



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company		WOOLSEY OPERATING CO. LLC.		Company		WOOLSEY OPERATING COMPANY, LLC.	
Well		BETTY YOST GU B-2		Well		BETTY YOST GU B-2	
Field		WILMORE EAST		Field		WILMORE EAST	
County		COMANCHE		County		COMANCHE	
State		KANSAS		State		KANSAS	
Location:		API # : 15-033-21675-0000		Other Services			
		940' FNL & 2310' FVL		DIL/MEL			
		APPROX. N/2 - SE - NE - NW					
		SEC 26 TWP 31S RGE 17W					
Permanent Datum		GROUND LEVEL		Elevation		1970	
Log Measured From		KELLY BUSHING 13' A.G.L.		K.B. 1983			
Drilling Measured From		KELLY BUSHING		D.F. 1981			
				G.L. 1970			
Date	11/2/12						
Run Number	ONE						
Depth Driller	5500						
Depth Logger	5498						
Bottom Logged Interval	5474						
Top Log Interval	2200						
Casing Driller	10 3/4" @ 217'						
Casing Logger	218						
Bit Size	7 7/8"						
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM					
Density / Viscosity	9.4/49						
pH / Fluid Loss	8.5/12.8						
Source of Sample	FLOWLINE						
Rim @ Meas. Temp	.700 @ 95F						
Rmf @ Meas. Temp	.525 @ 95F						
Rmc @ Meas. Temp	.840 @ 95F						
Source of Rmf / Rmc	MEASUREMENT						
Rim @ BHT	.512 @ 130F						
Time Circulation Stopped	4.5 HOURS						
Time Logger on Bottom	7:45 A.M.						
Maximum Recorded Temperature	130F						
Equipment Number	4854						
Location	HAYS, KANSAS						
Recorded By	JEFF LUEBBERS						
Witnessed By	SCOTT ALBERG						

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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" (785) 628-6395
DIRECTIONS
WILMORE, KS., 1/2E., 1/2S. TO "AVE. E", APPROX. 4E., S. INTO



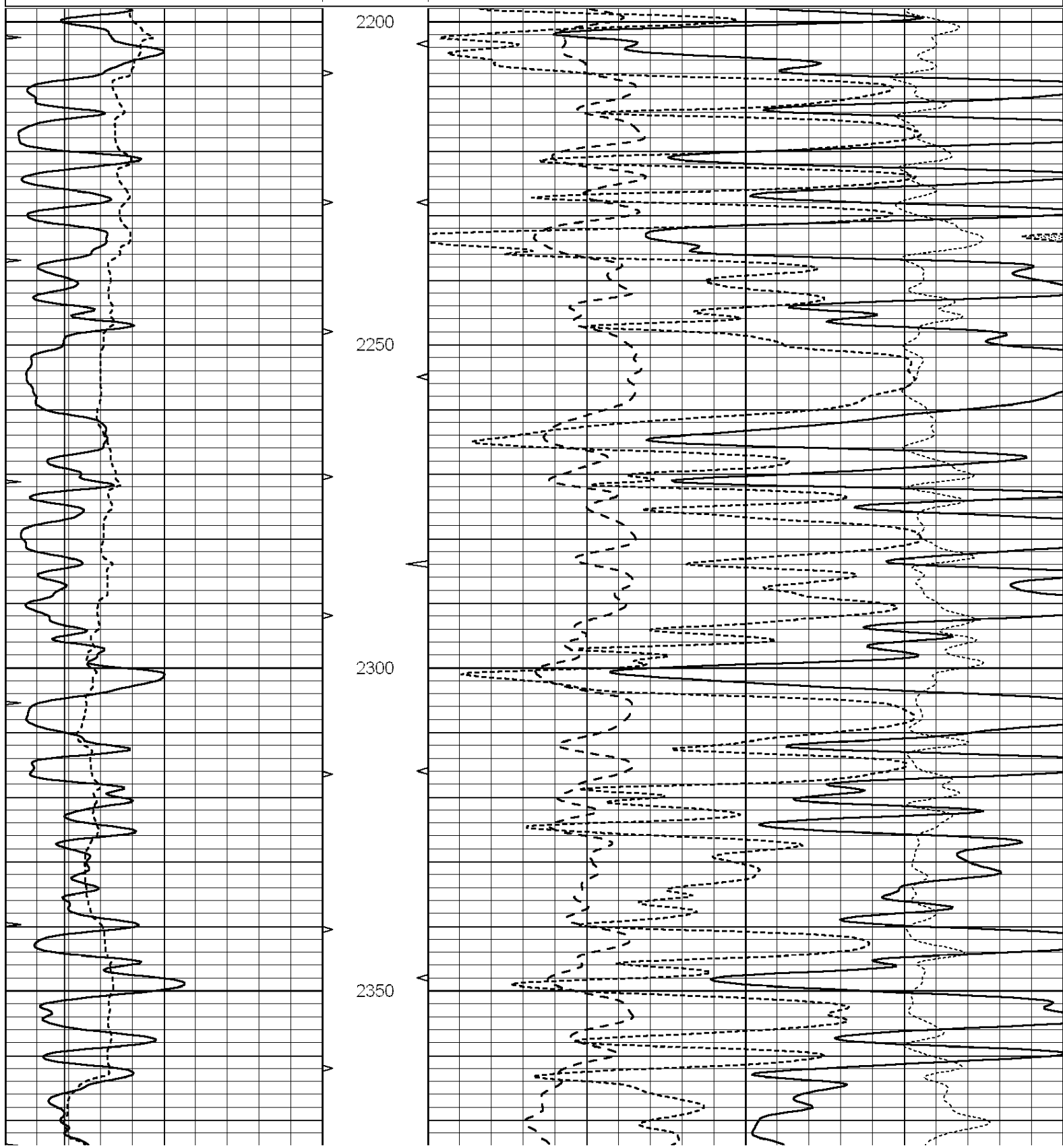
NABORS

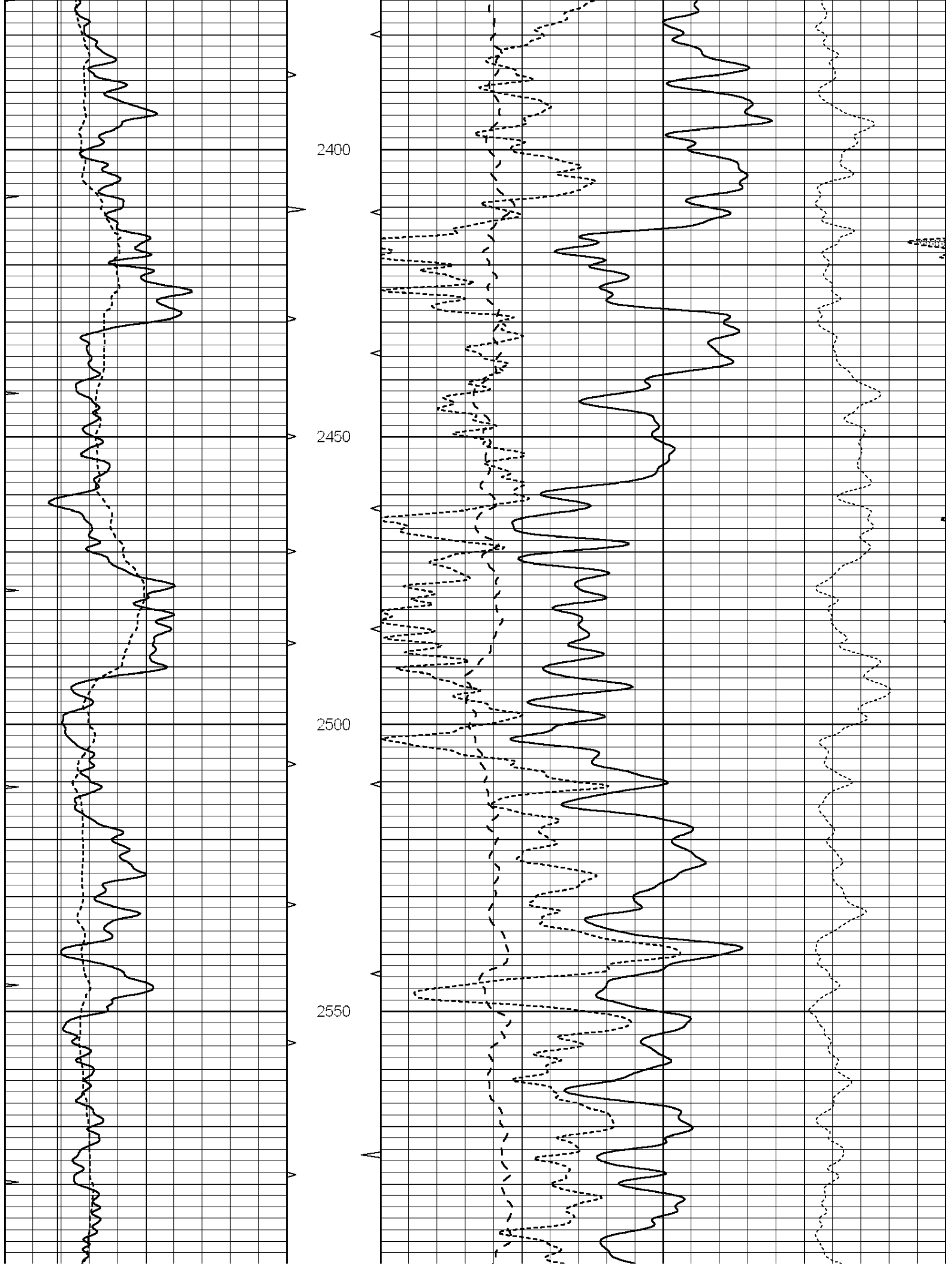
**COMPLETION
& PRODUCTION**

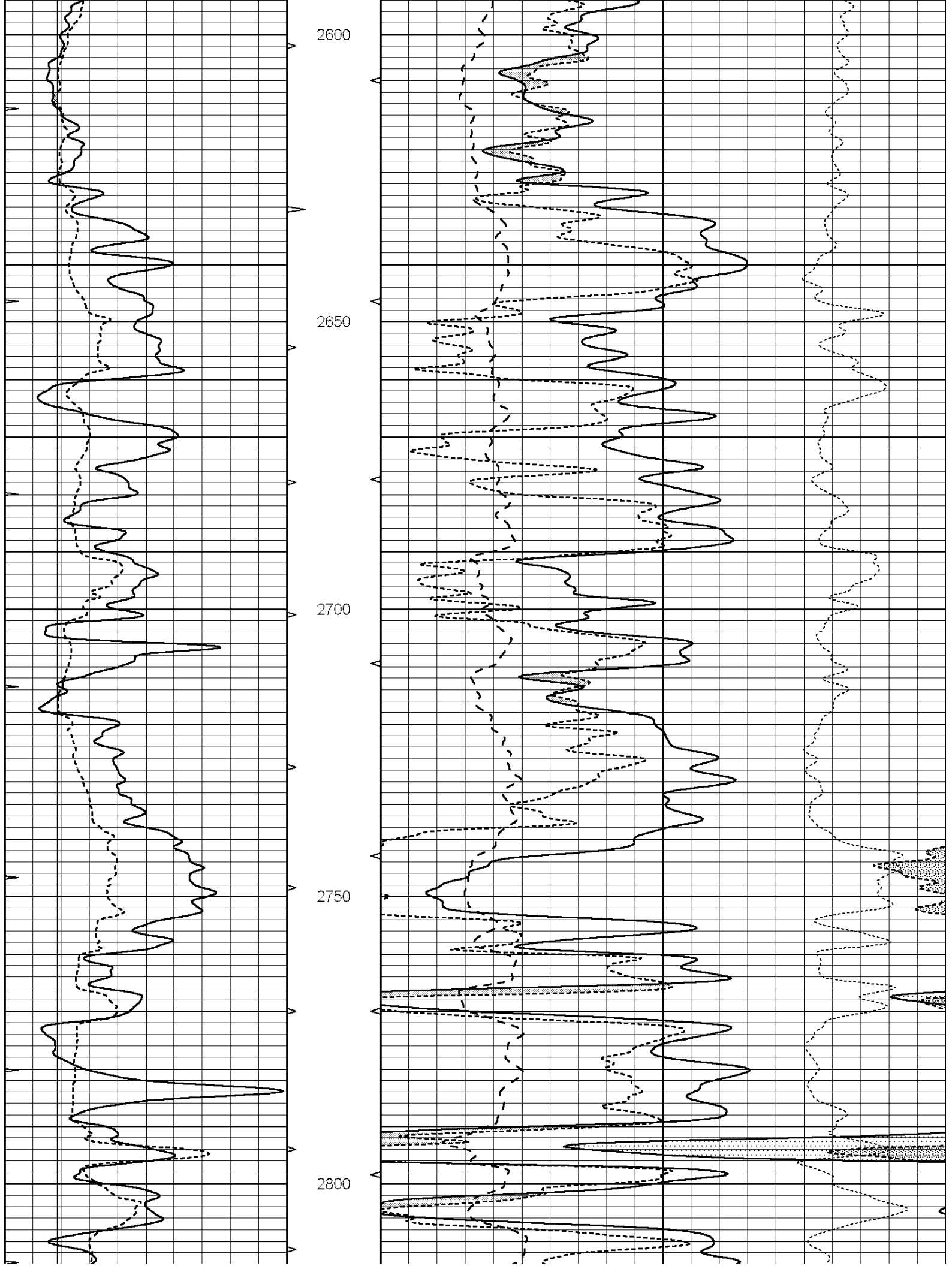
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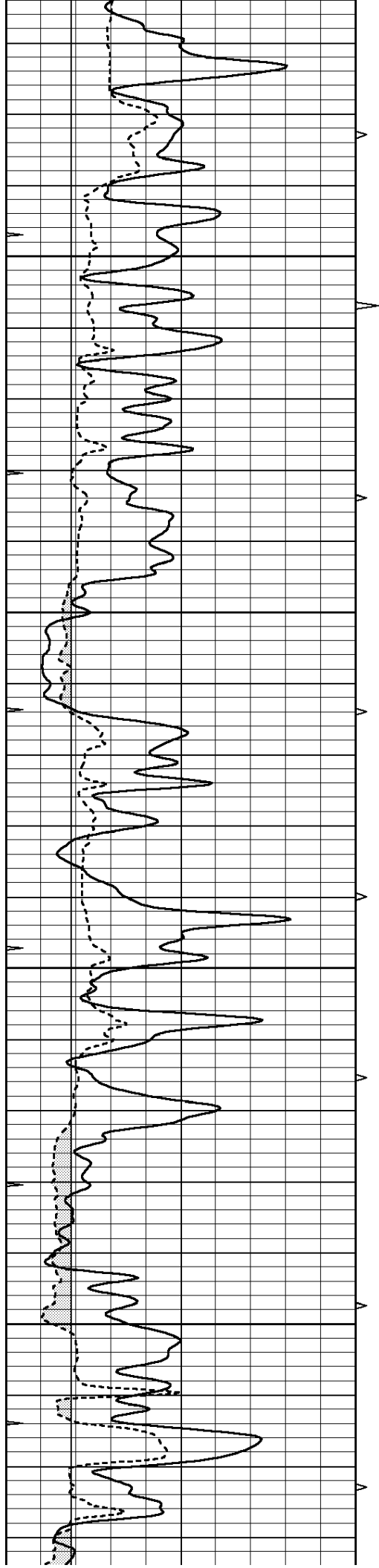
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 Dataset Pathname: pass4.5
 Presentation Format: ldt_neu
 Dataset Creation: Fri Nov 02 09:27:51 2012 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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		







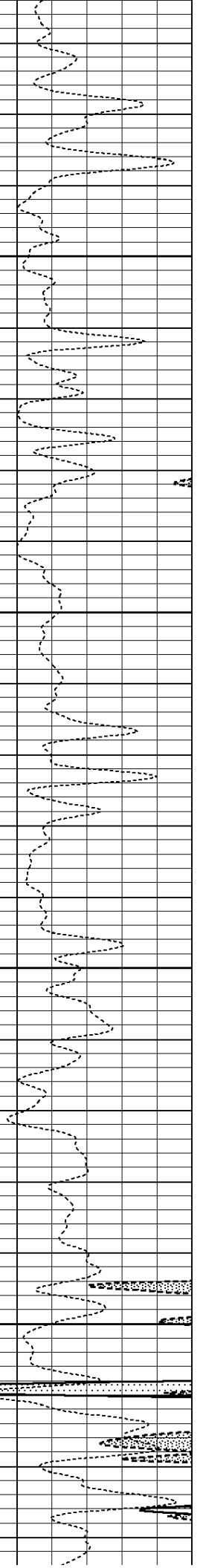
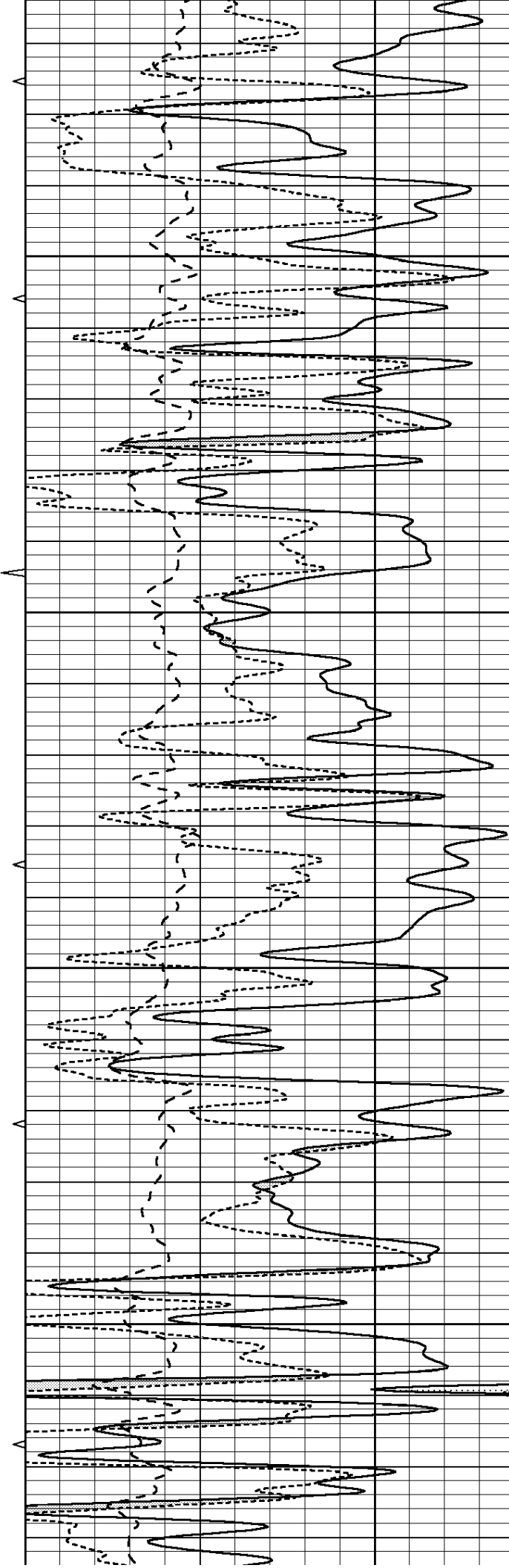


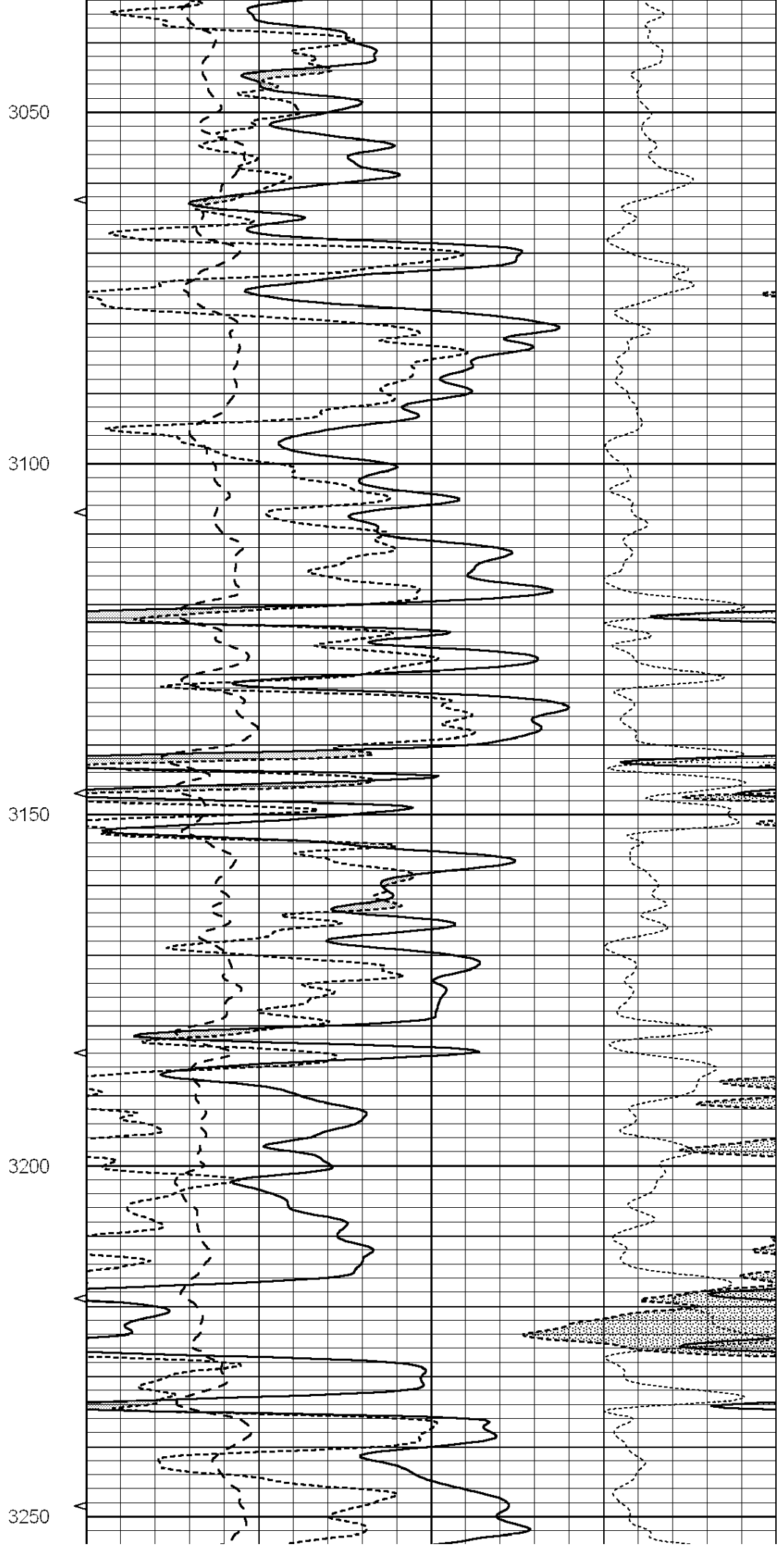
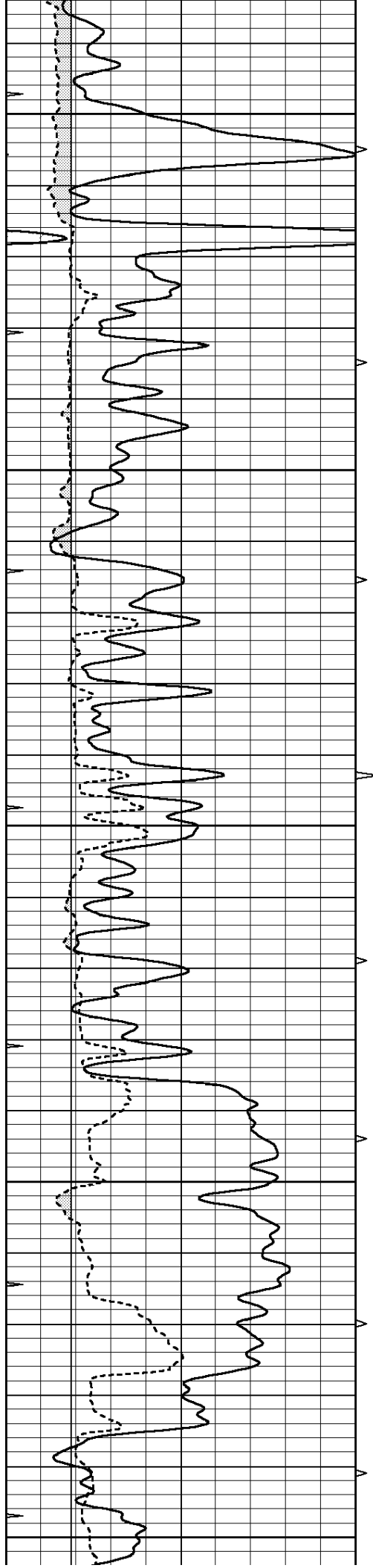
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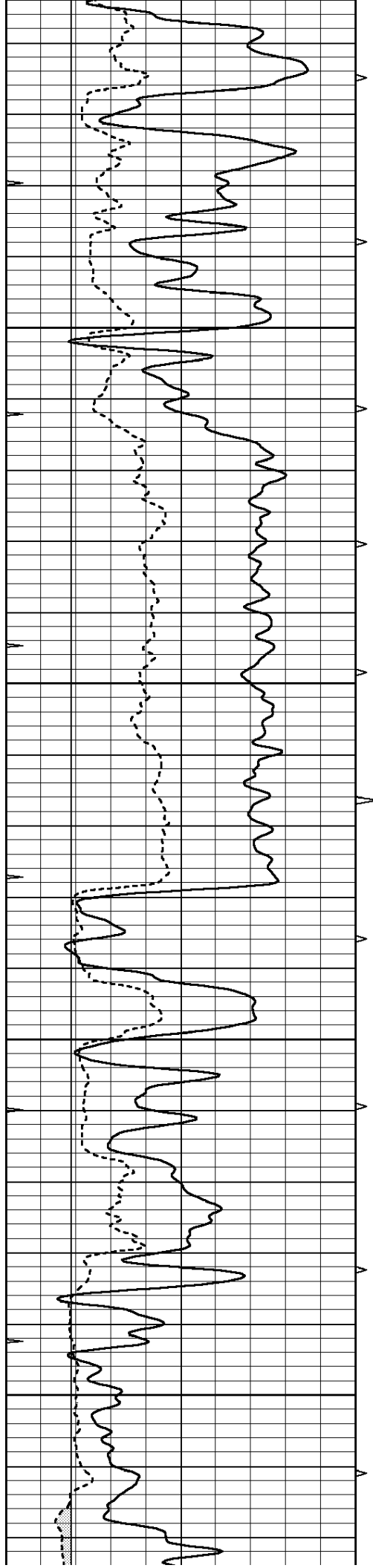
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2950

3000





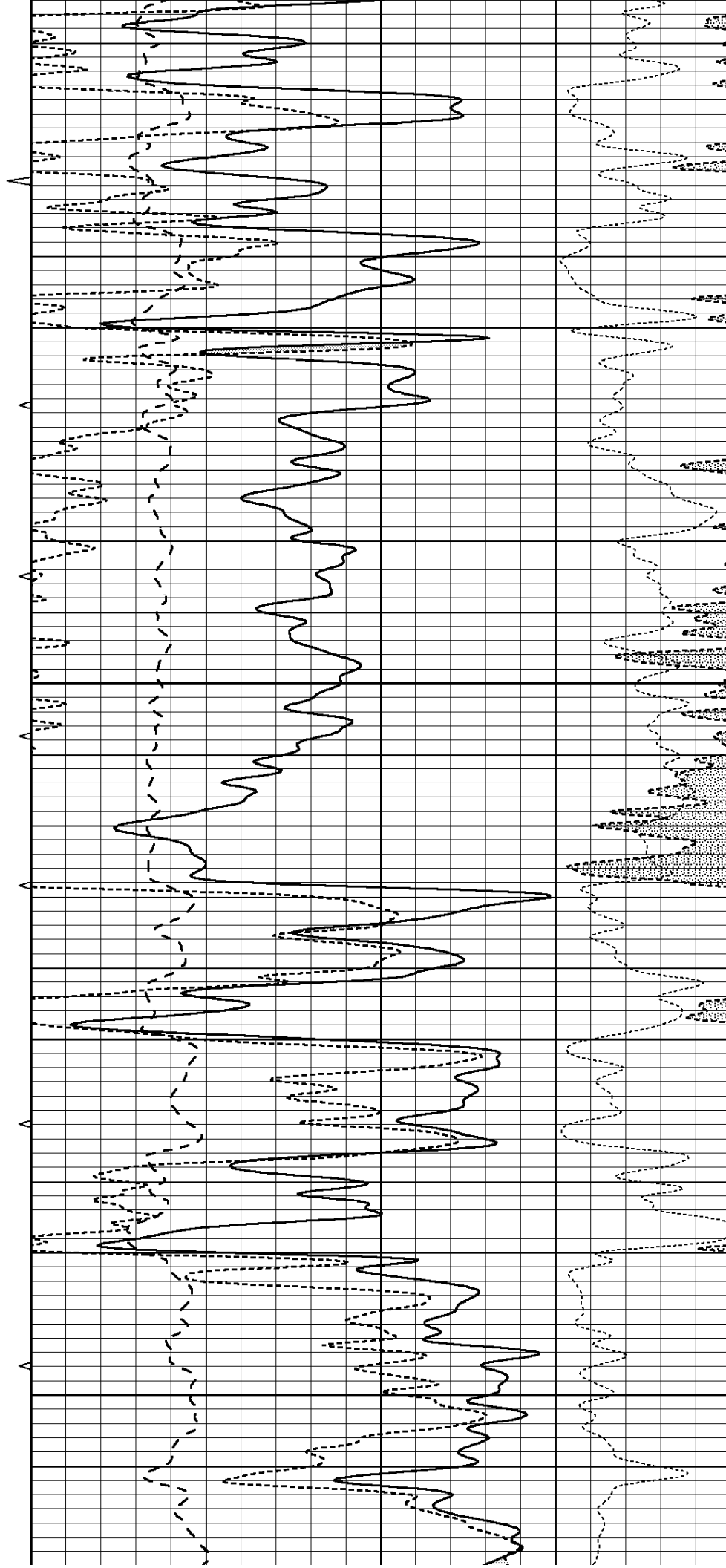


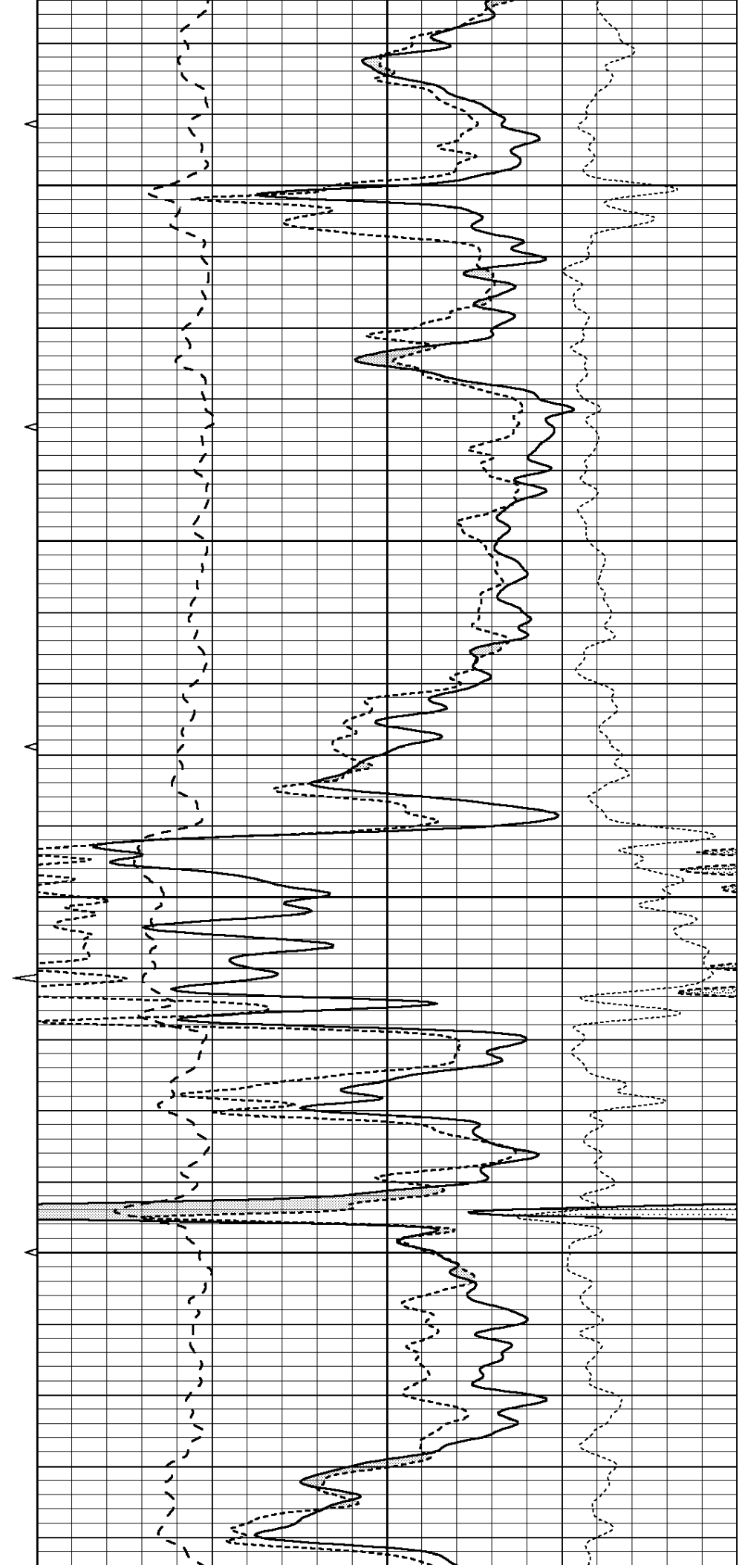
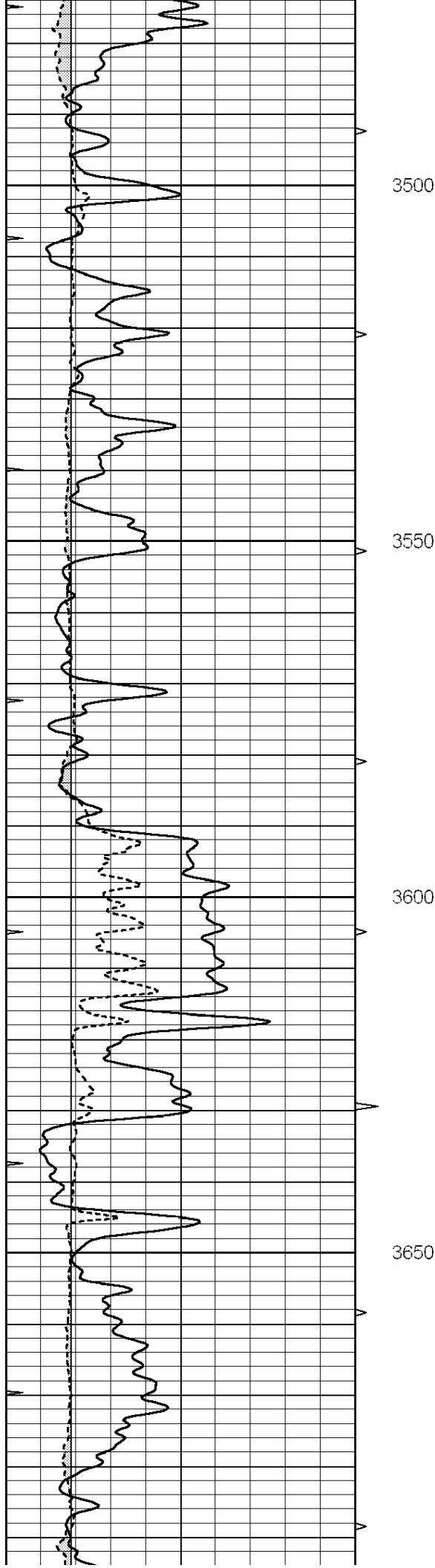
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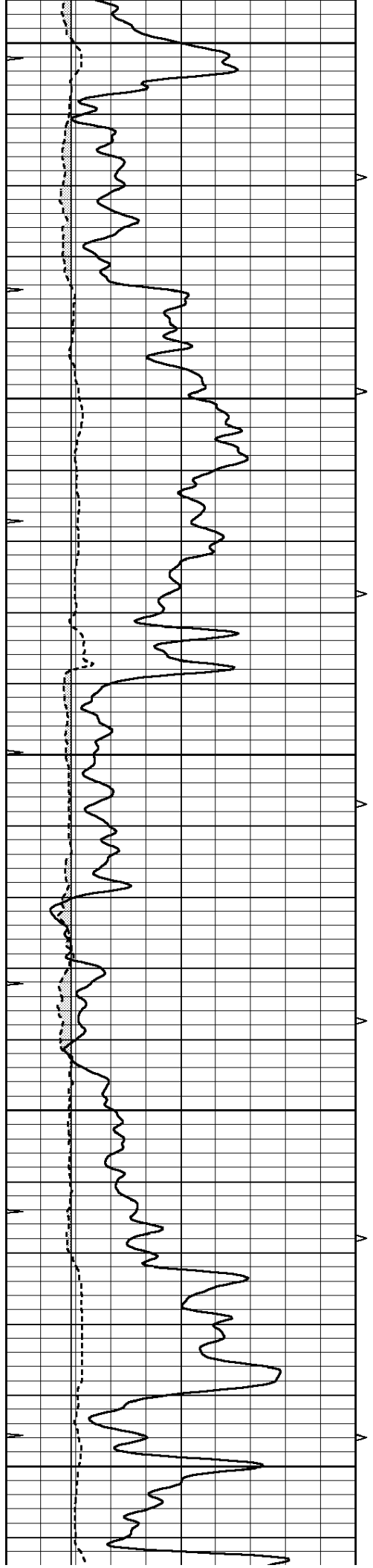
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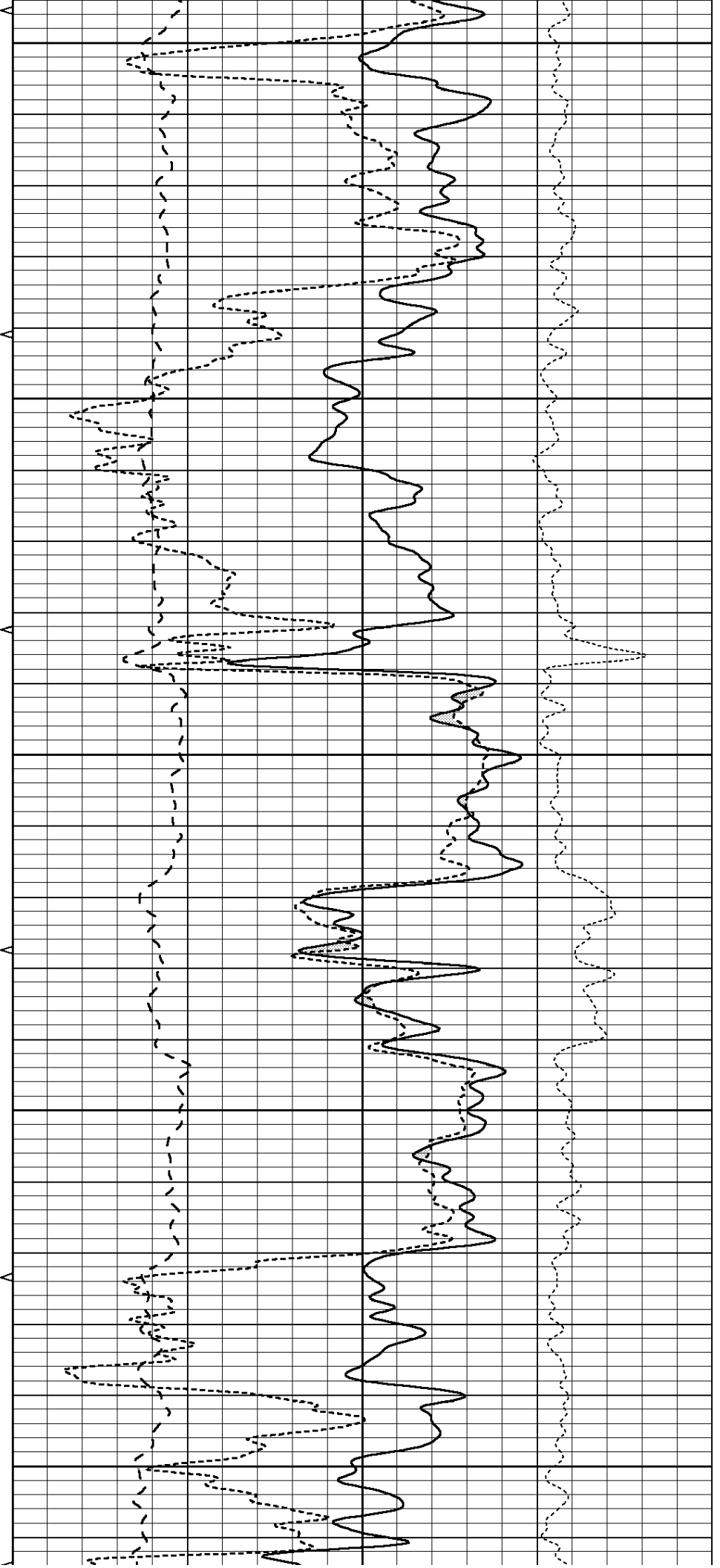
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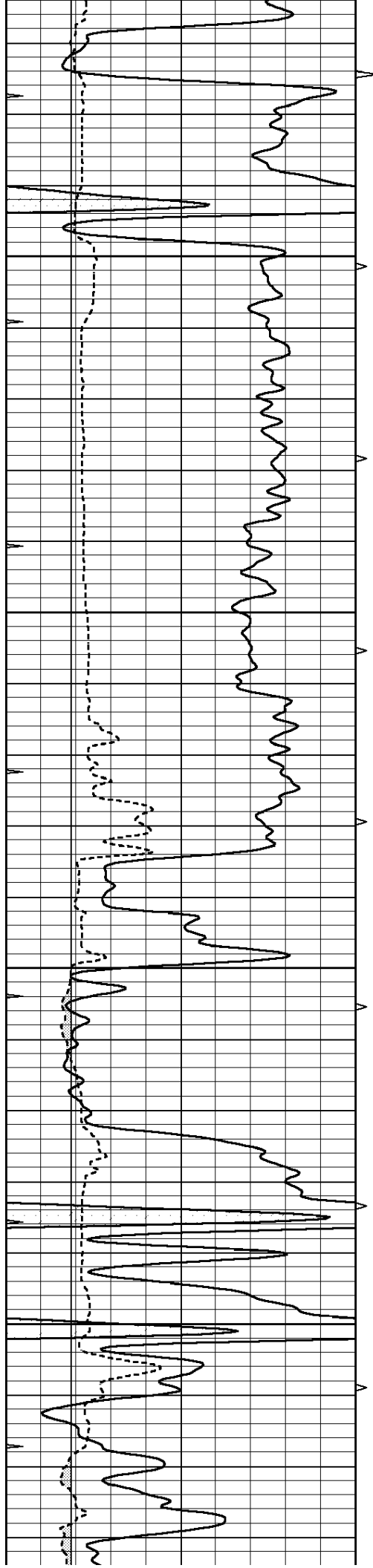
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3900



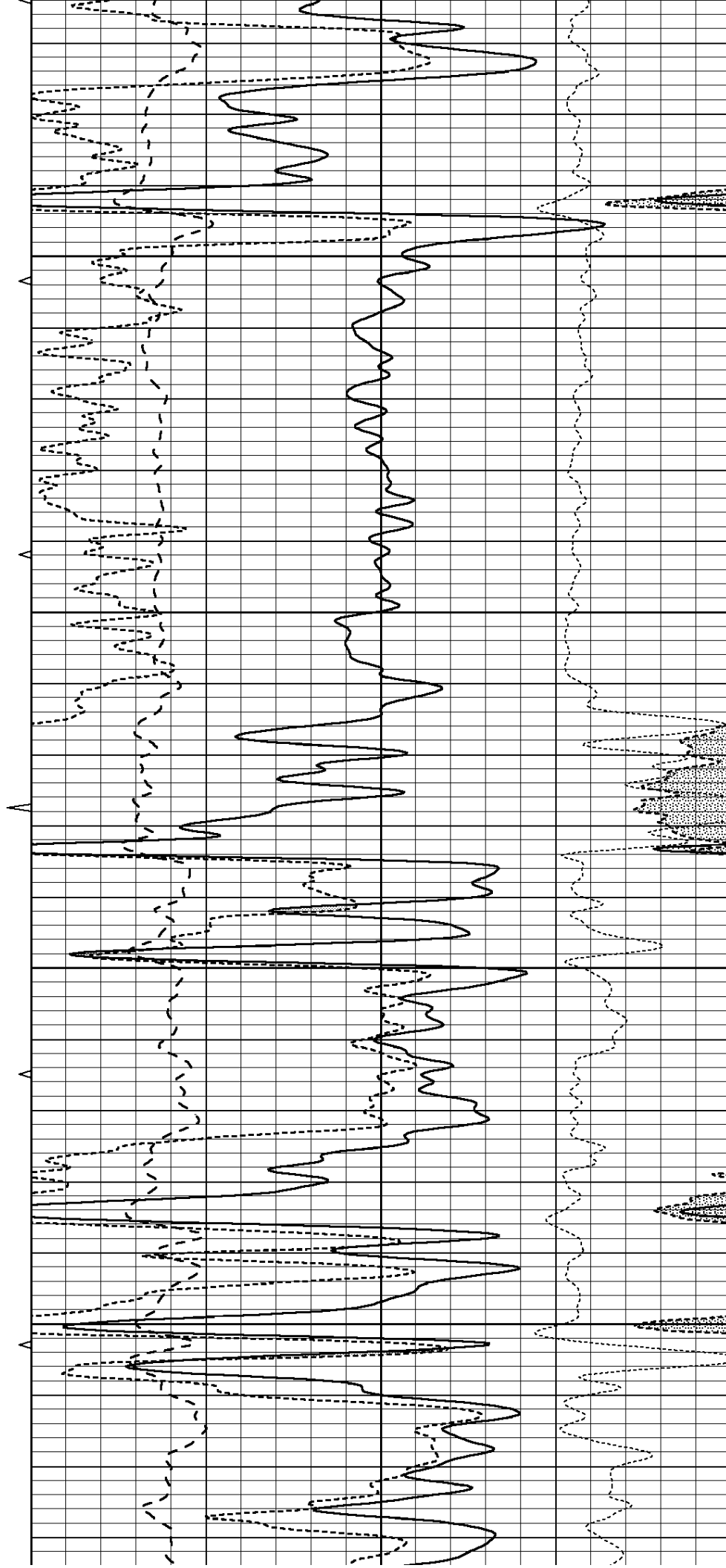


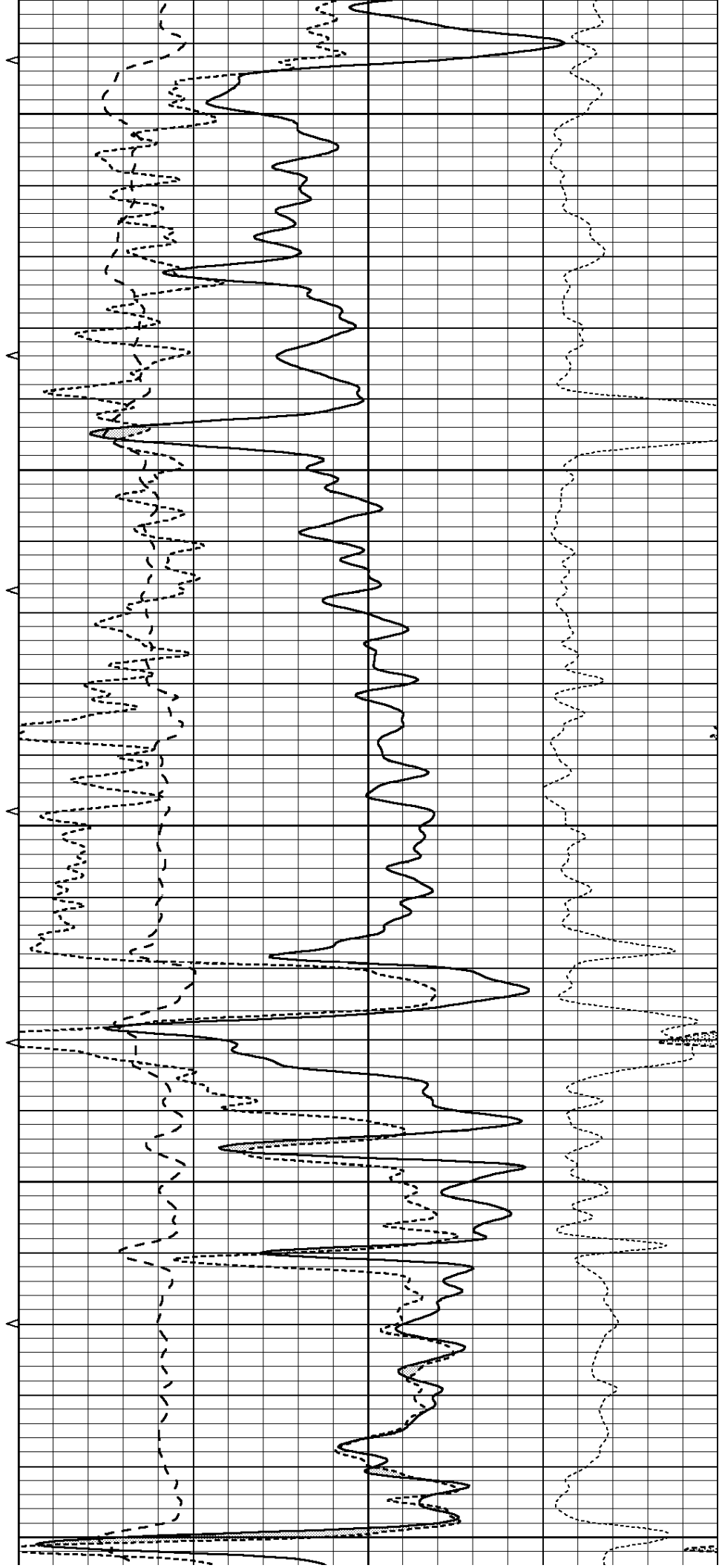
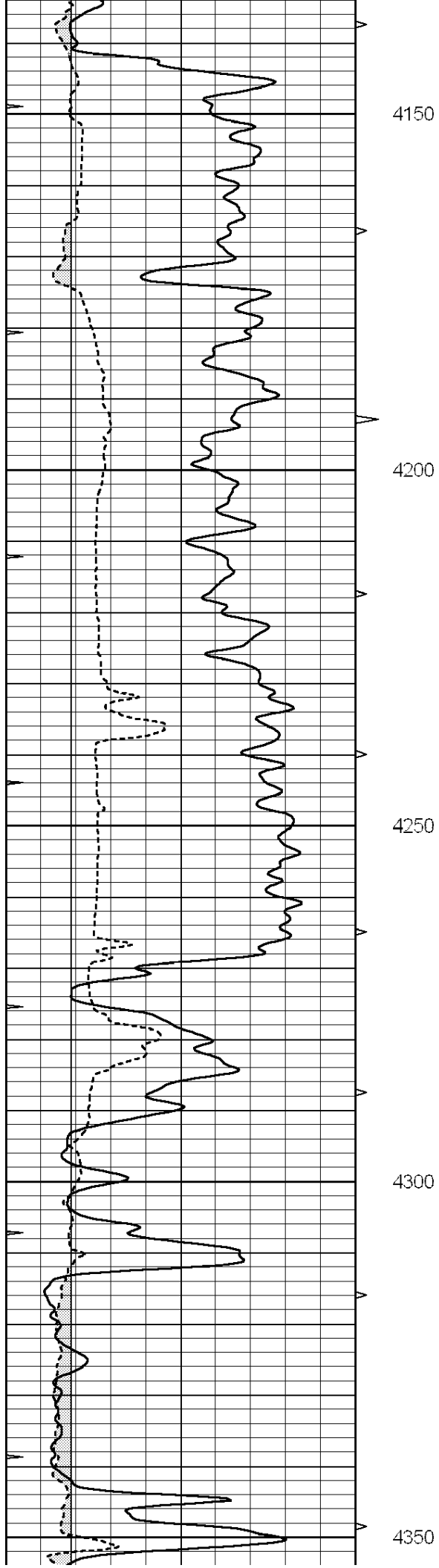
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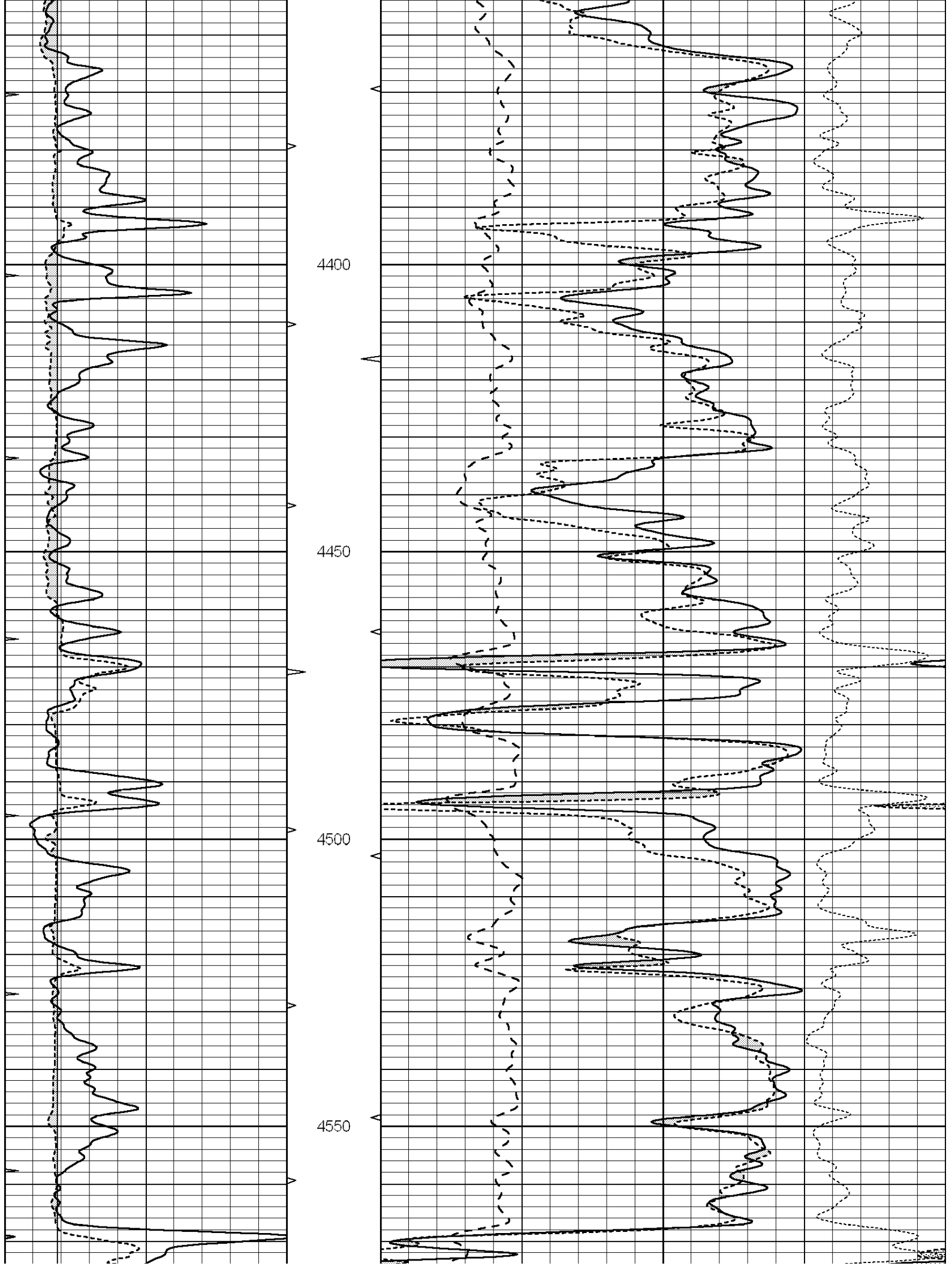
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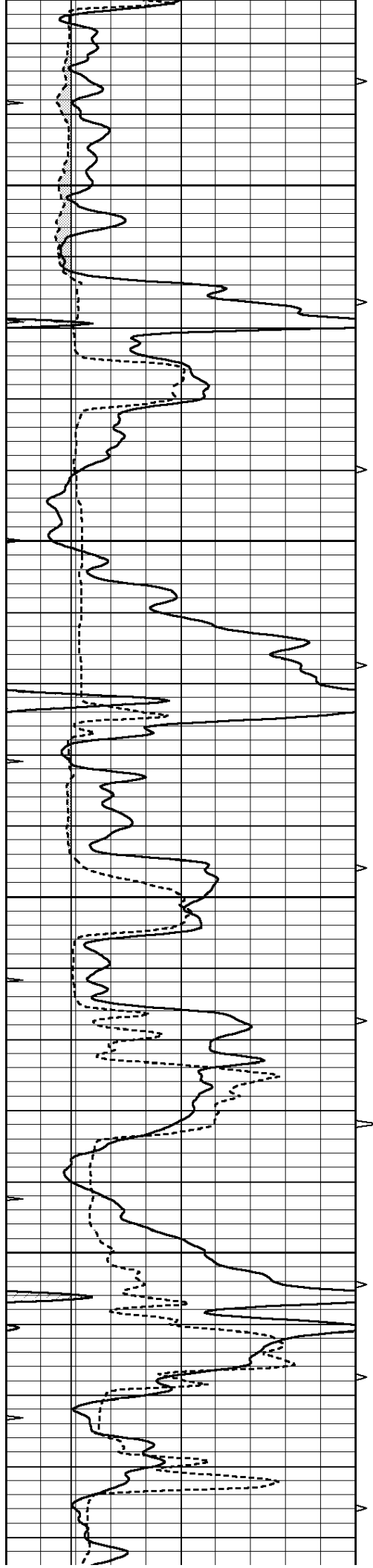
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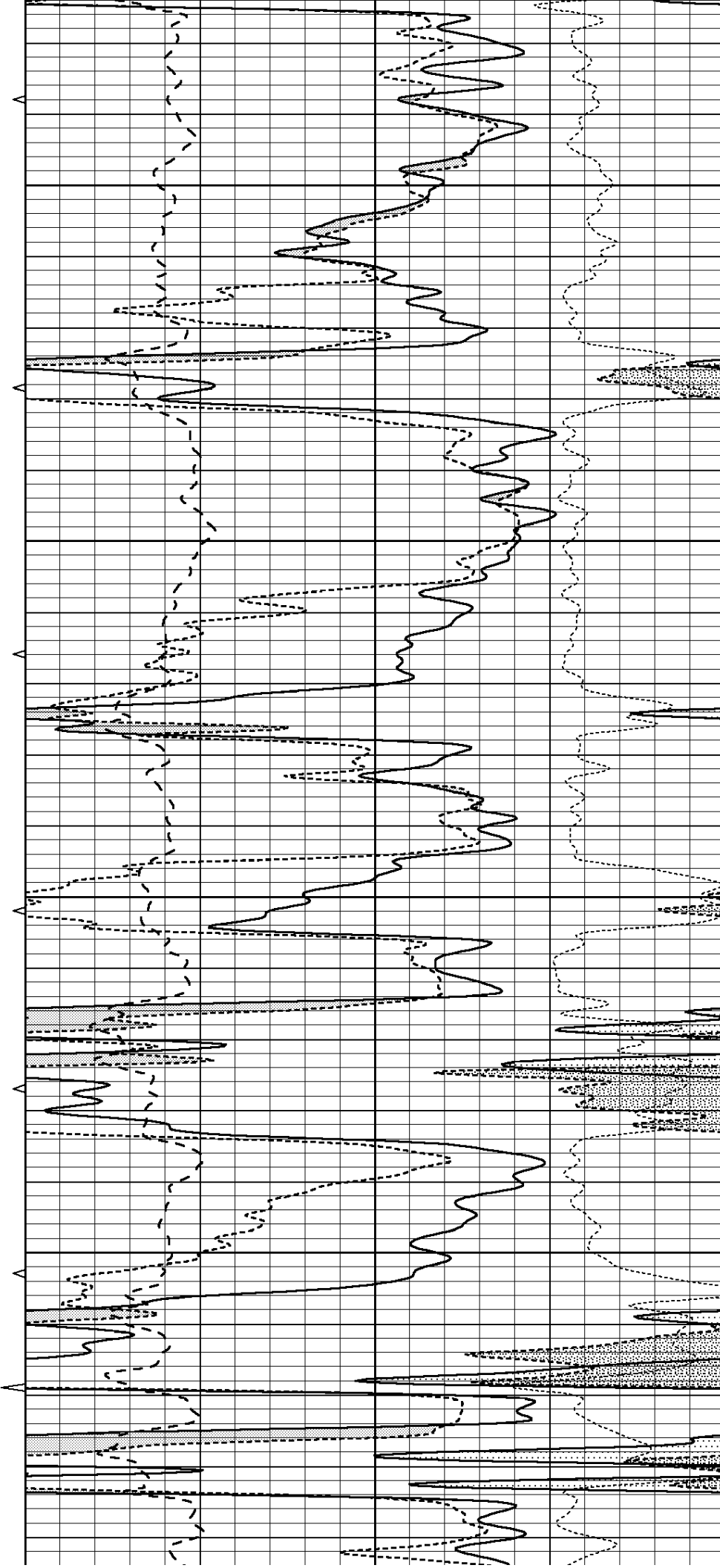


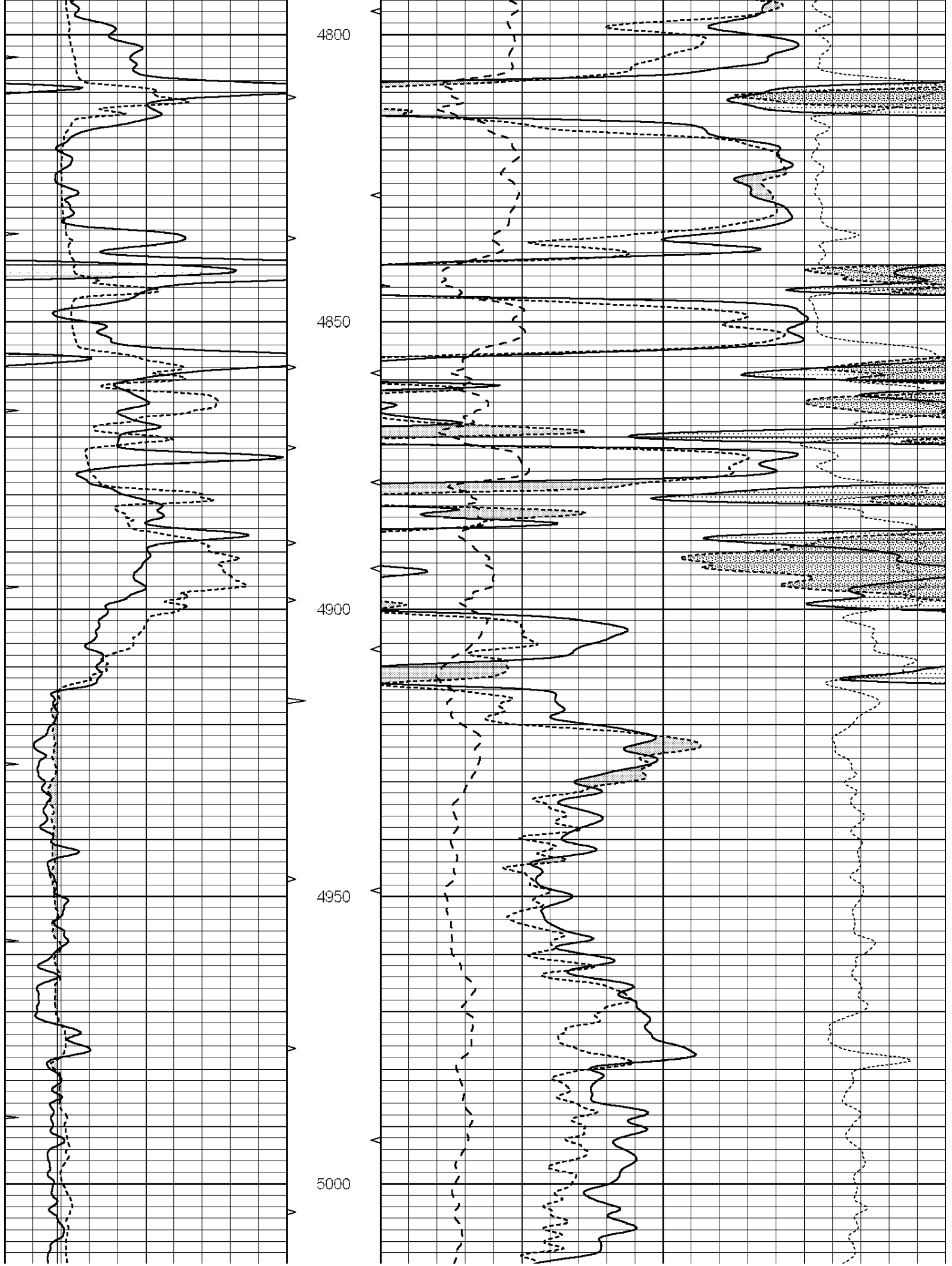
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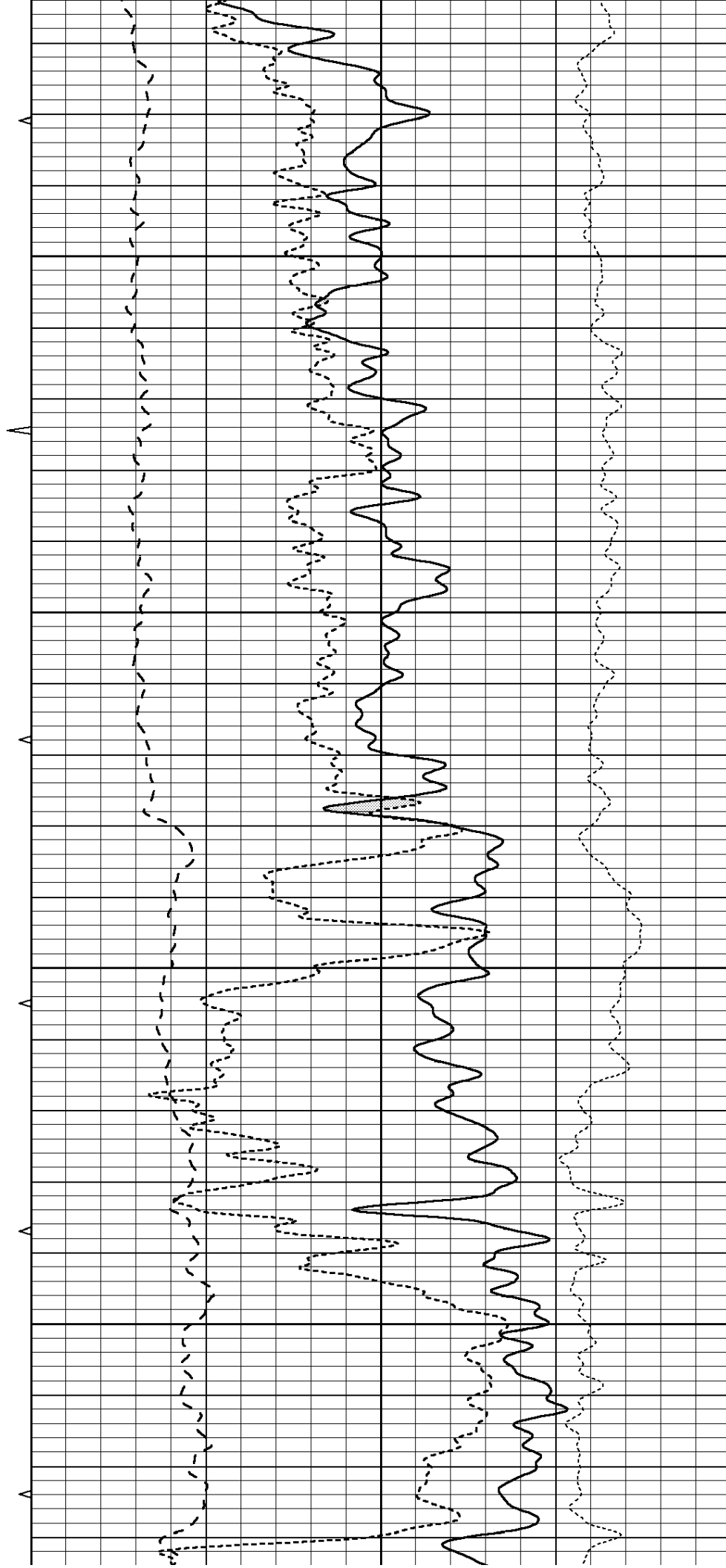
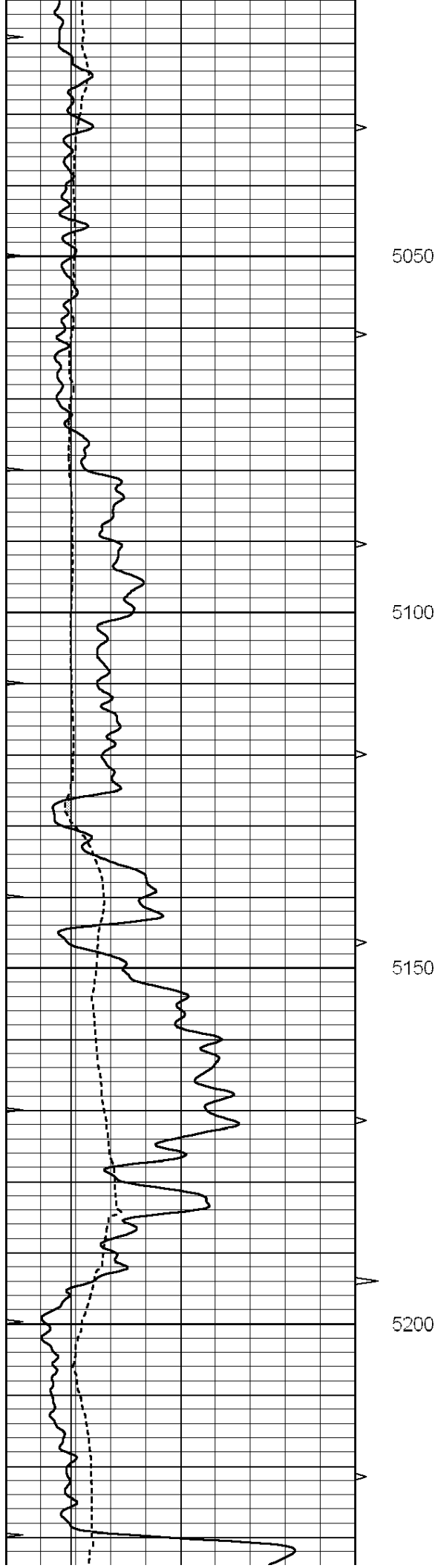
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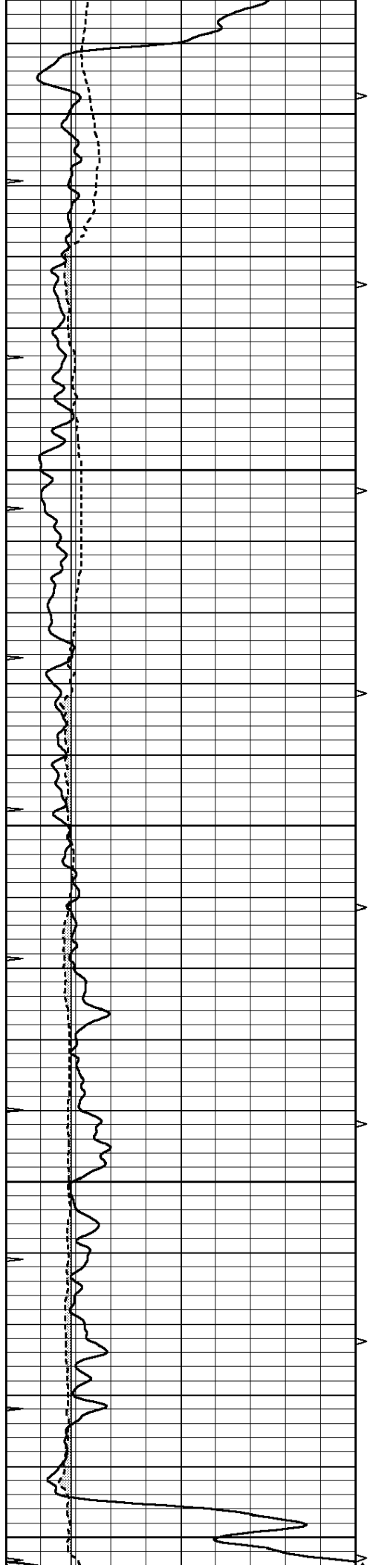
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5250

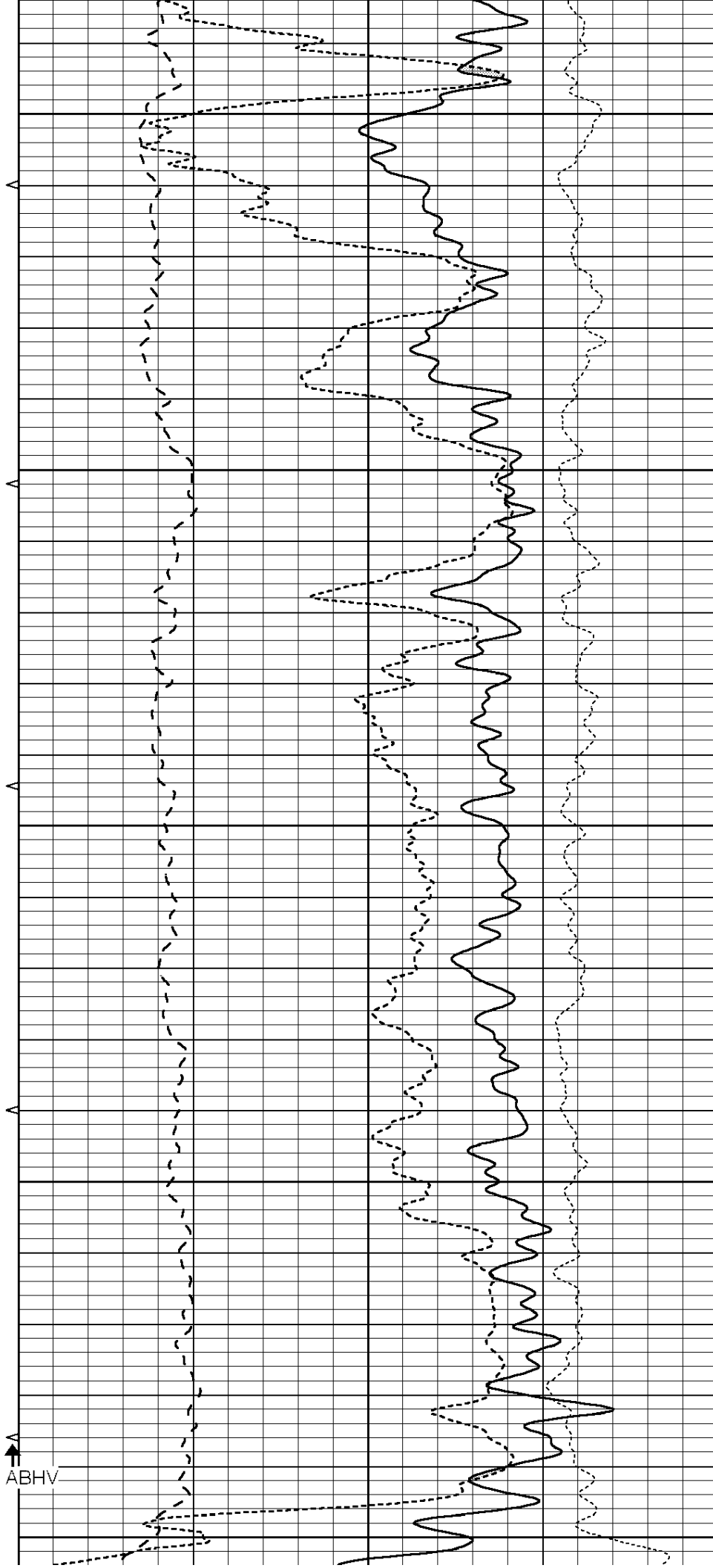
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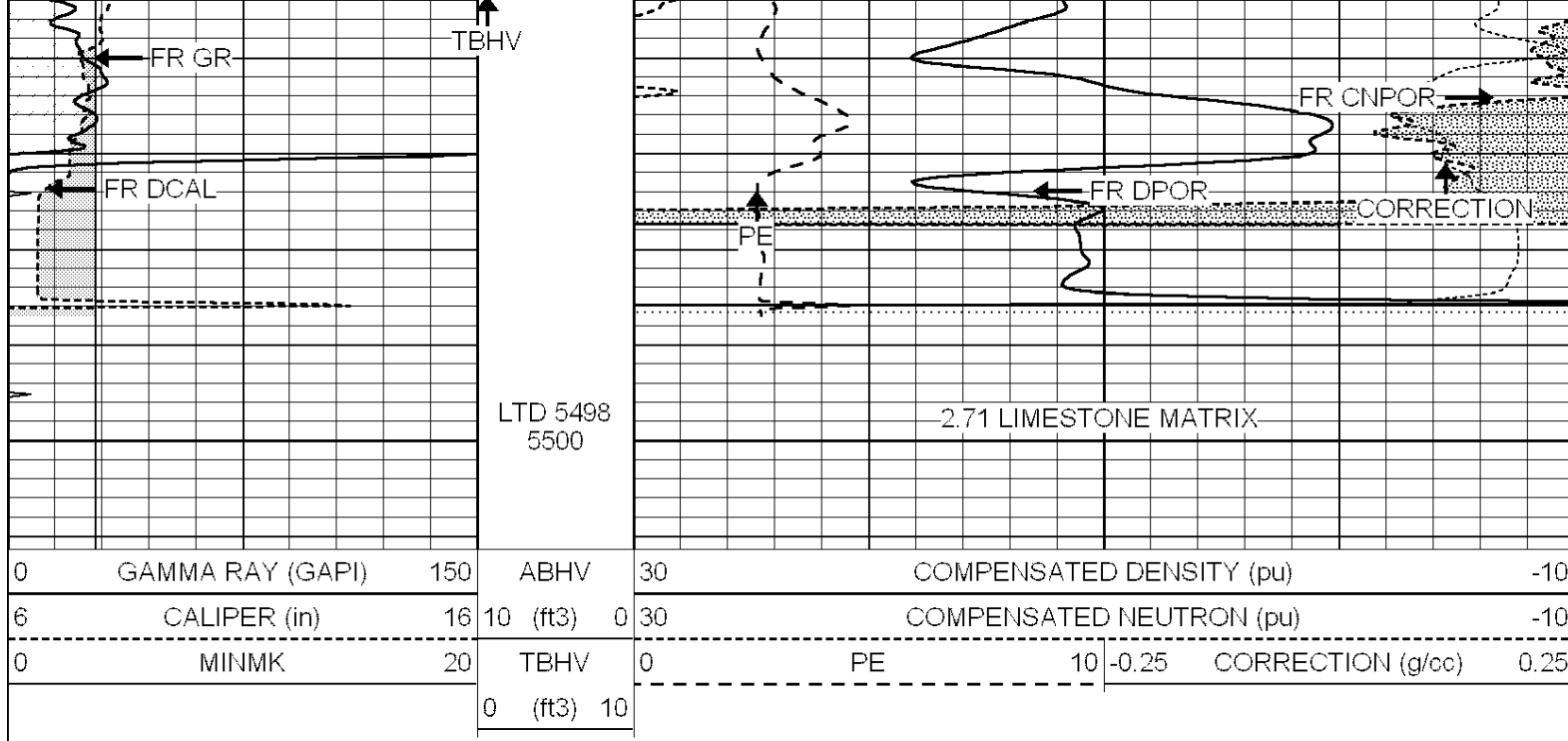
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4.5" ABHV

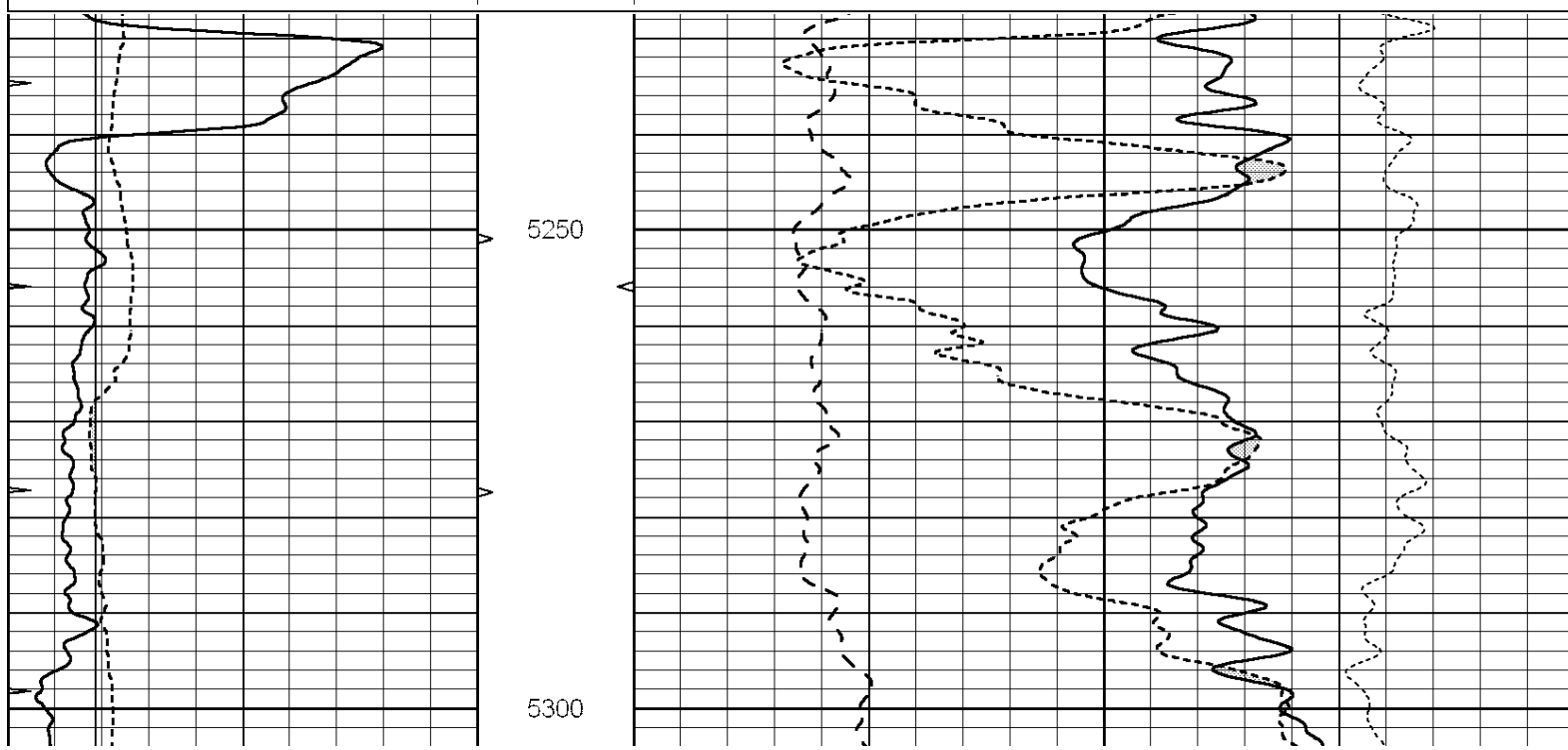


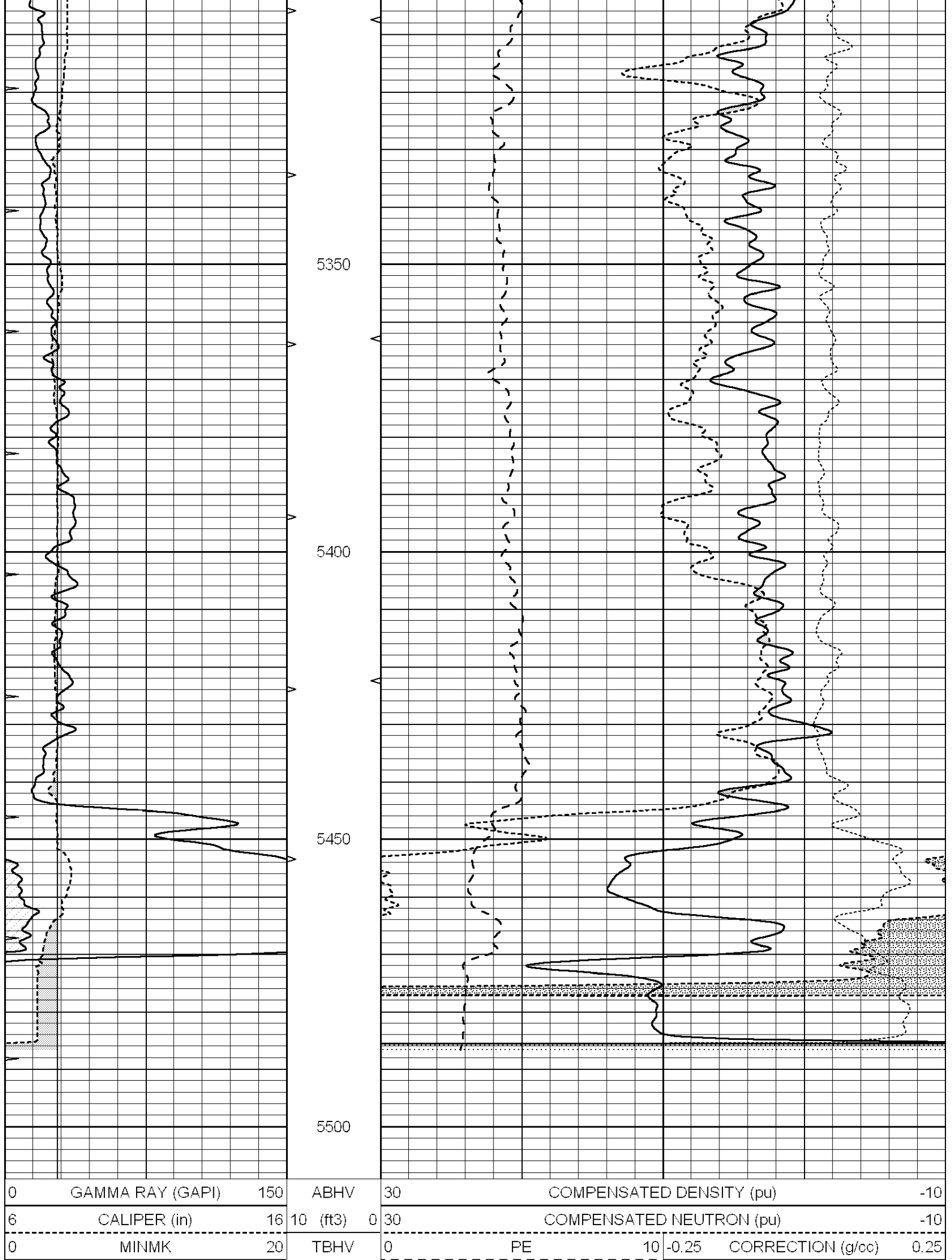


REPEAT SECTION

Database File: 010003pe.db
 Dataset Pathname: pass3.4
 Presentation Format: ldt_neu
 Dataset Creation: Fri Nov 02 07:21:51 2012 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	PE	10	-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	PE	10 -0.25 CORRECTION (g/cc) 0.25

Calibration Report

Database File: 010003pe.db
 Dataset Pathname: pass4.5
 Dataset Creation: Fri Nov 02 09:27:51 2012 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Fri Nov 02 08:44:54 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	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-11.000
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		

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	