



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company		WOOLSEY OPERATING CO. LLC.	
Well		TUCKER GU A-5	
Field		TRAFFAS	
County		BARBER	
State		KANSAS	
Company		WOOLSEY OPERATING COMPANY, LLC.	
Well		TUCKER GU A-5	
Field		TRAFFAS	
County		BARBER	
State		KANSAS	
Location:		API # : 15-007-24038-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		2250' FNL & 1830' FWL NE - SW - SE - NW	
Drilling Measured From		SEC 28 TWP 33S RGE 10W	
Other Services		CDL/CNL/PE	
Elevation		K.B. 1445 D.F. 1443 G.L. 1433	
Date	6/25/13		
Run Number	ONE		
Depth Driller	5080		
Depth Logger	5075		
Bottom Logged Interval	5073		
Top Log Interval	00		
Casing Driller	10 3/4"@219'		
Casing Logger	220		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.0/69		
pH / Fluid Loss	10.0/9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.600@90F		
Rmf @ Meas. Temp	.450@90F		
Rmc @ Meas. Temp	.720@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.429@126F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	11:15 A.M.		
Maximum Recorded Temperature	126F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SCOTT ALBERG		

<<< Fold Here >>>

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. 8S. ON TRI CITY BLKTOP TO "KOCHIA RD." , 3/4W., N. INTO

Database File:

011176pe.db

Dataset Pathname:

pass3.7

Presentation Format:

dil2

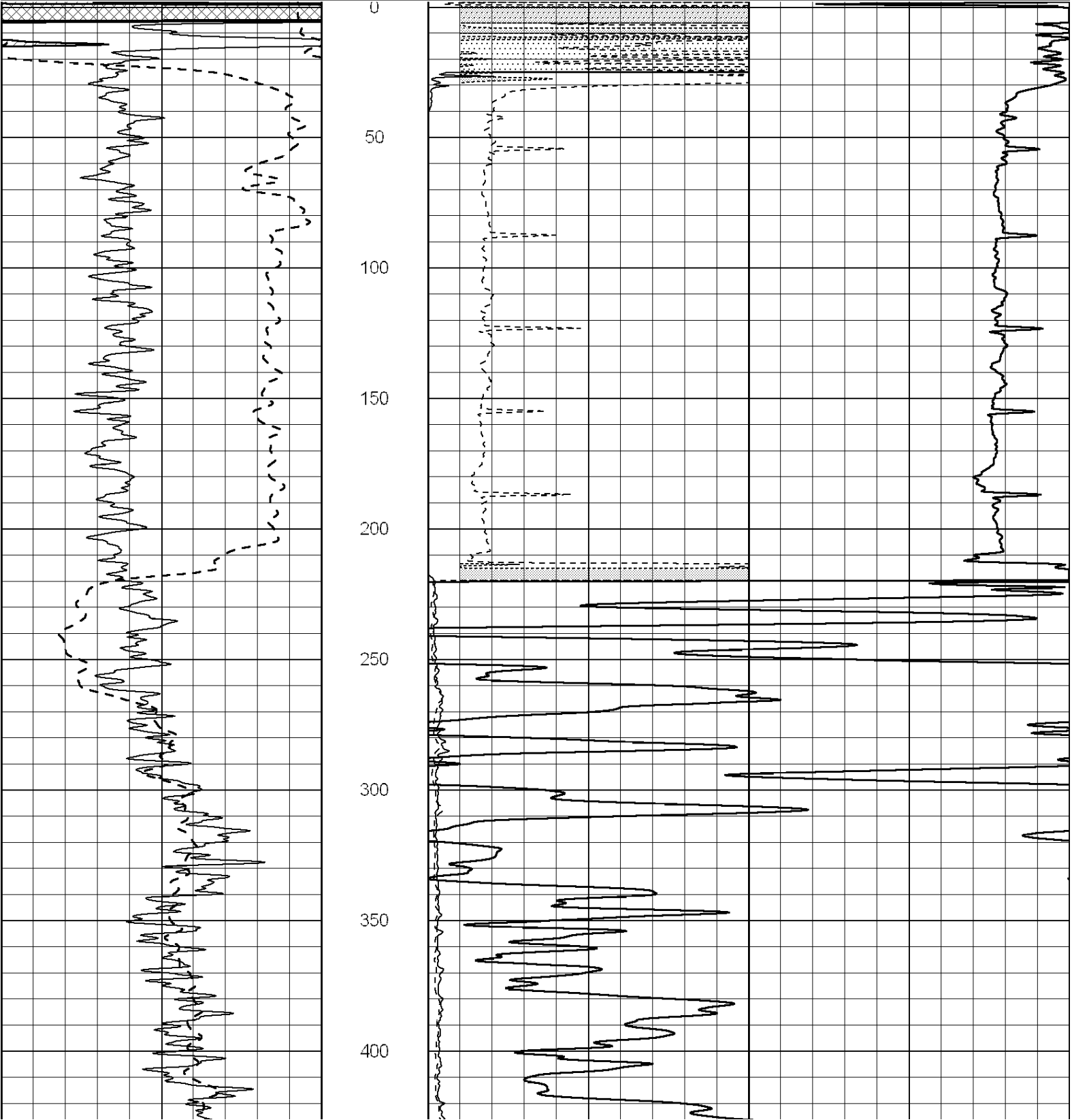
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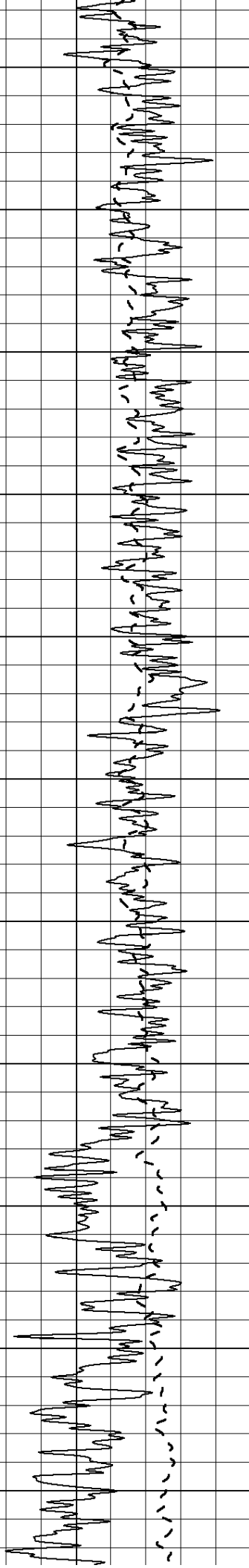
Tue Jun 25 13:28:22 2013 by Calc SOC 120430

Charted by:

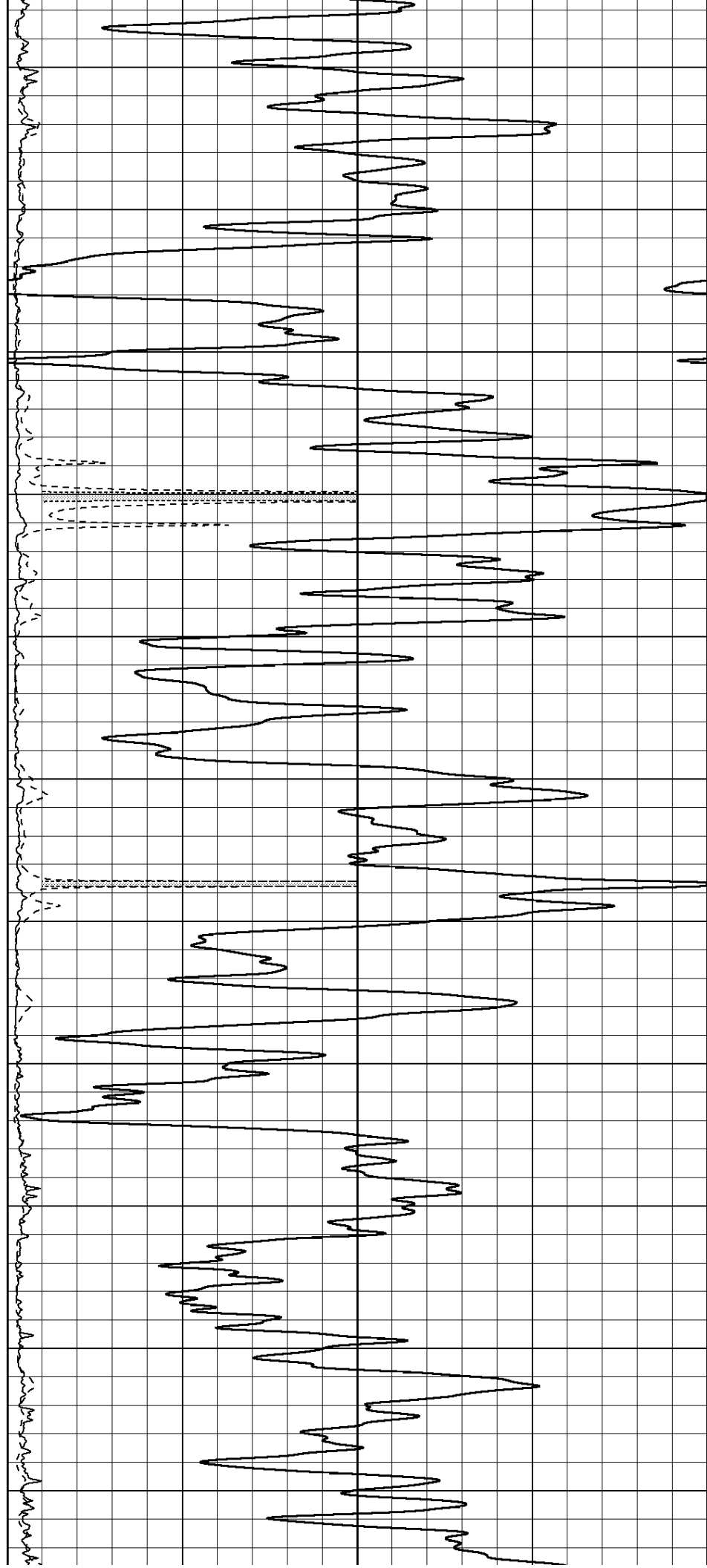
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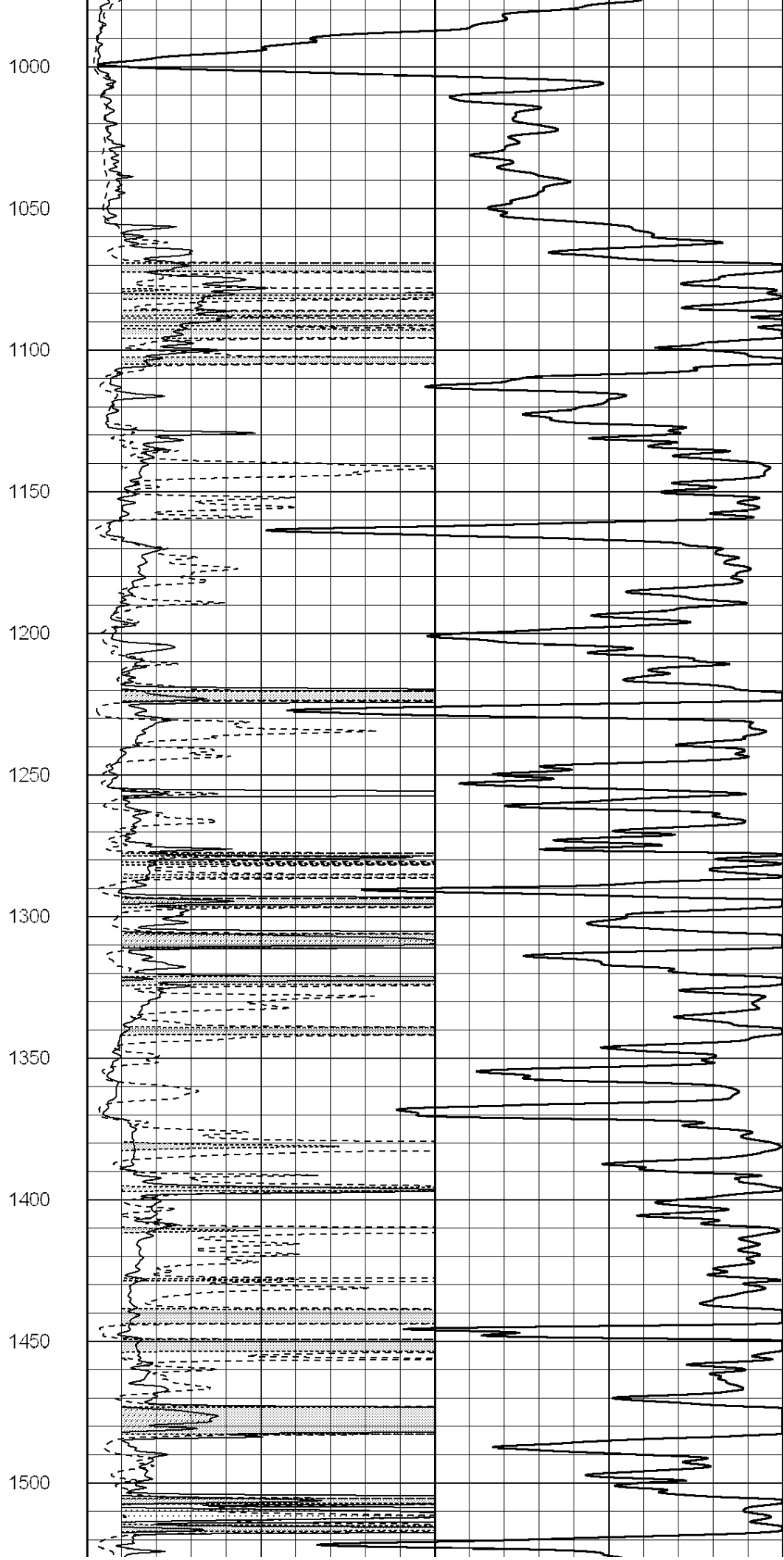
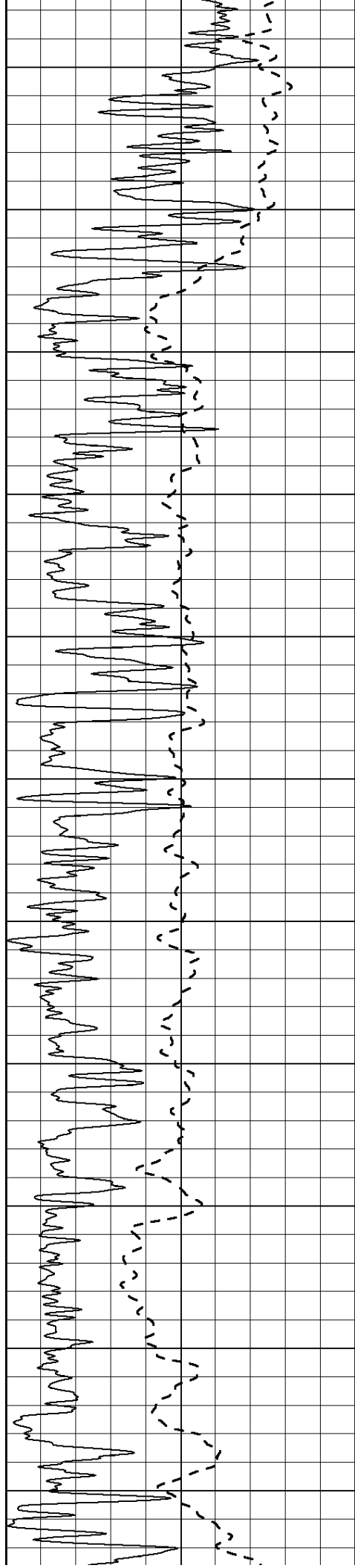
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-100	SP (mV)	100	0	RILD (Ohm-m)	50	
-----			1000			CILD (mmho/m)
			50	RILD X10 (Ohm-m)	500	
			50	RLL3 X10 (Ohm-m)	500	

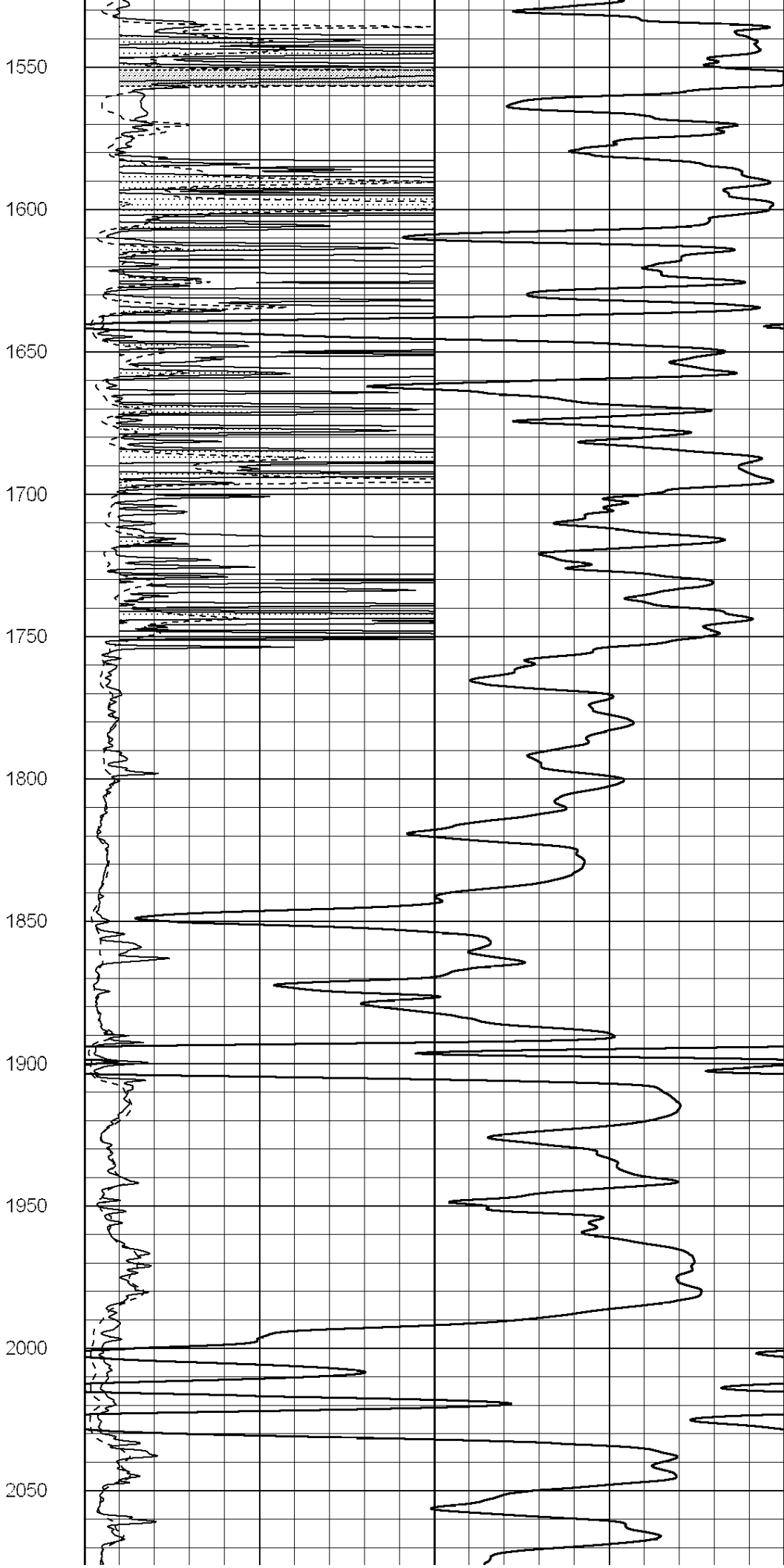
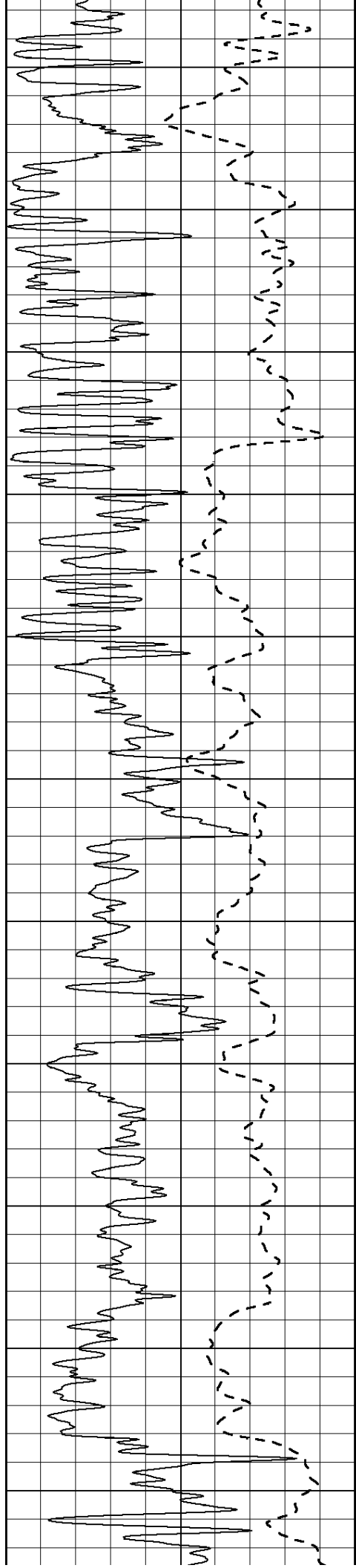


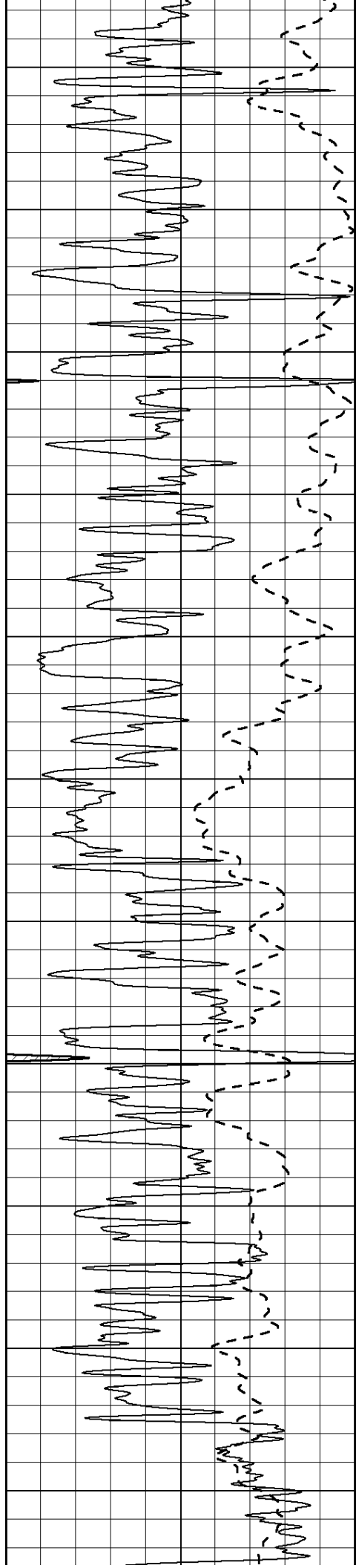


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850
900
950









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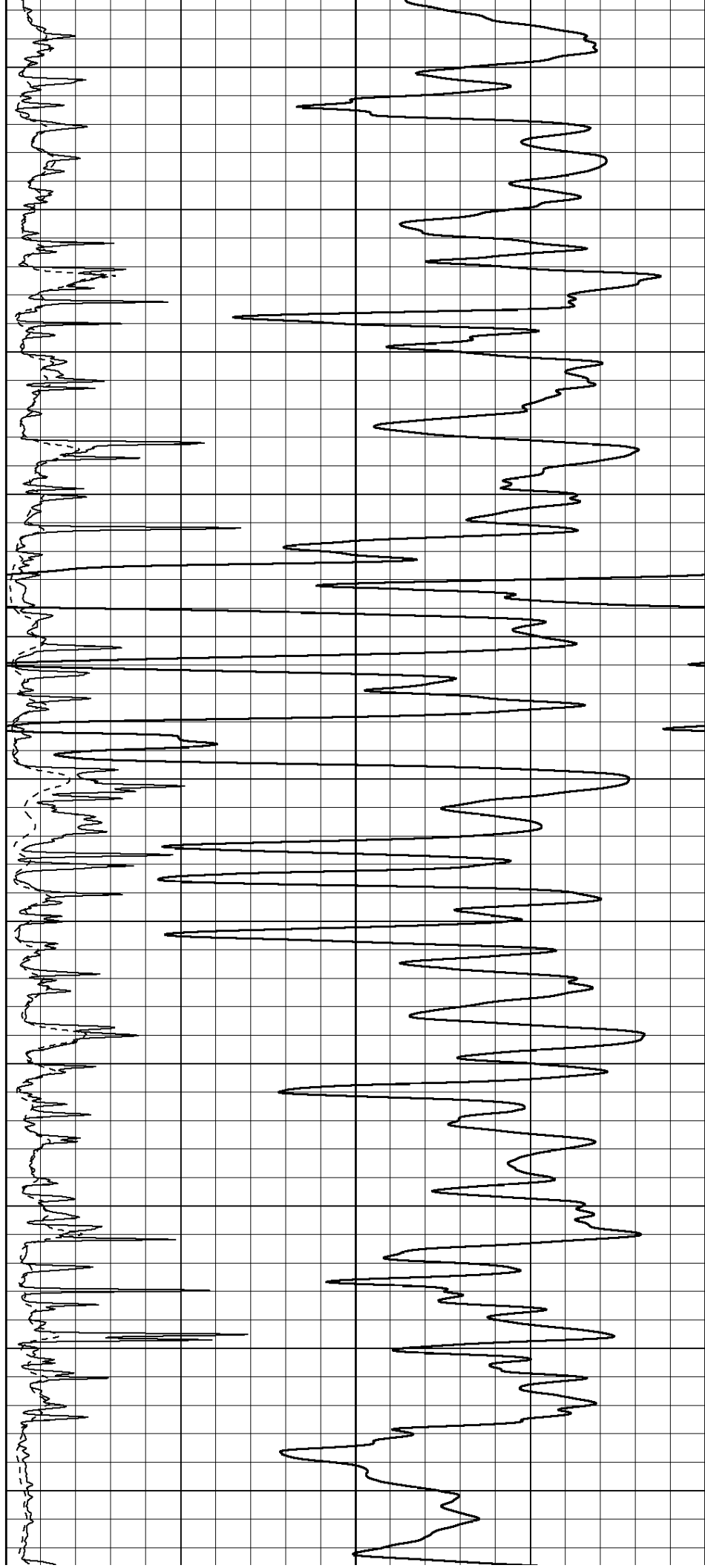
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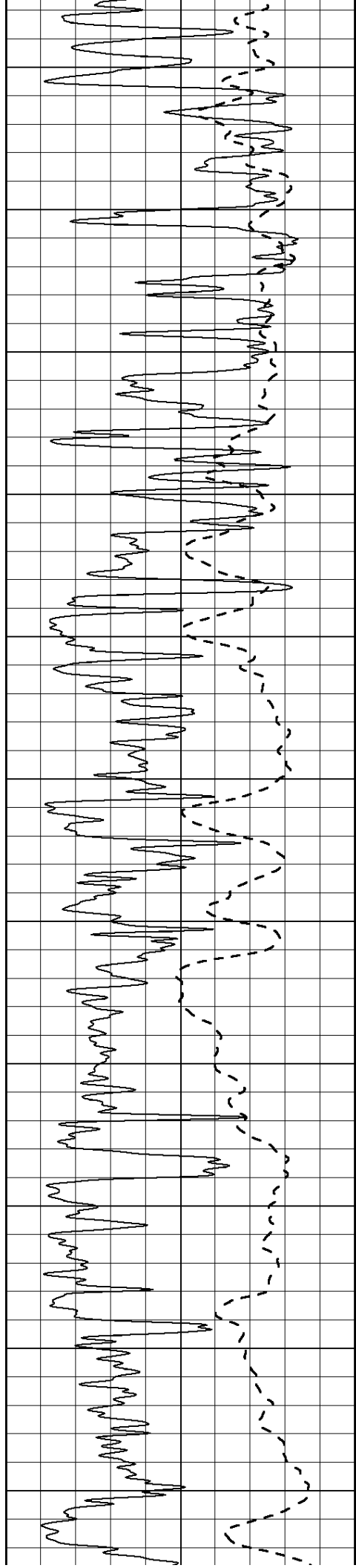
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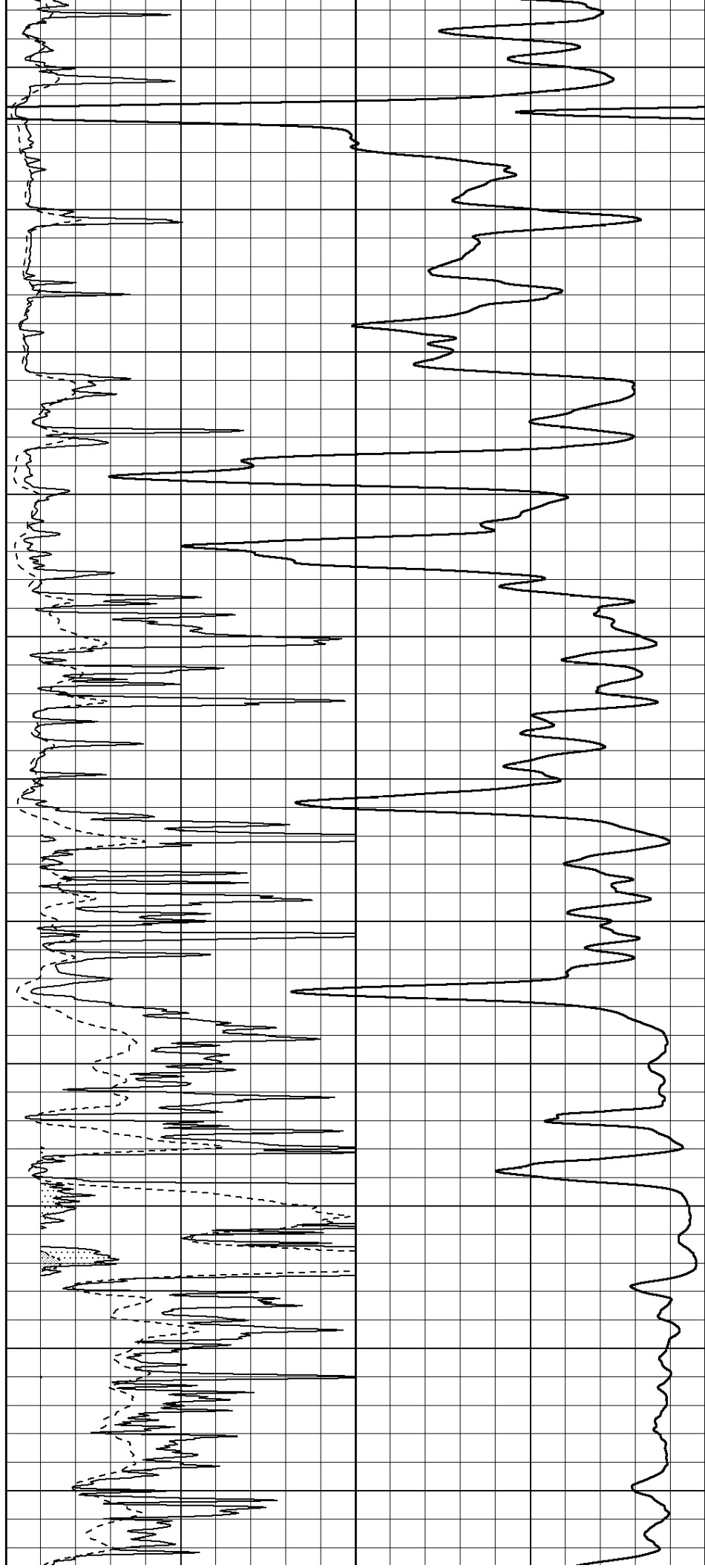
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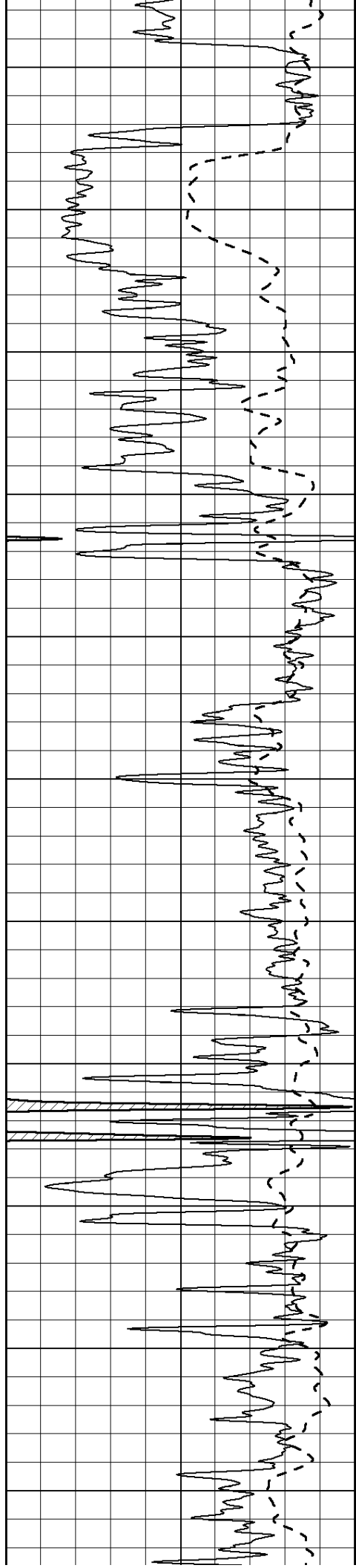
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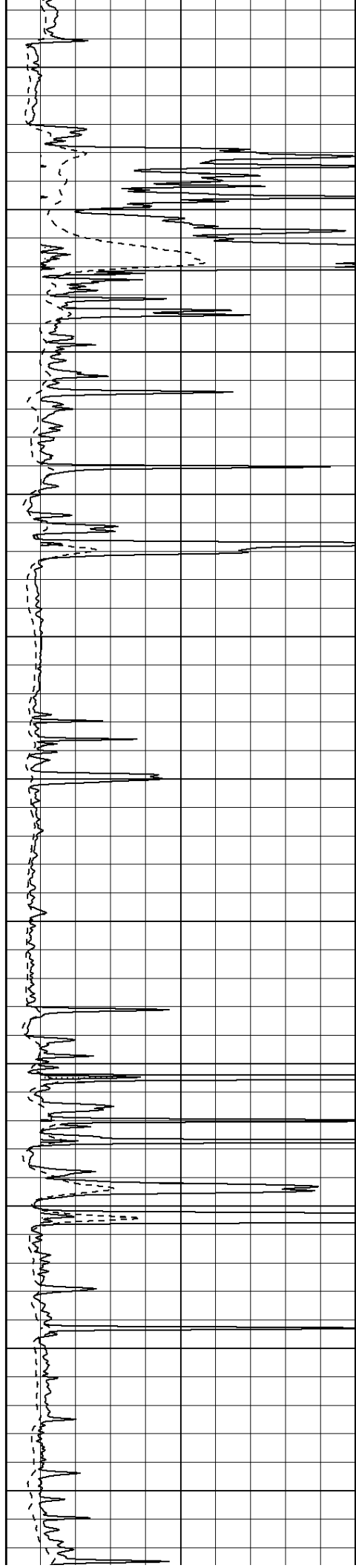
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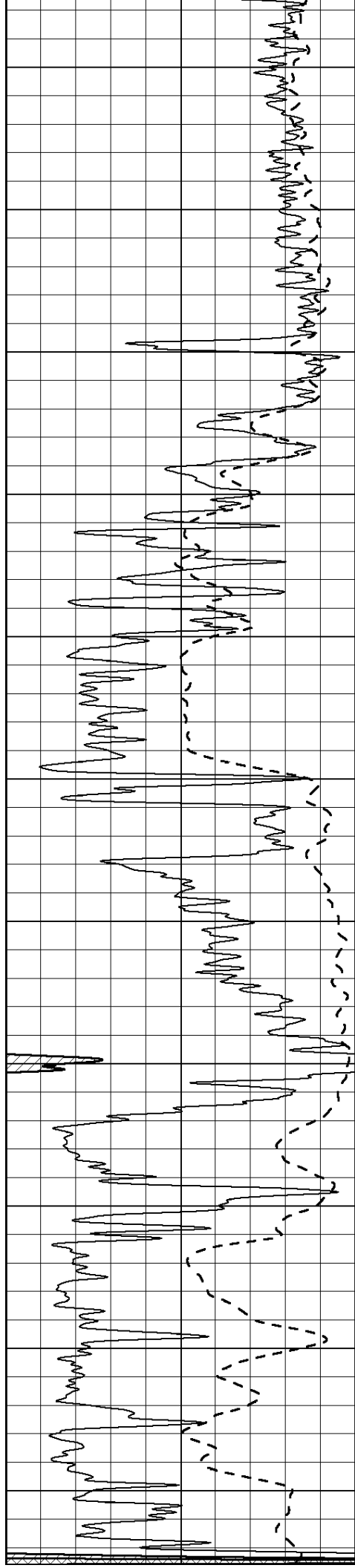
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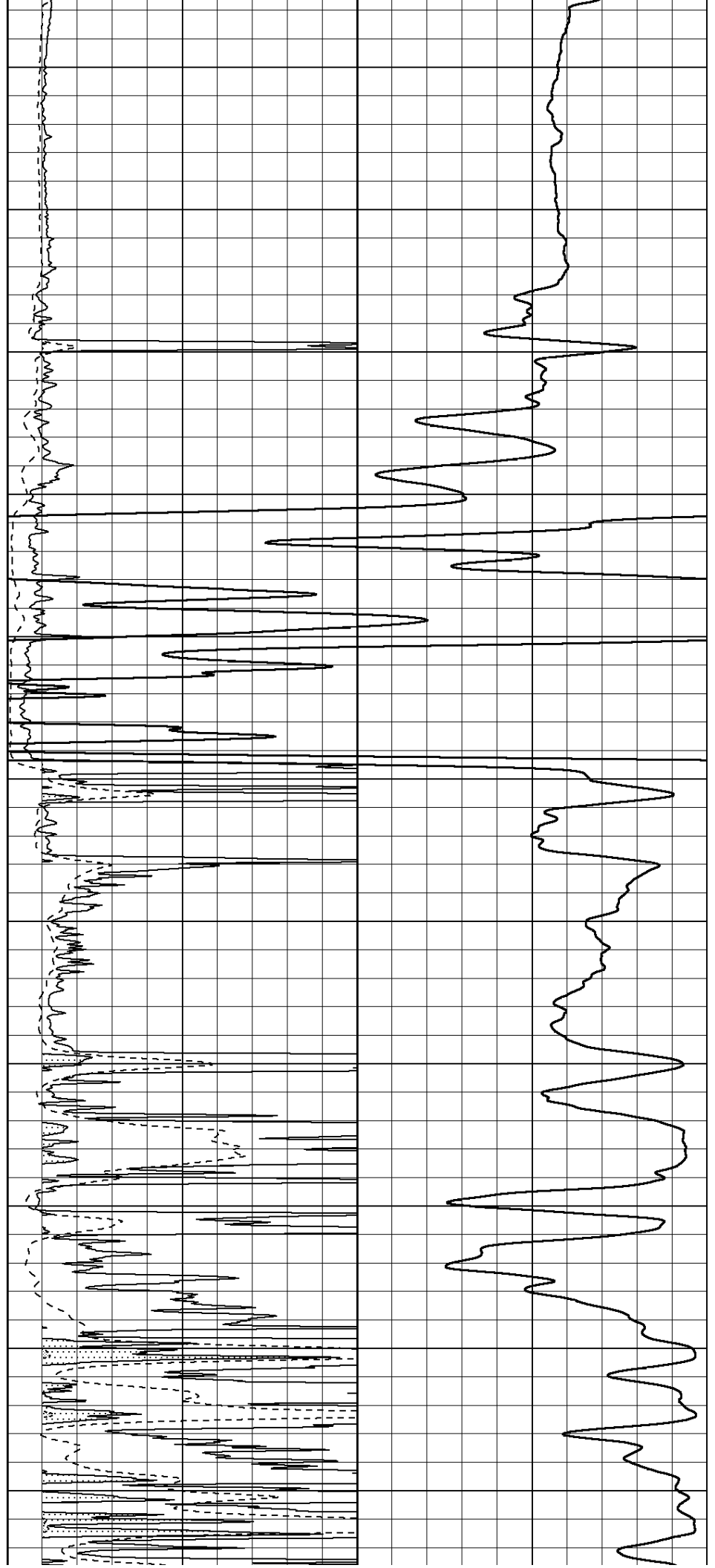
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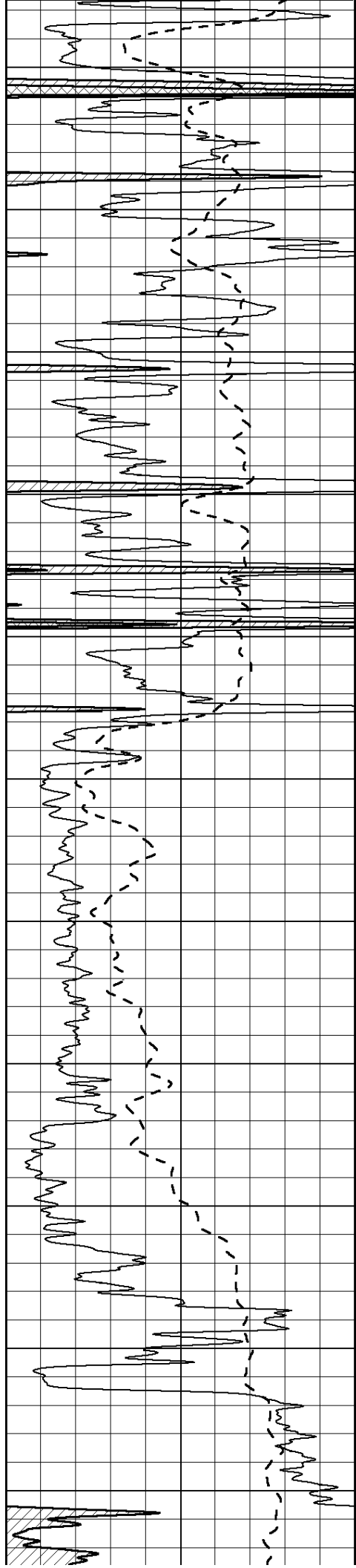
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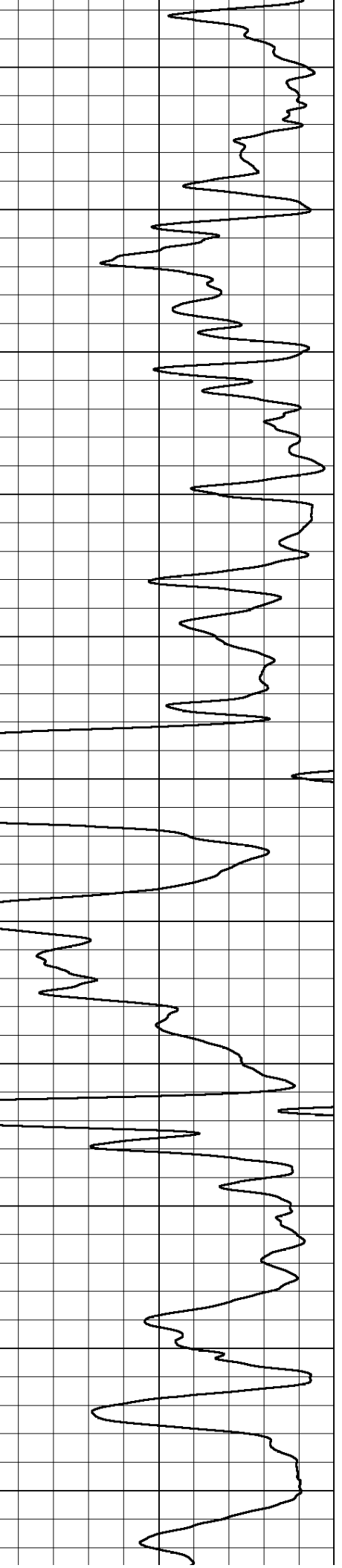
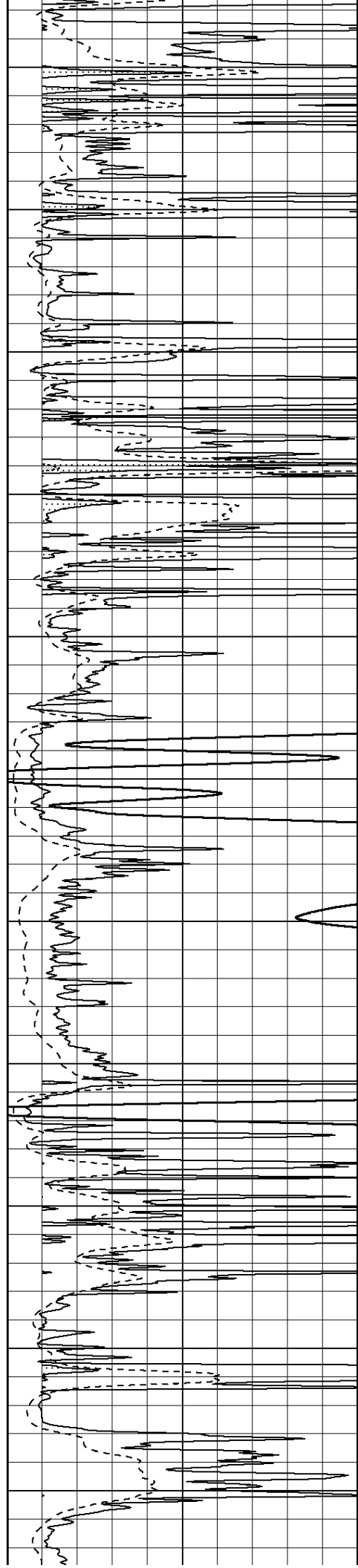
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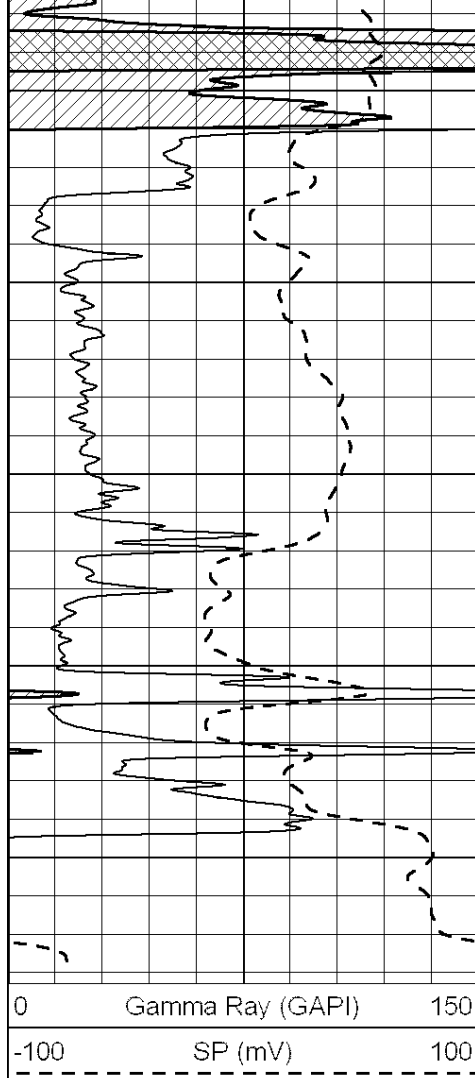
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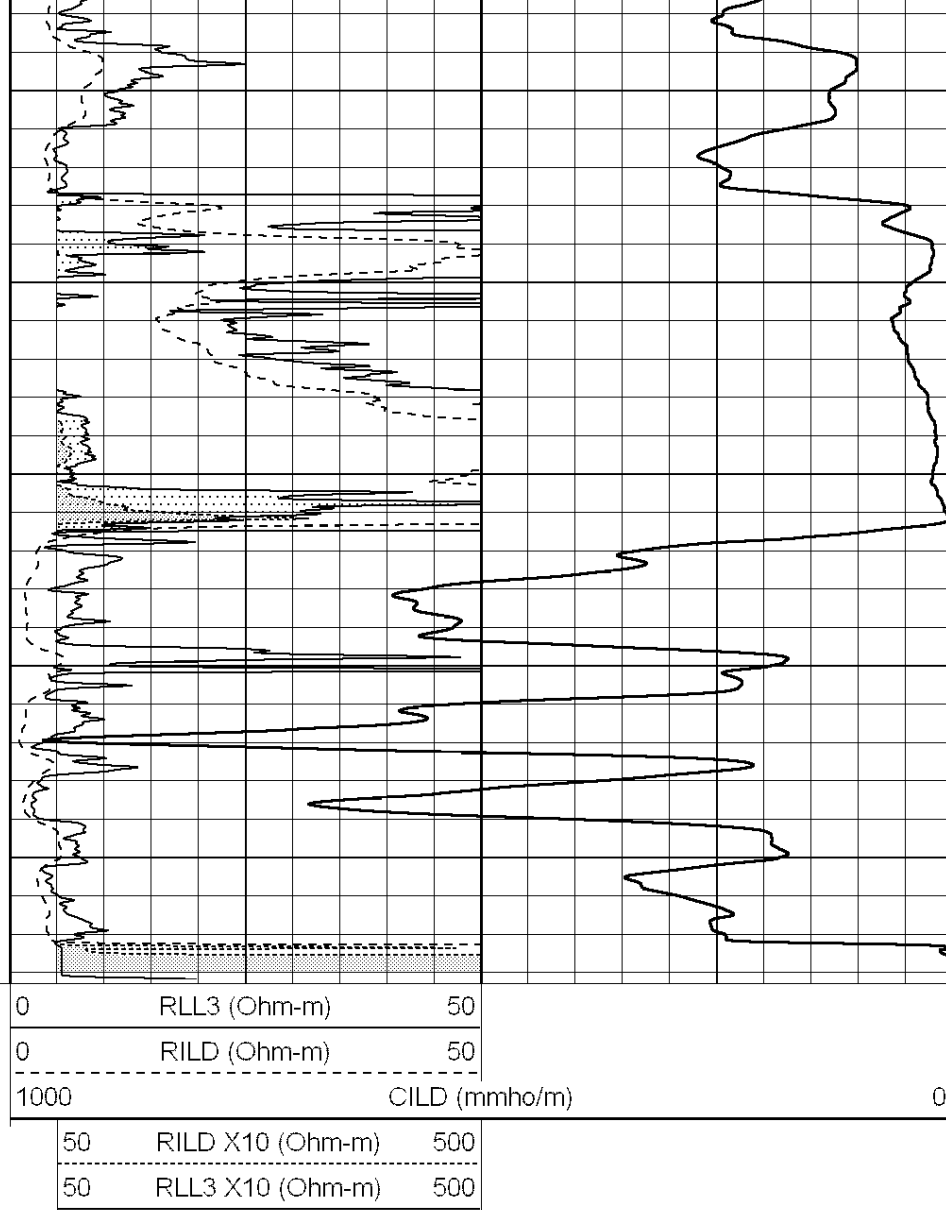
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0 Gamma Ray (GAPI) 150
-100 SP (mV) 100

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

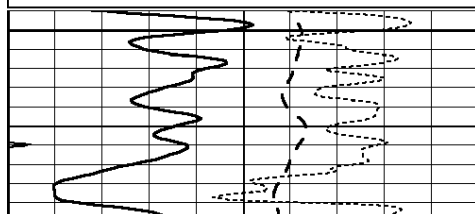


MAIN SECTION

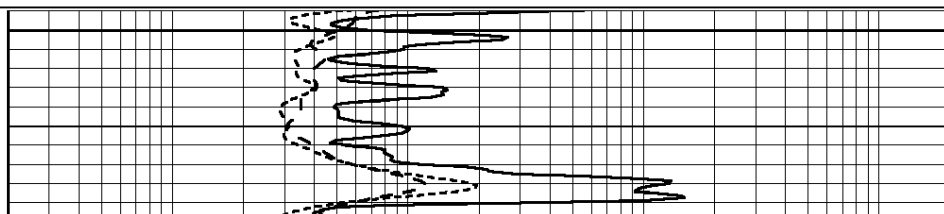
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Presentation Format: _dil
Dataset Creation: Tue Jun 25 13:28:22 2013 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

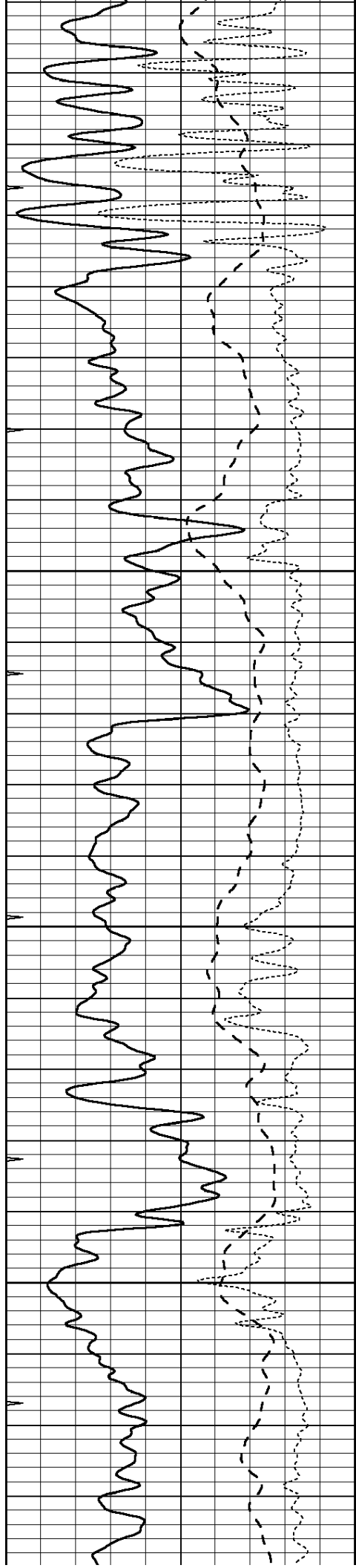
0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0 MINMK 20

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



1700



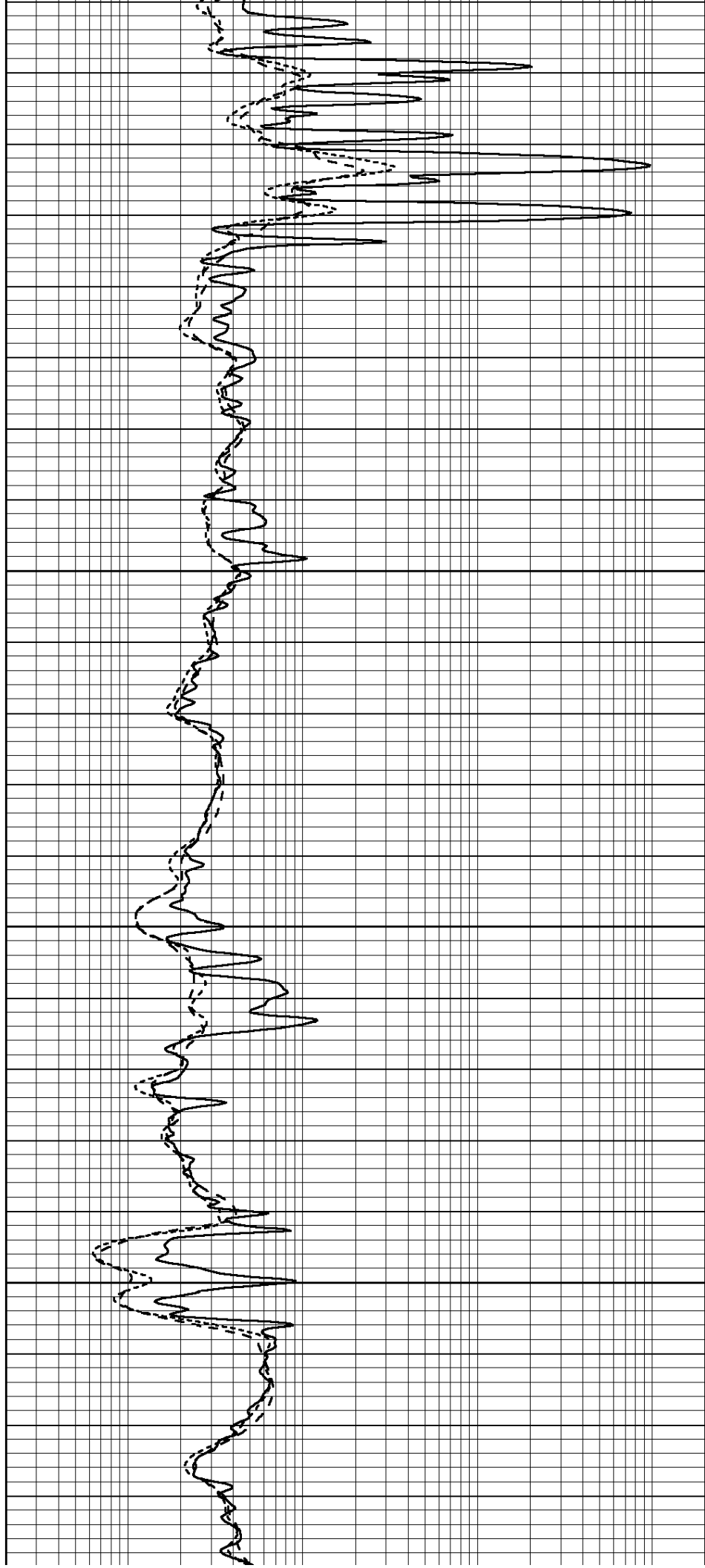


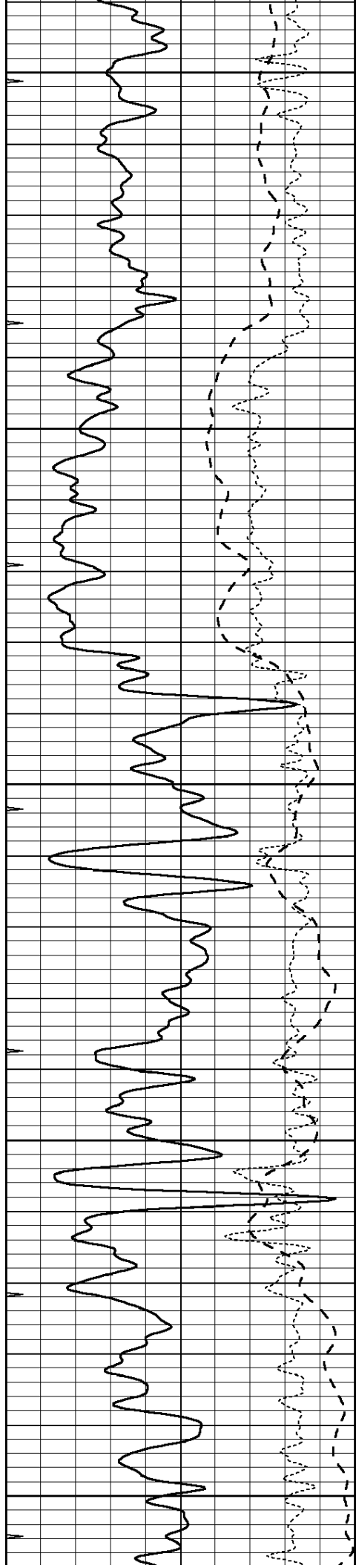
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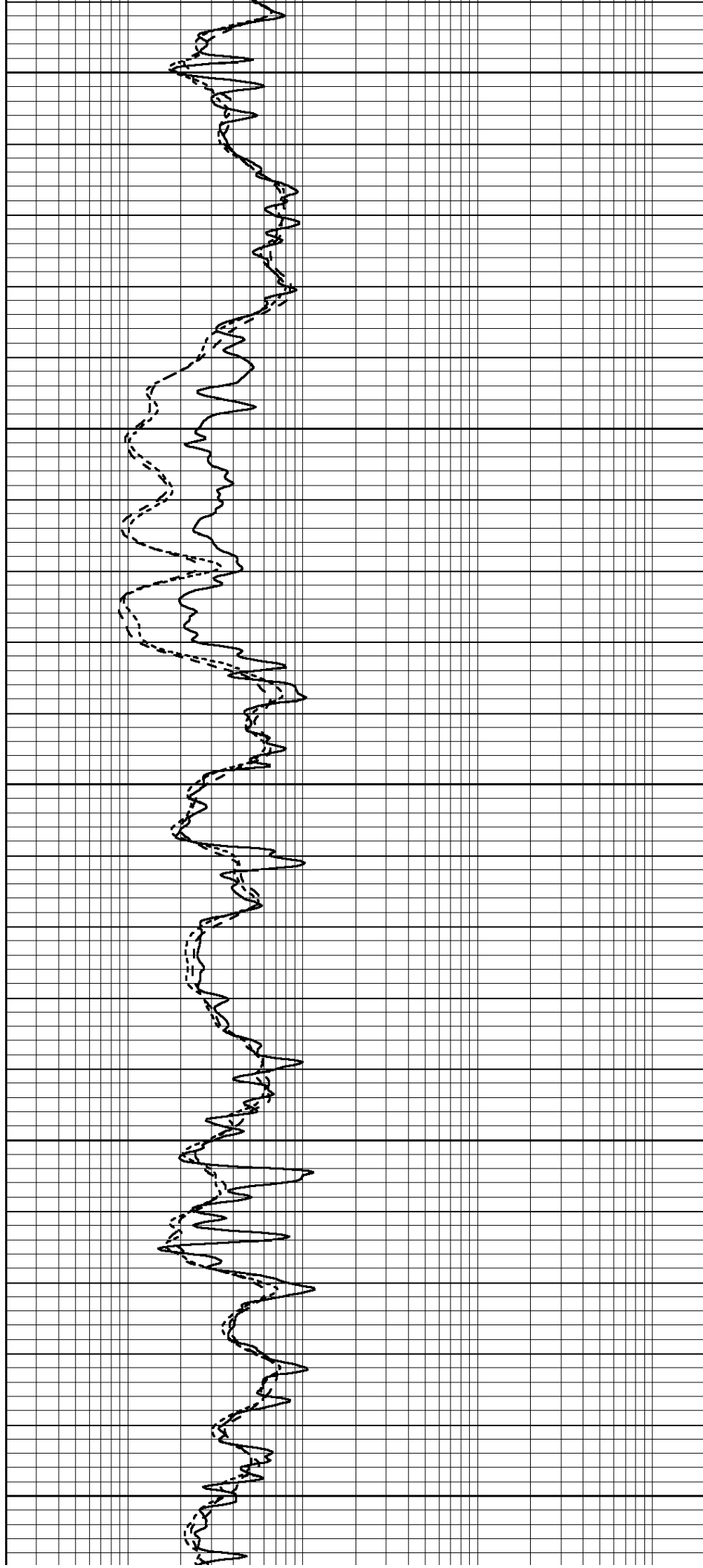
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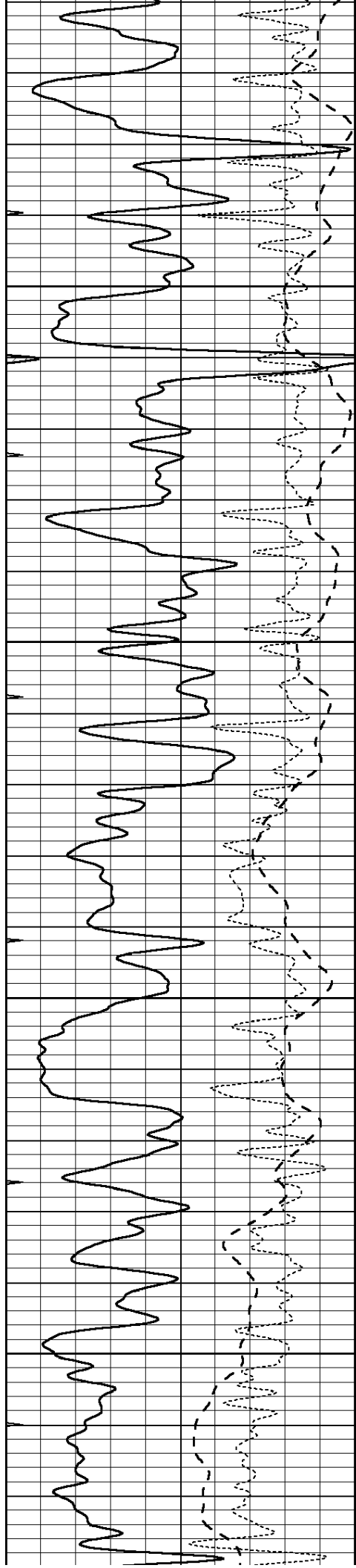
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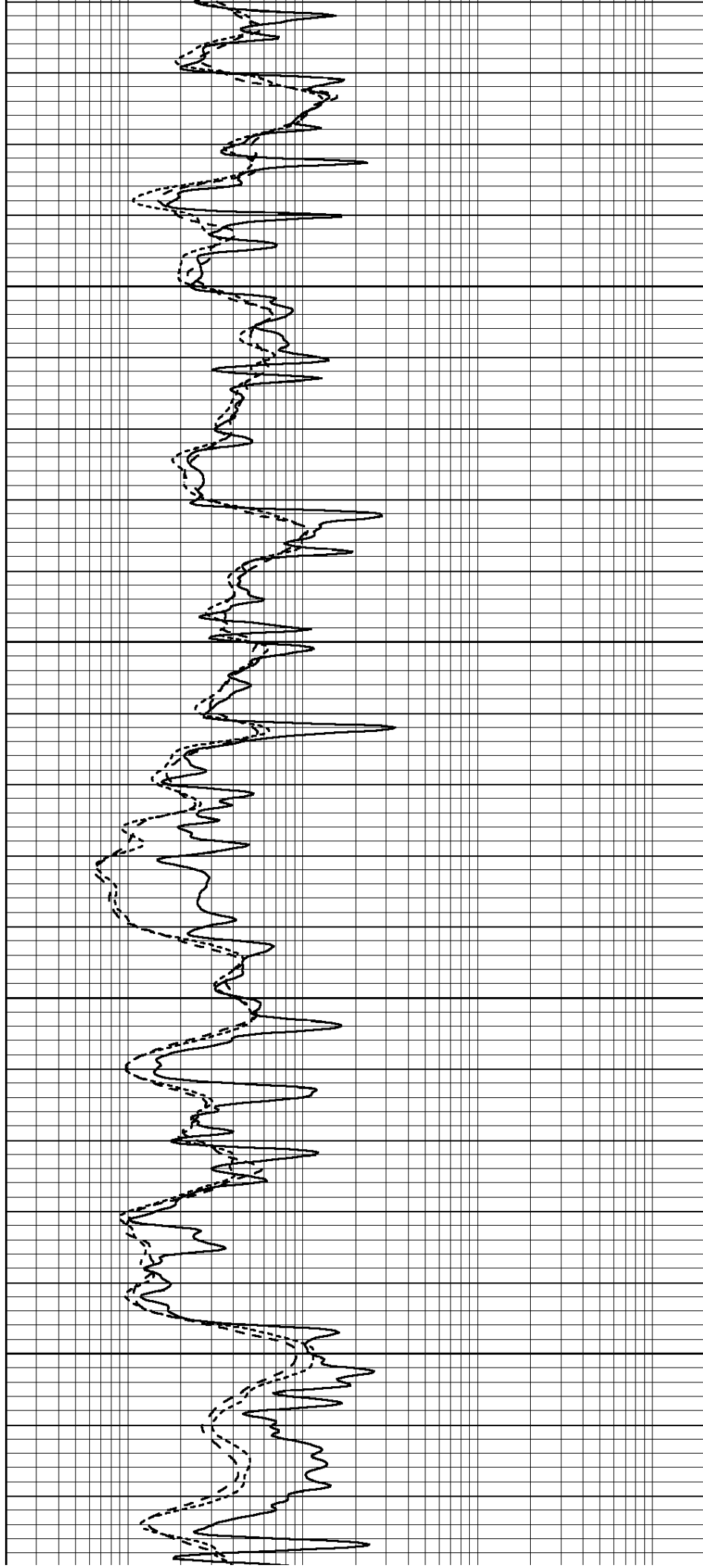


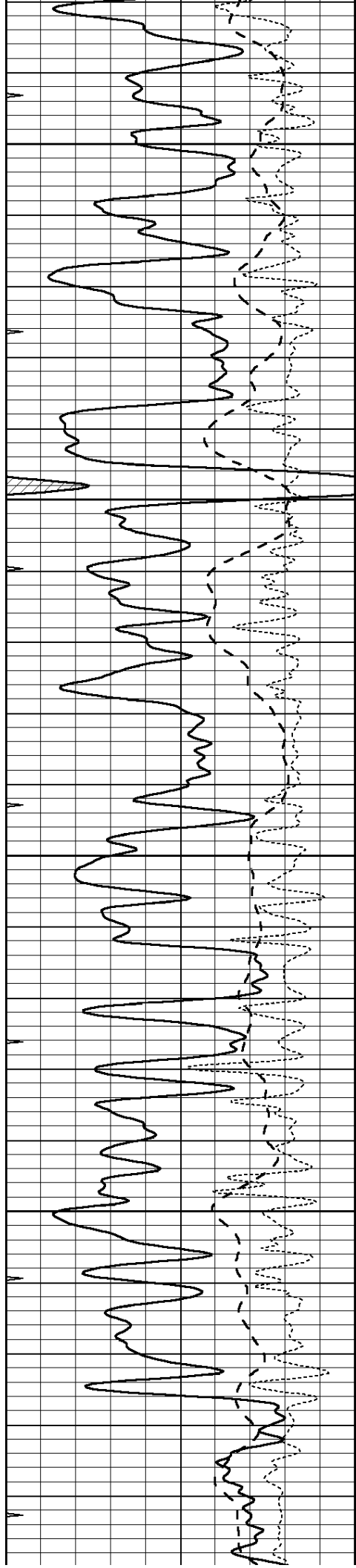
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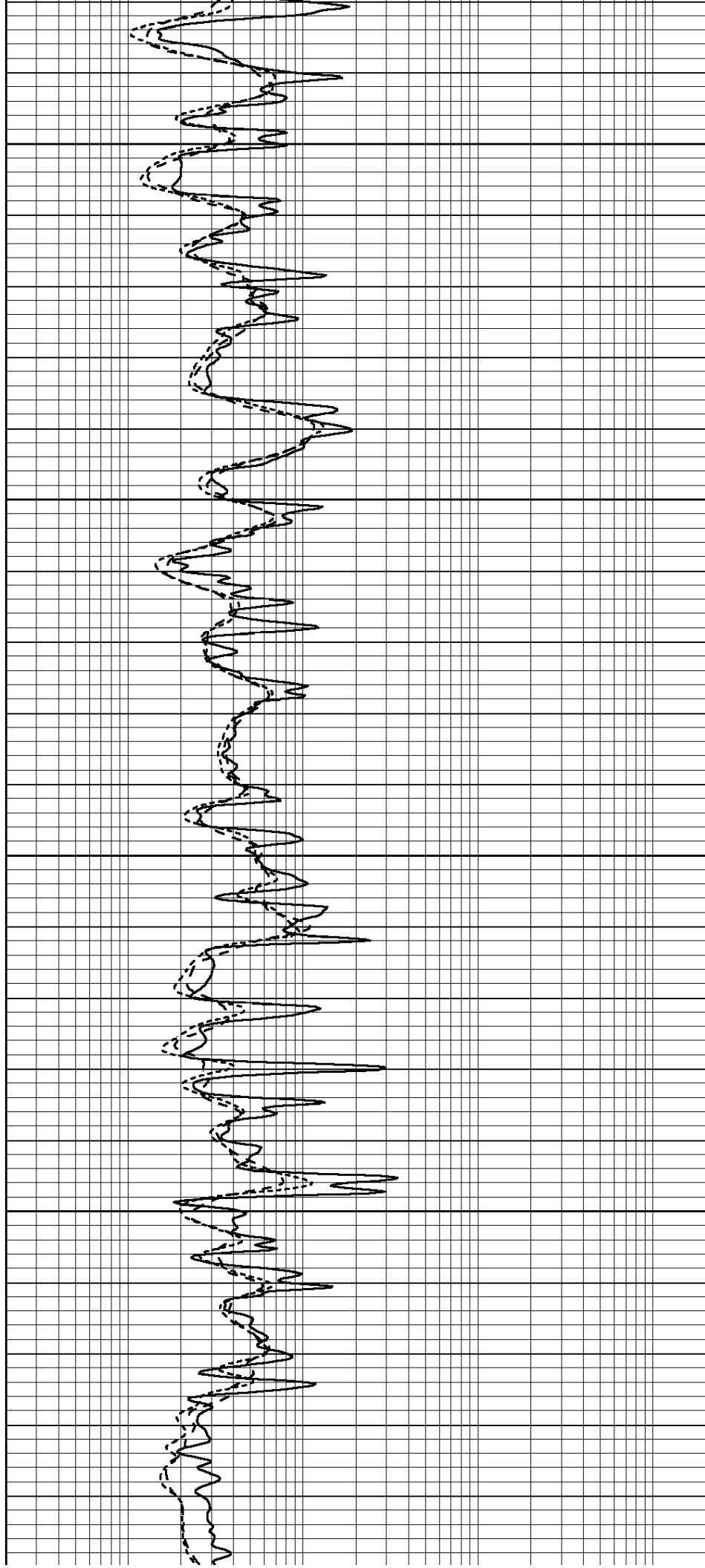
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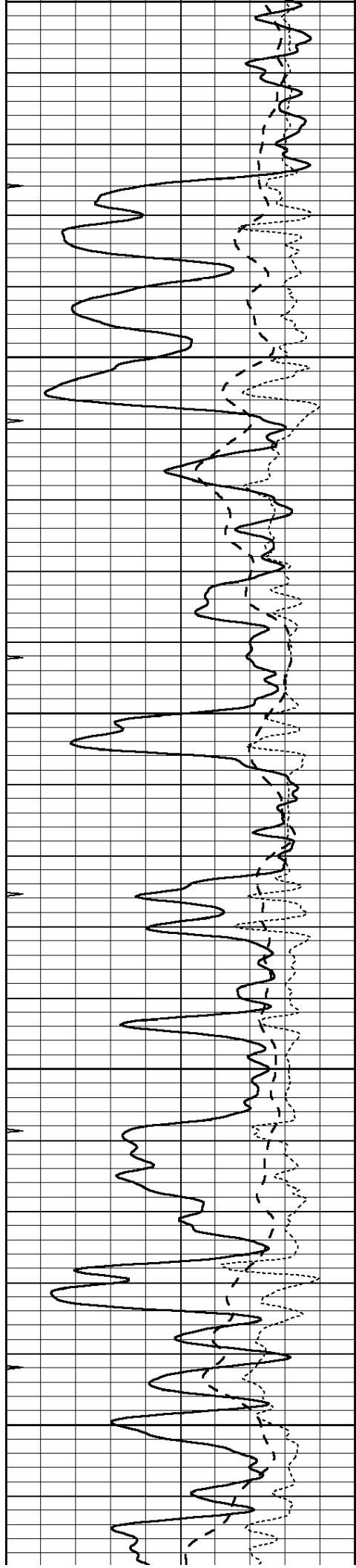
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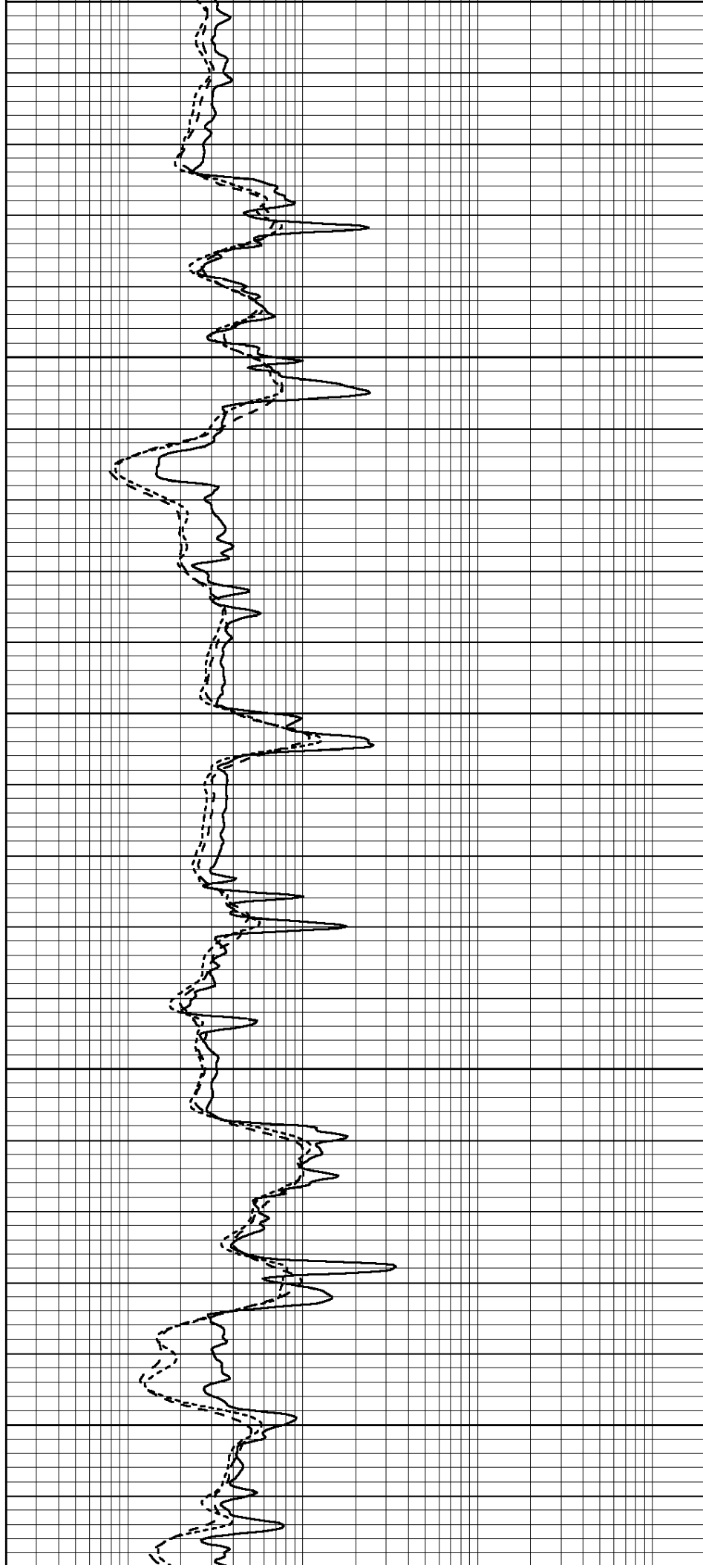
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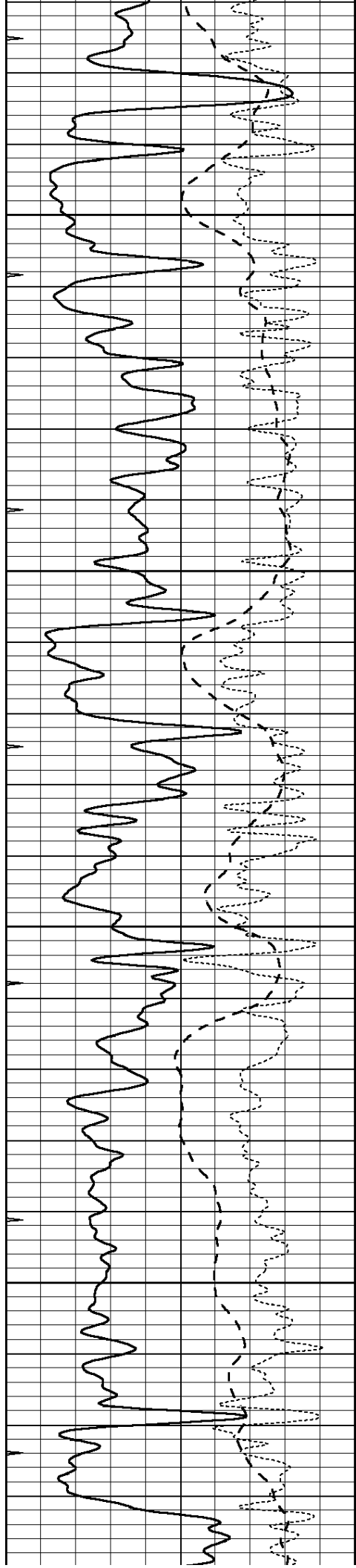
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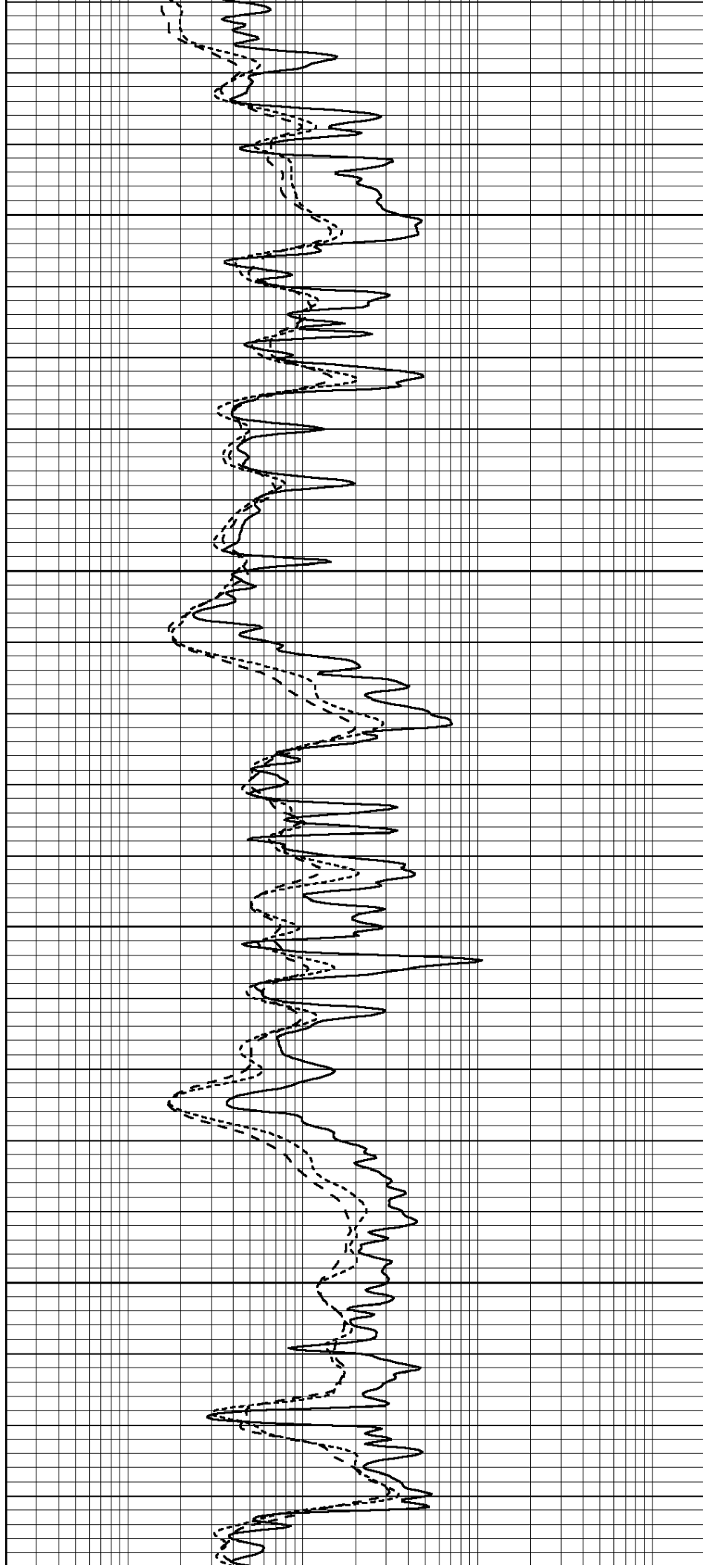


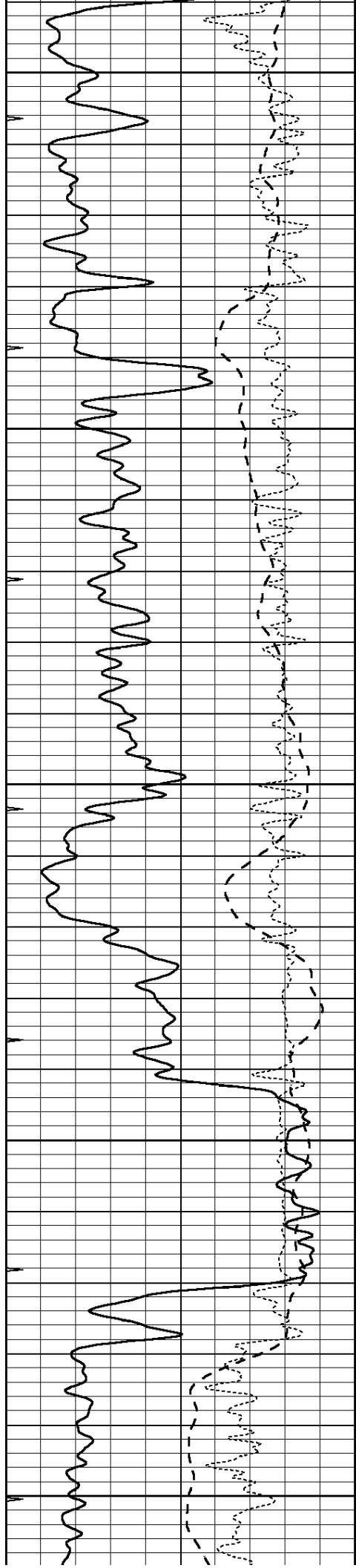
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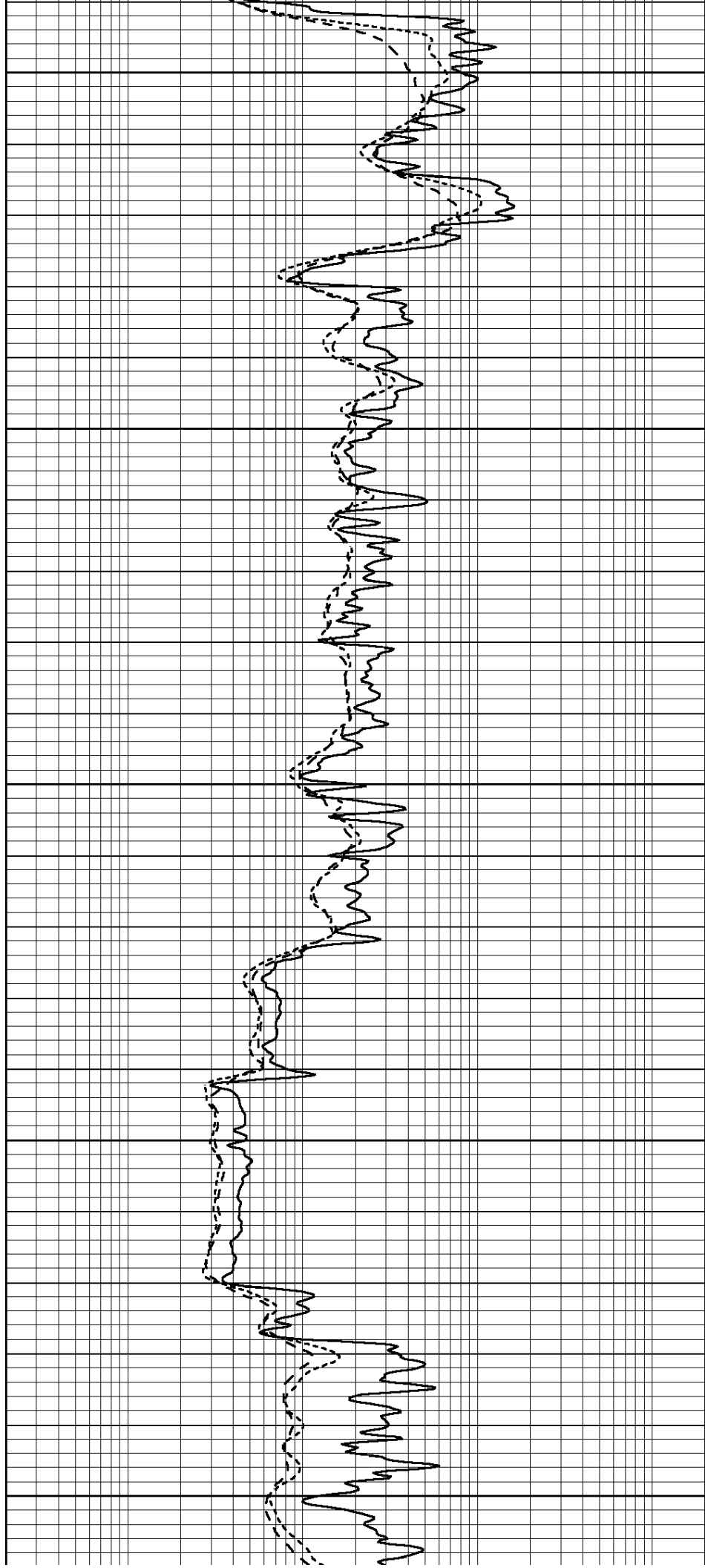
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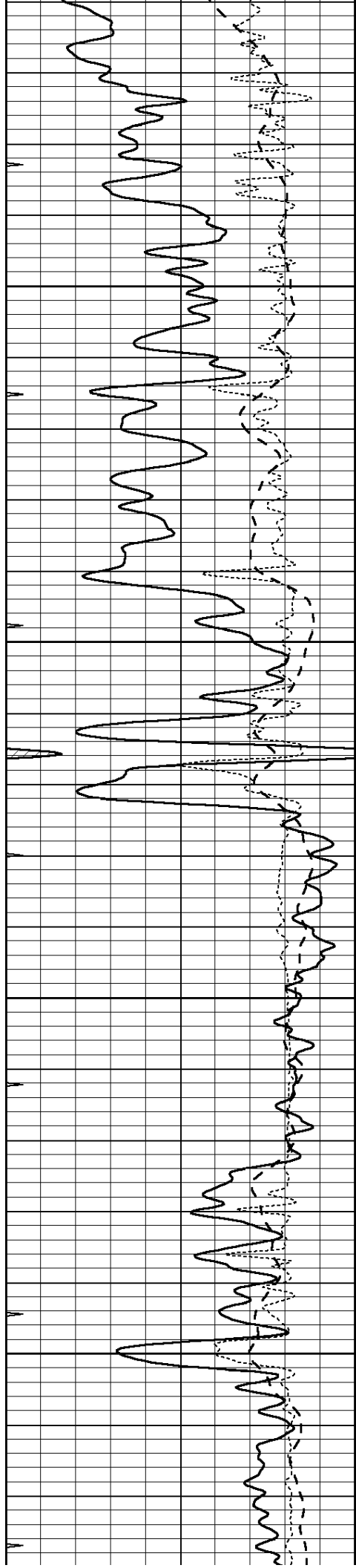
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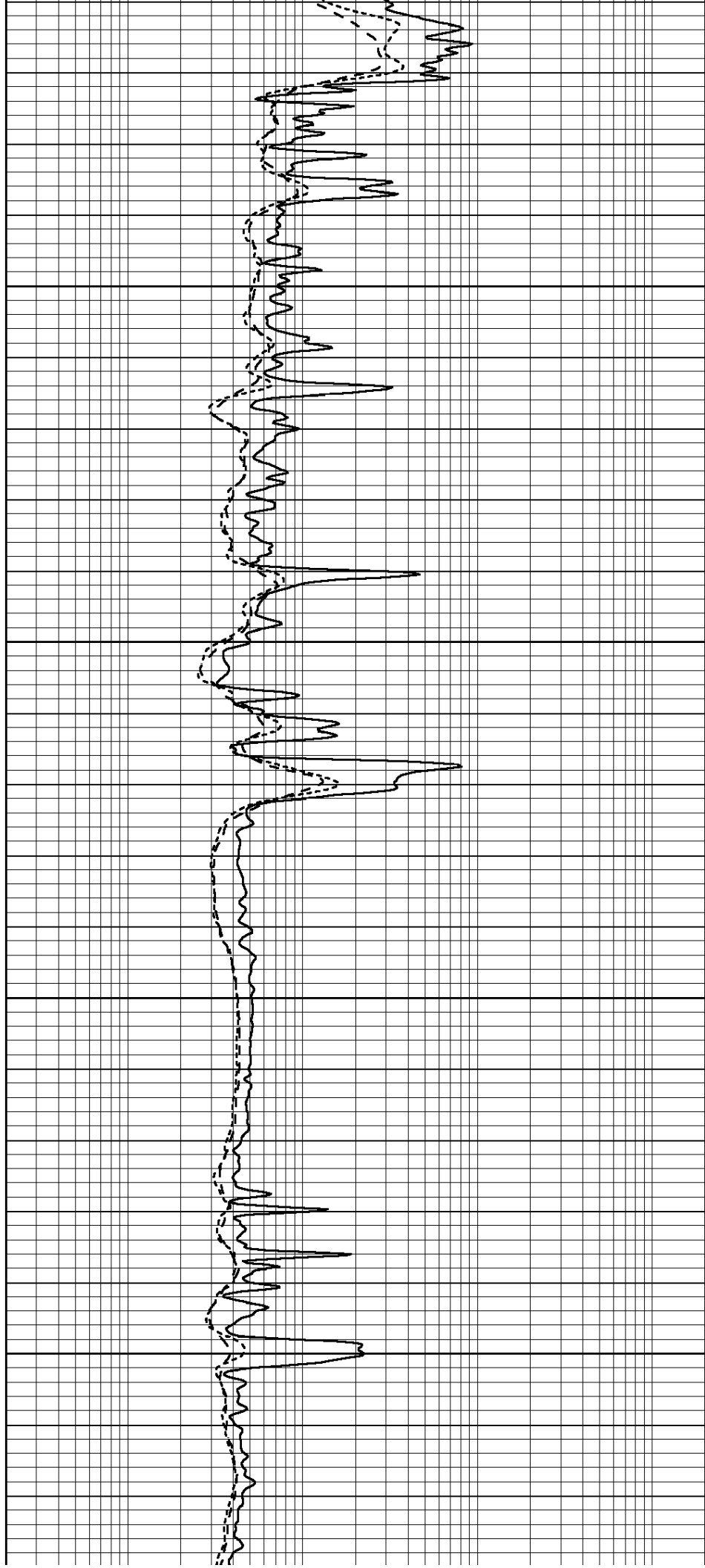


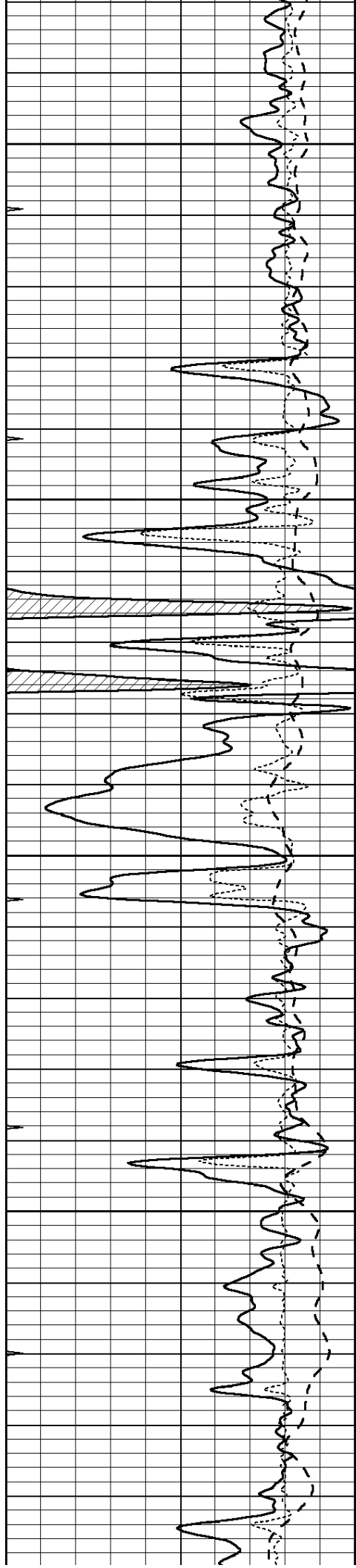
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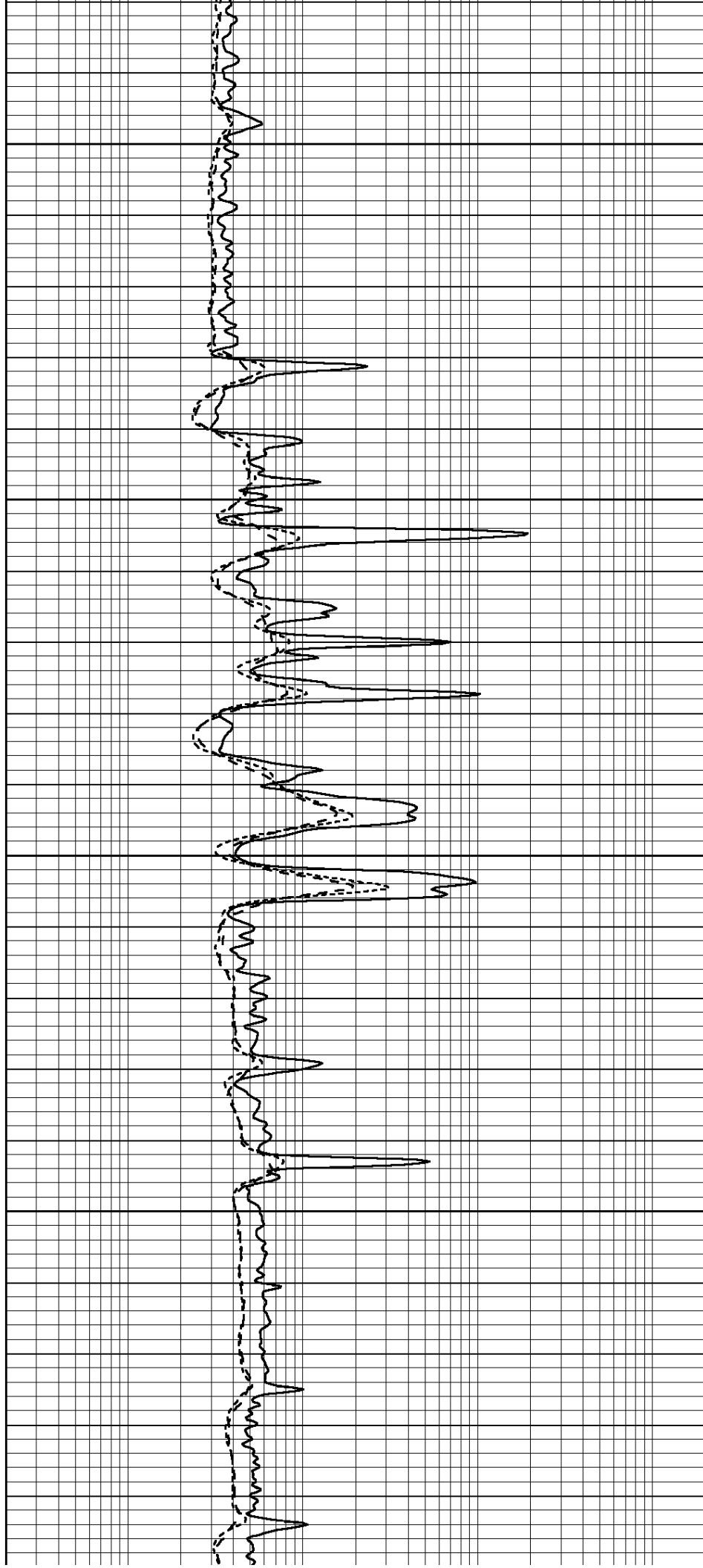
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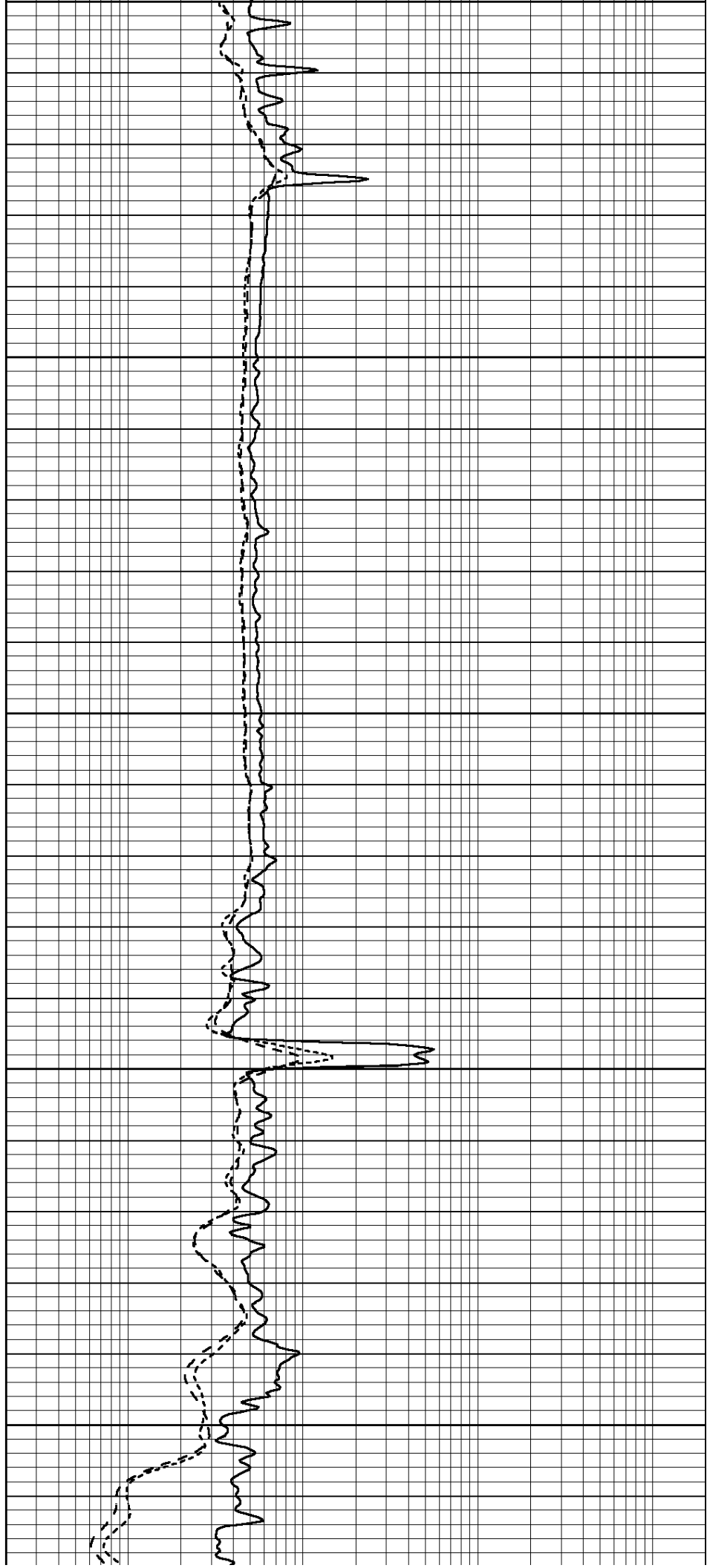
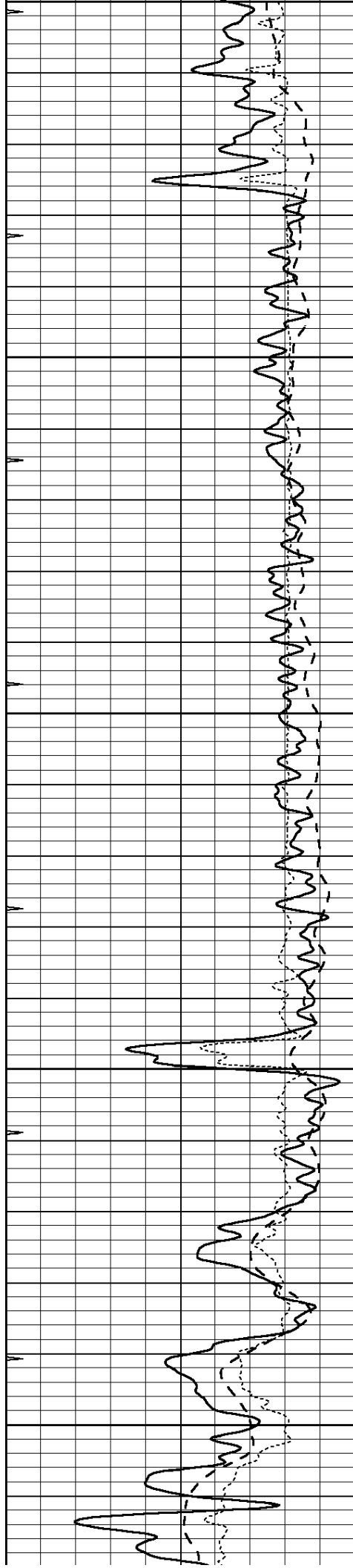
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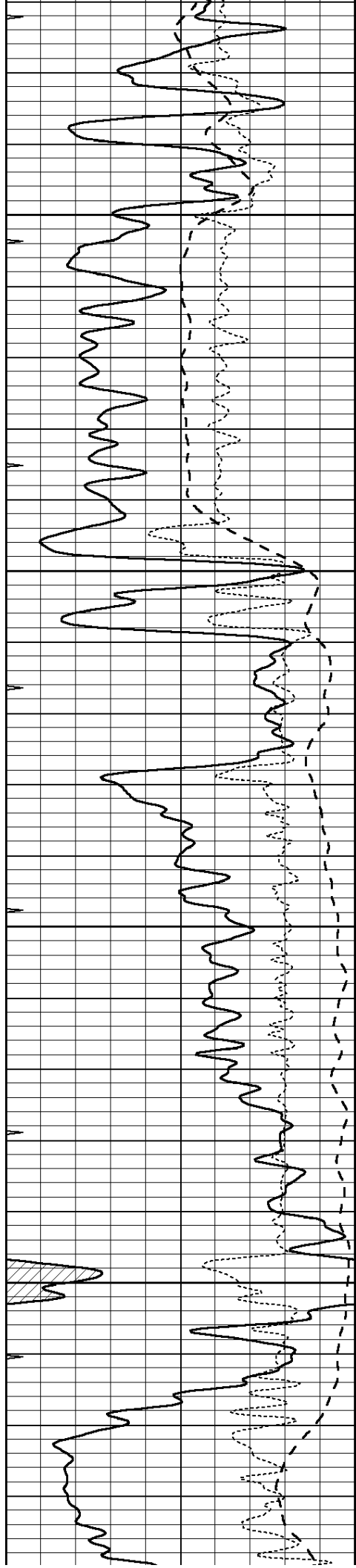
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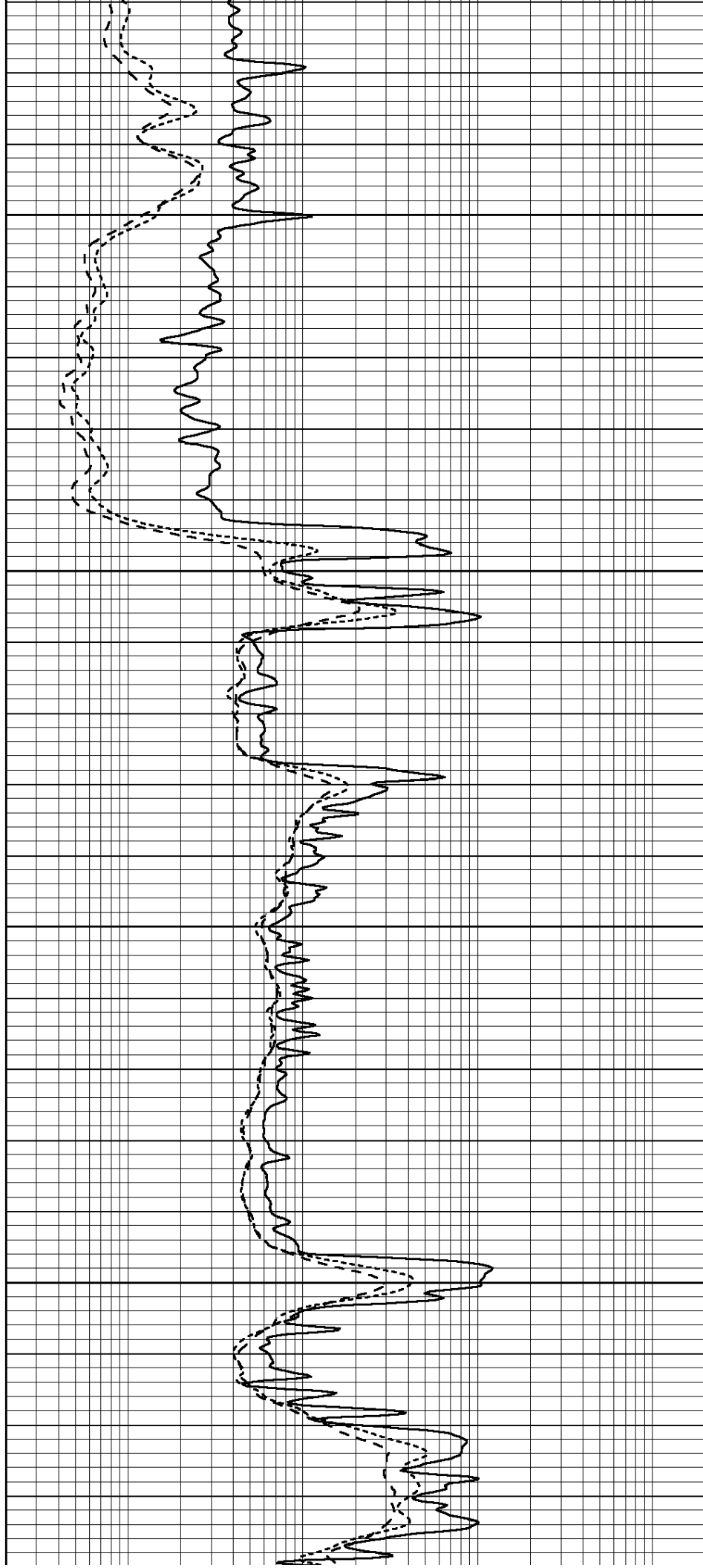


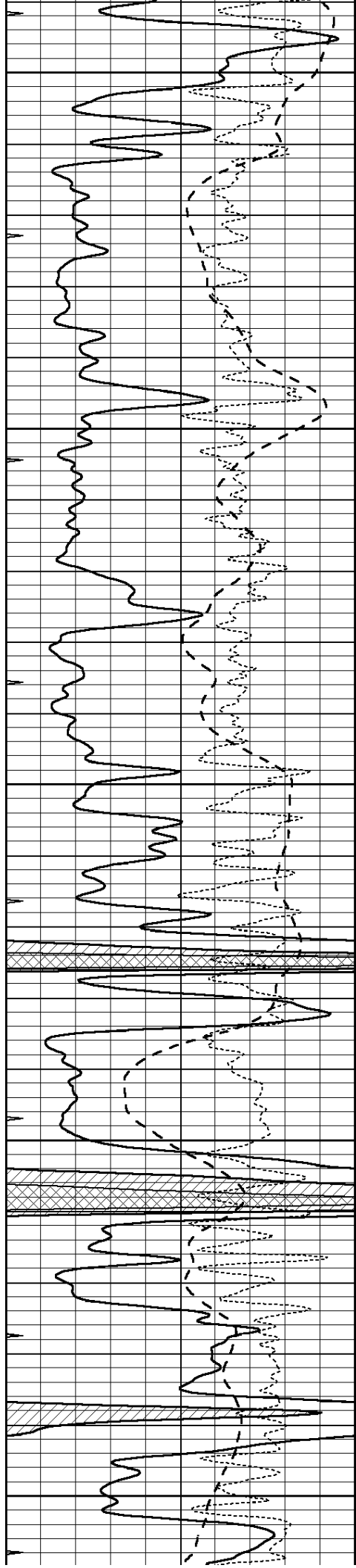
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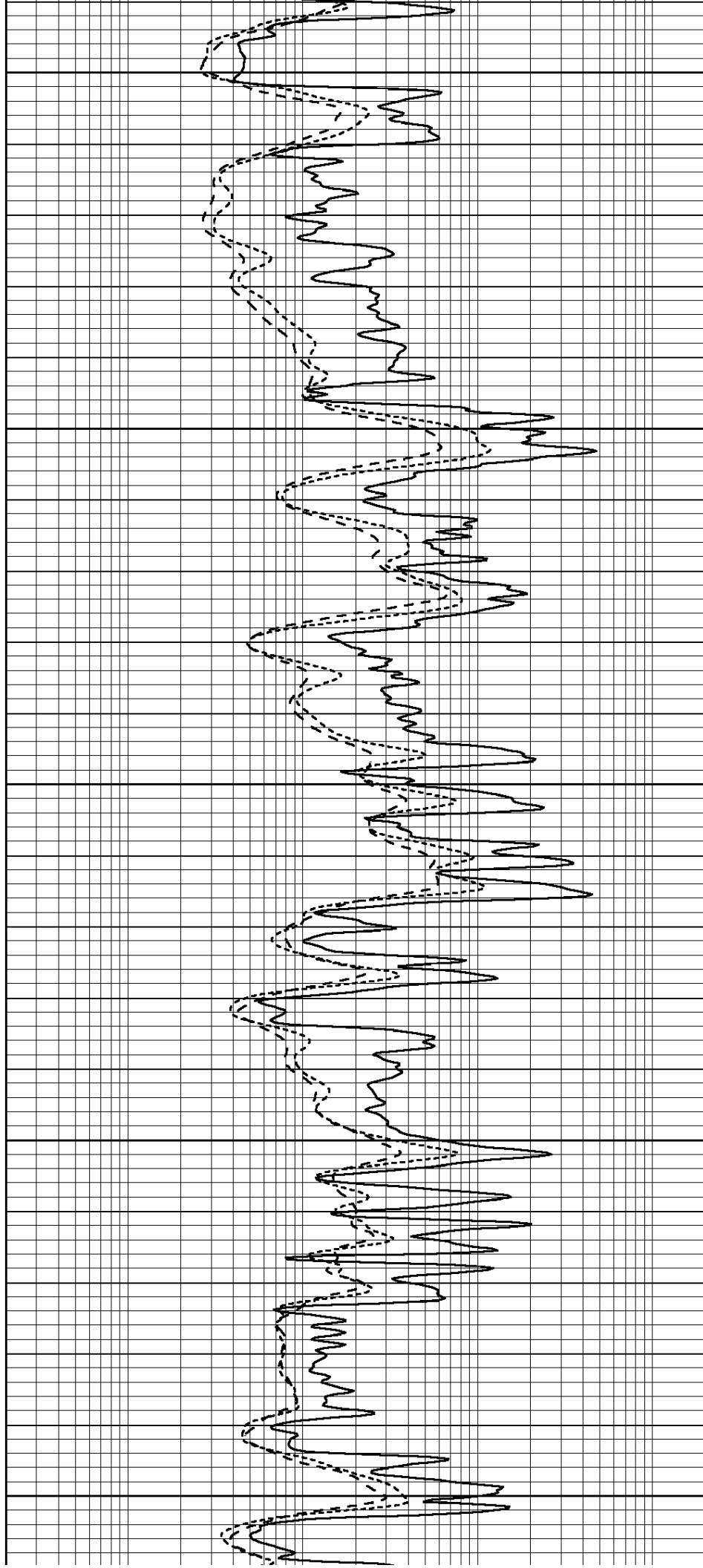
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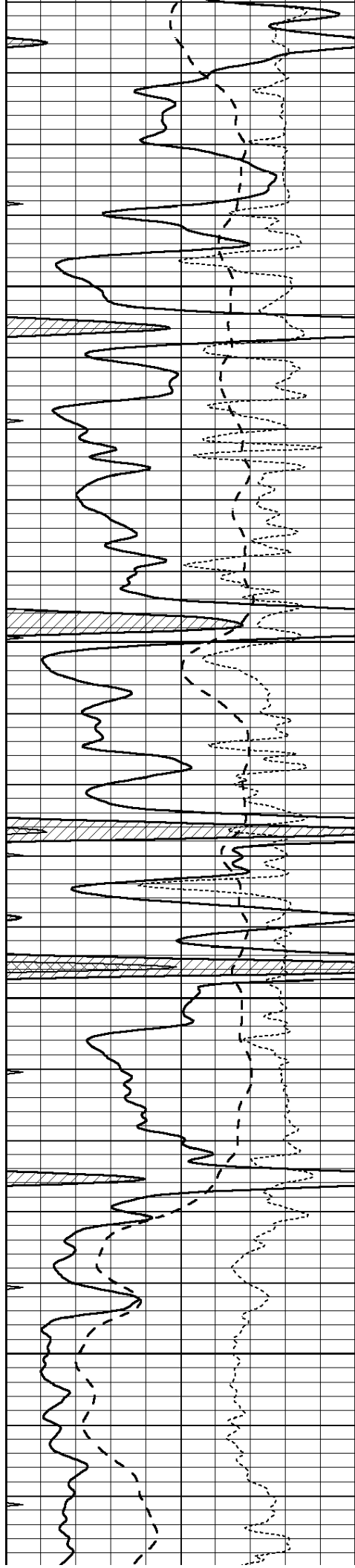
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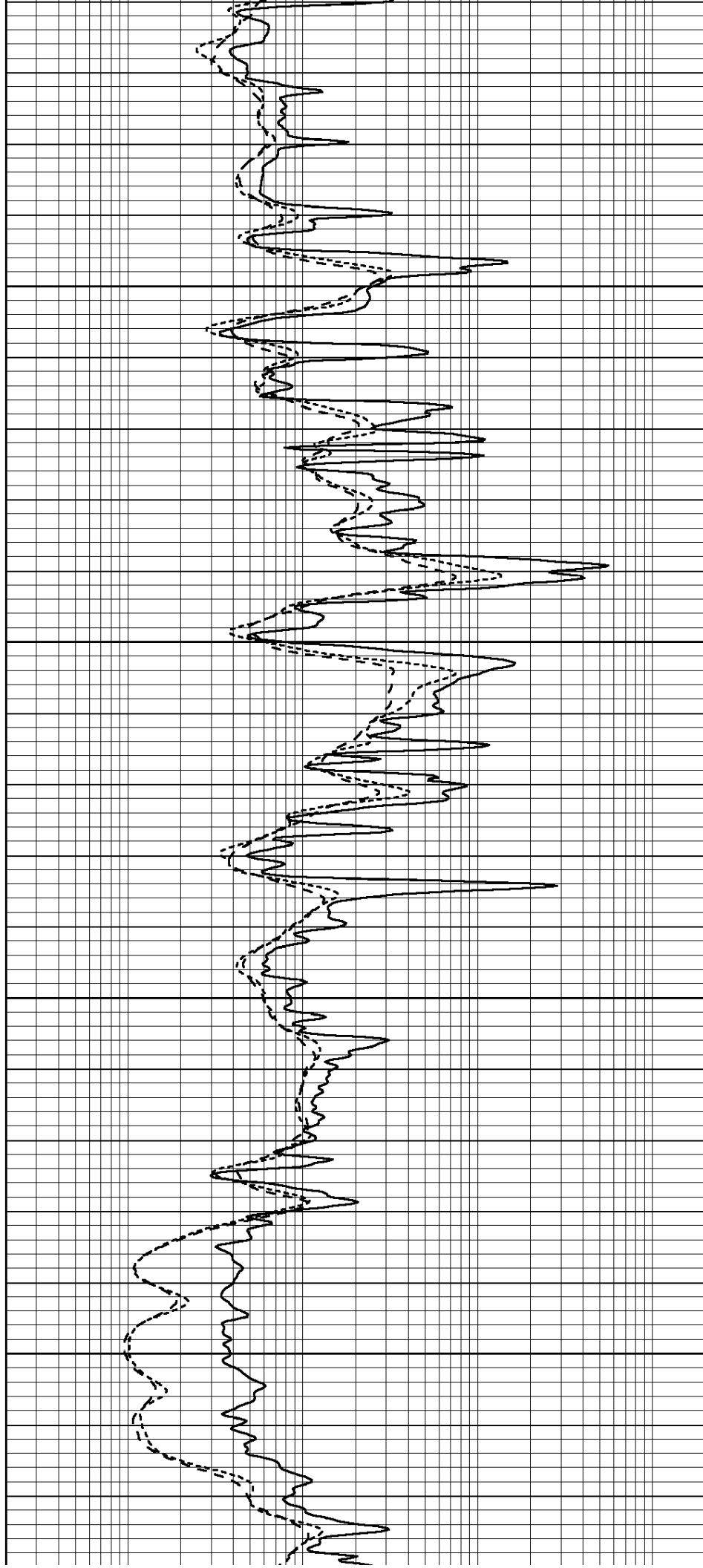


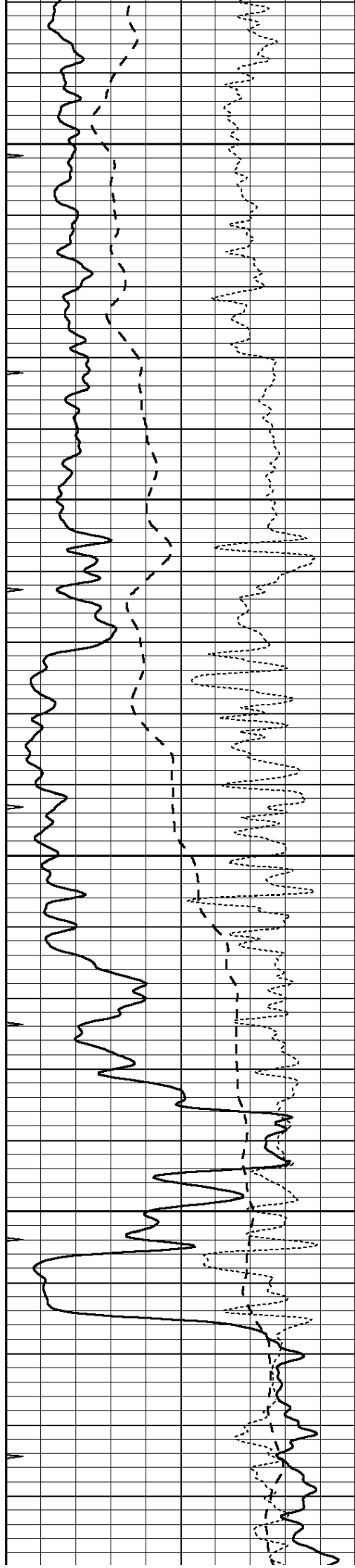
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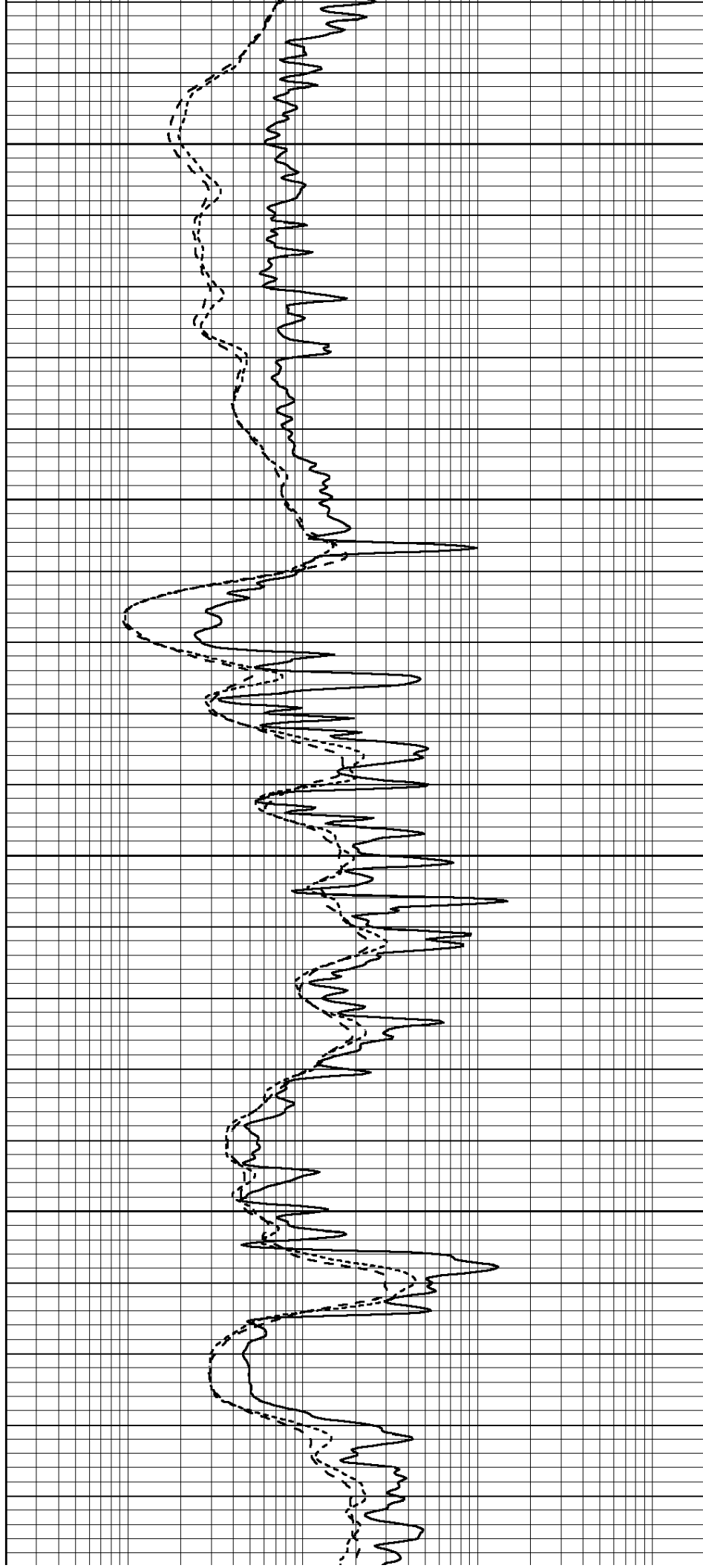
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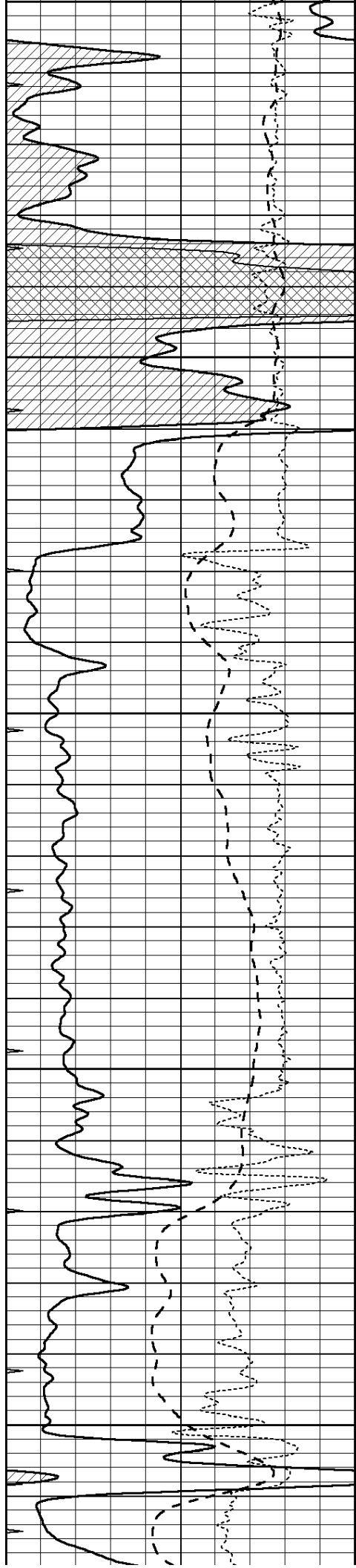
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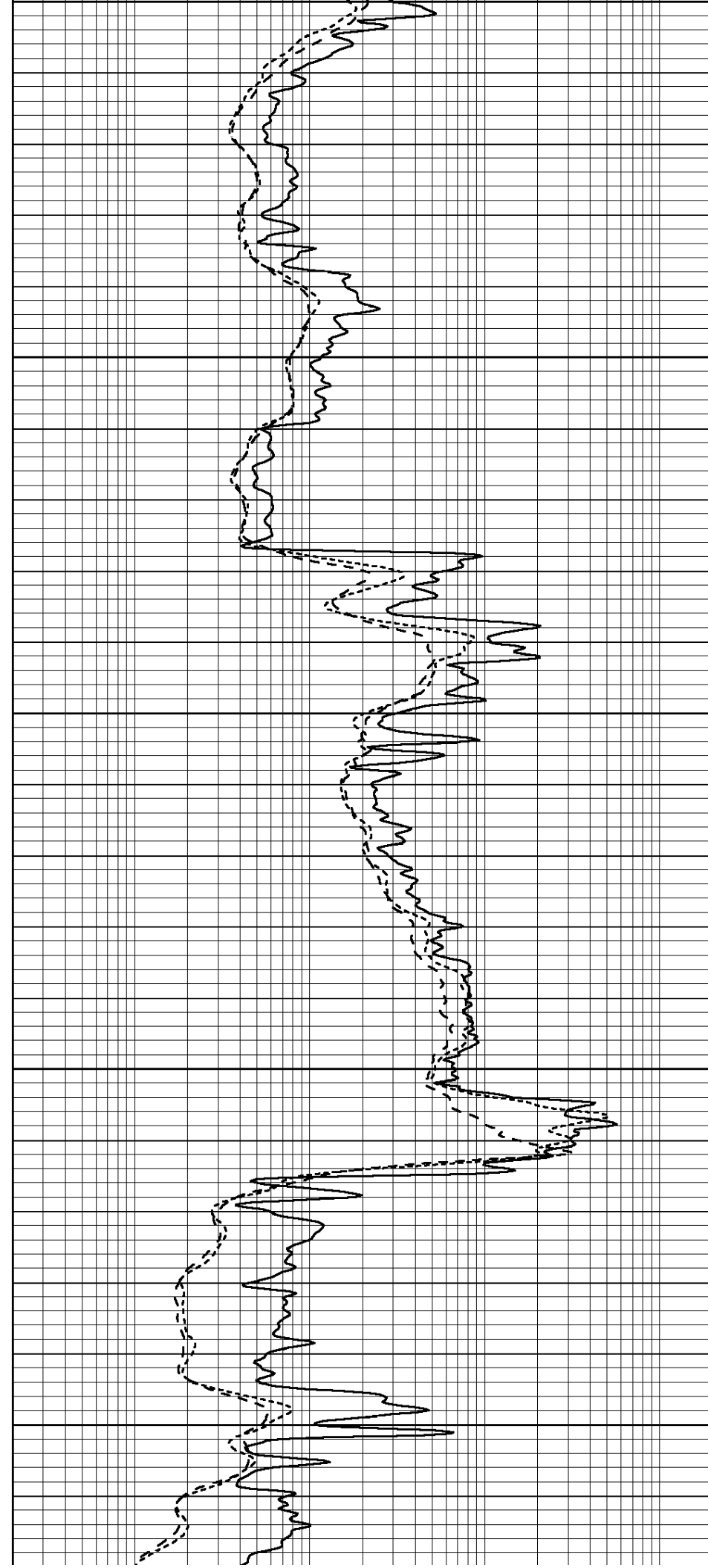
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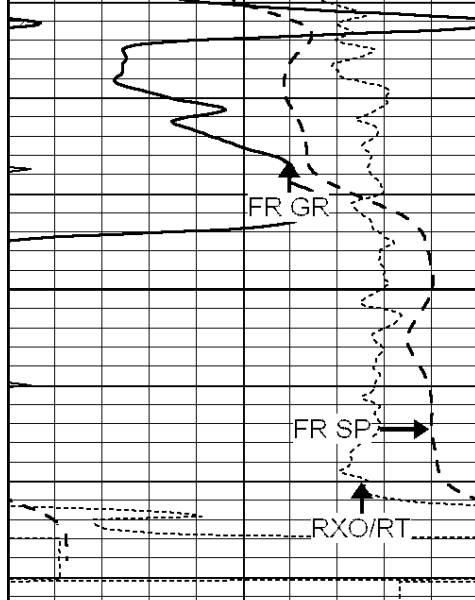
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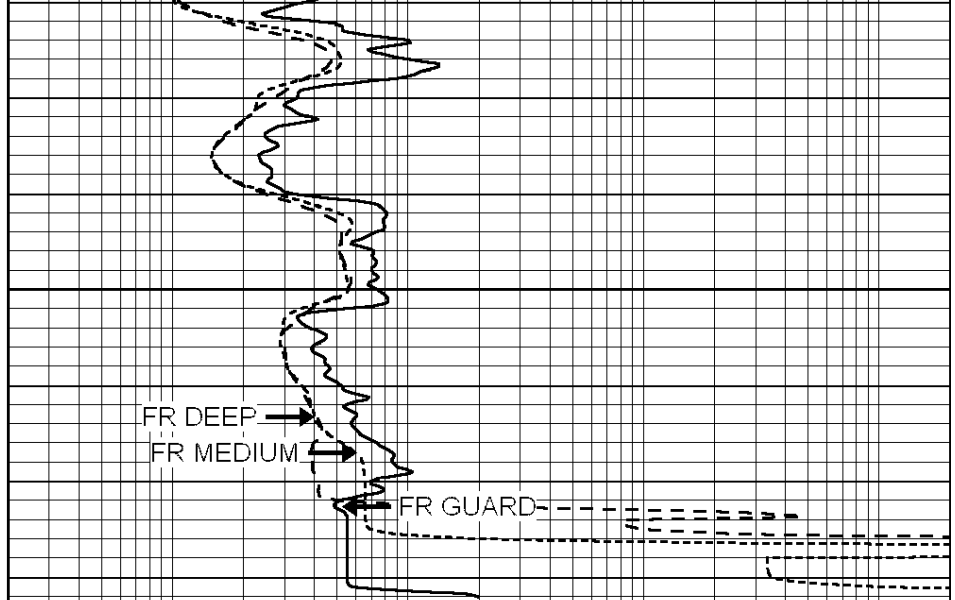




5050

LTD 5075

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

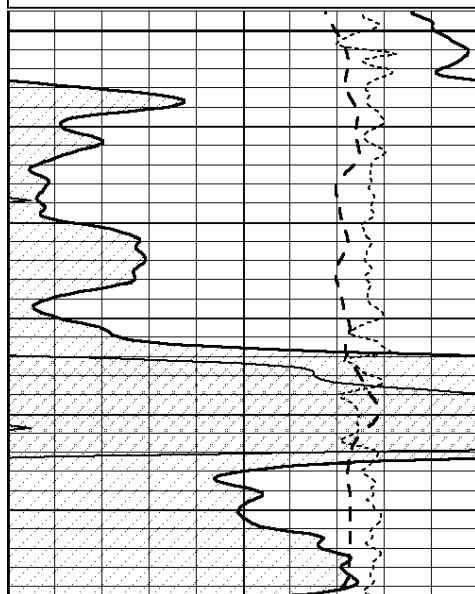


REPEAT SECTION

Database File: 011176pe.db
 Dataset Pathname: pass2.2
 Presentation Format: dil
 Dataset Creation: Tue Jun 25 11:19:54 2013 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

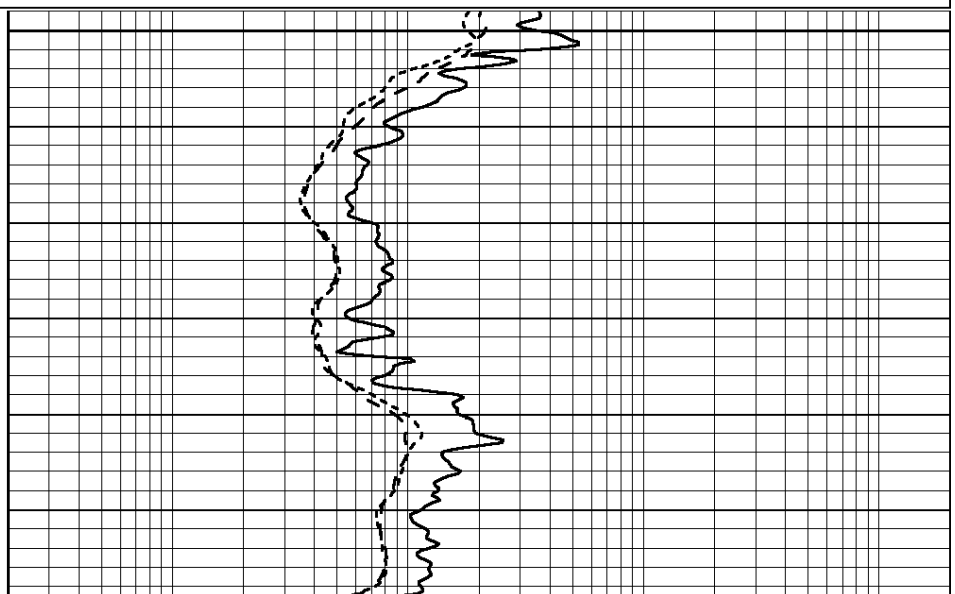
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

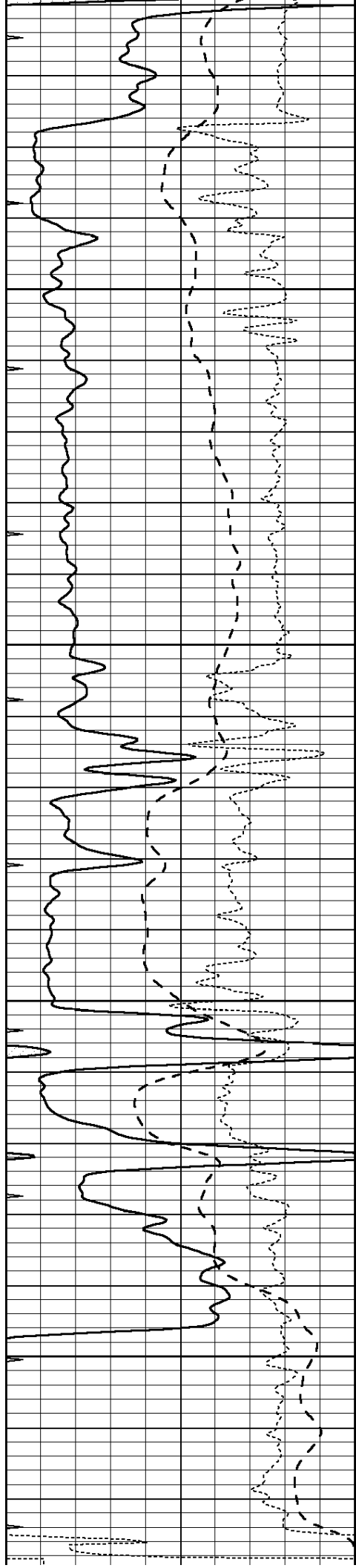
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0.2	DEEP INDUCTION (Ohm-m)	2000
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4800

4850



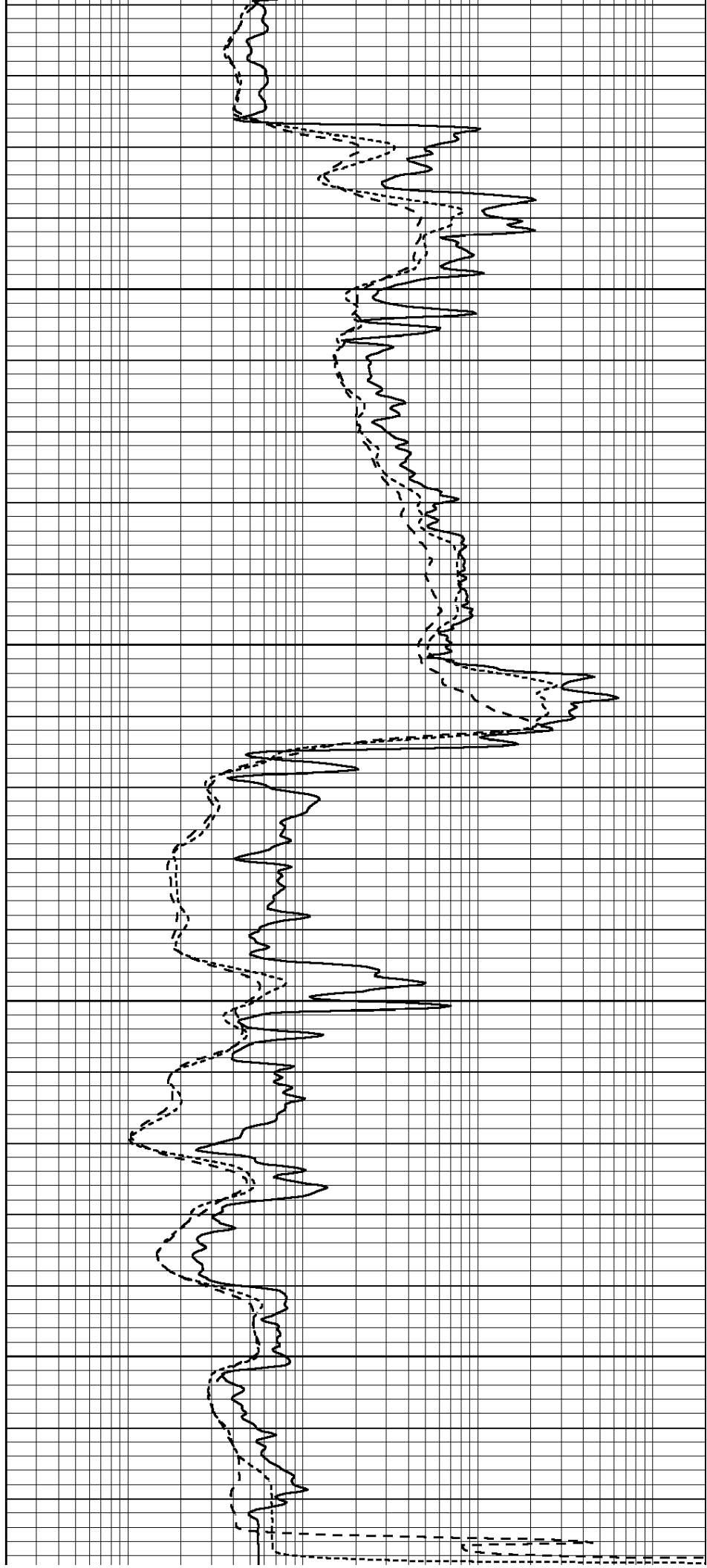


4900

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5000

5050



0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

Calibration Report									
Database File:		011176pe.db							
Dataset Pathname:		pass3.7							
Dataset Creation:		Tue Jun 25 13:28:22 2013 by Calc SOC 120430							
Dual Induction Calibration Report									
Serial-Model:				PROBE9-DILG					
Surface Cal Performed:				Tue Jun 25 11:17:47 2013					
Downhole Cal Performed:				Mon Jul 28 12:02:56 2008					
After Survey Verification Performed:				Mon Jul 28 12:02:56 2008					
Surface Calibration									
Readings				References			Results		
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	-10.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-17.000	
Internal:	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:		004N		Model:		PRB			

Master Calibration					Performed Mon Jun 03 09:36:56 2013				
	Background	Magnesium	Aluminum	Sandstone					
Window 1	1417.6	10391.4	3464.6	11537.5					cps
Window 2	1295.0	8959.7	3050.1	9816.4					cps
Window 3	1105.1	5464.2	2051.0	5838.8					cps
Window 4	315.0	317.7	312.0	319.8					cps

Window 4	515.0	517.7	512.9	515.0	cps
Long Space	0.0	7664.6	1755.0	8521.3	cps
Short Space	1.8	1582.4	1040.8	1699.4	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.574
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept	: -17.0

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	

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Compensated Neutron Calibration Report					
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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					
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Serial Number:		070559			
Tool Model:		OPEN_GR			
Performed:		Wed Jun 12 18:25:42 2013			
Calibrator Value:		1.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		1.0	cps		

Sensitivity:

0.3500

GAPI/cps