

			SECUREVIEW ULTRAVIEW CASING 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		Permanent Datum GL, Elevation 3565 feet Log Measured From KB, 20.00 feet above Permanent Datum Drilling Measured From KELLY BUSHING		
Longitude	104.250034				
API Number	30-015-44677				
			Elevations: KB 3585.00 DF 3584.00 GL 3565.00		
Date	31-JUL-2018		PERFORATION RECORD		
Run Number	ONE		Shot	Number	Depth From
Service Order	5839-220194889		Density	of Shots	Depth To
Type Log	URS				
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		Gun Type		
Well Head Pressure	0.00		Gun Size		
Well Head Equipment	NONE		CASING / TUBING RECORD		
Time Well Ready	15:00		Size	Weight	Depth From
Time Logger Bottom	17:45		inches	pounds/ft	Depth To
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

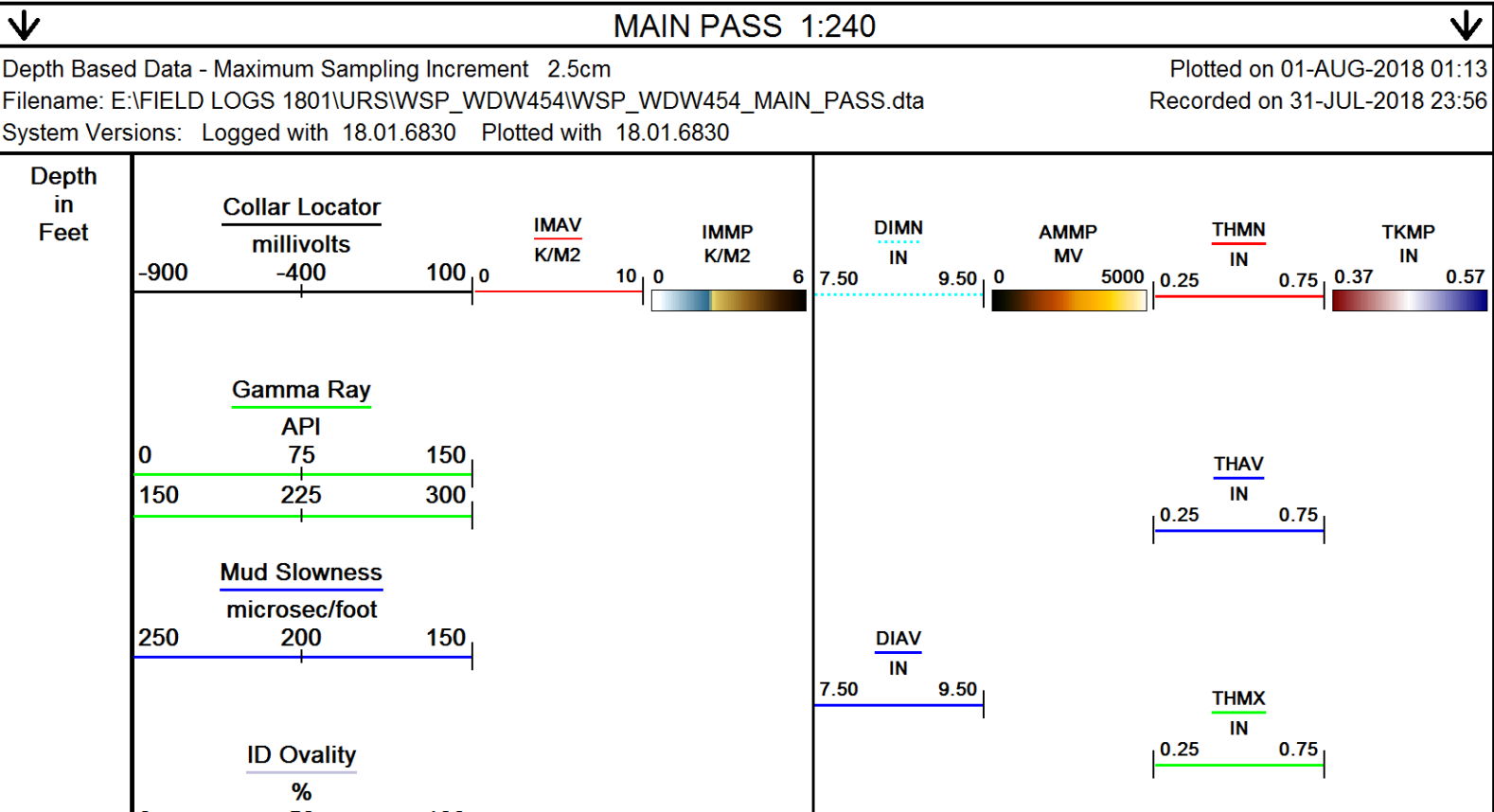
REMARKS
SERVICE ORDER NO: 5839-220194889 LOGGED USING WSS-E, WLS VERSION 18.01 TOOL ZEROED AT KELLY BUSHING. - NO LOGS AVAILABLE FOR CORRELATION AT TIME OF LOGGING. - ULTRASONIC CEMENT ANALYSIS UNAVAILABLE AT TIME OF LOGGING. CEMENT RETAINER SET AT 10280'. LOGGED FROM 10307' TO SURFACE AS PER CUSTOMER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

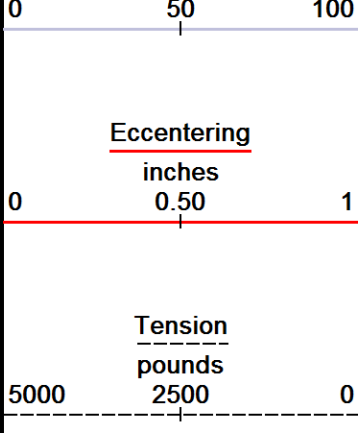
IMPEDANCE COLOUR PALETTE:

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

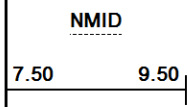
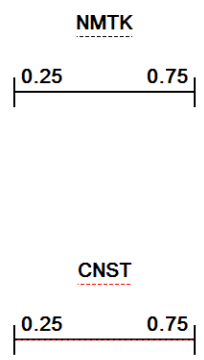
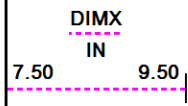
THANK YOU FOR CHOOSING WEATHERFORD.

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.

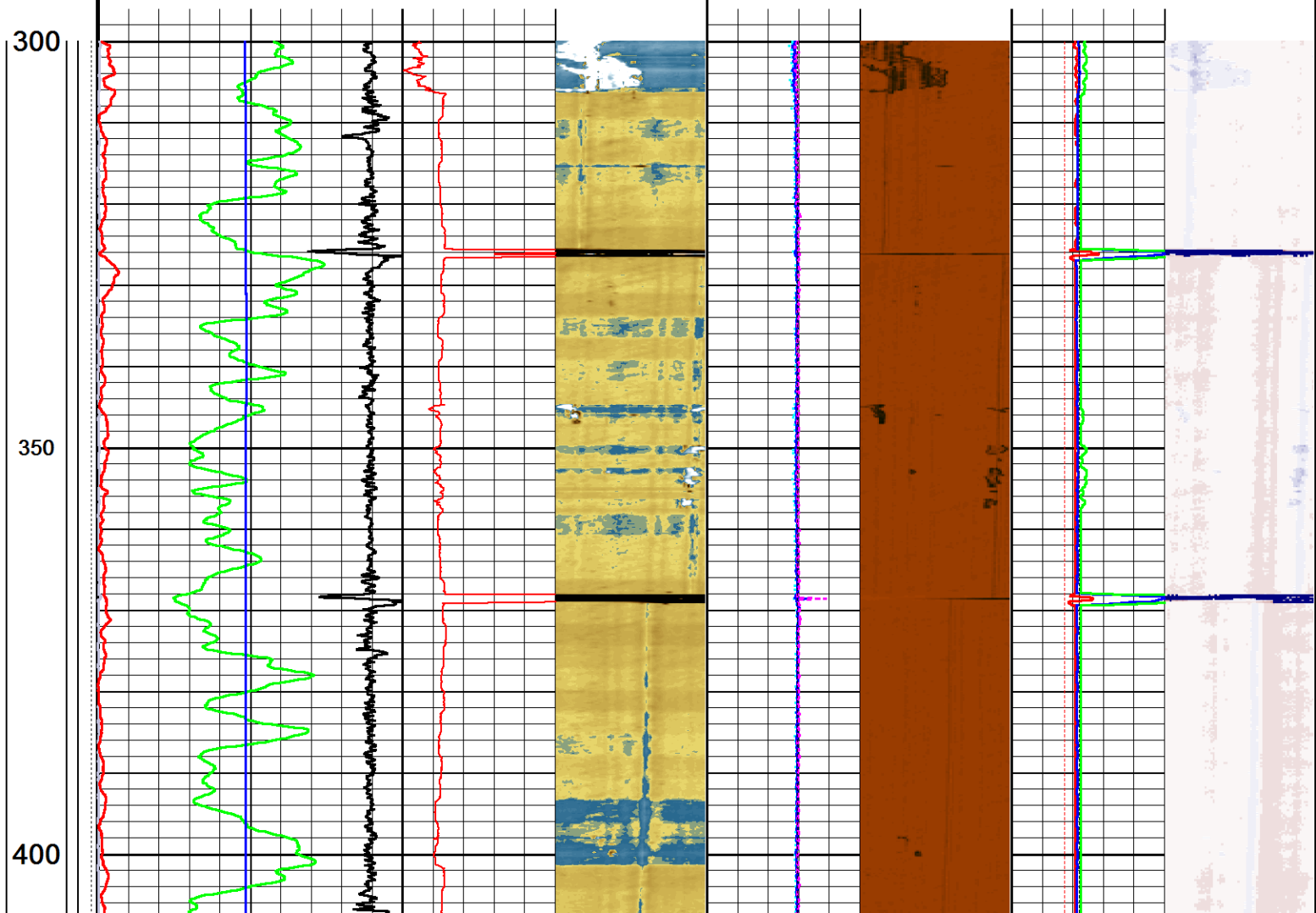


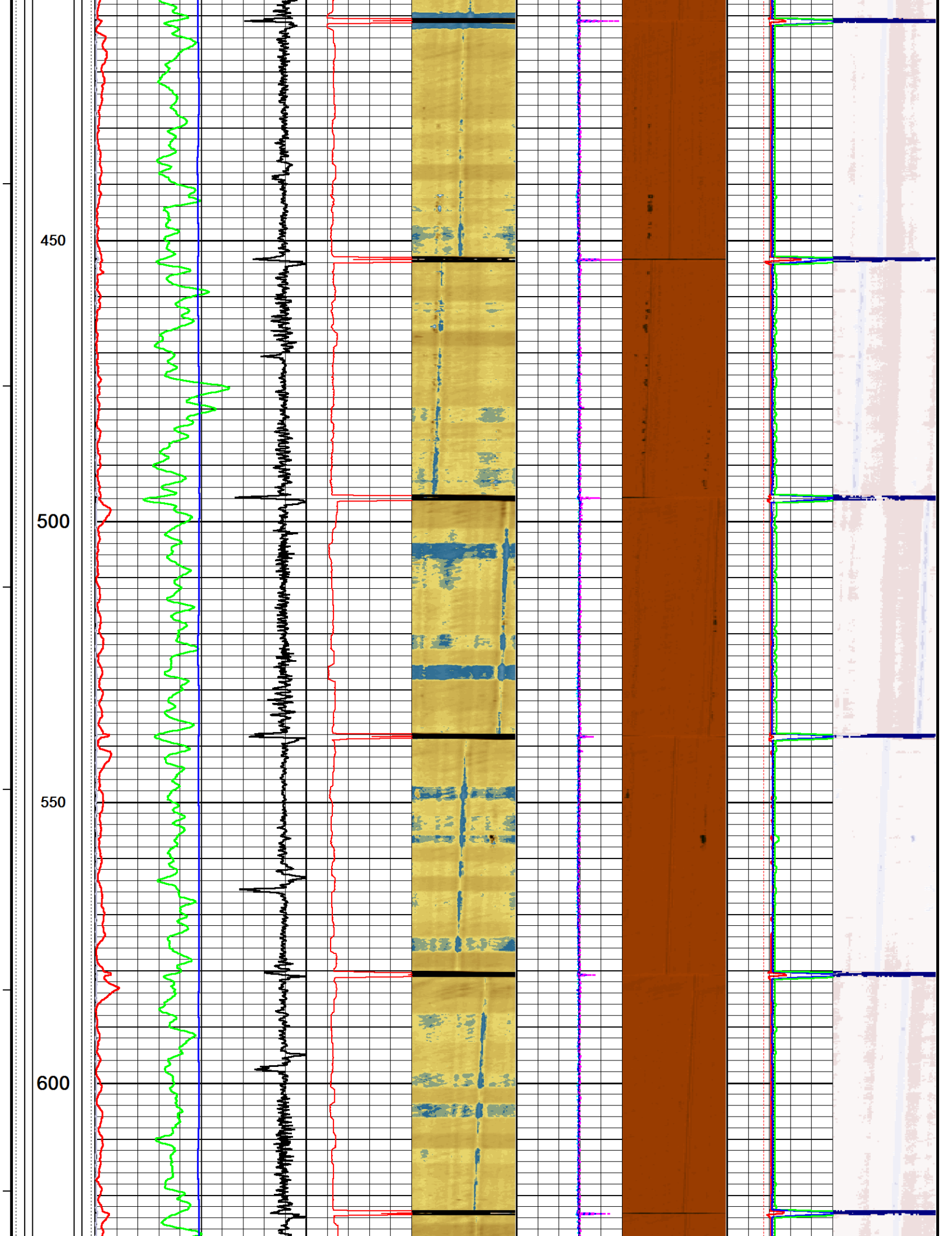


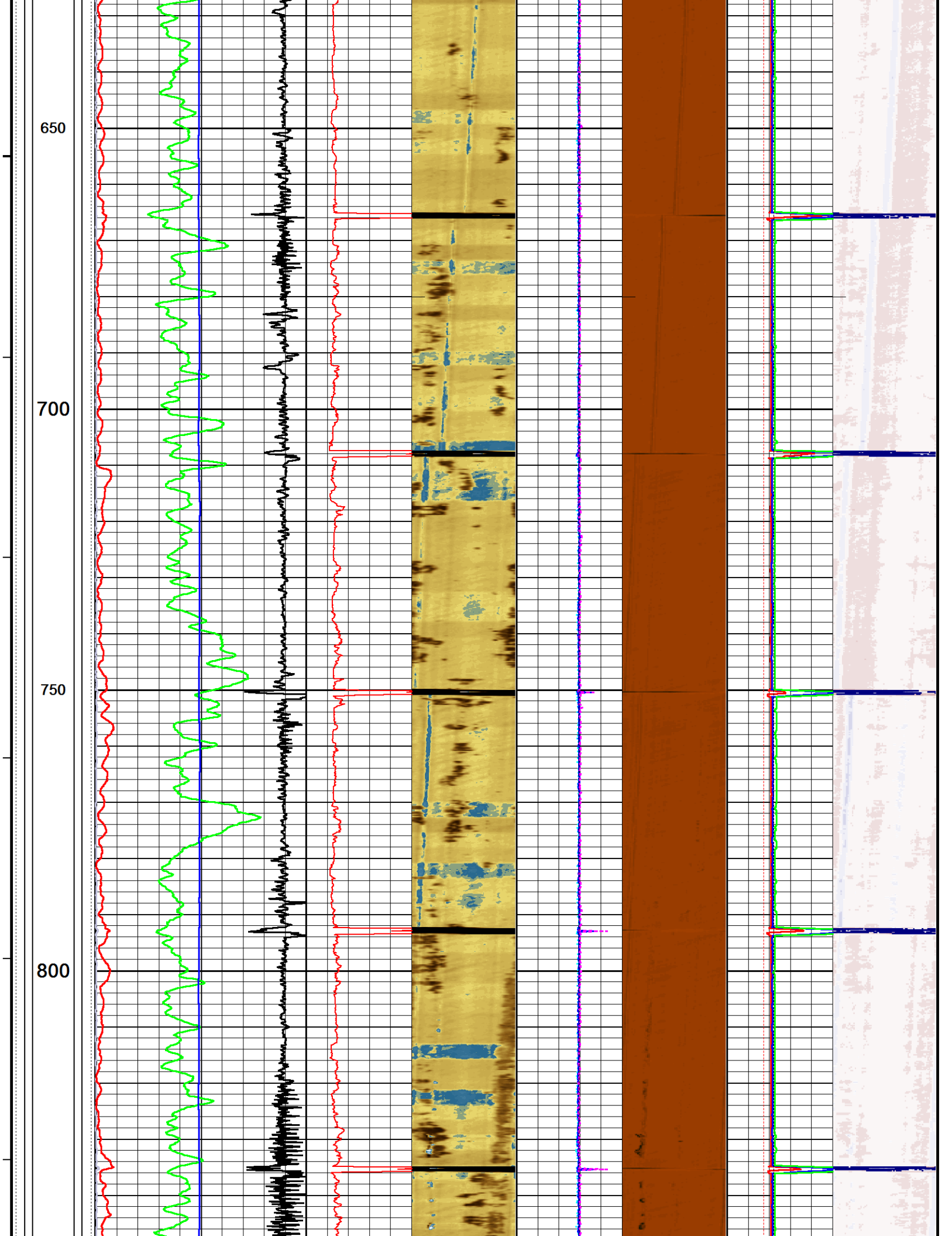
Timing
Marks
every
60.0 sec
←

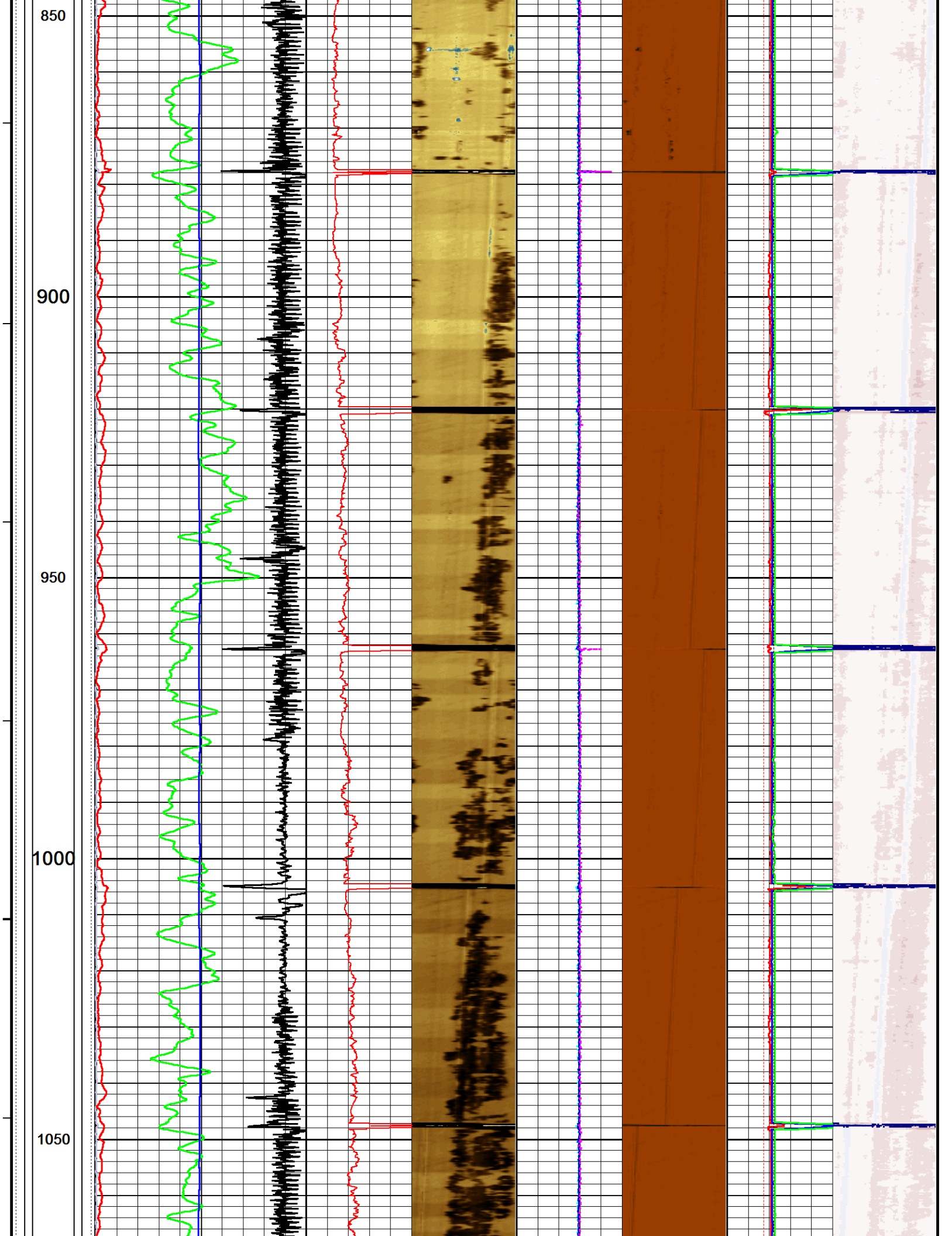


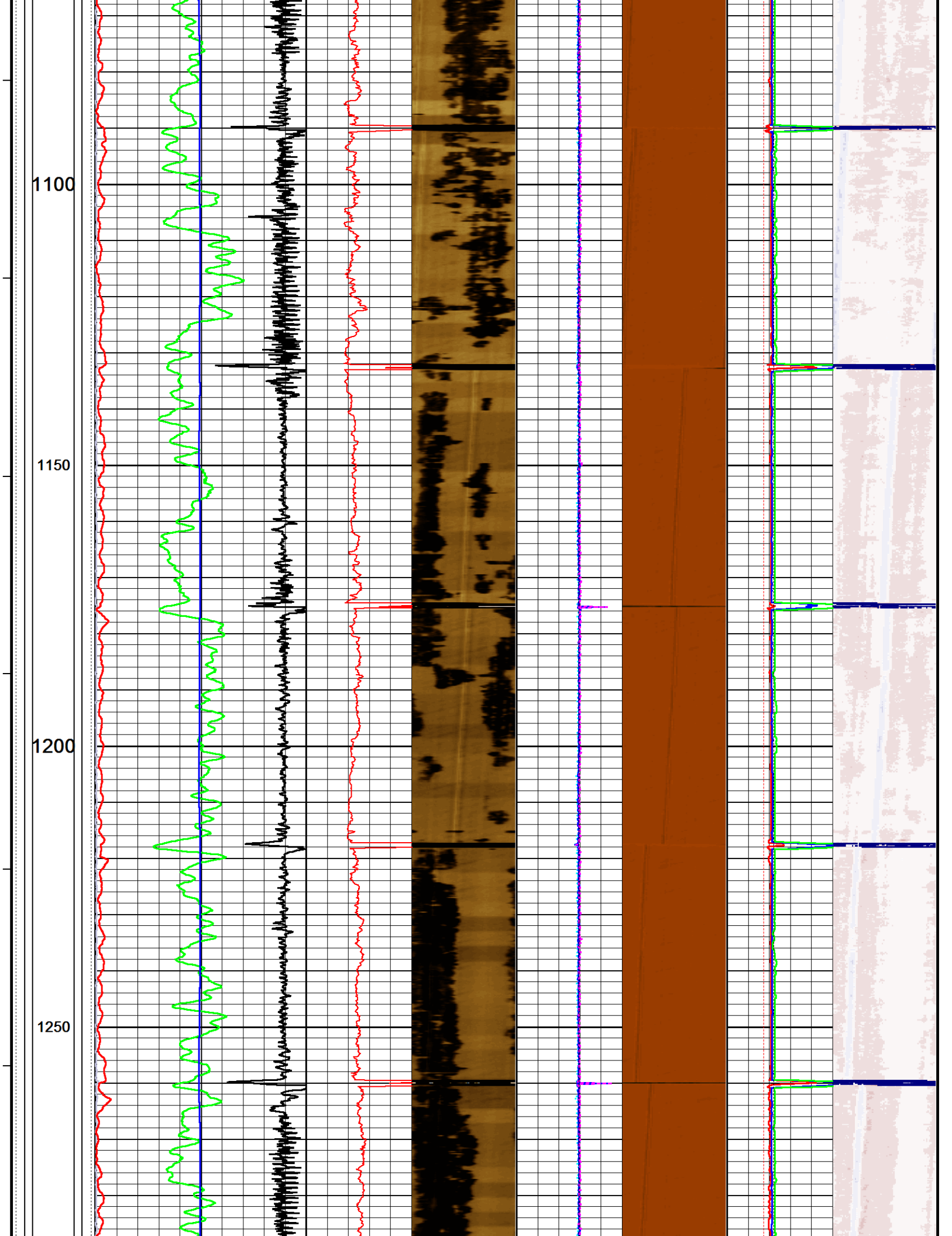
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Scale
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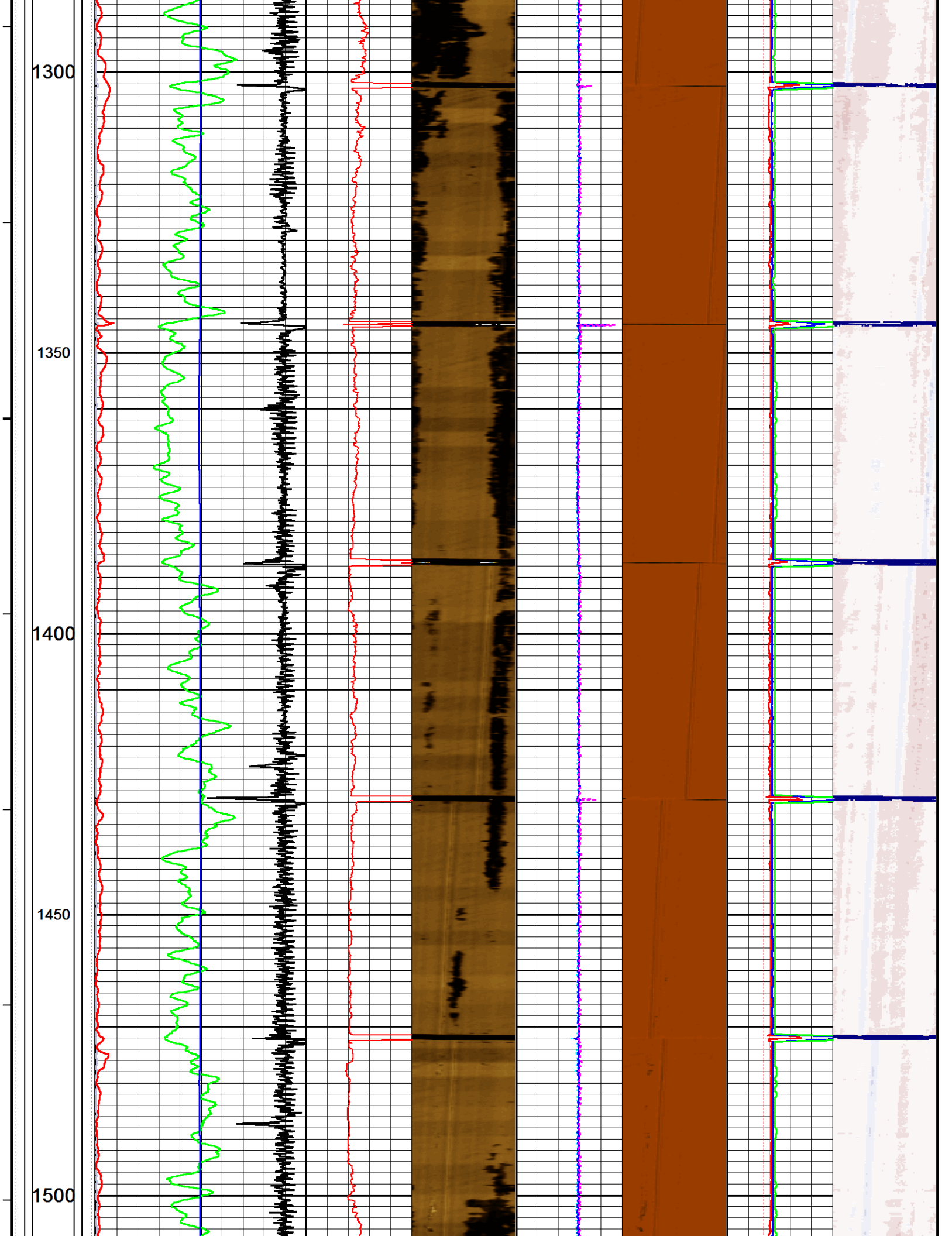


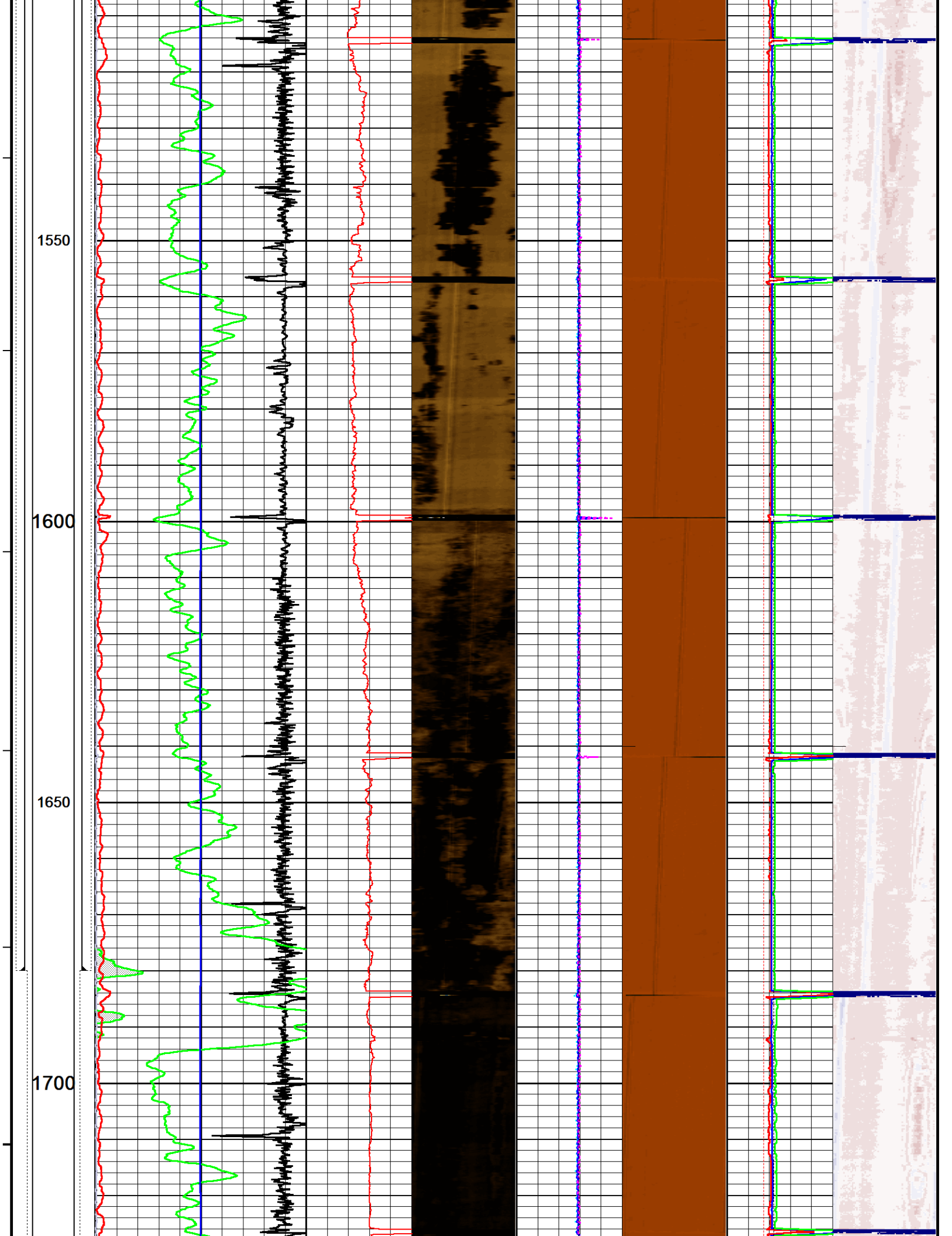


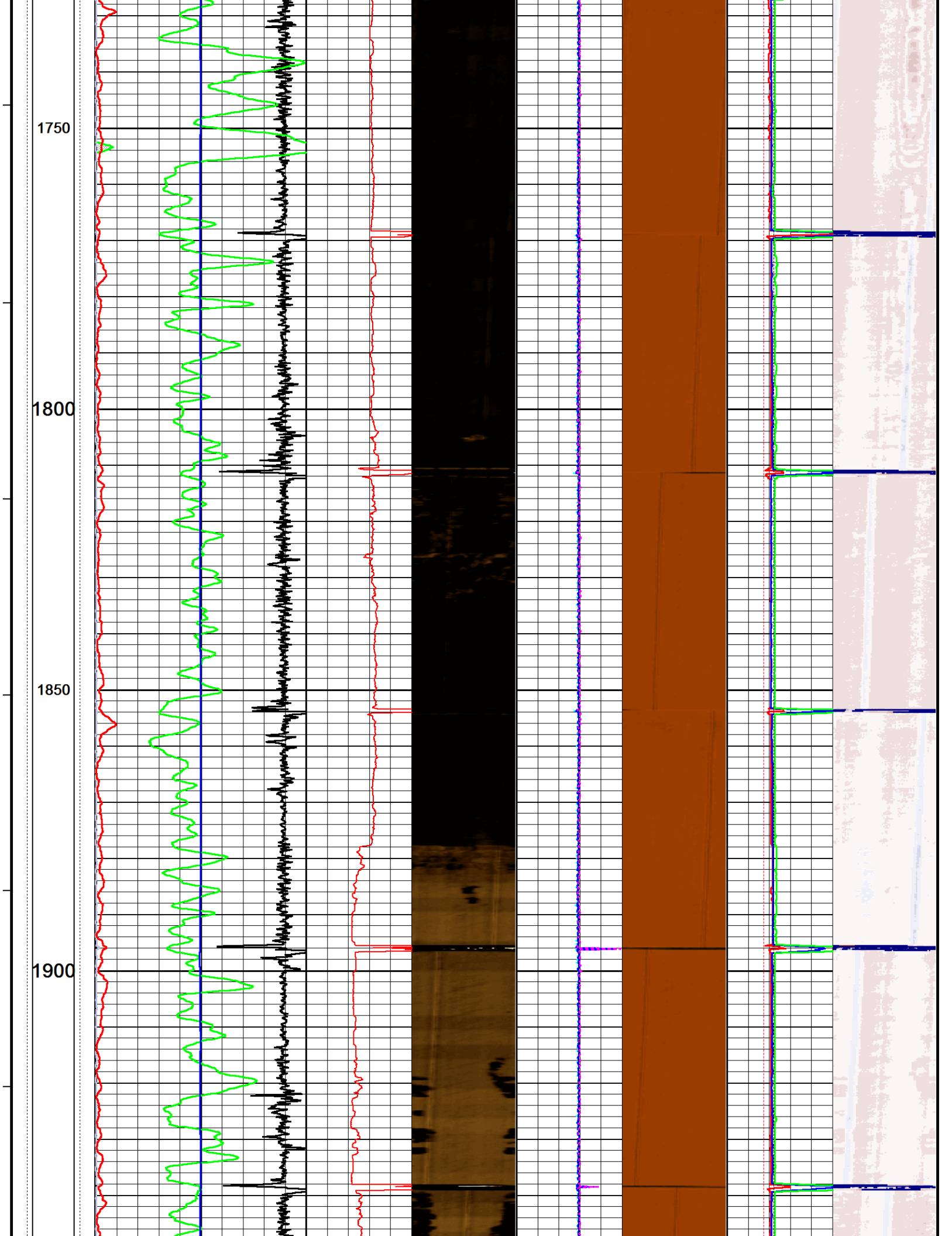


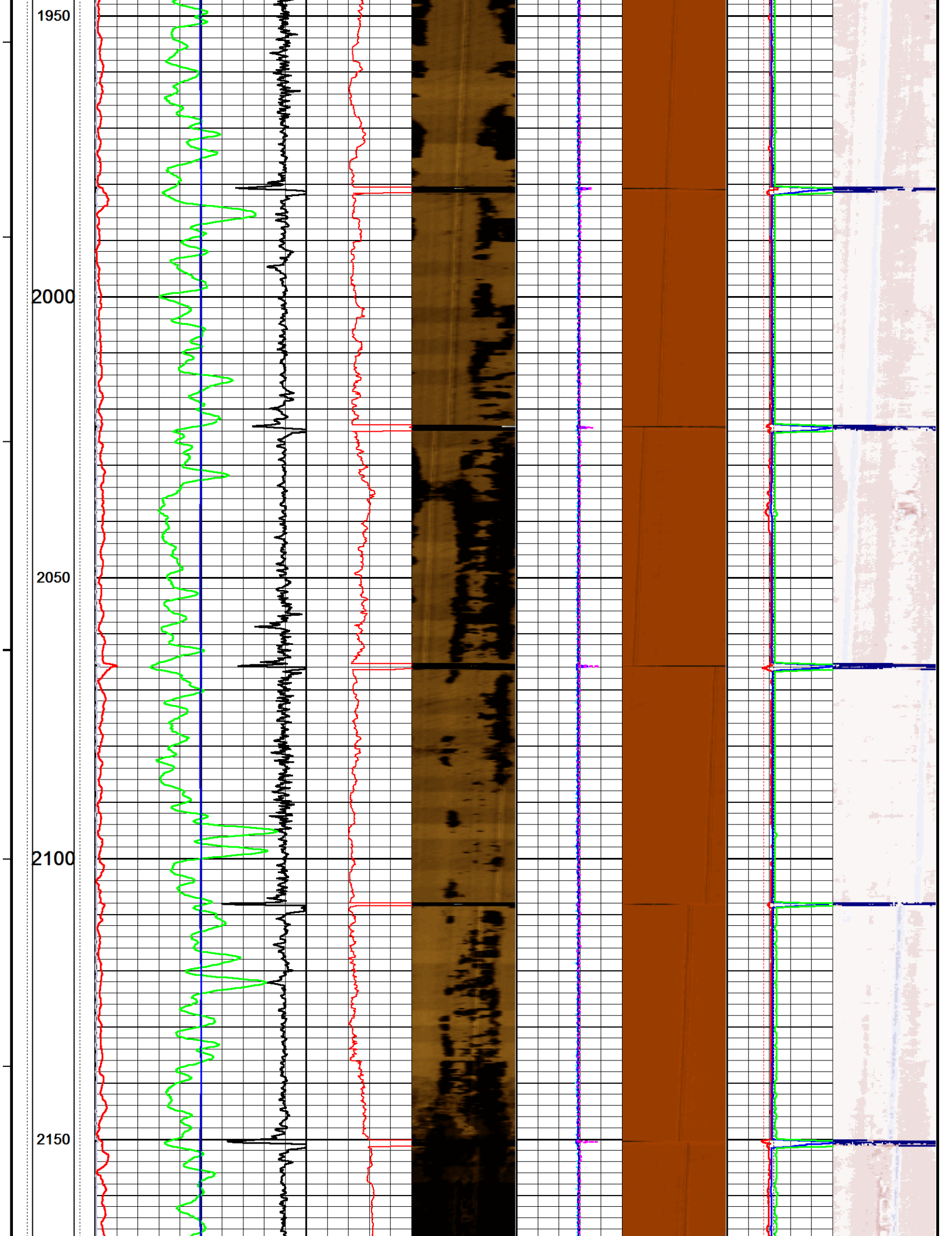


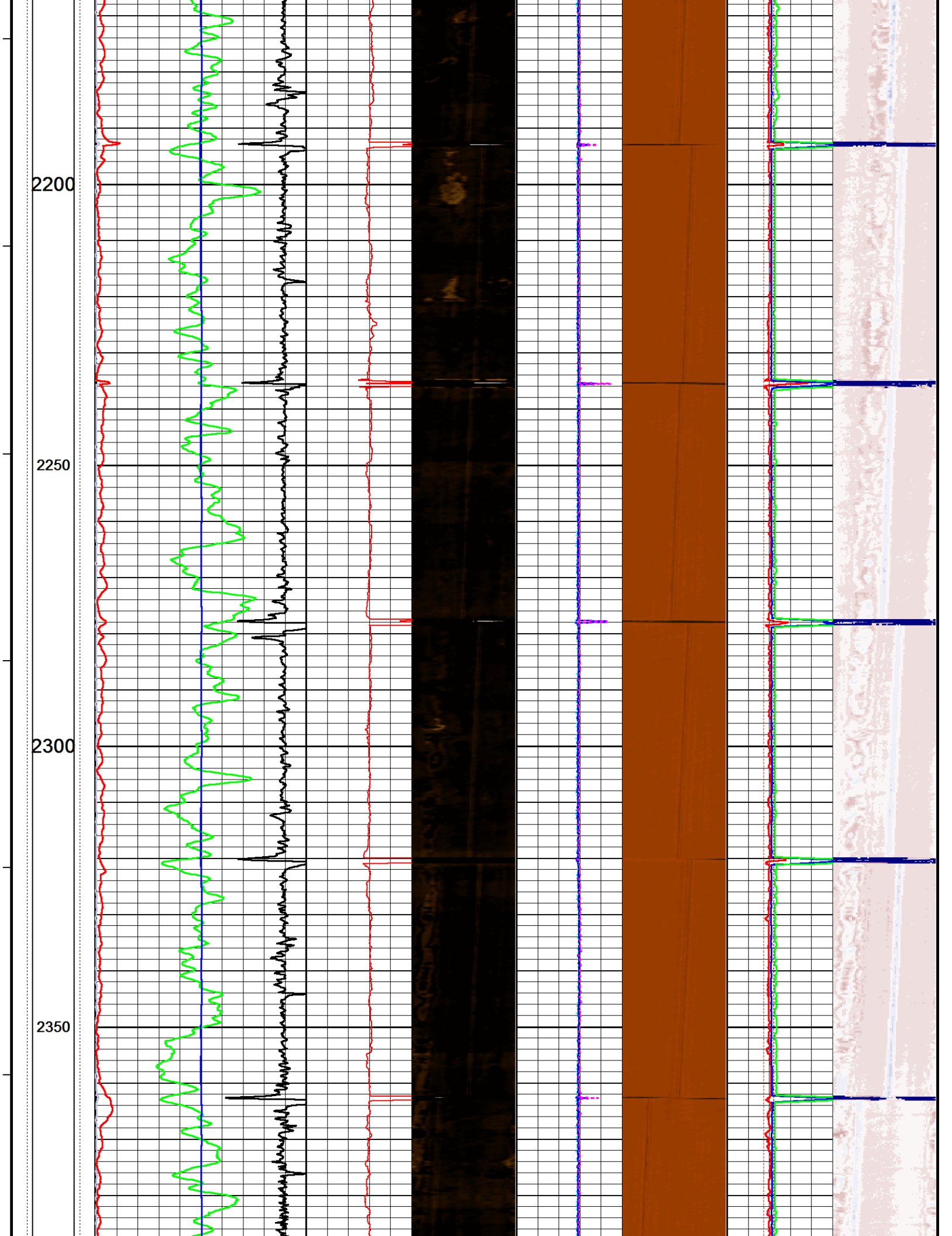


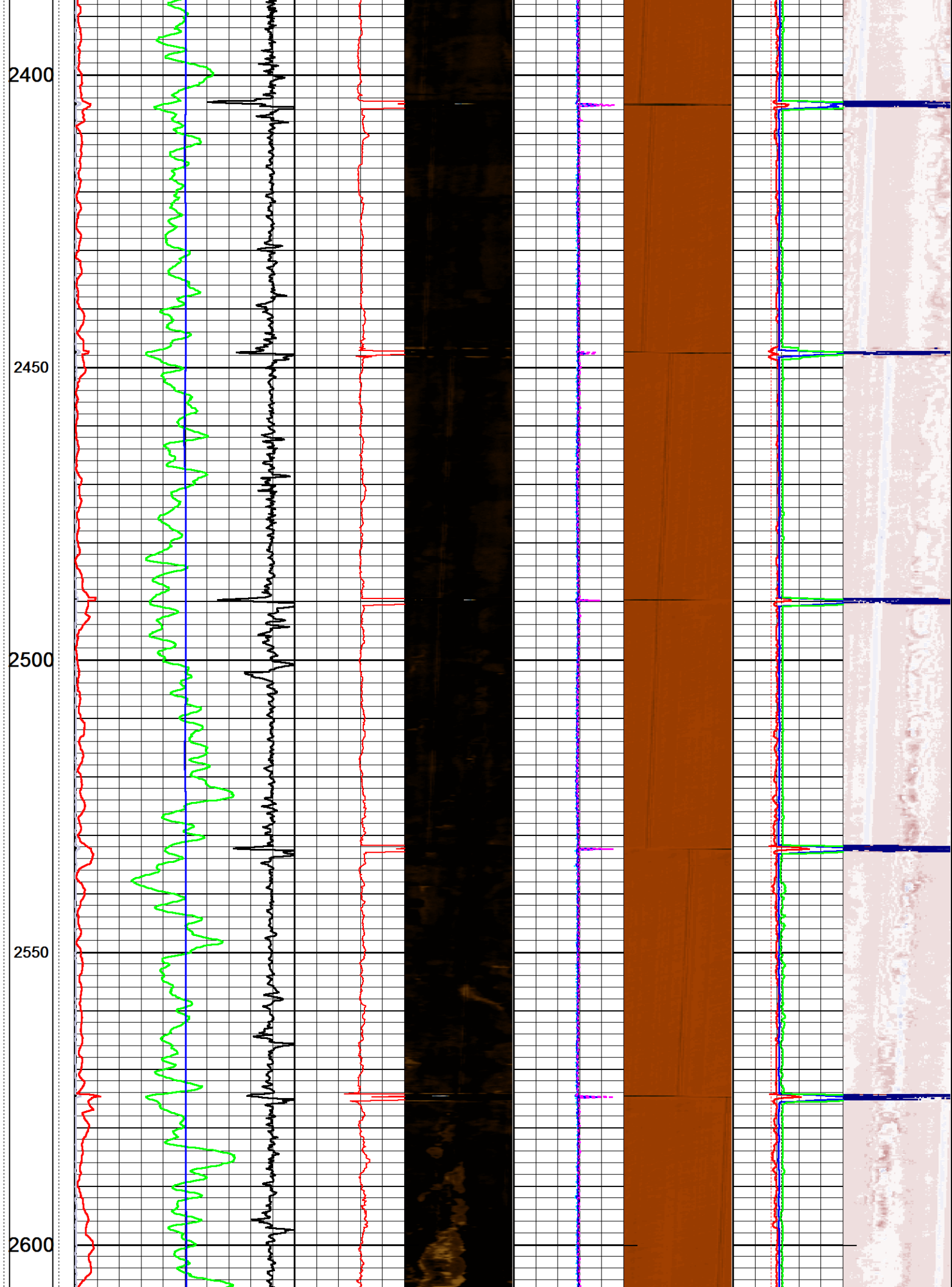


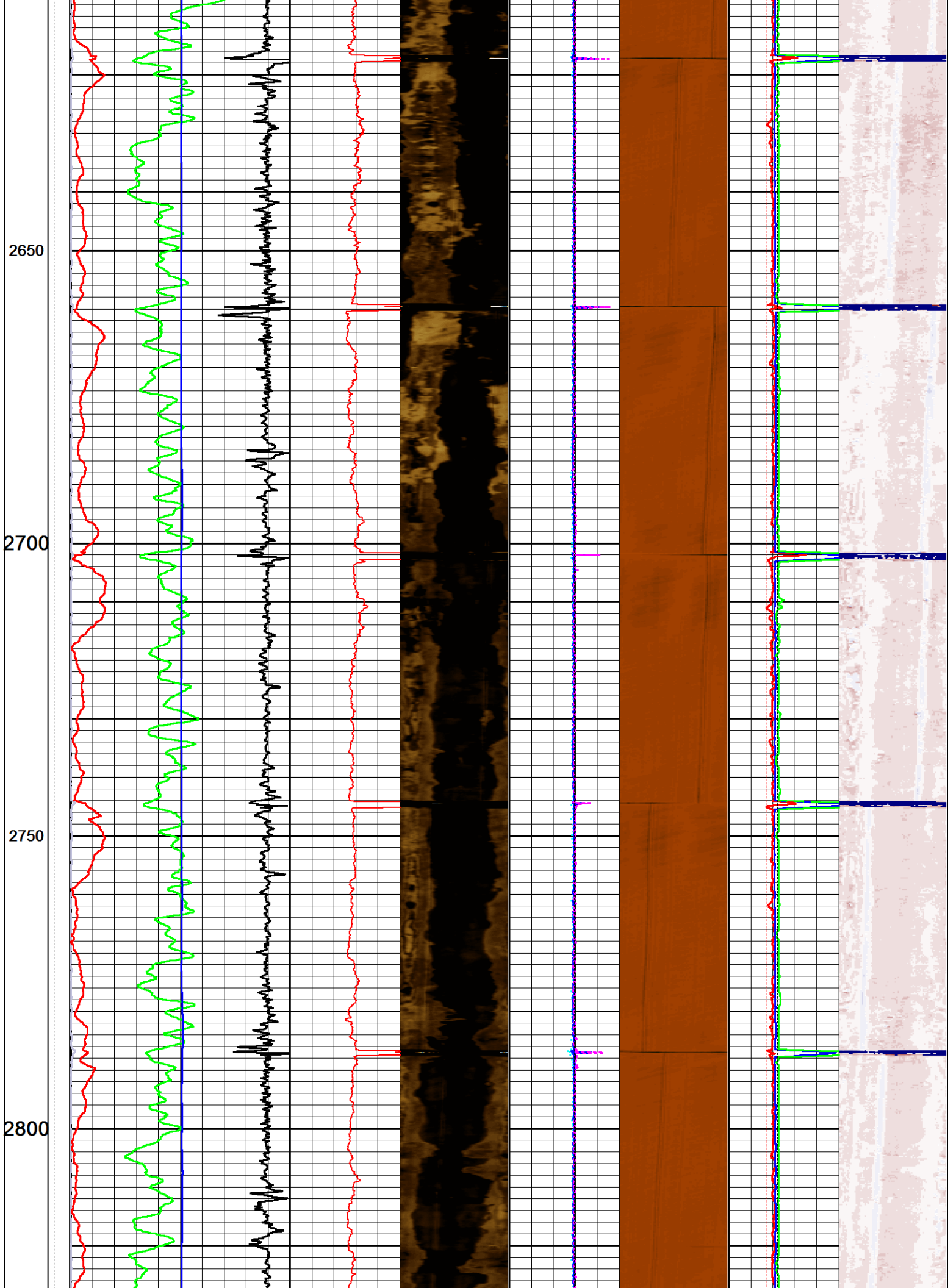


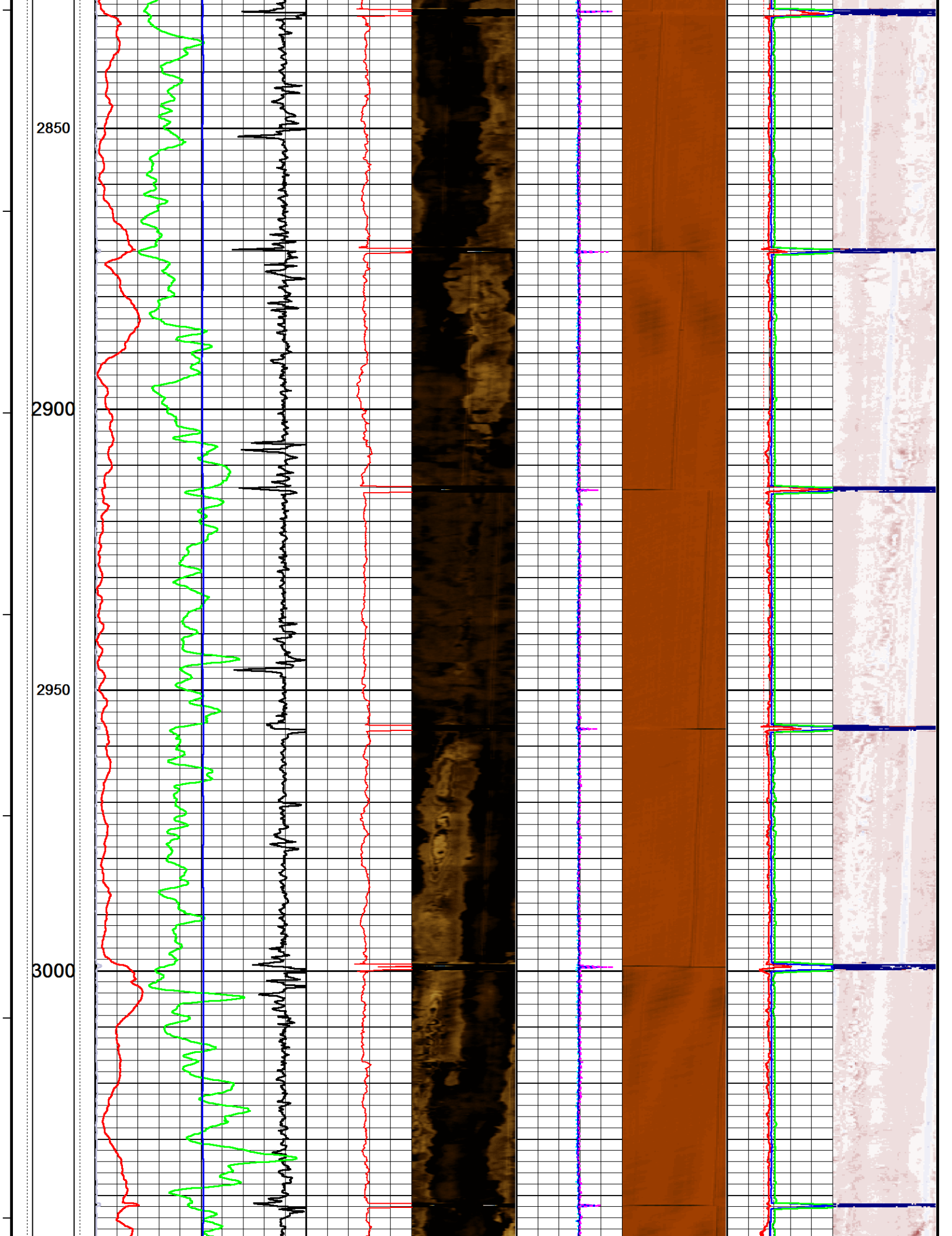


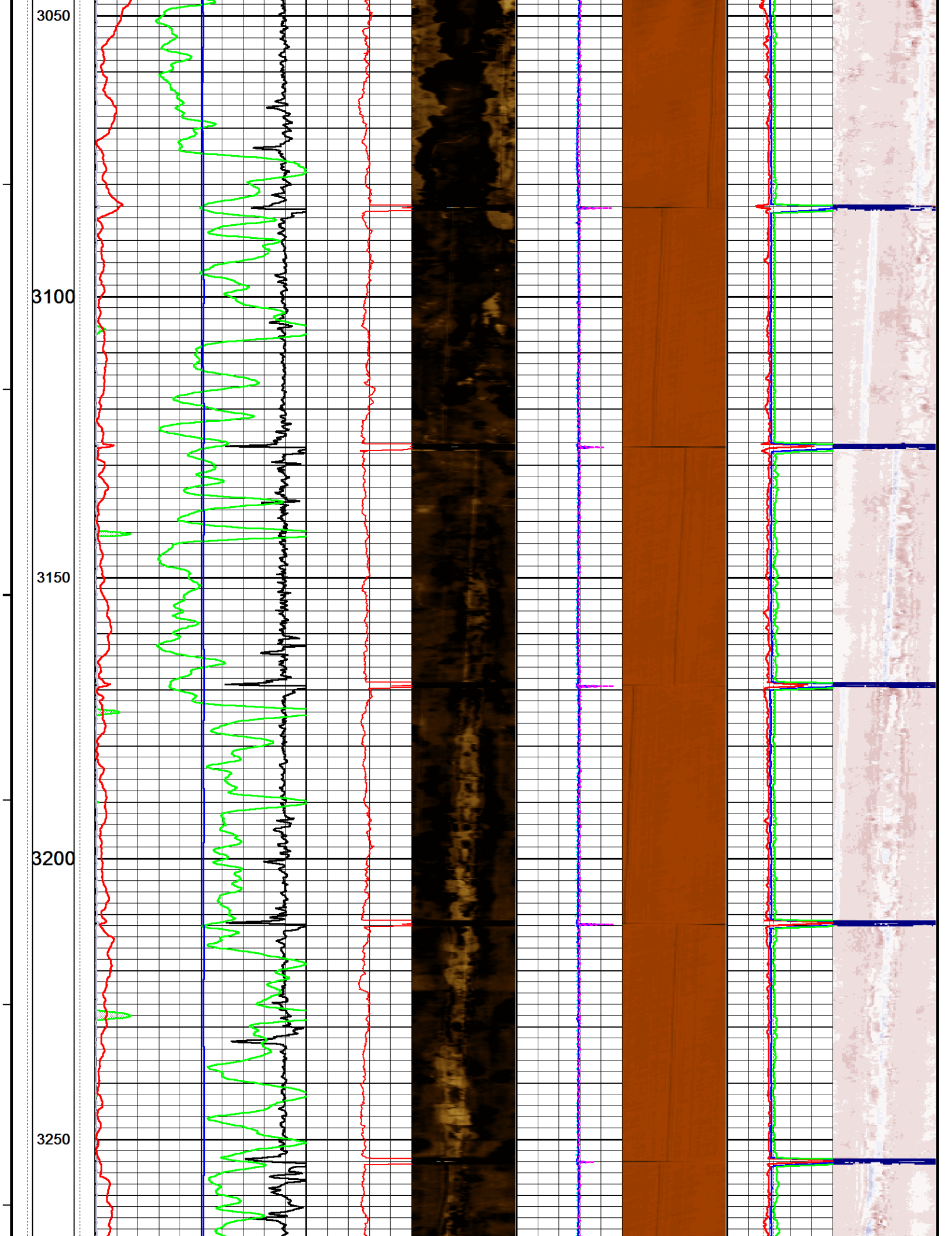


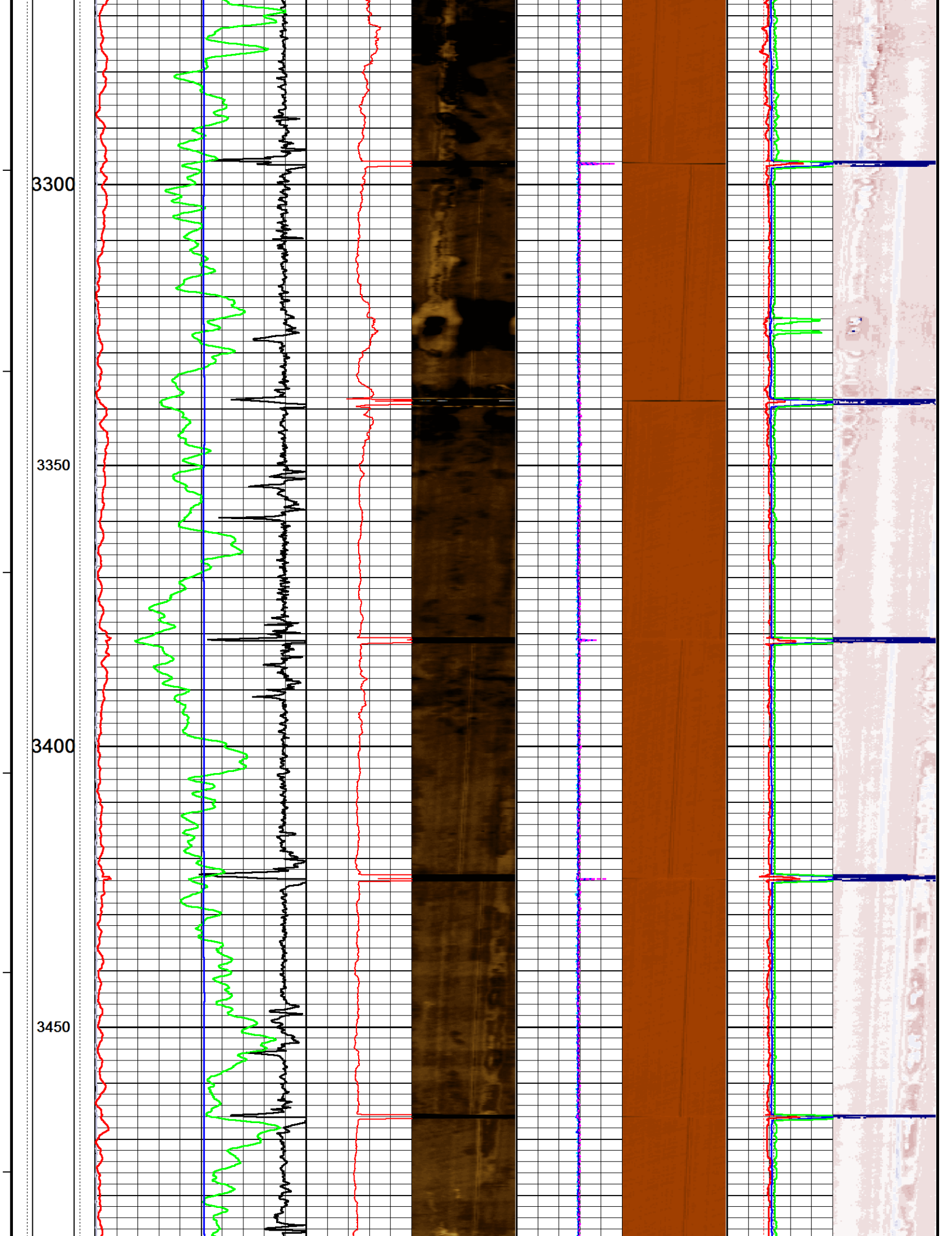


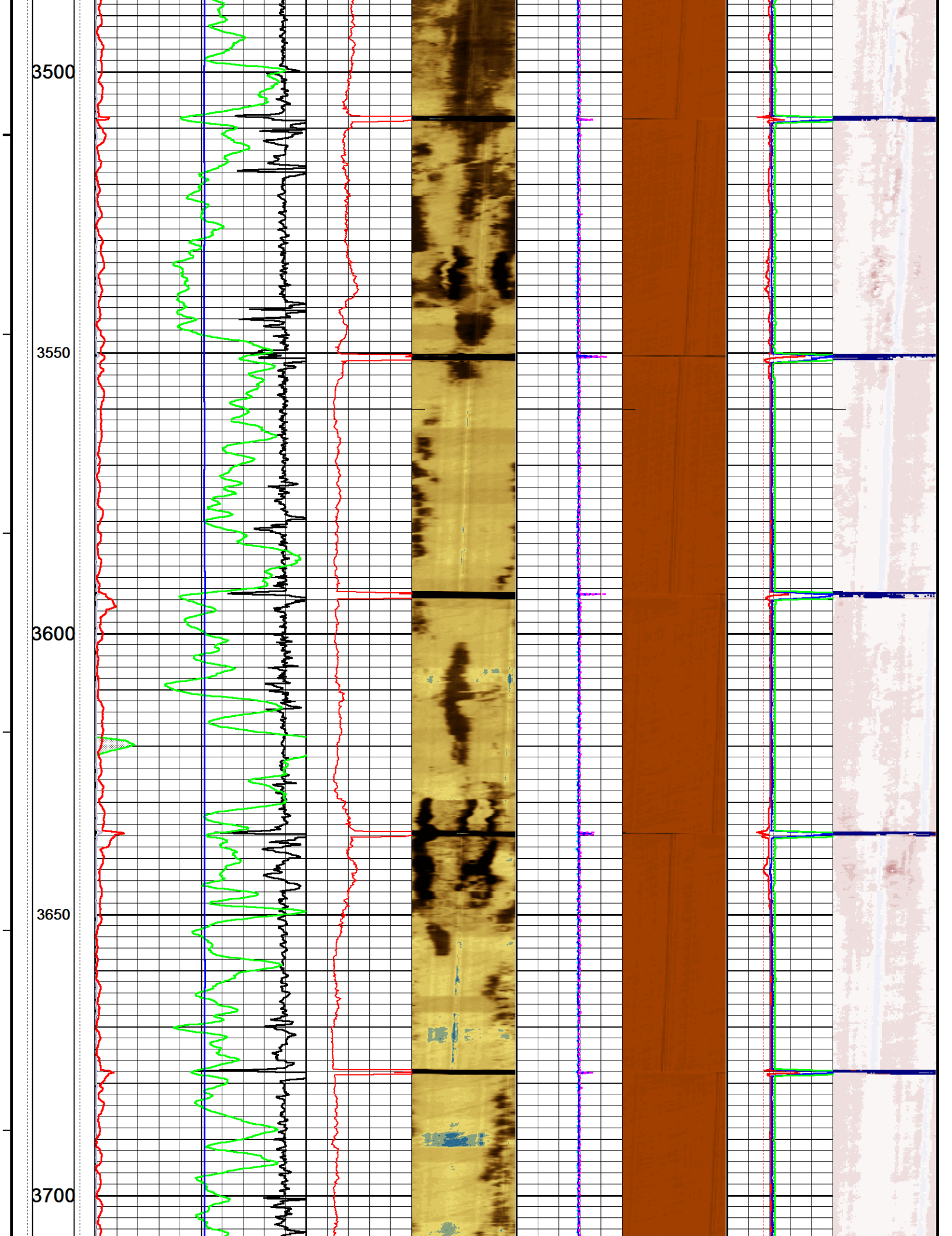


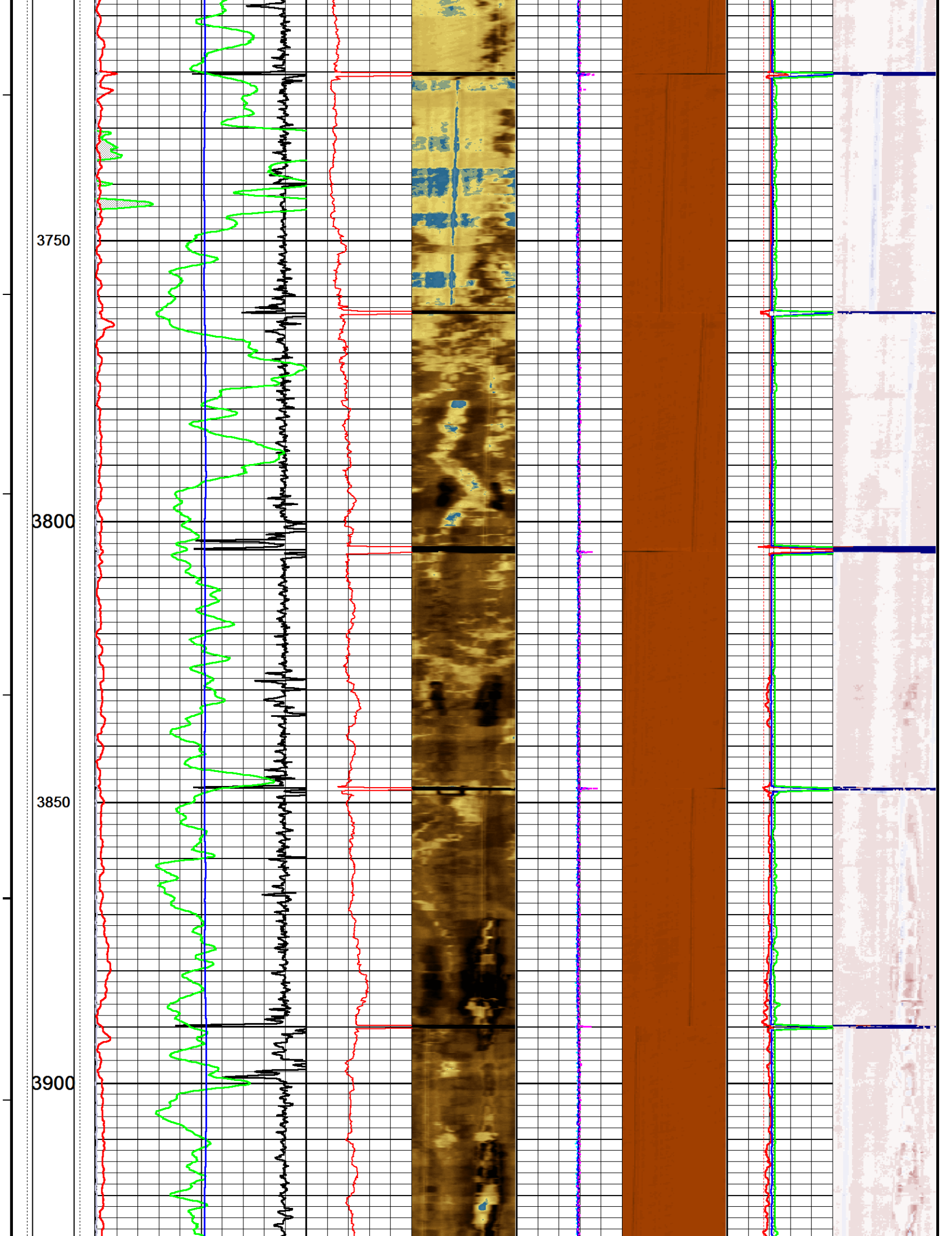


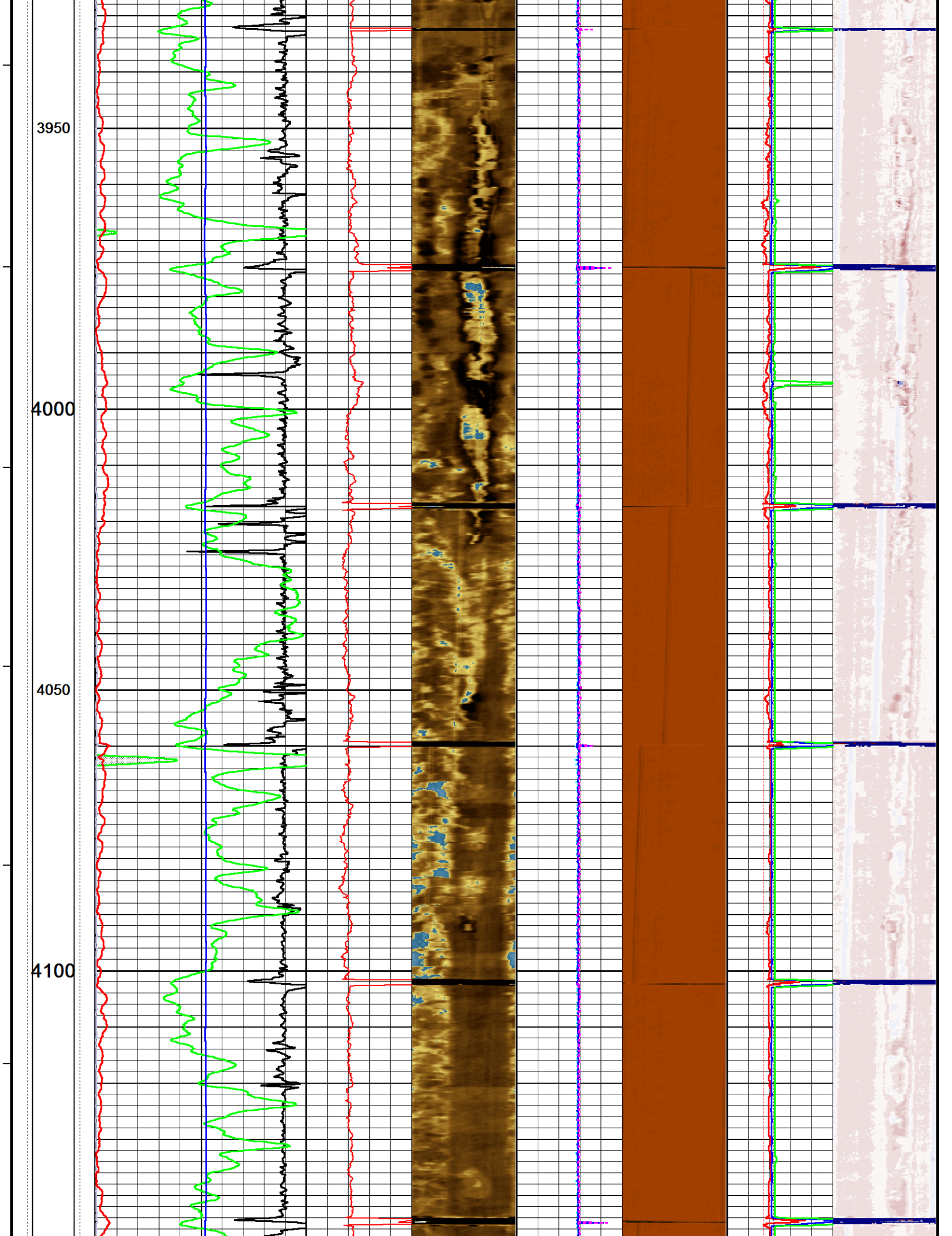


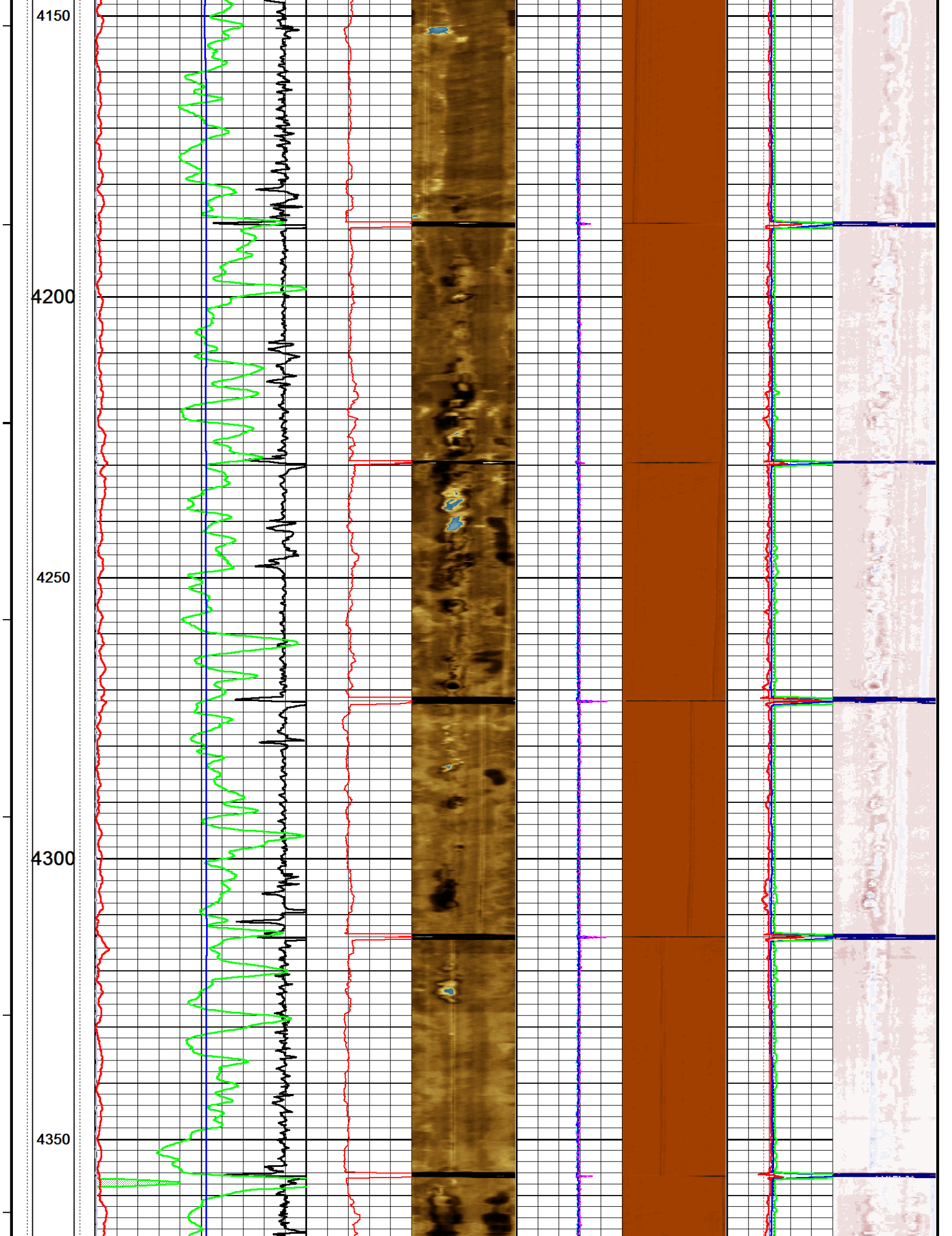


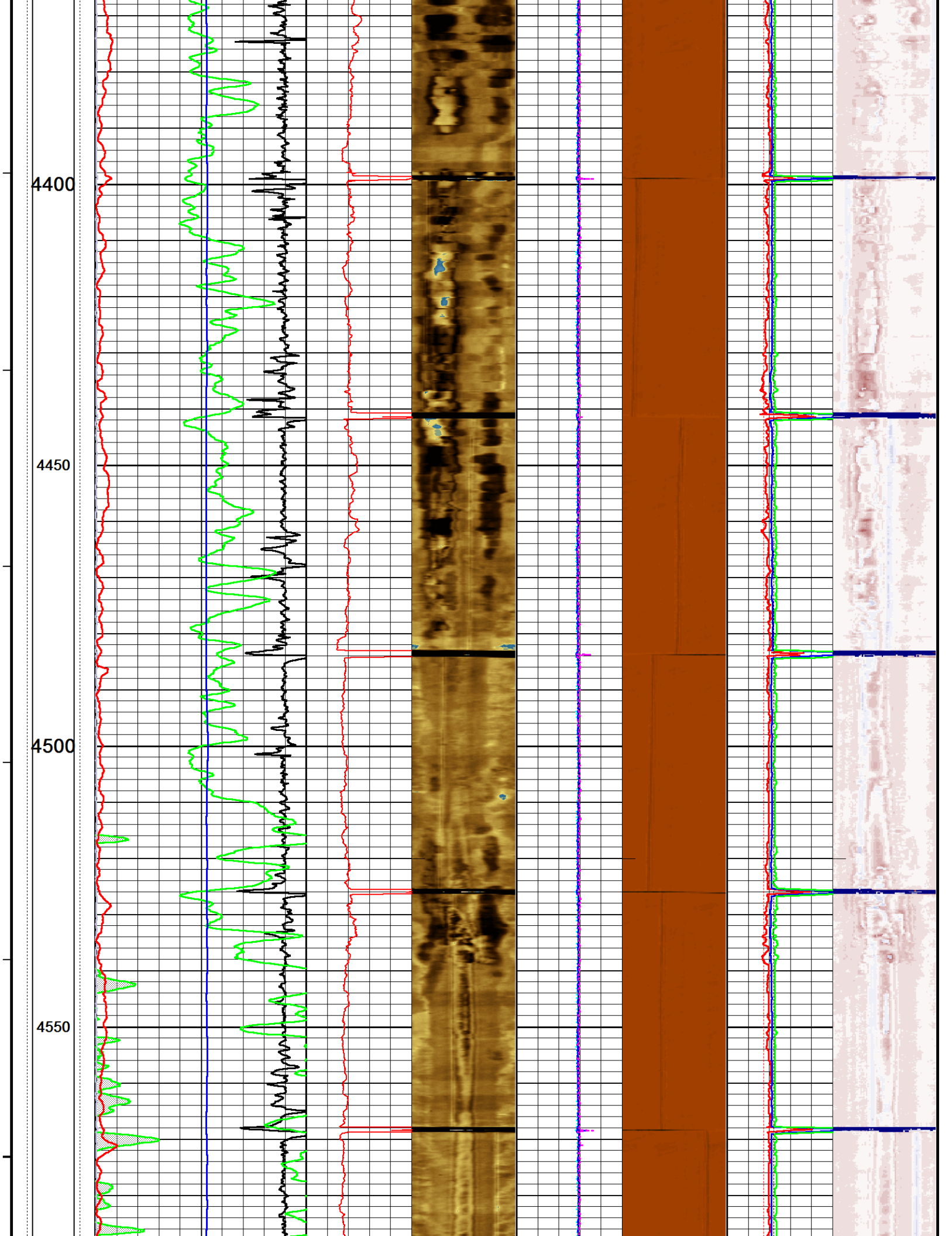


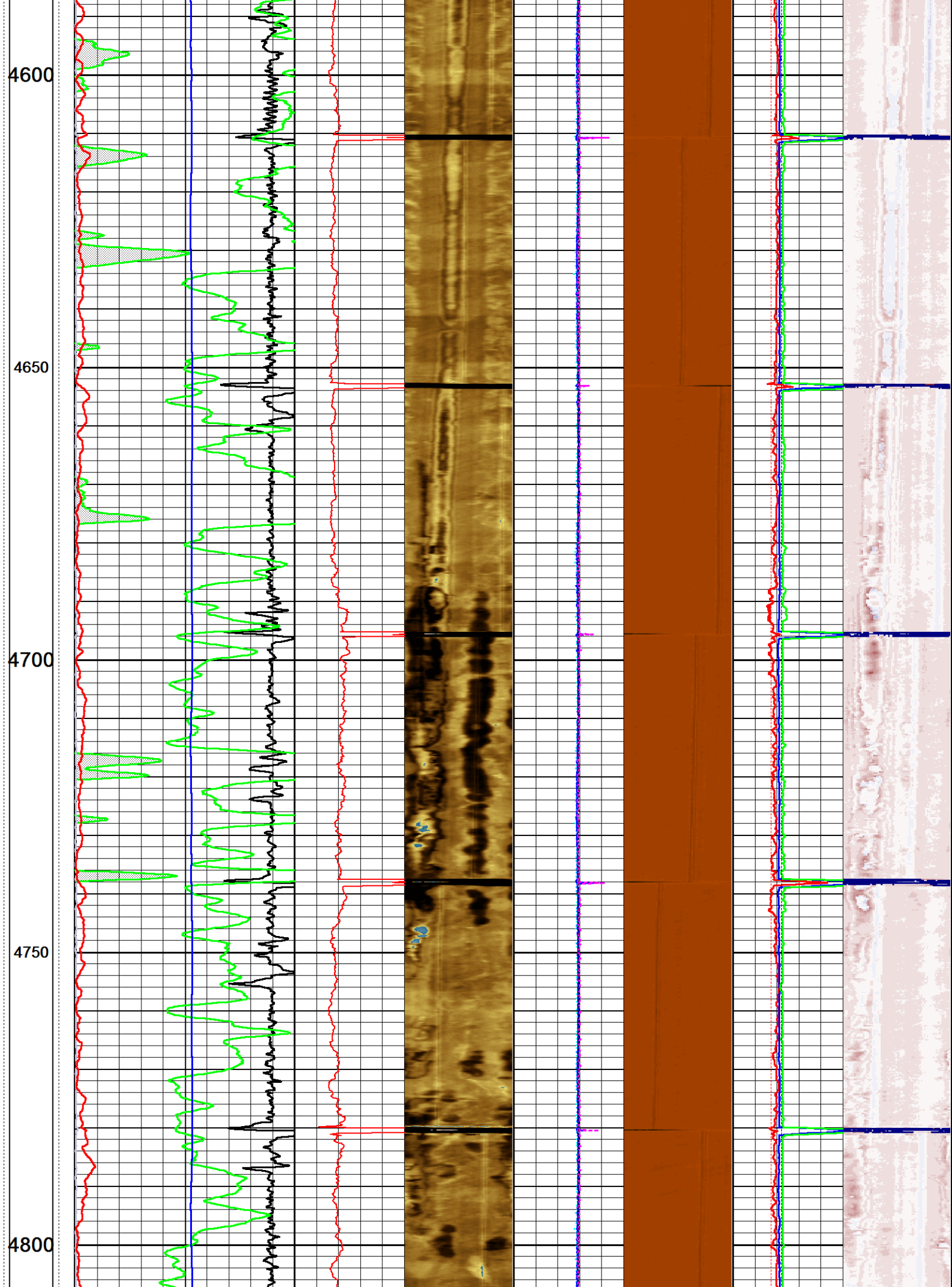


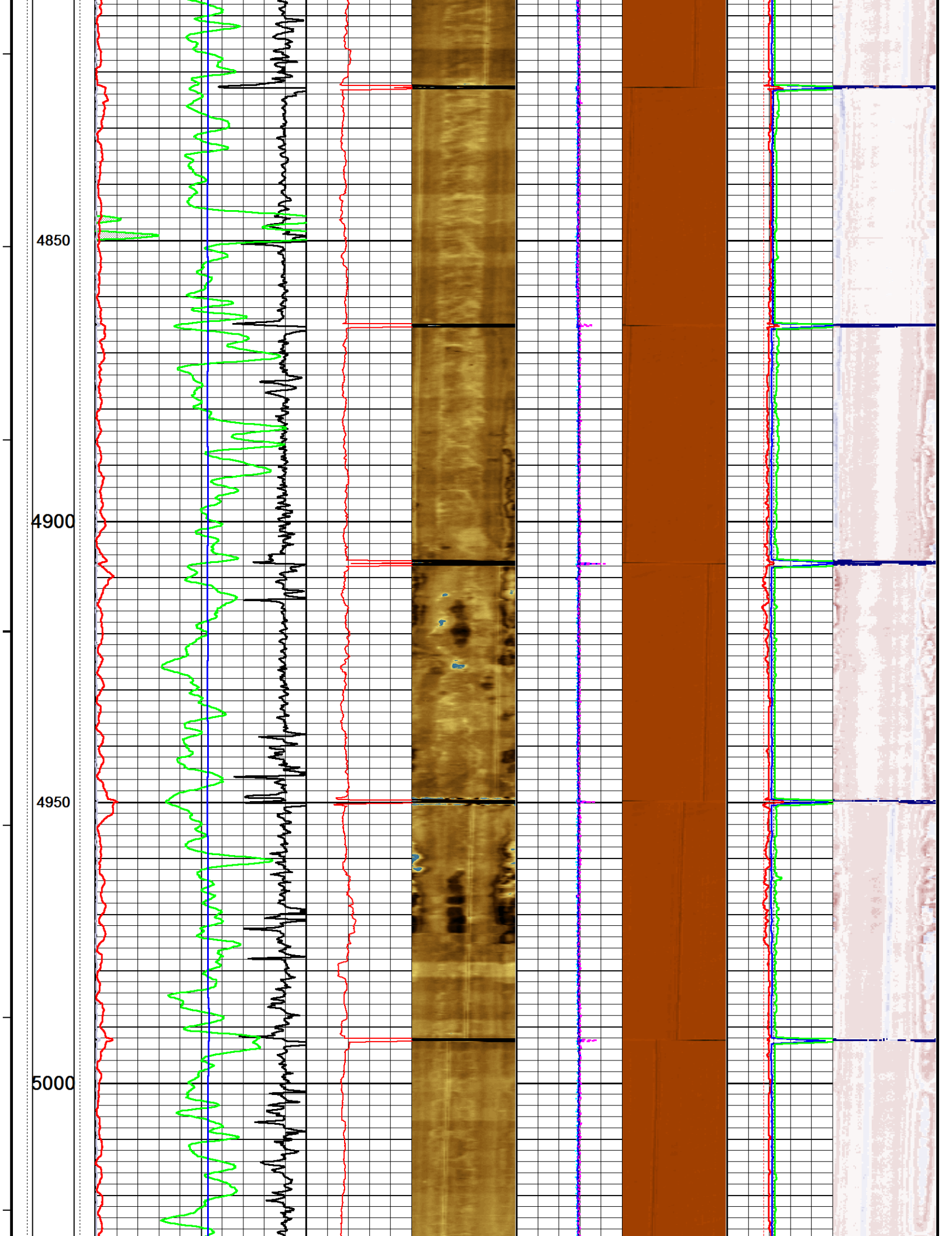


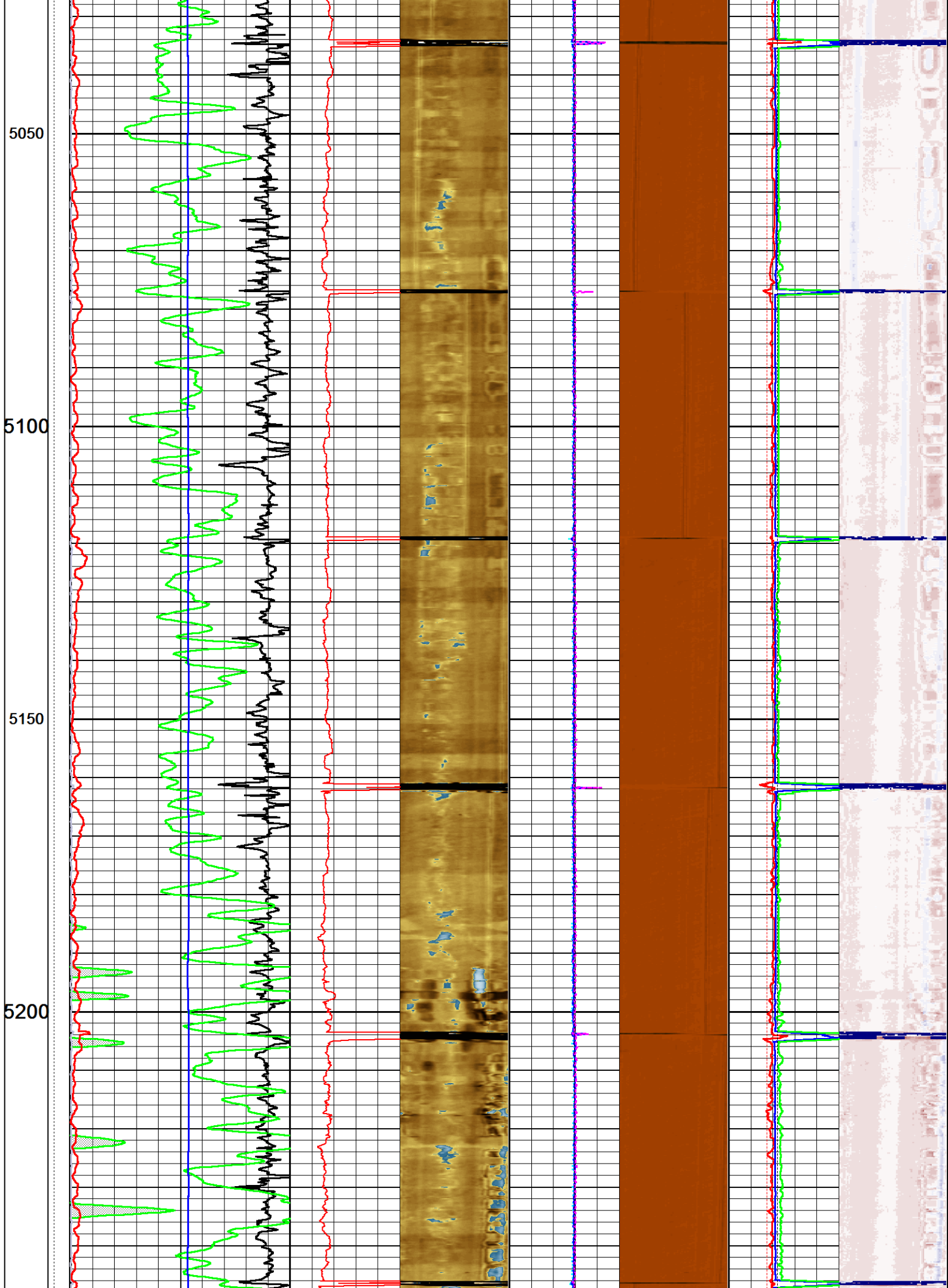


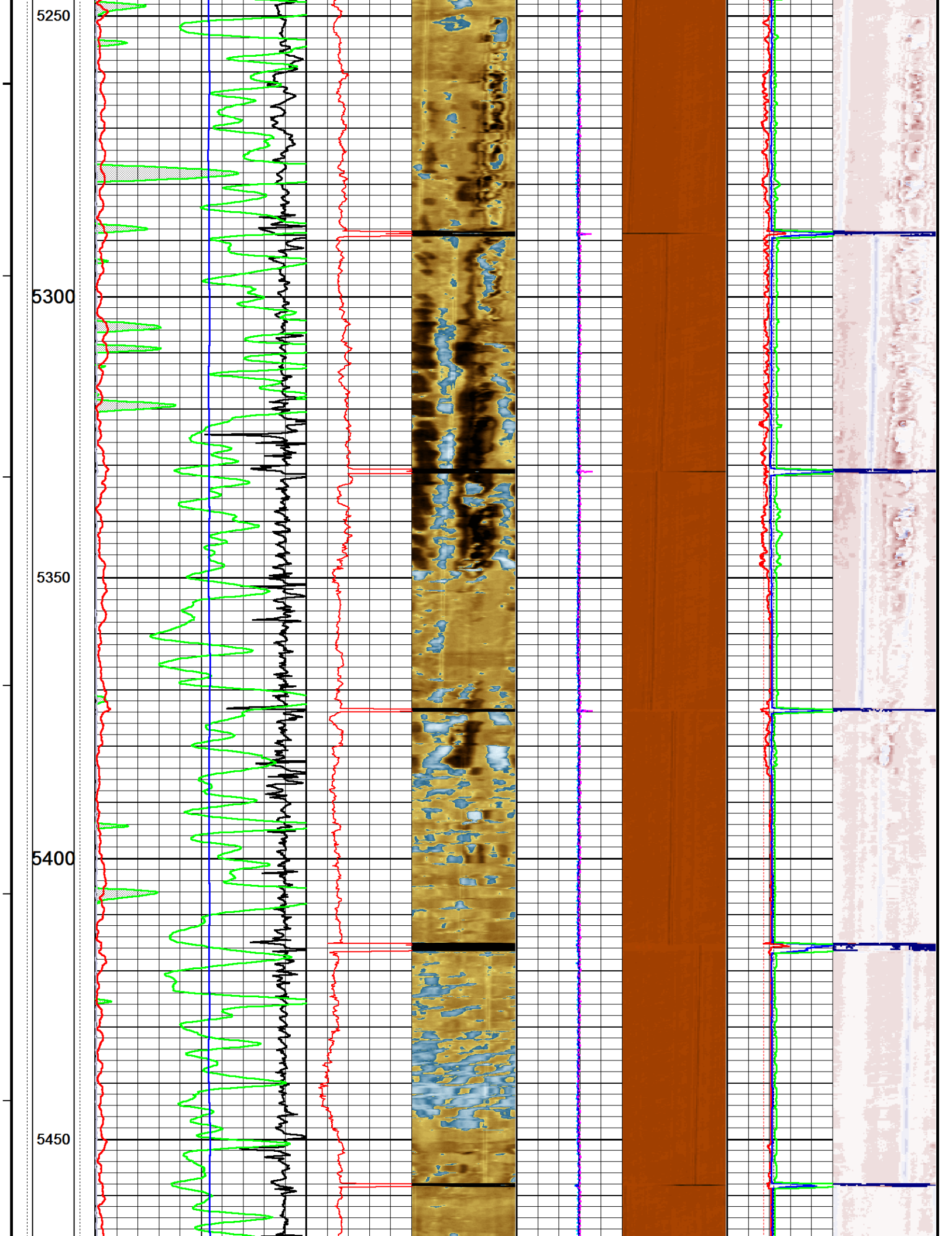


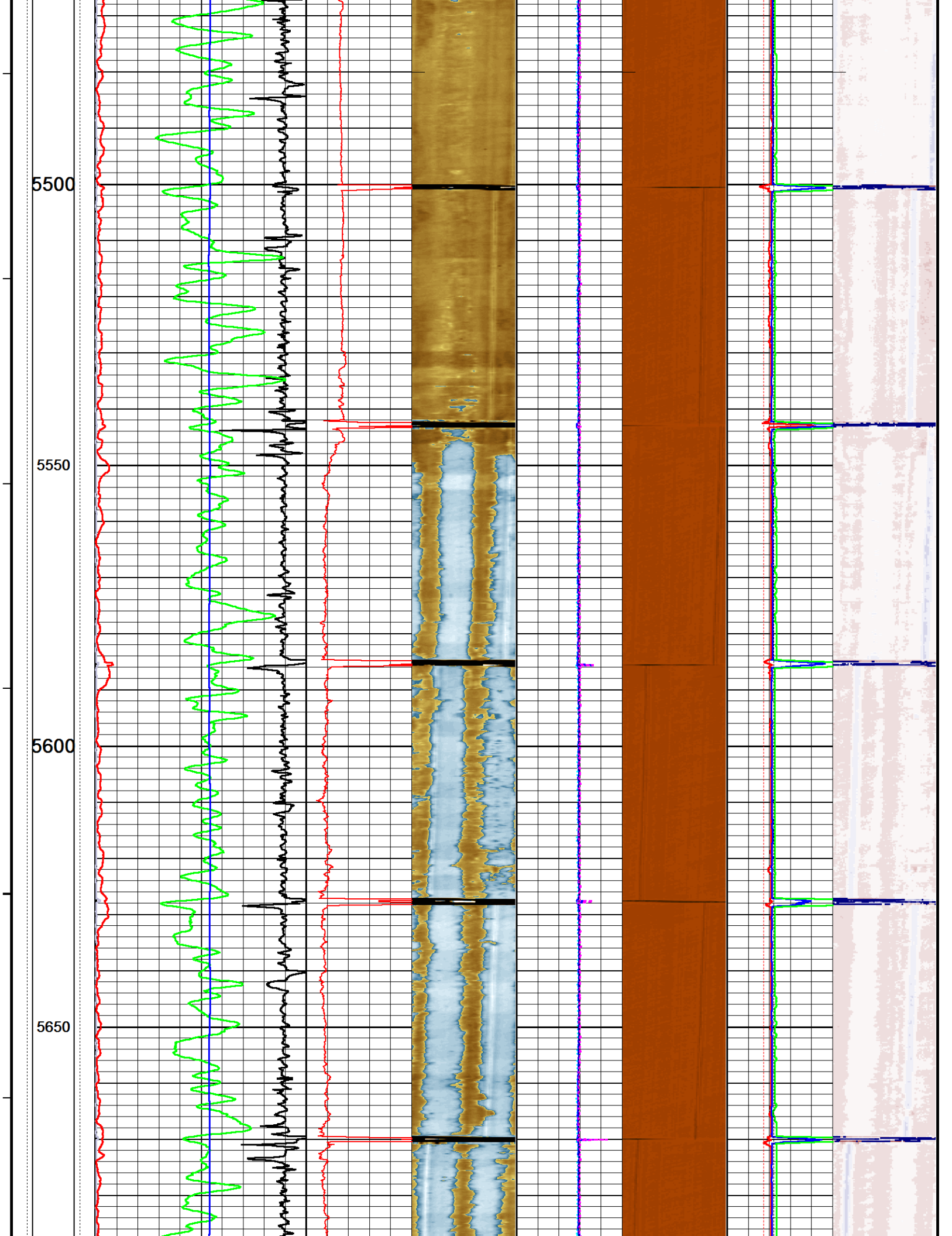


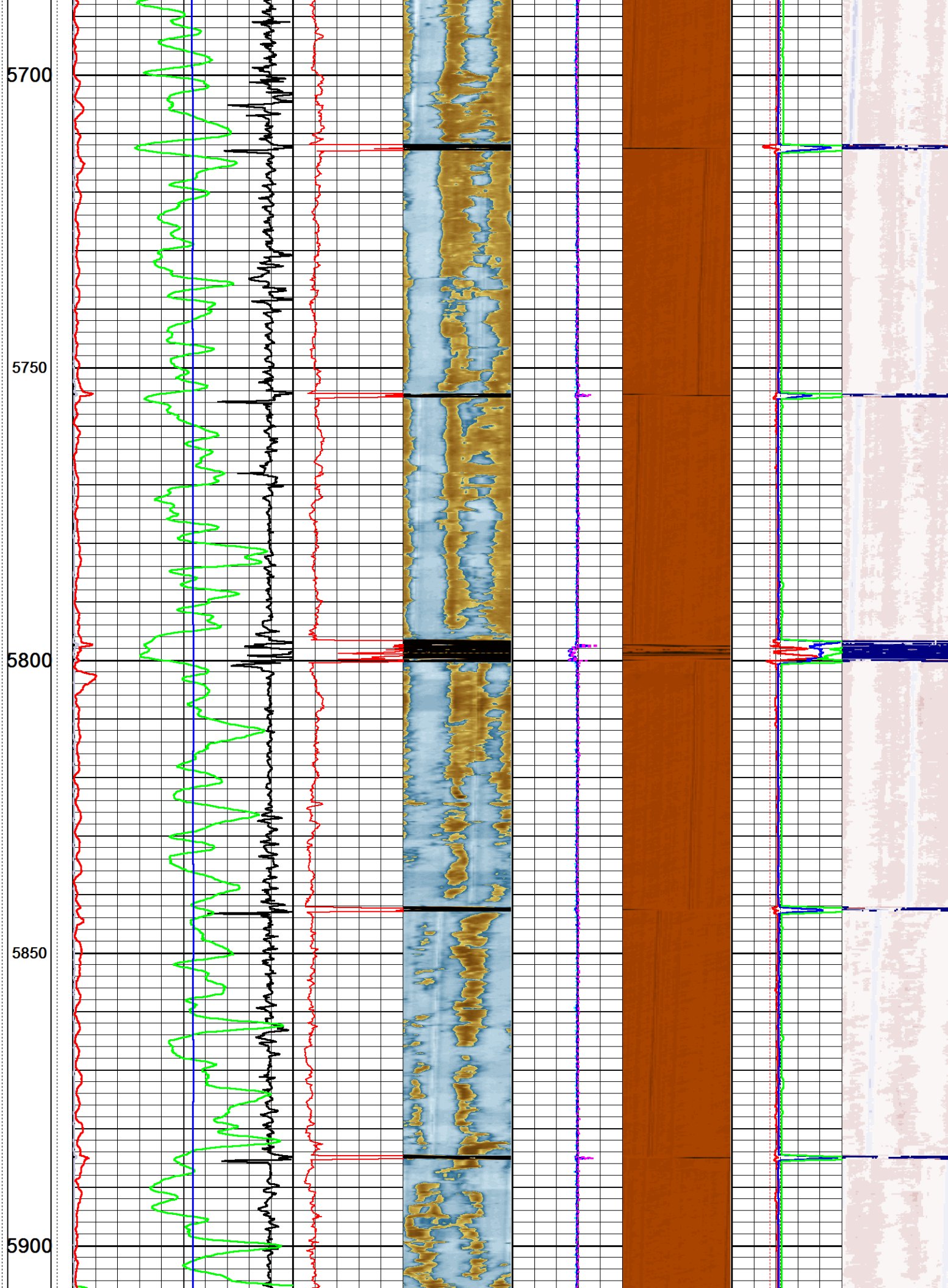


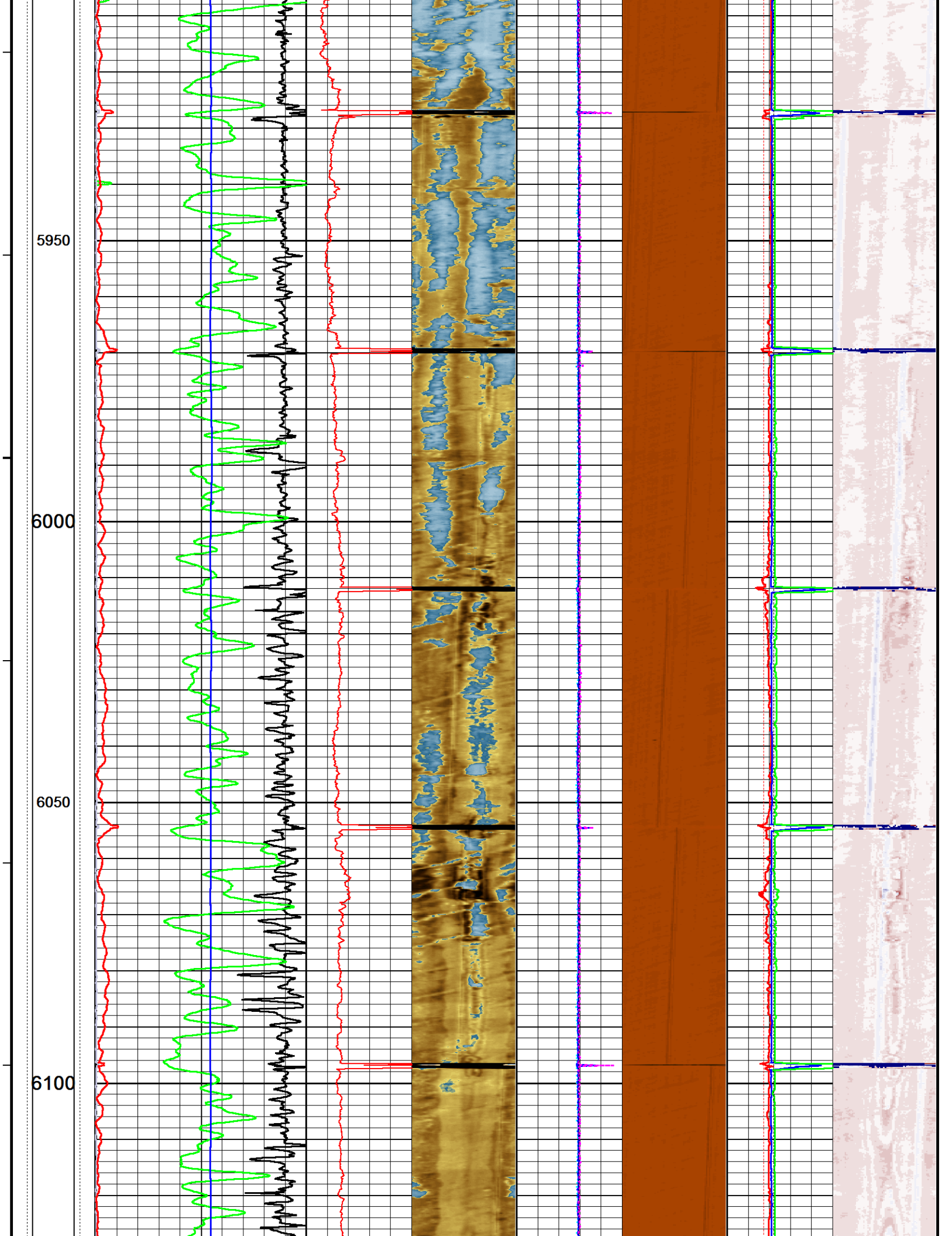


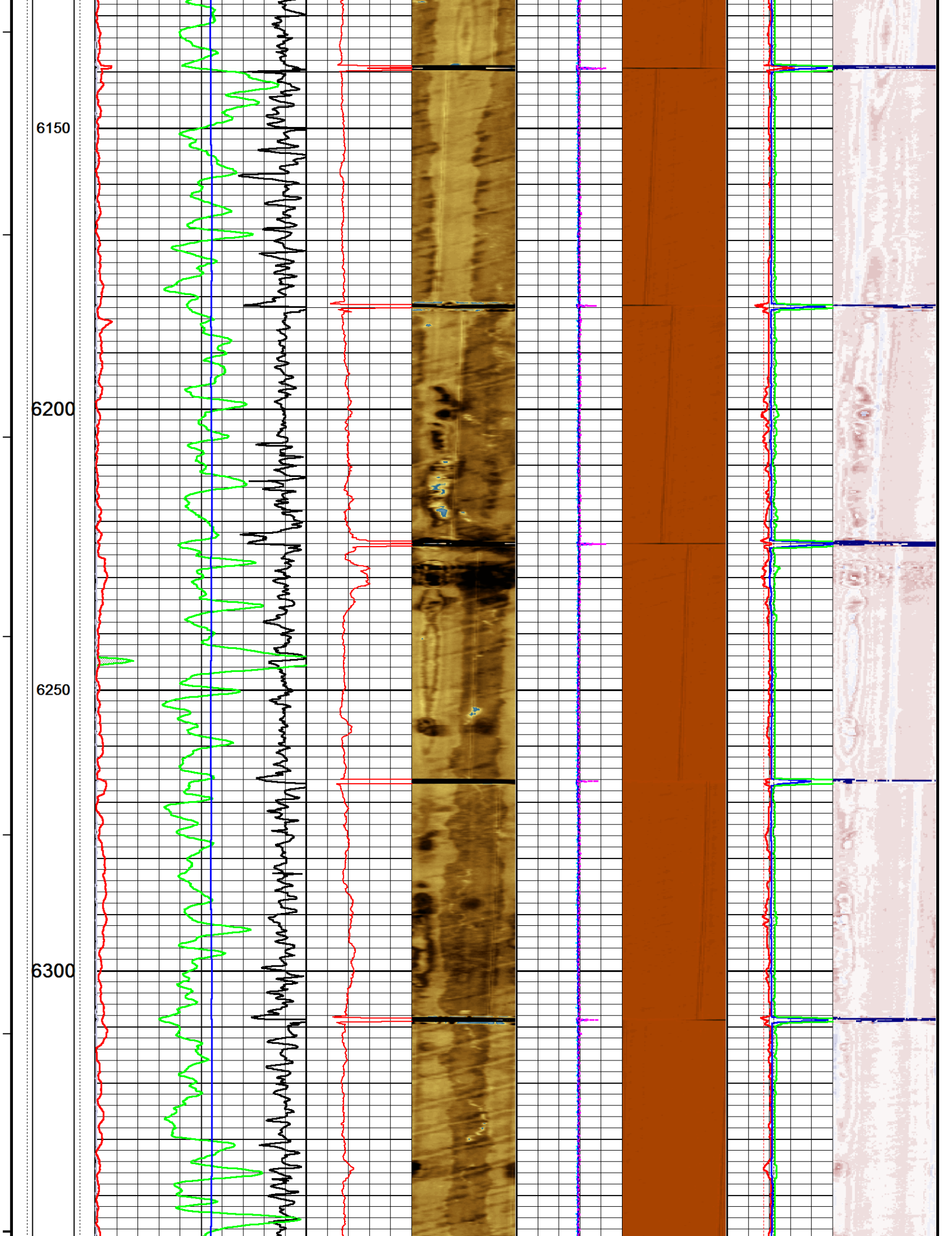


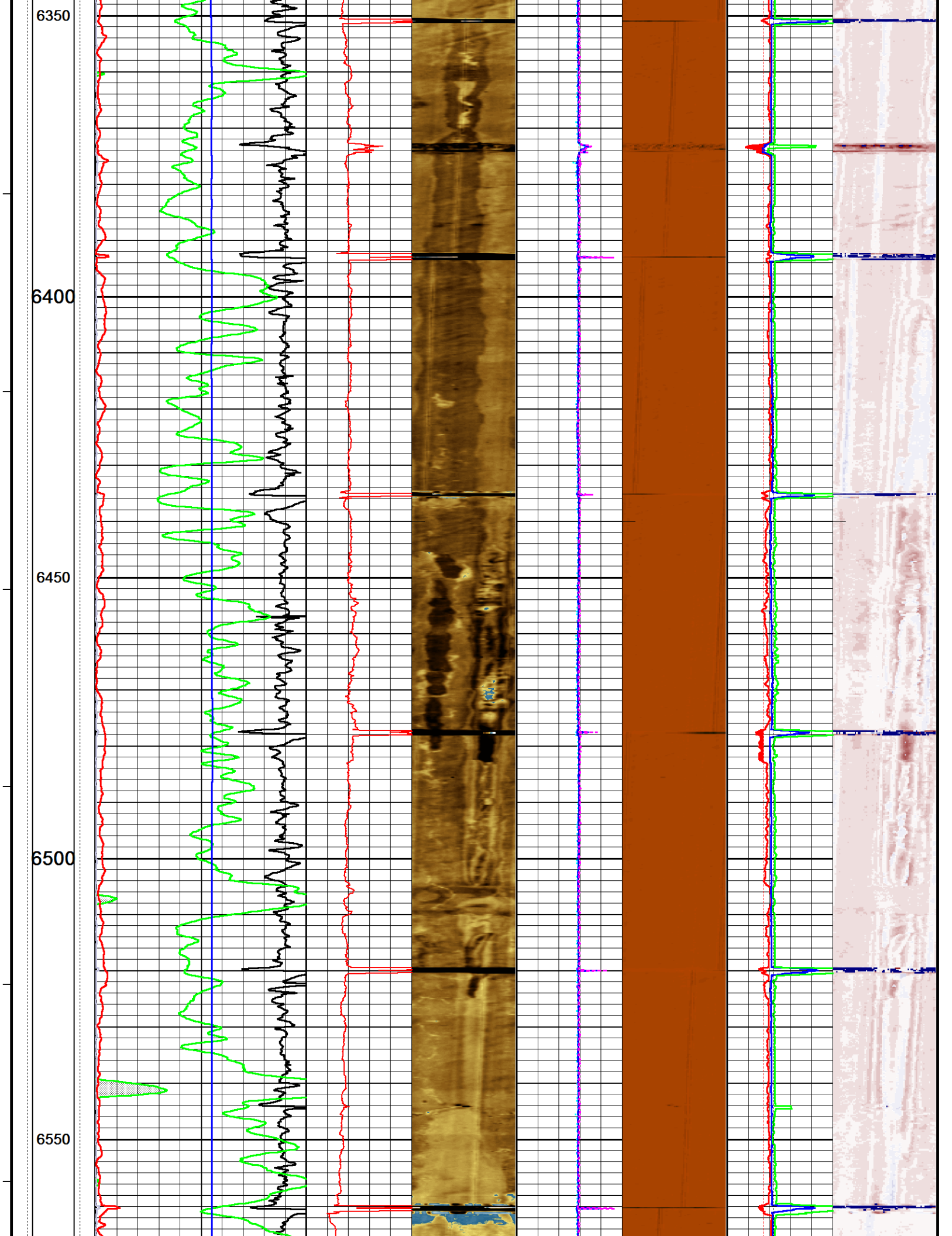


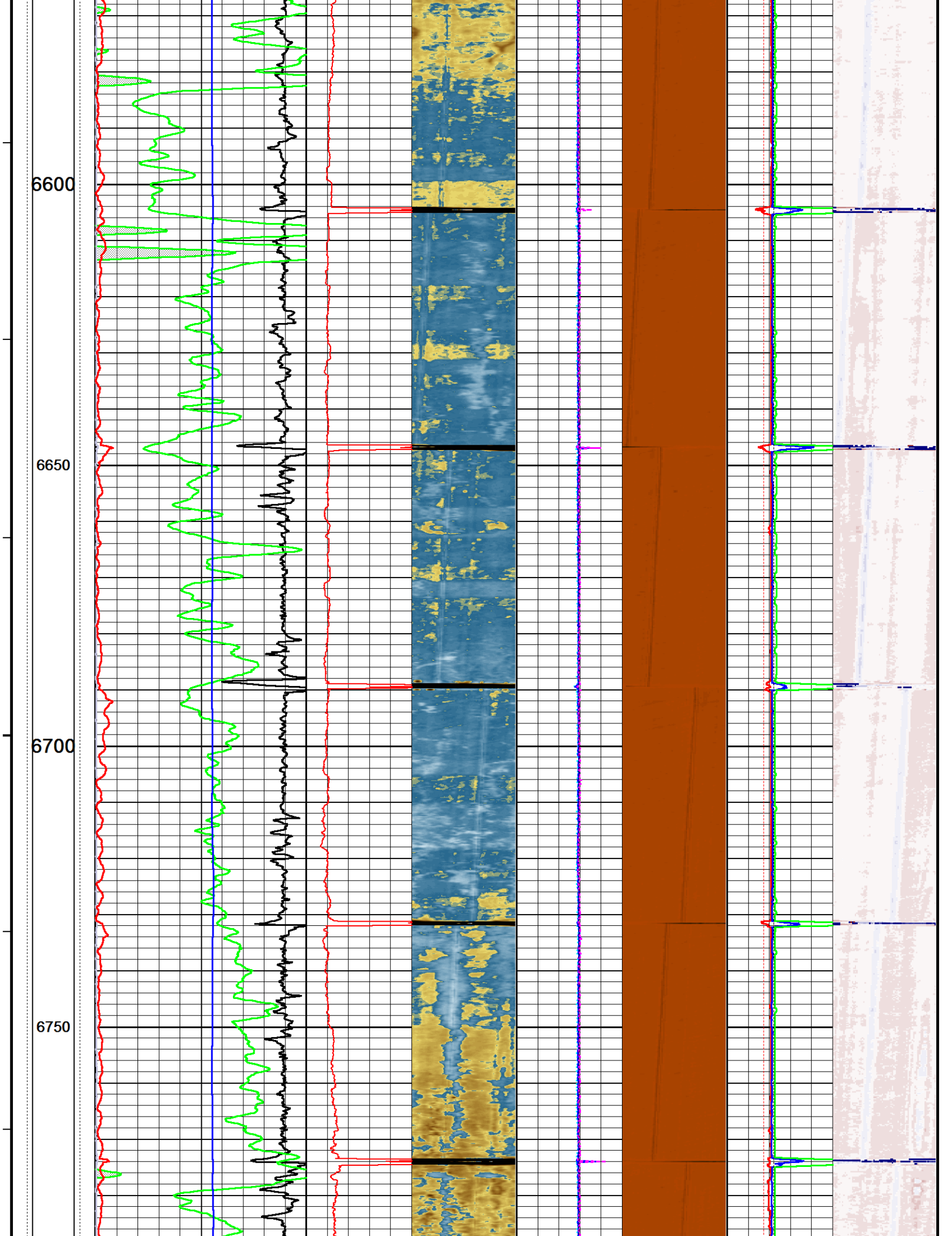


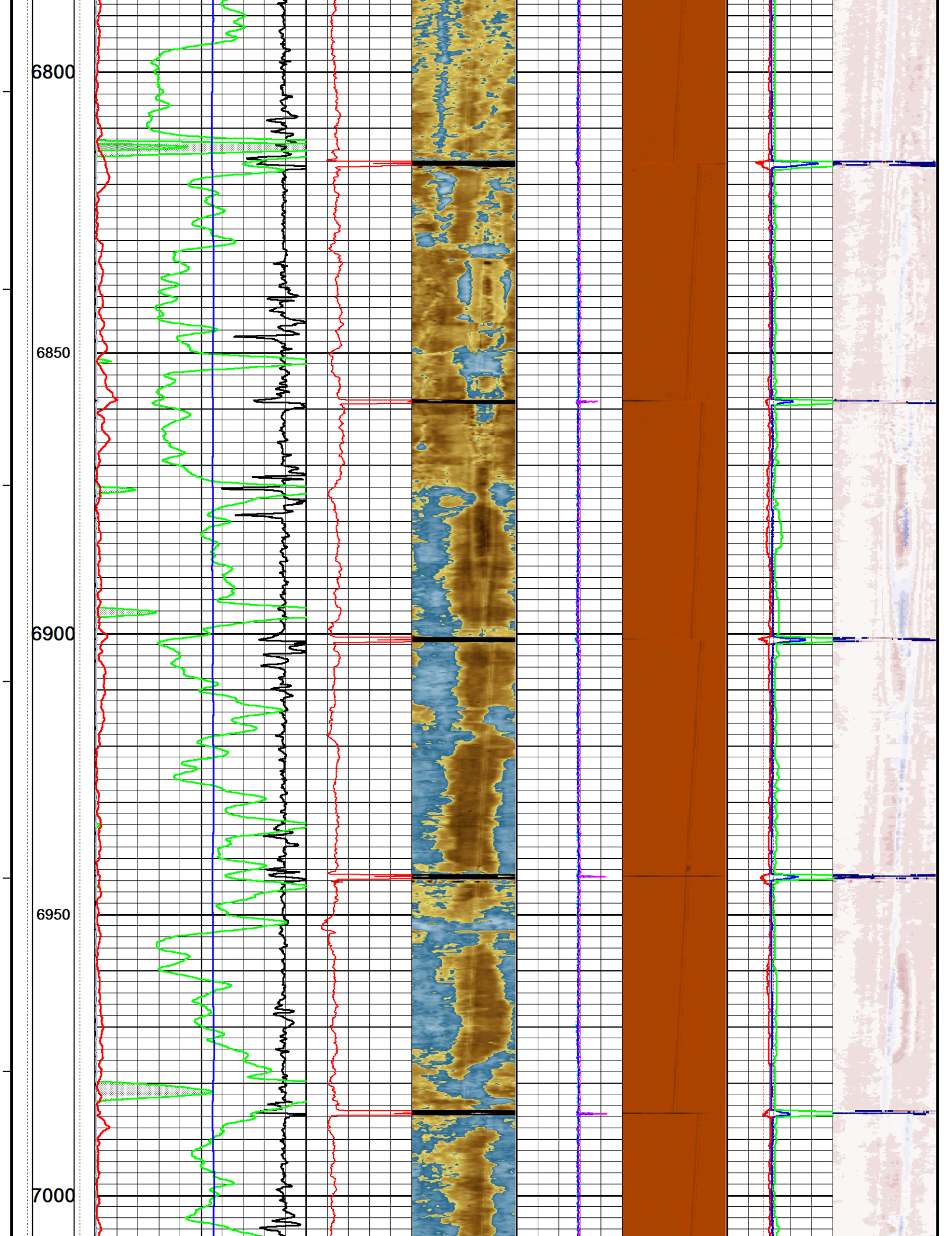


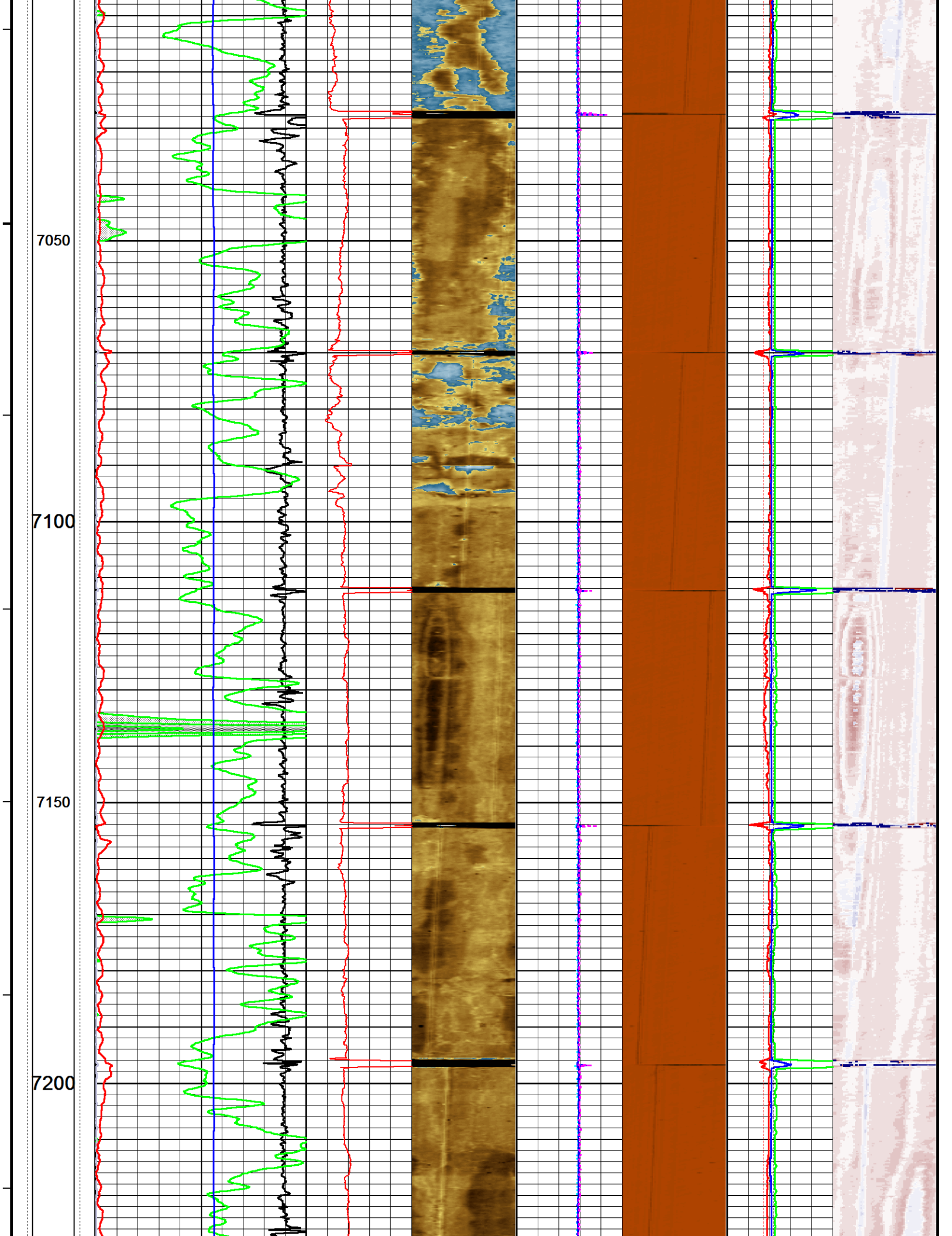


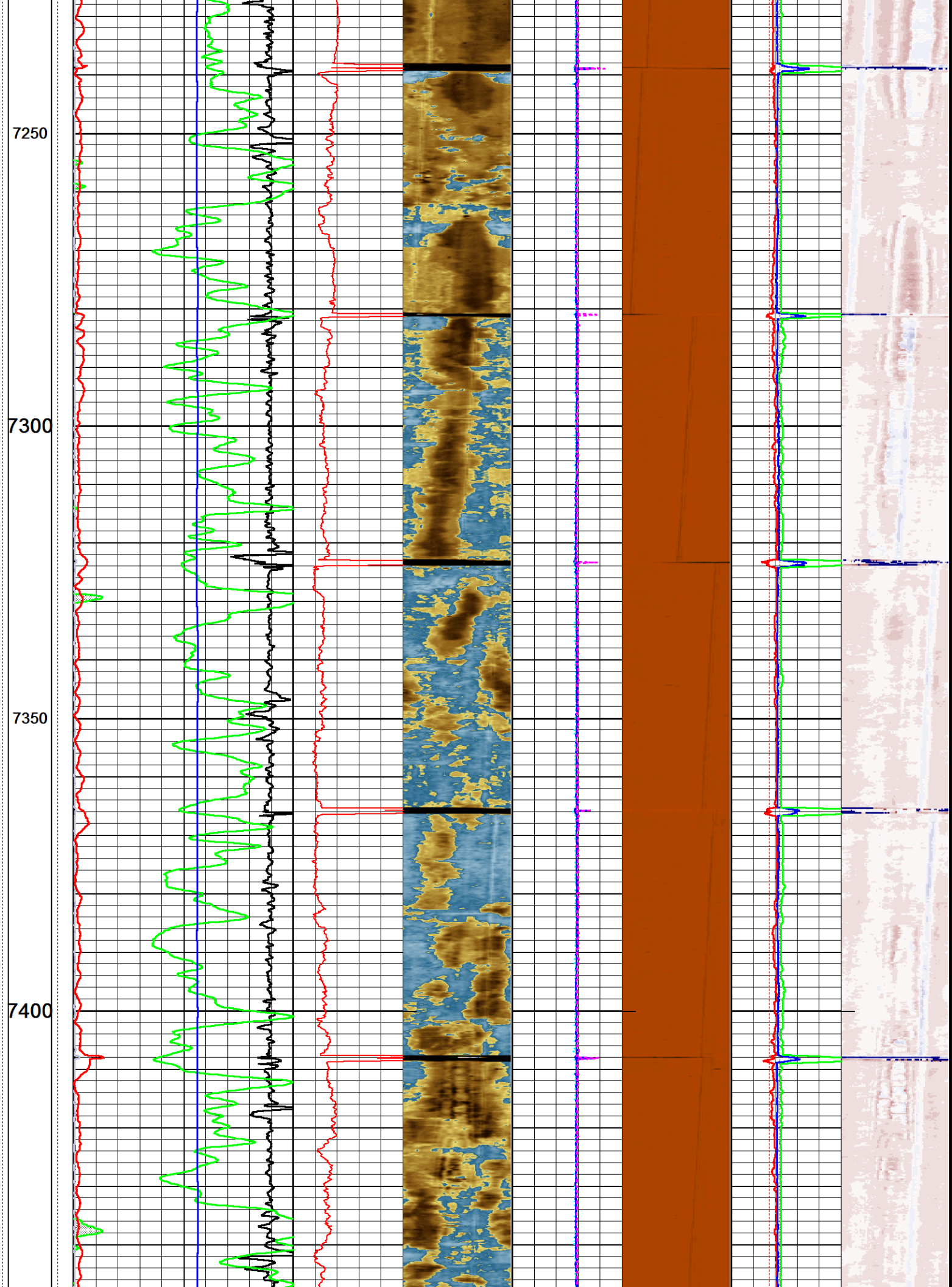


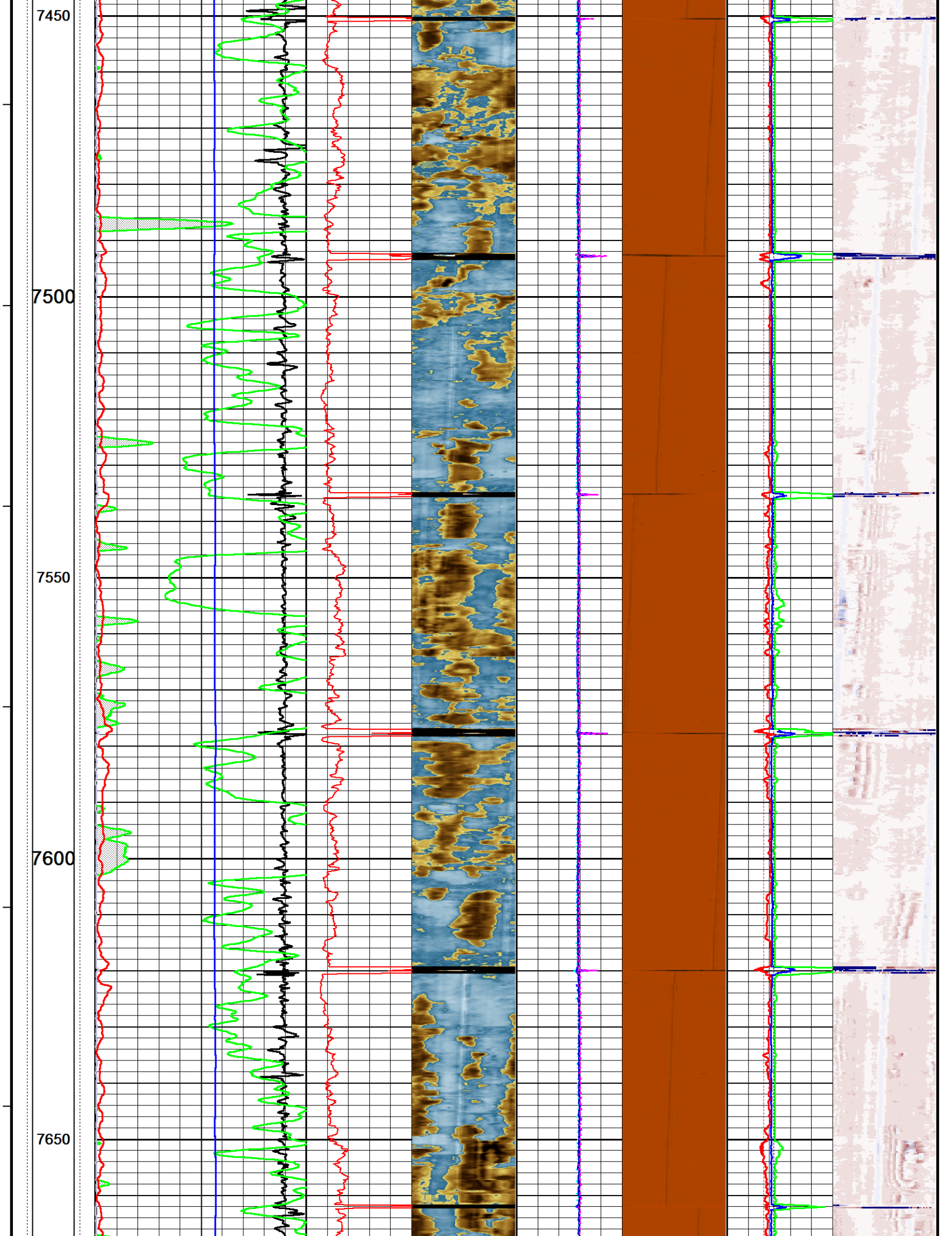


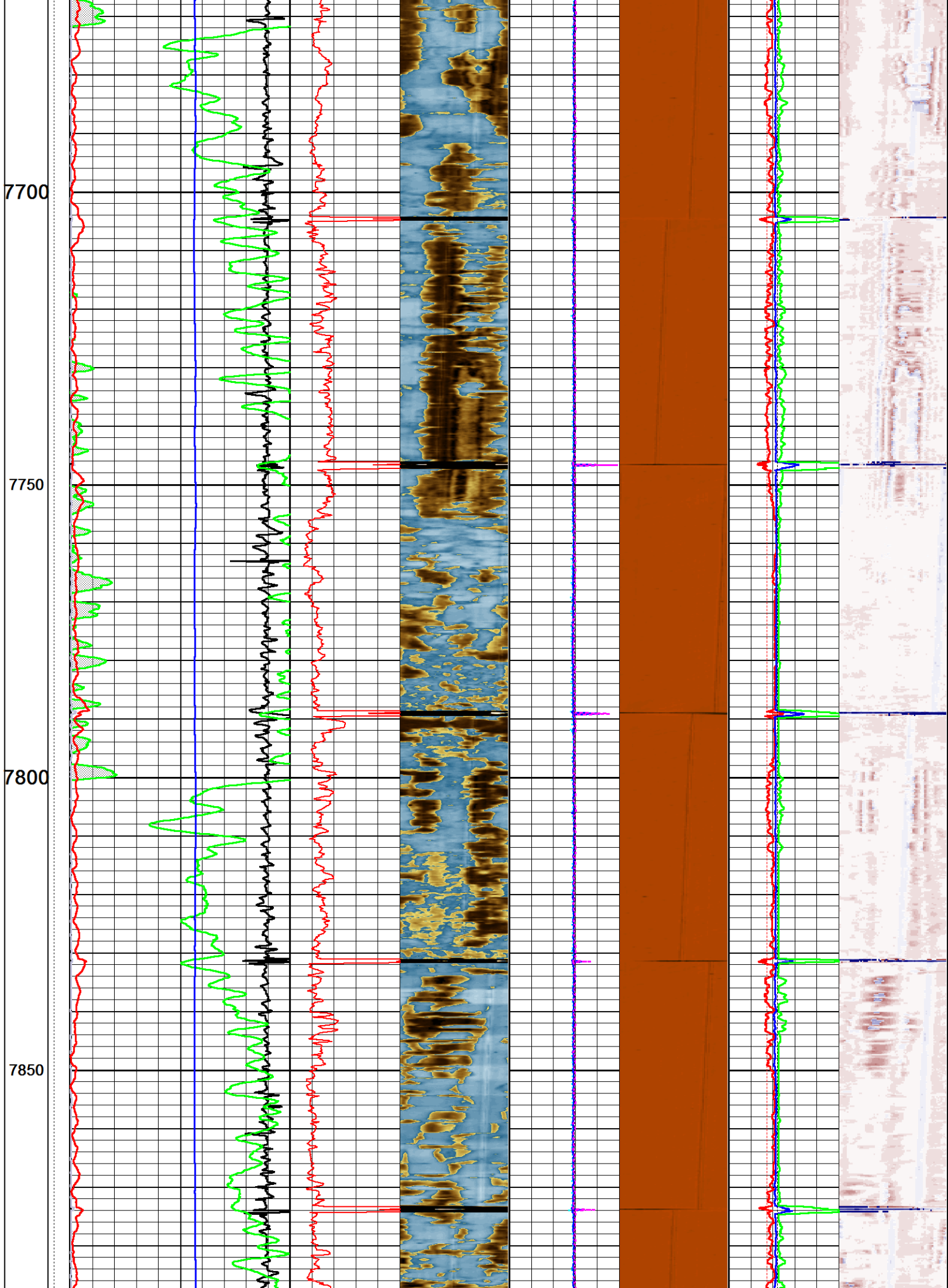


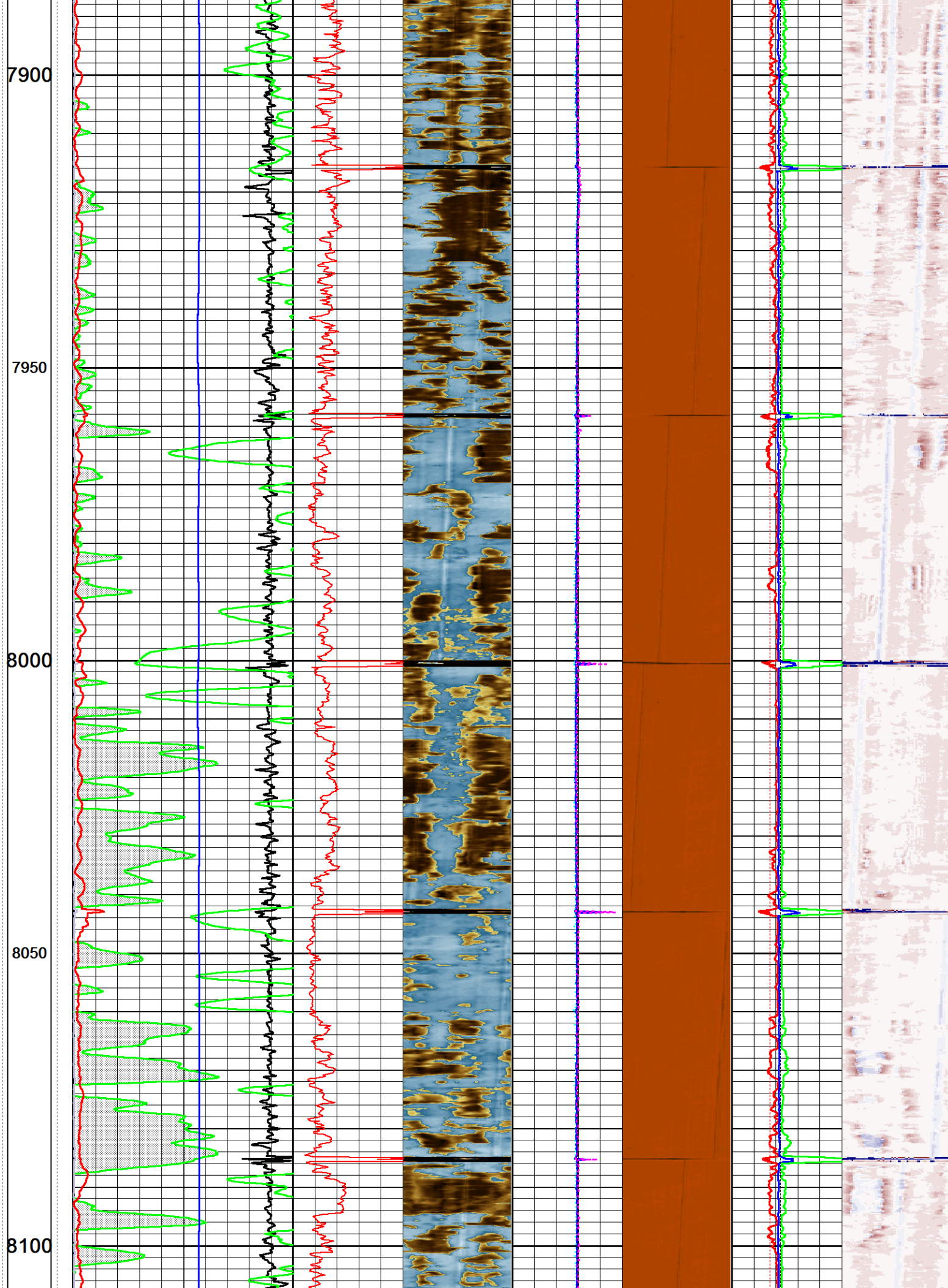


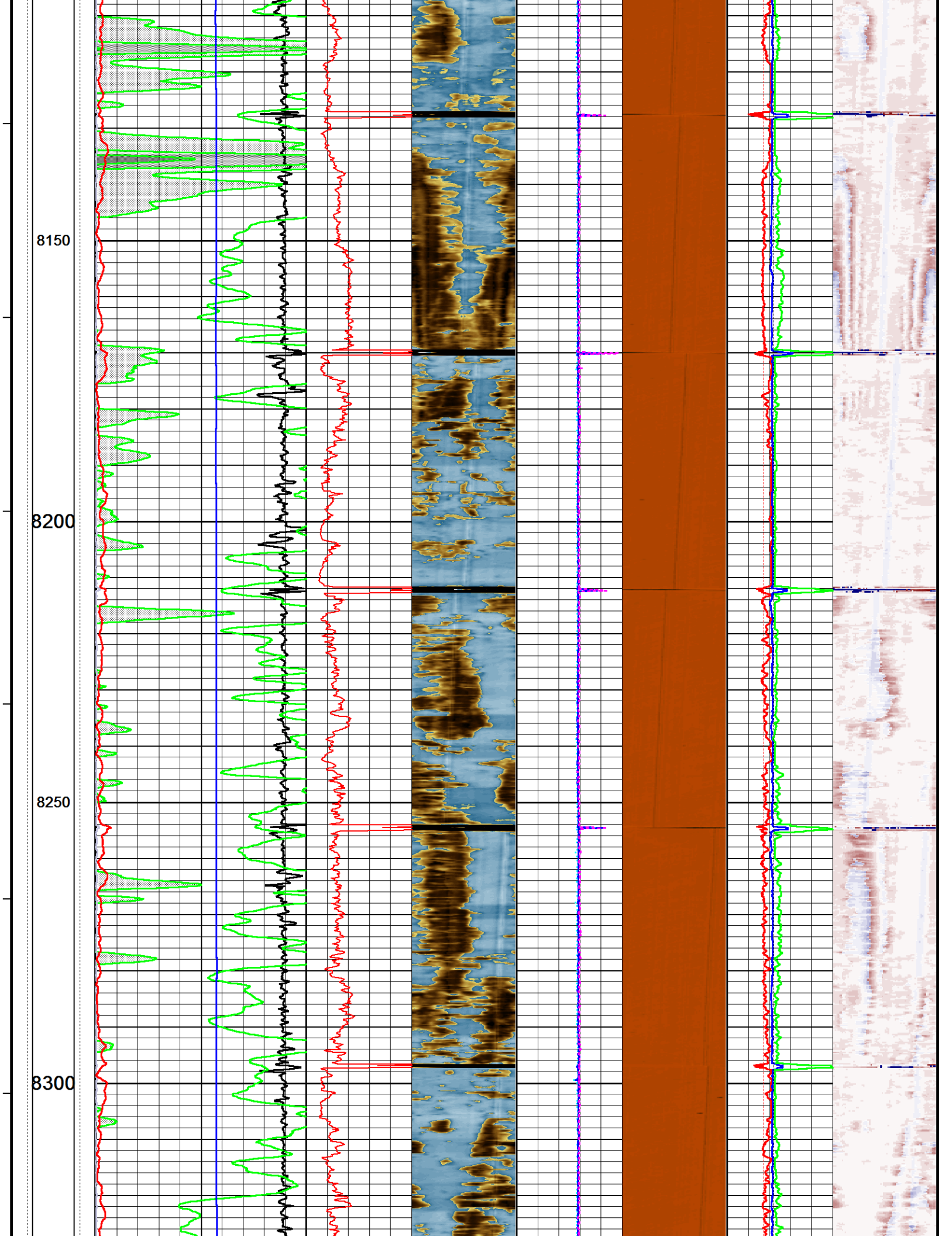


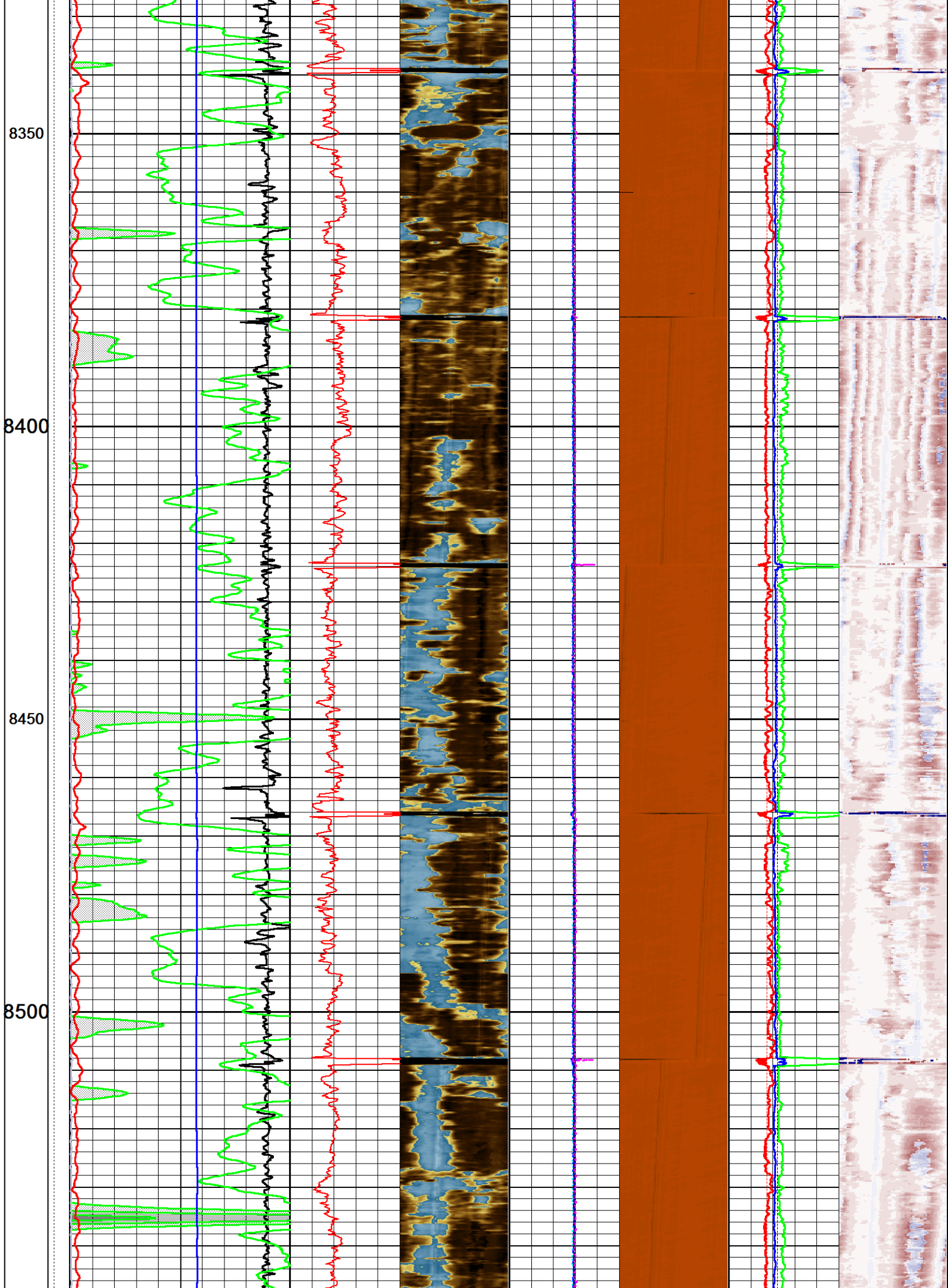


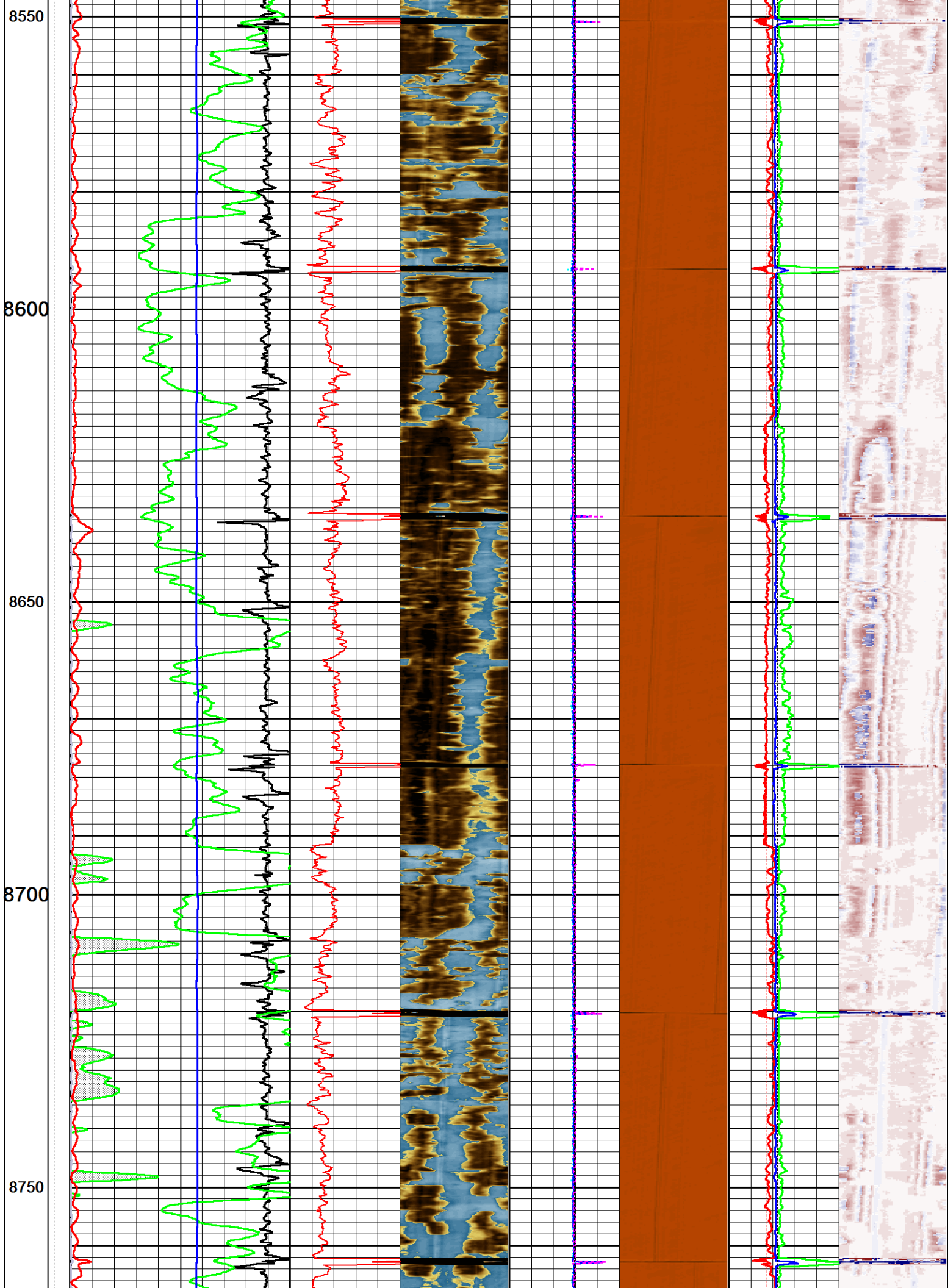


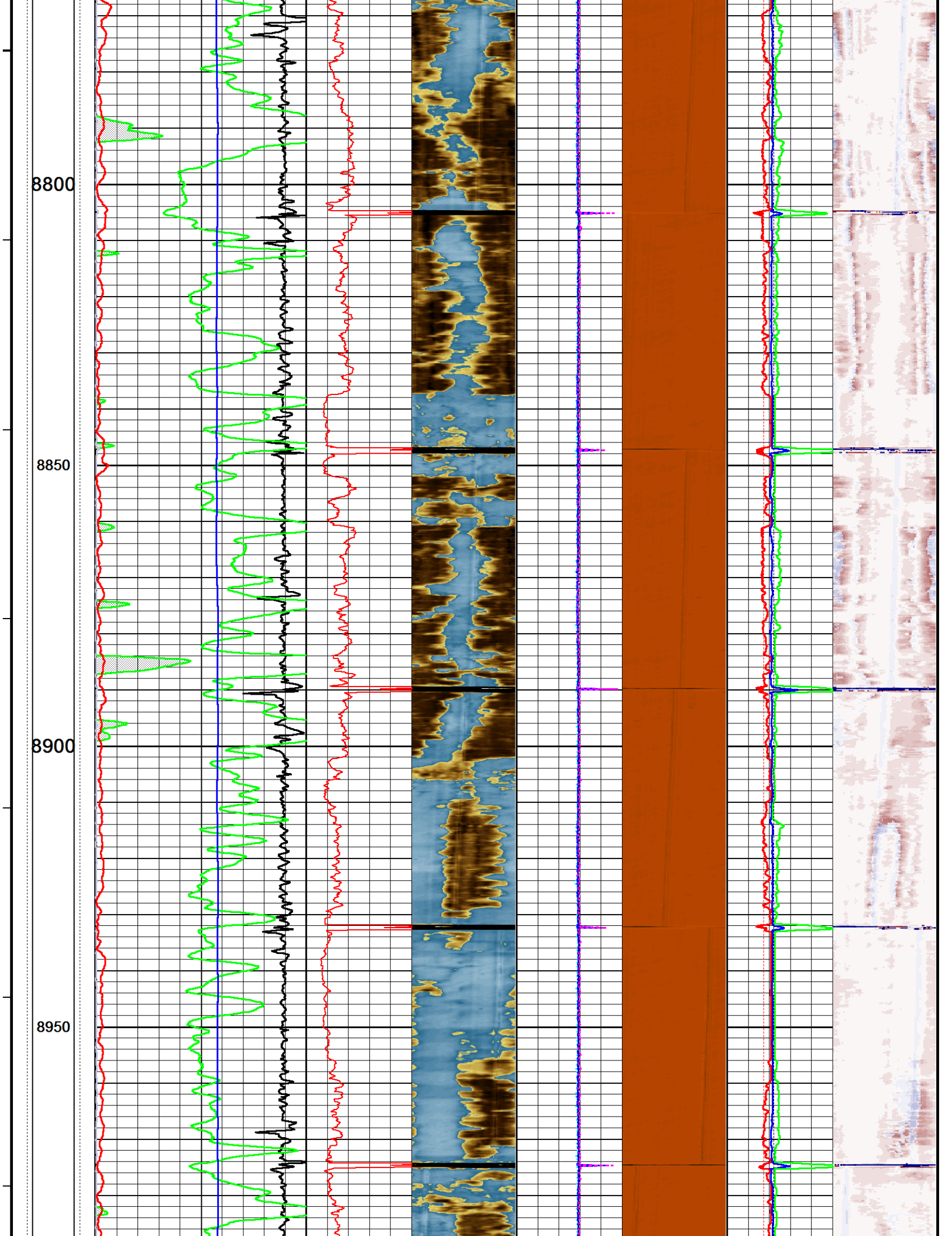


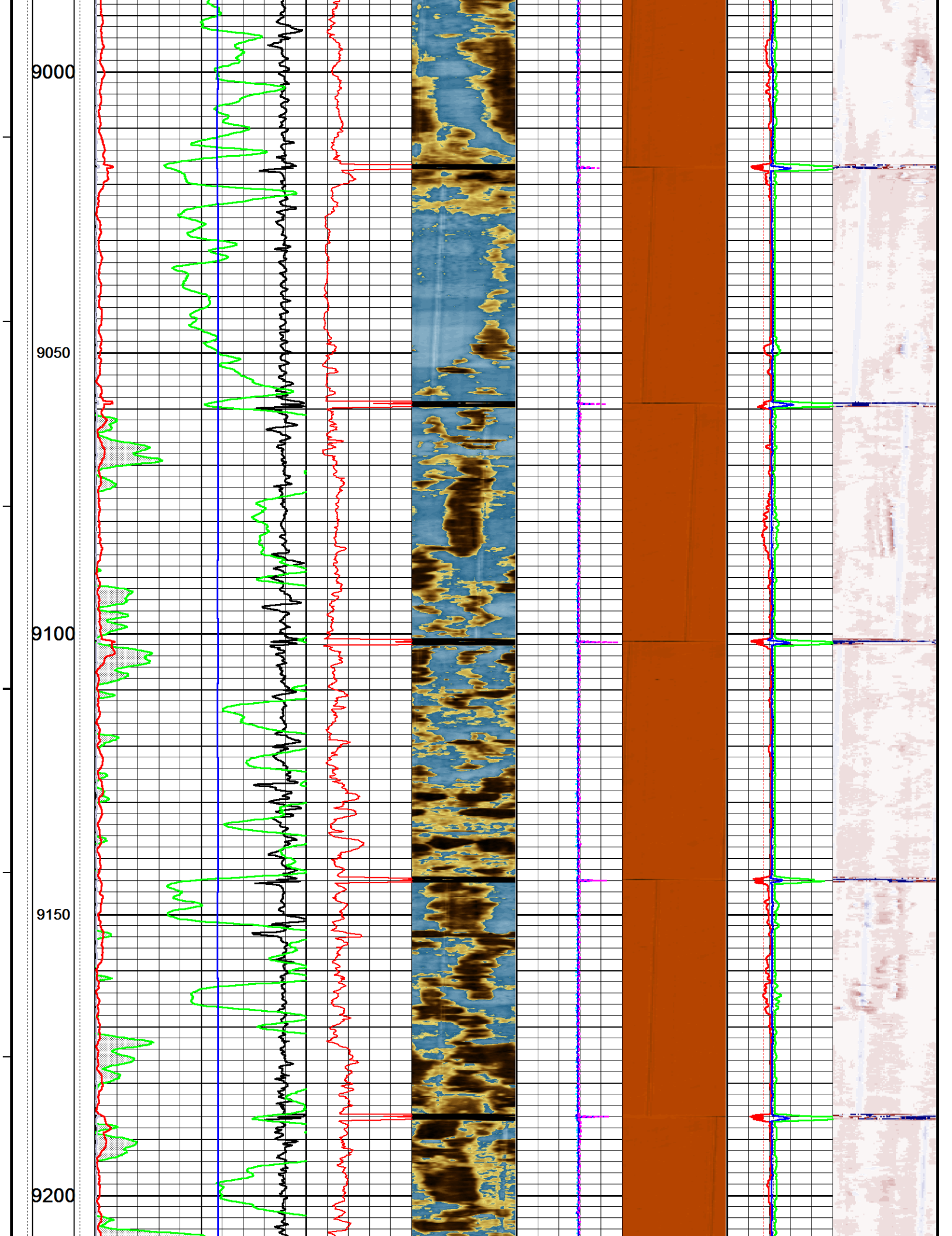


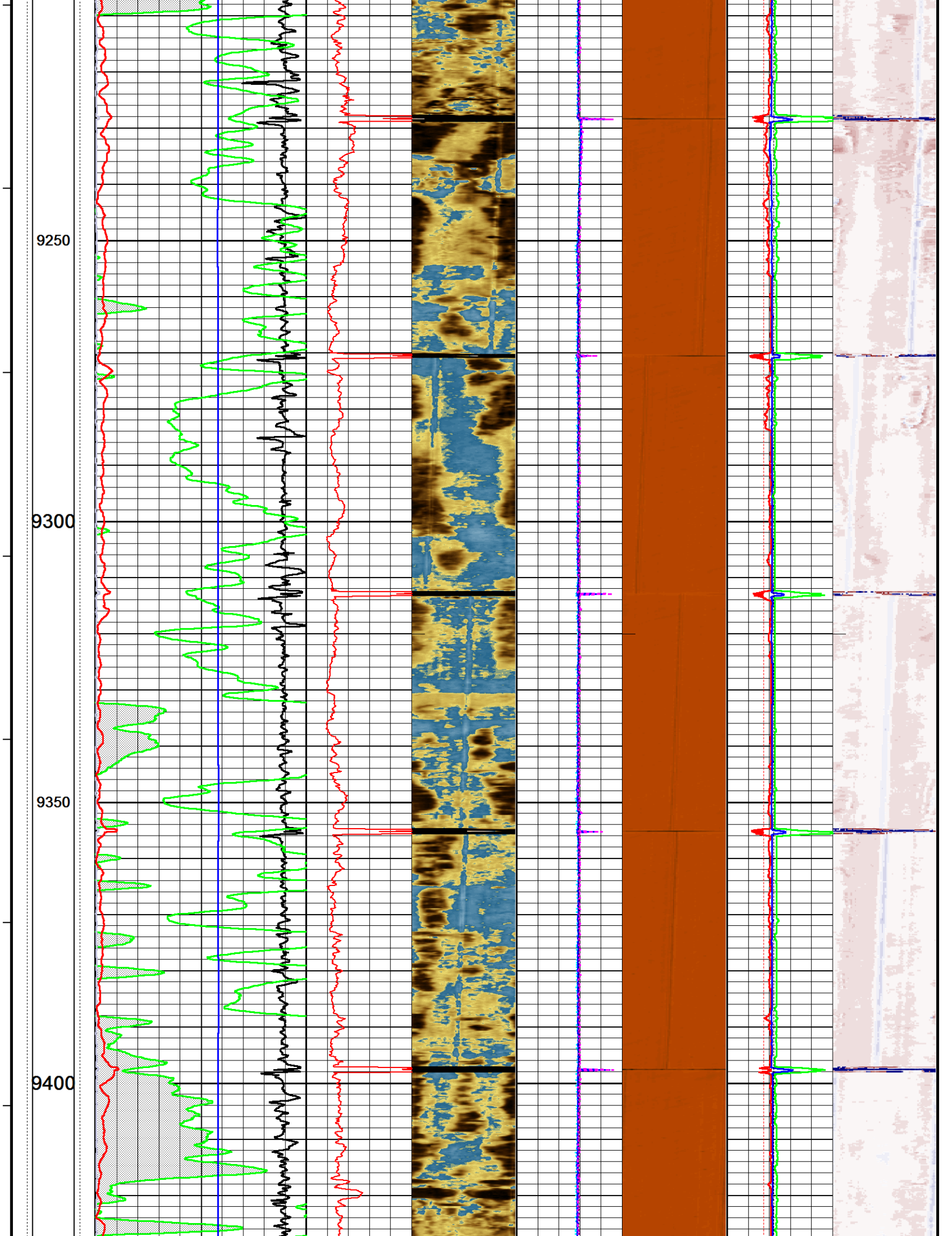


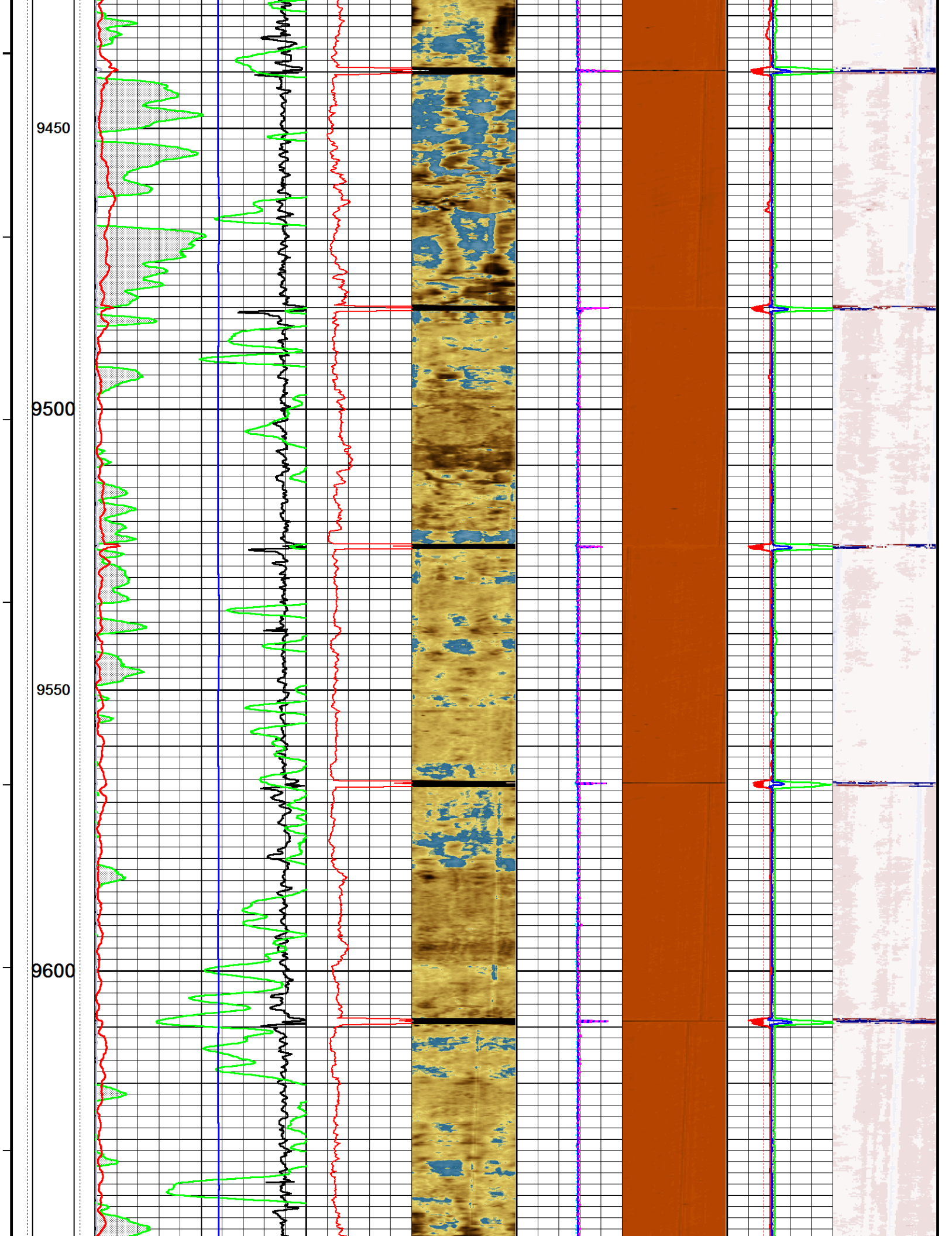


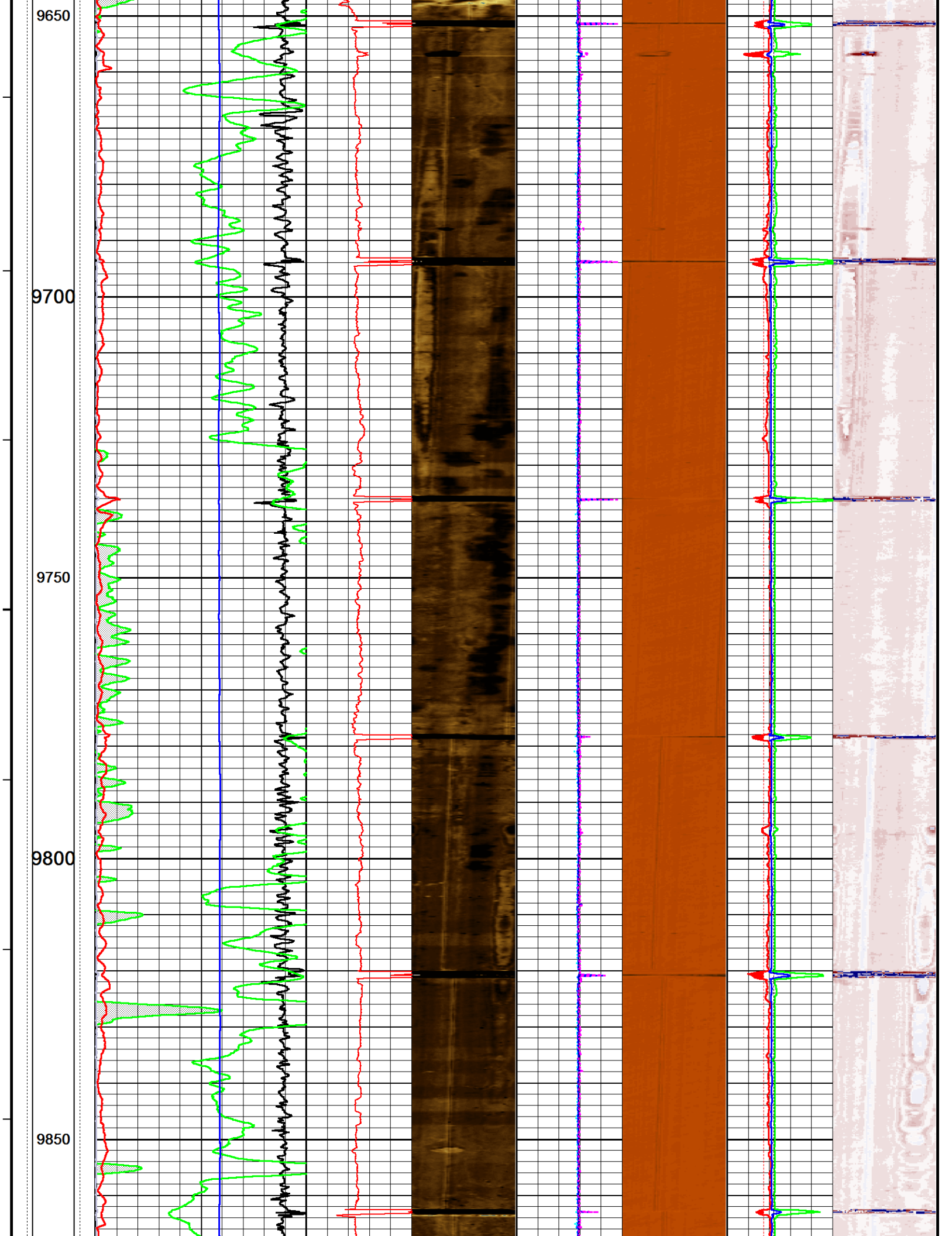


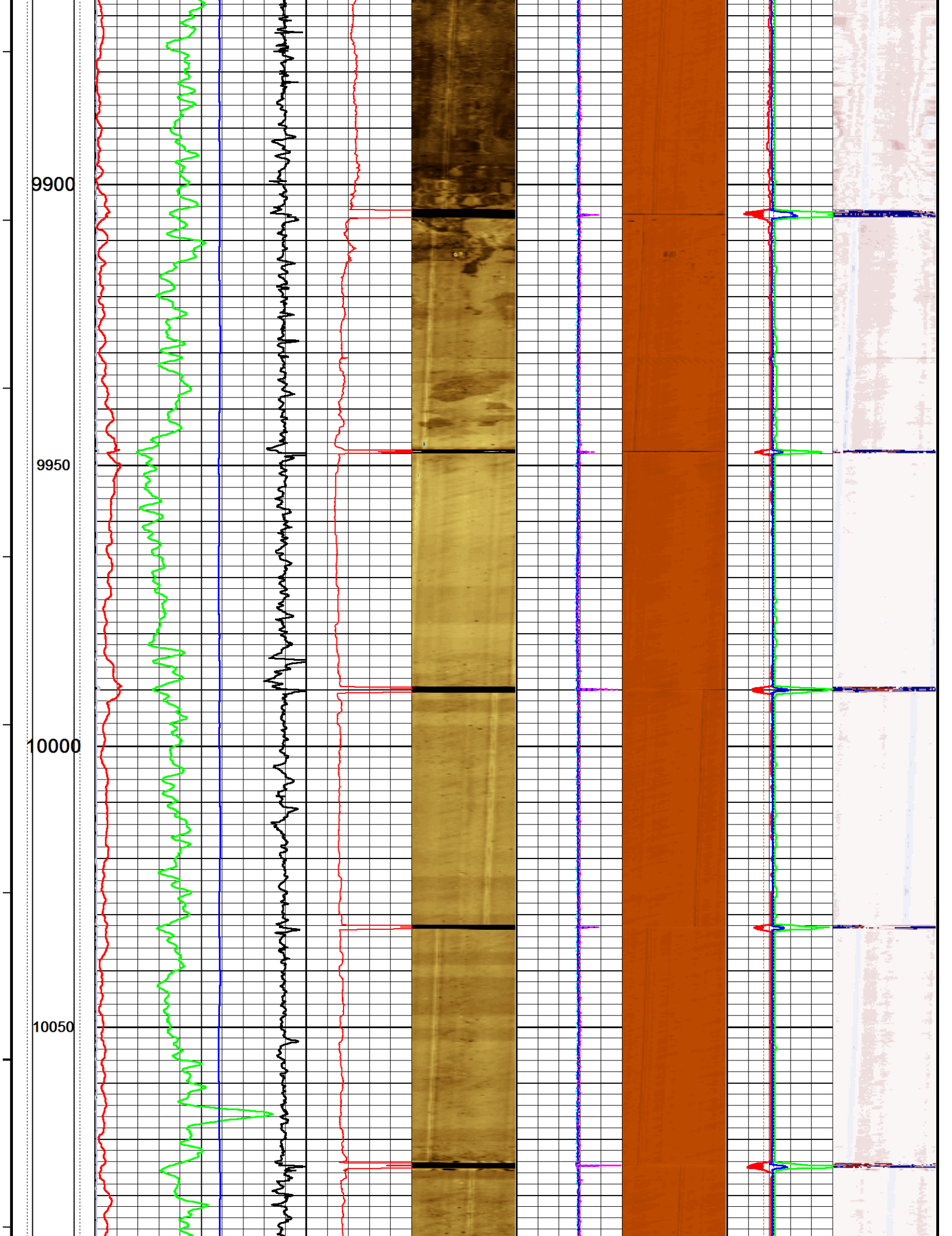


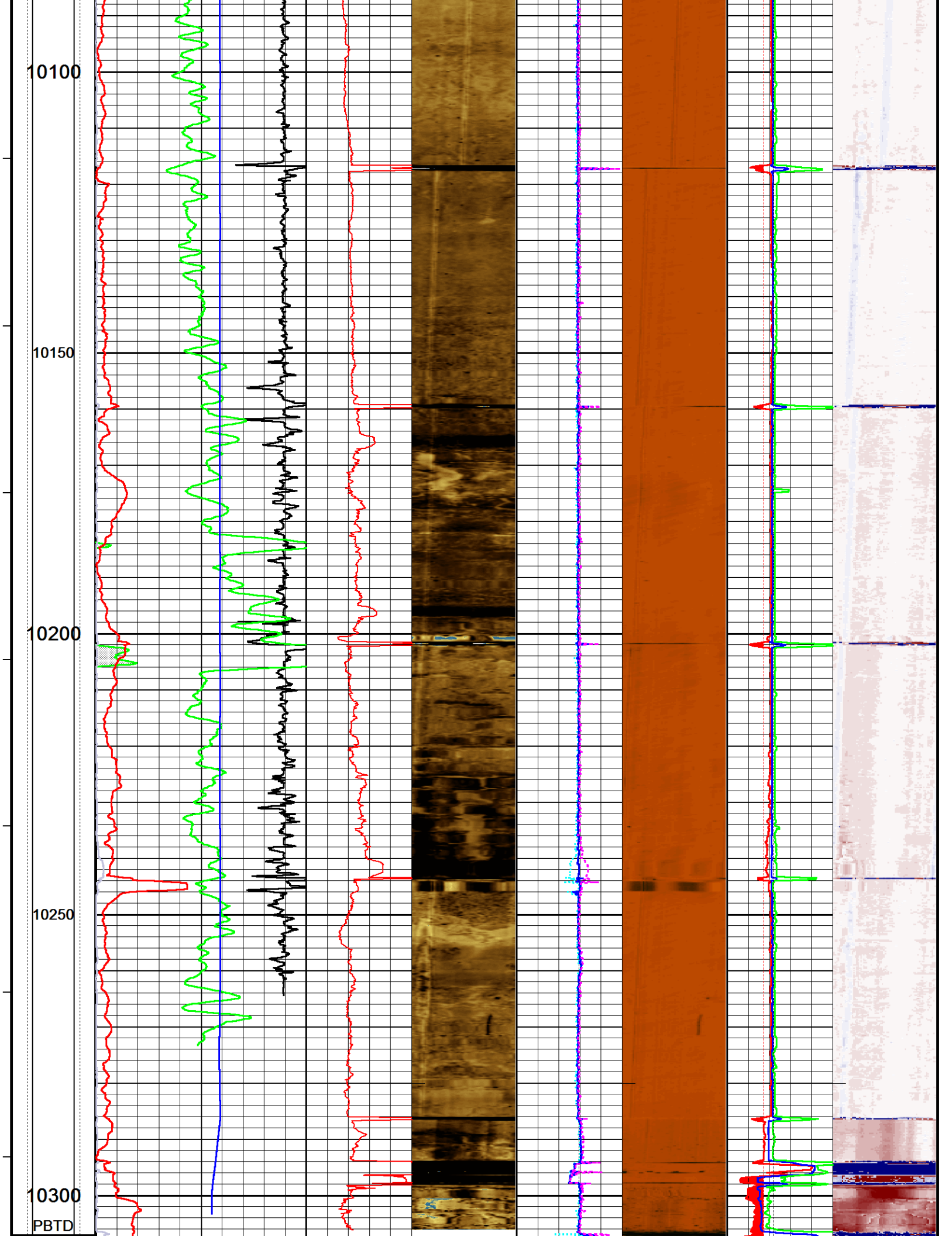


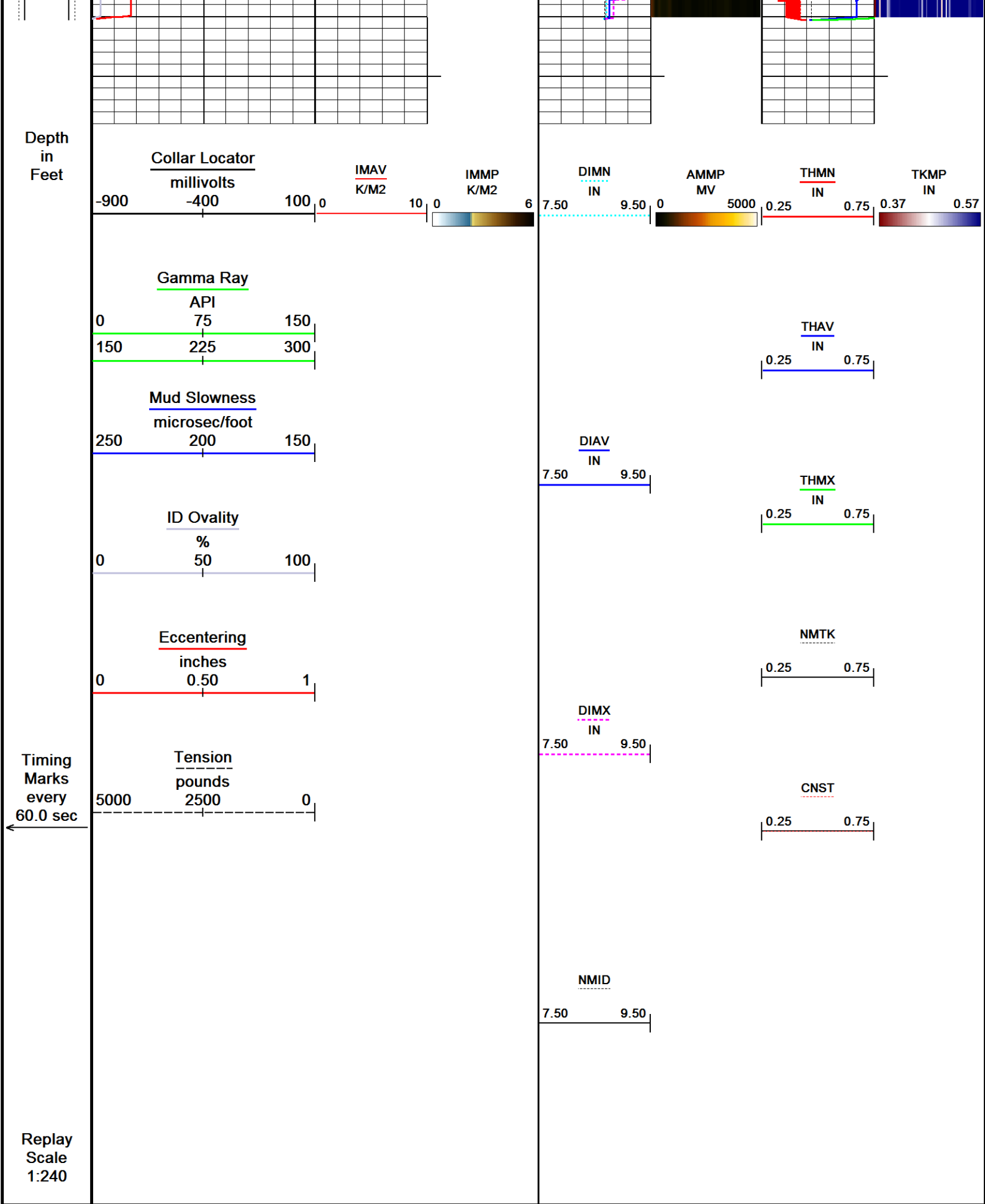






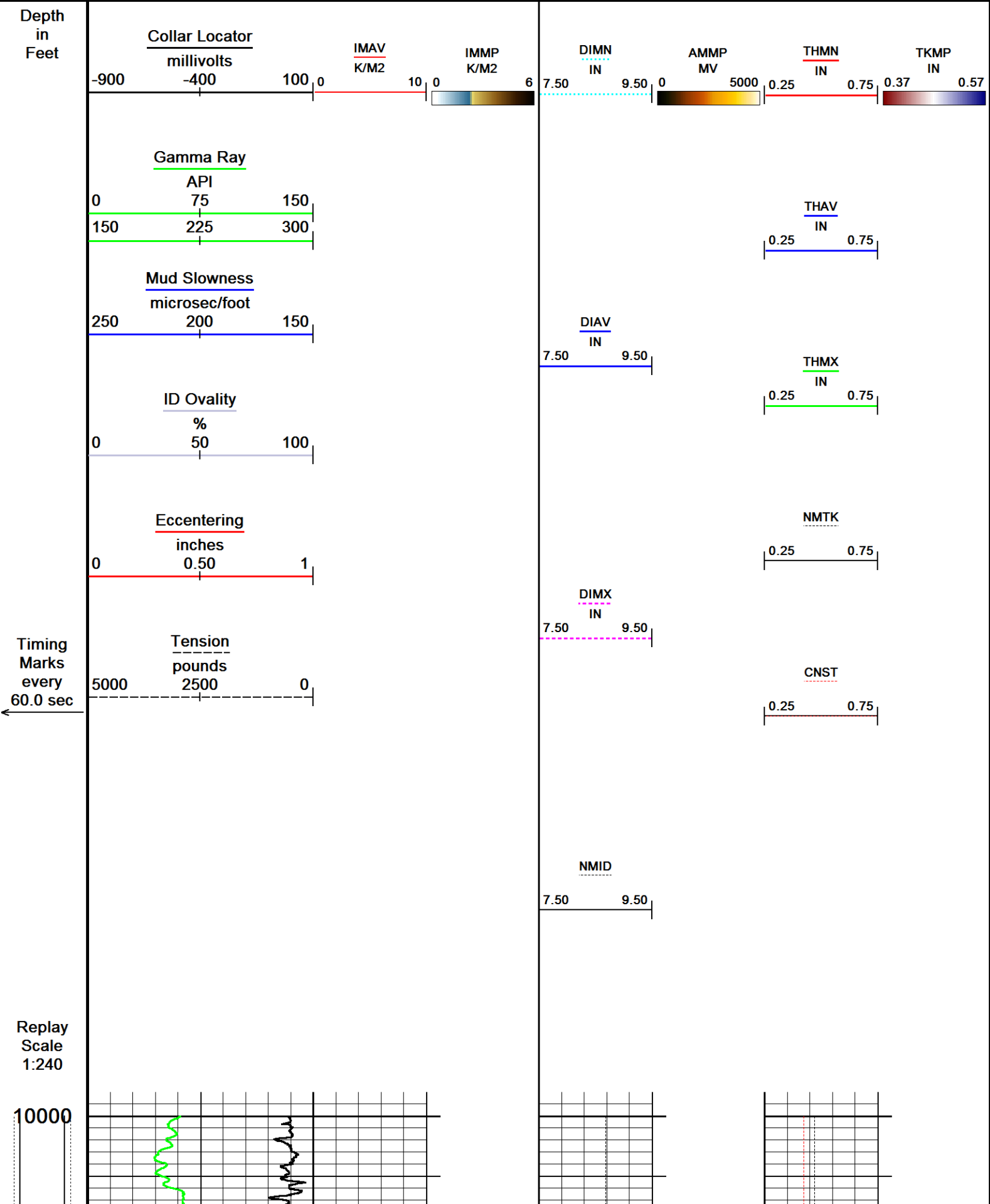


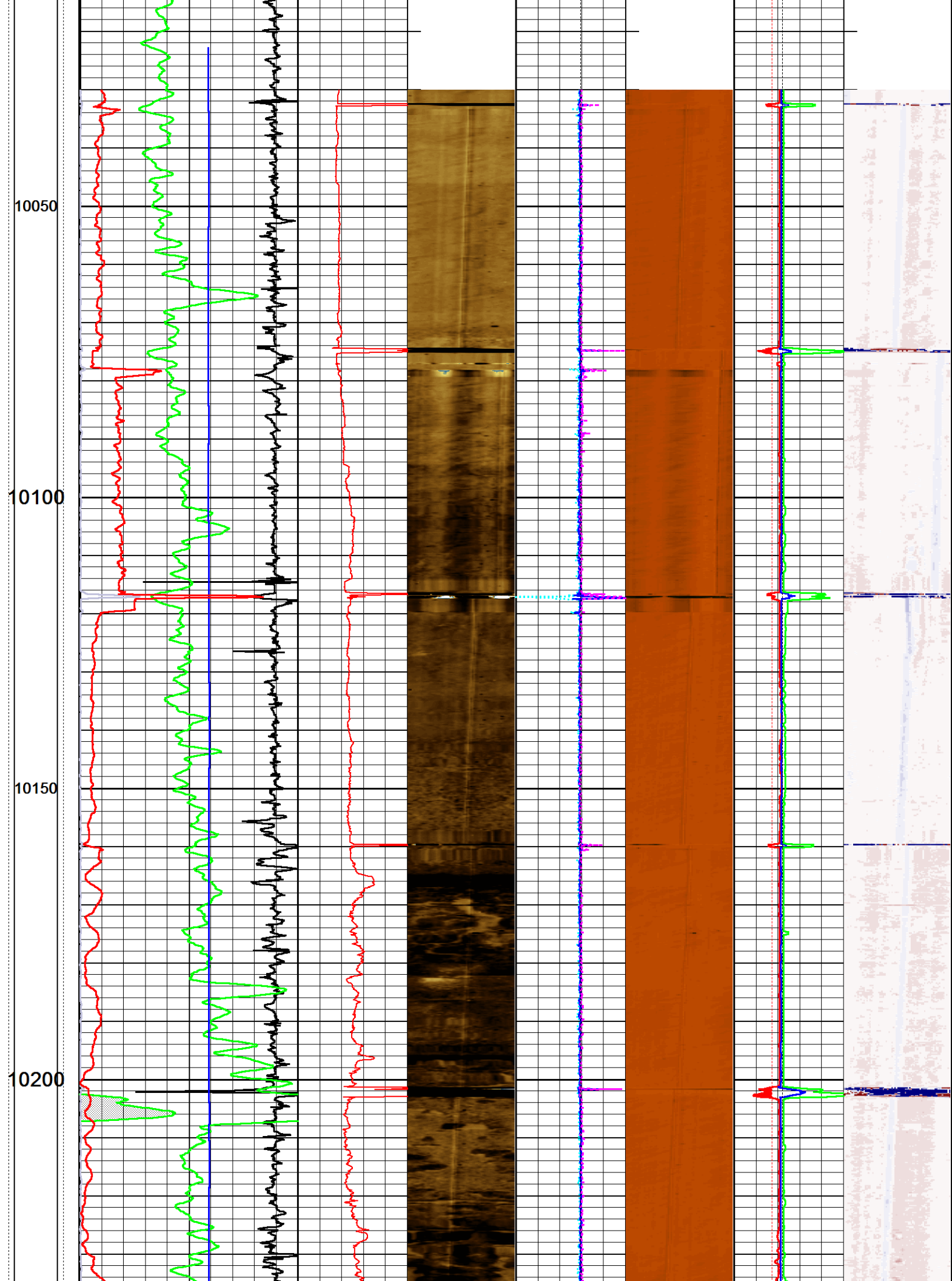


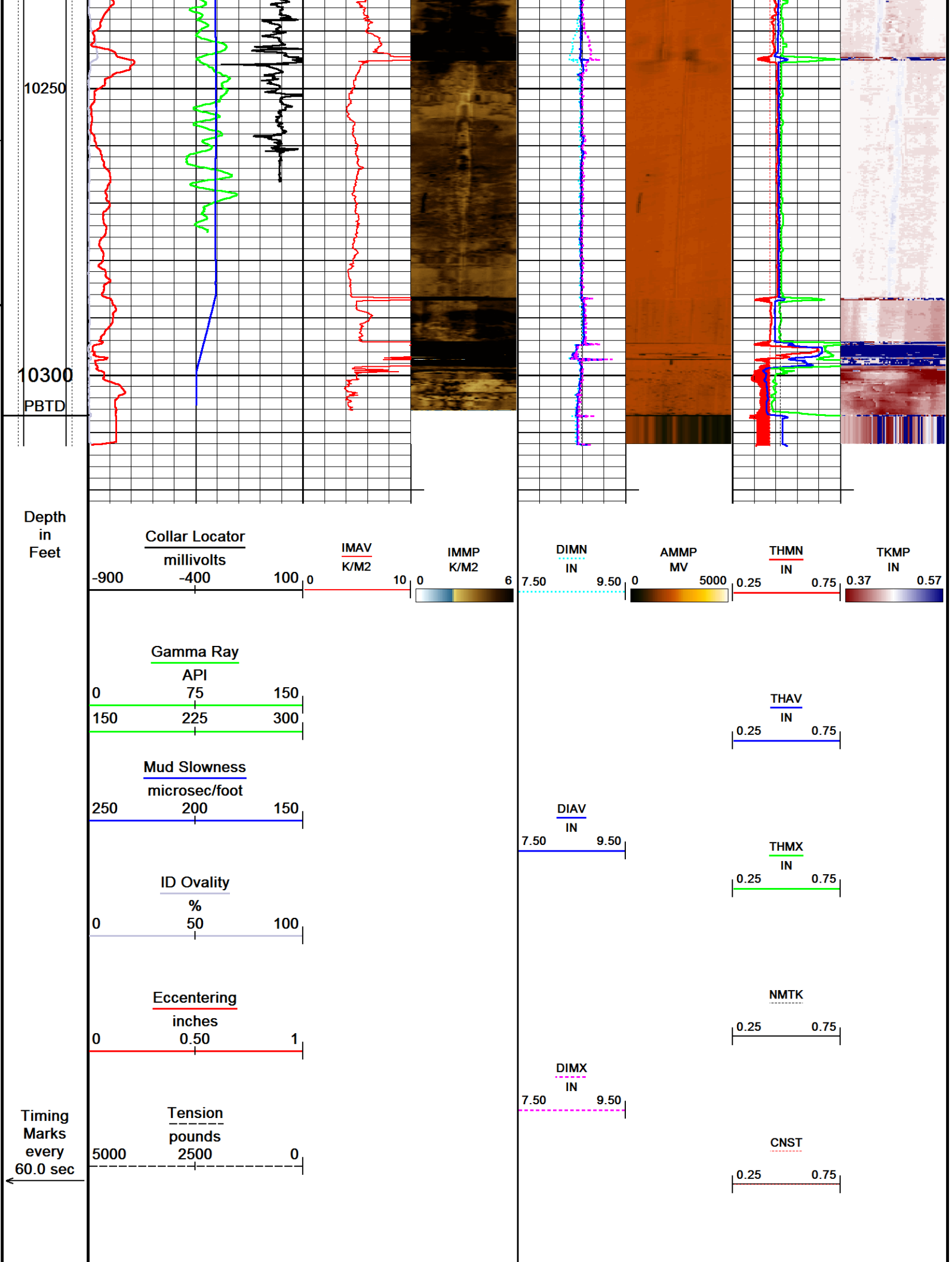


Depth Based Data - Maximum Sampling Increment 2.5cm
Filename: E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_REPEAT PASS.dta
System Versions: Logged with 18.01.6830 Plotted with 18.01.6830

Plotted on 01-AUG-2018 01:14
Recorded on 01-AUG-2018 00:17







Replay
Scale
1:240

NMID

7.50 9.50

Depth Based Data - Maximum Sampling Increment 2.5cm
Filename: E:\FIELD LOGS 1801\URS\WSP_WDW454\WSP_WDW454_REPEAT PASS.dta
System Versions: Logged with 18.01.6830 Plotted with 18.01.6830

Plotted on 01-AUG-2018 01:14

Recorded on 01-AUG-2018 00:17



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
Calibrator No:

Serial No: 177

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' TT 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

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

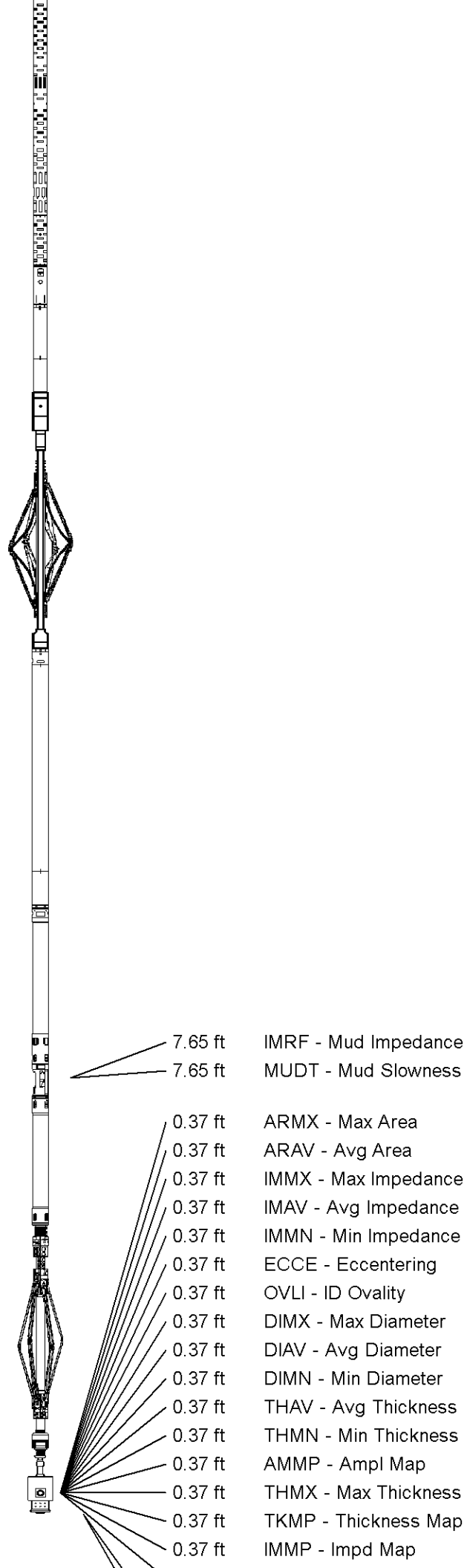
55 pin Roller Centralizer
CEN-XA 217 LG: 4.49 ft WT: 86.0 lb OD: 3.386 in

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



0.37 ft QAFL - Quality Flags
0.00 ft TENS - Tension
Tool Zero (0.00ft from bottom)

All measurements relative to tool zero.

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



SECUREVIEW
ULTRAVIEW
CASING EVALUATION

Weatherford[®]