

Company: Noble Energy Inc

Well: Wells Ranch AA22-617
Field: Wattenberg
County: Weld State: Colorado

County: Weld							
Field: Wattenberg							
Location: SWSW S22 T6N R63W							
Well: Wells Ranch AA22-617							
Company: Noble Energy Inc							
USI-LITE	LOCATION		Permanent Datum: Log Measured From: Drilling Measured From: MSL KB KB	Elev: K.B. 4775.0 F G.L. 4745.0 F D.F. 0.0 F			
	API Serial No. 05-123-42266				Section 22	Township 6N	Range 63
	Logging Date 04-May-2016						
	Run Number One						
	Depth Driller 15931.0 F						
	Schlumberger Depth 6900.0 F						
	Bottom Log Interval 6900.0 F						
	Top Log Interval 100.0 F						
	Casing Fluid Level 0.0 F						
	Salinity						
Density 8.50 LB/G							
Fluid Level 0.0 F							
BIT/CASING/TUBING STRING							
Bit Size 8.750 IN							
From 1921.0 F							
To 6900.0 F							
Casing Size 5.50 IN							
Weight 20.00 LB/F							
Grade N/A							
From 30.0 F							
To 15915.0 F							
Max Recorded Temp 213.9							
Logger on bottom (date) 04-May-2016							
Location Ft Morgan							
Recorded By Benjamin Marmou/ Blanka Kasek							
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

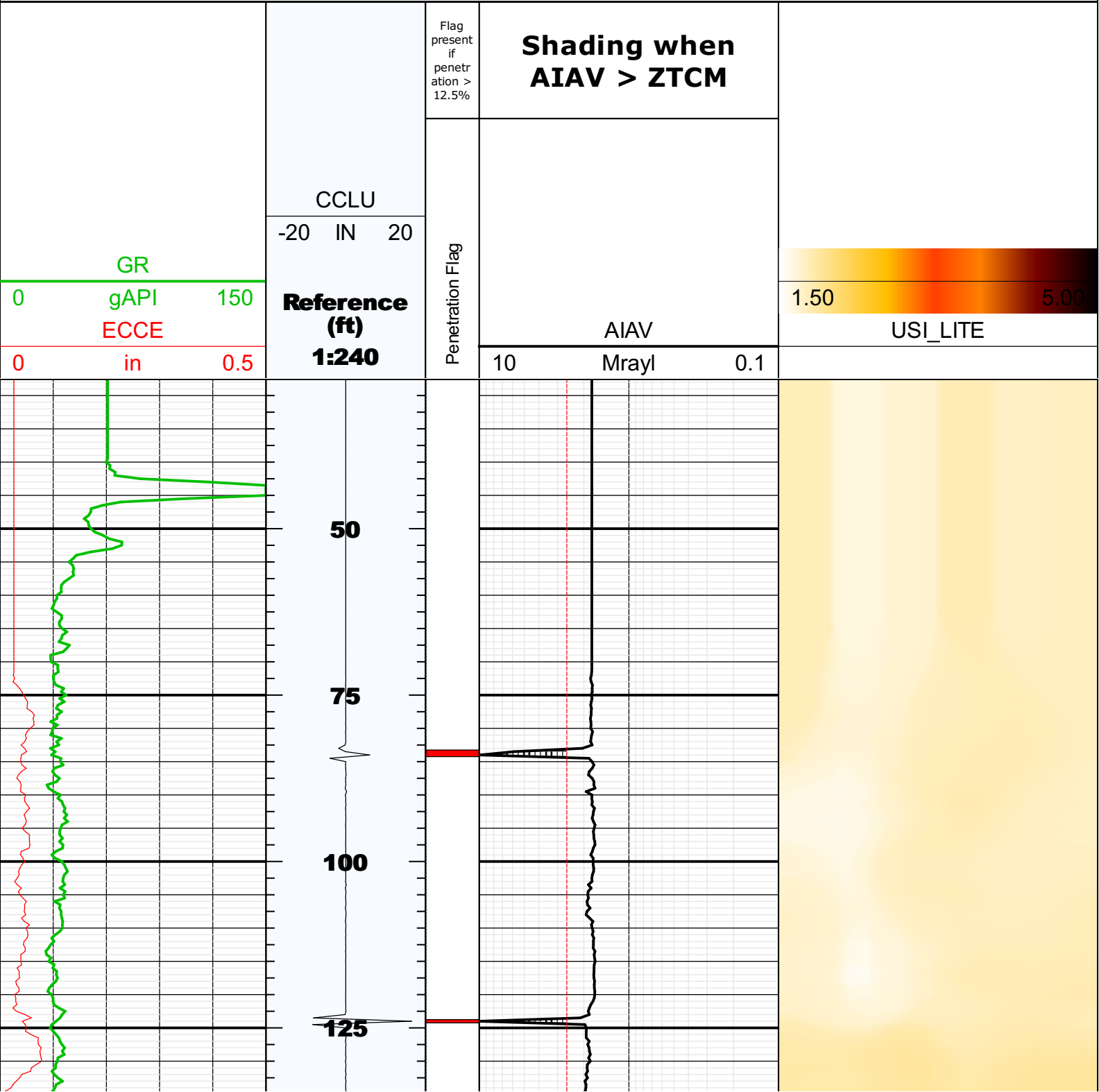
DISCLAIMER

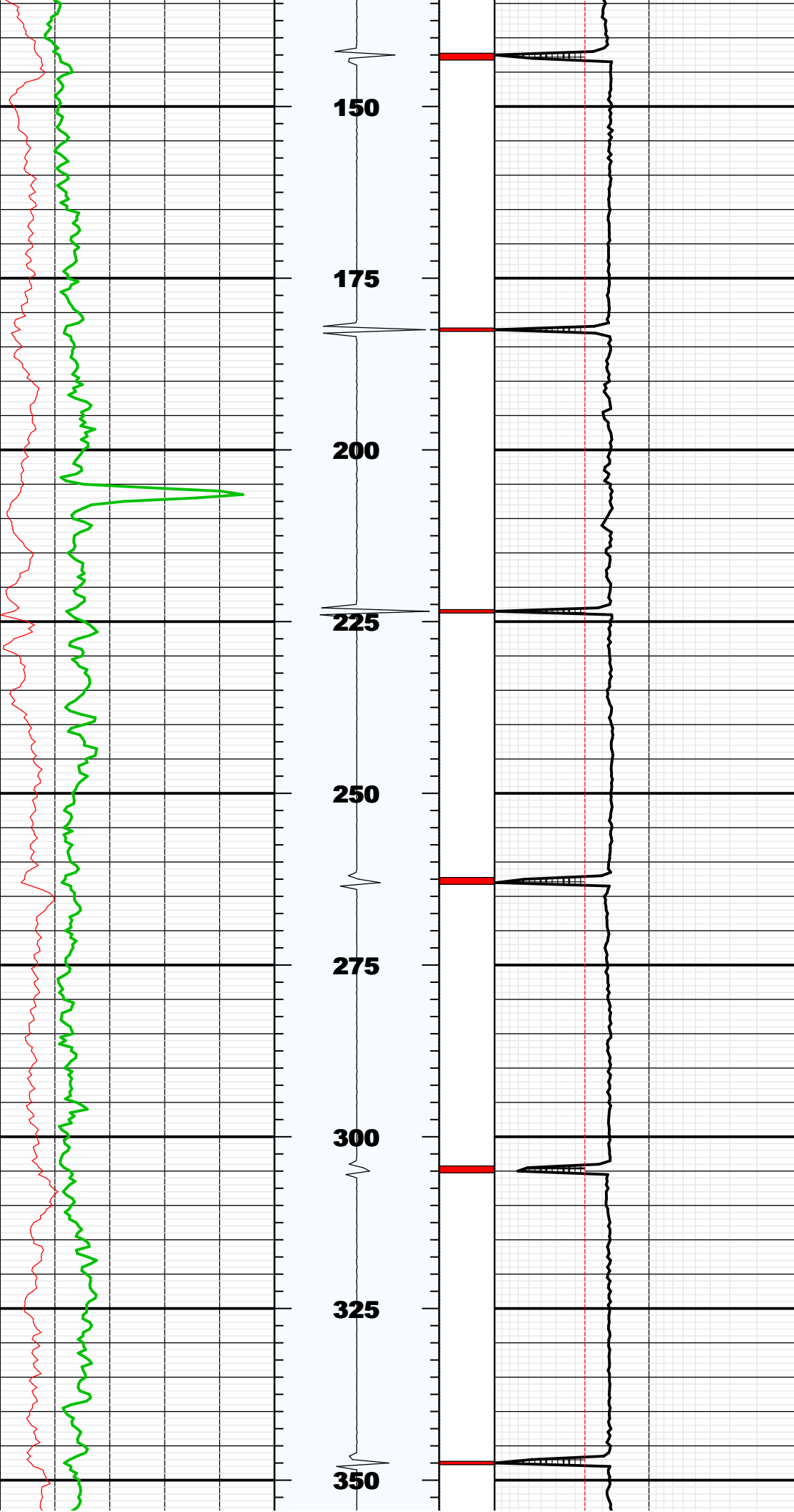
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIIONS ON USE OF THE RECORDED-DATA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

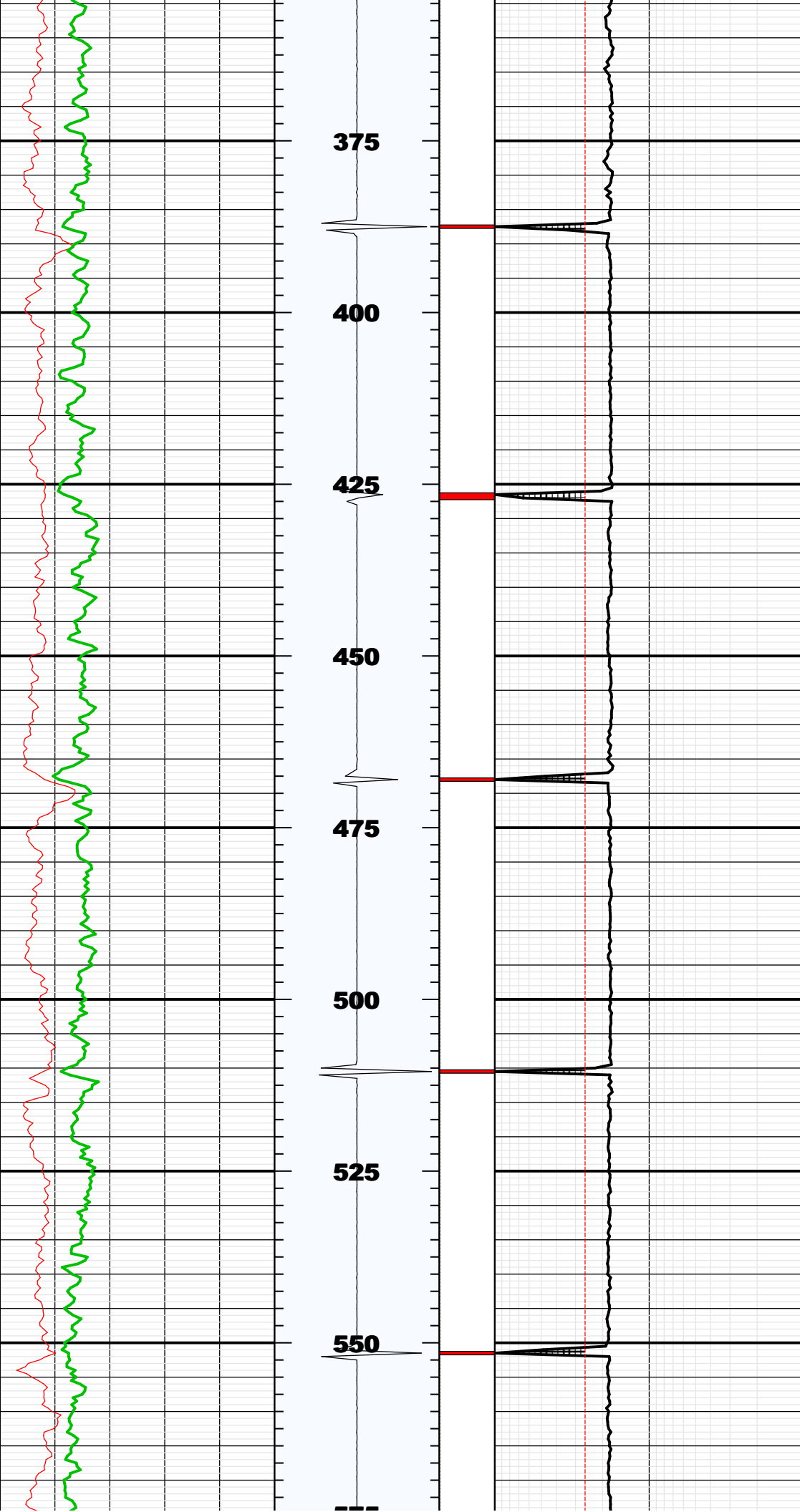
This is the first run in the well.
Toolstring run as per toolsketch.
Log Objective Cement Evaluation.
0 PSI Repeat Pass and 2500 PSI Main Pass.
Estimated TOC @2044' .
Bottom Log Interval at 6751'. Sub would not
Bottom hole temperature was 214 degF.

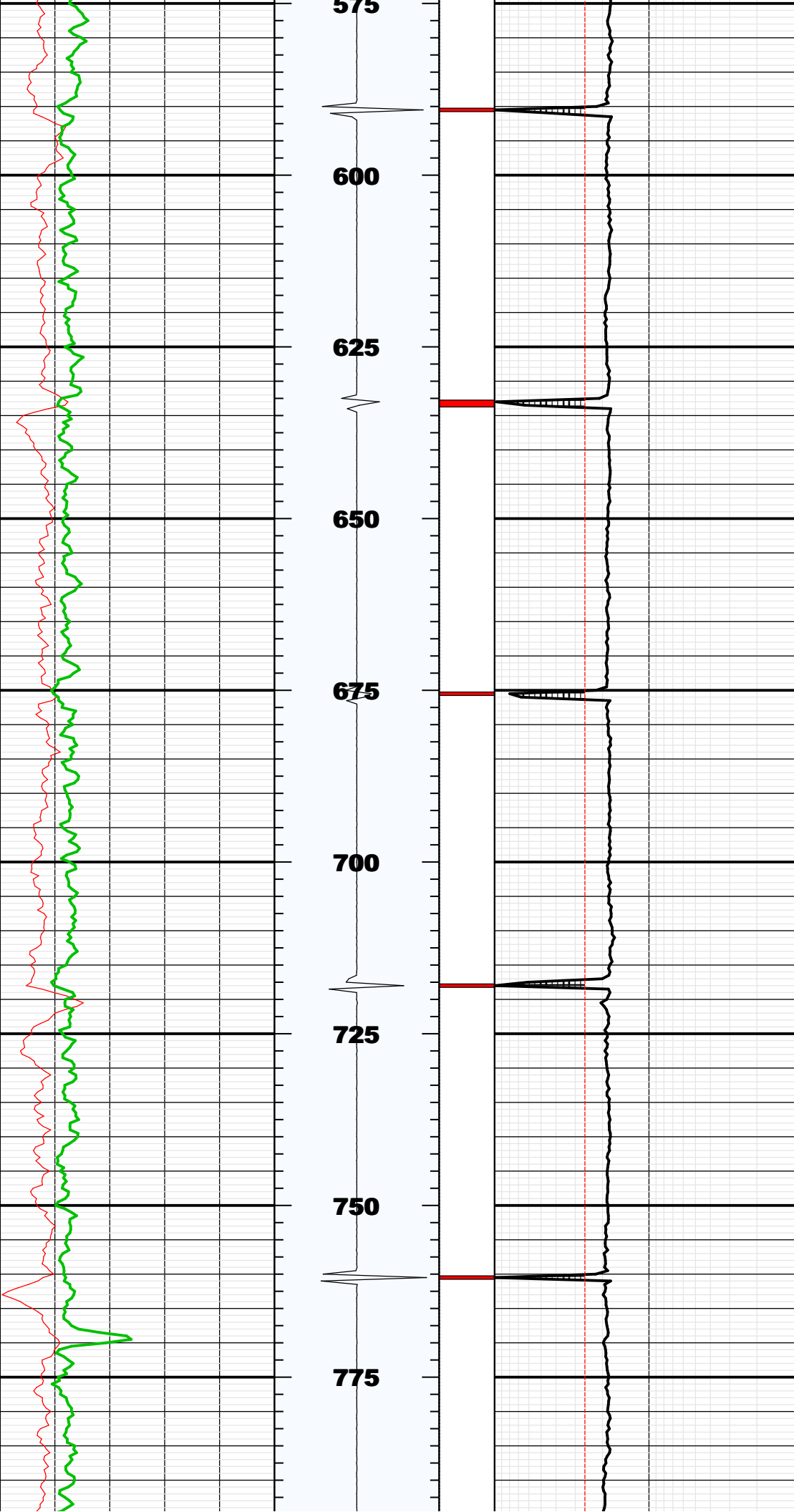
Main Pass

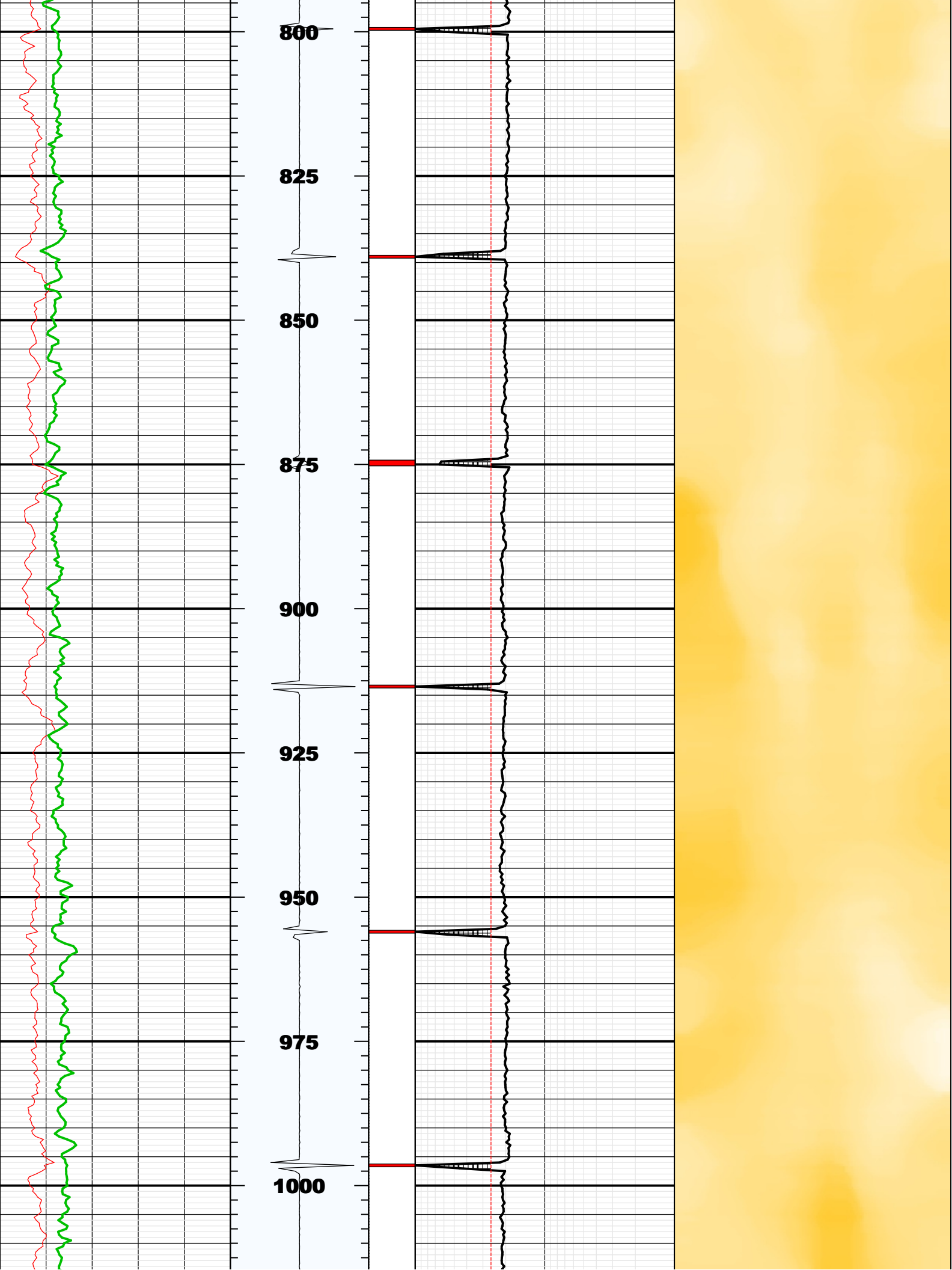
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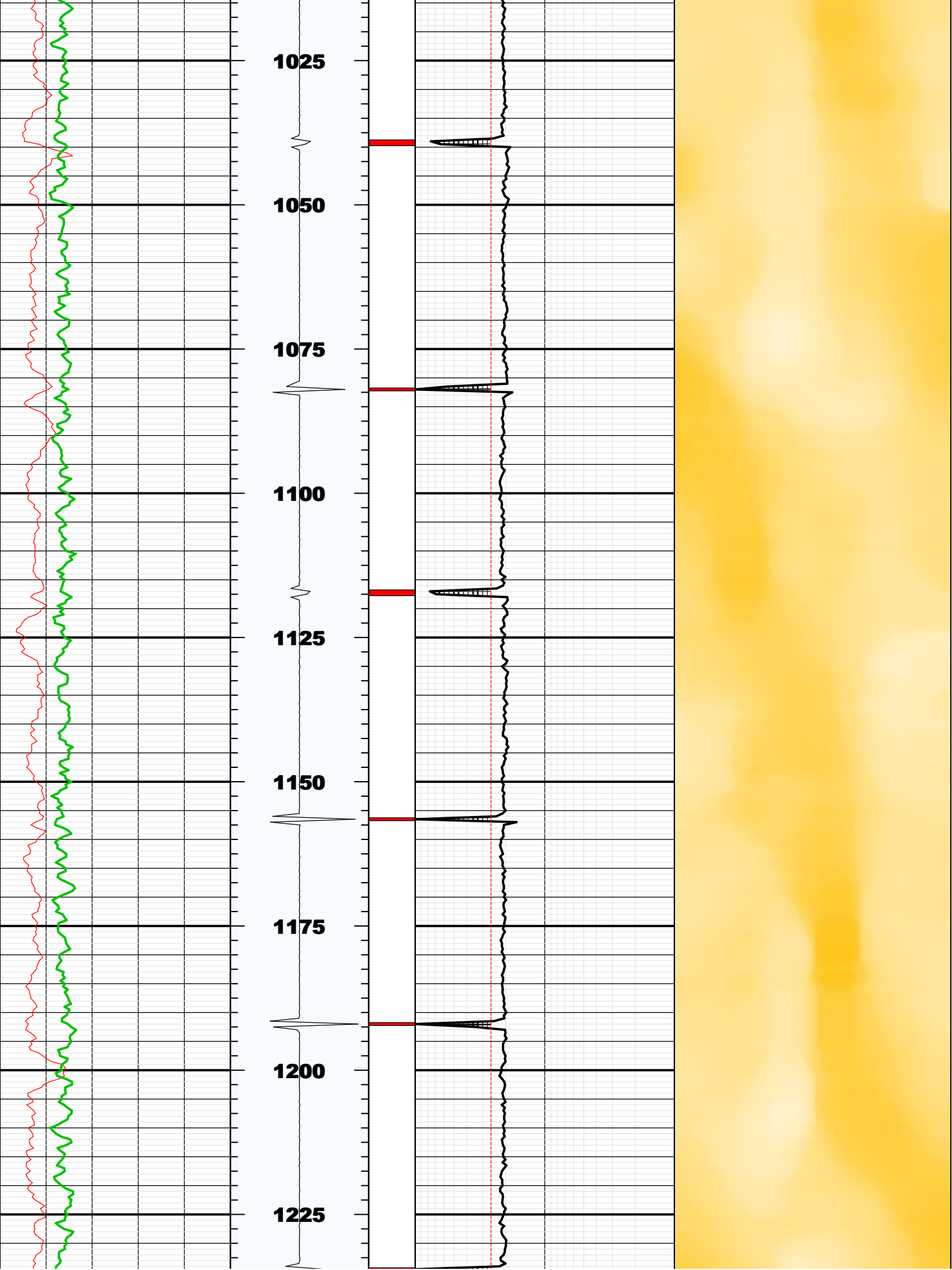


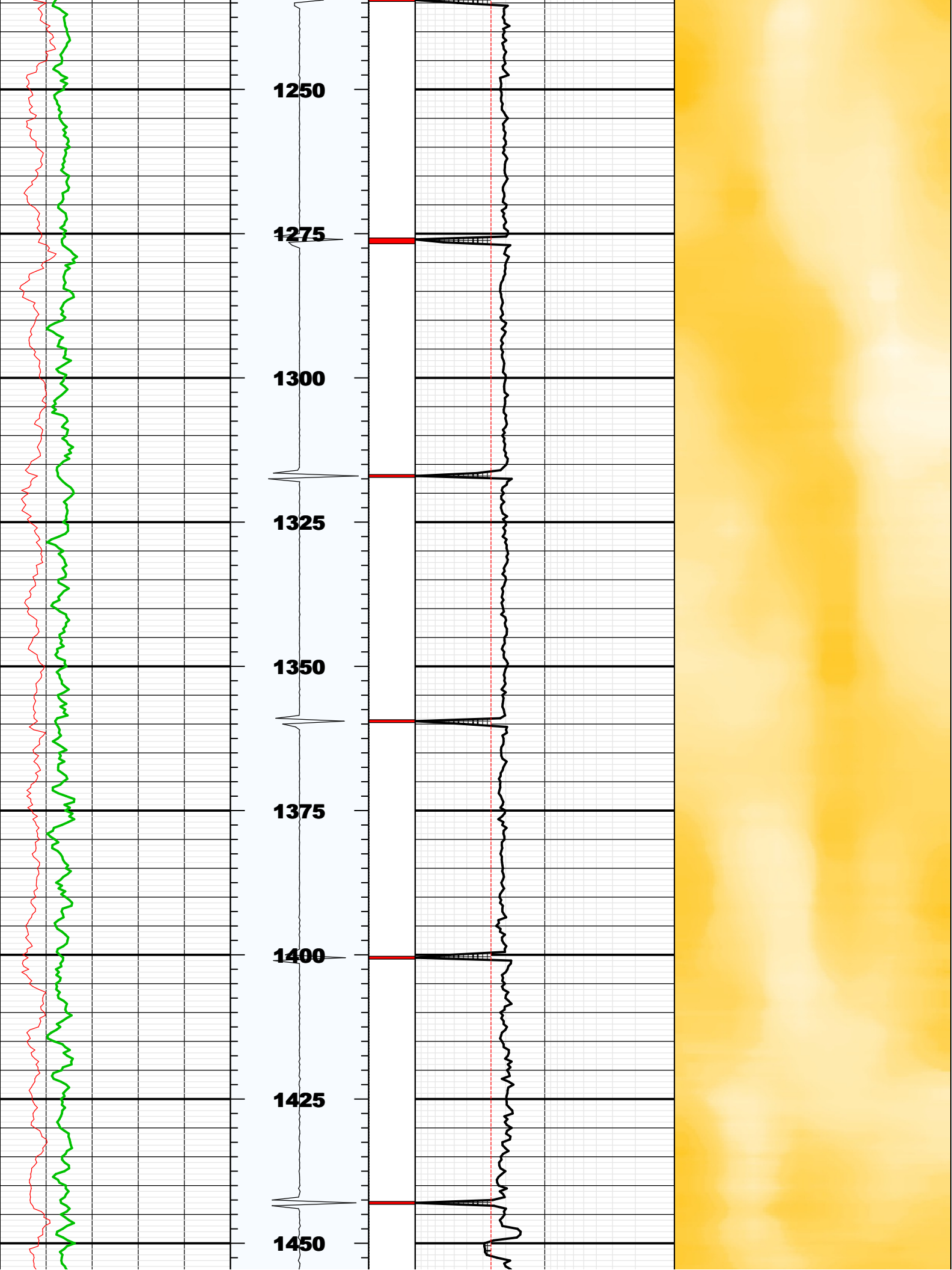


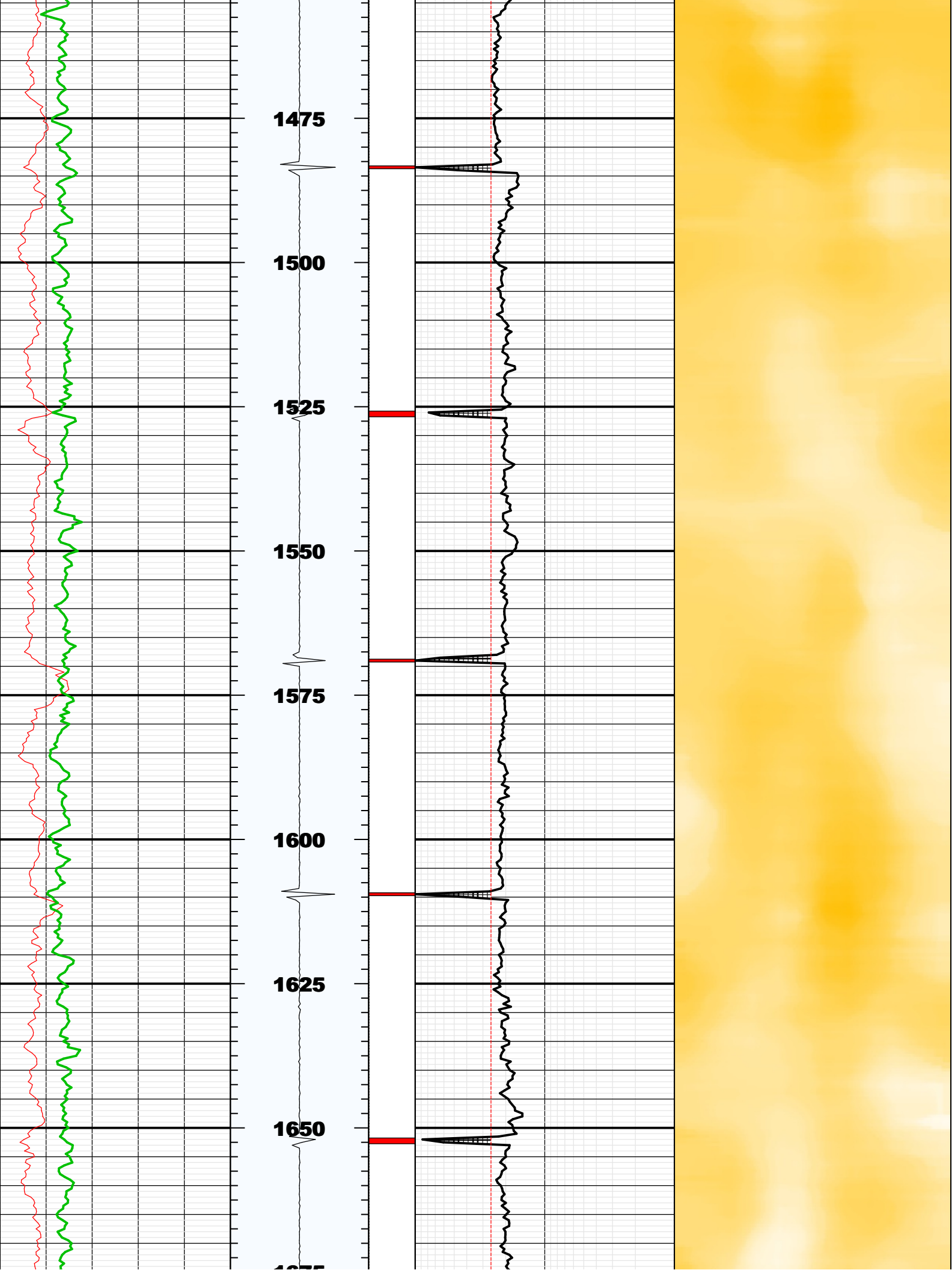


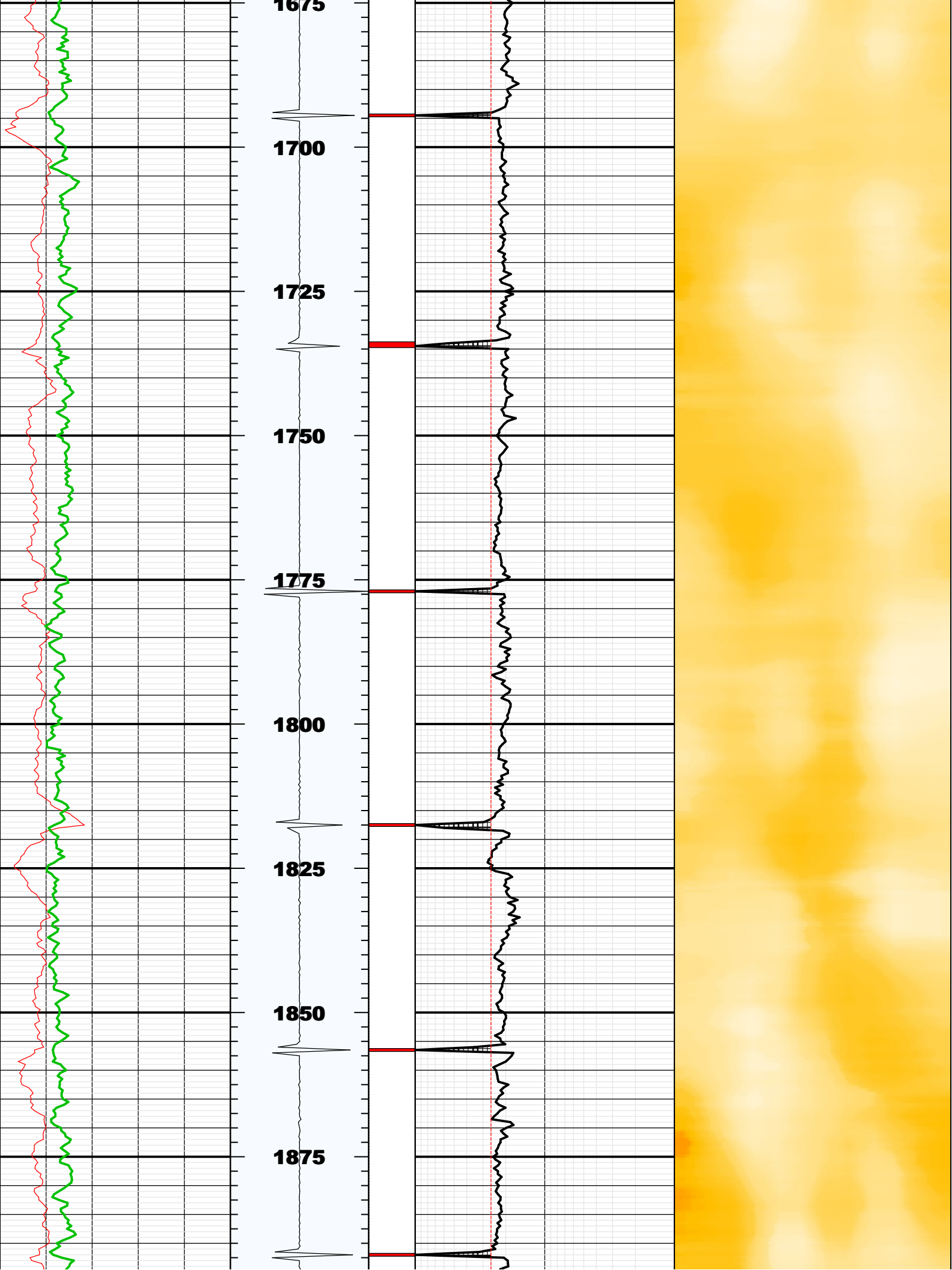


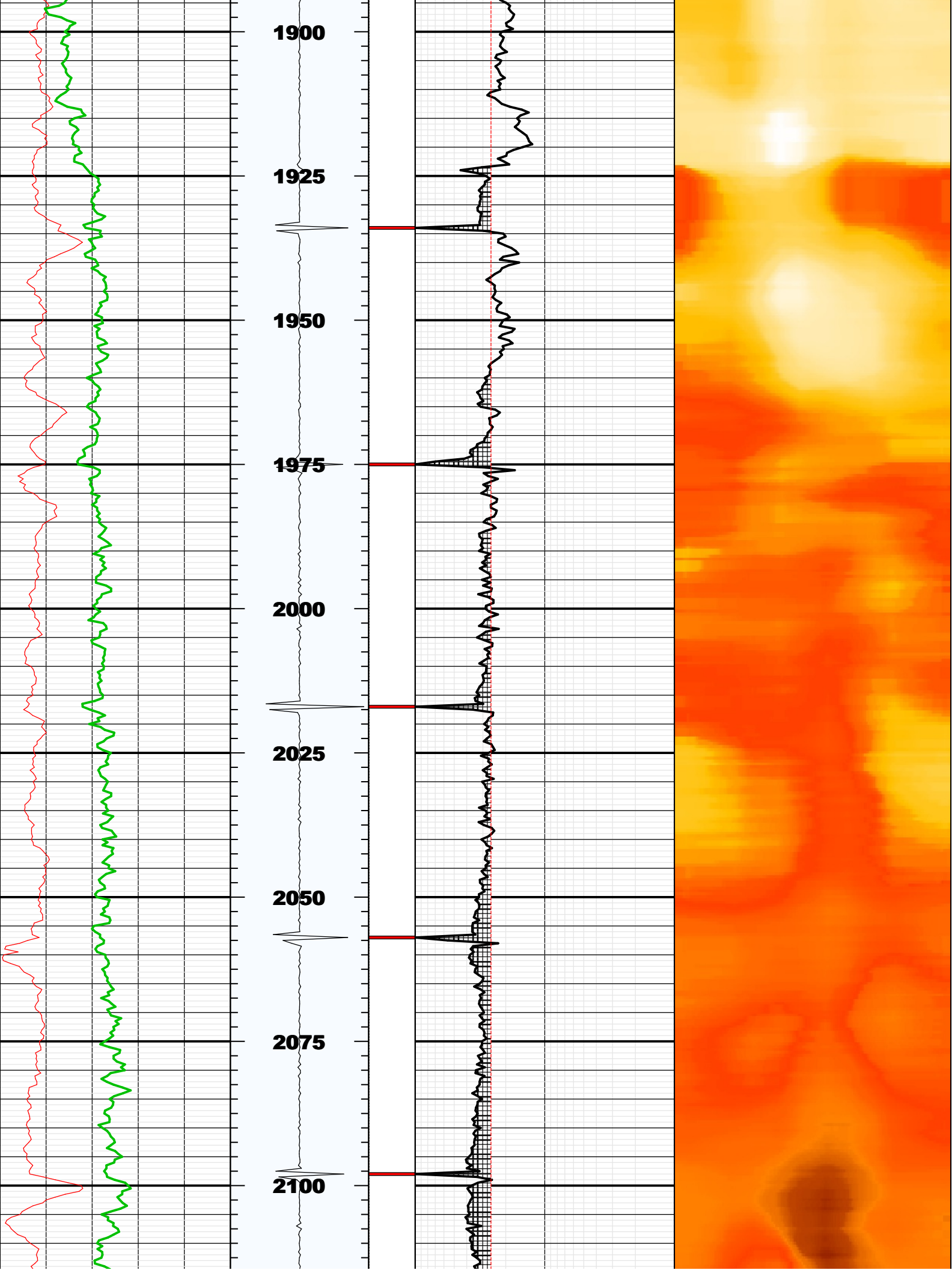


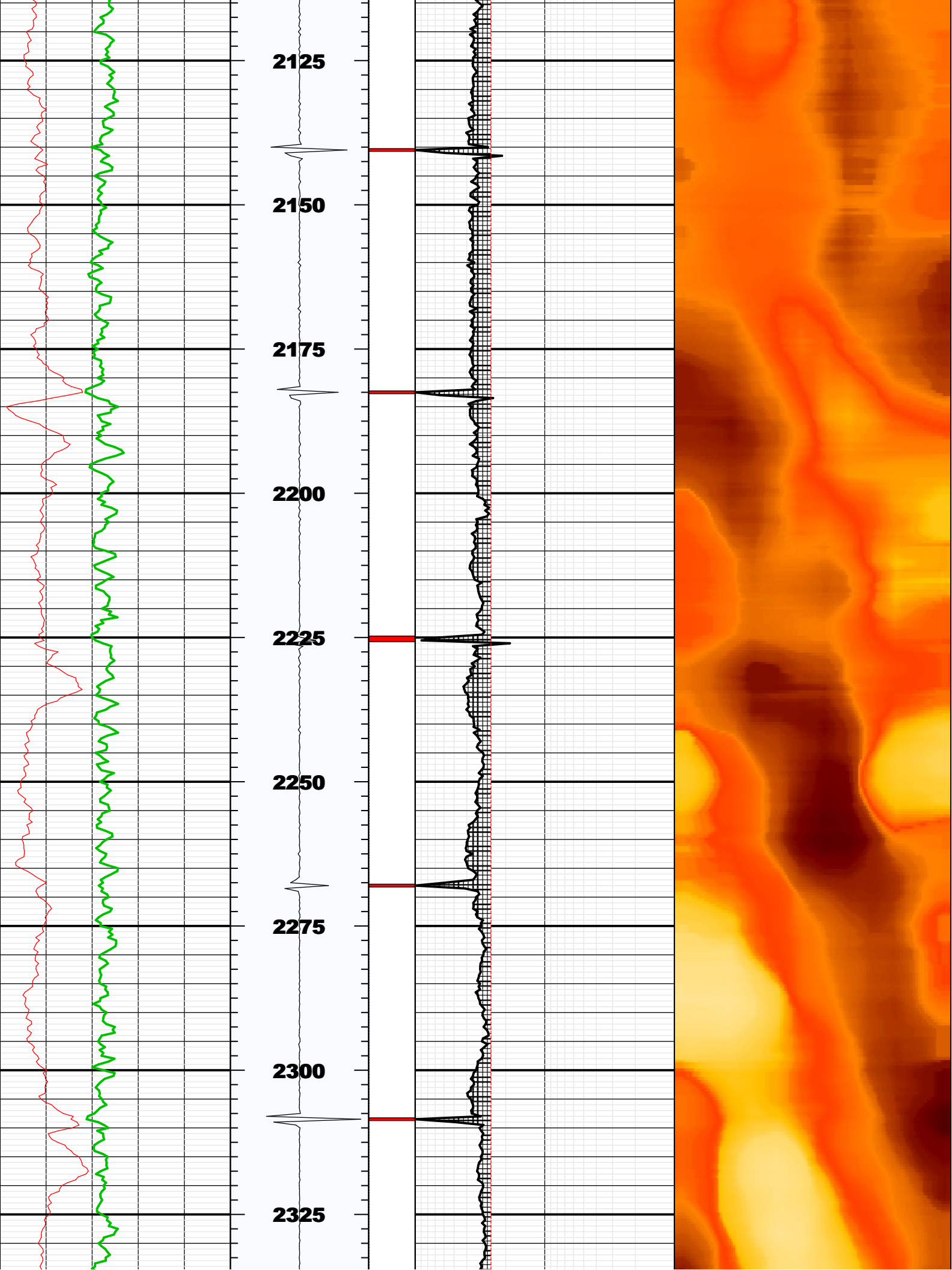


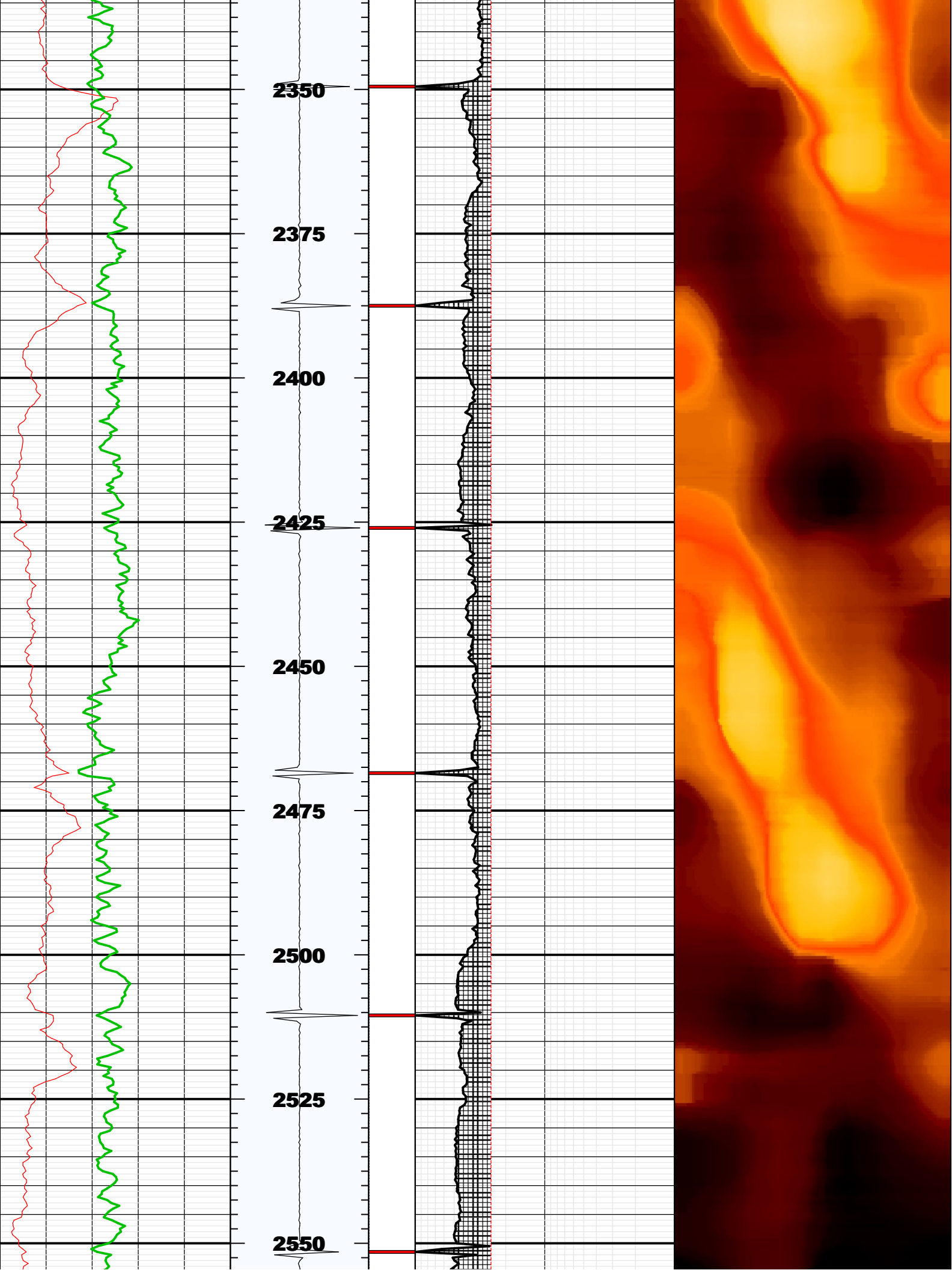


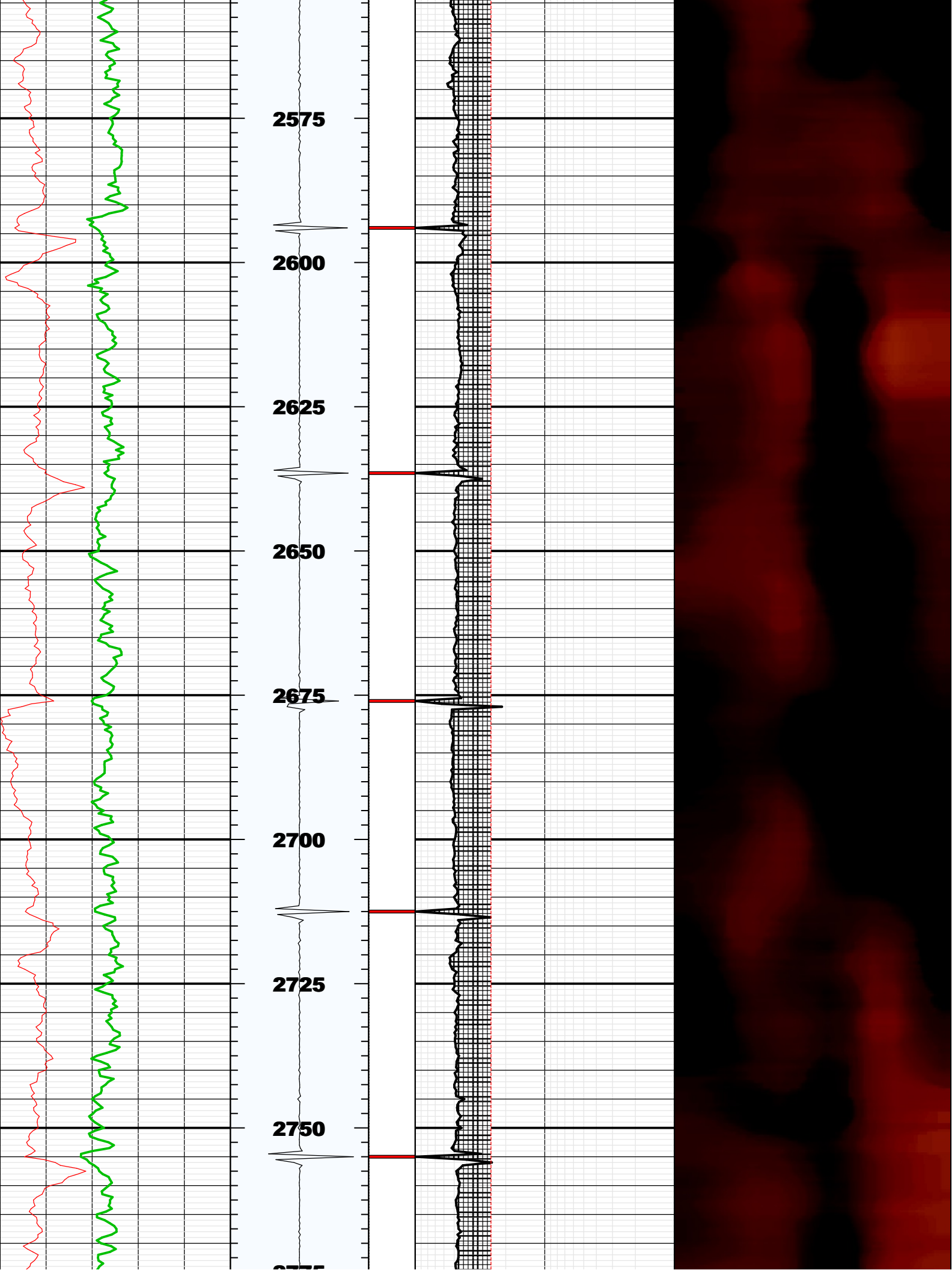


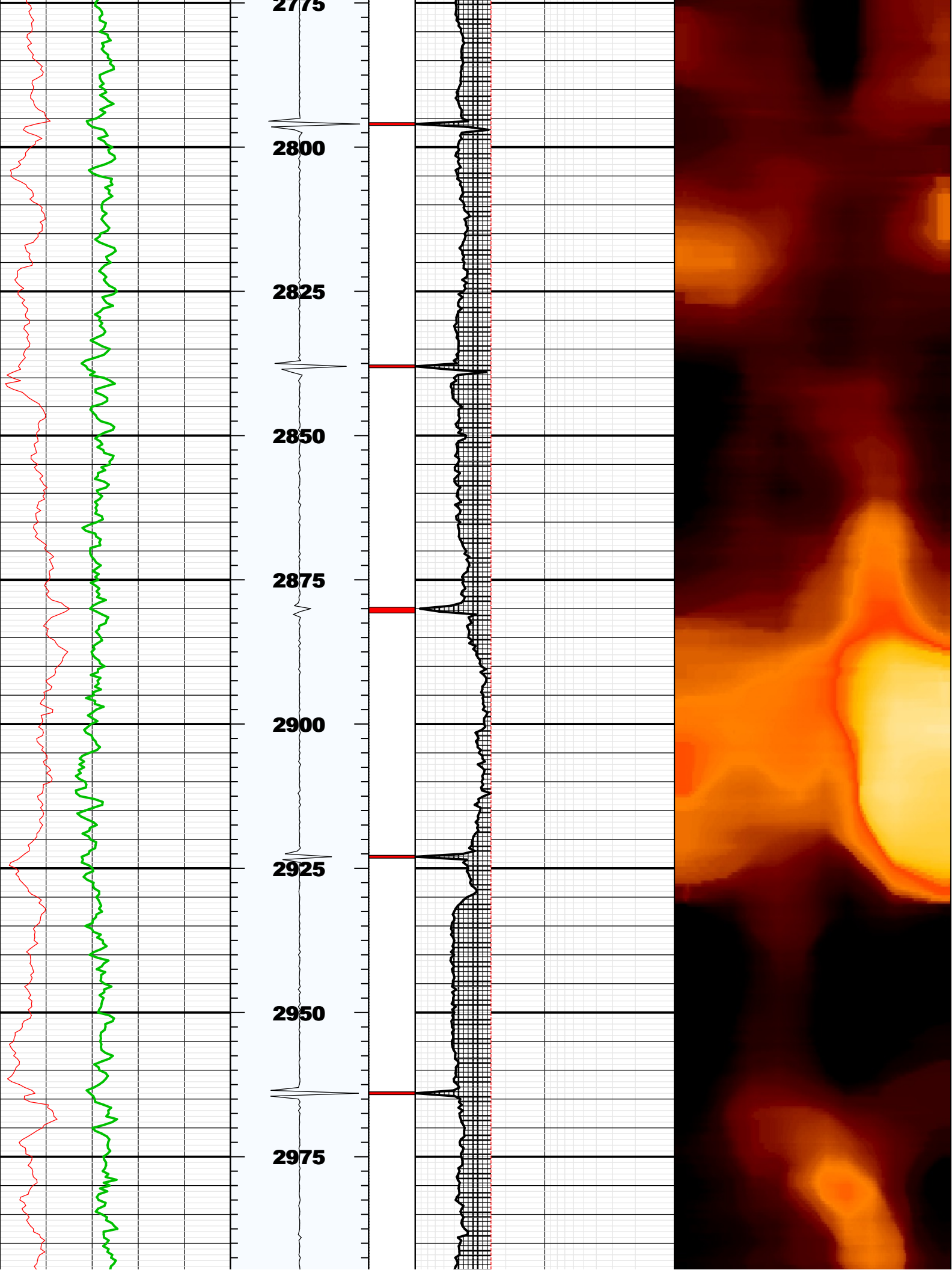


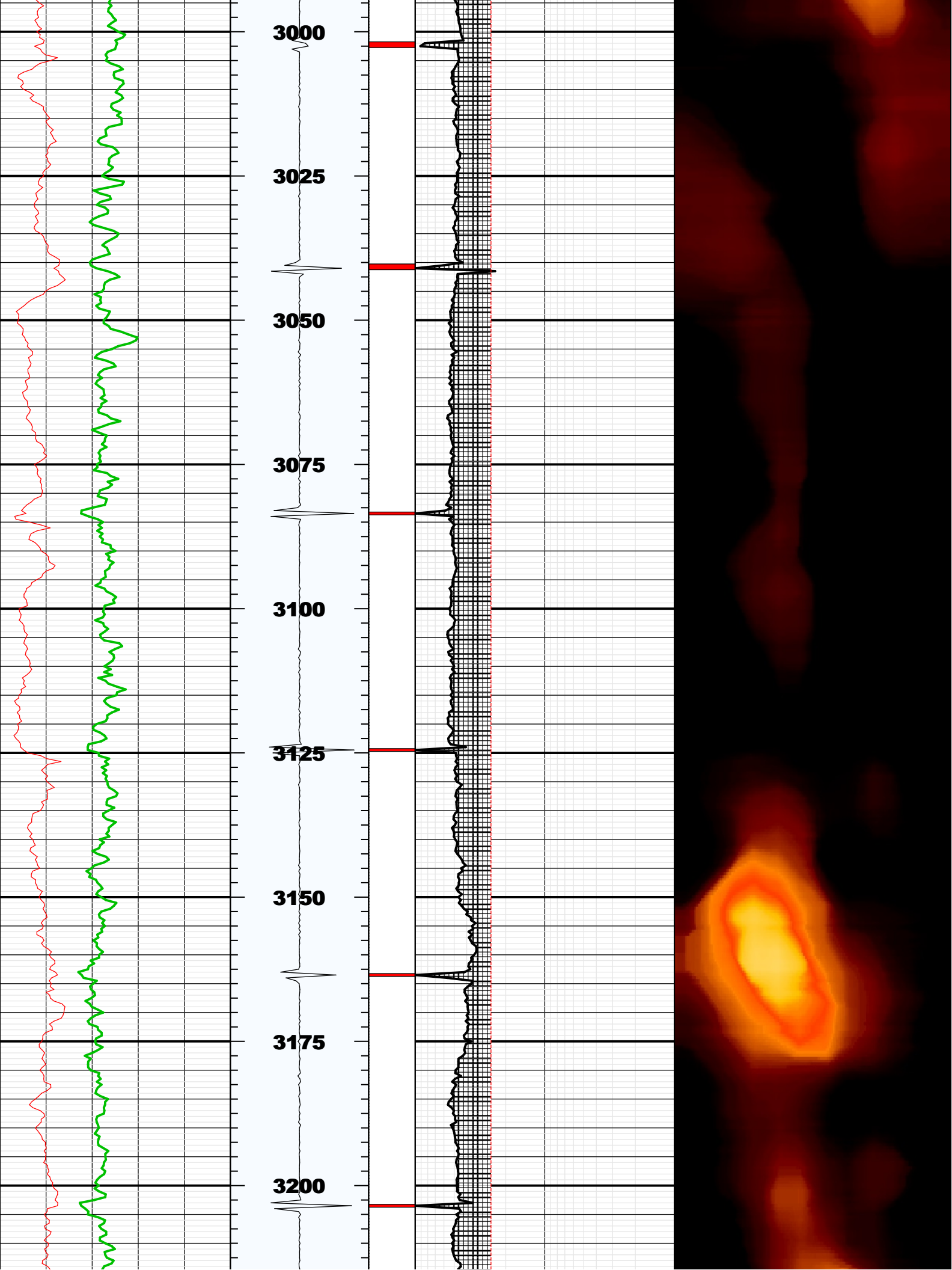


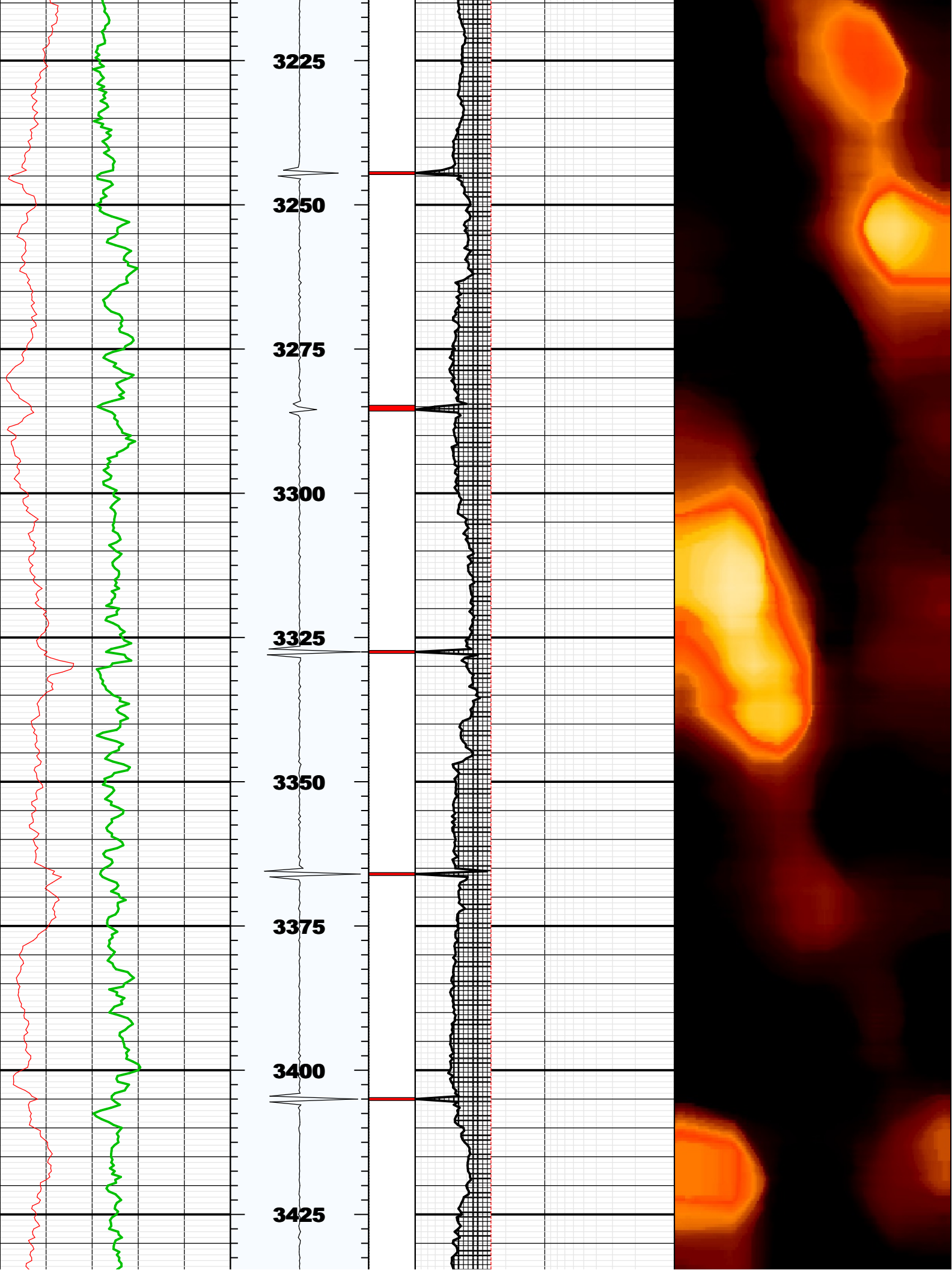


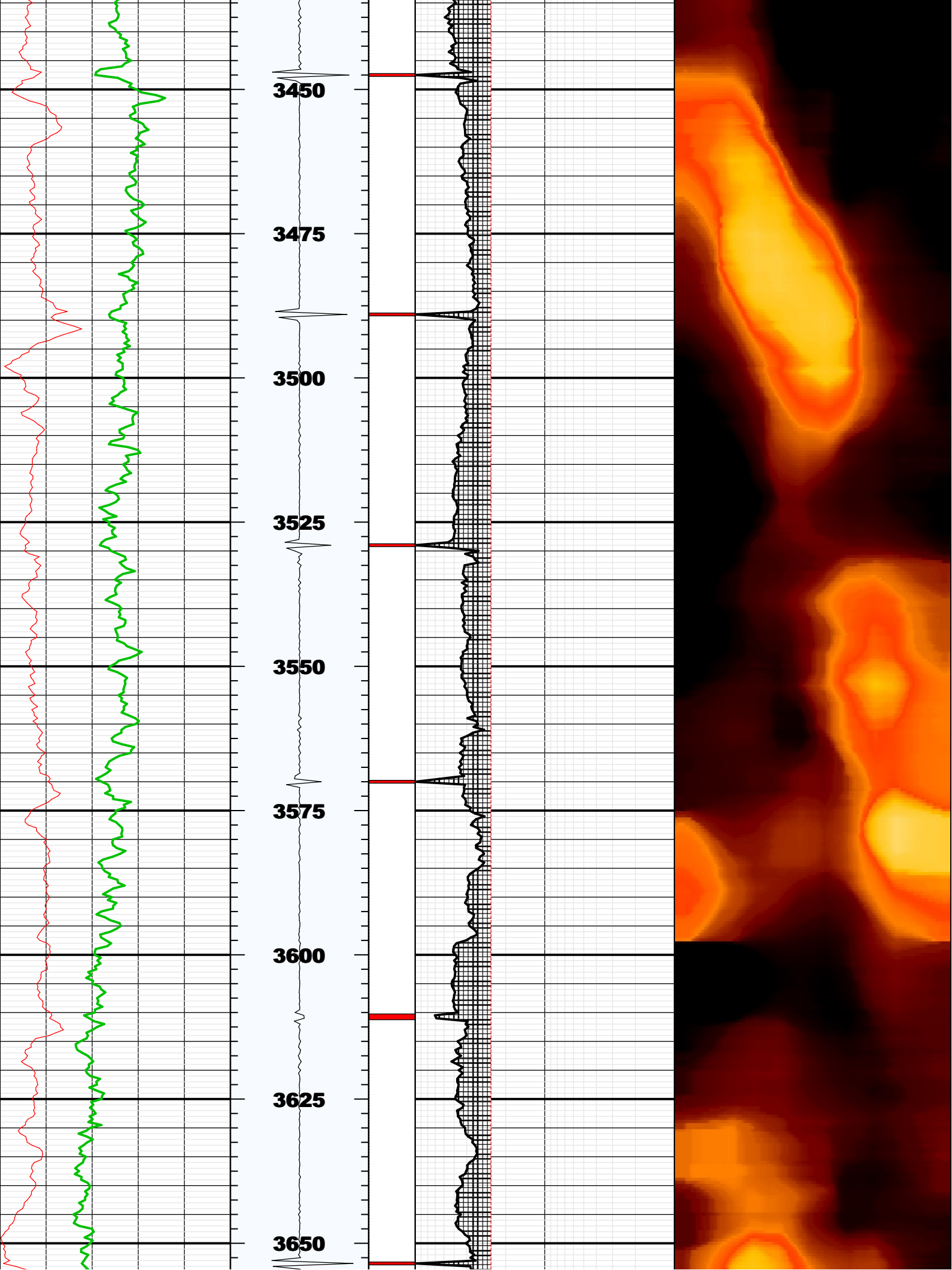


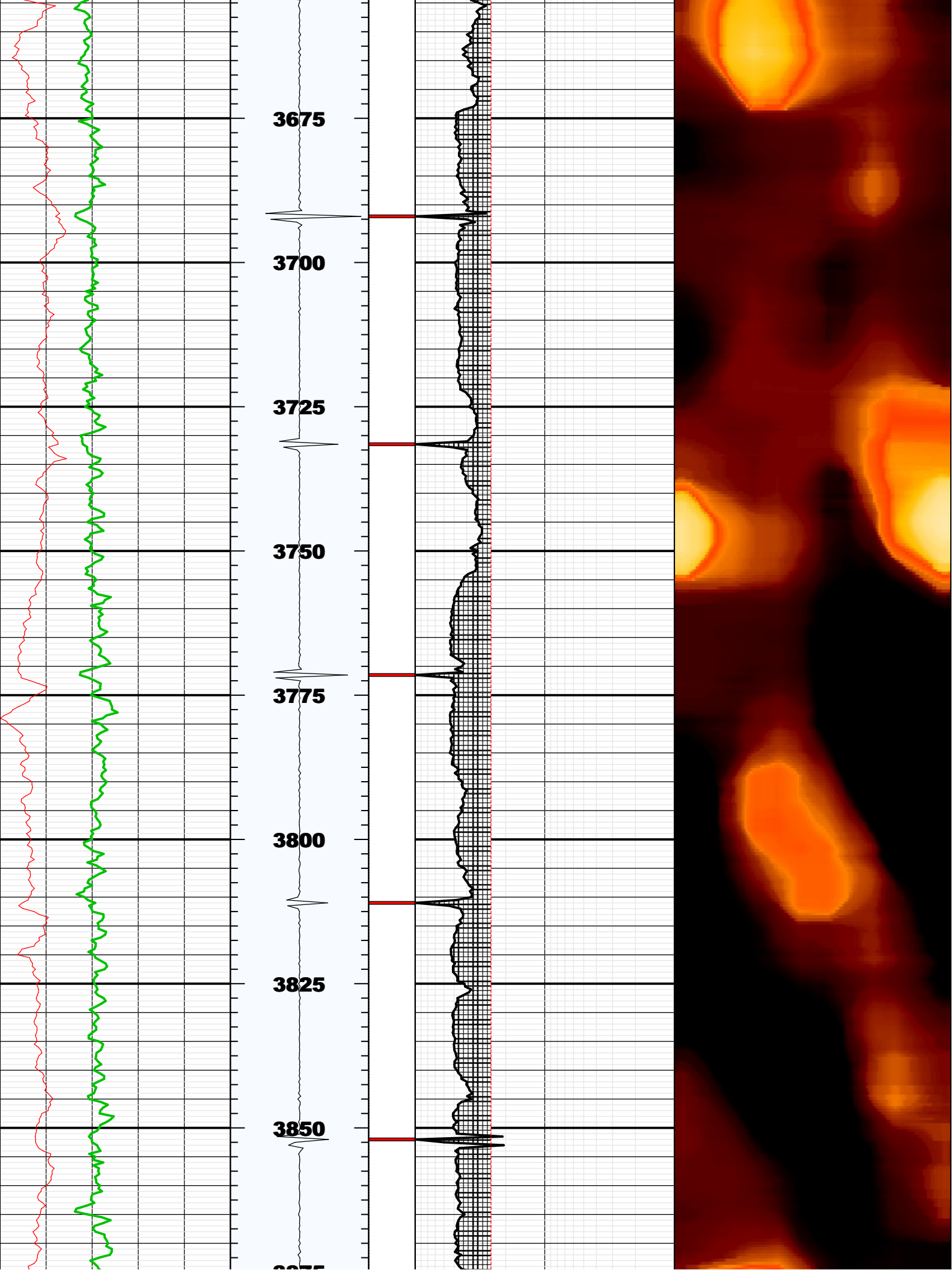


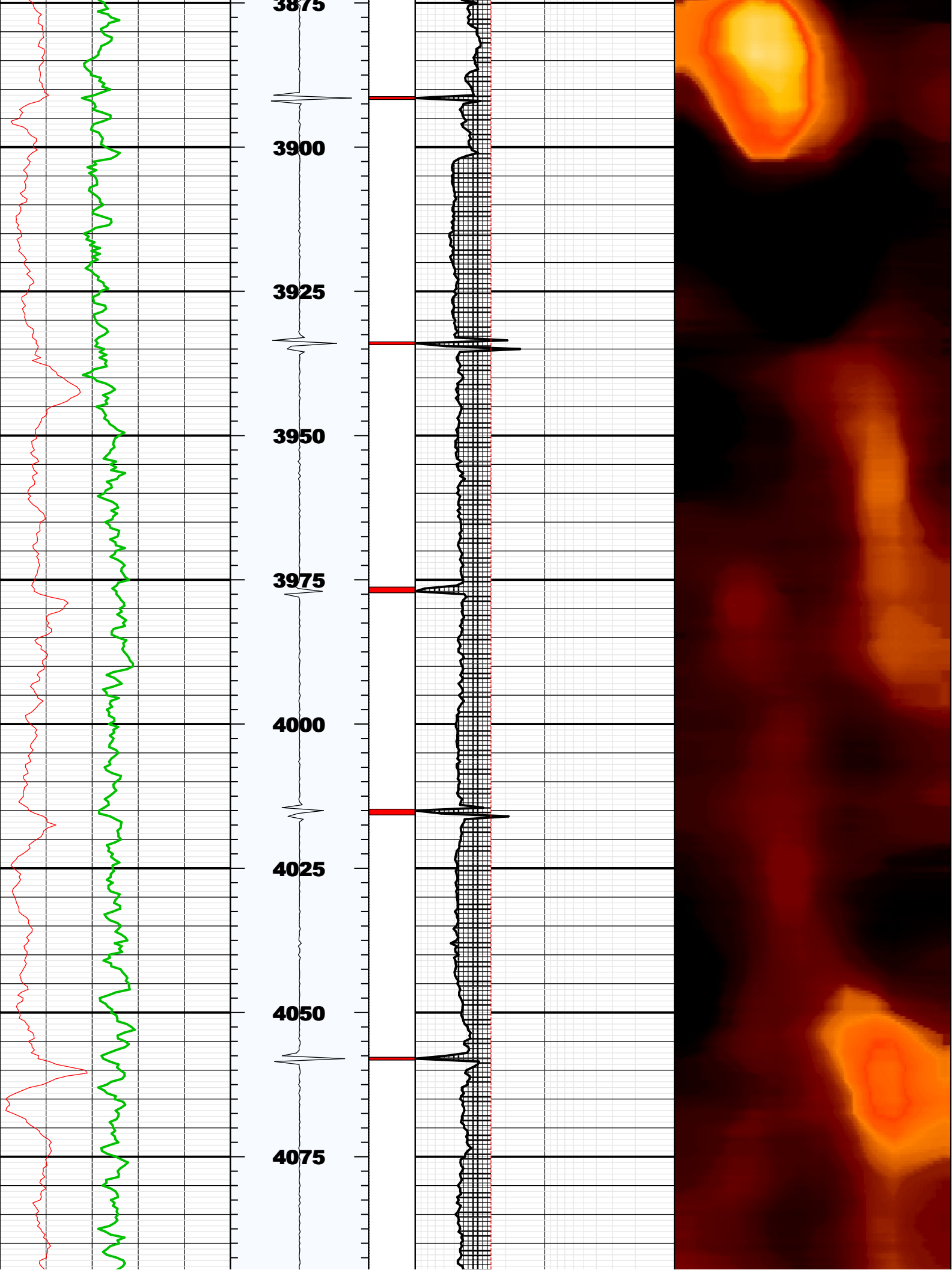


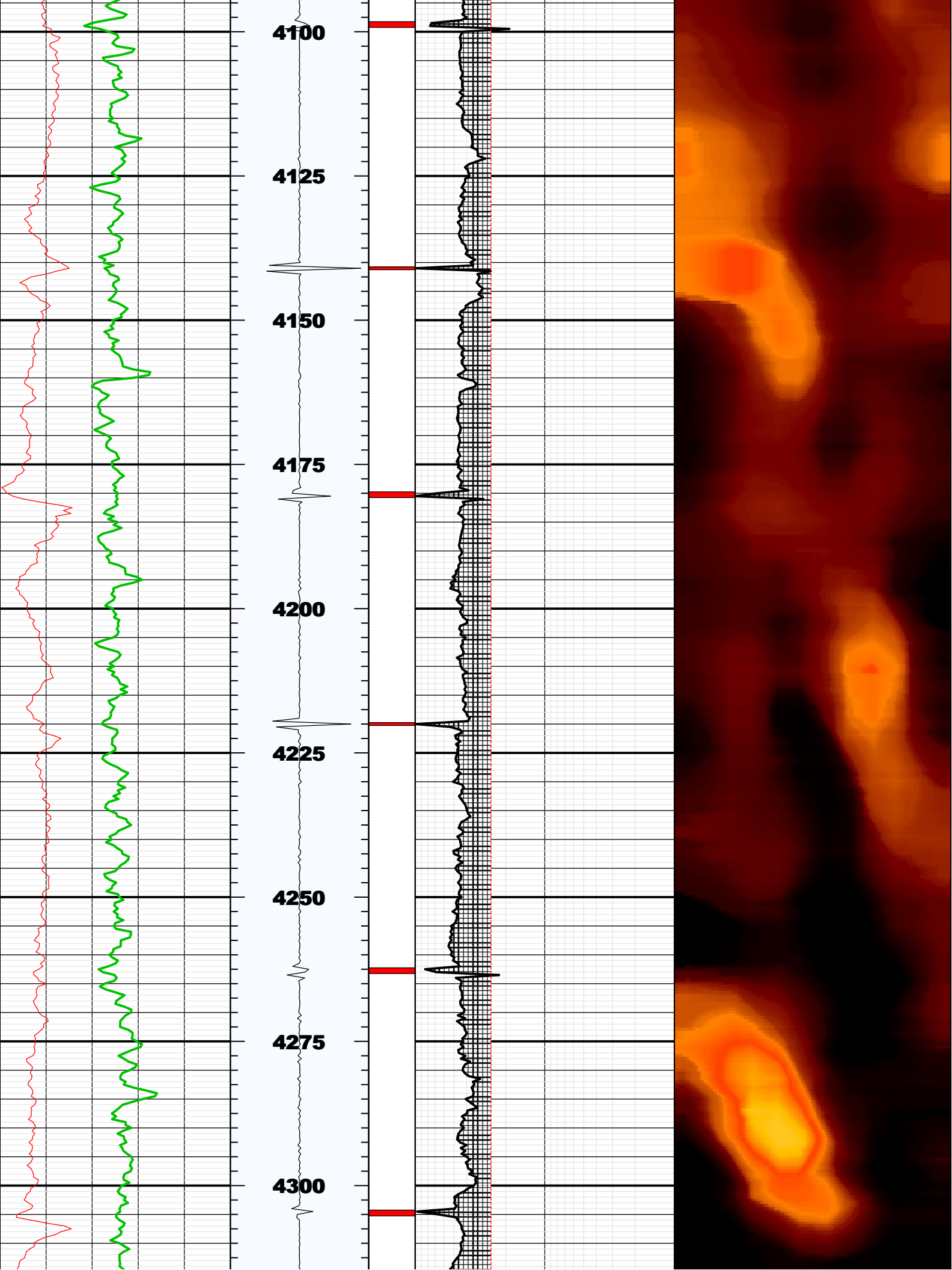


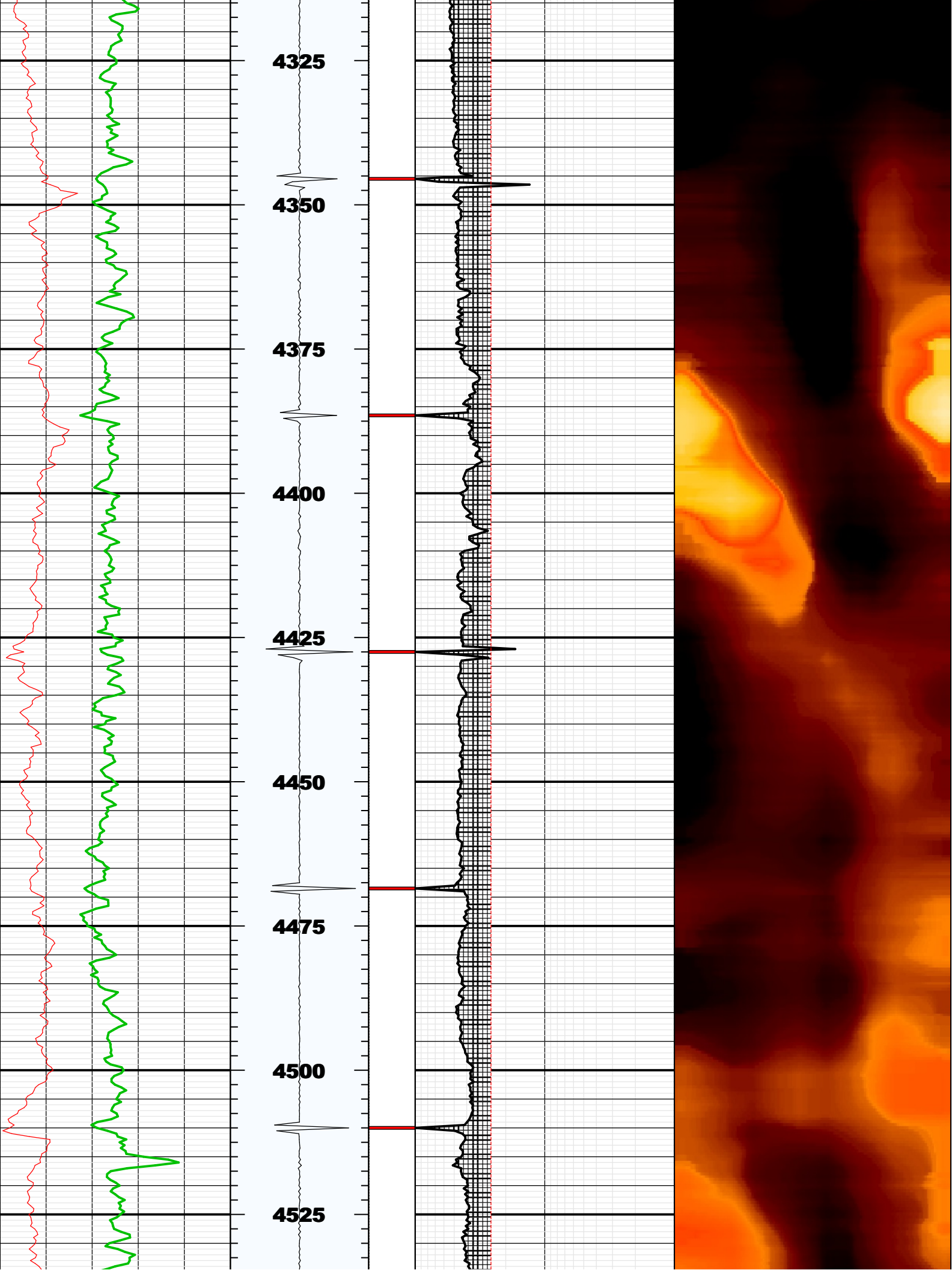


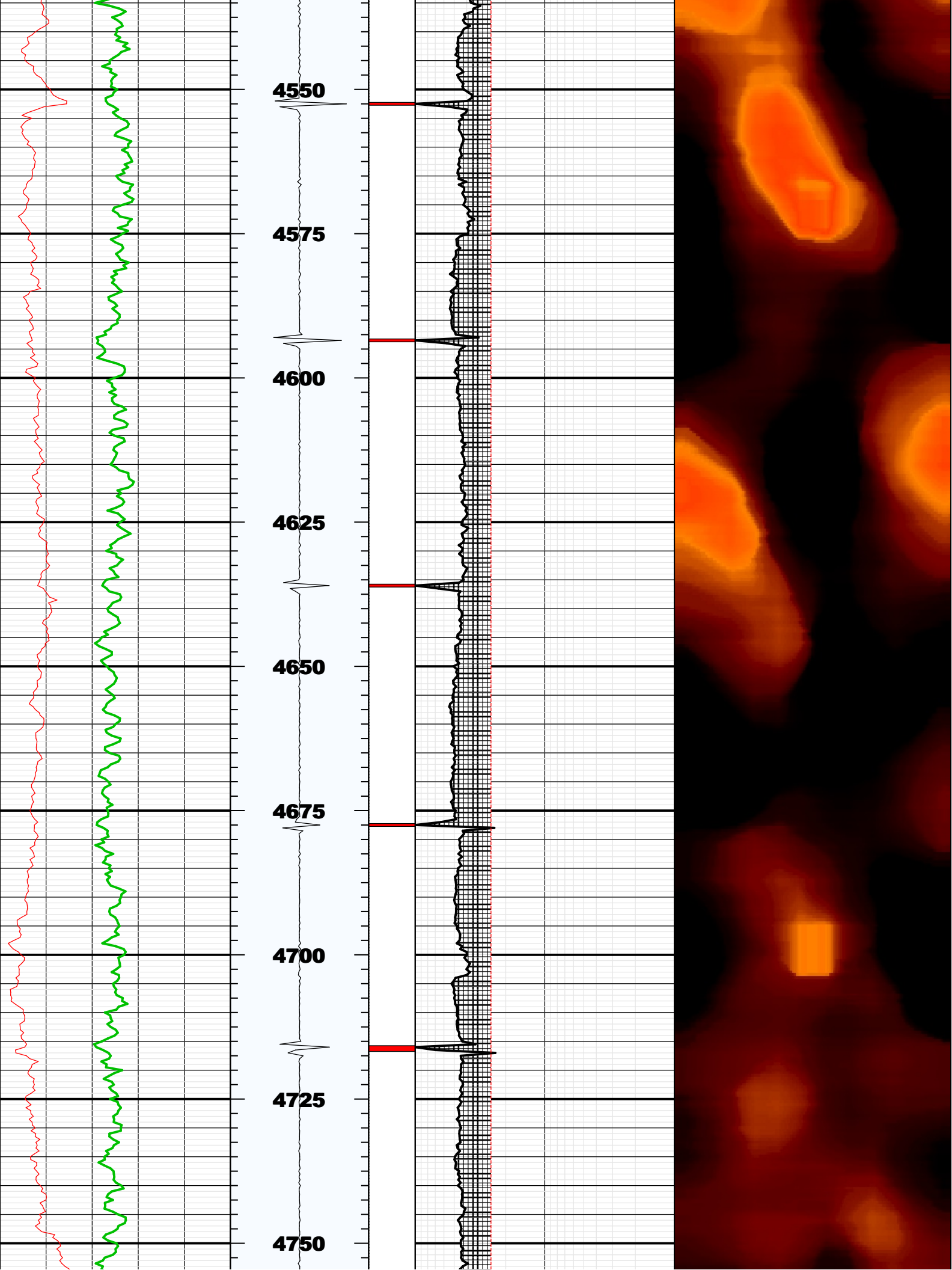


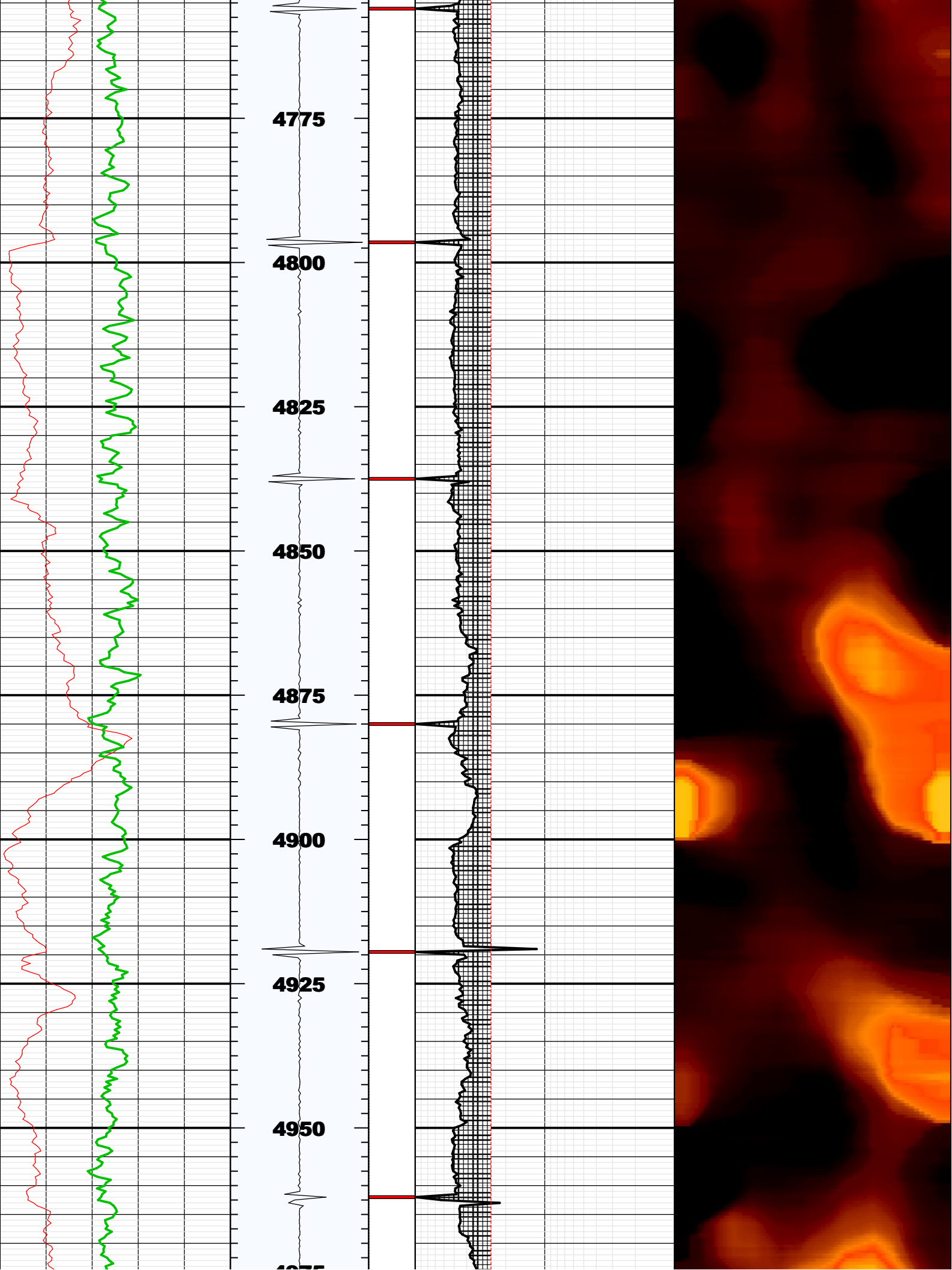


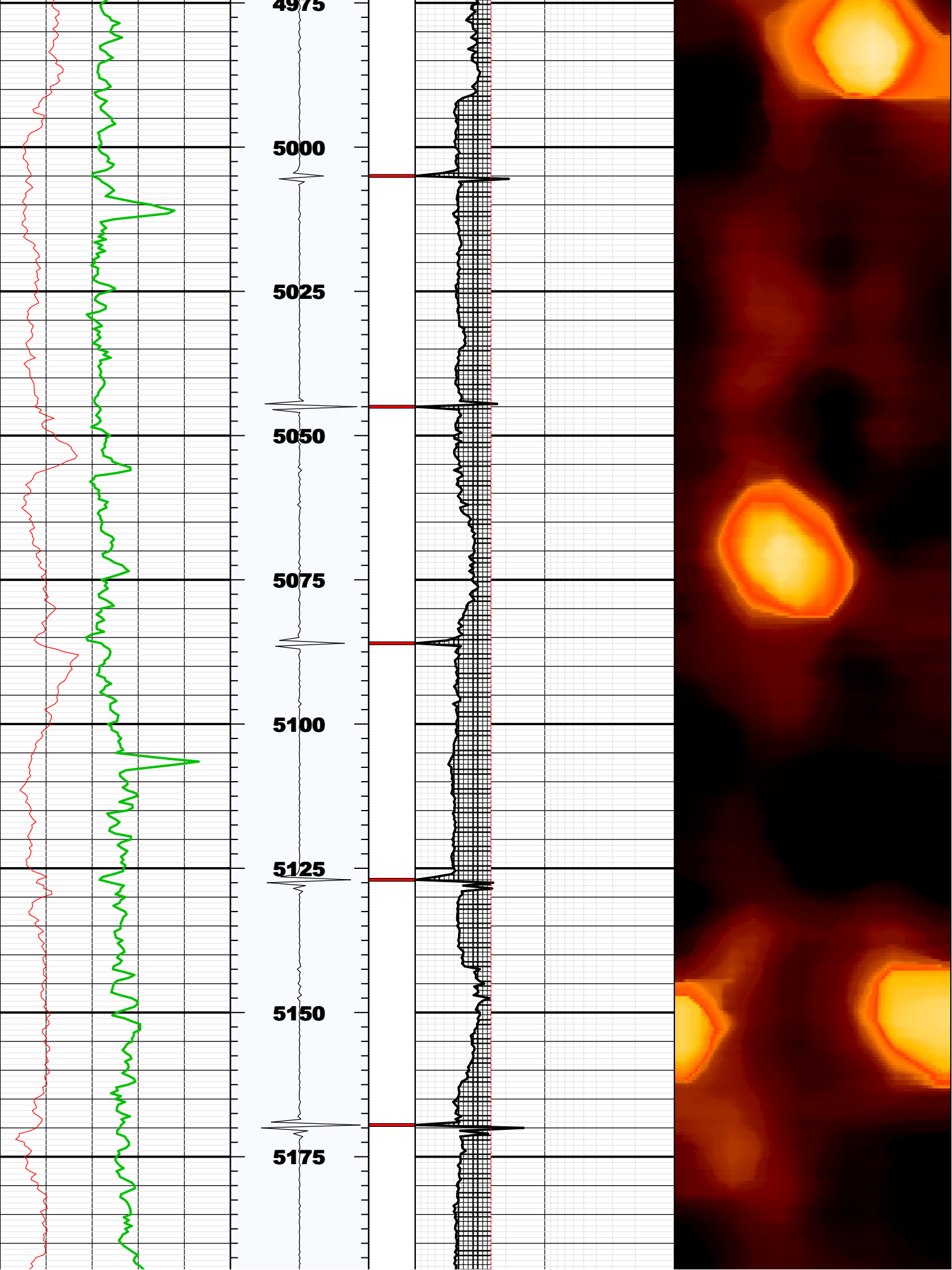


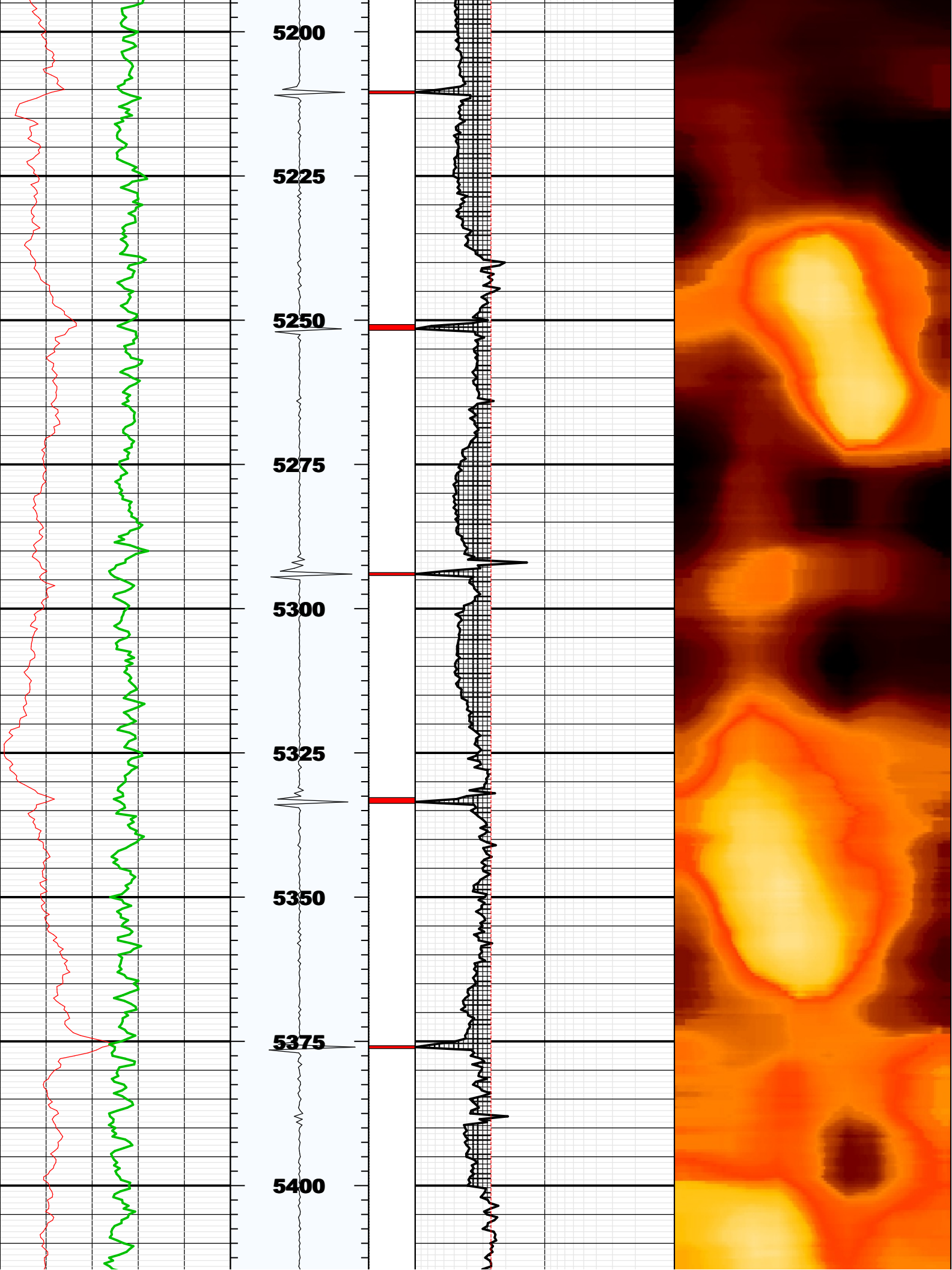


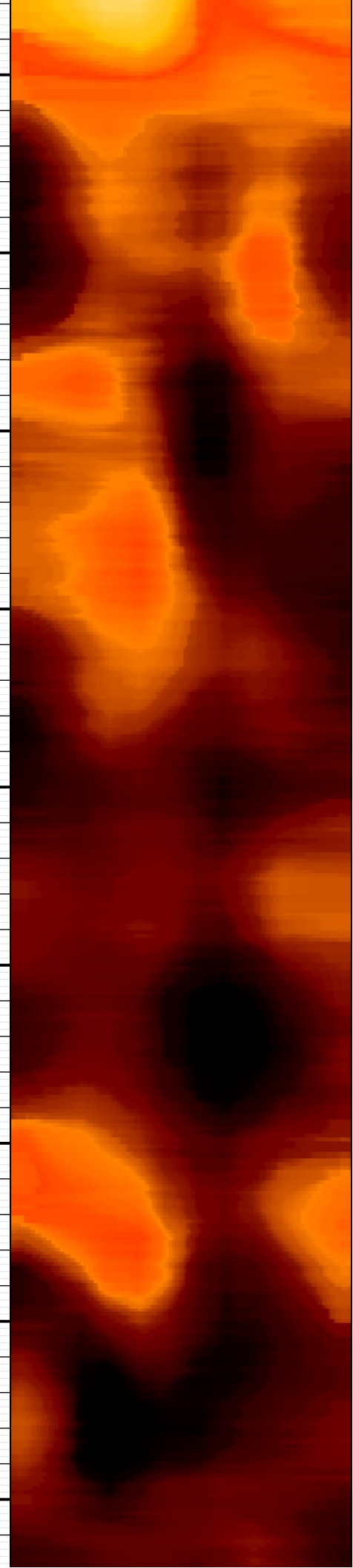
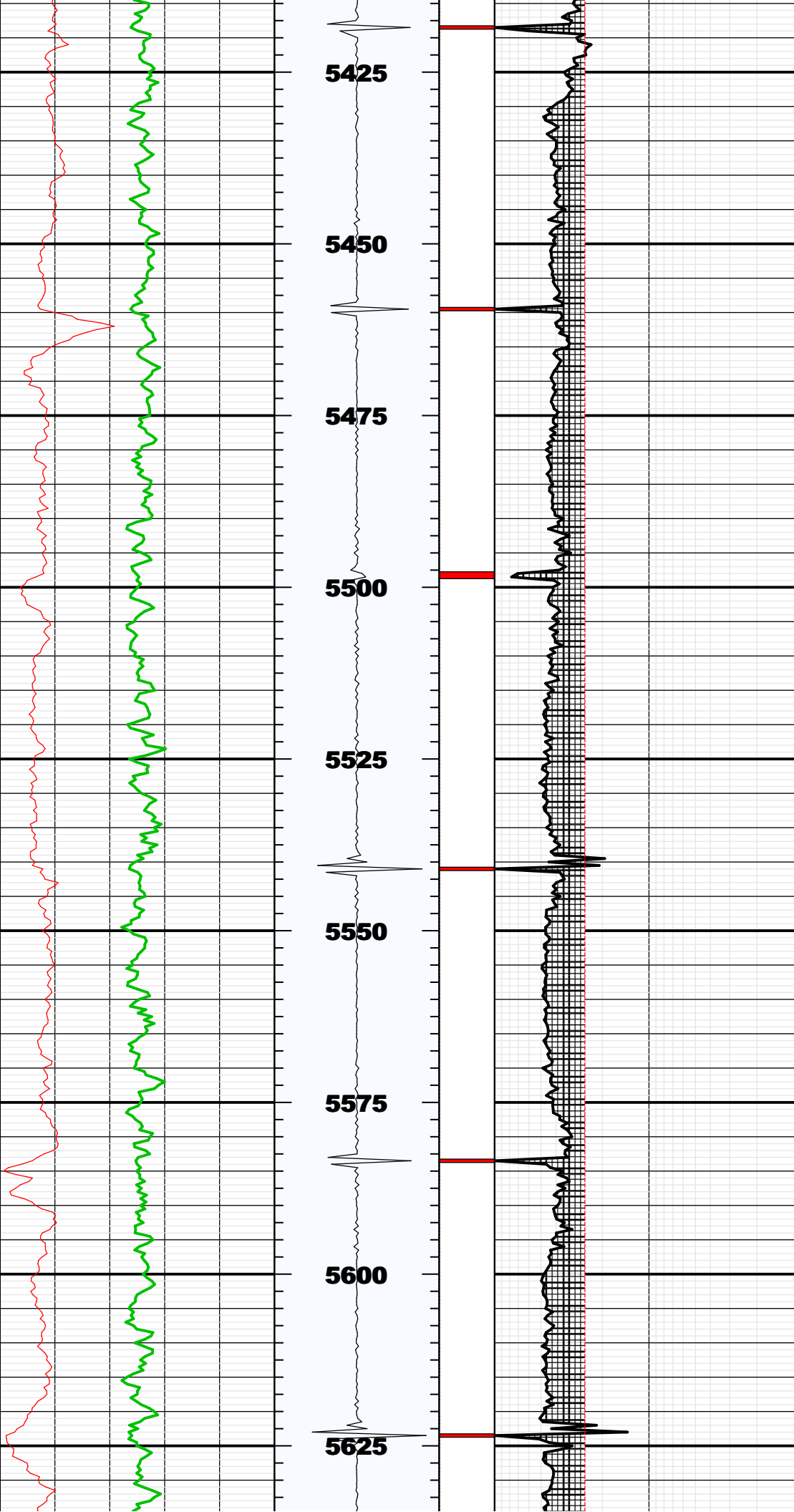


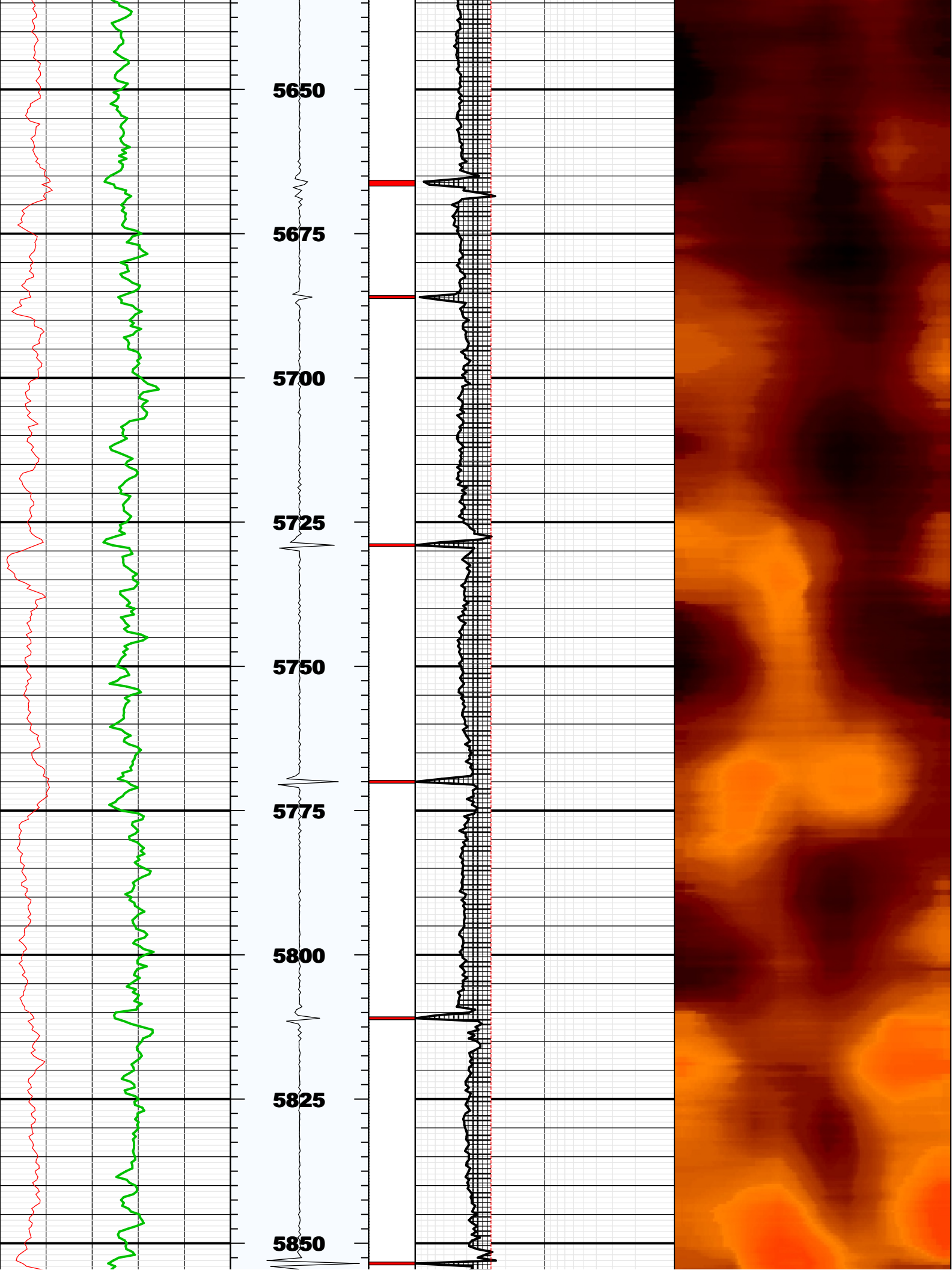


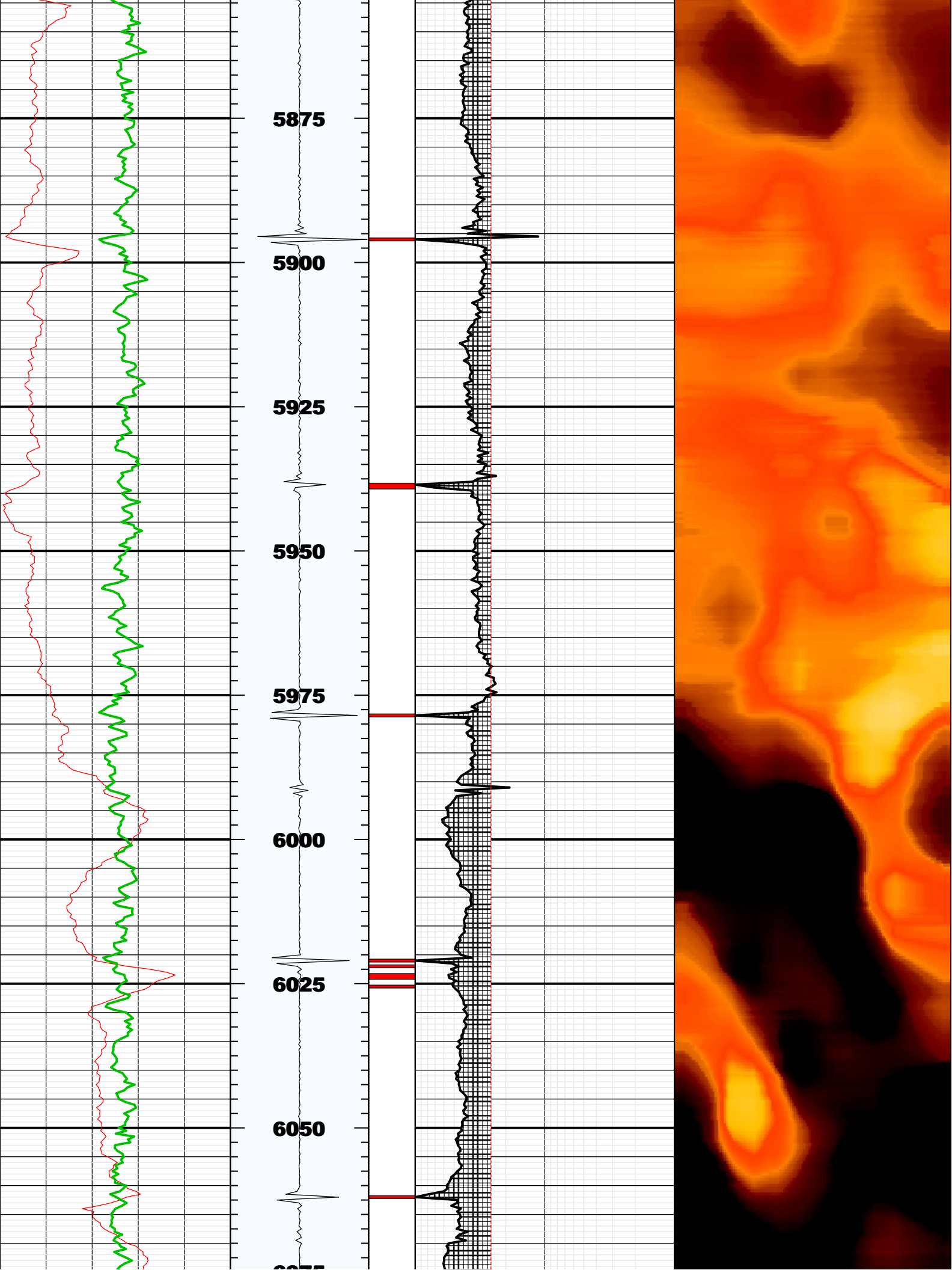


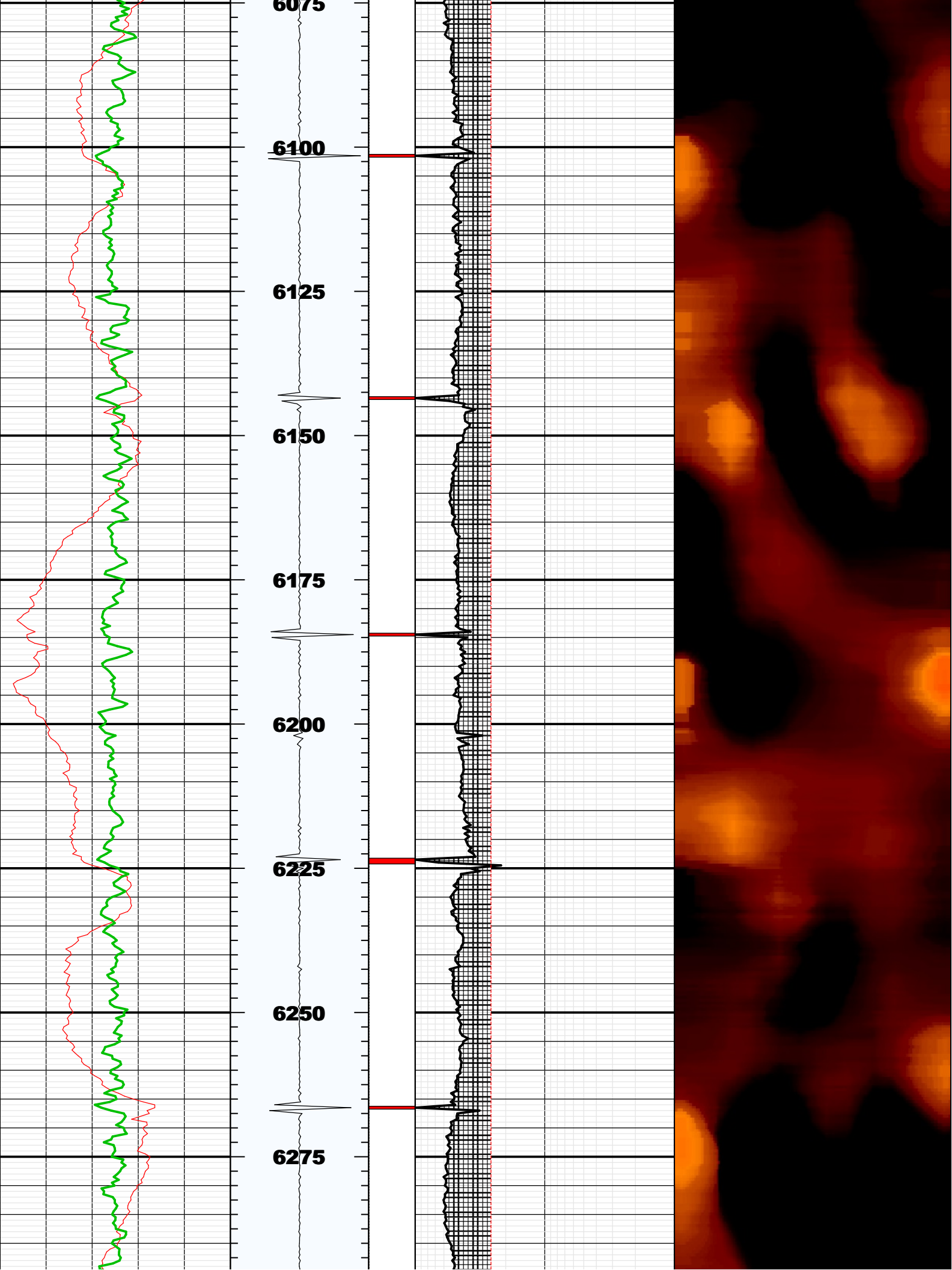


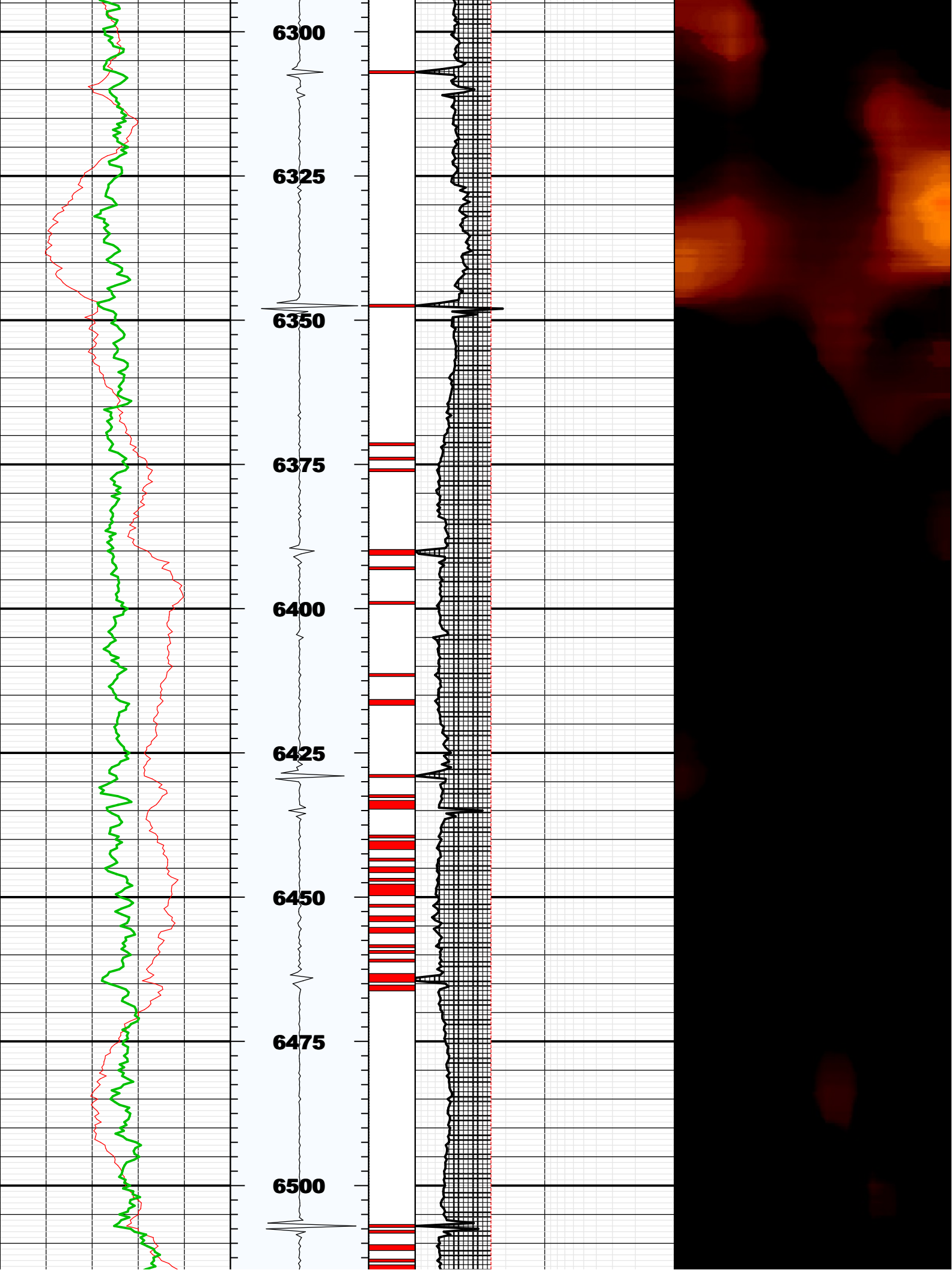


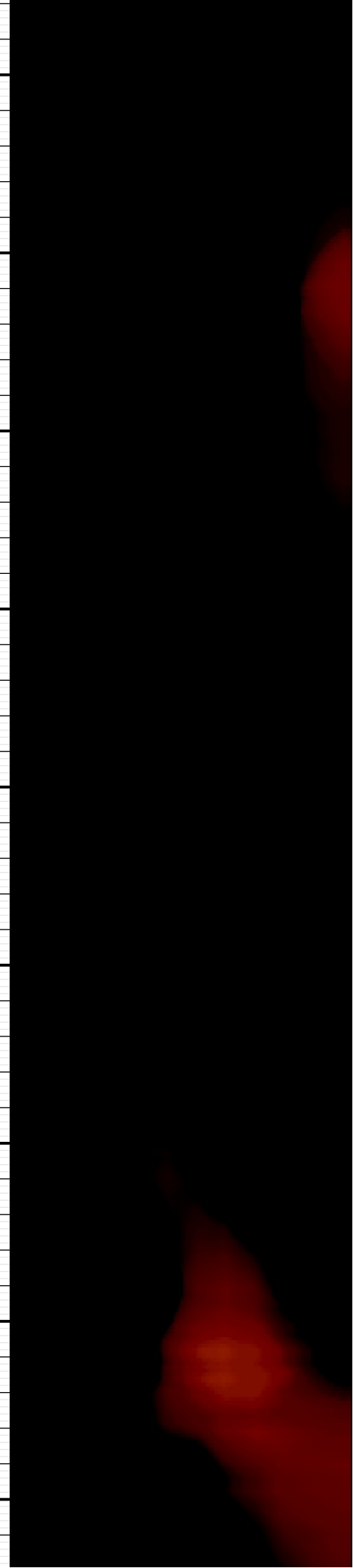
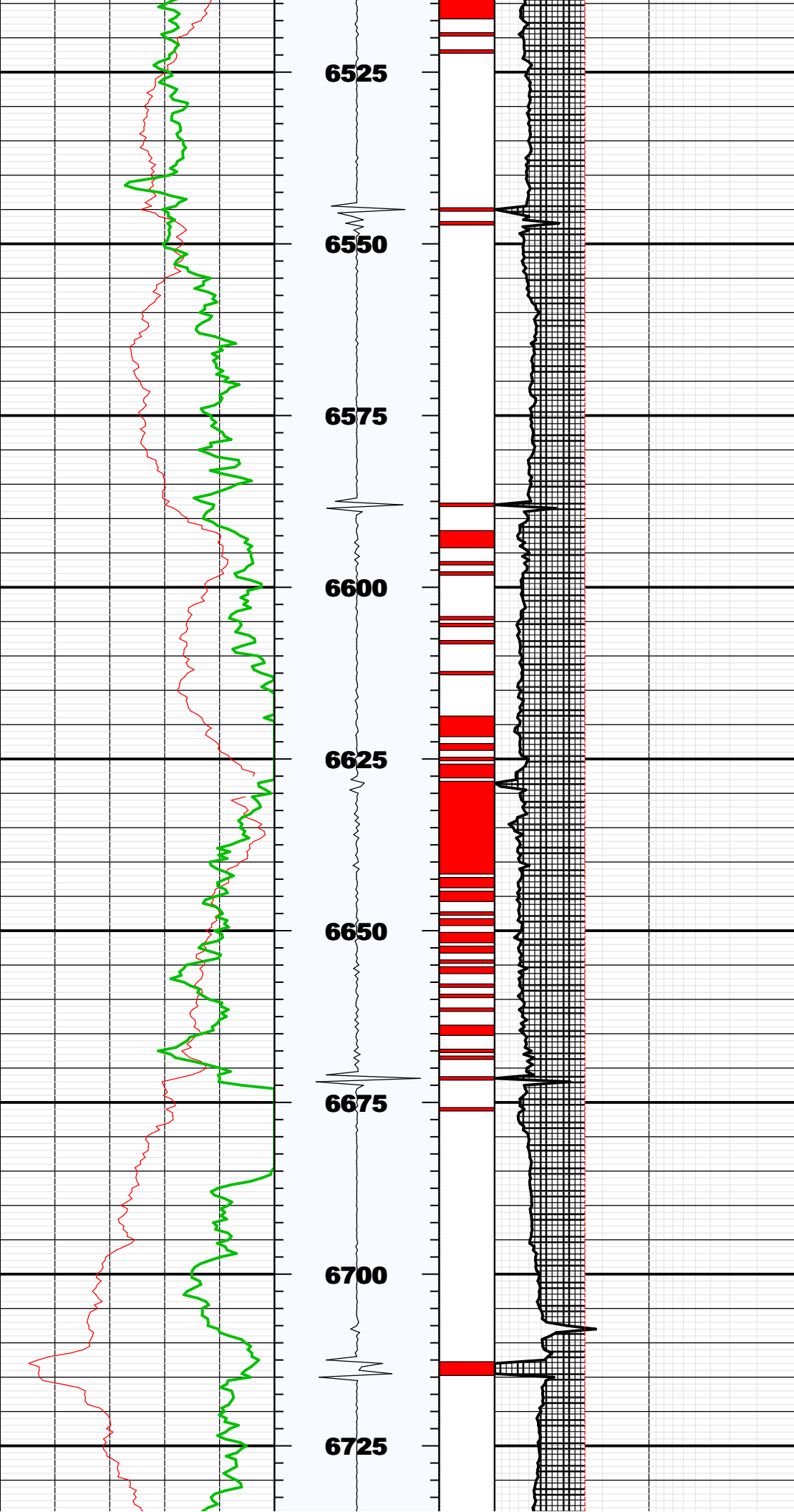


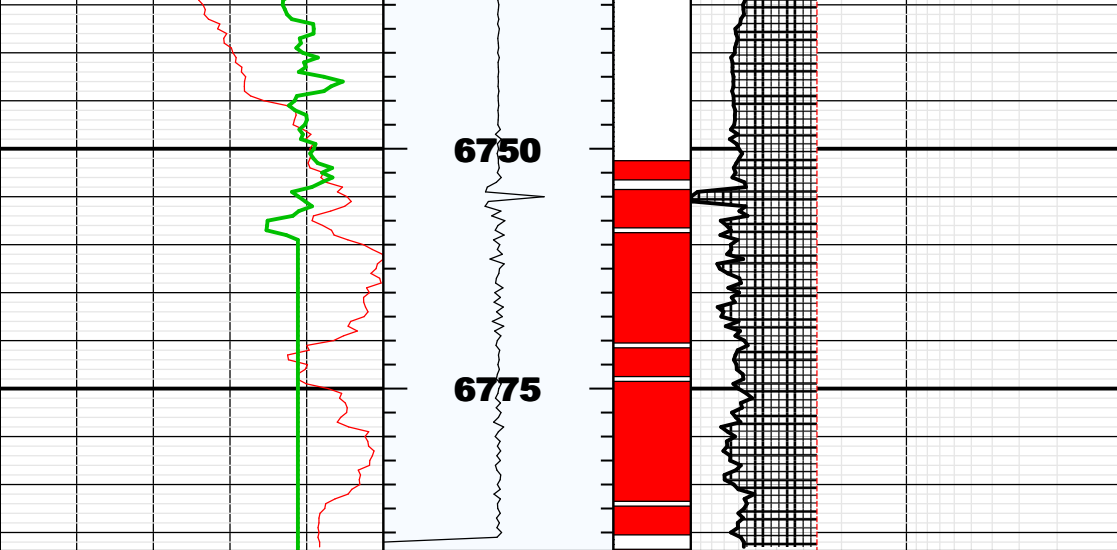








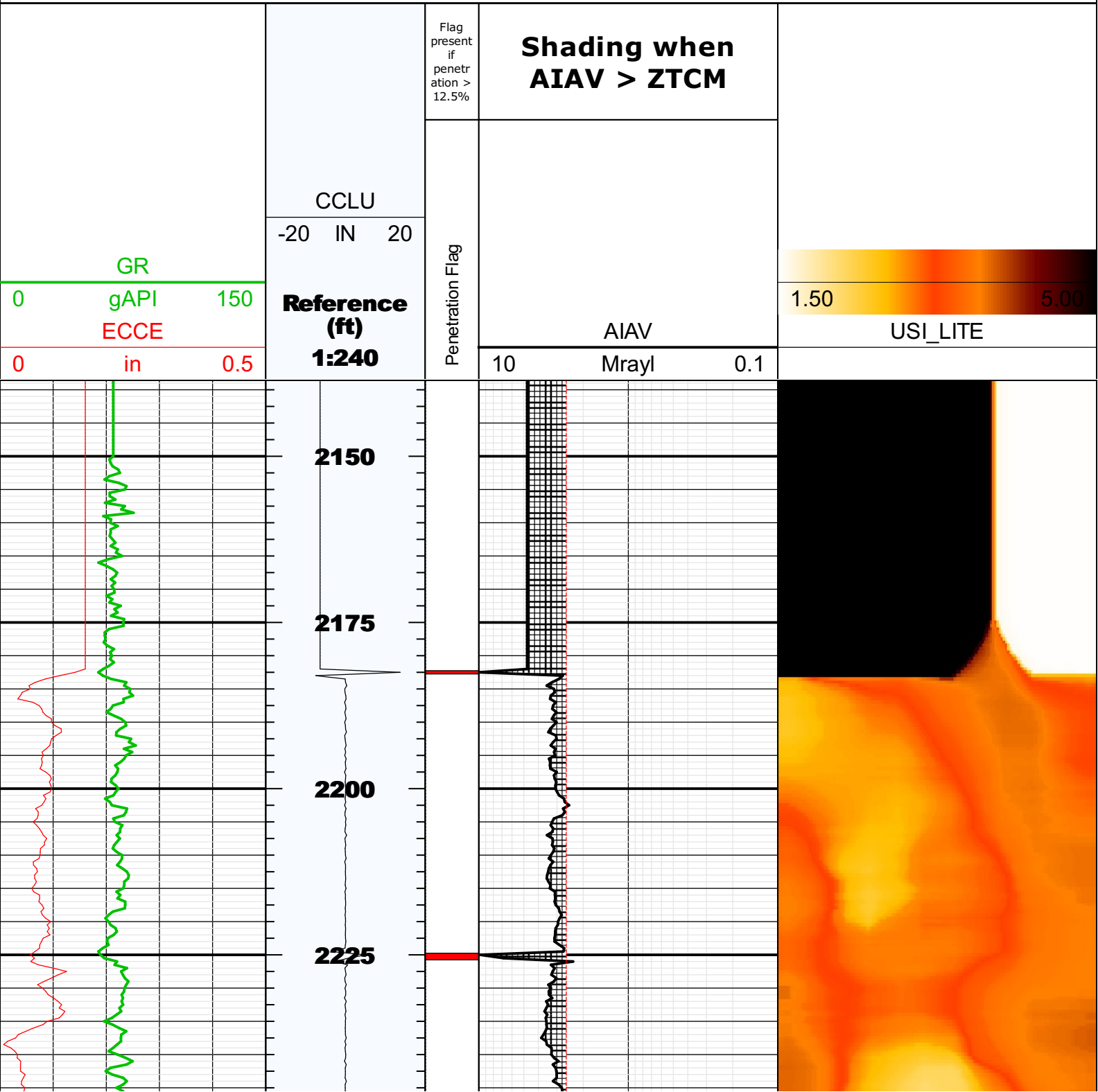


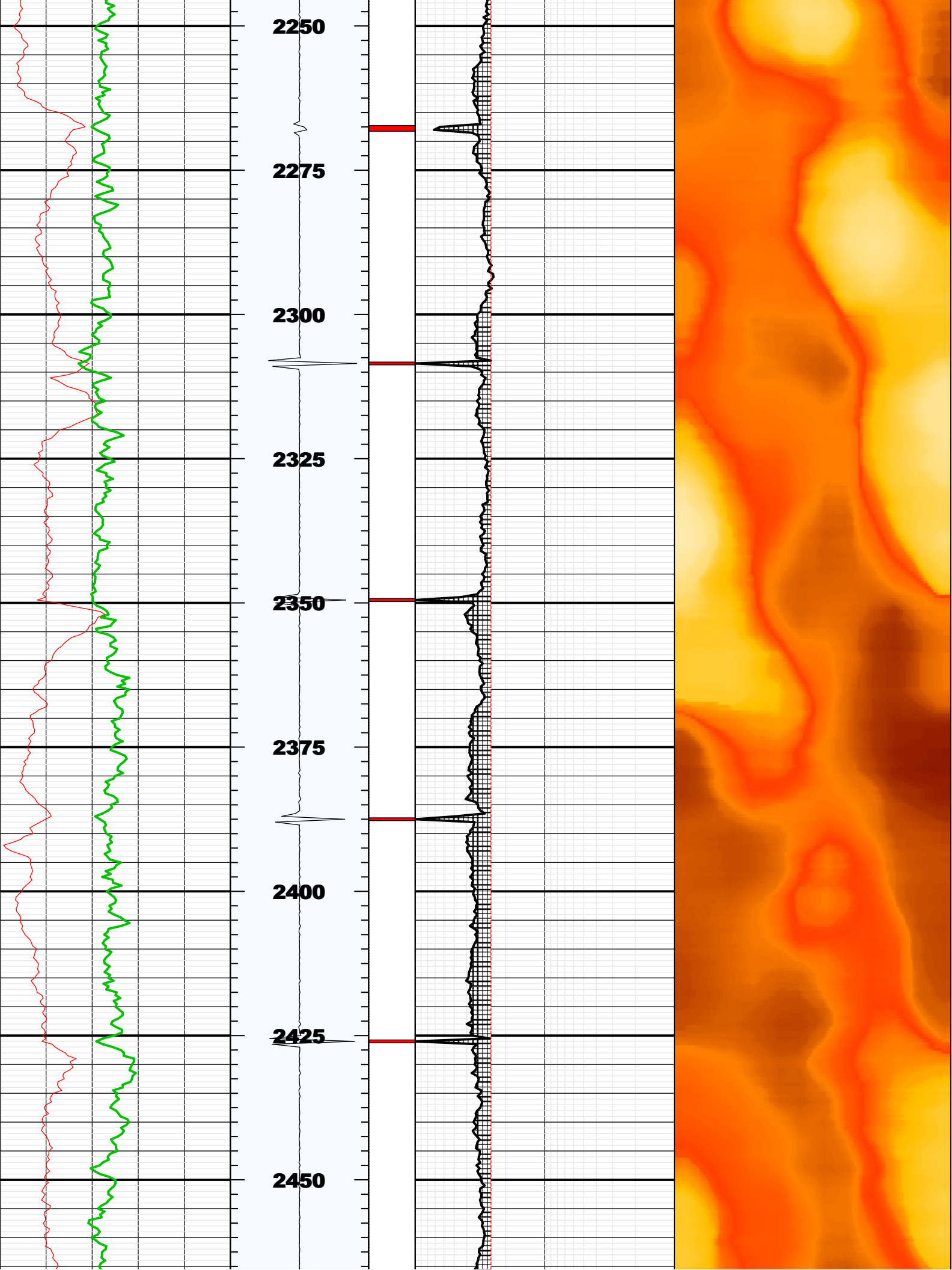


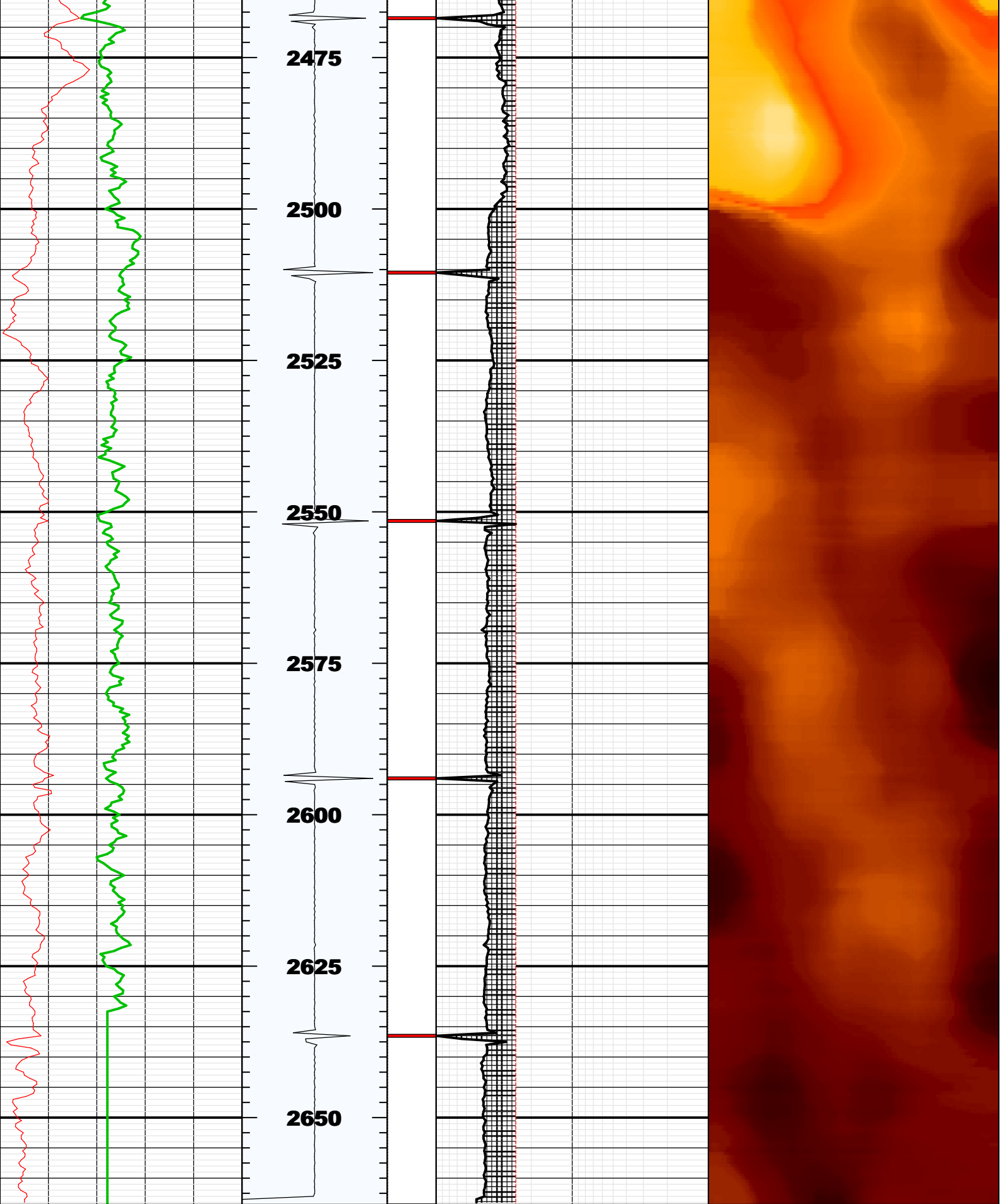
BS	8.75000	IN	Bit Size
CASG	N/A		Casing Grade
CDIA	5.50000	IN	Casing Outer Diameter
CSID	4.77800	IN	Casing Inner Diameter
CSIZ	5.50000	IN	Current Casing Size
CWEI	20.00000	LB/F	Casing Weight
DFD	8.50000	LB/G	Drilling Fluid Density
DFVL	190.00000	US/F	Default Fluid Velocity
DO			
DOT	1.75600	IN	Diameter of Transducer Sensor
EMXV	40	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	0.36100	IN	Nominal Thickness of Casing
TMUC	WRM		Type of Mud
U-USIT_DT3P			
UPAT	375K		Emission Pattern
USUB	5INC		USIT Sub Identifier
UWKM	D606010L		Working Mode
VCAS	51.40000	US/F	Ultrasonic Transversal Velocity in Casing
WINB	23.53000	US	Window Begin Time
WINE	71.87708	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	22.43906	US	T^3 Processing Length

Repeat Pass

Company: Noble Energy Inc
Well: Wells Ranch AA22-617
Field: Wattenberg







Fluid Properties Used for Main Pass

