

Company: Noble Energy Inc

Well: Wells Ranch AA22-612
Field: Wattenberg
County: WELD State: Colorado

County: WELD		<div>USI-LITE</div>				
Field: Wattenberg						
Location: SHL SWSW S22 T6N R63W						
Well: Wells Ranch AA22-612						
Company: Noble Energy Inc						
LOCATION		Permanent Datum: Log Measured From: Drilling Measured From:	NM MR MR	Elev: K.B. 4805.0 F G.L. 4775.0 F D.F. 4805.0 F		
API Serial No. 05-123-42264	Section 22				Township 6N	Range 63W
Logging Date 04/05/2016						
Run Number One						
Depth Driller	11828.0 F					
Schlumberger Depth	6200.0 F					
Bottom Log Interval	6200.0 F					
Top Log Interval	100.0 F					
Casing Fluid Level	0.0 F					
Salinity						
Density	8.80 LB/G					
Fluid Level	0.0 F					
BIT/CASING/TUBING STRING						
Bit Size	8.750 IN					
From	6200.0 F					
To	-999.2 F					
Casing Size	5.50 IN					
Weight	20.00 LB/F					
Grade	N/A					
From	30.0 F					
To	11800.0 F					
Max Recorded Temp	212.0					
Logger on bottom (date)	04/05/2016					
Location	Fort Morgan CO					
Recorded By	Benjamin Marmon / Blanka Kesek					
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

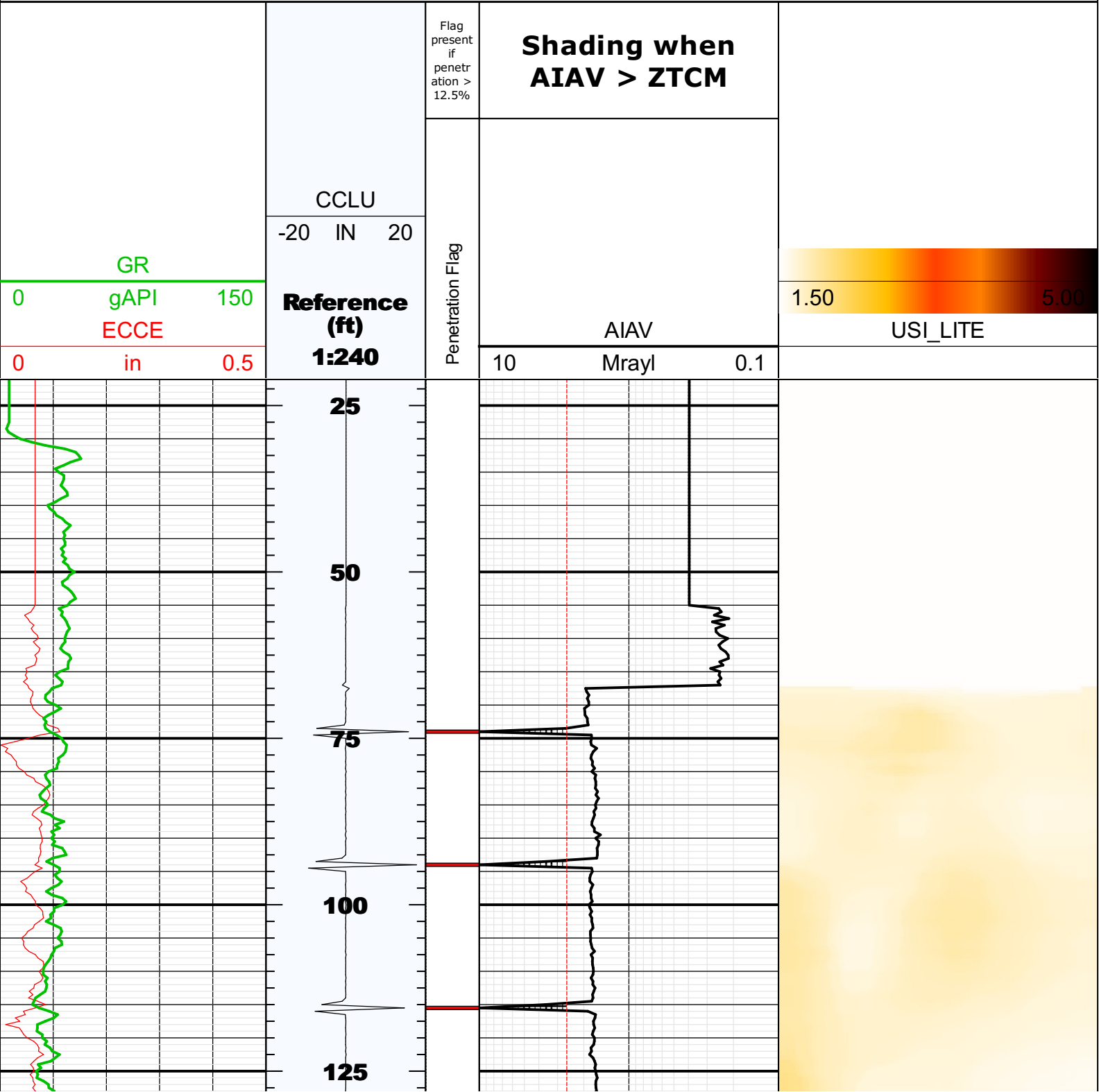
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIIONS ON USE OF THE RECORDED-DATA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

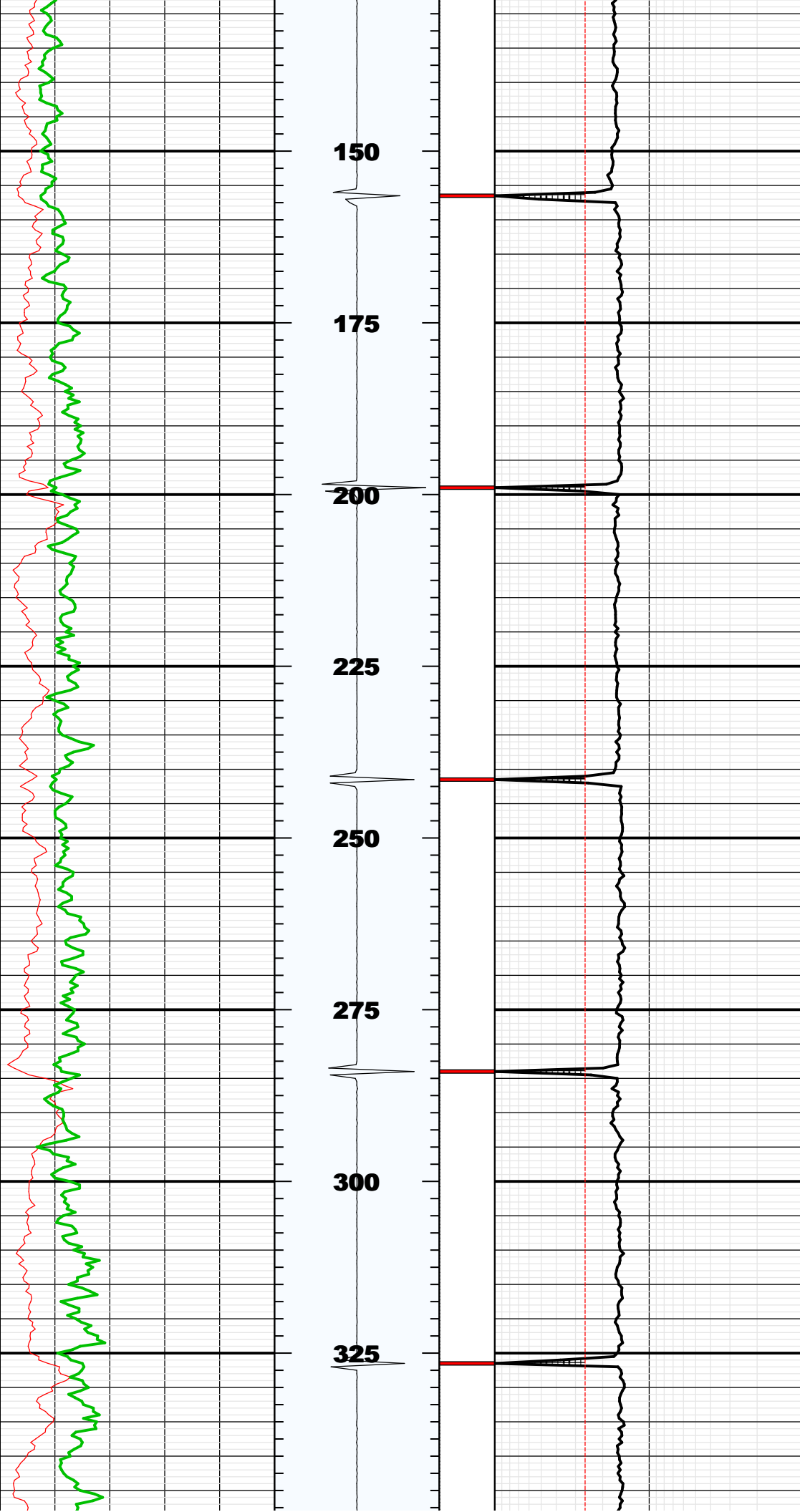
This is the first log in the well.
Toolstring ran as per toolsketch.
Log Objective Cement Evaluation
0 PSI Repeat Pass and 2500 PSI Main Pass.
Estimated TOC@ 2027'
Bottom log interval 6200'

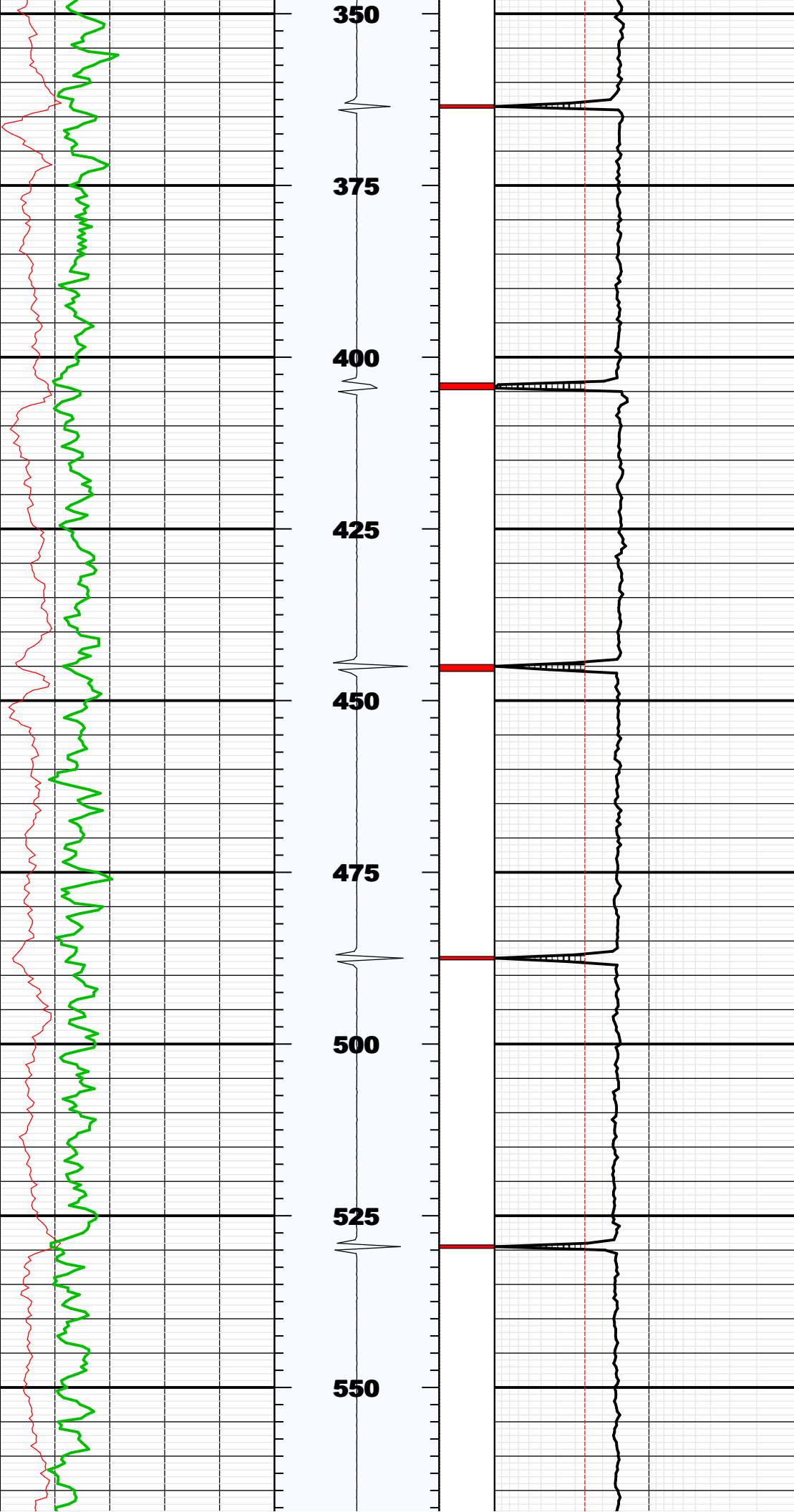
On previous decent into well sub was damaged. Log will start with new sub above dogleg.

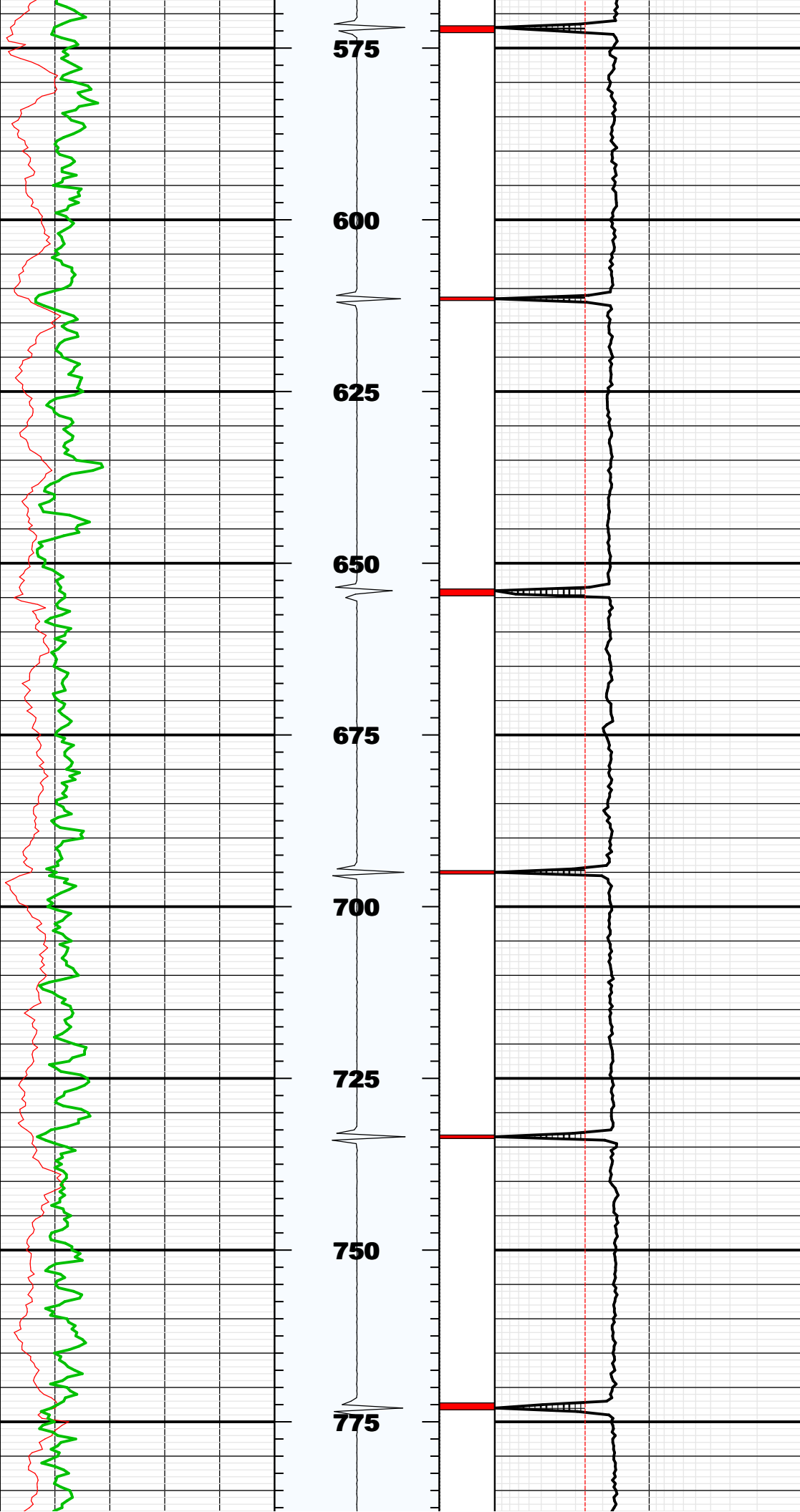
Main Pass

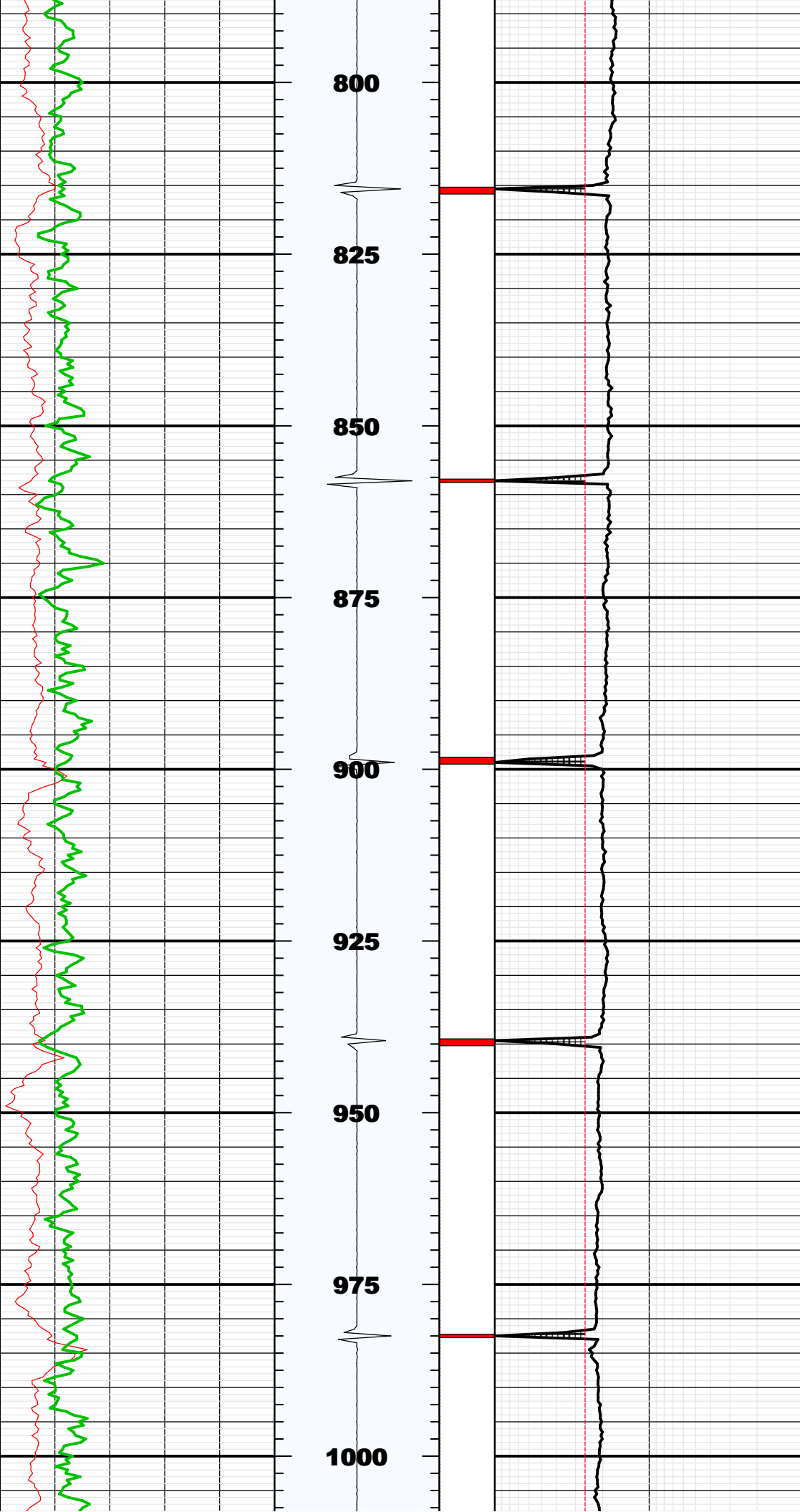
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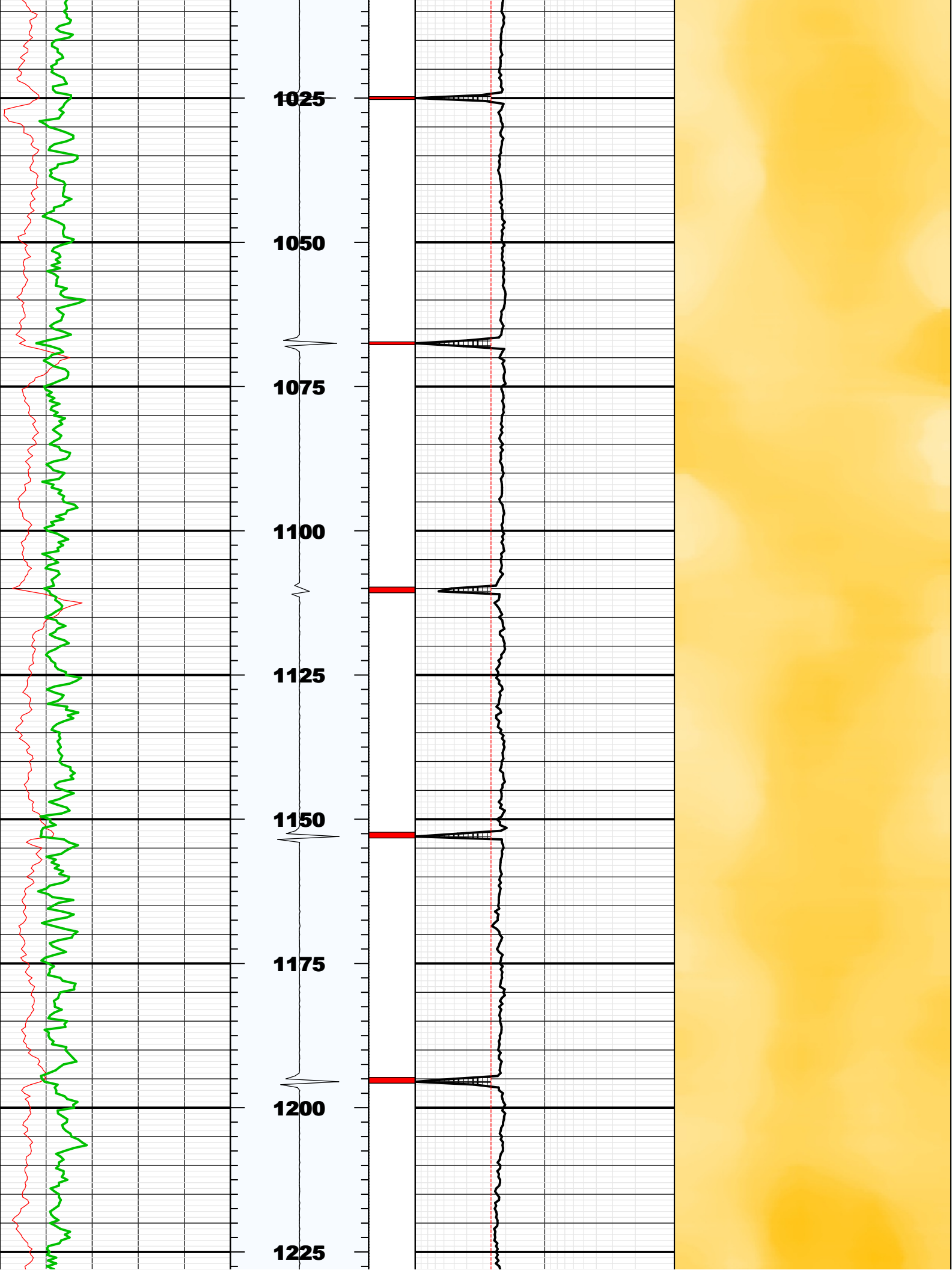


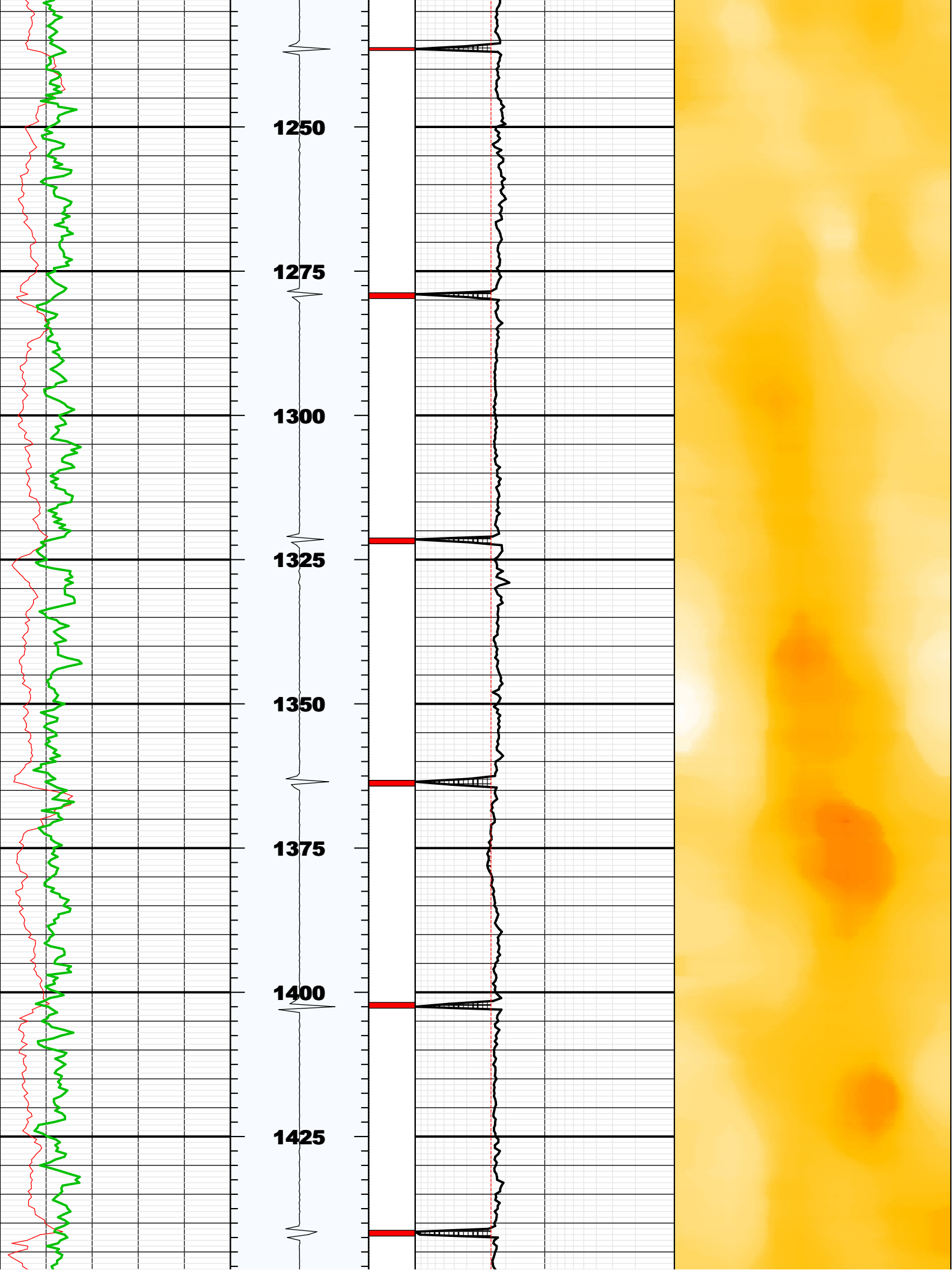


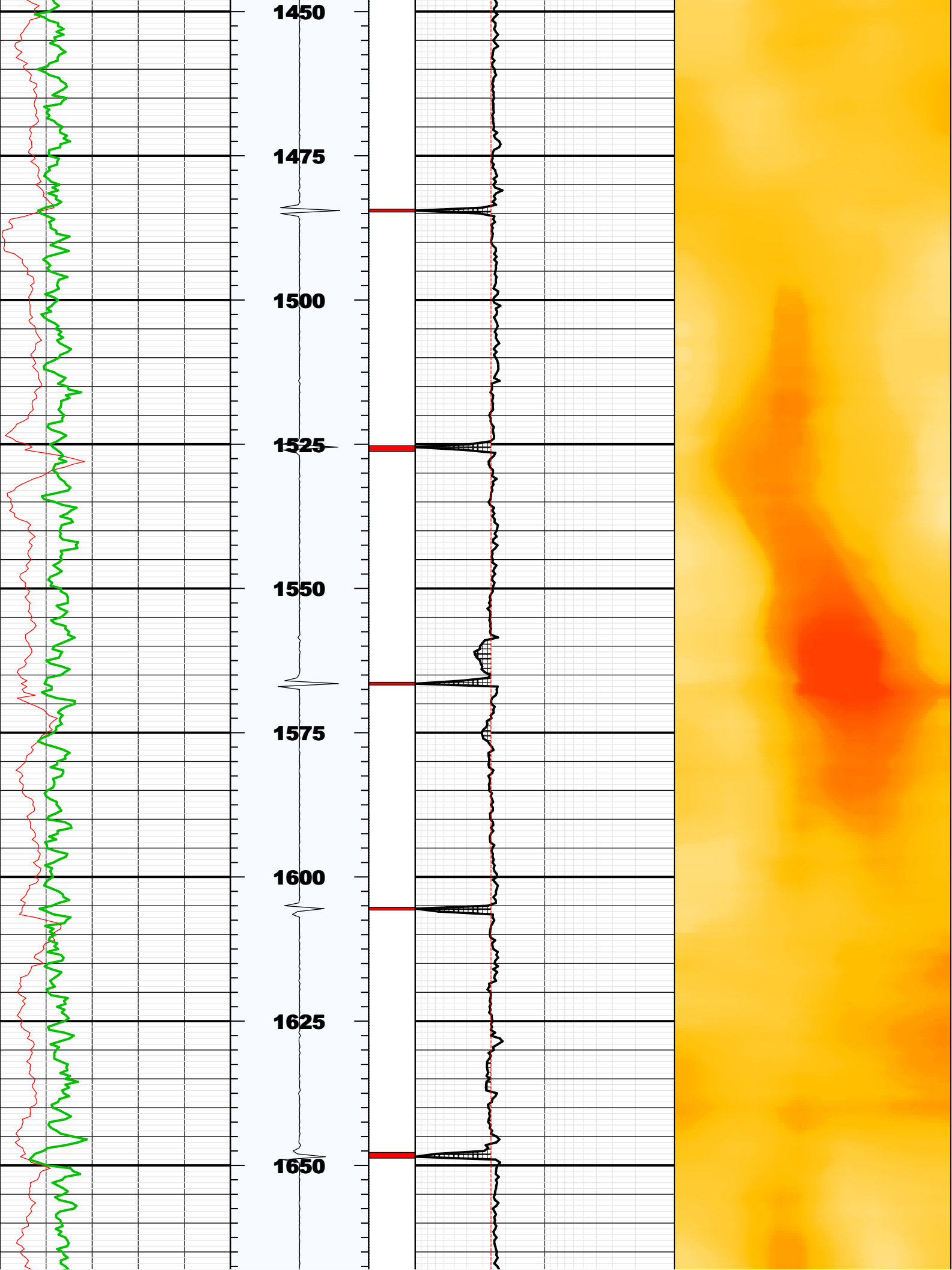


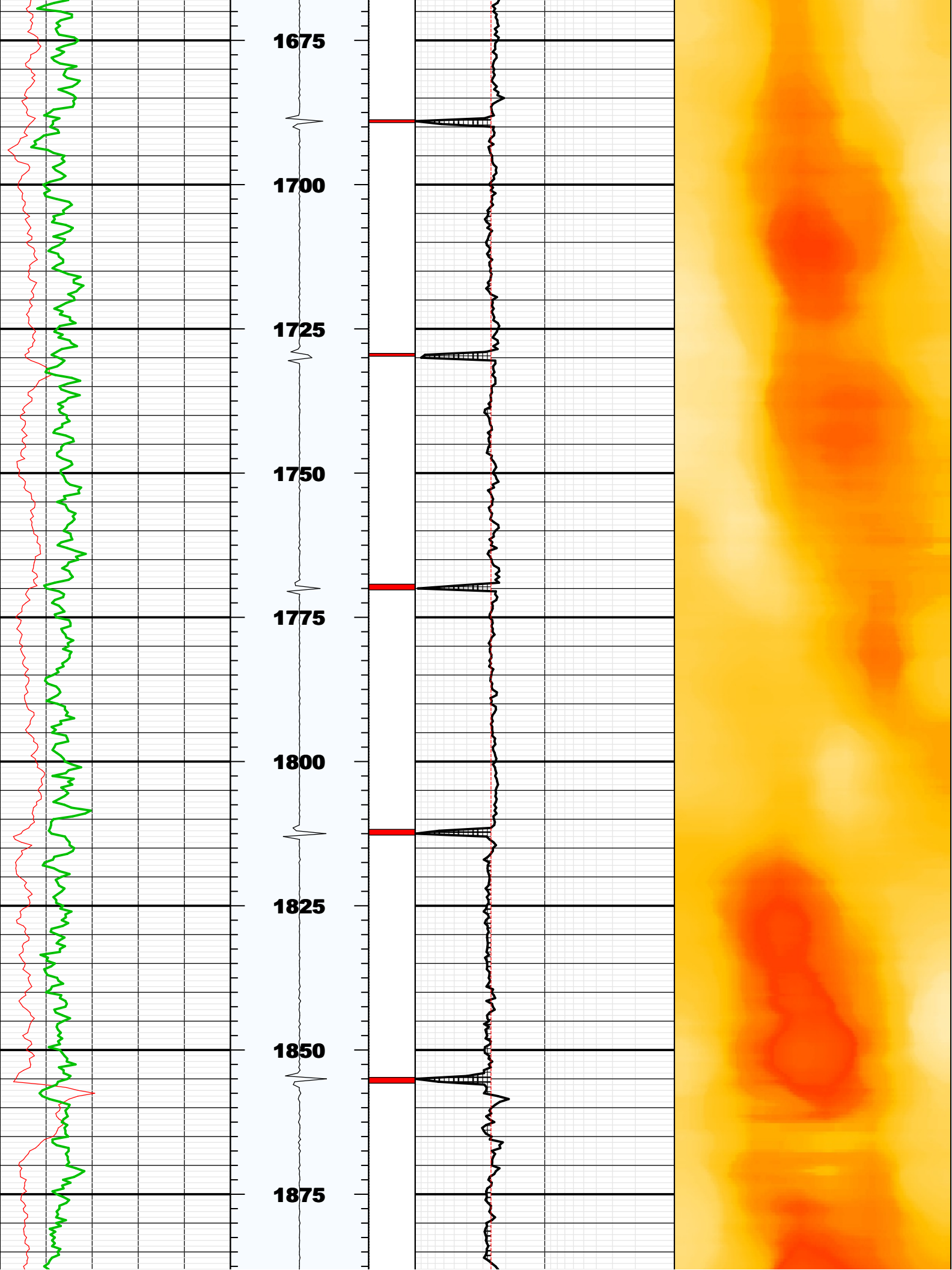


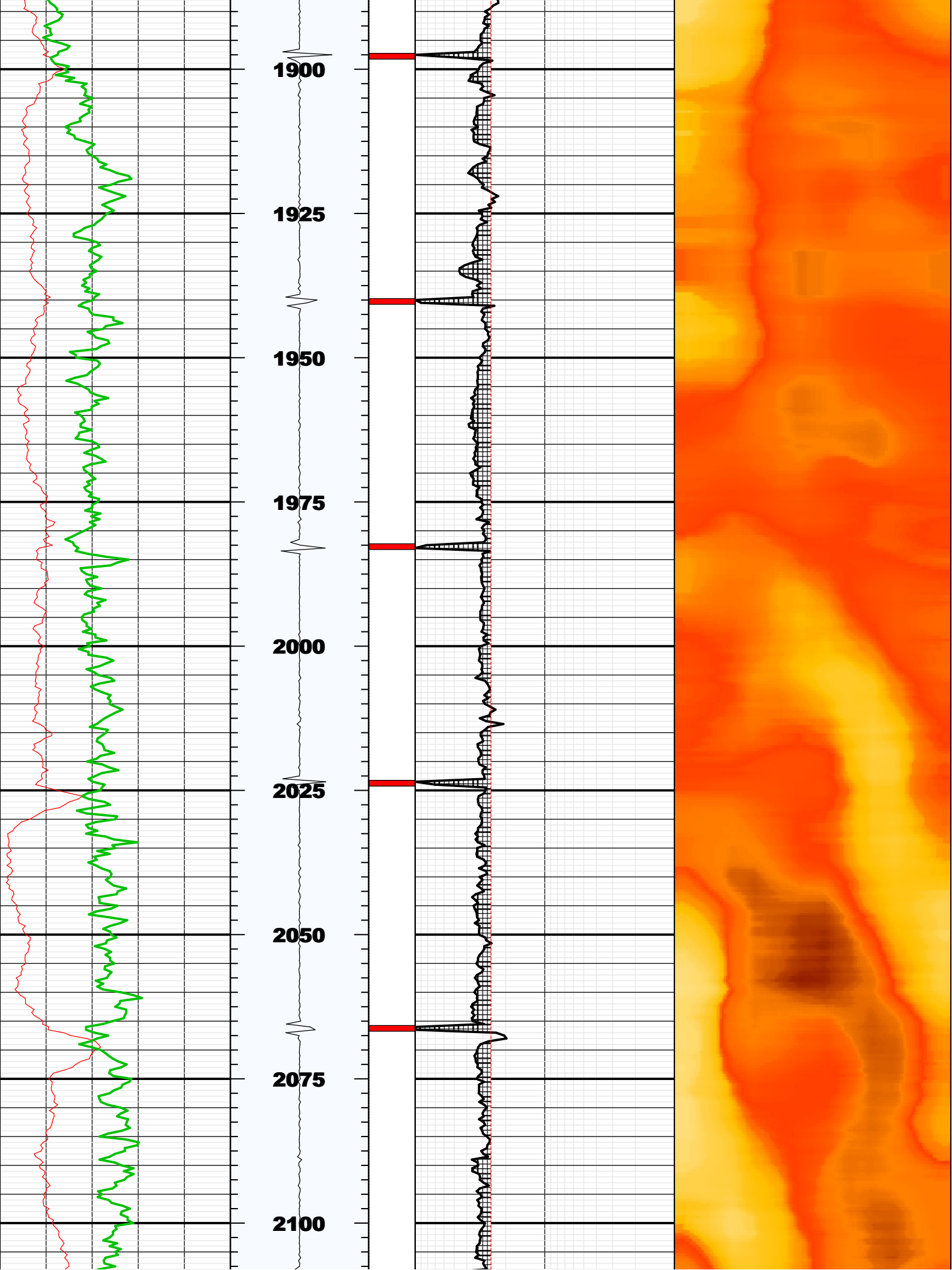


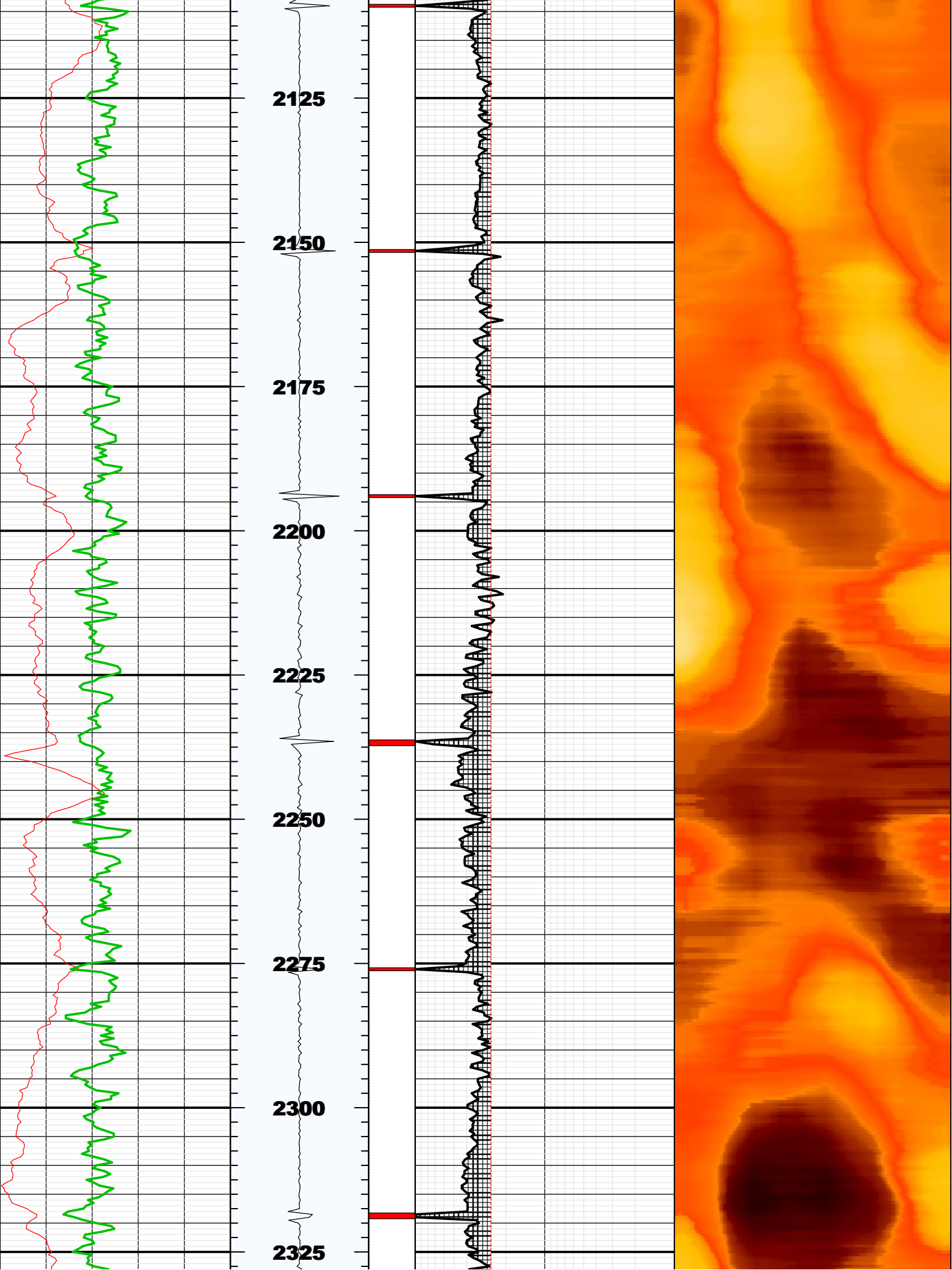


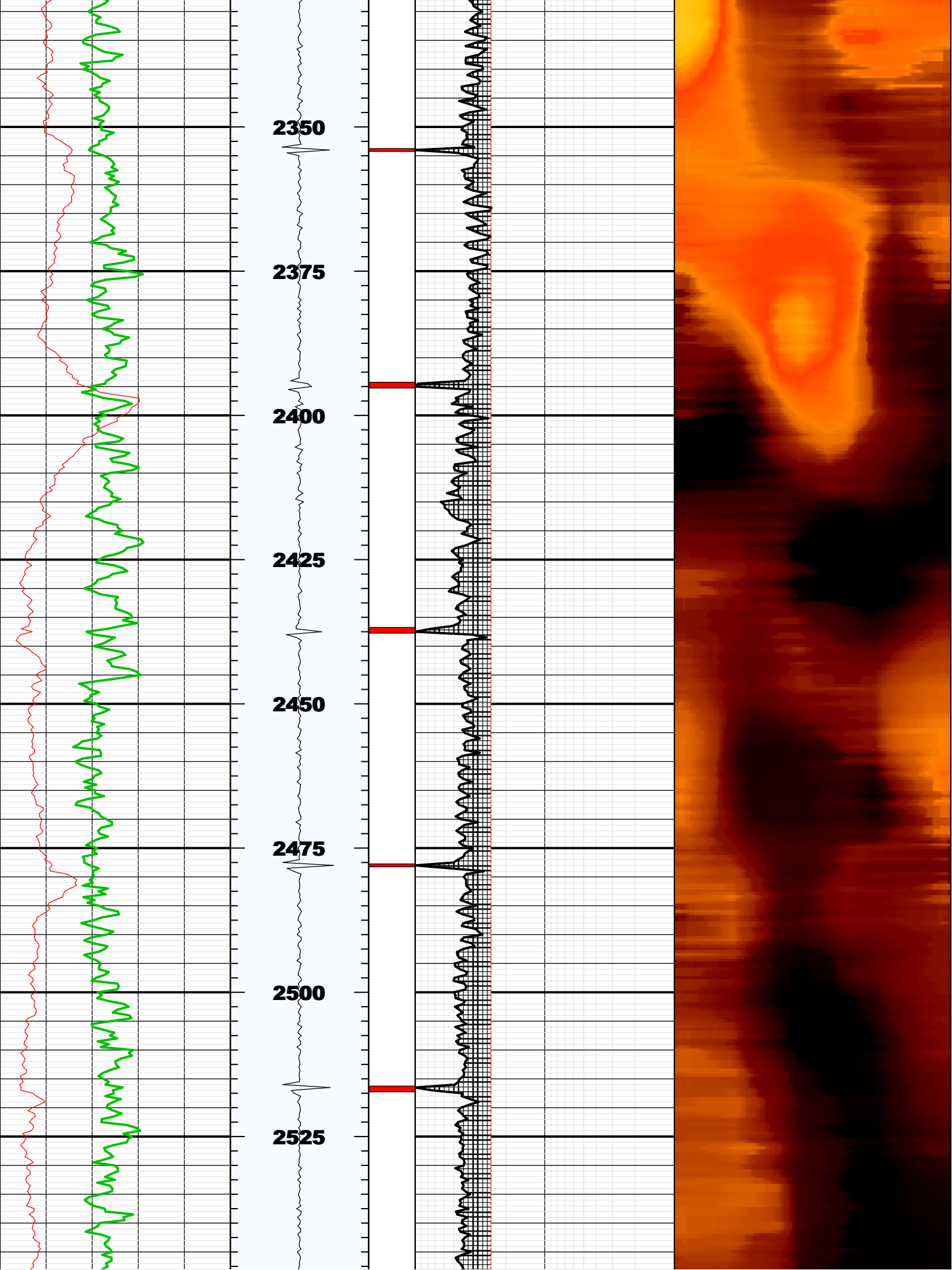


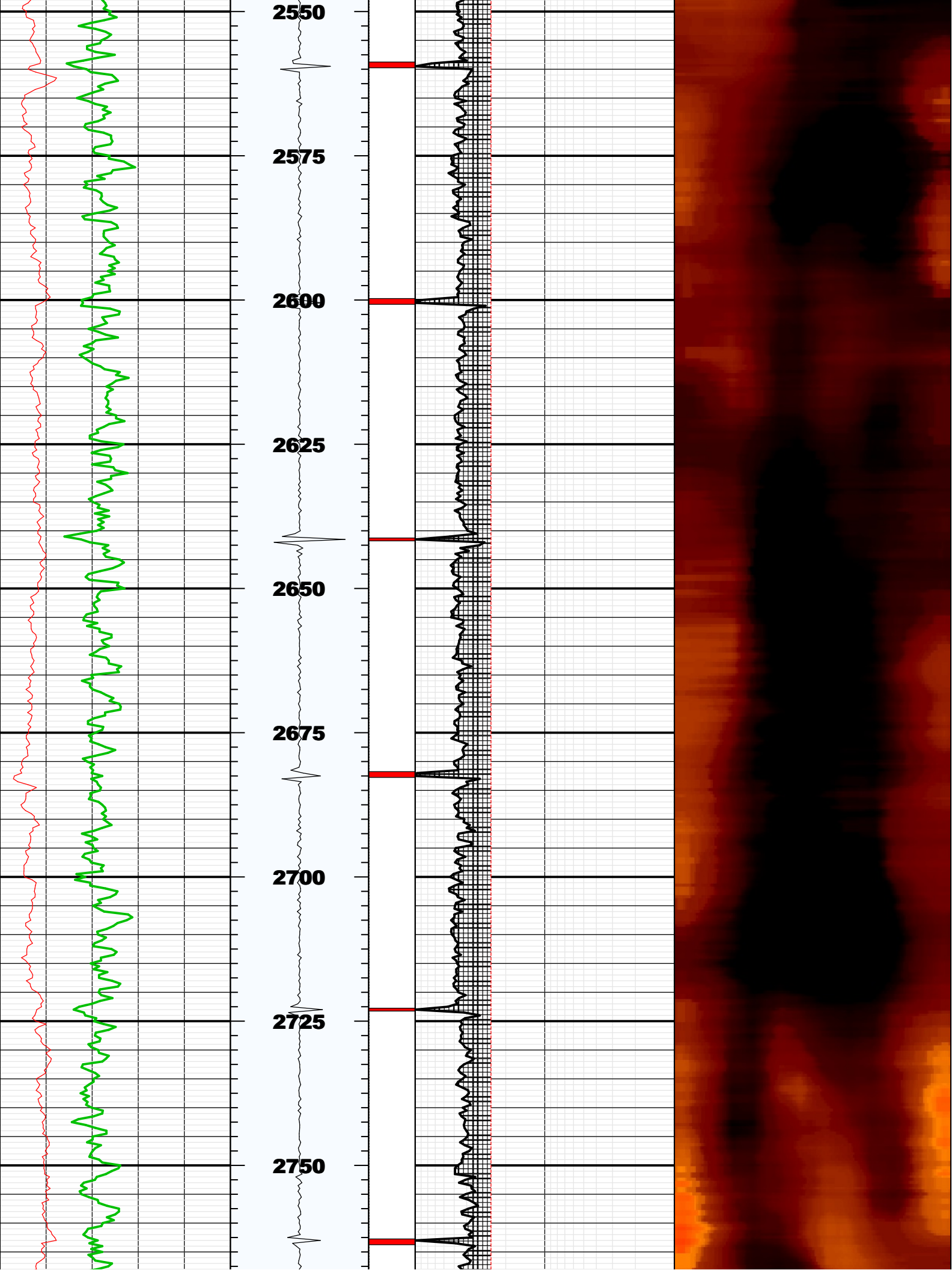


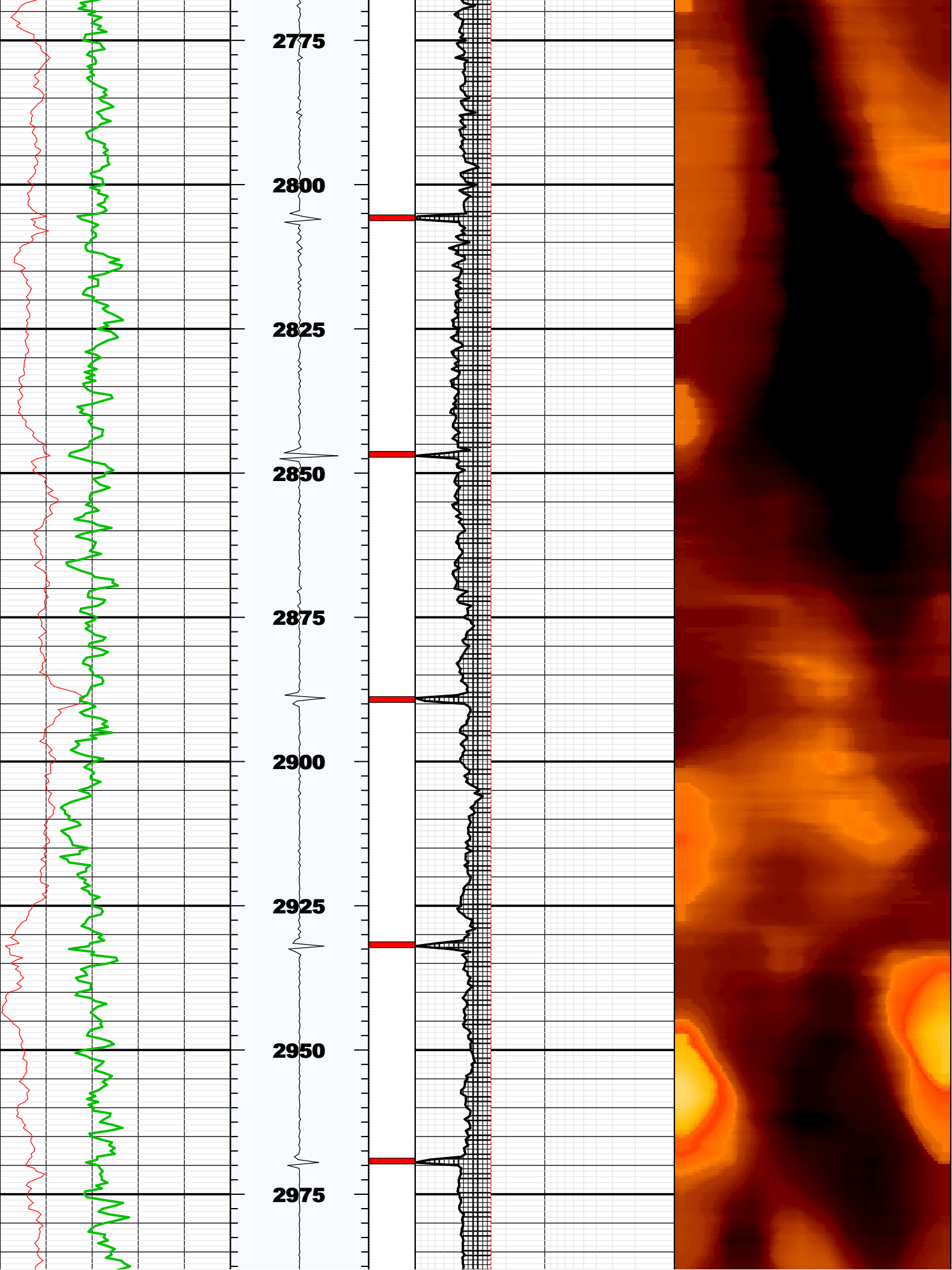


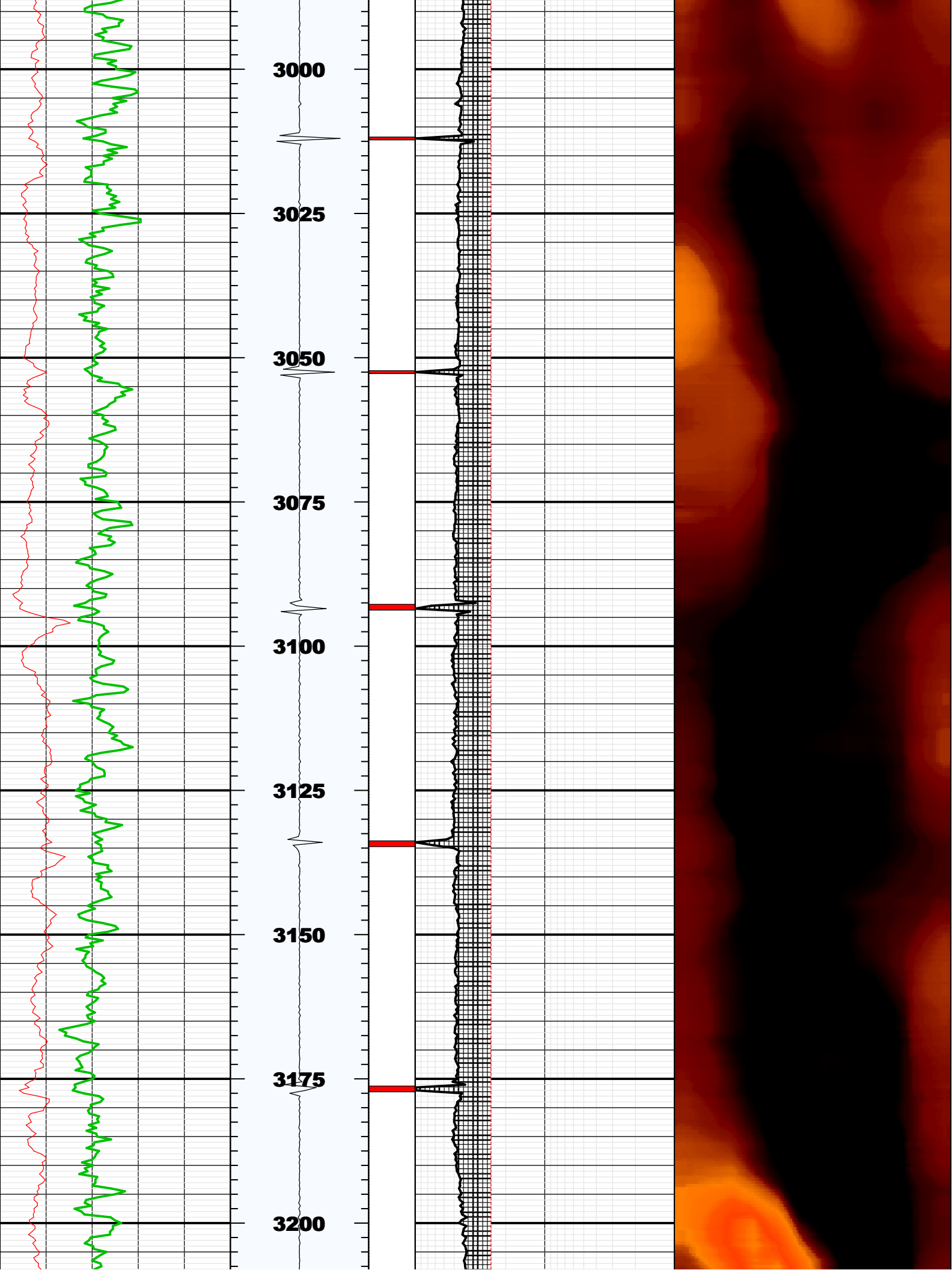


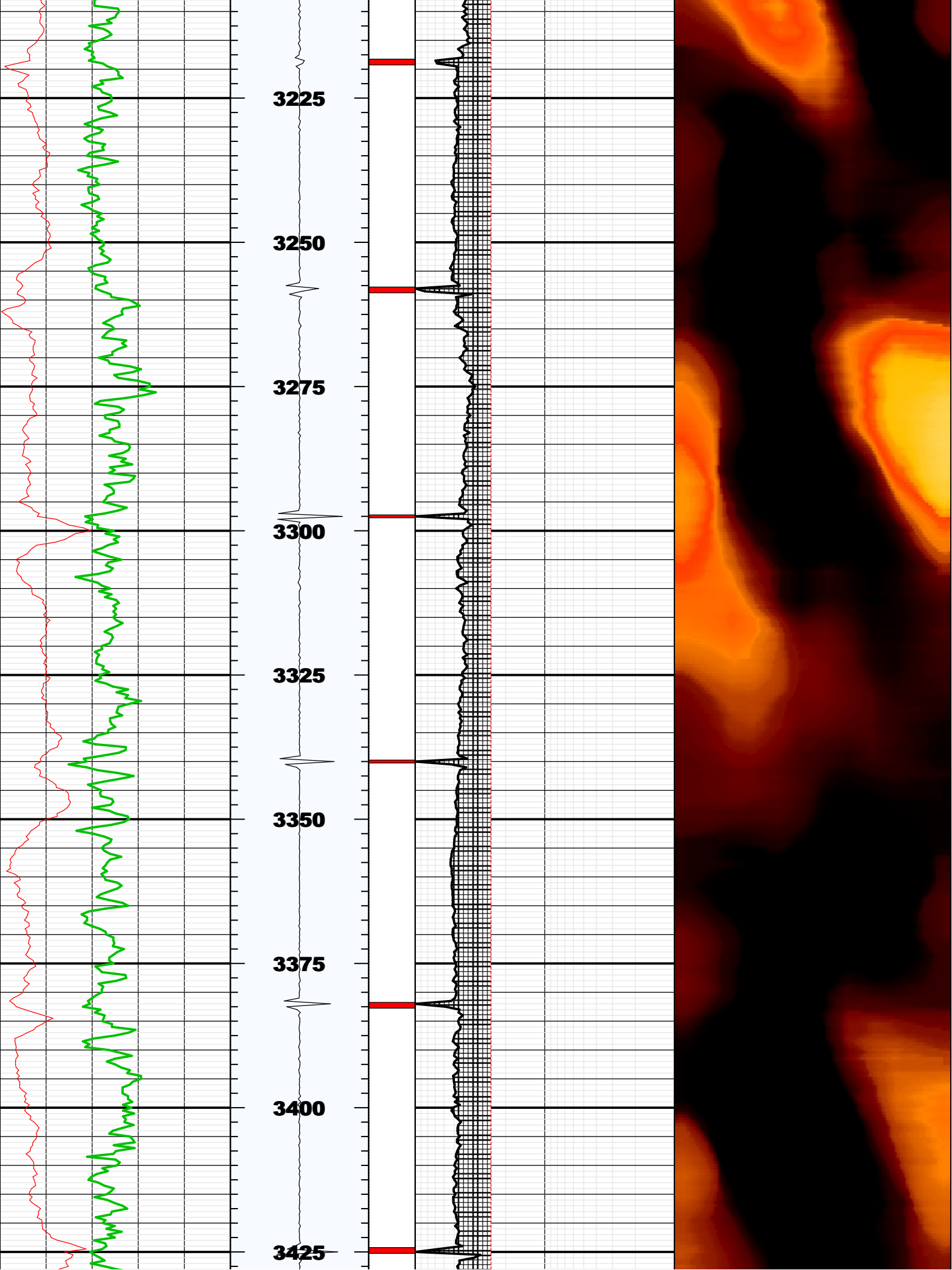


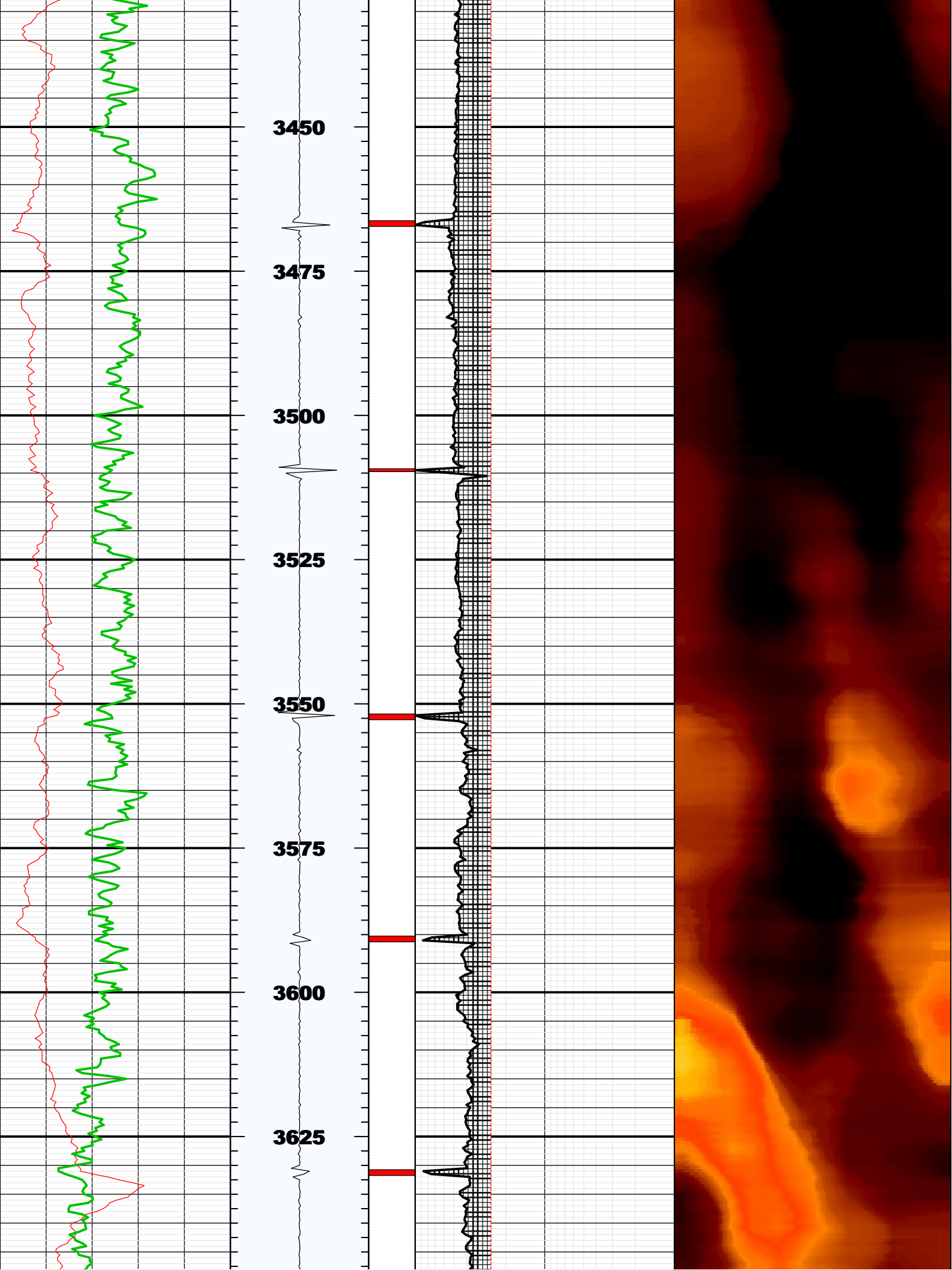


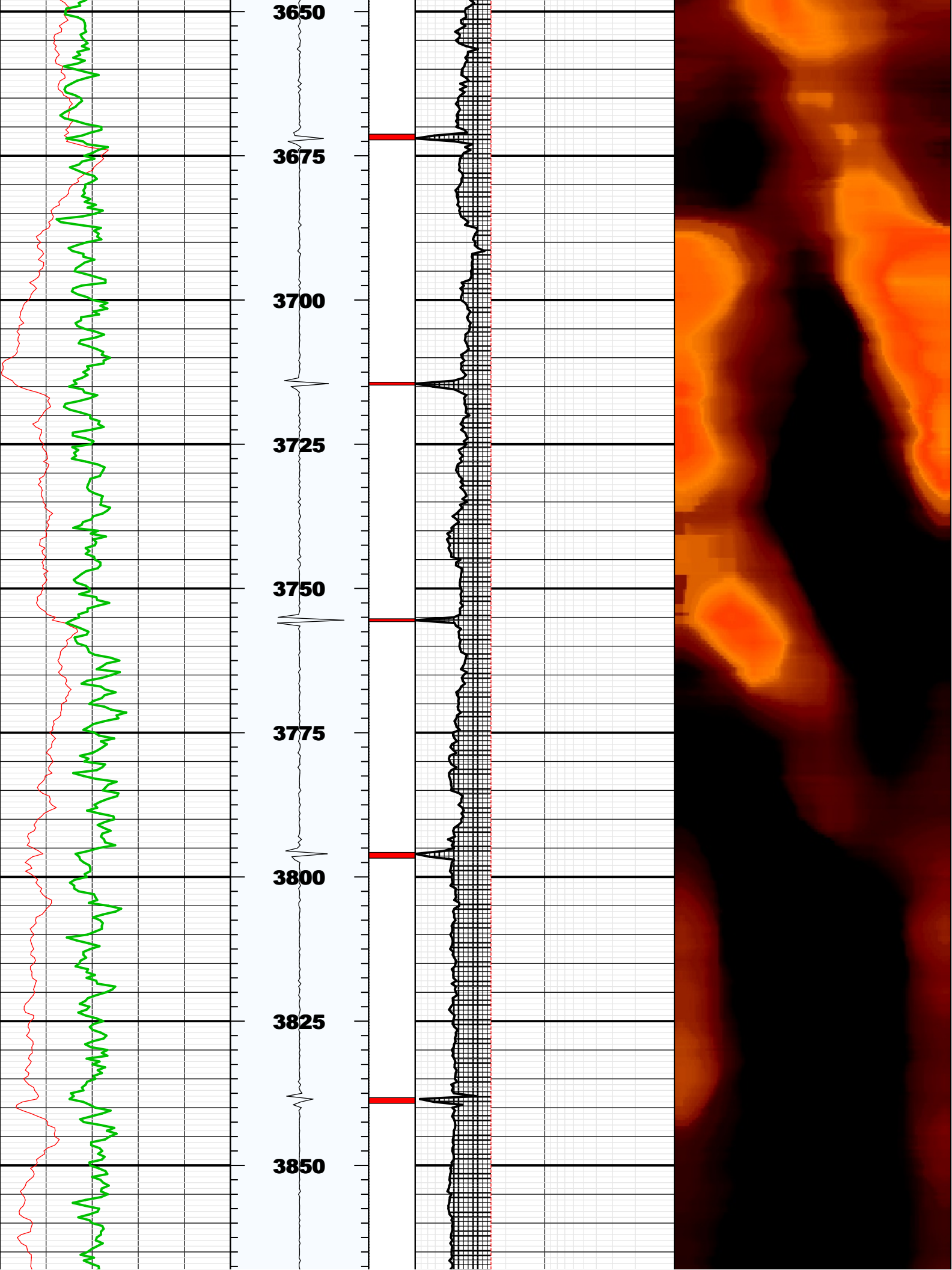


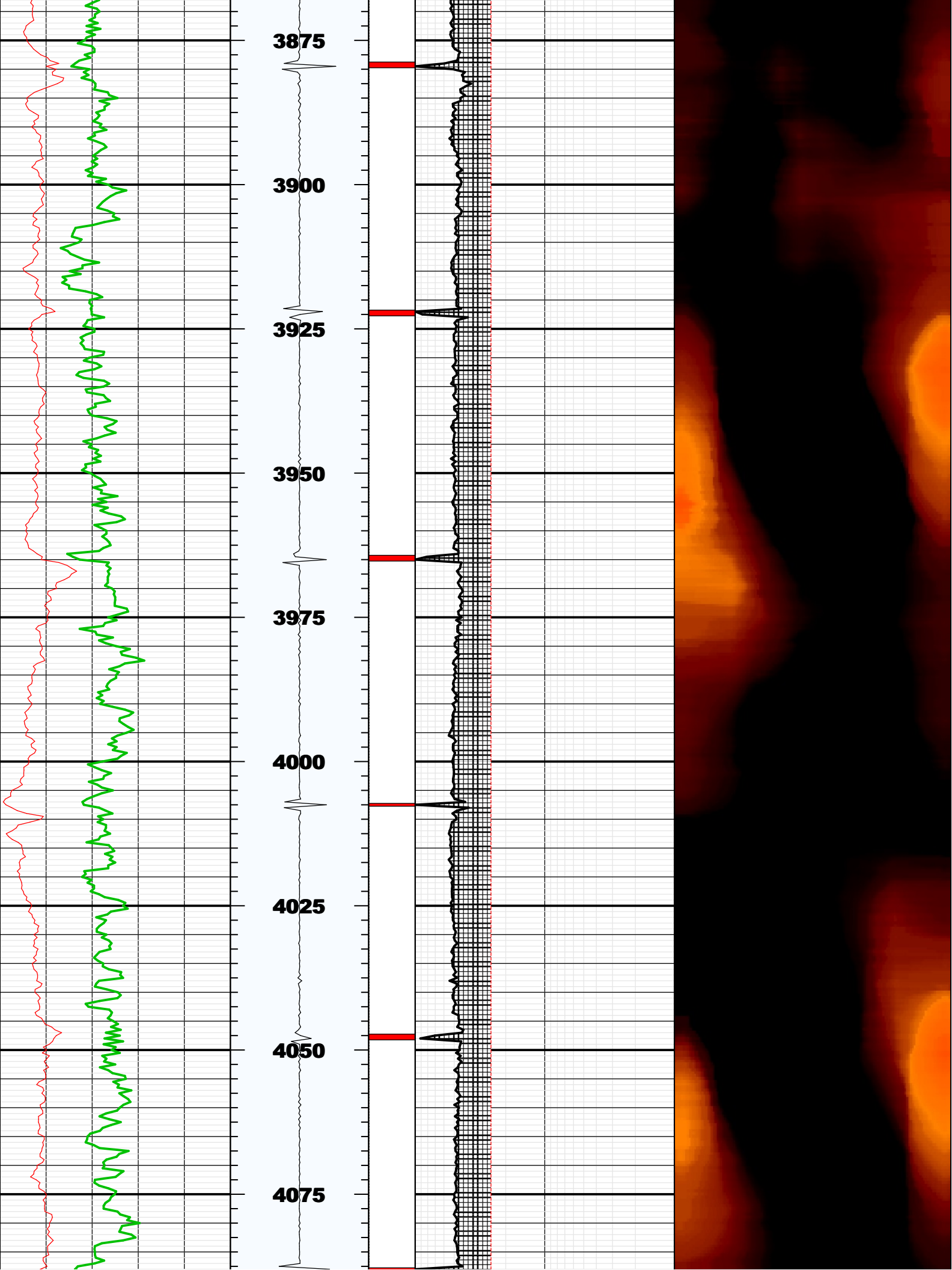


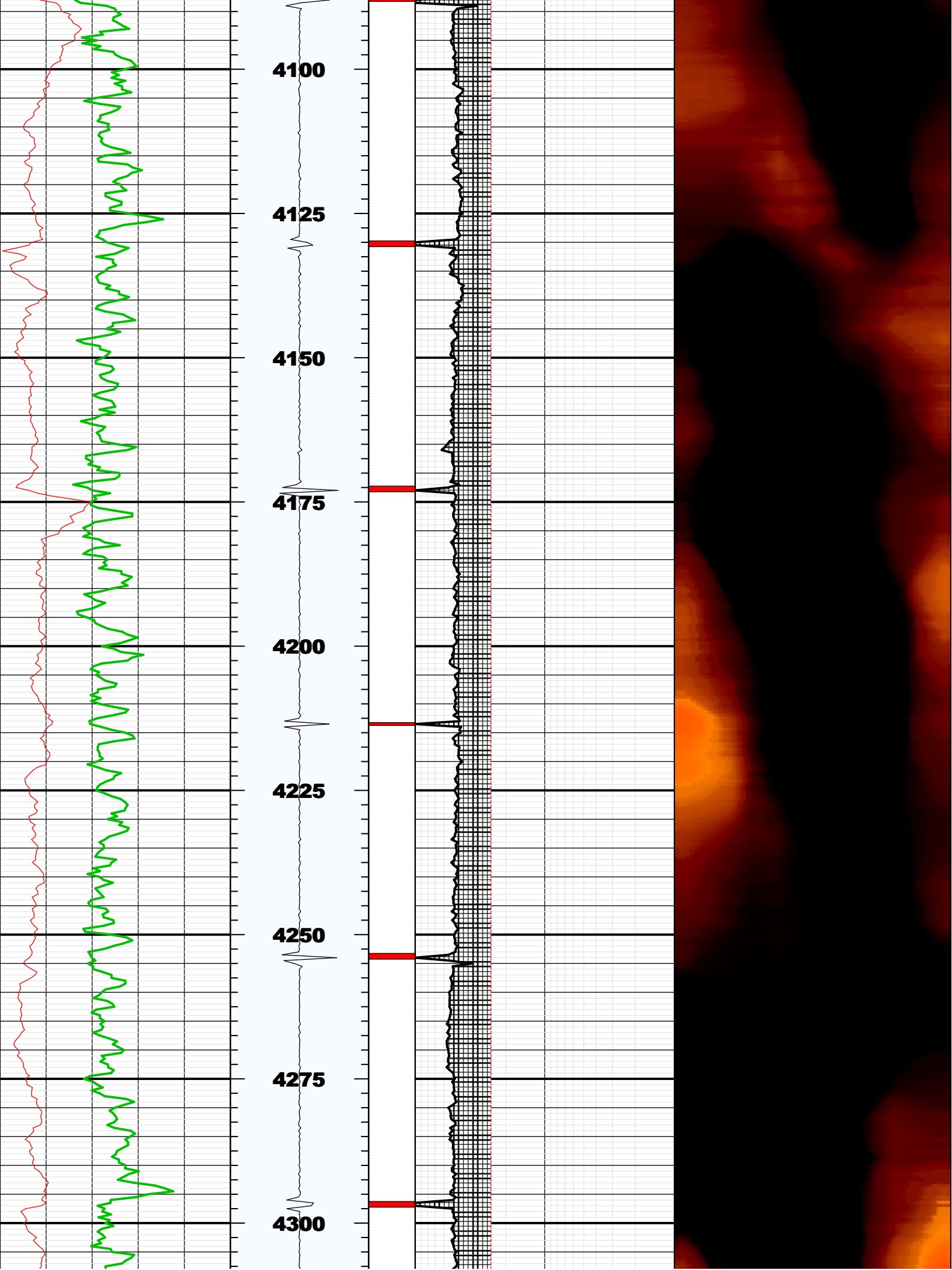


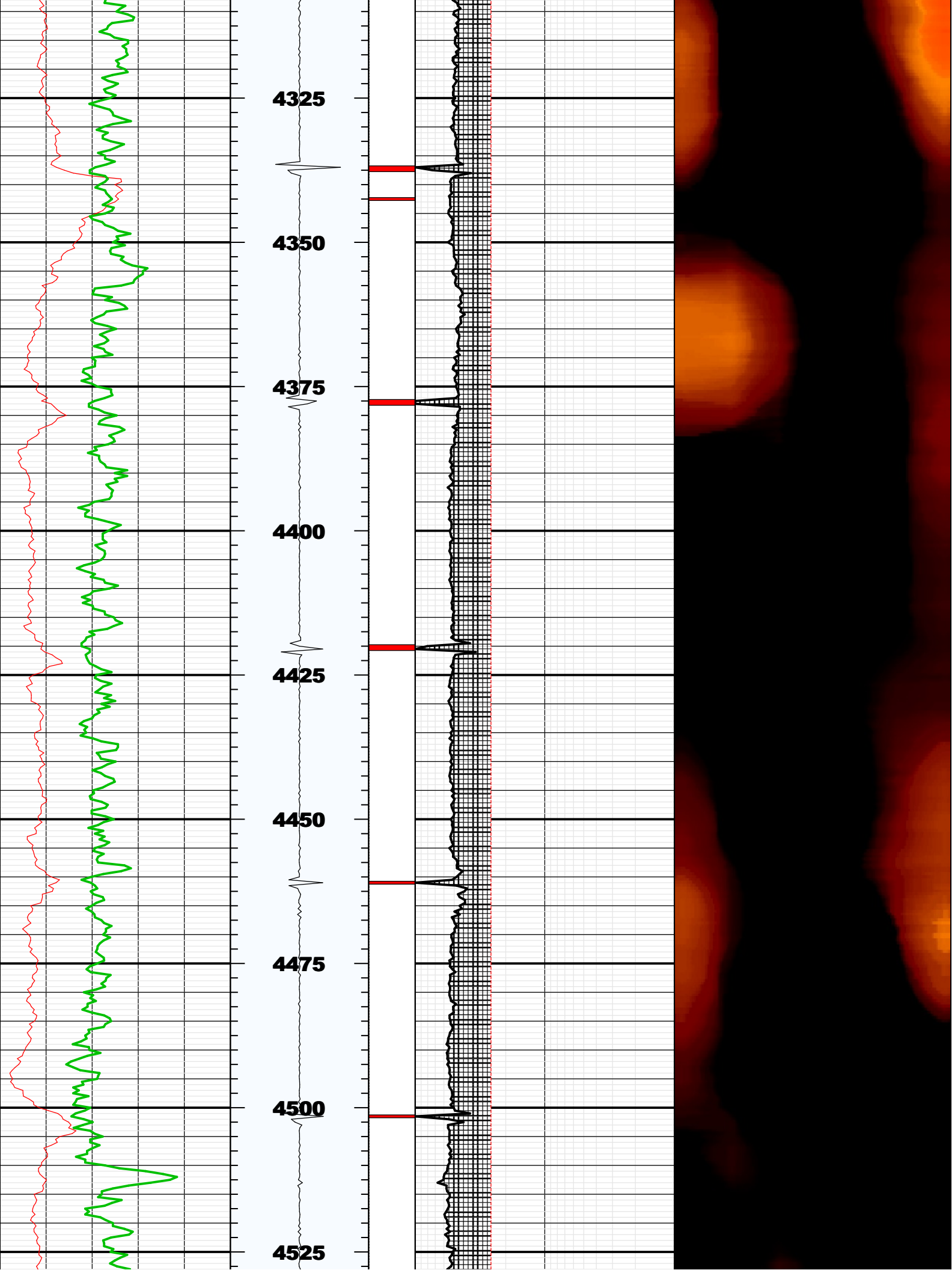


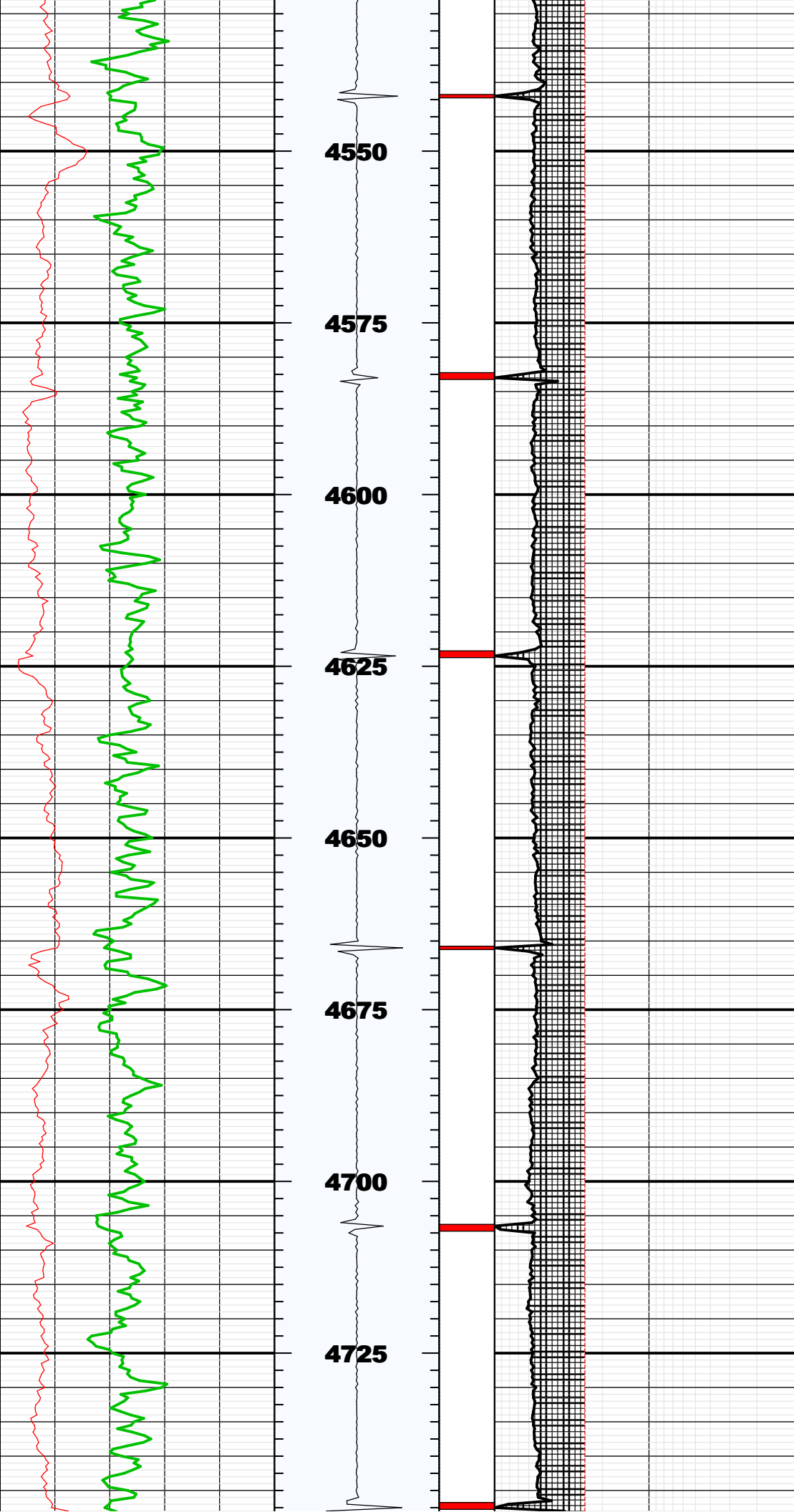


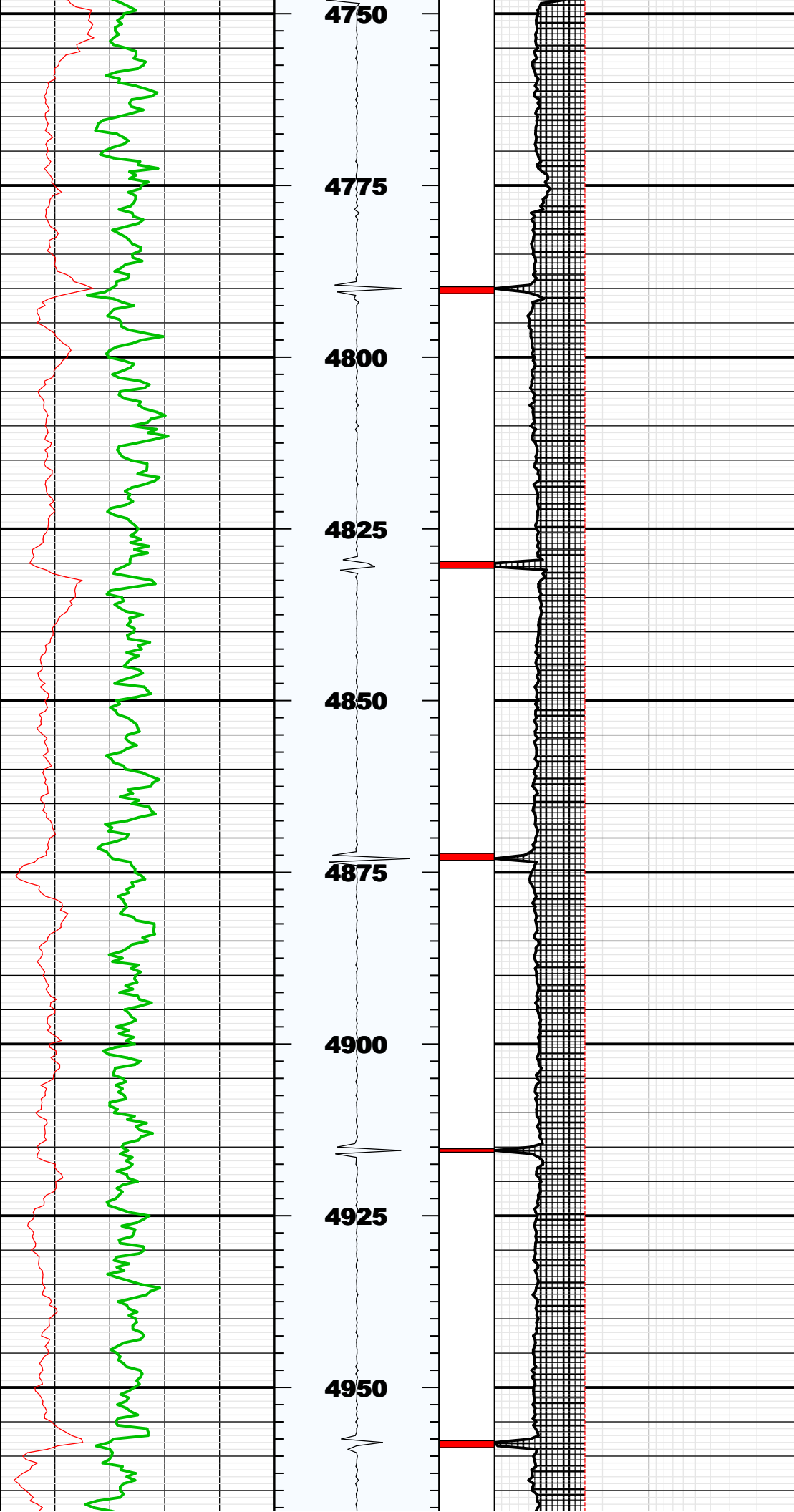


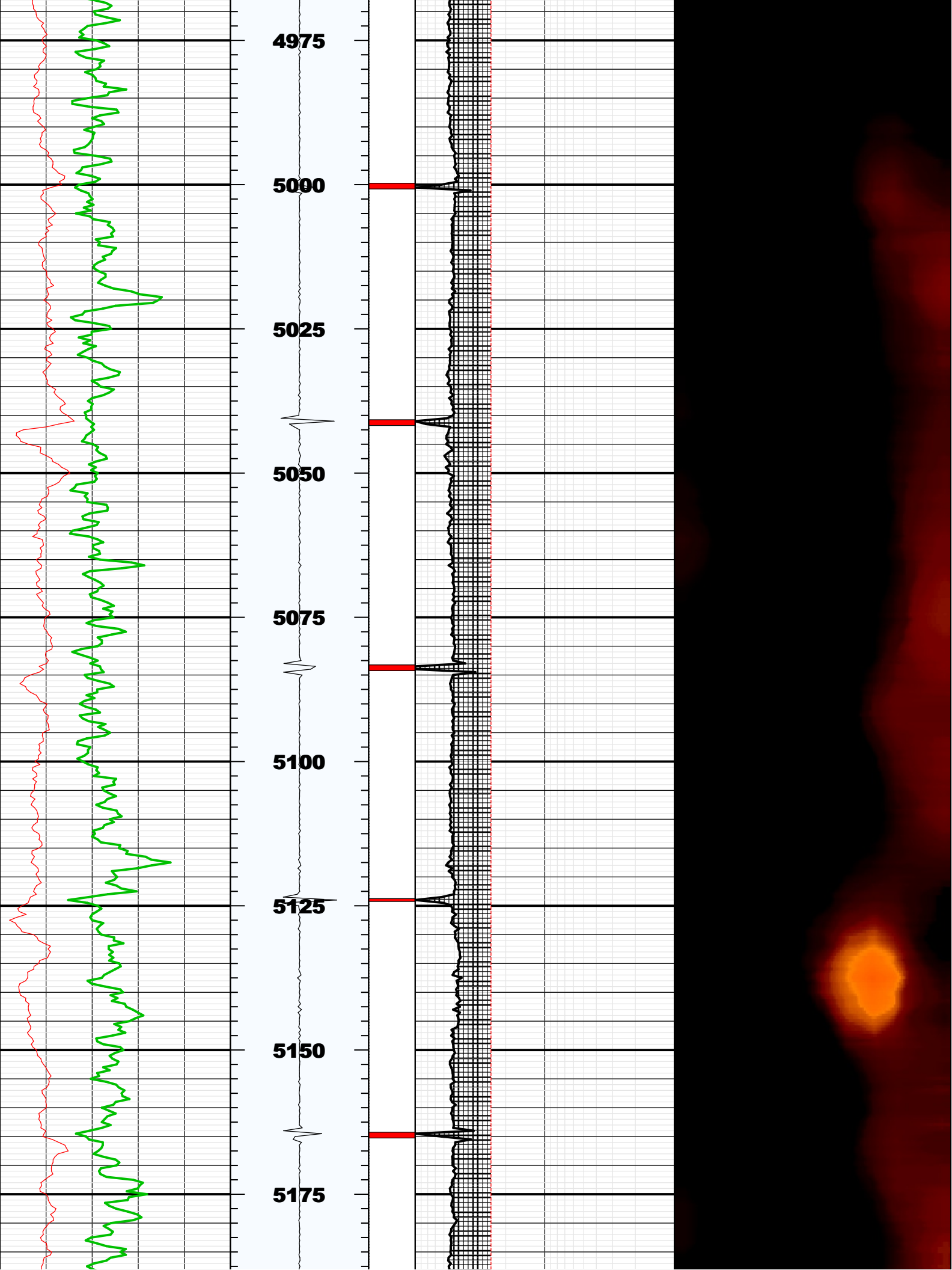


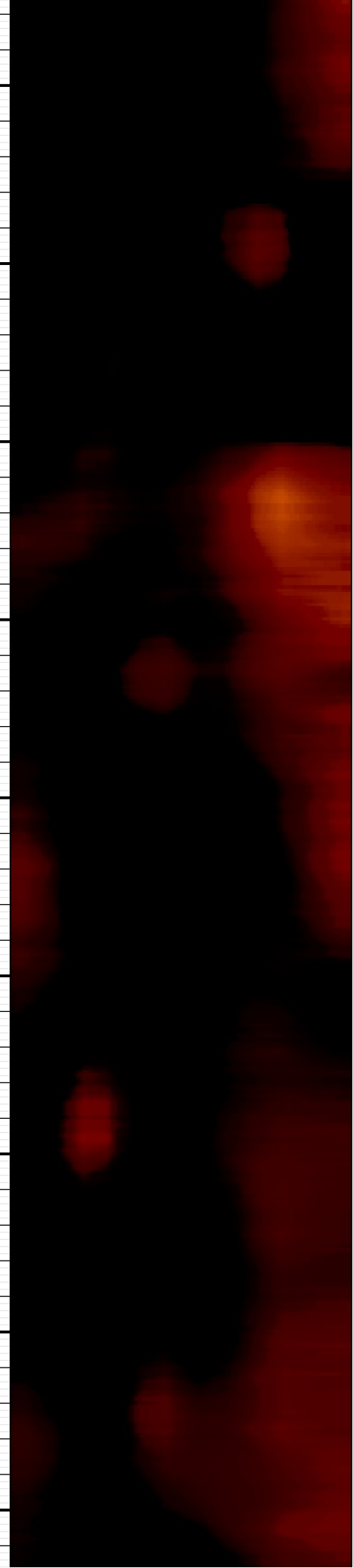
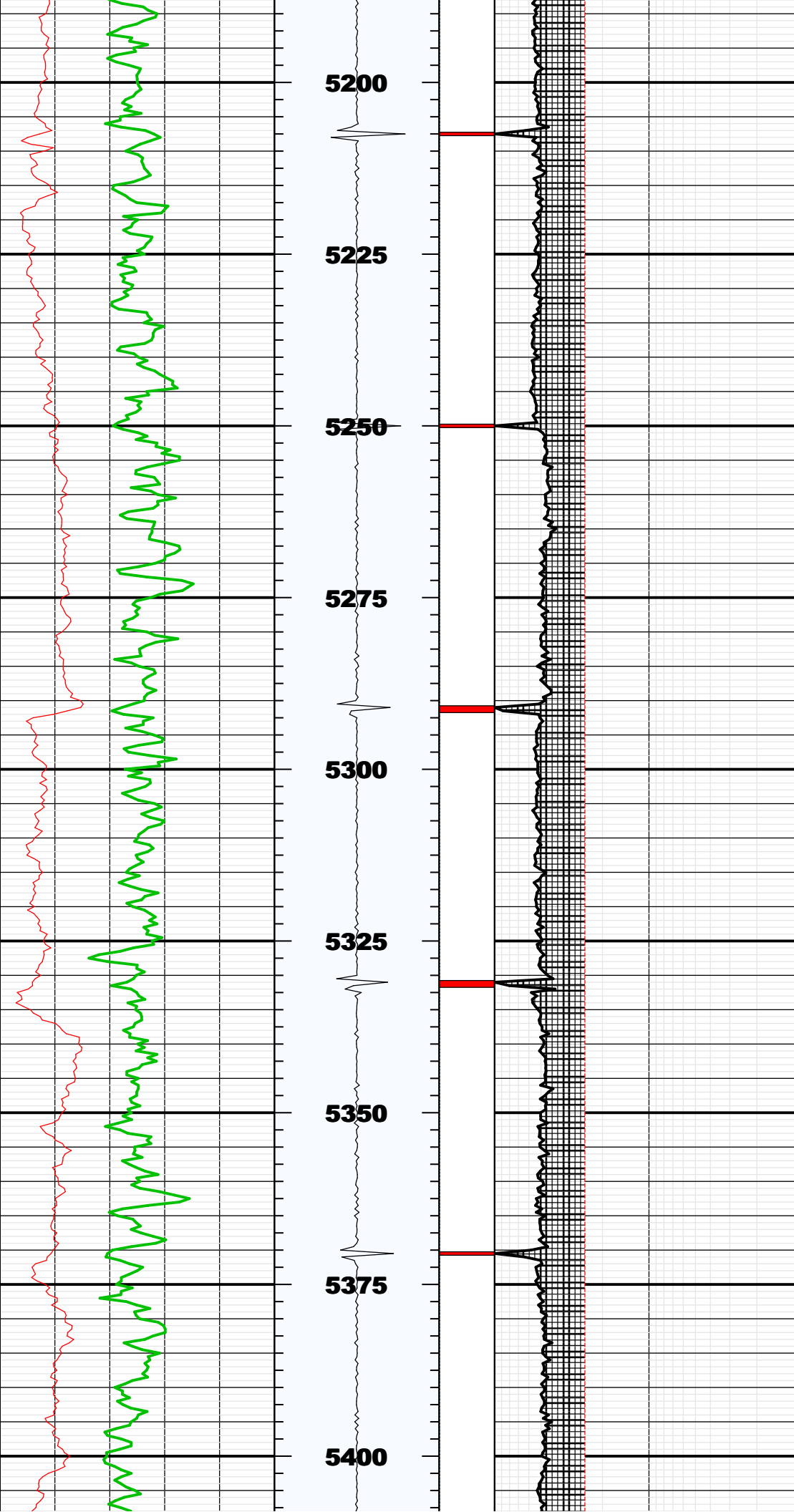


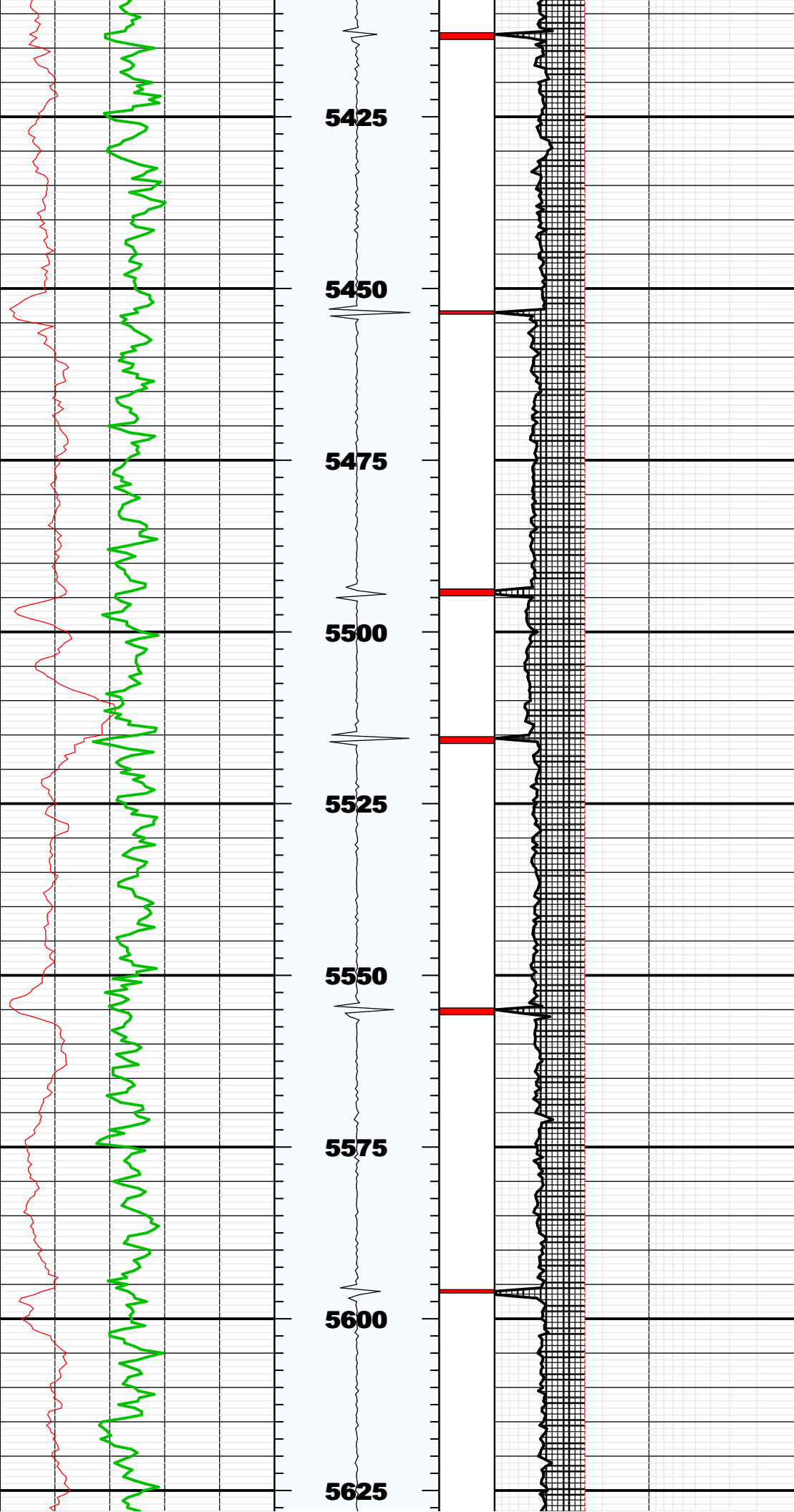


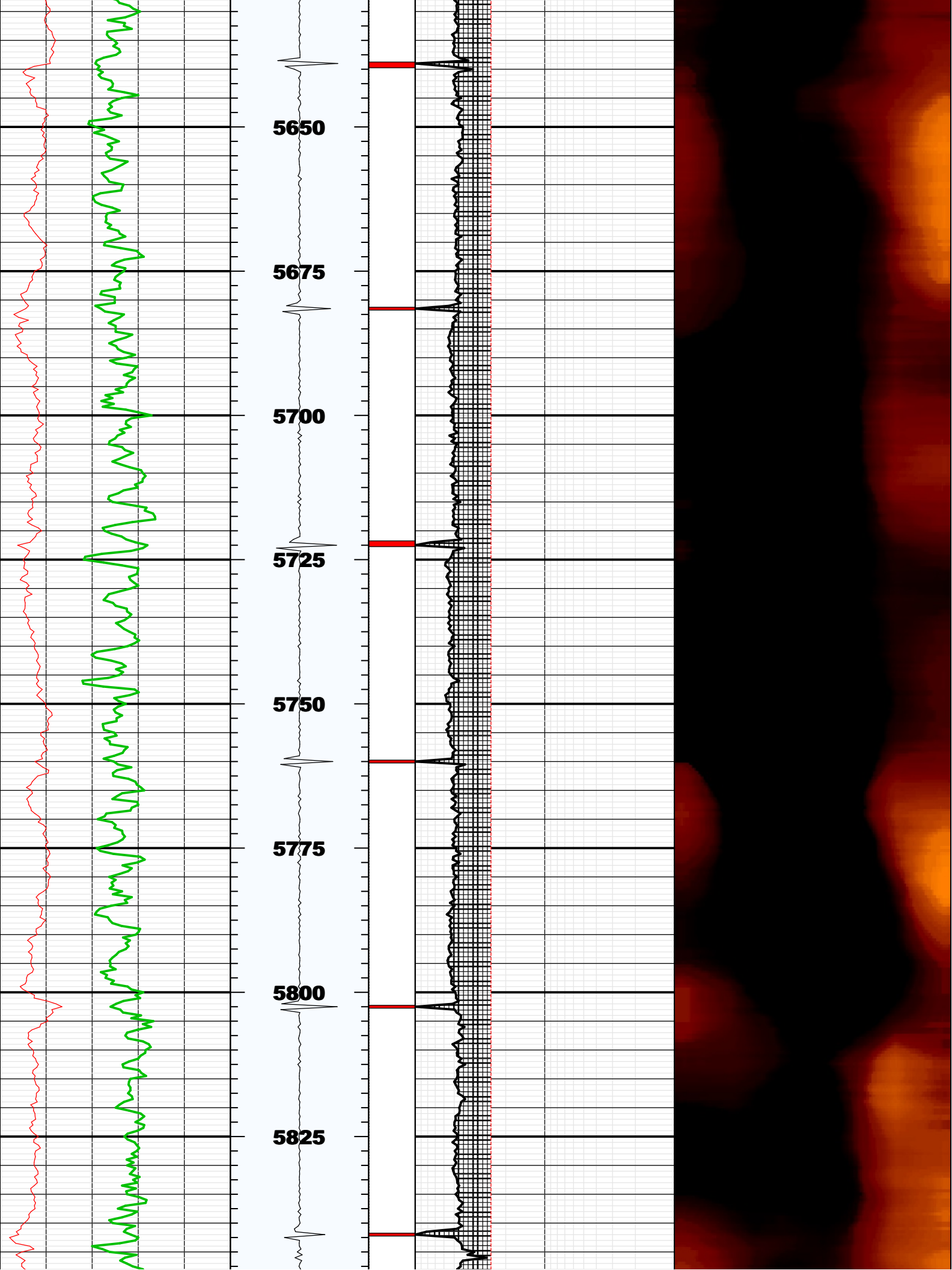


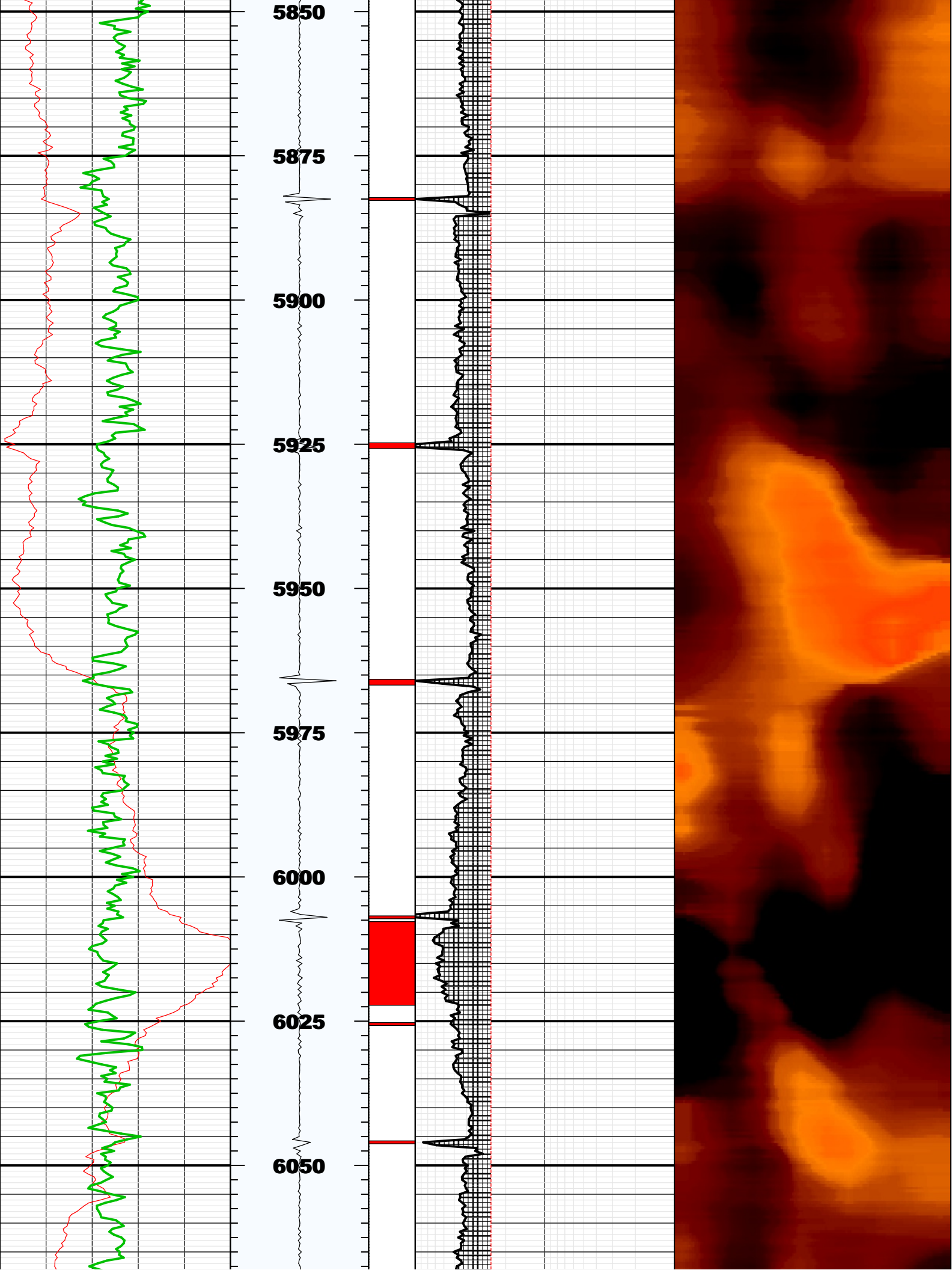


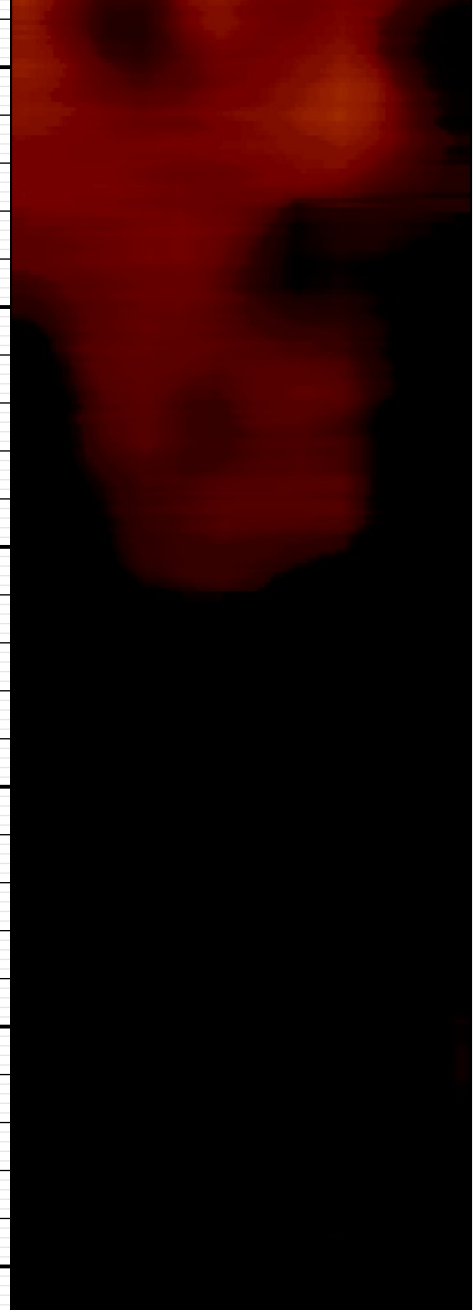
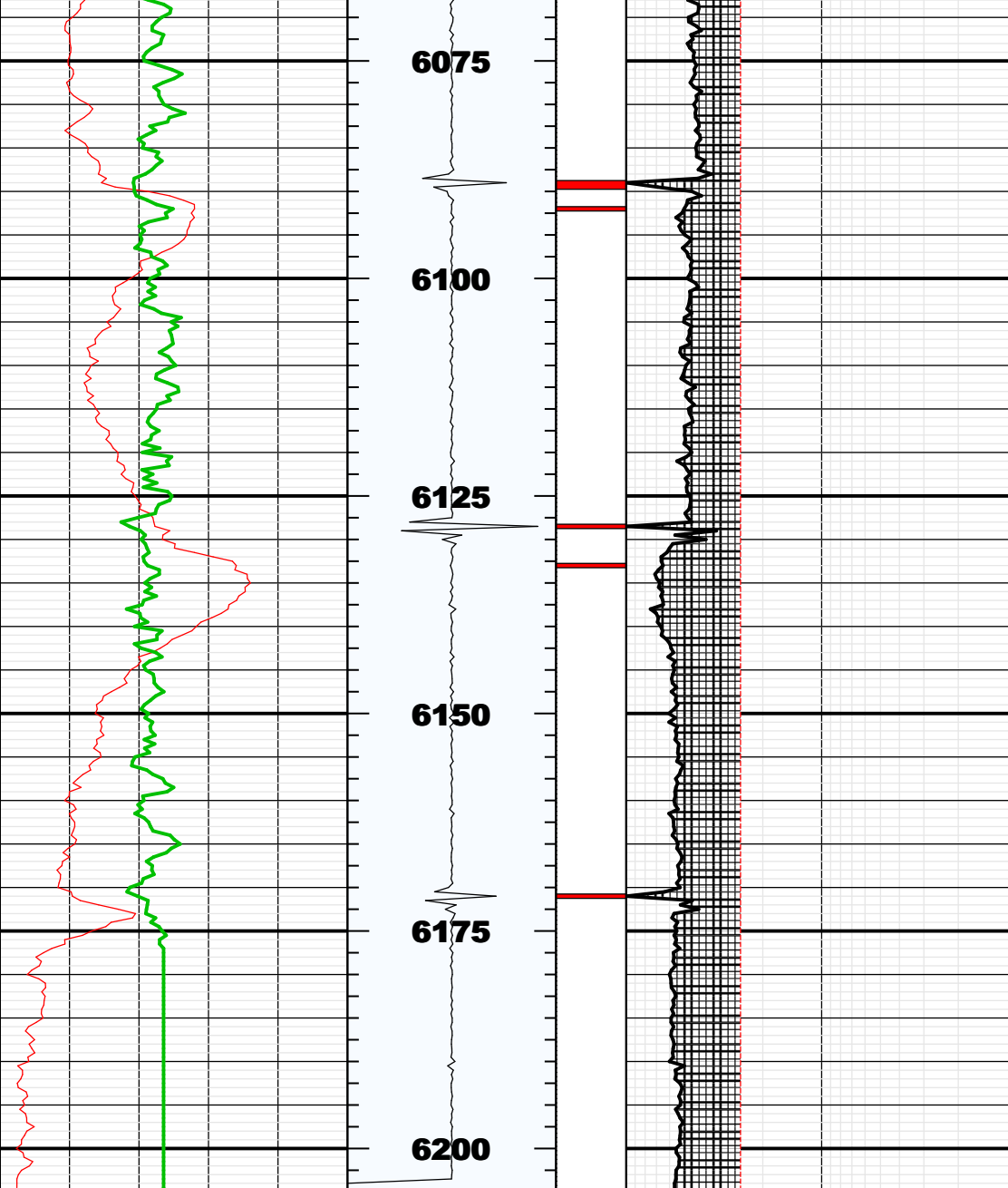








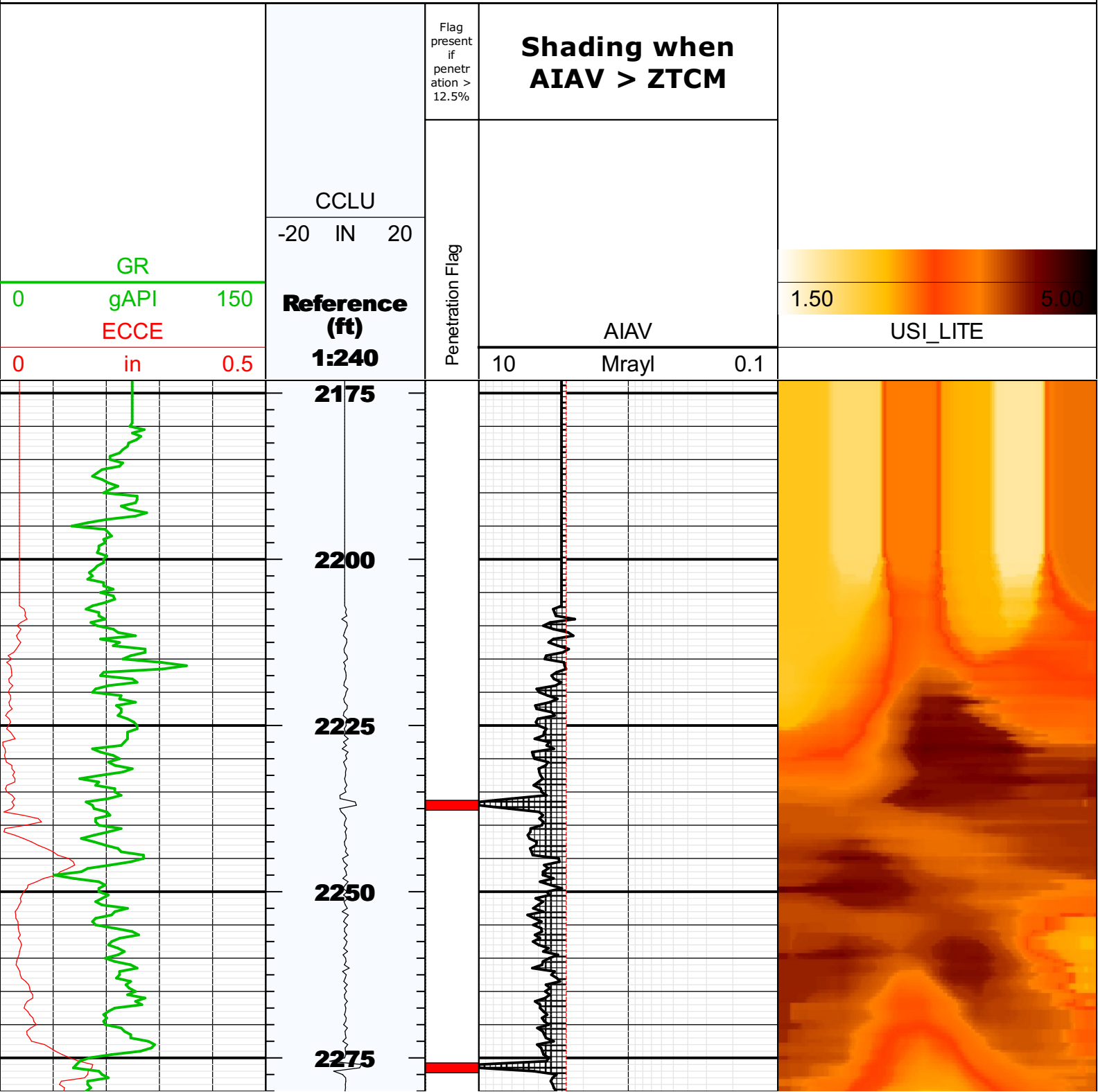


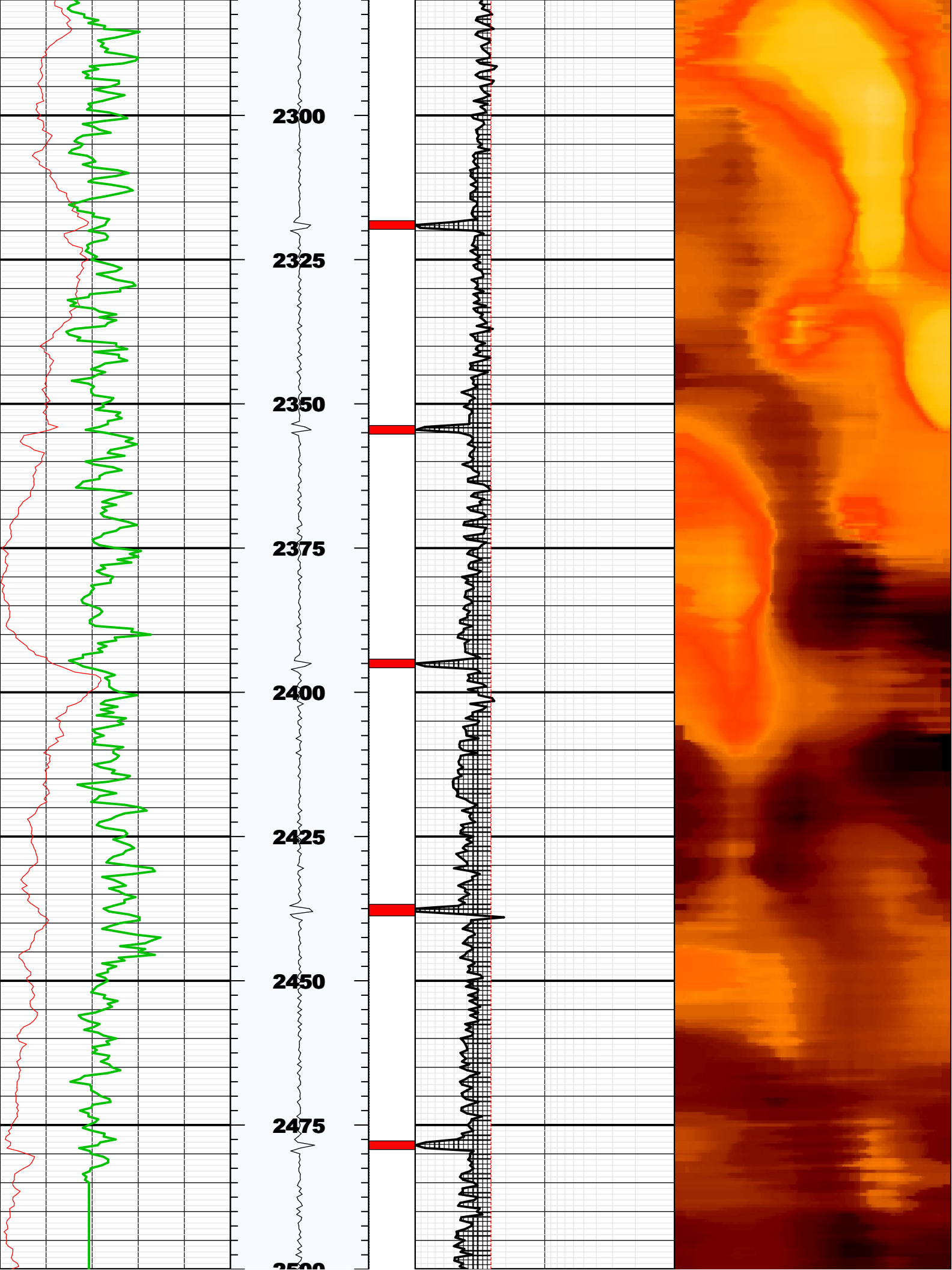


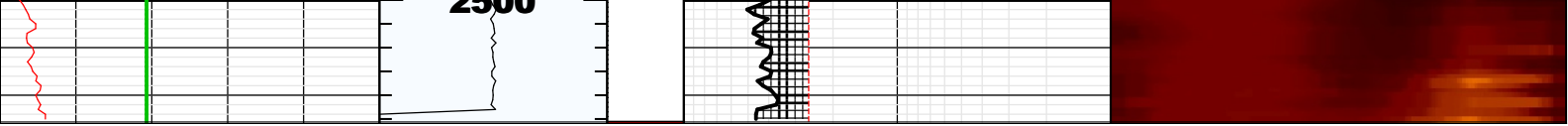
BS	8.75000	IN	Bit Size
CASG	N/A		Casing Grade
CDIA	5.50000	IN	Casing Outer Diameter
CSID	4.77800	IN	Casing Inner Diameter
CSIZ	5.50000	IN	Casing Outer Diameter
CWEI	20.00000	LB/F	Casing Weight
DFD	8.80000	LB/G	Drilling Fluid Density
DFVL	190.00000	US/F	Default Fluid Velocity
DO			
DOT	1.75600	IN	Diameter 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	0.36100	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	27.84833	US	Window Begin Time
WINE	67.84833	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
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Field: Wattenberg







Fluid Properties Used for Main Pass

