

Company: Noble Energy Inc

Well: Wells Ranch State BB01-690
Field: Wattenberg
County: Weld State: Colorado

County: Weld			
Field: Wattenberg			
Location: QtrQtr 4 Sec. 5 T5N R62W			
Well: Wells Ranch State BB01-690			
Company: Noble Energy Inc			
USI-LITE	LOCATION		
	Permanent Datum: Log Measured From: Drilling Measured From:		
	GL KB KB		
	Elev: K.B. 4732.0 F G.L. 4702.0 F D.F. 4731.0 F		
	API Serial No. 01-123-41986		
	Section 5		
	Township 5N		
	Range 62W		
	Logging Date 08-Apr-2016		
	Run Number Run 1		
Depth Driller 16119.0 F			
Schlumberger Depth 16119.0 F			
Bottom Log Interval 6568.0 F			
Top Log Interval 30.0 F			
Casing Fluid Level 0.0 F			
Salinity			
Density 8.40 LB/G			
Fluid Level 0.0 F			
BIT/CASING/TUBING STRING			
Bit Size 8.500 IN			
From 1926.0 F			
To 16119.0 F			
Casing Size 5.50 IN			
Weight 20.00 LB/F			
Grade P110			
From 0.0 F			
To 16112.0 F			
Max Recorded Temp 222.8			
Logger on bottom (date) 08-Apr-2016			
Location Ft. Morgan CO			
Recorded By Alekssei Bekhterev			
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: 23100.00000

DISCLAIMER

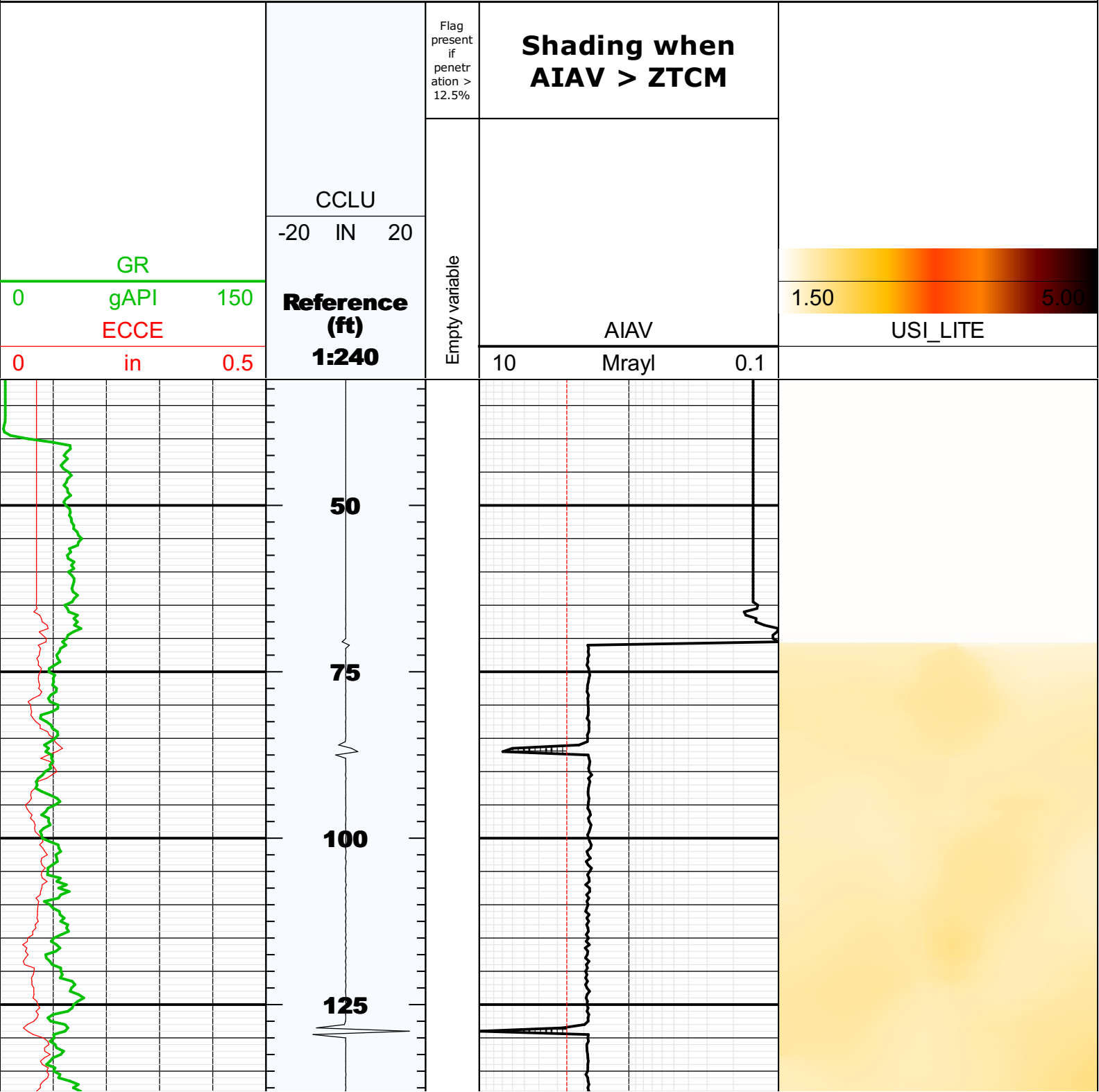
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRTICTIONS ON USE OF THE RECORDED-DATA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

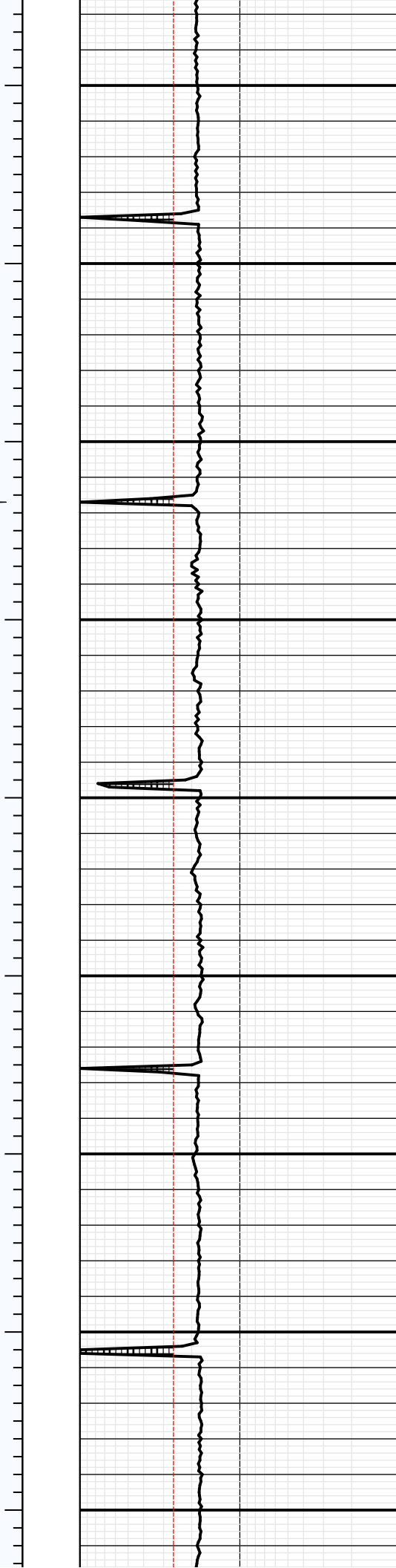
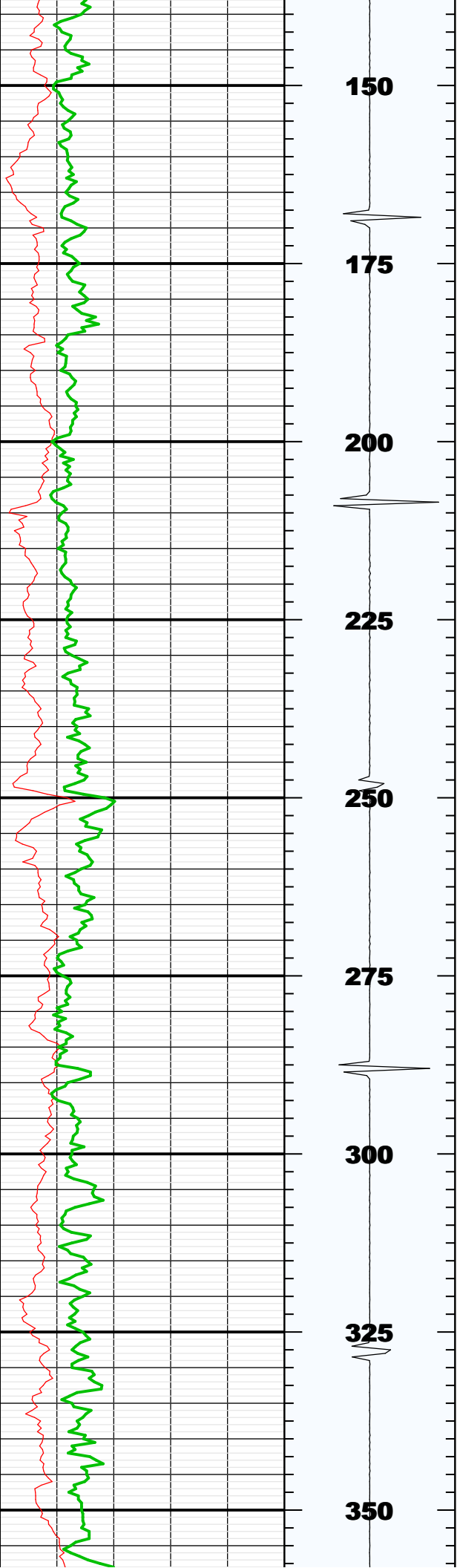
This is first run in hole
Toolstring ran as per tool sketch
Repeat Pass is done with 0 psi
Main Pass is done with 2500 psi
Log started from no-go point - 6568 ft
Temperature on bottom 222.9 degF
Top of cement 2030'

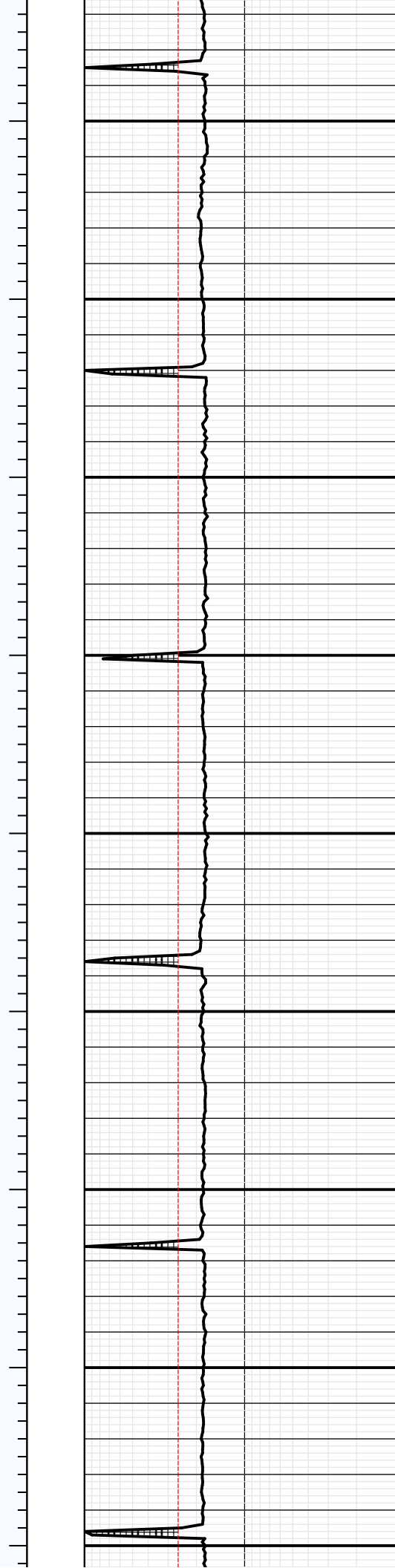
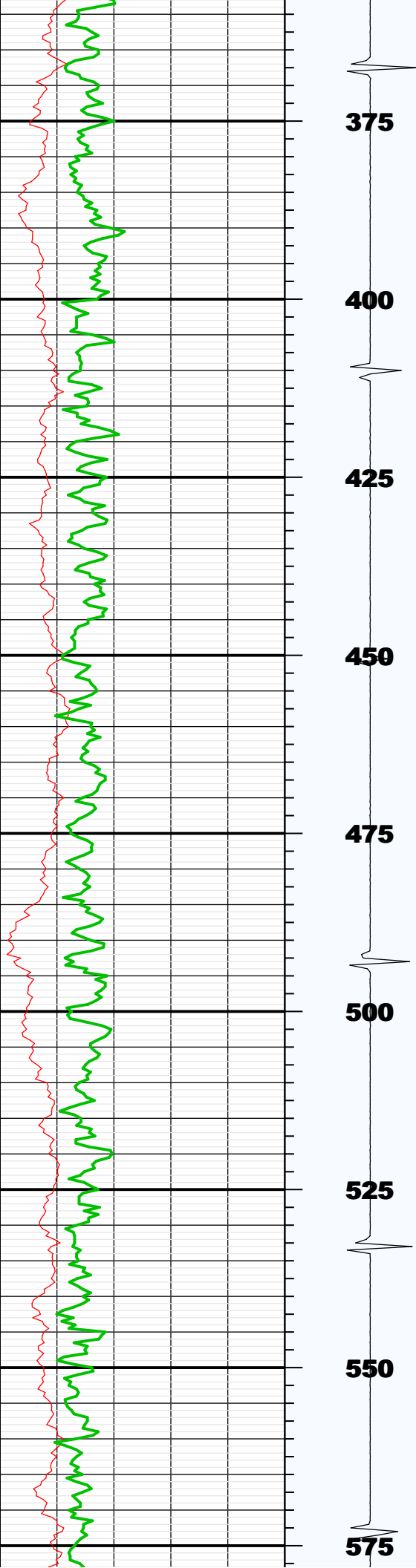
Crew Aleksei Bekhterev Blanka Kesek Tim
Thank you for choosing Schlumberger

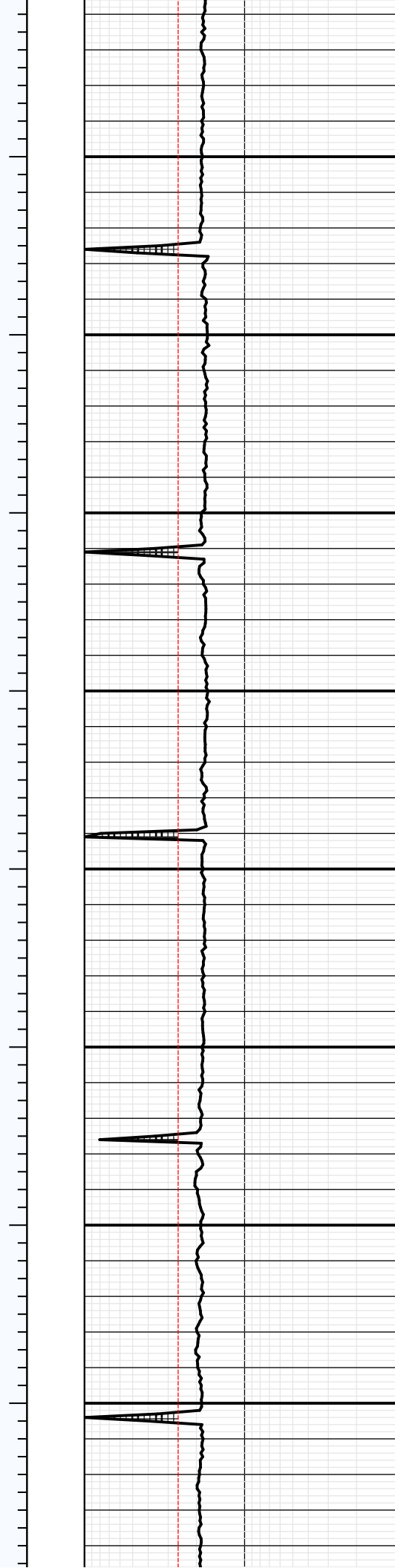
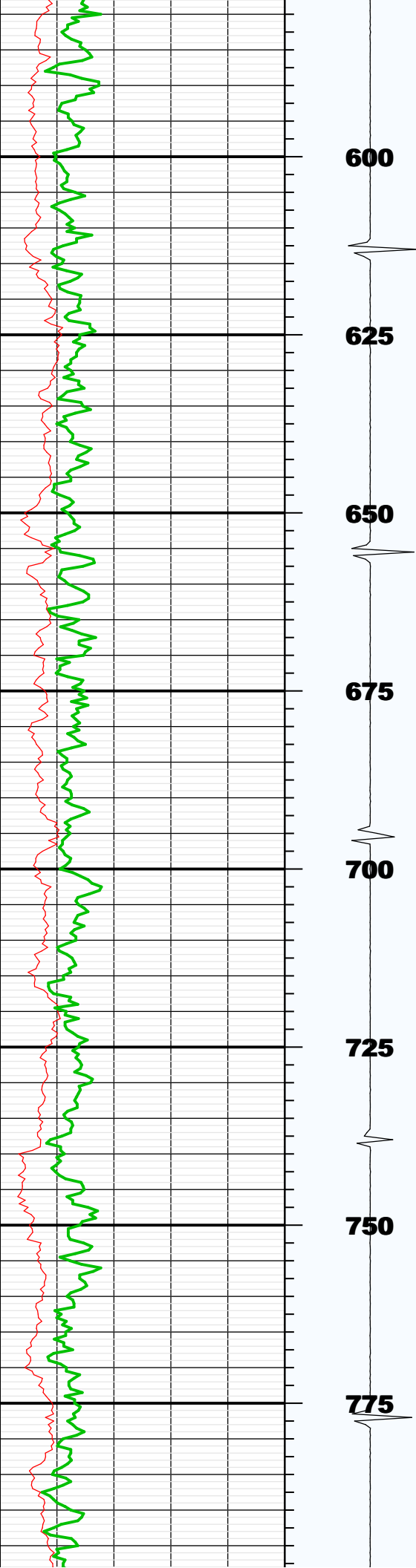
Main Pass

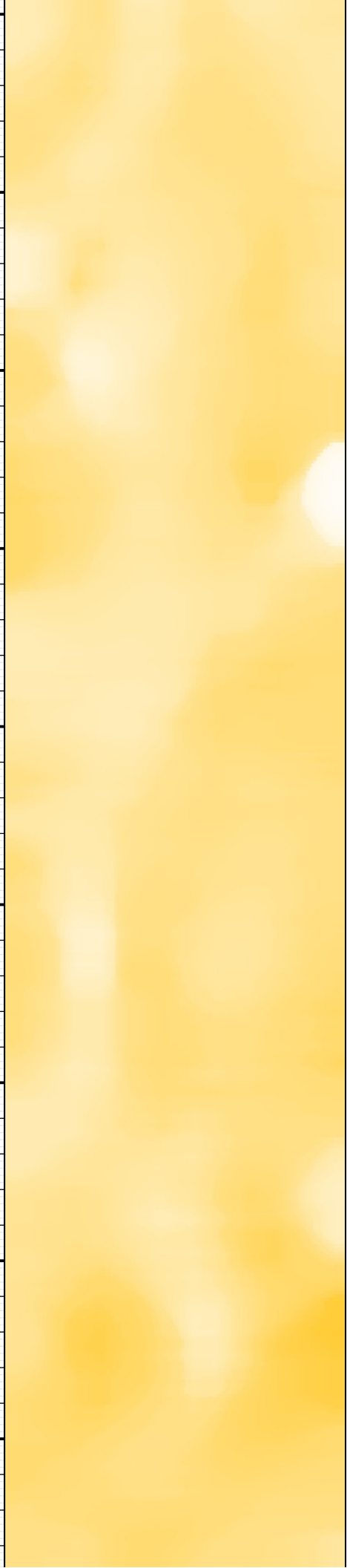
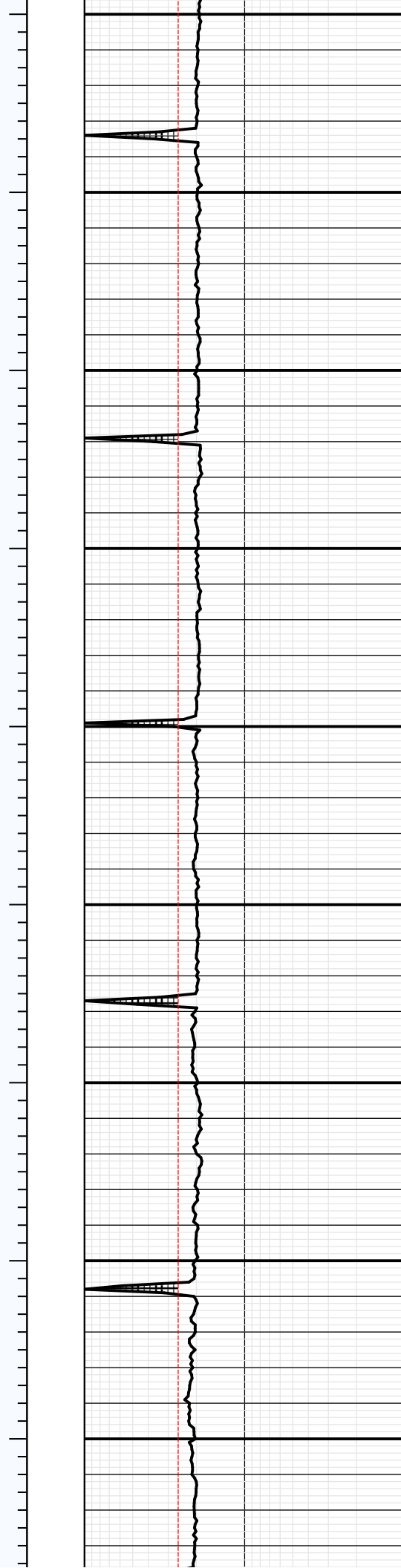
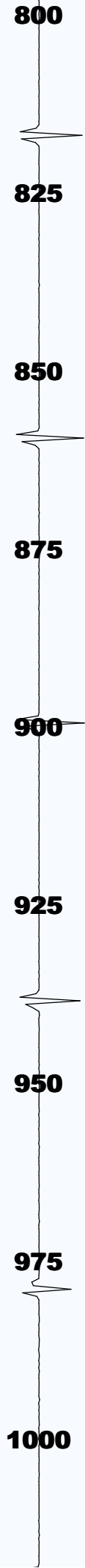
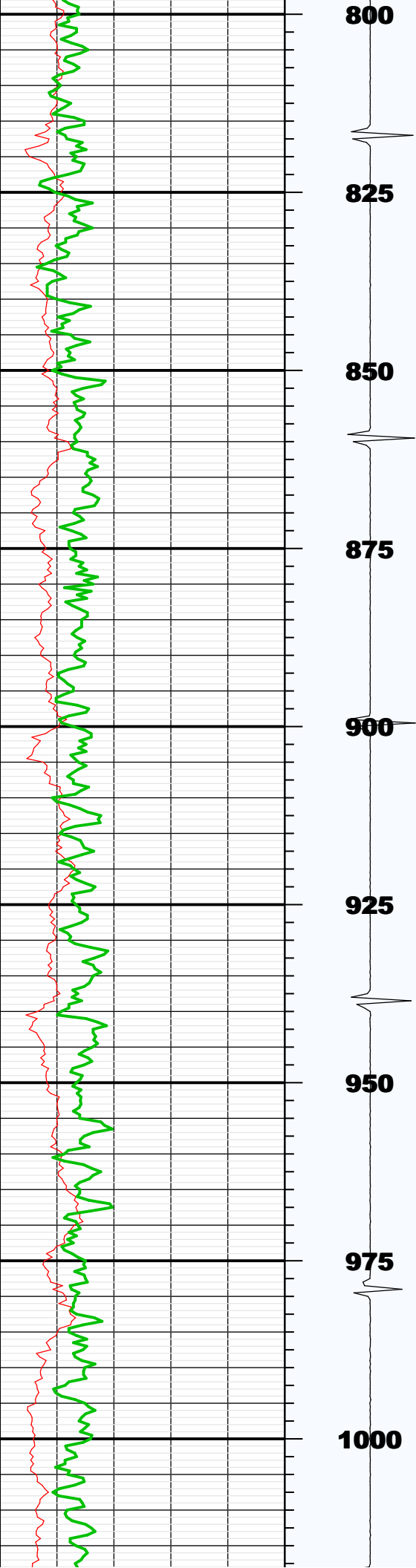
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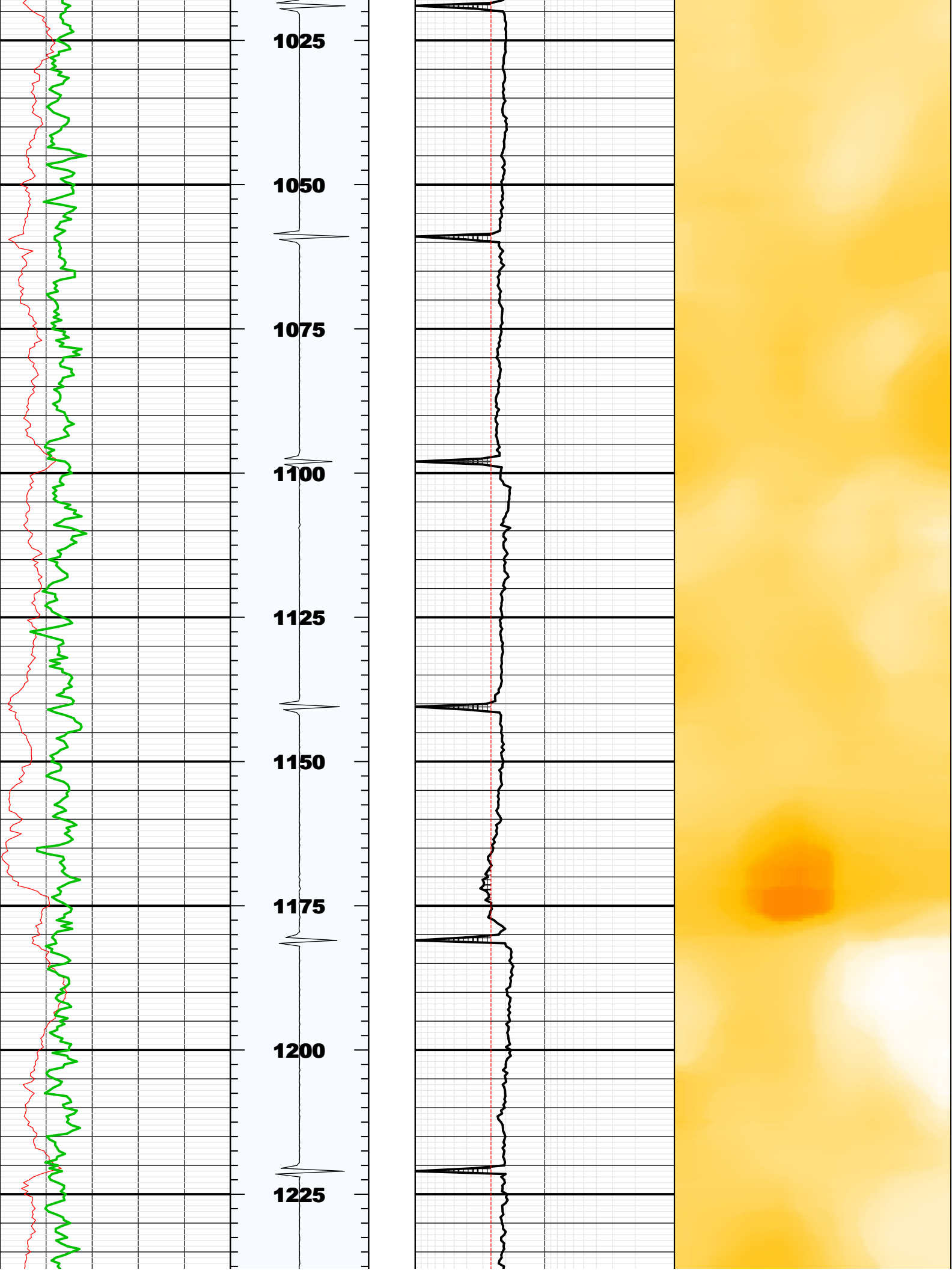


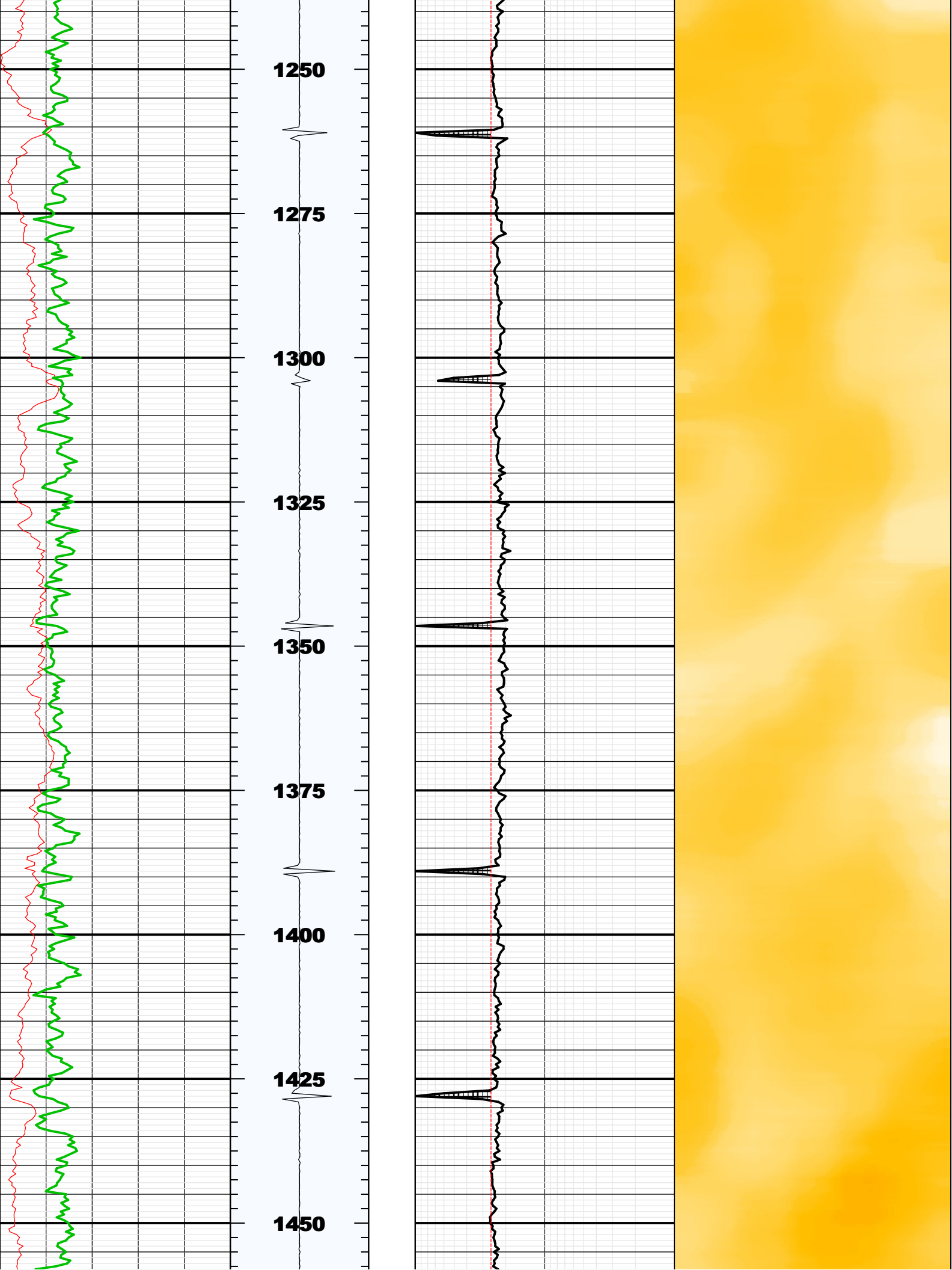


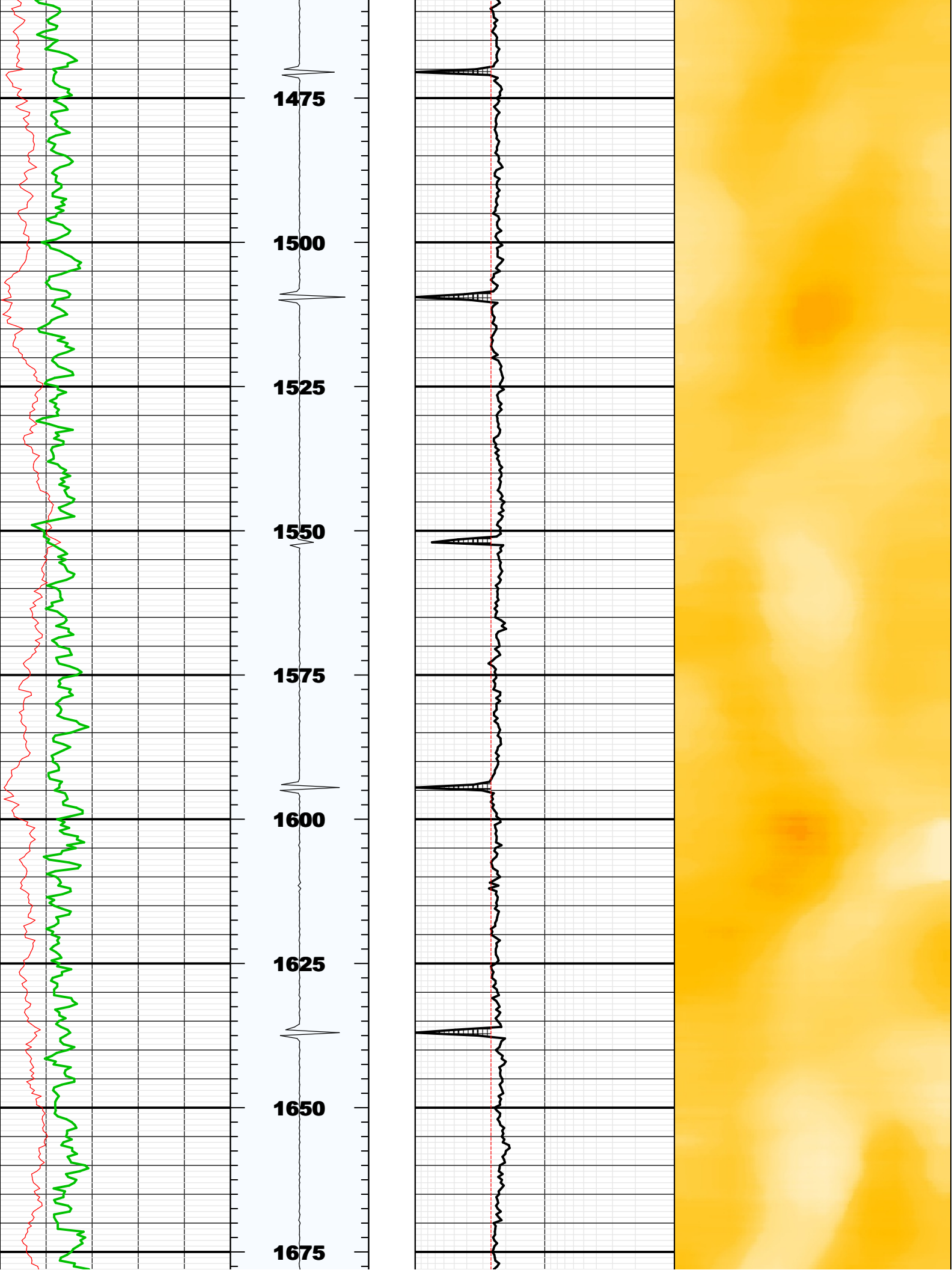


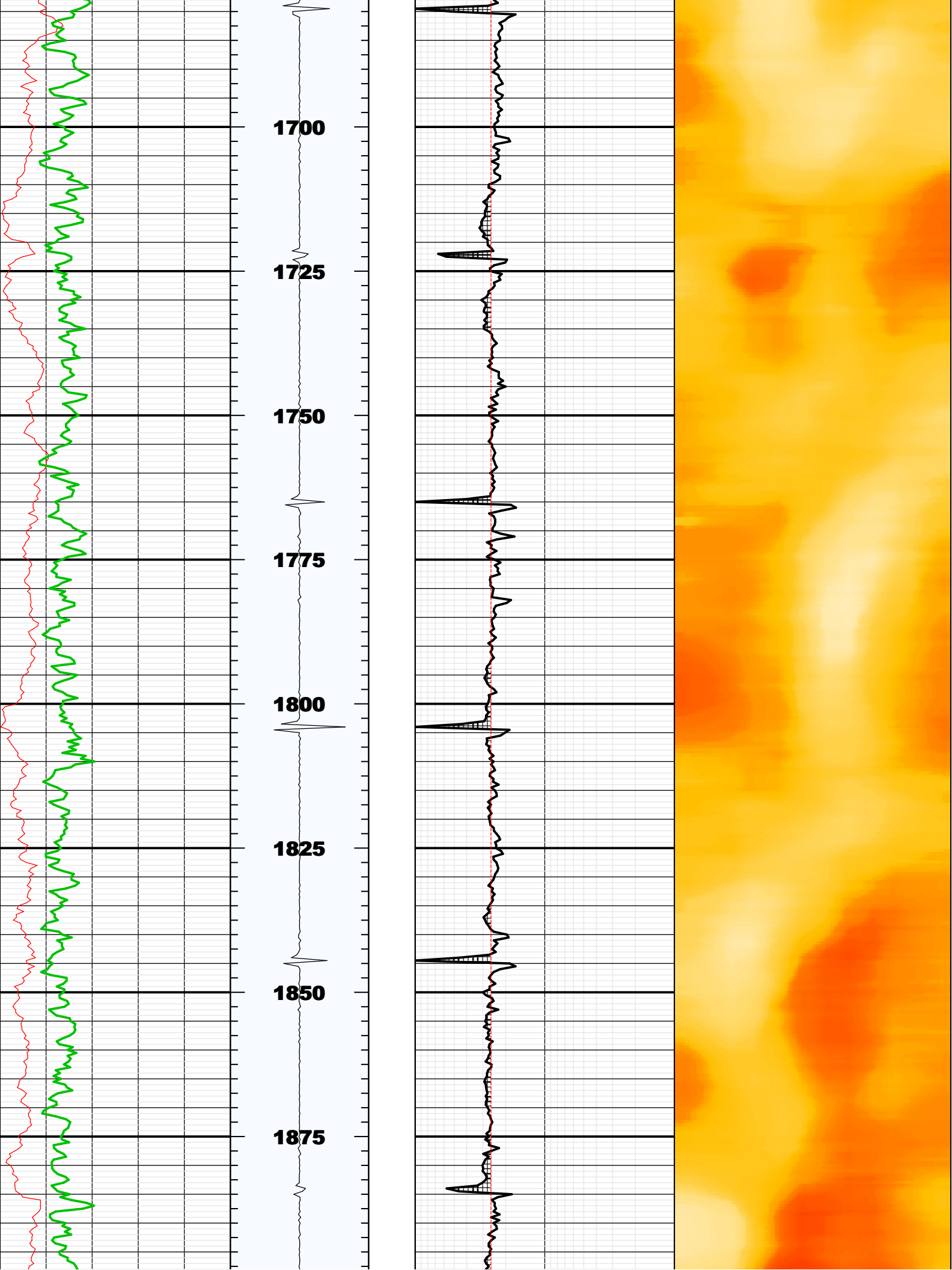


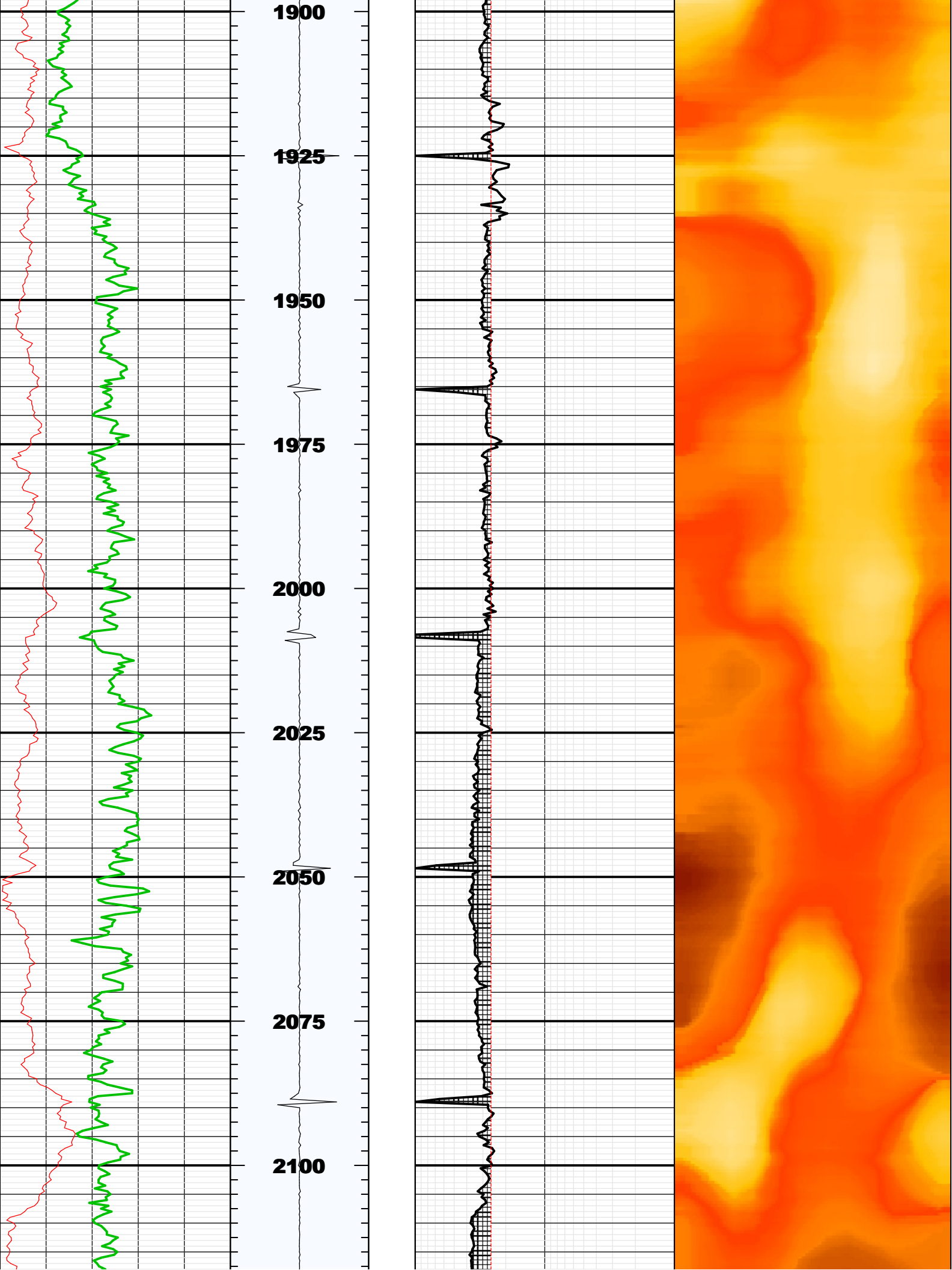


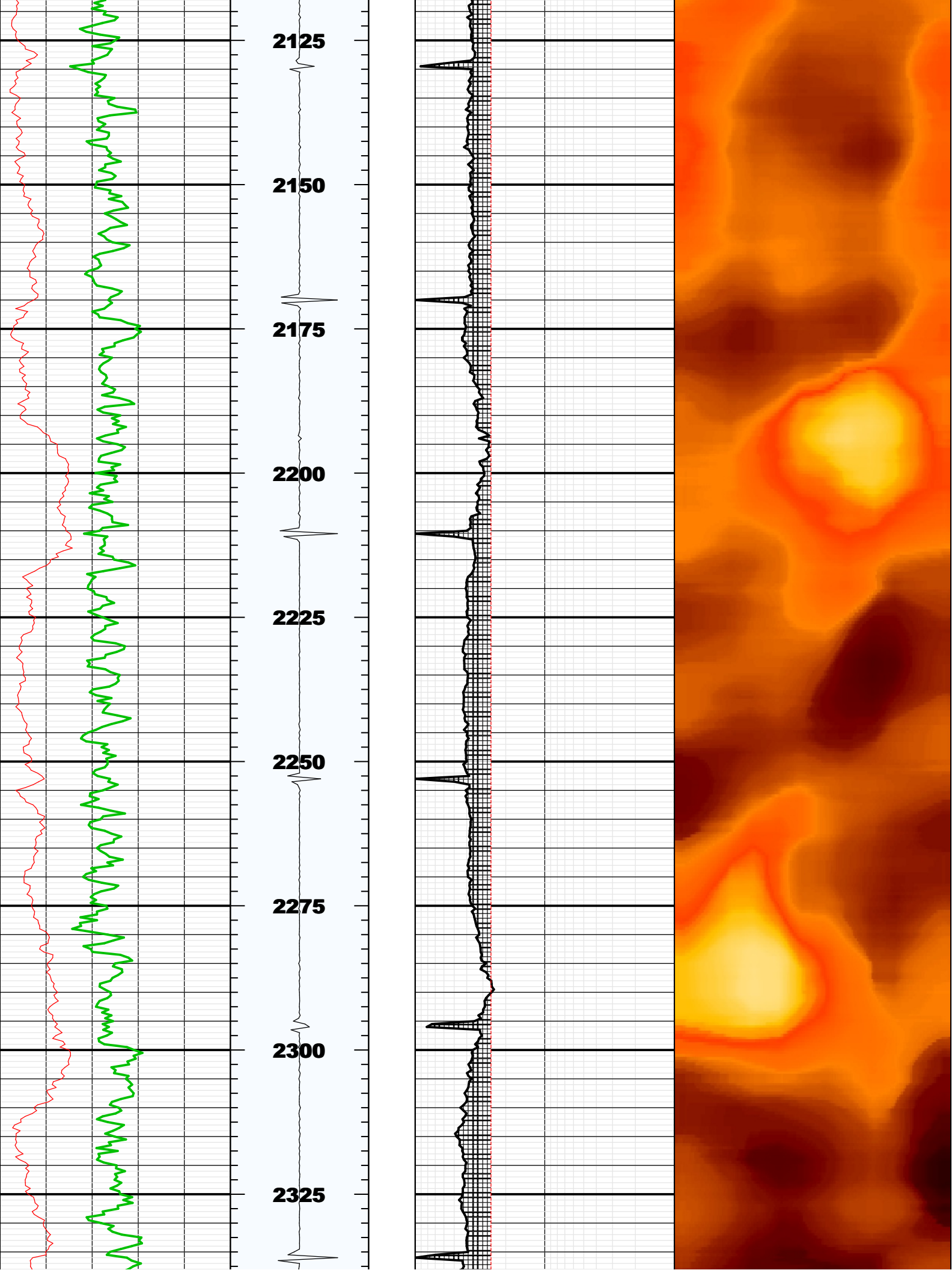


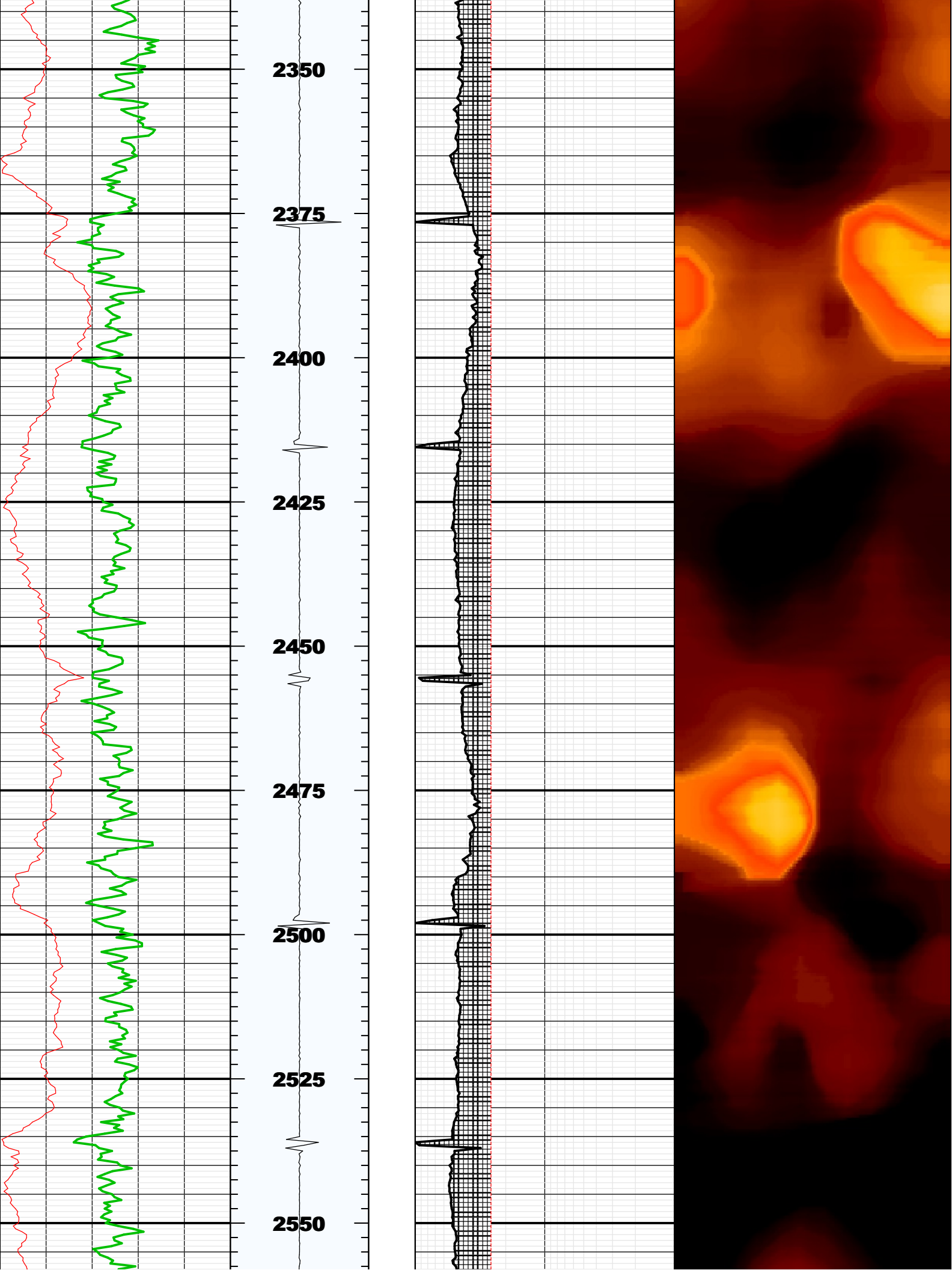


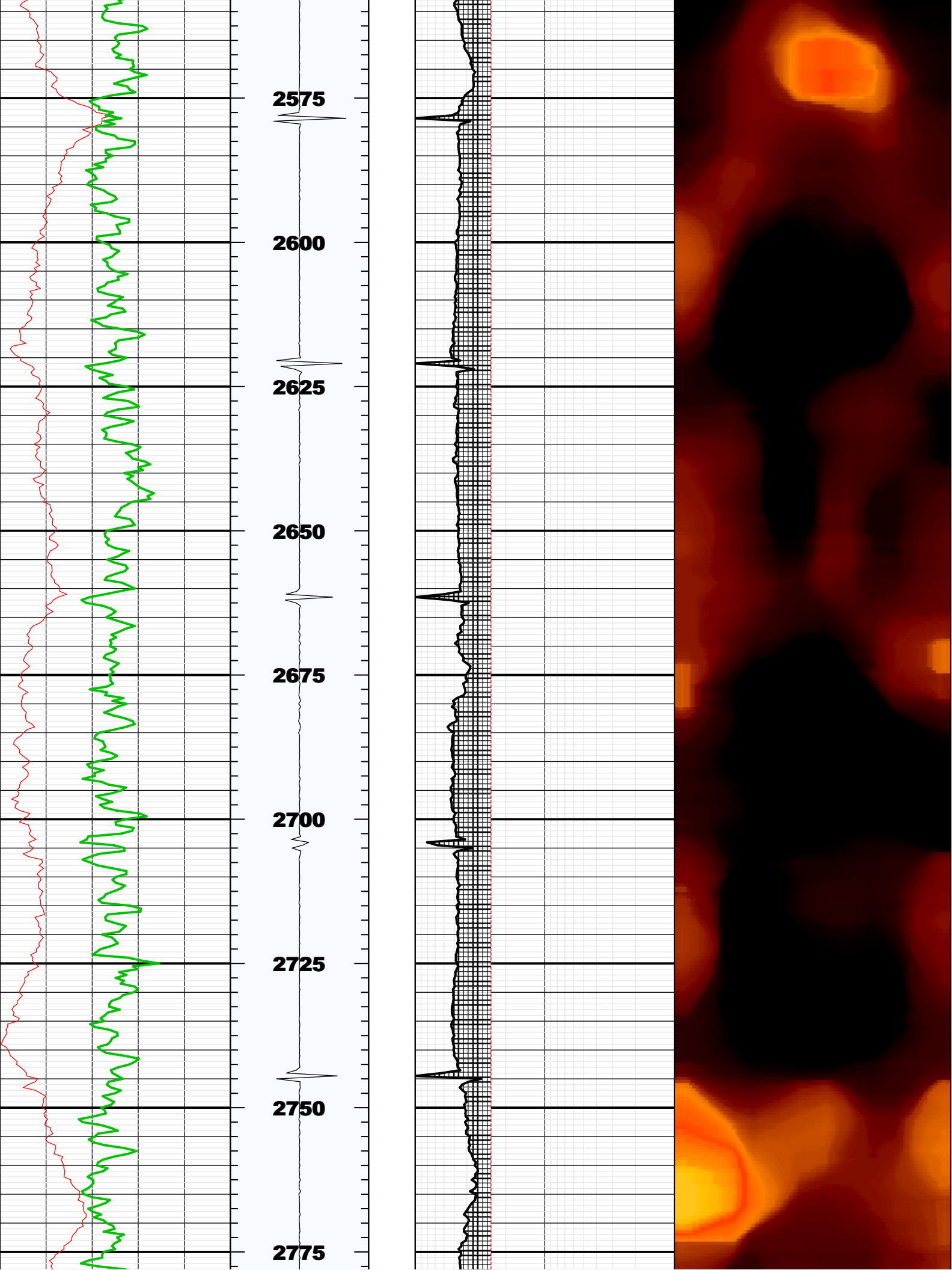


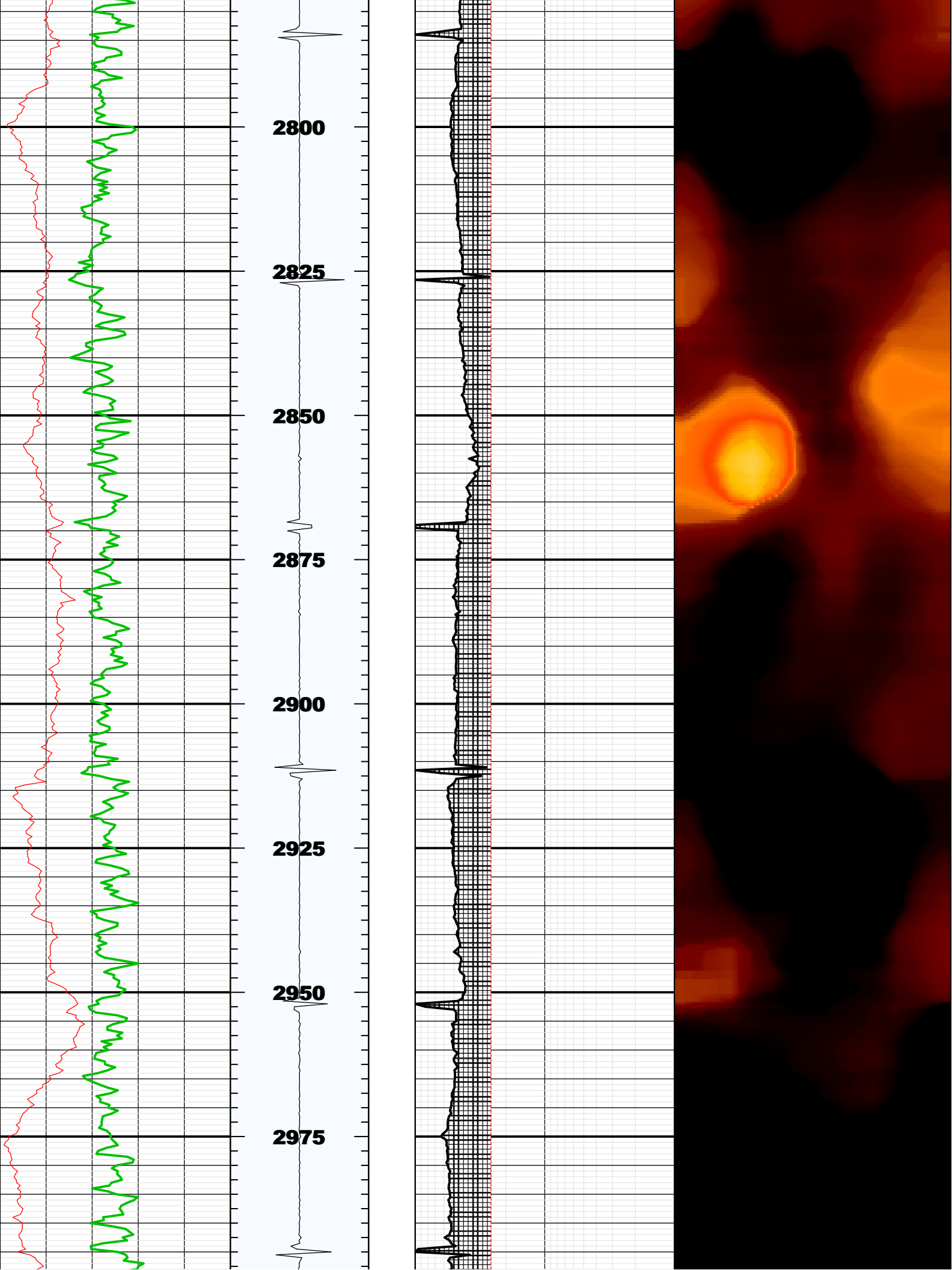


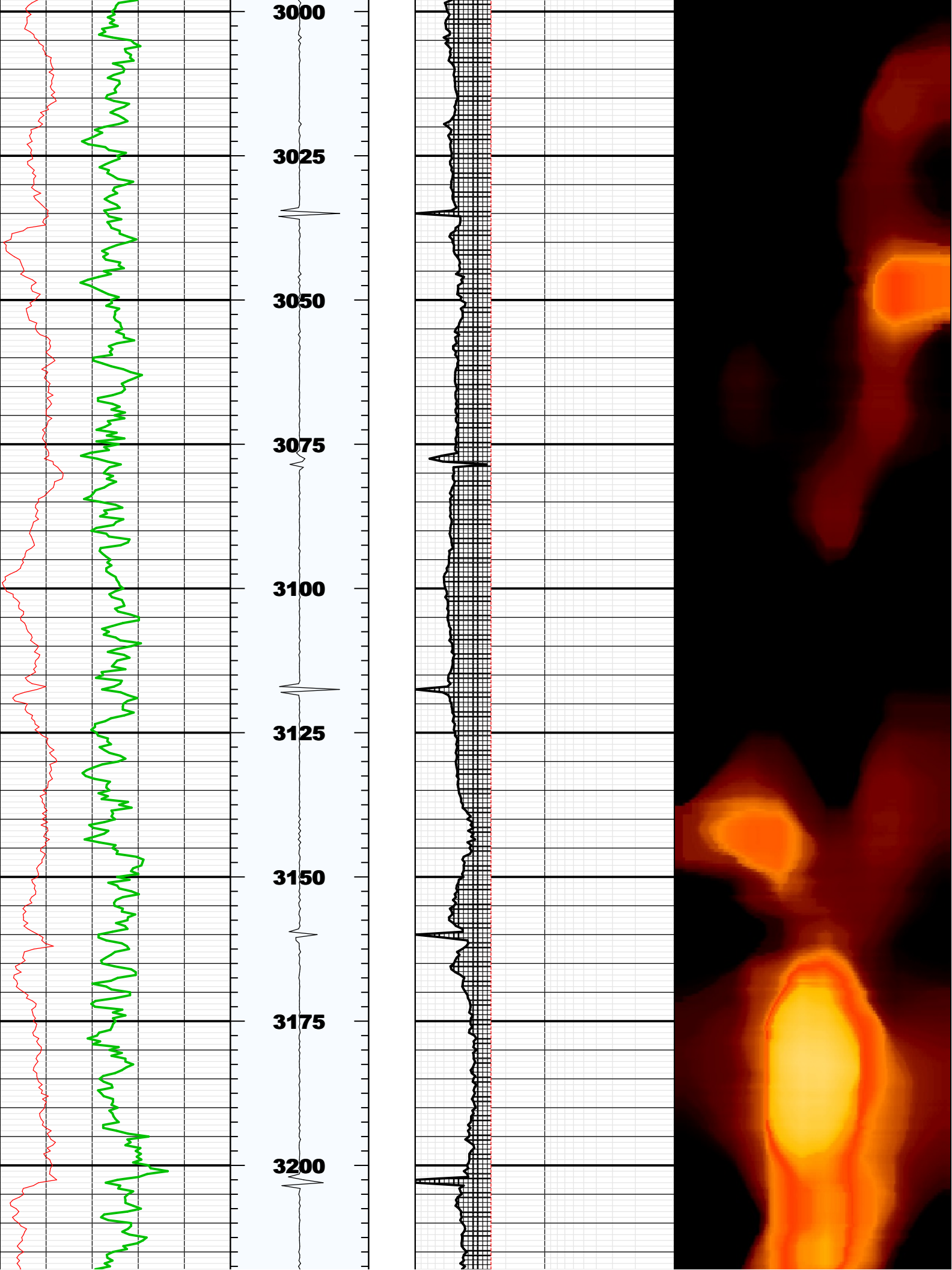


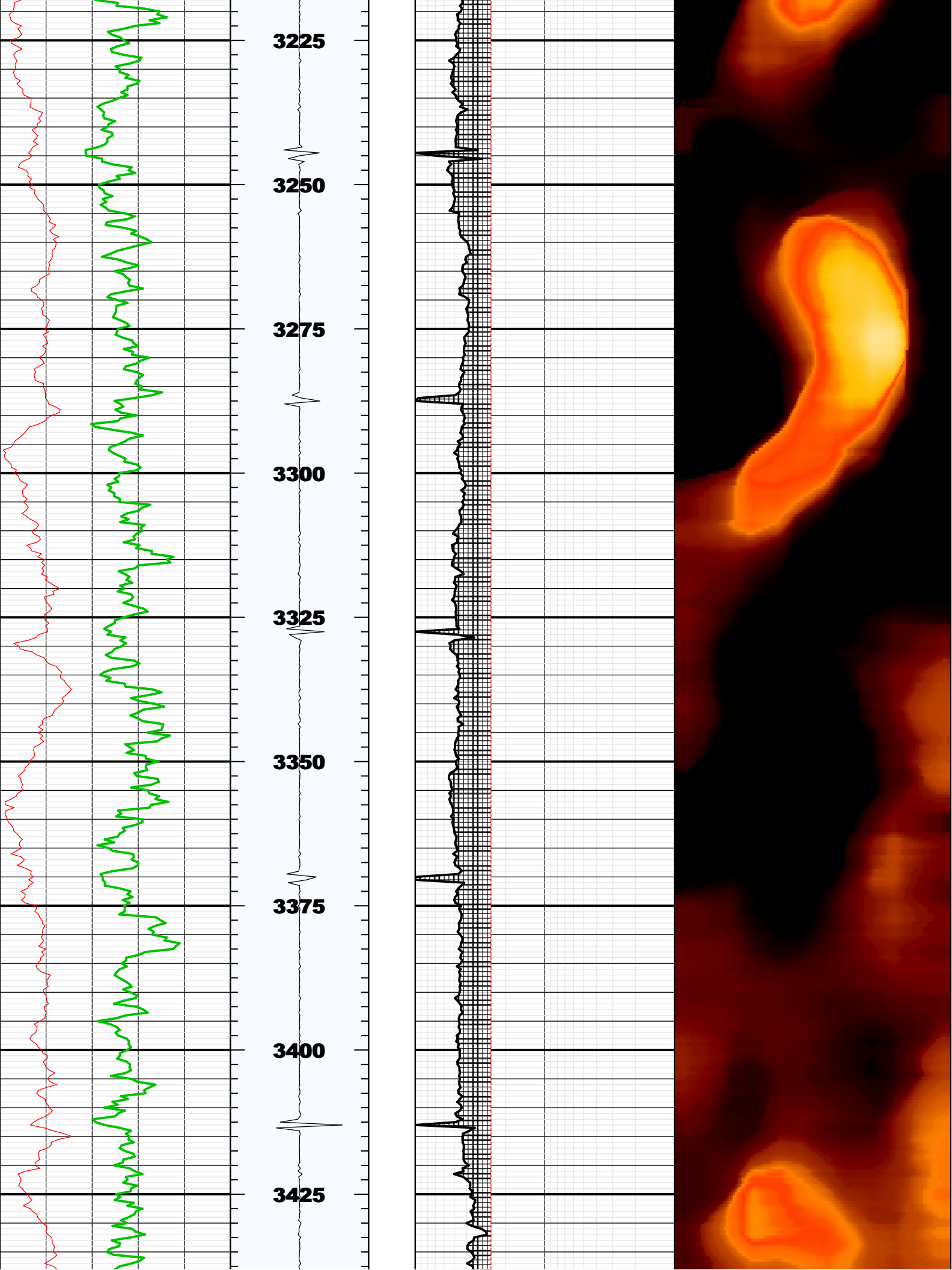


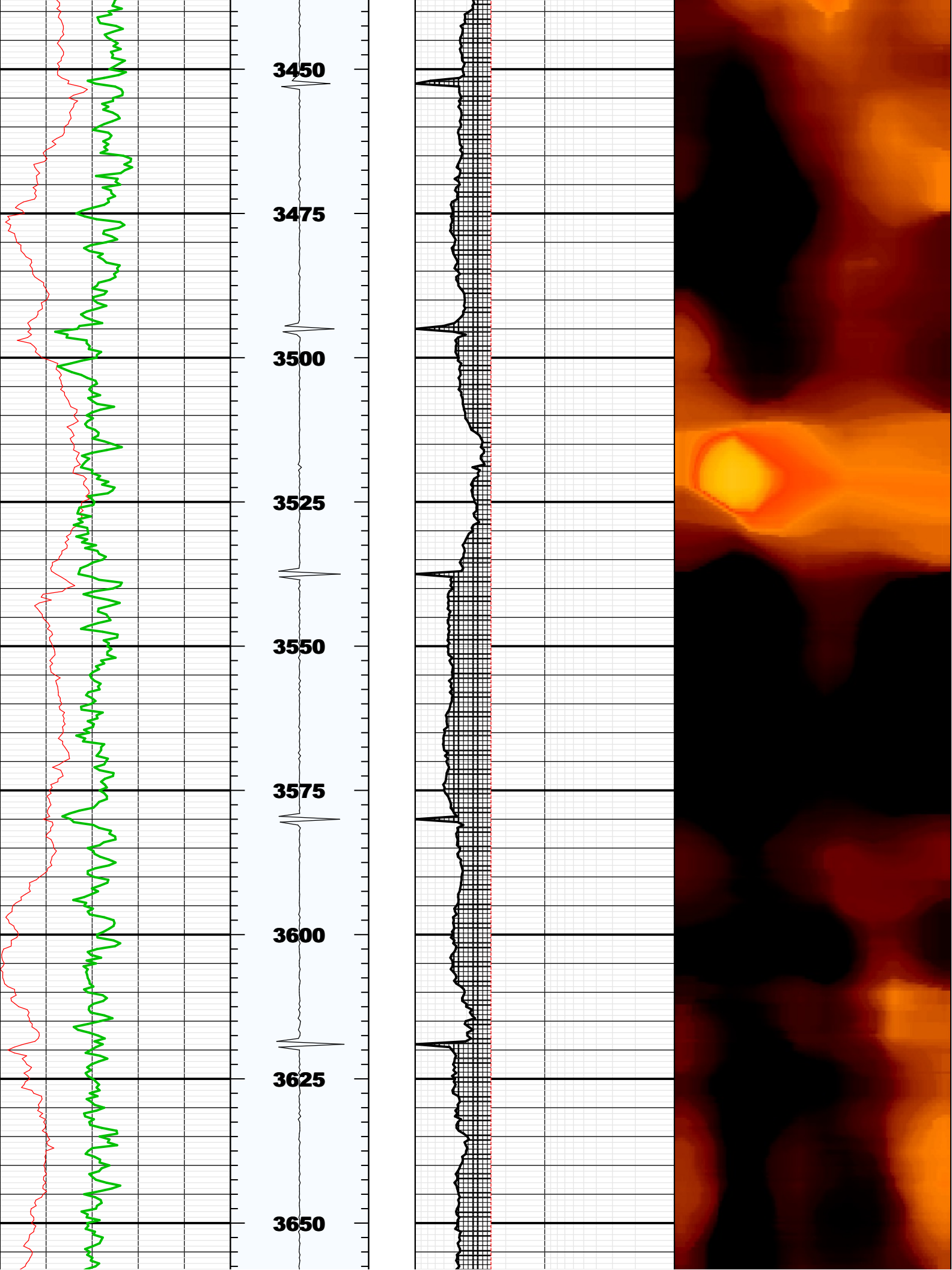


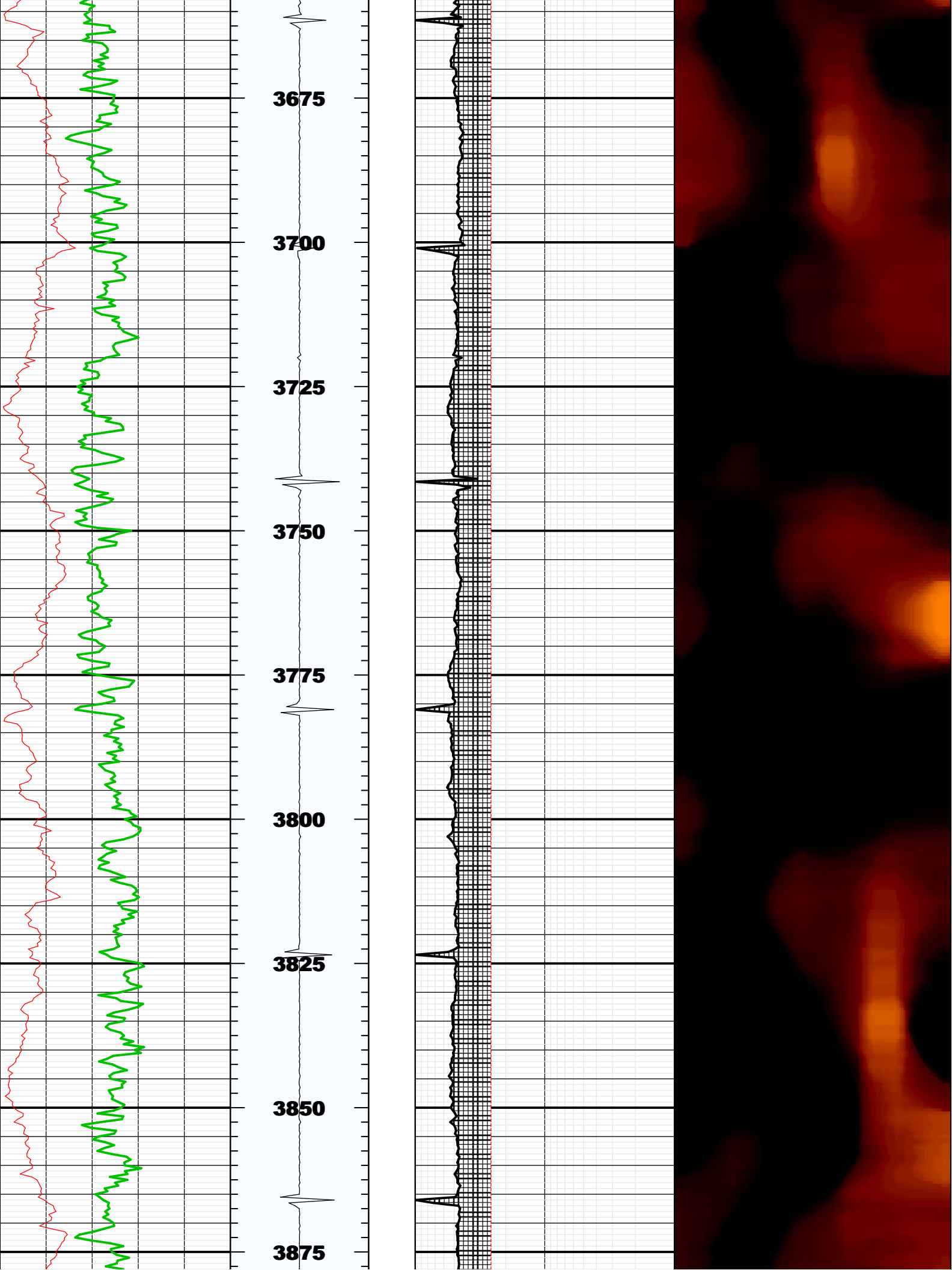


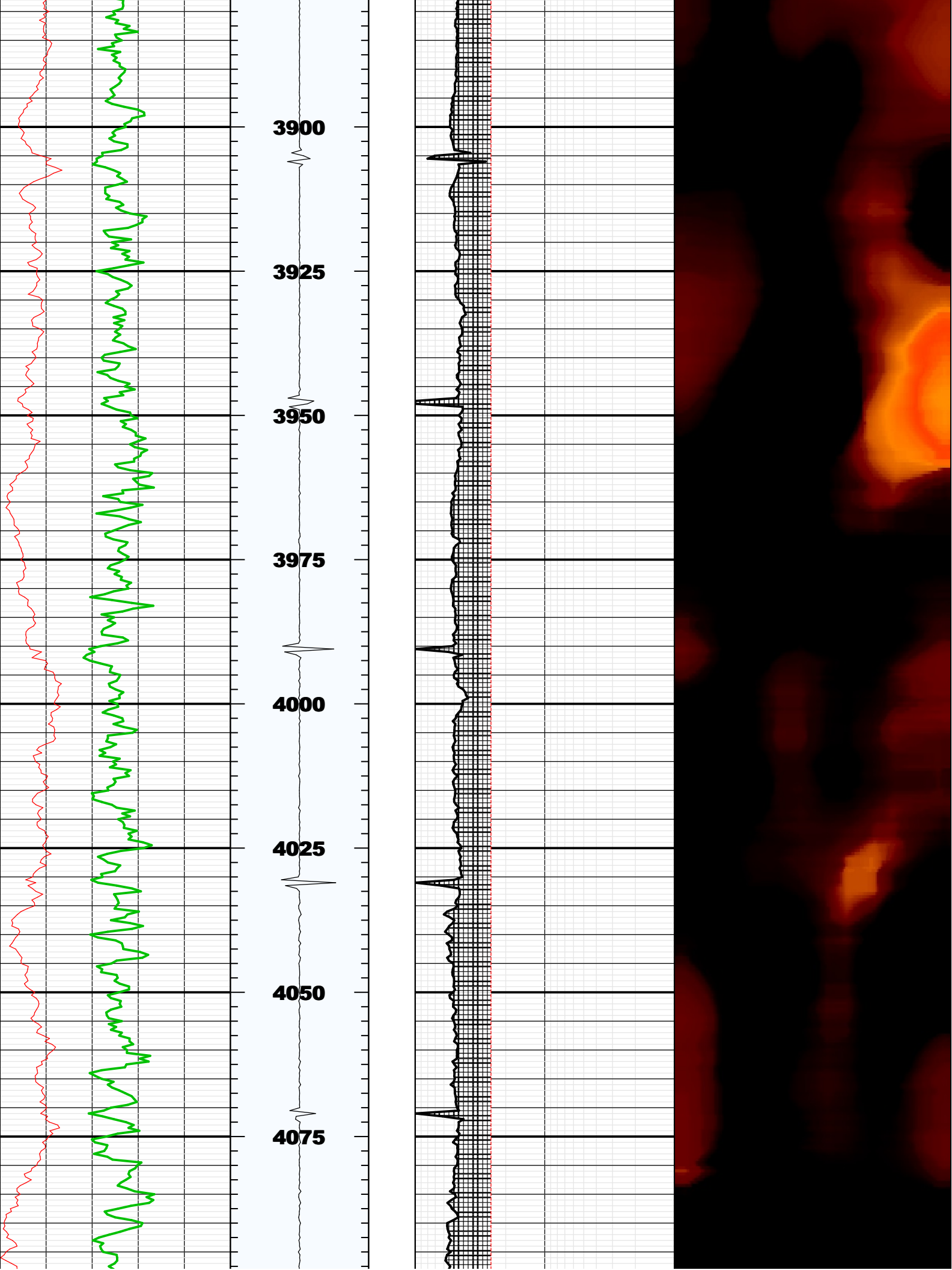


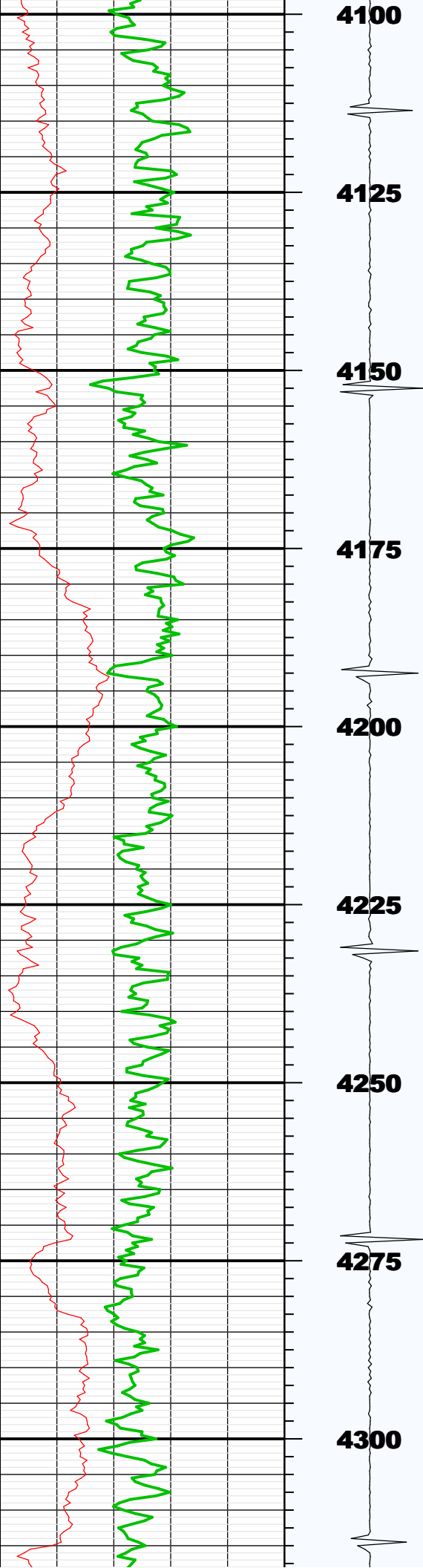












4100

4125

4150

4175

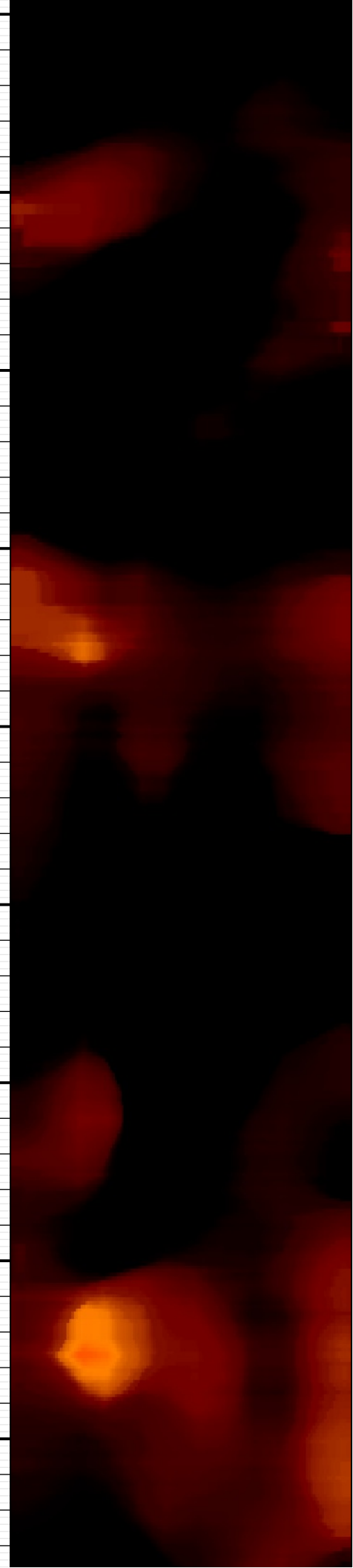
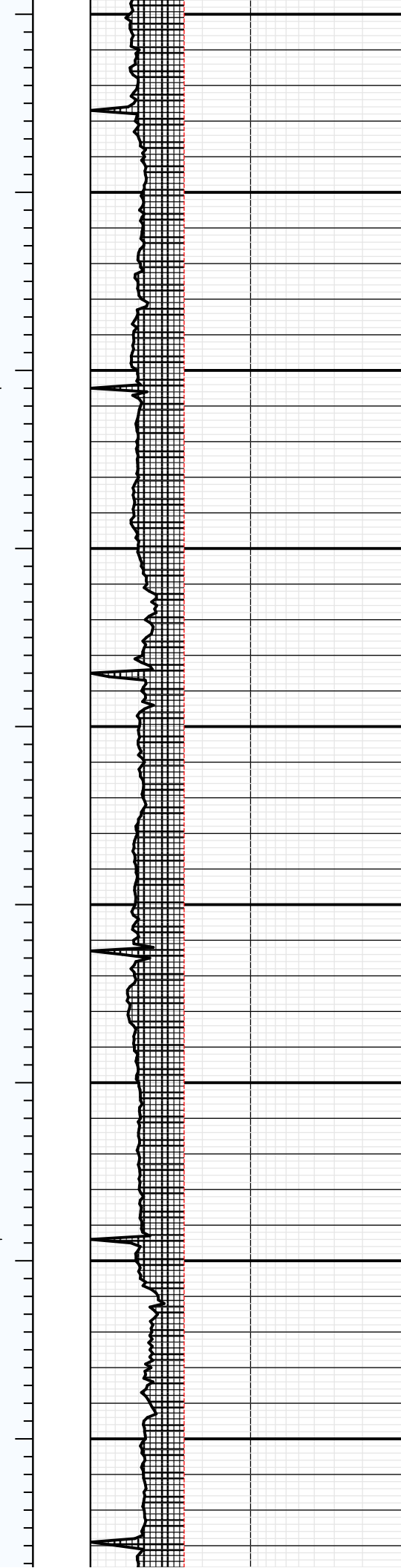
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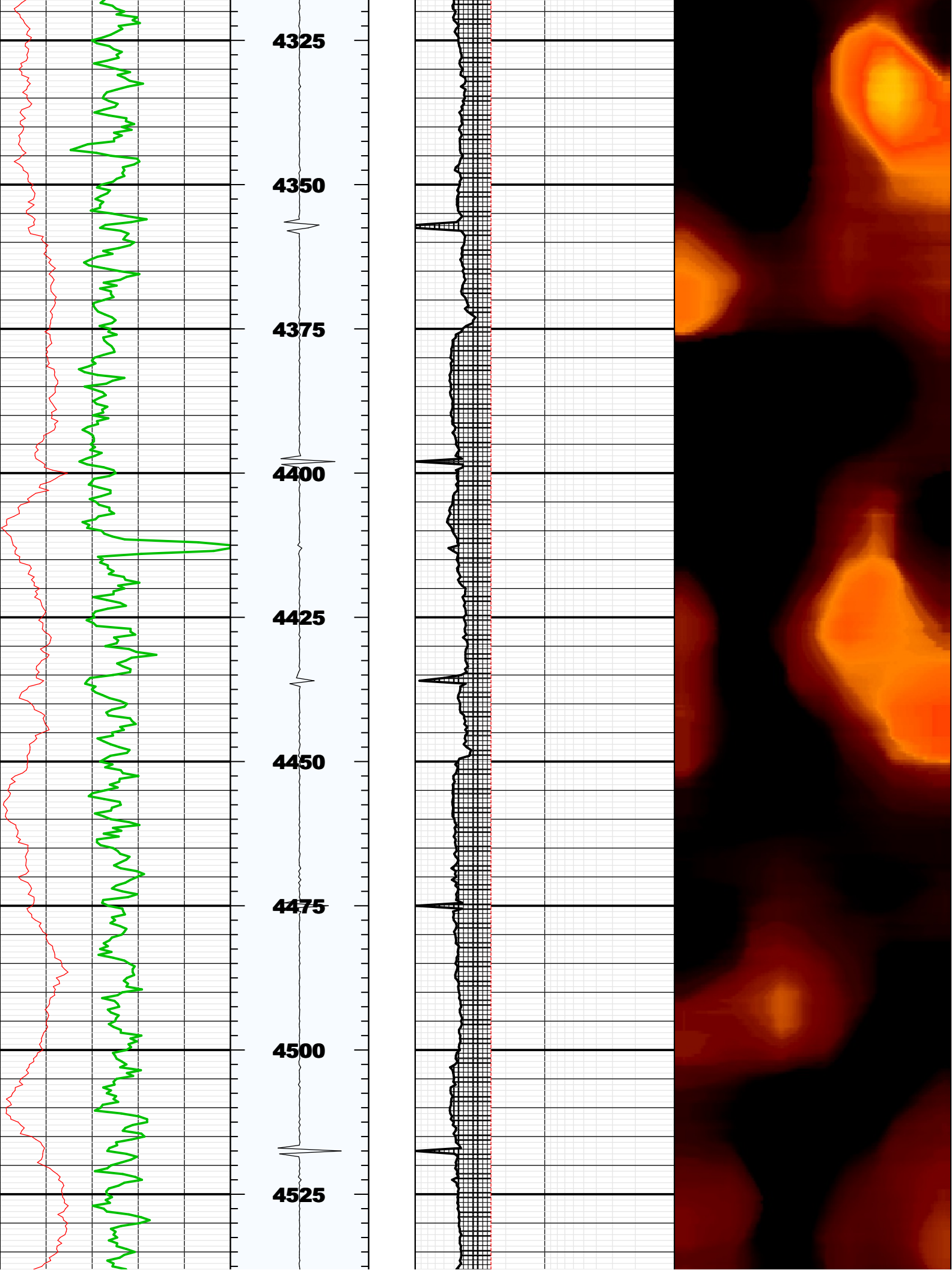
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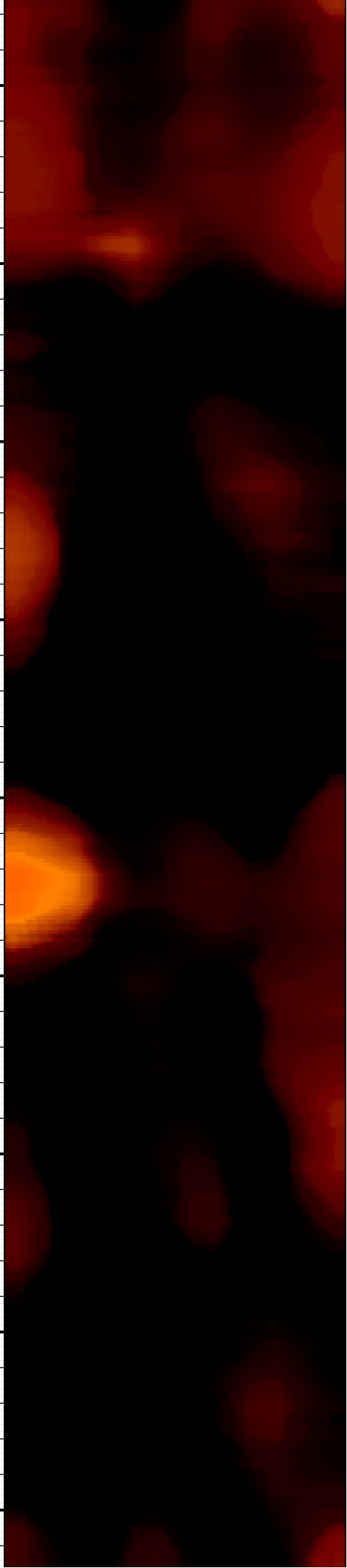
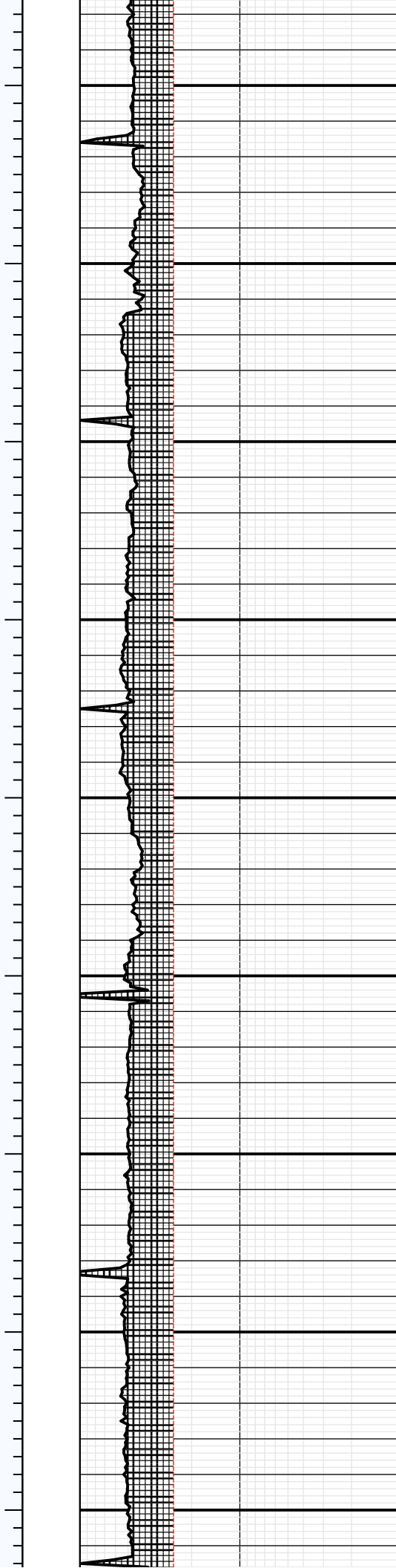
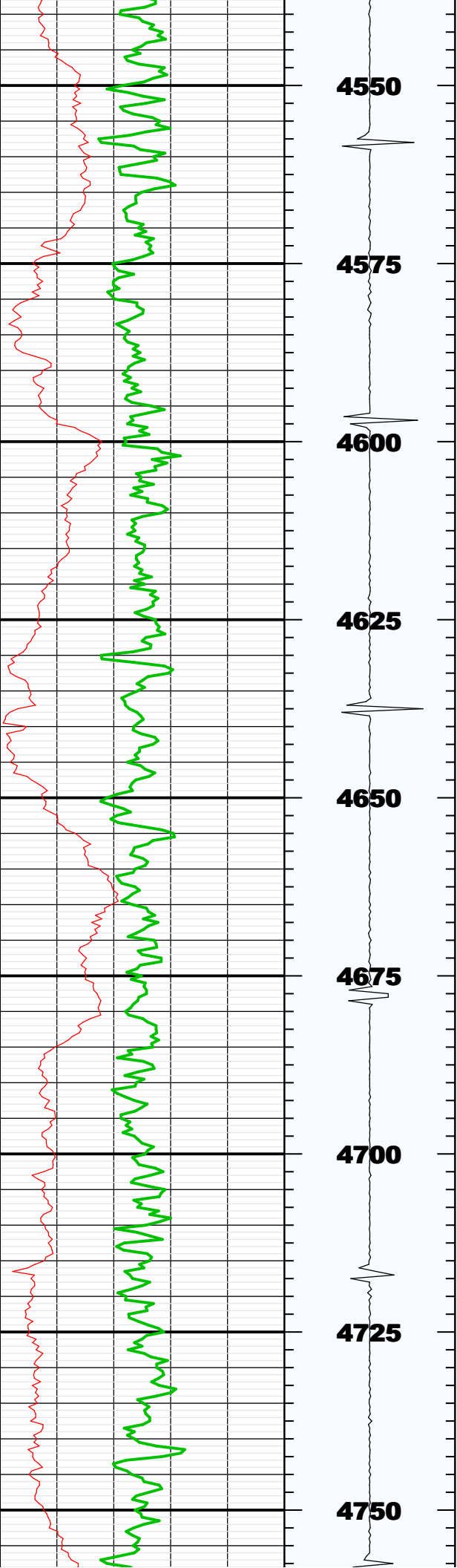
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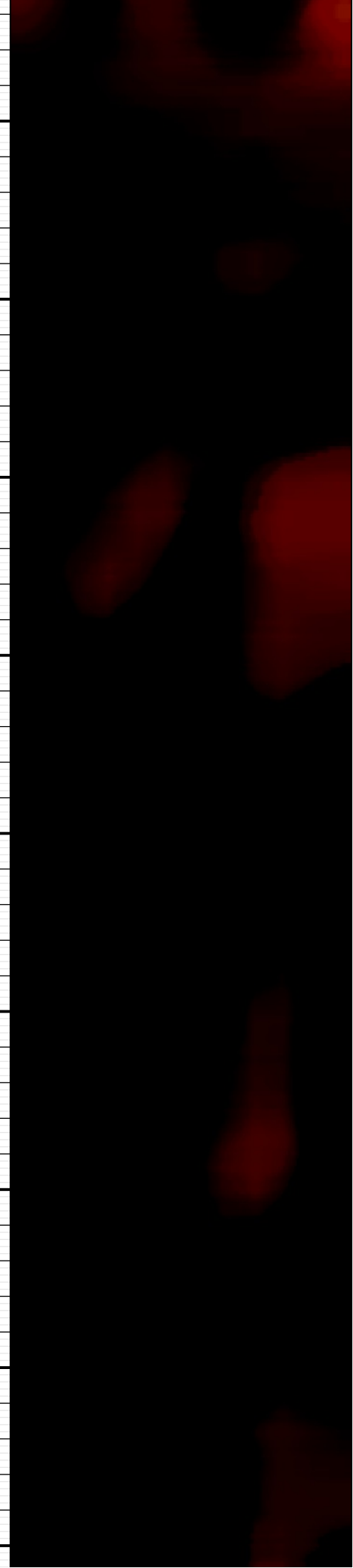
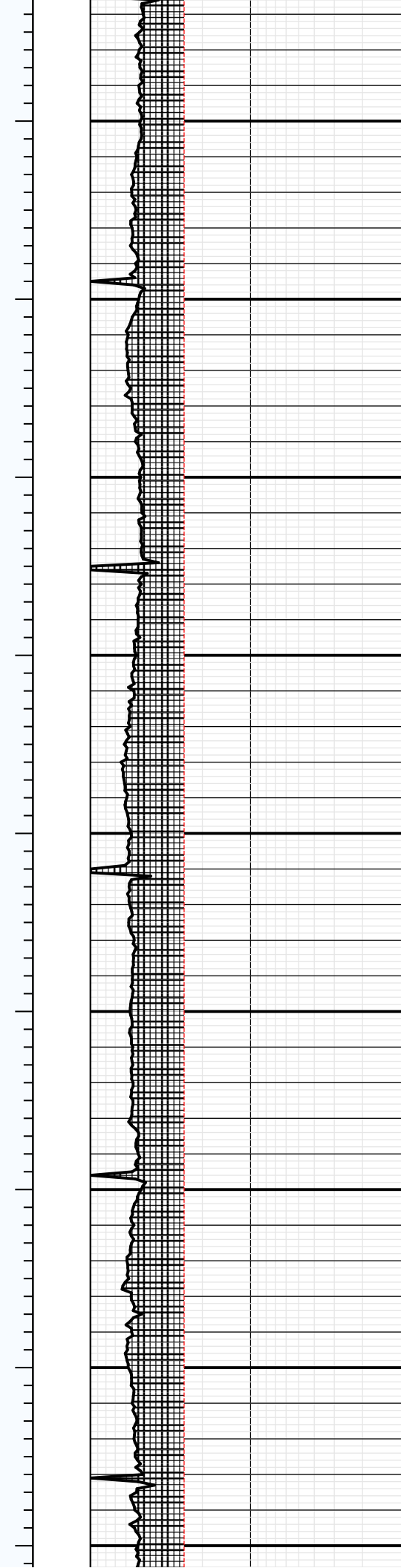
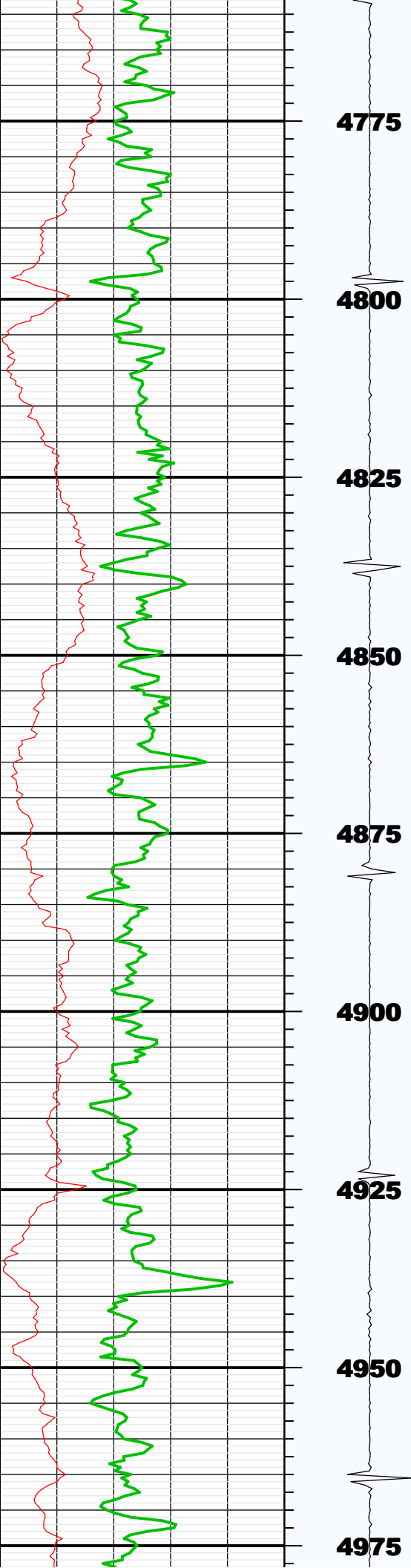
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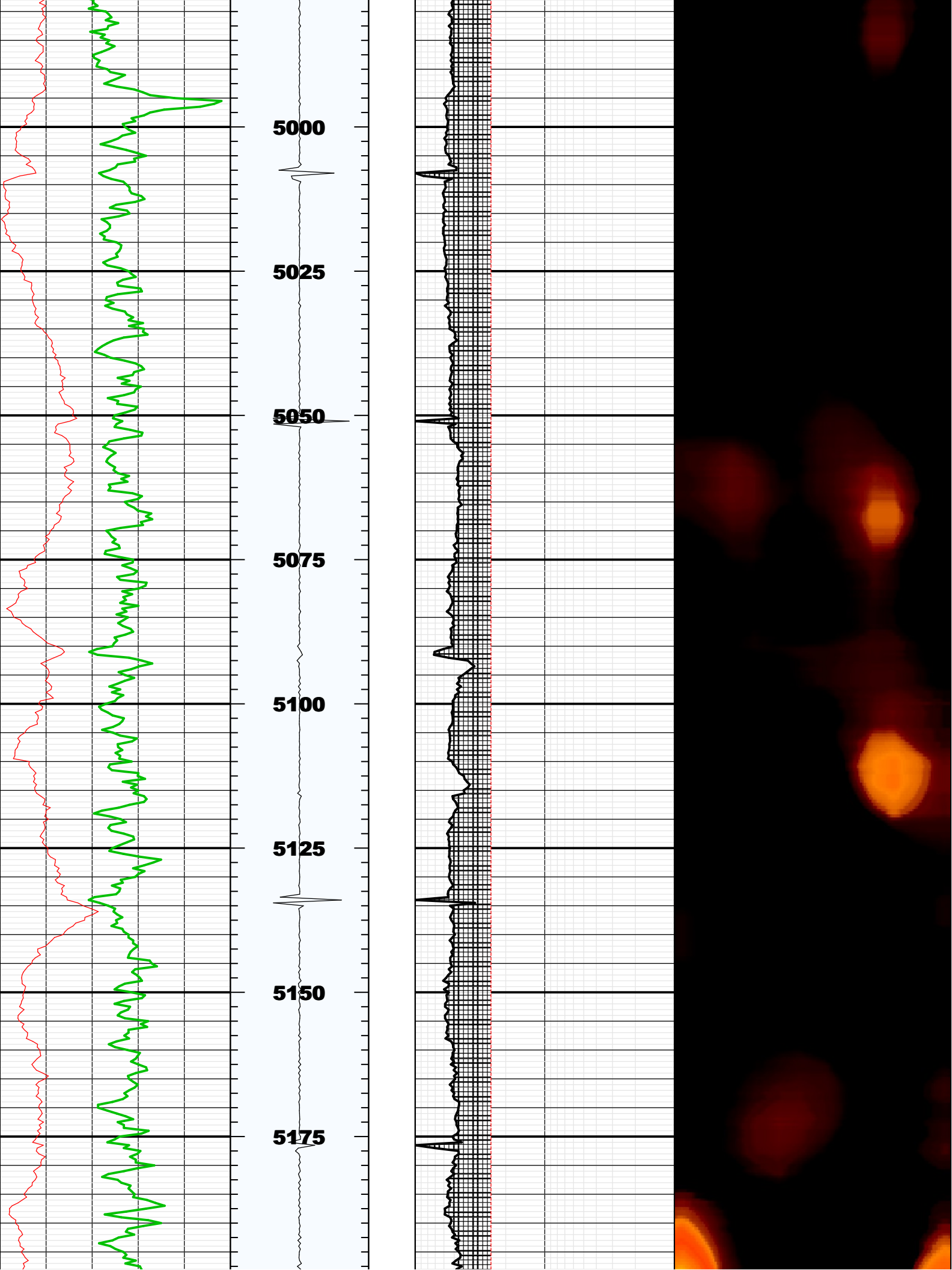
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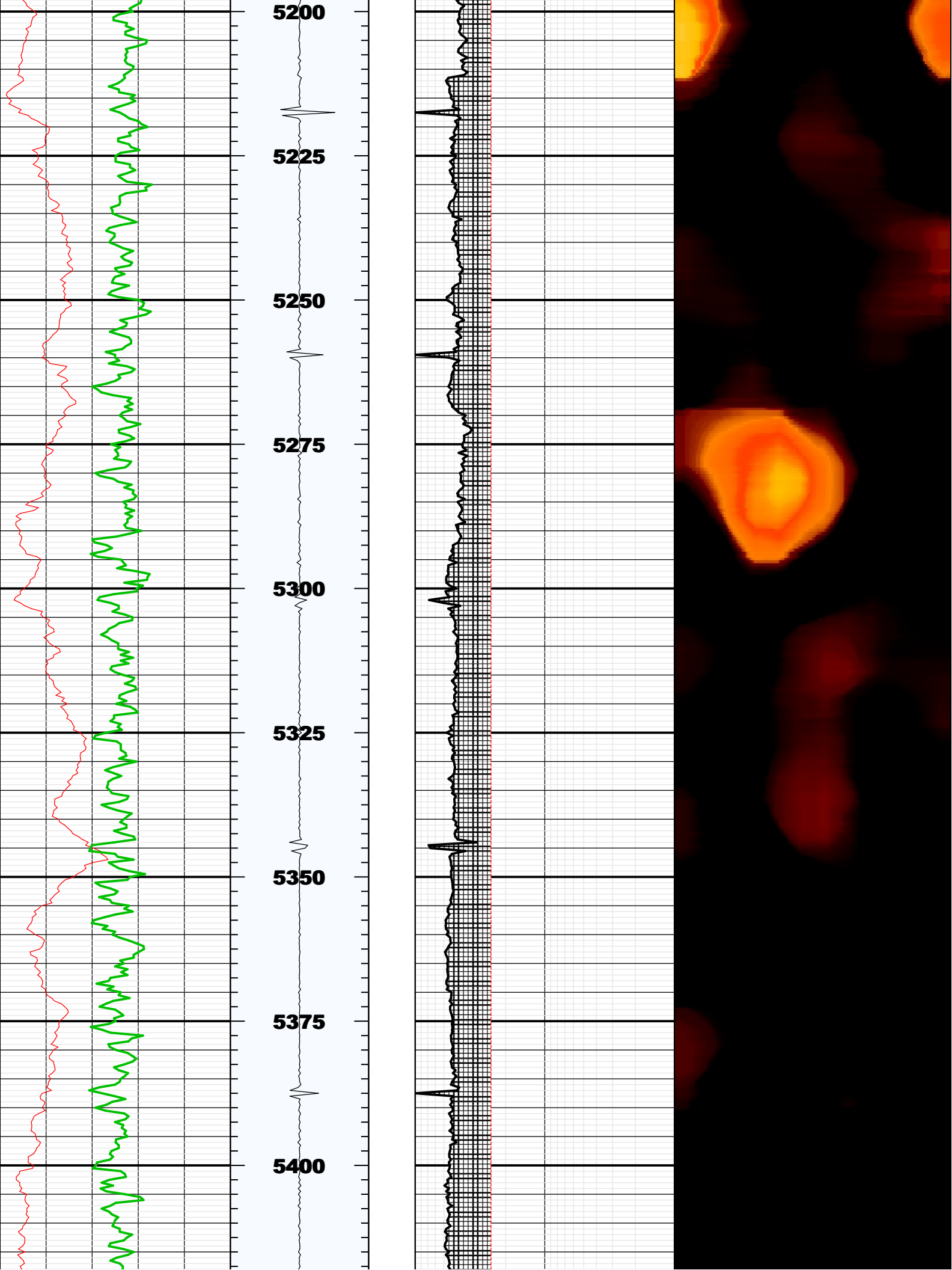


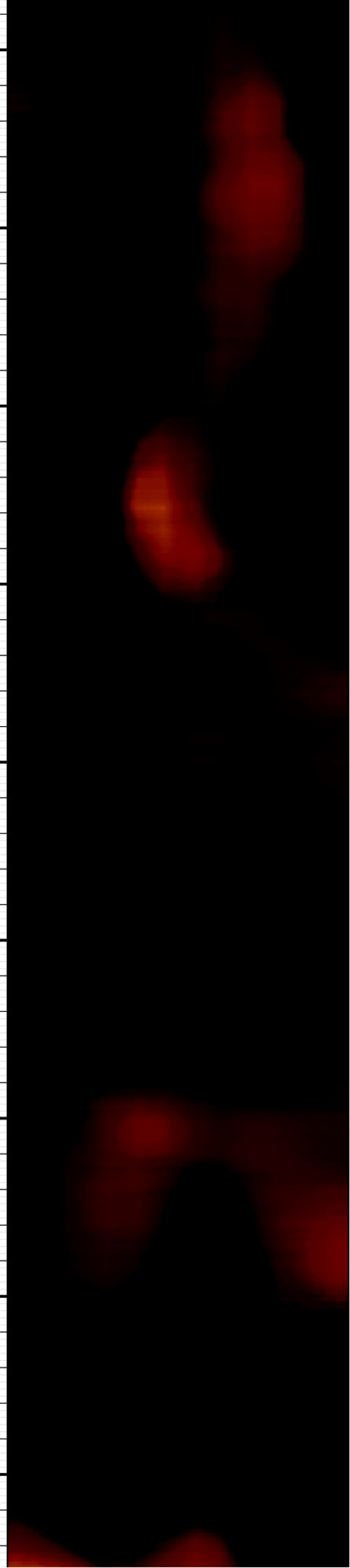
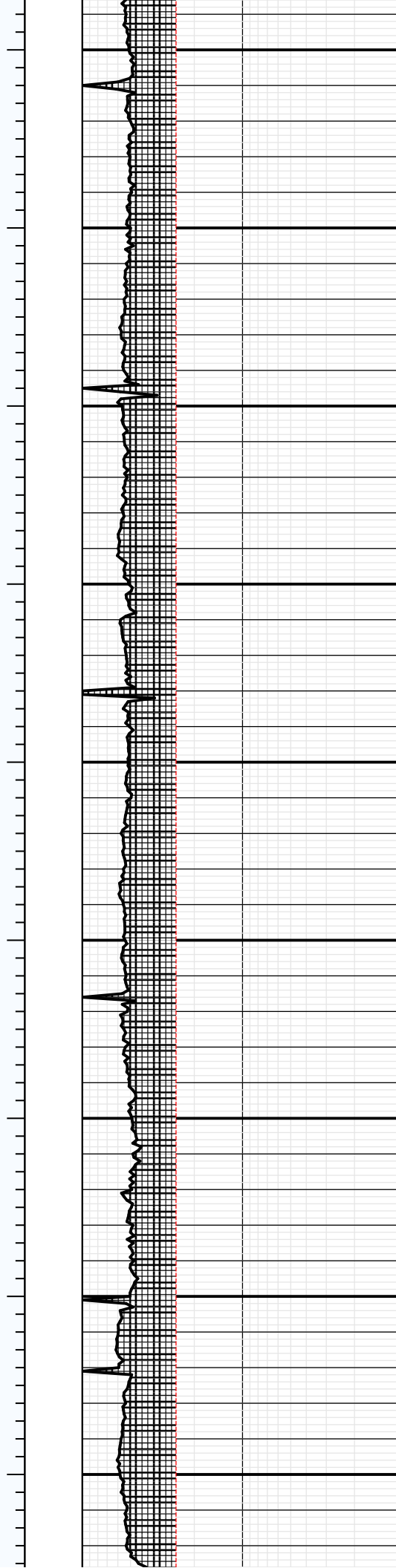
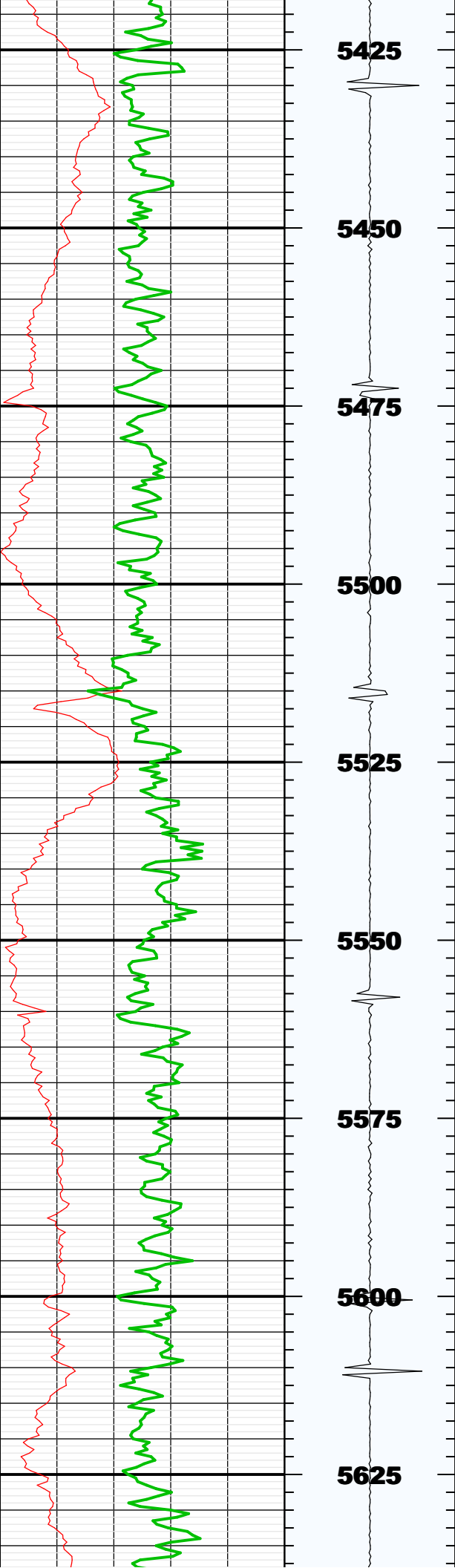


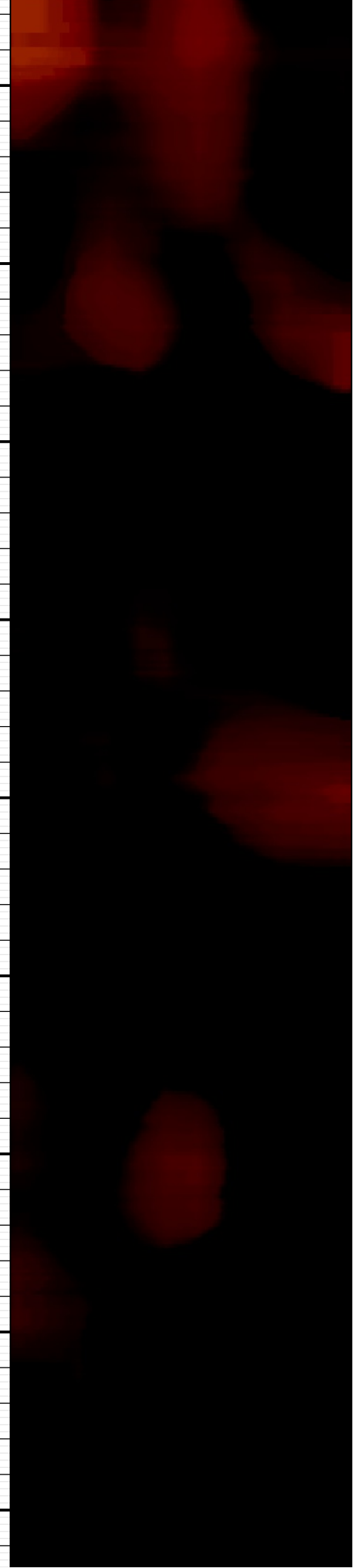
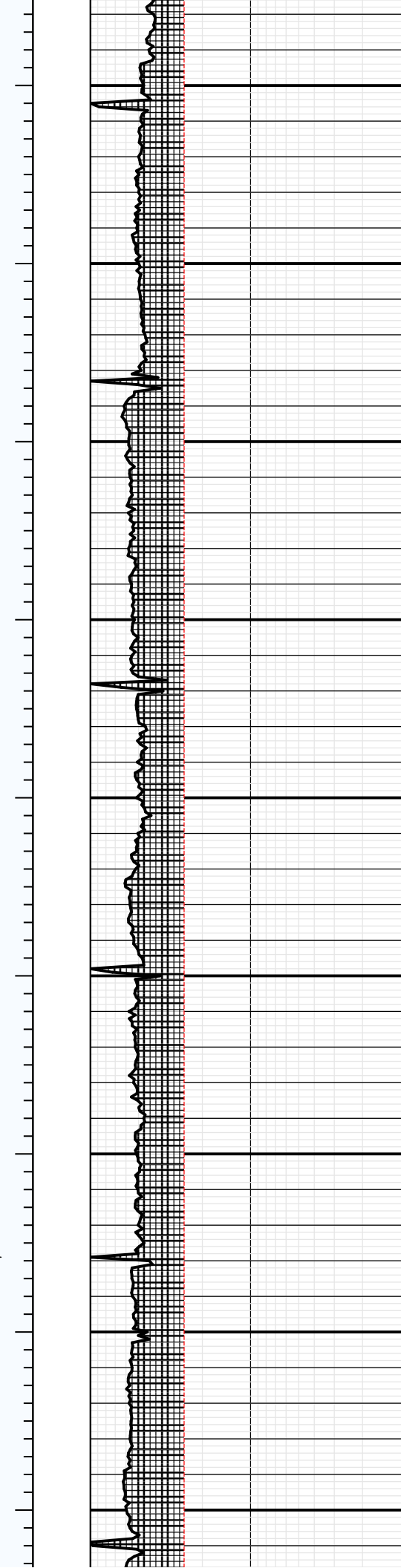
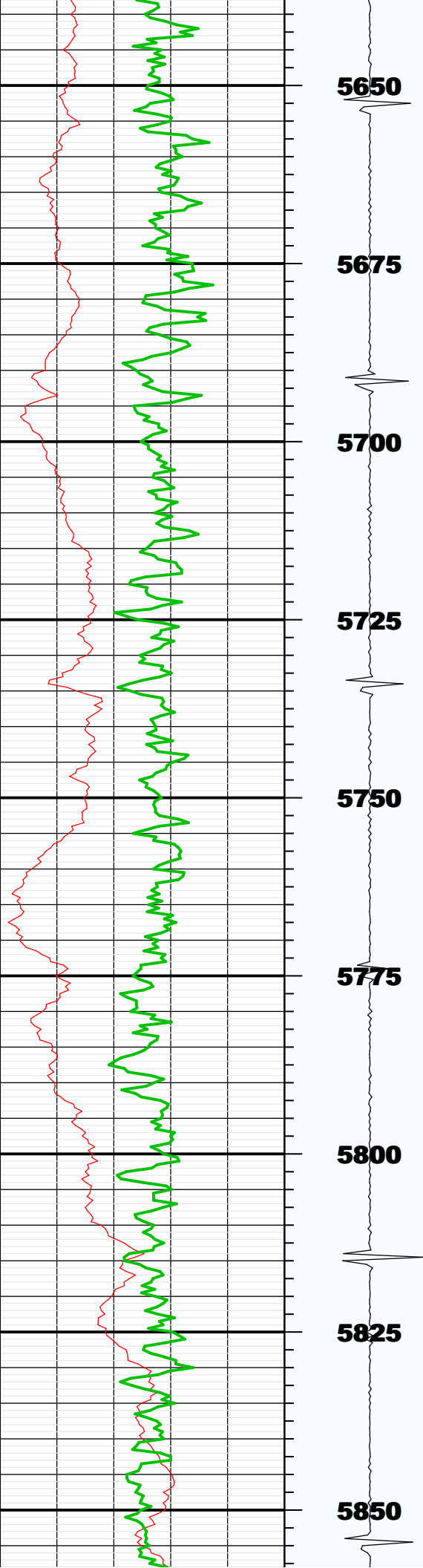


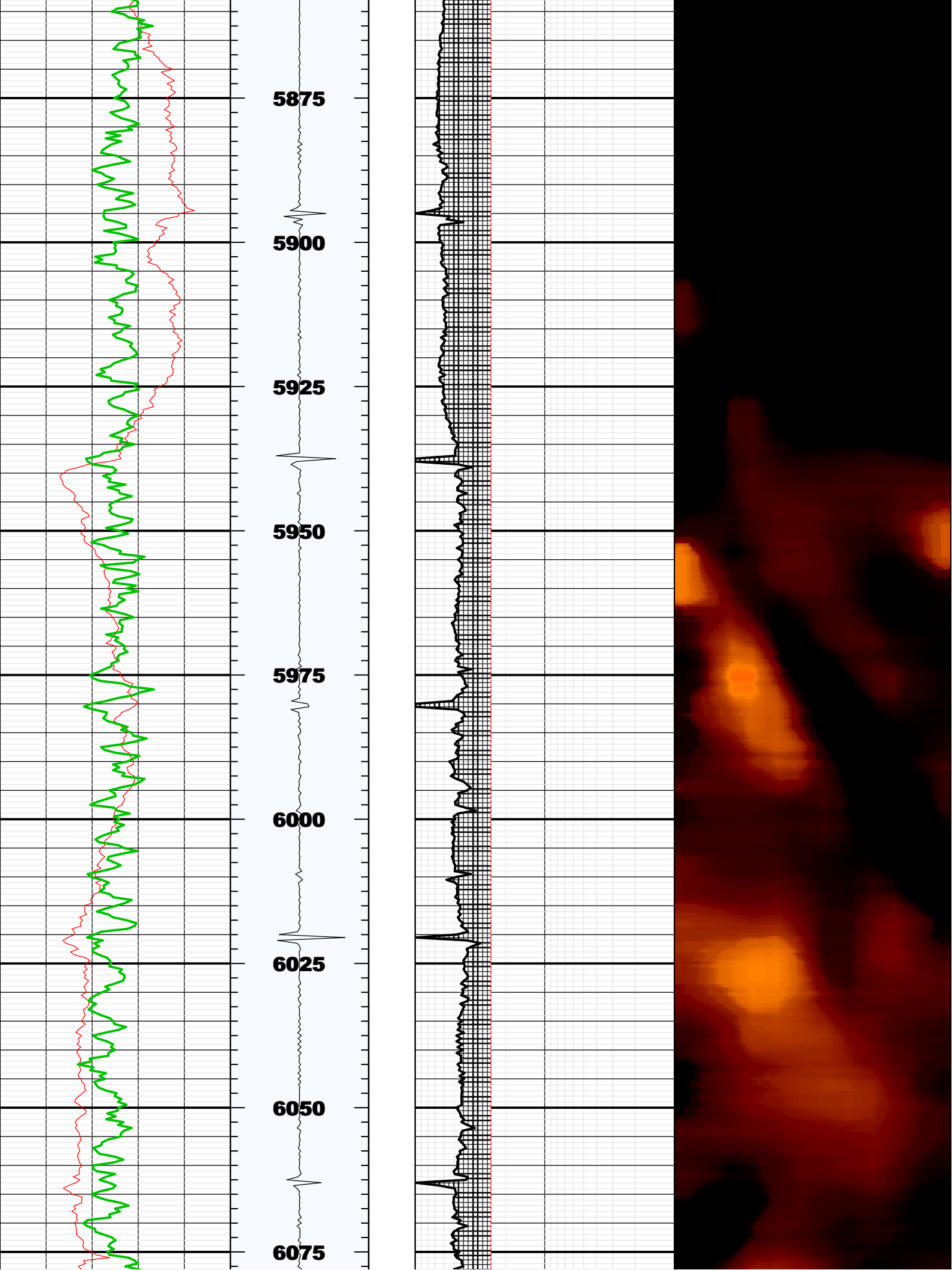


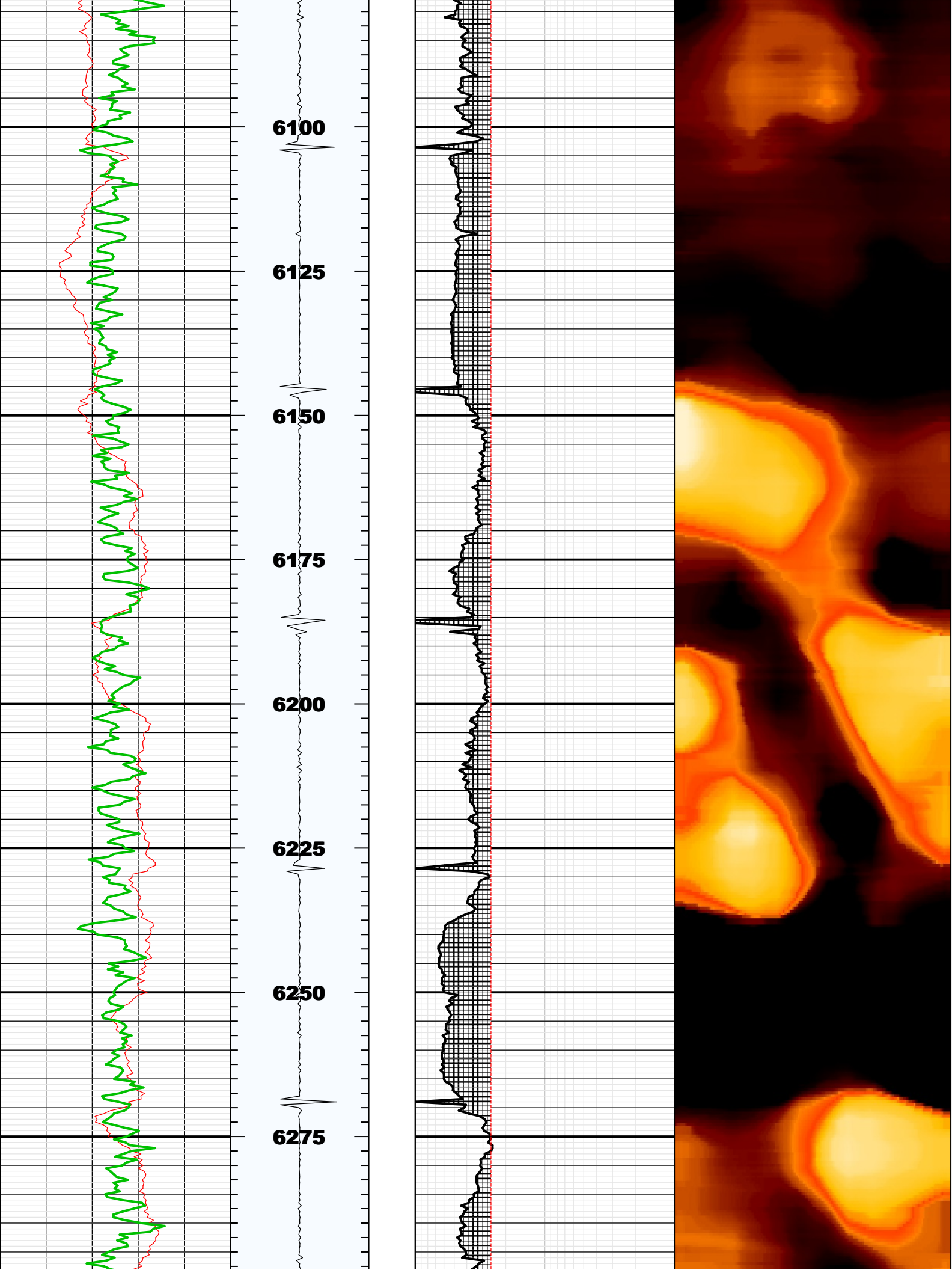


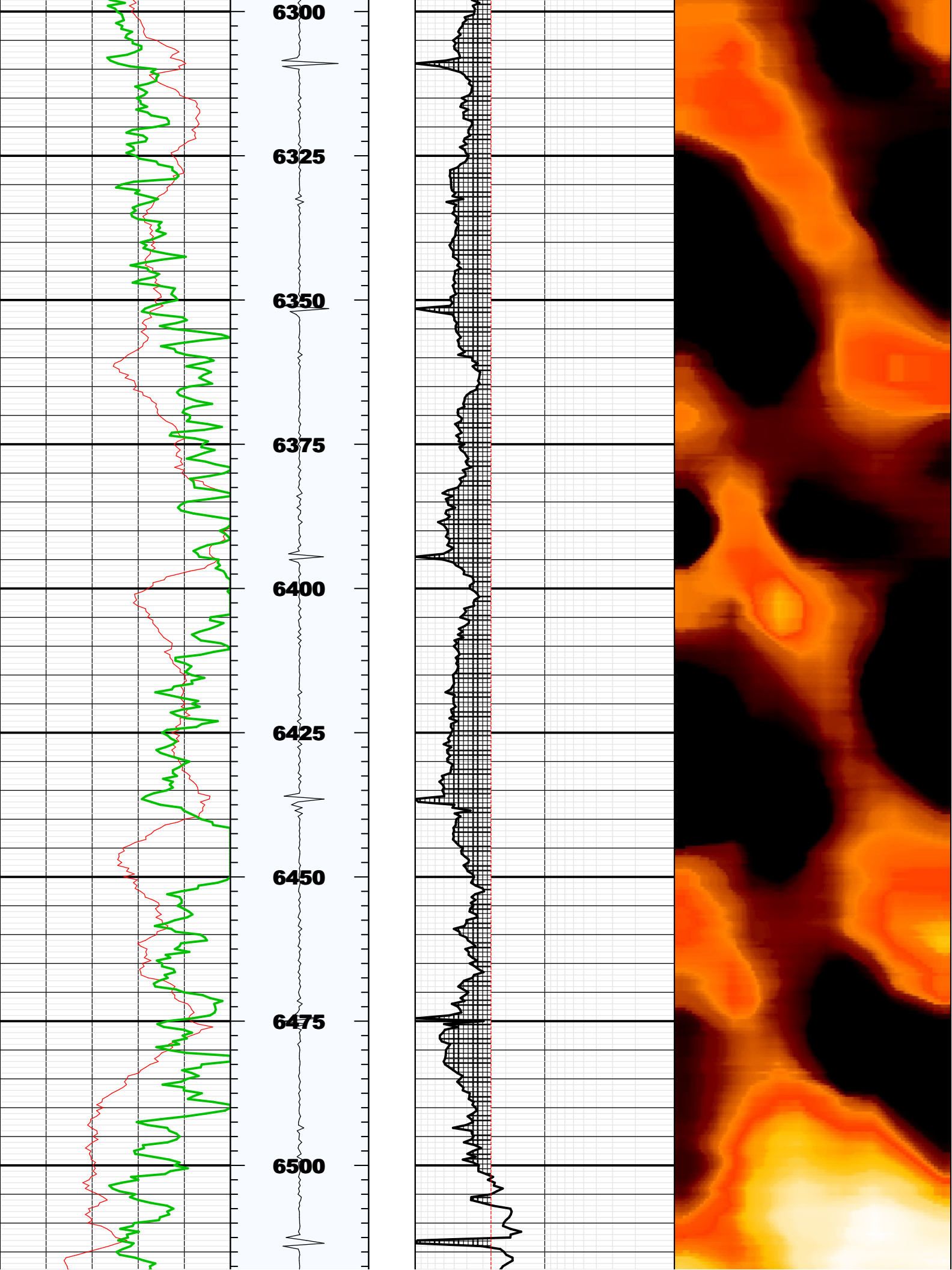


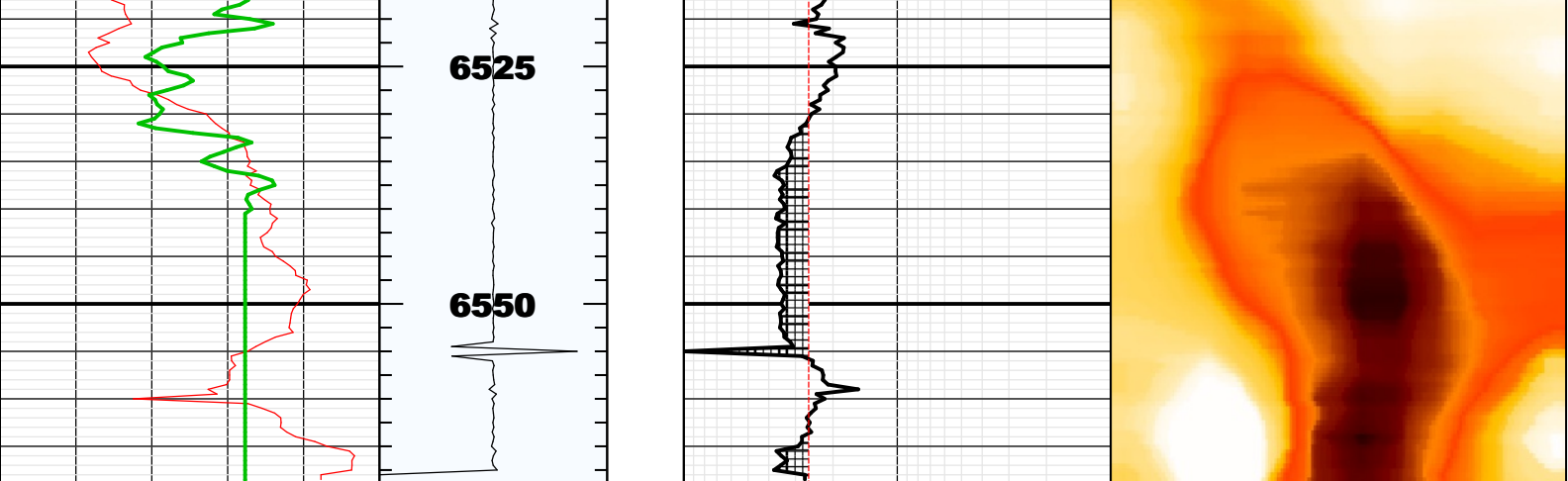








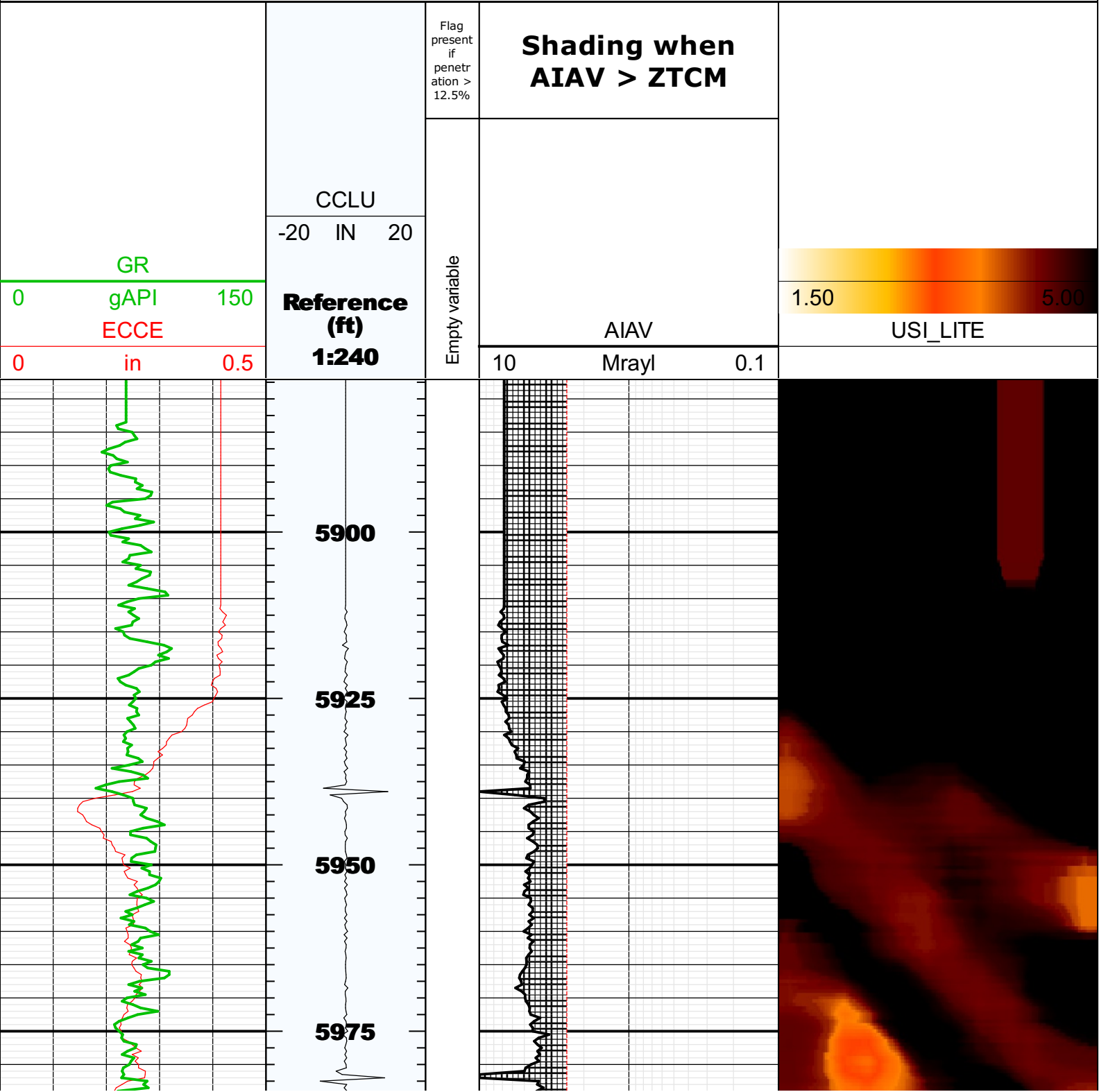


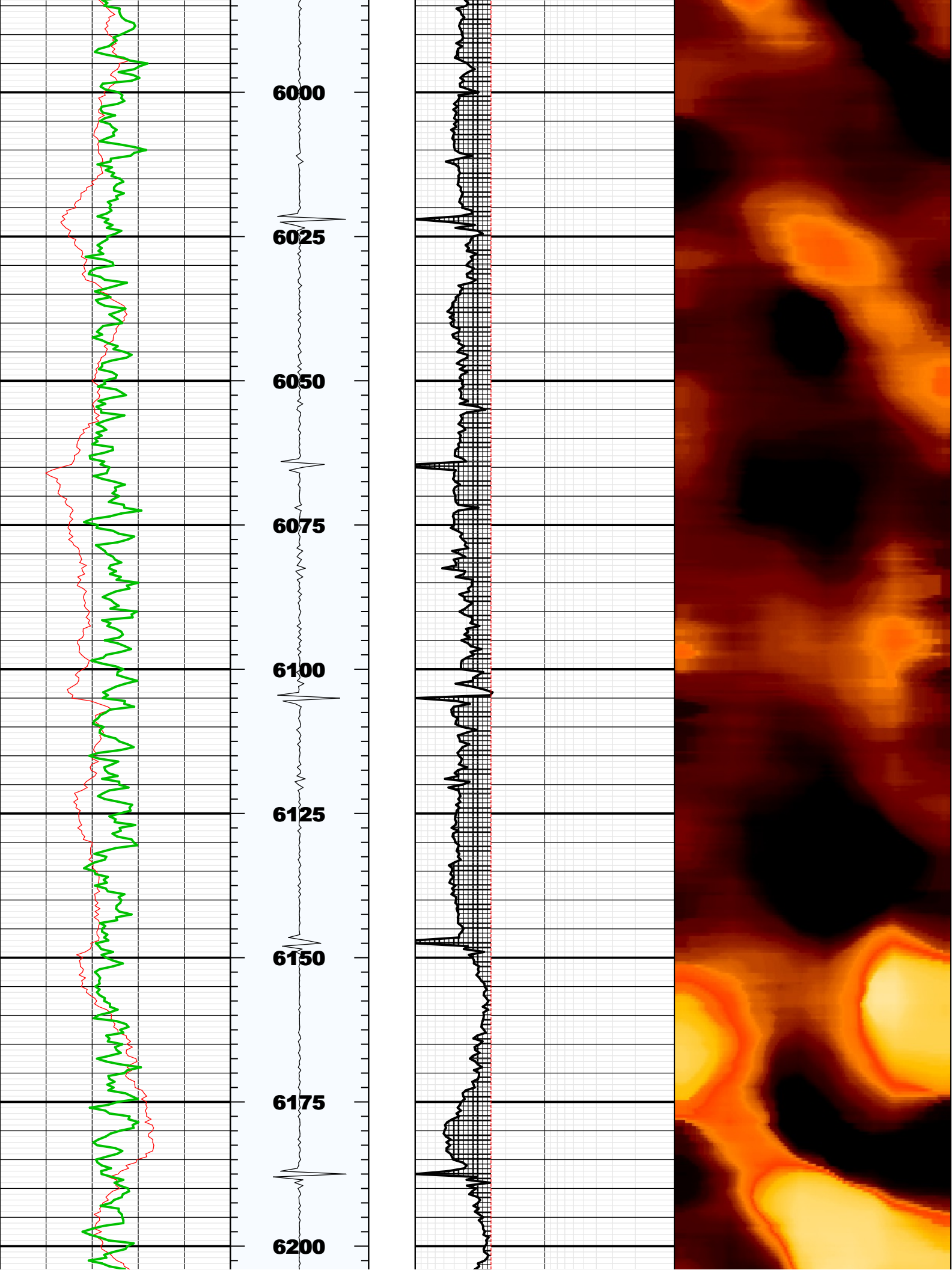


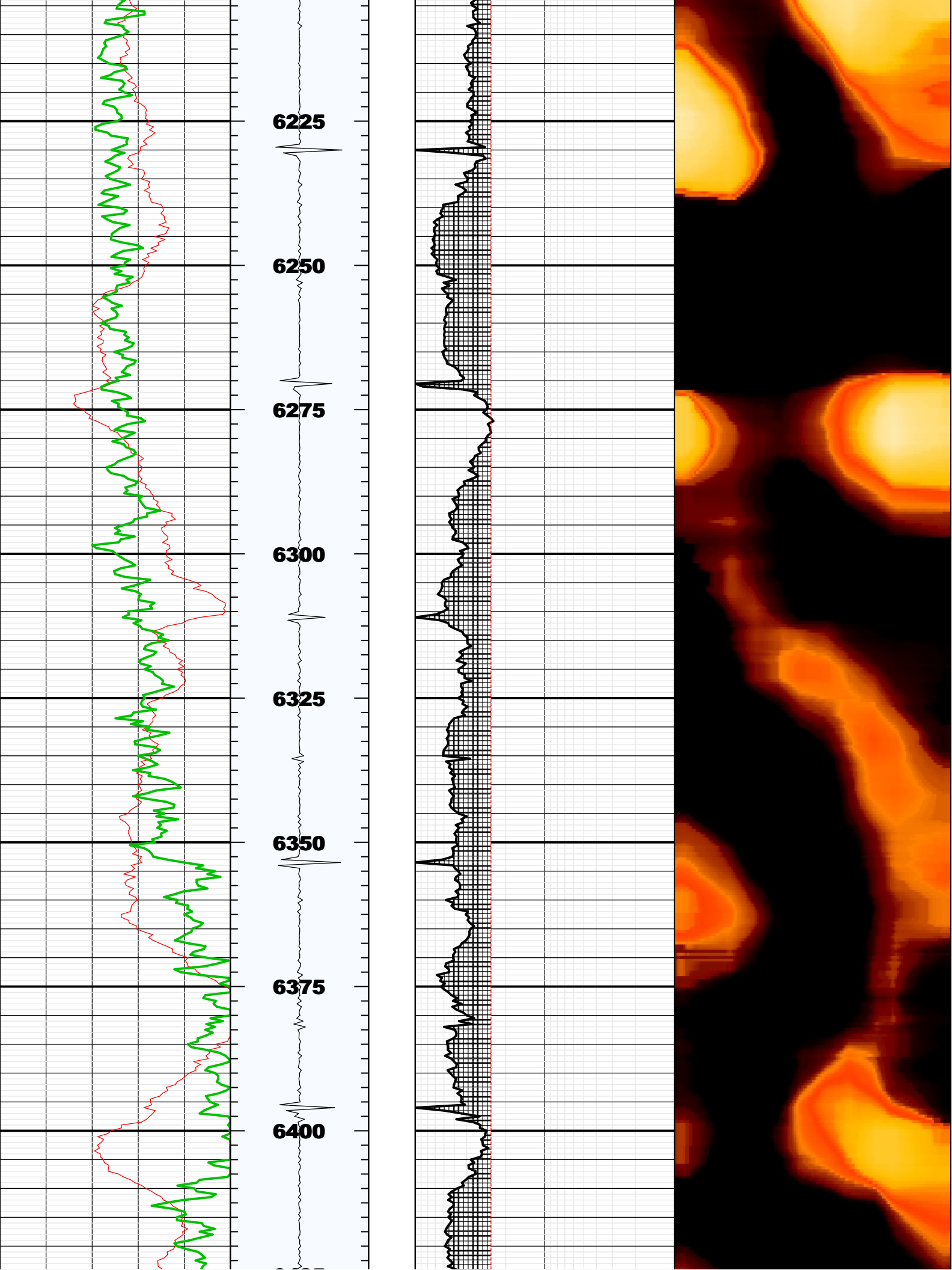
BS	8.50000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	5.50000	IN	Casing Outer Diameter
CSID	4.77800	IN	Casing Inner Diameter
CSIZ	5.50000	IN	Current Casing Size
CWEI	20.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	1.75600	IN	Diameter of Transducer Sensor
EMXV	35	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	31.20414	US	Window Begin Time
WINE	73.41190	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.48000	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

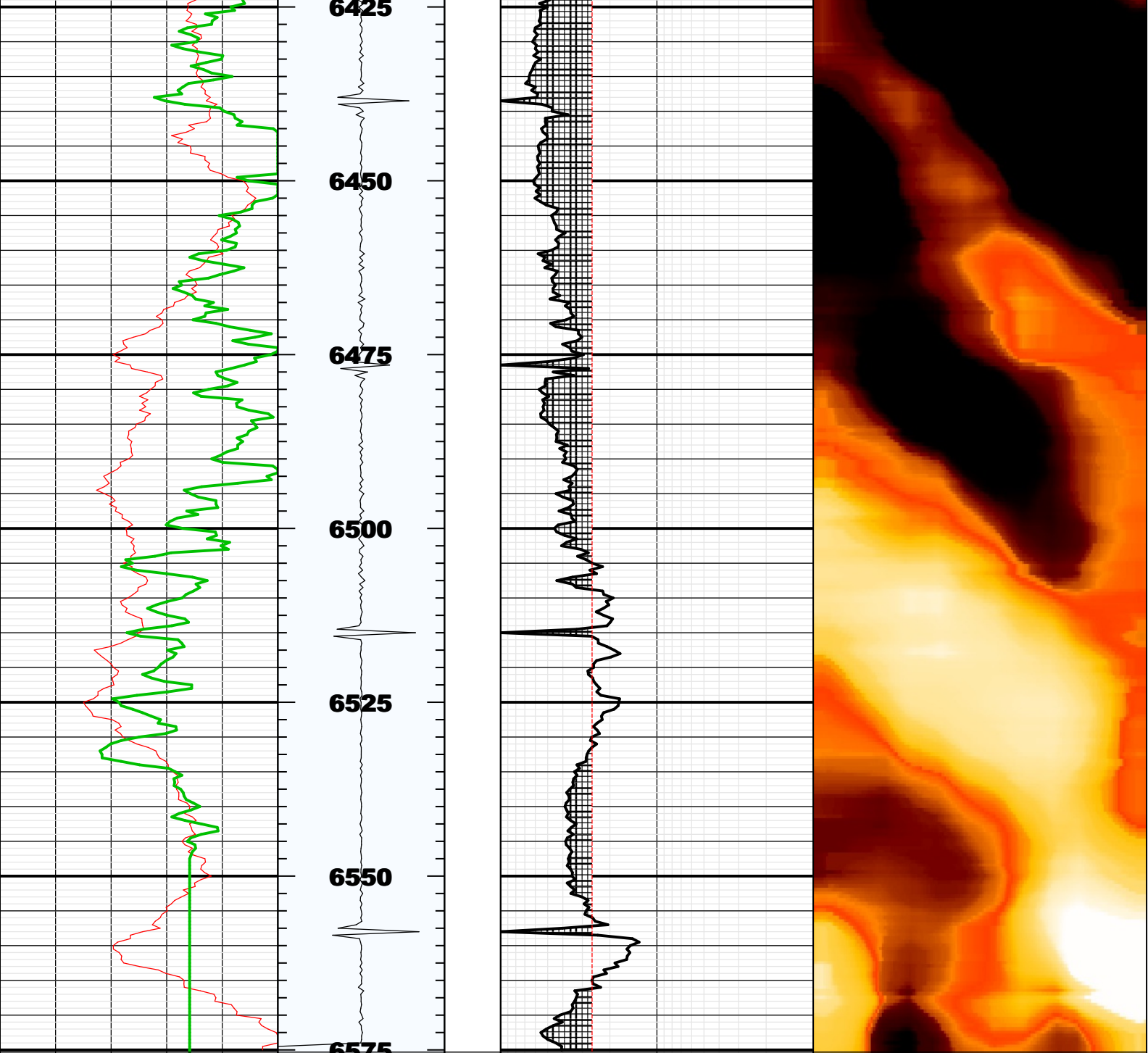
Repeat Pass

Company: Noble Energy Inc
Well: Wells Ranch State BB01-690
Field: Wattenberg









Fluid Properties Used for Main Pass

