

Company: Noble Energy Inc

Well: Nalen State LD12-77-1BHN  
Field: Wildcat  
County: Weld State: Colorado

County: Weld		USI-LITE (2500 psi)	
Field: Wildcat			
Location: SESW Sec. 1 T9N R58W			
Well: Nalen State LD12-77-1BHN			
Company: Noble Energy Inc			
LOCATION			
Permanent Datum:		Elev: K.B. 4671.0 F	
Log Measured From:		G.L. 4647.0 F	
Drilling Measured From:		D.F. 4670.0 F	
GL KB KB			
API Serial No. 05-123-39765-0000		Section 1	Range 58W
Logging Date		15-Jan-2015	
Run Number	Run 1		
Depth Driller	5900.0 F		
Schlumberger Depth	5740.0 F		
Bottom Log Interval	5740.0 F		
Top Log Interval	55.0 F		
Casing Fluid Level	8.0 F		
Salinity			
Density	8.70 LB/G		
Fluid Level	8.0 F		
BIT/CASING/TUBING STRING			
Bit Size	8.750 IN		
From	5740.0 F		
To	-999.2 F		
Casing Size	7.00 IN		
Weight	26.00 LB/F		
Grade	P110		
From	24.0 F		
To	5893.0 F		
Max Recorded Temp	212.9		
Logger on bottom (date)	15-Jan-2015		
Location	Fort Morgan CO		
Recorded By	Keri Ondrus		
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:	1109 Type: Serial Number: Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: Length: 16500.00000

DISCLAIMER

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0 PSI repeat pass and 2500 PSI main passEstimated

Top of Cement @ 1,220'.

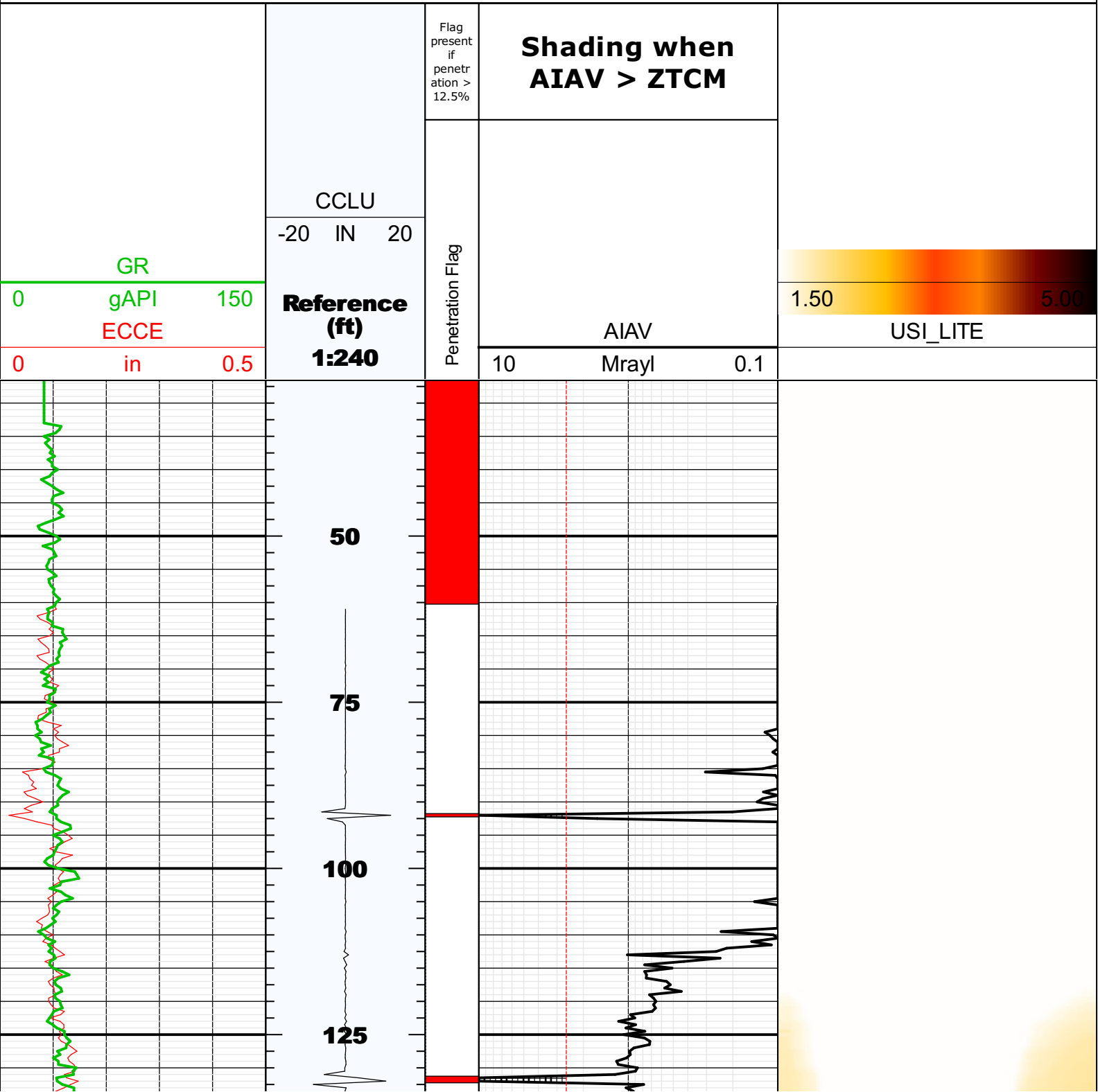
Top of 4.5 liner at 5747.6'.

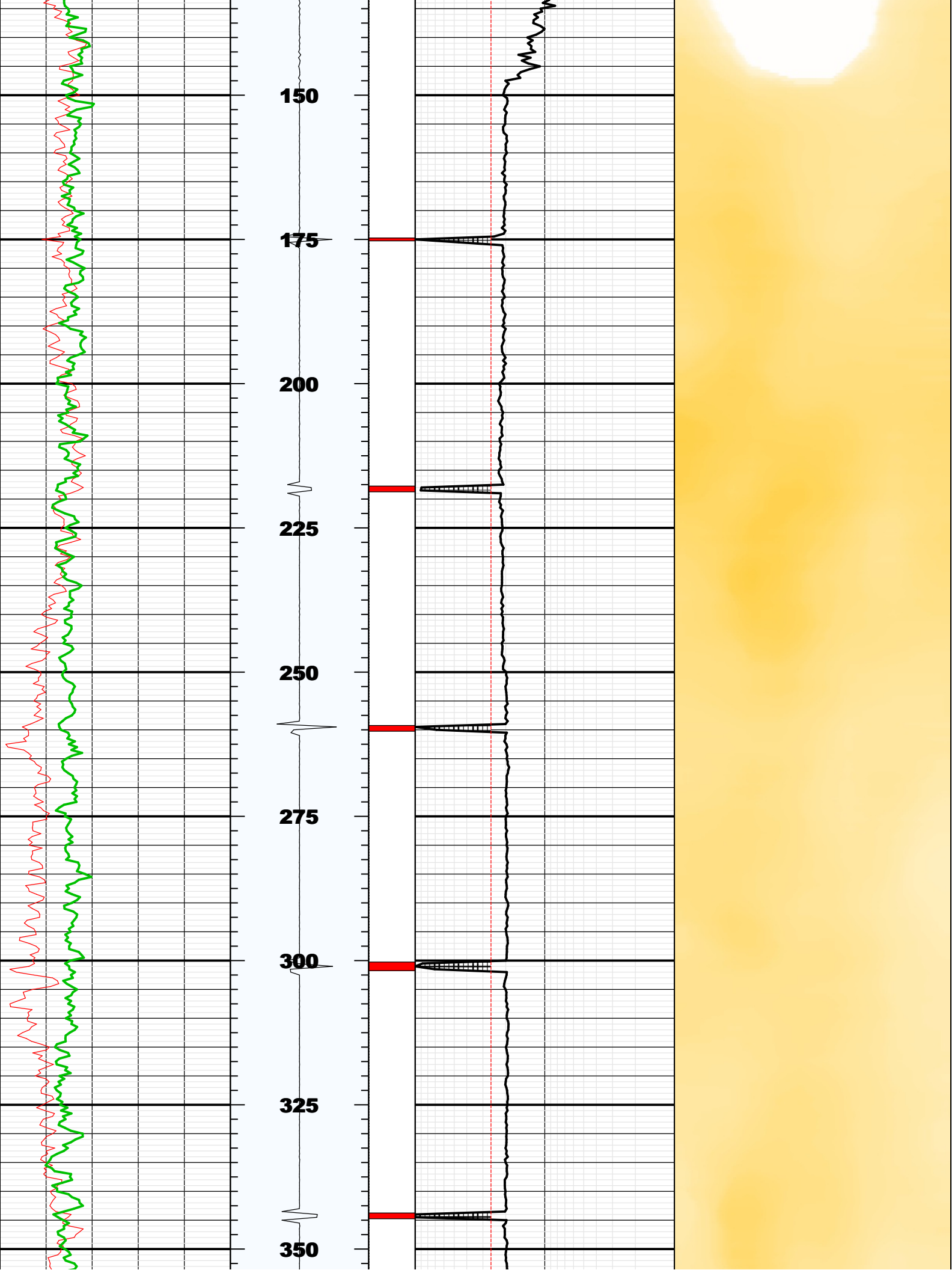
Bottom log interval at 5740' to maintain distance from top of liner.

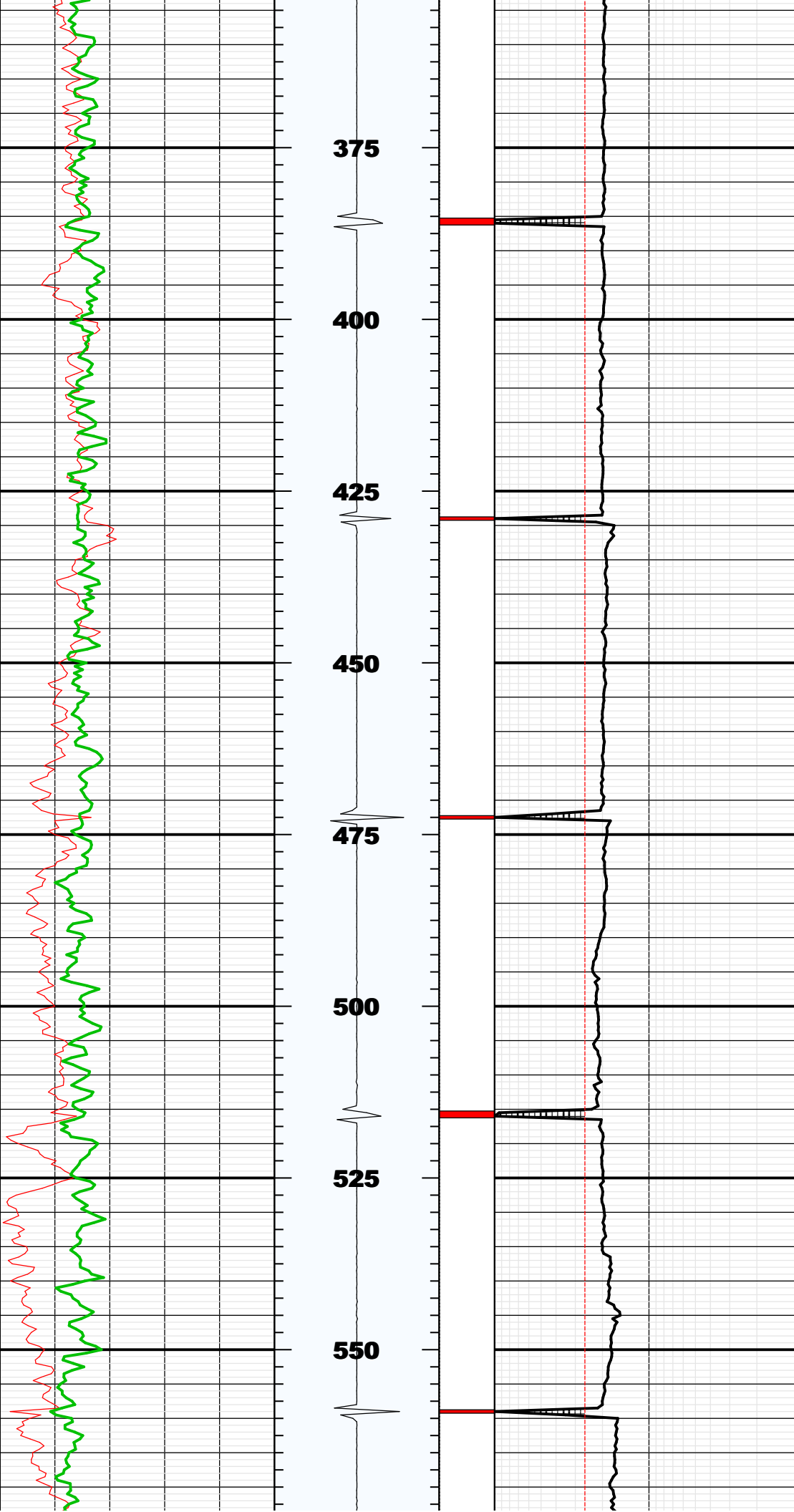
Bottom hole temperature was 213 degF measured at depth

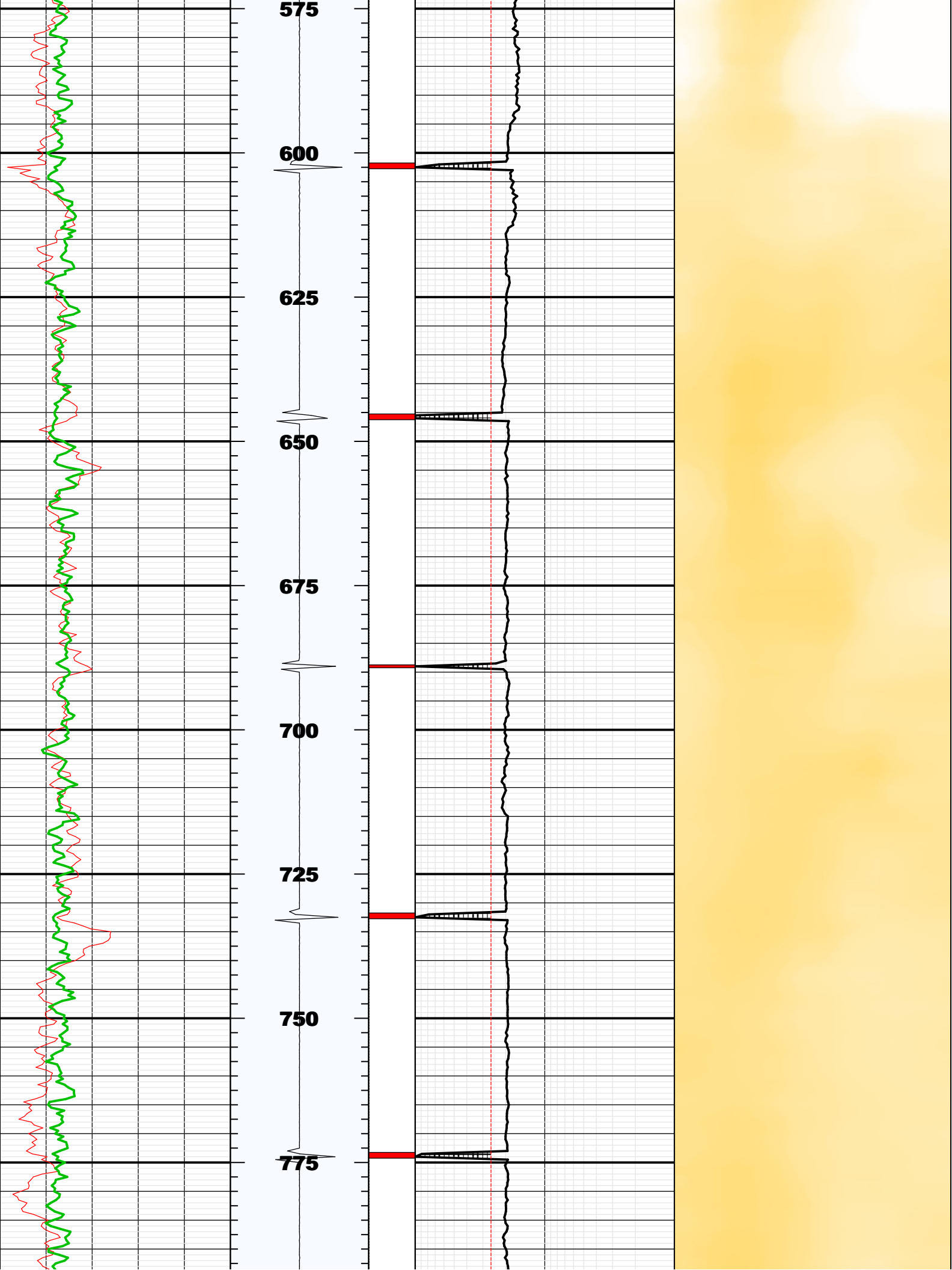
## Main Pass

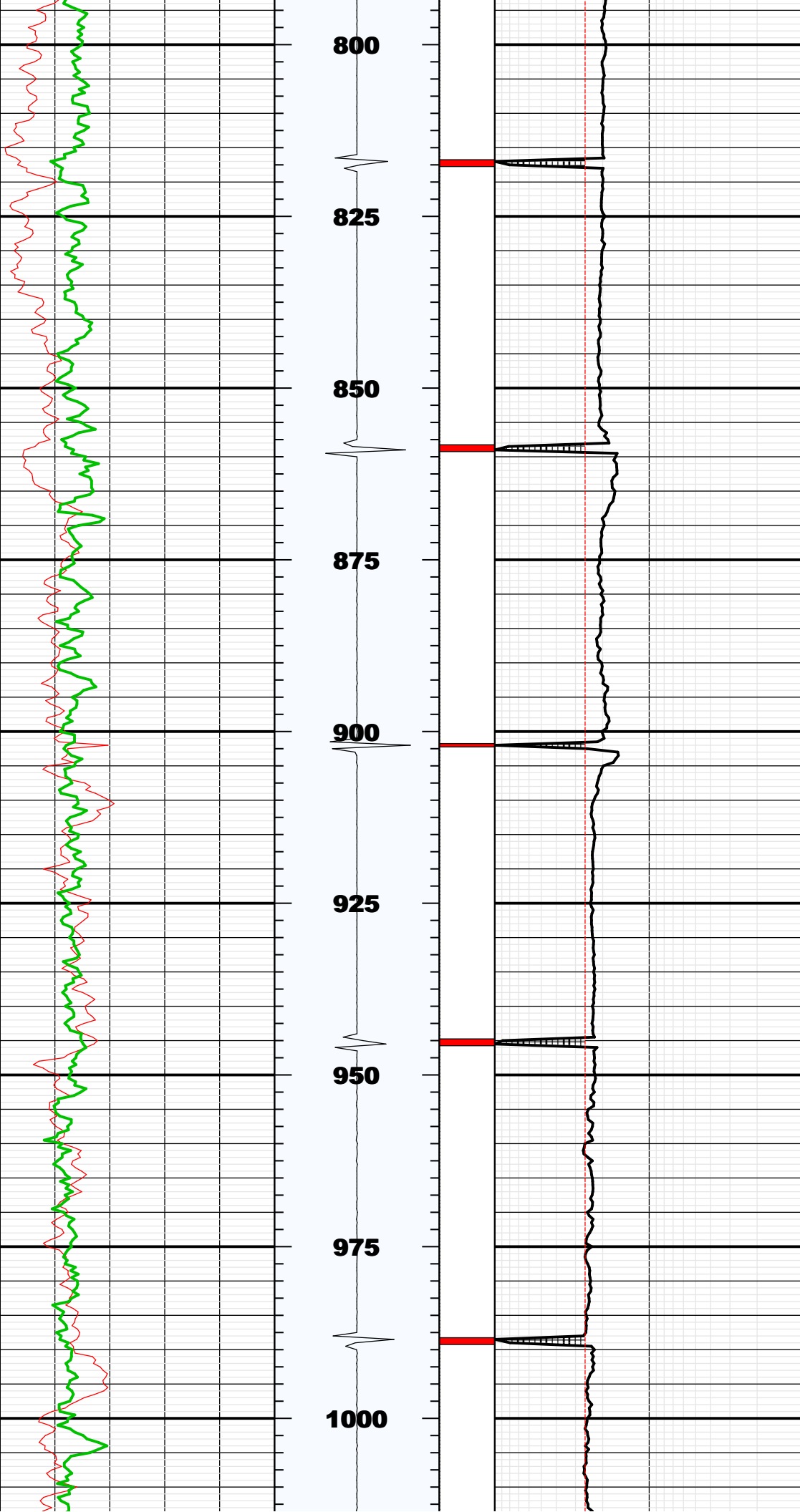
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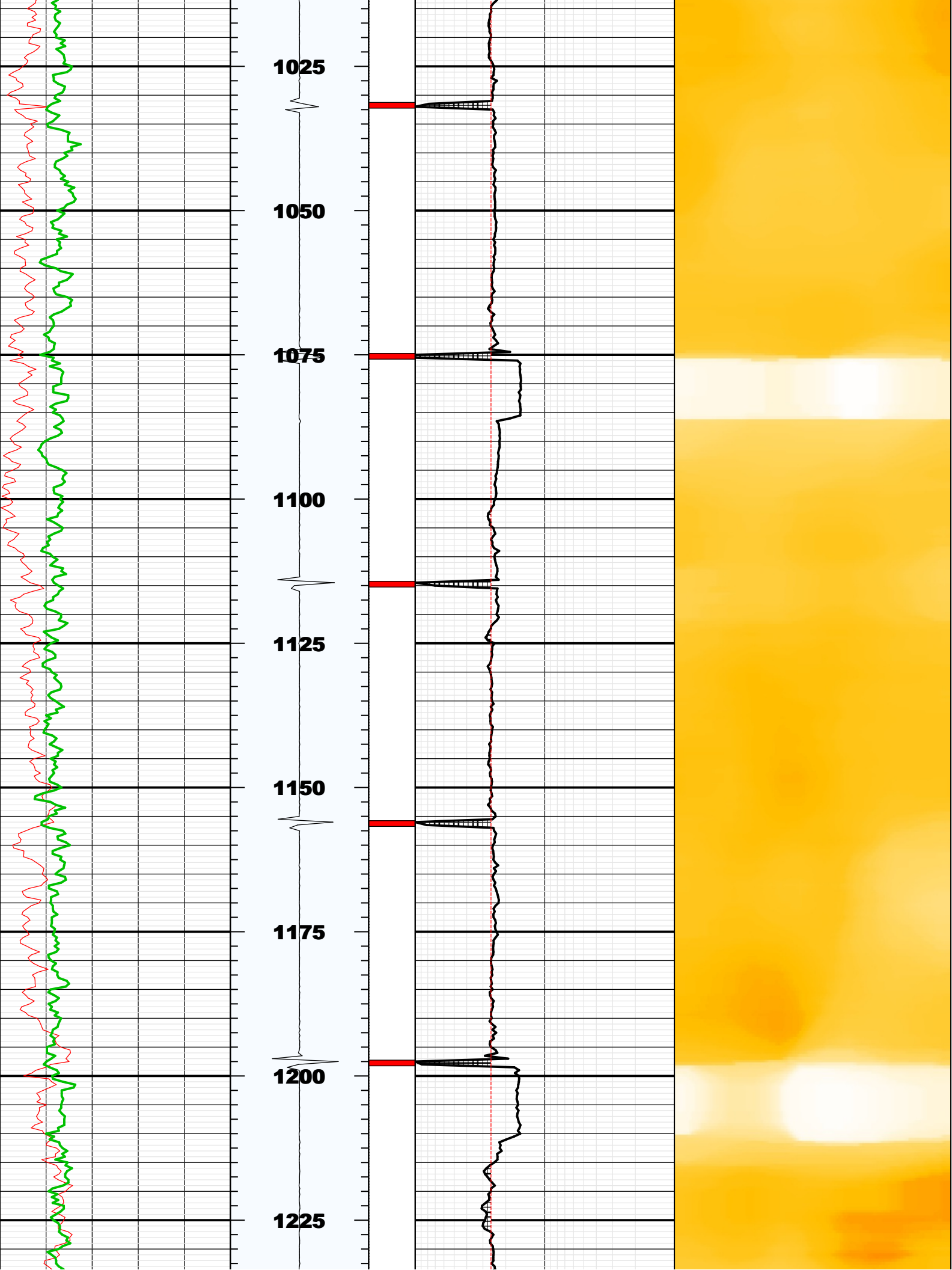




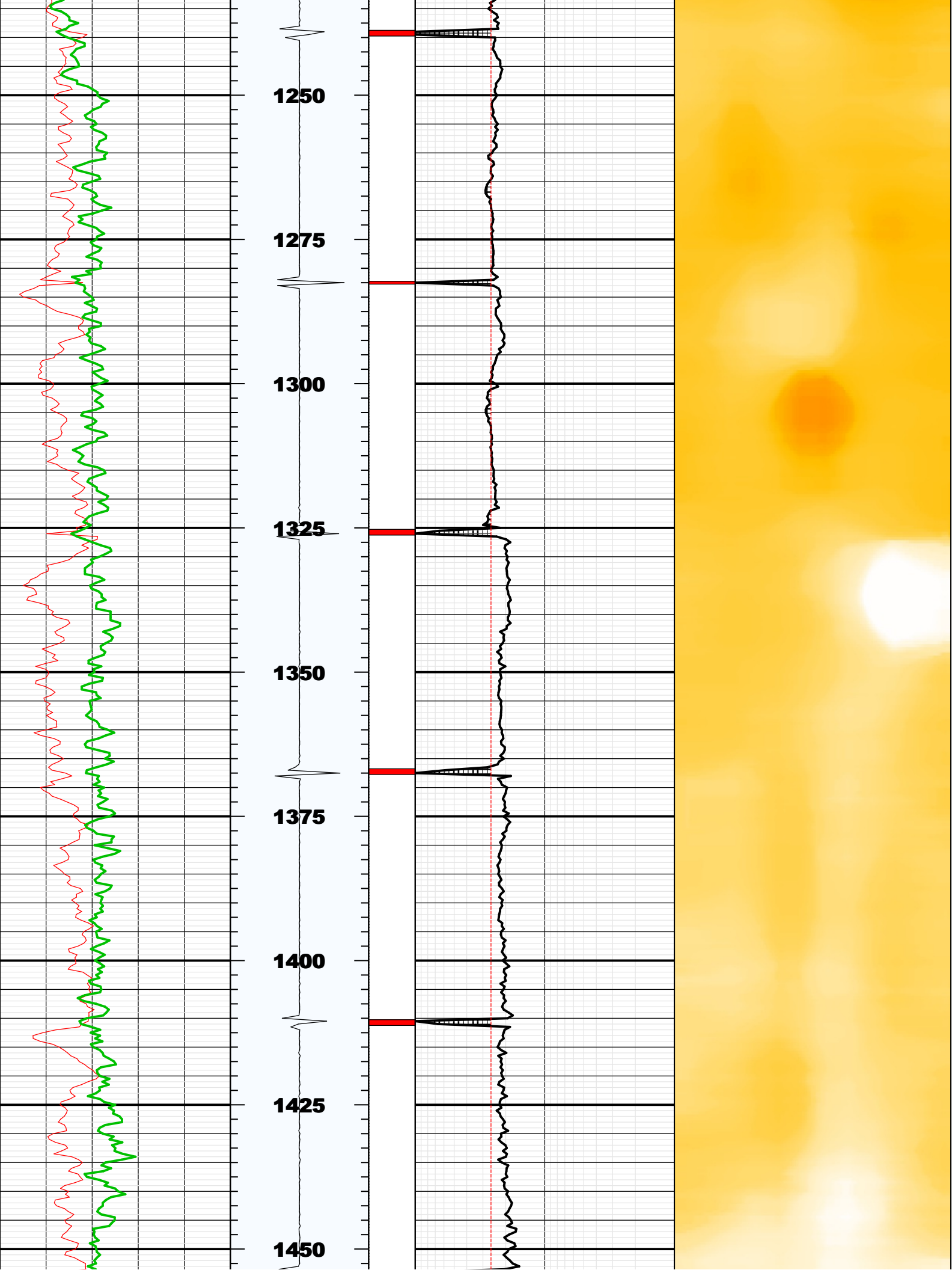


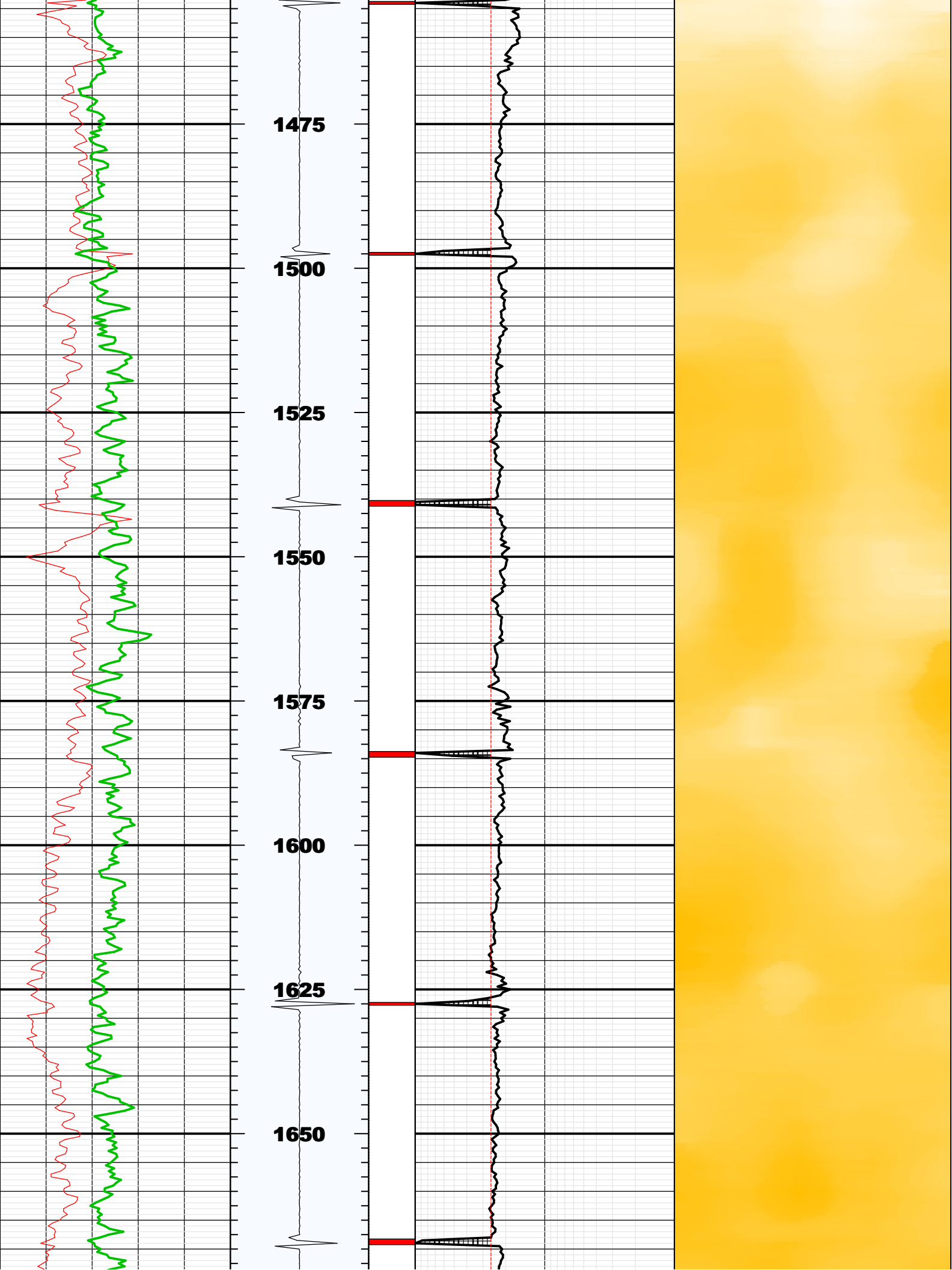


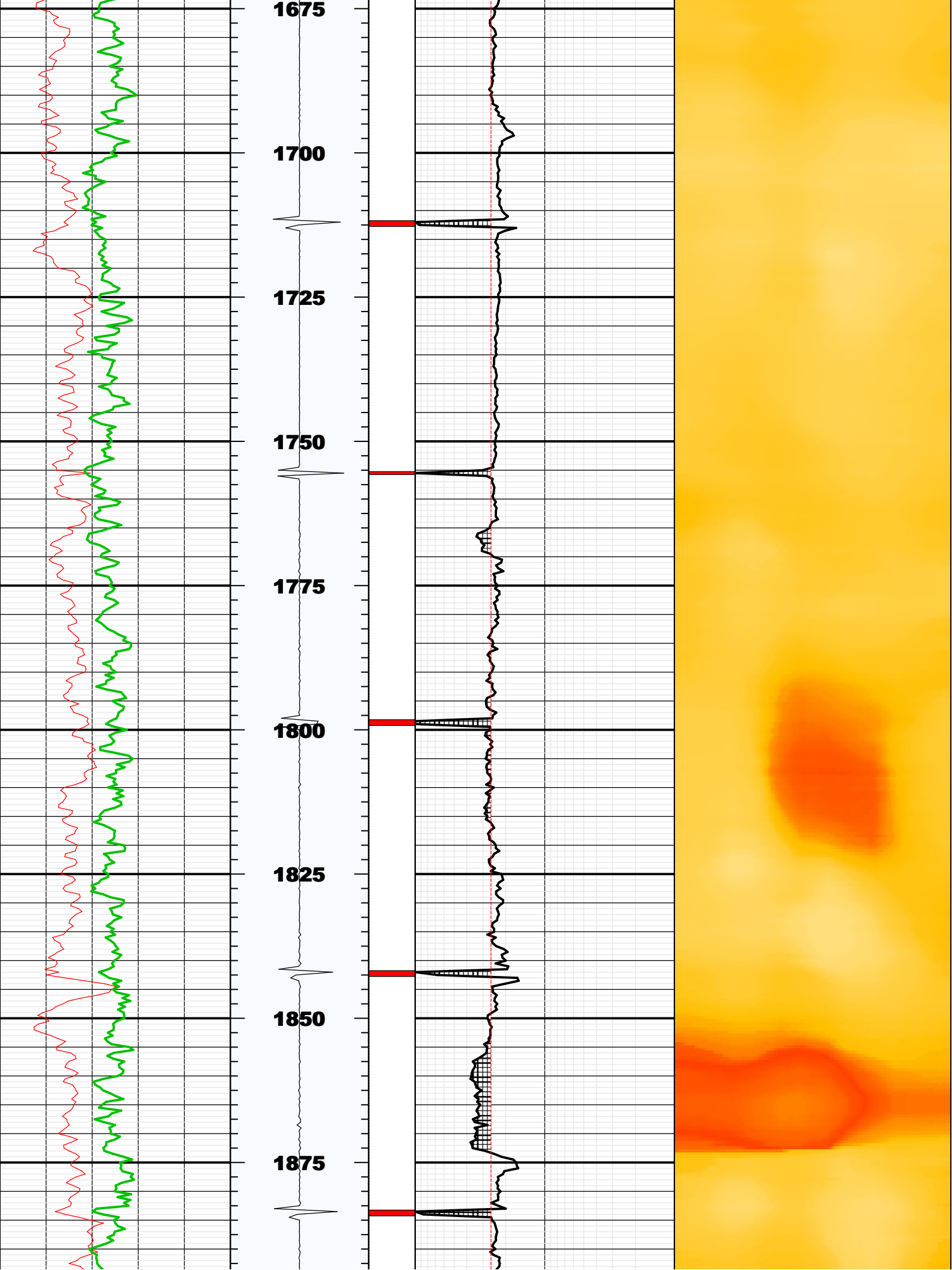


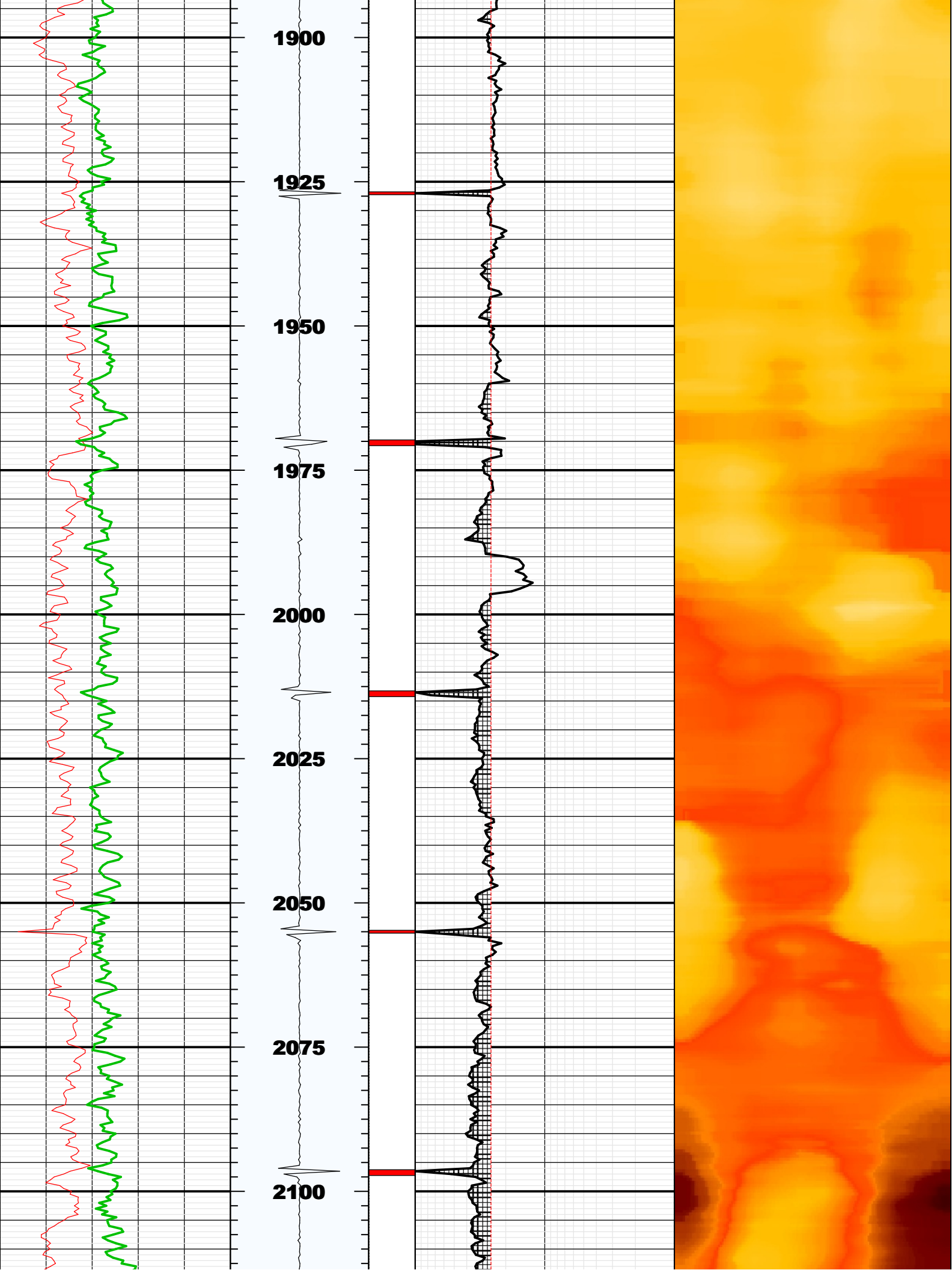


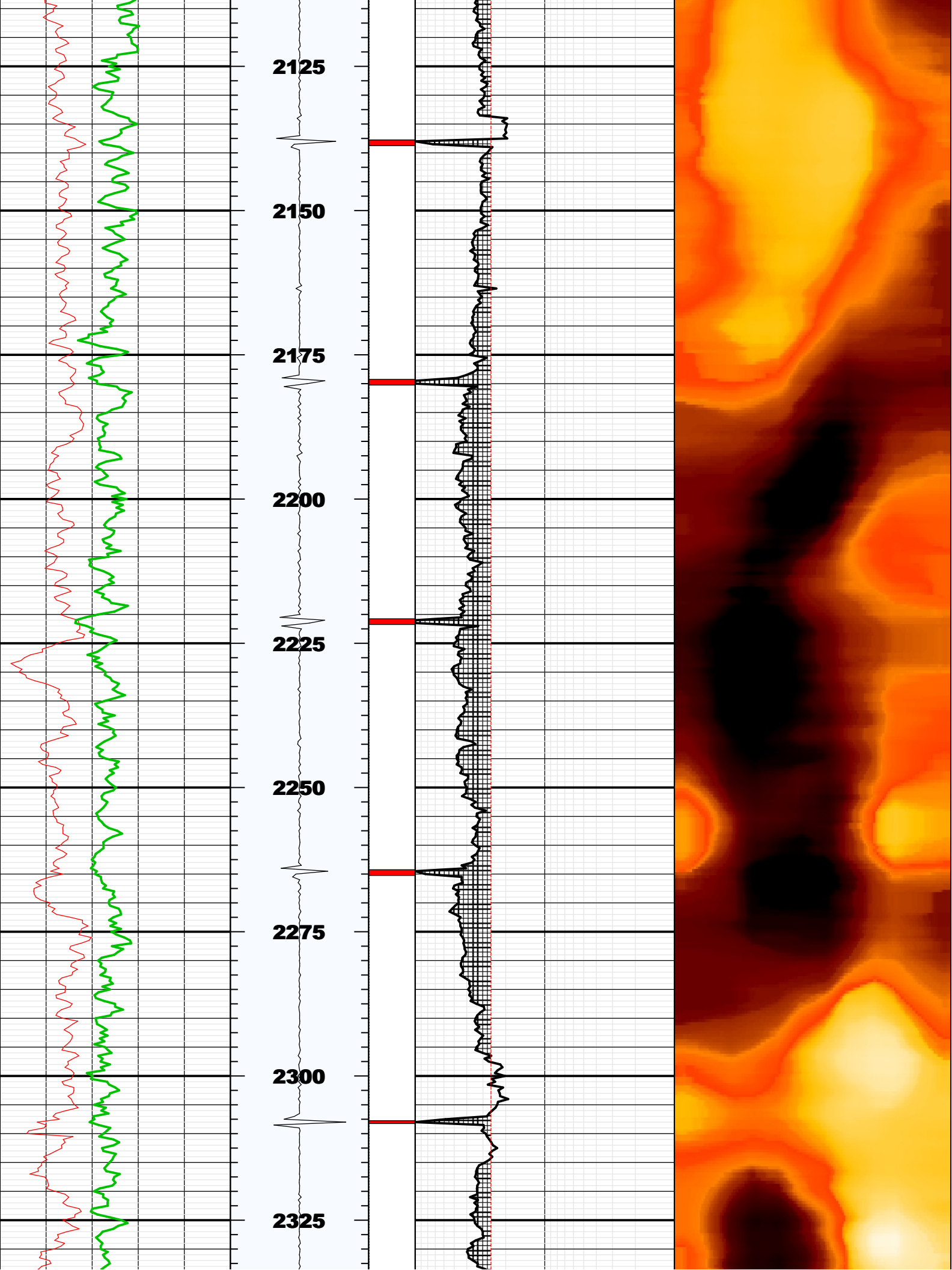




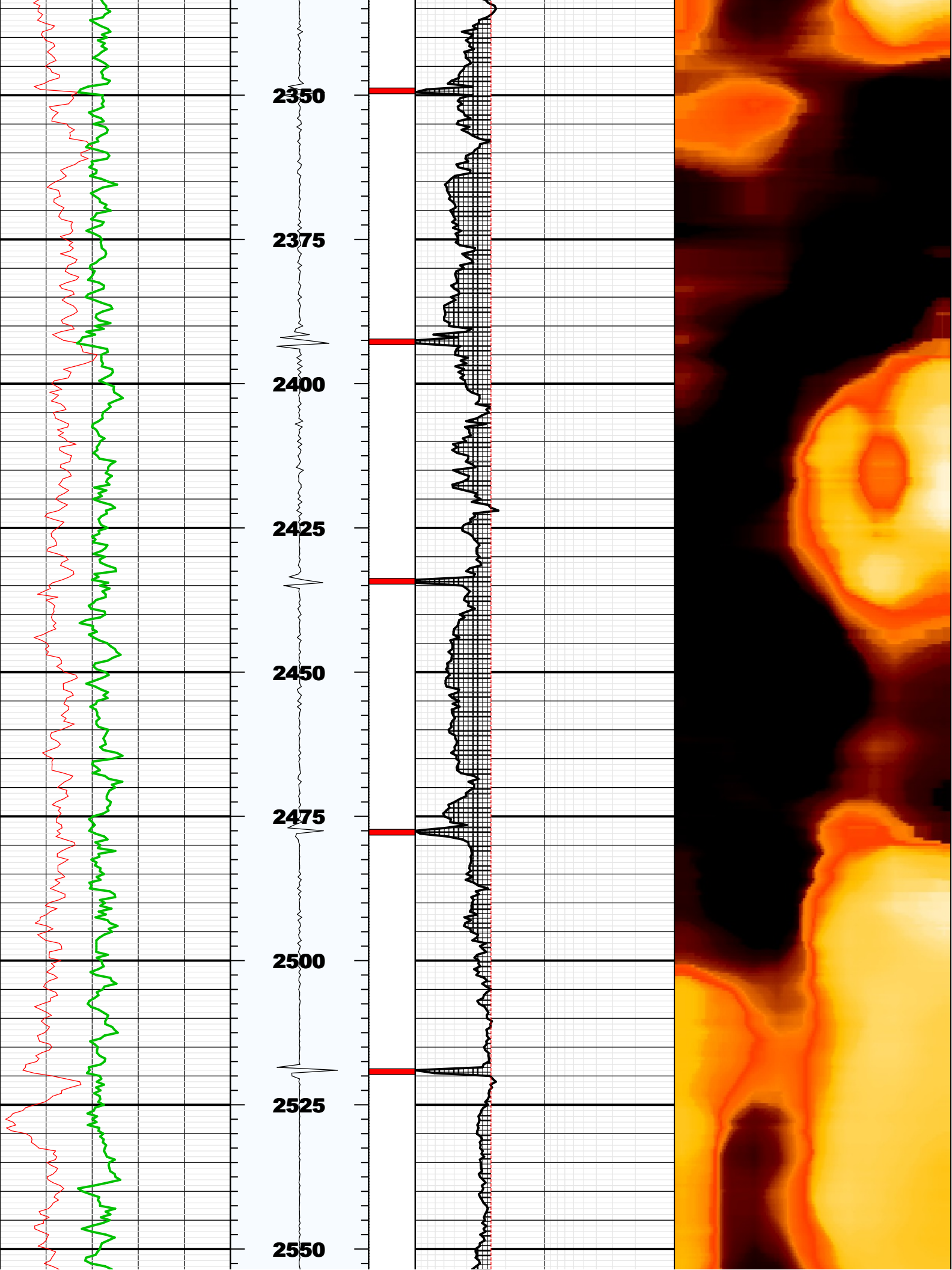


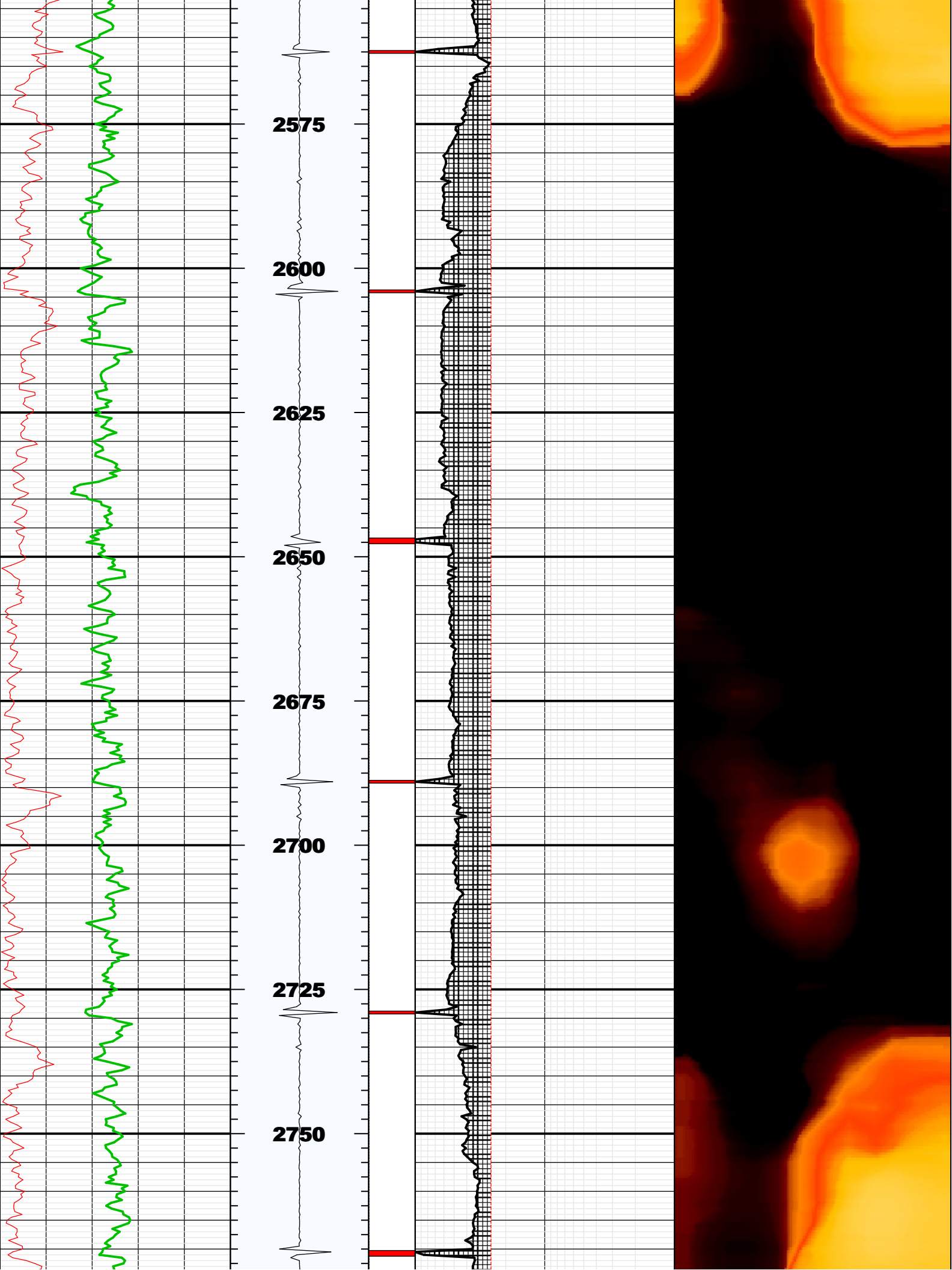


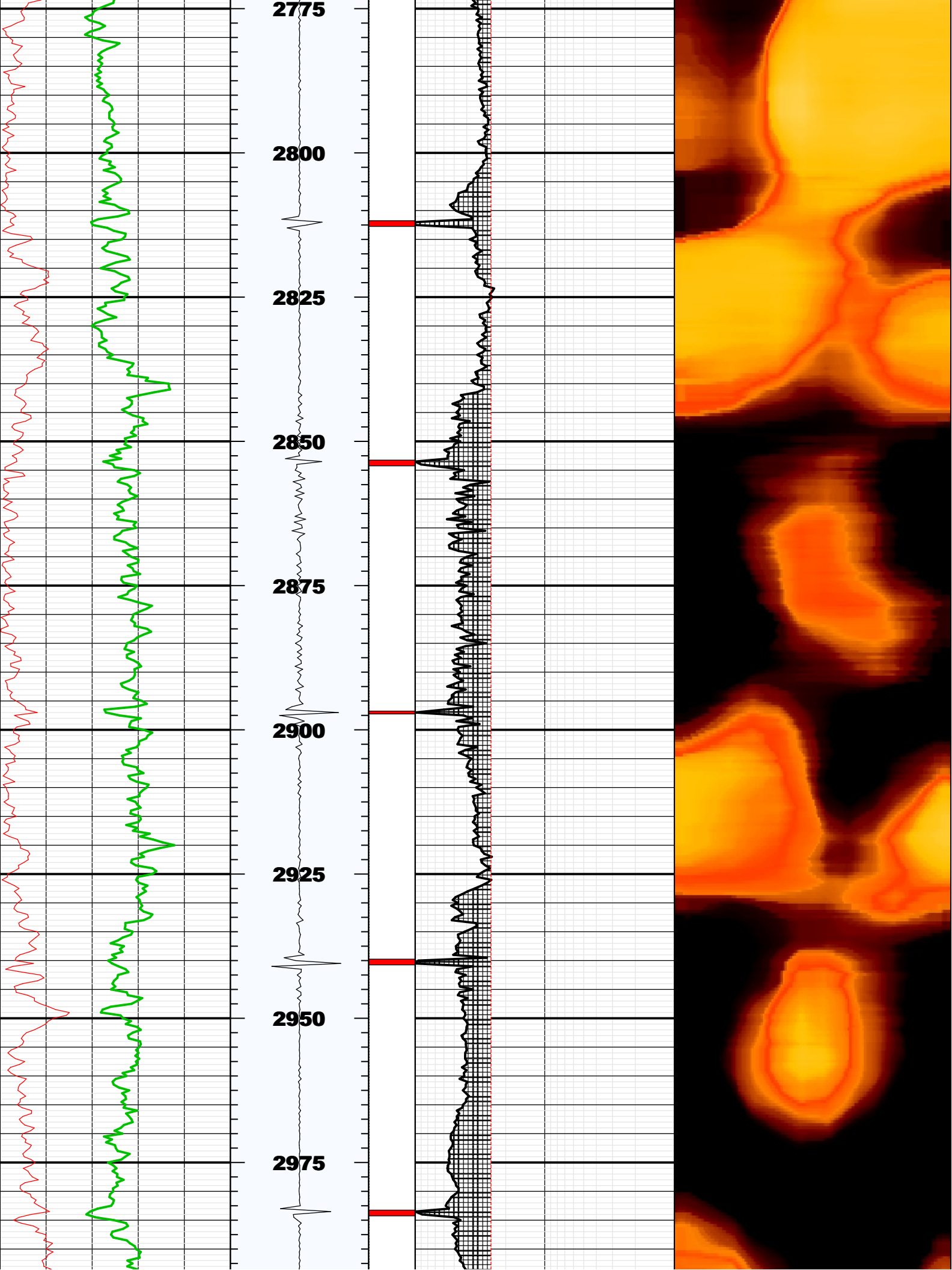




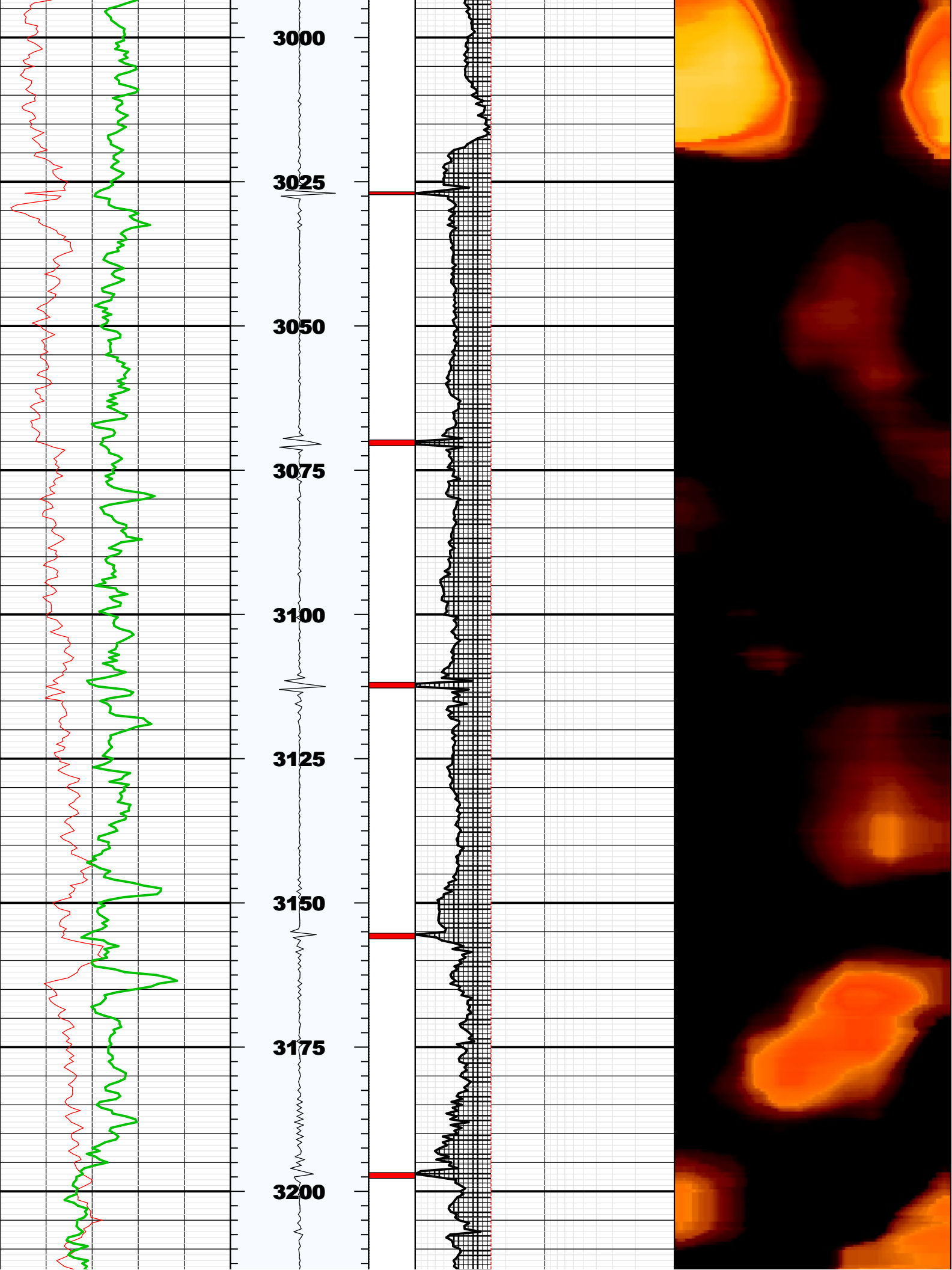


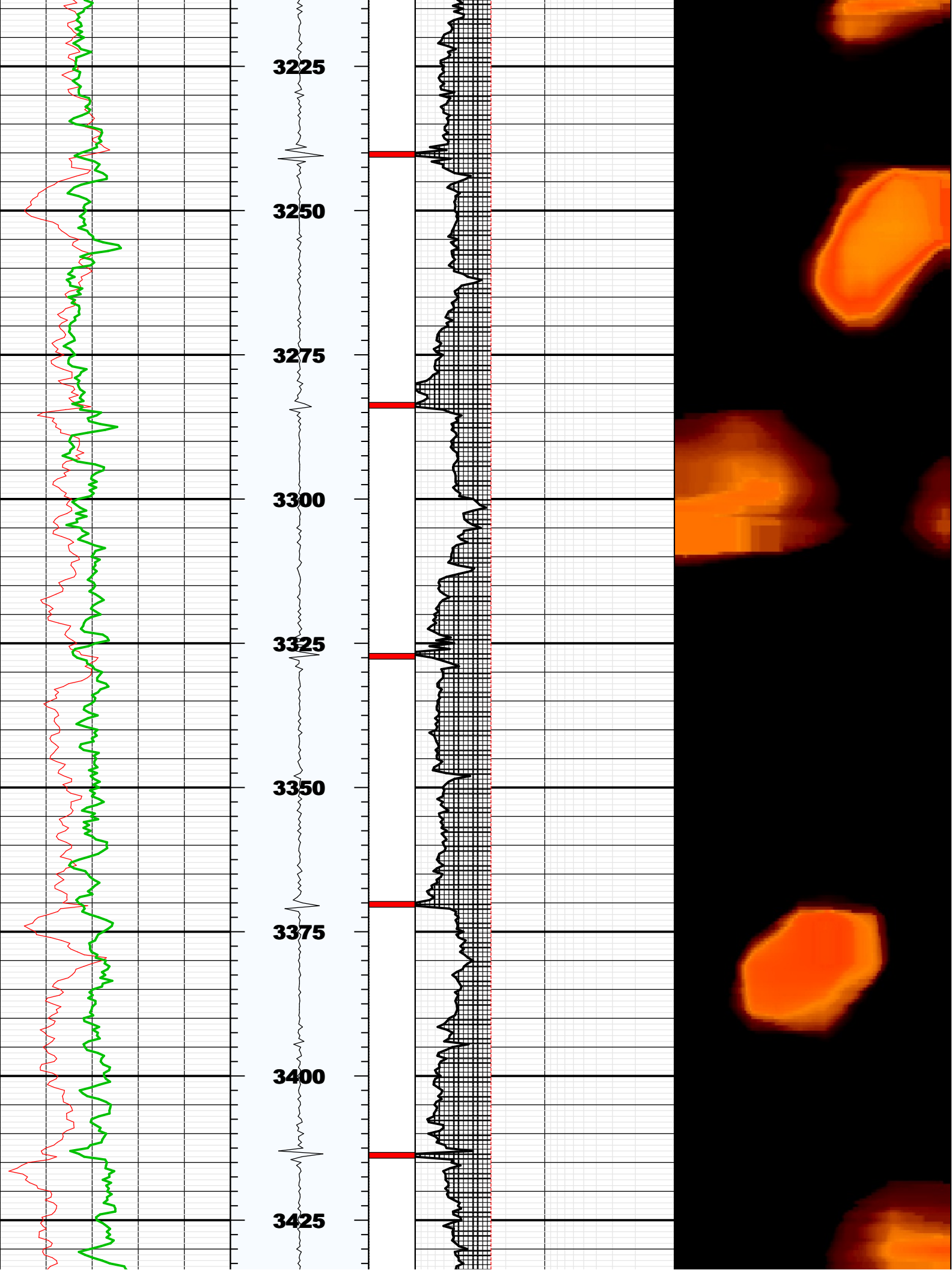


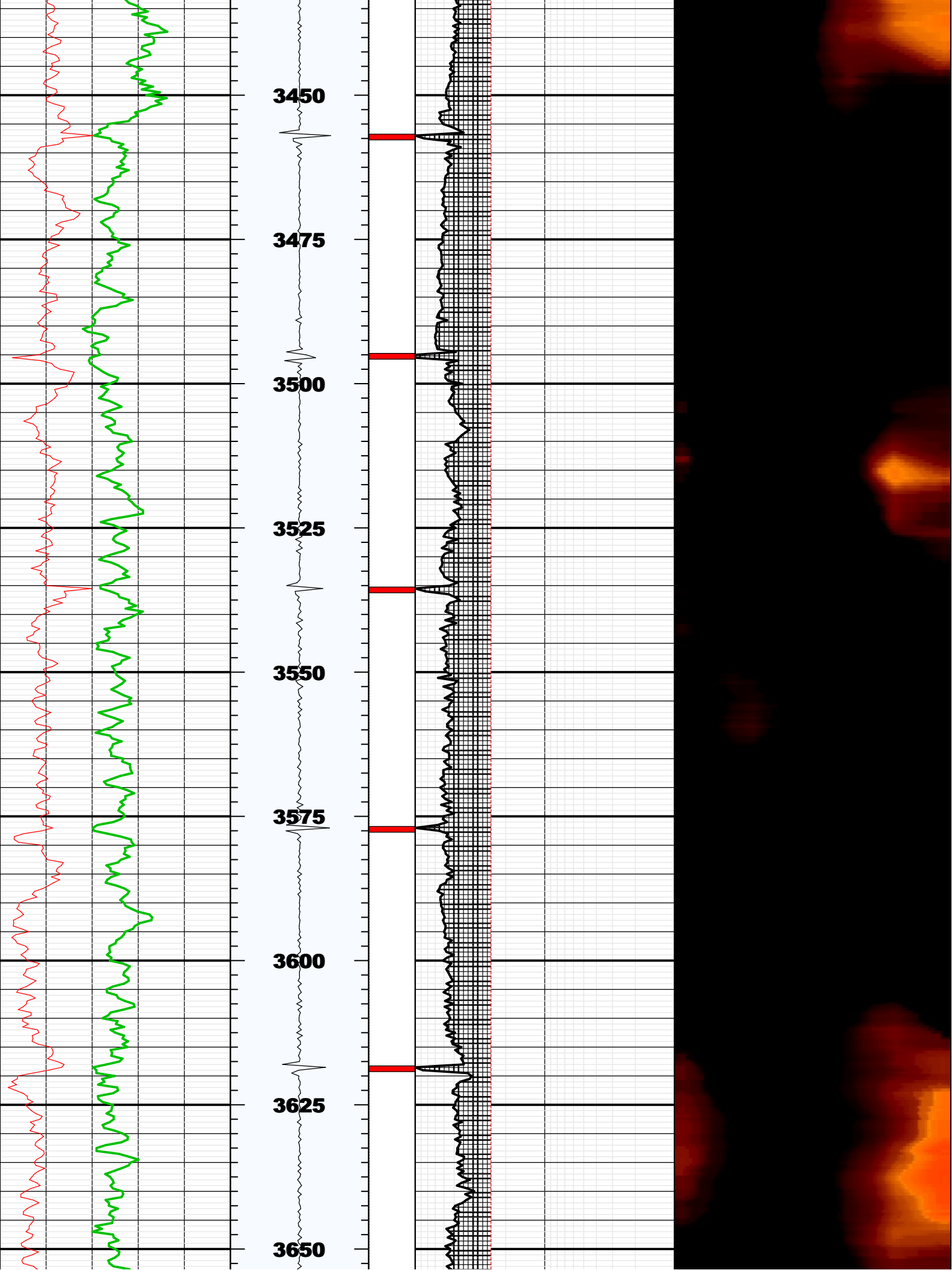


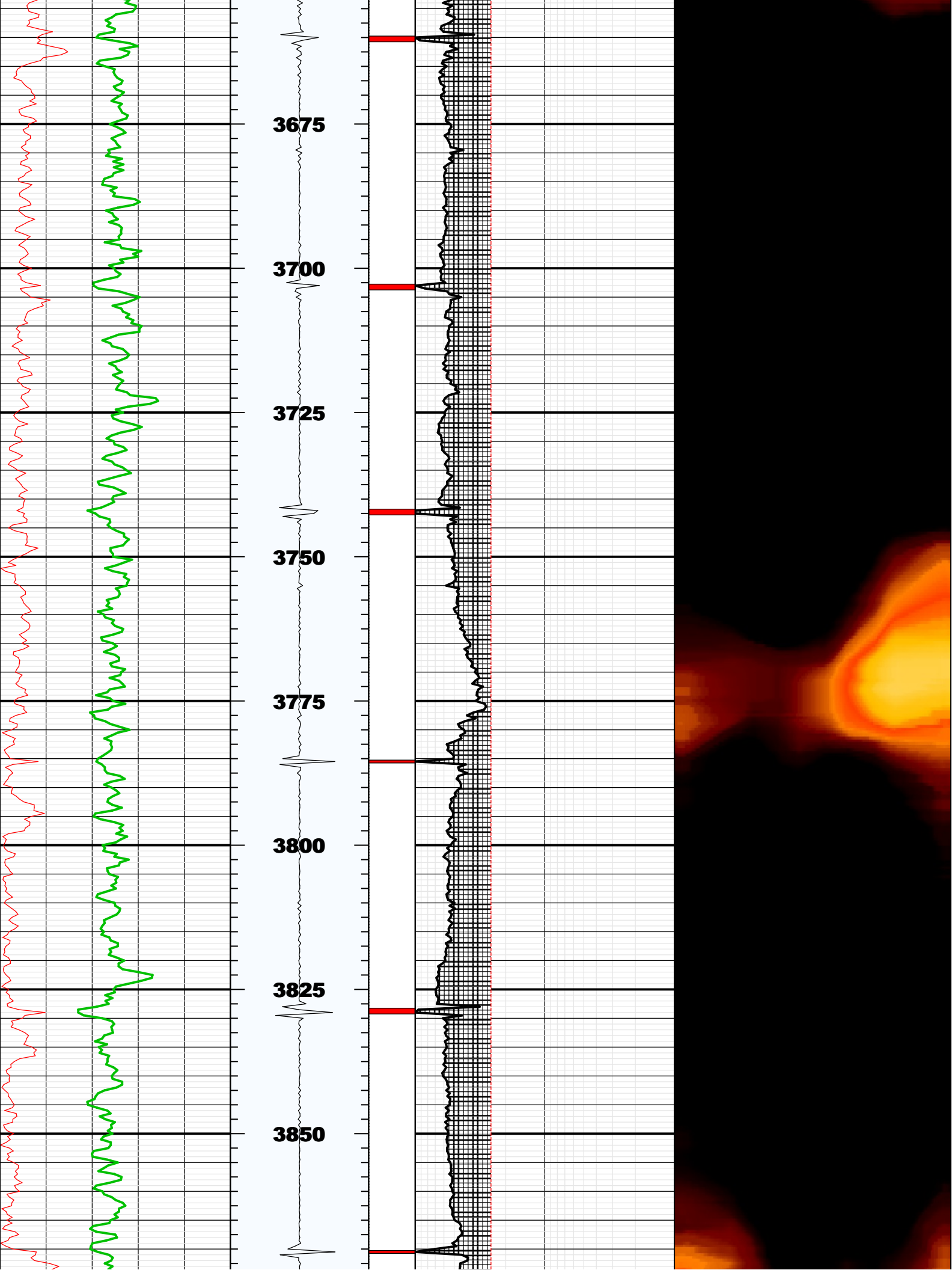


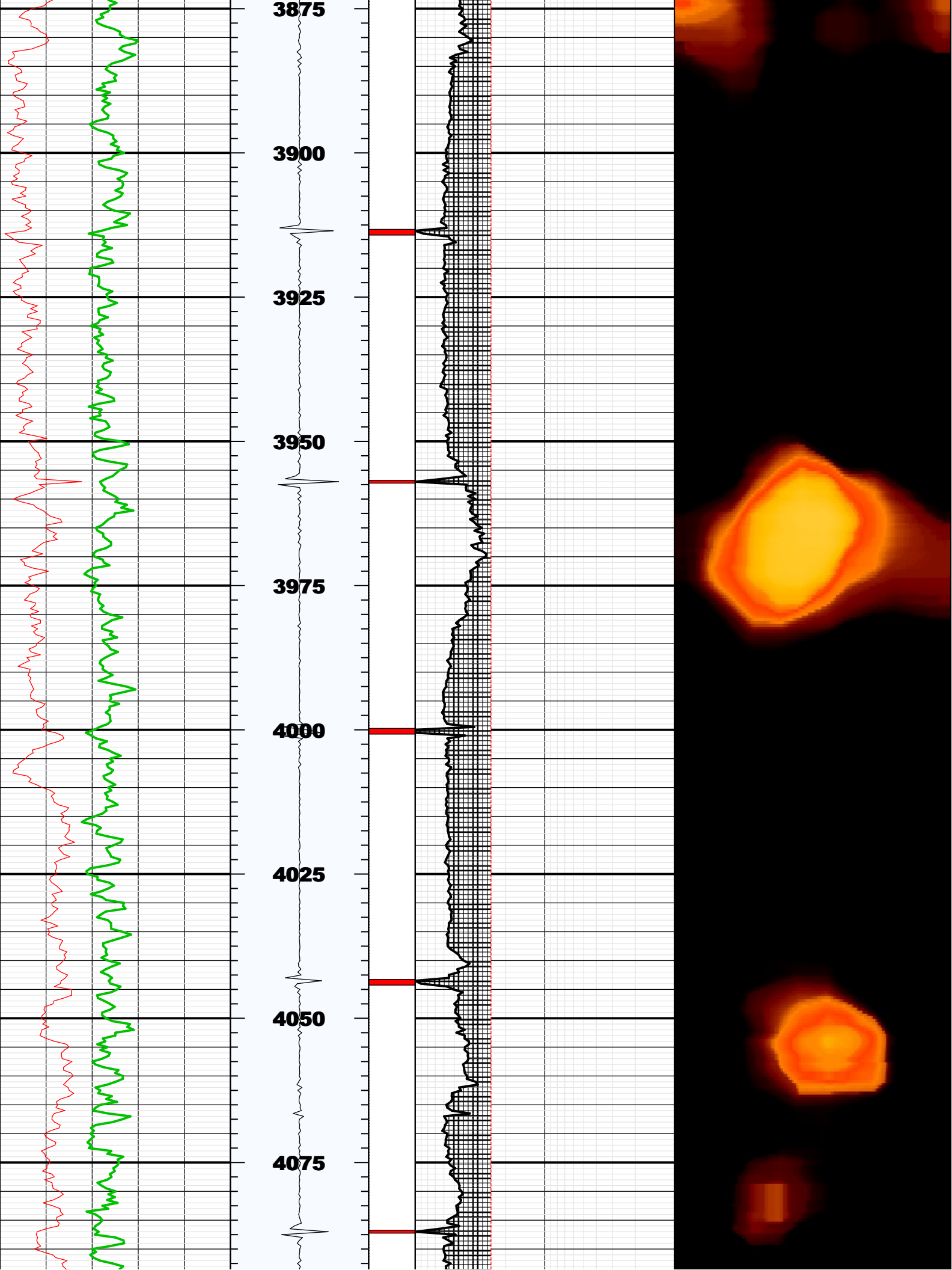




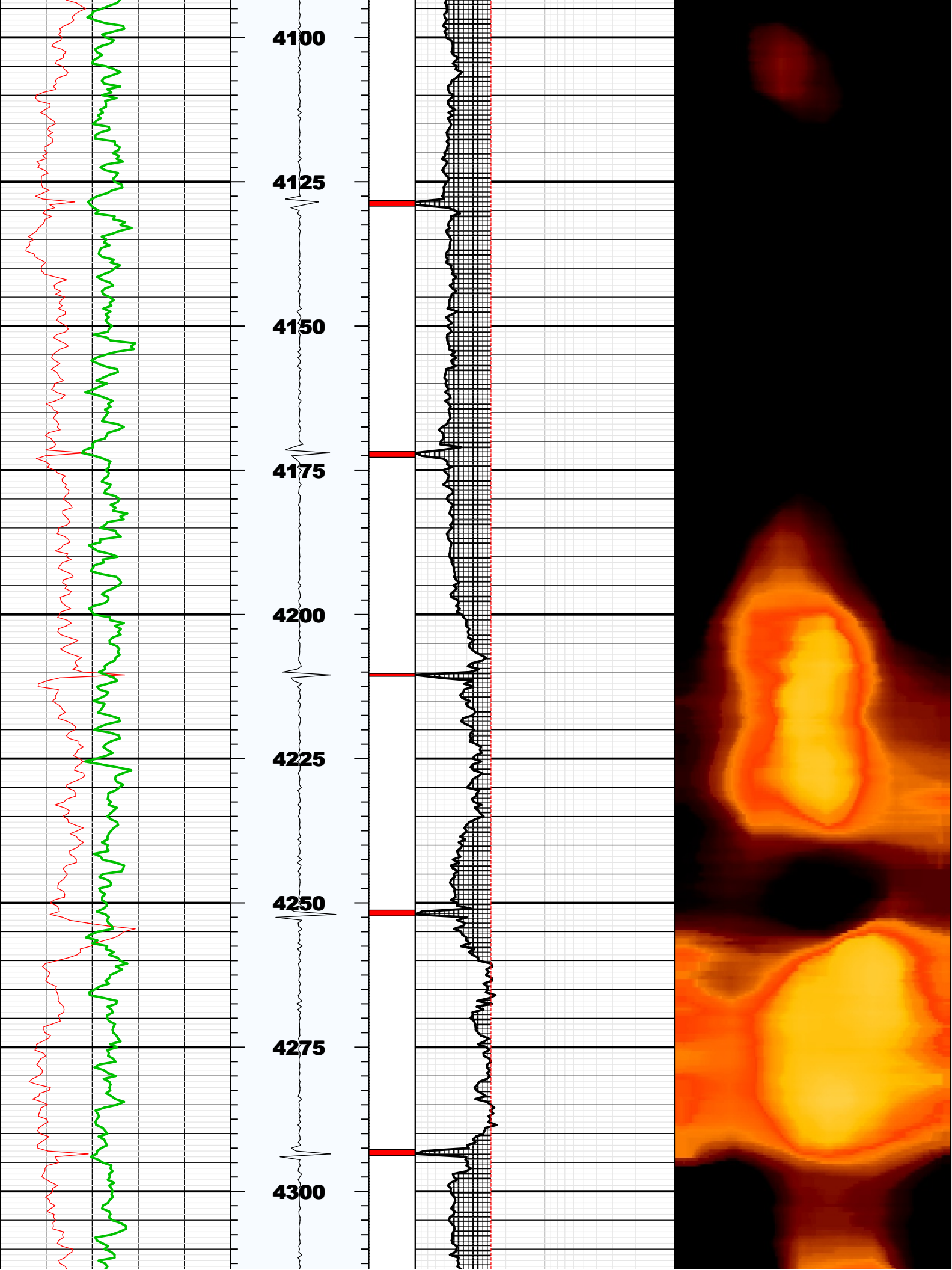


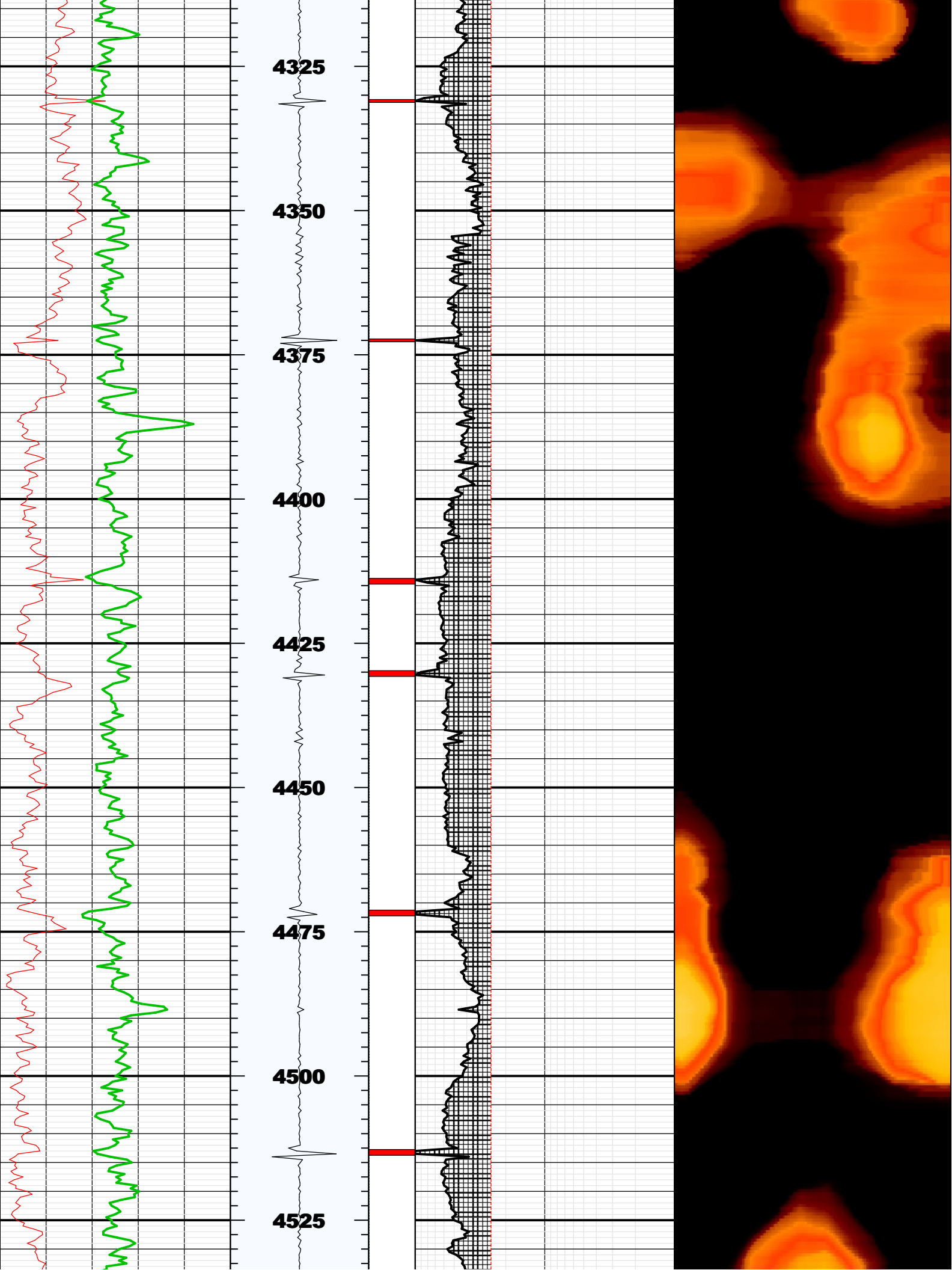


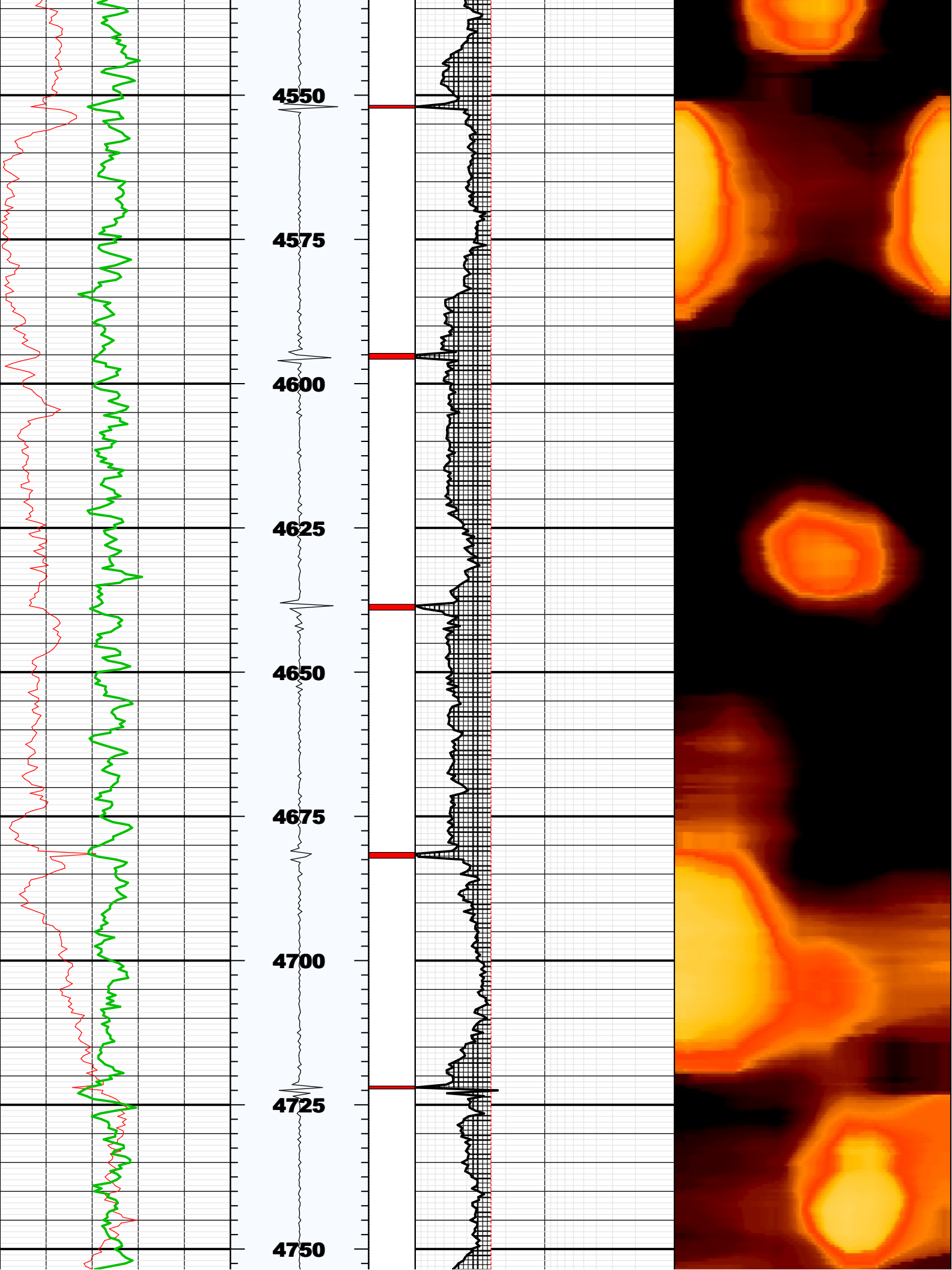




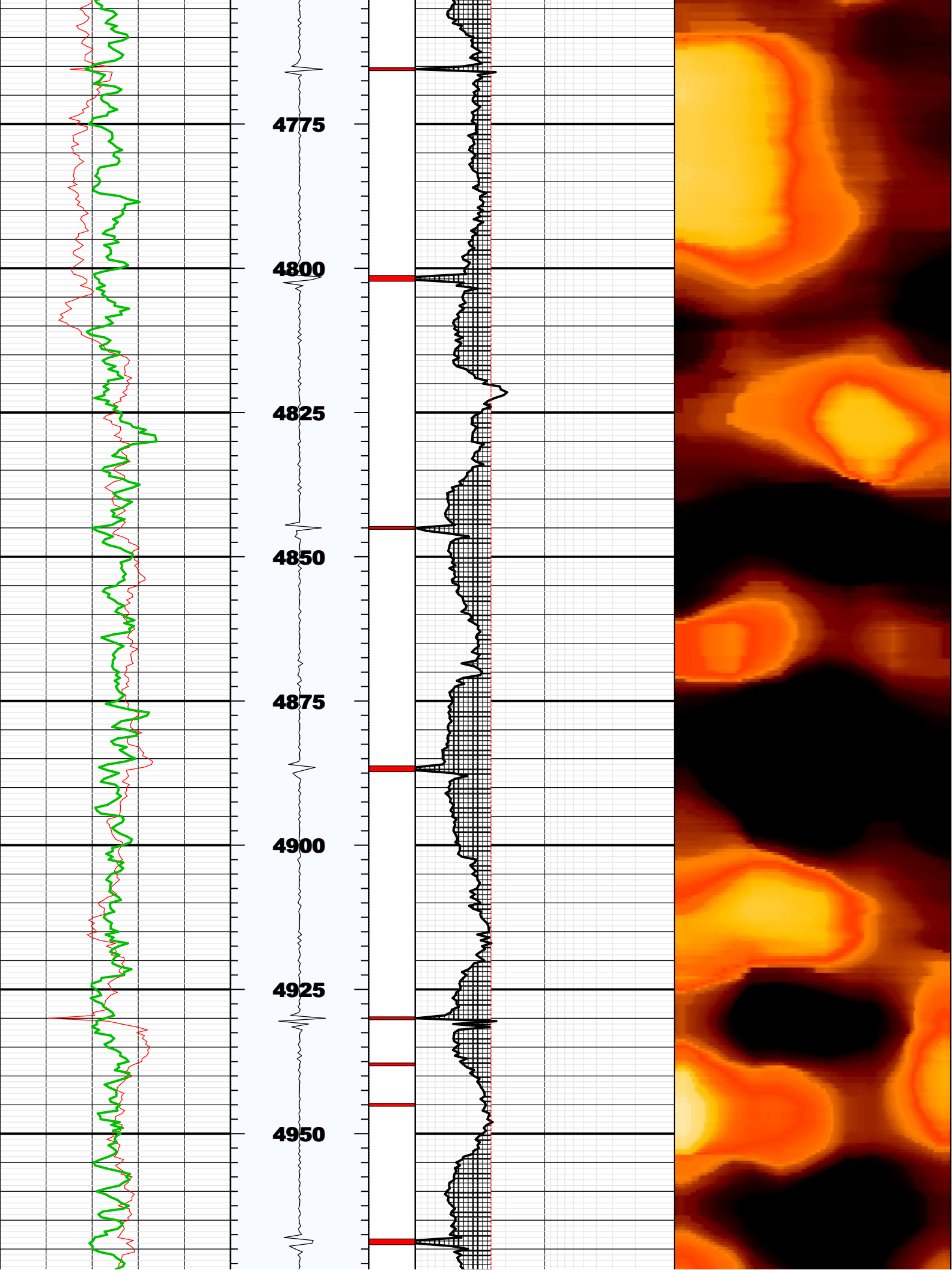


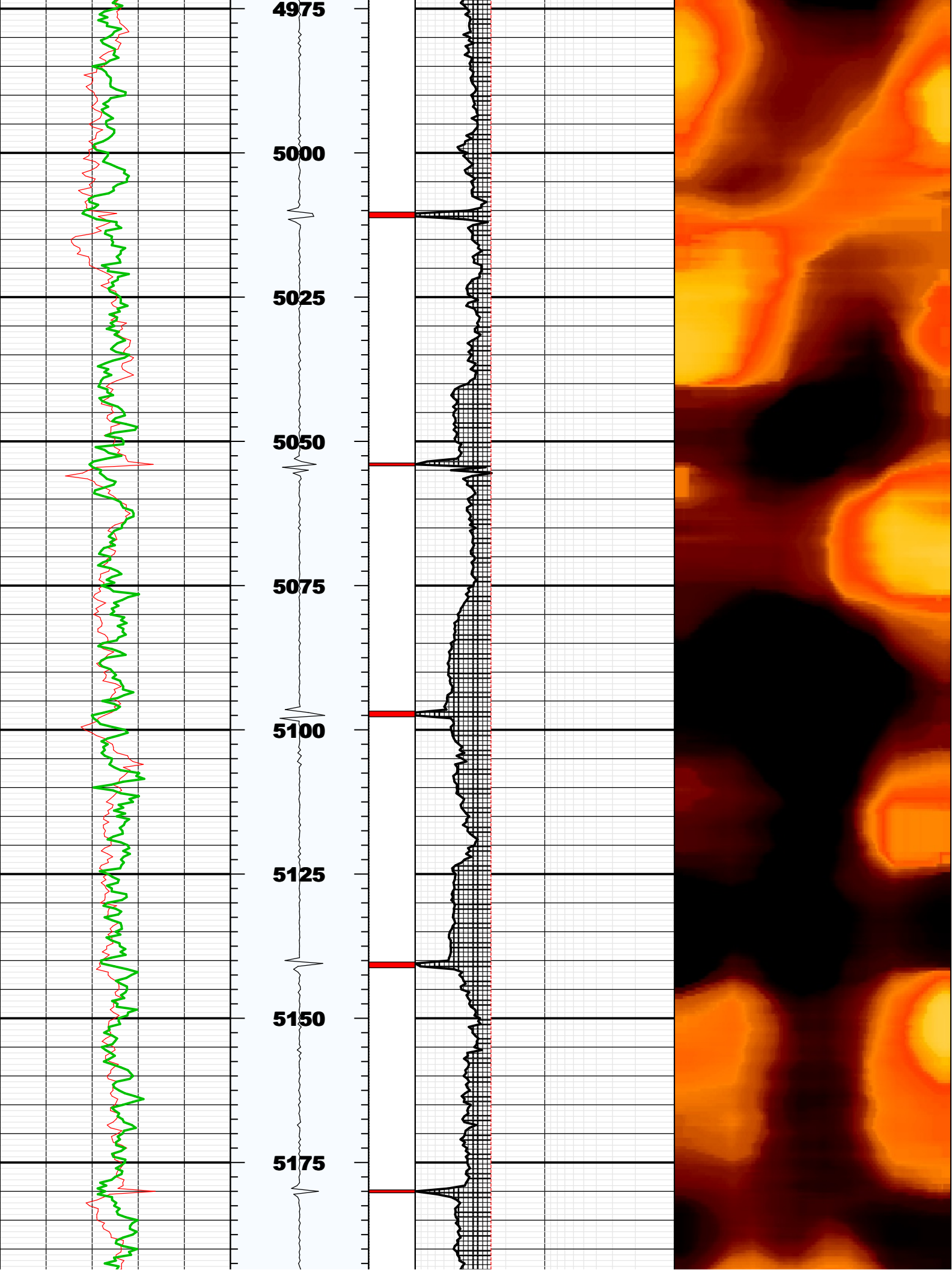


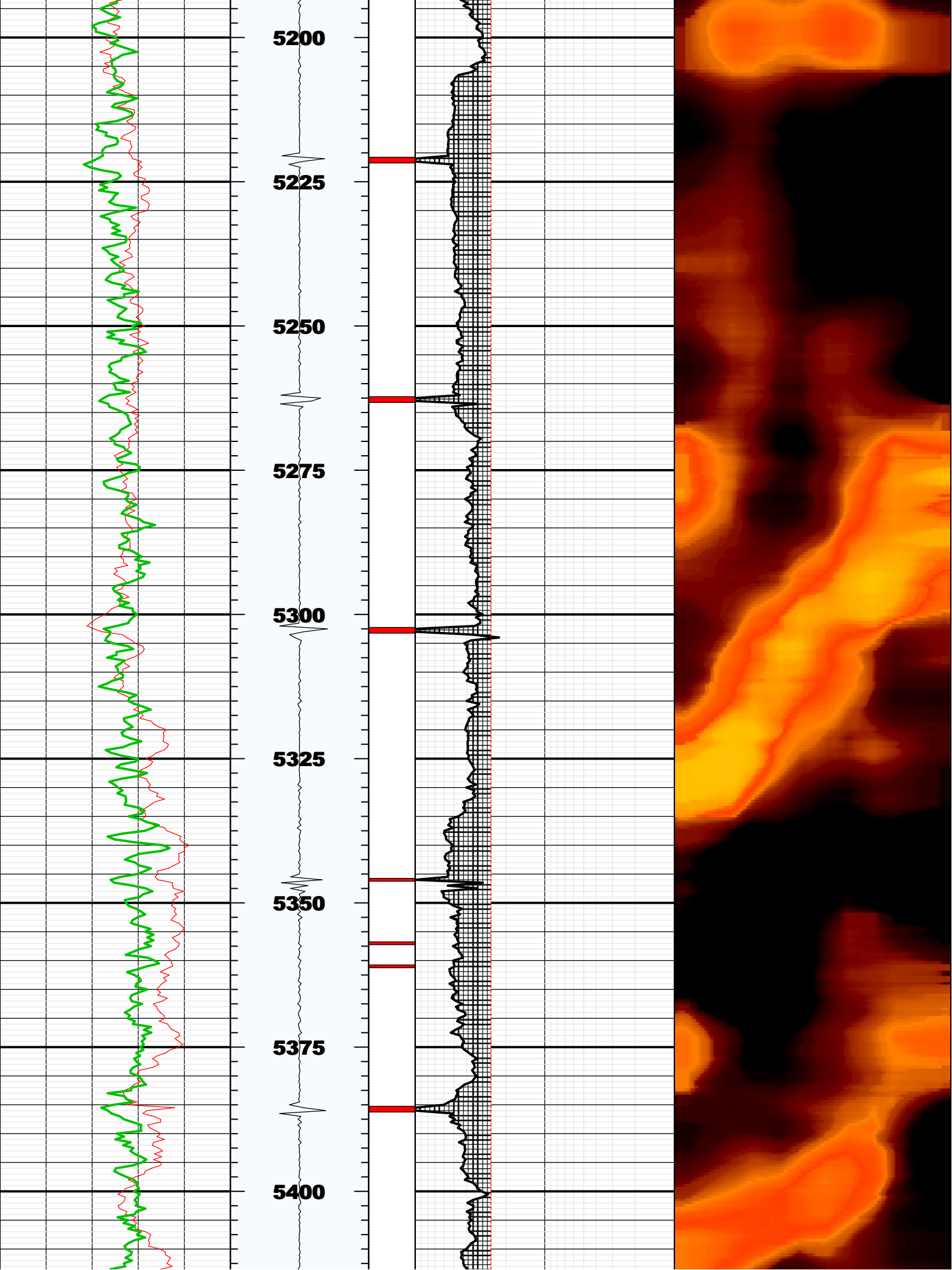


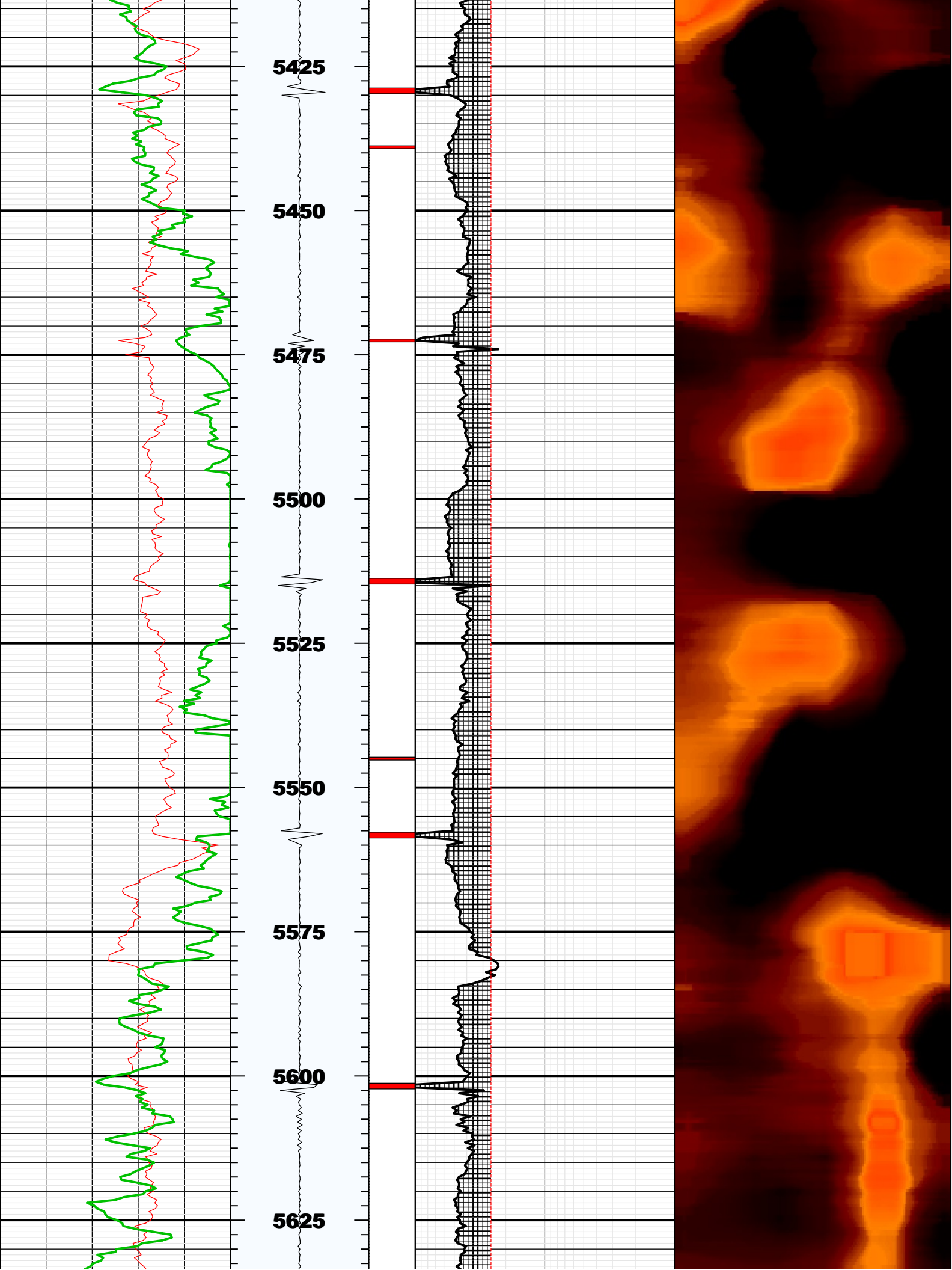




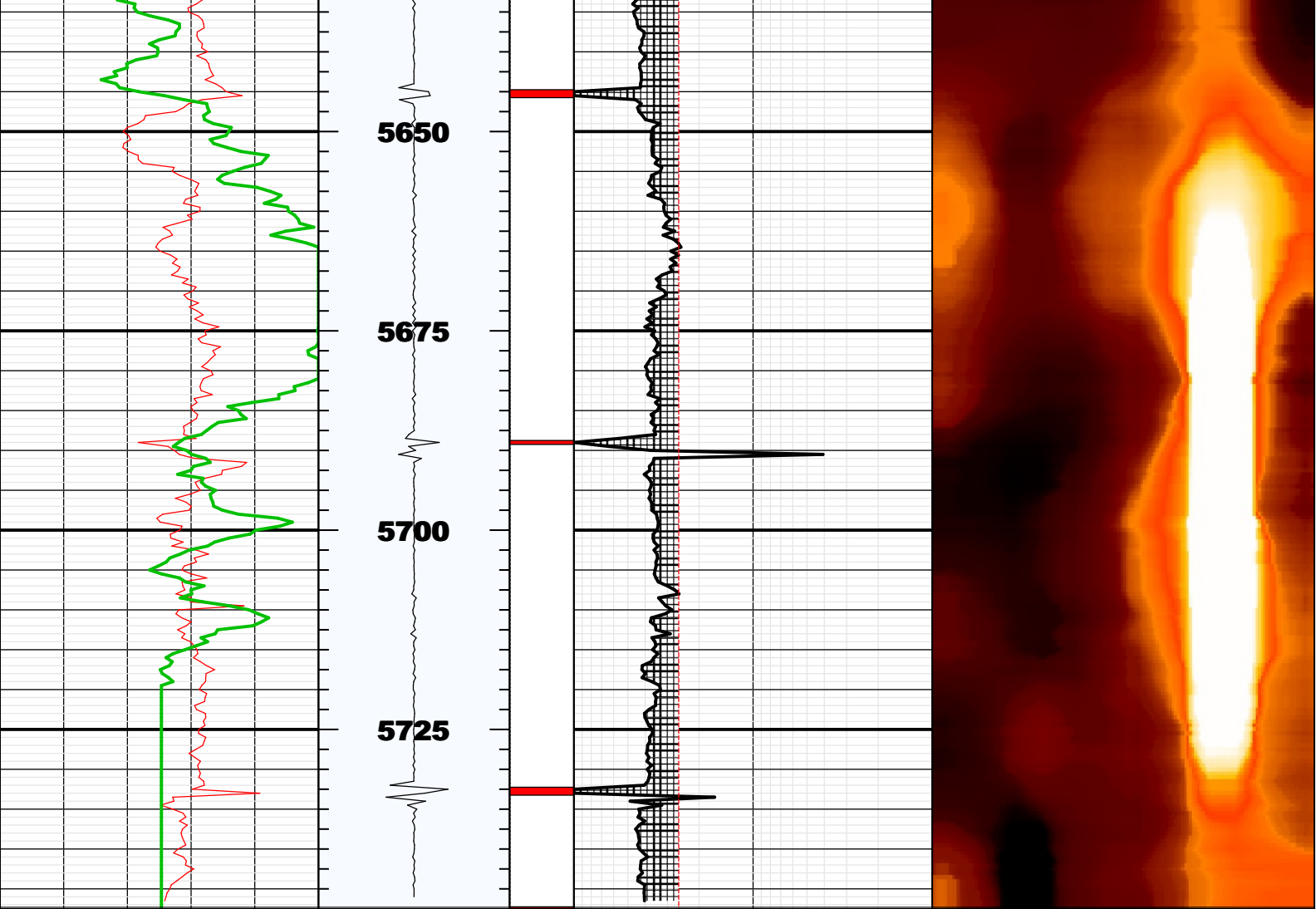








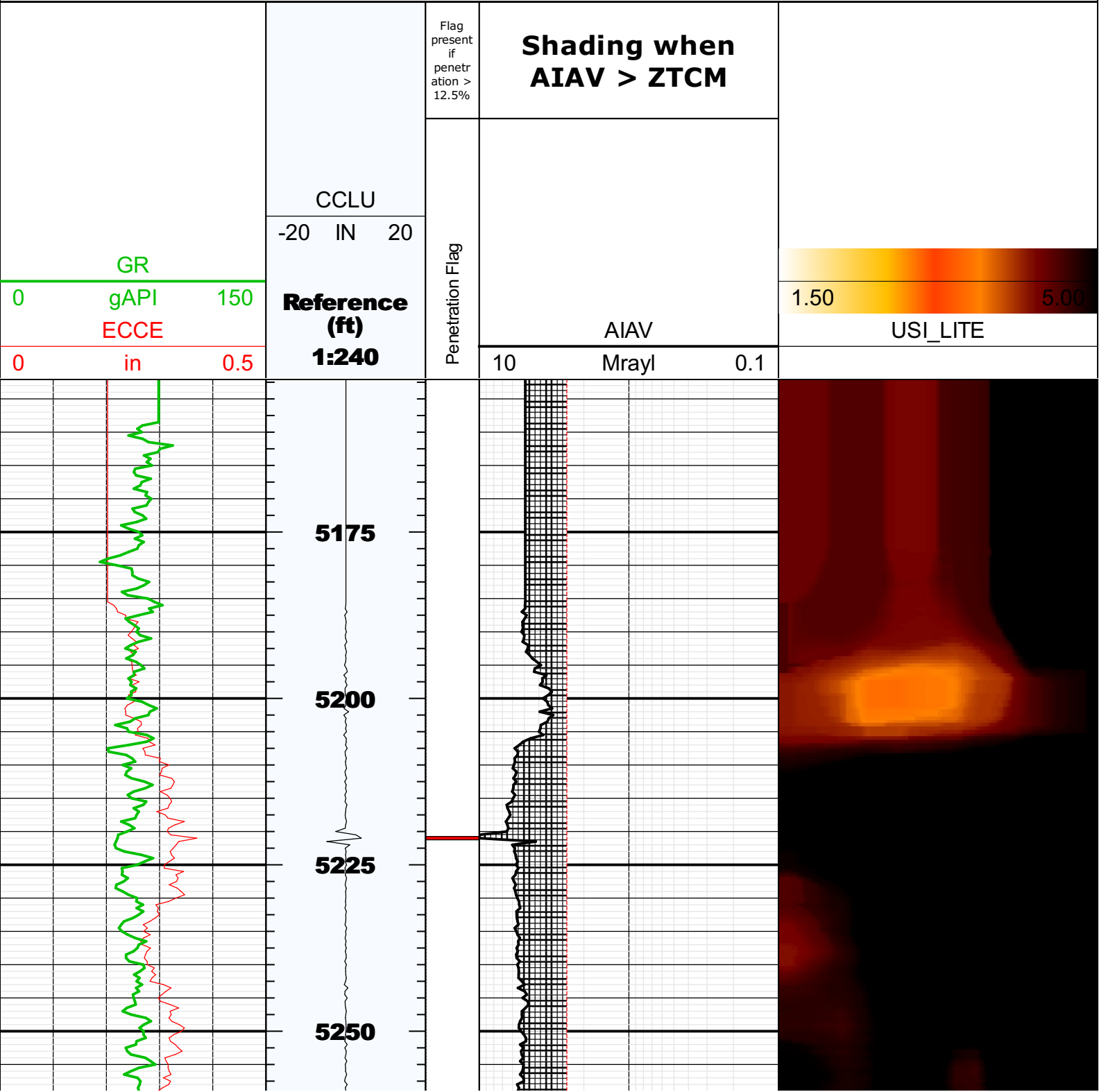


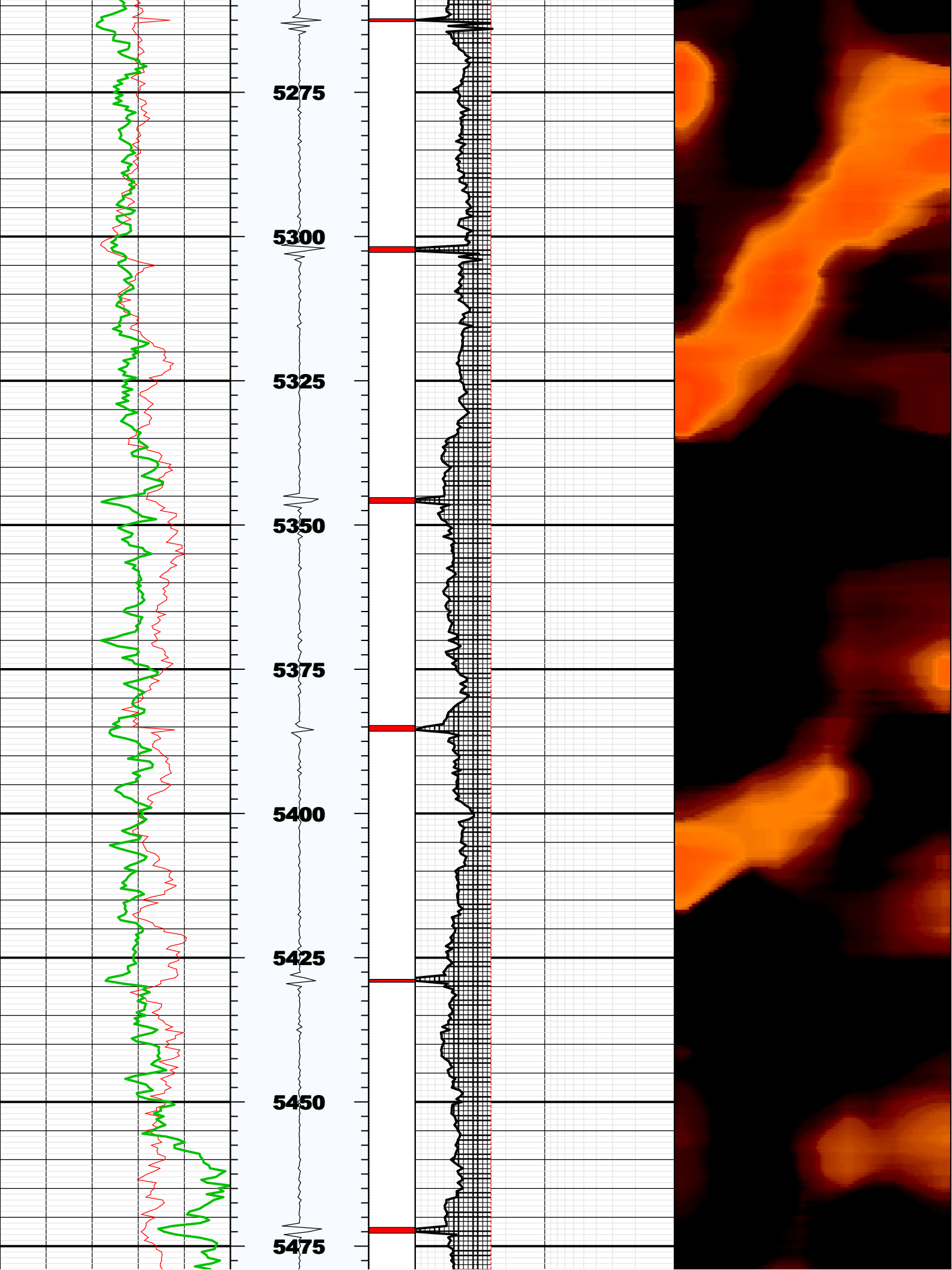


BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID	6.27600	IN	Casing Inner Diameter
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.70000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	60	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	35.19585	US	Window Begin Time
WINE	78.40100	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.80000	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

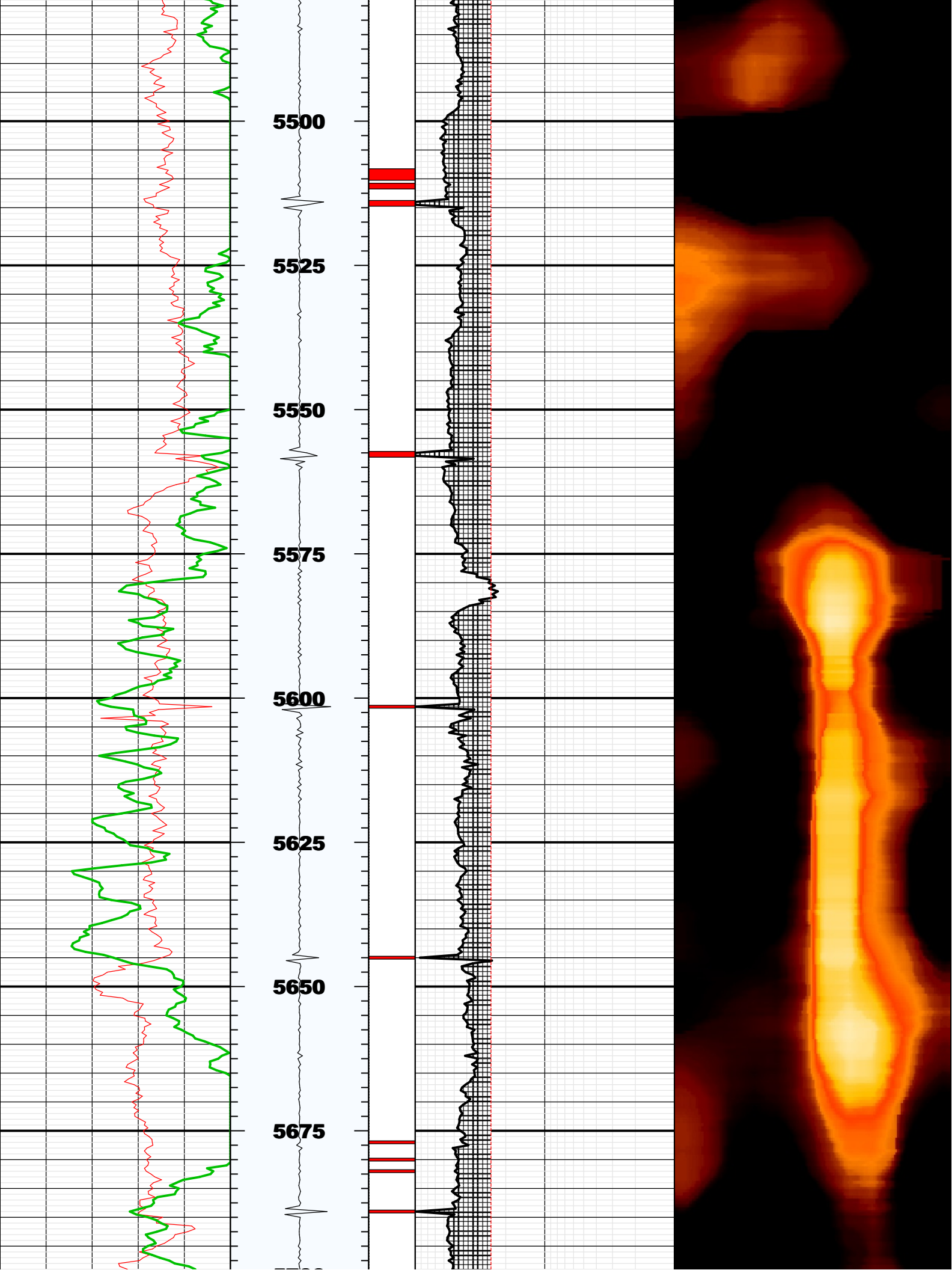
Repeat Pass

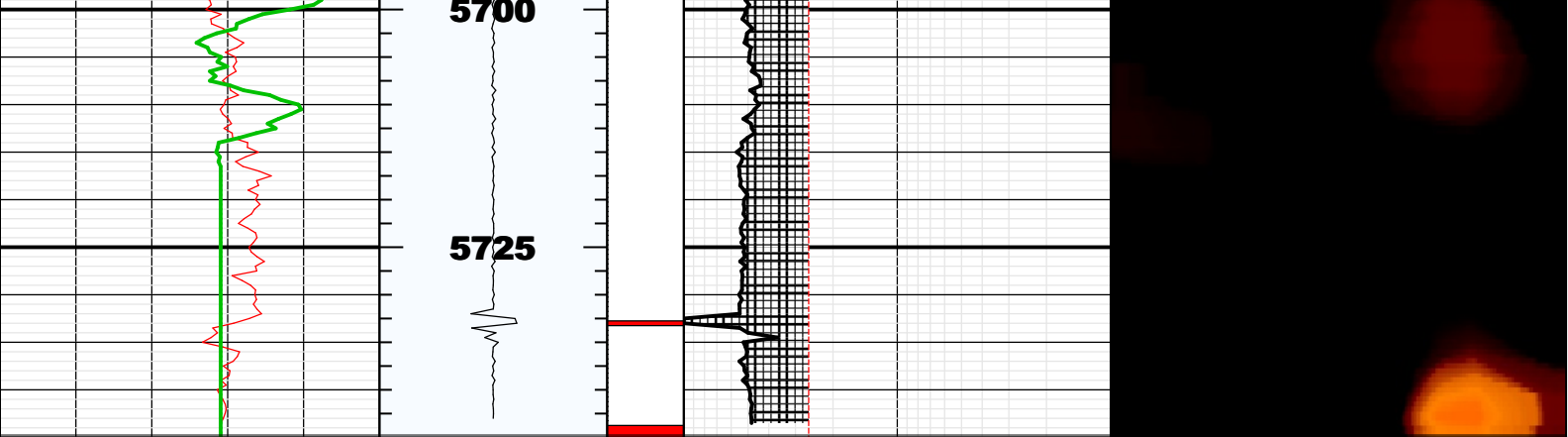
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## Fluid Properties Used for Main Pass

