

Company: Noble Energy Inc

Well: Wells Ranch AE19-689
Field: Wattenberg
County: Weld State: Colorado

County: Weld		USI-LITE (2500 psi)	
Field: Wattenberg			
Location: NWNW Sec. 20 T6N R62W			
Well: Wells Ranch AE19-689			
Company: Noble Energy Inc			
LOCATION			
Permanent Datum:		GL	
Log Measured From:		KB	
Drilling Measured From:		KB	
API Serial No.		Section	
05-123-39895-0000		20	
Logging Date		Township	
20-Jan-2015		6N	
Run Number		Range	
Run 1		62W	
Depth Driller			
7090.0 F			
Schlumberger Depth			
6920.0 F			
Bottom Log Interval			
6920.0 F			
Top Log Interval			
60.0 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			
From			
6920.0 F			
To			
-999.2 F			
Casing Size			
7.00 IN			
Weight			
26.00 LB/F			
Grade			
P110			
From			
30.0 F			
To			
7080.1 F			
Max Recorded Temp			
214.0			
Logger on bottom (date)			
20-Jan-2015			
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: 1109 Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error:	Serial Number: Length: 16500.00000

DISCLAIMER

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0 PSI repeat pass and 2500 PSI main pass.

Top of cement seen at 750'.

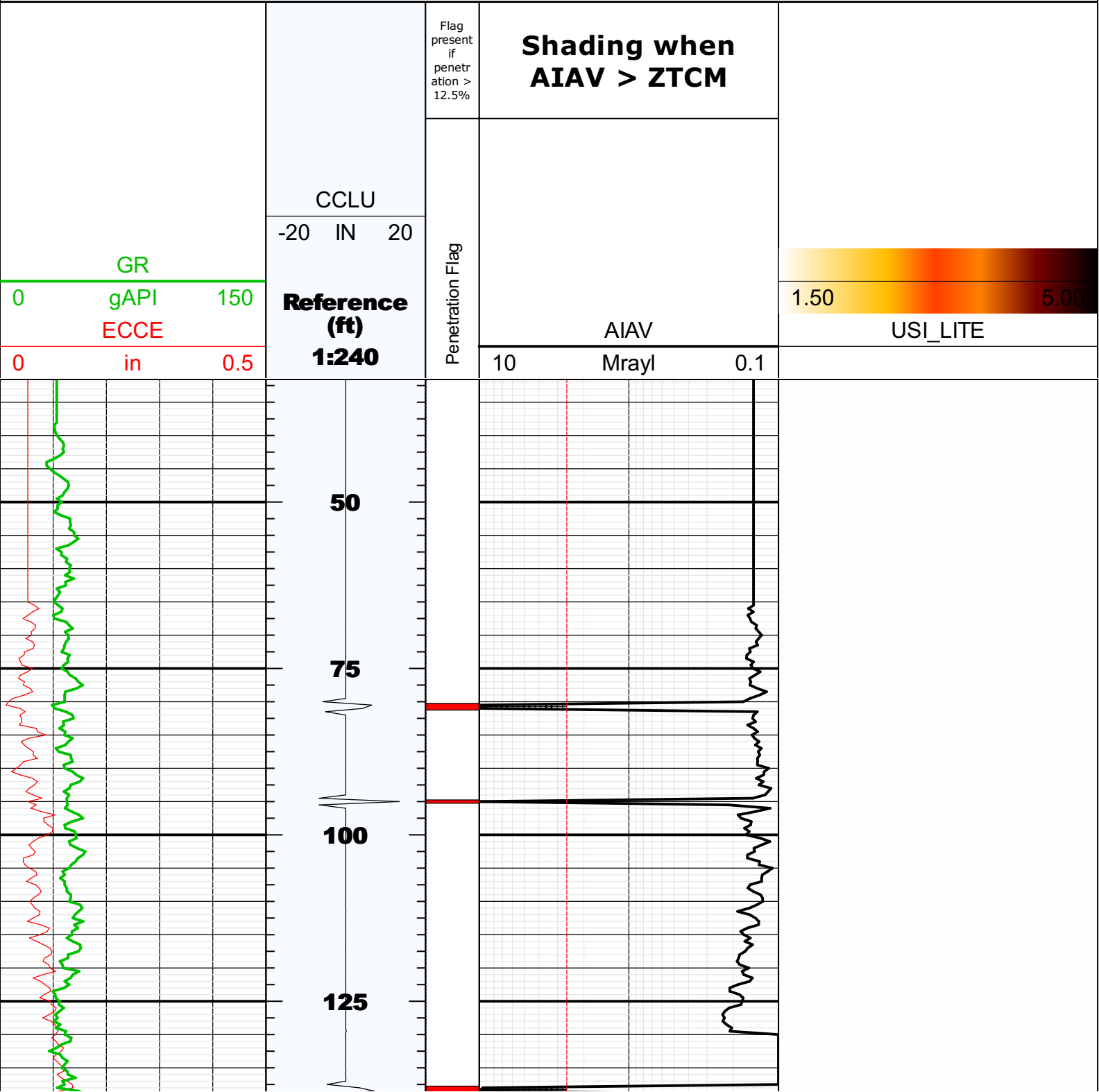
Top of 4.5 liner at 6929.7'.

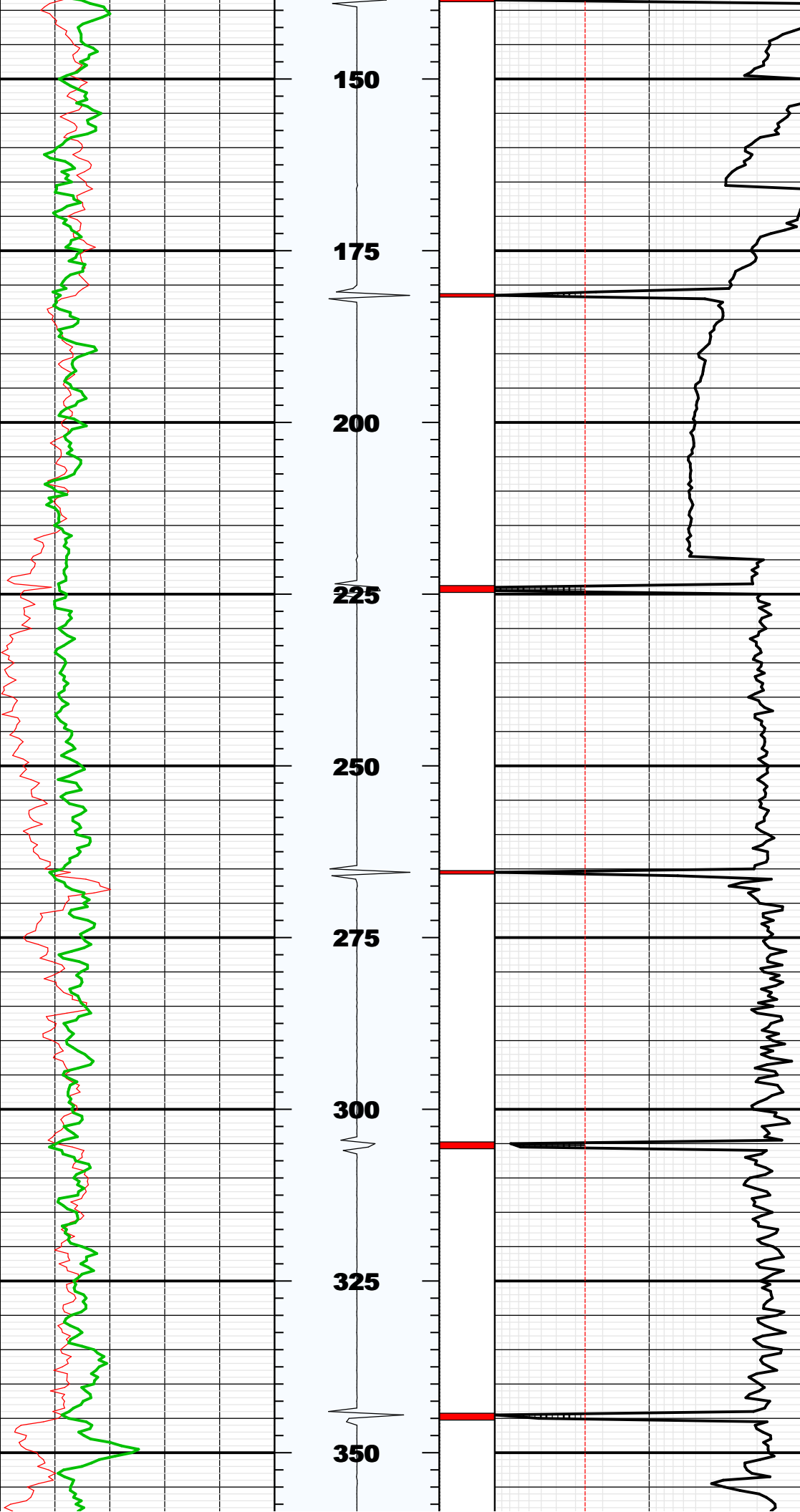
Bottom log interval at 6920' to maintain distance from top of liner.

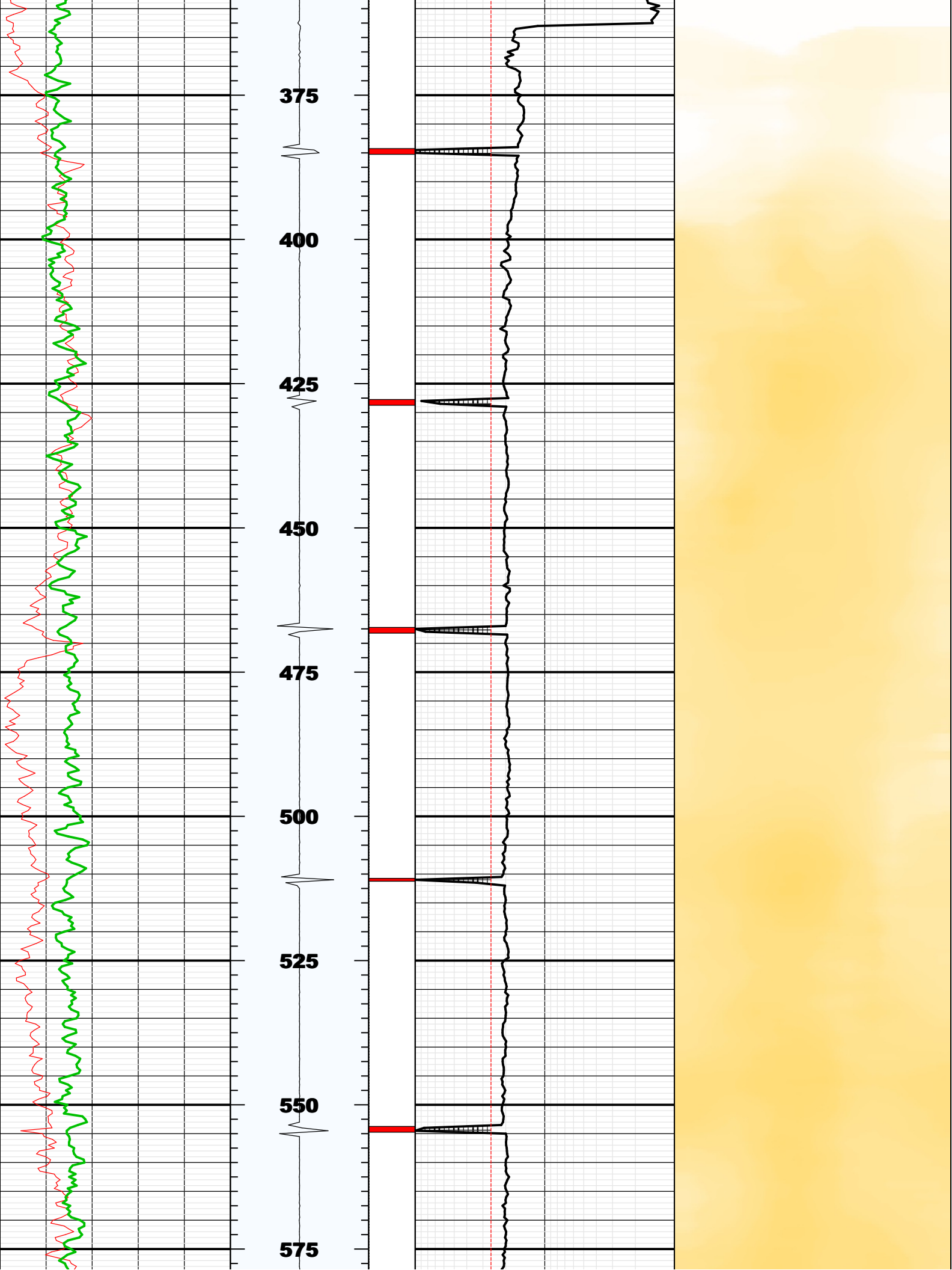
Bottom hole temperature was 214 degF measured at depth.

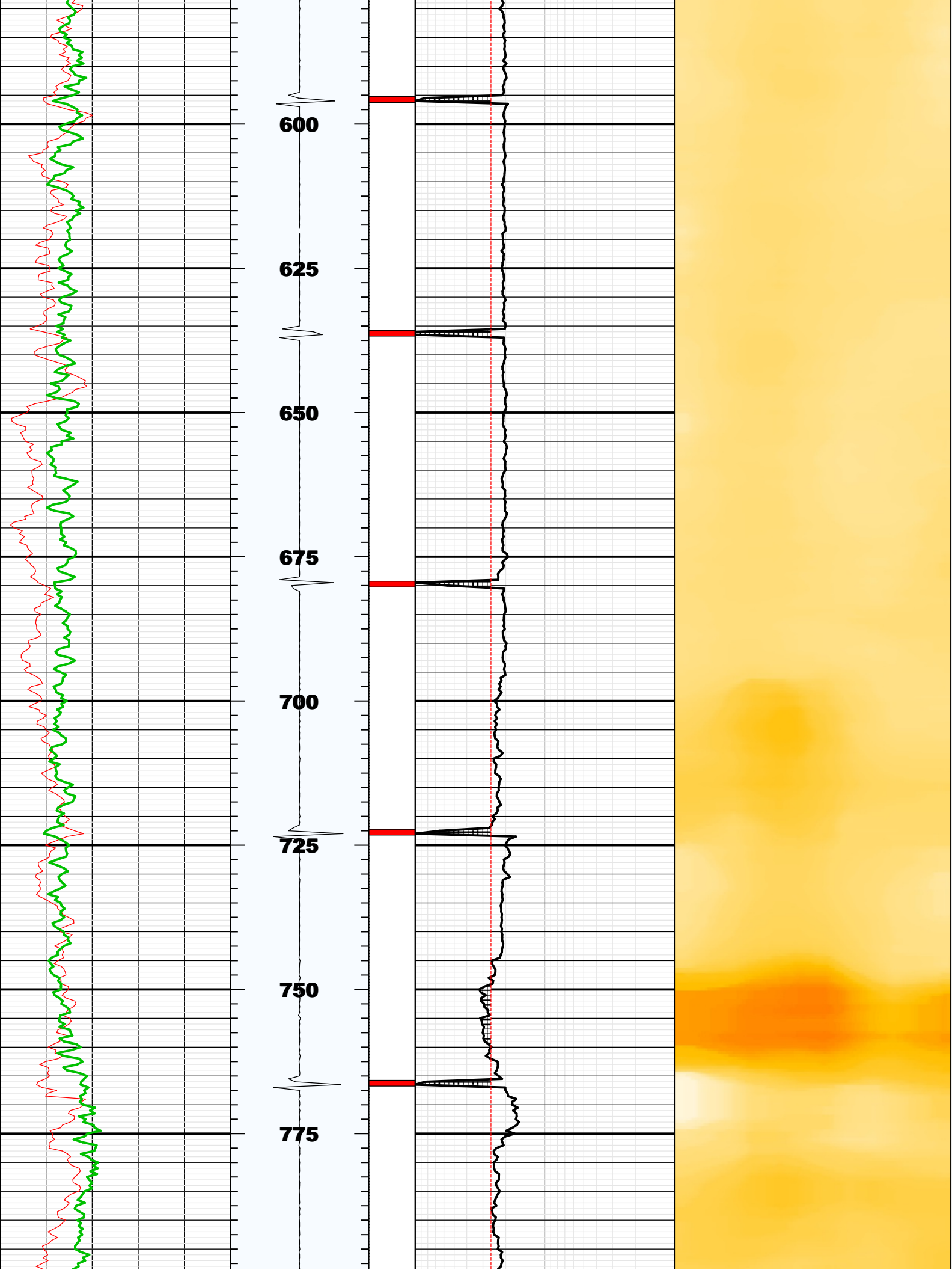
Main Pass

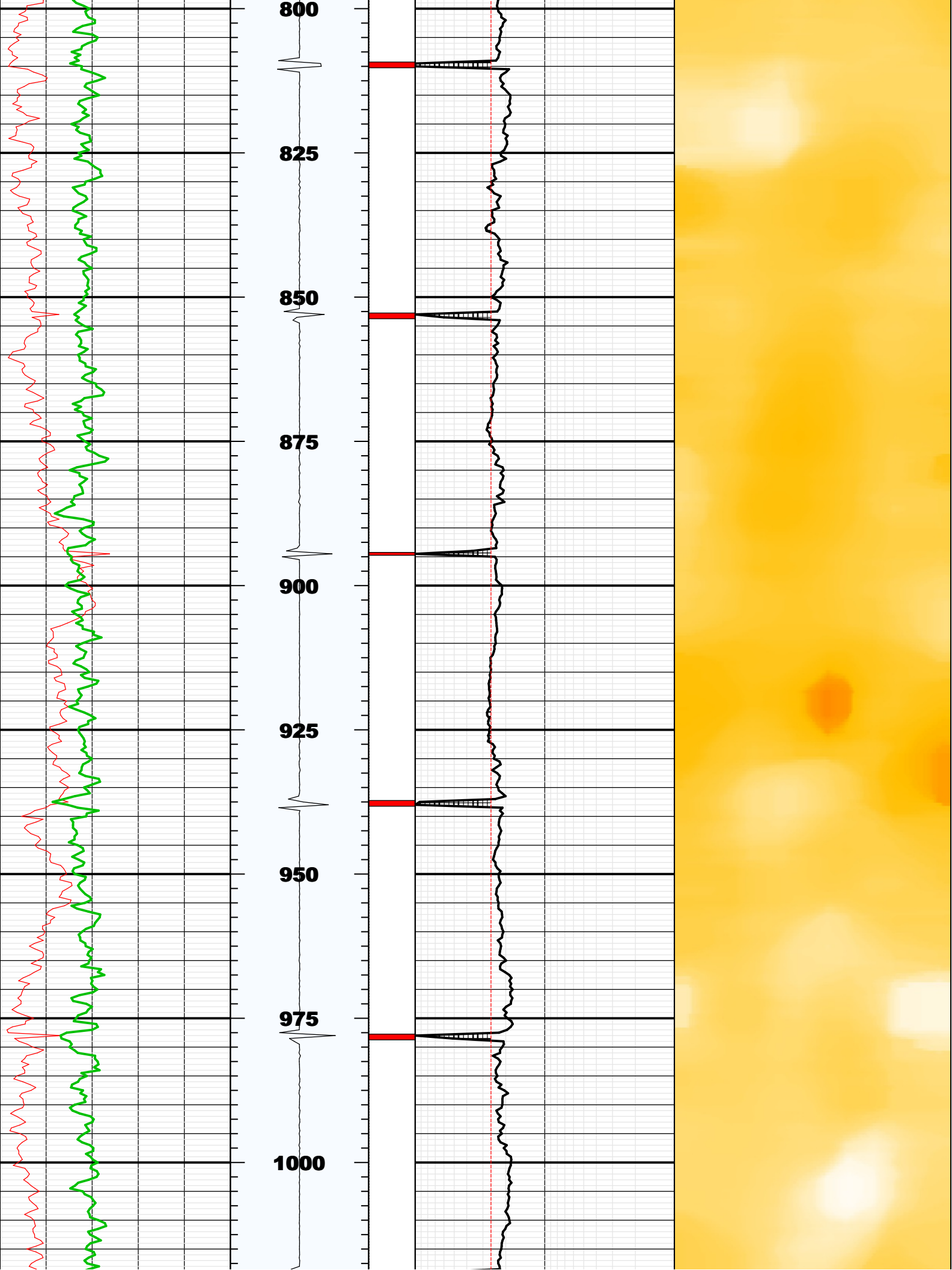
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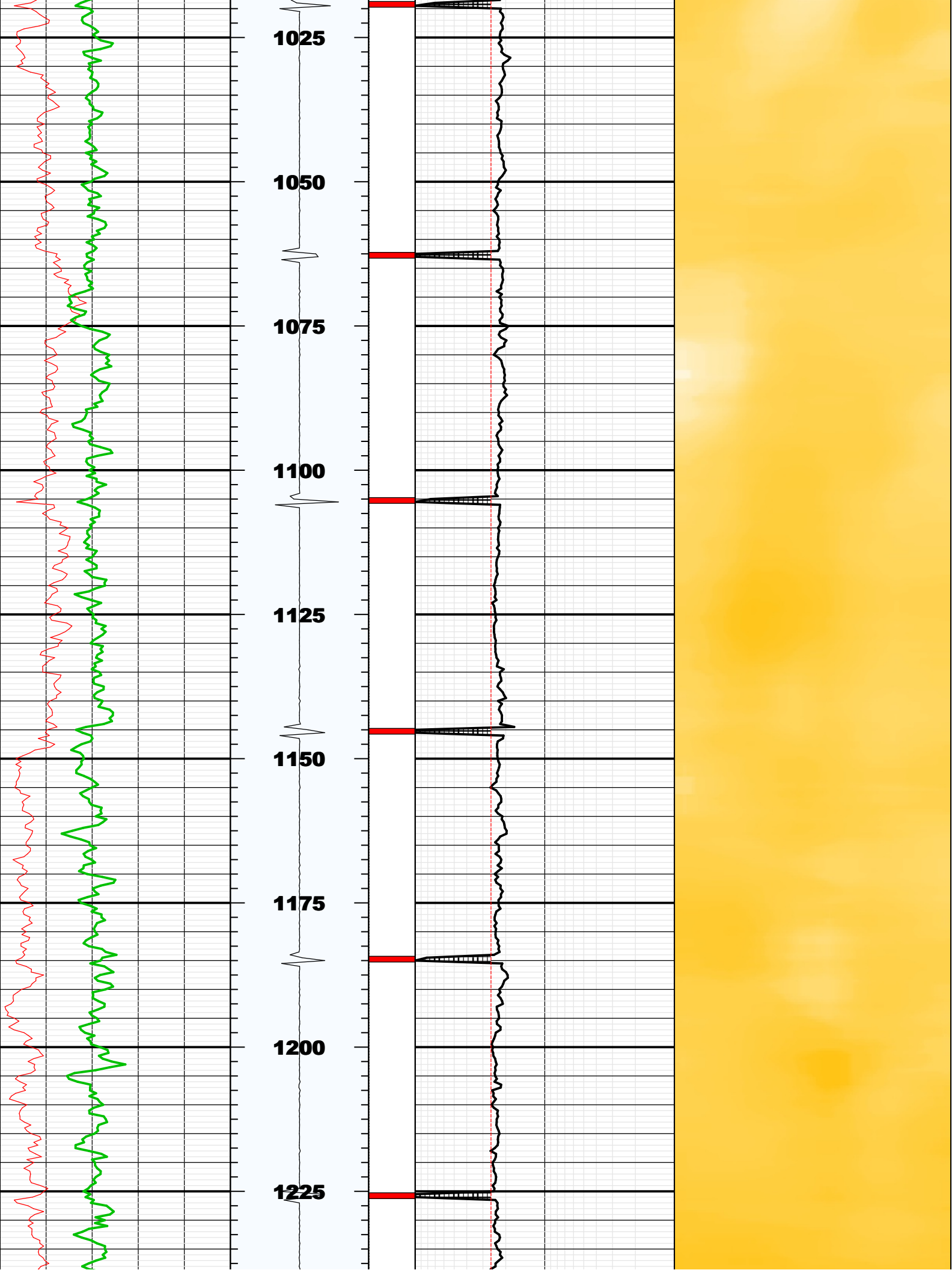


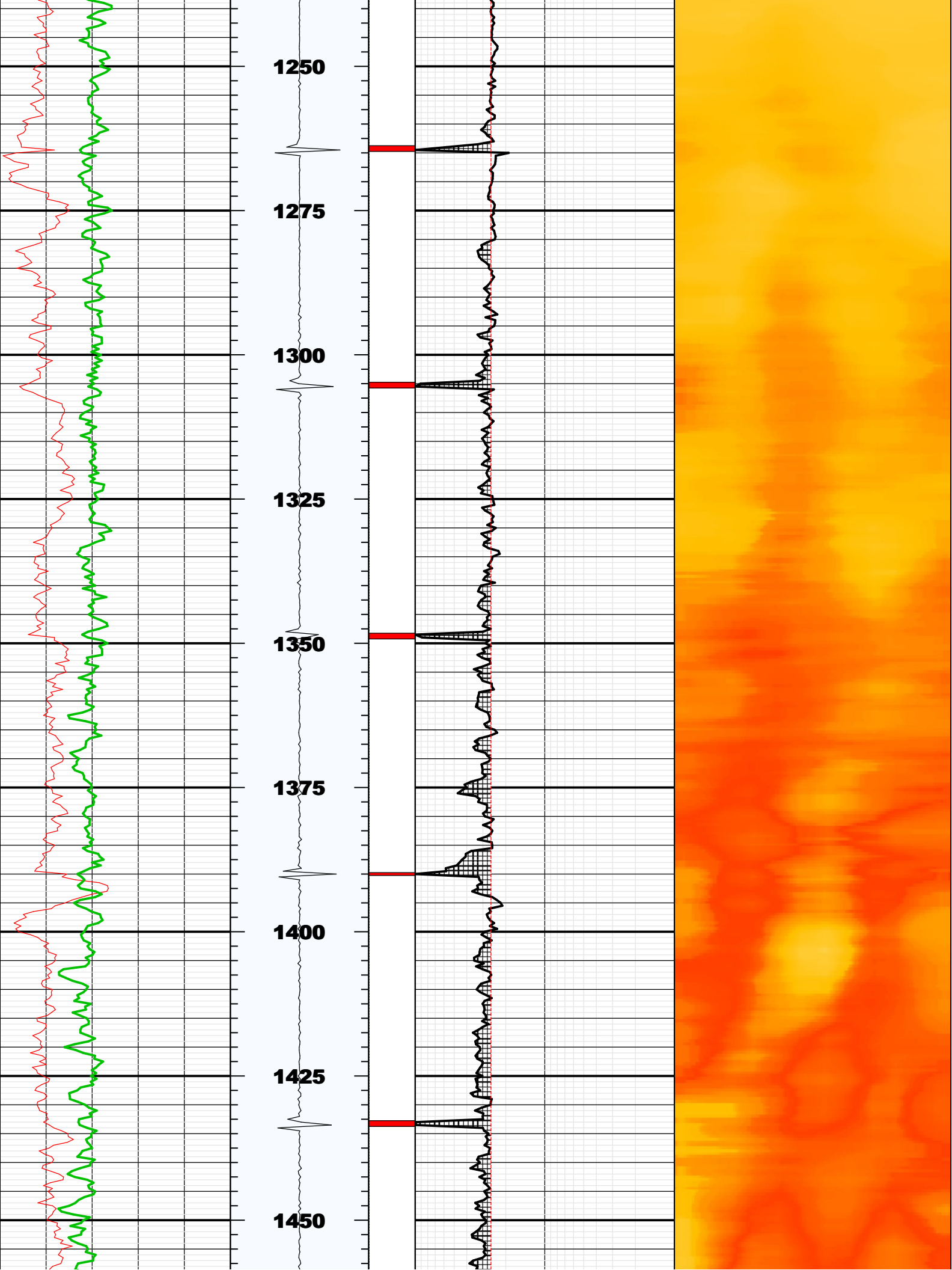


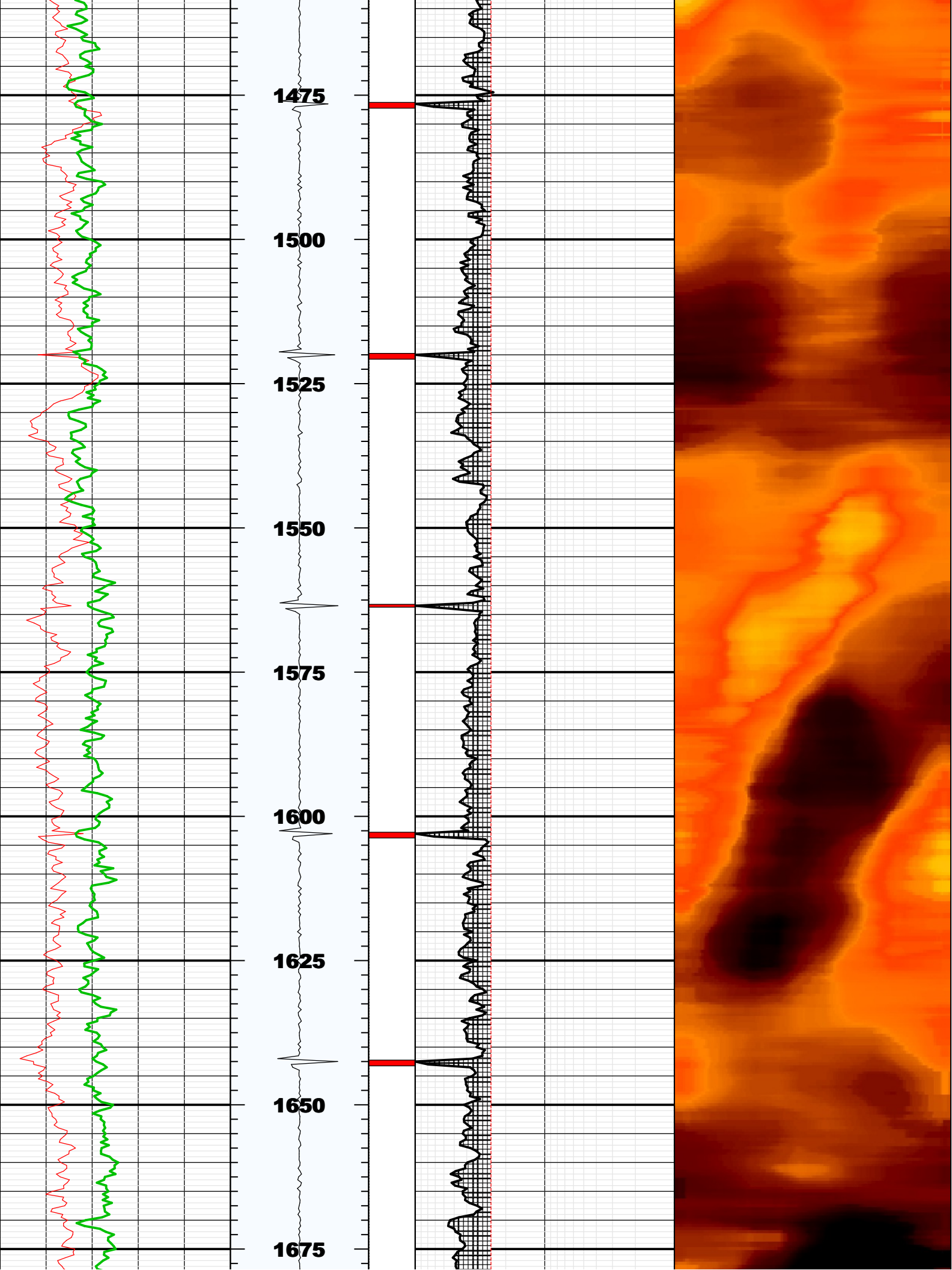


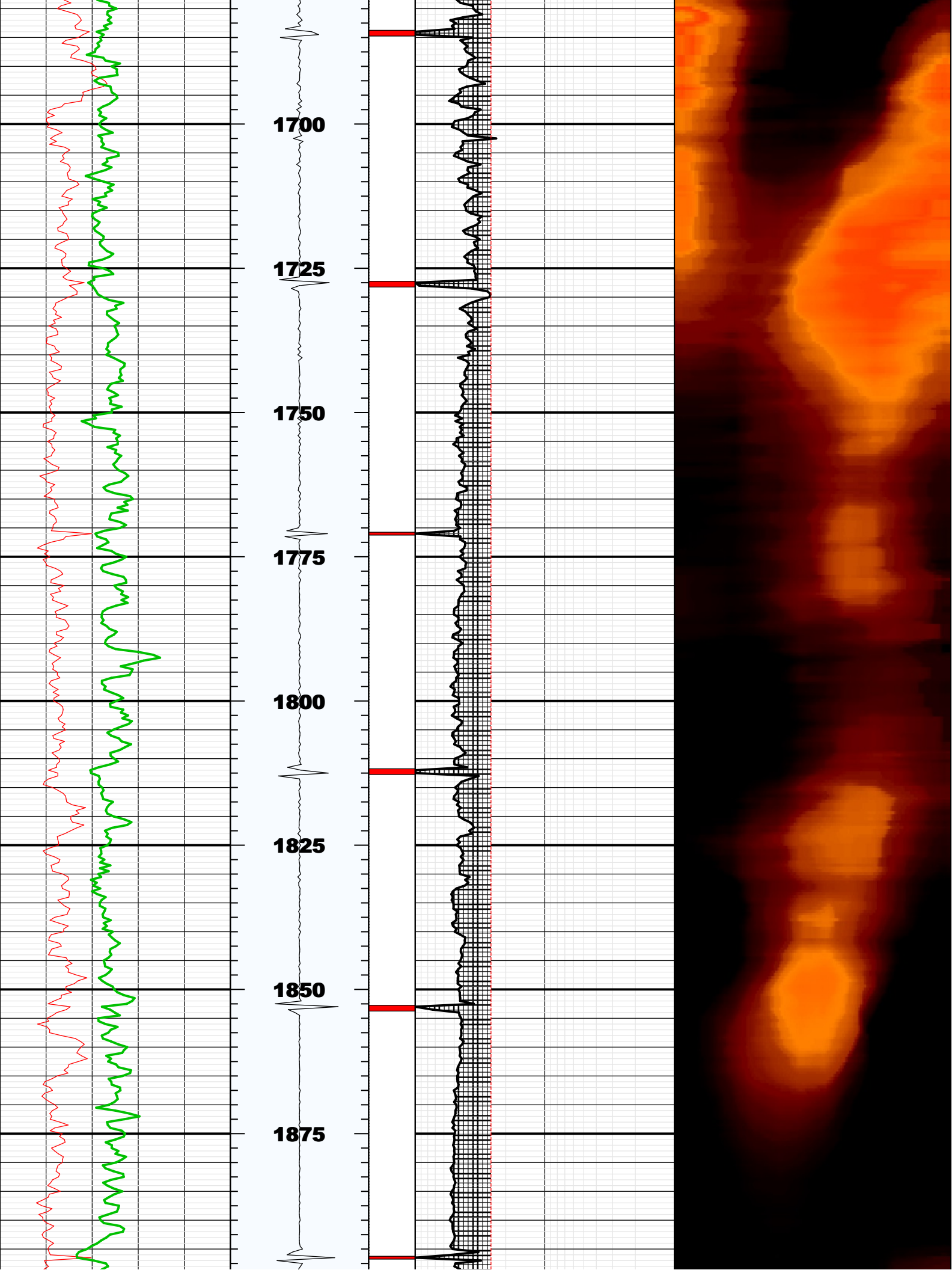


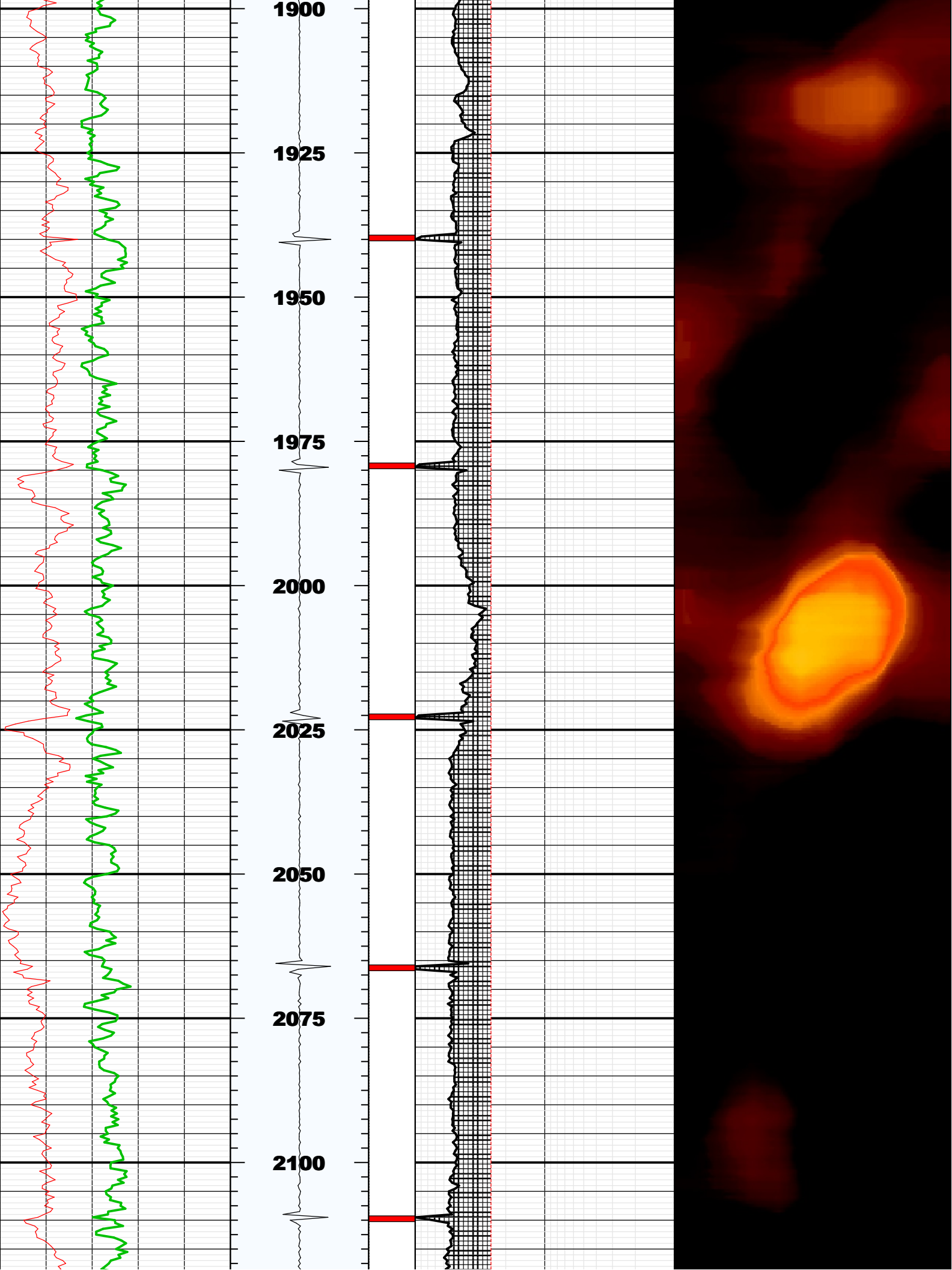


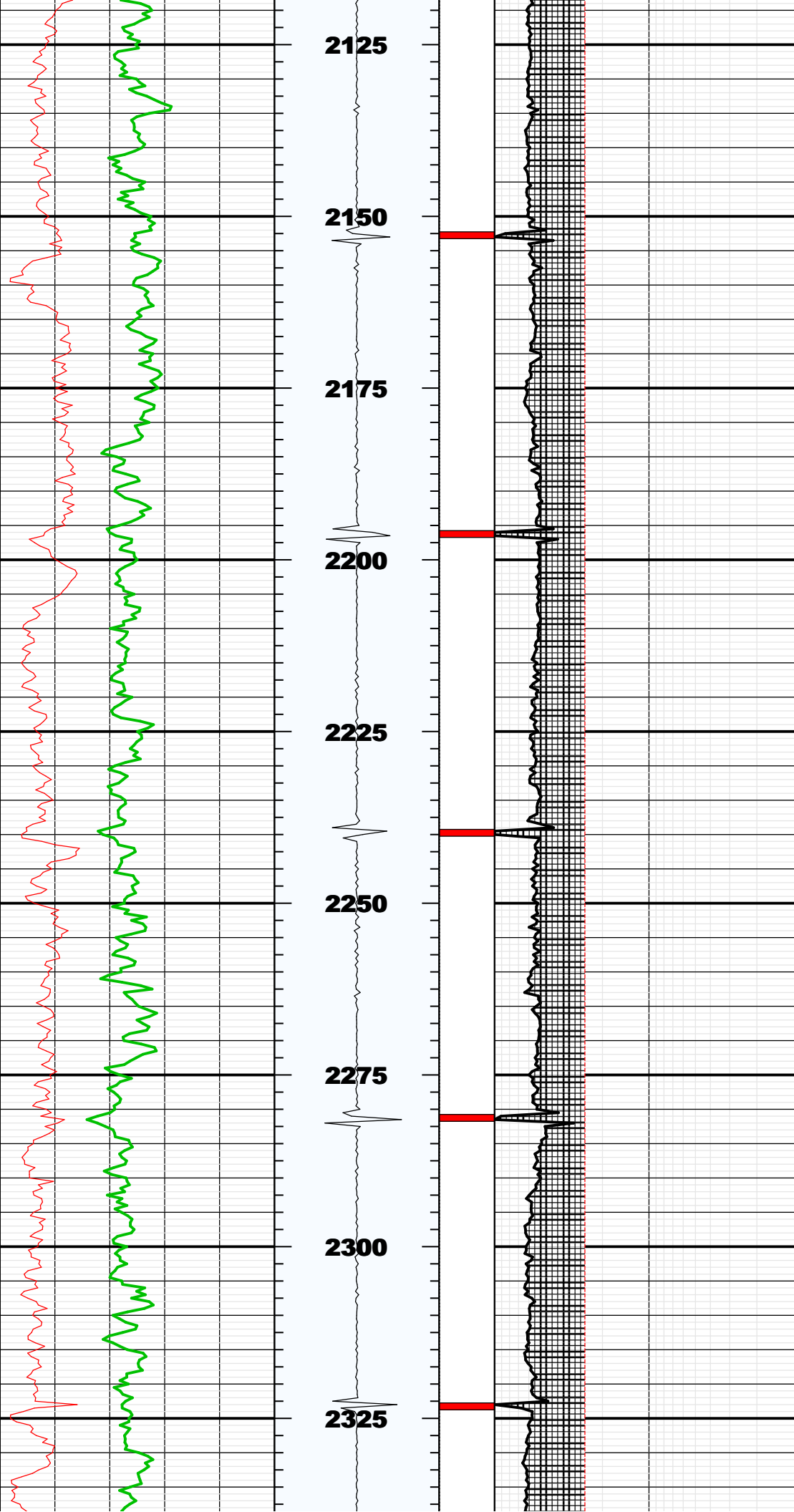


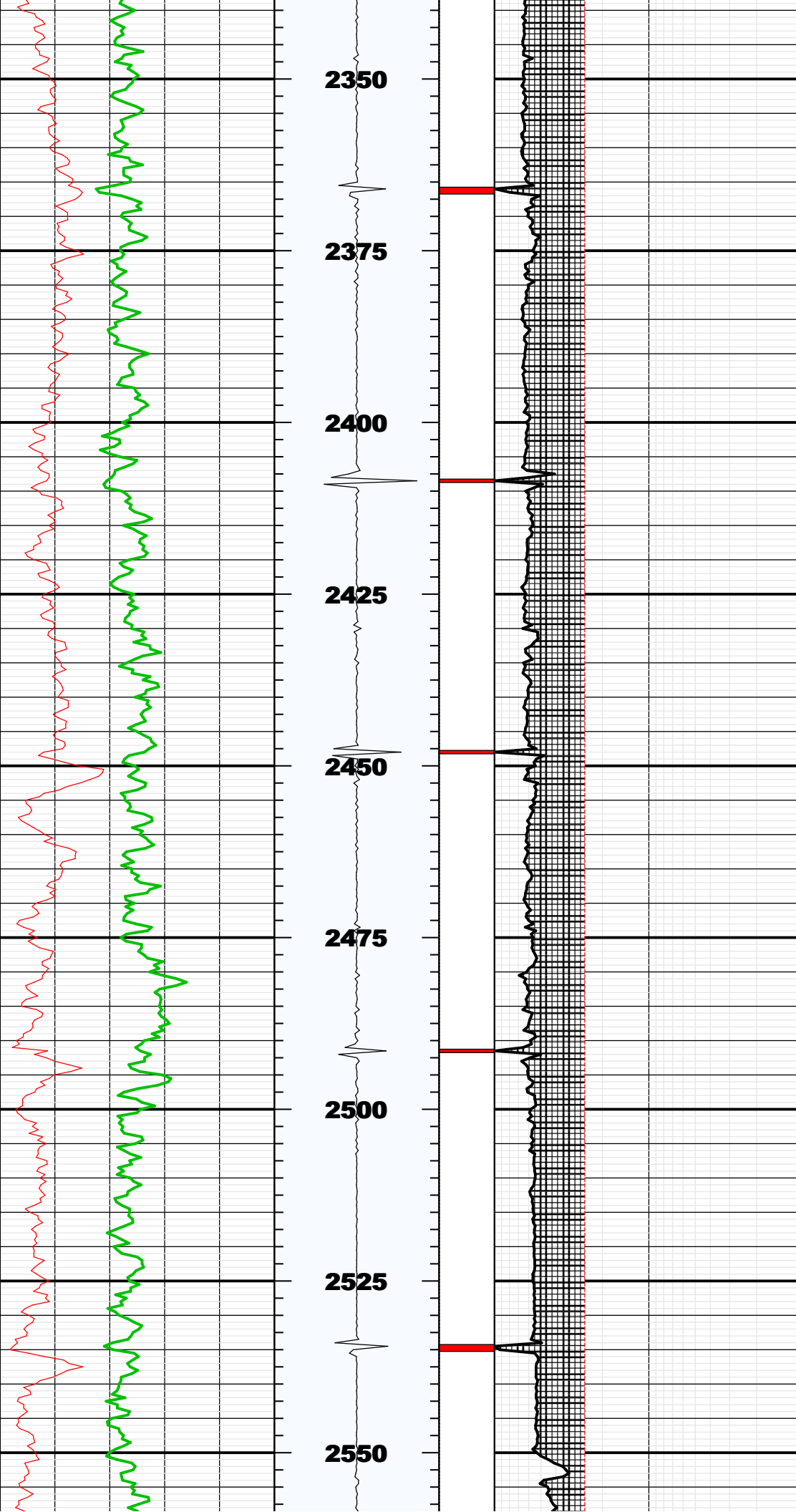


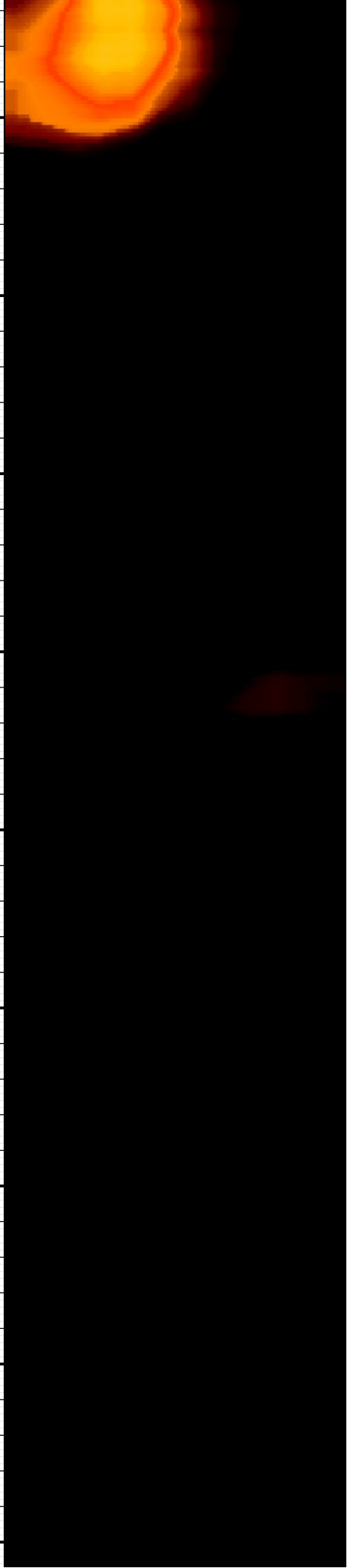
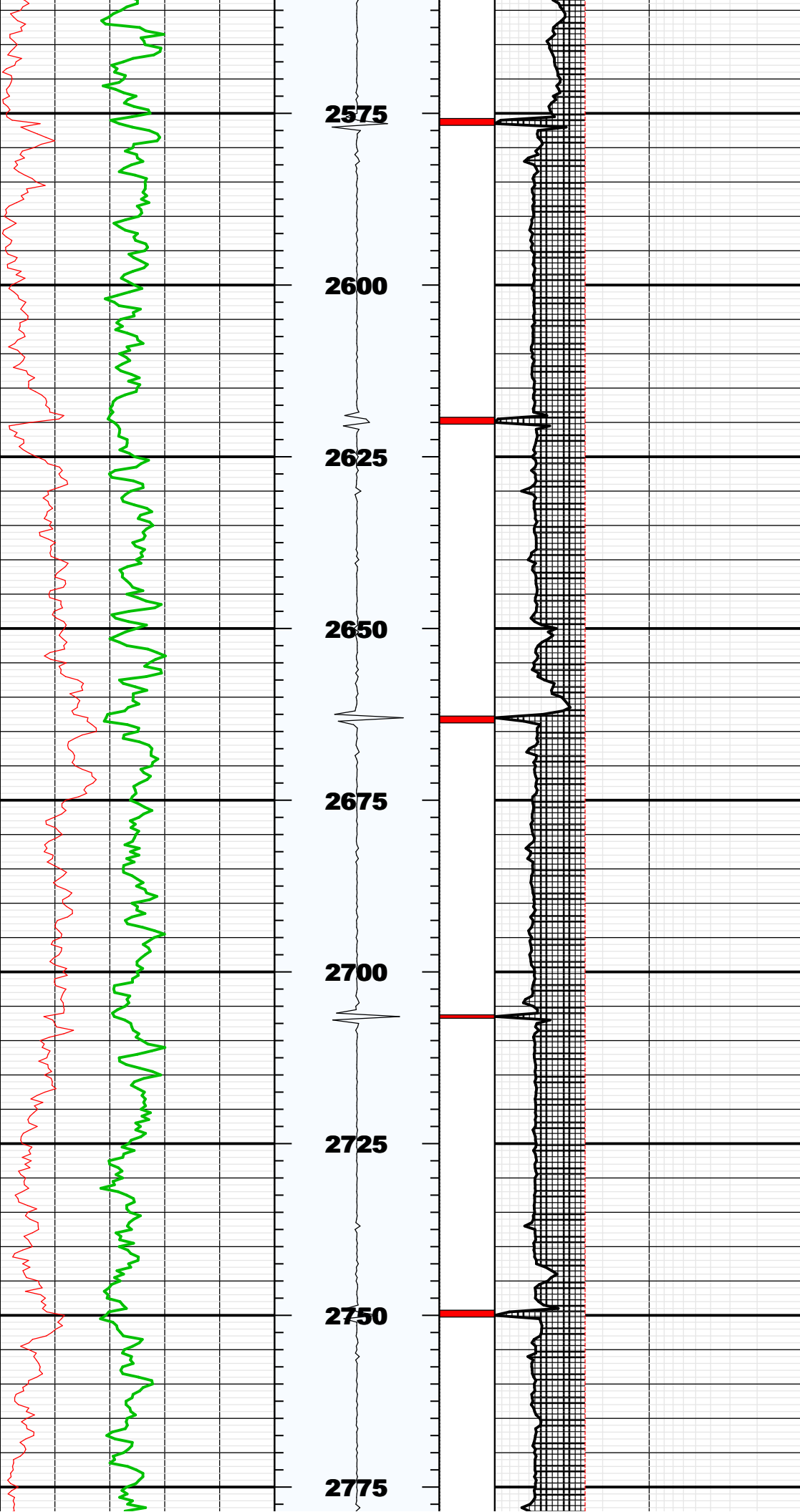


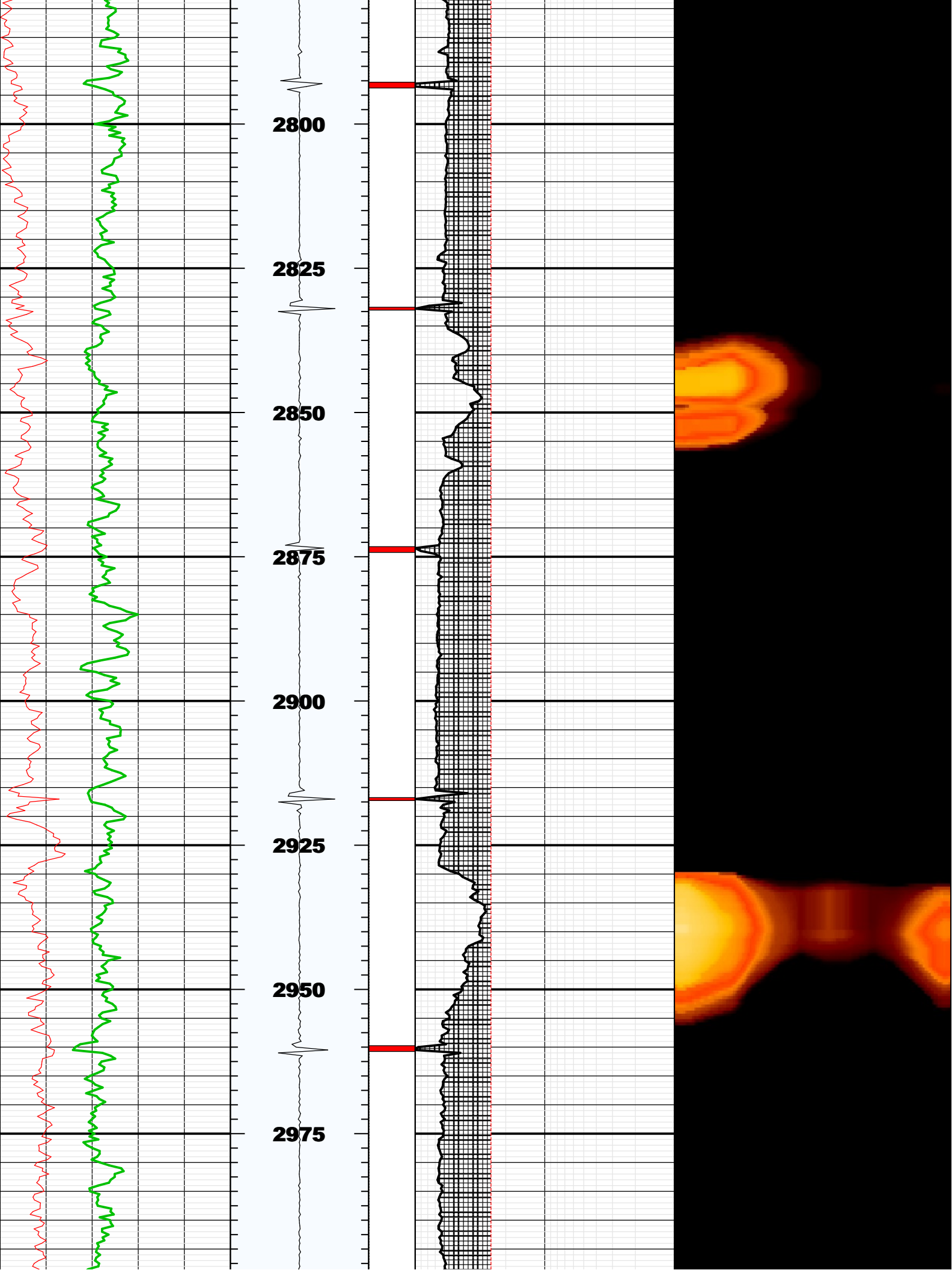


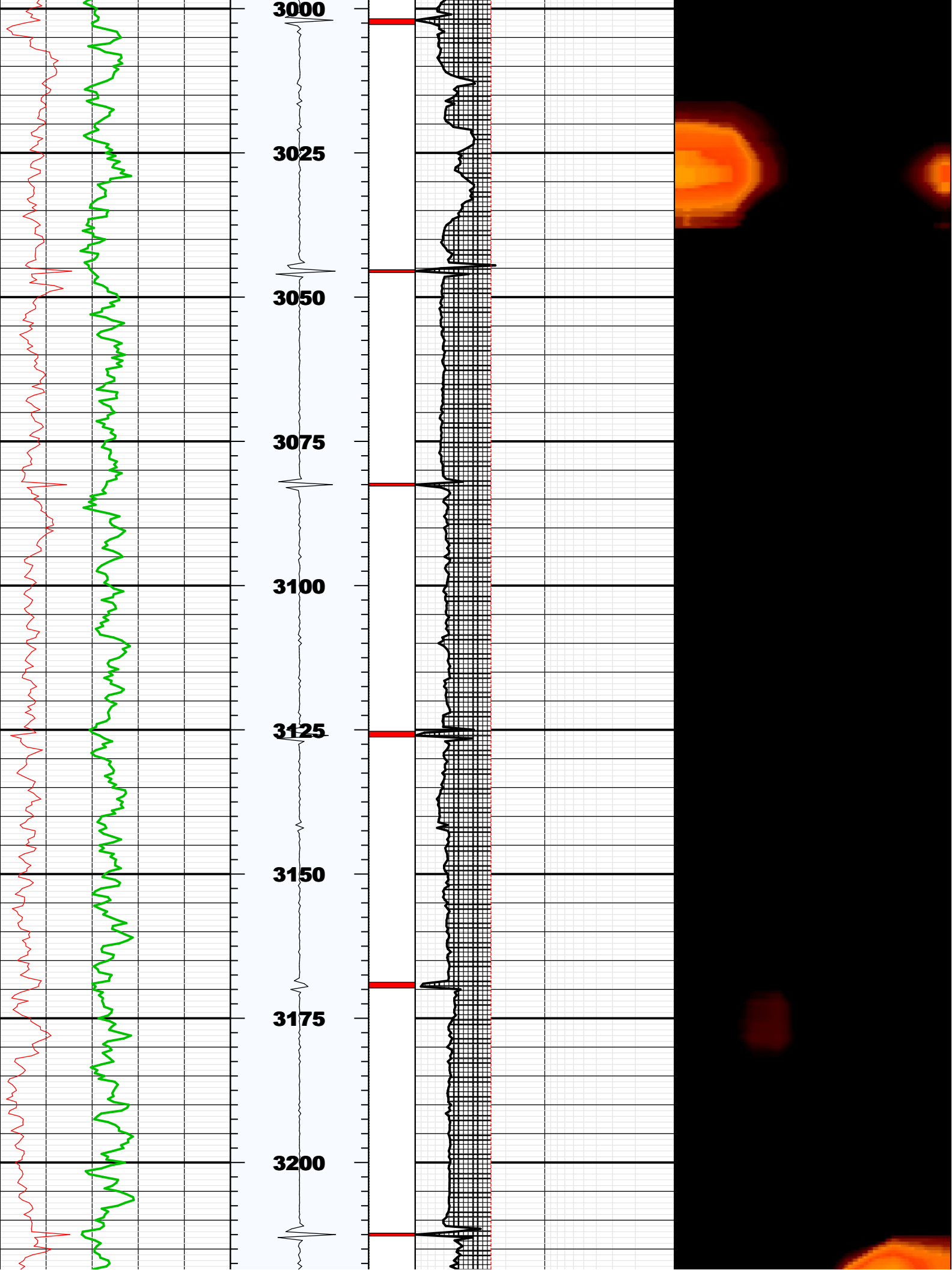


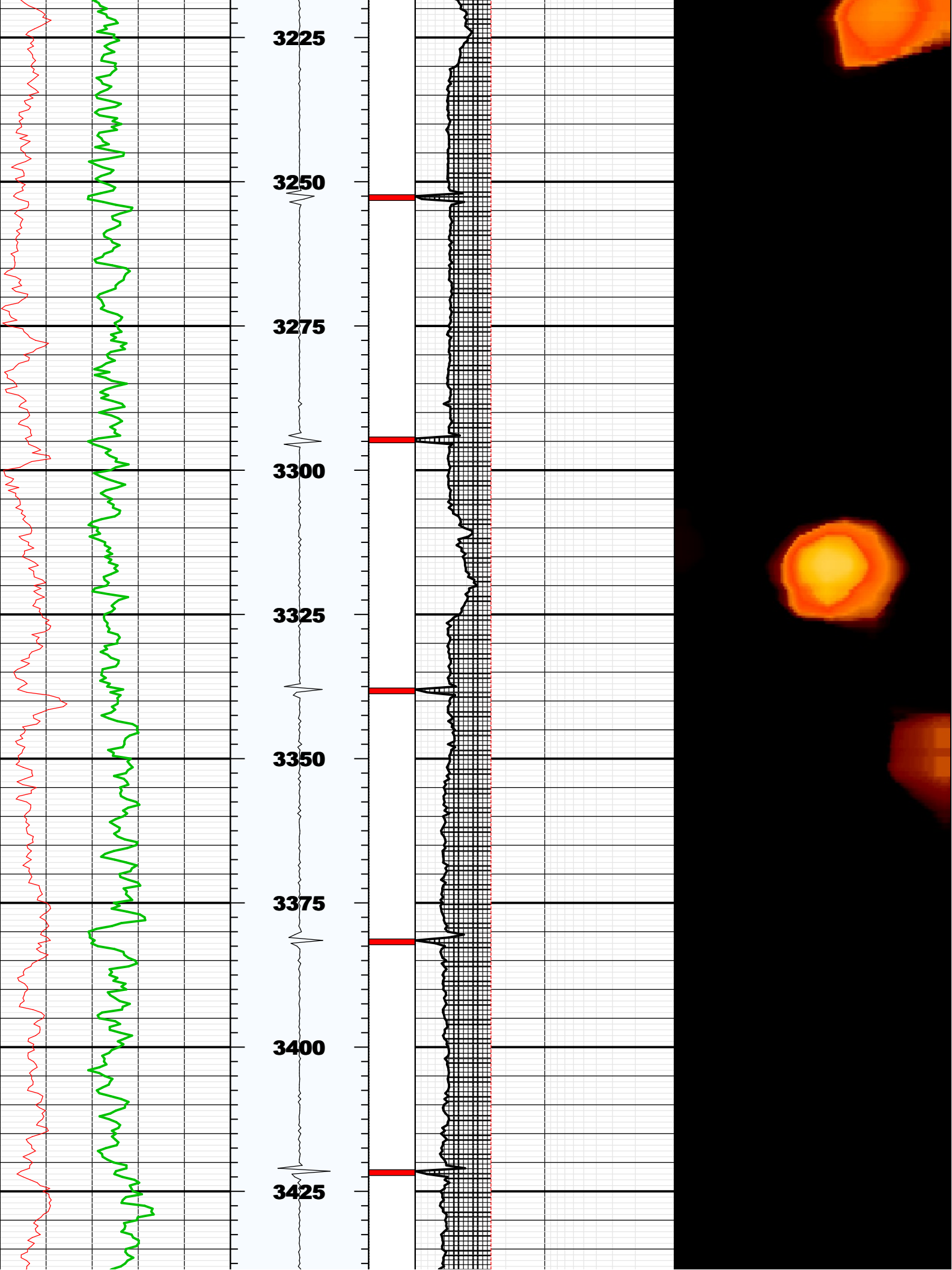


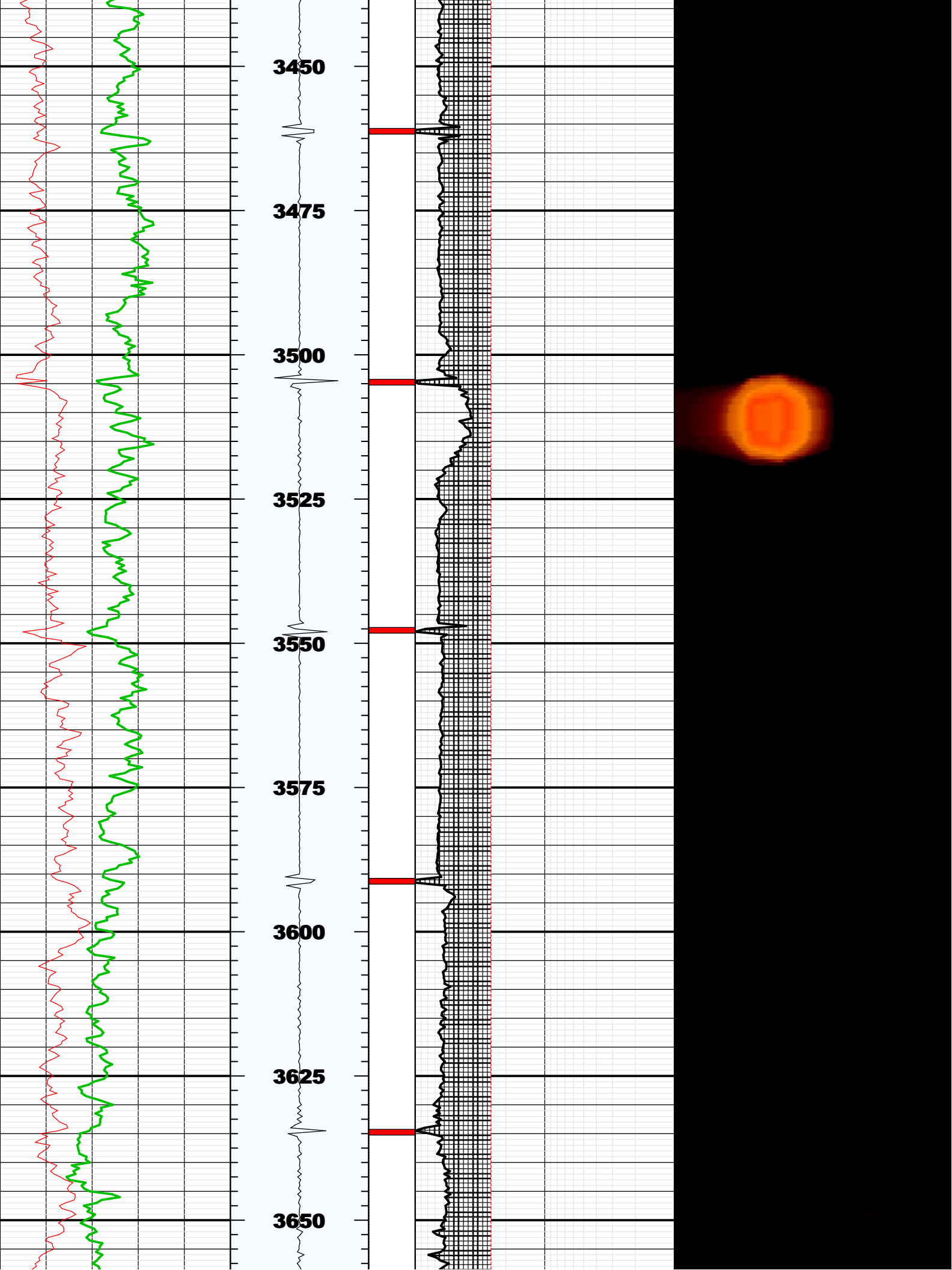


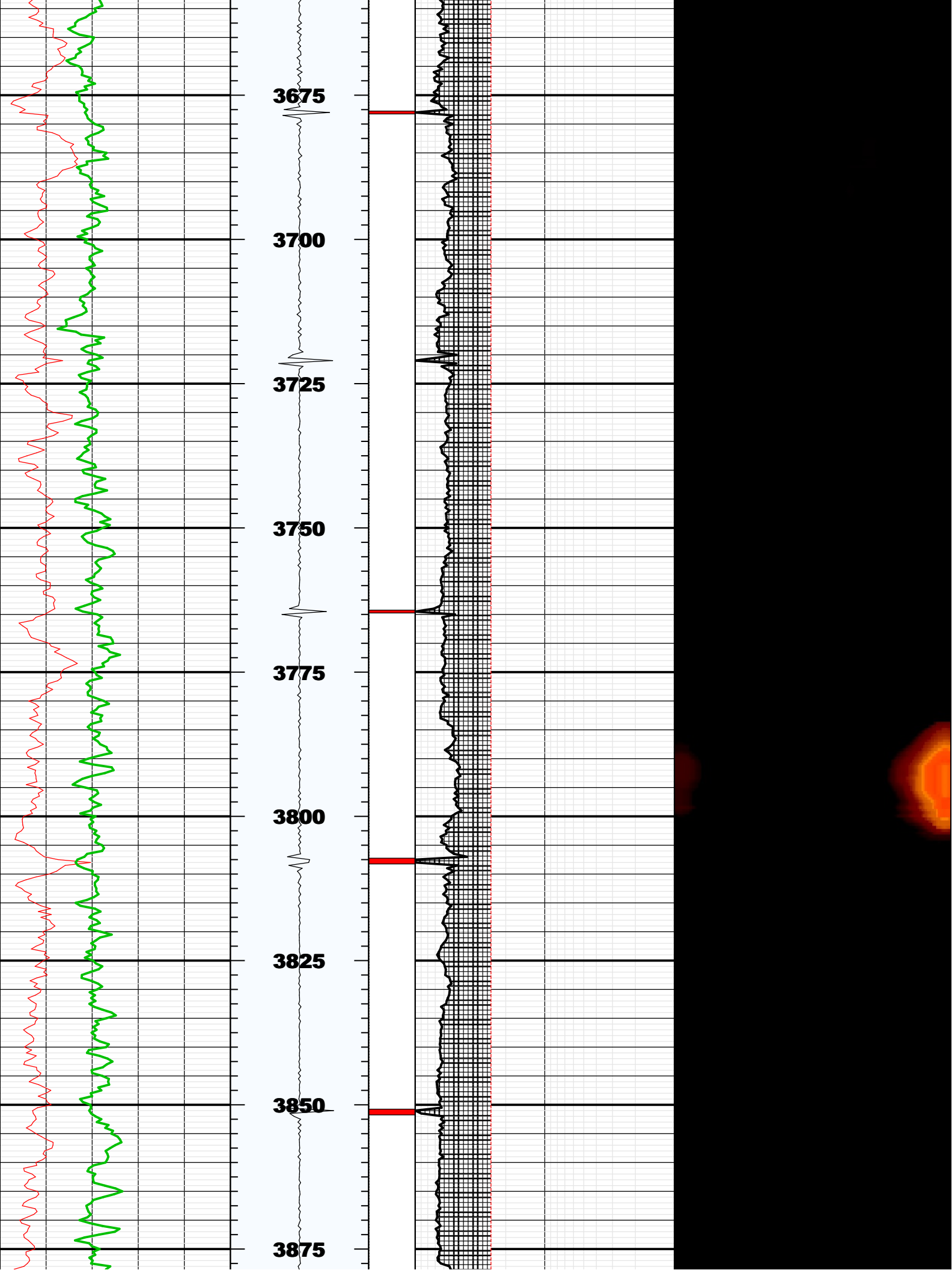


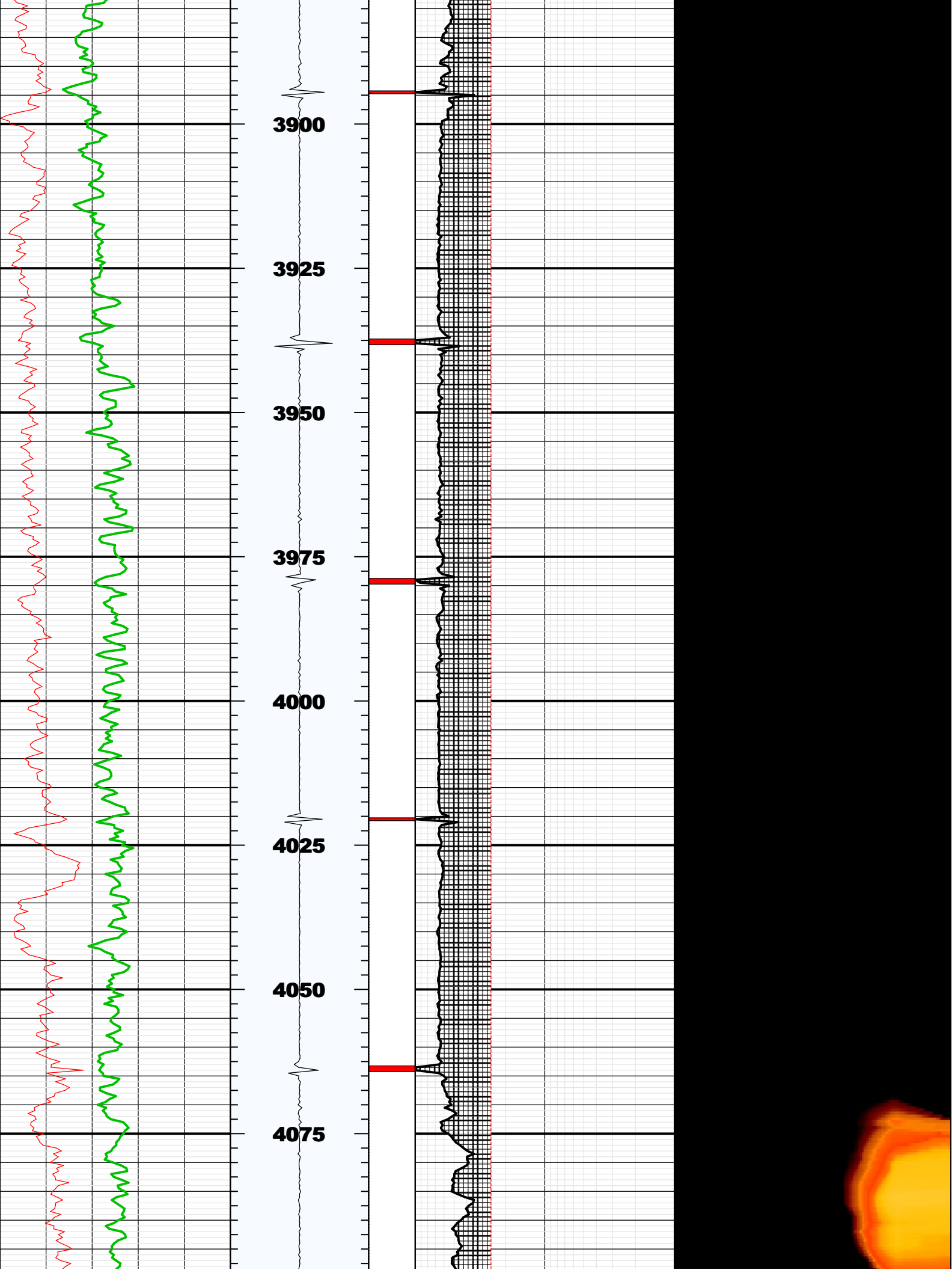


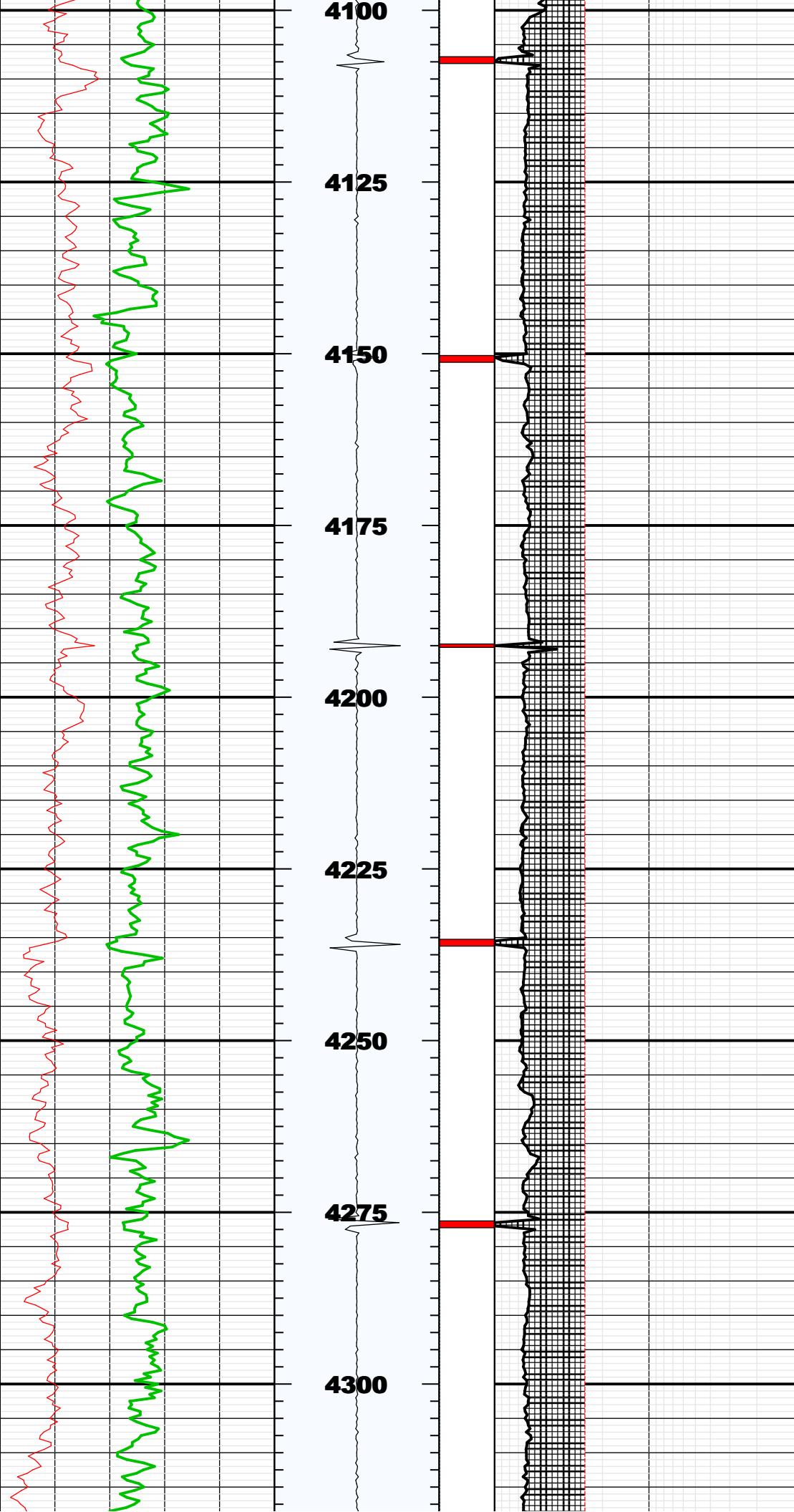


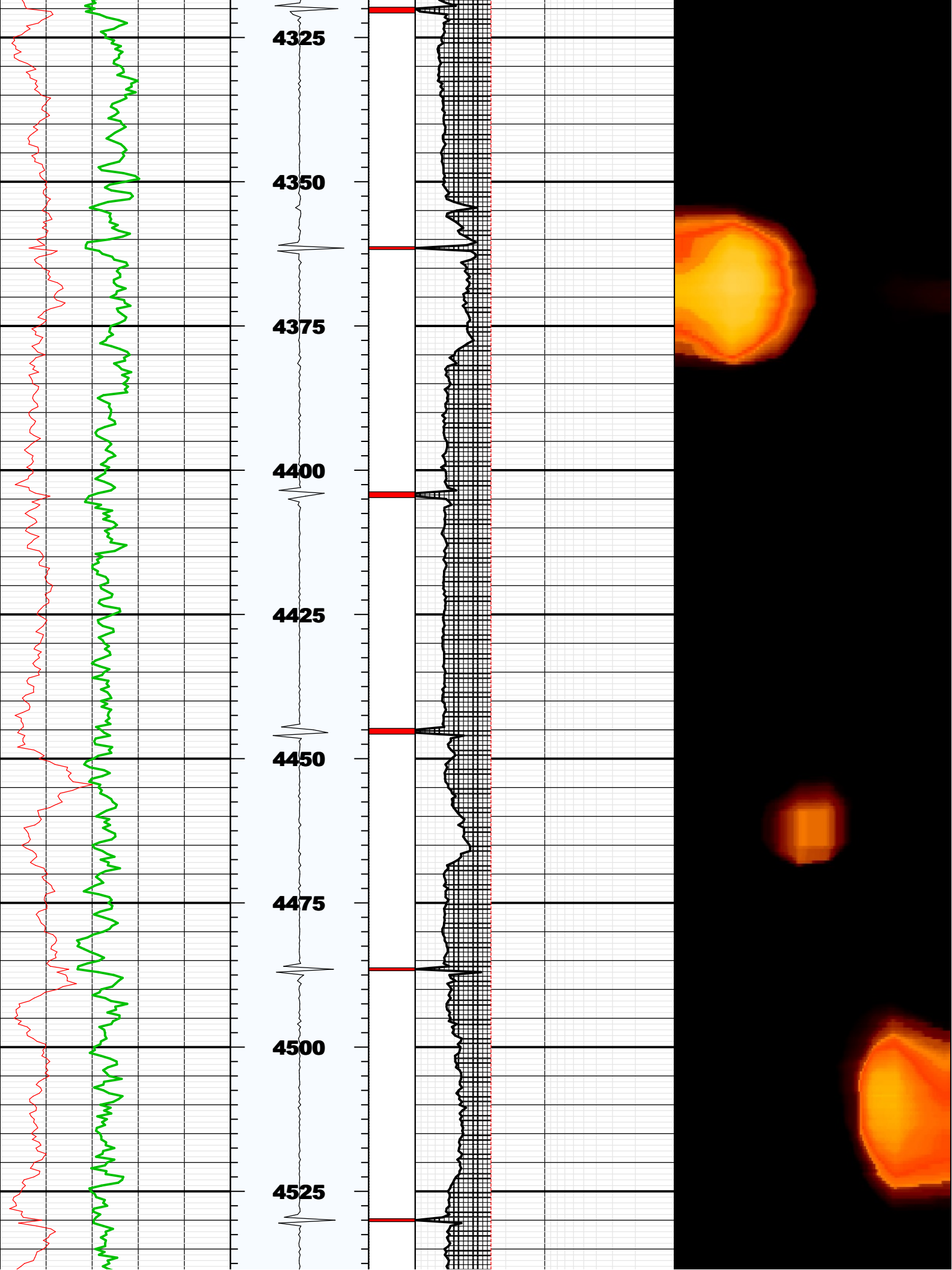


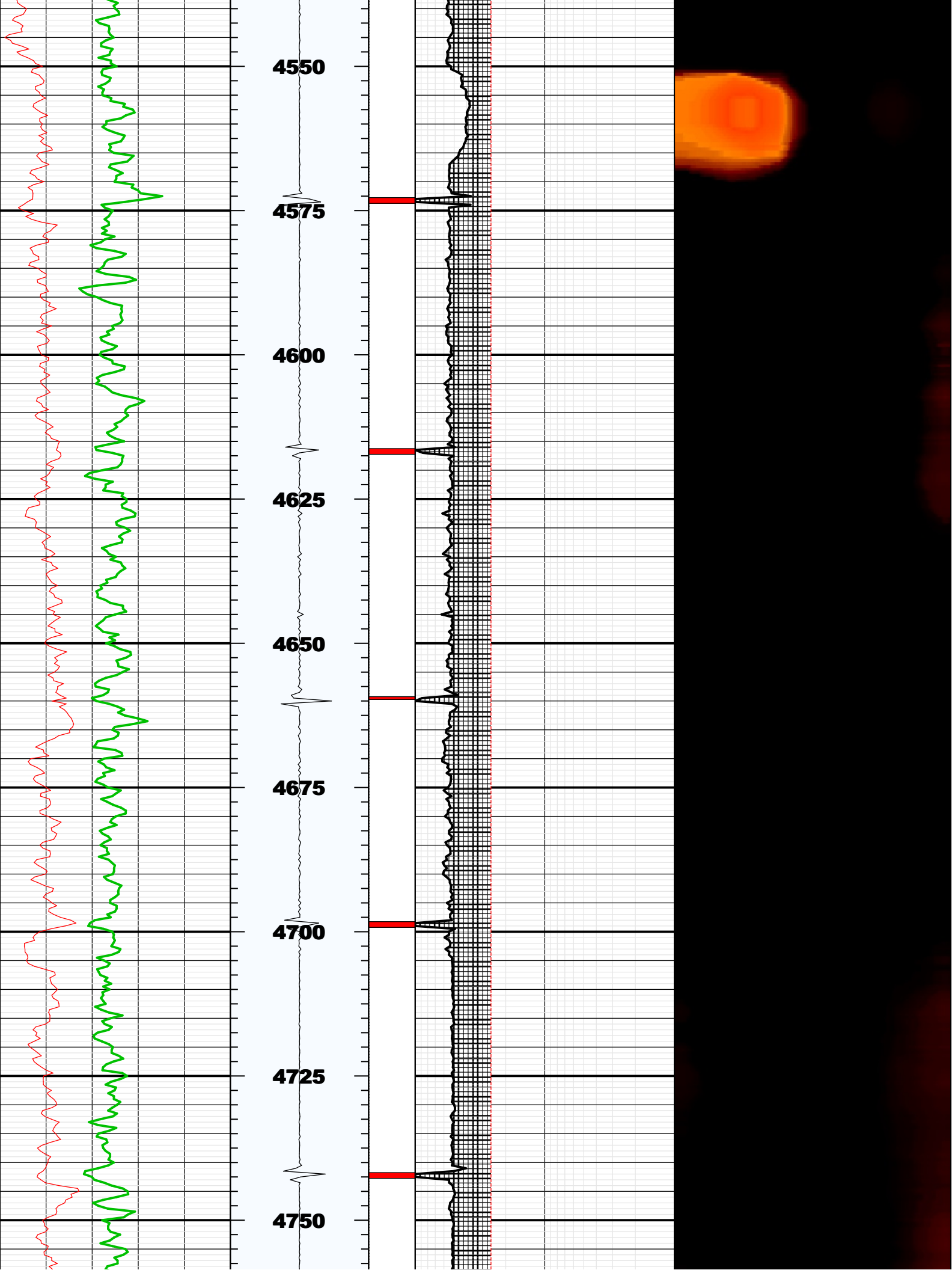


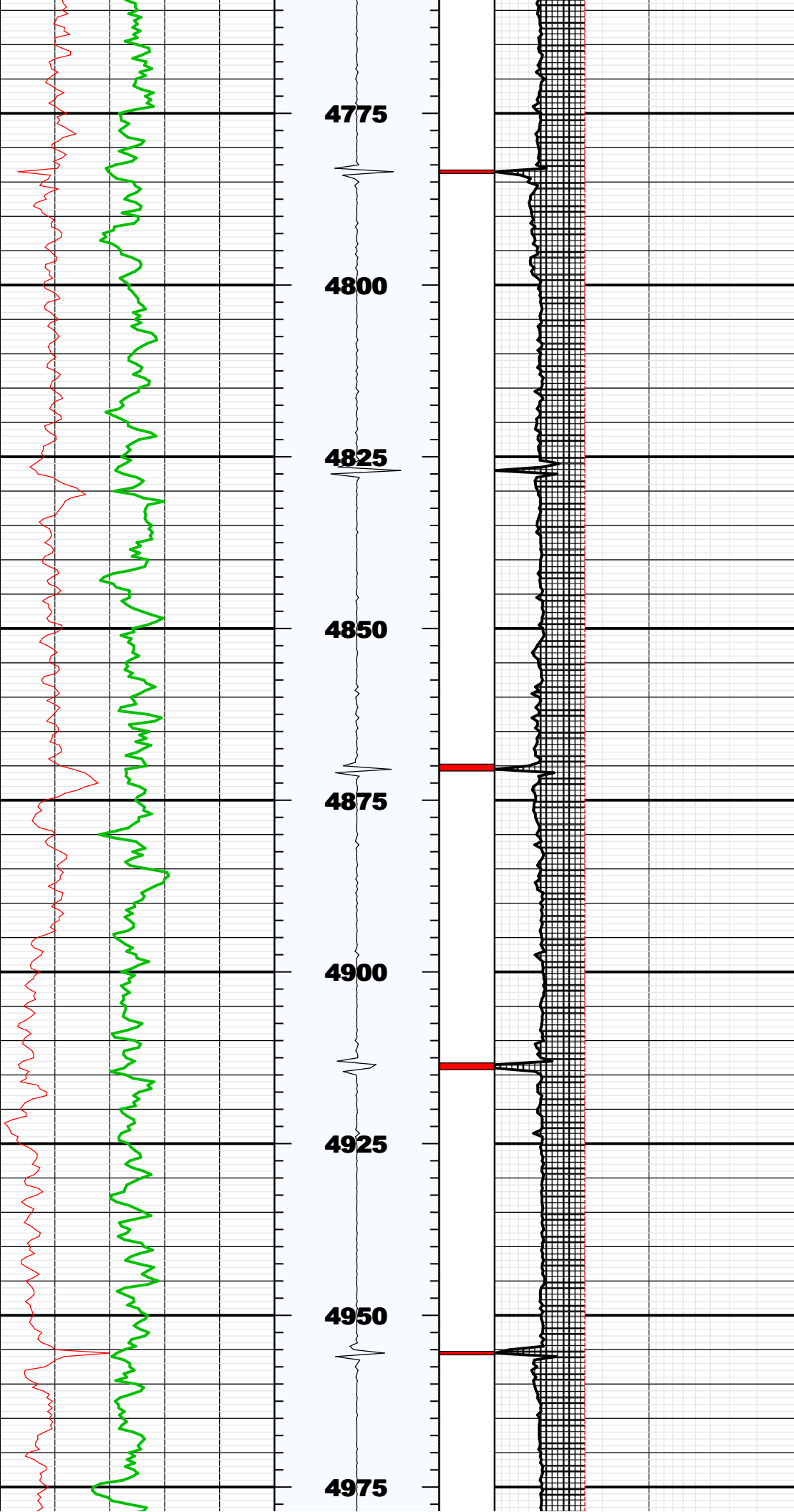


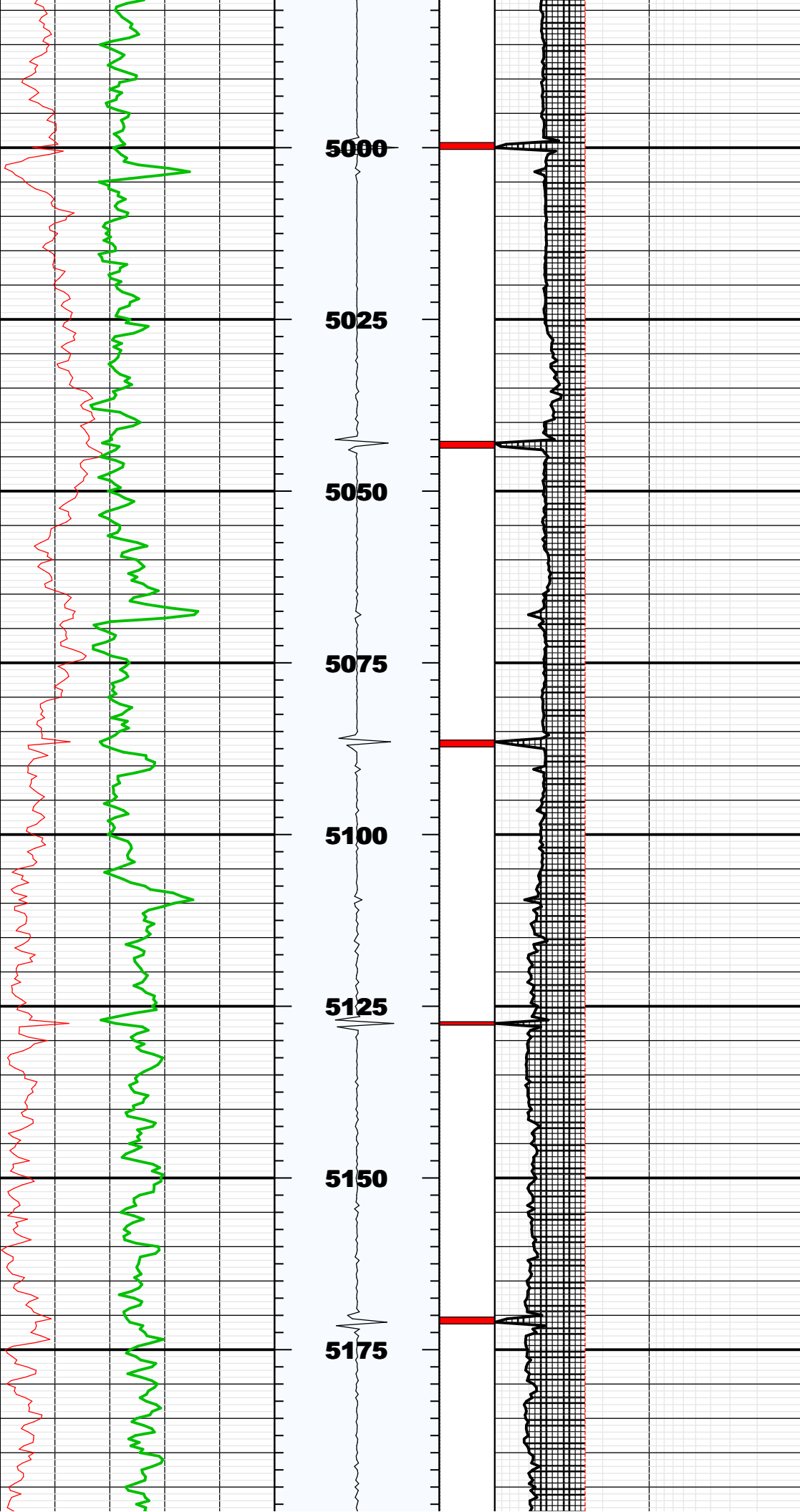


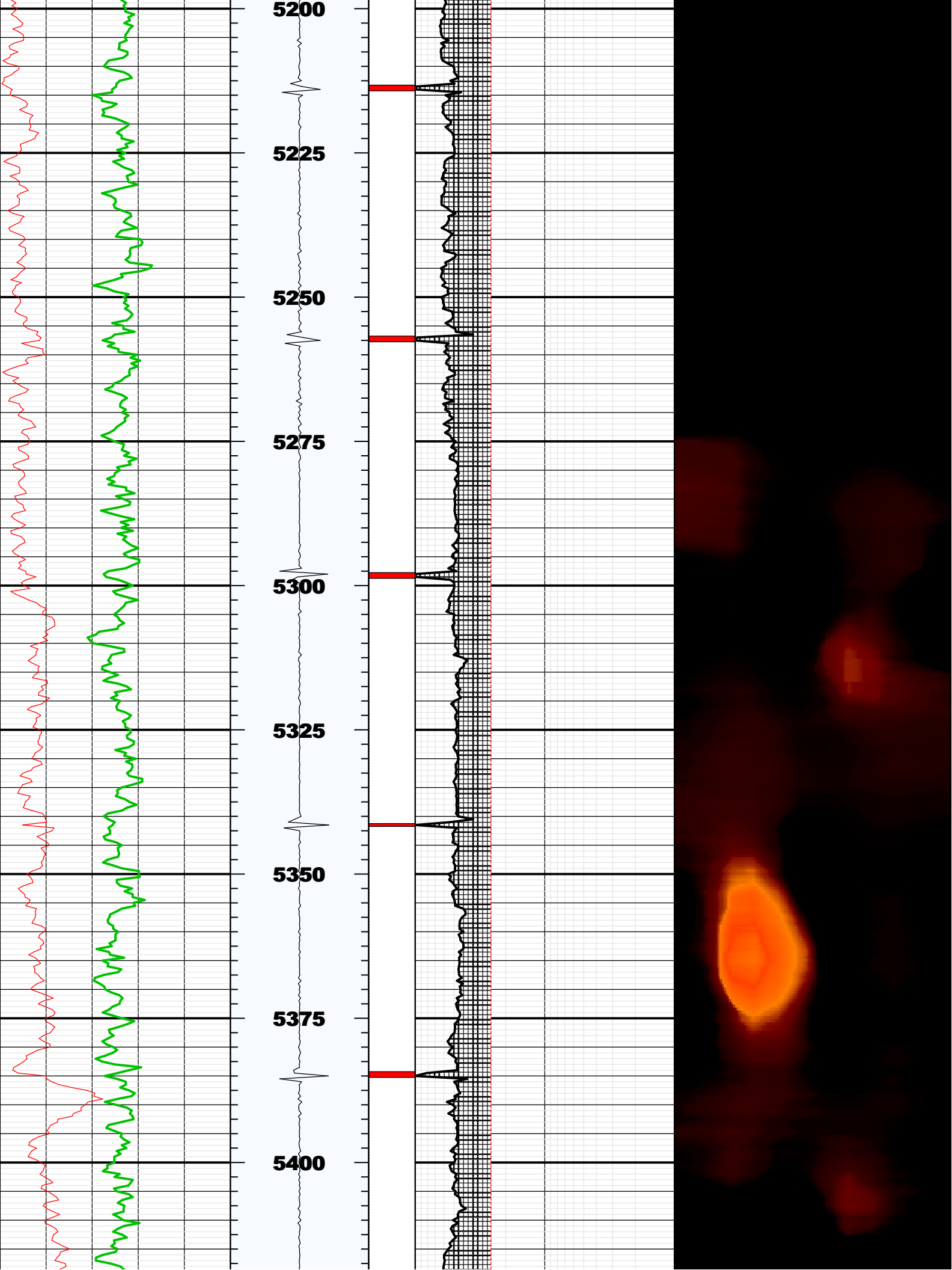


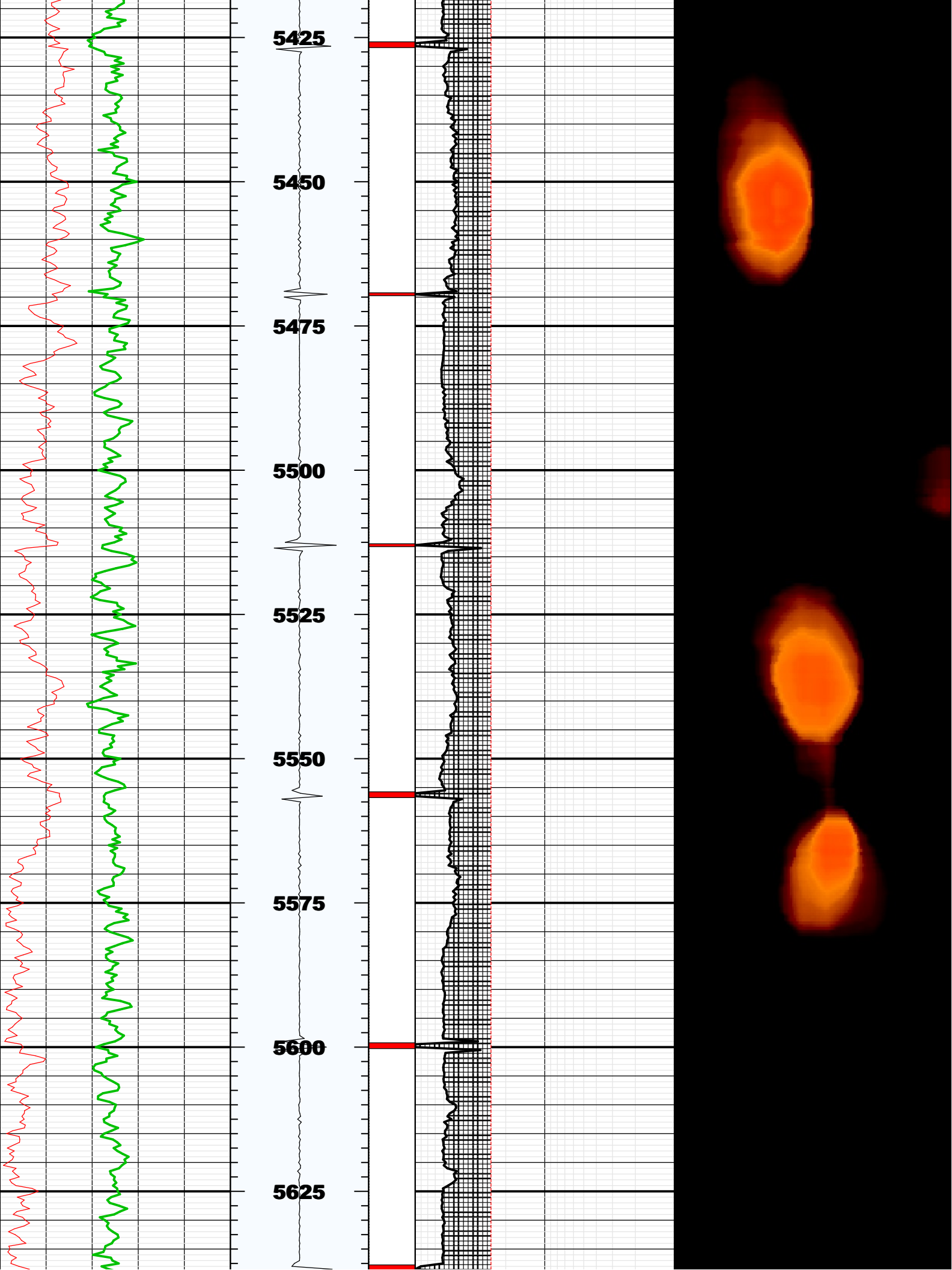


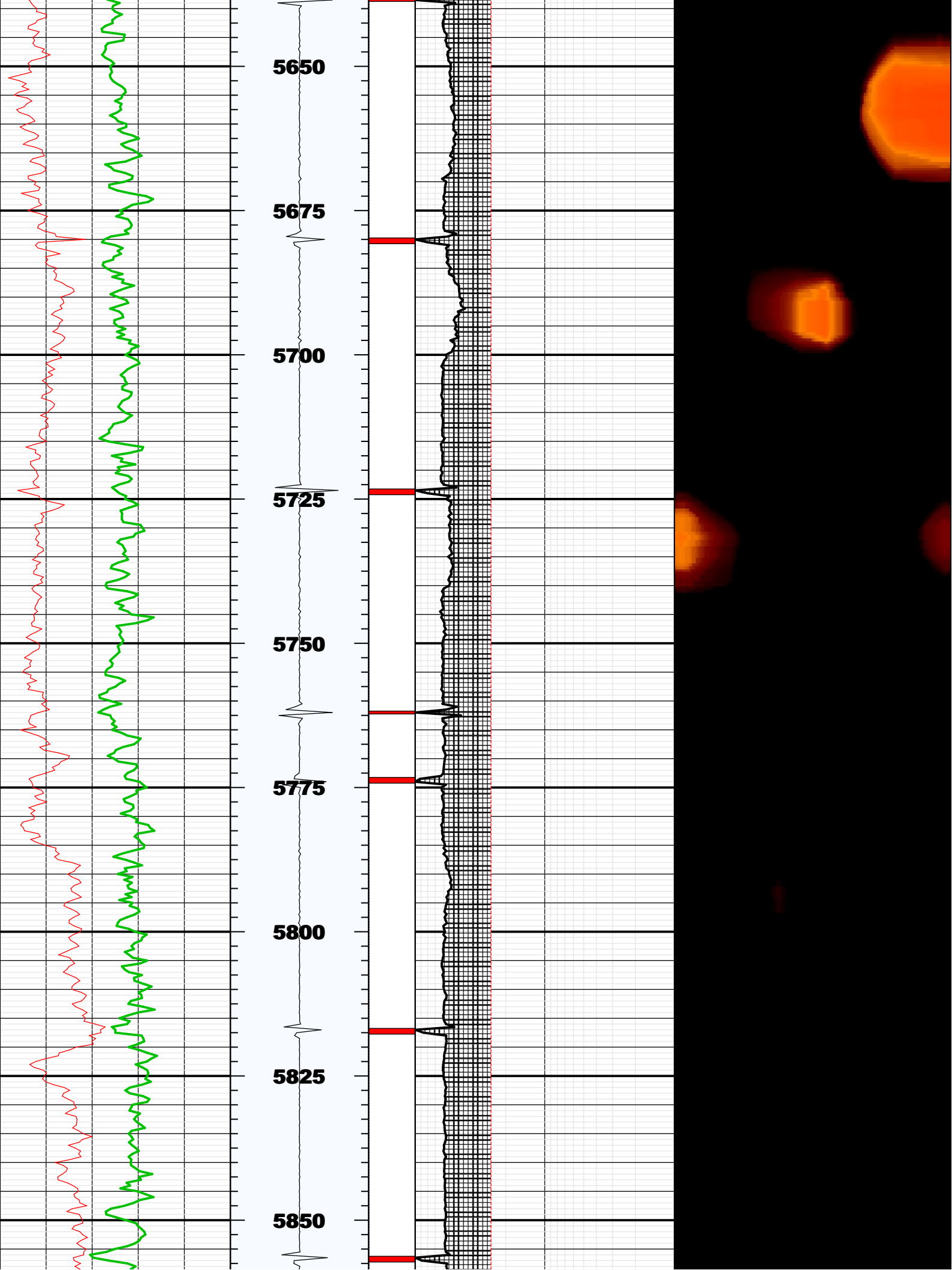


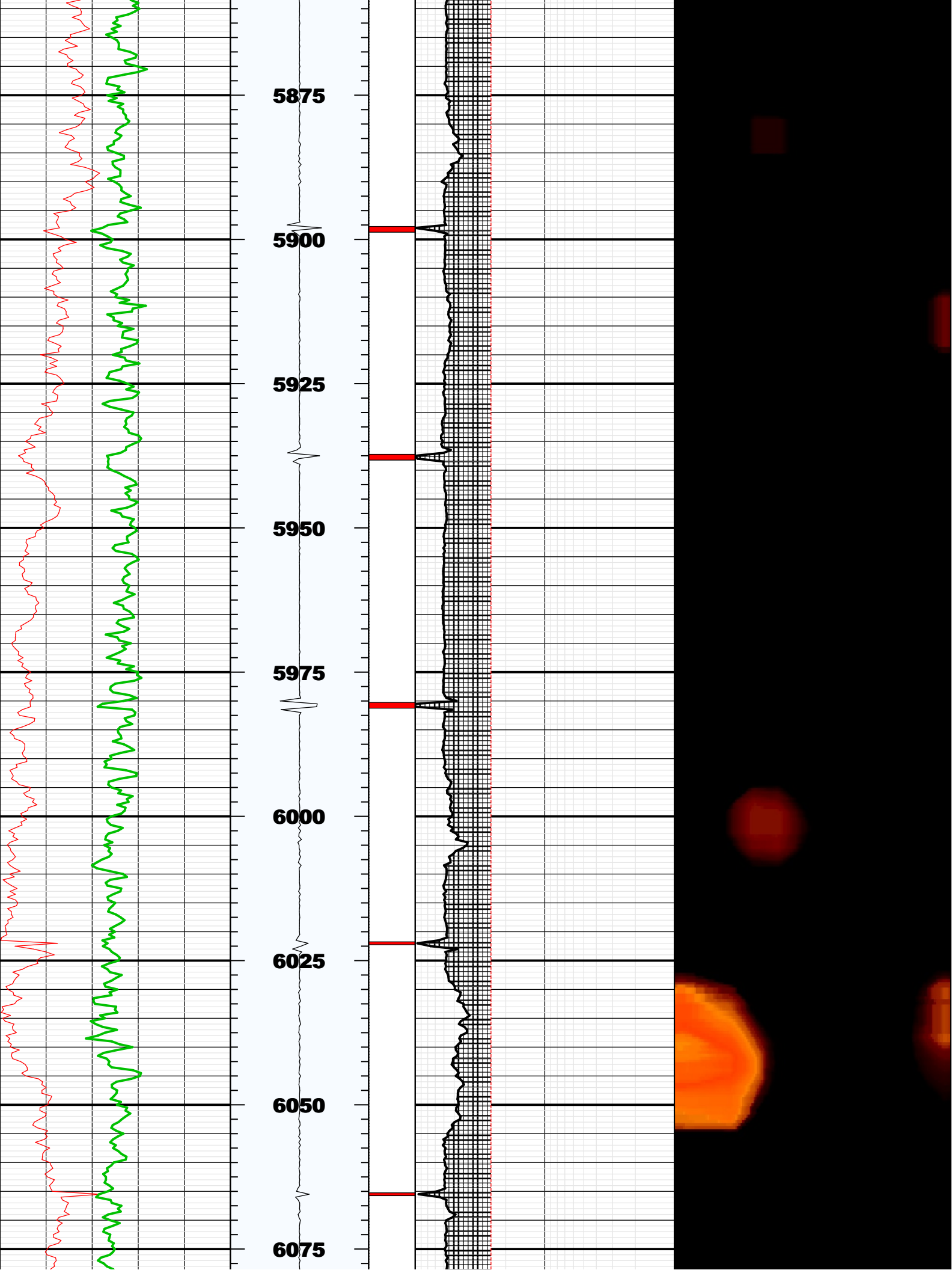


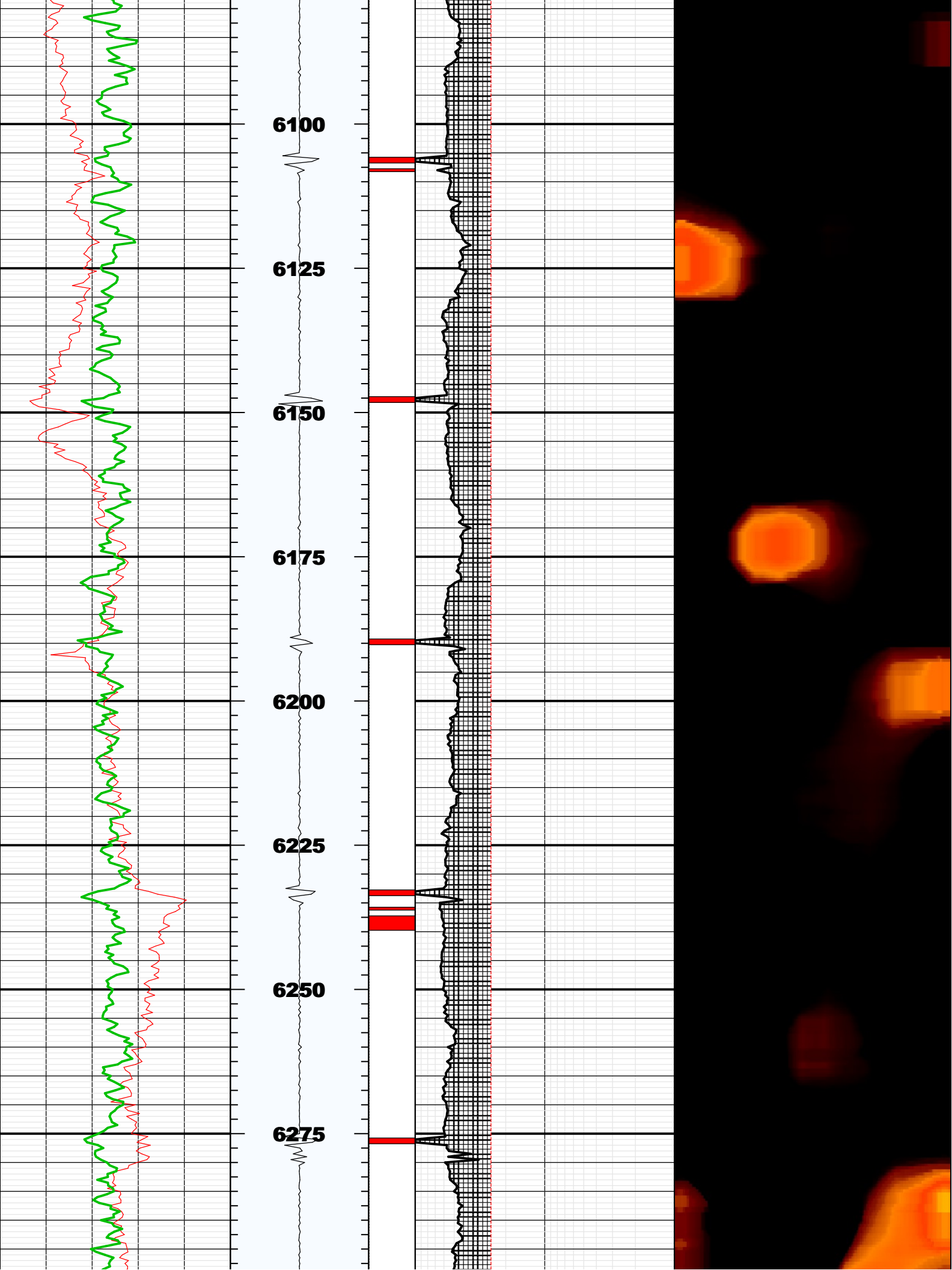


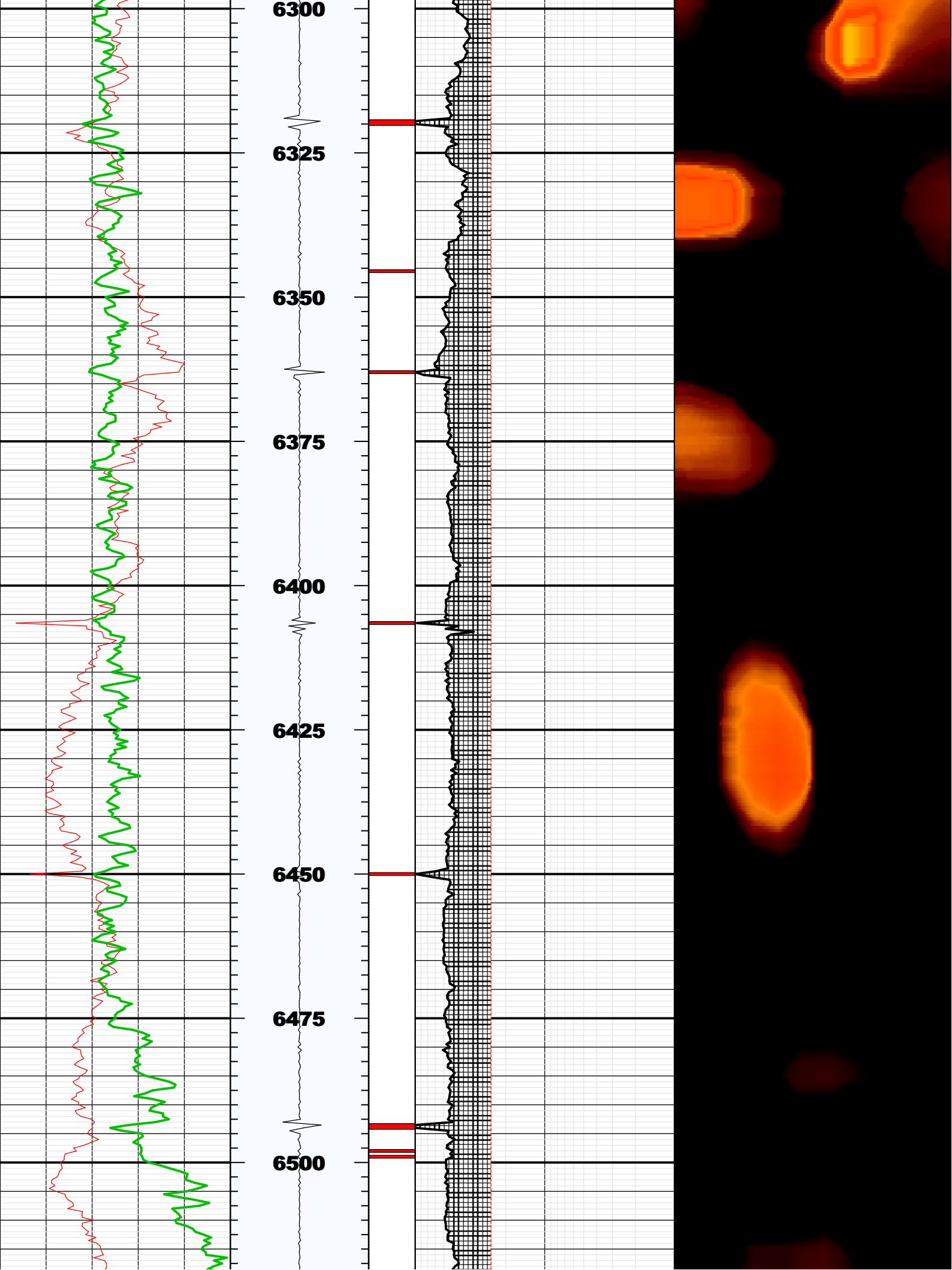


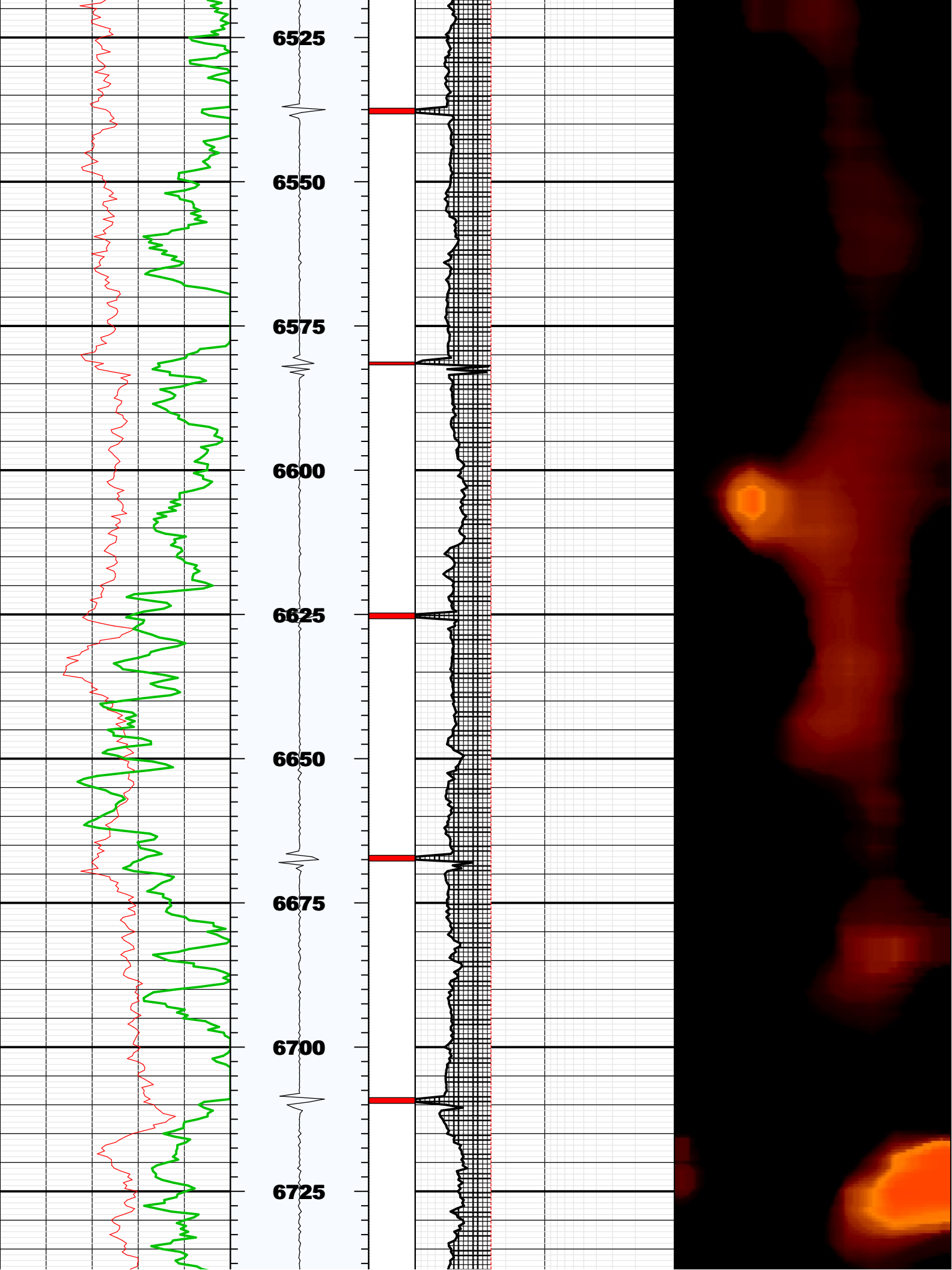


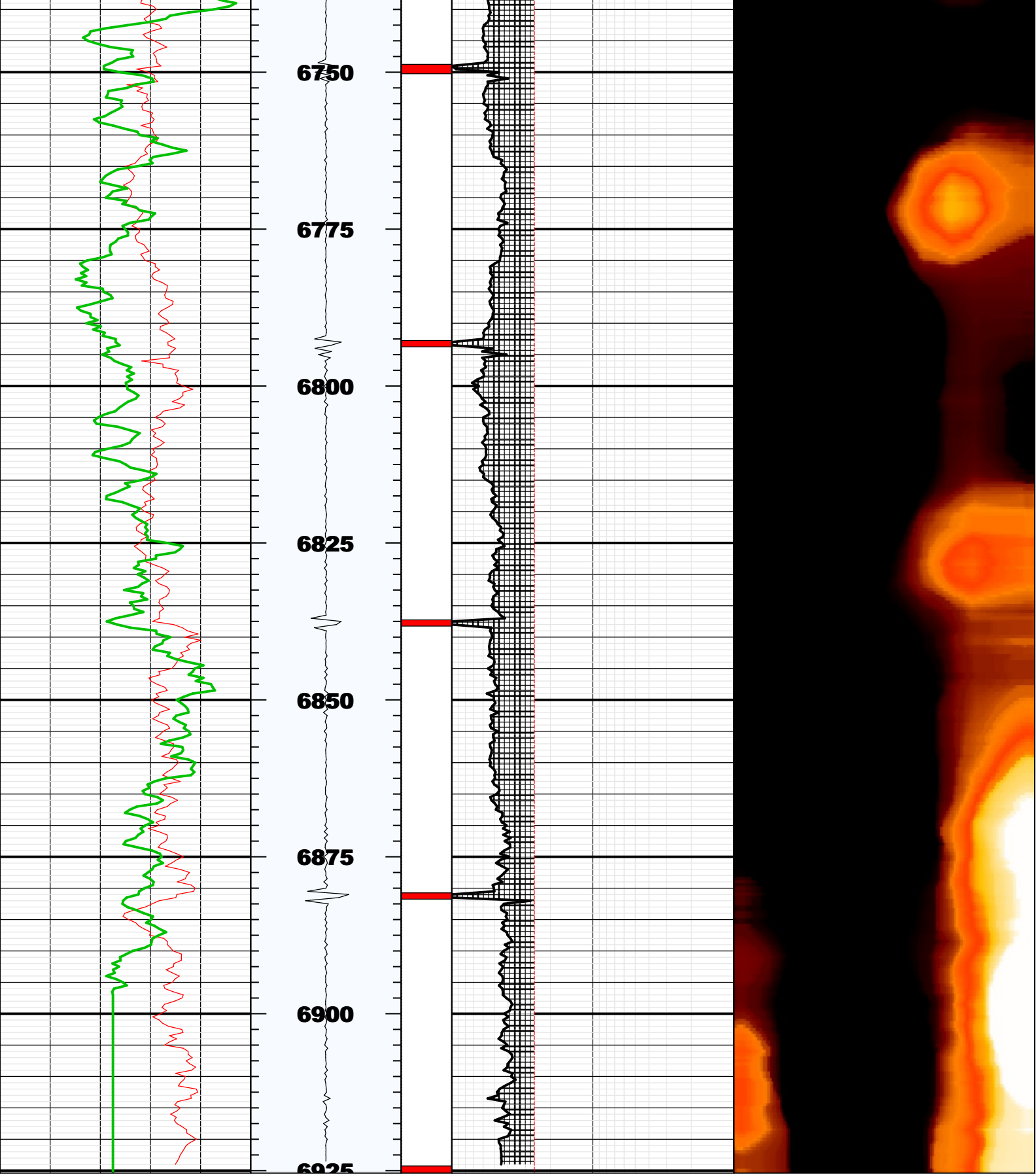








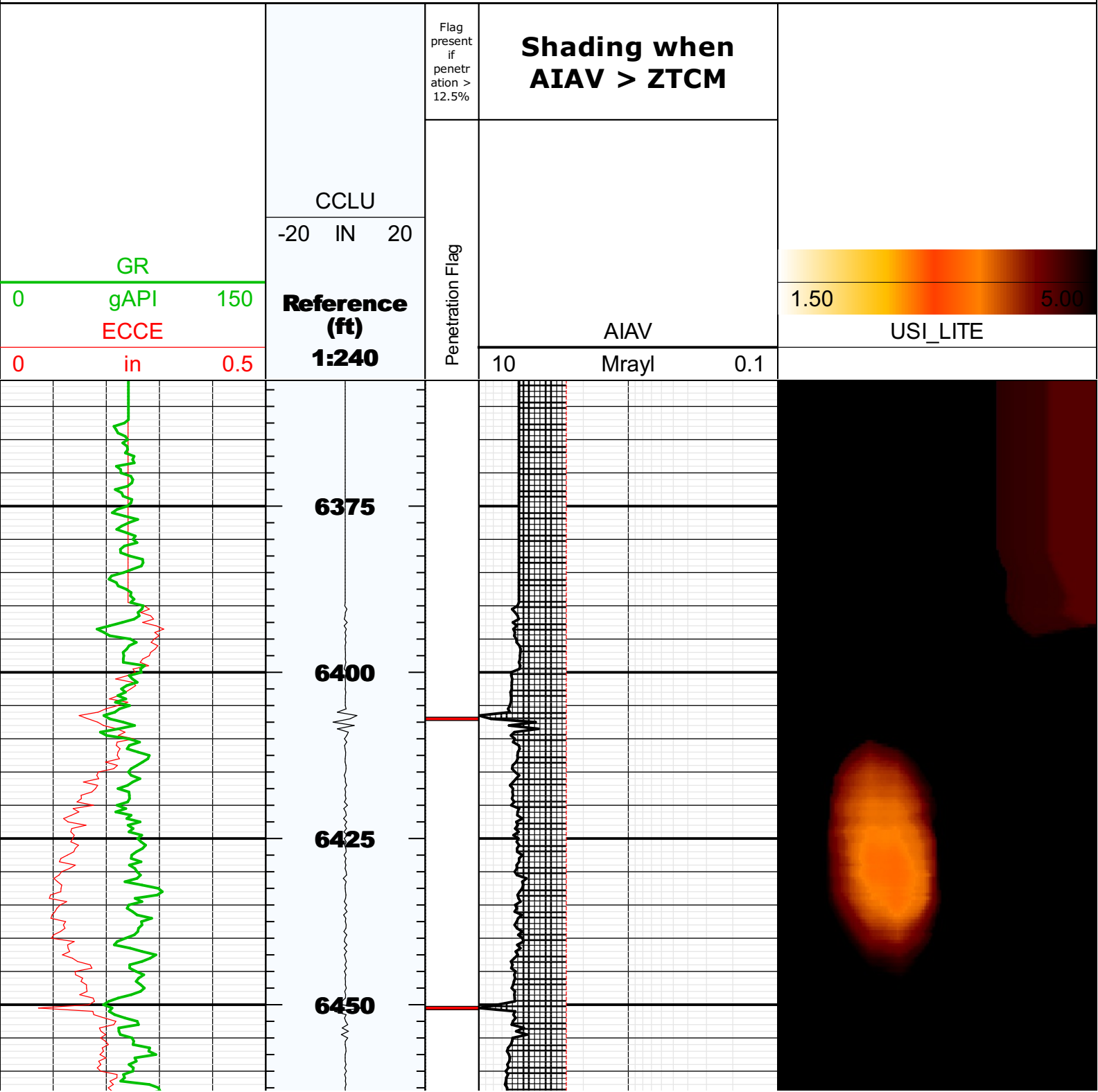


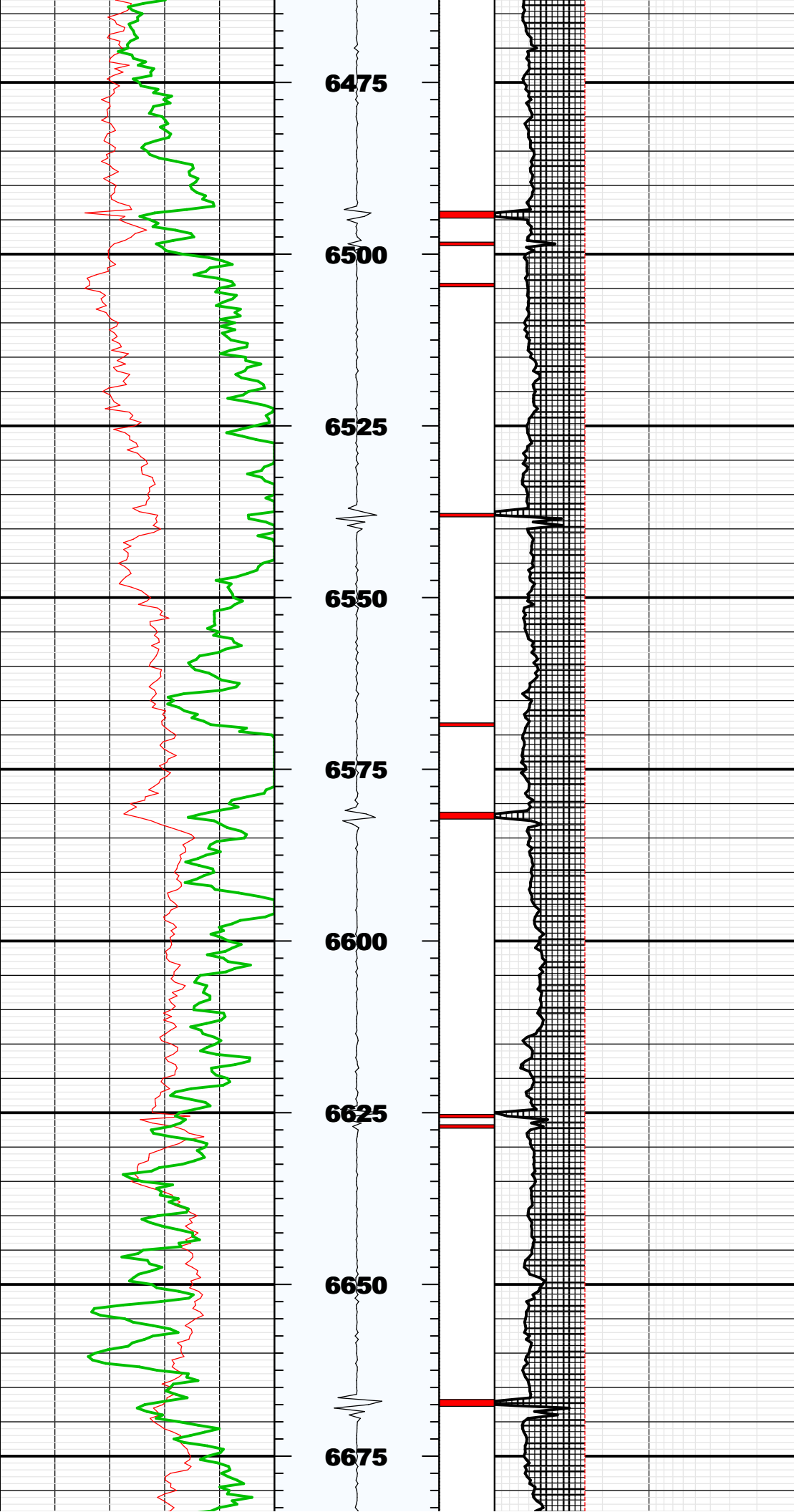


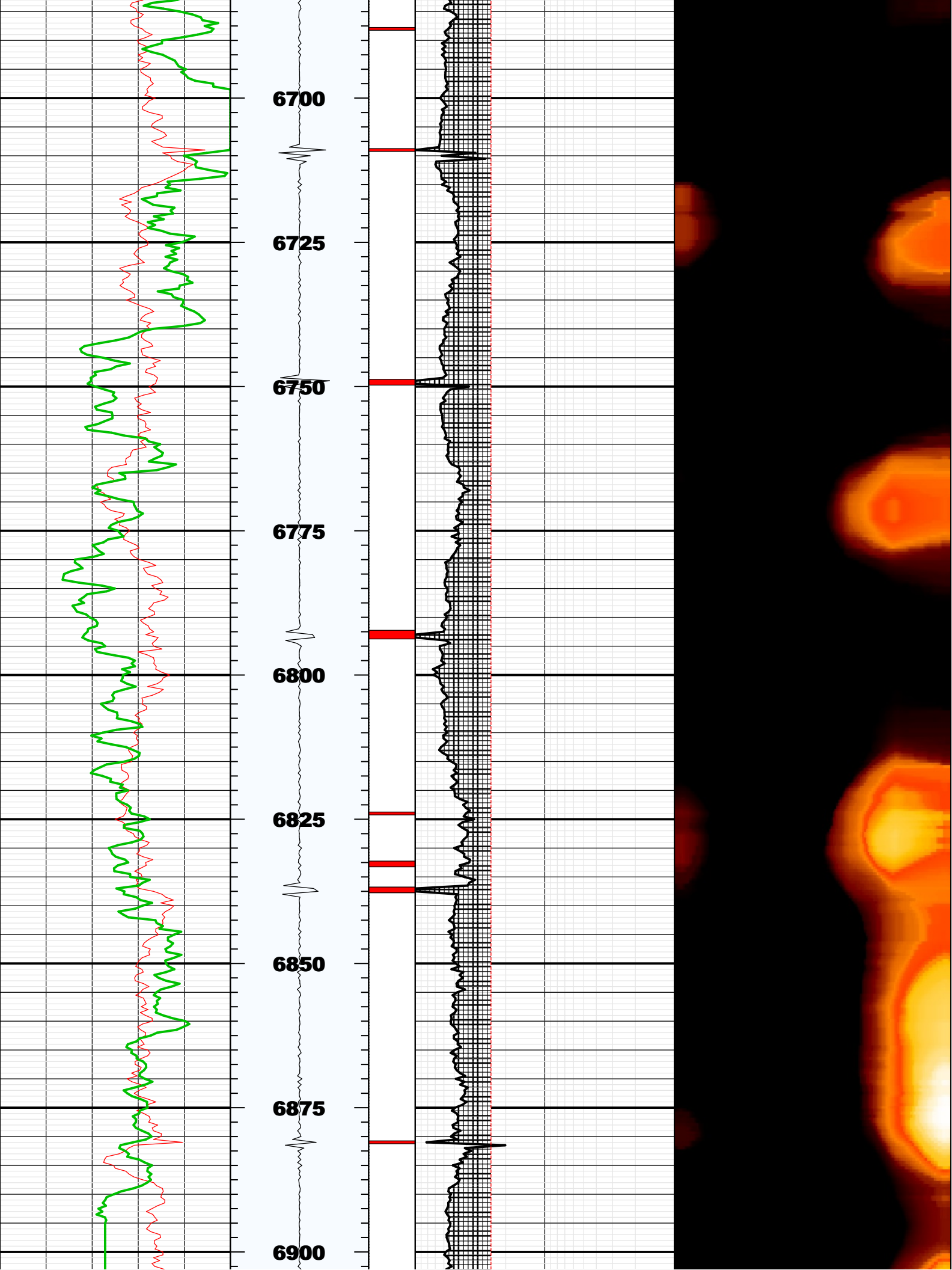
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	7.00000	IN	Casing Outer Diameter
CSID	6.27600	IN	Casing Inner Diameter
CSIZ	7.00000	IN	Current Casing Size
CWEI	26.00000	LB/F	Casing Weight
DFD	8.70000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	2.87400	IN	Diameter of Transducer Sensor
EMXV	68	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	32.79592	US	Window Begin Time
WINE	81.39453	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.80000	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

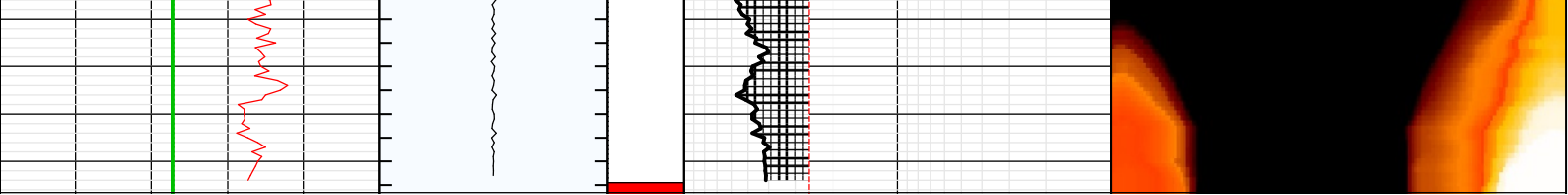
Repeat Pass

Company: Noble Energy Inc
Well: Wells Ranch AE19-689
Field: Wattenberg









Fluid Properties Used for Main Pass

