



DUAL INDUCTION LOG

Company WOOLSEY OPERATING COMPANY, INC.

Well McCRAKEN #1

Field WILDCAT

County BARBER State KANSAS

Location: API #: 15-007-24382-0000

987' FNL & 182' FEL
NE - SE - NE - NE

Other Services
CDL/CNL/PE
SONIC

SEC 33 TWP 33S RGE 12W

Elevation

Permanent Datum GROUND LEVEL Elevation 1559
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING

K.B. 1572
D.F. 1570
G.L. 1559

Date	6/19/21		
Run Number	ONE		
Depth Driller	5285		
Depth Logger	5287		
Bottom Logged Interval	5285		
Top Log Interval	00		
Casing Driller	8 5/8" @ 269'		
Casing Logger	269		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 9,500 PPM	
Density / Viscosity	9.4/57		
pH / Fluid Loss	9.0/10.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.510 @ 101F		
Rmf @ Meas. Temp	.383 @ 101F		
Rmc @ Meas. Temp	.612 @ 101F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.402 @ 128F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	9:00 A.M.		
Maximum Recorded Temperature	128F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BILL KLAVER		

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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.

15-007-24382-0000

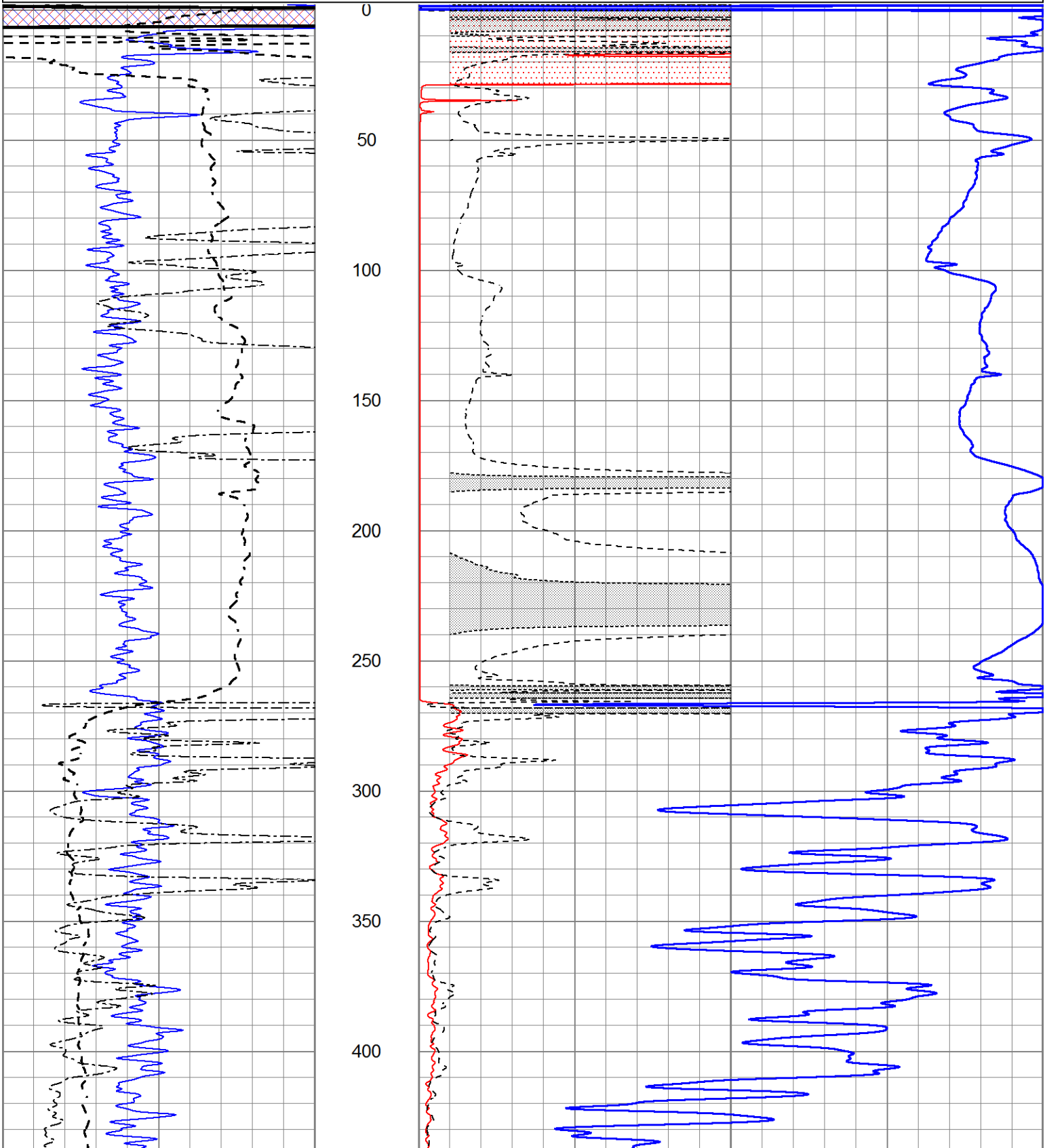
Comments

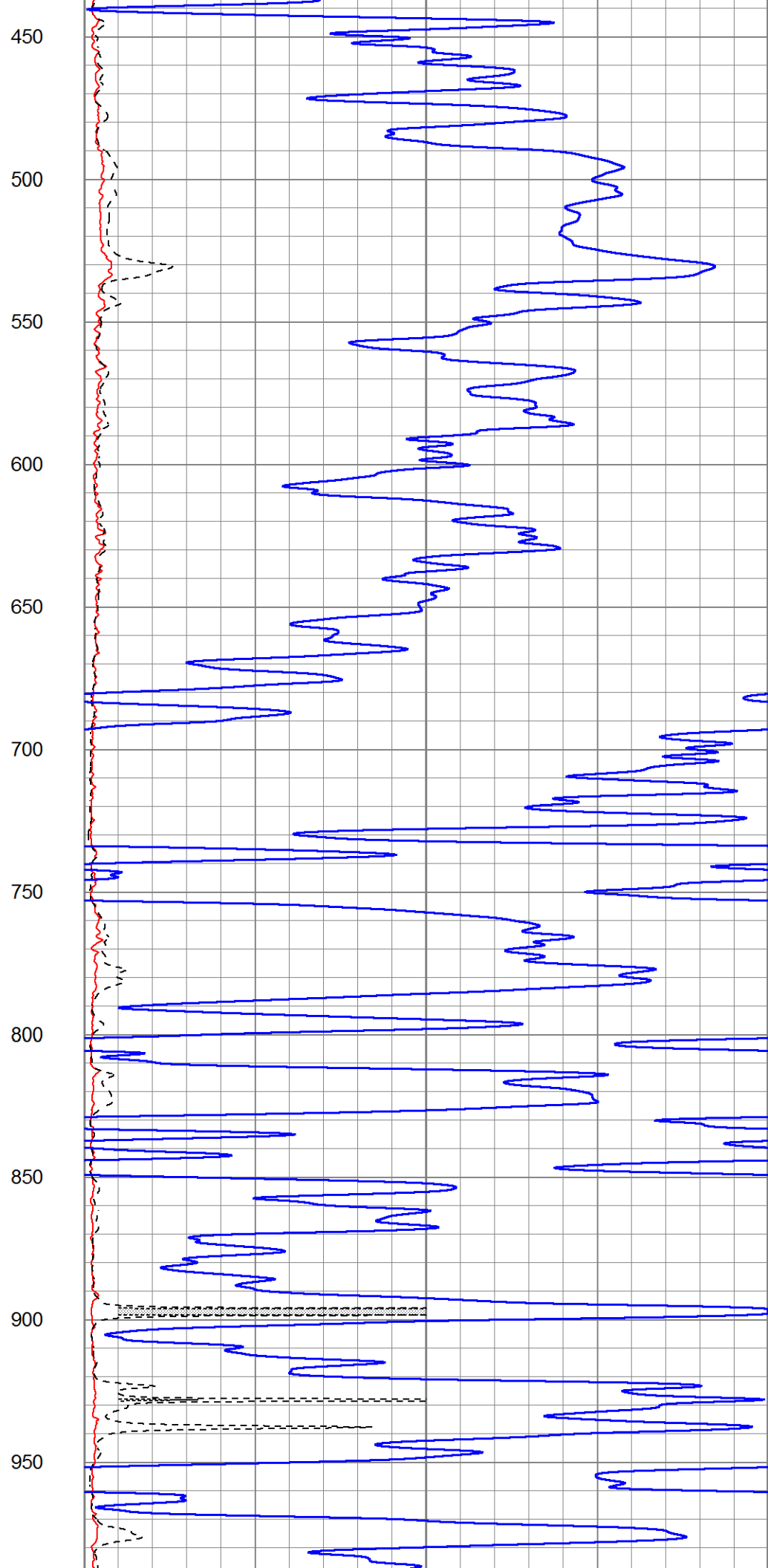
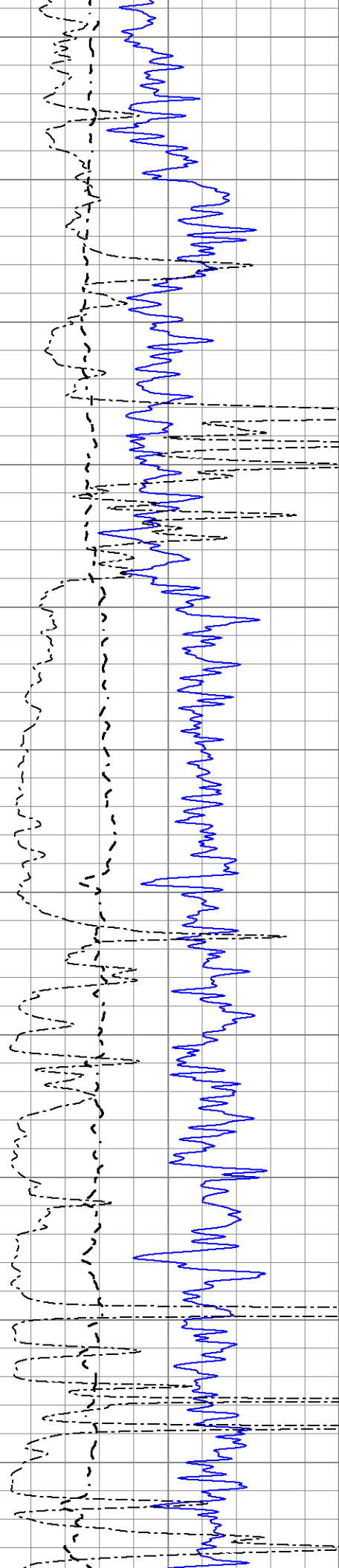
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
MEDICINE LODGE, KS., 9S. ON HWY 281 TO "GERLANE RD", 1W. TO "ROUNDUP", 2 1/2S.
(WINDING RD.) W. INTO AT FARMSTEAD 1 1/2 MILES

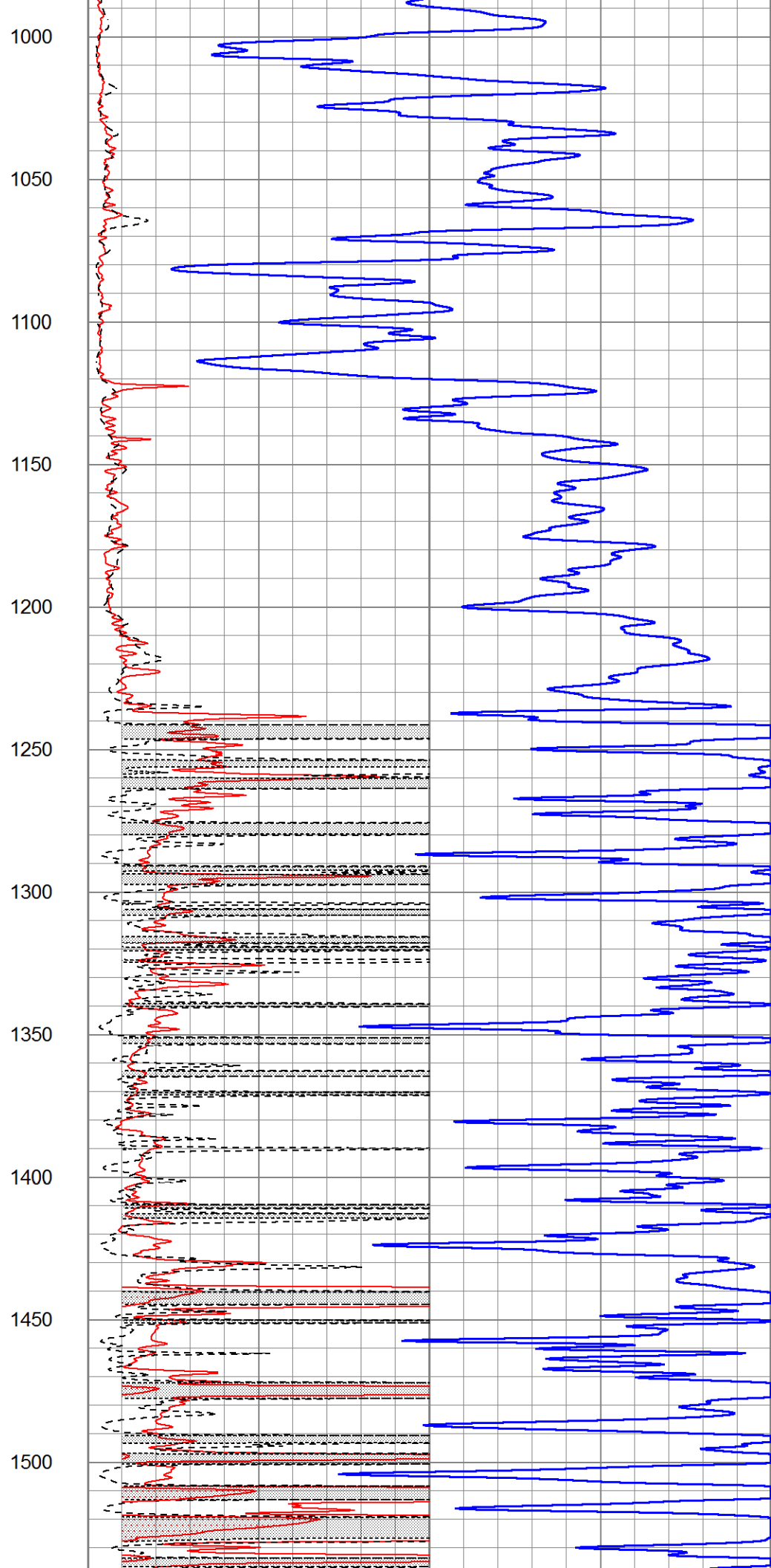
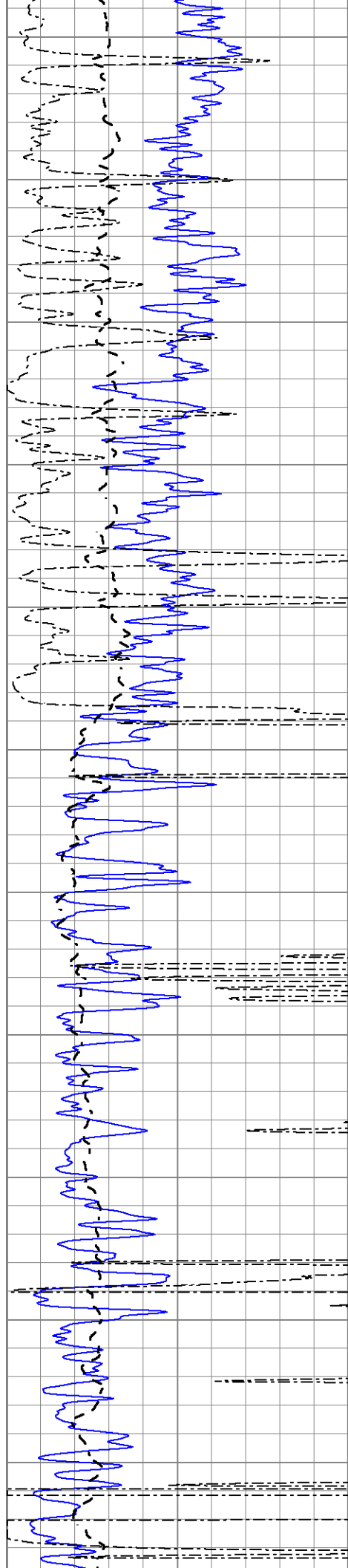


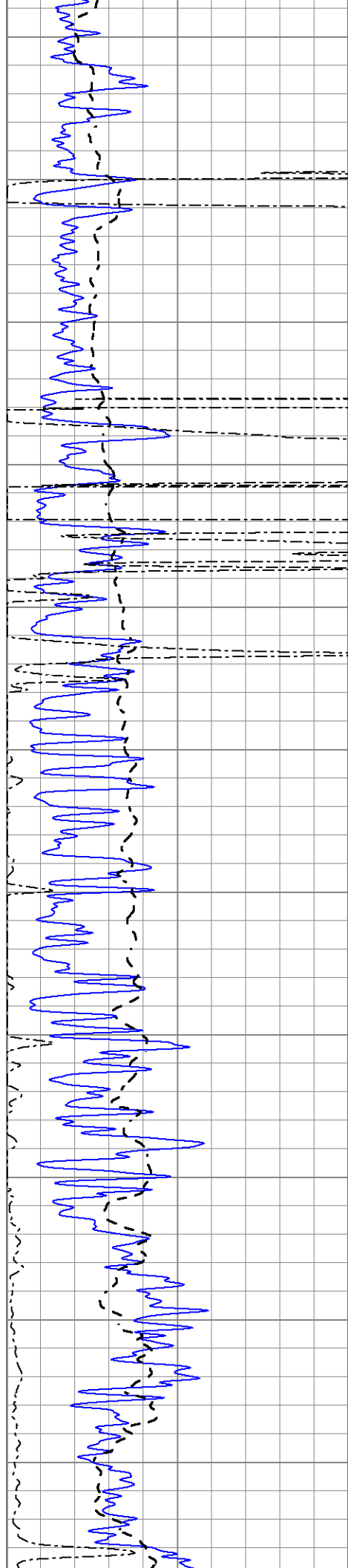
MAIN SECTION

0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500









1550

1600

1650

1700

1750

1800

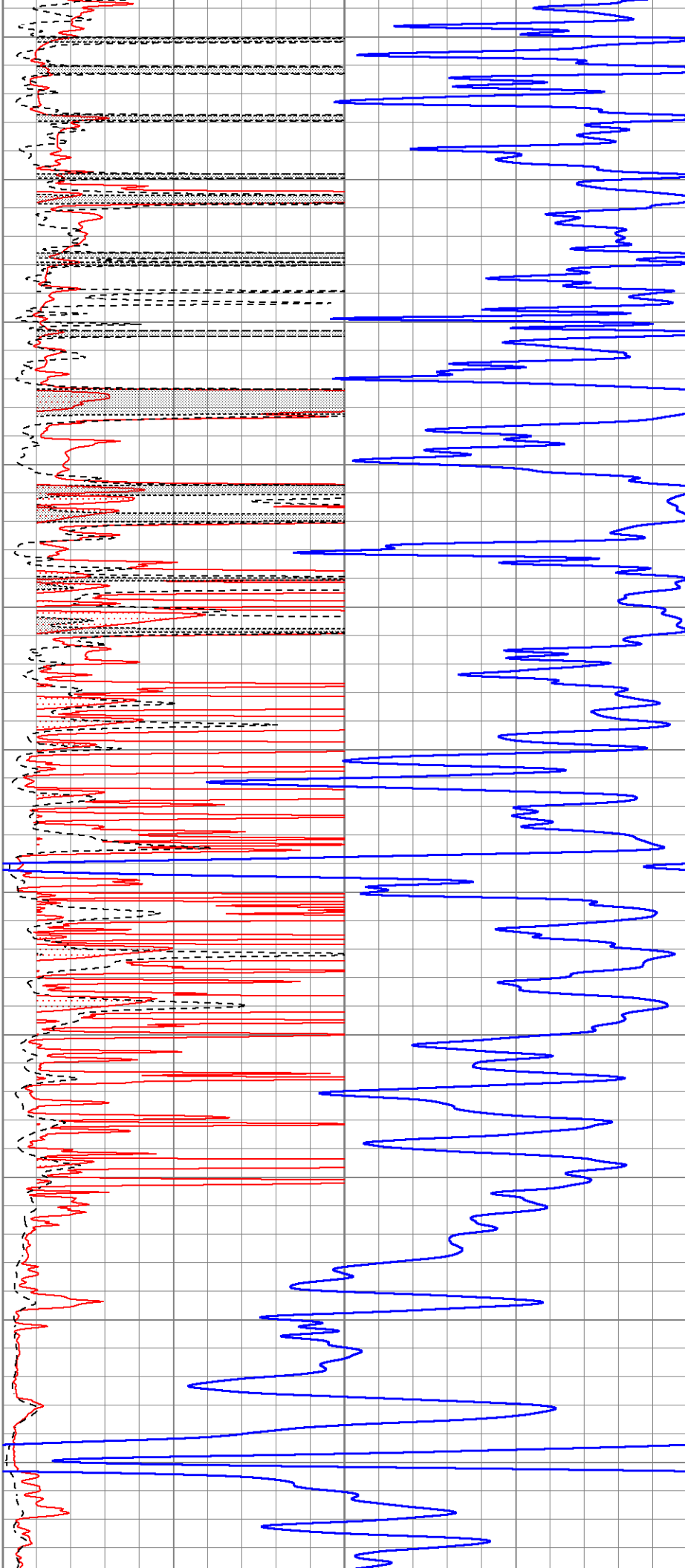
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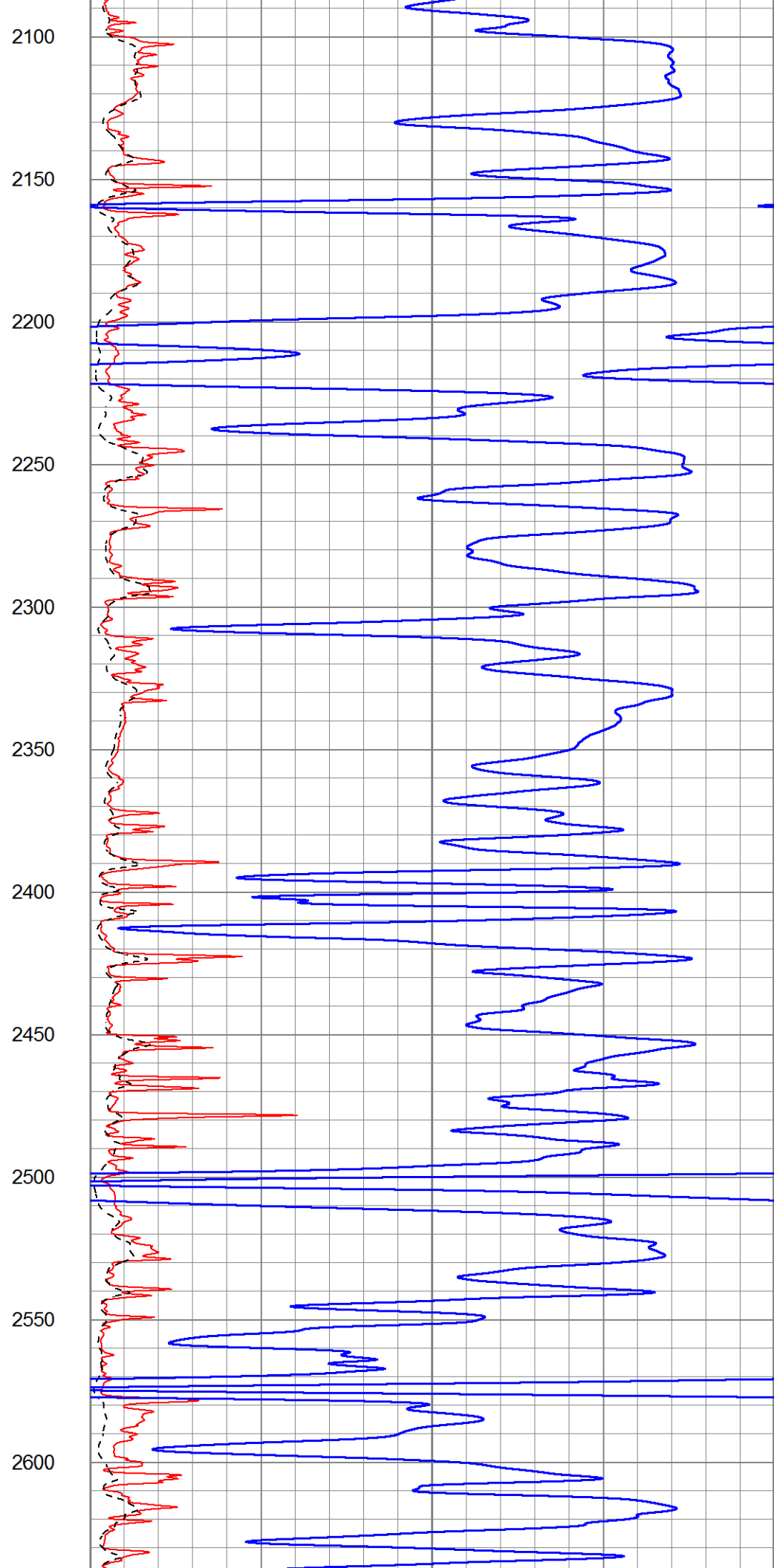
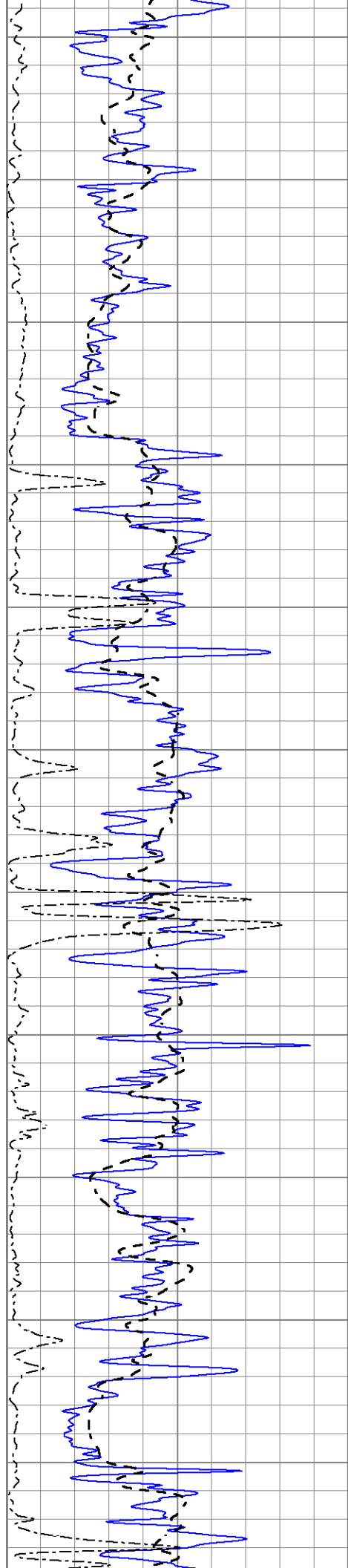
1900

1950

2000

2050





2650

2700

2750

2800

2850

2900

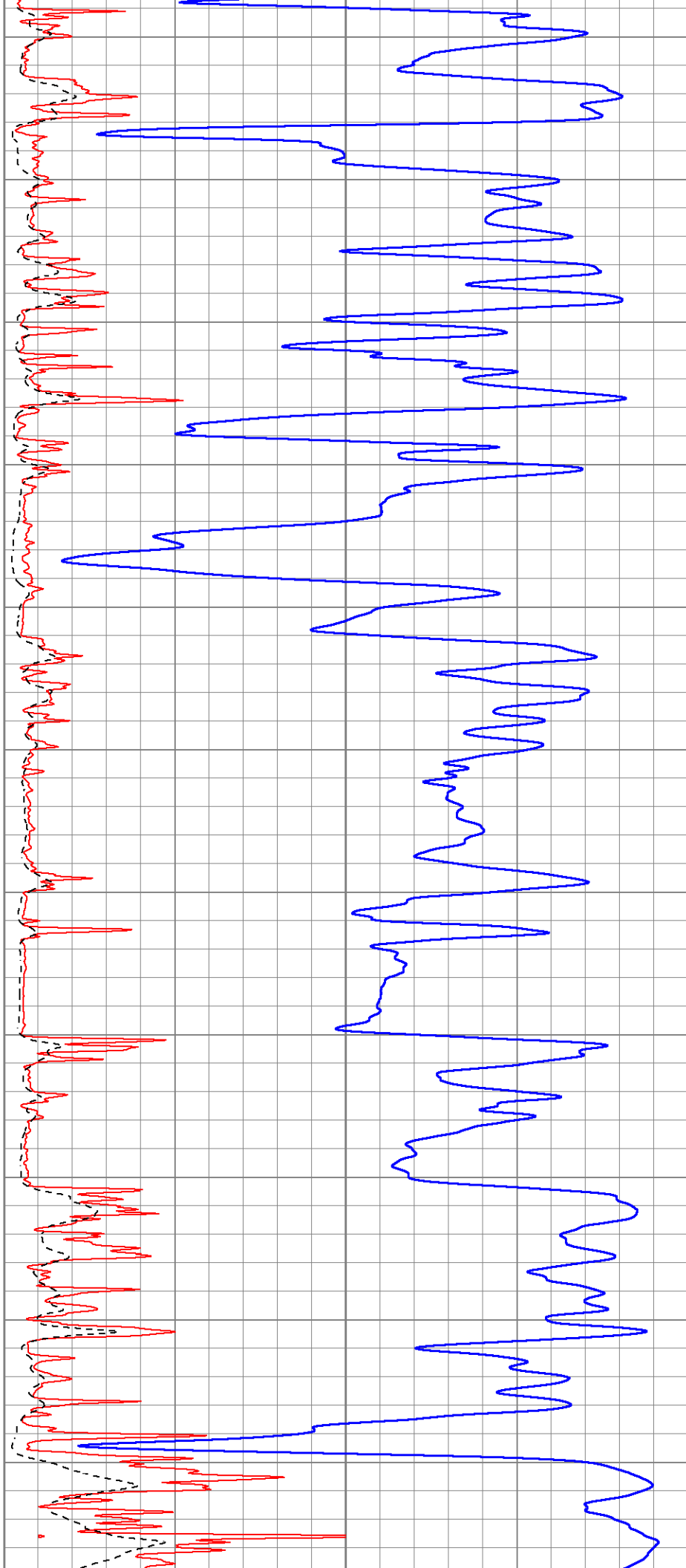
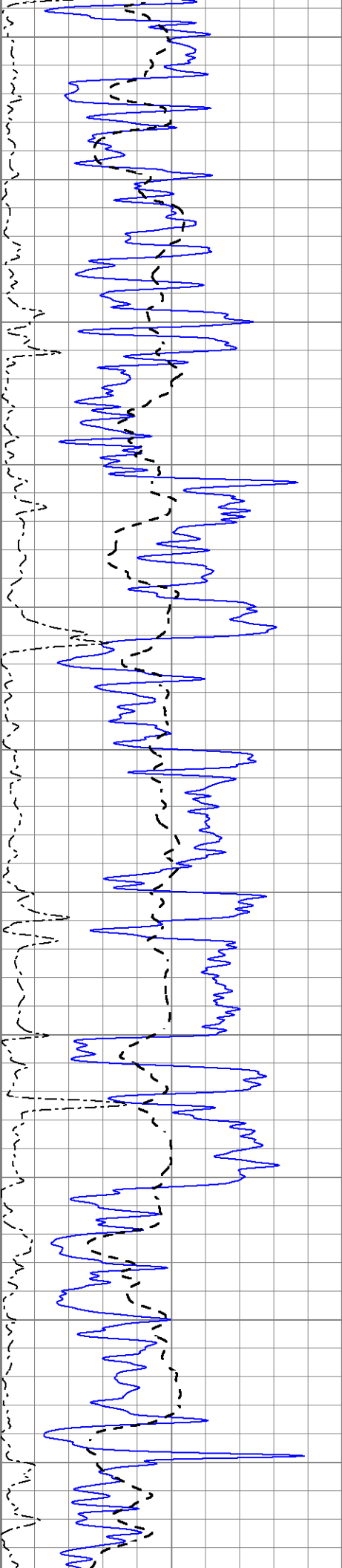
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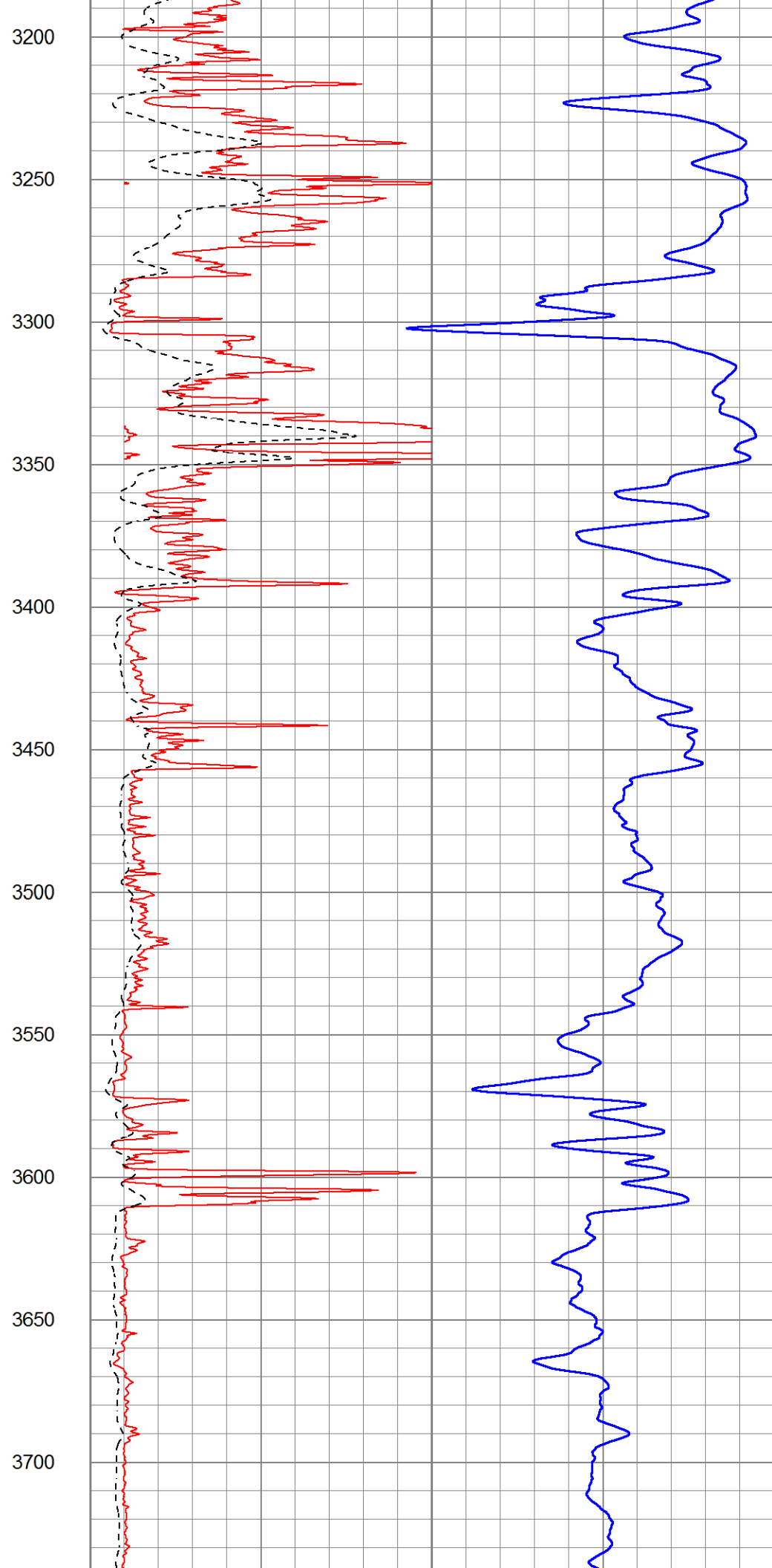
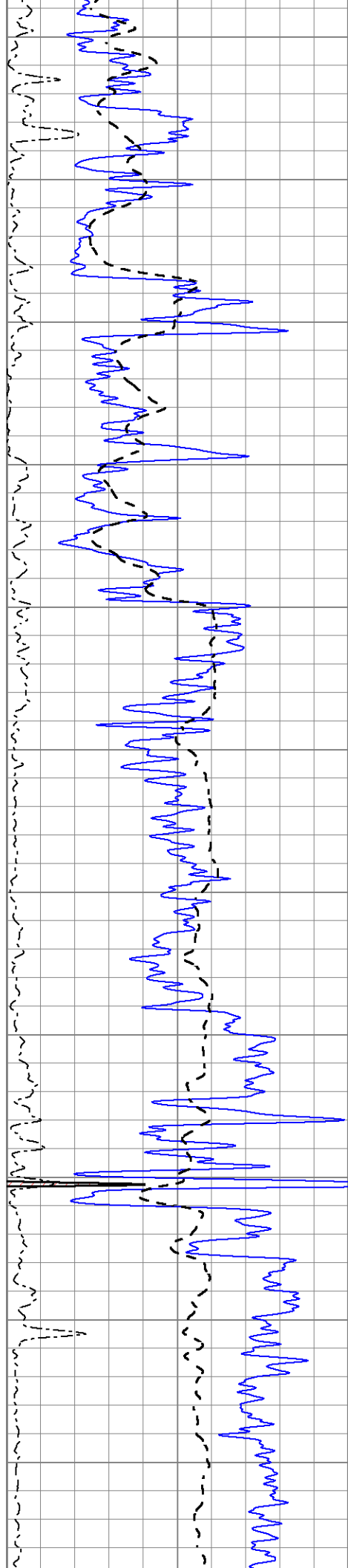
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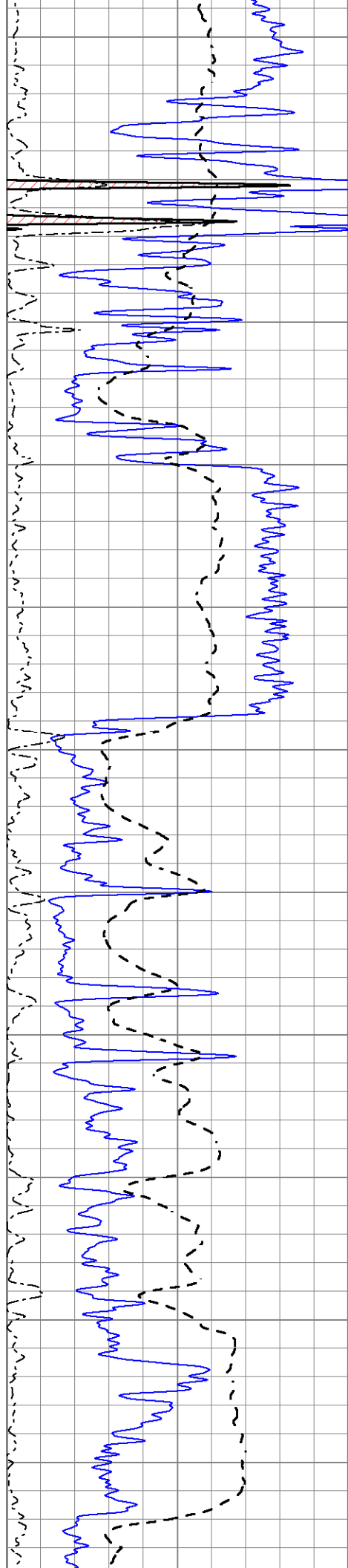
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3100

3150







3750

3800

3850

3900

3950

4000

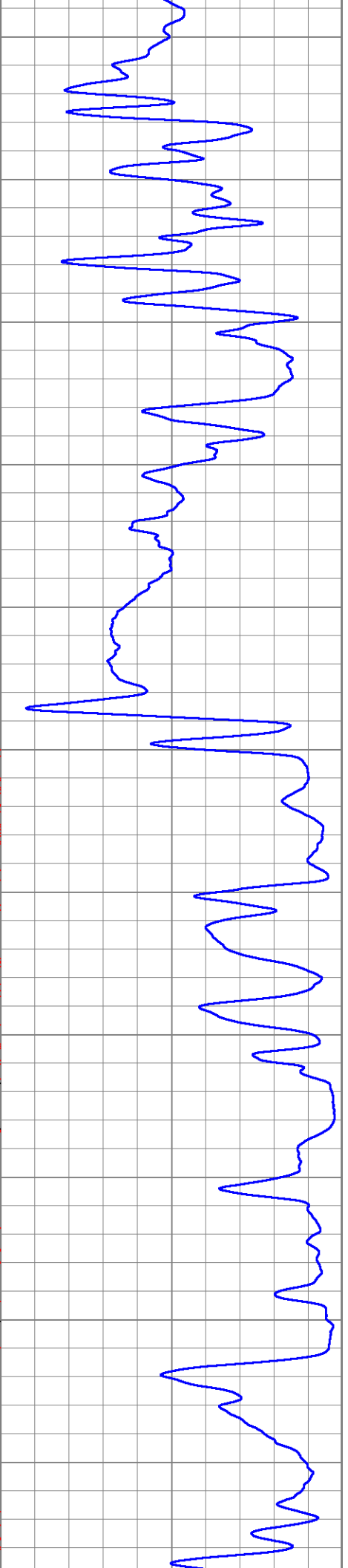
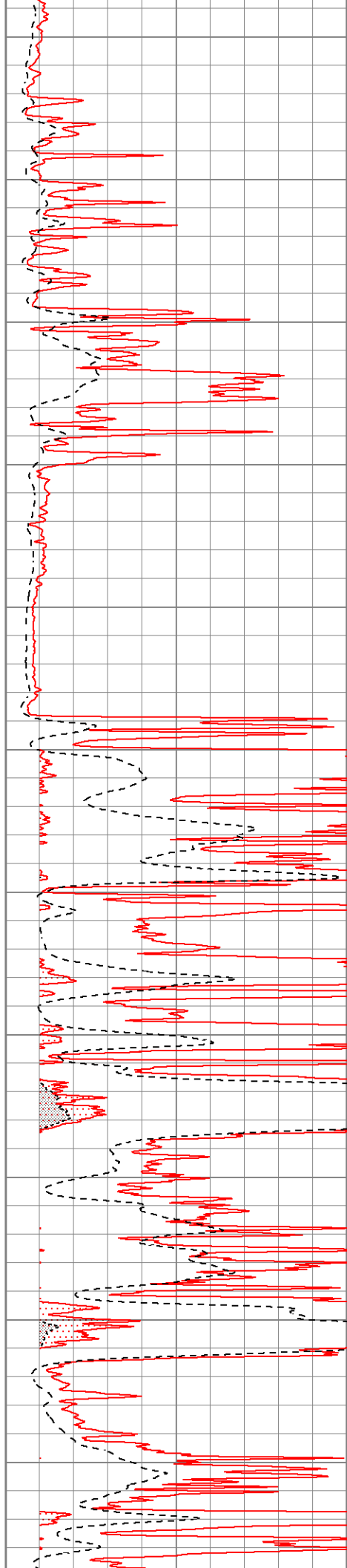
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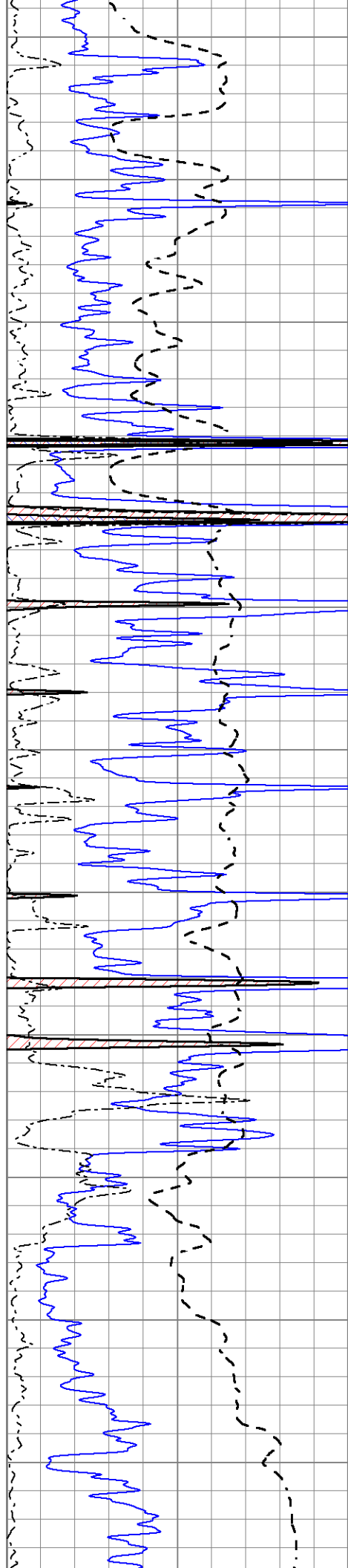
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4150

4200

4250





4300

4350

4400

4450

4500

4550

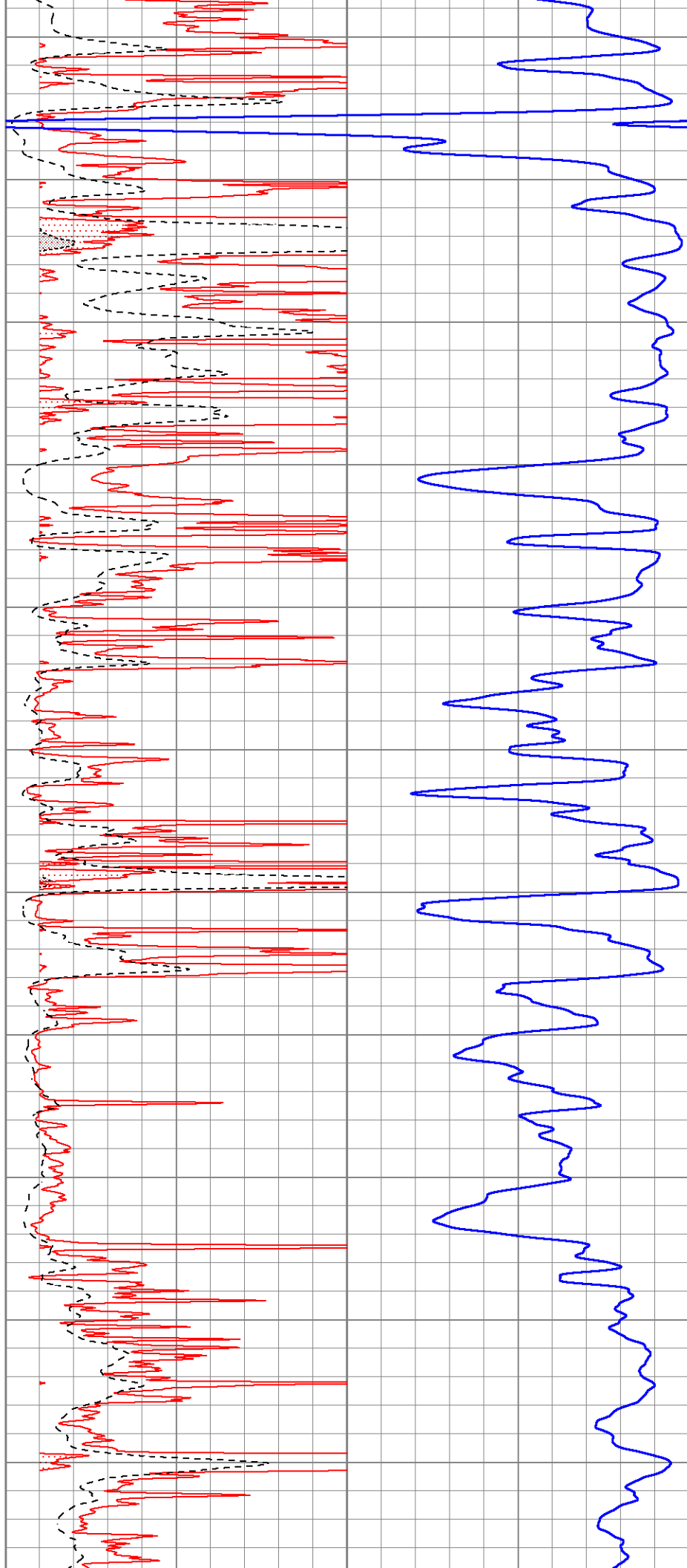
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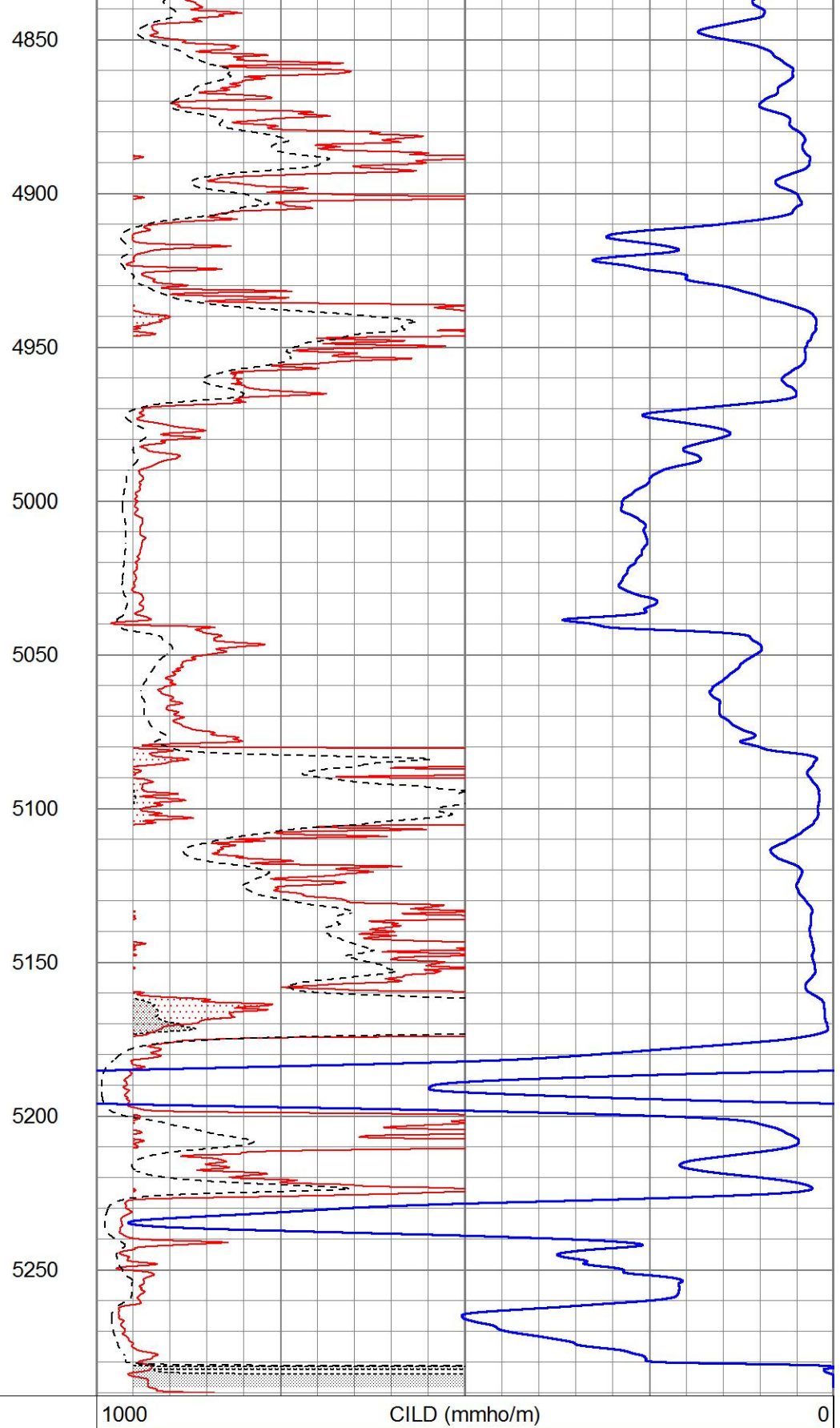
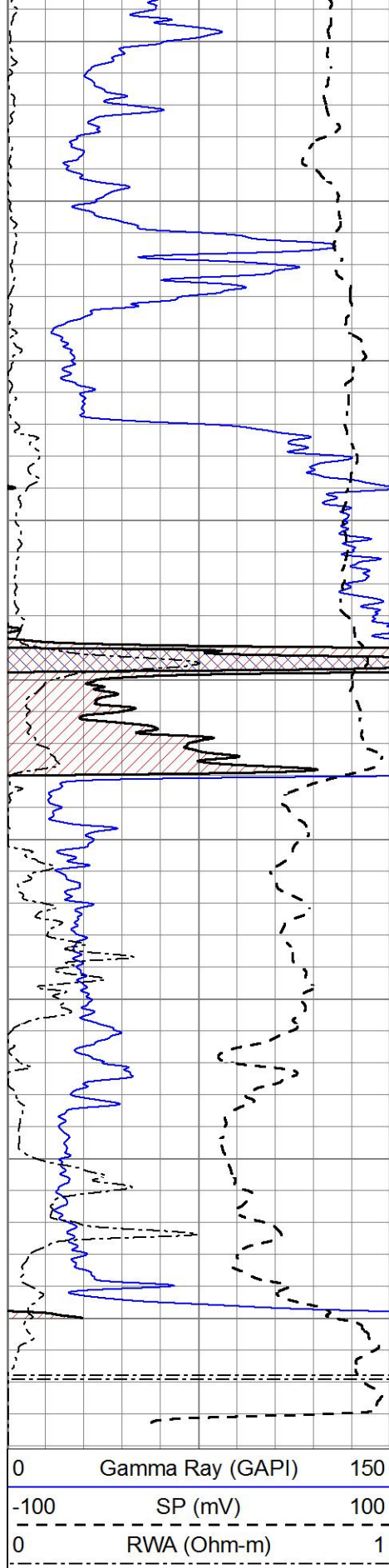
4650

4700

4750

4800





0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



MAIN SECTION

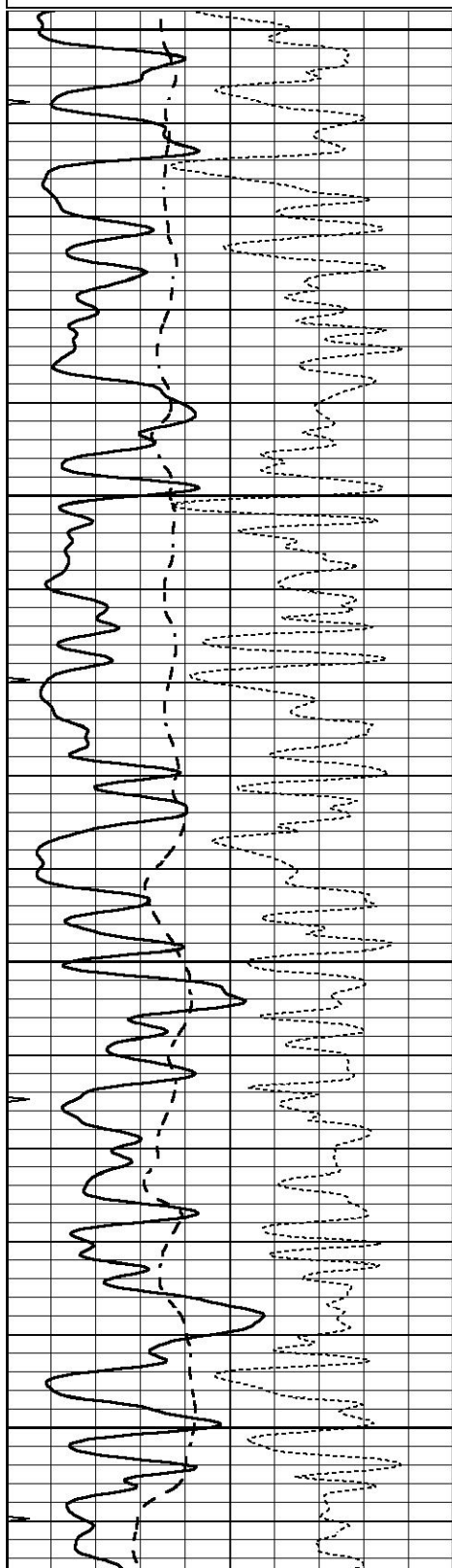


MAIN SECTION

Database File 5577pe.db
Dataset Pathname pass3.3M
Presentation Format _dil
Dataset Creation Sat Jun 19 11:09:07 2021
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

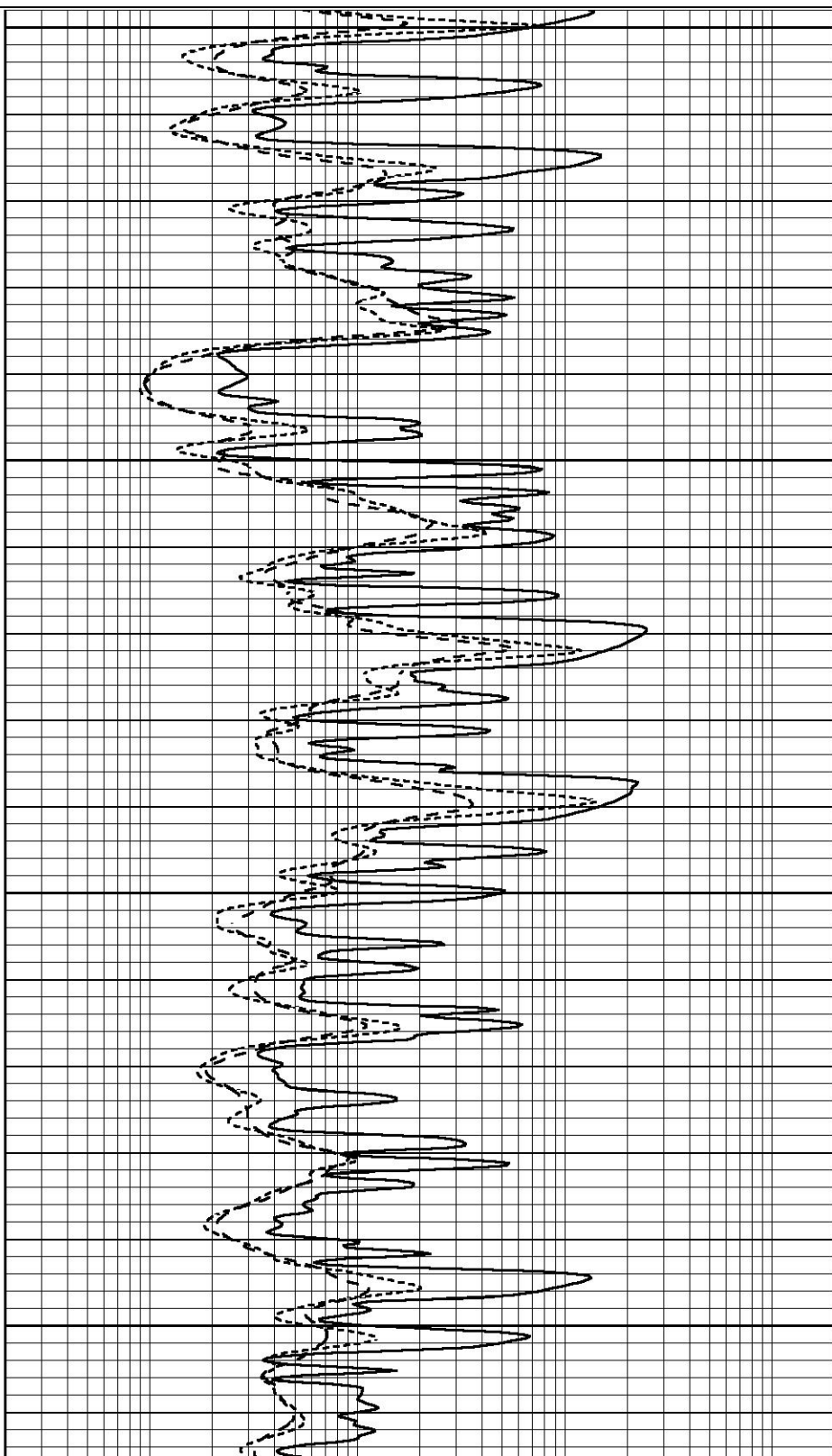


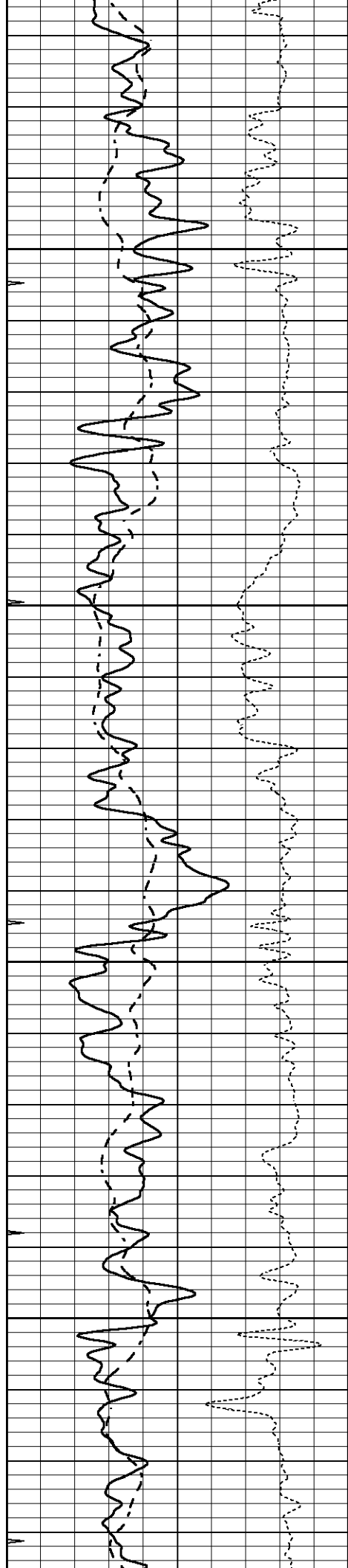
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1850

1900

1950



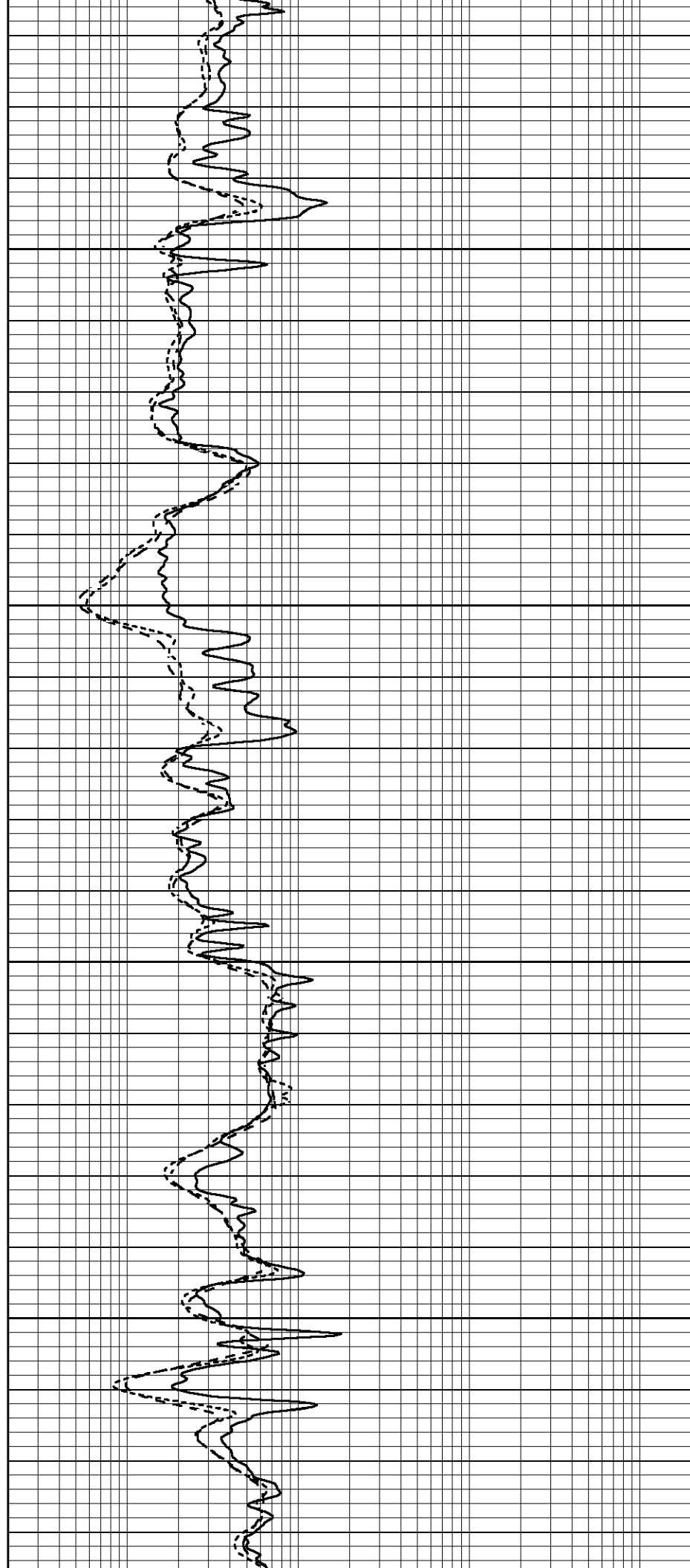


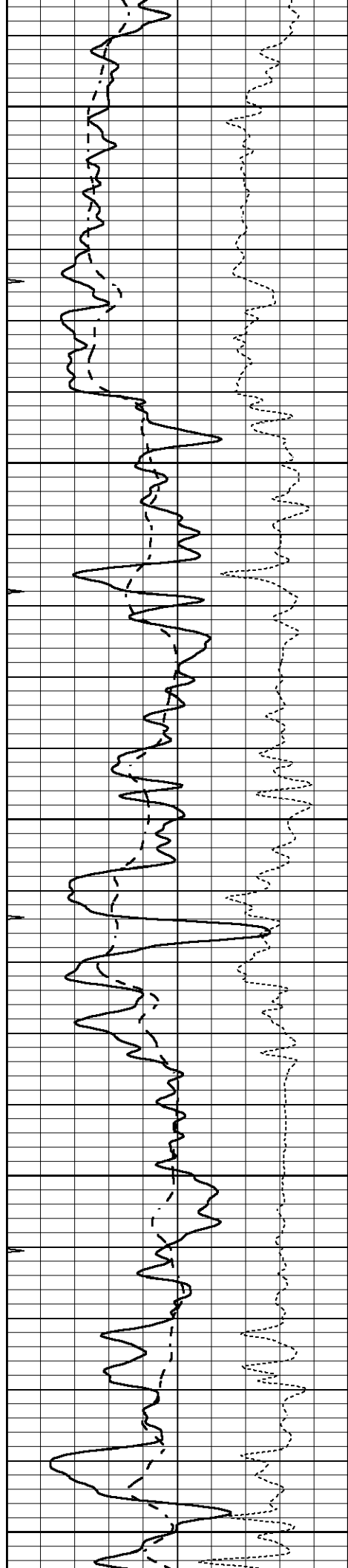
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2050

2100

2150





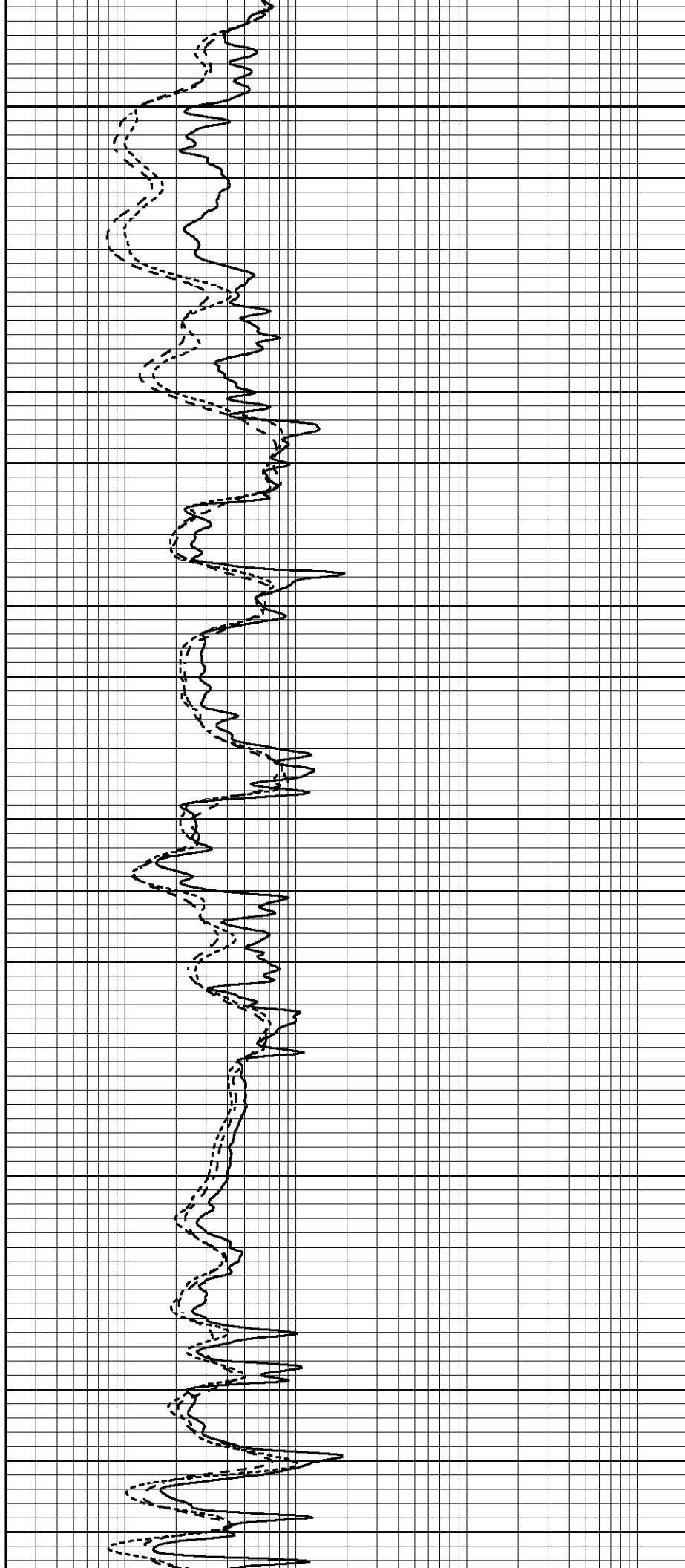
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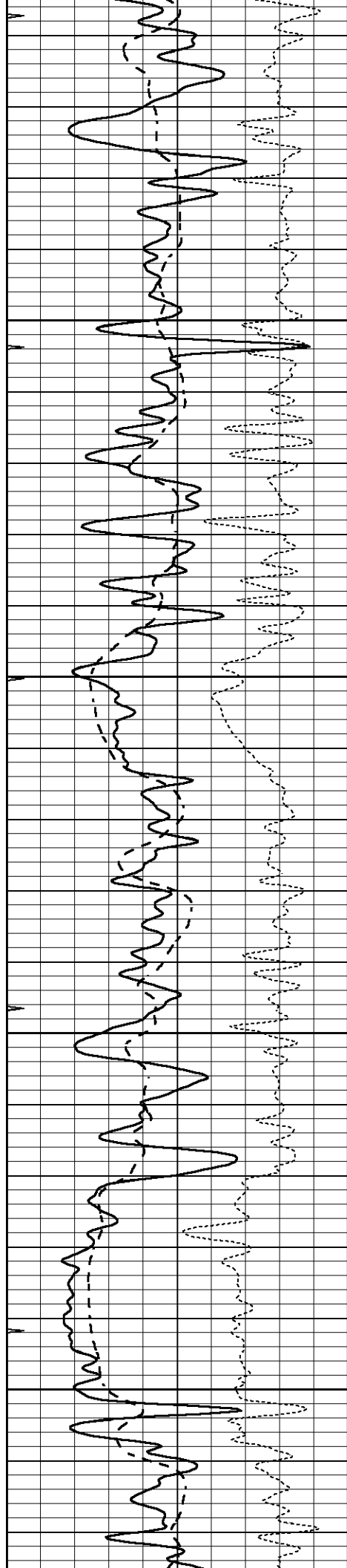
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2300

2350

2400



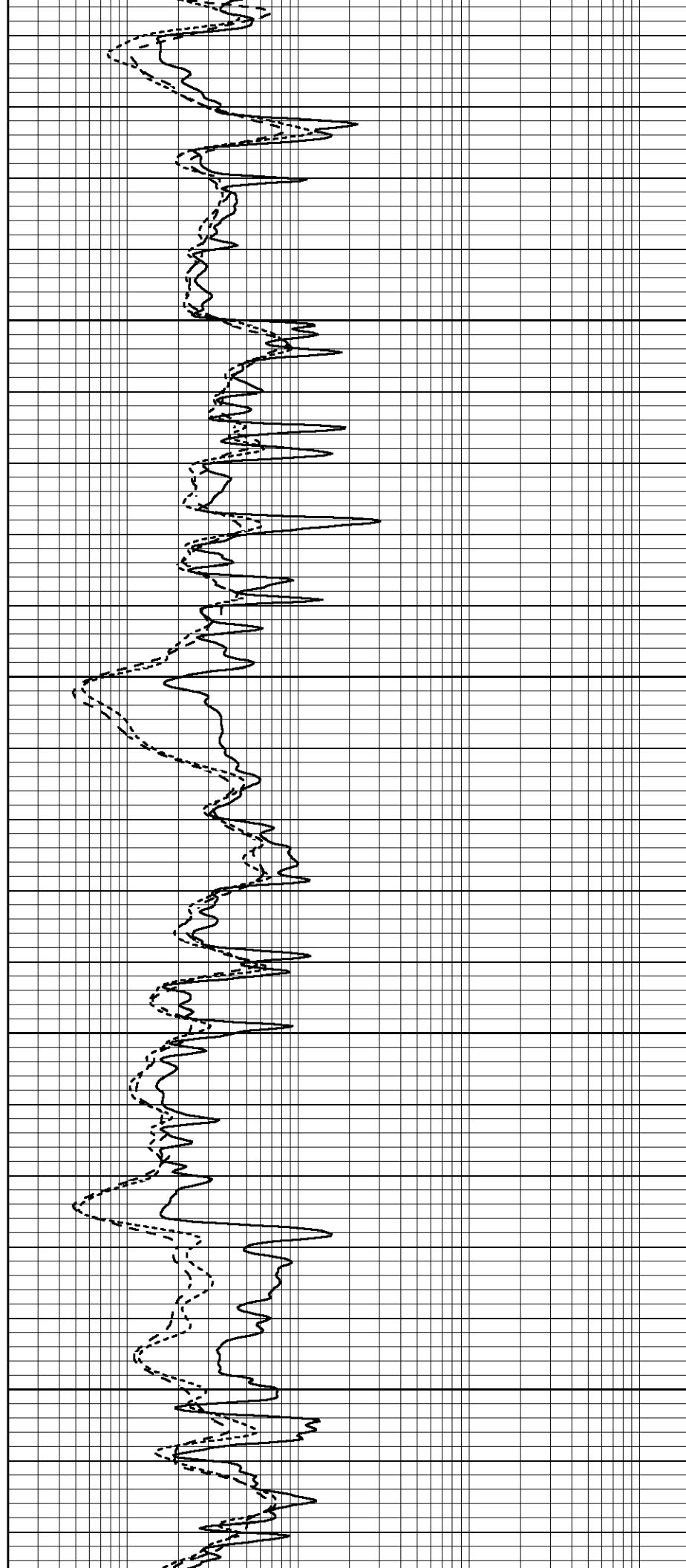


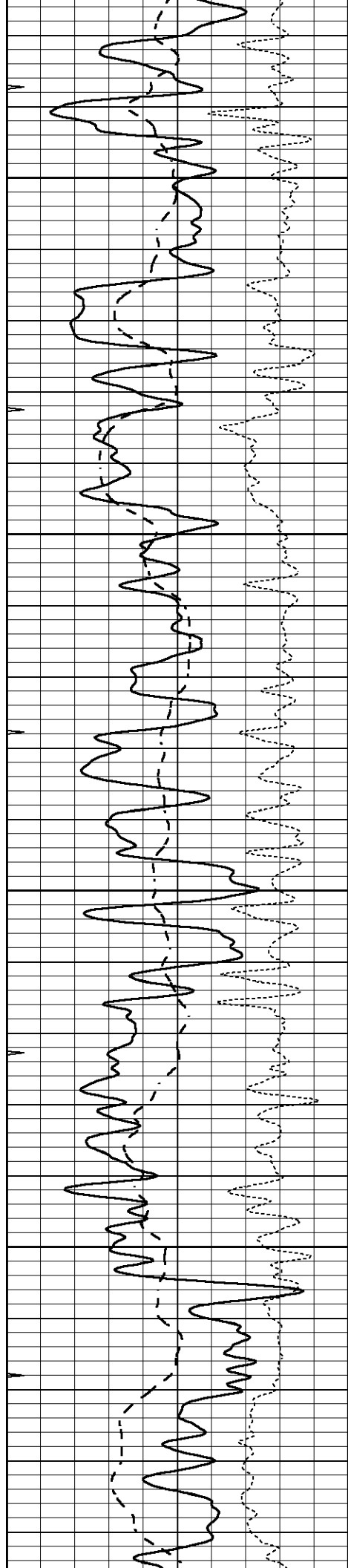
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2550

2600



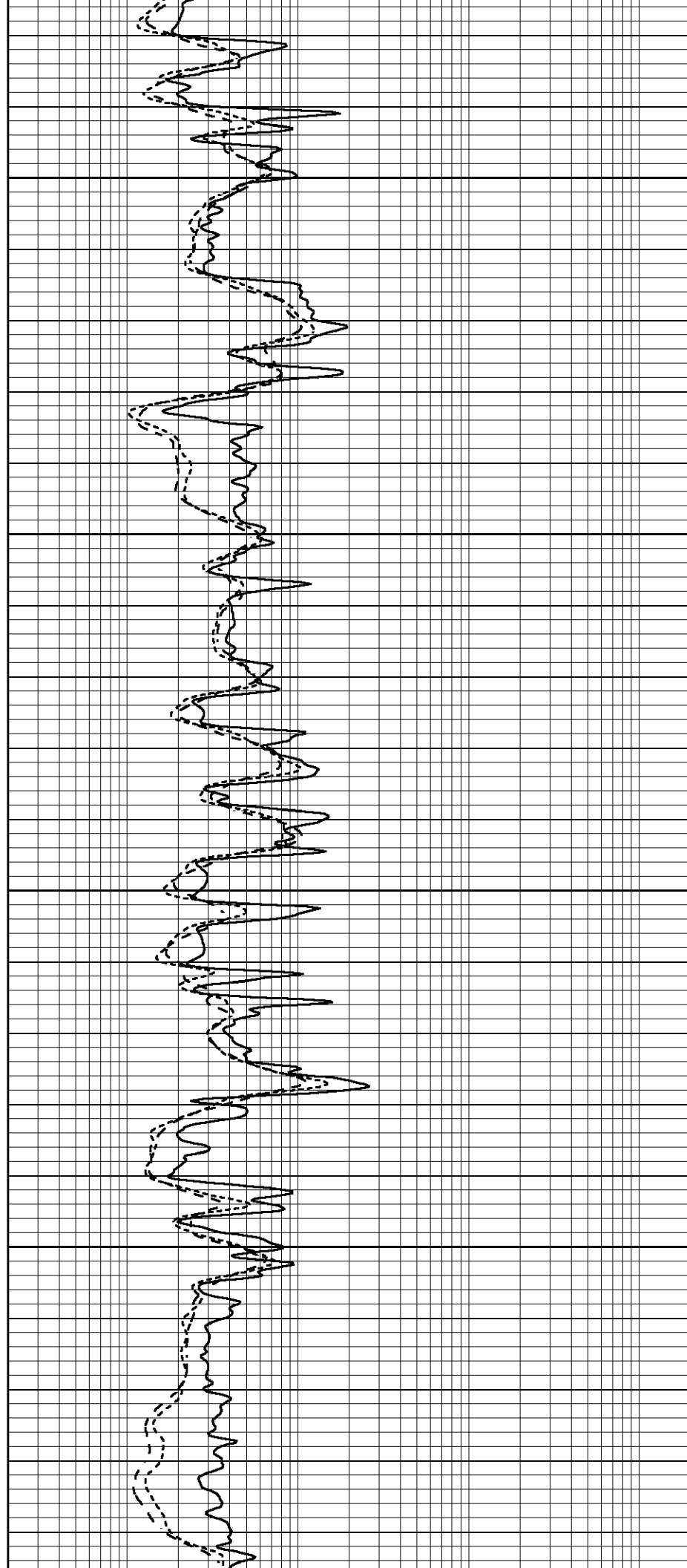


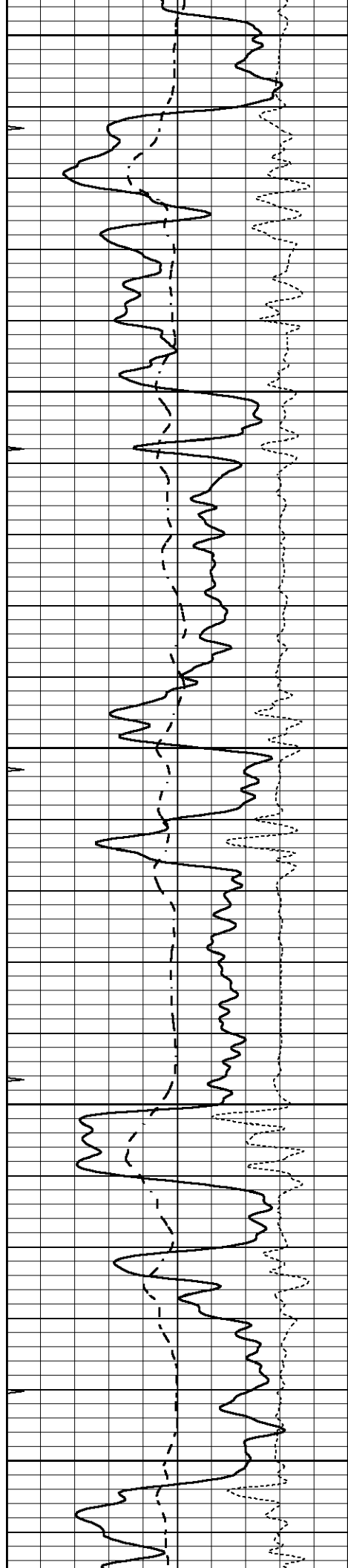
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2800





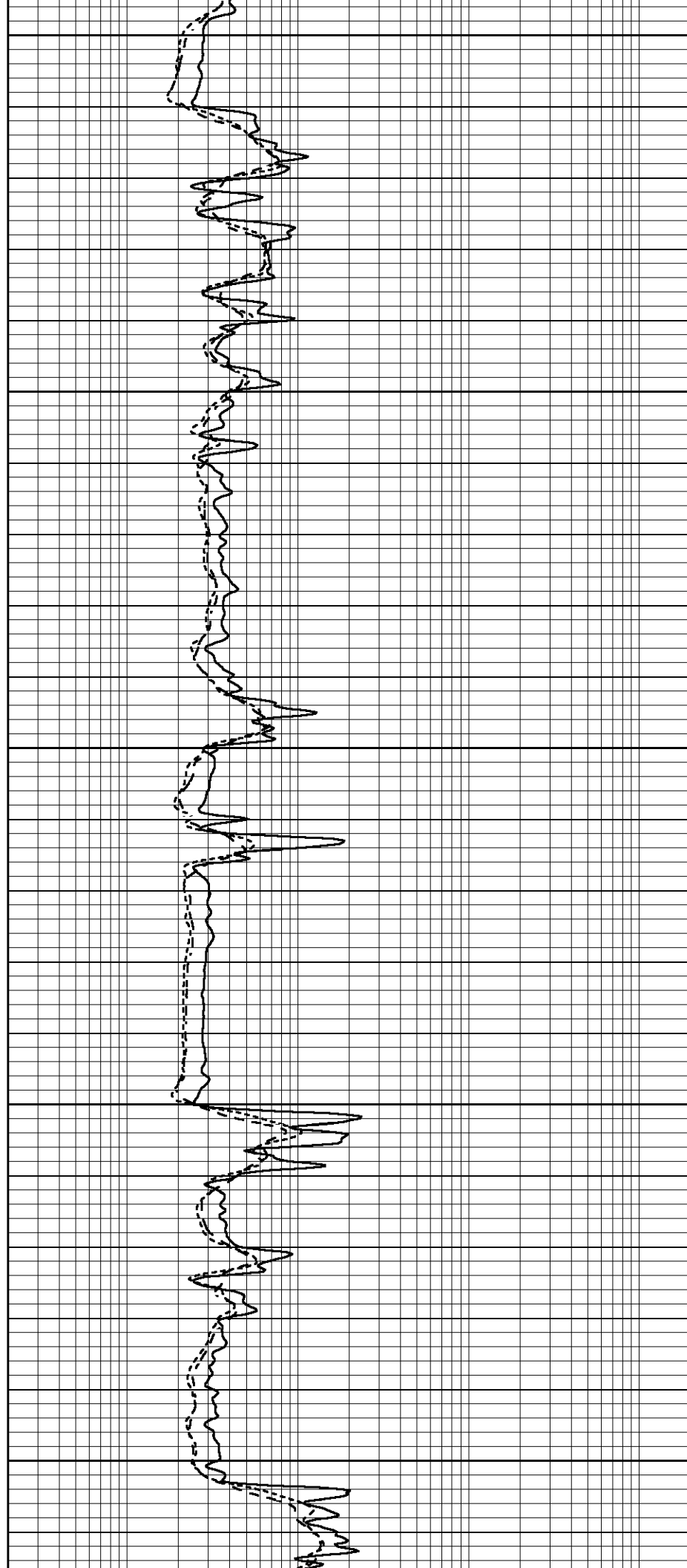
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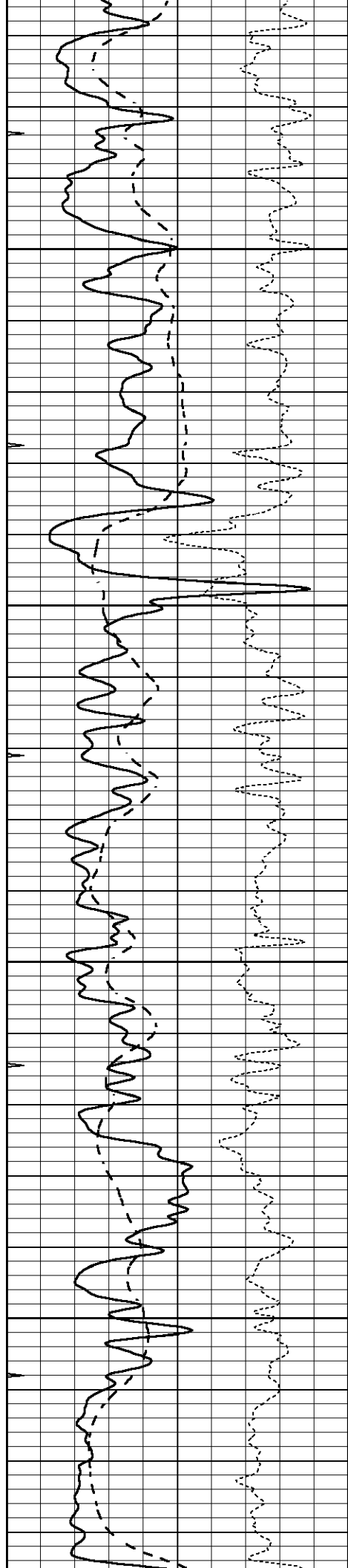
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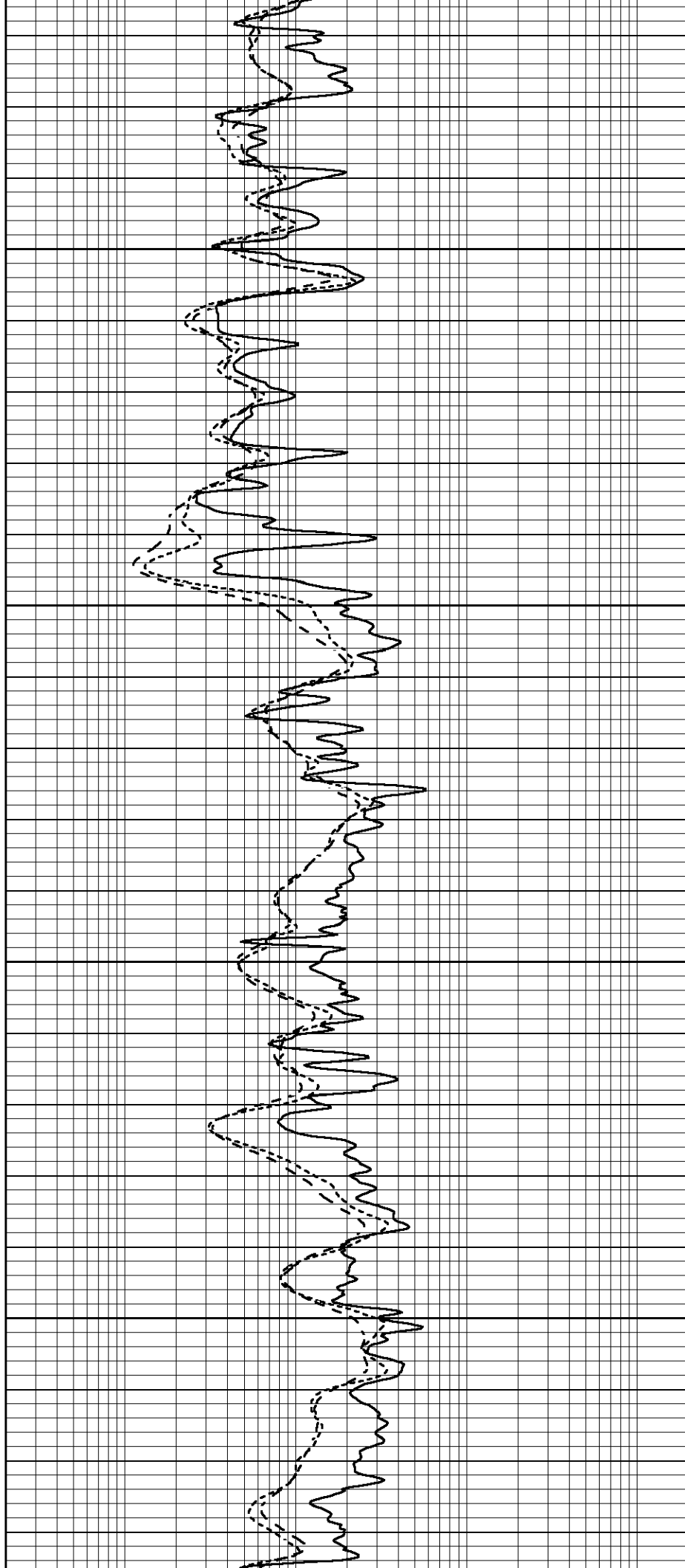


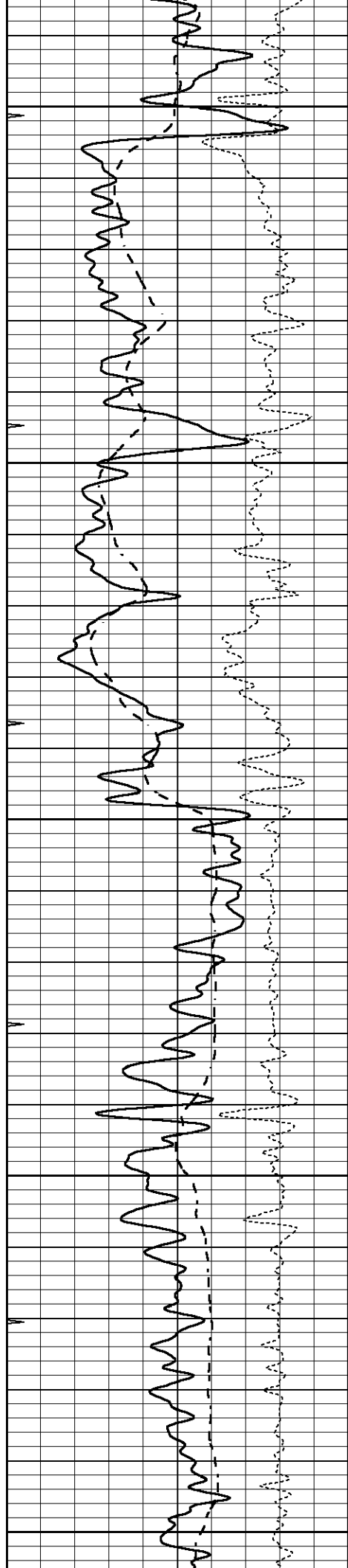
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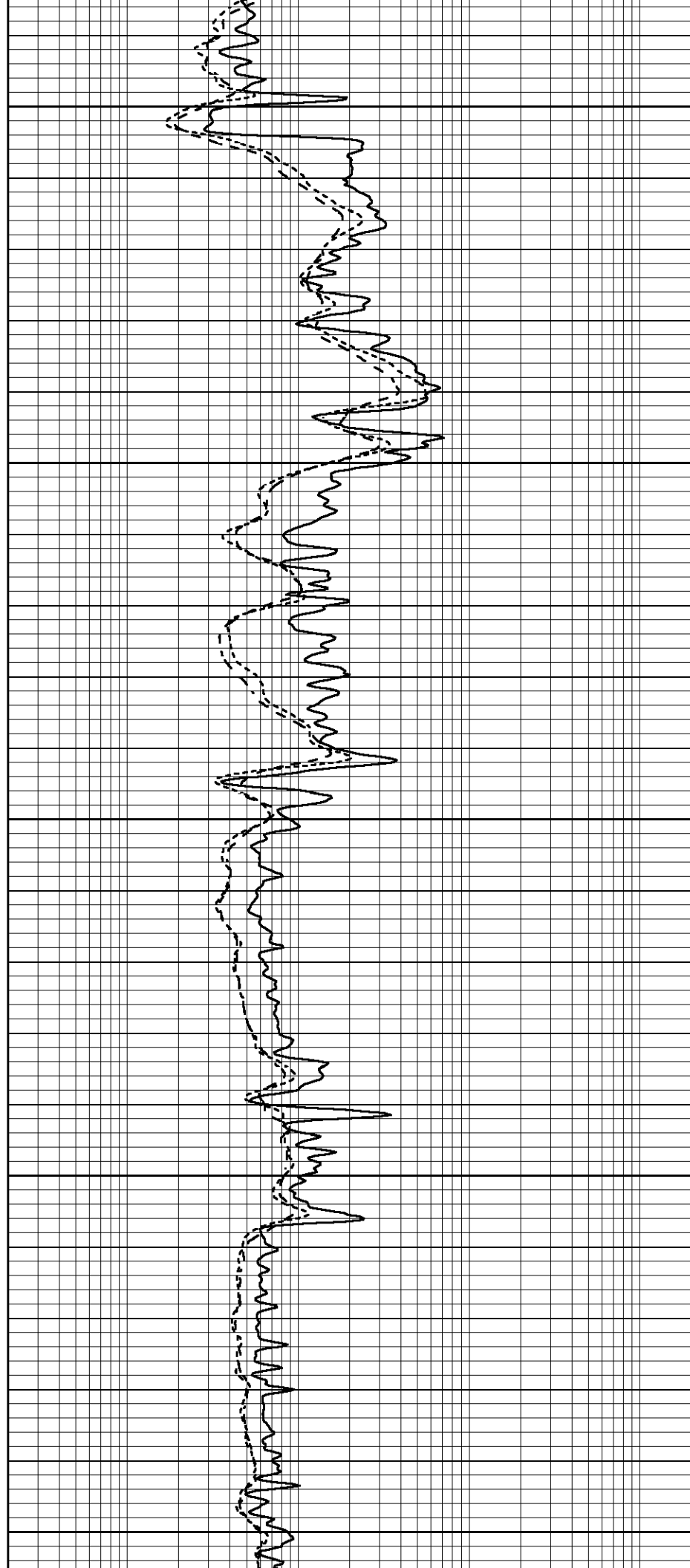
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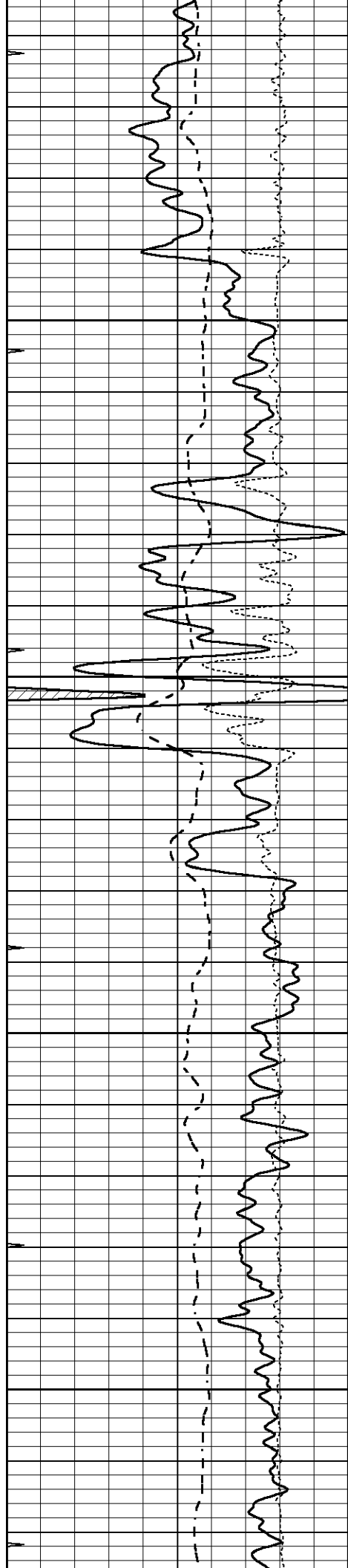
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3500



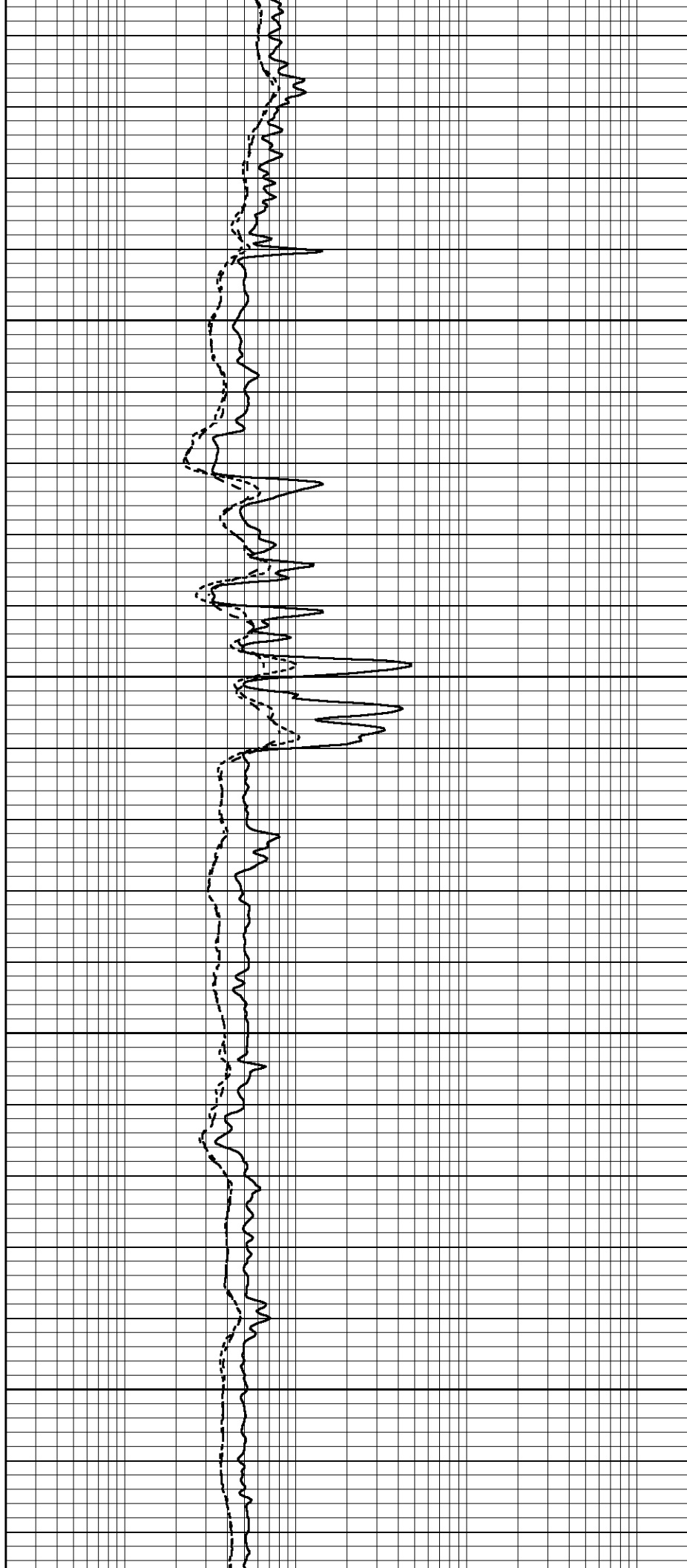


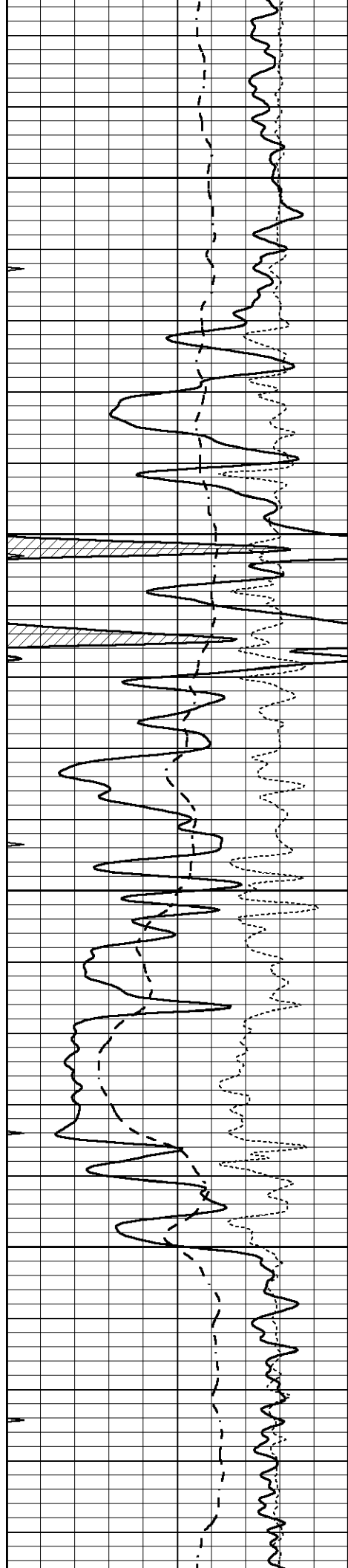
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3700



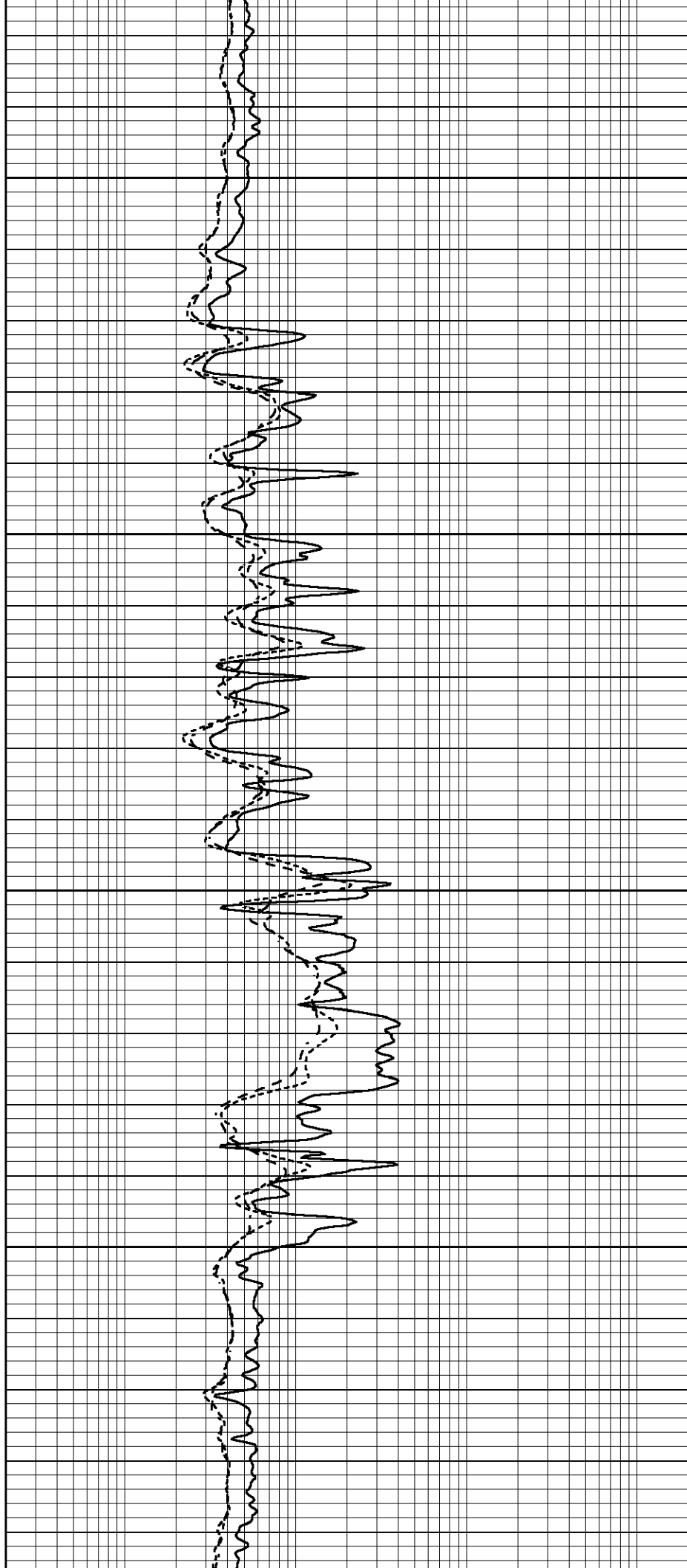


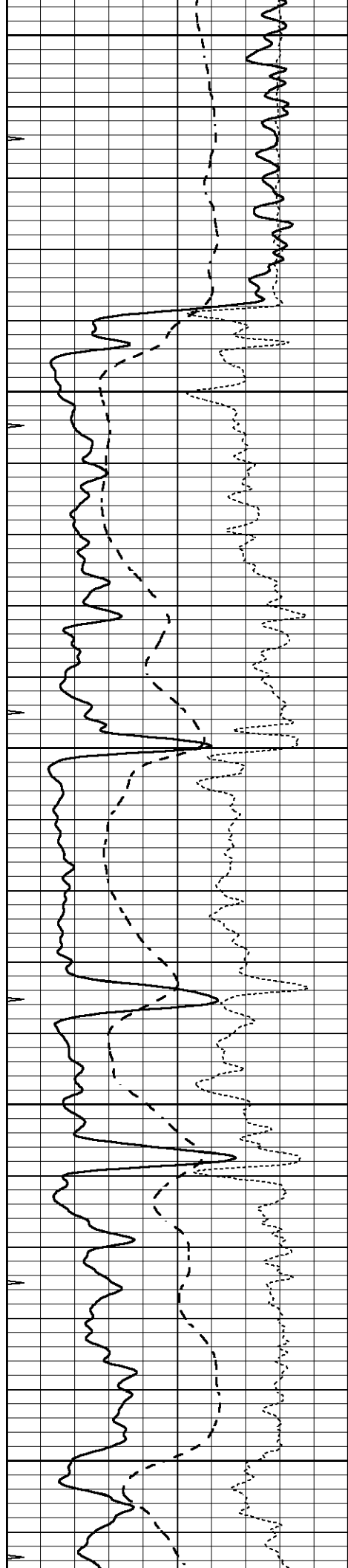
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3900





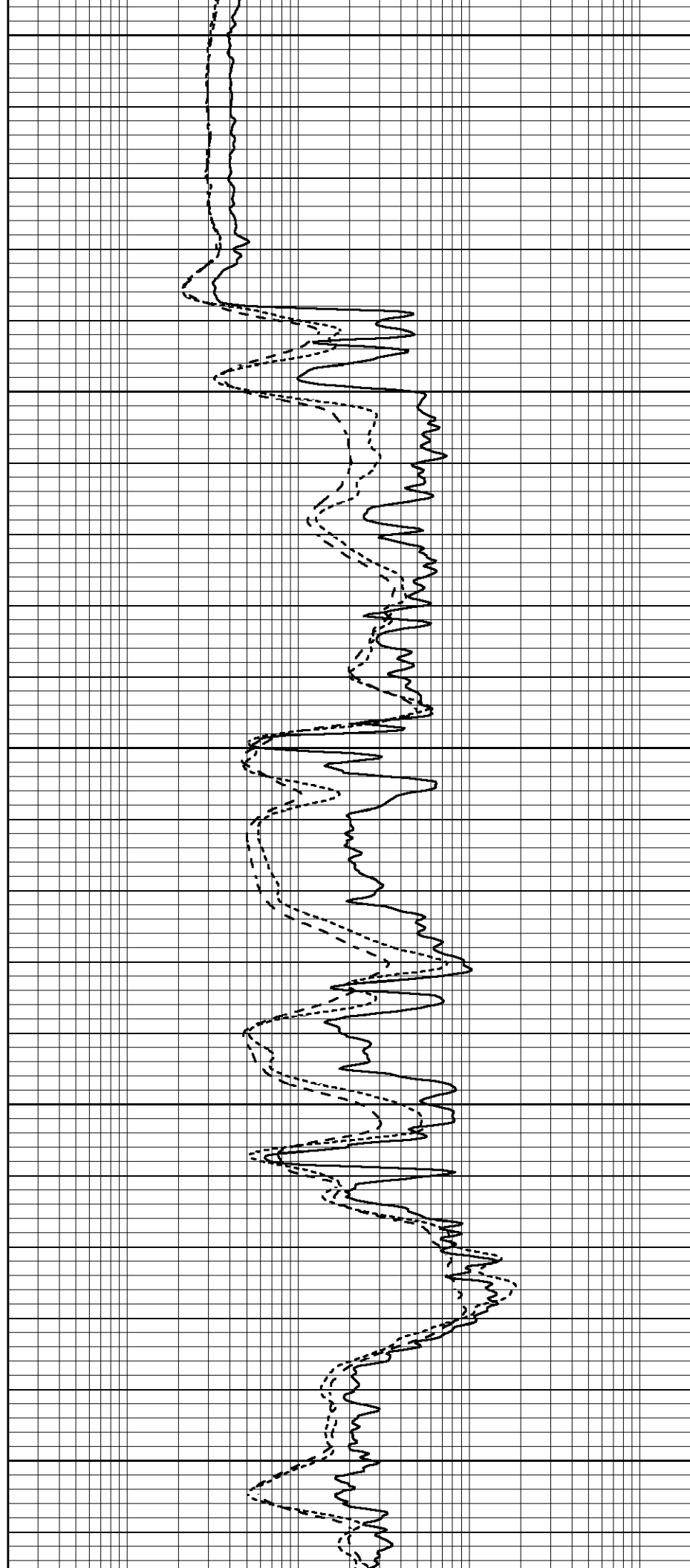
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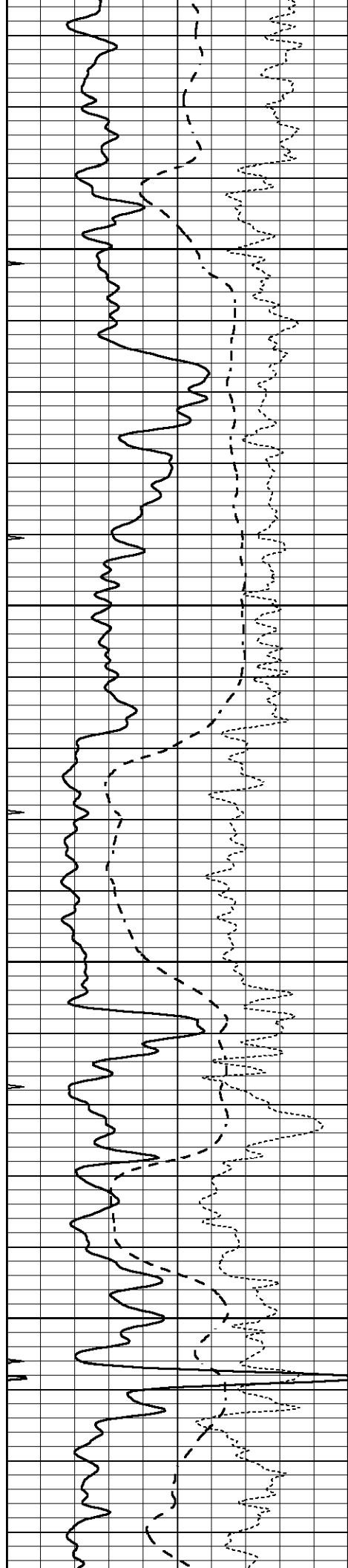
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4050

4100

4150



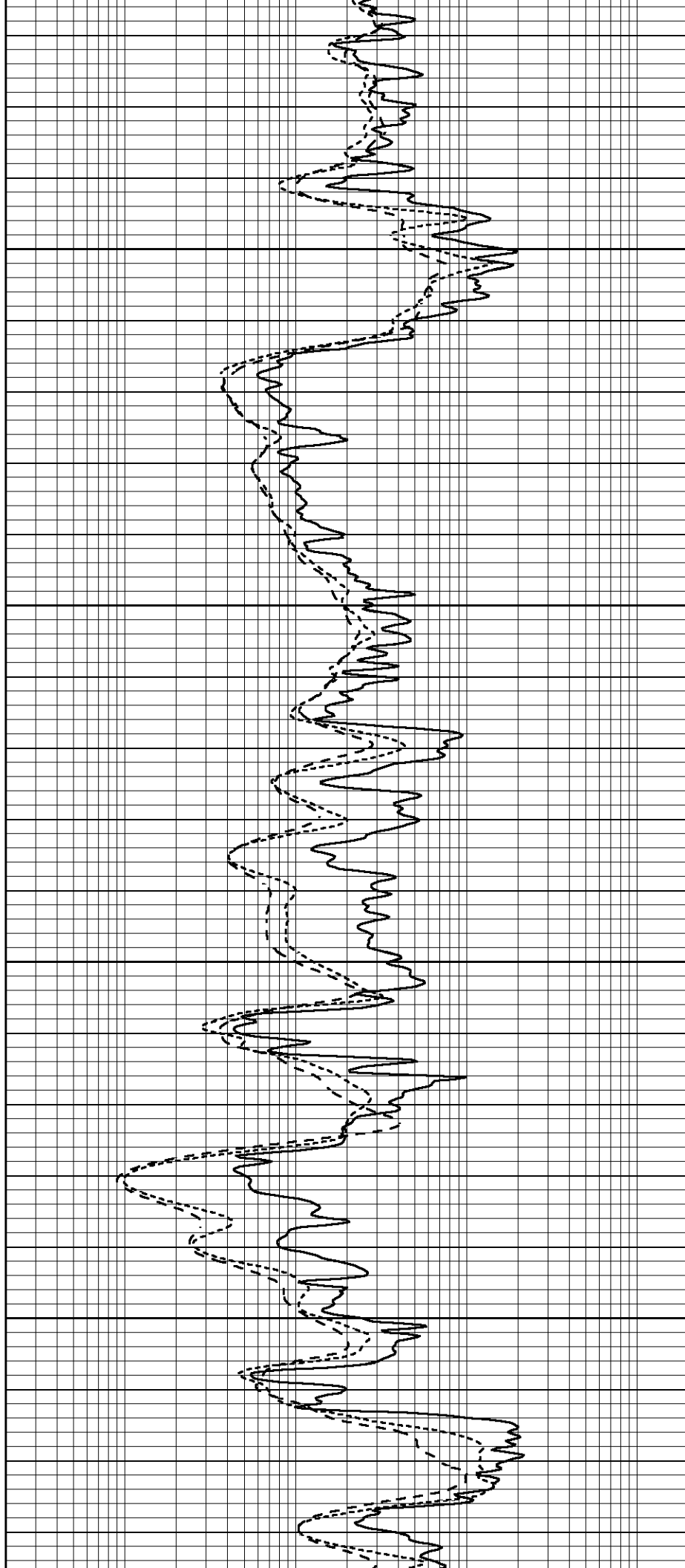


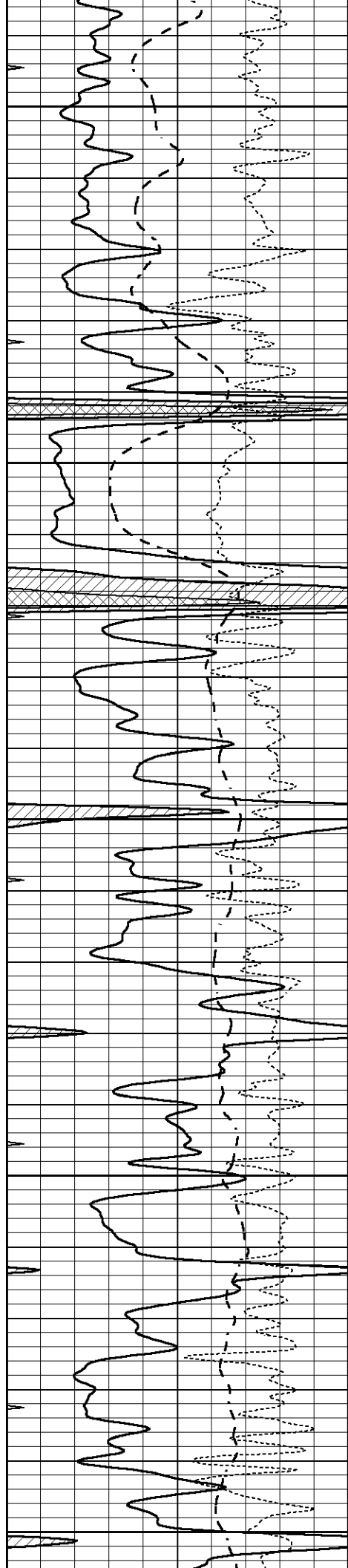
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4350





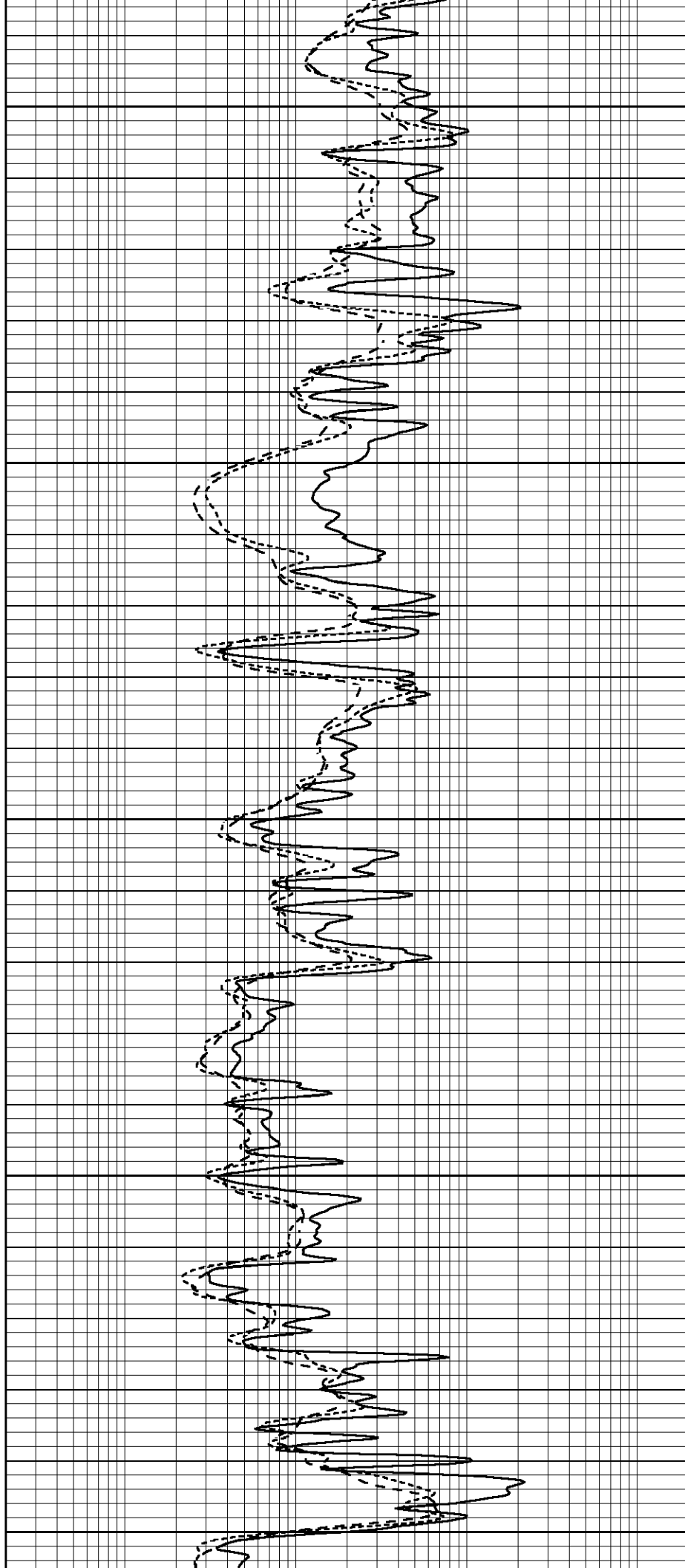
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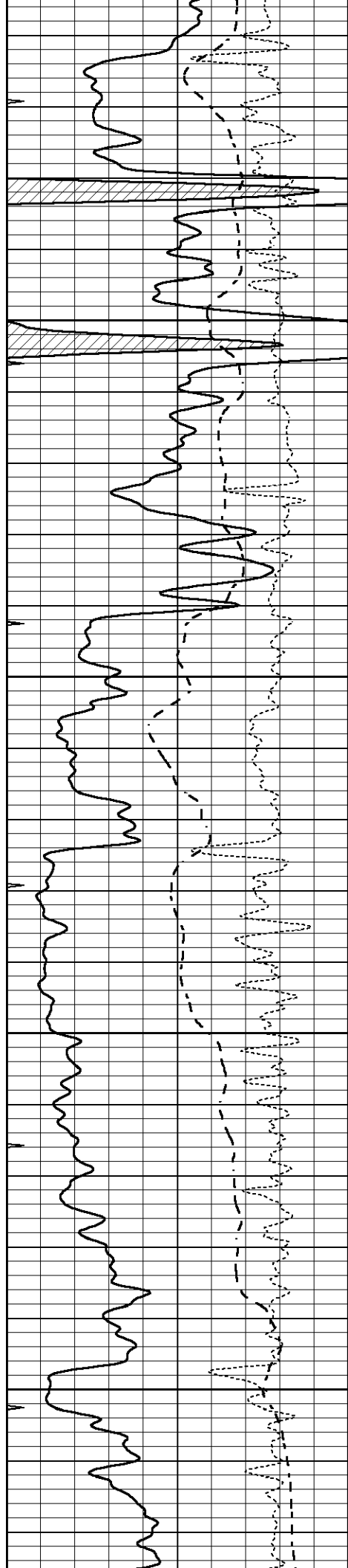
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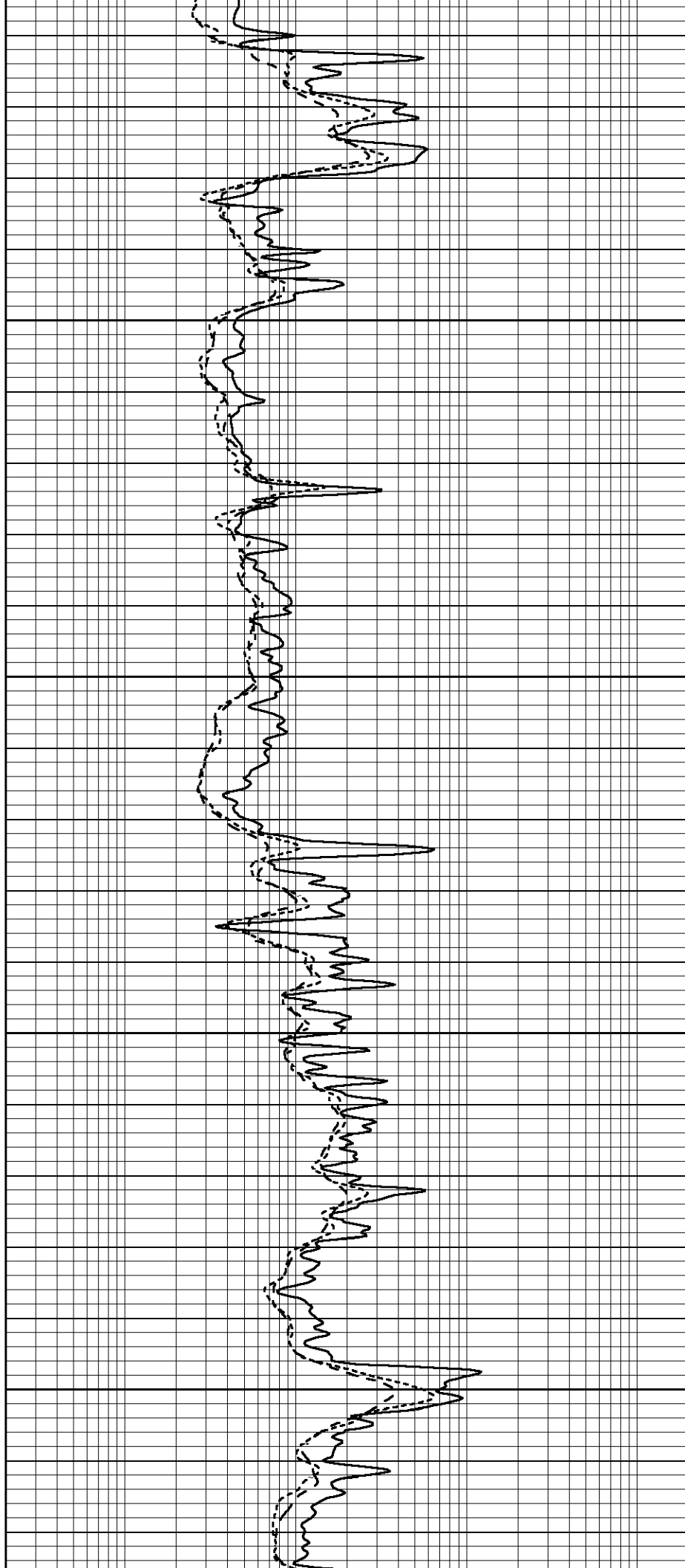


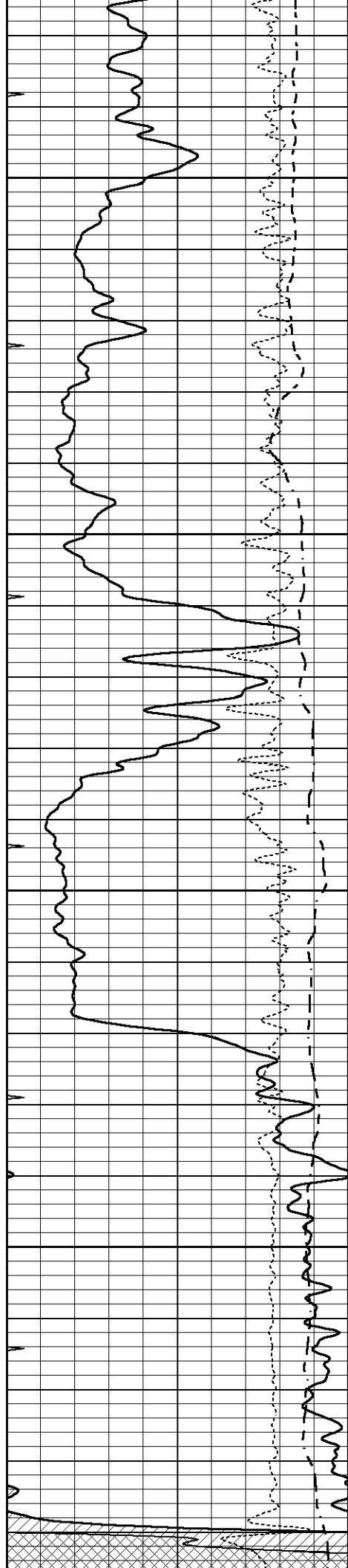
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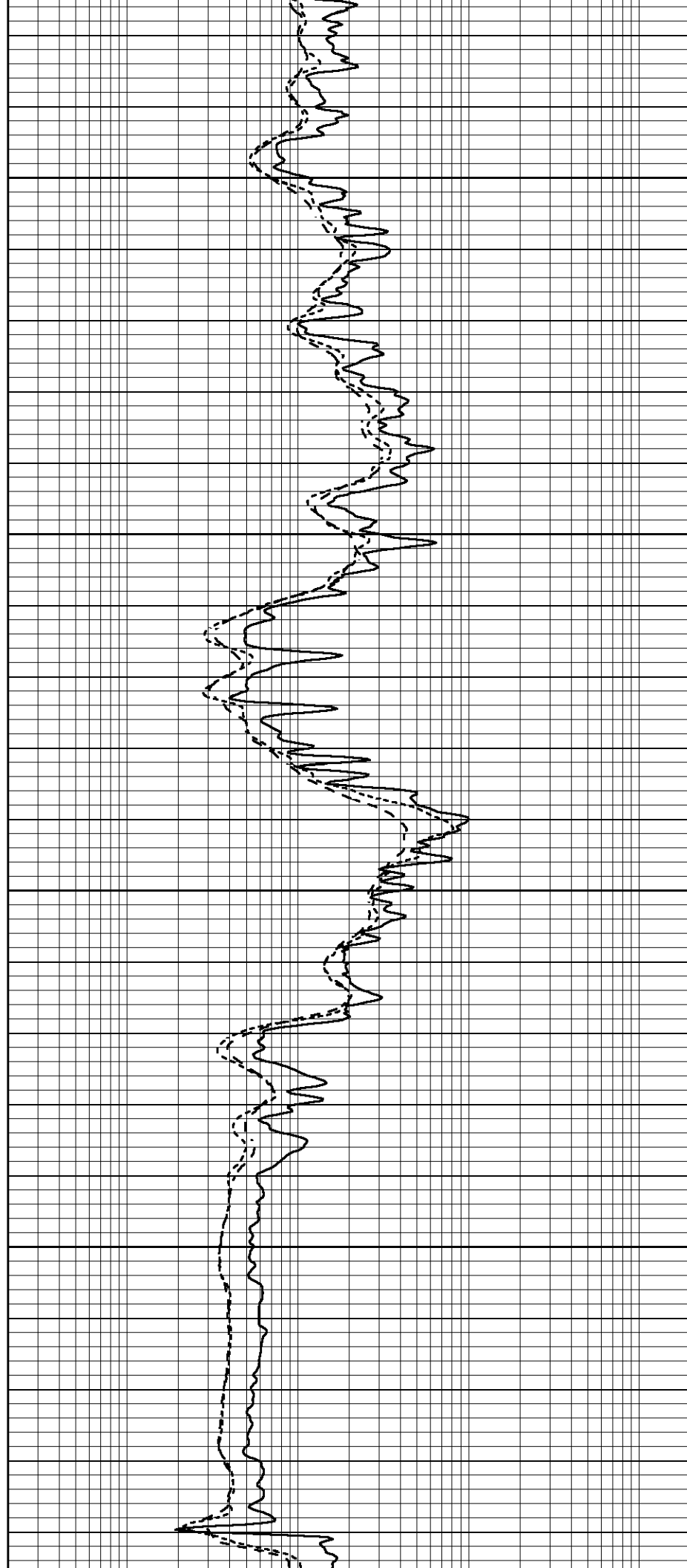


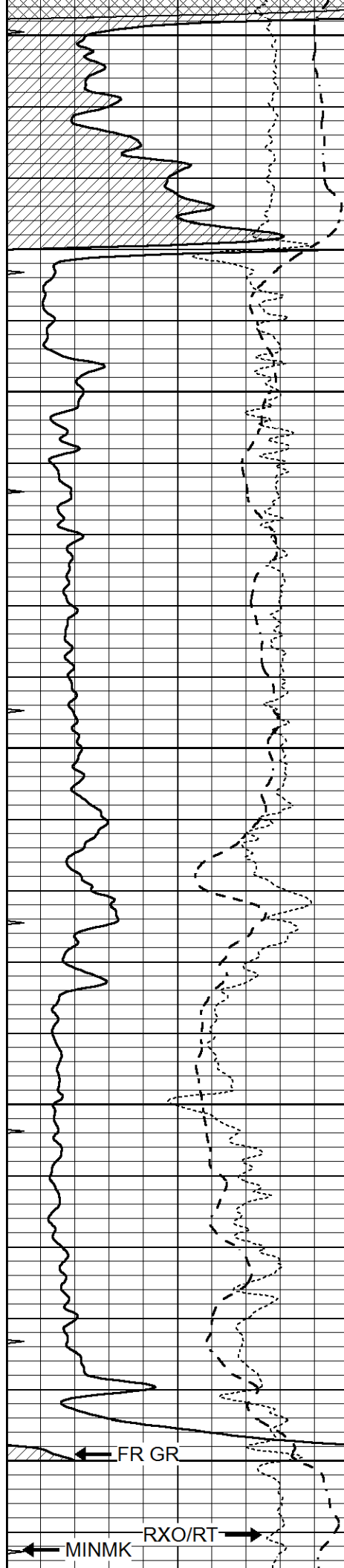
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4900

4950

5000





5050

5100

5150

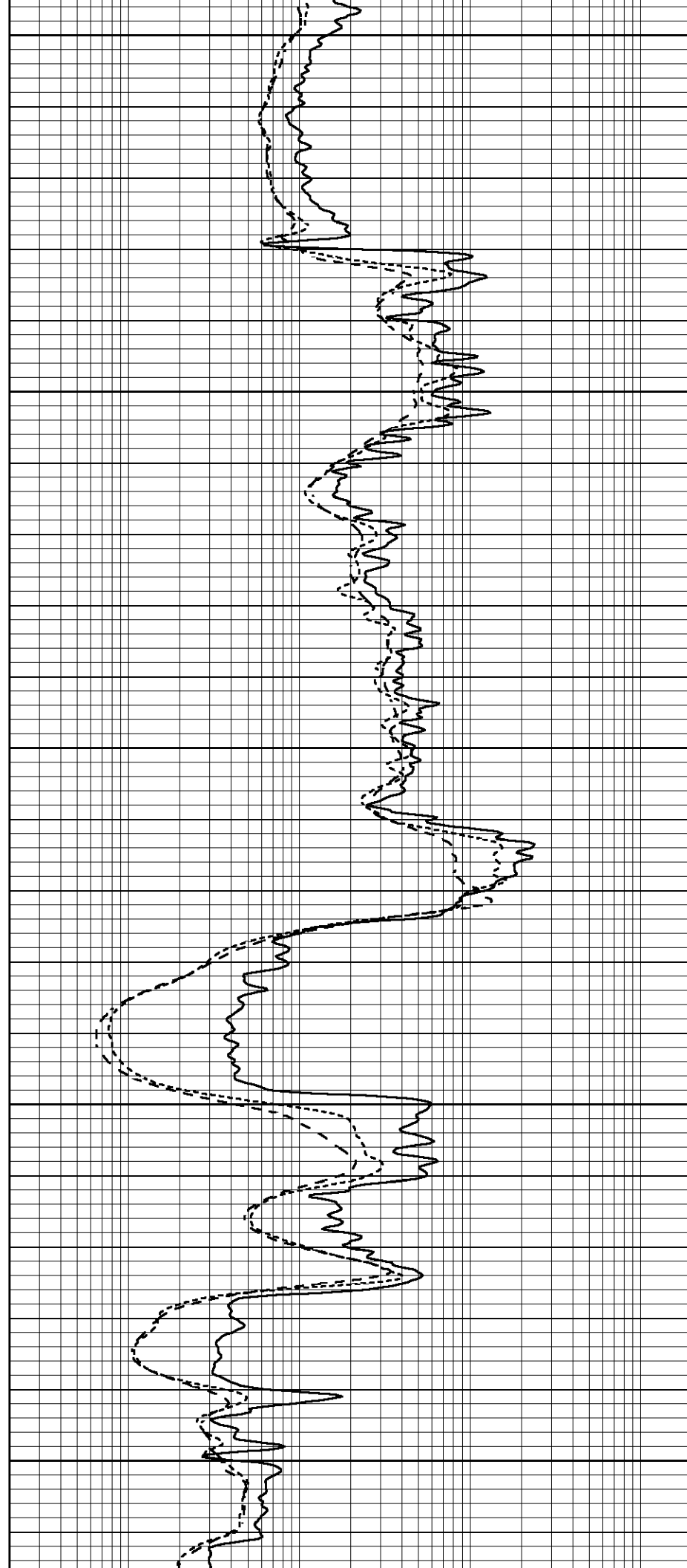
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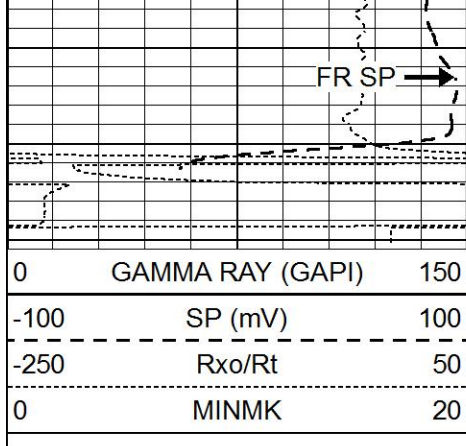
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FR GR

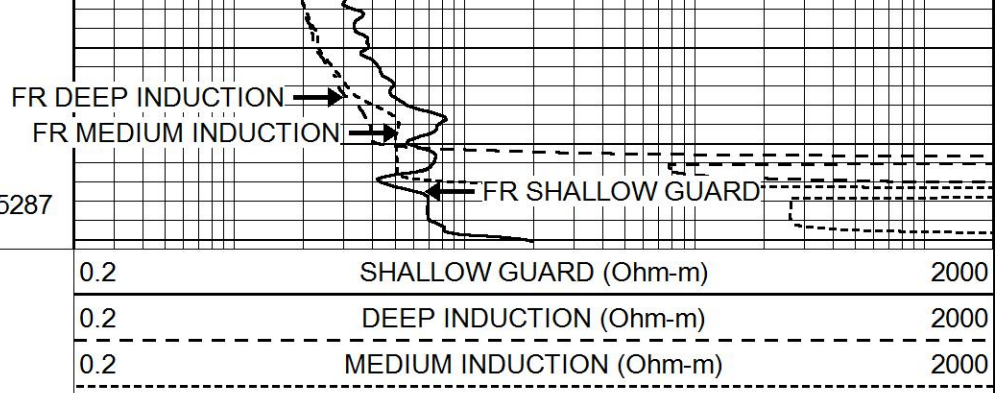
MINMK

RXO/RT



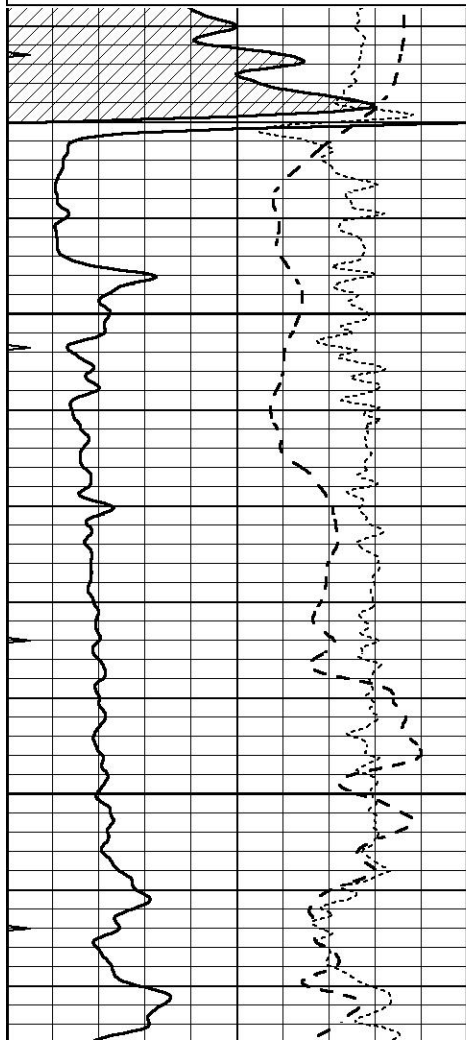
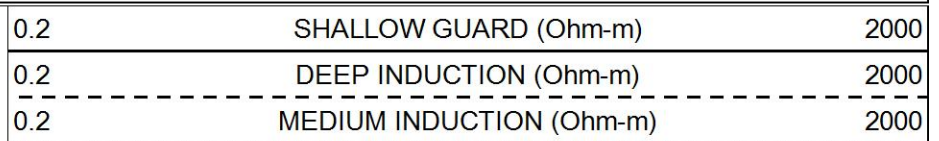
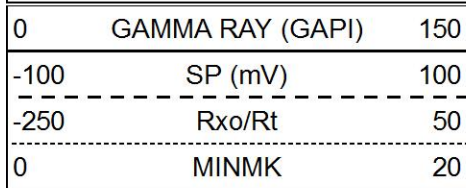


LTD 5287



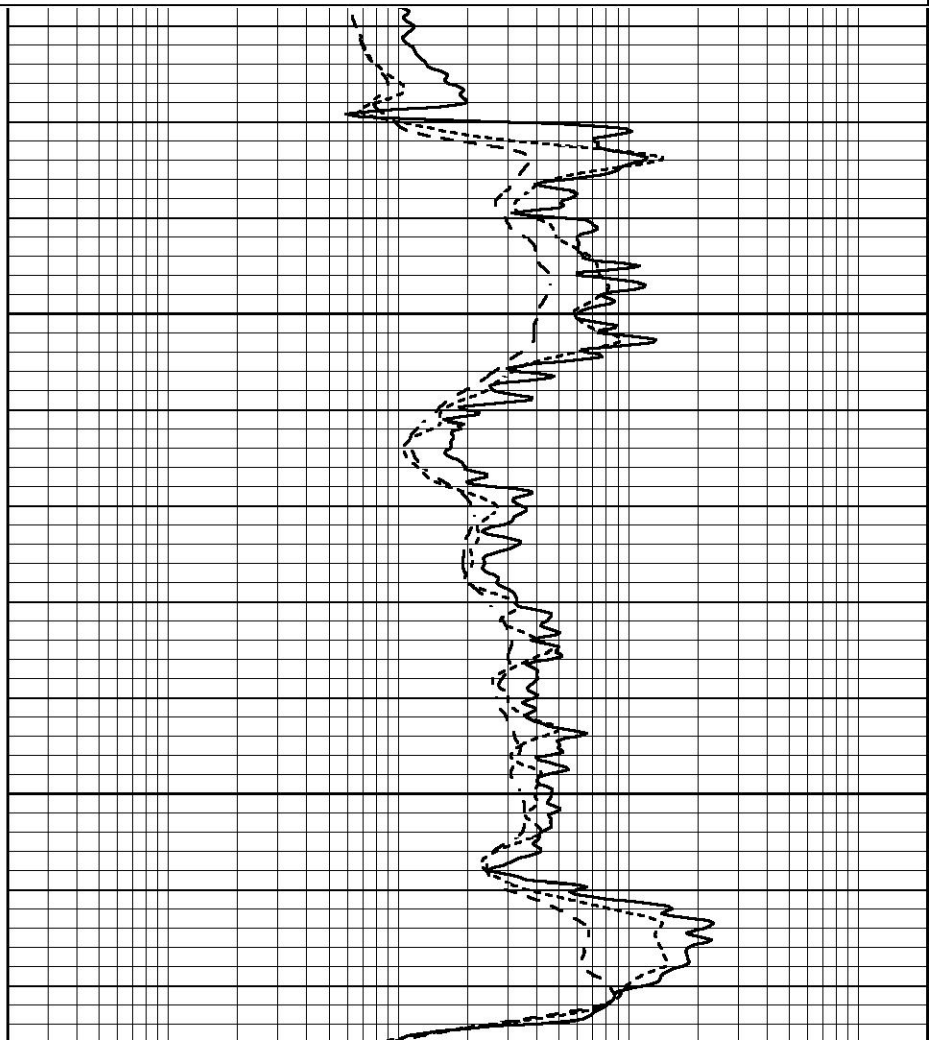
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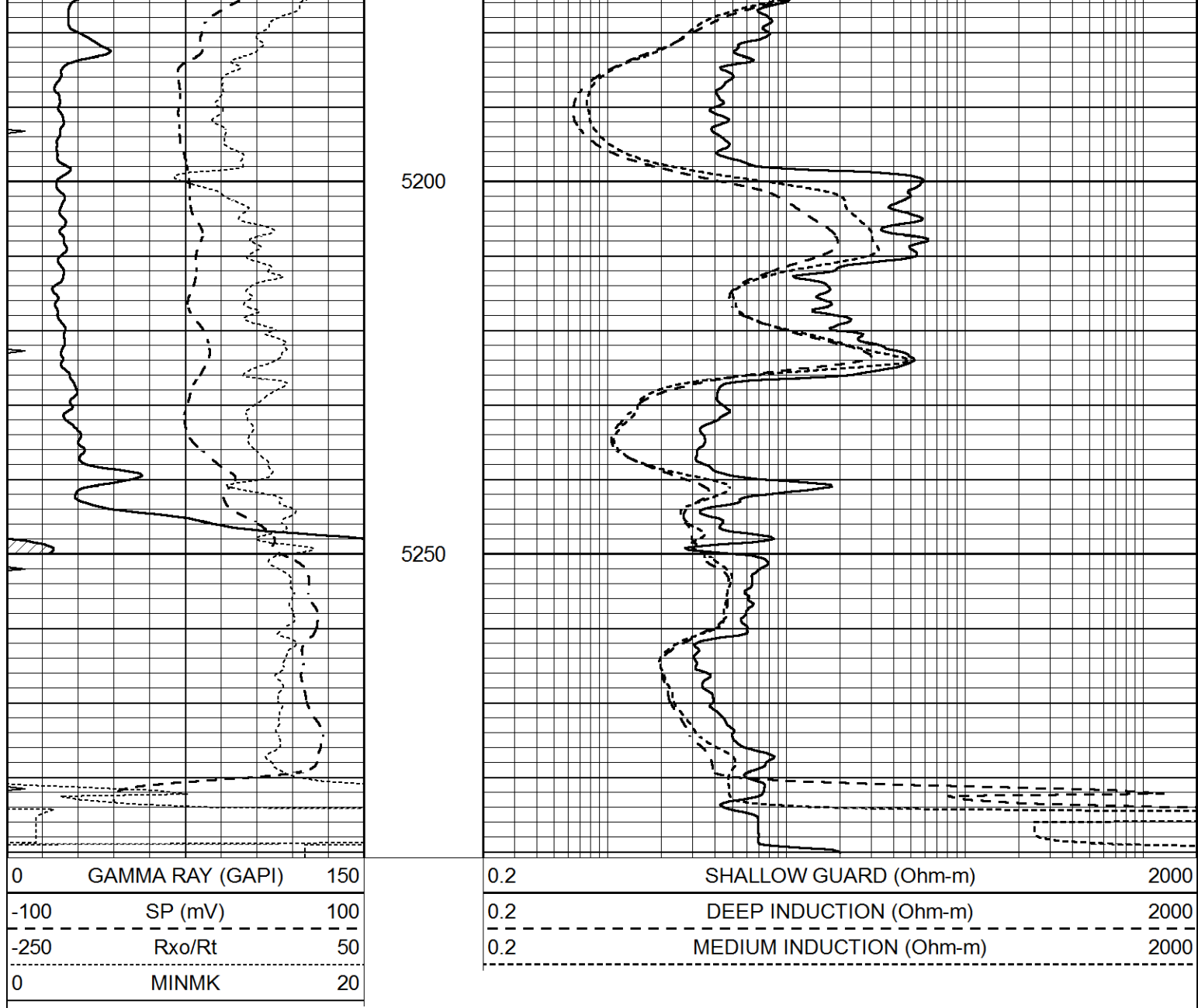
Database File 5577pe.db
Dataset Pathname pass2.1R
Presentation Format _dil
Dataset Creation Sat Jun 19 09:21:02 2021
Charted by Depth in Feet scaled 1:240



5100

5150





Calibration Report

Database File 5577pe.db
 Dataset Pathname pass3.3M
 Dataset Creation Sat Jun 19 11:09:07 2021

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Sat Jun 19 09:01:00 2021
 Downhole Cal Performed: Wed Mar 11 11:31:19 2020
 After Survey Verification Performed: Wed Mar 11 11:31:22 2020

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	720.000	-15.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	720.000	-26.000
Internal:	Zero			Cal			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
			Readings		References		Results	
			Zero	Cal	Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification								
			Readings		Targets		Results	
			Zero	Cal	Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report								
Serial: 003			Model: PRB					

Master Calibration		Performed Fri Mar 05 10:51:07 2021			
	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1570.6	10682.1	3457.0	3096.9	cps
Window 2	1451.7	9432.7	3101.4	2816.5	cps
Window 3	1334.0	7160.6	2532.0	2369.3	cps
Window 4	370.4	373.1	366.4	370.9	cps
Long Space	0.0	7981.0	1649.7	1364.8	cps
Short Space	2.8	3522.0	2211.0	1823.6	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 43.5	Rib Slope	: 0.951	Density/Spine Ratio	: 0.535
Spine Angle	: 73.5	Spine Slope	: 3.386	Spine Intercept	: -18.7

Before Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0	0.0	cps		
Window 2	0.0	0.0		0.0	0.0	cps		
Window 3	0.0	0.0		0.0	0.0	cps		
Window 4	0.0	0.0		0.0	0.0	cps		
Long Space	0.0	0.0		0.0	0.0	cps		
Short Space	0.0	0.0		0.0	0.0	cps		
Measured Rho		0.0000		0.0000	0.0000	g/cc		
Measured Correction		0.0000		0.0000	0.0000	g/cc		
Measured Pe				0.0000	0.0000			

After Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0	0.0	cps		
Window 2	0.0	0.0		0.0	0.0	cps		
Window 3	0.0	0.0		0.0	0.0	cps		
Window 4	0.0	0.0		0.0	0.0	cps		
Long Space	0.0	0.0		0.0	0.0	cps		
Short Space	0.0	0.0		0.0	0.0	cps		
Measured Rho		0.0000		0.0000	0.0000	g/cc		

Measured Rho	0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	
Measured Pe			0.0000	
Compensated Neutron Calibration Report				
Serial Number:		070808PMC		
Tool Model:		NABORS		
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:	070558			
Tool Model:	OPEN_GR			
Performed:	Fri Apr 16 13:57:16 2021			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.3000	GAPI/cps		