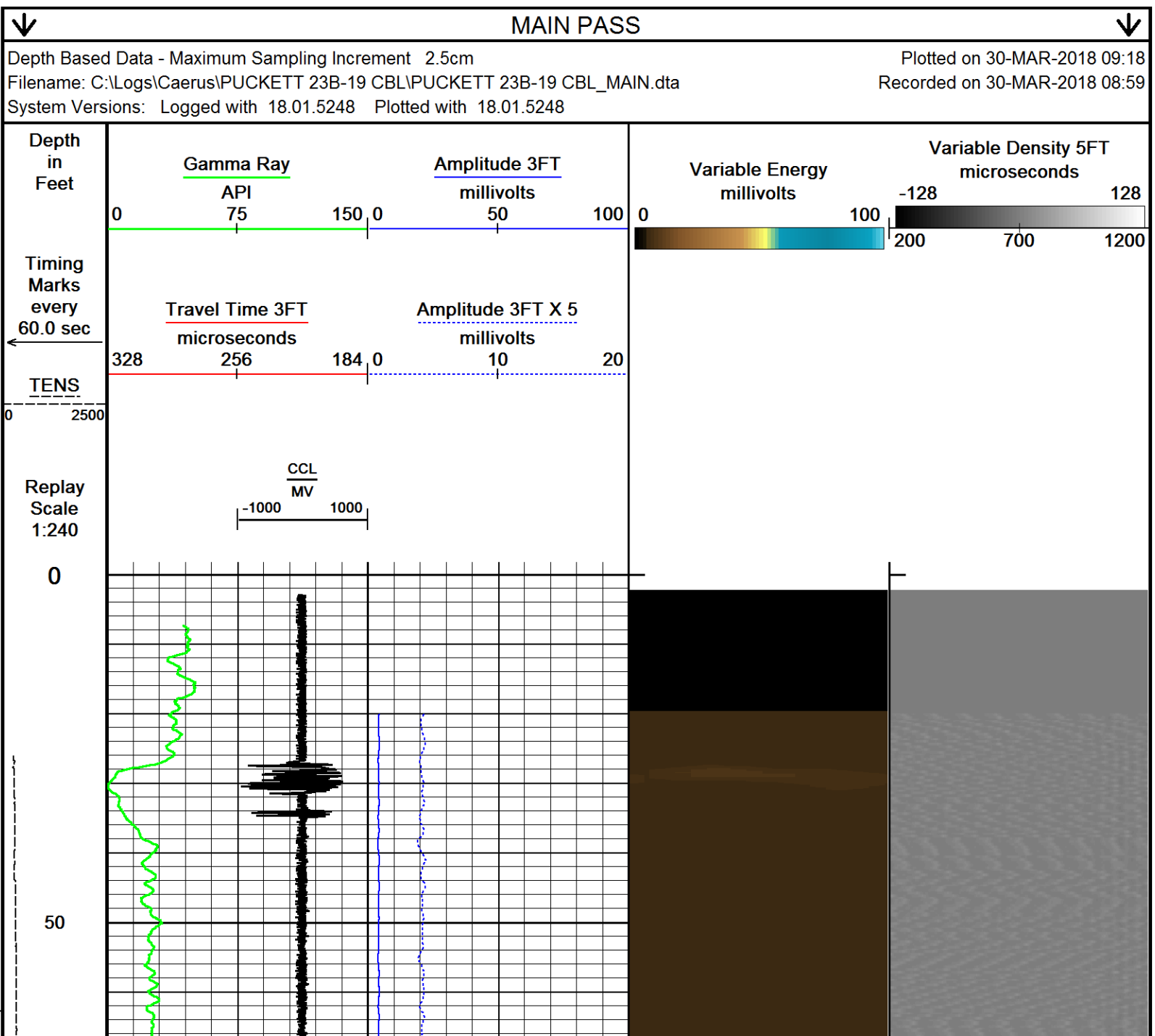
				CEMENT BOND LOG			
COMPANY WELL FIELD PROVINCE/COUNTY COUNTRY/STATE LOCATION				CAERUS OIL & GAS PUCKETT 23B-19 GRAND VALLEY GARFIELD USA / COLORADO			
SEC 19	TWP 6S	RGE 97W	Other Services				
Latitude		PND					
Longitude							
API Number							
Permanent Datum GROUND LEVEL, Elevation 8151 feet			Elevations:			feet	
Log Measured From KB, 30.00 feet above Permanent Datum			KB			8181.00	
Drilling Measured From KB			DF			8181.00	
			GL			8151.00	
Date	28-MAR-2018	PERFORATION RECORD					
Run Number	ONE	Shot	Number	Depth From	Depth To		
Service Order	5133-209607914	Density	of Shots	feet	feet		
Type Log							
Depth Driller	10121.00						
Depth Logger	10050.00						
Top Log Interval	0.00						
Bottom Log Interval	10050.00						
Hole Fluid Type	WATER						
Hole Fluid Level	90.00						
Restriction ID	3.875	Gun Type					
Max Recorded Temp	235.00	Gun Size					
Well Head Pressure	0.00						
Well Head Equipment	N/A	CASING / TUBING RECORD					
Time Well Ready	ROA	Size	Weight	Depth From	Depth To		
Time Logger Bottom	2200	inches	pounds/ft	feet	feet		
Unit	14115		36.00	0.00	2432.00		
Equipment Name	WSS-E		11.60	0.00	10104.00		
Base	CASPER						
Recorded By	P. MAZUR / A. LITTLE						
Witnessed By	R. TOMPKINS						

BOREHOLE RECORD						Last Edited: 30-MAR-2018 08:30
Bit Size inches		Depth From feet		Depth To feet		
14.750		0.00		2522.00		
8.750		2522.00		7582.00		
7.825		7582.00		10121.00		
CASING / TUBING RECORD						
Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	J-55		9.625	0.00	2432.00	36.00
PRODUCTION	P-110		4.500	0.00	10104.00	11.60

REMARKS
SOFTWARE VERSION 18.01.5248 - COMMERCIAL VERSION
ALL DEPTH CONTROL PROCEDURES FOR SUBSEQUENT RUN IN HOLE WERE FOLLOWED. LOG WAS RUN FROM 30' K.B.
SHORT JOINT LOCATED AT 6574' - 6584'
SURFACE SYSTEM USED: WCM-D 160
TOOLS RUN: CENA, CTBA, GRBA, CENB, SBTA, CENA WERE RAN IN COMBINATION
PREDICTED 3' AMPLITUDE FOR 4.5" WITH 11.6 LB/FT CASING: 81 mv
FREE PIPE CALIBRATION DONE AT 1030 FT
UNKNOWN CEMENT CLASS DUE MISSING DATA FROM CLIENT

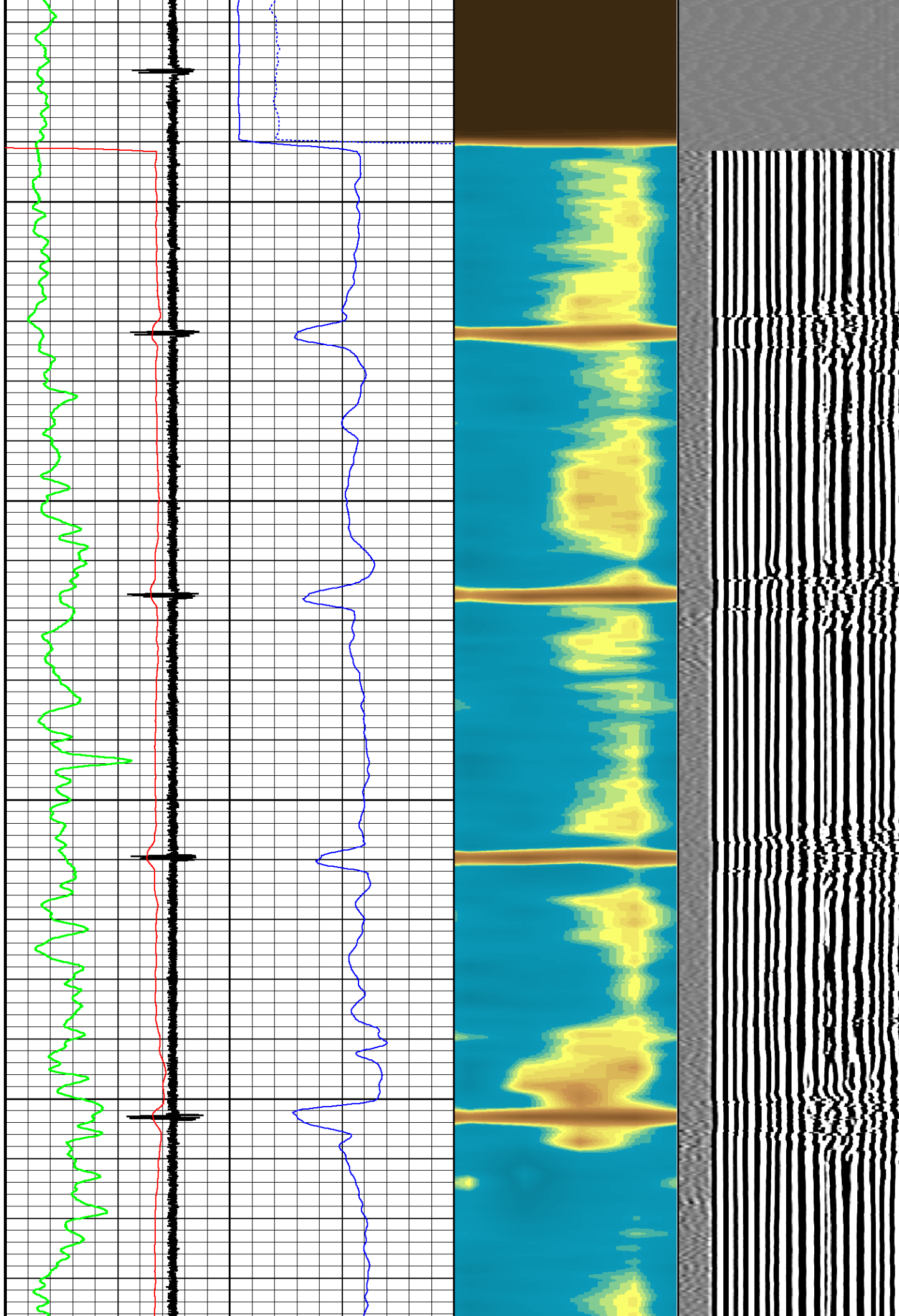


100

150

200

250



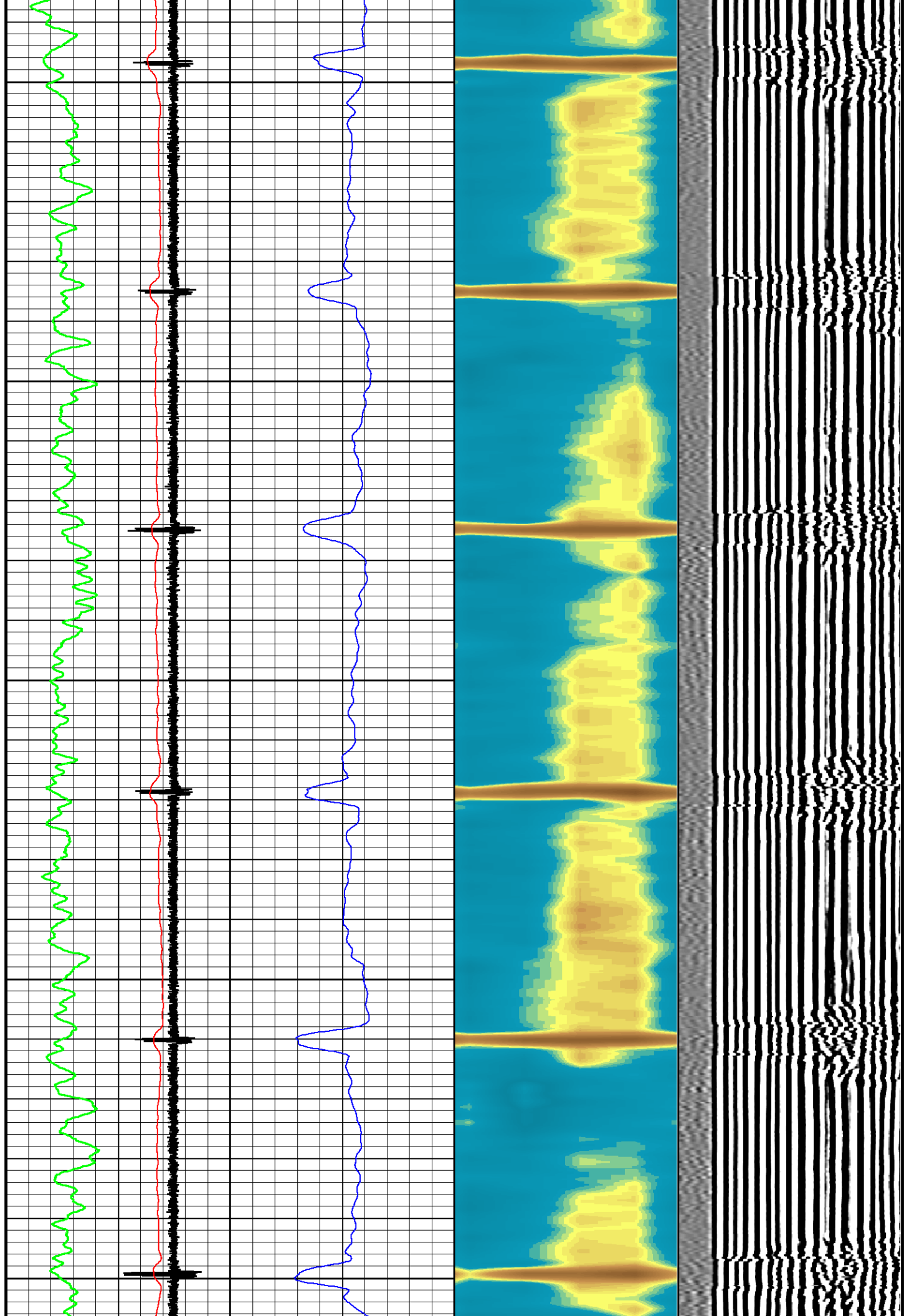
300

350

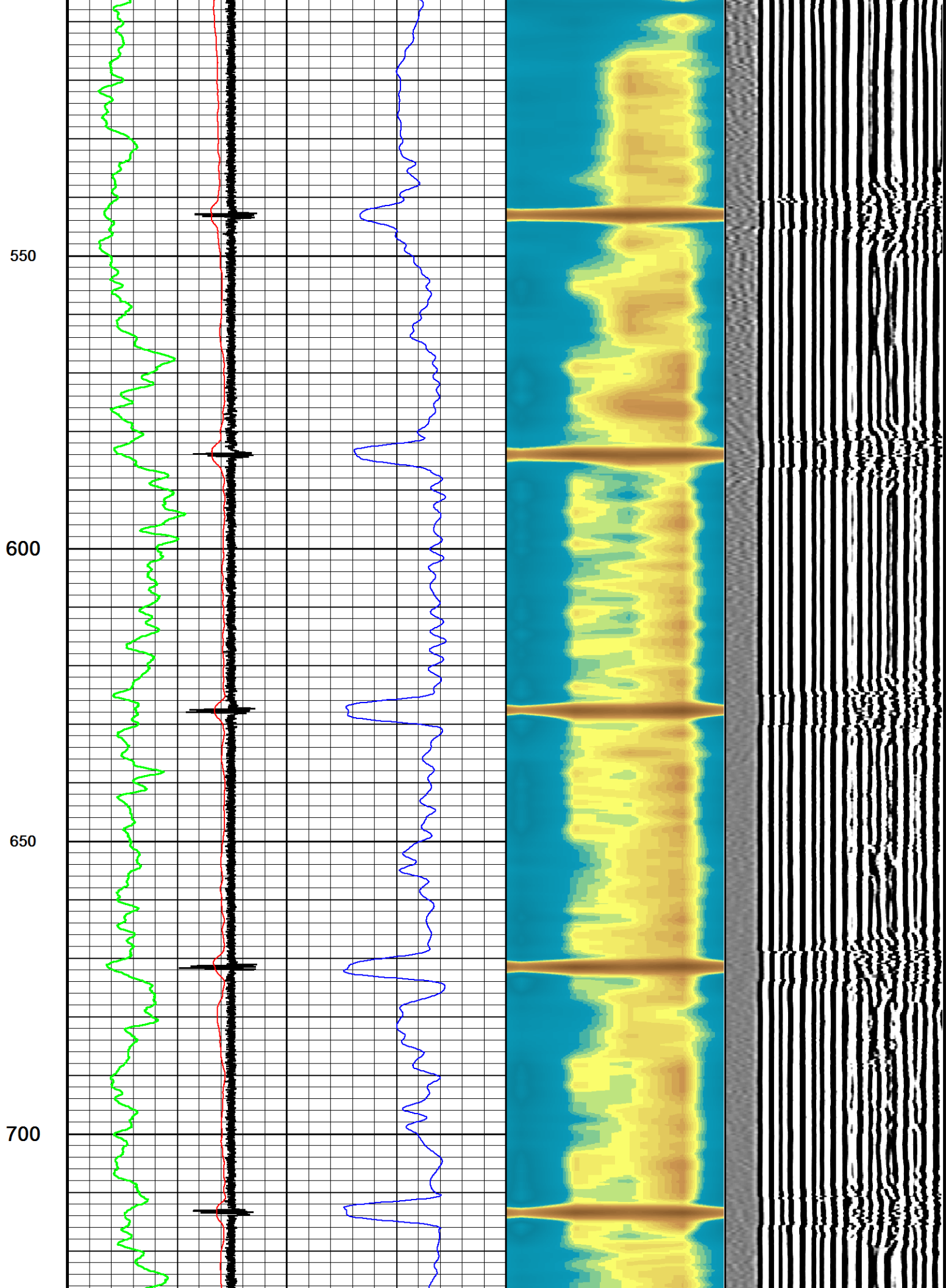
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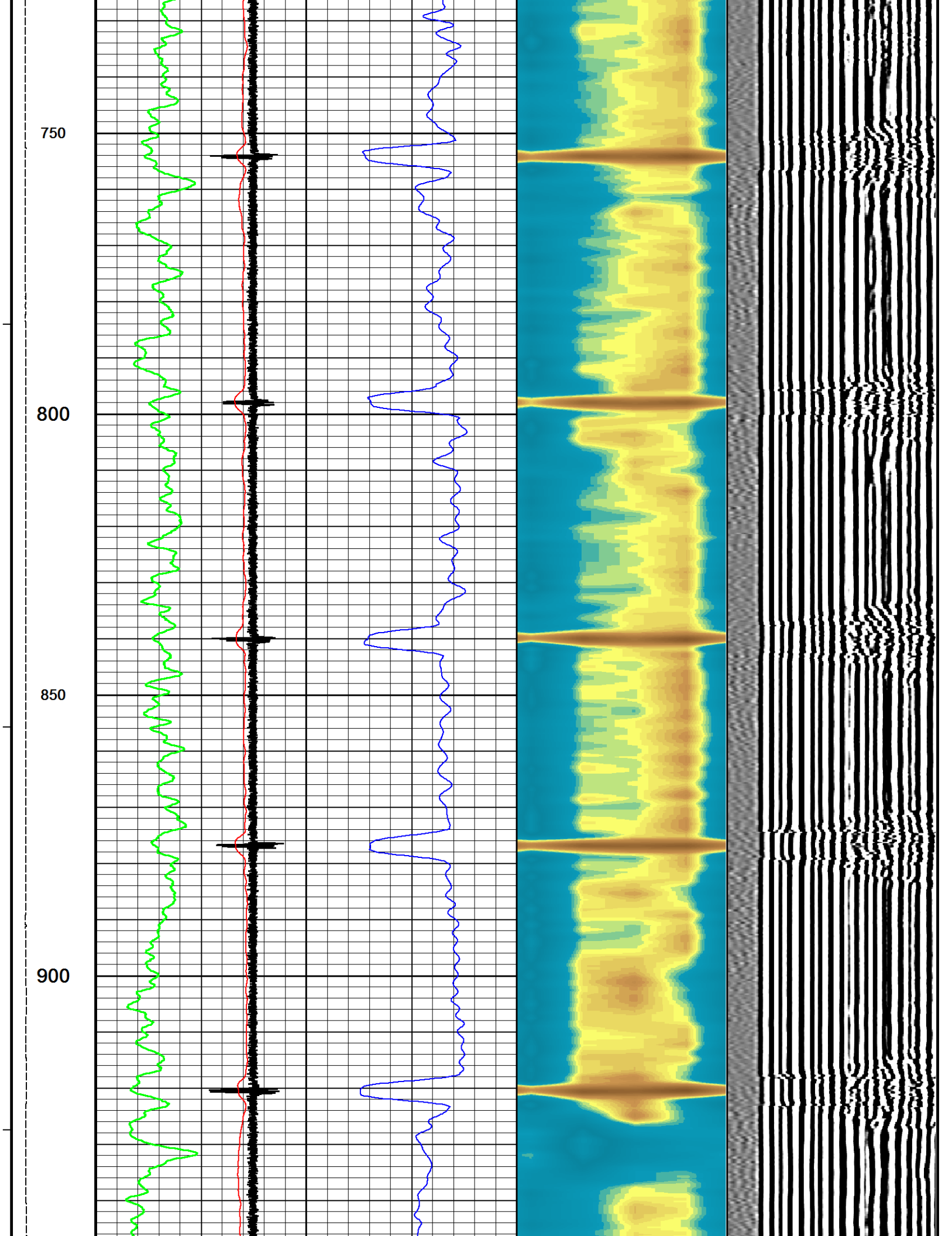
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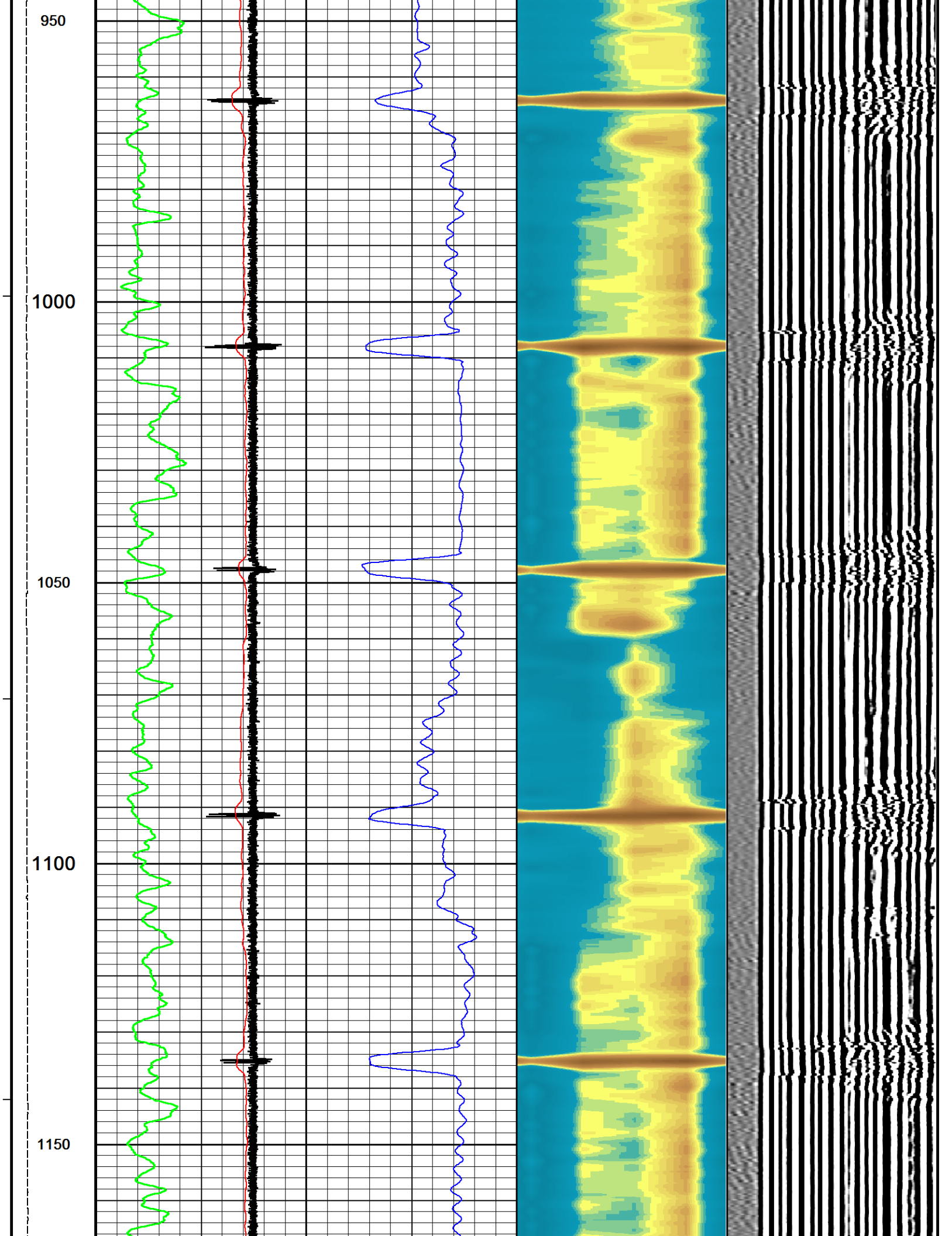
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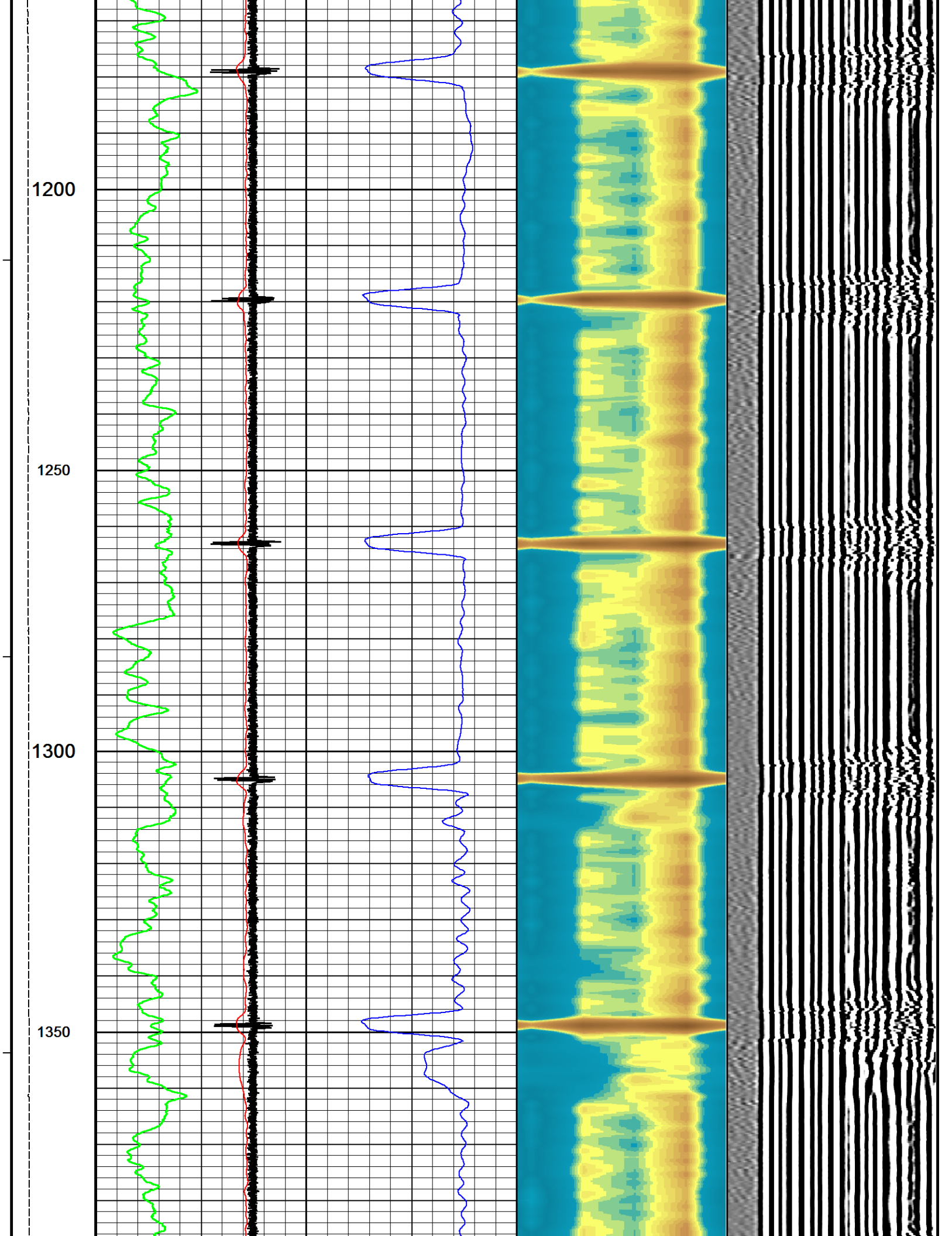




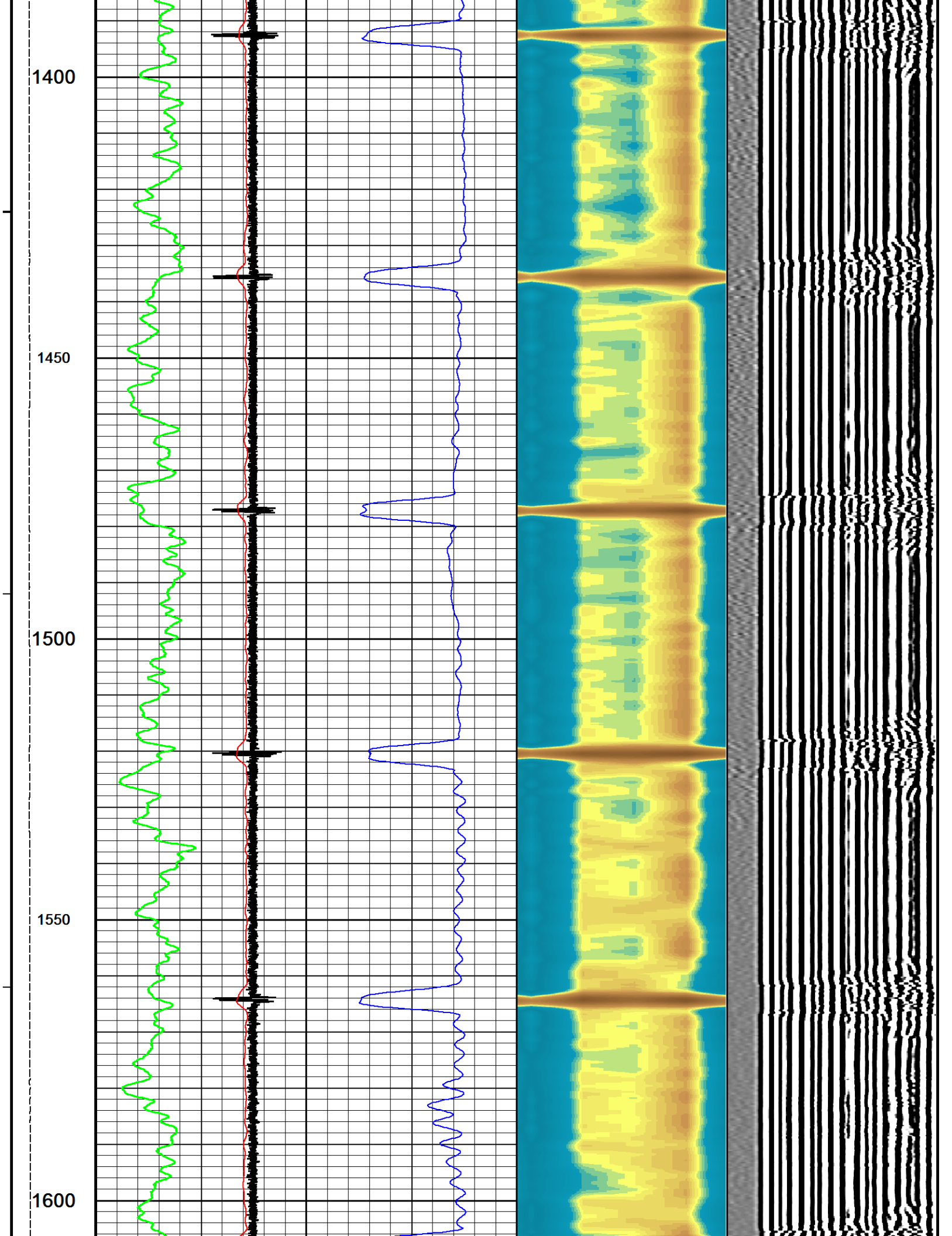




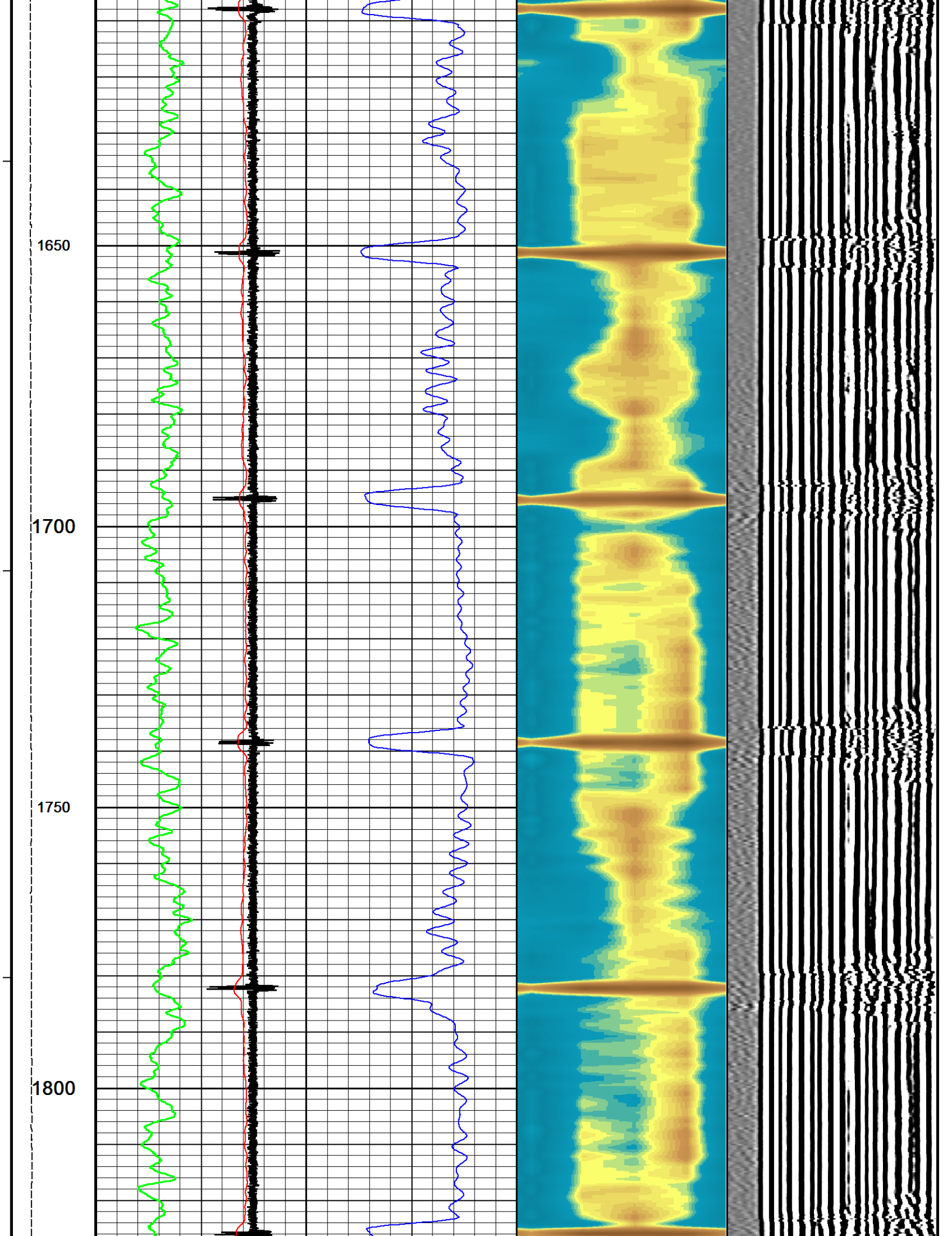


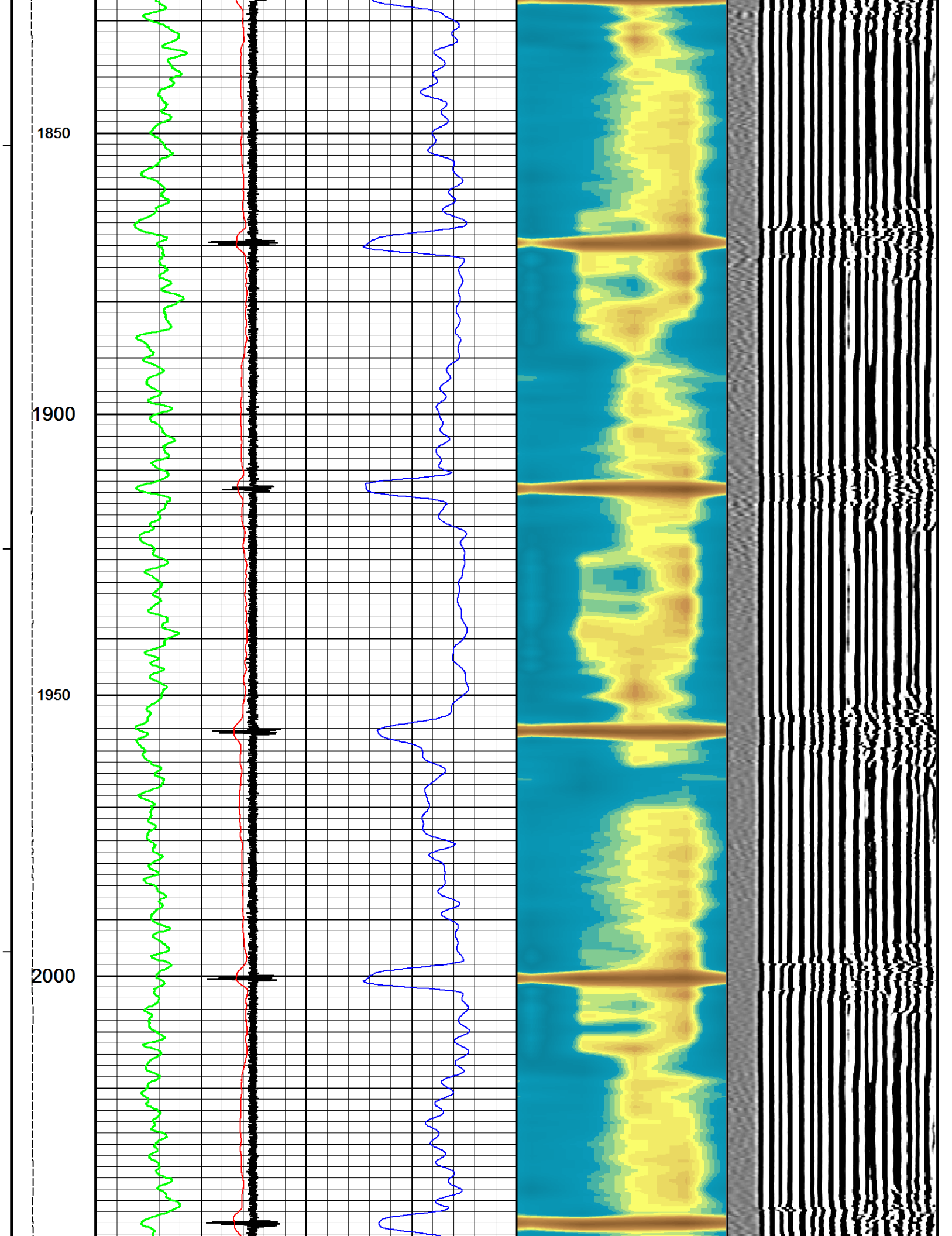


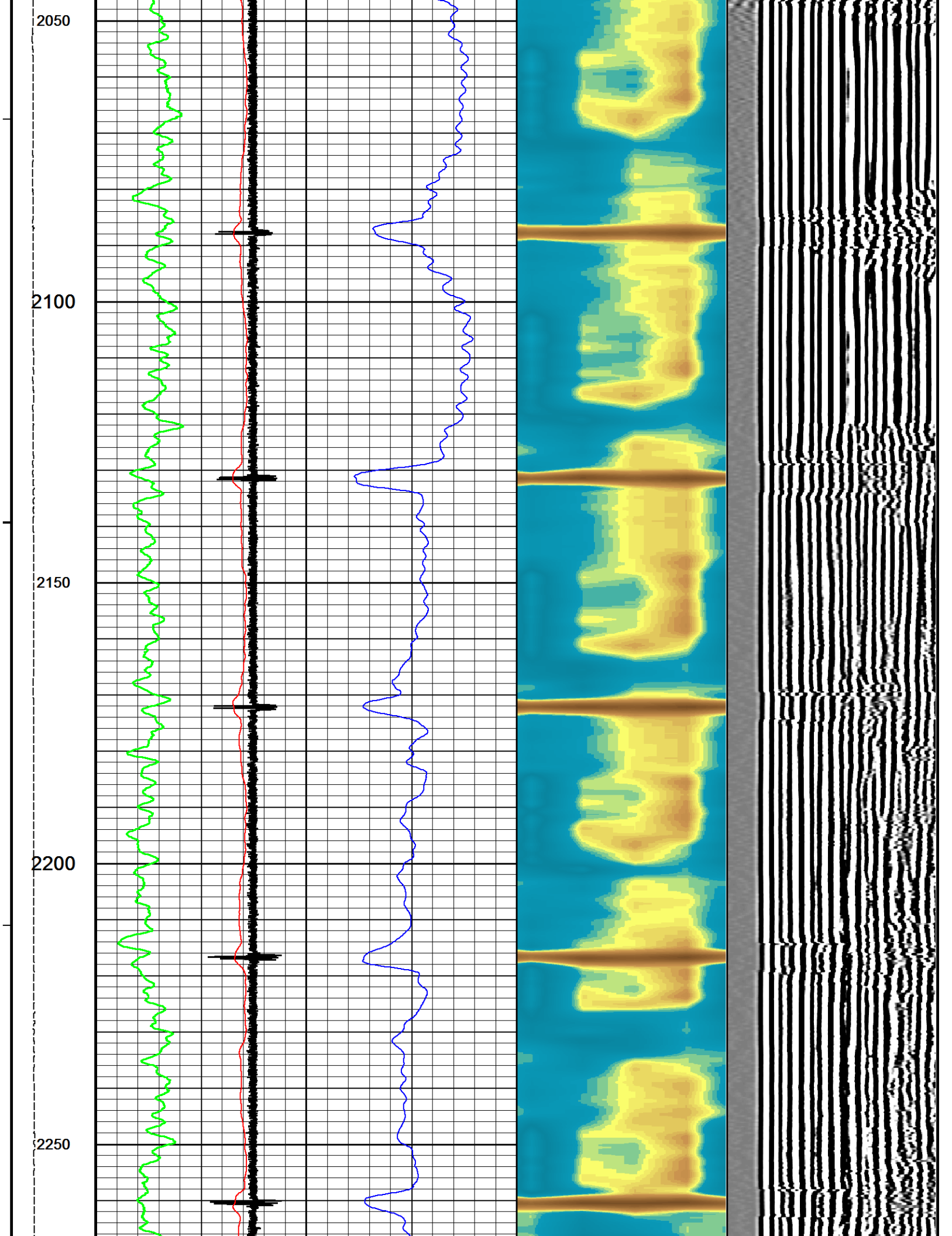


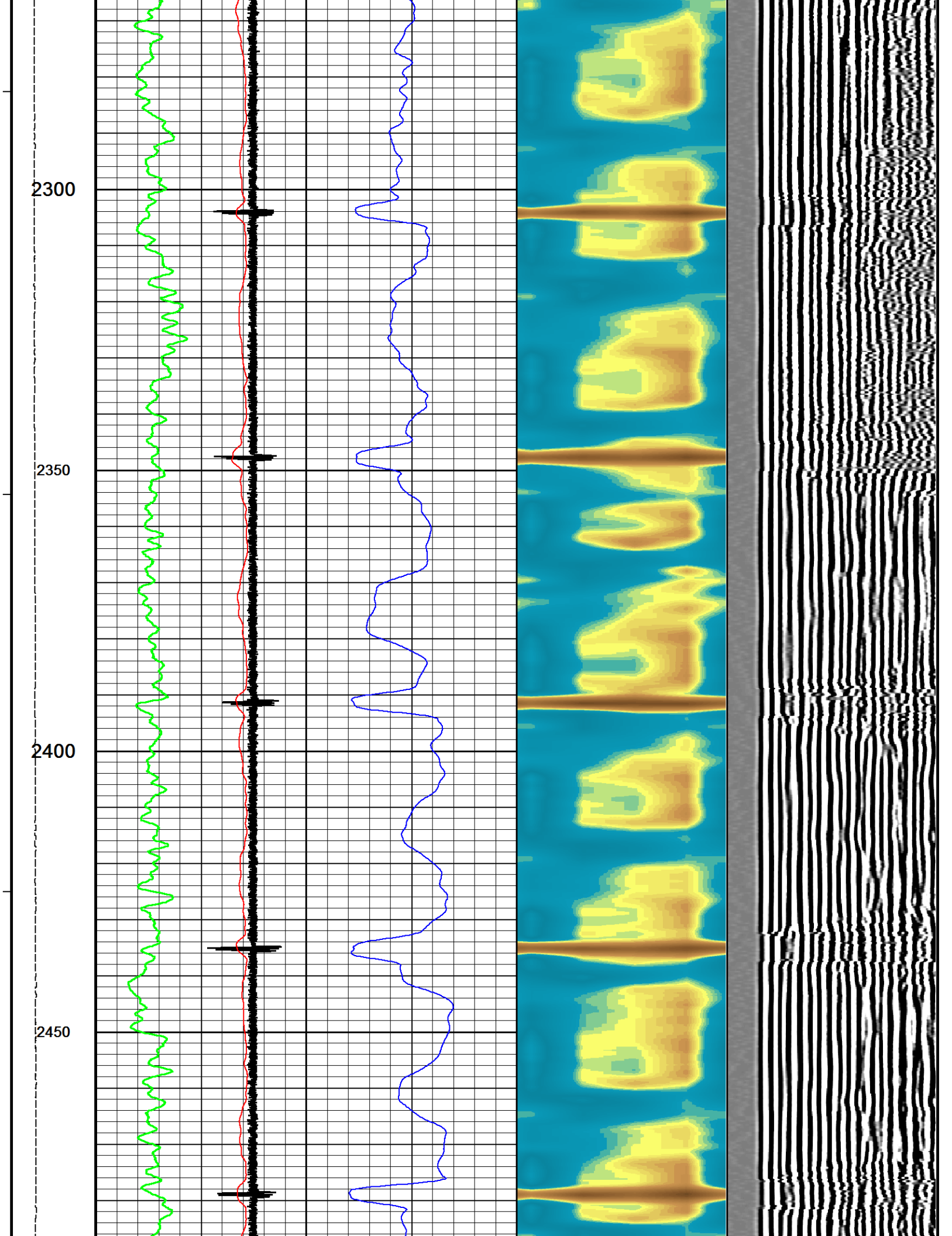




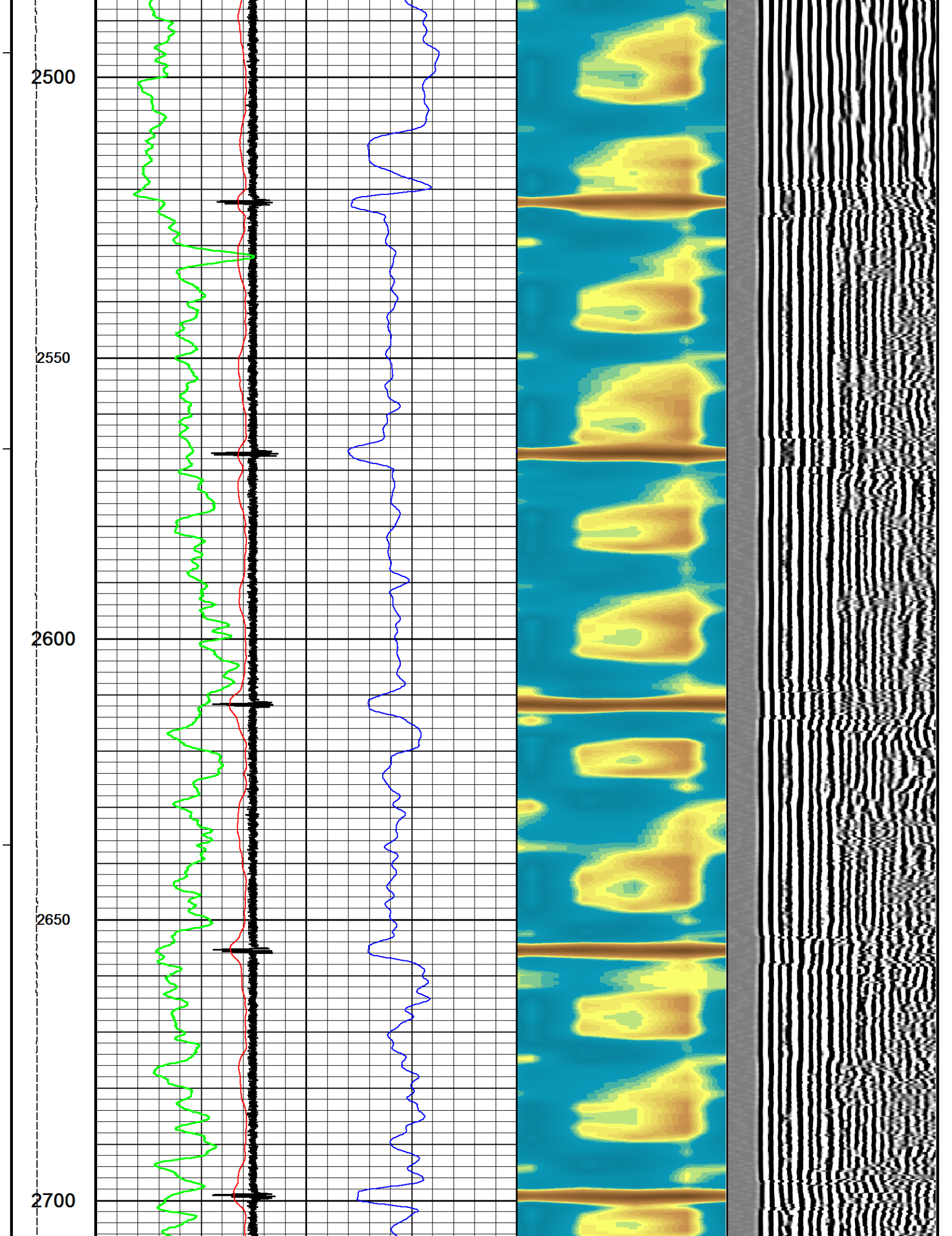




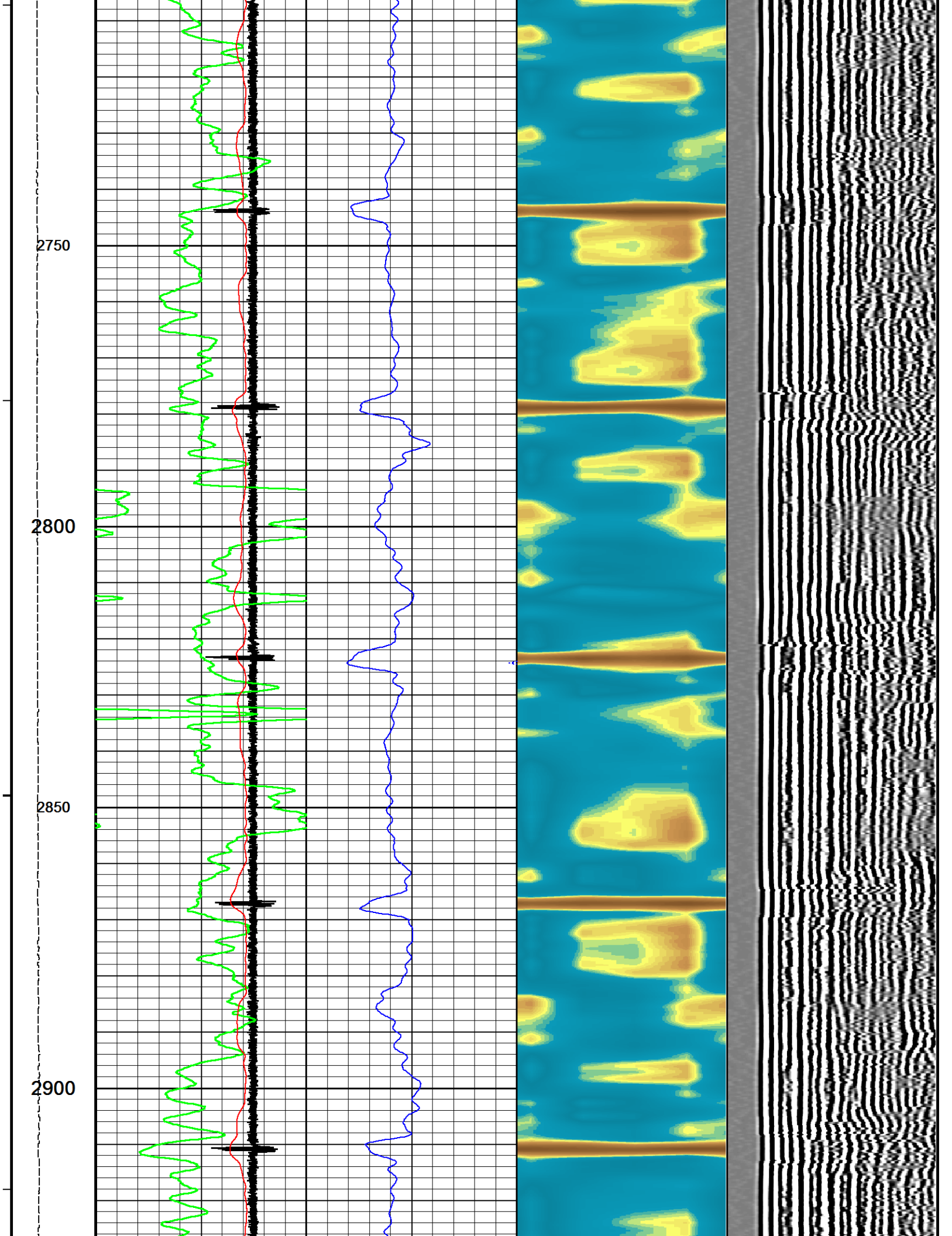


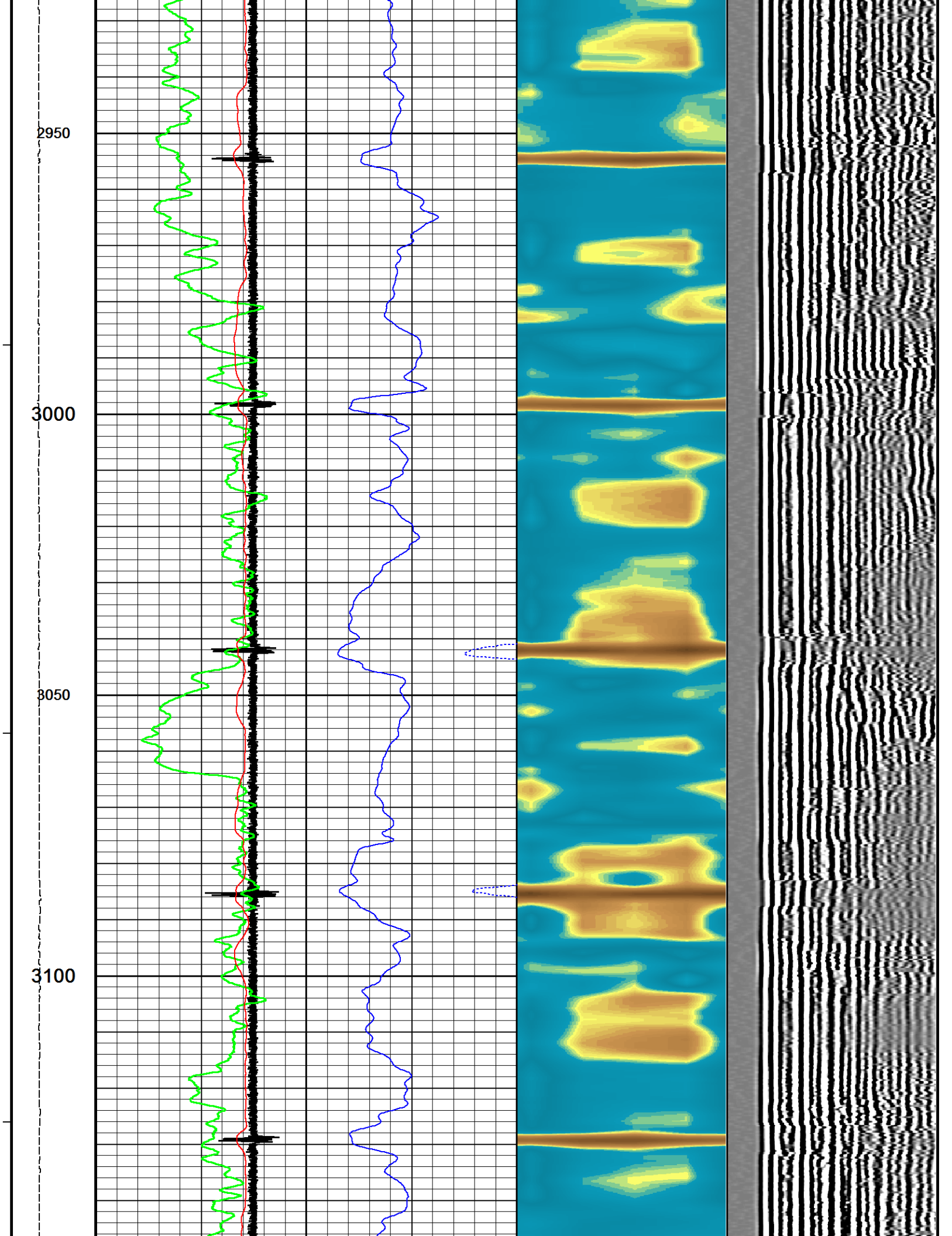


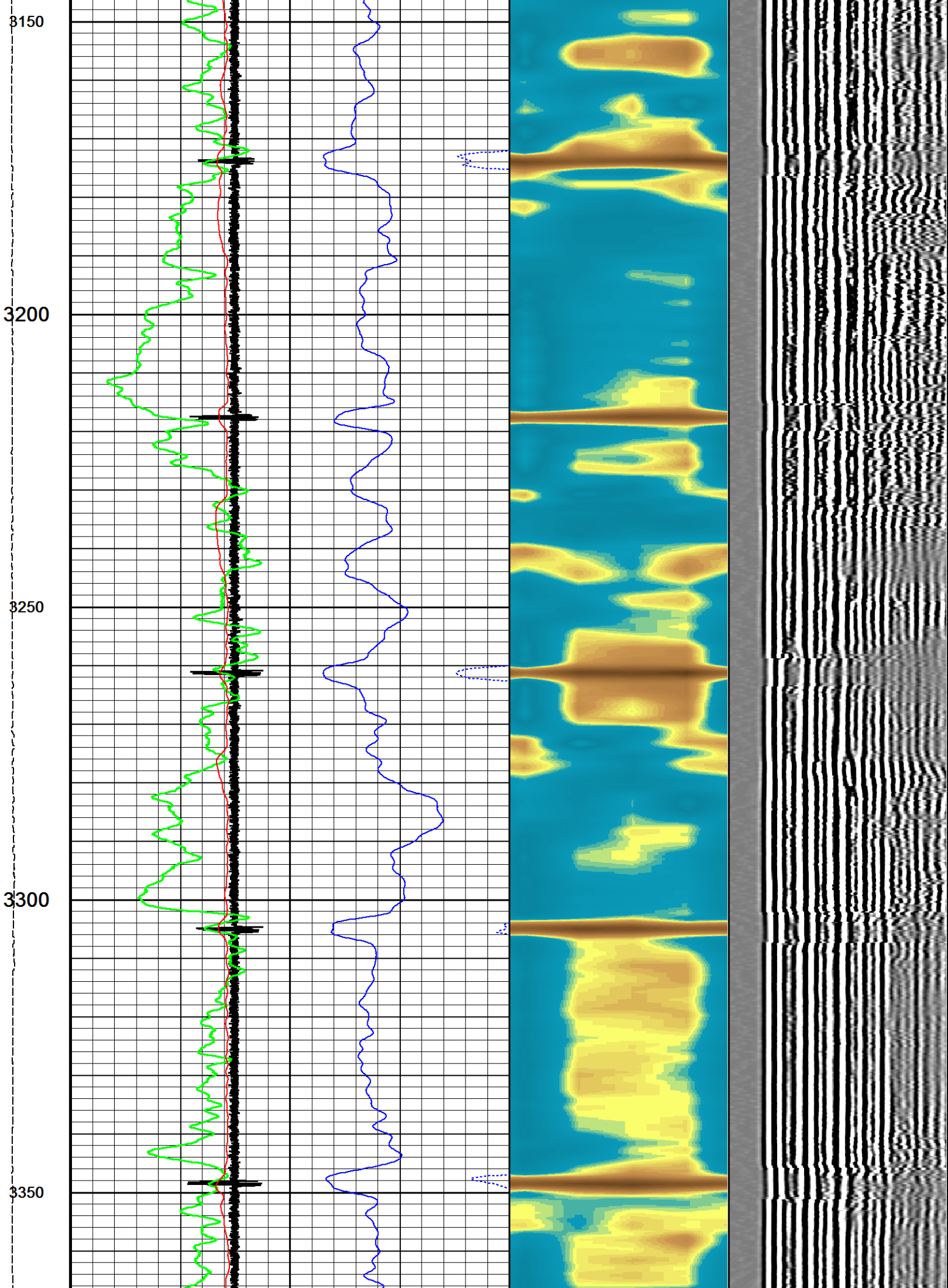




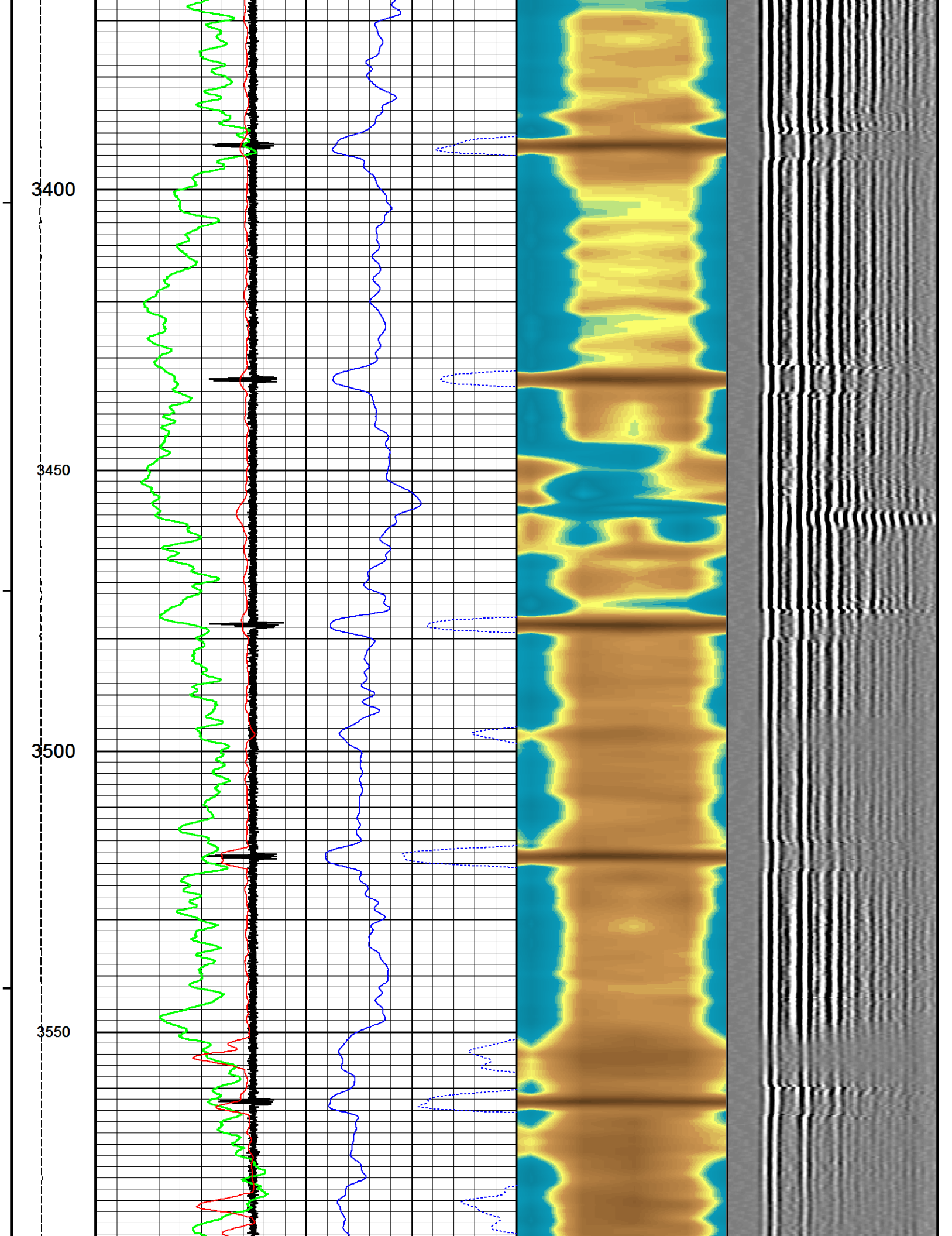


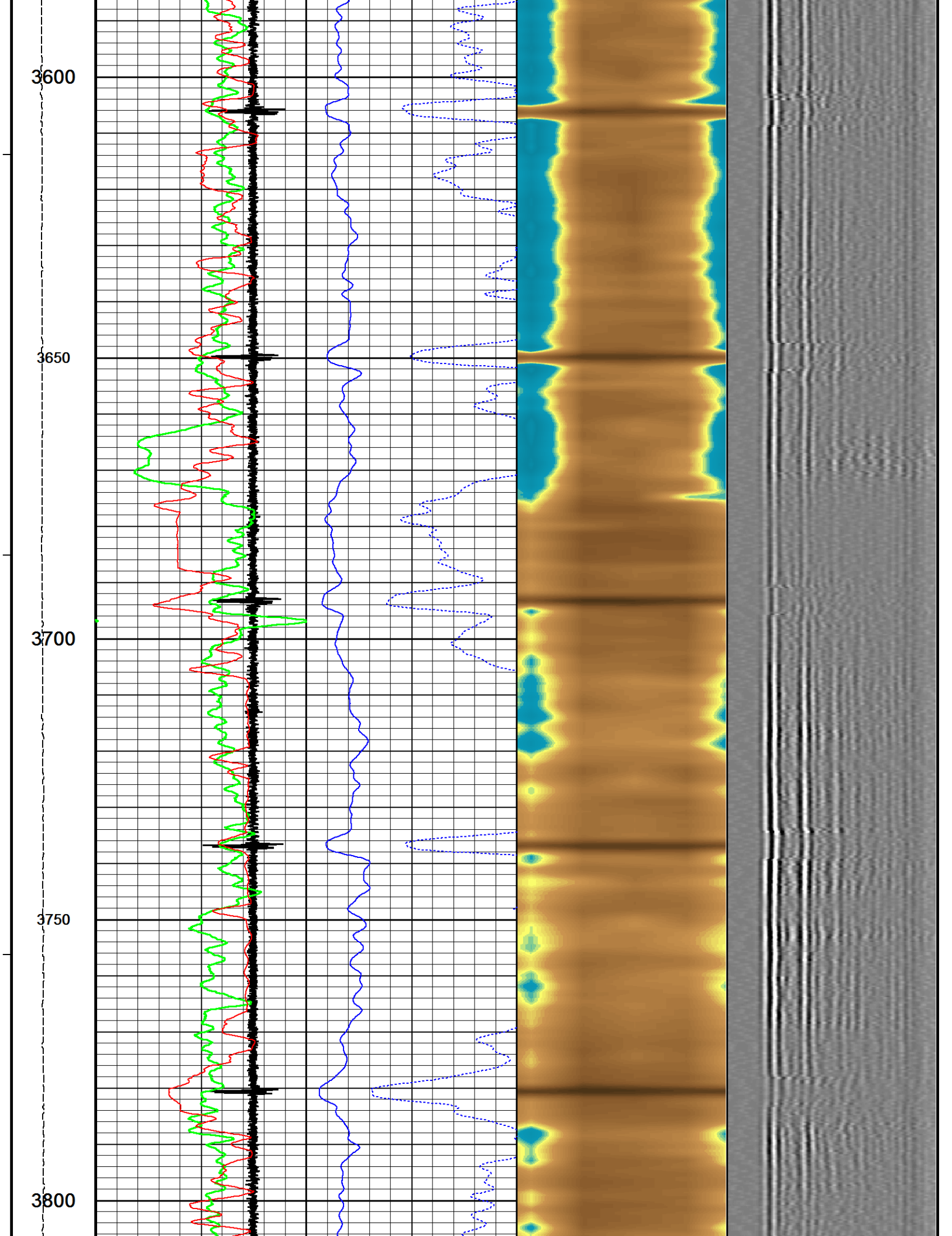




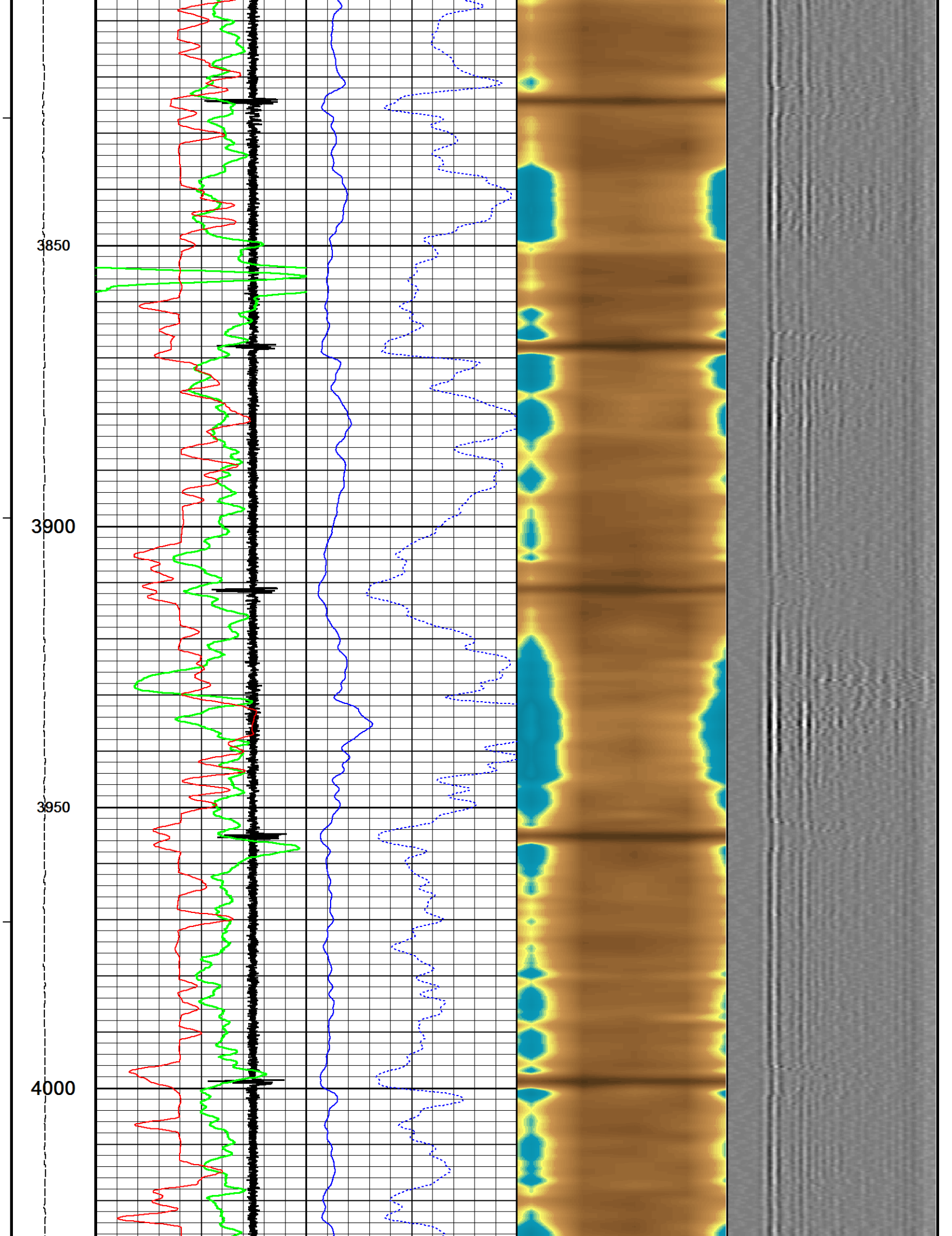


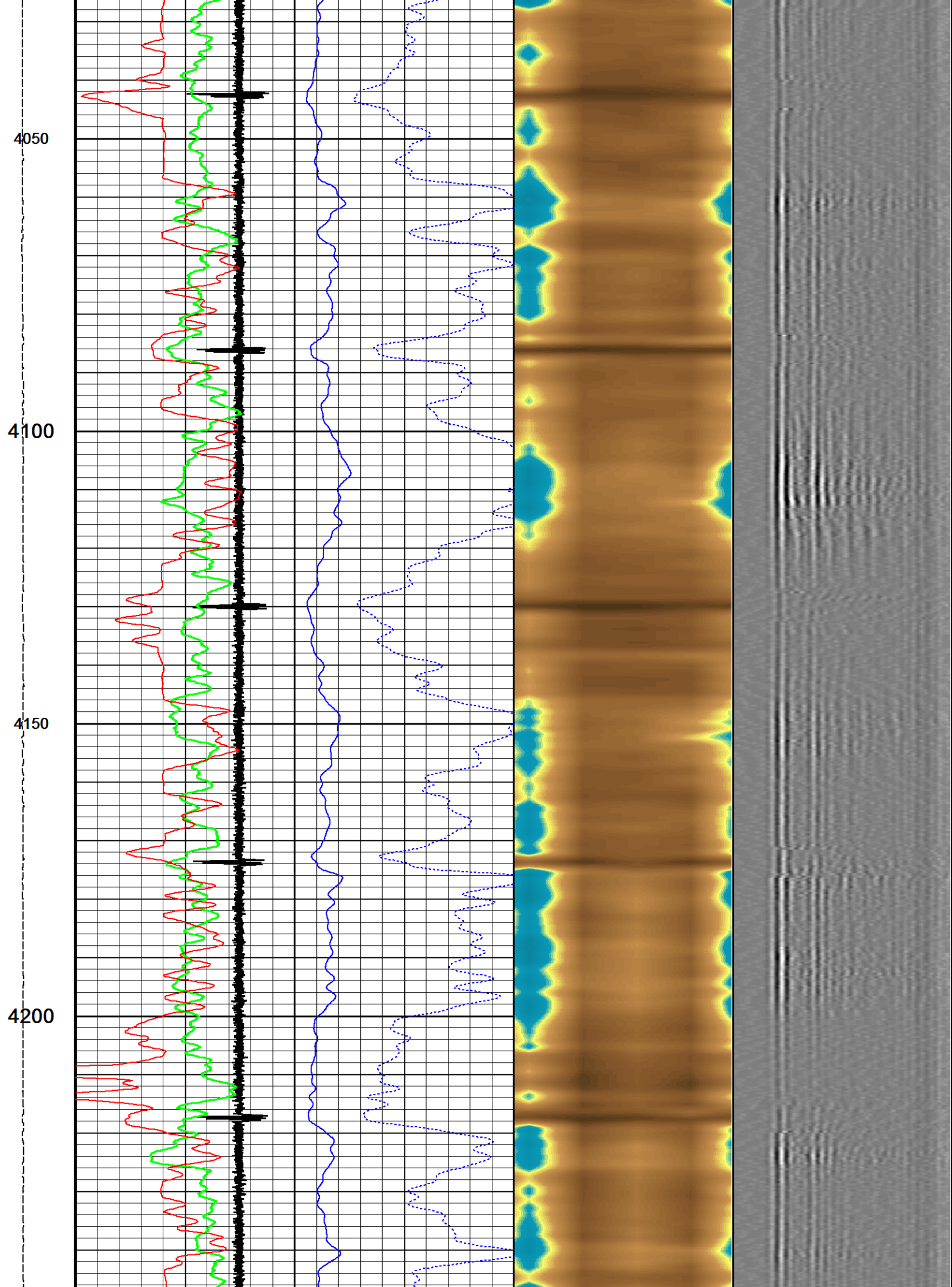


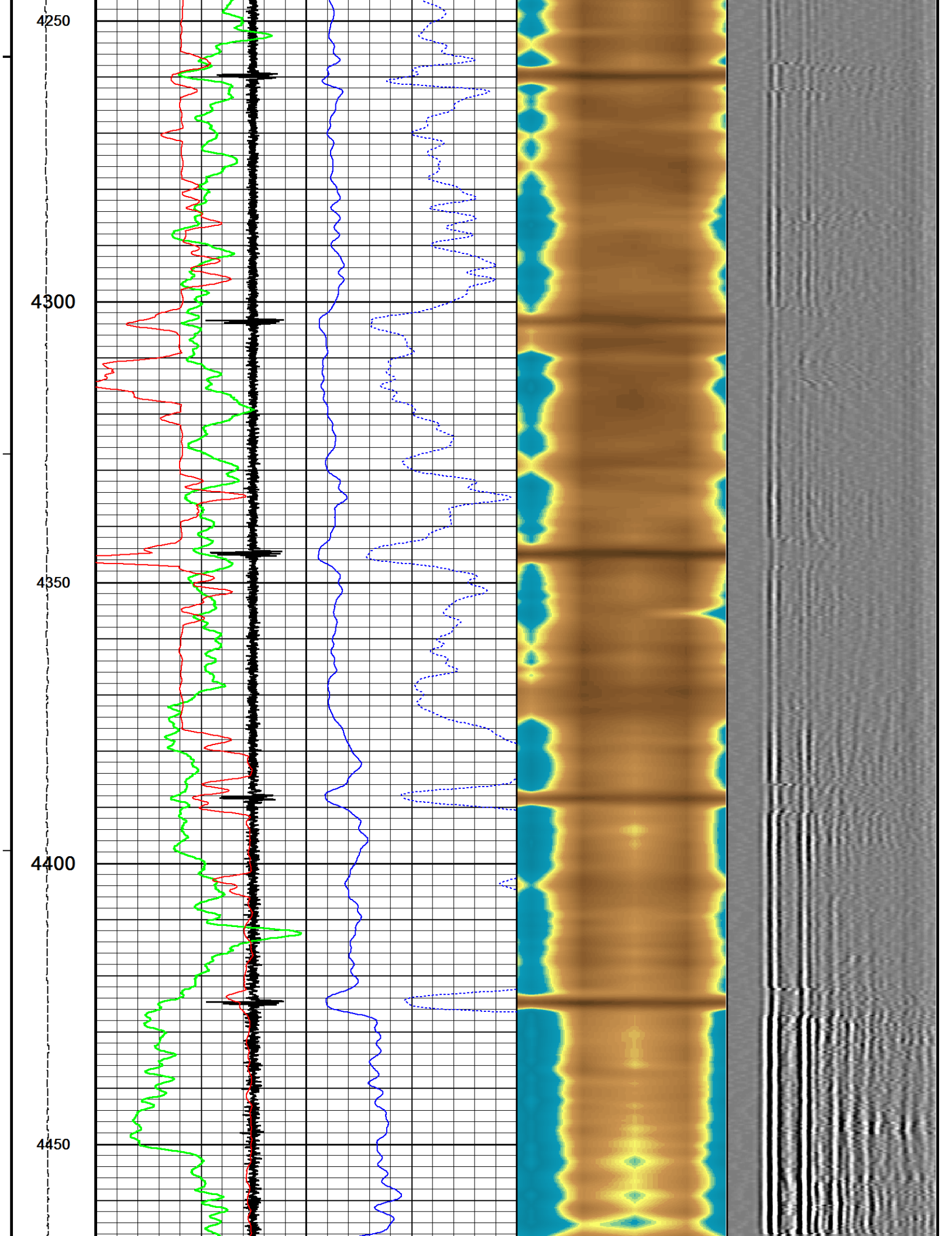




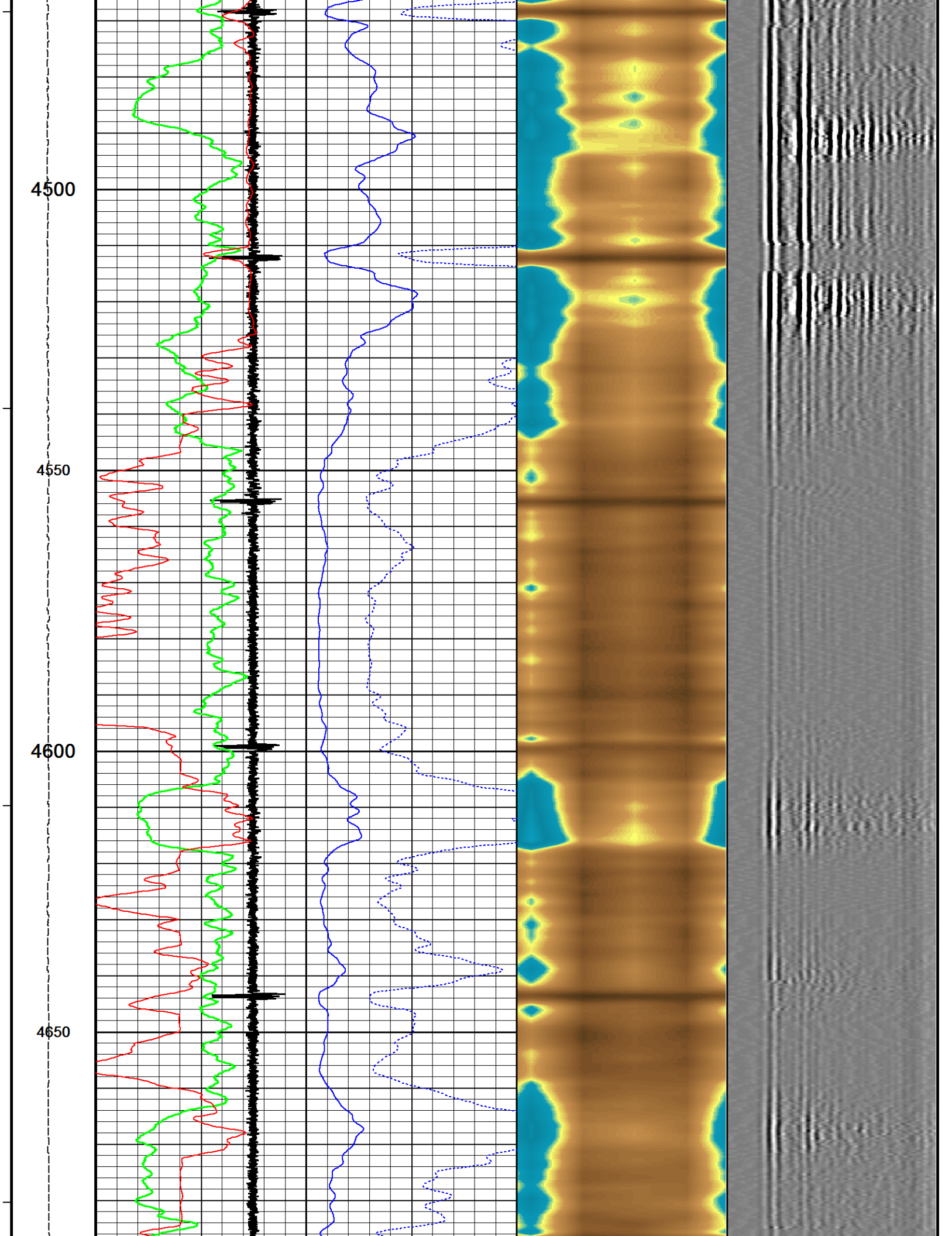


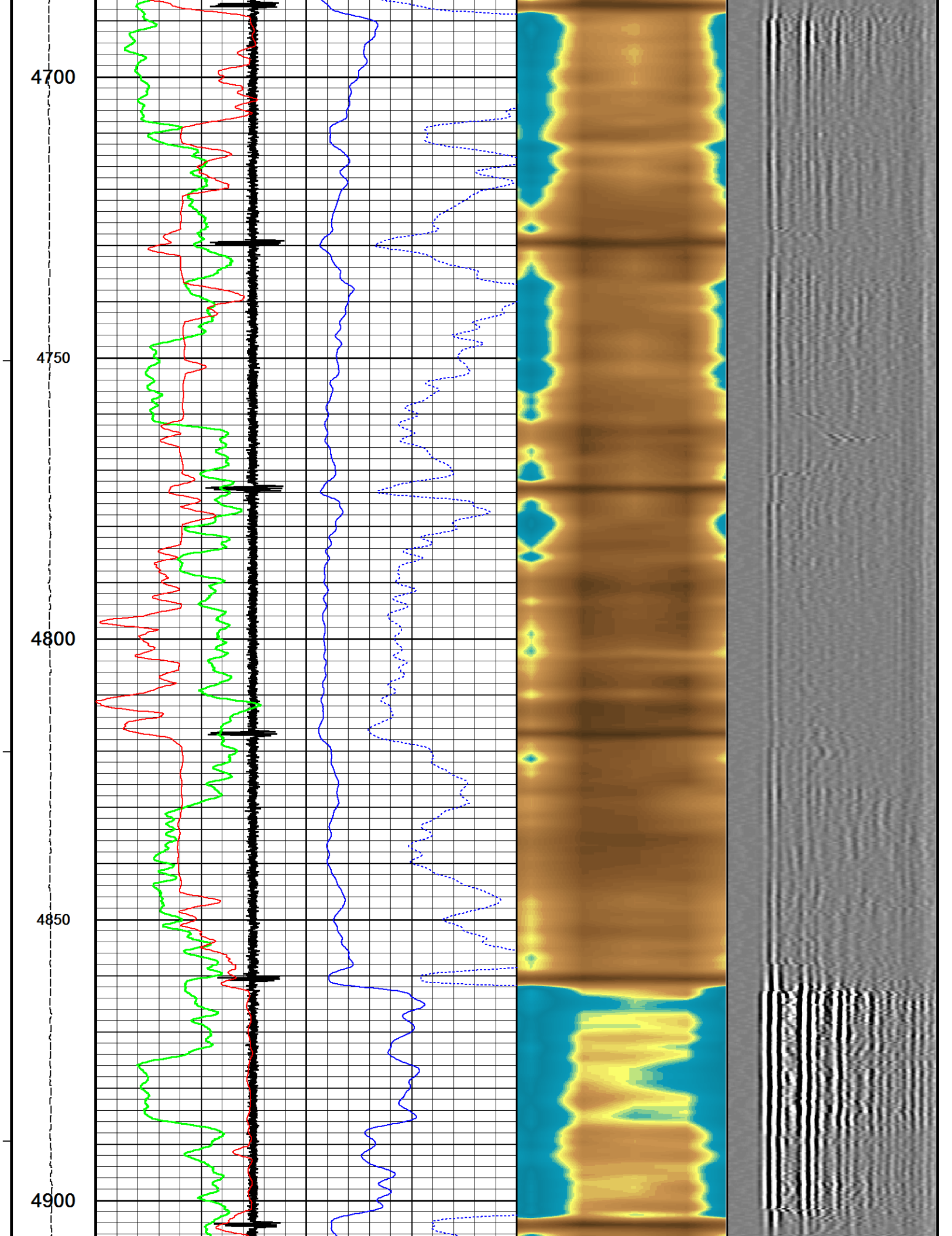




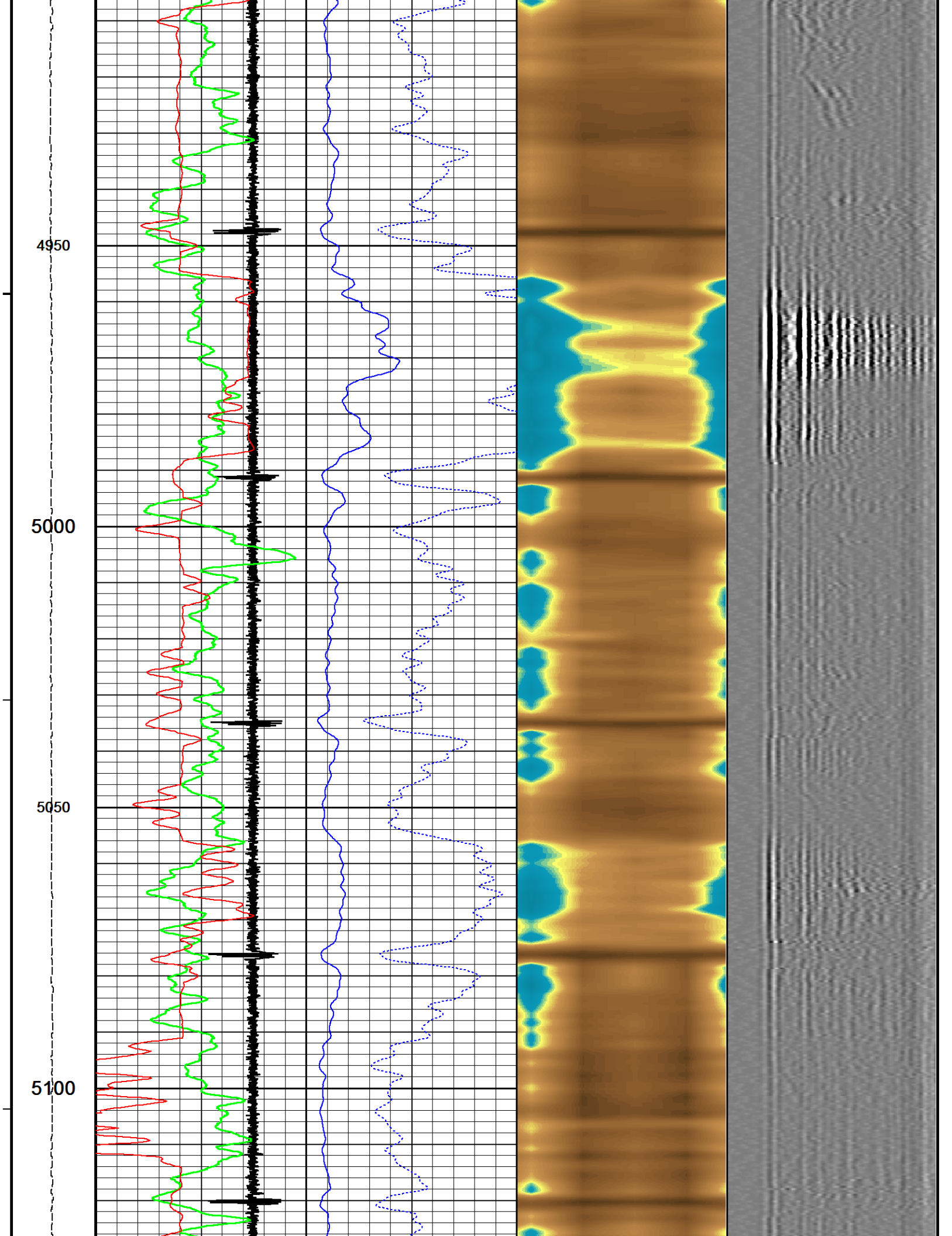


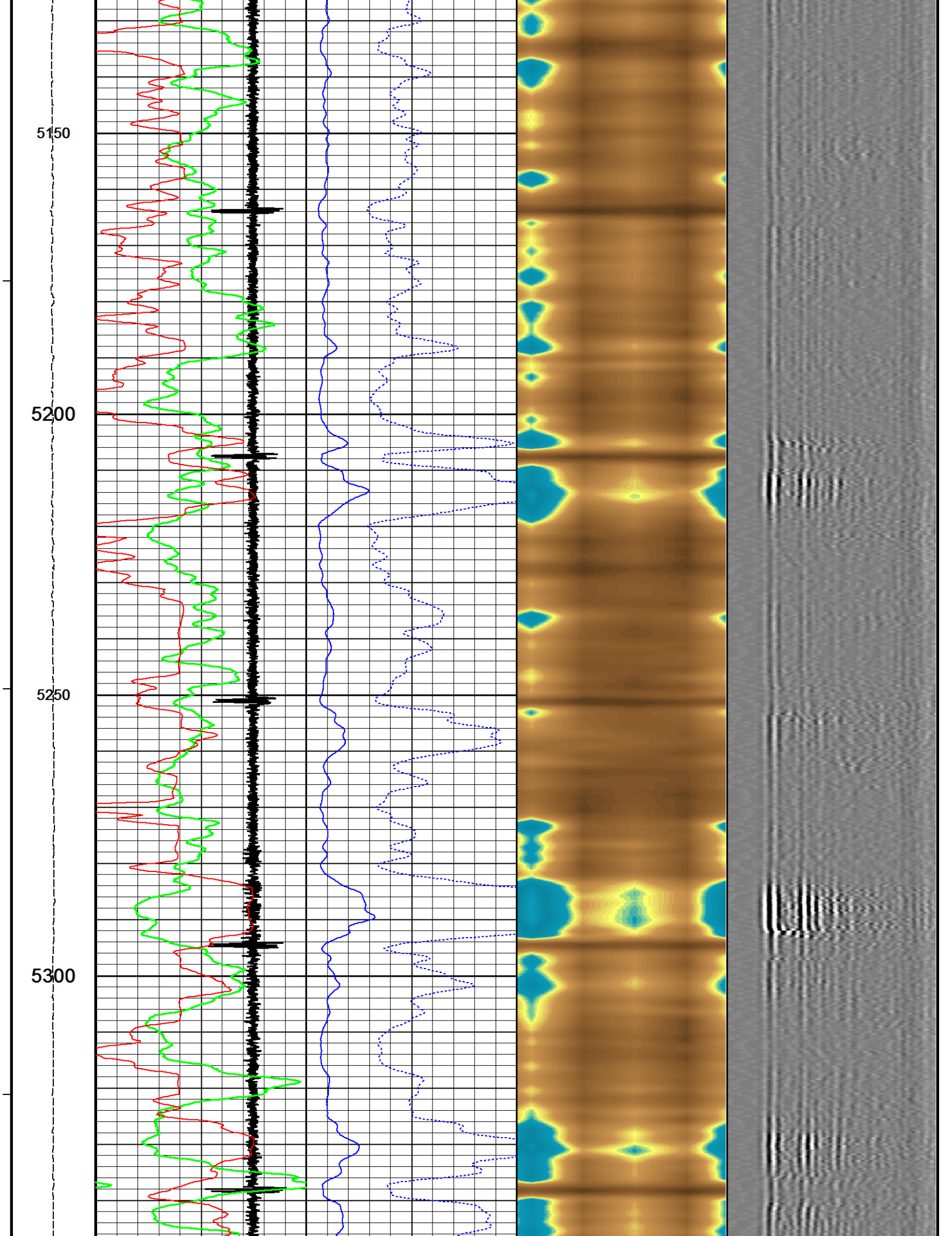


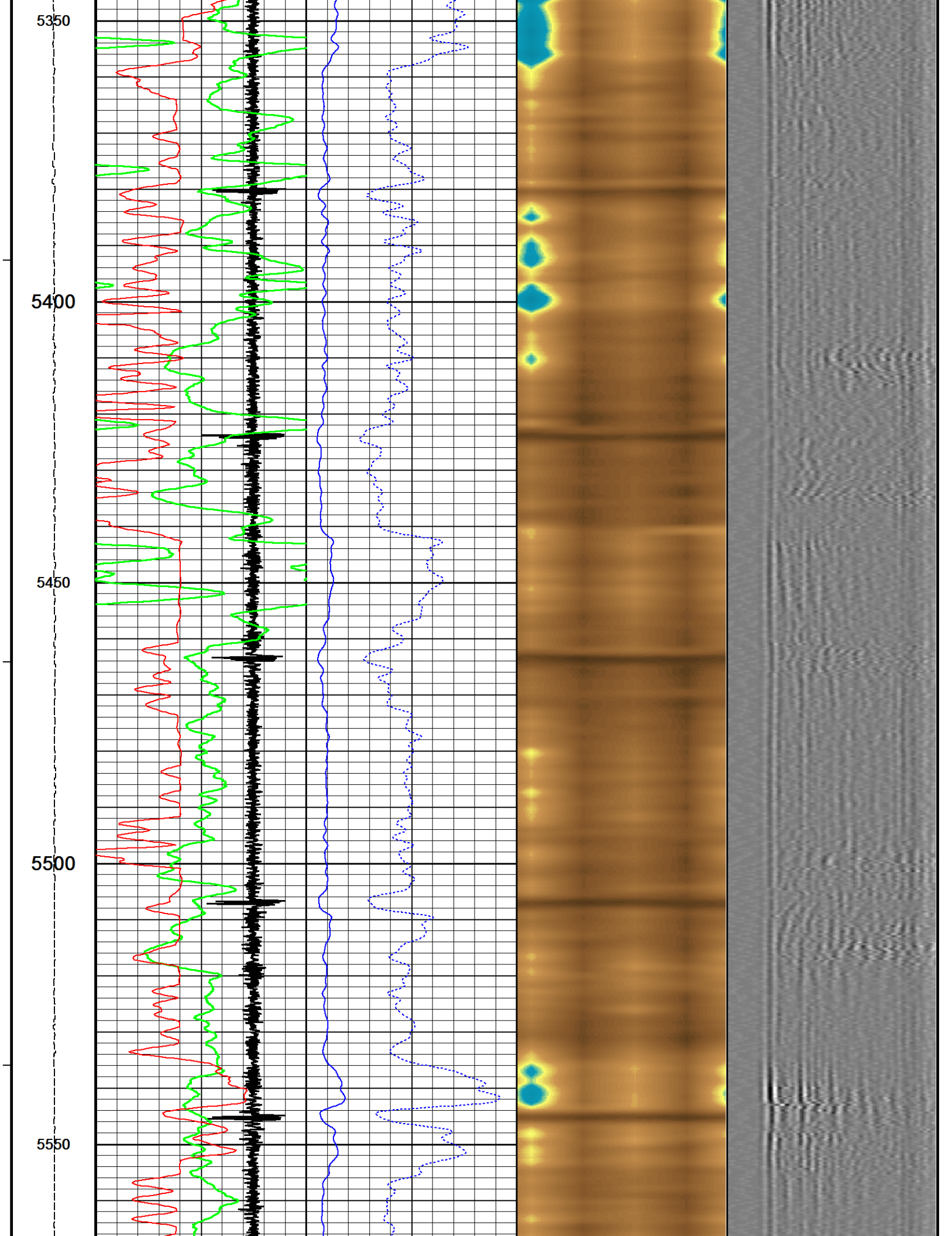




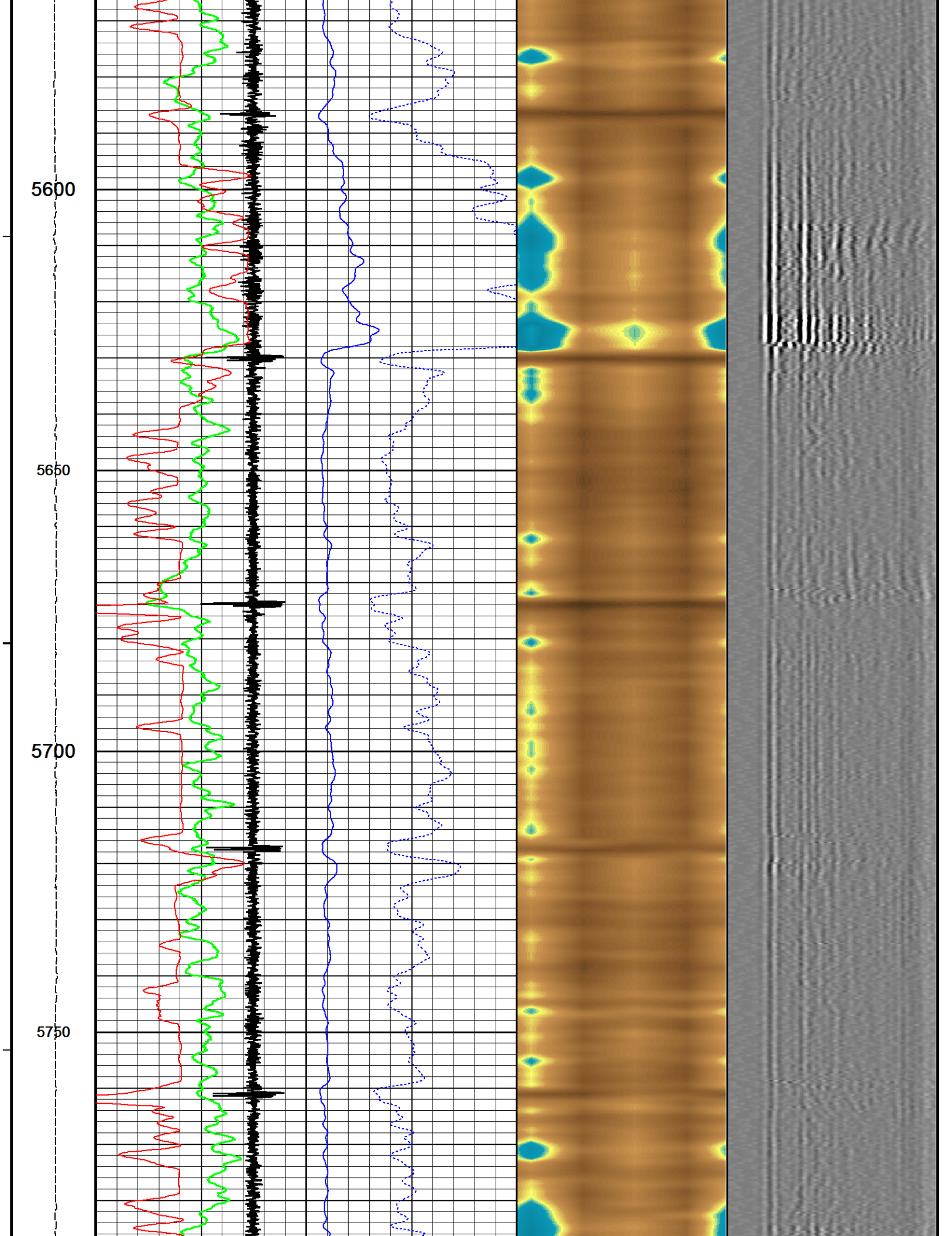




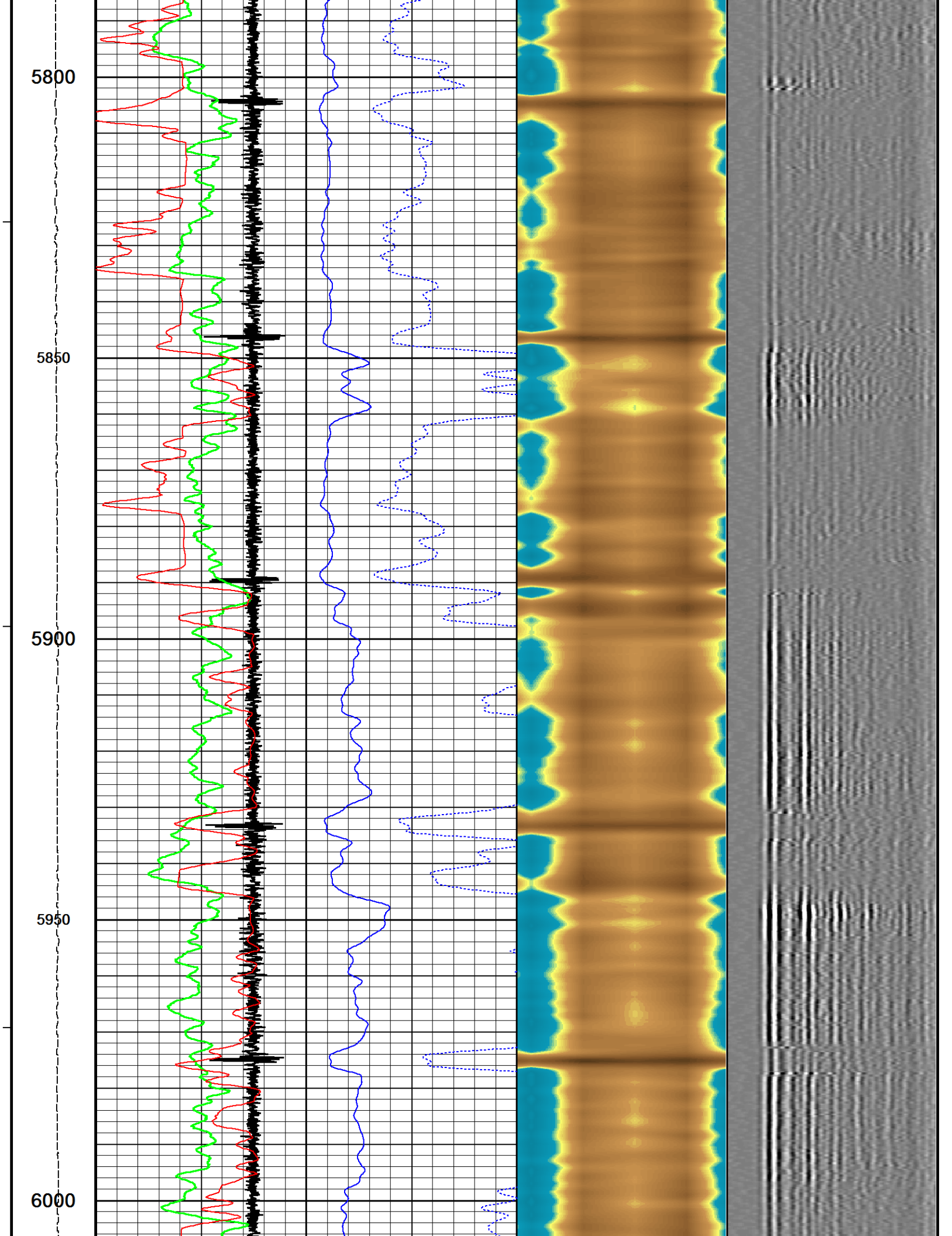


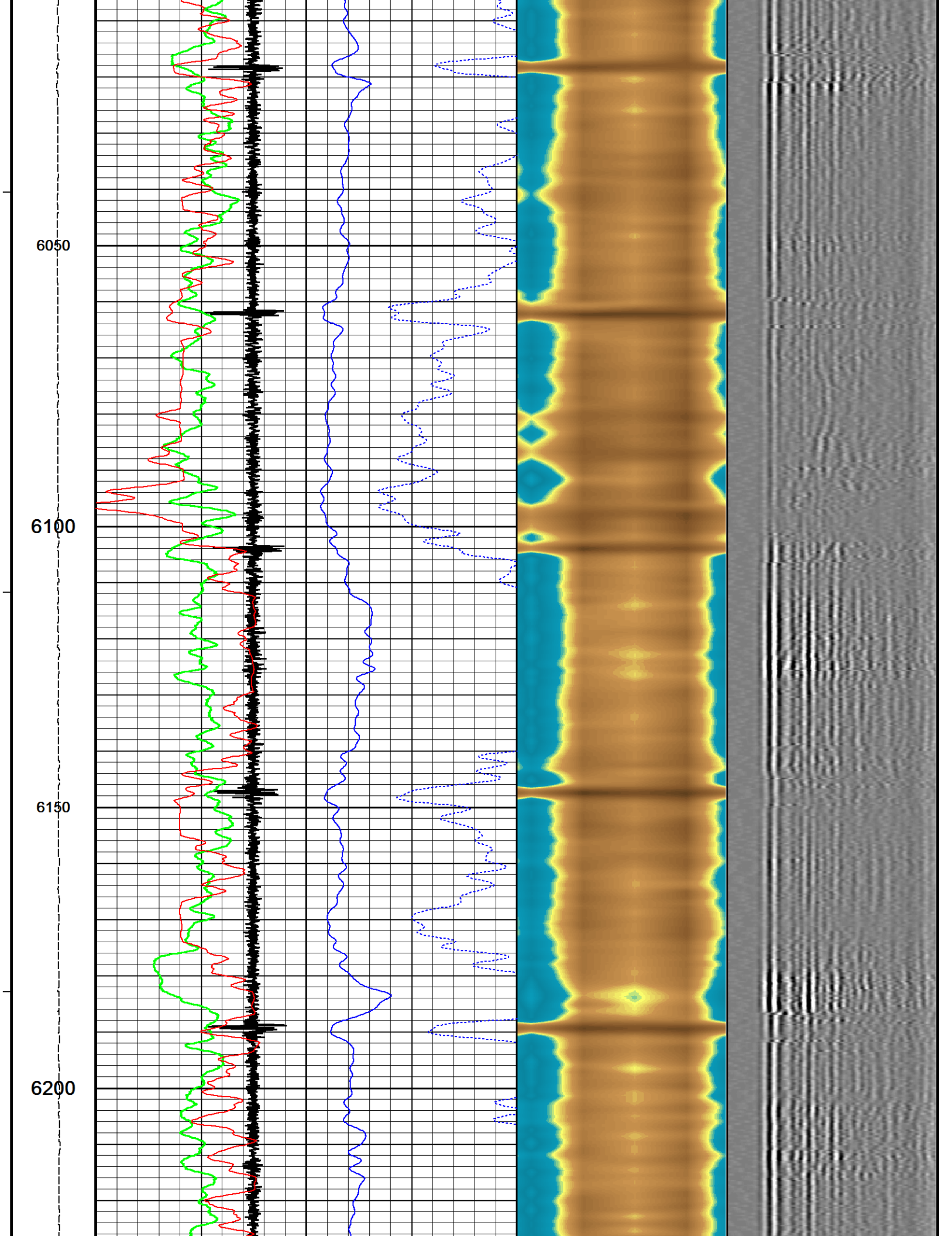


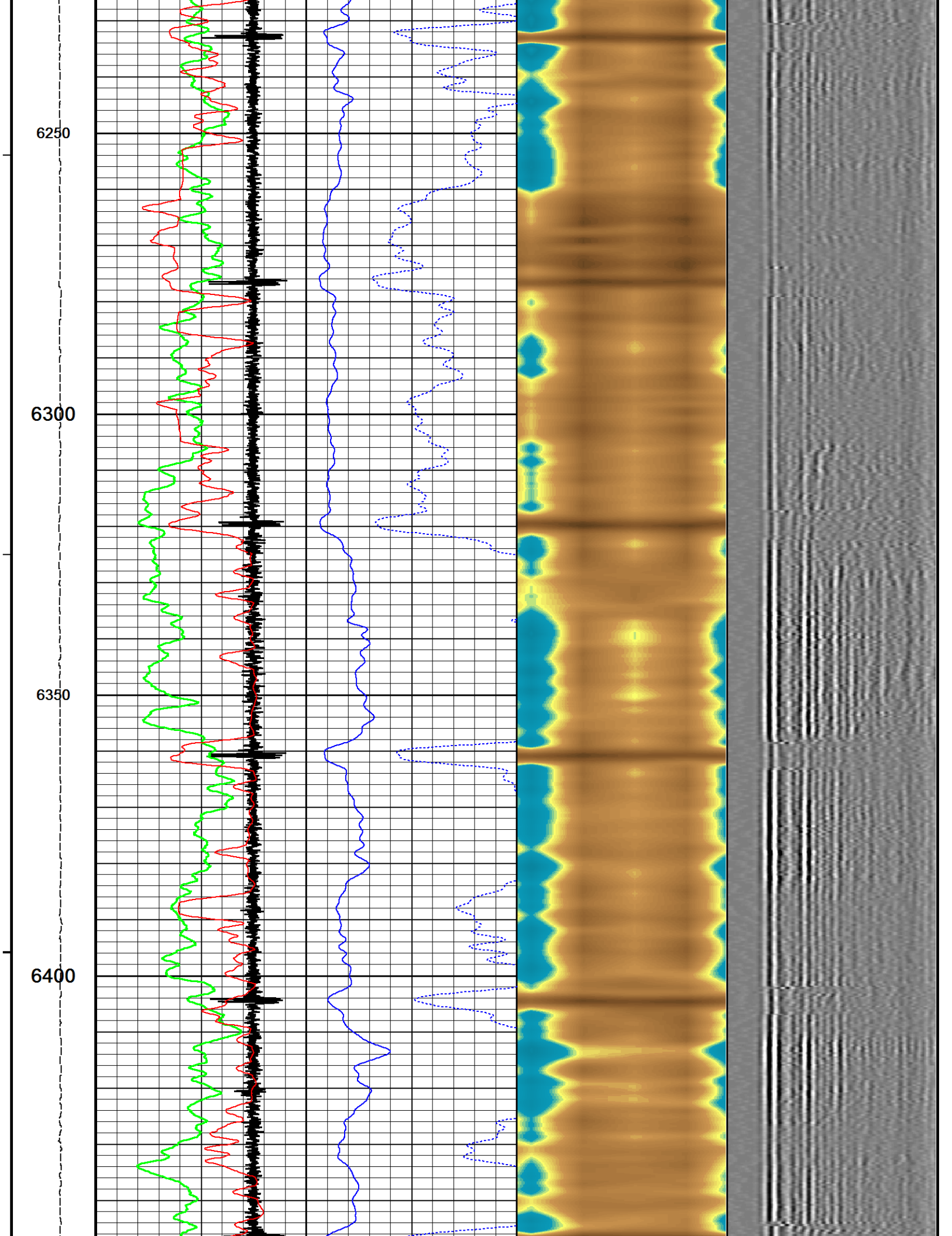




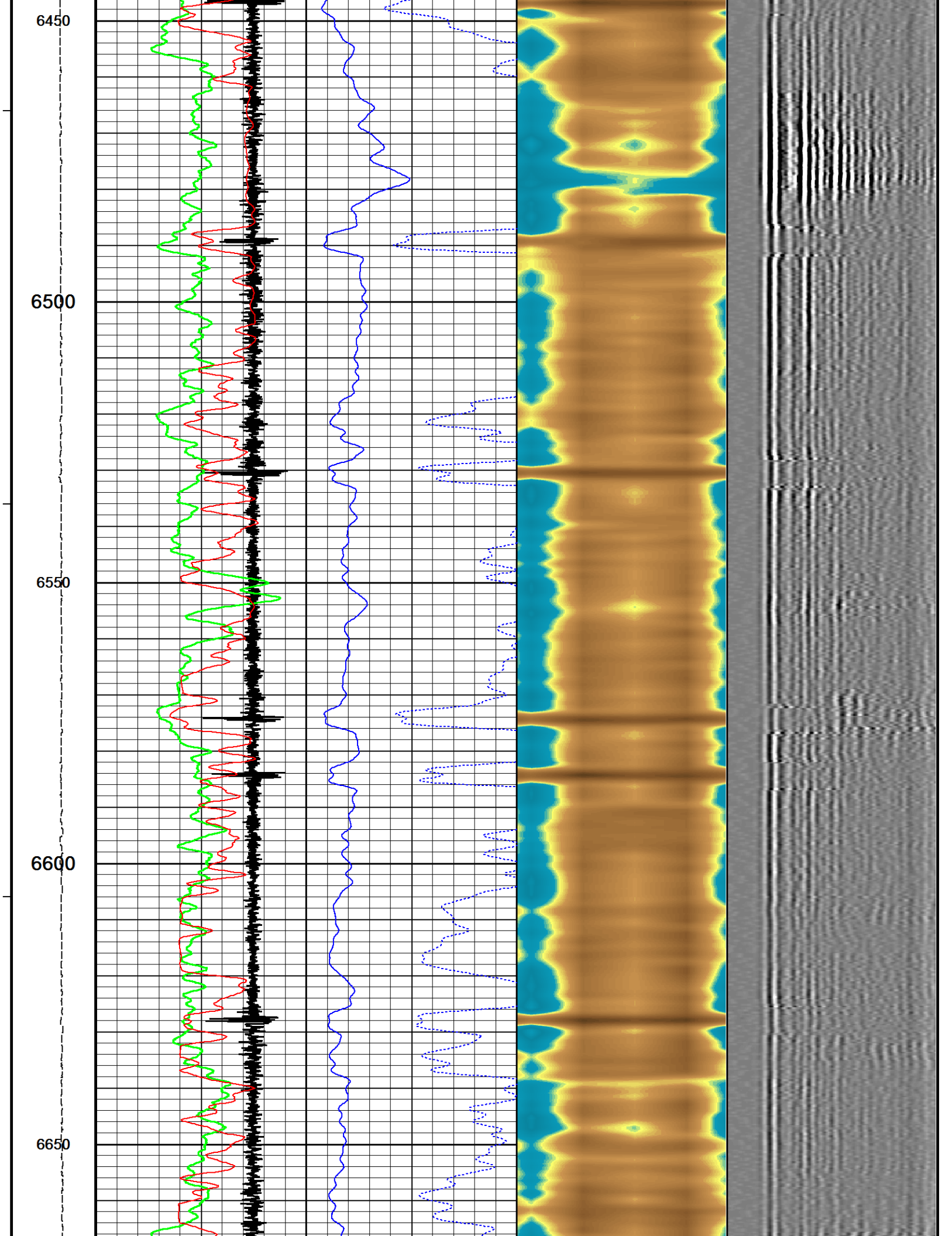




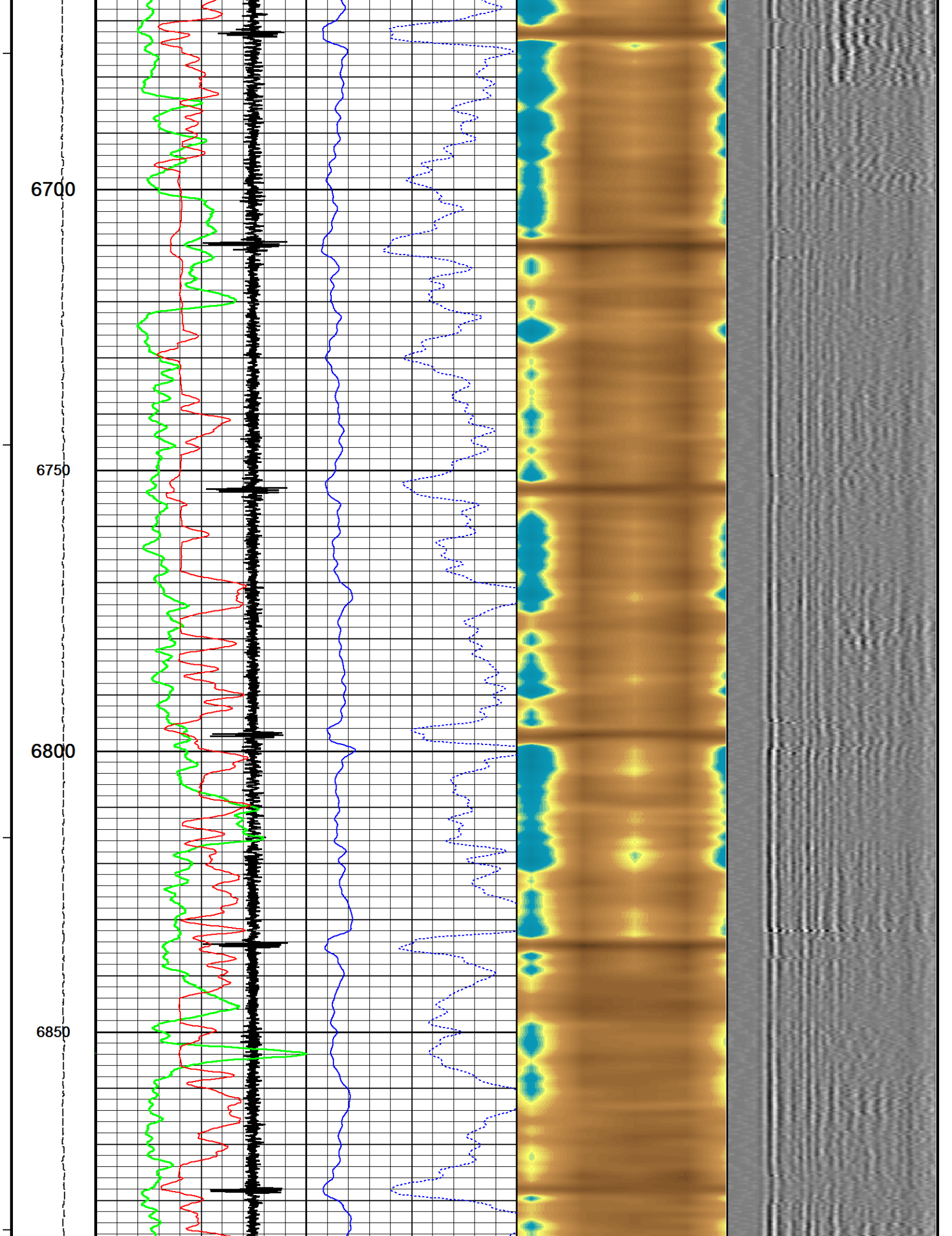


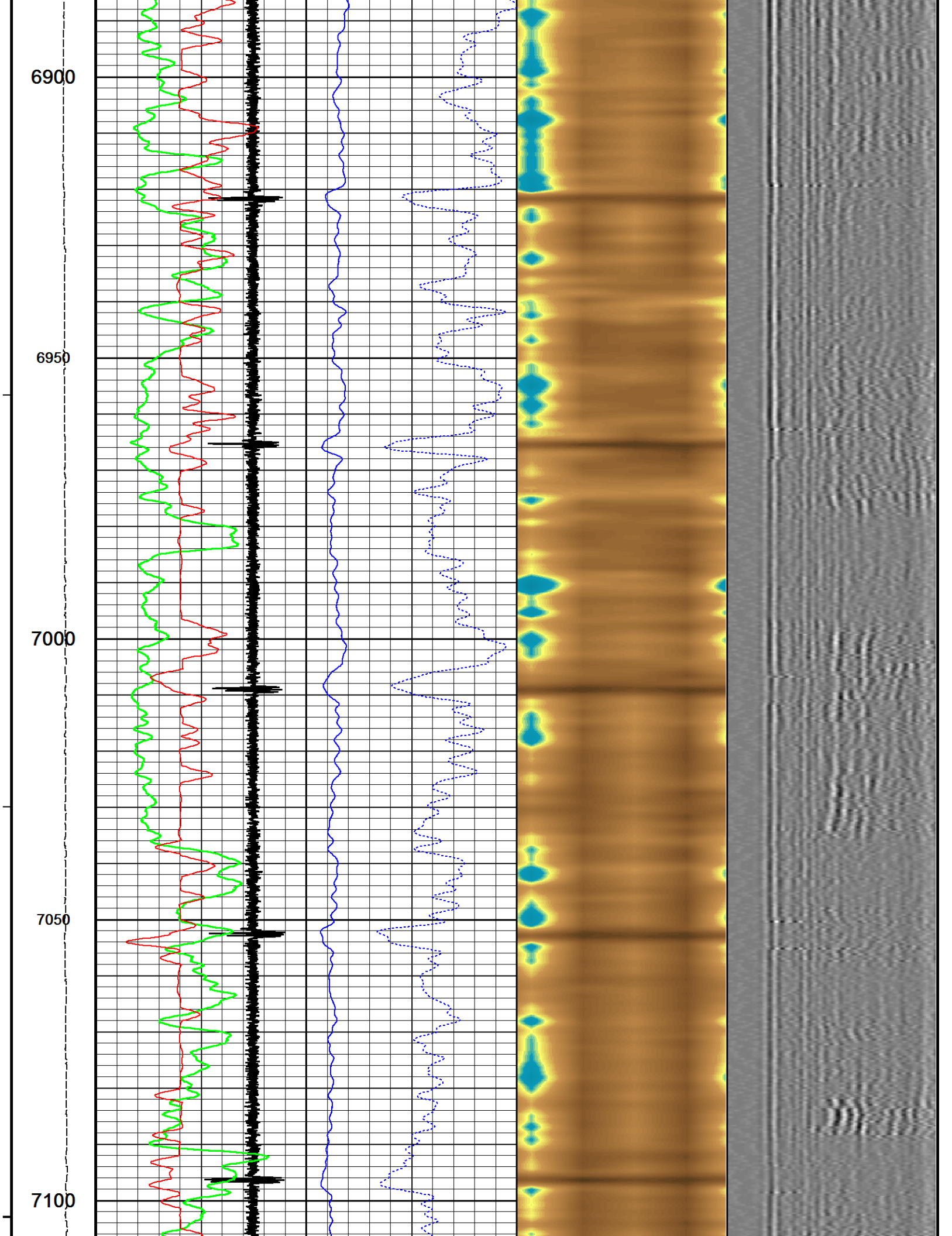


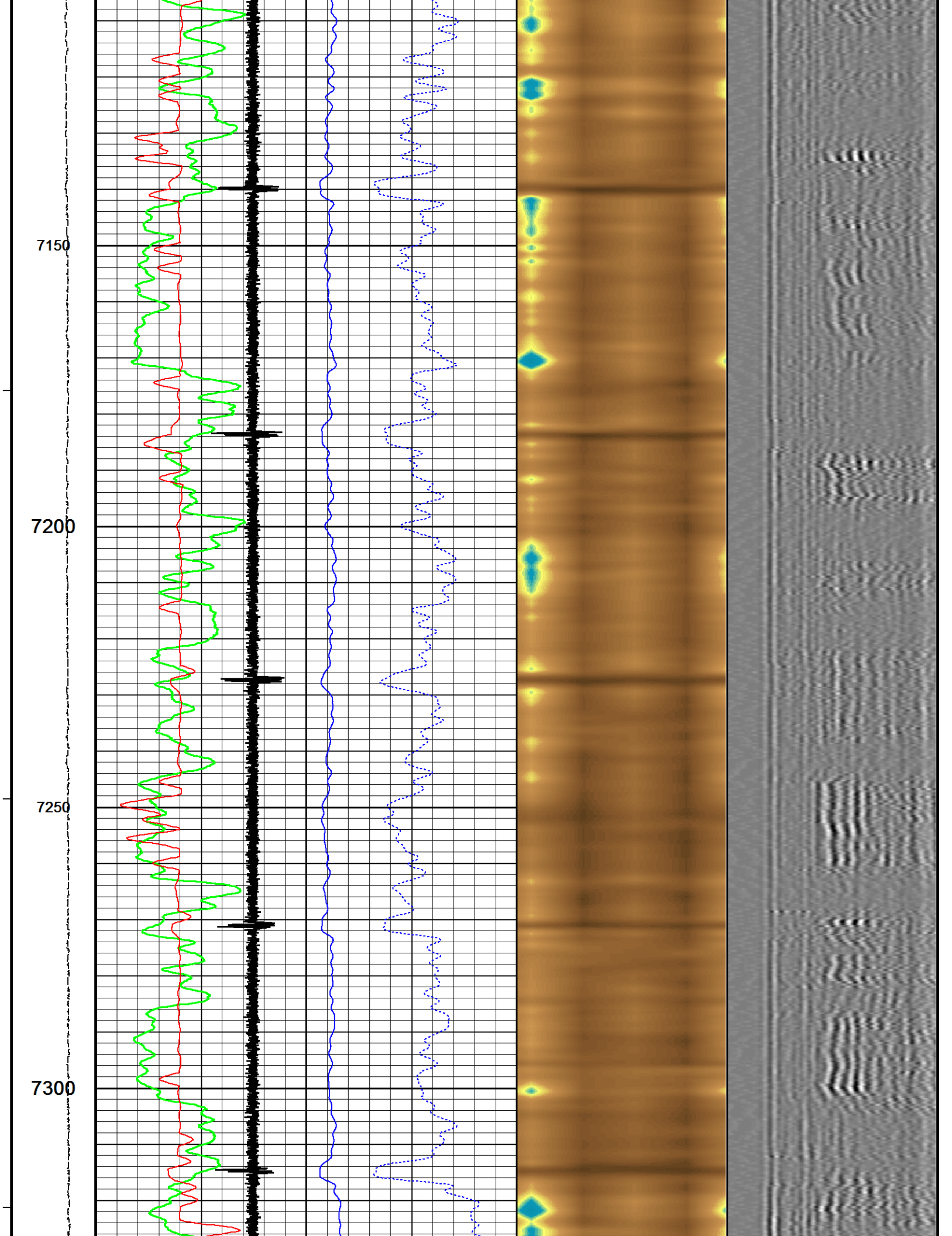




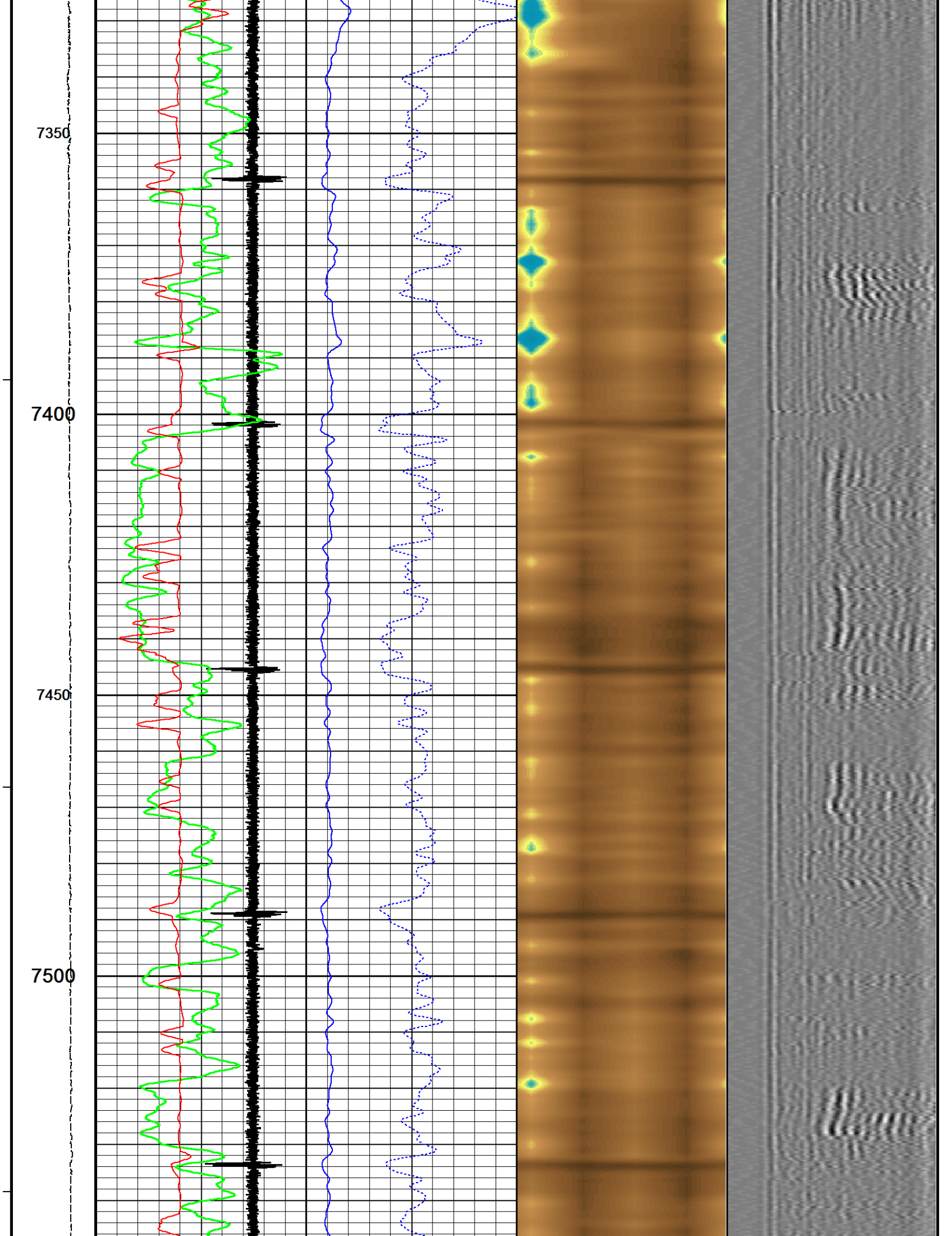




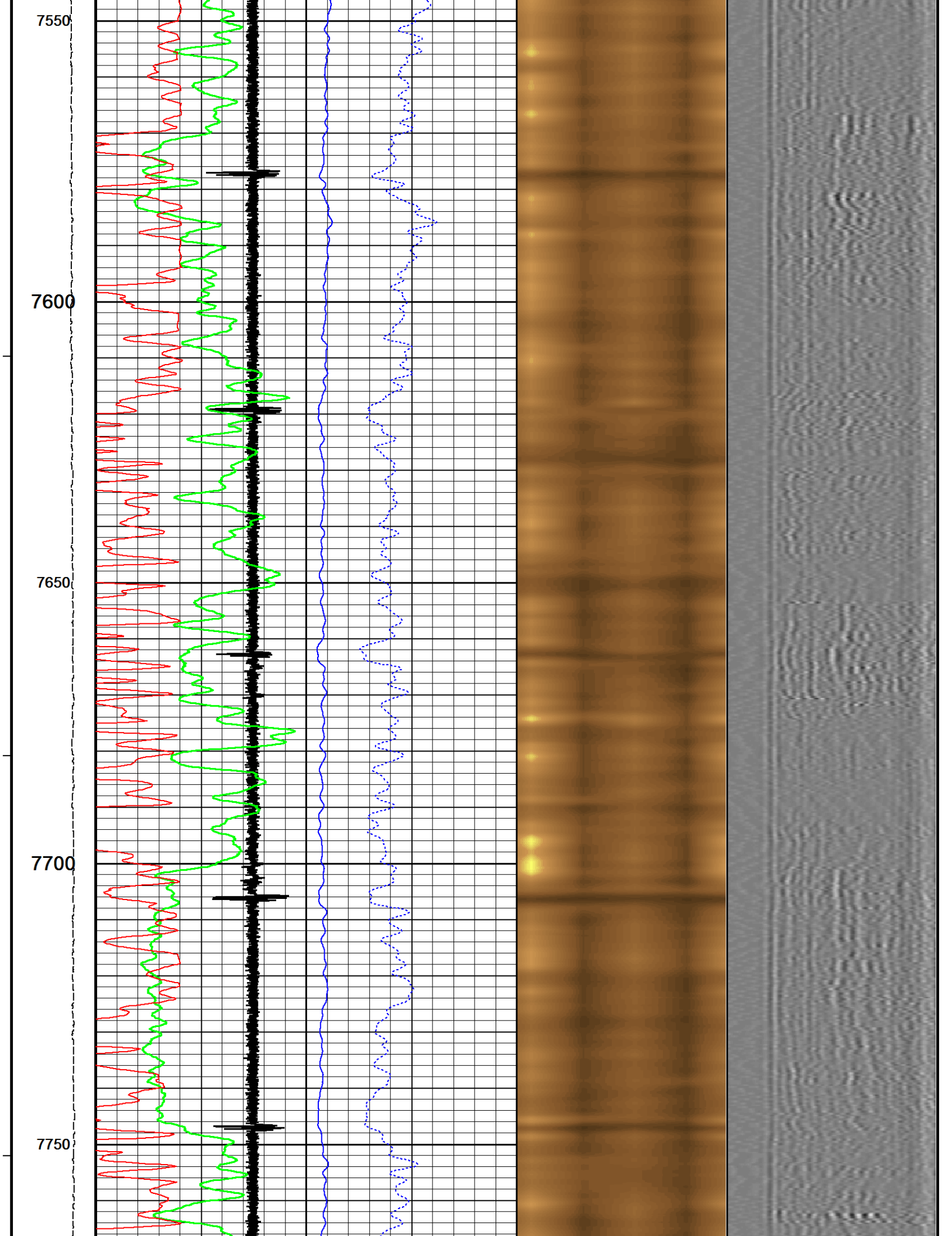


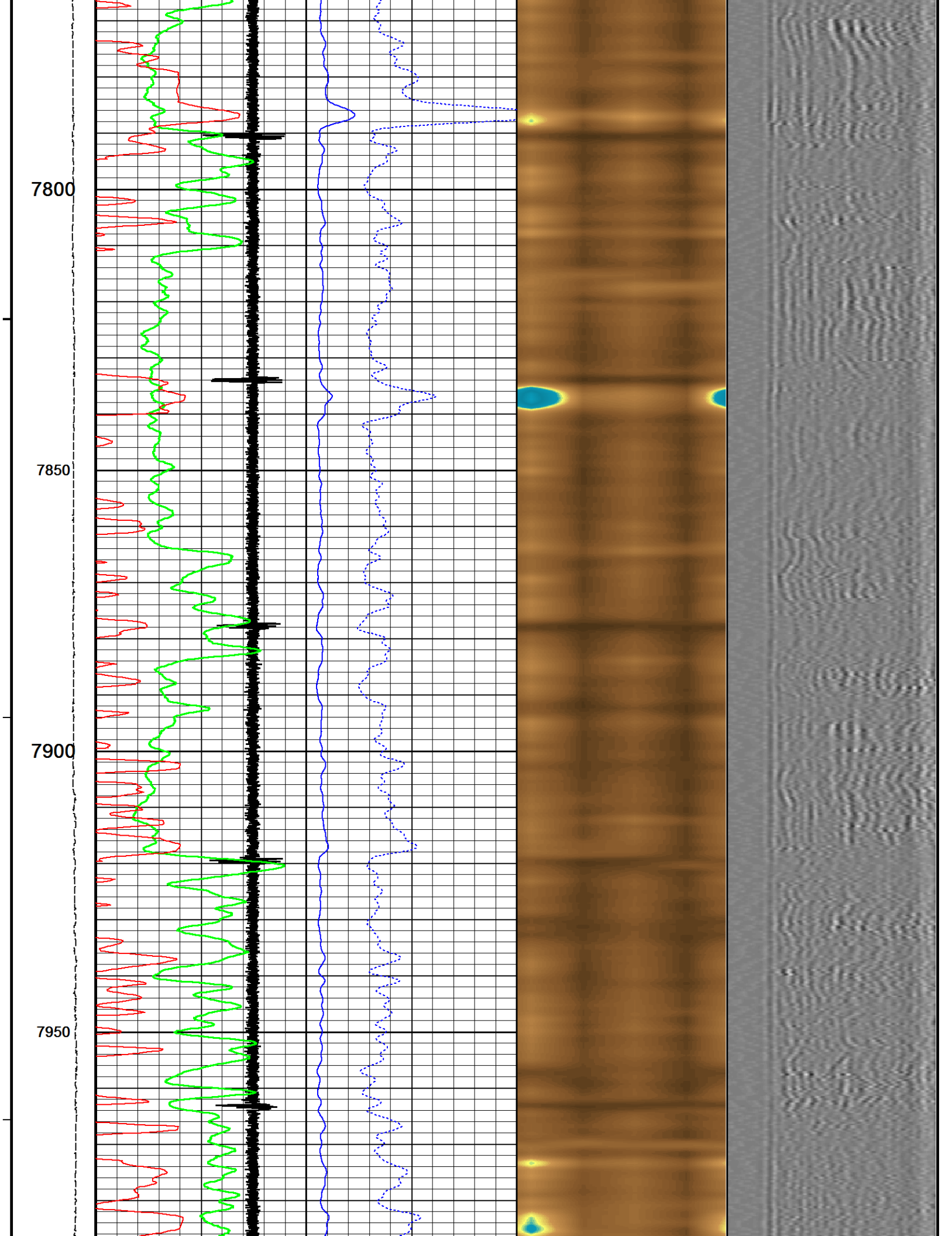


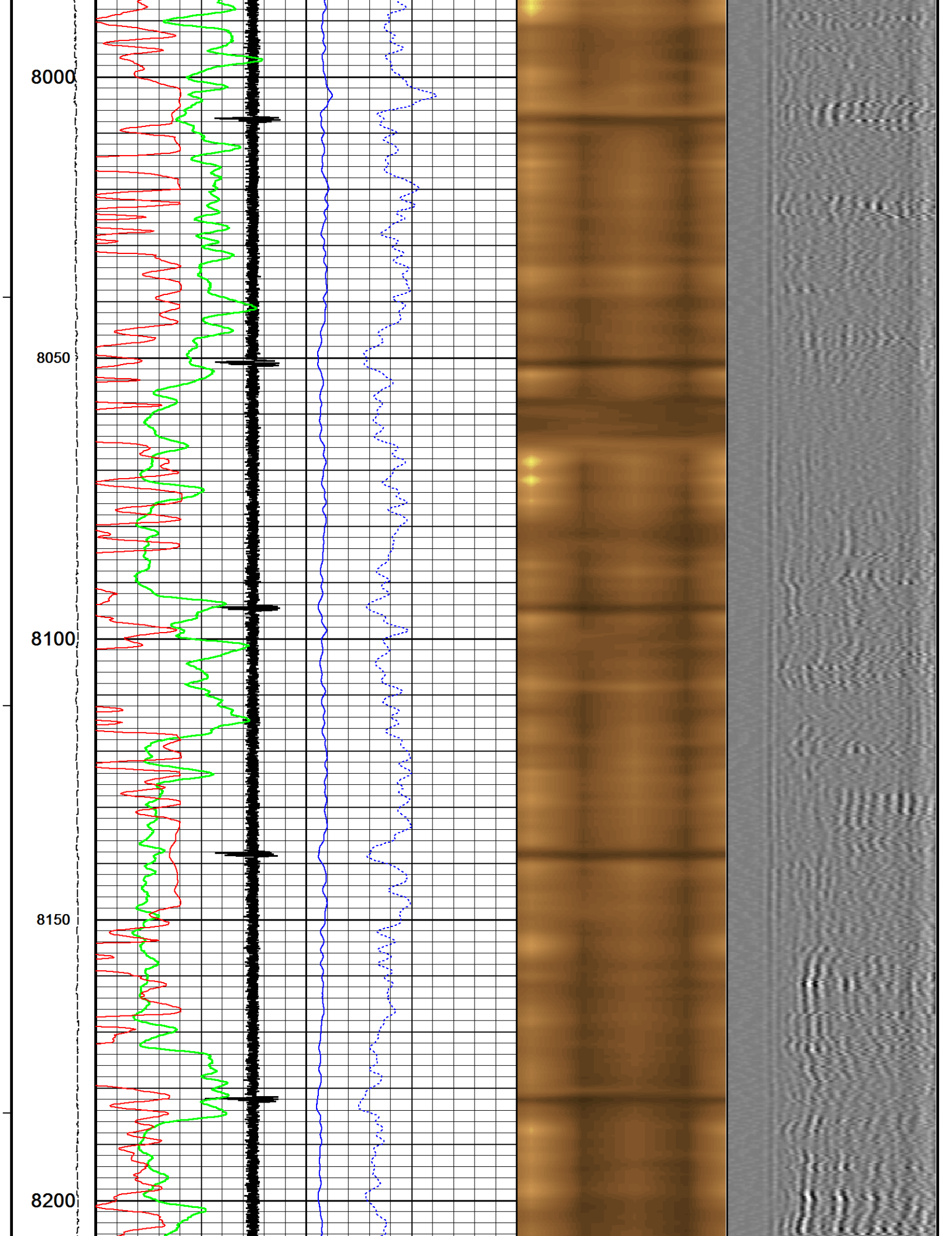


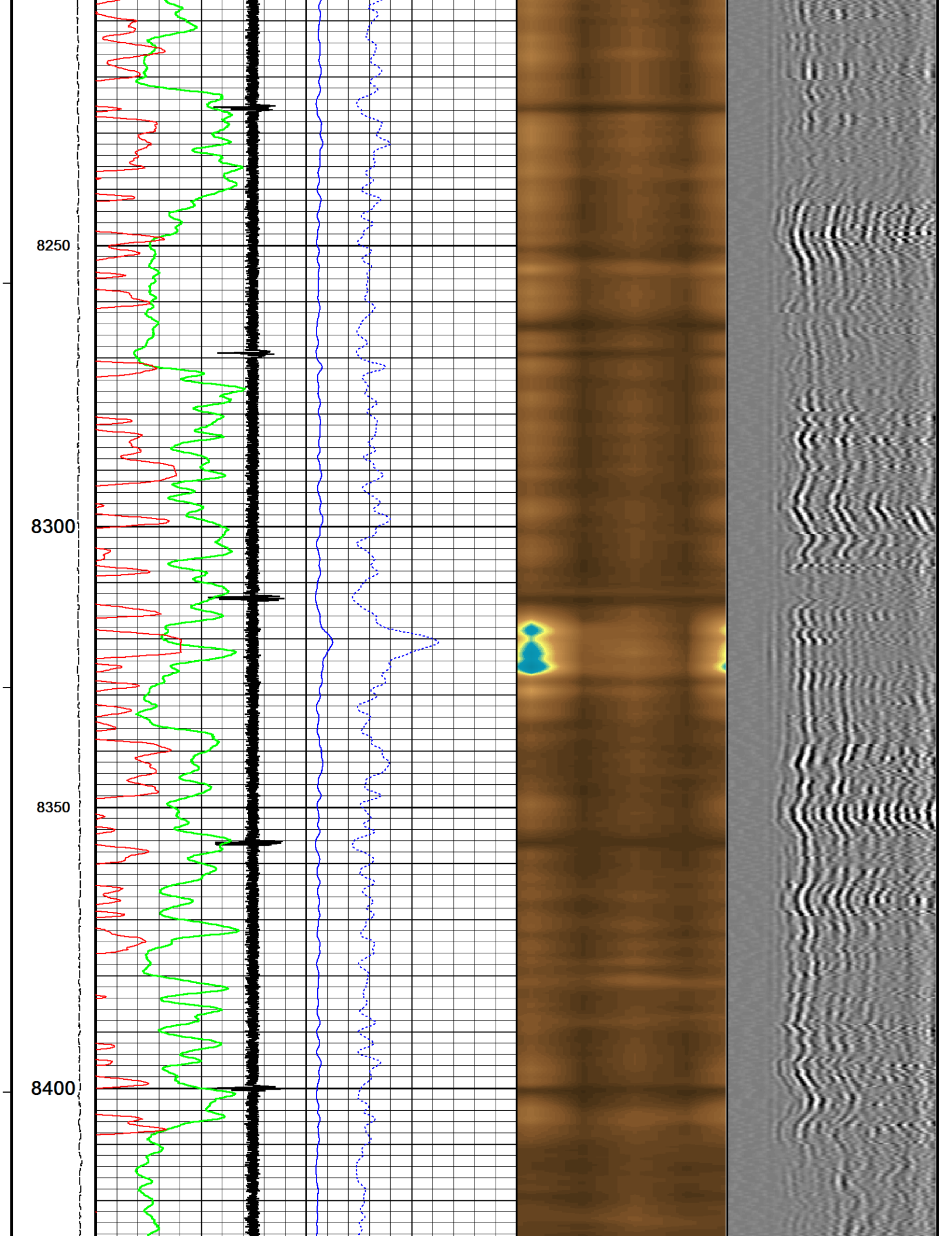




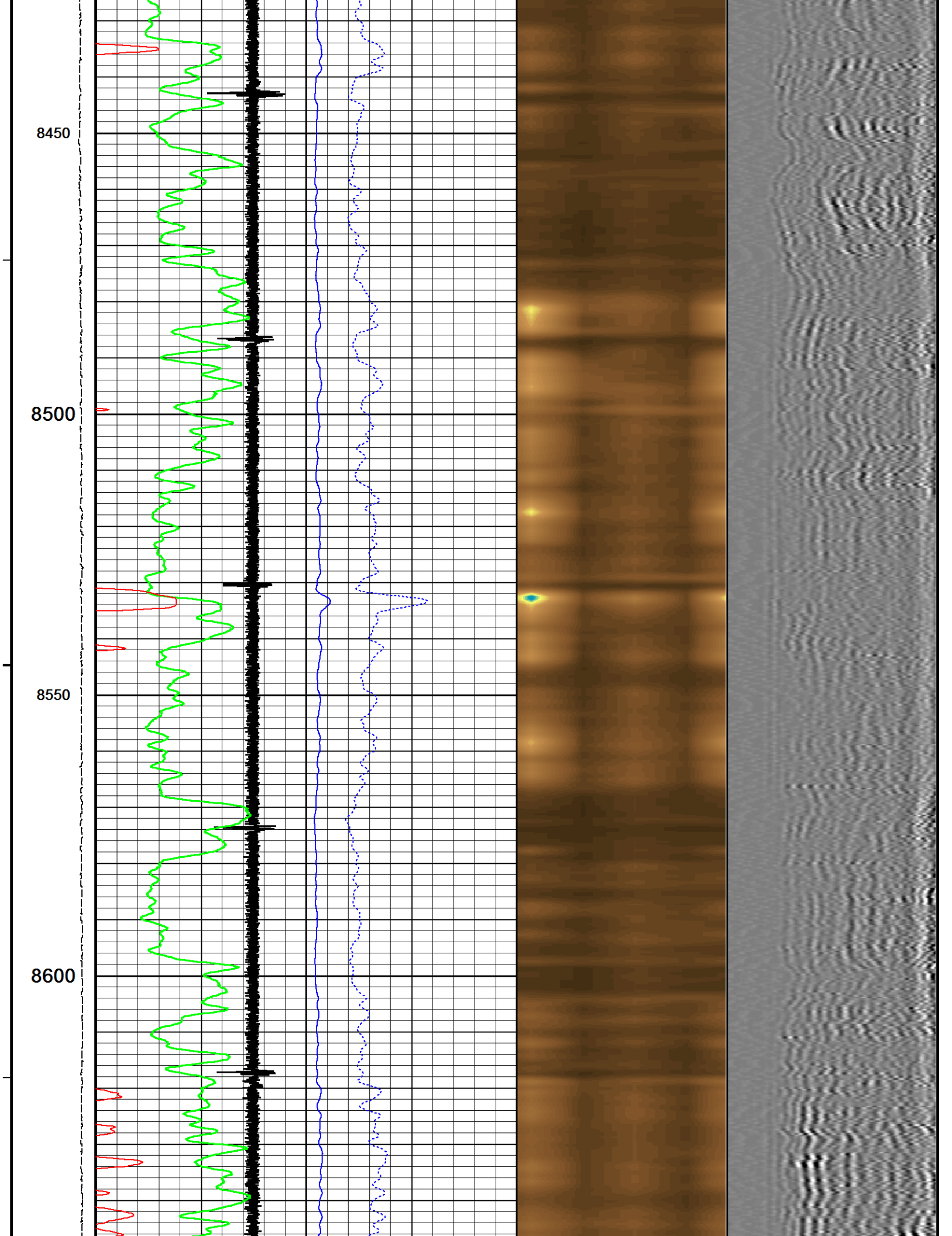


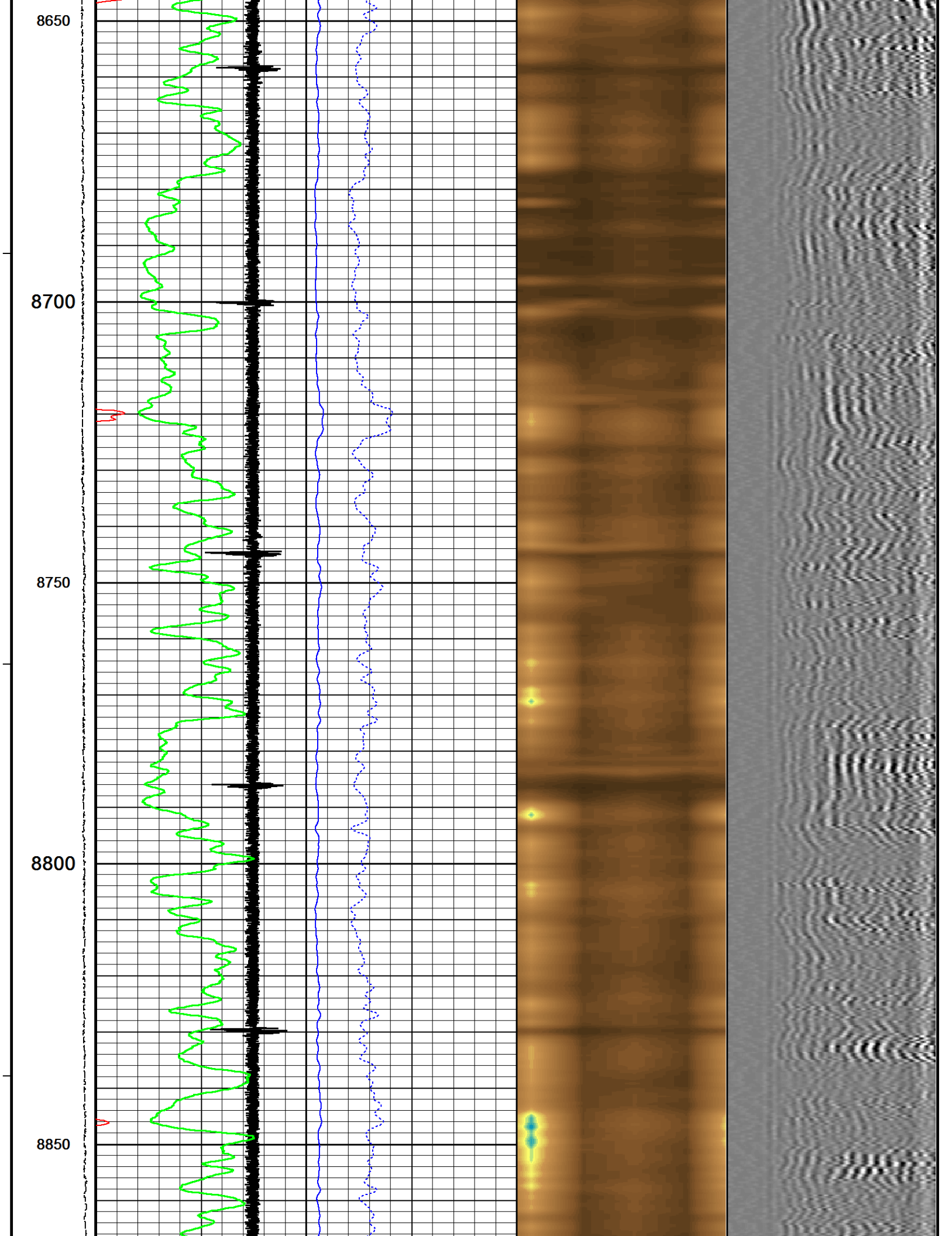


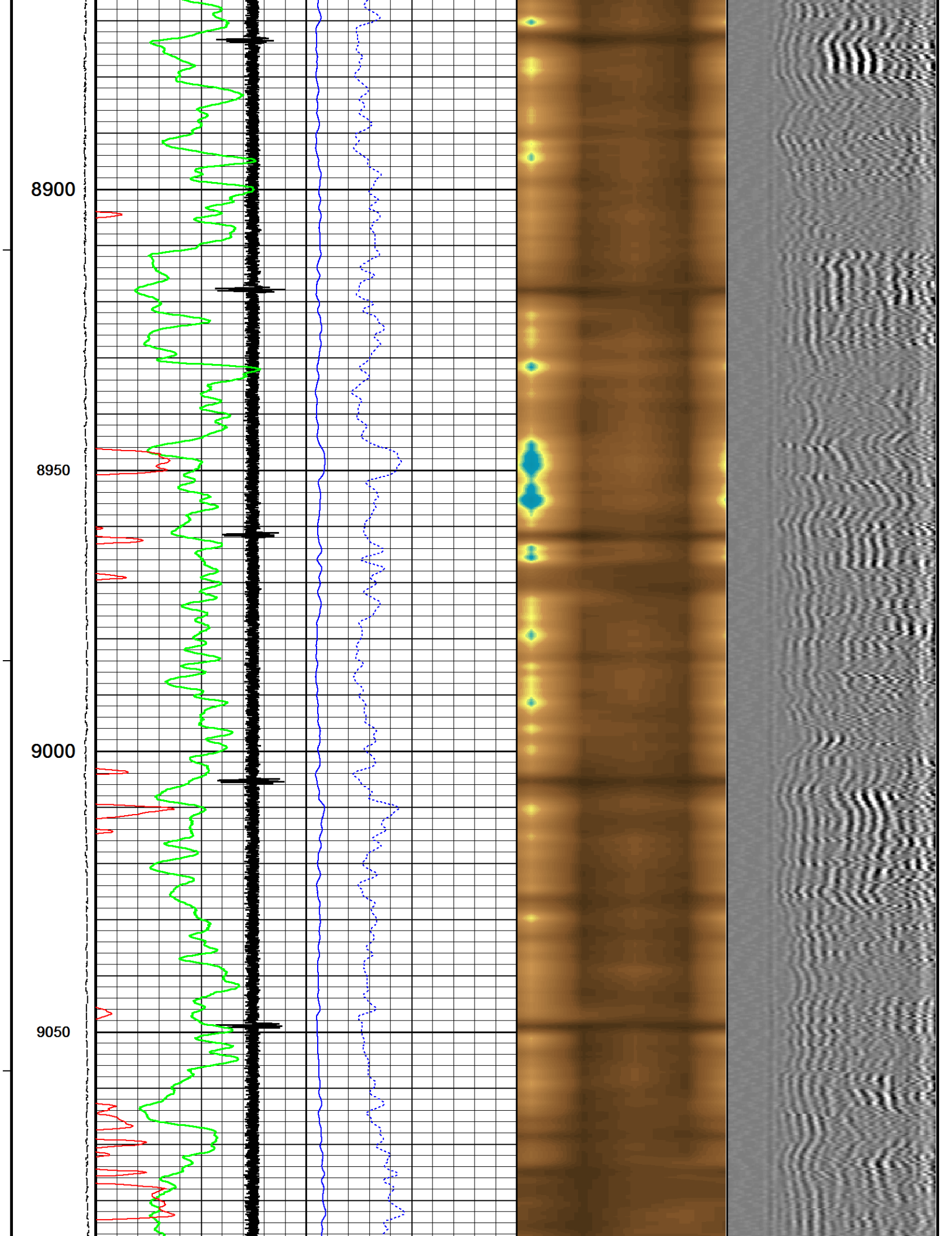




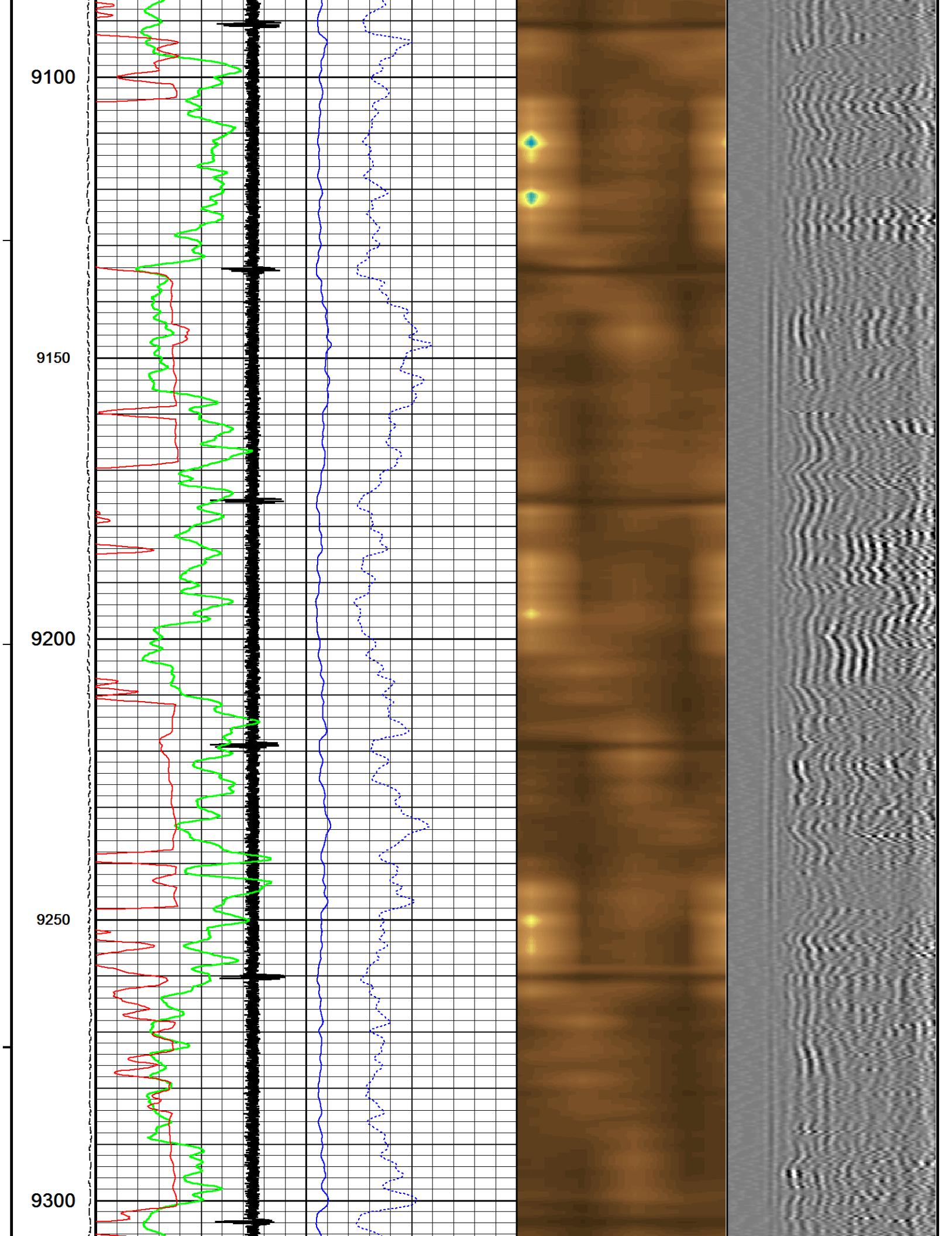


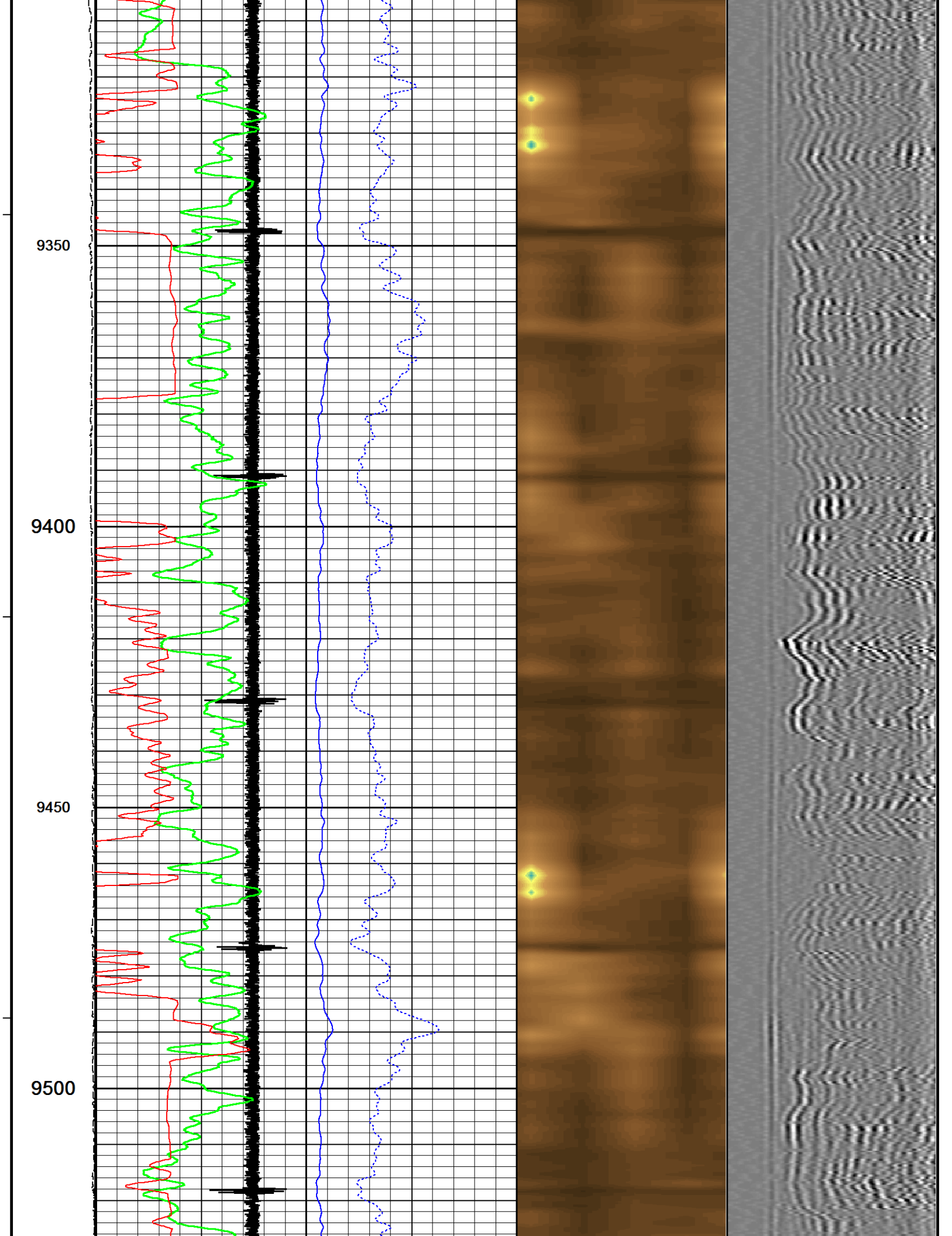


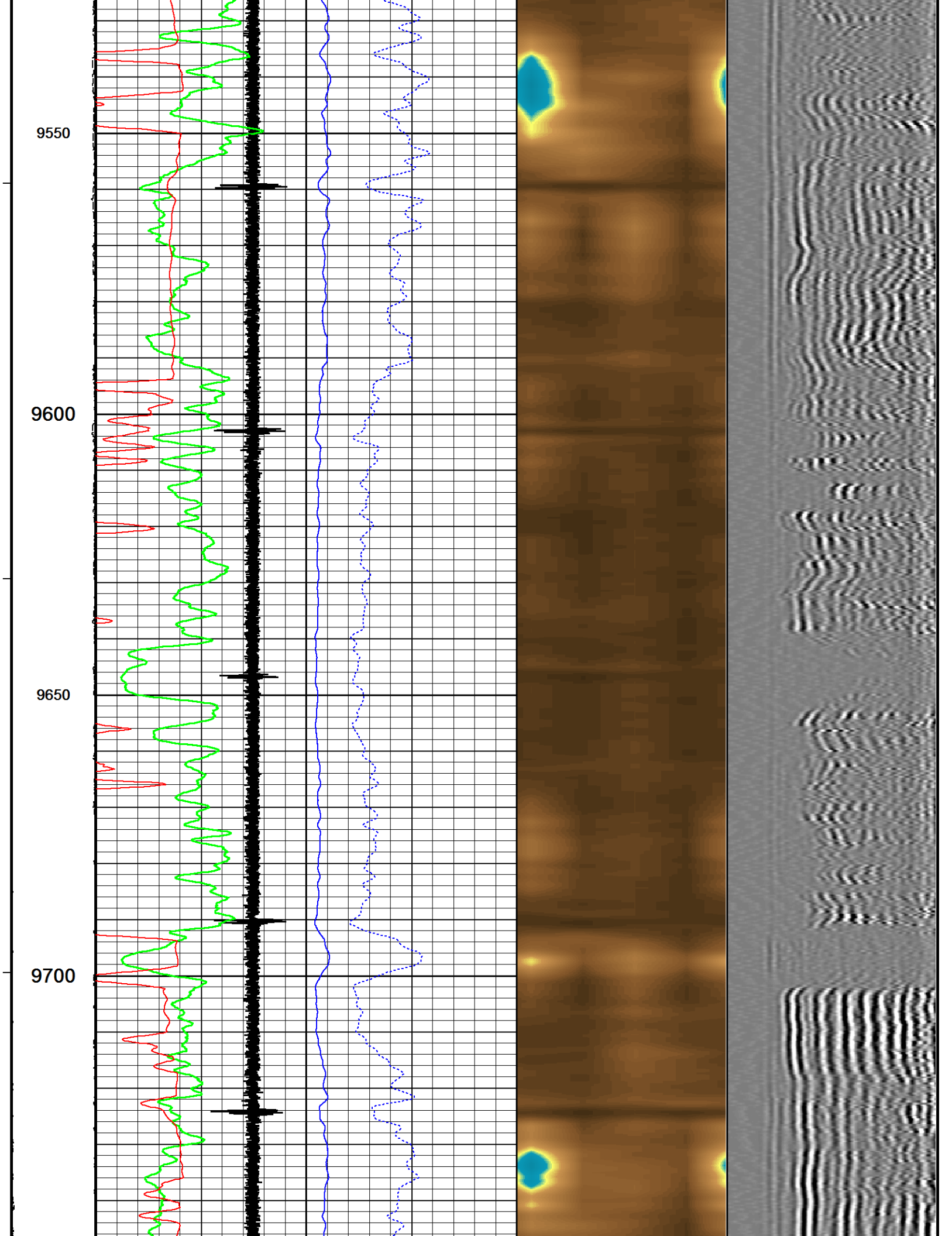




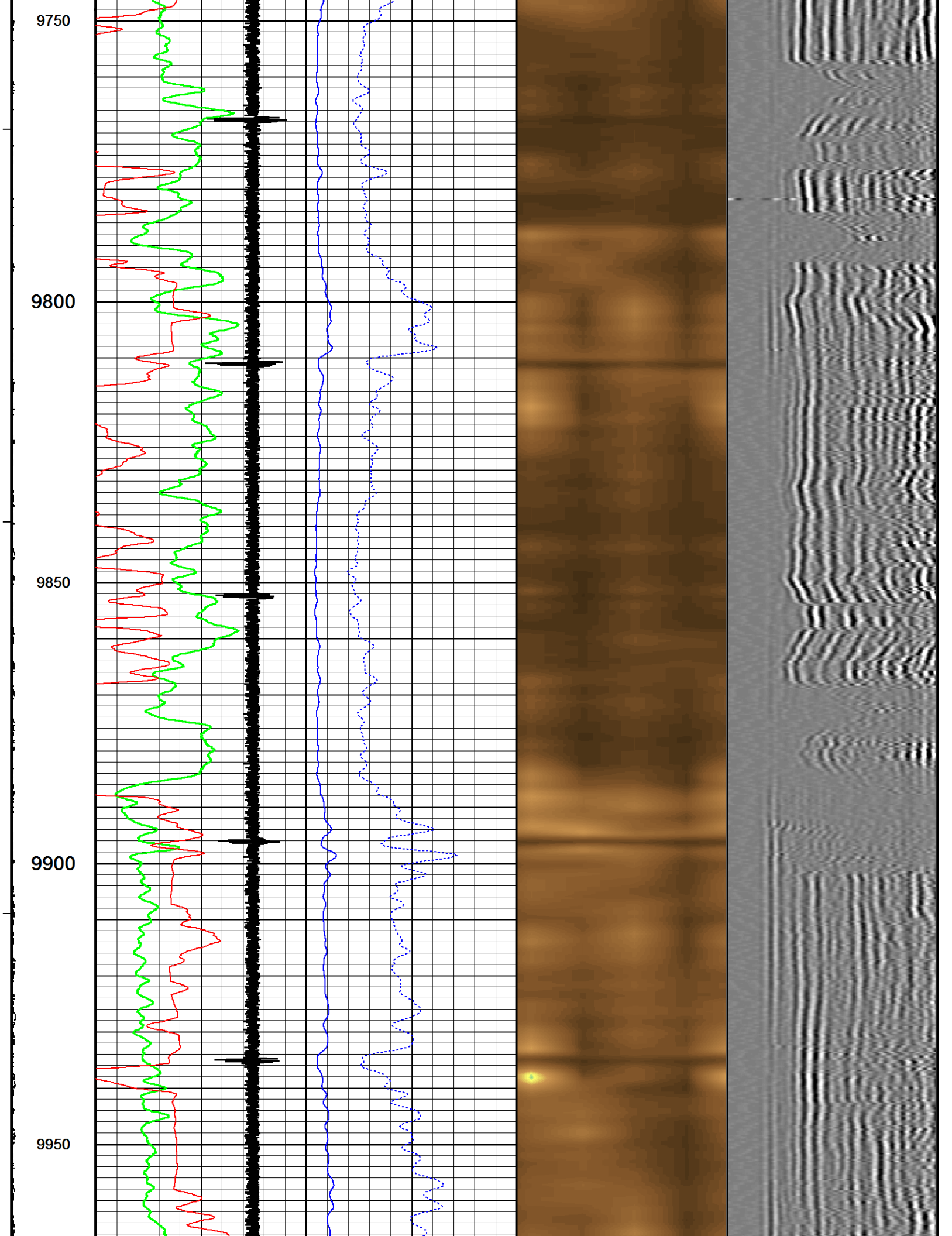


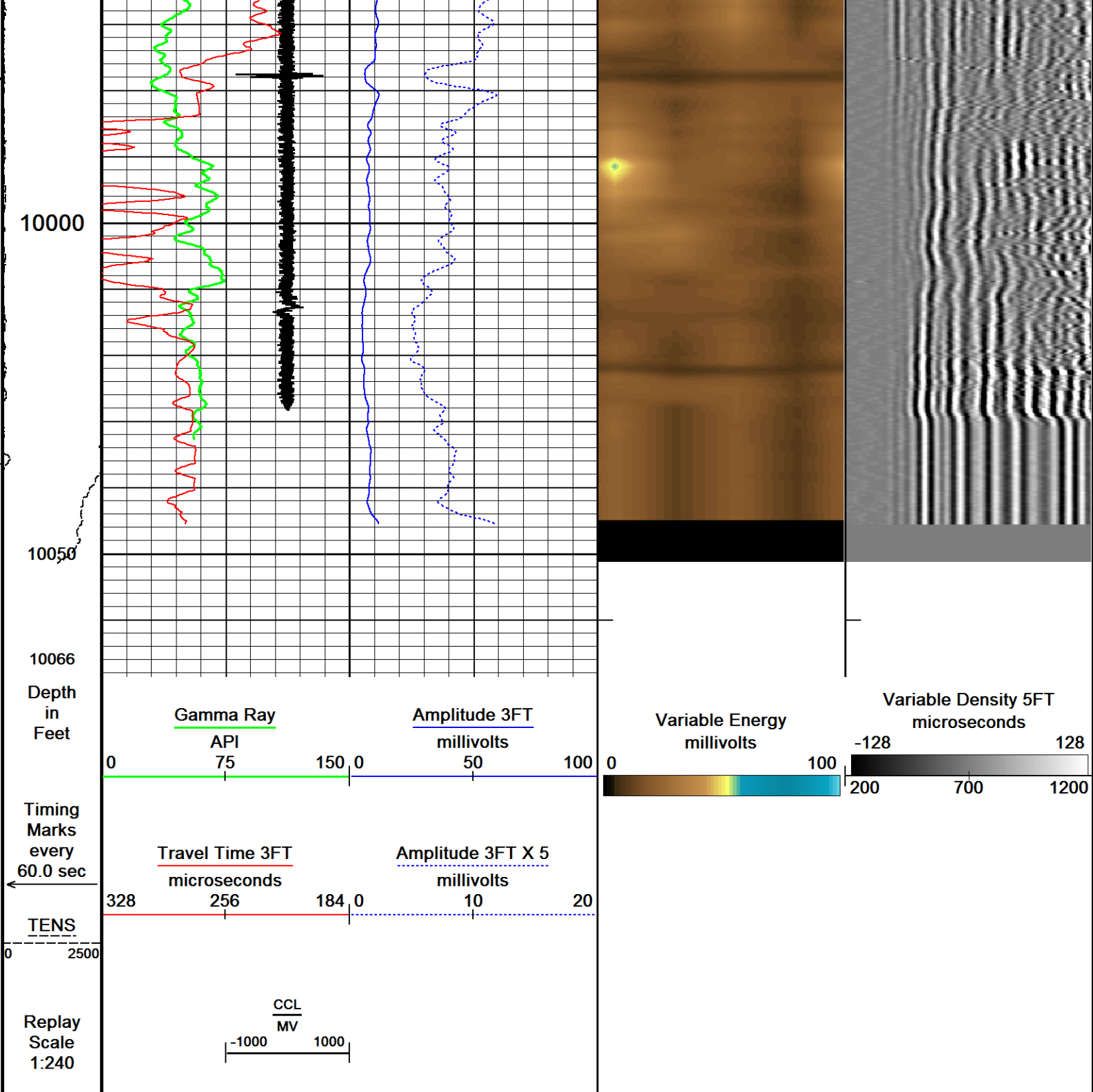












Depth Based Data - Maximum Sampling Increment 2.5cm  
Filename: C:\Logs\Caerus\PUCKETT 23B-19 CBL\PUCKETT 23B-19 CBL\_MAIN.dta  
System Versions: Logged with 18.01.5248 Plotted with 18.01.5248

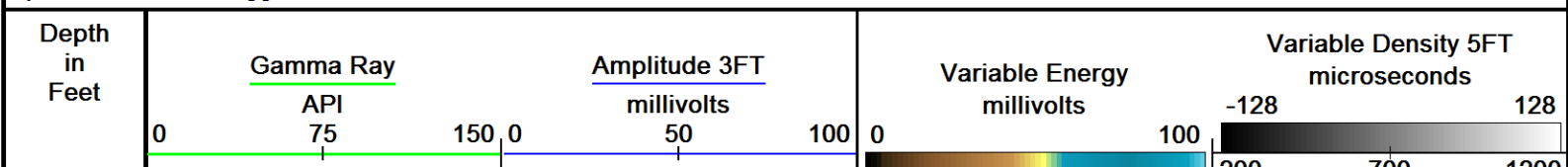
Plotted on 30-MAR-2018 09:18  
Recorded on 30-MAR-2018 08:59

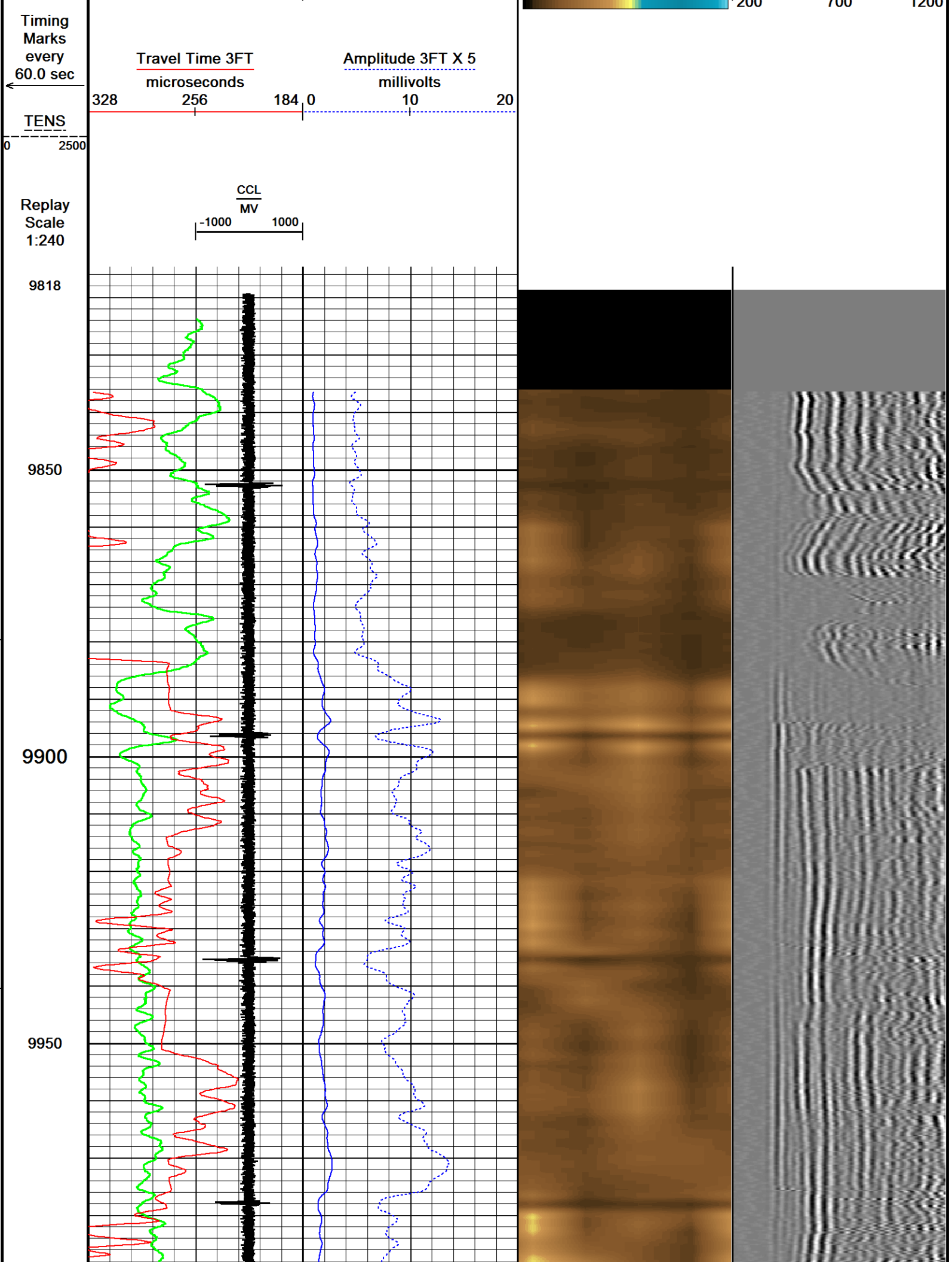
↑ MAIN PASS ↑

↓ REPEAT PASS ↓

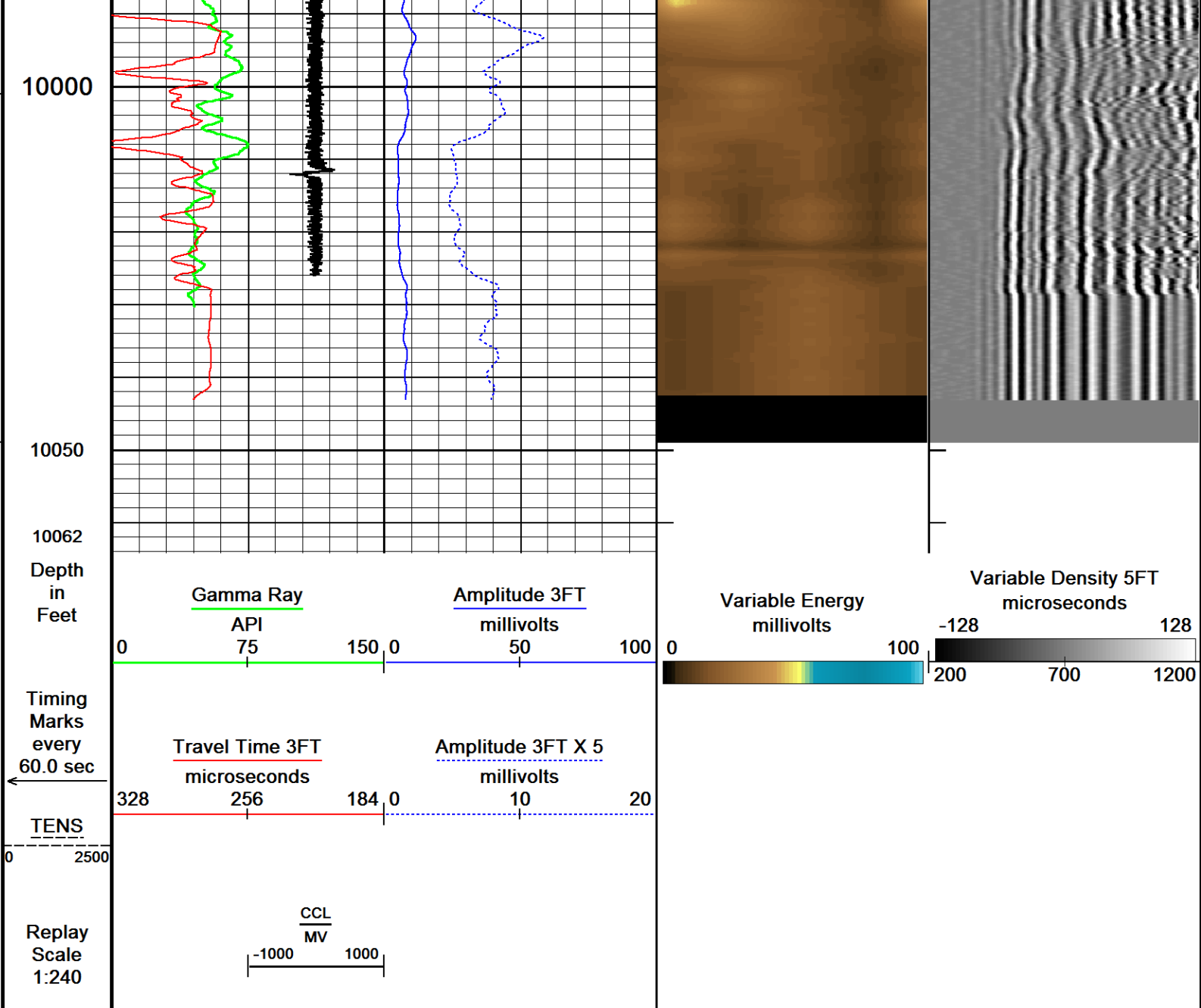
Depth Based Data - Maximum Sampling Increment 2.5cm  
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System Versions: Logged with 18.01.5248 Plotted with 18.01.5248

Plotted on 30-MAR-2018 09:18  
Recorded on 30-MAR-2018 09:06







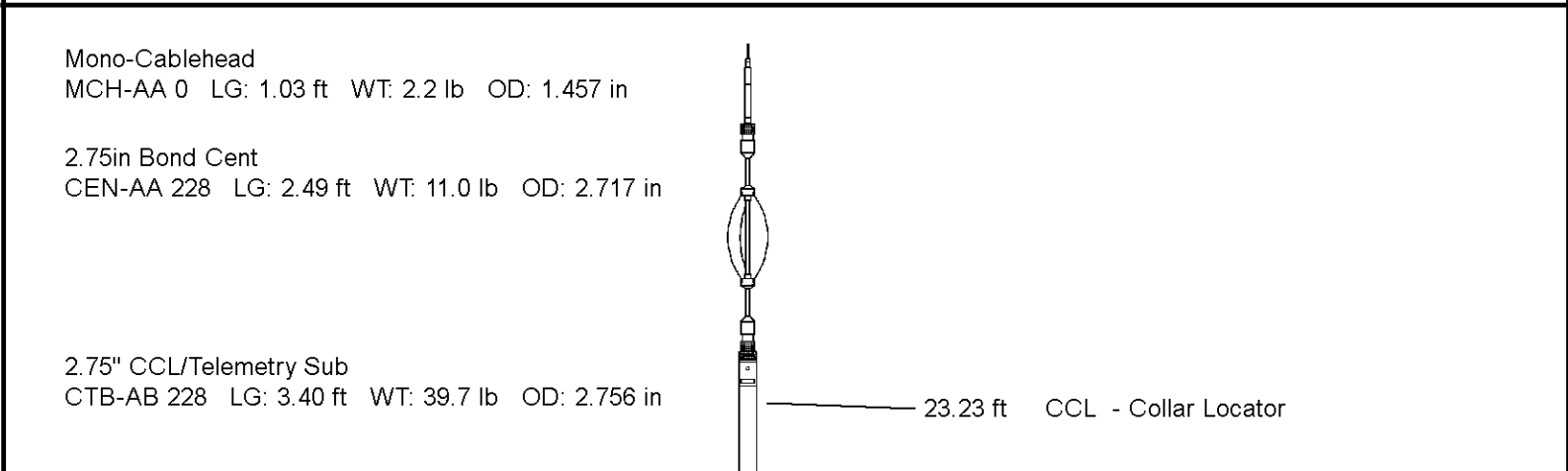


Depth Based Data - Maximum Sampling Increment 2.5cm  
Filename: C:\Logs\Caerus\PUCKETT 23B-19 CBL\PUCKETT 23B-19 CBL\_REPEAT.dta  
System Versions: Logged with 18.01.5248 Plotted with 18.01.5248  
Plotted on 30-MAR-2018 09:18  
Recorded on 30-MAR-2018 09:06

↑ REPEAT PASS ↑

### DOWNHOLE EQUIPMENT

C:\Logs\Caerus\PUCKETT 23B-19 CBL\PUCKETT 23B-19 CBL\_MAIN.dta



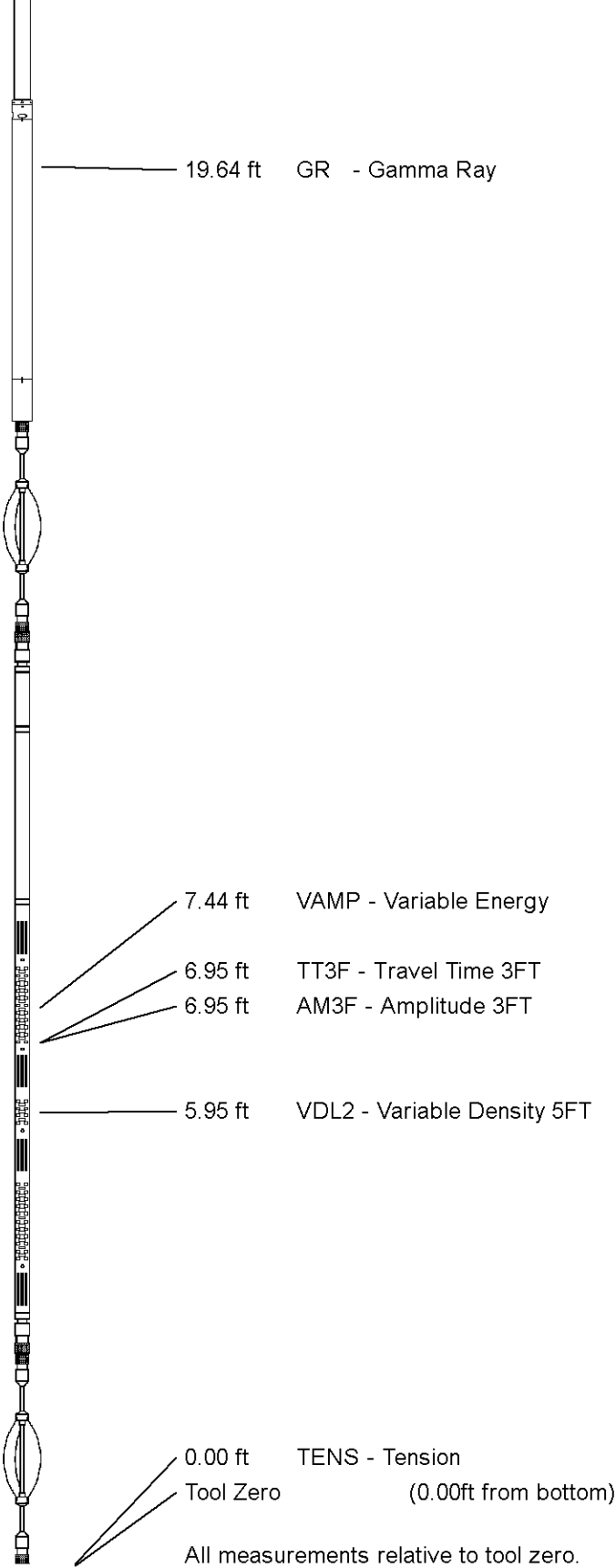
2.75" Gamma Ray Tool  
GRB-AB 314 LG: 4.71 ft WT: 59.5 lb OD: 2.756 in

2.75in SBT Middle  
CEN-BA 123 LG: 3.08 ft WT: 22.0 lb OD: 2.717 in

Sector Bond Tool  
SBT-AA 316 LG: 10.32 ft WT: 90.4 lb OD: 2.717 in

2.75in Bond Cent  
CEN-AA 216 LG: 2.49 ft WT: 11.0 lb OD: 2.717 in

Total Length: 27.53 ft Weight: 235.9 lb



SHOP AND FIELD CALIBRATIONS

C:\Logs\Caerus\PUCKETT 23B-19 CBL\PUCKETT 23B-19 CBL\_MAIN.dta

UGR Field Survey Cal GRB-AB 314

Field calibration on 00-JAN-1988 00:00

Gamma Ray Field Survey calibration

Tool Type: GRB-AB  
Calibrator No:

Serial No: 314

Background      Calibrator      Standard      Units

102.2              492.8              140.0      CPS

Delta Counts Per Sec: 390.6              CPS/API = 2.790

SBT Field Calibration    SBT-AA 316

Field Calibration on 27-MAR-2018 15:38

Sector Bond Field Calibration

Tool Type      SBT-AA                      Serial No              316

T0 Gain      3dB                      Free Pipe Depth

Sensor	Description	Standard(mV)	Measured(mV)
AMP 3FT	100% Bond	3.60	2.50
	Free Pipe	81.00	848.60
AMP 5FT	100% Bond	0.40	3.10
	Free Pipe	54.00	1374.10
1 SECTOR AMP	100% Bond	5.00	7.00
	Free Pipe	95.00	989.00
2 SECTOR AMP	100% Bond	5.00	37.80
	Free Pipe	95.00	998.10
3 SECTOR AMP	100% Bond	5.00	5.90
	Free Pipe	95.00	768.00
4 SECTOR AMP	100% Bond	5.00	7.20
	Free Pipe	95.00	765.10
5 SECTOR AMP	100% Bond	5.00	7.30
	Free Pipe	95.00	769.80
6 SECTOR AMP	100% Bond	5.00	8.30
	Free Pipe	95.00	753.60
7 SECTOR AMP	100% Bond	5.00	12.87
	Free Pipe	95.00	705.80
8 SECTOR AMP	100% Bond	5.00	41.70
	Free Pipe	95.00	901.10

SBT Constants    SBT-AA 316


Last Edited on 27-MAR-2018 15:37

Min Ampl 100% Bond	3.63 MV
Max Ampl 0% Bond	81.03 MV
Casing Size	4.50 IN
Casing Weight	11.6 LB/F
3' TT Correction	-999.0 US
DT Fluid	200.0 US/F
Fast Formation TT	38.5 US/F
Cement Cmpr Strength	580 PSI
Casing Velocity	57.00 US/F
Maximum Attenuation	12.00 DB/F
Cement Weight	0.00 LB/G



COMPANY	CAERUS OIL & GAS		
WELL	PUCKETT 23B-19		
FIELD	GRAND VALLEY		
PROVINCE/COUNTY	GARFIELD		
COUNTRY/STATE	USA / COLORADO		

Elevation Kelly Bushing	8181	feet	Bottom Log Interval	10050.00	feet
Elevation Drill Floor	8181	feet	Depth Driller	10121.00	feet
Elevation Ground Level	8151	feet	Depth Logger	10050.00	feet

  
**Weatherford**<sup>®</sup>

CEMENT BOND LOG