

Company: Noble Energy Inc

Well: Heartland State H01-74-1HN
Field: Wattenberg
County: Weld State: Colorado

County: Weld		USI-LITE (2500 psi)					
Field: Wattenberg							
Location: SESE Sec.25 T4N R65W							
Well: Heartland H01-74-1HN							
Company: Noble Energy Inc							
LOCATION		Permanent Datum: Log Measured From: Drilling Measured From:	GL KB KB	Elev: K.B. 4850.0 F G.L. 4834.0 F D.F. 4849.0 F			
API Serial No. 05-123-39550-0000					Section 25	Township 4N	Range 65W
Logging Date 11-Oct-2014							
Run Number Run 1 USIT							
Depth Driller 7536.0 F							
Schlumberger Depth 7536.0 F							
Bottom Log Interval 6793.0 F							
Top Log Interval -999.2 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 735.0 F							
To 7536.0 F							
Casing Size 7.00 IN							
Weight 26.00 LB/F							
Grade P110							
From 0.0 F							
To 7536.0 F							
Max Recorded Temp 231.9							
Logger on bottom (date) 11-Oct-2014							
Location Ft. Morgan							
Recorded By Danielle Maniere							
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: 17000.00000

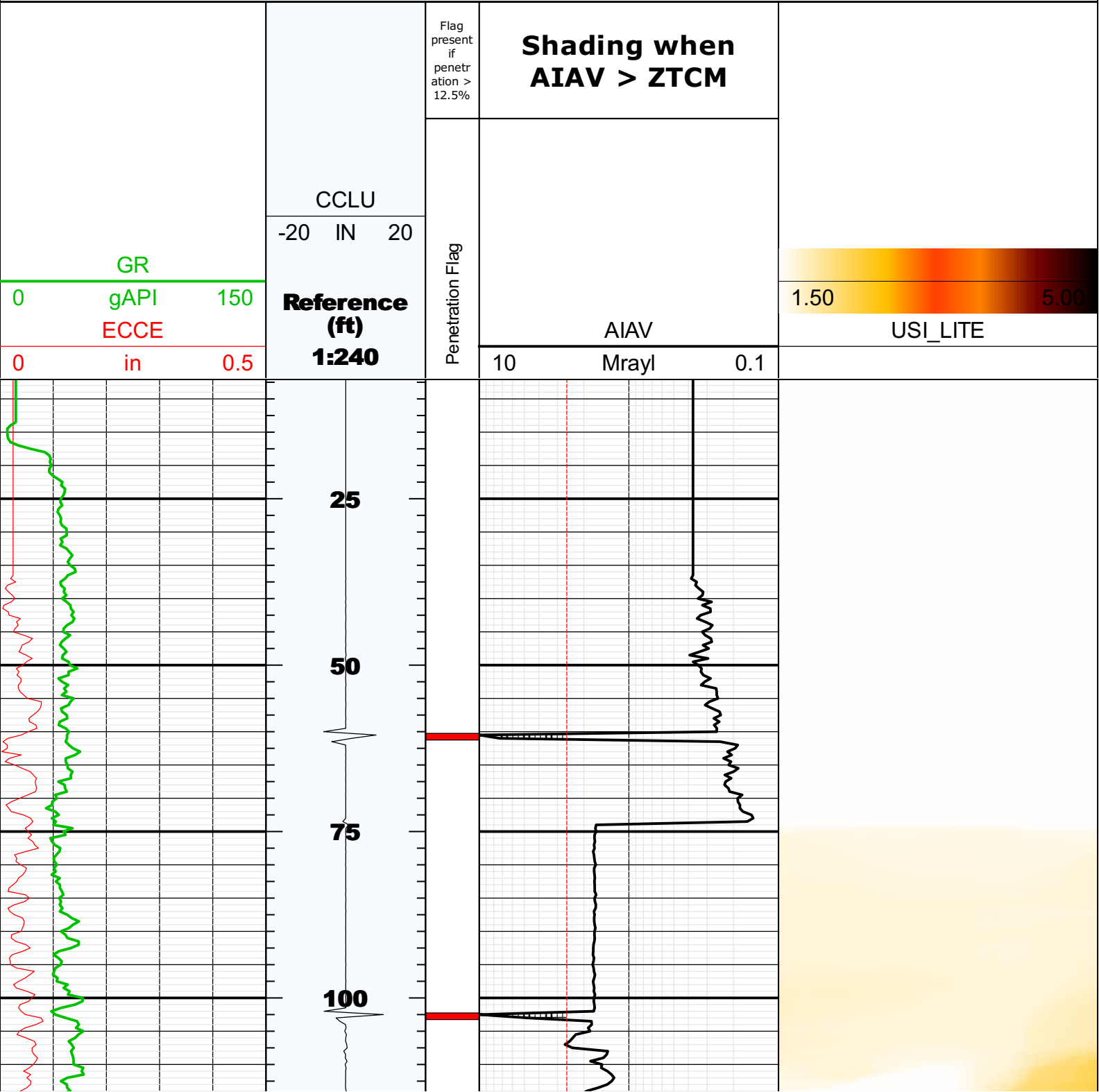
DISCLAIMER

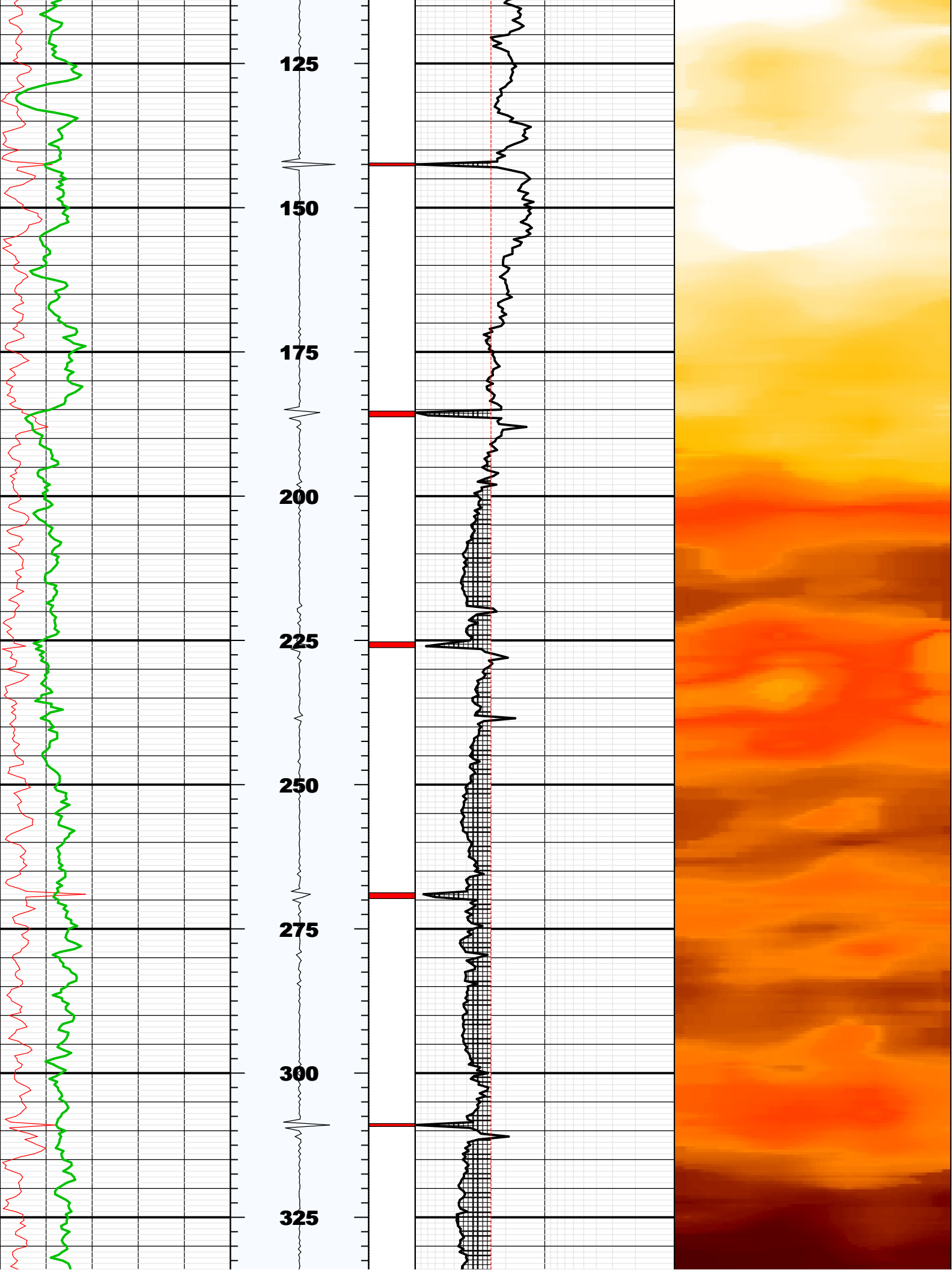
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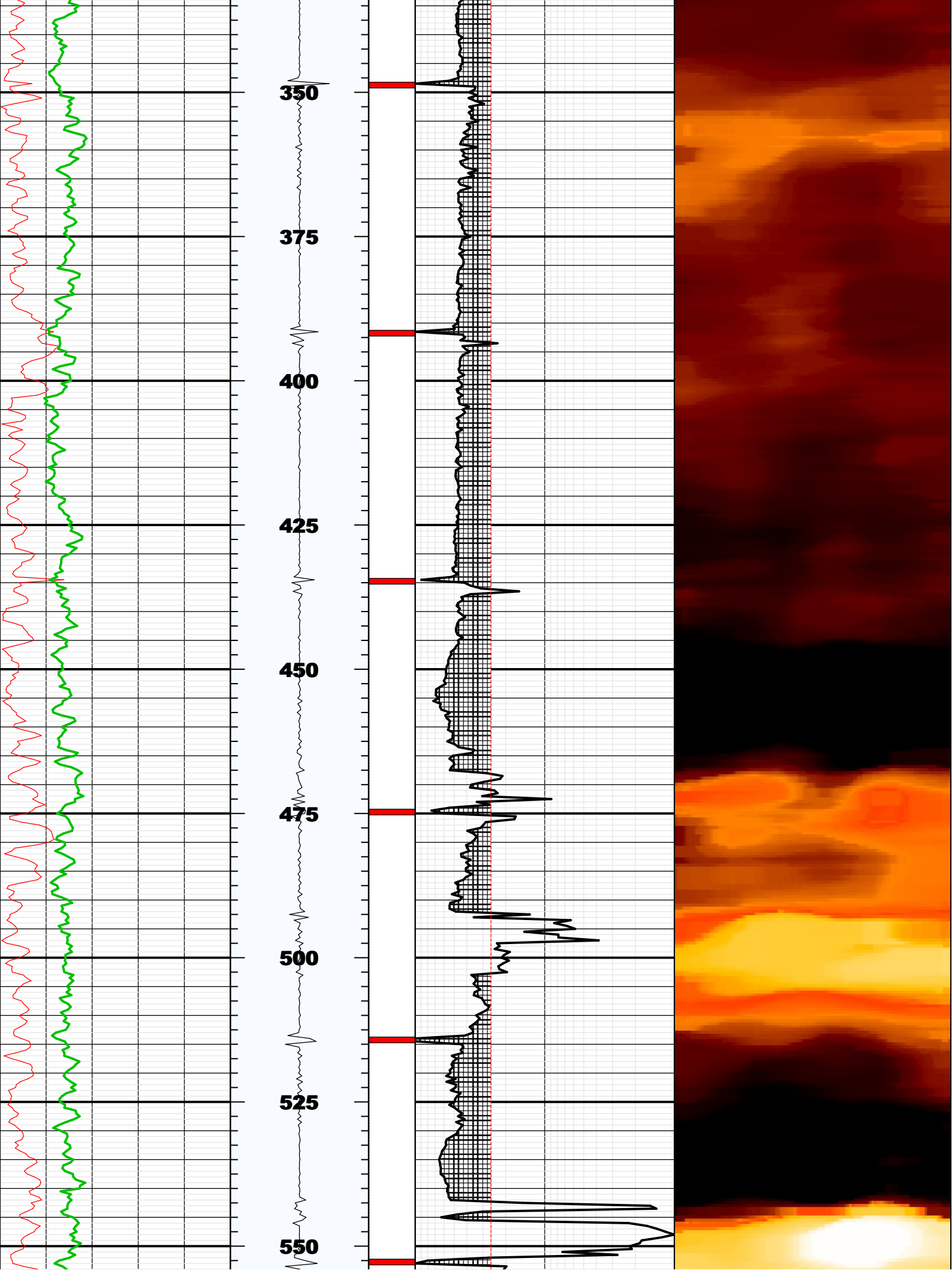
0psi repeat pass 2500psi main pass
Logged from 20ft above top of liner
Top of liner at 6813ft. Niobrara formation top not reached.
Bottom hole temperature 232F
Top of cement 190ft

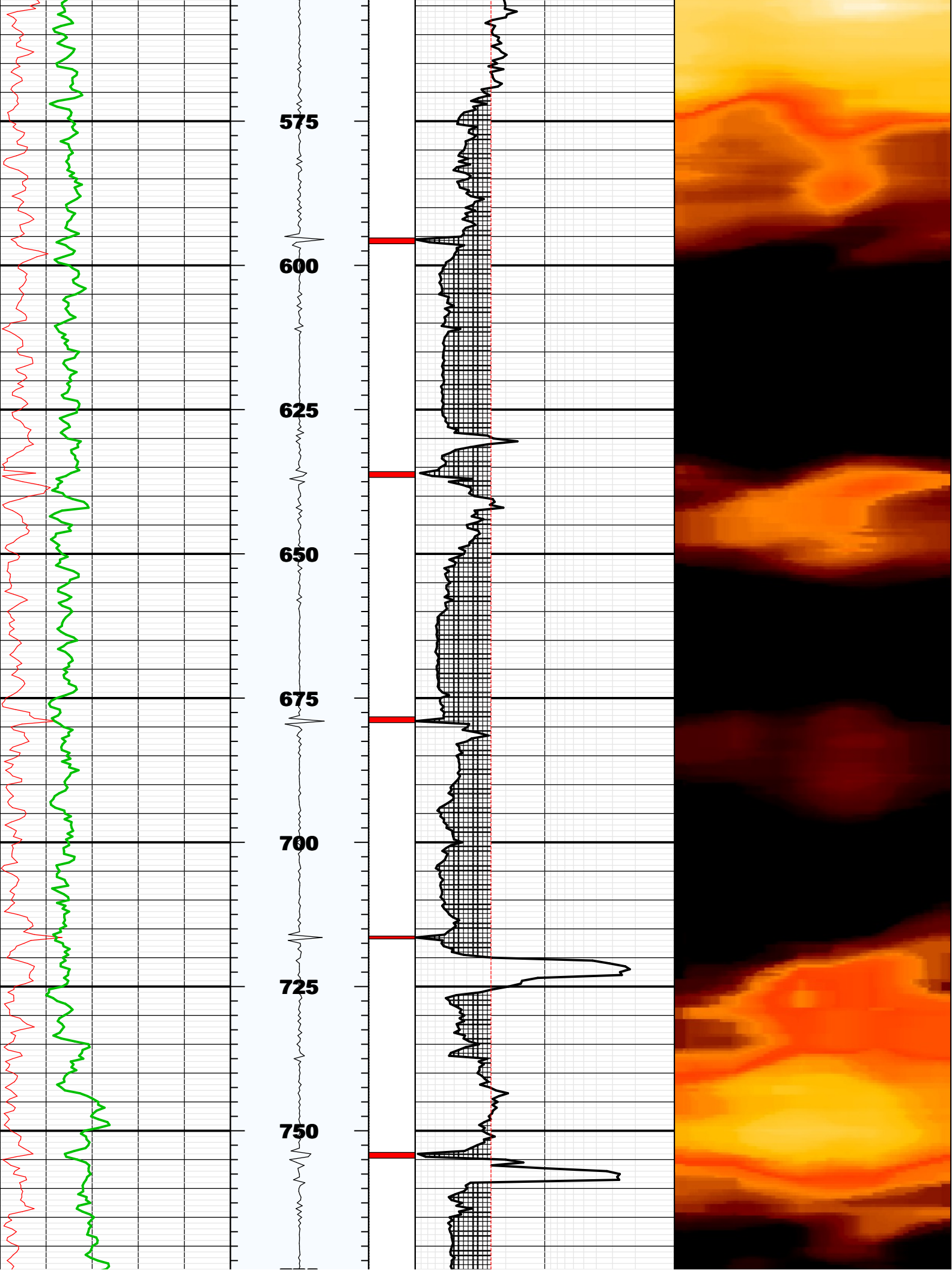
Main Pass

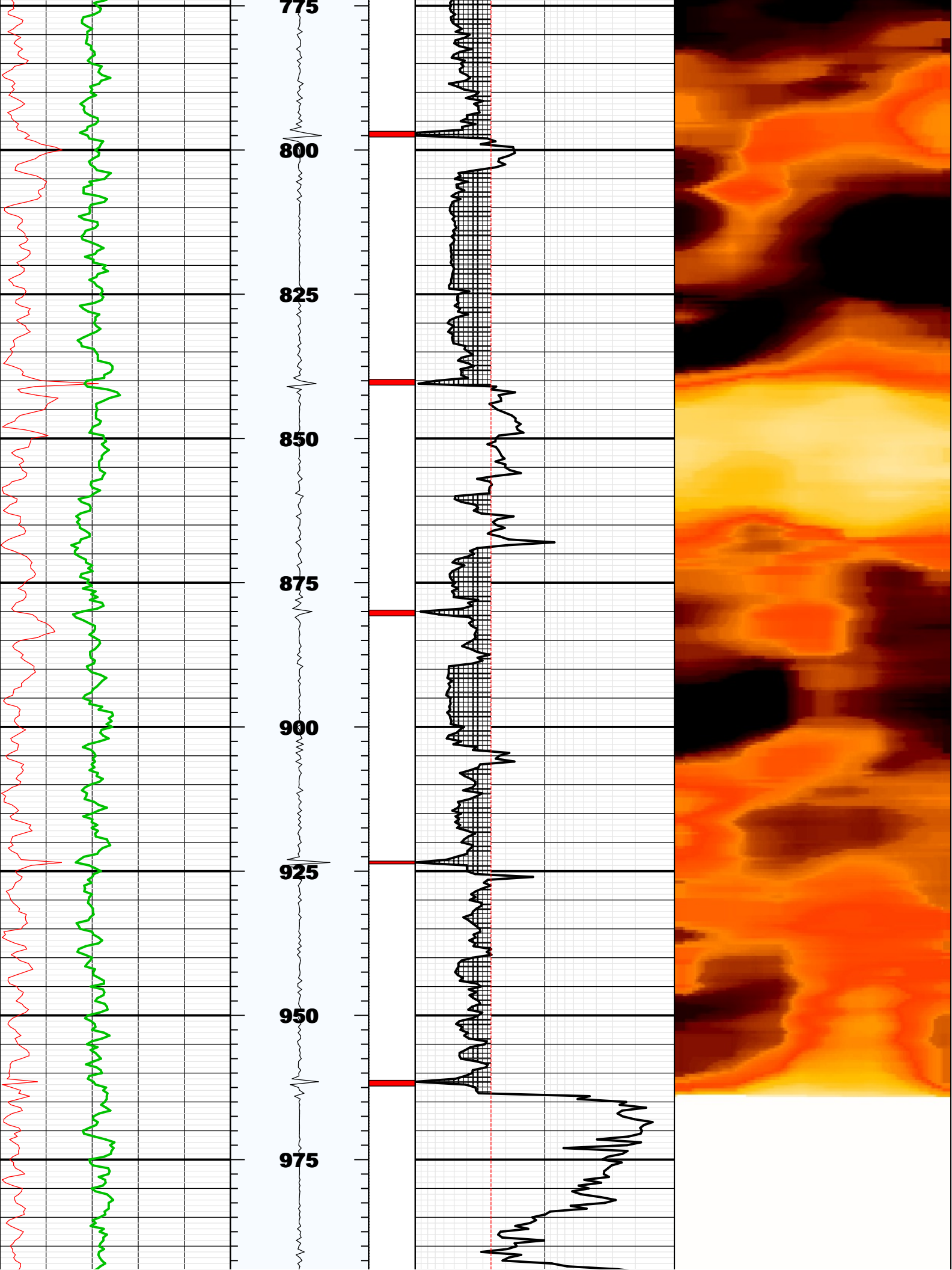
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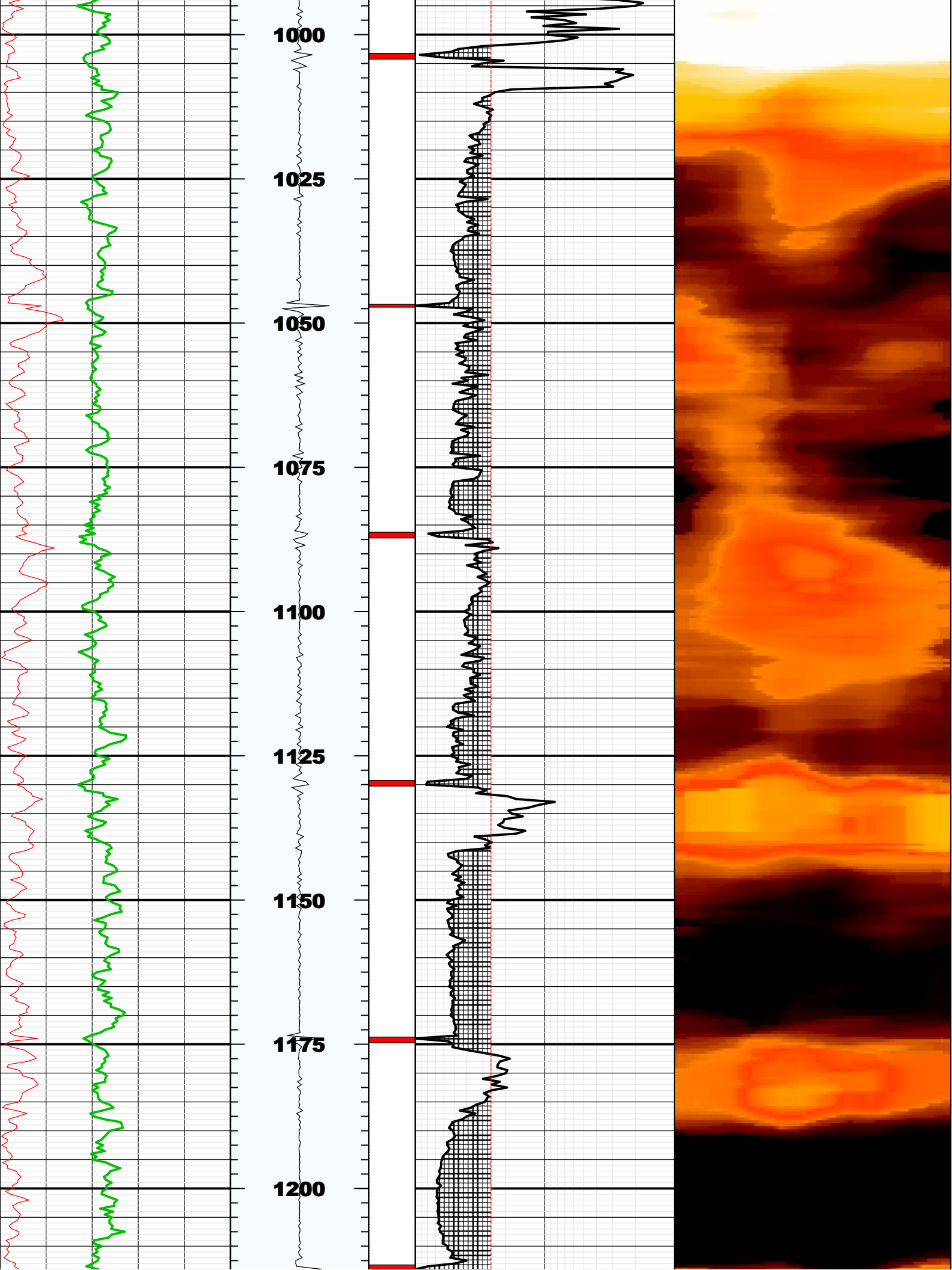


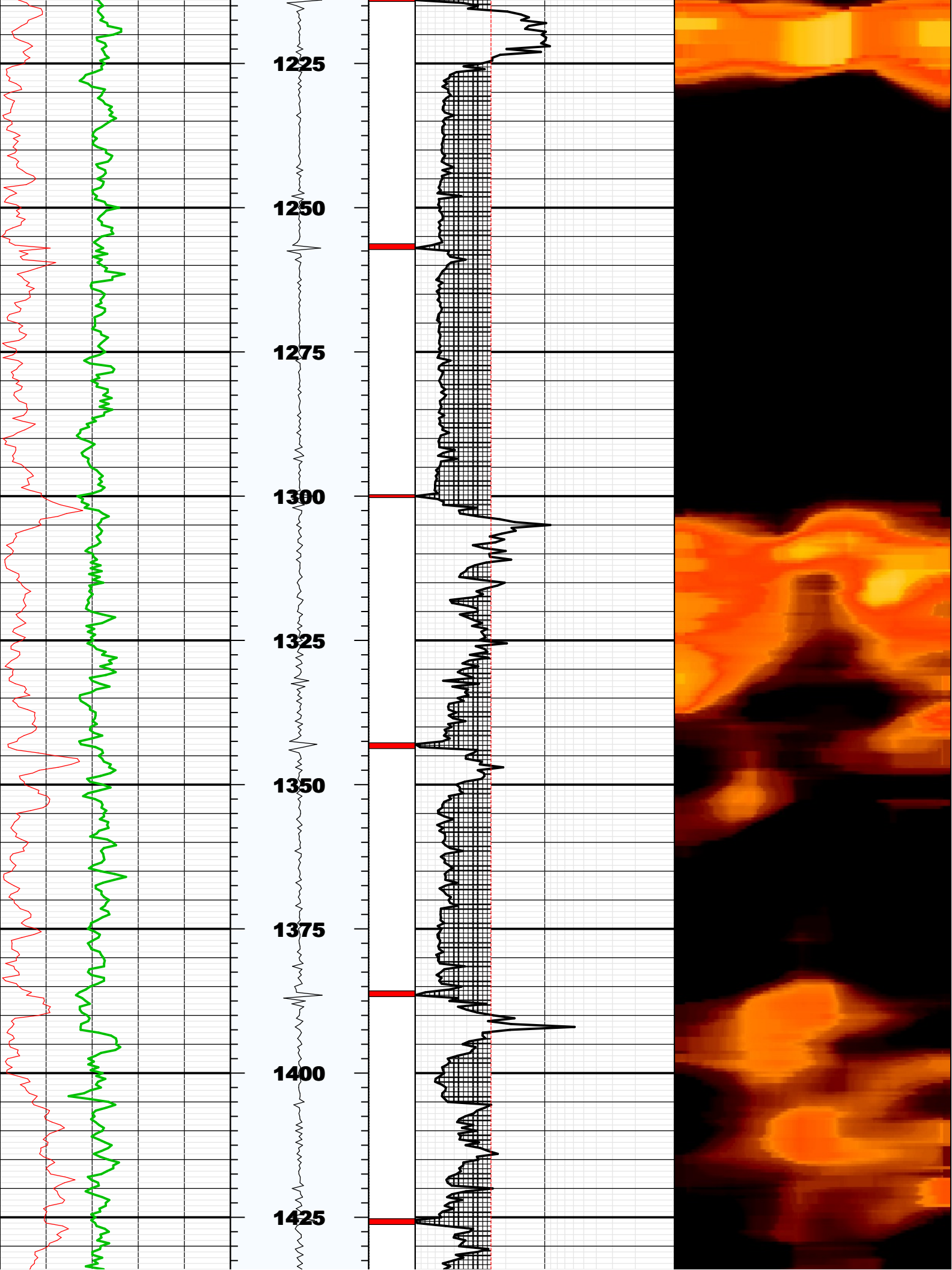


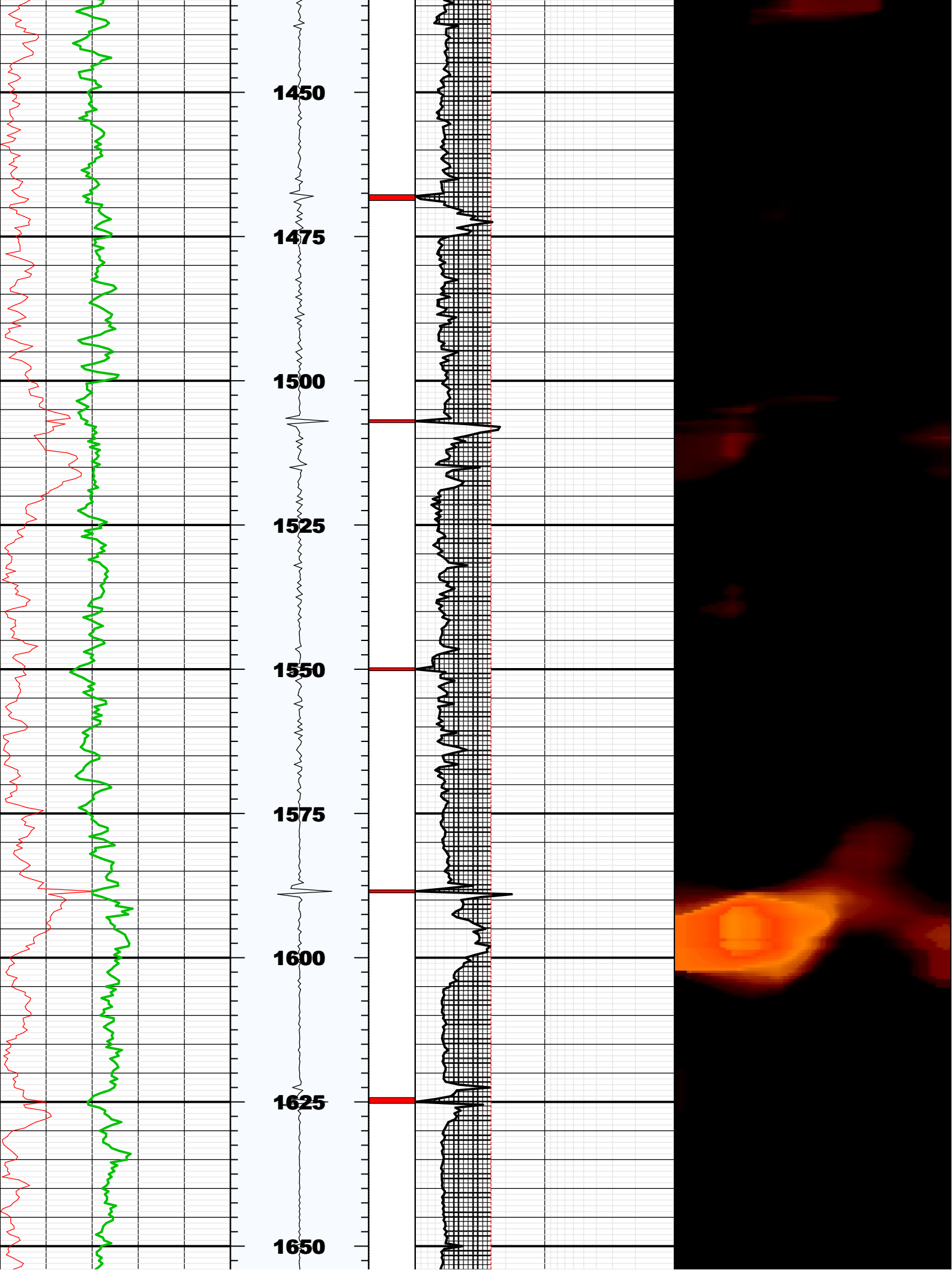


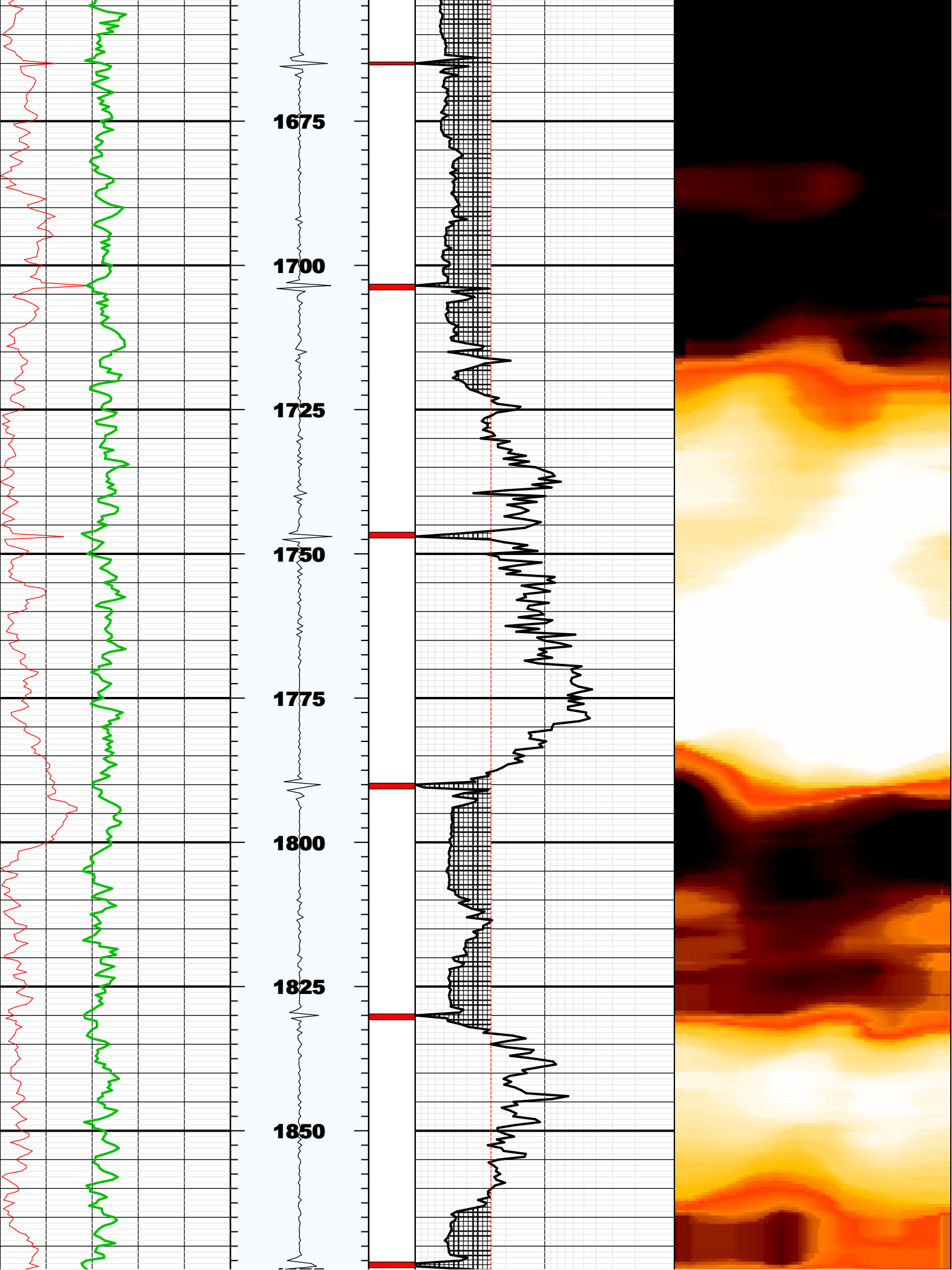


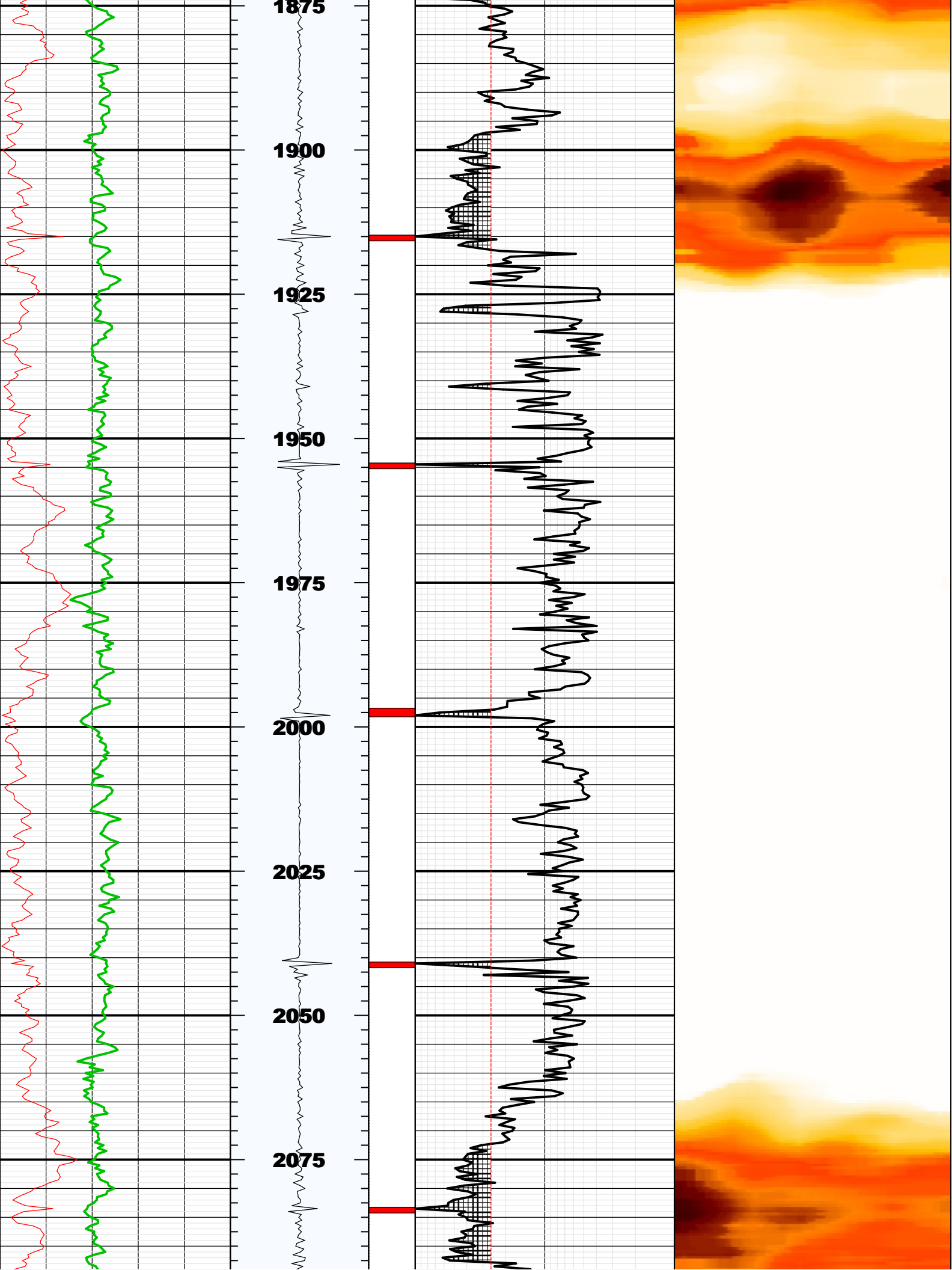


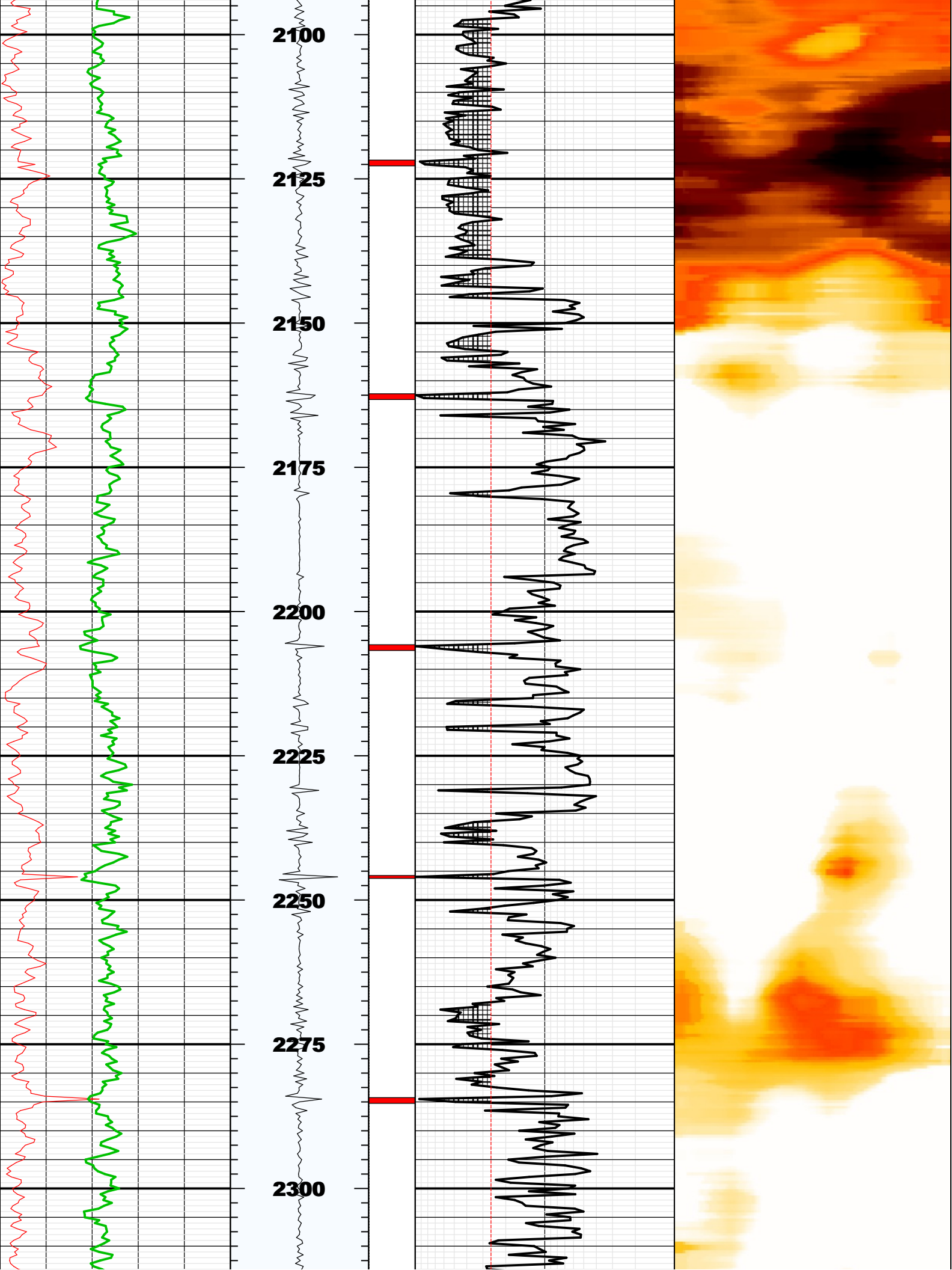


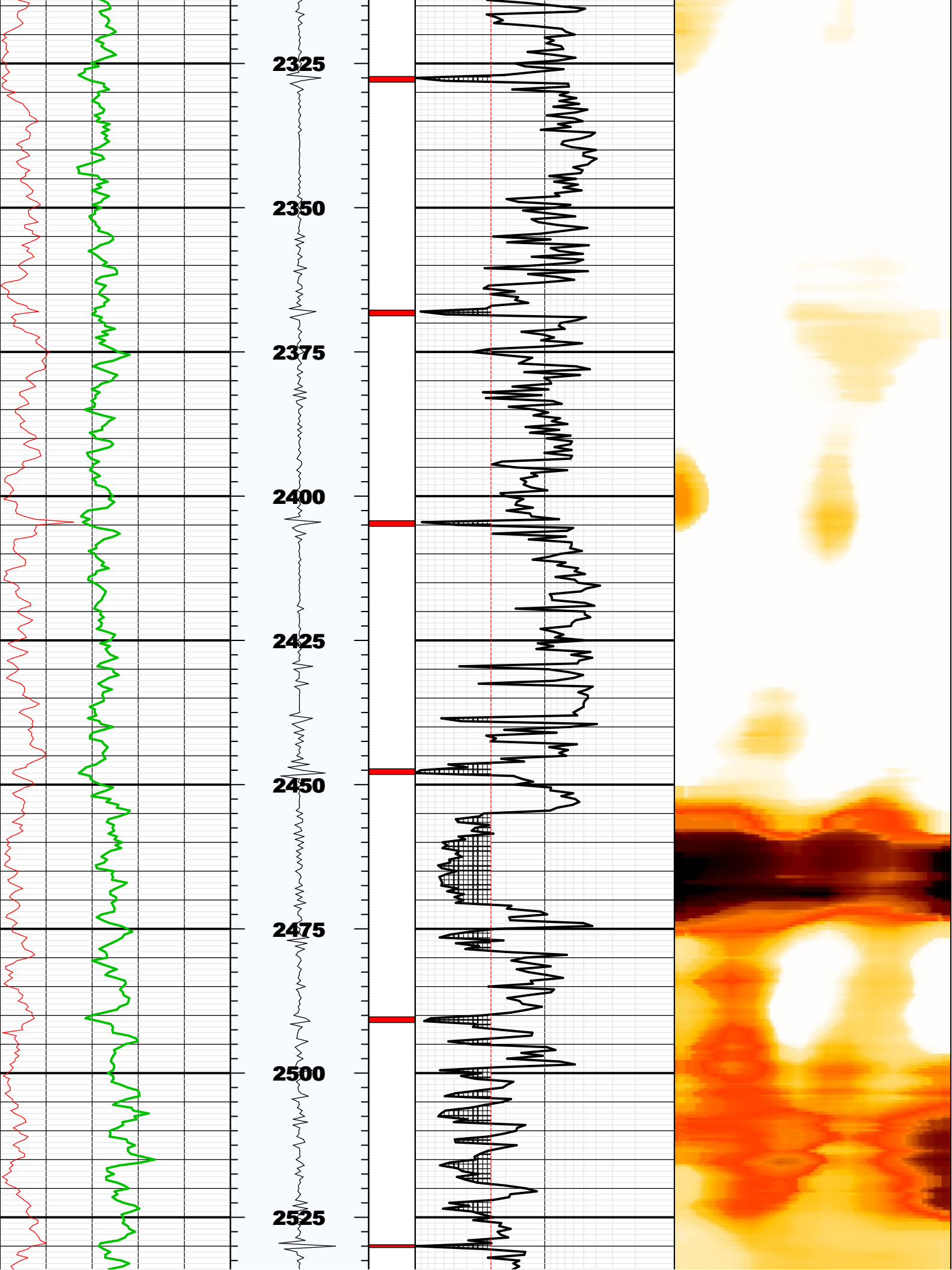


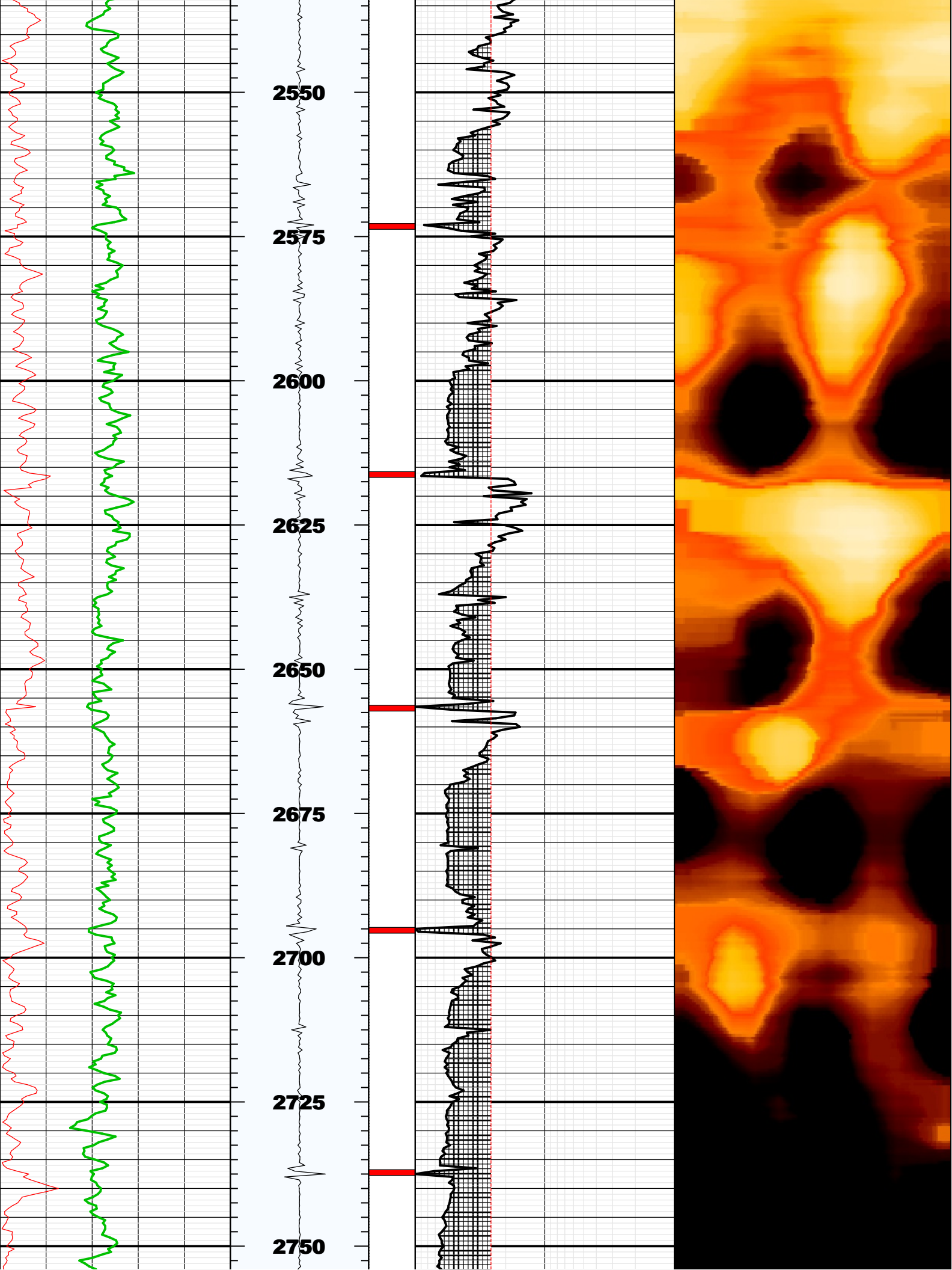


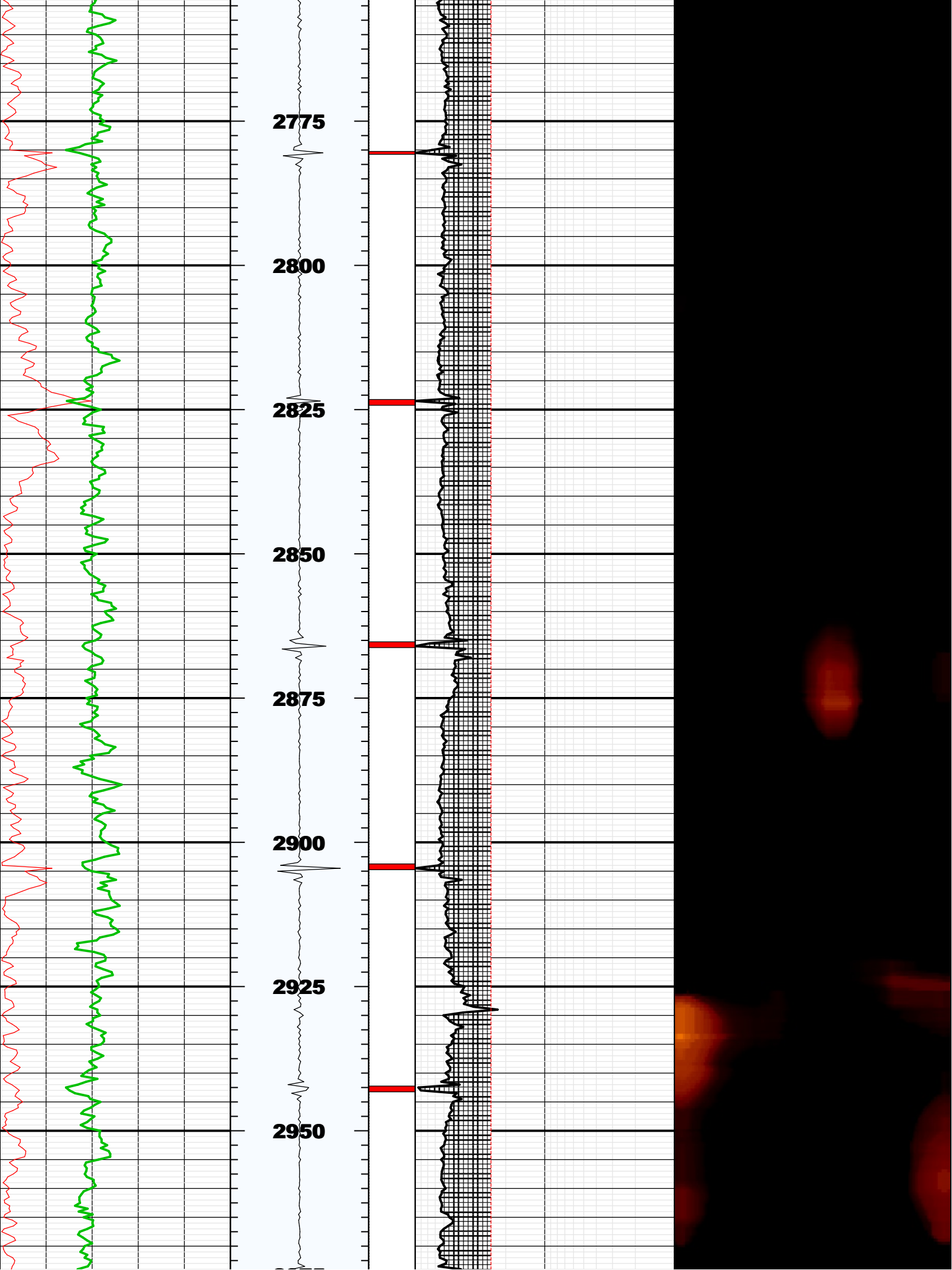


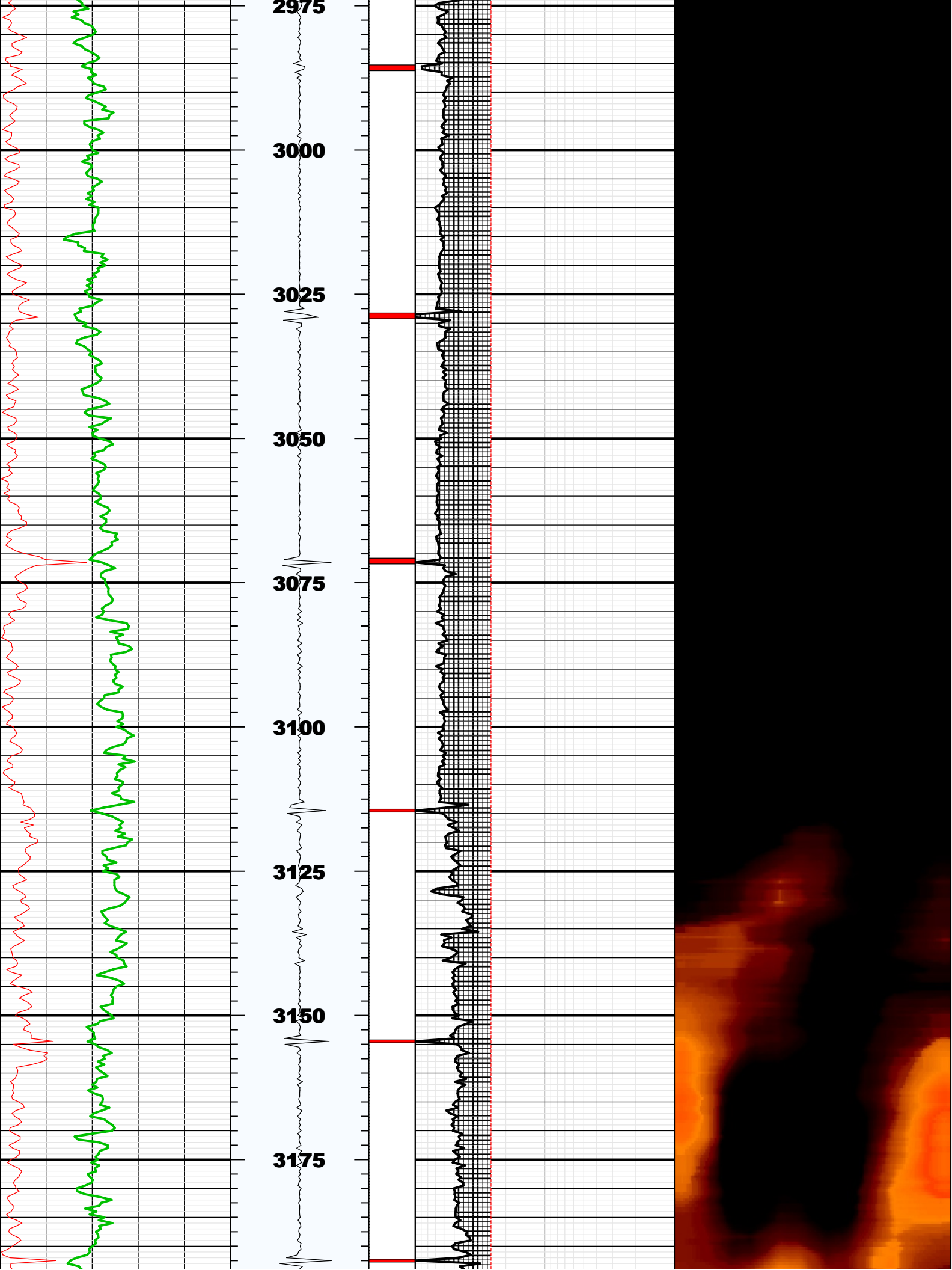


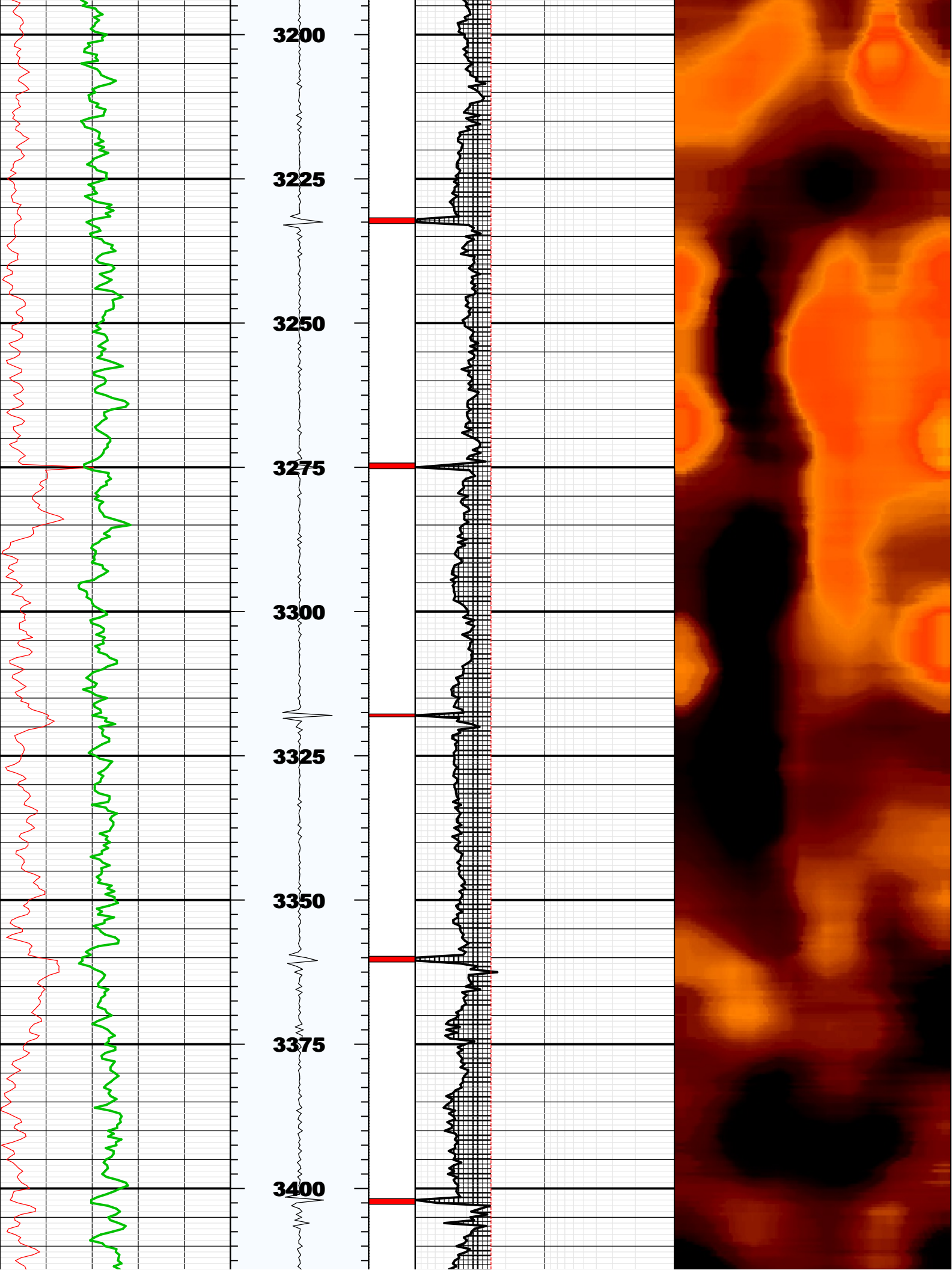


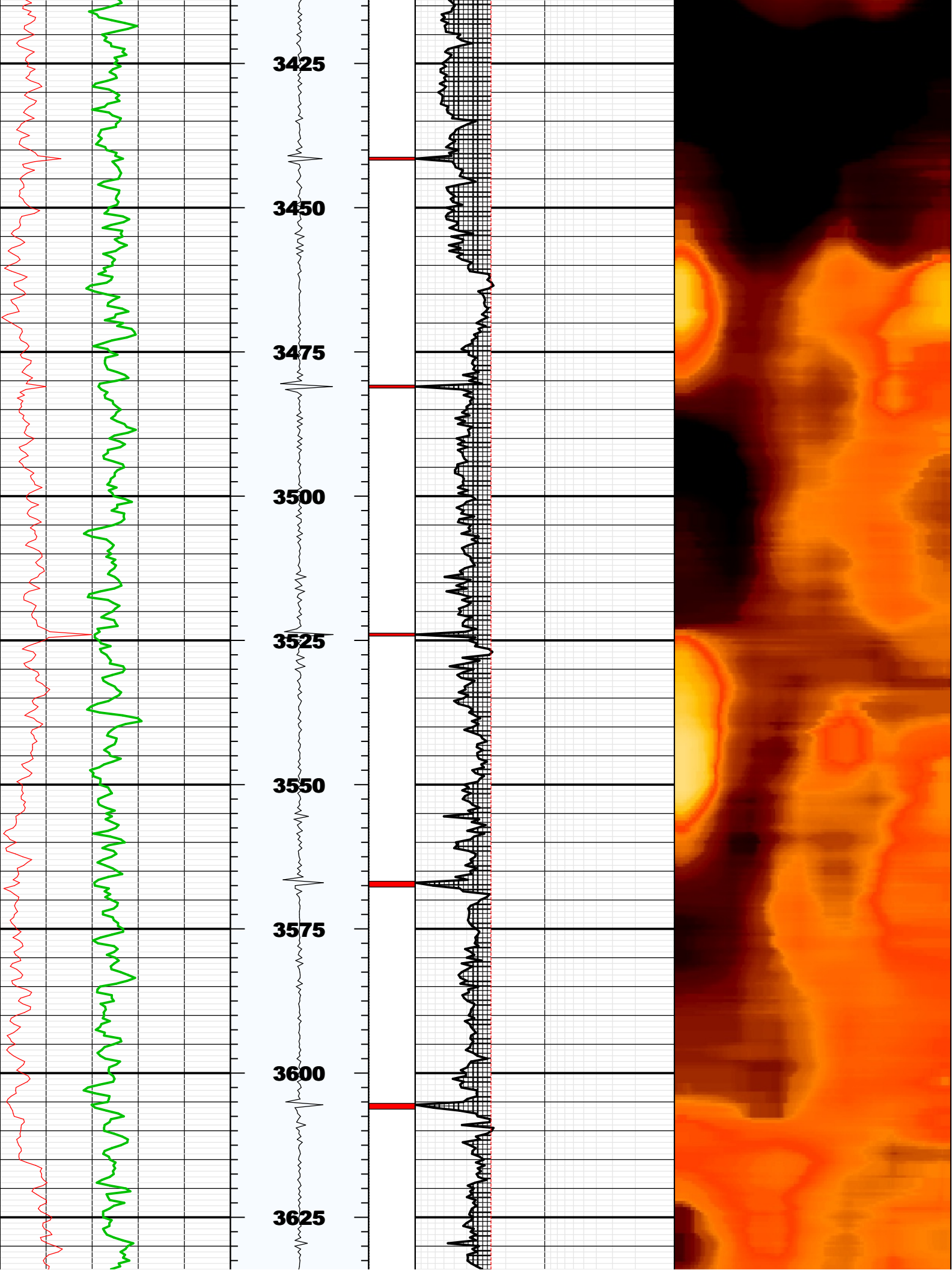


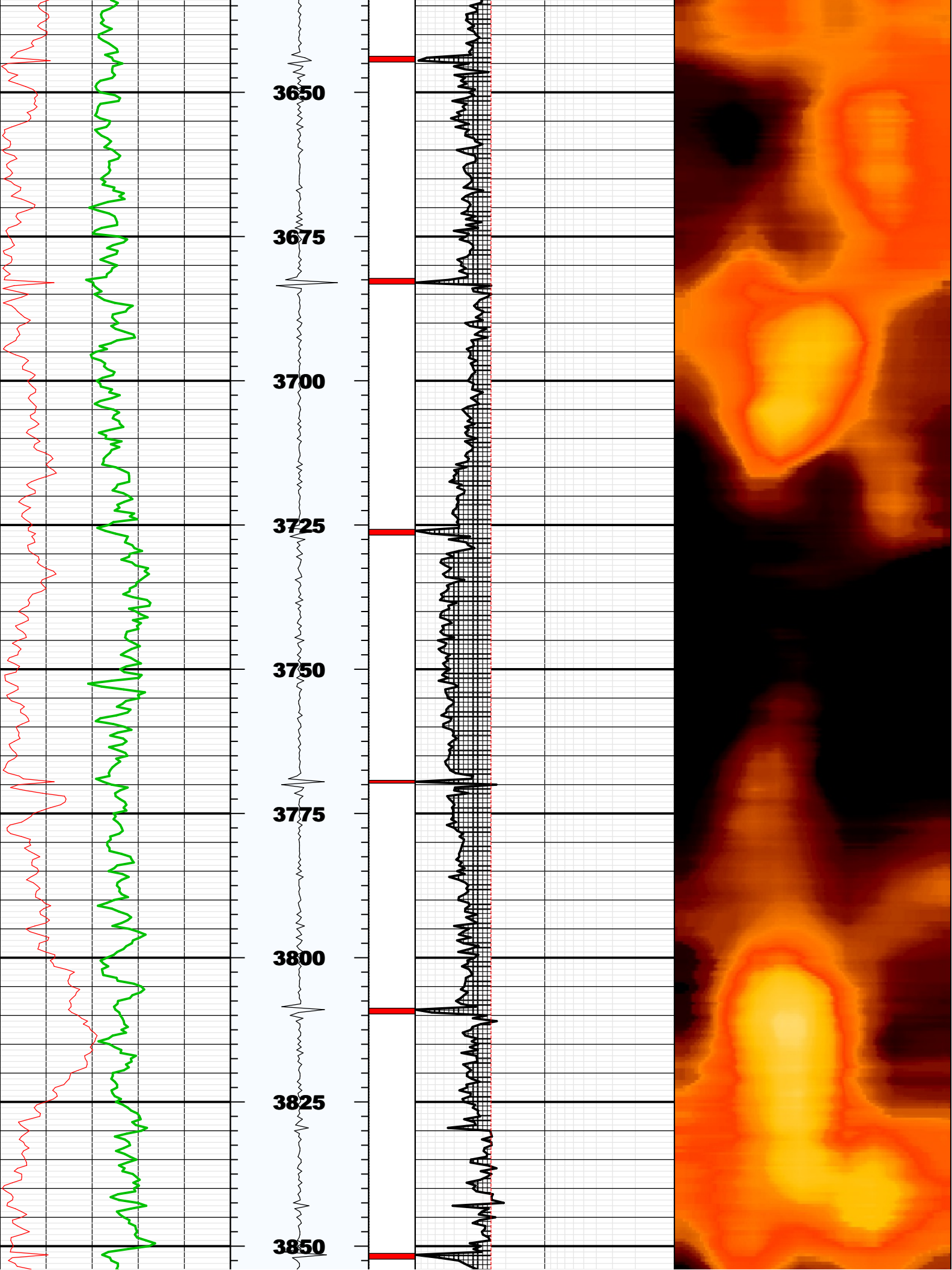


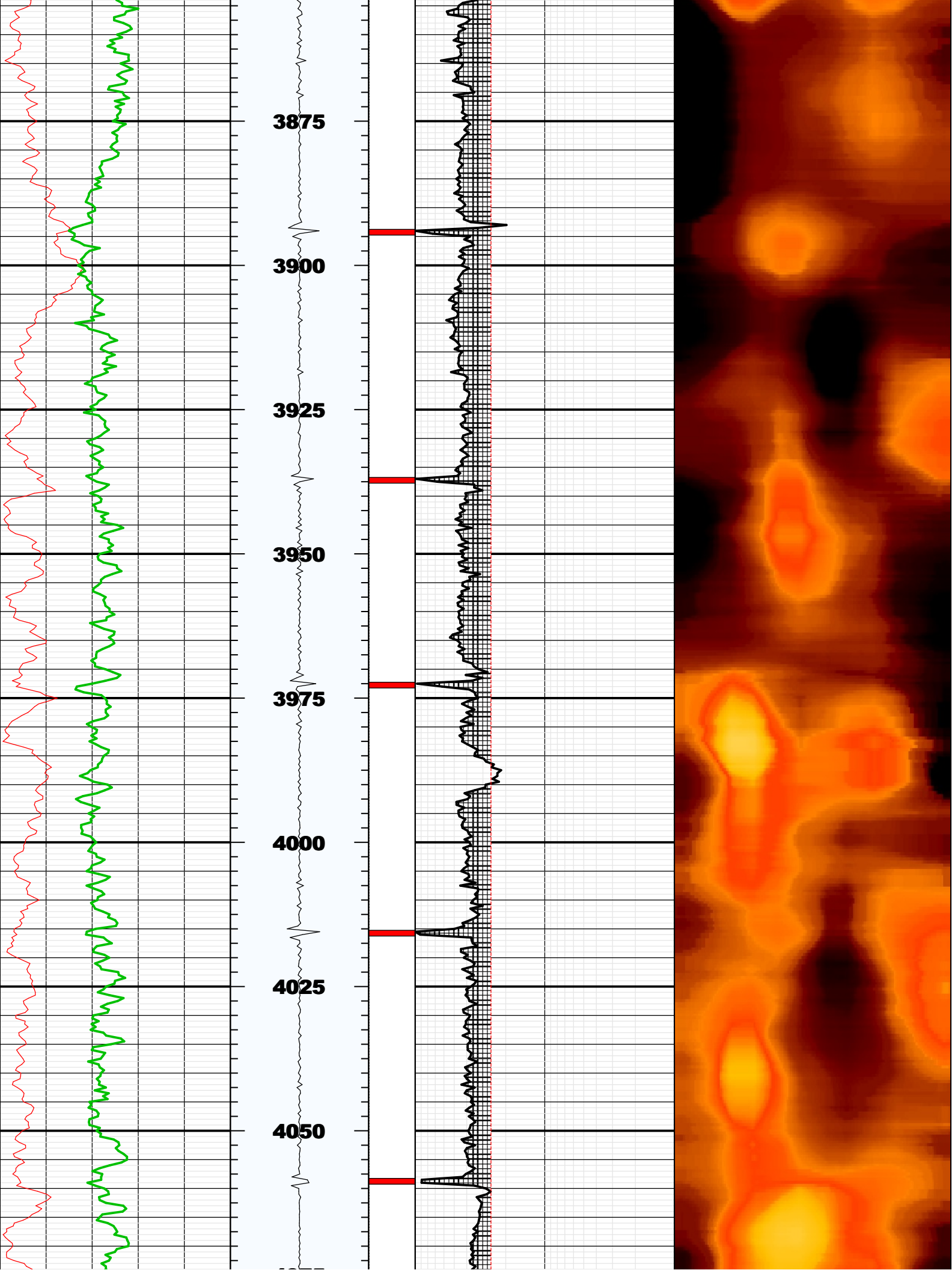


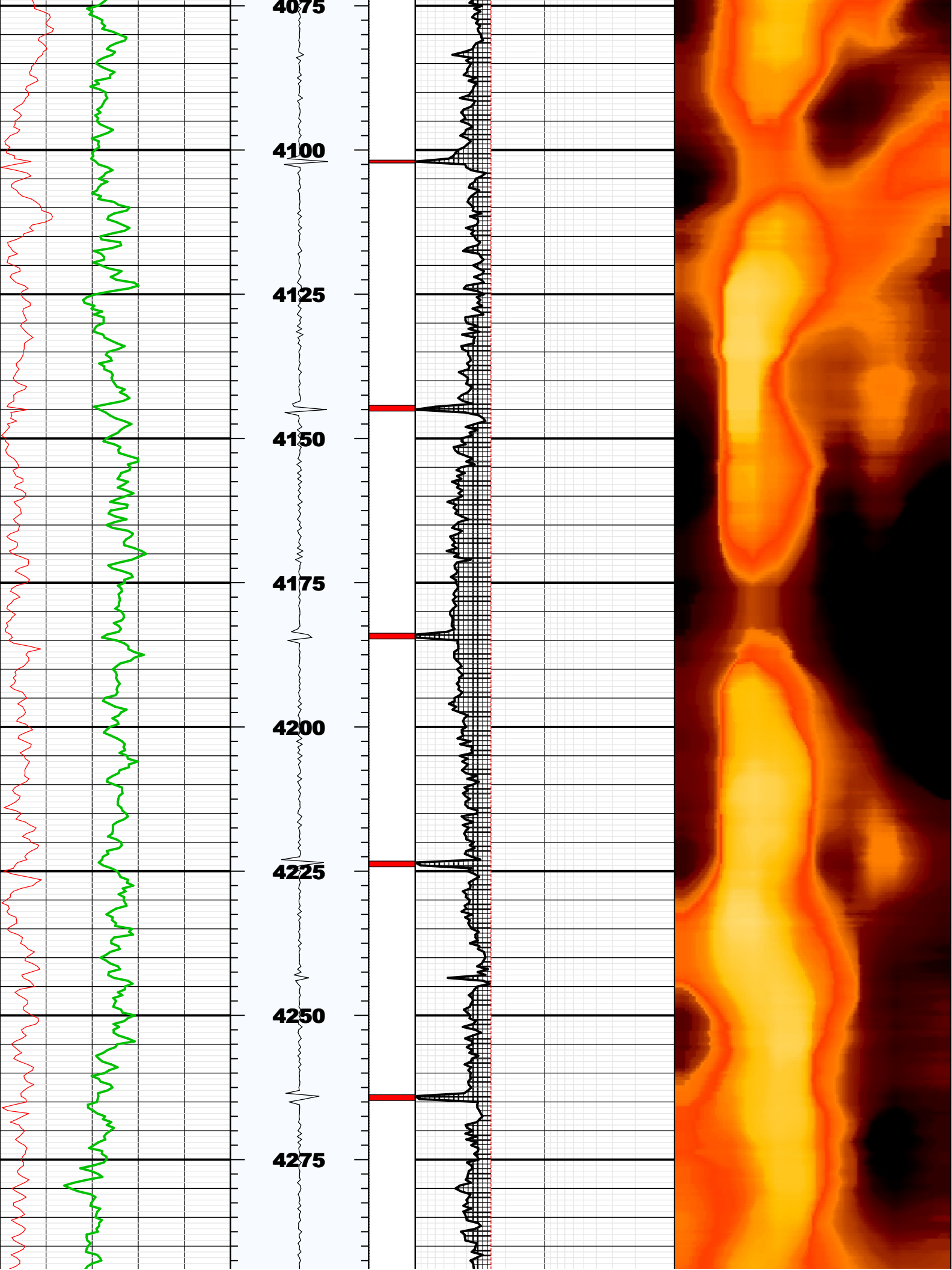


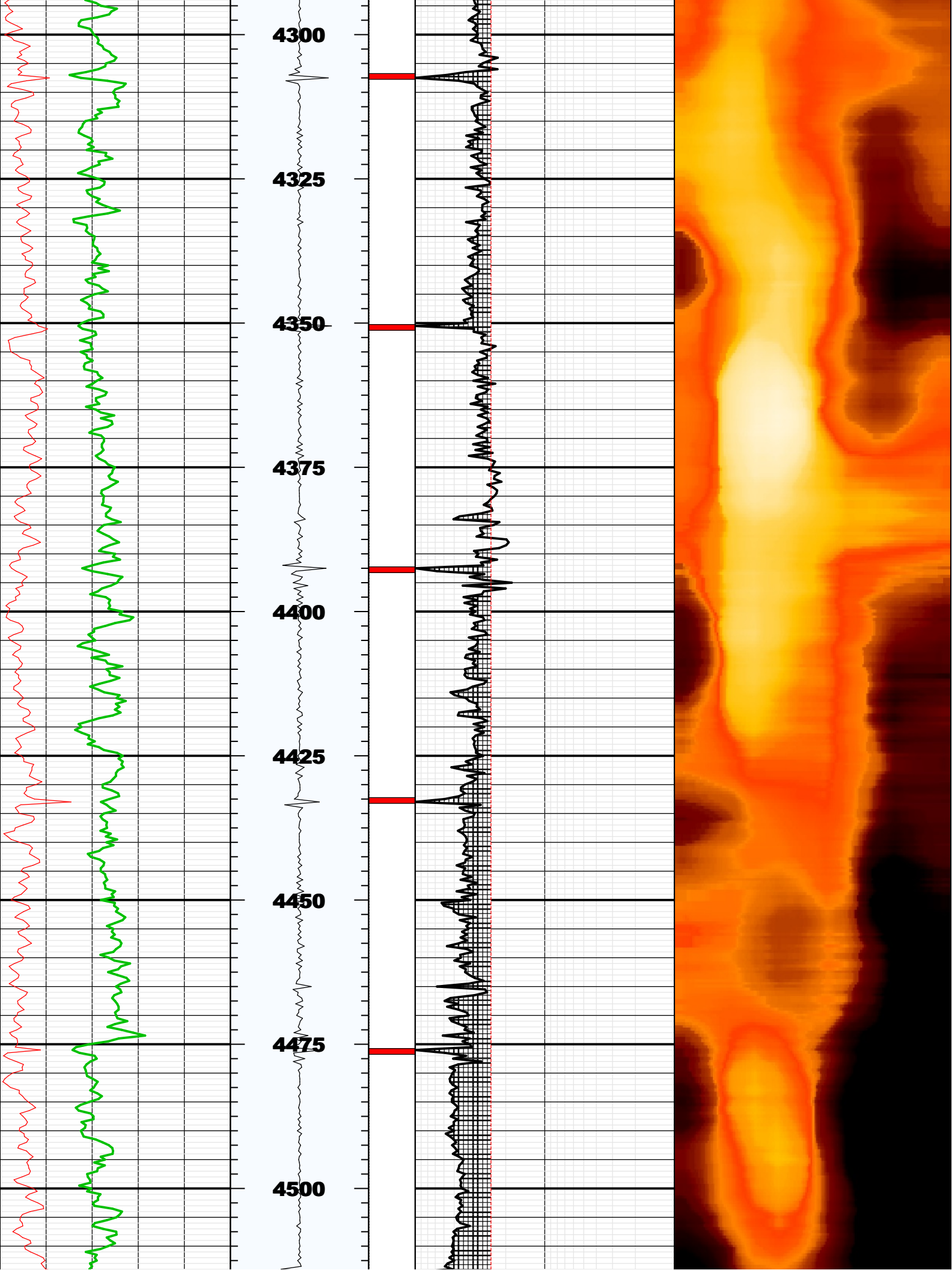


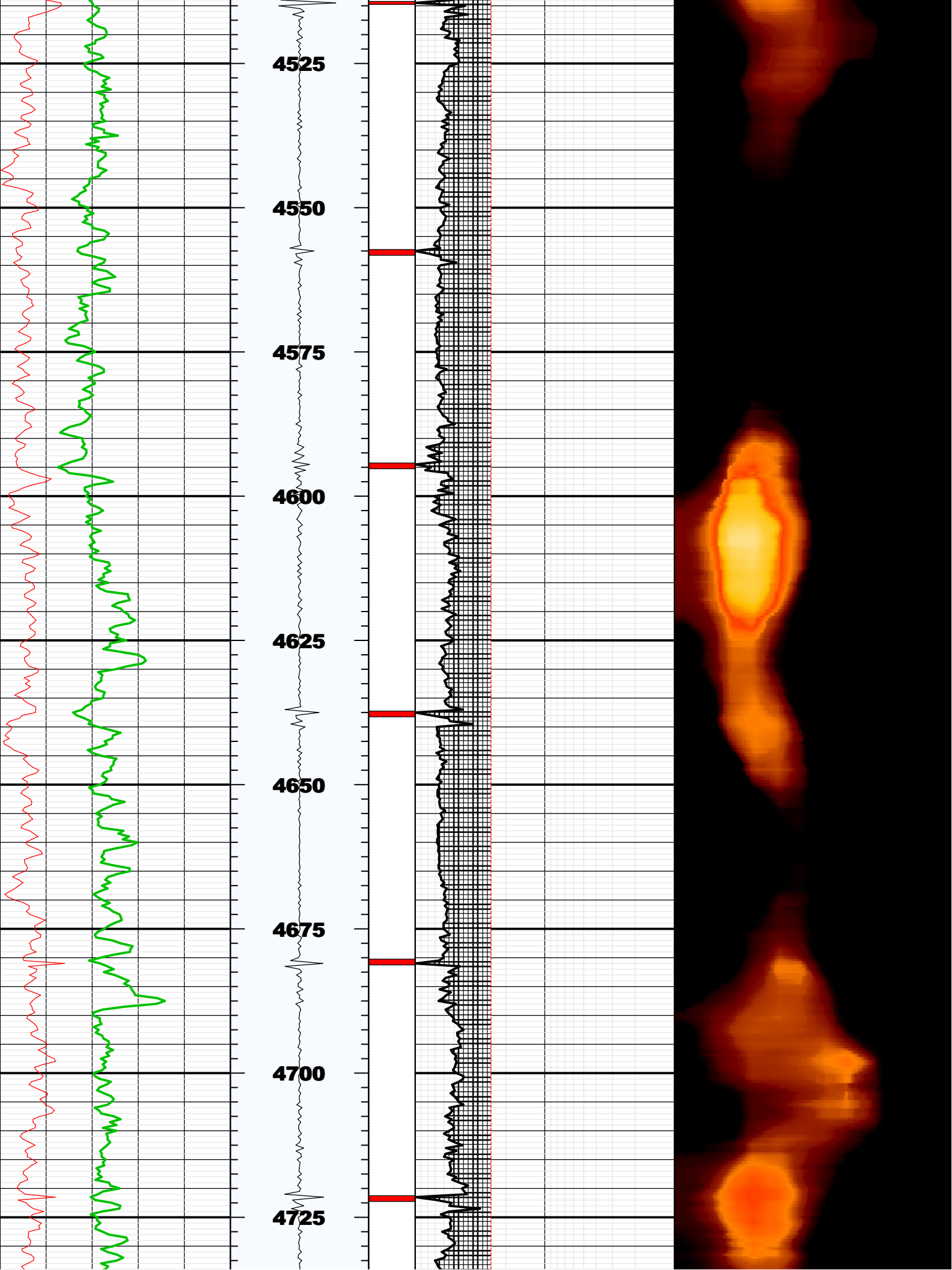


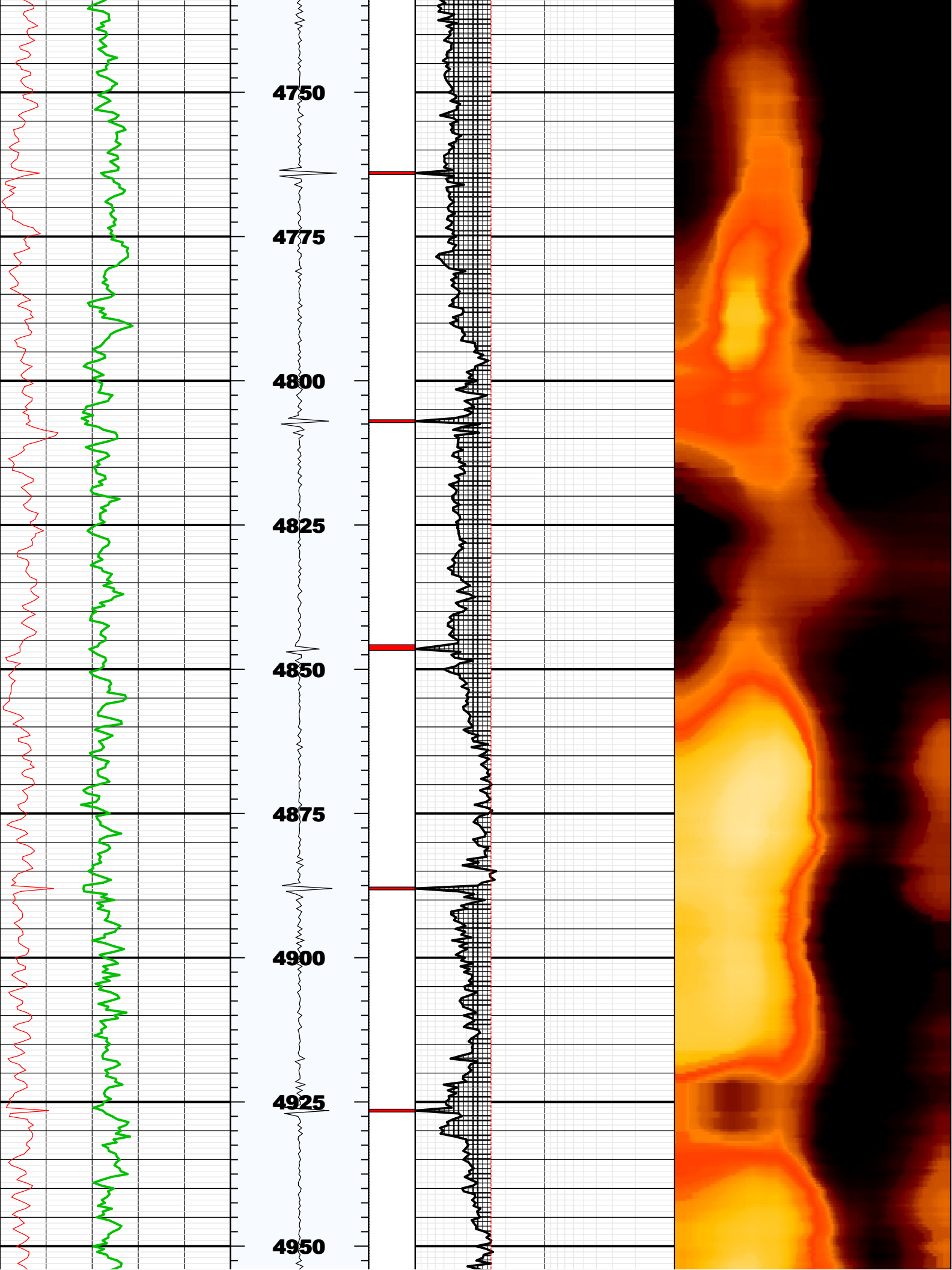


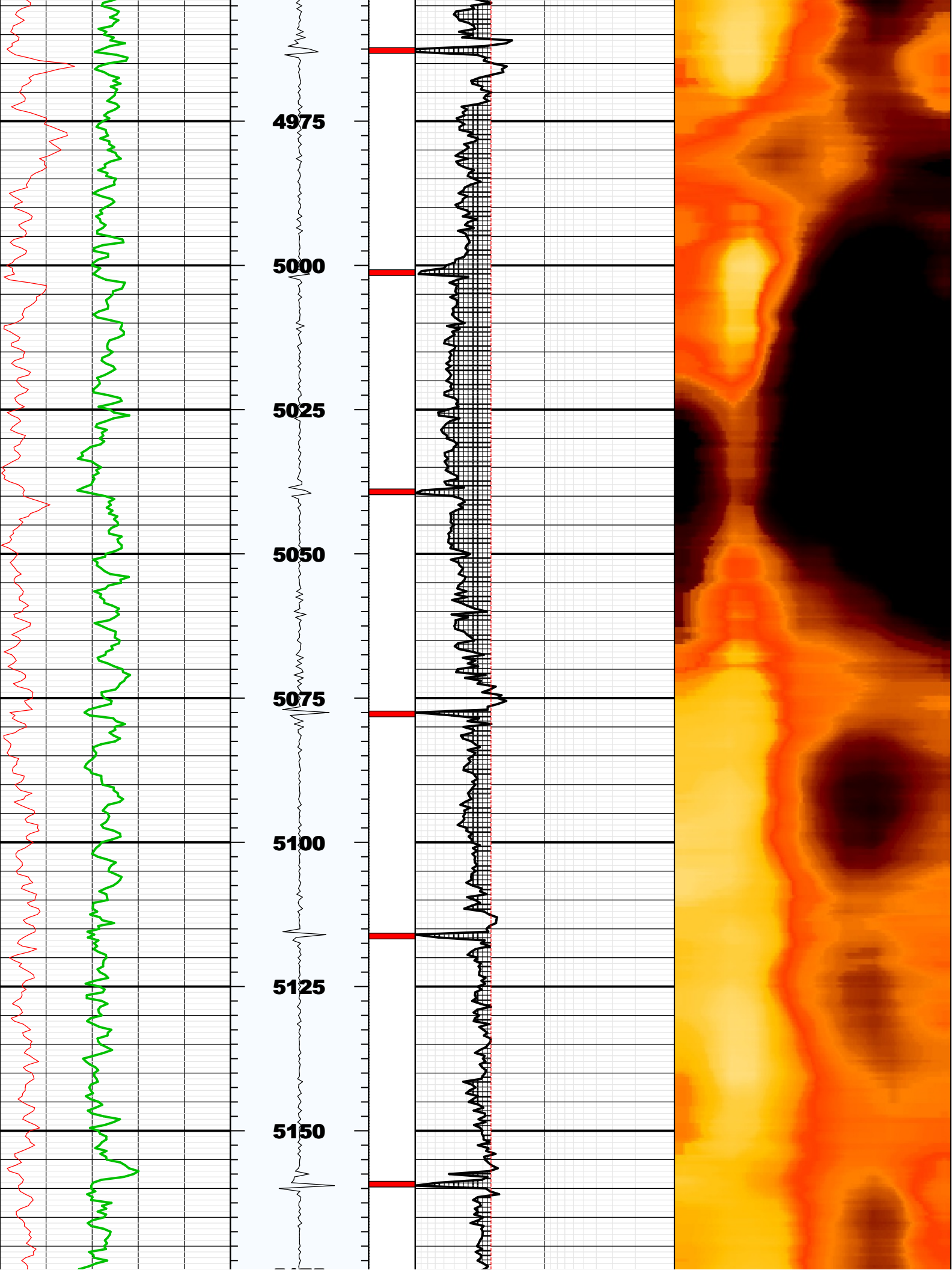


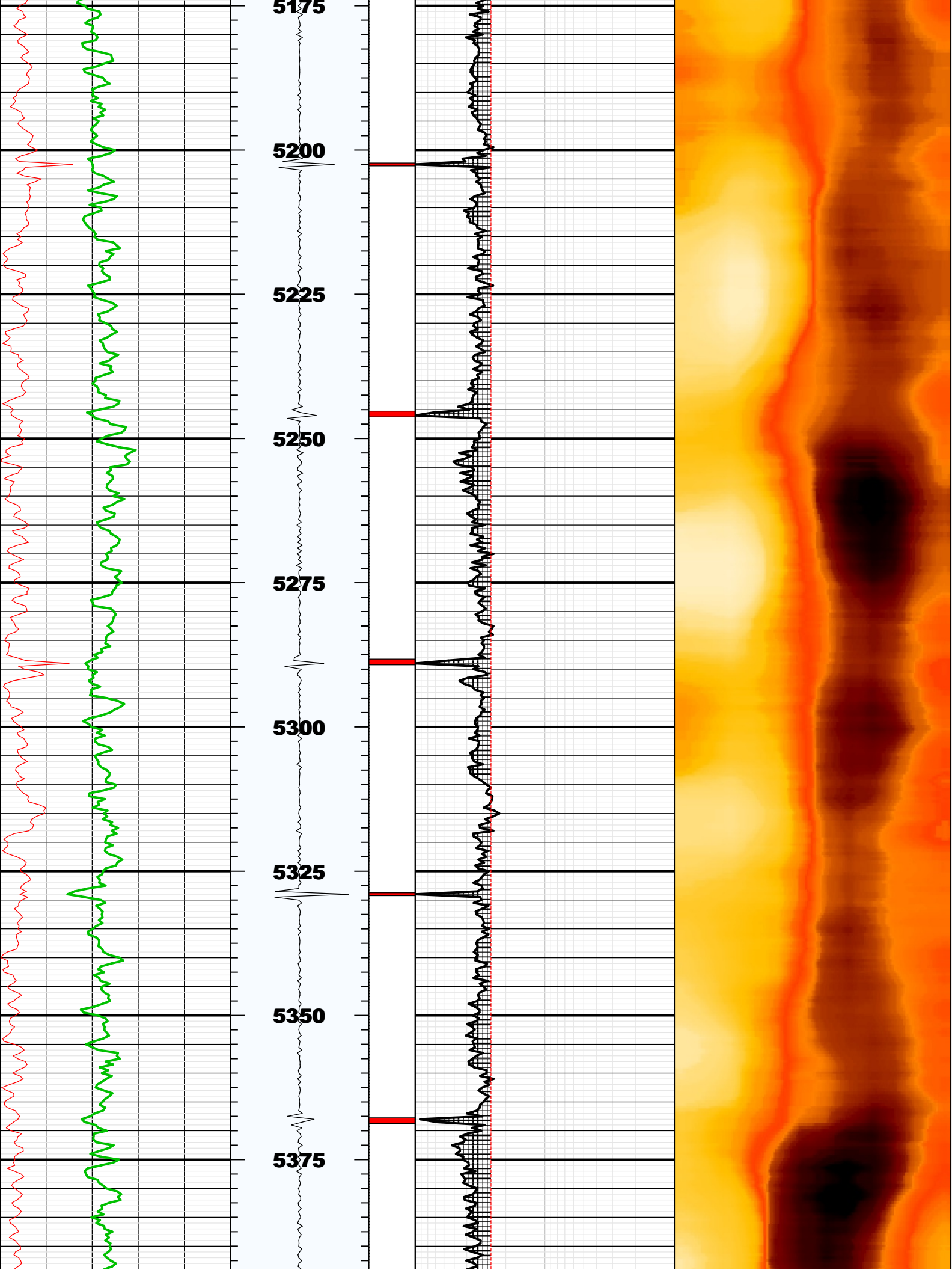


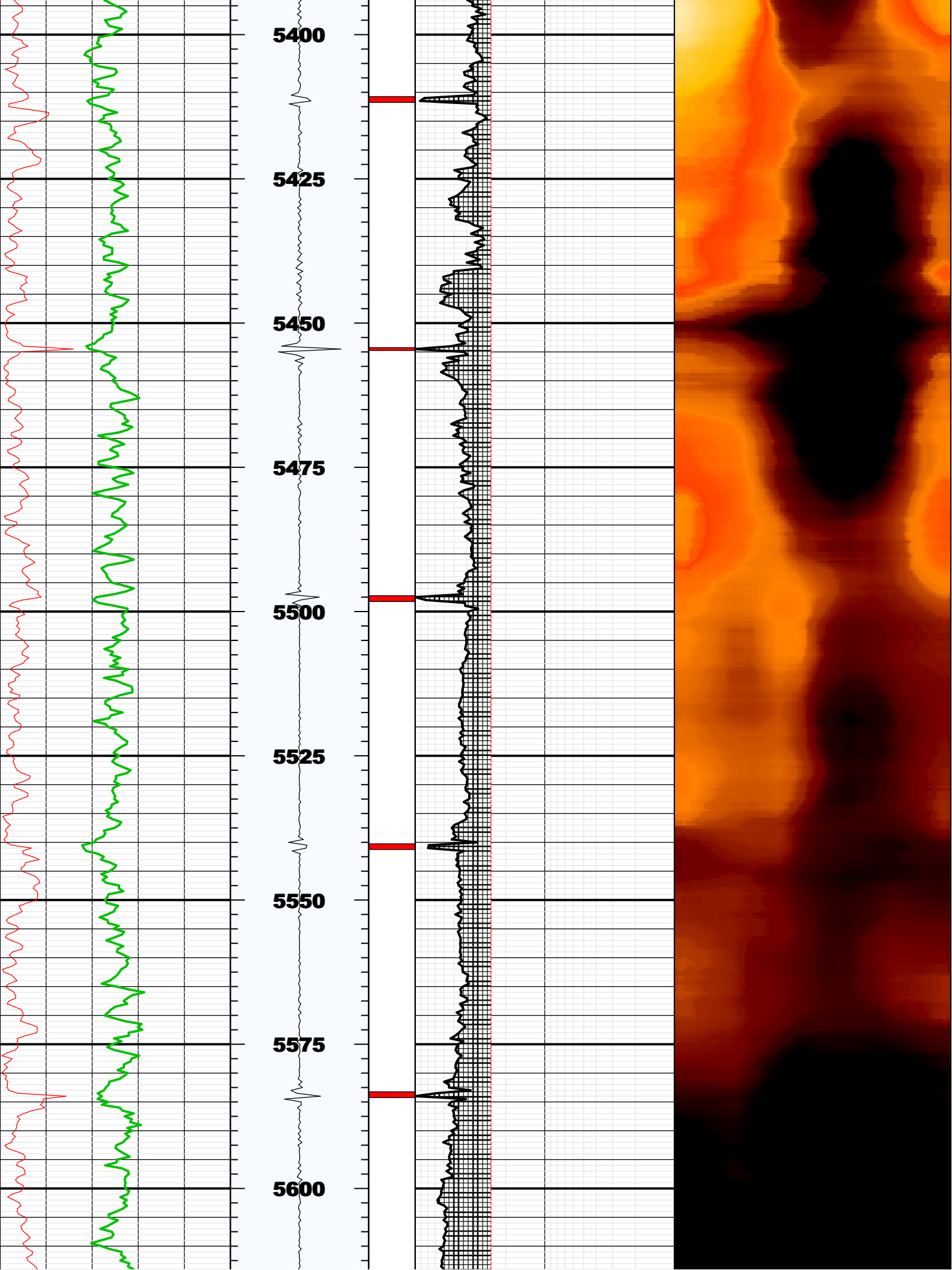


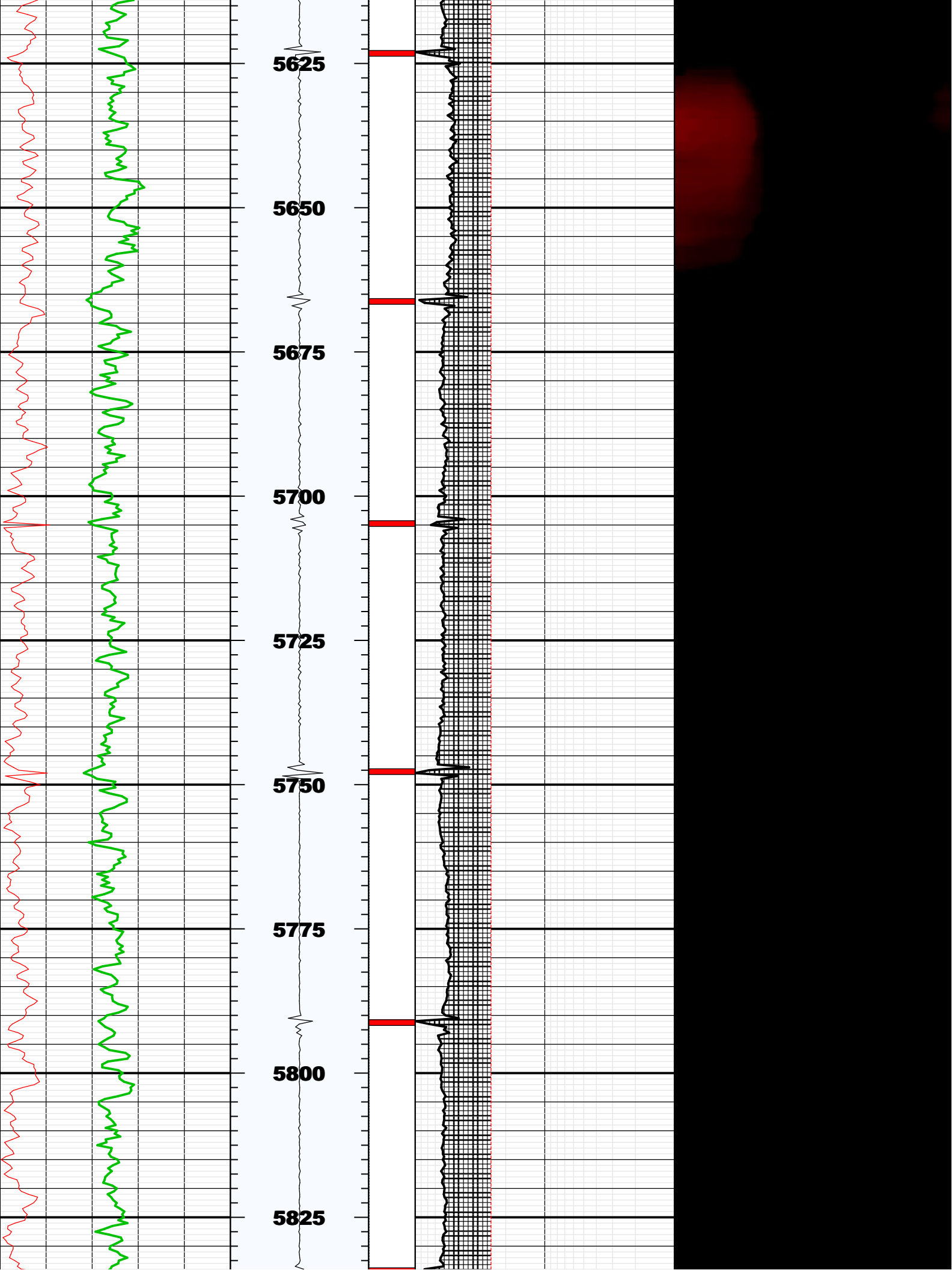


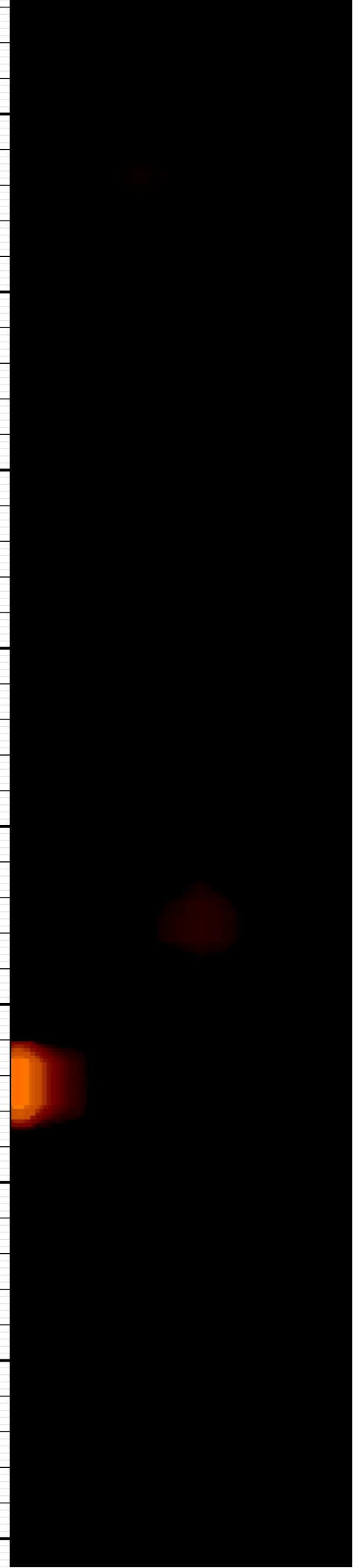
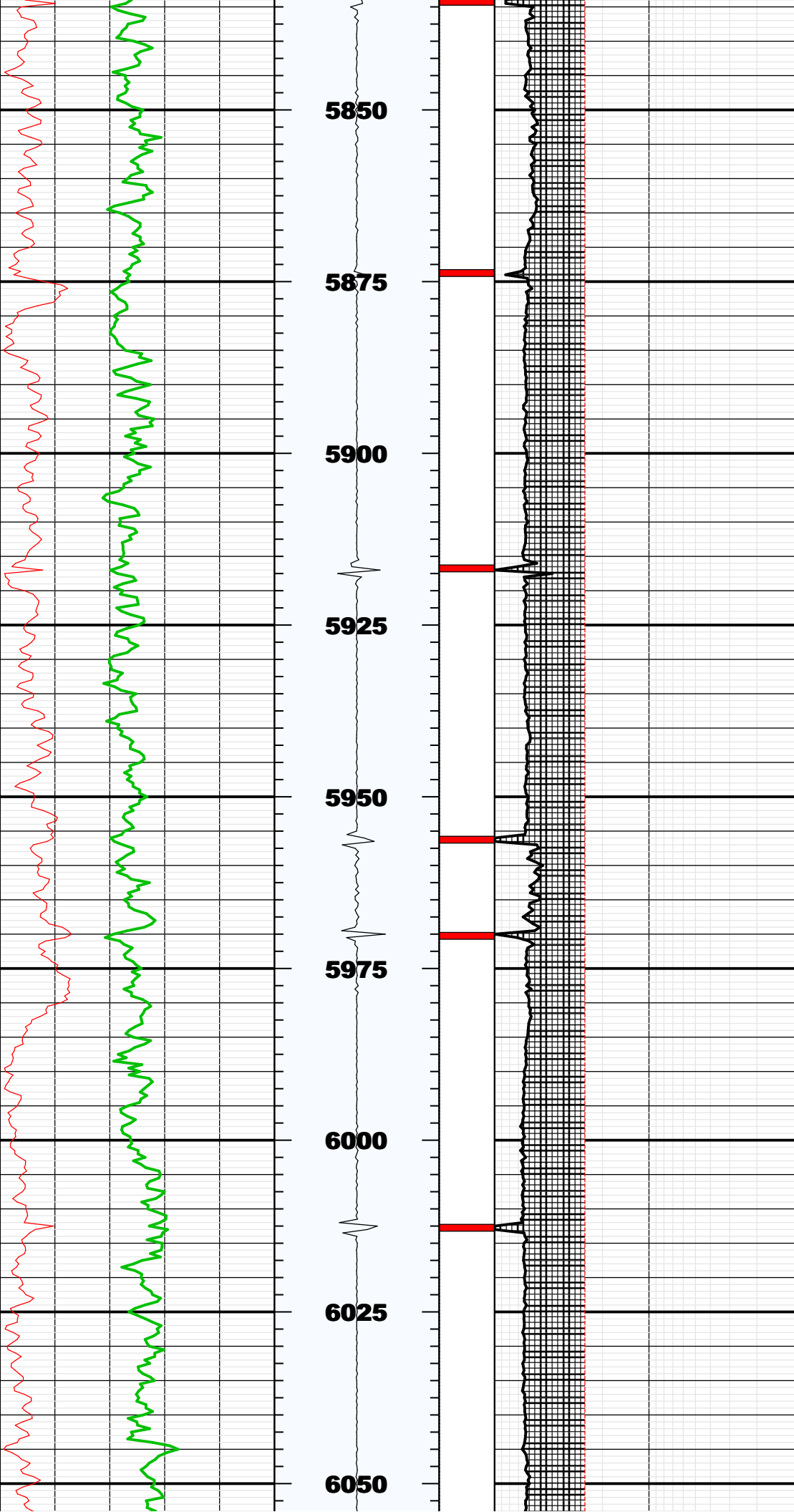


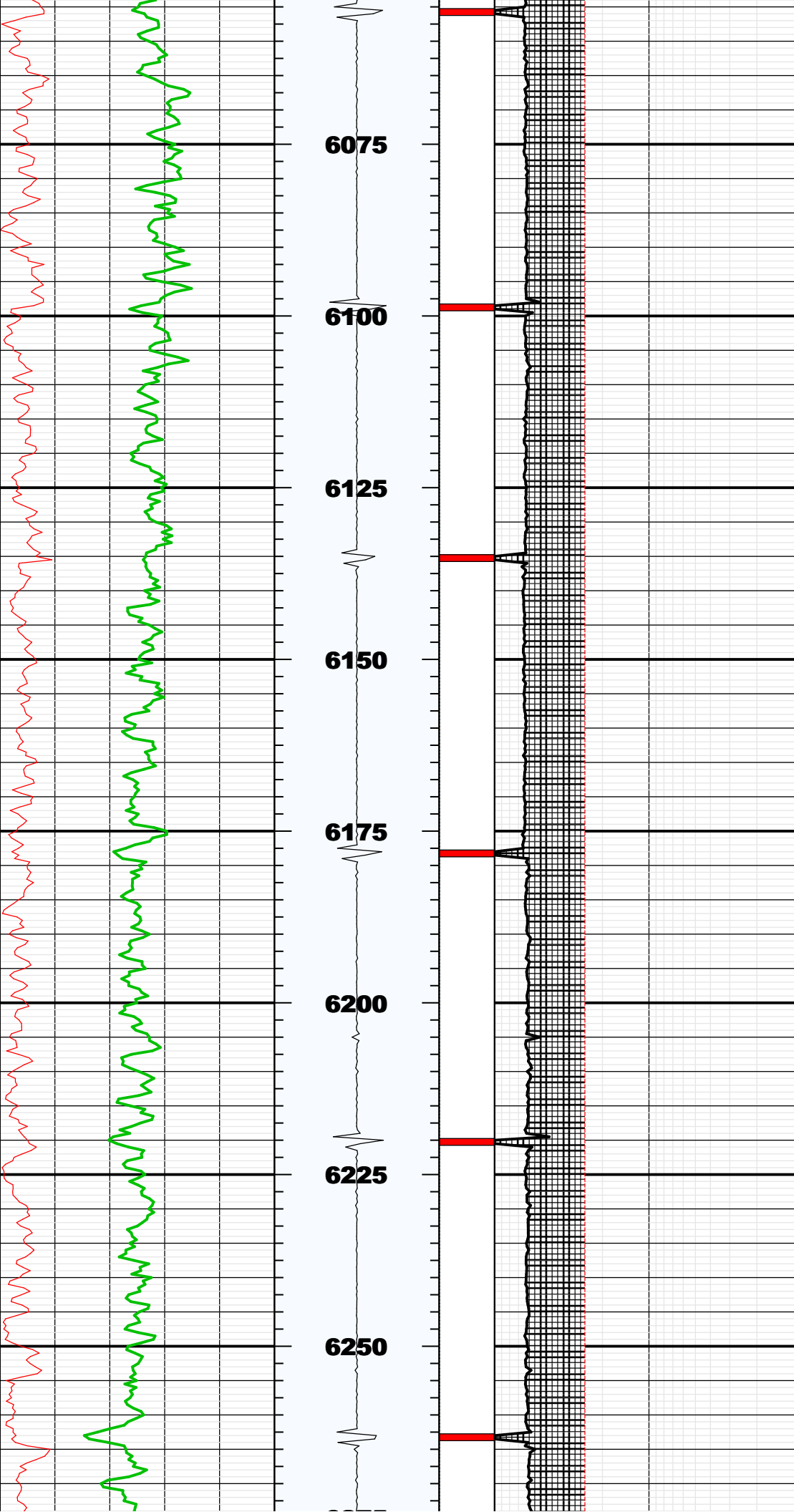


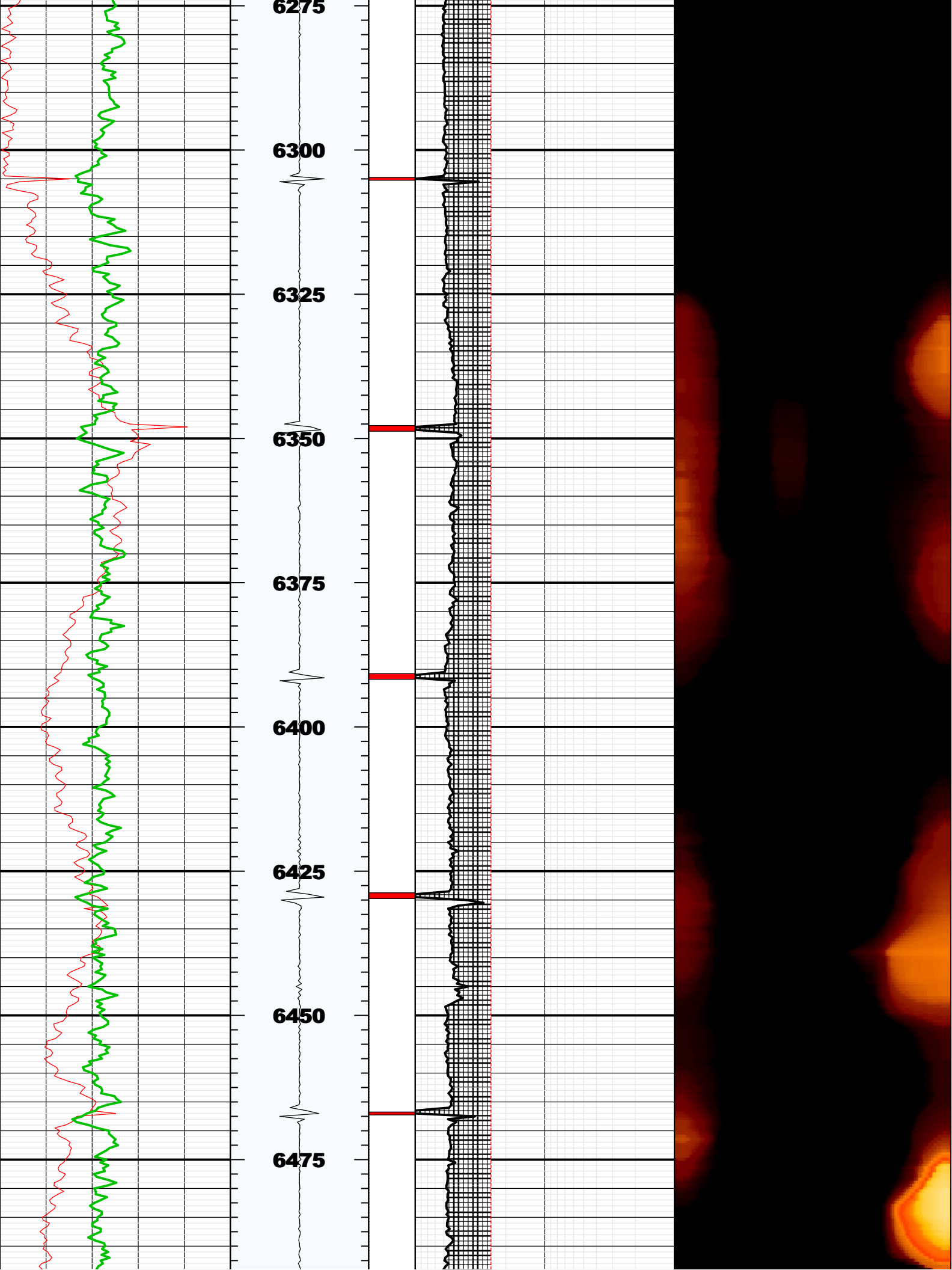


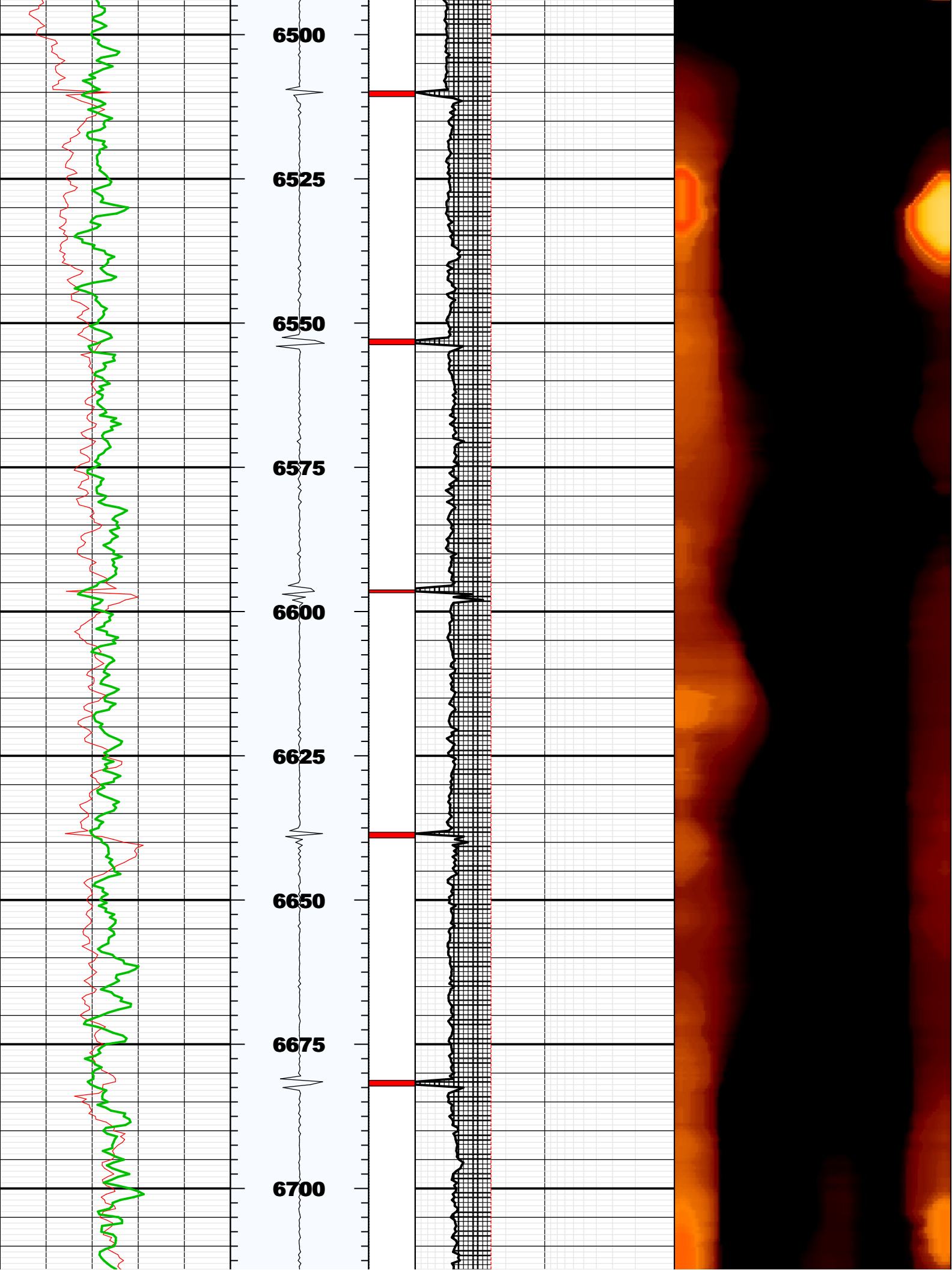


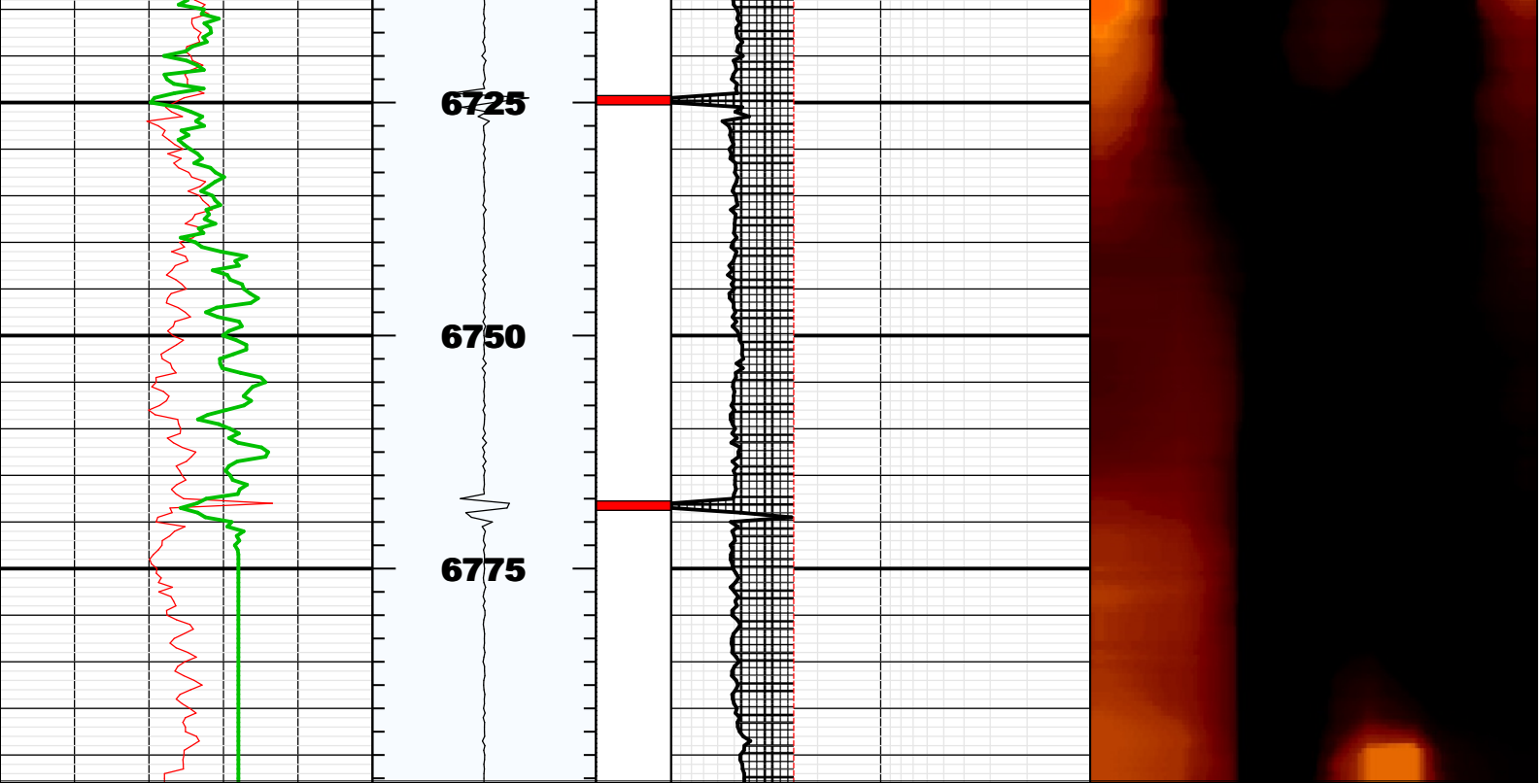








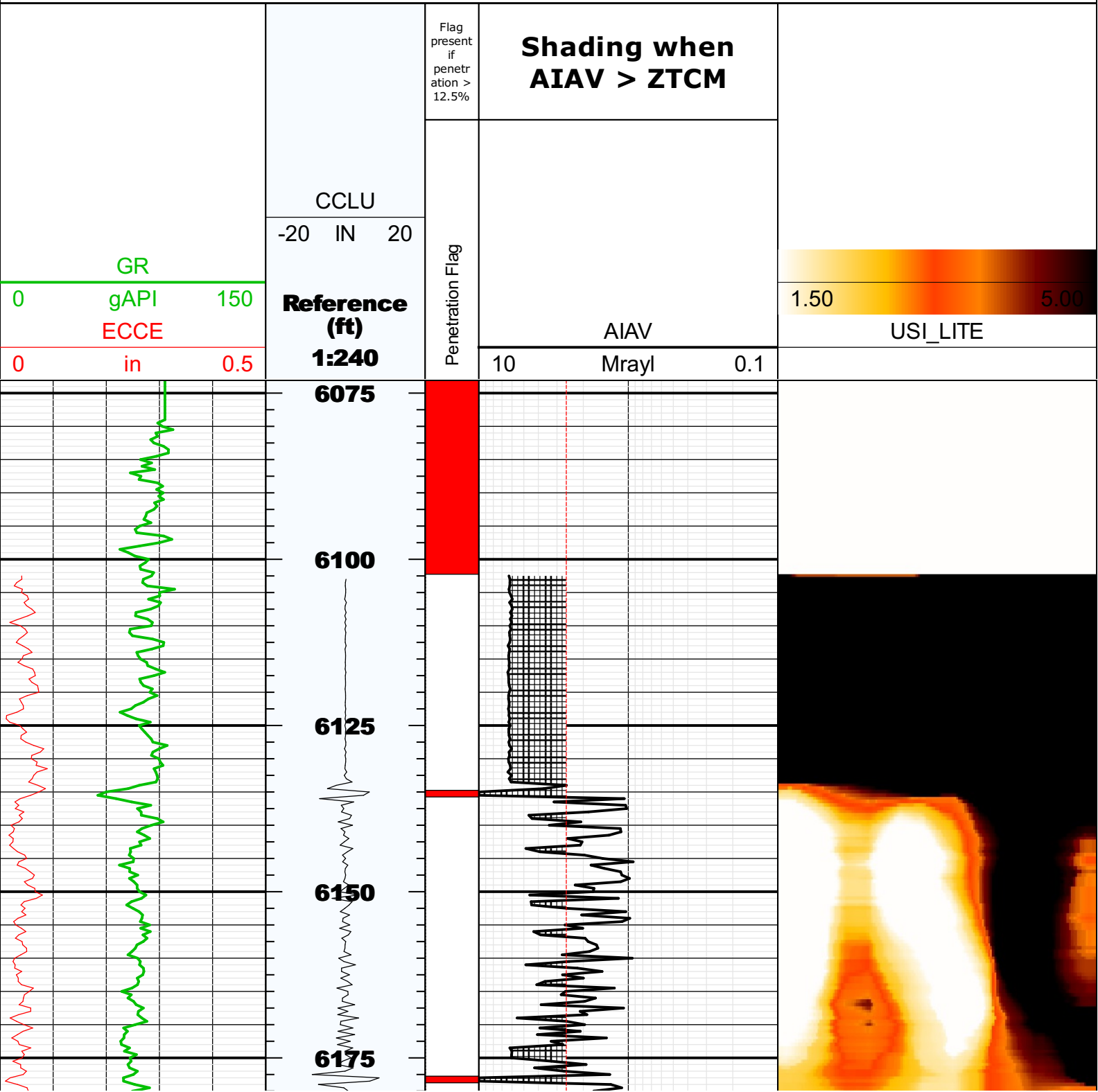


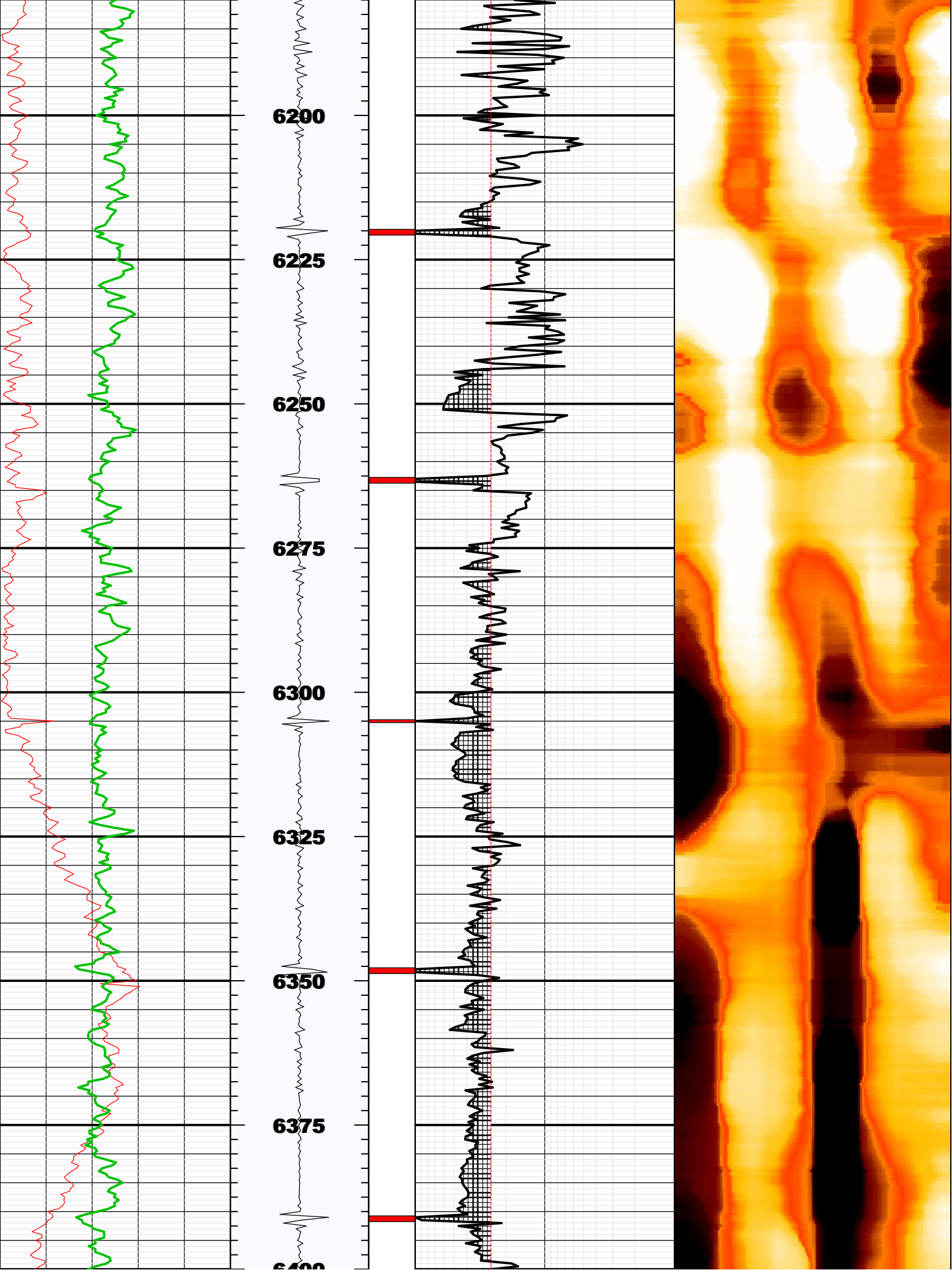


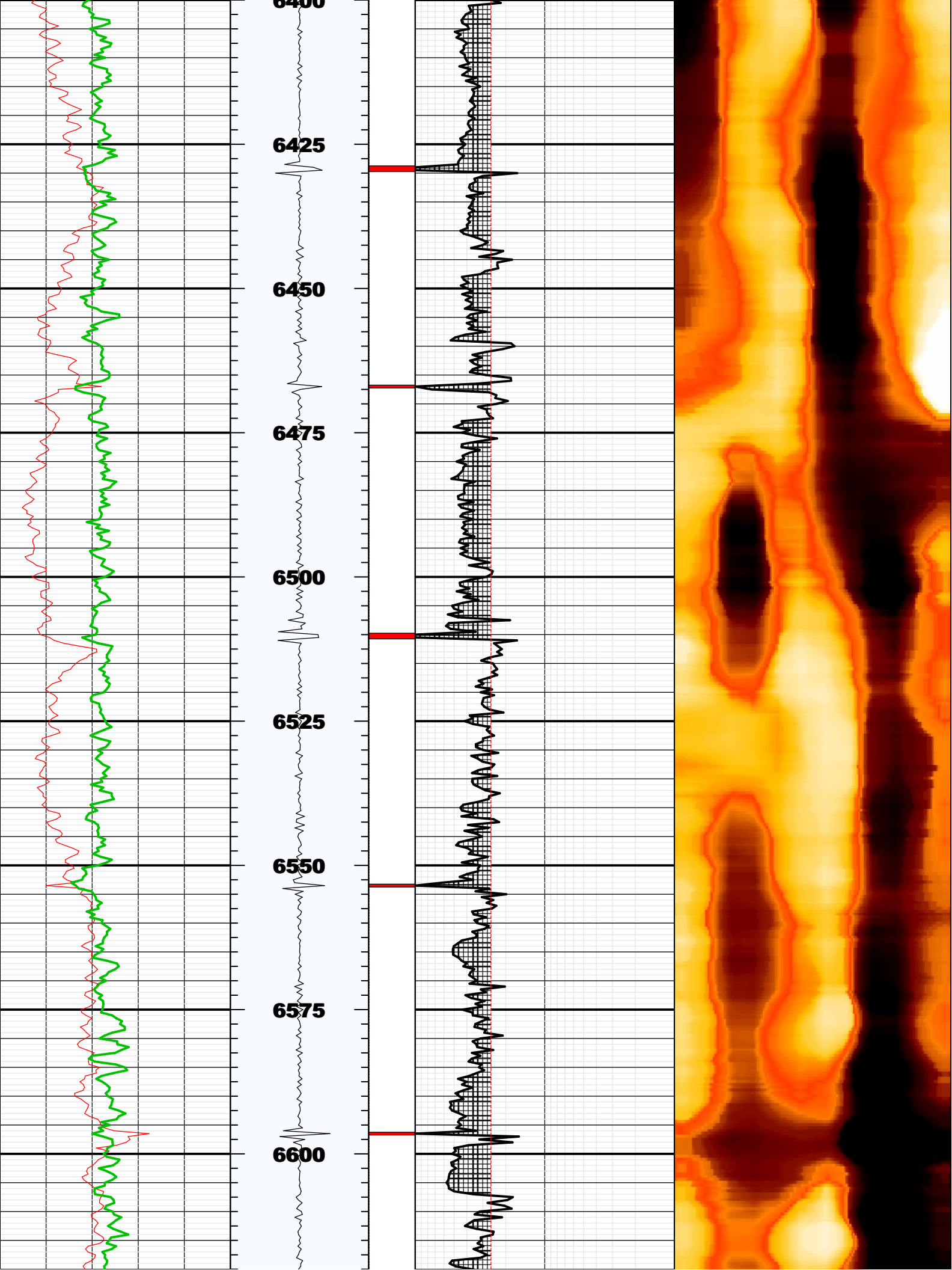
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID			
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	188.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	50	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	33.29800	US	Window Begin Time
WINE	73.29800	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.83000	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

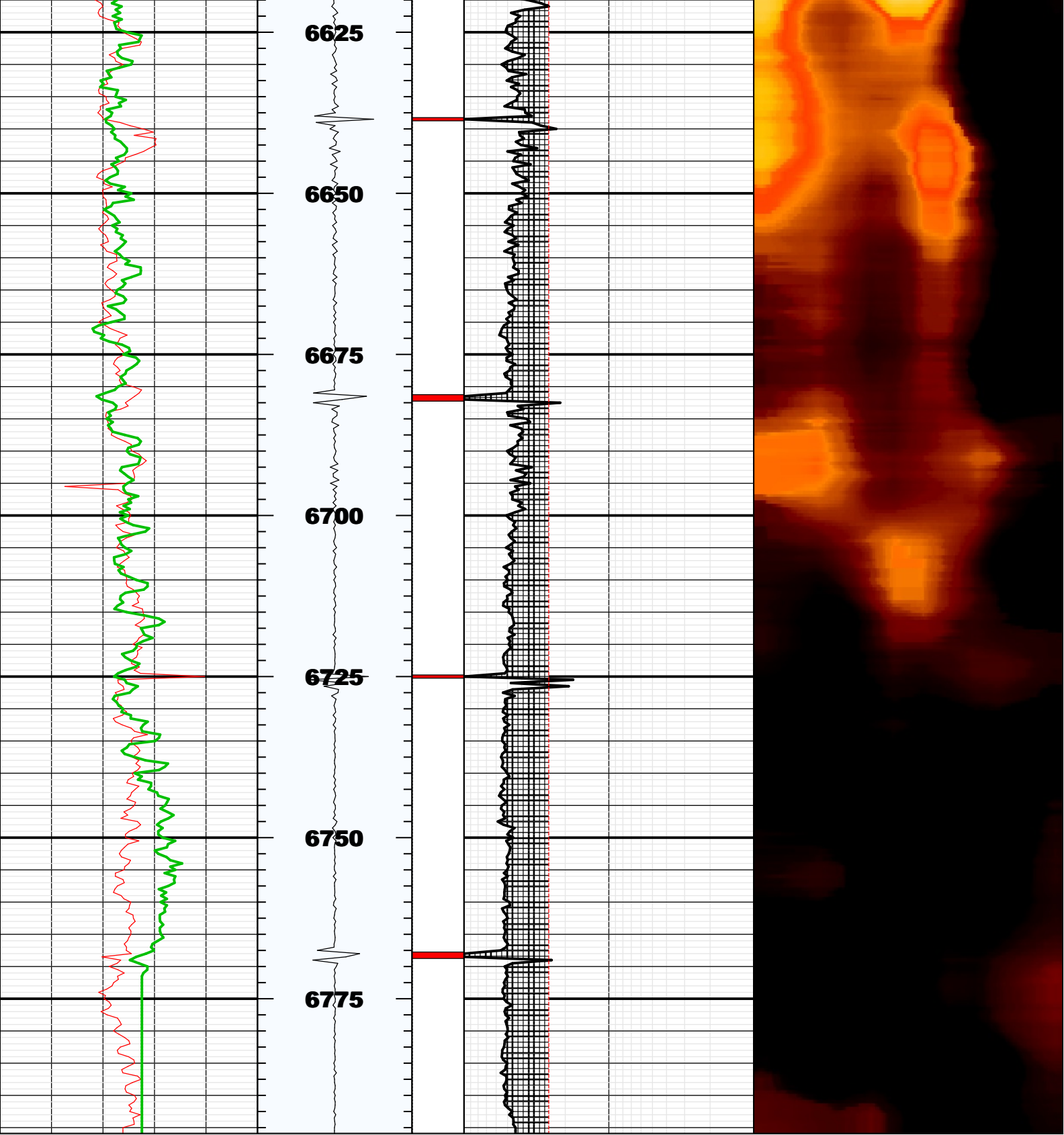
Repeat Pass

Company: Noble Energy Inc
Well: Heartland H01-74-1HN
Field: Wattenberg









Fluid Properties Used for Main Pass

