

COMPENSATED DENSITY / NEUTRON LOG

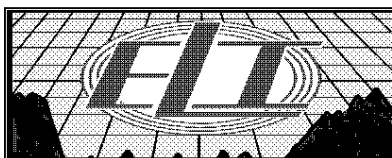
Company	BEAR PETROLEUM, LLC.		
Well	RYAN #1		
Field	WILDCAT		
County	PAWNEE	State	KANSAS
Location:	API # : 15-145-21829-0000		Other Services DIL/MEL SONIC
Permanent Datum GROUND LEVEL Elevation 2193 Log Measured From KELLY BUSHING 6' A.G.L. Drilling Measured From KELLY BUSHING			
SEC 15 TWP 22S RGE 20W			
Date	3/2/18		
Run Number	ONE		
Depth Driller	4488		
Depth Logger	4489		
Bottom Logged Interval	4465		
Top Log Interval	2200		
Casing Driller	8 5/8" @ 1277'		
Casing Logger	1274		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,500 PPM	
Density / Viscosity	8.9/60		
pH / Fluid Loss	9.0/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.750 @ 60F		
Rmf @ Meas. Temp	.563 @ 60F		
Rmc @ Meas. Temp	.900 @ 60F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.375 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	10:30 P.M.		
Maximum Recorded Temperature	120F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ROD ANDERSEN		

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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

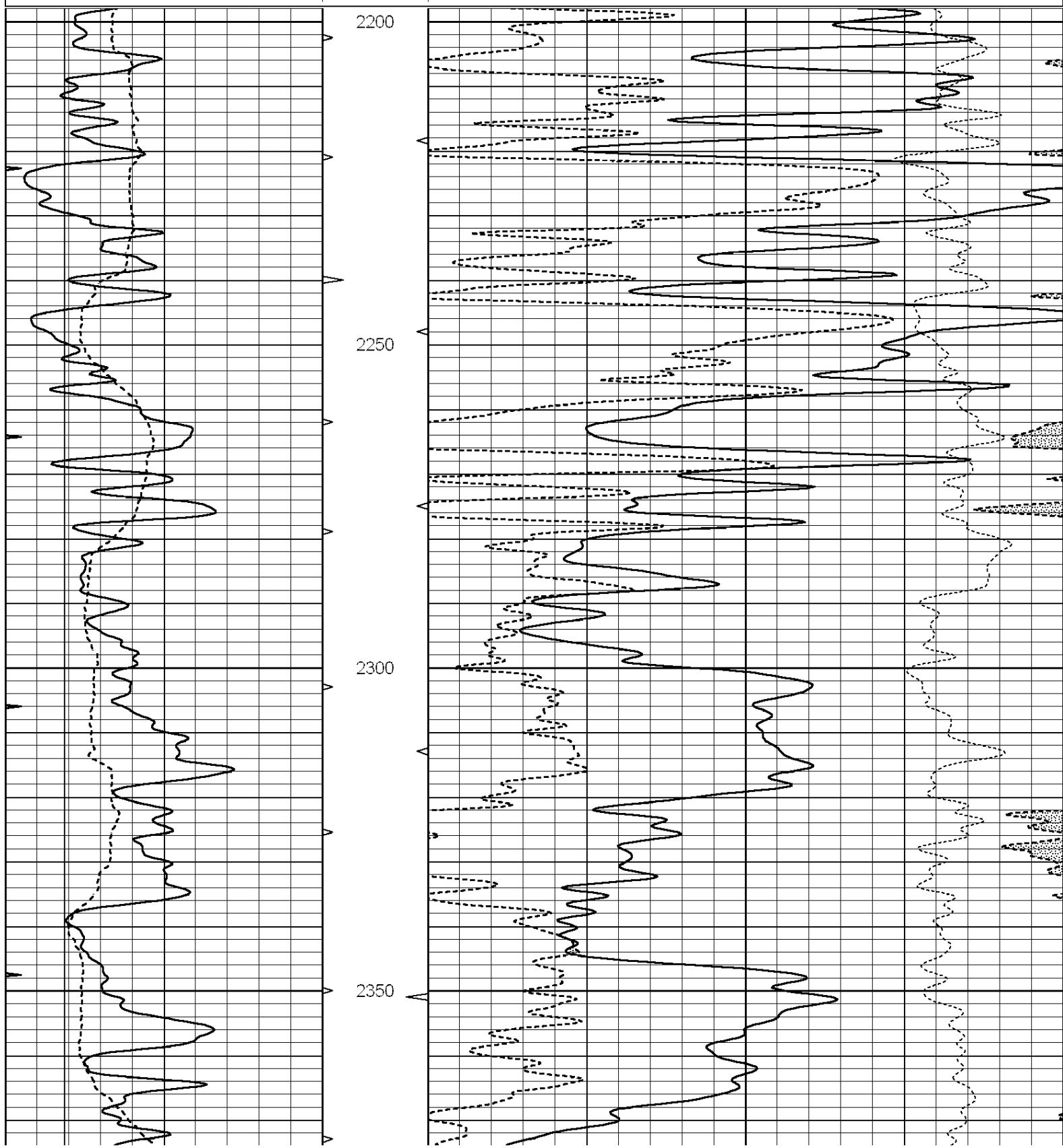
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
BURDETT, KS., 1E. ON HWY 156 TO "340TH AVE.", 3S., JOG EAST, S. INTO

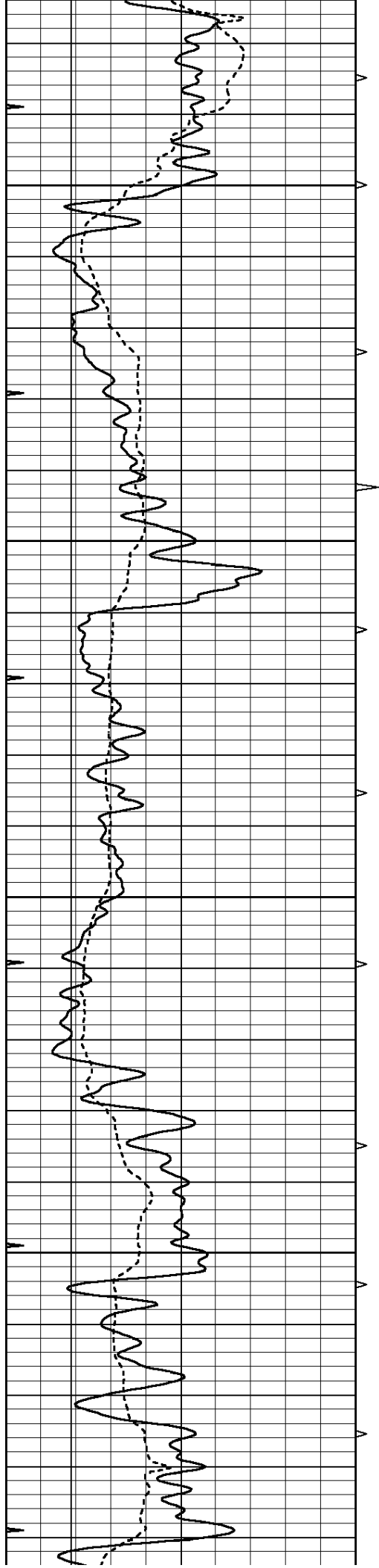


MAIN SECTION

Database File: 2344ddn.db
Dataset Pathname: pass3.10
Presentation Format: den_neu
Dataset Creation: Sat Mar 03 00:24:53 2018
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 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		



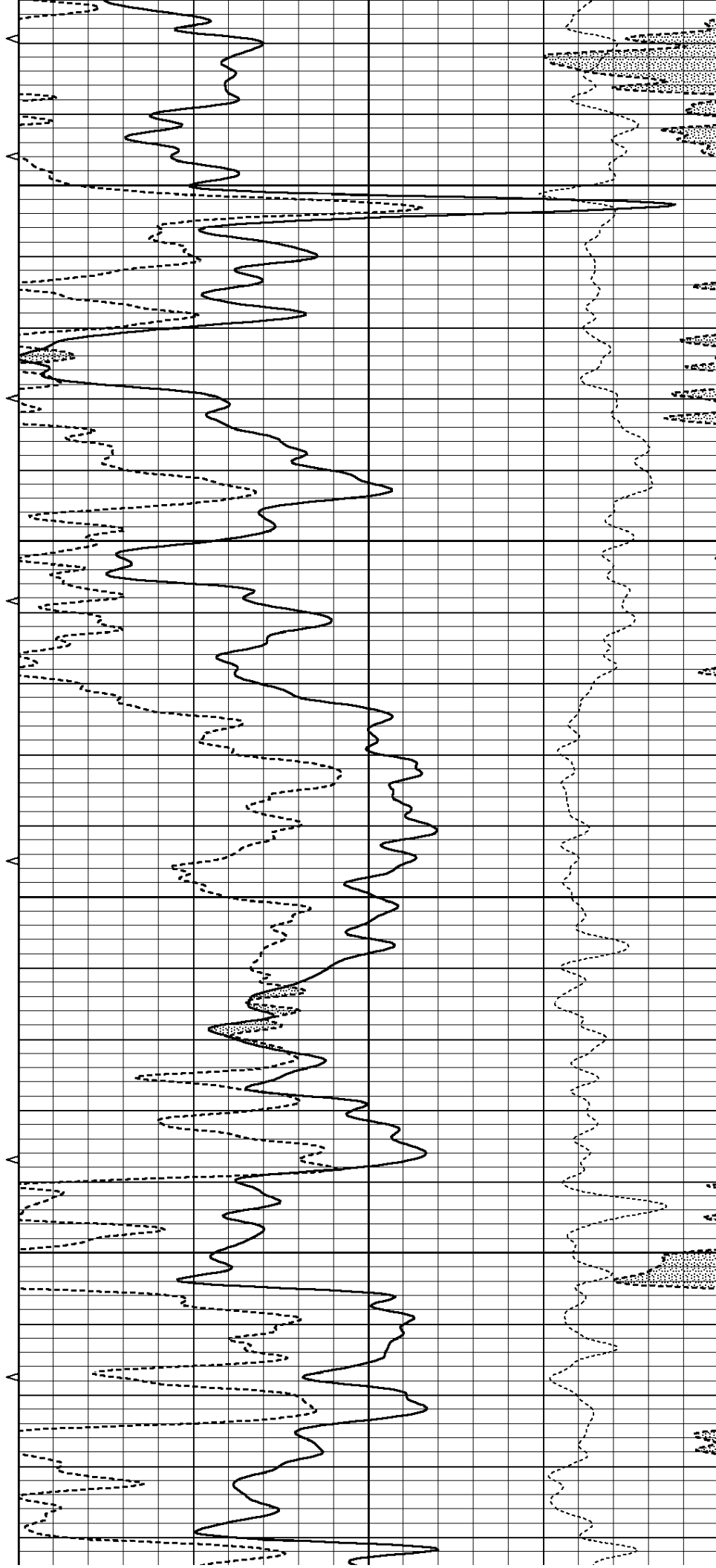


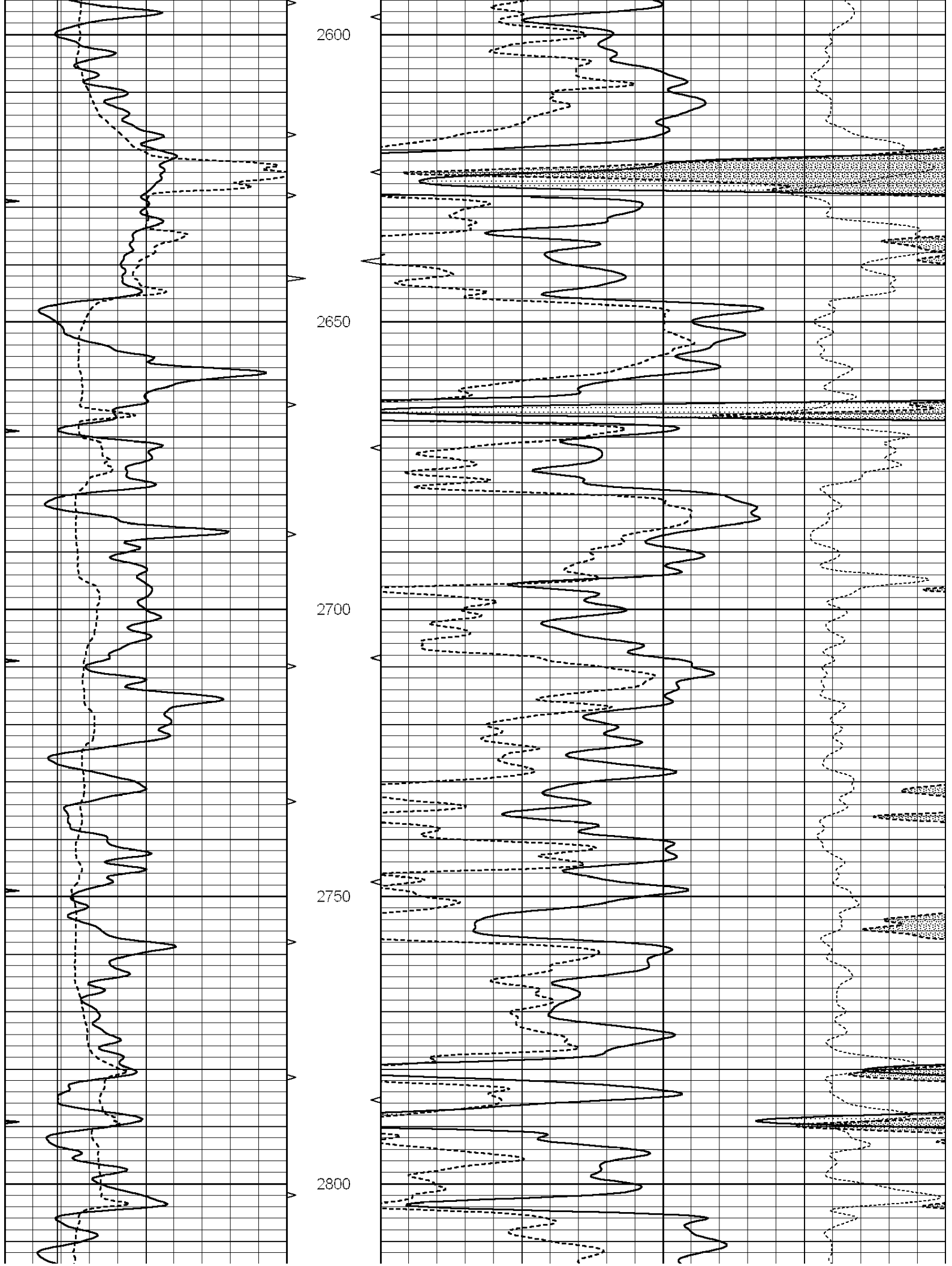
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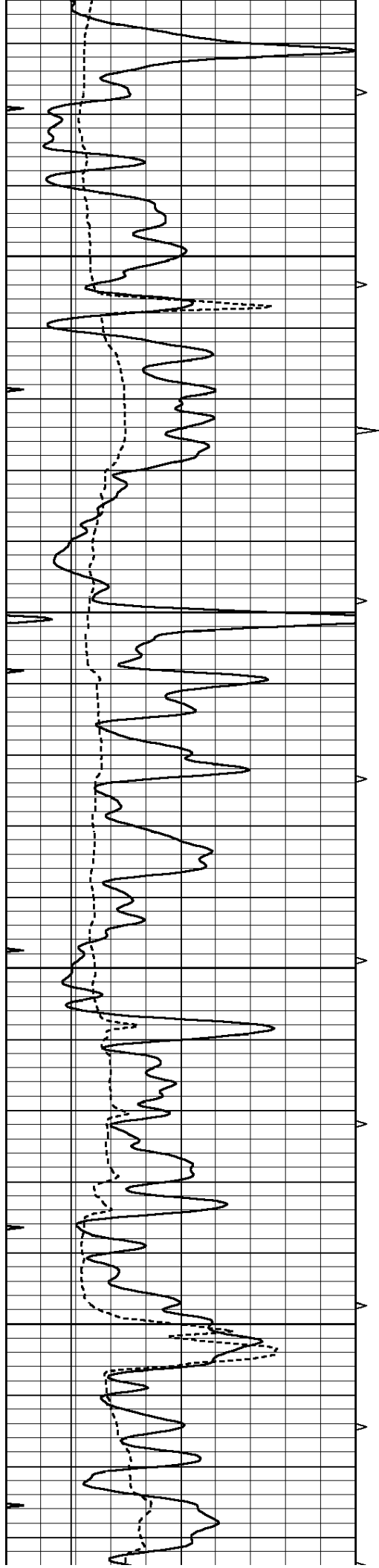
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2500

2550





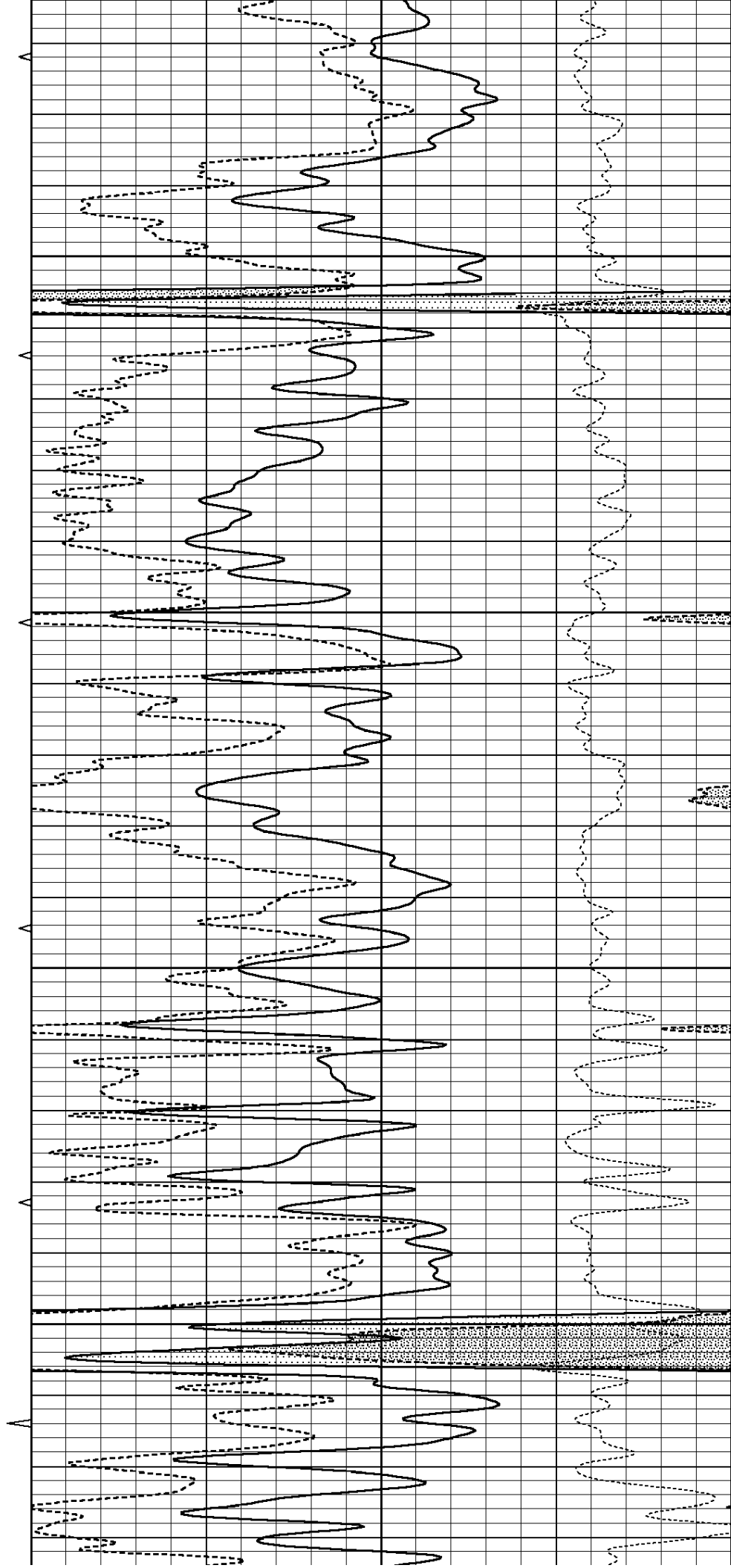


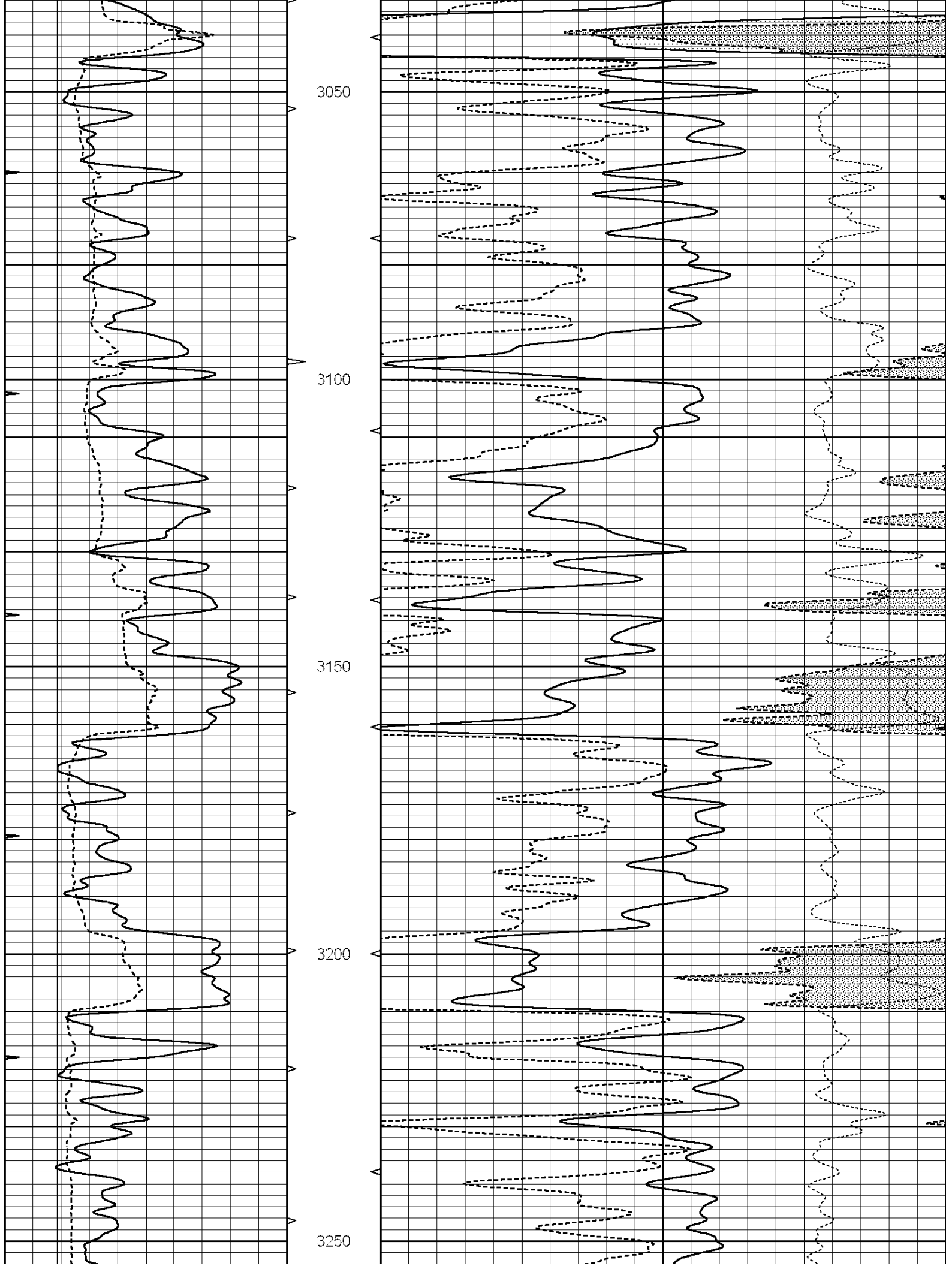
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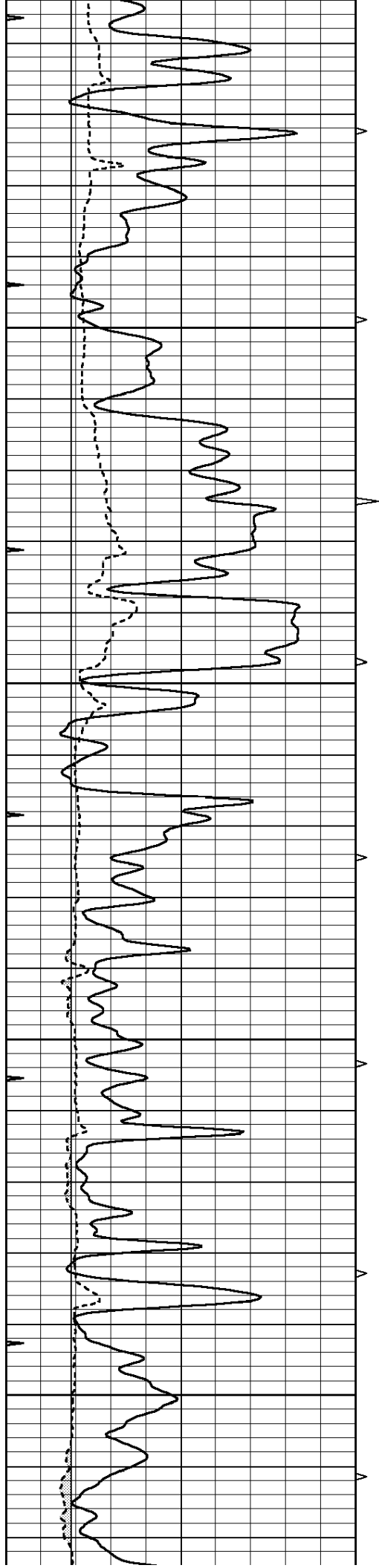
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2950

3000





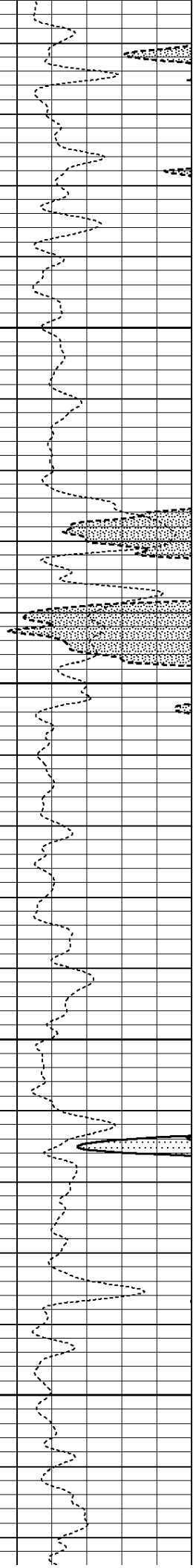
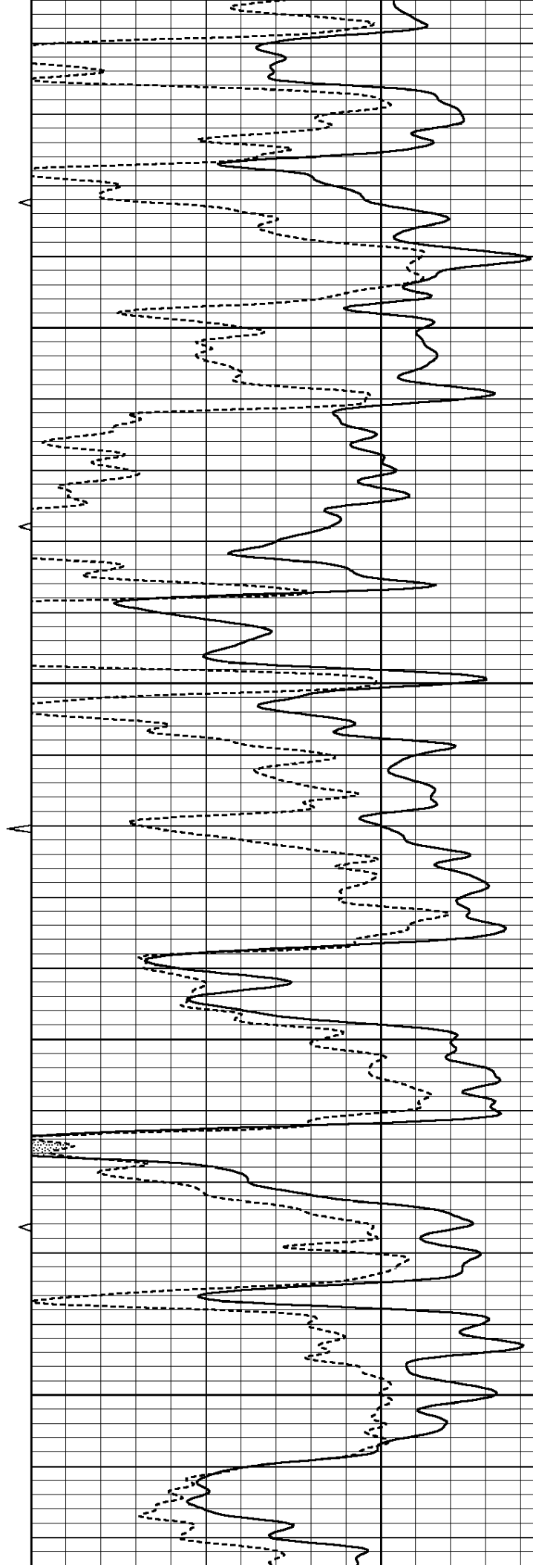


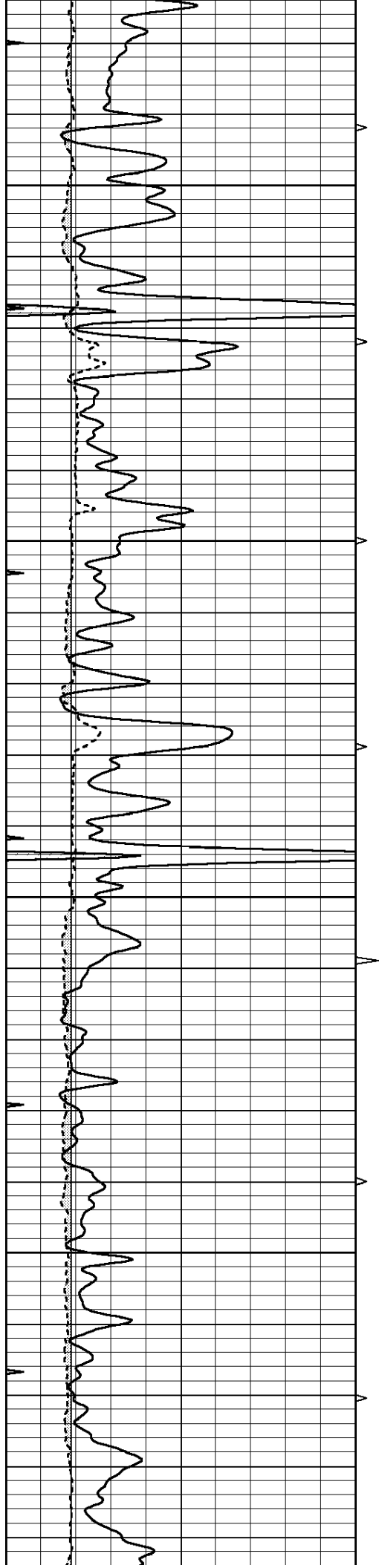
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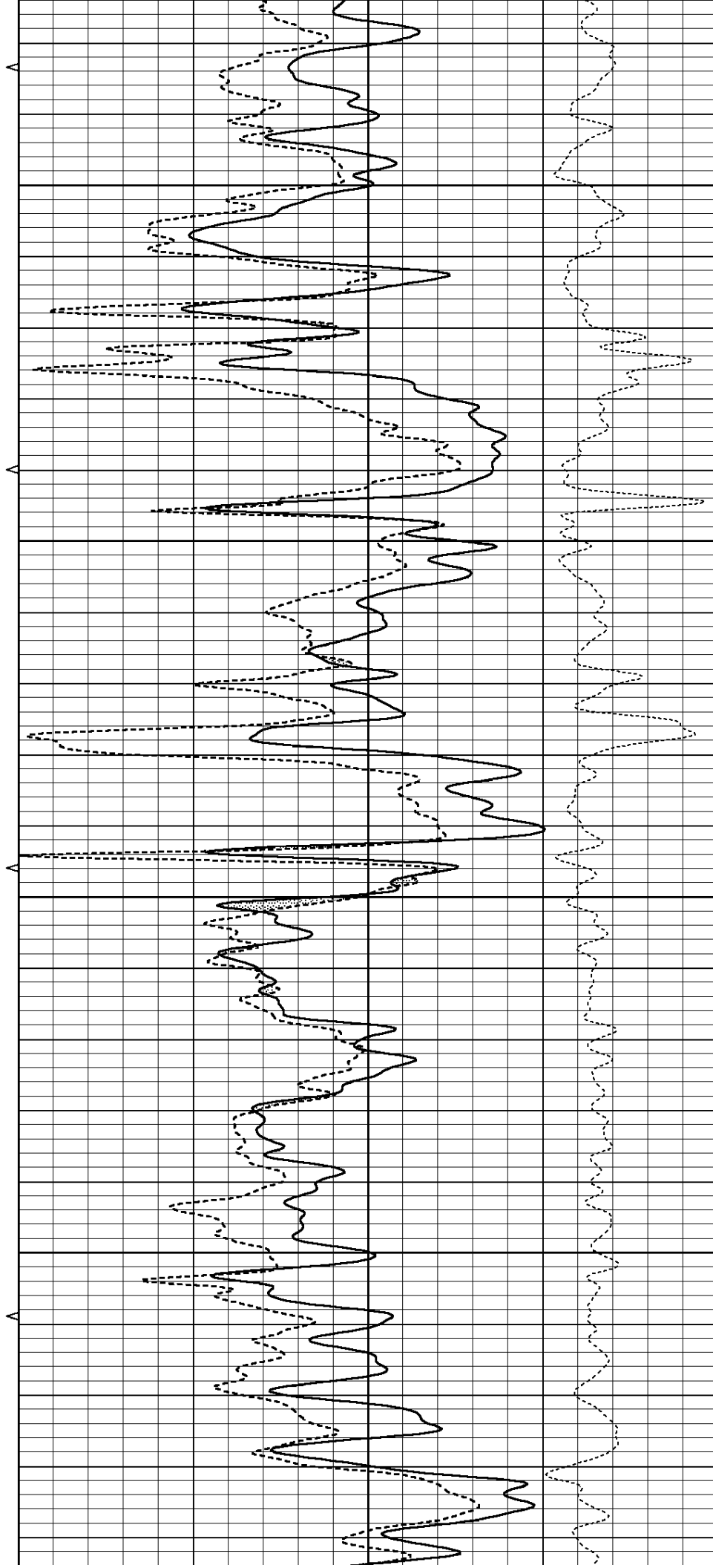


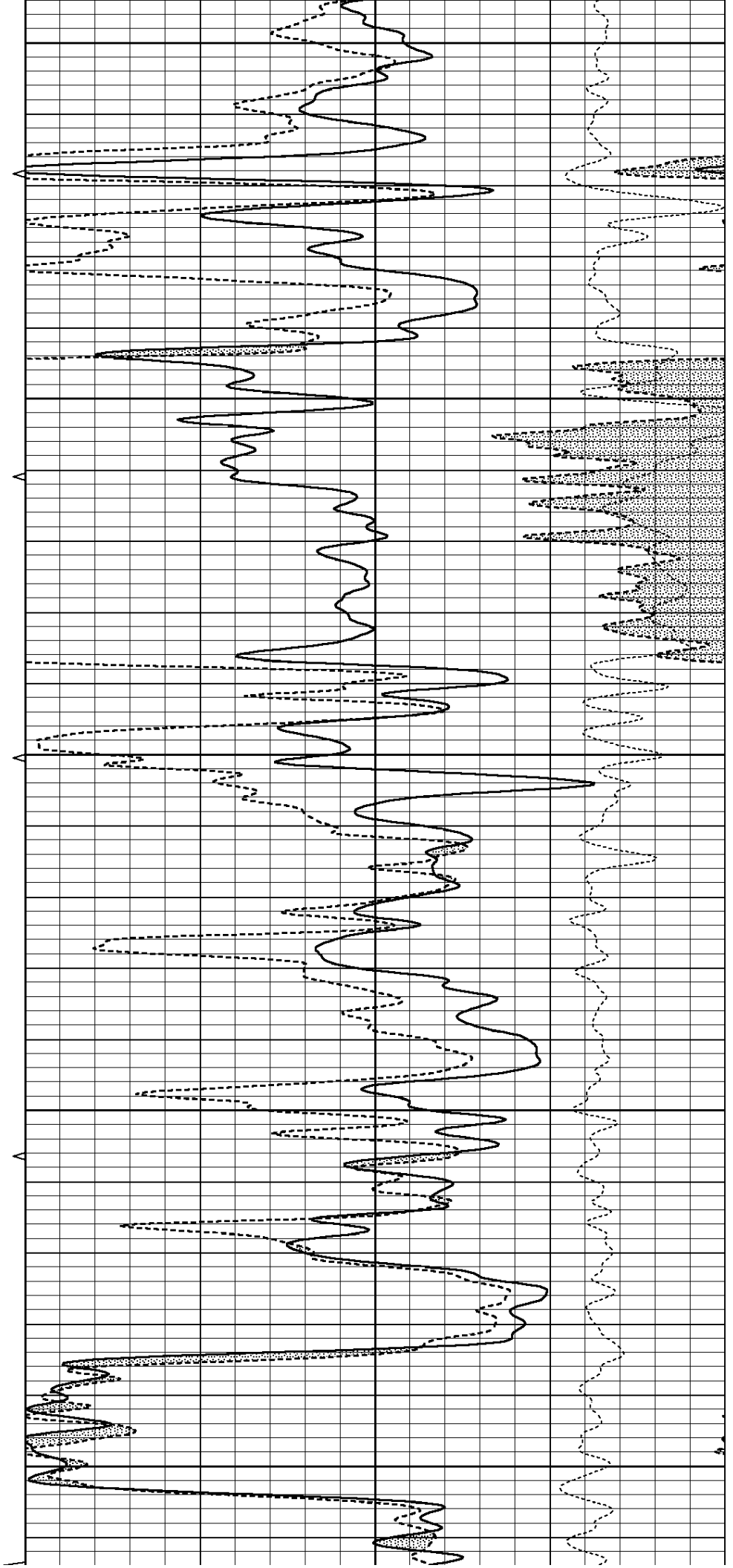
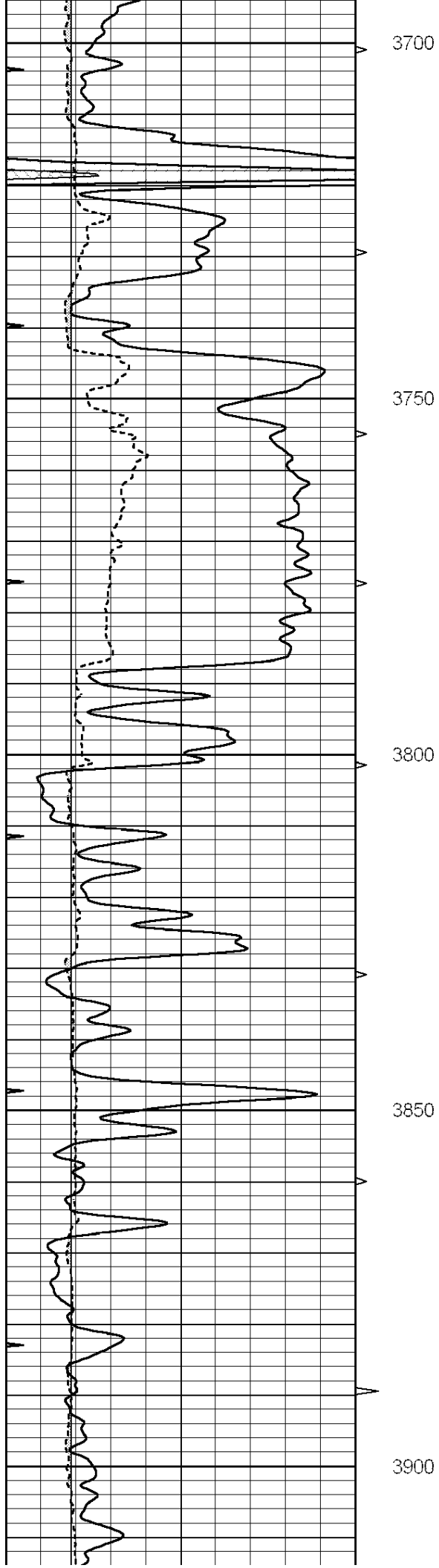
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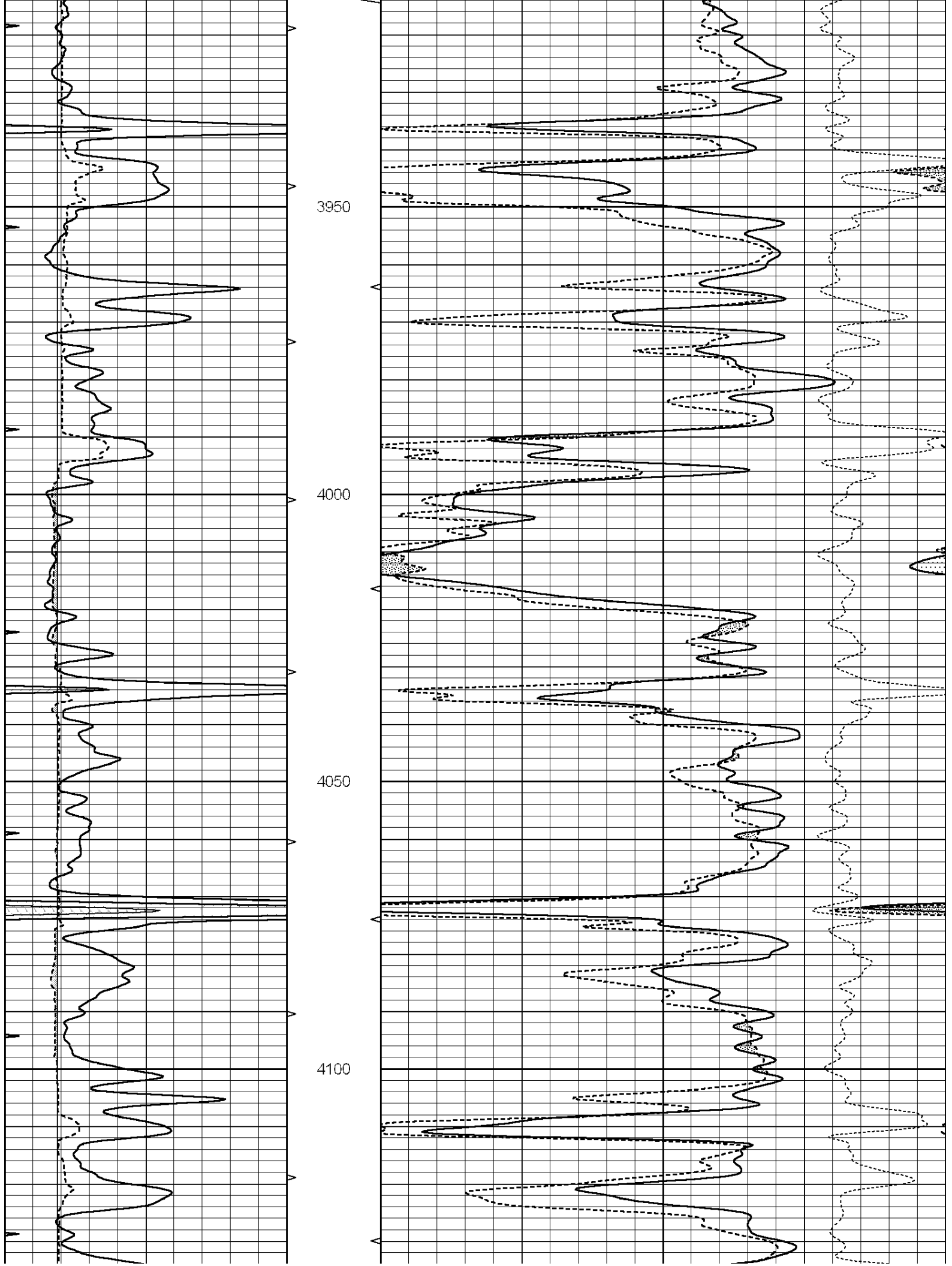
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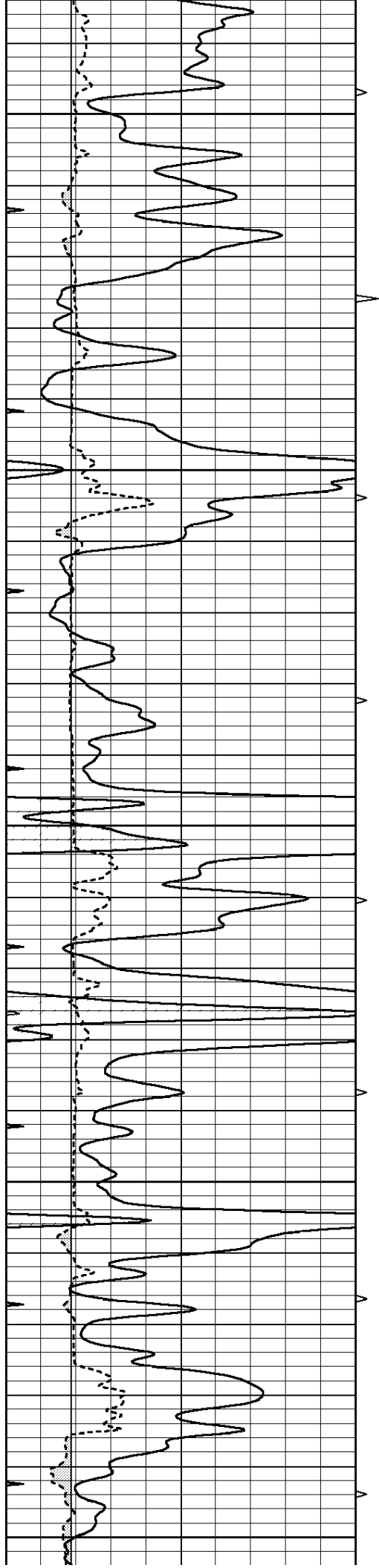
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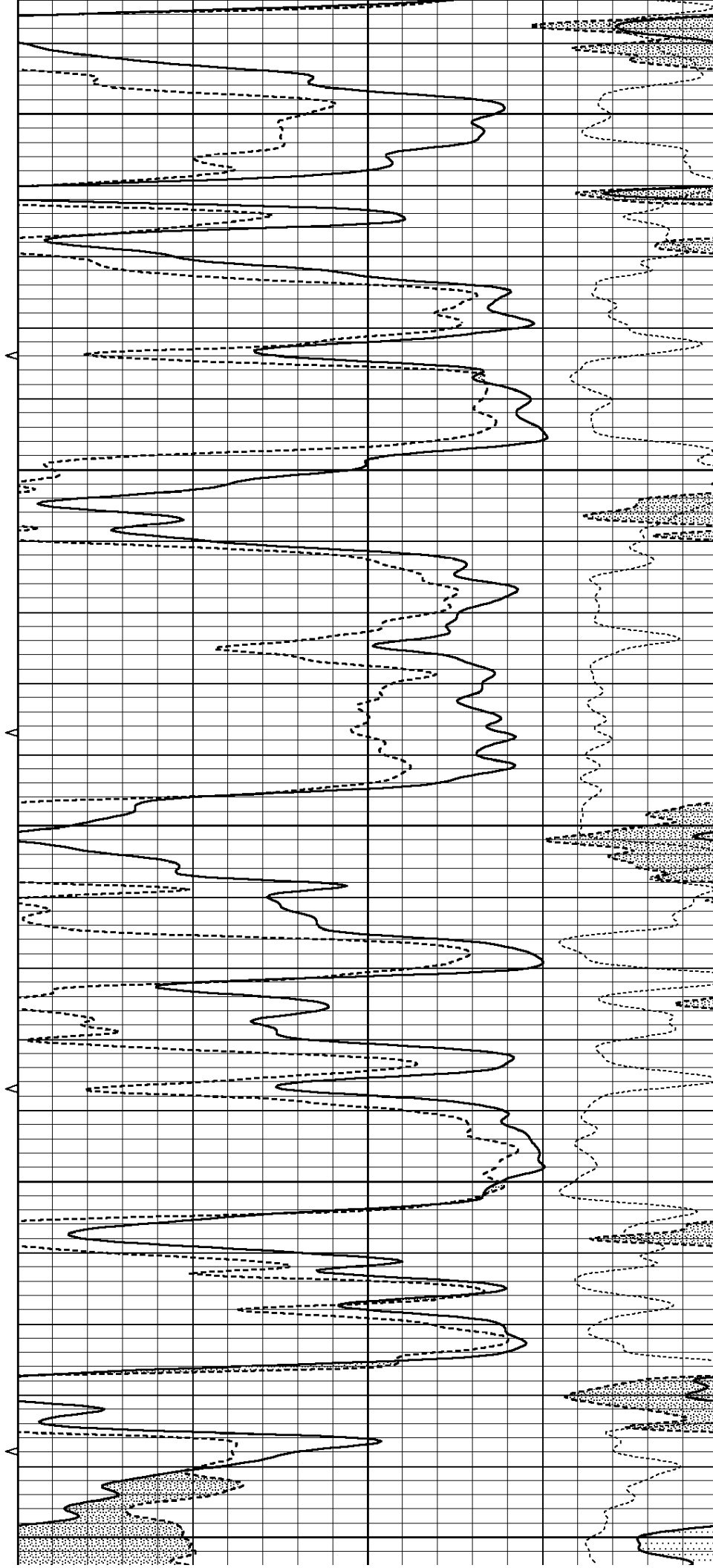
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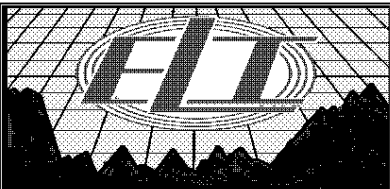
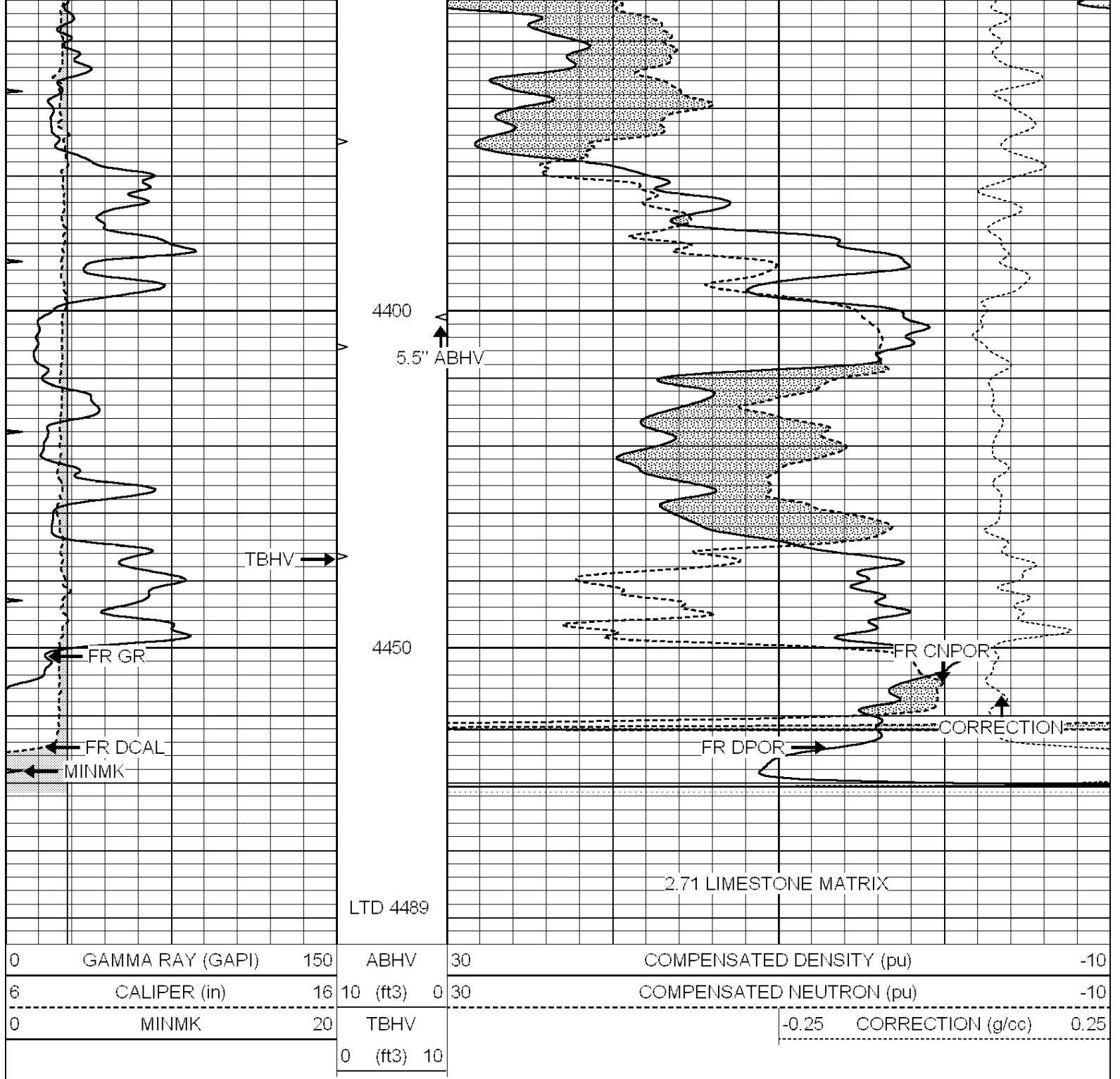
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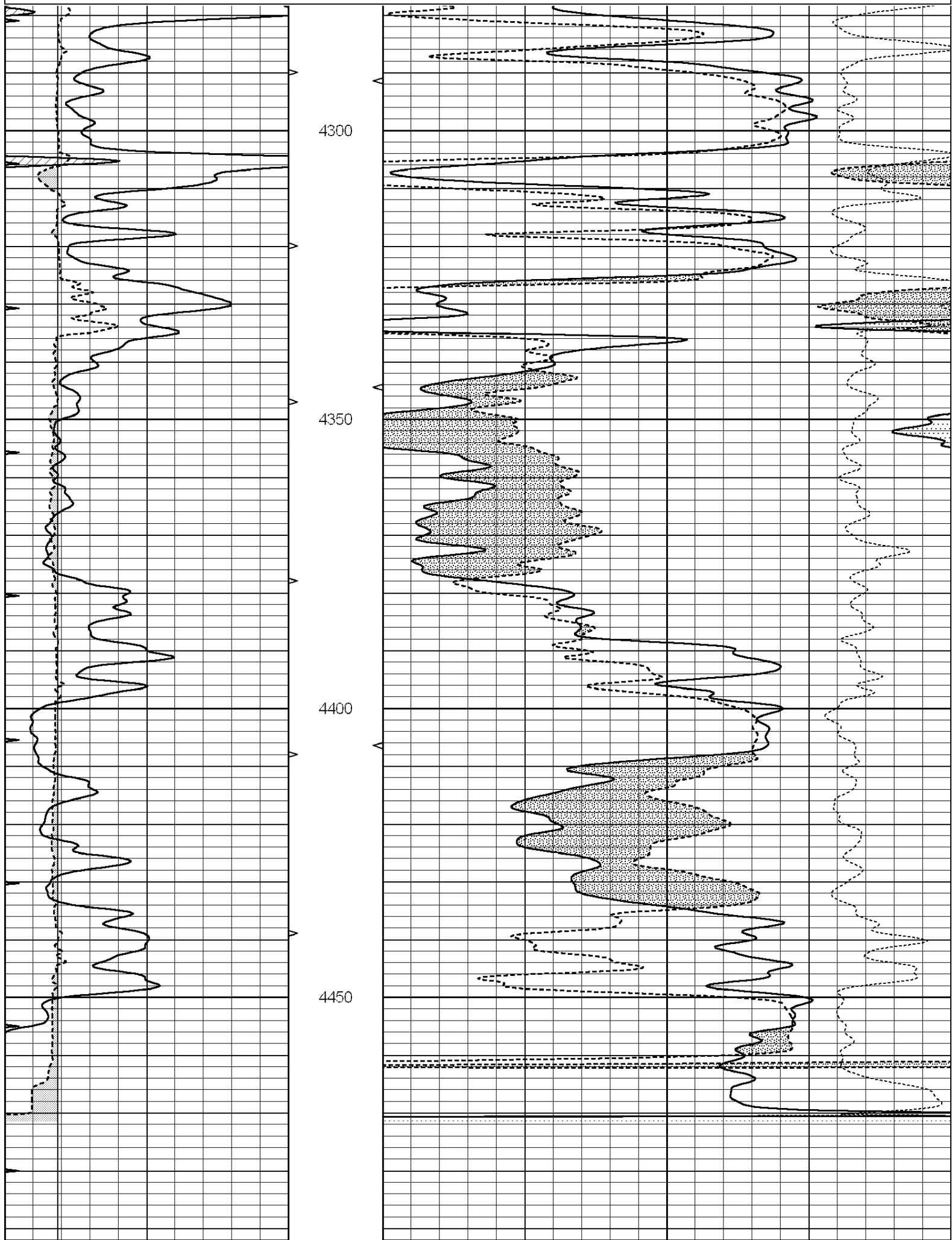


REPEAT SECTION

Database File: 2344ddn.db
Dataset Pathname: pass2.3
Presentation Format: den_neu
Dataset Creation: Sat Mar 03 00:11:28 2018 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 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25	CORRECTION (g/cc) 0.25

0 (ft3) 10



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

Calibration Report	
Database File:	1598ddn.db
Dataset Pathname:	pass4
Dataset Creation:	Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Wed Aug 30 00:06:33 2017
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	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
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: 002	Model: PRB

Master Calibration		Performed Mon Aug 21 11:27:42 2017			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	837.1	10632.5	2945.1	12110.1	cps
Window 2	772.0	9117.4	2570.1	10197.3	cps
Window 3	631.7	4669.0	1481.9	5042.9	cps
Window 4	187.0	187.5	185.9	189.9	cps
Long Space	0.0	8345.4	1798.1	9425.3	cps
Short Space	1.1	1927.9	1285.9	2050.2	cps
Rho		1.7100	2.5000	1.2800	g/cc

Rho		1.7100		2.5900		1.5000		g/cc
Pe		0.0000		2.5700		1.5500		
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio		: 0.558		
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept		: -19.6		

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				

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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:	Wed May 31 00:09:32 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps