

# Radial Cement Bond Gamma Ray Casing Collar Log

Company Whiting Oil & Gas  
Well Razor 22-2712H  
Field Red Tail  
County Weld State Colorado

Location: API # : 05-123-3625700  
SHL 330' FNL & 660' FWL  
SEC 22 TWP 10N RGE 58W  
Permanent Datum Ground Level Elevation 4833  
Log Measured From Kelly Bushing  
Drilling Measured From Kelly Bushing  
Other Services  
Gauge Run Plug  
Elevation  
K.B. 4849  
D.F. 4850  
G.L. 4833

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State Colorado

Date 20-Feb-2013

Run Number	Three
Depth Driller	---
Depth Logger	5050
Bottom Logged Interval	5048
Top Log Interval	25
Open Hole Size	9 5/8"
Type Fluid	Water
Density / Viscosity	---
Max. Recorded Temp.	---
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	10:15
Equipment Number	HD 134
Location	Ft. Lupton
Recorded By	Patrick Grimes
Witnessed By	Mike Stabb

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36	surface	1614
Prot. String				
Production String	7"	29	Surface	6139
Liner	4.5"	11.6	5154	12563

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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.

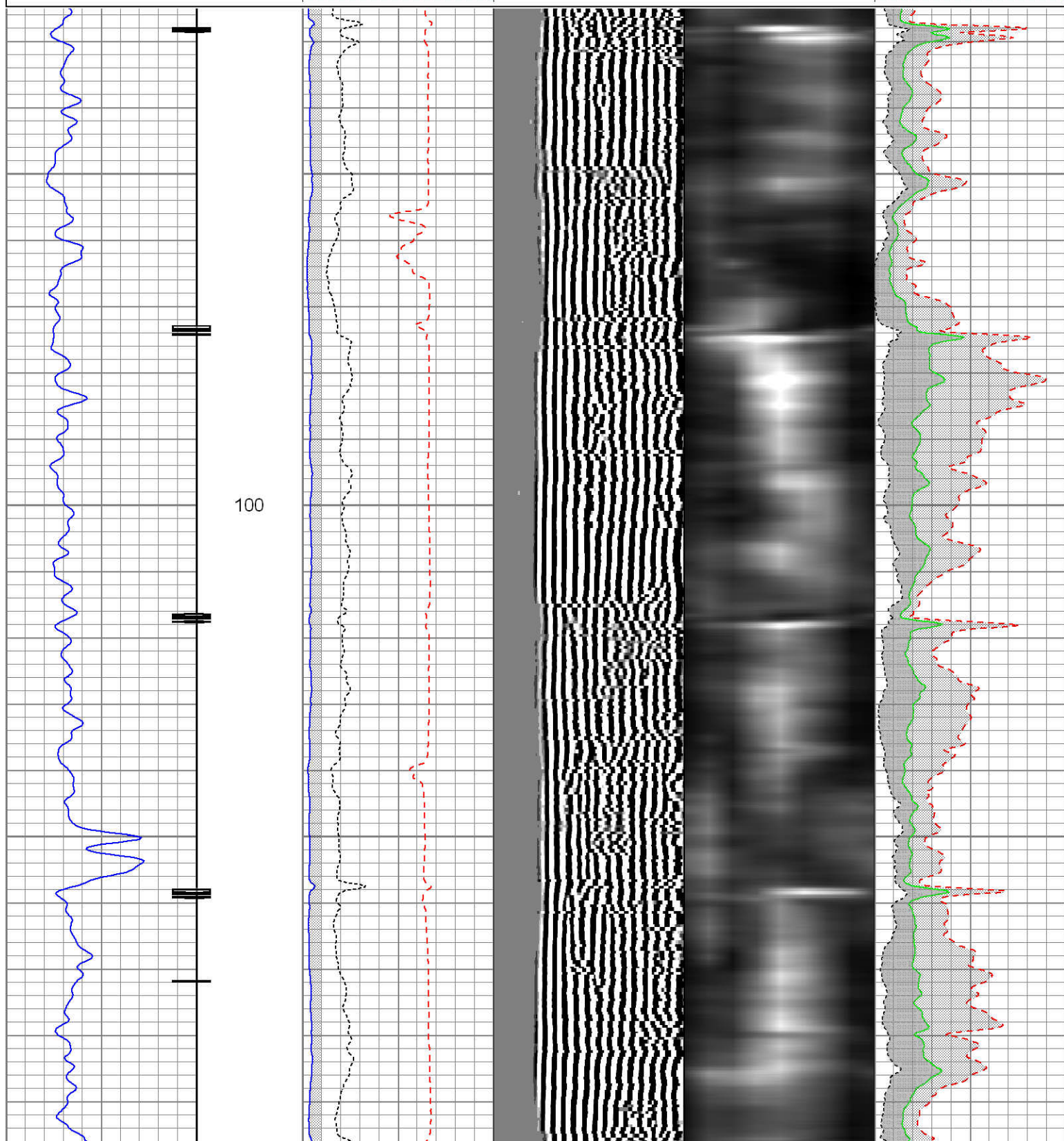
## Comments

Depth Correlated to casing tally liner top  
Log ran under 1600 psi surface induced pressure  
Estimated Cement Top @ Surface  
Thank You For Using FMC Technologies

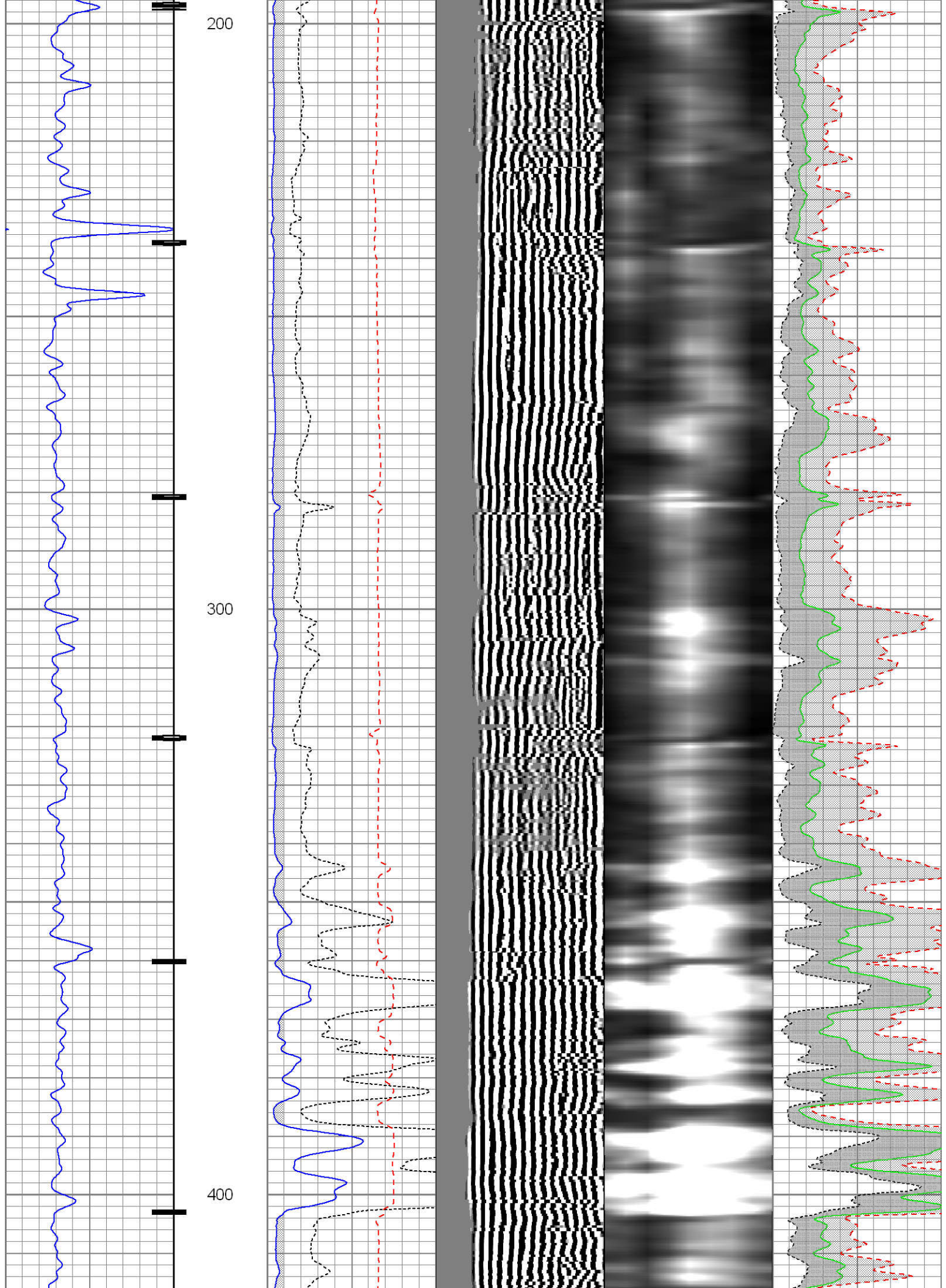
# Main Pass @ 1600psi

Database File: rzor-22-2712h.db  
Dataset Pathname: pass7  
Presentation Format: rib  
Dataset Creation: Wed Feb 20 10:23:03 2013 by Log SCH 111116  
Charted by: Depth in Feet scaled 1:240

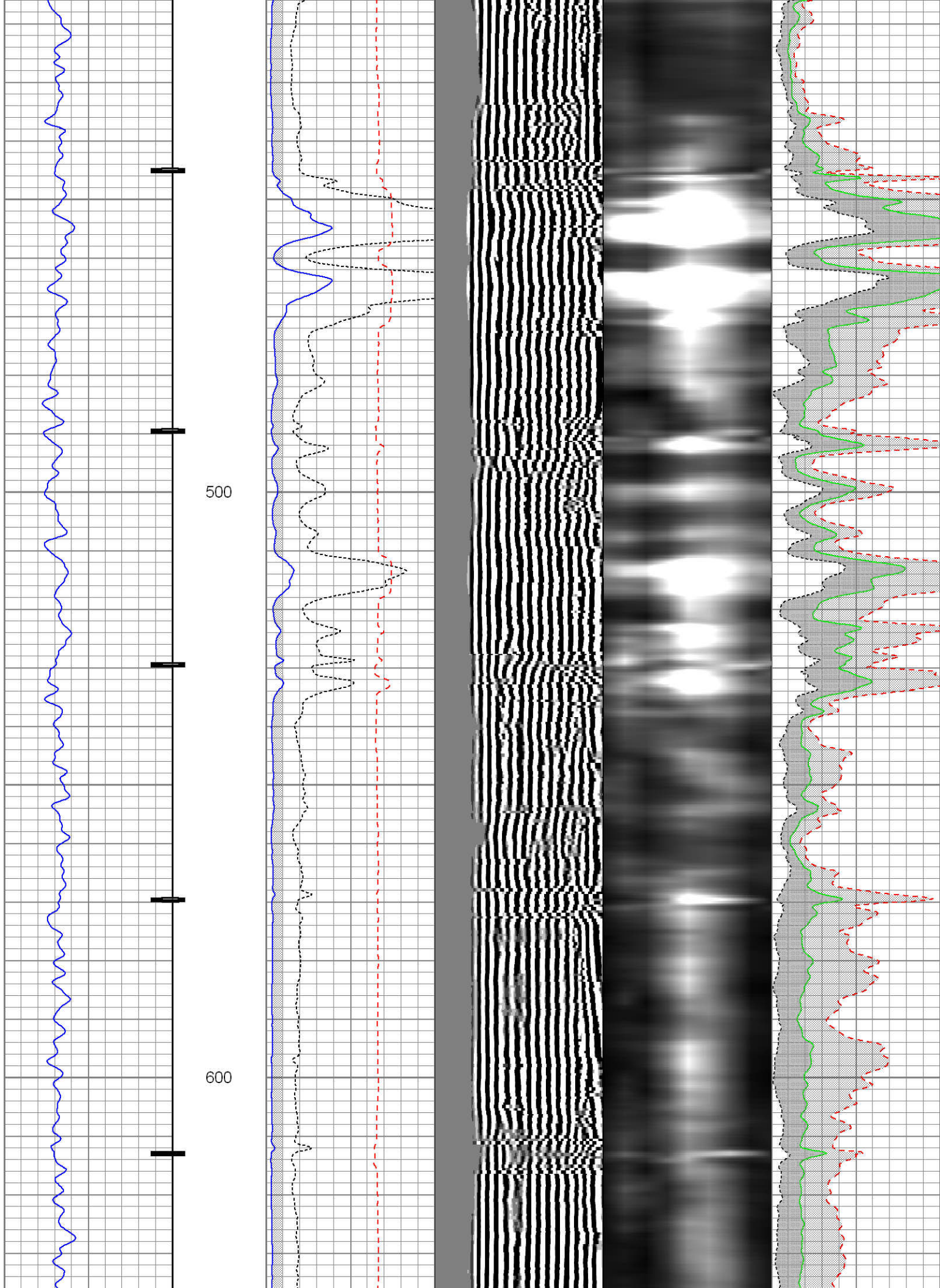
0	Gamma Ray	150	3' Amplitude		5' Variable Density Log		Sector Map	Average Amplitude	
			0	(mV)	100	200	1200	0	100
			3' Amplitude x 5					Minimum Amplitude	
			0	(mV)	20			0	100
			3' Travel Time					Maximum Amplitude	
			650	(usec)	150			0	100



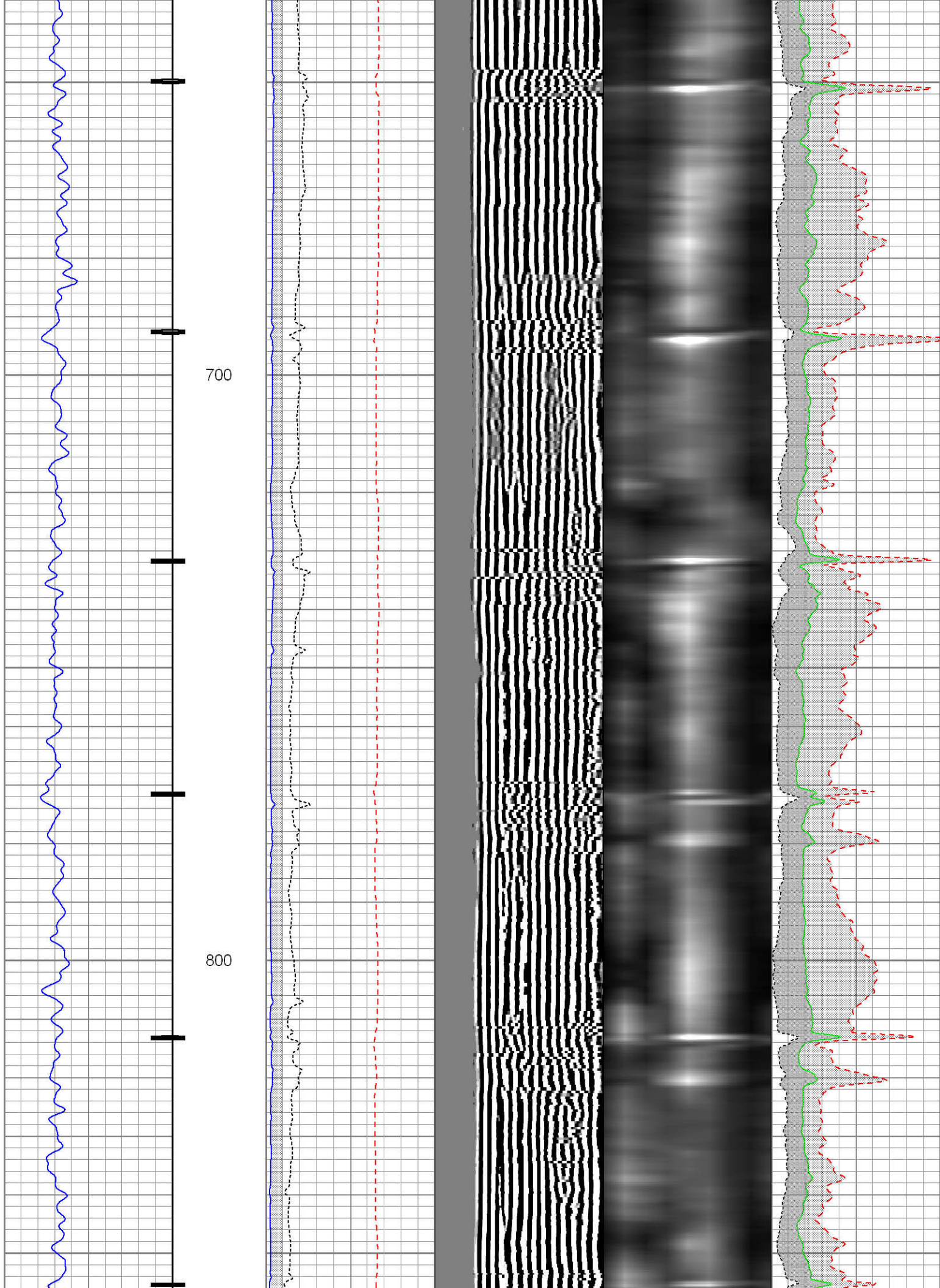




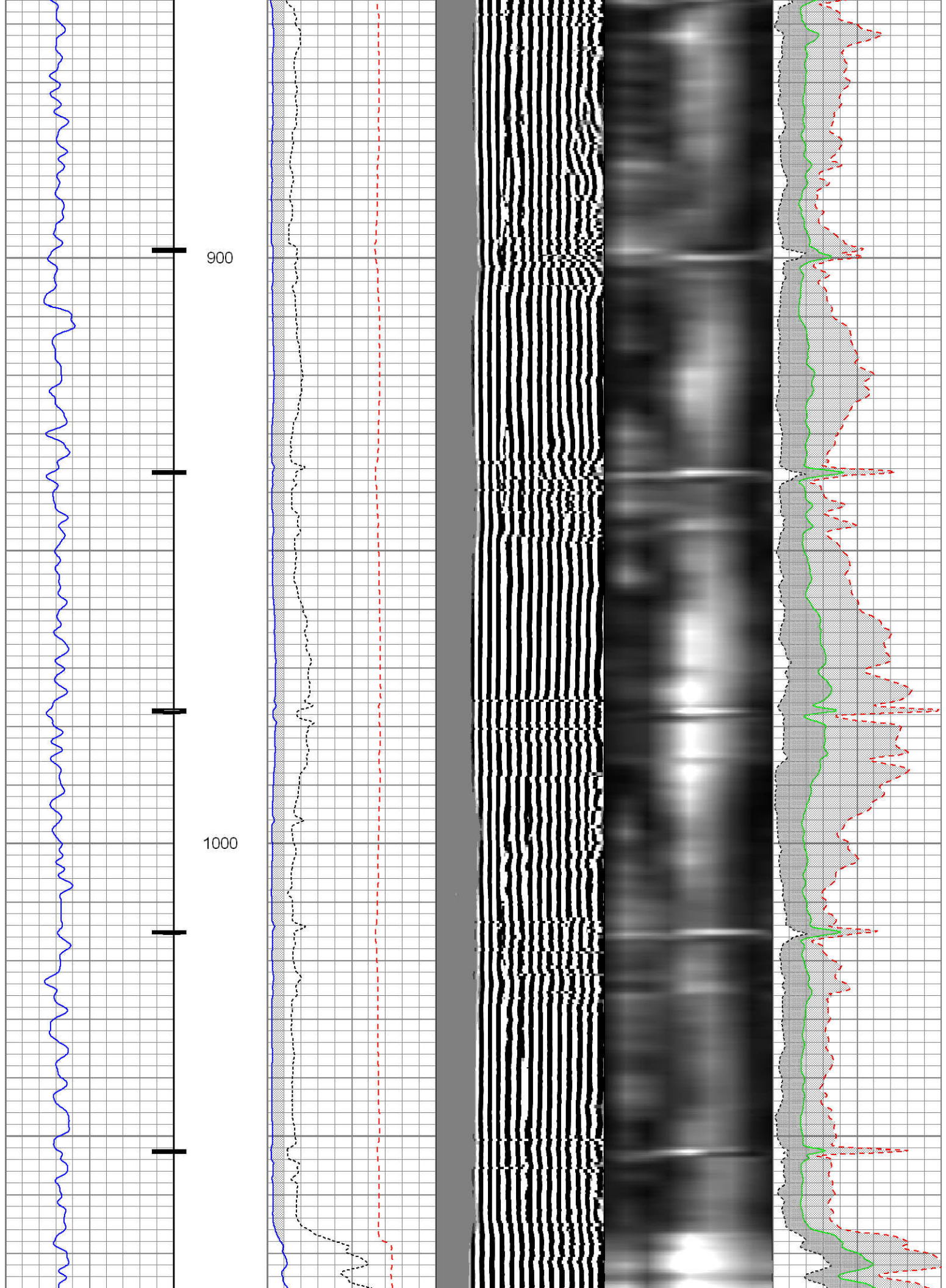




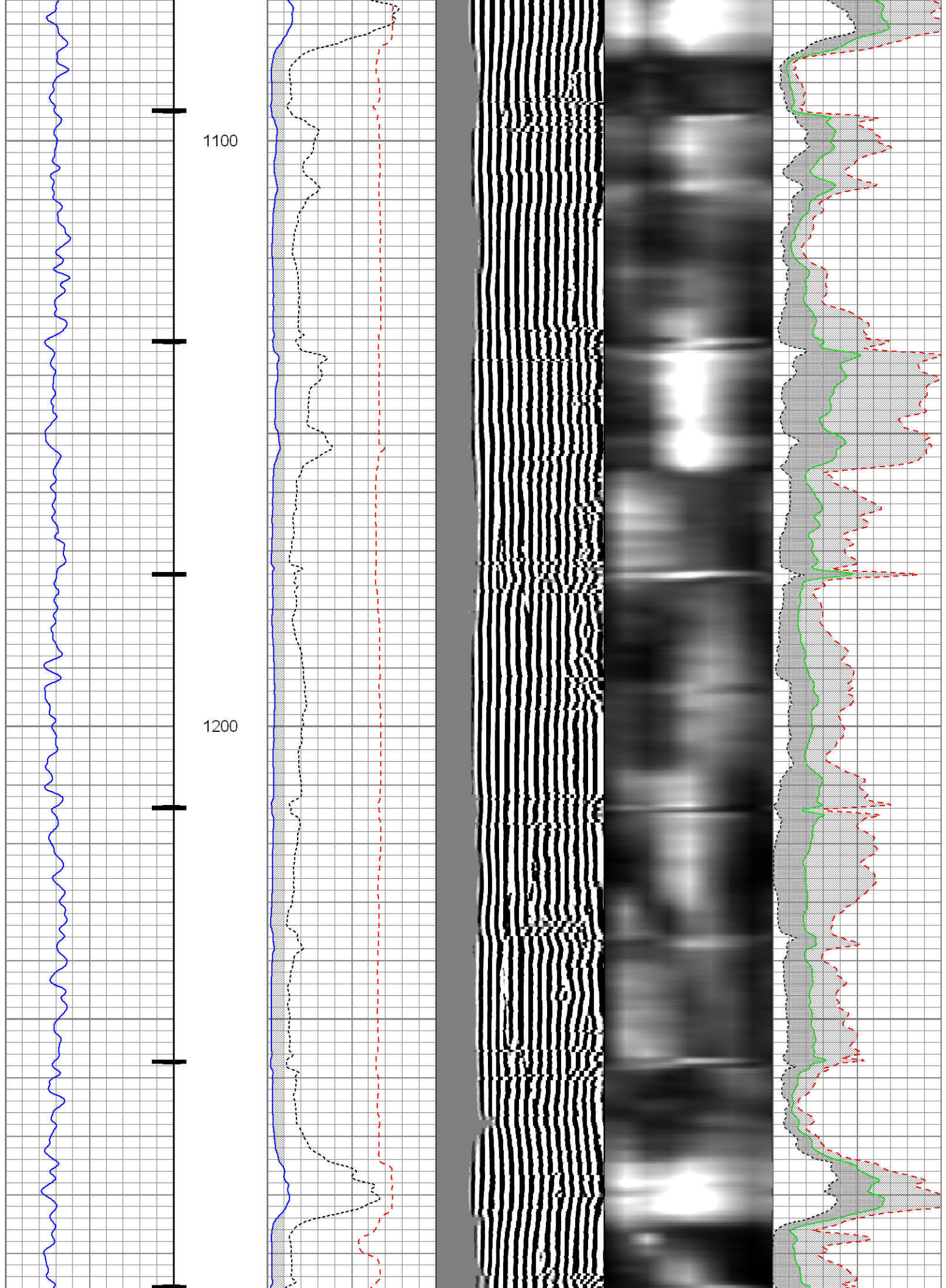




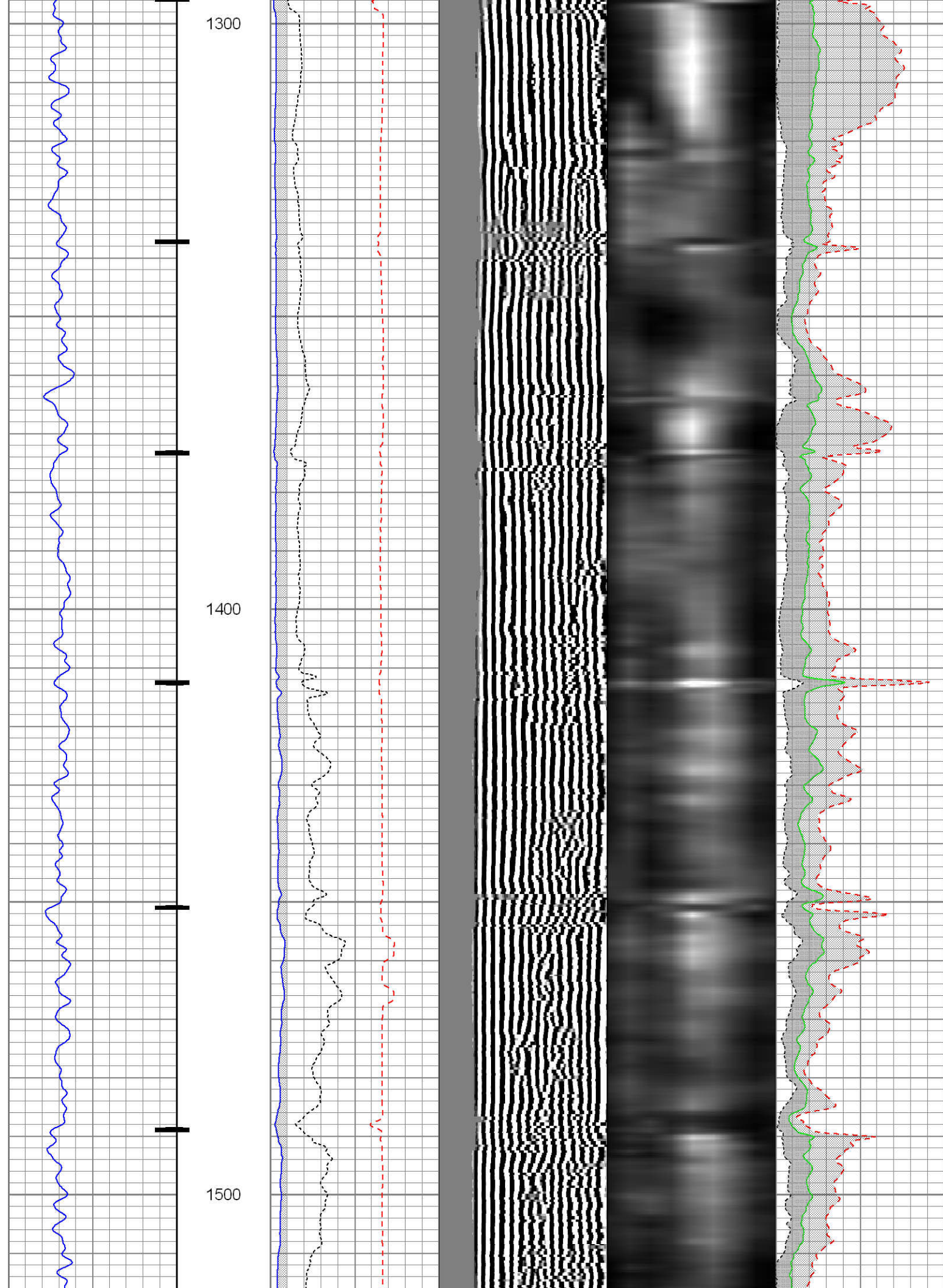




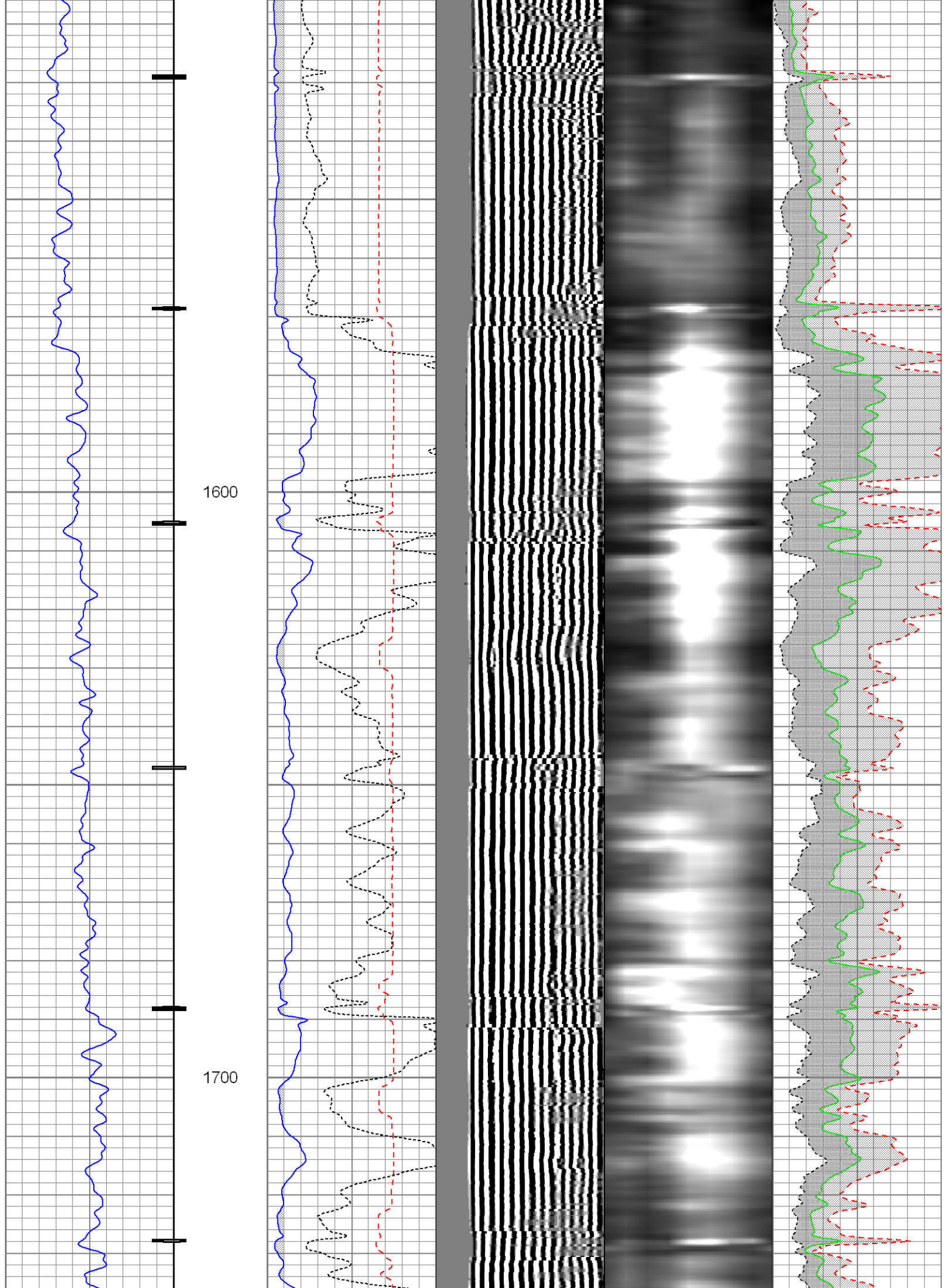




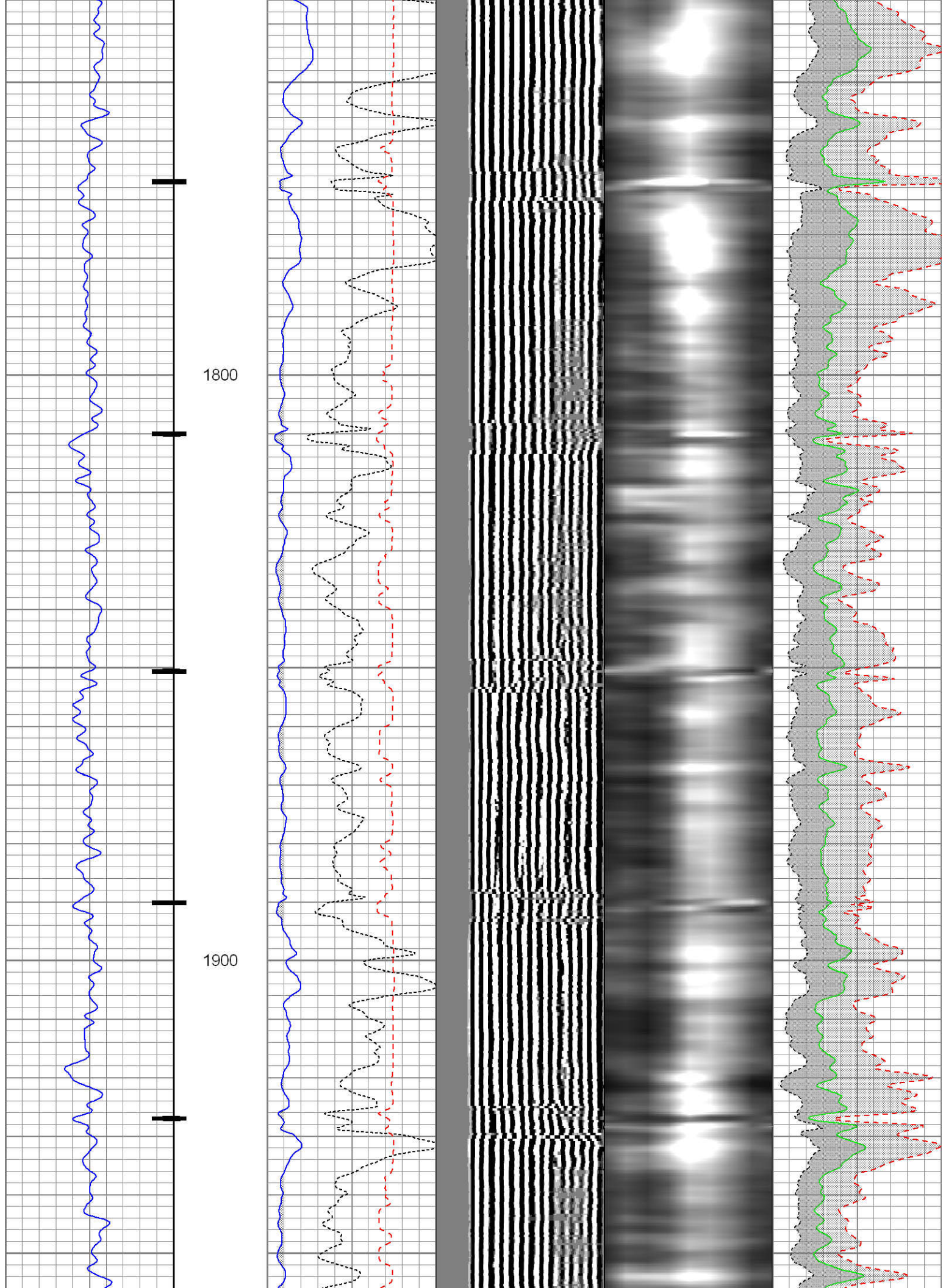




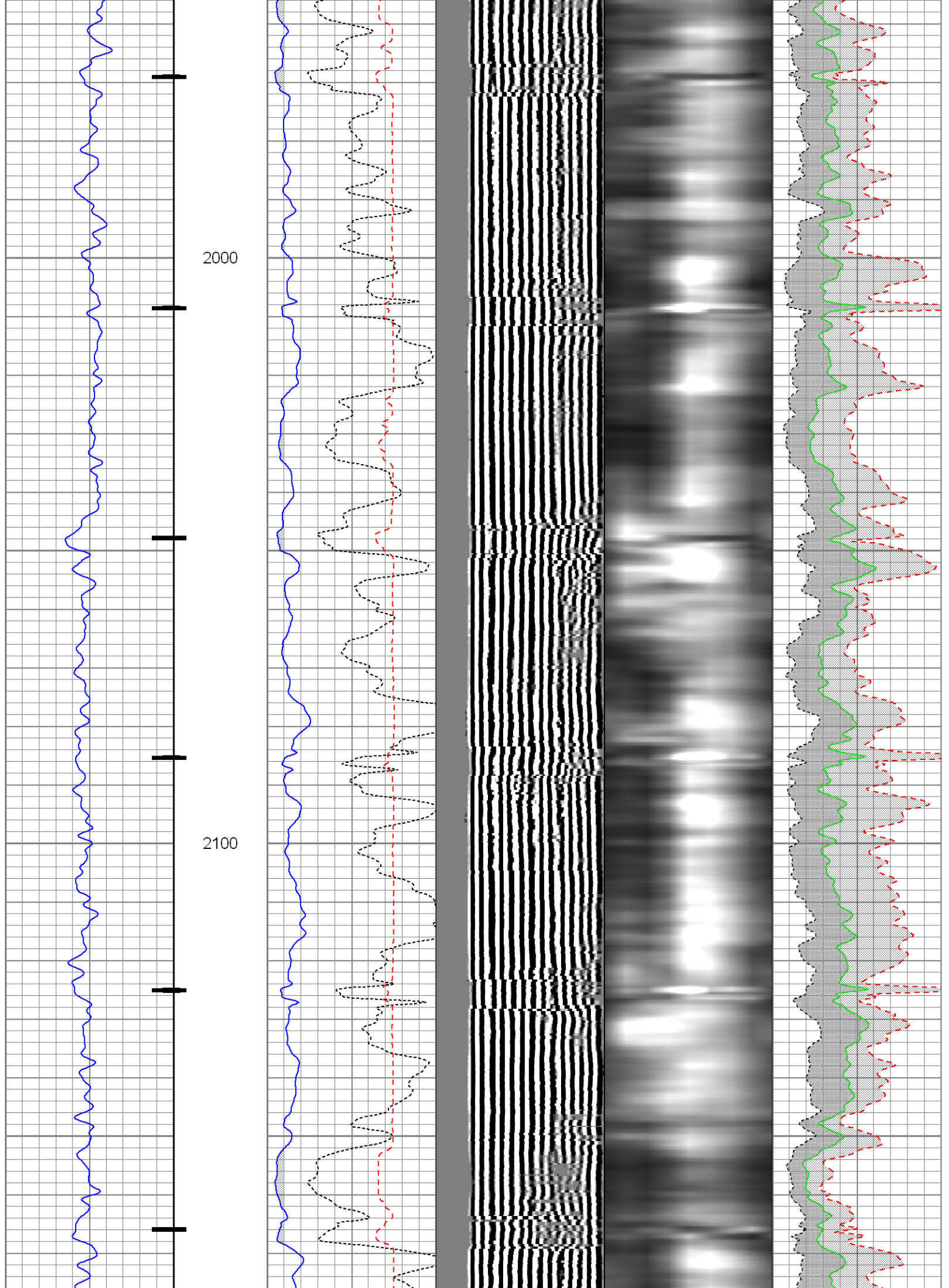




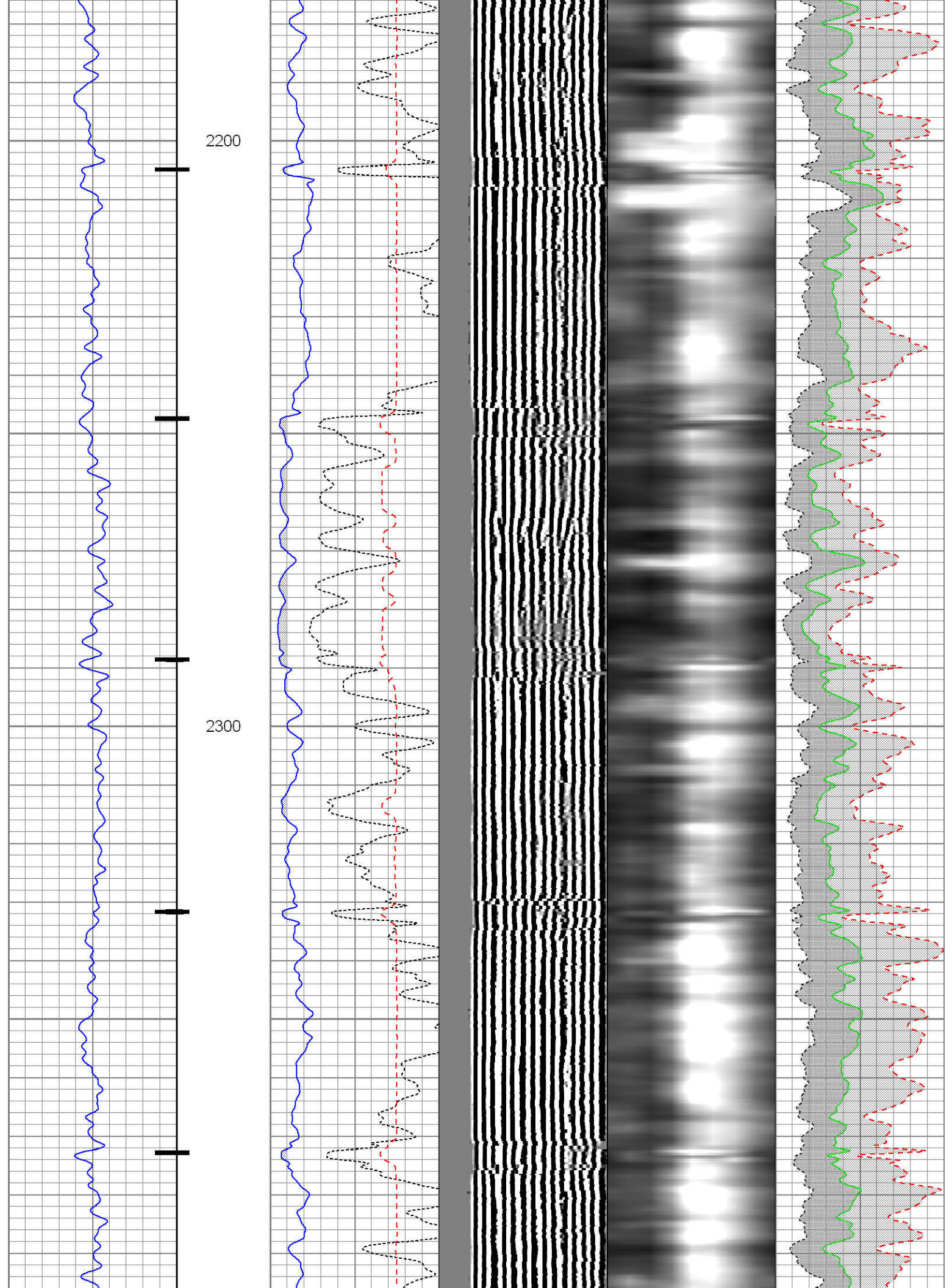




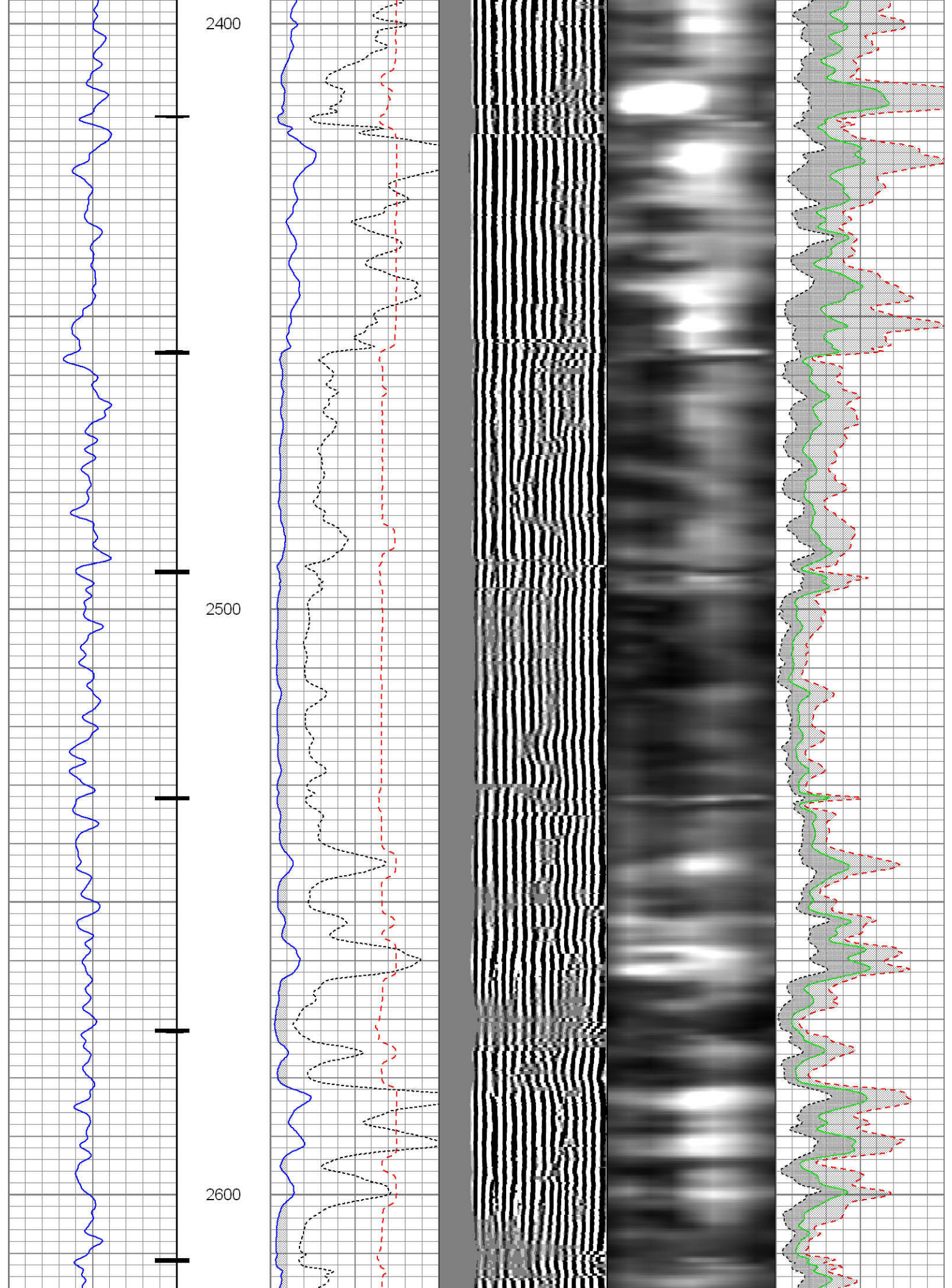




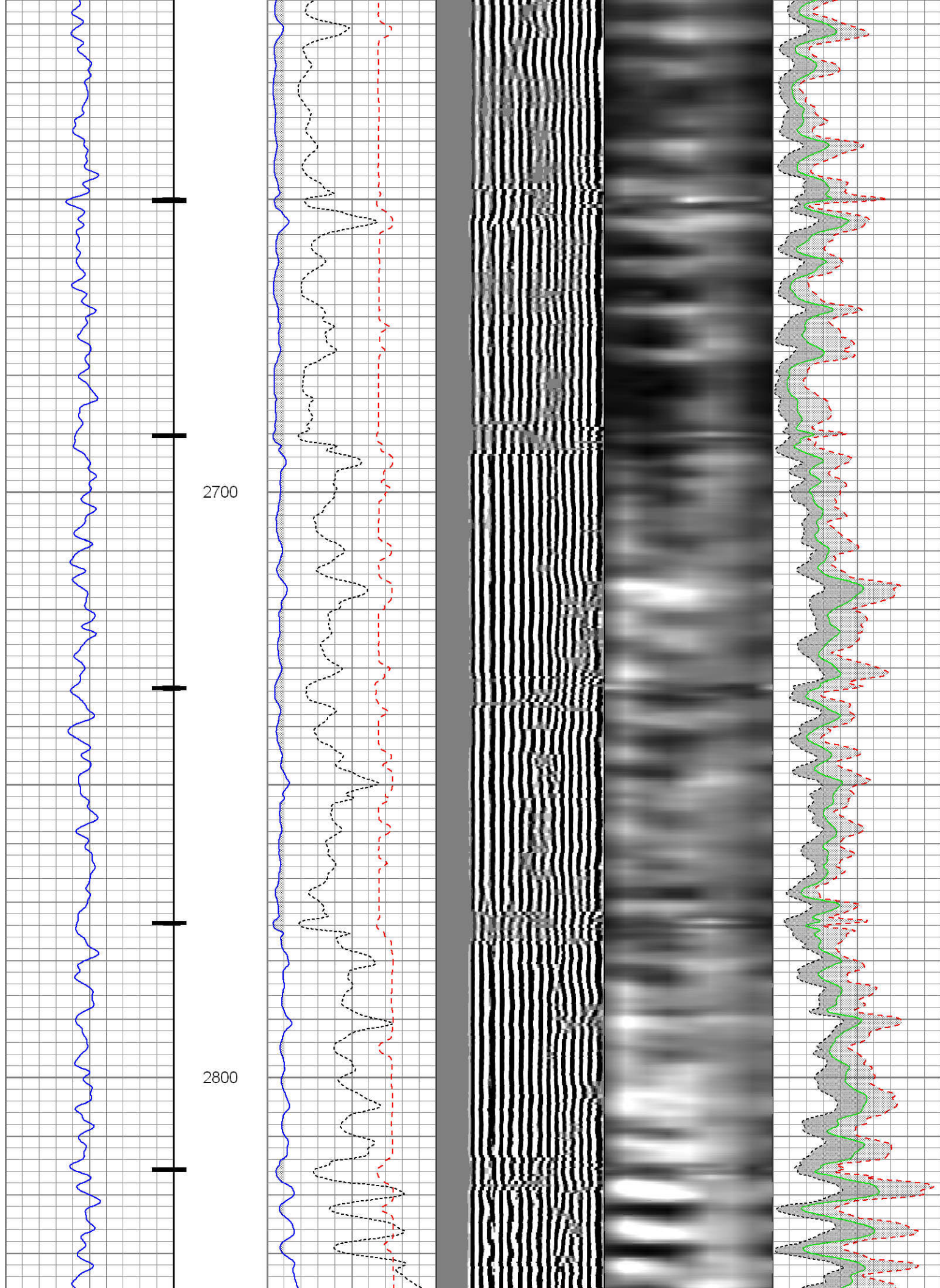




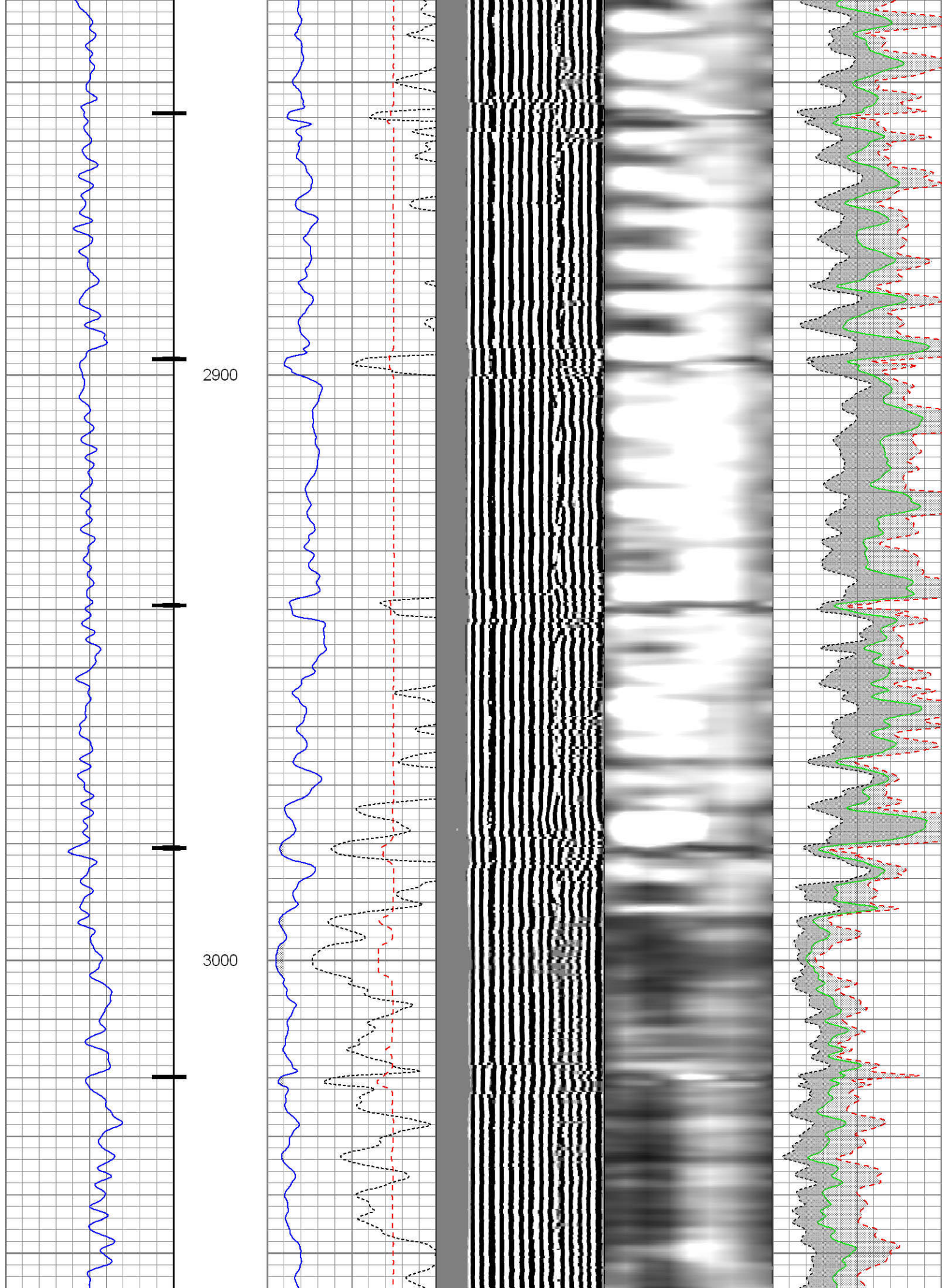




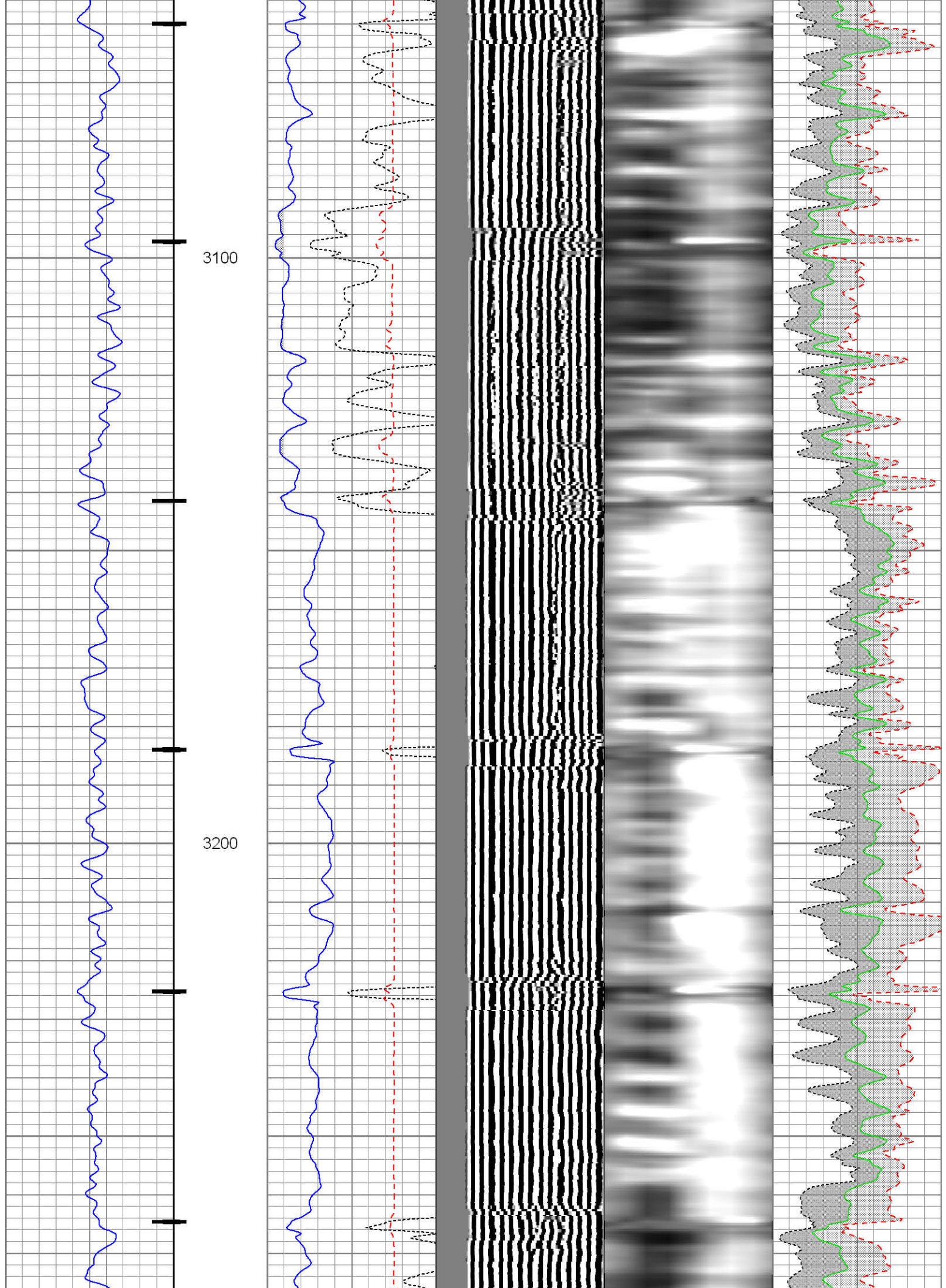




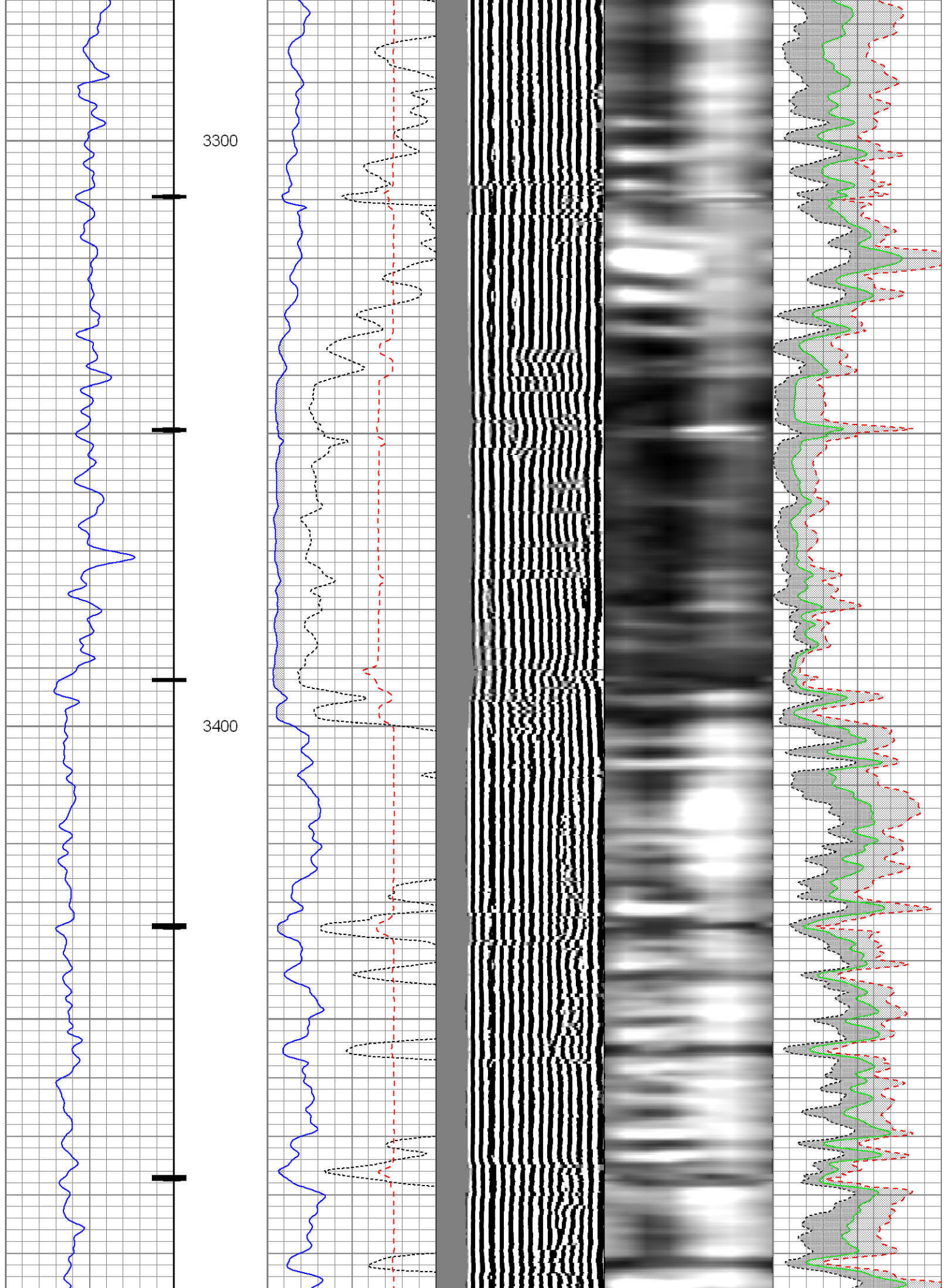




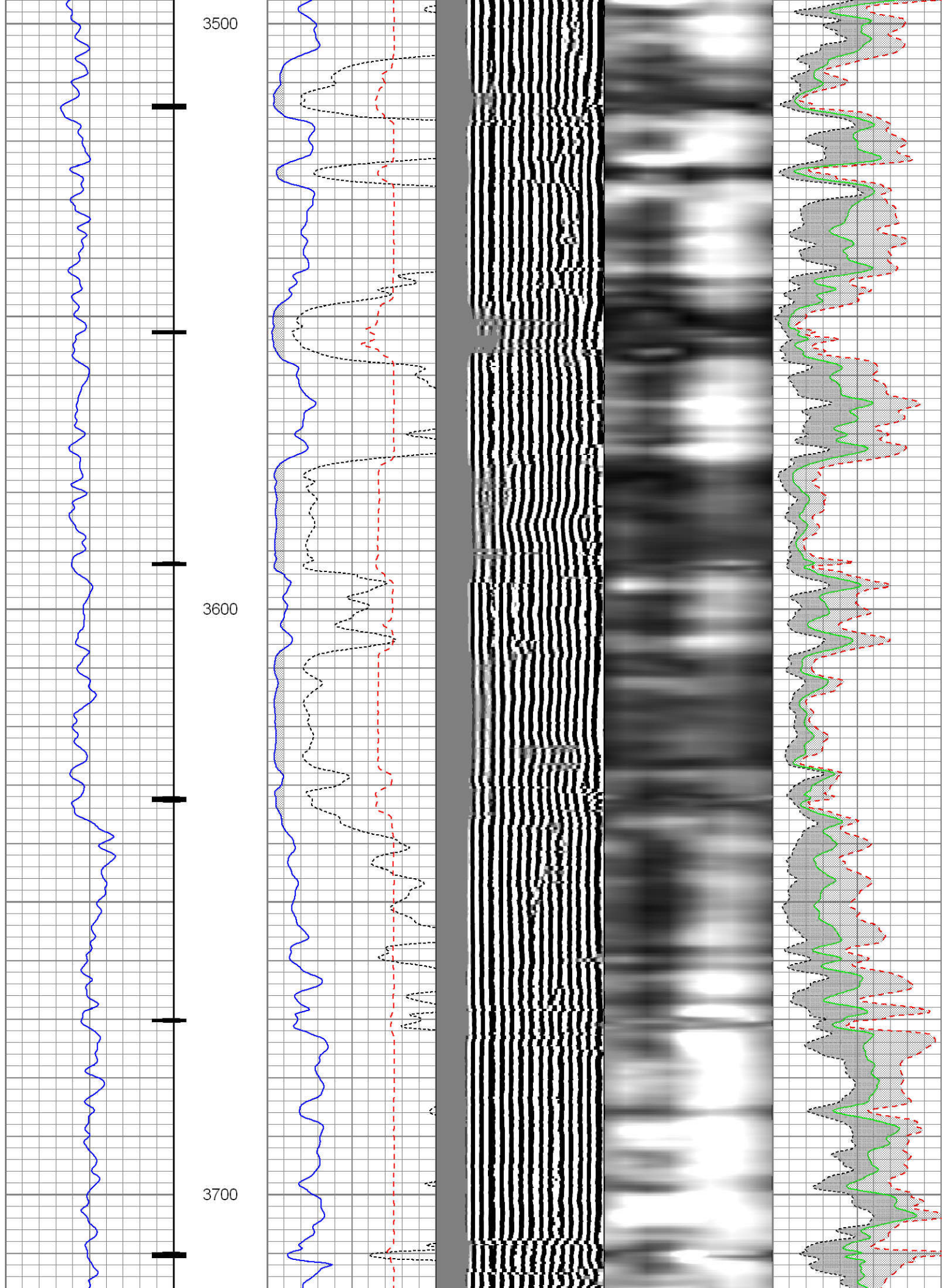




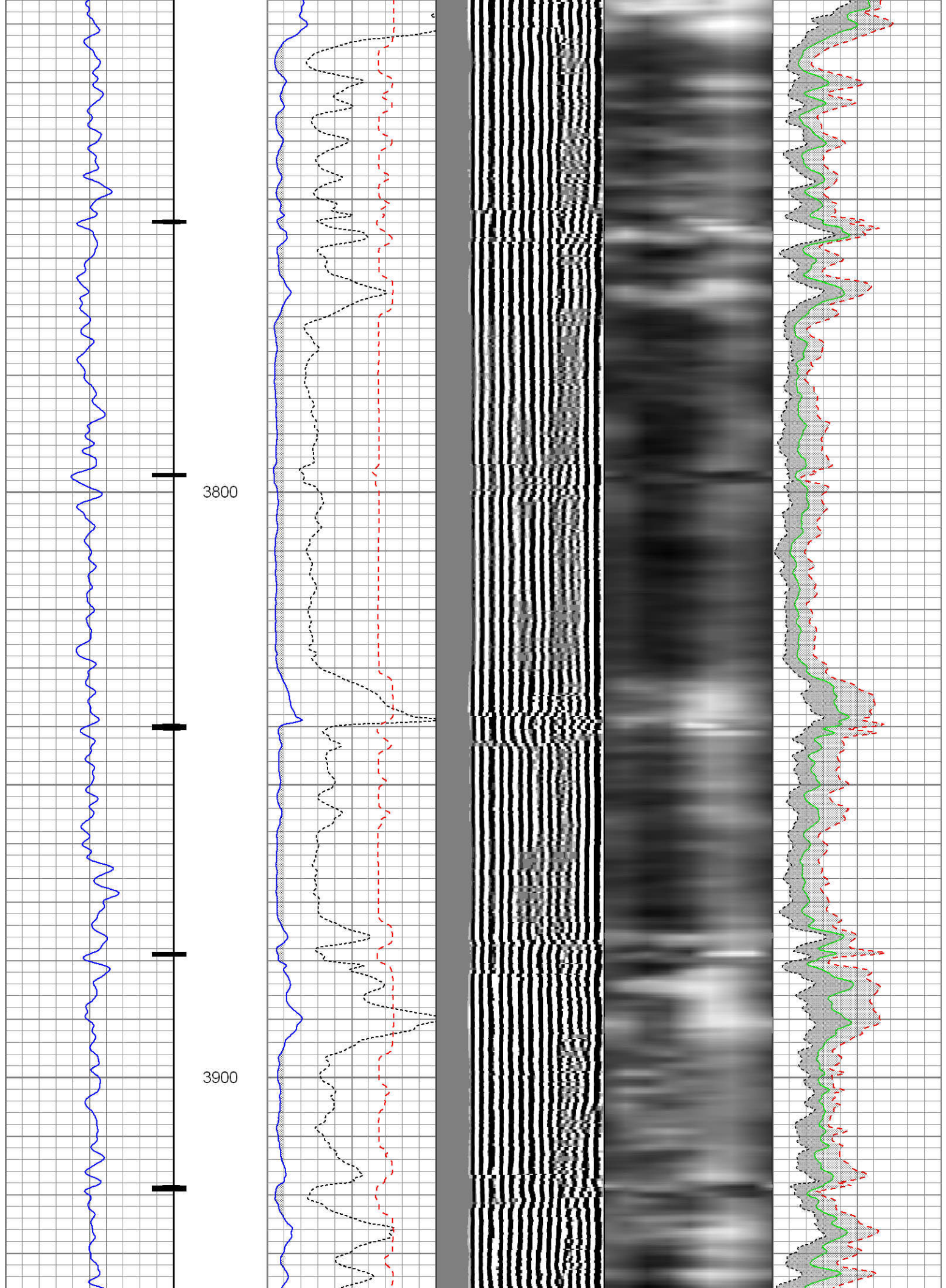




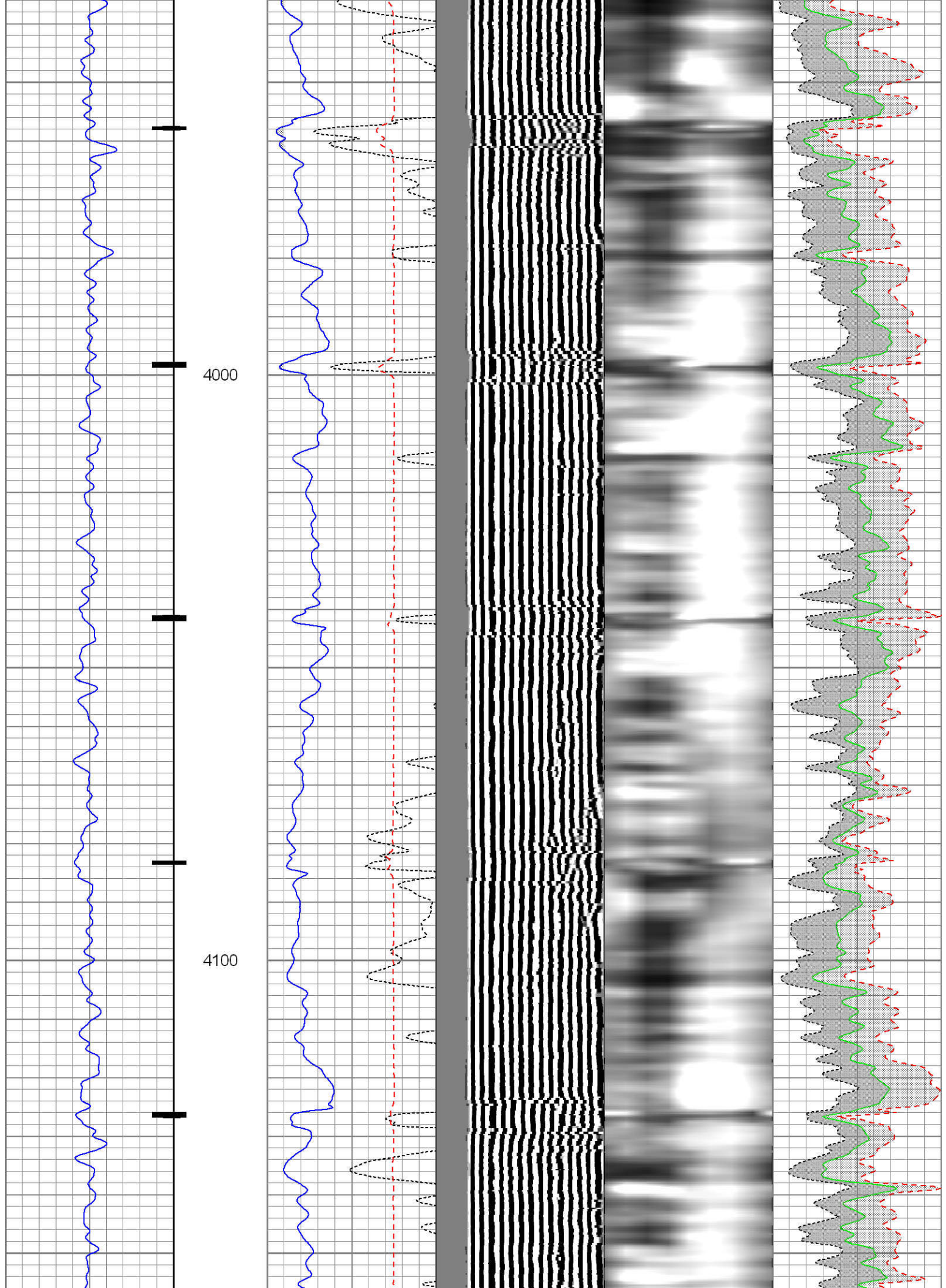




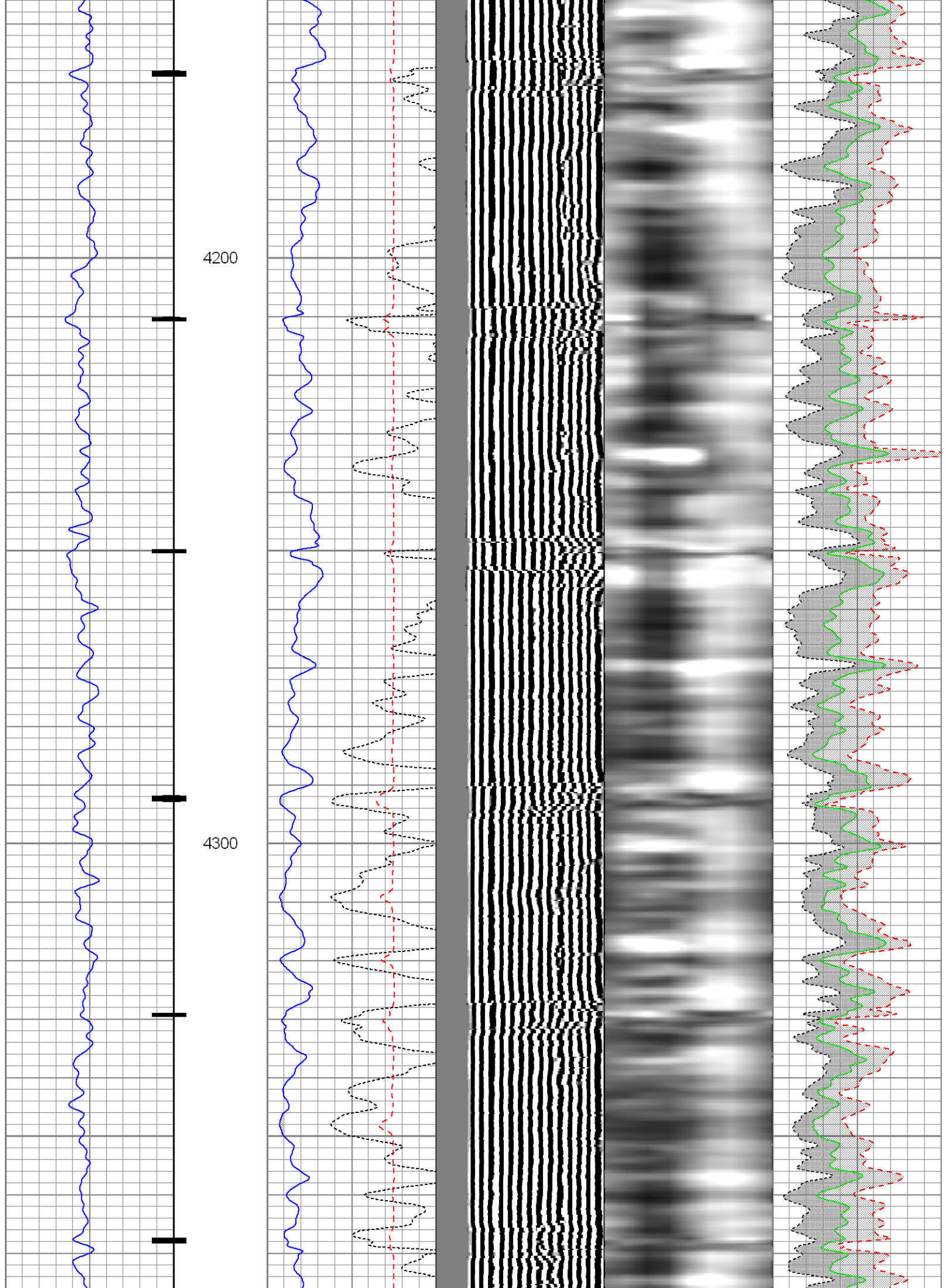




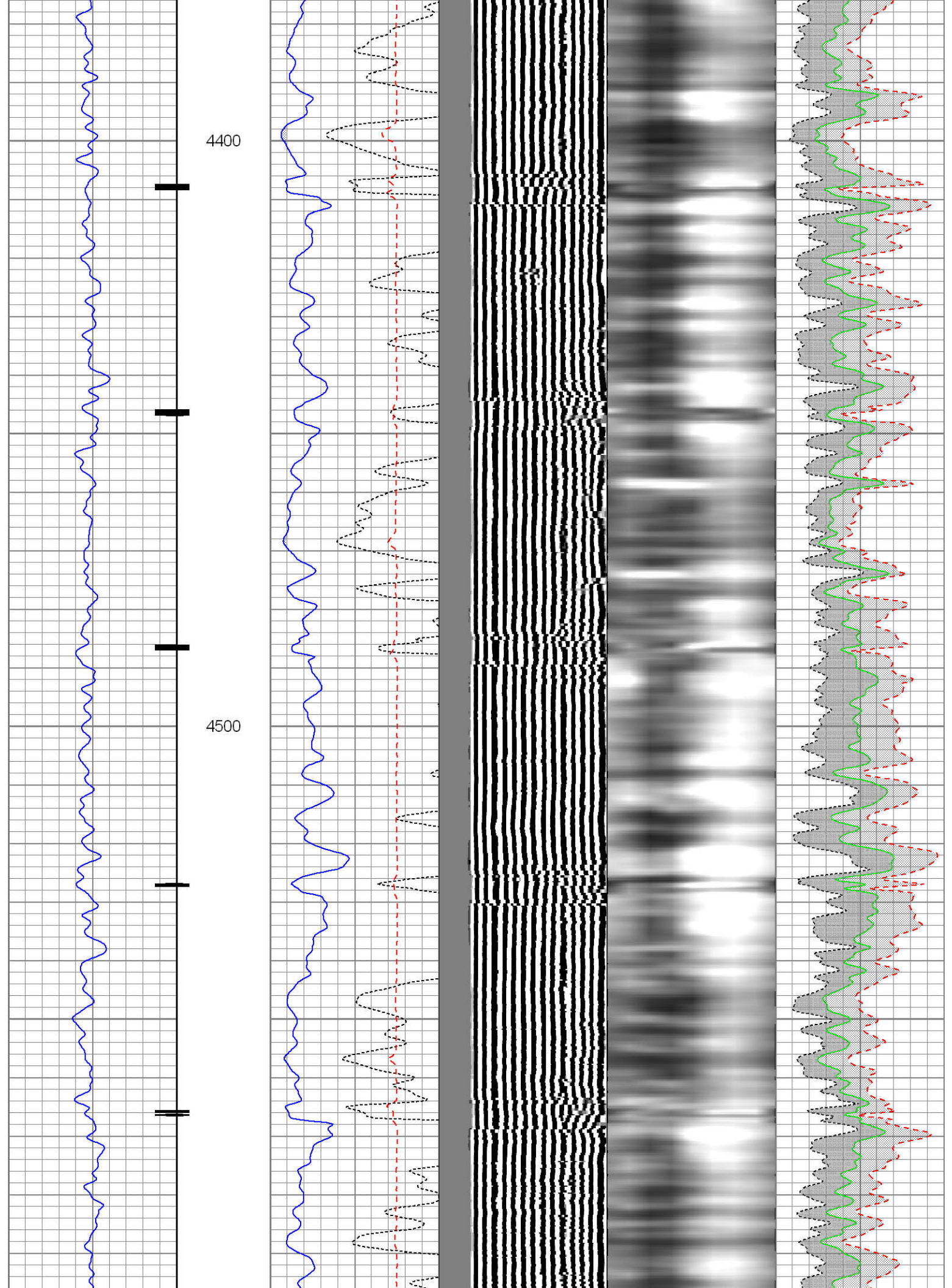




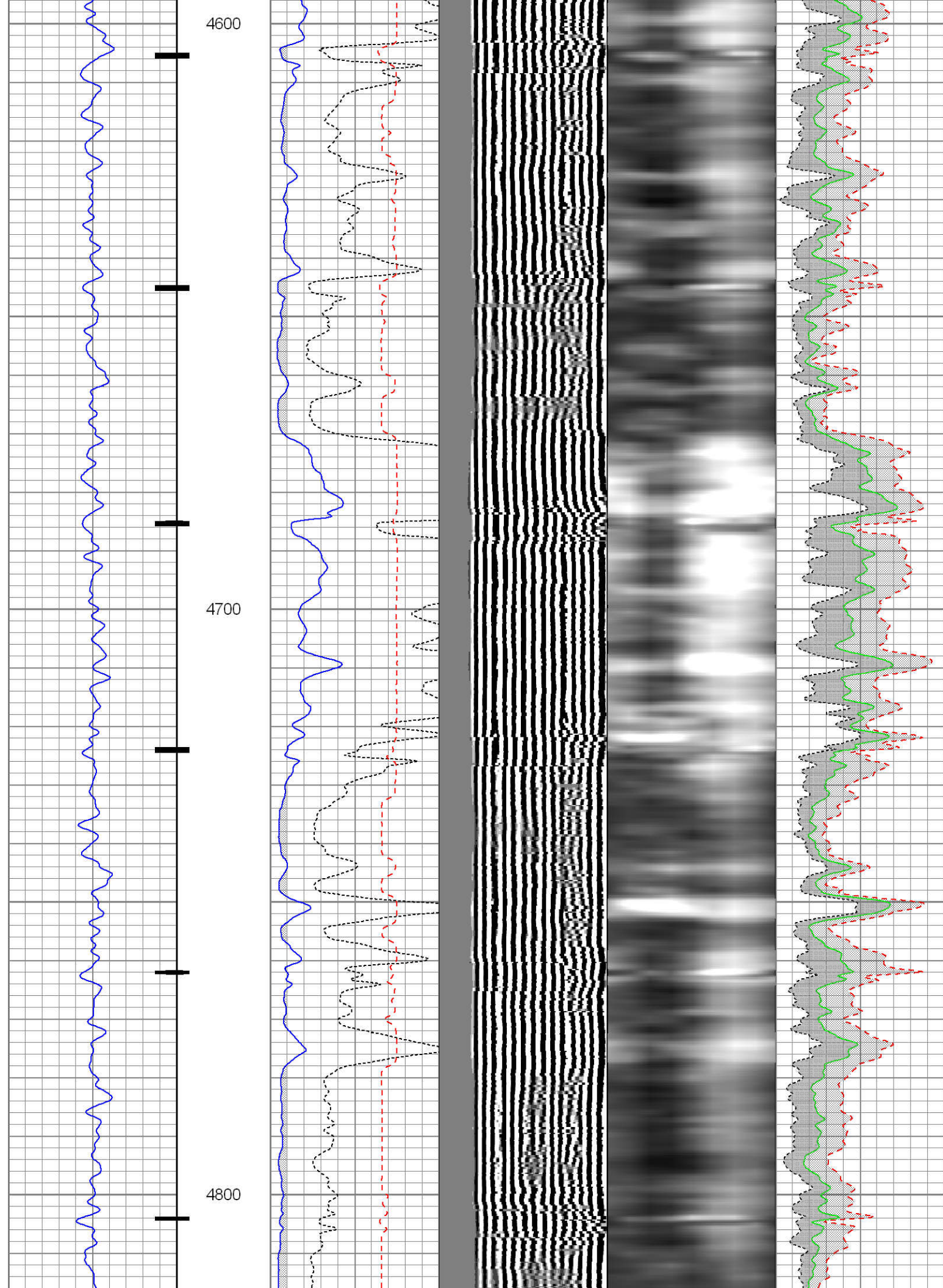




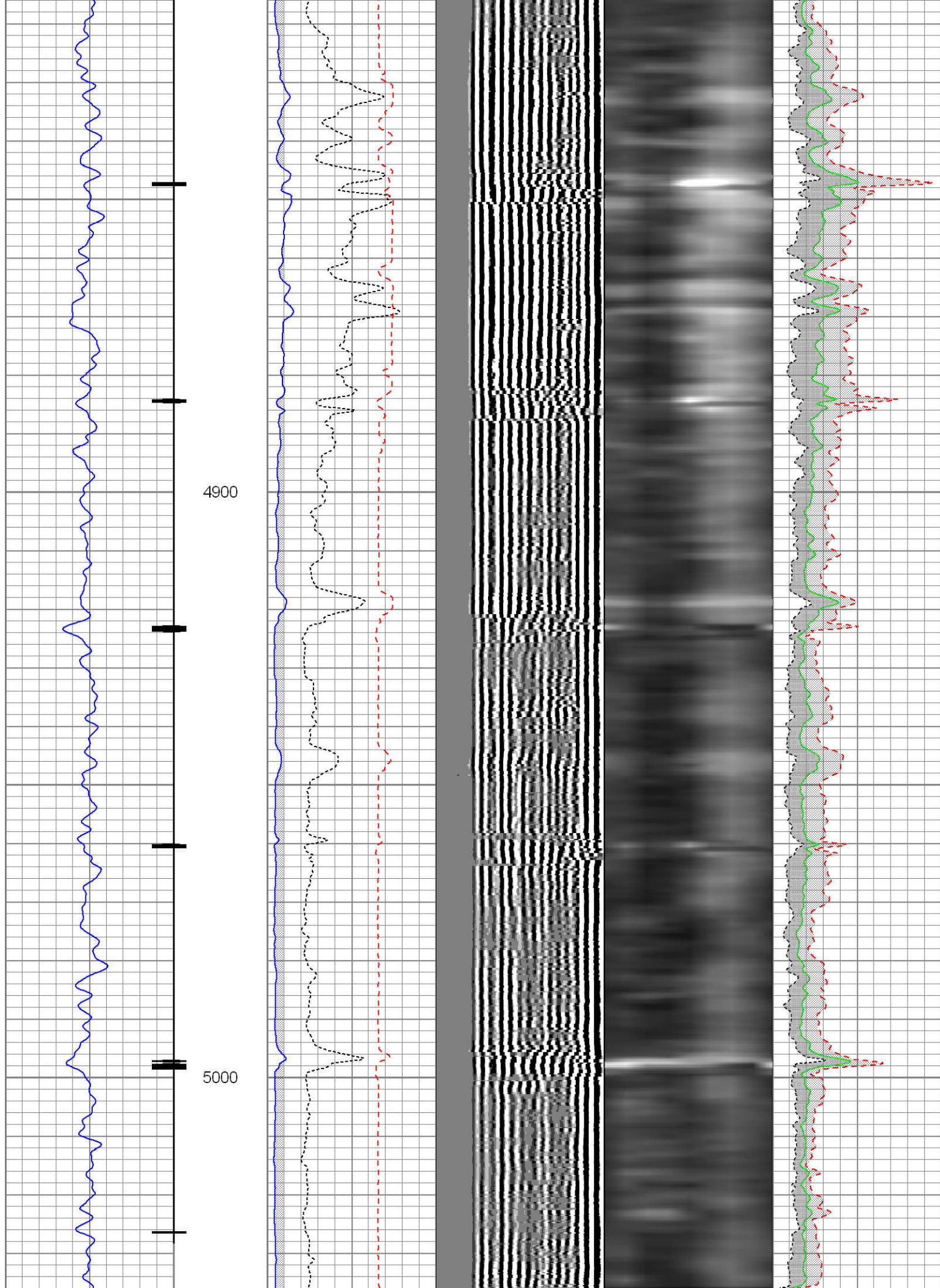




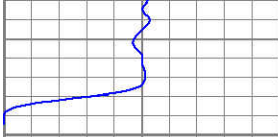
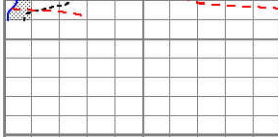
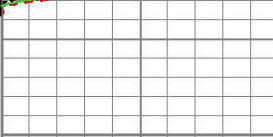


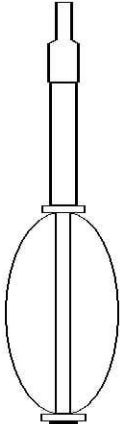
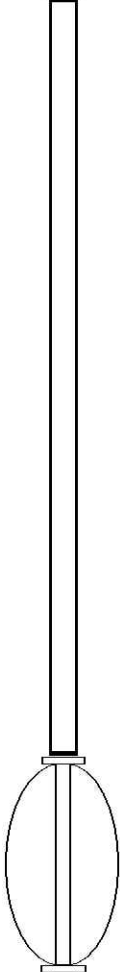
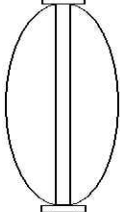




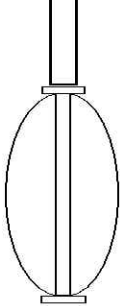




				
0    Gamma Ray    150		3' Amplitude	5' Variable Density Log	Sector Map
Collar Locator		0                      100	200                      1200	Average Amplitude
		3' Amplitude x 5		0                      100
		0                      20		Minimum Amplitude
		3' Travel Time		0                      100
		650                      150		Maximum Amplitude
				0                      100

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	22.06		AES1563 Applied Science 1-7/16" cablehead with 1" fishing neck	1.04	1.56	2.00
			CCL_LOG-TypeA (AAAA) Comprobe 2-3/4" Logging CCL with short body	1.53	2.75	26.00
			Sondex_IL_Cent Sondex bowspring inline electrical centralizer - 32.875"	2.74	2.75	20.00
TEMP	15.84					
WVFS1	14.47					
WVFS2	14.47					
WVFS3	14.47					
WVFS4	14.47					
WVFS5	14.47					
WVFS6	14.47					
WVFS7	14.47					
WVFS8	14.47					
WVF3FT	13.72					
WVF5FT	12.72					
WVFCAL	8.93					
WVFTEMP	8.93					
WVFSYNC	8.93					
			Sondex_IL_Cent Sondex bowspring inline electrical centralizer - 32.875"	2.74	2.75	20.00
			GR-TypeA (AAAA) Comprobe 2-3/4" Scintillating Gamma Ray (Low Temp)	3.45	2.75	38.00



GR	3.78		Temp)			
			Sondex_IL_Cent Sondex bowspring inline electrical centralizer - 32.875"	2.74	2.75	20.00
Dataset: rzor-22-2712h.db: field/well/run1/pass7 Total Length: 23.80 ft Total Weight: 249.00 lb O.D. 2.75 in						

		CompanyWhiting Oil & Gas WellRazor 22-2712H FieldRed Tail CountyWeld StateColorado
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