



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company LB EXPLORATION, INC.
Well HOPKINS RANCH 31 #1
Field WILD CAT
County BARBER
State KANSAS

Company LB EXPLORATION, INC.
Well HOPKINS RANCH 31 #1
Field WILD CAT
County BARBER State KANSAS

Location: API # : 15-007-24268-00-00
330' FNL & 850' FEL
E2 - NW - NE - NE
SEC 31 TWP 32S RGE 13W
Permanent Datum GROUND LEVEL Elevation 1715
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIIC
Elevation
K.B. 1728
D.F. 1726
G.L. 1715

Date	2/8/15
Run Number	ONE
Depth Driller	5307
Depth Logger	5302
Bottom Logged Interval	5278
Top Log Interval	2400
Casing Driller	13 3/8" @ 221'
Casing Logger	220'
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/52
pH / Fluid Loss	10.0/8.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.75 @ 60F
Rmf @ Meas. Temp	.56 @ 60F
Rmc @ Meas. Temp	.90 @ 60F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.51 @ 128F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	128F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	IAN MABB
Witnessed By	STEVEN PETERMANN
	BLAKE WAGGONER

<<< Fold Here >>>

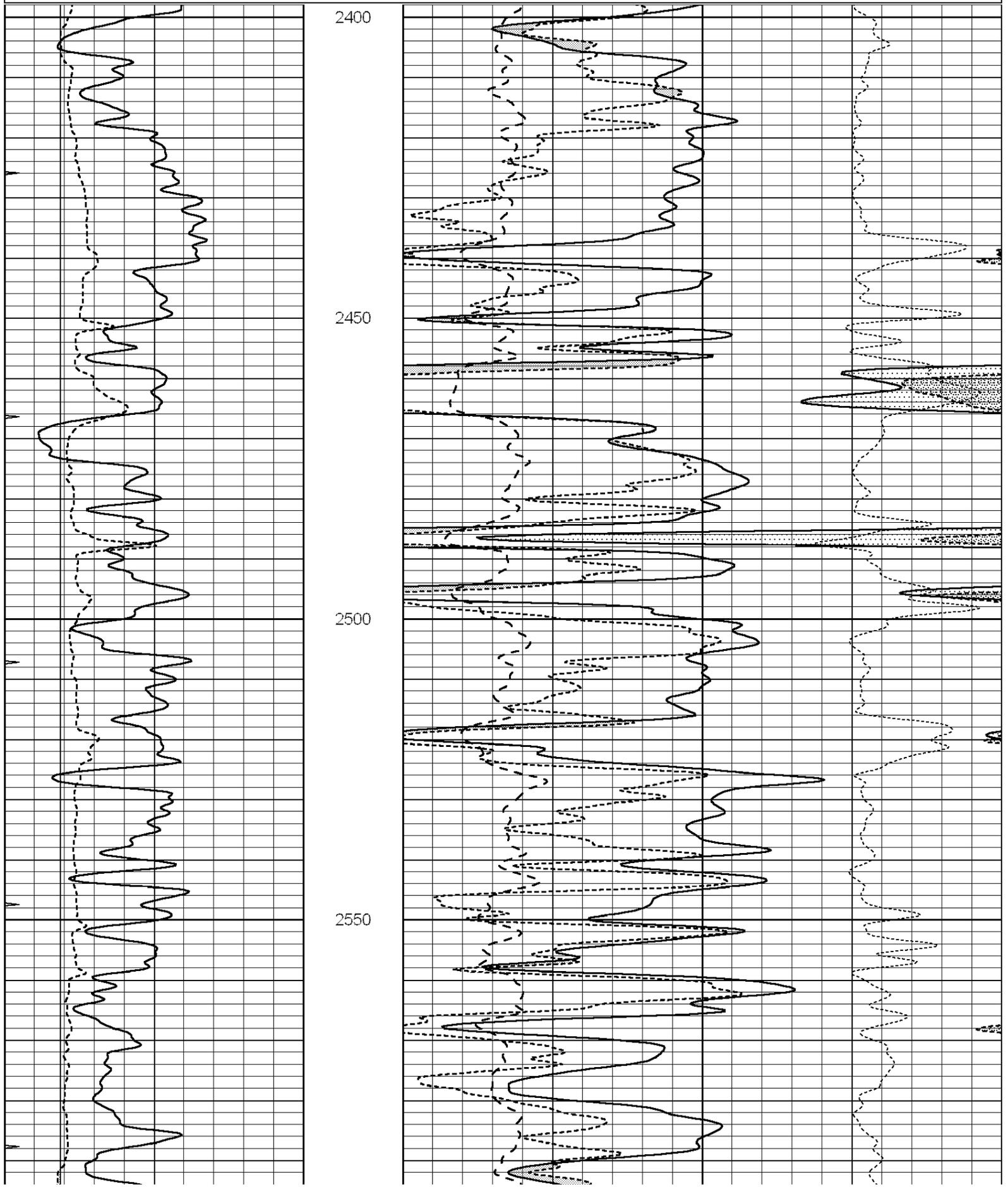
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

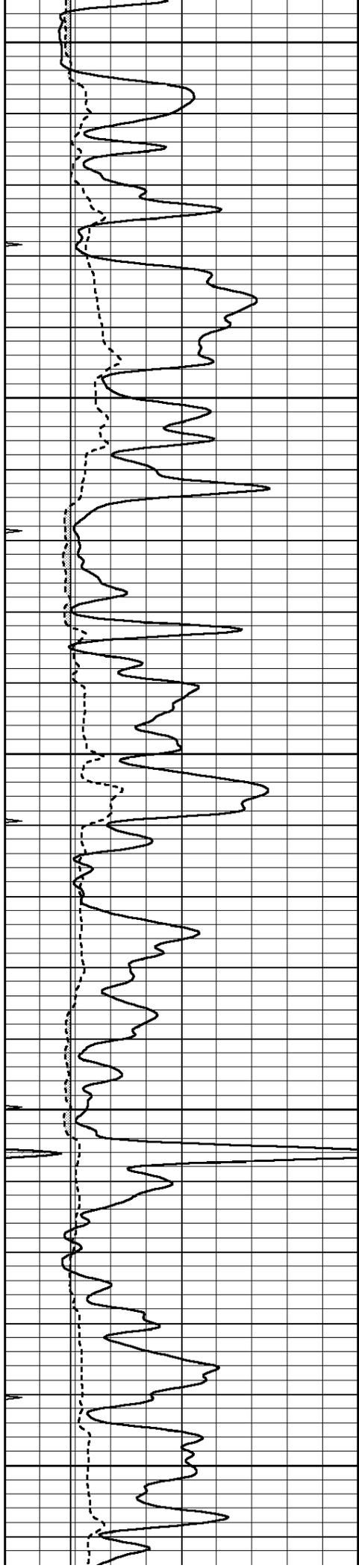
Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
COLWATER, KS, APPROX. 28E. TO "LAKE CITY RD.", 5S. TO "BITTER CREEK RD.", 2E., S.E. ON MAIN TRAIL, STAY RIGHT AT FORKS

Database File: 26347pe.db
Dataset Pathname: pass3.8
Presentation Format: _ldt_neu
Dataset Creation: Sun Feb 08 14:47:49 2015
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
0	MINMK	20	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
6	CALIPER (in)	16	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					





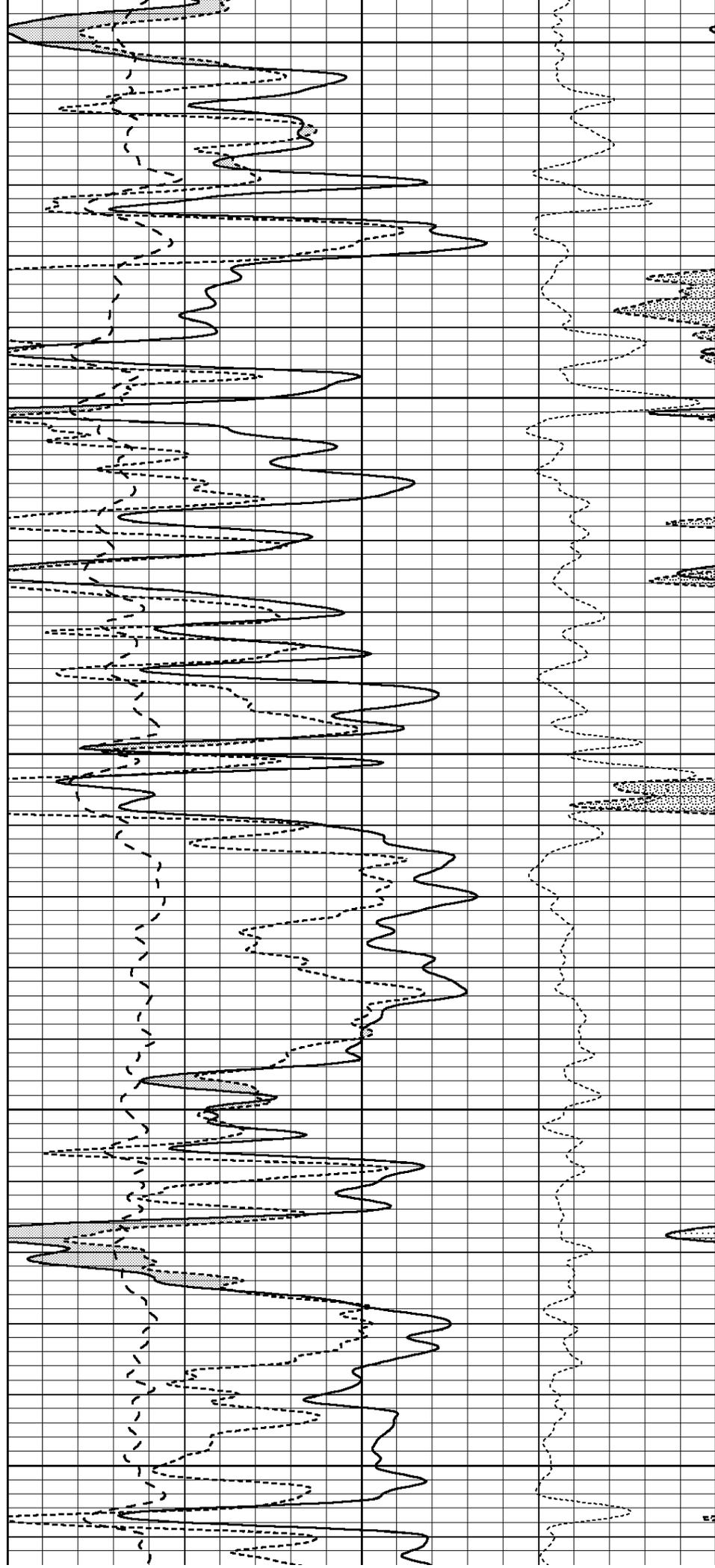
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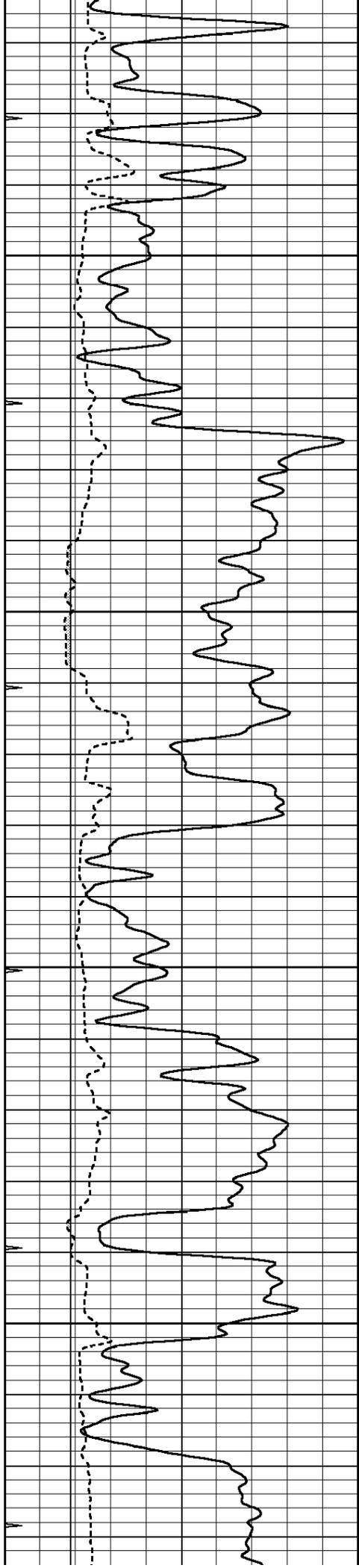
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2700

2750

2800



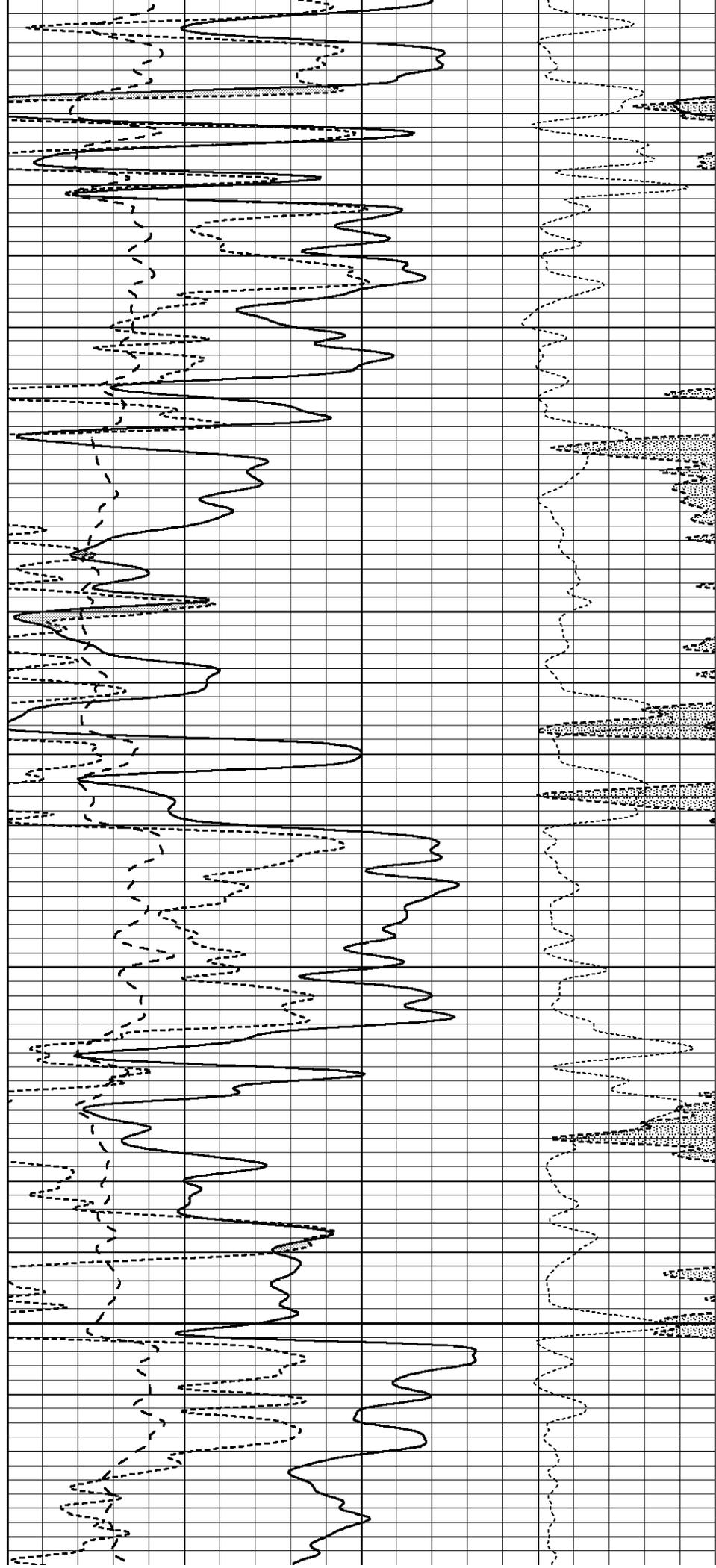


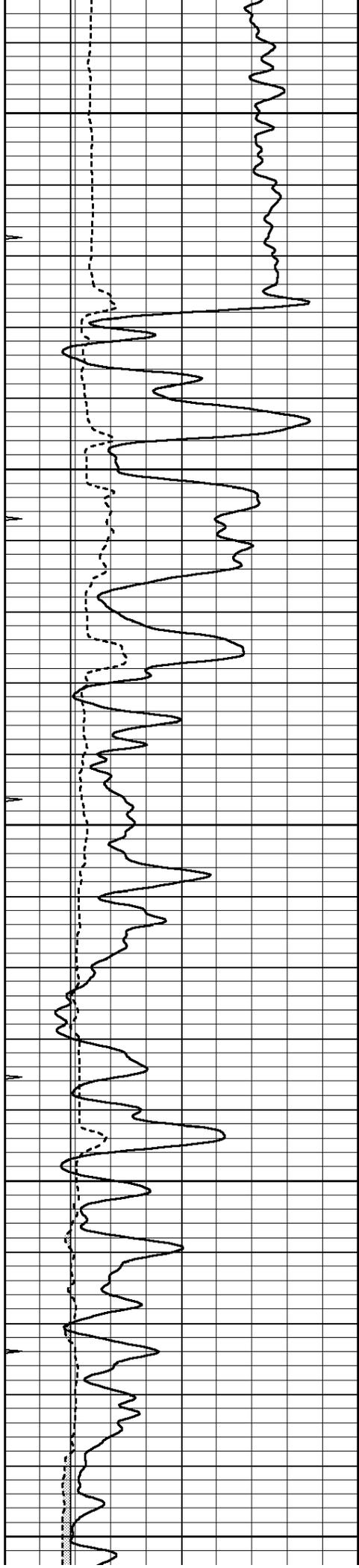
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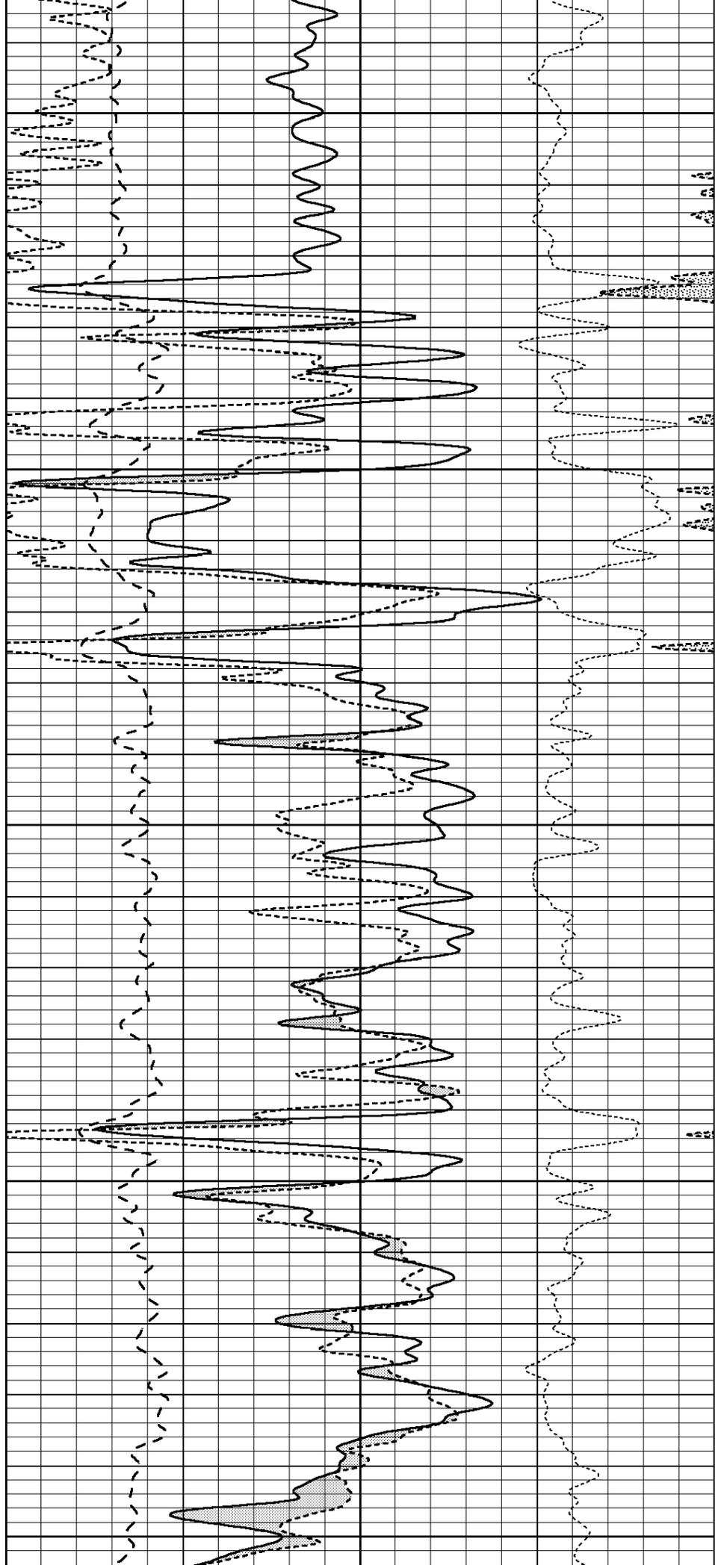
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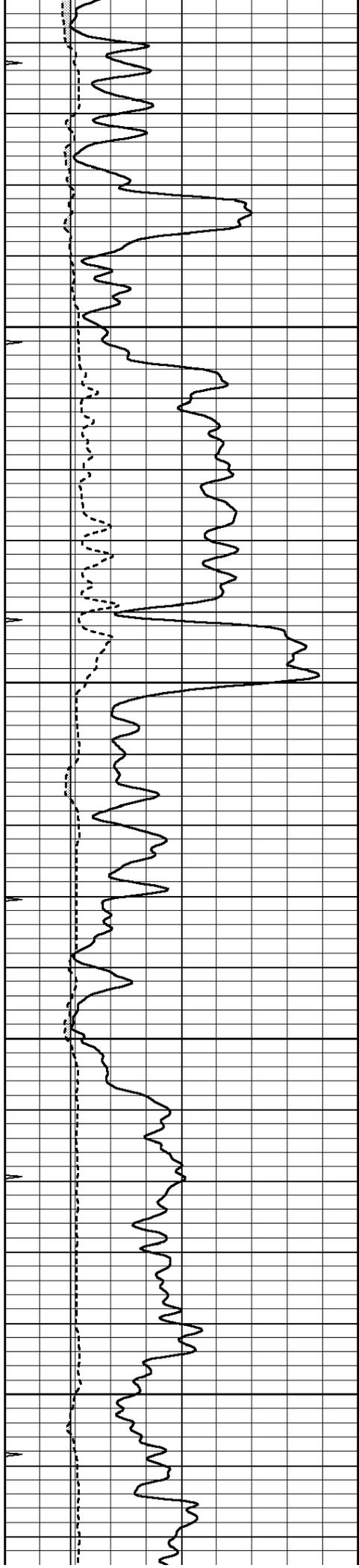
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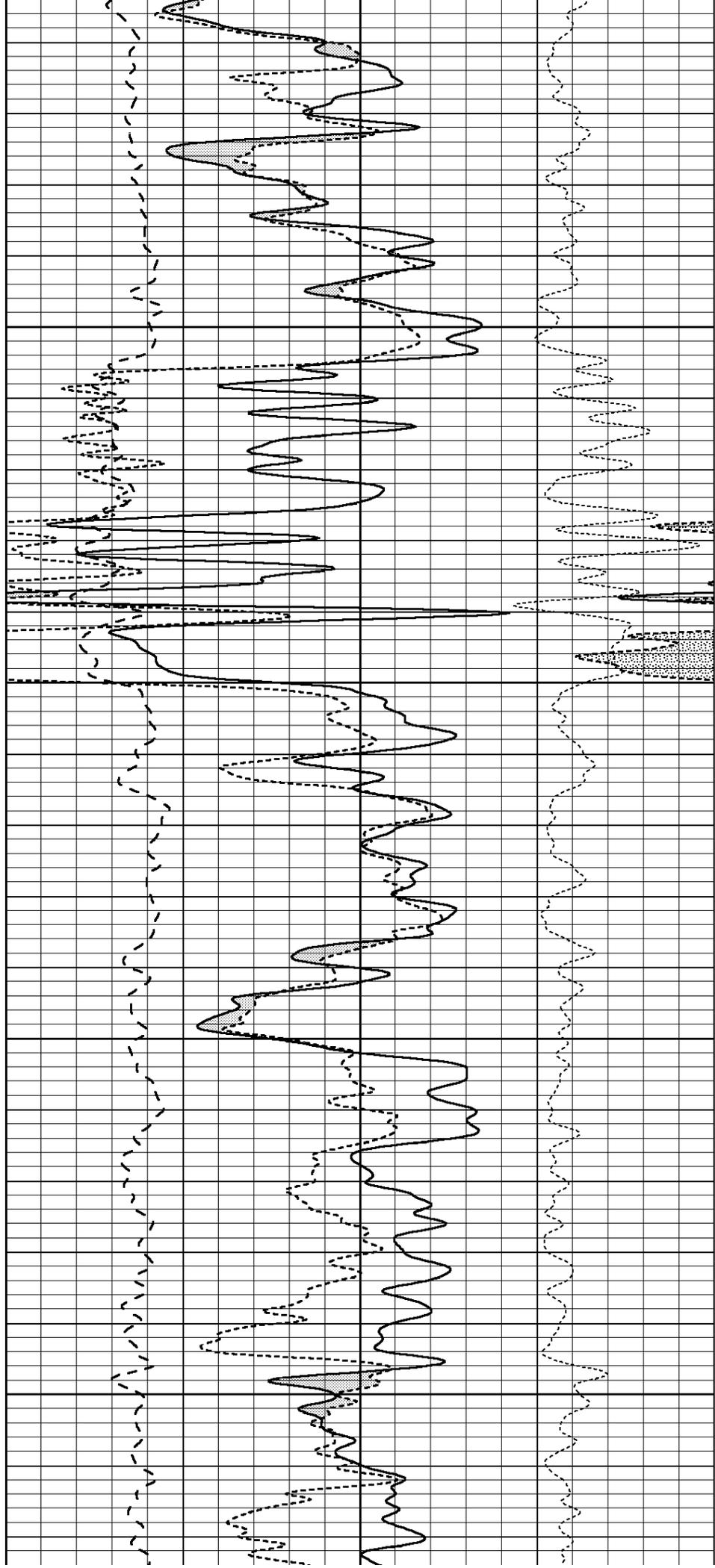


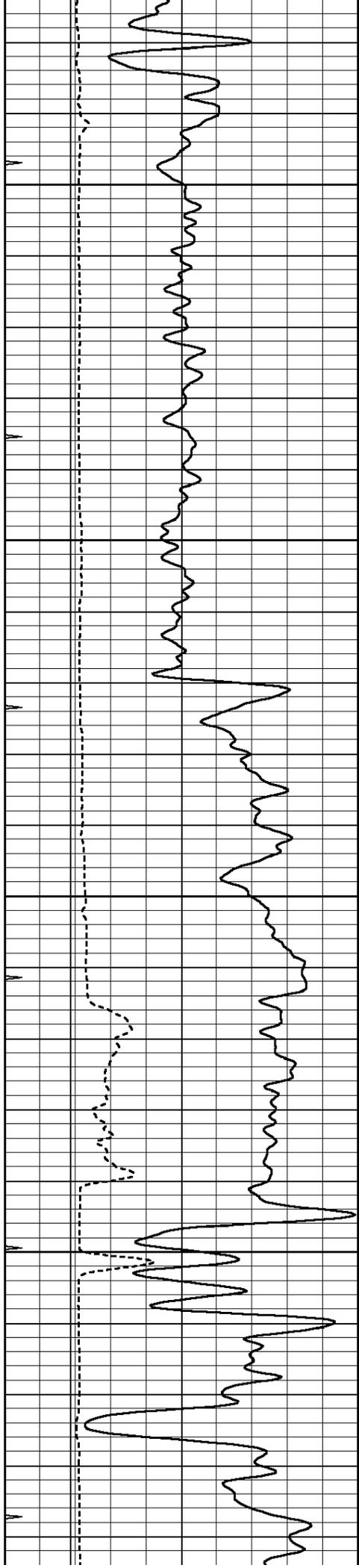
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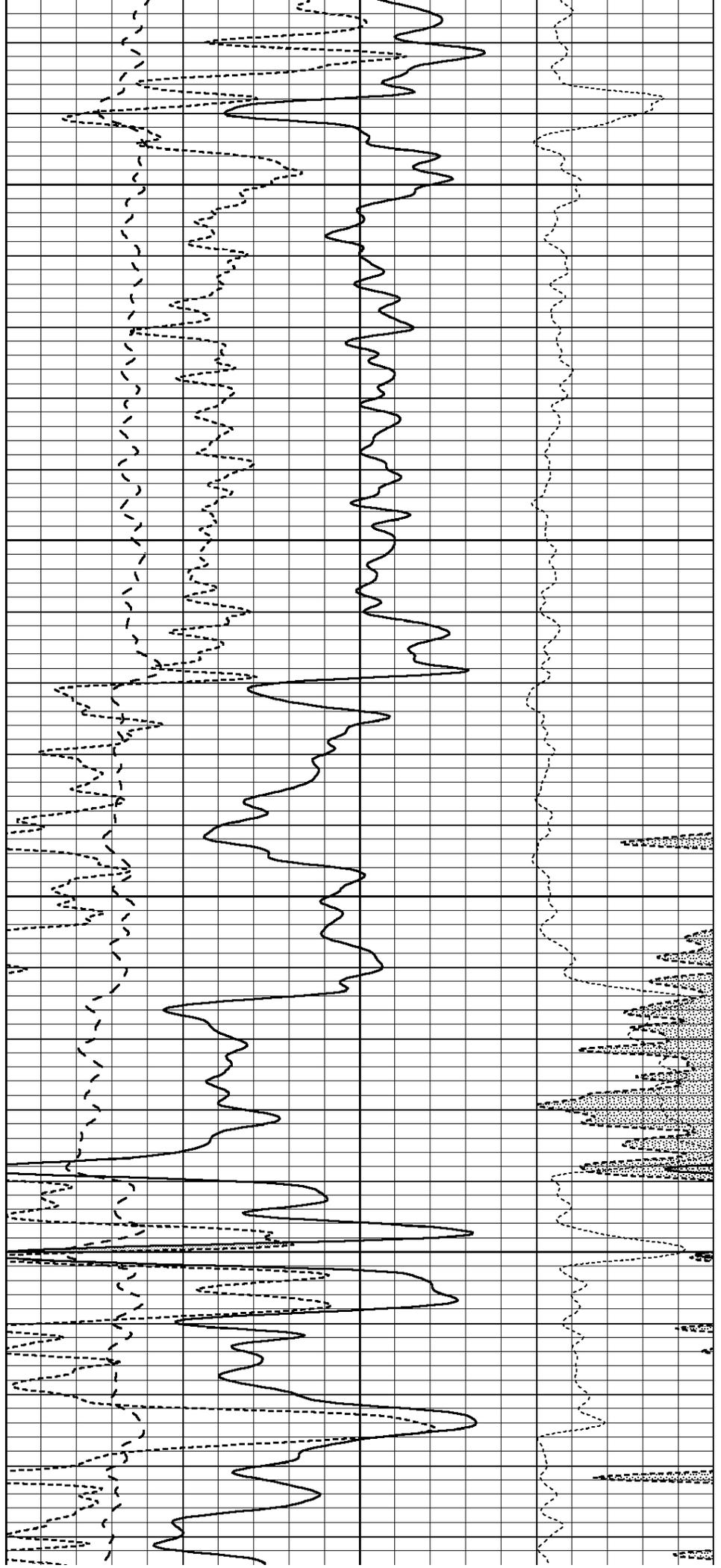


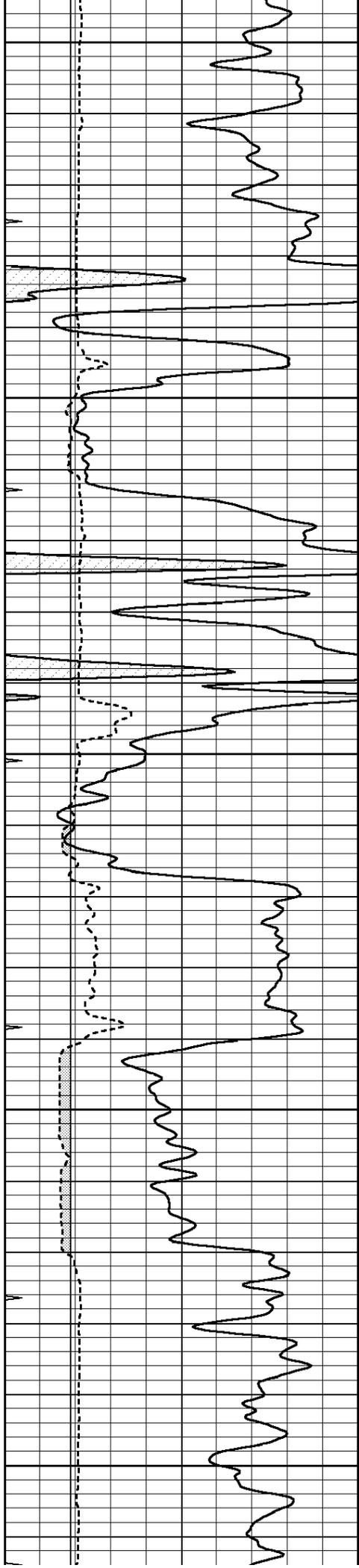
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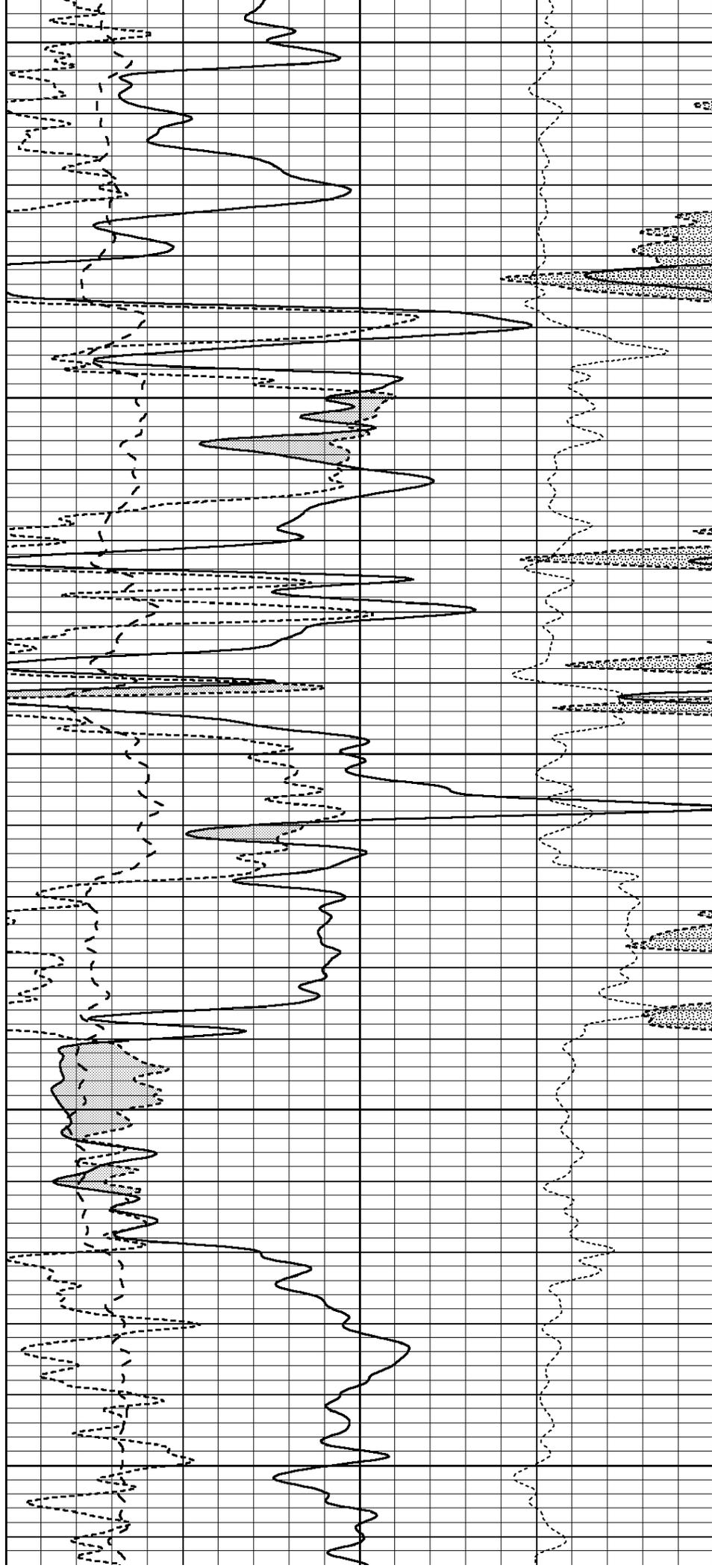
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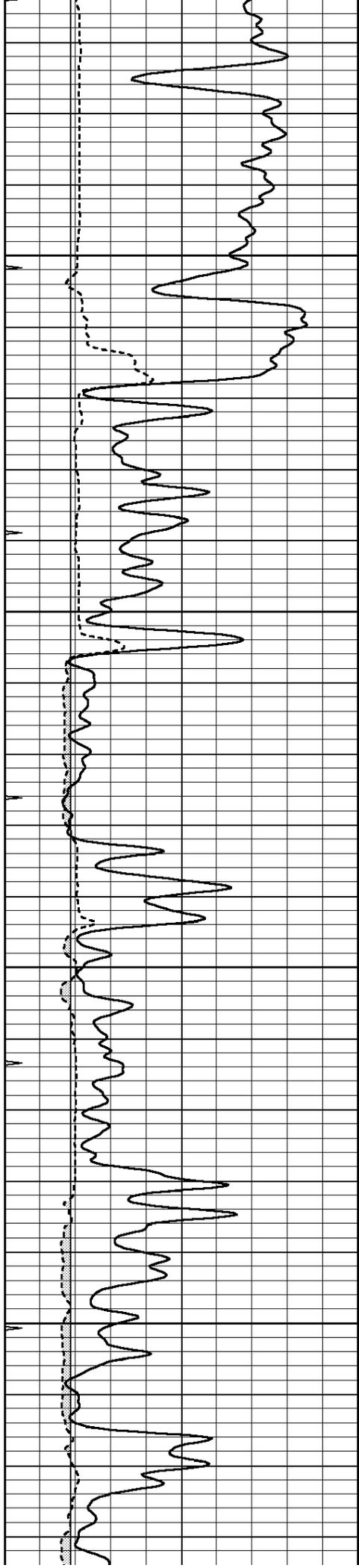
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3850

3900



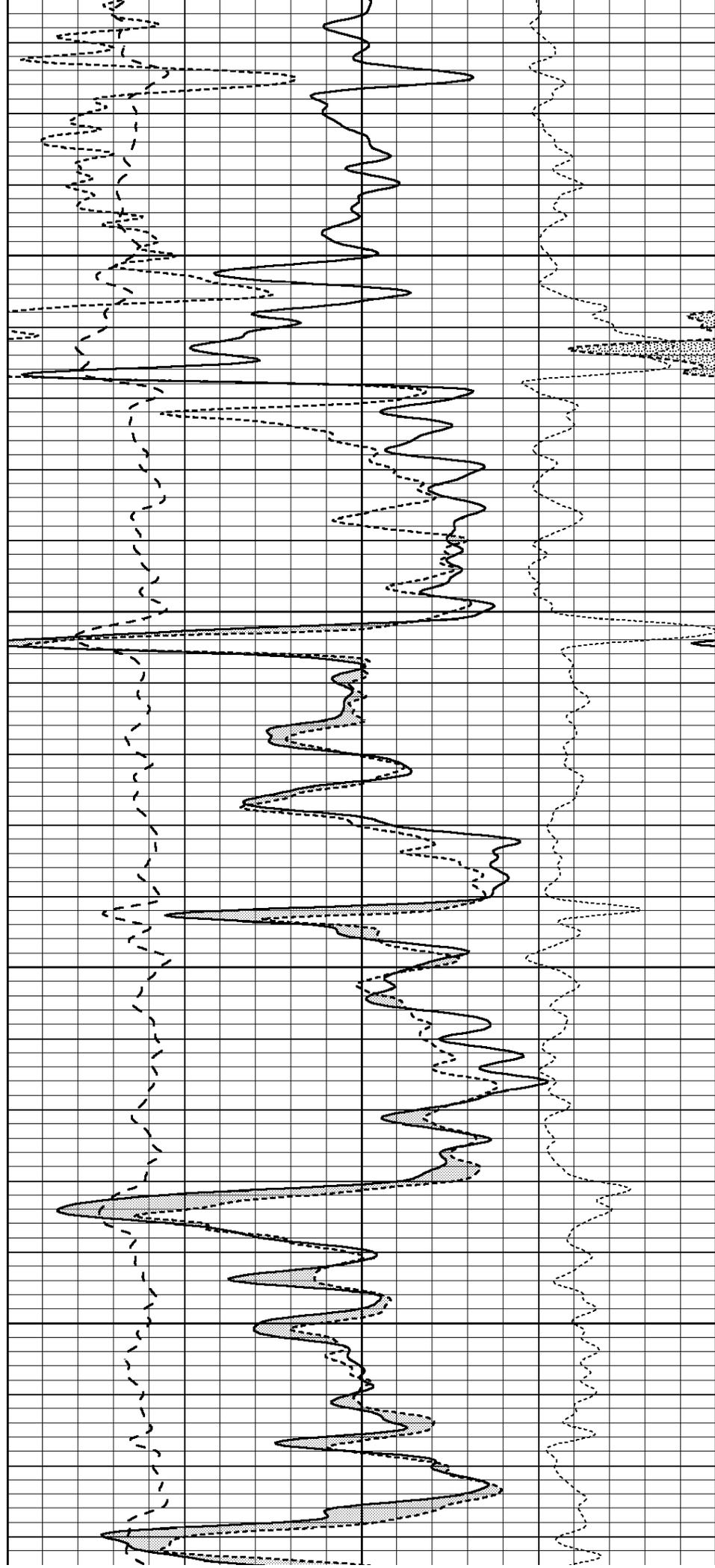


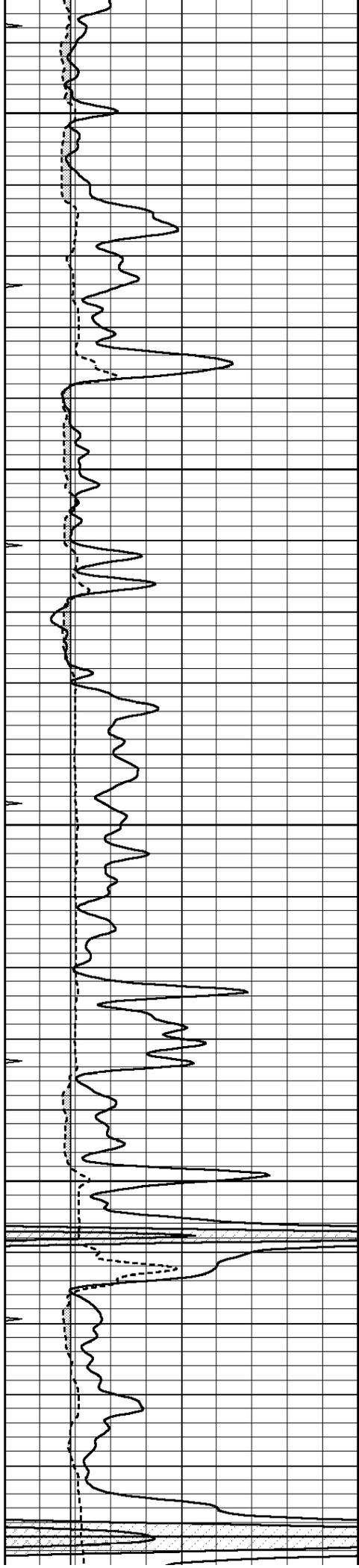
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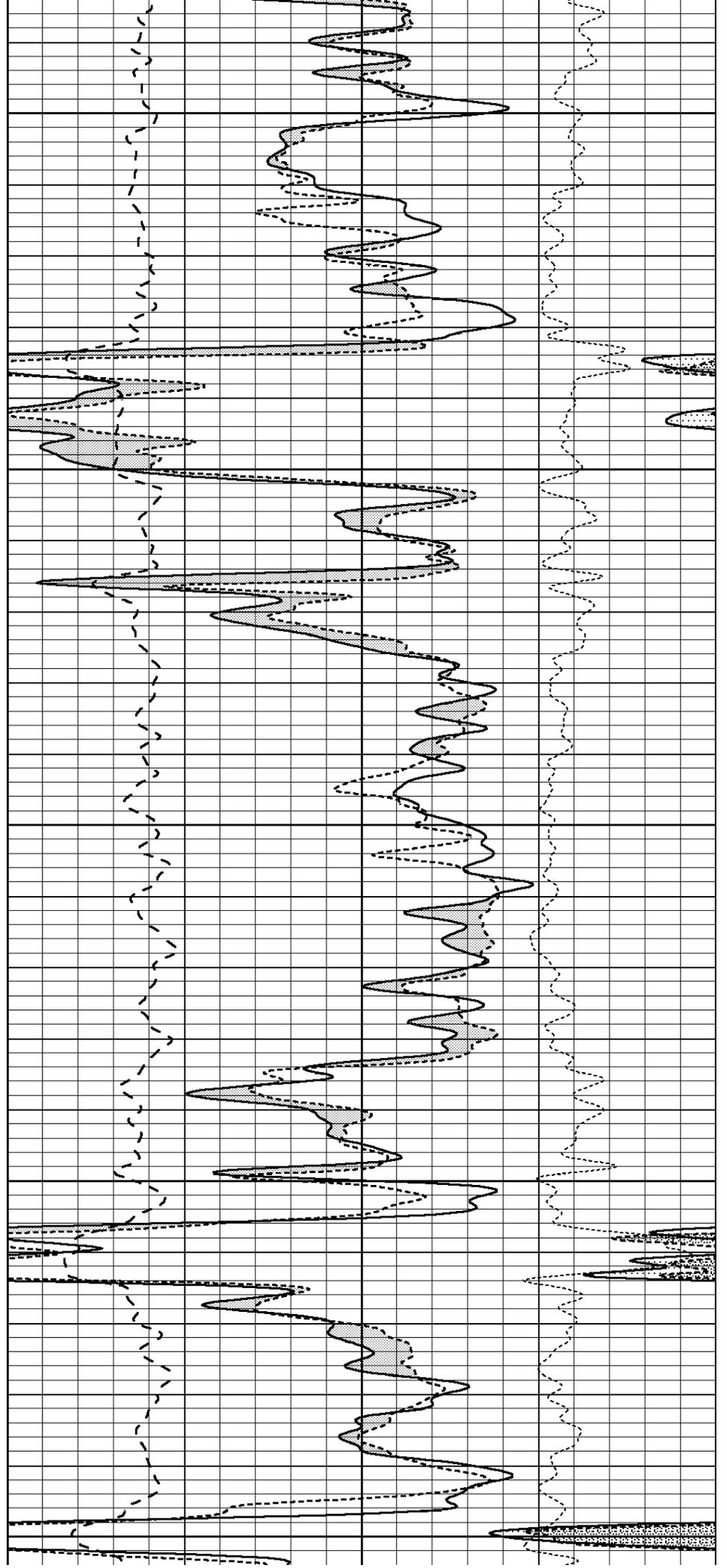
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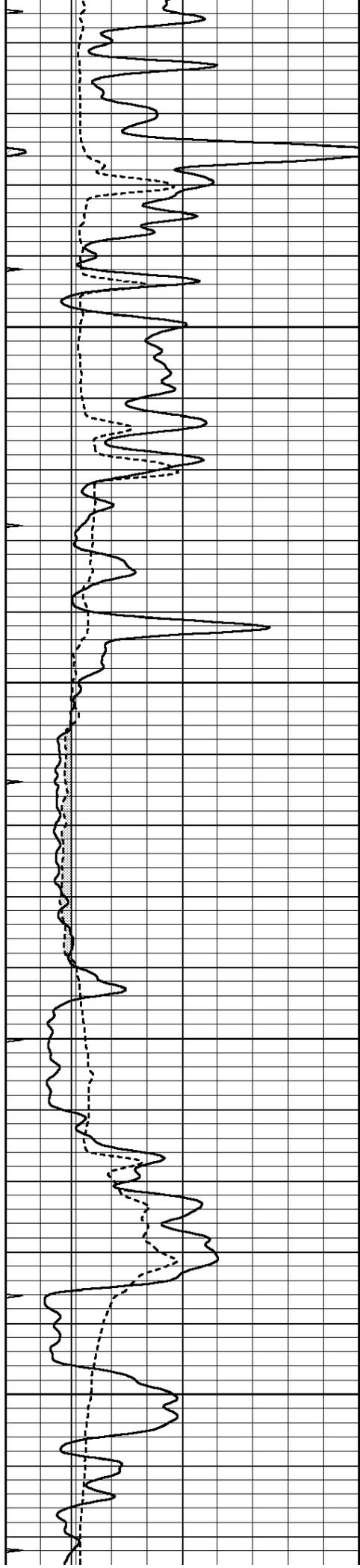
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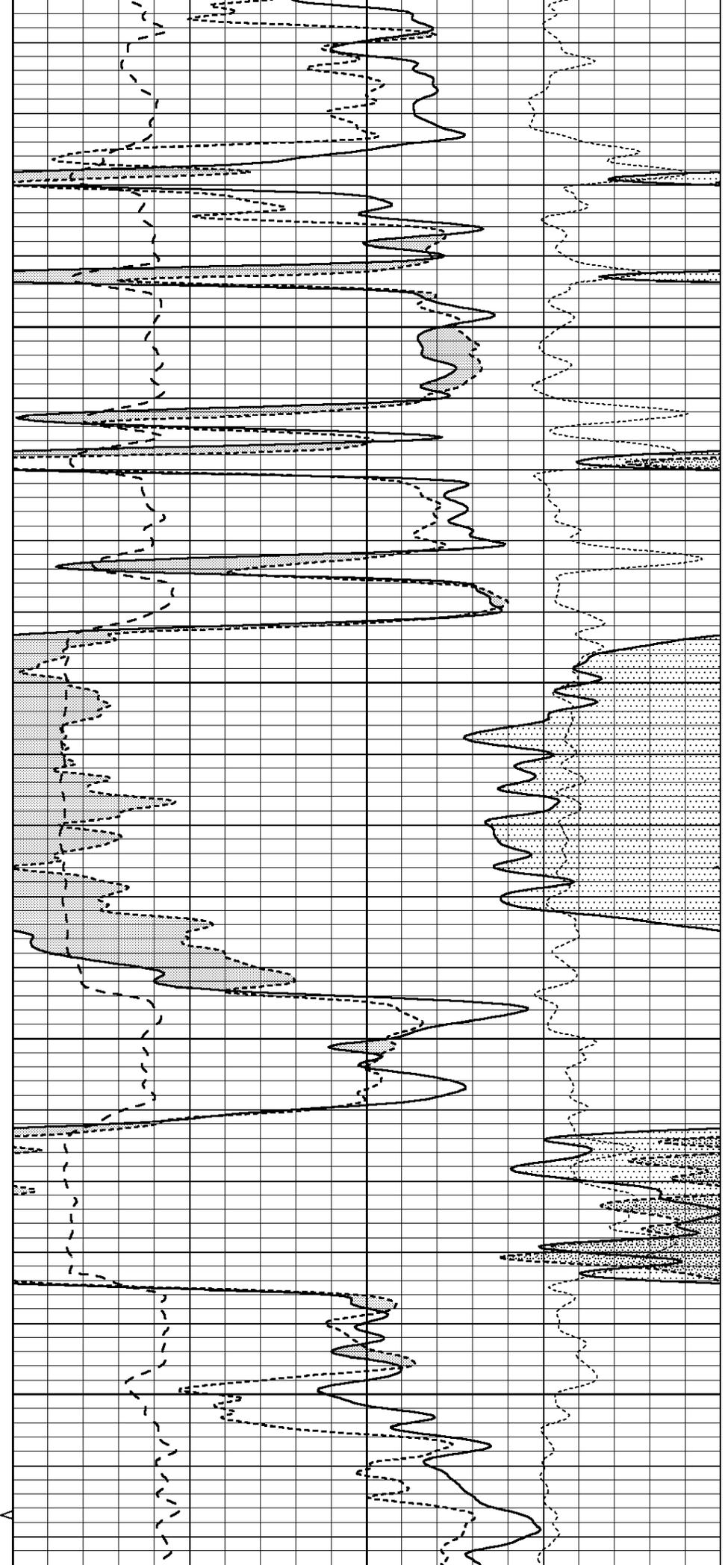


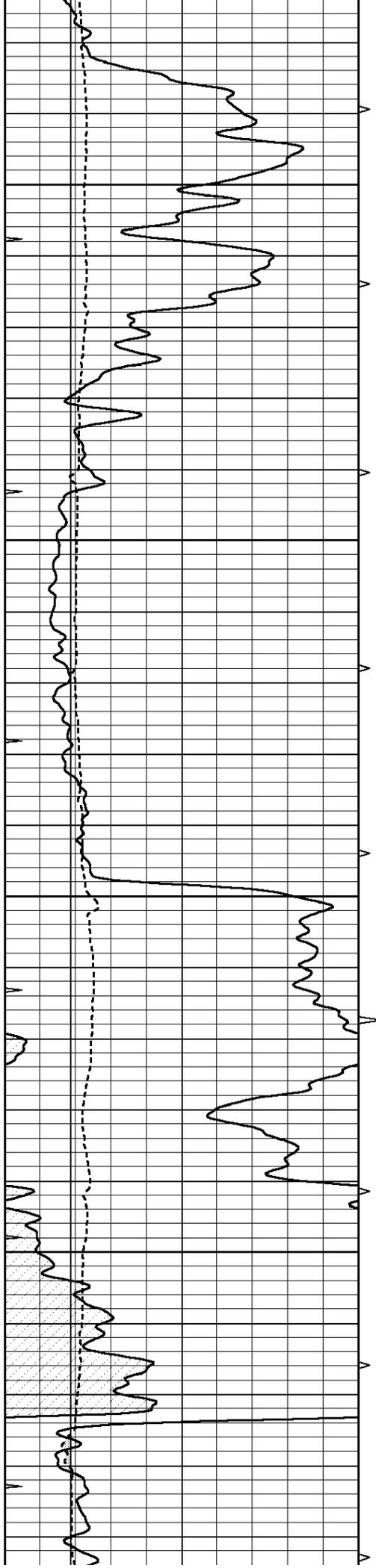
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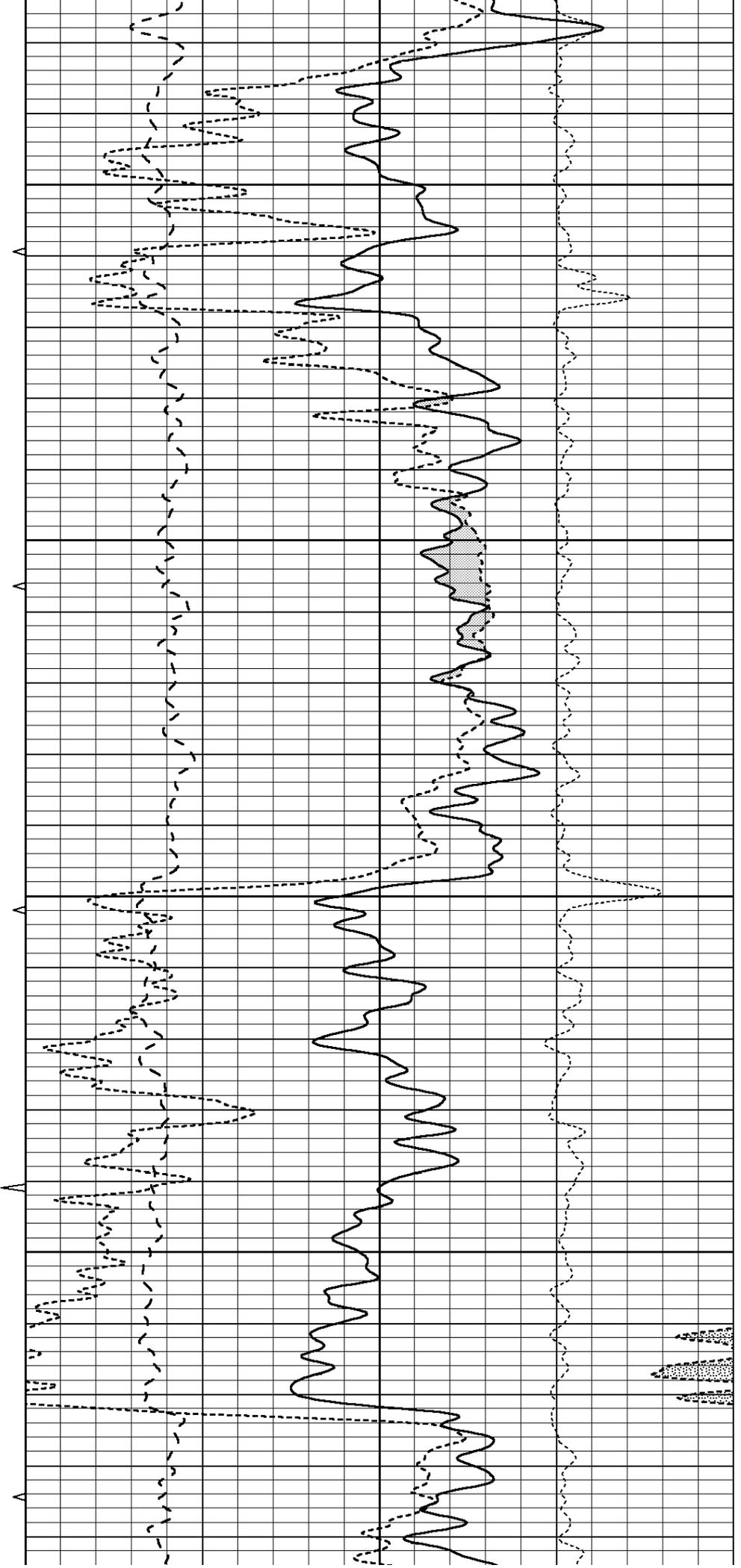


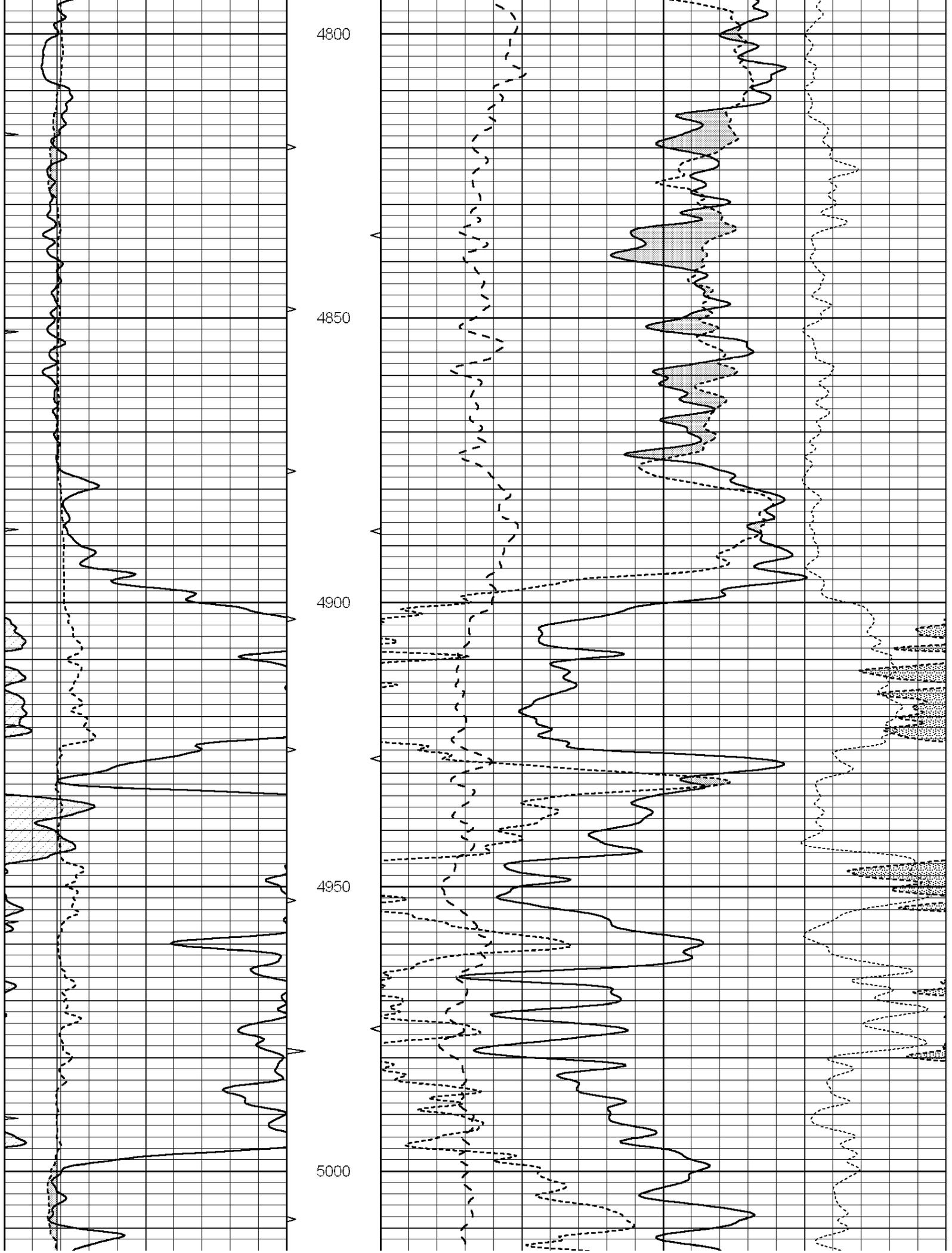
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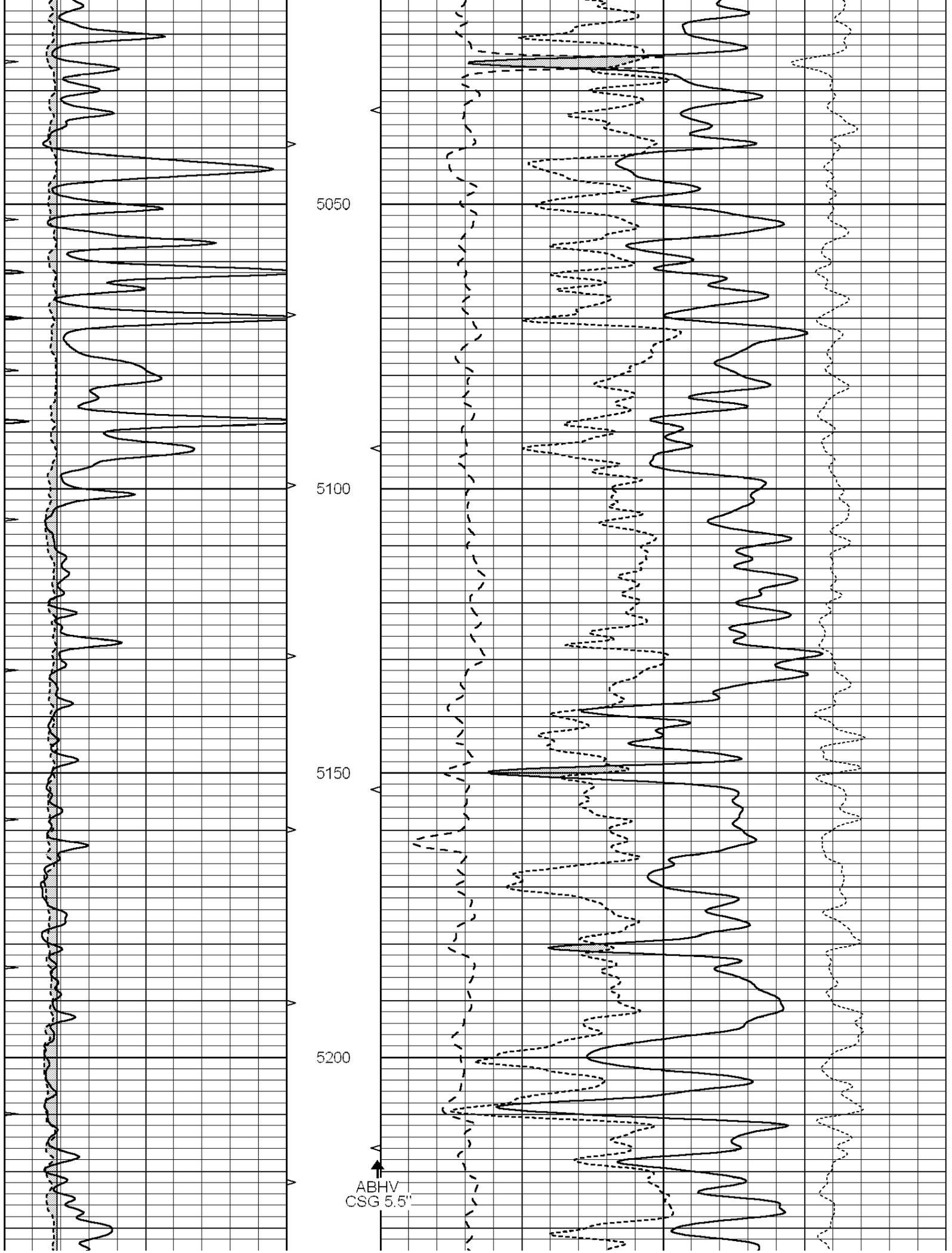
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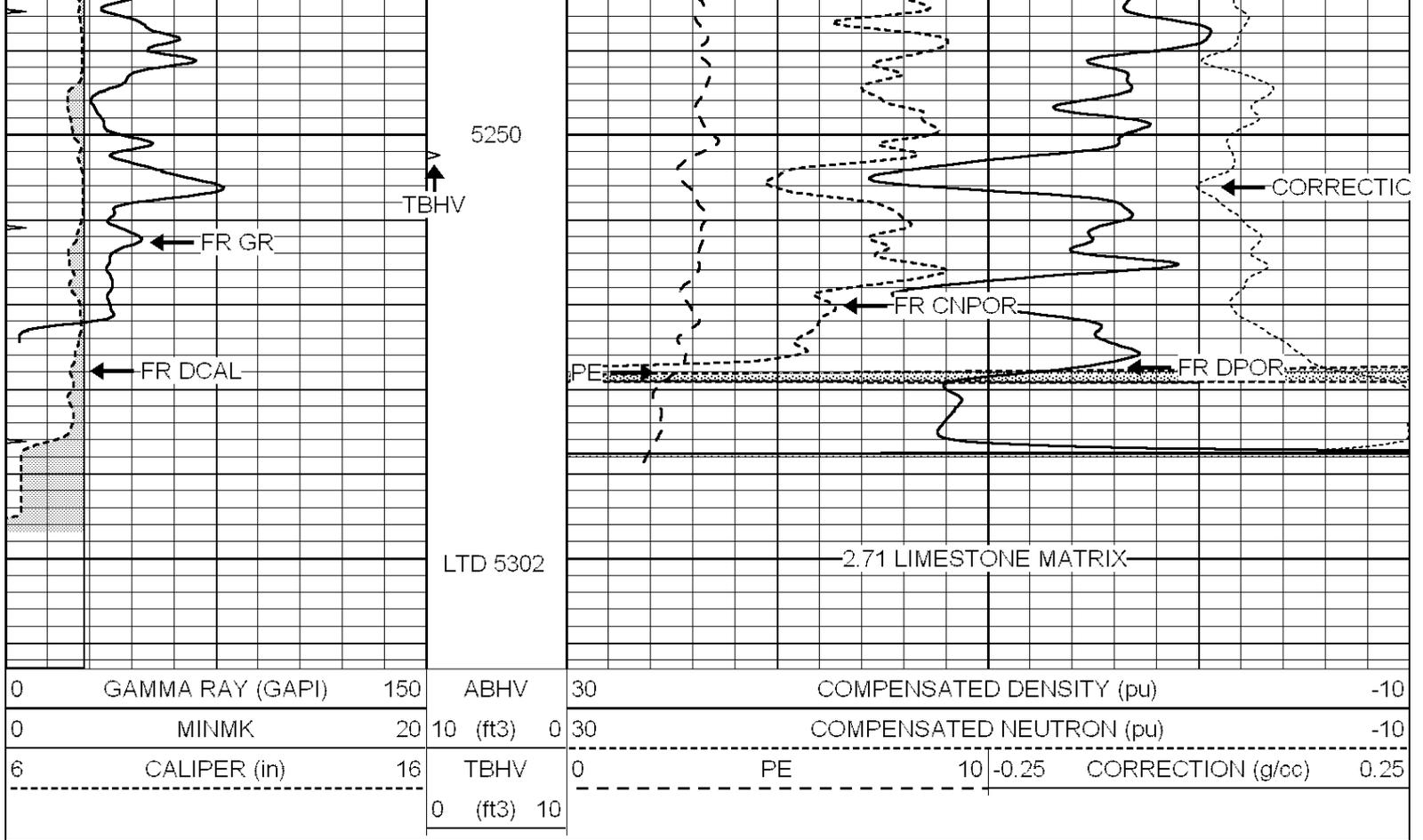
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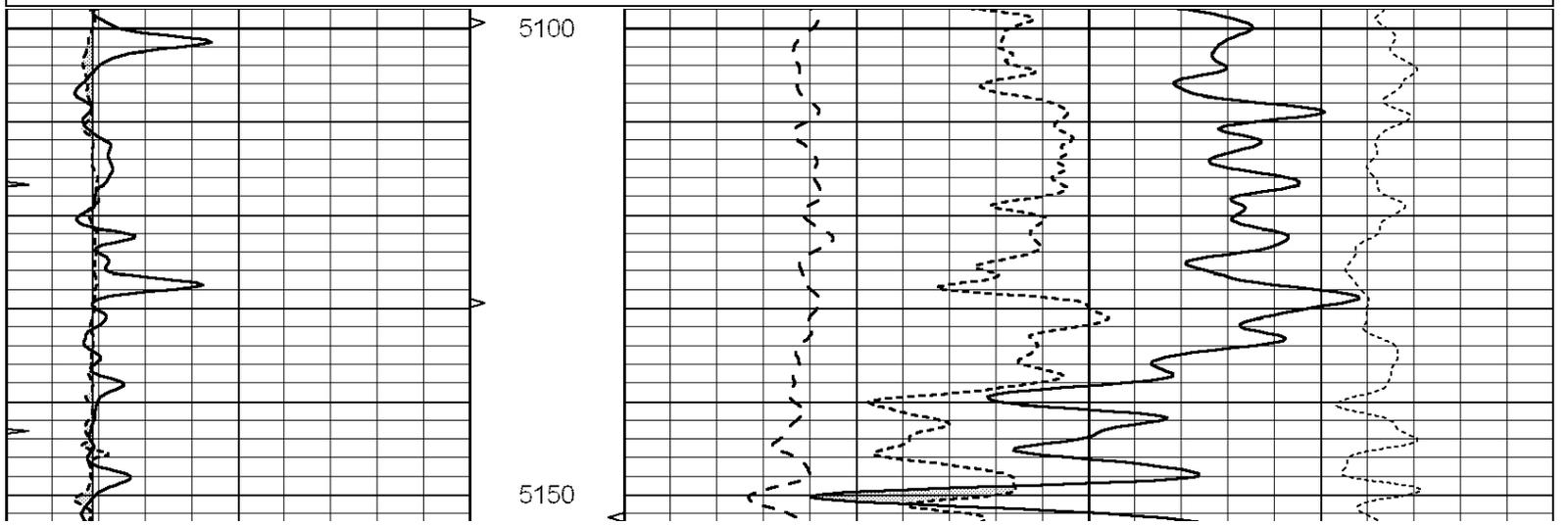


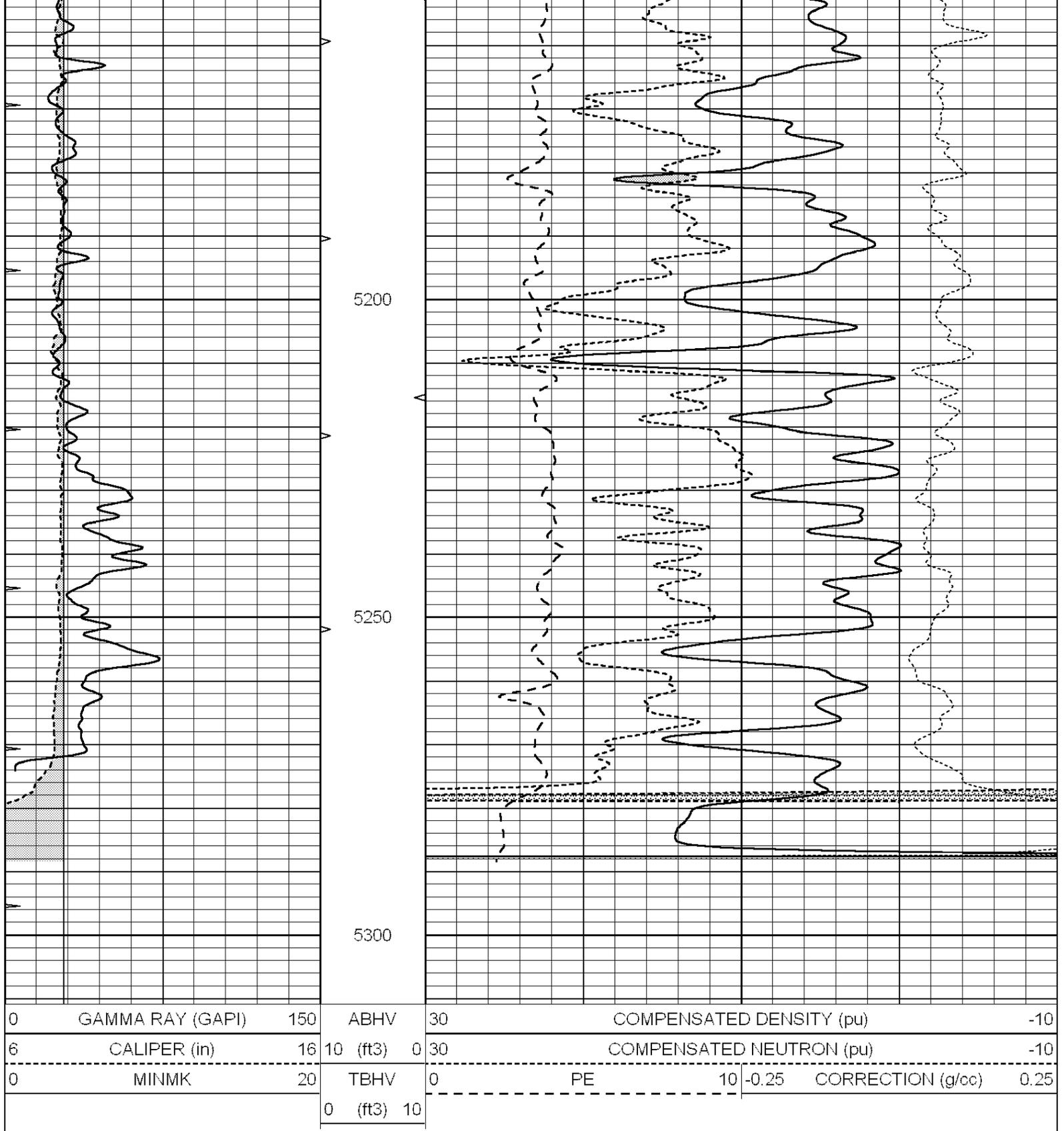


REPEAT SECTION

Database File: 26347pe.db
 Dataset Pathname: pass2.1
 Presentation Format: _ldt_neu
 Dataset Creation: Sun Feb 08 10:14:48 2015 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		





Calibration Report

Database File: 26347pe.db
 Dataset Pathname: pass3.8
 Dataset Creation: Sun Feb 08 14:47:49 2015

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Fri Feb 06 00:27:40 2015
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration								
Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-14.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-24.000
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: 003N Model: PRB

Master Calibration				Performed Tue Sep 08 14:14:44 2009			
	Background	Magnesium		Aluminum	Sandstone		
Window 1	2042.6	12312.8		4225.8	13758.4		cps
Window 2	1855.8	10134.7		3624.2	11113.1		cps
Window 3	1639.4	6760.2		2716.3	7260.3		cps
Window 4	466.4	469.2		466.1	476.5		cps
Long Space	0.0	8278.9		1768.4	9257.4		cps
Short Space	2.2	2377.3		1544.1	2574.2		cps
Rho		1.7100		2.5900	1.3800		g/cc
Pe		0.0000		2.5700	1.5500		
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio		: 0.549	
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept		: -18.8	

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

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: 070558
Tool Model: OPEN_GR
Performed: Fri Jan 30 18:19:46 2015

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps