



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company	WOOLSEY OPERATING CO. LLC.		
Well	TUCKER GU "A" #3		
Field	TRAFFAS SOUTH		
County	BARBER	State	KANSAS
Location:	API # : 15-007-23940-0000		Other Services
	1450' FNL & 810' FWL		CDL/CNL/PE
	NW -NE - SW - NW		
	SEC 28 TWP 33S RGE 10W		
Permanent Datum	GROUND LEVEL	Elevation	1458
Log Measured From	KELLY BUSHING 10' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Elevation			K.B. 1468 D.F. 1466 G.L. 1458
Date	10/24/12		
Run Number	ONE		
Depth Driller	5050		
Depth Logger	5053		
Bottom Logged Interval	5051		
Top Log Interval	00		
Casing Driller	10 3/4"@215'		
Casing Logger	214		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.0/60		
pH / Fluid Loss	10.5/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@82F		
Rmf @ Meas. Temp	.675@82F		
Rmc @ Meas. Temp	1.08@82F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.586@126F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	10:15 A.M.		
Maximum Recorded Temperature	126F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SCOTT ALBERG	DEAN PATTISSON	

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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
SHARON, KS. & "TRI CITY RD.", 6S. TO "WATERWAY RD.",1W., S. INTO

Database File:

409699pe.db

Dataset Pathname:

pass3.5

Presentation Format:

dil2

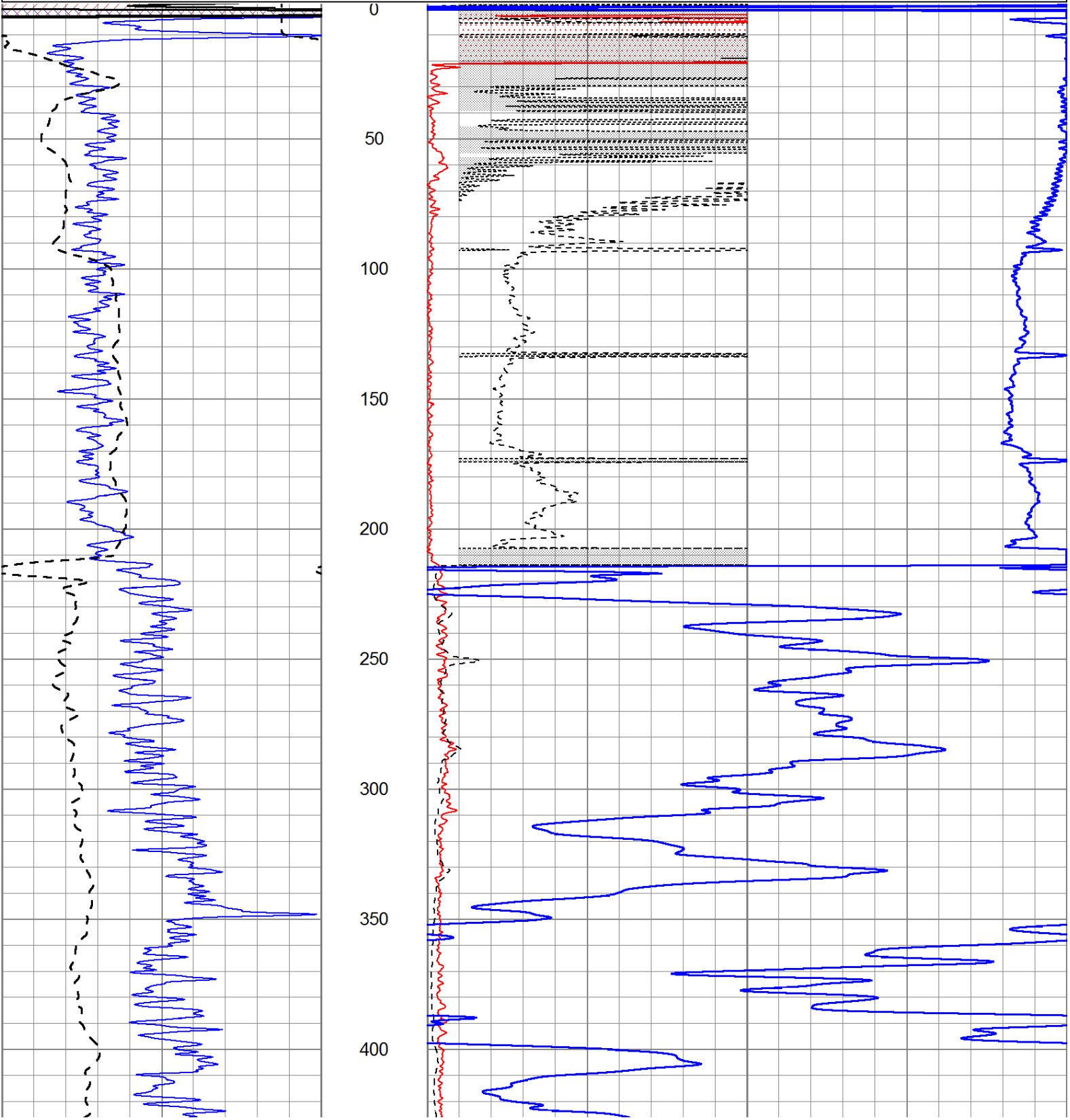
Dataset Creation:

Wed Oct 24 12:56:50 2012 by Calc Open-Cased 110302

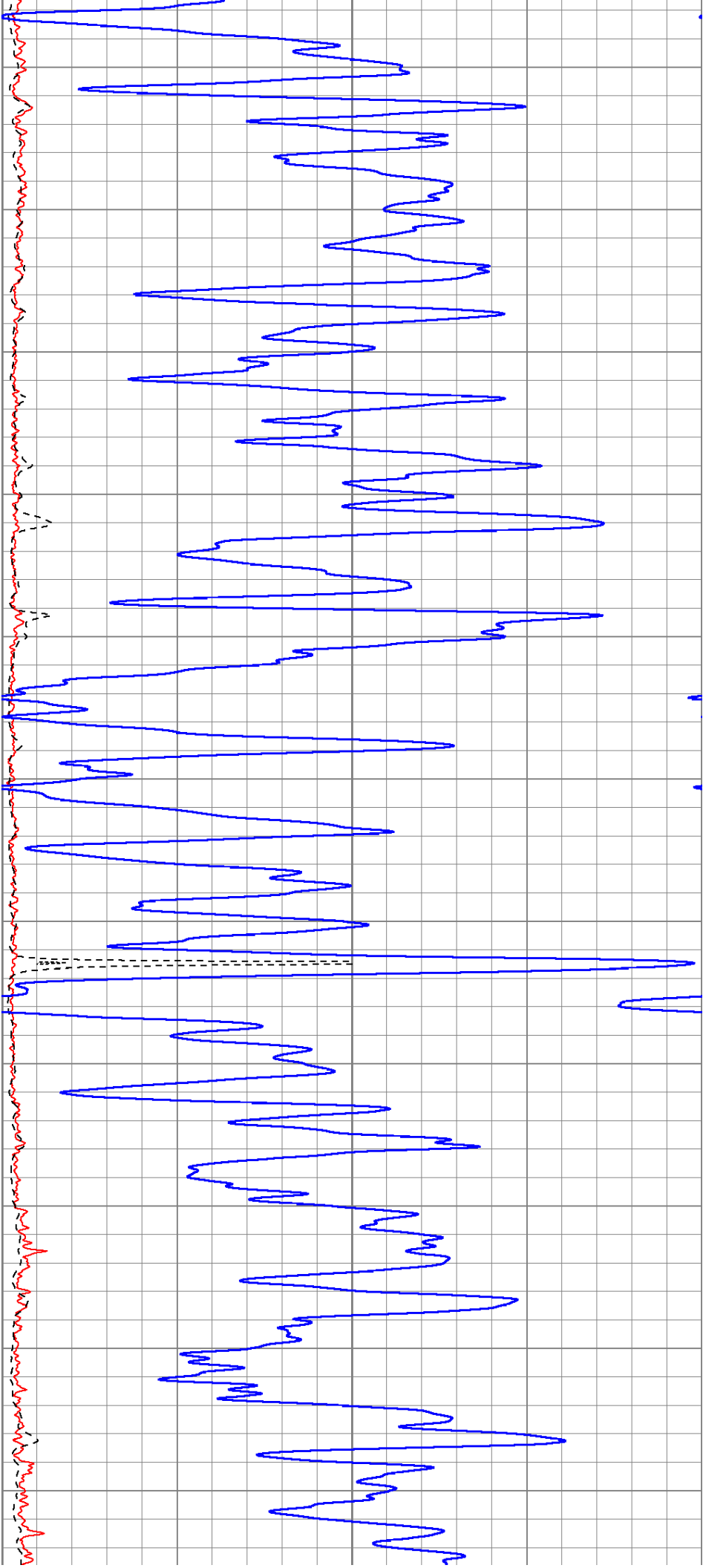
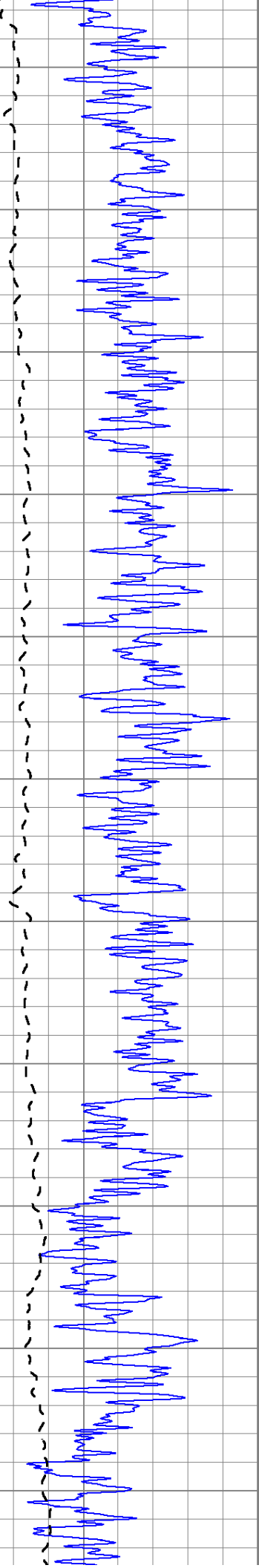
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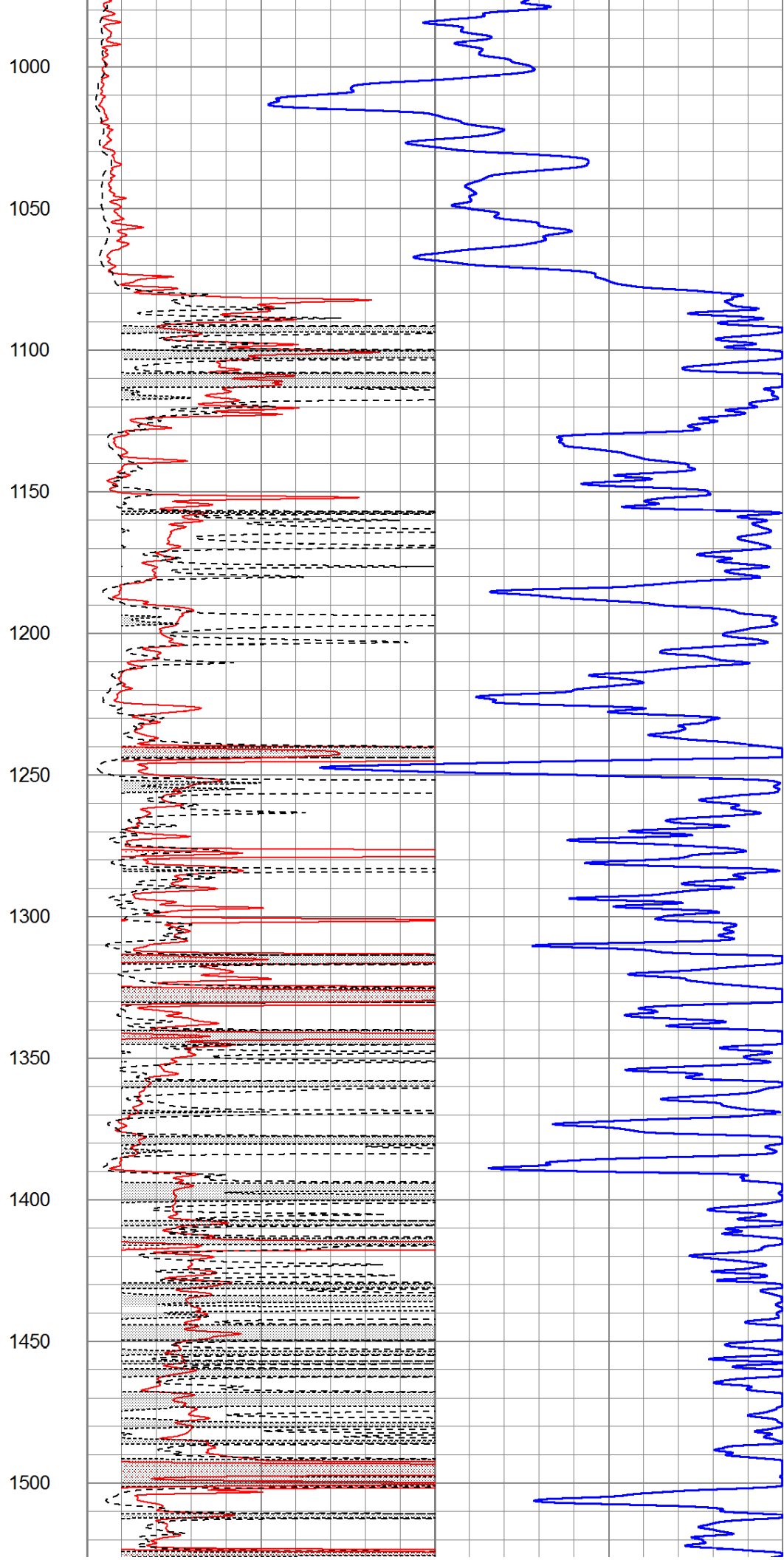
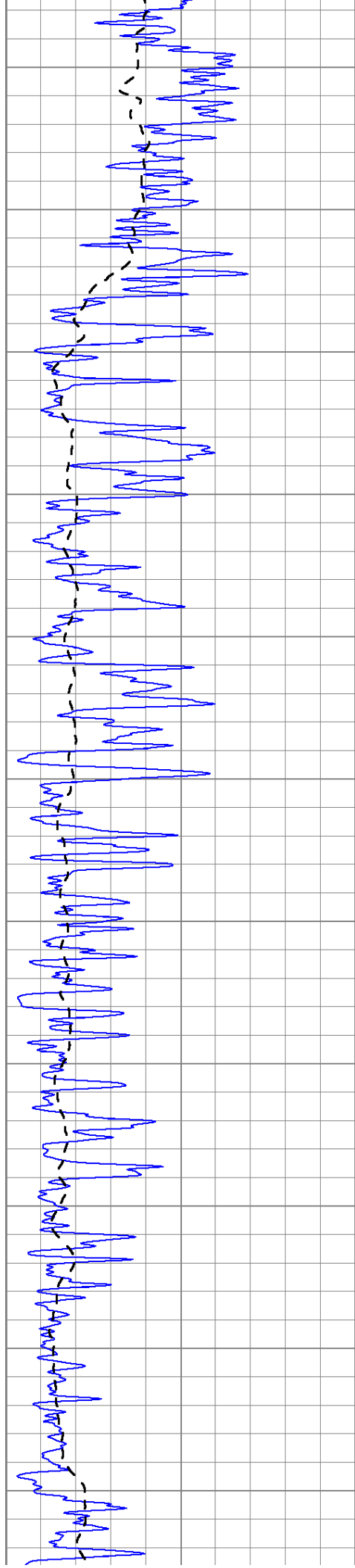
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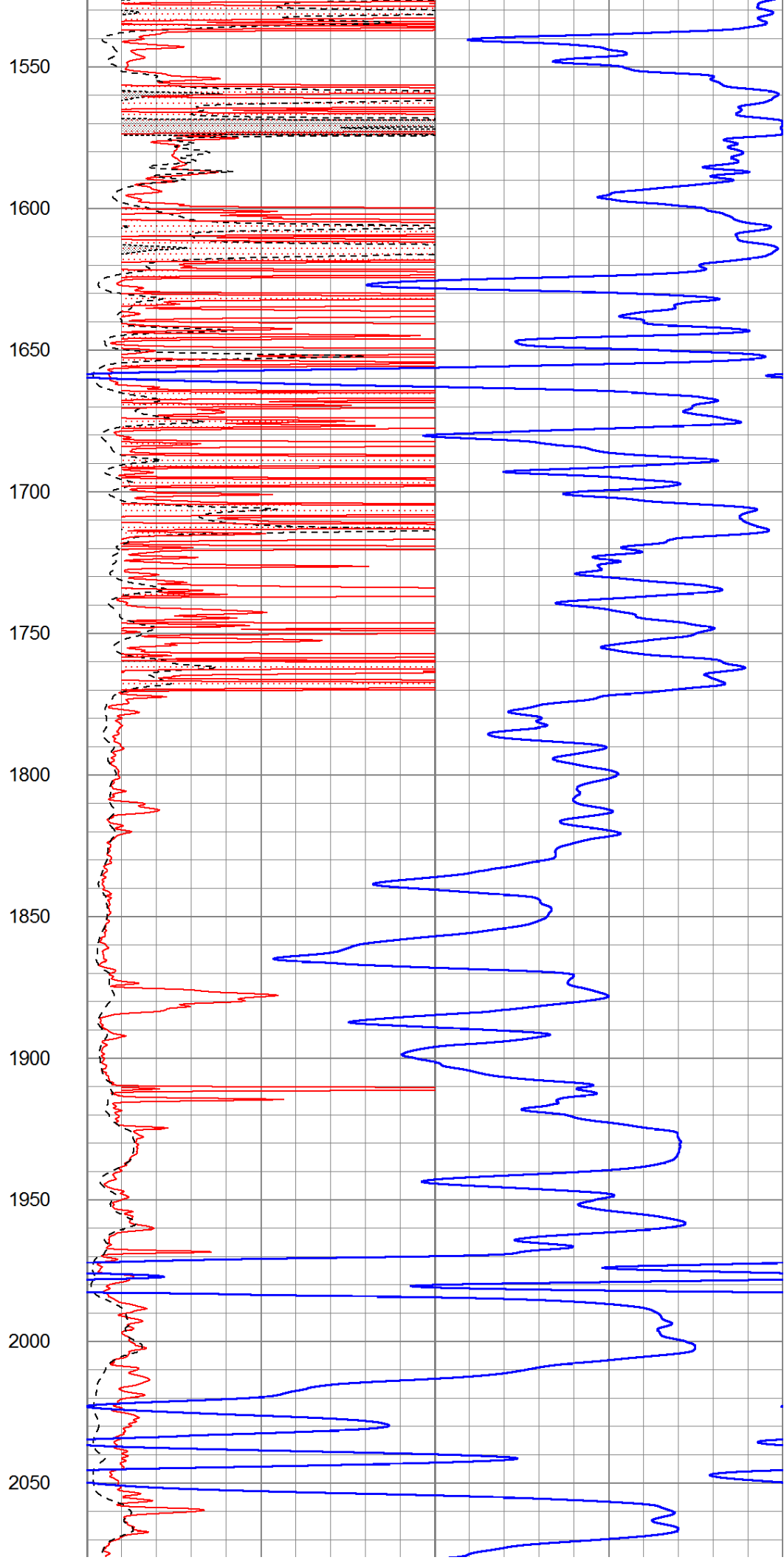
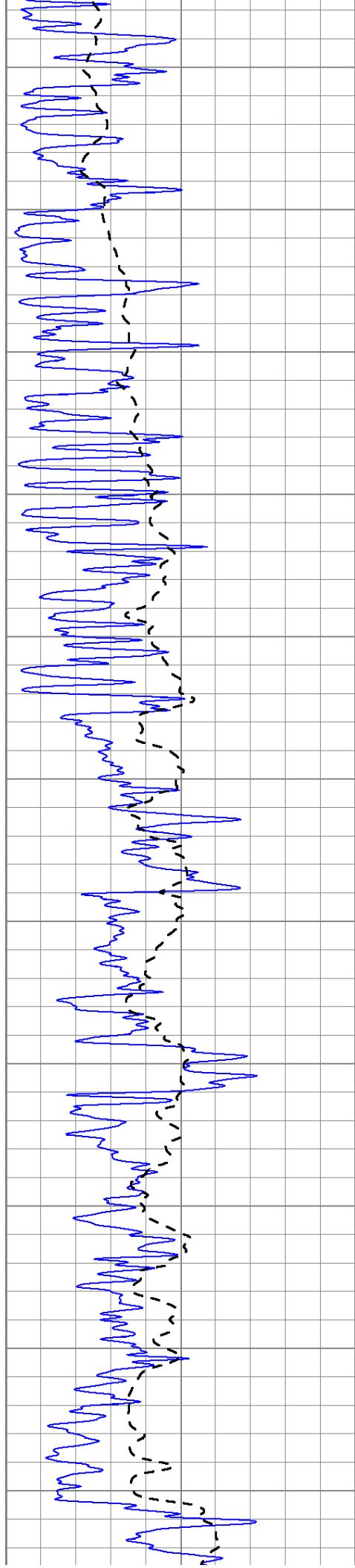
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-100	SP (mV)	100	0	RILD (Ohm-m)	50	
			1000		CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500	
			50	RLL3 X10 (Ohm-m)	500	

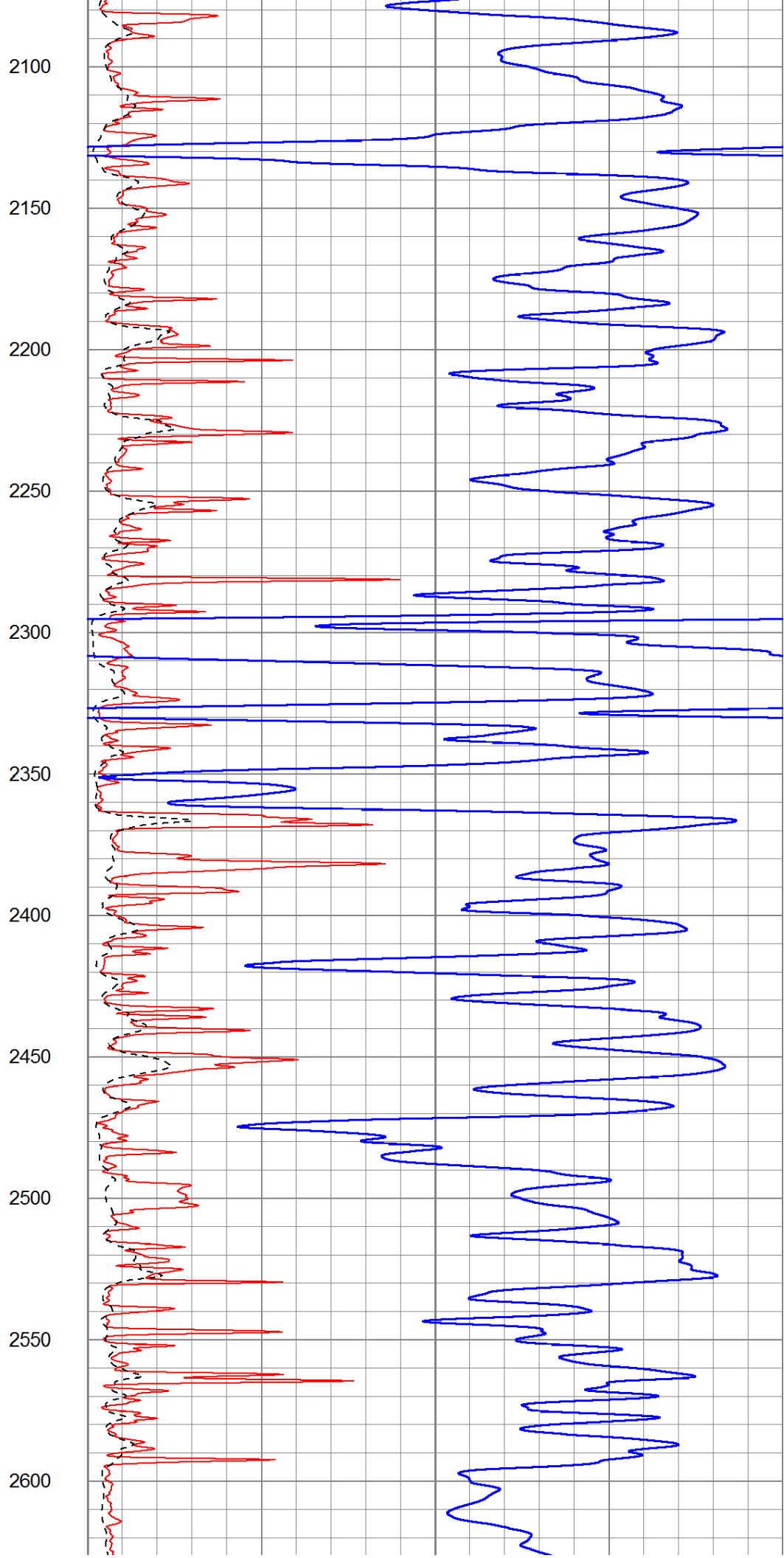
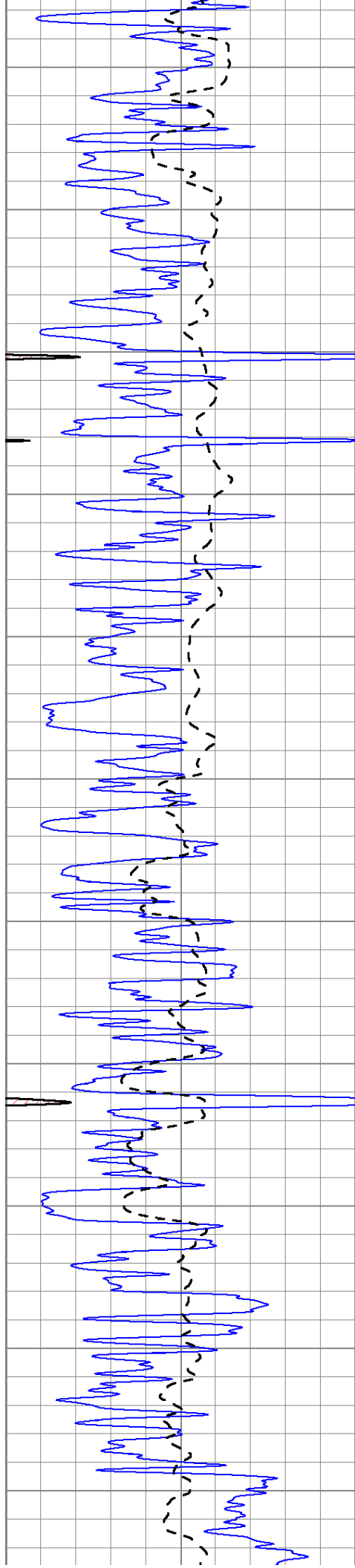


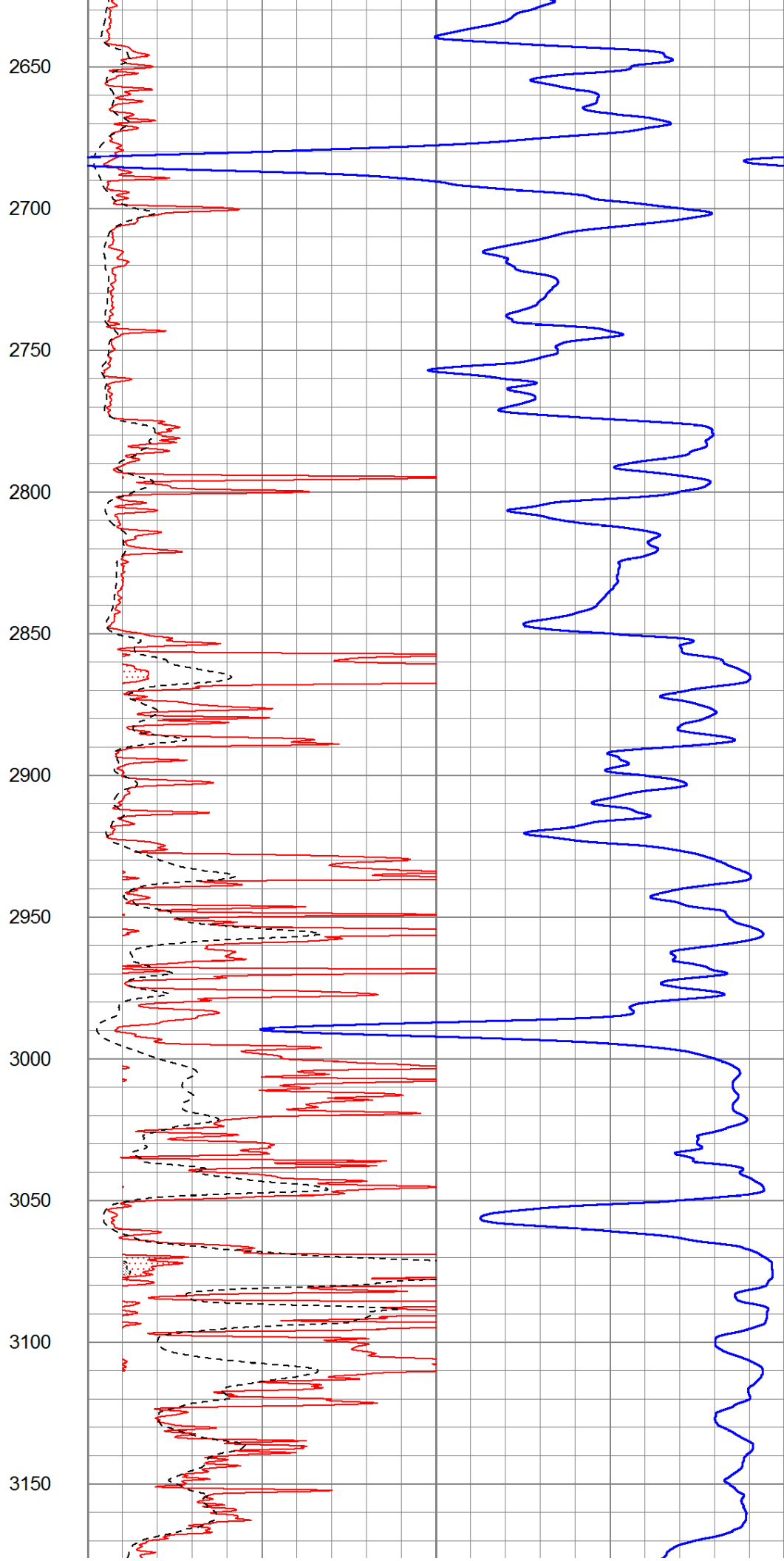
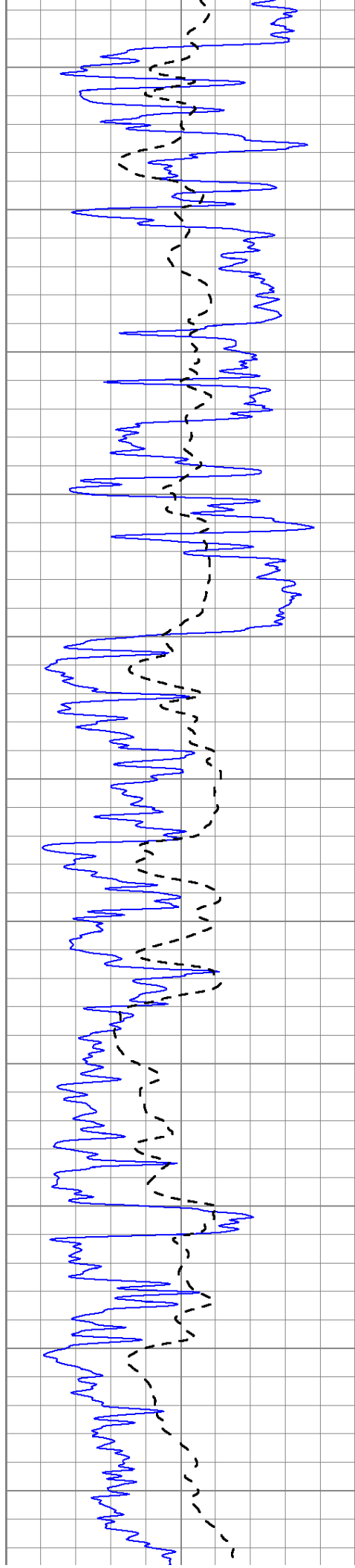
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900
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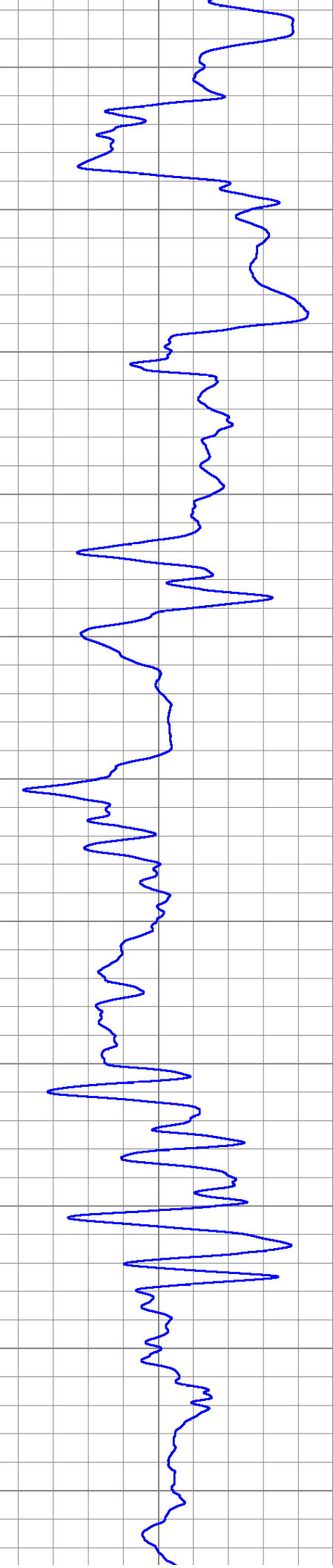
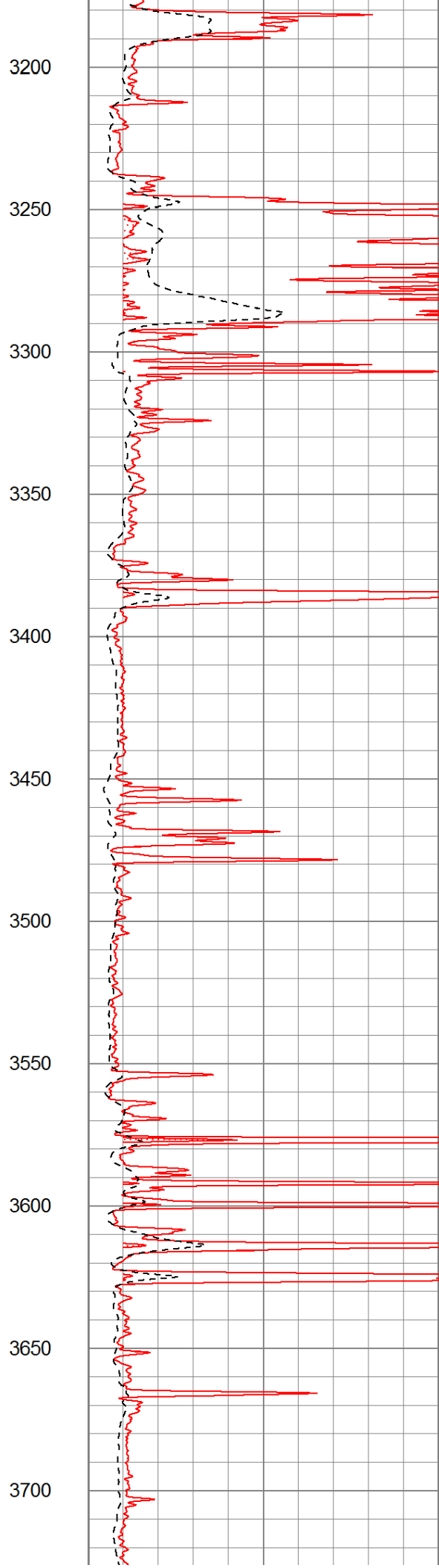
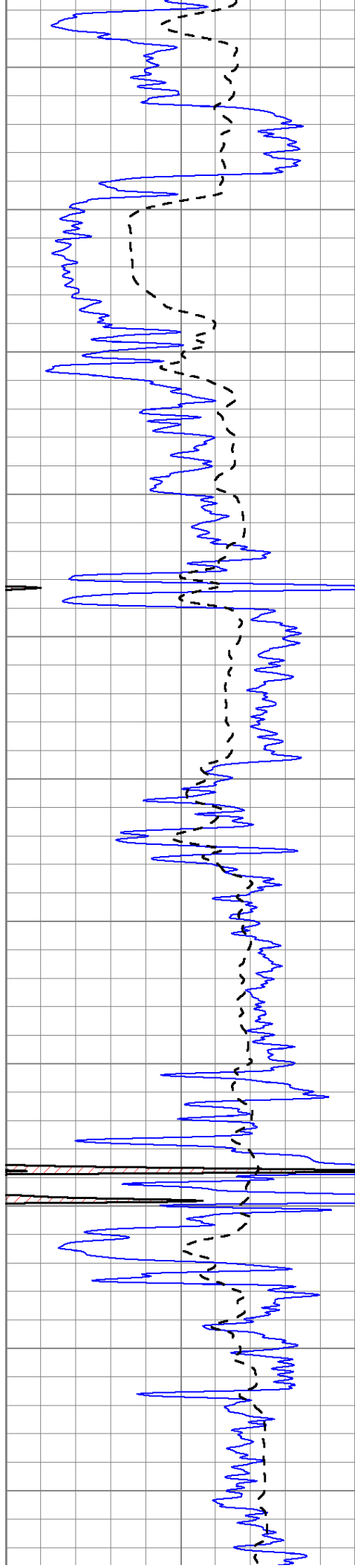


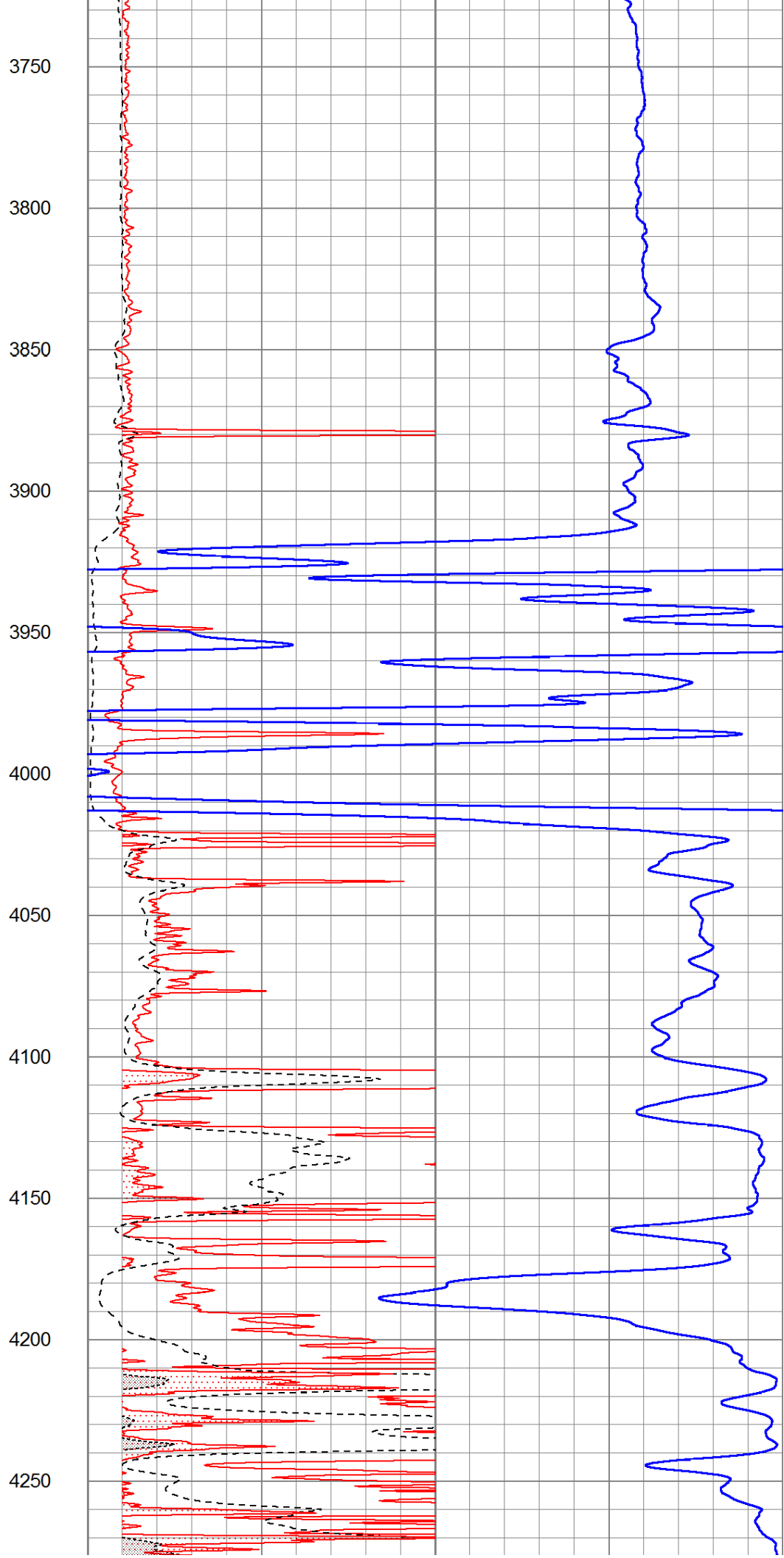
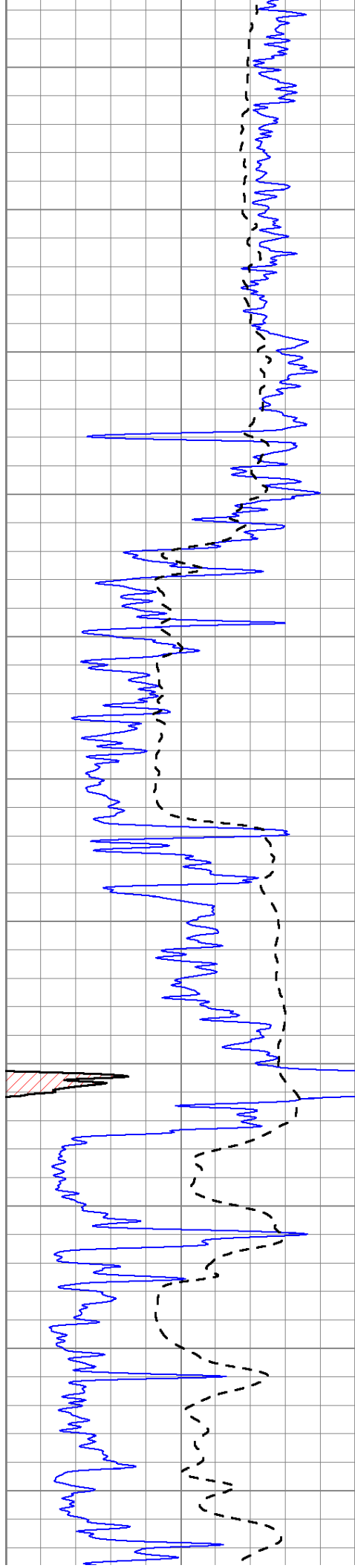


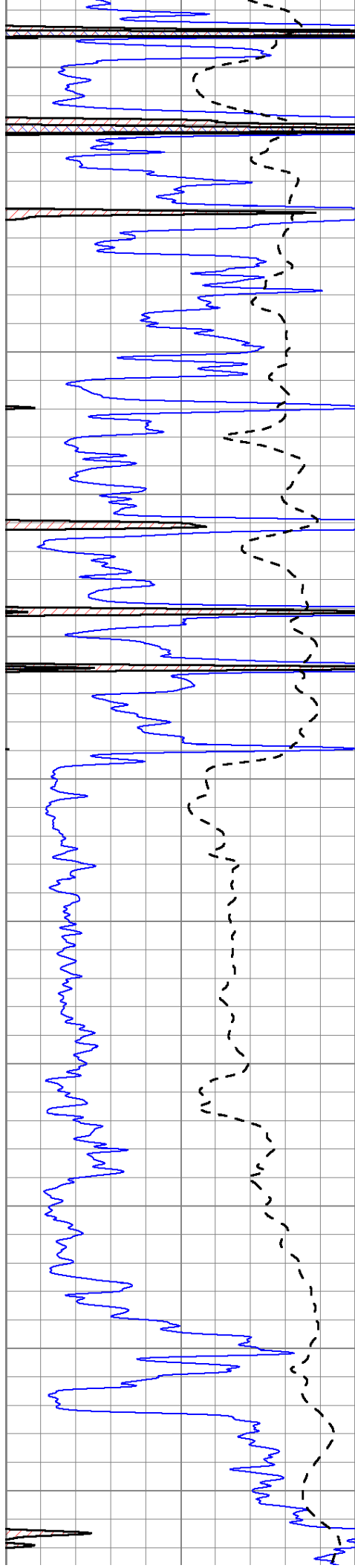












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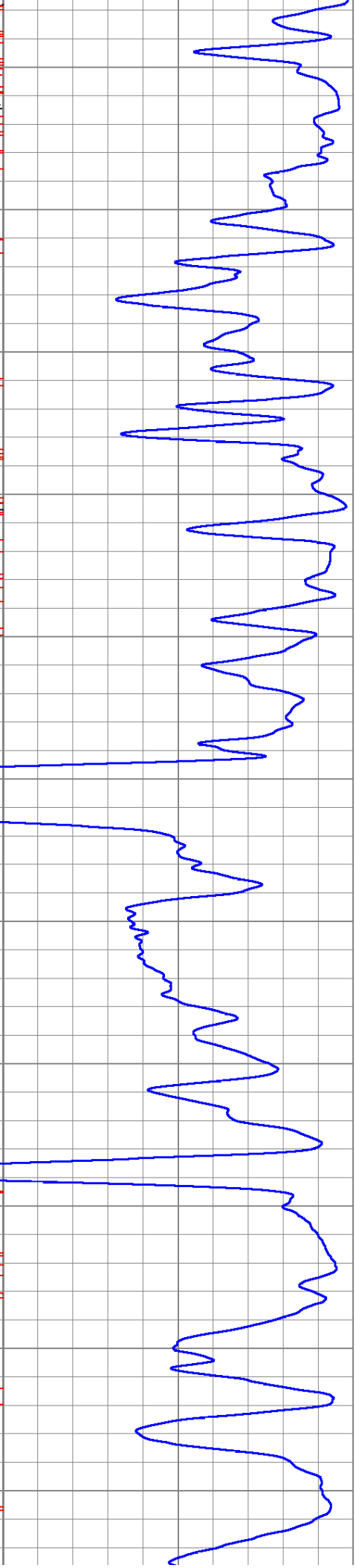
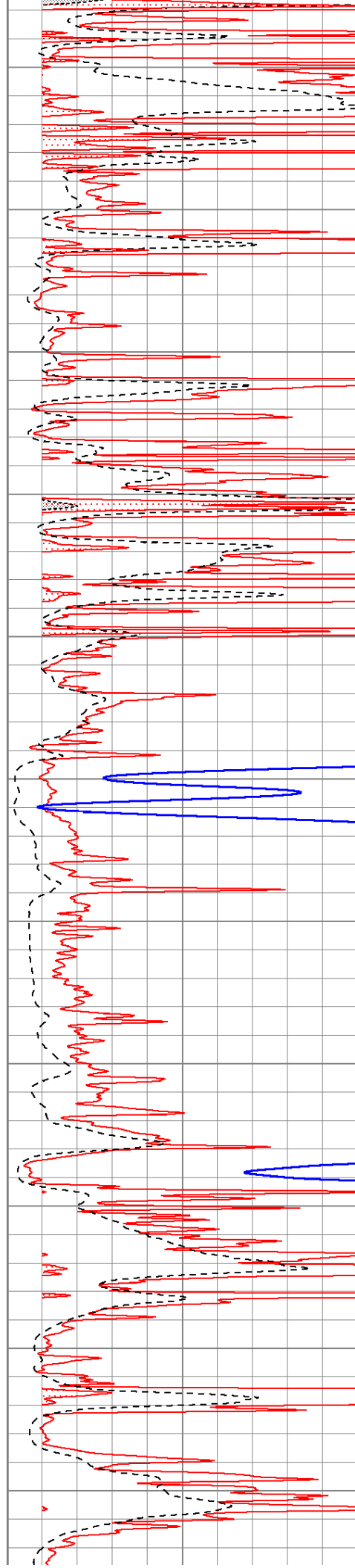
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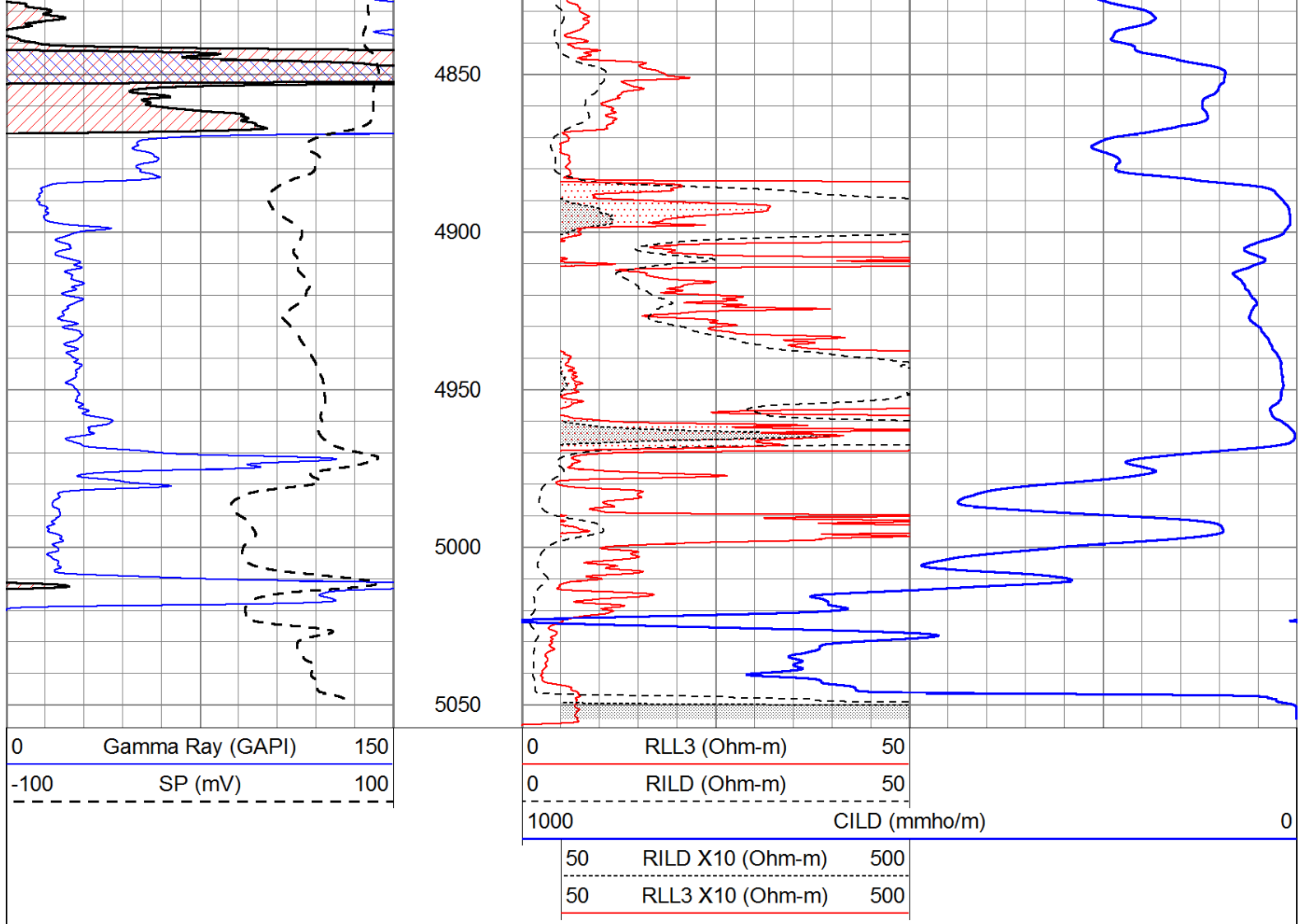
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NABORS

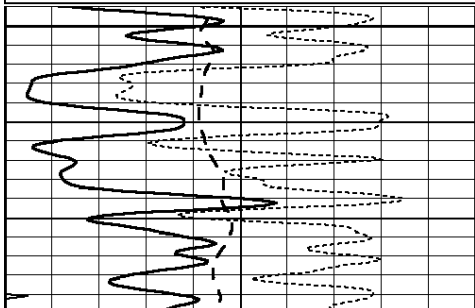
**COMPLETION
& PRODUCTION
SERVICES CO.**

MAIN SECTION

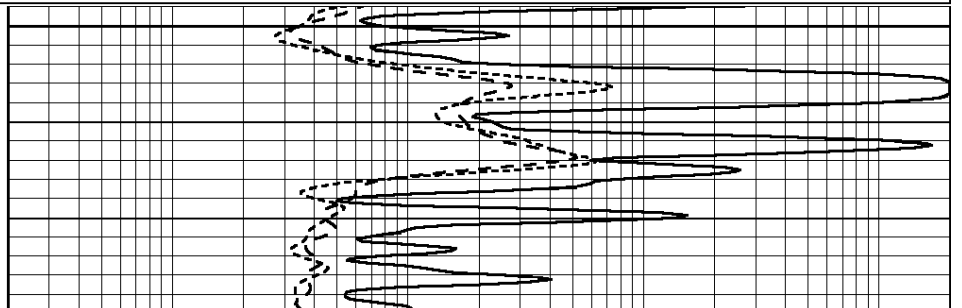
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 Presentation Format: dil
 Dataset Creation: Wed Oct 24 12:56:50 2012 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

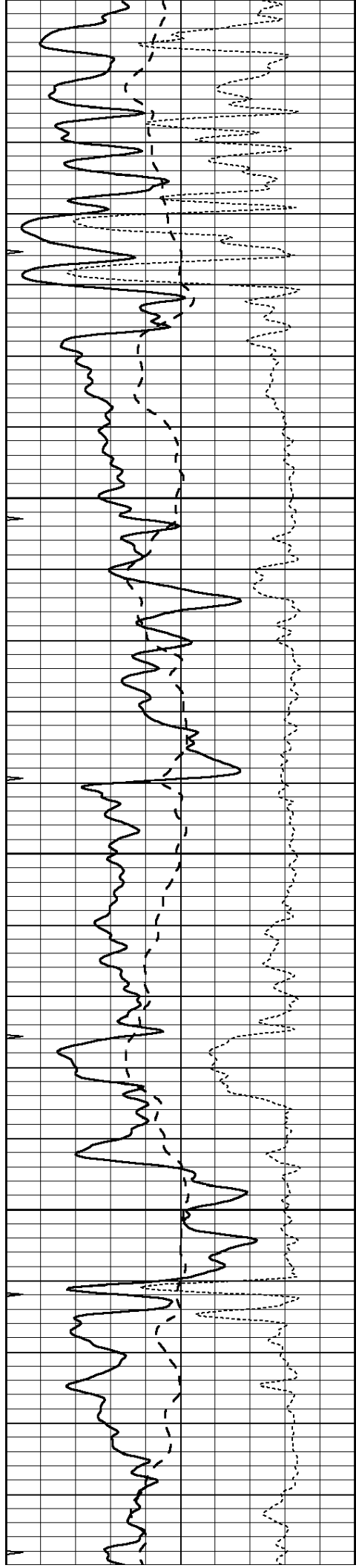
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



1700





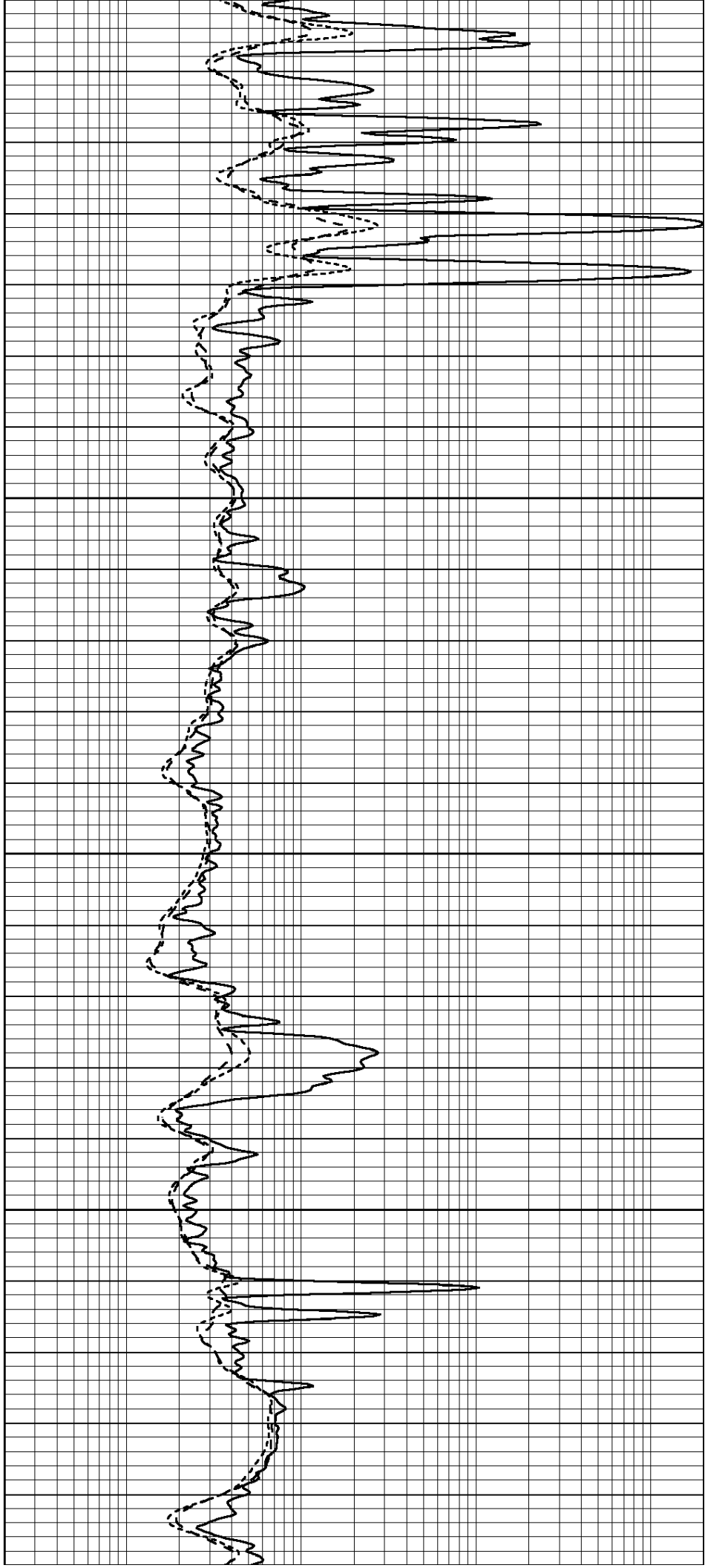
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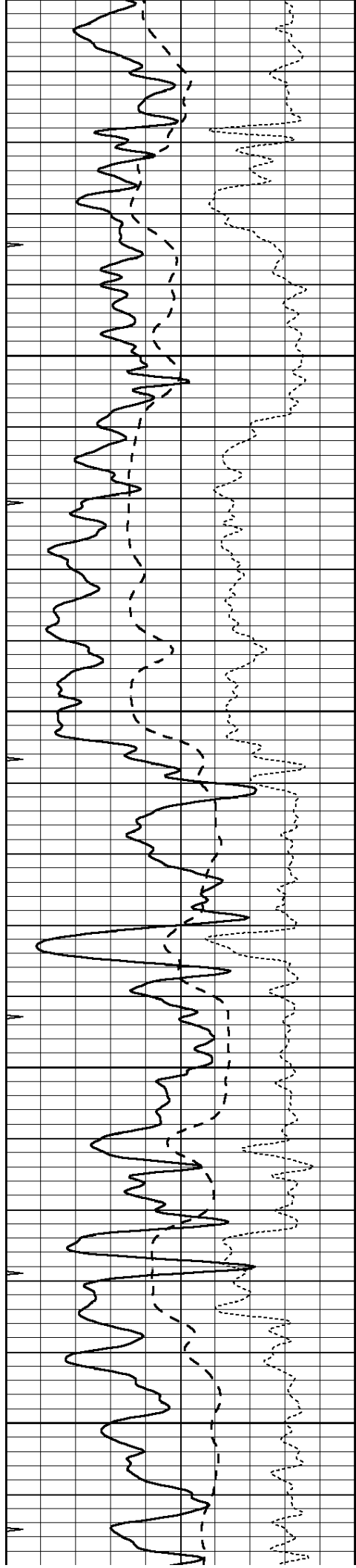
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1850

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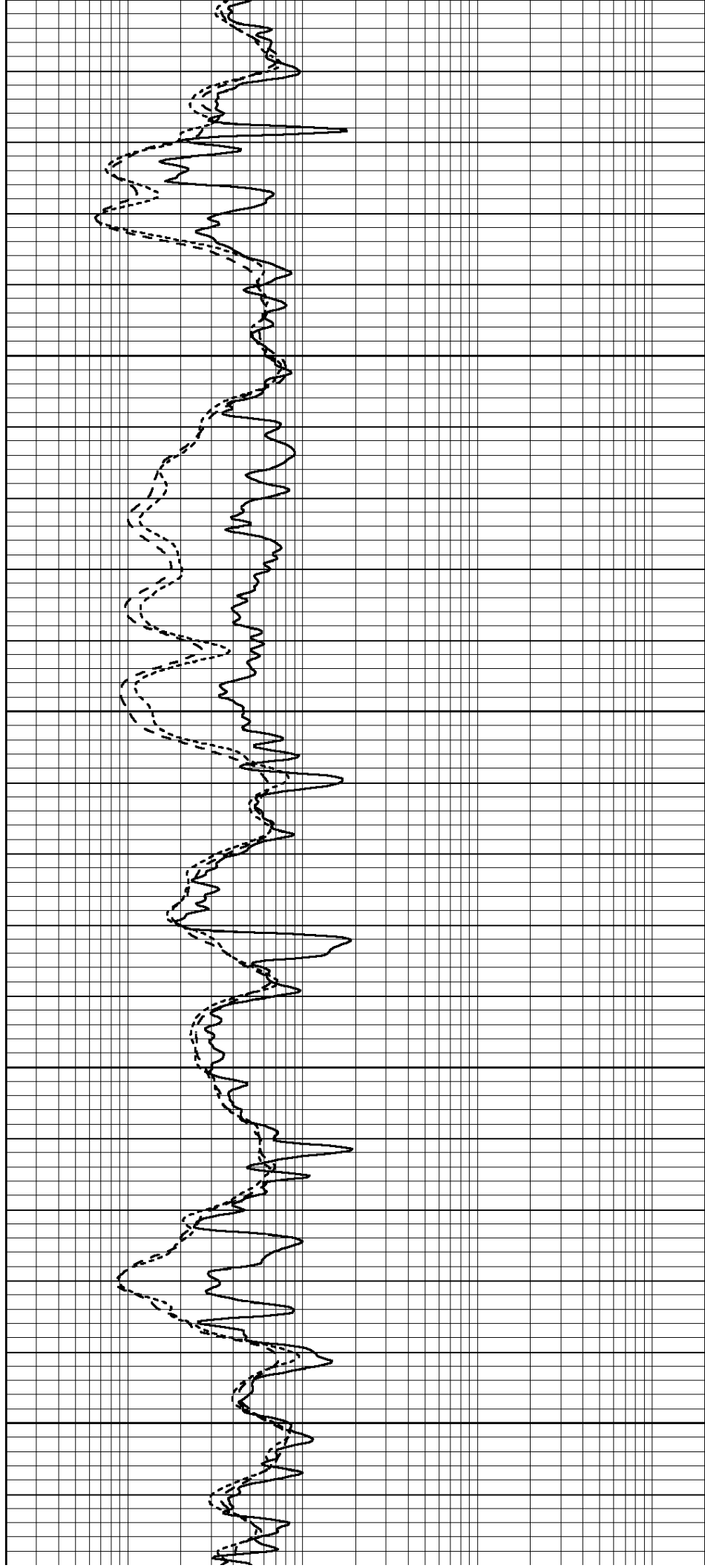
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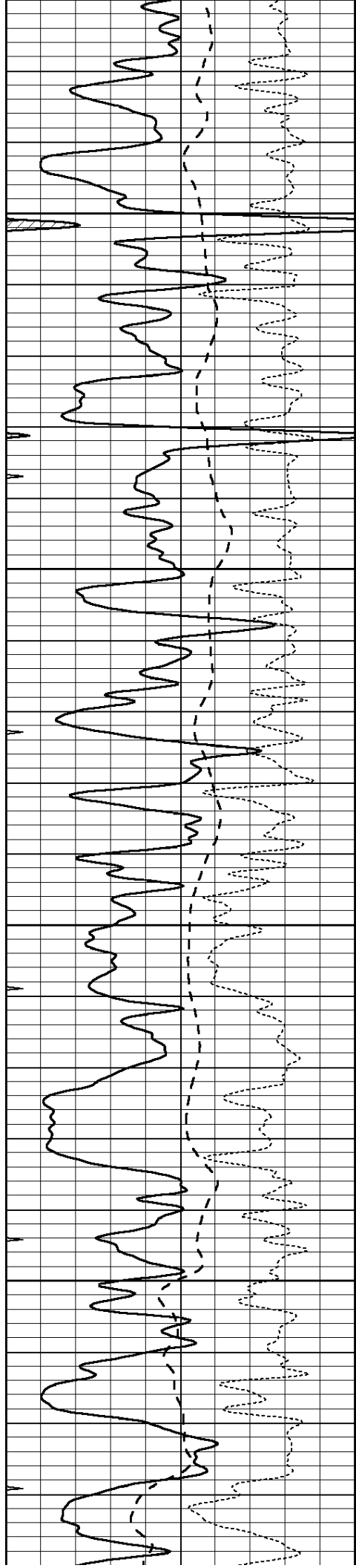
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2050

2100

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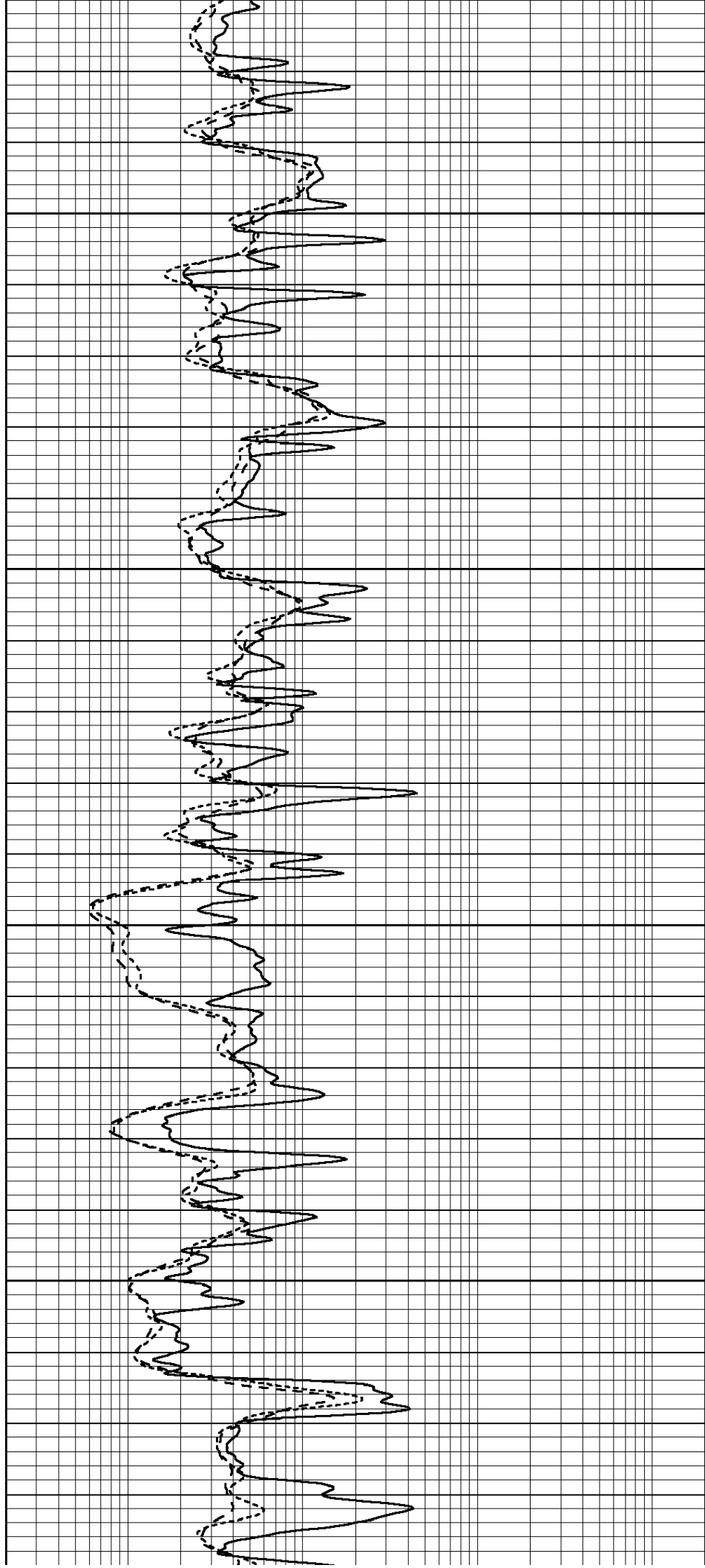


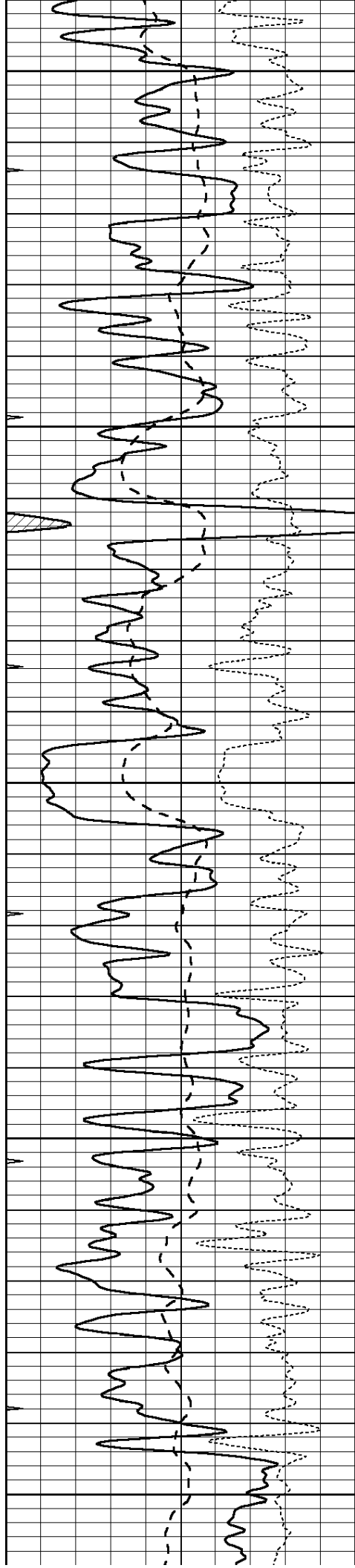
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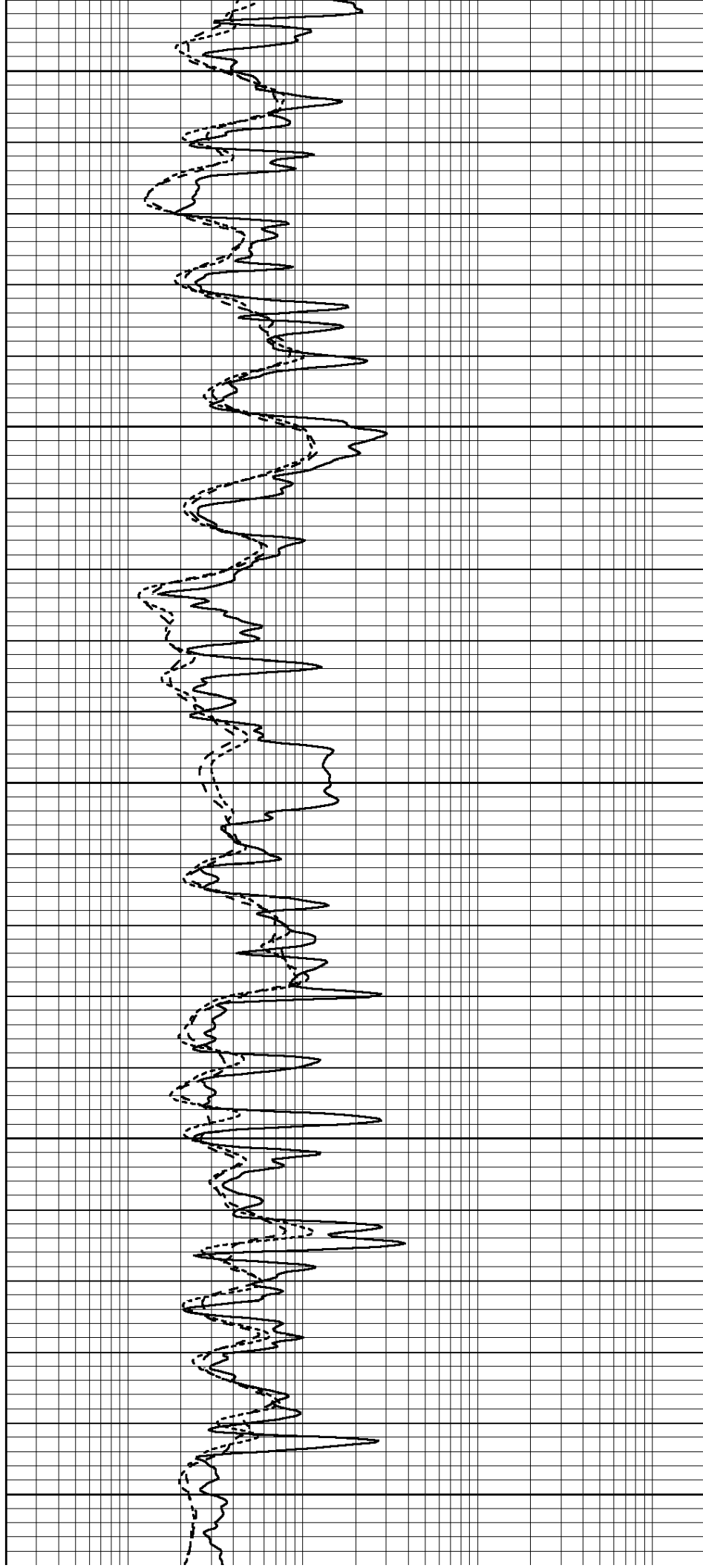
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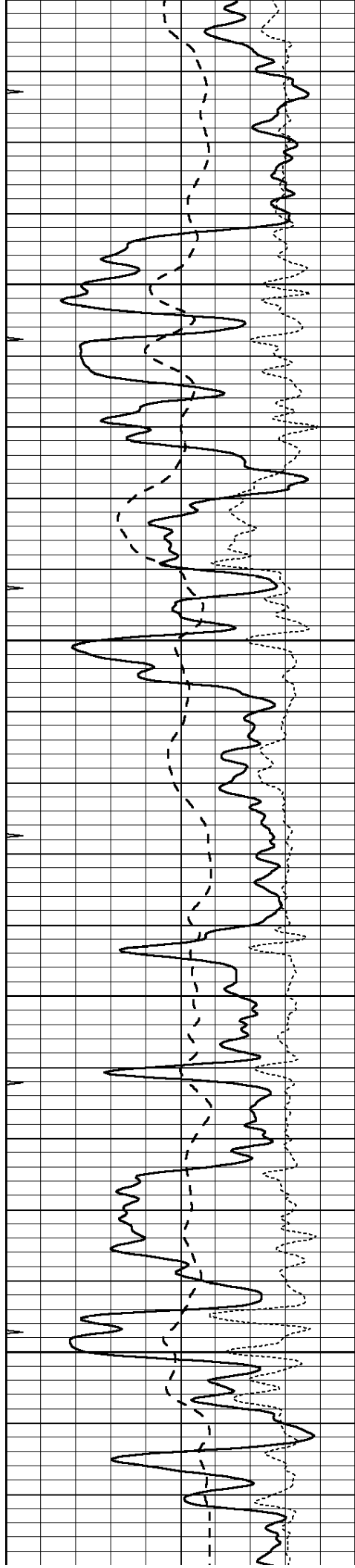
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2600



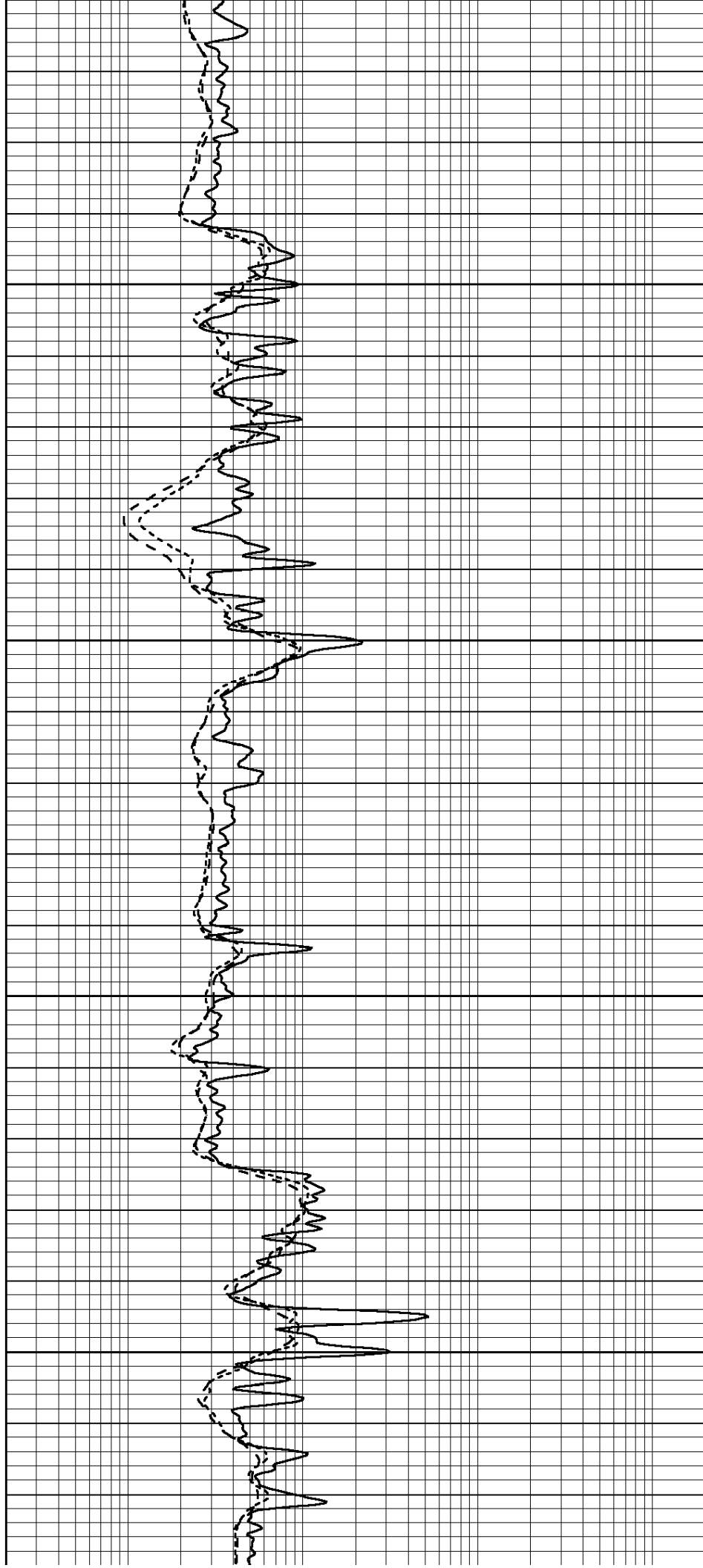


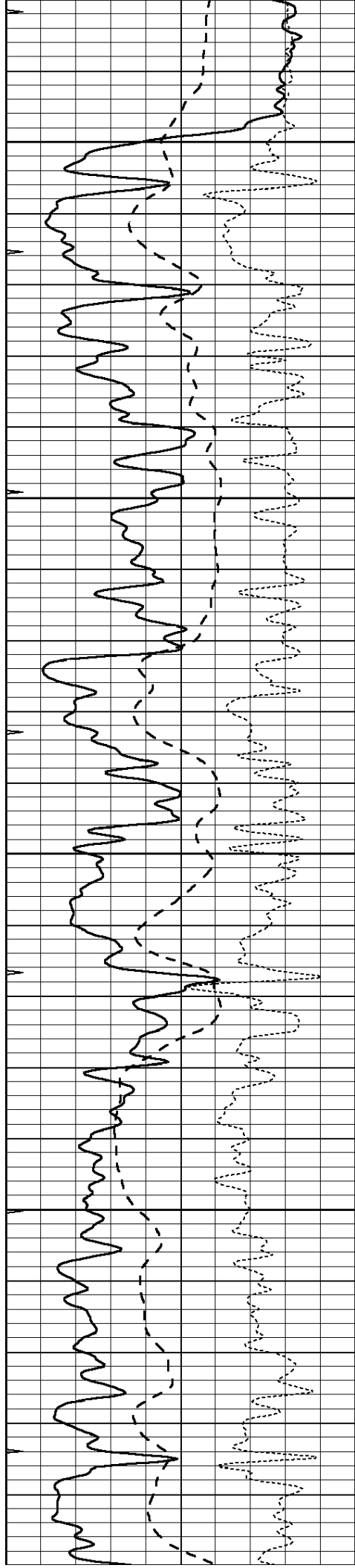
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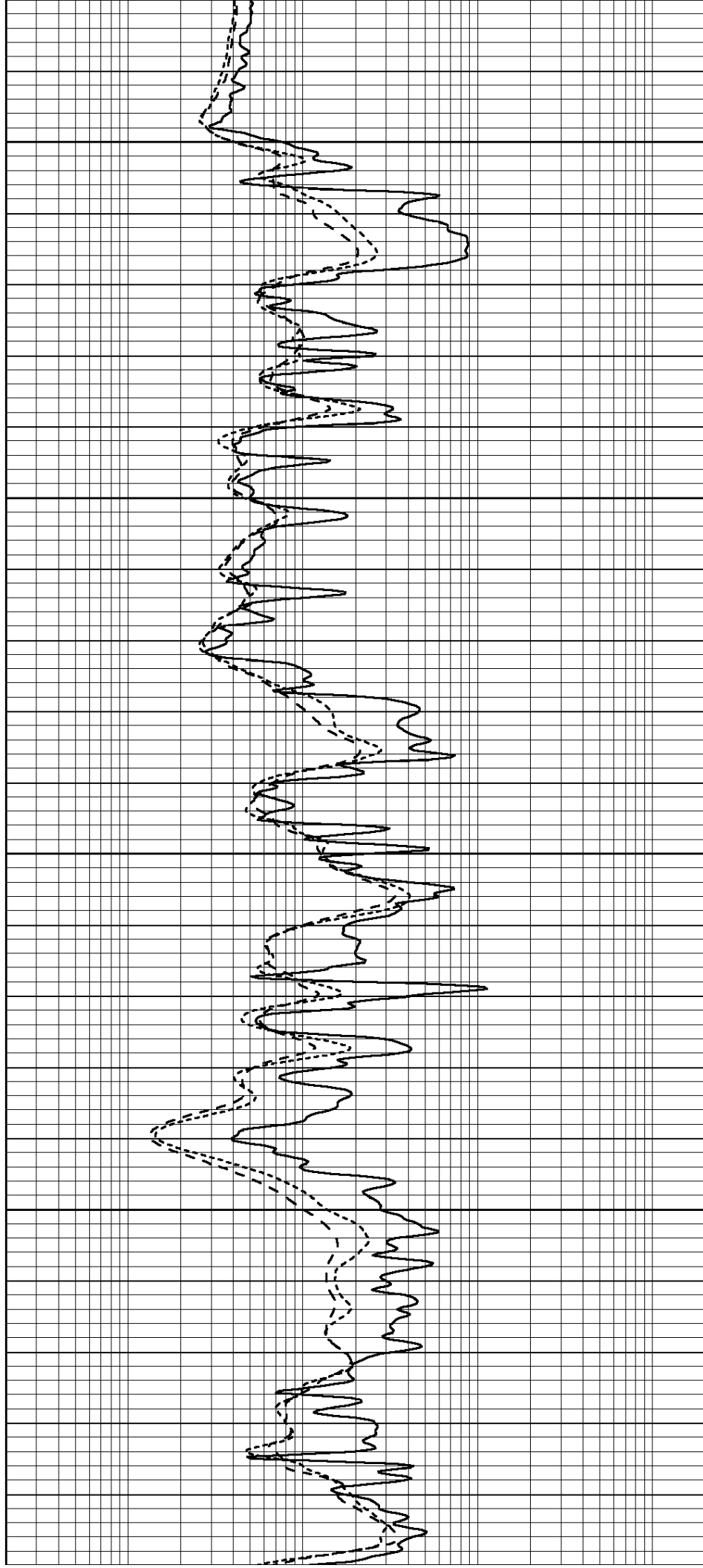
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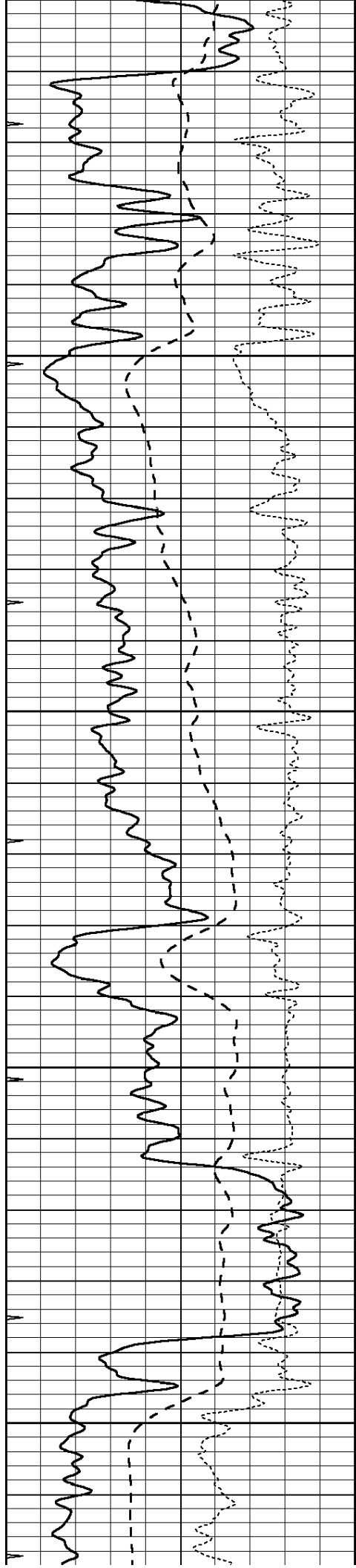
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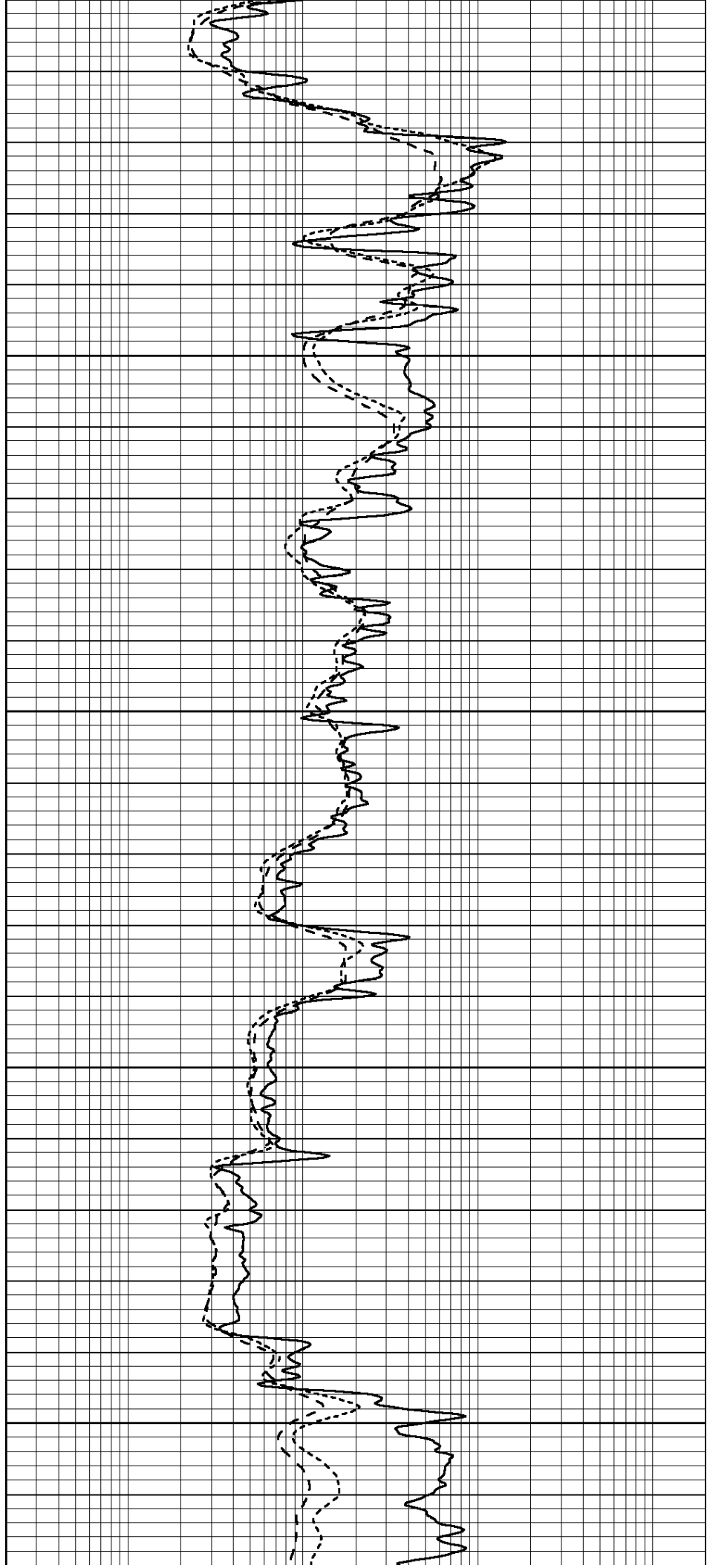
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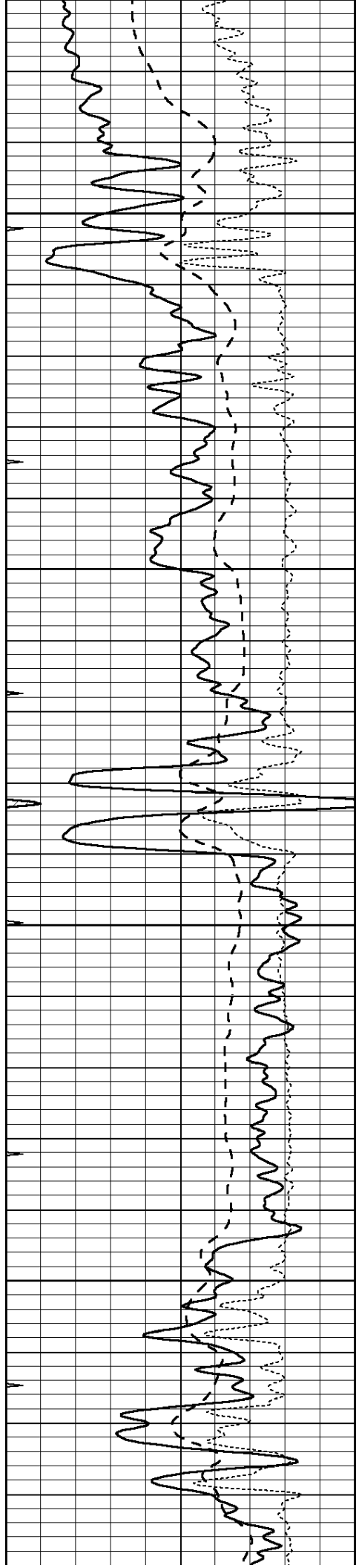
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3050
3100
3150
3200
3250



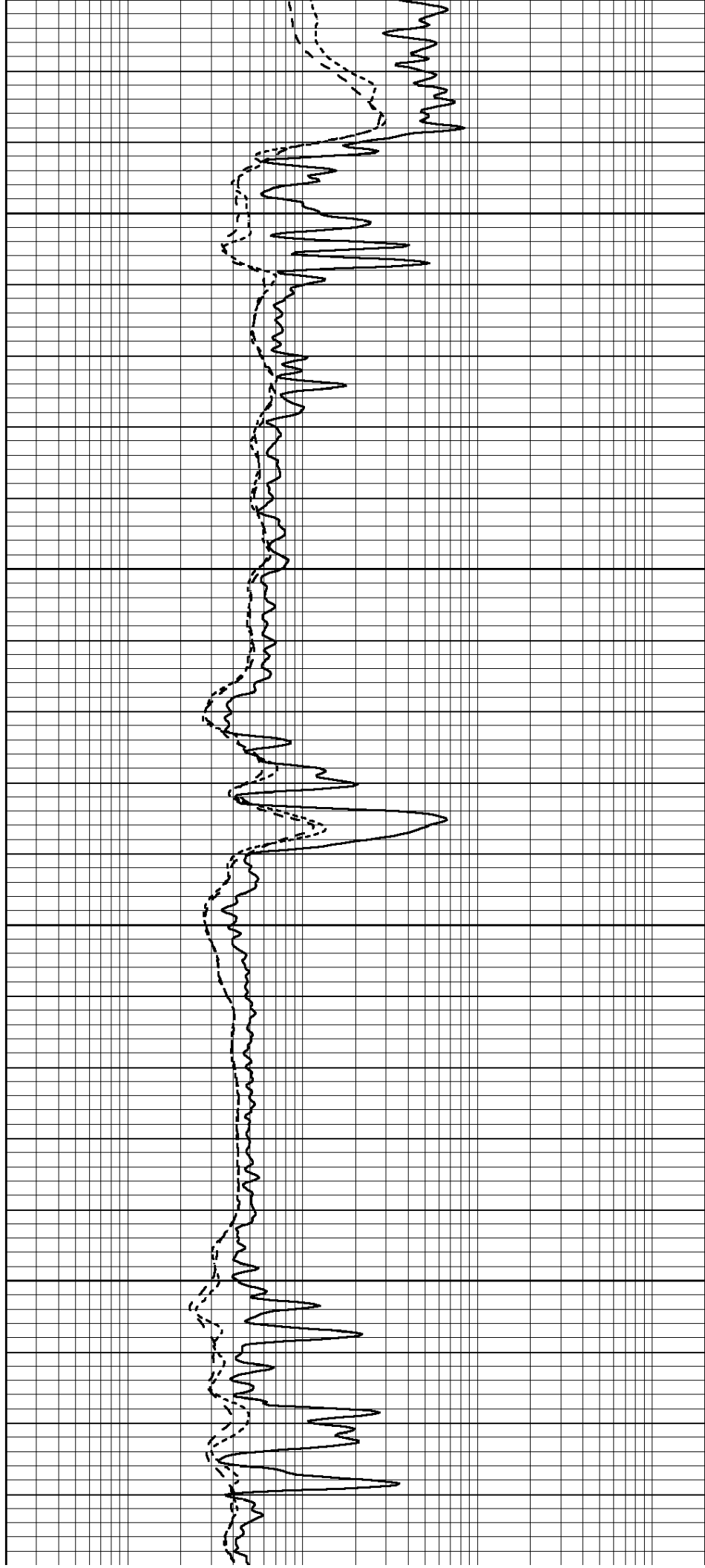


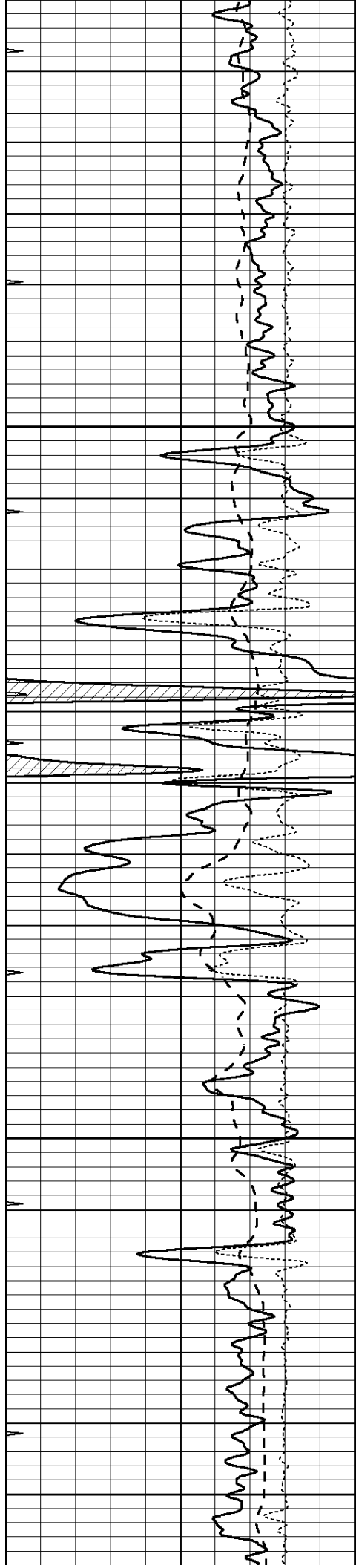
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3450





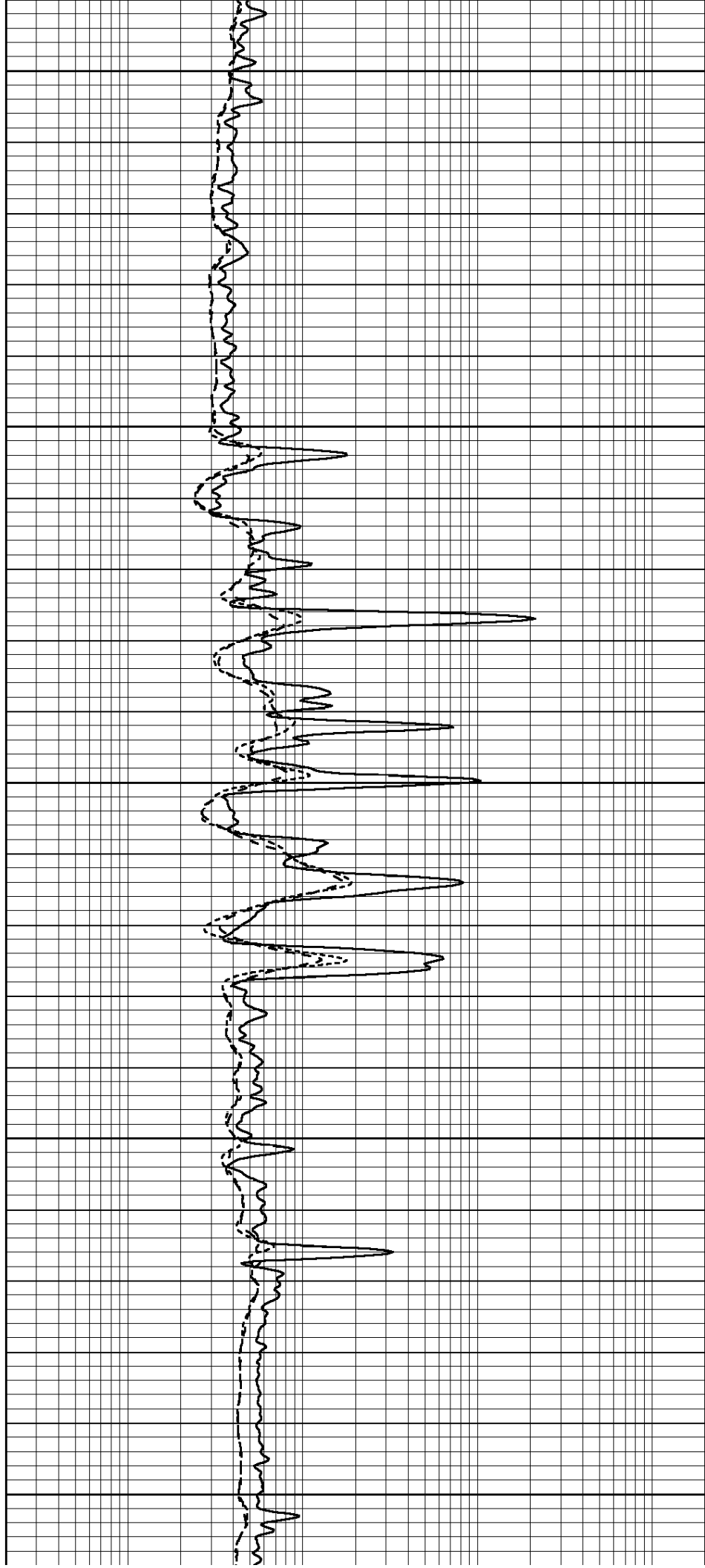
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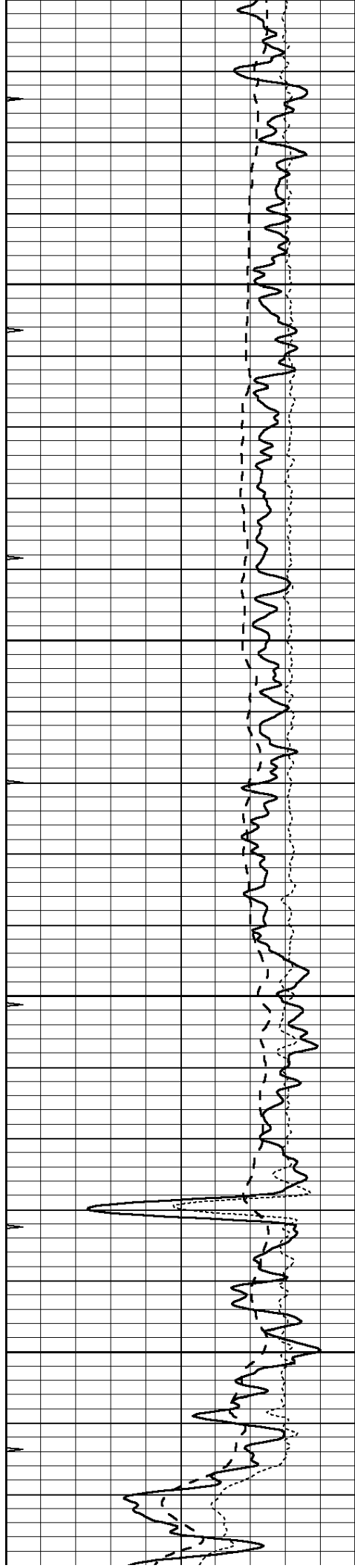
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3700



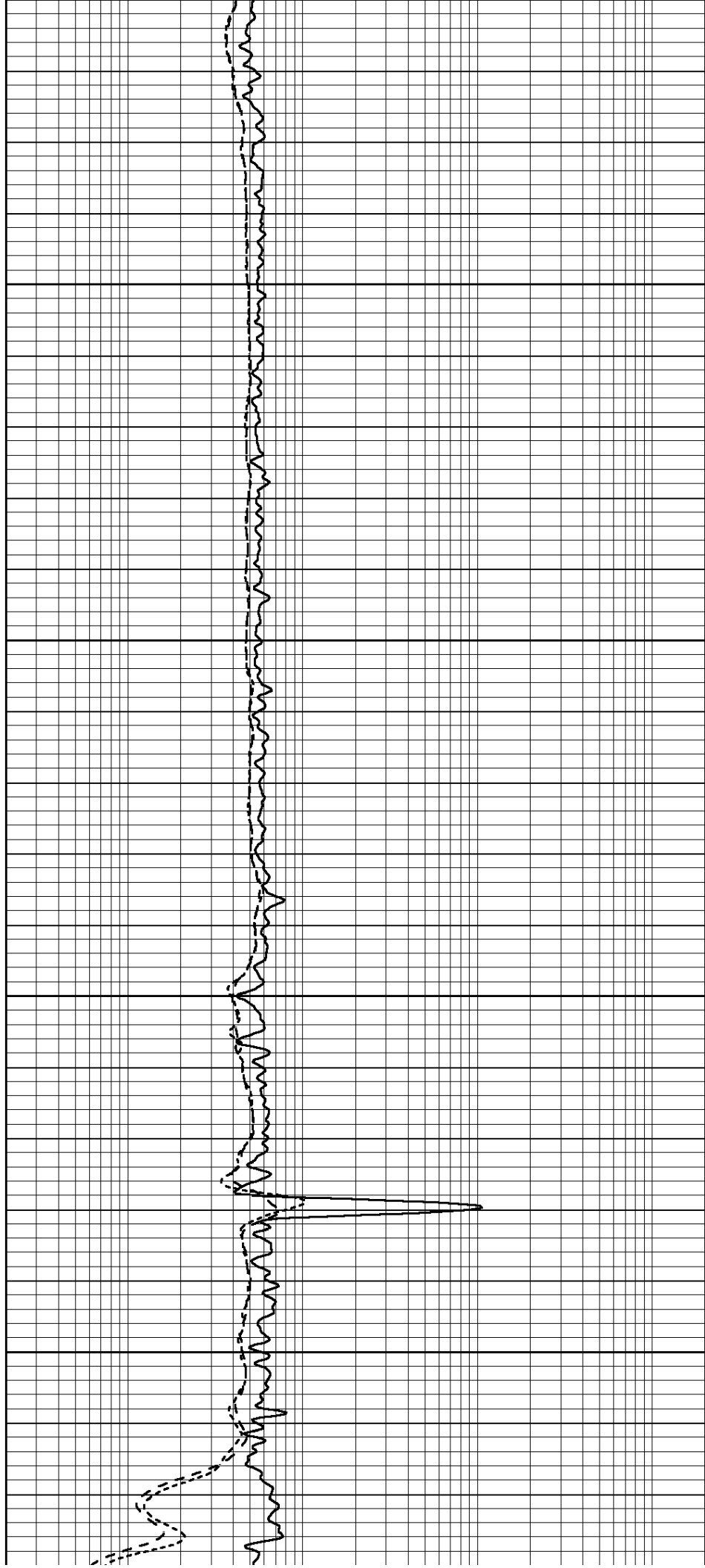


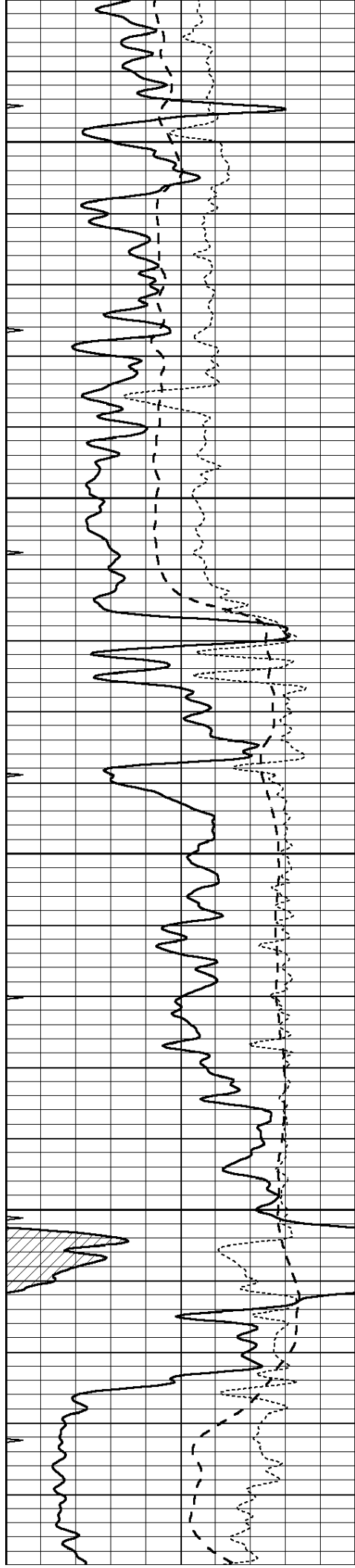
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3900





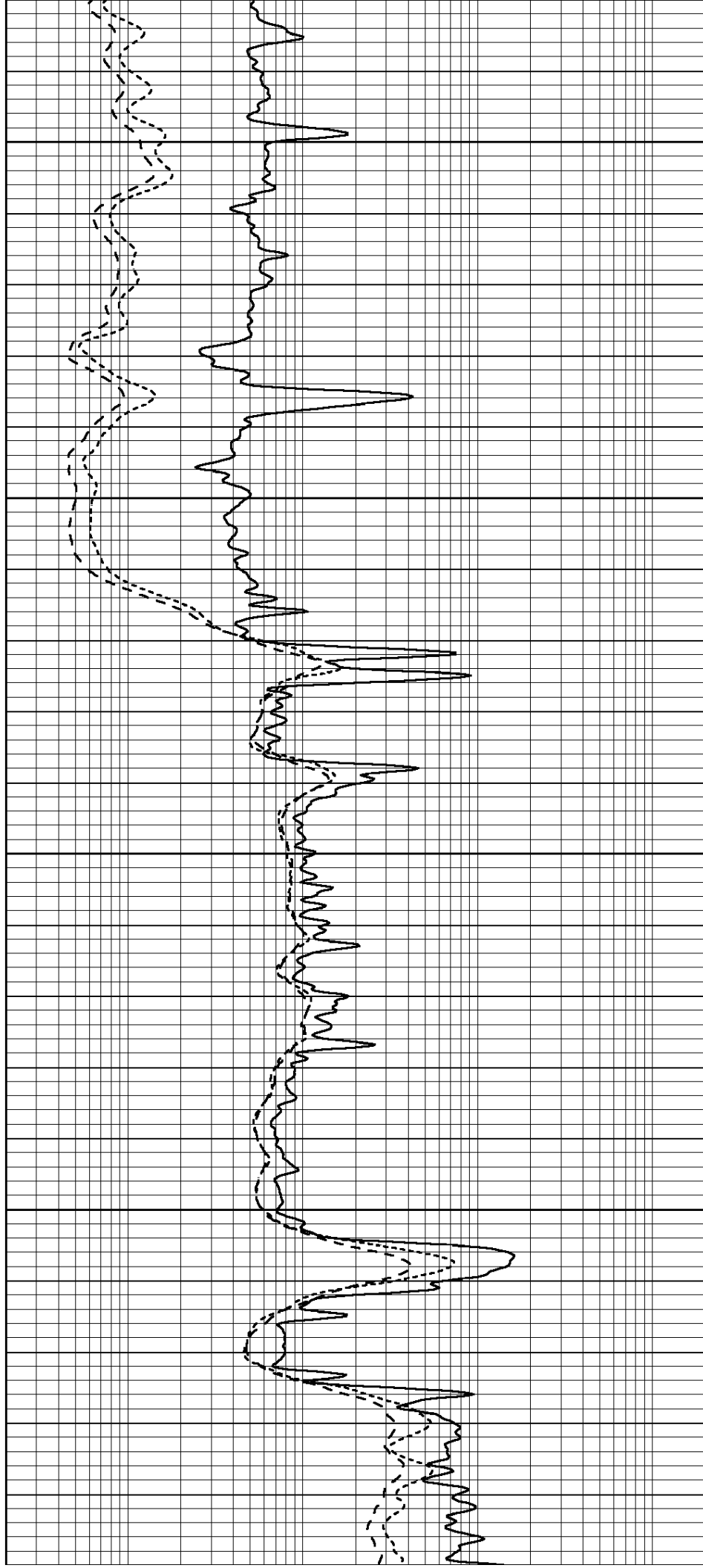
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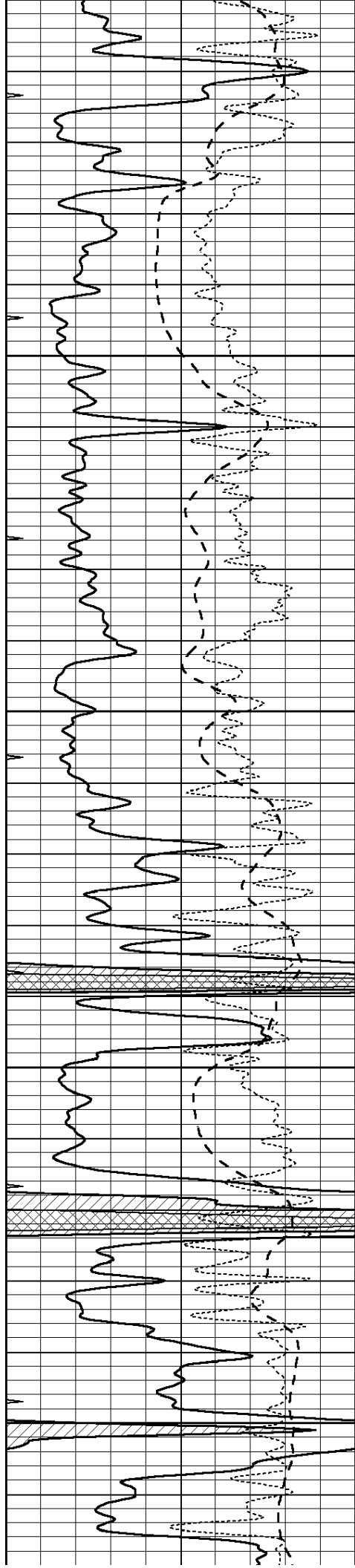
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4050

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4150





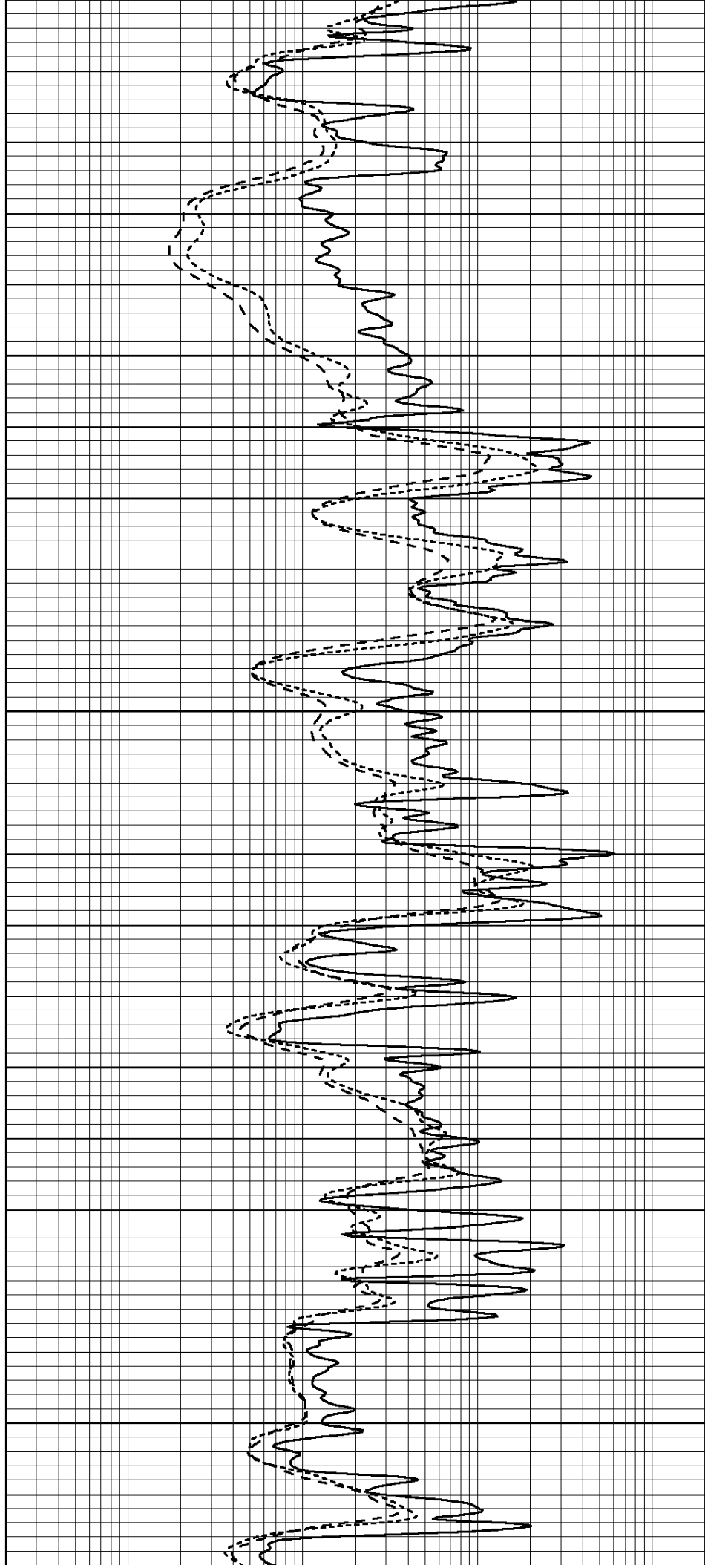
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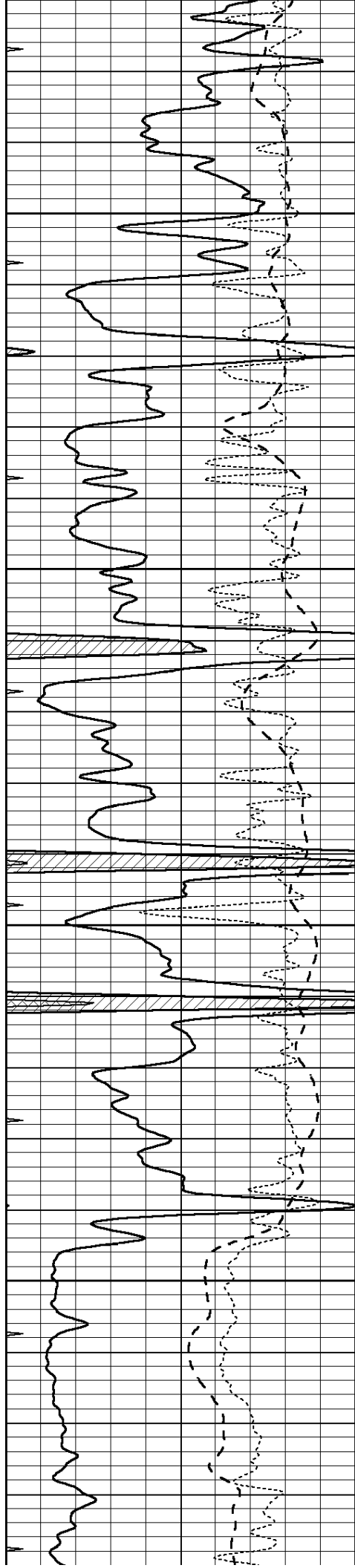
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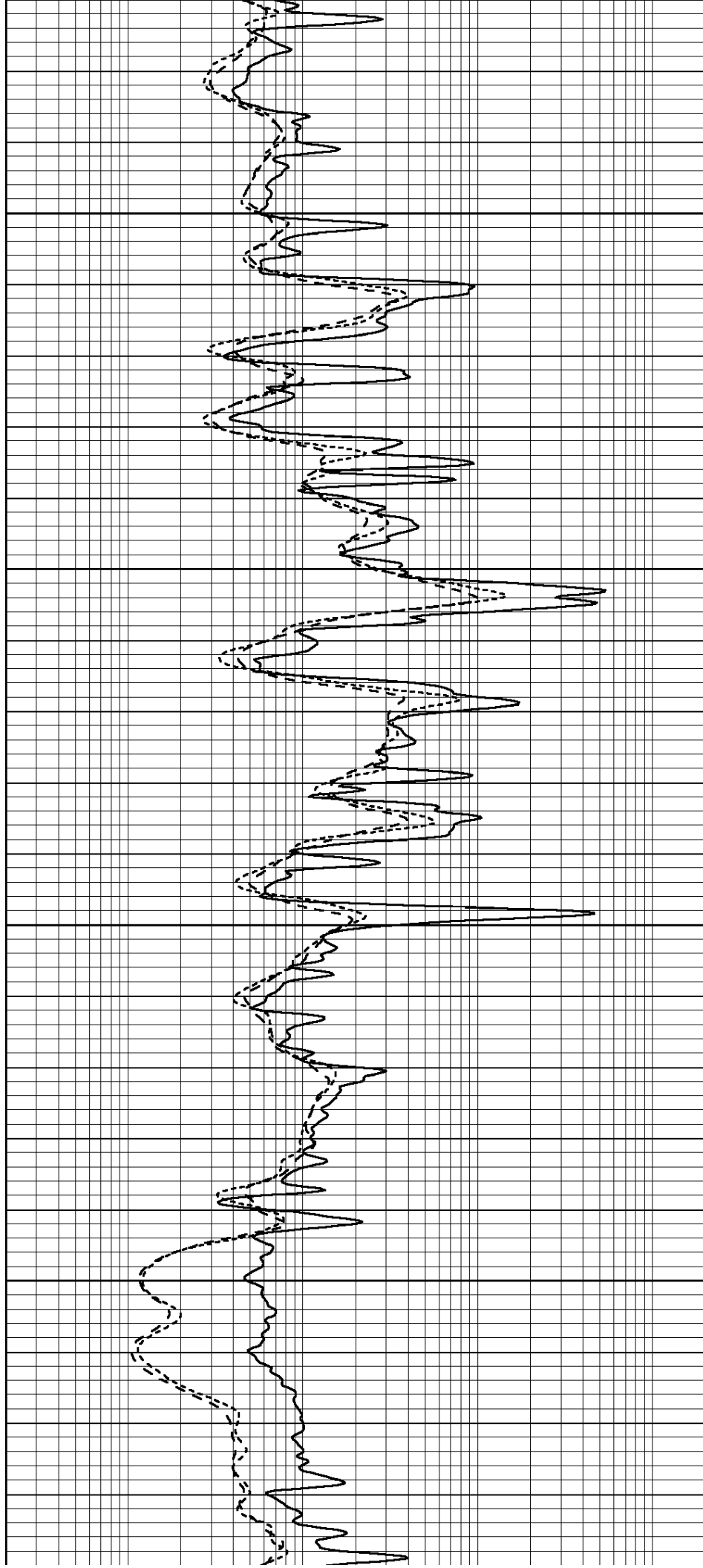


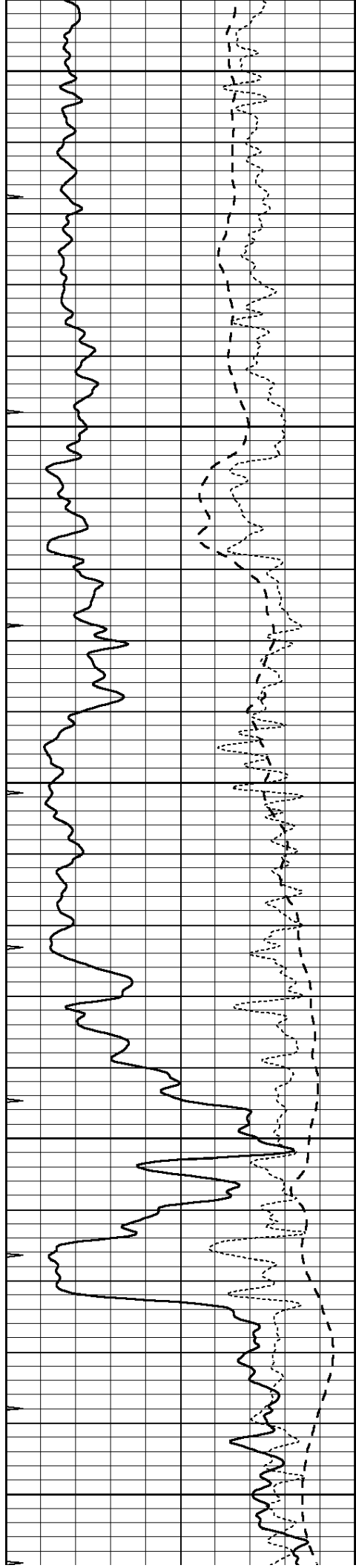
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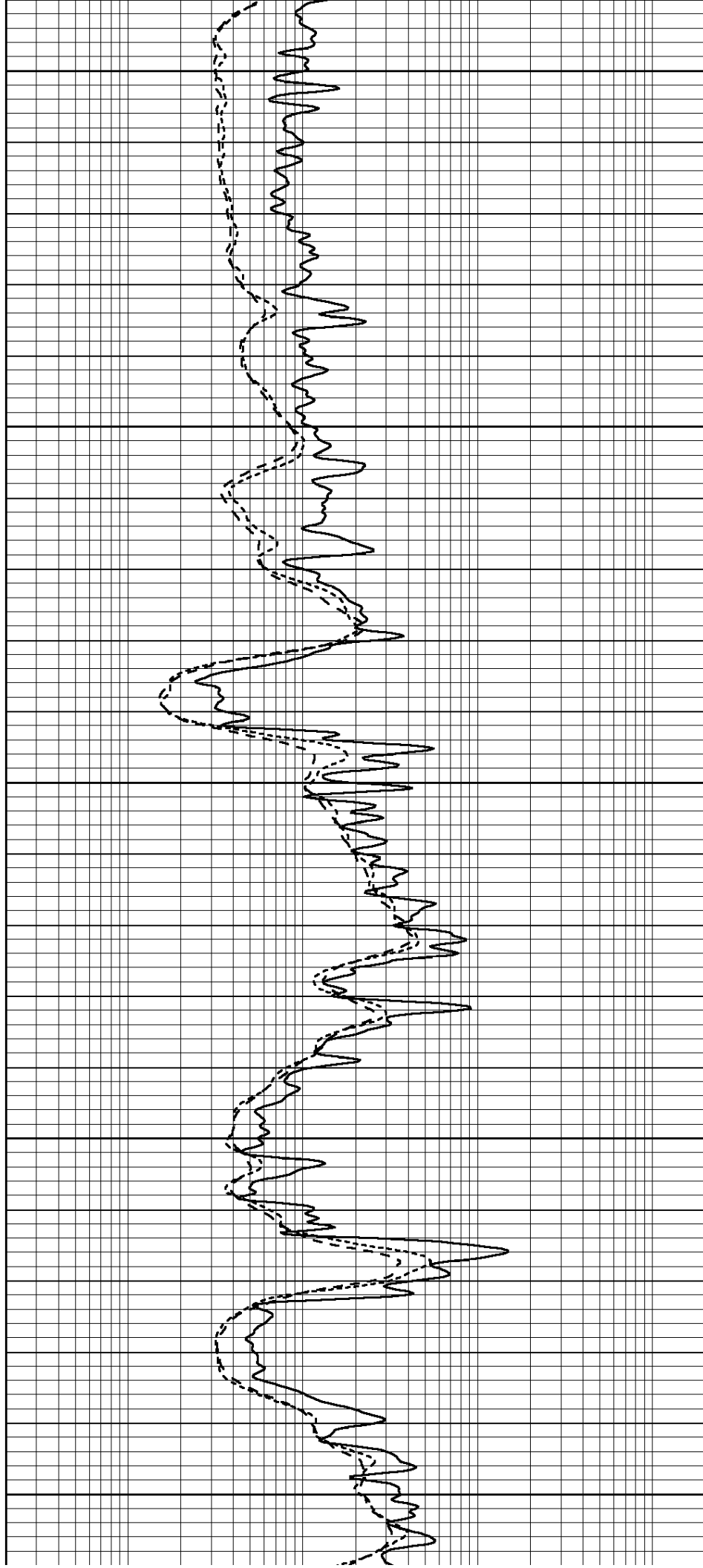
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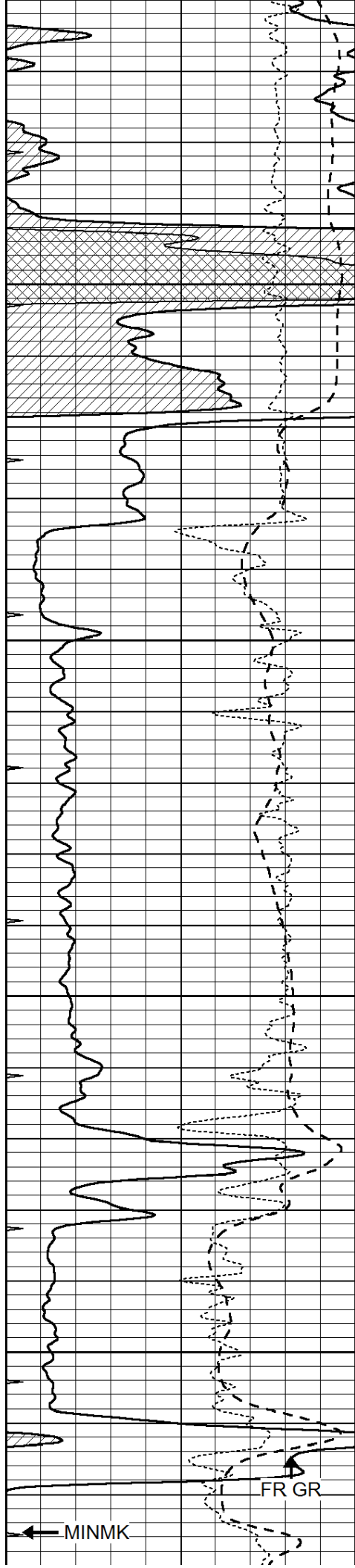
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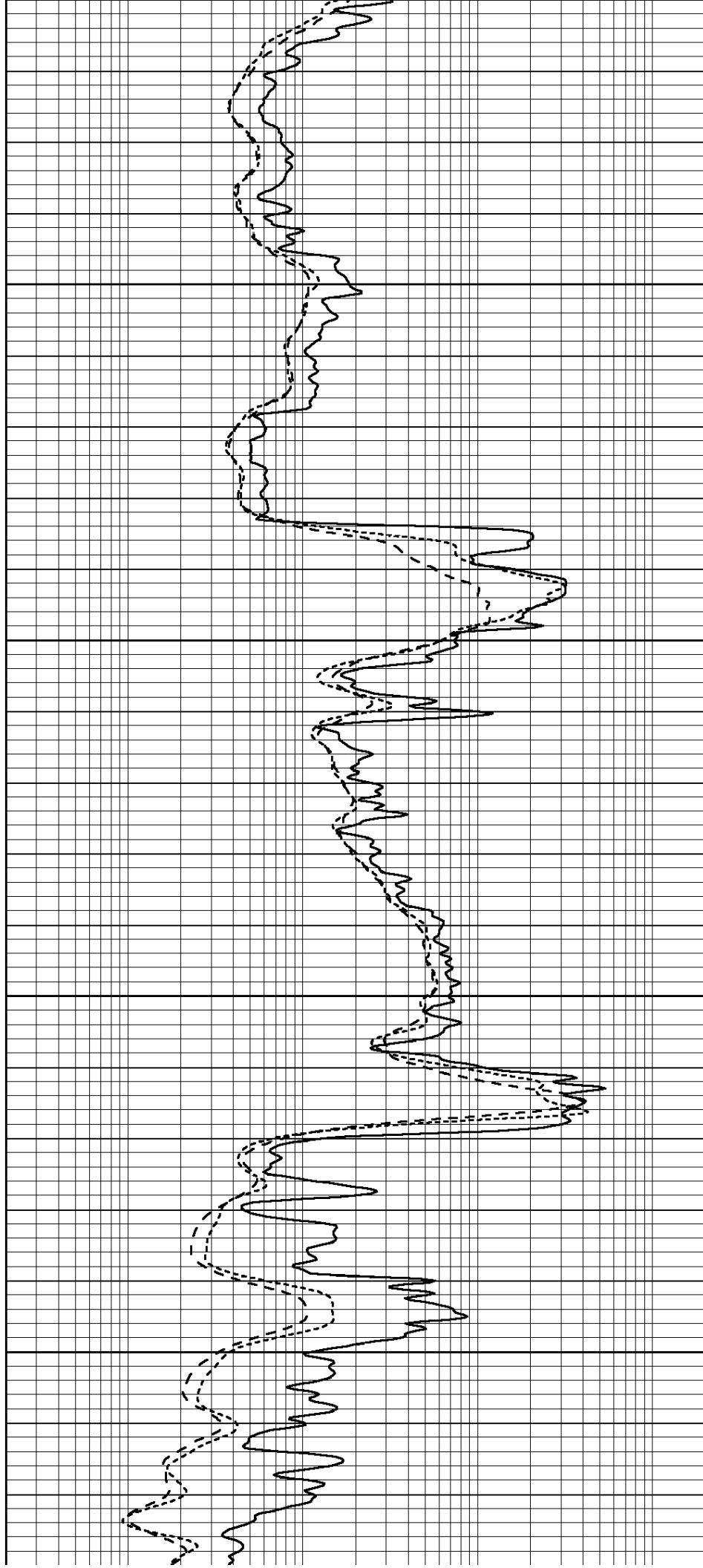


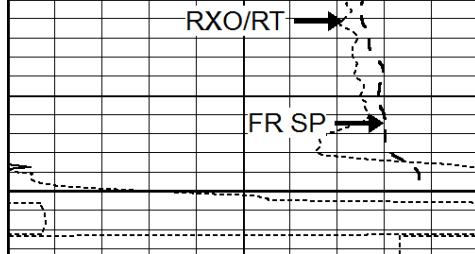
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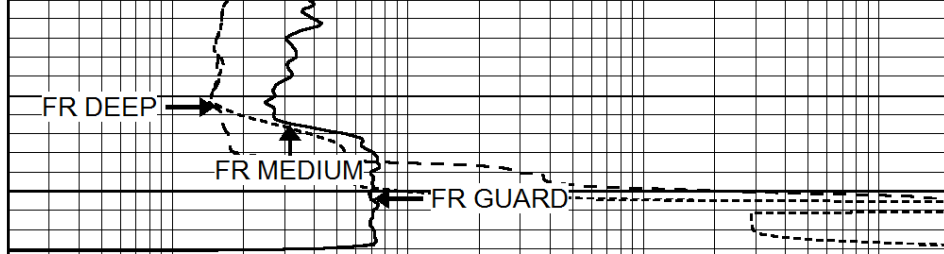
5000





5050
LTD 5053

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

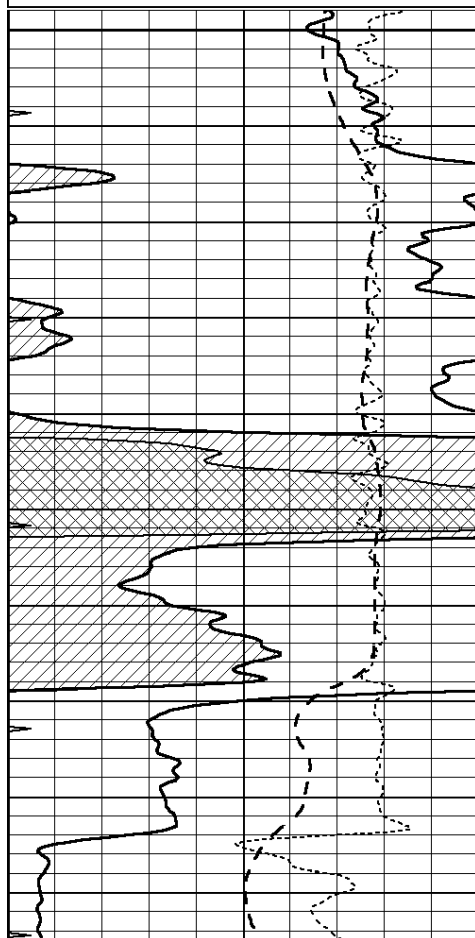


REPEAT SECTION

Database File: 409699pe.db
Dataset Pathname: pass2.4
Presentation Format: dil
Dataset Creation: Wed Oct 24 13:09:43 2012 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

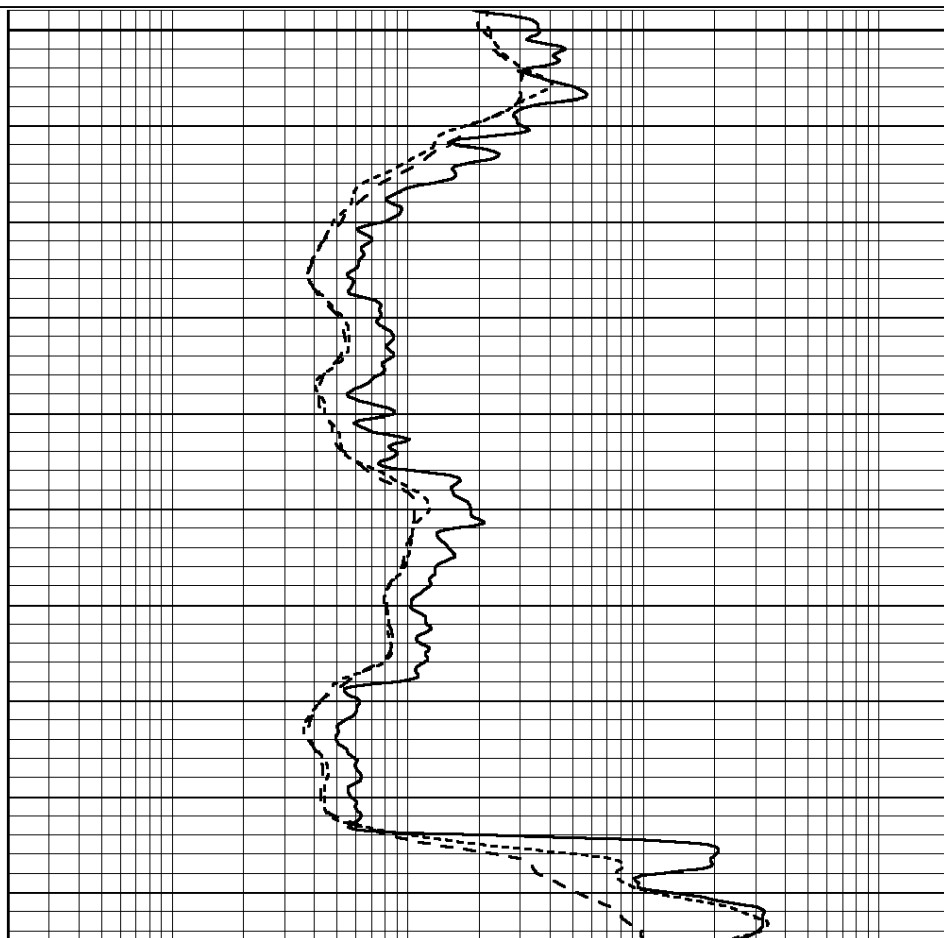
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

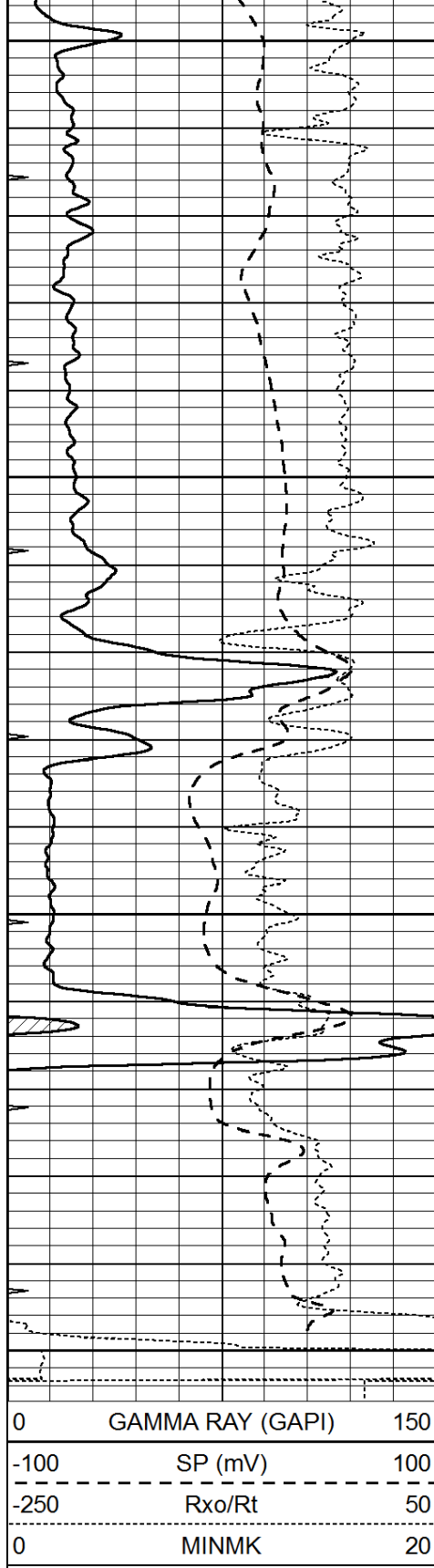
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



4800

4850



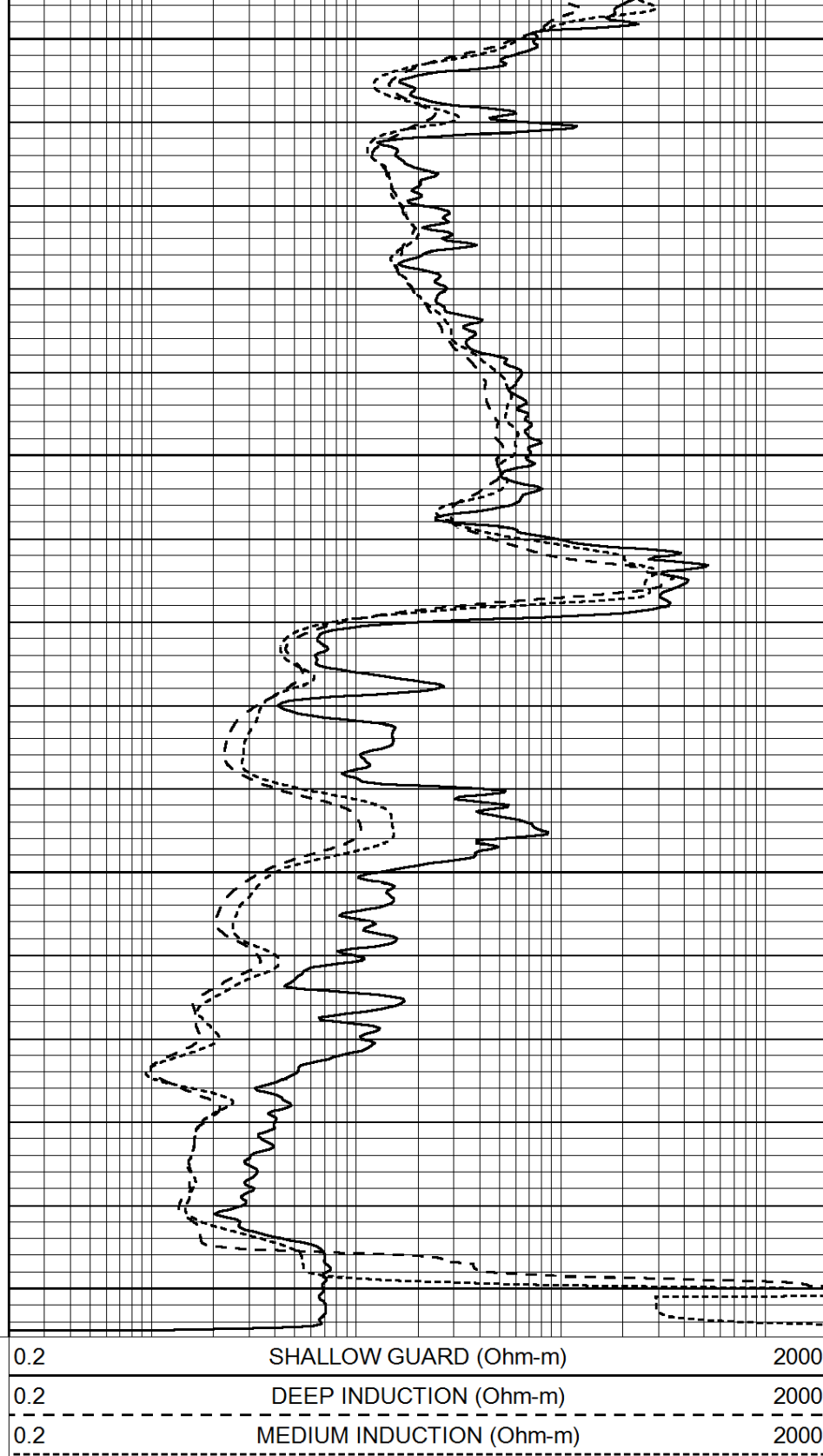


4900

4950

5000

5050



Calibration Report

Database File: 409699pe.db
Dataset Pathname: pass3.5
Dataset Creation: Wed Oct 24 12:56:50 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model:
Performed:

DIL3-GEAR
Wed Oct 24 10:22:26 2012

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	9.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-6.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report
 Serial: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration					
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper		
Readings	Reference	
Low Ref 3.5	6.4	
High Ref 5.5	15.0	
Gain: 4.5		Offset: -9.3

Compensated Neutron Calibration Report

Serial Number:	070808
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:	070559	
Tool Model:	OPEN_GR	
Performed:	Wed Sep 19 15:58:00 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps

Sensitivity:

0.3000

GAPI/cps