Goetze, Phillip, EMNRD

From: Stan_Wagner@eogresources.com
Sent: Wednesday, January 22, 2014 9:58 AM
To: Goetze, Phillip, EMNRD
Cc: Shane_Brannan@eogresources.com; Dickey, Sylvia, EMNRD
Subject: Diamond 31 Fed Com 1 - SWD Amendment request -SWD -1440
Attachments: EOG (1-21-14)Diamond Federal Com #1.pdf; Diamond 31 FC #1 SWD Amendment Proposal.docx; Diamond 31 Fed #1 WBD 1.21.14.xlsx

Good morning Phillip,

Attached please find the supporting documentation regarding our request for an amended packer setting depth that we discussed by phone this morning.
If additional information is needed, please let me know. Thank you for your time and help concerning this request.

Stan Wagner
EOG Resources - Midland Division
432-686-3689

(See attached file: EOG (1-21-14)Diamond Federal Com #1.pdf)(See attached file: Diamond 31 FC #1 SWD Amendment Proposal.docx)(See attached file: Diamond 31 Fed #1 WBD 1.21.14.xlsx)

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DIAMOND 31 FED COM #1 REQUEST TO AMEND PACKER DEPTH

SECT 31, T24S, R34E

1980' FSL & 1980' FWL

API: 30-025-29000

EOG is in the process of converting the Diamond 31 FC #1 to a SWD, and we have completed the plug back portion of the procedure. On Friday the 17th, we squeezed 370sx of cement behind the 7" casing with the goal of raising the TOC behind this string of casing from 6,224' to at least 4,600', giving at least 500' of tie back above the 9-5/8" shoe at 5,120'.

A CBL run on January 19th showed the TOC to be 5,375' after the squeeze, leaving 255' of open hole below the 9-5/8" shoe. On January 20th, we did a Braden head squeeze of 350sx Class C down the 7"x9-5/8" annulus with the goal of raising the TOC inside the intermediate casing, however a CBL run the 21st showed the while the TOC was 3,290', there a void space behind the 7" between 5,290'-5,370'.

Based on our permitted injection interval of 5,440'-7,200', we intend to make our uppermost injection perf at 5,465', and set our packer within 100' feet of it, which would be at least 5,365' or deeper, just below the void space. While we have considered squeezing the void space, perforating the 7" casing would reduce the mechanical integrity of the wellbore. For this reason, we request permission to set the injection packer above this void space, at 5,280'.

Summary of Operations to plug back/Convert the Diamond 31 FC #1:

1/6/2014	MIRU, prepare to TIH with work string.
1/7/2014	Rig repairs.
1/8/2014	Rig repairs.
1/9/2014	TIH, tag fill at 14,623'. Spotted 100sx Class H at 14,623'.
1/10/2014	Tag cement at 12,881'. TOH, LD 2-3/8" tubing.
1/11/2014	TIH to 12,881', spotted 60sx Class H at 12,881'
1/12/2014	TOH with plugged tubing.
1/13/2014	TIH and tagged plug at 12,625'. Displaced wellbore with 450bbls of 10ppg mud. Spotted 60sx Class H at 12,367'.

1/14/2014	Tagged plug at 12,113'. Spotted 120bbls 10ppg mud. Spotted 80sx Class H at 9,126'.
1/15/2014	Tagged plug at 8,651'. Spotted 58bbls of 10ppg mud. TOH. Set 7" CIBP @ 7,200'. Dump bail 8sx (44') of Class H on CIBP.
1/16/2014	Test 7" casing to 1,200psi, pressure decreased to 1,190psi after one hour. Perforate 7" casing with 5 holes at 6,200'. Break circulation in 7"x9-5/8" annulus with 185bbls of 10ppg mud. Set cement retainer at 6,084'. Establish pump in rate of 3 BPM at 750psi.
1/17/2014	Squeezed 150sx Class C lead, 220sx Class H tail. Stung out of cement retainer, reverse tubing clean. Make up 6-1/8" mill tooth bit, TIH to 6,010', prepare to drill cement retainer.
1/18/2014	Drill out cement and cement retainer from 6,076'-6,086'. Drill through cement from 6,086' to 6,200'. TIH to 6,284', no restrictions. Displace hole with 267bbls 10ppg brine. TOH, LD bit.
1/19/2014	Run CBL from 6,500'-5,150', found TOC behind 7" to be 5,375'. Establish injection rate of 2.5 BPM at 425psi through 7"x9-5/8" annulus.
1/20/2014	Braden head squeeze 350sx Class C down 7"x9-5/8" annulus. Displace with 98bbls fresh water. Final injection pressure 425psi.
1/21/2014	Run CBL, found void from 5,290'-5,370', TOC 3,290' behind 7" casing.

DIAMOND 31 FED COM #1

API# 30-025-29000
Sect 31, T24S, R34E
1980' FSL & 1980' FWL
Lea County, NM

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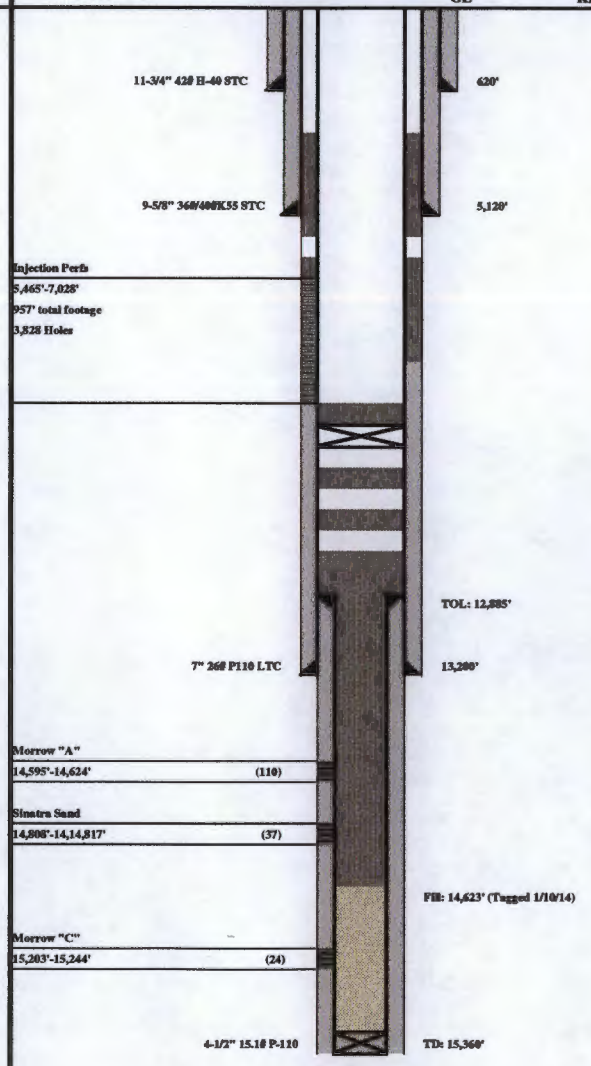
energy opportunity growth

	SPUD	TD
DRILLING	10/16/1984	12/9/1984
LAST REVISED	1/21/2014	SMB

WI NRI

Formation Tops	GL KB	Hole	AFE #



TOC @ 3,290 from CBL on 1/21/14

Void from 5,290'-5,370'

Perf 7" csg @ 6,200' on 1/17/14. Squeeze 150sx Class C and 220sx Class H on 1/18/14

Set 7" CIBP @ 7,200', dump bailed 44' Class H on 1/16/14, TAGGED @ 7,140' on 1/17/14

Spotted 80sx Class H @ 9,126', TAGGED @ 8,651' on 1/16/14

Spotted 60sx Class H @ 12,367' on 1/14/14. TAGGED @ 12,113' on 1/15/14.

Spotted 60sx Class H @ 12,881' on 1/12/14, TAGGED @ 12,625' on 1/14/14
TAGGED Cmt @ 12,881' on 1/11/14

Spotted 100sx Class H @ ±14623' TAG on 1/10/14

ROD DETAIL

COUNT	SIZE	ITEM	DEPTH

TUBING DETAIL

COUNT	SIZE	ITEM	DEPTH

Tubular Dimensions	Burst	Collapse	ID	Drift	bbl/ft
13-3/8" 54.5# K-55	2730	1130	12.615	12.459	
9-5/8" 40# K-55	3950	2570	8.835	8.679	
9-5/8" 36# K-55	3520	2020	8.921	8.765	
7" 26# P-110	9950	6230	6.276	6.151	
4-1/2" 15.1# P-110	14420	14350	3.826	3.701	

DIAMOND 31 FED COM #1

API# 30-025-29000

Sect 31, T24S, R34E

1980' FSL & 1980' FWL

Lea County, NM

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Formation Tops		GL	KB	Hole
	11-3/4" 42# H-40 STC	620'		17-1/2"
	9-5/8" 36#/40#K55 STC	5,120'		12-1/4"
	Injection Perfs 5,465'-7,028' 957' total footage 3,828 Holes			
	TOL: 12,885'			
	7" 26# P110 LTC	13,200'		8-3/4"
	Morrow "A" 14,595'-14,624' (110)			
	Sinatra Sand 14,808'-14,14,817' (37)			
	Fill: 14,623' (Tagged 1/10/14)			
	Morrow "C" 15,203'-15,244' (24)			
	4-1/2" 15.1# P-110	TD: 15,360'		6-1/8"

WARRIOR
ENERGY SERVICE CORPORATION

CEMENT BOND / VDL GAMMA RAY / CCL LOG

Company EOG Resources, Inc.
Well Diamond 31 Federal Com #1
Field Pitchfork
County Lea State New Mexico

Location: API # : 30-025-29000

1980' FSL & 1980' FWL

SEC 31 TWP 24-S RGE 34-E

Other Services

Permanent Datum	Ground Level	Elevation	3456.2 ft.
Log Measured From	Kelly Bushing or 20.8 ft. APD		
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 3477.0 ft.
D.F. 3476.0 ft.
G.L. 3456.2 ft.

Company EOG Resources, Inc.
Well Diamond 31 Federal Com #1
Field Pitchfork
County Lea
State New Mexico

Date	21-January-2014		
Run Number	One		
Depth Driller	13200ft		
Depth Logger	Not Logged		
Bottom Logged Interval	6550 ft.		
Top Log Interval	3500ft		
Open Hole Size	8.75 in.		
Type Fluid	Water		
Density / Viscosity	NA		
Max. Recorded Temp.	NA		
Estimated Cement Top	3290ft		
Time Well Ready	11:30am		
Time Logger on Bottom	See Log		
Equipment Number	WL - 36026		
Location	Hobbs, NM		
Recorded By	Bill Jean		
Witnessed By	Mr. James Brown		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	13.375 in.	54.5 lb.	Surface	620 ft.
Prot. String	9.625 in.	36 & 40 lb.	Surface	5120 ft.
Production String	7.000 in.	26 lb.	Surface	13200 ft.
Liner				

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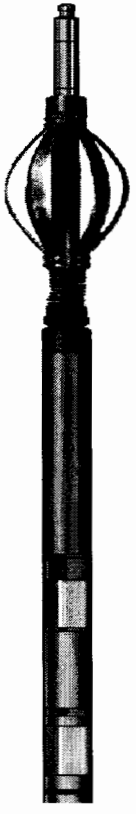
interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Correlated to Schlumberger Litho-Density Log 11-9-84 ft.

Thank you for using Warrior Energy Services.

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD1_4	1.00	1.44	1.00
			APD2.75	2.50	2.75	10.00
TEMP	14.41					
WVFCAL	12.91		CBLTEMP-Teko101T (101T-002)	9.13	2.75	102.00
WVF3FT	12.33					

WVF5FT	11.33					
WVFTEMP	7.99					
WVFSYNC	7.99		APD2.75	2.50	2.75	10.00
CCL	4.34		CCL-Tekco105 (105-001)	1.82	2.75	15.00
GR	1.08		GR-Tekco110 (110-001)	3.67	2.75	25.00

Dataset:	eog(1-21-13).db: field/well/run1/pass4.1
Total Length:	20.62 ft
Total Weight:	163.00 lb
O.D.	2.75 in

WARRIOR ENERGY SERVICE CORPORATION

Main Pass W/ 500 PSI

Database File: eog(1-21-13).db

Dataset Pathname: pass5
Presentation Format: rbl3_55
Dataset Creation: Tue Jan 21 12:33:54 2014 by Log SCH 120126
Charted by: Depth in Feet scaled 1:240

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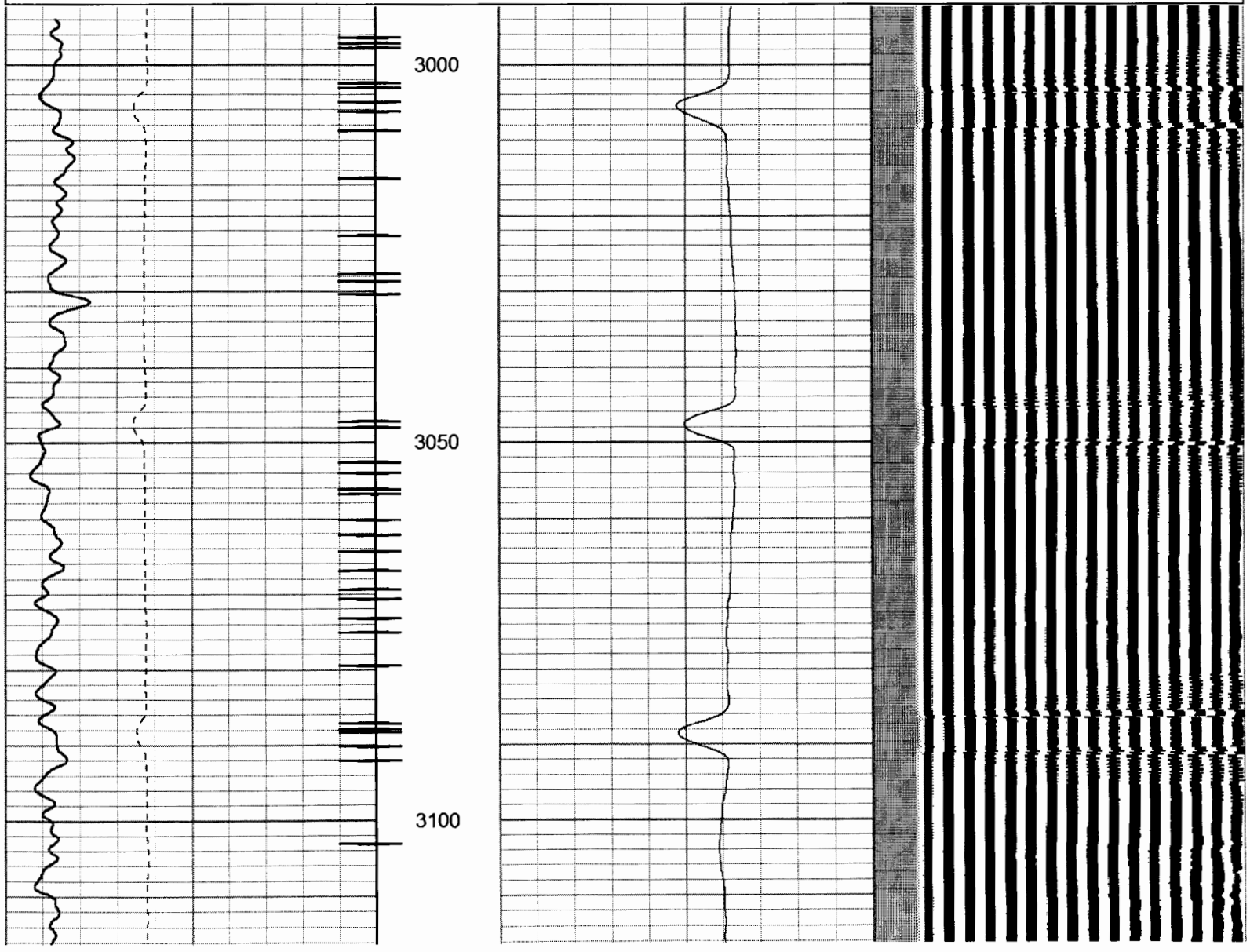
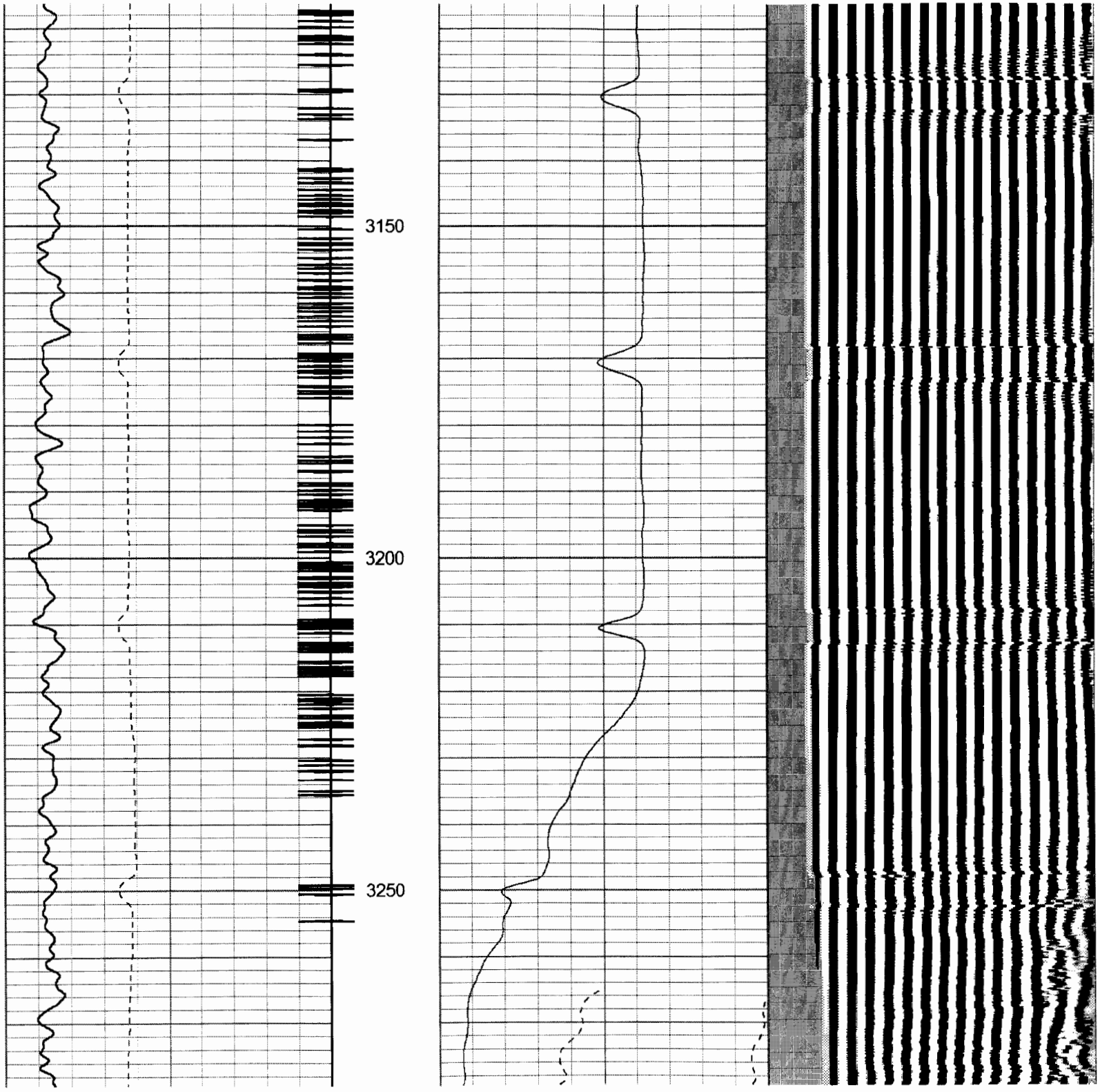
10	Collar Locator 0				X5 Amplitude	1	Bond Index 0.5
260	Travel Time (usec) 160			0	(mV) 10		
0	Line Speed (ft/min) 100						

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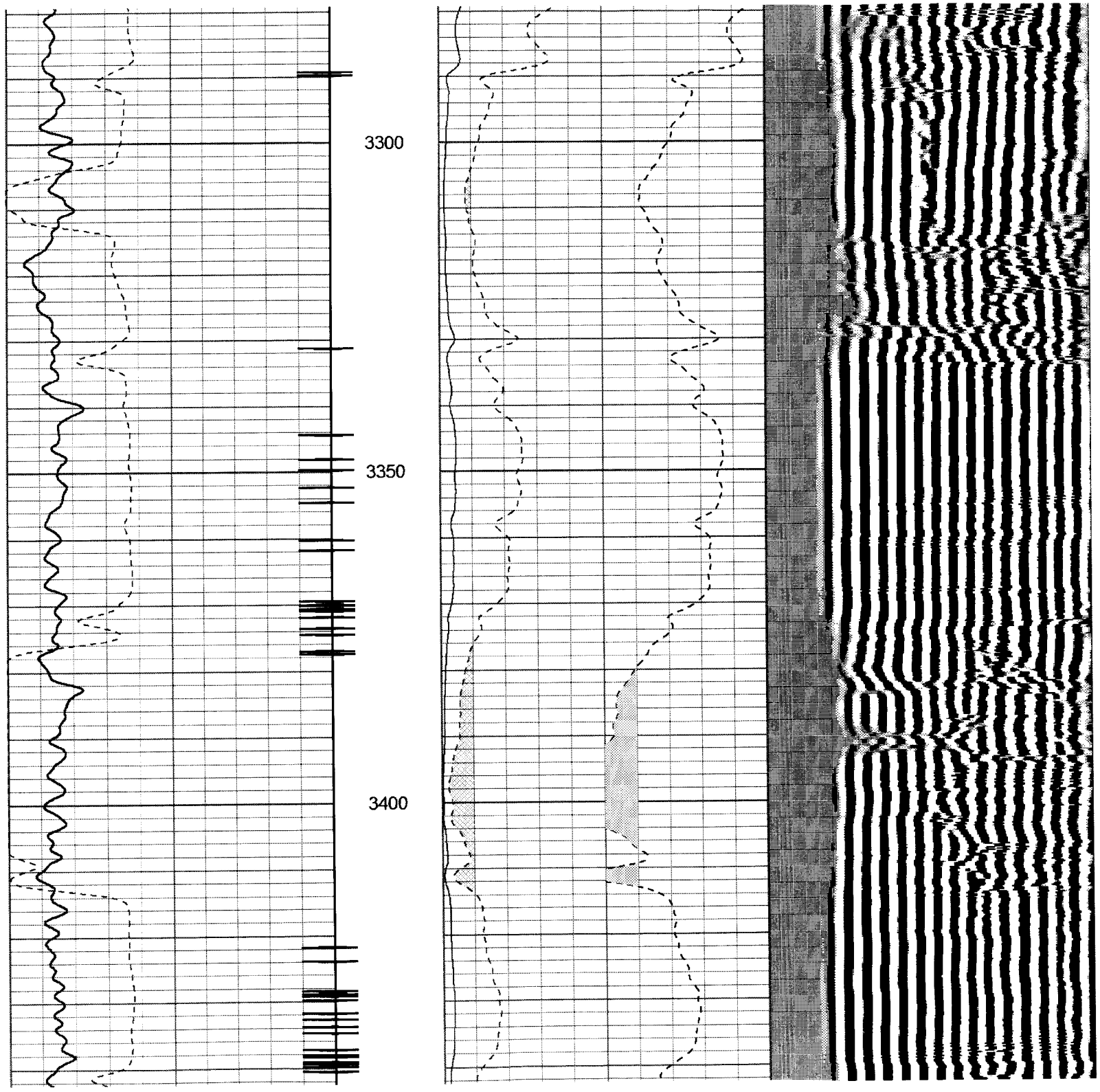
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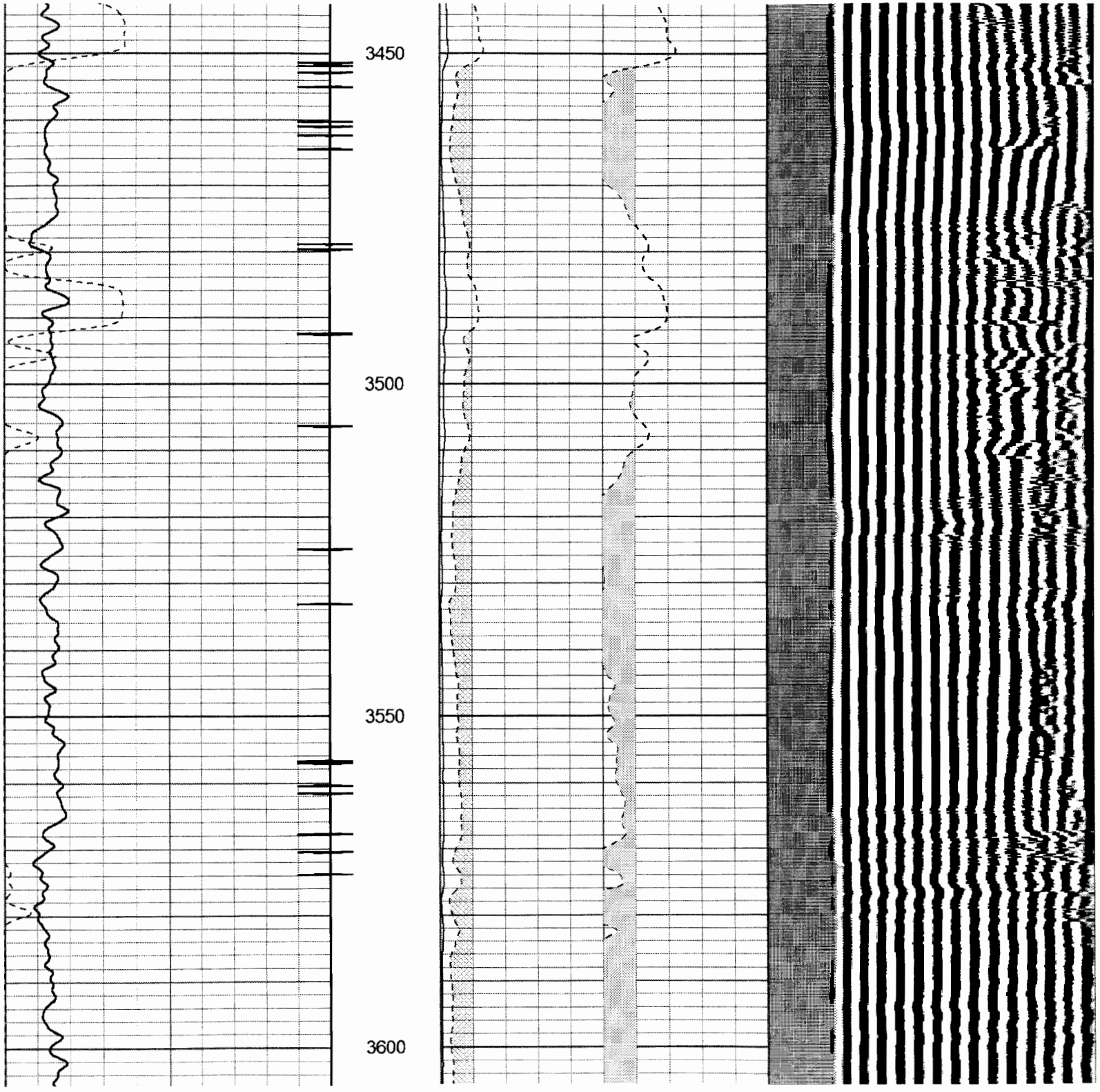
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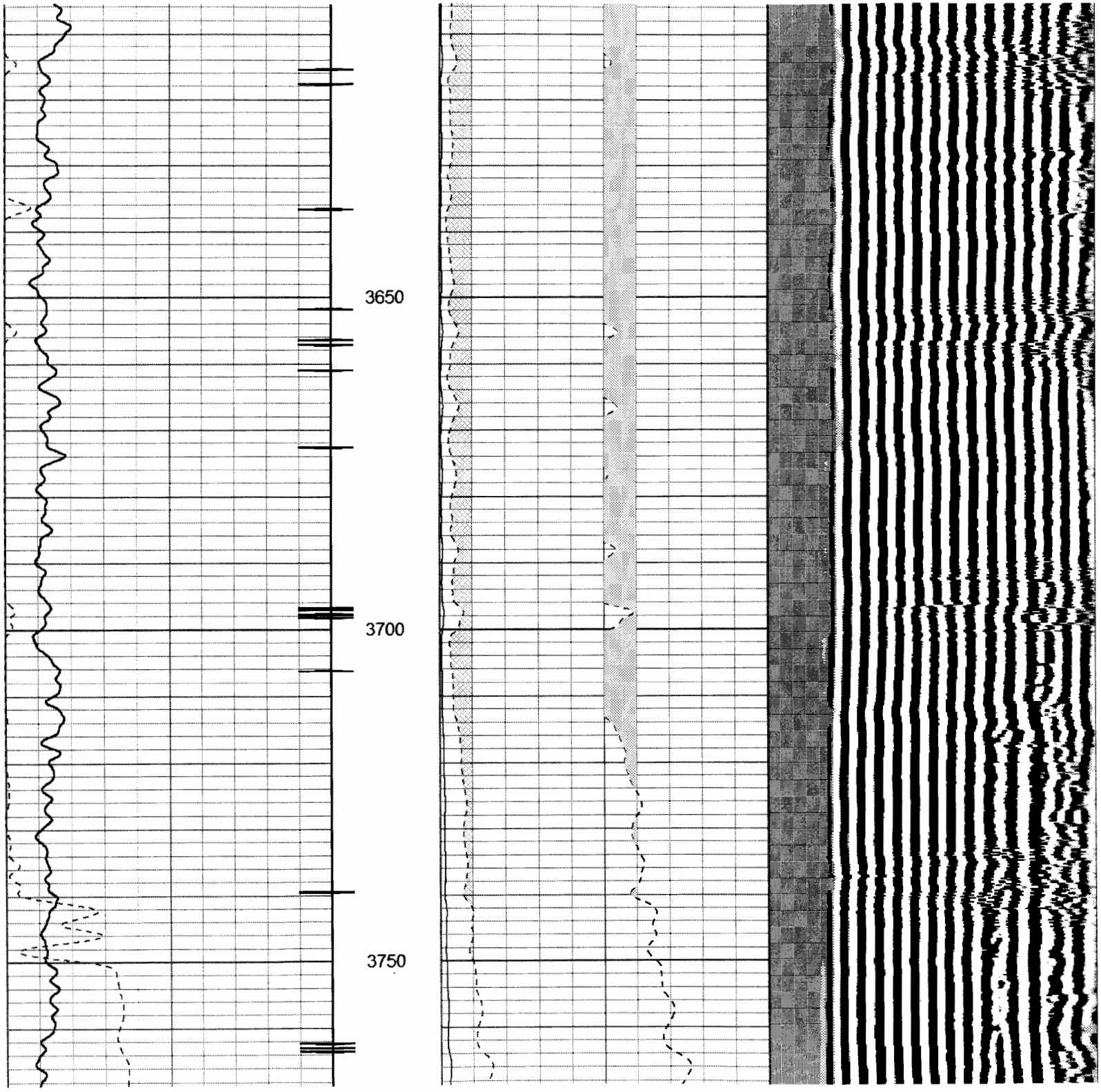
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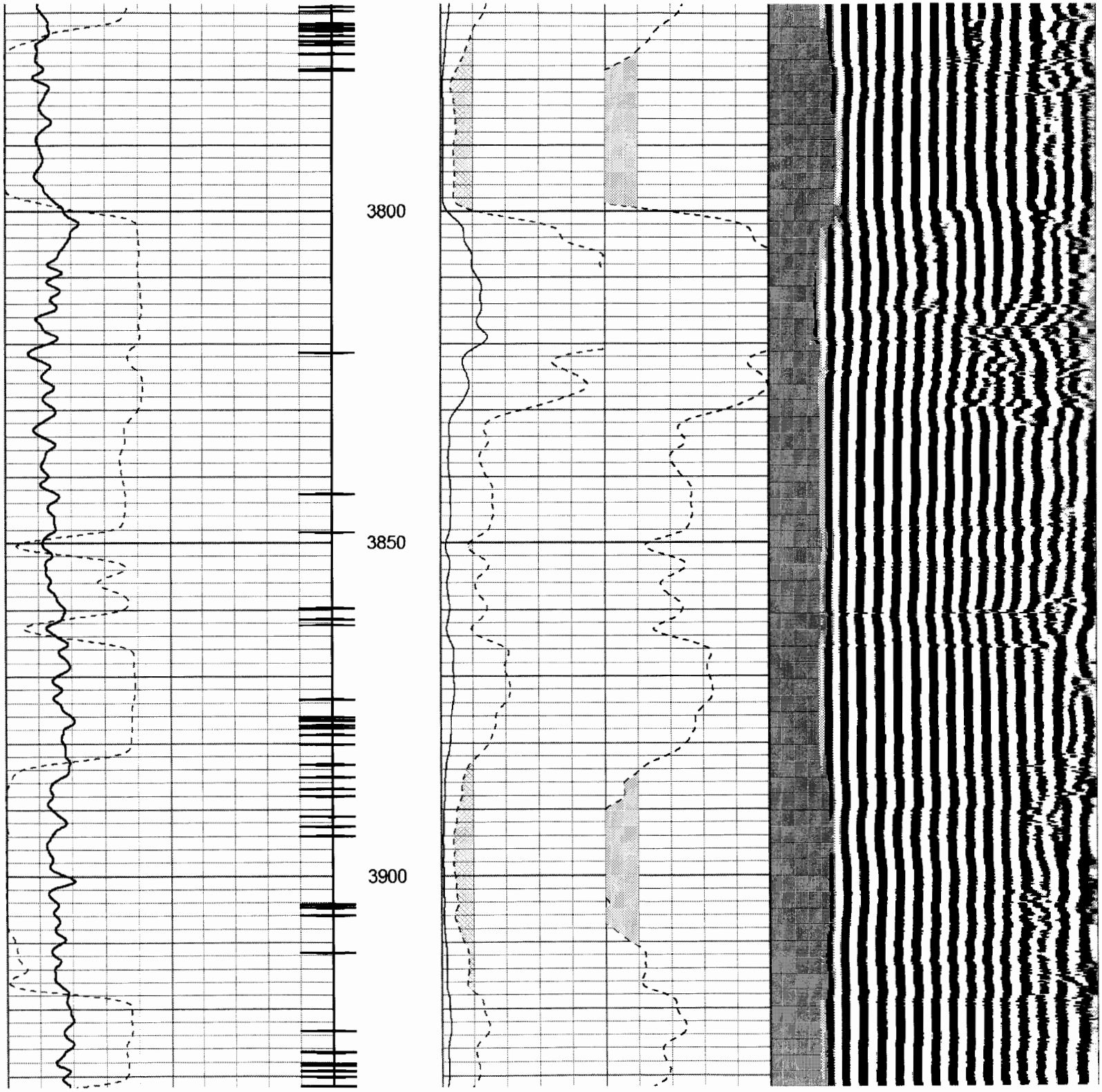
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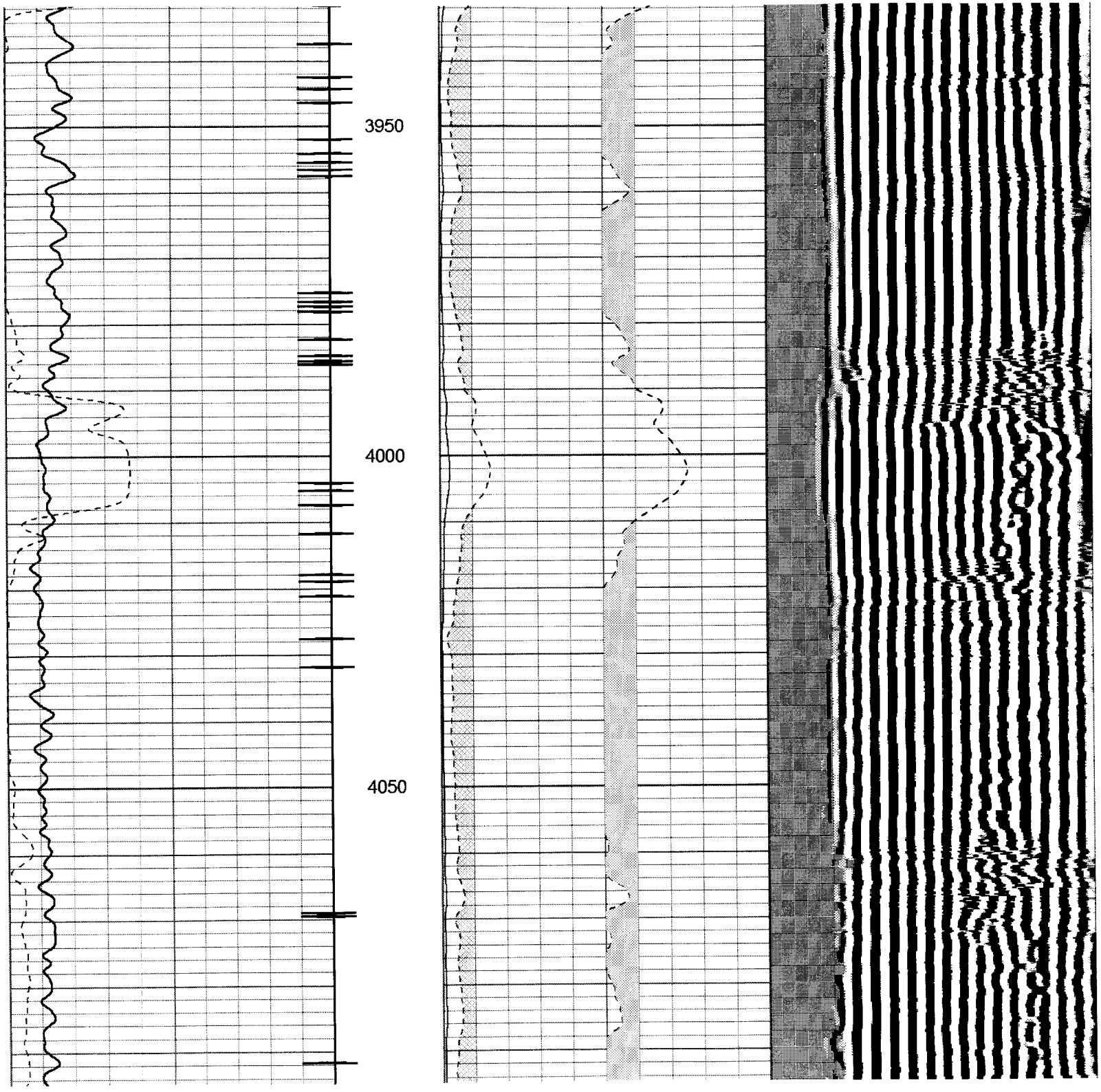
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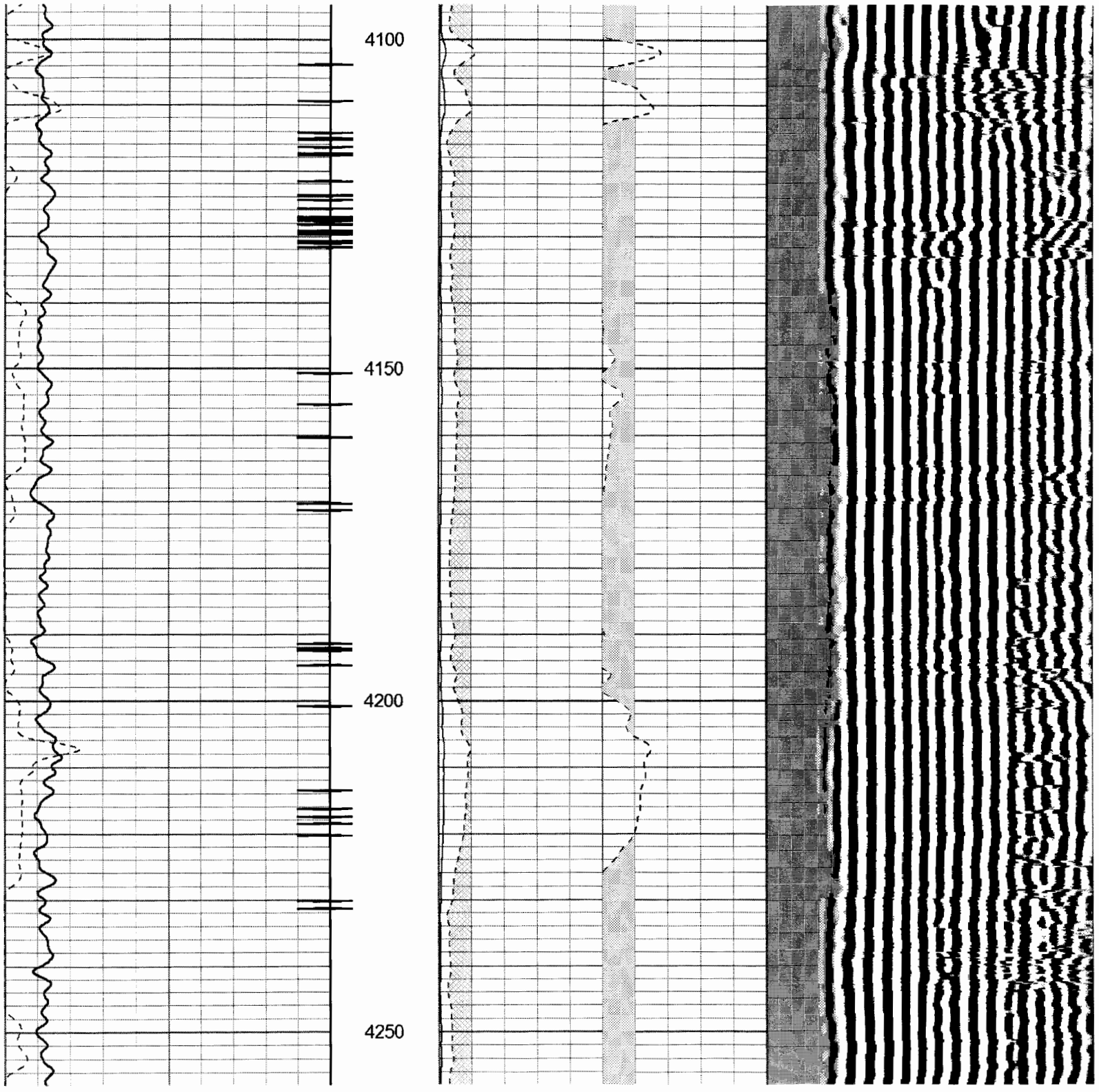
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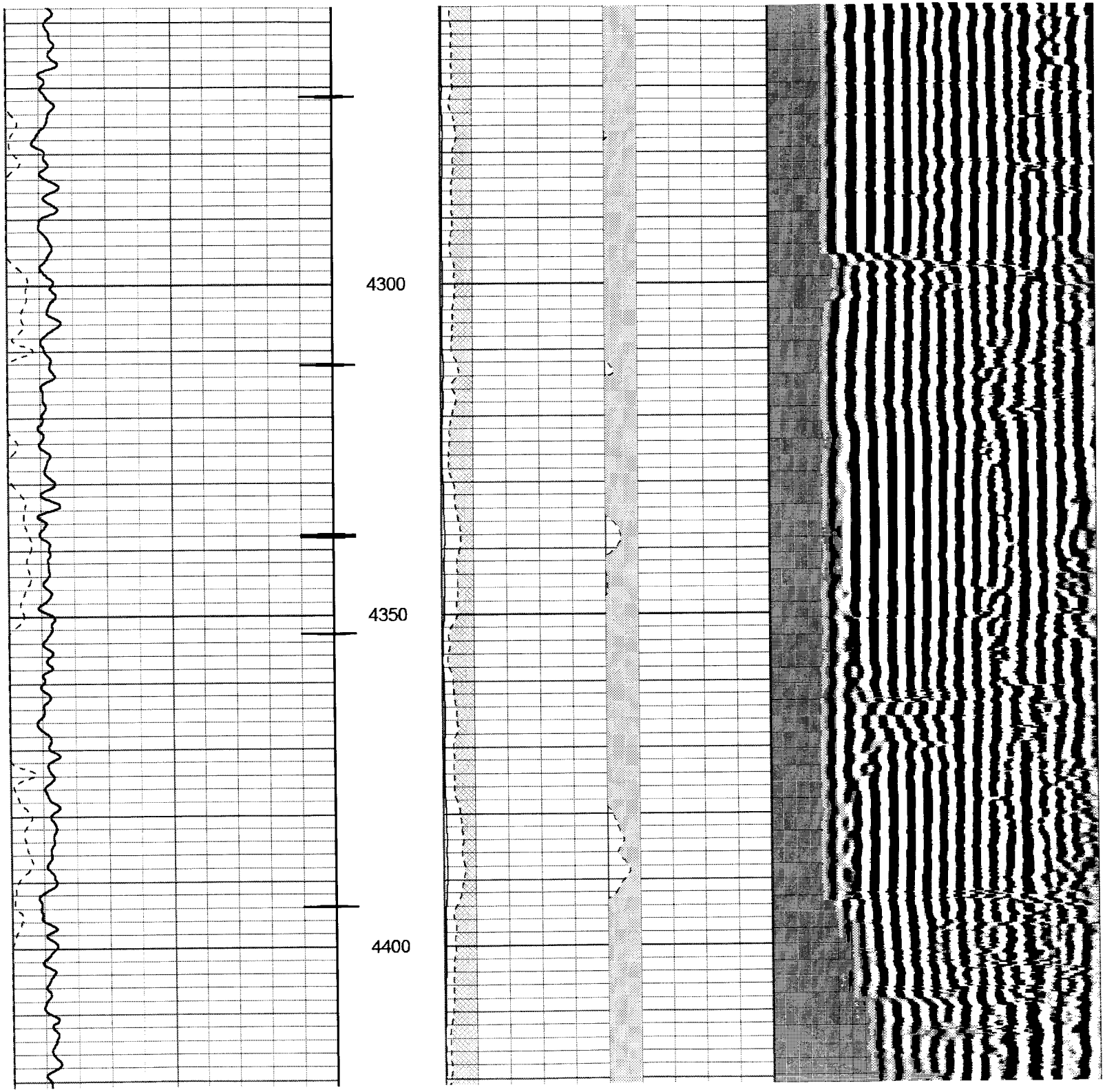
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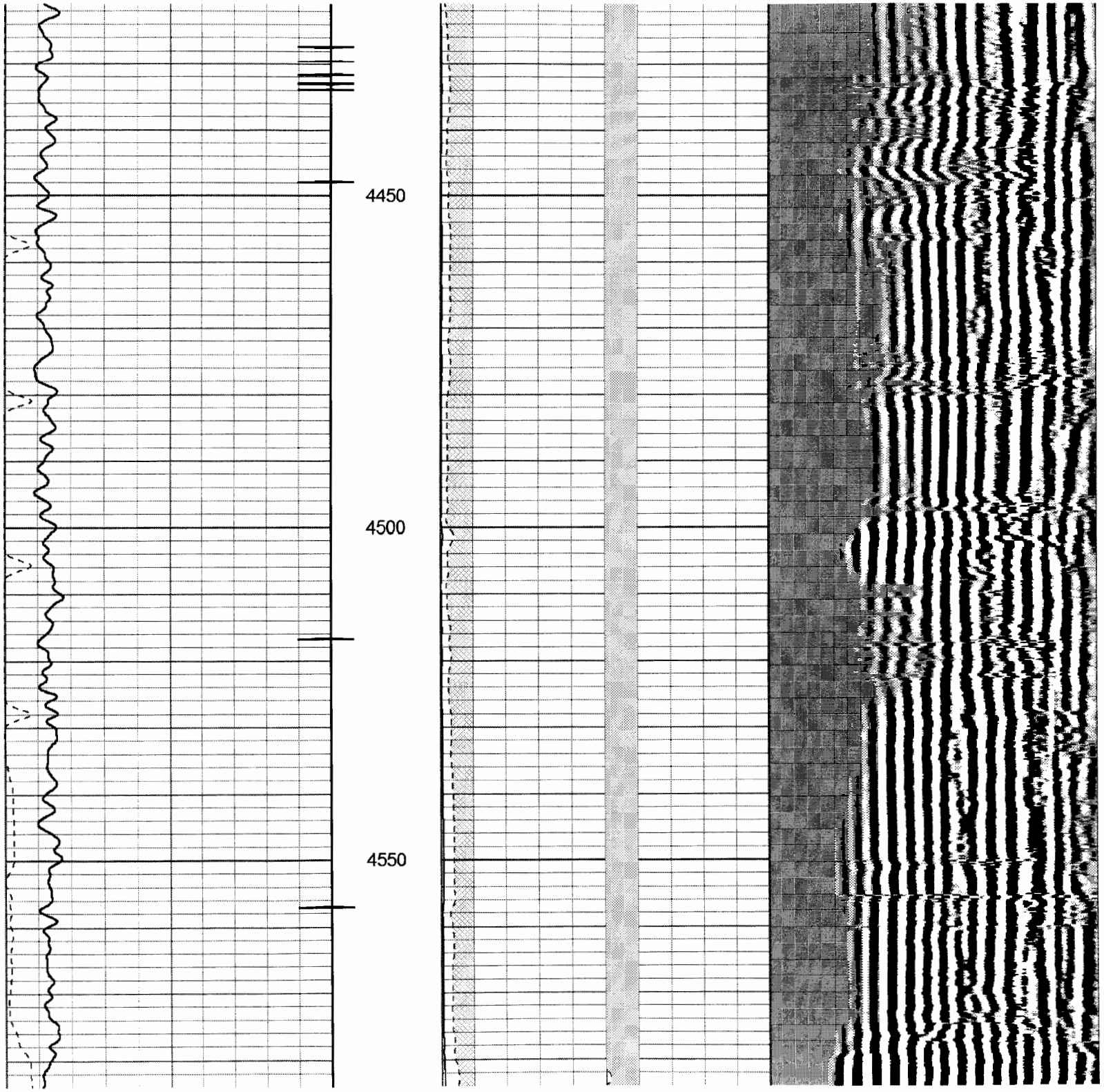
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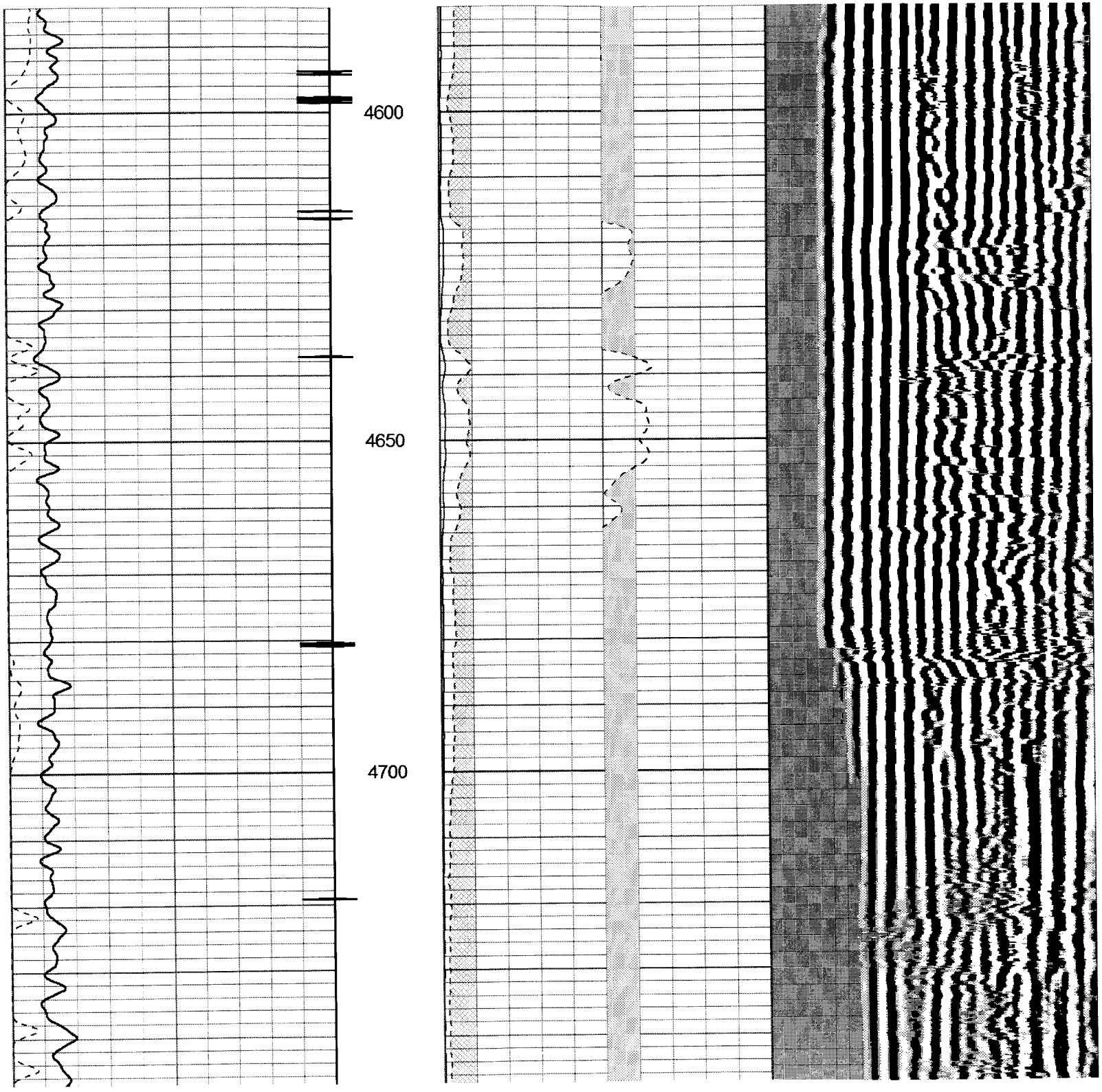
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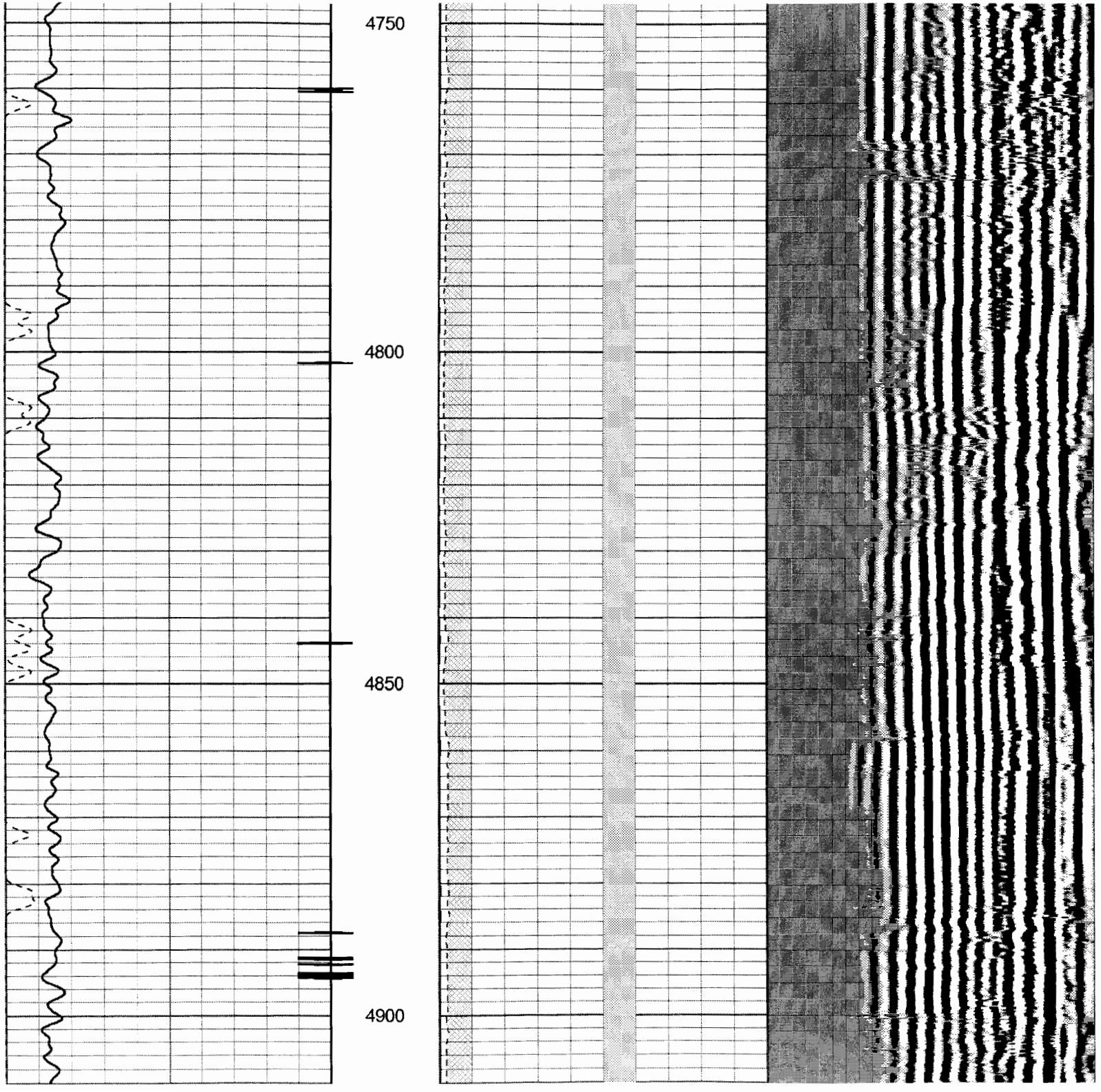
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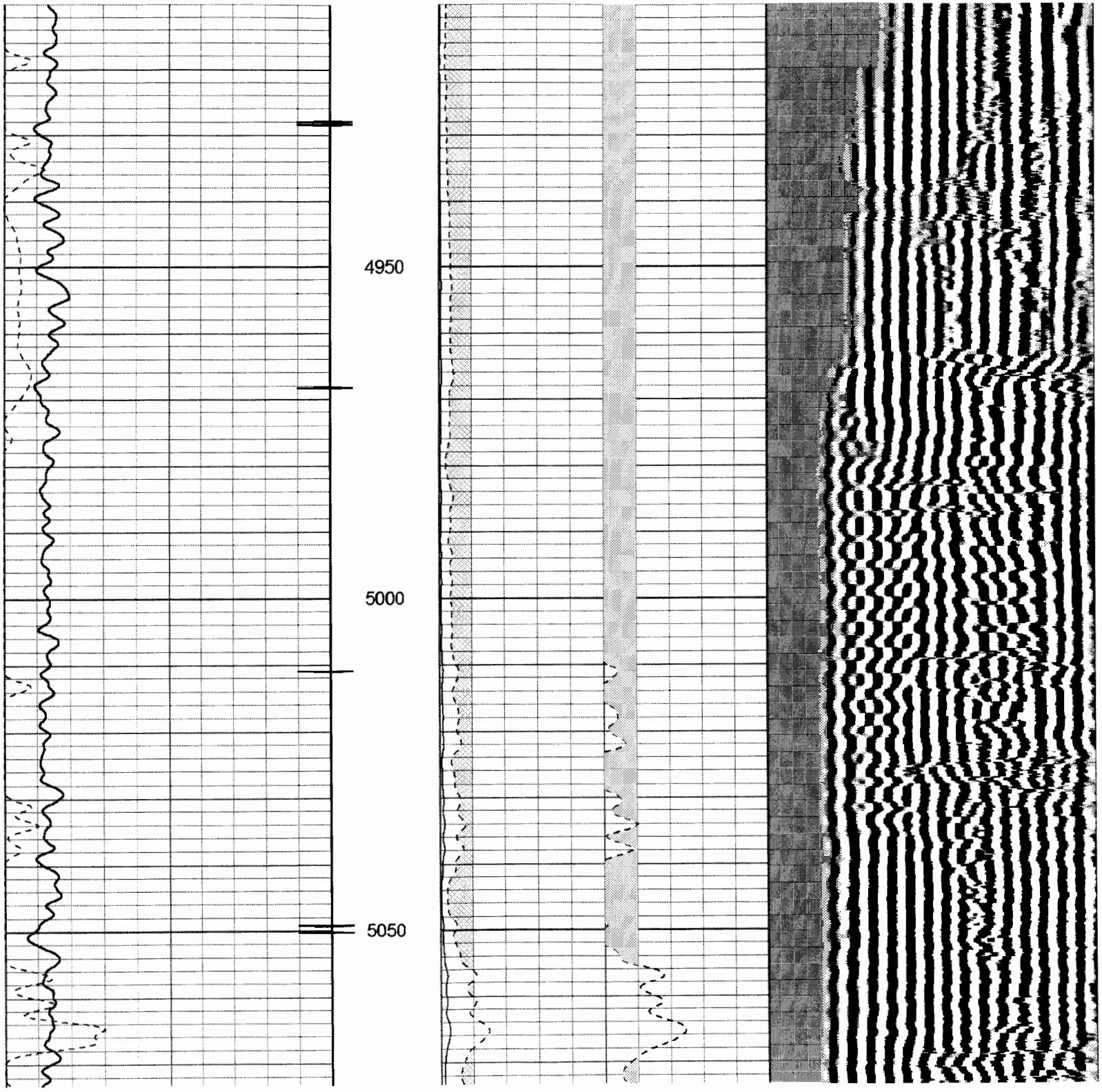
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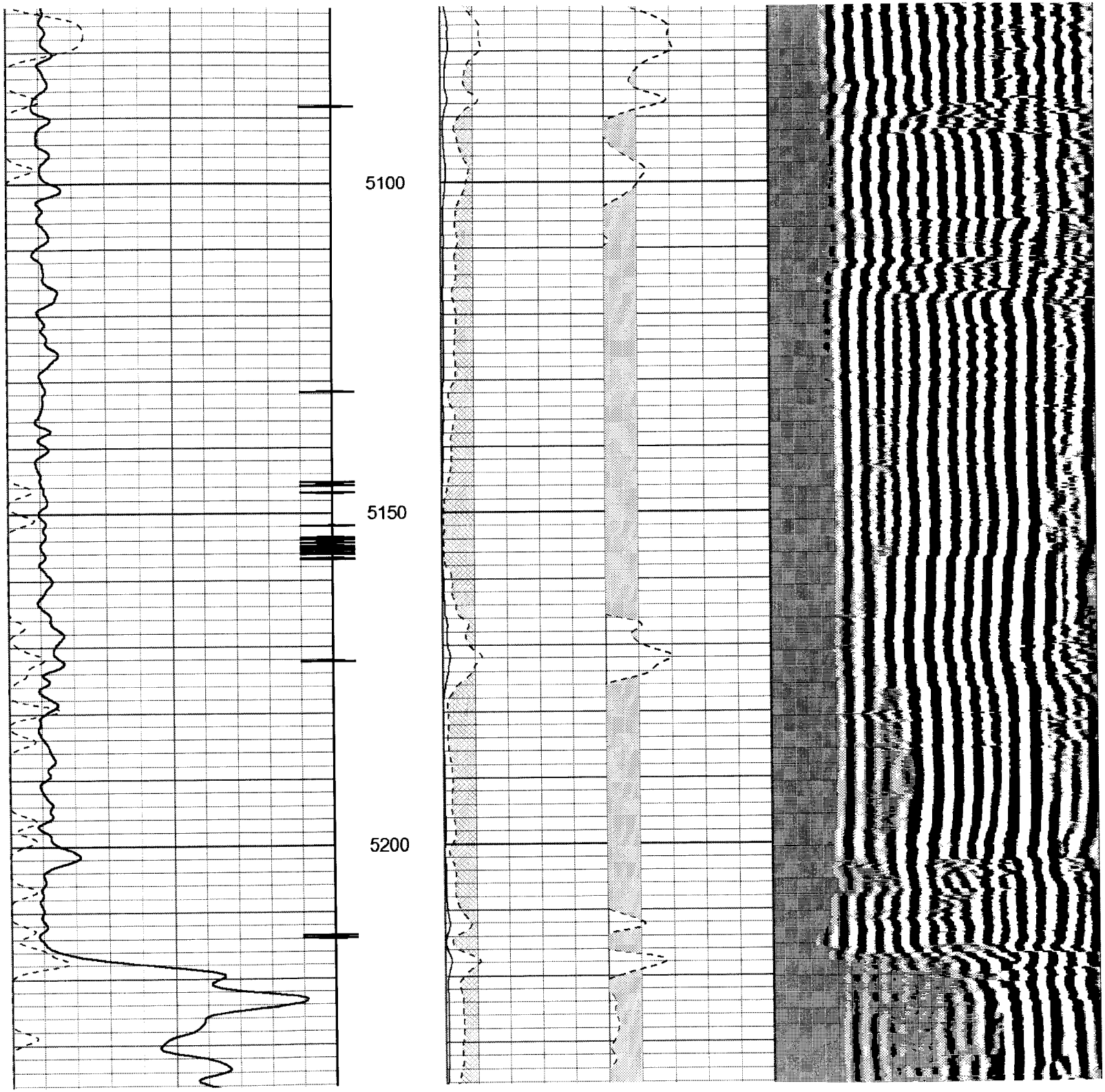
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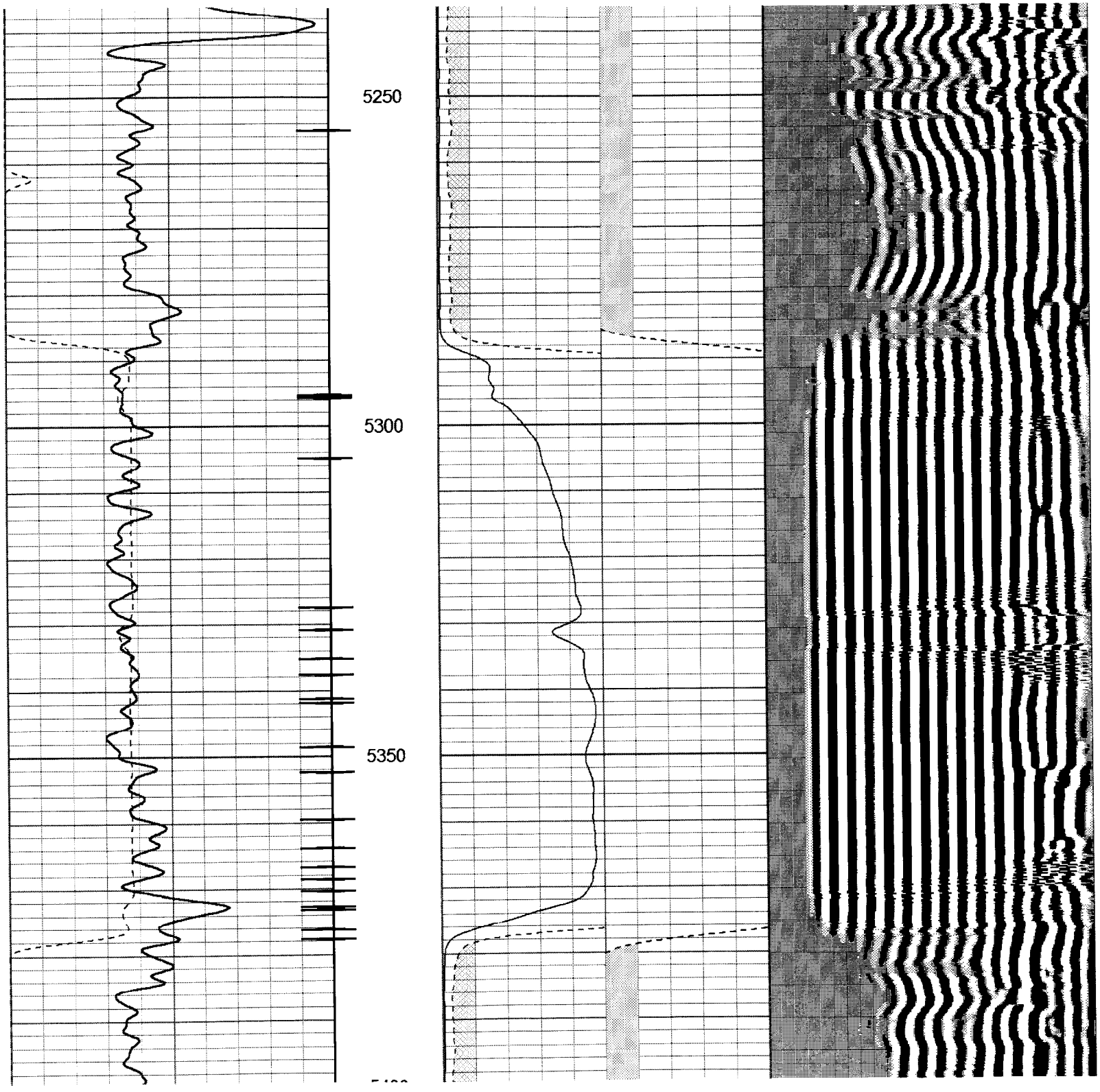
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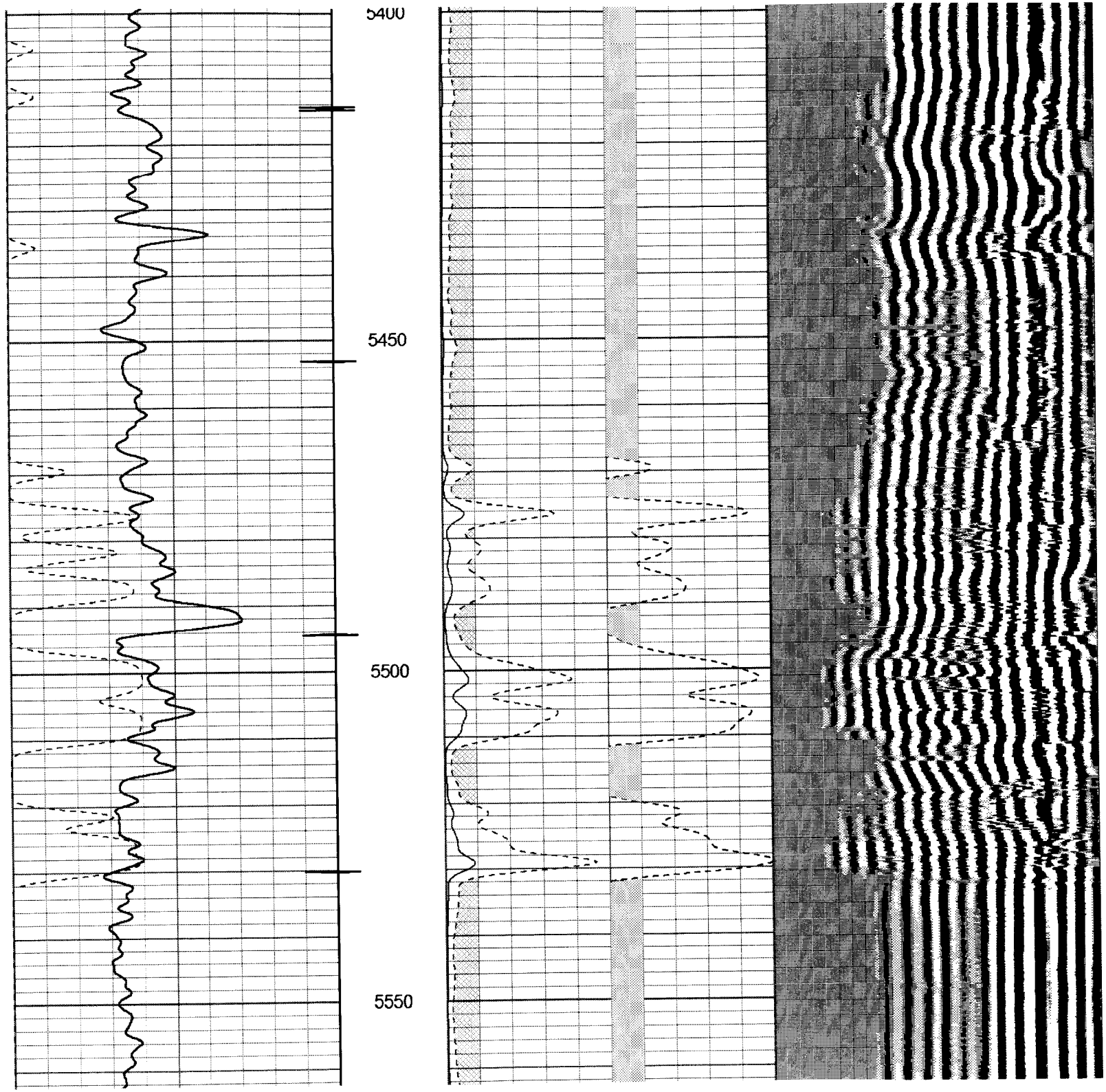
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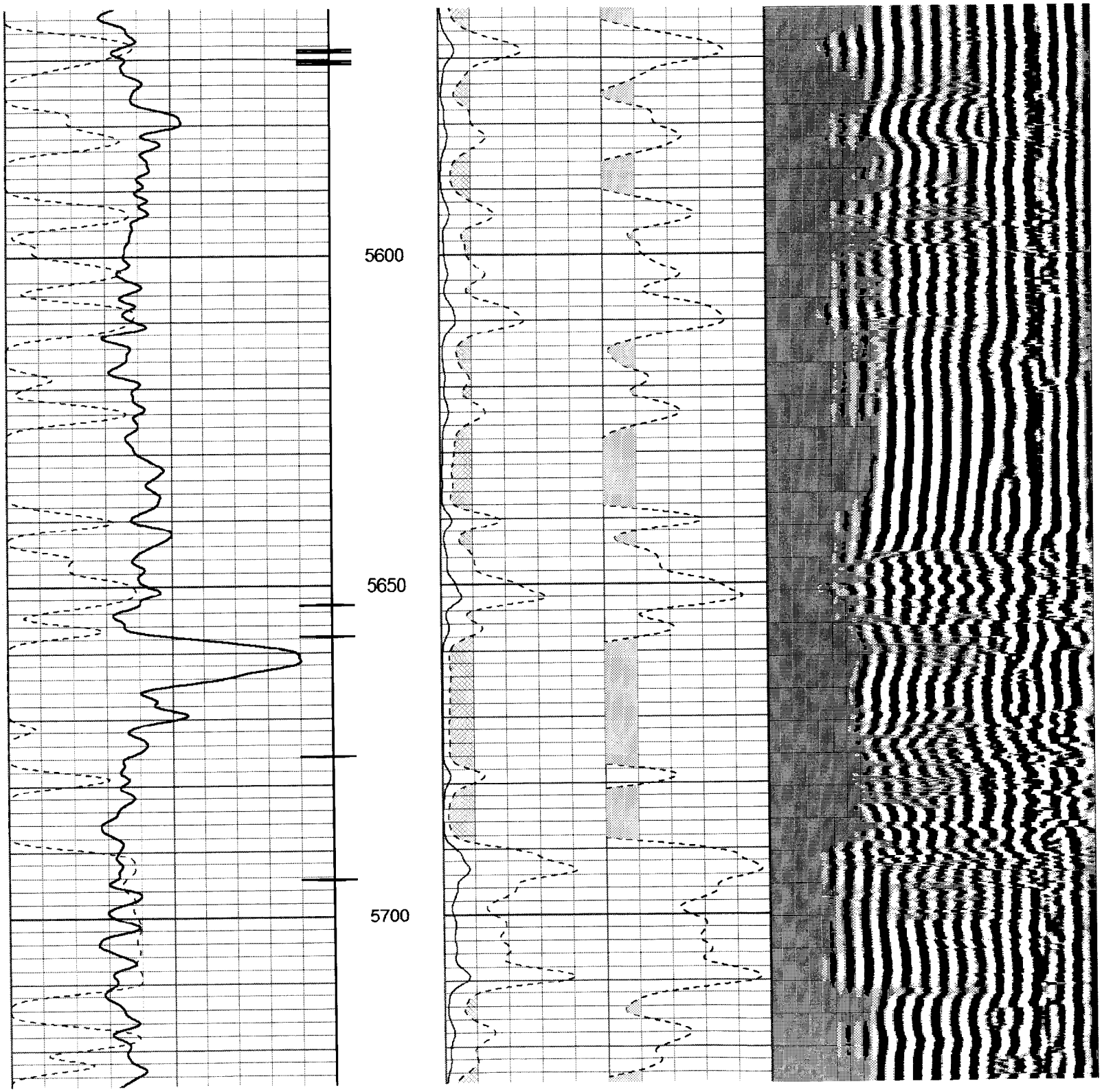
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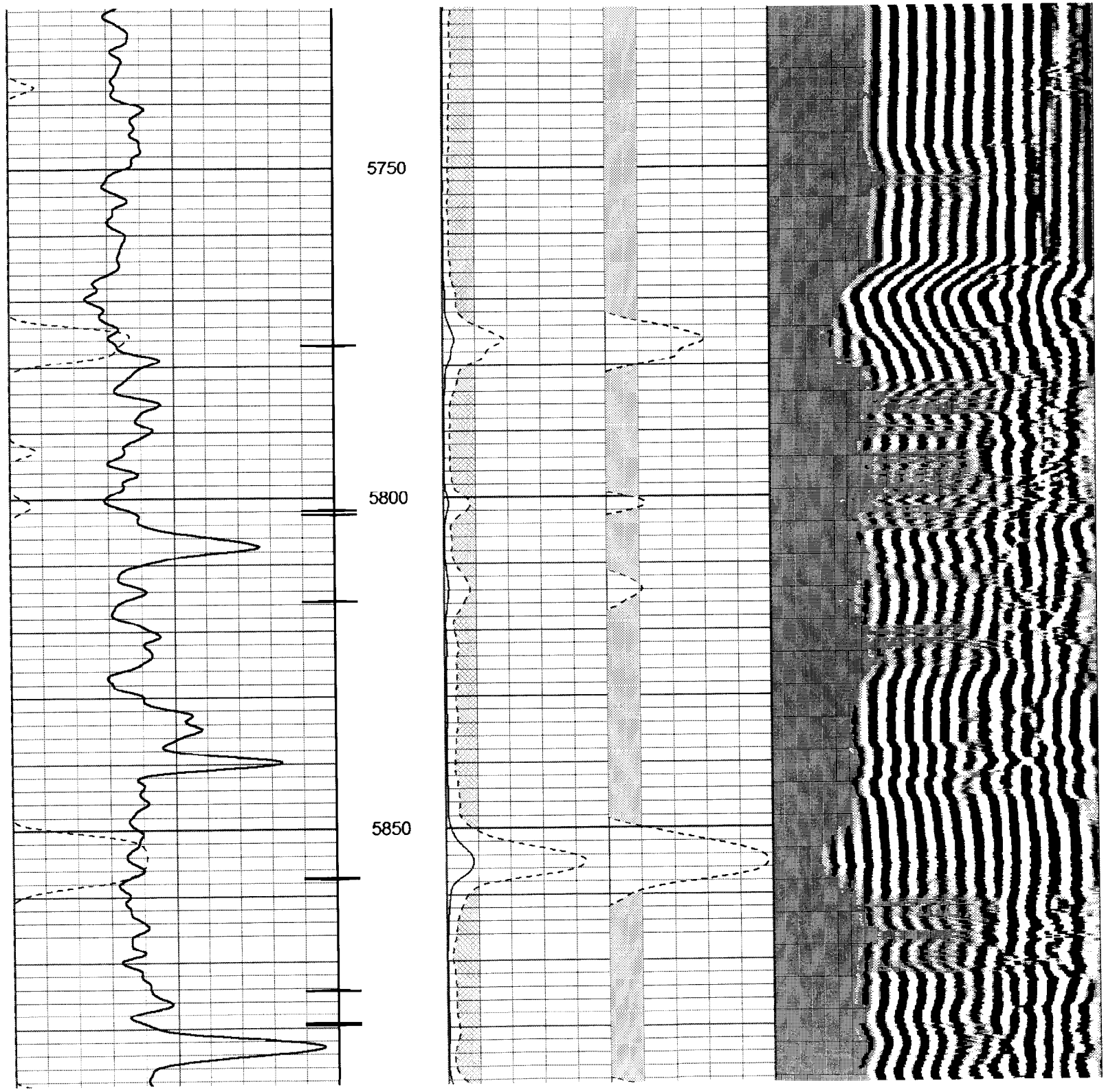
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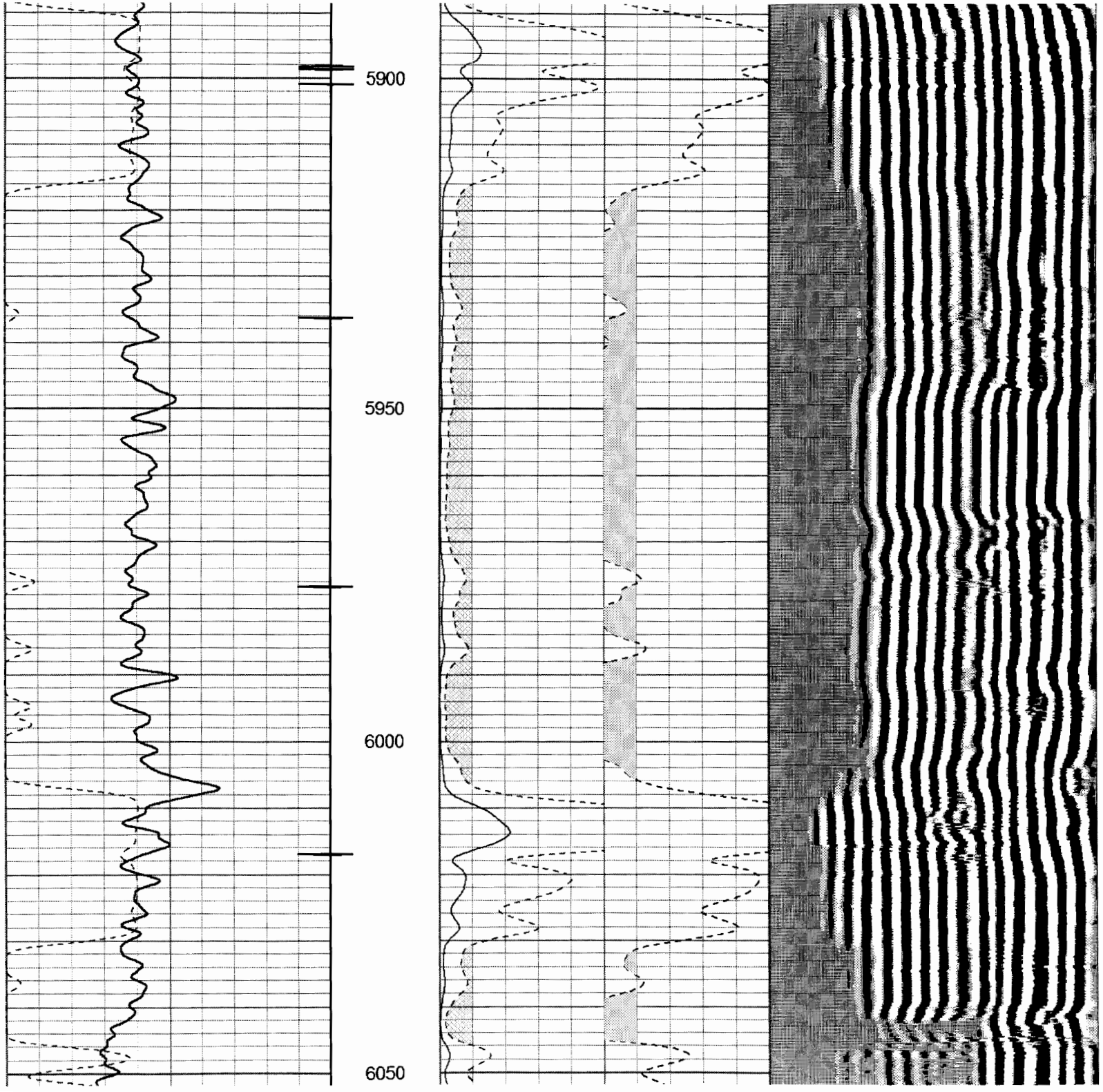
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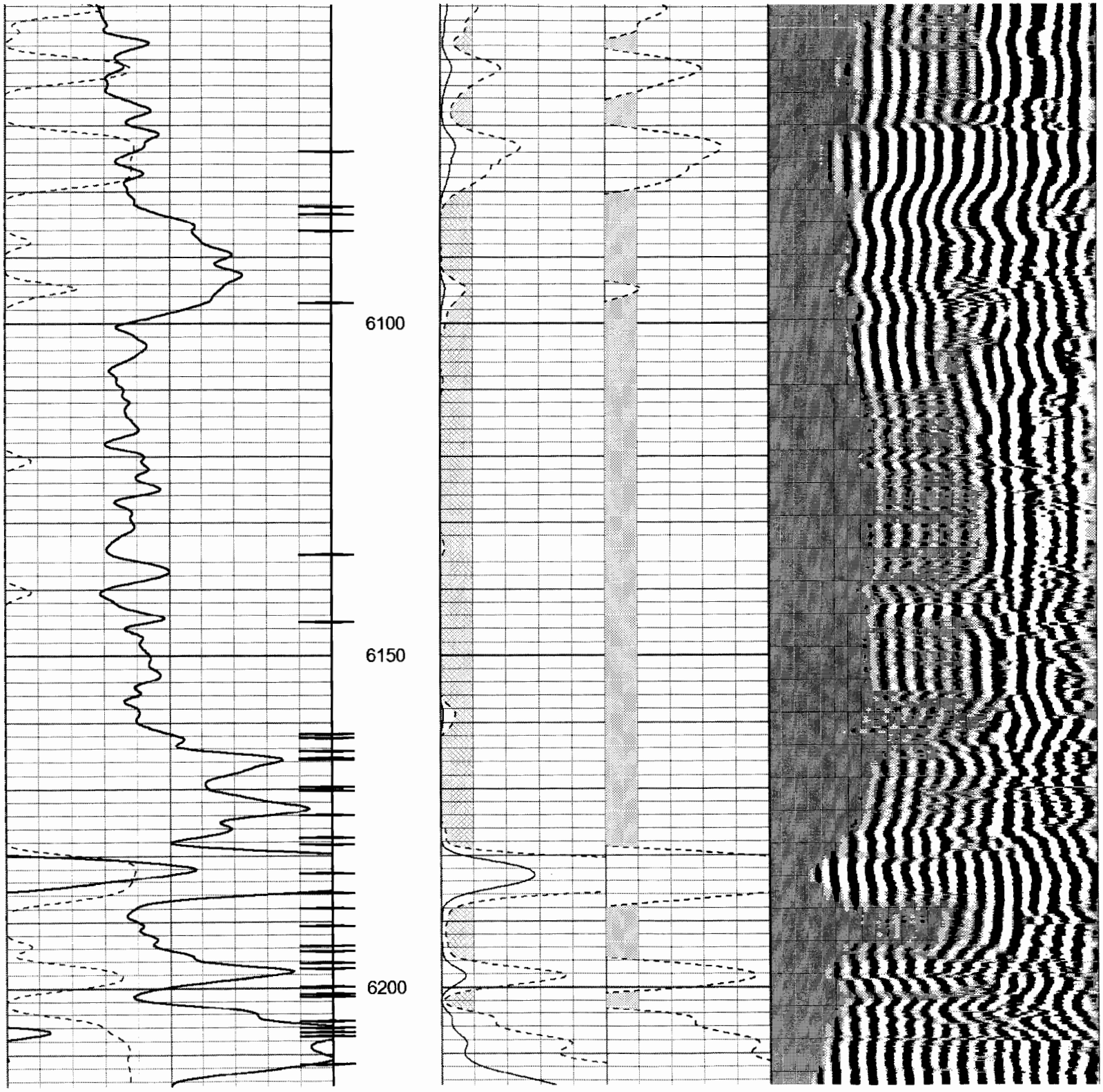
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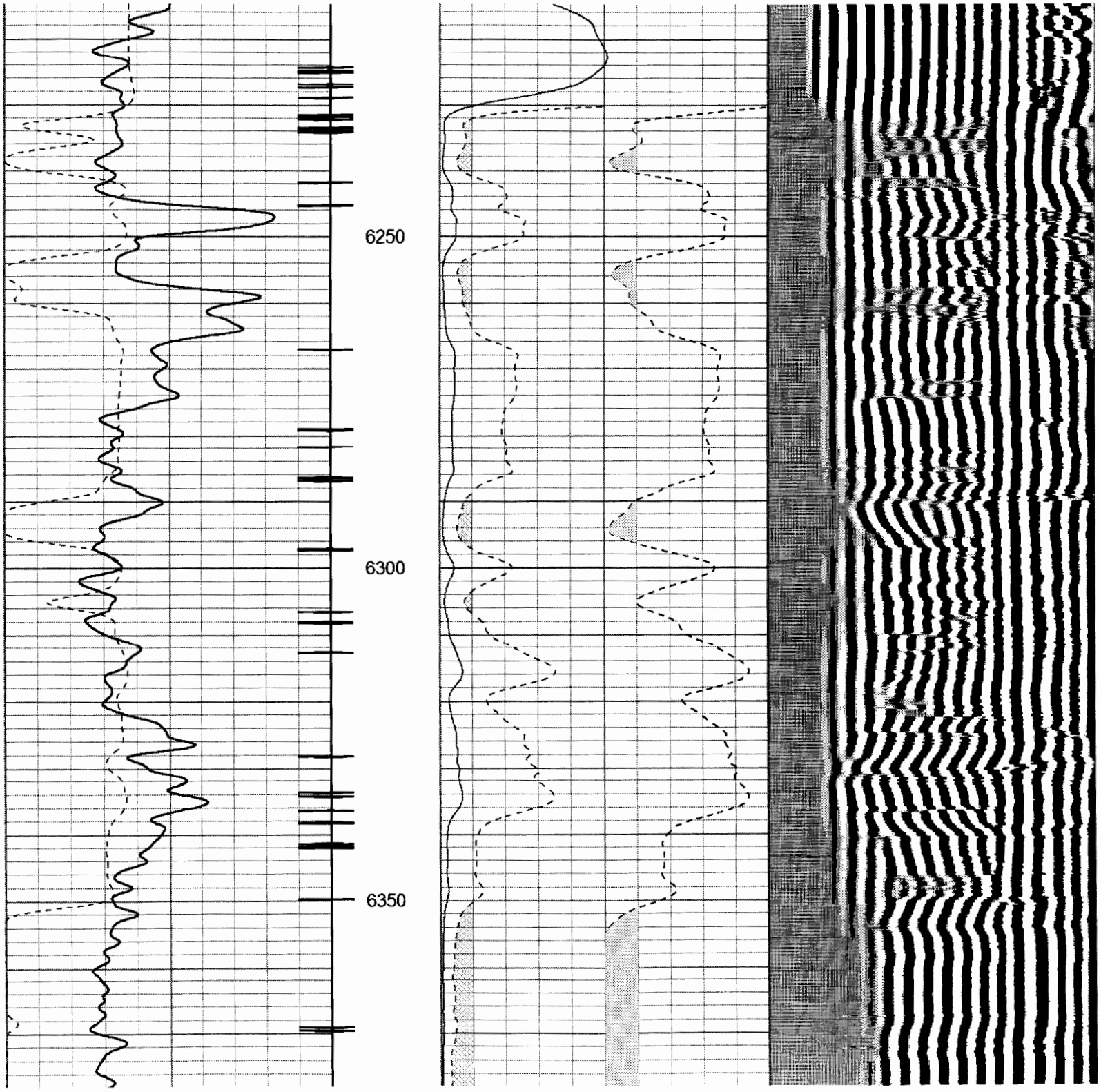
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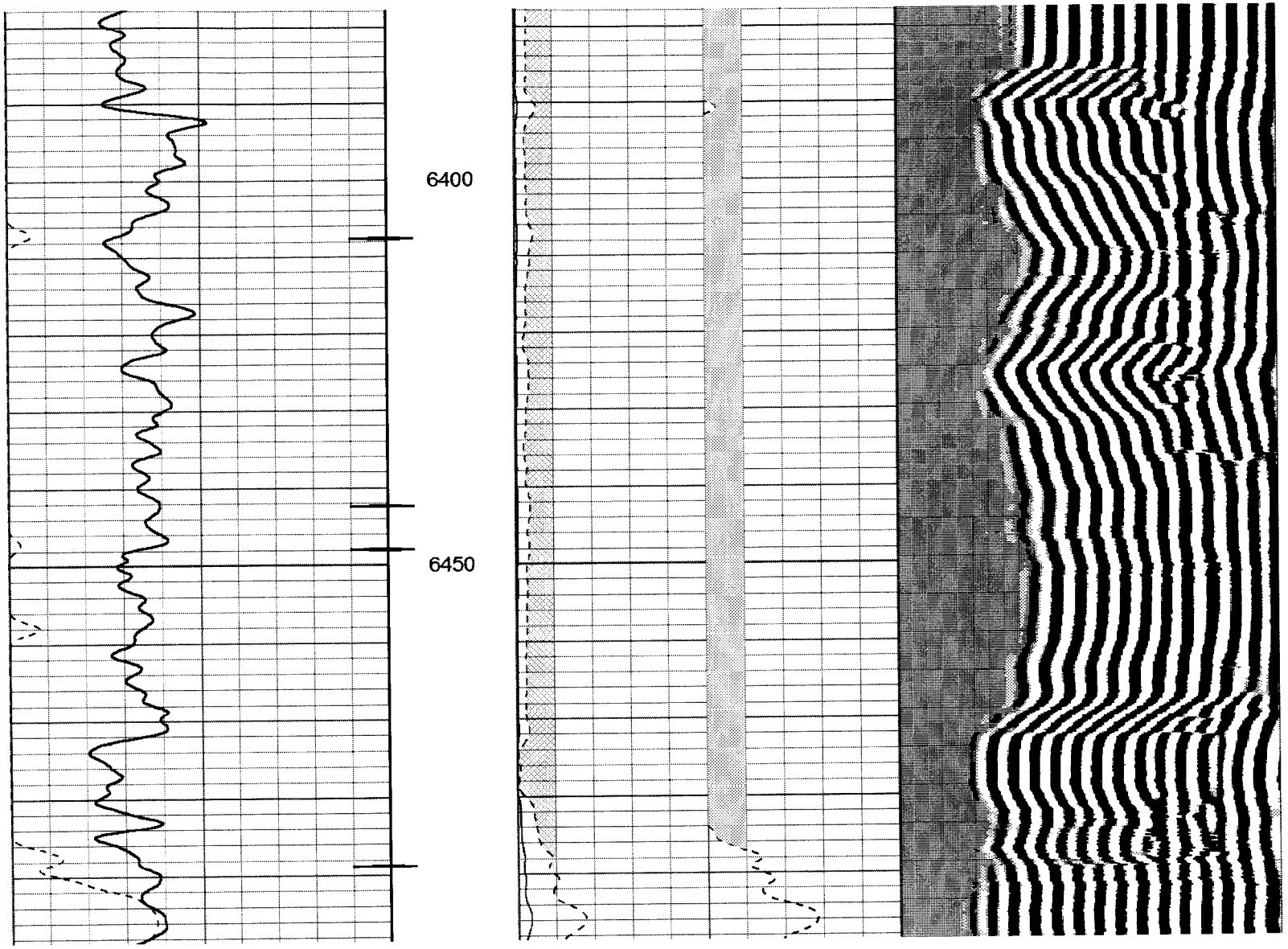
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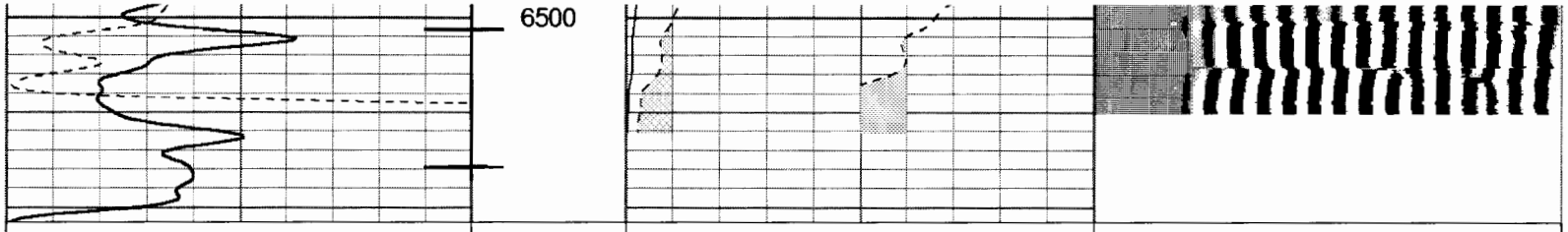
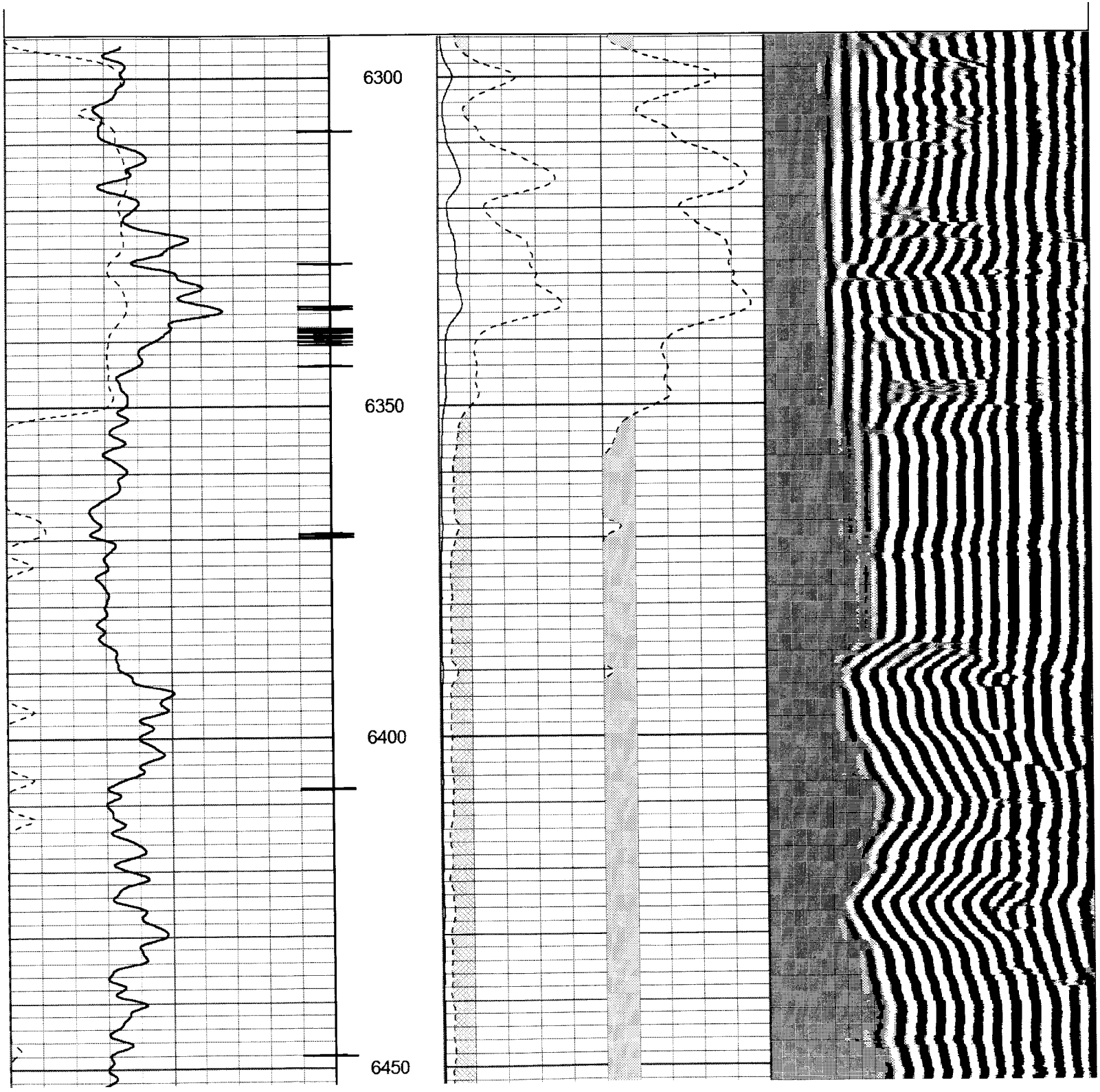


Database File:	eog(1-21-13).db
Dataset Pathname:	pass4.1
Presentation Format:	rbl3_55
Dataset Creation:	Tue Jan 21 12:40:05 2014 by Calc SCH 120126
Charted by:	Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150 | 0 CCL 5 | 0 Amplitude (mV) 100 | 200 Variable Density 1200
10 Collar Locator 0 | X5 Amplitude | 1 Bond Index 0.5
260 Travel Time (usec) 160 | 0 (mV) 10
0 Line Speed (ft/min) 100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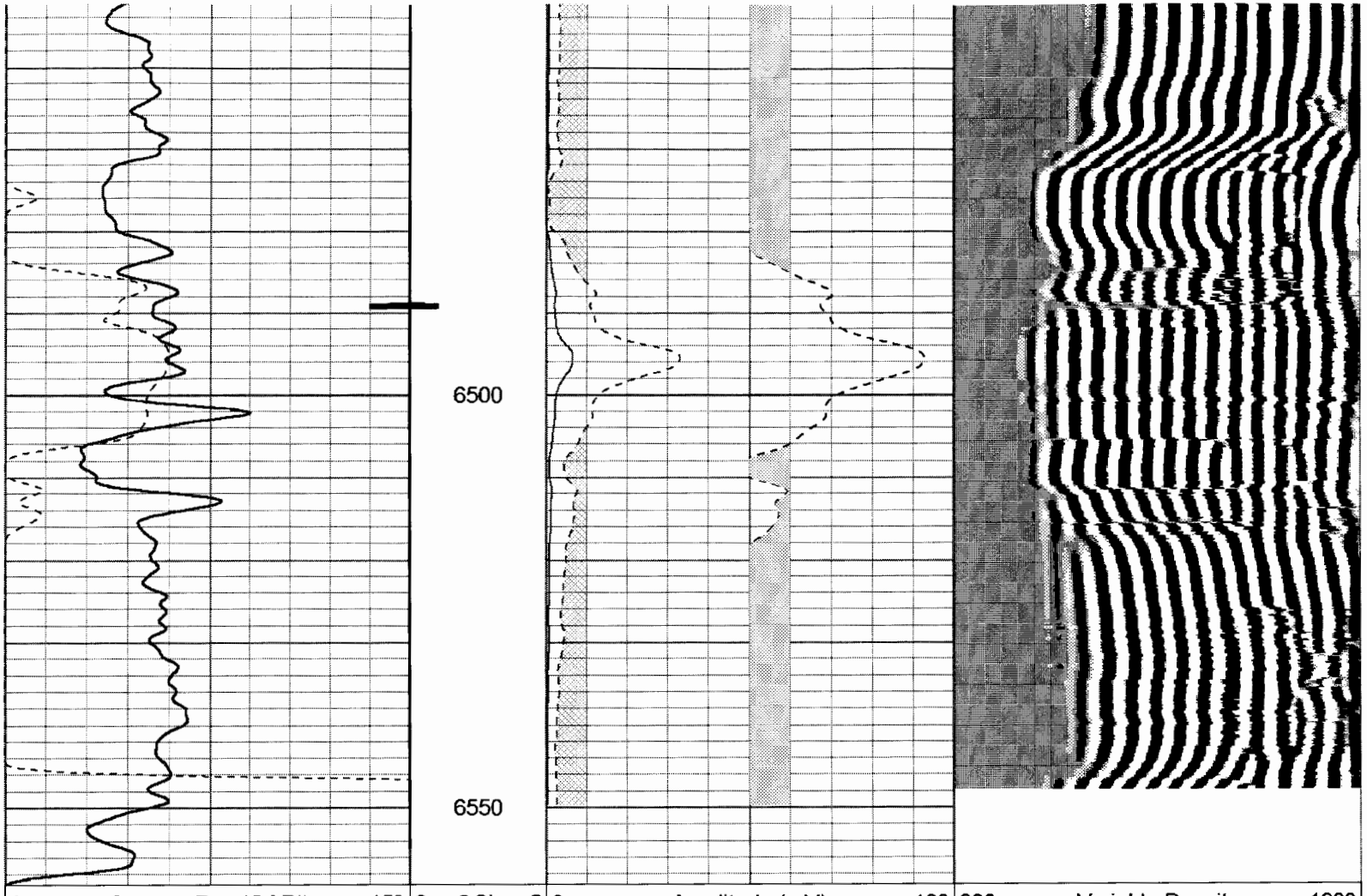

Calibration Report

Database File: eog(1-21-13).db
Dataset Pathname: pass5
Dataset Creation: Tue Jan 21 12:33:54 2014 by Log SCH 120126

Gamma Ray Calibration Report

Serial Number: 110-001

Serial Number:	110-001	
Tool Model:	Tekco110	
Performed:	Sun Jan 19 09:16:28 2014	
Calibrator Value:	100.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	63.0	cps
Sensitivity:	1.0000	GAPI/cps

Temperature Calibration Report

Serial Number:	101T-002			
Tool Model:	Teko101T			
Performed:	Sun Jun 13 13:33:21 1993			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec
Gain:	1.00			
Offset:	0.00			
Delta Spacing	2			

Segmented Cement Bond Log Calibration Report

Serial Number:	101T-002	
Tool Model:	Teko101T	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	840.542	ft

Master Calibration, performed Tue Jan 21 12:47:47 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.420	0.000	62.165	40.784	0.950
CAL	1.092	0.493				
5'	0.000	1.124	0.000	62.165	55.284	-0.000
SUM						
S1						
S2						
S3						
S4						
S5						
S6						
S7						

S8

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.092	0.493	1.000	0.000

Air Zero Calibration, performed Tue Jan 21 11:16:08 2014:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1			
S2			
S3			
S4			
S5			
S6			
S7			
S8			