

 Weatherford®			SECUREVIEW ULTRAVIEW / BONDVIEW CEMENT EVALUATION			
COMPANY	WSP USA INC.					
WELL	WDW #4					
FIELD						
PROVINCE/COUNTY	EDDY					
COUNTRY/STATE	NEW MEXICO / USA					
LOCATION	LOT N 1217' FSL & 2443' FWL					
PERMIT NUMBER	MNM025527A					
SEC	TWP	RGE	Other Services			
Latitude	32.815814					
Longitude	104.250034					
API Number	30-015-44677					
Permanent Datum GL, Elevation 3565 feet			Elevations: feet			
Log Measured From KB, 20.00 feet above Permanent Datum			KB 3585.00			
Drilling Measured From KELLY BUSHING			DF 3584.00			
			GL 3565.00			
Date	31-JUL-2018		PERFORATION RECORD			
Run Number	ONE		Shot	Number	Depth From	Depth To
Service Order	5839-220194889		Density	of Shots	feet	feet
Type Log	URS / CBT					
Depth Driller	10306.00					
Depth Logger	10307.00					
Top Log Interval	300.00					
Bottom Log Interval	10307.00					
Hole Fluid Type	WBM					
Hole Fluid Level	300.00					
Restriction ID	8.681					
Max Recorded Temp	151.00					
Well Head Pressure	0.00					
Well Head Equipment	NONE					
Time Well Ready	15:00		Size	Weight	Depth From	Depth To
Time Logger Bottom	17:45		inches	pounds/ft	feet	feet
Unit	14183					
Equipment Name	WSS-E					
Base	OKC					
Recorded By	HOLUB / TAYLOR					
Witnessed By	Mr. KEVIN COOK					

BOREHOLE RECORD						Last Edited: 31-JUL-2018 13:20
Bit Size inches		Depth From feet		Depth To feet		
17.500		0.00		1680.00		
12.250		1680.00		10326.00		
CASING / TUBING RECORD						
Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE			13.375	0.00	1680.00	54.50
INTERMEDIATE			9.625	0.00	10326.00	47.00

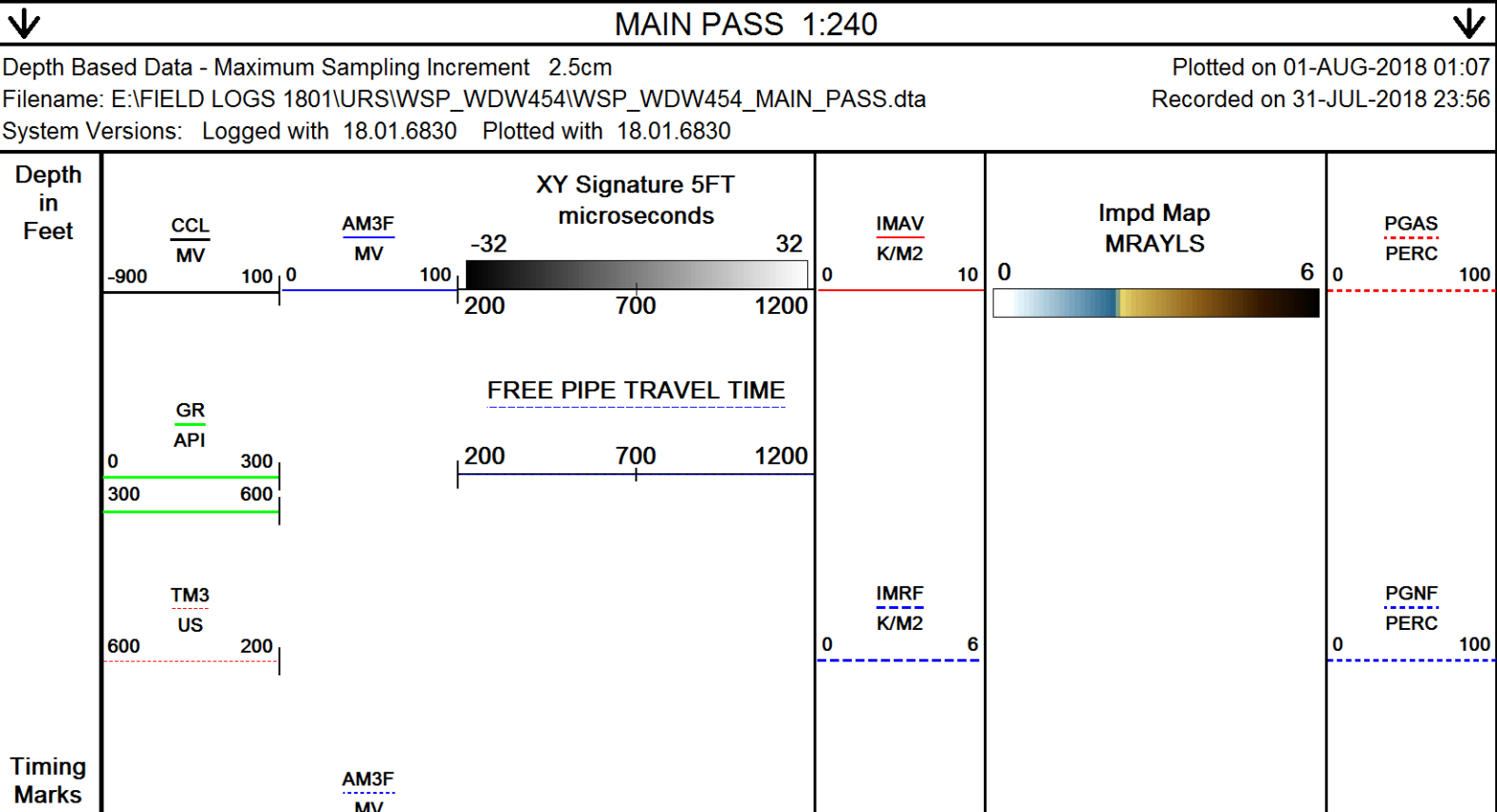
REMARKS
SERVICE ORDER NO: 5839-220194889 LOGGED USING WSS-E, WLS VERSION 18.01
TOOL ZEROED AT KELLY BUSHING. - NO LOGS AVAILABLE FOR CORRELATION AT TIME OF LOGGING. - ULTRASONIC CEMENT ANALYSIS UNAVAILABLE AT TIME OF LOGGING.
CEMENT RETAINER SET AT 10280'.
LOGGED FROM 10307' TO SURFACE AS PER CUSTOMER REQUEST. LOG DATA AFFECTED ABOVE 300' DUE TO WELLBORE FLUID.
LOG PRESENTATIONS NOT SPECIFIED BY CUSTOMER.

IMPEDANCE COLOUR PALETTE:

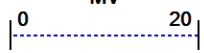
White-----0-0.38 - Gas
Lt Blue-Dk Blue-----0.39-2.3 - Liquid Gas-Fresh water
Yellow-Lt Brown-----2.31-2.70 - Heavy drill fluid - light cement
Lt Brown-Dk Brown-----2.71-3.85 - Low Impedance Cement
Dk Brown-----3.86-5.0 - Medium Impedance Cement
Black-----Larger than 5.0 - High Impedance Cement

THANK YOU FOR CHOOSING WEATHERFORD.

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.



every
60.0 sec
←



MUDT
US/F
250 150

PCON
PERC
0 100

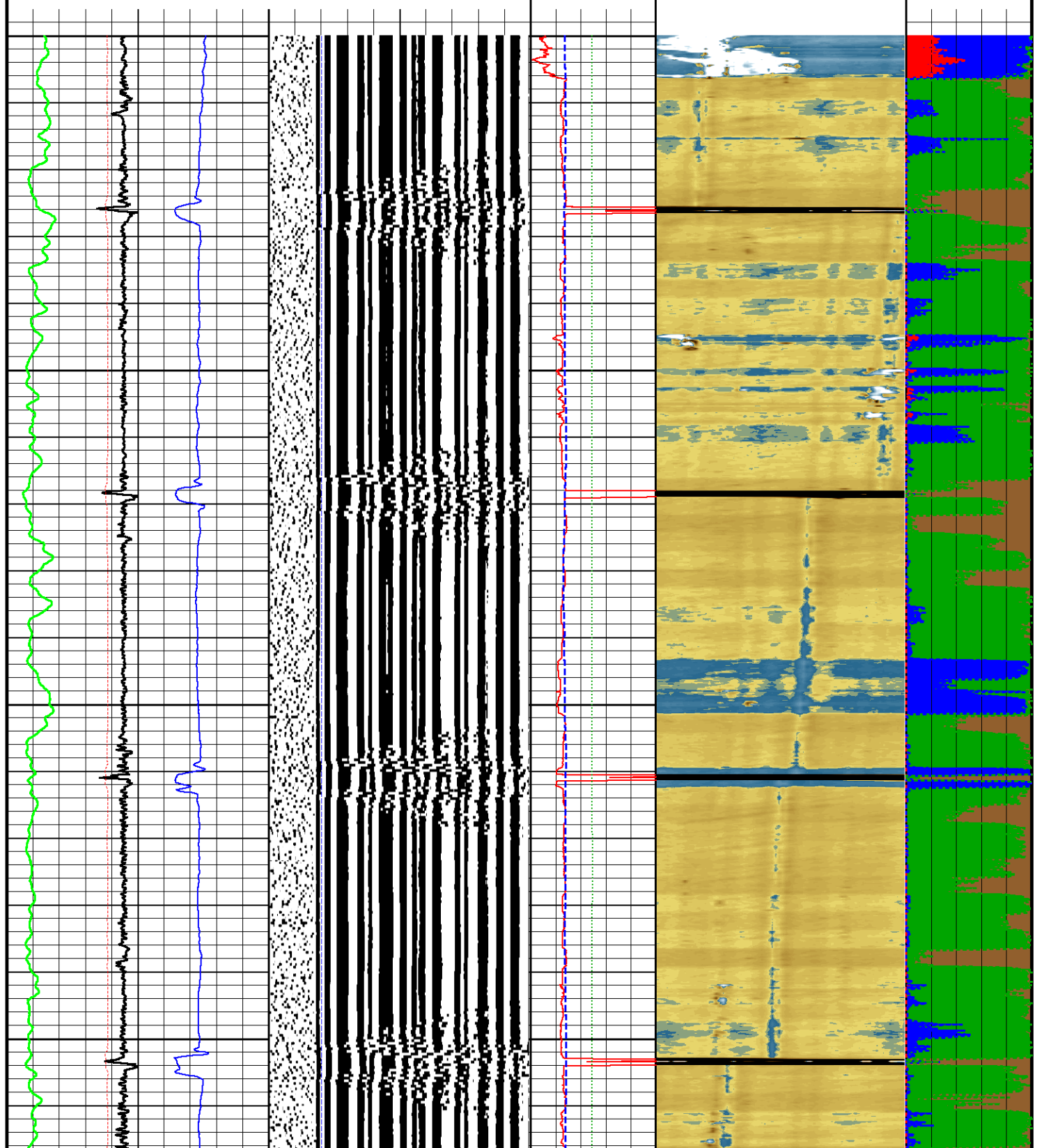
Replay
Scale
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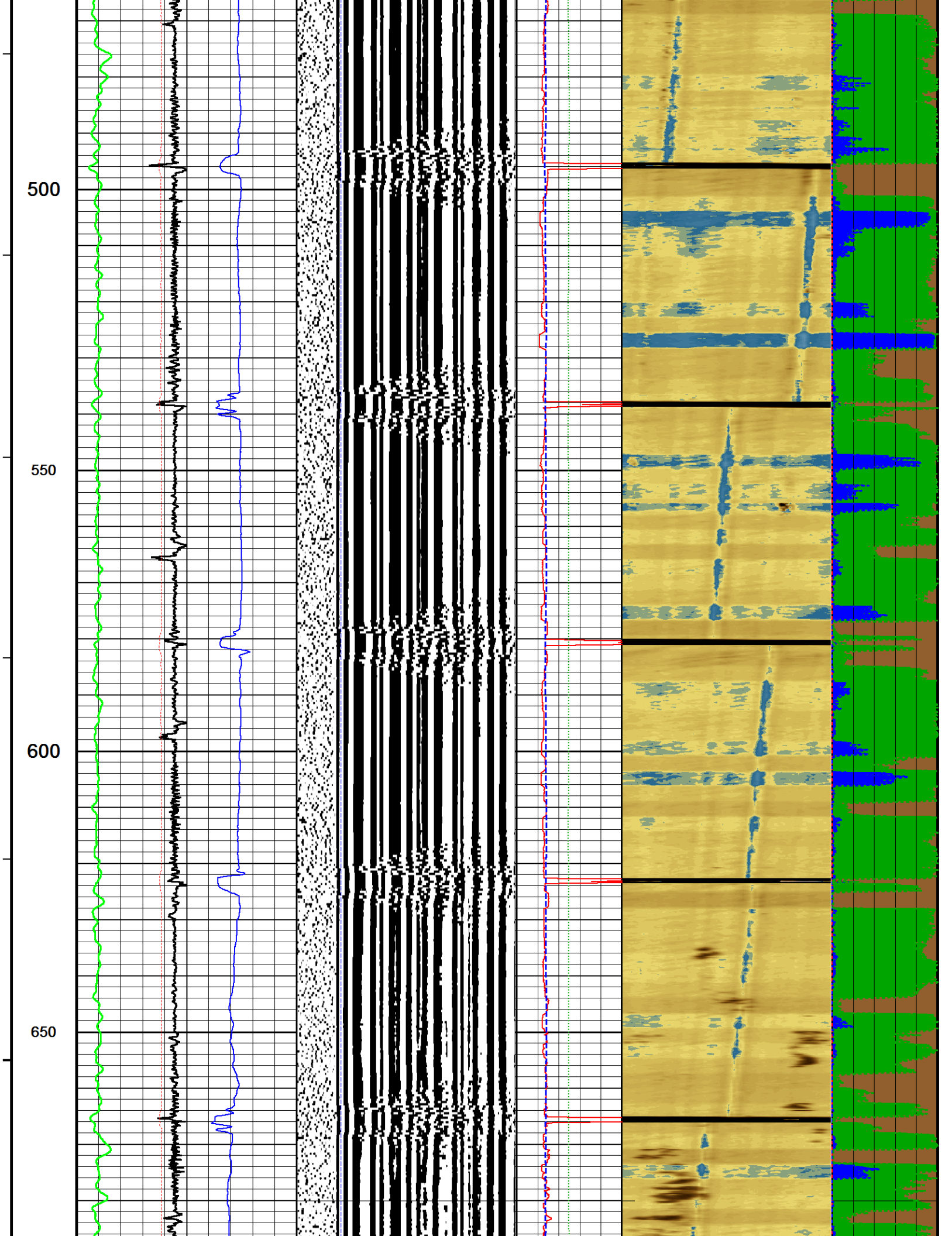
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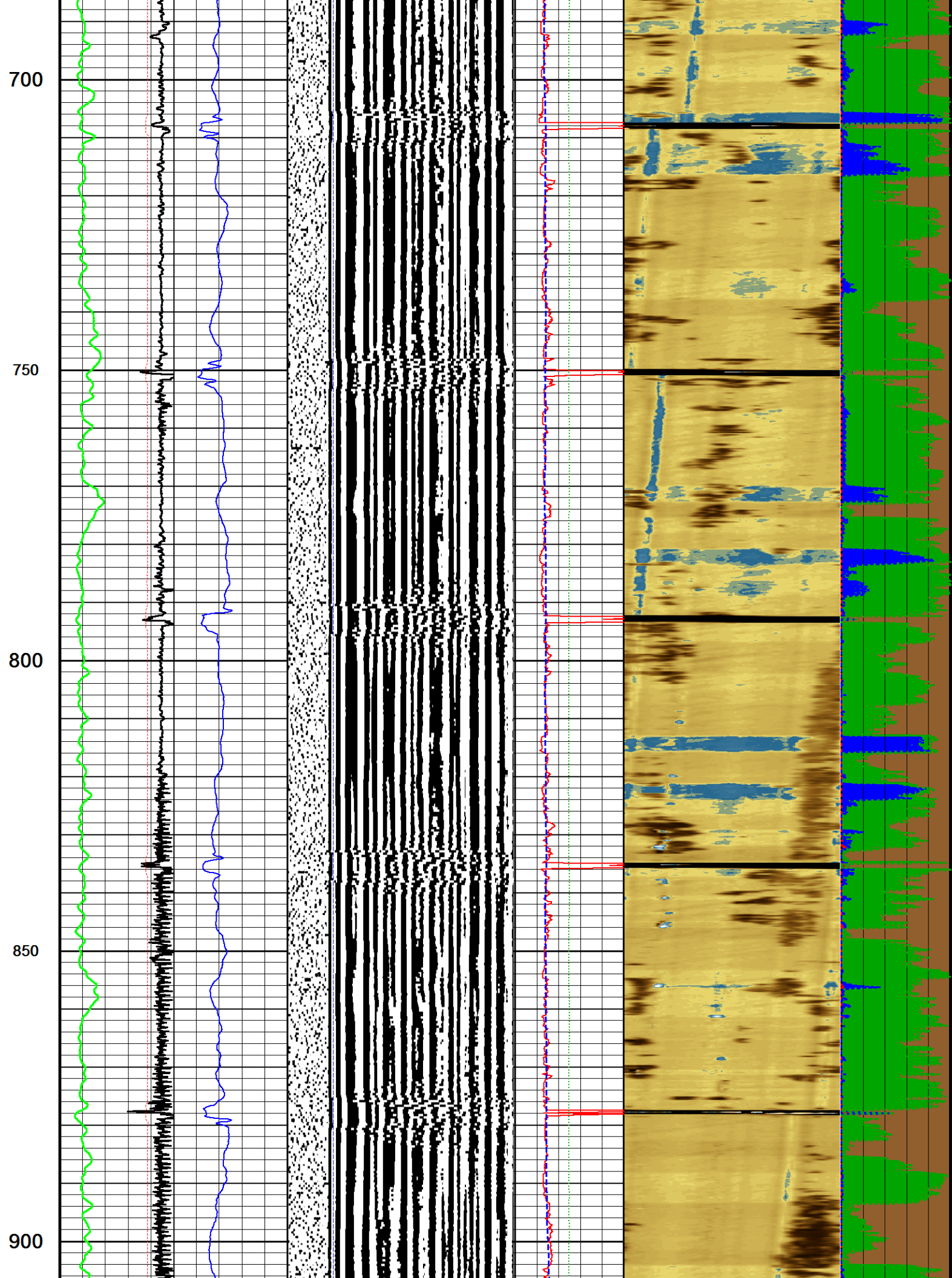
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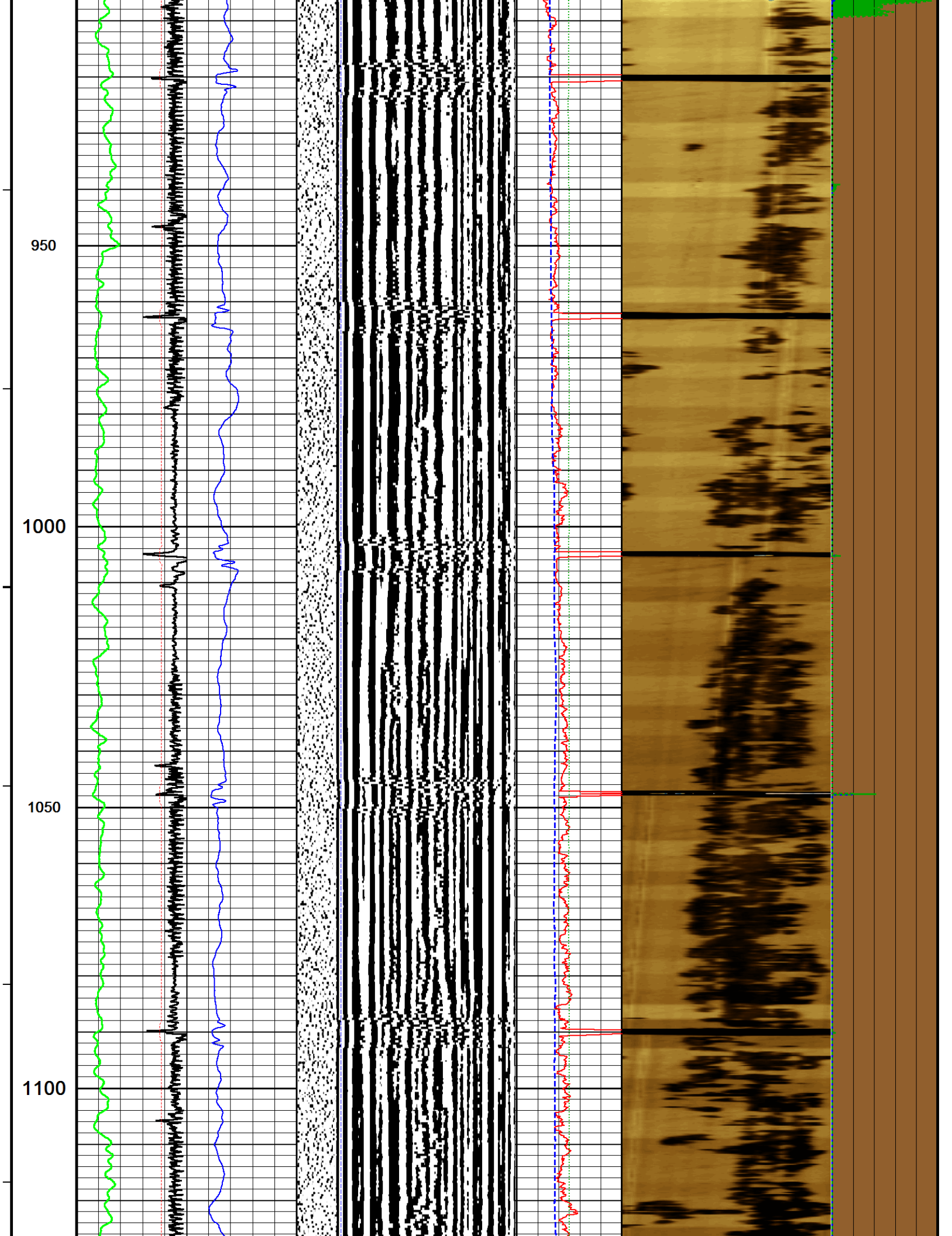
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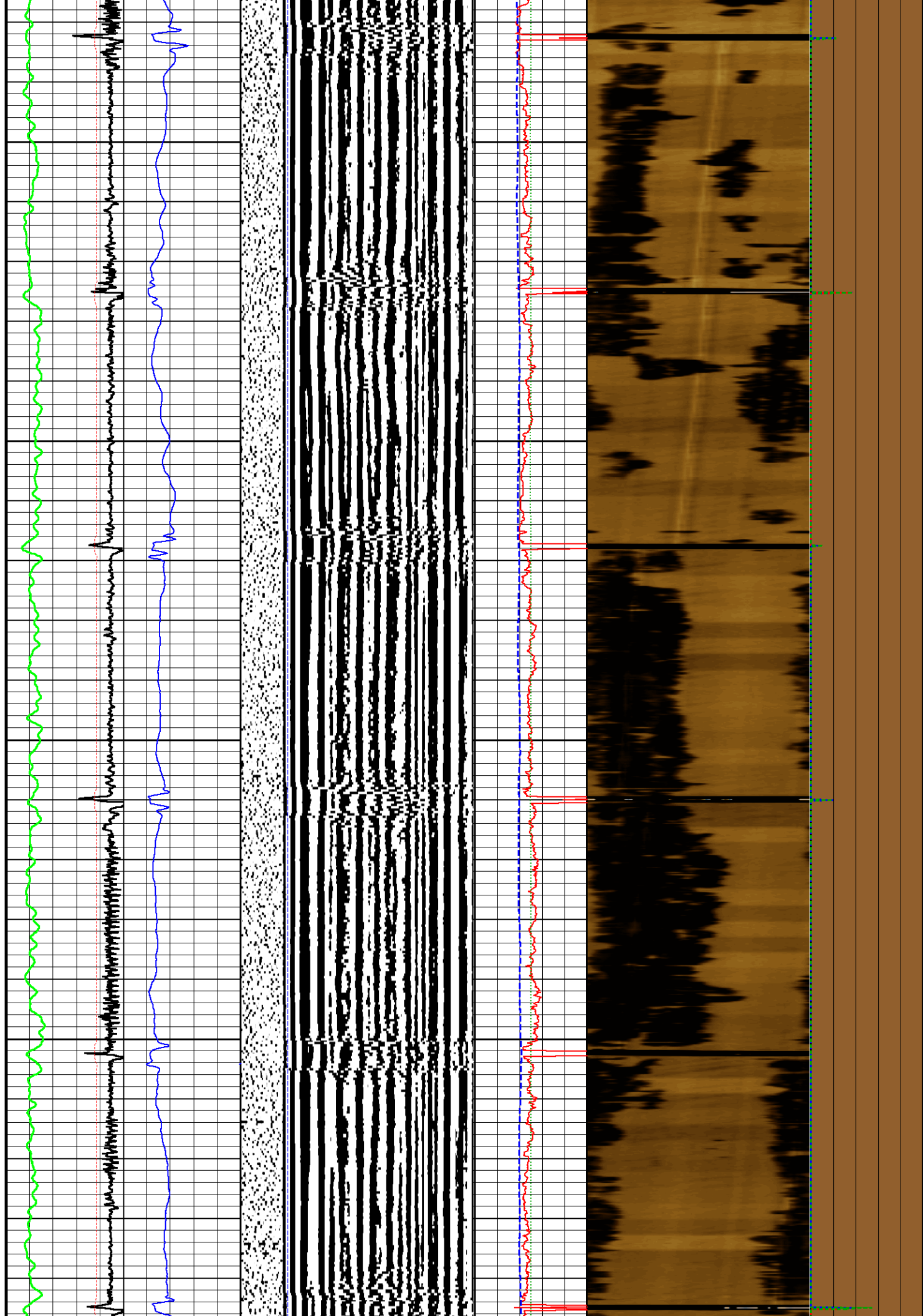


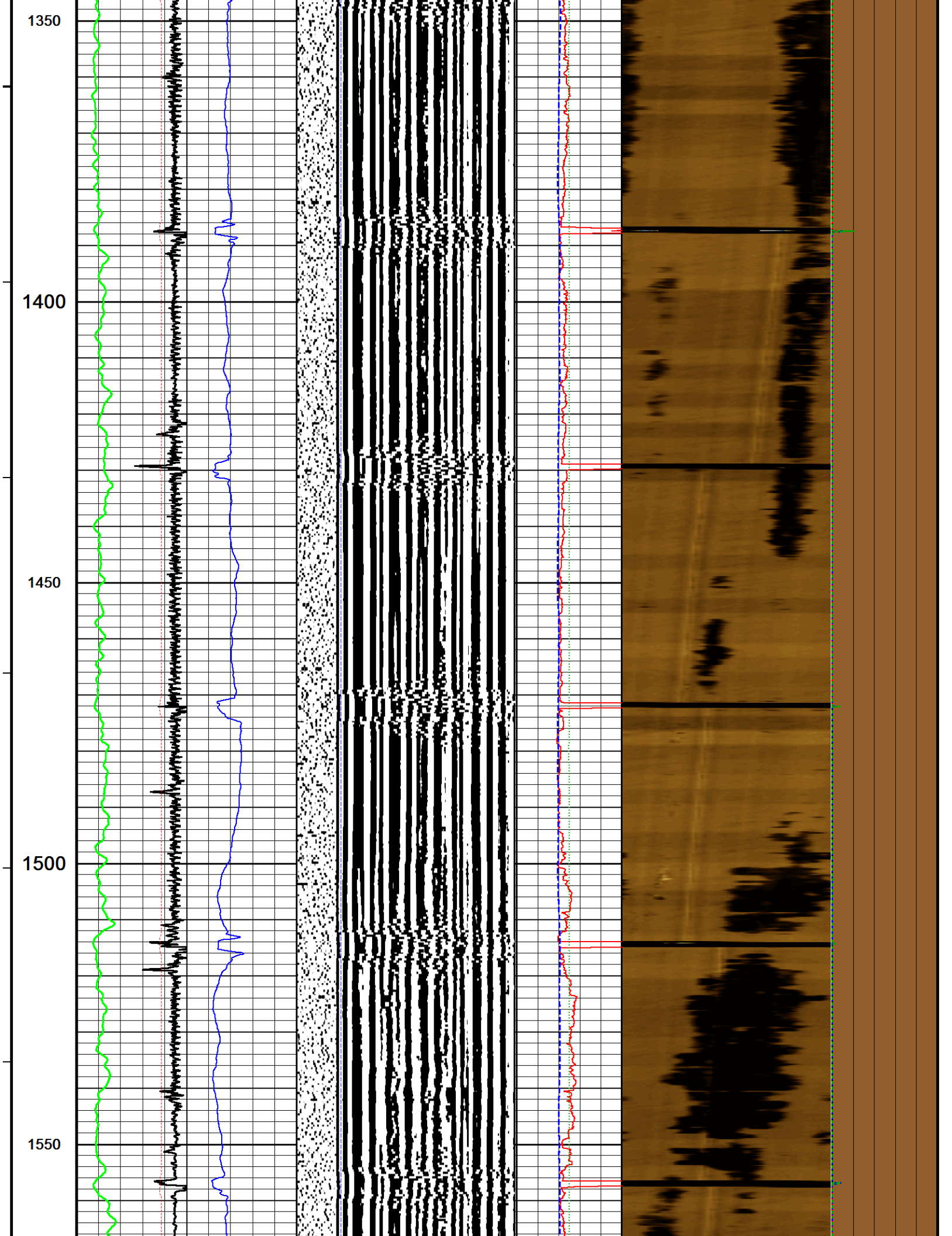
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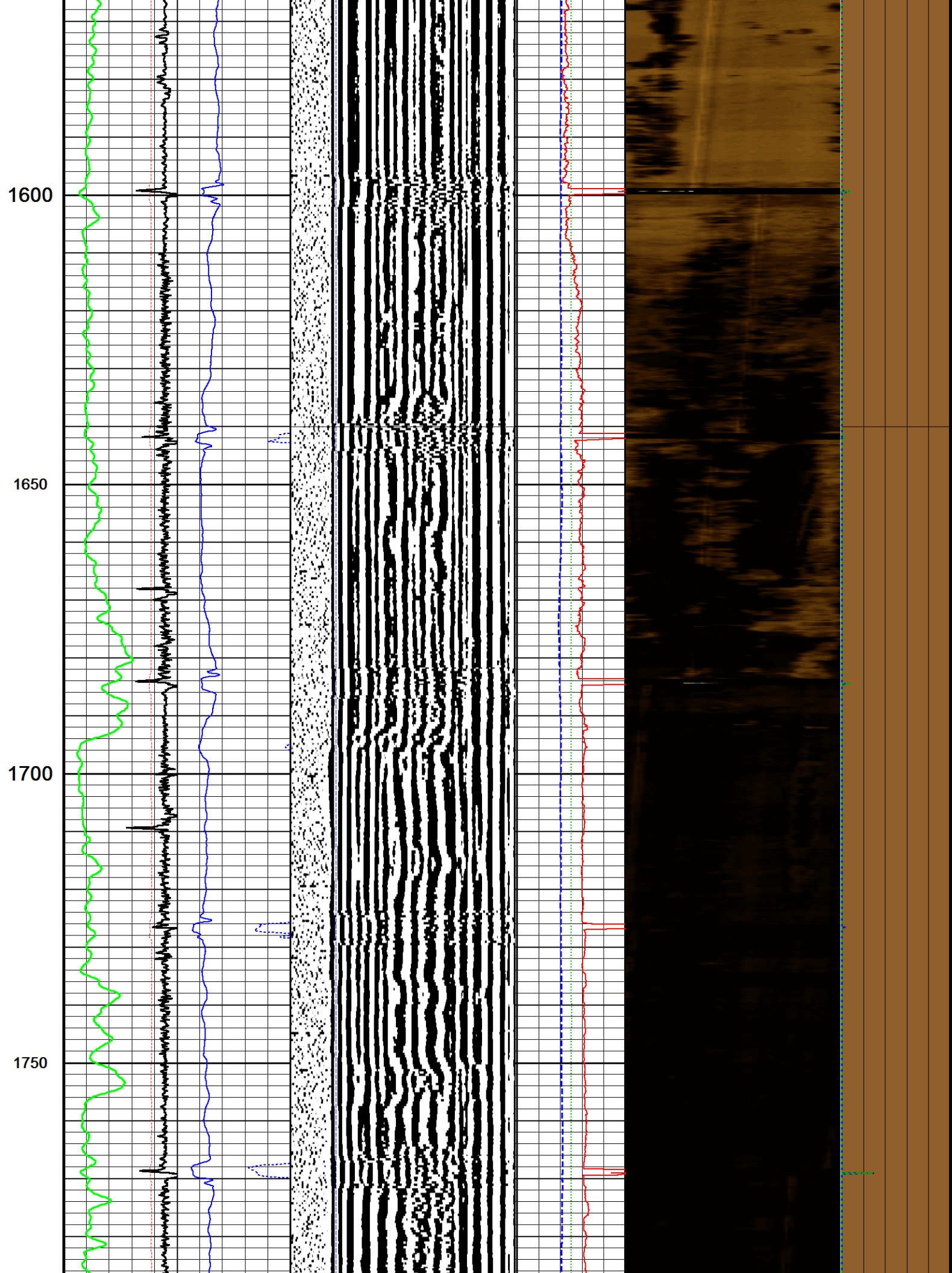
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1250

1300







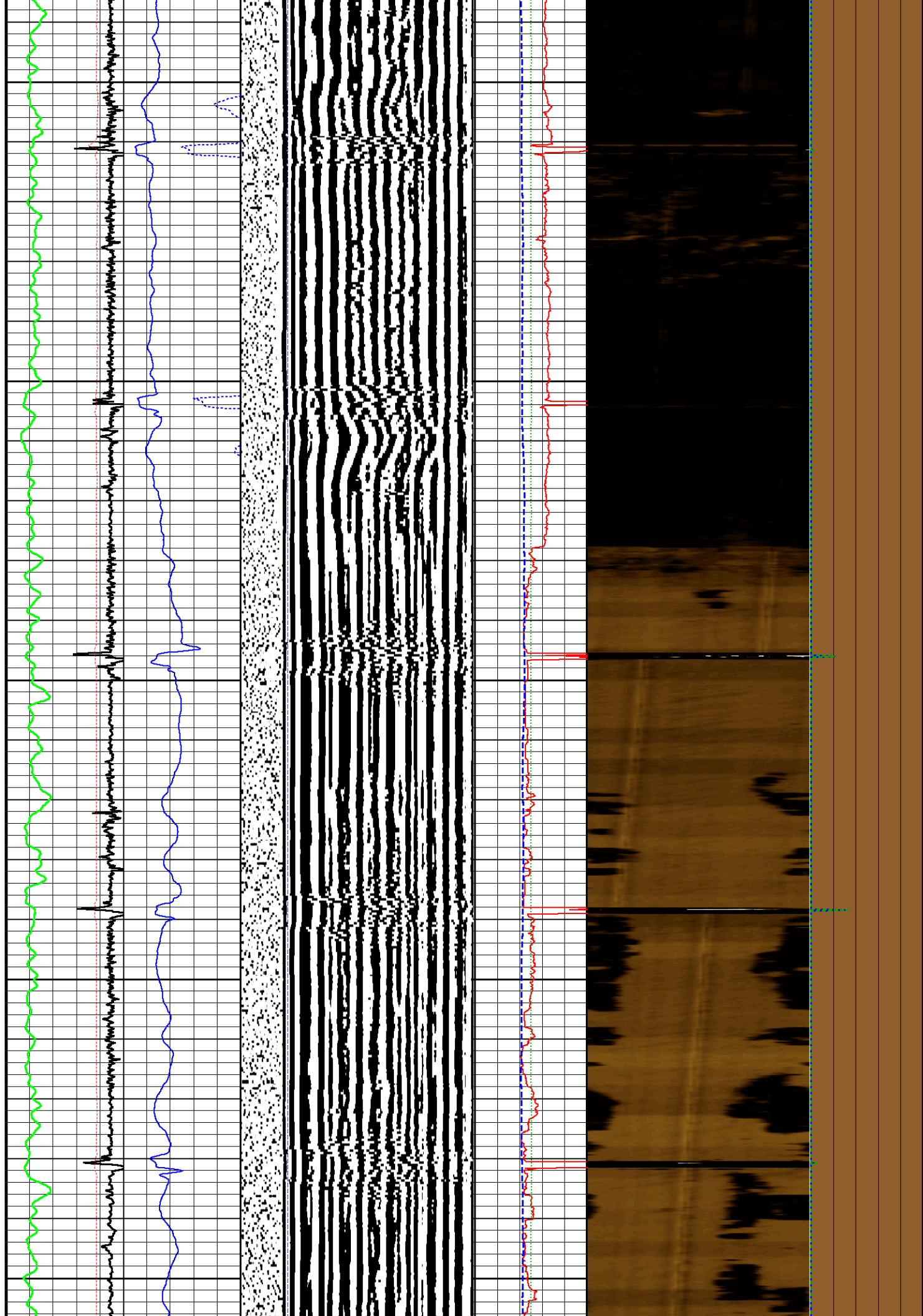
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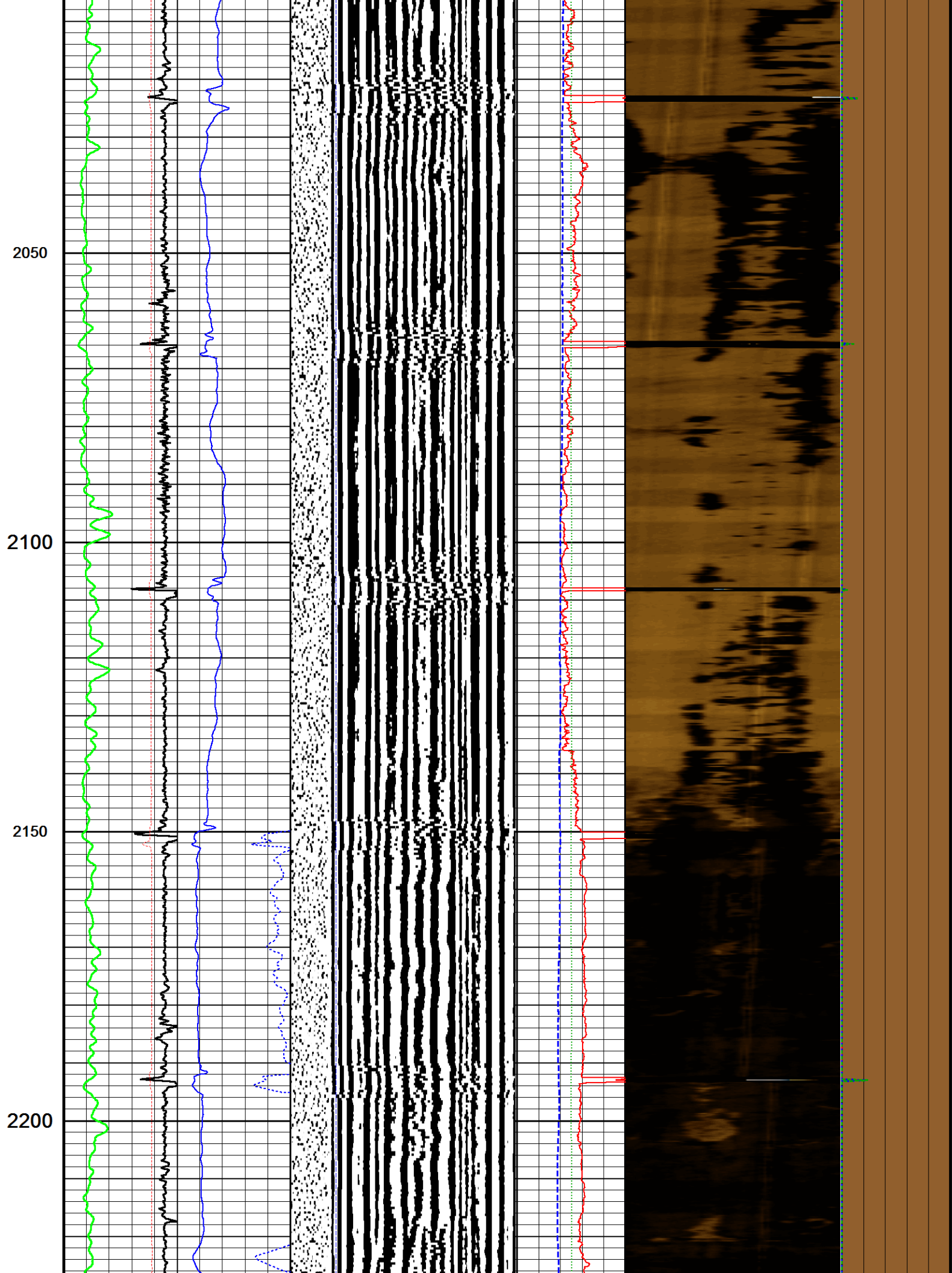
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1900

1950

2000



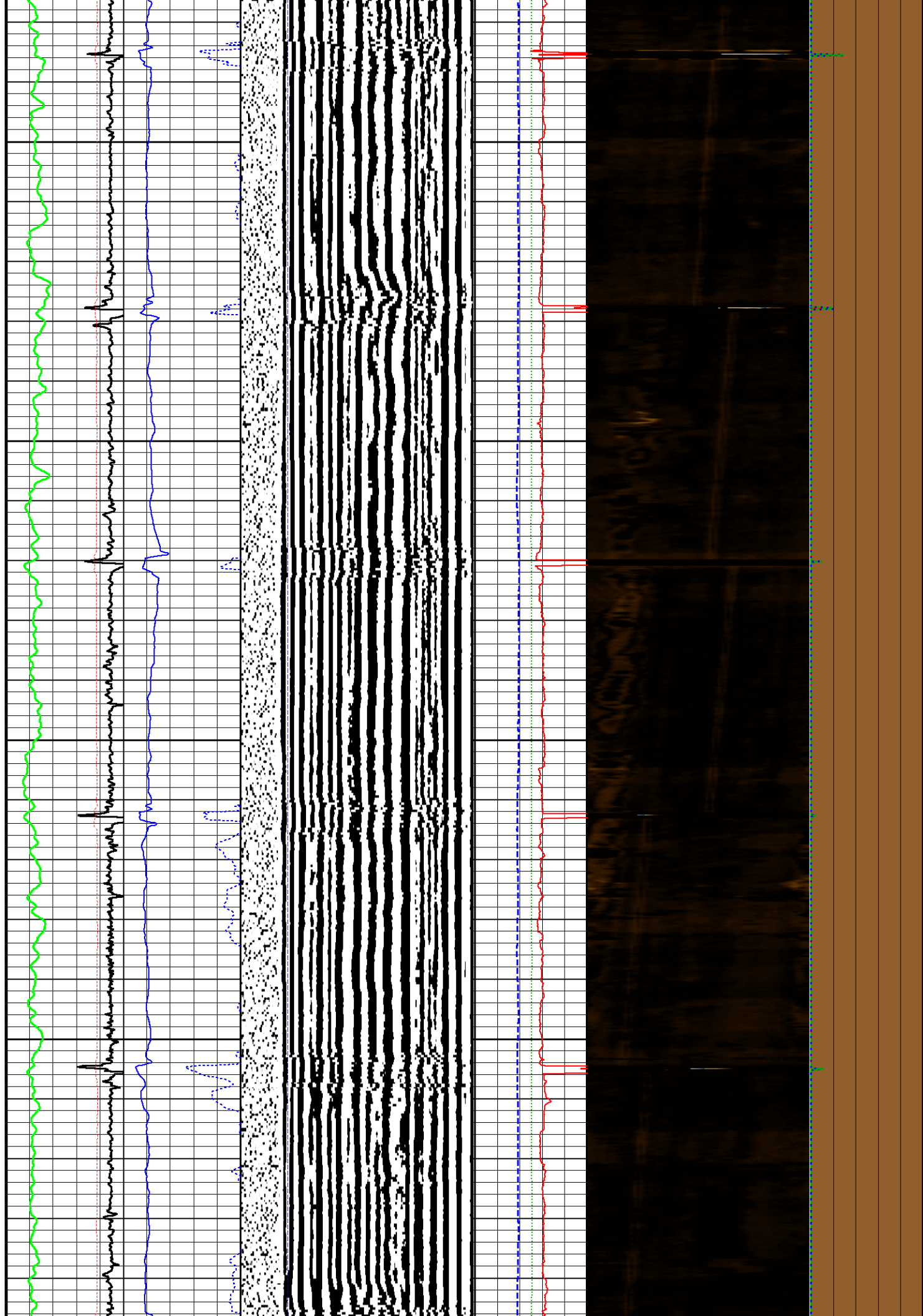


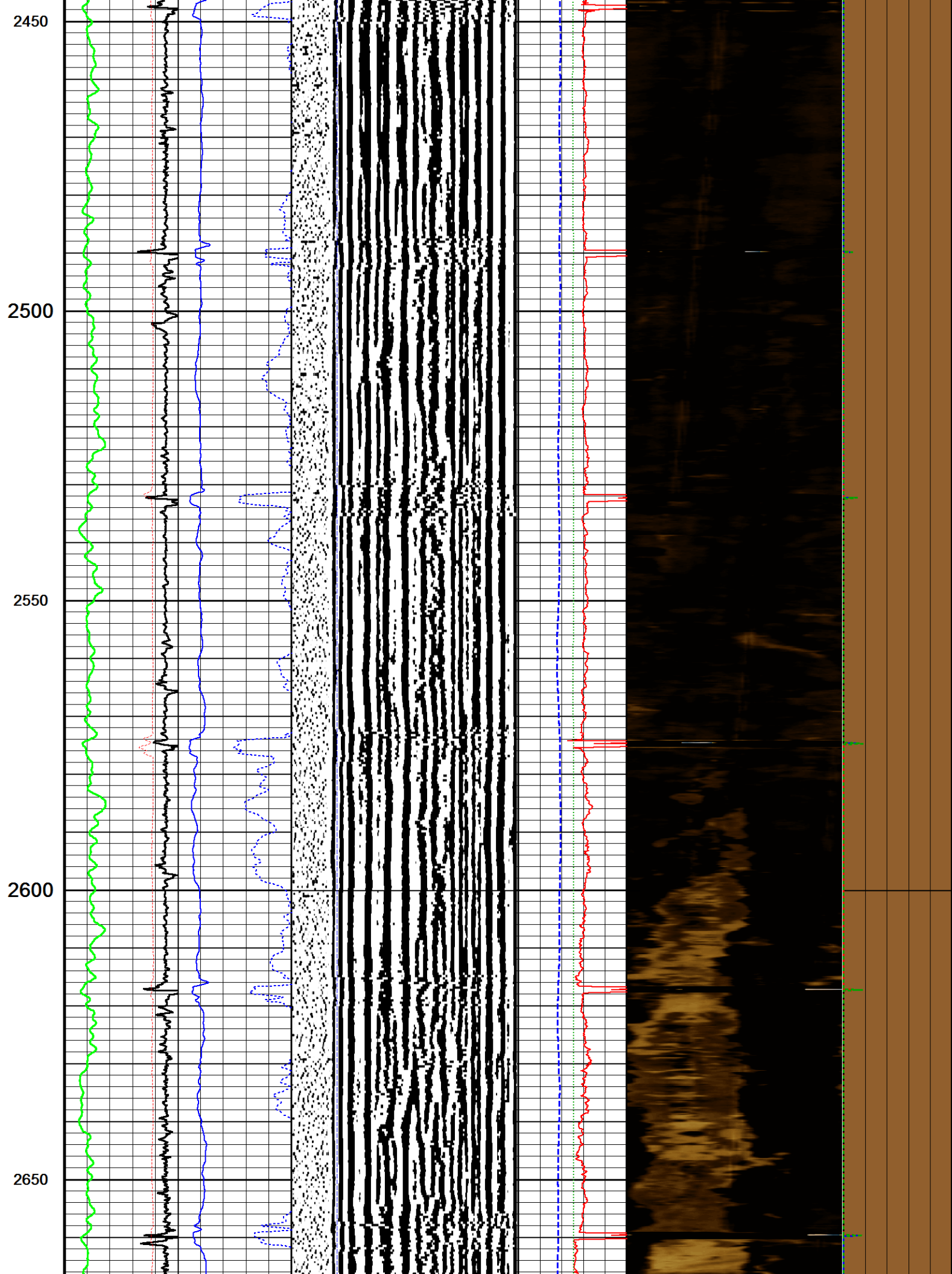
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2300

2350

2400



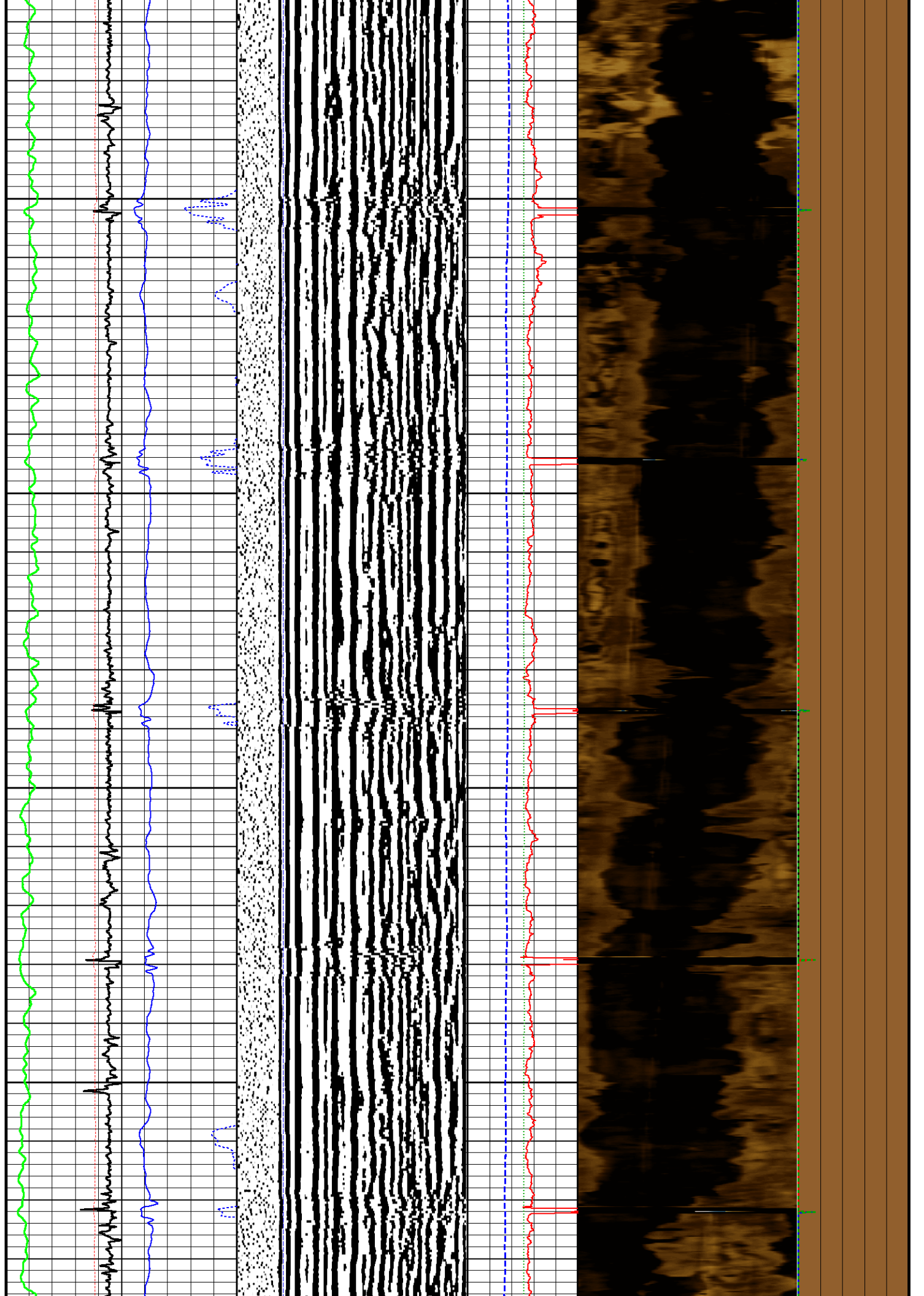


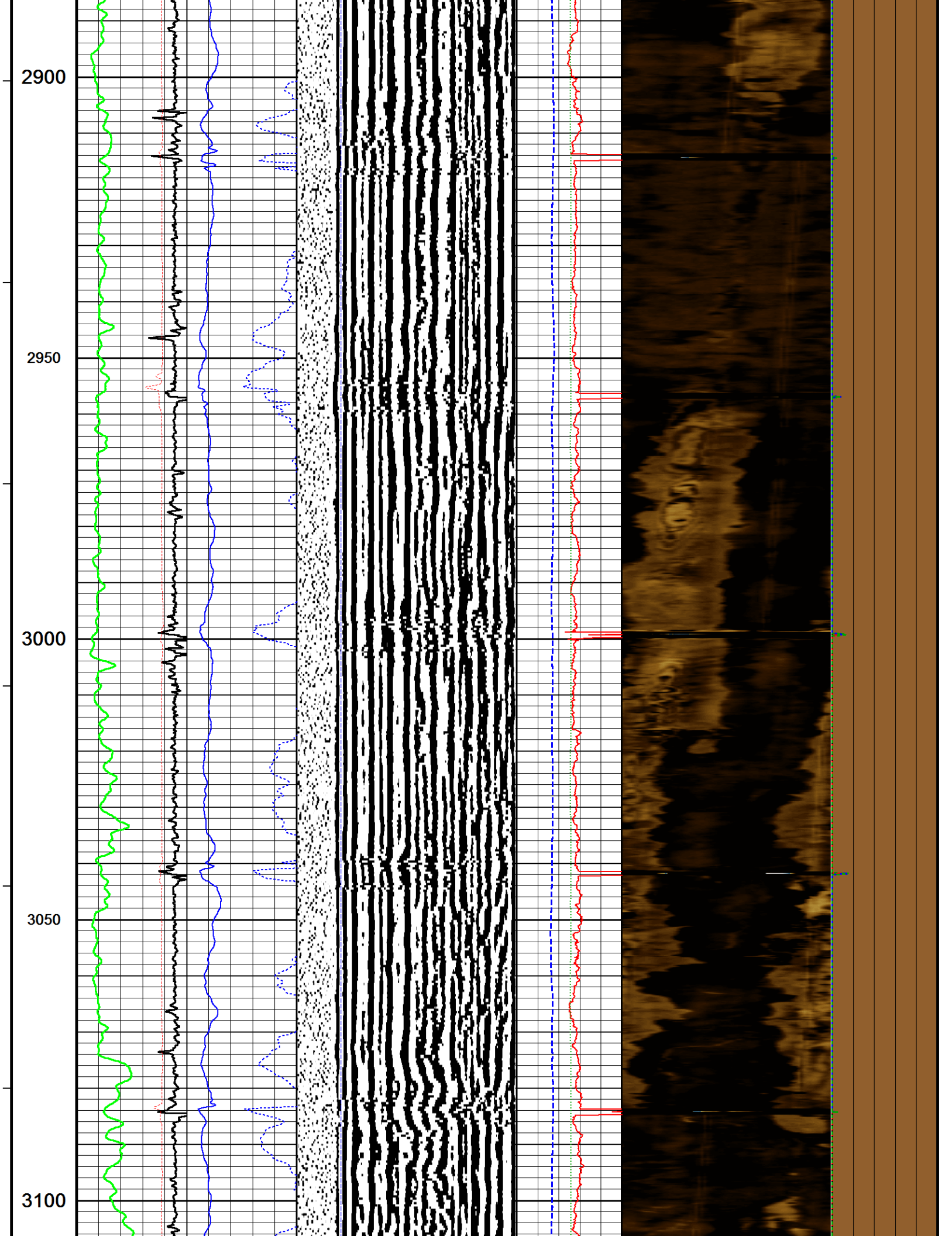
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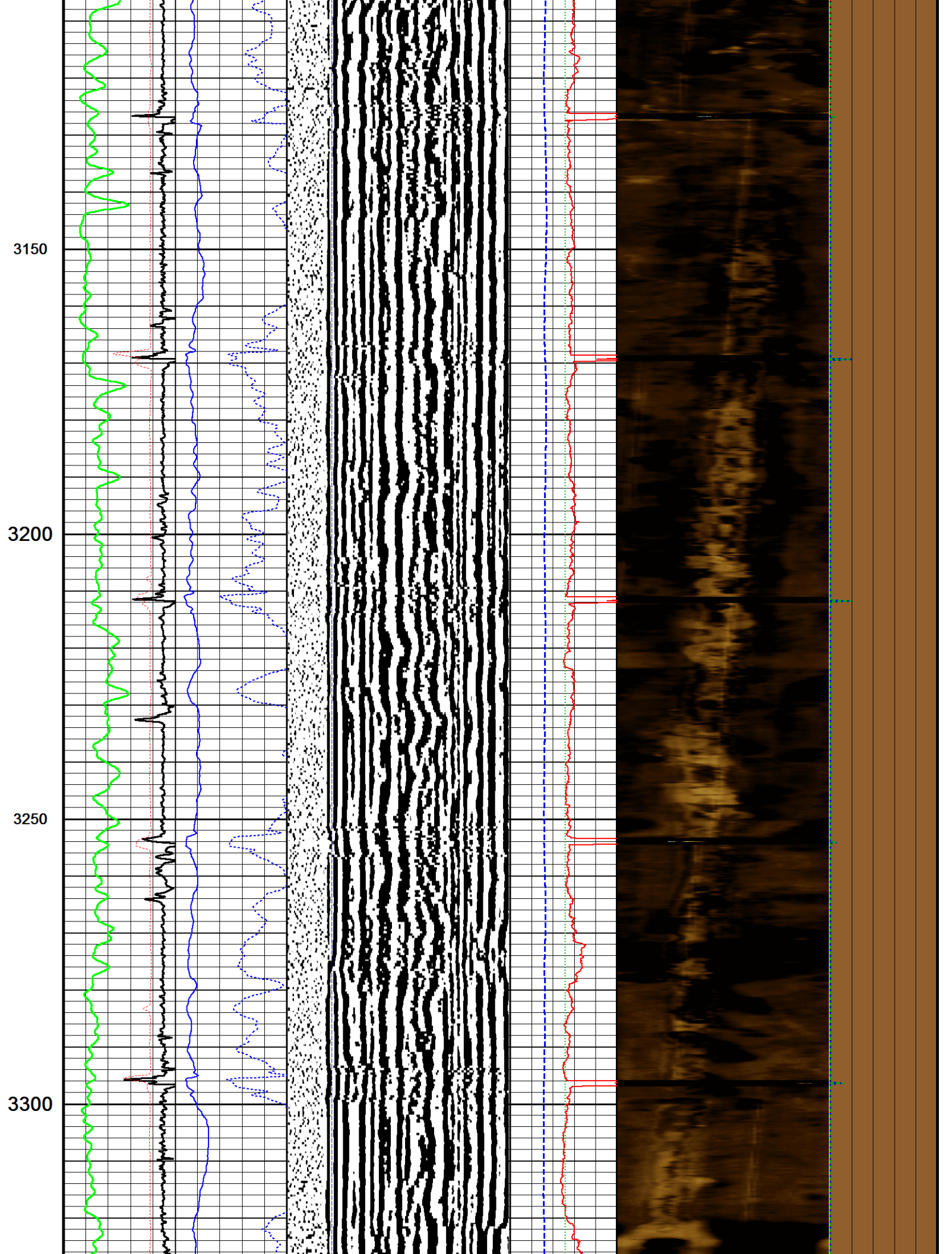
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2850





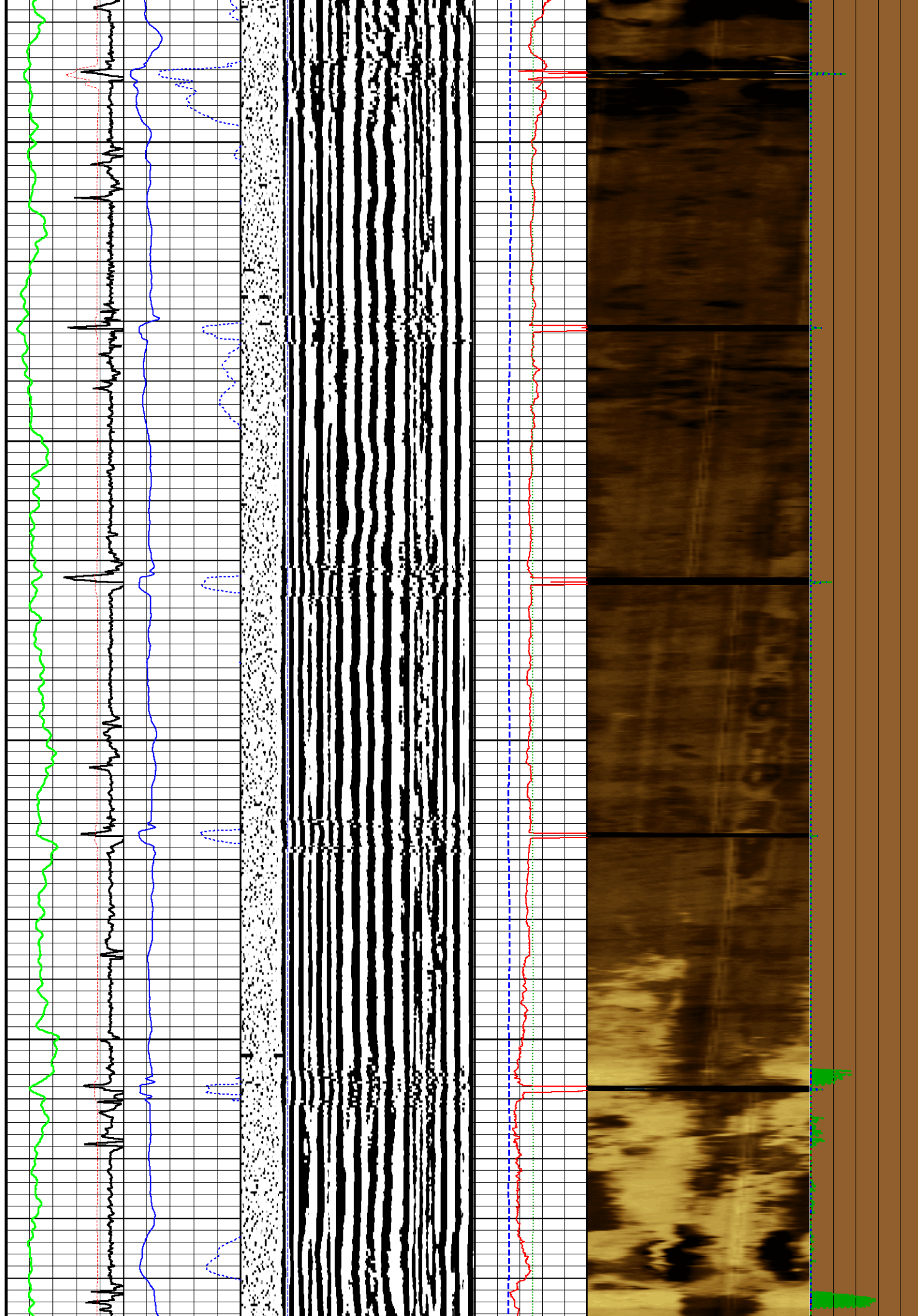


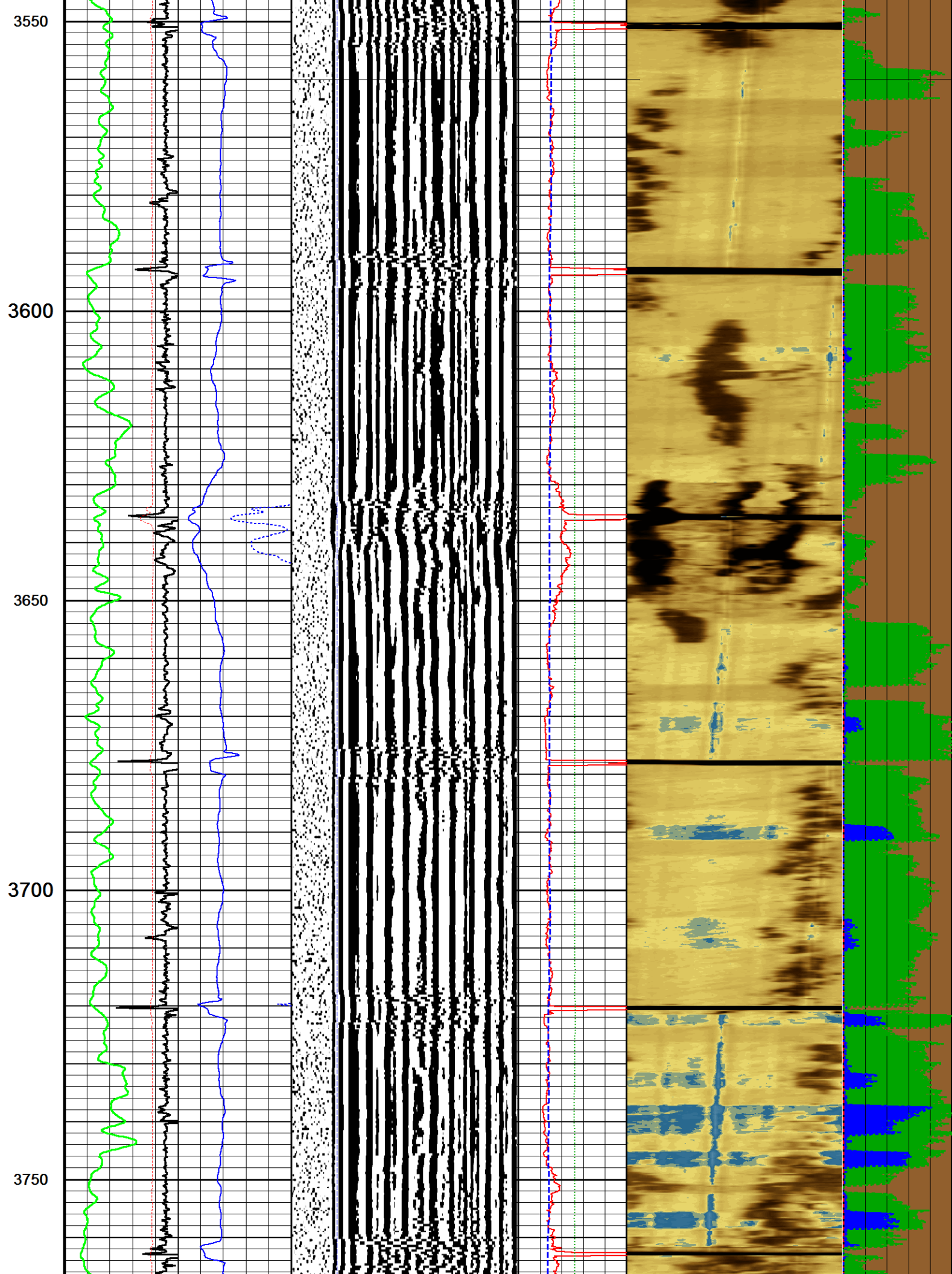
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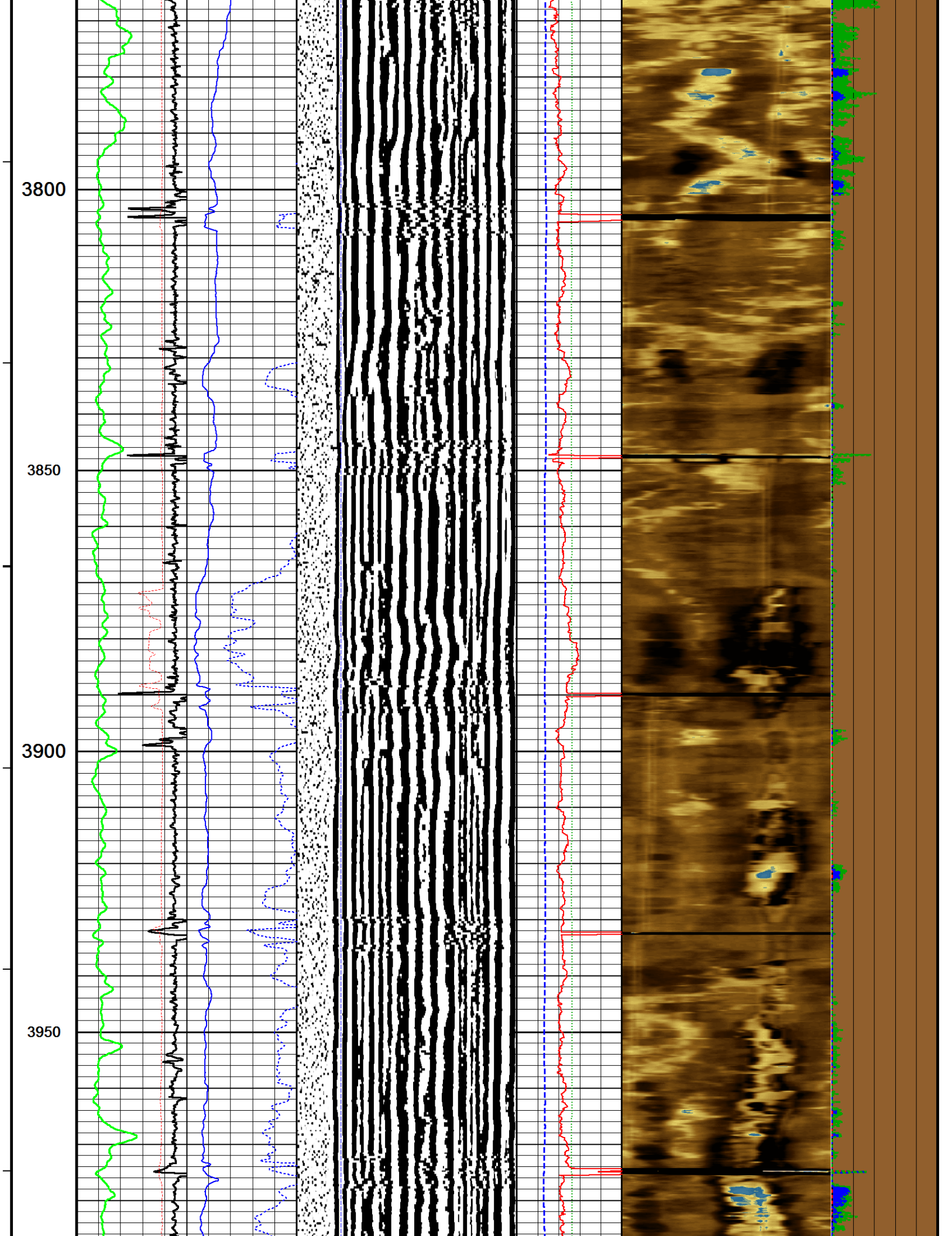
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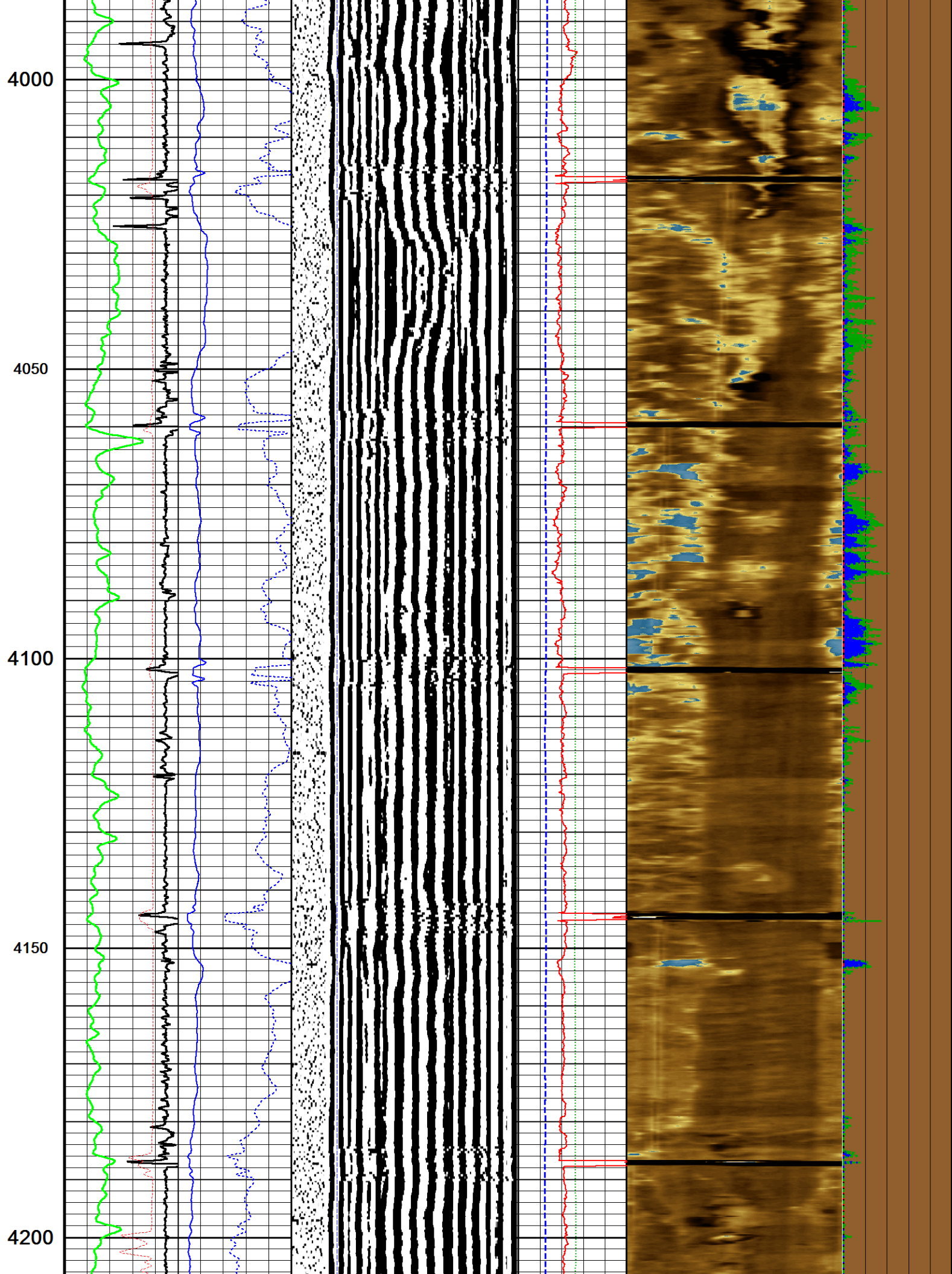
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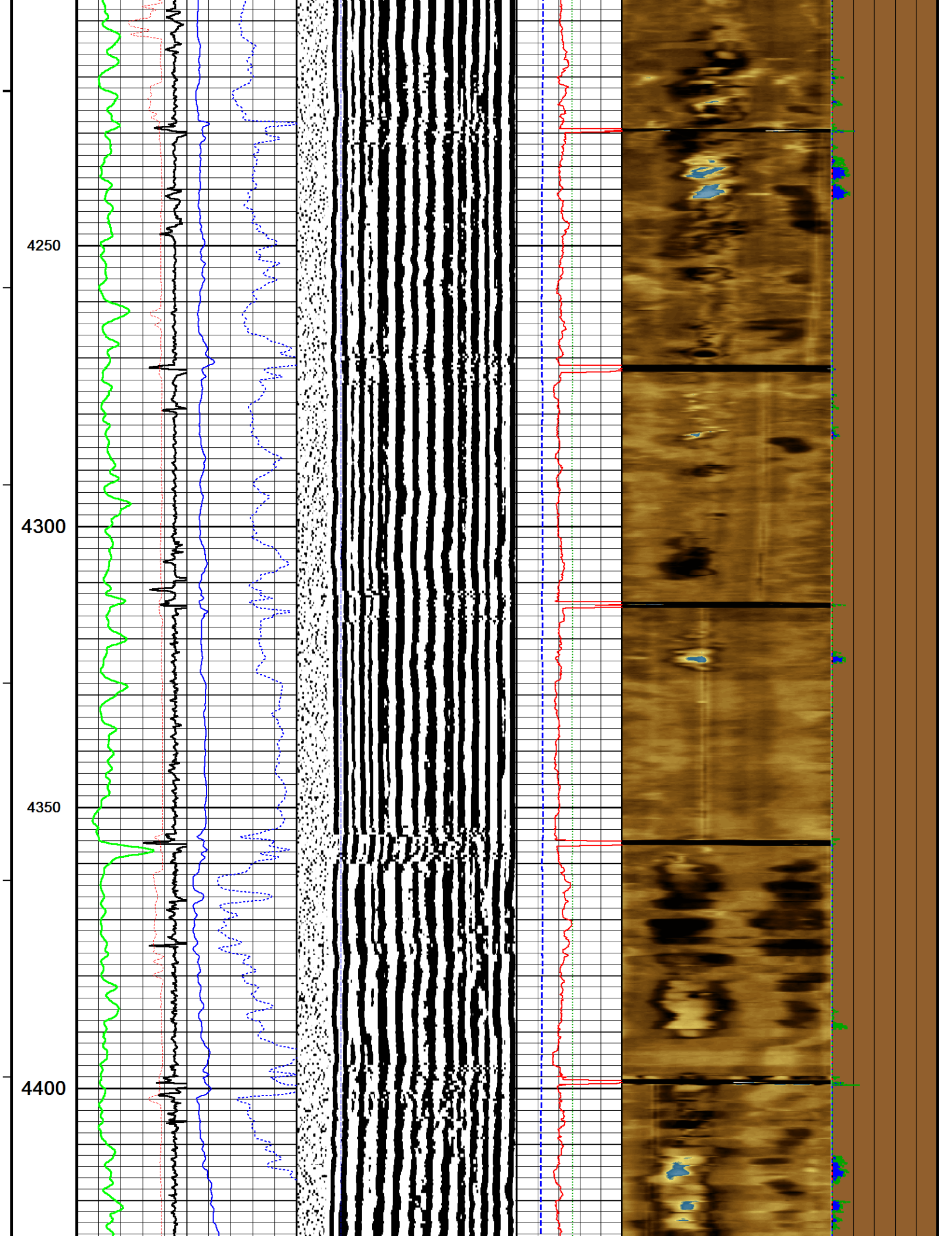
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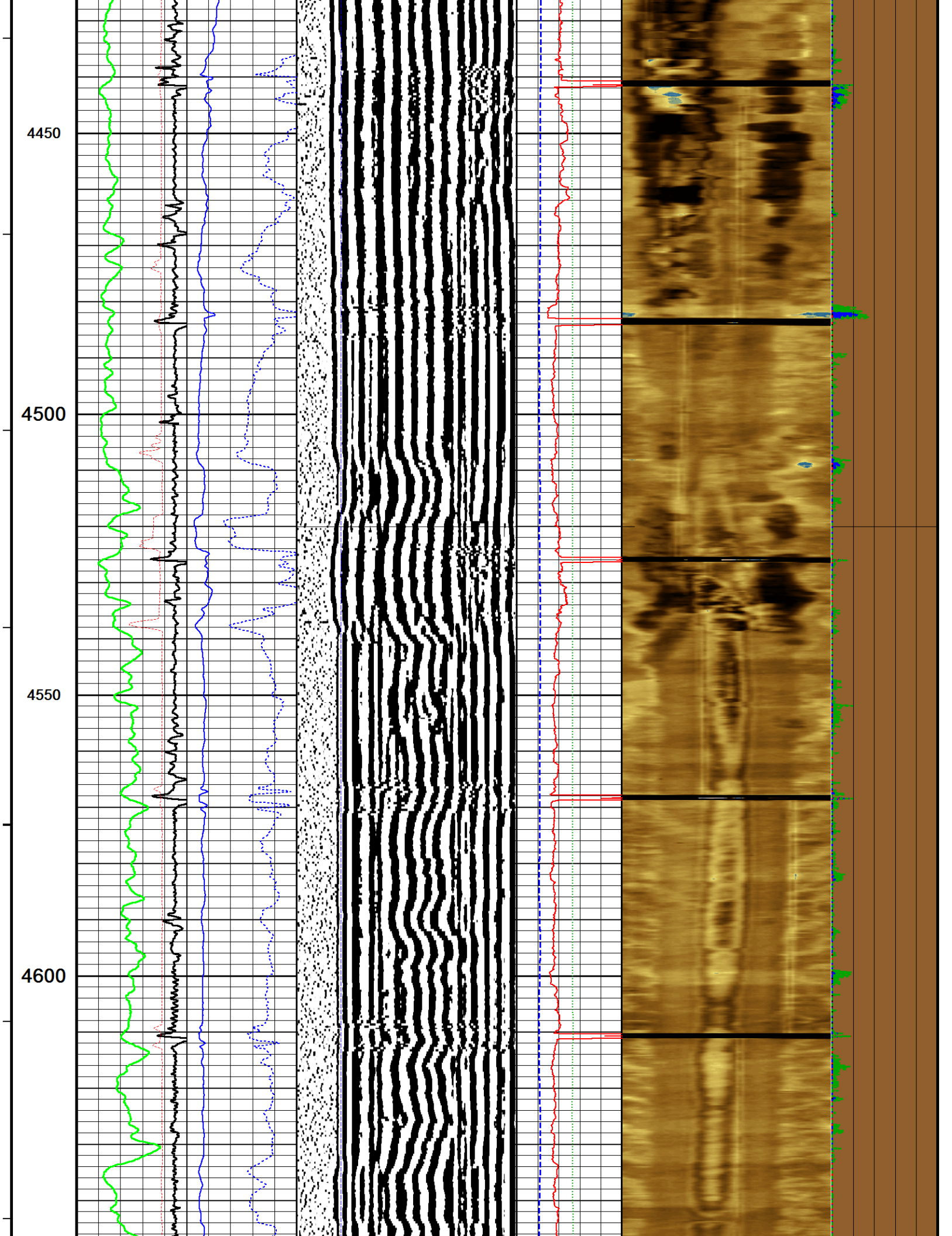


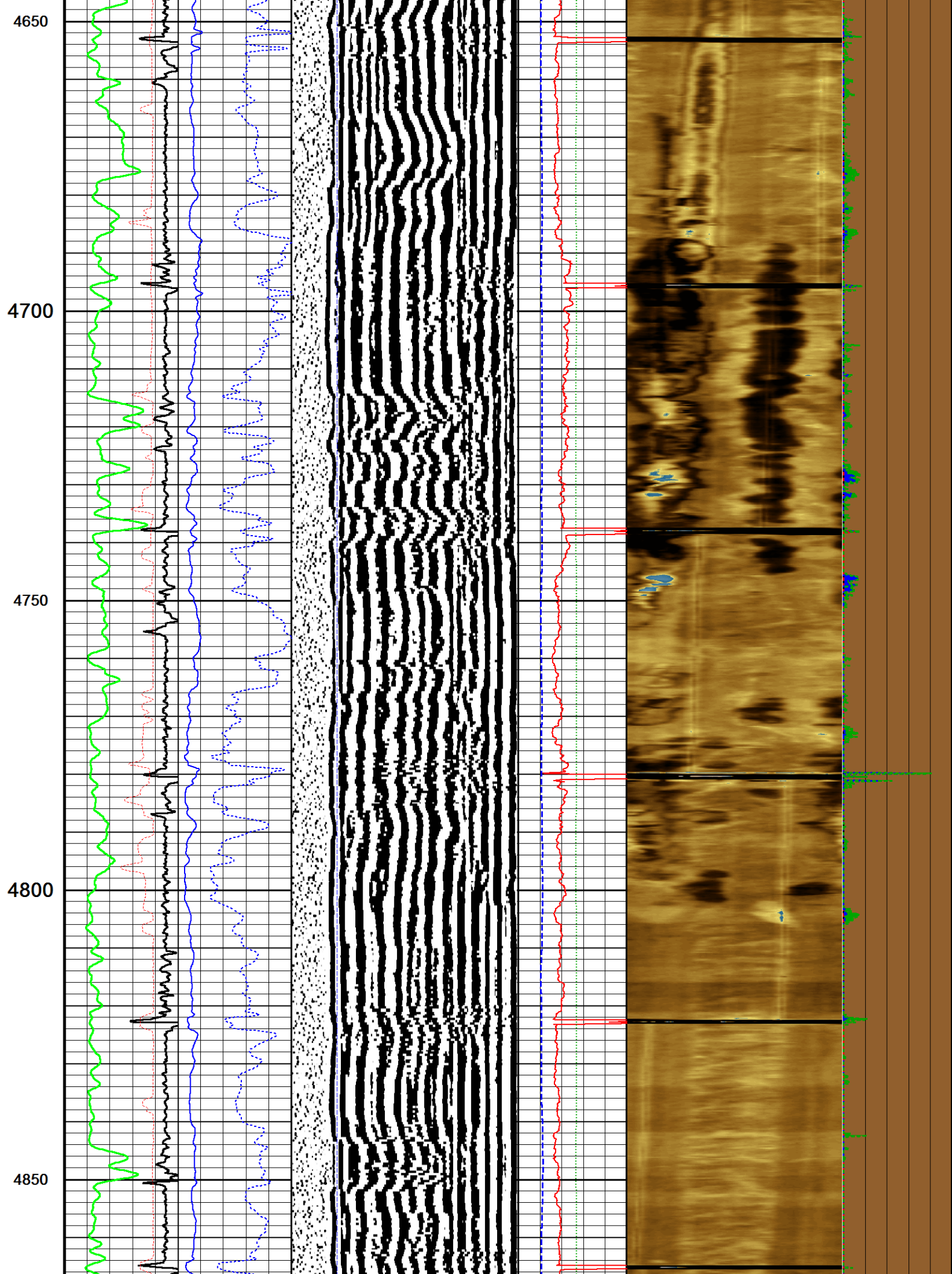










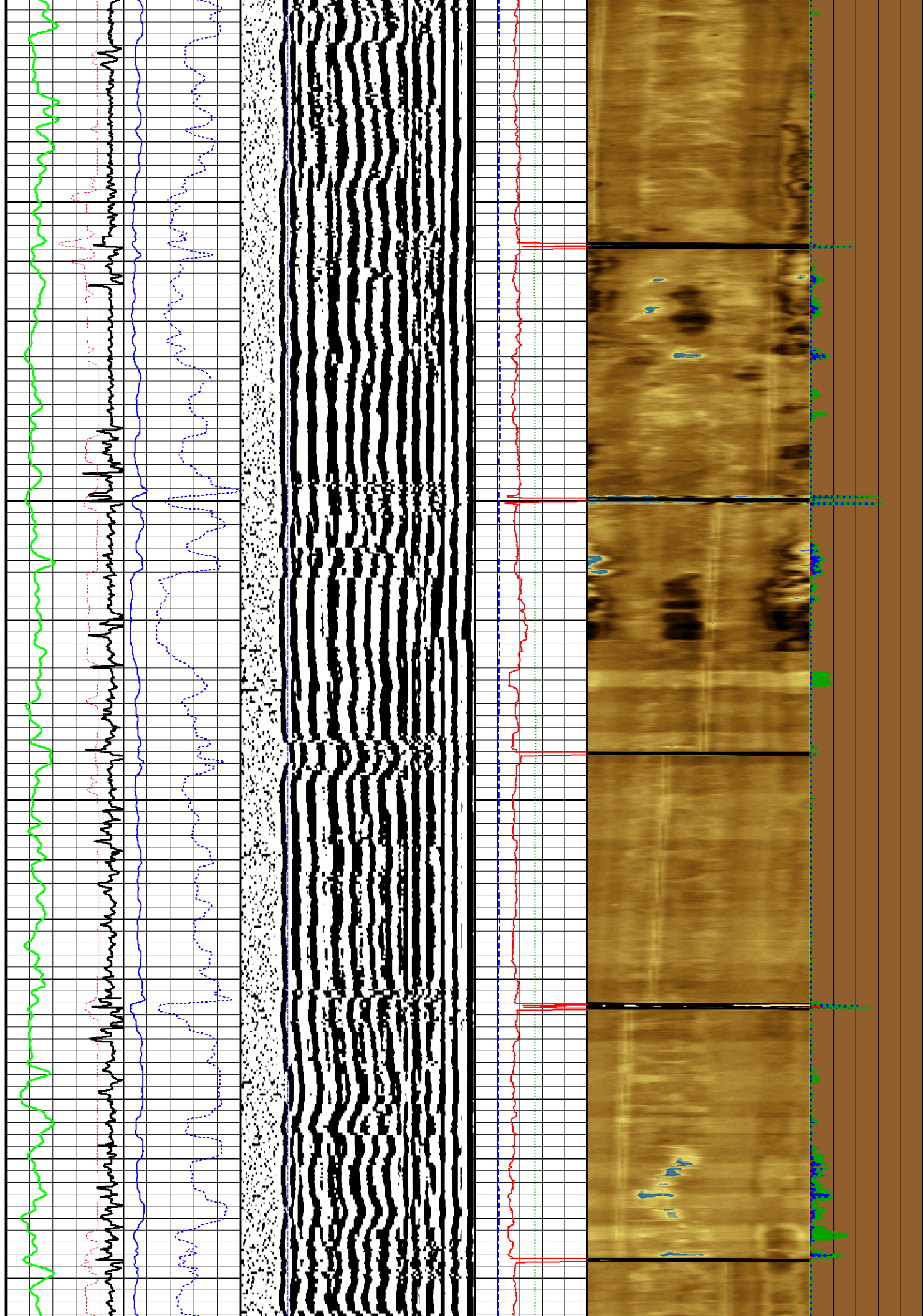


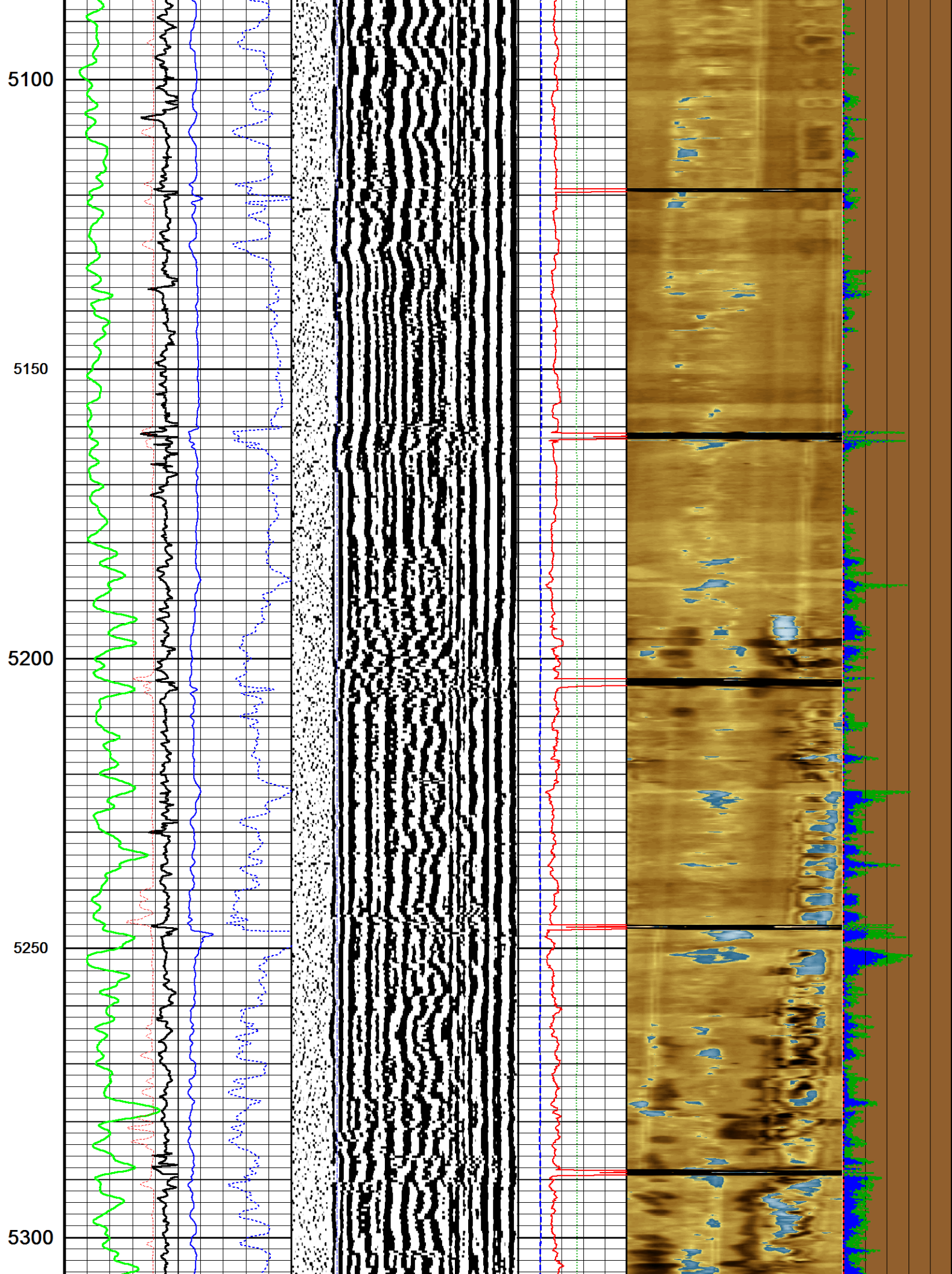
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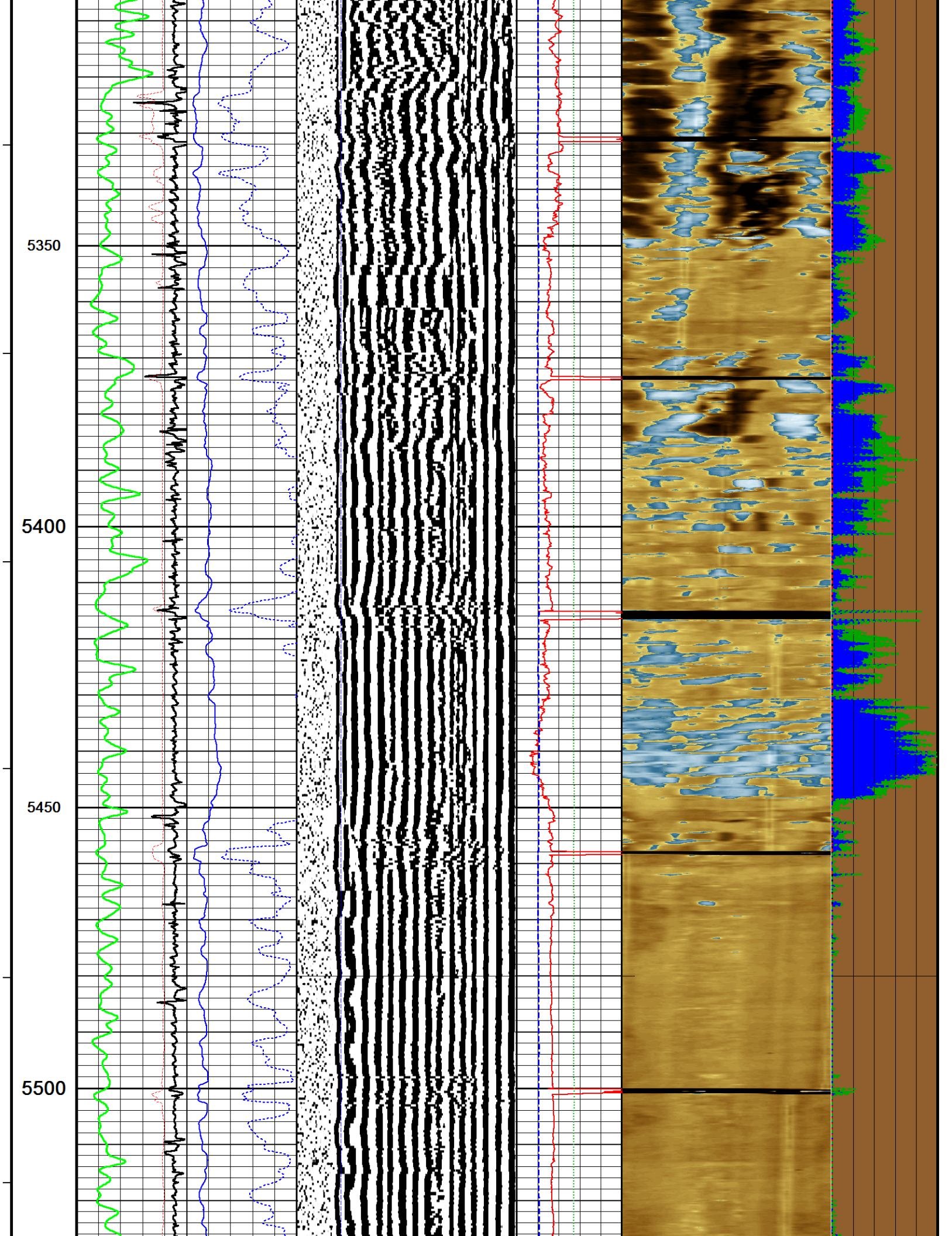
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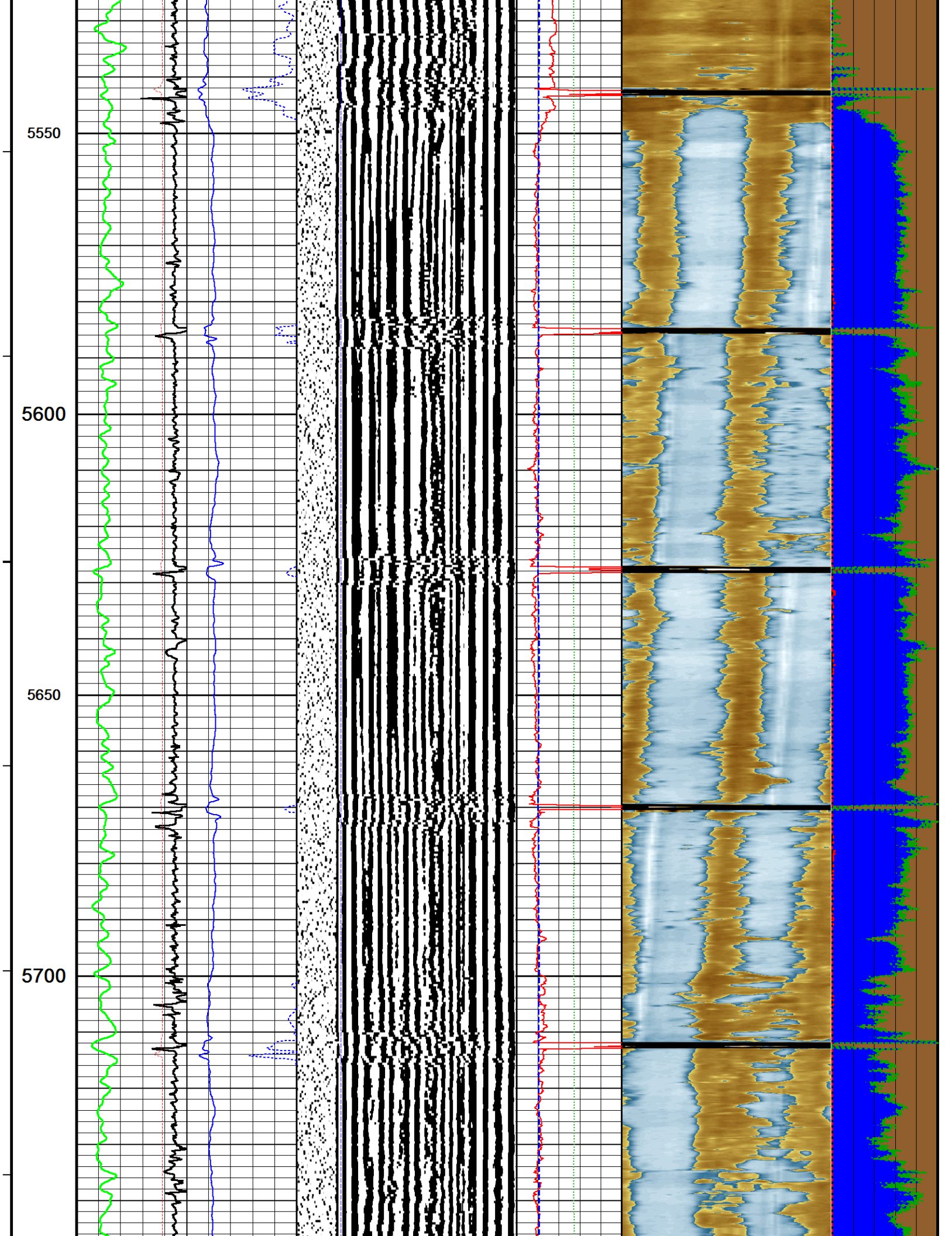
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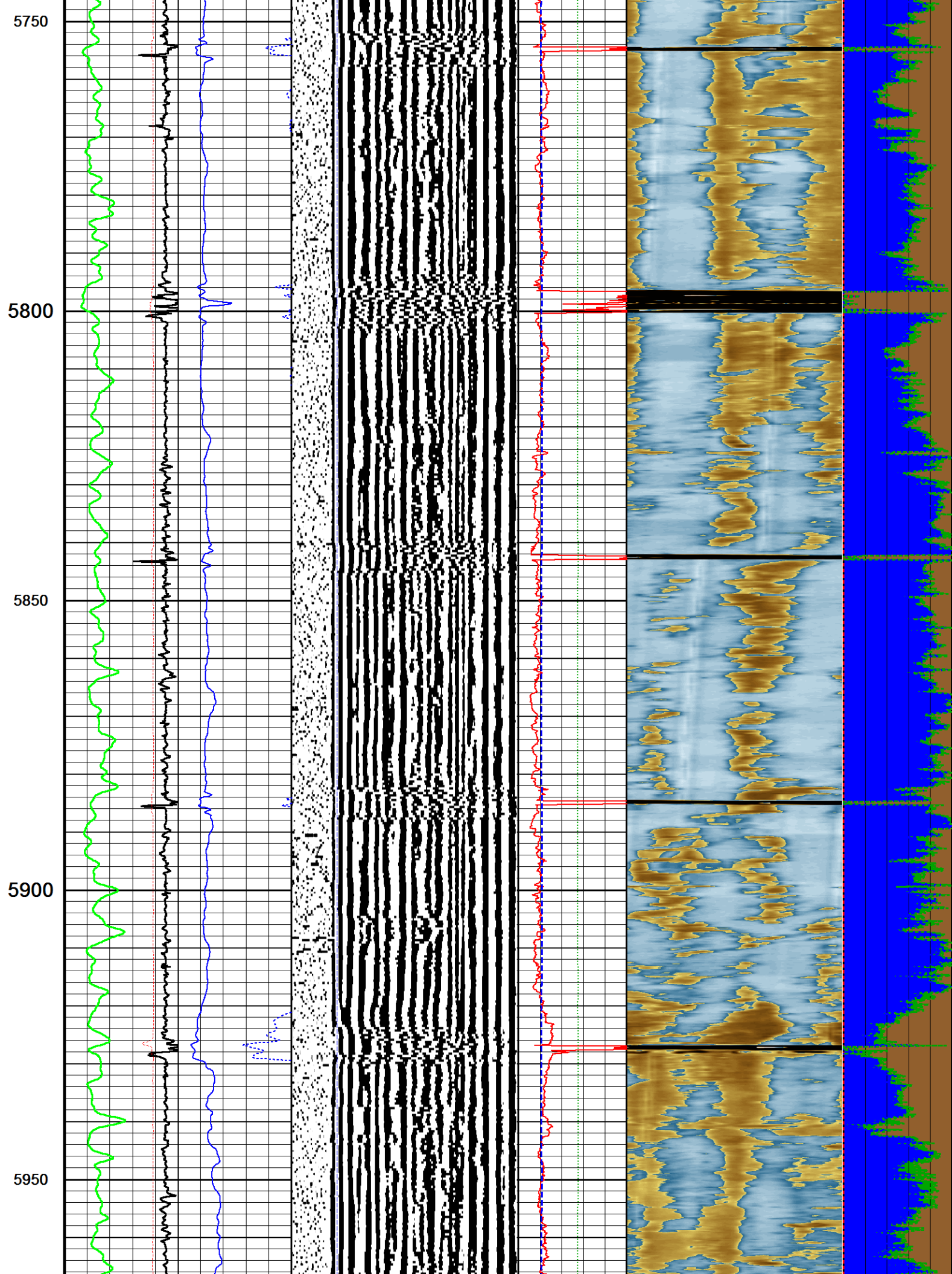
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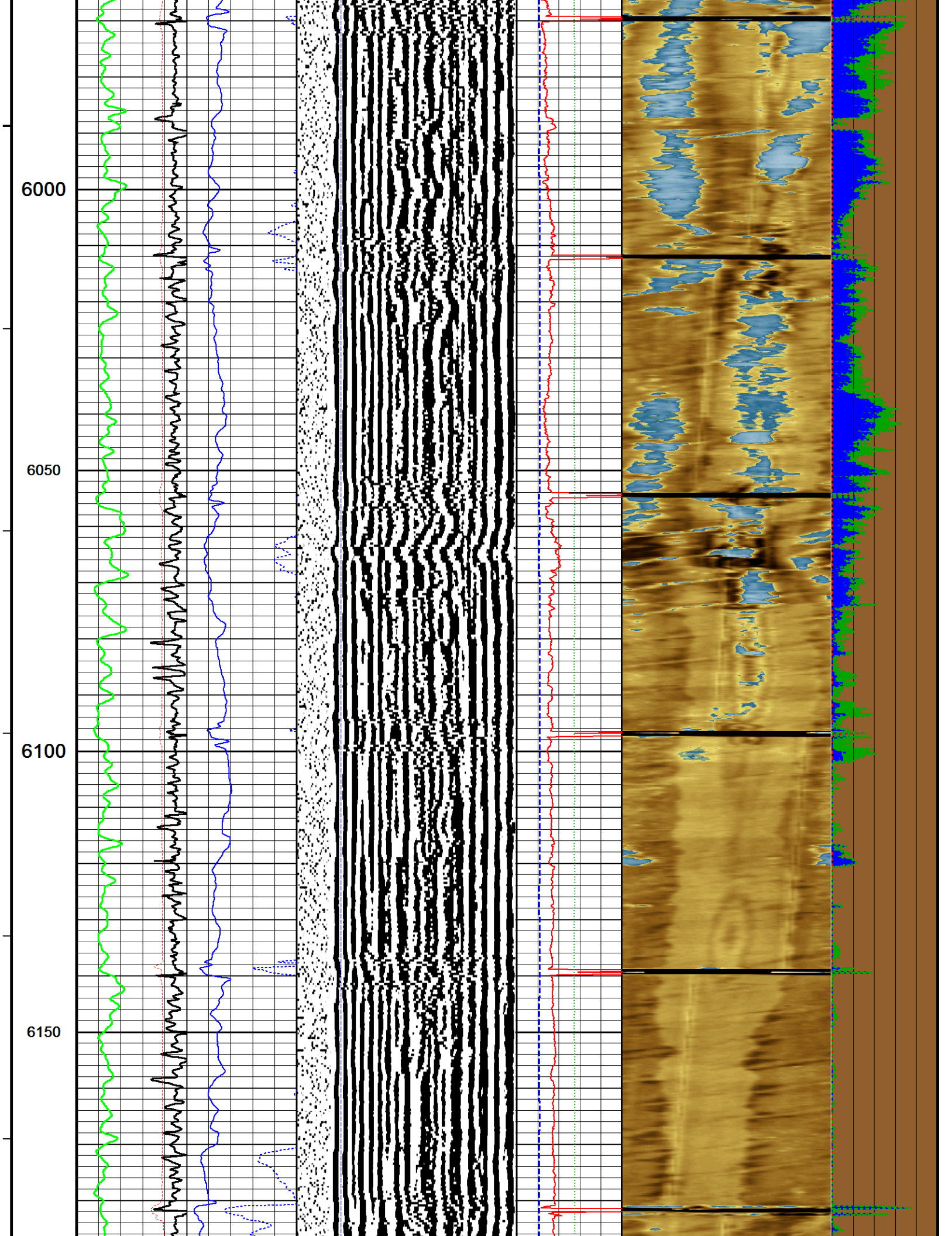


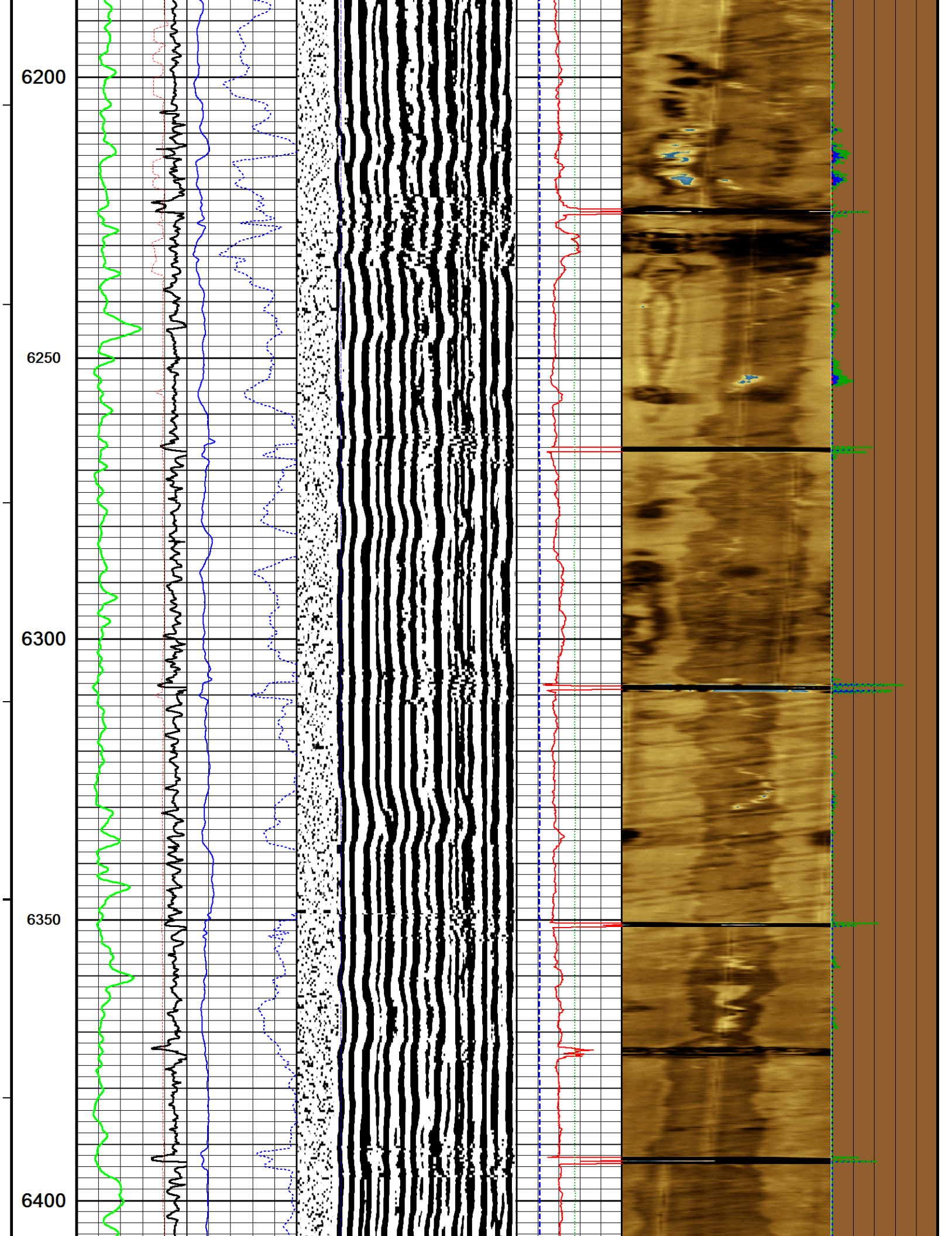


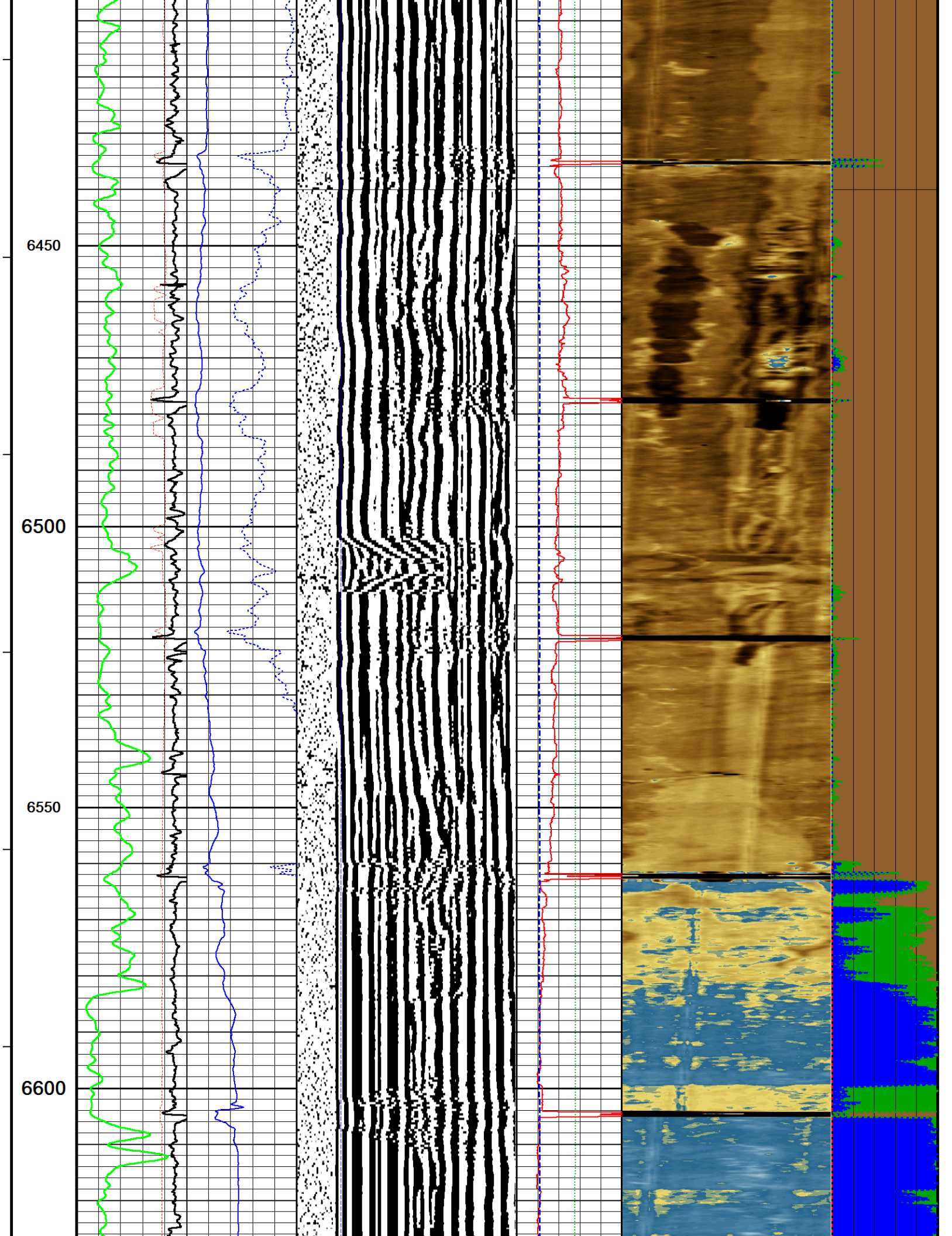


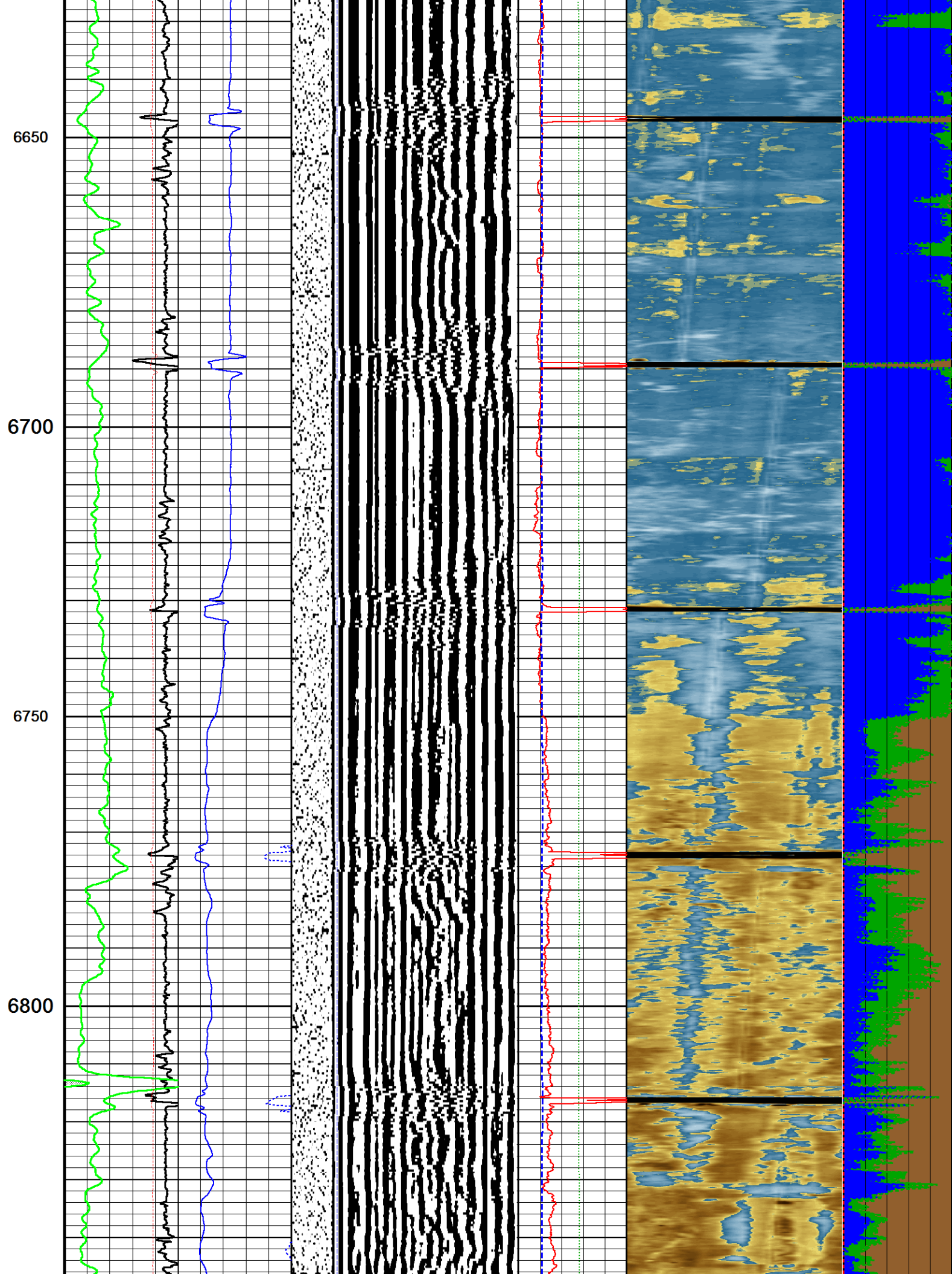


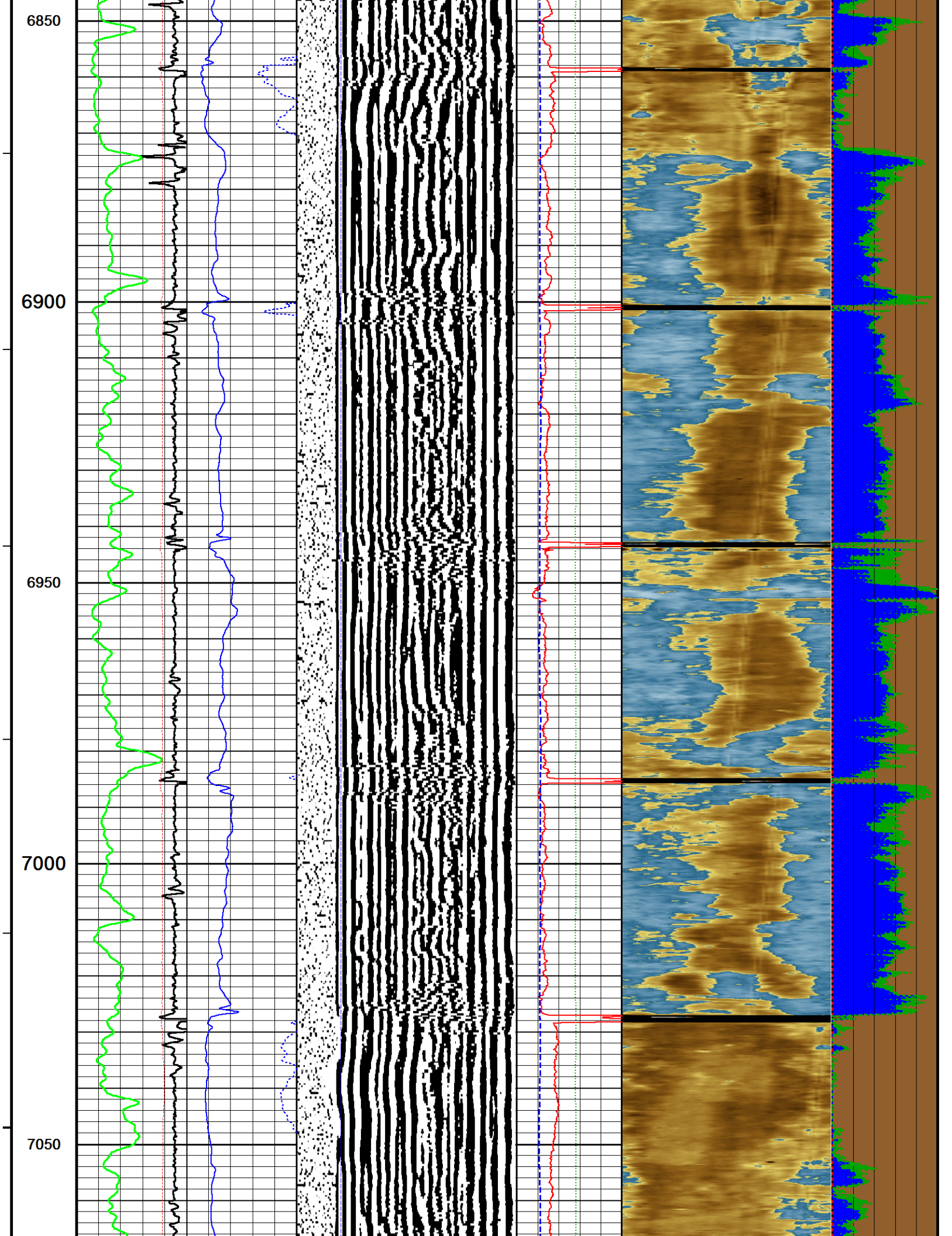


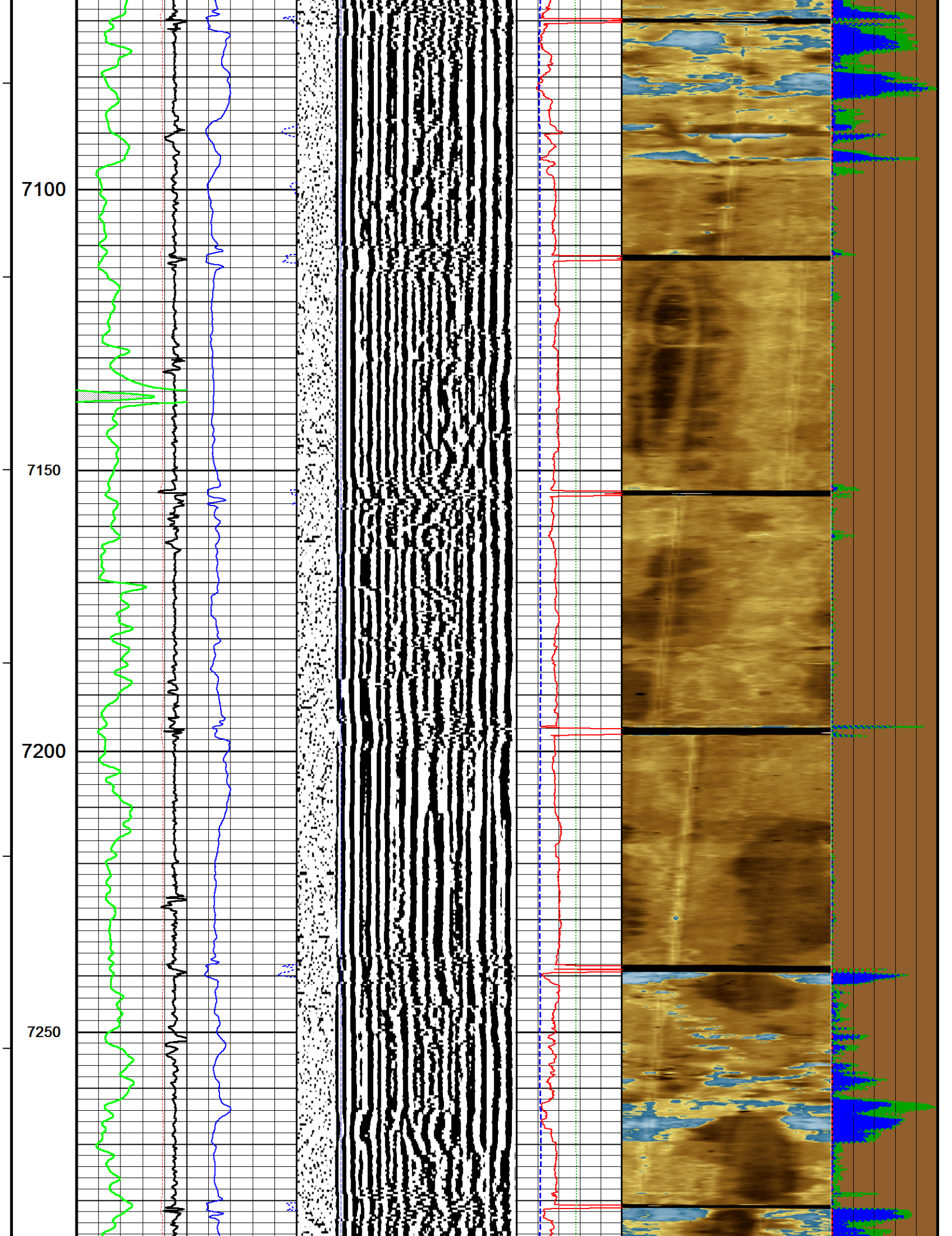


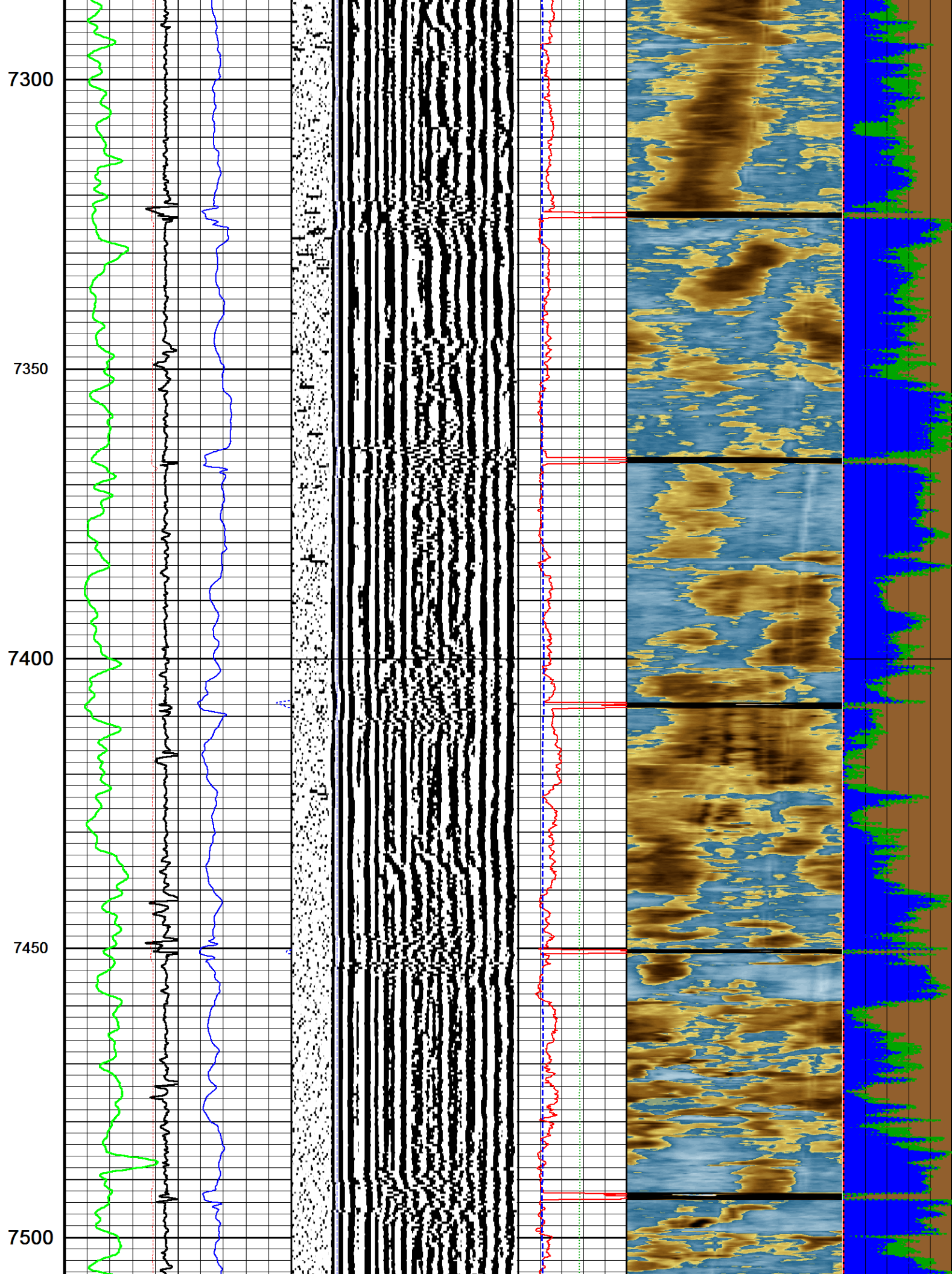


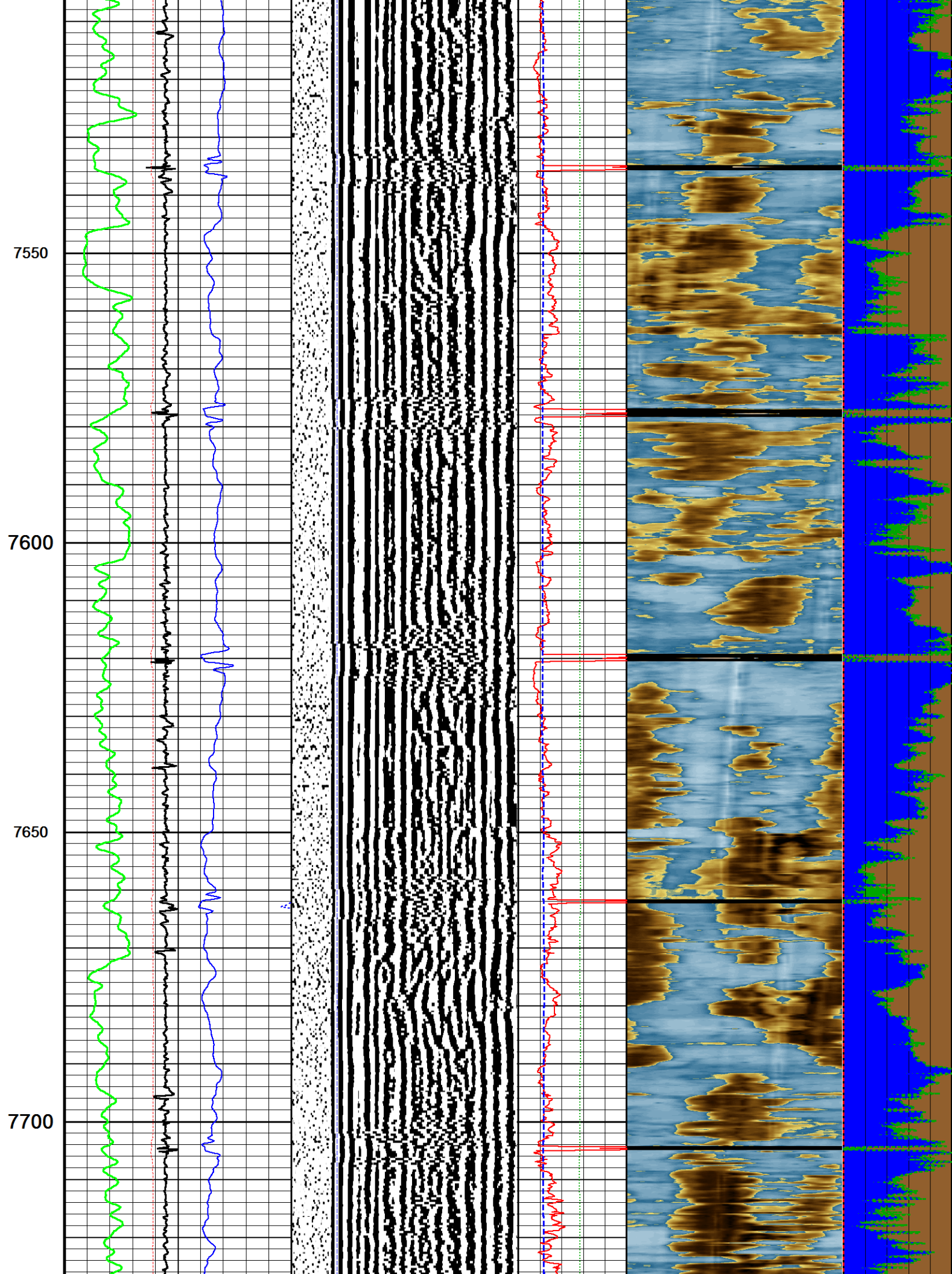


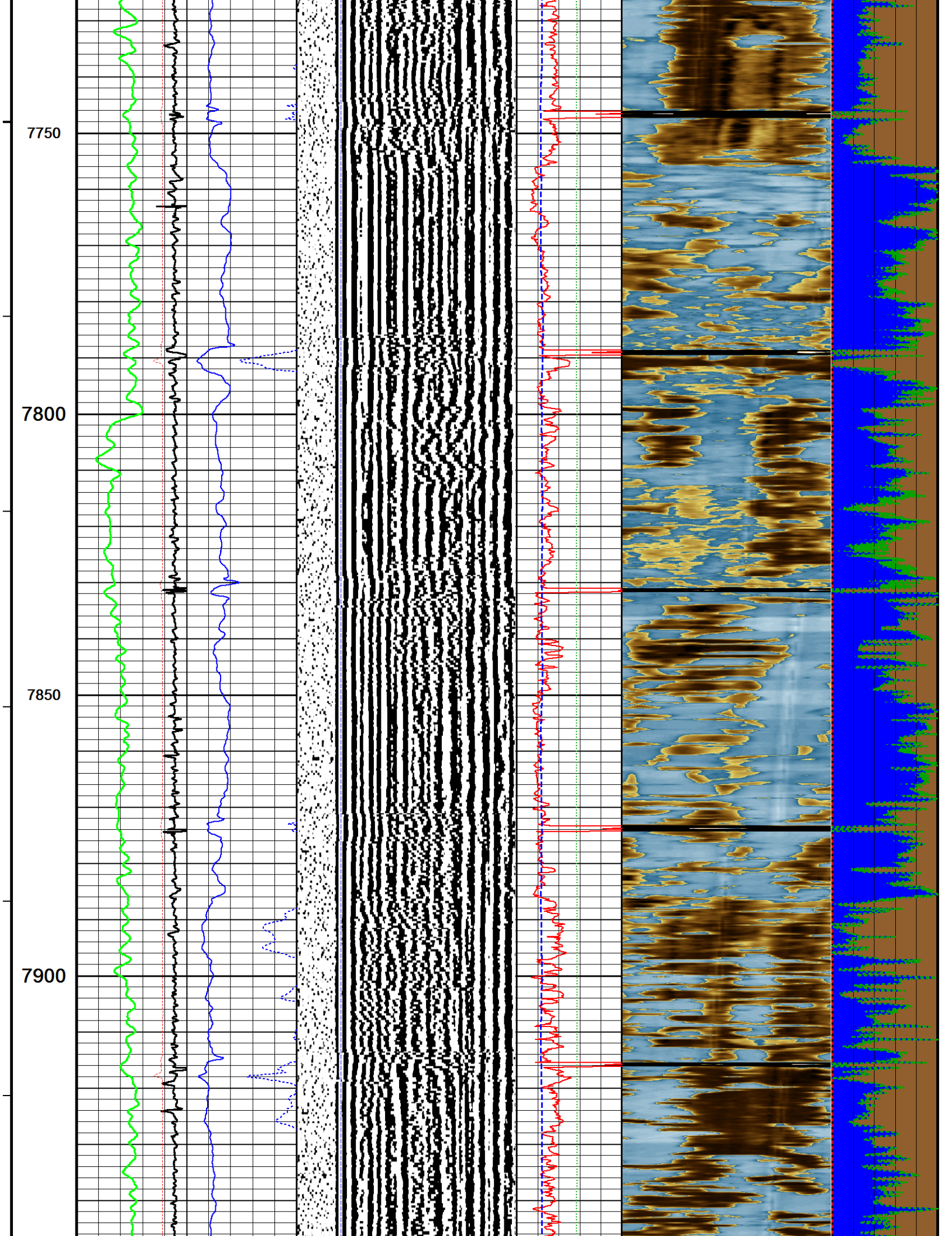


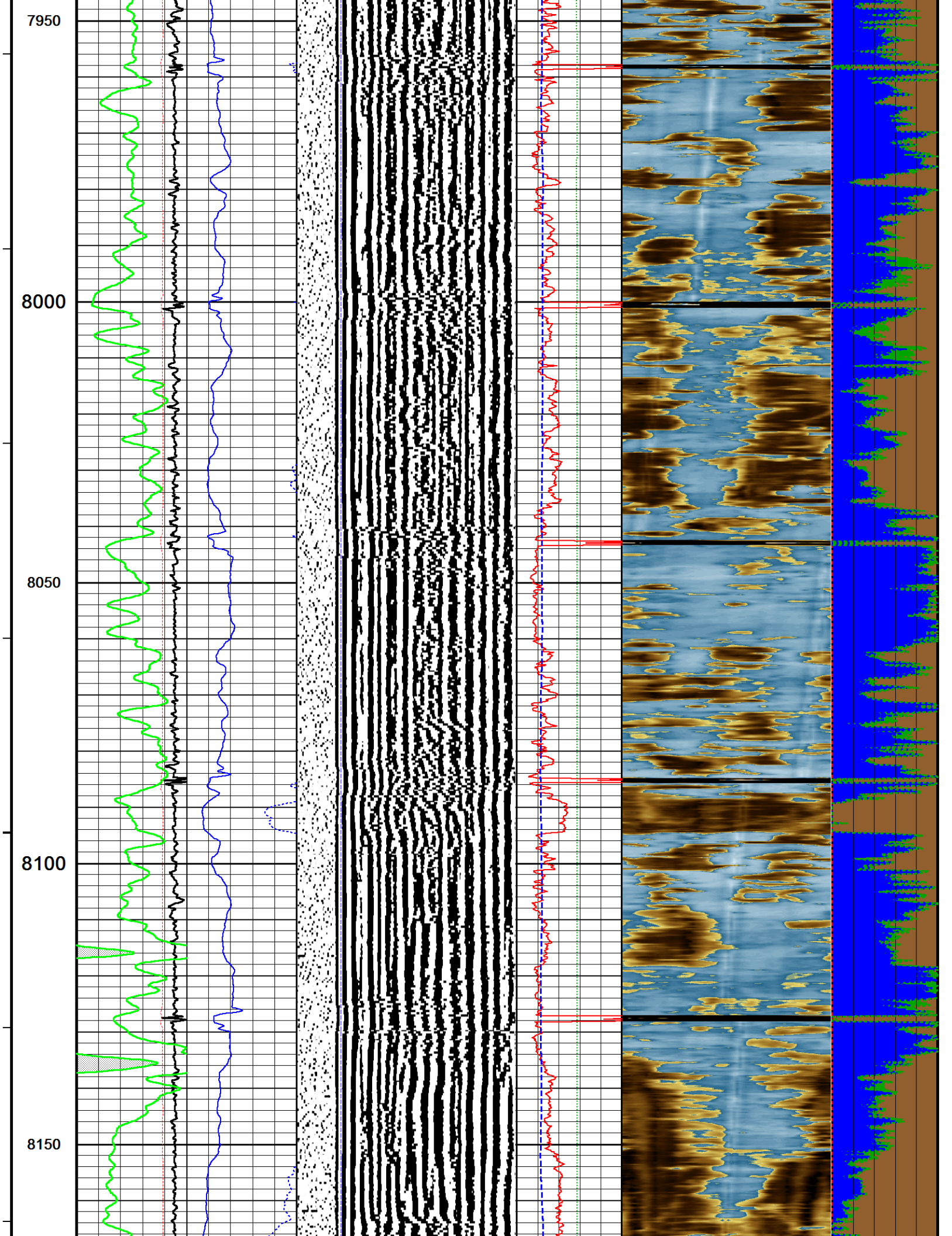


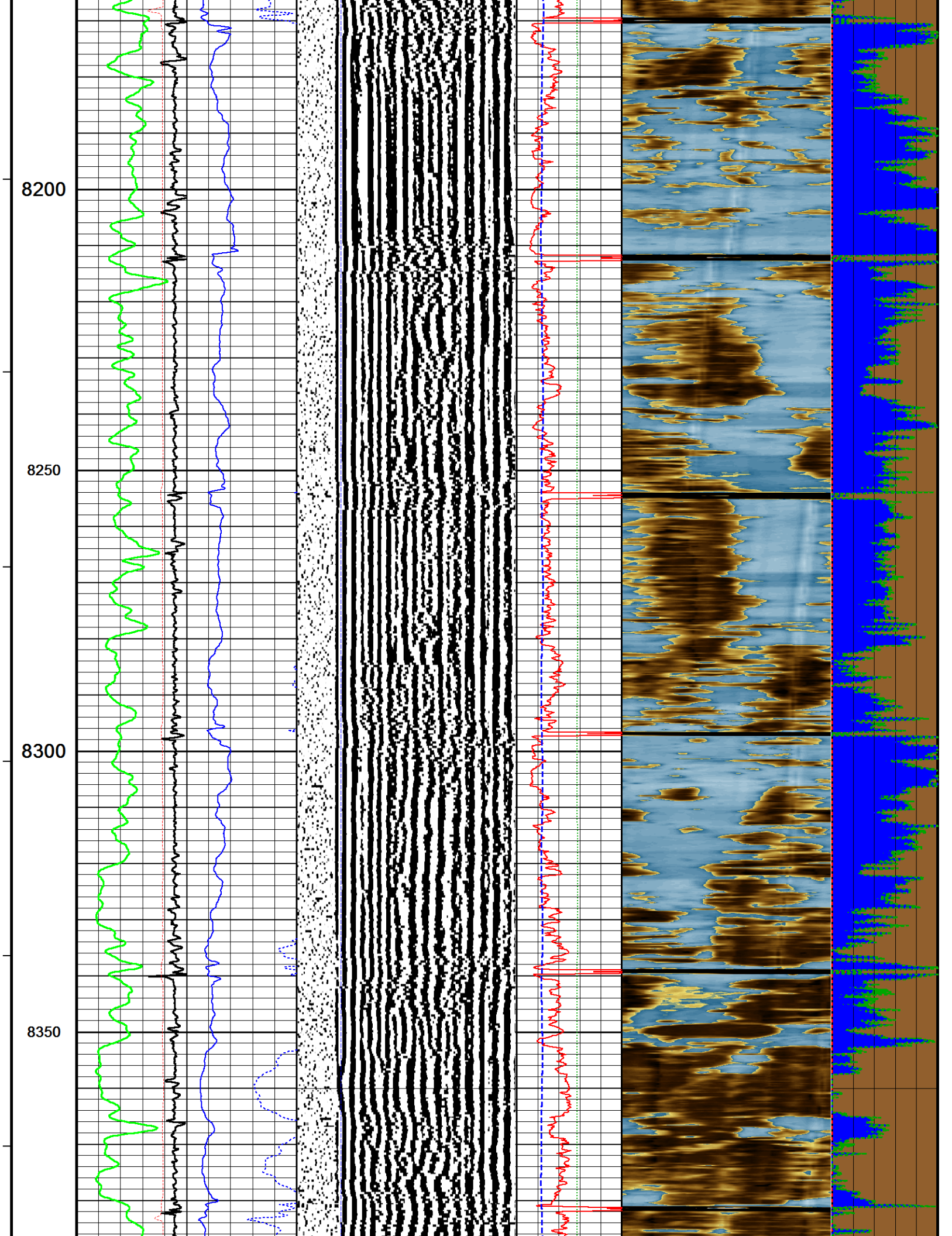


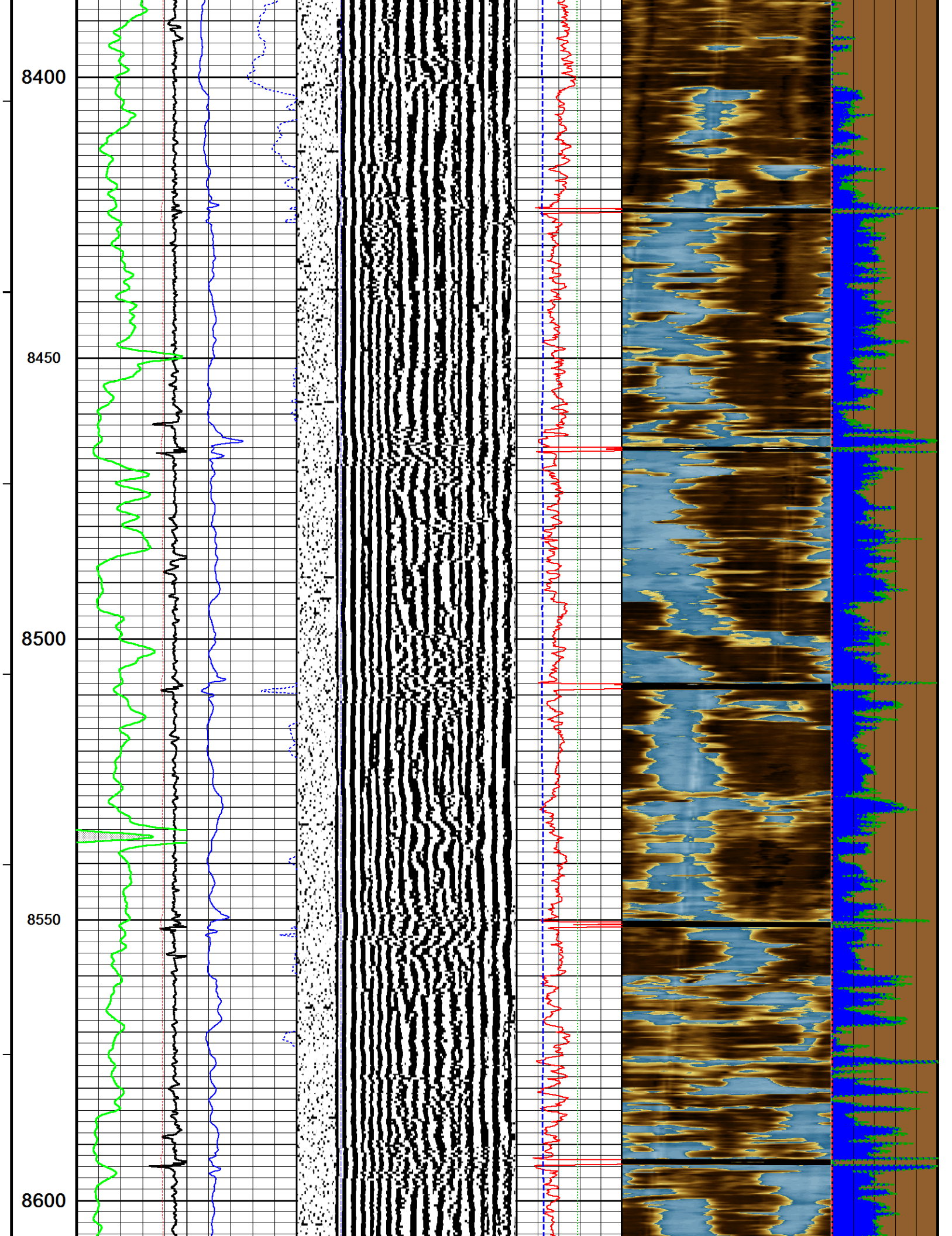


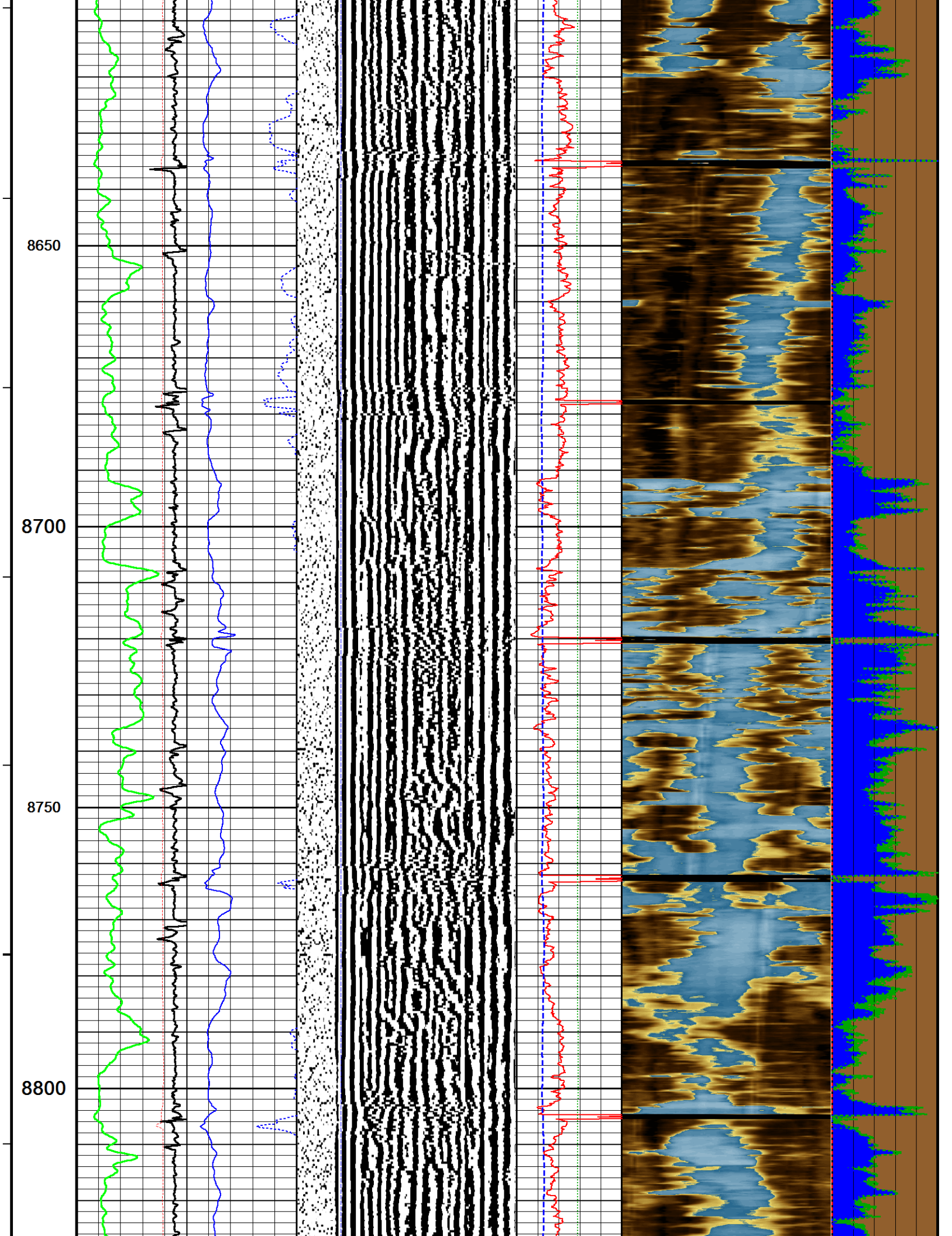


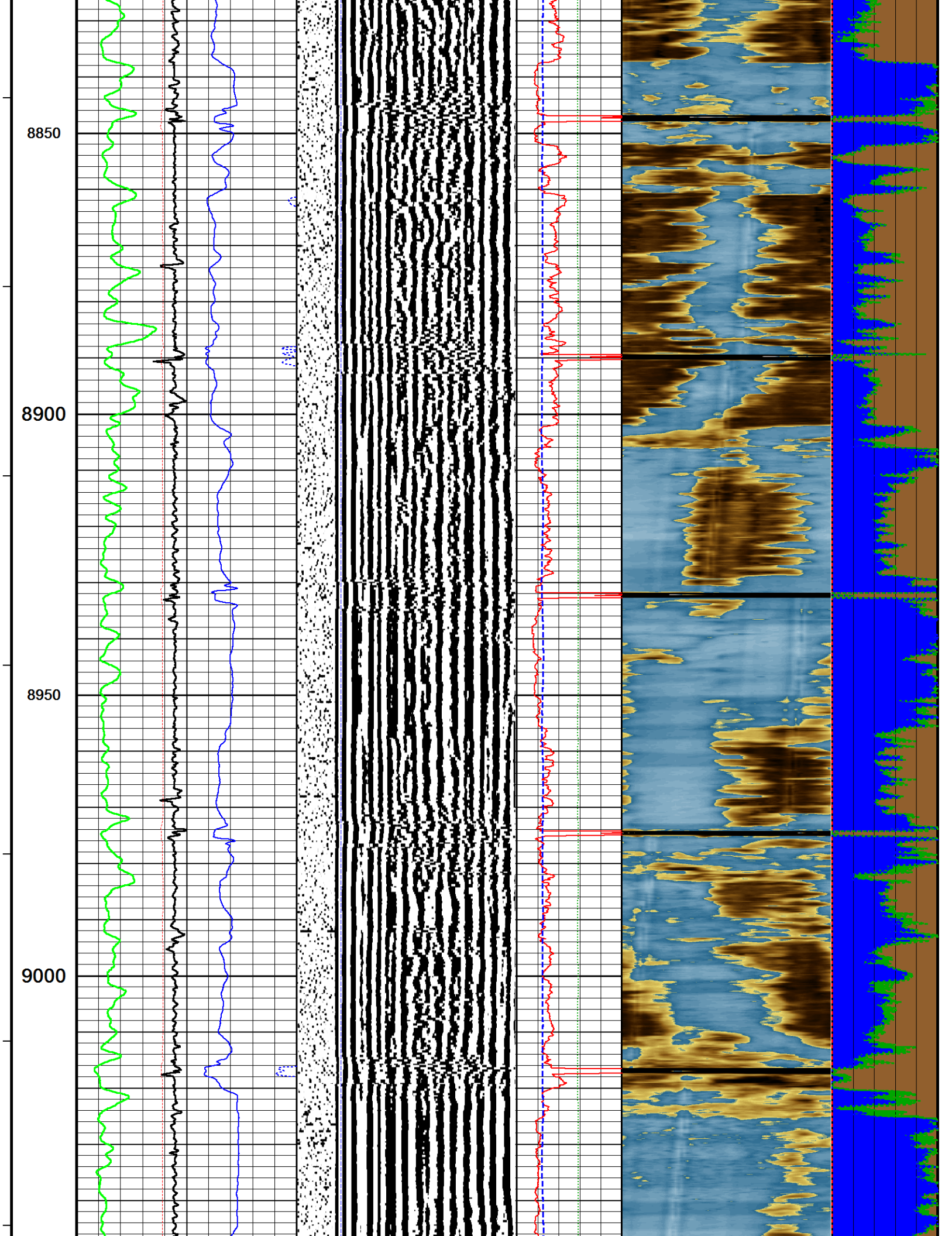


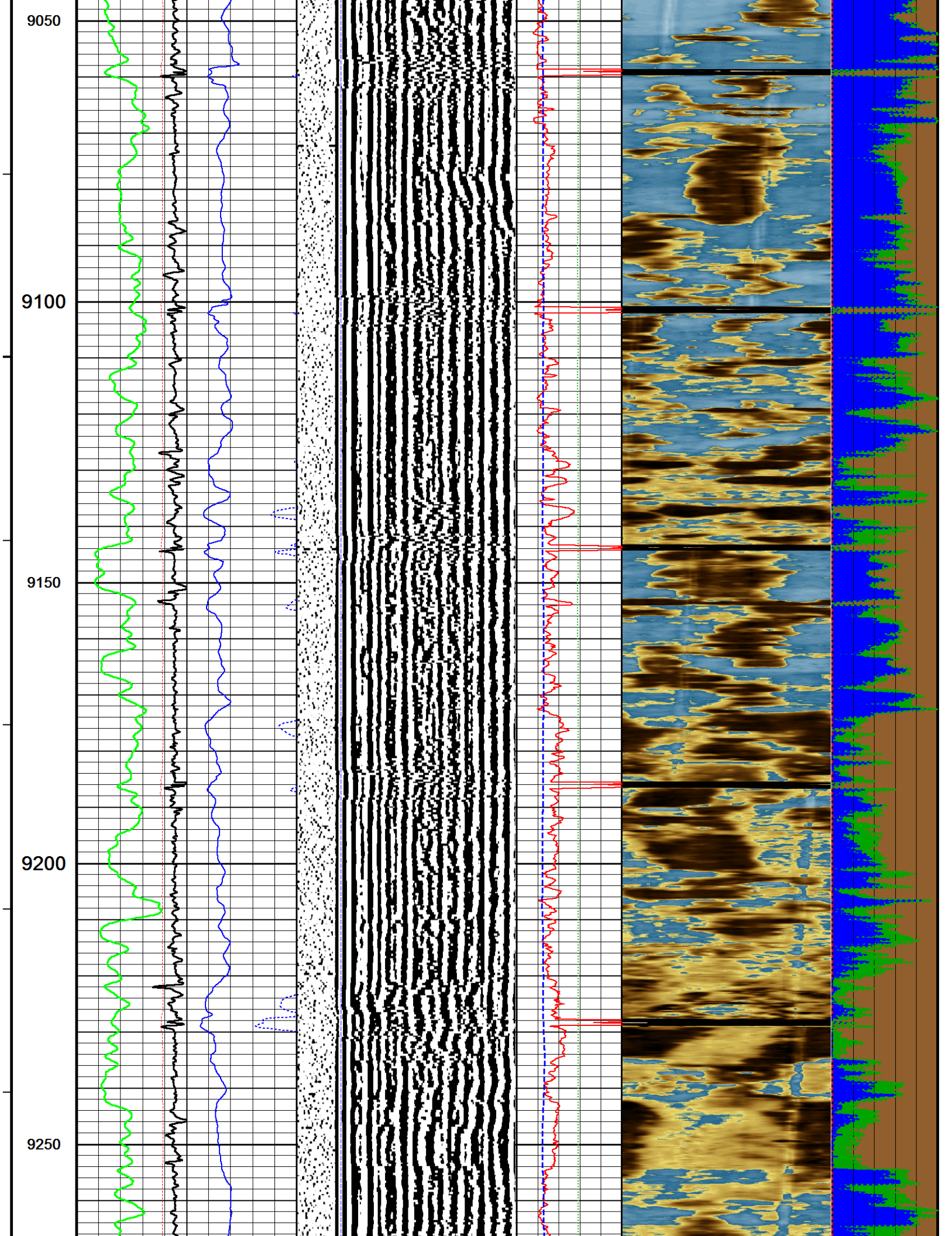


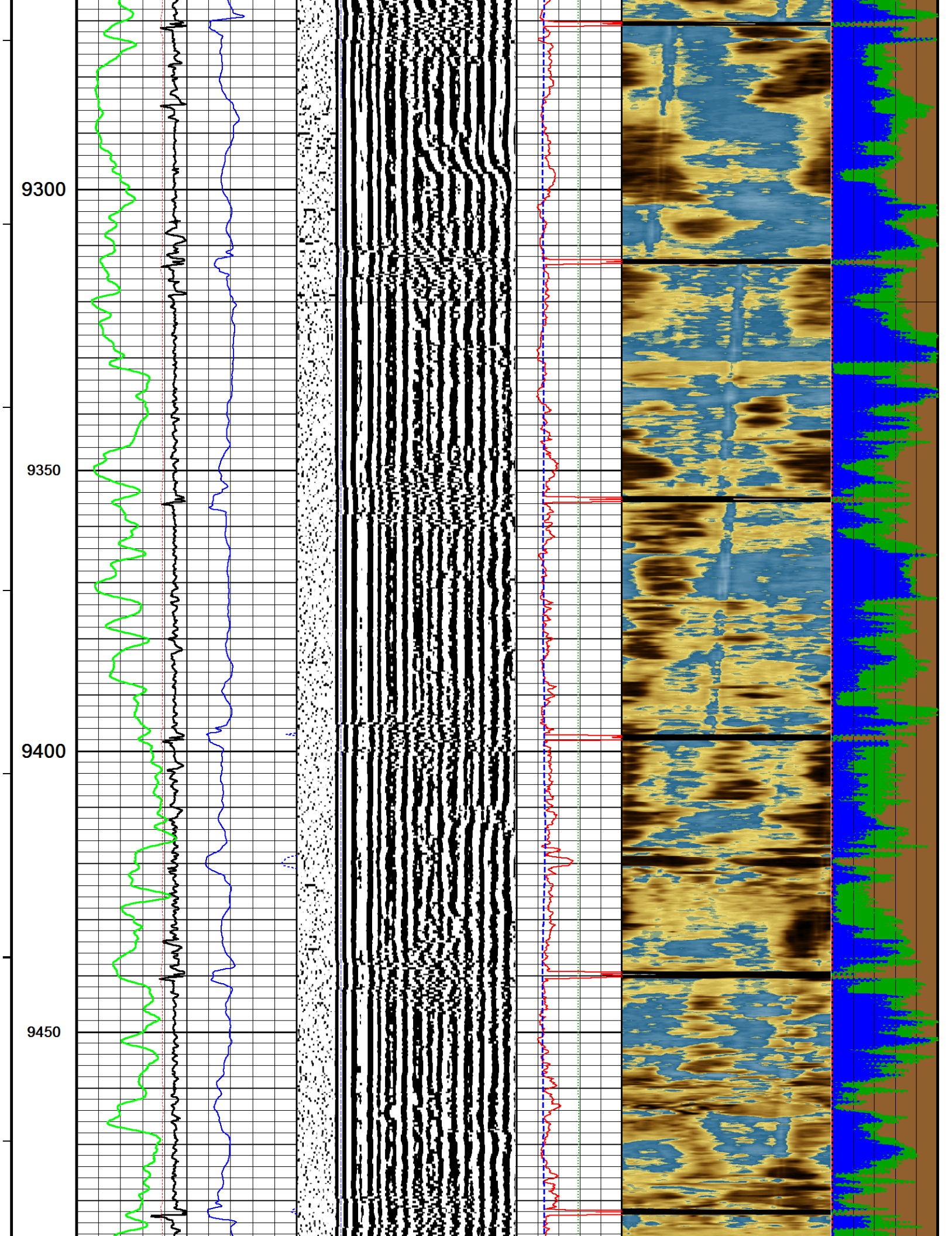


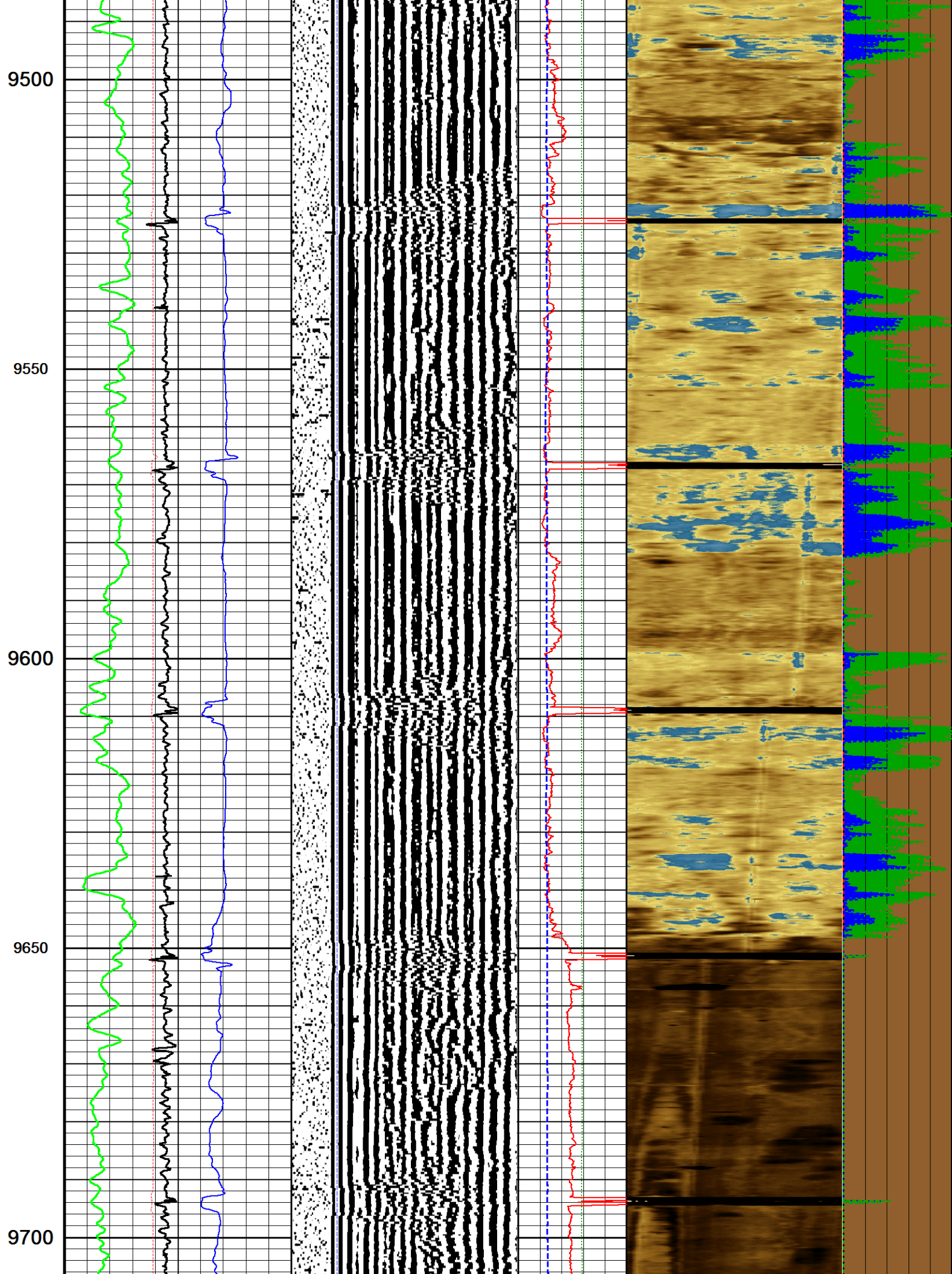


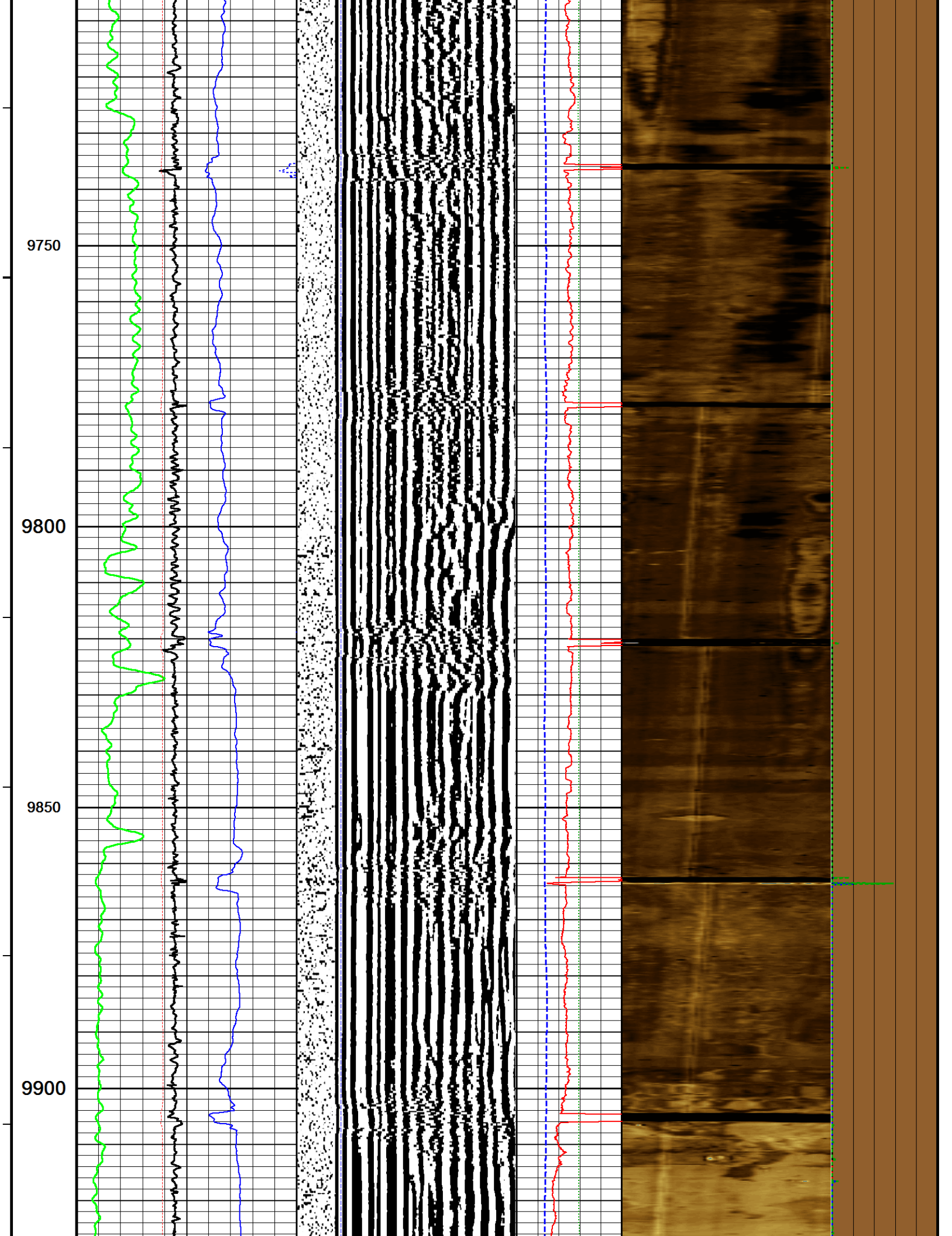


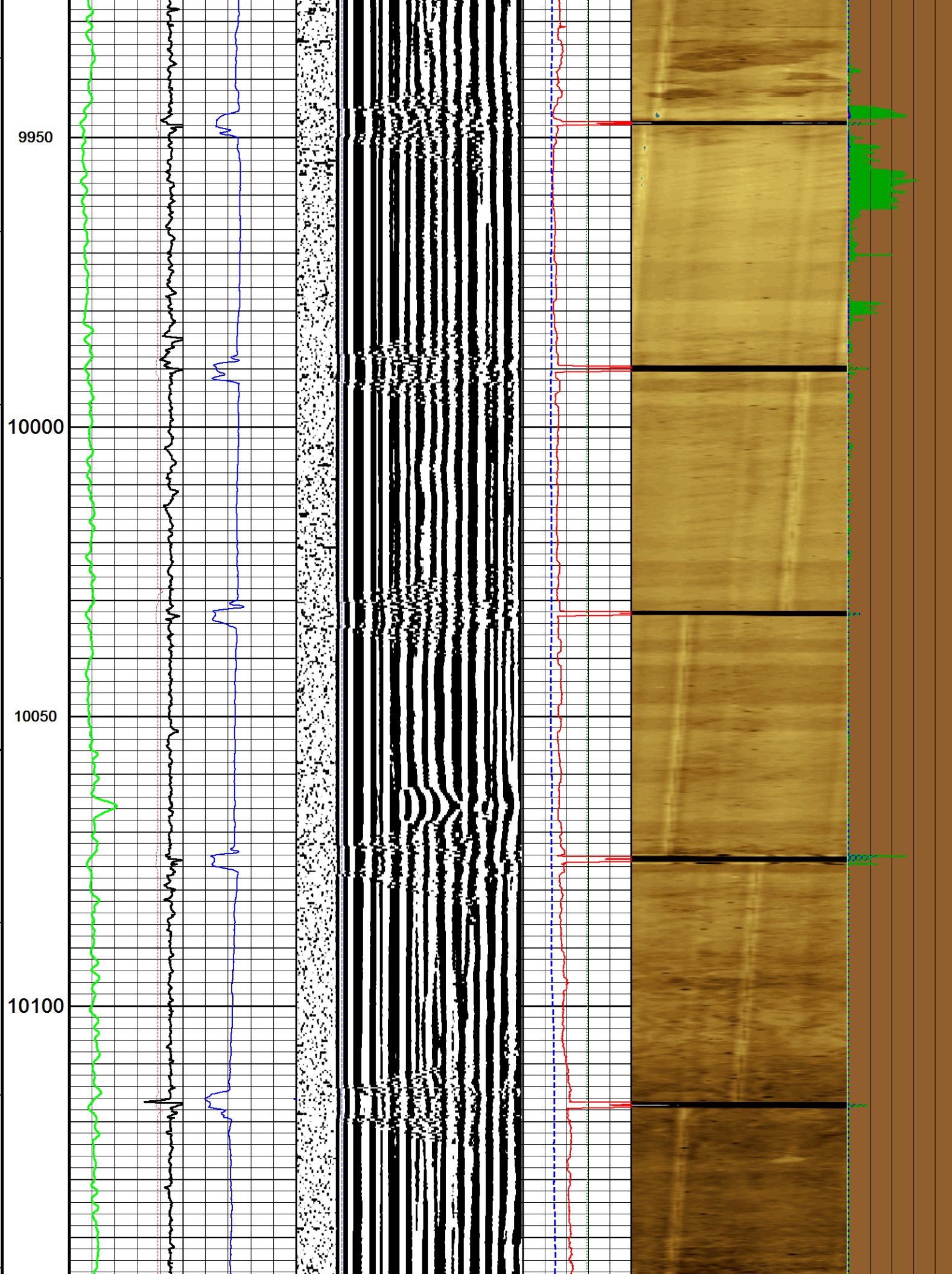


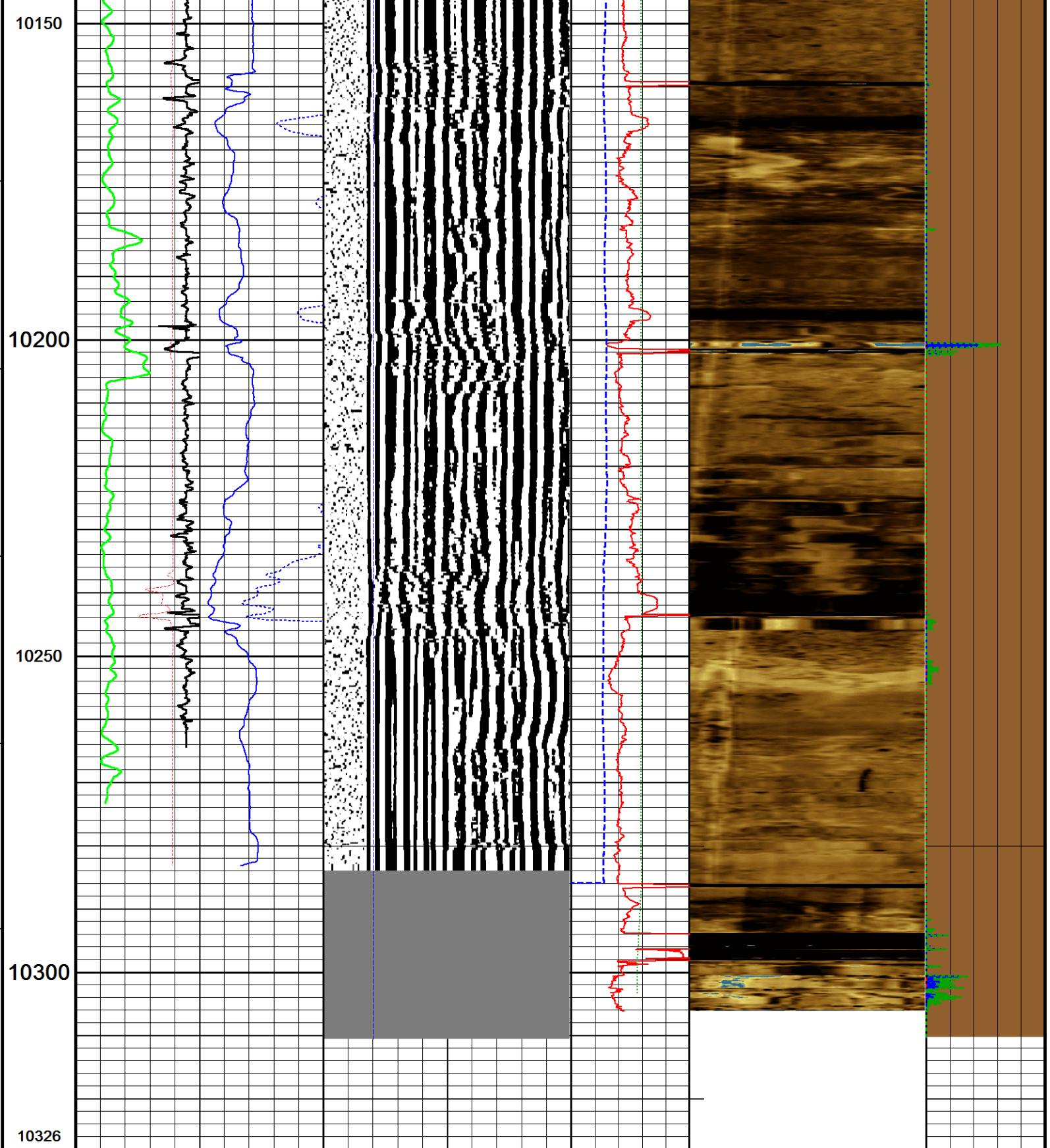












Depth
in
Feet

$\frac{CCL}{MV}$

$\frac{AM3F}{MV}$

XY Signature 5FT
microseconds

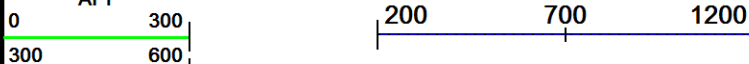
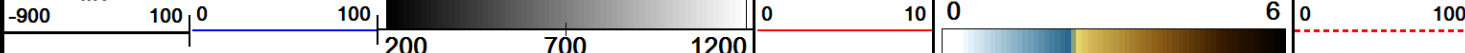
$\frac{IMAV}{K/M2}$

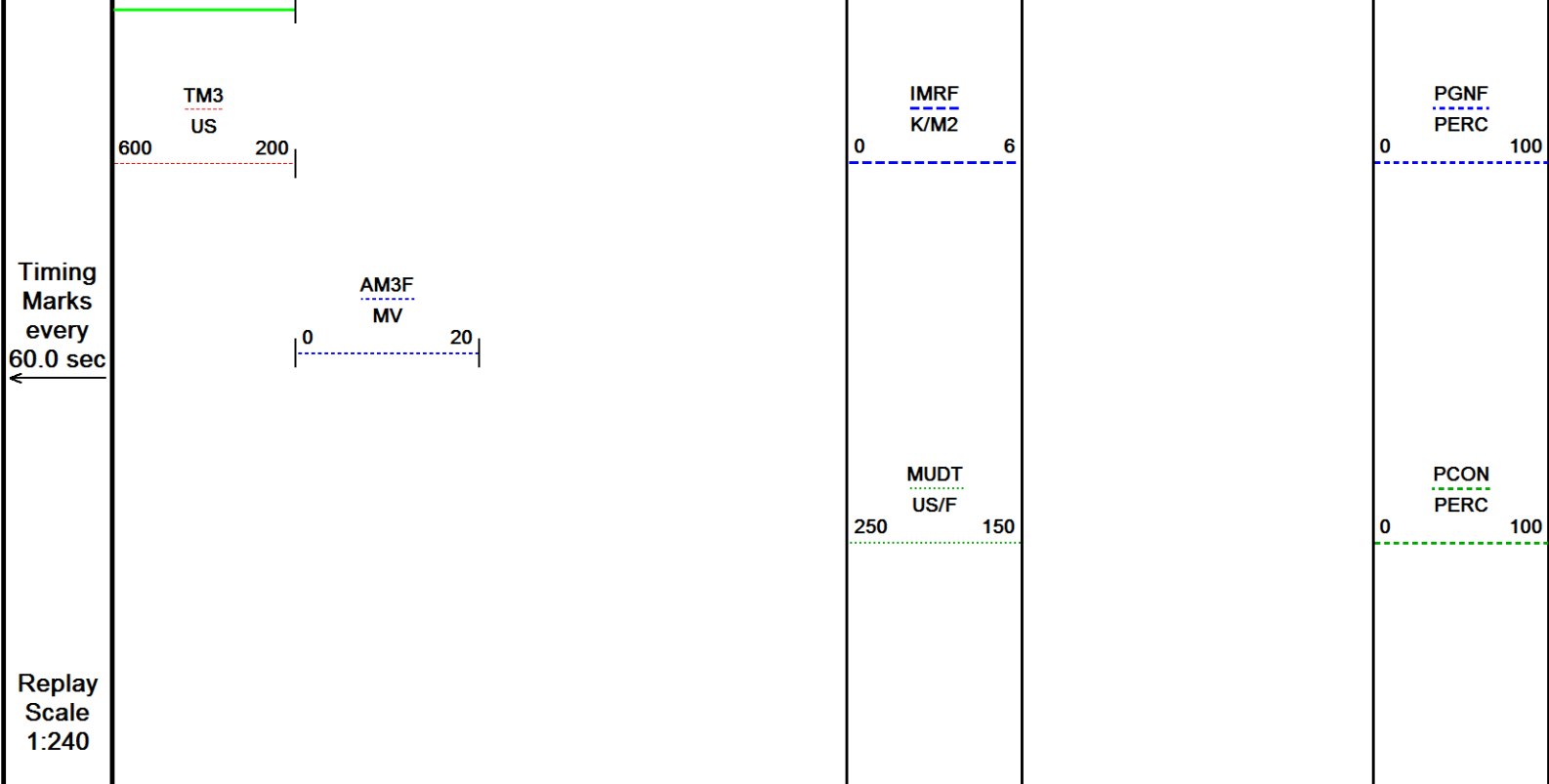
Impd Map
MRAYLS

$\frac{PGAS}{PERC}$

$\frac{GR}{API}$

FREE PIPE TRAVEL TIME





Depth Based Data - Maximum Sampling Increment 2.5cm

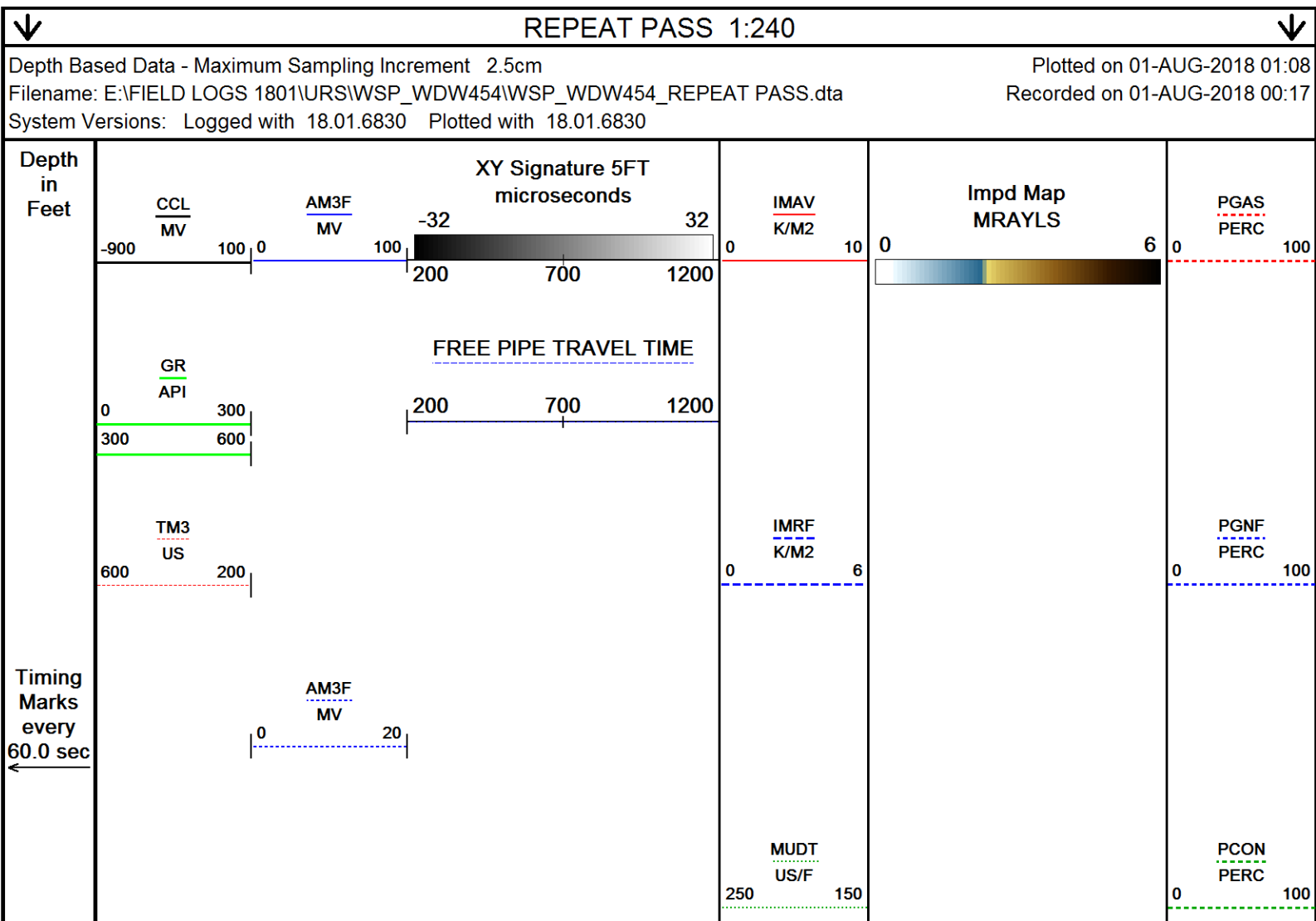
Plotted on 01-AUG-2018 01:08

Filename: E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_MAIN_PASS.dta

Recorded on 31-JUL-2018 23:56

System Versions: Logged with 18.01.6830 Plotted with 18.01.6830

↑MAIN PASS 1:240↑



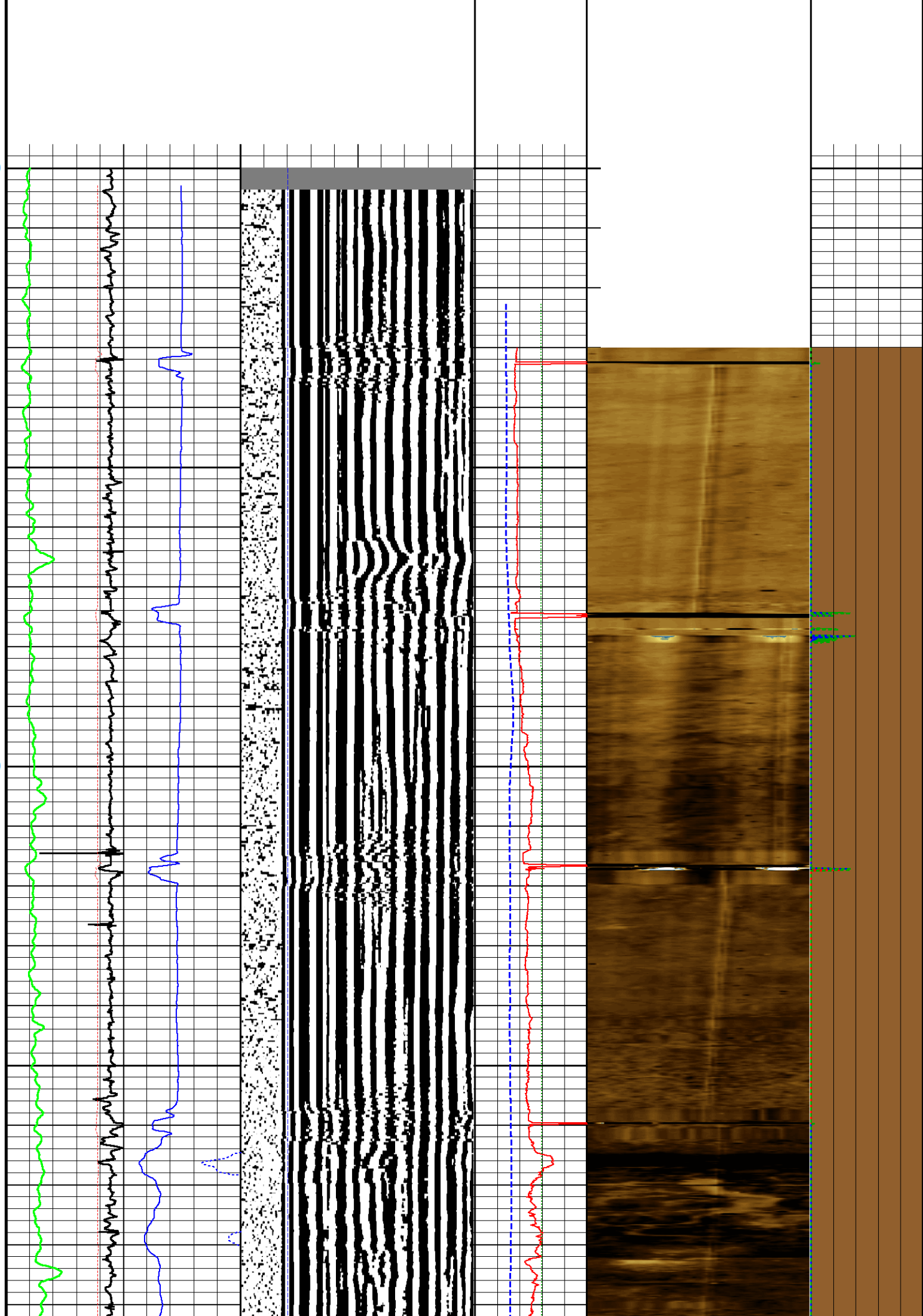
Replay
Scale
1:240

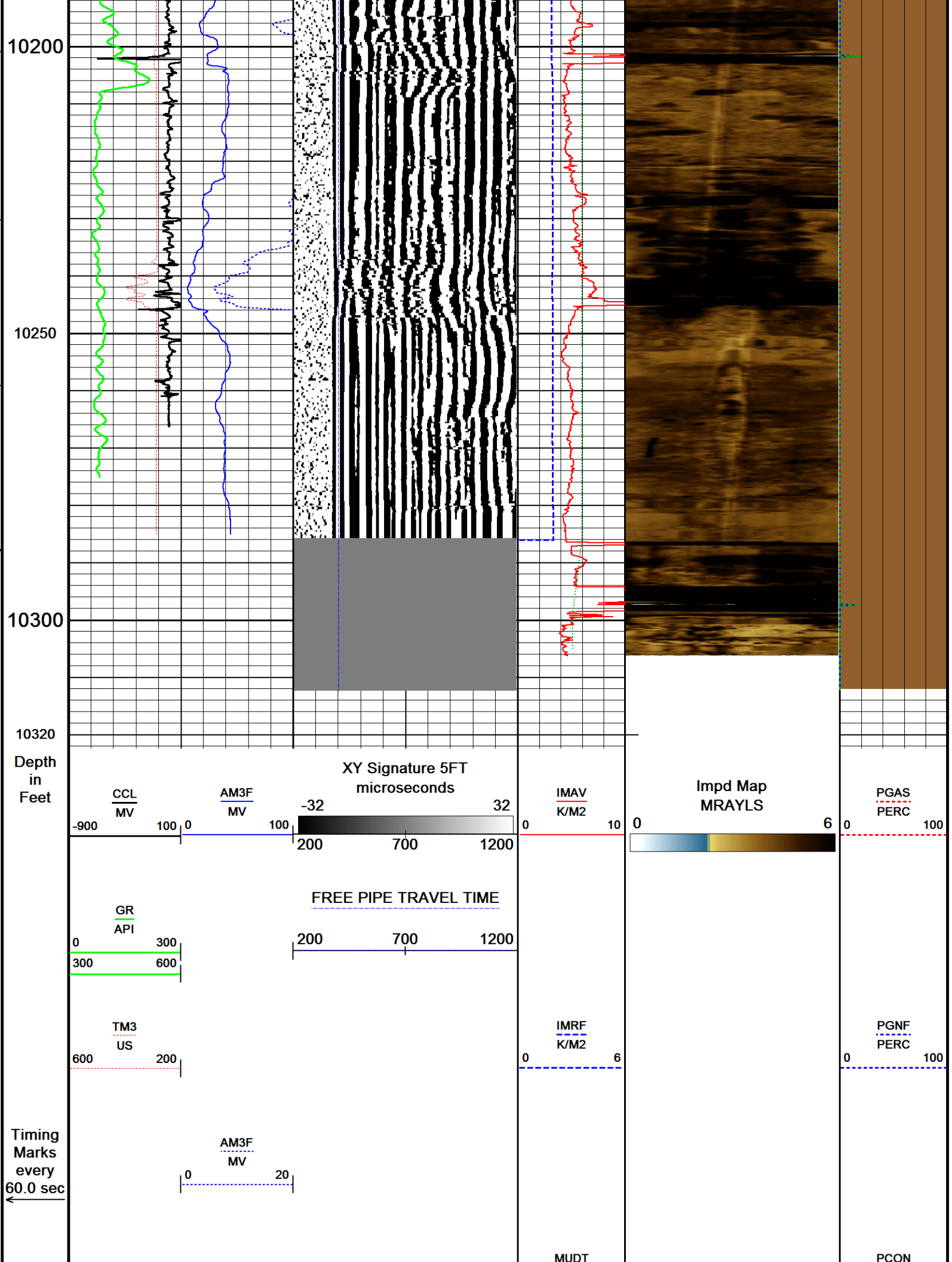
10000

10050

10100

10150





Replay Scale 1:240		250	US/F	150		0	PERC	100

Depth Based Data - Maximum Sampling Increment 2.5cm
Plotted on 01-AUG-2018 01:08

Filename: E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_REPEAT PASS.dta
Recorded on 01-AUG-2018 00:17

System Versions: Logged with 18.01.6830 Plotted with 18.01.6830

↑
REPEAT PASS 1:240
↑

SHOP AND FIELD CALIBRATIONS
 E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_MAIN_PASS.dta

UGR Field Survey Cal UGR-JD 177

Field calibration on 00-JAN-1988 00:00

Gamma Ray Field Survey Calibration

Tool Type: UGR-JD	Serial No: 177		
Calibrator No:			
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 112

Field calibration on 31-JUL-2018 16:16

Cement Bond Tool Amplitude Field Calibration

Tool Type	CBT-AA	Serial No	112
Free Pipe Depth			

Sensor	Description	Standard(mv)	Measured(mv)
AMP 3 FT	100 % Bond	8.70	40.00
	Free Pipe	51.00	600.12
AMP 5 FT	100 % Bond	2.60	47.54
	Free Pipe	34.00	628.75

CBT Constants CBT-AA 112

Last Edited on 31-JUL-2018 23:56

Min Ampl 100% Bond	8.68 MV
Max Ampl 0% Bond	51.14 MV
Cement Cmpr Strength	580 PSI
Casing Size	9.63 IN
Casing Weight	47.0 LB/F
Casing Velocity	57.00 US/F
DT Fluid	210.0 US/F
Maximum Attenuation	12.00 DB/F
3' FT Connection	0.0 US

3	TI Correction	0.0 US
	Cement Weight	13.00 LB/G

Ultrasonic Radial Scanner Before Cal USH-DA 152

Field Calibration on 31-JUL-2018 15:42

Ultrasonic Radial Scanner Before Calibration

Tool Type USH-DA Serial No 152

	Measured	Minimum	Maximum	
Free Pipe	-999.250	0.000	0.000	K/M2
Mud Impedance	1.160	0.000	0.000	K/M2

URS Constants USH-DA 152

Last Edited on 31-JUL-2018 23:56

*** 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	6.61
ZMud Cal Area Ratio	4.05

** 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	1680.00	9.63	54.50	1.50	1.50	0.47	1.00
0.00	10326.00	9.63	47.00	7.37	1.16	0.47	1.00

** Constants **

Thickness Calculated from	Tool
Radius Offset	-0.13
Mud slowness Offset	10.00 US/F
Mud Chamber Equation	Titanium Air Backed
Z_mud at Calibration	1.55 K/M2
Z_mud Outside	1.80 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

E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_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 135 LG: 1.05 ft WT: 15.4 lb OD: 3.386 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 147 LG: 4.60 ft WT: 63.9 lb OD: 3.386 in

Gamma Ray

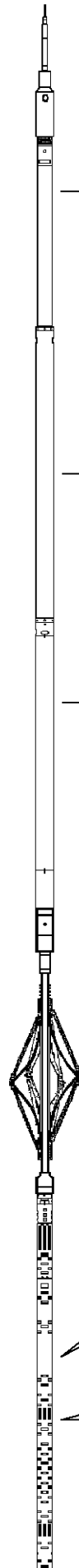
UGR-JD 177 LG: 4.60 ft WT: 81.6 lb OD: 3.386 in

55 pin Roller Centralizer

CEN-XA 133 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

Cement Bond Tool

CBT-AA 112 LG: 10.75 ft WT: 163.1 lb OD: 3.386 in



46.30 ft CCL - Collar Locator

41.83 ft INCL - INCLINATION

38.21 ft GR - Gamma Ray

27.85 ft AM3F - Amplitude 3FT

27.85 ft TM3 - Travel Time 3FT

26.85 ft TM5 - Travel Time 5FT

26.85 ft XY5 - XY Signature 5FT

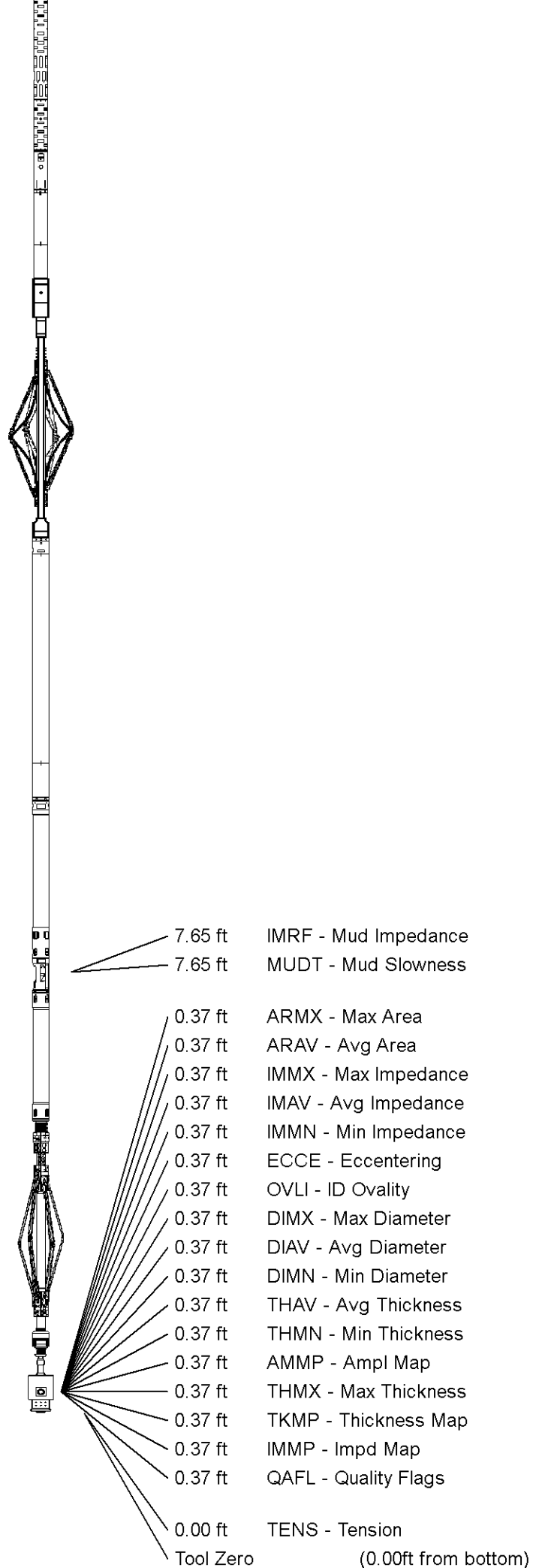
55 pin Roller Centralizer
CEN-XA 217 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

URS Electronics Cartridge
UCC-AA 195 LG: 4.51 ft WT: 79.4 lb OD: 3.386 in

URS Sonde Section
USS-AD 174 LG: 9.65 ft WT: 167.6 lb OD: 3.386 in

Ultrasonic Radial Scanner Head D
USH-DA 152 LG: 1.03 ft WT: 19.8 lb OD: 5.433 in

Total Length: 49.22 ft Weight: 784.8 lb



COMPANY	WSP USA INC.
WELL	WDW #4
FIELD	
PROVINCE/COUNTY	EDDY
COUNTRY/STATE	NEW MEXICO / USA

Elevation Kelly Bushing	3585	feet	Bottom Log Interval	10307.00	feet
Elevation Drill Floor	3584	feet	Depth Driller	10306.00	feet
Elevation Ground Level	3565	feet	Depth Logger	10307.00	feet



Weatherford®

SECUREVIEW
ULTRAVIEW / BONDVIEW
CEMENT EVALUATION