



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

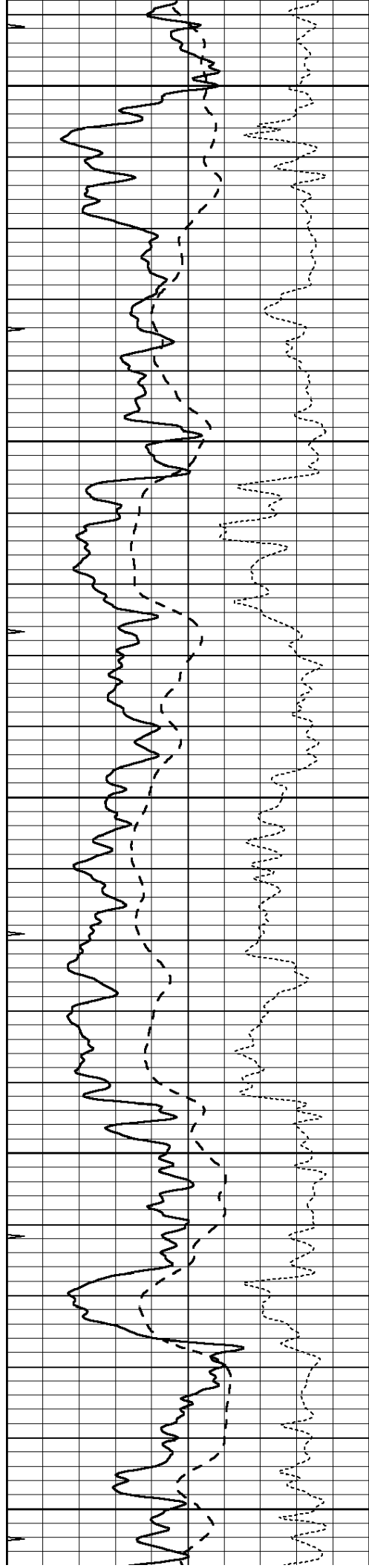
Company	WOOLSEY OPERATING COMPANY, LLC.		
Well	WARREN FEE #13		
Field	MEDICINE LODGE NORTH		
County	BARBER	State	KANSAS
Location:	API # : 15-007-24192-00-00		Other Services CDL/CNL PE
Permanent Datum Log Measured From Drilling Measured From		1380' FSL & 1000' FWL SE - SE - NW - SW SEC 19 TWP 32S RGE 12W GROUND LEVEL Elevation 1637 KELLY BUSHING 12' A.G.L. KELLY BUSHING	Elevation K.B. 1649 D.F. 1647 G.L. 1637
Date	8/5/14		
Run Number	ONE		
Depth Driller	4910		
Depth Logger	4908		
Bottom Logged Interval	4906		
Top Log Interval	00		
Casing Driller	13 3/8 @ 235		
Casing Logger	230'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.1/63	CHLORIDES 7,000 PPM	
pH / Fluid Loss	10.5/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.52 @ 90F		
Rmf @ Meas. Temp	0.39 @ 90F		
Rmc @ Meas. Temp	0.62 @ 90F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.38 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
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.

Comments

NABORS COMPLETION & PRODUCTION SERVICES CO.
785 (628 - 6395)
THANK YOU FOR YOUR BUSINESS
DIRECTIONS :MEDICINE LODGE, KS. - 3 WEST ON HWY 160 TO GYP HILL RD. - 4 MILES SOUTH TO CATTLE GUARD WITH OLD RUSTY SKELLY SIGN - WEST INTO ABOUT 1 1/2 MILES N.W. ON WHITE CHALK LEASE RD.



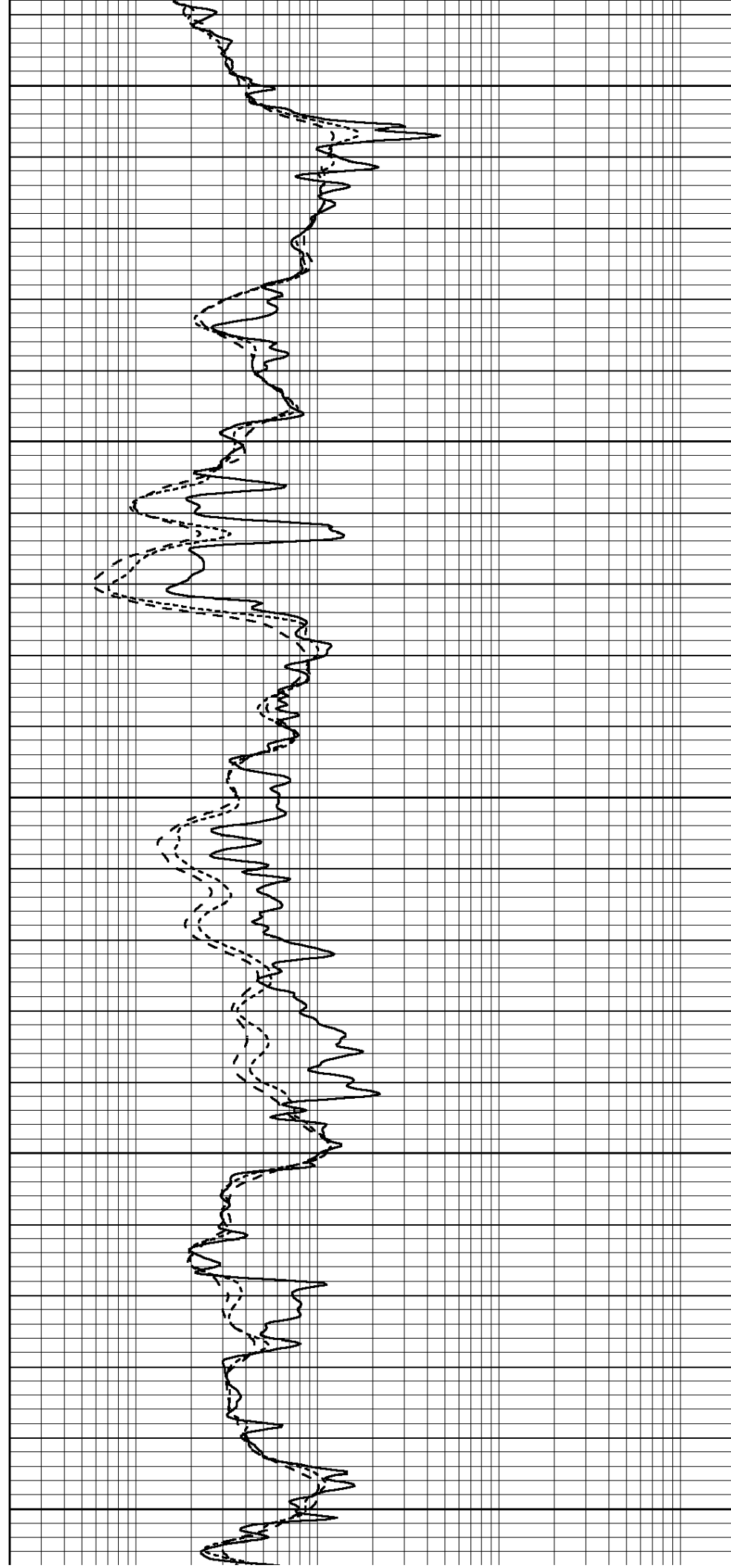
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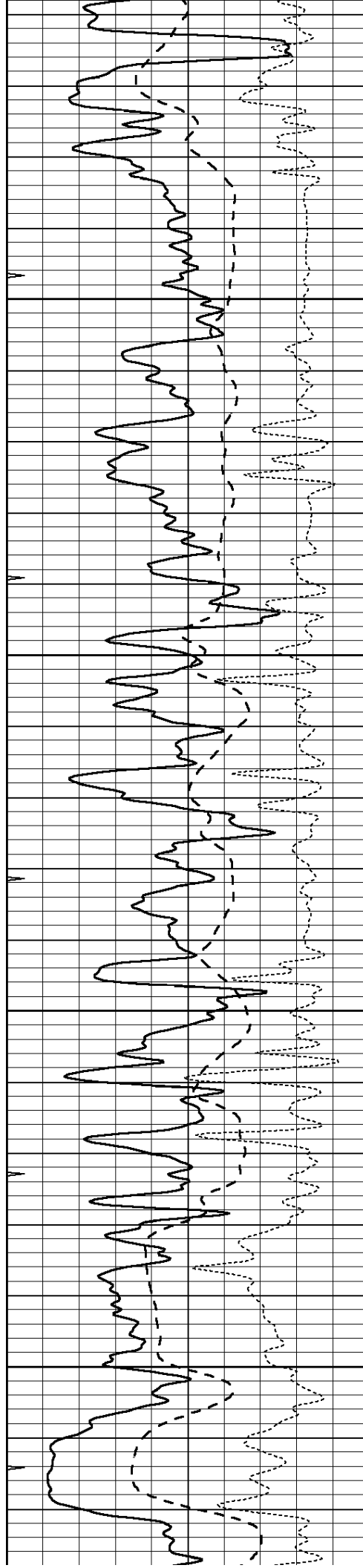
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2200

2250

2300



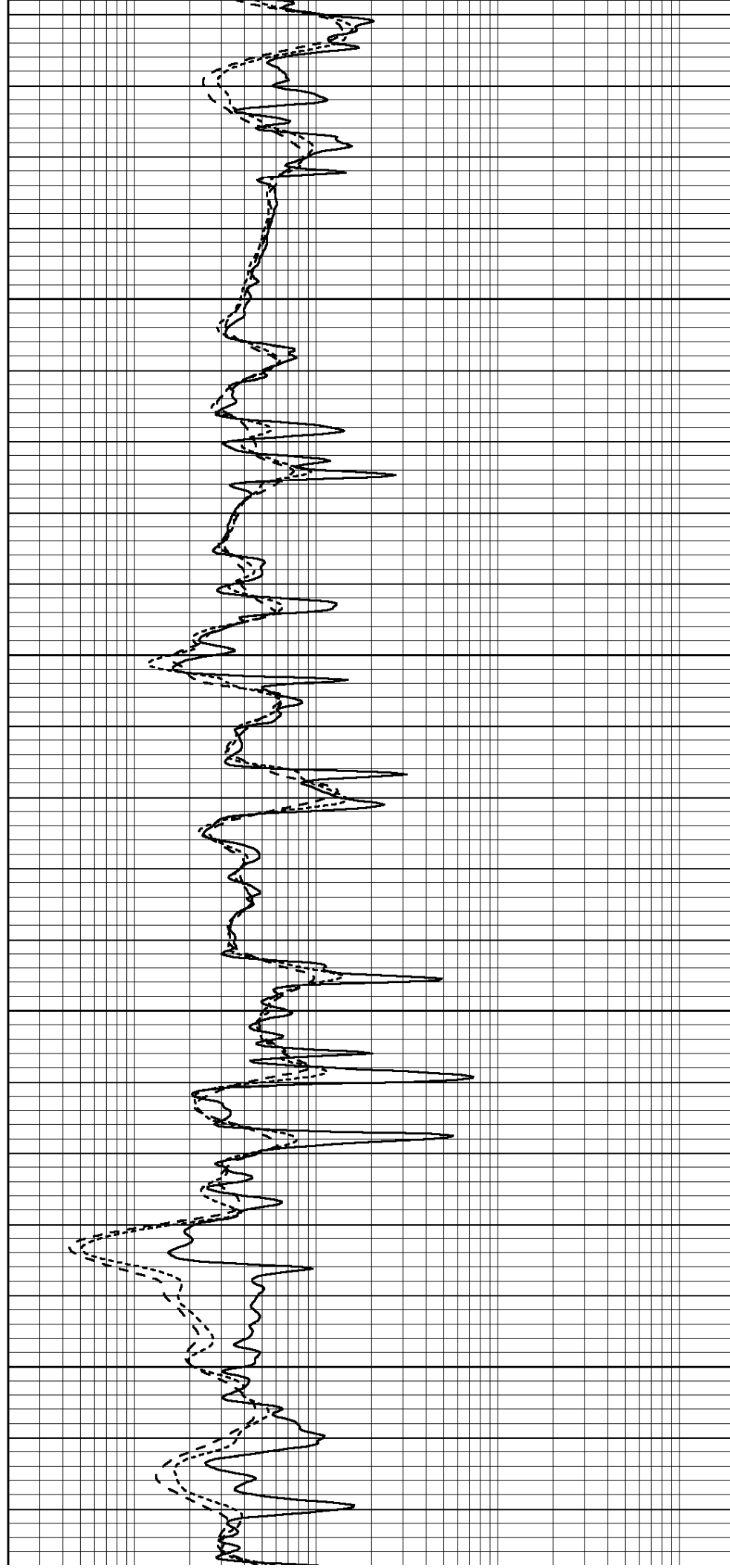


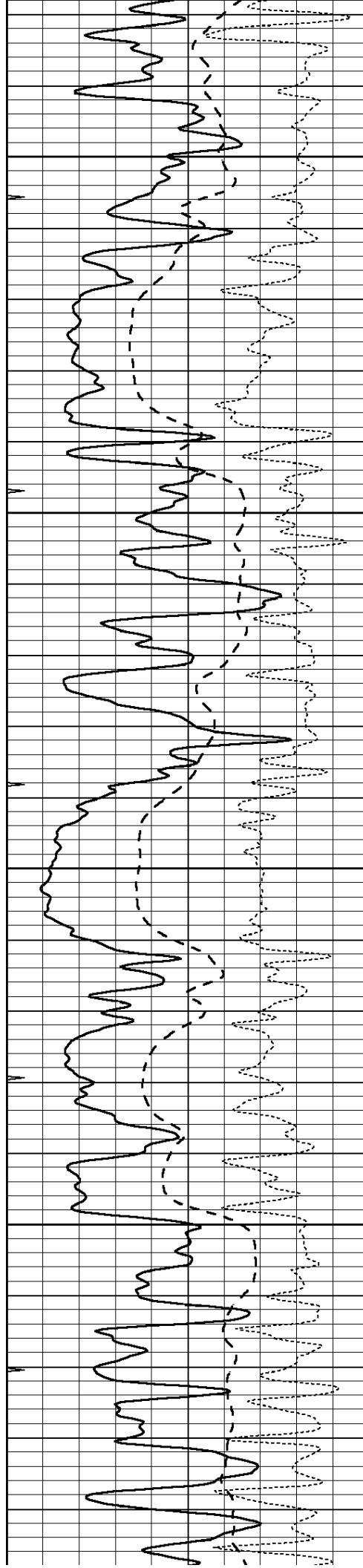
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2400

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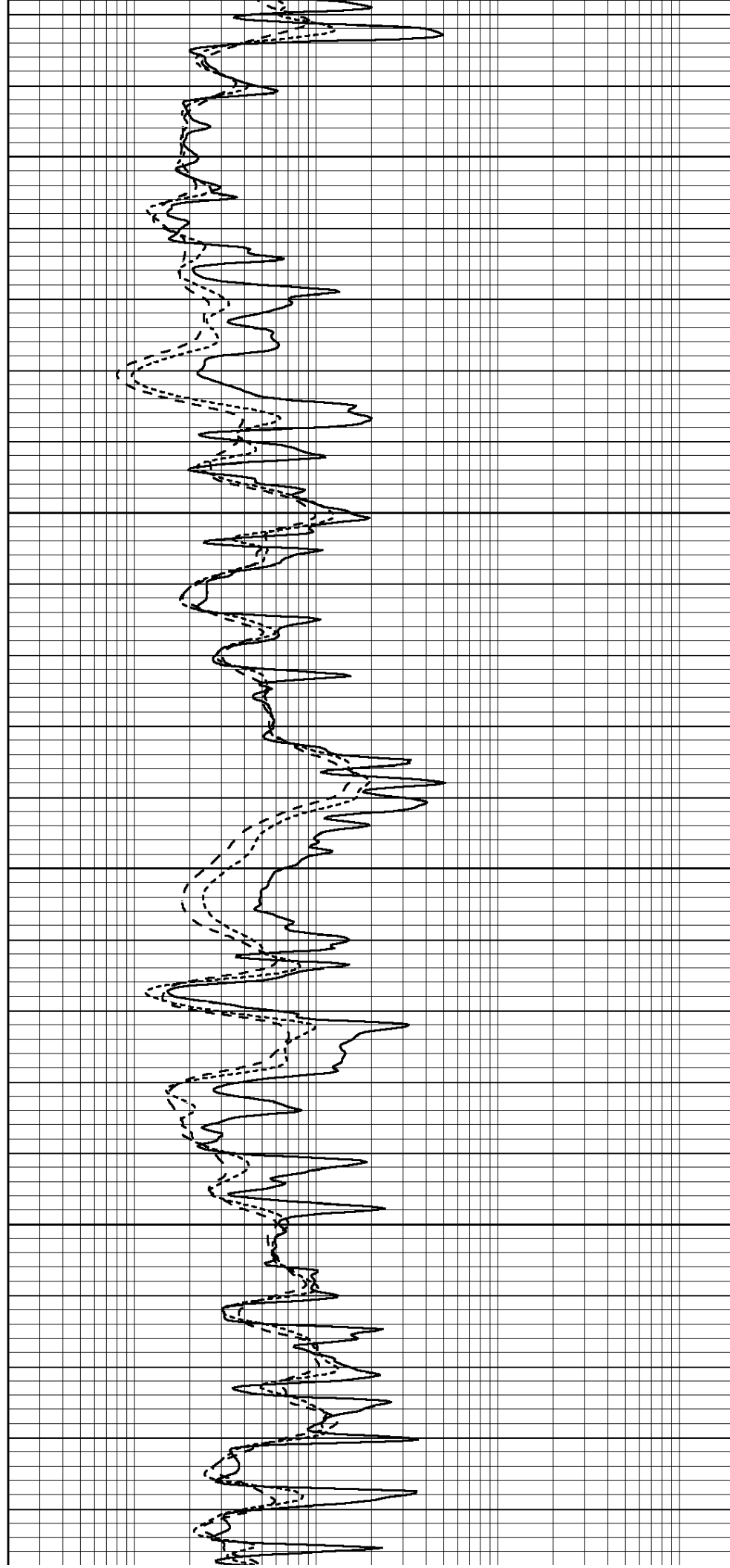


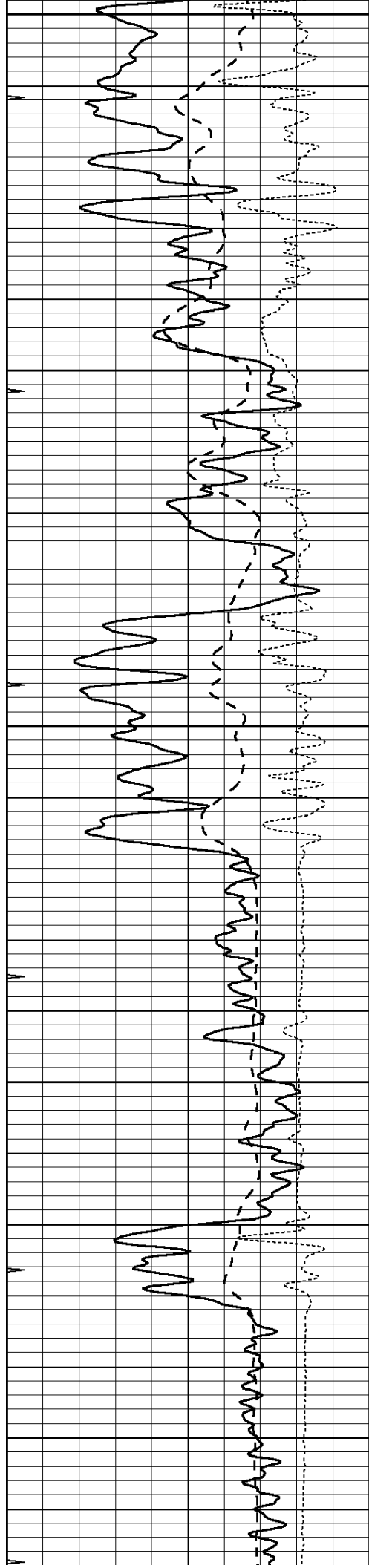
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2700





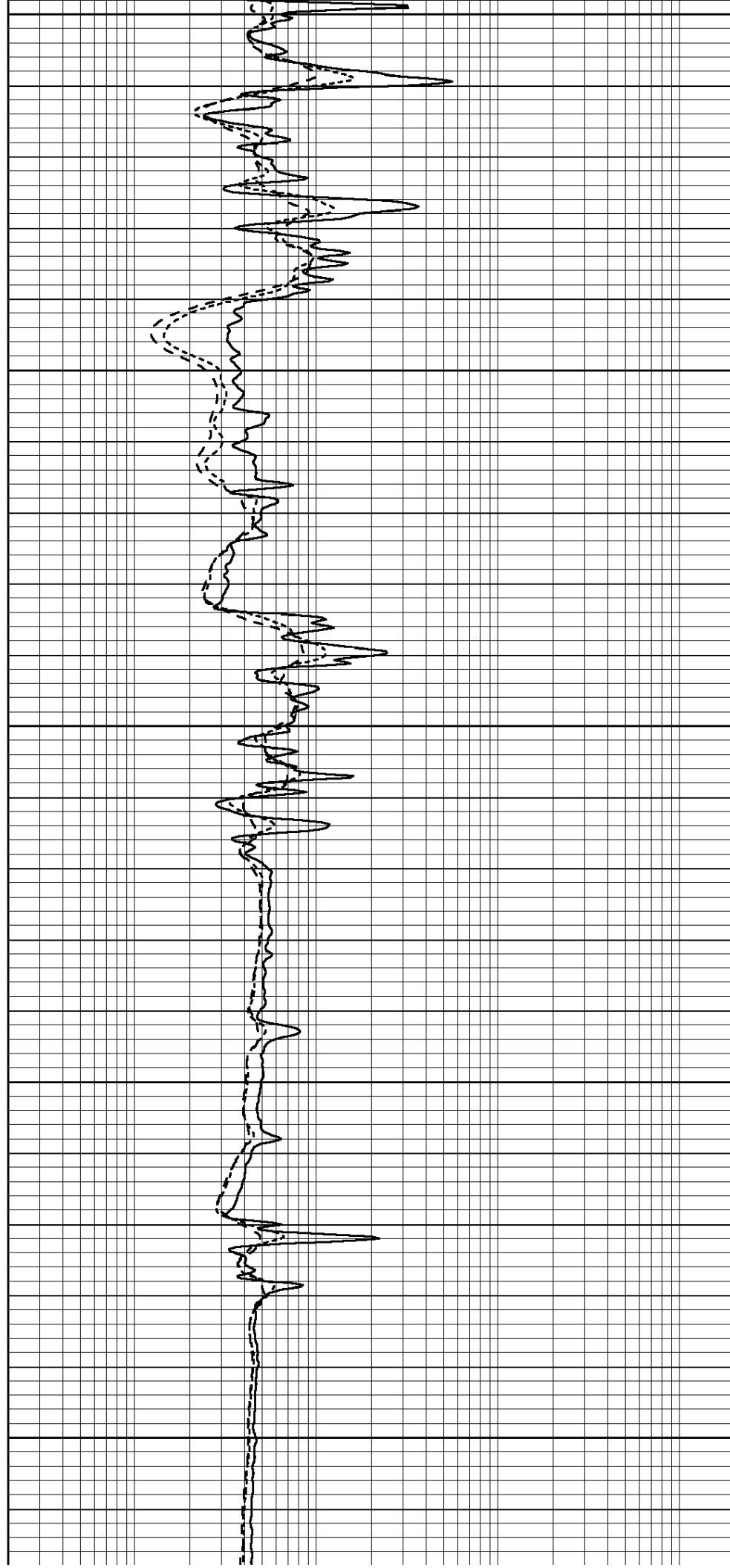
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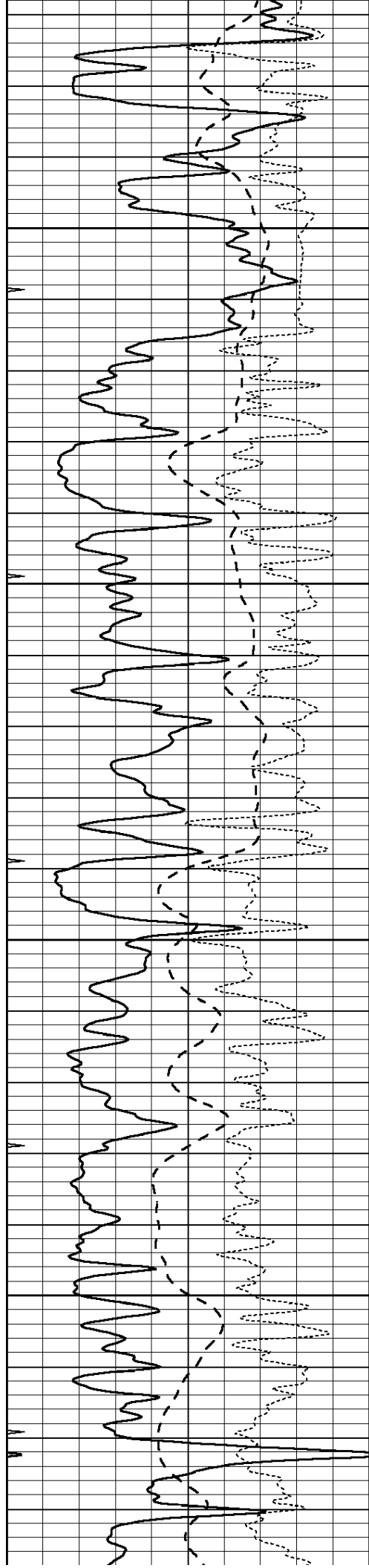
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2950



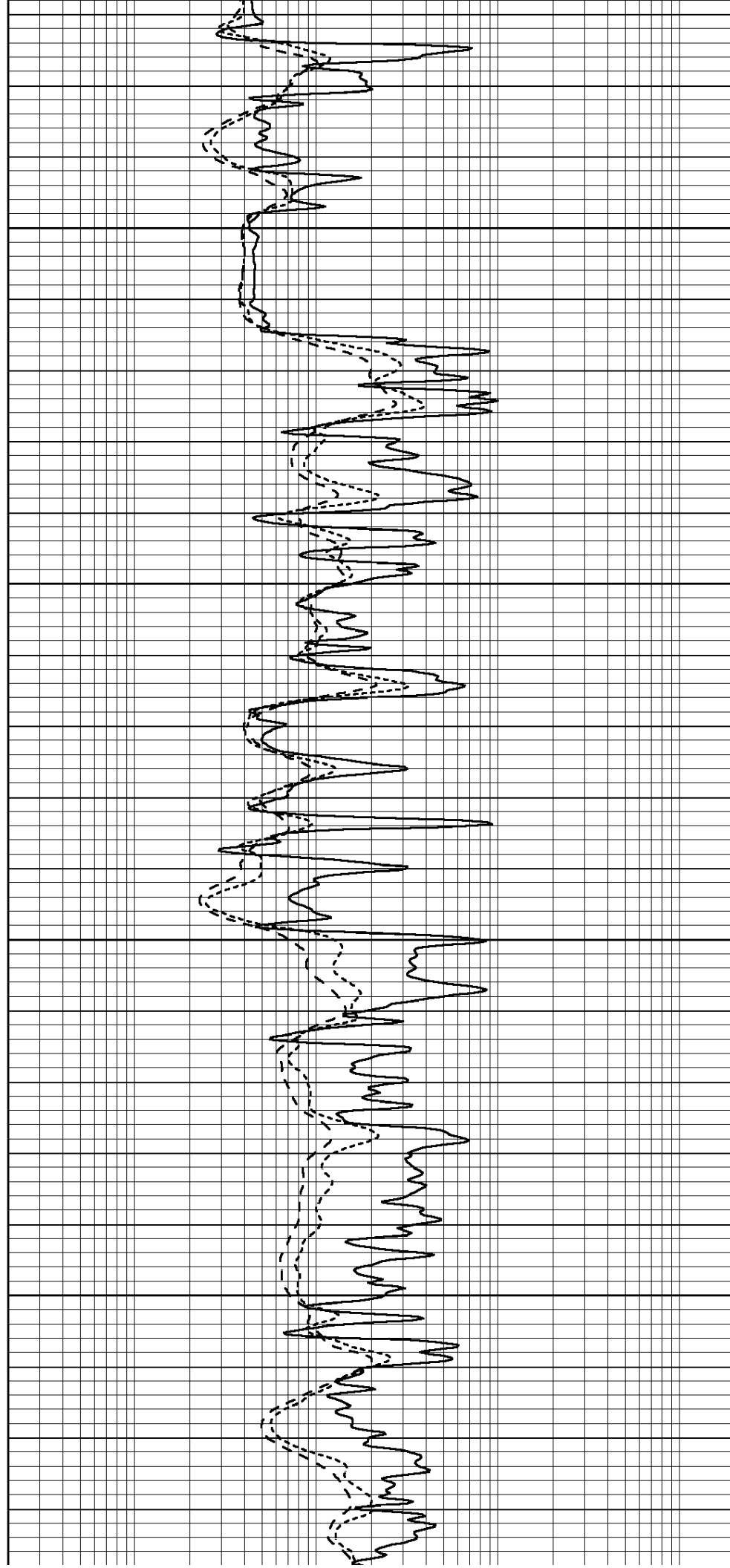


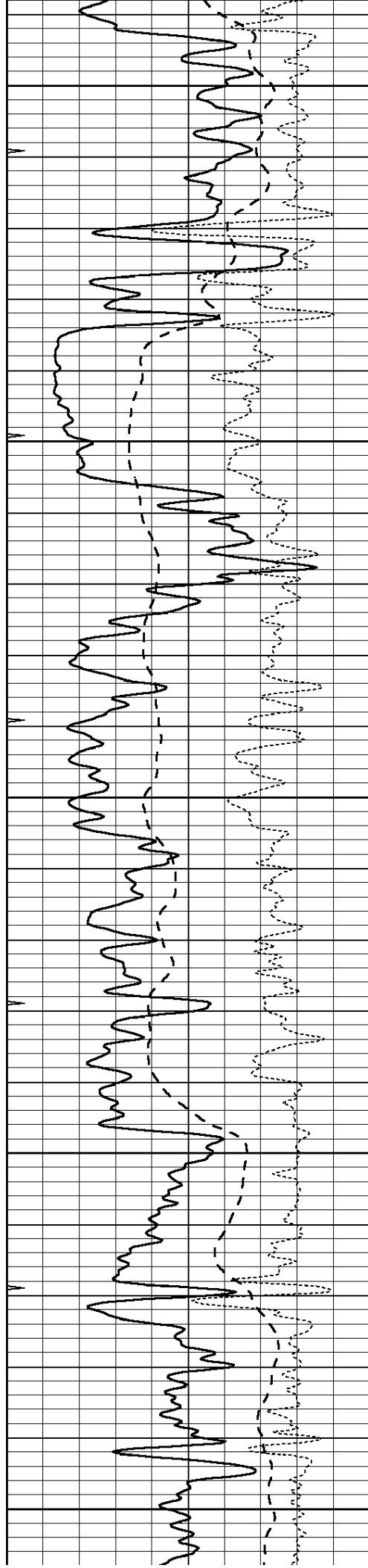
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3050

3100

3150





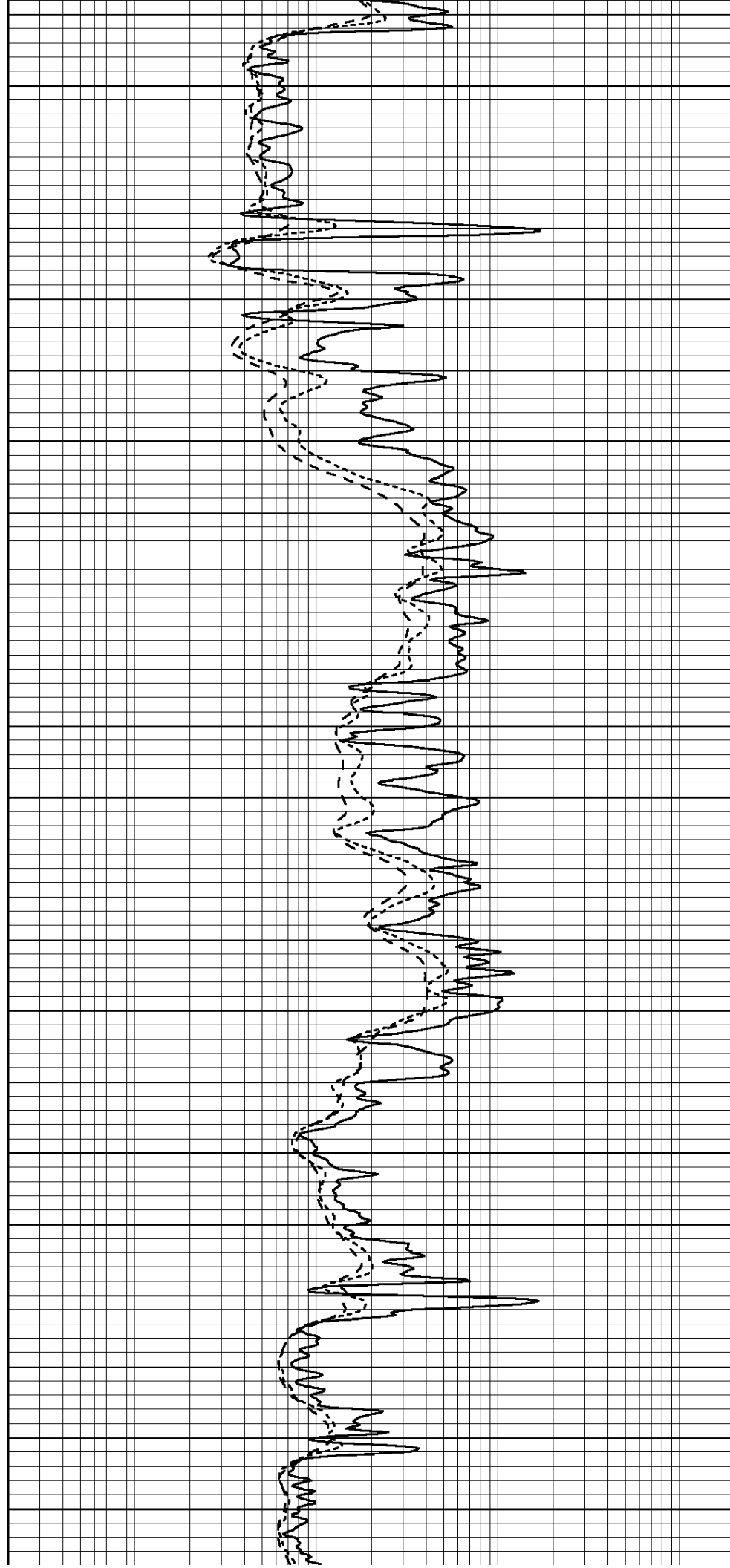
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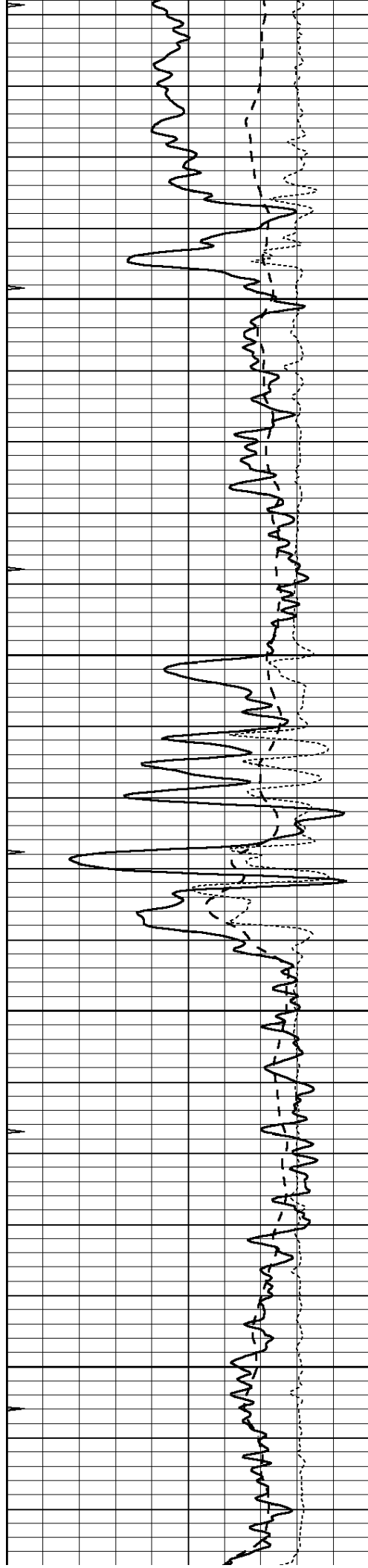
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3300

3350

3400



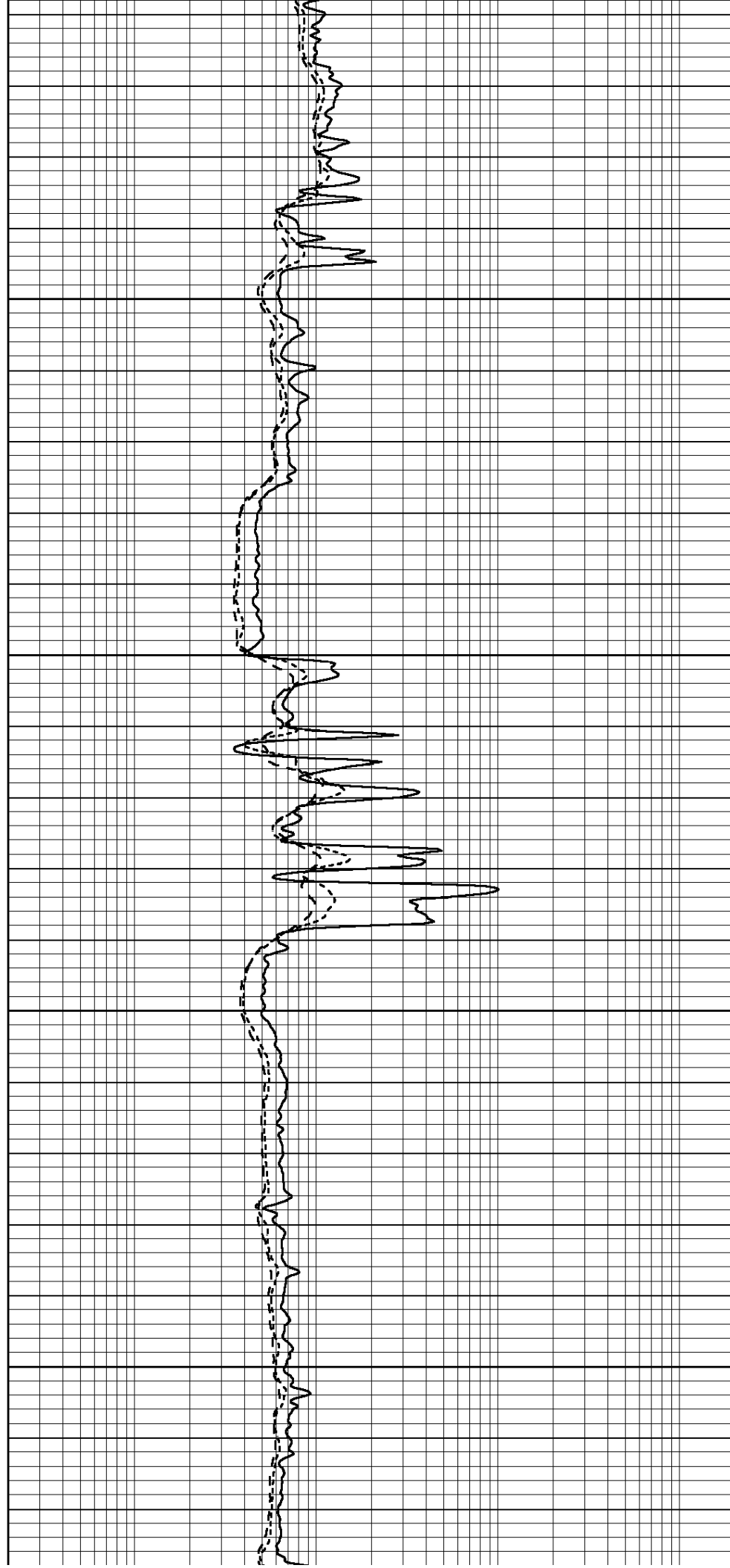


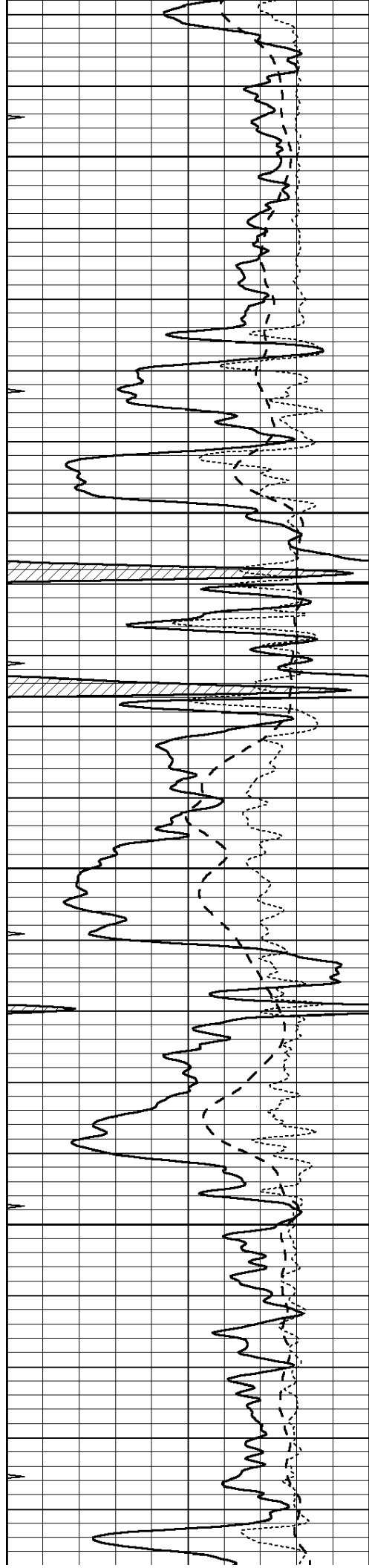
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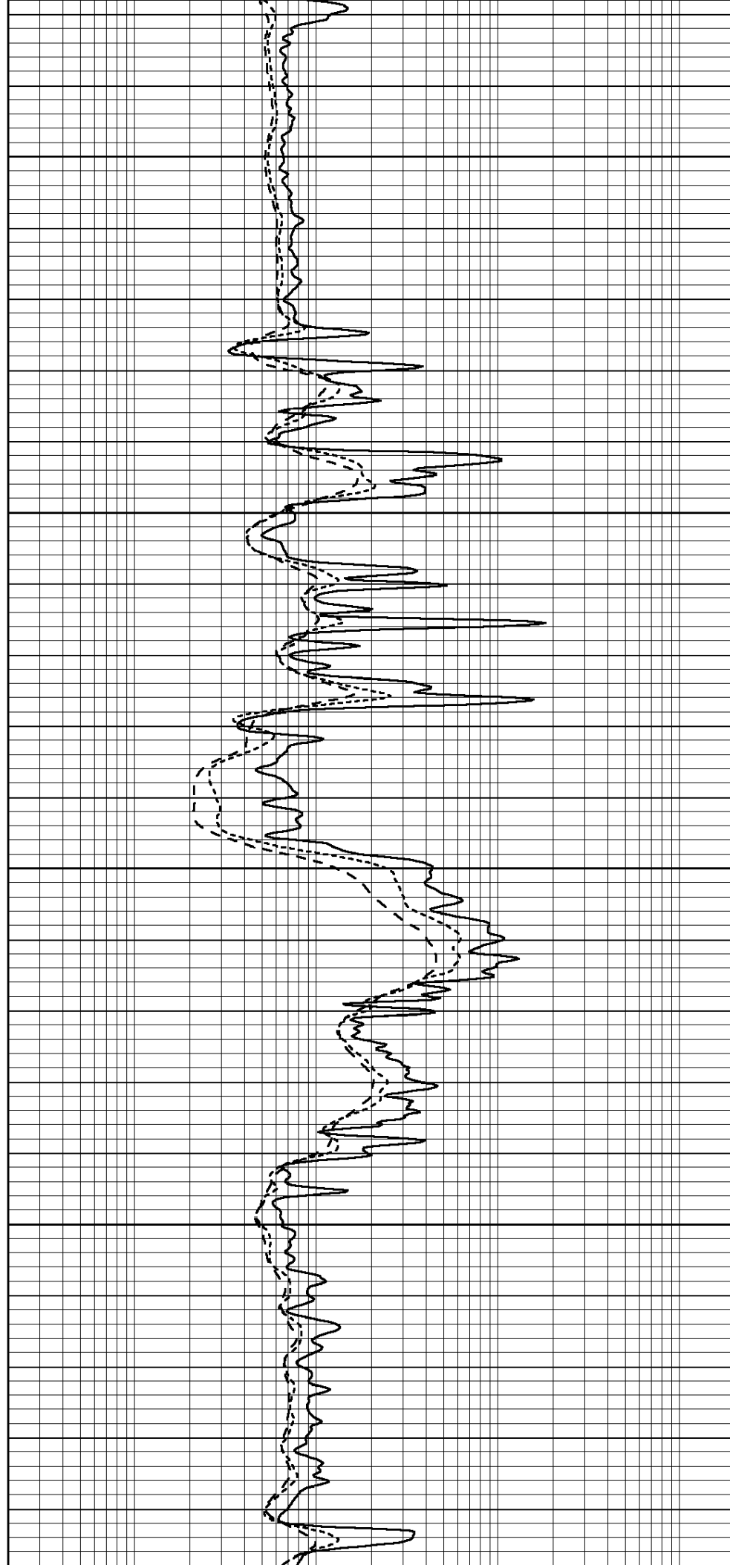


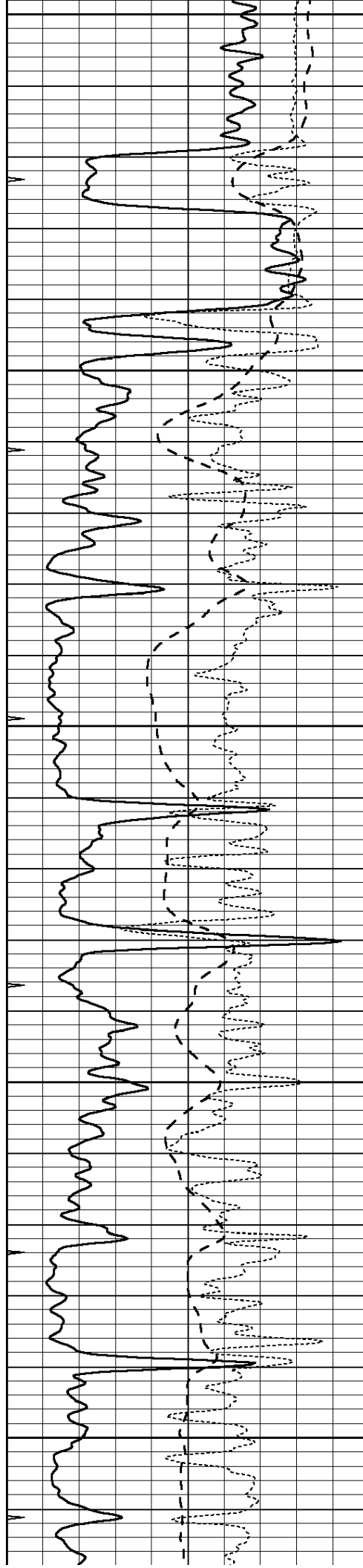
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3800





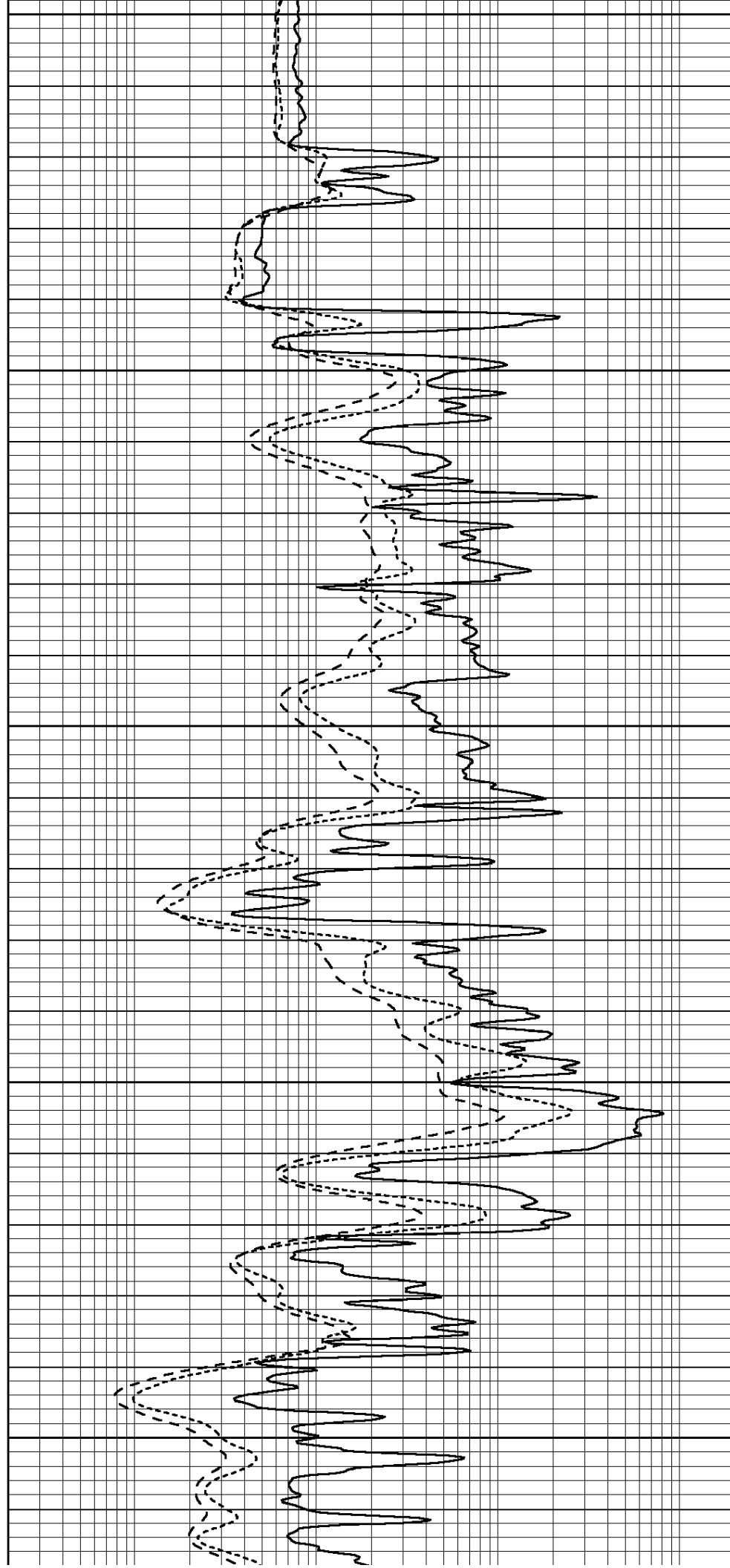
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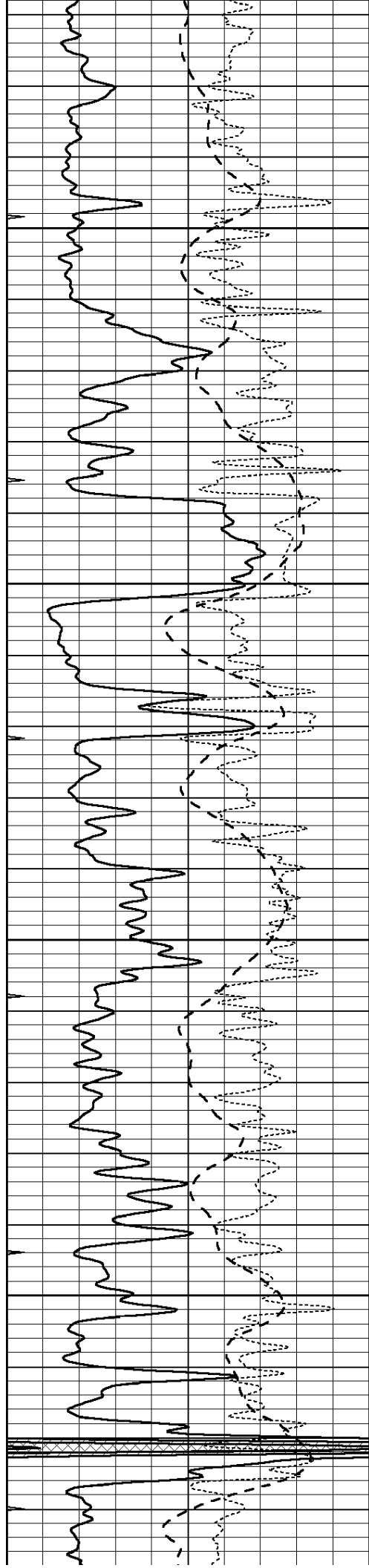
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3950

4000

4050



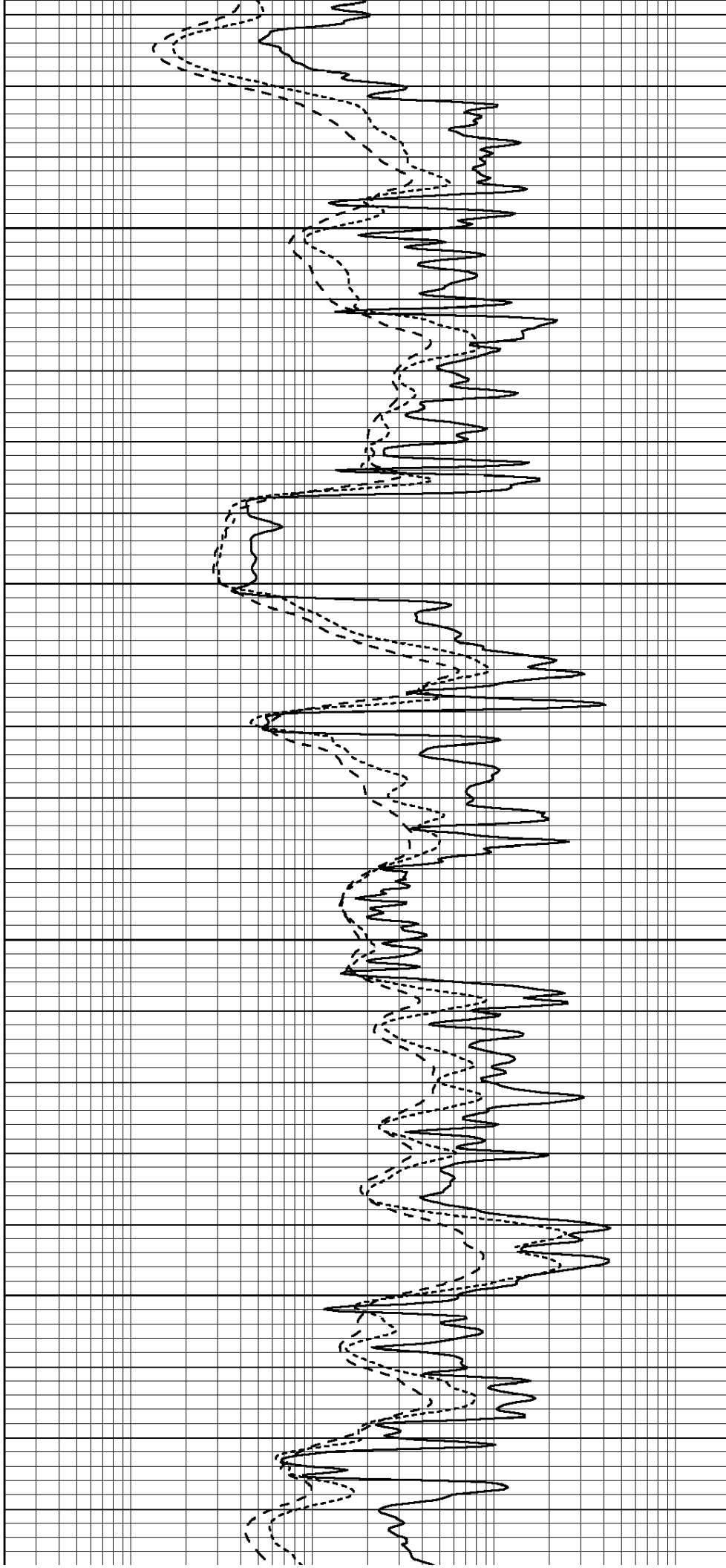


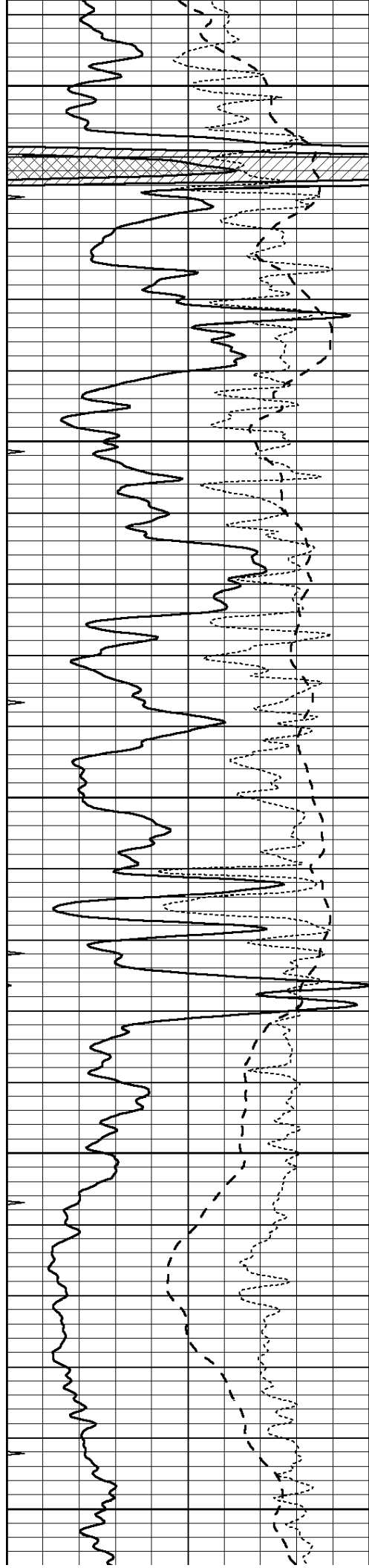
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4150

4200

4250





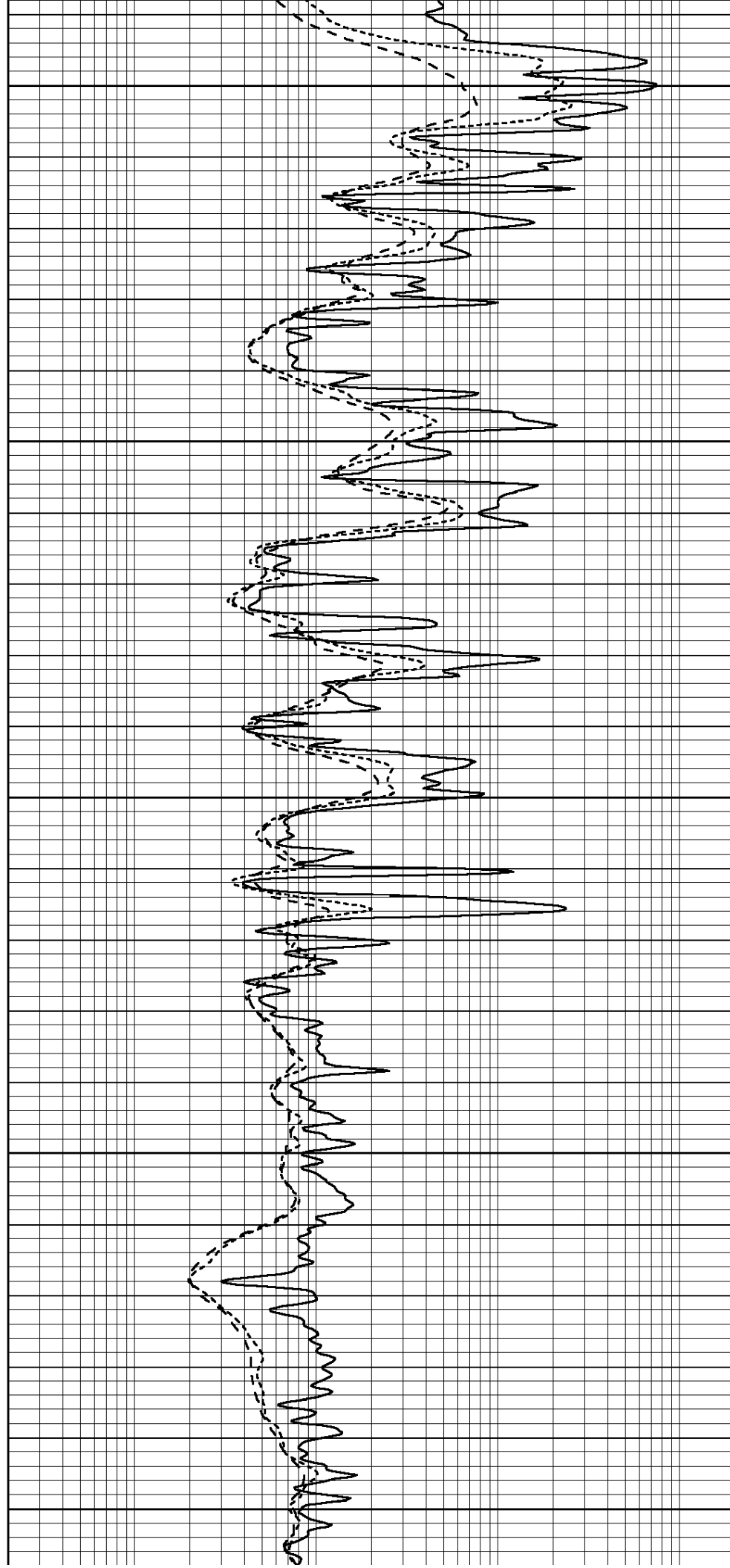
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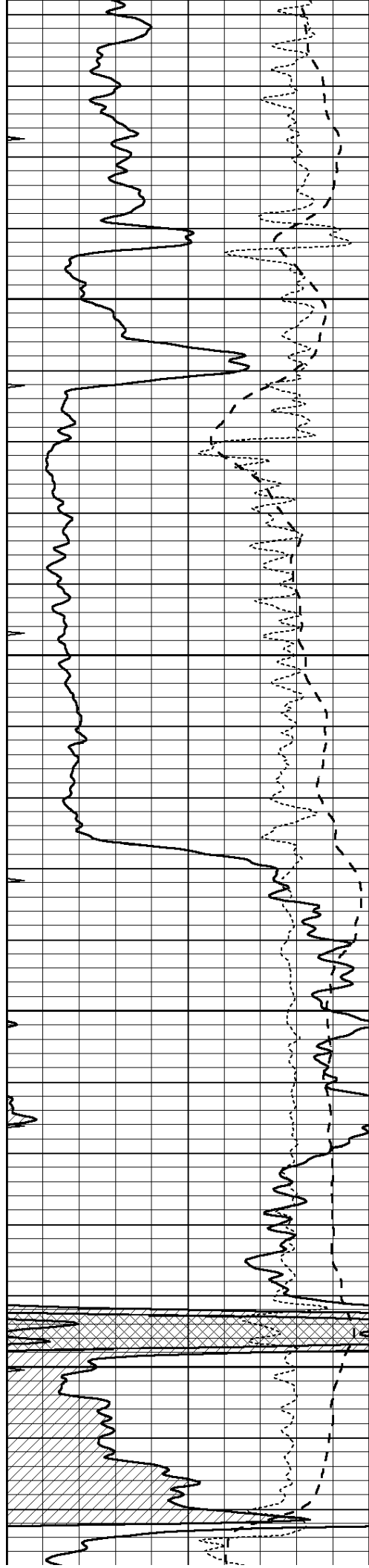
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4500



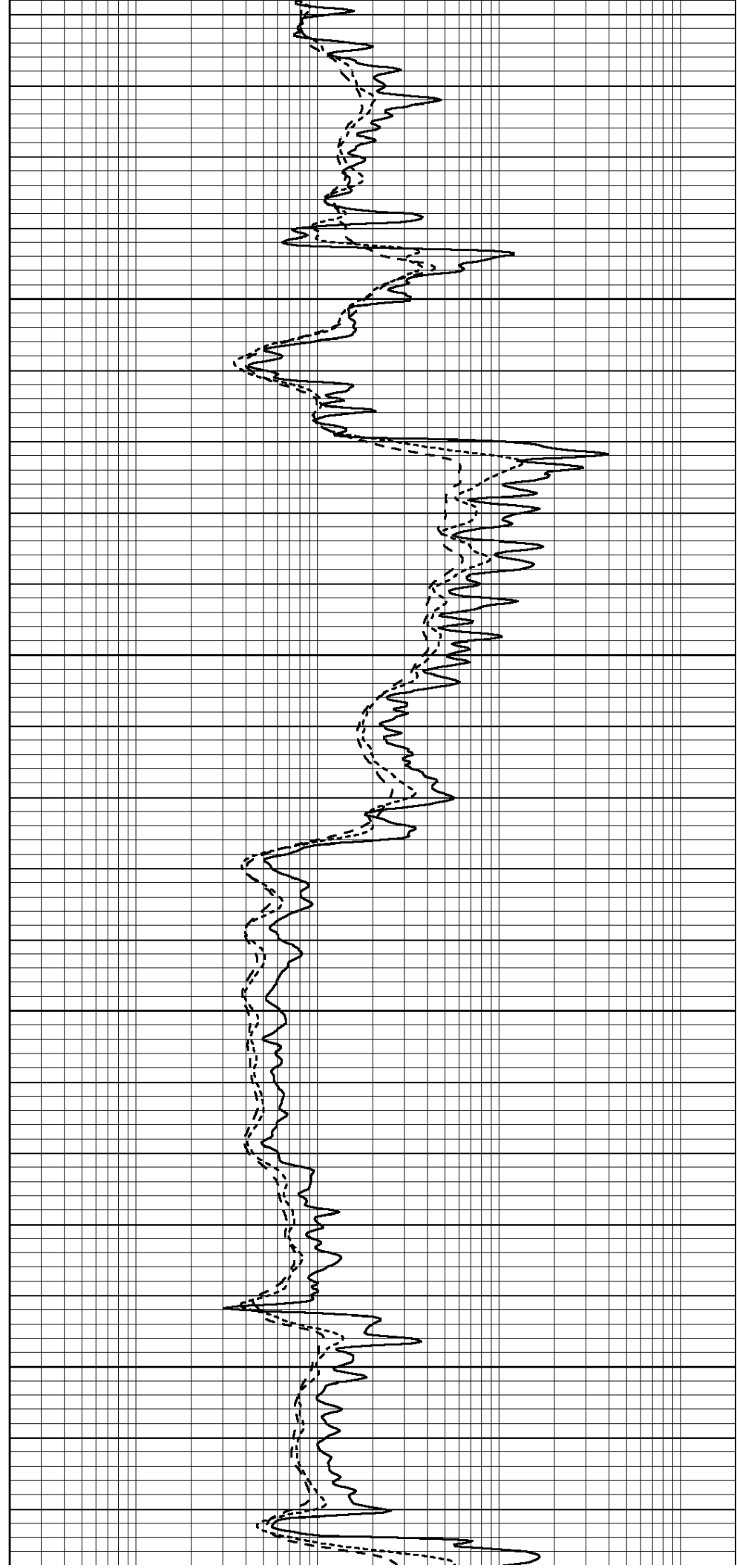


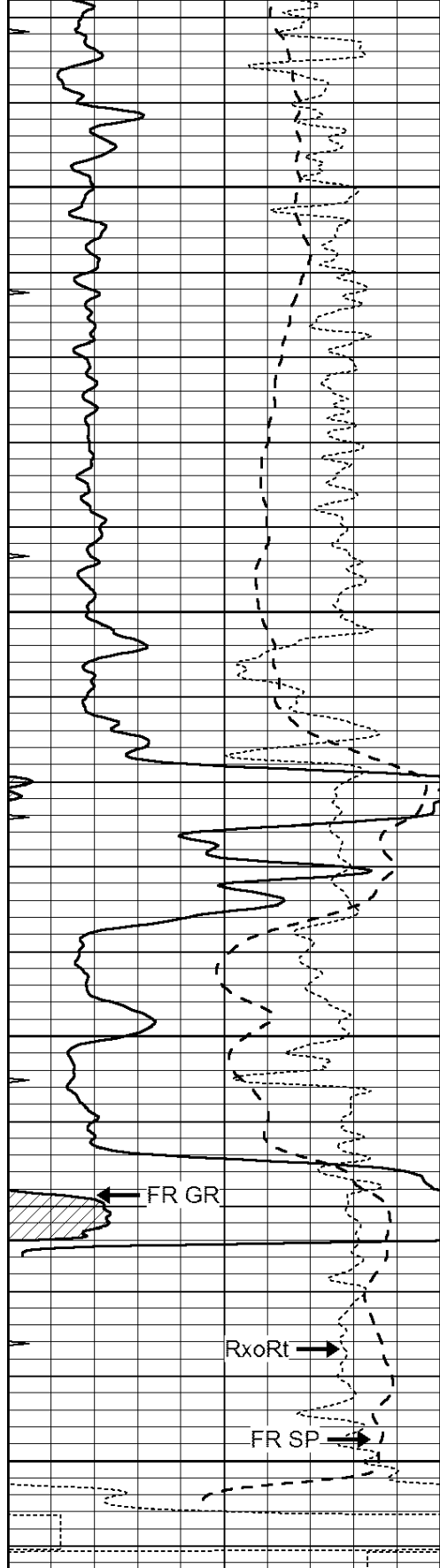
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4600

4650

4700





4750

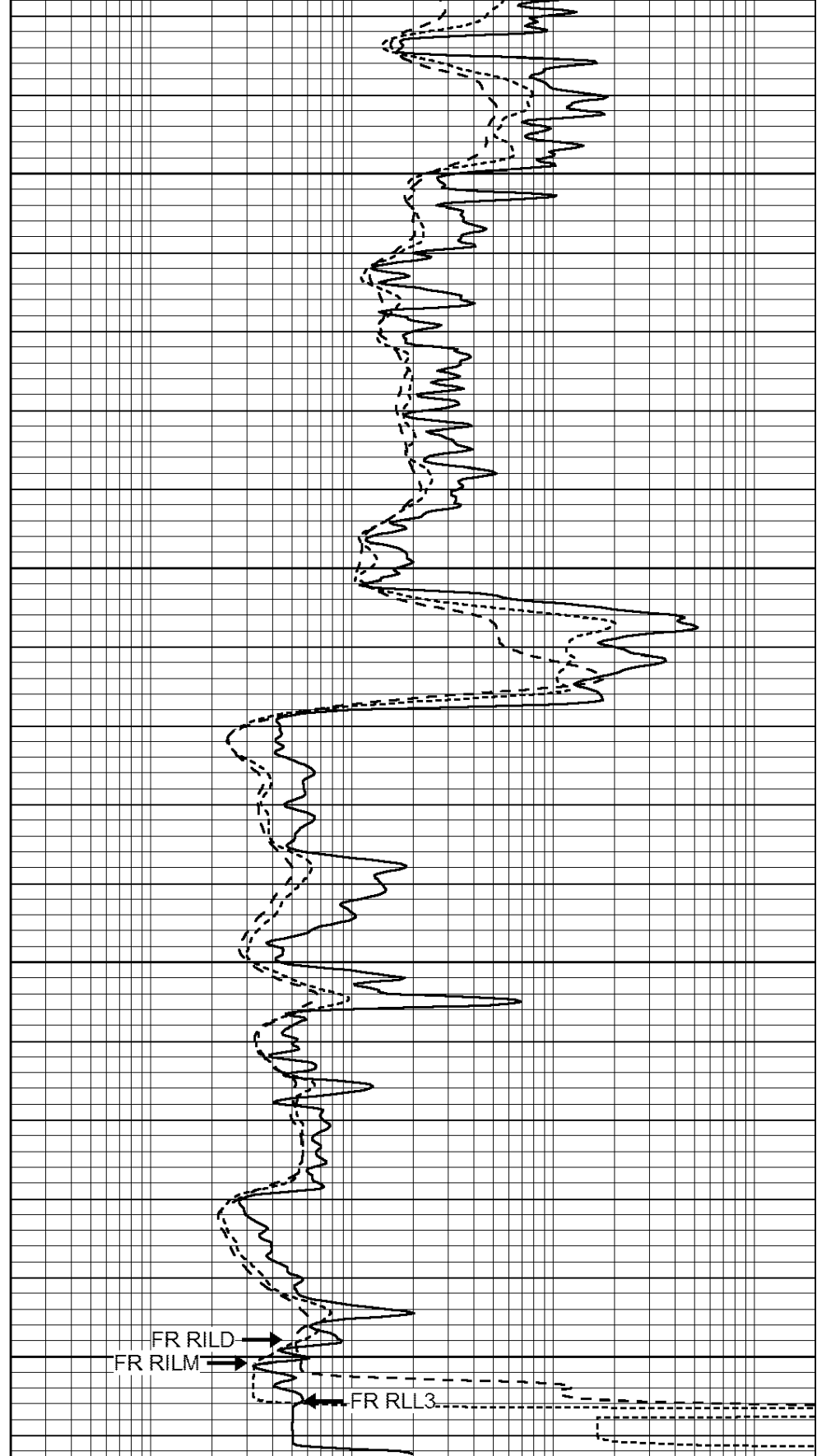
4800

4850

4900

LTD 4908

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



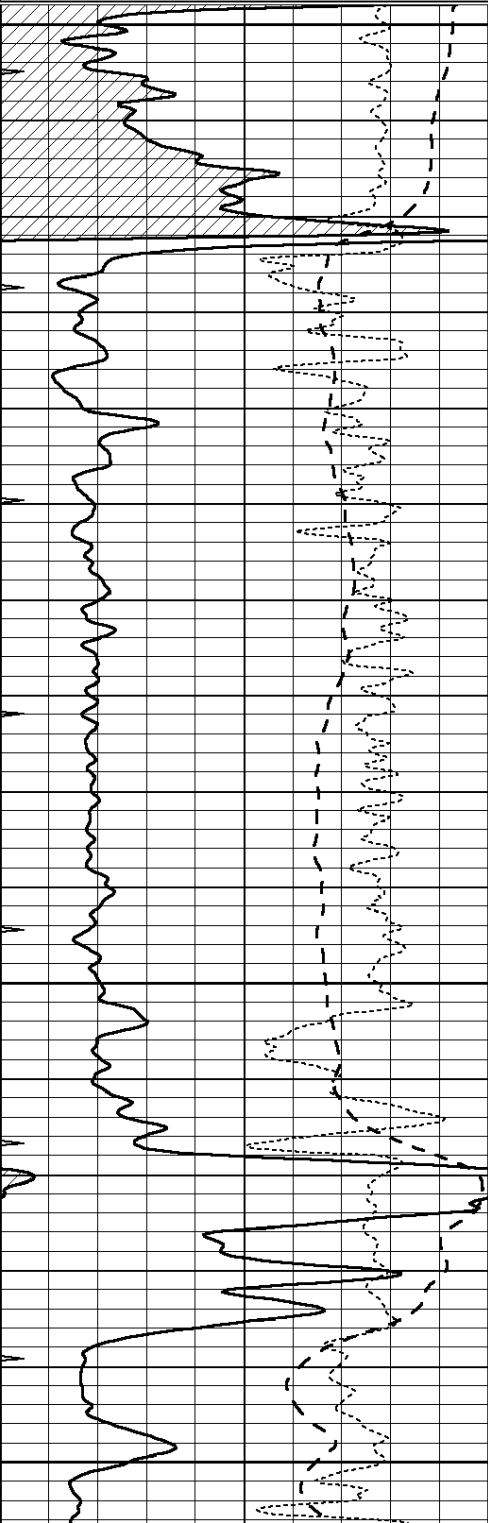
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

REPEAT SECTION

Database File:	24720pe.db
Dataset Pathname:	pass2.1.5
Presentation Format:	_dil
Dataset Creation:	Tue Aug 05 14:08:21 2014 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

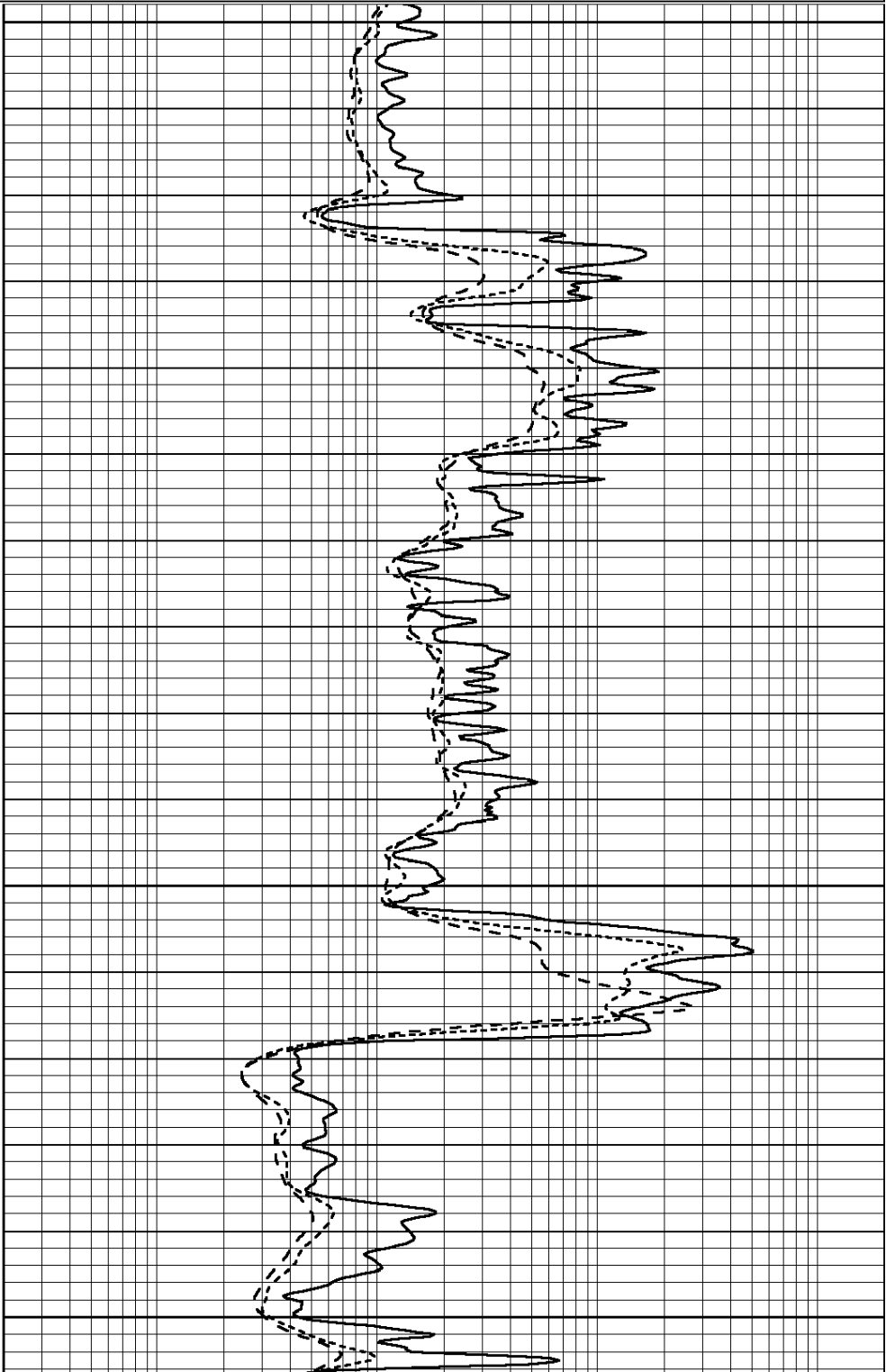


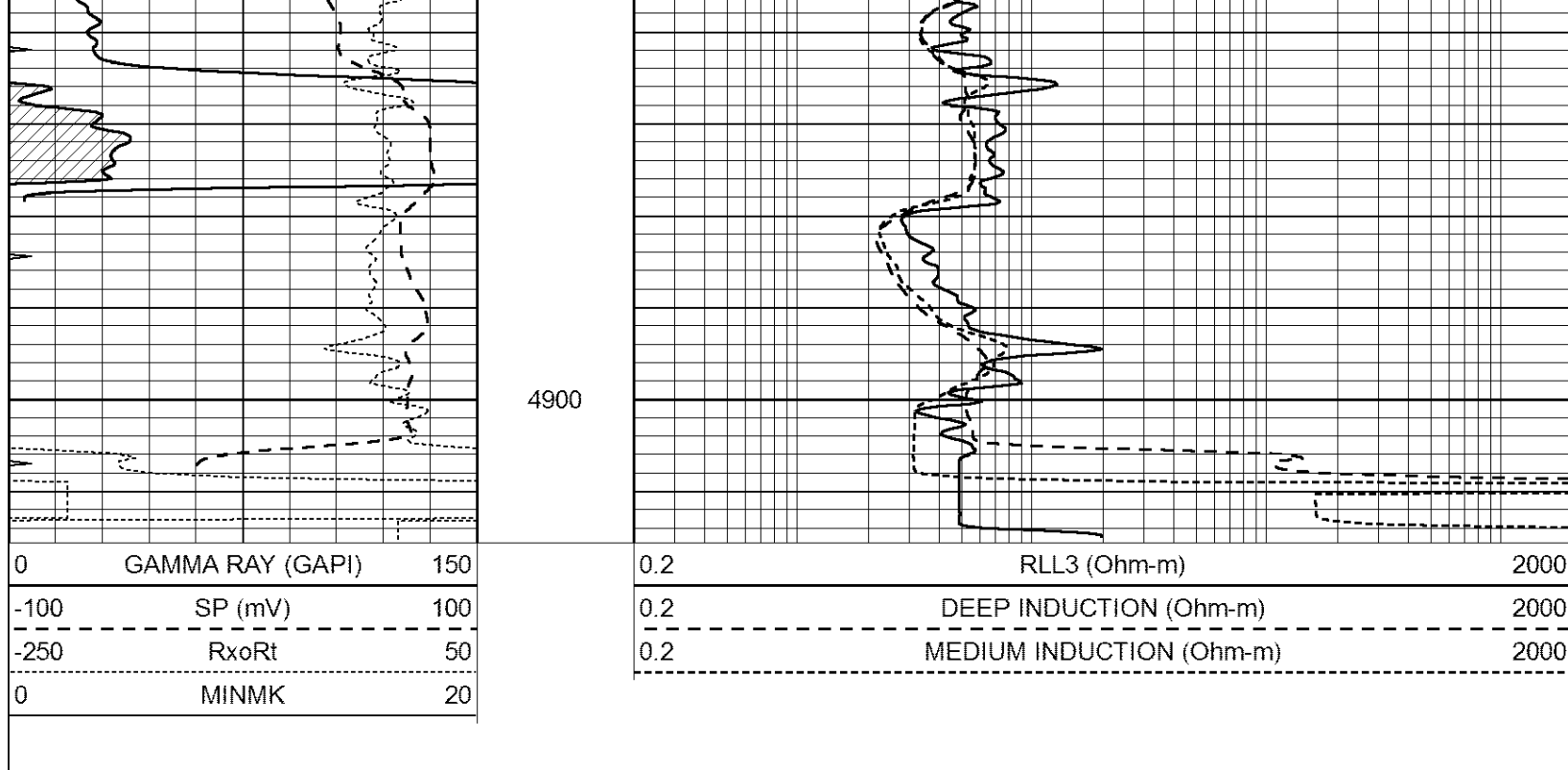
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4750

4800

4850





Calibration Report

Database File: 24720pe.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue Aug 05 15:26:26 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Sat Aug 02 01:54:49 2014
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	550.000	14.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	580.000	-32.000
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		

Litho Density Calibration Report Serial: 001 Model: PRB

Master Calibration	Performed Mon Jun 09 14:46:25 2014							
	Background	Magnesium	Aluminum	Sandstone				
Window 1	1833.3	8239.1	3179.3	9365.4				cps
Window 2	1708.4	7189.1	2862.8	8058.6				cps
Window 3	1391.6	4030.0	1937.3	4384.2				cps
Window 4	414.3	417.6	417.2	416.2				cps
Long Space	0.0	5480.6	1154.3	6350.2				cps
Short Space	3.1	1831.8	1190.6	2030.8				cps
Rho		1.7100	2.5900	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 44.5	Rib Slope	: 0.984	Density/Spine Ratio				: 0.544
Spine Angle	: 74.5	Spine Slope	: 3.615	Spine Intercept				: -18.6

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 Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				

Compensated Neutron Calibration Report
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Serial Number: 080620
Tool Model: Probe

PRE-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

POST-SURVEY VERIFICATION

Detector

Readings

Measured

Target

Short Space
Long Space

cps
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:

46001

Tool Model:

Probe1

Performed:

Sat Aug 02 01:56:52 2014

Calibrator Value:

1.0

GAPI

Background Reading:

0.0

cps

Calibrator Reading:

1.0

cps

Sensitivity:

0.2600

GAPI/cps