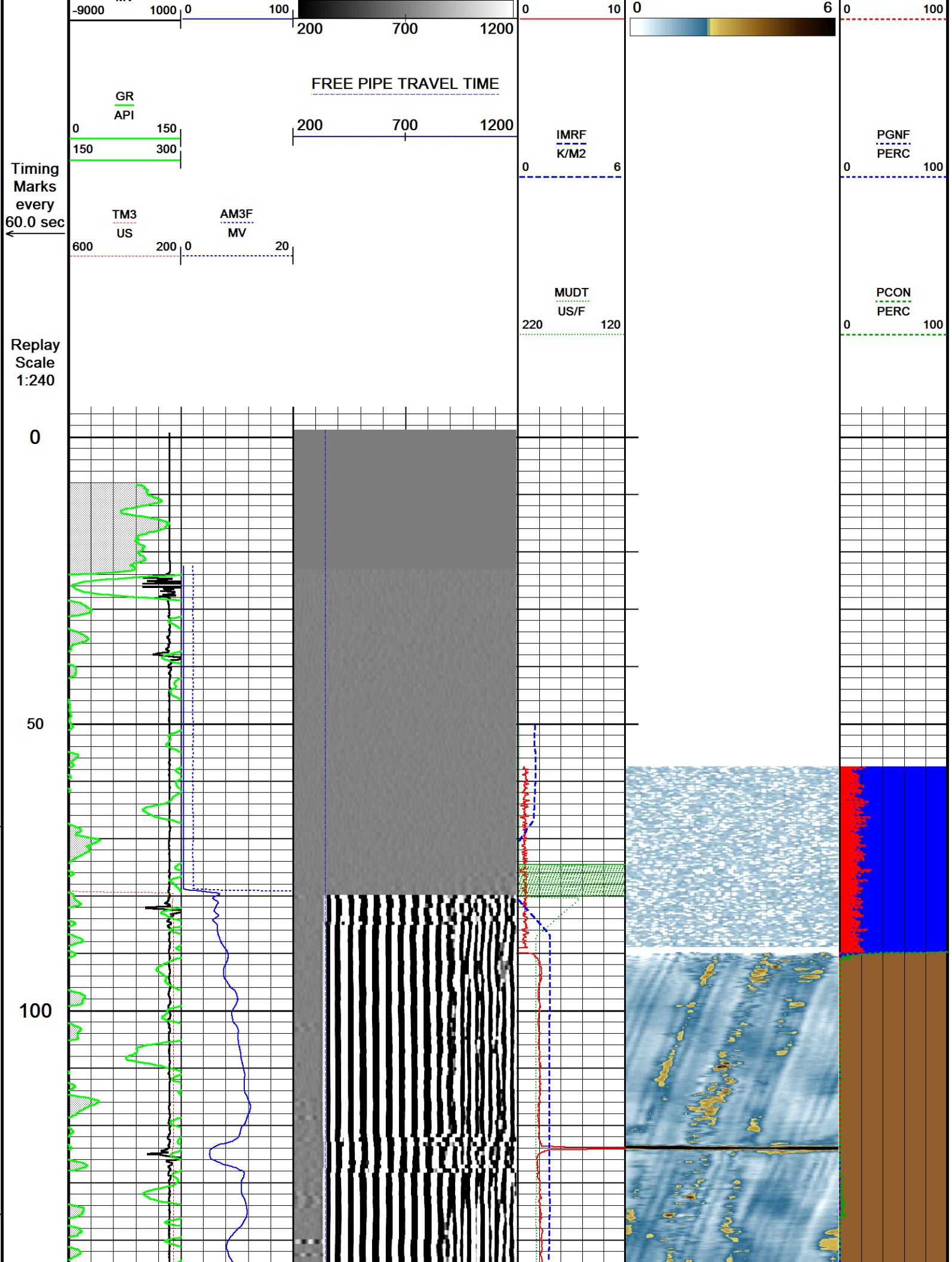
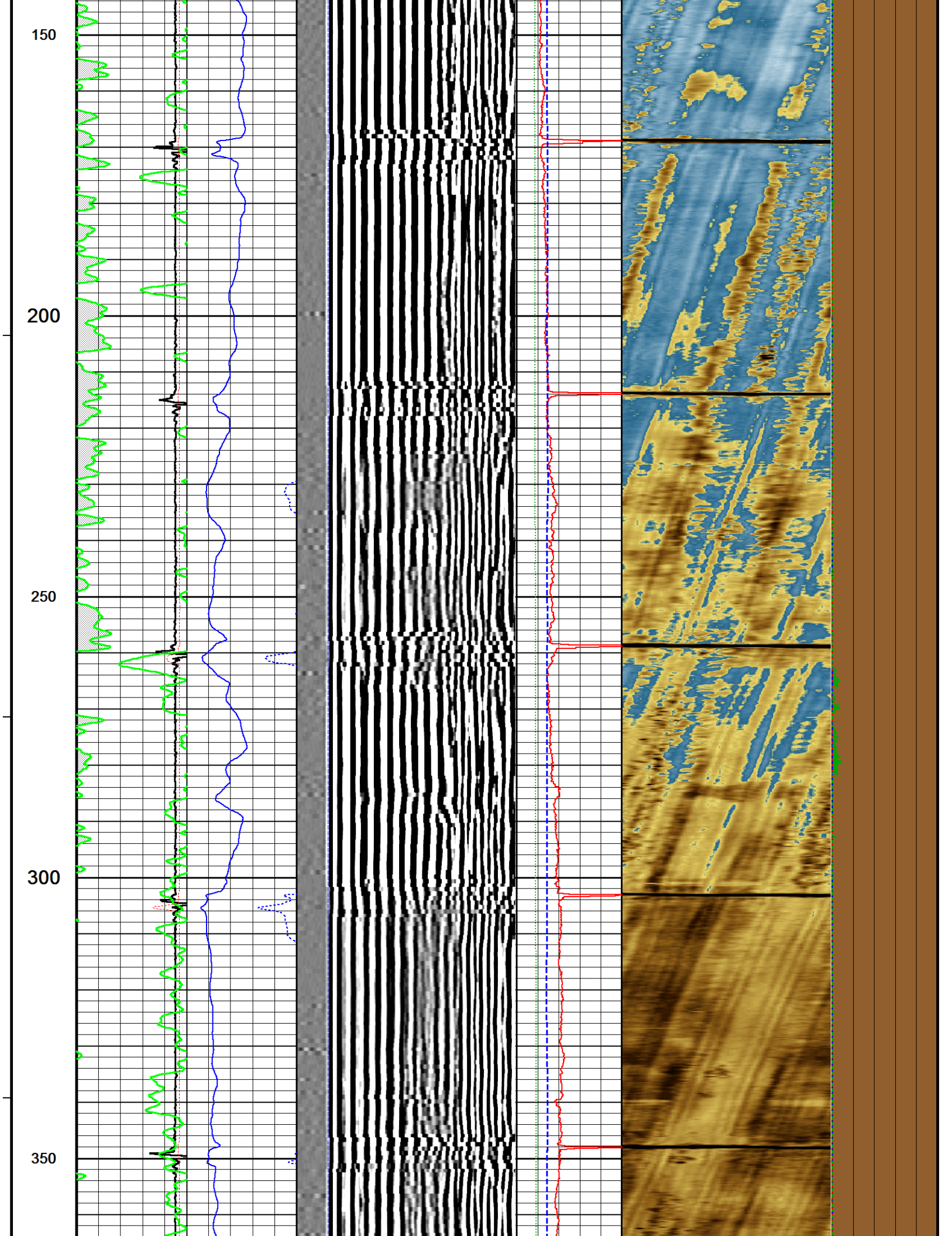
				SECUREVIEW							
				ULTRAVIEW/BONDVIEW							
				CEMENT ANALYSIS							
COMPANY				EXTRACTION OIL & GAS							
WELL				LEONARD 4N							
FIELD				WATTENBERG							
PROVINCE/COUNTY				WELD							
COUNTRY/STATE				USA / COLORADO							
LOCATION											
SEC 21		TWP 2N		RGE 67W		Other Services					
Latitude		Longitude		Permanent Datum GROUND LEVEL, Elevation 5004 feet Log Measured From KB, 28 feet above Permanent Datum Drilling Measured From KB							
API Number		051234504600									
Permanent Datum GROUND LEVEL, Elevation 5004 feet		Log Measured From KB, 28 feet above Permanent Datum		Elevations:		feet					
Drilling Measured From KB				KB		5032.00					
				DF		5032.00					
				GL		5004.00					
Date		07-OCT-2017		PERFORATION RECORD							
Run Number		ONE		Shot		Number		Depth From		Depth To	
Service Order		TBD		Density		of Shots		feet		feet	
Type Log		URS/CBT									
Depth Driller		12170.00		feet							
Depth Logger		6800.00		feet							
Top Log Interval		0.00		feet							
Bottom Log Interval		6800.00		feet							
Hole Fluid Type		WATER									
Hole Fluid Level		0.00		feet							
Restriction ID		4.653		inches		Gun Type					
Max Recorded Temp						Gun Size					
Well Head Pressure		0.00		psi		CASING / TUBING RECORD					
Well Head Equipment				Size		Weight		Depth From		Depth To	
Time Well Ready		ROA		inches		pounds/ft		feet		feet	
Time Logger Bottom		SEE LOG		5.500		20.00		0.00		12170.00	
Unit		14115									
Equipment Name		WSS-E									
Base		CASPER									
Recorded By		P. MAZUR									
Witnessed By											

CASING / TUBING RECORD						
Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
CASING	P 110	LTC	5.500	0.00	12170.00	20.00

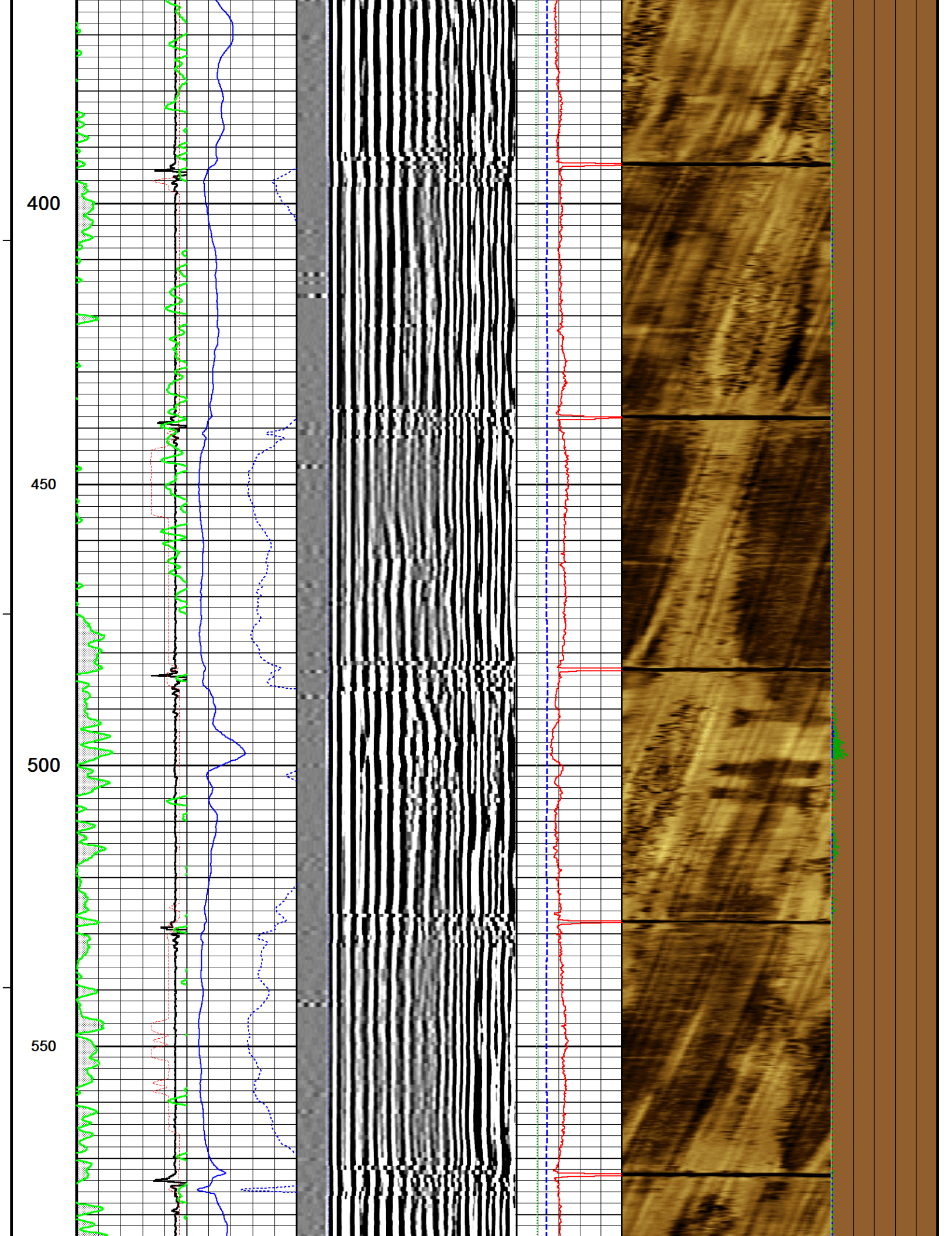
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

↓						MAIN PASS 1:240						↓											
Depth Based Data - Maximum Sampling Increment 2.5cm												Plotted on 07-OCT-2017 17:56											
Filename: C:\Logs\Extraction\LEONARD 4 N\LEONARD 4N MAIN URS FINAL.dta												Recorded on 07-OCT-2017 17:22											
System Versions: Logged with 16.05.3841 Plotted with 16.05.3841																							
Depth in Feet		XY Signature 5FT microseconds														Impd Map						PGAS	
		CCL		AM3F																PERC			
		MV		MV		-10000		10000												MRAYLS			
												IMAV											
												K/M2											

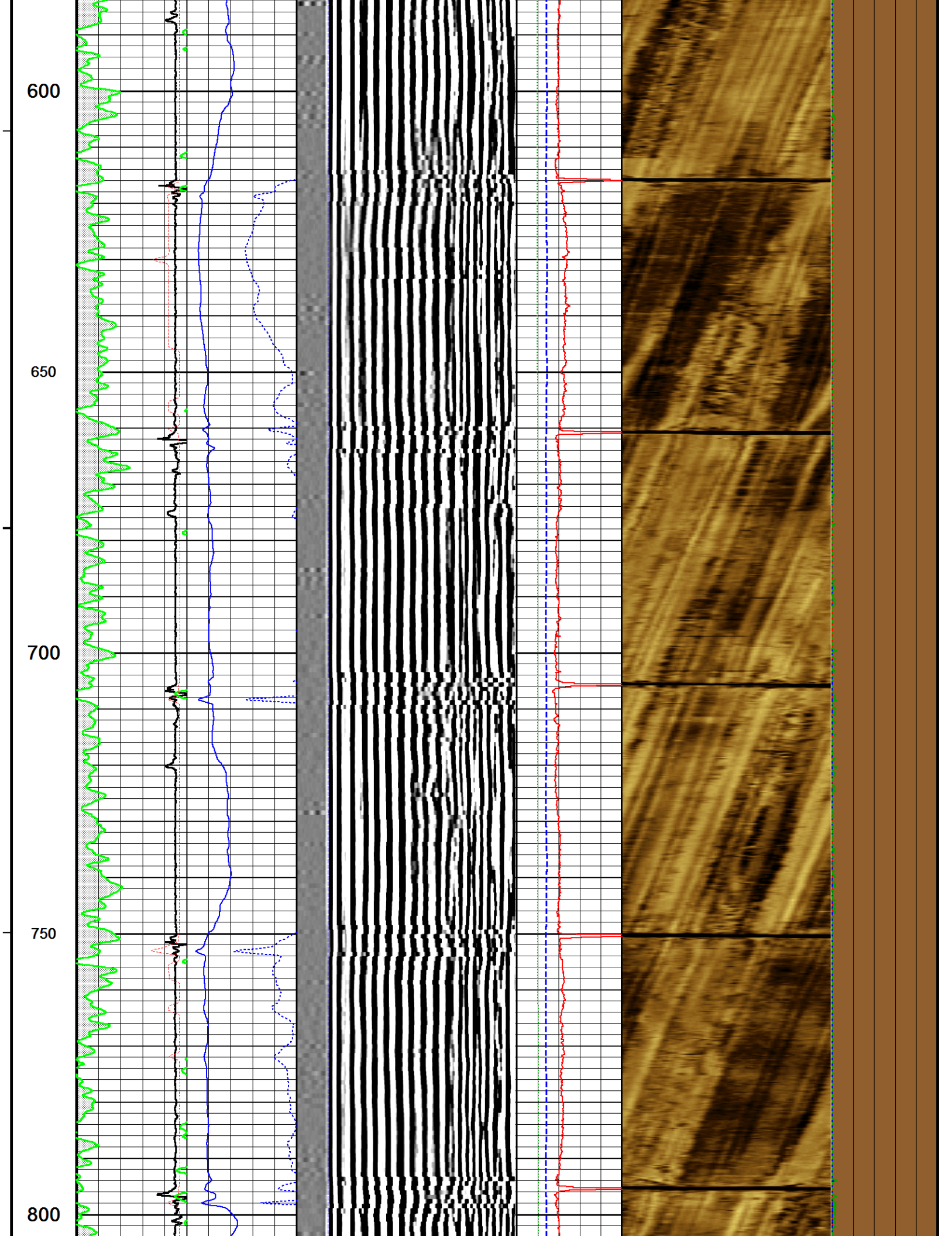


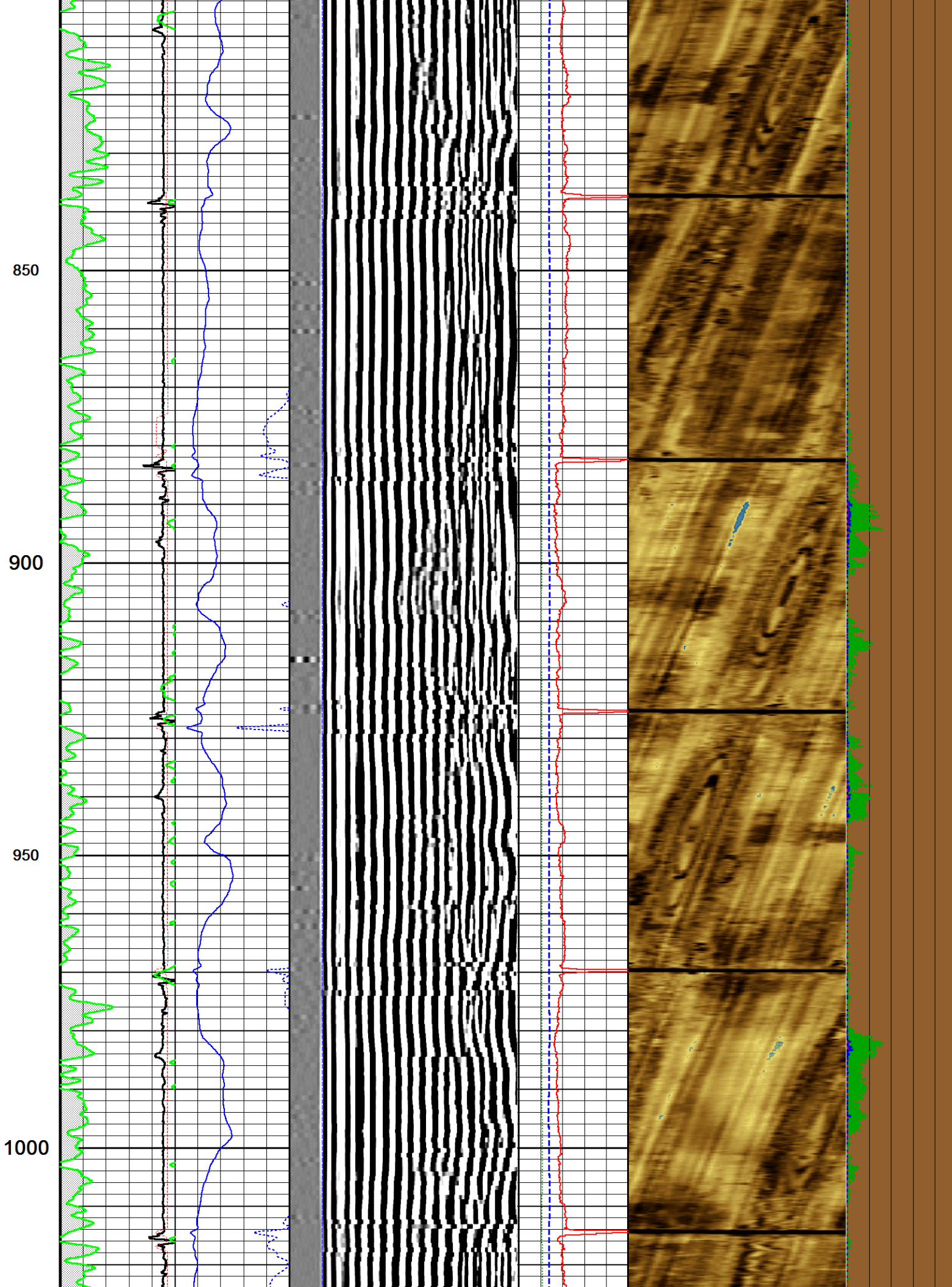












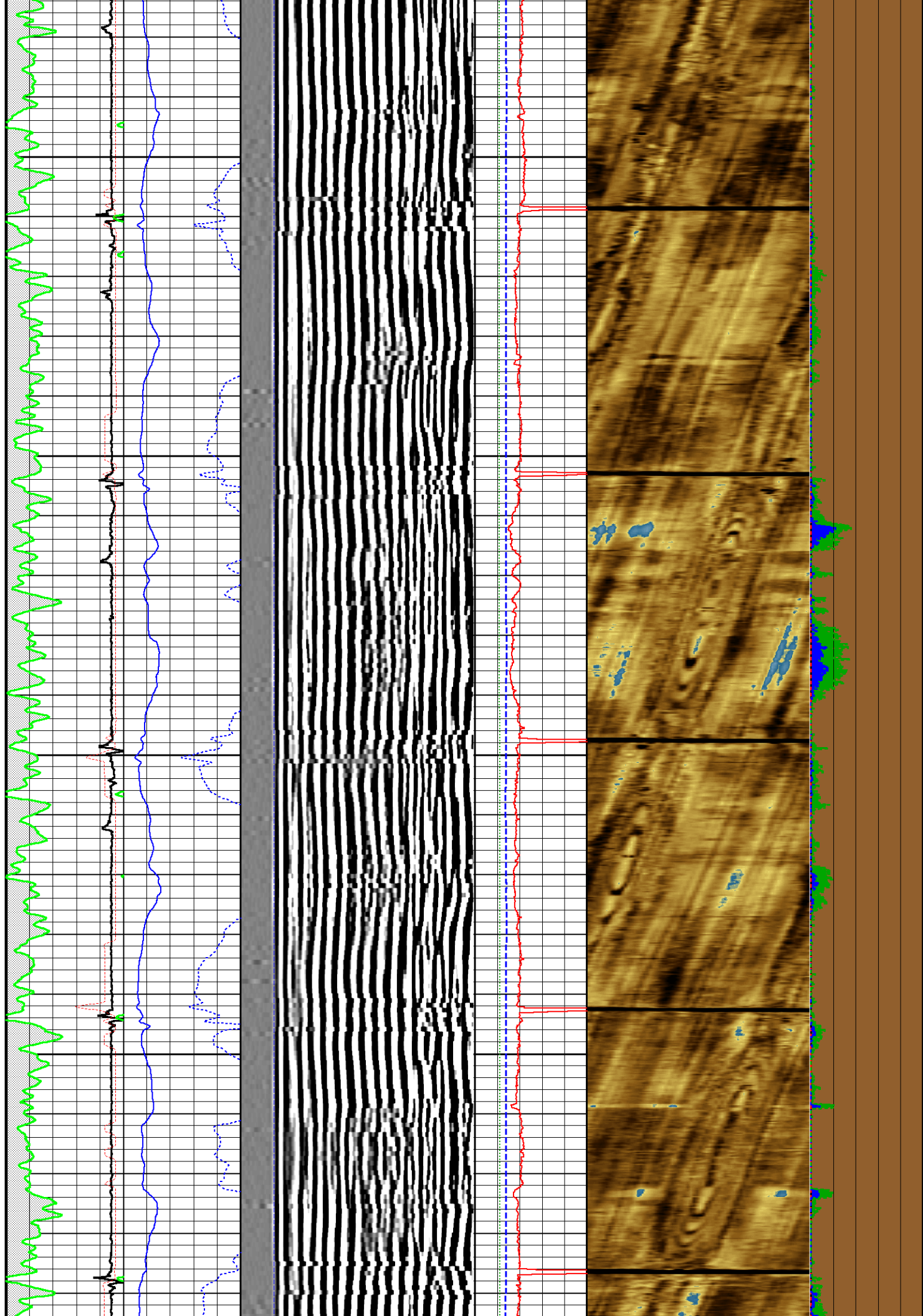


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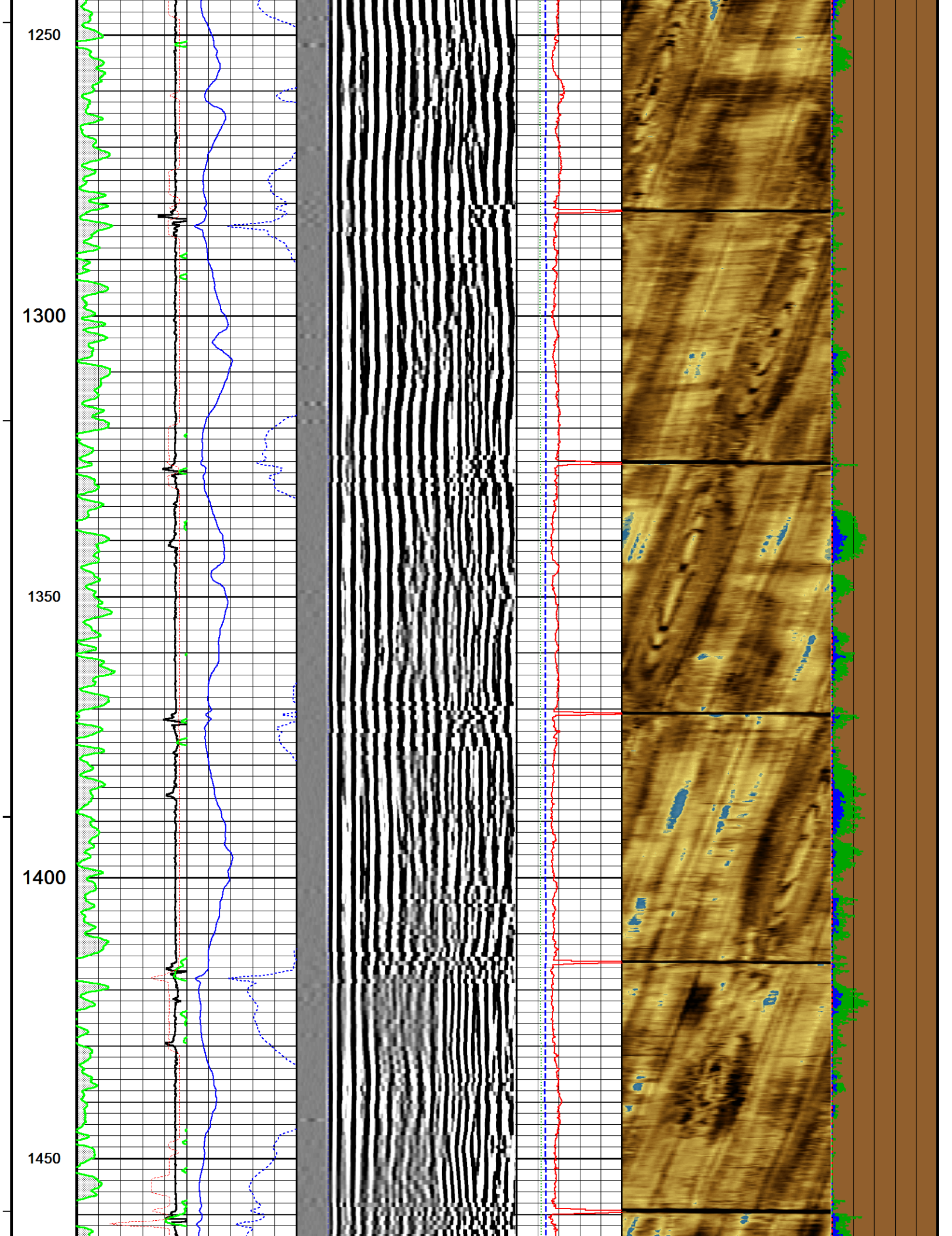
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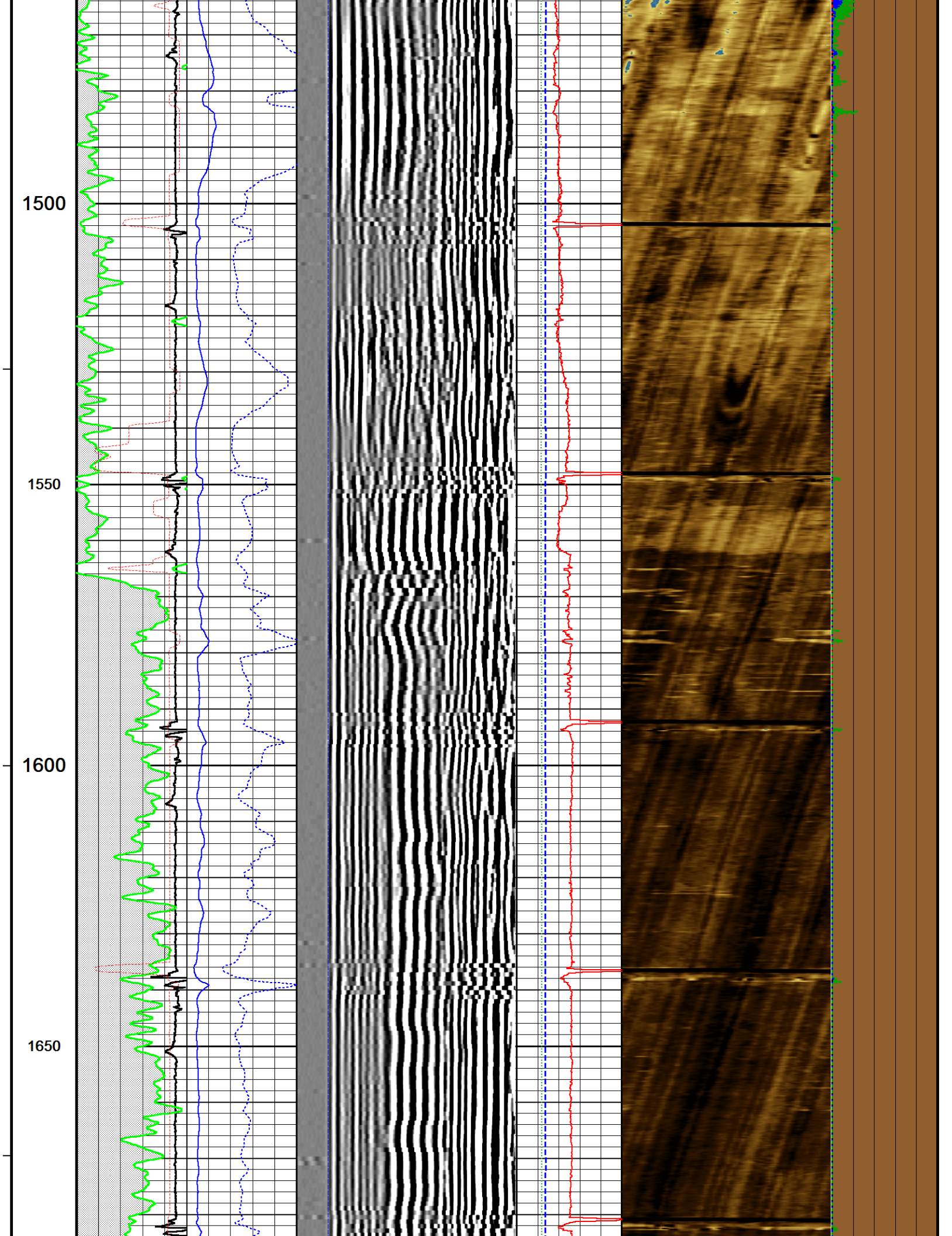
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1200

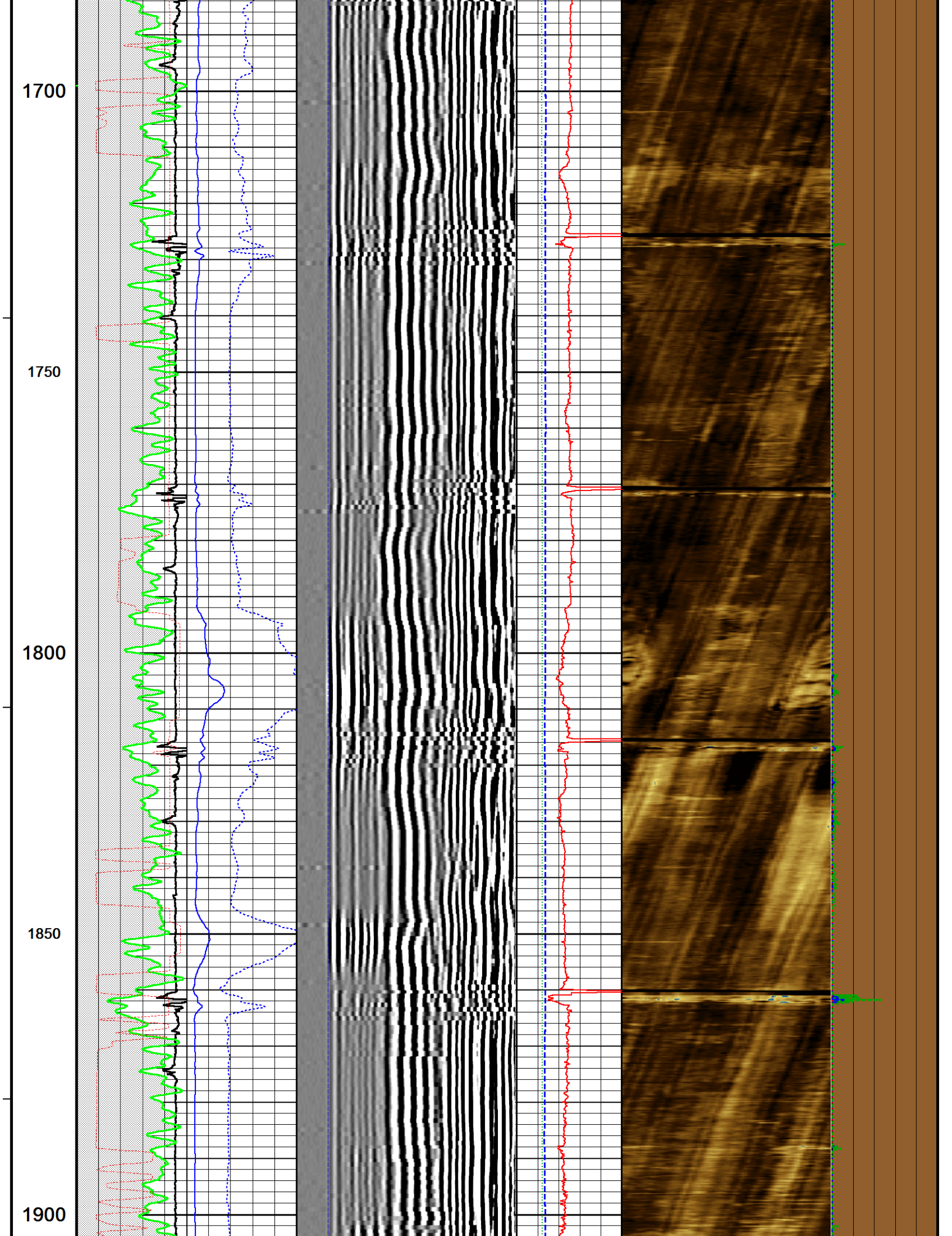




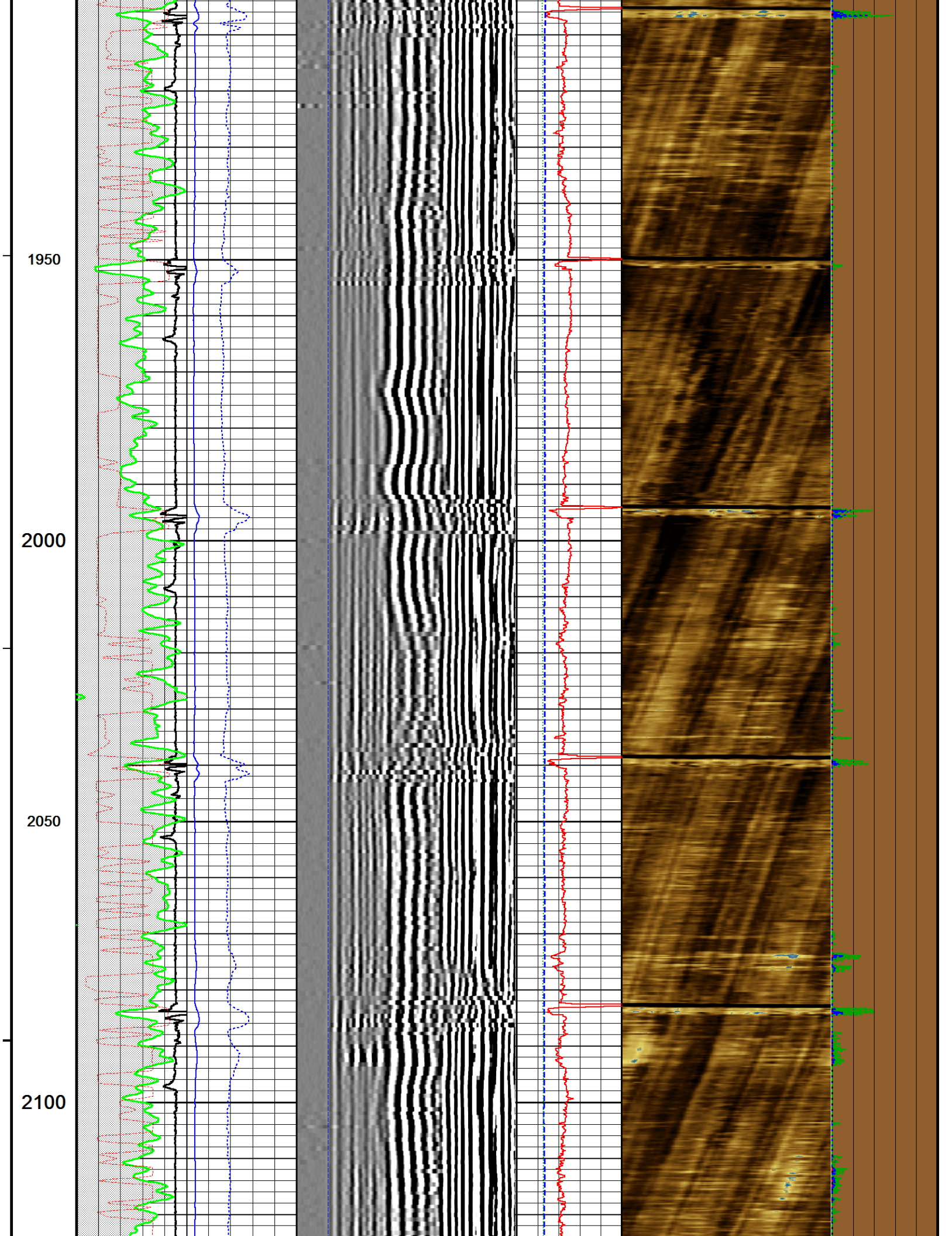












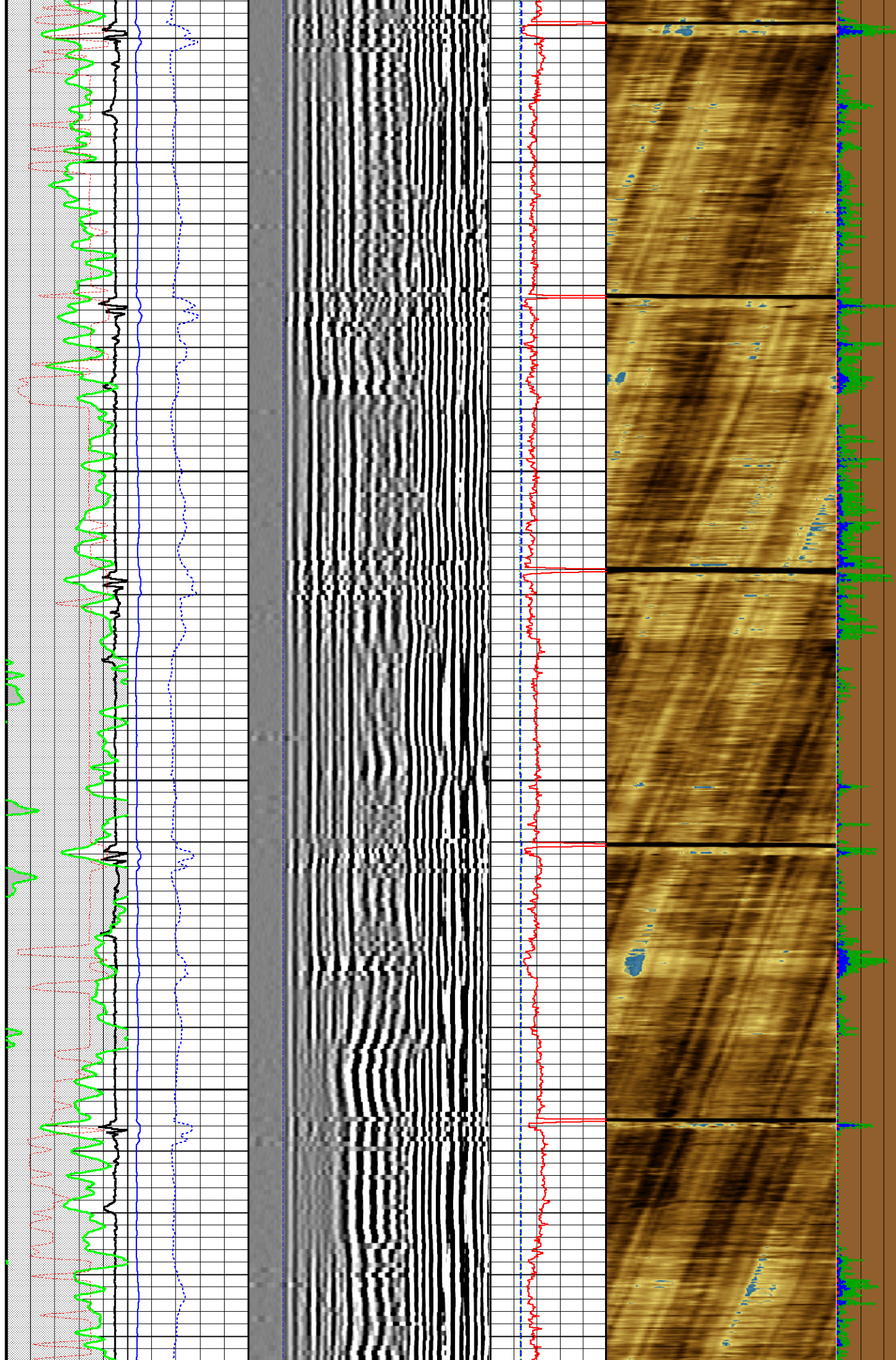


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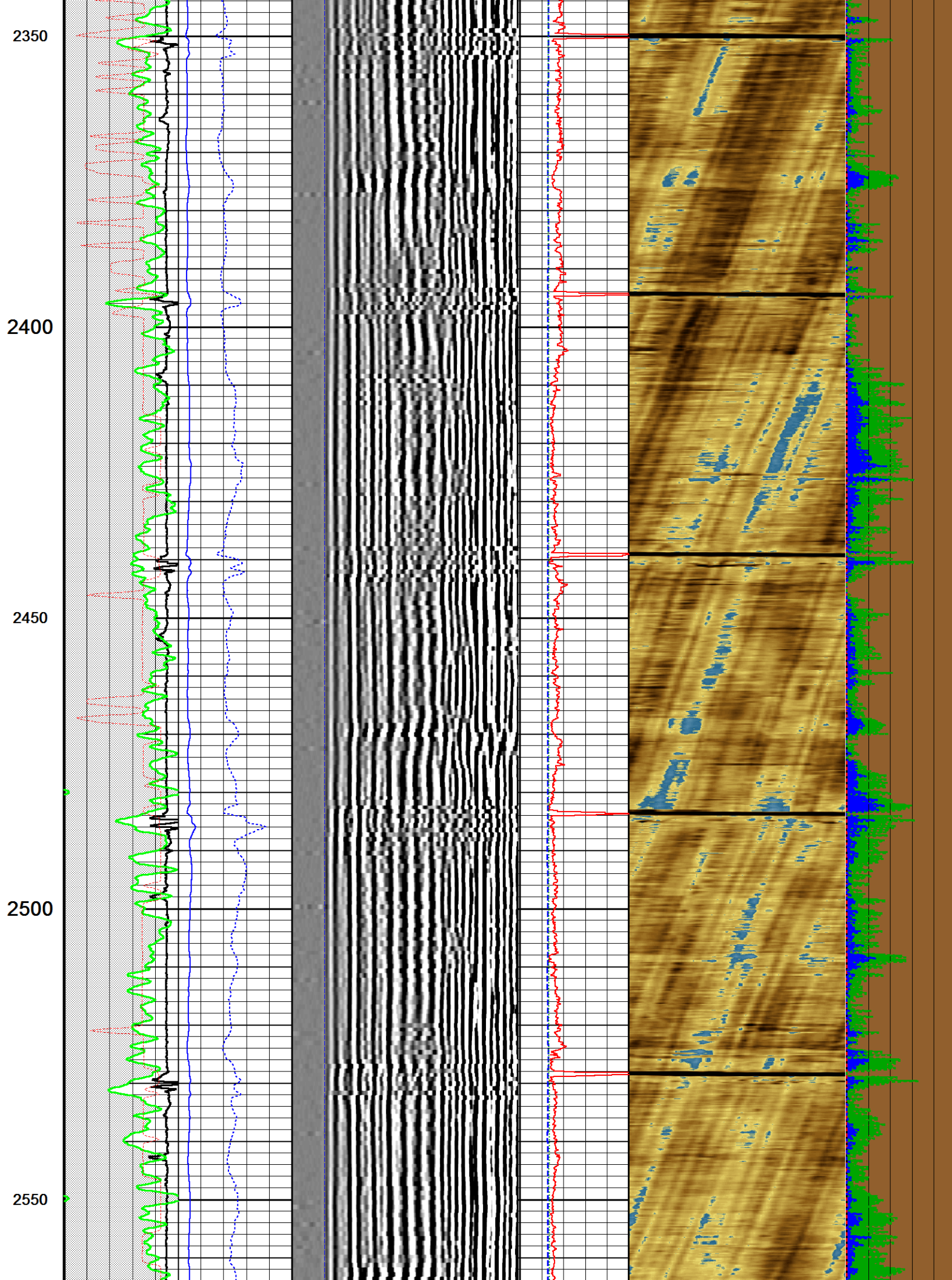
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2250

2300







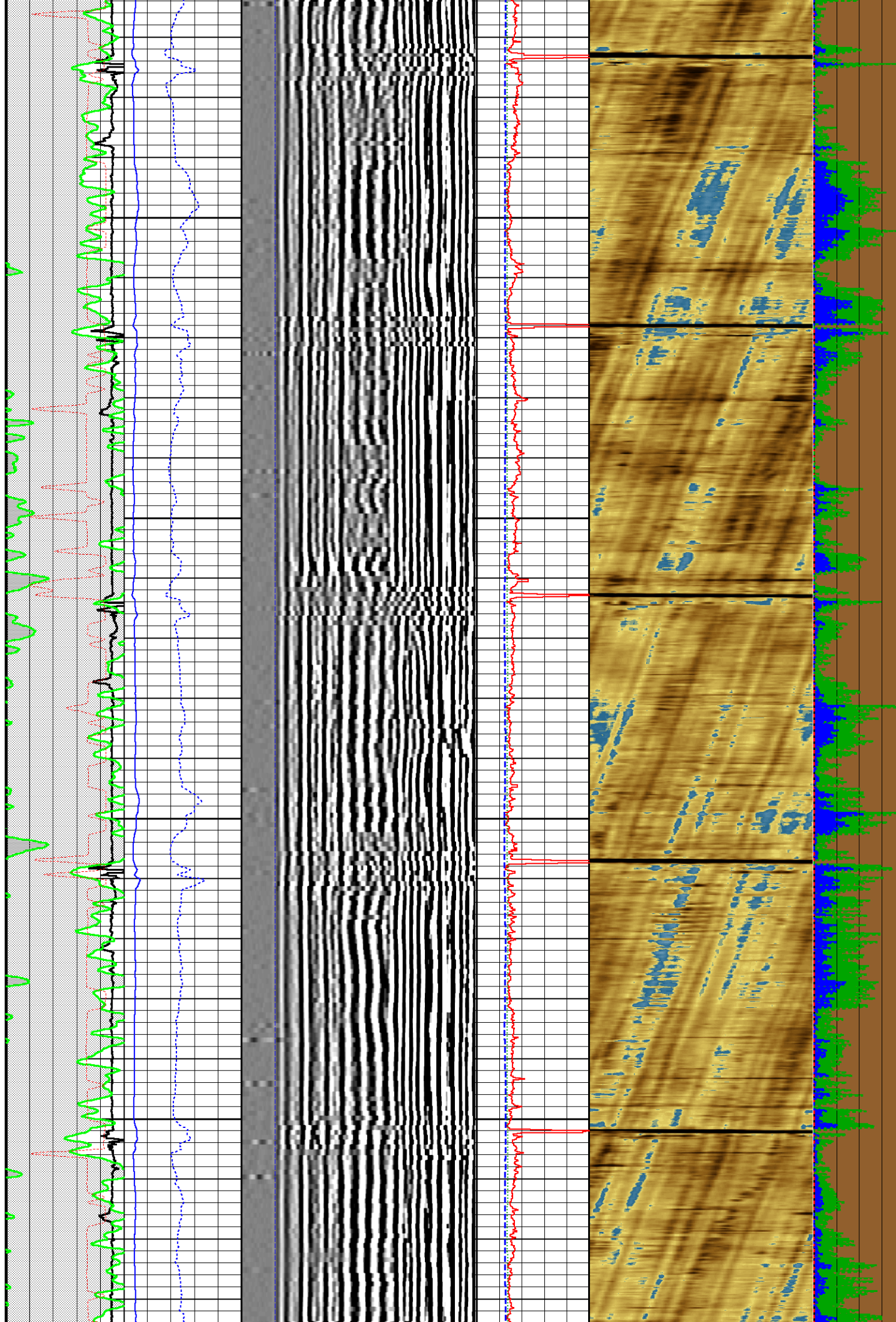


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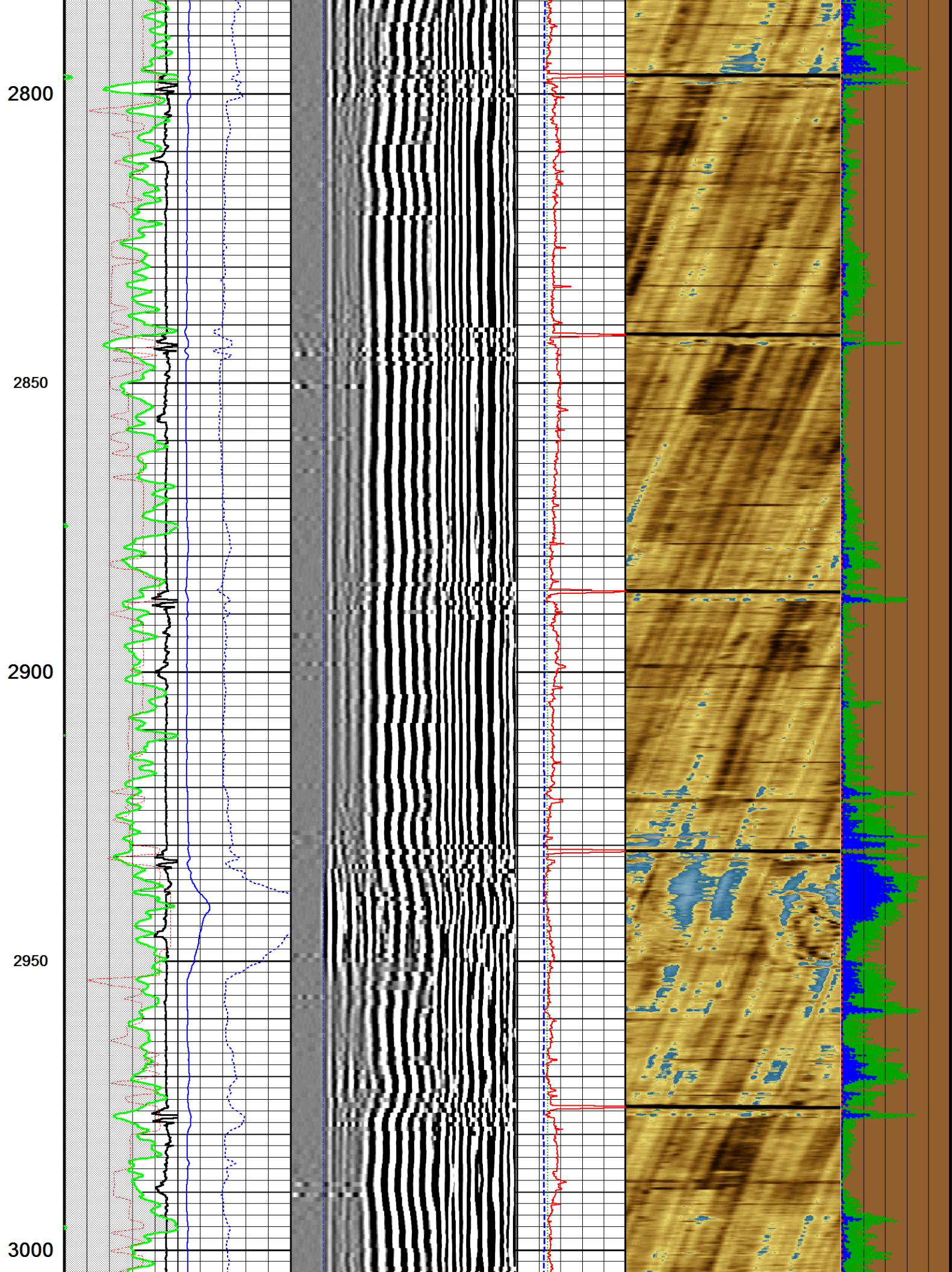
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2700

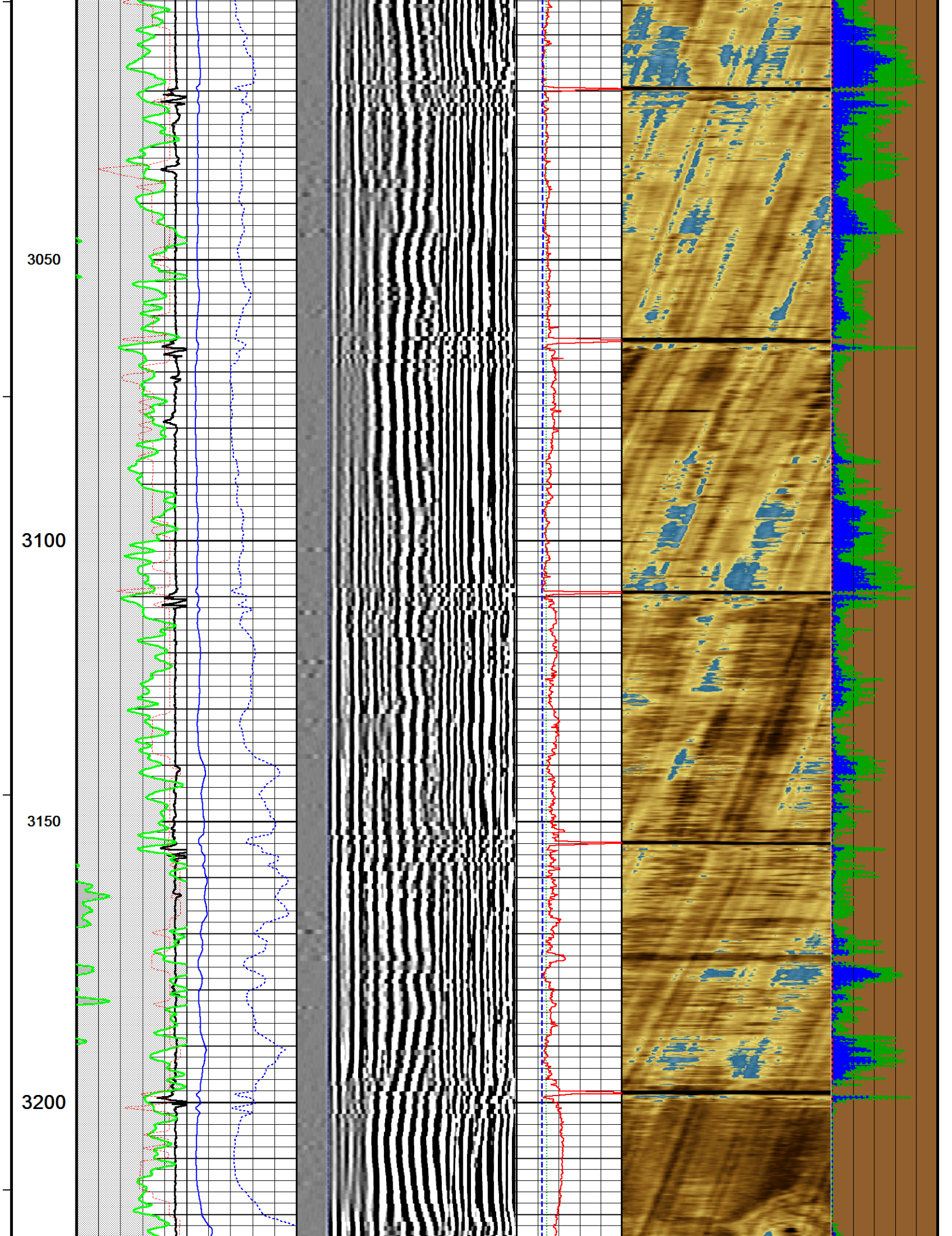
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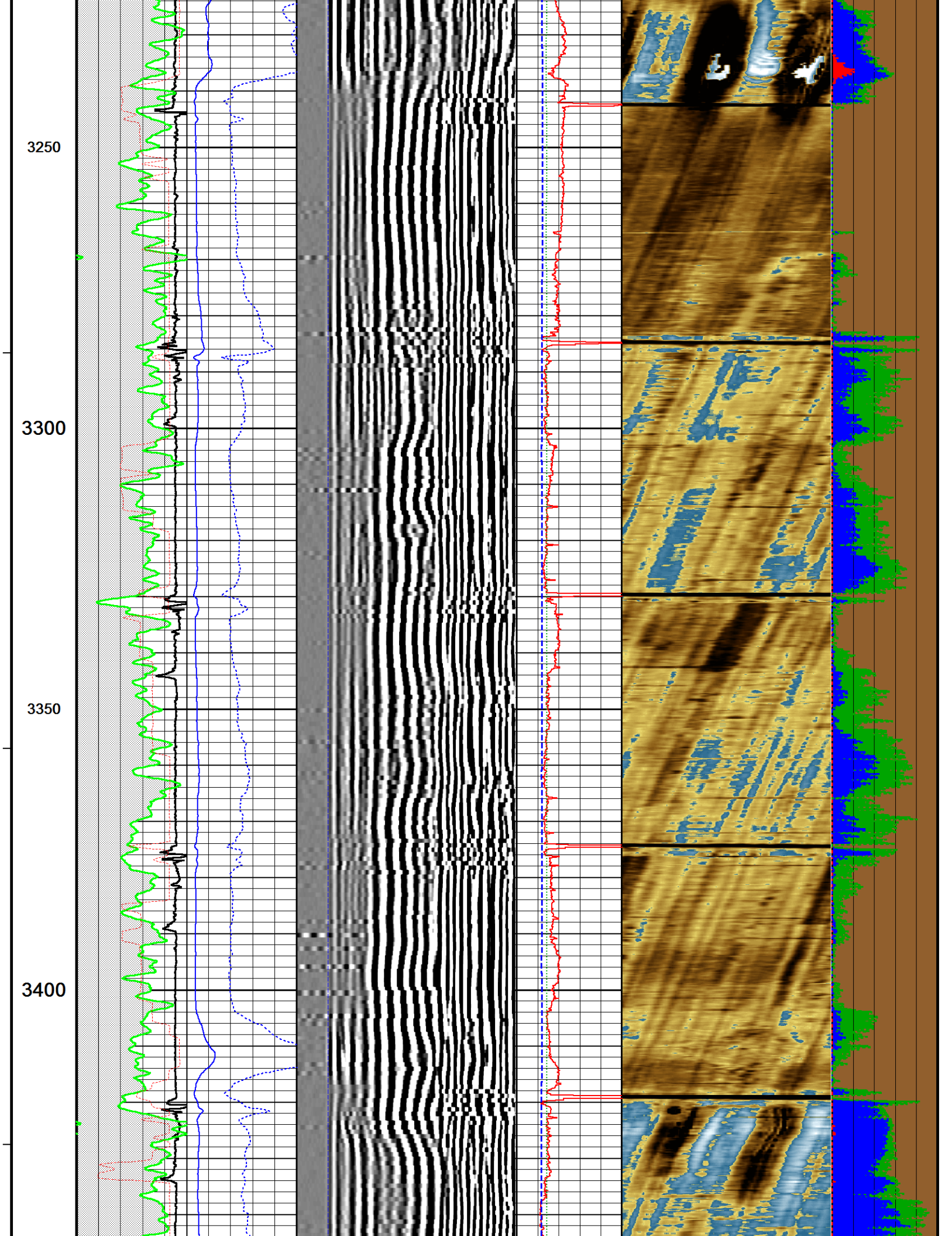




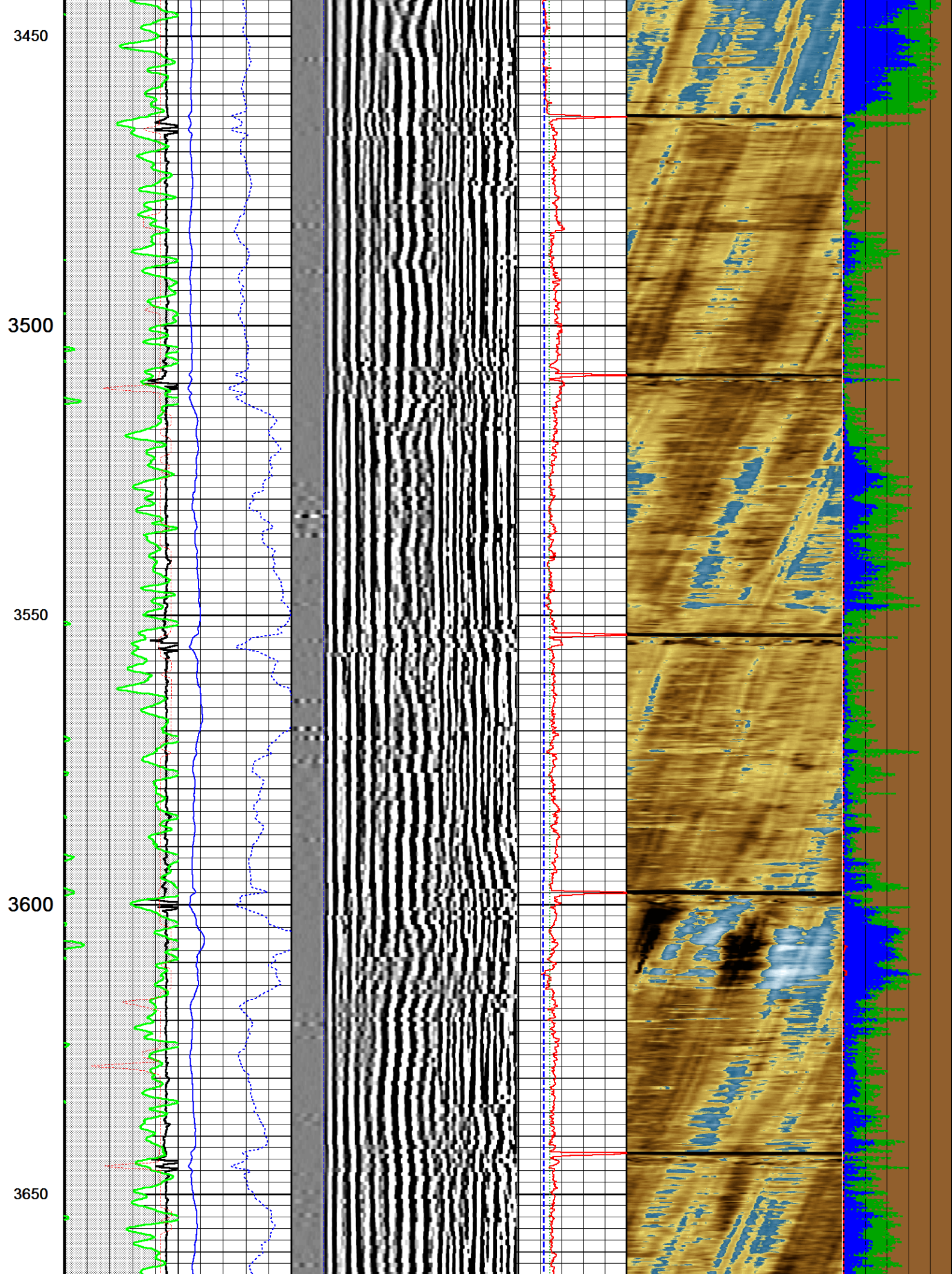




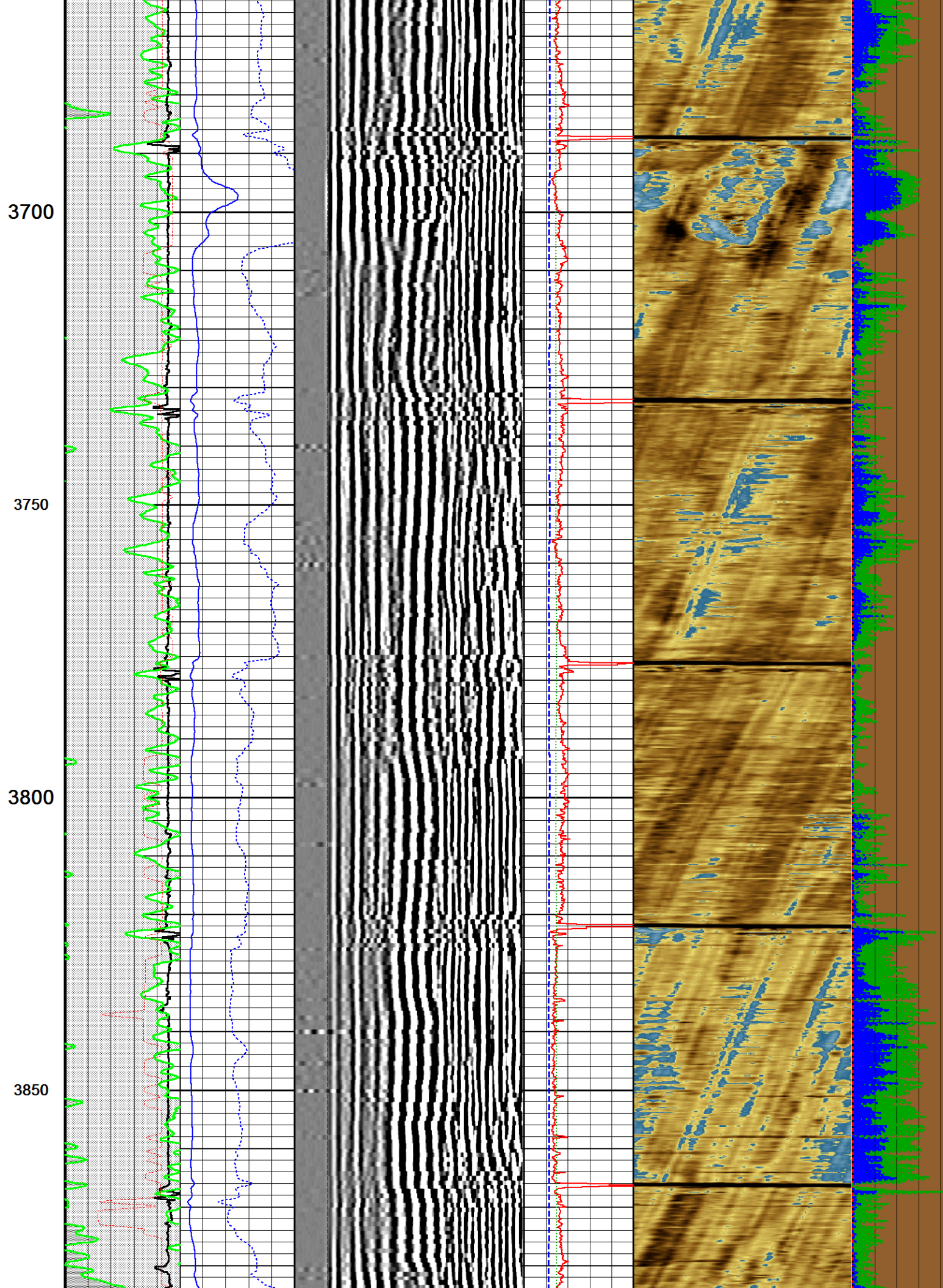




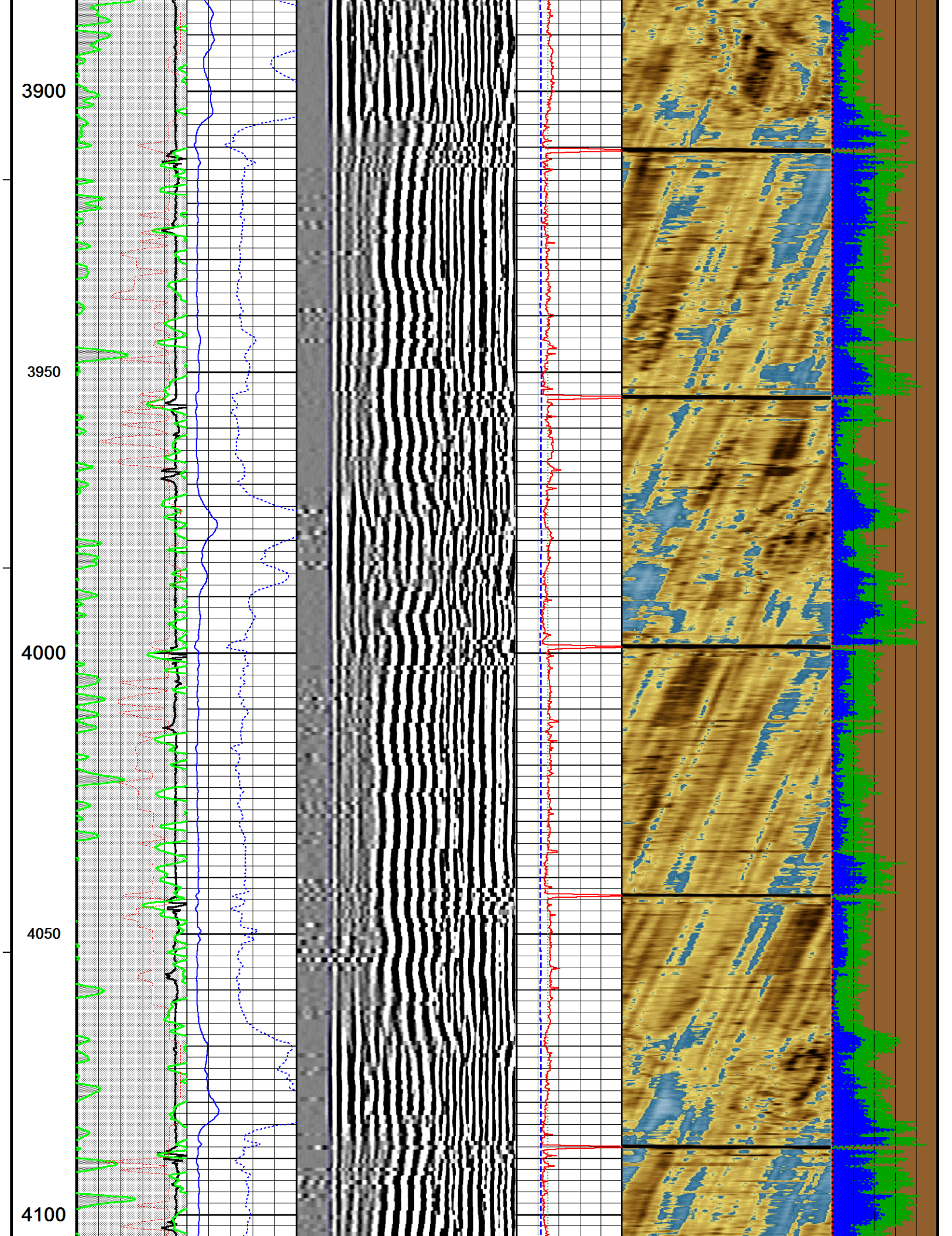




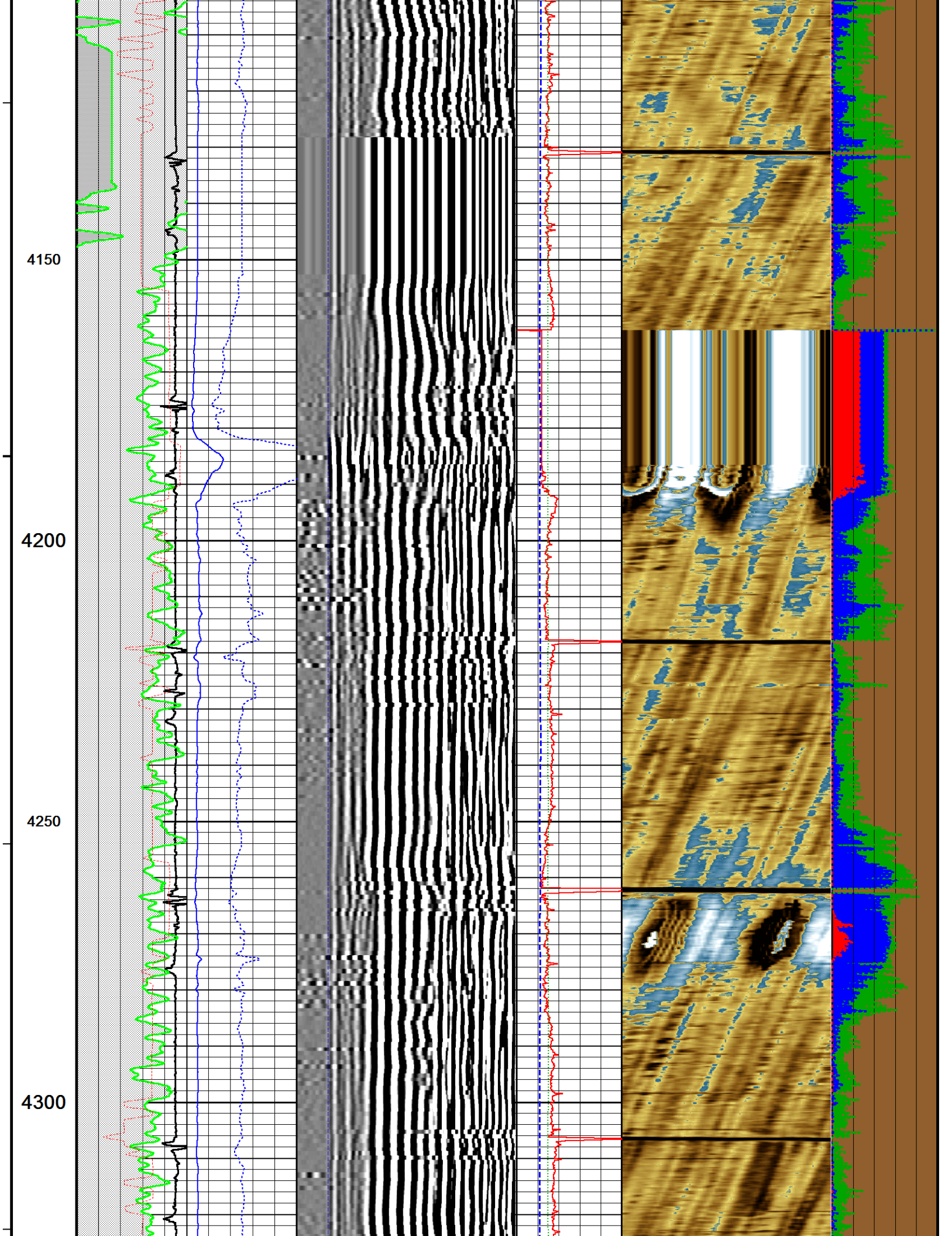




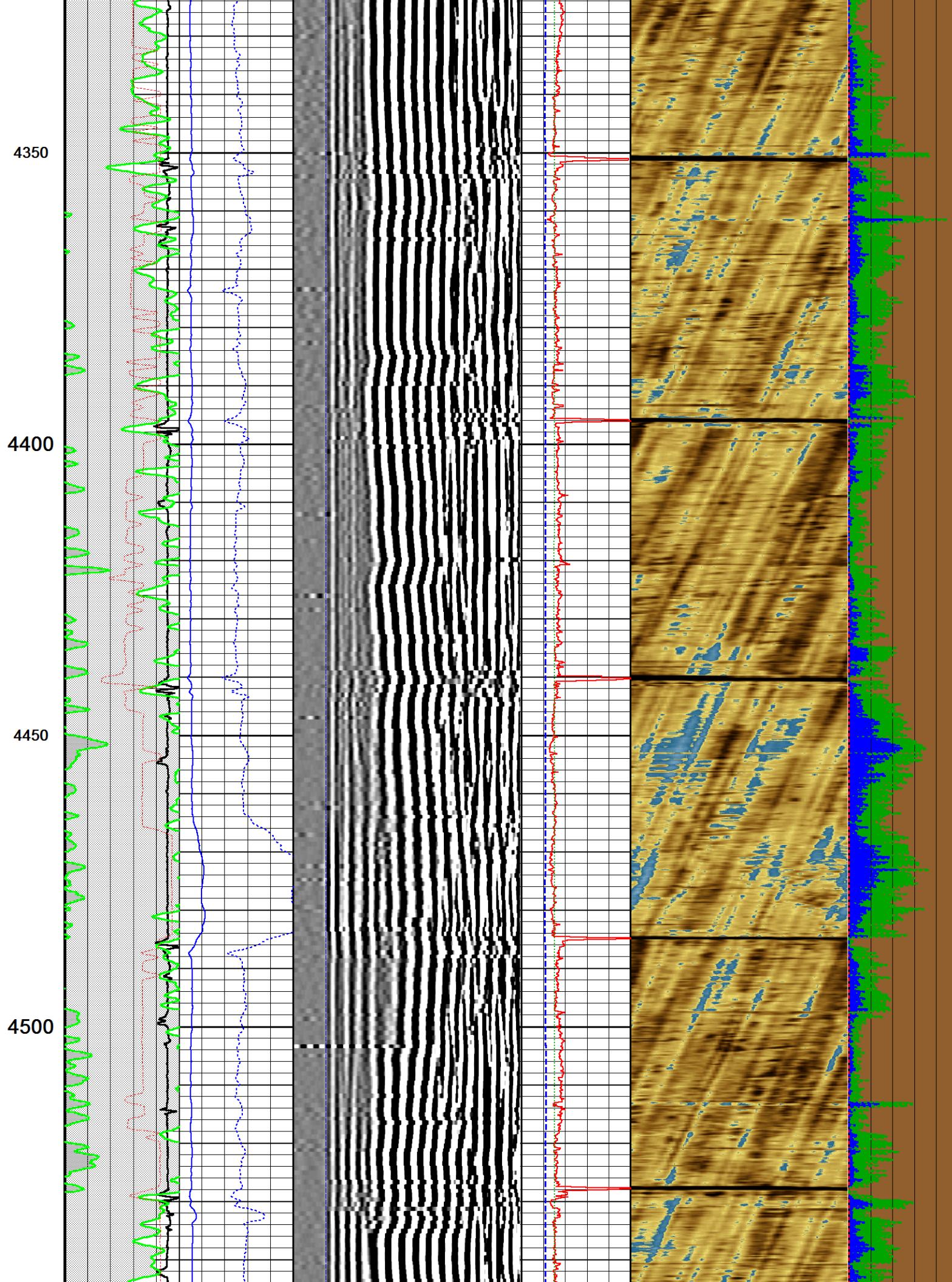




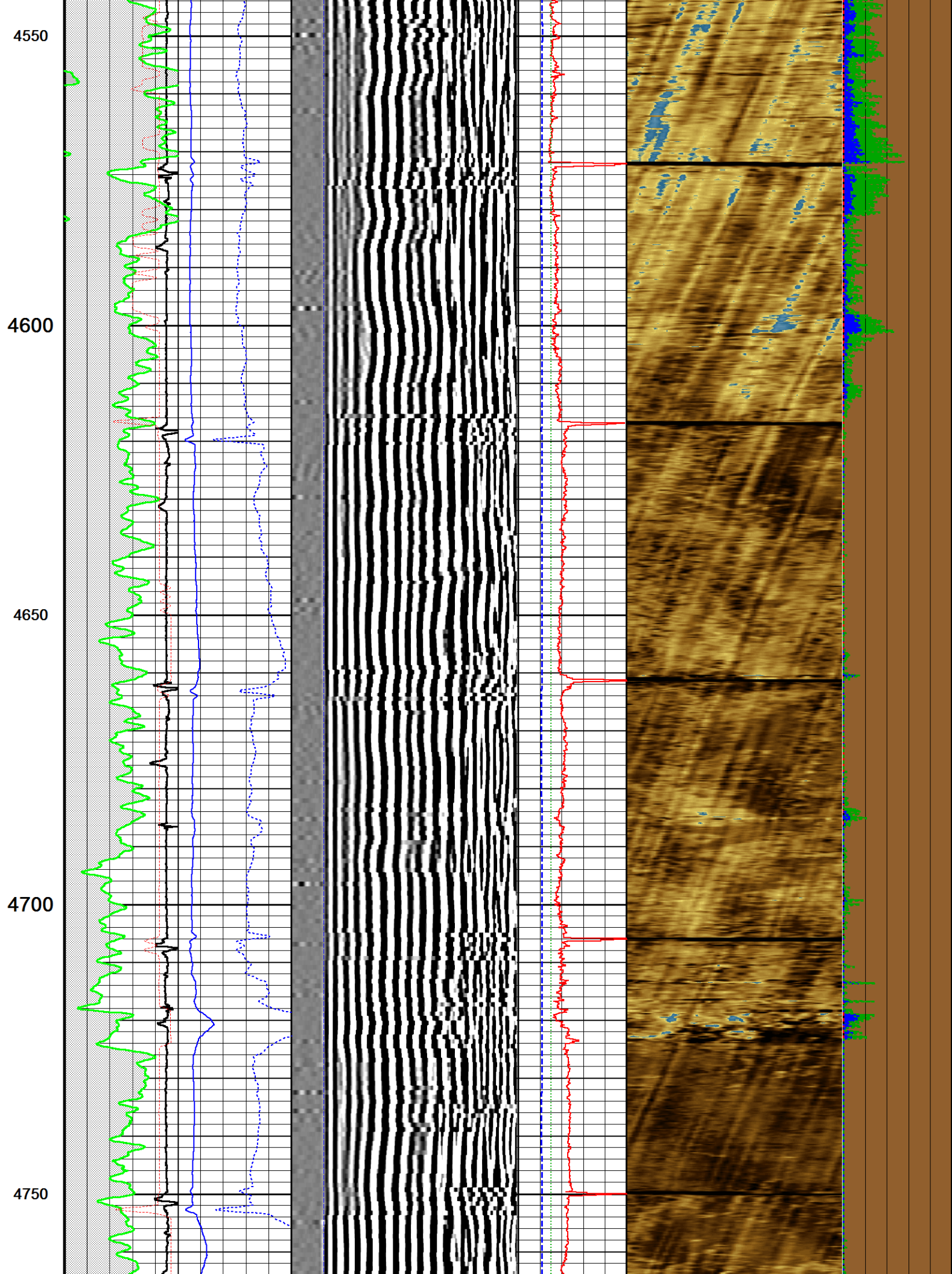




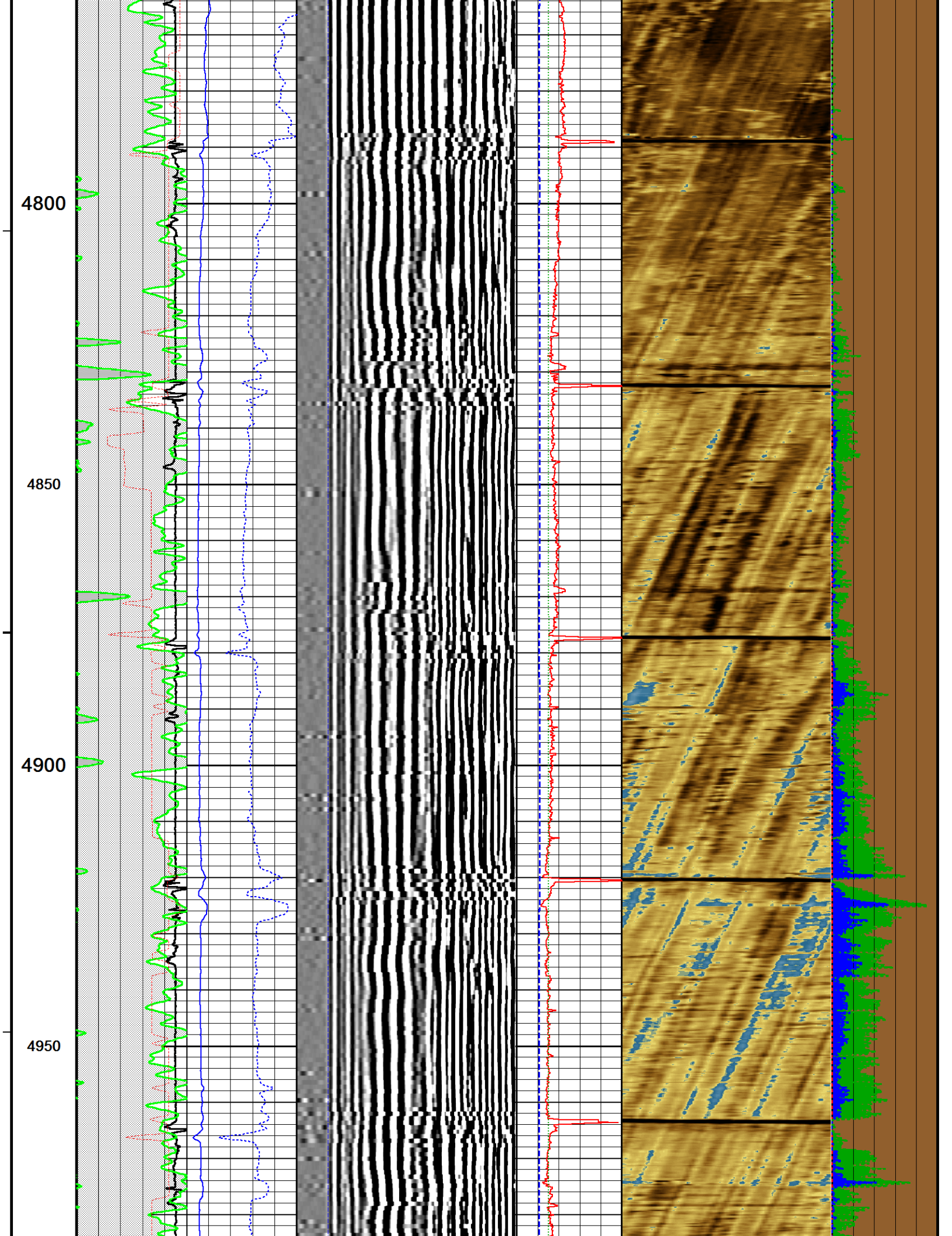




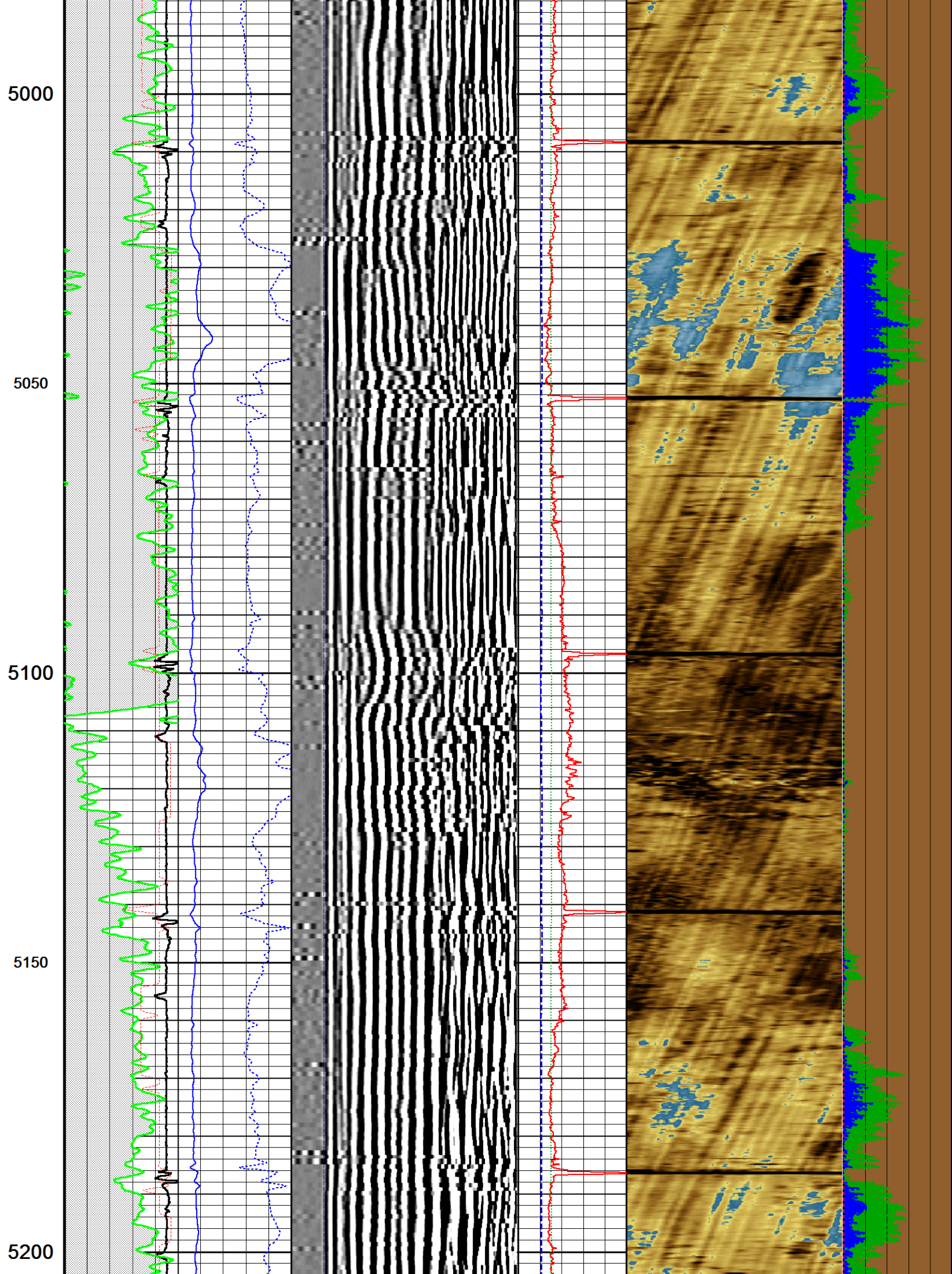




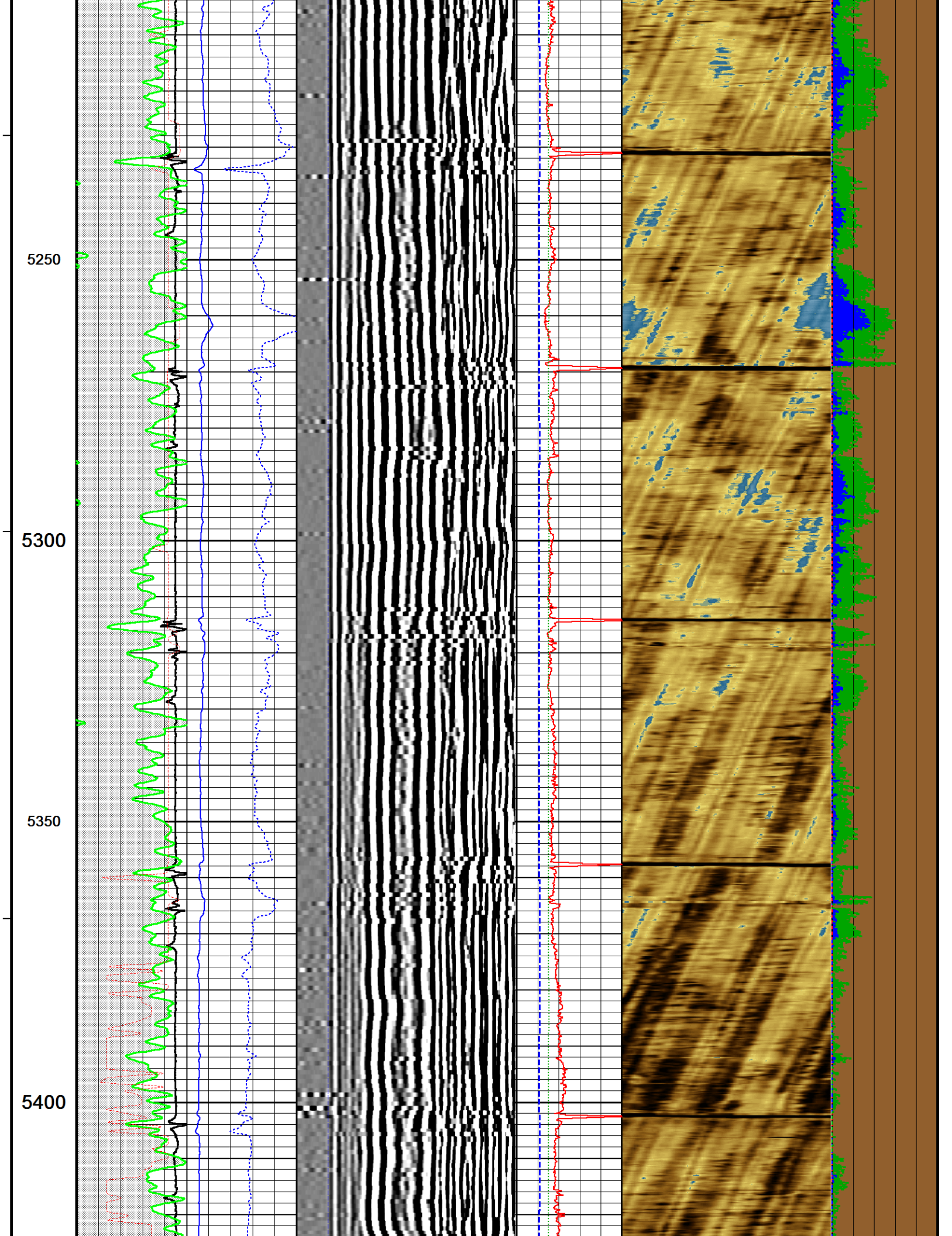




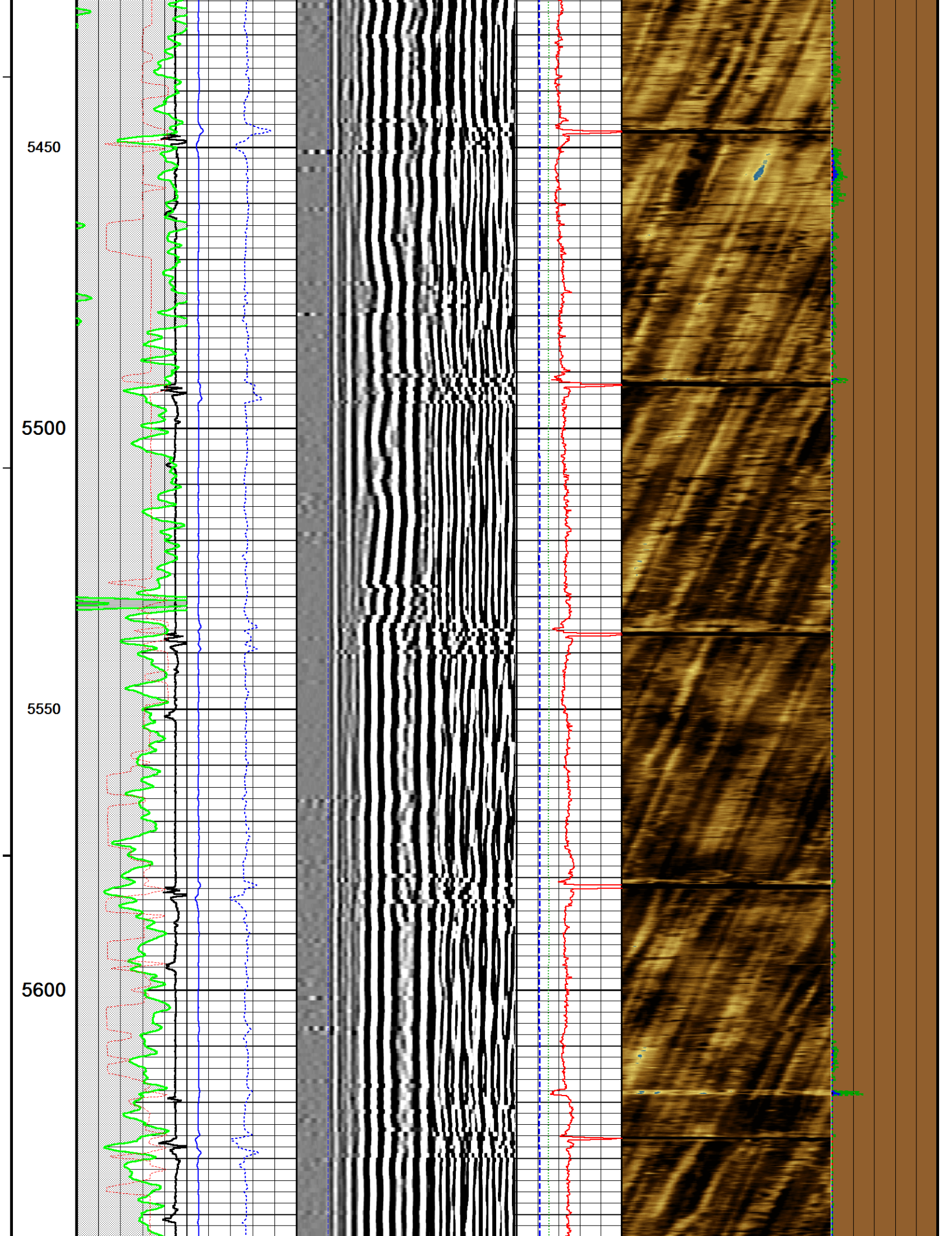




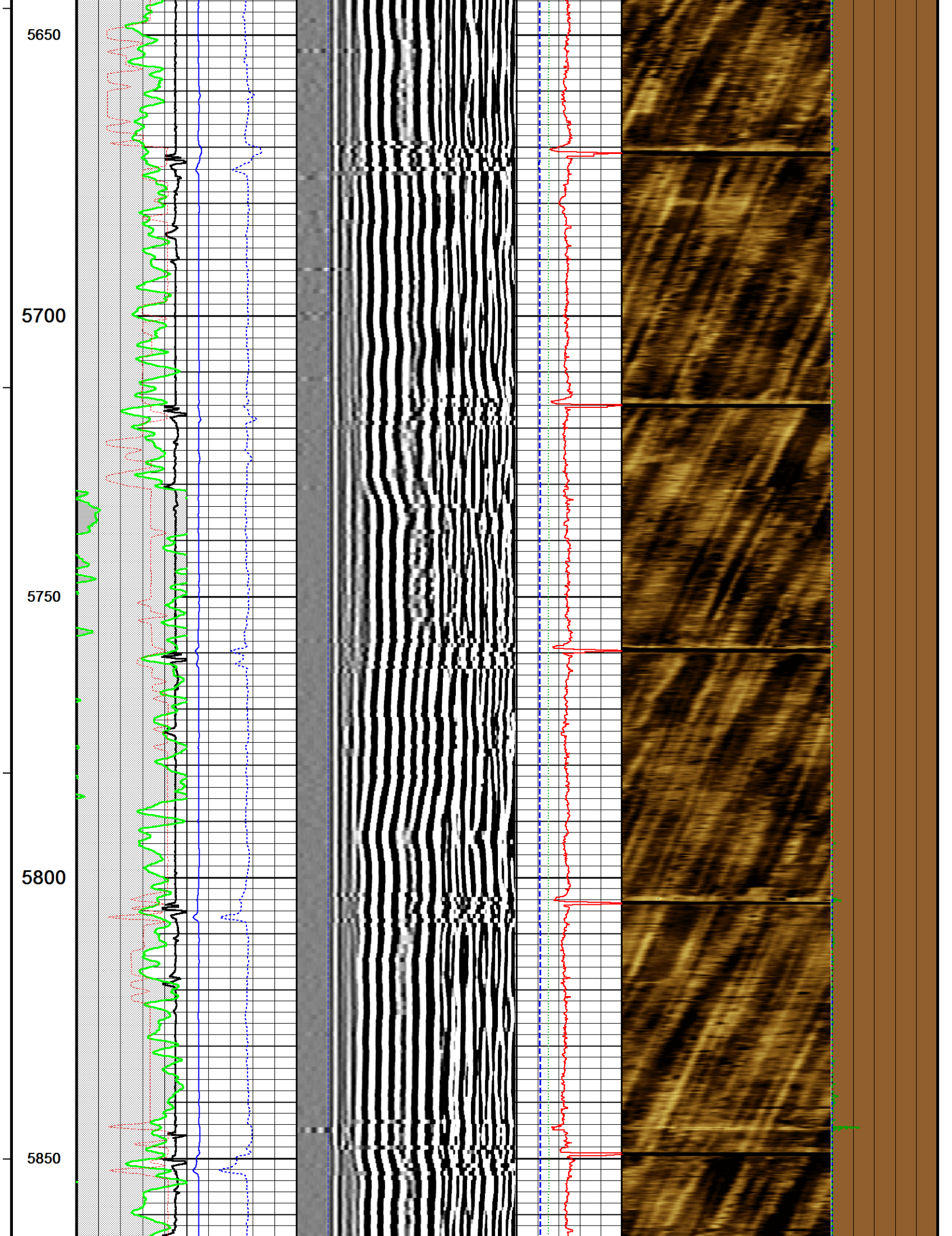












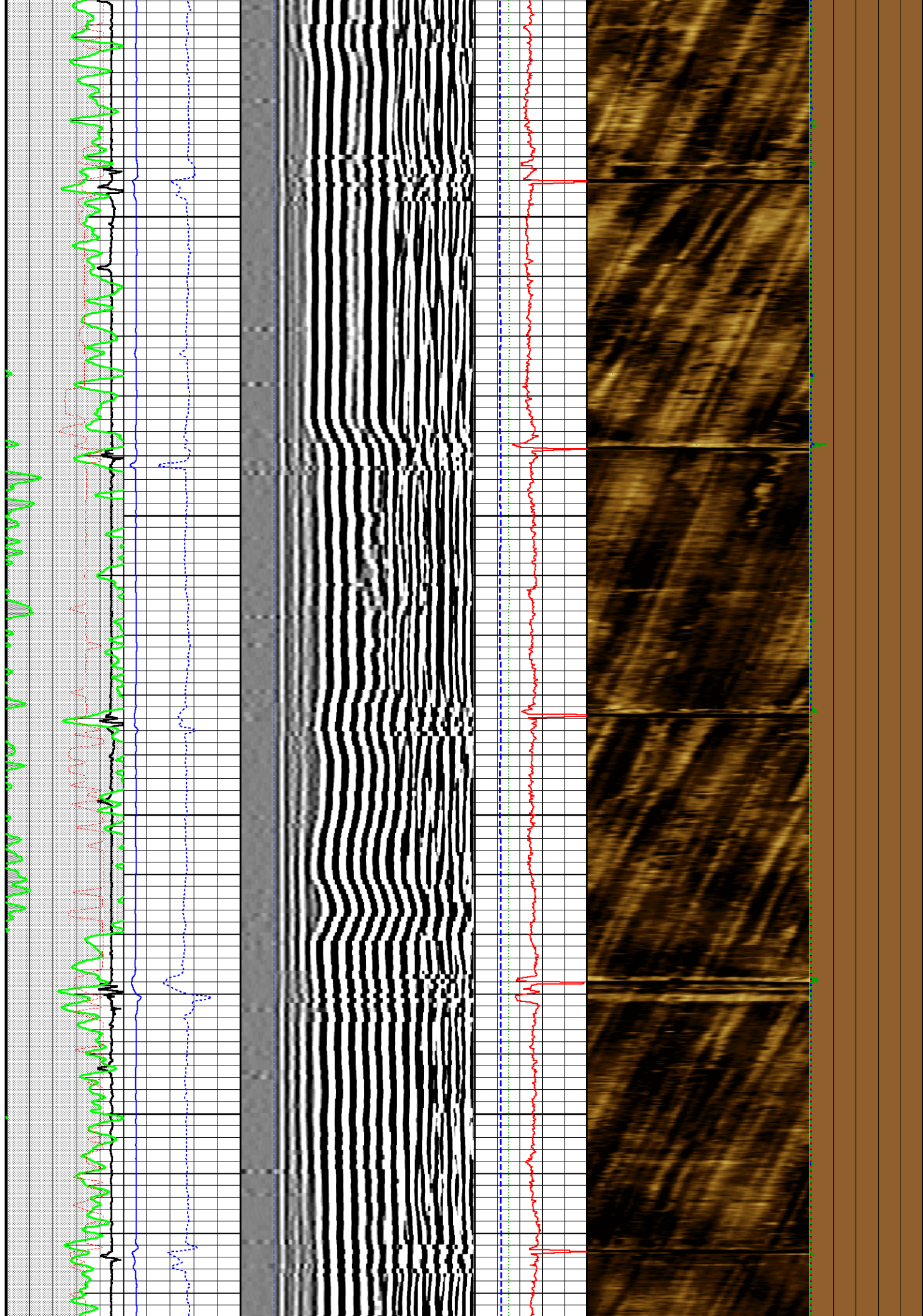


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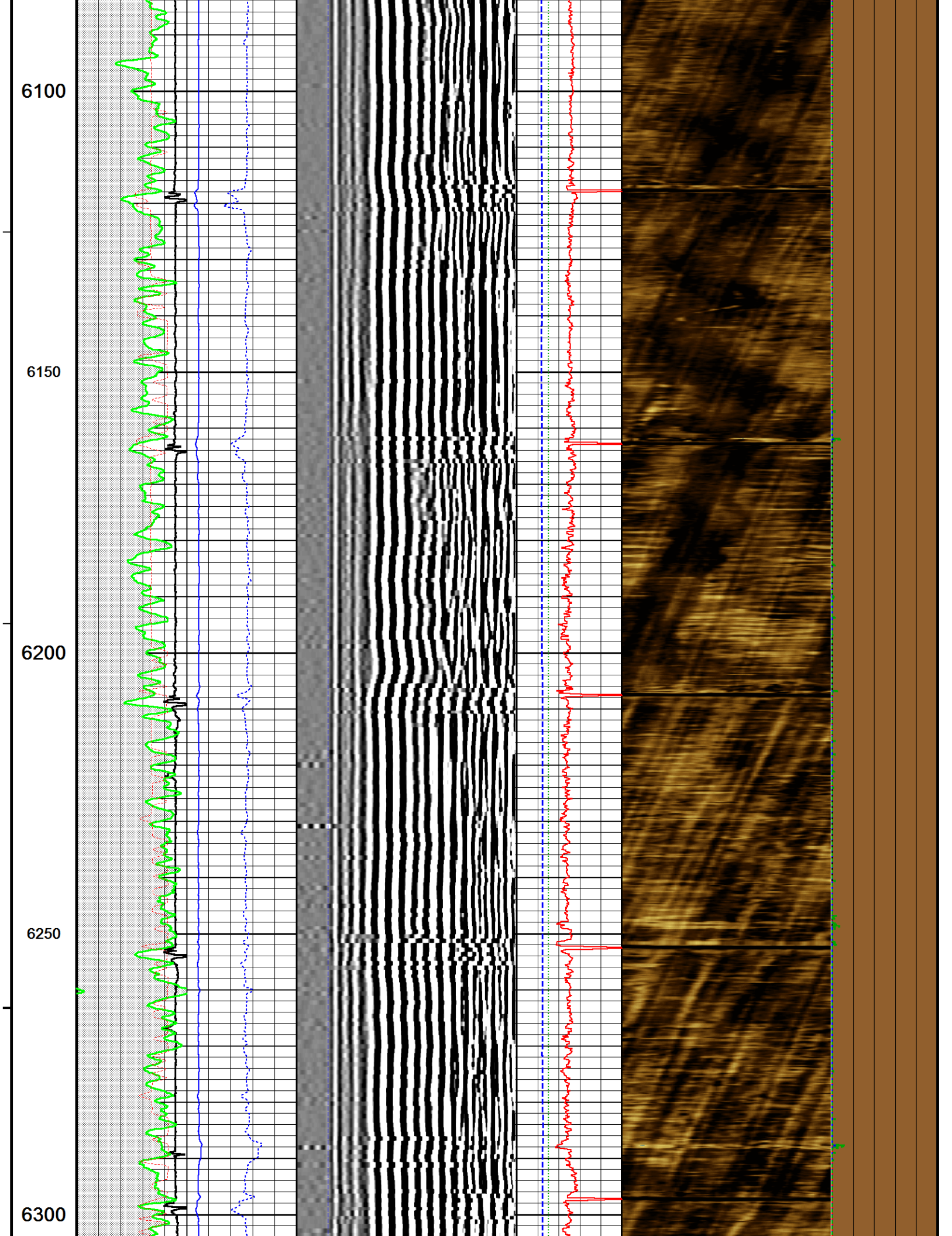
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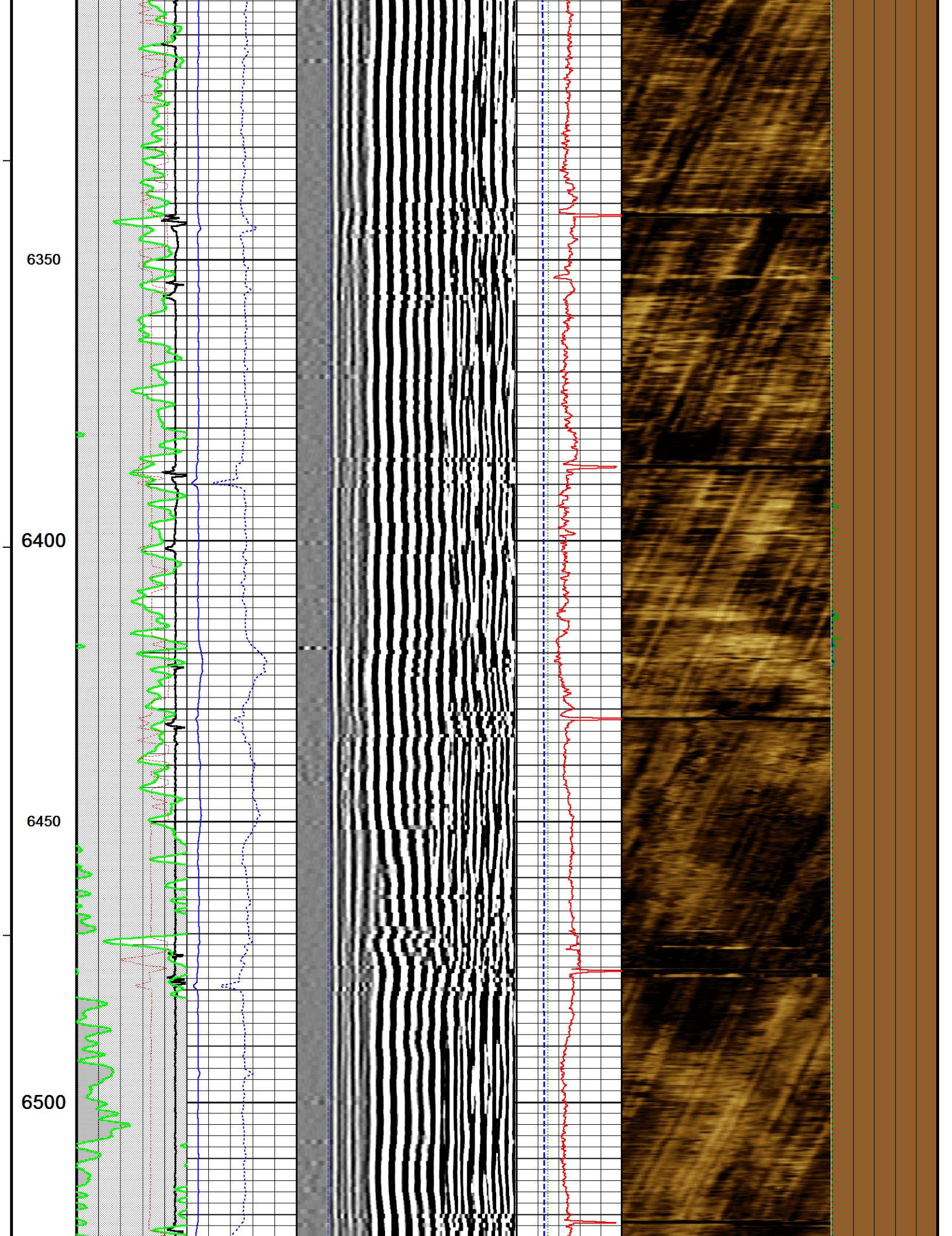
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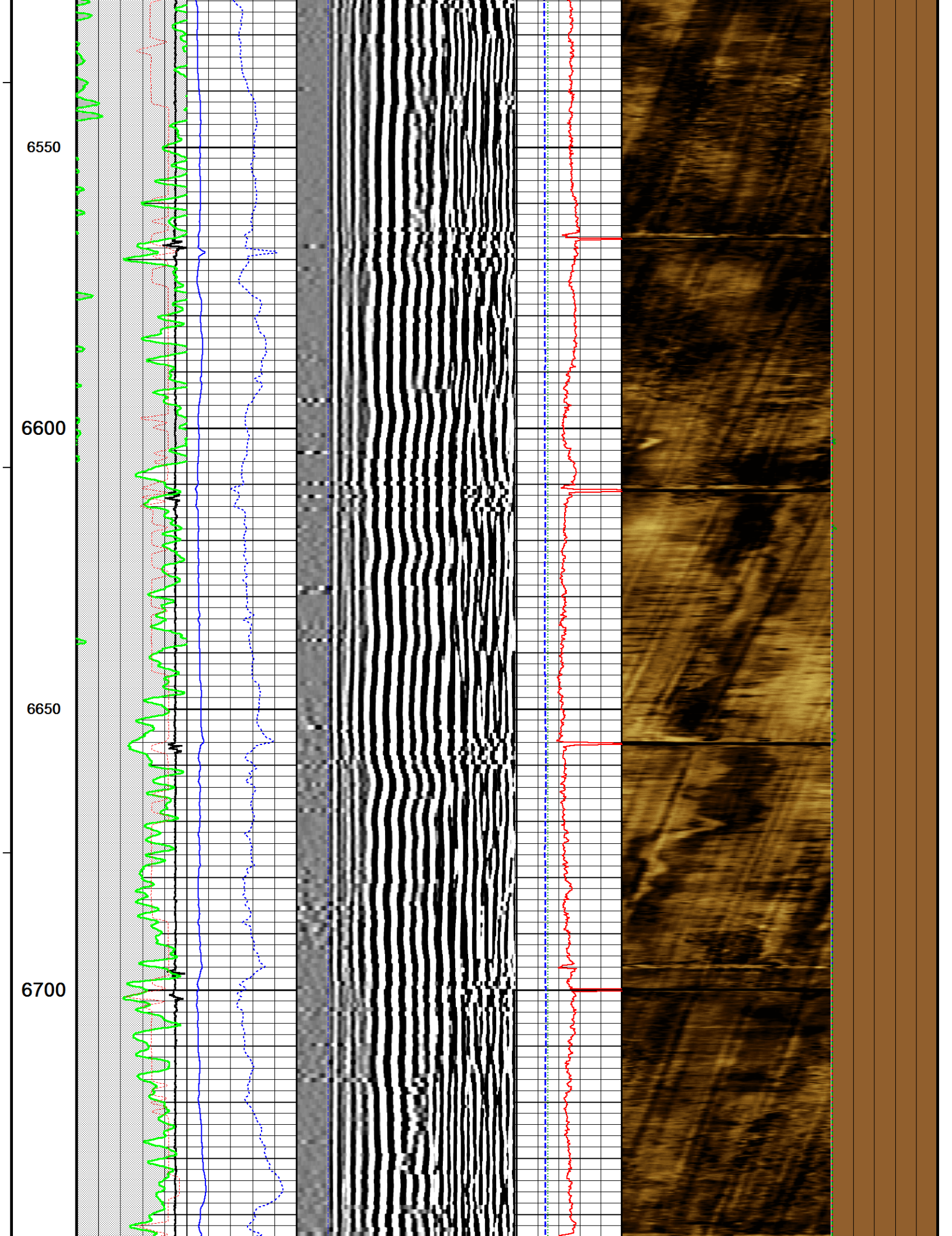






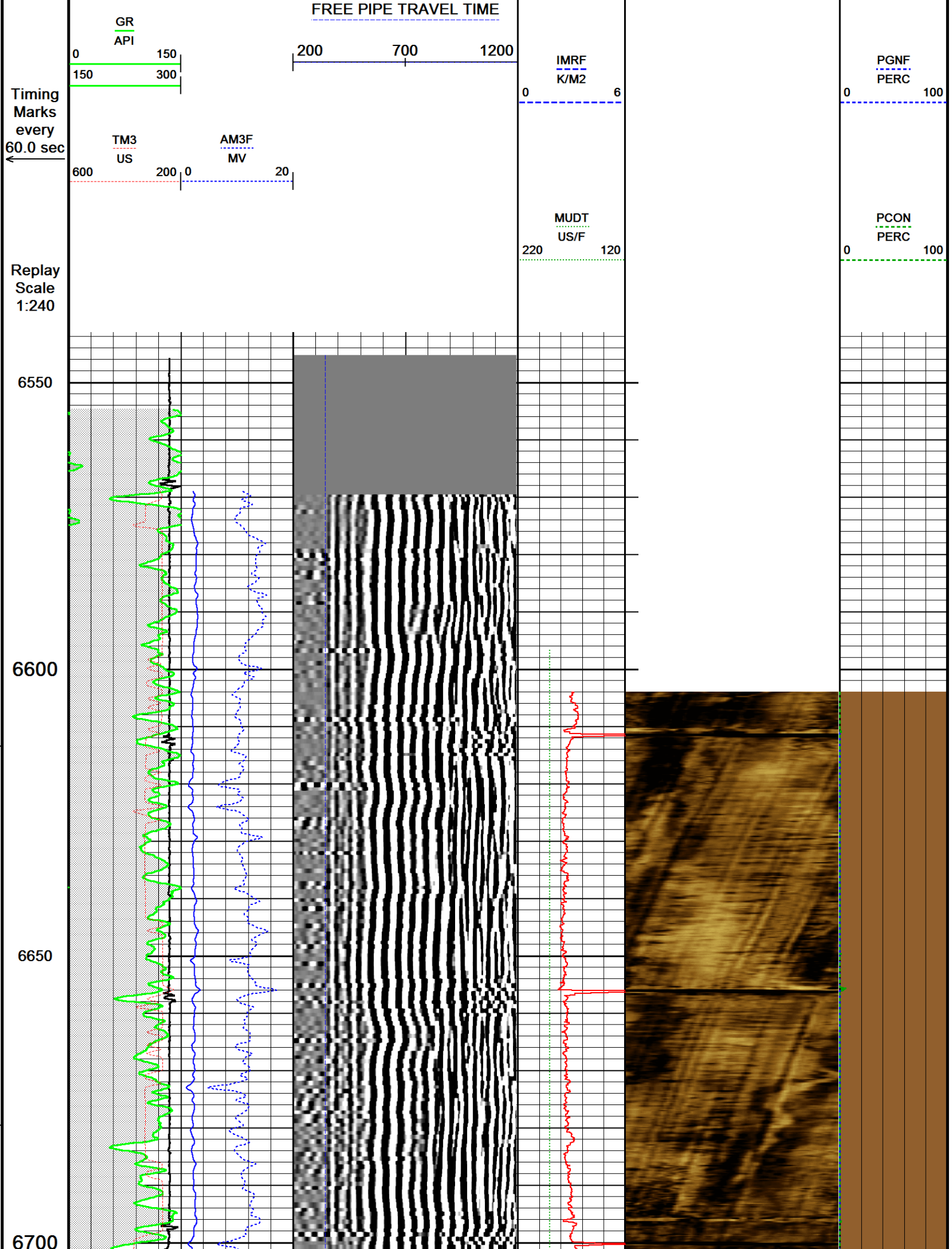




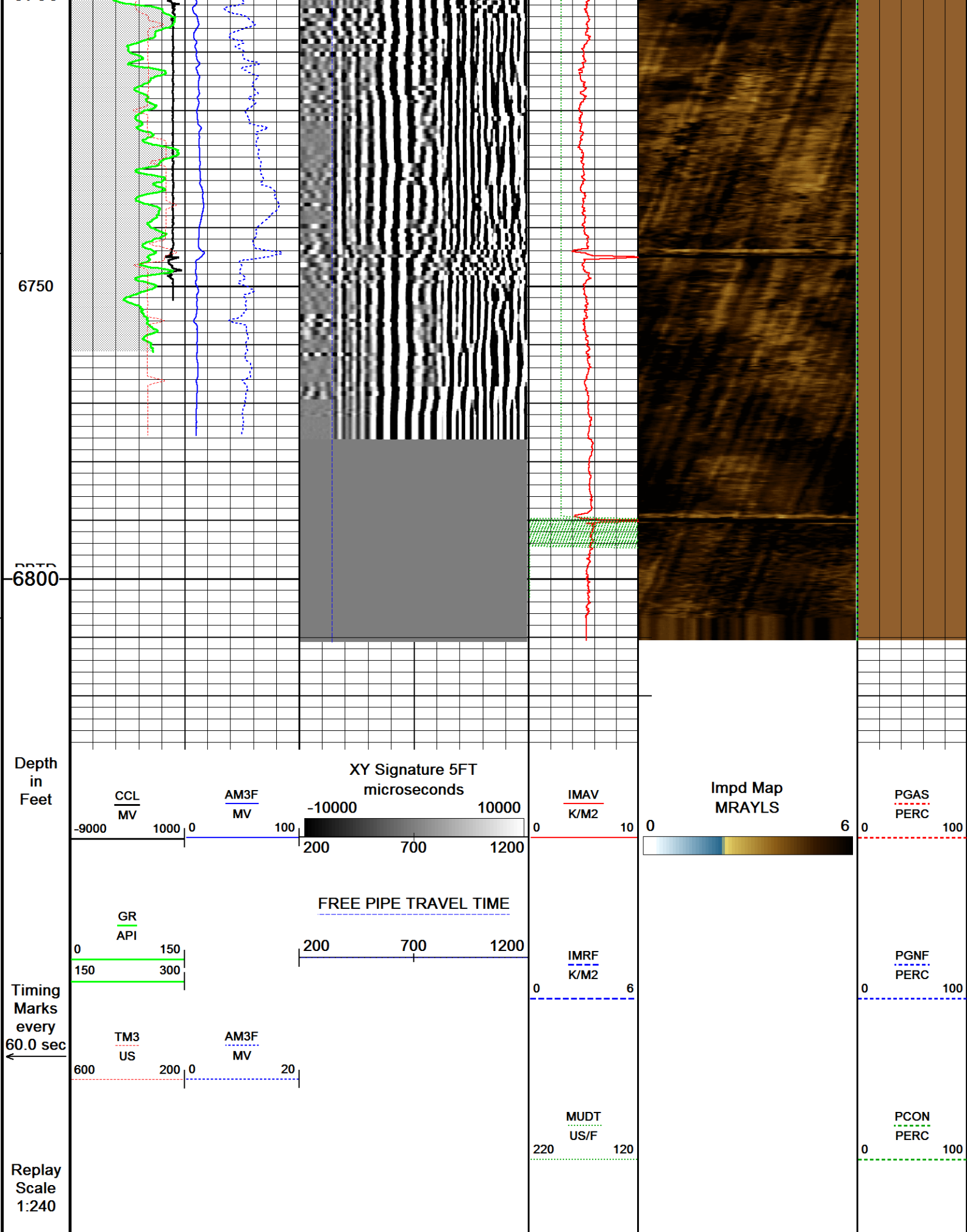
















## SHOP AND FIELD CALIBRATIONS

C:\Logs\Extraction\LEONARD 4 N\LEONARD 4N MAIN URS FINAL.dta

UGR Field Survey Cal UGR-JD 118

Field calibration on 00-JAN-1988 00:00

## Gamma Ray Field Survey Calibration

Tool Type: UGR-JD  
Calibrator No:

Serial No: 118

Background Calibrator Standard Units

0.0 140.0 140.0 CPS

Delta Counts Per Sec: 140.0 CPS/API = 1.000

CBT Field Calibration CBT-AA 109

Field calibration on 17-JAN-2017 08:32

## Cement Bond Tool Amplitude Field Calibration

Tool Type CBT-AA

Serial No 109

Free Pipe Depth

Sensor	Description	Standard(mv)	Measured(mv)
AMP 3 FT	100 % Bond	2.10	0.00
	Free Pipe	62.00	627.70
AMP 5 FT	100 % Bond	1.40	0.00
	Free Pipe	41.00	540.50

CBT Constants CBT-AA 109

Last Edited on 07-OCT-2017 17:22

Min Ampl 100% Bond	2.00 MV
Max Ampl 0% Bond	72.00 MV
Cement Cmpr Strength	580 PSI
Casing Size	5.50 IN
Casing Weight	20.0 LB/F
Casing Velocity	57.00 US/F
DT Fluid	200.0 US/F
Maximum Attenuation	12.00 DB/F
3' TT Correction	0.0 US
Cement Weight	0.00 LB/G

Ultrasonic Radial Scanner Before Cal USH-AB 136

Field calibration on 00-JAN-1988 00:00

## Ultrasonic Radial Scanner Before Calibration

Tool Type USH-AB

Serial No 136



	Measured	Minimum	Maximum	
Free Pipe	-999.250	0.000	0.000	K/M2
Mud Impedance	1.500	0.000	0.000	K/M2

URS Constants USH-AB 136

Last Edited on 07-OCT-2017 17:22

\*\*\* Well Information \*\*\*

\*\* NOTE \*\*

If `Use General Settings` is set to `OFF`, the `ZHead Cal` and `ZMud Cal` values will be obtained from `Depth Specific Settings` entry

\*\* General Settings \*\*

Use General Settings	ON
ZHead Cal Area Ratio	4.40
ZMud Cal Area Ratio	4.00

\*\* Depth Specific Settings \*\*

Dpth Intvl Min(F)	Dpth Intvl Max(F)	Cs Sz (IN)	Cs WT (LB/G)	ZHd Cal ARatio	ZMd Cal ARatio	Thk (IN)	Harmnc K Factor
0.00	17120.00	5.50	20.00	1.50	1.50	0.36	1.00

\*\* Constants \*\*

Thickness Calculated from	Tool
Radius Offset	0.00
Mud Slowness Offset	0.00 US/F
Mud Chamber Equation	Mud Plate
Z_mud at Calibration	1.70 K/M2
Z_mud Outside	1.75 K/M2
Gas Impedance Cutoff	0.38 K/M2
Fluid Impedance Cutoff	2.30 K/M2
Contam Impedance Cutoff	2.70 K/M2
Relative Bearing Rotate	OFF
RB Offset Angle	0.00 DEG
Cement Density	14.00 LB/G

DOWNHOLE EQUIPMENT

C:\Logs\Extraction\LEONARD 4 N\LEONARD 4N MAIN URS FINAL.dta

Mono-Cablehead  
MCH-AA 0 LG: 1.03 ft WT: 2.2 lb OD: 1.457 in

Crossover 1-pin to 55-pin for WCC-D  
XOV-WC 119 LG: 1.05 ft WT: 15.4 lb OD: 3.386 in

Swivel Head 55 pin





Swivel Head 55 pin  
SWH-CB 137 LG: 2.72 ft WT: 77.2 lb OD: 3.346 in

Casing Collar Locator, 55 pin  
CCL-WA 197 LG: 3.01 ft WT: 19.8 lb OD: 2.756 in

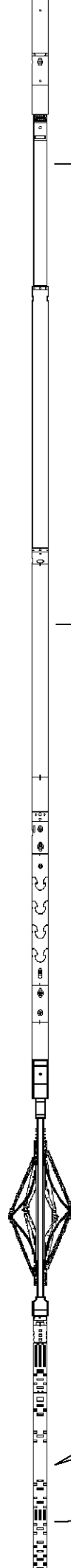
Communication Cartridge 55pin 3-3/8in  
WCC-DA 141 LG: 4.60 ft WT: 63.9 lb OD: 3.386 in

Gamma Ray  
UGR-JD 118 LG: 4.60 ft WT: 81.6 lb OD: 3.386 in

Flexible Joint, URS, 55 Pin  
FTP-FA 132 LG: 4.35 ft WT: 90.4 lb OD: 3.386 in

55 pin Roller Centralizer  
CEN-XA 213 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

Cement Bond Tool  
CBT-AA 109 LG: 10.75 ft WT: 163.1 lb OD: 3.386 in



58.58 ft CCL - Collar Locator

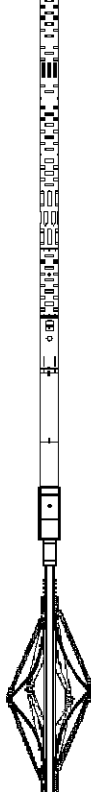
50.49 ft GR - Gamma Ray

35.79 ft AM3F - Amplitude 3FT

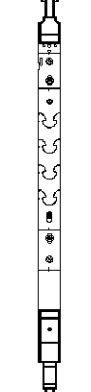
35.79 ft TM3 - Travel Time 3FT

34.79 ft XY5 - XY Signature 5FT

55 pin Roller Centralizer  
CEN-XA 132 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in



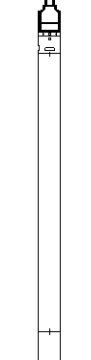
Flexible Joint, 55 Pin  
FTP-AA 134 LG: 3.44 ft WT: 77.2 lb OD: 3.346 in



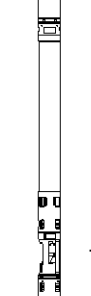
55 pin Roller Centralizer  
CEN-XA 221 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in



URS Electronics Cartridge  
UCC-AA 132 LG: 4.51 ft WT: 79.4 lb OD: 3.386 in



URS Sonde Section  
USS-AB 179 LG: 9.65 ft WT: 167.6 lb OD: 3.386 in

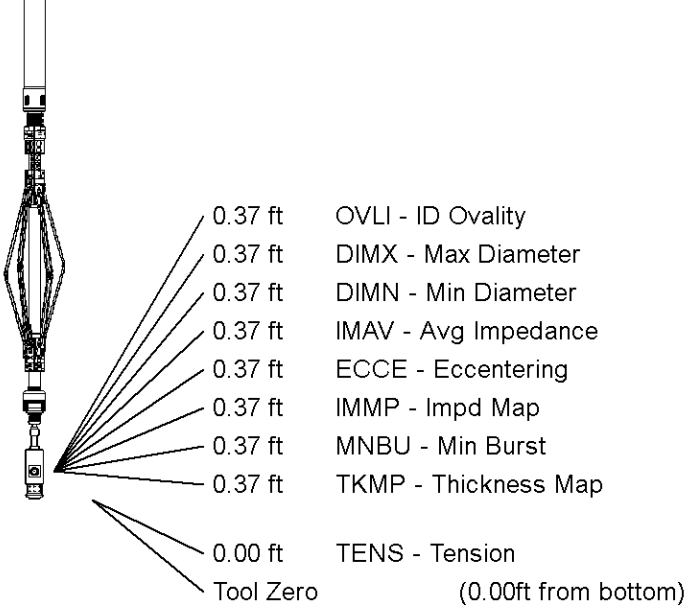


7.65 ft IMRF - Mud Impedance  
7.65 ft MUDT - Mud Slowness




Ultrasonic Radial Scanner Head A  
USH-AB 136 LG: 1.03 ft WT: 13.2 lb OD: 3.386 in

Total Length: 64.23 ft Weight: 1108.9 lb



COMPANY	EXTRACTION OIL & GAS
WELL	LEONARD 4N
FIELD	WATTENBERG
PROVINCE/COUNTY	WELD
COUNTRY/STATE	USA / COLORADO

Elevation Kelly Bushing	5032	feet	Bottom Log Interval	6800.00	feet
Elevation Drill Floor	5032	feet	Depth Driller	12170.00	feet
Elevation Ground Level	5004	feet	Depth Logger	6800.00	feet



**Weatherford**<sup>®</sup>

SECUREVIEW  
ULTRAVIEW/BONDVIEW  
CEMENT ANALYSIS