

Company: Noble Energy Inc

Well: Christine LC27 765  
Field: Wattenberg  
County: Weld  
State: Colorado

County: Weld		Field: Wattenberg		Location: SHL NENW 660' FNL & 1590' FW		Well: Christine LC27 765		Company: Noble Energy Inc	
USI-LITE		LOCATION		Permanent Datum: Log Measured From: Drilling Measured From:		GL KB KB		Elev: K.B. 4857.0 F G.L. 4827.0 F D.F. 4856.0 F	
Logging Date	05-Jun-2015	API Serial No. 05-123-40631	Section 34	Township 9N	Range 59W				
Run Number	Run 1								
Depth Driller	6479.0 F								
Schlumberger Depth	6479.0 F								
Bottom Log Interval	6270.0 F								
Top Log Interval	60.0 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	6479.0 F								
Casing Size	7.00 IN								
Weight	26.00 LB/F								
Grade	P110								
From	0.0 F								
To	6469.0 F								
Max Recorded Temp	219.0								
Logger on bottom (date)	05-Jun-2015								
Location	Fort Morgan CO								
Recorded By	Max Pace								
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: Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: Length: 24000.00000

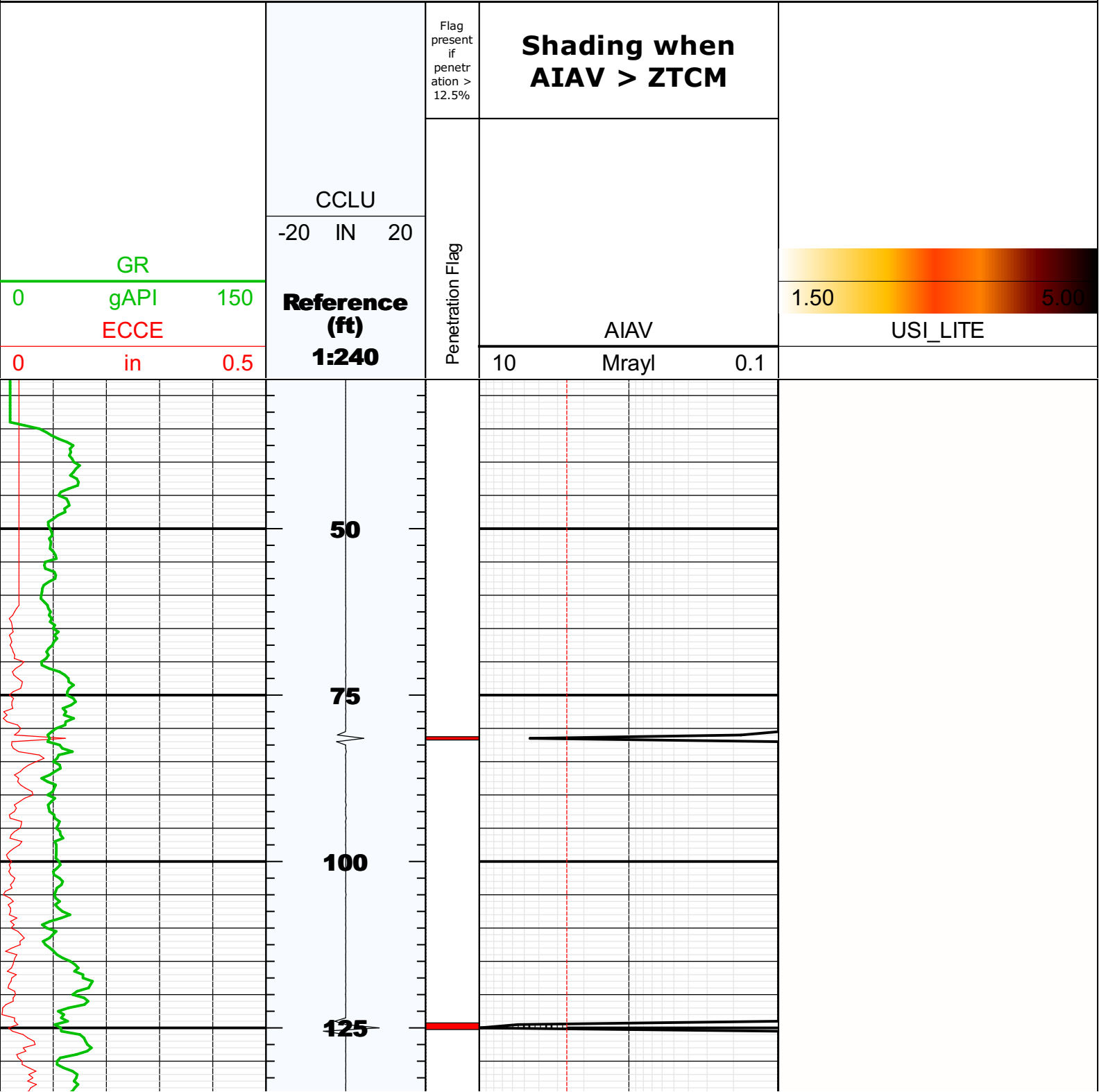
DISCLAIMER

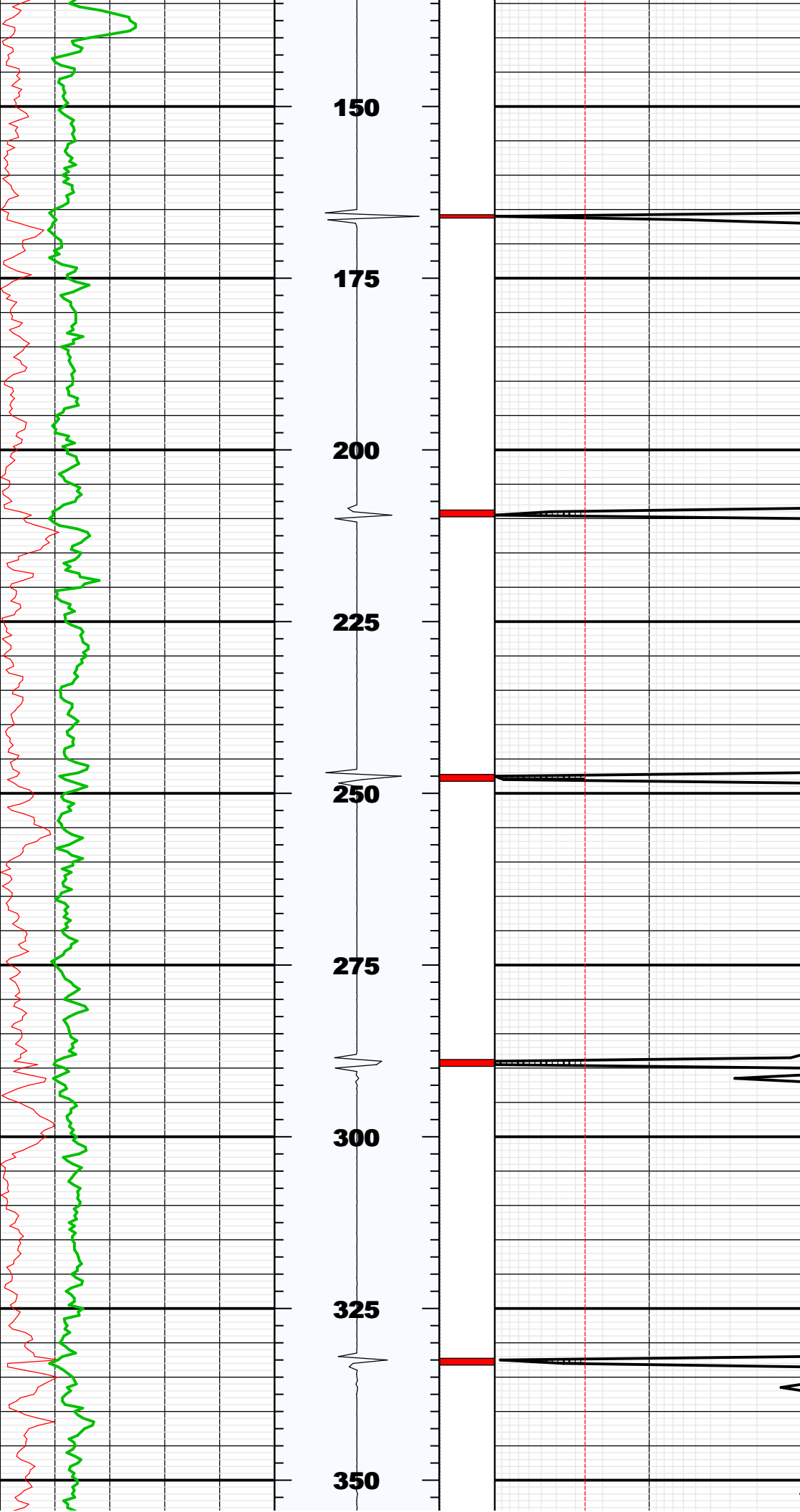
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIIONS ON USE OF THE RECORDED-DATA (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

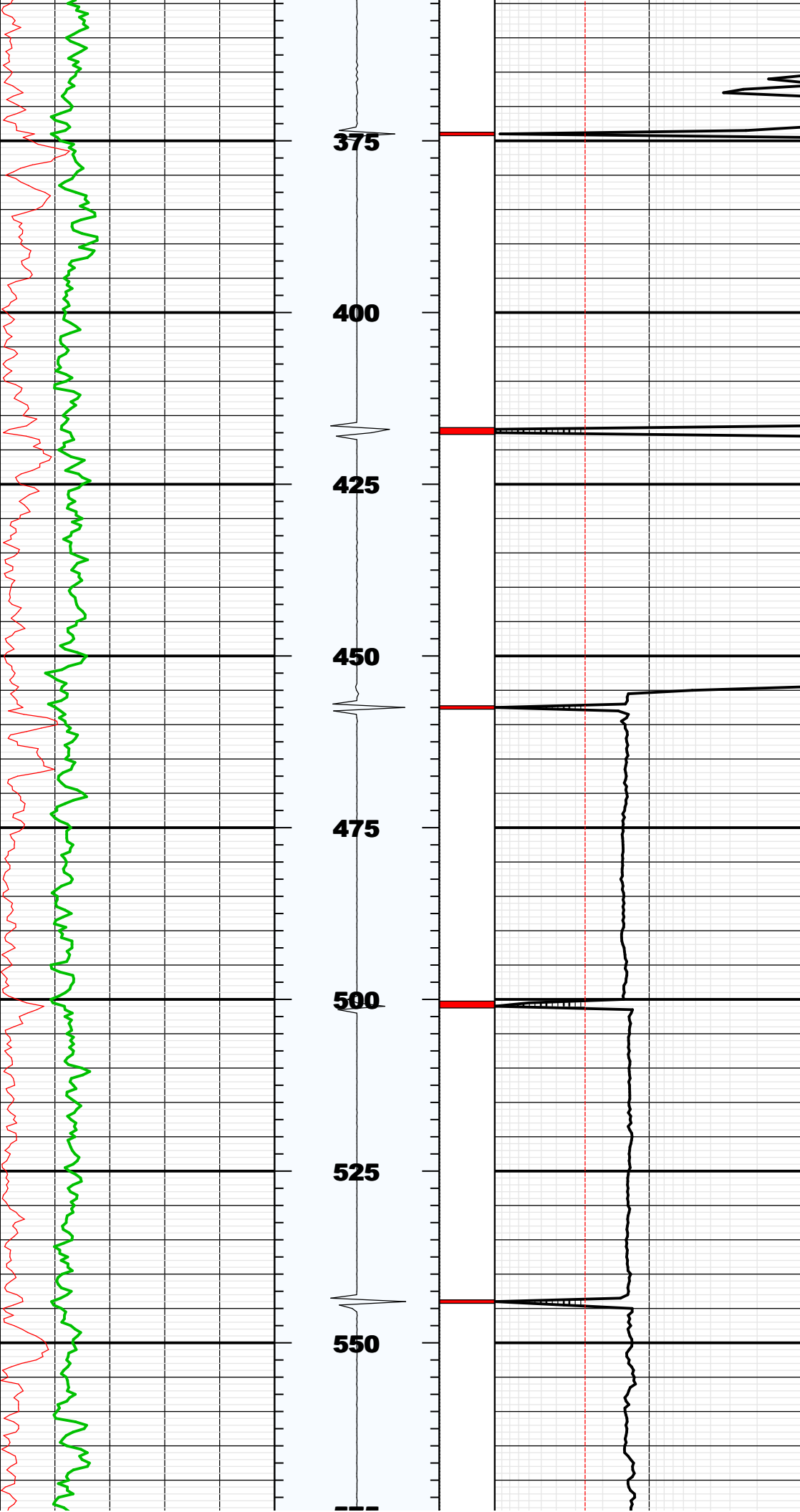
Bottom hole temperature 219 degF  
Top of cement 2060 feet  
Pressures repeat (0) main (2500)

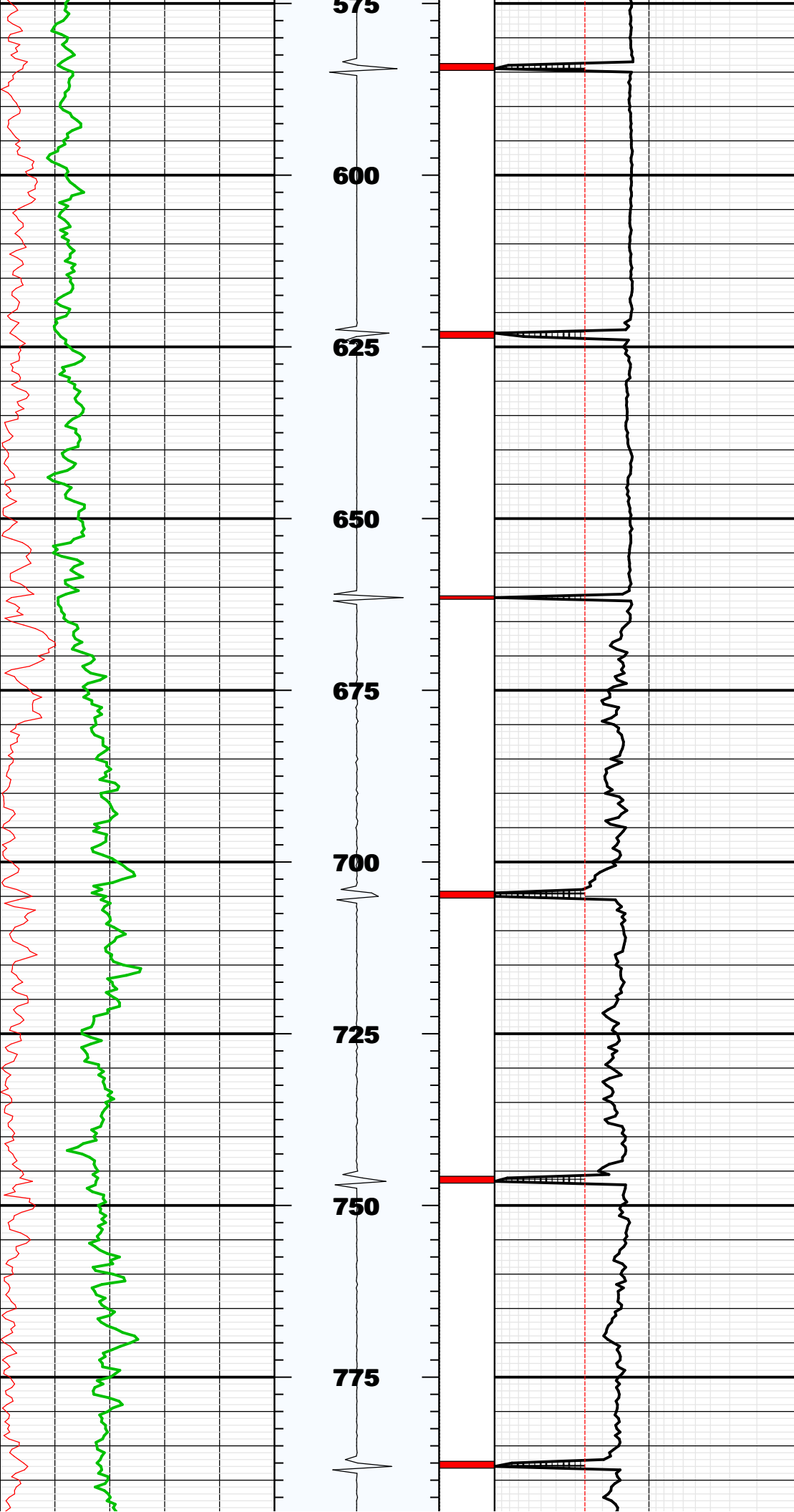
Main Pass

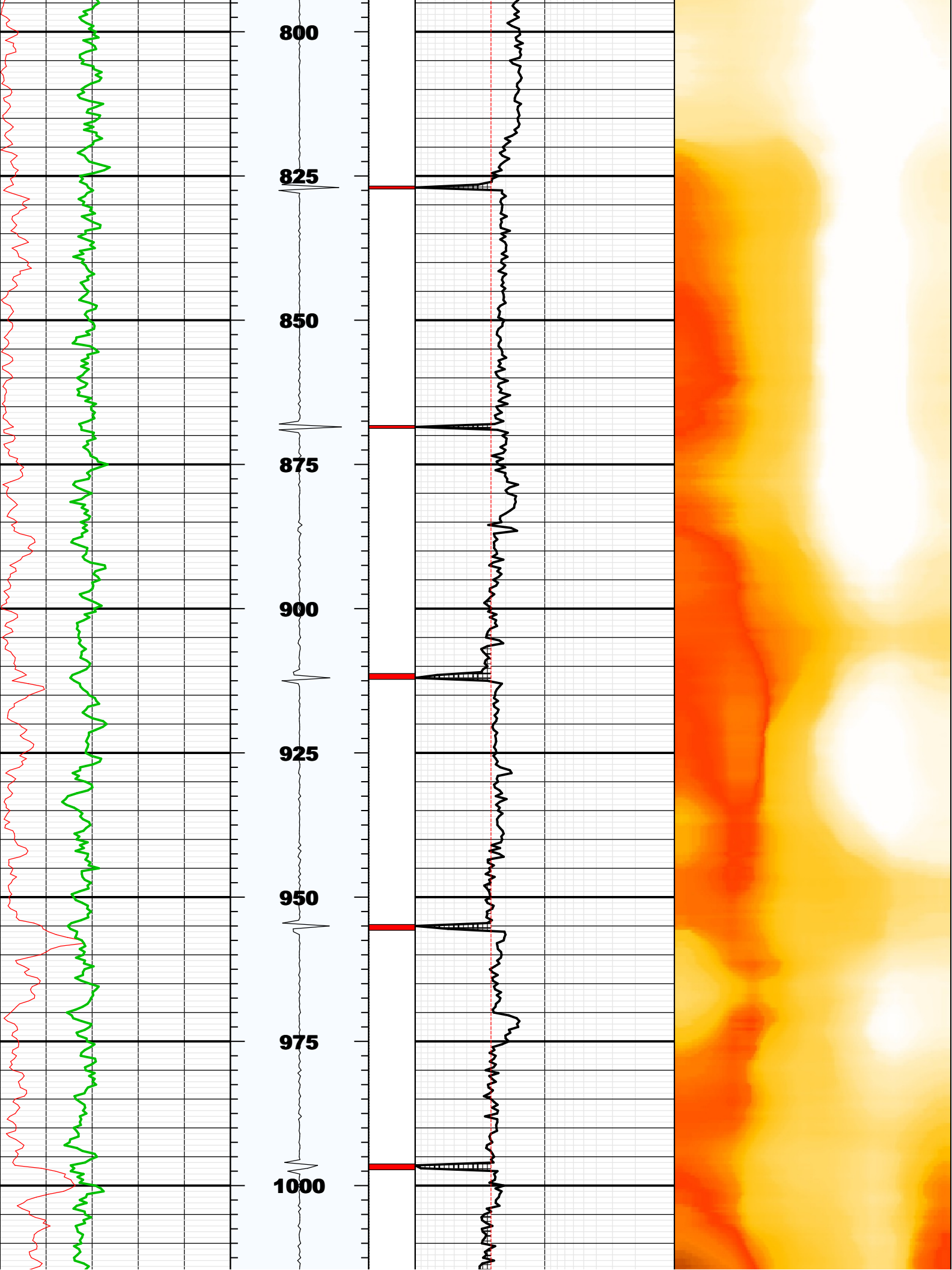
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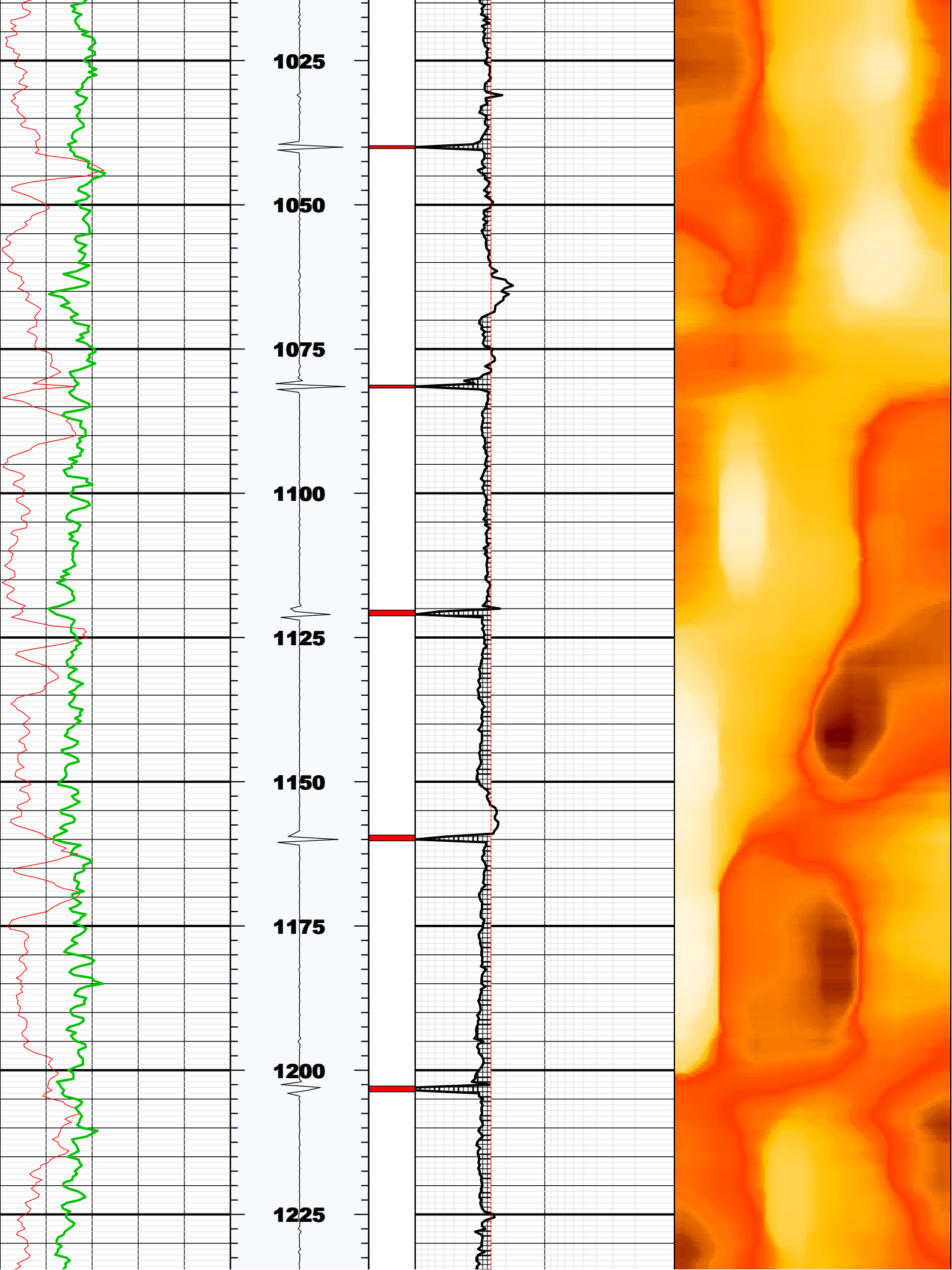


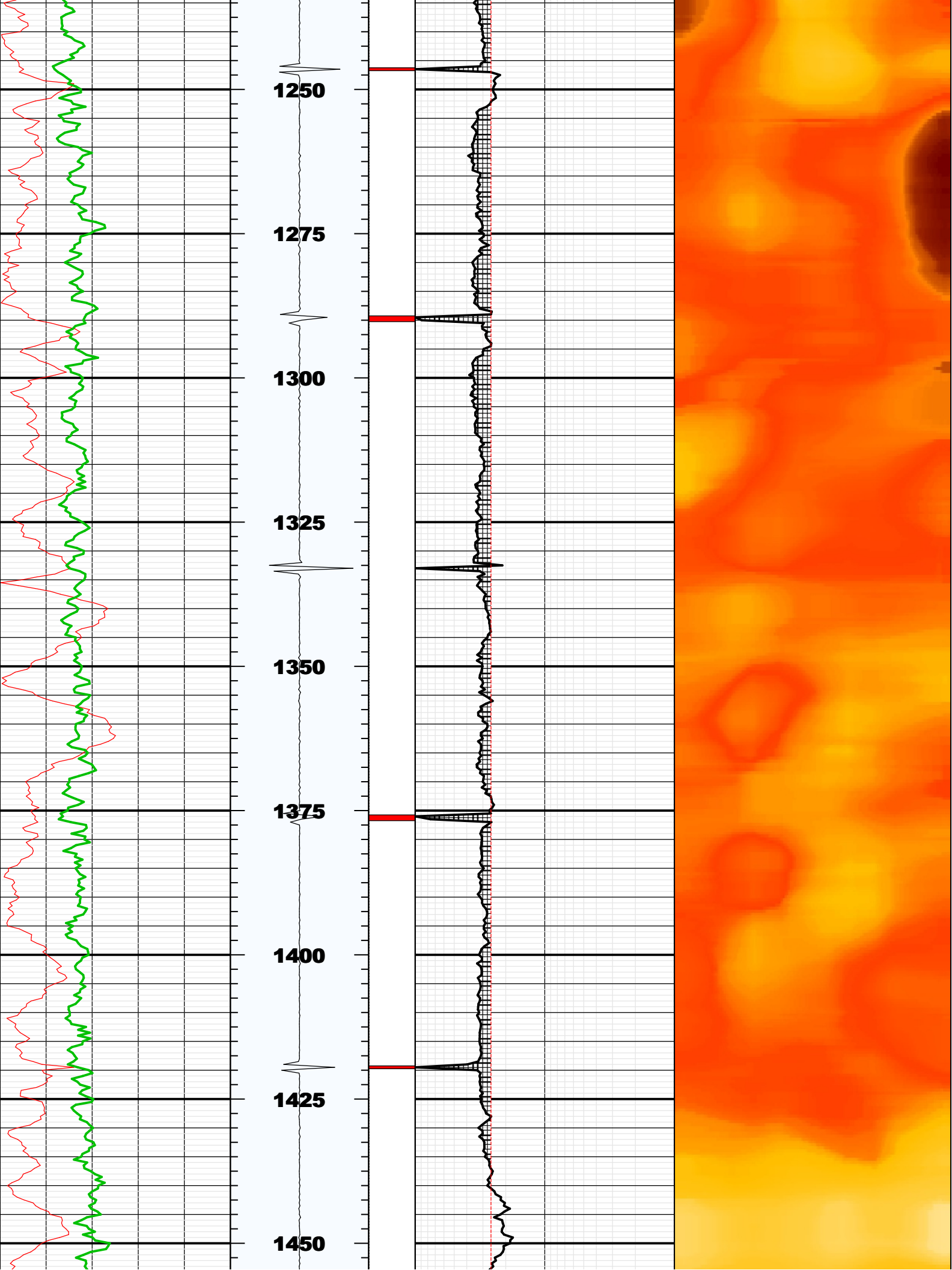


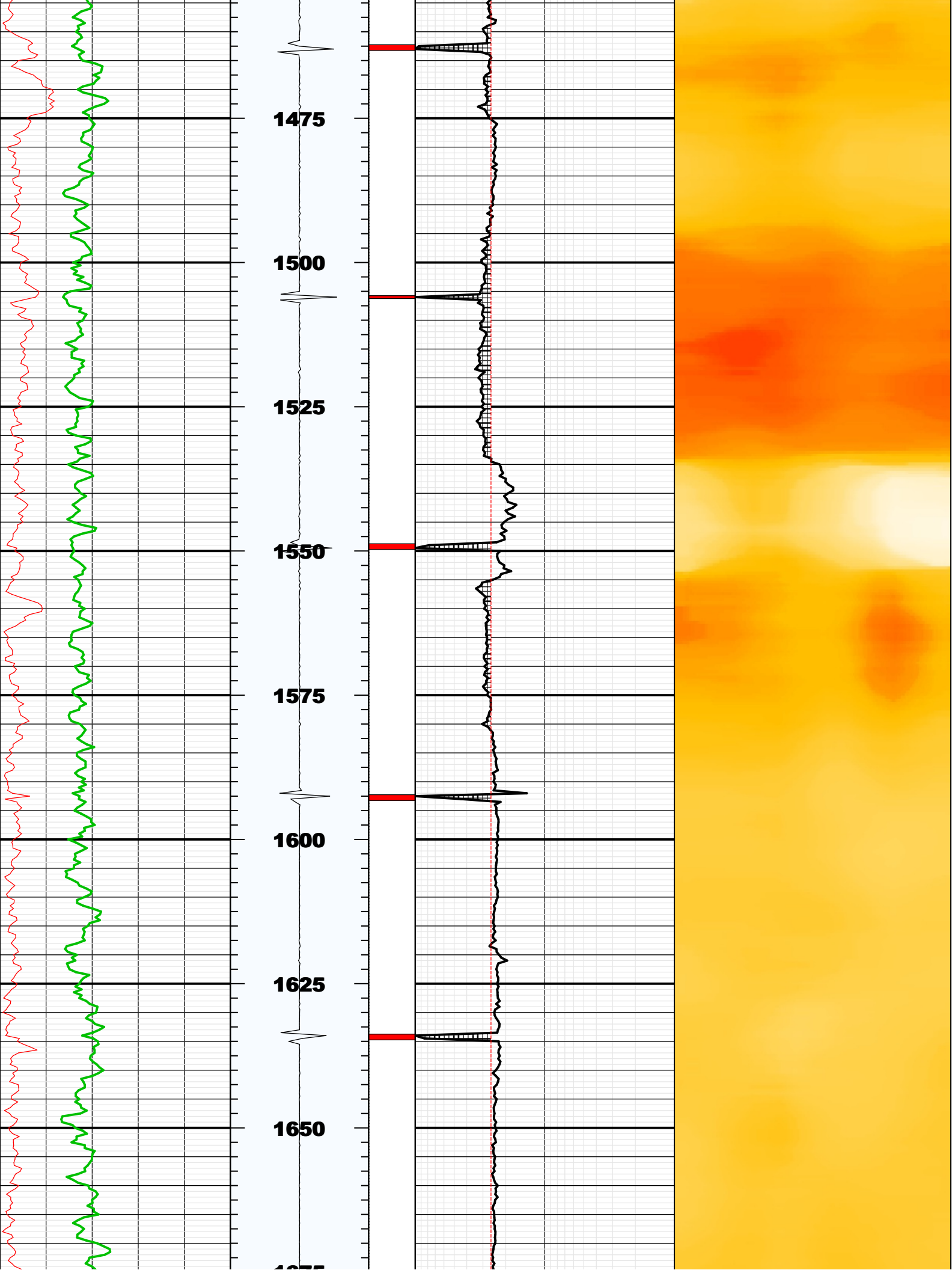


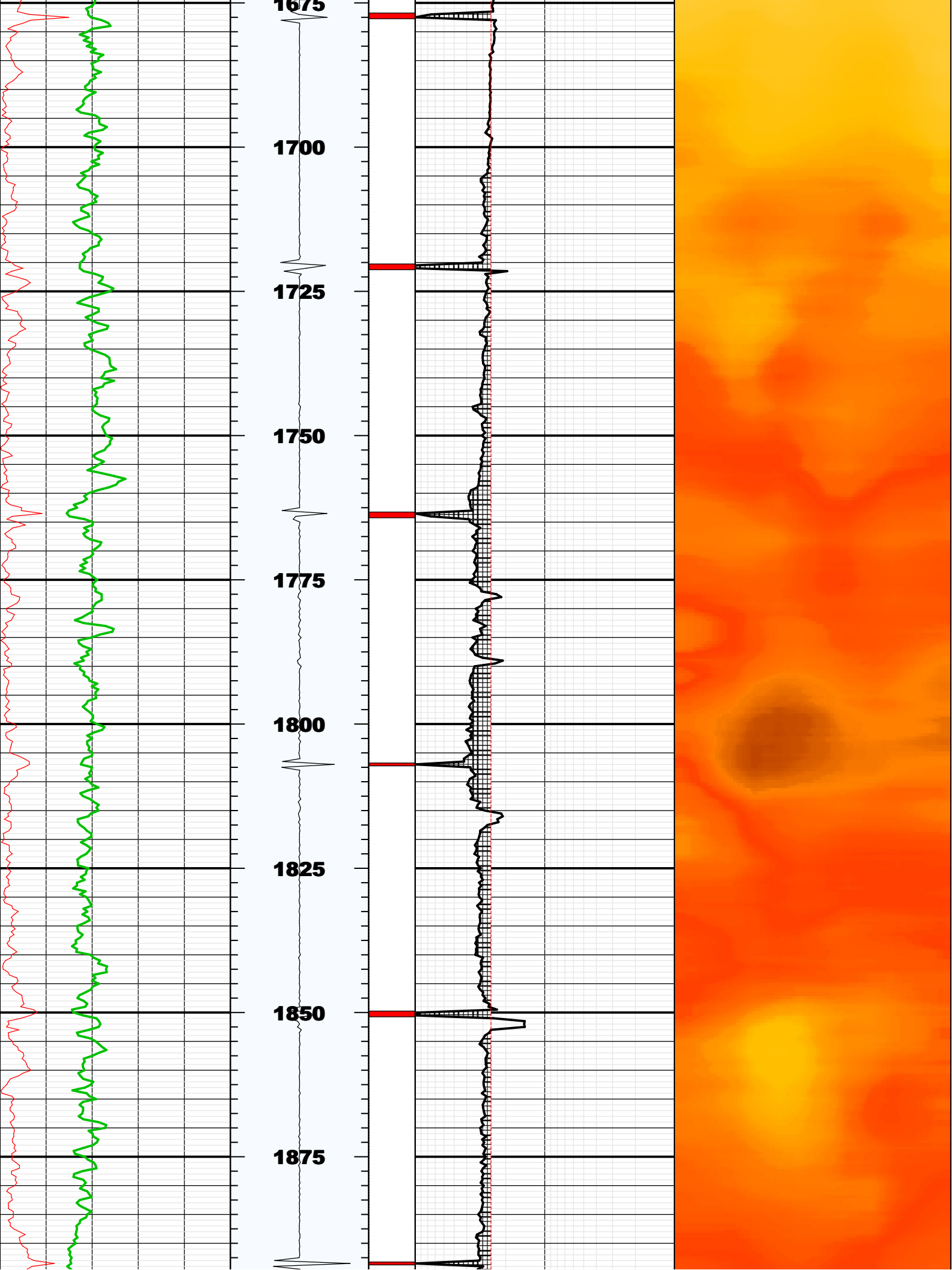


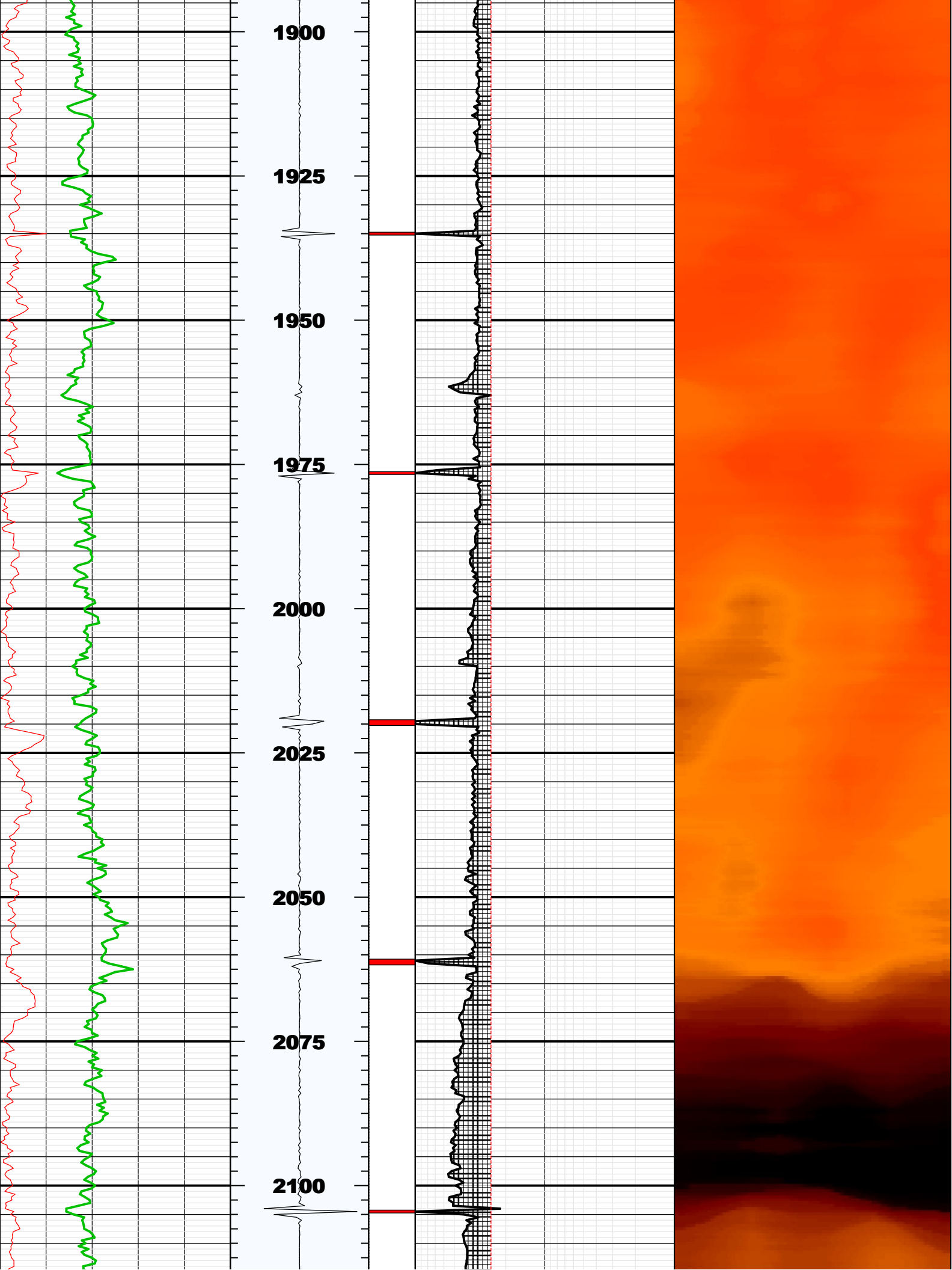


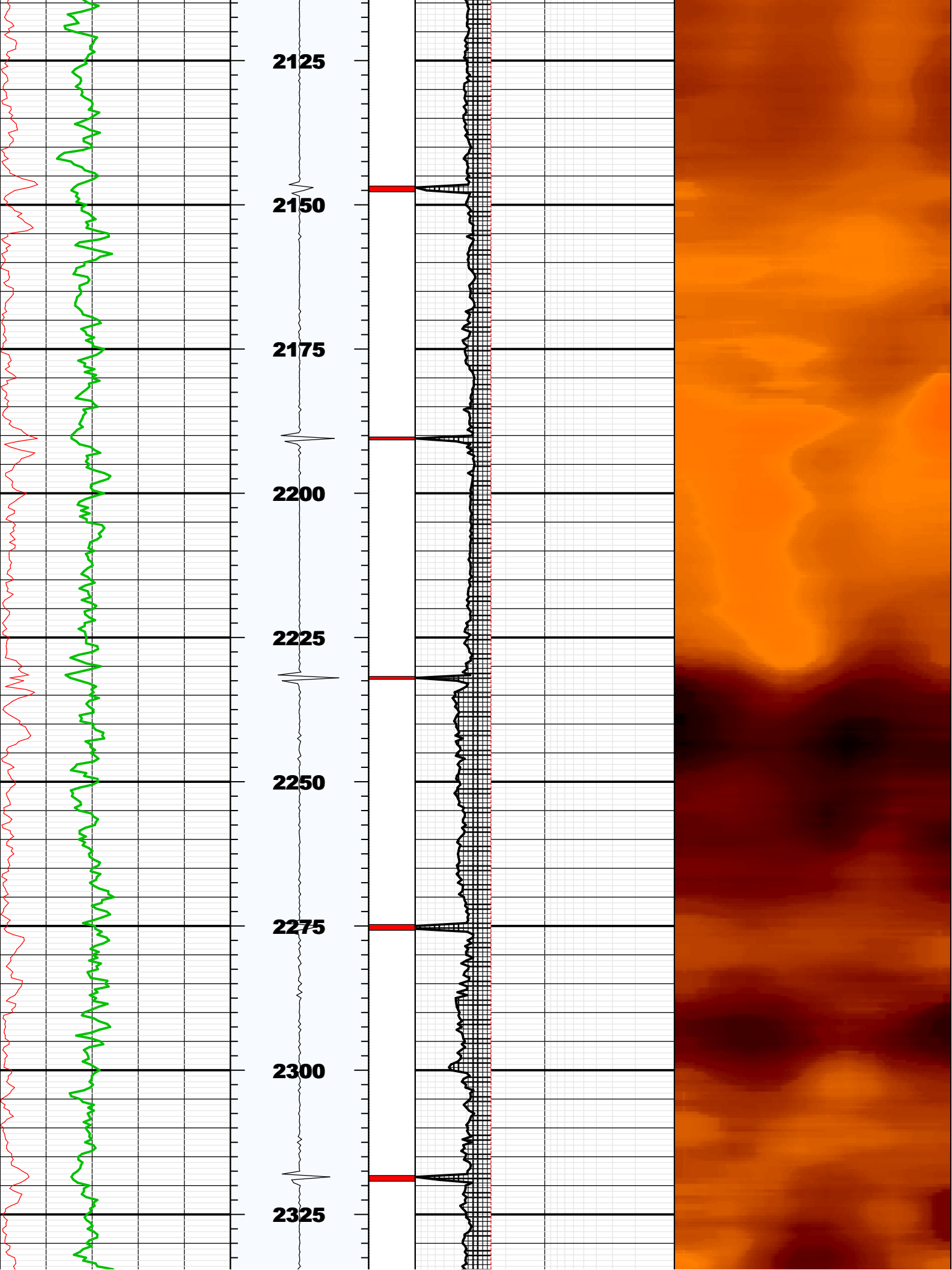


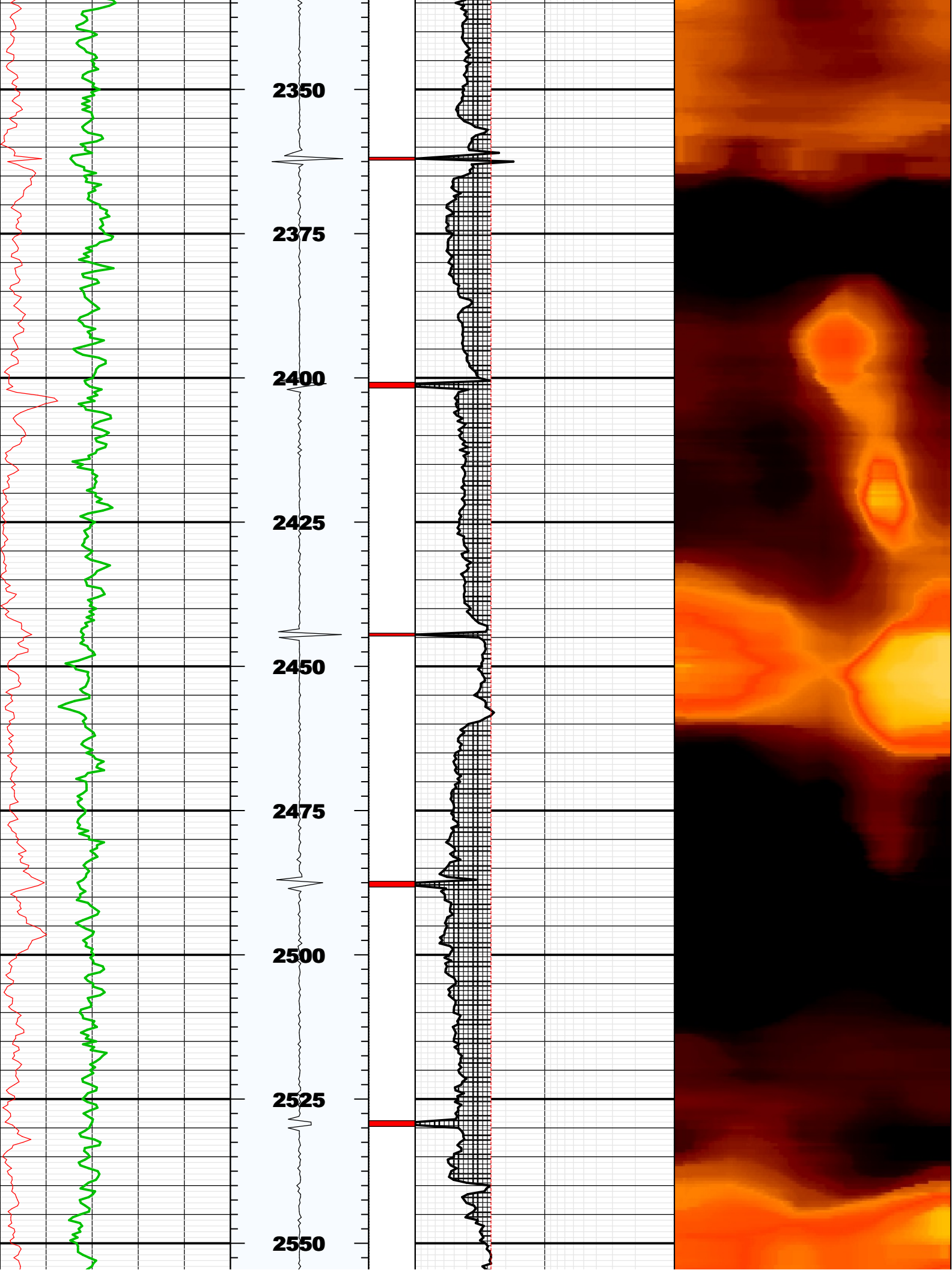


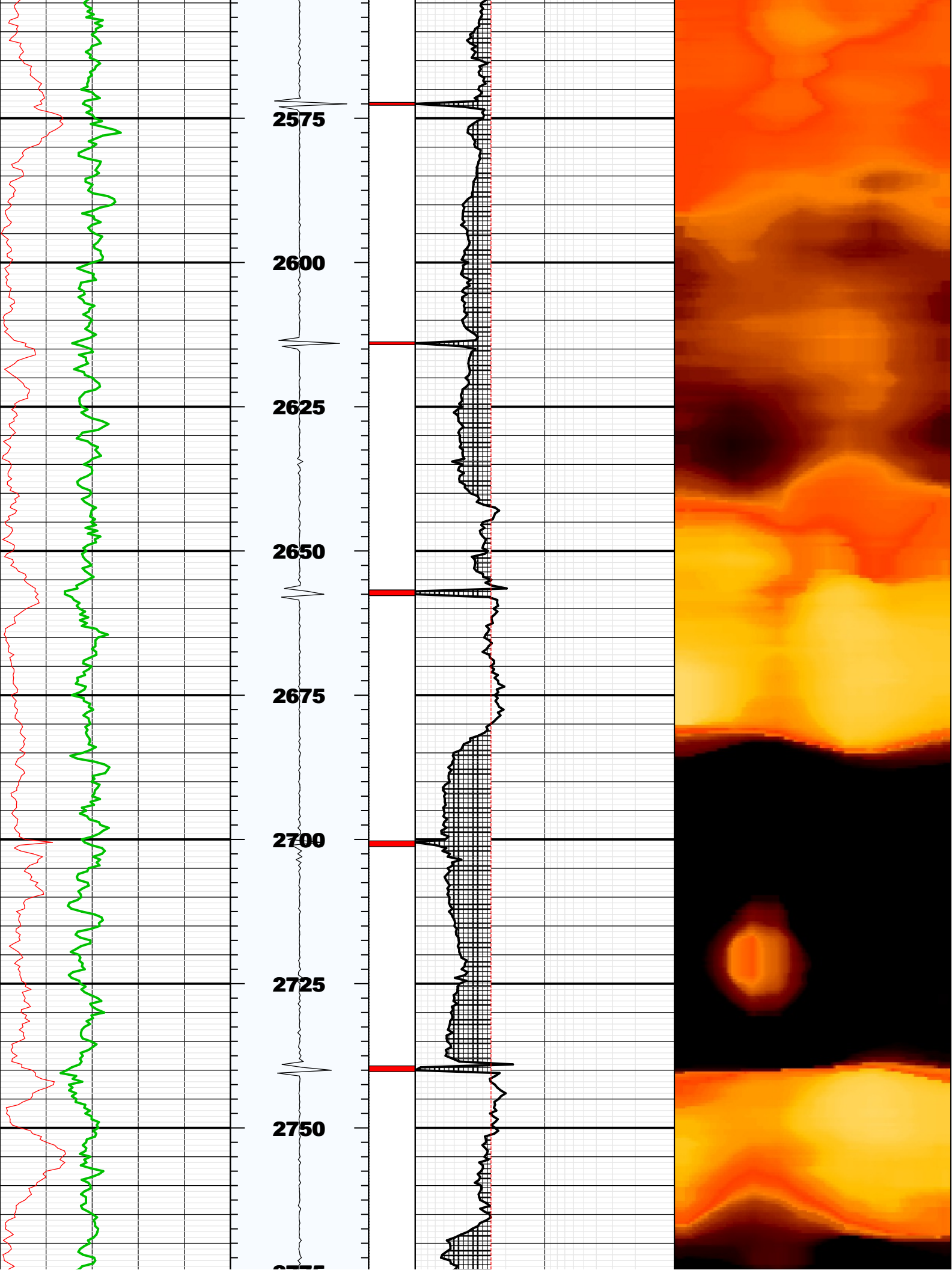


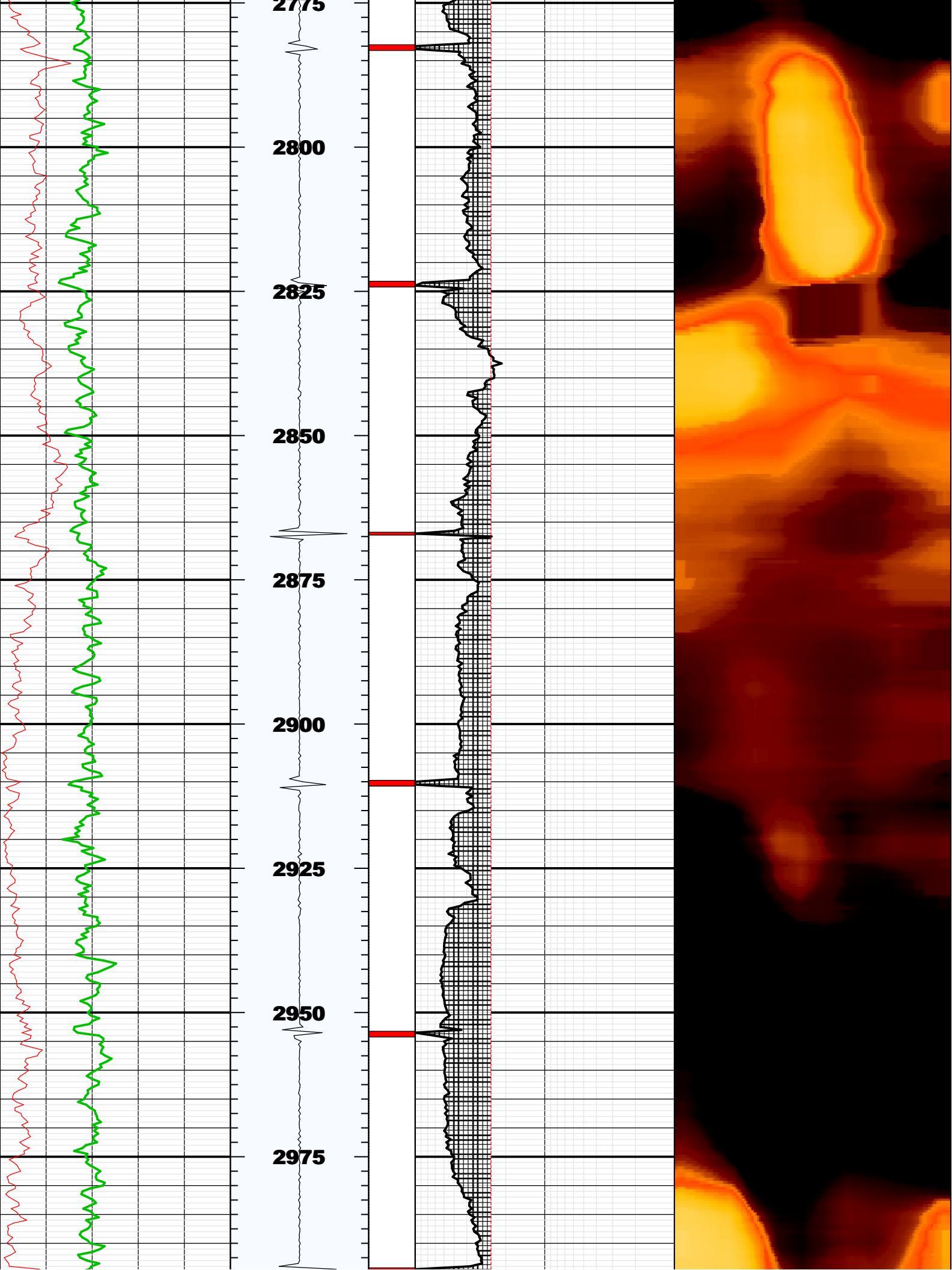


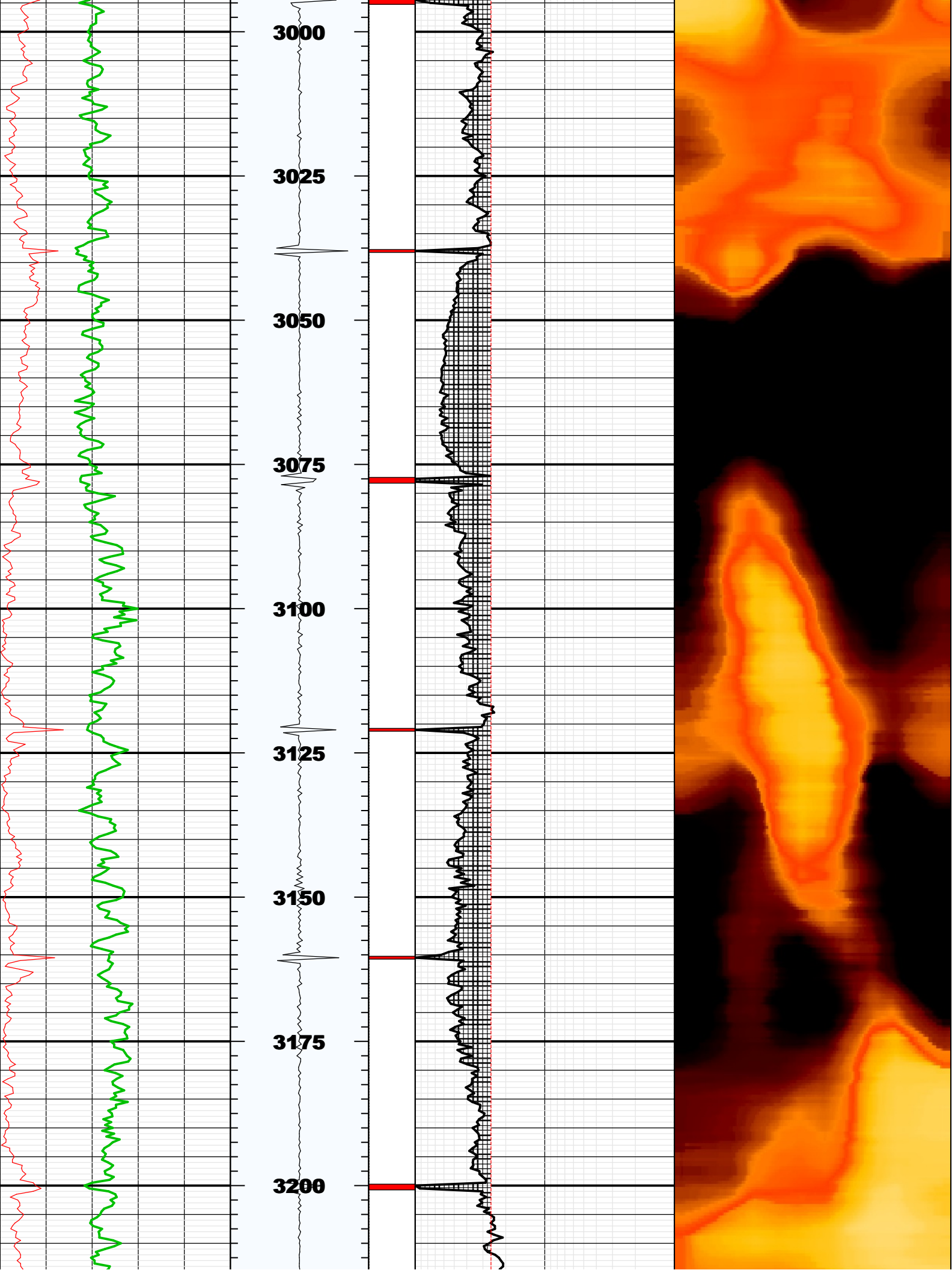


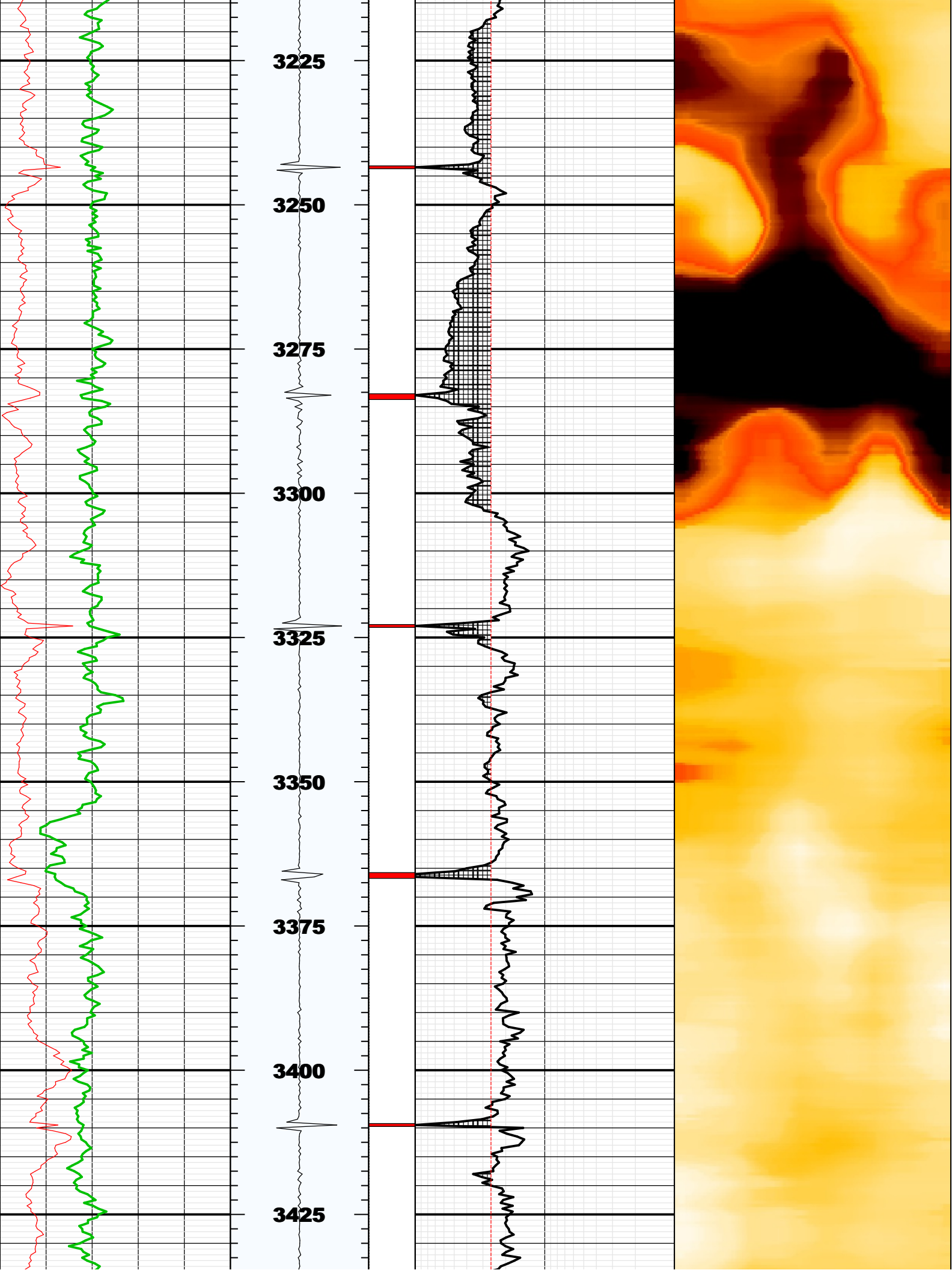


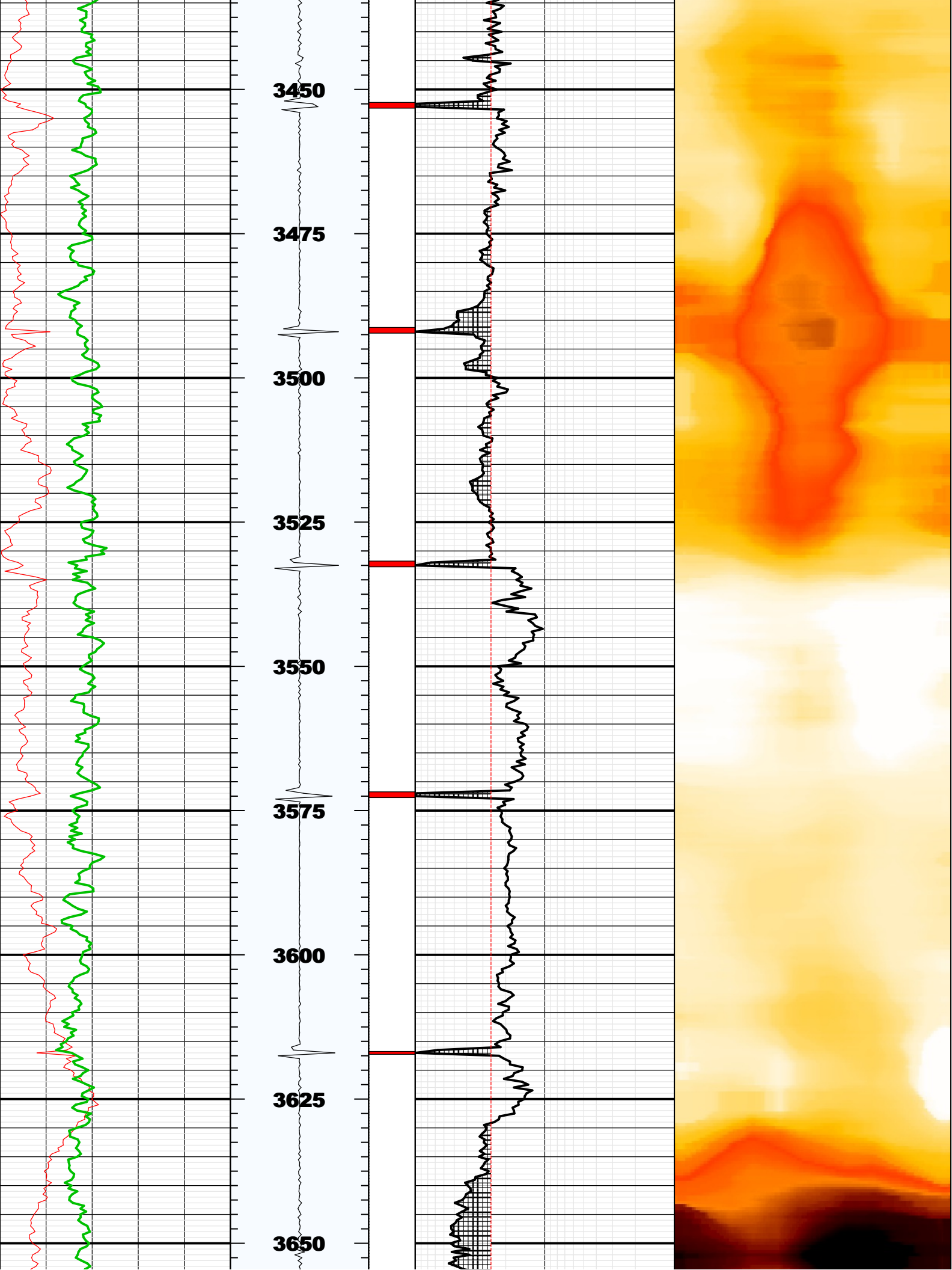


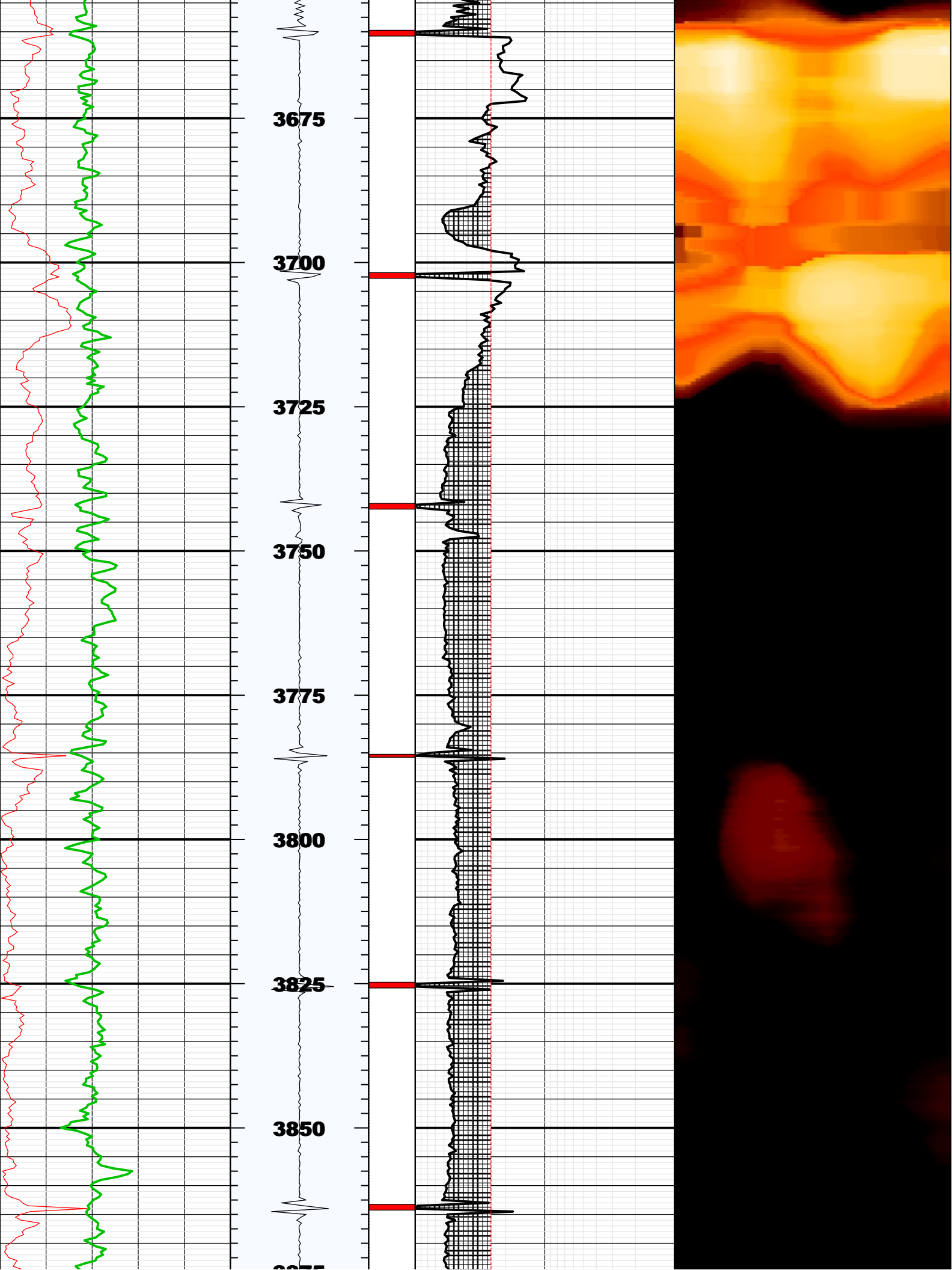


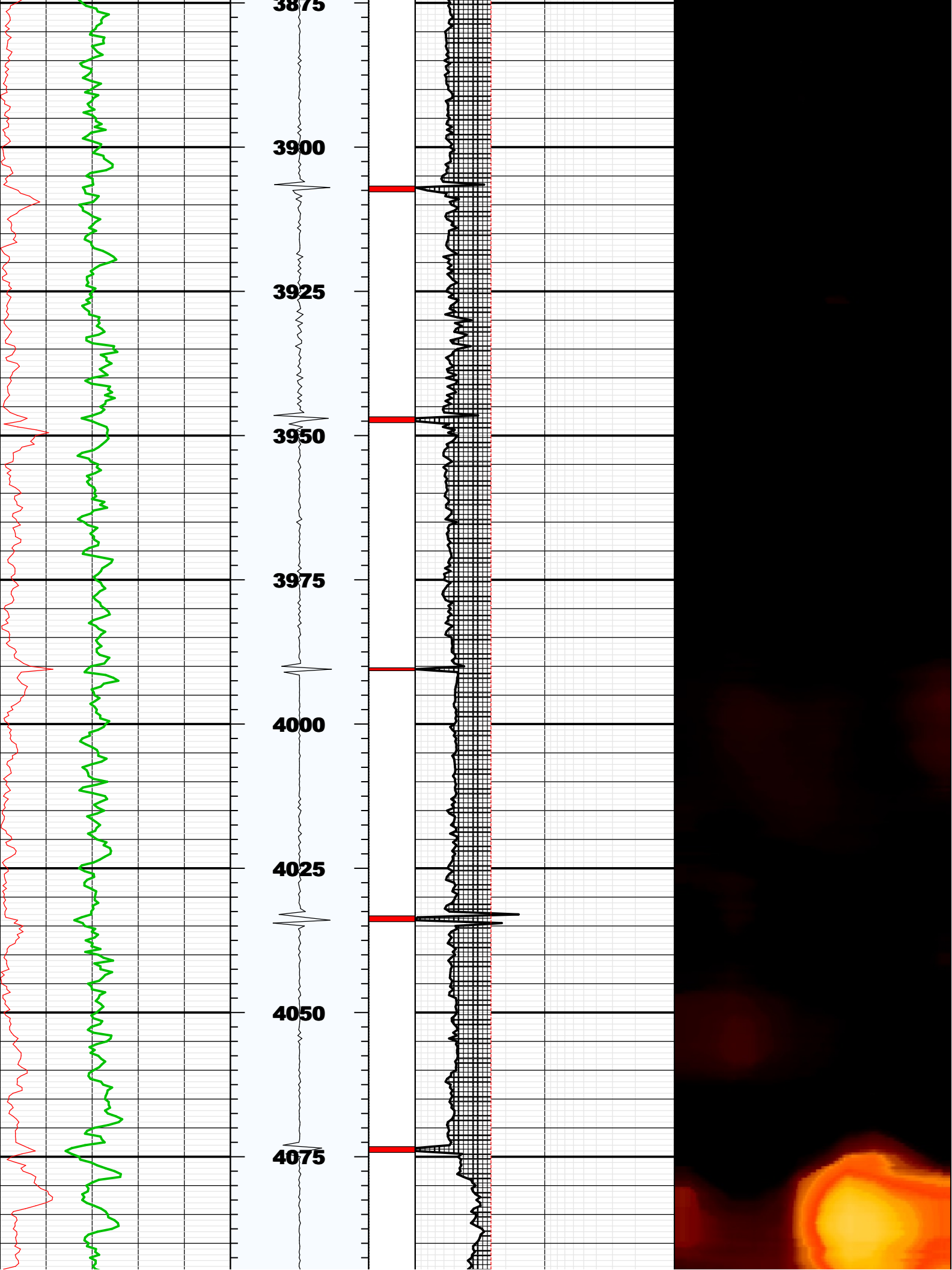


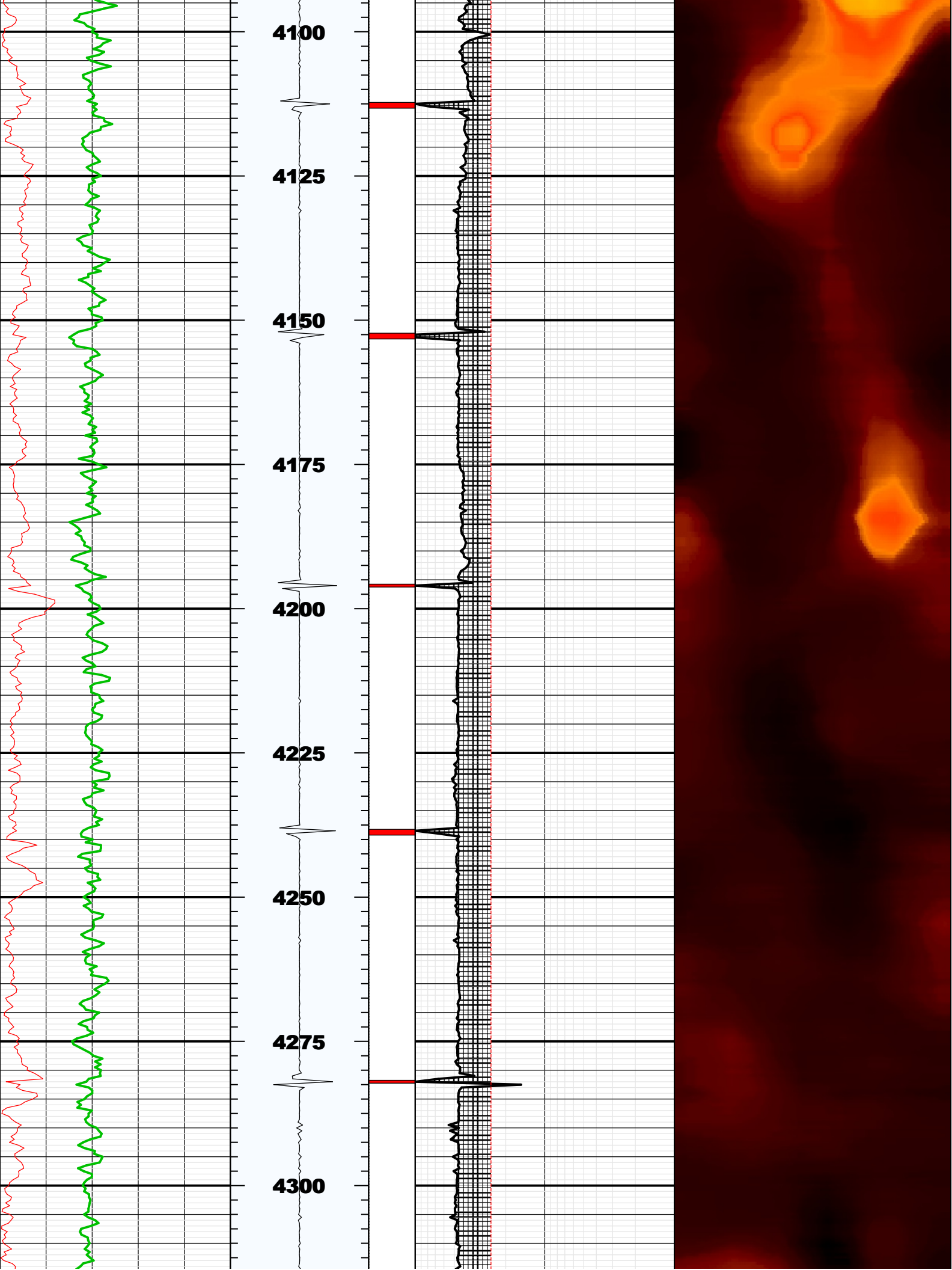


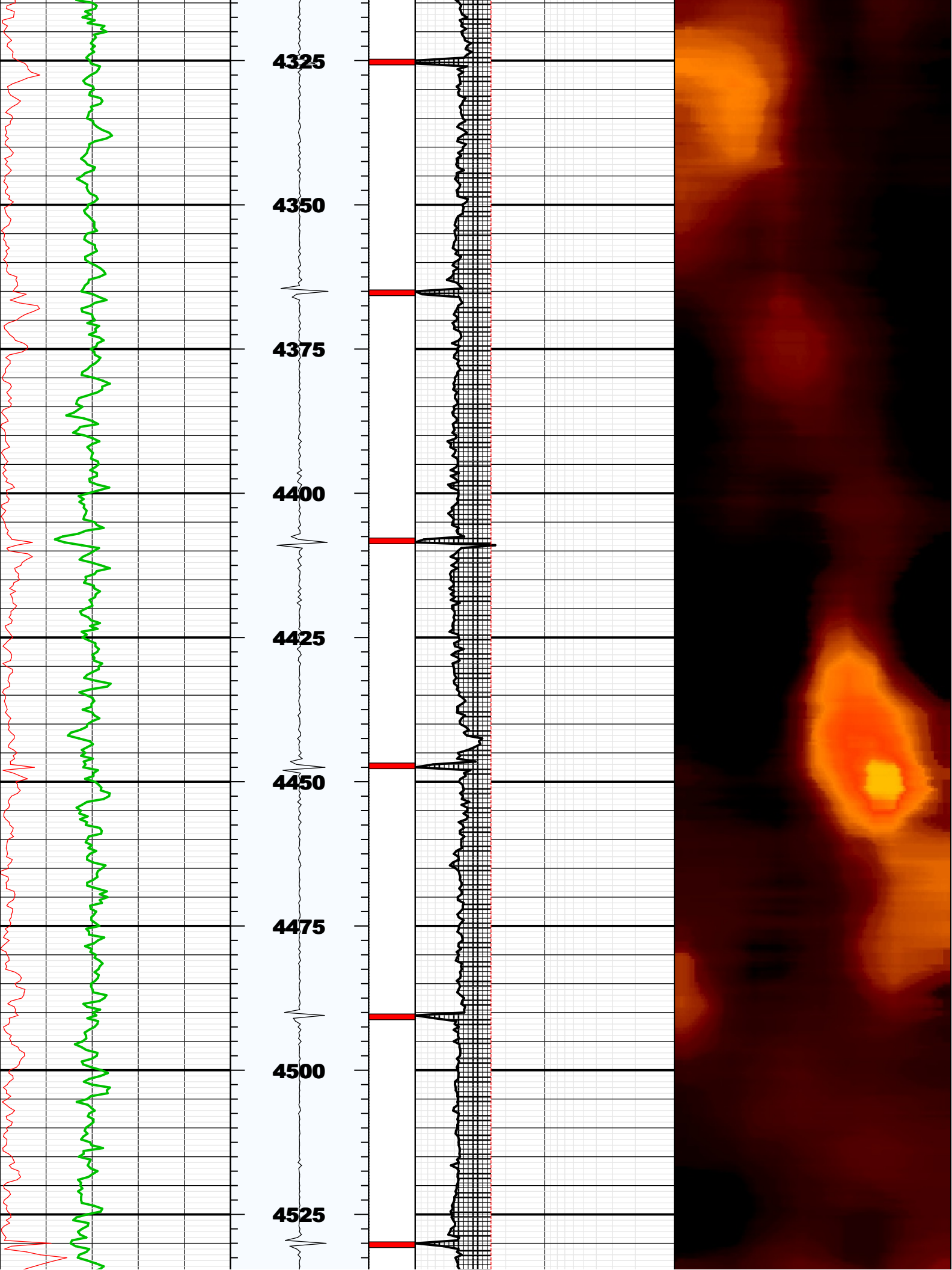


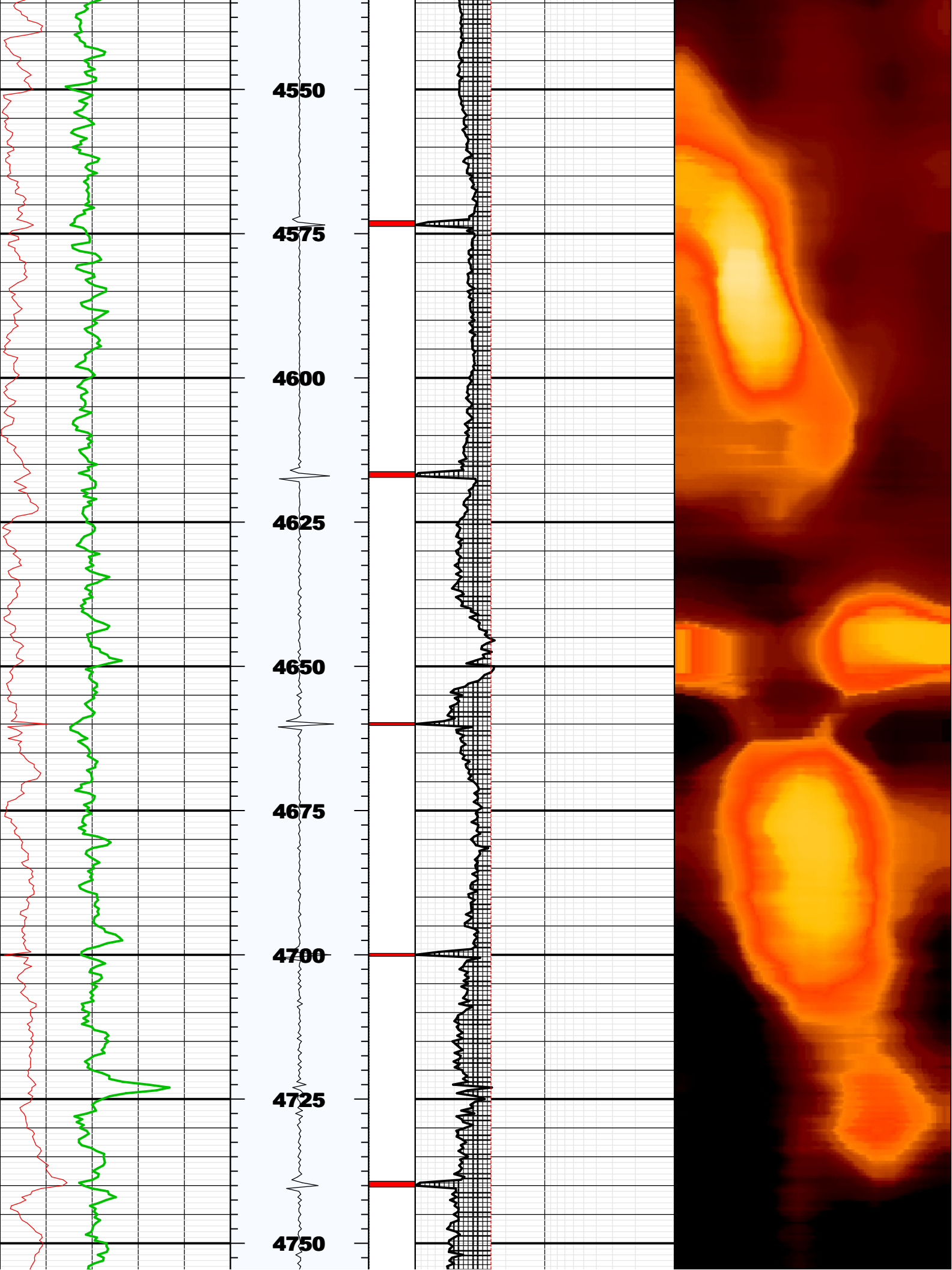


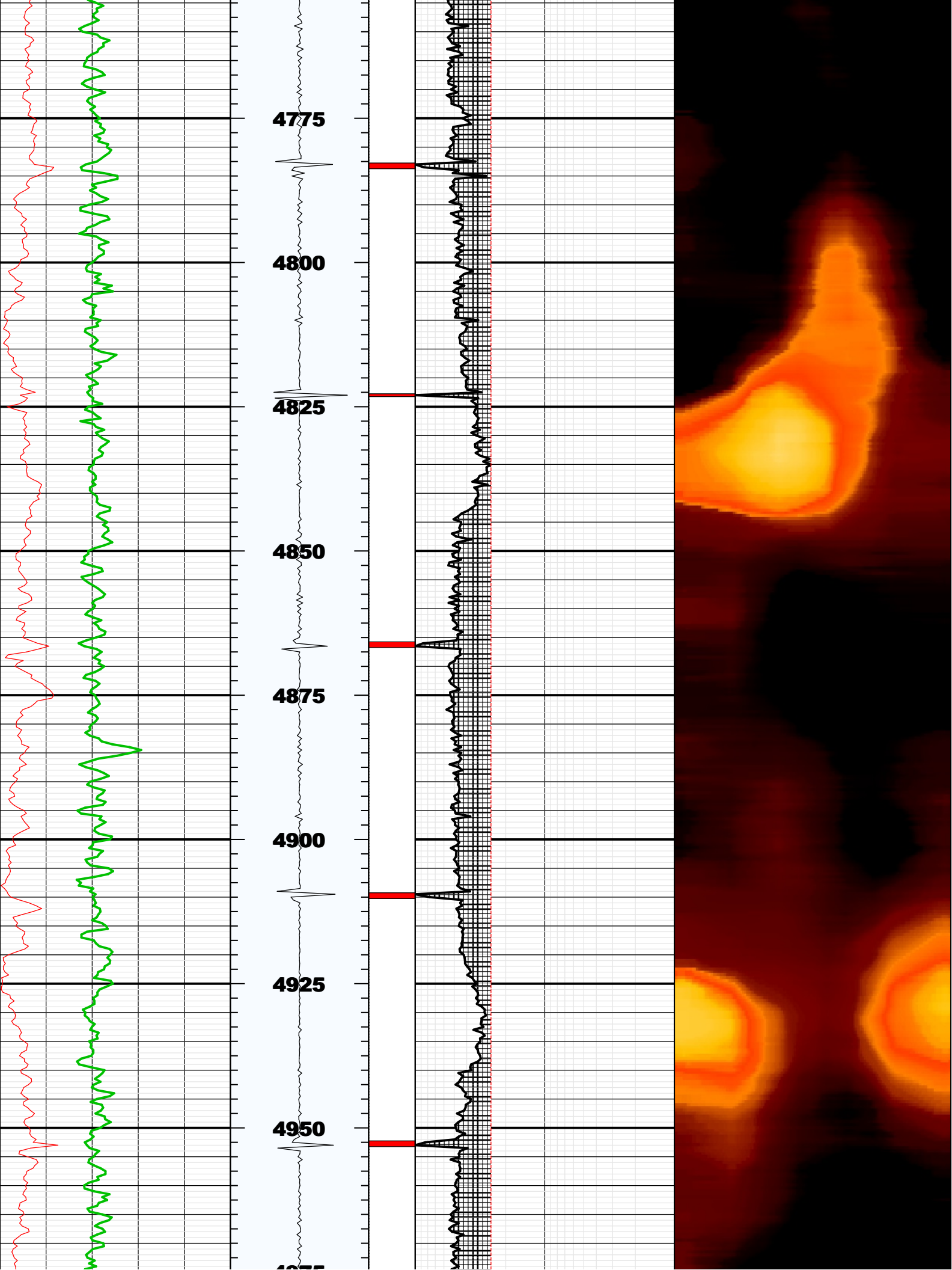


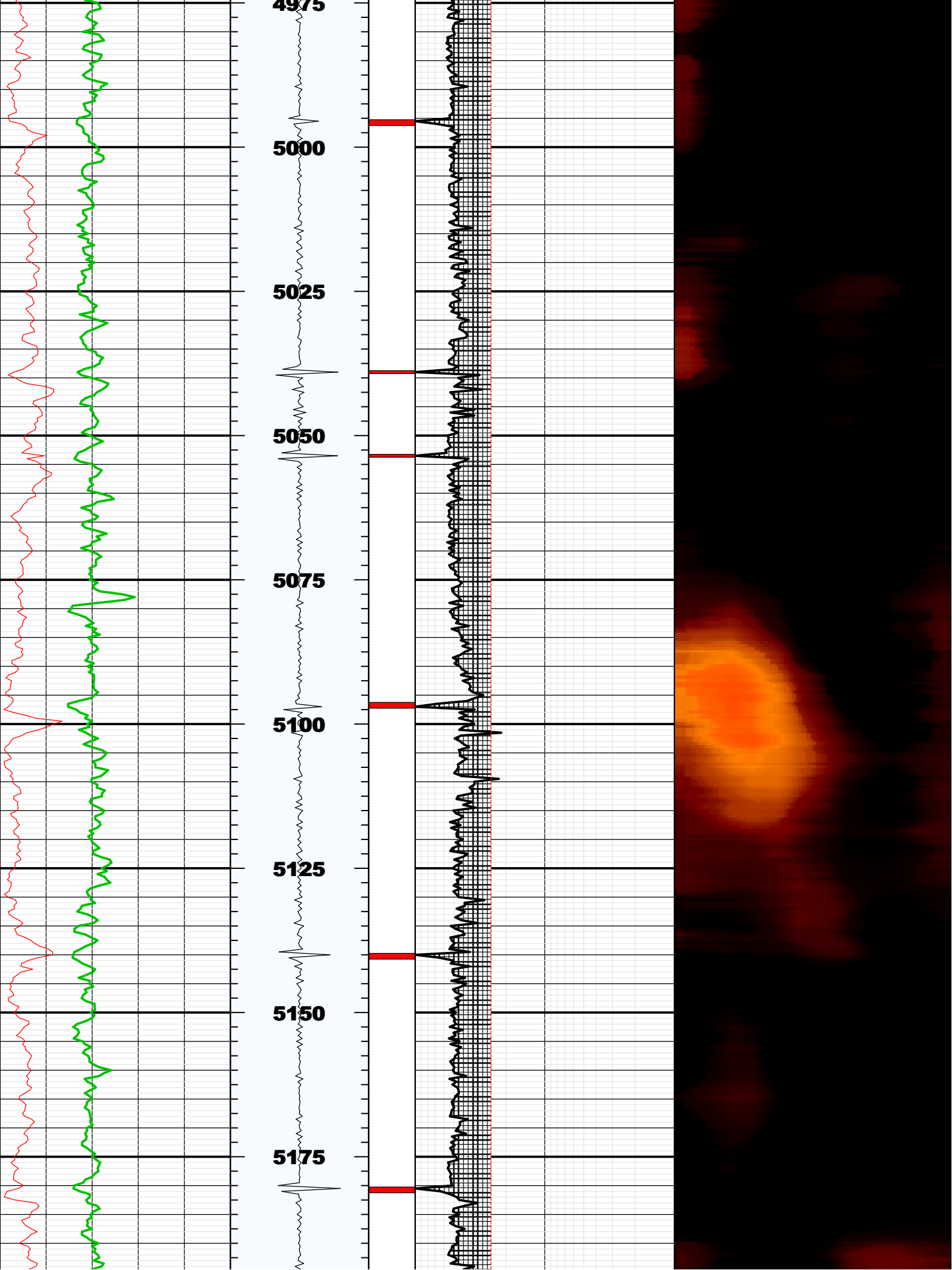


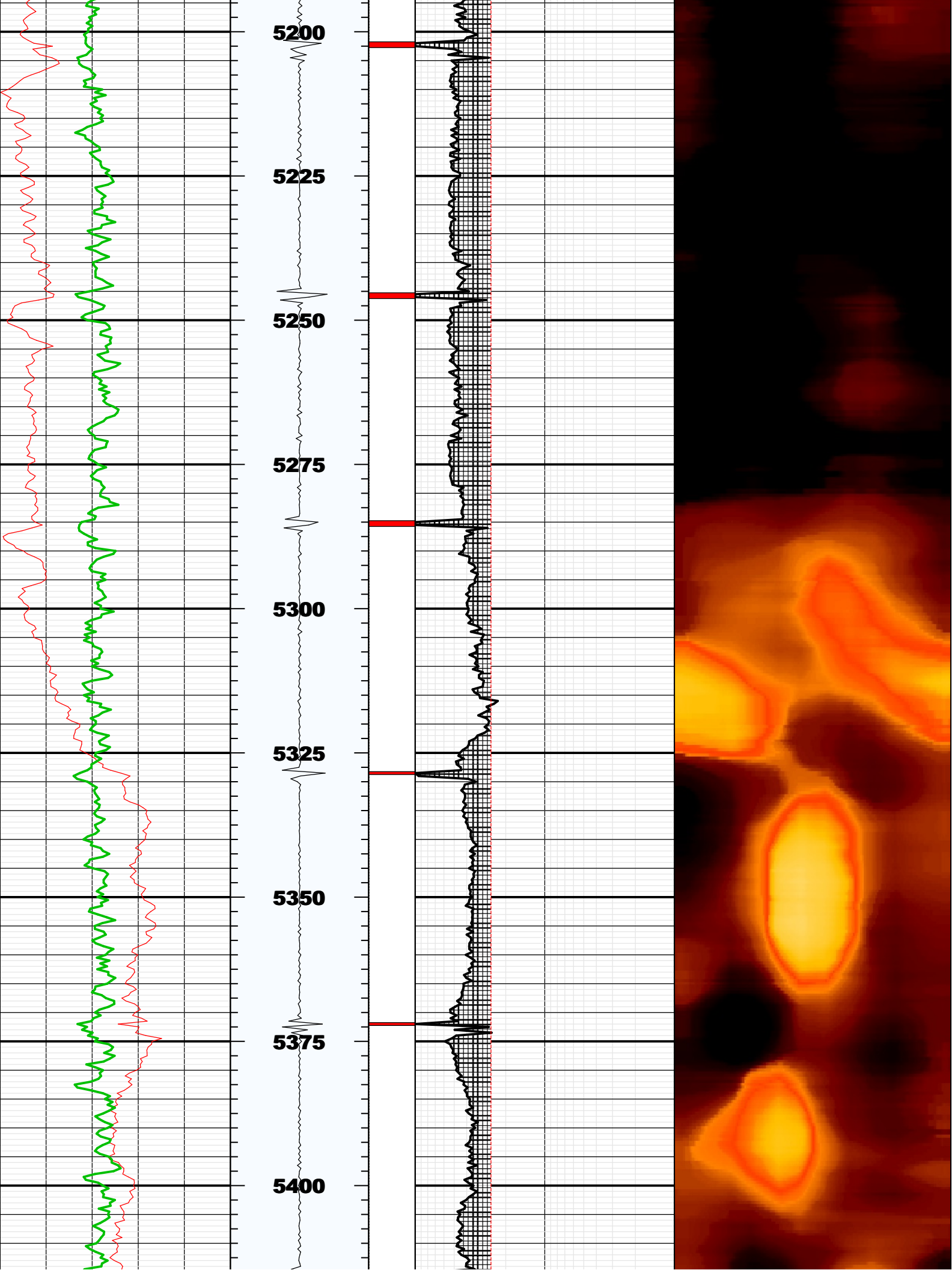


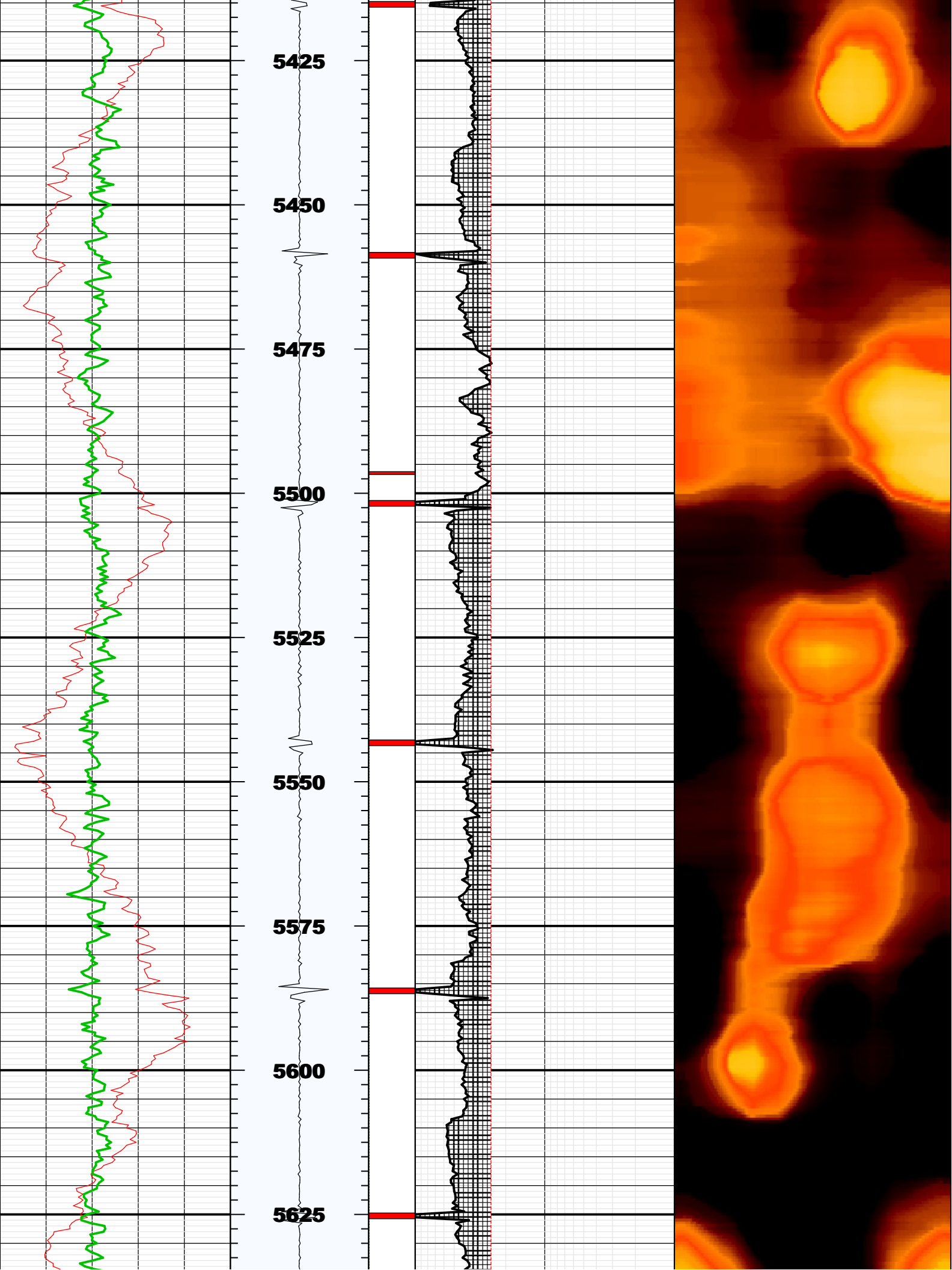


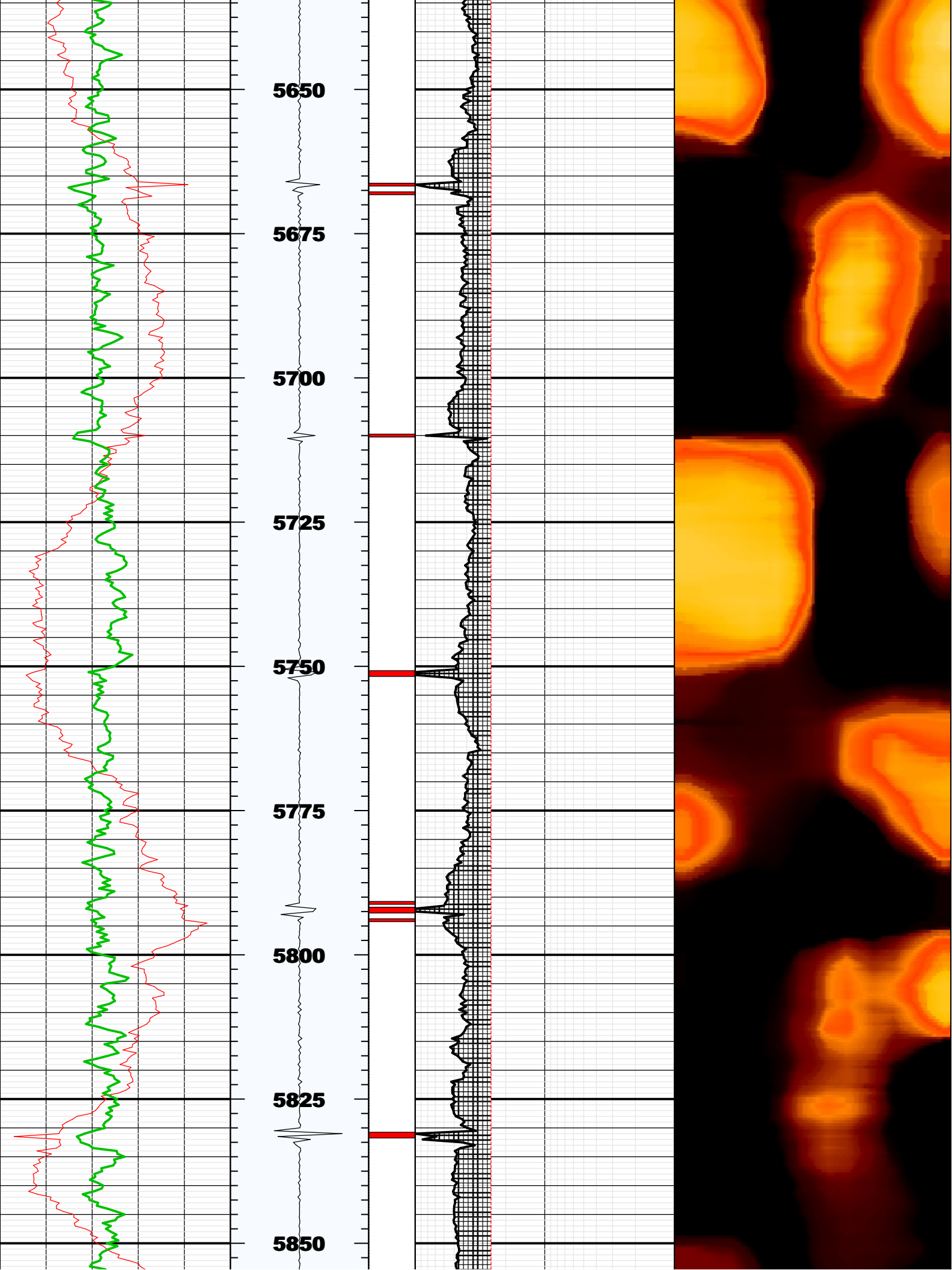


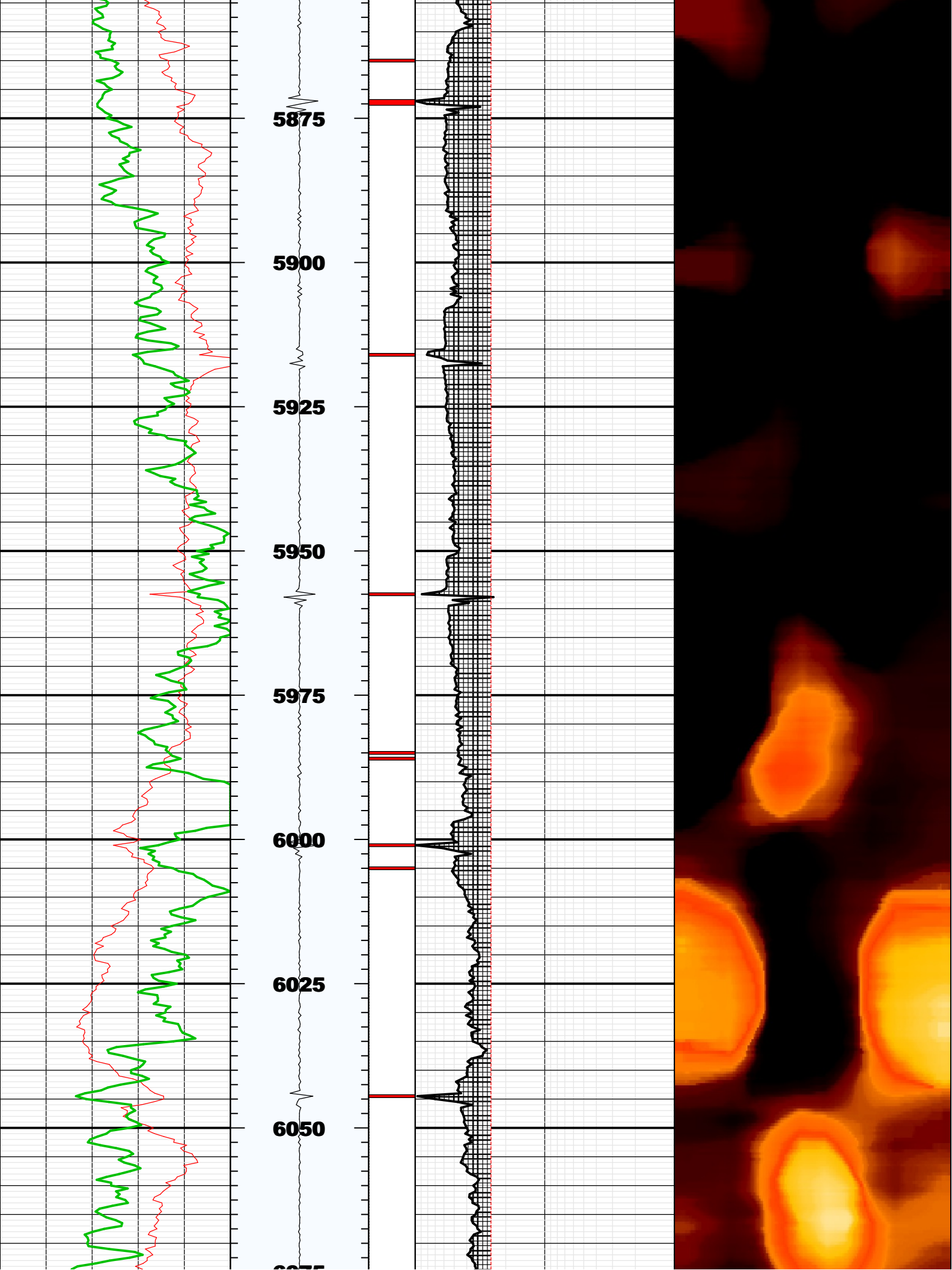


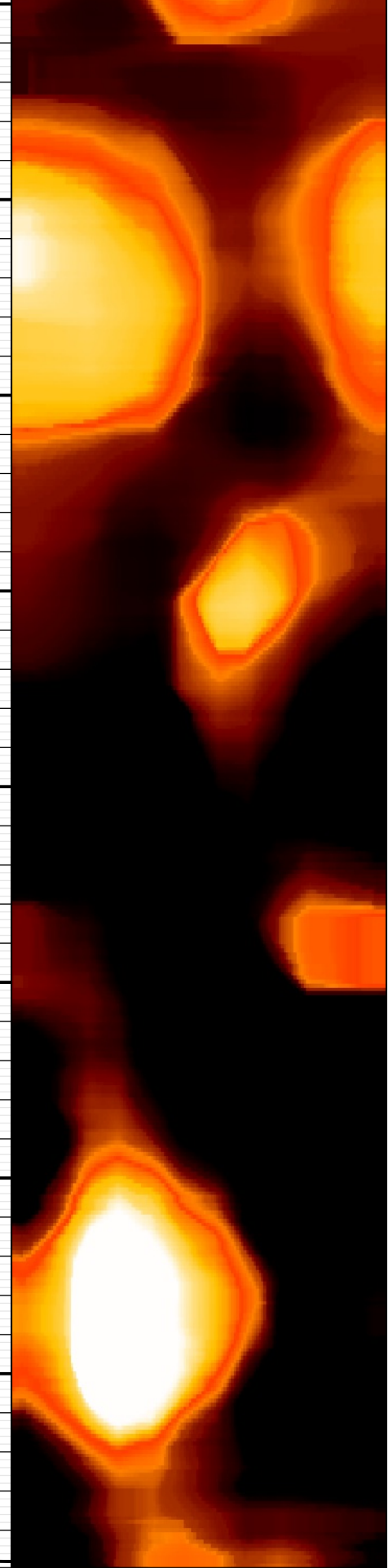
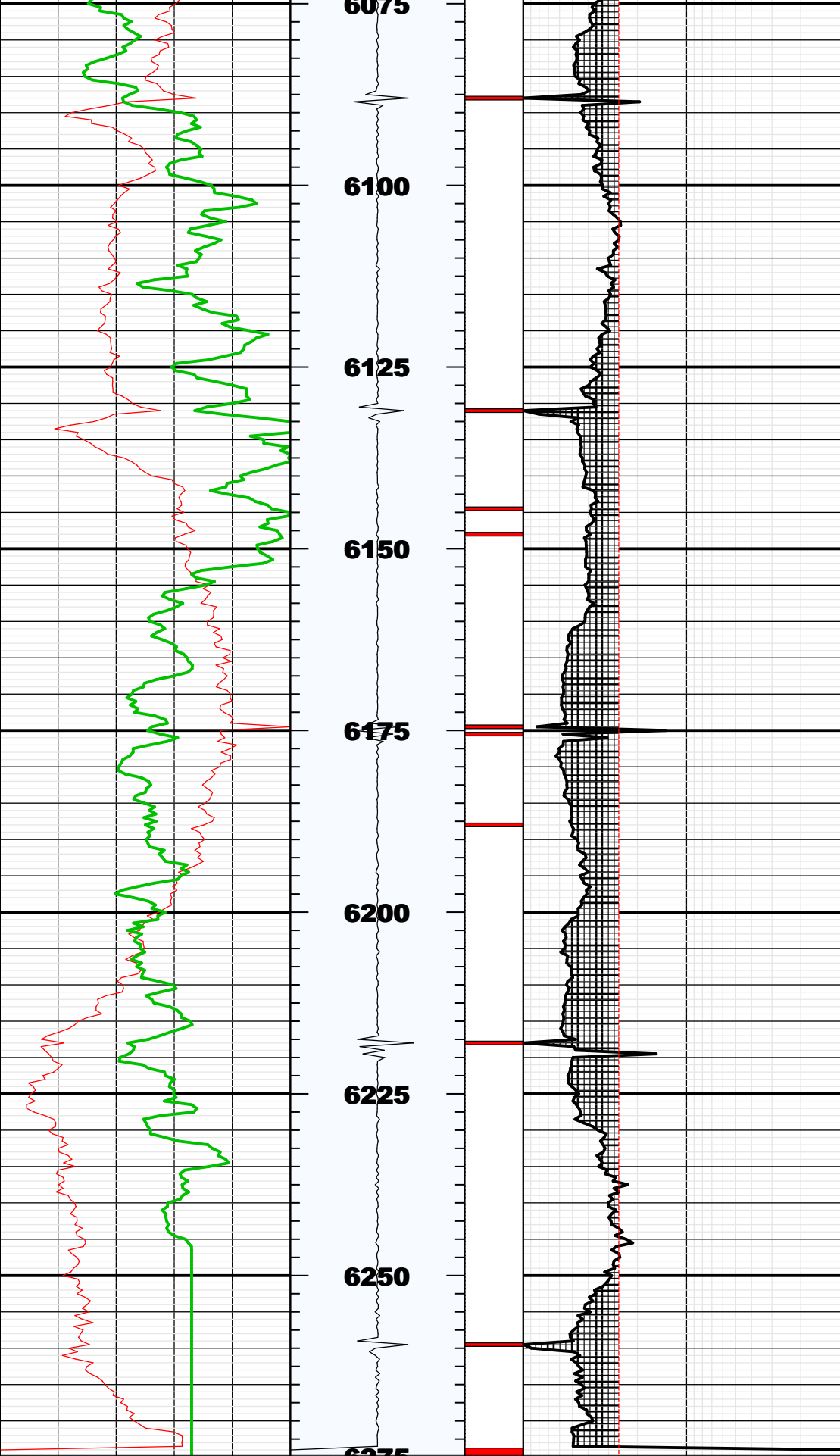








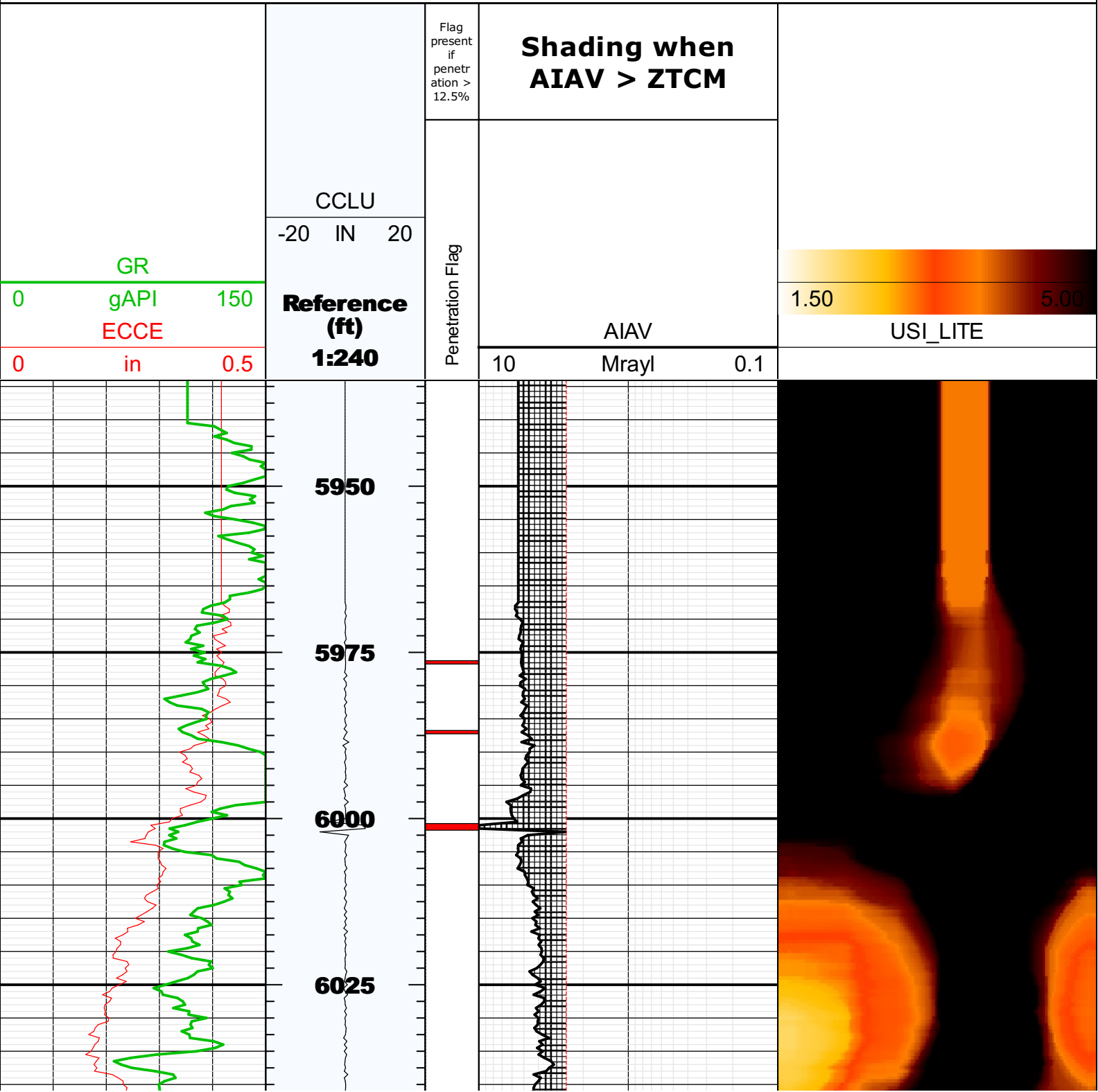


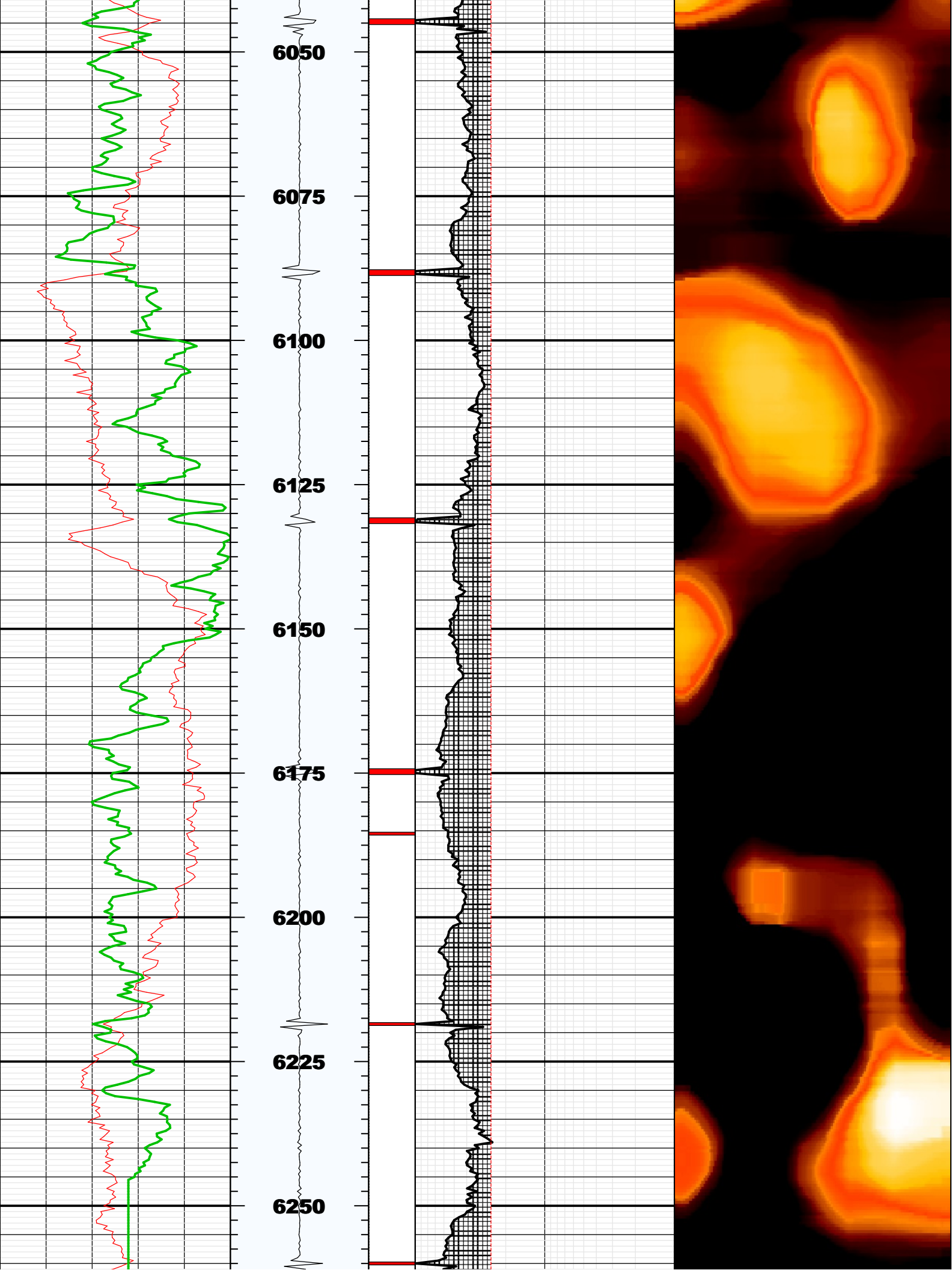


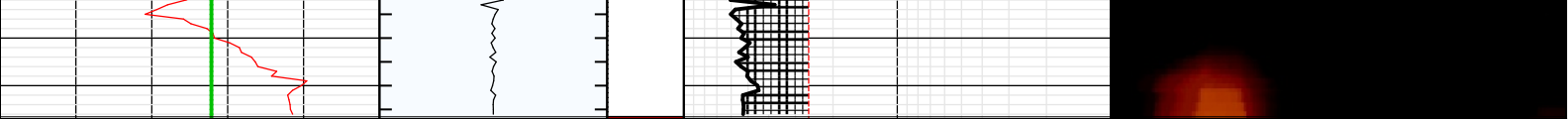
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID	6.27600	IN	Casing Inner Diameter
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	190.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	70	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	BRINE		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	1.78000	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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## Fluid Properties Used for Main Pass

