

Company: Noble Energy Inc

Well: Crow Creek AA01-785
Field: Wattenberg
County: Weld State: Colorado

County: Weld		USI-LITE (2500 psi)					
Field: Wattenberg							
Location: NWNW Sec. 1 T6N R63W							
Well: Crow Creek AA01-785							
Company: Noble Energy Inc							
LOCATION		Permanent Datum: Log Measured From: Drilling Measured From:	GL KB KB	Elev: K.B. 4821.0 F G.L. 4797.0 F D.F. 4820.0 F			
APL Serial No. 05-123-40160					Section 1	Township	Range 63W
Logging Date 06-Feb-2015							
Run Number Run 1							
Depth Driller 6950.0 F							
Schlumberger Depth 6950.0 F							
Bottom Log Interval 6825.0 F							
Top Log Interval 24.0 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							
To 683.0 F							
Casing Size 6950.0 F							
Weight 7.00 IN							
Grade 26.00 LB/F							
From P110							
To 24.0 F							
Max Recorded Temp 6945.0 F							
Logger on bottom (date) 224.8							
Location 06-Feb-2015							
Recorded By Fort Morgan CO							
Witnessed By Keri Ondrus							

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: F713384 Length: 14000.00098

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

12.5 PPG tuned spacer and 13.6 PPG single slurry cement.
During cement job casing pressure tested at 3000 PSI for 15 min.
12.5 PPG tuned spacer and 13.6 PPG single slurry cement.

0 PSI ran on repeat pass and 2500 PSI ran on main pass.

Top of Cement seen @ 455'. Expected TOC @ 542'.

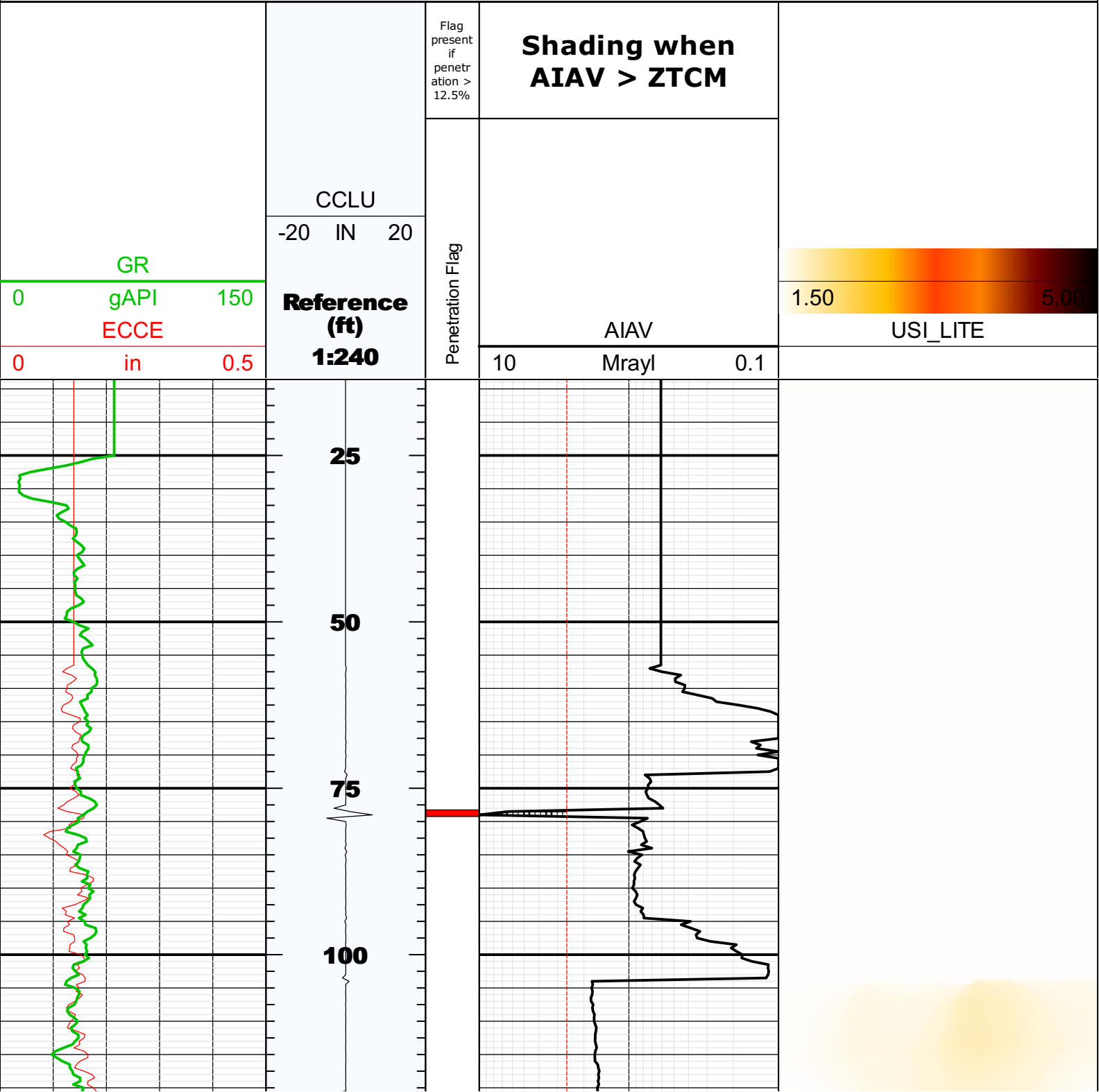
Top of the 4.5 liner at 6834'.

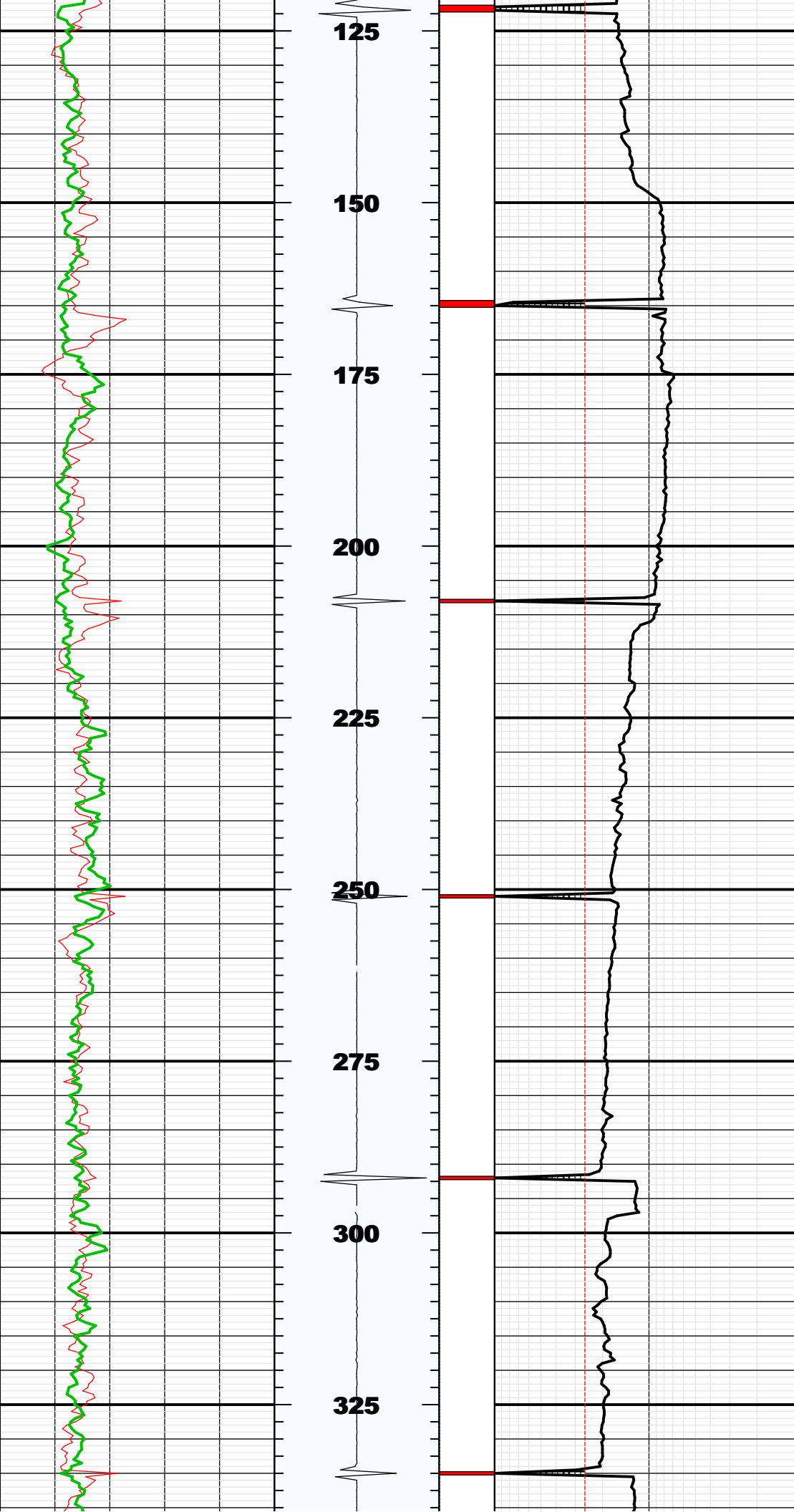
Bottom log interval at 6820 to maintain distance from liner top.

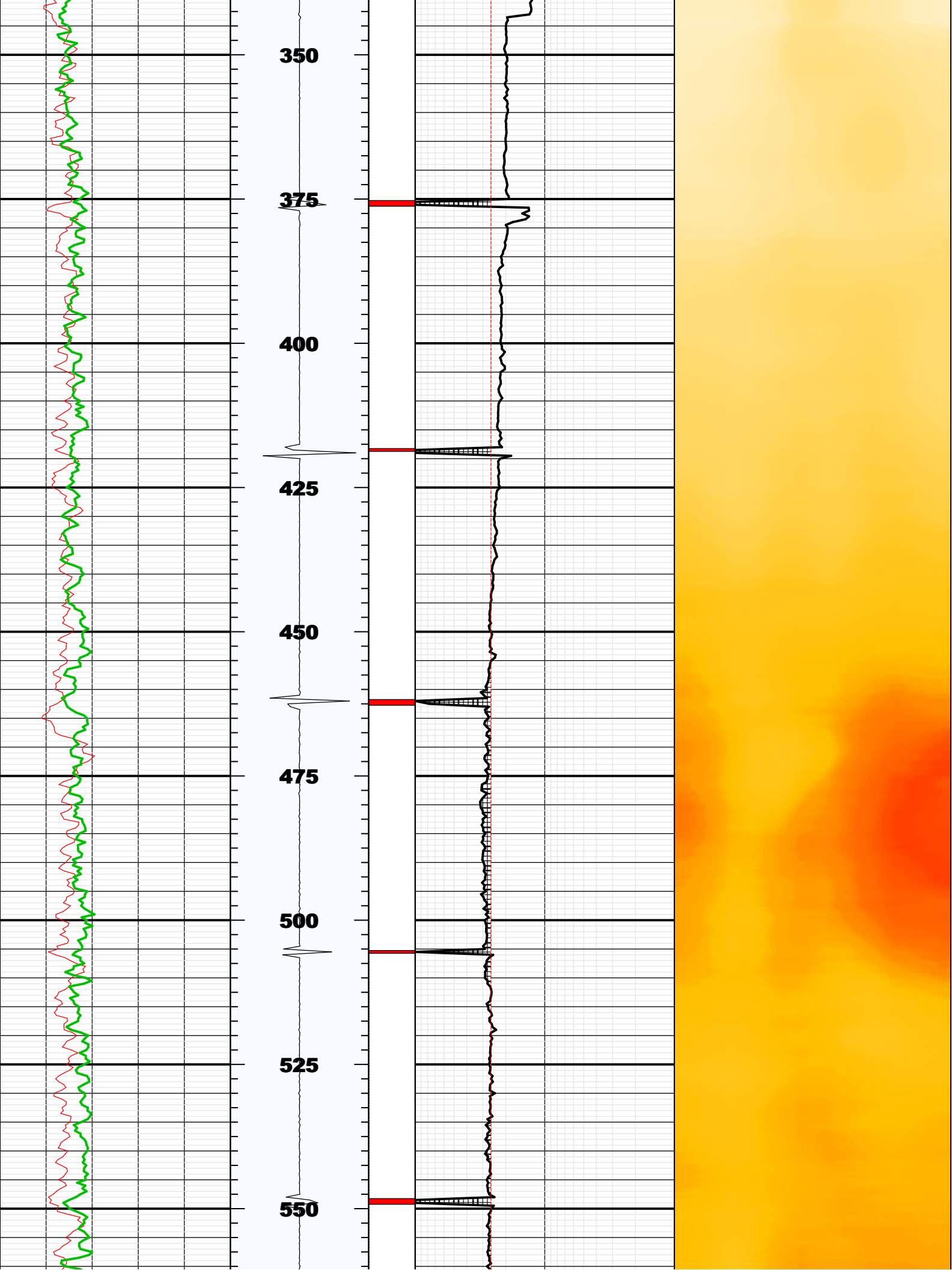
Bottom hole temperature 225 degF measured at depth.

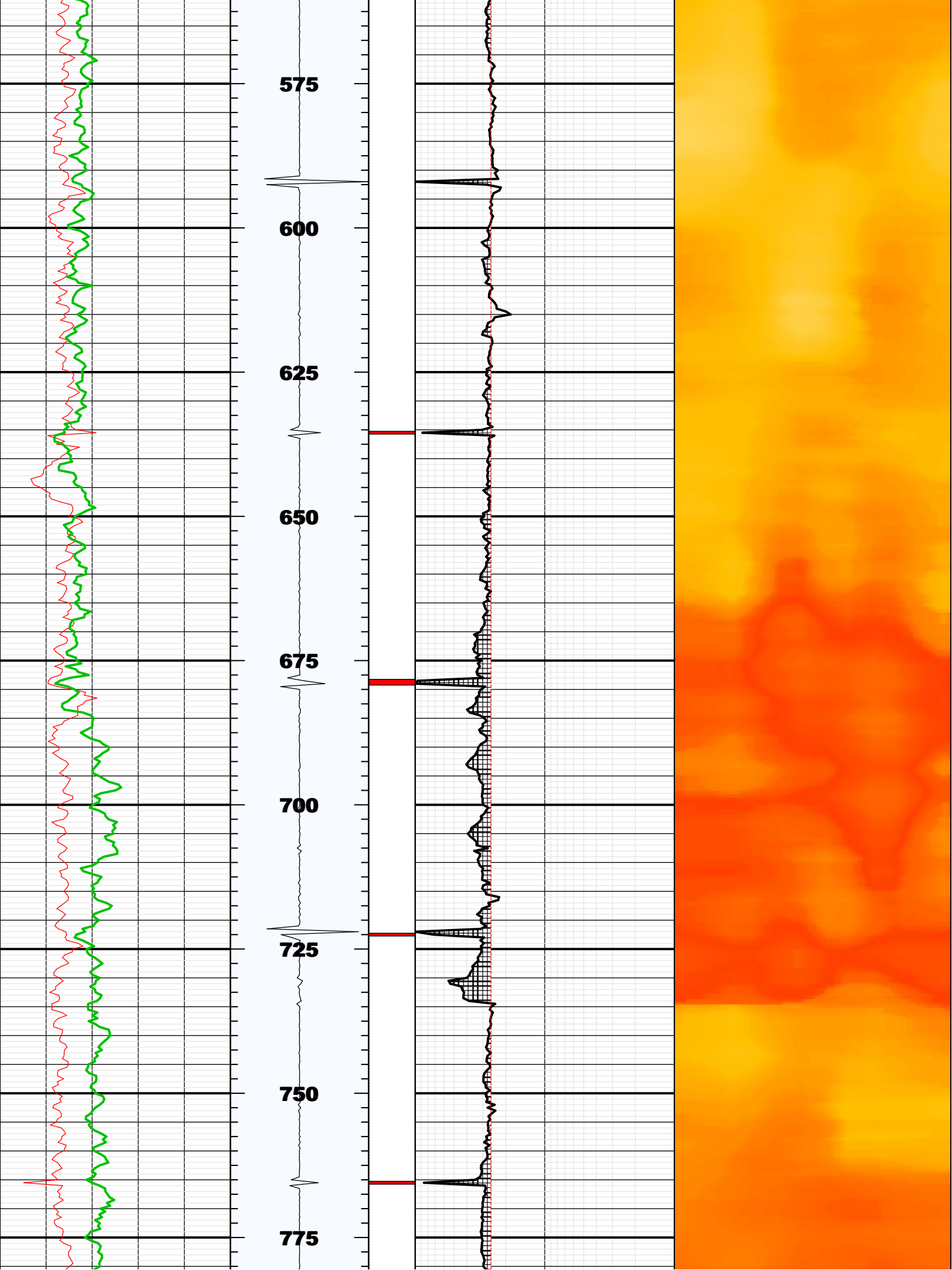
Main Pass

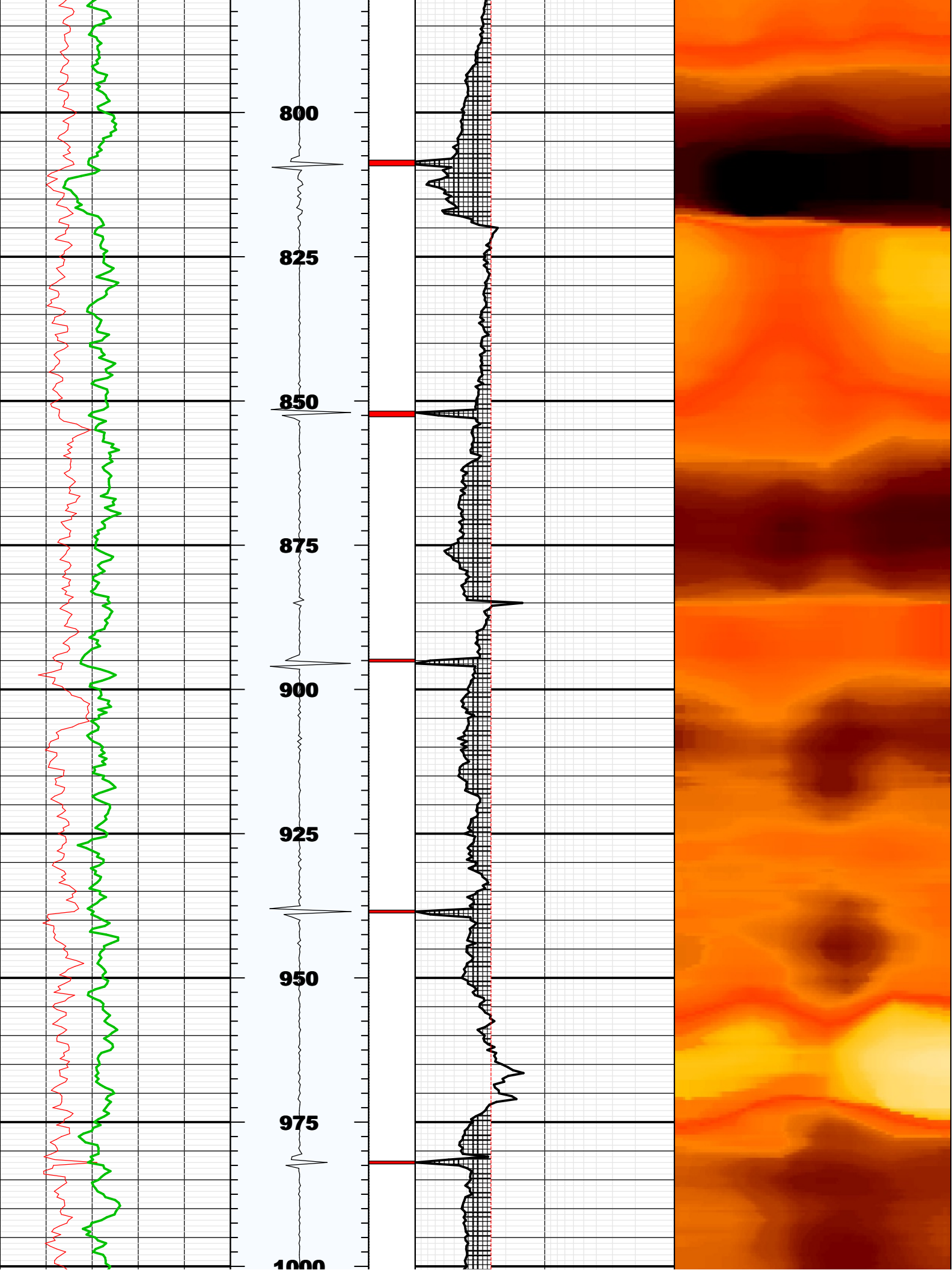
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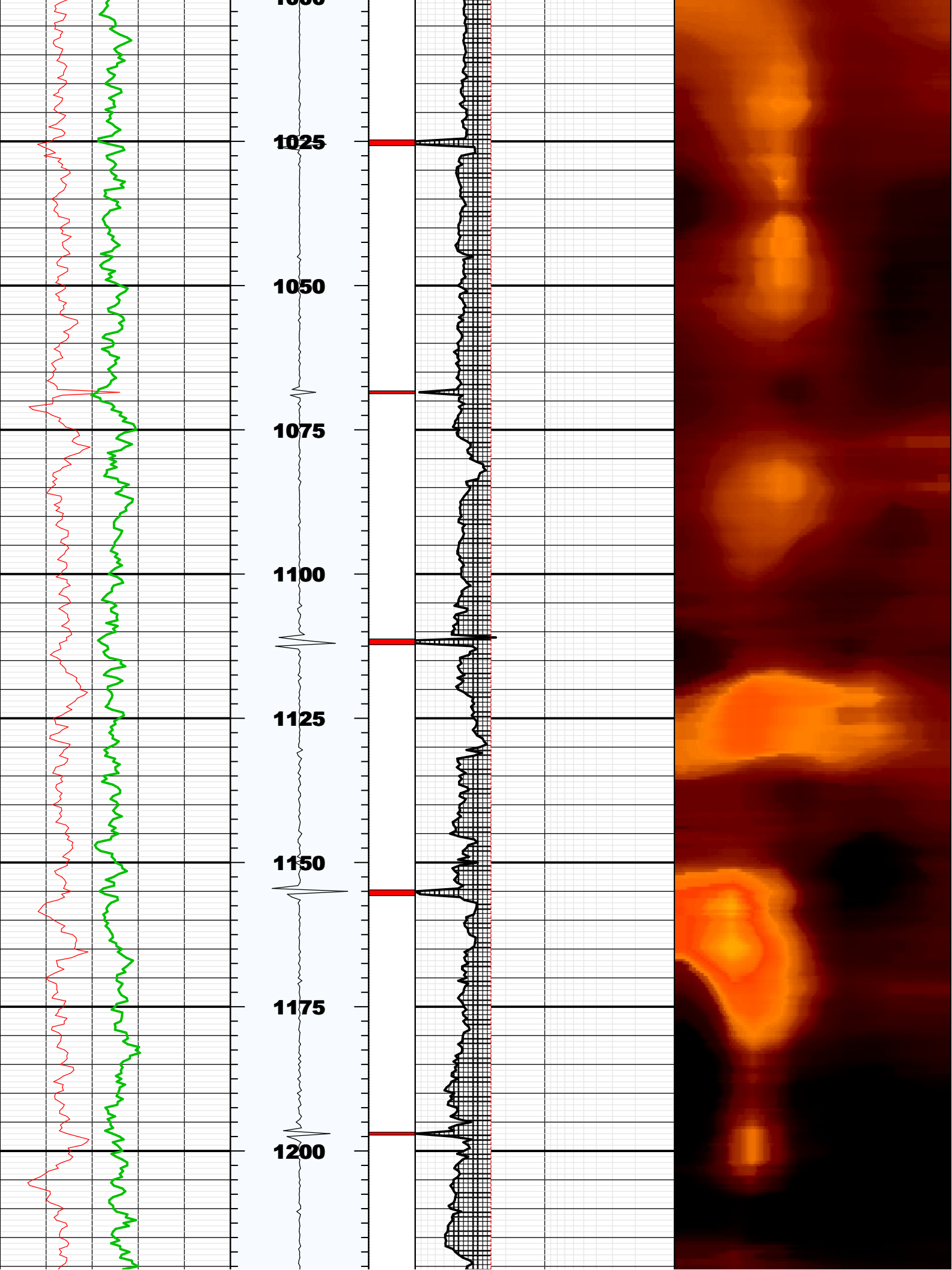


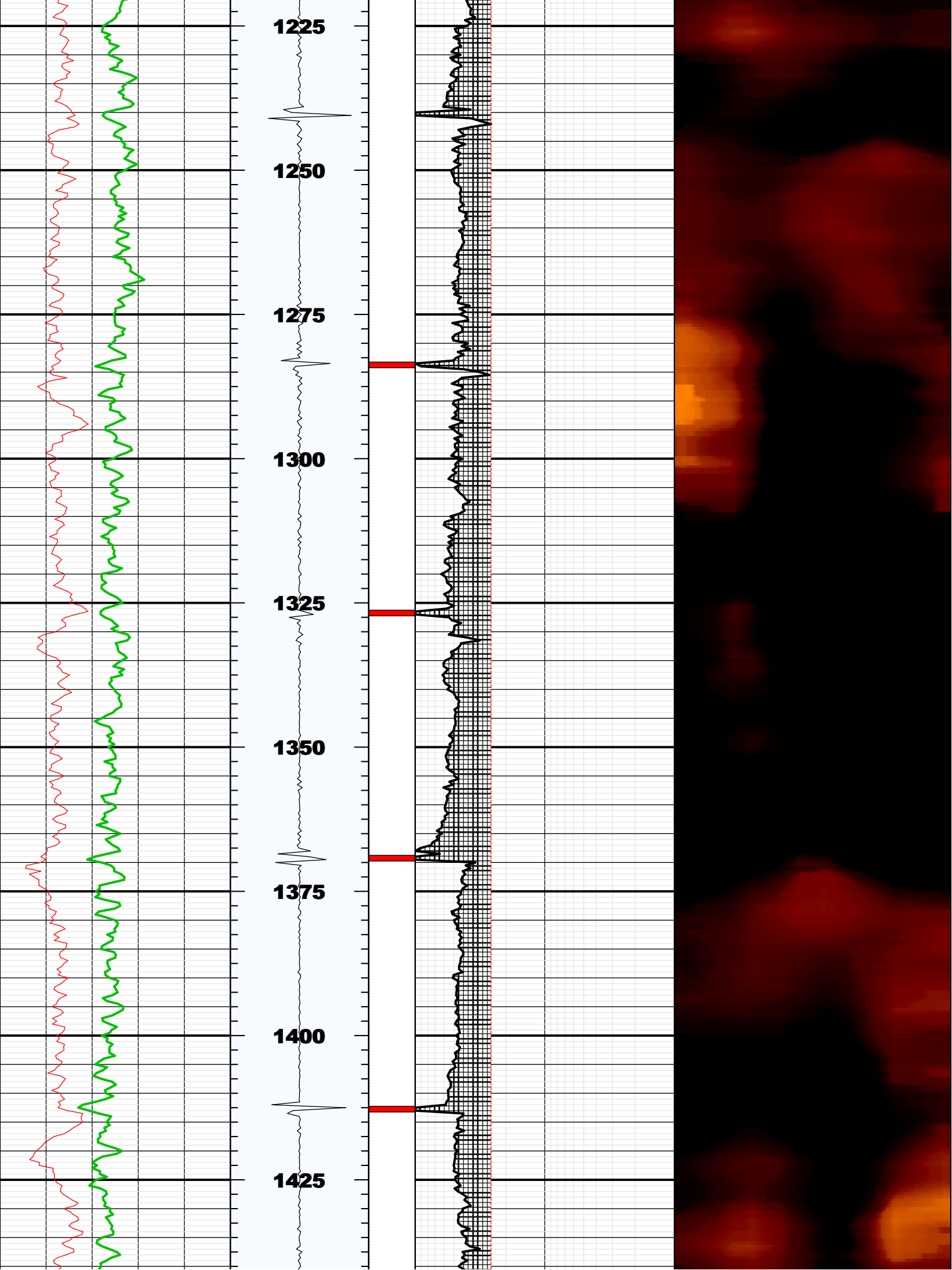


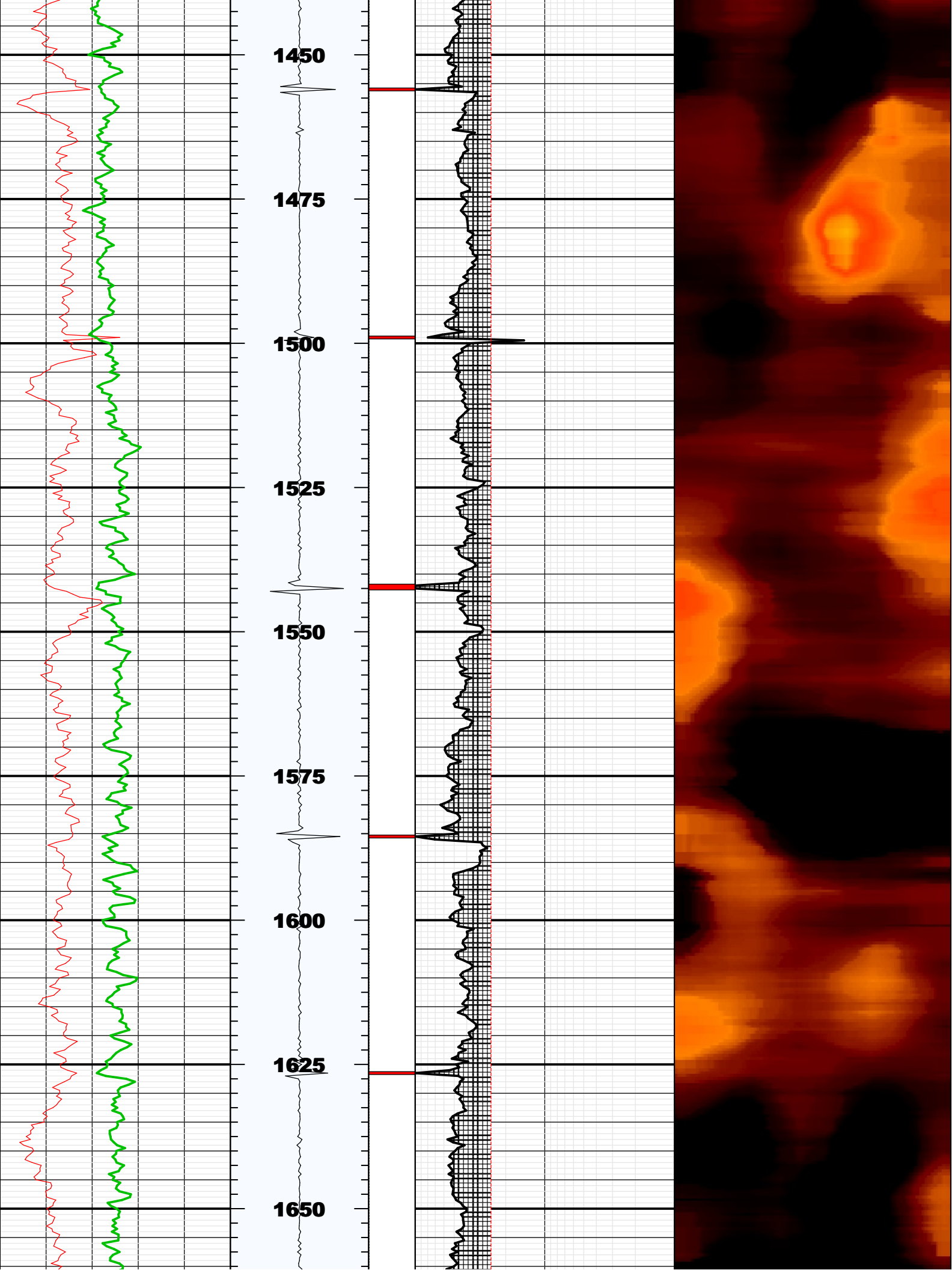


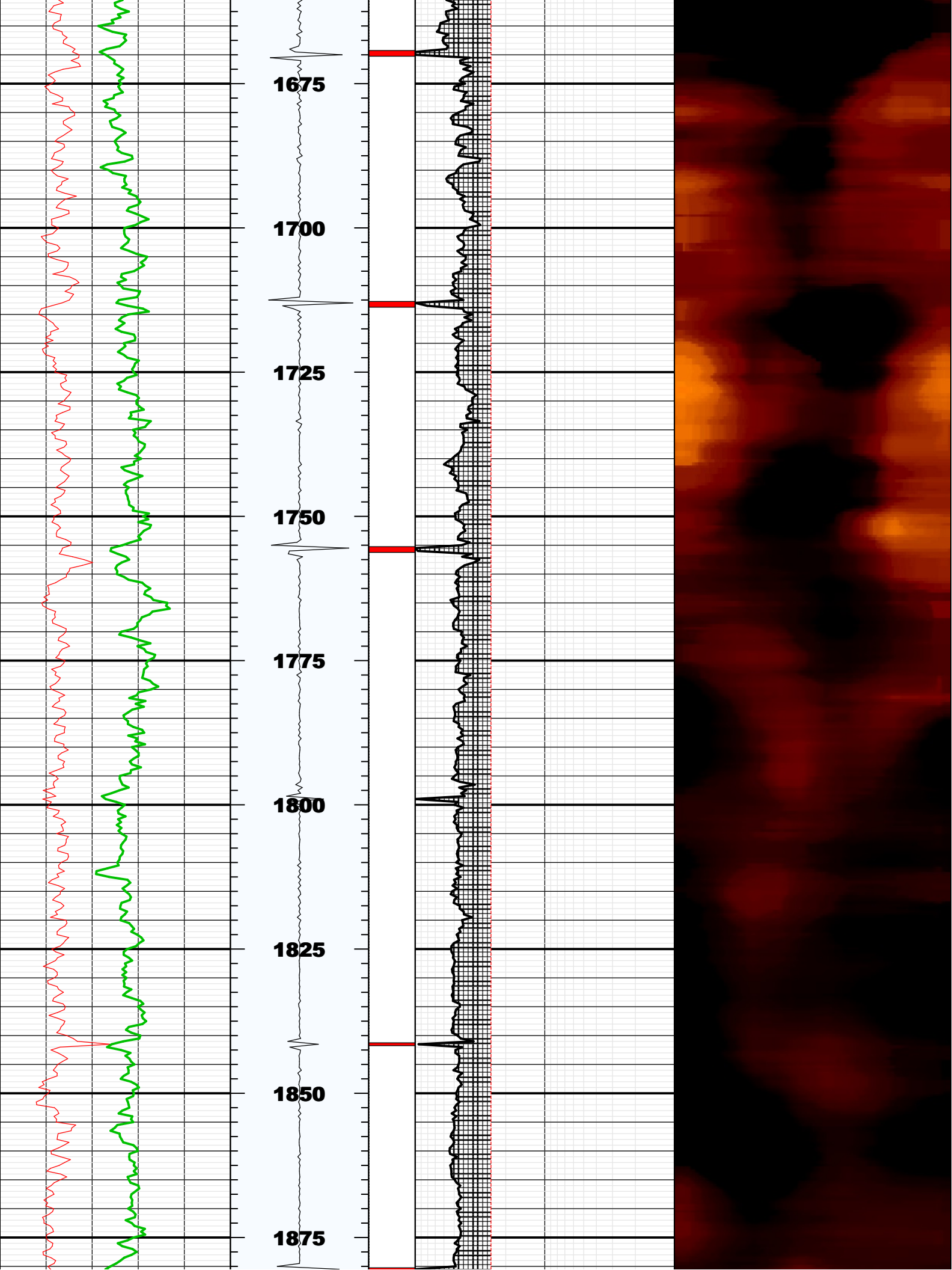


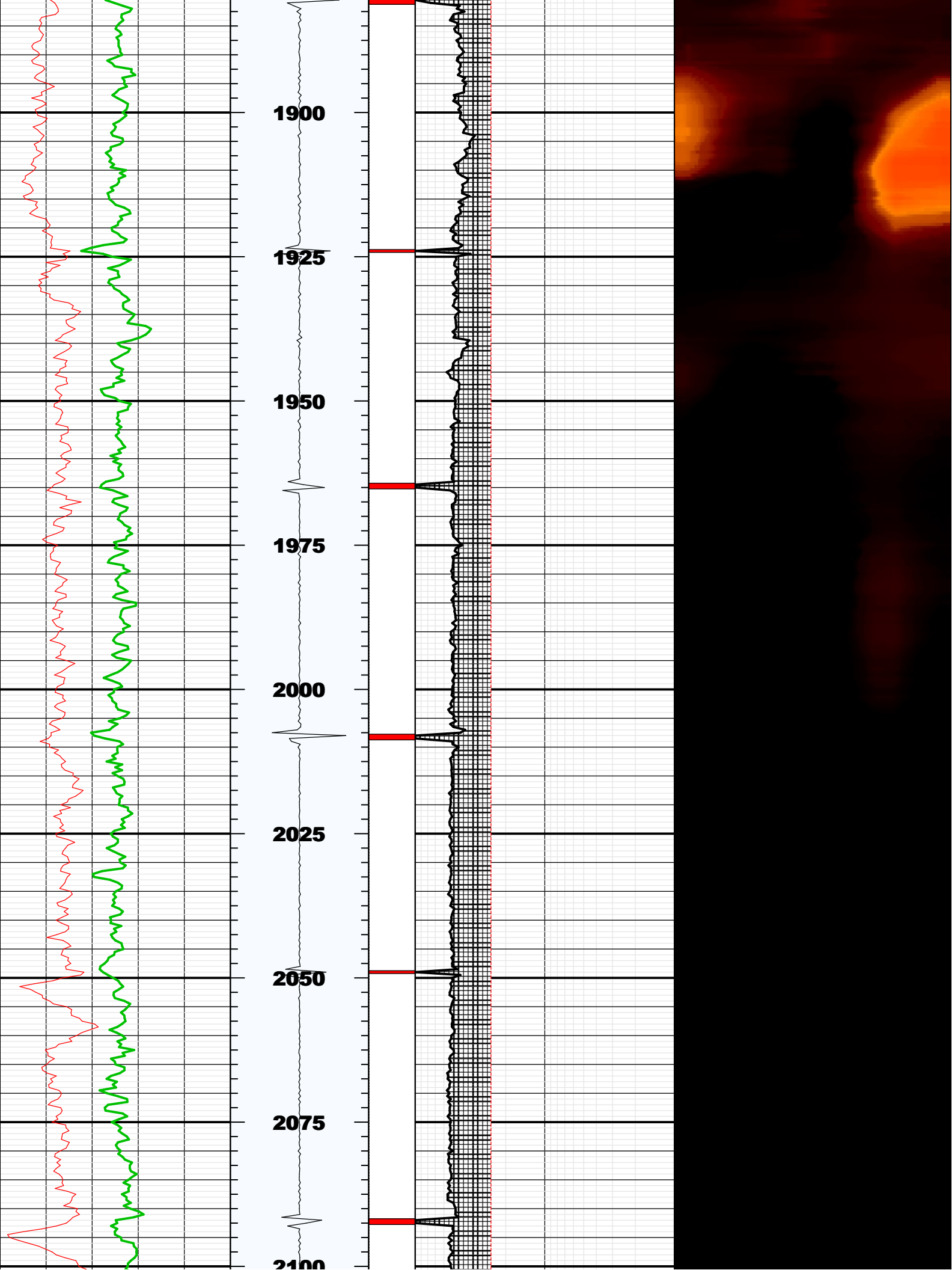


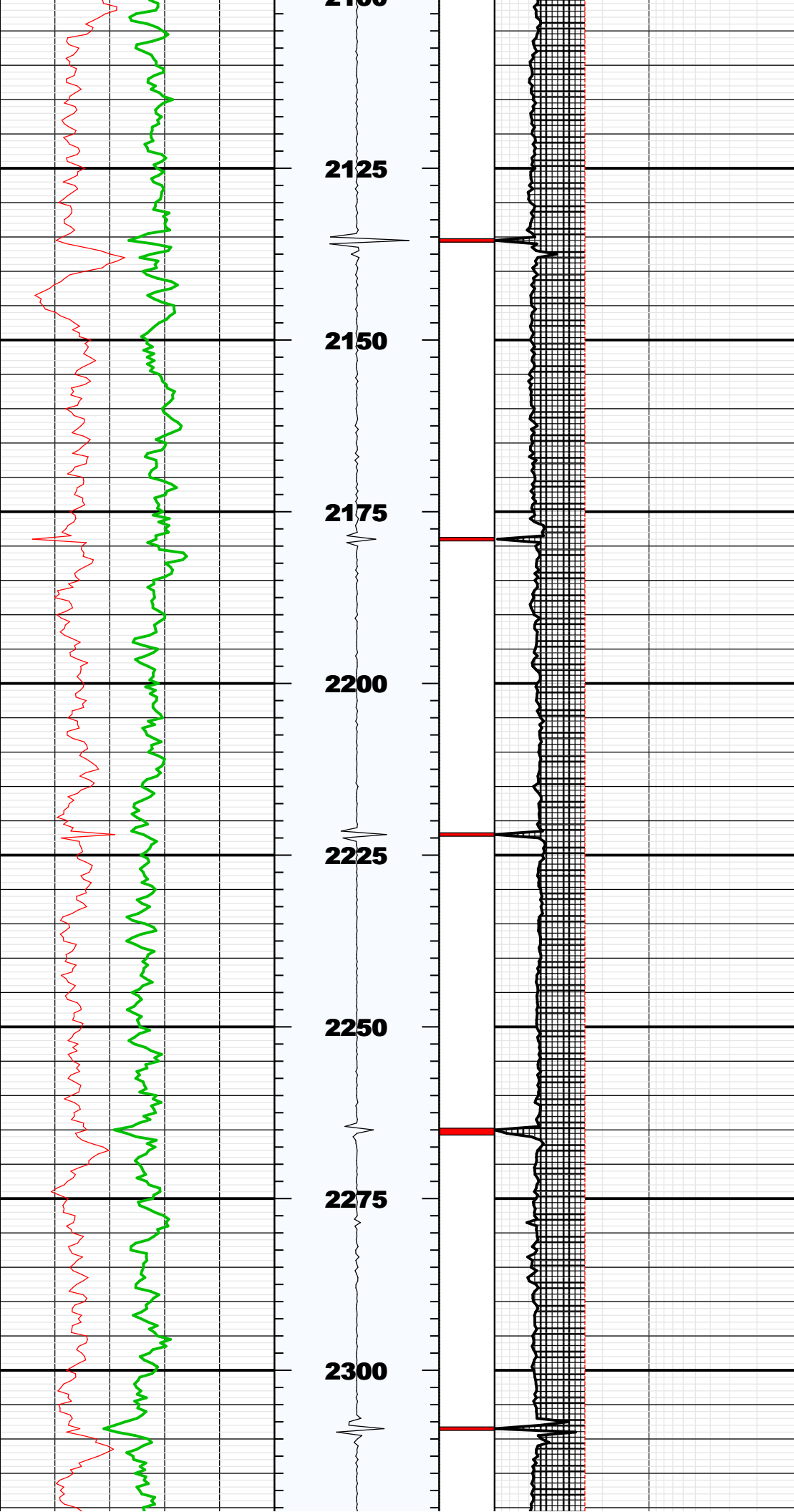


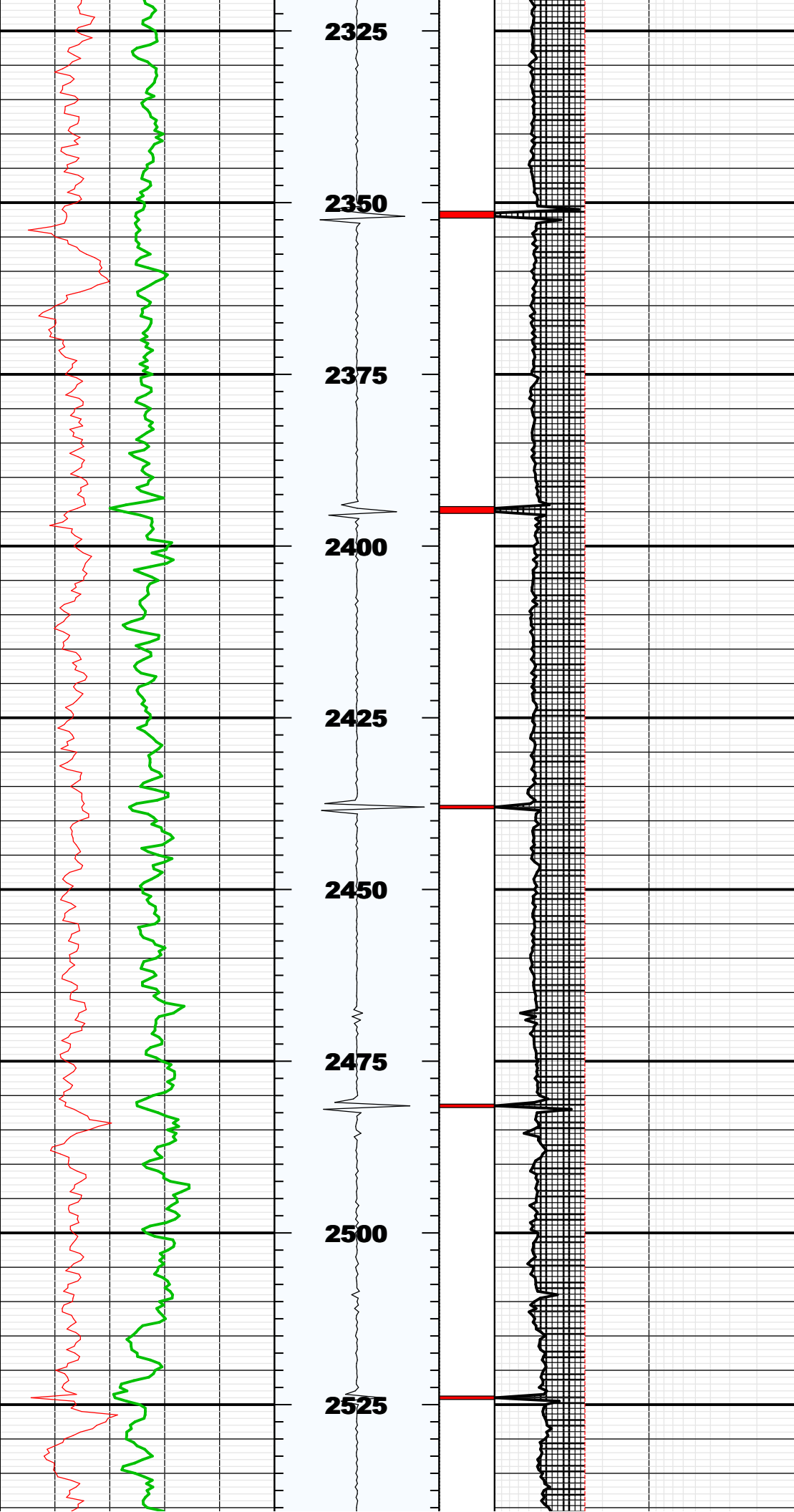


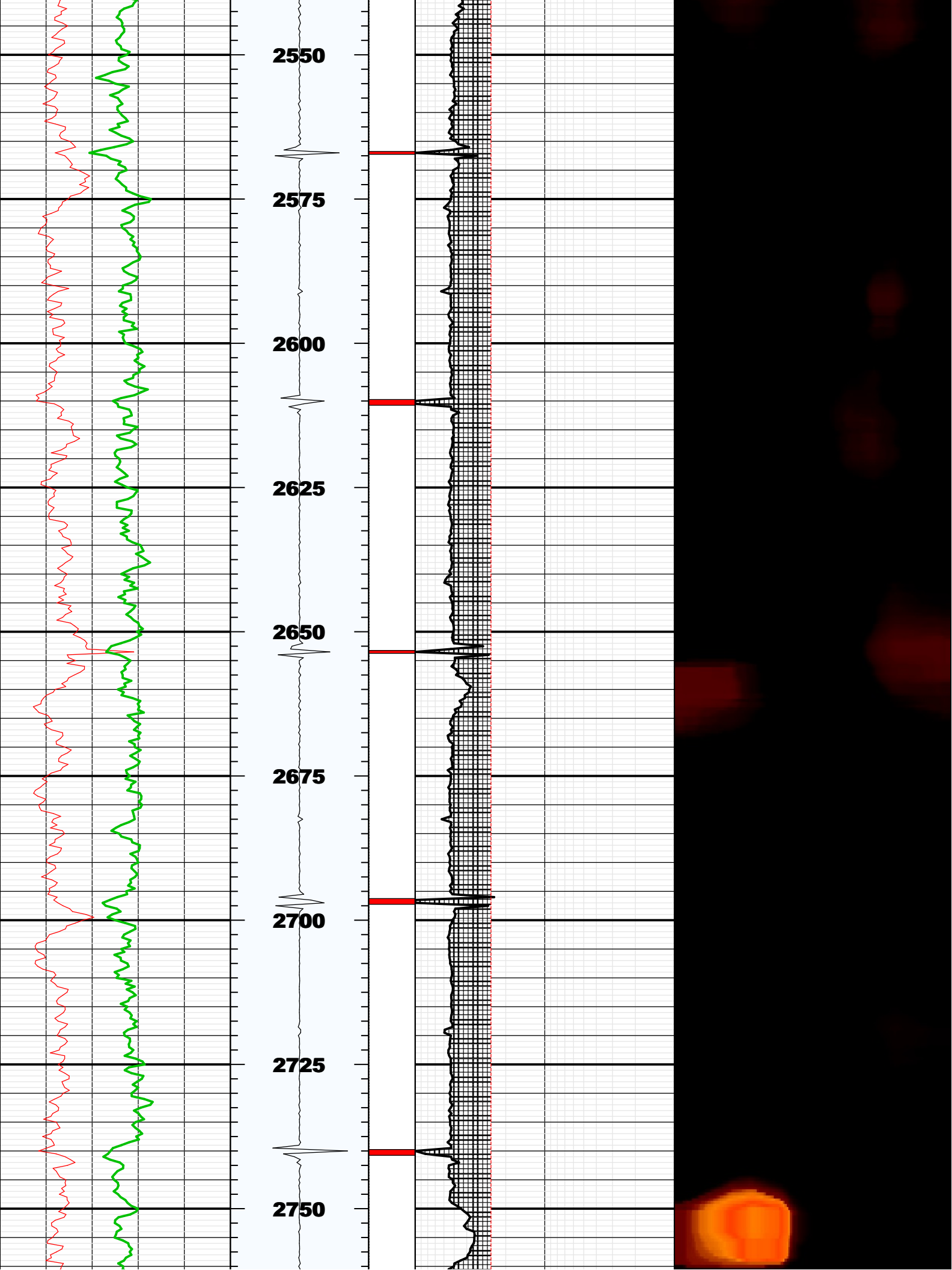


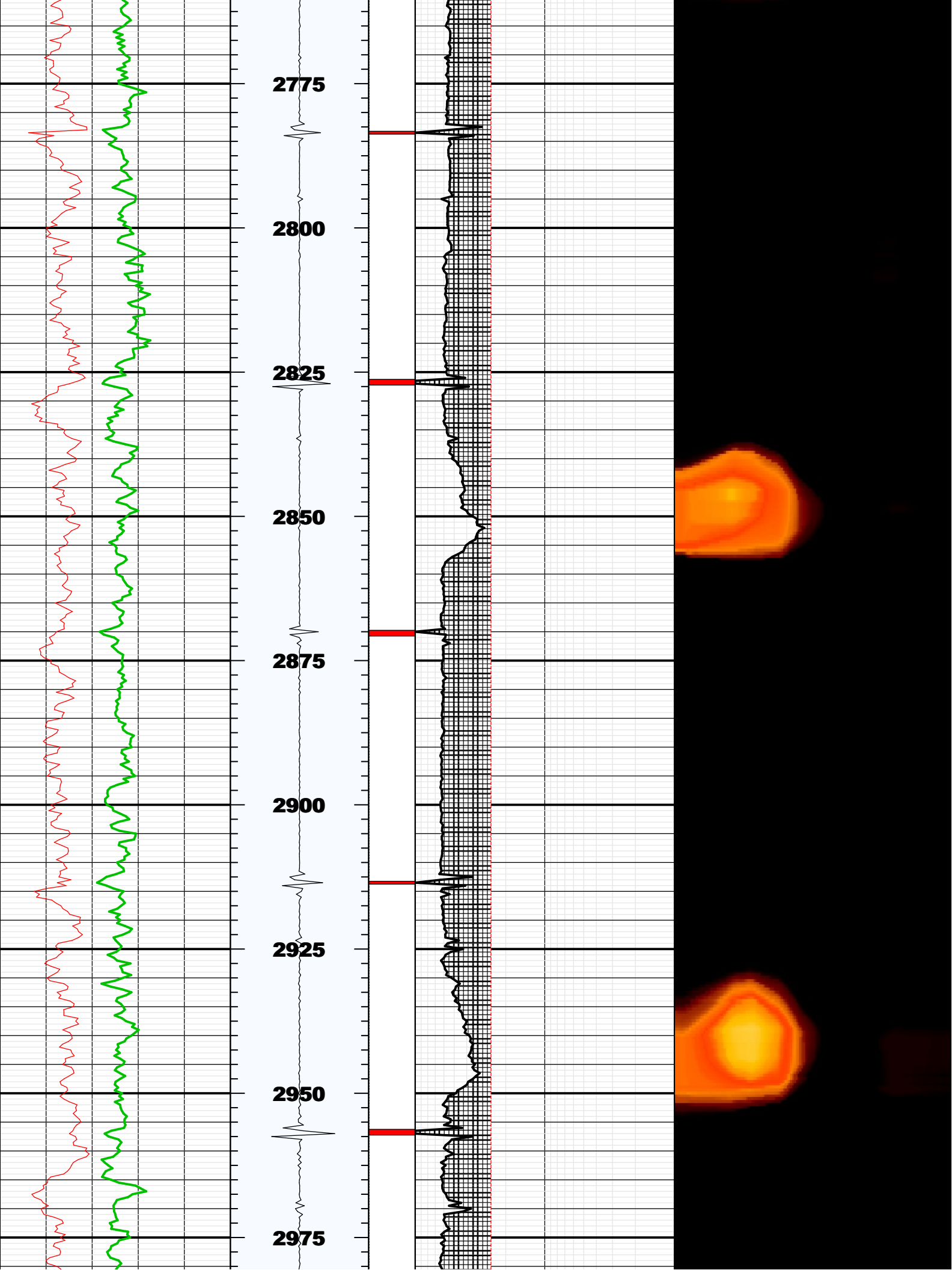


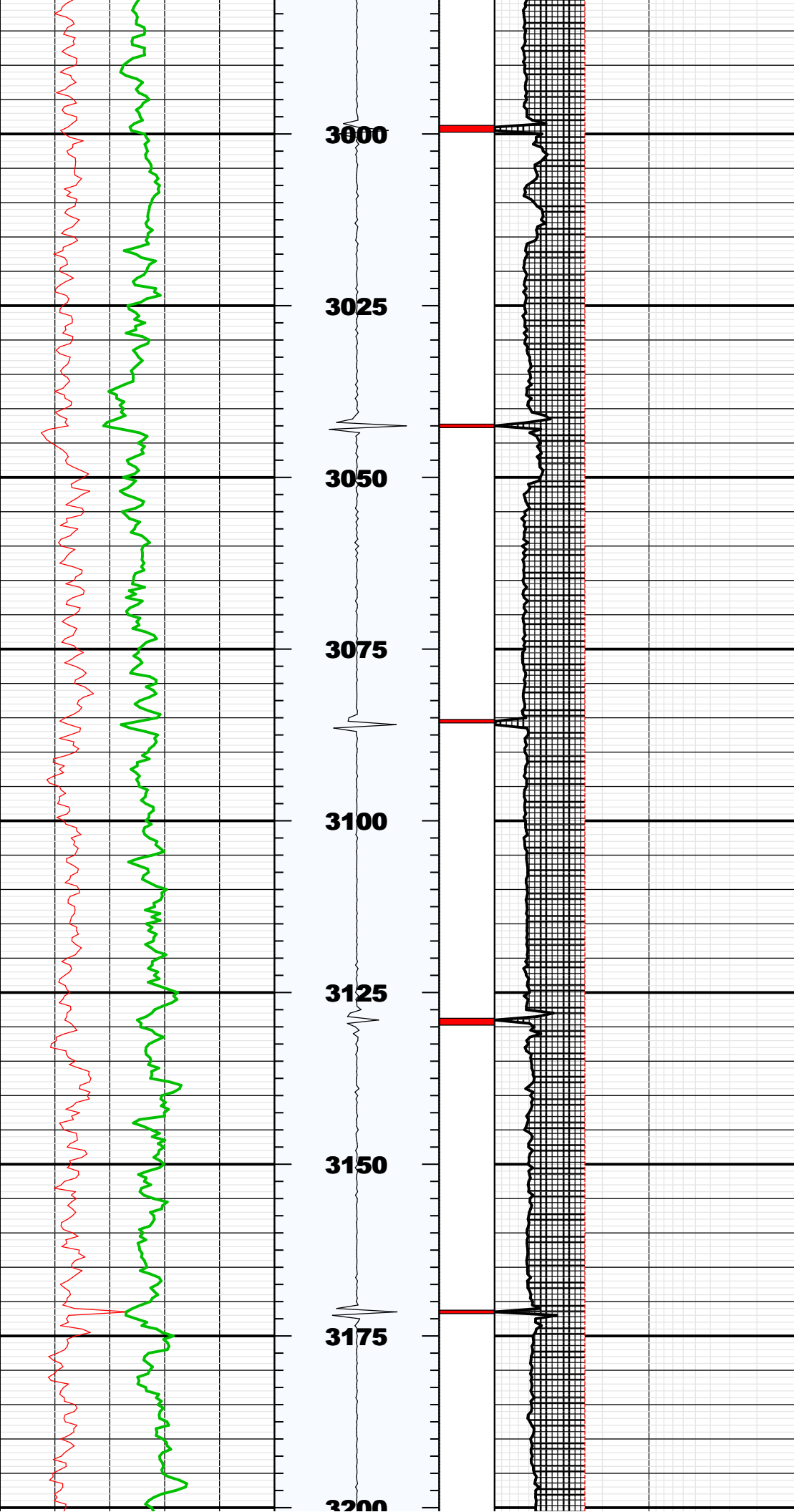


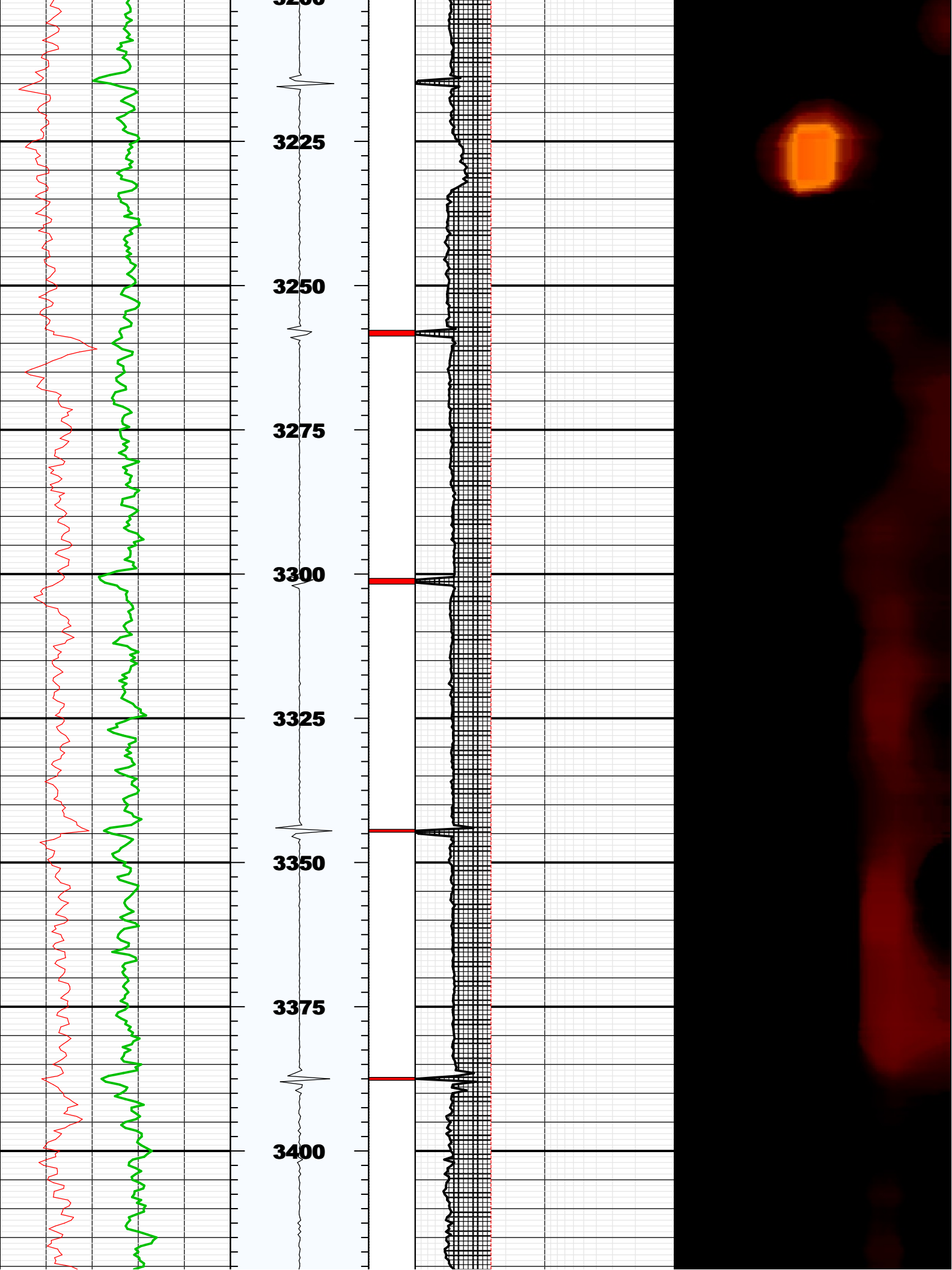


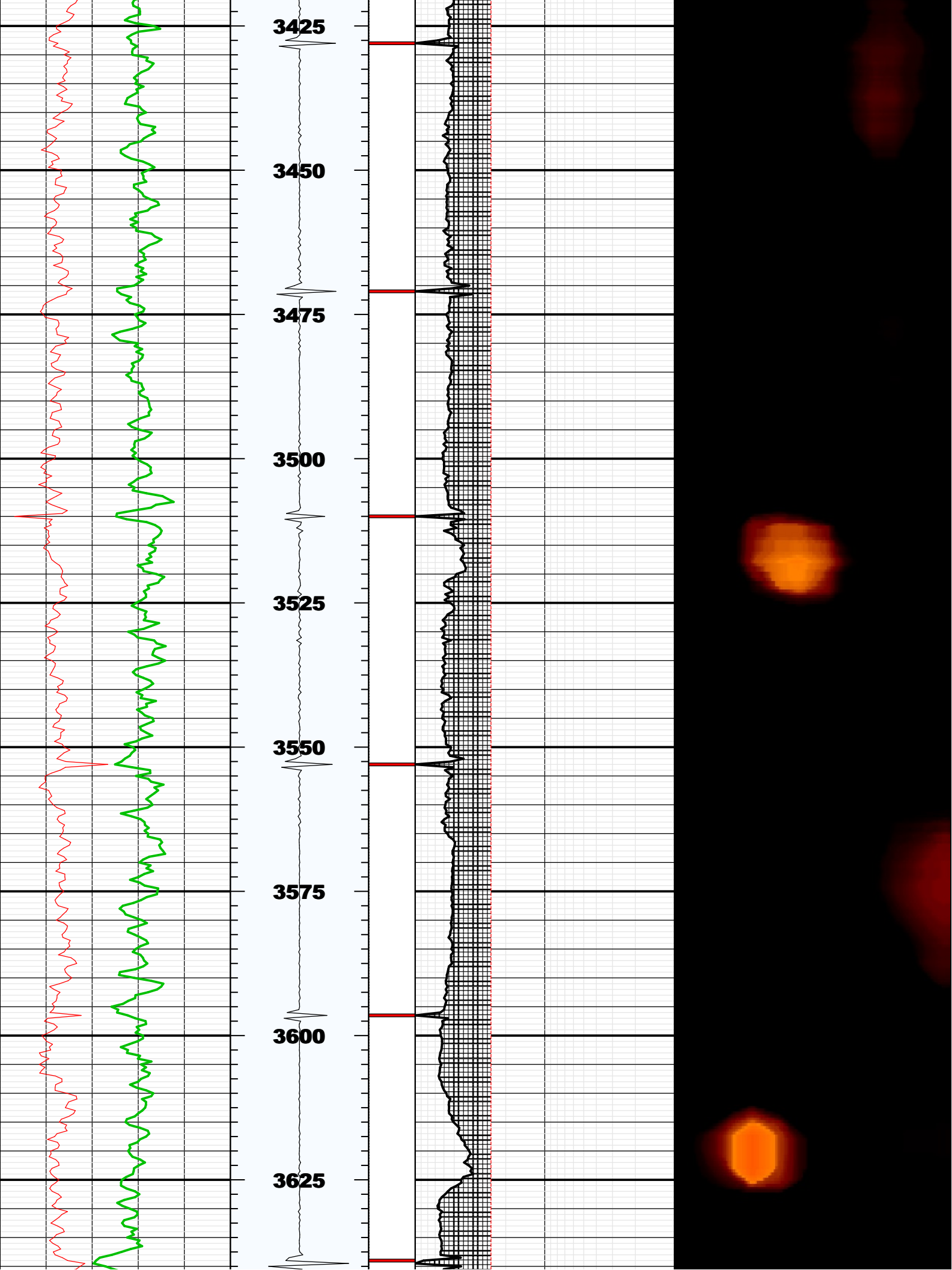


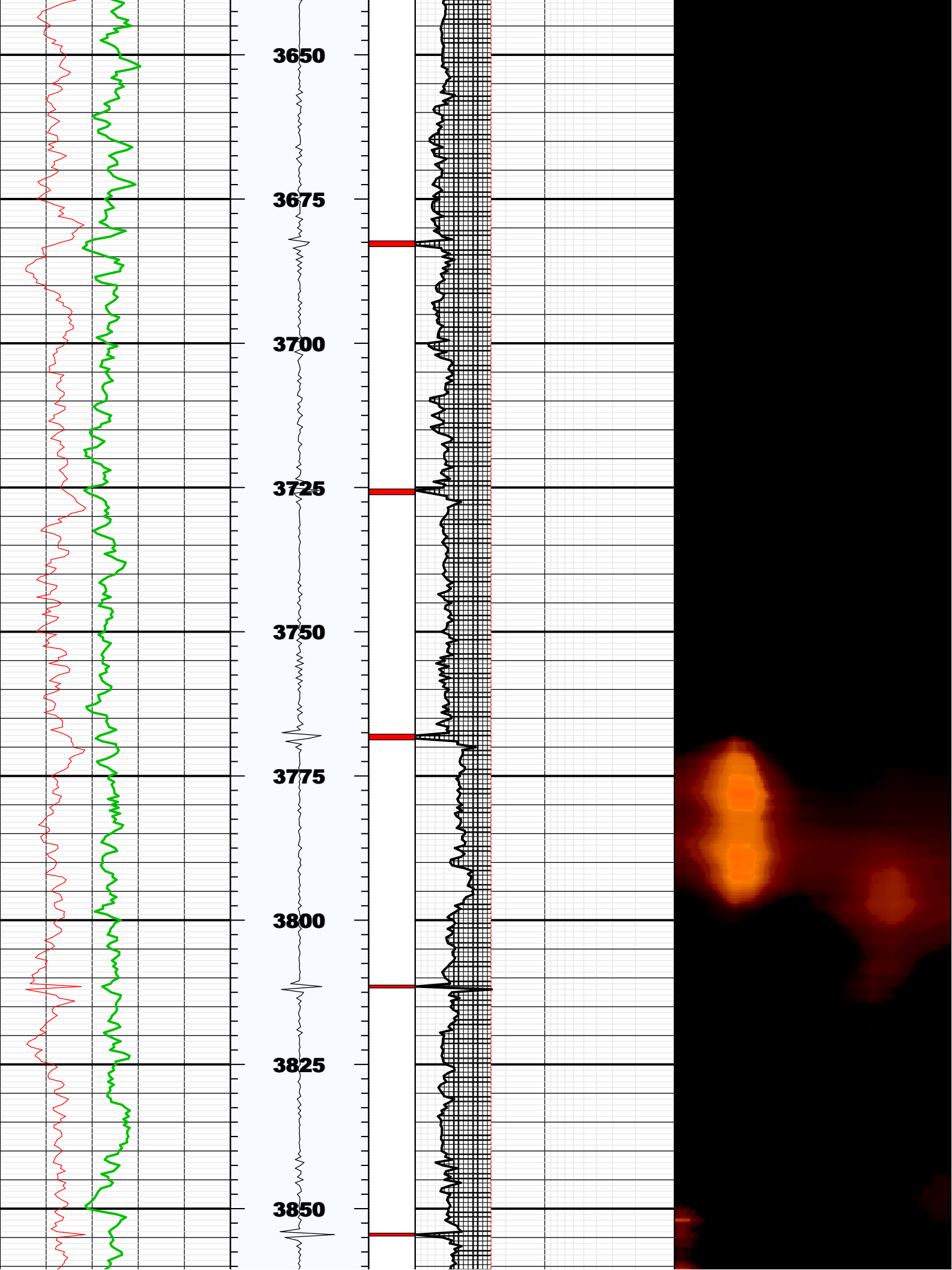


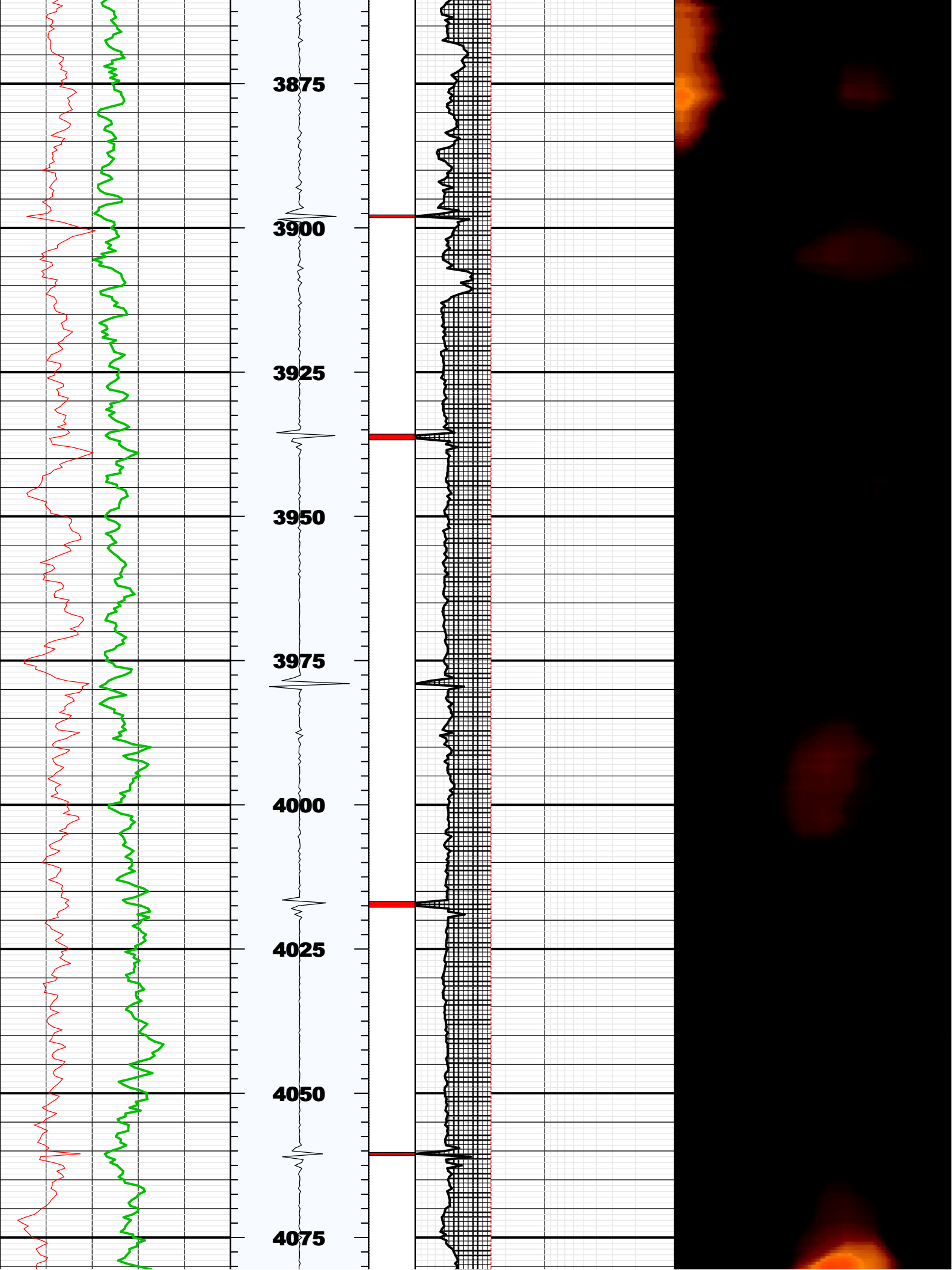


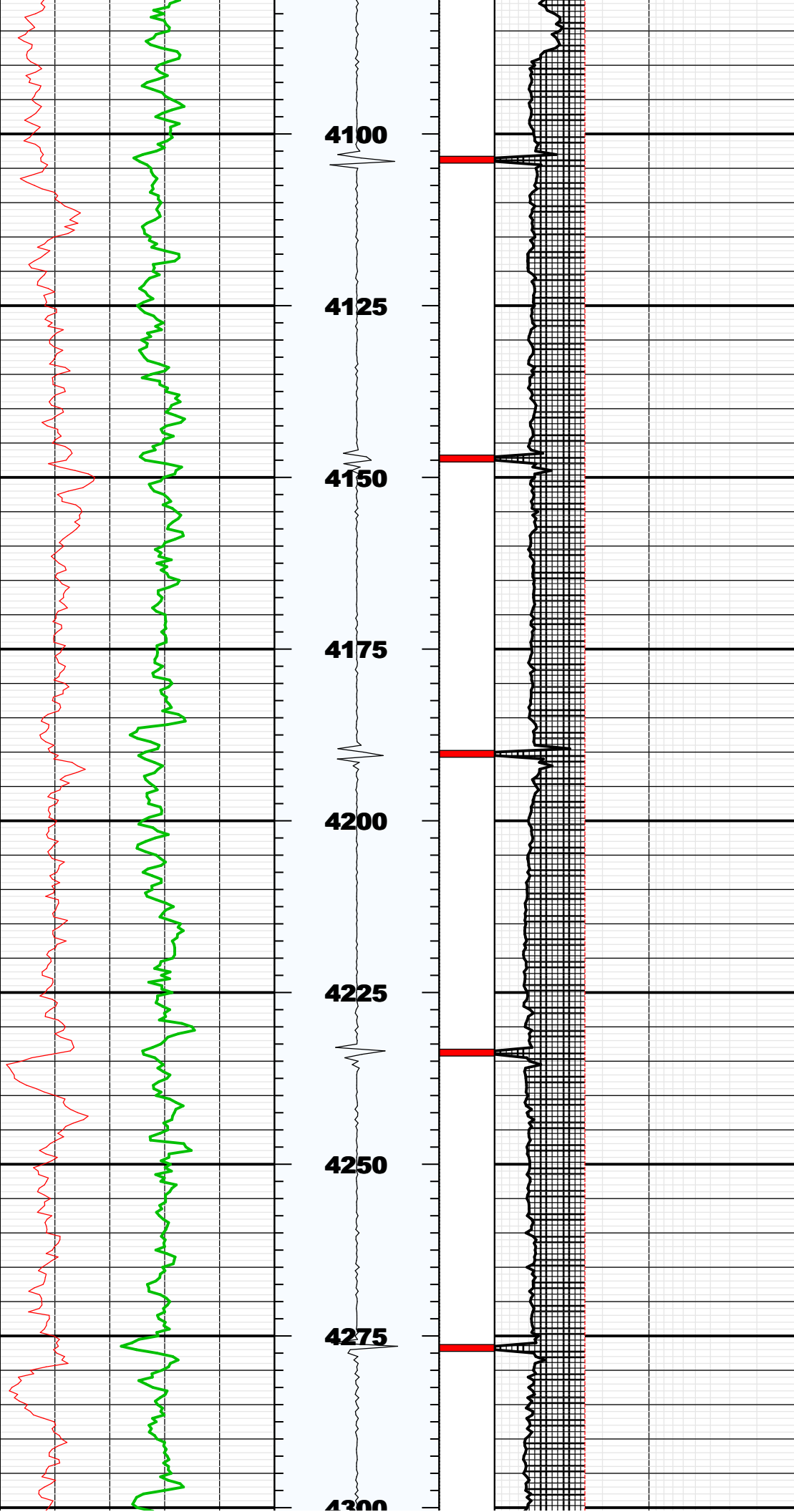


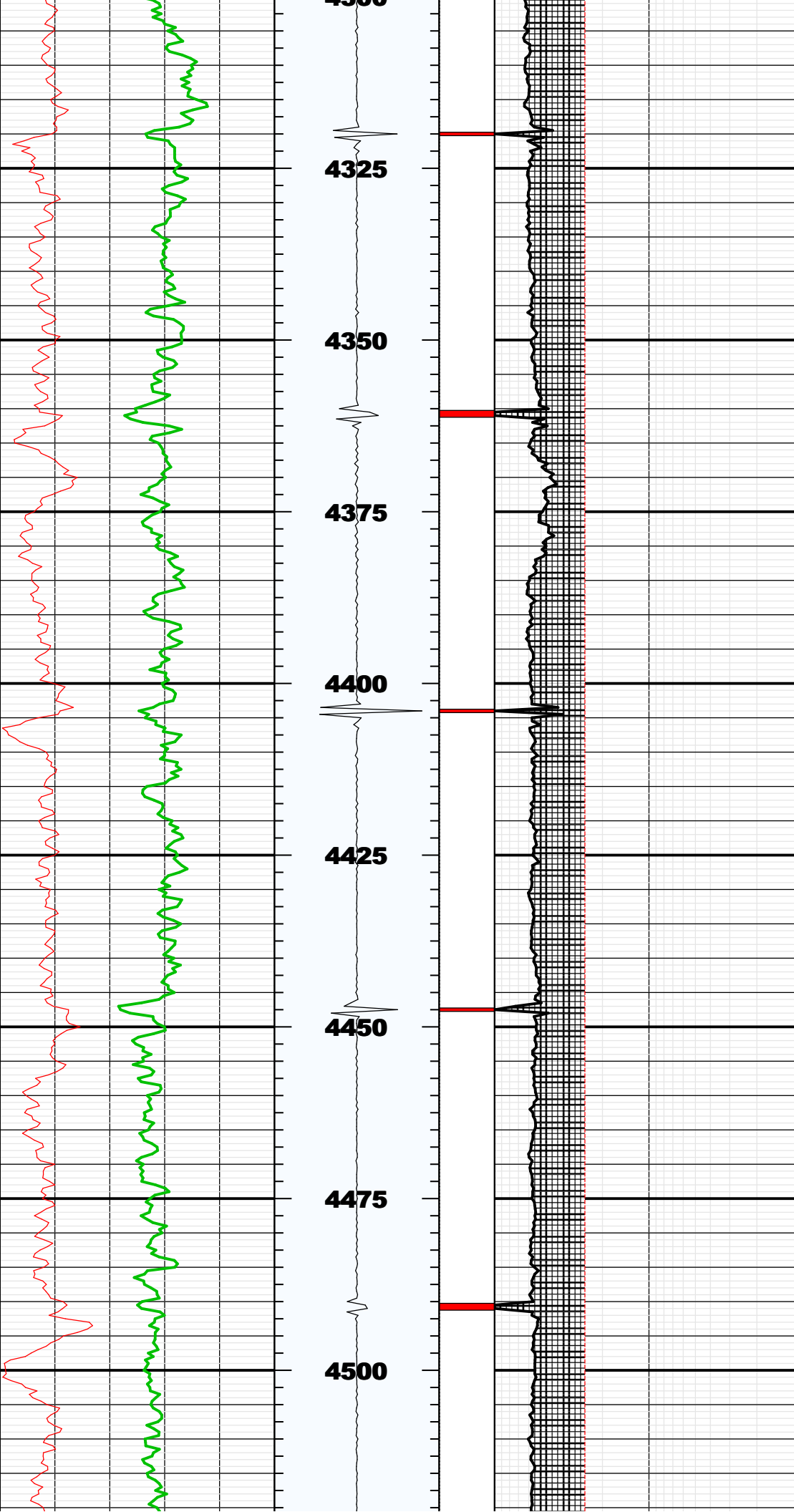


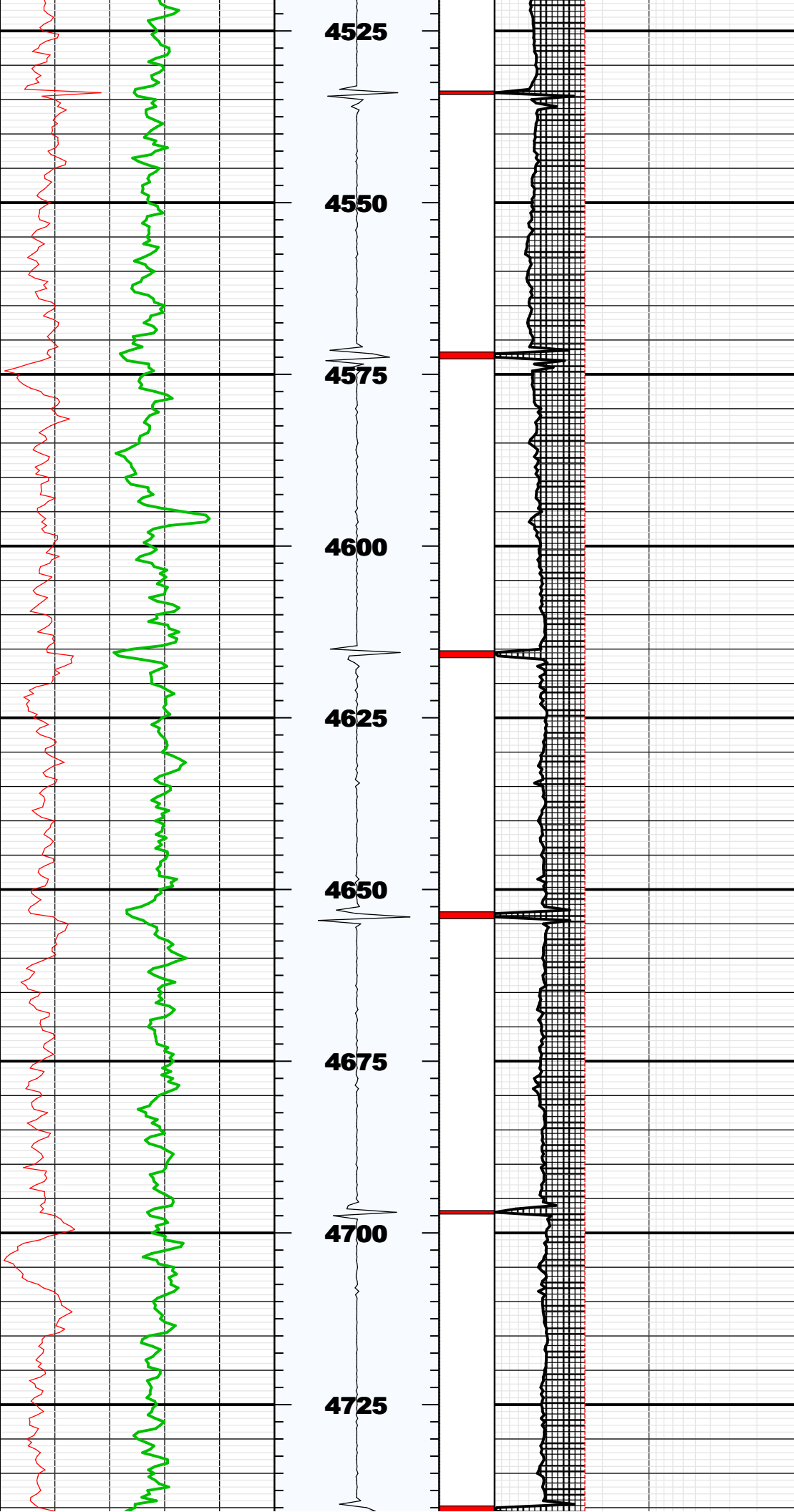


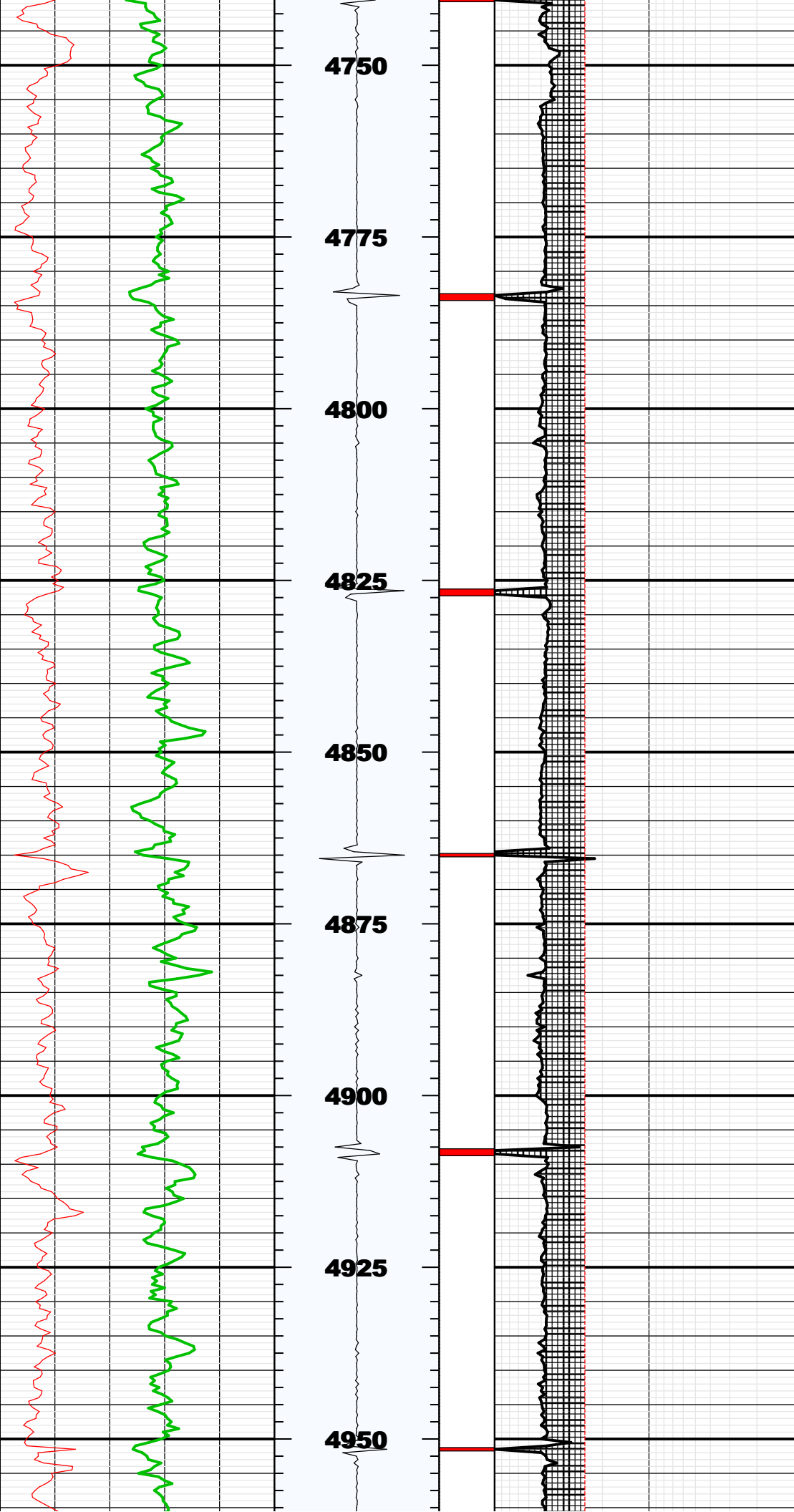


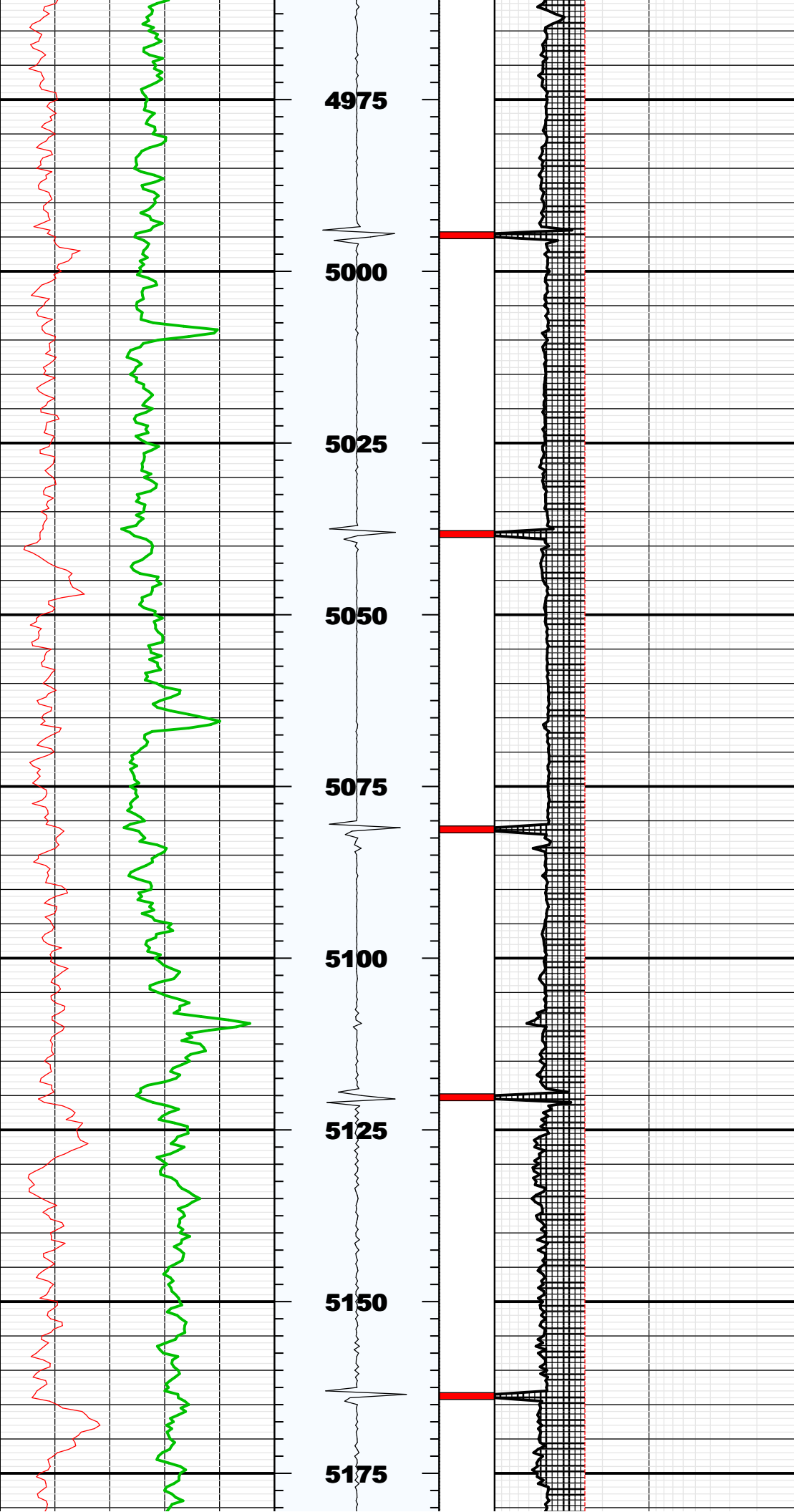


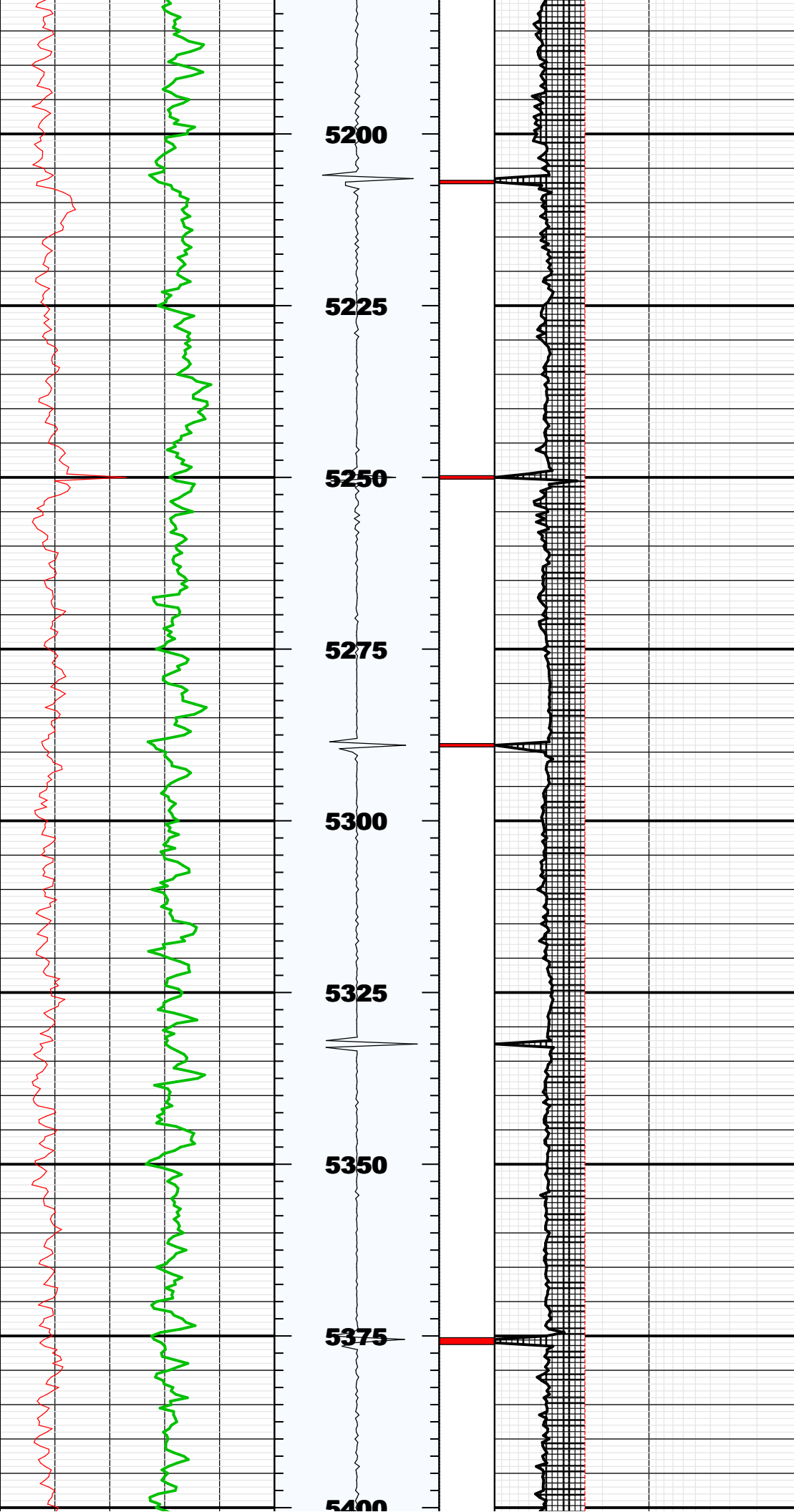


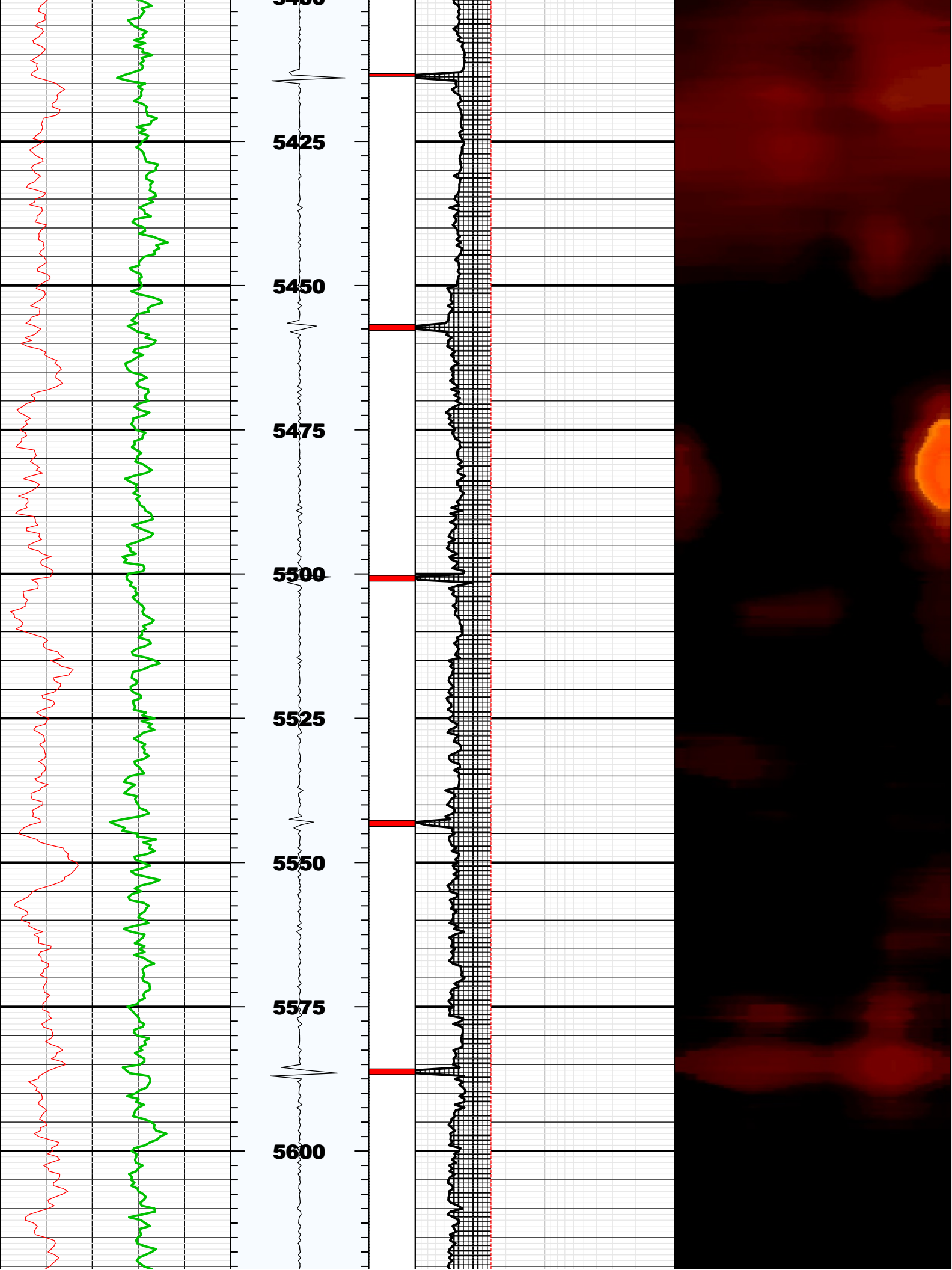


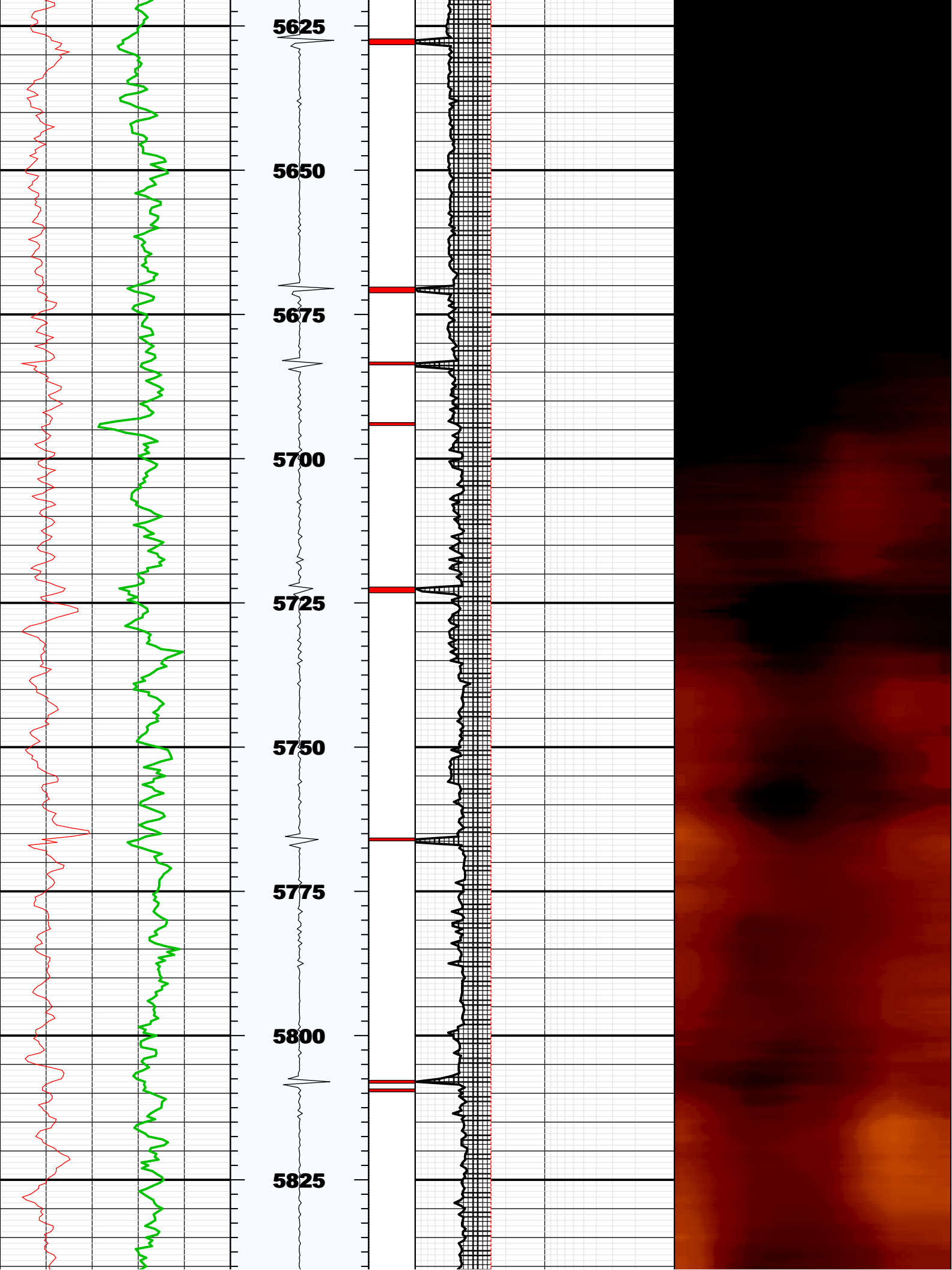


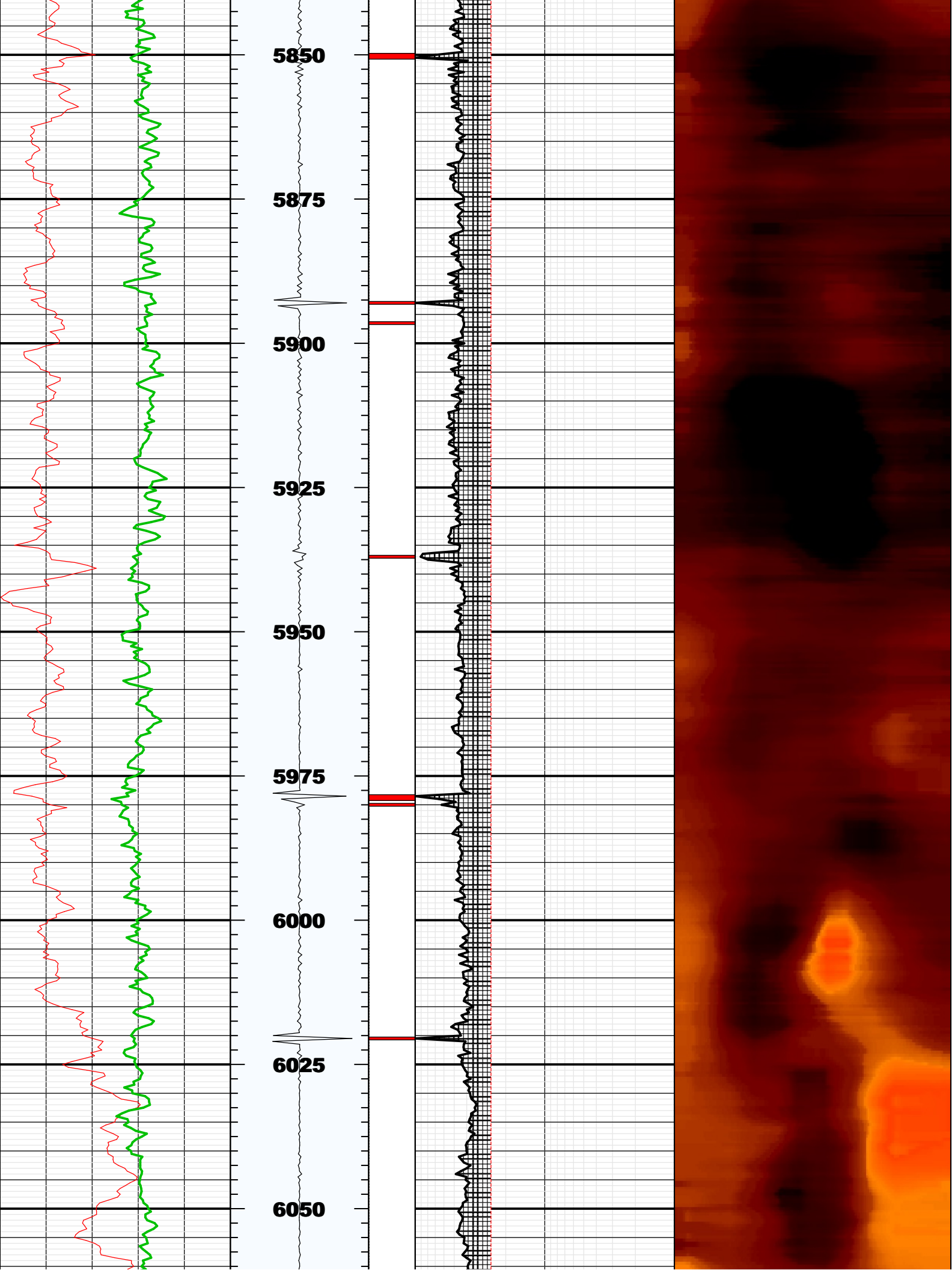


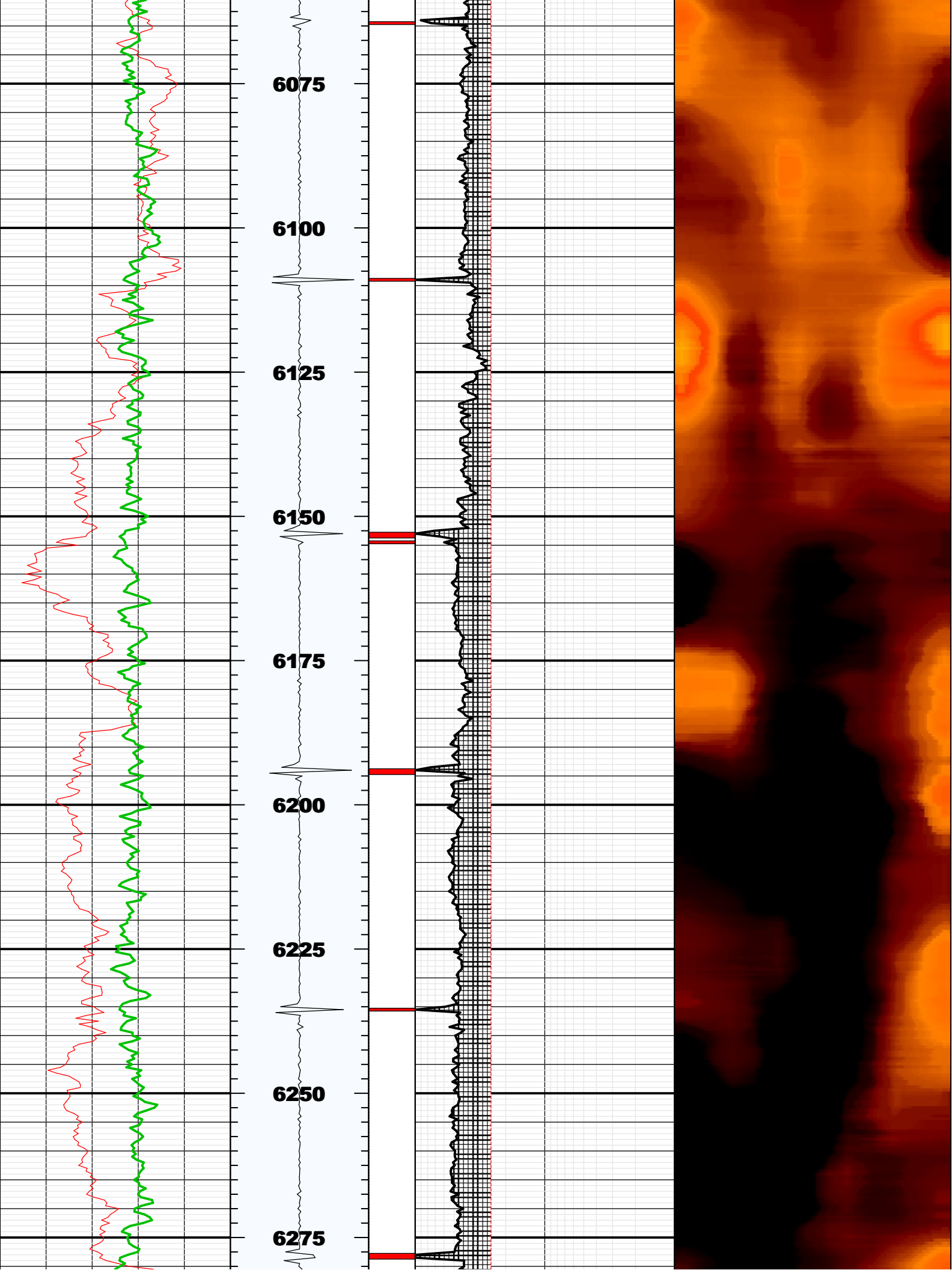


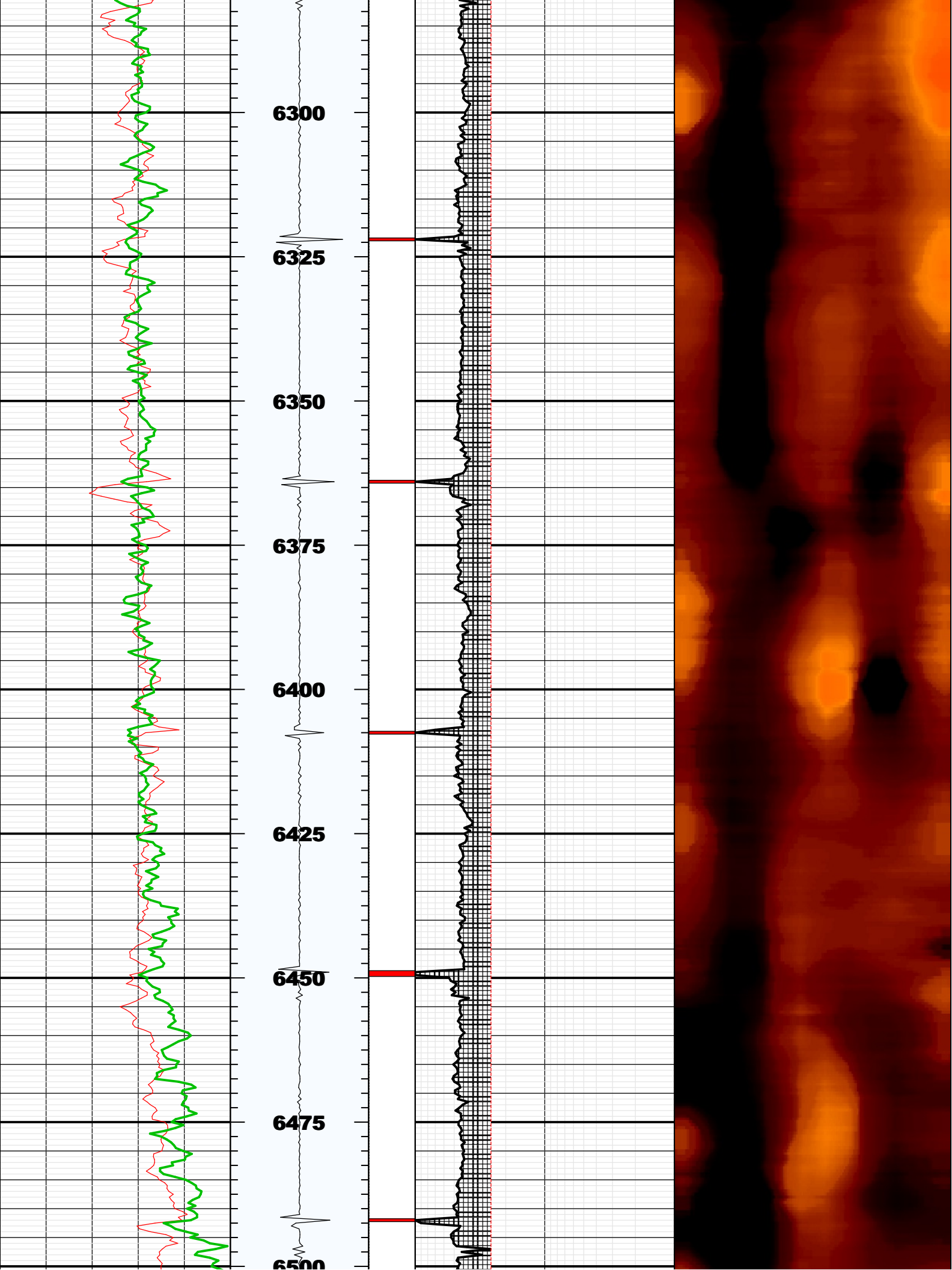


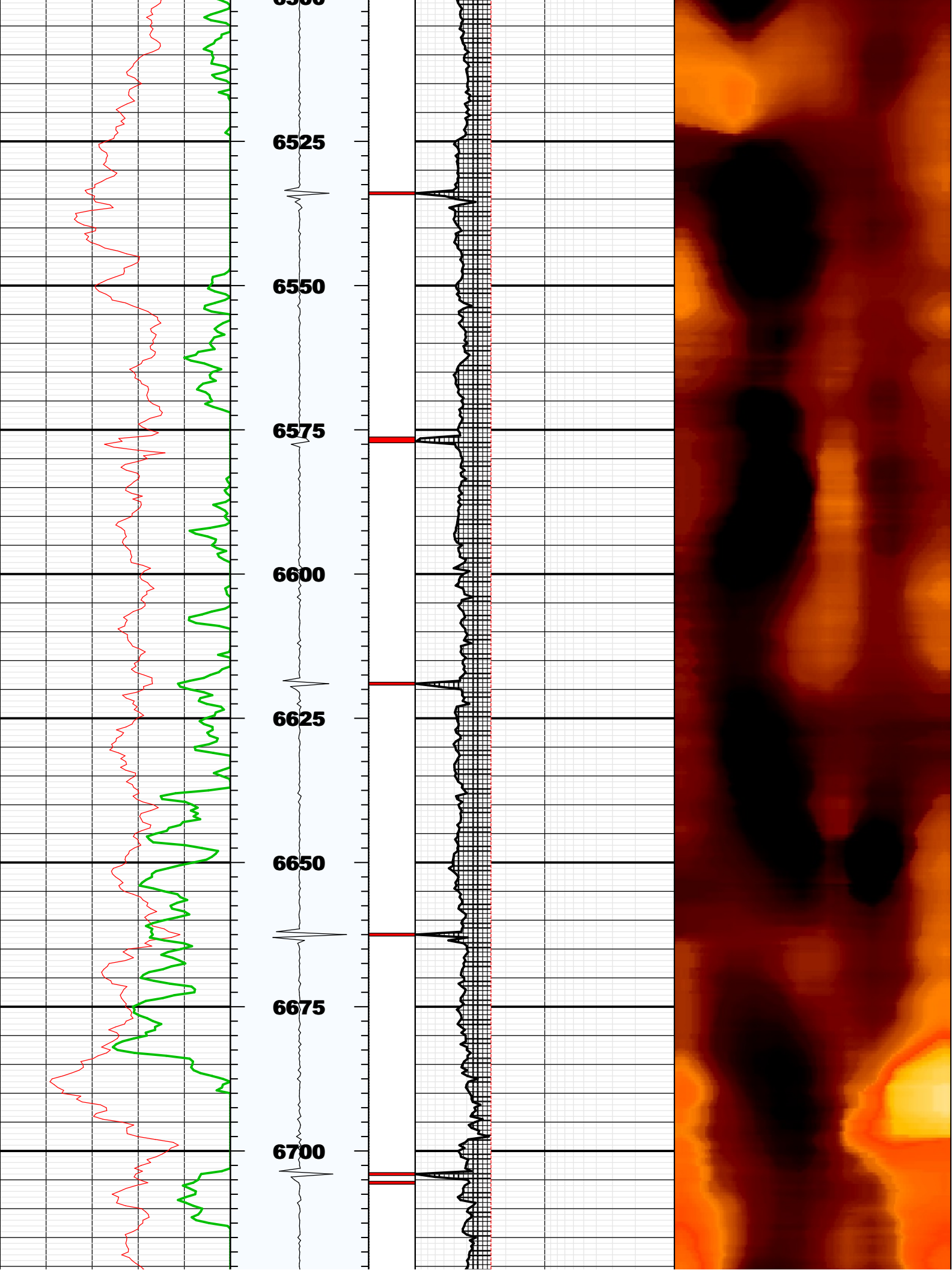


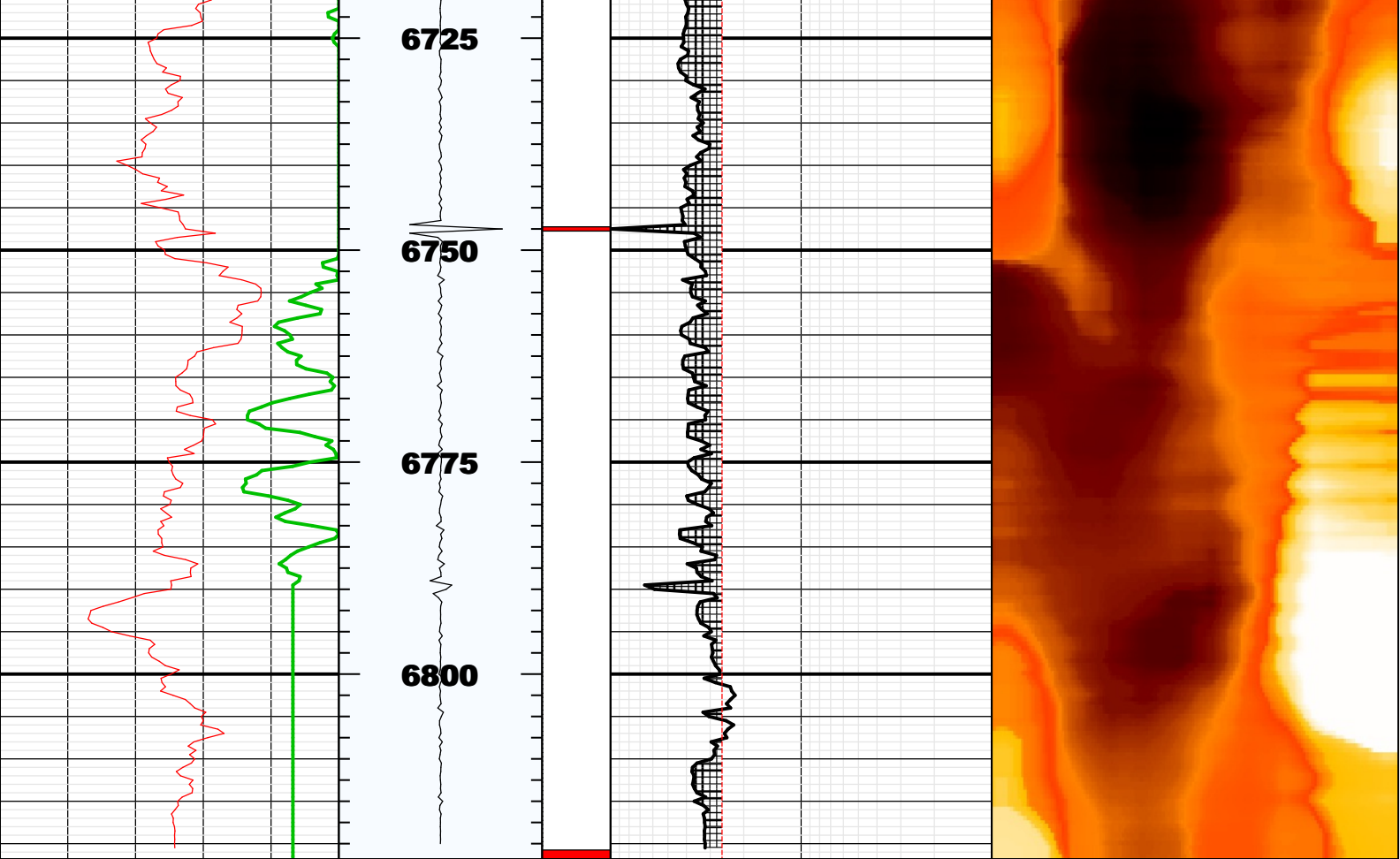








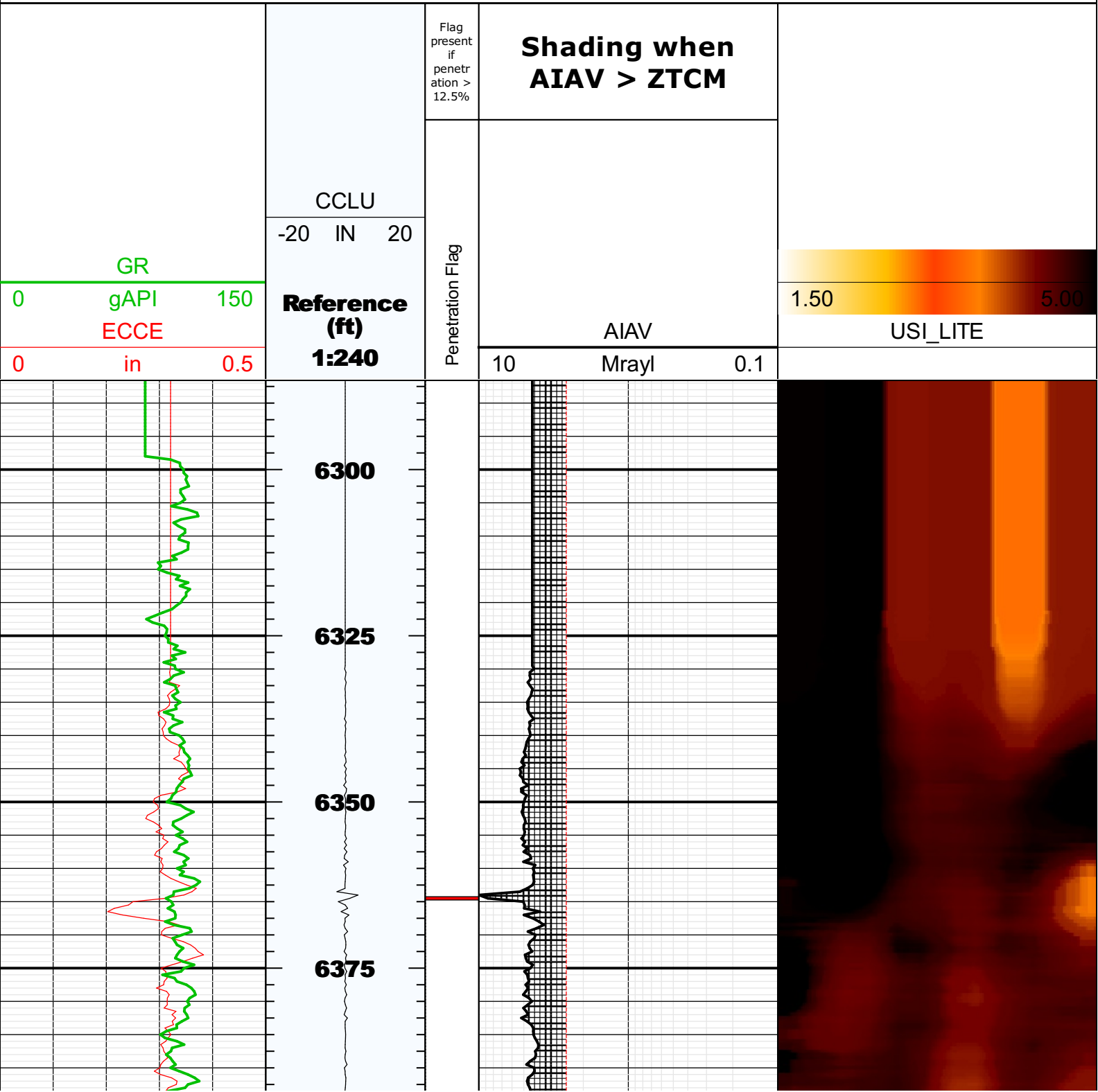


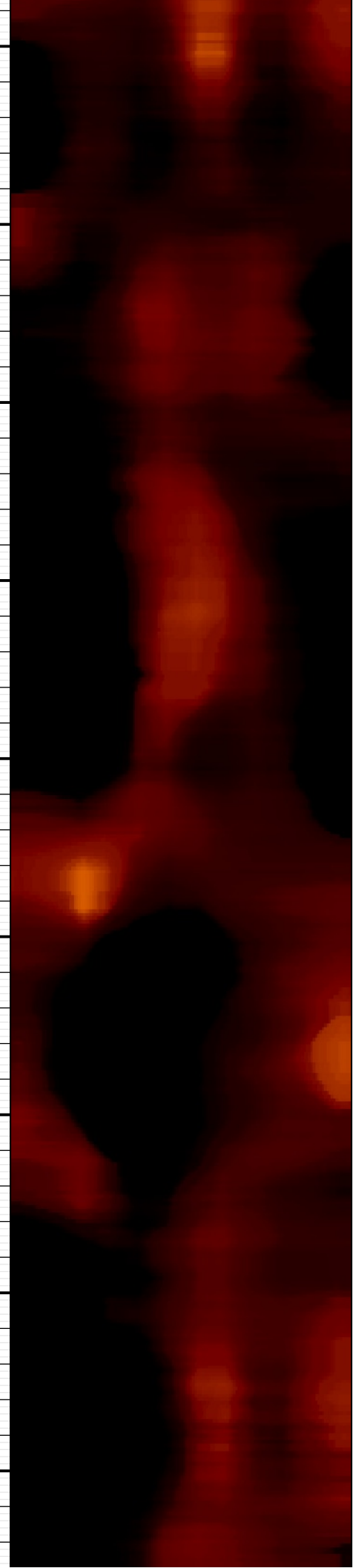
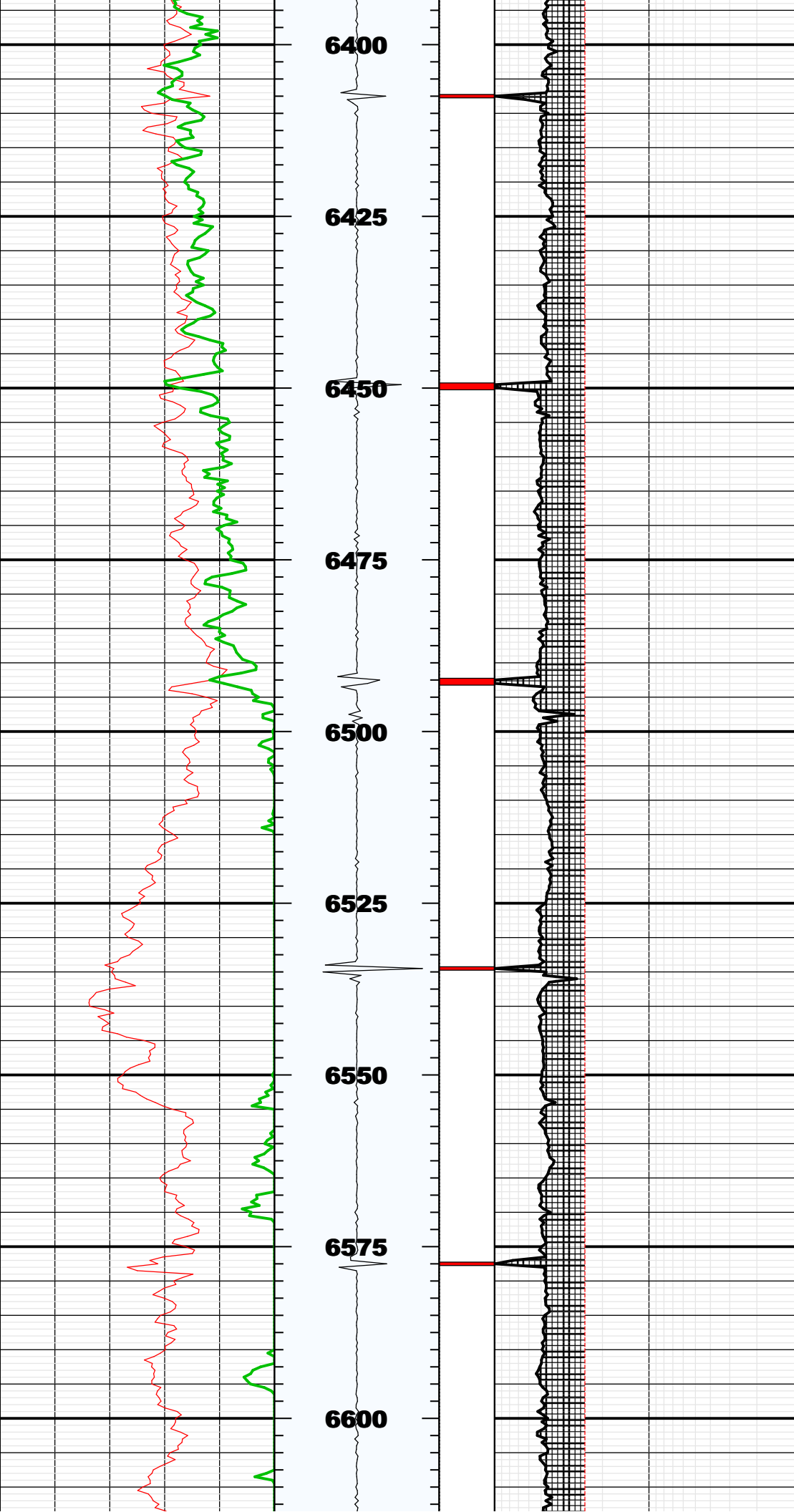


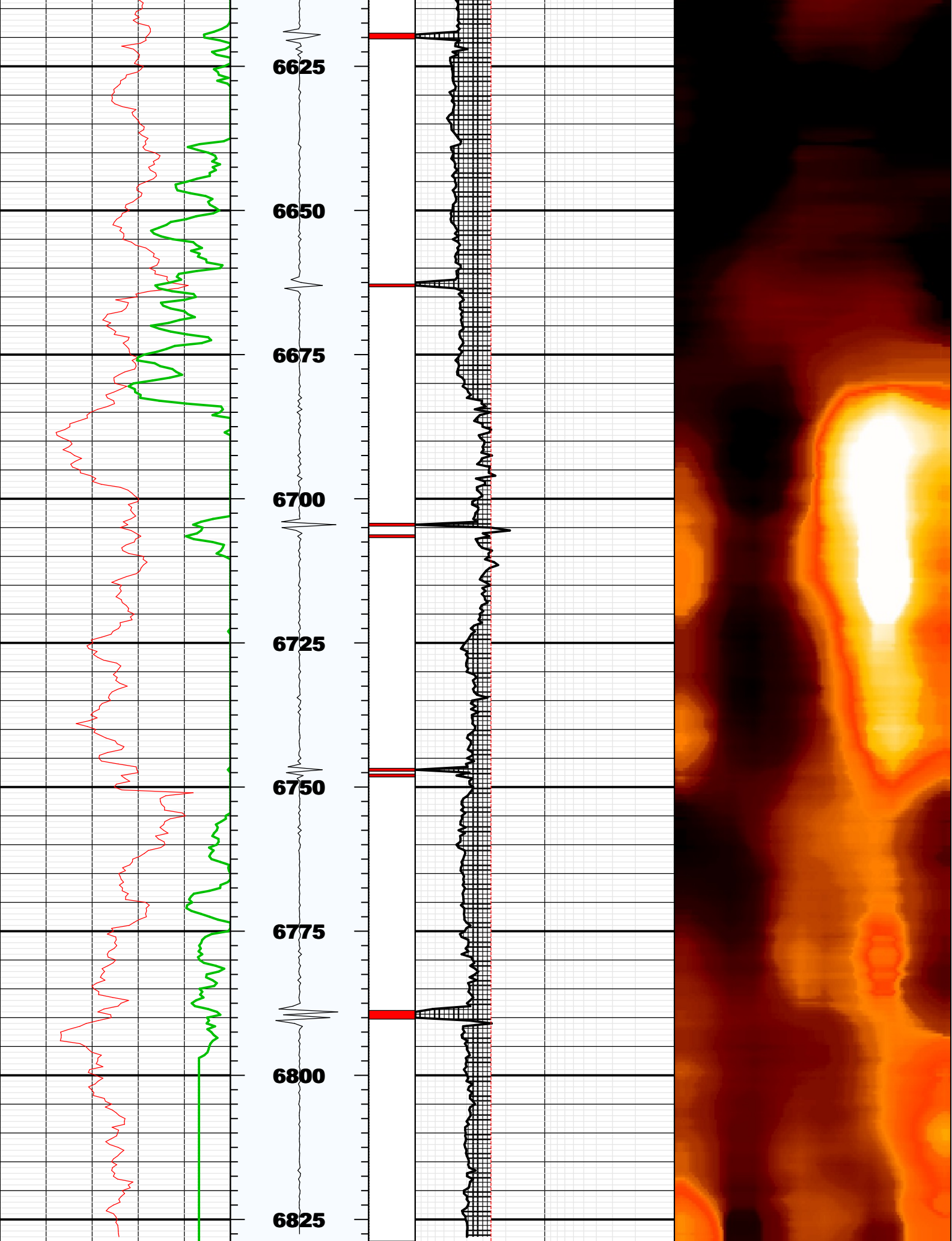
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID	6.27600	IN	Casing Inner Diameter
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.70000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	64	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	34.59587	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	1.75000	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: Crow Creek AA01-785
Field: Wattenberg







Fluid Properties Used for Main Pass

