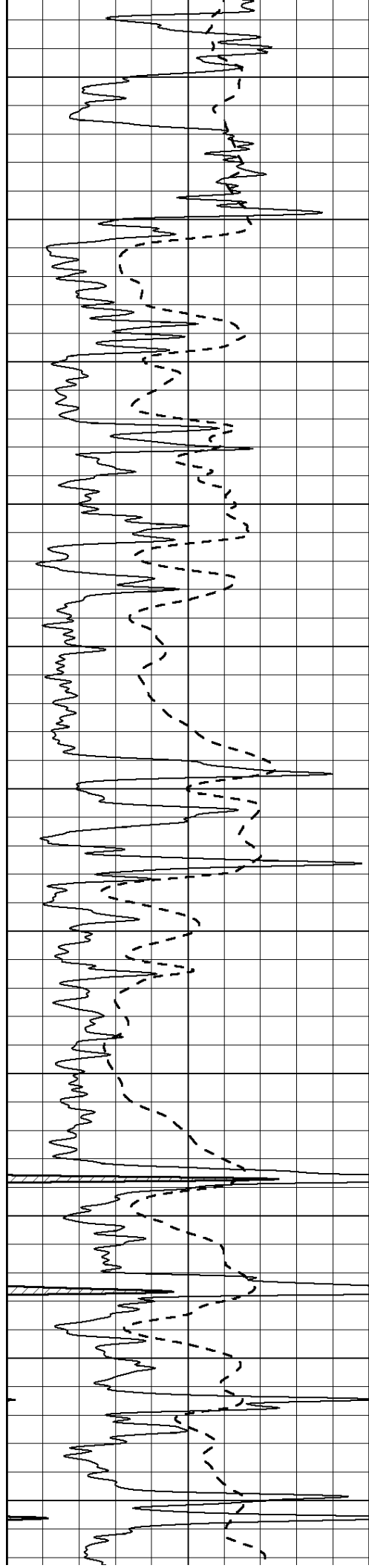
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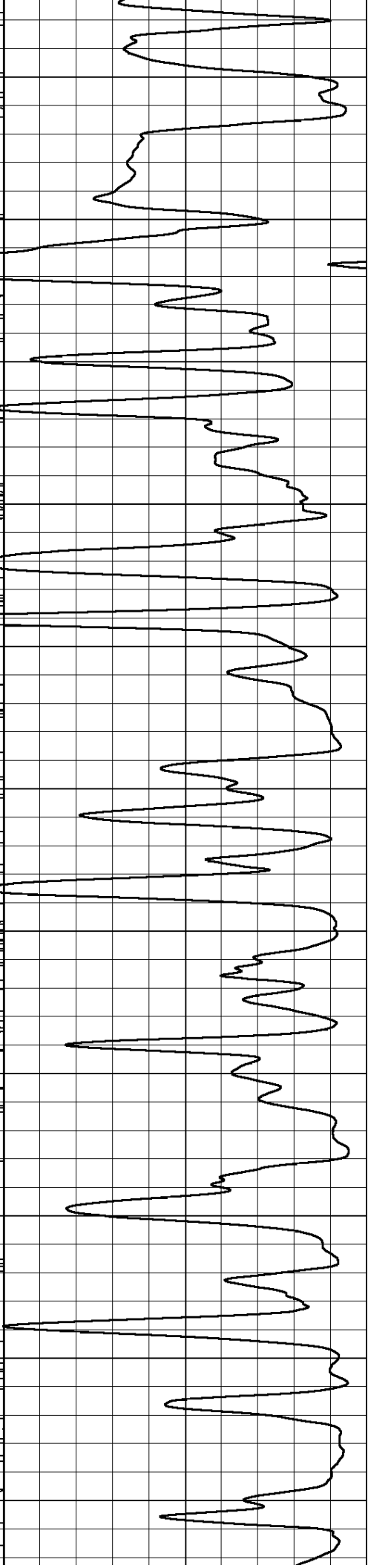
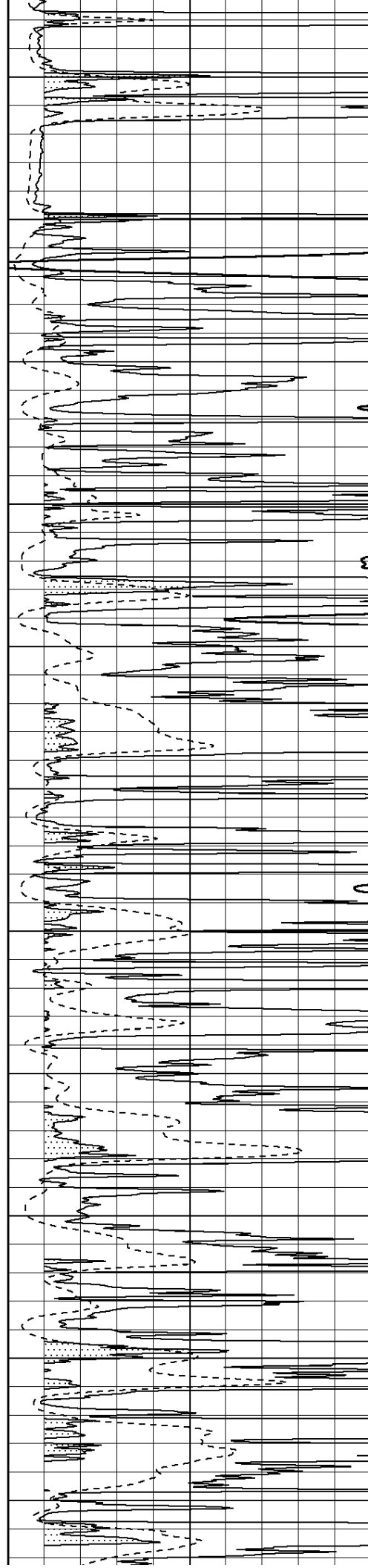
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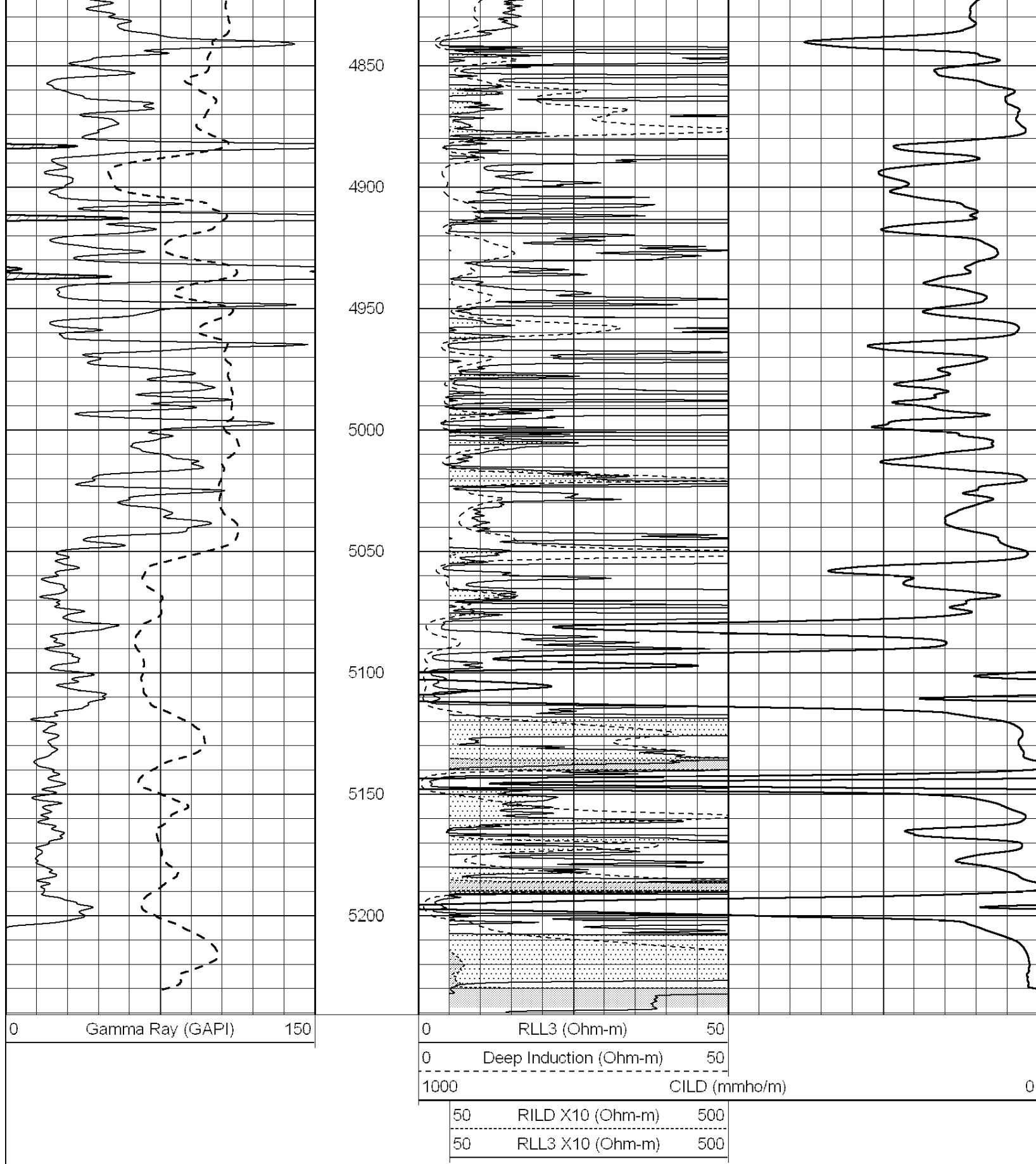
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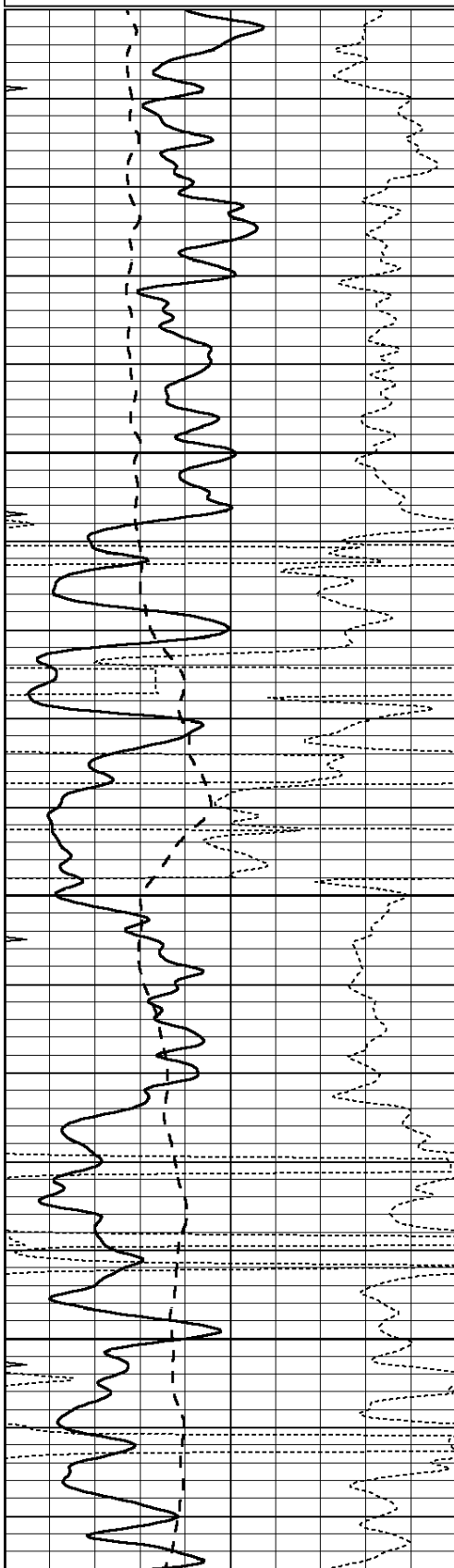




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Dataset Pathname: pass3.2
Presentation Format: dil
Dataset Creation: Tue Feb 12 11:13:35 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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

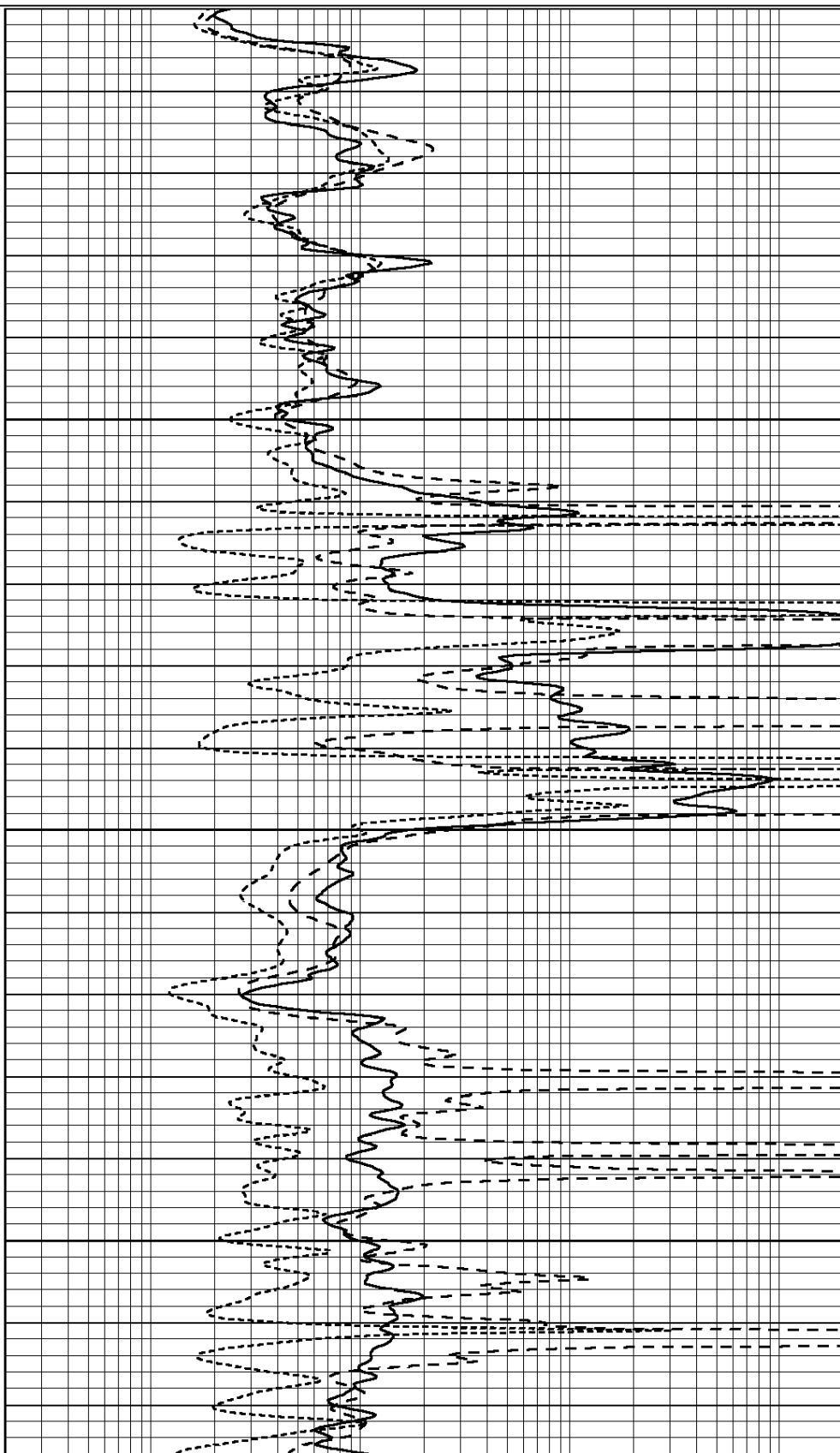


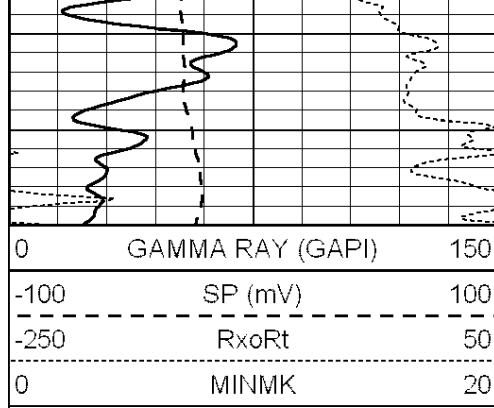
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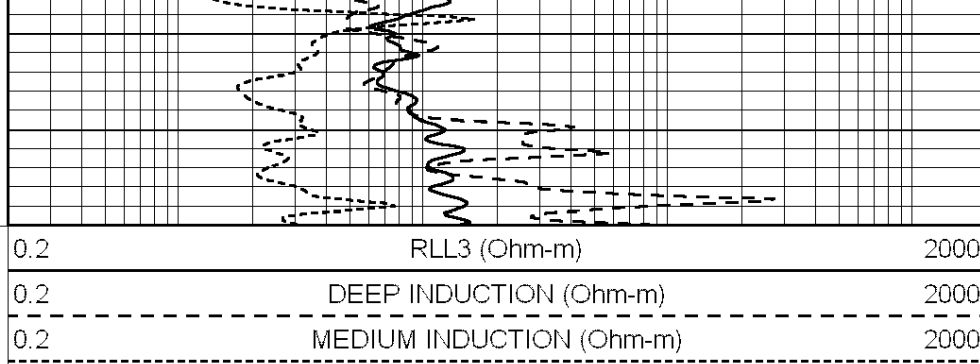
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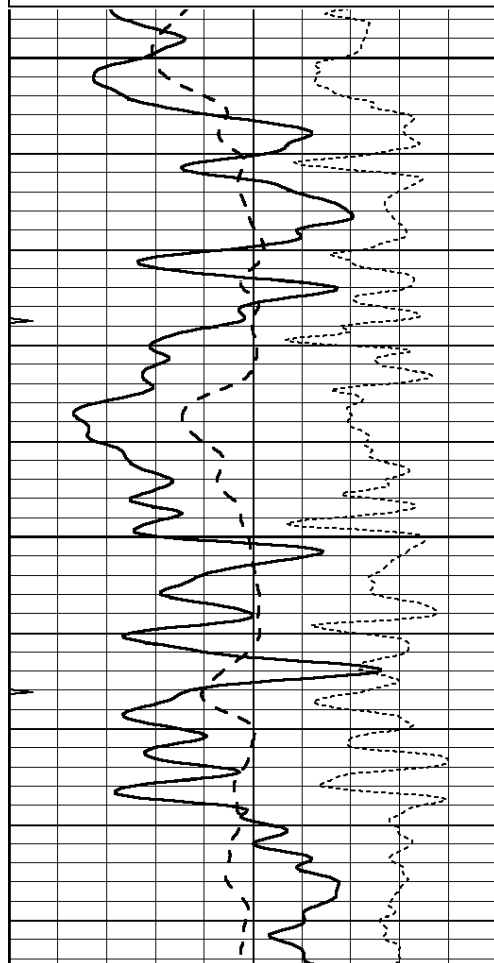
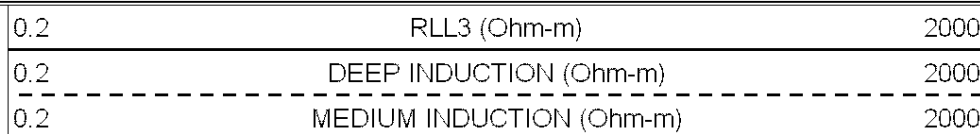
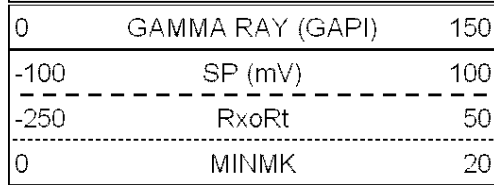
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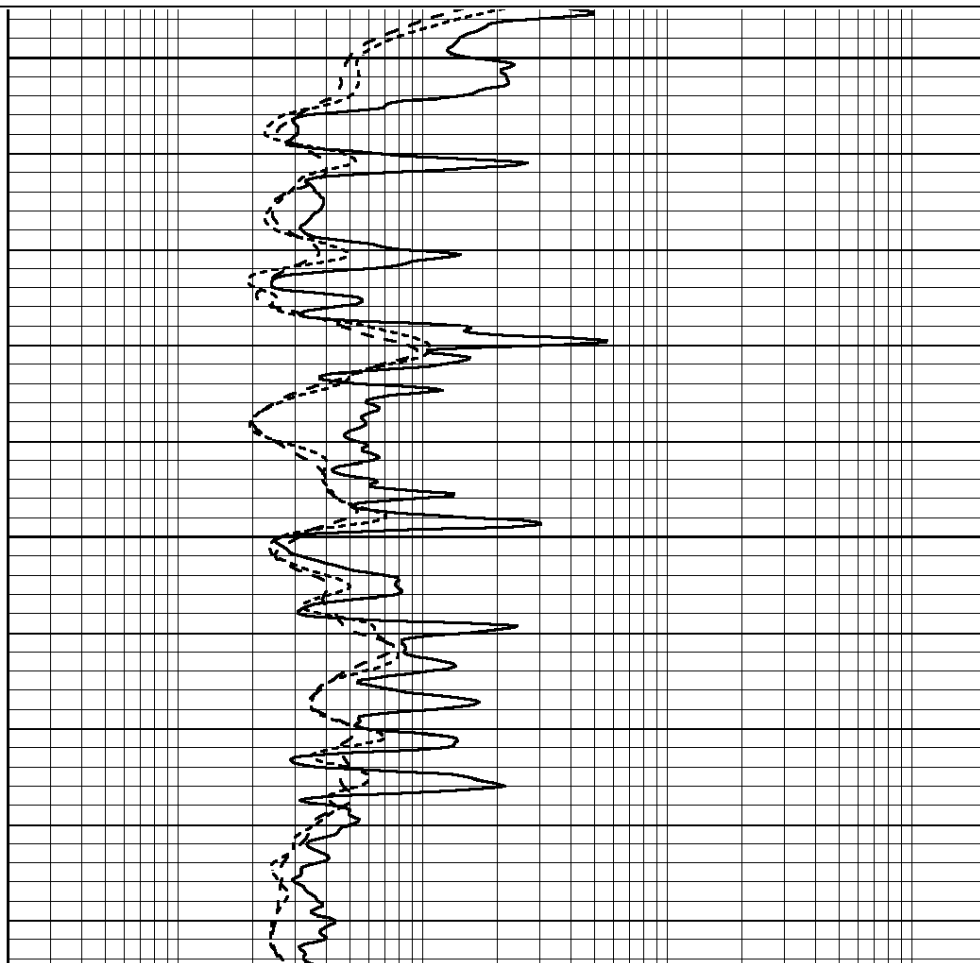
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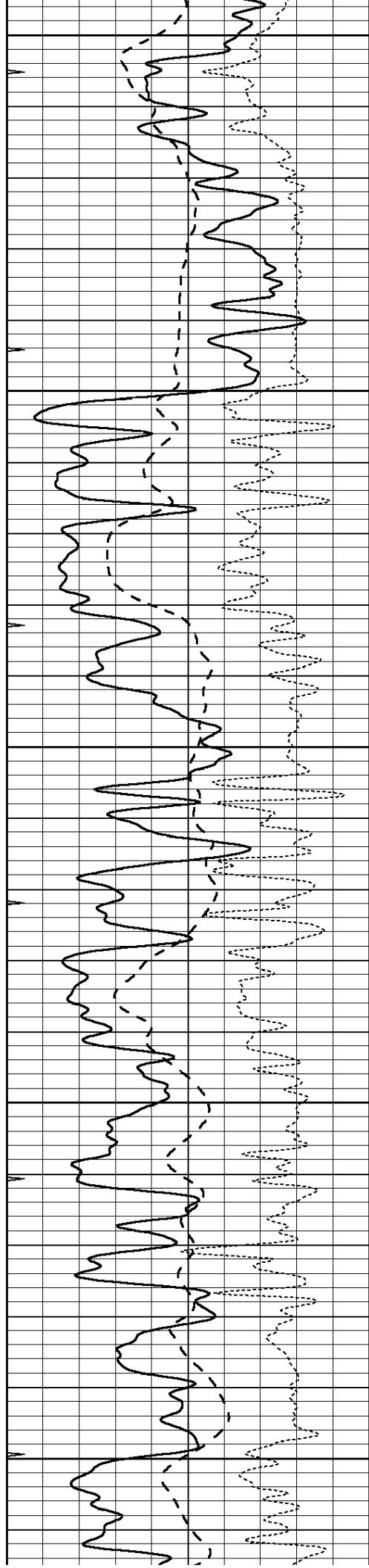
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 Dataset Pathname: pass3.2
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 Dataset Creation: Tue Feb 12 11:13:35 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



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3450





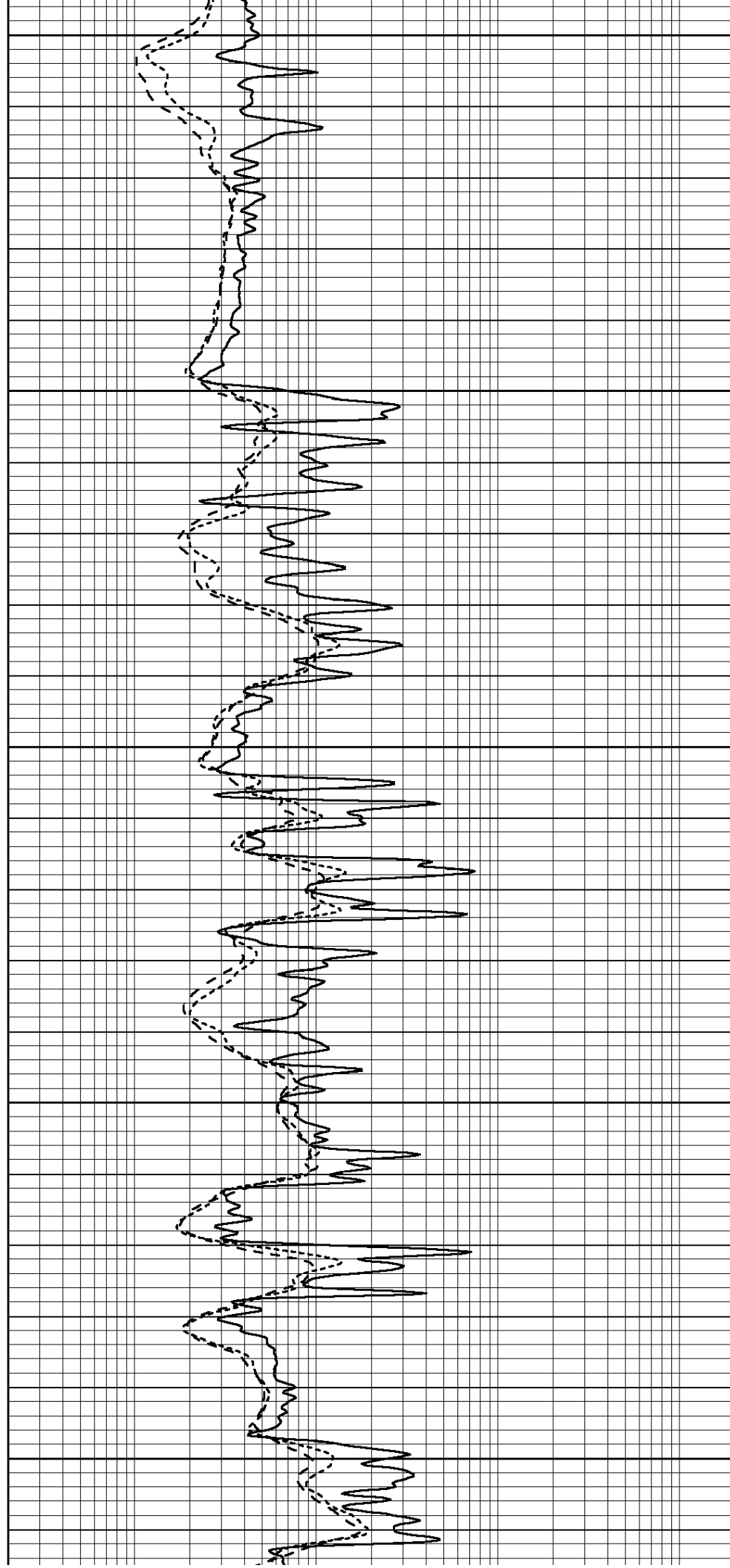
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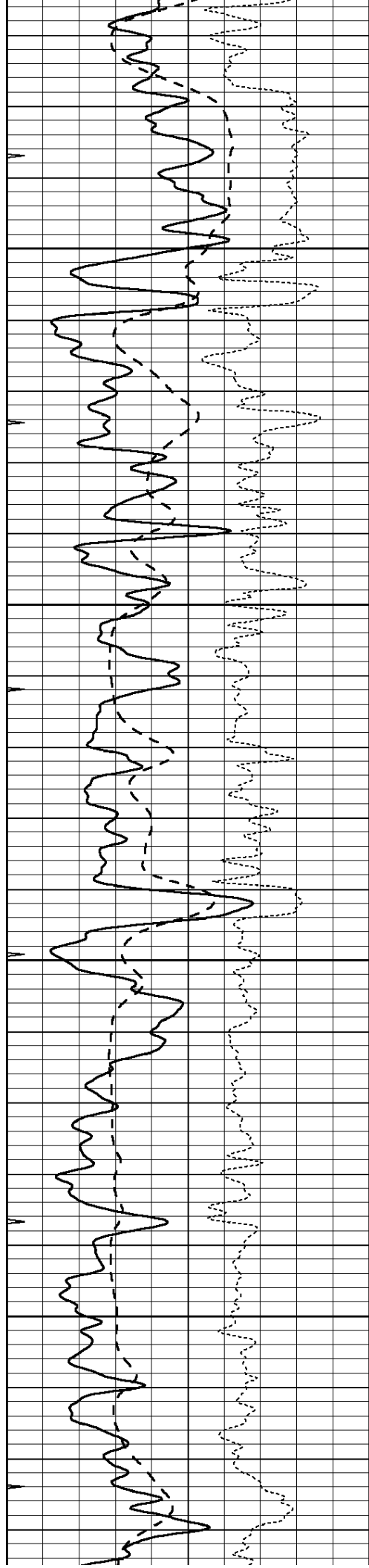
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3700



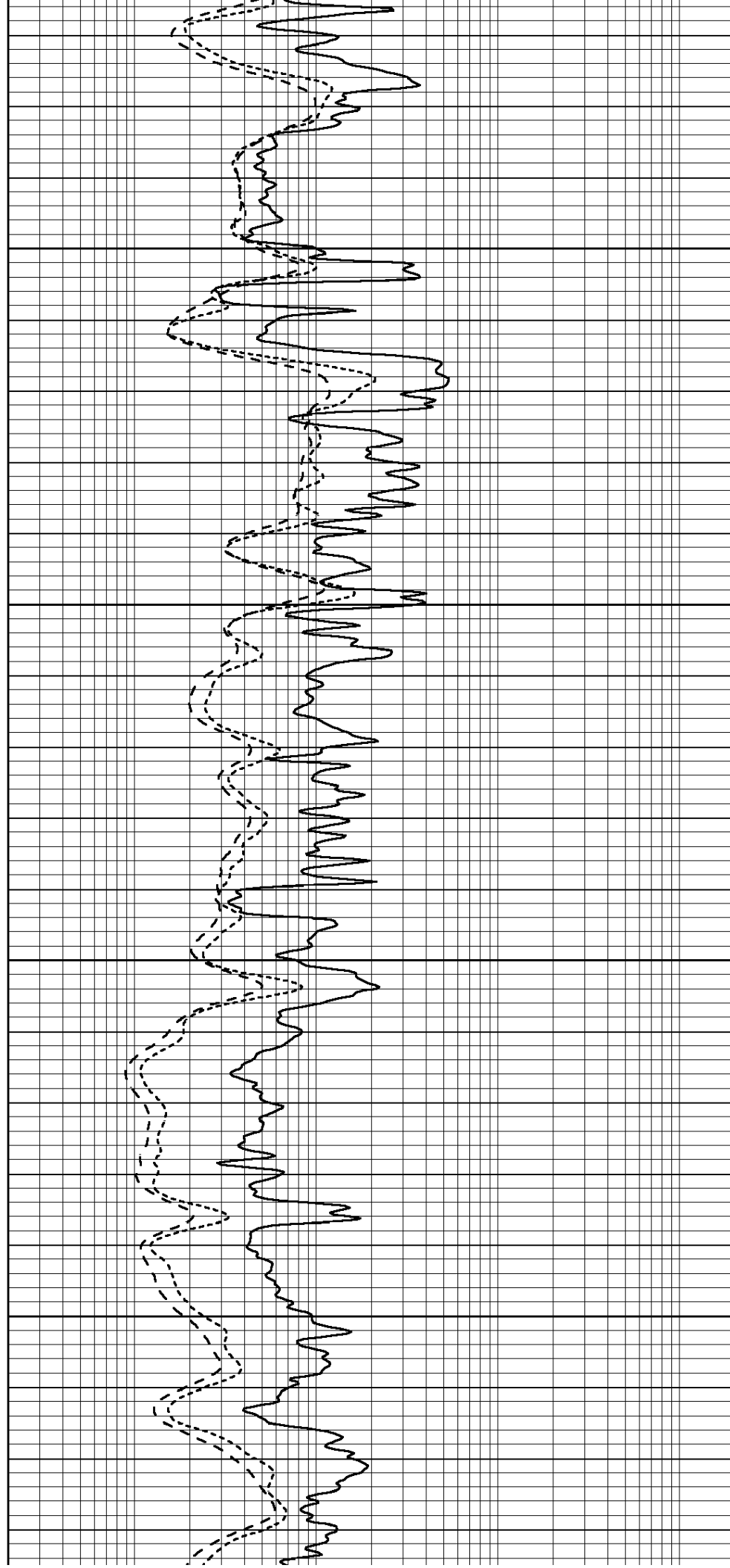


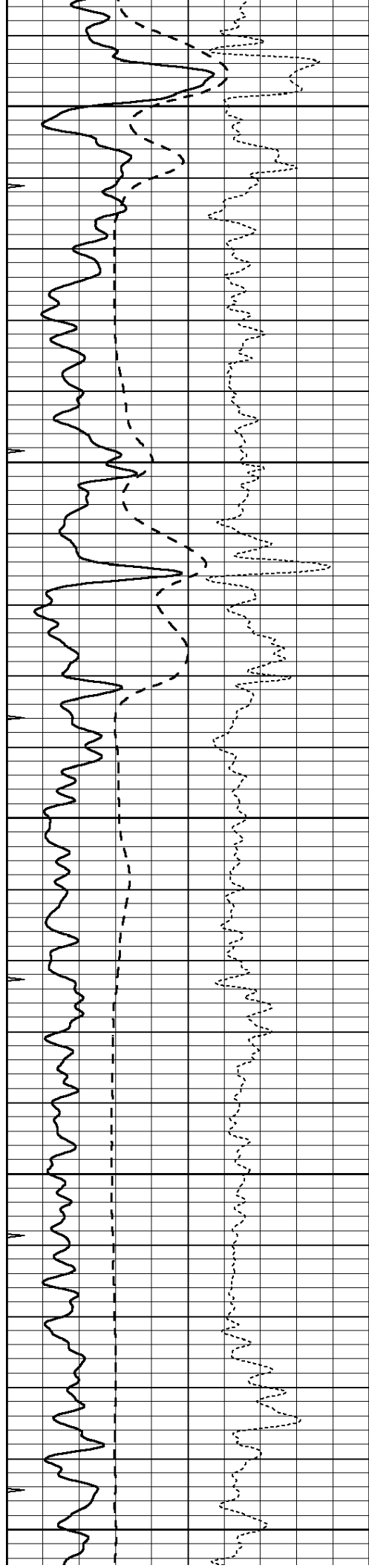
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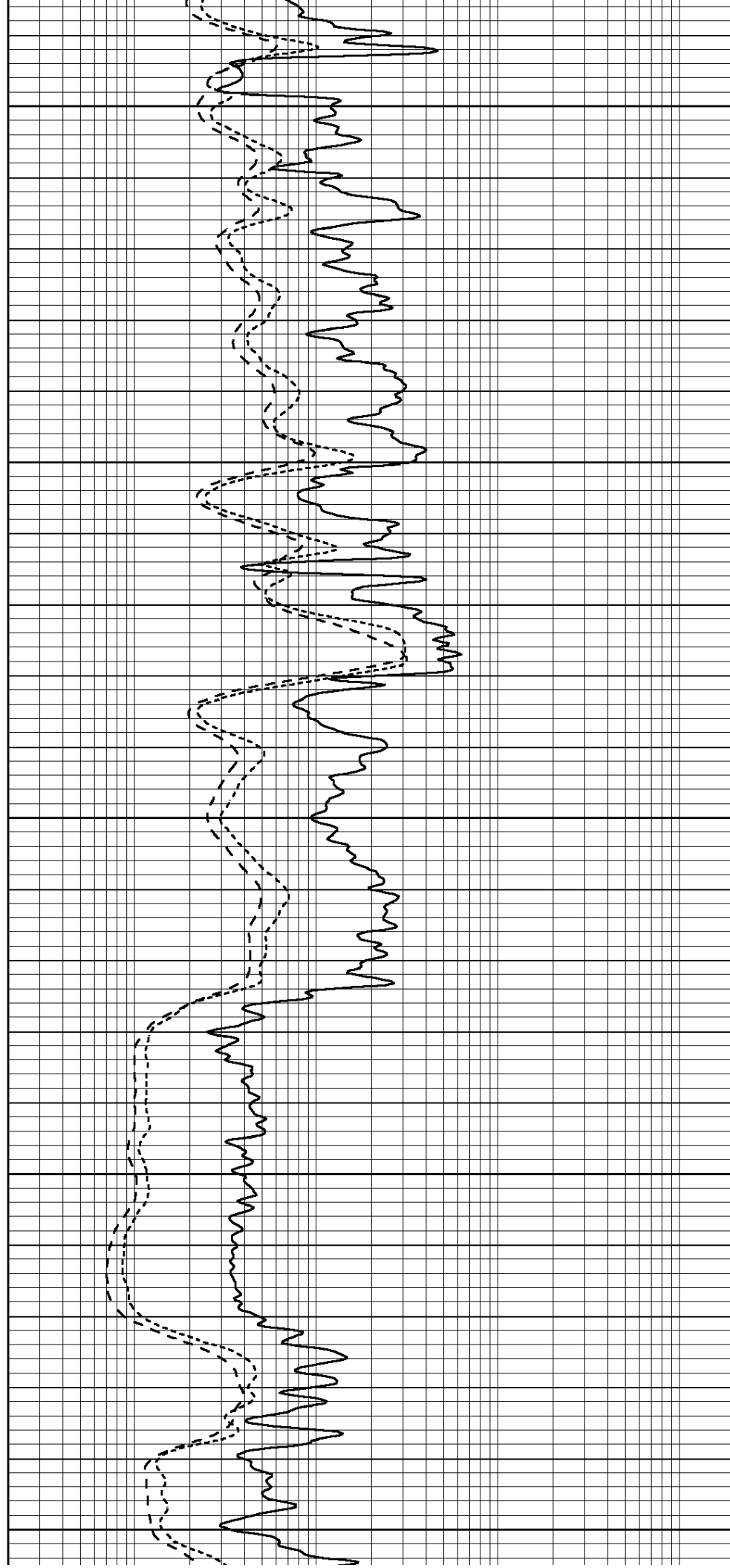
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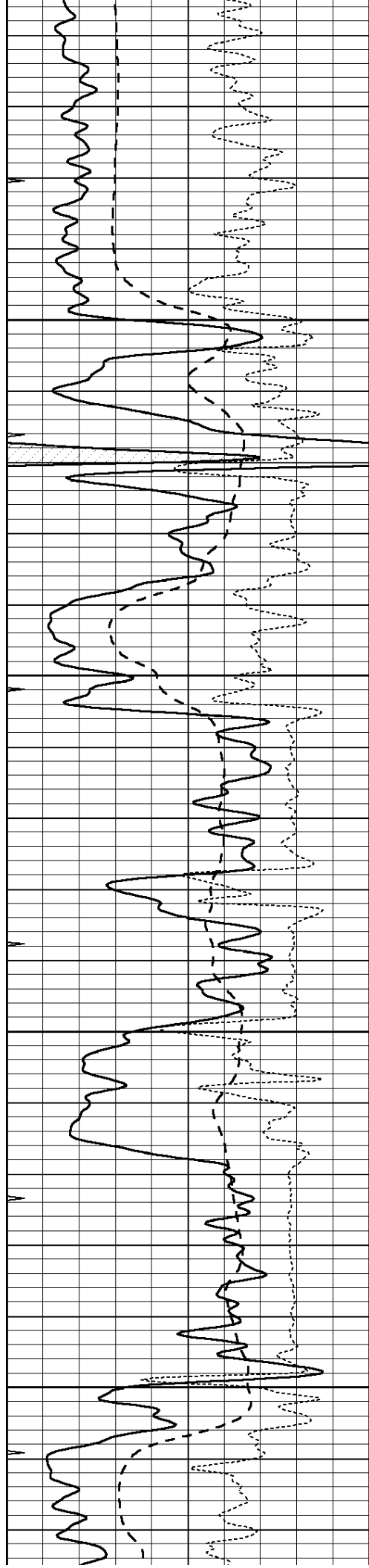
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4150



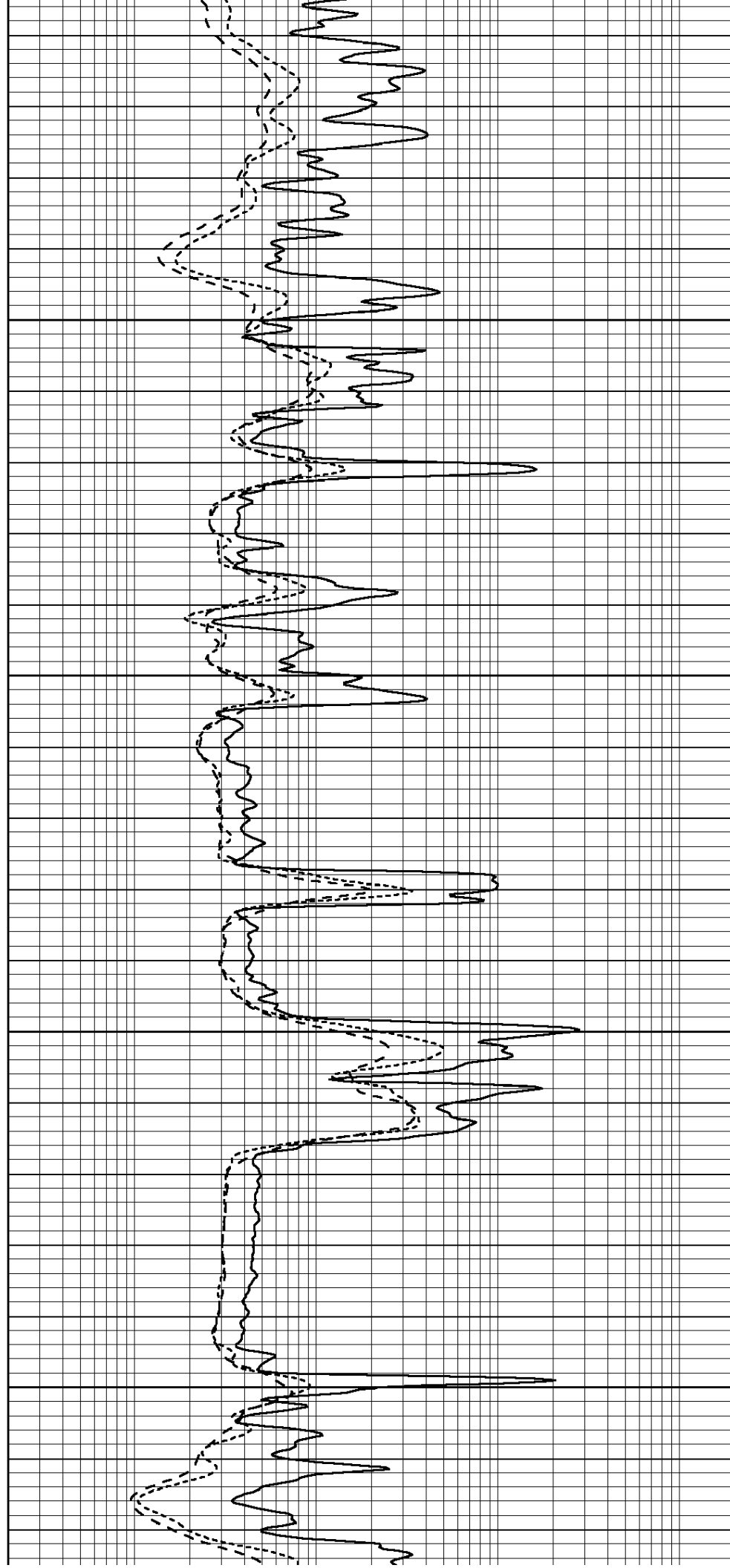


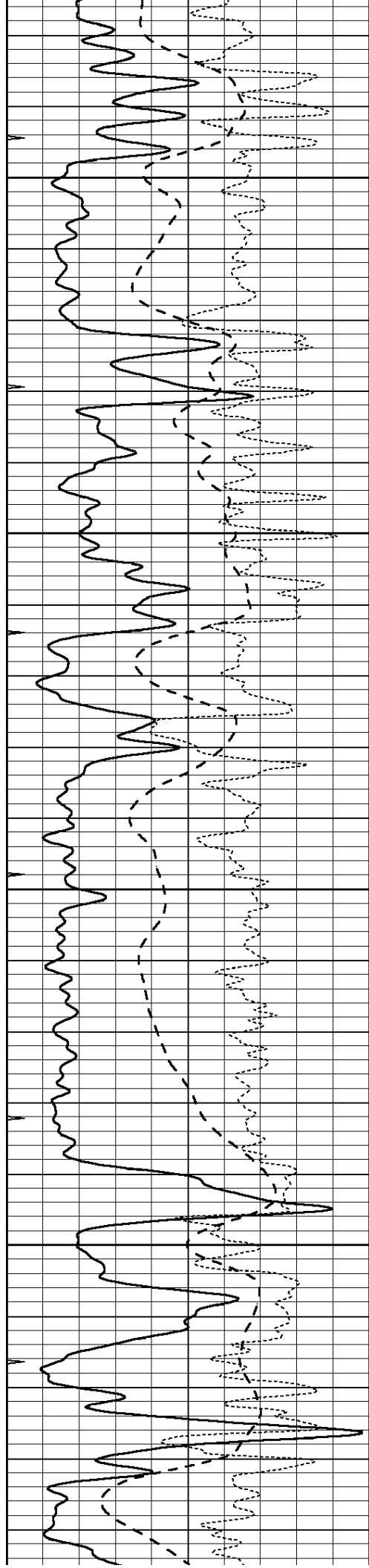
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4350



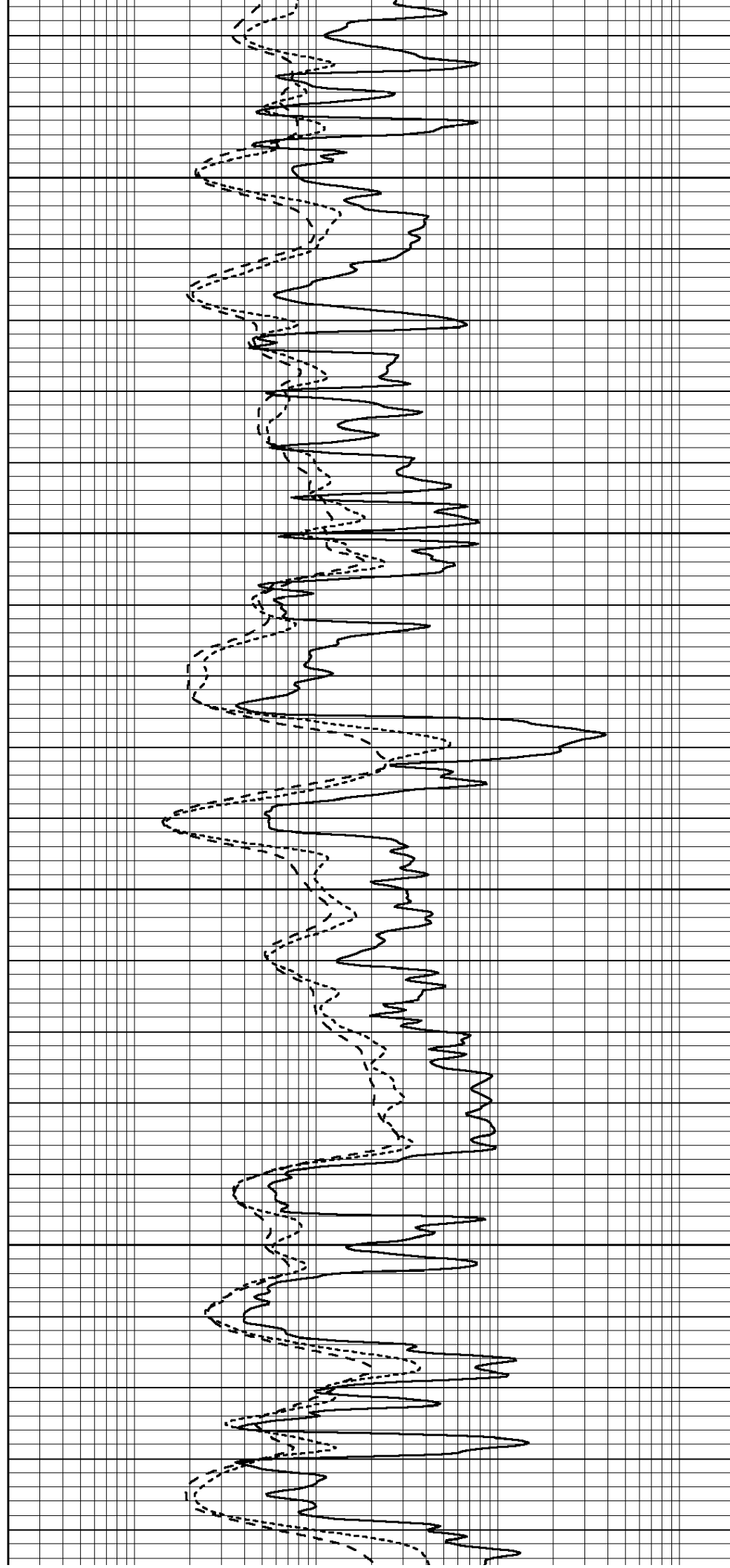


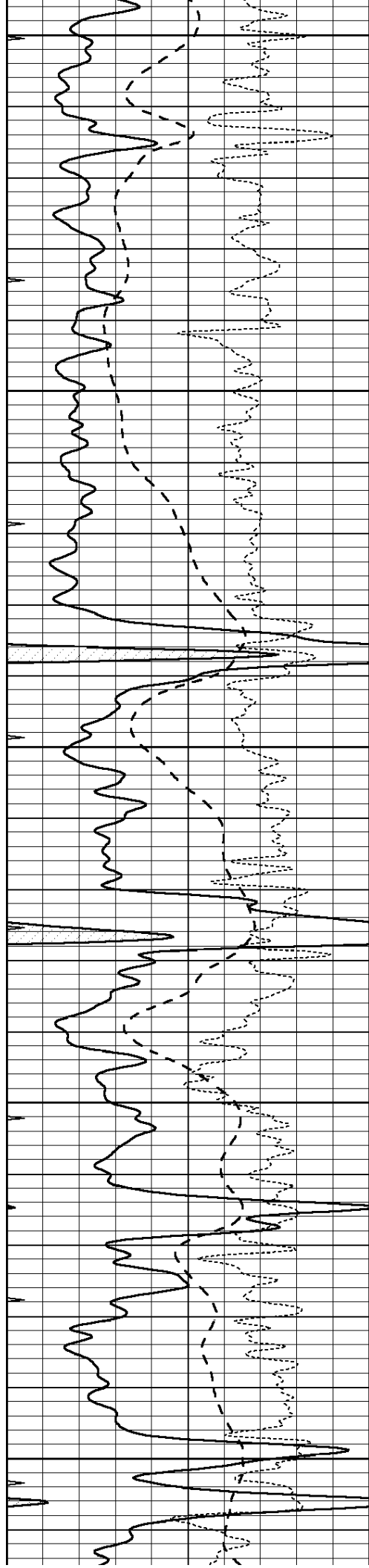
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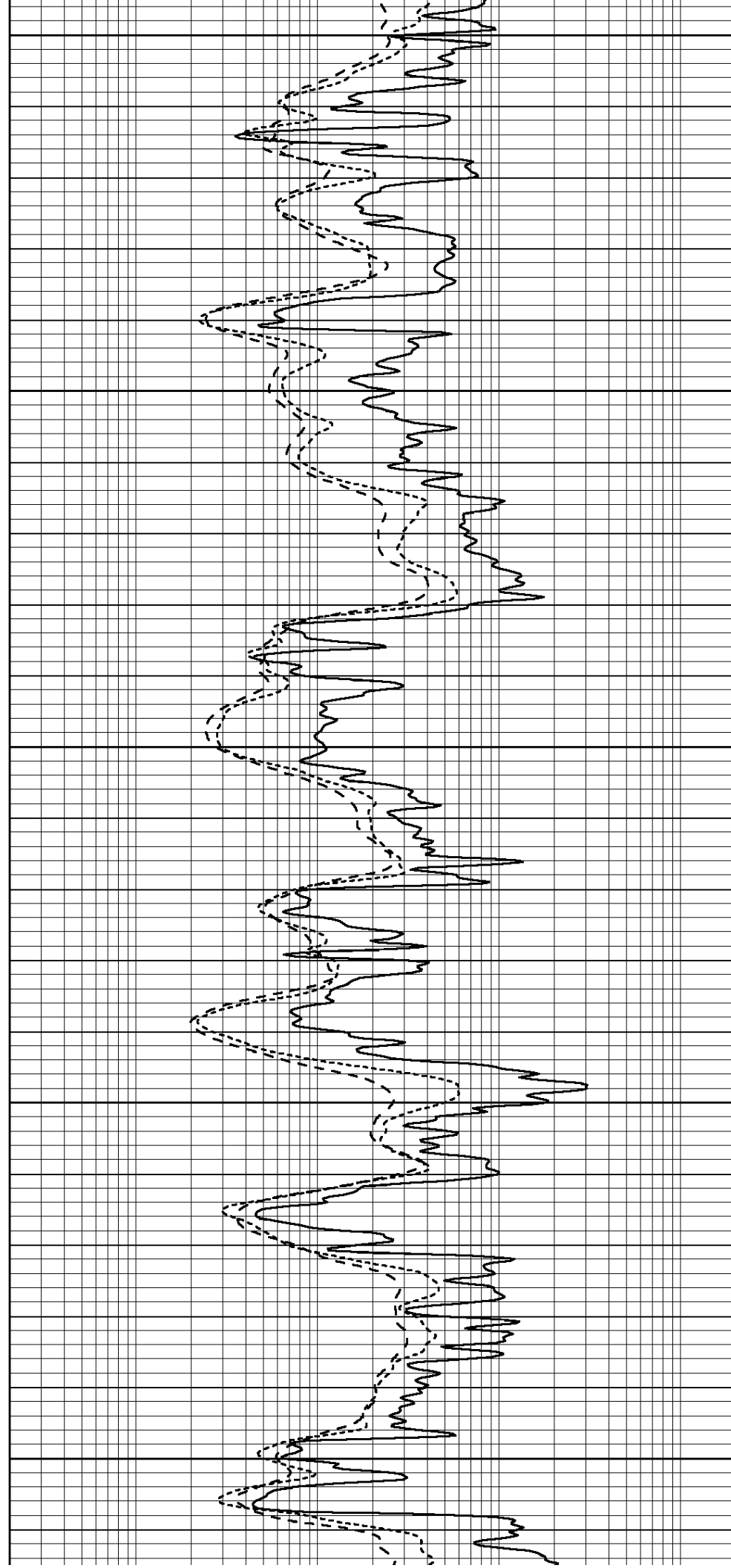
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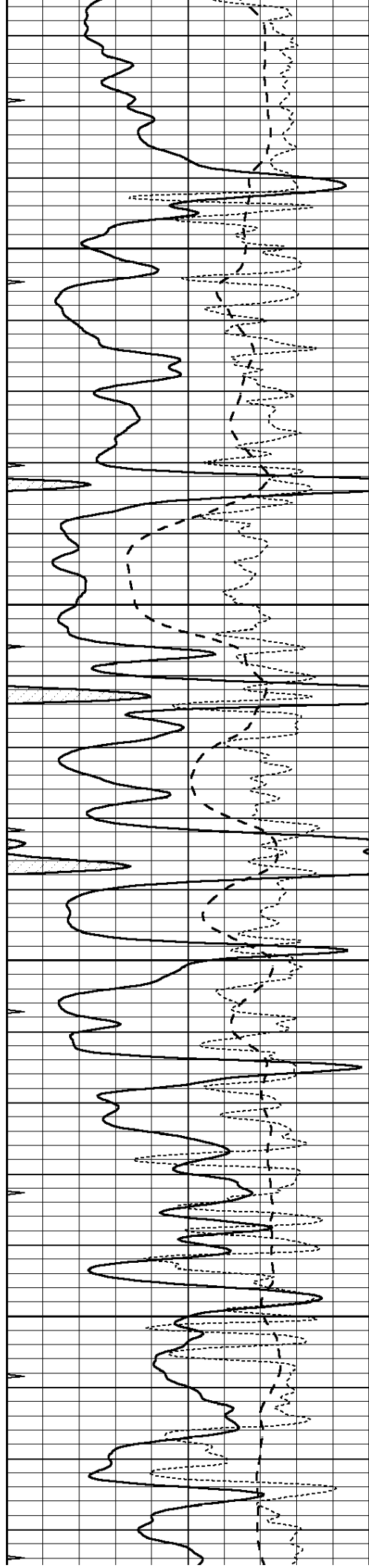
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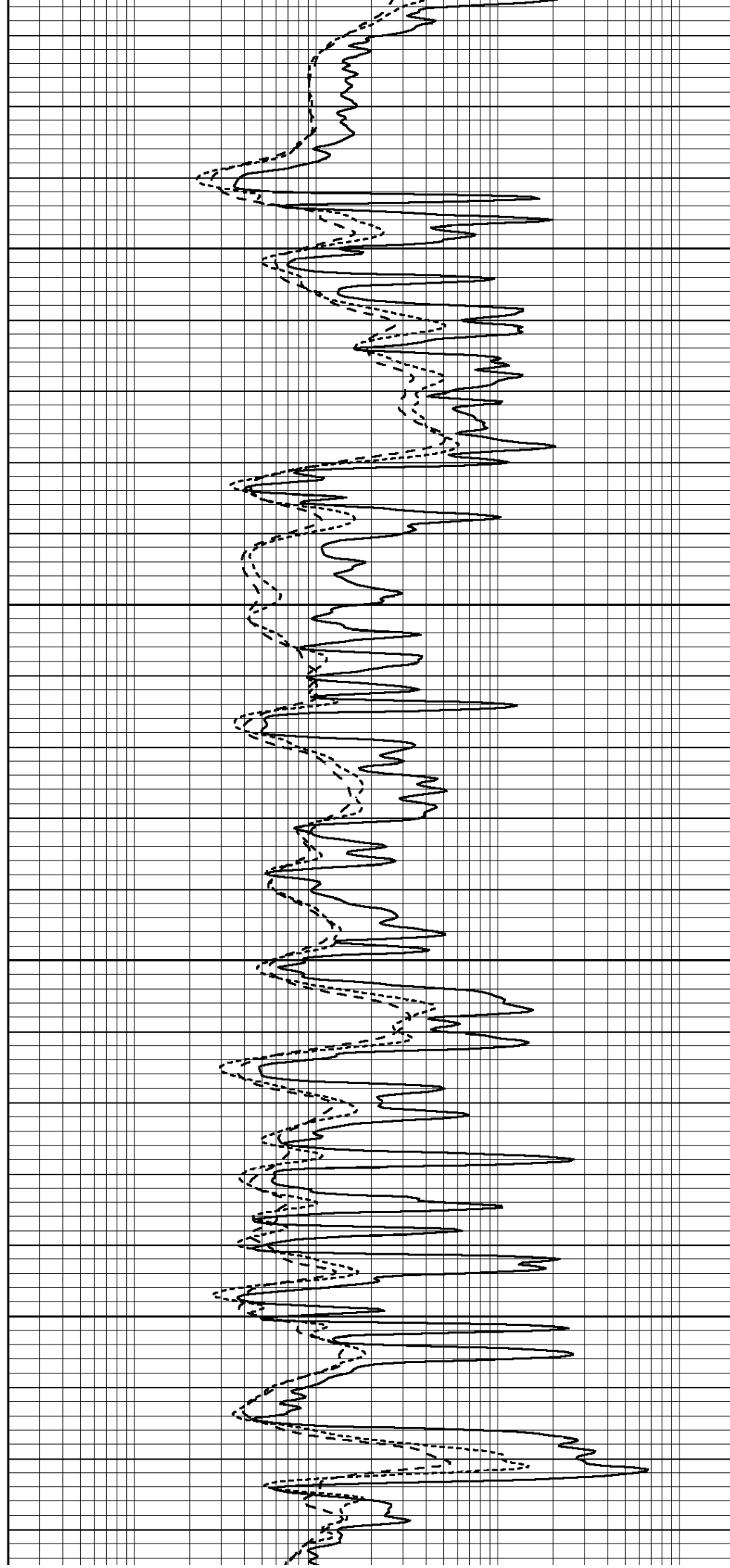


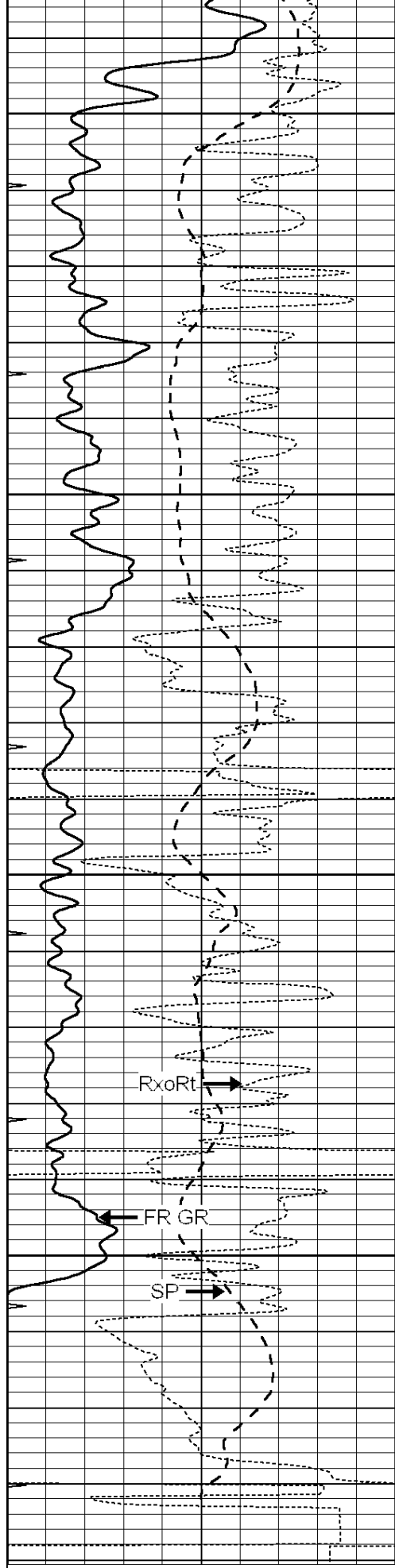
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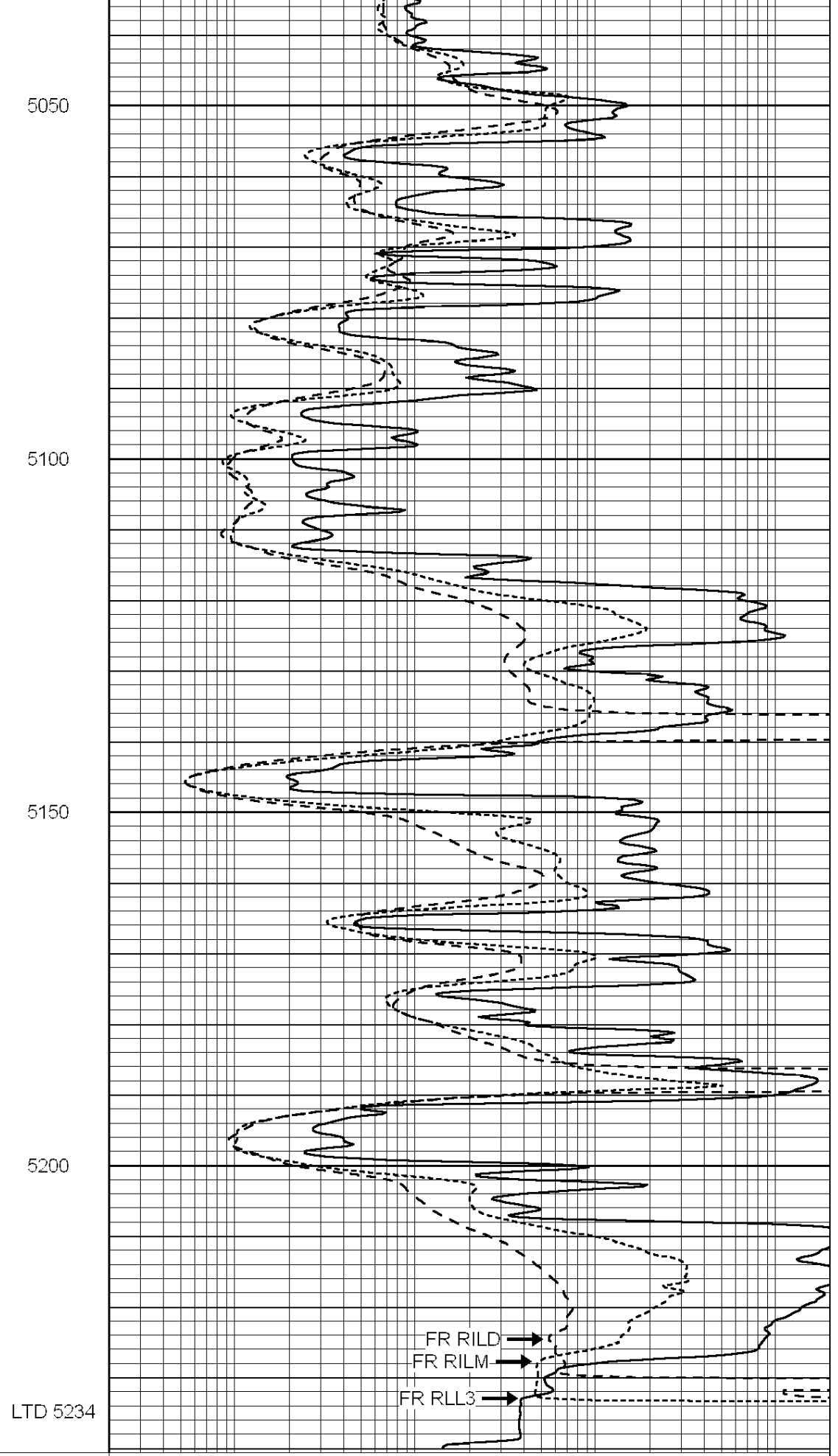
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5000





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



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

5050

5100

5150

5200

LTD 5234

RxoRt

FR GR

SP

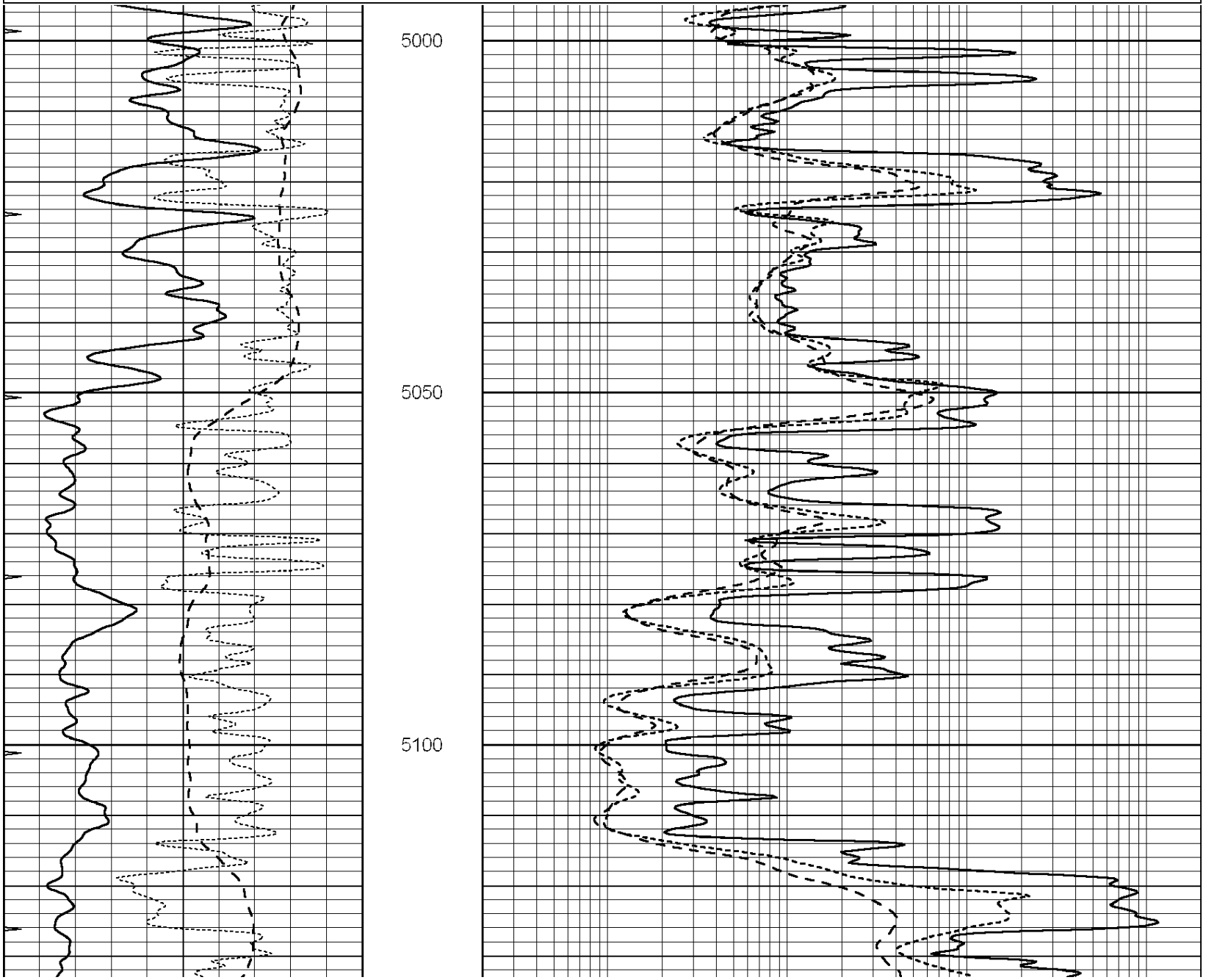
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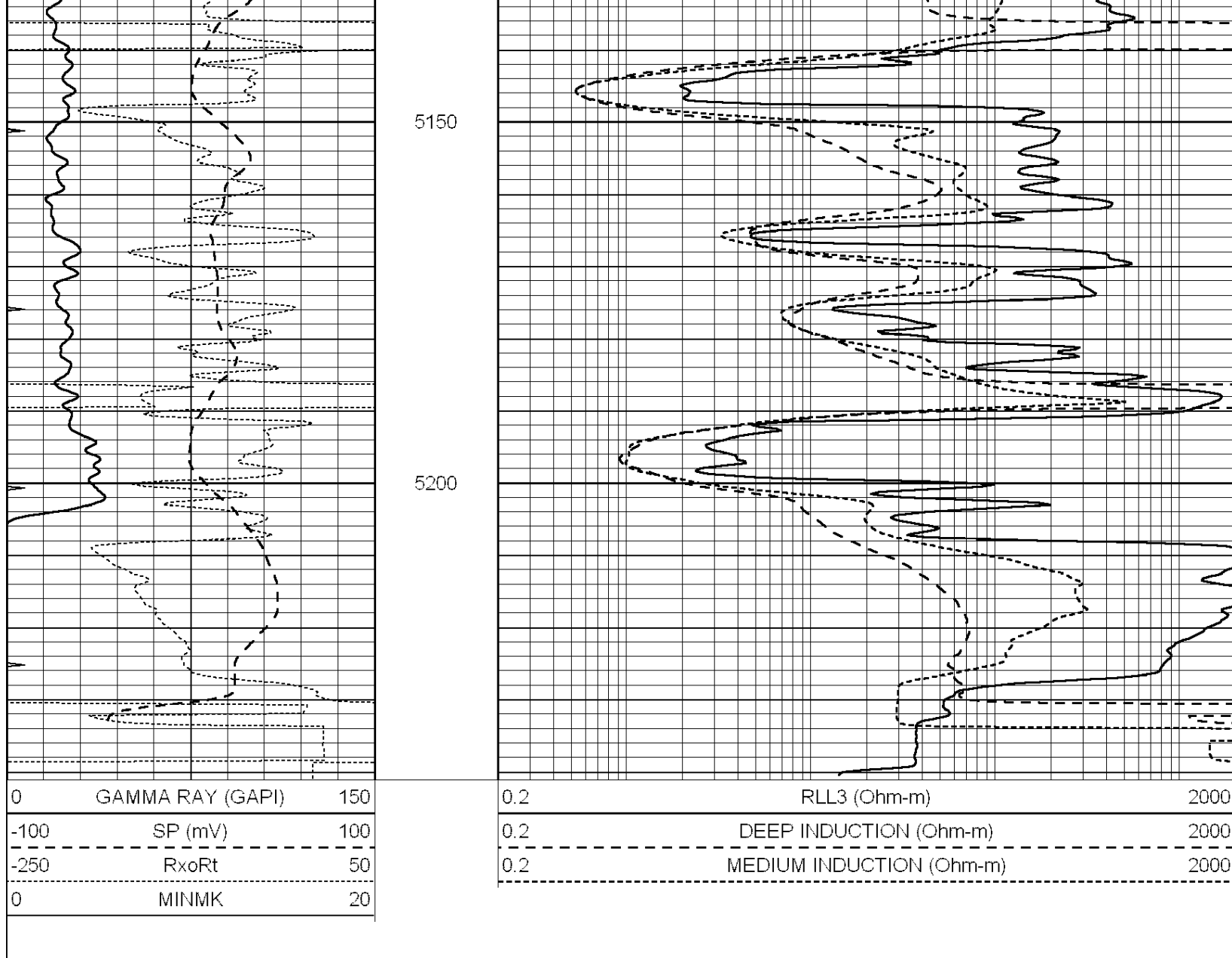
FR RILM

FR RLL3

REPEAT SECTION

Database File: 010670dildn.db					
Dataset Pathname: pass2.1					
Presentation Format: dil					
Dataset Creation: Tue Feb 12 10:10:26 2013 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			





Calibration Report

Database File: 010670dildn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue Feb 12 11:13:35 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Sat Feb 02 01:31:14 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		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	630.000	0.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	700.000	-49.000
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:	Fri Feb 01 23:17:10 2013

Master Calibration			Density		Far Detector	Near Detector	
Magnesium			1.710	g/cc	1205.77	610.74	cps
Aluminum			2.600	g/cc	271.21	419.72	cps
Spine Angle = 75.89			Density/Spine Ratio = 0.579				
	Size		Reading				
Small Ring	6.90	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:	Fri Feb 08 10:03:25 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	2.4000	GAPI/cps