



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company CHIEFTAIN OIL COMPANY, INC. Well MOLZ FAMILY SWD #1 Field STRANATHAN County BARBER State KANSAS		Company CHIEFTAIN OIL COMPANY, INC. Well MOLZ FAMILY SWD #1 Field STRANATHAN County BARBER State KANSAS	
Location: API # : 15-007-24045-0000 610' FSL & 1795' FEL NW - SE - SW - SE SEC 2 TWP 35S RGE 12W		Other Services DIL/MEL	
Permanent Datum GROUND LEVEL Elevation 1411 Log Measured From KELLY BUSHING 13' A.G.L. Drilling Measured From KELLY BUSHING		Elevation K.B. 1424 D.F. 1422 G.L. 1411	
Date	8/6/13		
Run Number	ONE		
Depth Driller	6460		
Depth Logger	6458		
Bottom Logged Interval	6434		
Top Log Interval	3400		
Casing Driller	8 5/8"@915'	13 3/8"@325'	
Casing Logger	909		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,300 PPM	
Density / Viscosity	8.8/72		
pH / Fluid Loss	10.0/10.5		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.250@90F		
Rmf @ Meas. Temp	.188@90F		
Rmc @ Meas. Temp	.300@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.163@138F		
Time Circulation Stopped	8 HOURS		
Time Logger on Bottom	7:00 P.M.		
Maximum Recorded Temperature	138F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ARDEN RATZLAFF		

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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" HAYS, KANSAS (785) 628-6395
DIRECTIONS

HARDTNER, KS., 3 1/2E. ON HWY 281 TO "CLAIRMONT RD.", 1/2N., W. INTO @CATTLE GUARD



NABORS
COMPLETION
& PRODUCTION

MAIN SECTION

Database File:

011199pe.db

Dataset Pathname:

pass3.3

Presentation Format:

ldt_neuc

Dataset Creation:

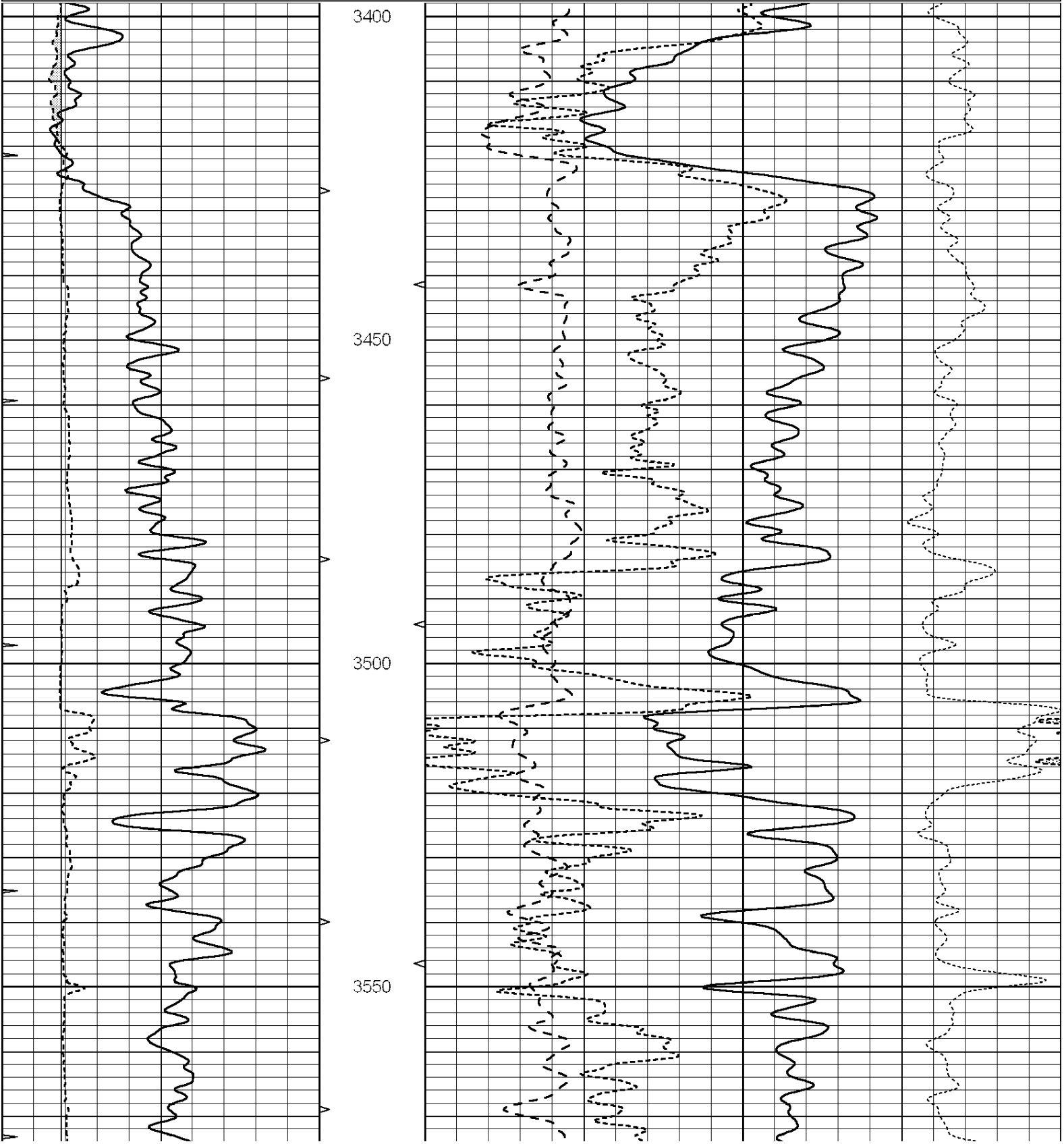
Tue Aug 06 21:16:52 2013 by Calc SOC 120430

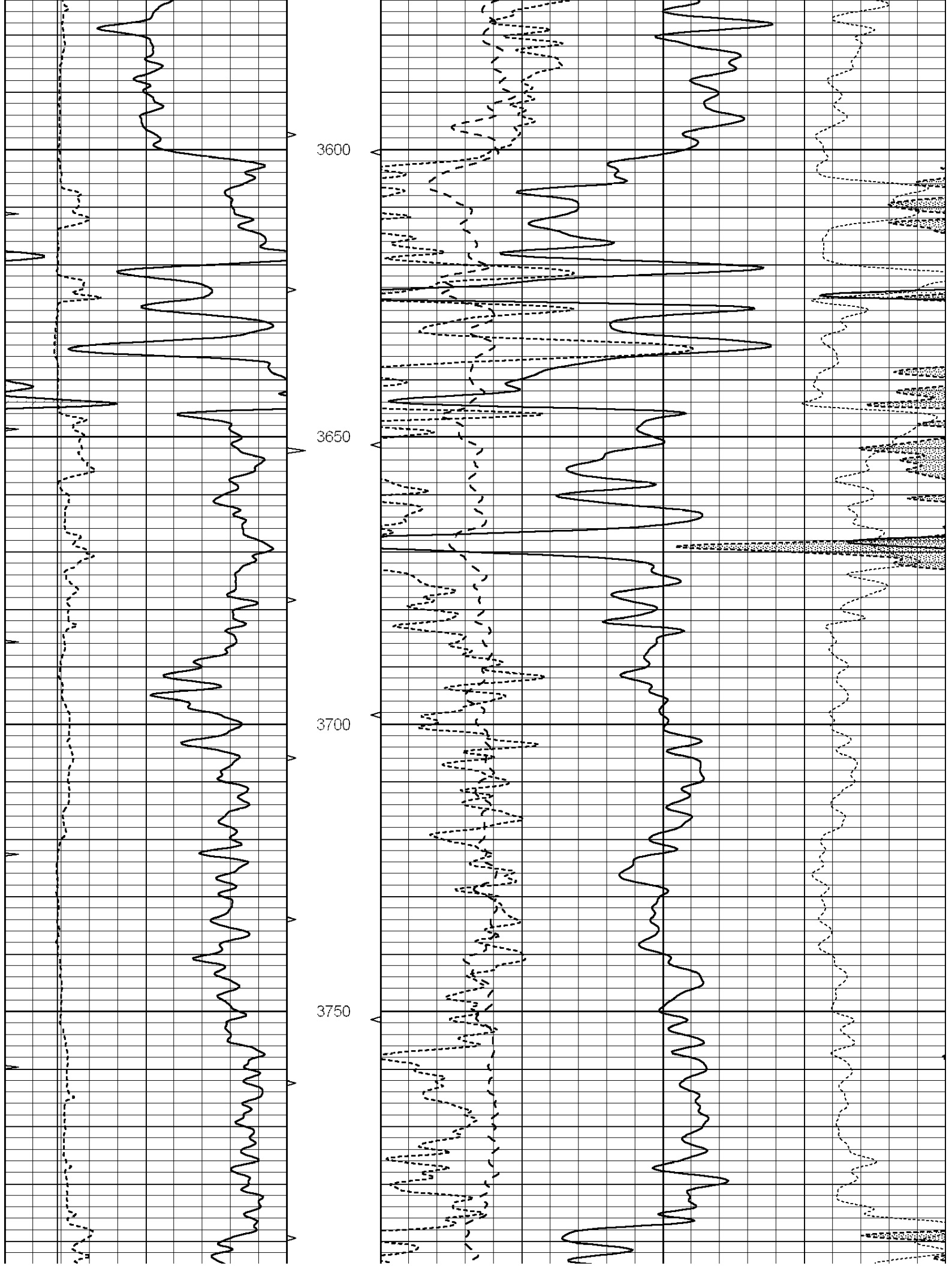
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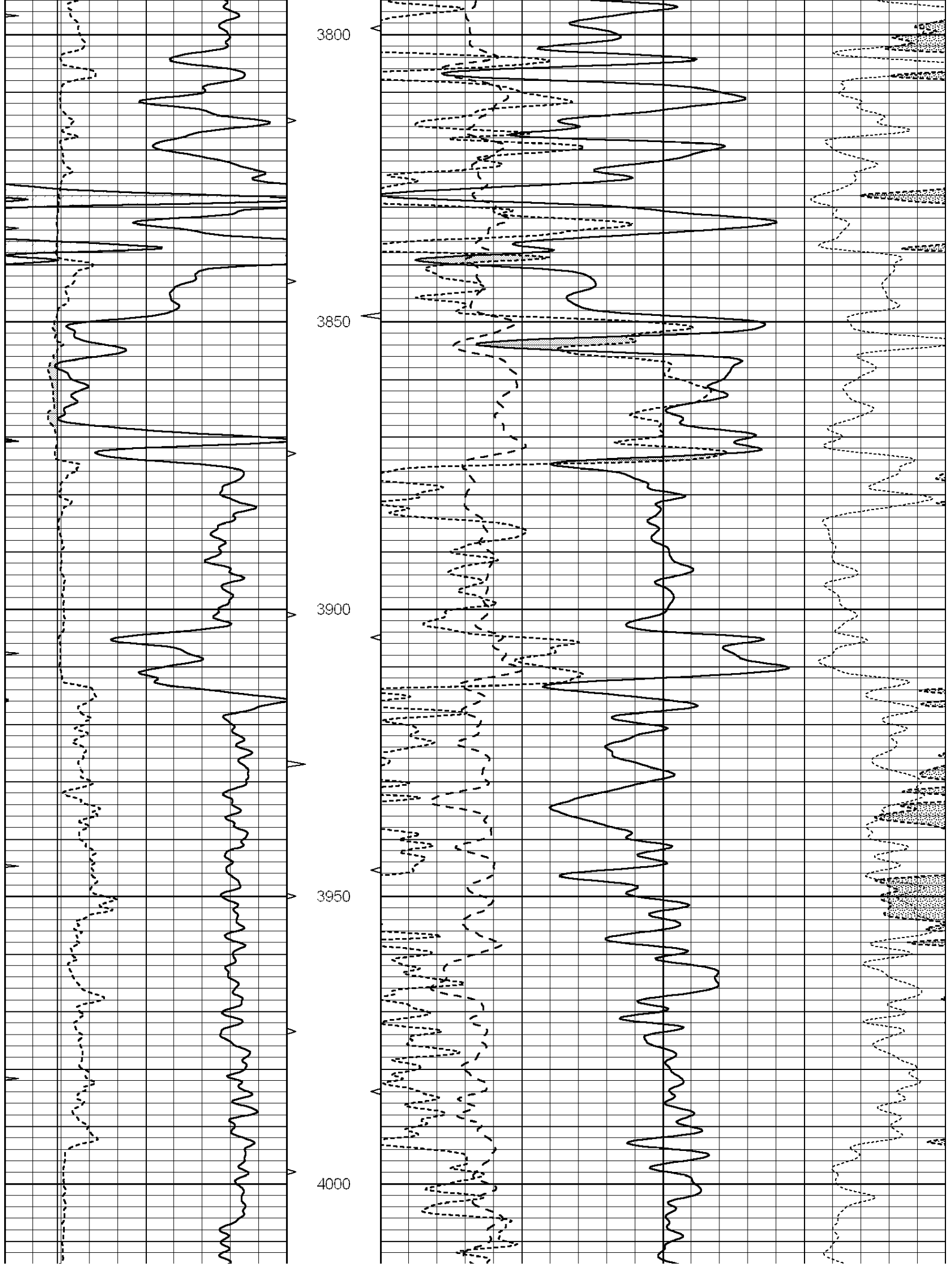
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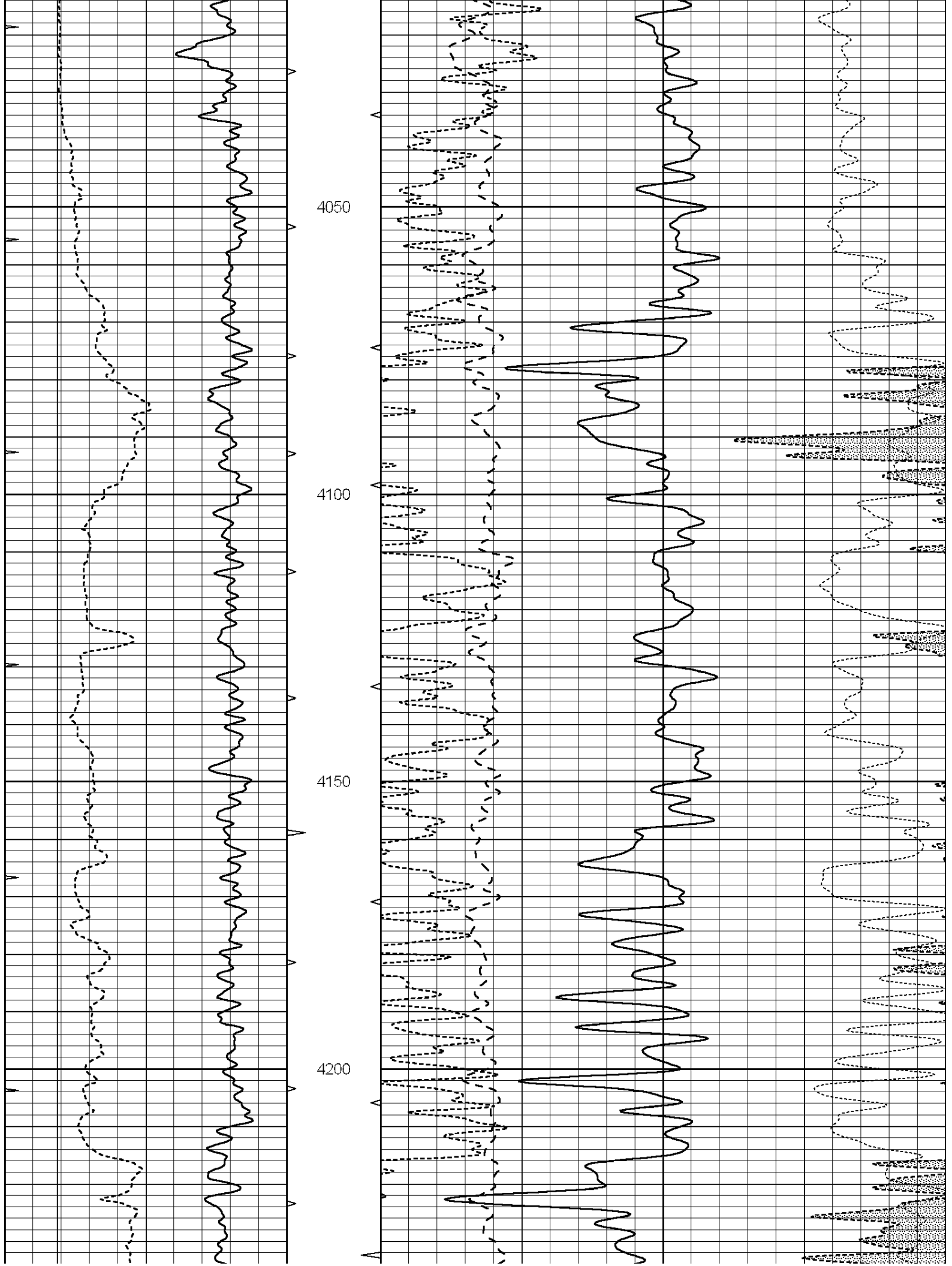
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6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)				-10

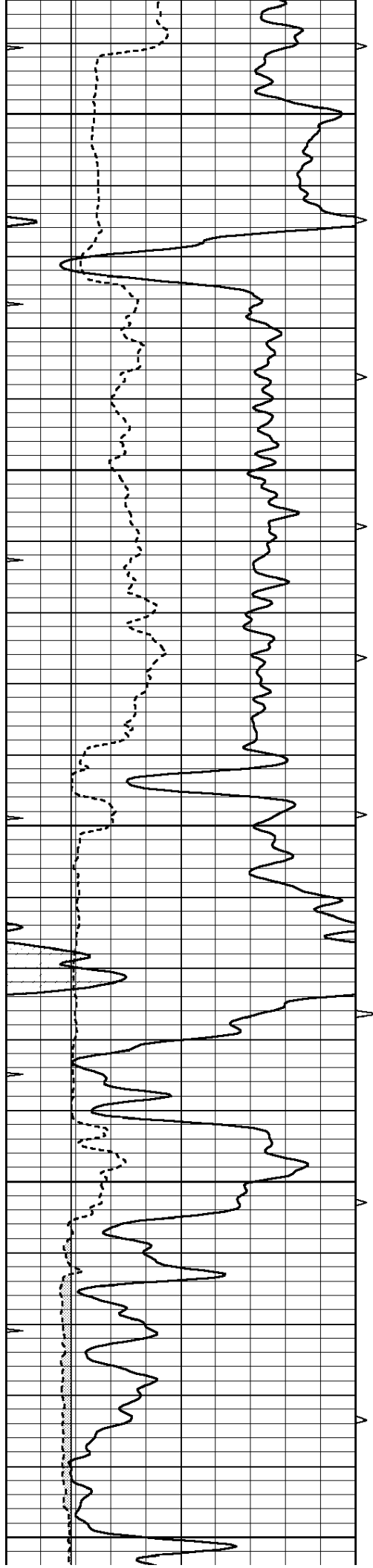
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10						











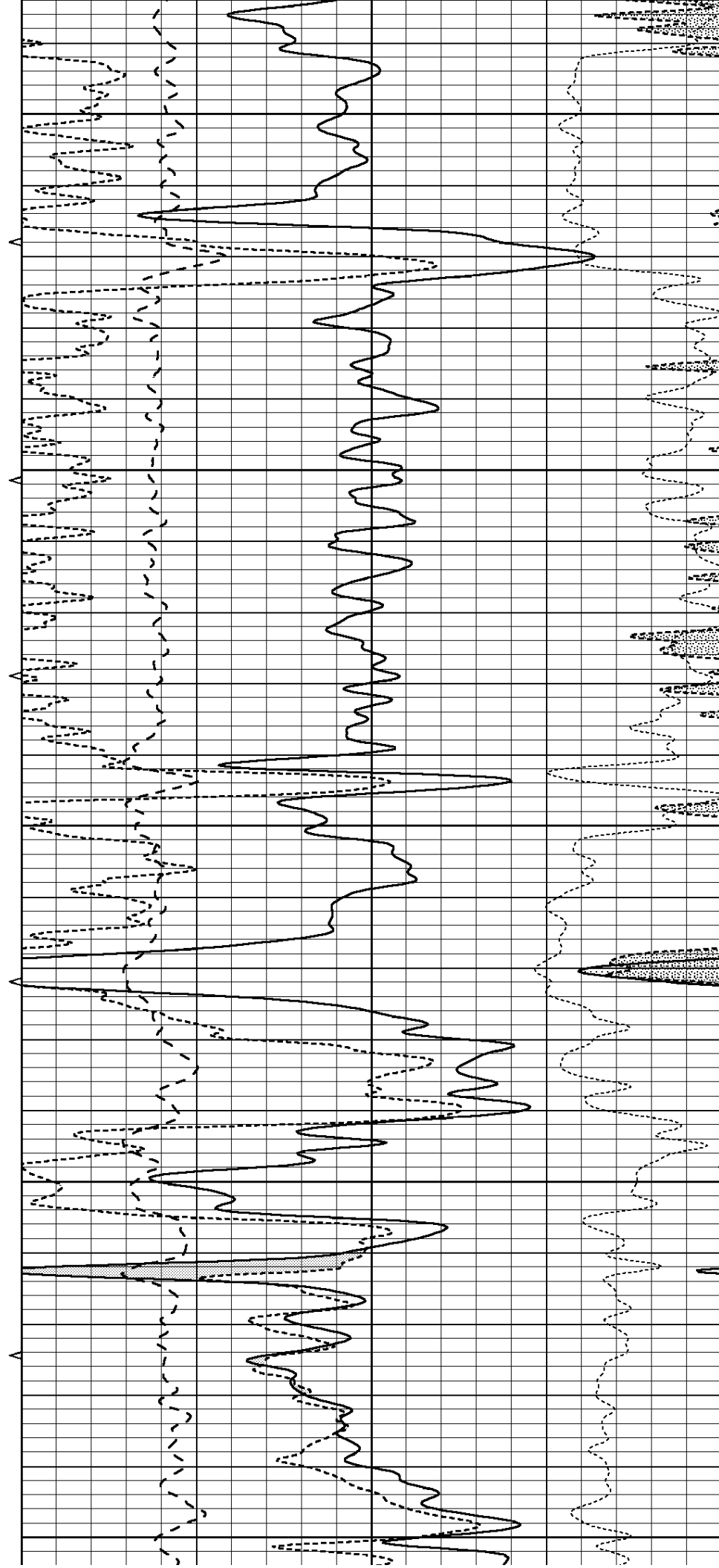
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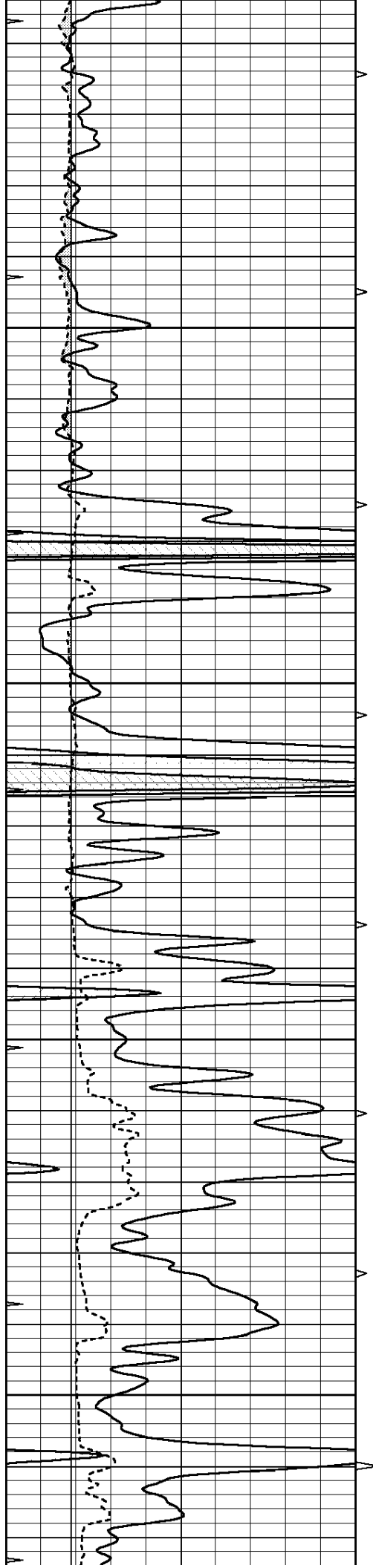
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4350

4400

4450



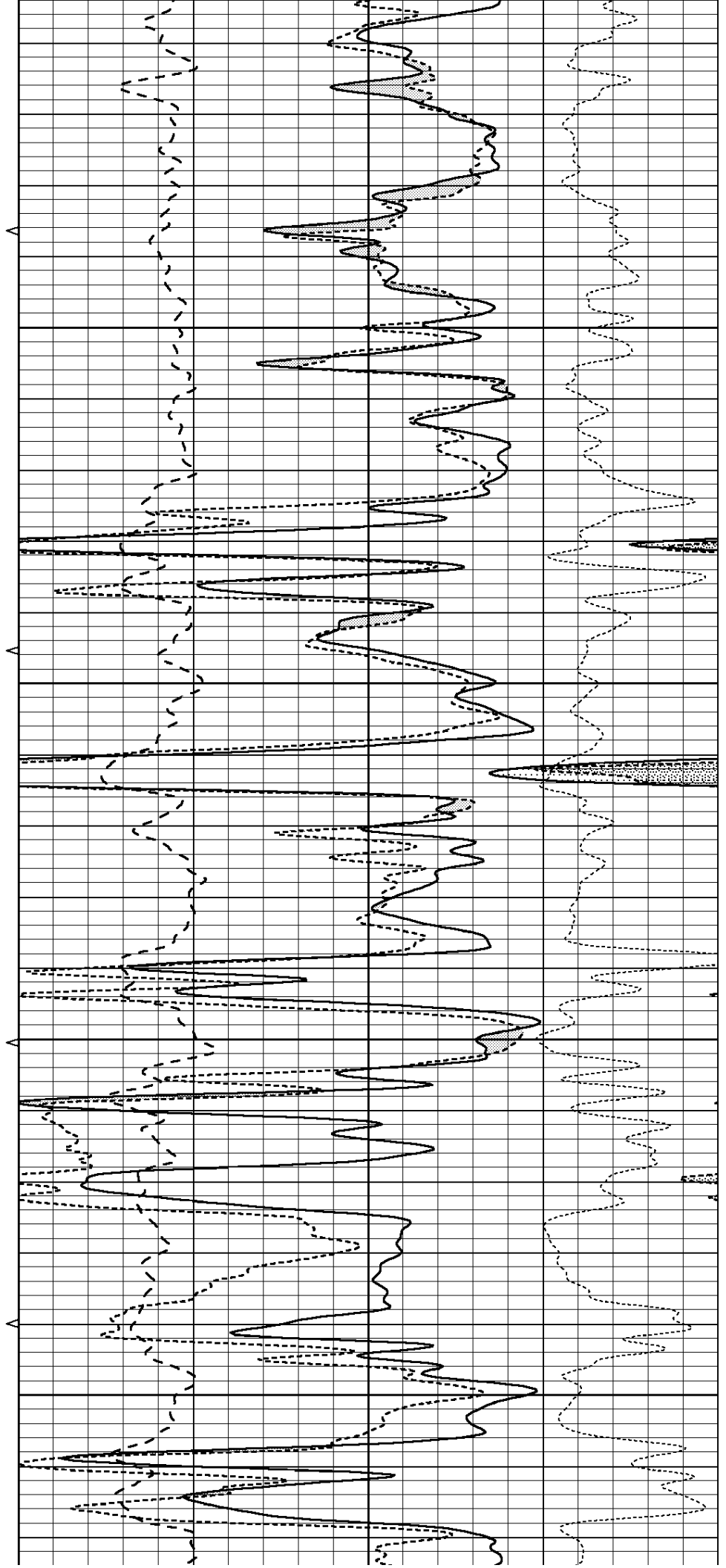


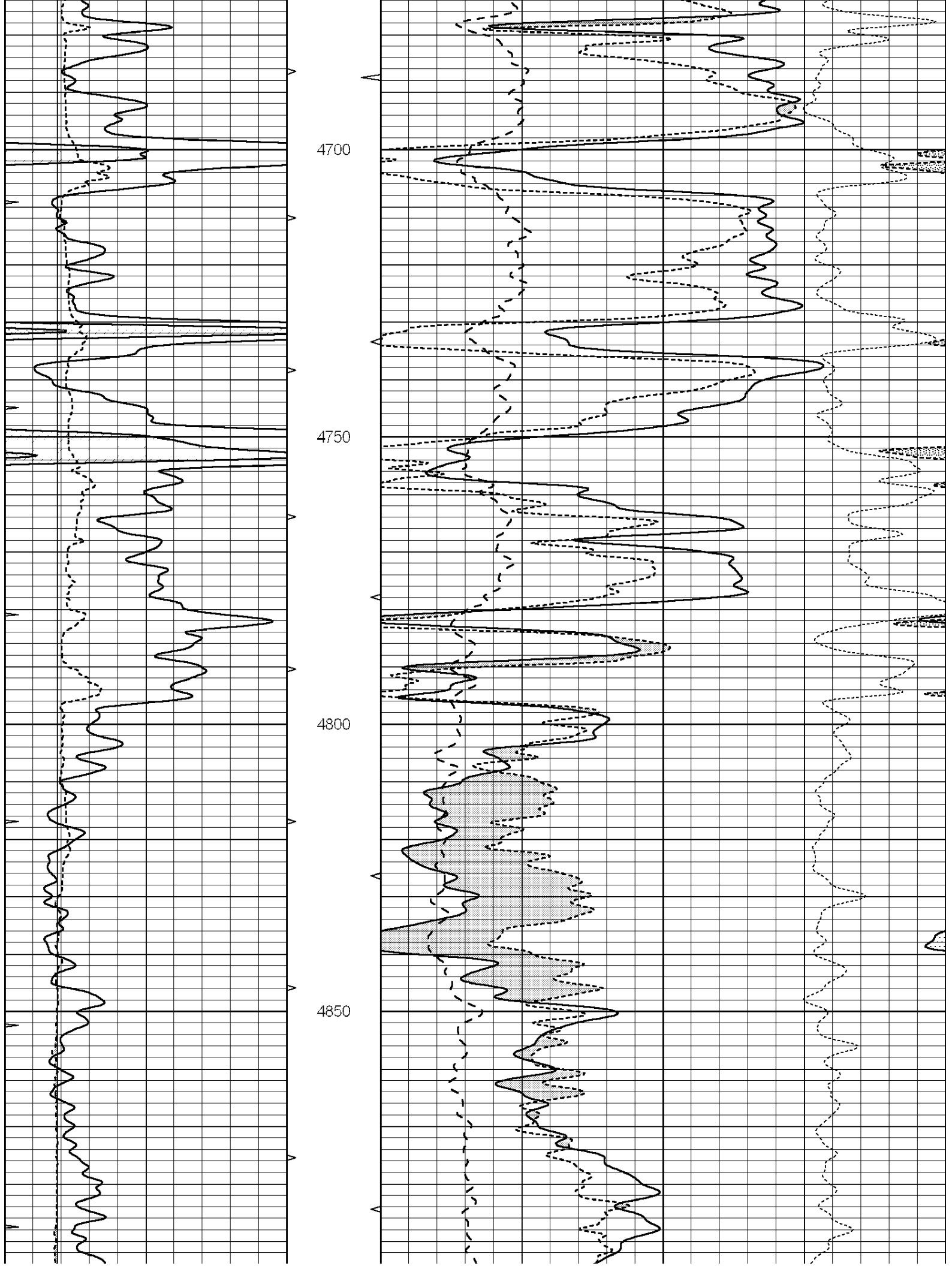
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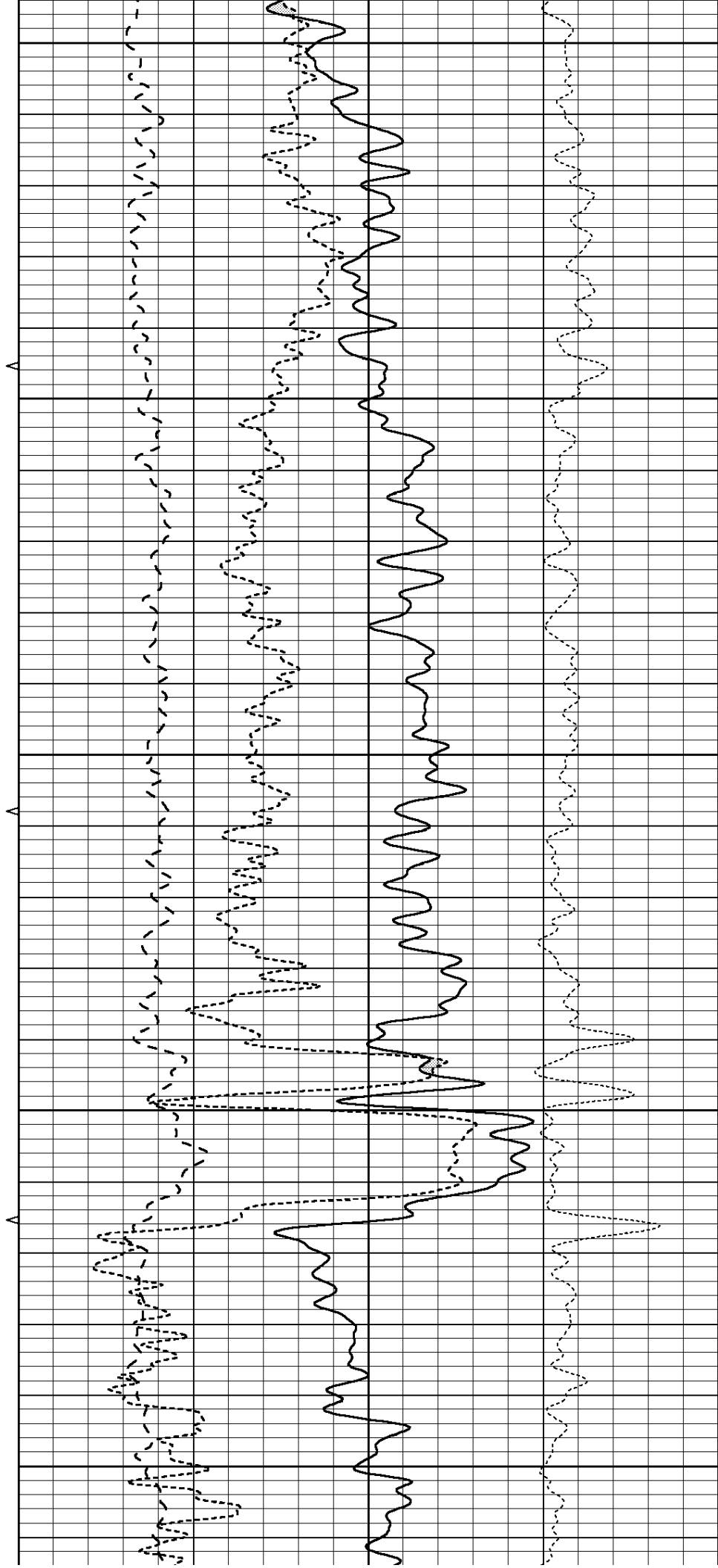
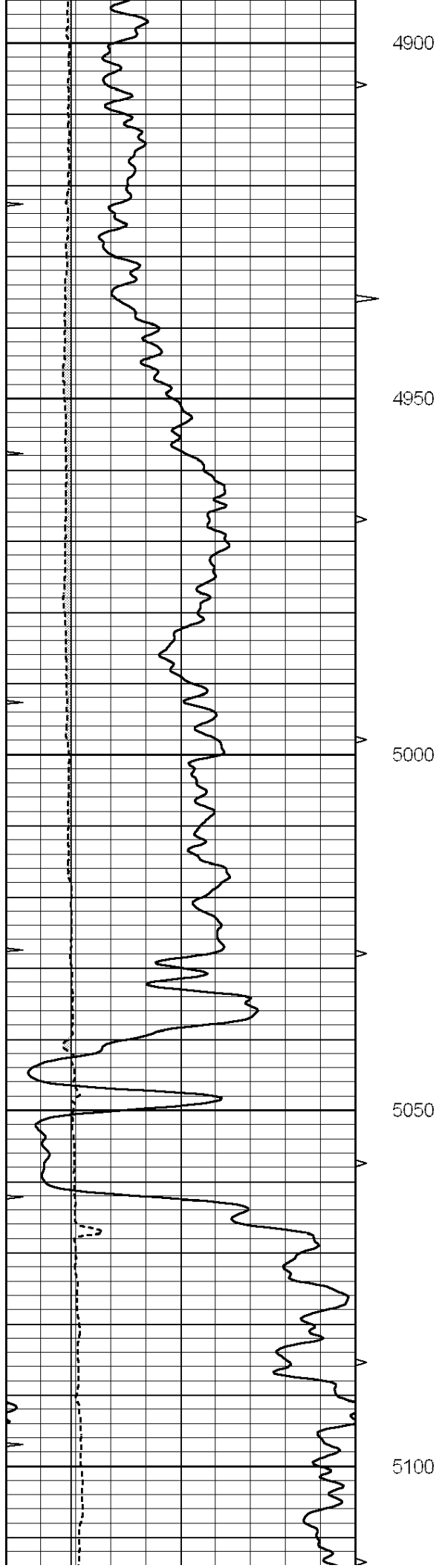
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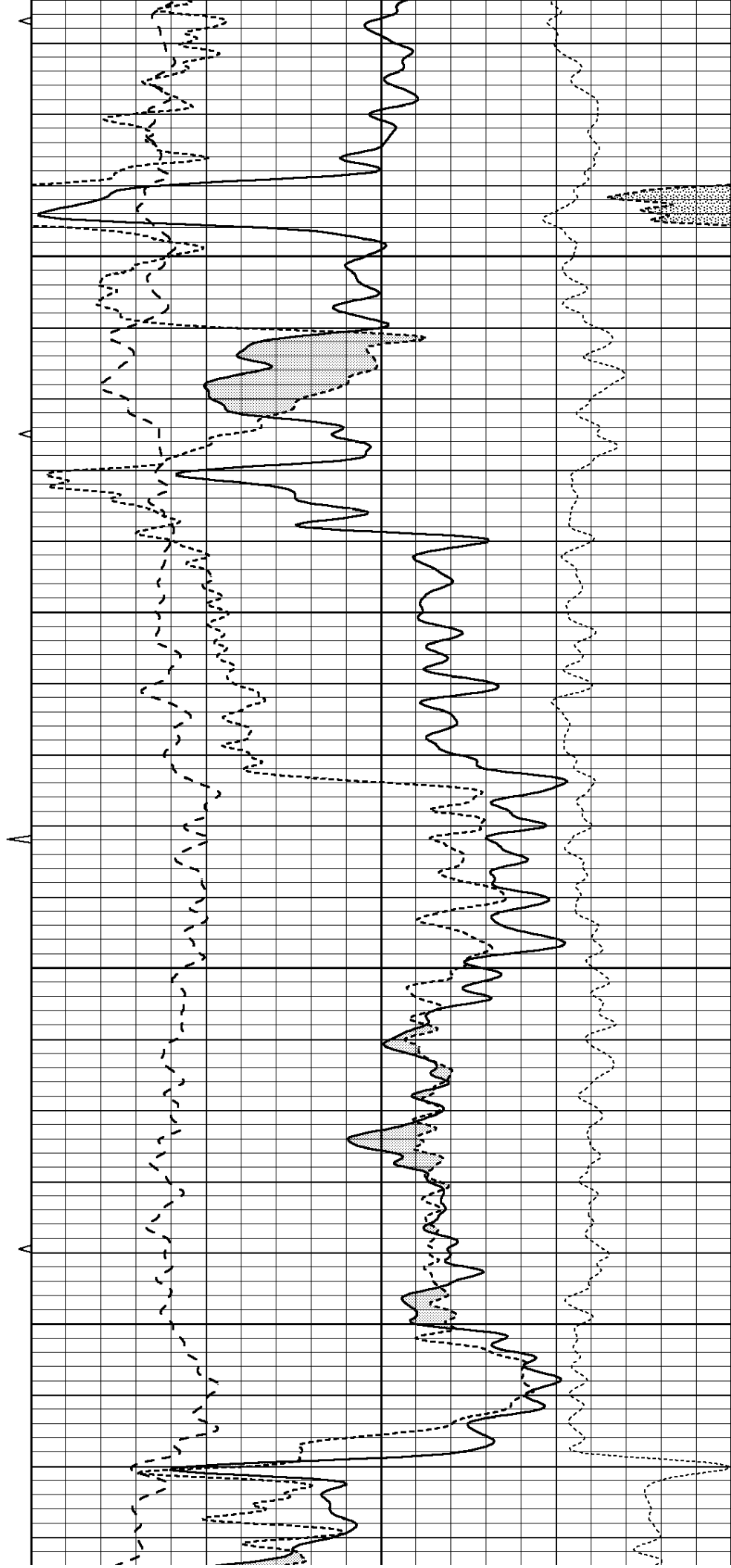
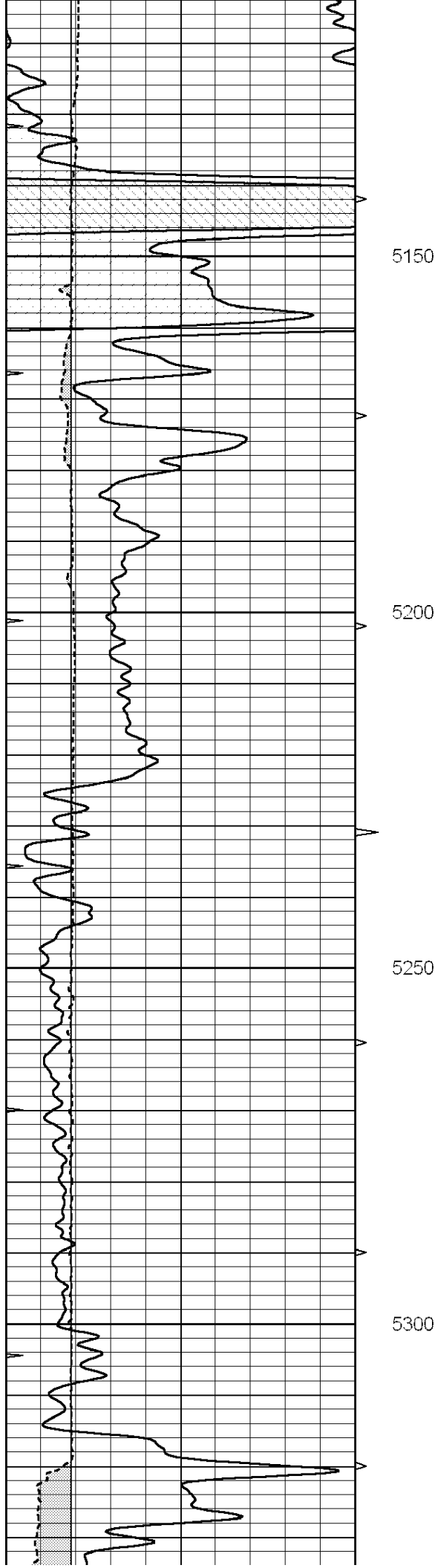
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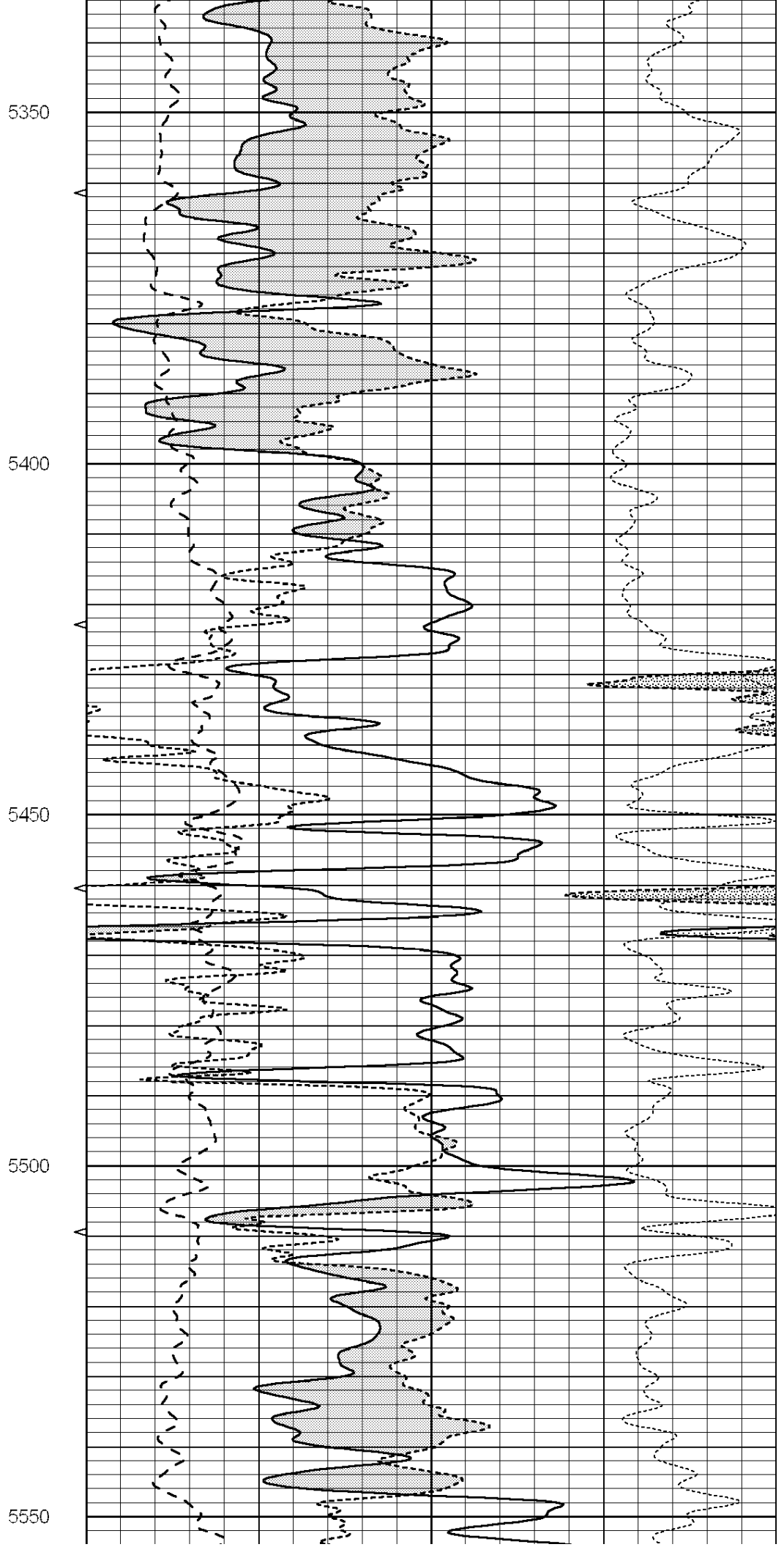
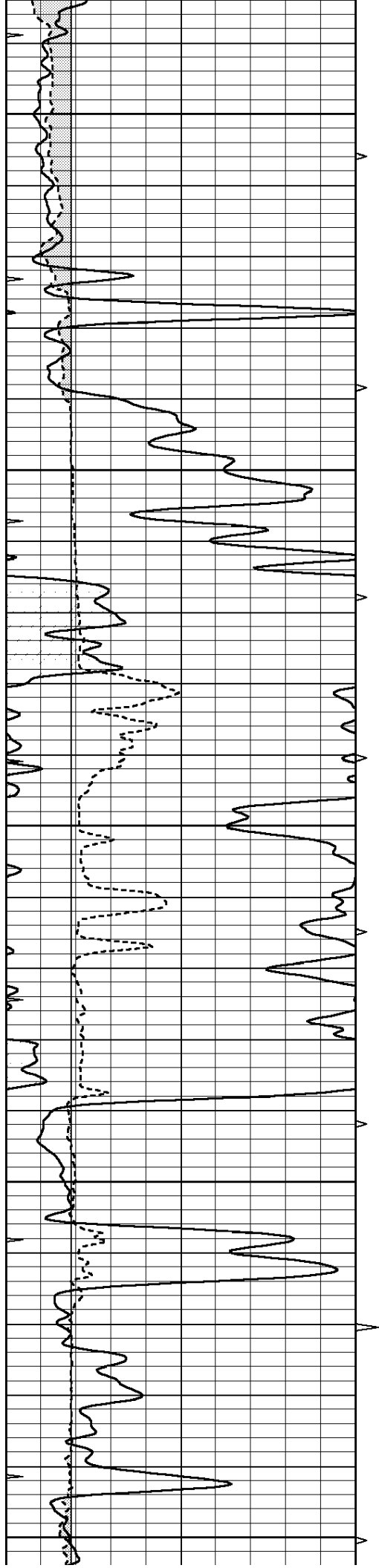
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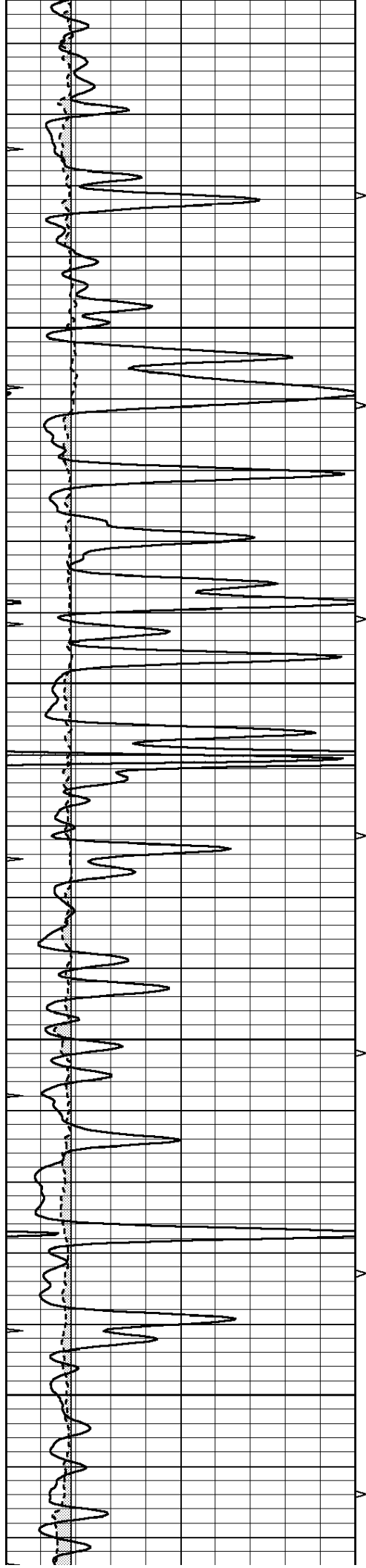










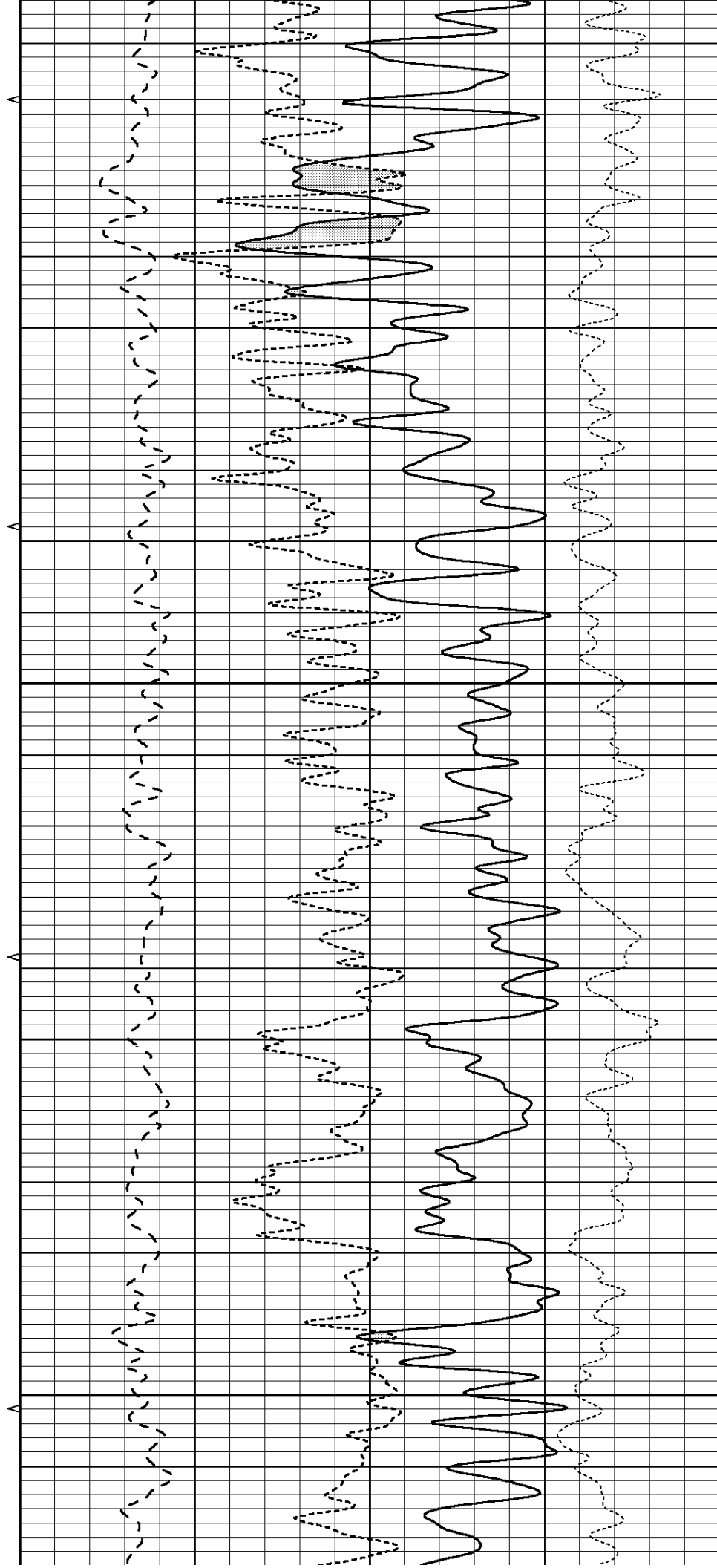


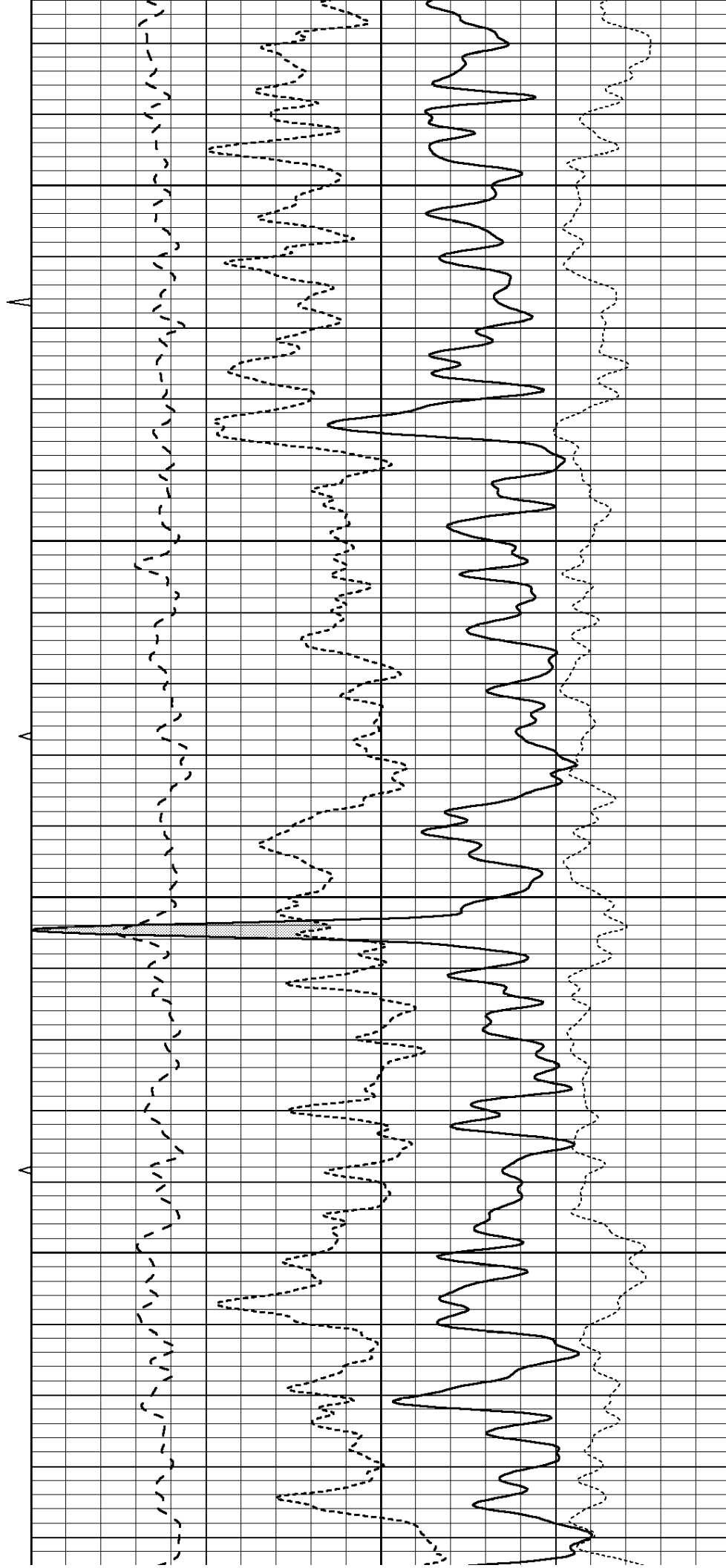
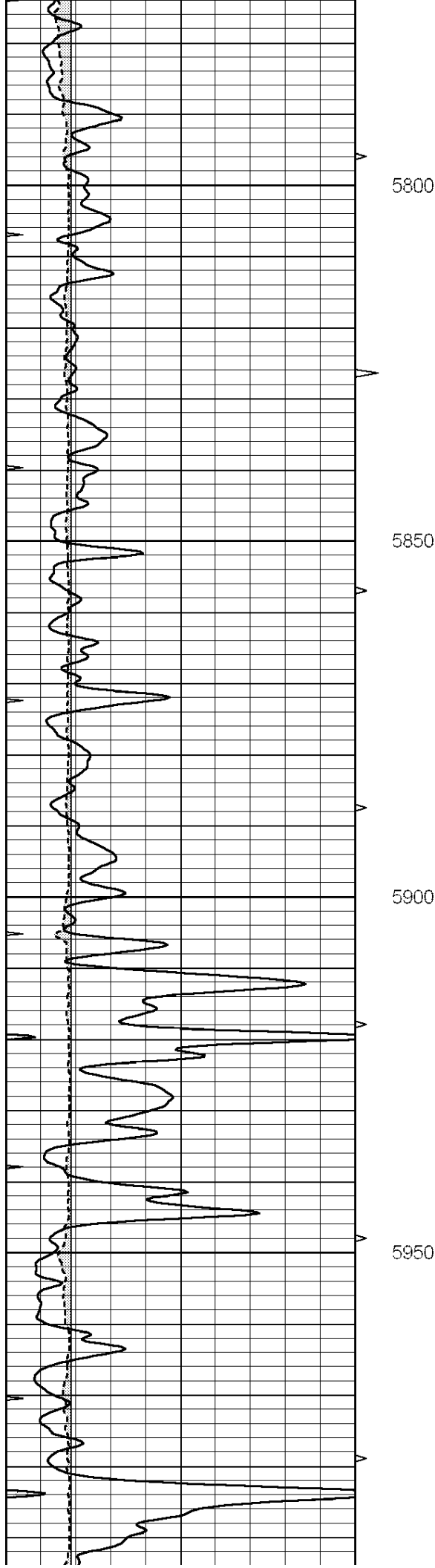
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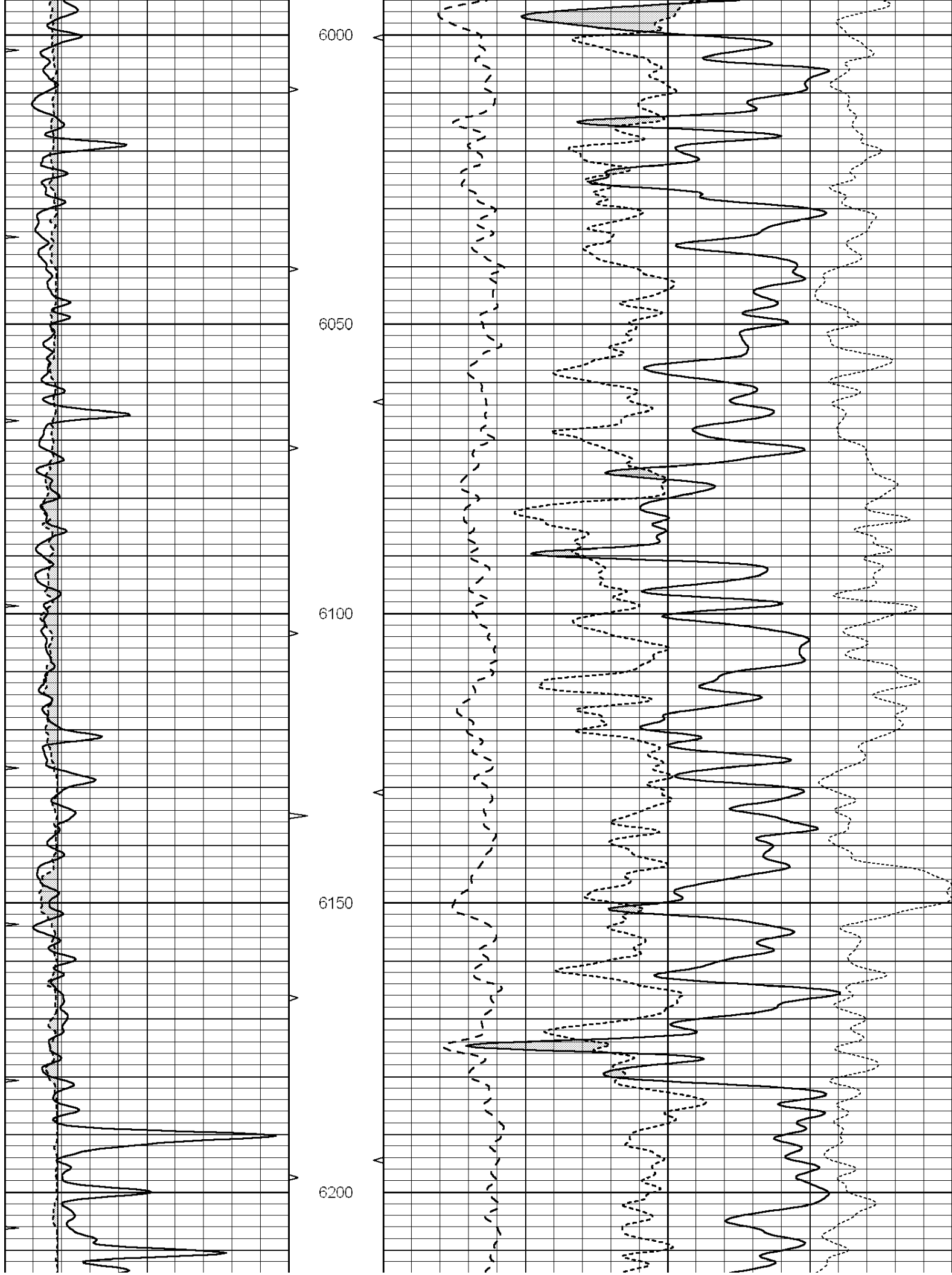
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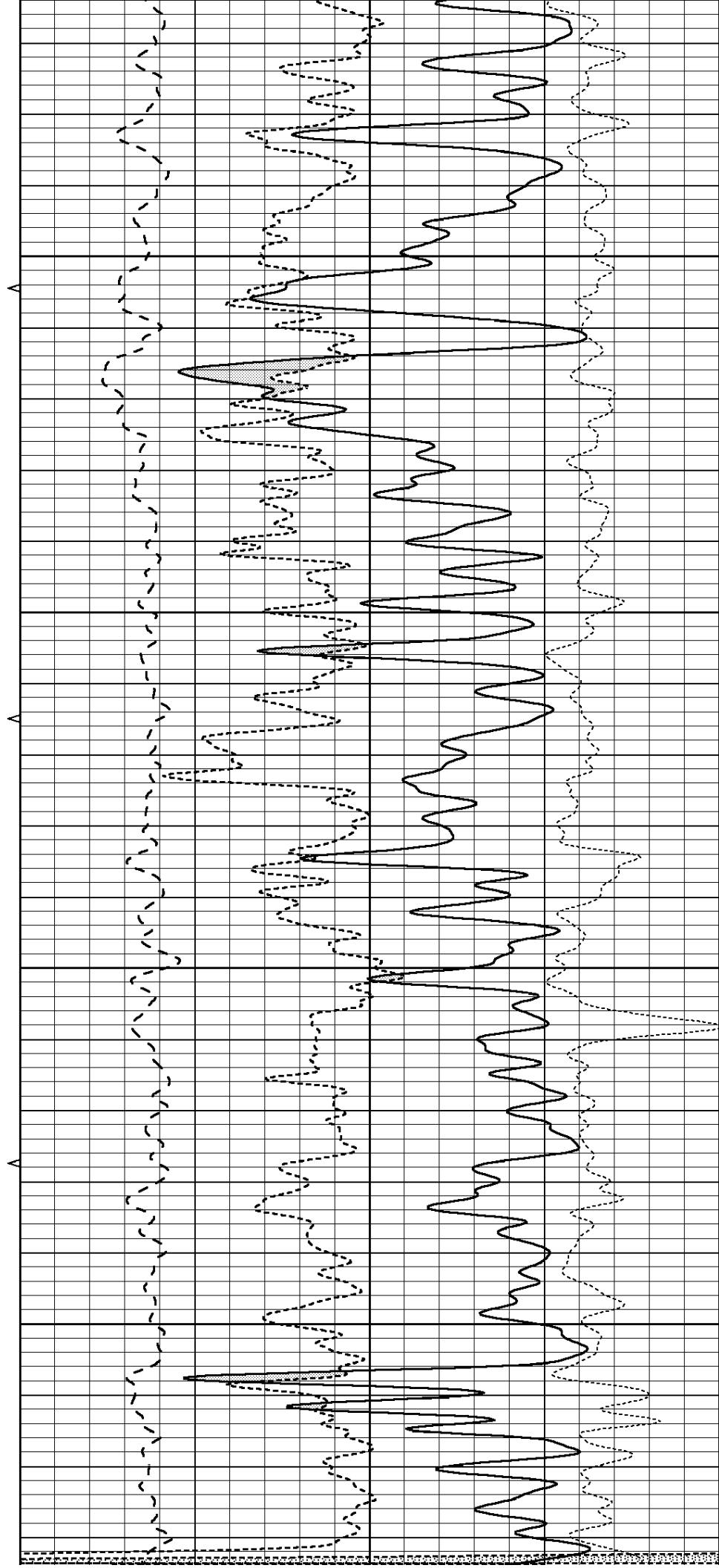
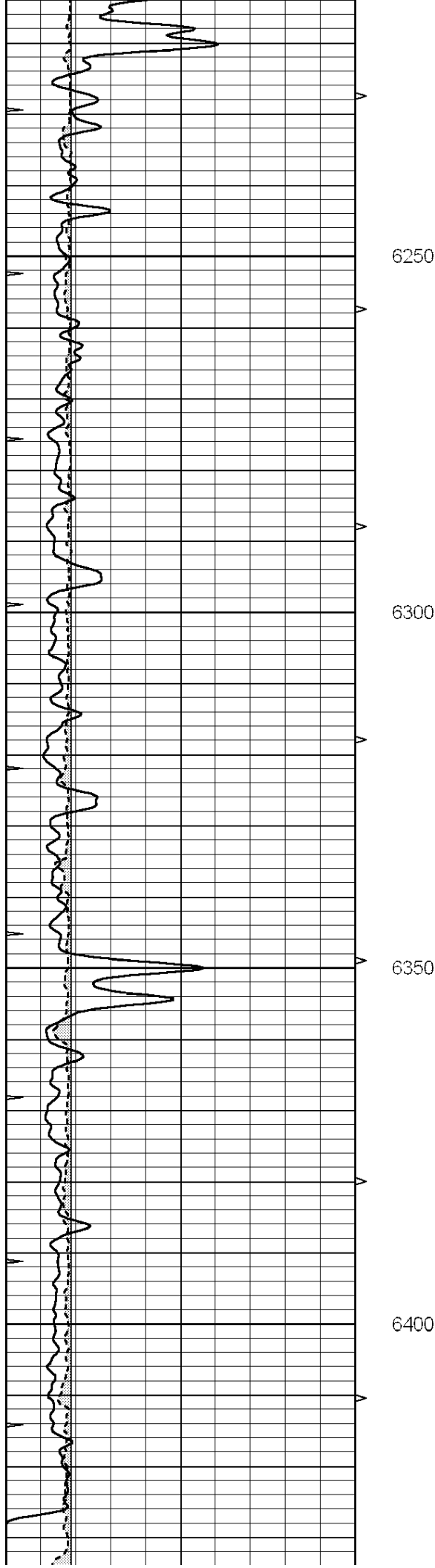
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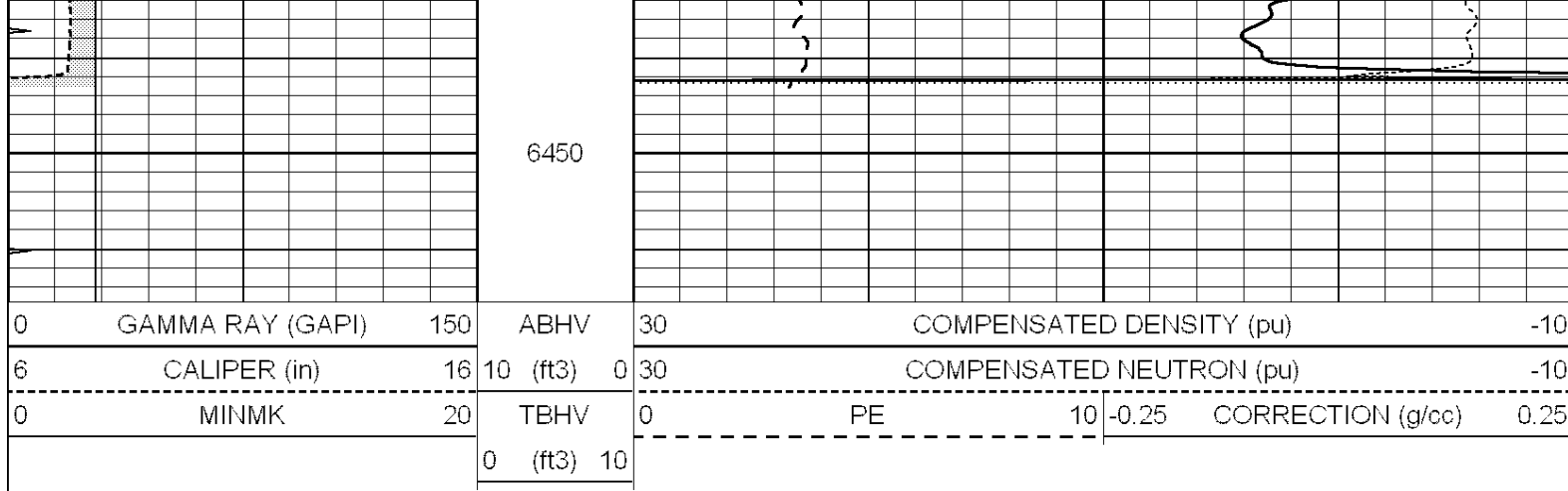
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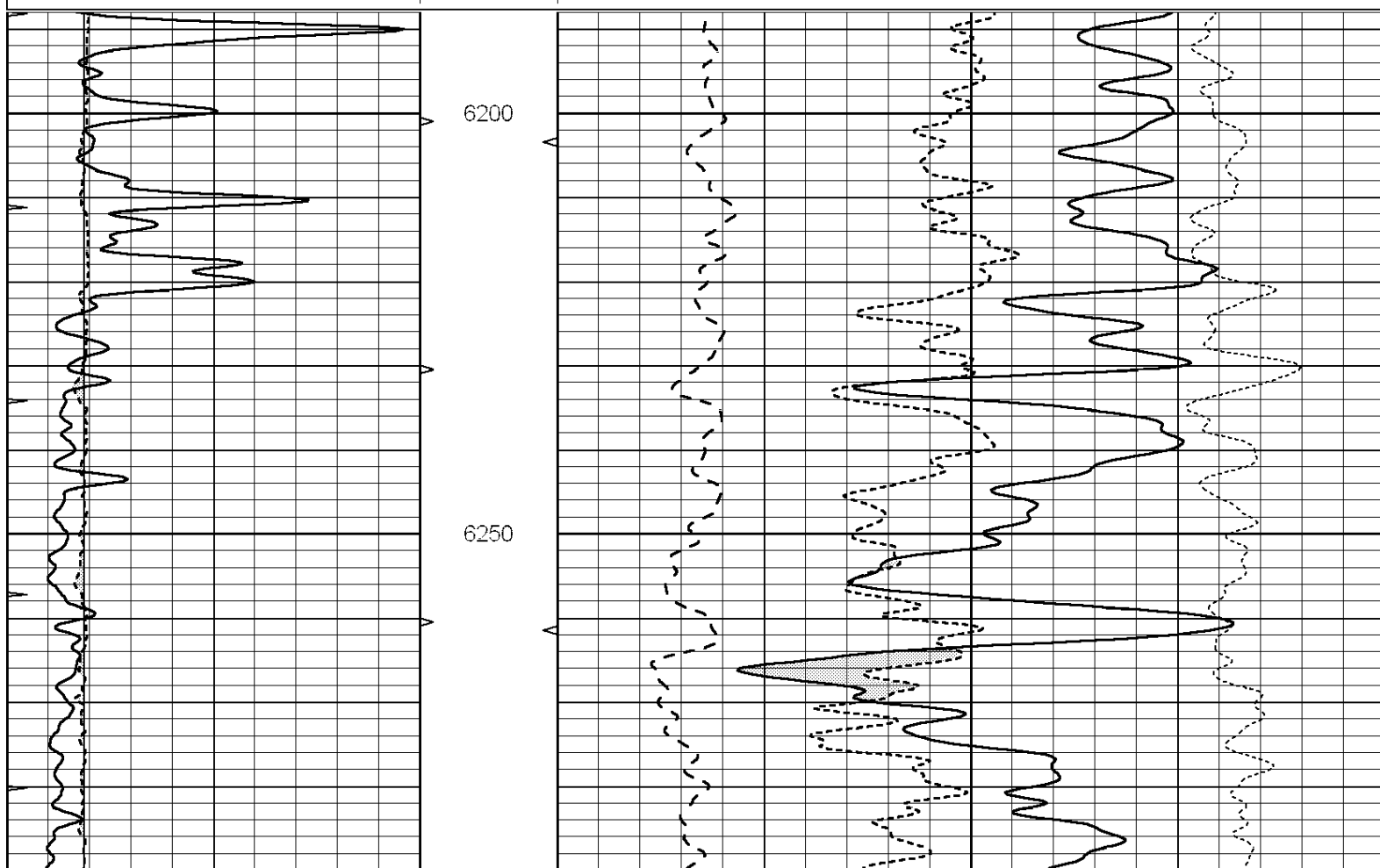
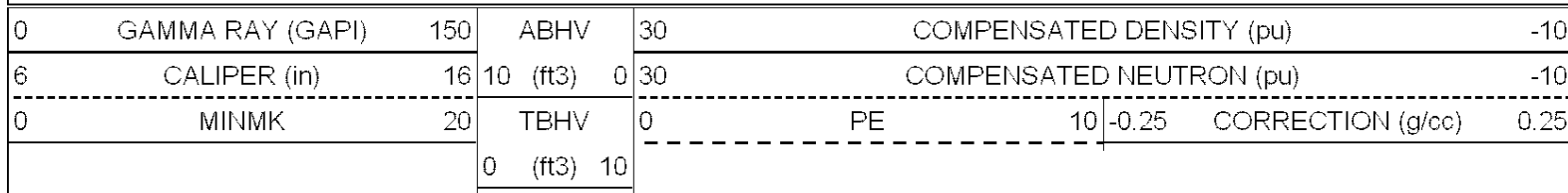






REPEAT SECTION

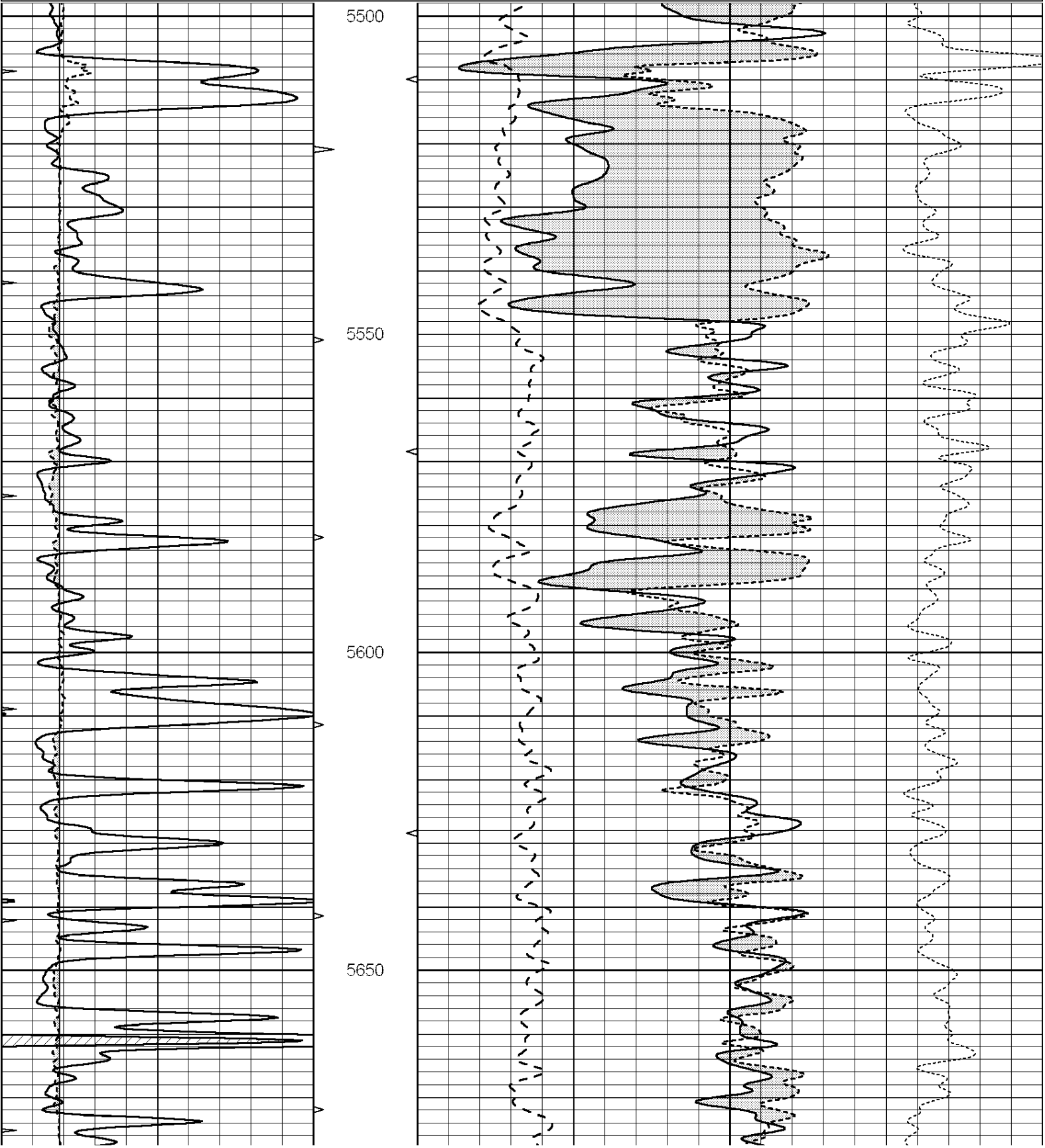
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 Dataset Creation: Tue Aug 06 19:16:29 2013 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

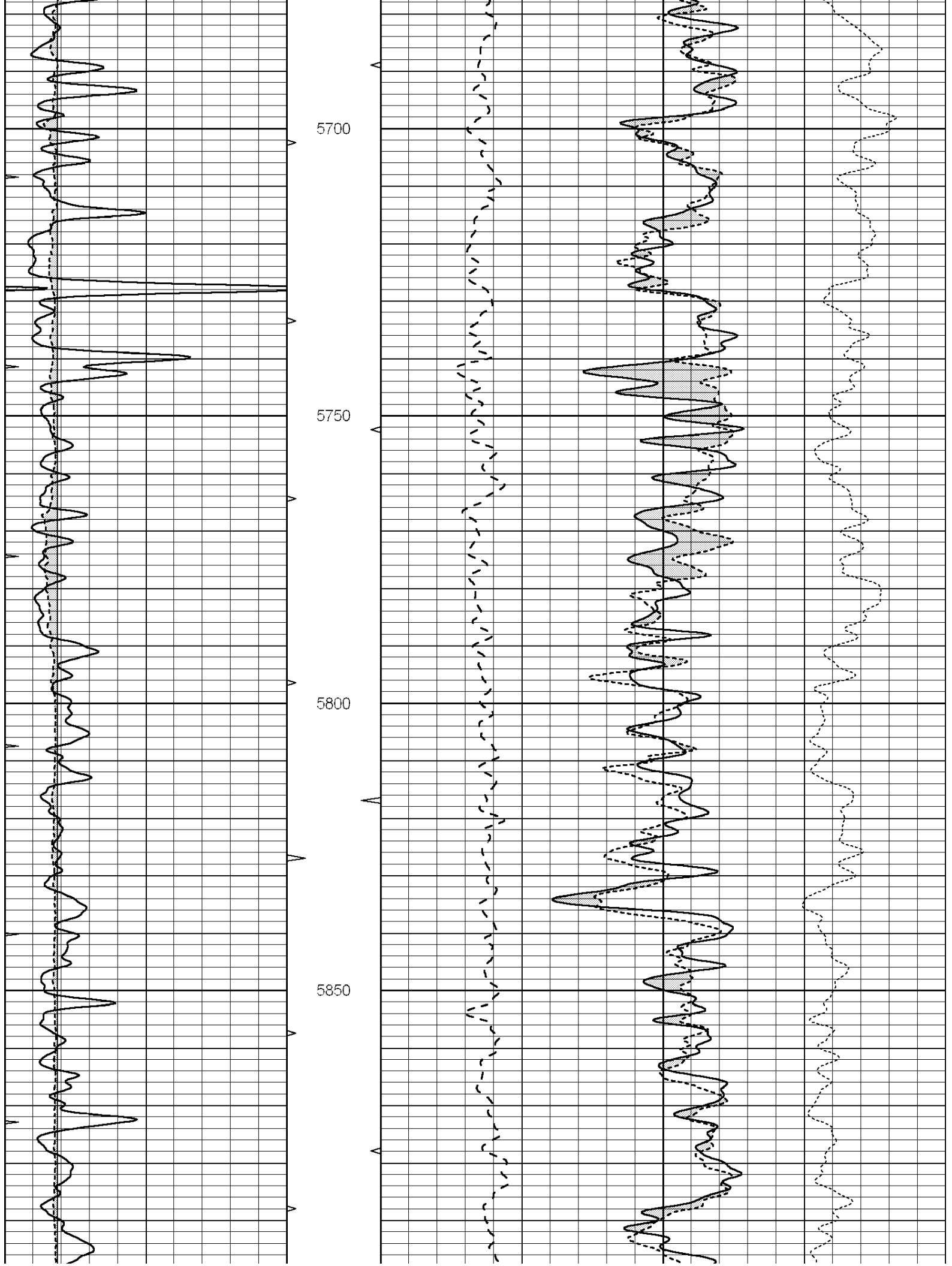


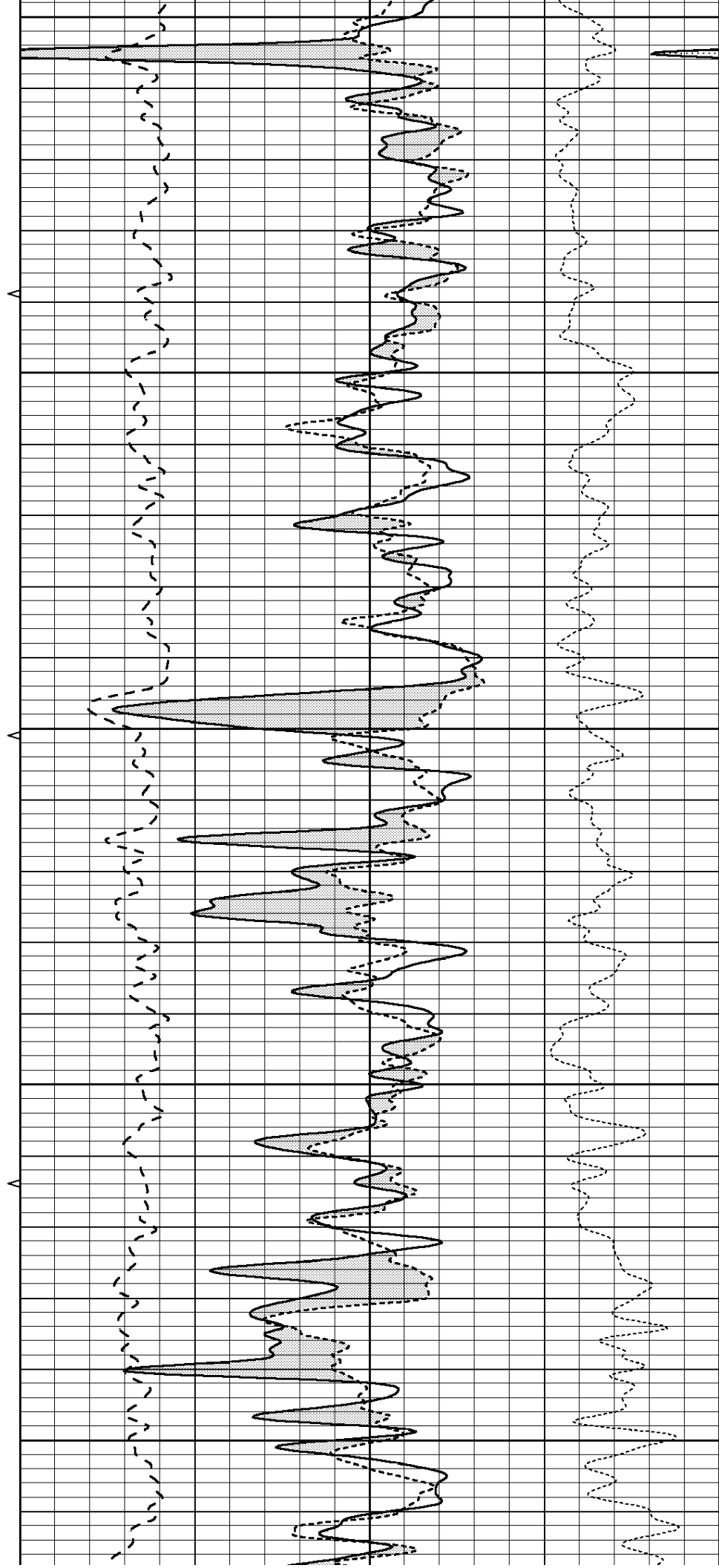
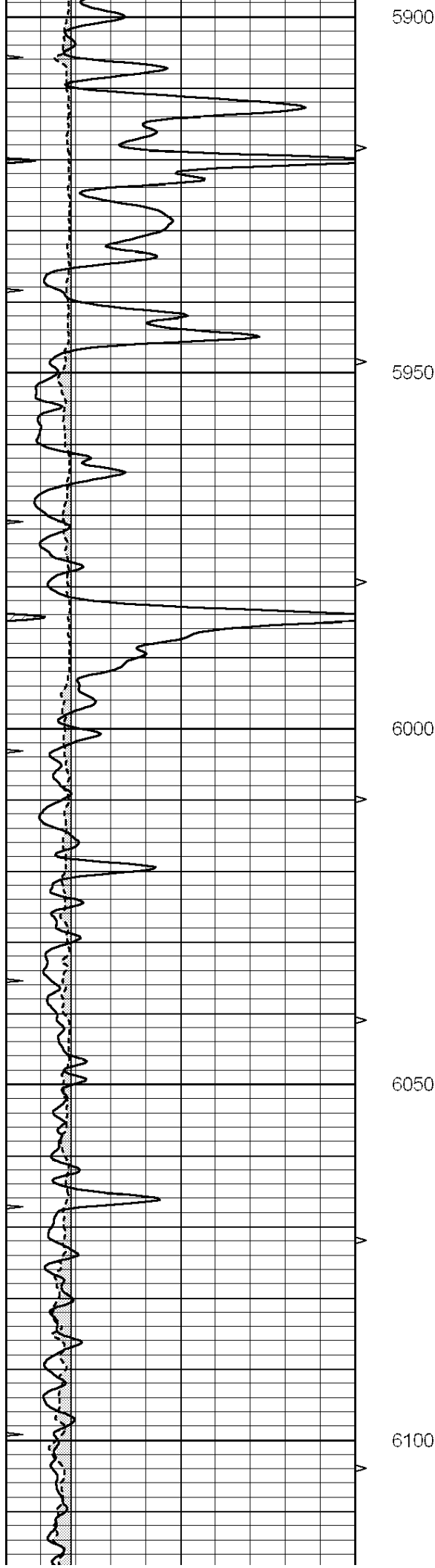


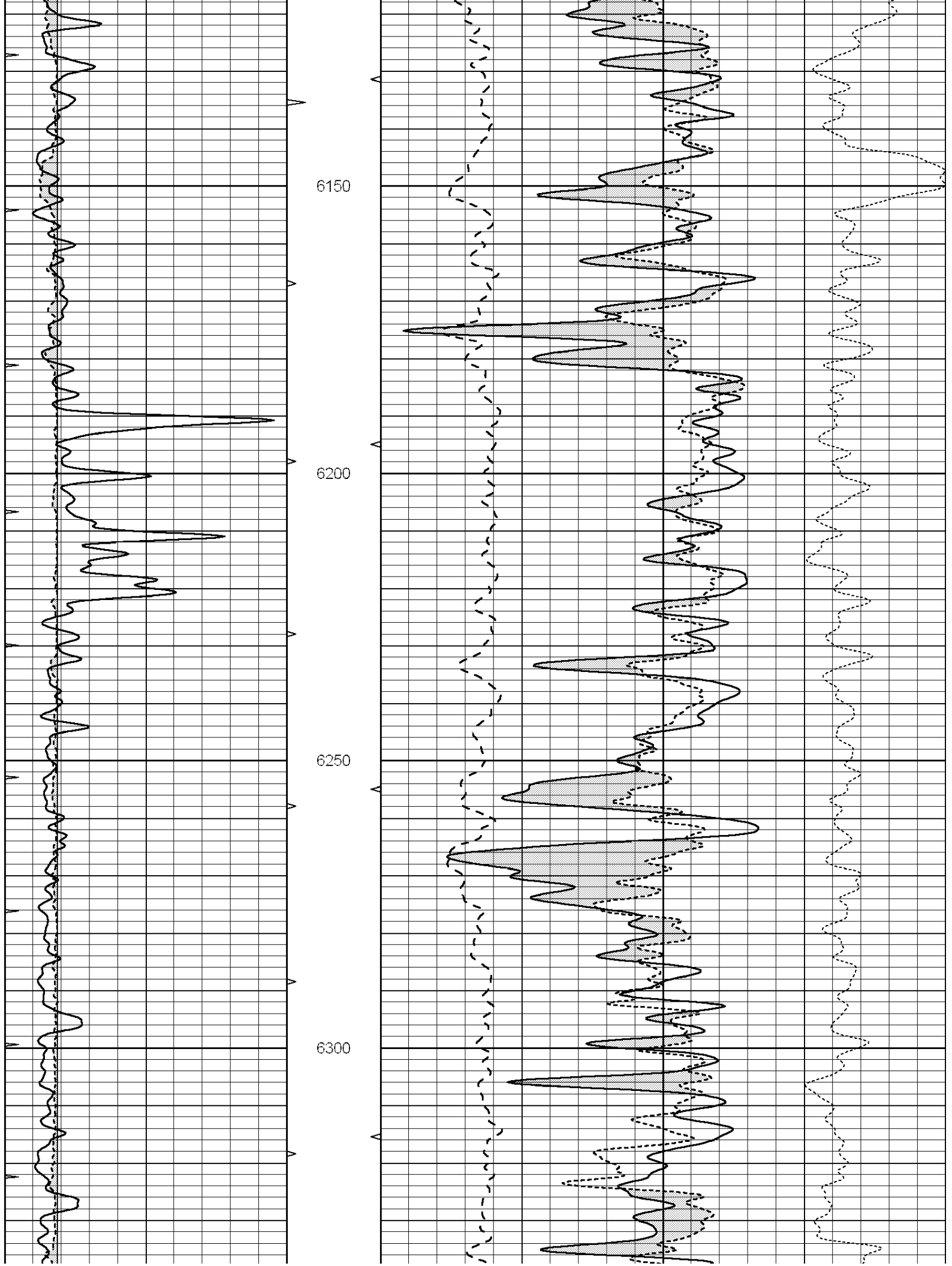
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Presentation Format: ldt_neuc
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Charted by: Depth in Feet scaled 1:240

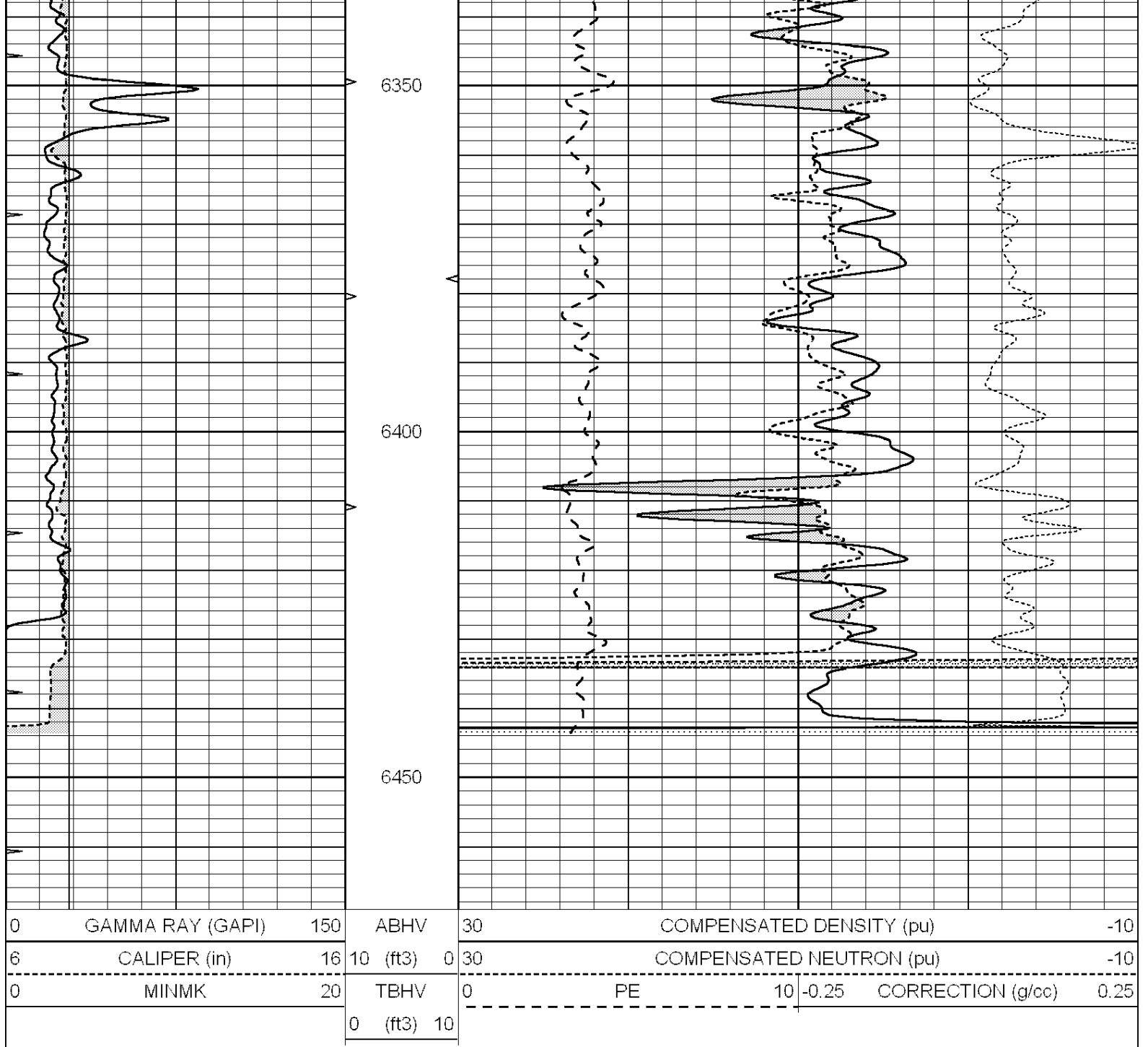
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					











Calibration Report

Database File: 011199pe.db
 Dataset Pathname: pass3.3
 Dataset Creation: Tue Aug 06 21:16:52 2013 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Tue Aug 06 18:50:23 2013
 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	621.923	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-3.000

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		312.9		319.8		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

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:	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