



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company WOOLSEY OPERATING CO. LLC.
Well STERNBERGER "B" #3
Field STRANATHAN
County BARBER
State KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.
Well STERNBERGER "B" #3
Field STRANATHAN
County BARBER State KANSAS

Location: API # : 15-007-24217-0000
2310' FSL & 2310' FWL
NE - NE - SW
SEC 12 TWP 35S RGE 12W
Permanent Datum GROUND LEVEL Elevation 1349
Log Measured From KELLY BUSHING 12' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
Elevation
K.B. 1361
D.F. 1359
G.L. 1349

Date	9/26/14		
Run Number	ONE		
Depth Driller	5410		
Depth Logger	5411		
Bottom Logged Interval	5387		
Top Log Interval	1600		
Casing Driller	13 3/8" @ 219'		
Casing Logger	214		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,000 PPM	
Density / Viscosity	9.0/53		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.700 @ 70F		
Rmf @ Meas. Temp	.525 @ 70F		
Rmc @ Meas. Temp	.840 @ 70F		
Source of Rmf / Rmc	MEASUREMENT		
Rin @ BHT	.380 @ 129F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	10:15 P.M.		
Maximum Recorded Temperature	129F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BILL KLAVER		

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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

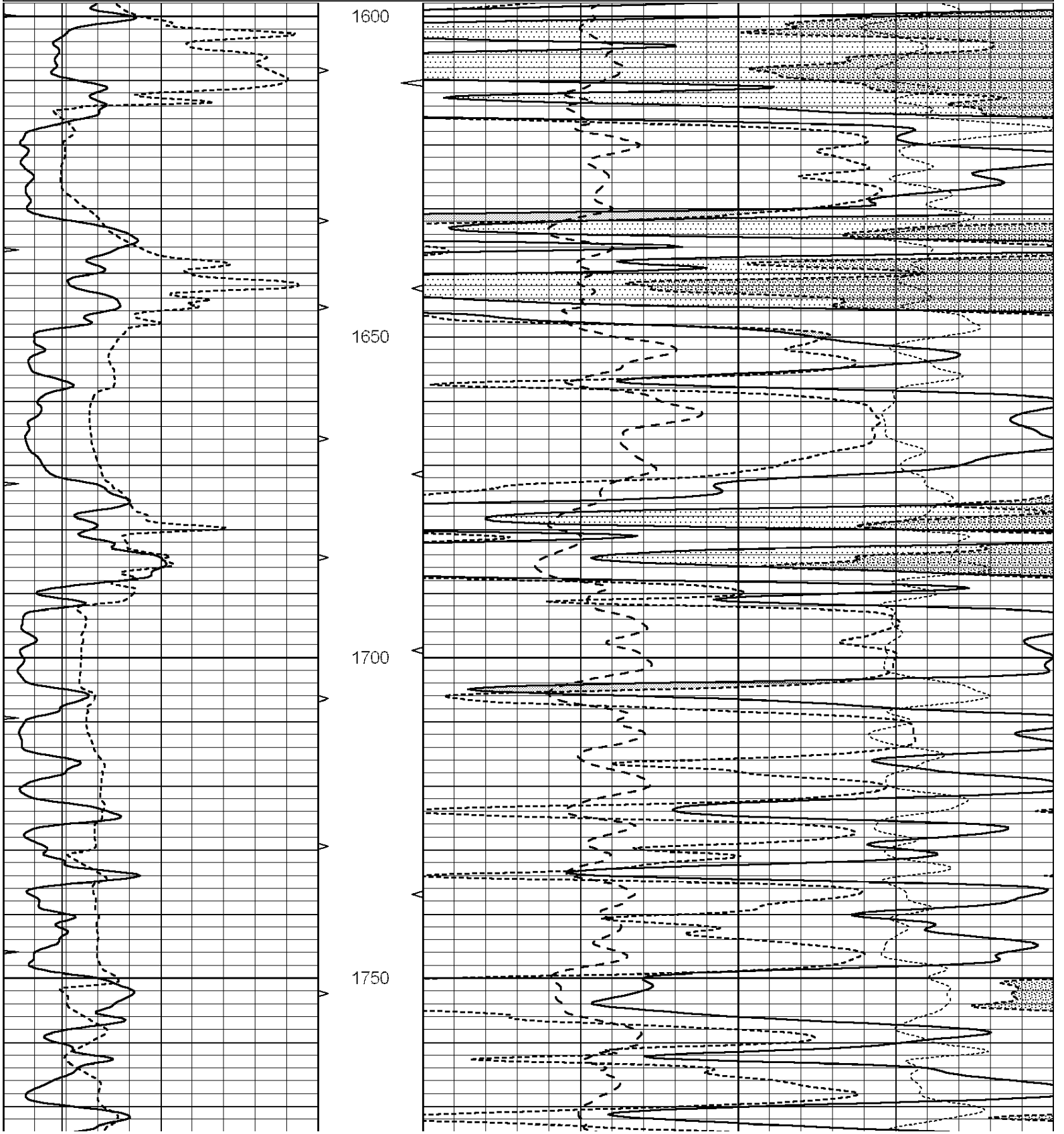
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
HARDTNER, KS., E. ON HWY 281 TO (BLACK & GREEN TANKS ON N. SIDE), S. INTO CATTLE GUARD.
FOLLOW TRAIL S. & E. & N. 3/4 MILE

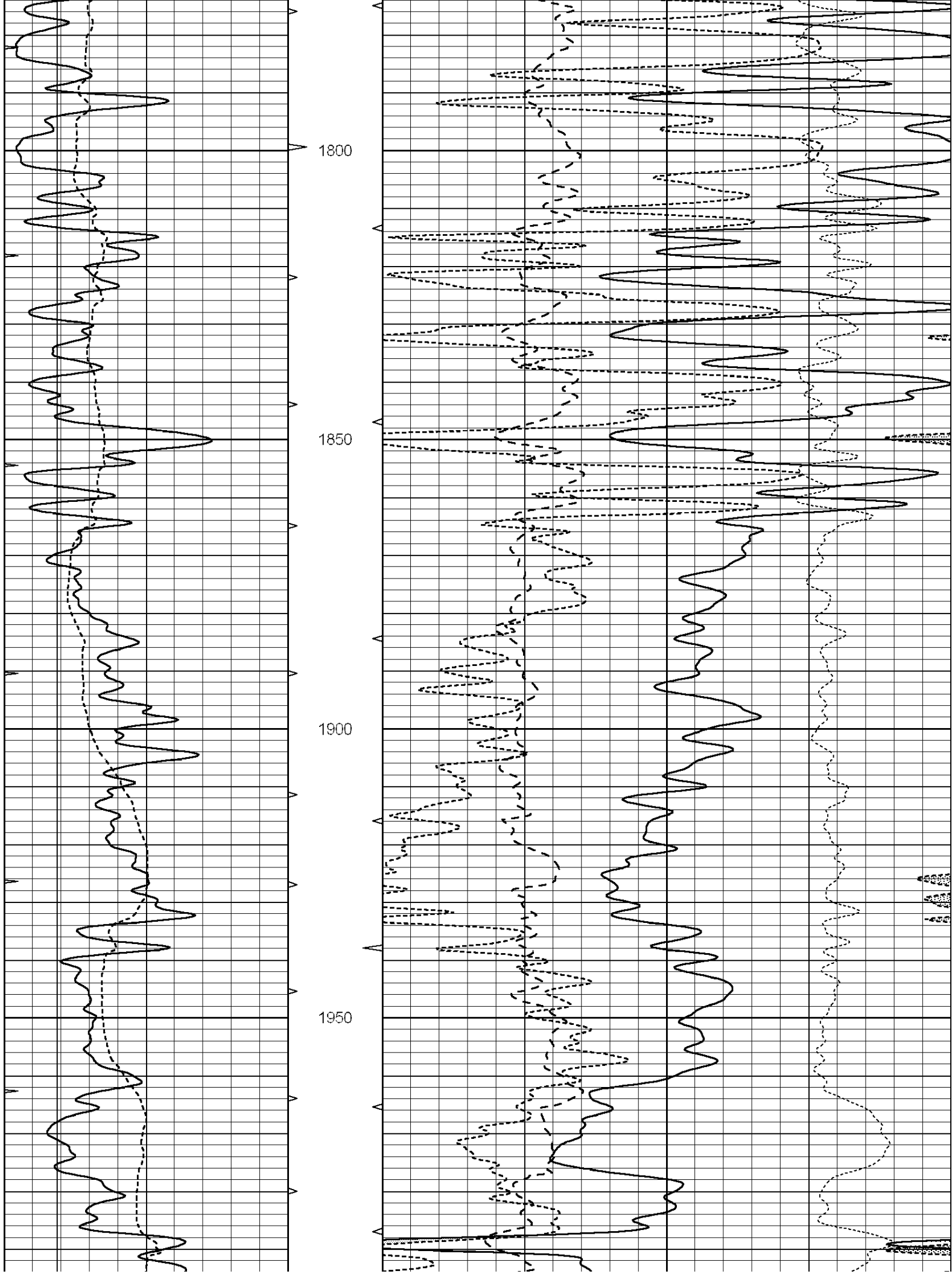


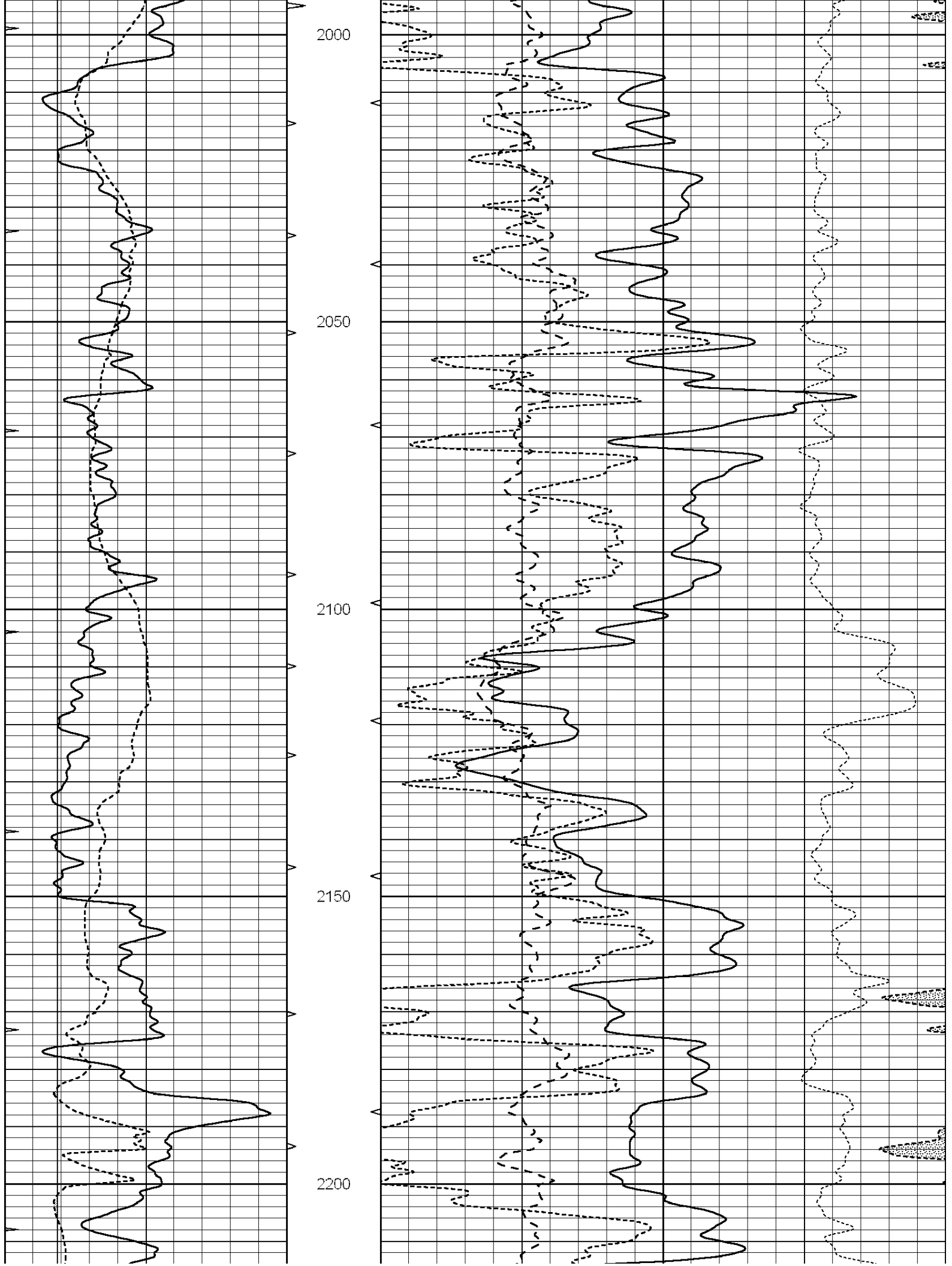
MAIN SECTION

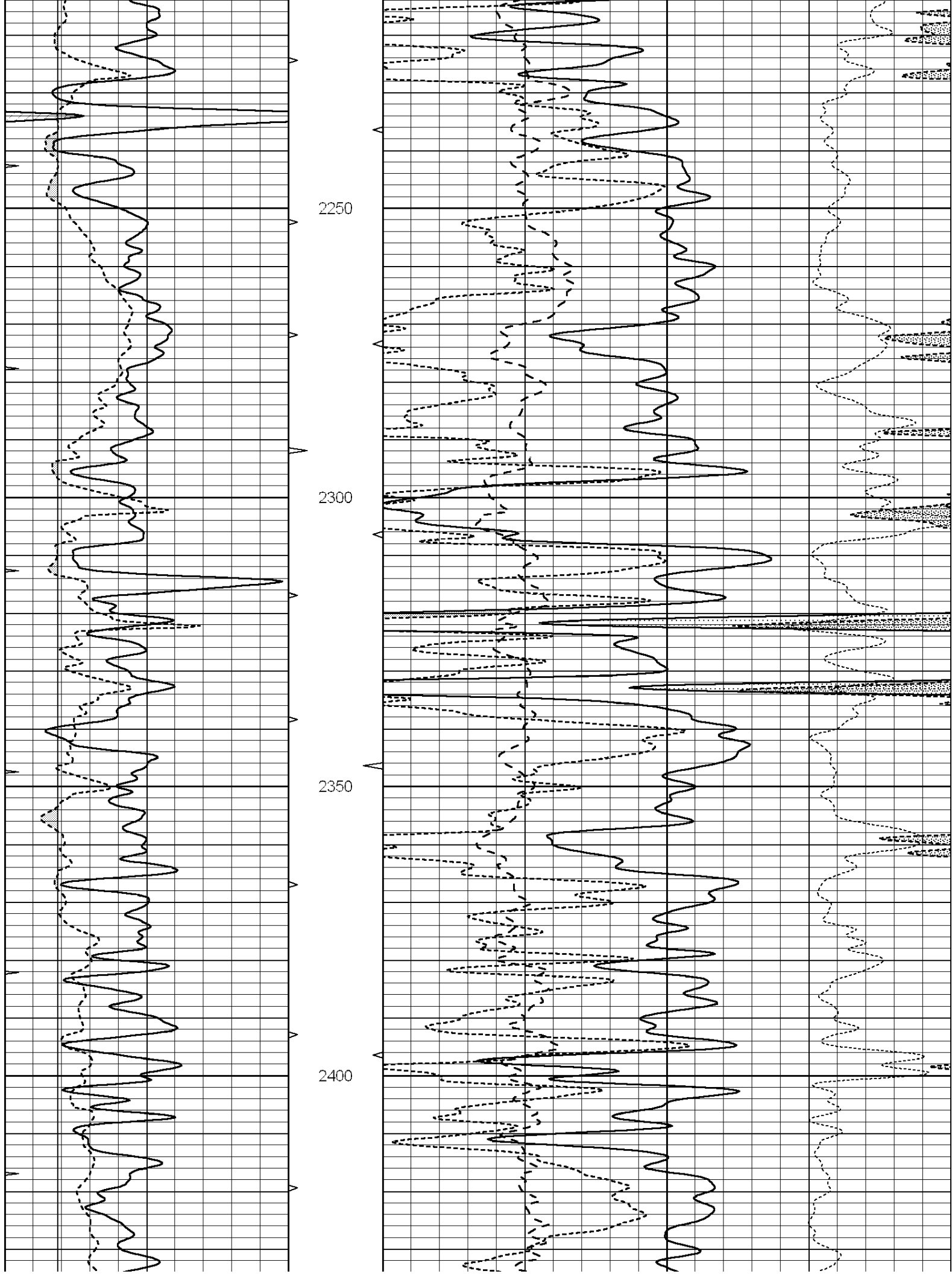
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 Dataset Pathname: pass3.11
 Presentation Format: ldt_neu
 Dataset Creation: Sat Sep 27 01:48:00 2014
 Charted by: Depth in Feet scaled 1:240

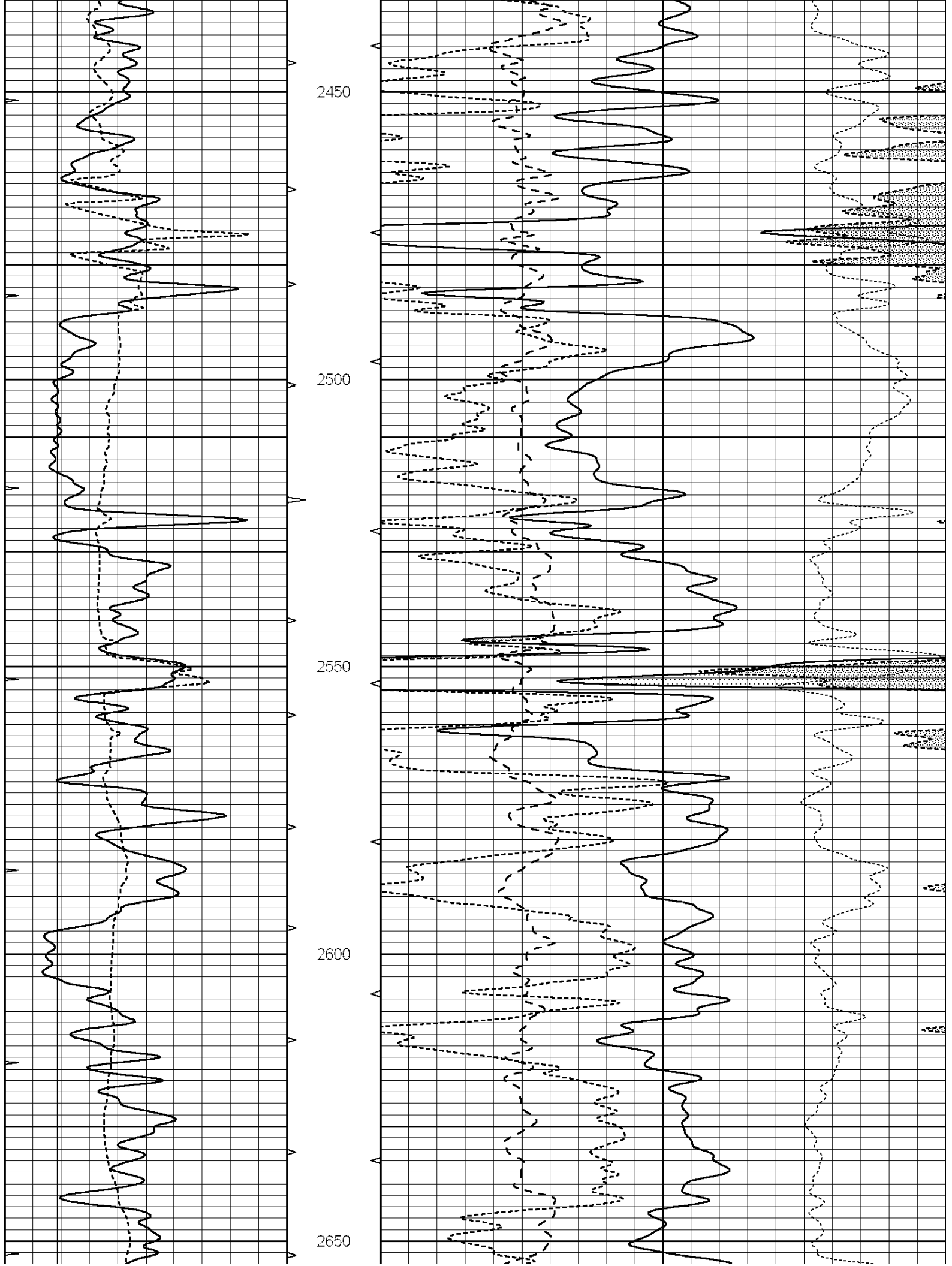
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6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)		-10	
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

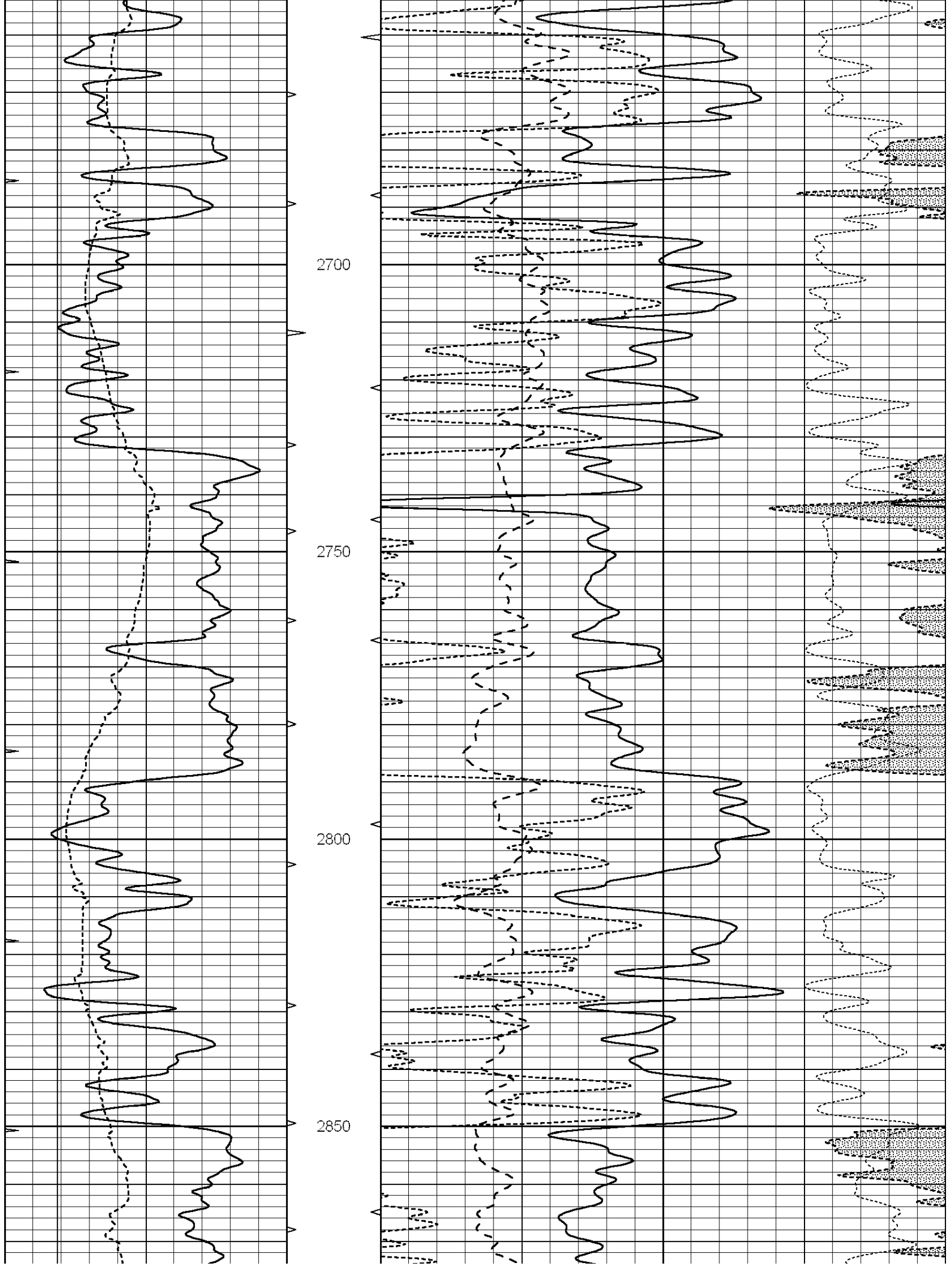


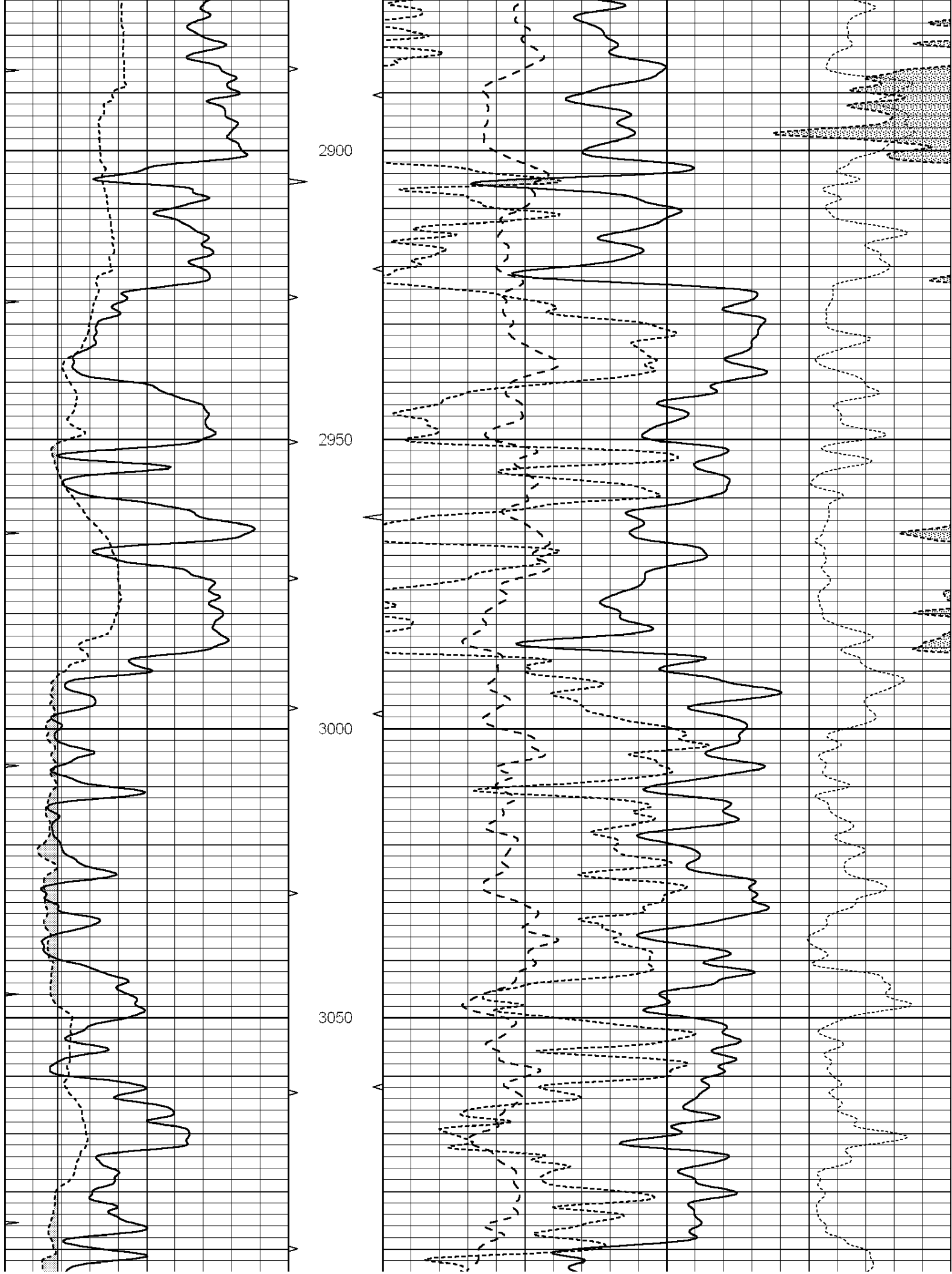


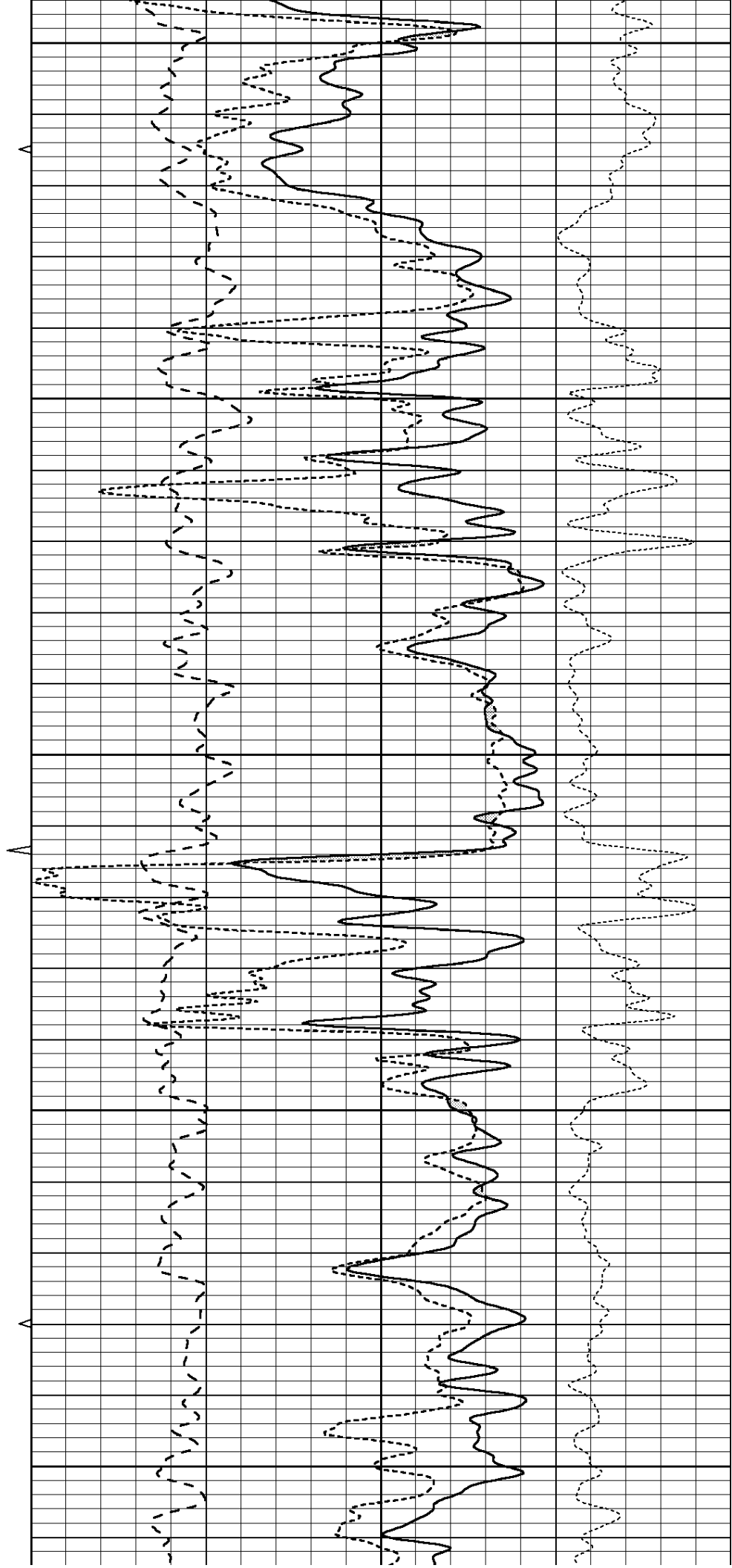
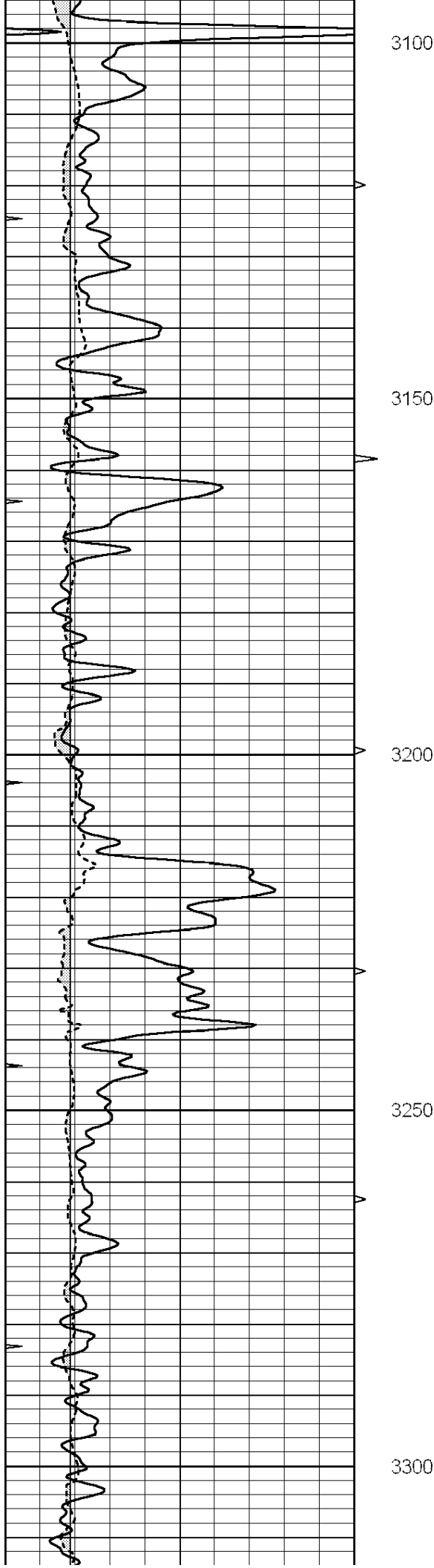


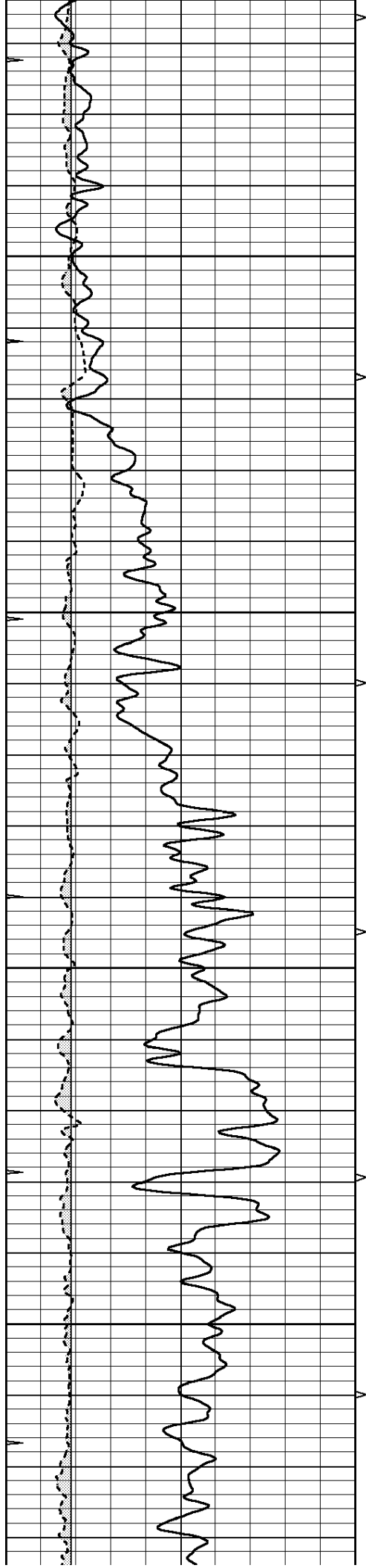










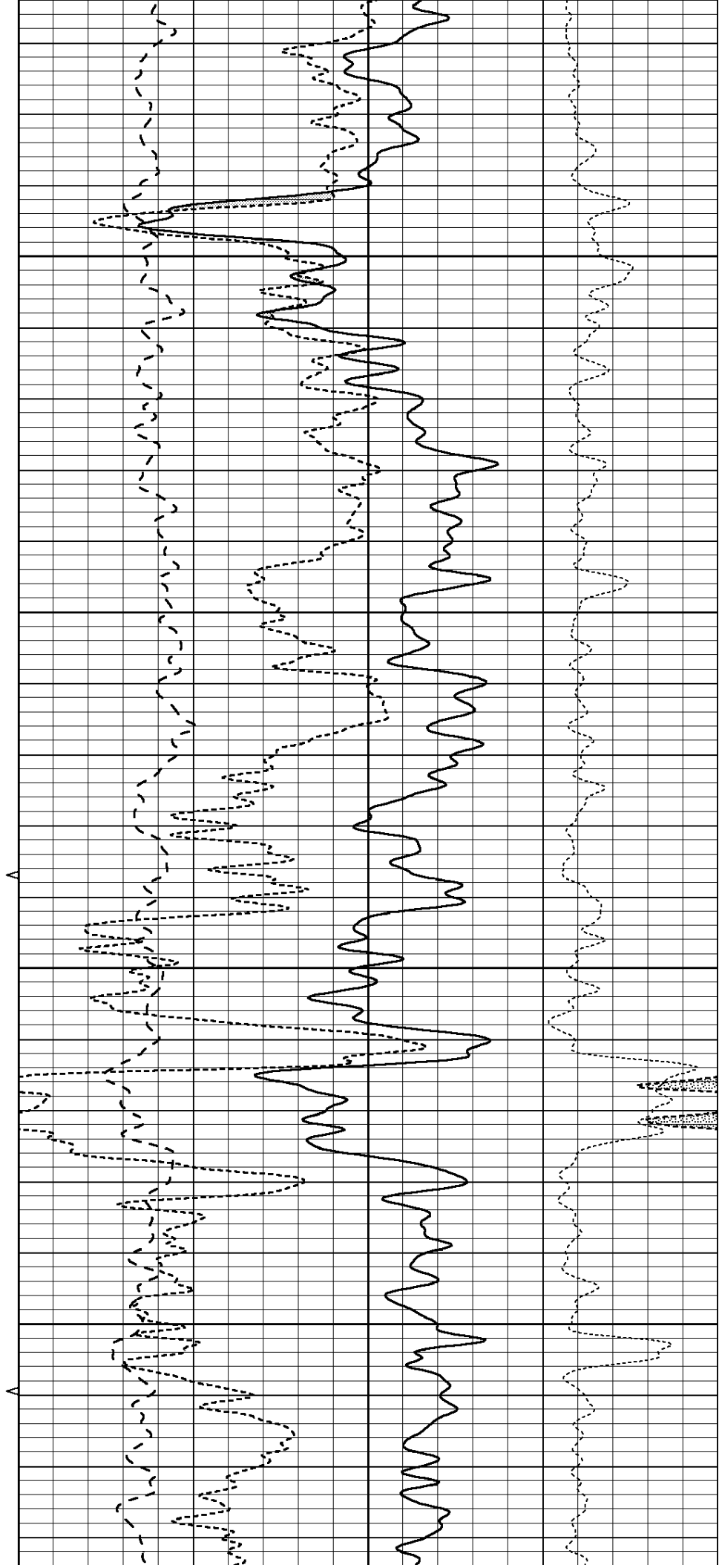


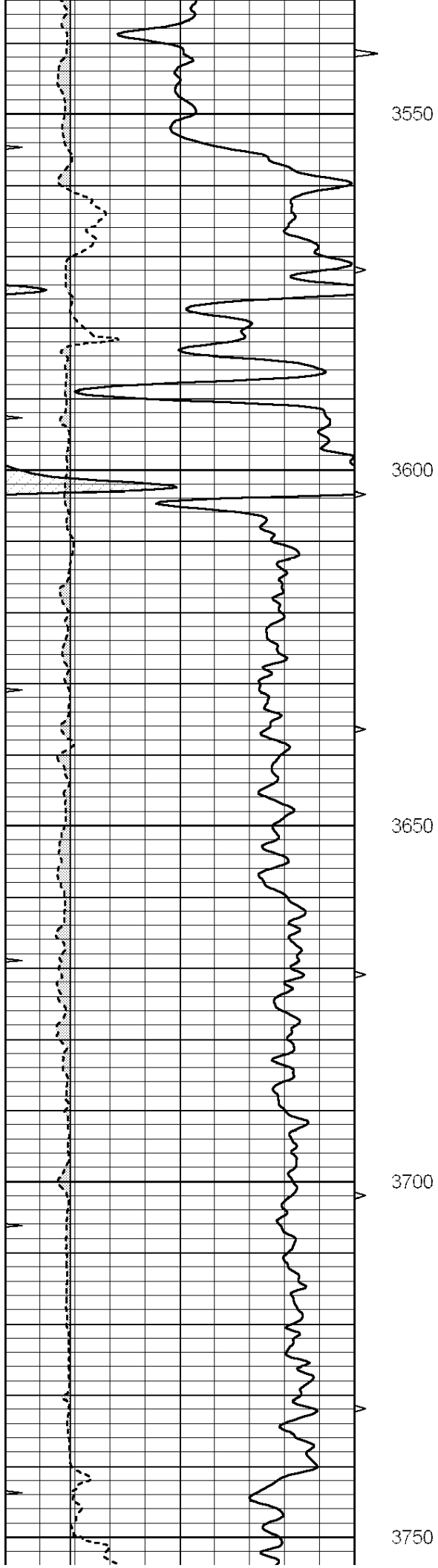
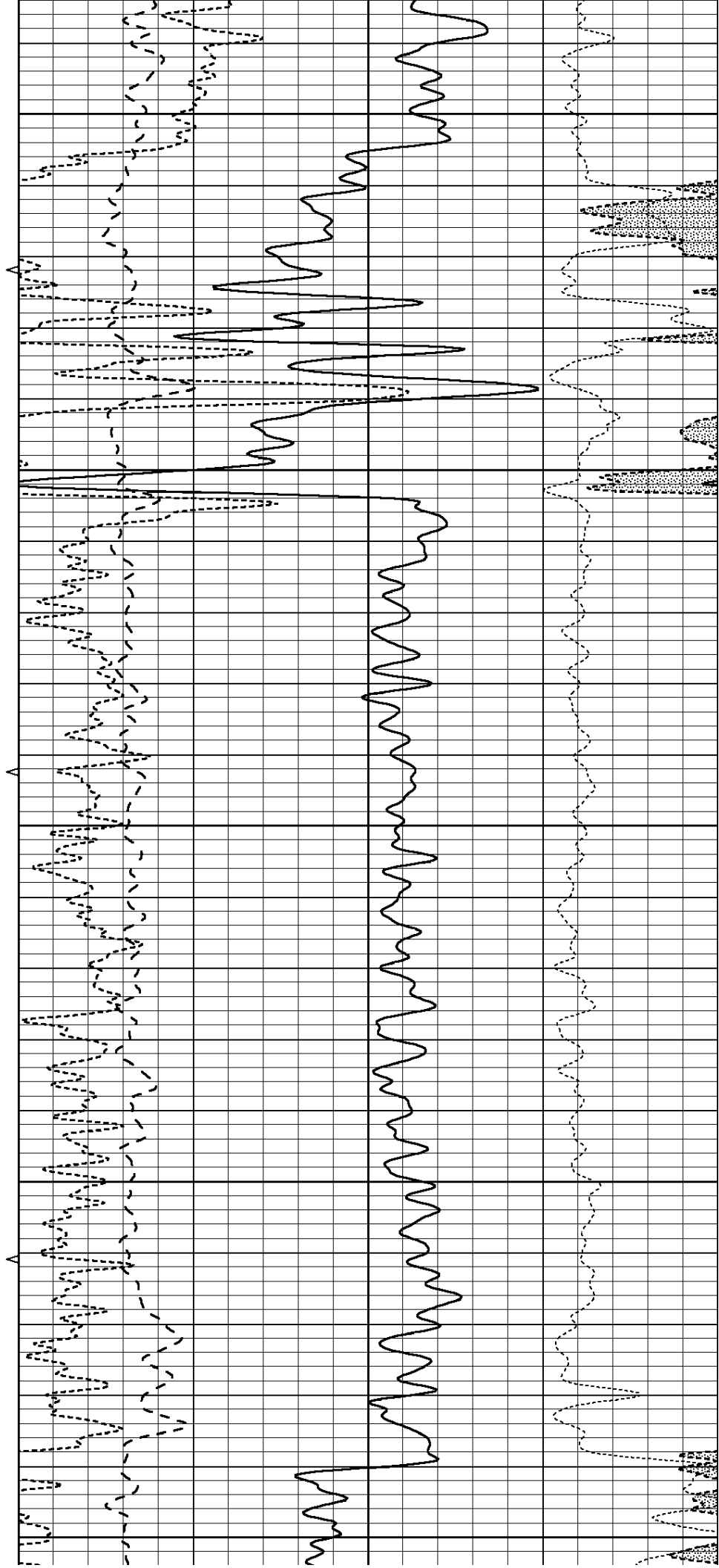
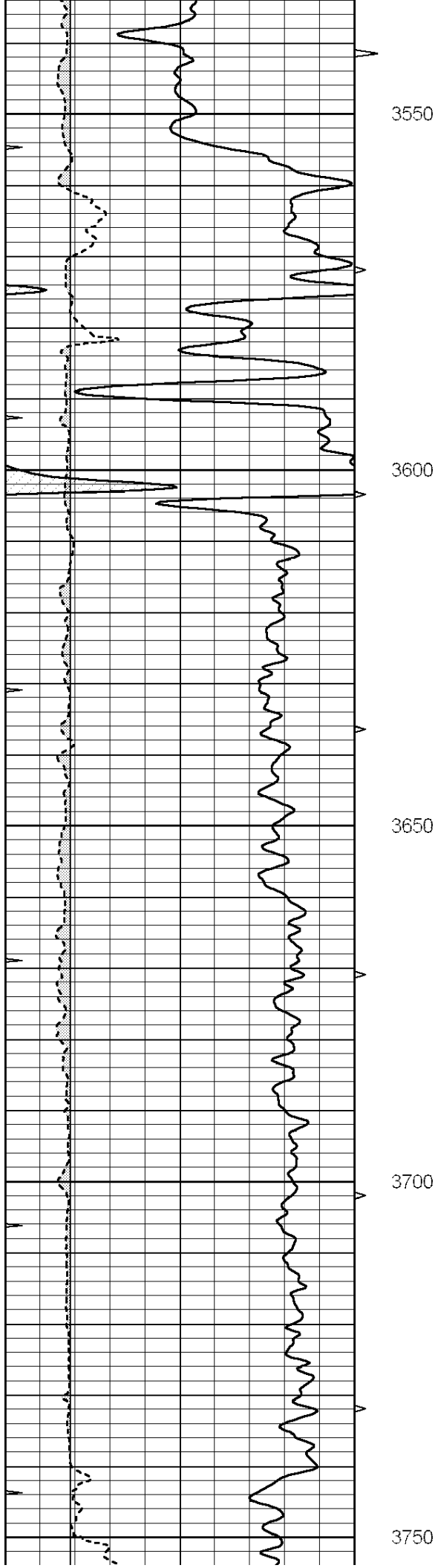
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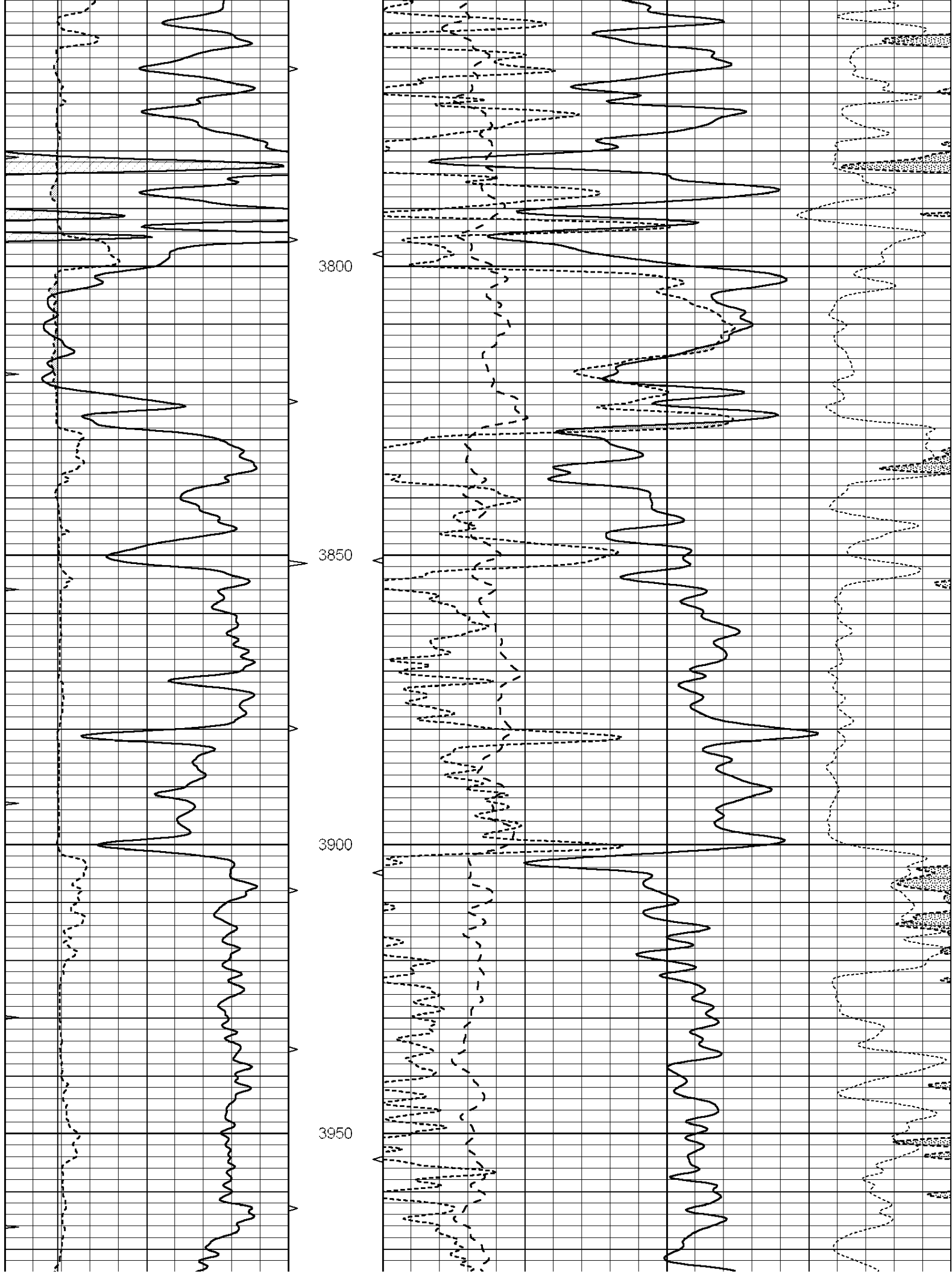
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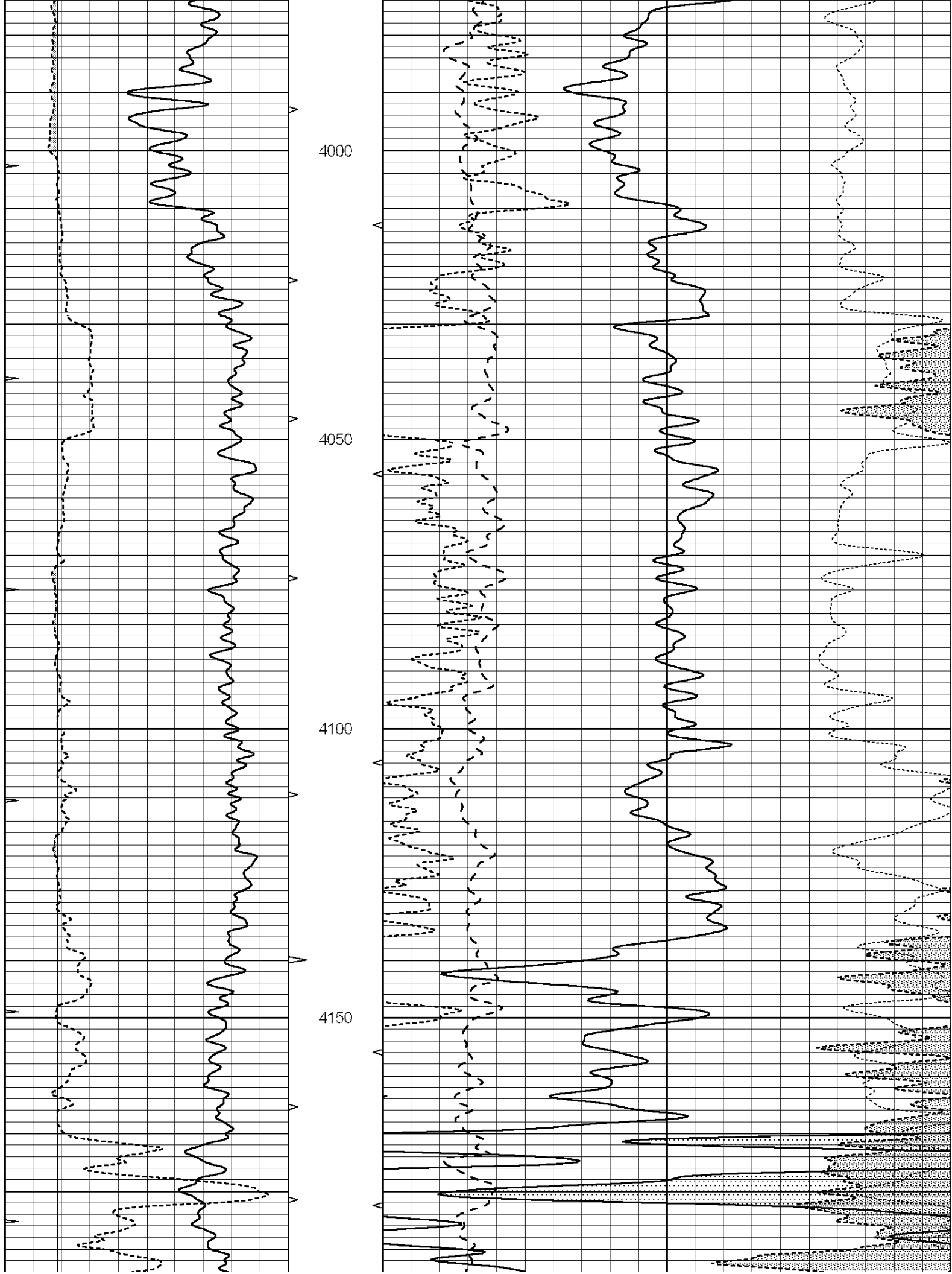
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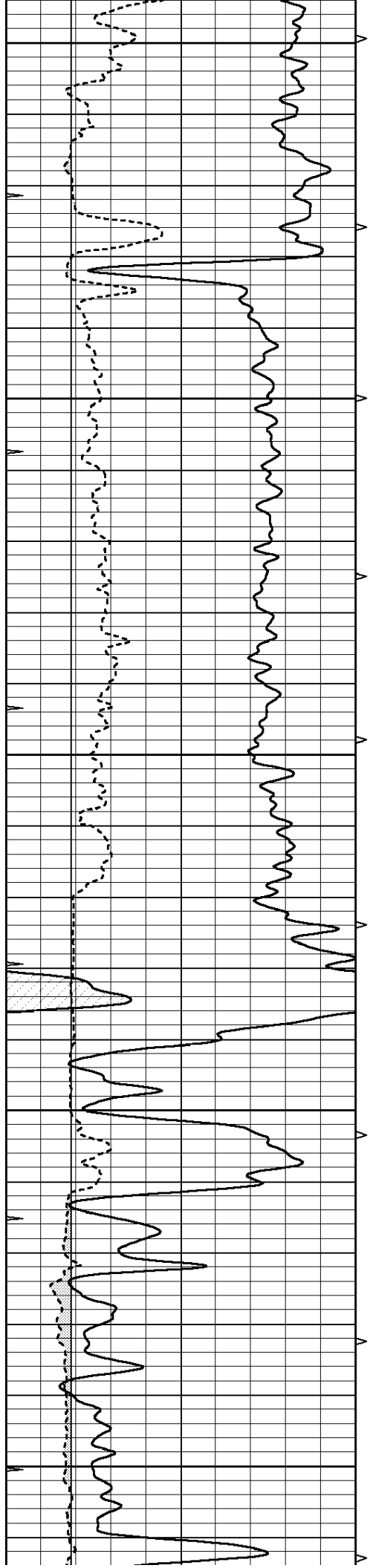
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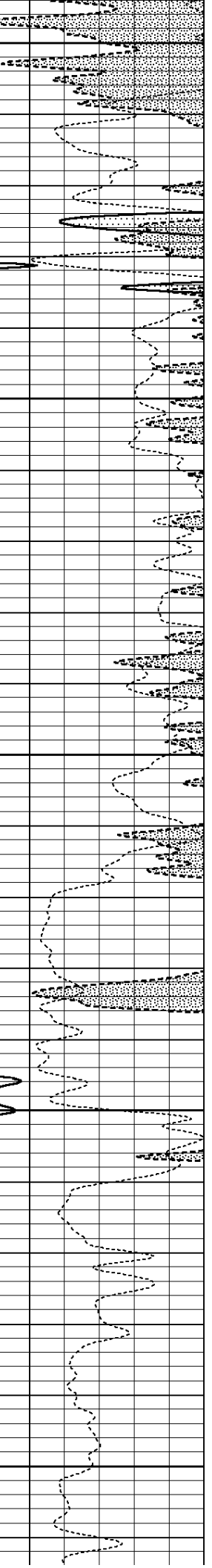
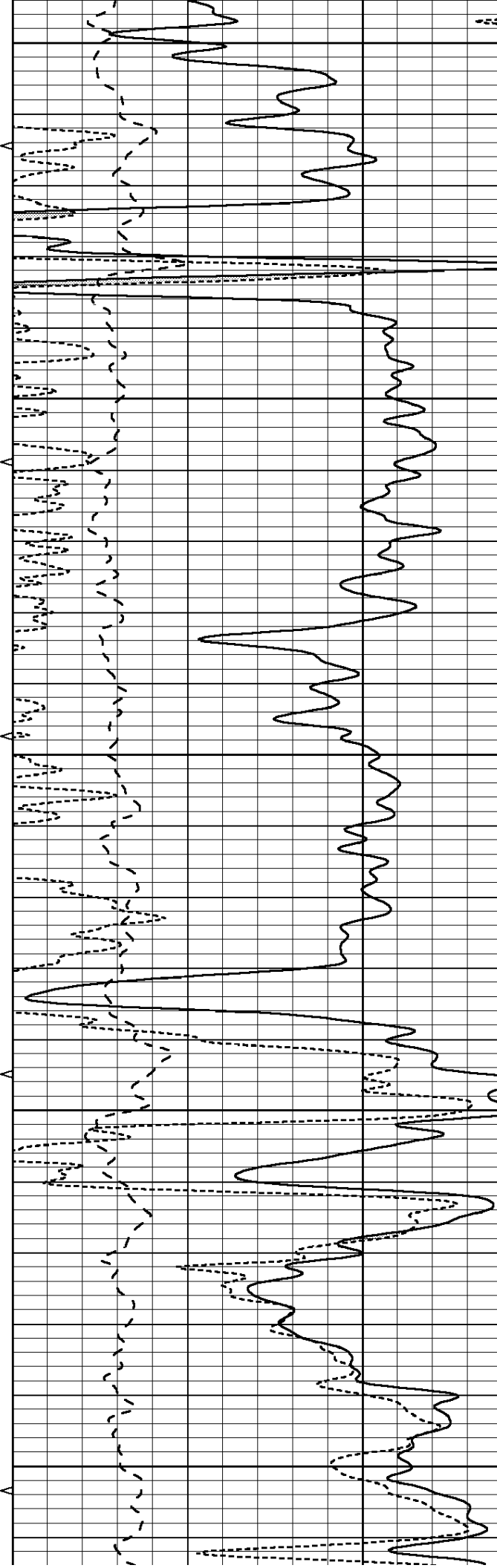


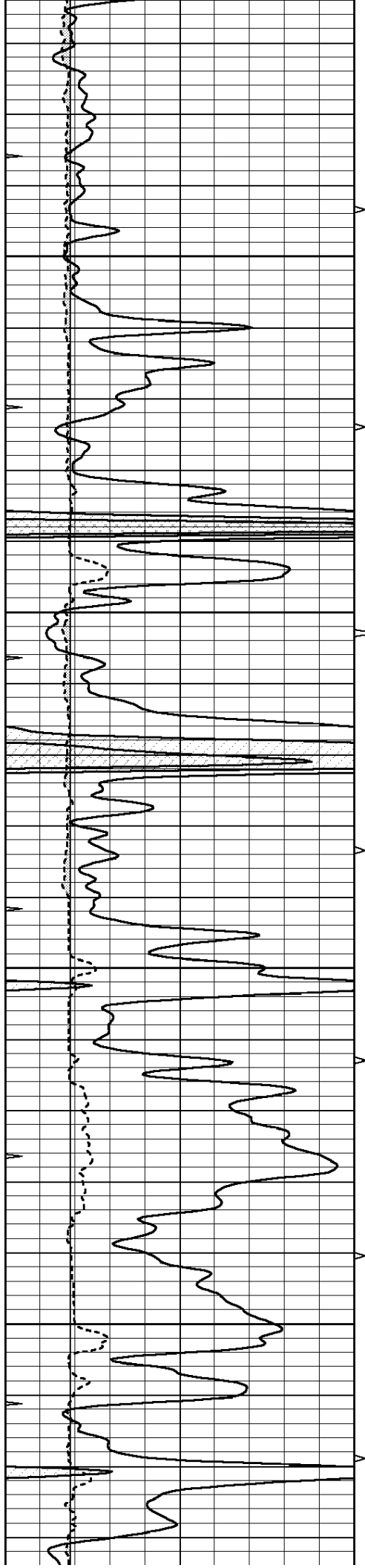






4200
4250
4300
4350
4400



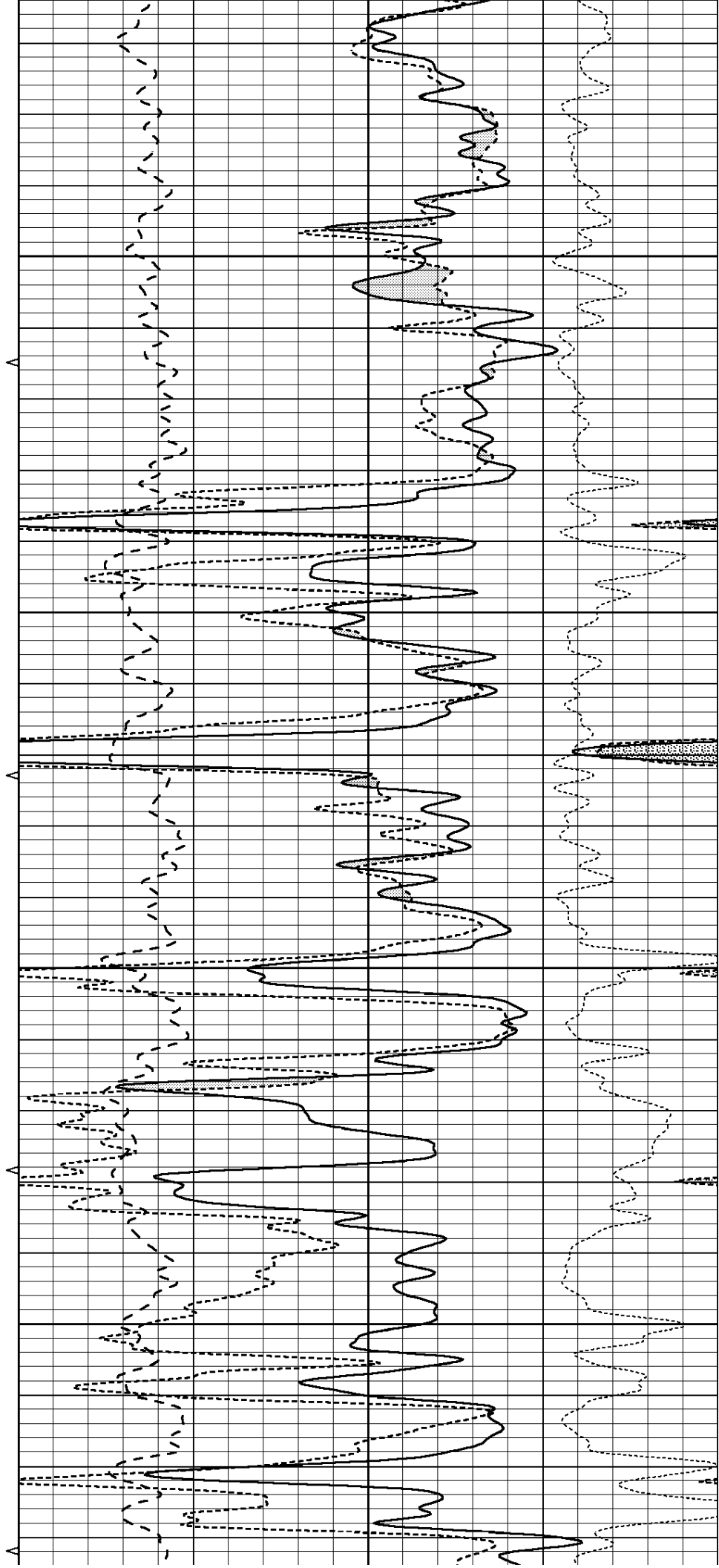


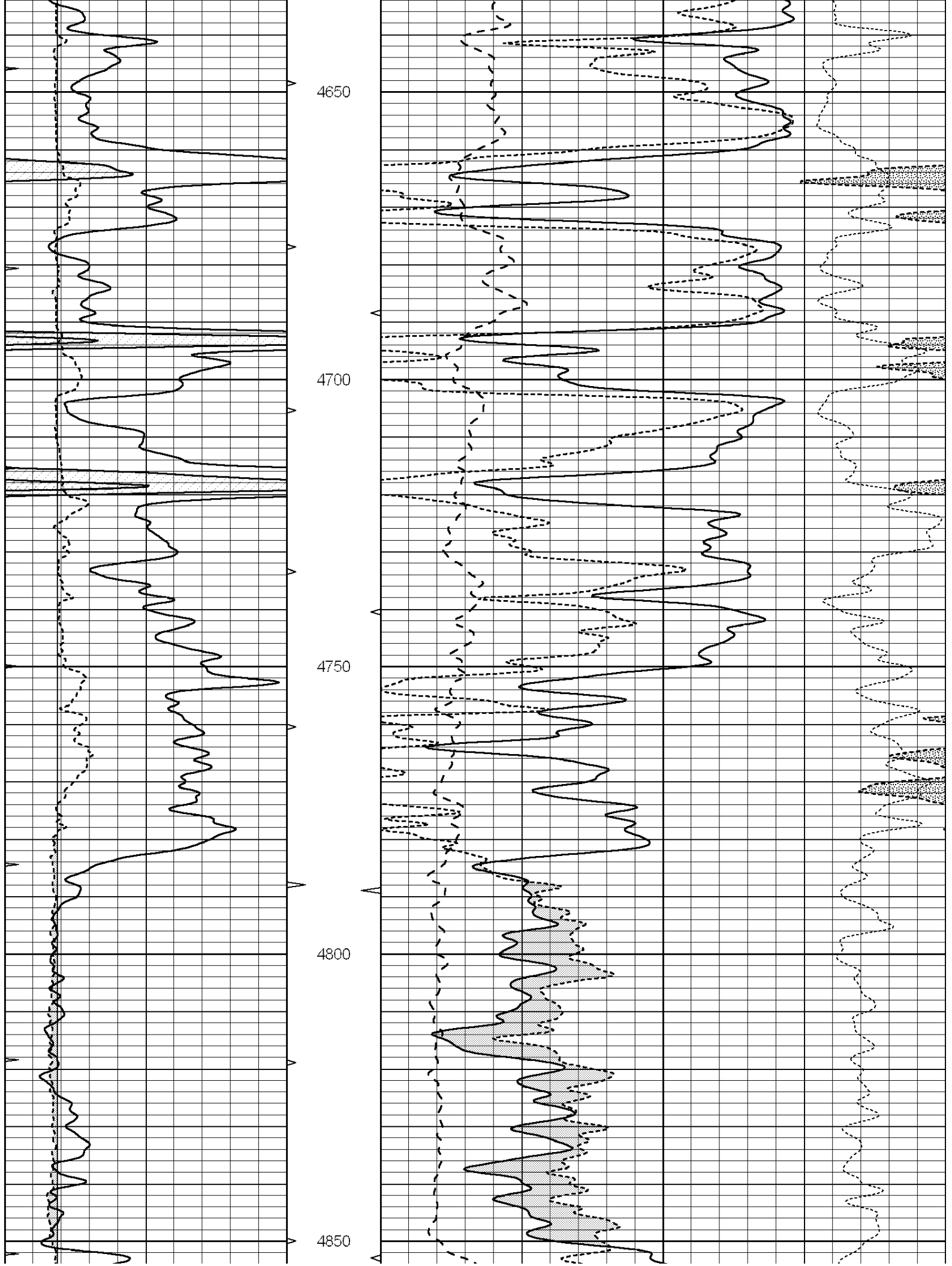
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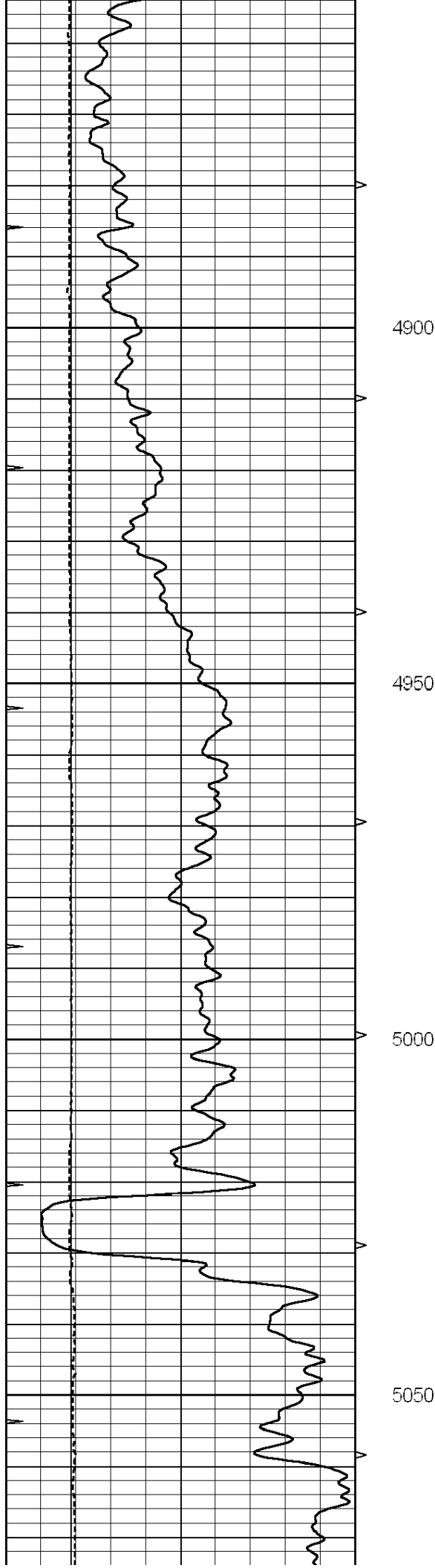
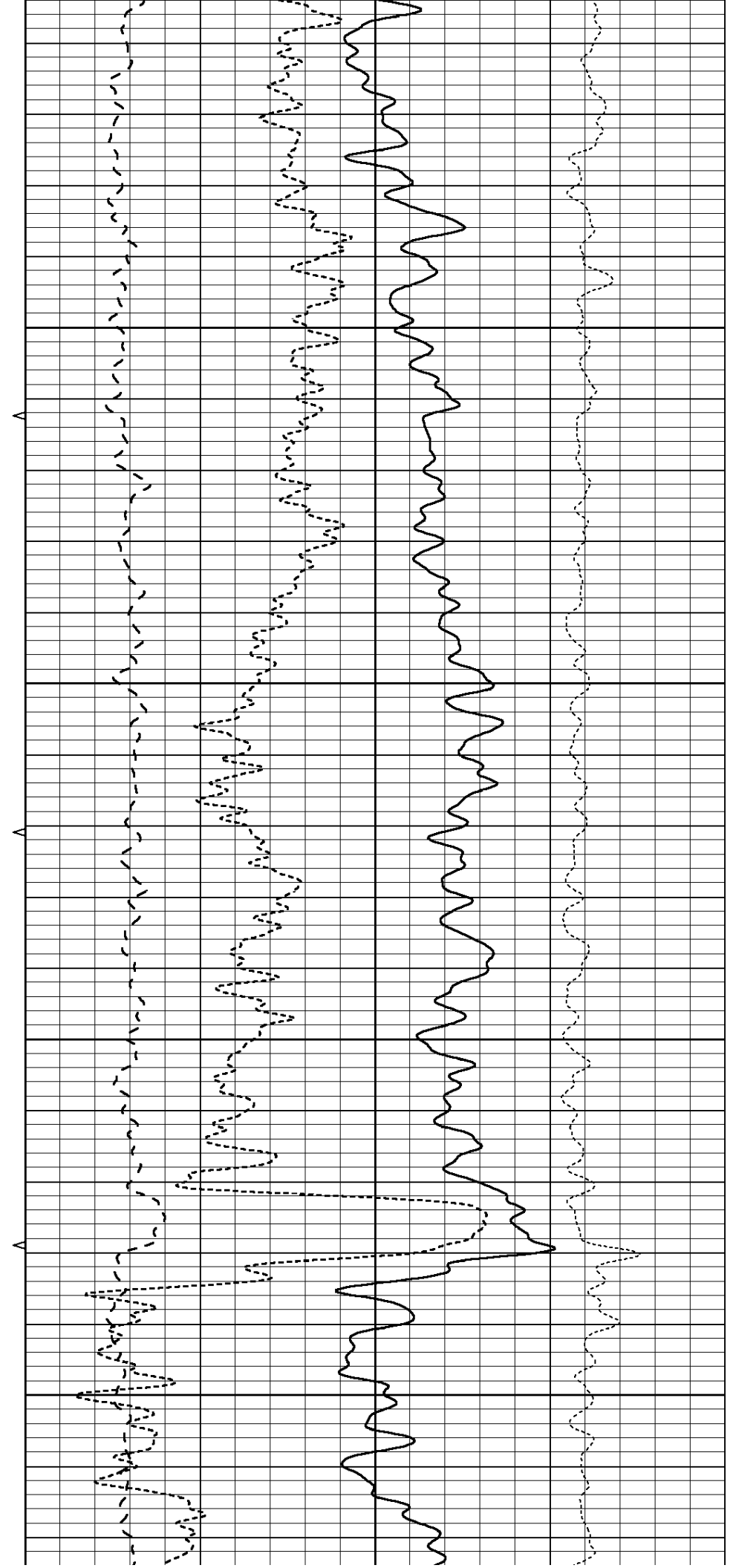
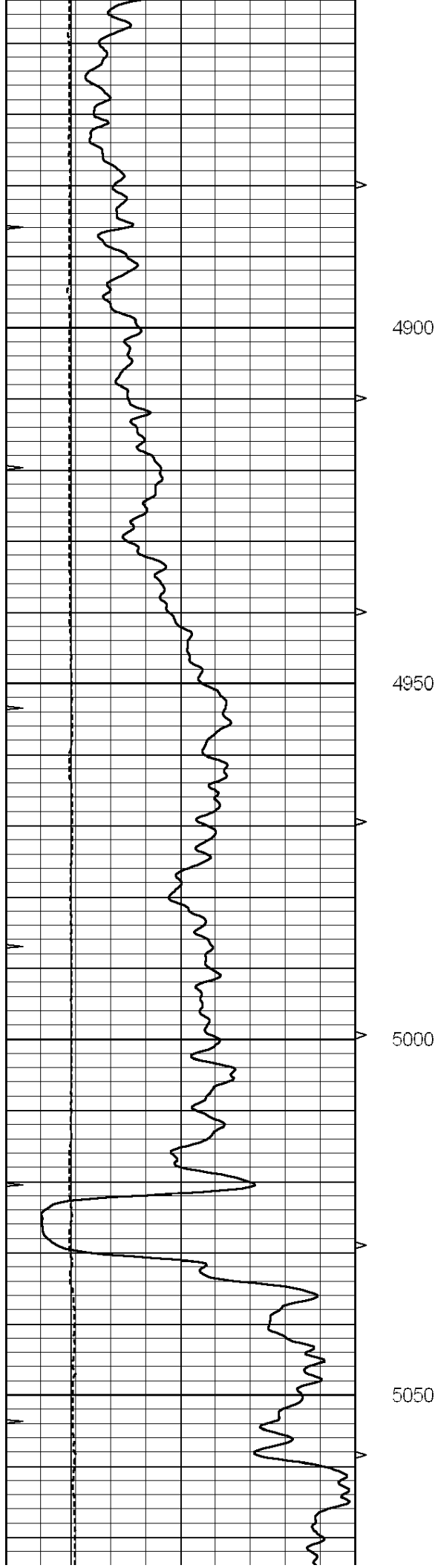
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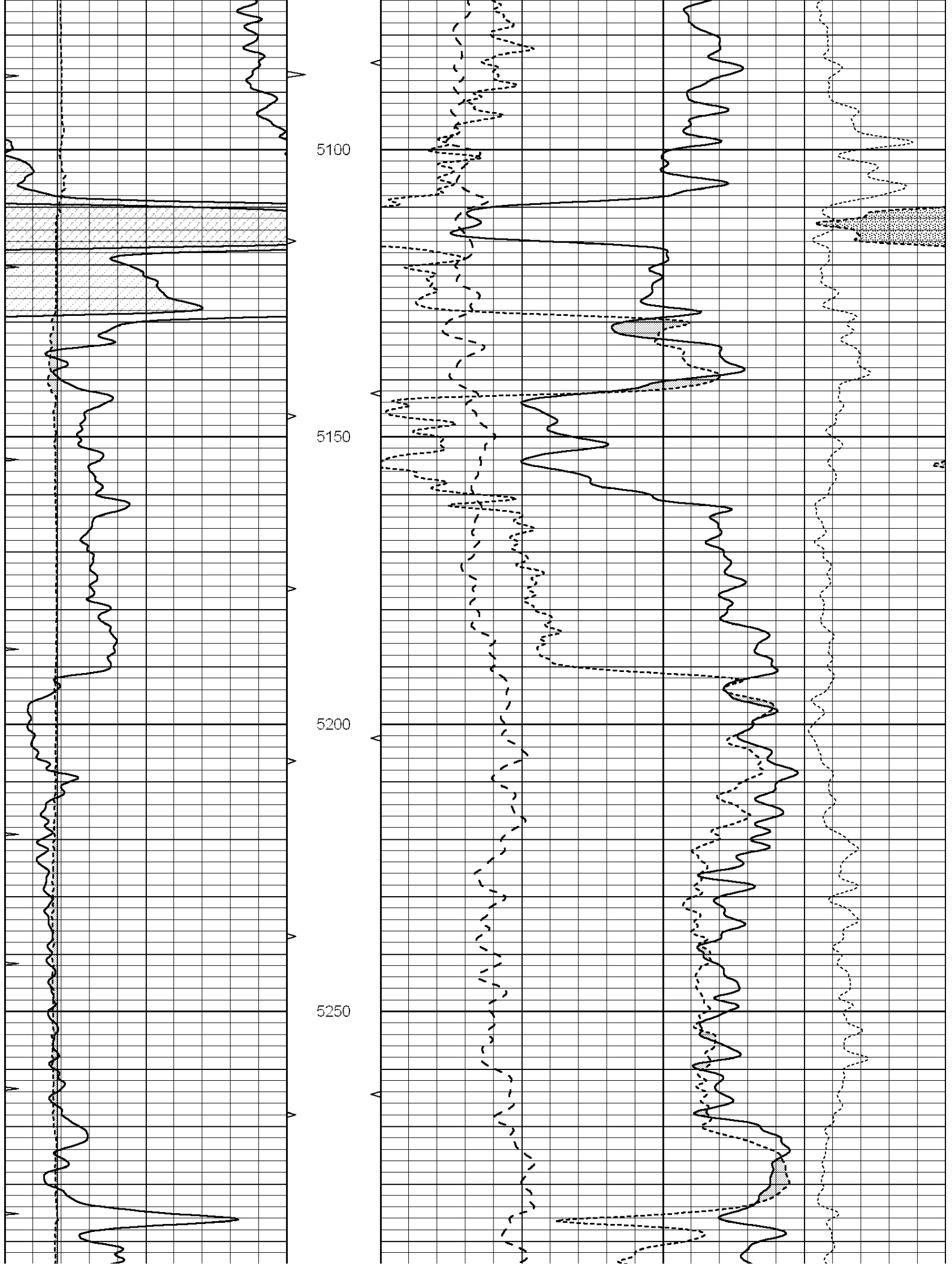
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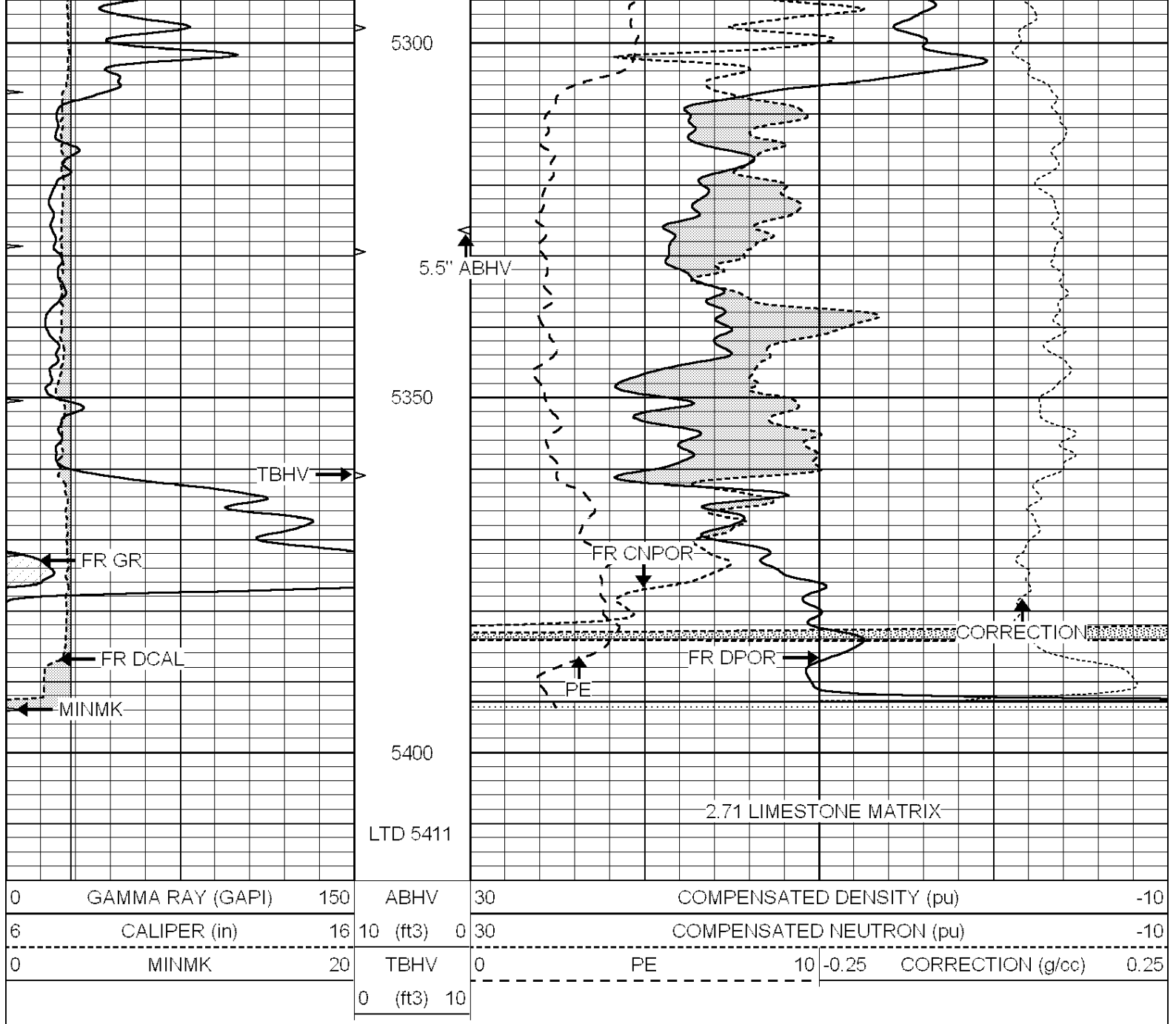
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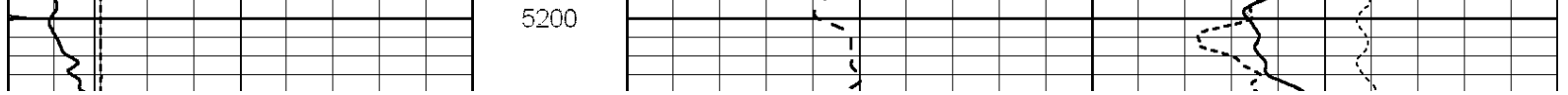


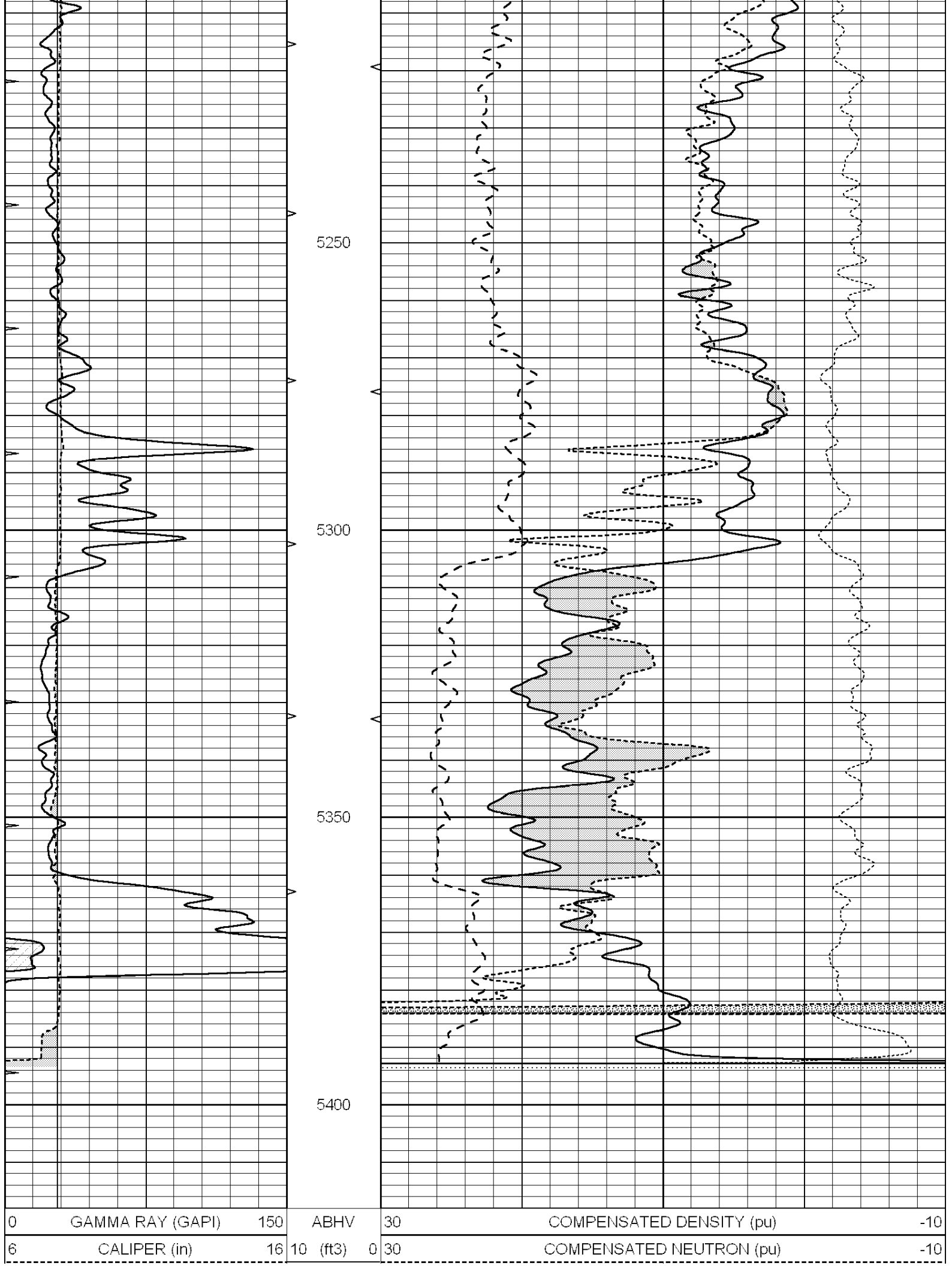
NABORS
COMPLETION & PRODUCTION SERVICES CO.

REPEAT SECTION

Database File: 25886pe.db
 Dataset Pathname: pass2.11
 Presentation Format: ldt_neu
 Dataset Creation: Sat Sep 27 00:42:52 2014
 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
		0	(ft3)	10					

Calibration Report

Database File: 25886pe.db
 Dataset Pathname: pass3.11
 Dataset Creation: Sat Sep 27 01:48:00 2014

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Fri Sep 26 22:43:29 2014
 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	-12.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-25.000
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: 006 Model: PRB

Master Calibration

Performed Fri May 30 11:50:45 2014

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1256.6	9989.4	3203.9	10919.3	cps
Window 2	1137.0	8207.0	2724.6	8764.6	cps
Window 3	749.9	3977.2	1516.7	4097.1	cps
Window 4	144.0	317.0	303.6	310.9	cps
Long Space	0.0	7070.0	1587.6	7627.6	cps
Short Space	1.9	2571.4	1707.5	2736.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle : 44.7 Rib Slope : 0.989 Density/Spine Ratio : 0.568

Spine Angle : 74.7

Spine Slope : 3.648

Spine Intercept : -19.8

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: Mon Jun 30 21:53:39 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps