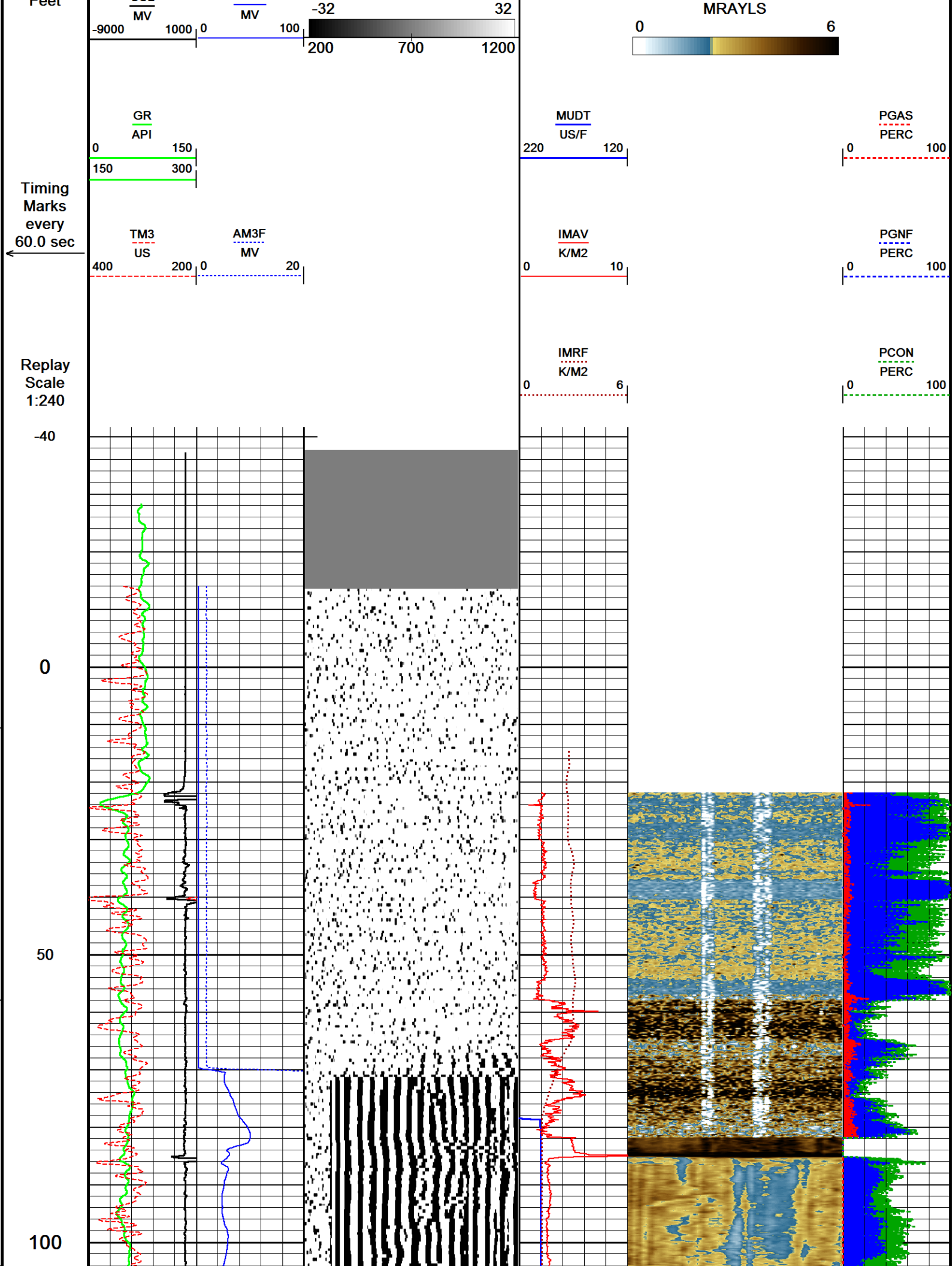
 <b>Weatherford®</b>			<b>SECUREVIEW</b> <b>ULTRAVIEW/BONDVIEW</b> <b>CEMENT ANALYSIS</b>			
COMPANY WELL FIELD PROVINCE/COUNTY COUNTRY/STATE LOCATION			EXTRACTION OIL & GAS VARRA 11 WATTENBERG WELD USA / COLORADO			
SEC 5	TWP 6N	RGE 67W	Other Services			
Latitude Longitude API Number		05 123 39991 00				
Permanent Datum GROUND LEVEL, Elevation 4899 feet Log Measured From KB, 25 feet above Permanent Datum Drilling Measured From KB @ 25'				Elevations: KB 4924.00 DF 4924.00 GL 4899.00		
Date	02-DEC-2016	PERFORATION RECORD				
Run Number	ONE	Shot	Number	Depth From	Depth To	
Service Order	167917310	Density	of Shots	feet	feet	
Type Log	URS/CBT					
Depth Driller	16912.00					
Depth Logger	6475.00					
Top Log Interval	0.00					
Bottom Log Interval	6475.00					
Hole Fluid Type	WATER					
Hole Fluid Level	0.00	feet				
Restriction ID	4.767	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	9.625	36.00	0.00	1529.00	
Unit	14338	5.500	20.00	0.00	17369.00	
Equipment Name	WSSE					
Base	CASPER					
Recorded By	P. MAZUR					
Witnessed By	NOT WITNESSED					

CASING / TUBING RECORD						
Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE			9.625	0.00	1529.00	36.00
PRODUCTION			5.500	0.00	17369.00	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		↓	
Depth Based Data - Maximum Sampling Increment 2.5cm				Plotted on 02-DEC-2016 20:29	
Filename: C:\Logs\Extraction\VARRA 11\VARRA 11 MAIN PASS.dta				Recorded on 02-DEC-2016 12:46	
System Versions: Logged with 16.05.3841 Plotted with 16.05.3841					
Depth in Feet		XY Signature 5FT microseconds		Impd Map	
	CCI	AM3F			

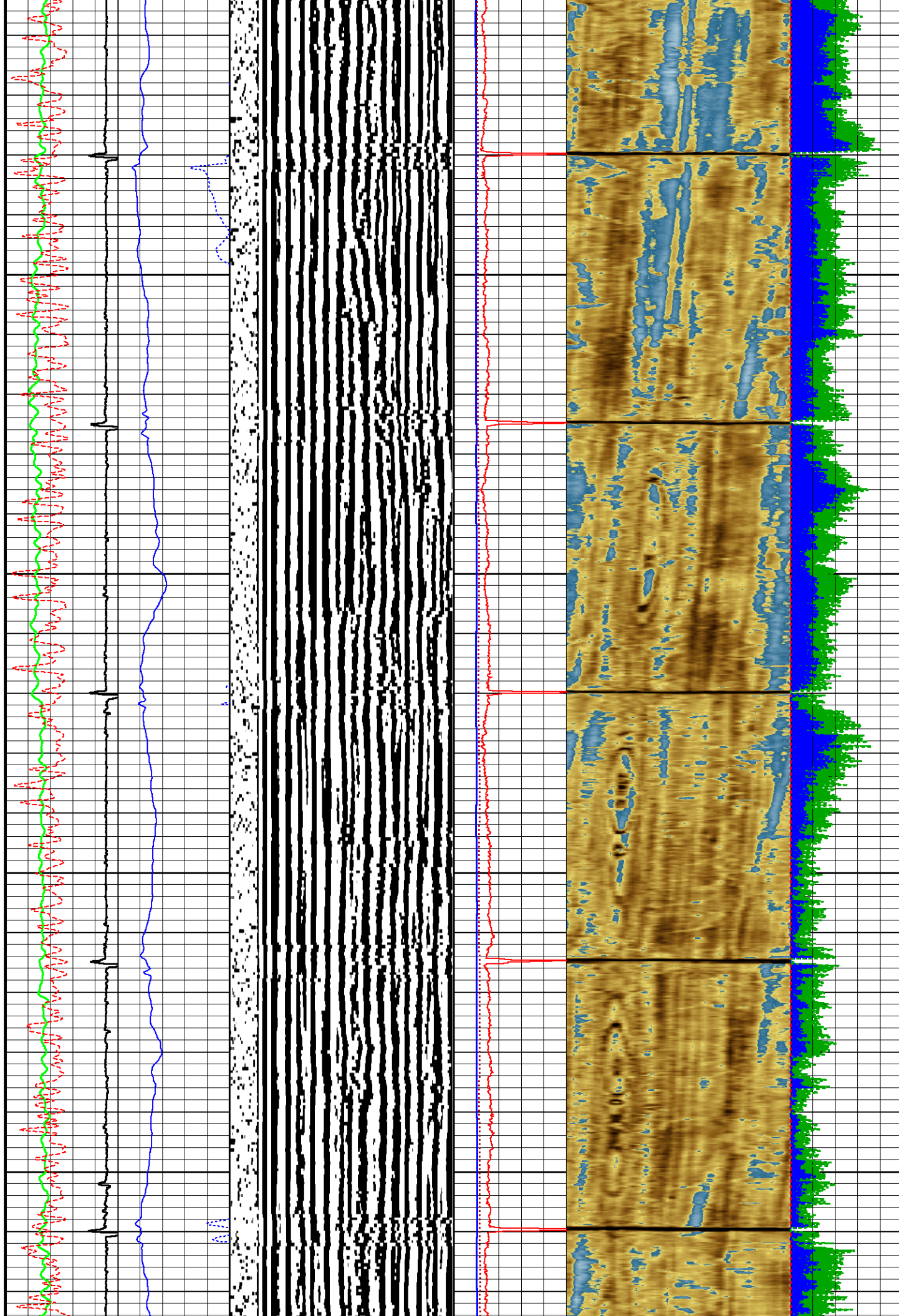


150

200

250

300



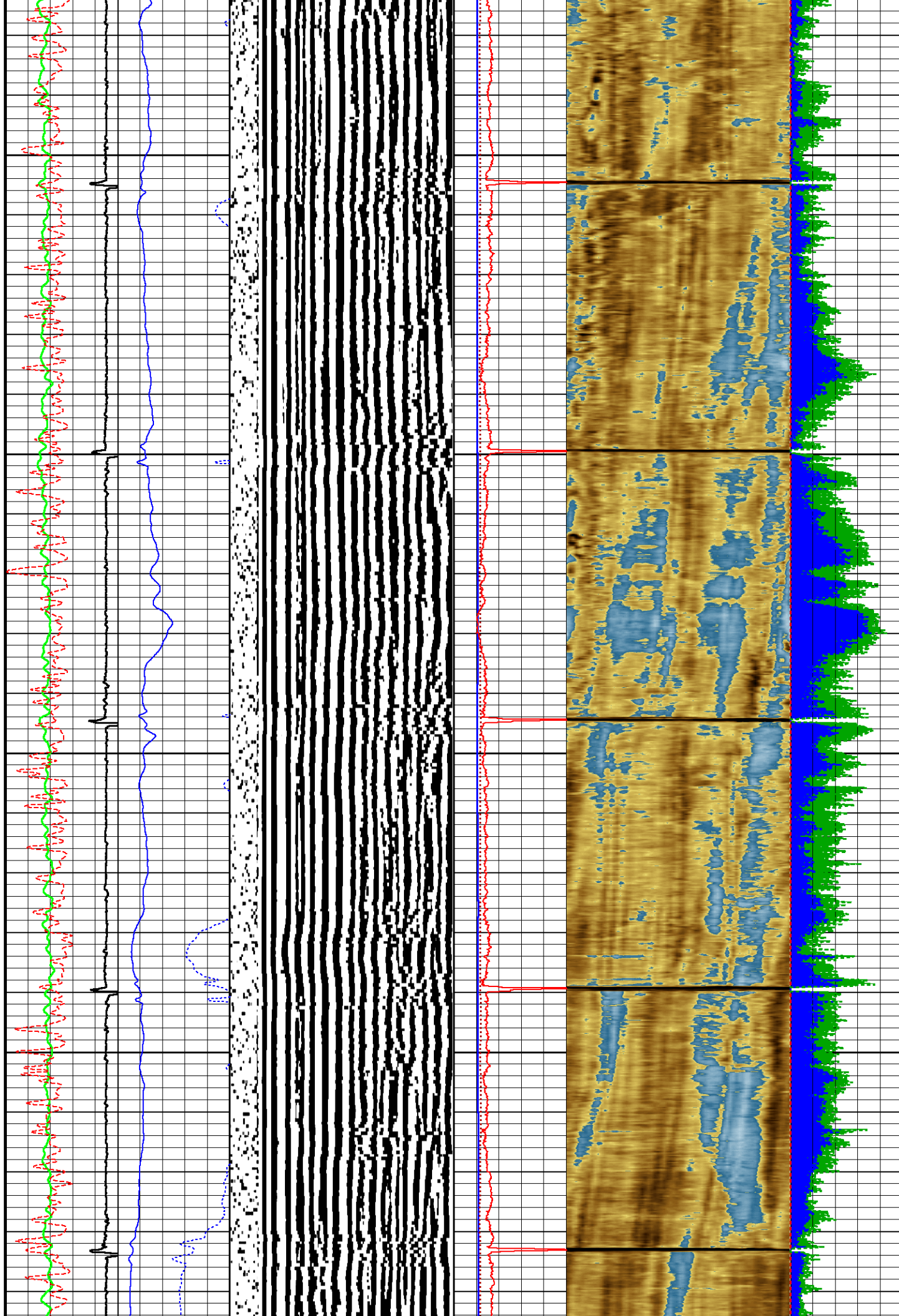


350

400

450

500





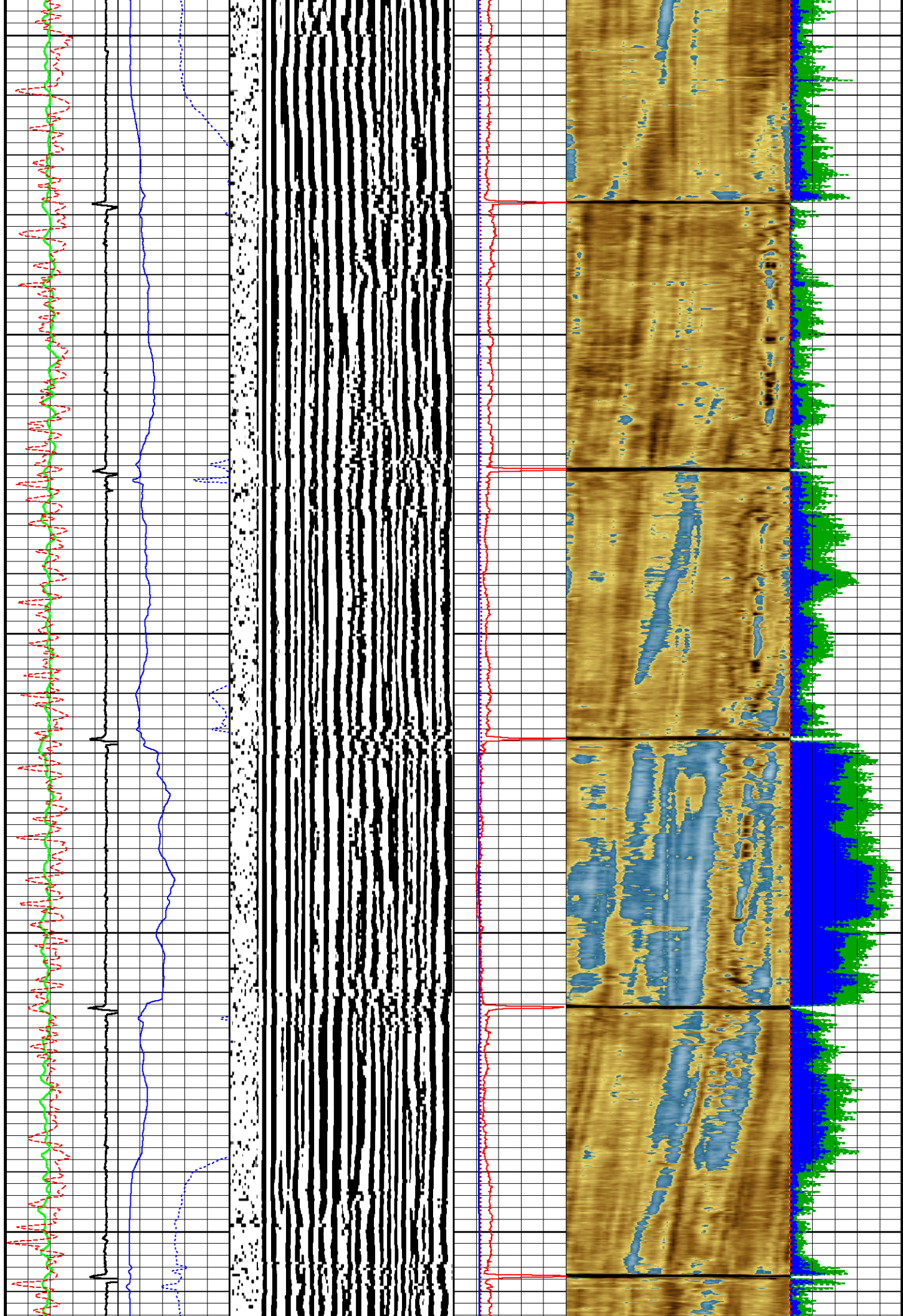
550

600

650

700

750

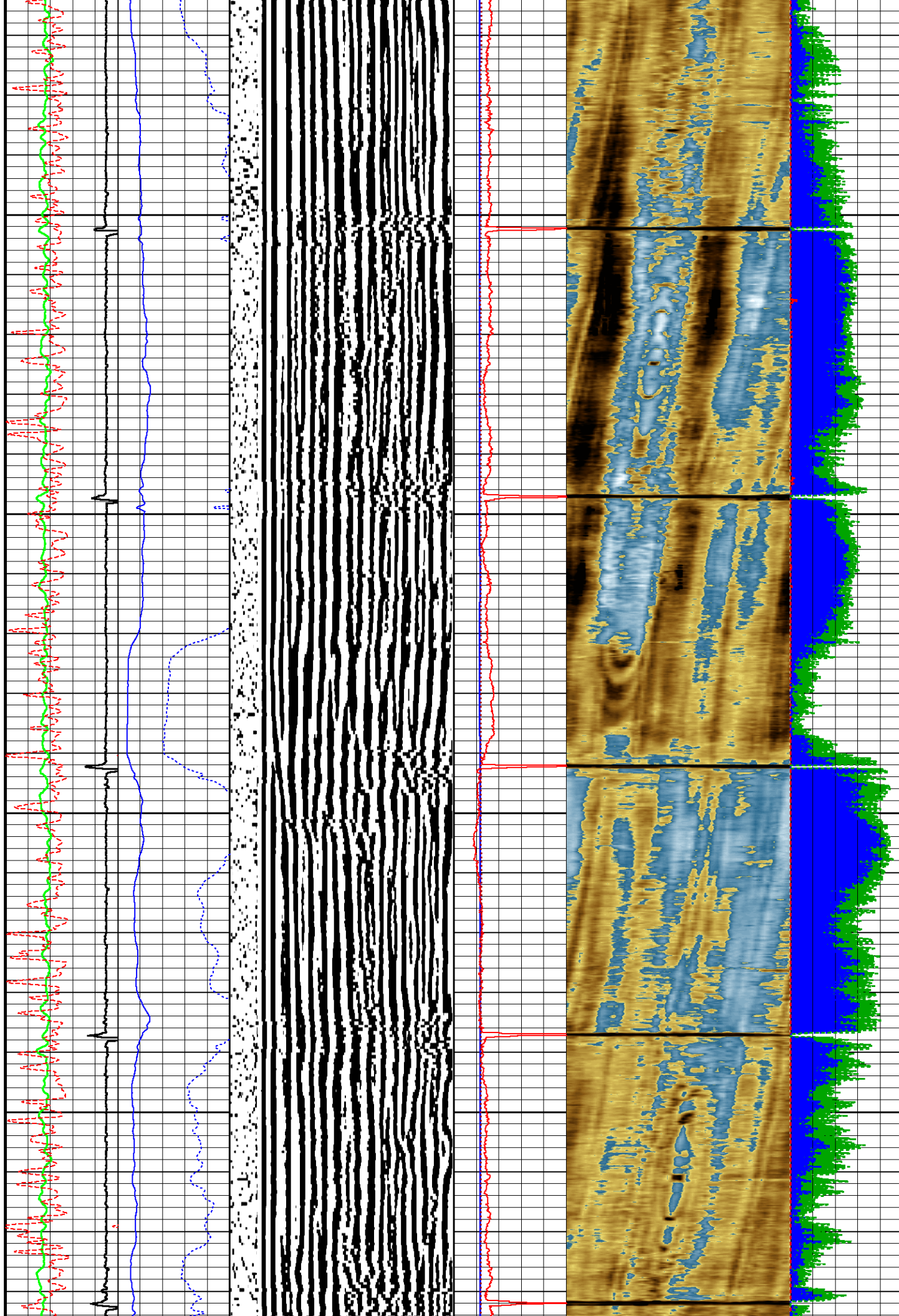


800

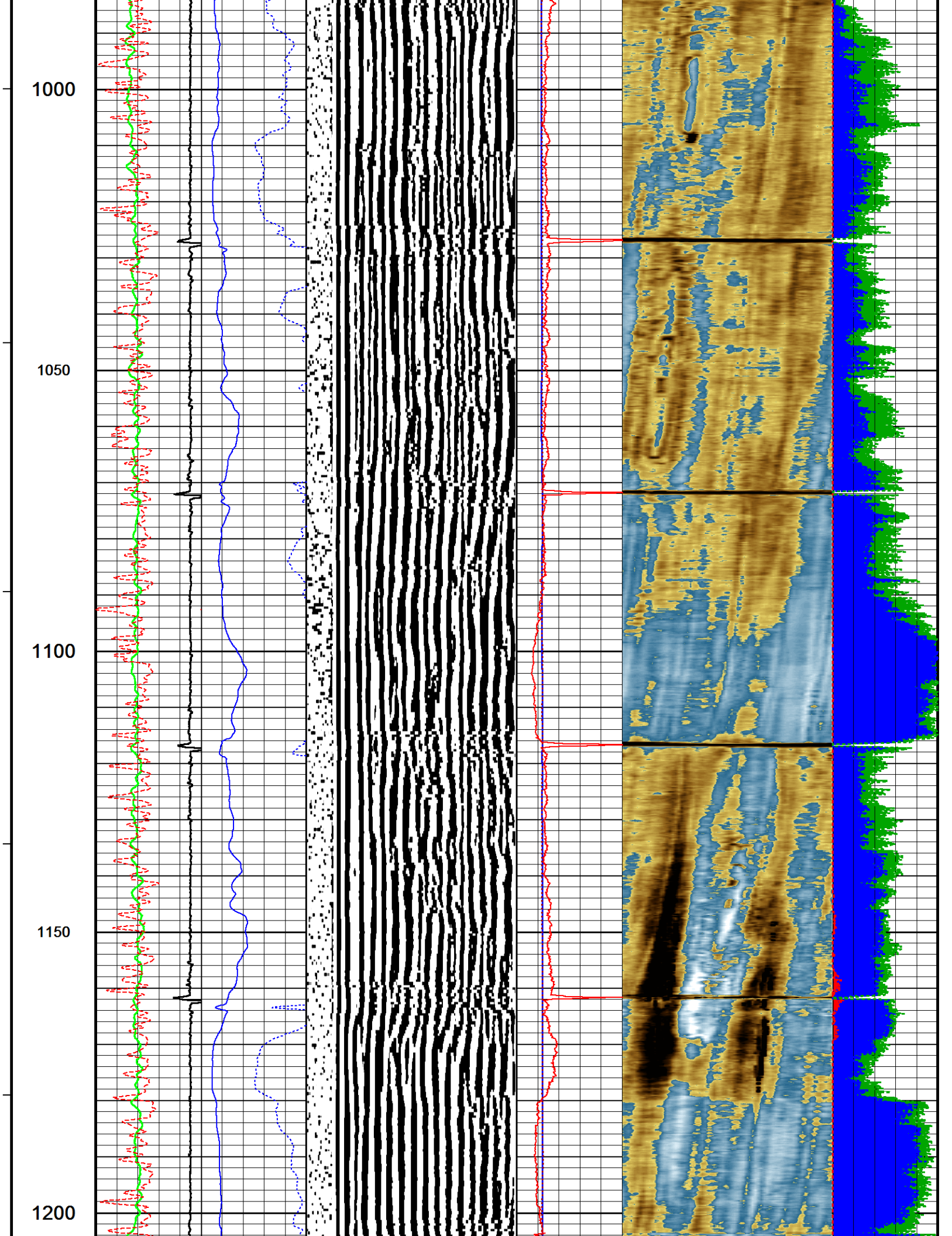
850

900

950





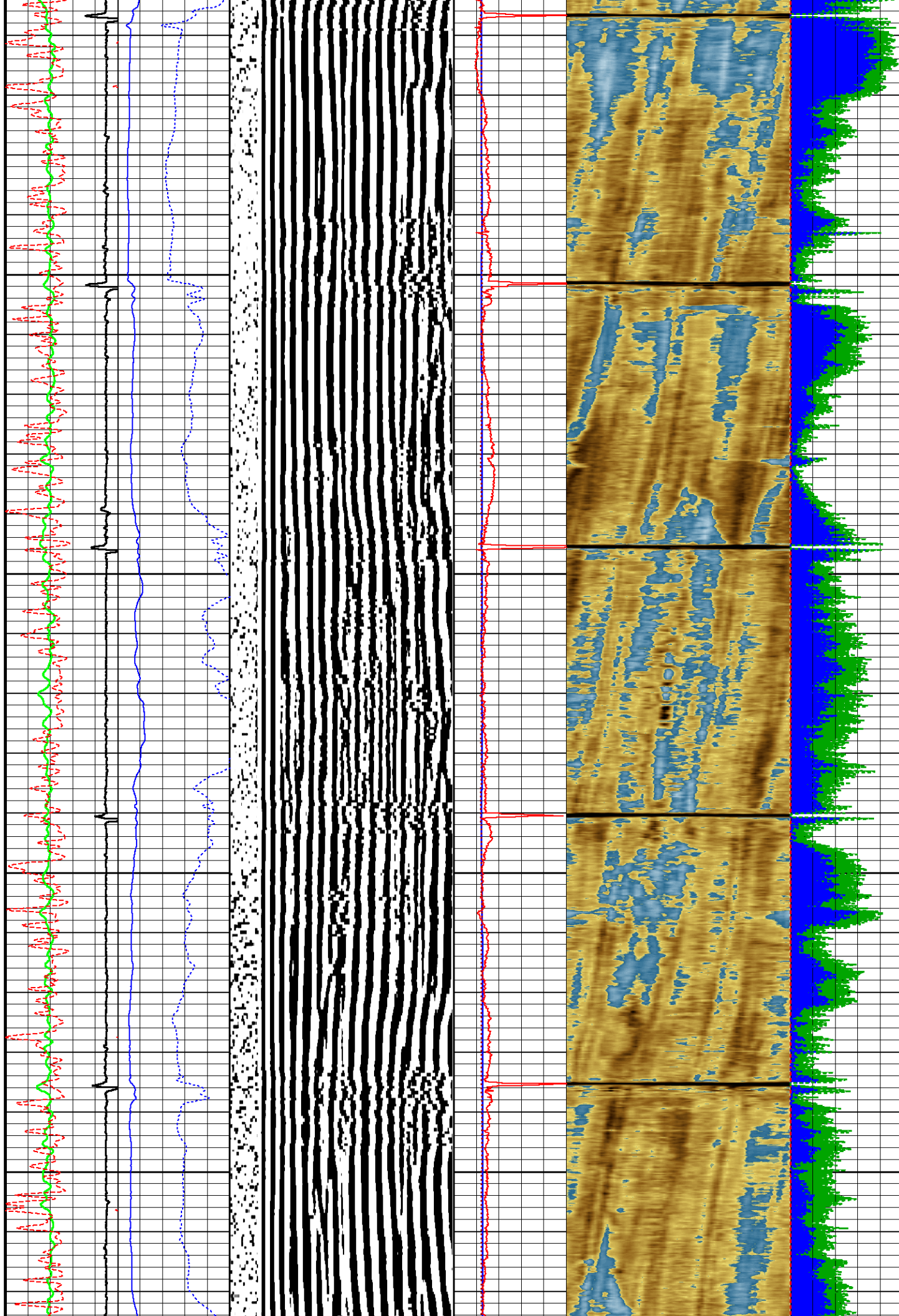


1250

1300

1350

1400



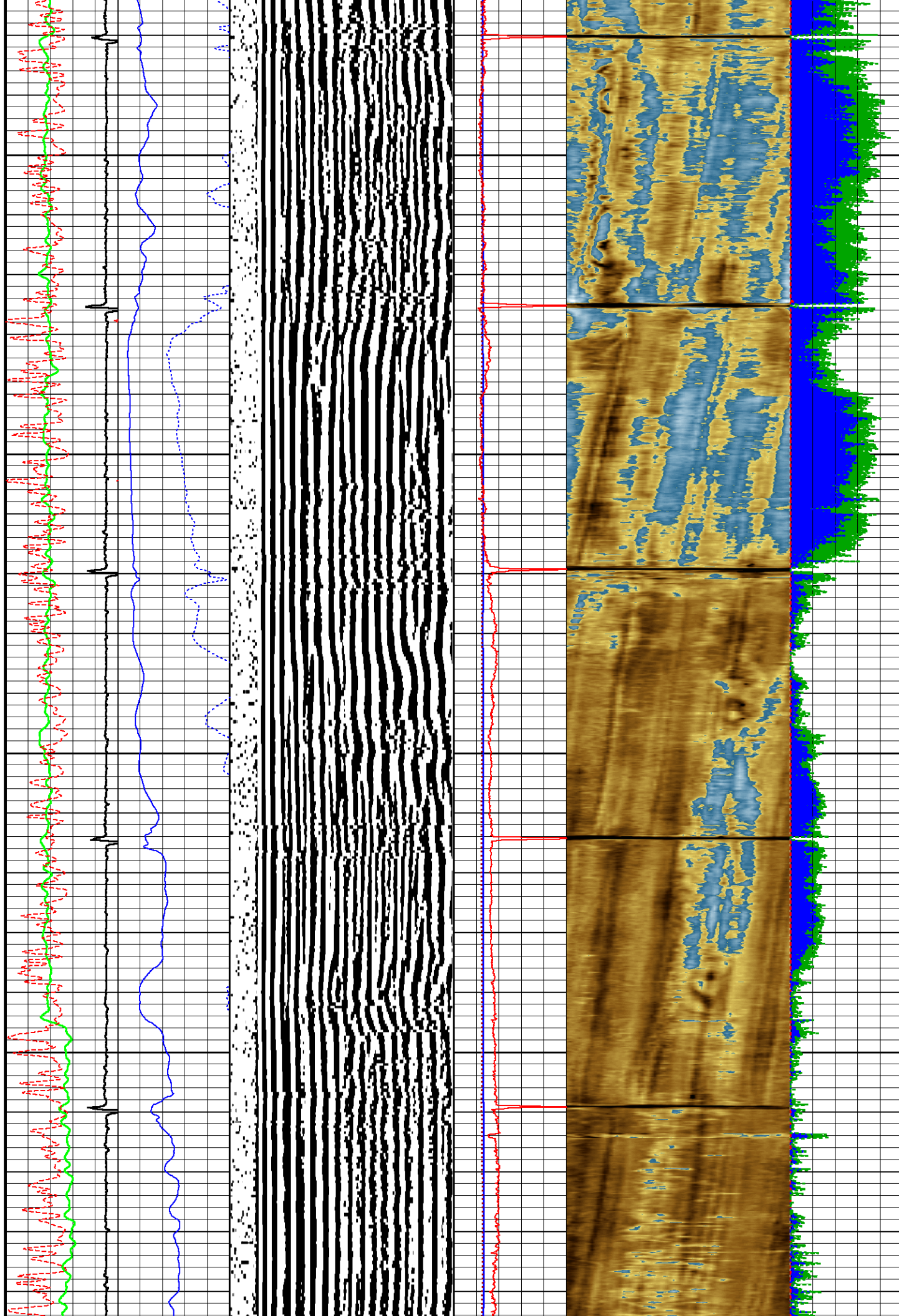


1450

1500

1550

1600



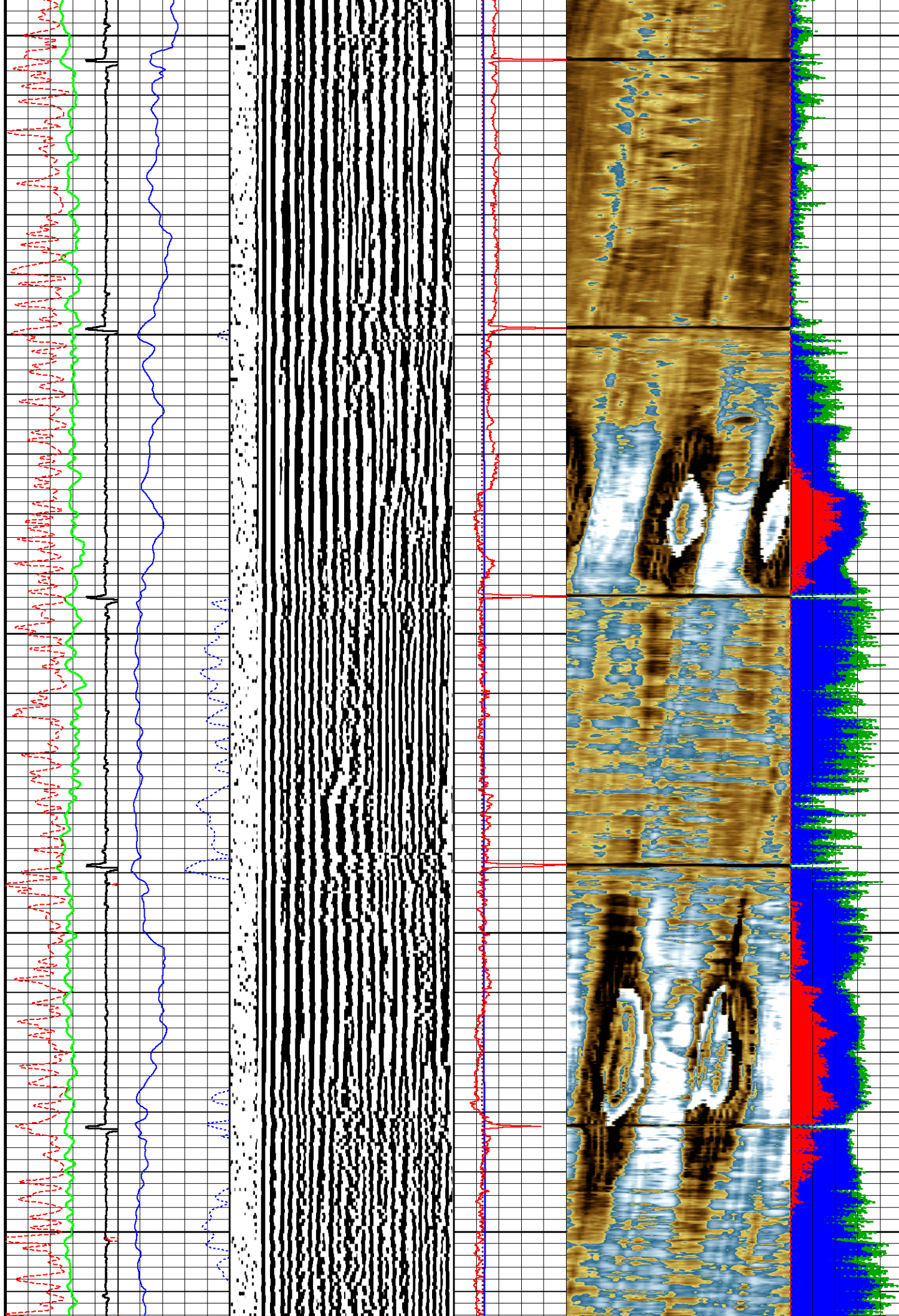
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1700

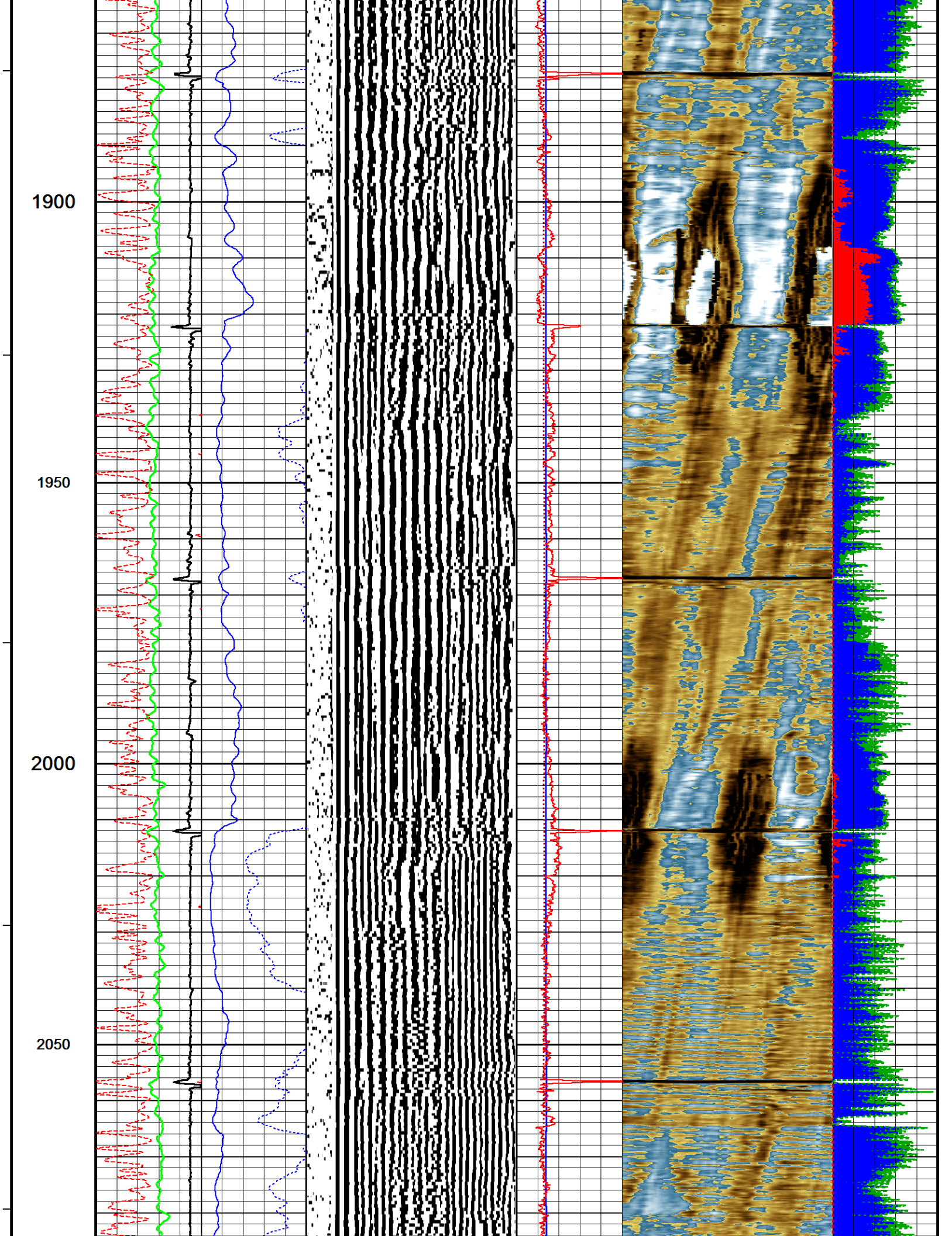
1750

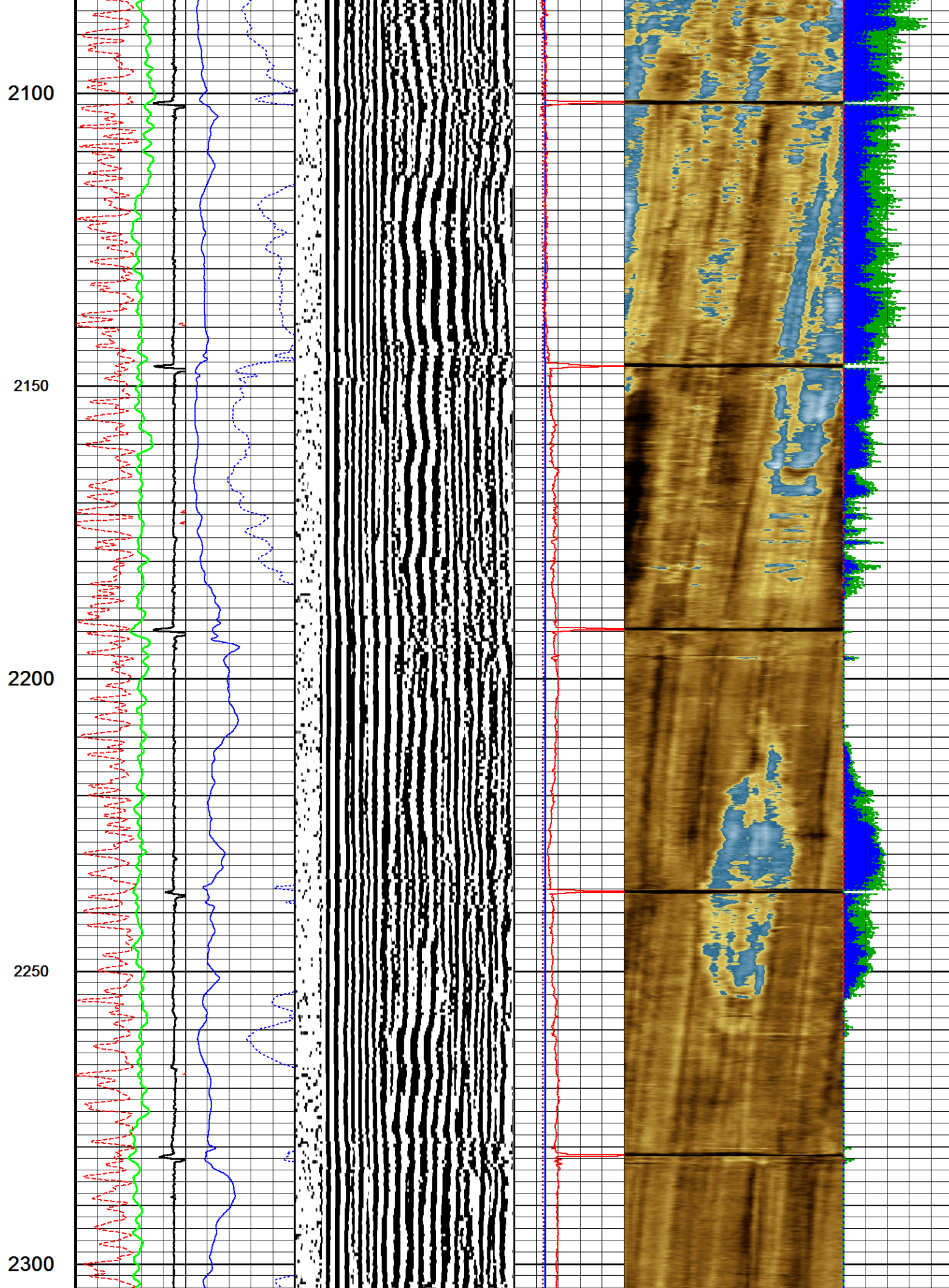
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1850









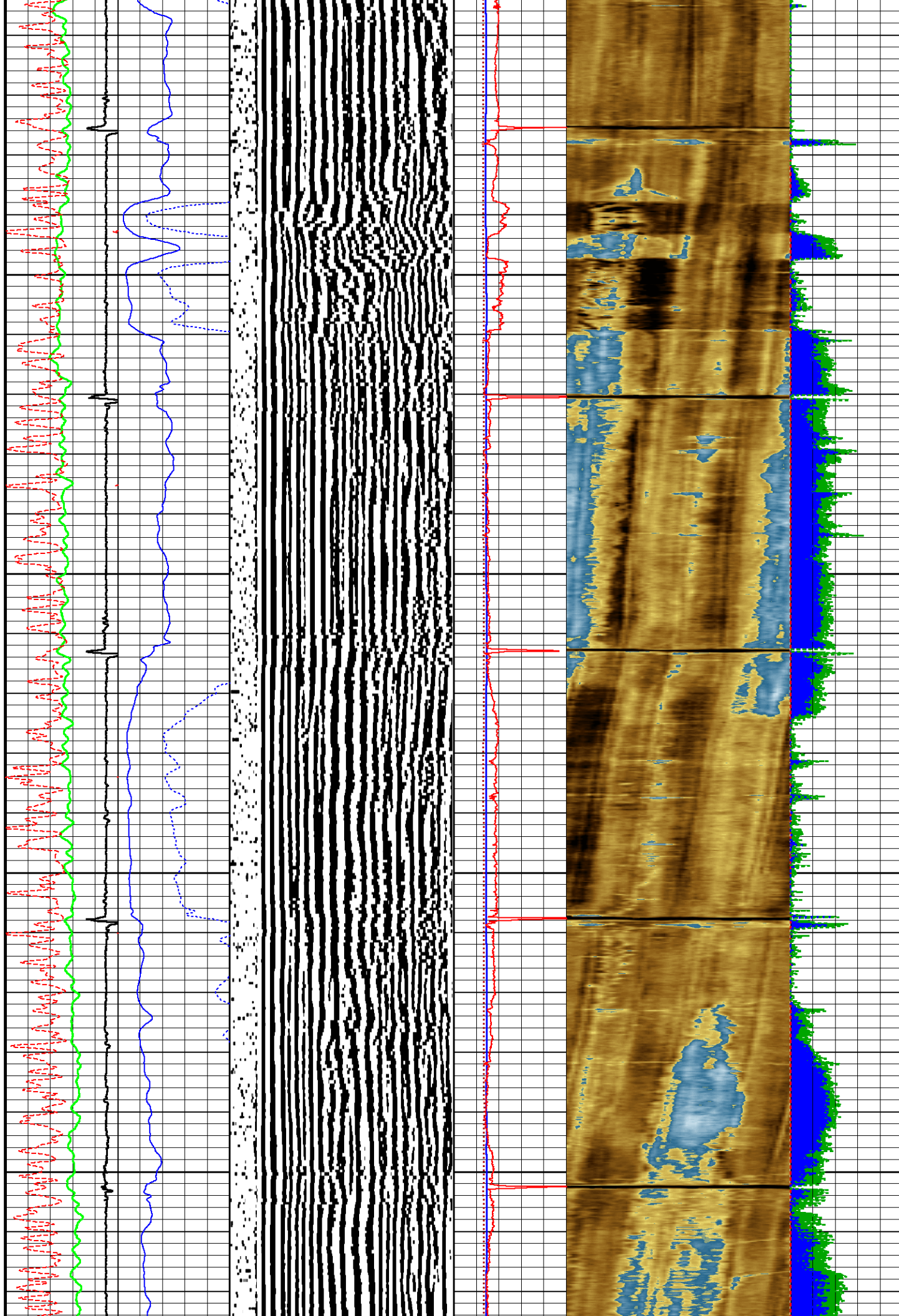


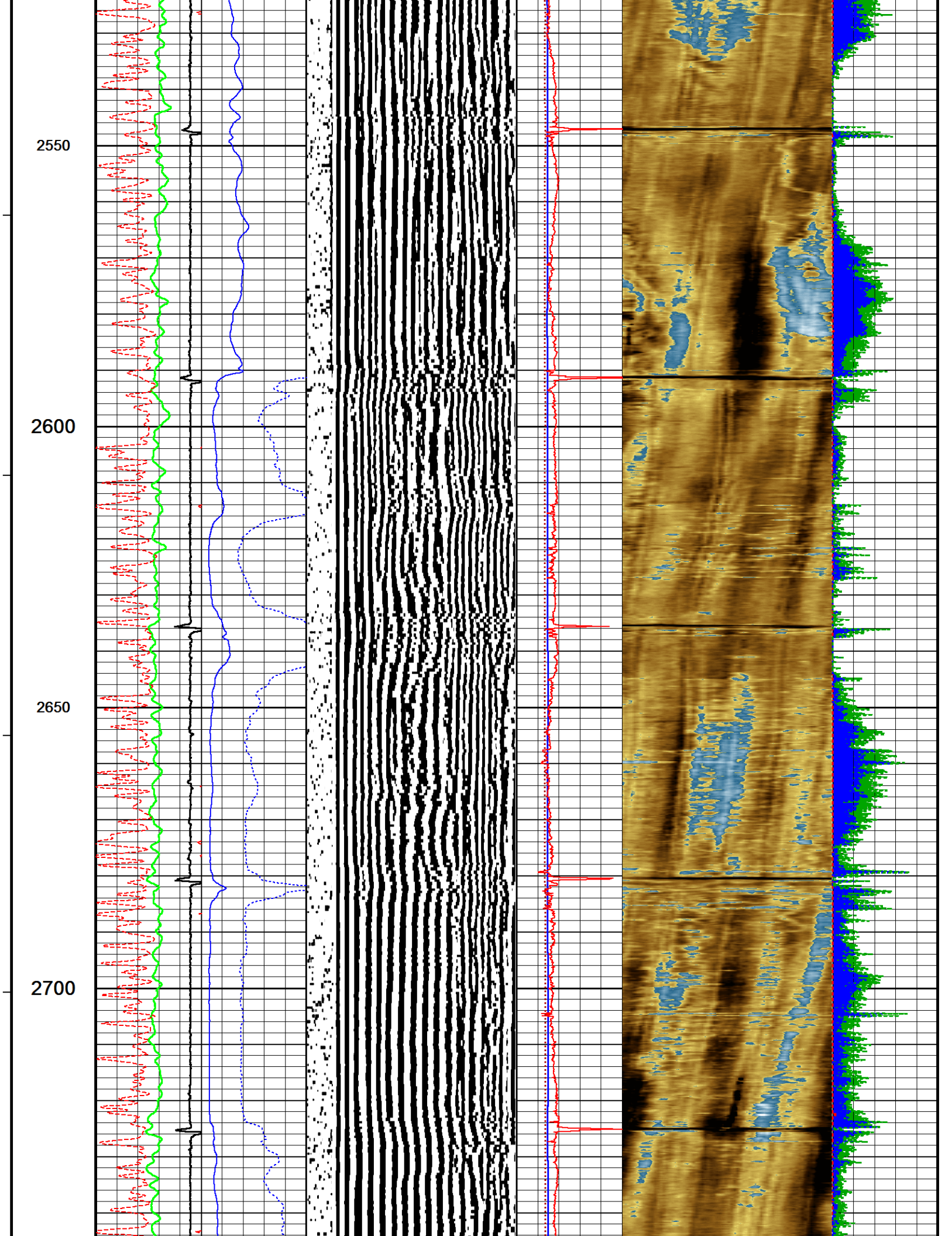
2350

2400

2450

2500







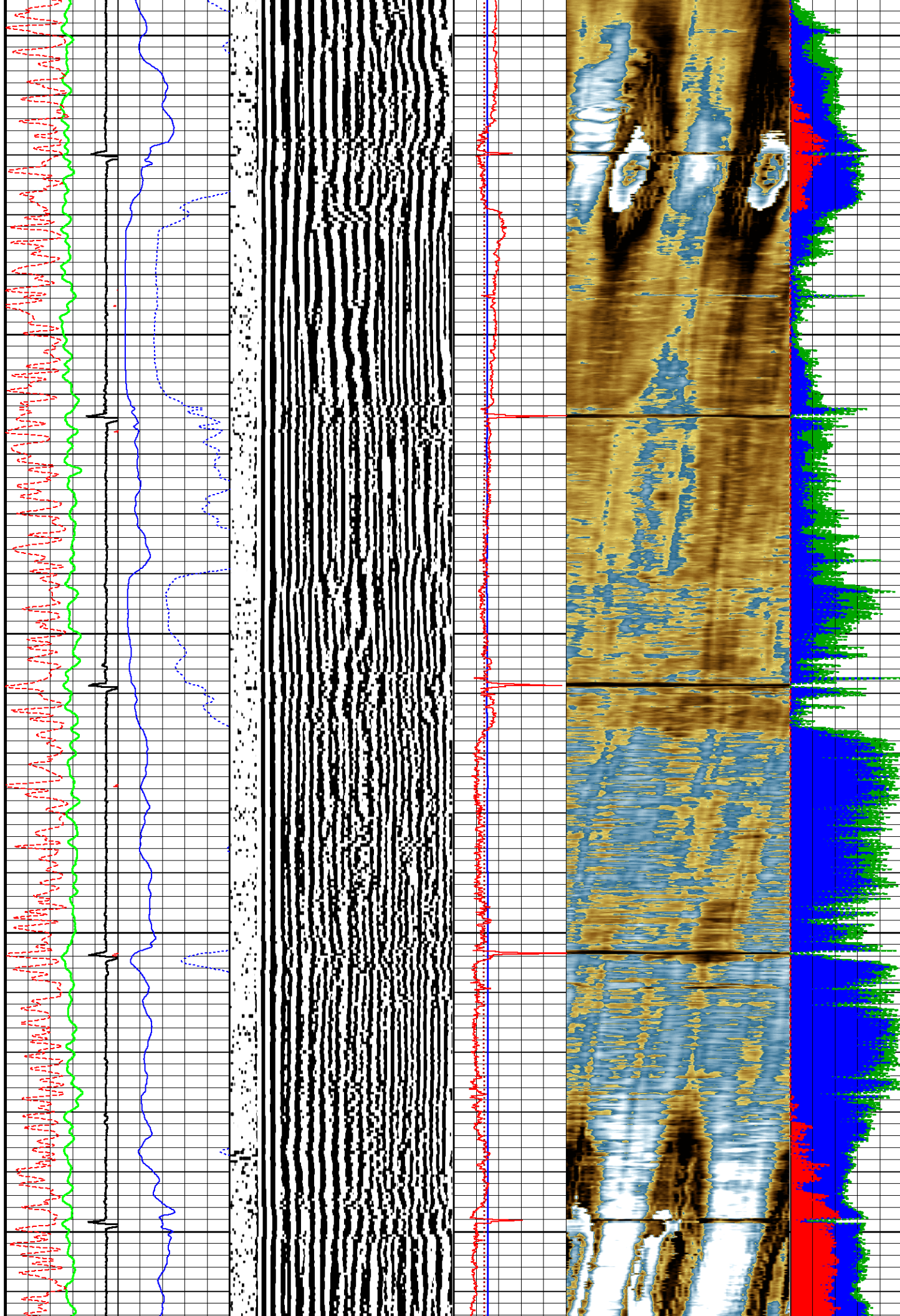
2750

2800

2850

2900

2950

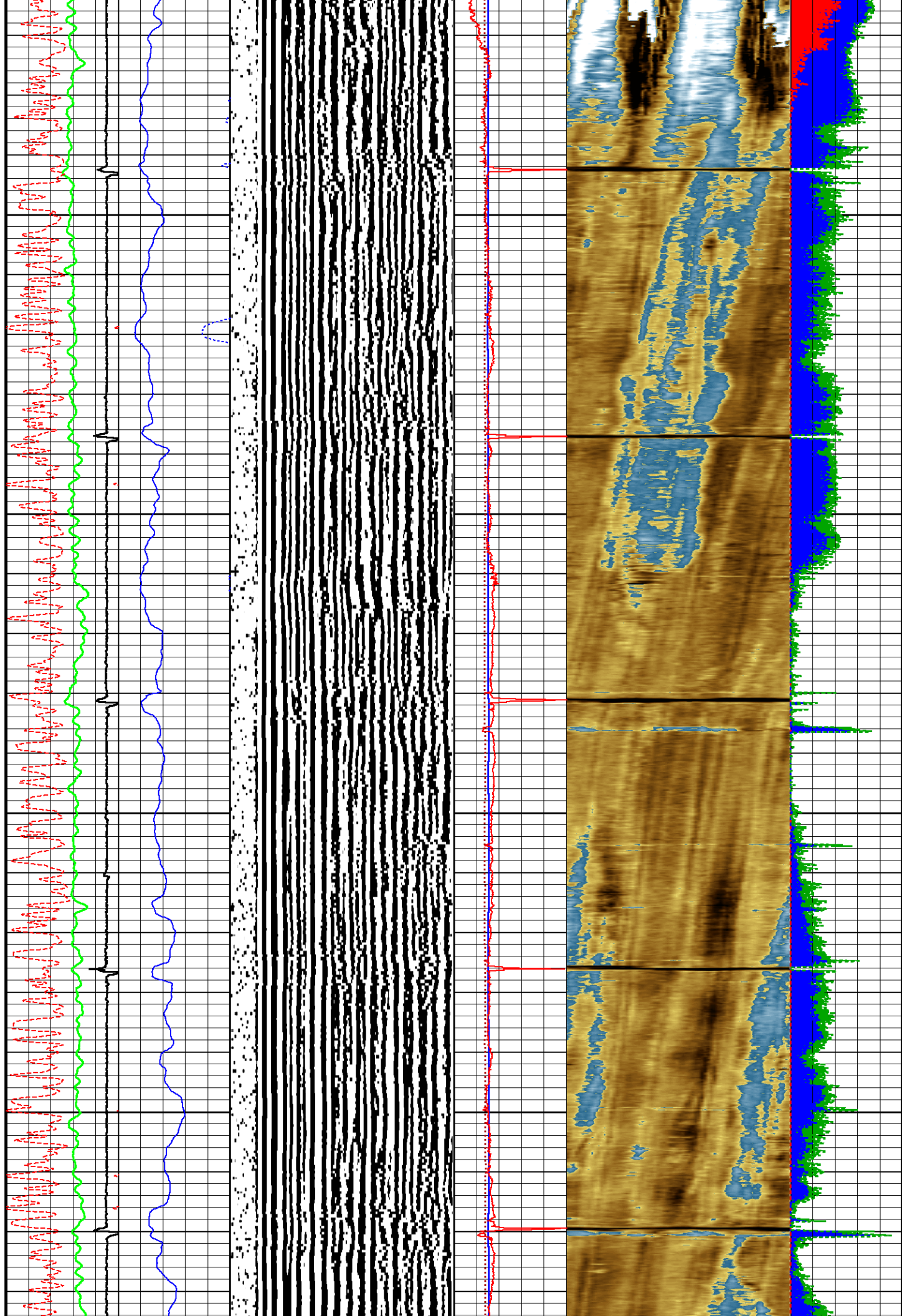


3000

3050

3100

3150





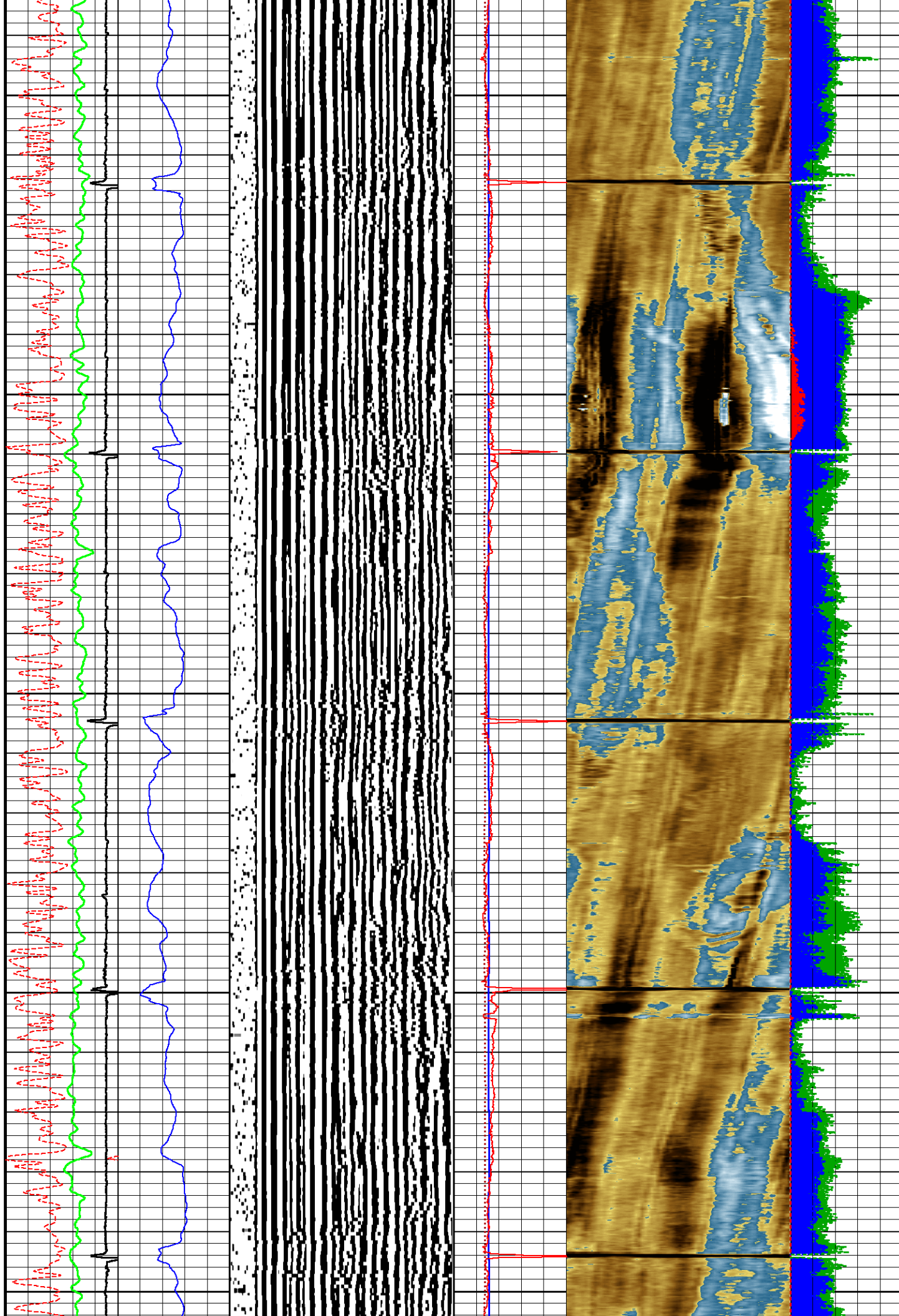
3200

3250

3300

3350

3400

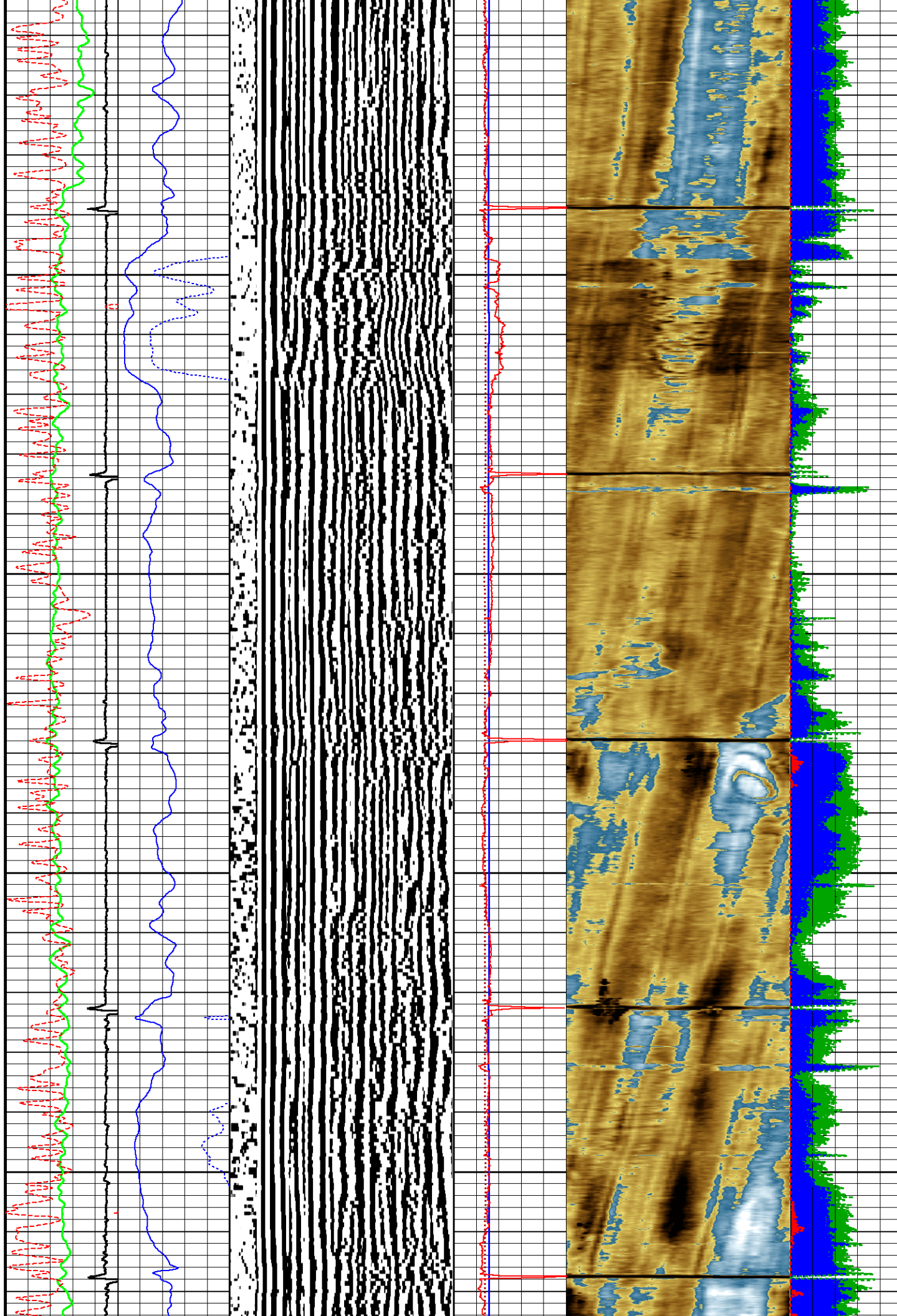


3450

3500

3550

3600



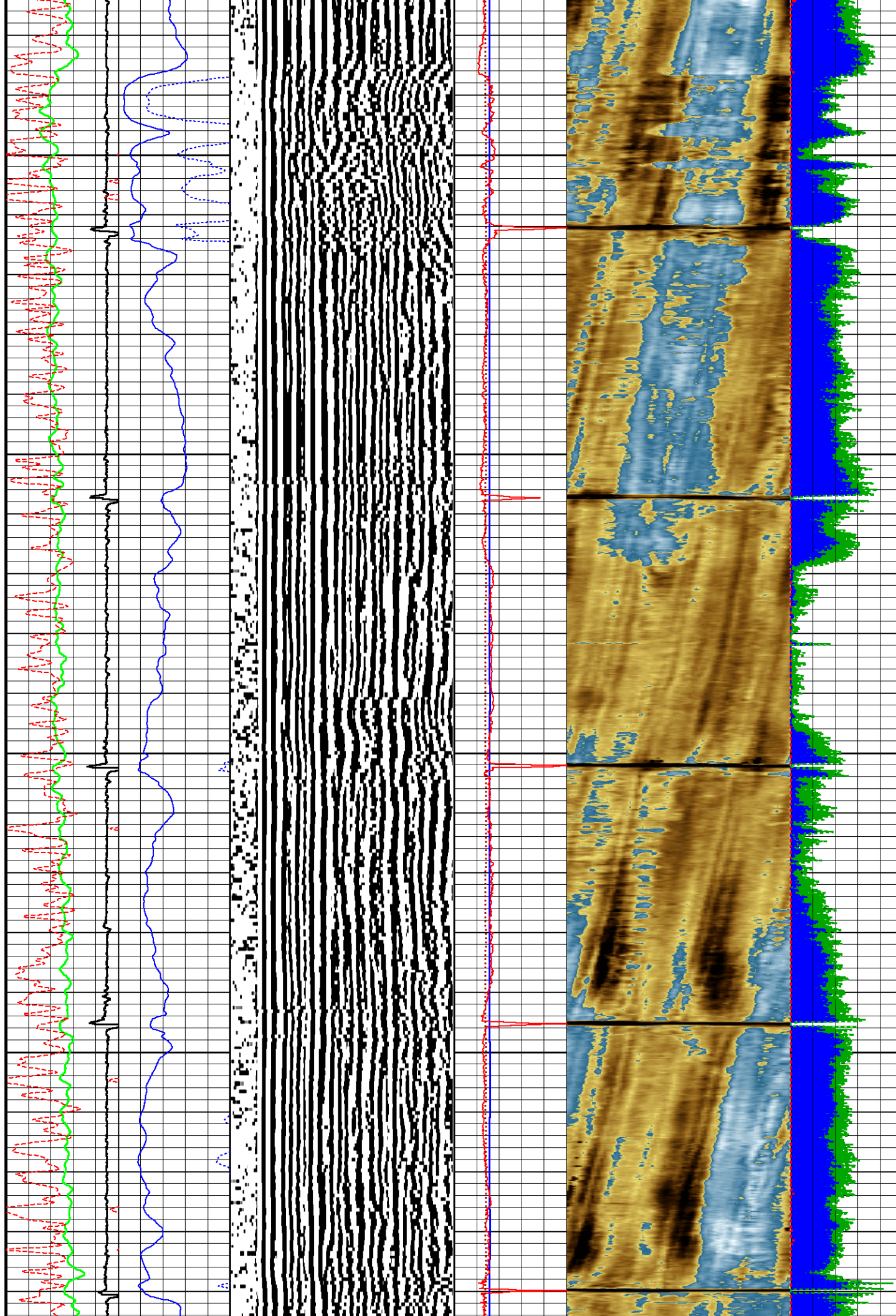


3650

3700

3750

3800



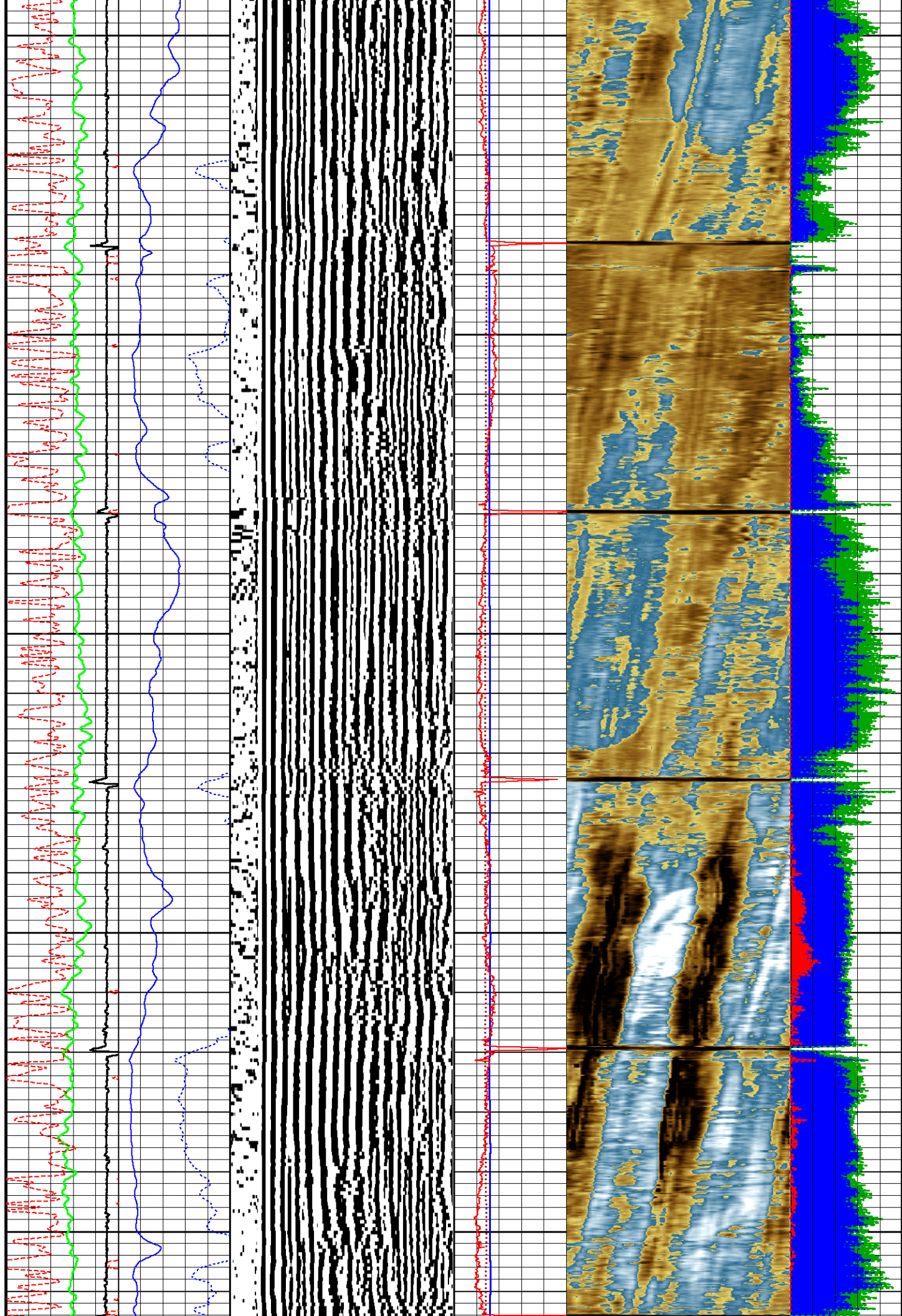
3850

3900

3950

4000

4050



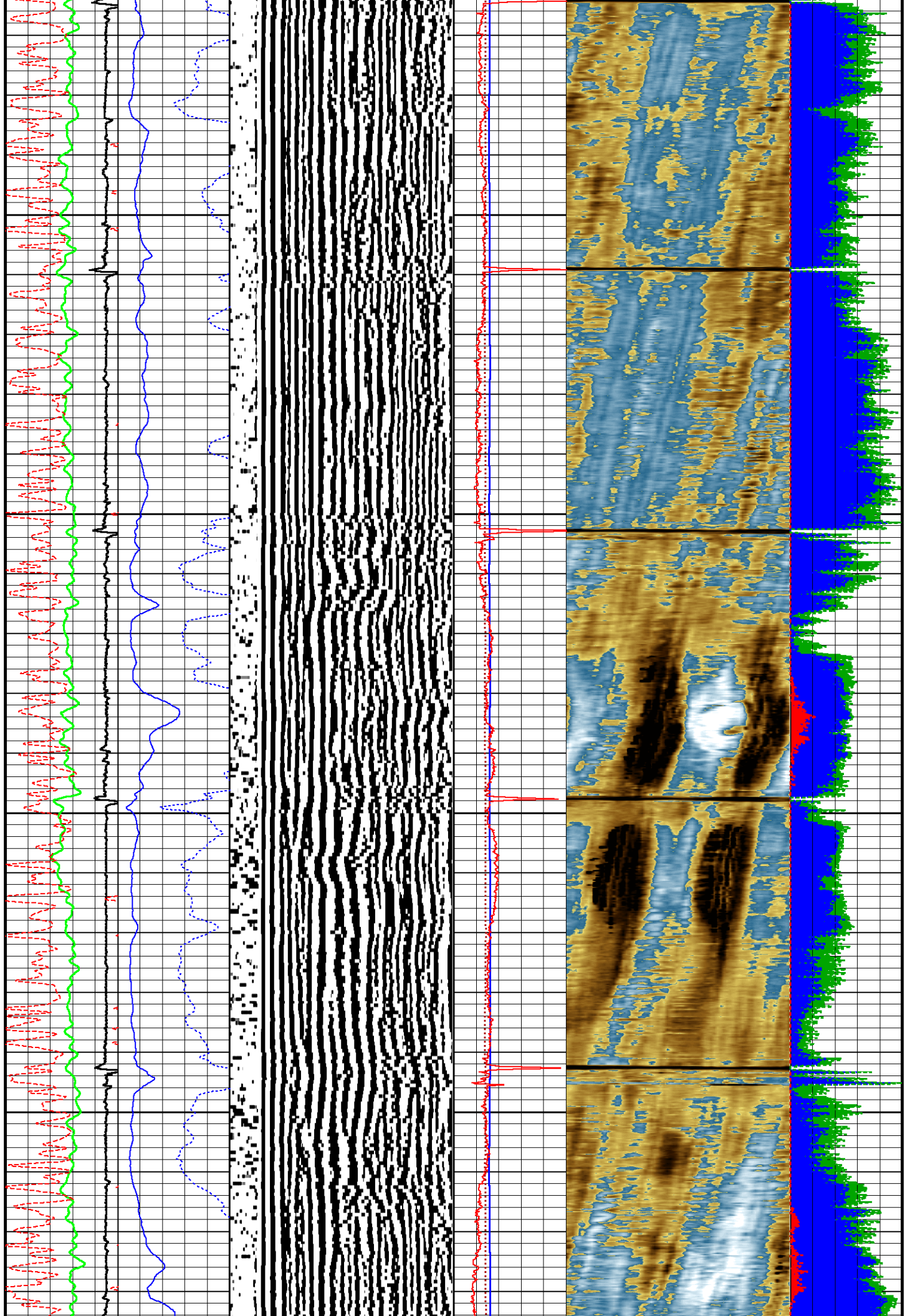


4100

4150

4200

4250



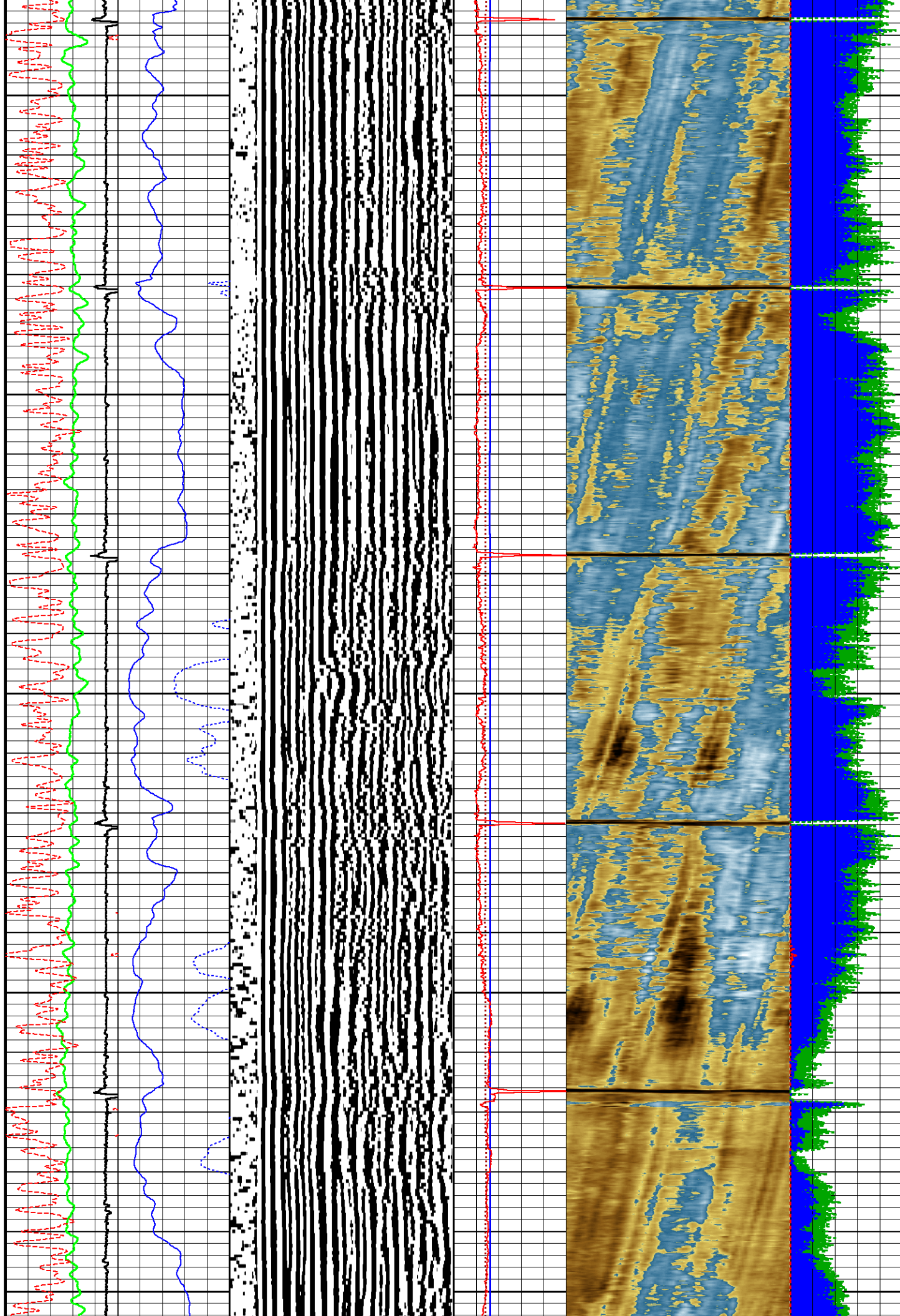
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4350

4400

4450

4500



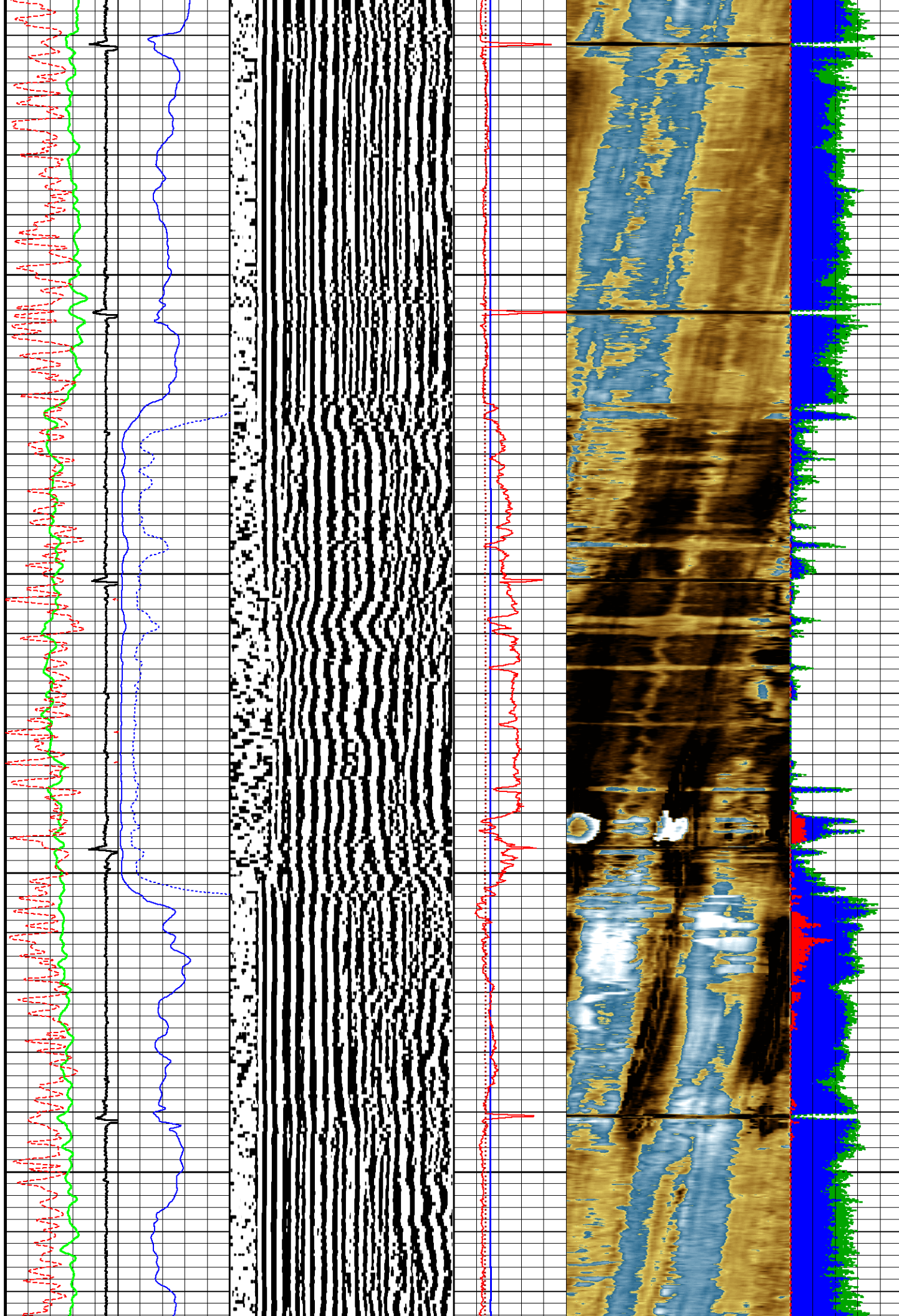


4550

4600

4650

4700

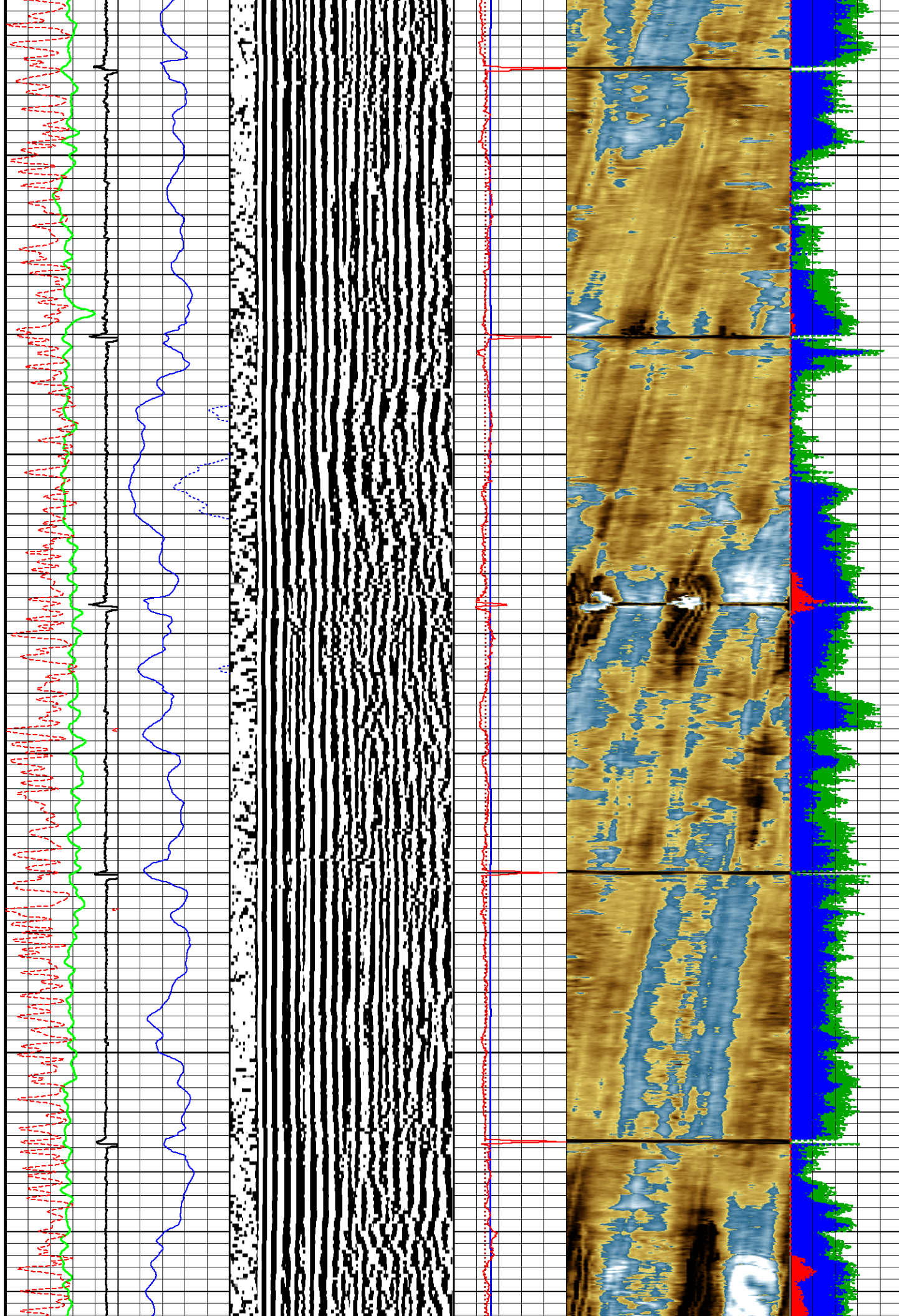


4750

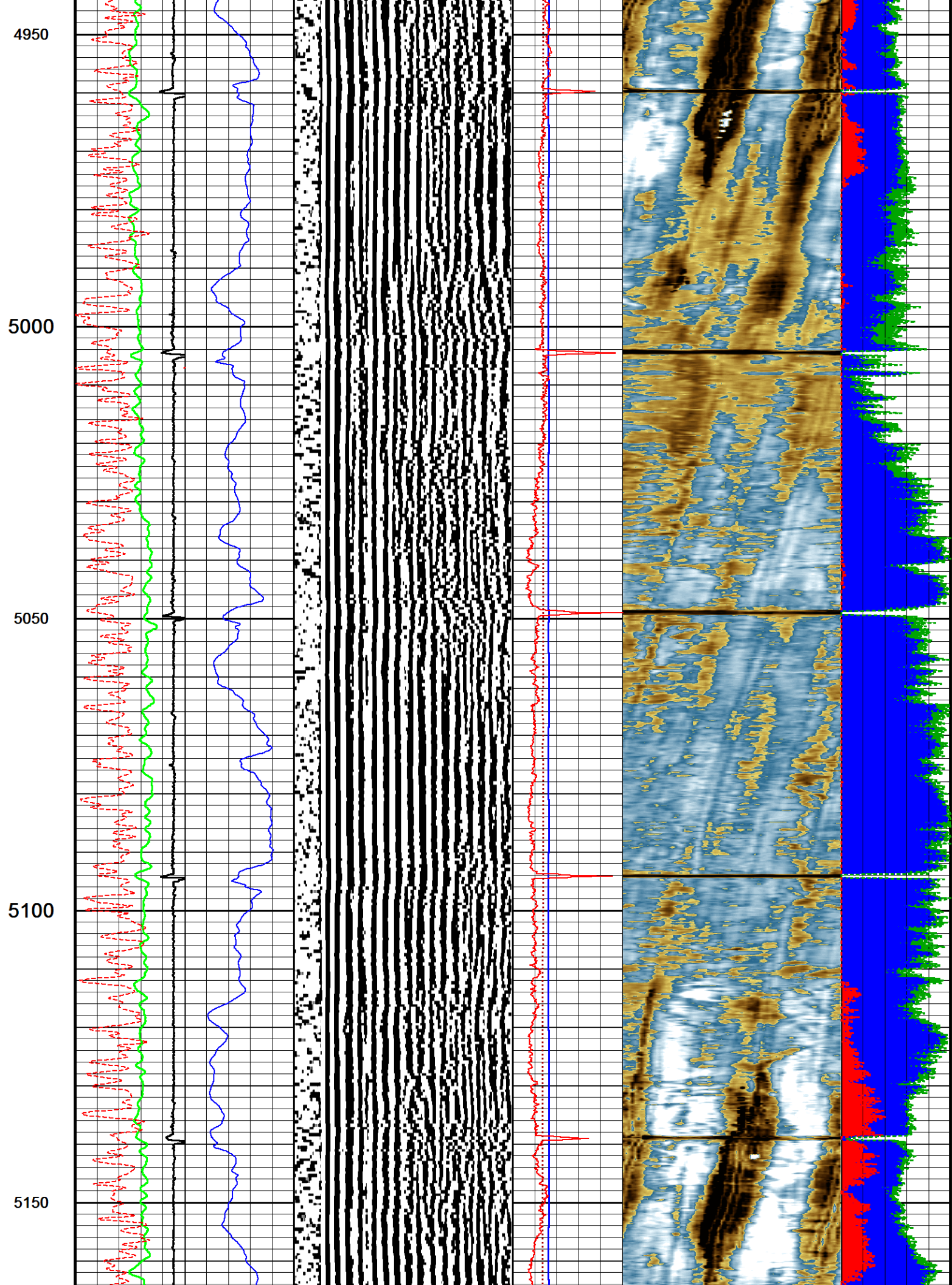
4800

4850

4900





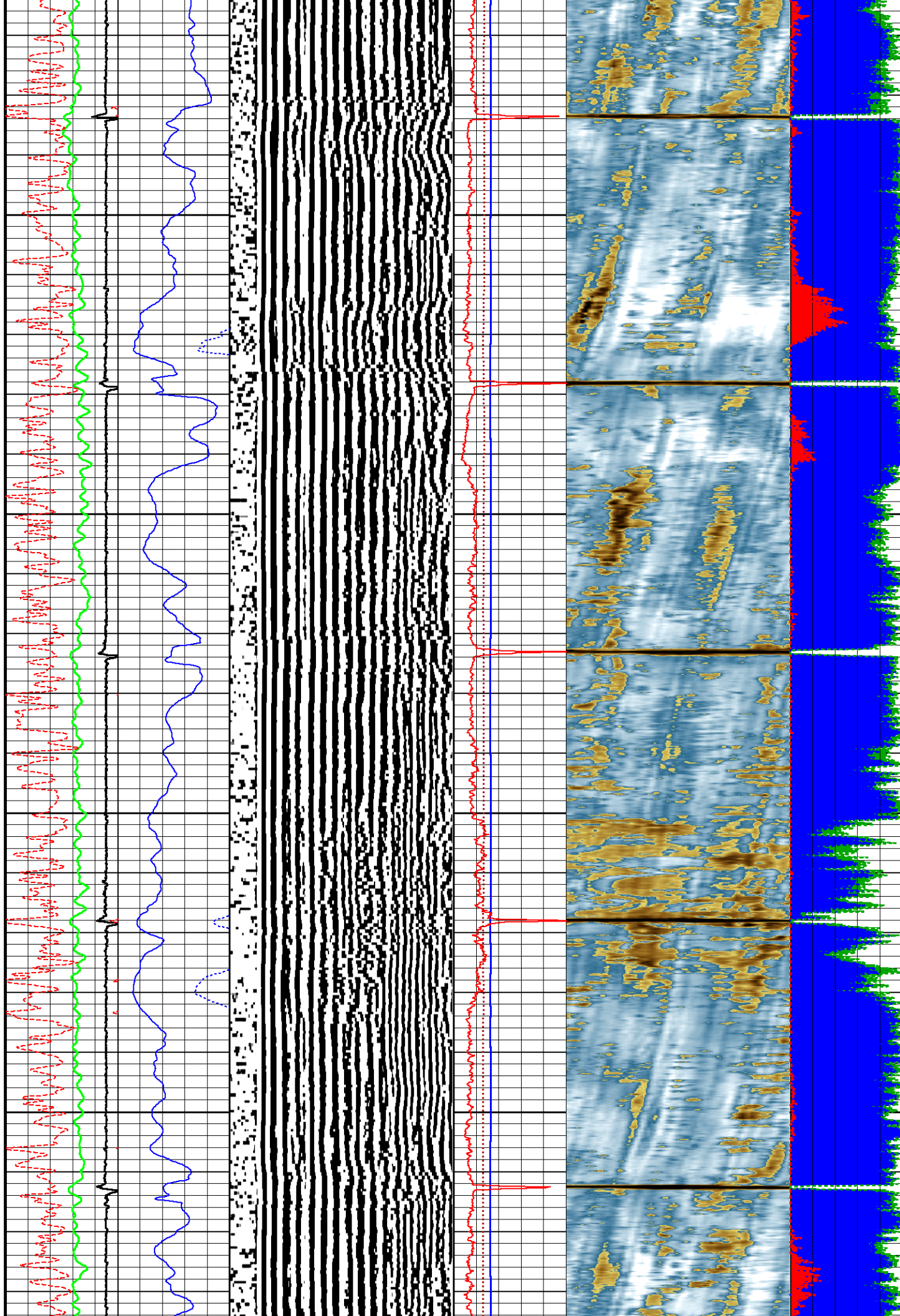


5200

5250

5300

5350





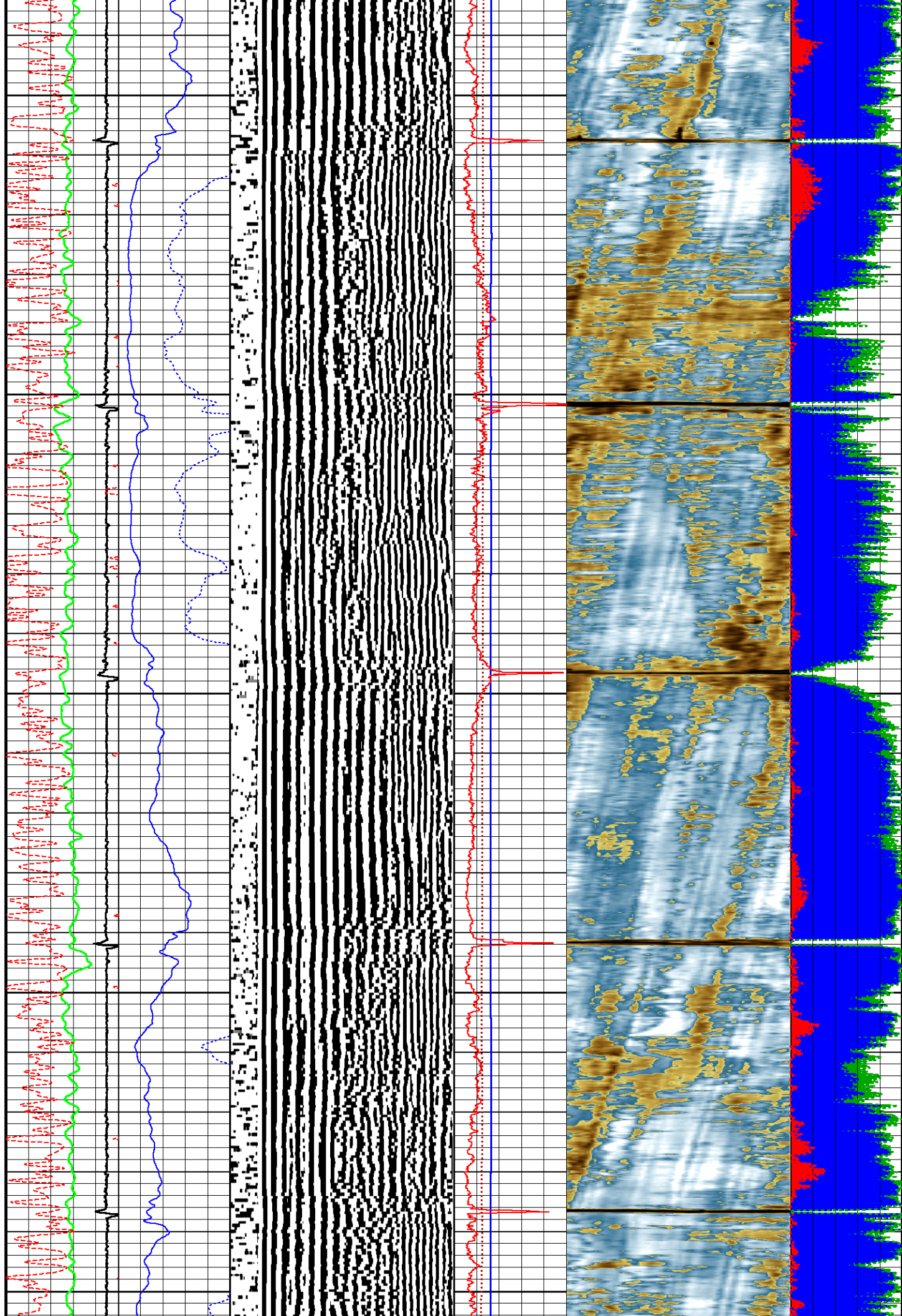
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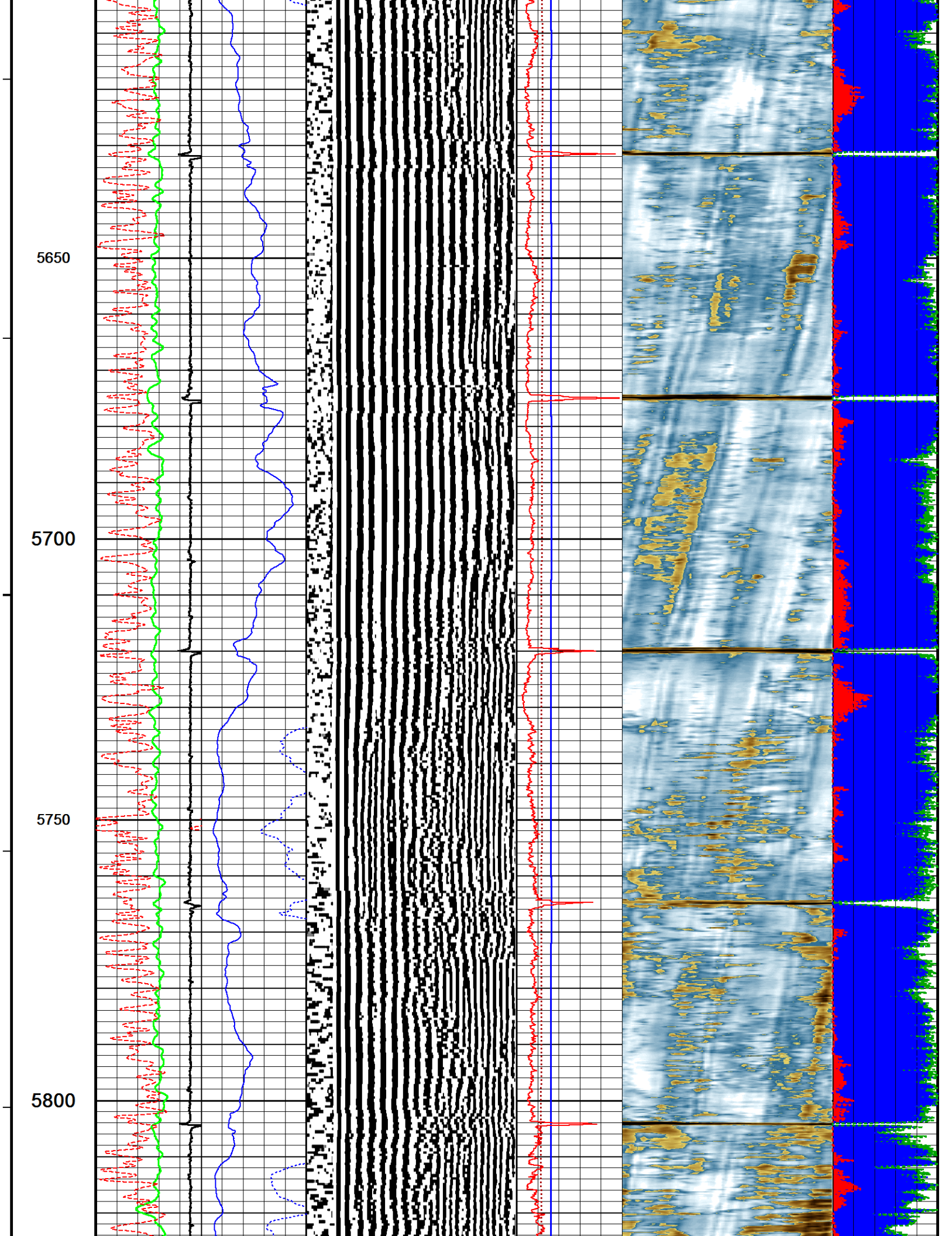
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5500

5550

5600





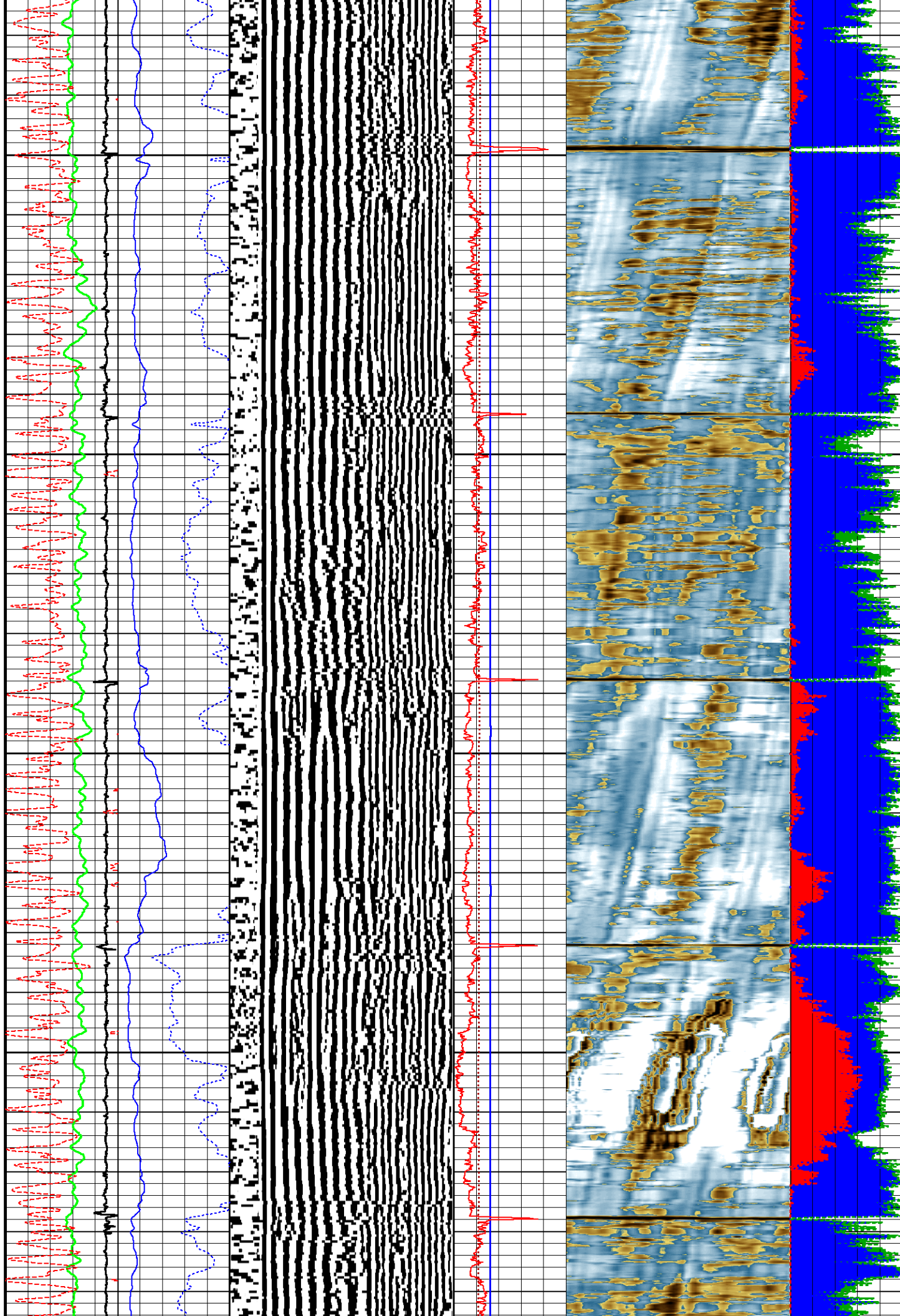


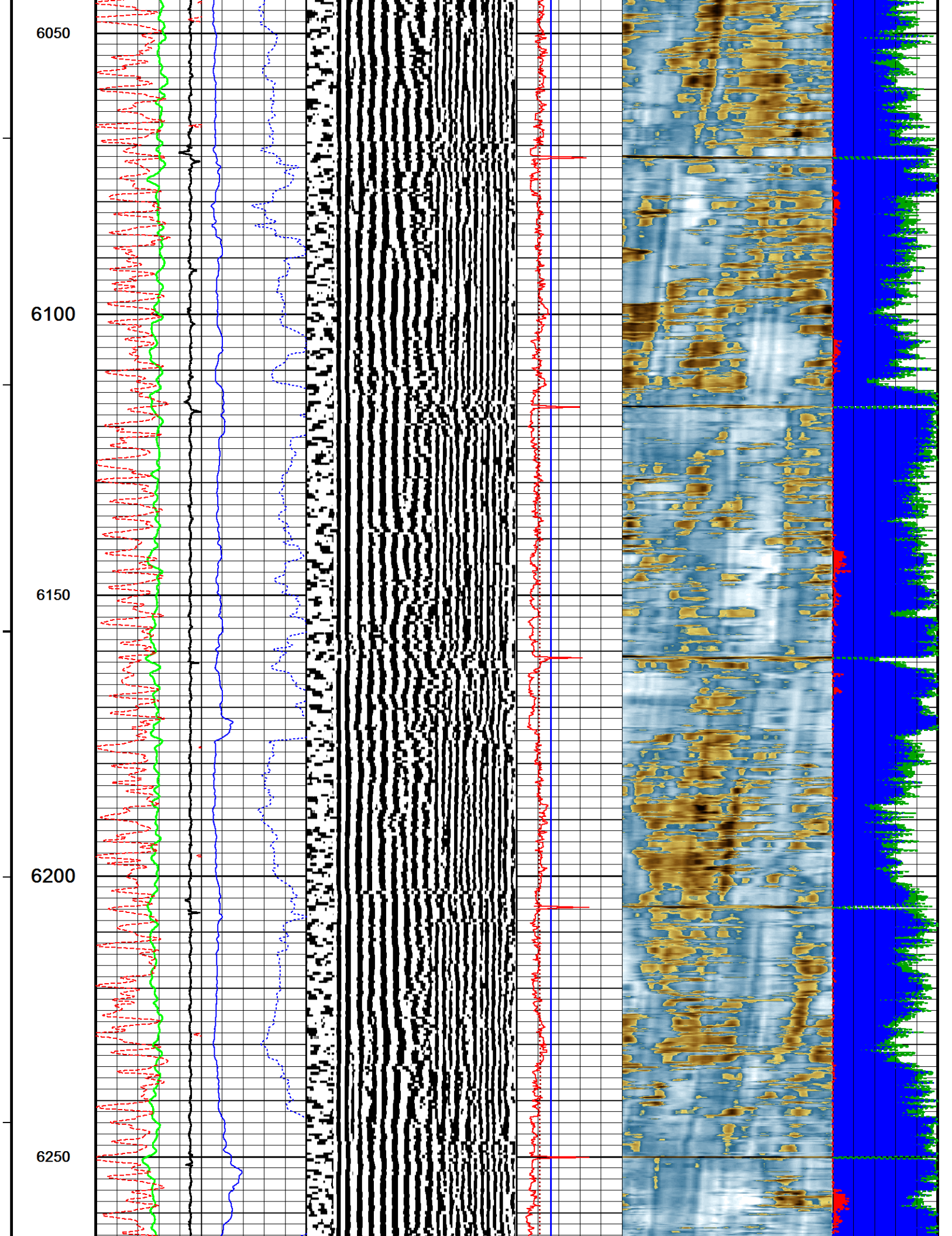
5850

5900

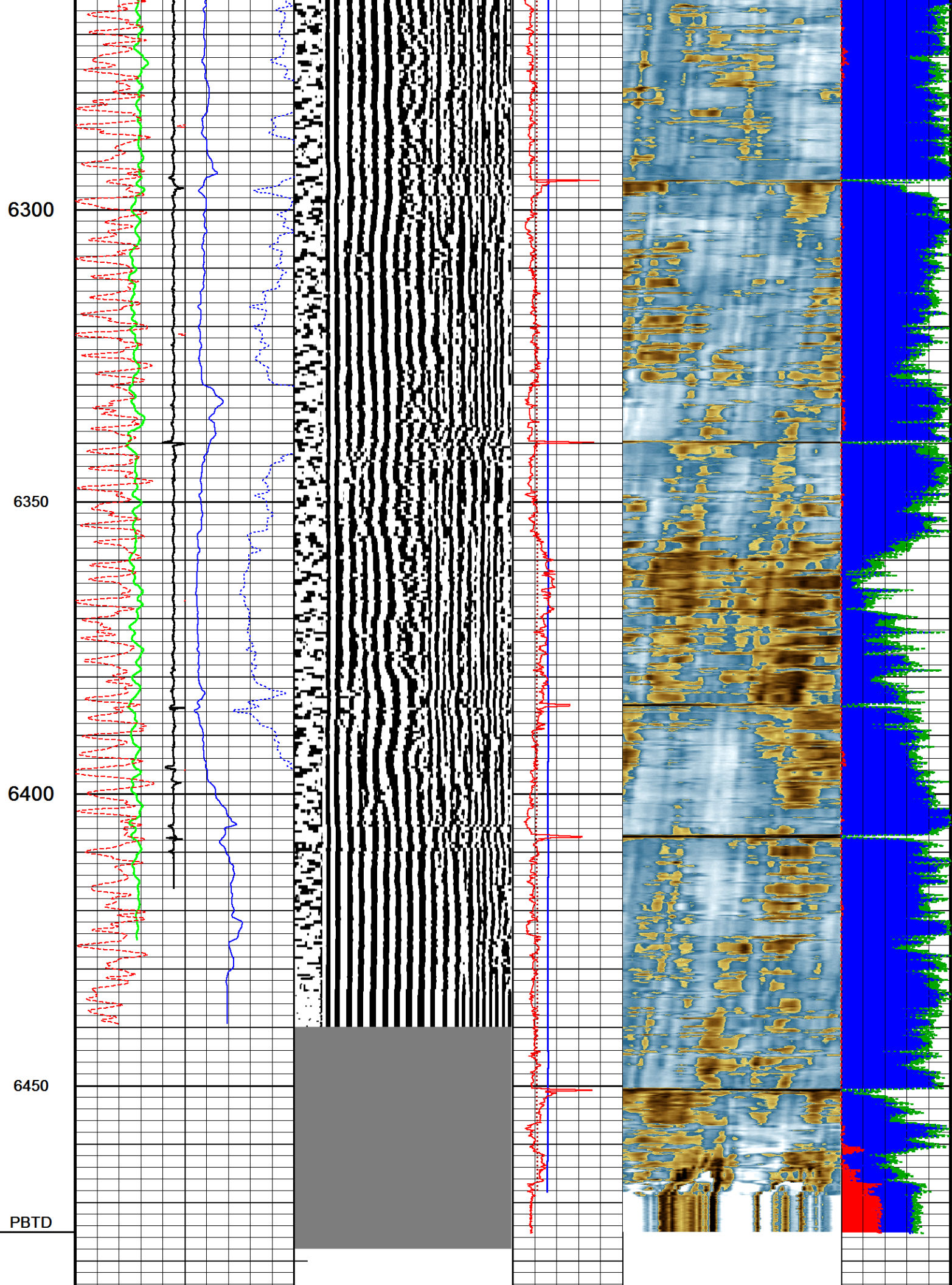
5950

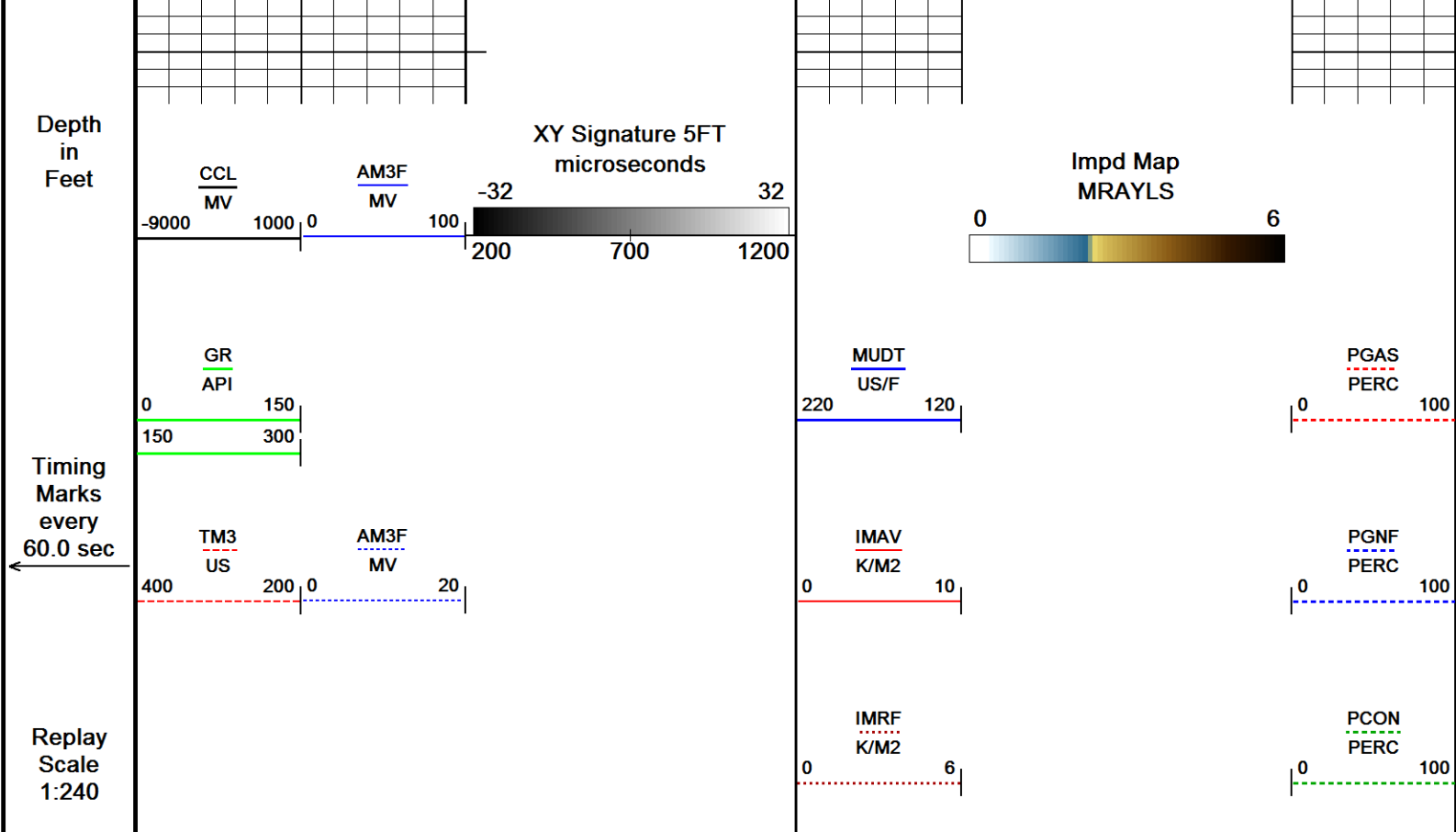
6000











Depth Based Data - Maximum Sampling Increment 2.5cm  
Filename: C:\Logs\Extraction\VARRA 11\VARRA 11 MAIN PASS.dta  
System Versions: Logged with 16.05.3841 Plotted with 16.05.3841

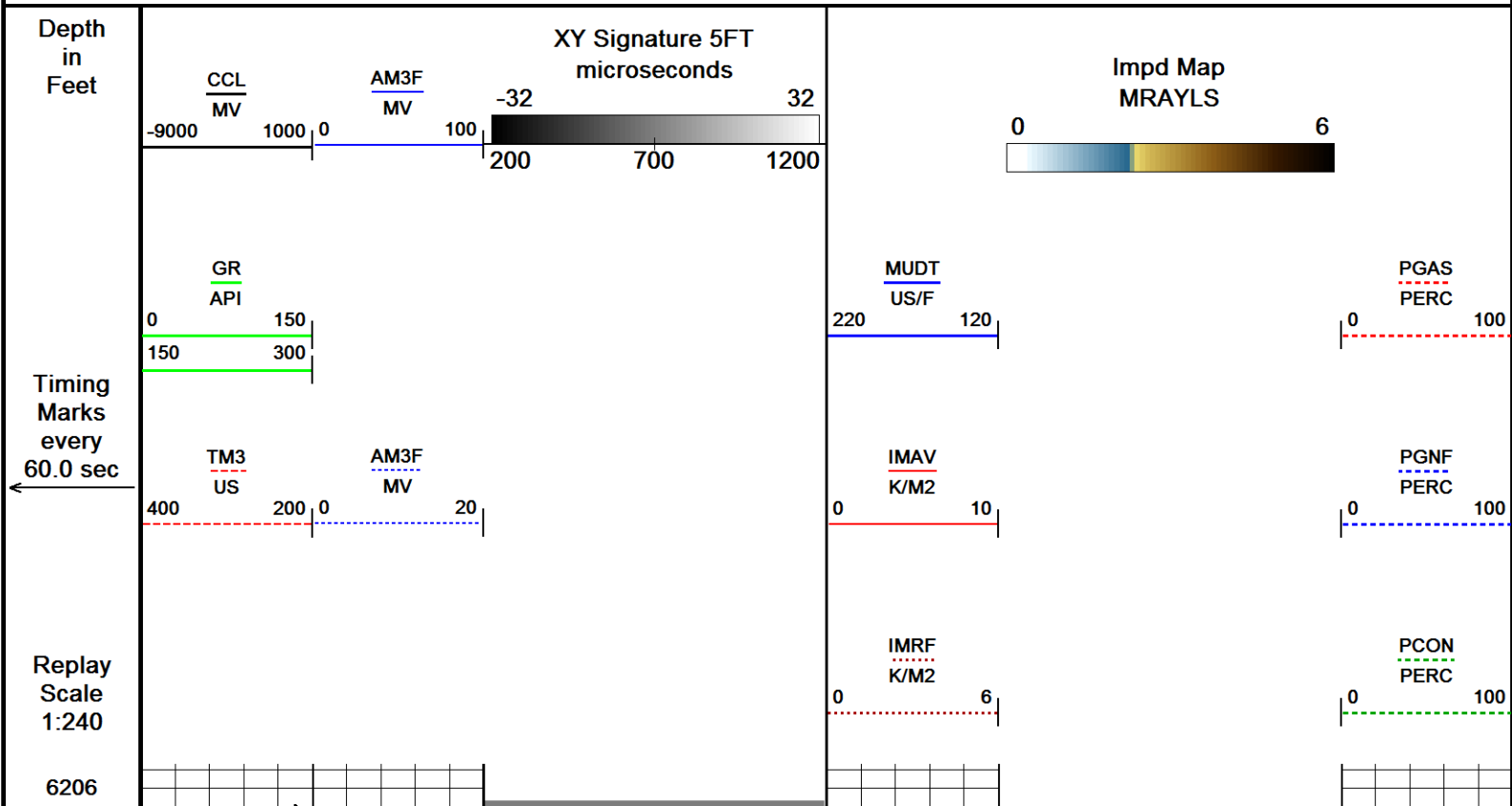
Plotted on 02-DEC-2016 20:29  
Recorded on 02-DEC-2016 12:46

MAIN PASS

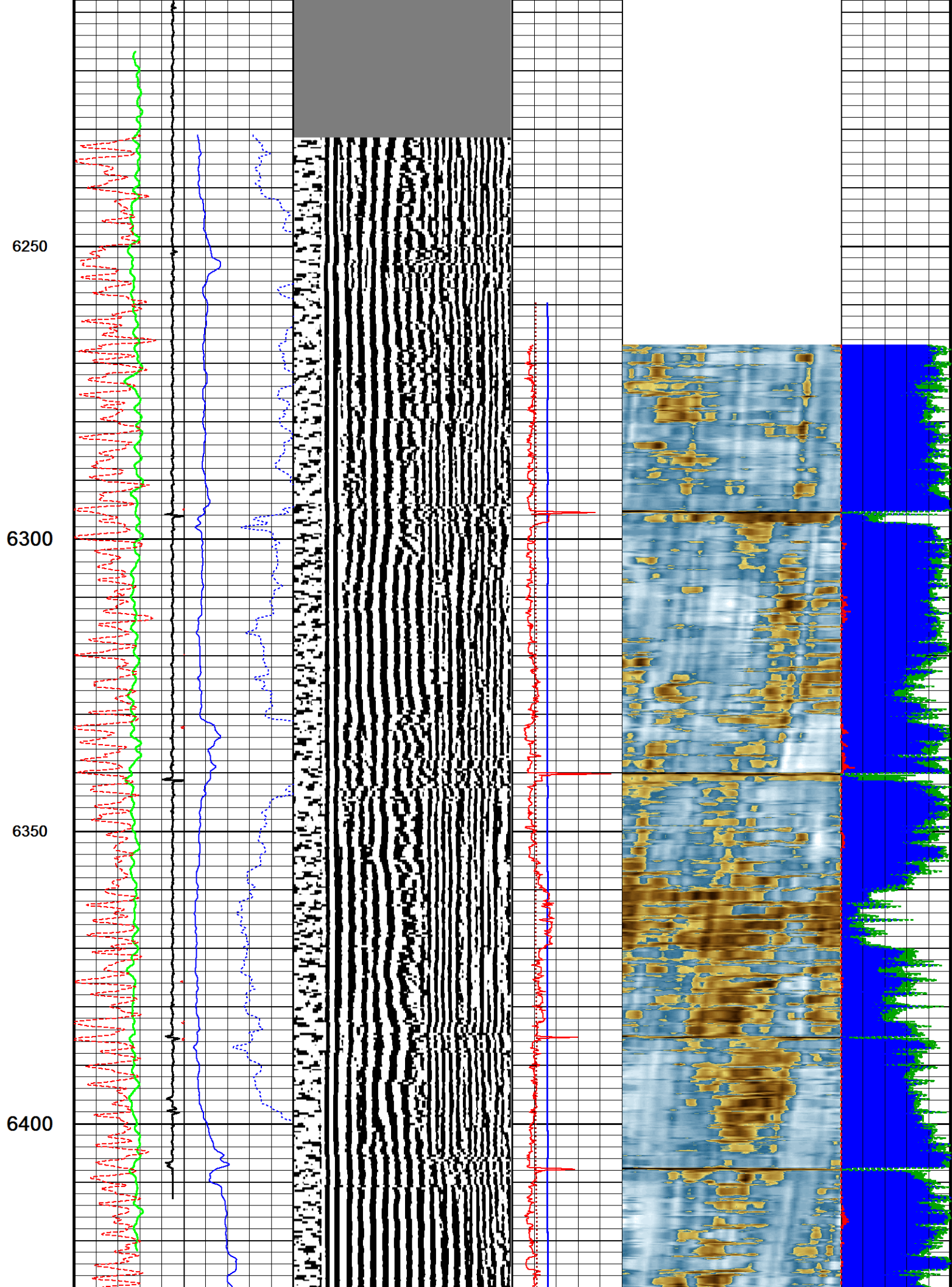
REPEAT PASS

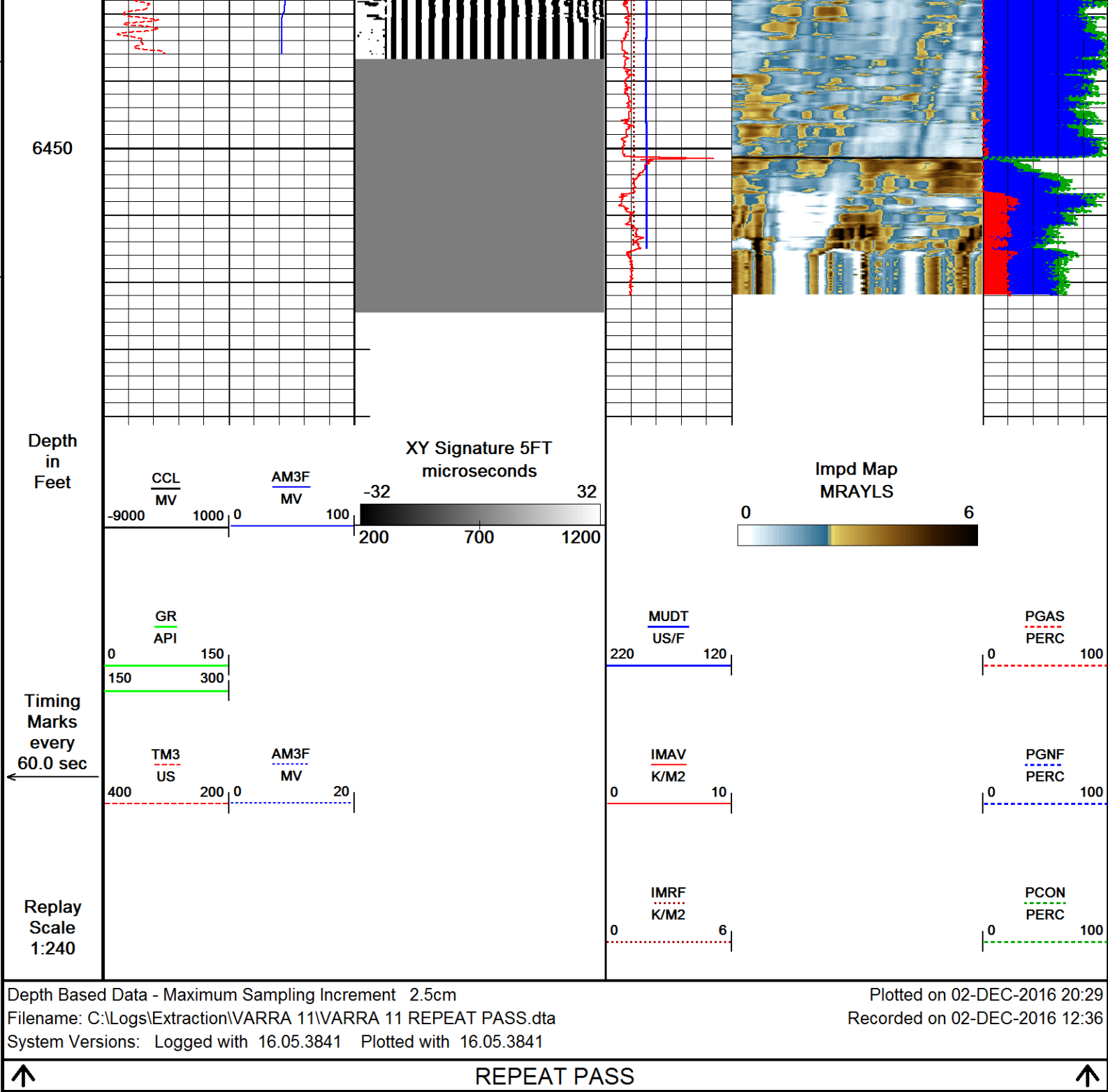
Depth Based Data - Maximum Sampling Increment 2.5cm  
Filename: C:\Logs\Extraction\VARRA 11\VARRA 11 REPEAT PASS.dta  
System Versions: Logged with 16.05.3841 Plotted with 16.05.3841

Plotted on 02-DEC-2016 20:29  
Recorded on 02-DEC-2016 12:36









## DOWNHOLE EQUIPMENT

C:\Logs\Extraction\VARRA 11\VARRA 11 MAIN PASS.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 128 LG: 1.05 ft WT: 15.4 lb OD: 3.386 in

Swivel Head 55 pin  
SWH-CC 173 LG: 2.72 ft WT: 77.2 lb OD: 3.346 in





Casing Collar Locator, 55 pin  
CCL-WA 142 LG: 3.01 ft WT: 19.8 lb OD: 2.756 in

59.48 ft CCL - Collar Locator

Communication Cartridge 55pin 3-3/8in  
WCC-DA 125 LG: 4.60 ft WT: 63.9 lb OD: 3.386 in

Gamma Ray  
UGR-JD 223 LG: 4.60 ft WT: 81.6 lb OD: 3.386 in

51.39 ft GR - Gamma Ray

Flexible Joint, URS, 55 Pin  
FTP-FA 131 LG: 4.35 ft WT: 90.4 lb OD: 3.386 in

55 pin Roller Centralizer  
CEN-XA 162 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

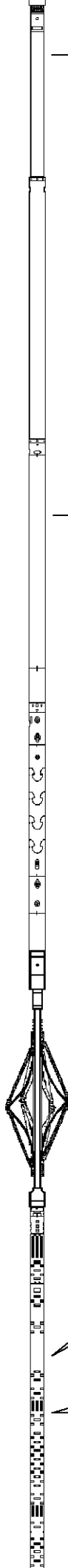
Cement Bond Tool  
CBT-AA 101 LG: 10.75 ft WT: 163.1 lb OD: 3.386 in

36.70 ft AM3F - Amplitude 3FT

36.70 ft TM3 - Travel Time 3FT

35.70 ft TM5 - Travel Time 5FT

35.70 ft XY5 - XY Signature 5FT



55 pin Roller Centralizer  
CEN-XA 222 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

Flexible Joint, URS, 55 Pin  
FTP-FA 182 LG: 4.35 ft WT: 90.4 lb OD: 3.390 in

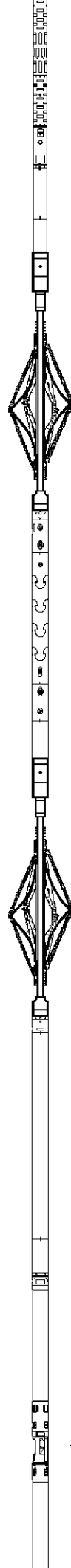
55 pin Roller Centralizer  
CEN-XA 221 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

URS Electronics Cartridge  
UCC-AA 194 LG: 4.51 ft WT: 79.4 lb OD: 3.386 in

URS Sonde Section  
USS-AB 178 LG: 9.65 ft WT: 167.6 lb OD: 3.386 in

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

Total Length: 65.13 ft Weight: 1122.2 lb



7.65 ft

IMRF - Mud Impedance

7.65 ft

MUDT - Mud Slowness

0.37 ft

IMMX - Max Impedance

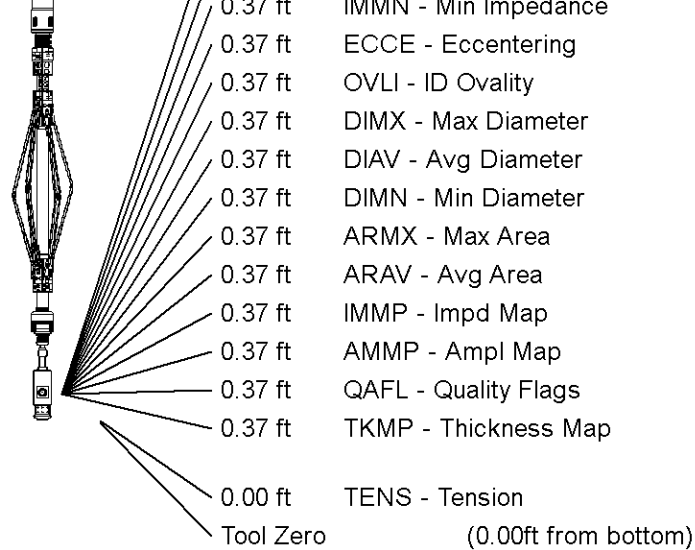
0.37 ft

IMAV - Avg Impedance

0.37 ft

IMMN - Min Impedance





All measurements relative to tool zero.

## SHOP AND FIELD CALIBRATIONS

C:\Logs\Extraction\VARRA 11\VARRA 11 MAIN PASS.dta

UGR Field Survey Cal UGR-JD 223

Field calibration on 03-NOV-2016 11:17

### Gamma Ray Field Survey Calibration

Tool Type: UGR-JD  
 Calibrator No: TH 047

Serial No: 223

Background	Calibrator	Standard	Units
89.3	548.2	155.0	CPS

Delta Counts Per Sec: 458.9

CPS/API = 2.961

CBT Field Calibration CBT-AA 101

Field calibration on 08-NOV-2016 08:11

### Cement Bond Tool Amplitude Field Calibration

Tool Type CBT-AA

Serial No 101

Free Pipe Depth

Sensor	Description	Standard(mV)	Measured(mV)
AMP 3 FT	100 % Bond	1.80	0.00
	Free Pipe	55.00	444.52
AMP 5 FT	100 % Bond	1.20	0.00
	Free Pipe	36.00	408.30

CBT Constants CBT-AA 101

Last Edited on 02-DEC-2016 12:46

Min Ampl 100% Bond	2.00 MV
Max Ampl 0% Bond	90.00 MV
Cement Cmpr Strength	580 PSI
Casing Size	5.50 IN

Casing Size	5.50 IN
Casing Weight	20.0 LB/F
Casing Velocity	57.00 US/F
DT Fluid	187.0 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 15-NOV-2016 08:41

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 02-DEC-2016 12:46

\*\*\* 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	3.75
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	1596.00	5.50	36.00	1.50	1.50	0.36	1.00
0.00	16800.00	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	Titanium Air Backed
Z_mud at Calibration	1.60 K/M2
Z_mud Outside	1.70 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

COMPANY	EXTRACTION OIL & GAS
WELL	VARRA 11
FIELD	WATTENBERG
PROVINCE/COUNTY	WELD
COUNTRY/STATE	USA / COLORADO

Elevation Kelly Bushing	4924	feet	Bottom Log Interval	6475.00	feet
Elevation Drill Floor	4924	feet	Depth Driller	16912.00	feet
Elevation Ground Level	4899	feet	Depth Logger	6475.00	feet



**Weatherford®**

SECUREVIEW  
ULTRAVIEW/BONDVIEW  
CEMENT ANALYSIS