

Company: Noble Energy Inc

Well: Wells Ranch State AE30-62-1HNC  
Field: Wattenberg  
County: Weld State: Colorado

County: Weld			
Field: Wattenberg			
Location: SWSW Sec. 29 T6N R62W			
Well: Wells Ranch State AE30-62-1HNC			
Company: Noble Energy Inc			
USI-LITE	LOCATION		
	Permanent Datum: Log Measured From: Drilling Measured From:	GL KB KB	Elev: K.B. 4770.0 F G.L. 4746.0 F D.F. 4769.0 F
Logging Date	API Serial No. 05-123-38681-0000	Section 29	Township 6N
Run Number	1		Range 62W
Depth Driller	6871.0 F		
Schlumberger Depth	6871.0 F		
Bottom Log Interval	6450.0 F		
Top Log Interval	50.0 F		
Casing Fluid Level	8.0 F		
Salinity			
Density	8.40 LB/G		
Fluid Level	8.0 F		
BIT/CASING/TUBING STRING			
Bit Size	8.750 IN		
From	645.0 F		
To	6871.0 F		
Casing Size	7.00 IN		
Weight	26.00 LB/F		
Grade	N/A		
From	24.0 F		
To	6861.7 F		
Max Recorded Temp	230.0		
Logger on bottom (date)	13-Jun-2014		
Location	Fort Morgan CO		
Recorded By	Elizabeth Wilson		
Witnessed By			

DEPTH SUMMARY LISTING

DEPTH SYSTEM EQUIPMENT

Depth Measuring Device	Tension Device	Logging Cable
Type: Serial Number: Calibration Date: Calibration Cable Type: Wheel Correction 1: Wheel Correction 2:	Type: Serial Number: 777 Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: F713671/1 Length: 18200.00000

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF ANR RELIANCE UPN THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISIONS MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA

Toolstring ran as per toolsketch

Repeat pass ran under 0 psi

Main pass ran under 2500 psi

Lead cement 12.5 ppg

Tail cement 13.8 ppg

Top of cement estimated to be at 500'

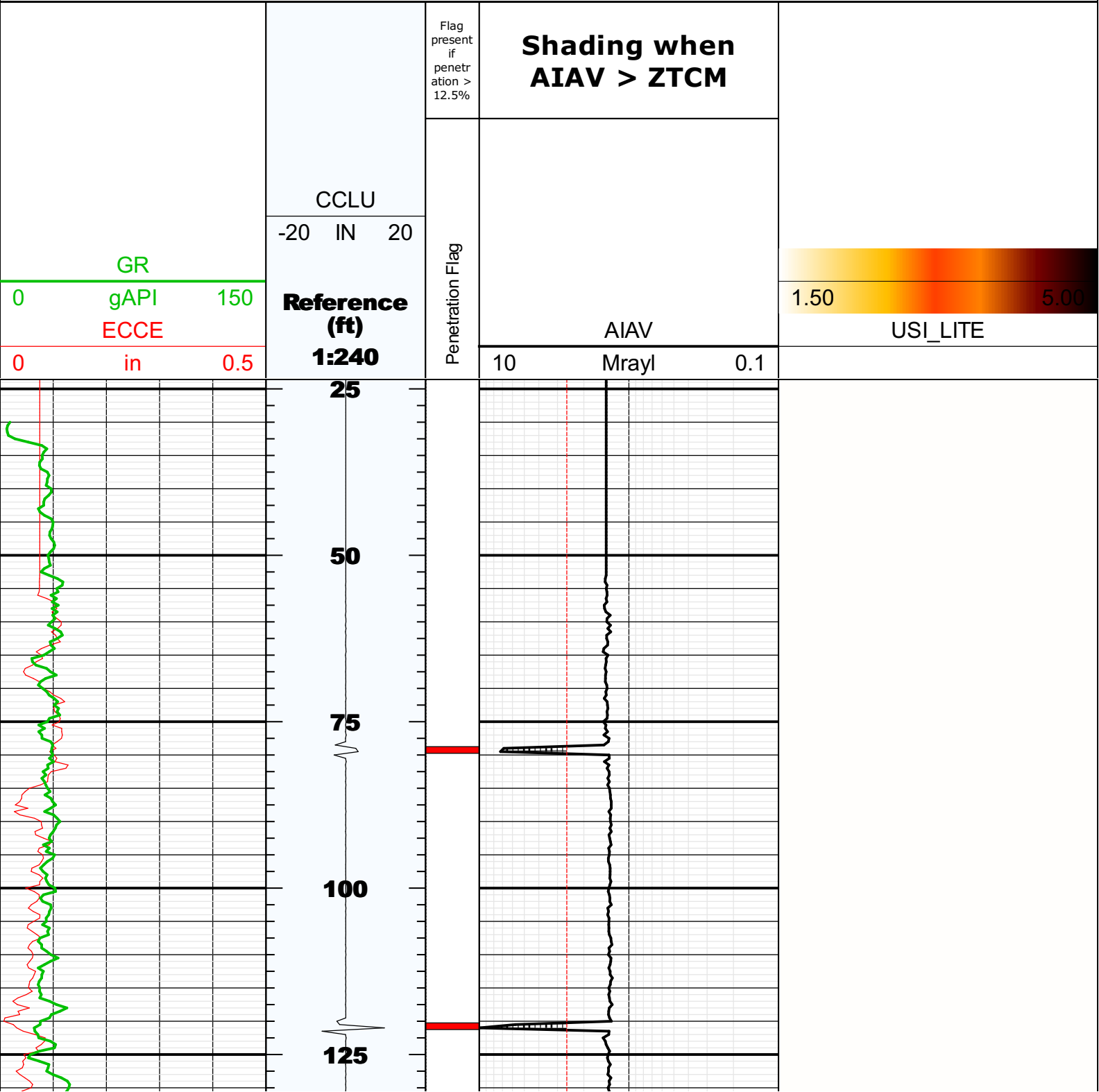
Attempted to log from liner at 6755' but was unable to get quality data in deviated casing so had to log up from 6450'

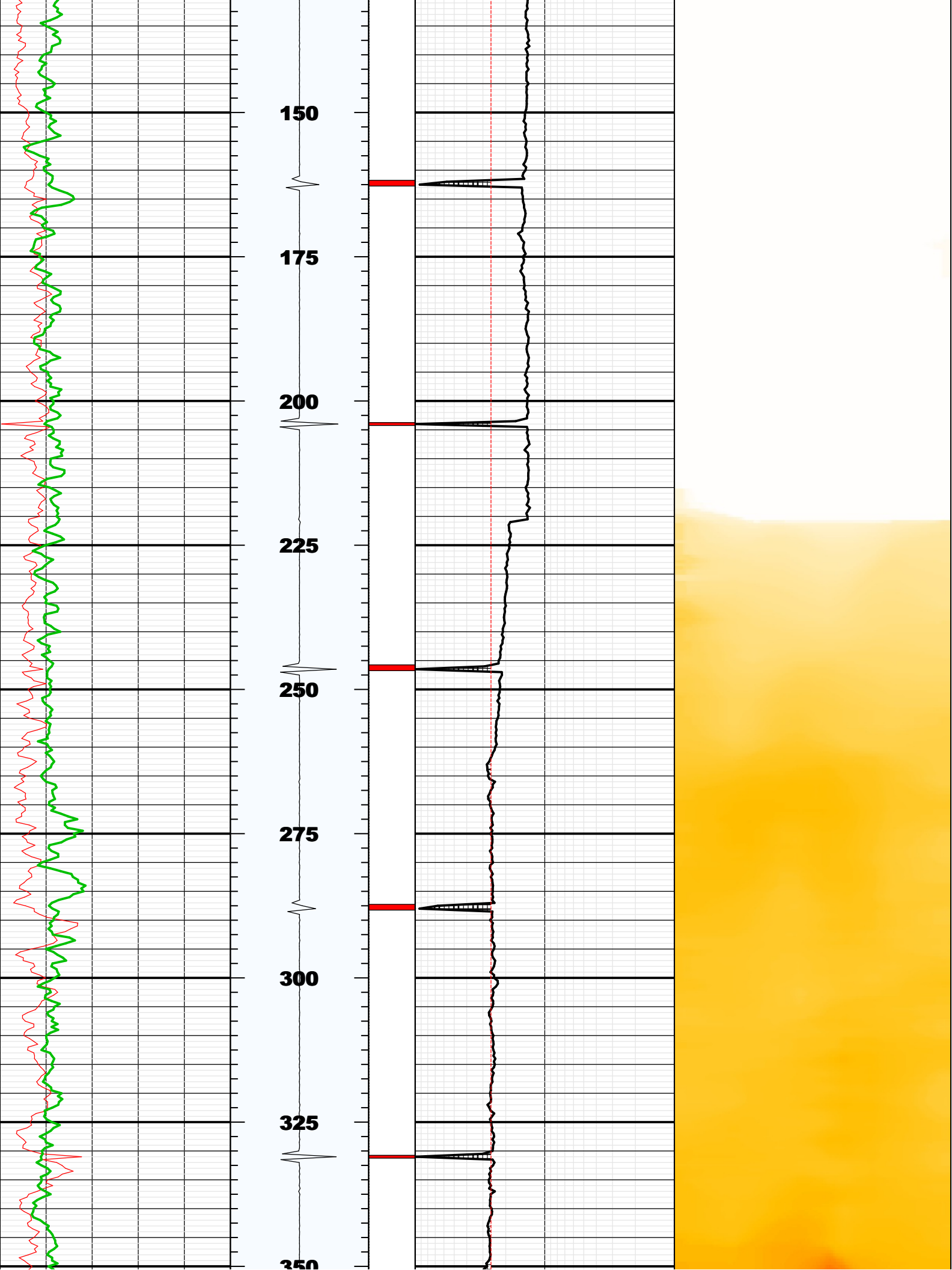
Crew Derrick Hunter Jake Jump

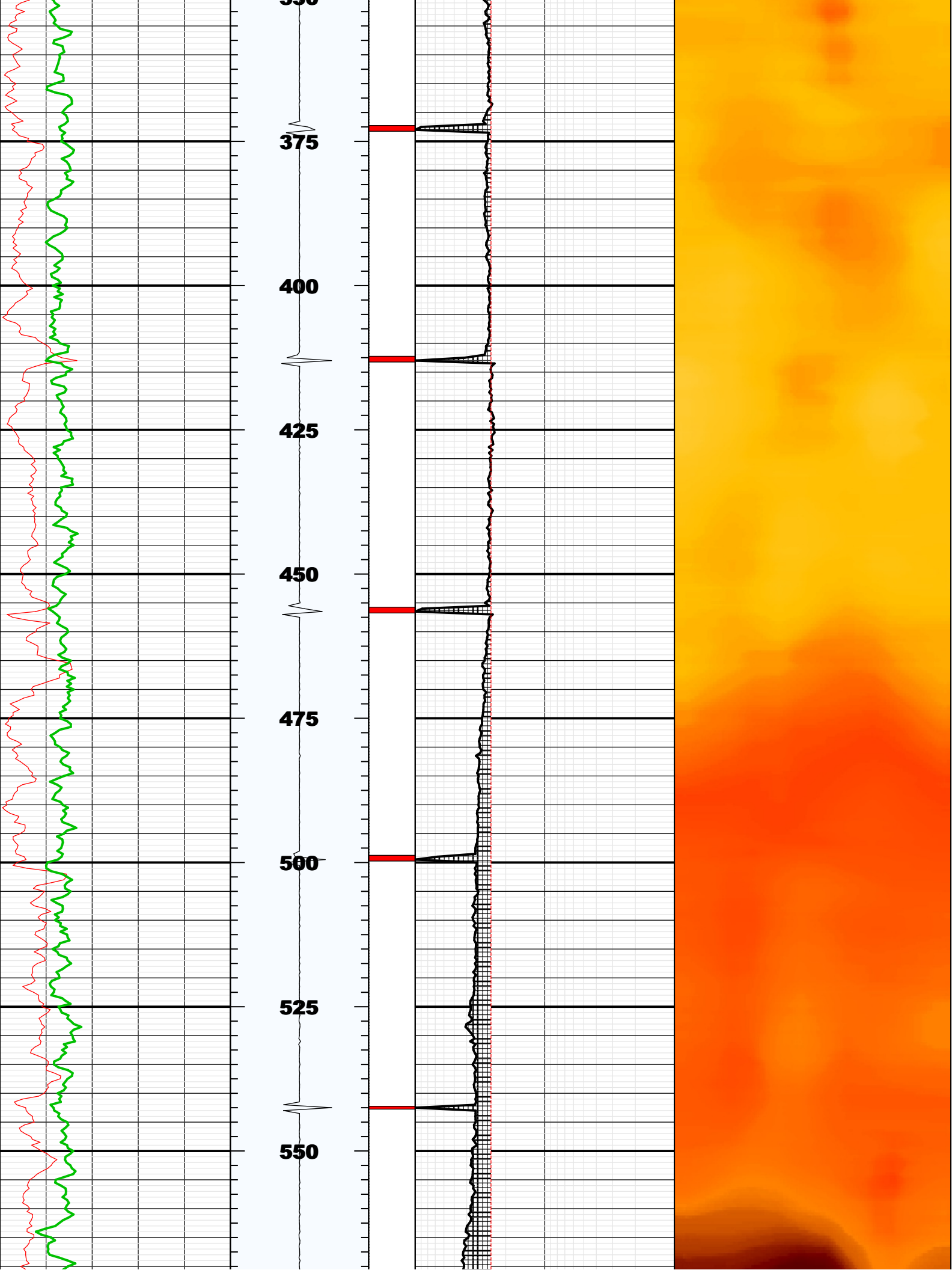
Thank you for choosing Schlumberger Wireline Services

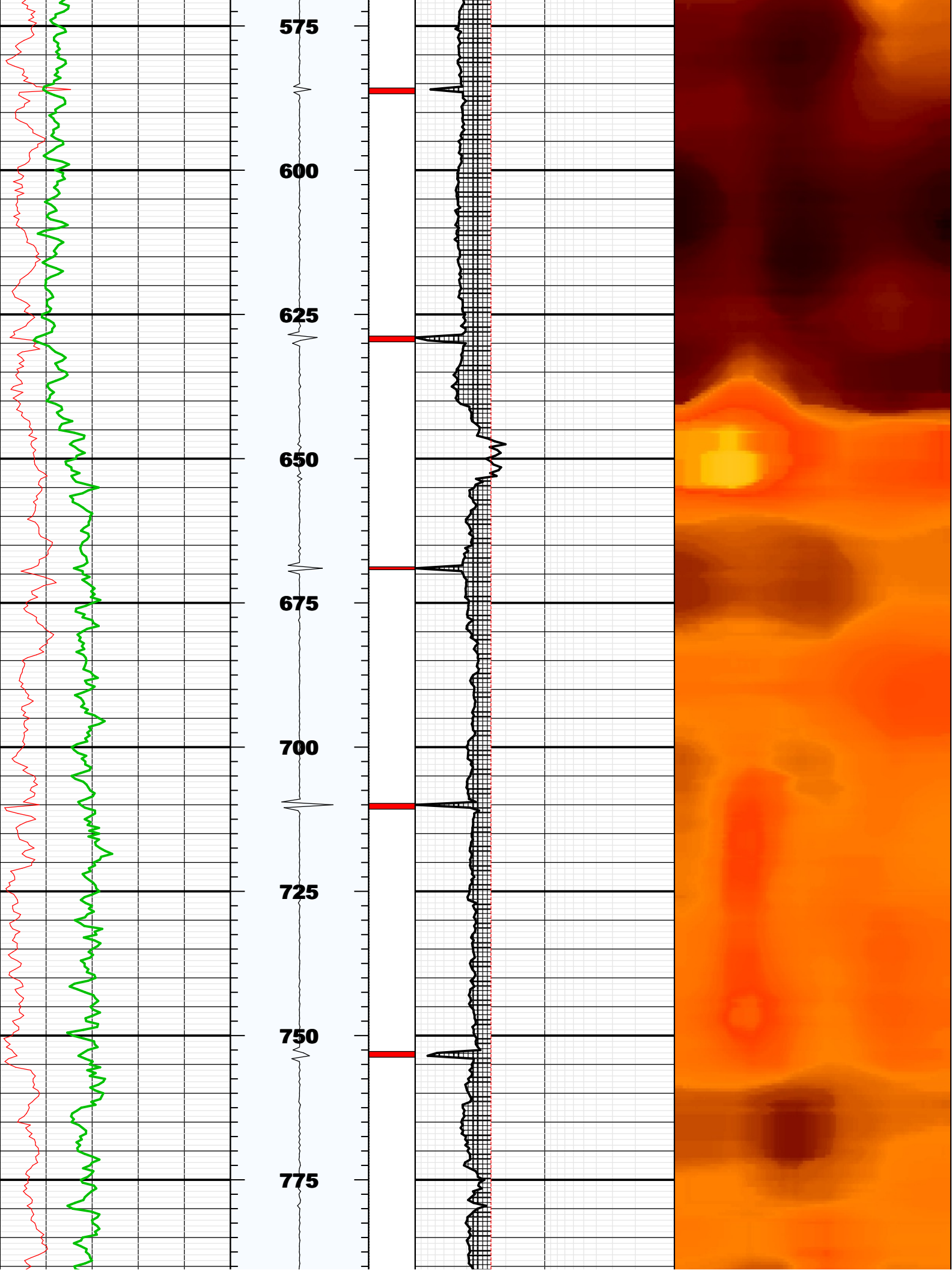
Main Pass

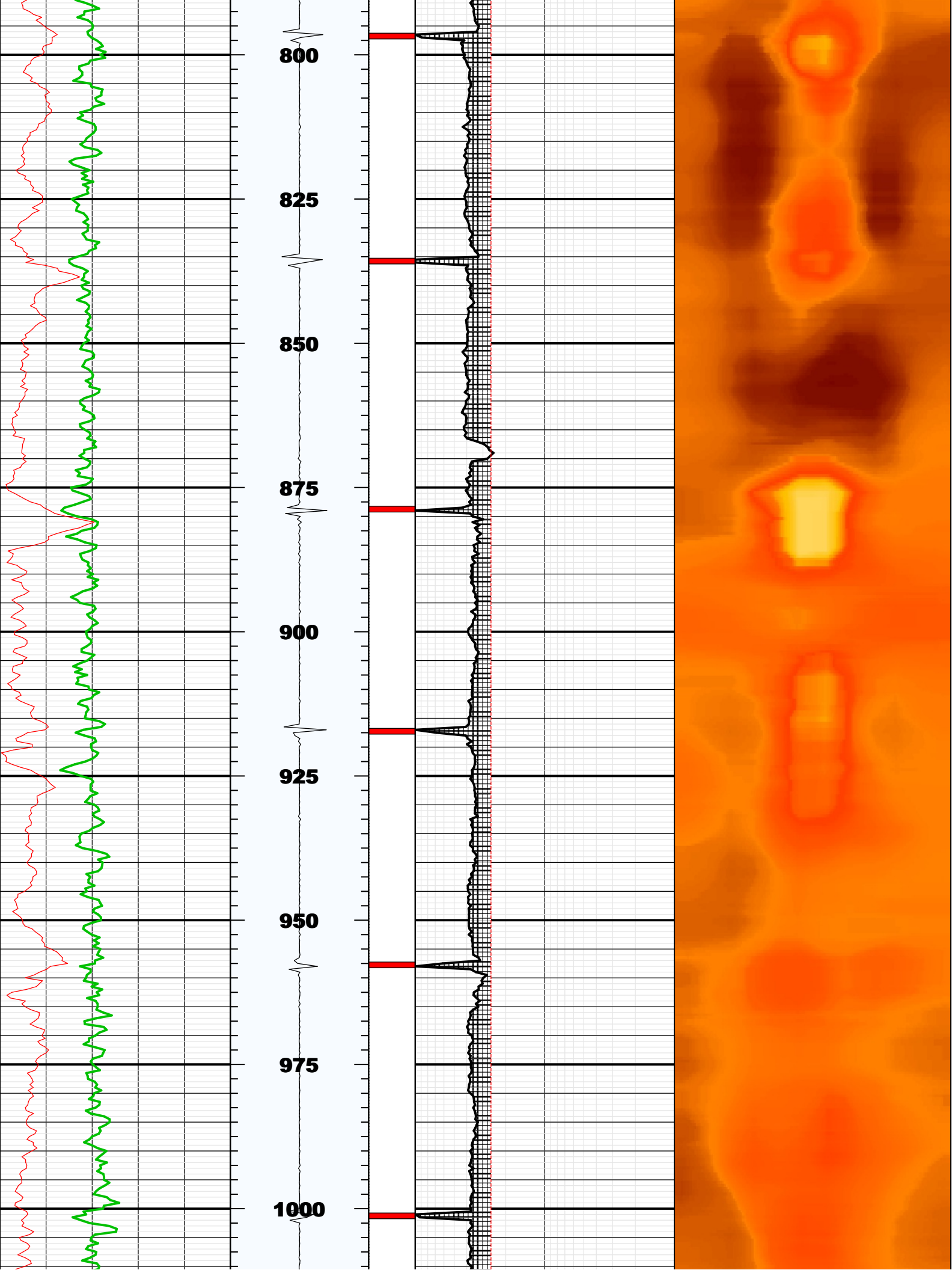
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Well: Wells Ranch State AE30-62-1HNC  
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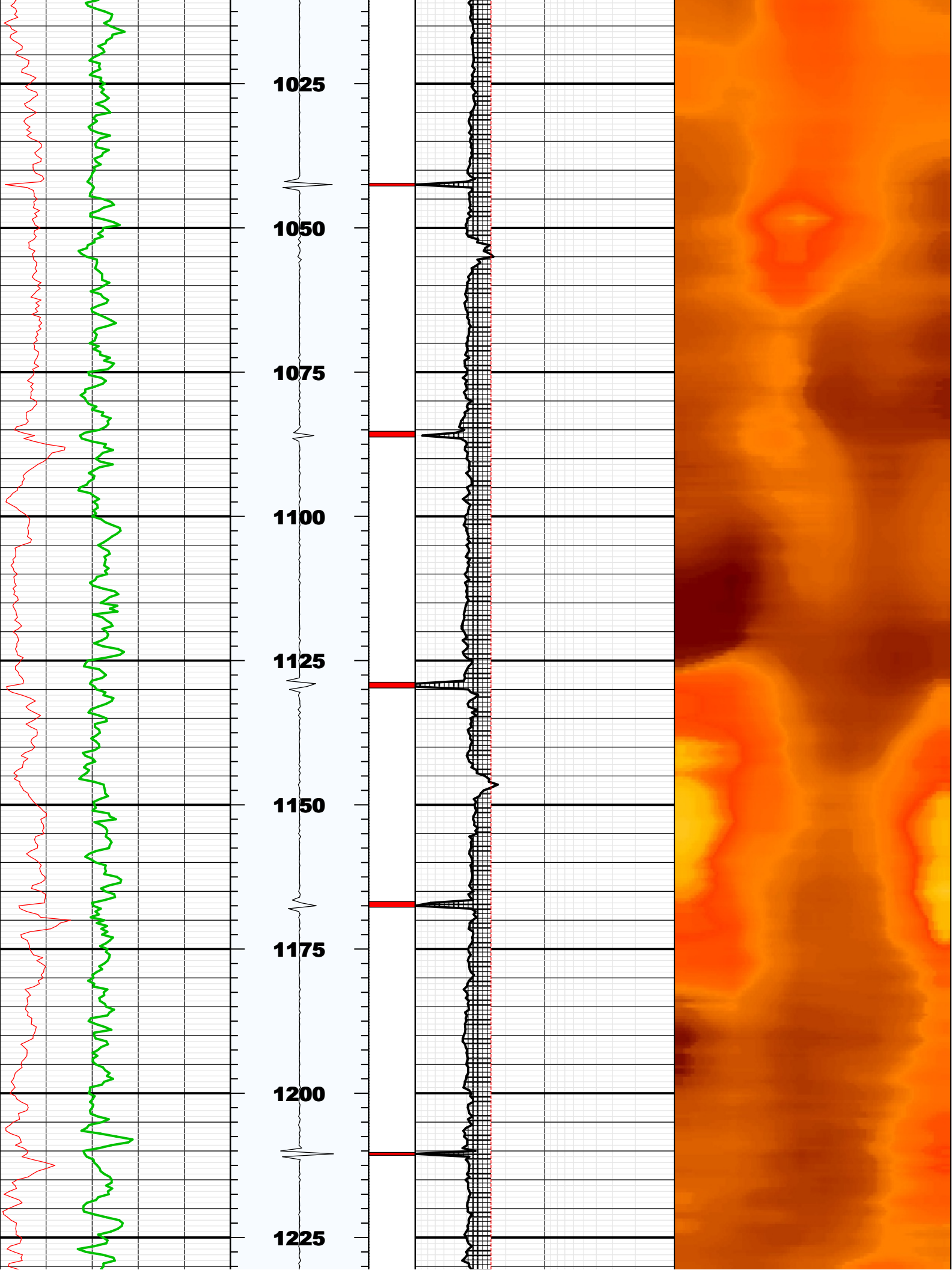




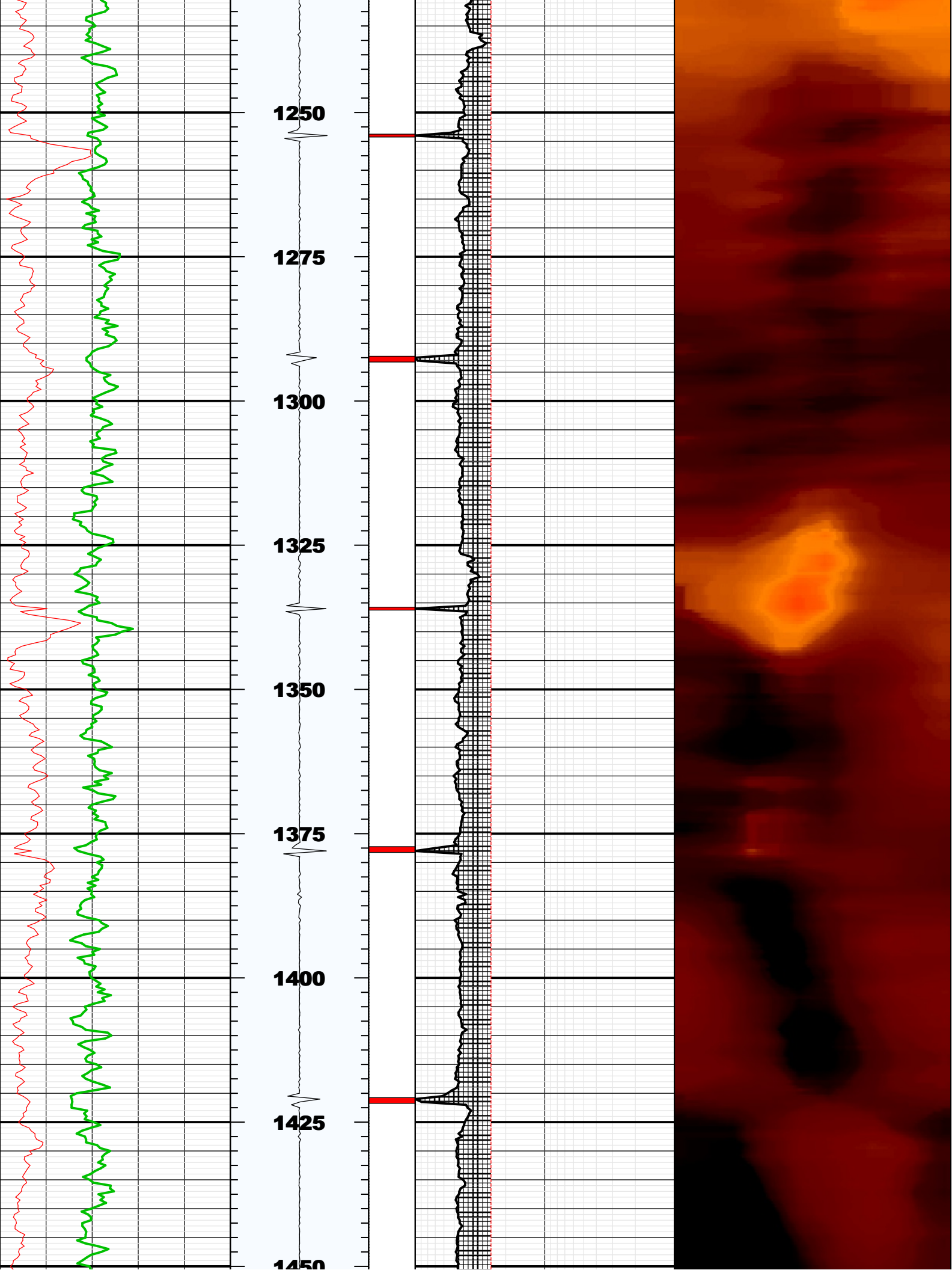


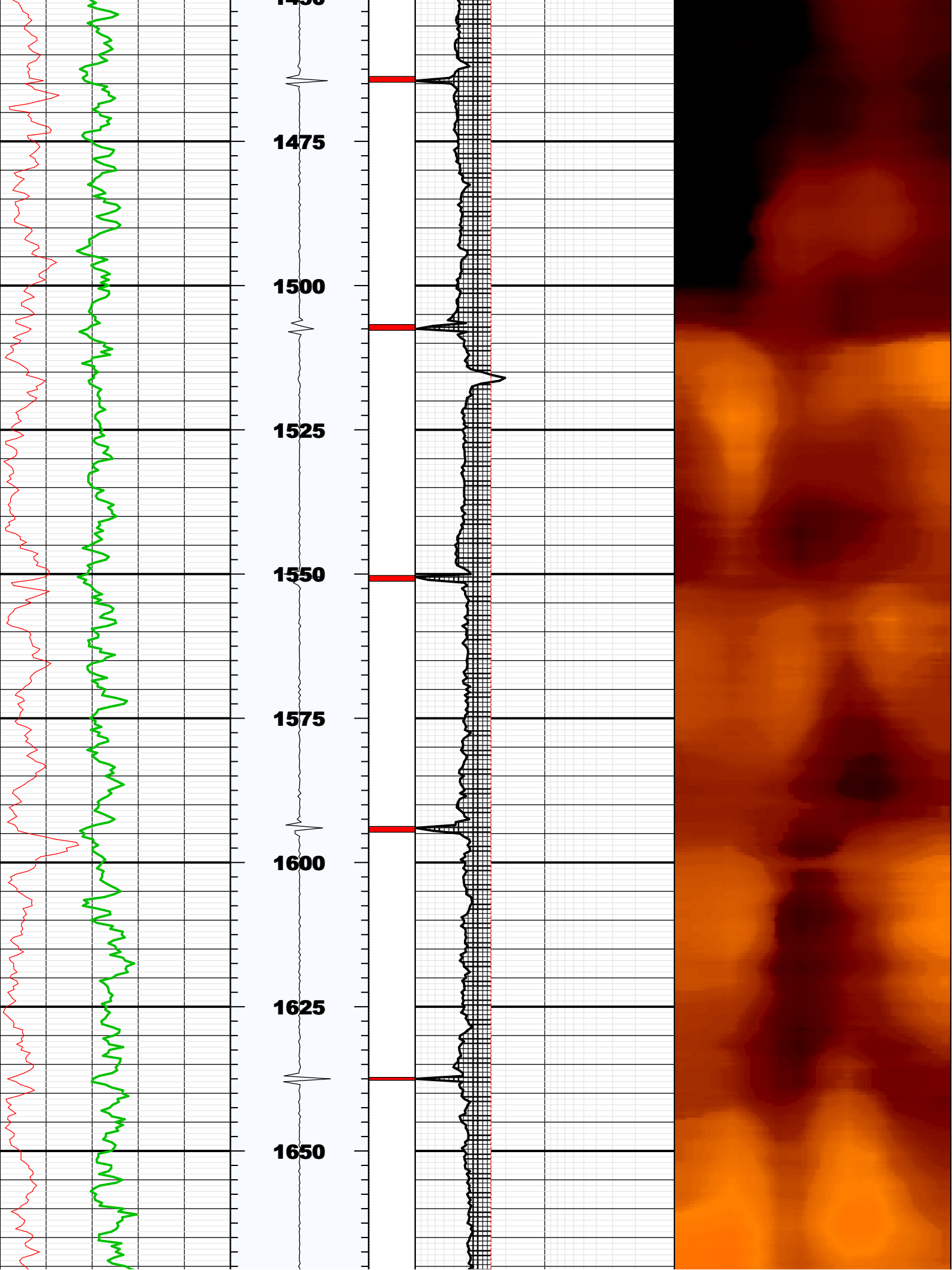


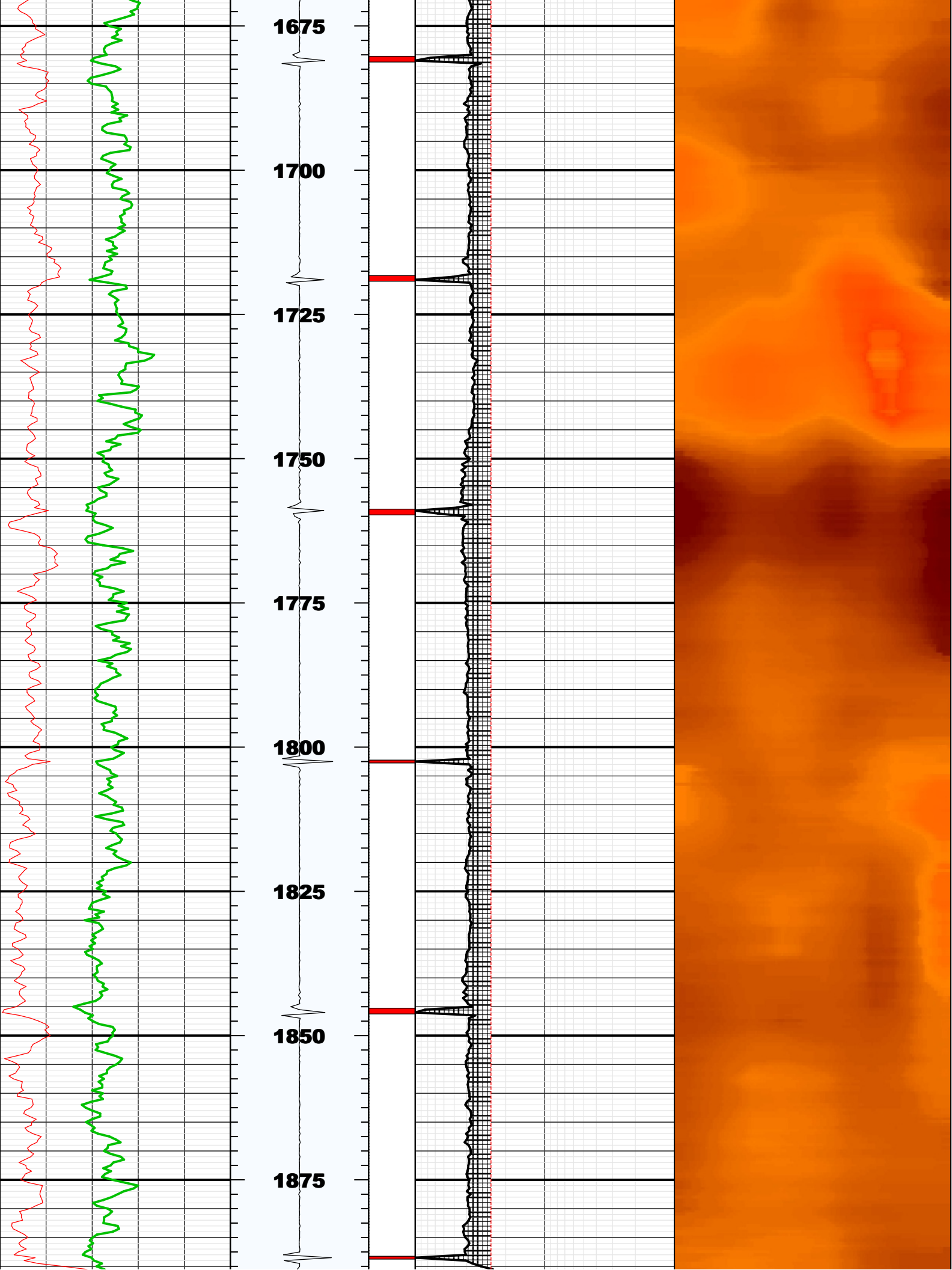


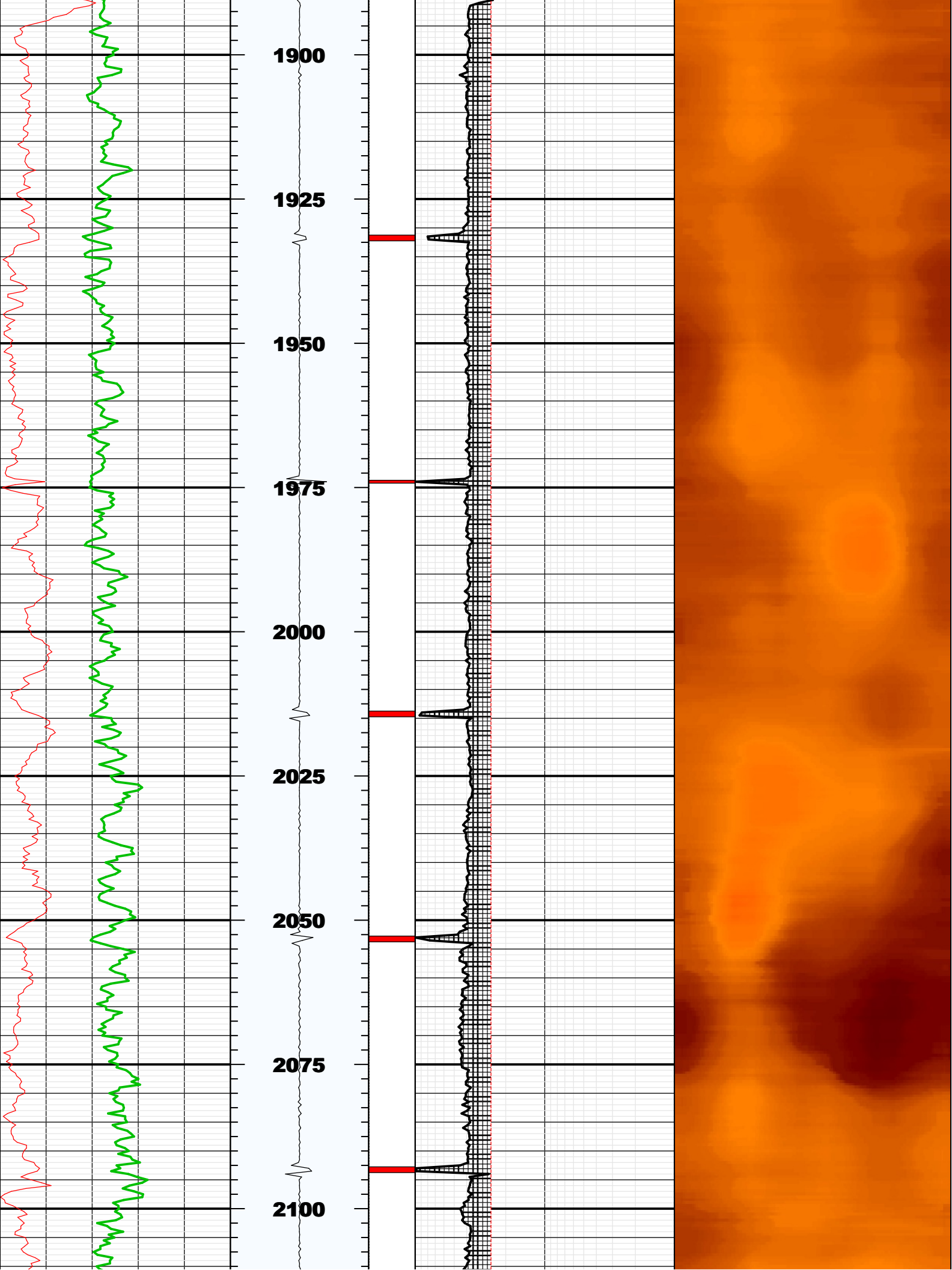




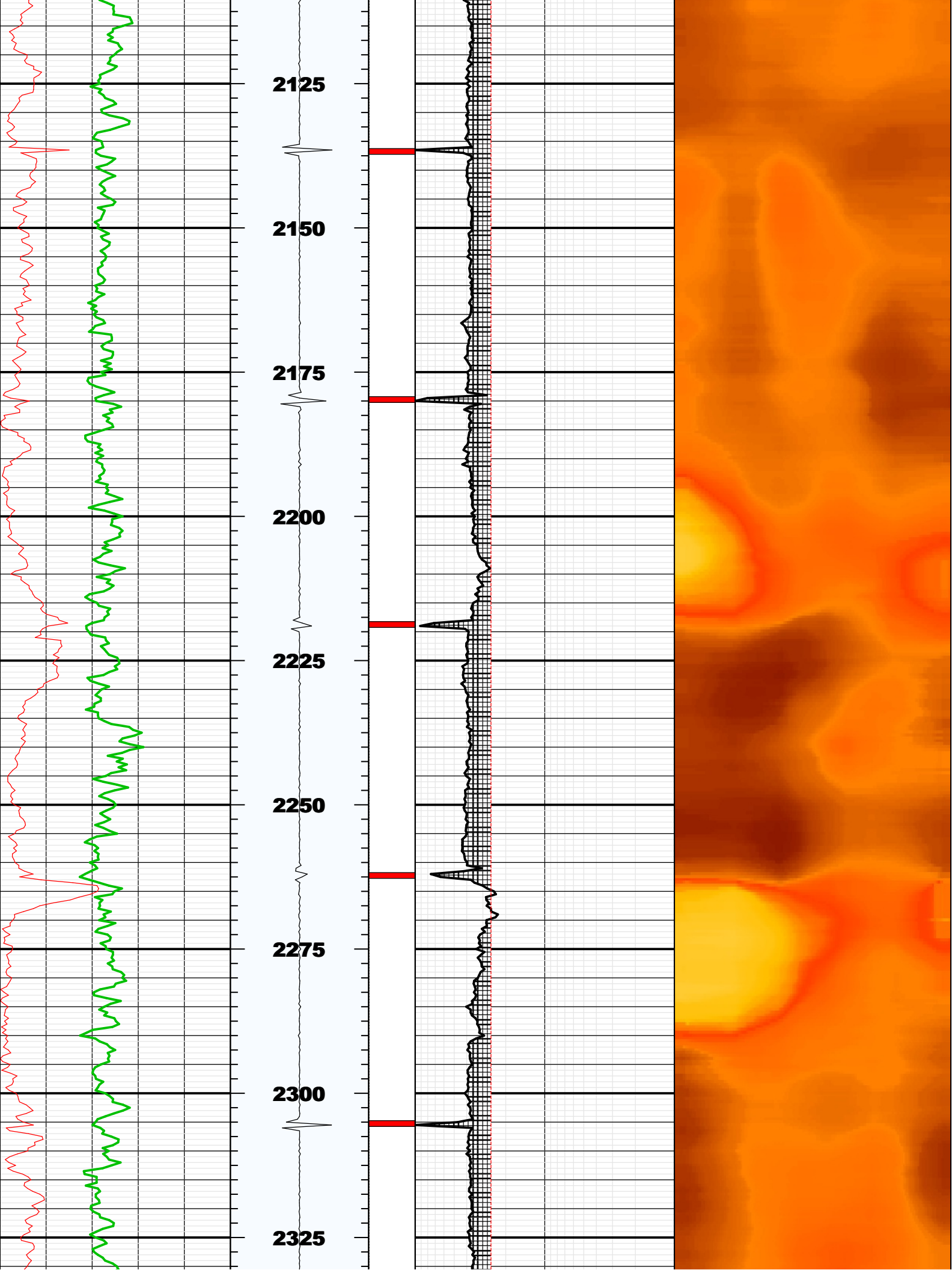


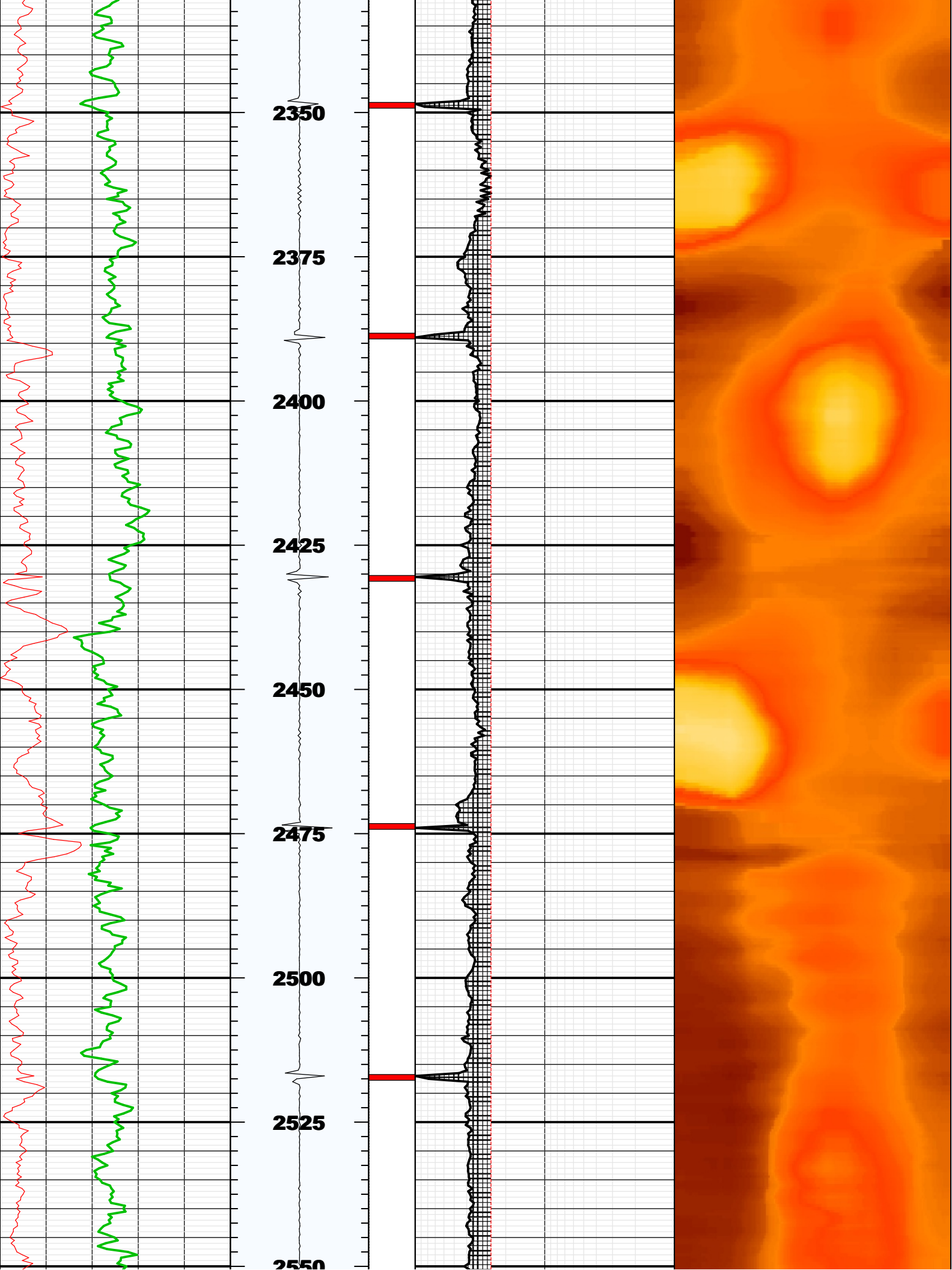


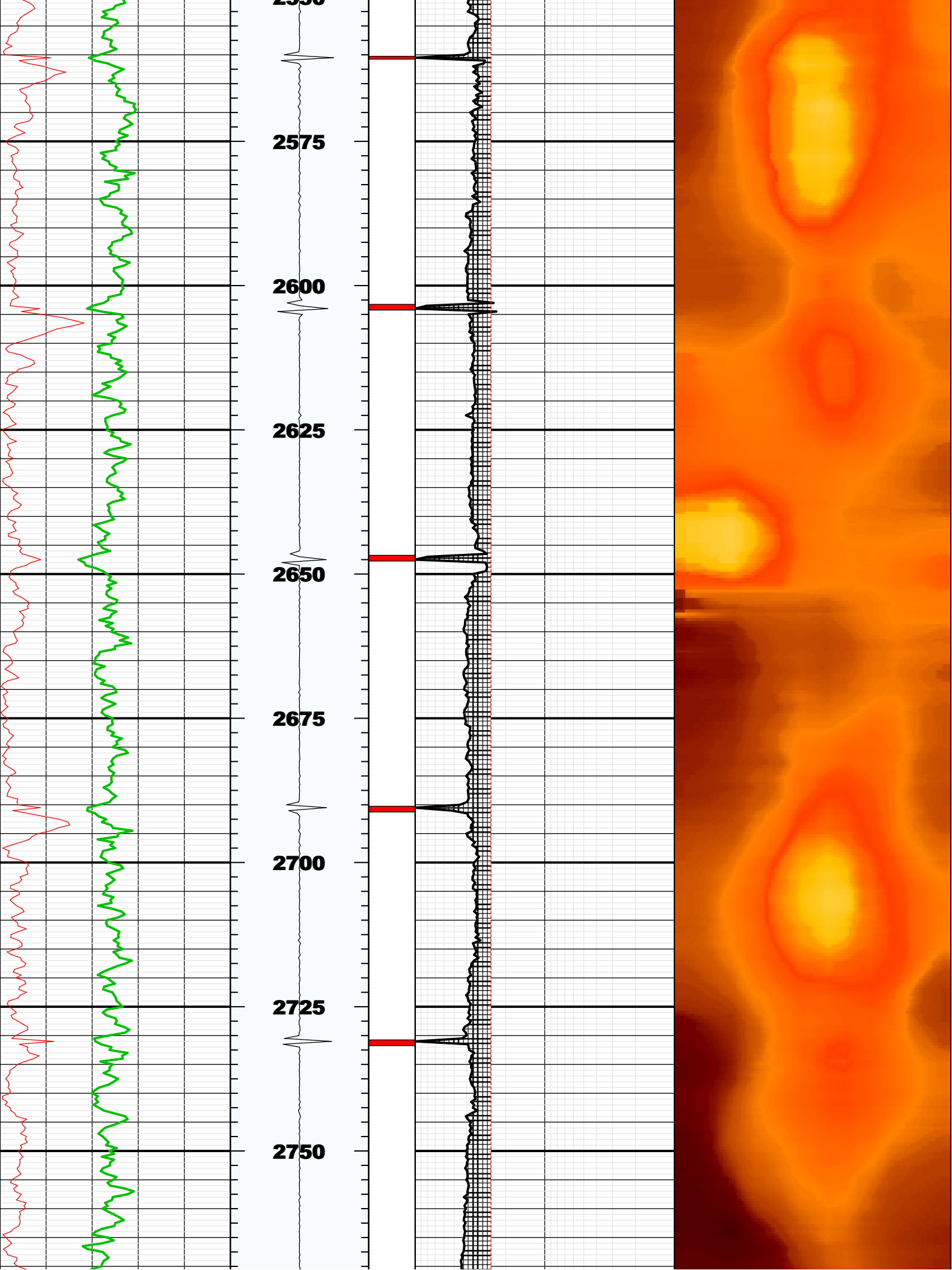




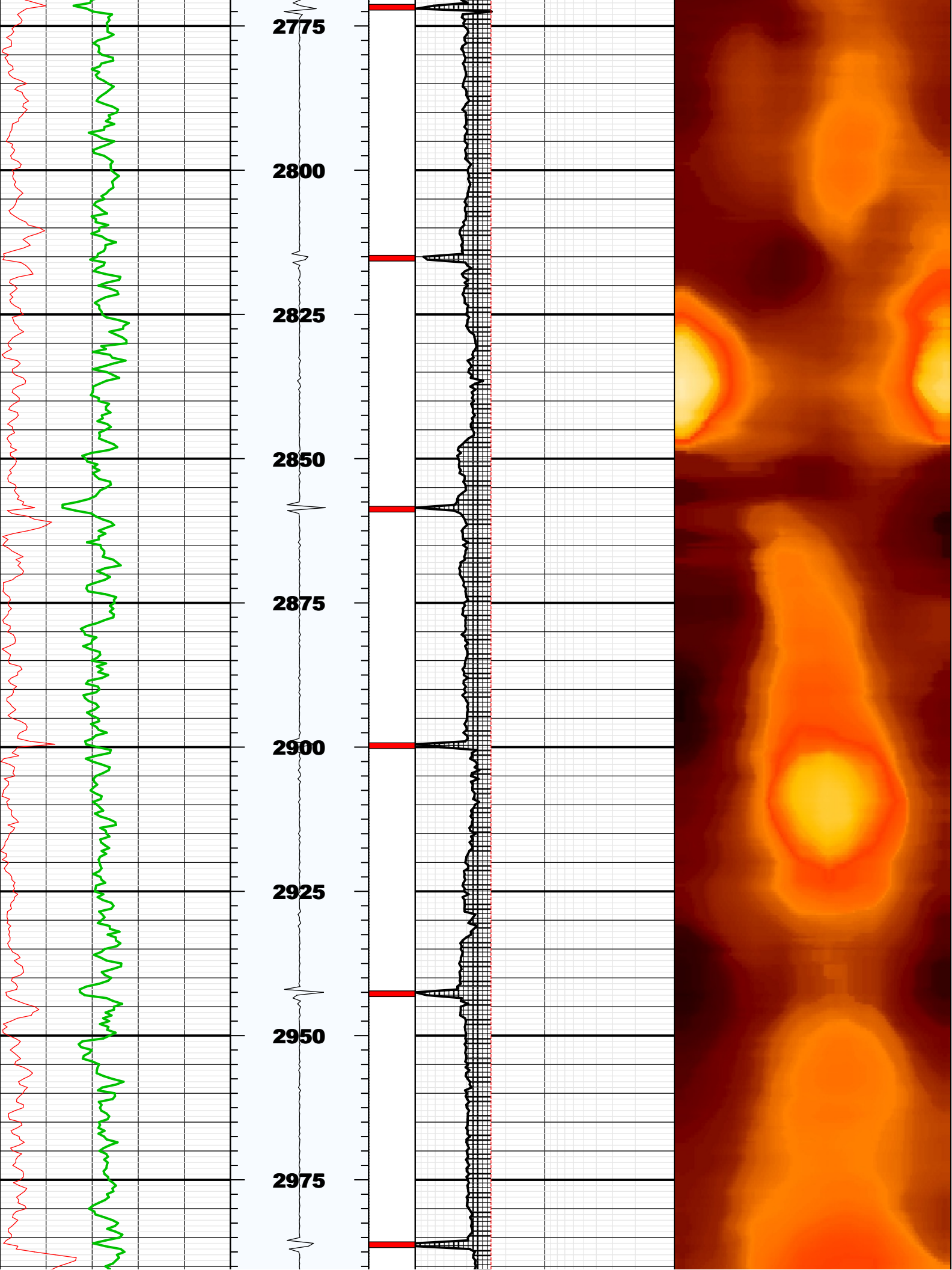


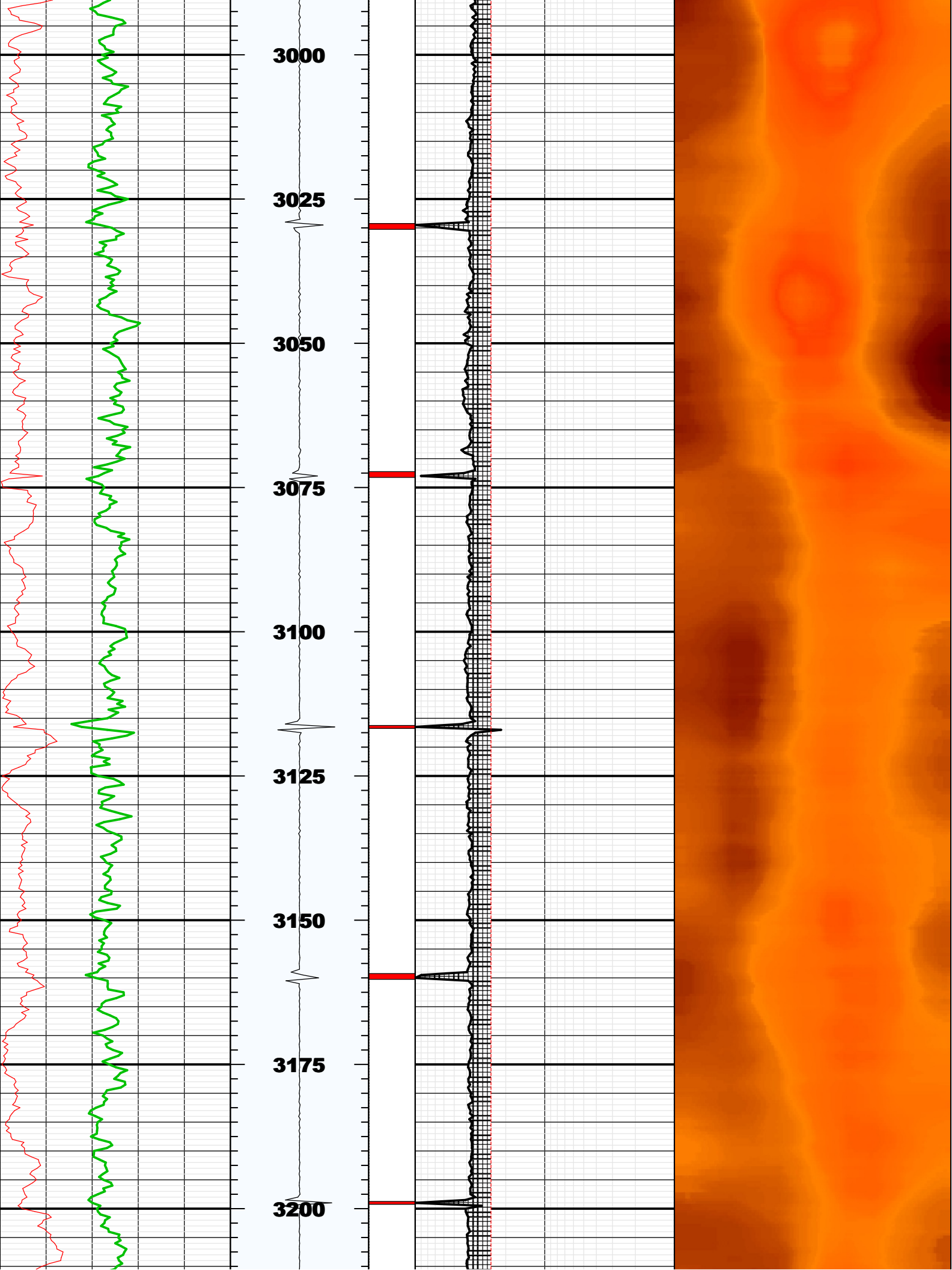


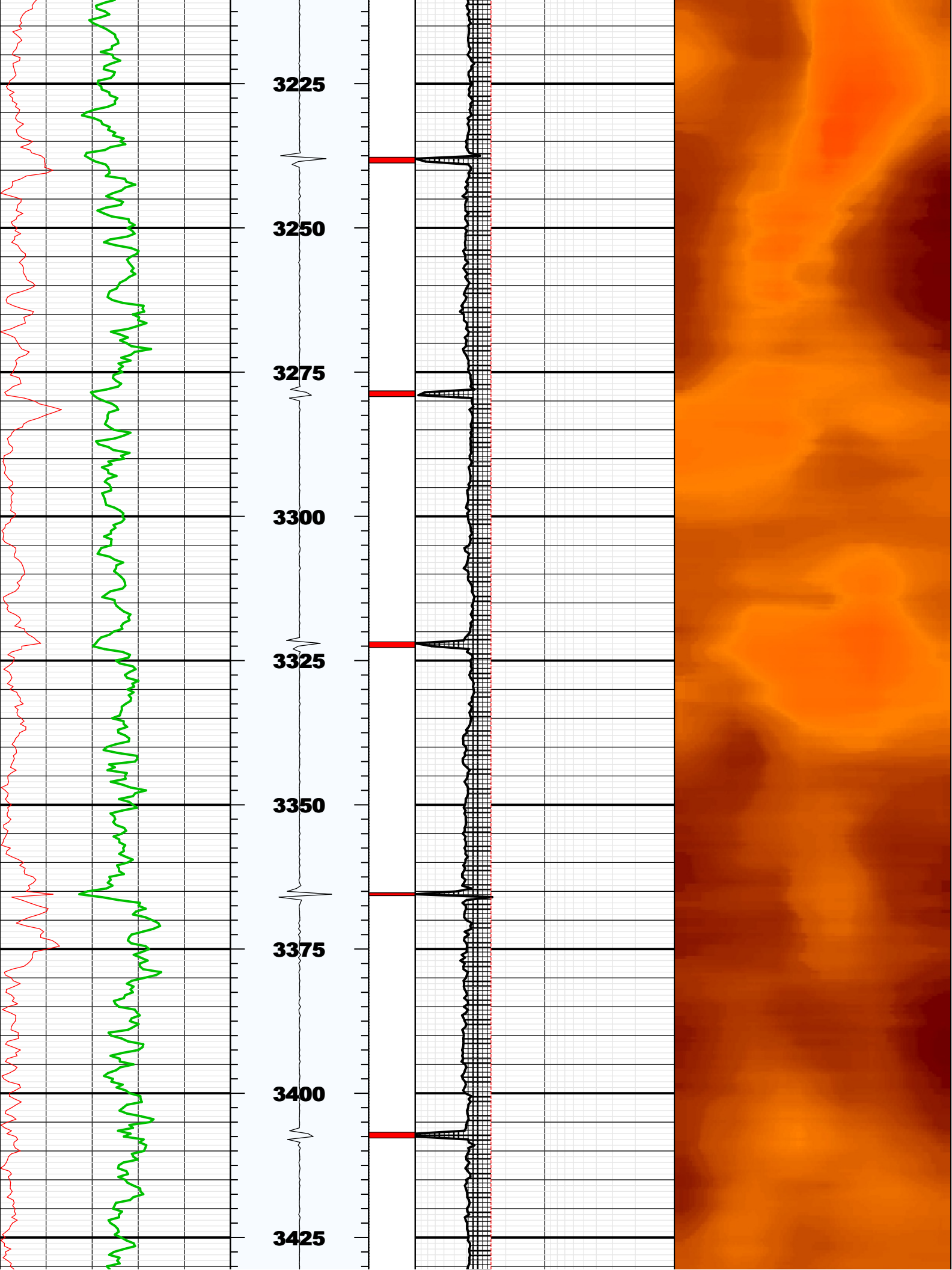


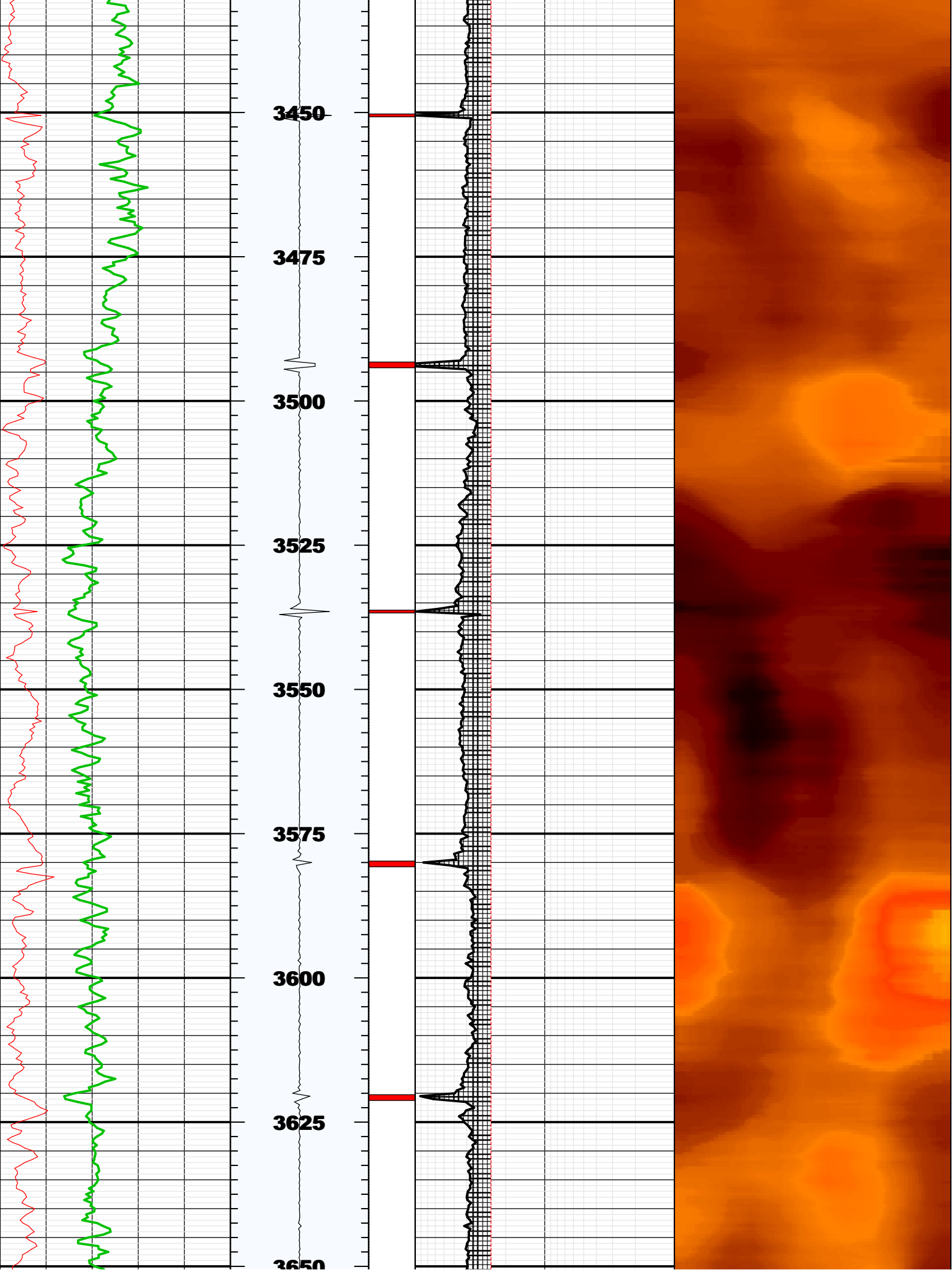




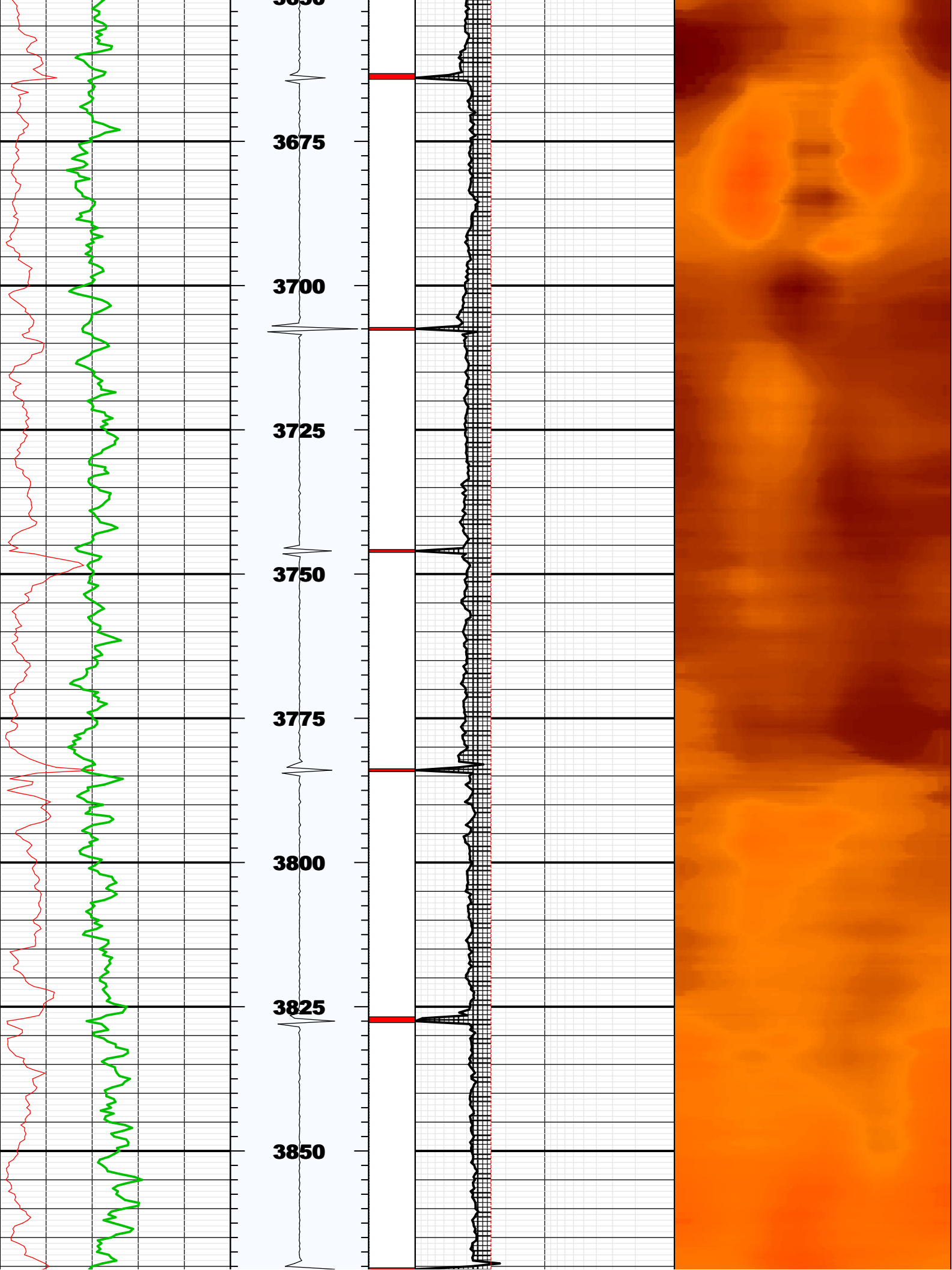


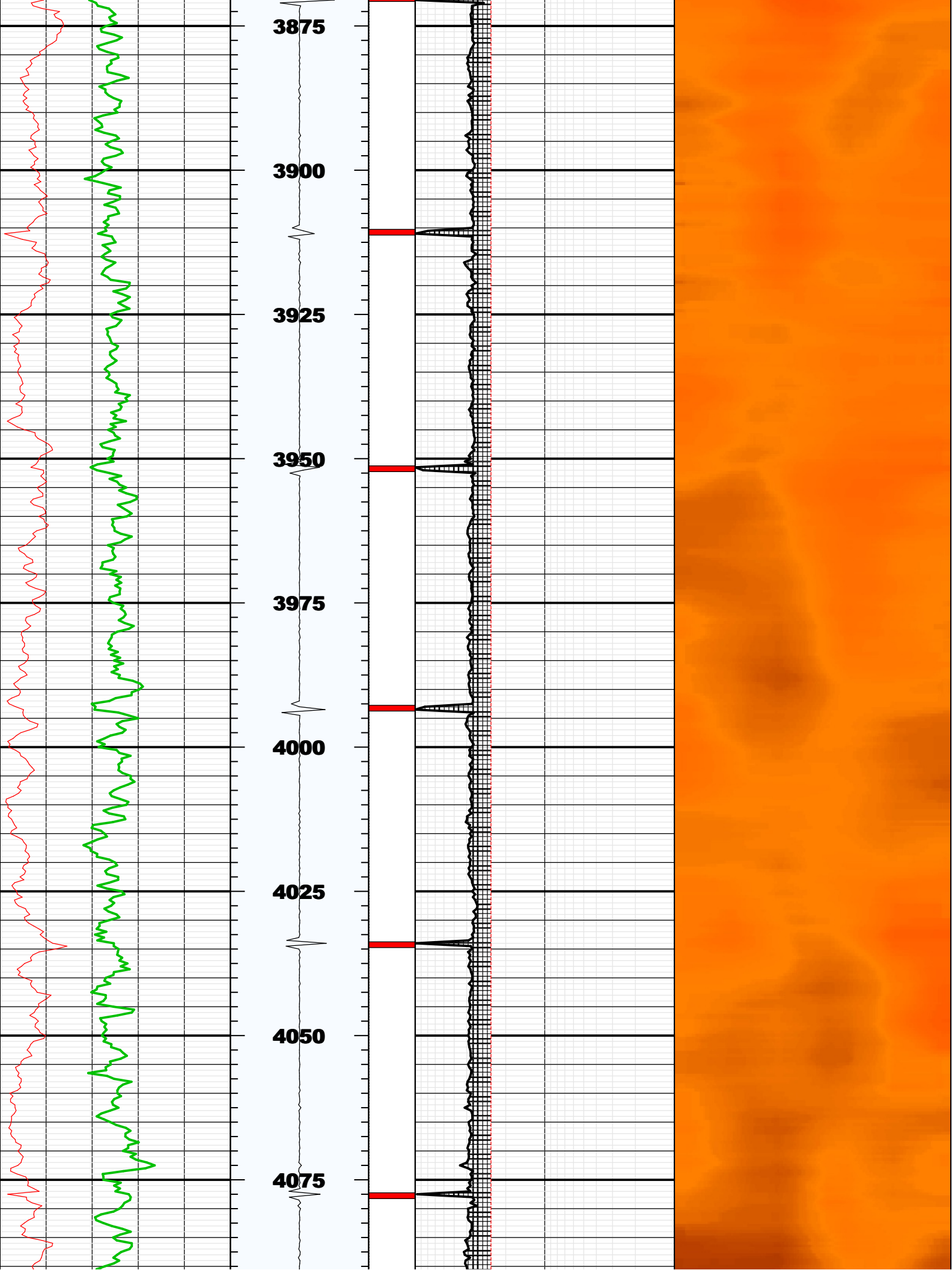


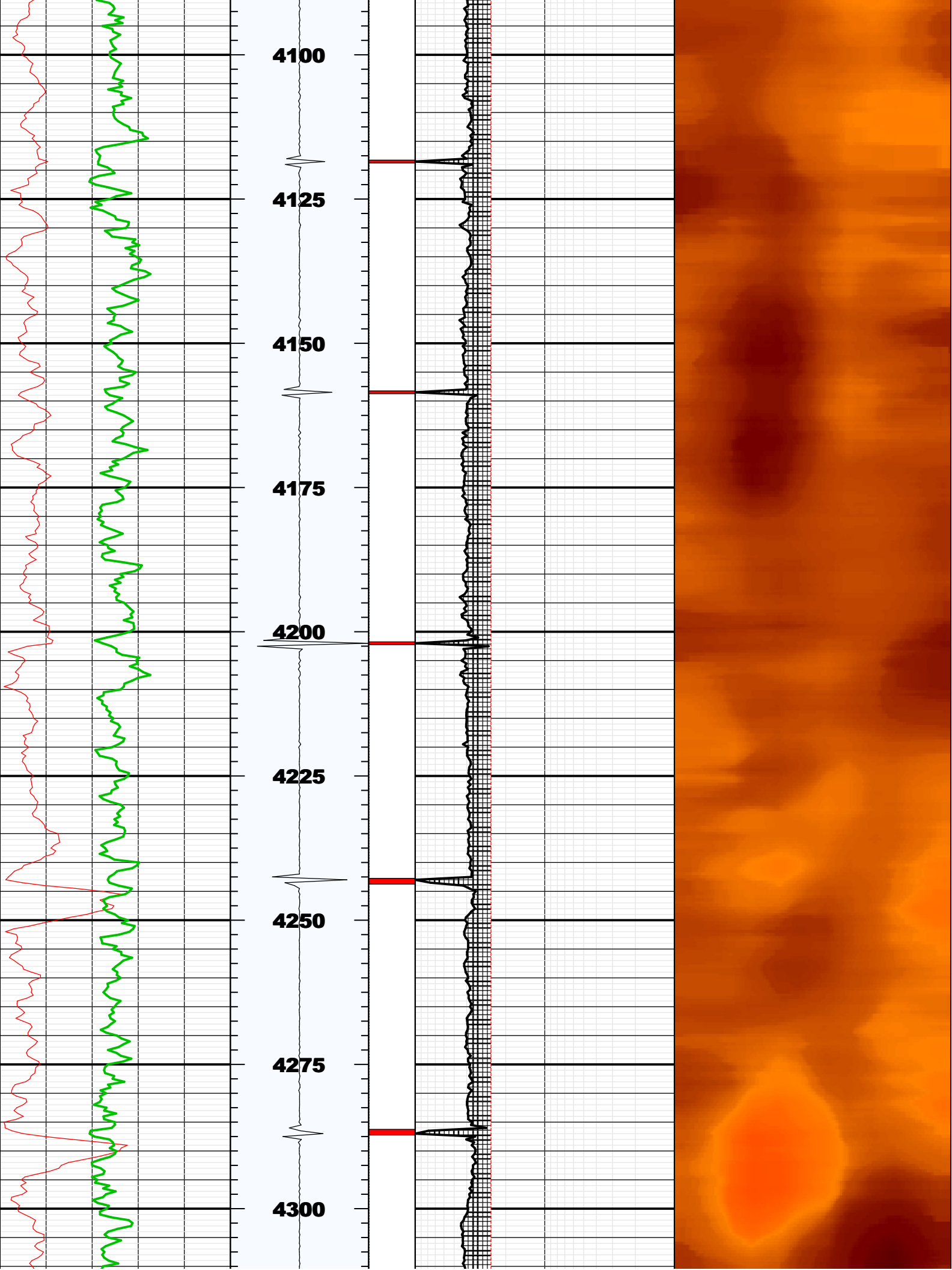




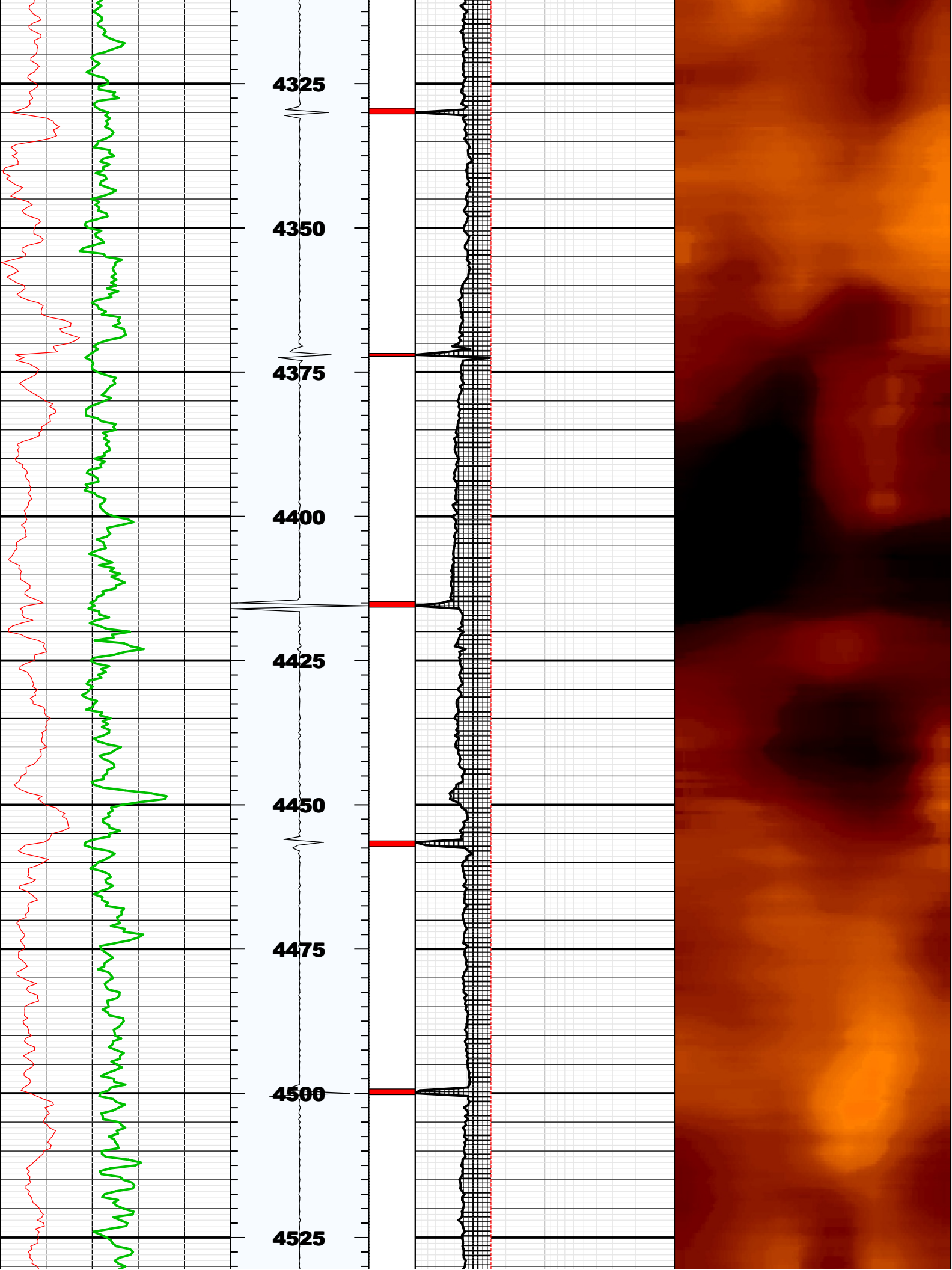


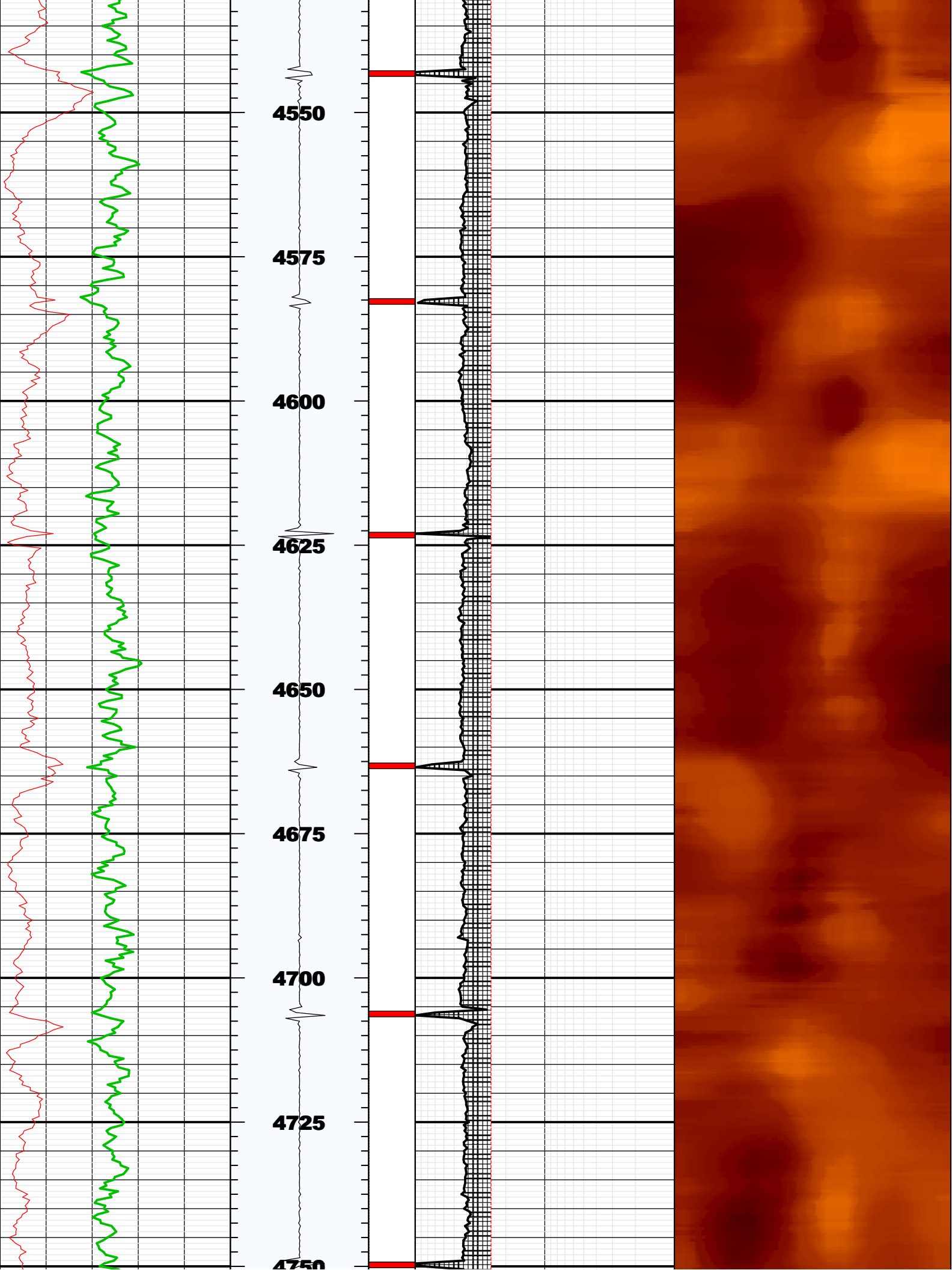


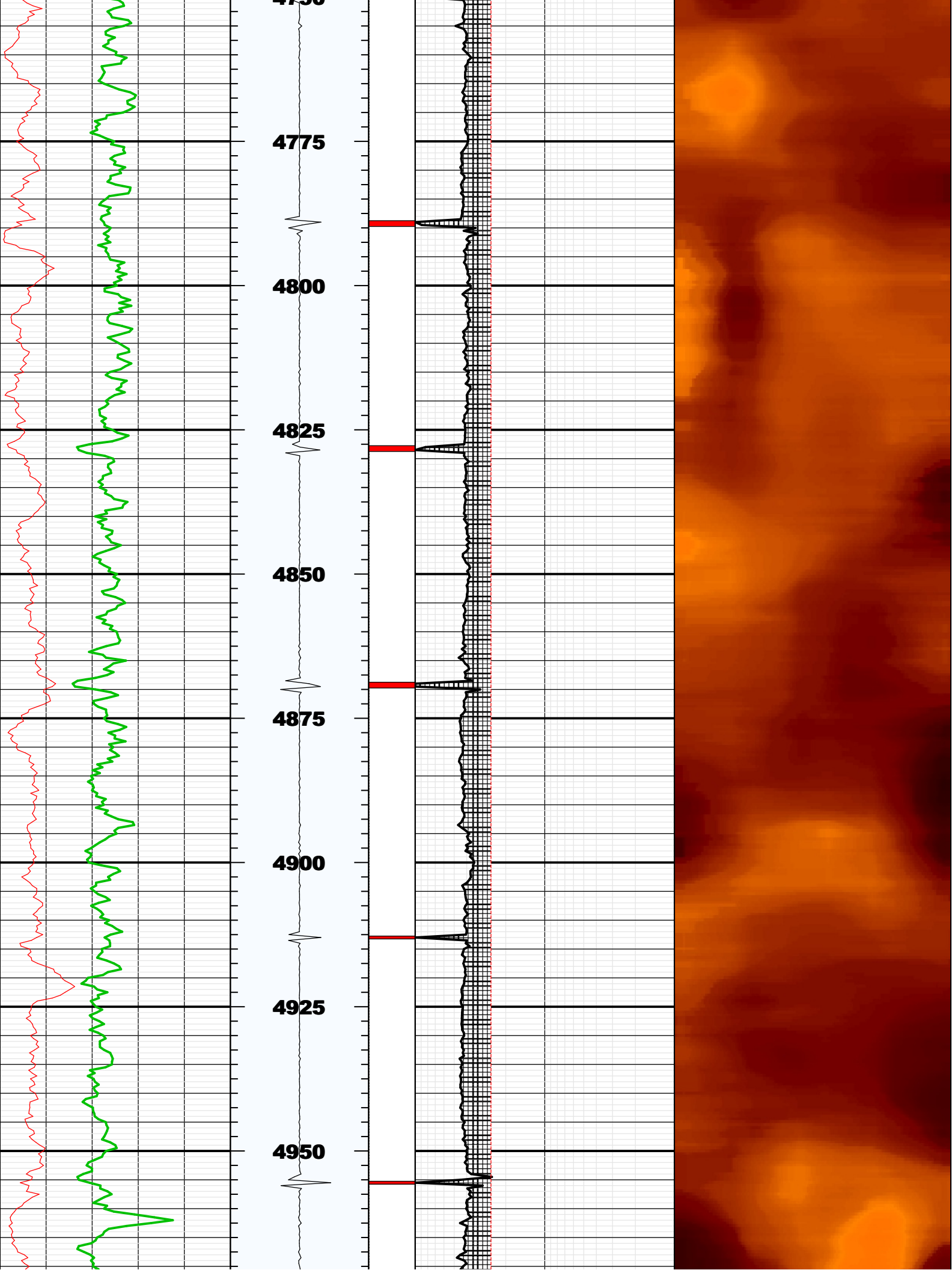


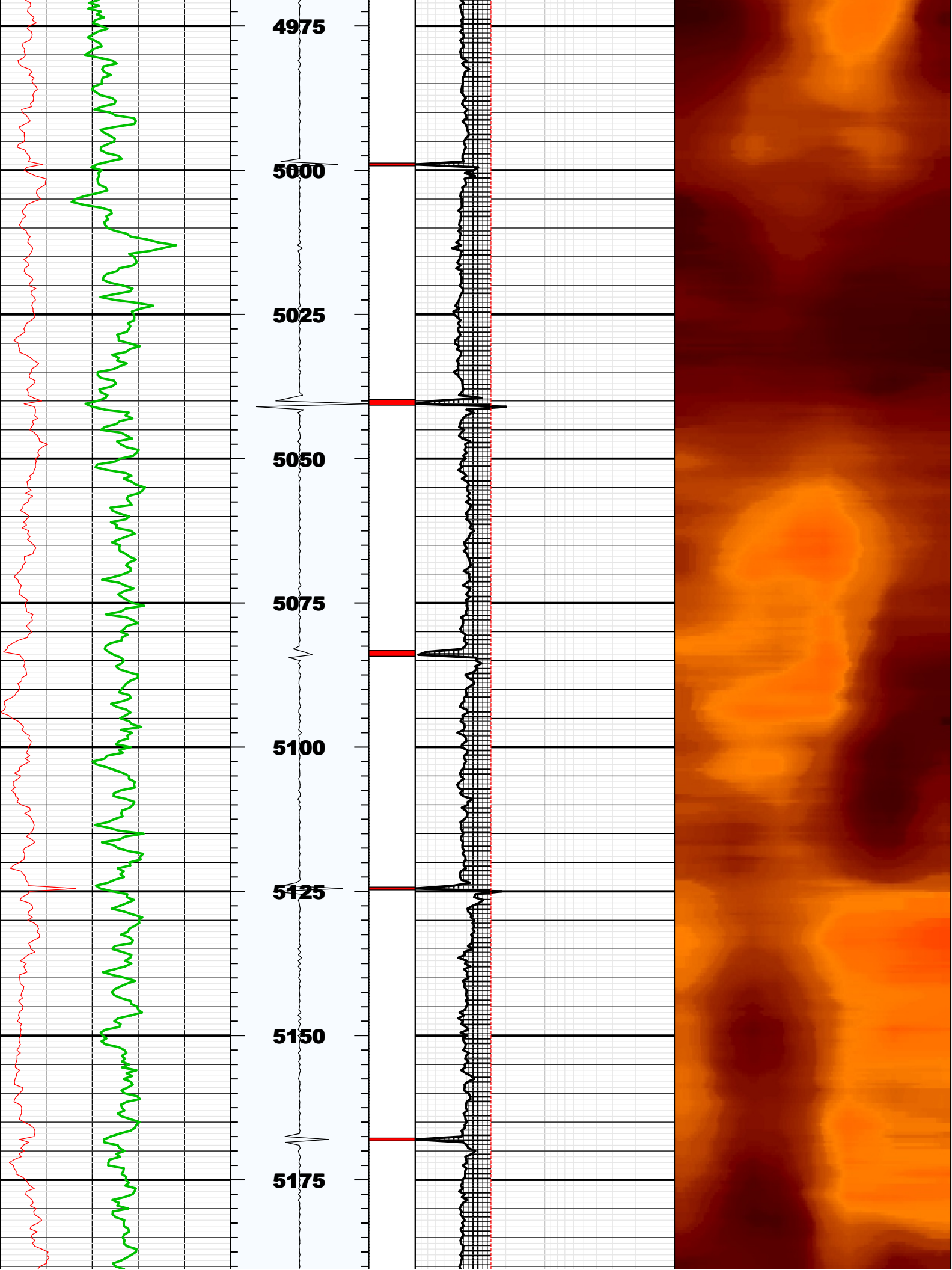




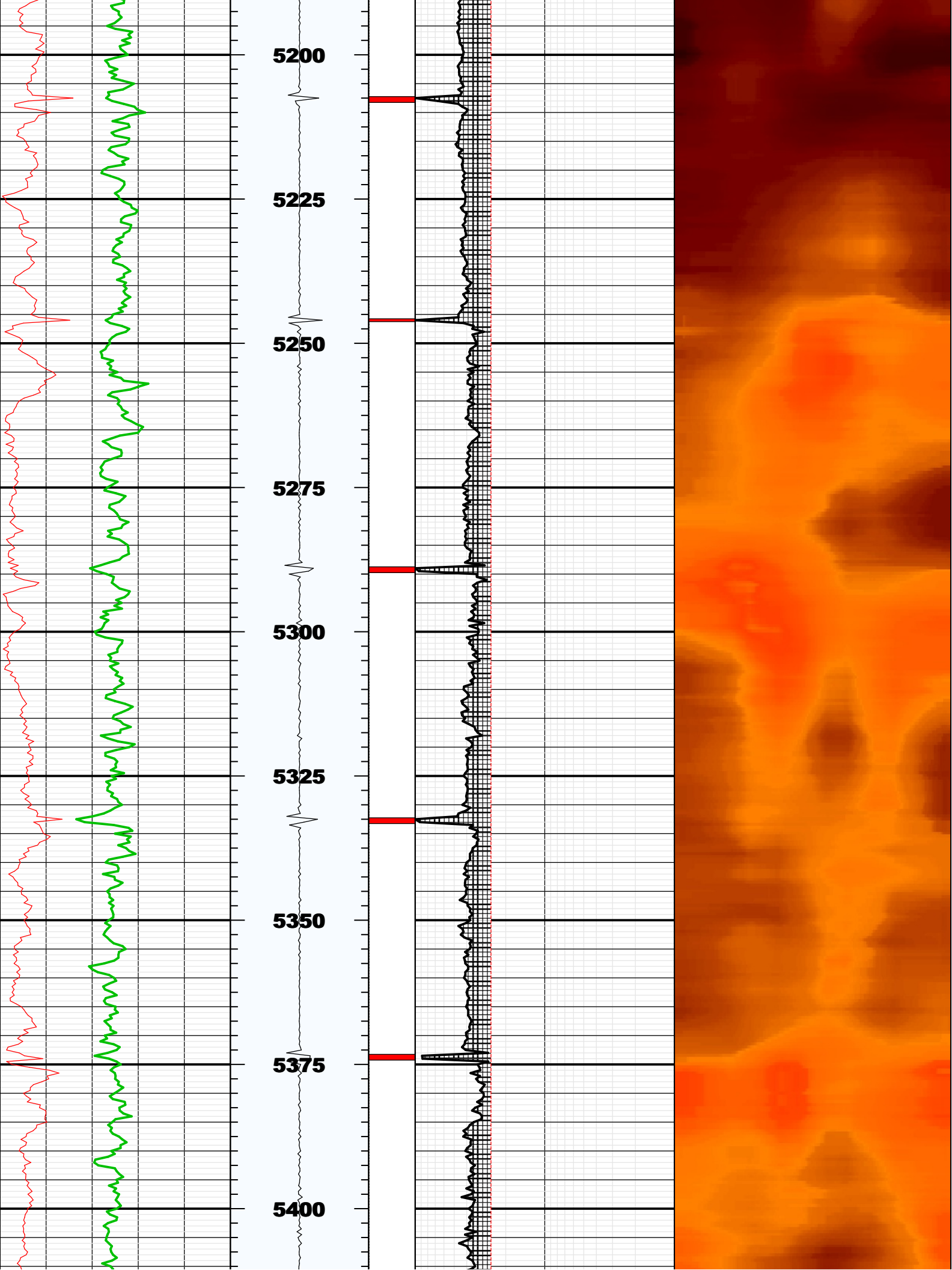


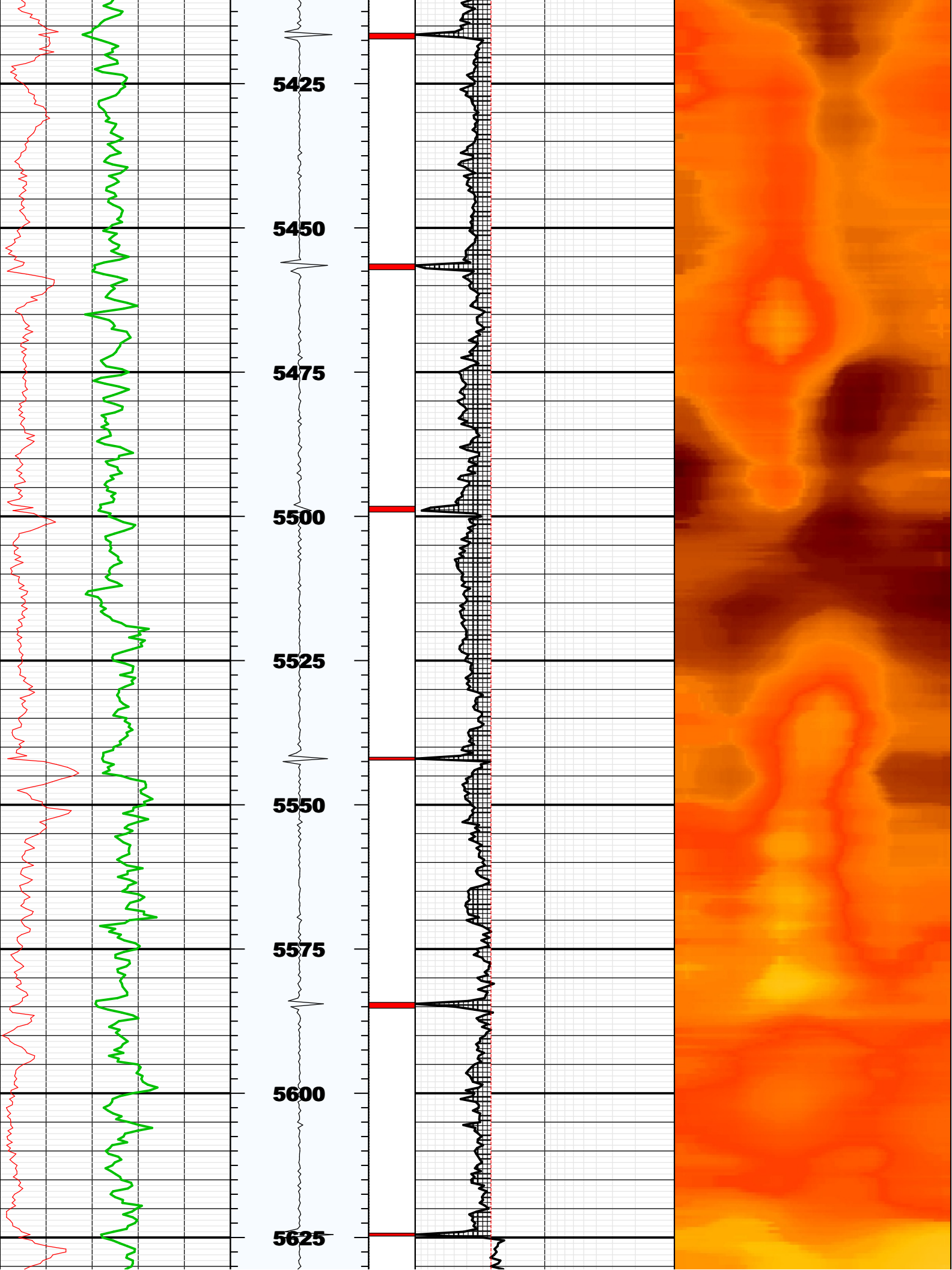


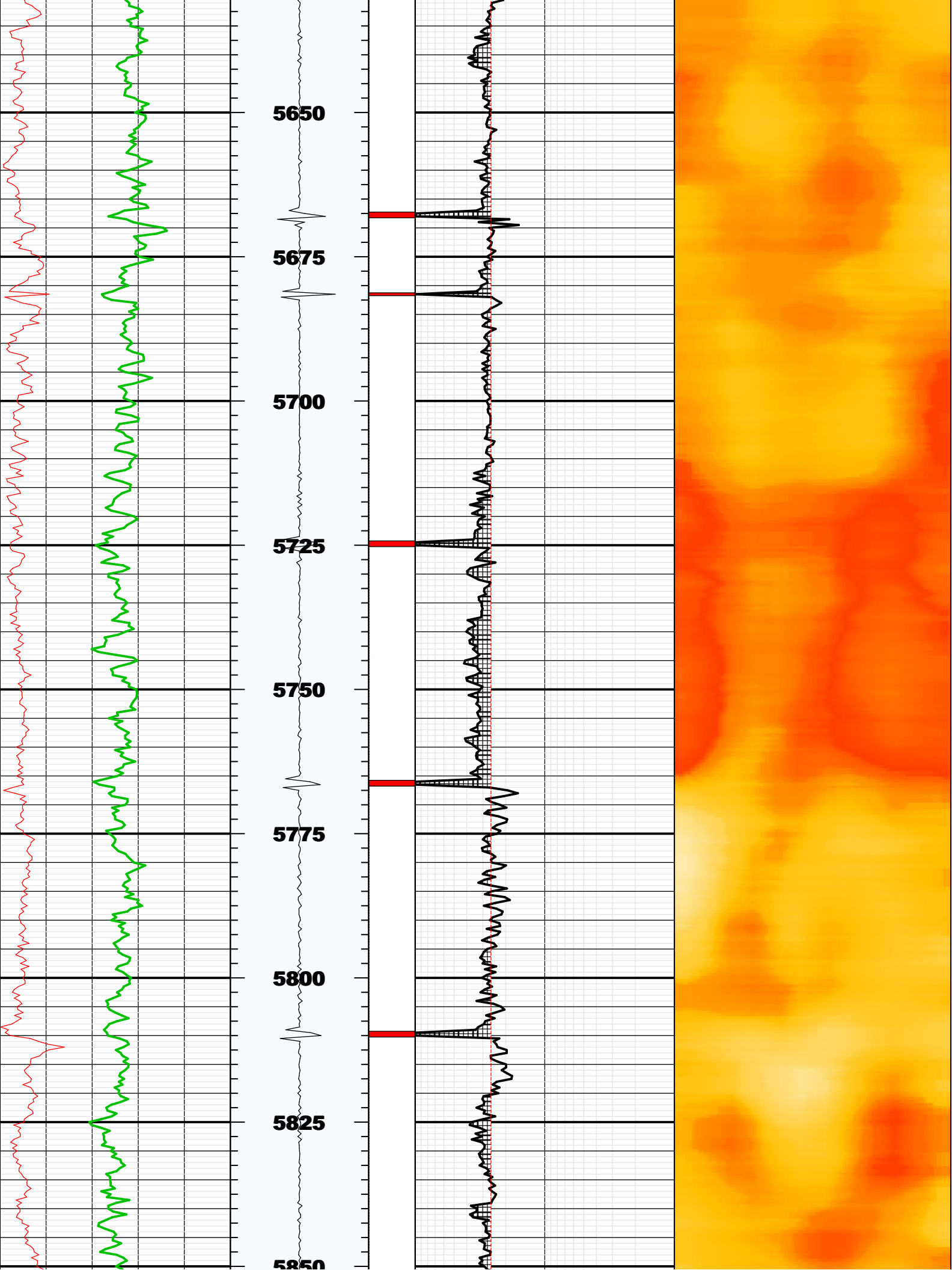




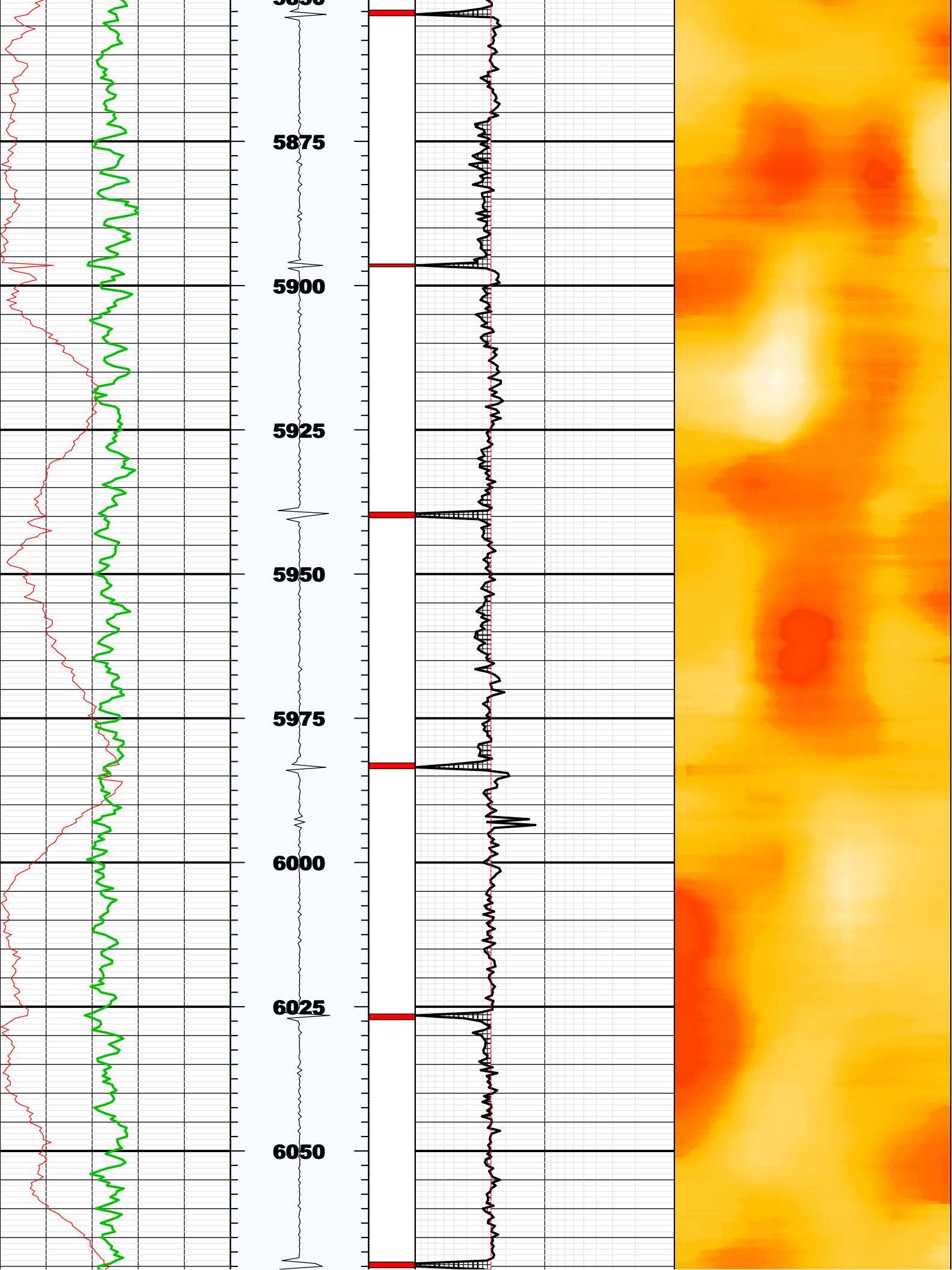


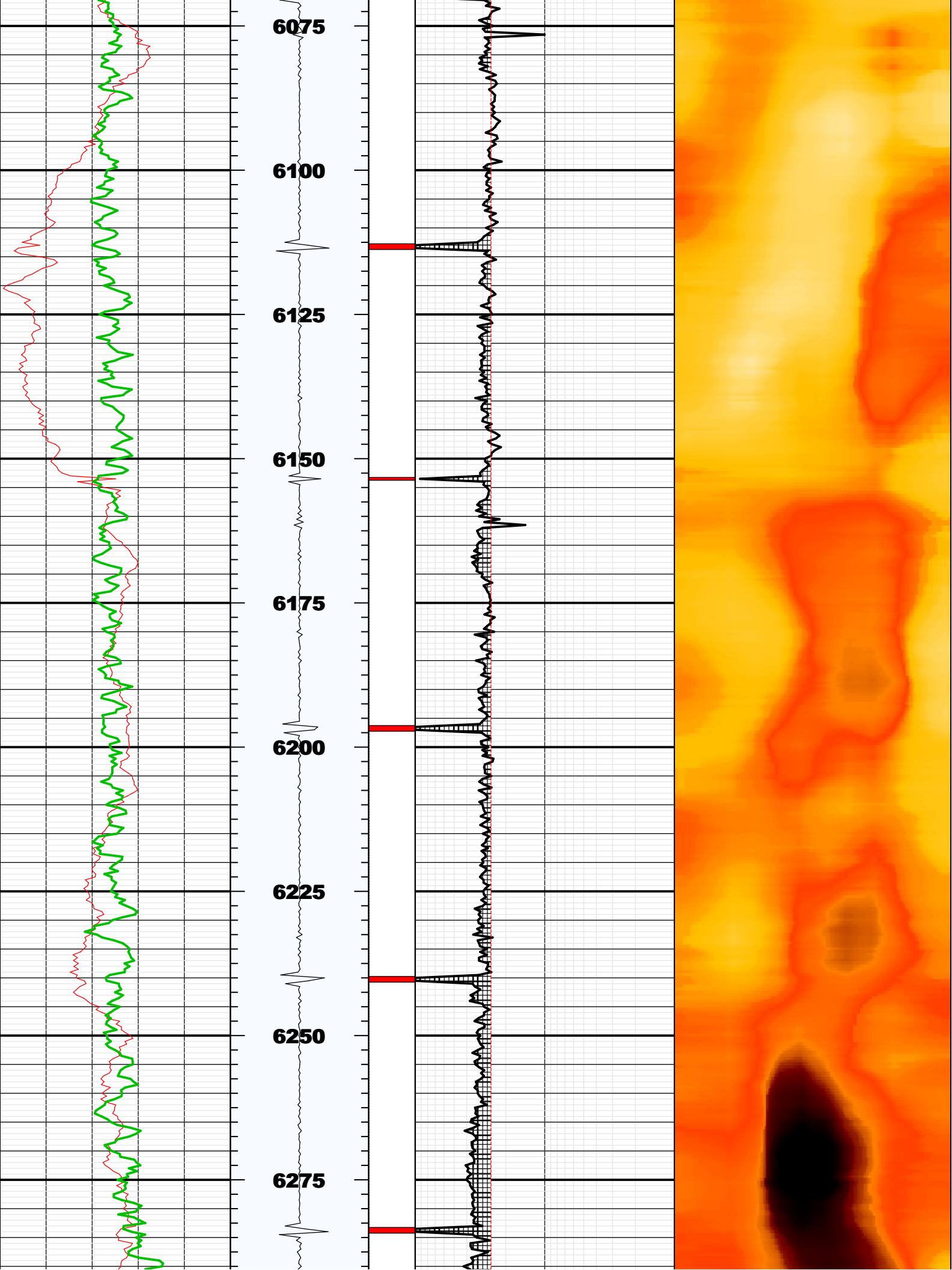


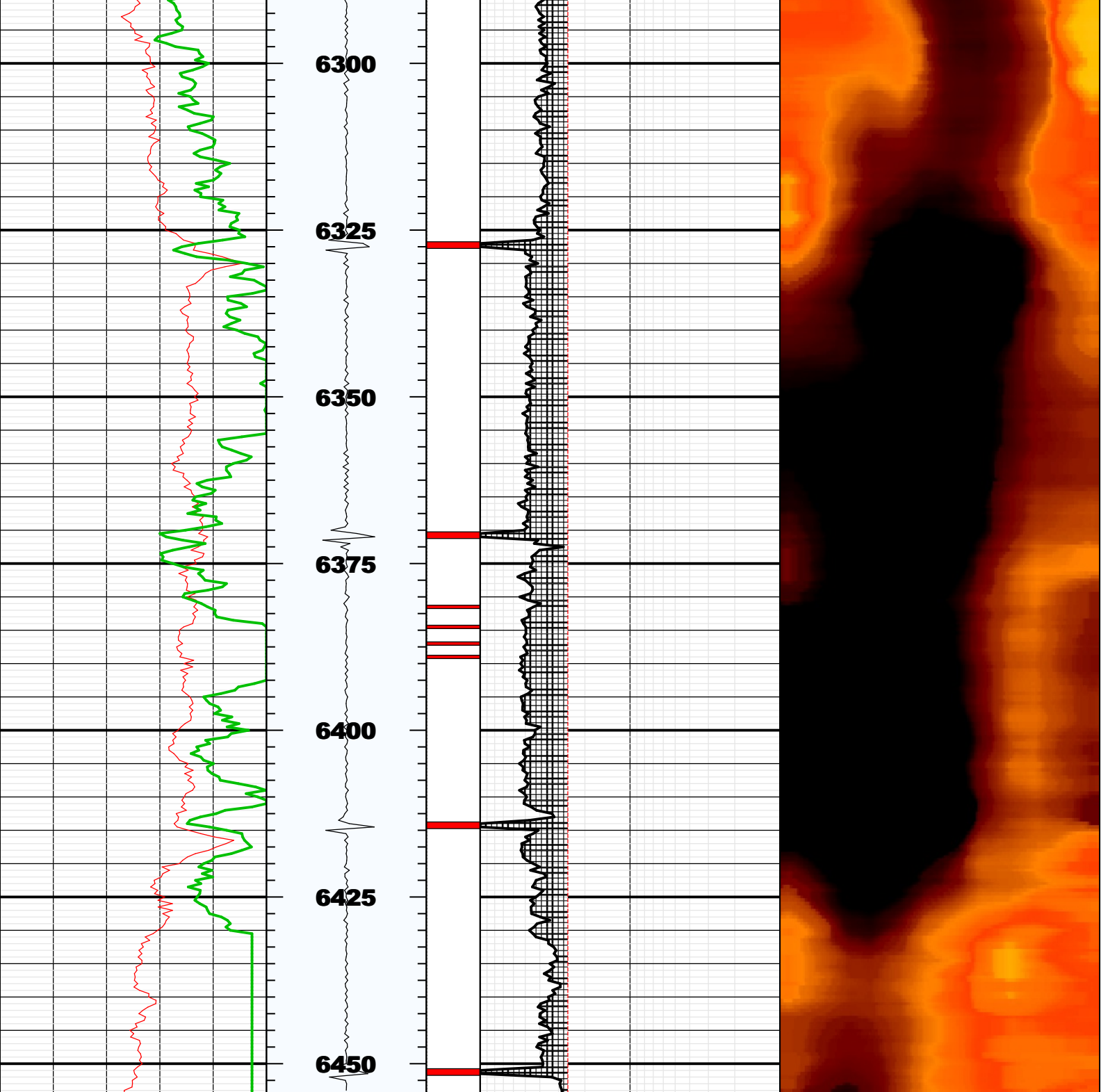








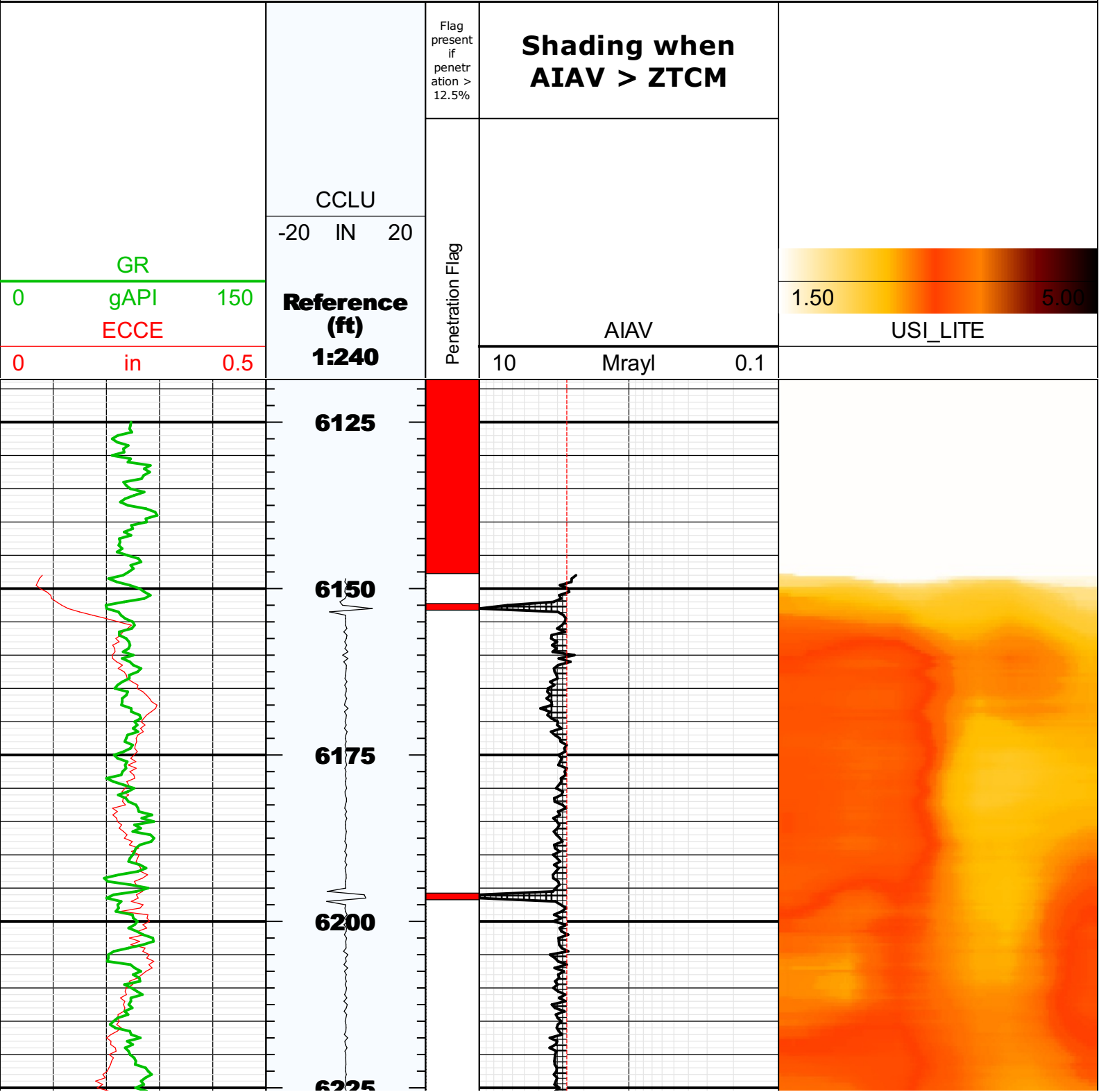




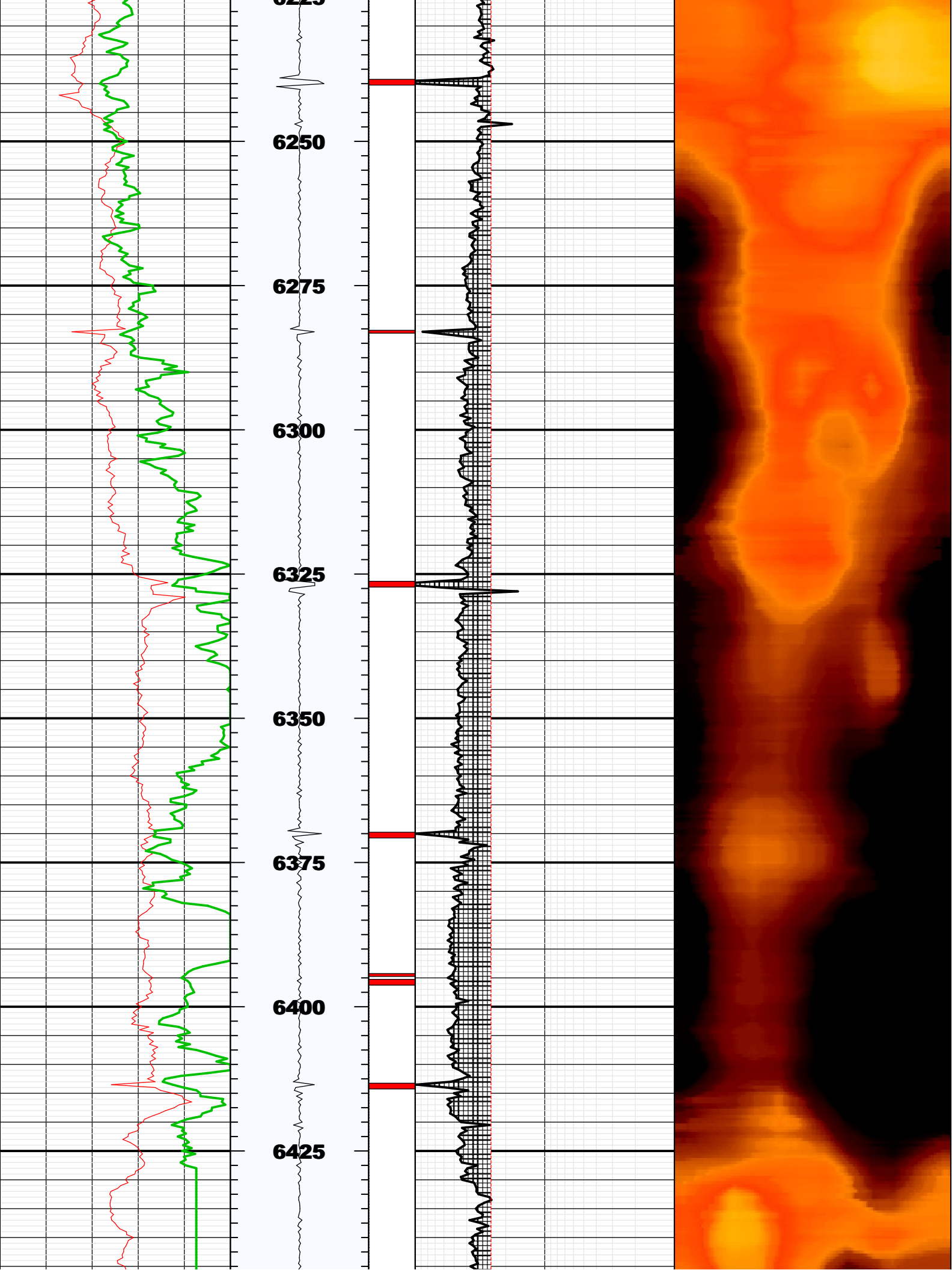
BS	8.75000	IN	Bit Size
CASG	N/A		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID			
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	190.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	55	V	EMEX Voltage
FDII	0.00000	F	FPM Data Interpolation Interval
FSOD	0_OFF		Fluid Slowness Fits Casing Outer Diameter
LOGMODE			
PP			
STEP	-0.5	F	STEP
THDH	130.00000	%	Maximum Search Thickness (percentage of nominal)
THDL	70.00000	%	Minimum Search Thickness (percentage of nominal)
THDP	Fundamental		Thickness Detection Policy
THNO	0.36200	IN	Nominal Thickness of Casing
TMUC	WRM		Type of Mud
U-USIT_DT3P			
UPAT	375K		Emission Pattern
USUB	7INC		USIT Sub Identifier
UWKM	D603010L		Working Mode
VCAS	51.40000	US/F	Ultrasonic Transversal Velocity in Casing
WINB	33.86500	US	Window Begin Time
WINE	73.86501	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.76000	MRAY	Acoustic Impedance of Mud
ZTCM	2.60000	MRAY	Acoustic Impedance Threshold for Cement
ZTGS	0.30000	MRAY	Acoustic Impedance Threshold for Gas
WLEN	22.50350	US	T <sup>^</sup> 3 Processing Length

Repeat Pass

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## Fluid Properties Used for Main Pass

