

Company: Noble Energy Inc

Well: Wells Ranch AA35-68-1BHNC
Field: Wattenberg
County: Weld State: Colorado

County: Weld			
Field: Wattenberg			
Location: NWNW Sec 36 T6N R63W			
Well: Wells Ranch AA35-68-1BHNC			
Company: Noble Energy Inc			
USI-LITE			
Permanent Datum: Log Measured From: Drilling Measured From:		GL KB KB	Elev: K.B. 4838.0 F G.L. 4808.0 F D.F. 4808.0 F
API Serial No. 05-123-38665-0000		Section 36	Township 6N
01-May-2014		Range 63W	
Logging Date			
Run Number	Run 1		
Depth Driller	11307.0 F		
Schlumberger Depth	11307.0 F		
Bottom Log Interval	6965.0 F		
Top Log Interval	100.0 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	633.0 F		
To	7091.0 F		
Casing Size	7.00 IN		
Weight	26.00 LB/F		
Grade	P110		
From	30.1 F		
To	7081.2 F		
Max Recorded Temp	-999.2		
Logger on bottom (date)	01-May-2014		
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:	Type: Serial Number: 2858 Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: 713277 Length: 18240.00000

DISCLAIMER

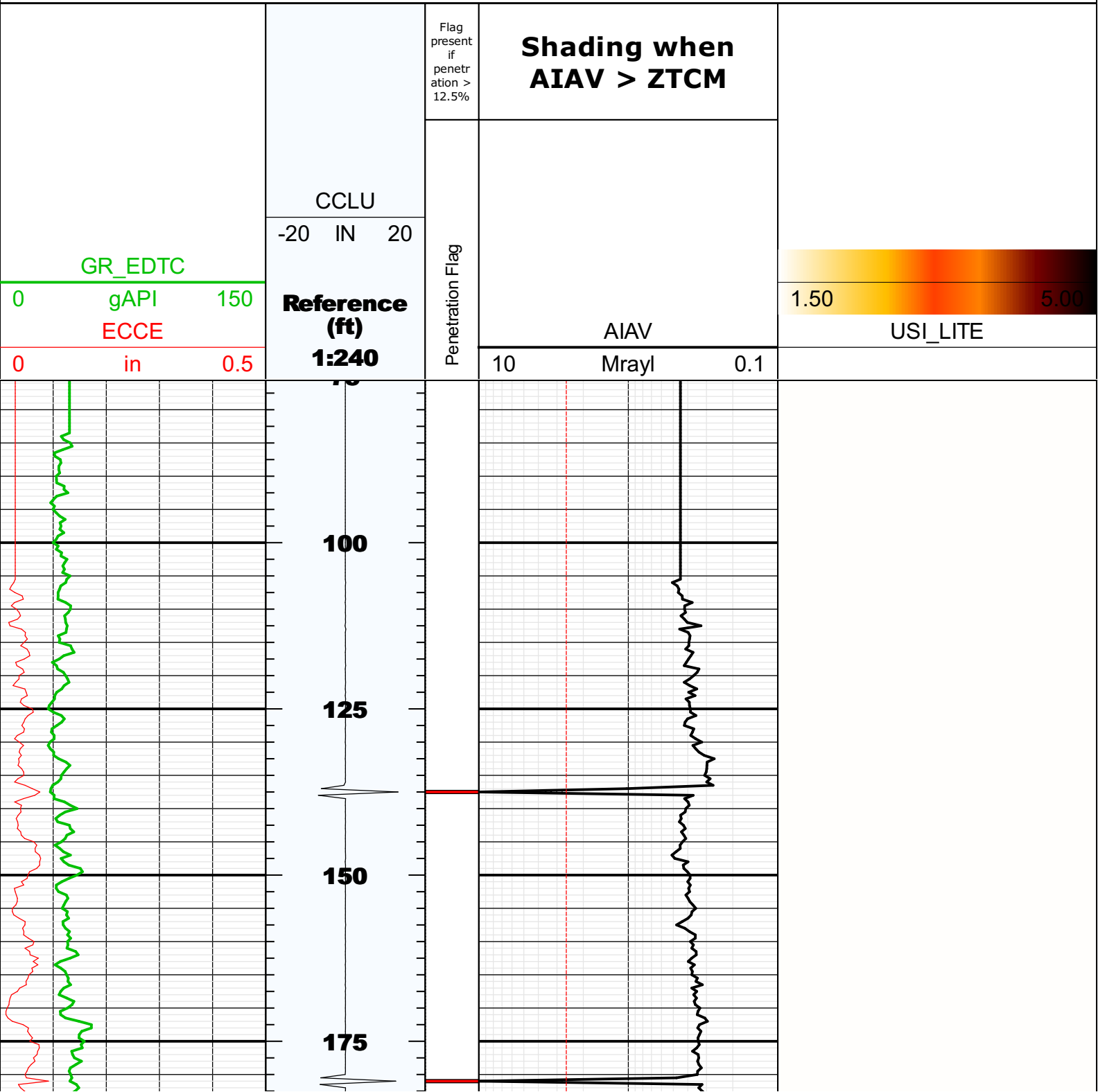
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIIONS ON USE OF THE RECORDED-DATA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

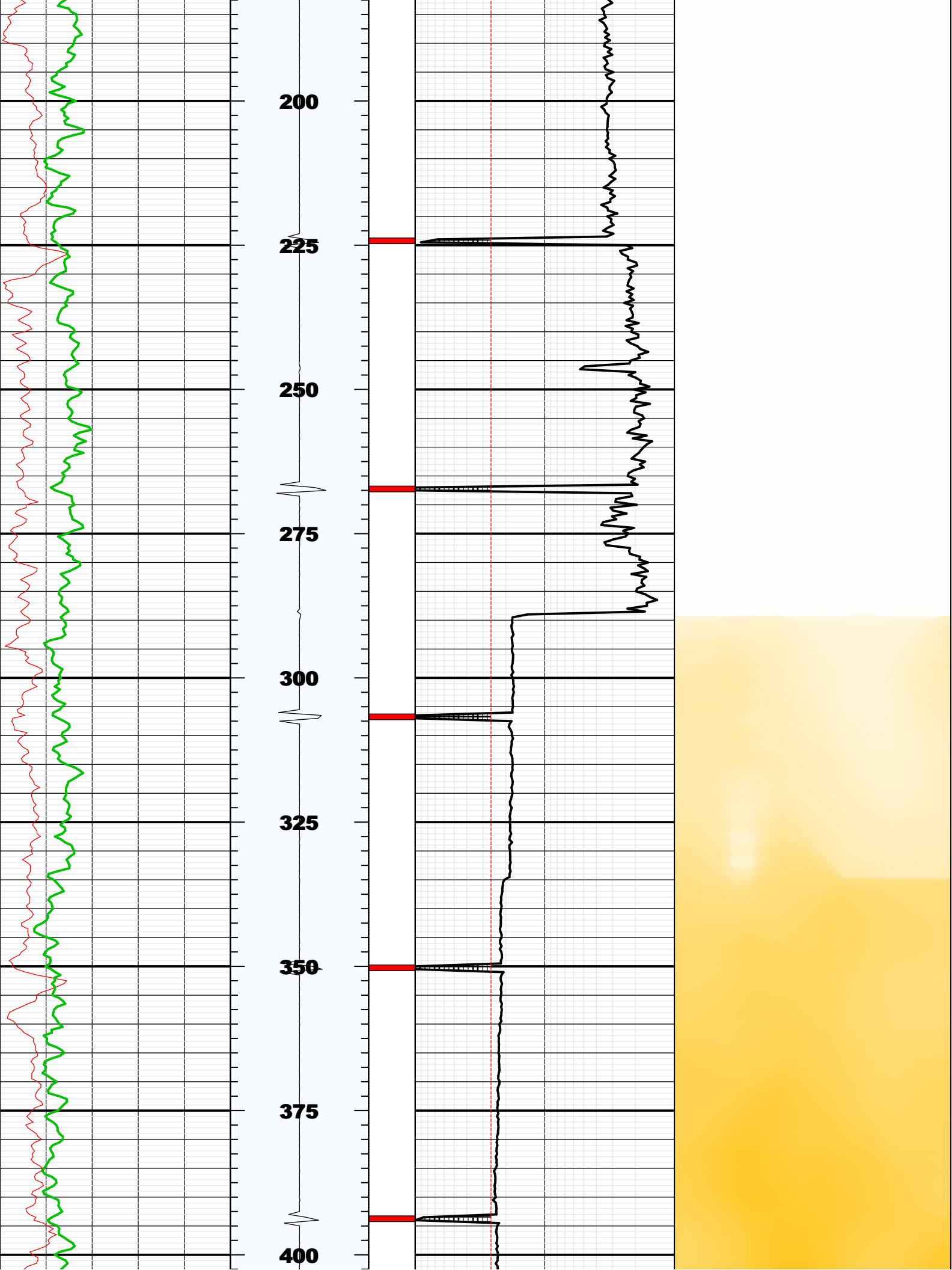
Toolstring run as per toolsketch.
Lead cement 12.5 ppg Tail cement 13.8 ppg.
0 PSI repeat pass 2500 PSI main pass.
Liner top at 6976.9 feet.
Bottom log interval at 6955 feet to maintain distance from liner top.
Estimated TOC @ 900 feet.

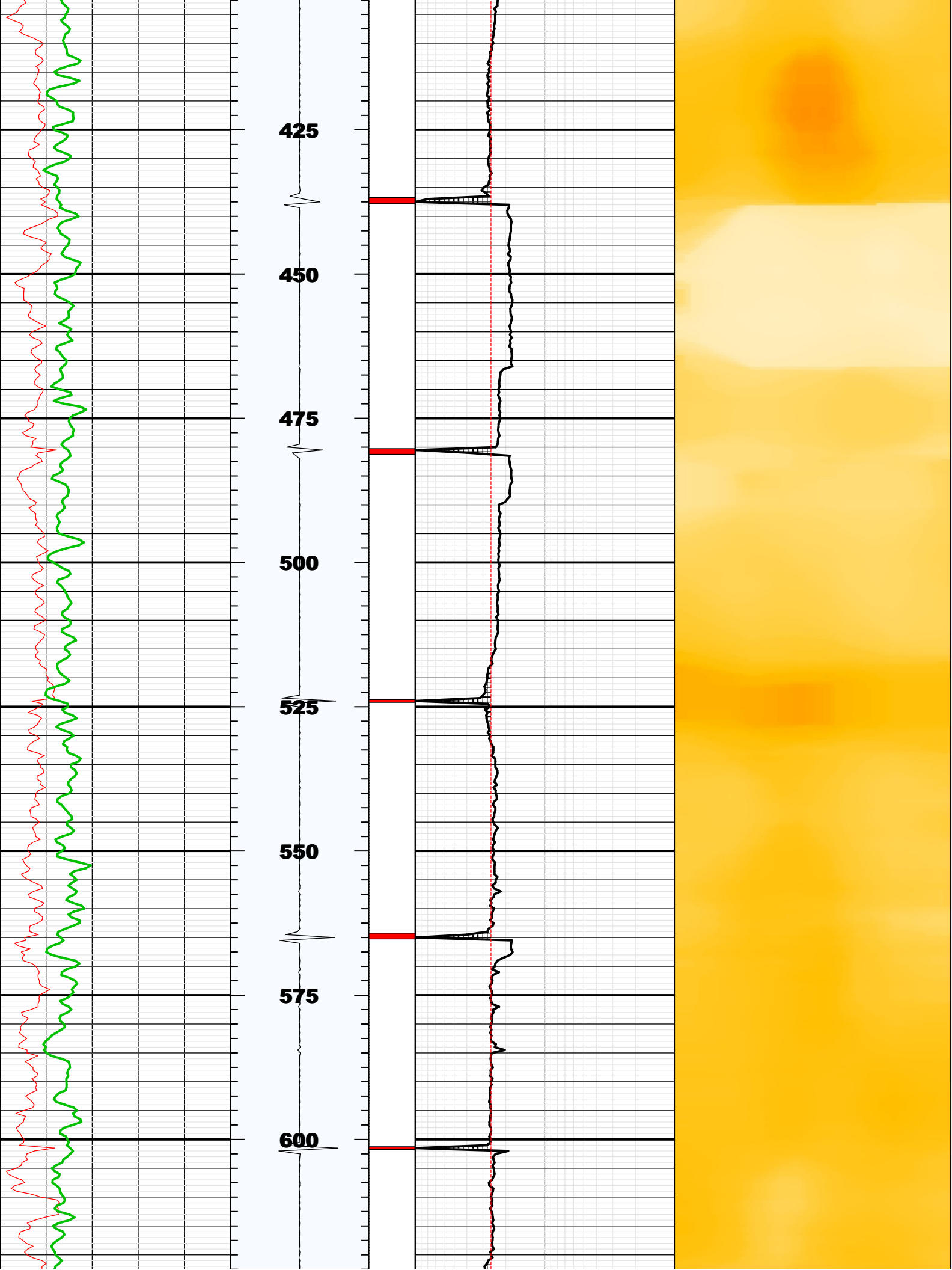
Thank you for choosing Schlumberger Wireline.
Schlumberger Crew Derrick Hunter Josh Strand.

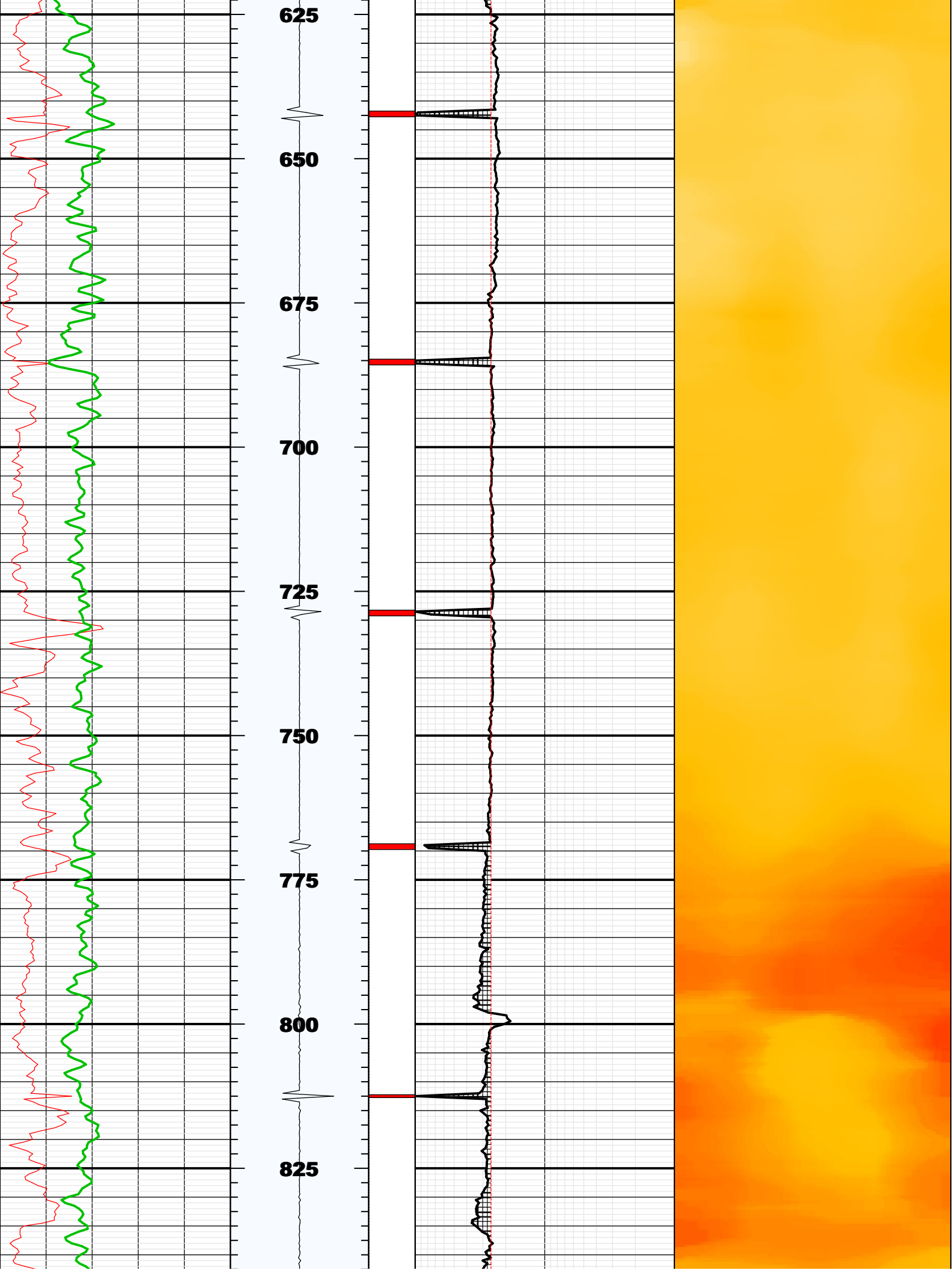
Main Pass

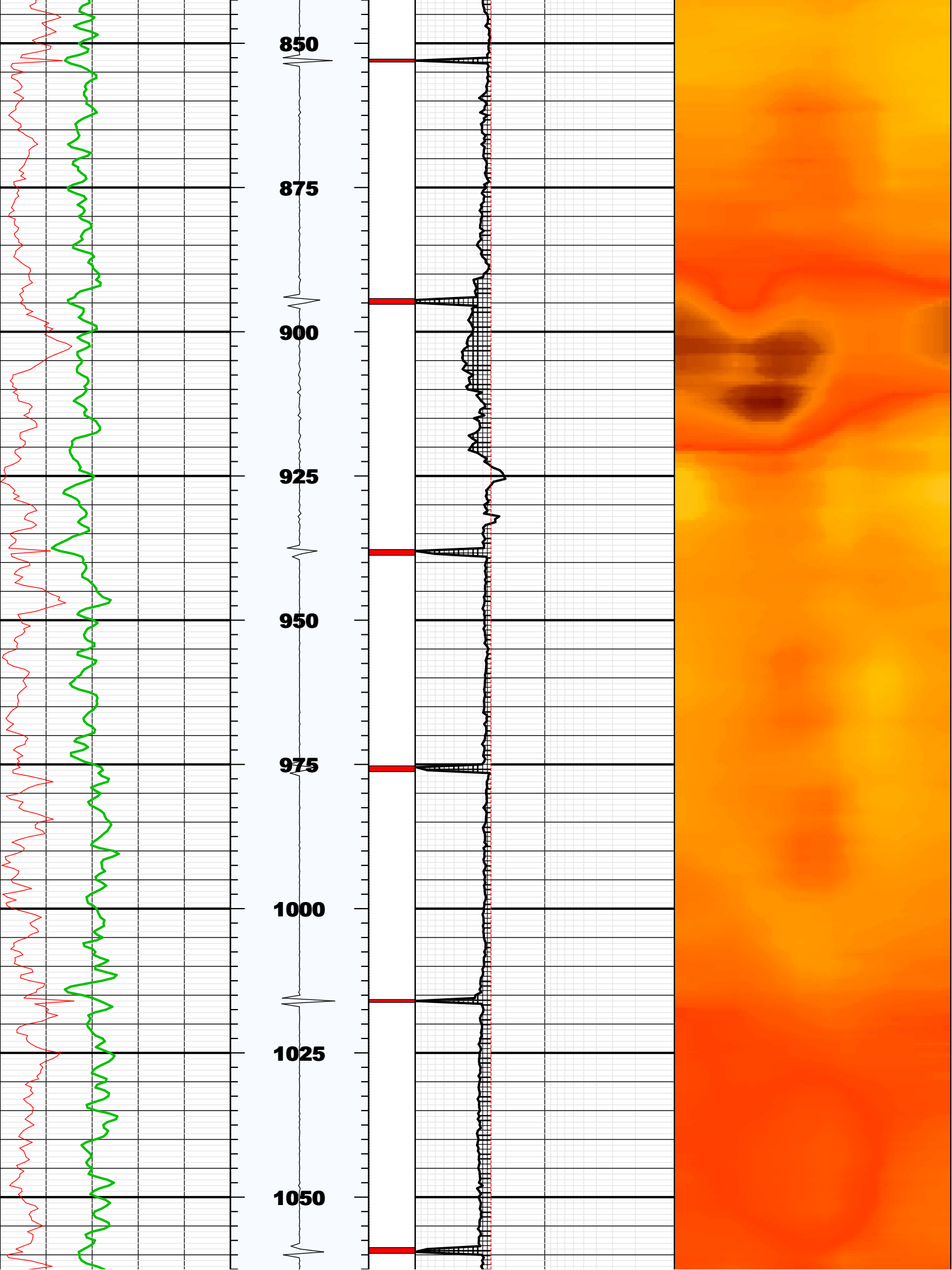
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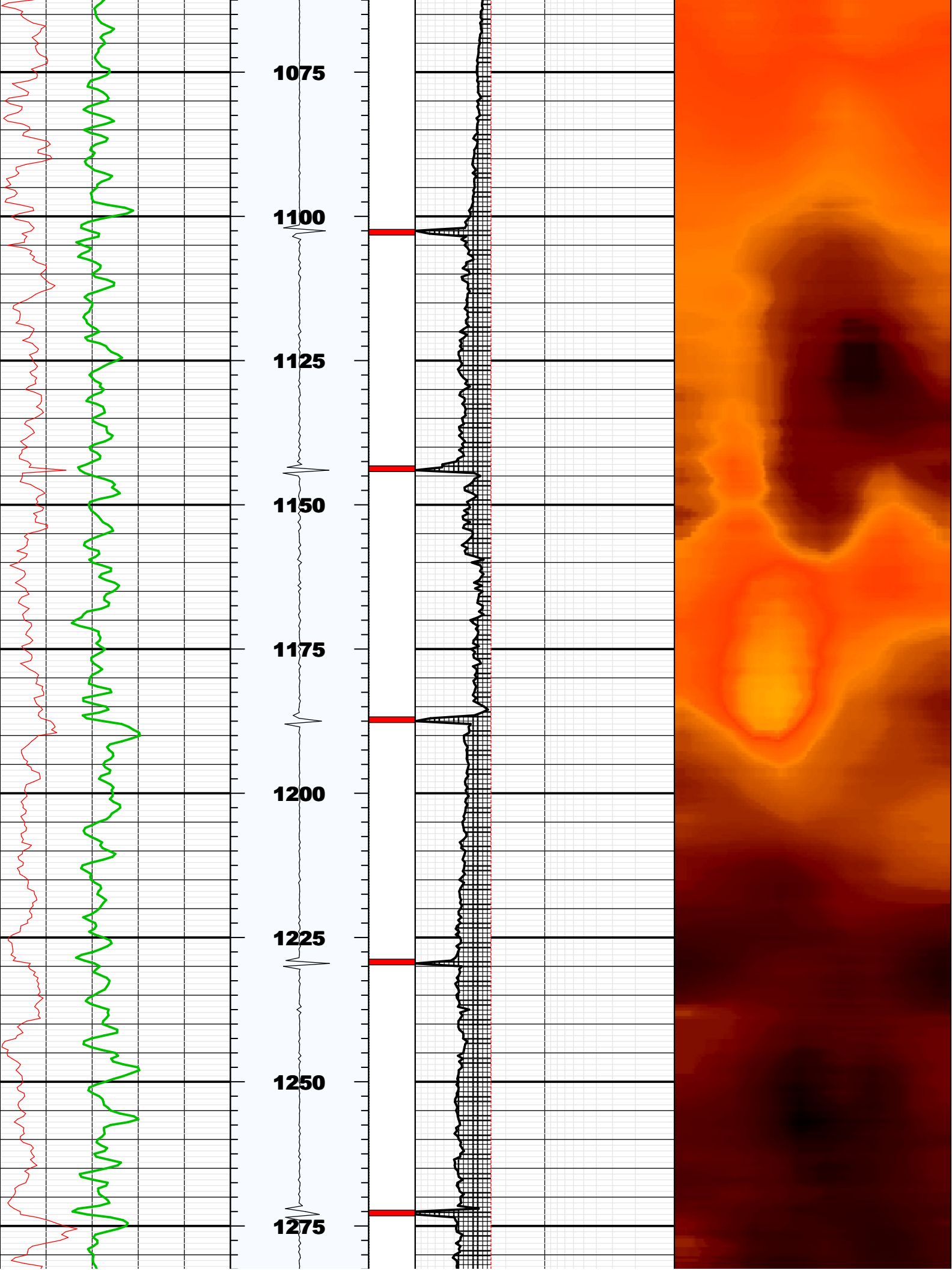


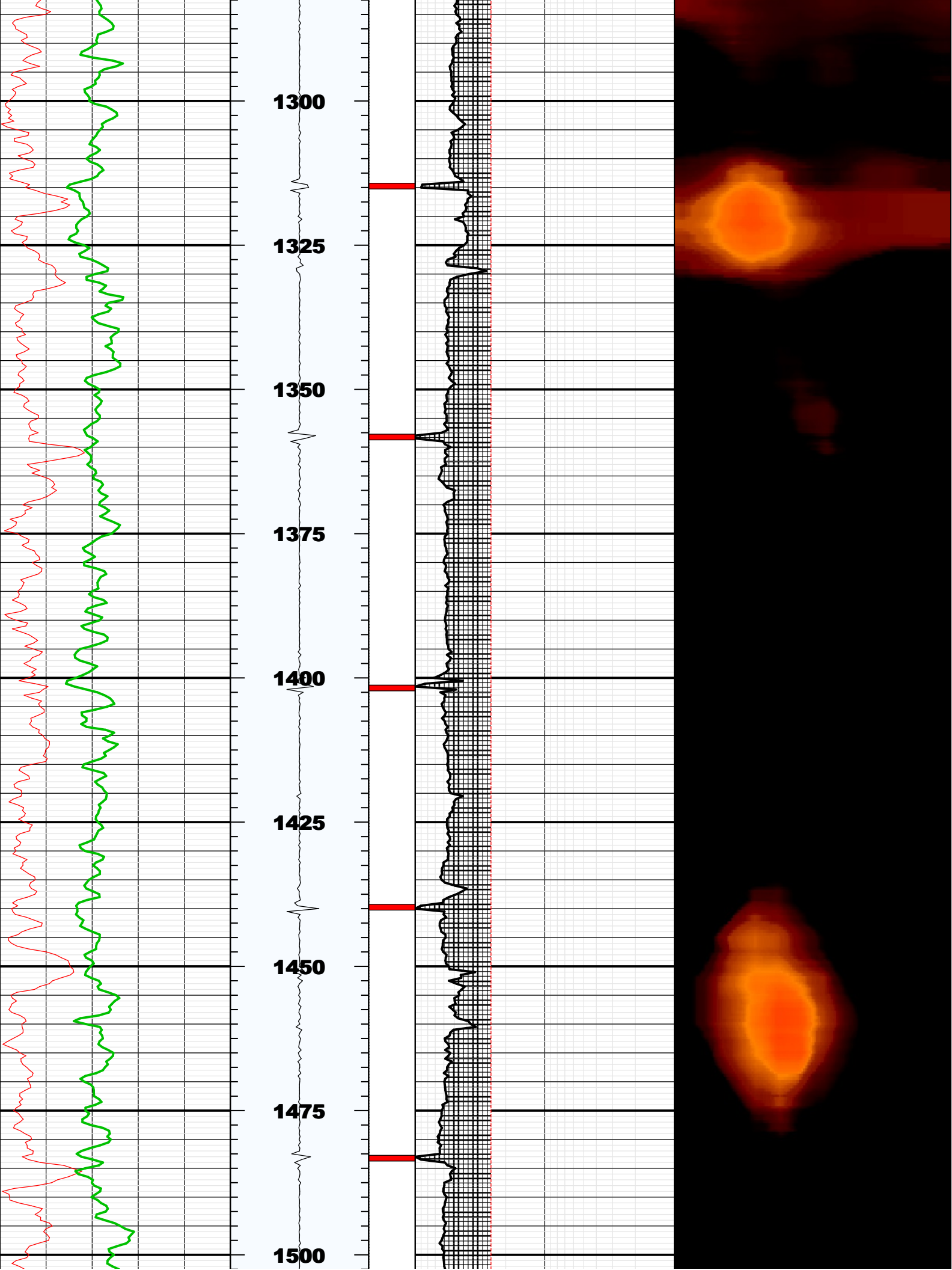


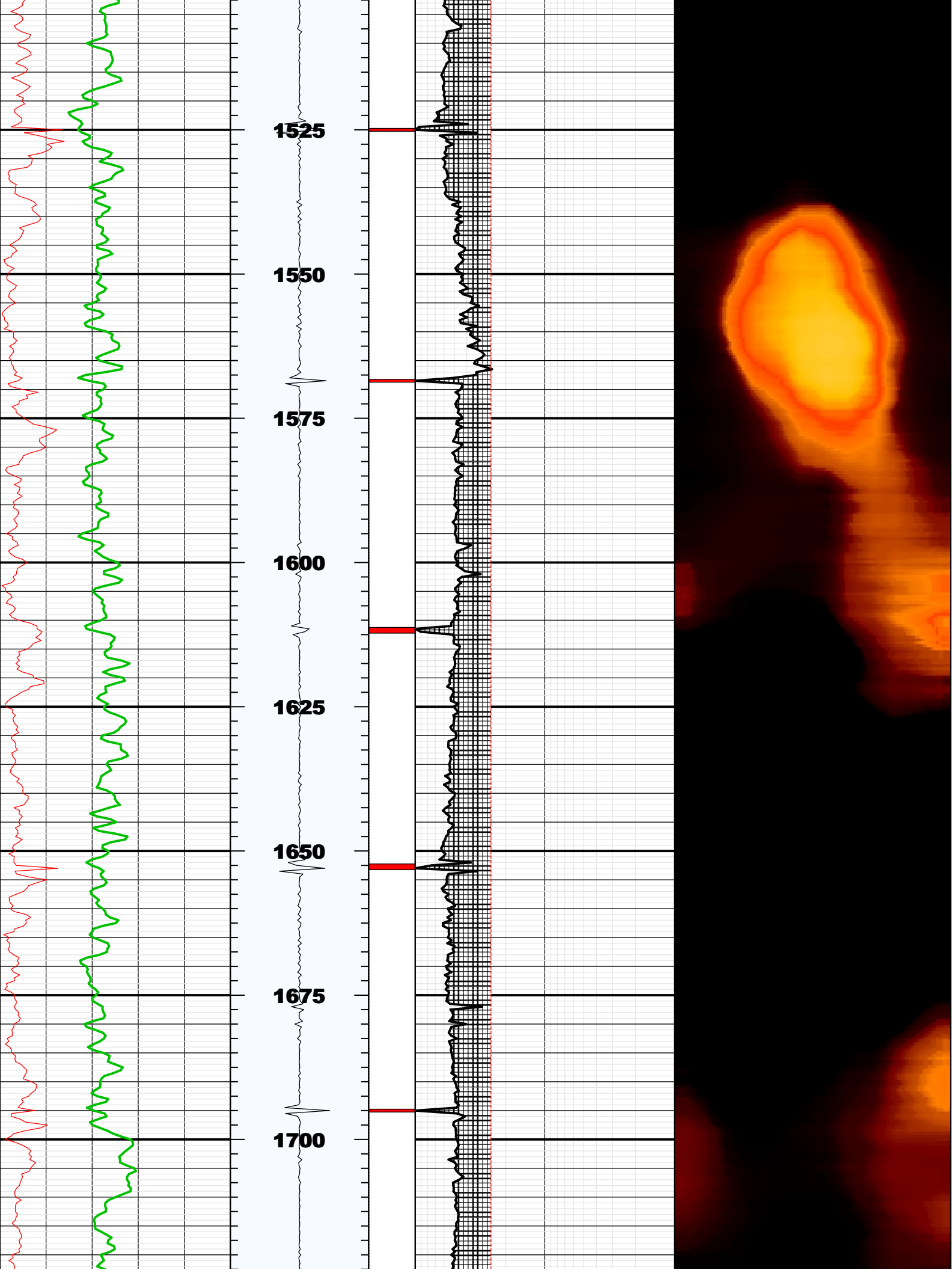


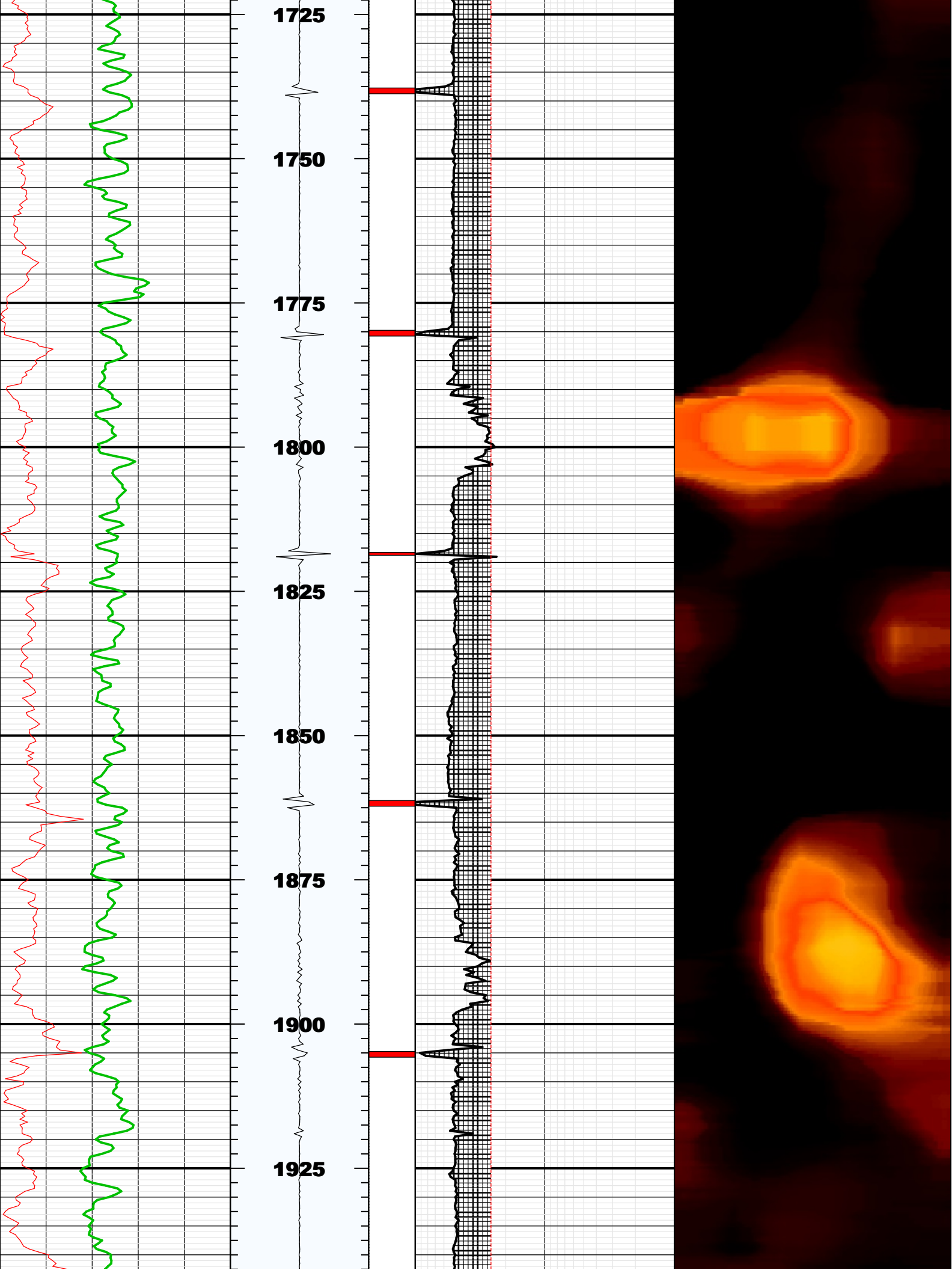


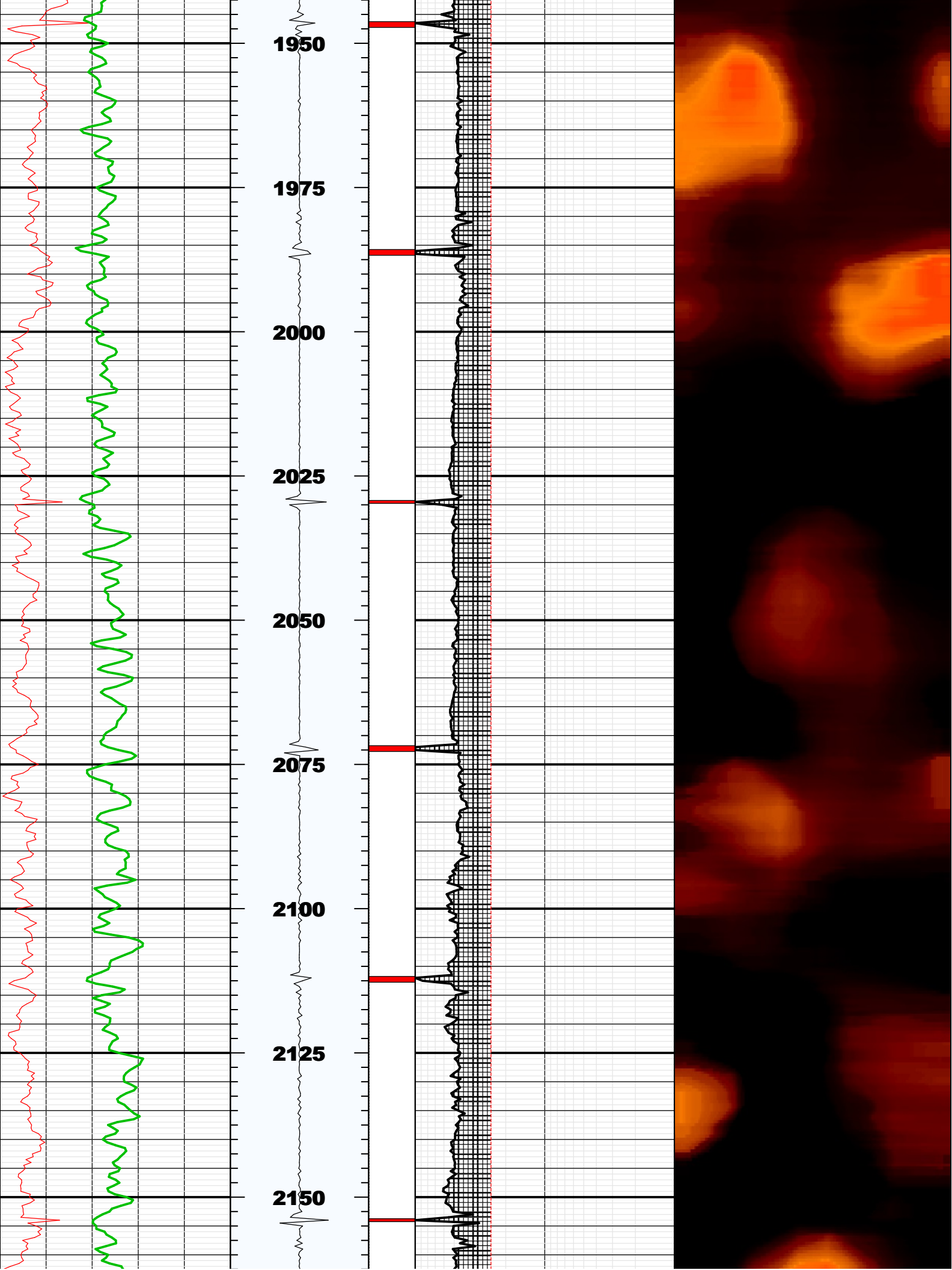


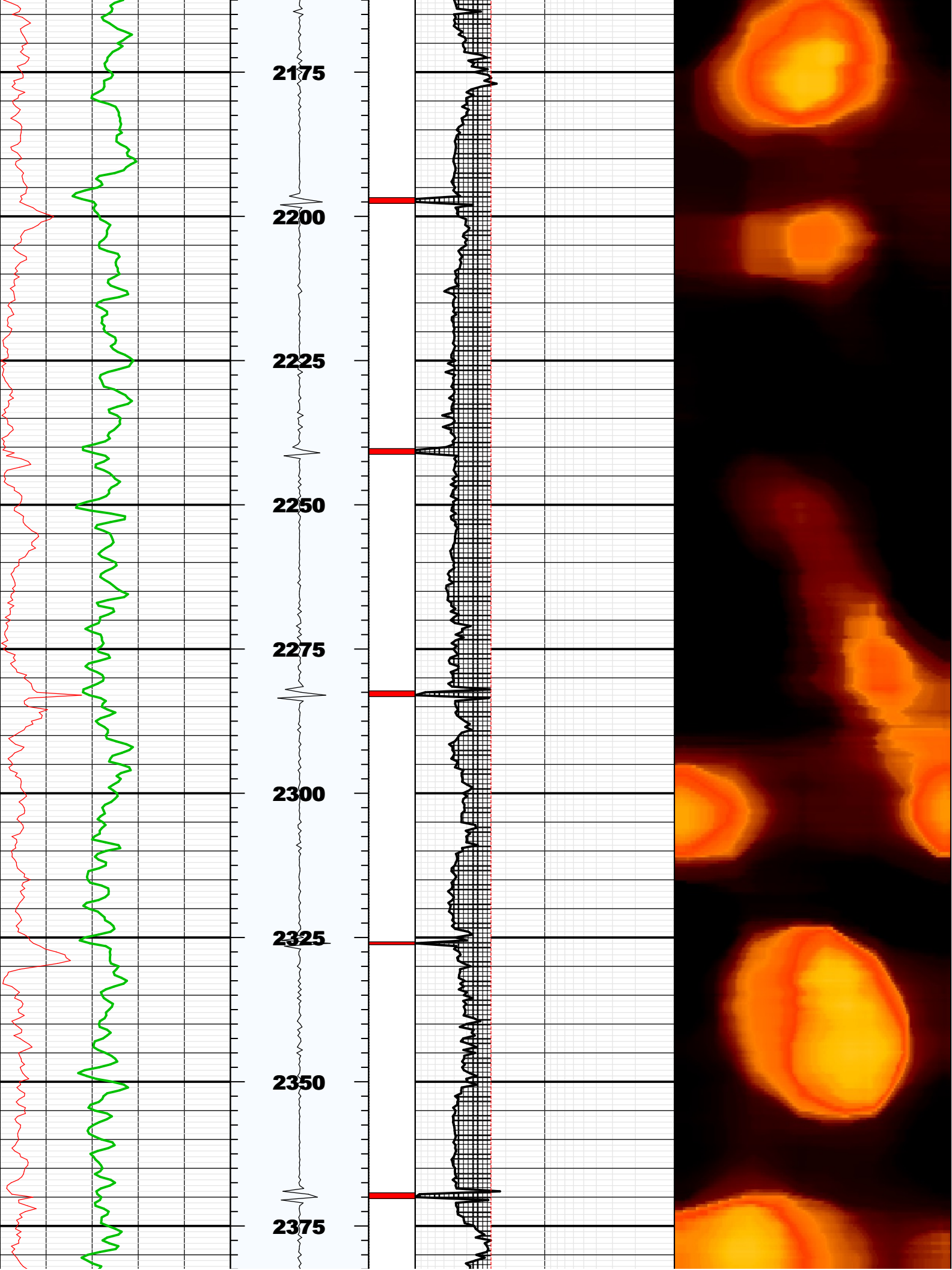


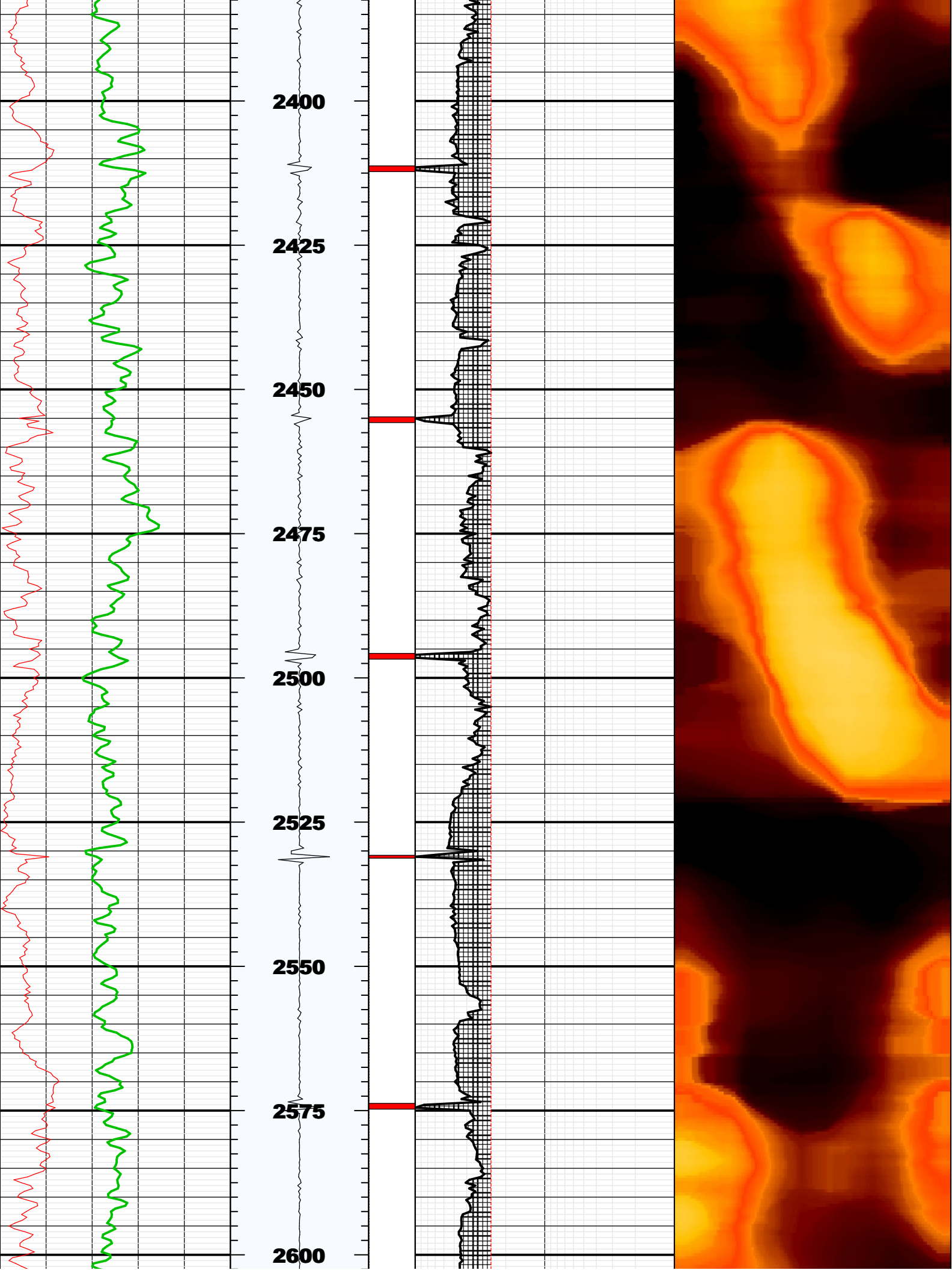


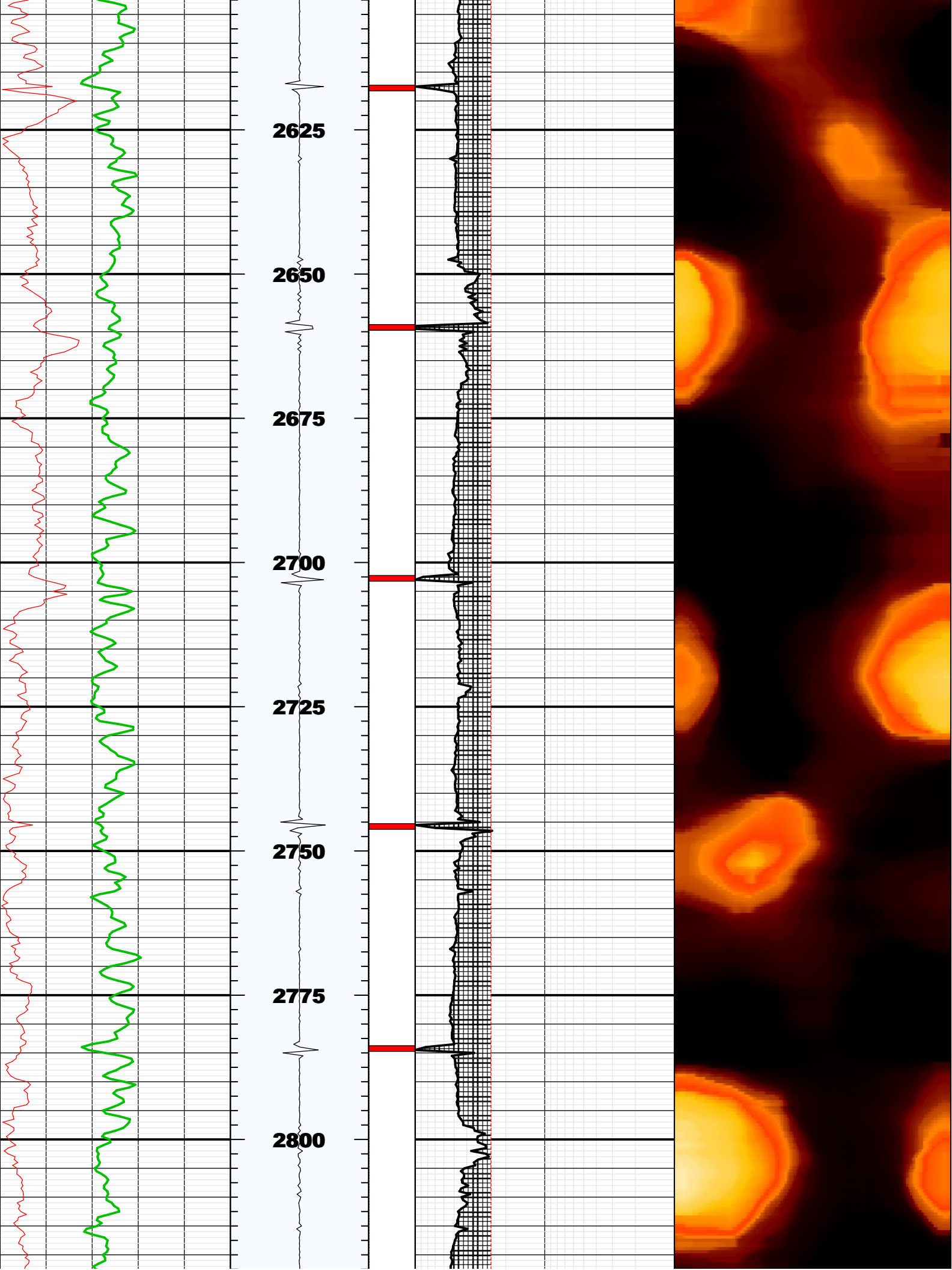


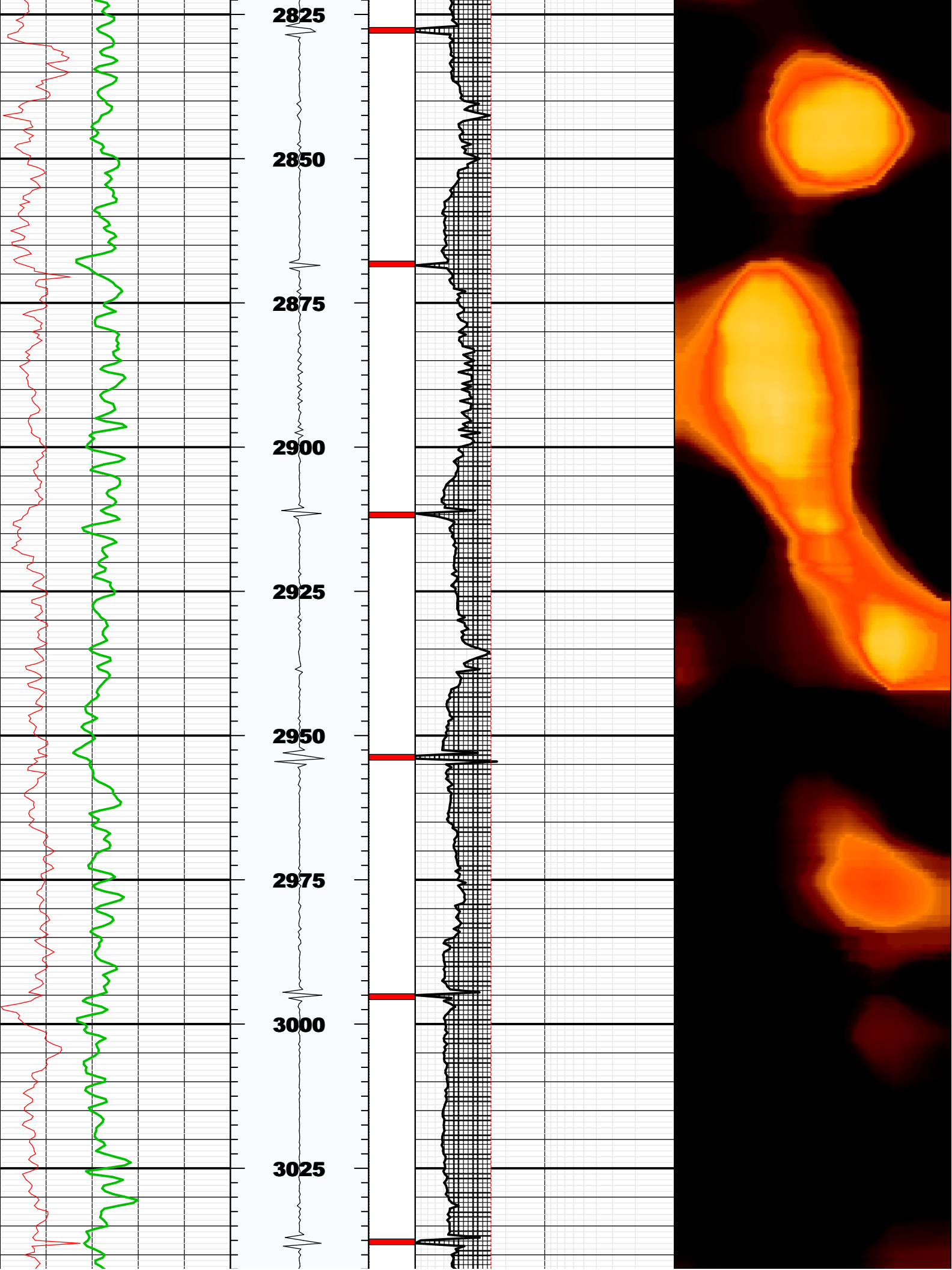


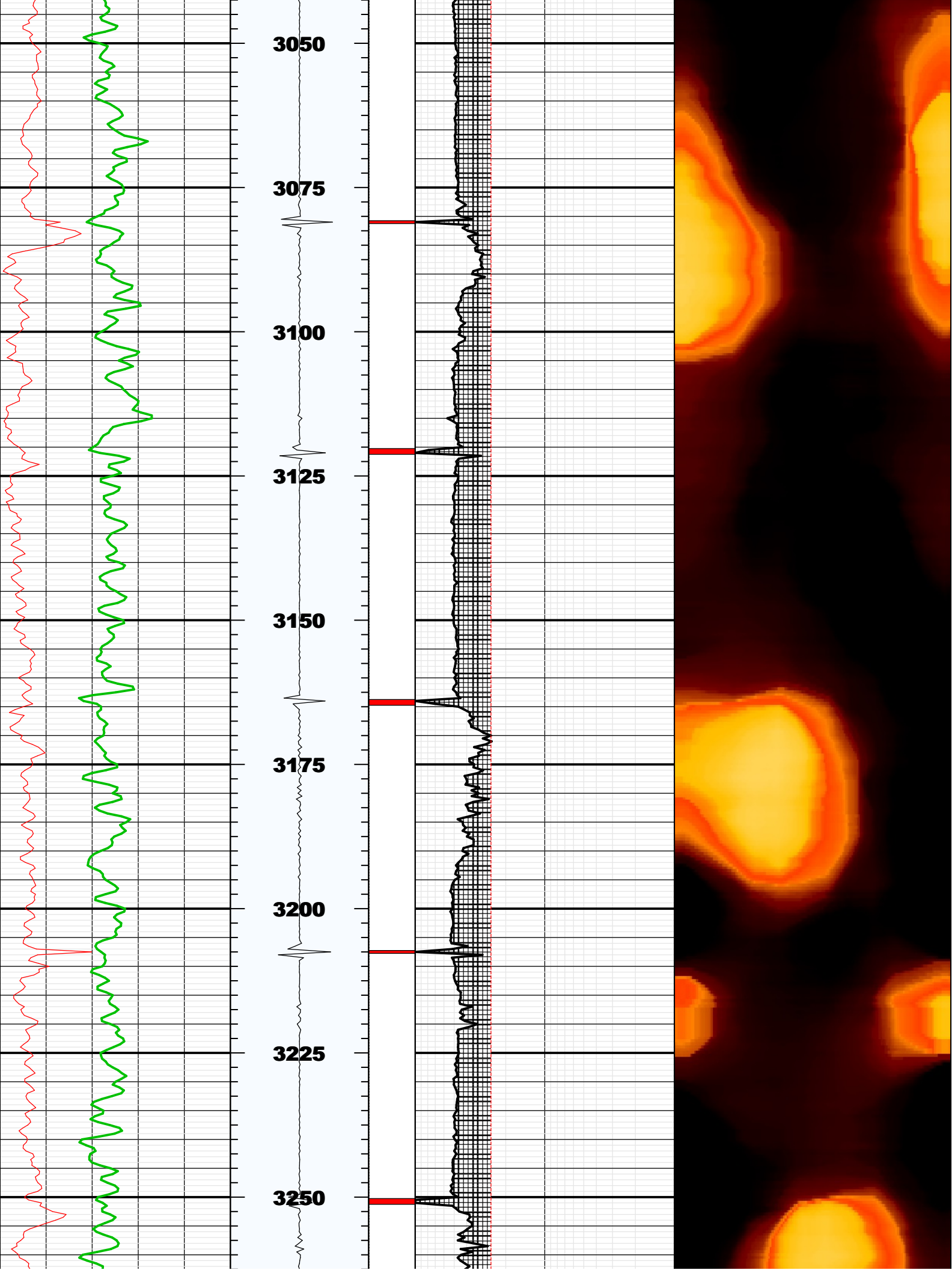


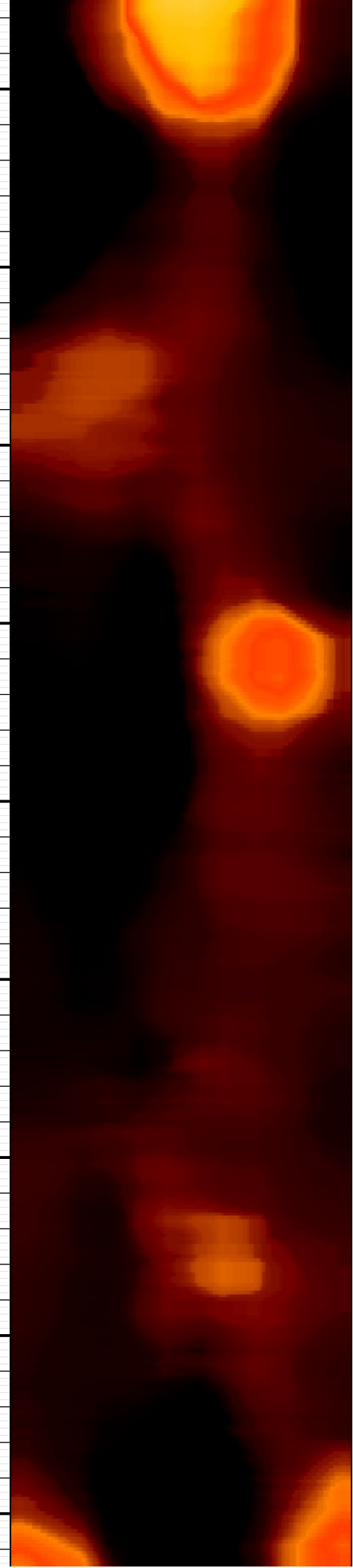
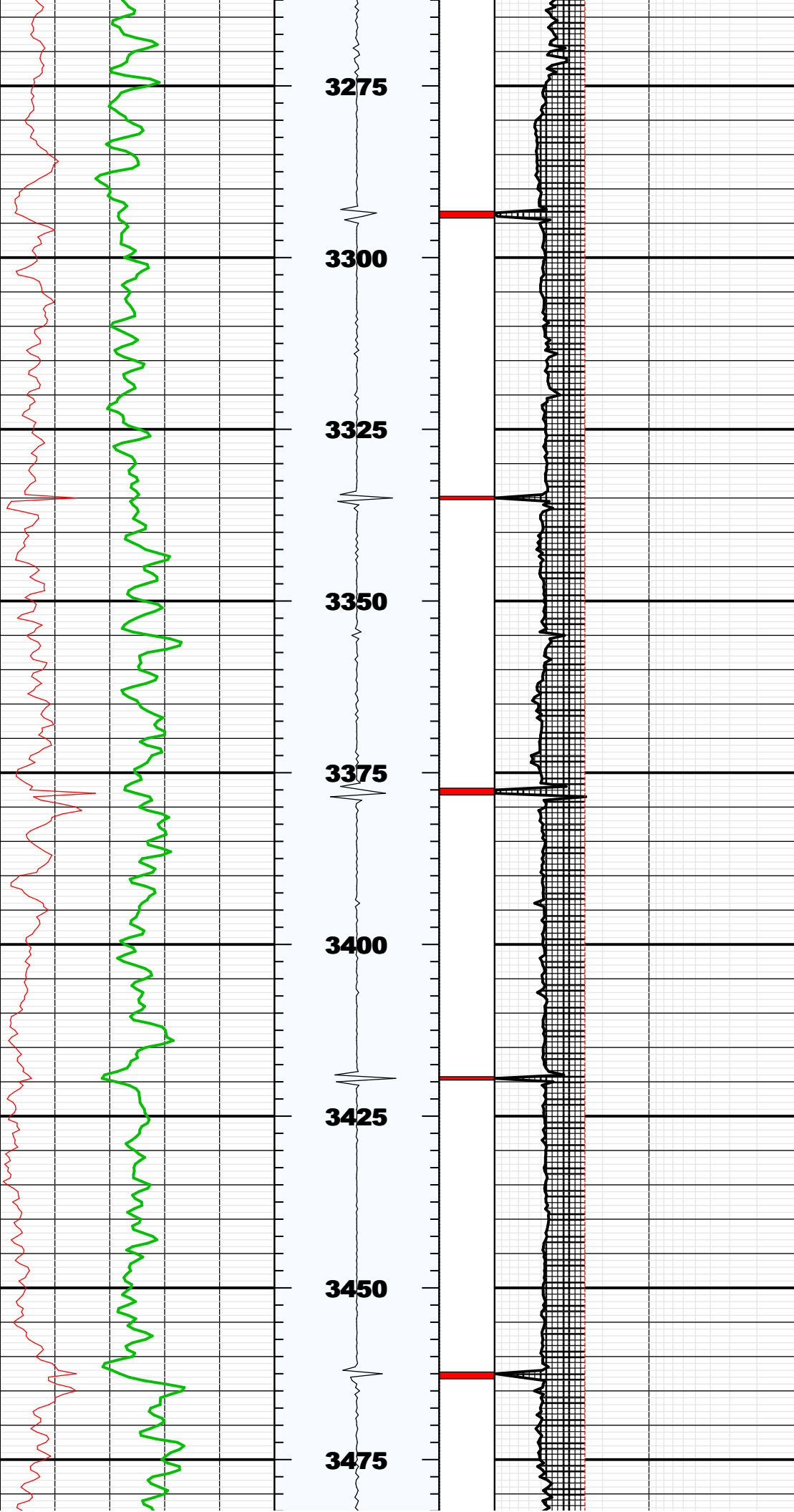


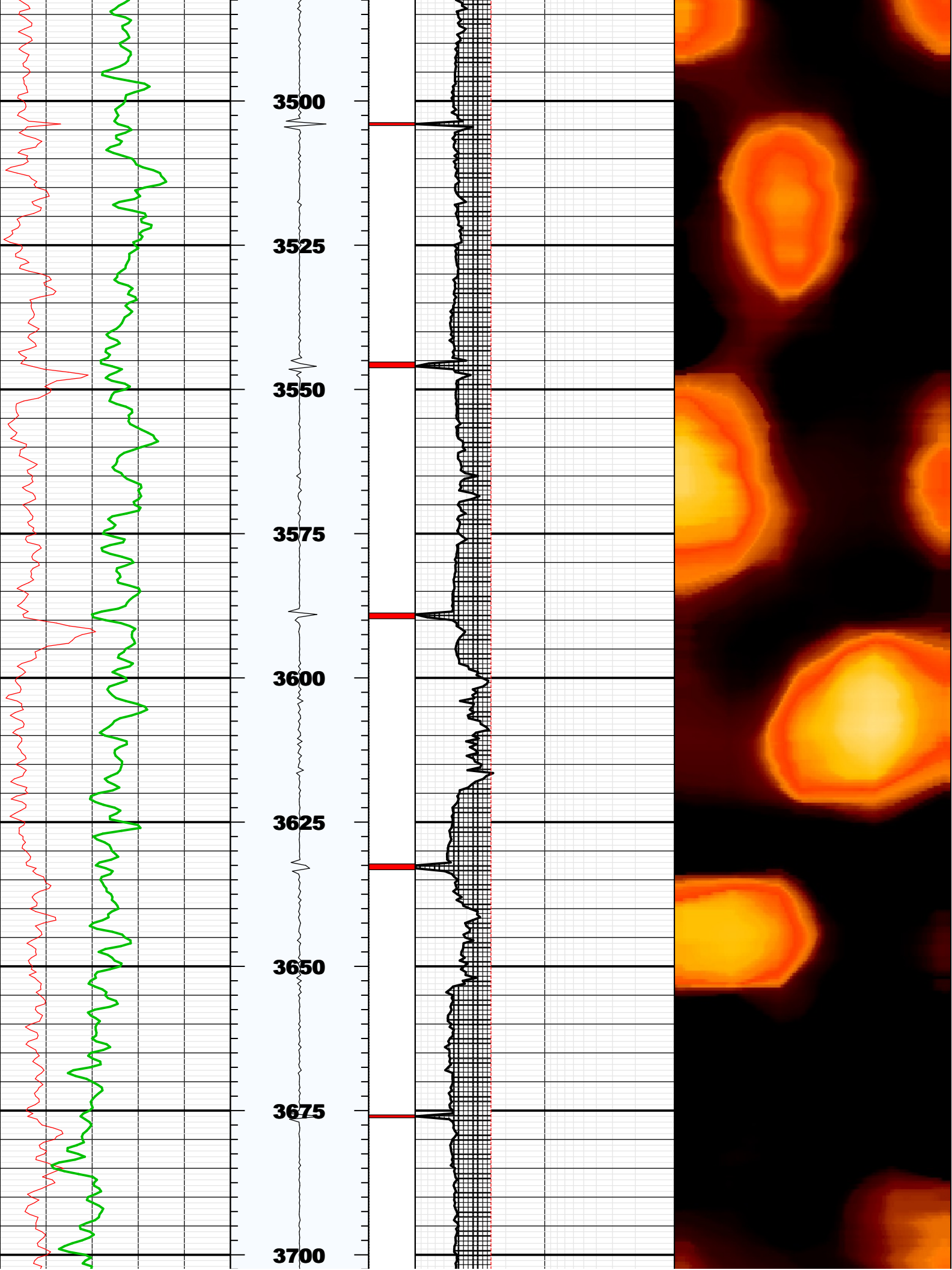


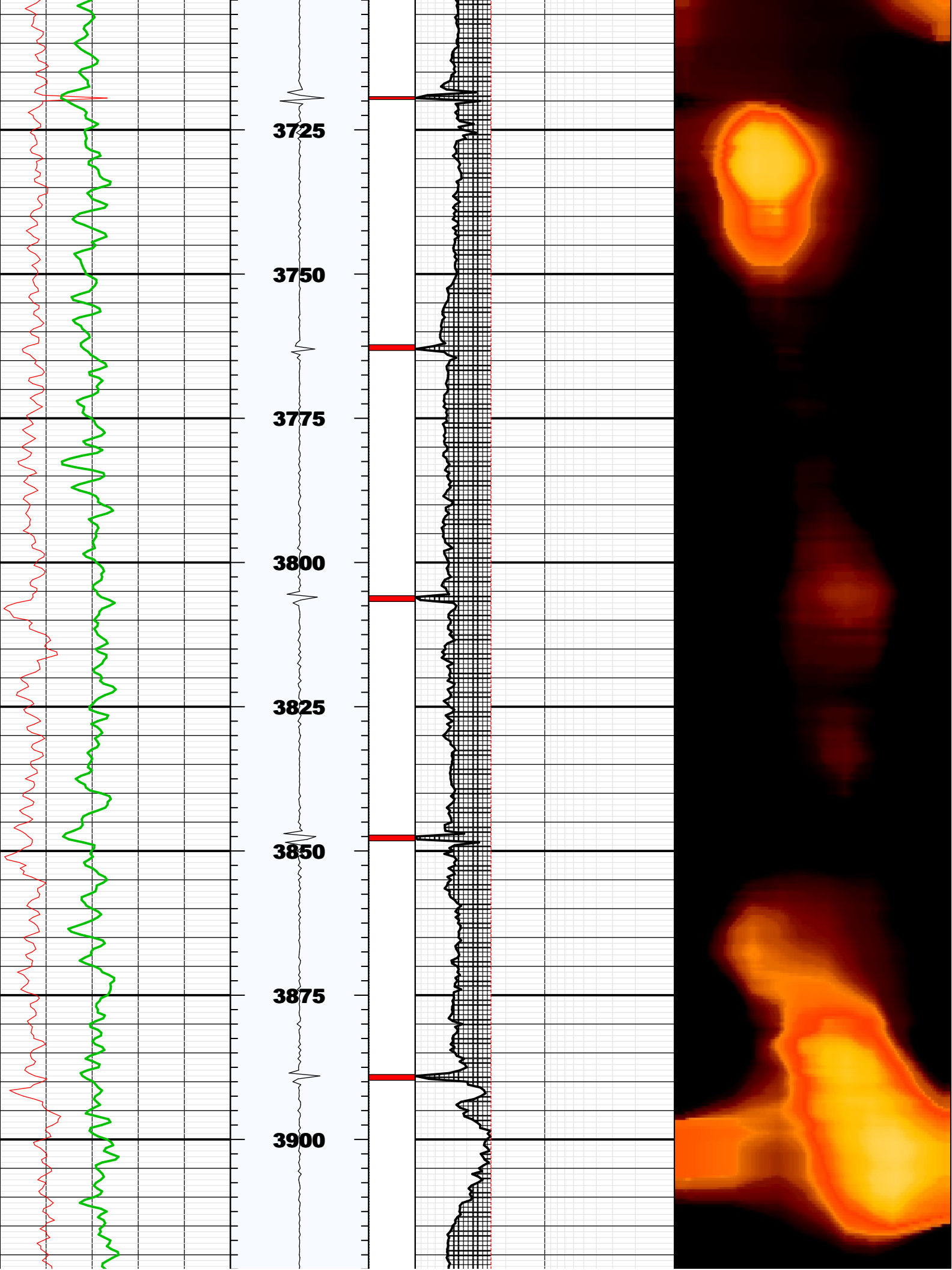


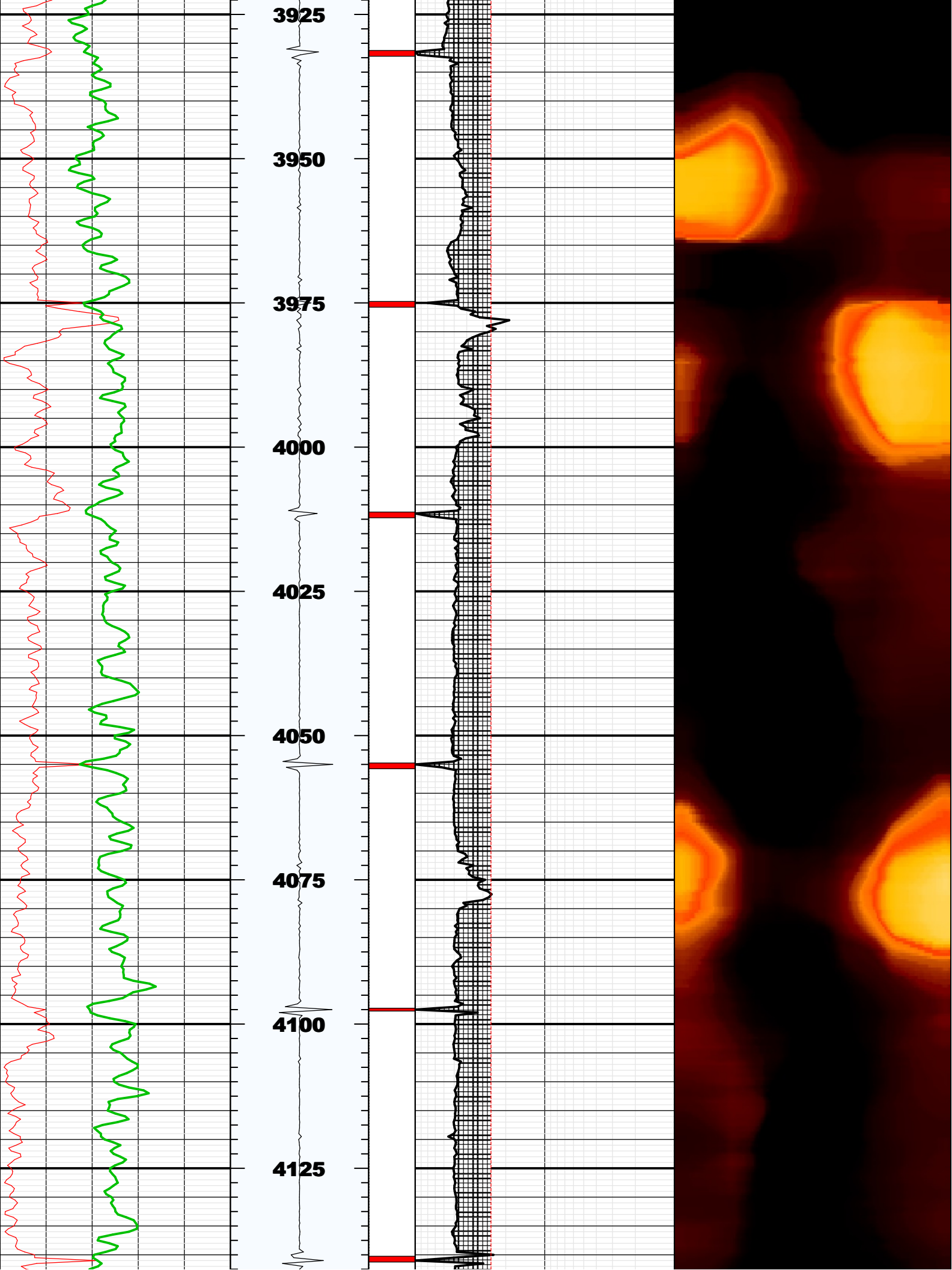


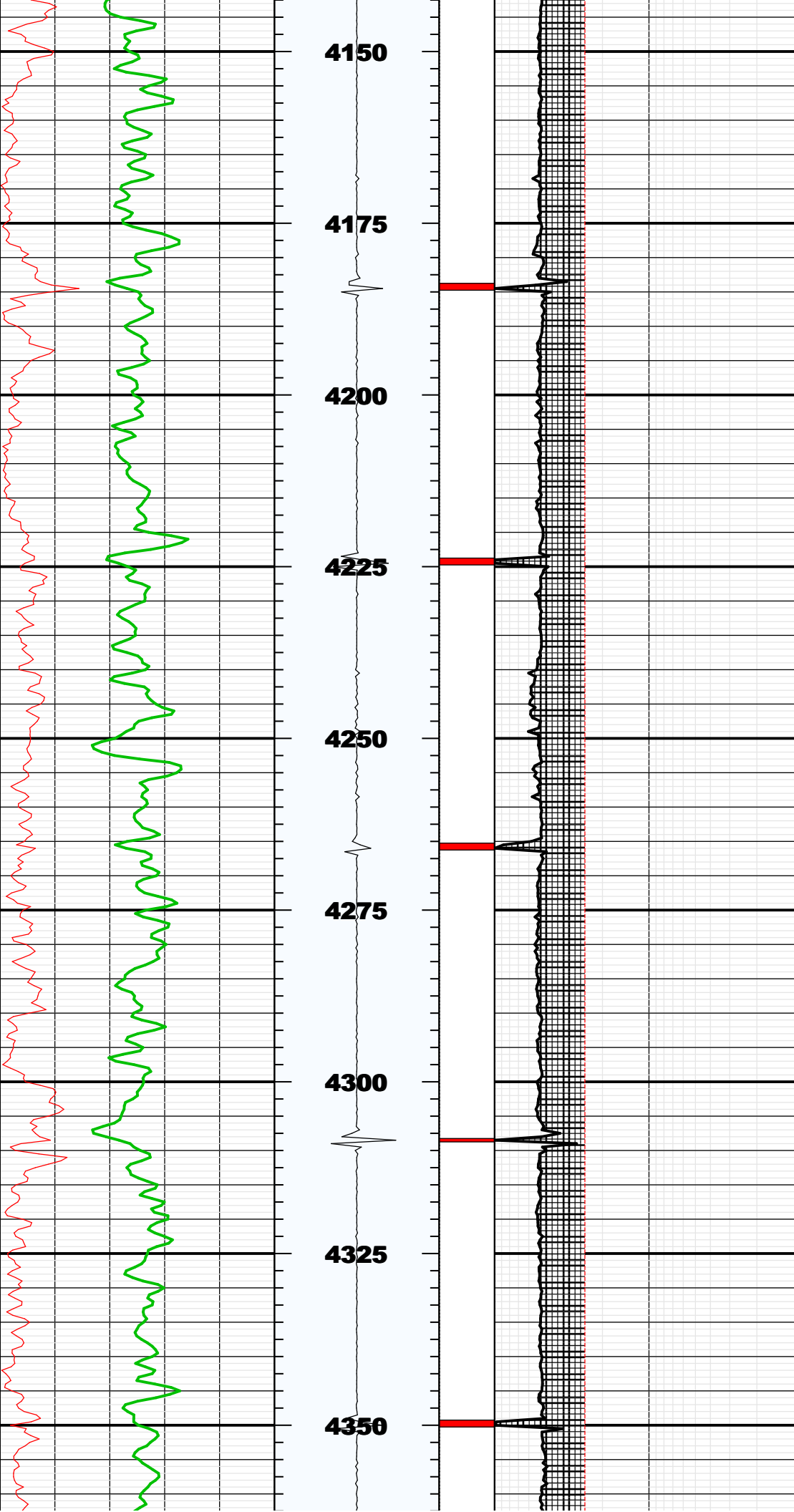


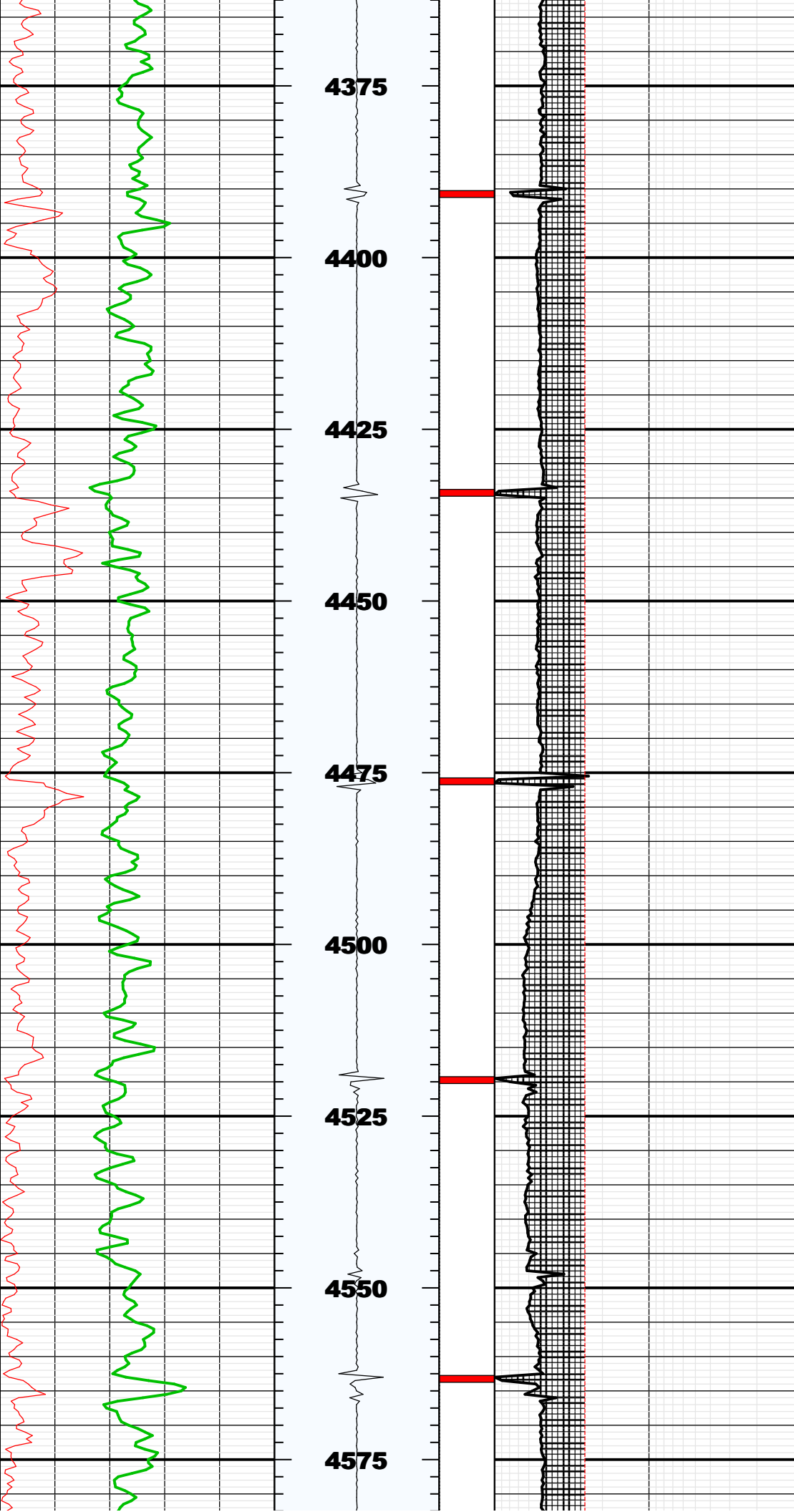


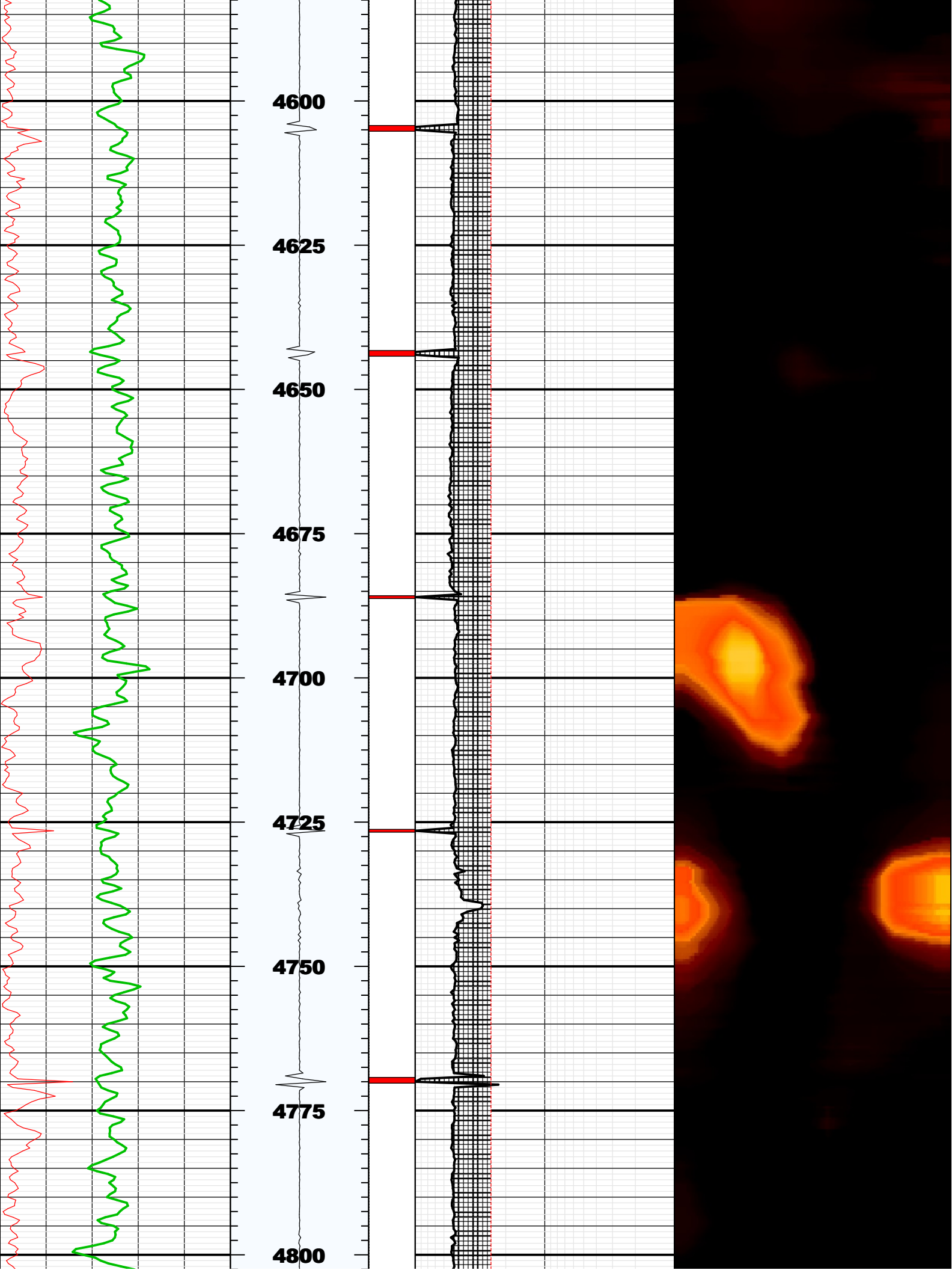


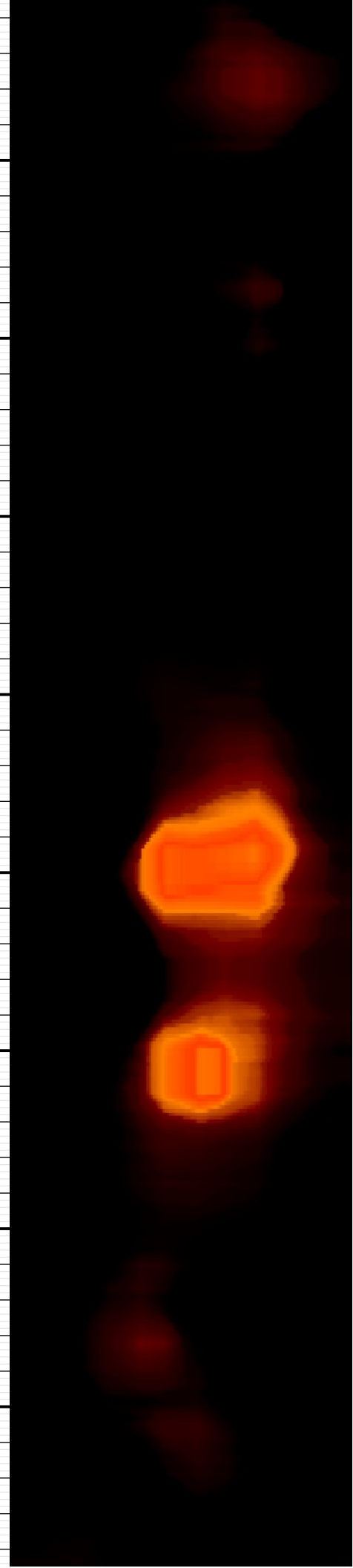
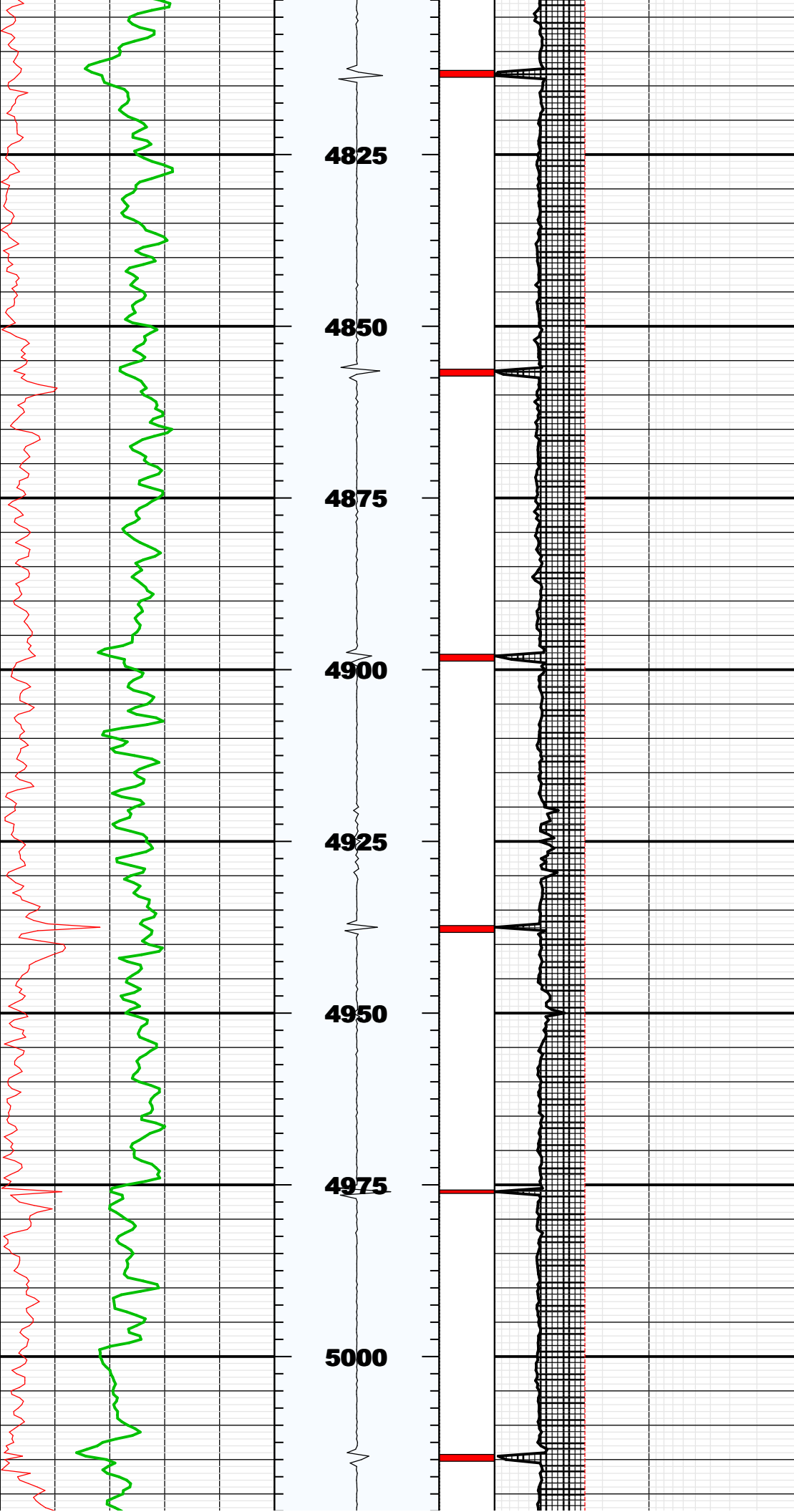


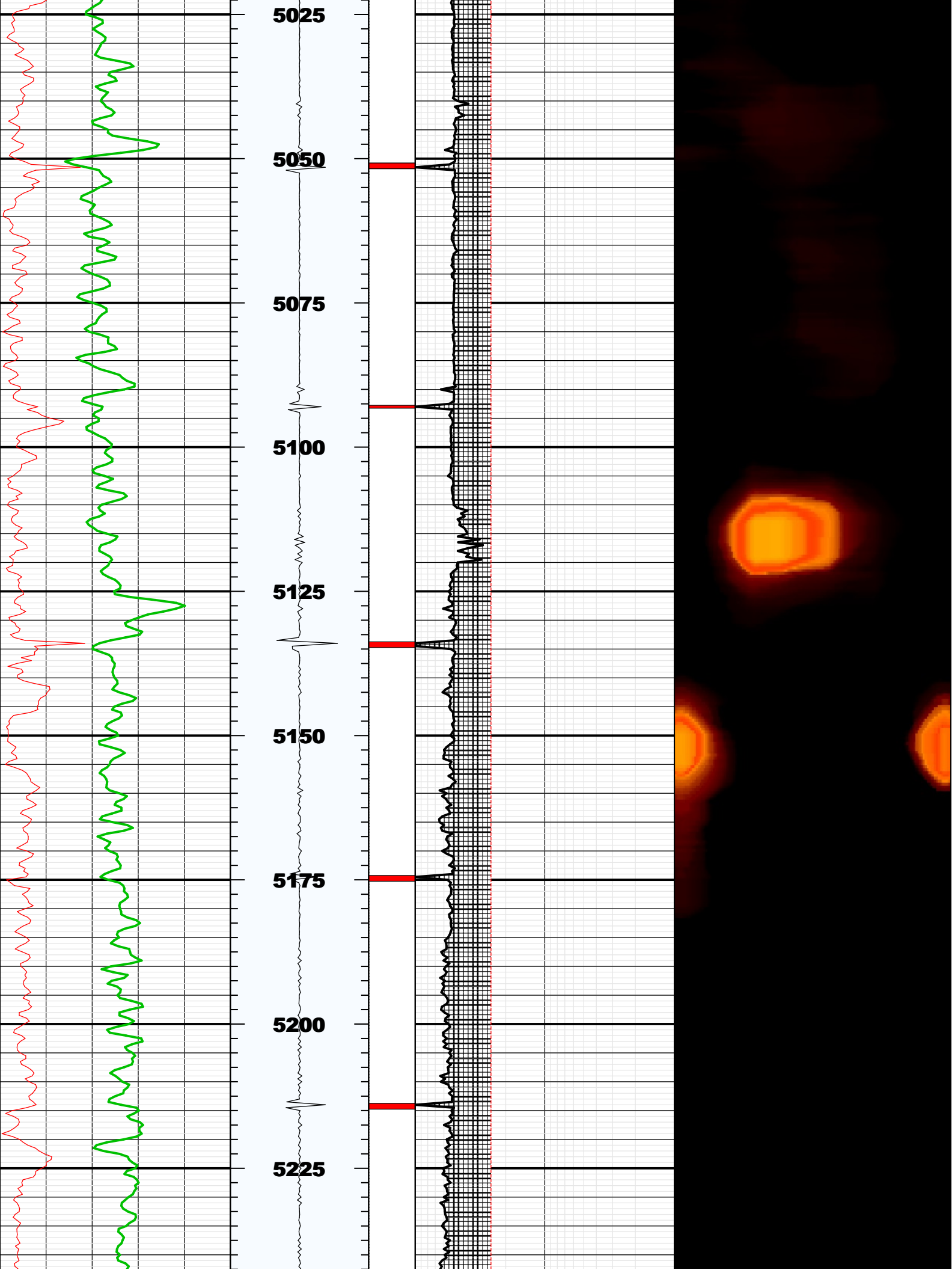


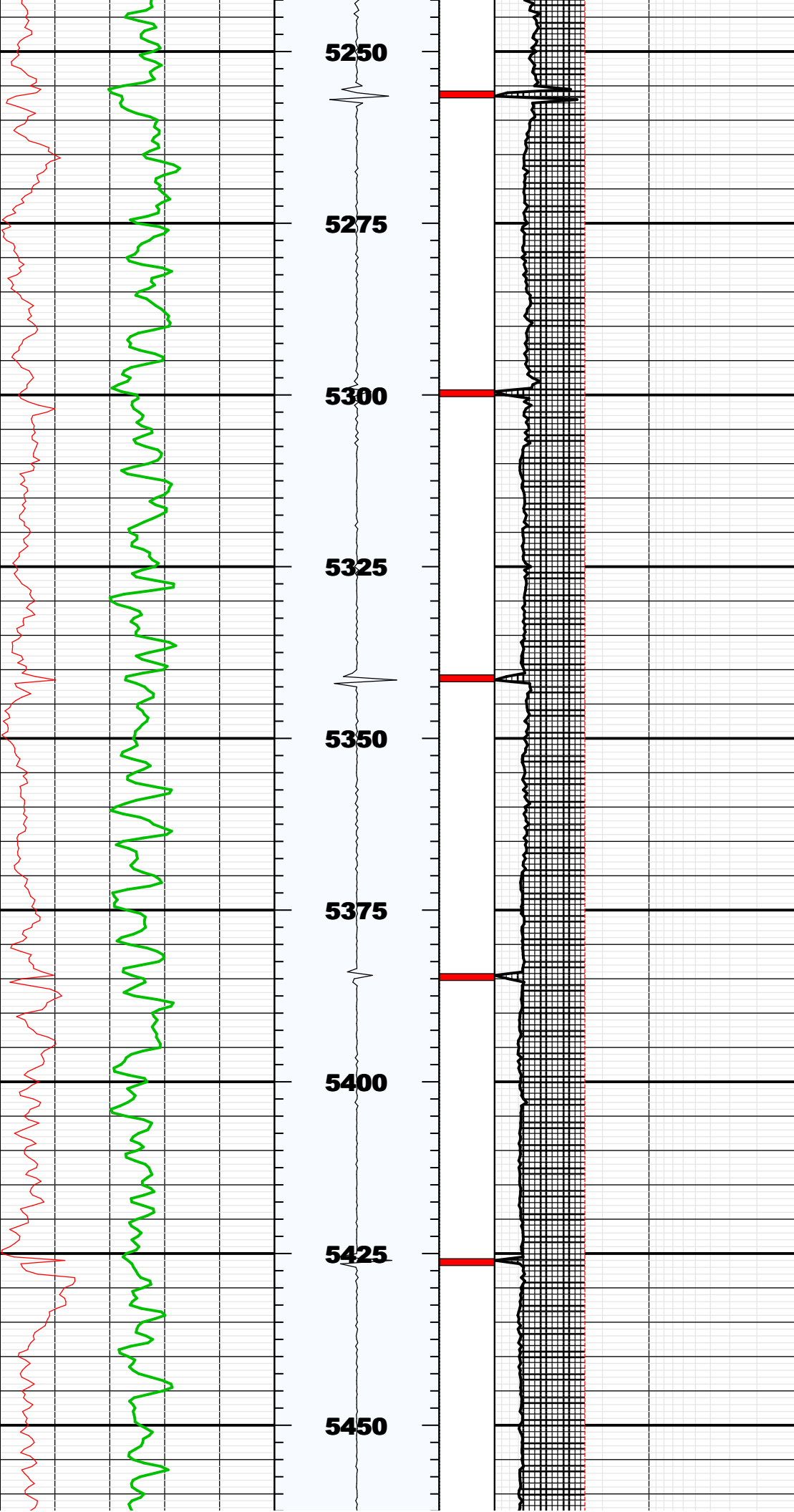


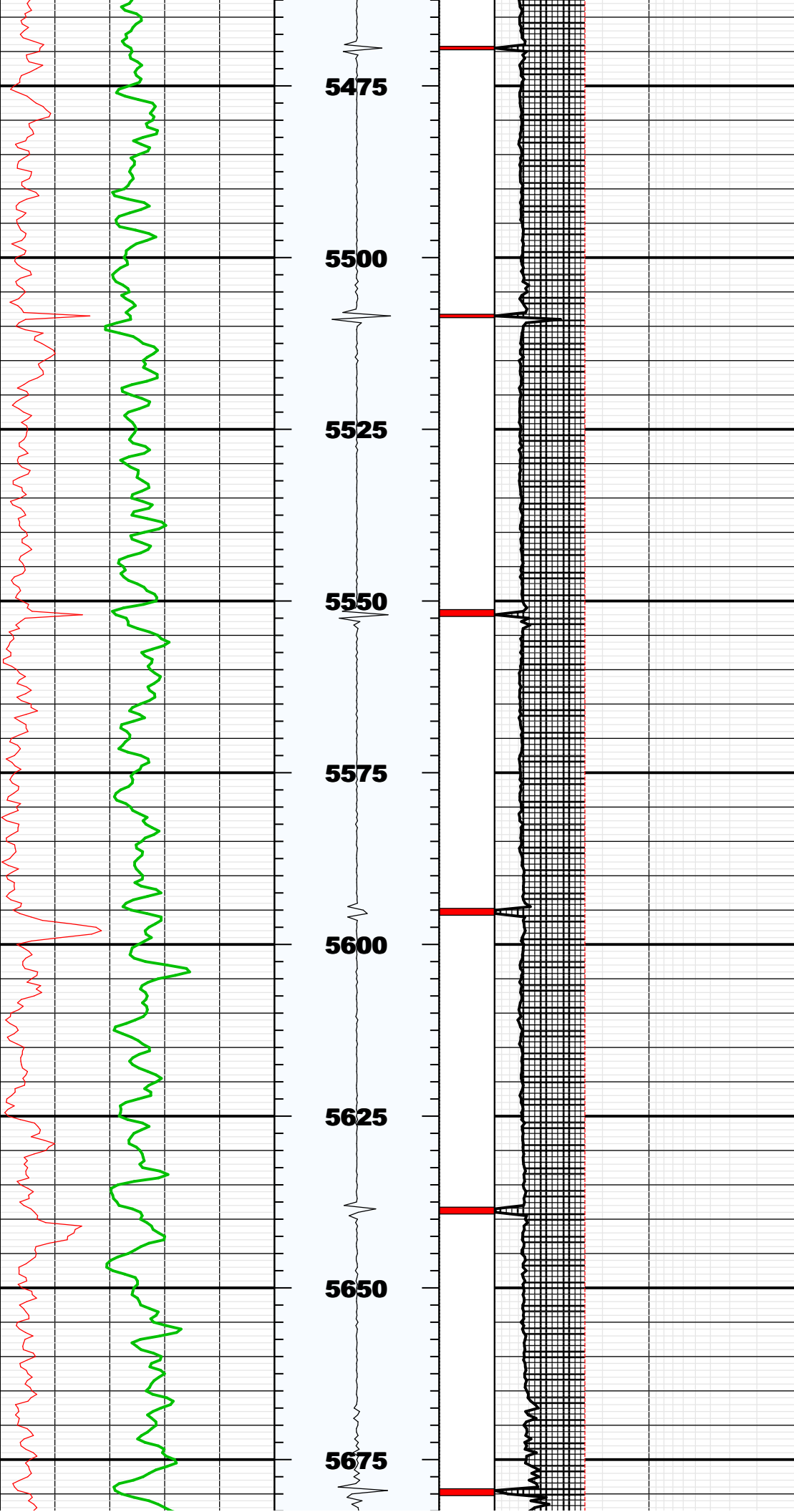


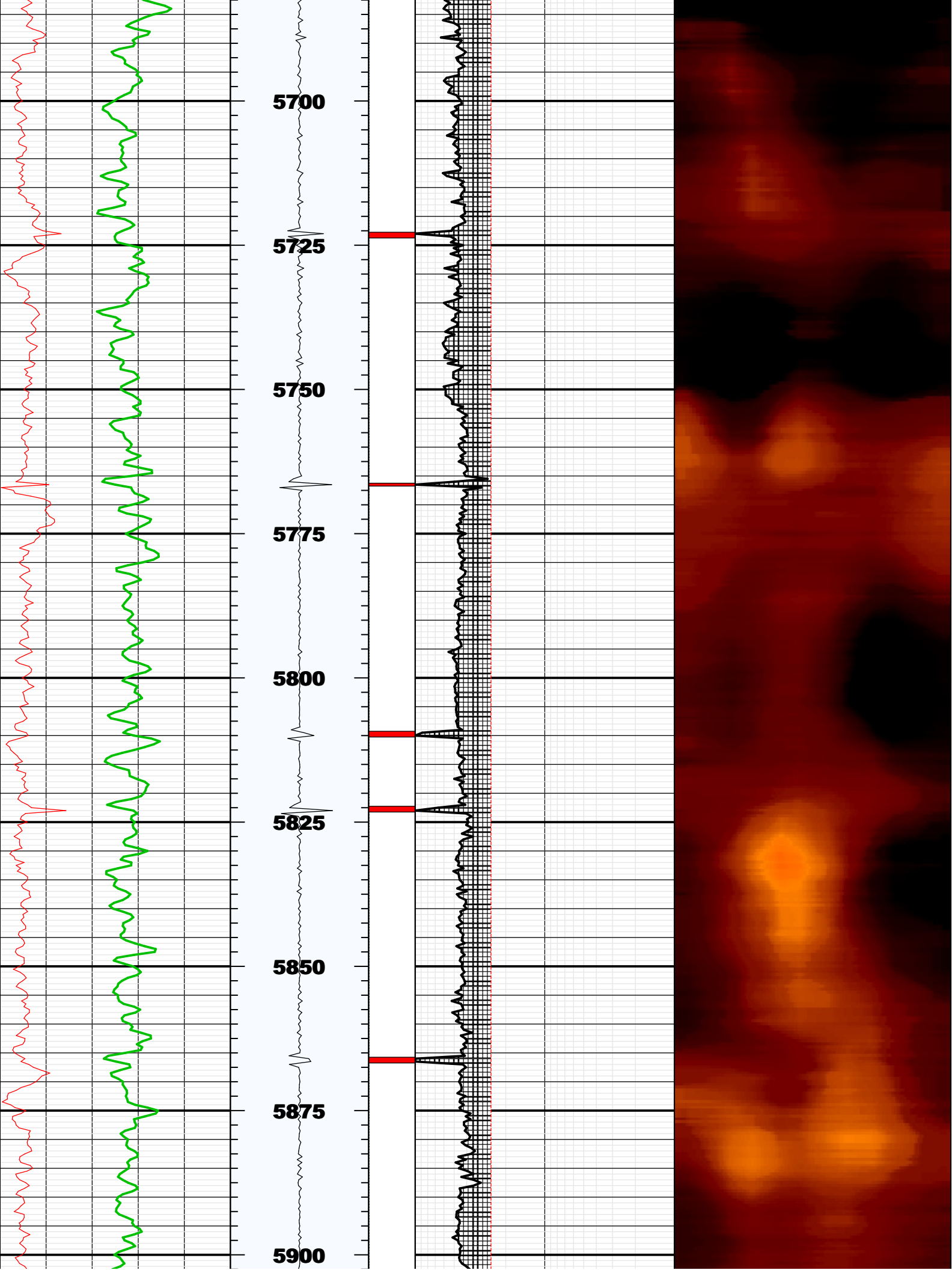


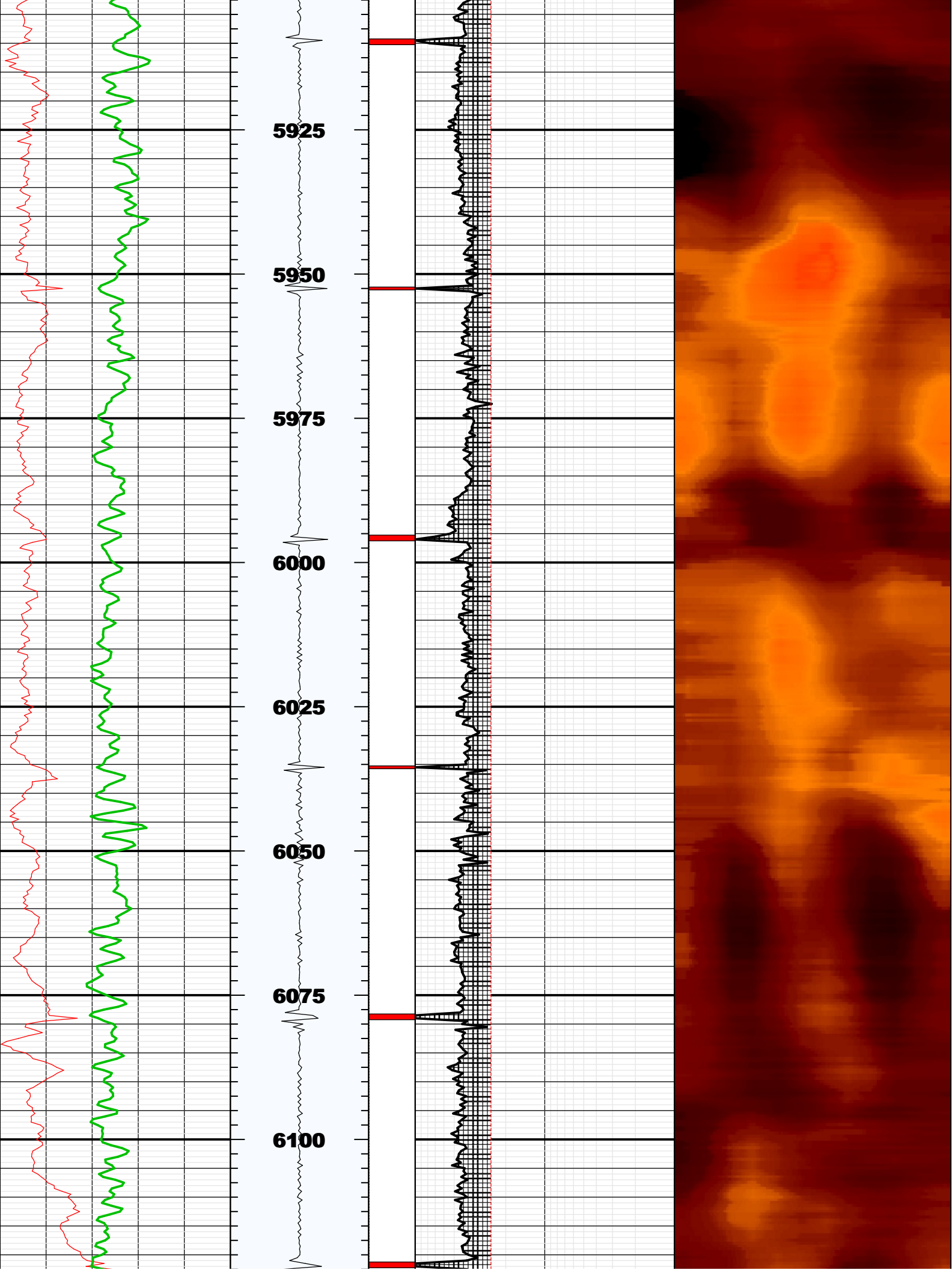


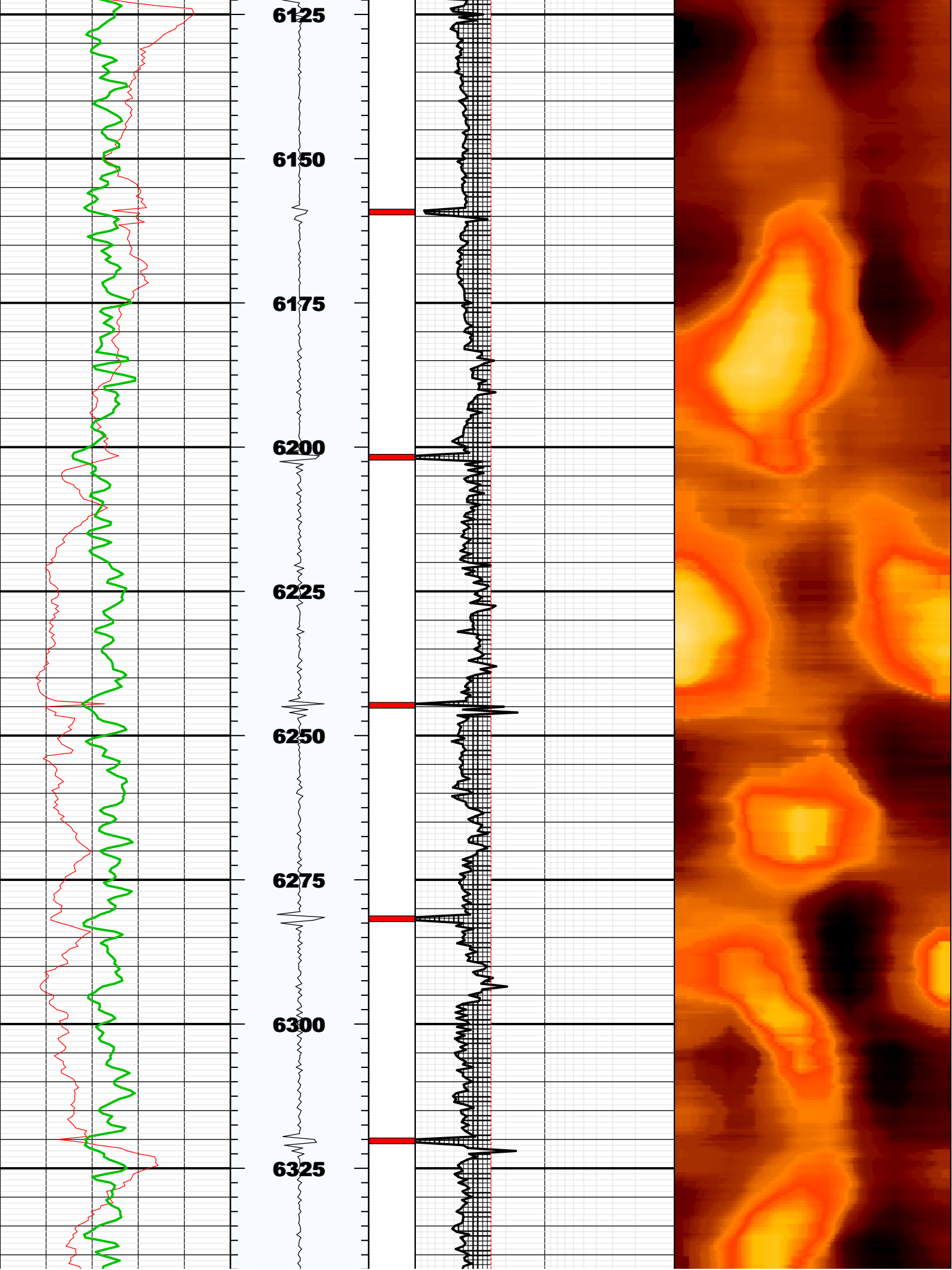


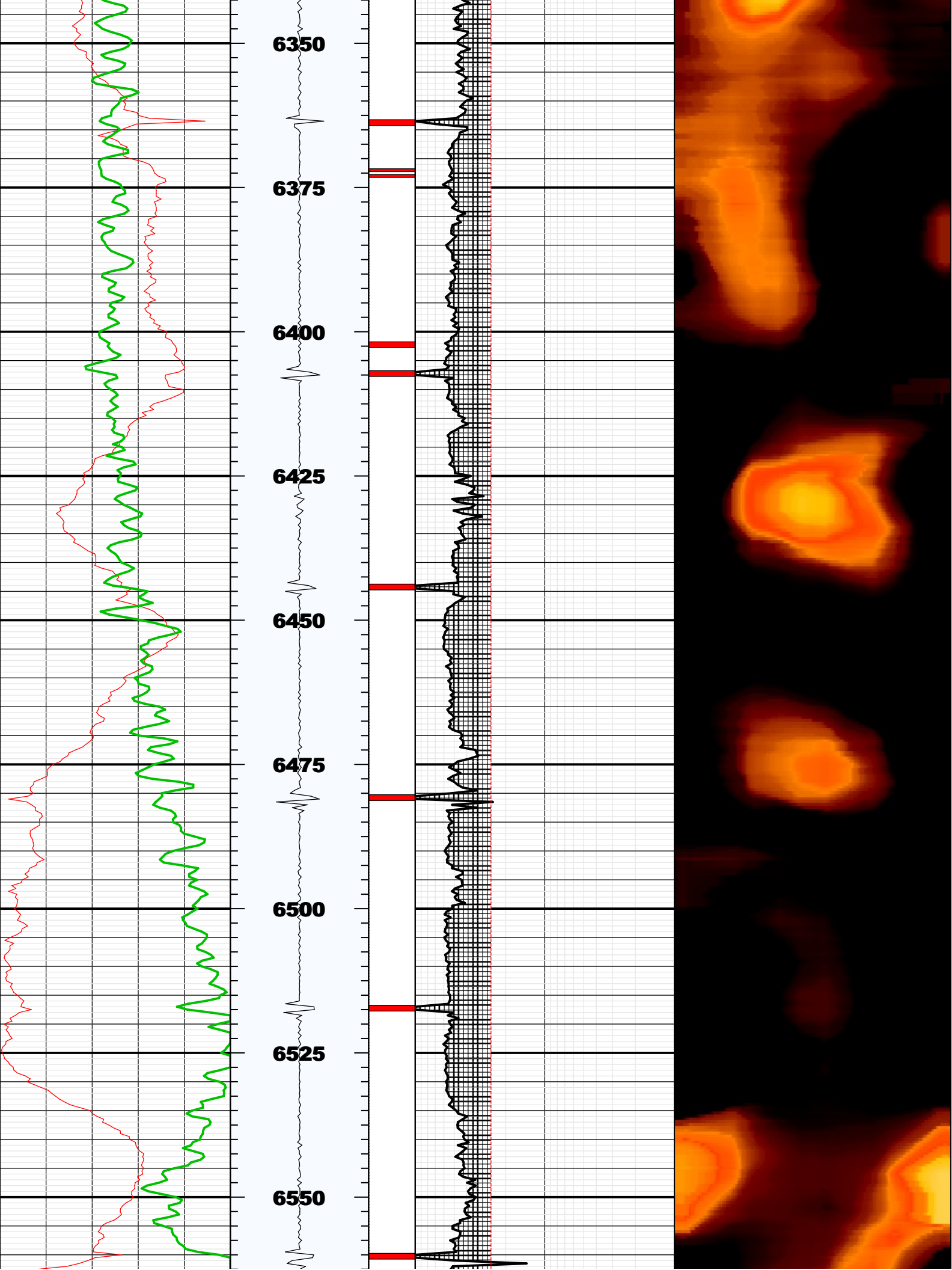


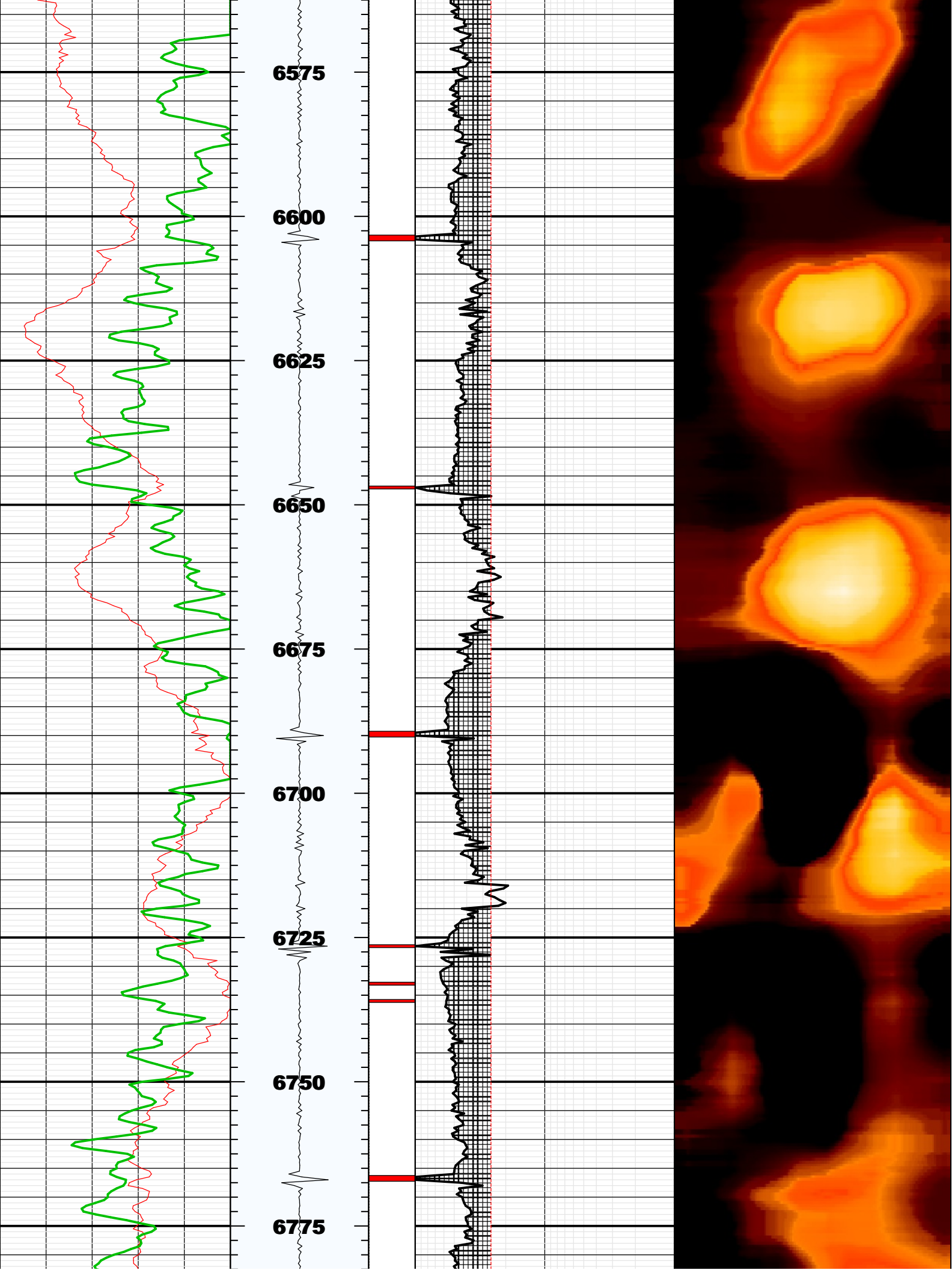


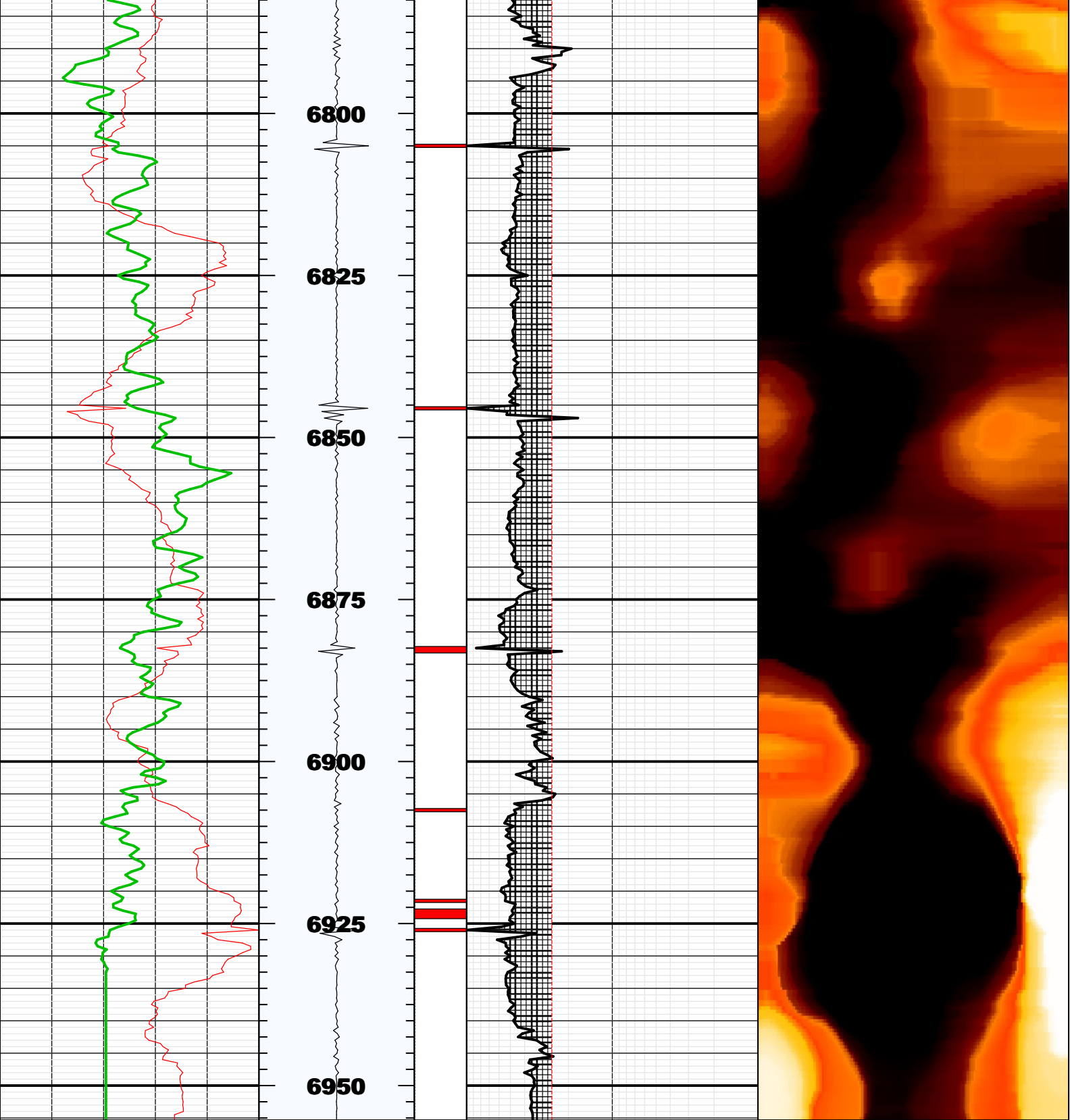








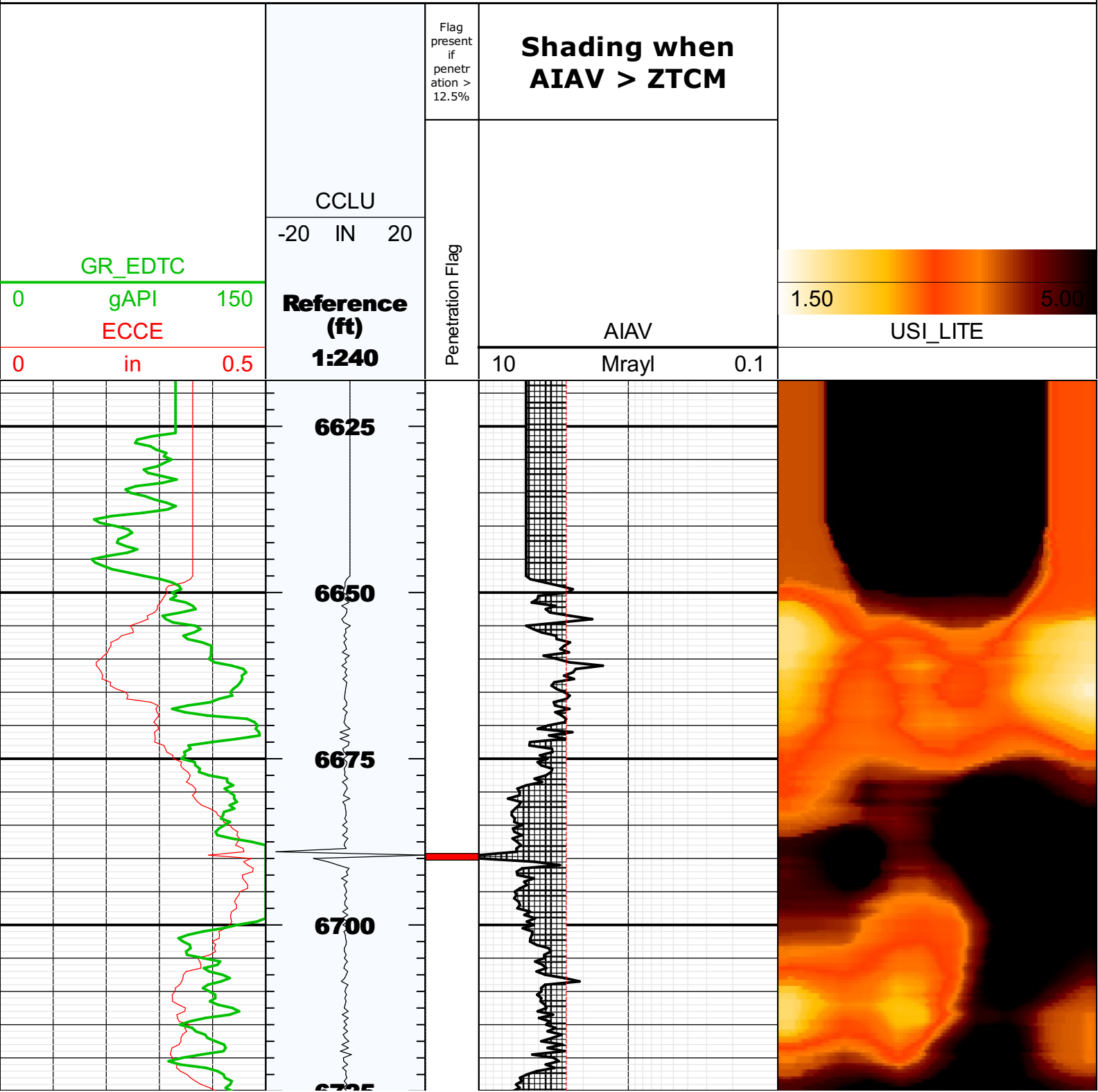


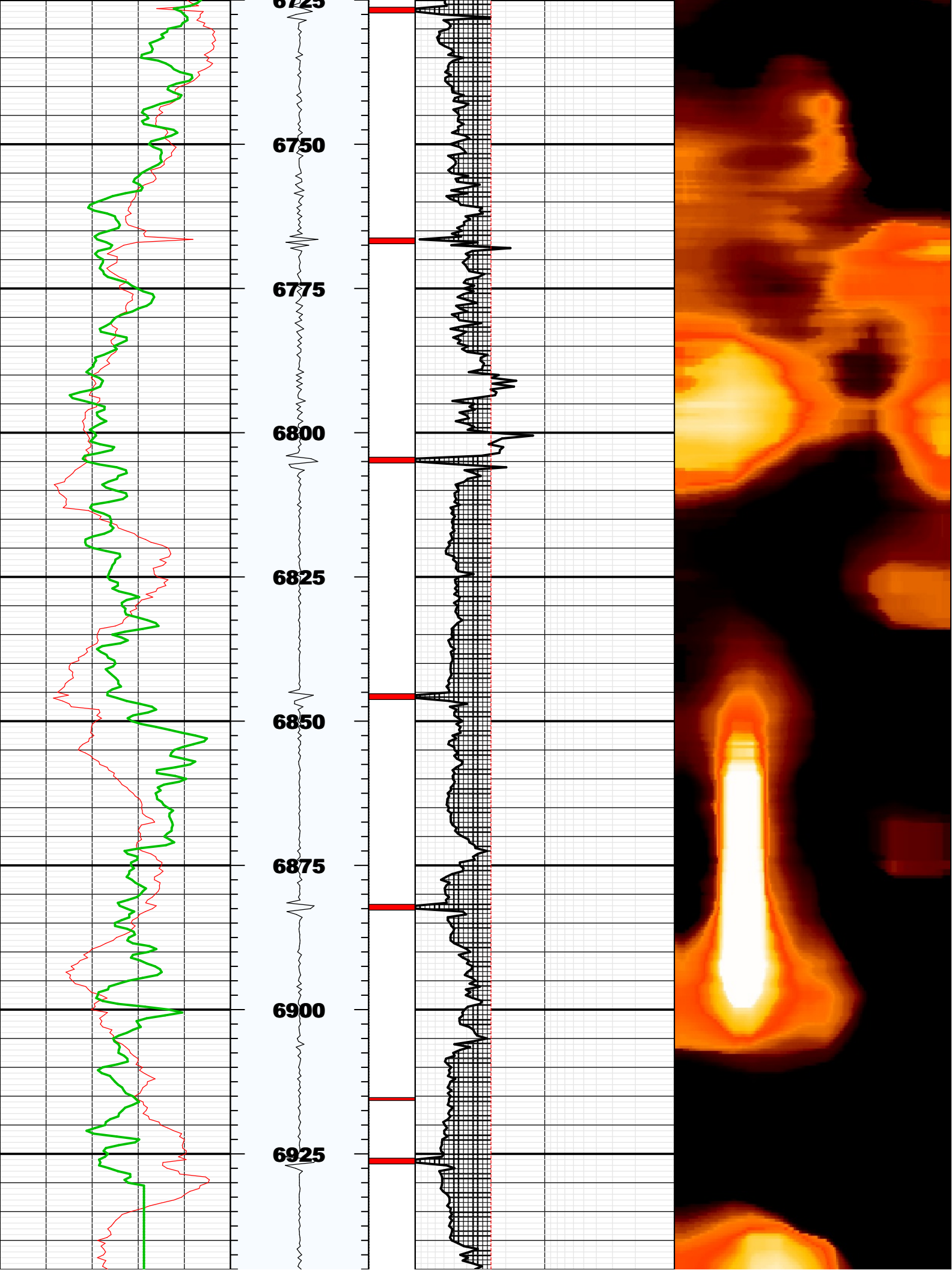


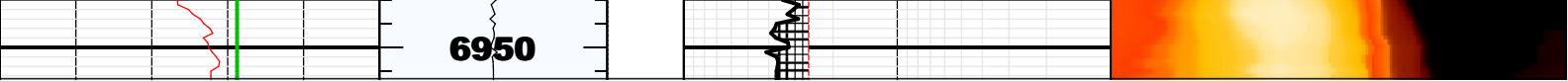
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID			
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.40000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	80	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	38.40100	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	1.82000	MRAY	Acoustic Impedance of Mud
ZTCM	2.60000	MRAY	Acoustic Impedance Threshold for Cement
ZTGS	0.30000	MRAY	Acoustic Impedance Threshold for Gas
WLEN	15.36685	US	T ³ Processing Length

Repeat Pass

Company: Noble Energy Inc
Well: Wells Ranch AA35-68-1BHNC
Field: Wattenberg







Fluid Properties Used for Main Pass

