

Company: Noble Energy Inc

Well: Reliance E23-79HN
Field: Wattenberg
County: Weld State: Colorado

County: Weld		Field: Wattenberg		Location: SWSW Sec. 14 T6N R65W		Well: Reliance E23-79HN		Company: Noble Energy Inc	
USI-LITE		LOCATION		Permanent Datum: Log Measured From: Drilling Measured From:		GL KB KB		Elev: K.B. 4753.0 F G.L. 4737.0 F D.F. 4752.0 F	
Logging Date	13-Aug-2014	API Serial No. 05-123-38868-0000	Section	Township 6N	Range 65W				
Run Number	ONE								
Depth Driller	11604.0 F								
Schlumberger Depth	11604.0 F								
Bottom Log Interval	6893.0 F								
Top Log Interval	0.0 F								
Casing Fluid Level	0.0 F								
Salinity									
Density	8.40 LB/G								
Fluid Level	0.0 F								
BIT/CASING/TUBING STRING									
Bit Size	8.750 IN								
From	-999.2 F								
To	11604.0 F								
Casing Size	7.00 IN								
Weight	26.00 LB/F								
Grade	P110								
From	0.0 F								
To	7363.8 F								
Max Recorded Temp	230.0								
Logger on bottom (date)	13-Aug-2014								
Location	Fort Morgan								
Recorded By	Nolan Welsh								
Witnessed By	Bill Mansfield								

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: 1109 Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: Length: 12000.00000

DISCLAIMER

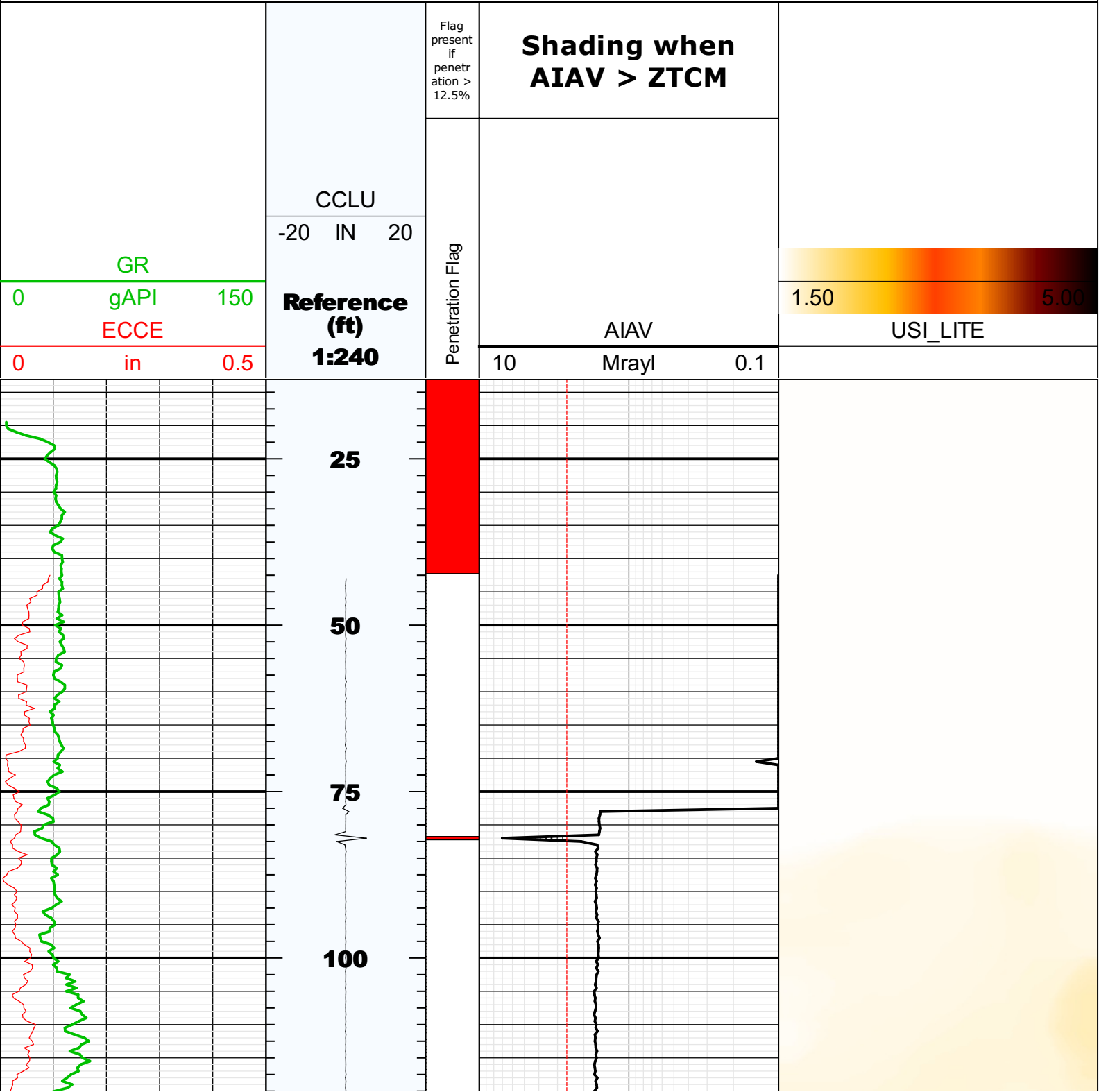
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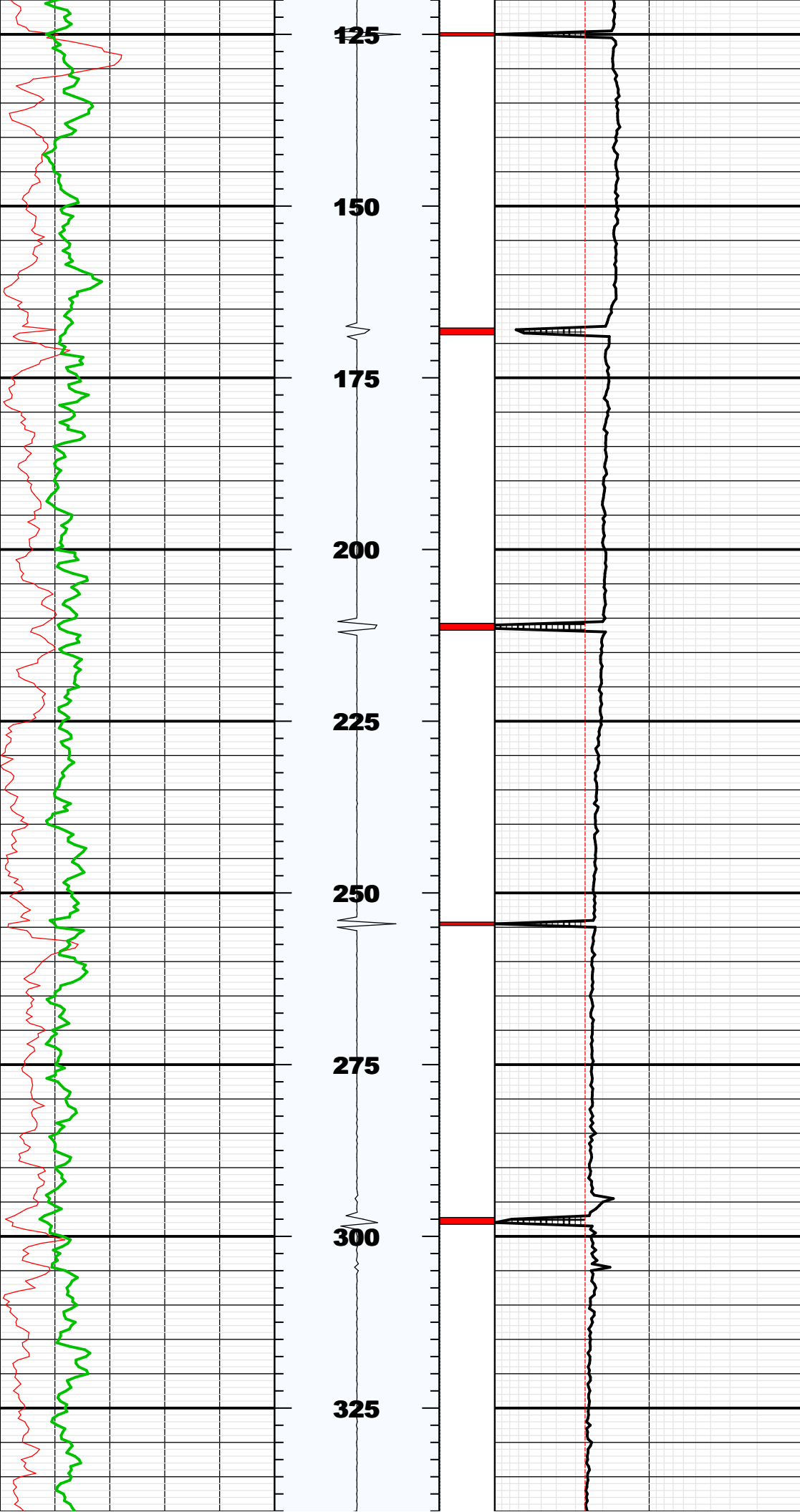
This is the first run in hole.
Toolstring run as per tool sketch.
12.5 ppg lead cement.
13.8 ppg lead cement.
0 PSI repeat pass.
2500 PSI main pass

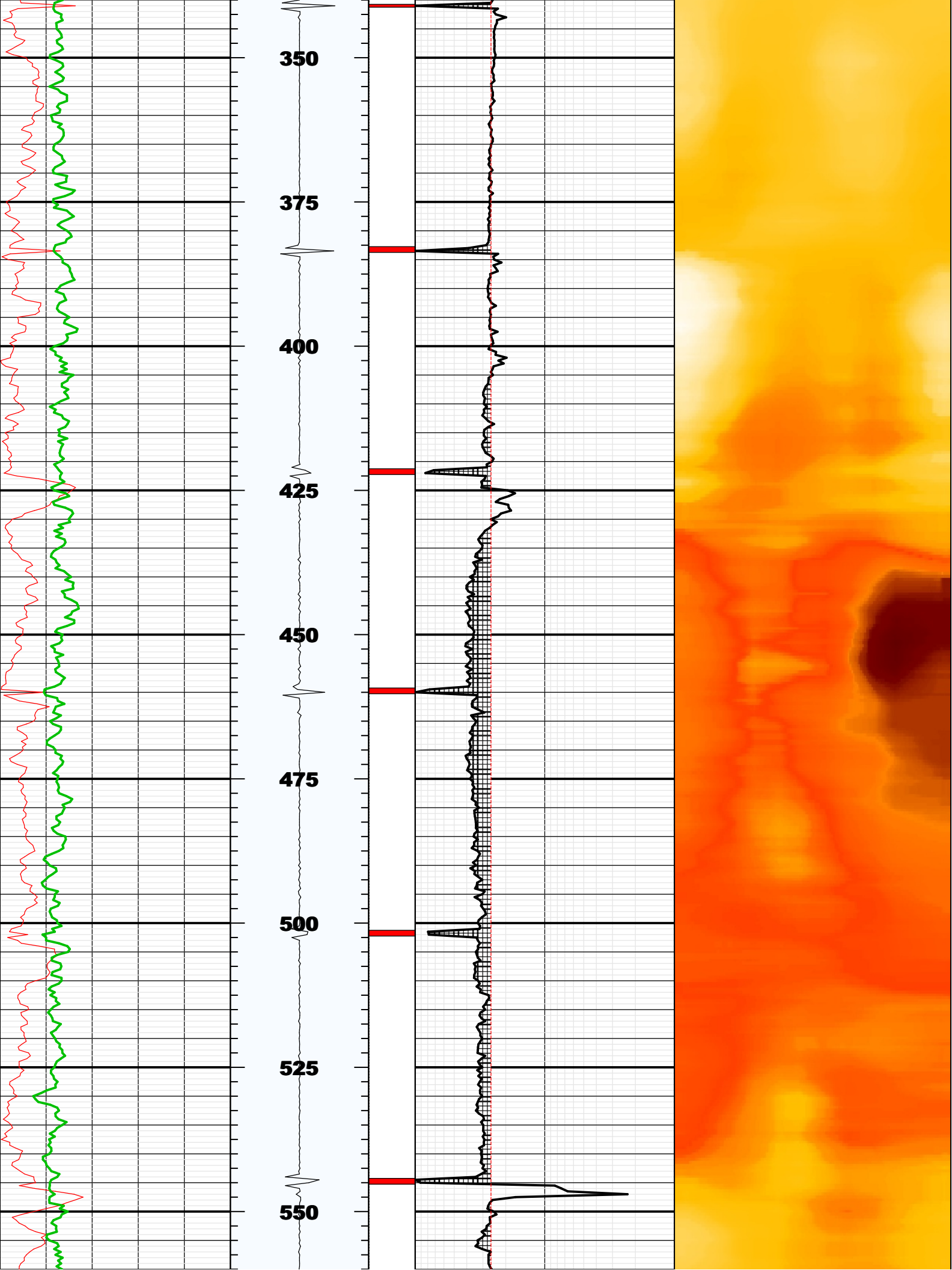
Bottom log temperature 230 degF.
Top of cement 335 ft.
Crew Jay Musgrave Jake Jump

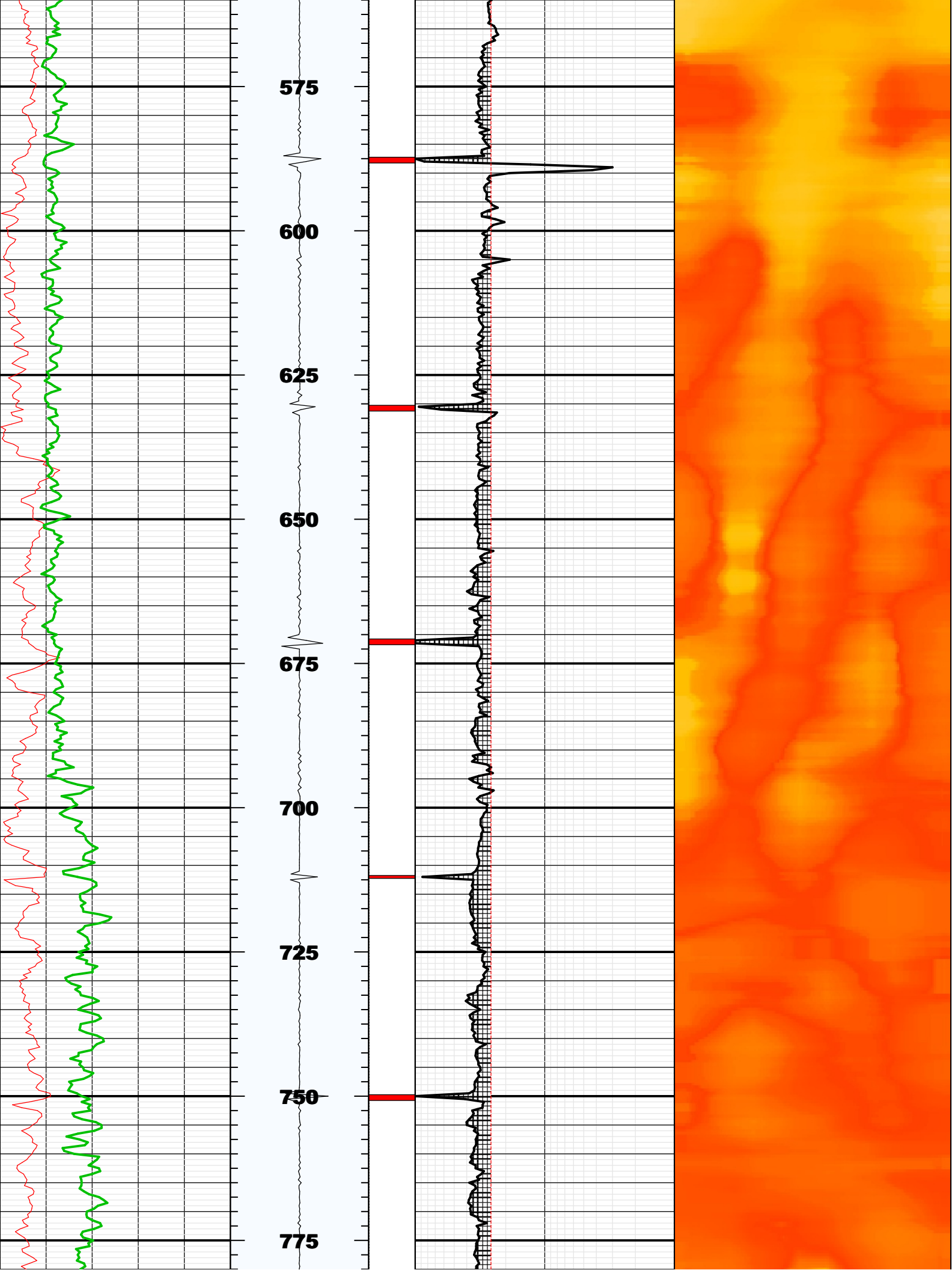
Main Pass

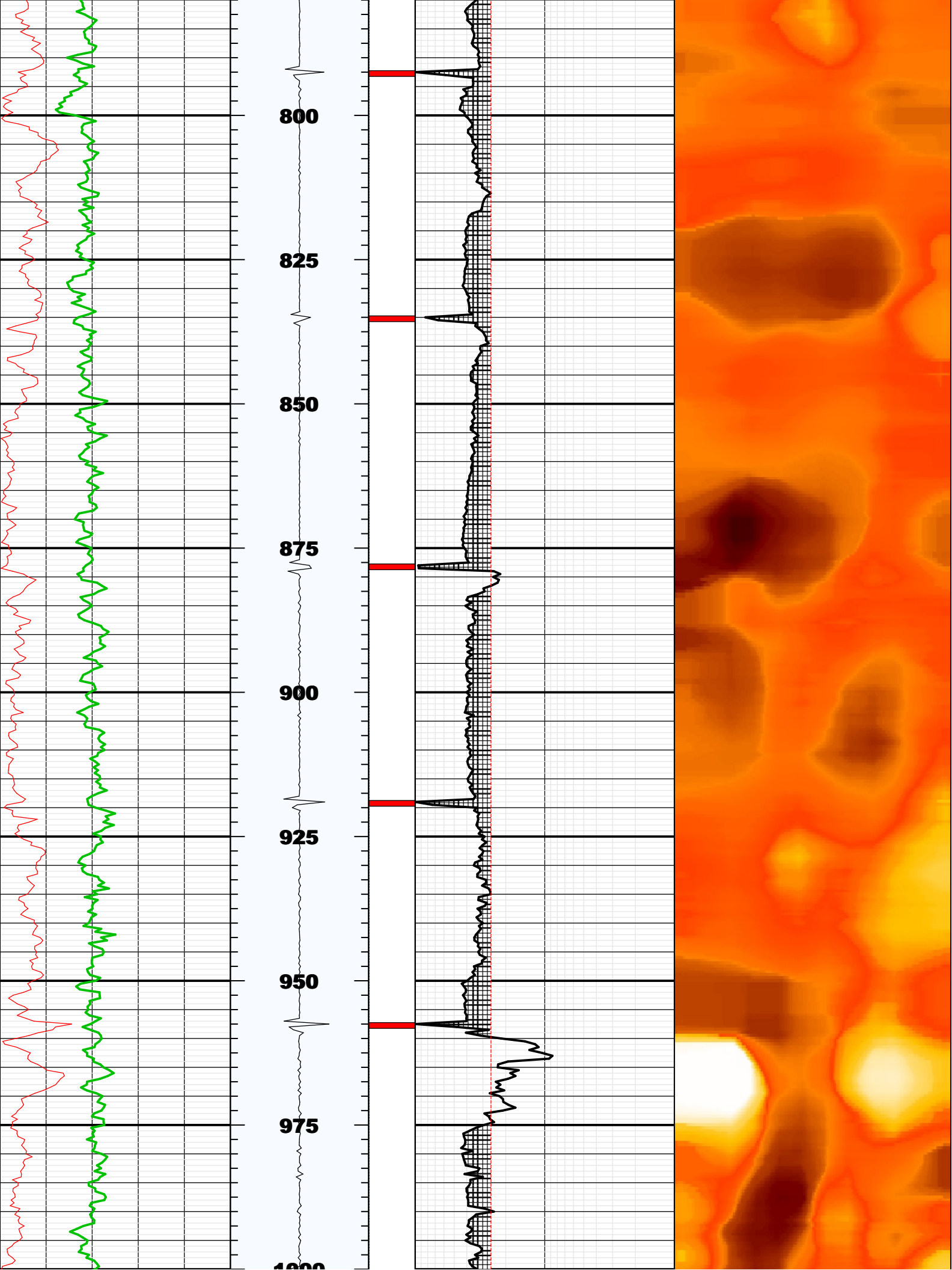
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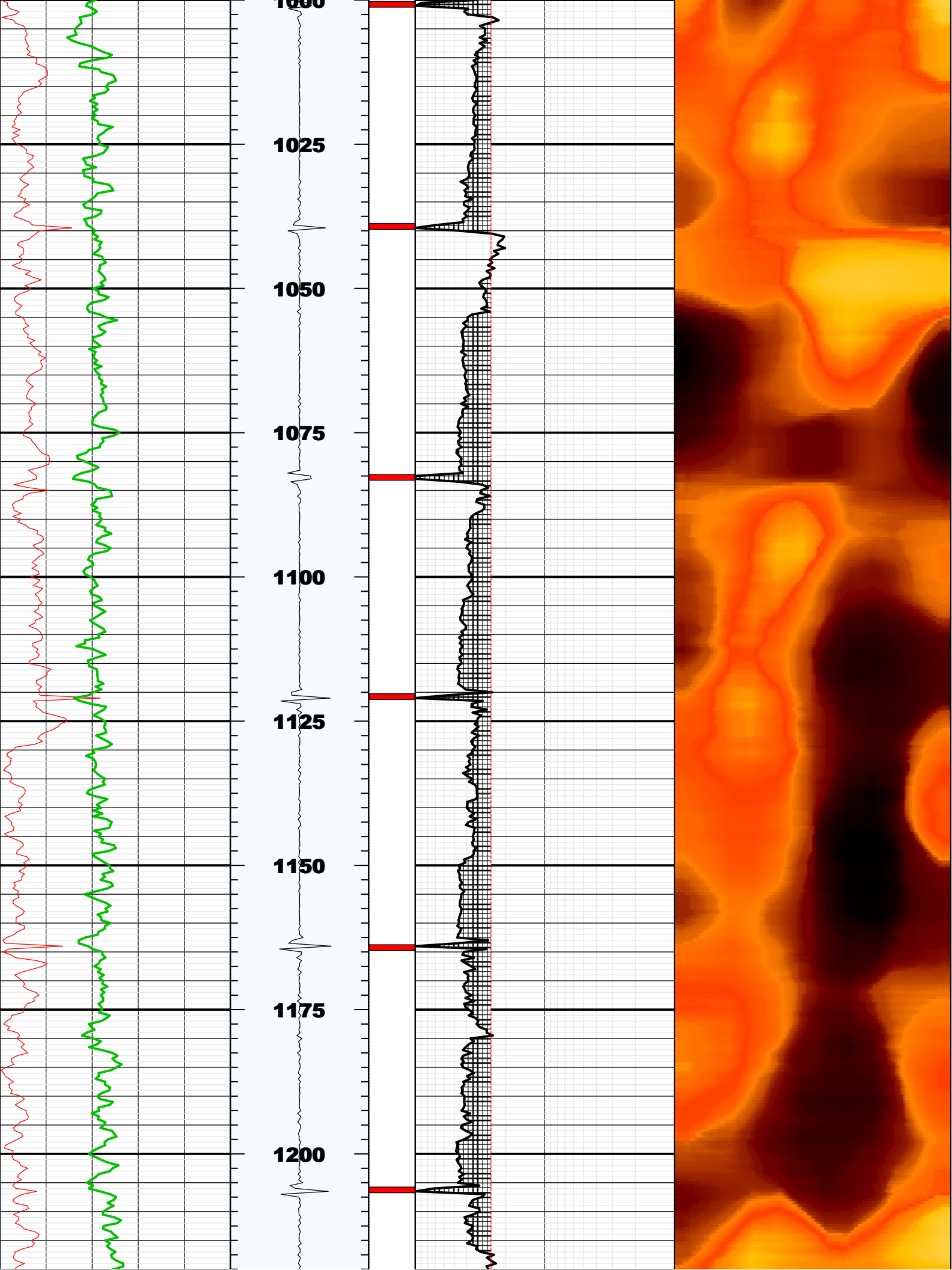


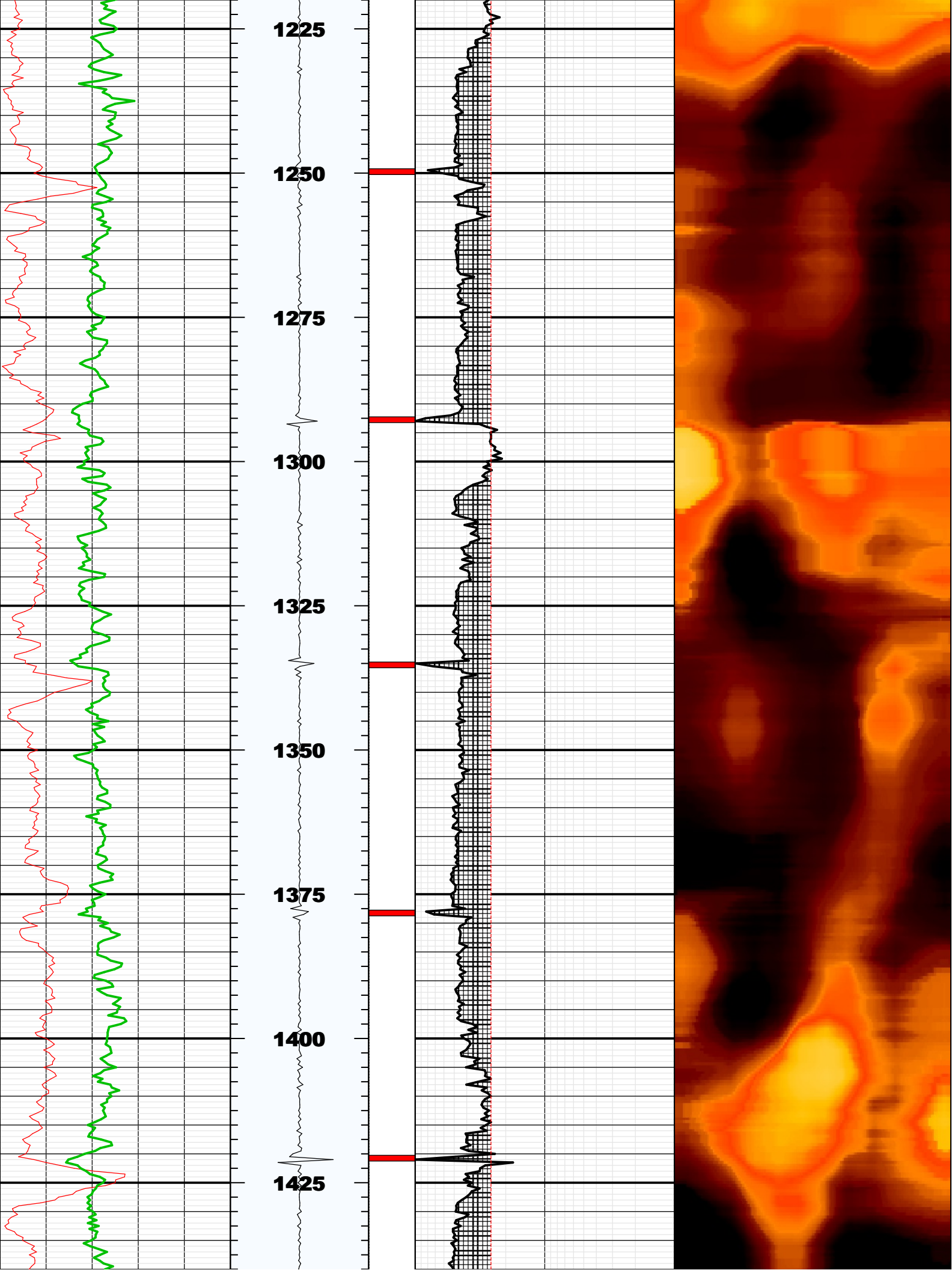


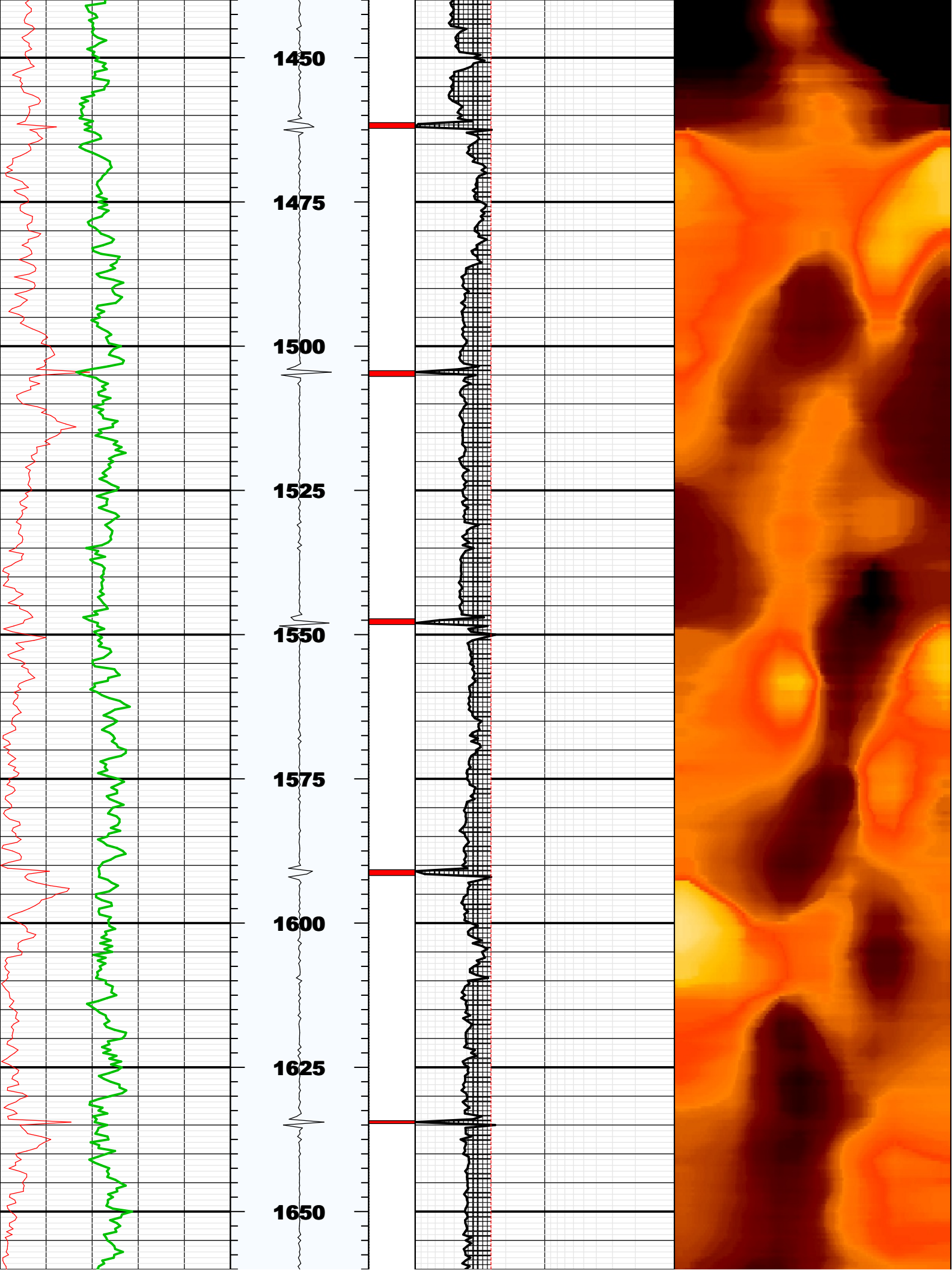


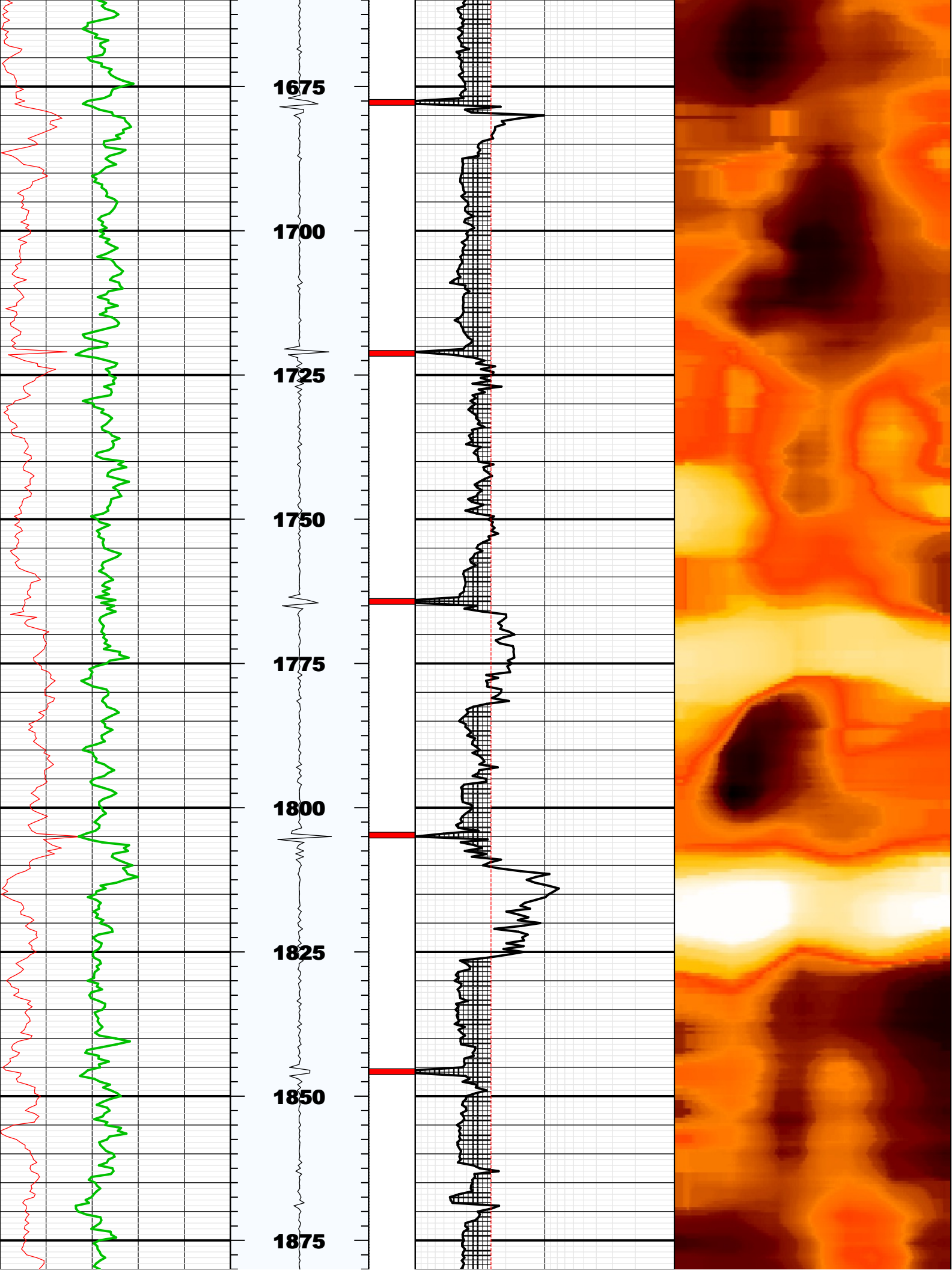


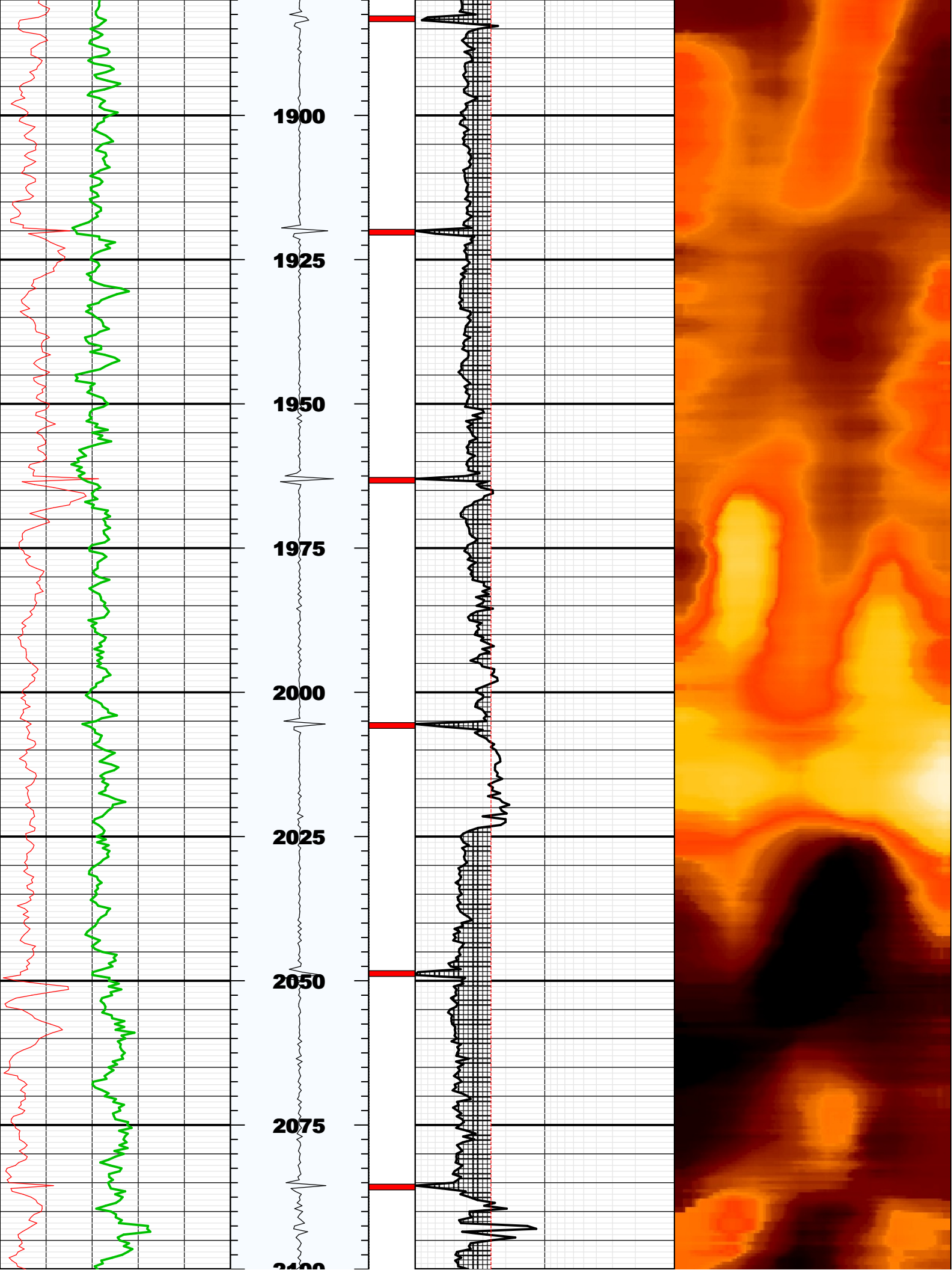


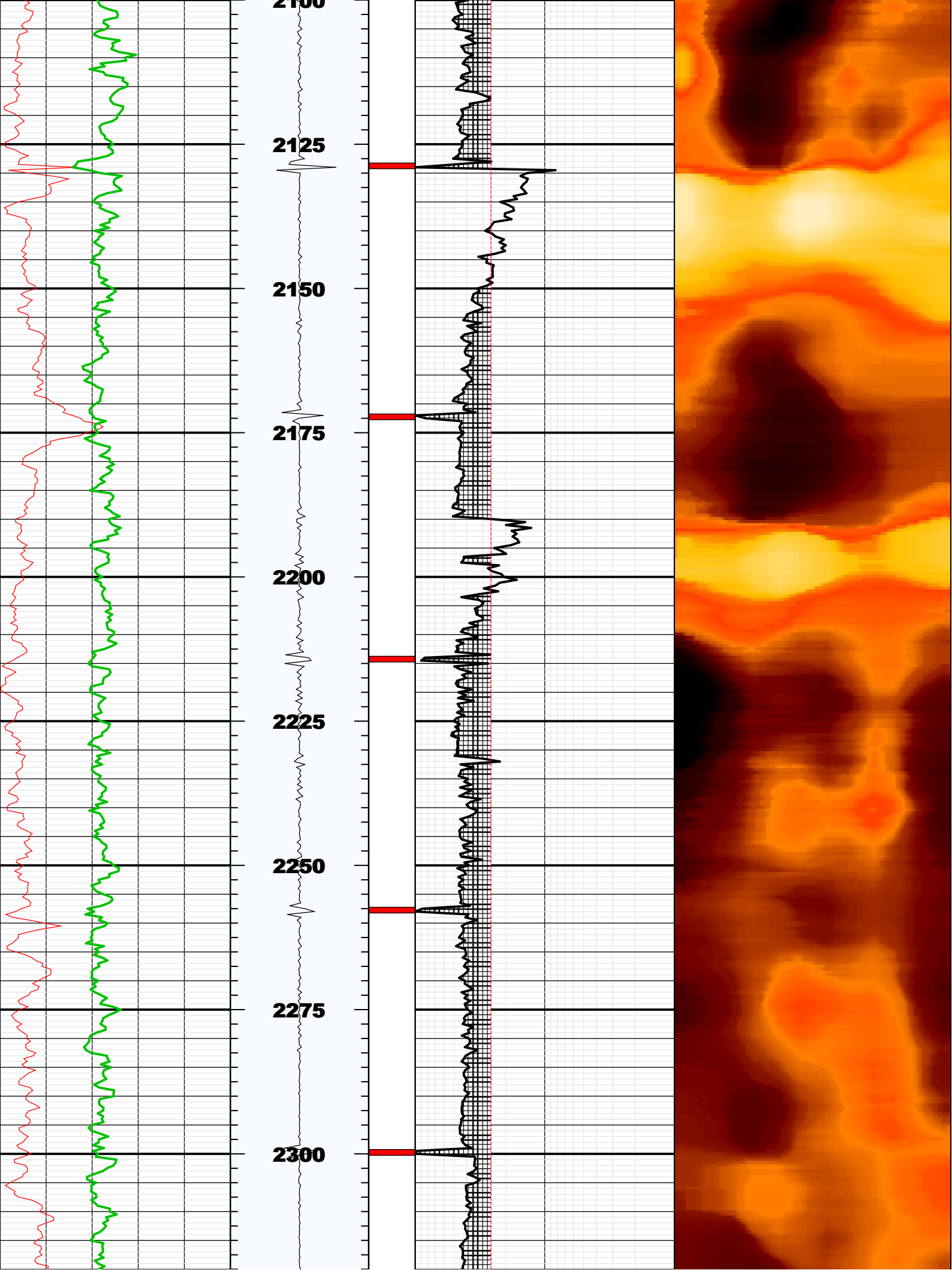


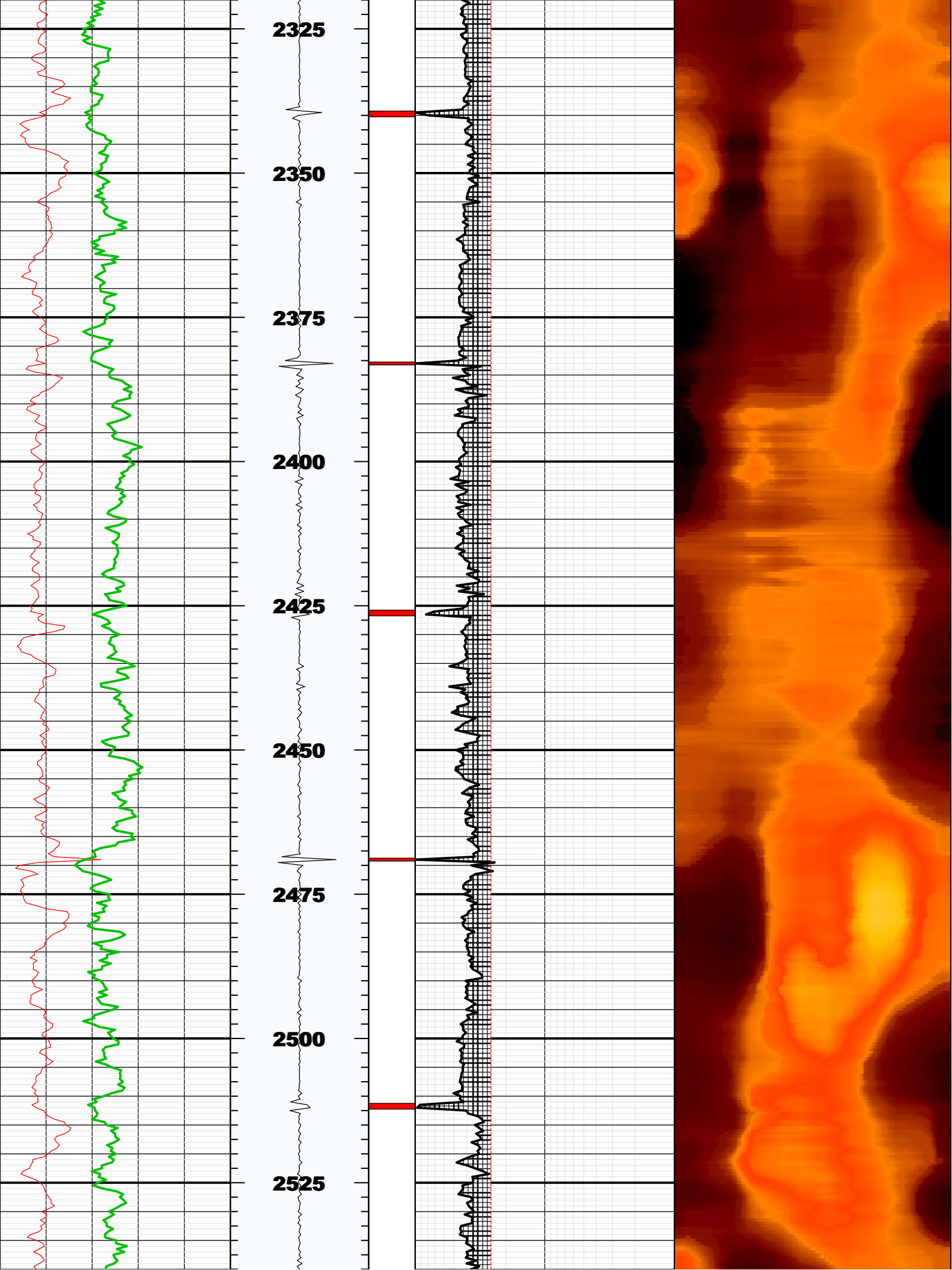


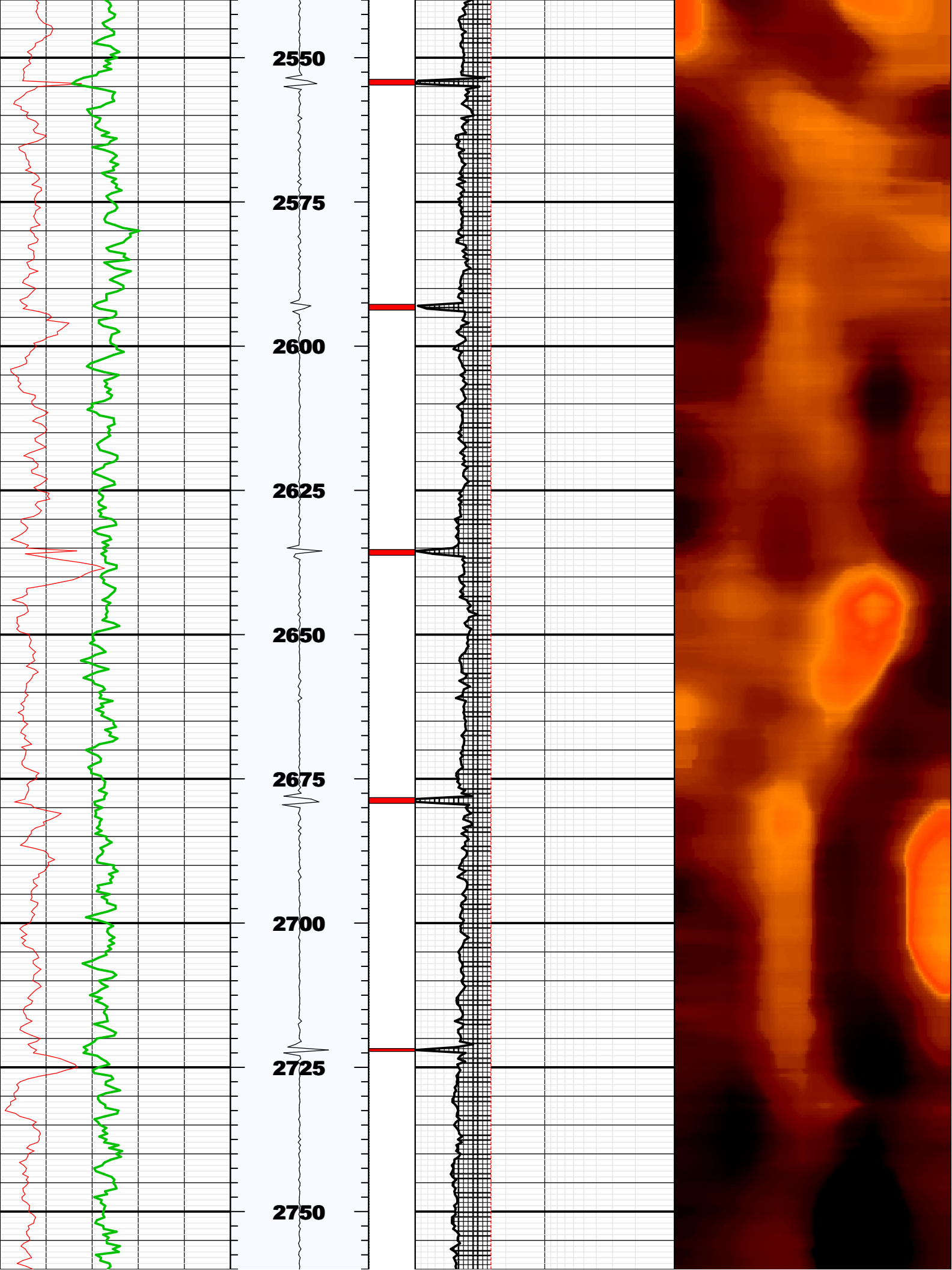


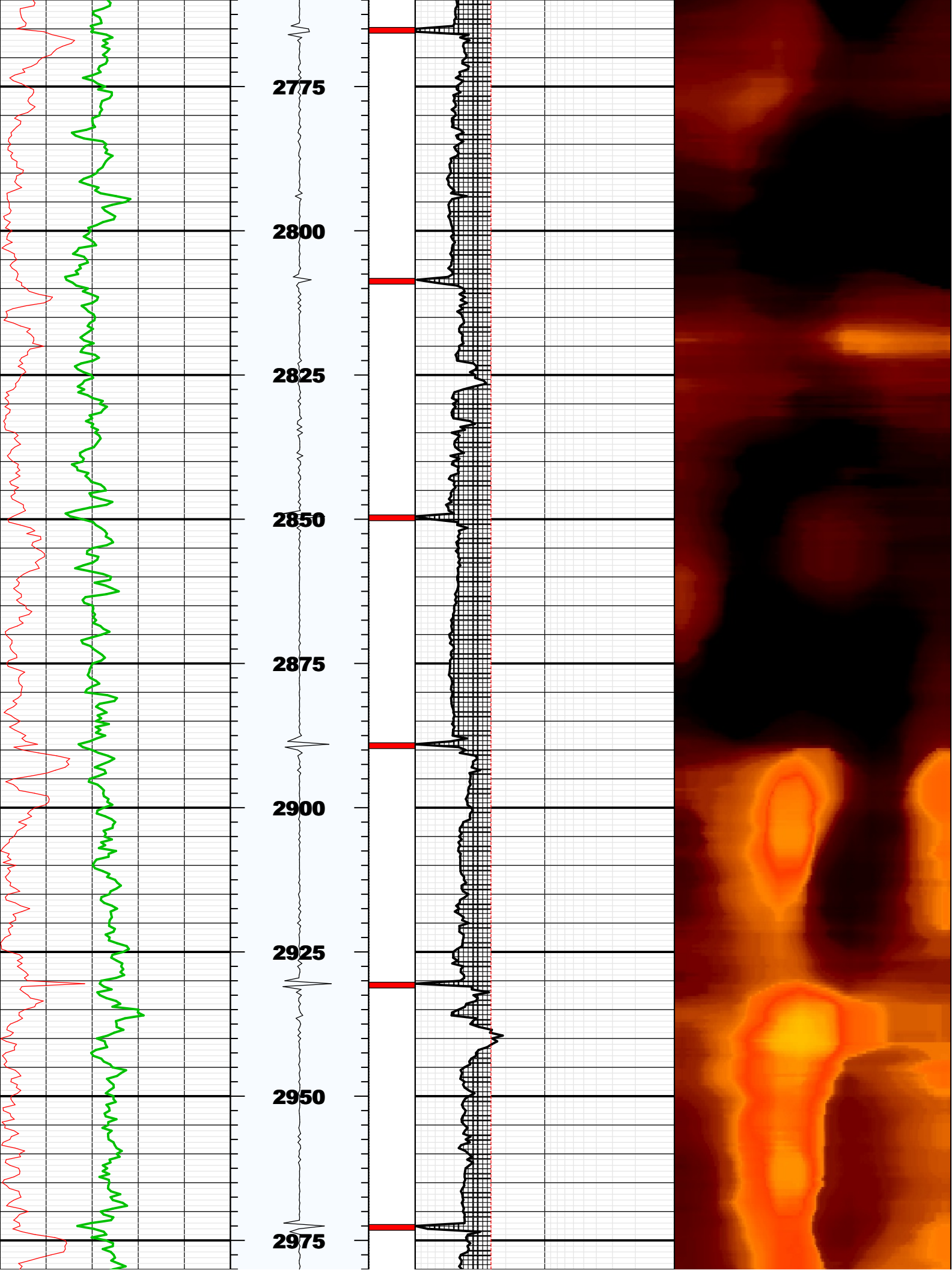


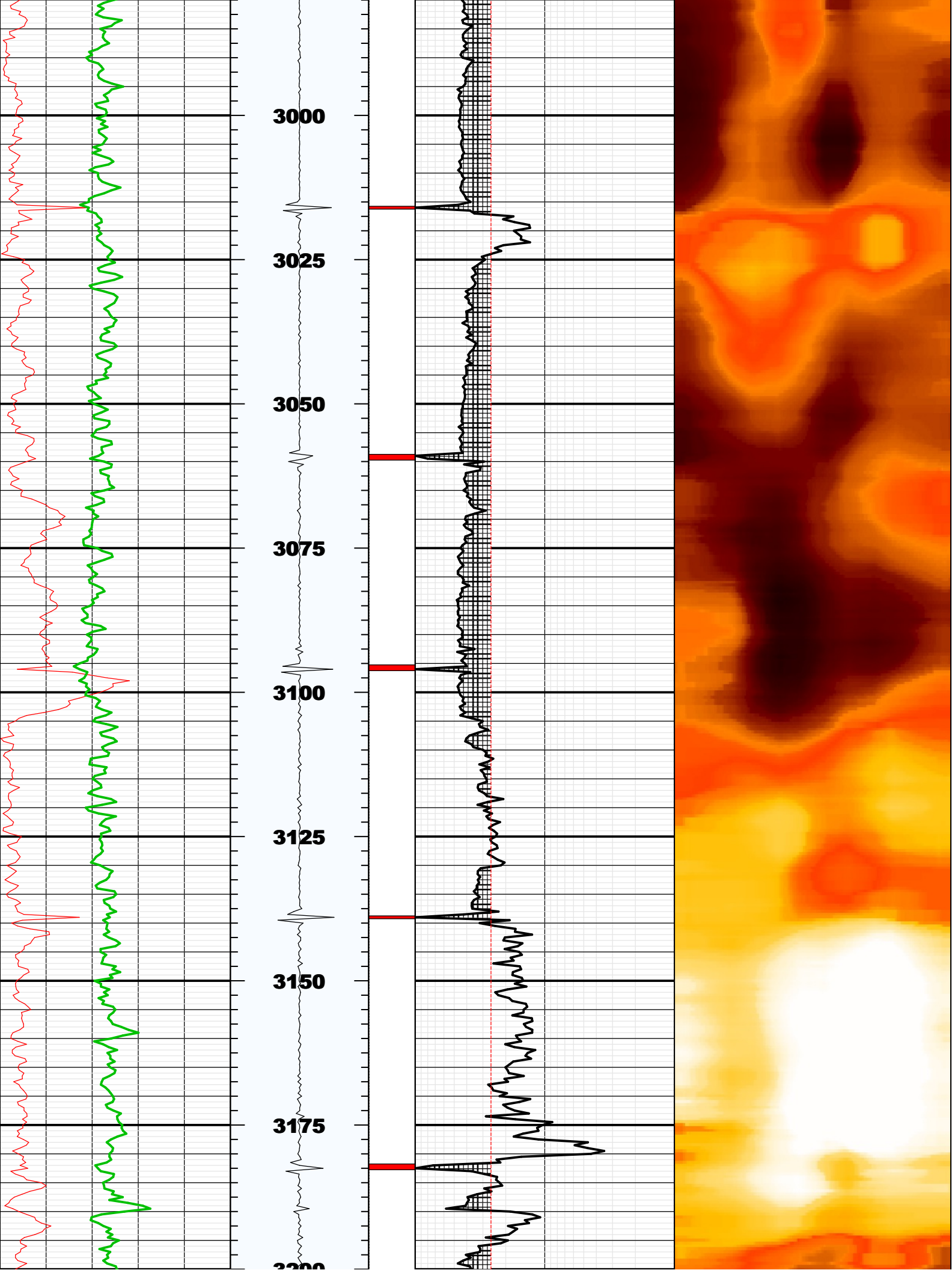


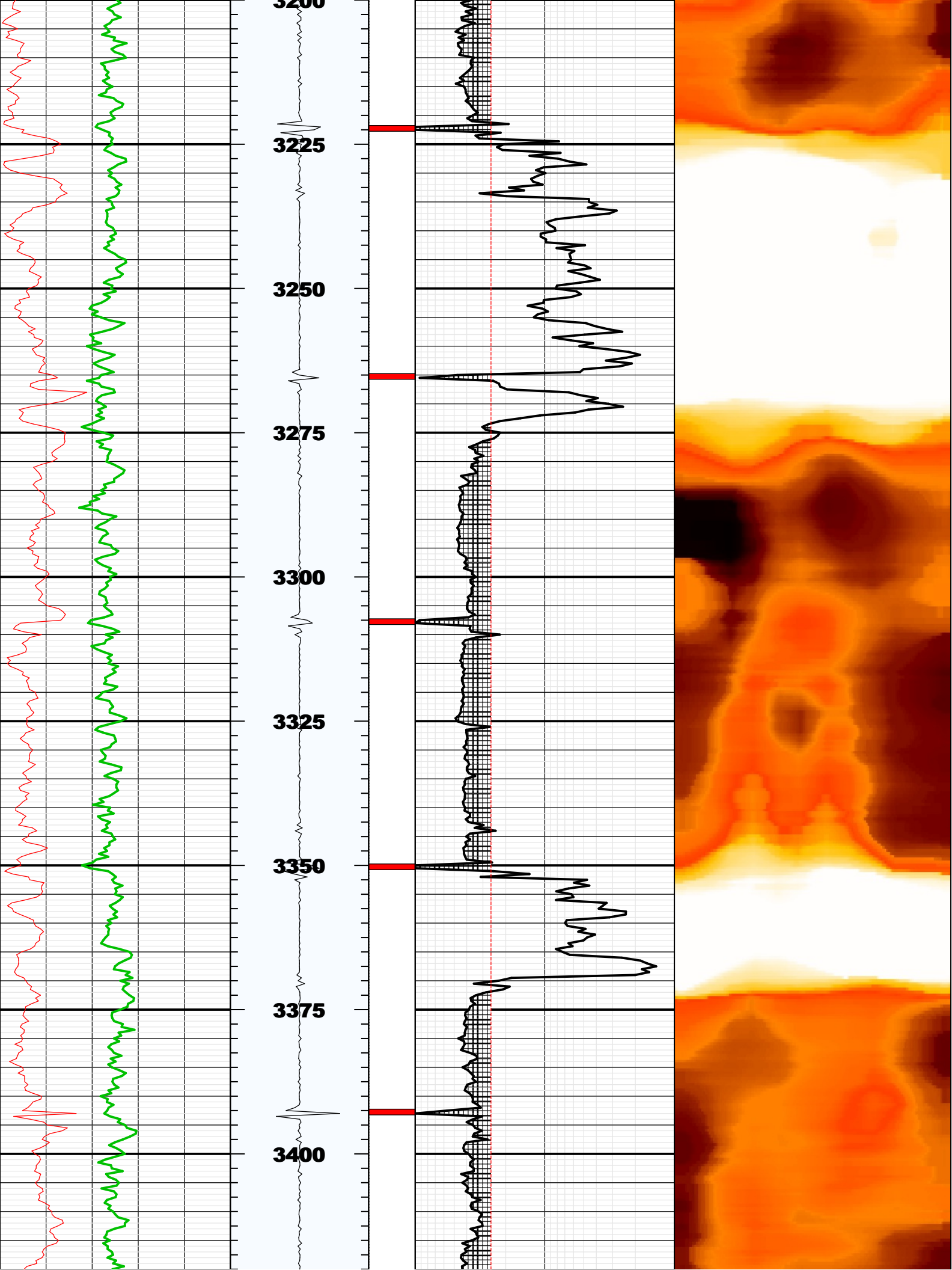


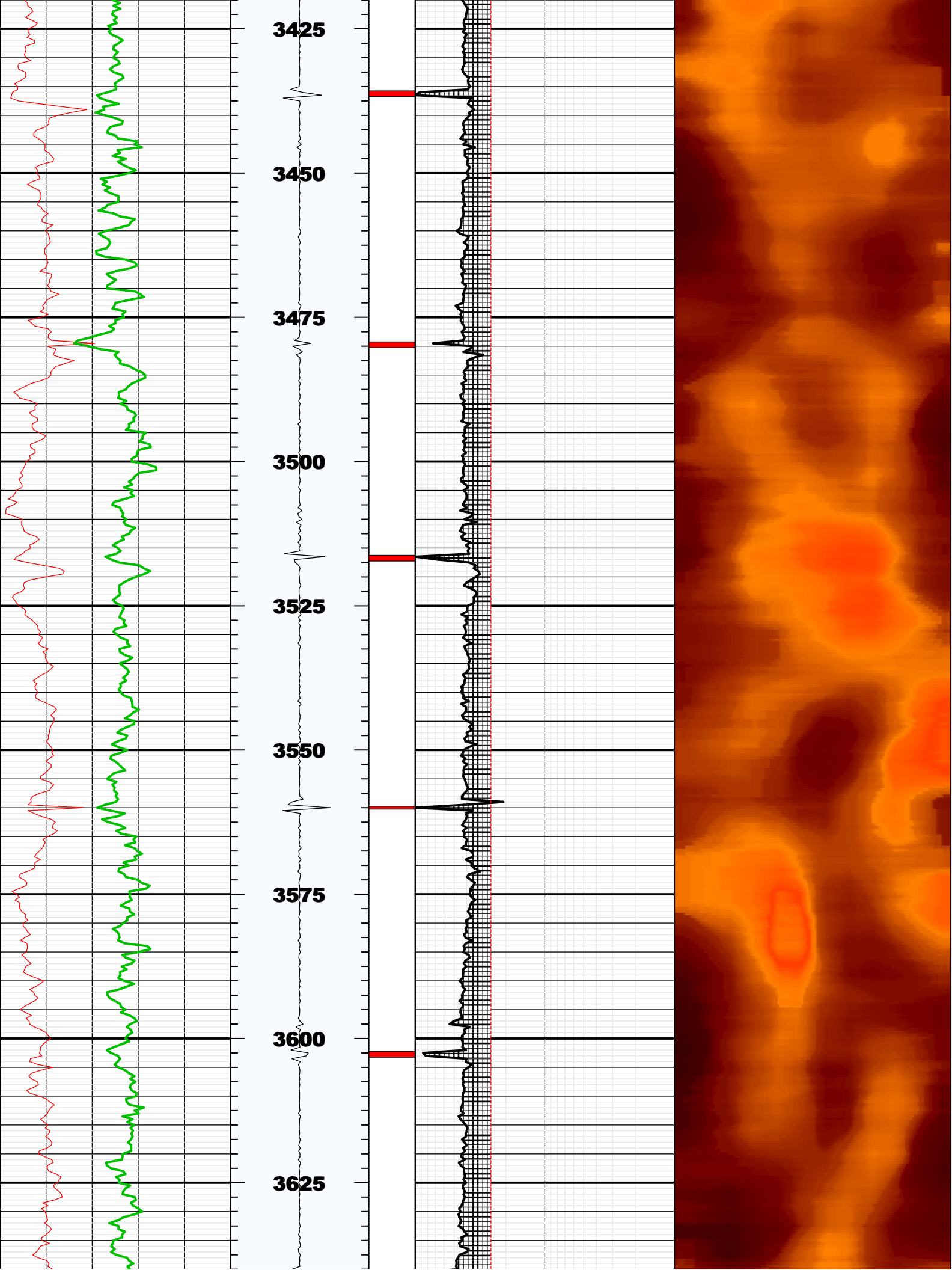


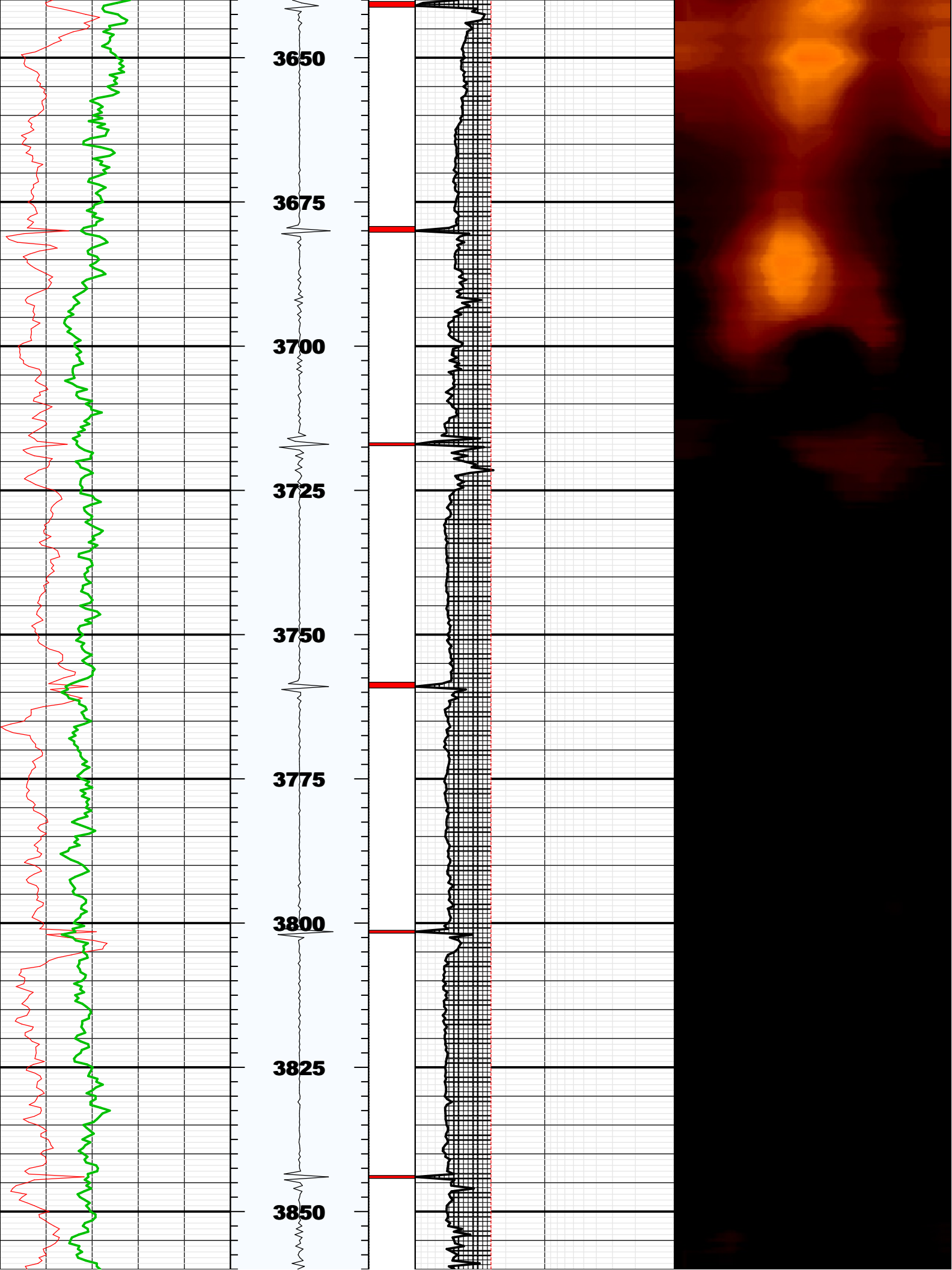


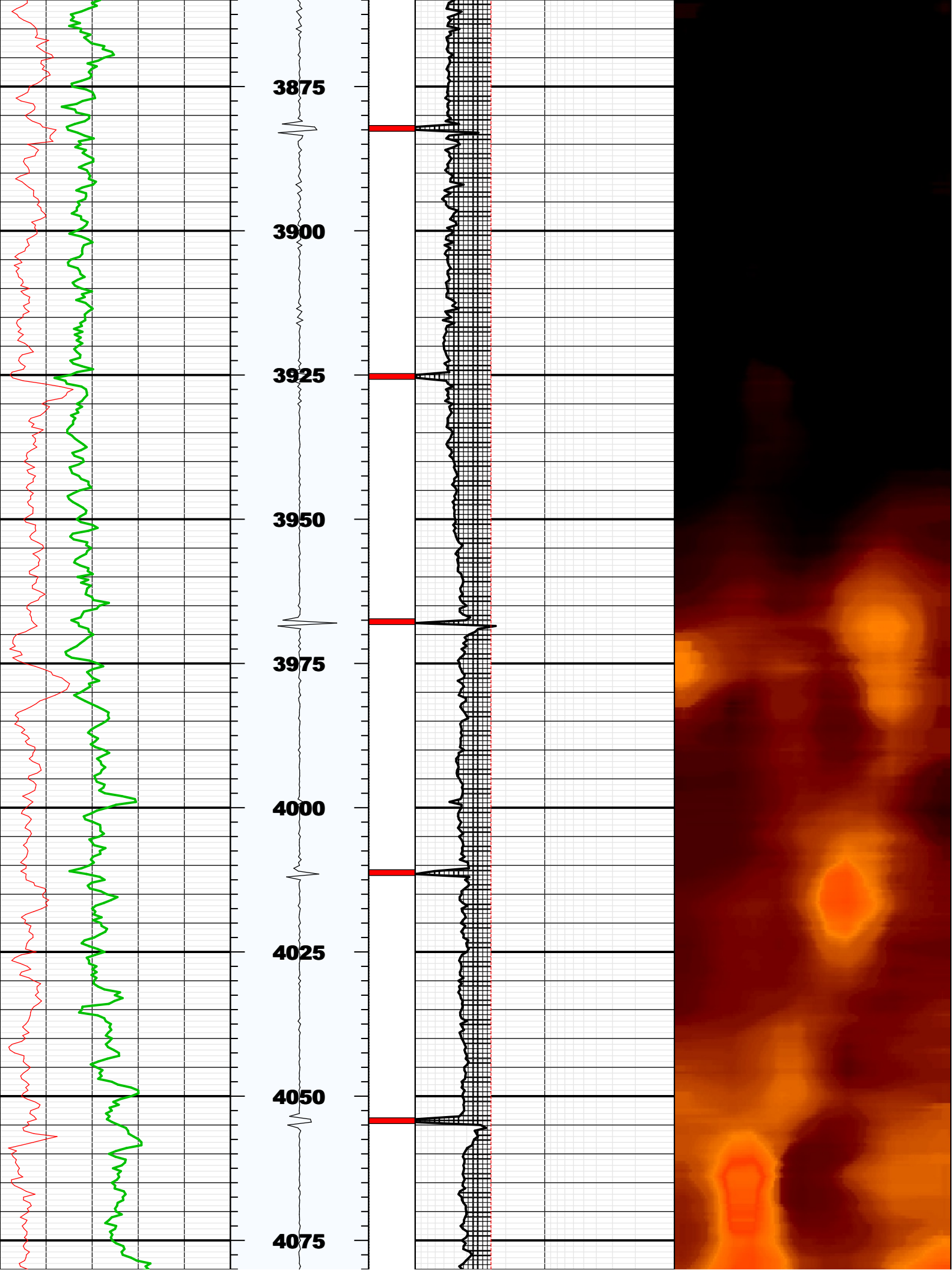


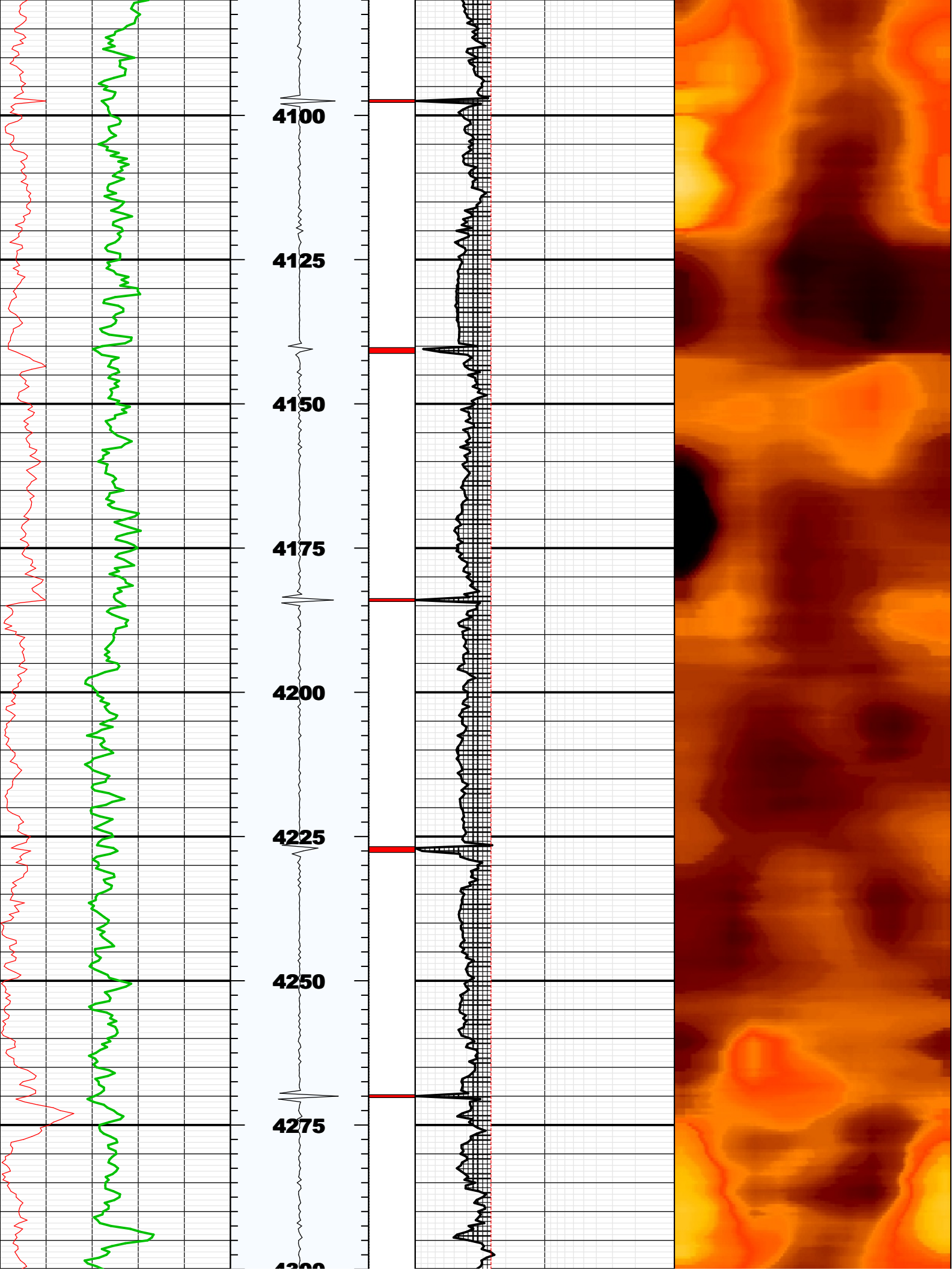


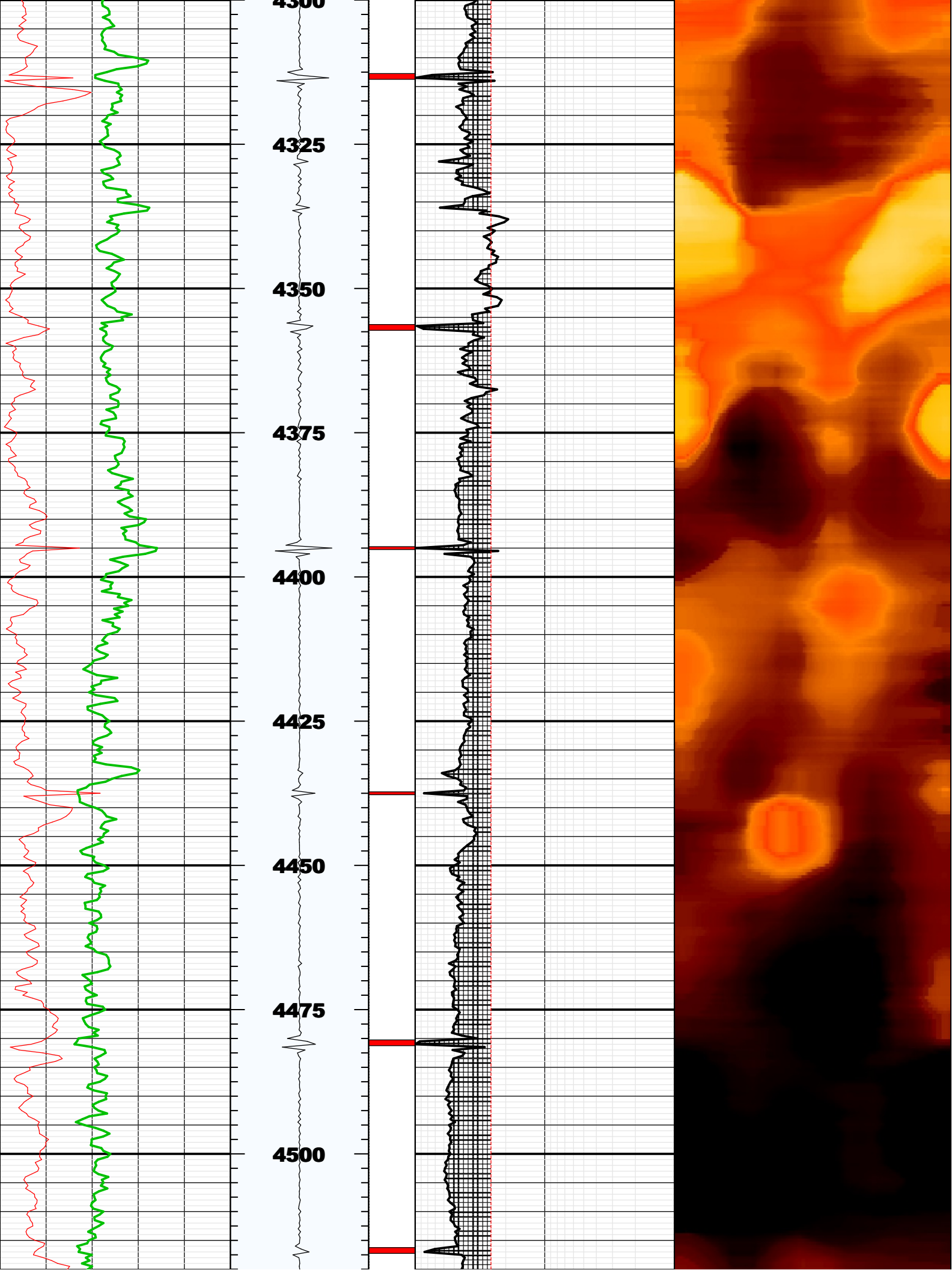


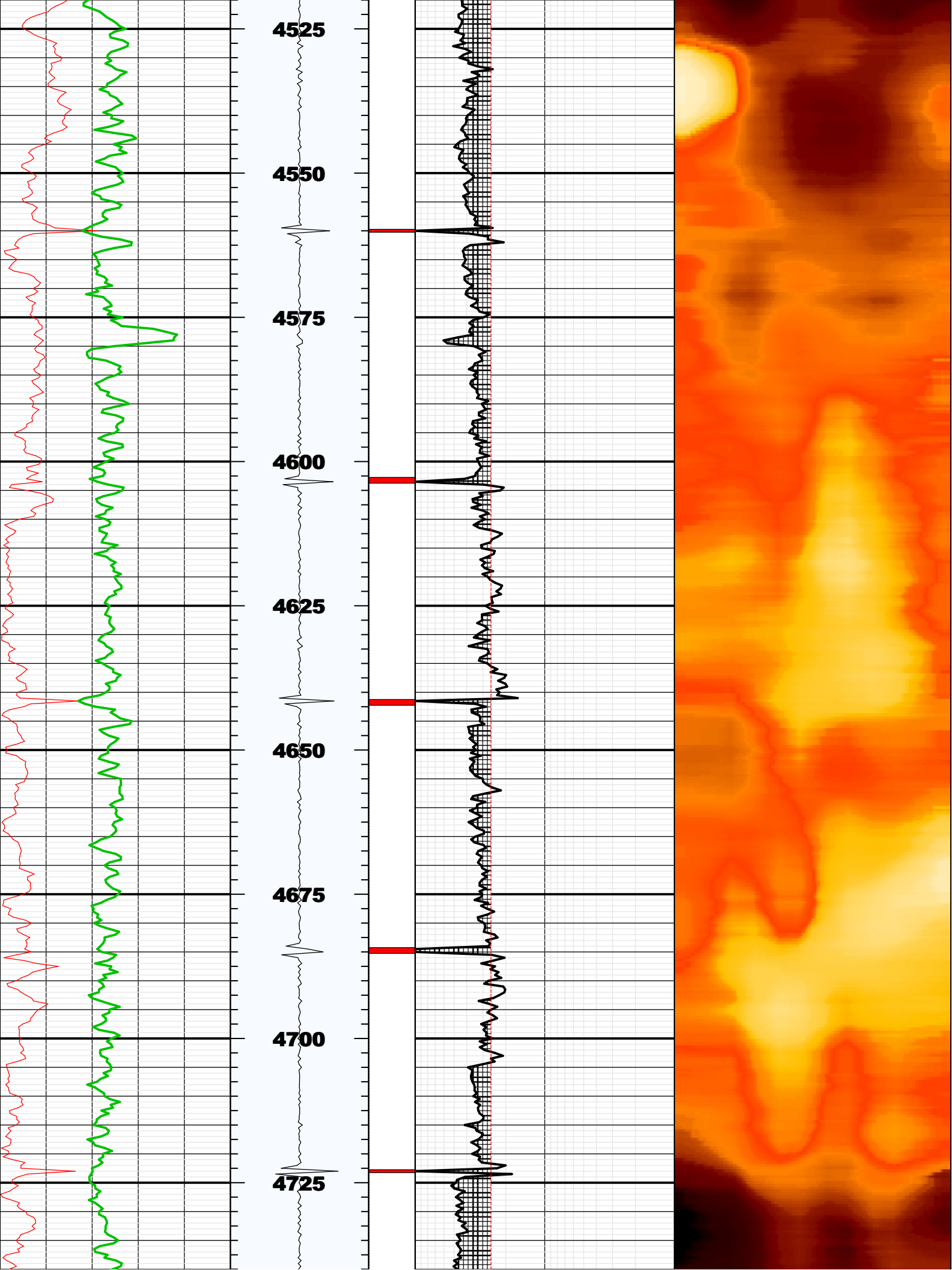


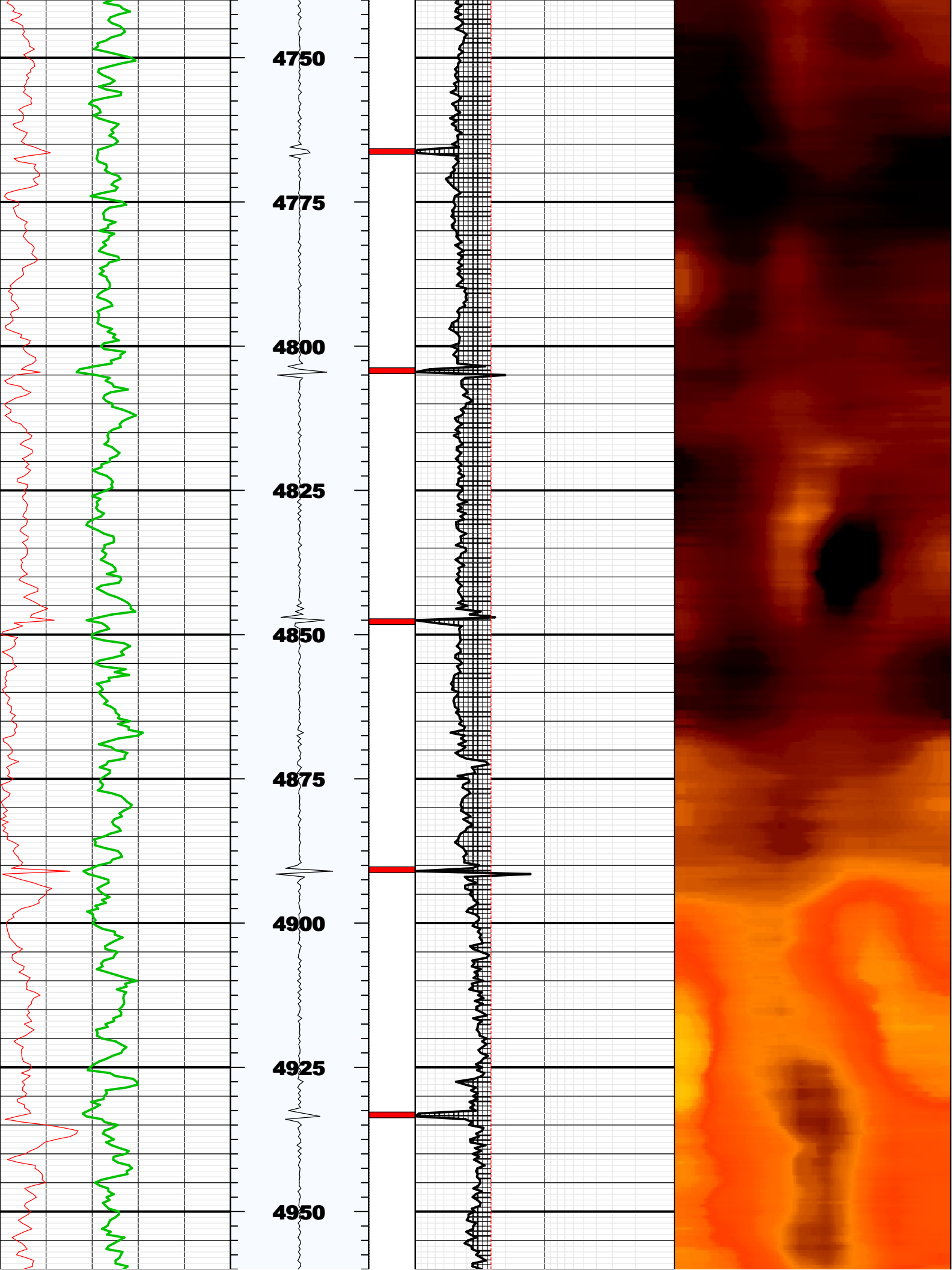


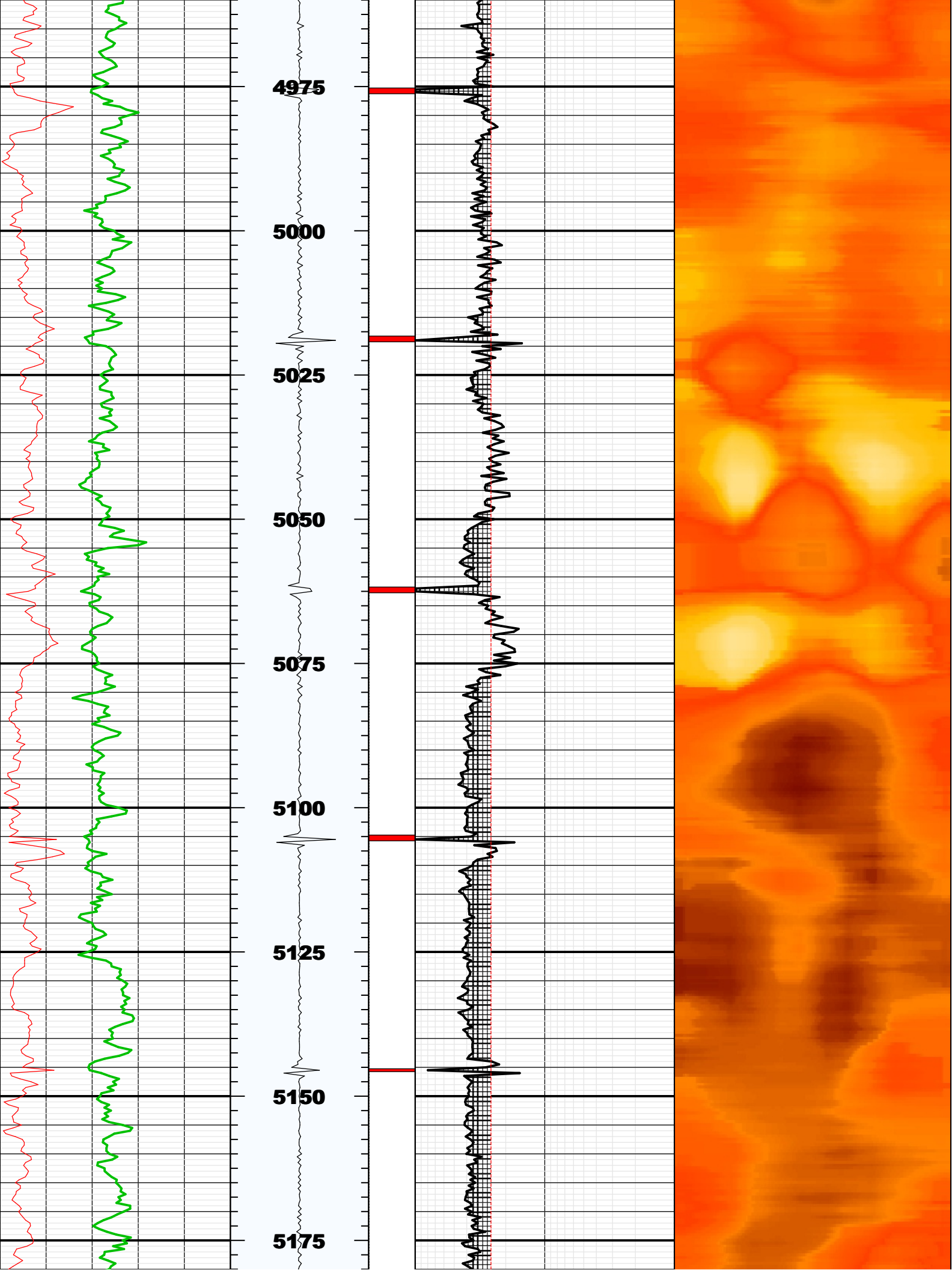


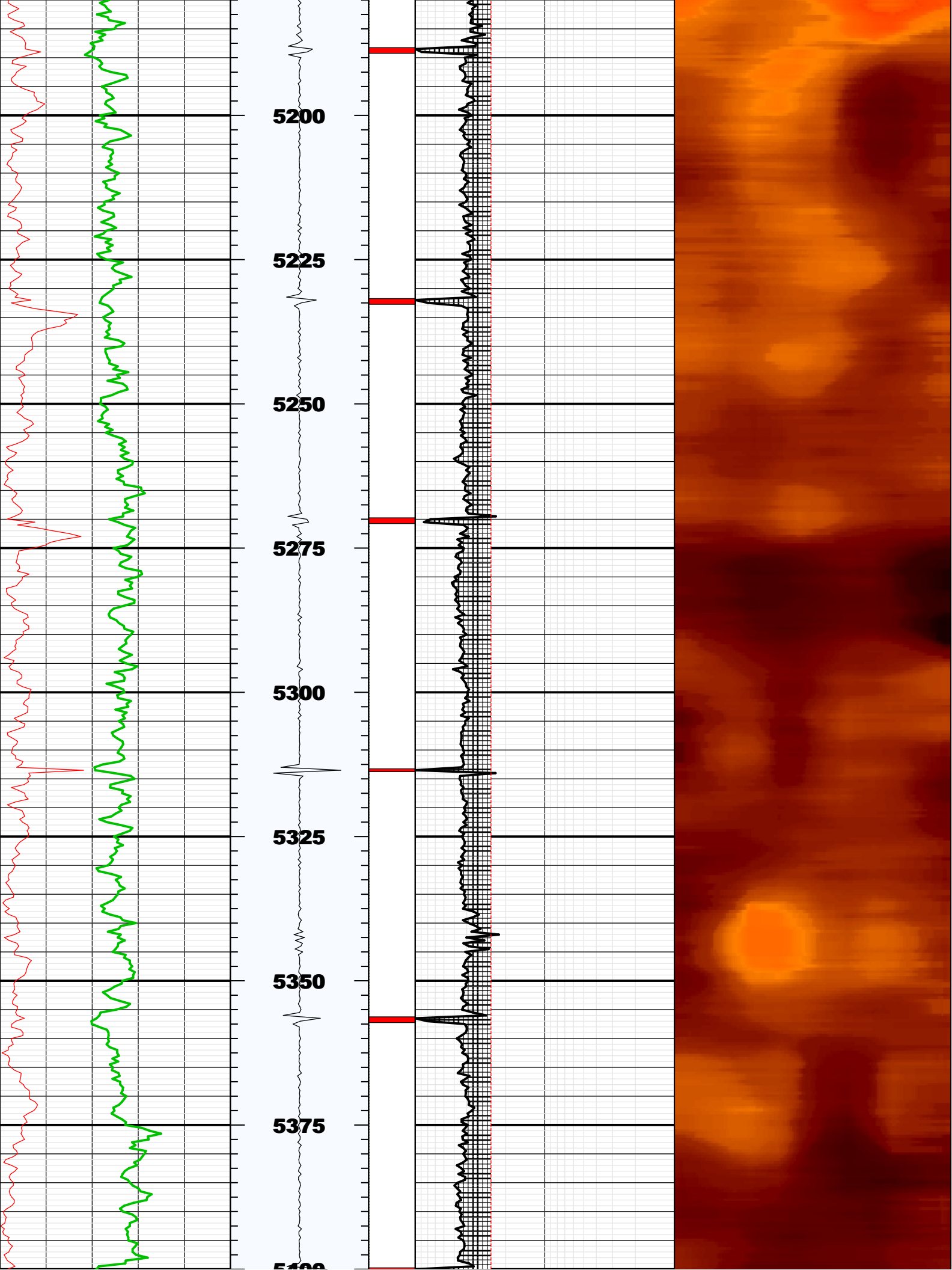


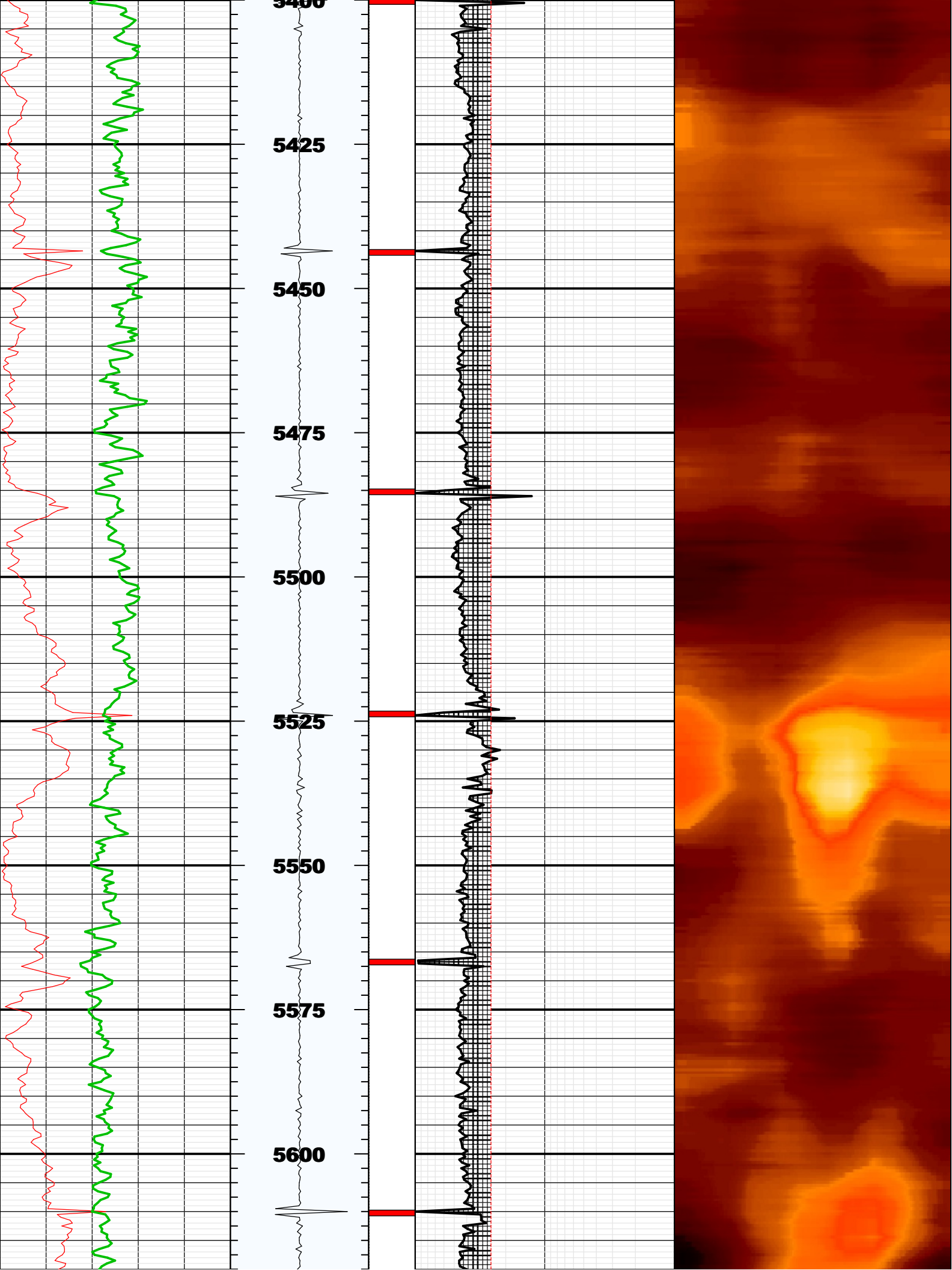


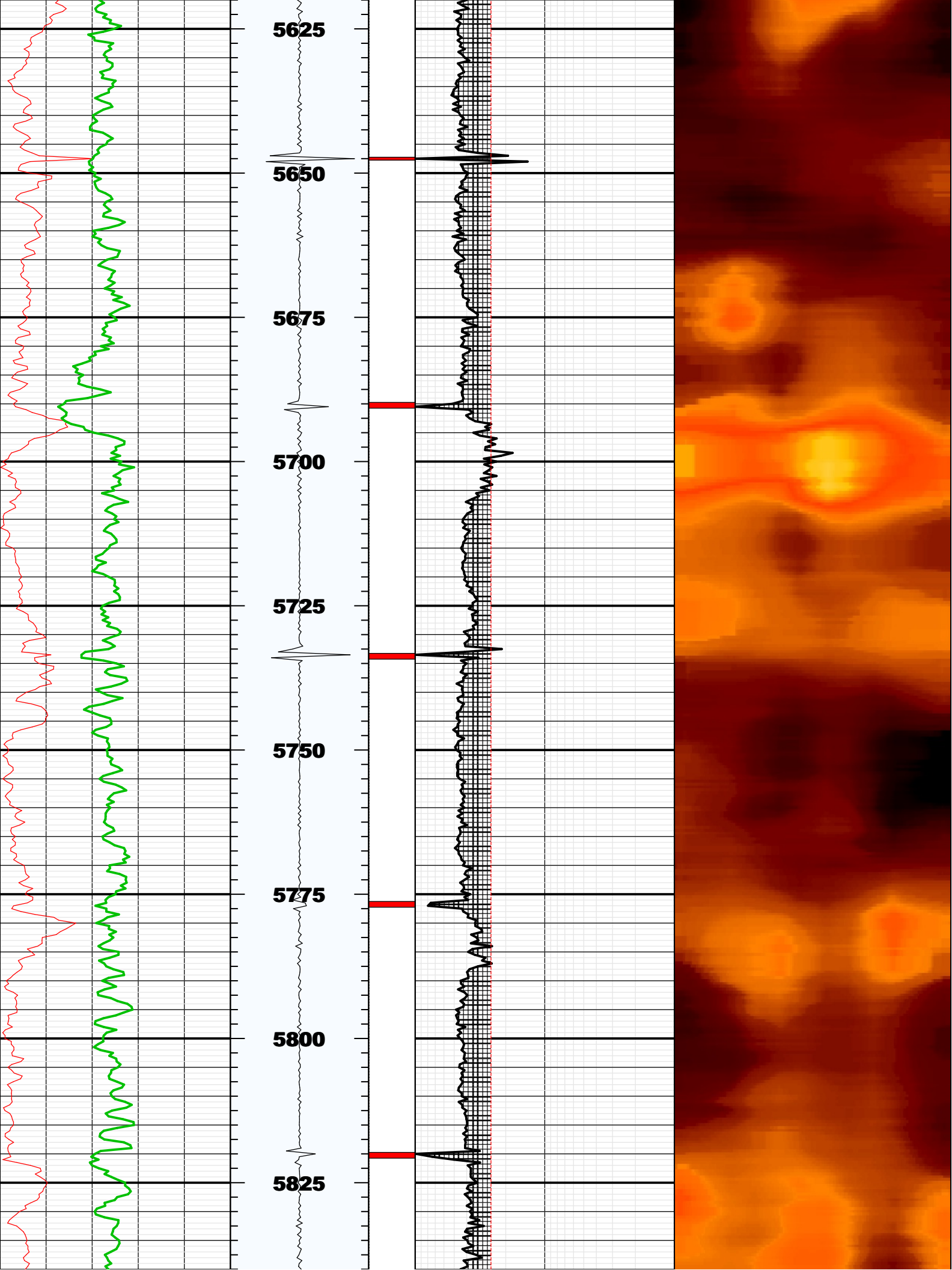


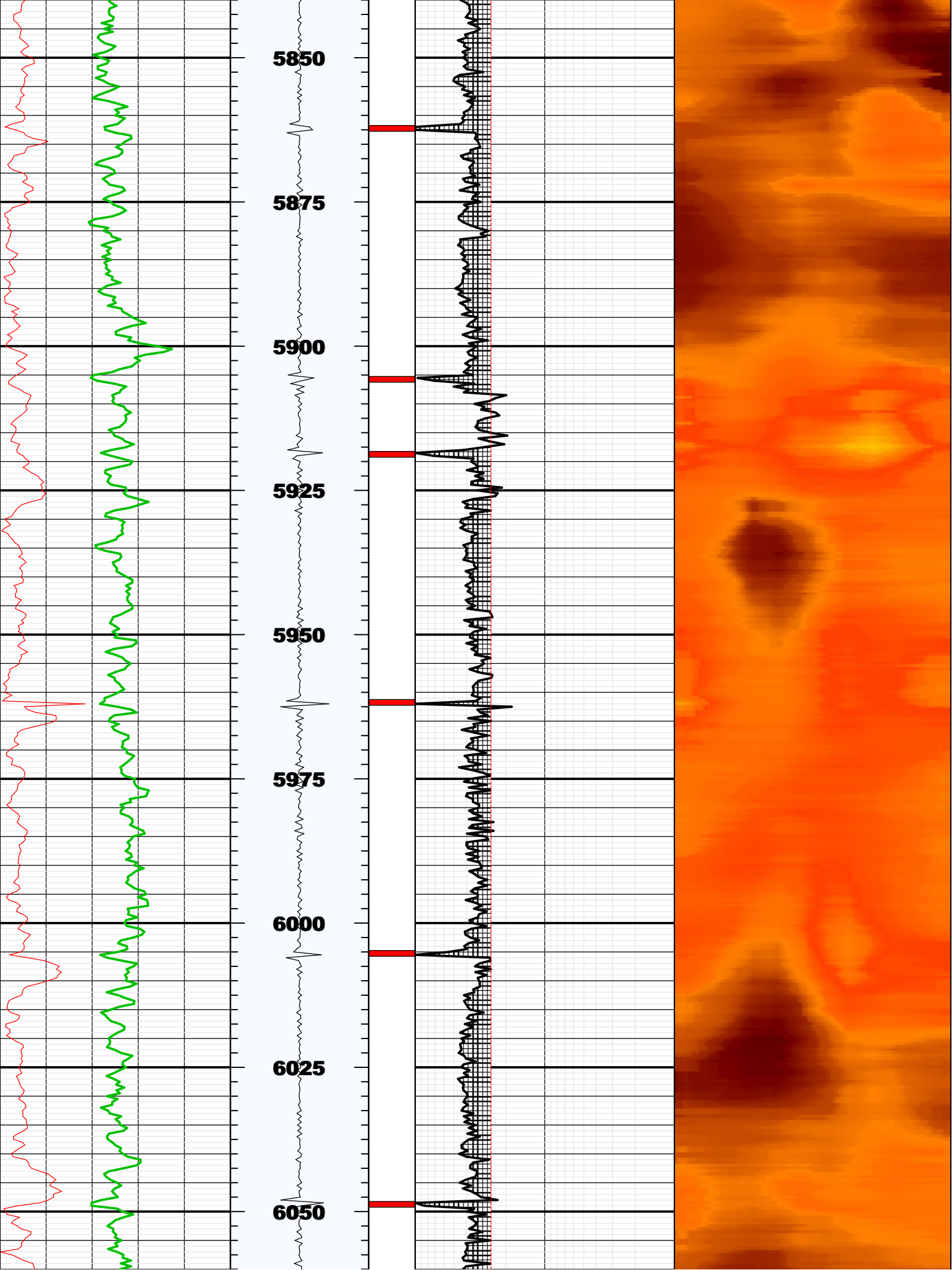


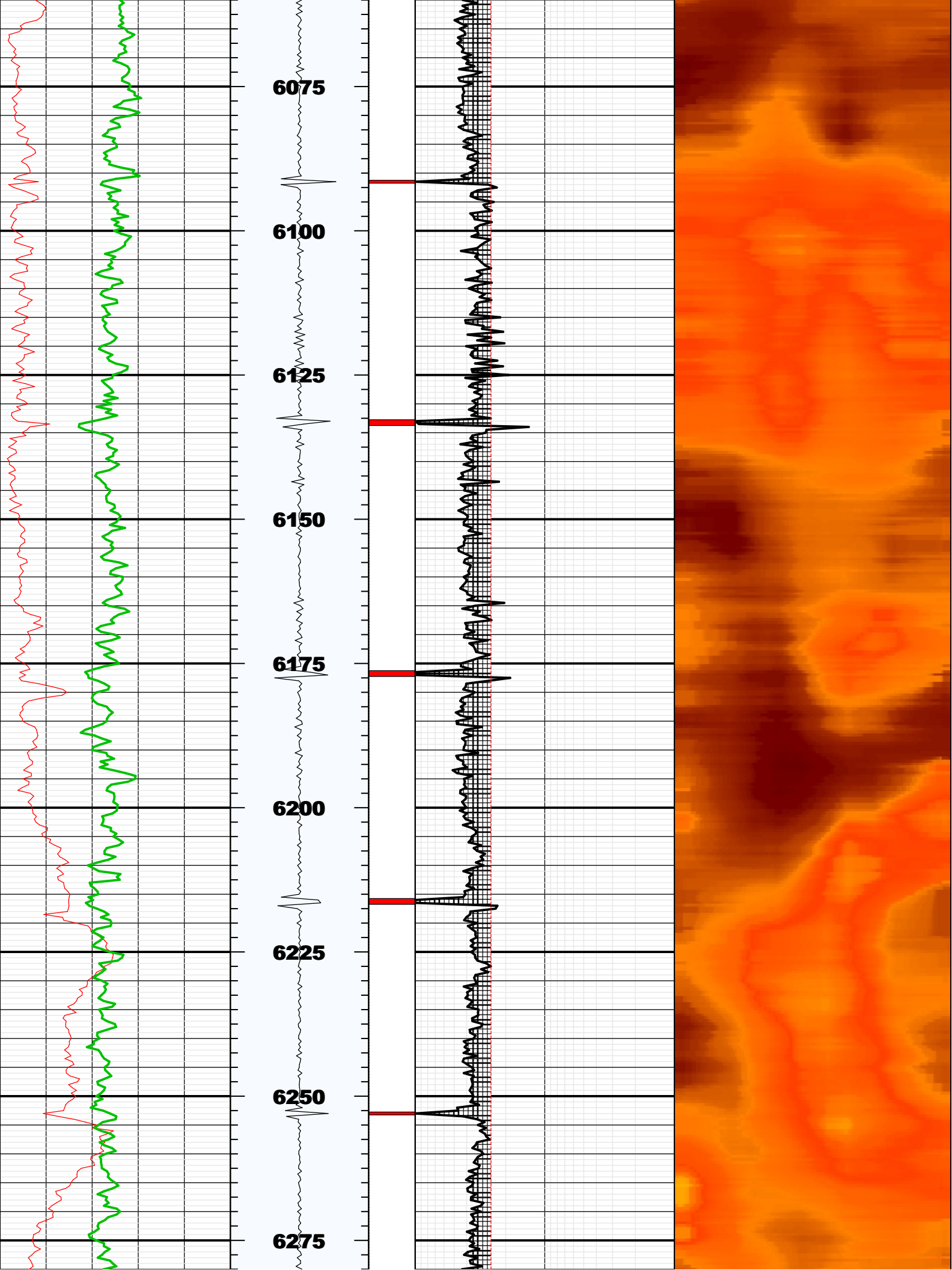


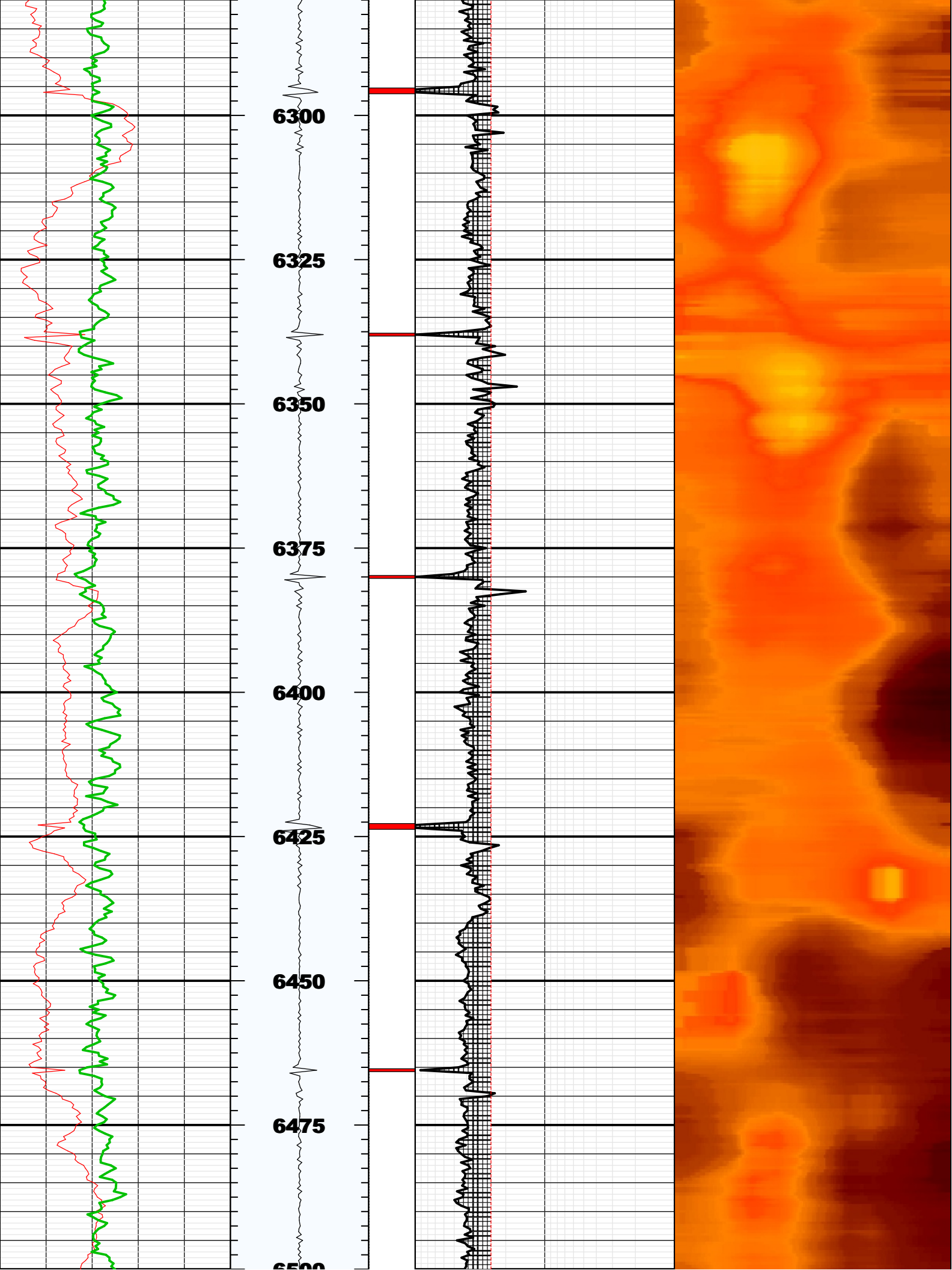


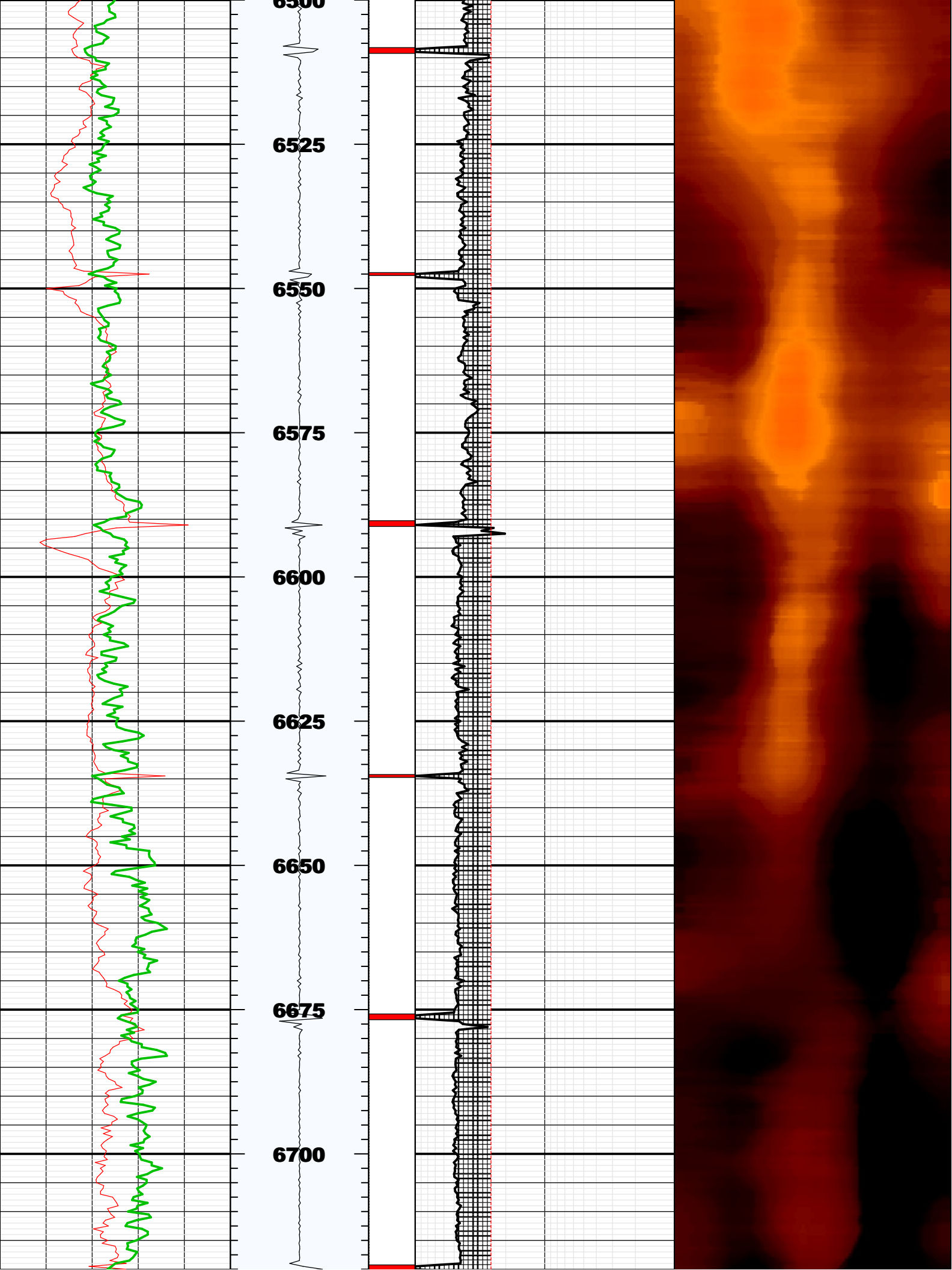


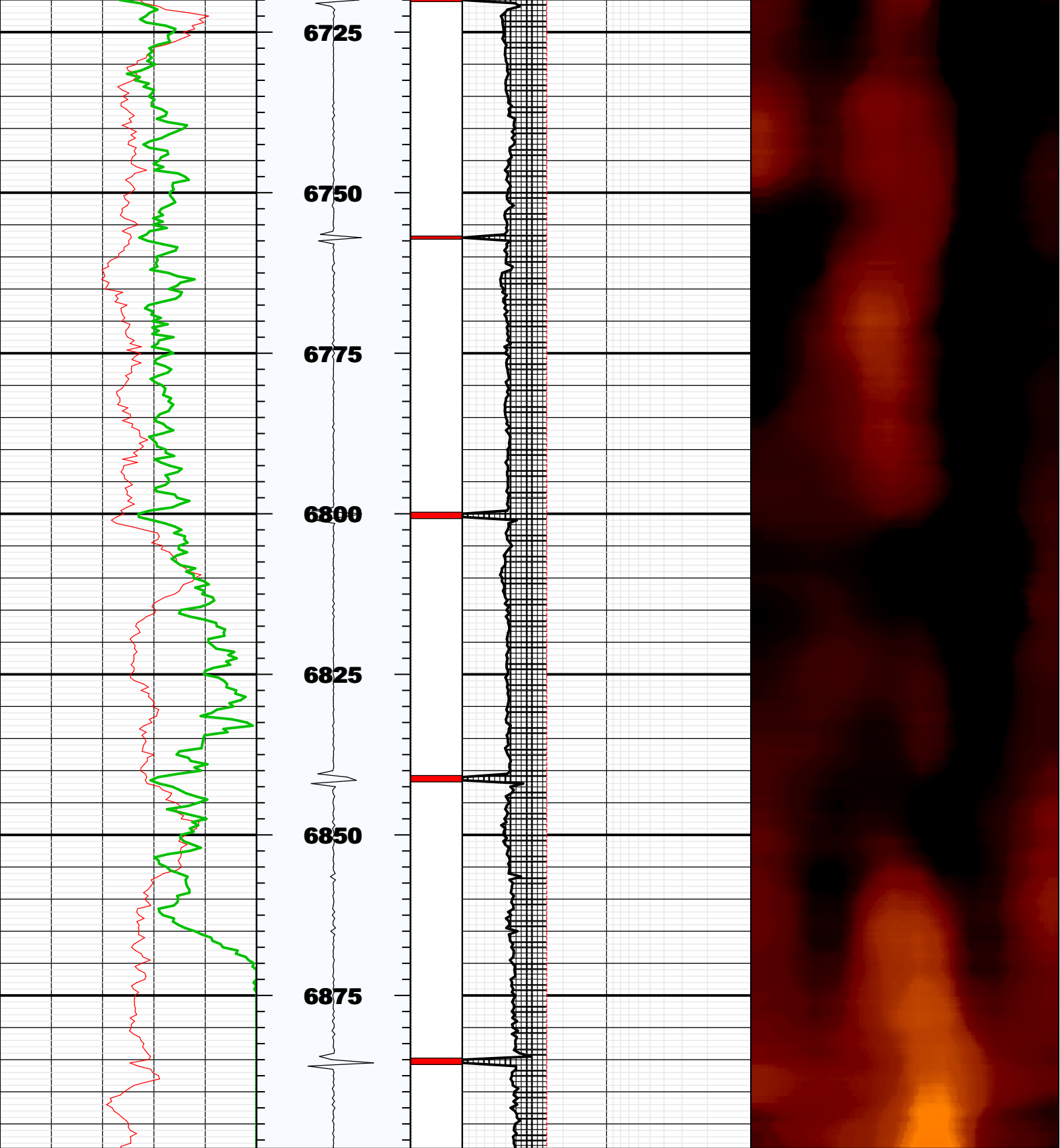








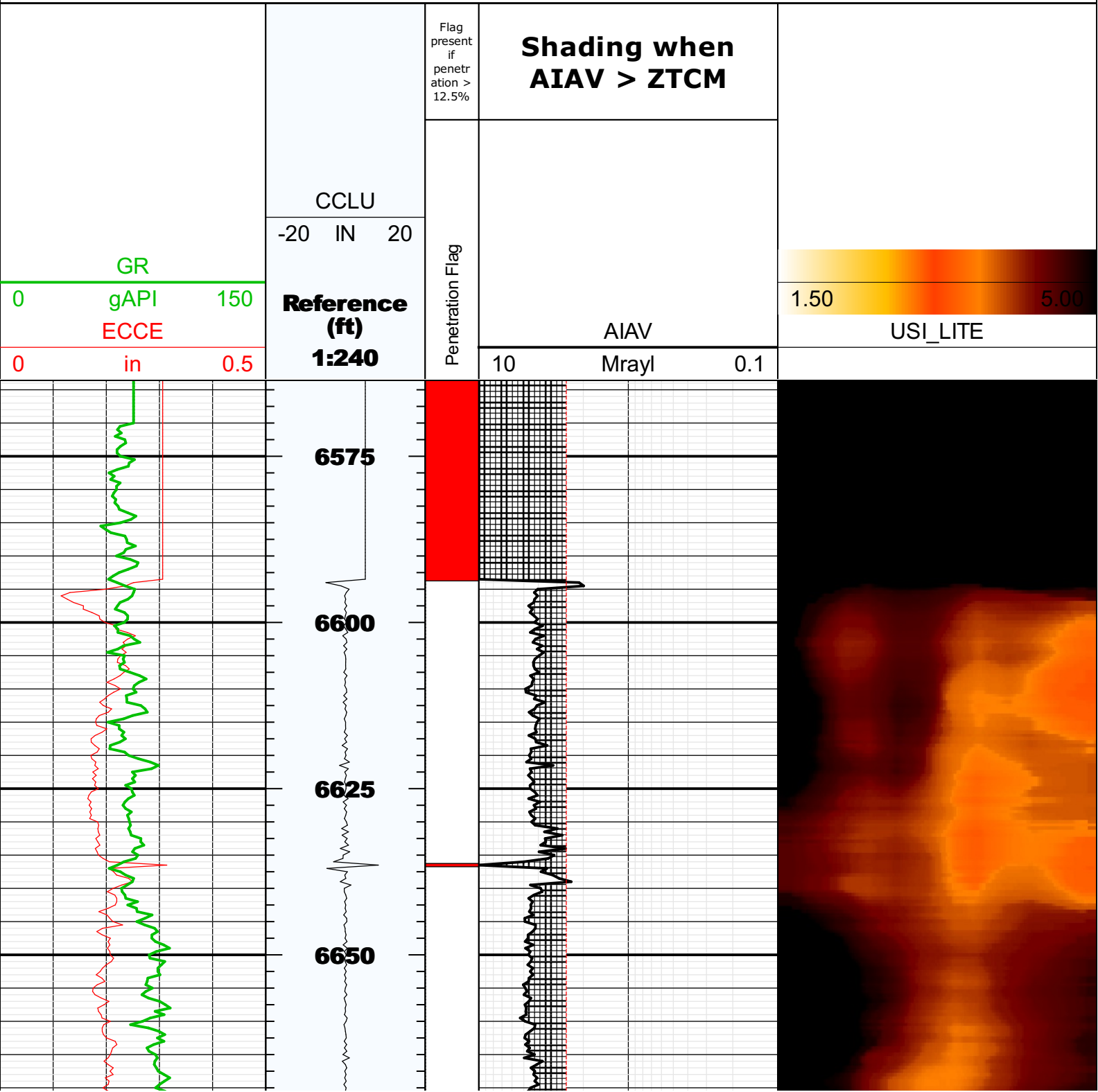


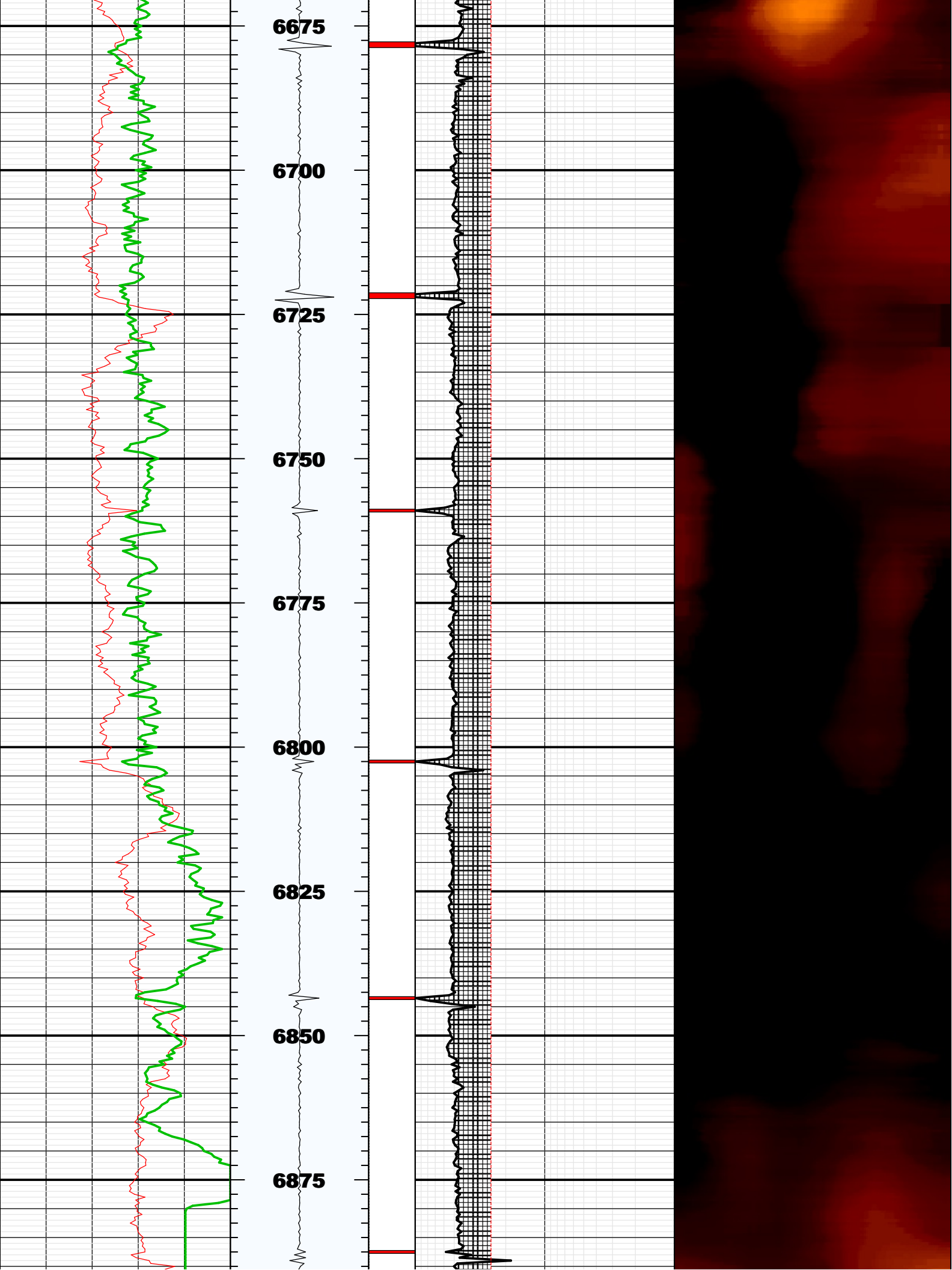


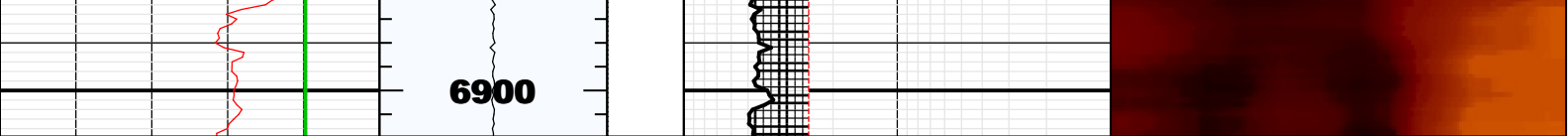
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID			
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	80	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	34.27380	US	Window Begin Time
WINE	85.69053	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.79000	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 [^] 3 Processing Length

Repeat Pass

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Field: Wattenberg







Fluid Properties Used for Main Pass

