

Company: Noble Energy Inc

Well: Crow Creek AA01-743
Field: Wattenberg
County: Weld State: Colorado

County: Weld		USI-LITE (2500 psi)	
Field: Wattenberg			
Location: NWNE Sec. 1 T6N R63W			
Well: Crow Creek AA01-743			
Company: Noble Energy Inc			
LOCATION			
Permanent Datum:		GL	Elev: K.B. 4859.0 F
Log Measured From:		KB	G.L. 4835.0 F
Drilling Measured From:		KB	D.F. 4858.0 F
Logging Date	27-Feb-2015		
Run Number	Run 1		
Depth Driller	11906.0 F		
Schlumberger Depth	6670.0 F		
Bottom Log Interval	6670.0 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	6670.0 F		
To	-999.2 F		
Casing Size	5.50 IN		
Weight	20.00 LB/F		
Grade	P110		
From	24.0 F		
To	11902.0 F		
Max Recorded Temp	-999.2		
Logger on bottom (date)	27-Feb-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: U711136 Length: 17300.00000

DISCLAIMER

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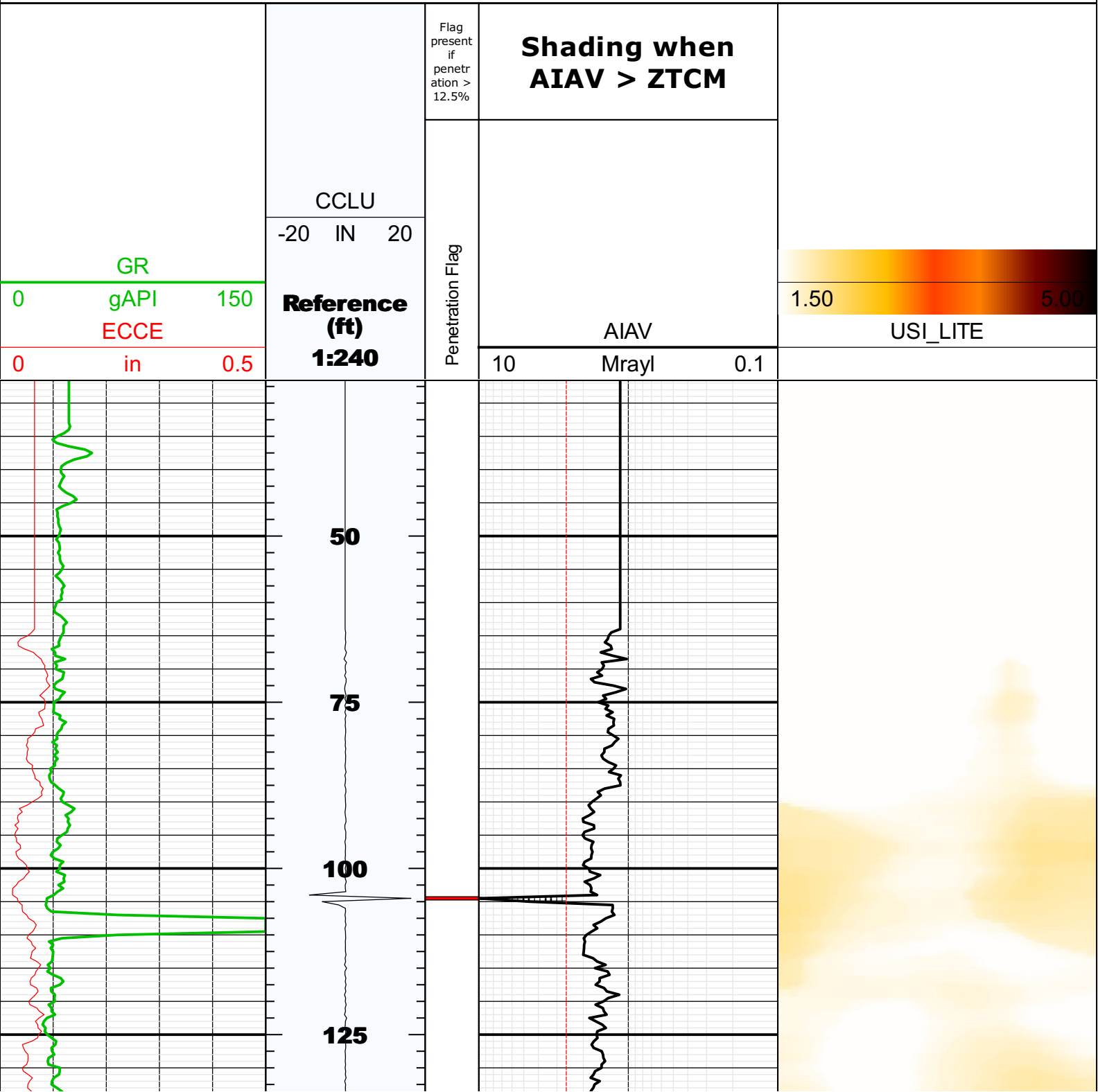
Estimated TOC @ 1515'. Expected TOC @ 650'.
13.6 PPG single slurry cement.

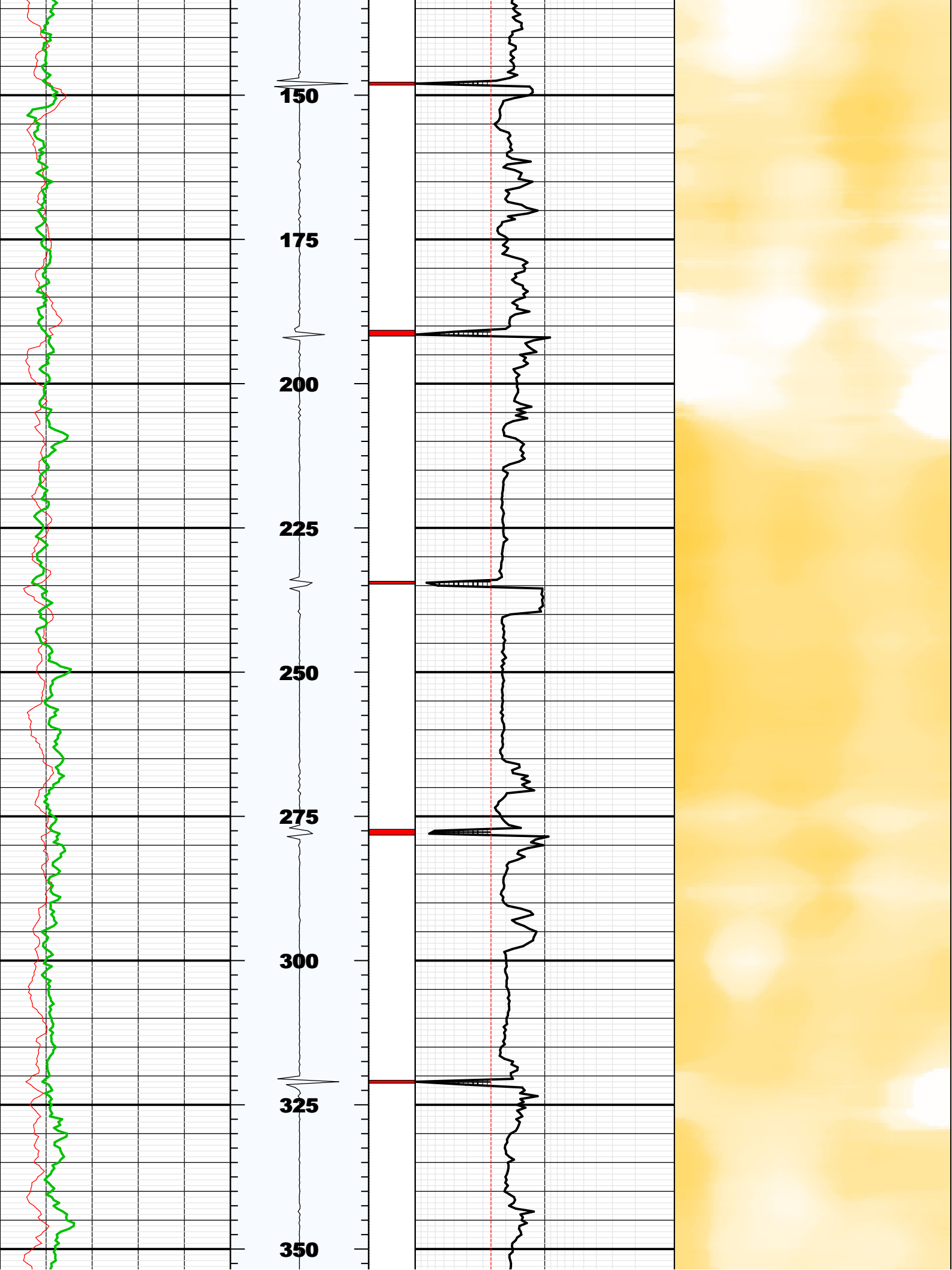
5.5" casing from surface to TD logged down until tension reflected cable weight - approx. 6800'.
Bottom log interval at 6570' because data below this point was poor quality and sub would not spin below 6660'.

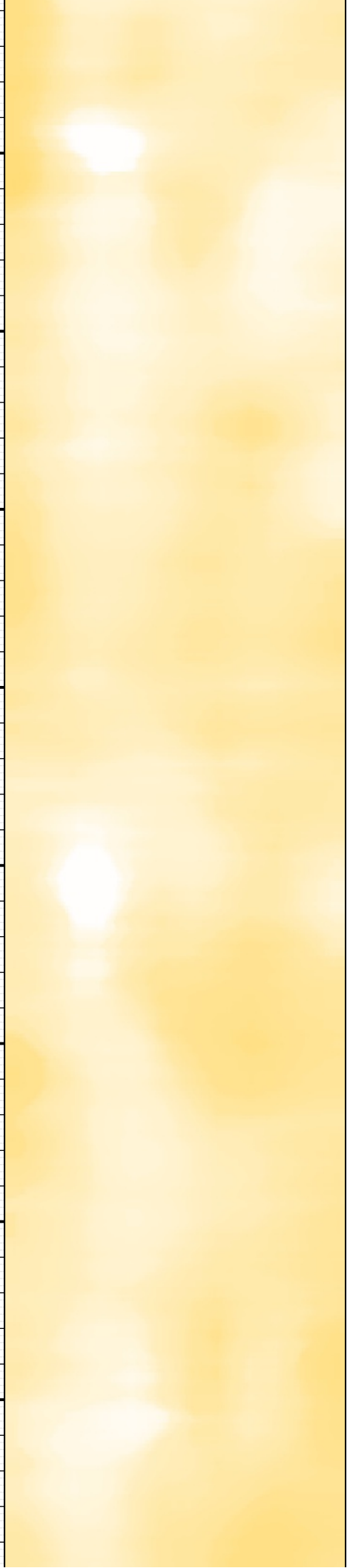
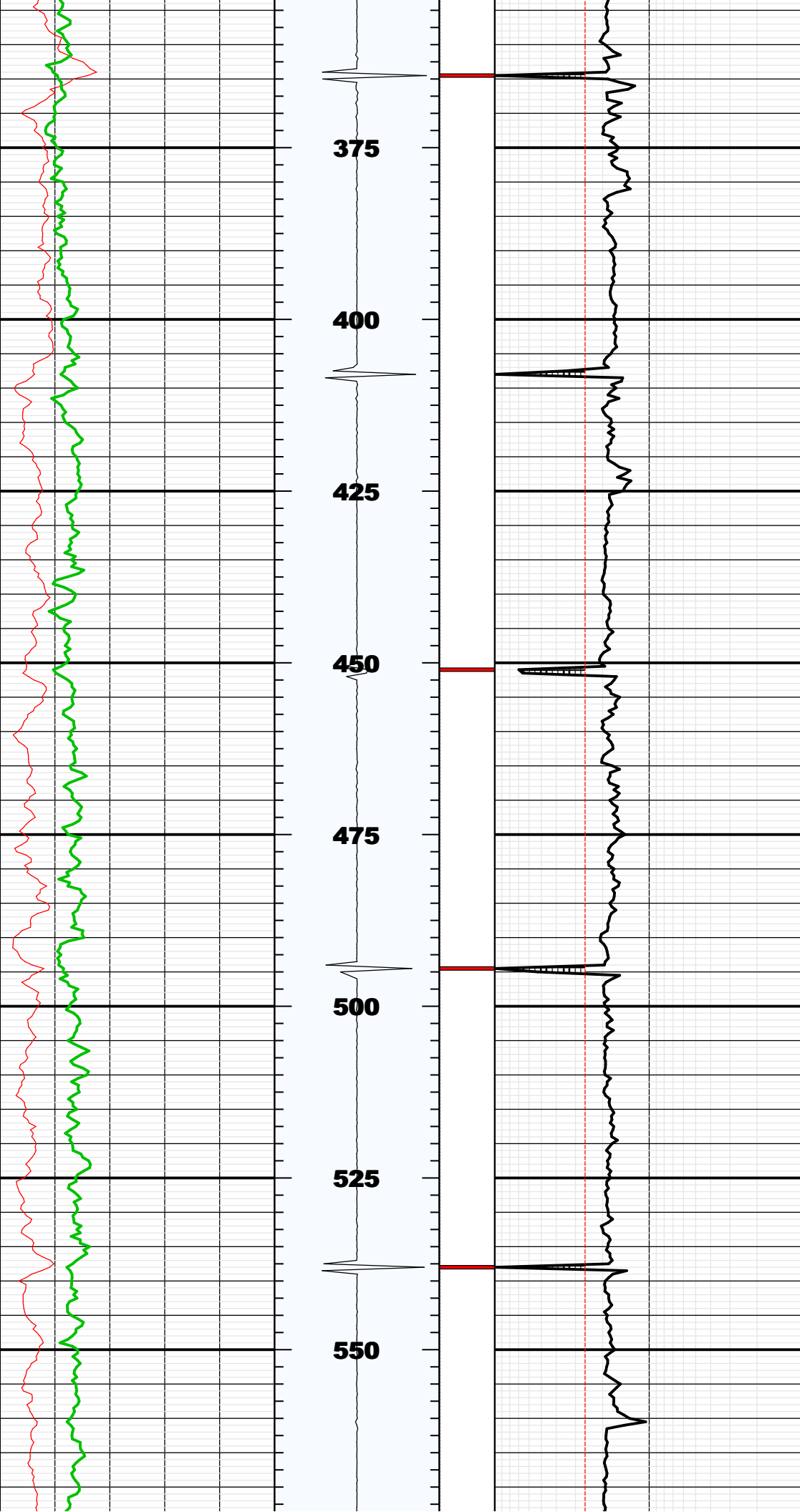
Bottom hole temperature was 220 degF measured at depth.

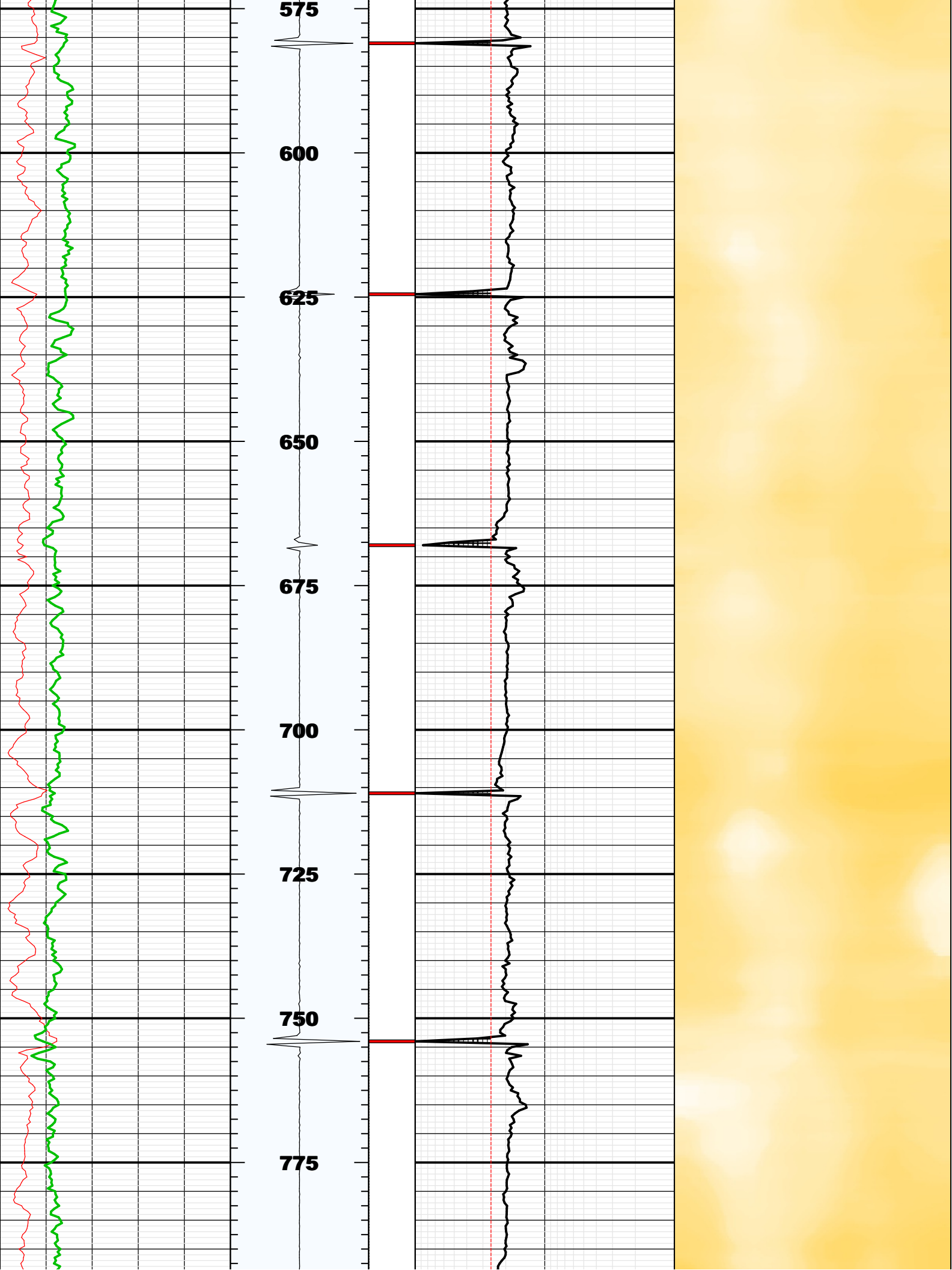
Main Pass

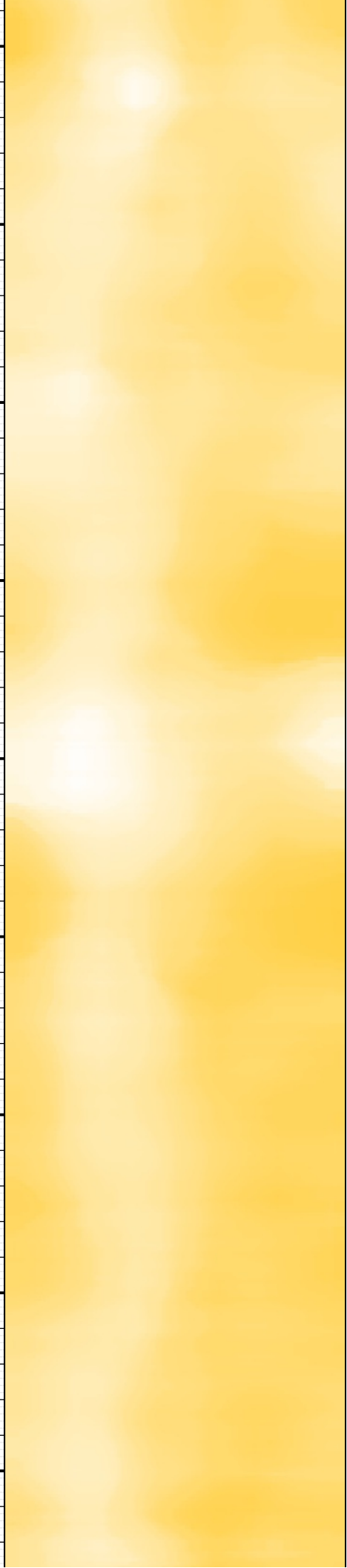
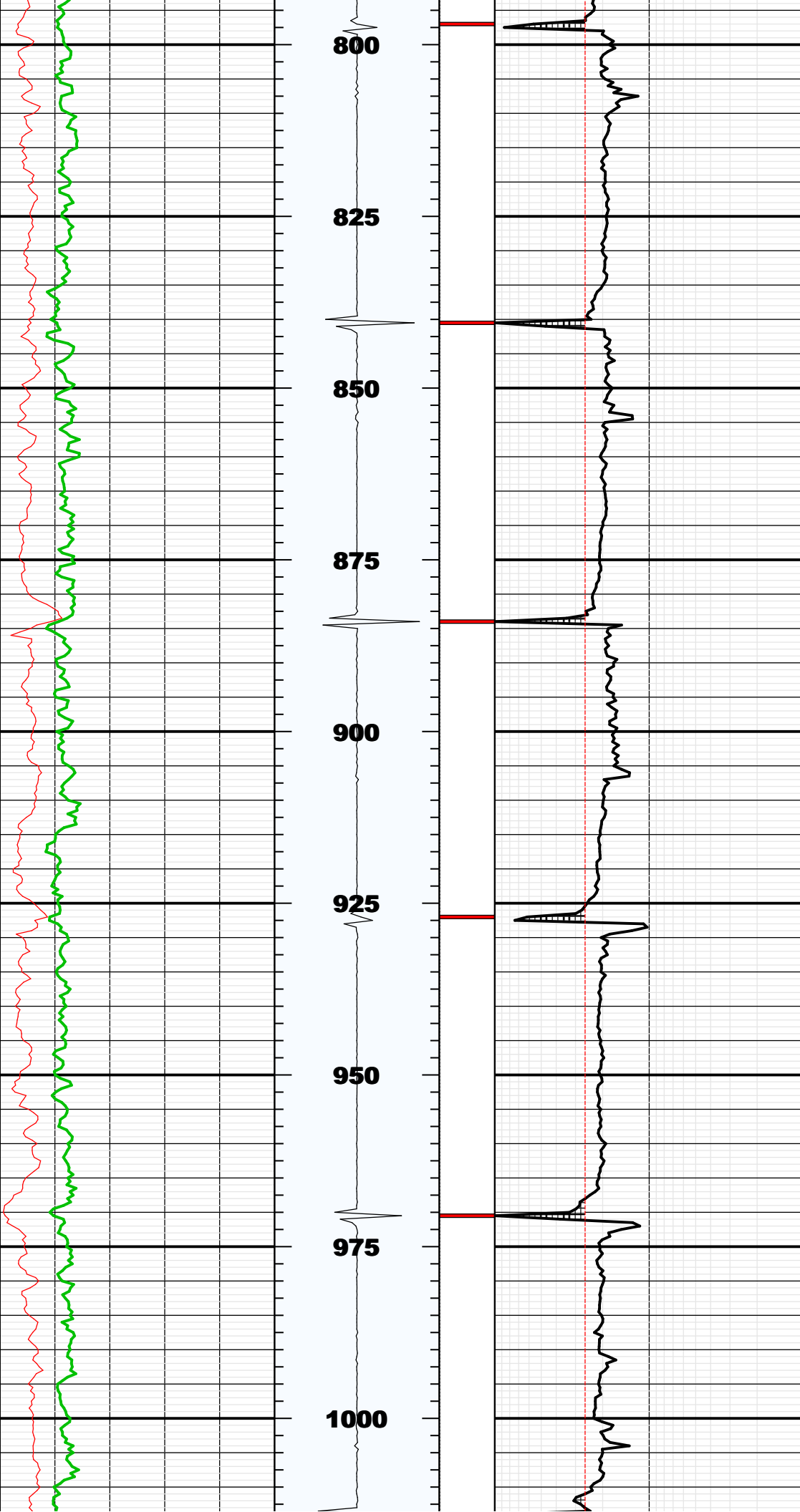
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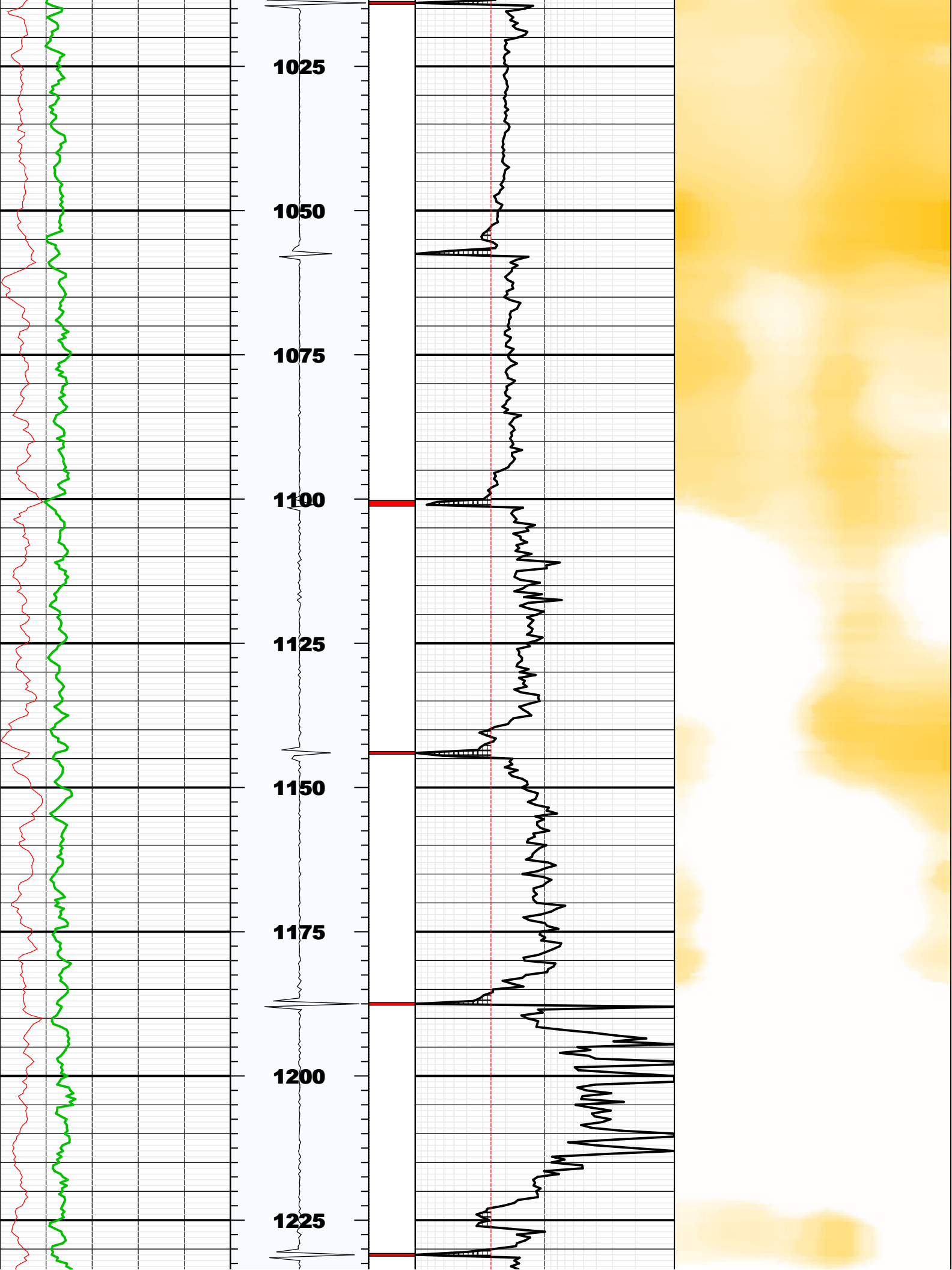


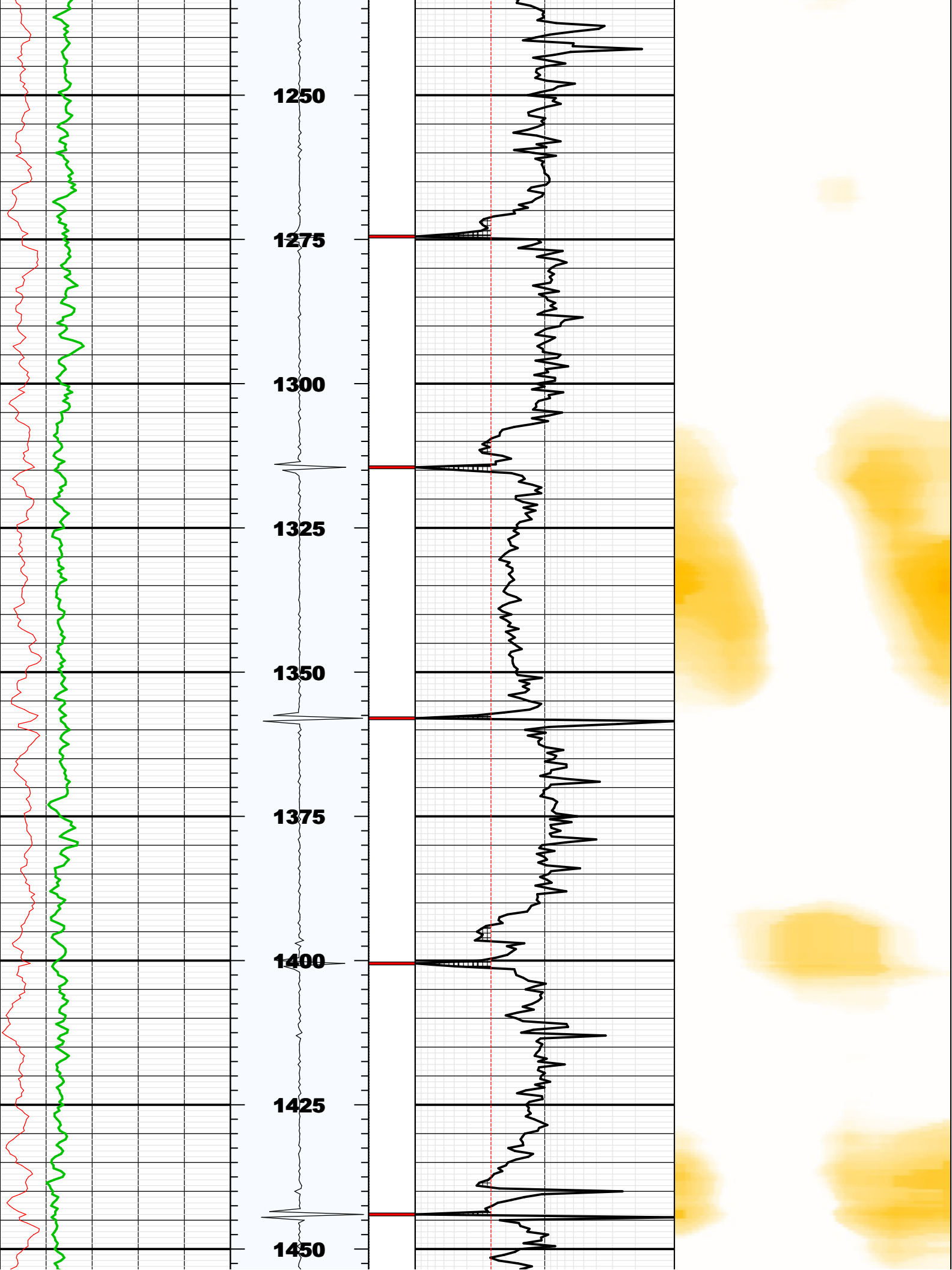


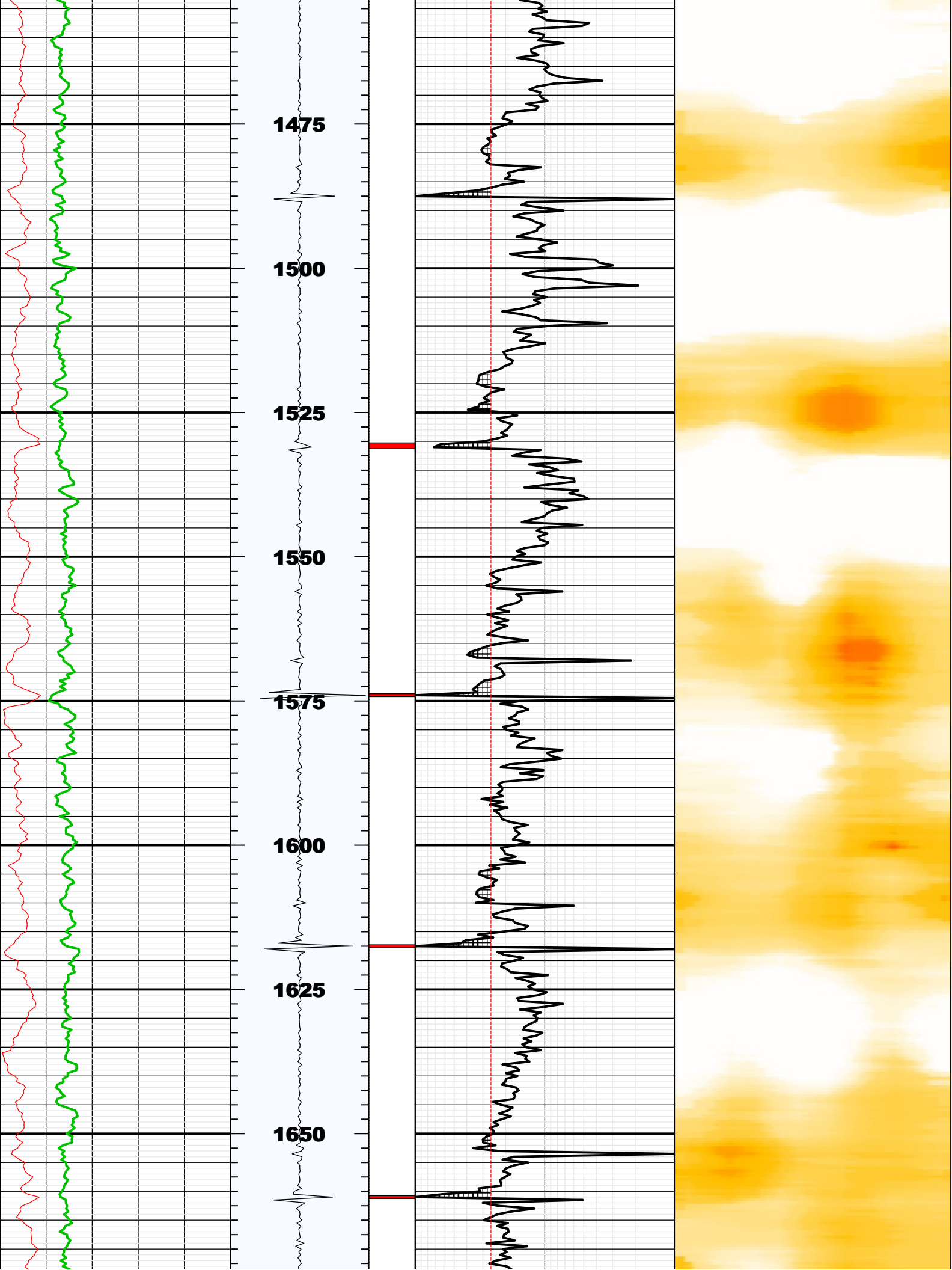


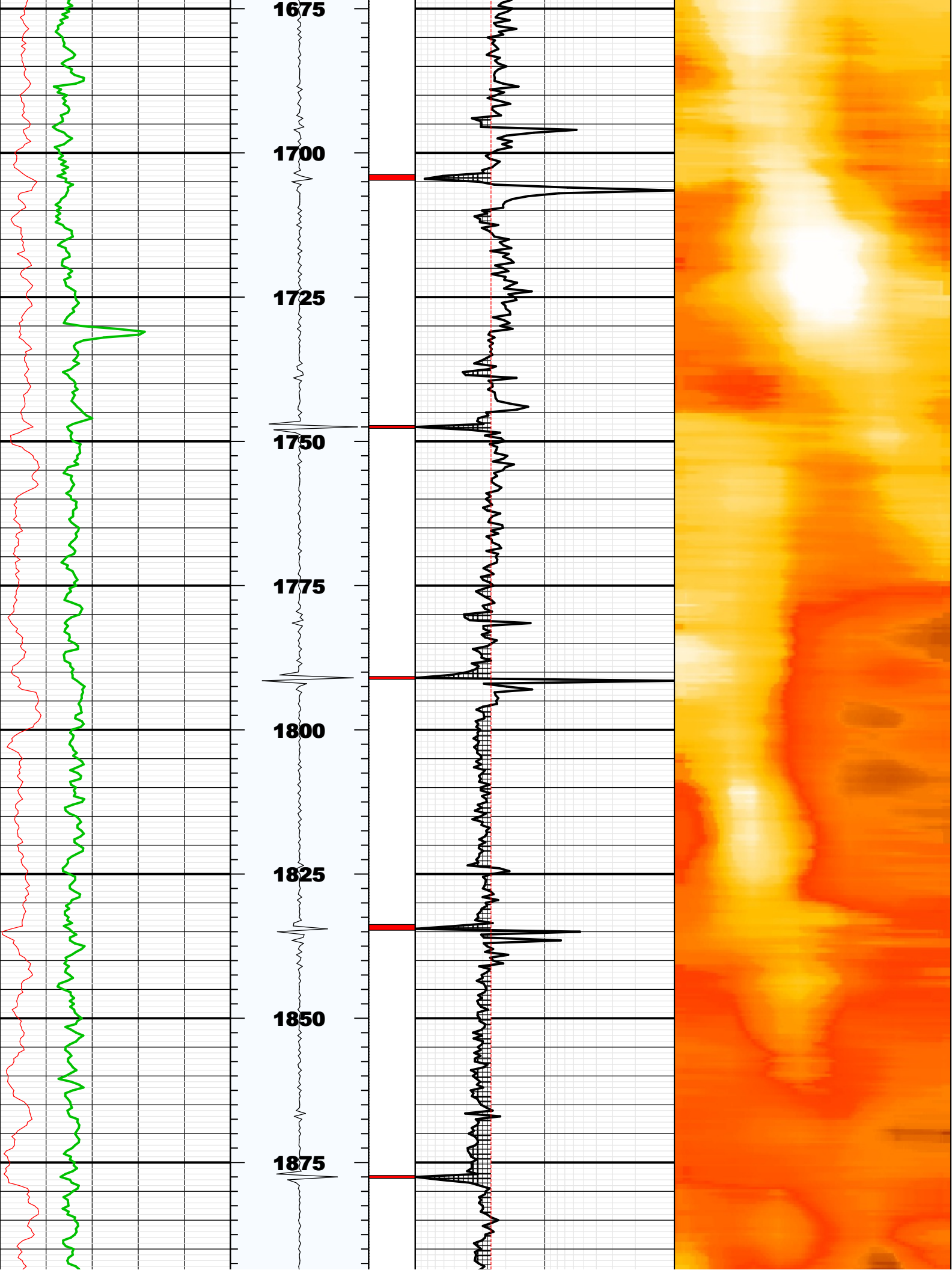


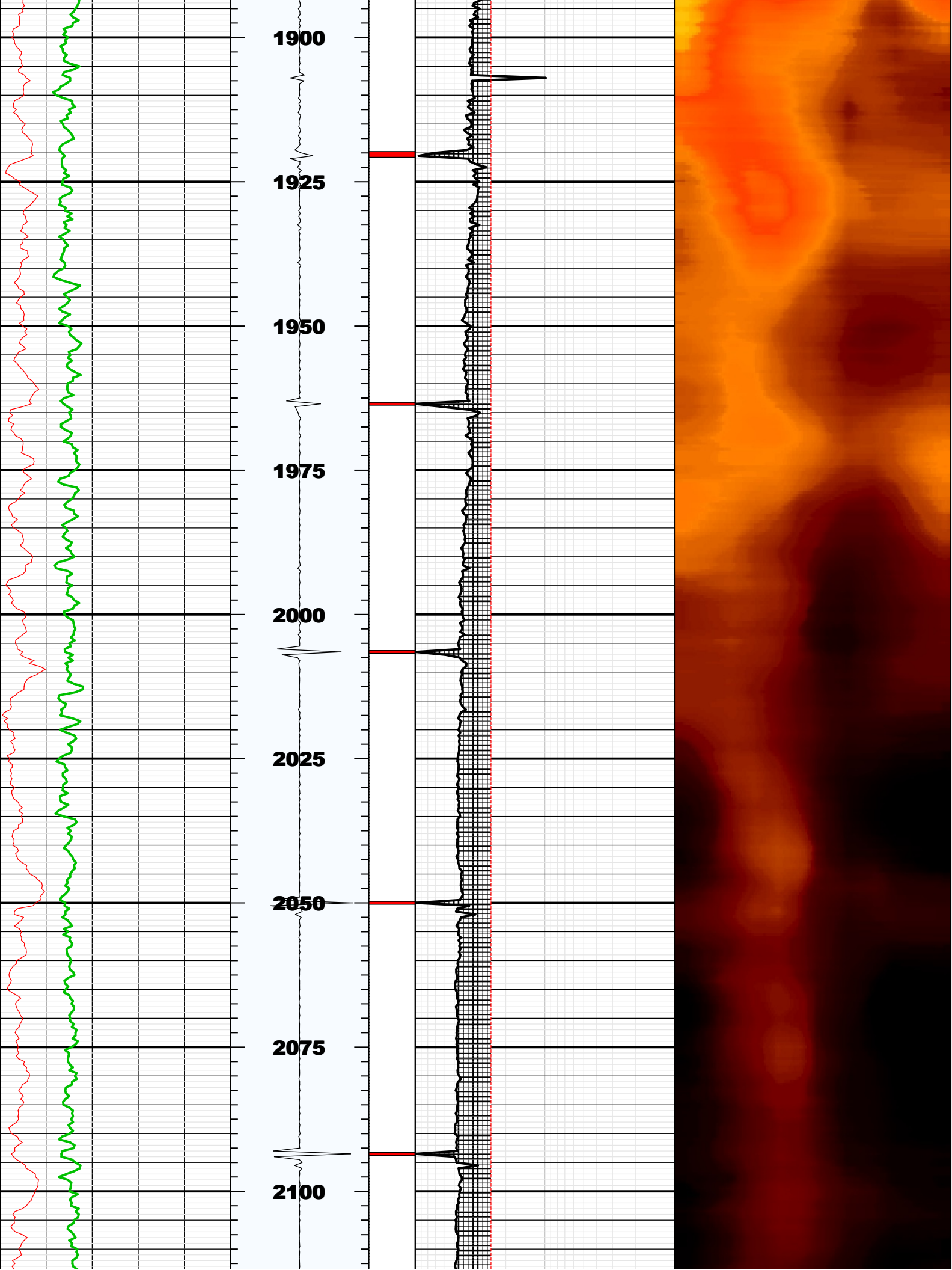


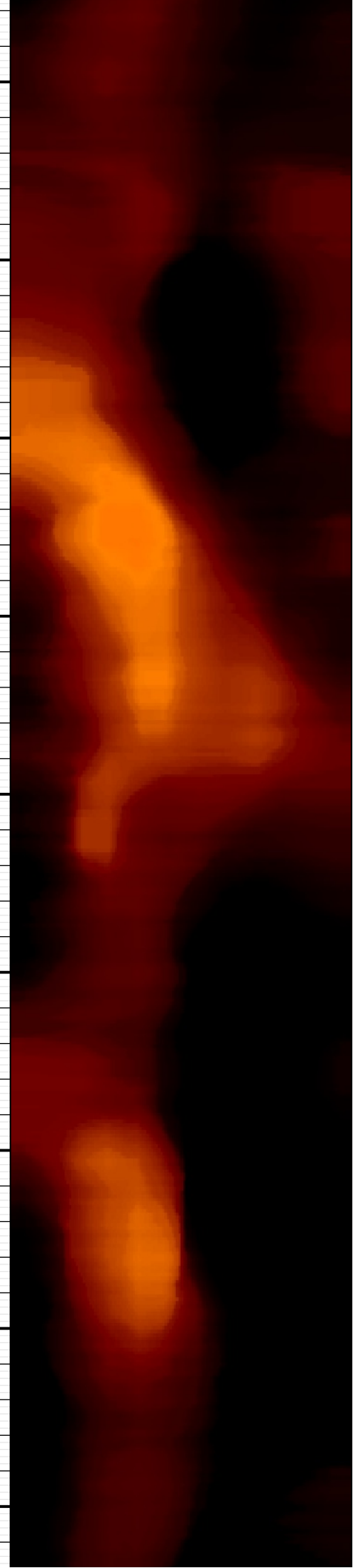
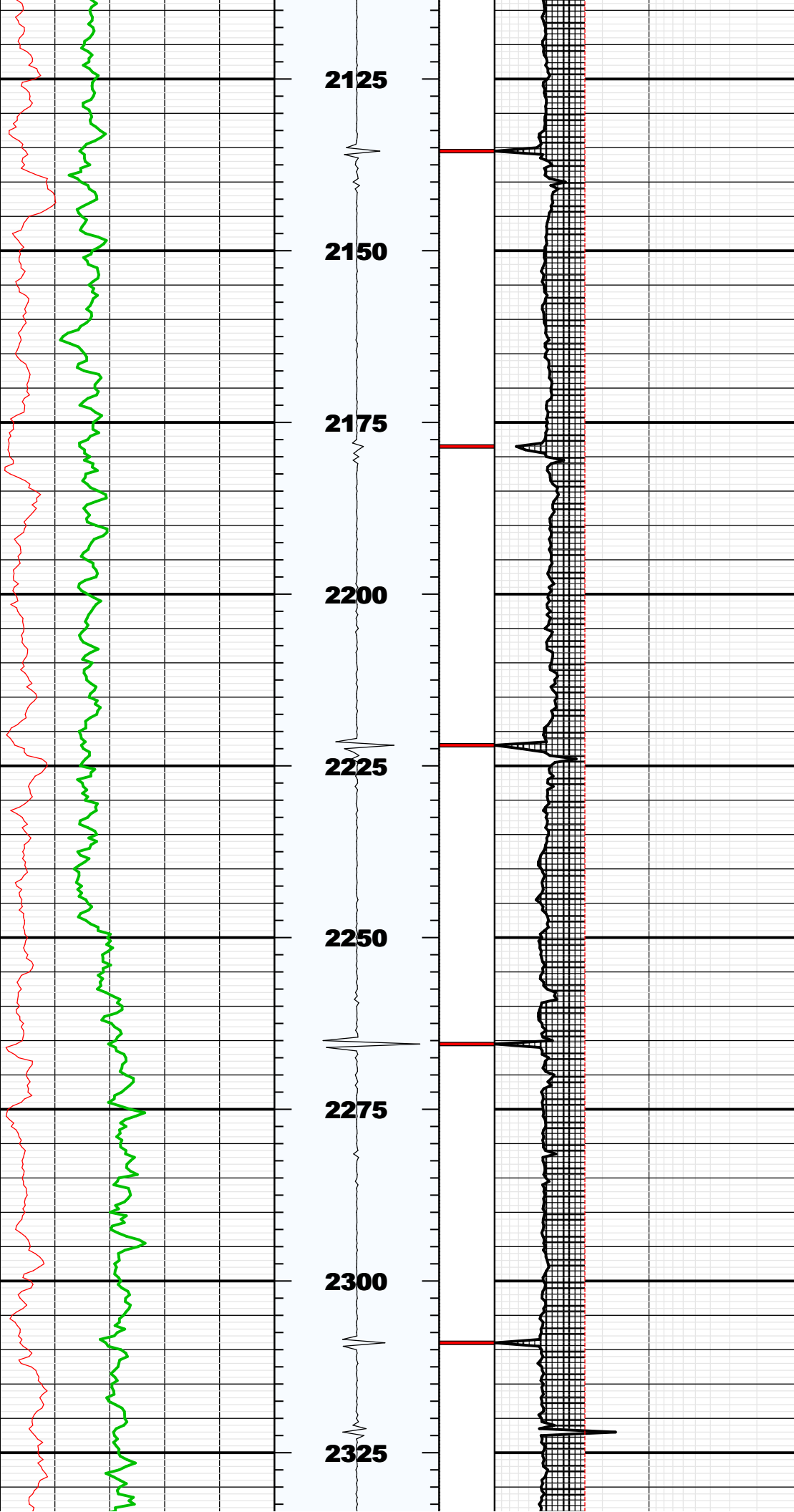


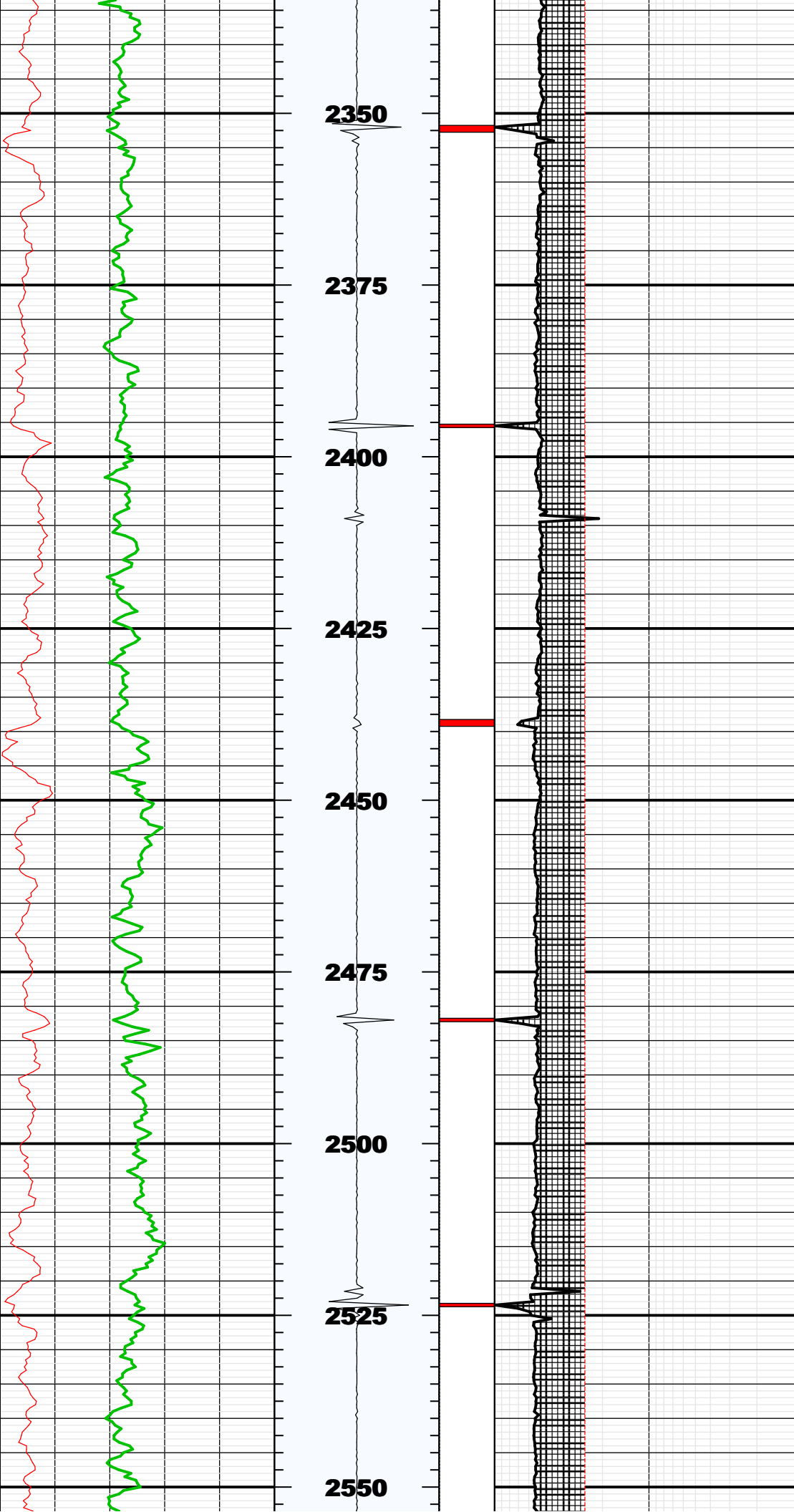


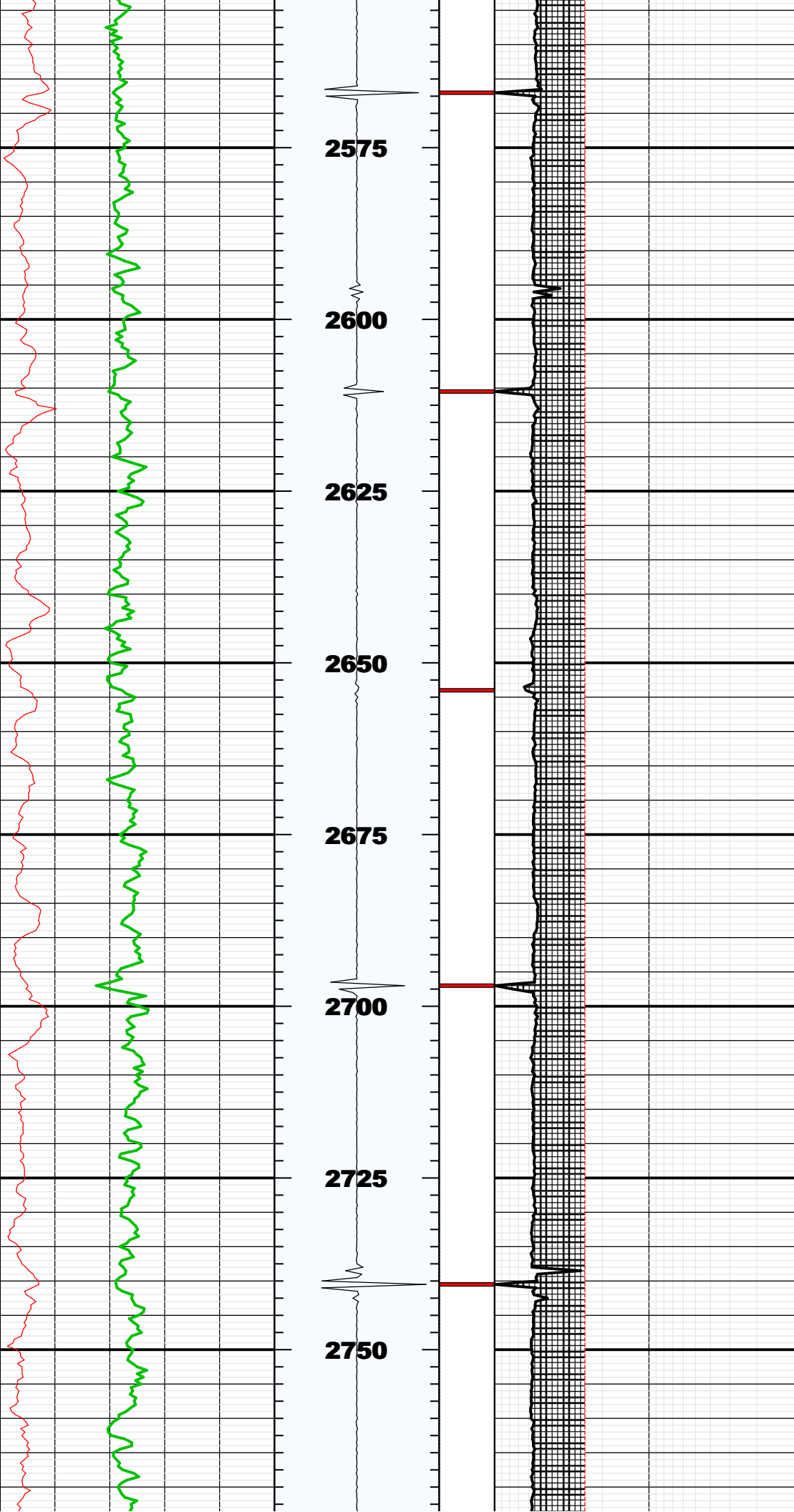


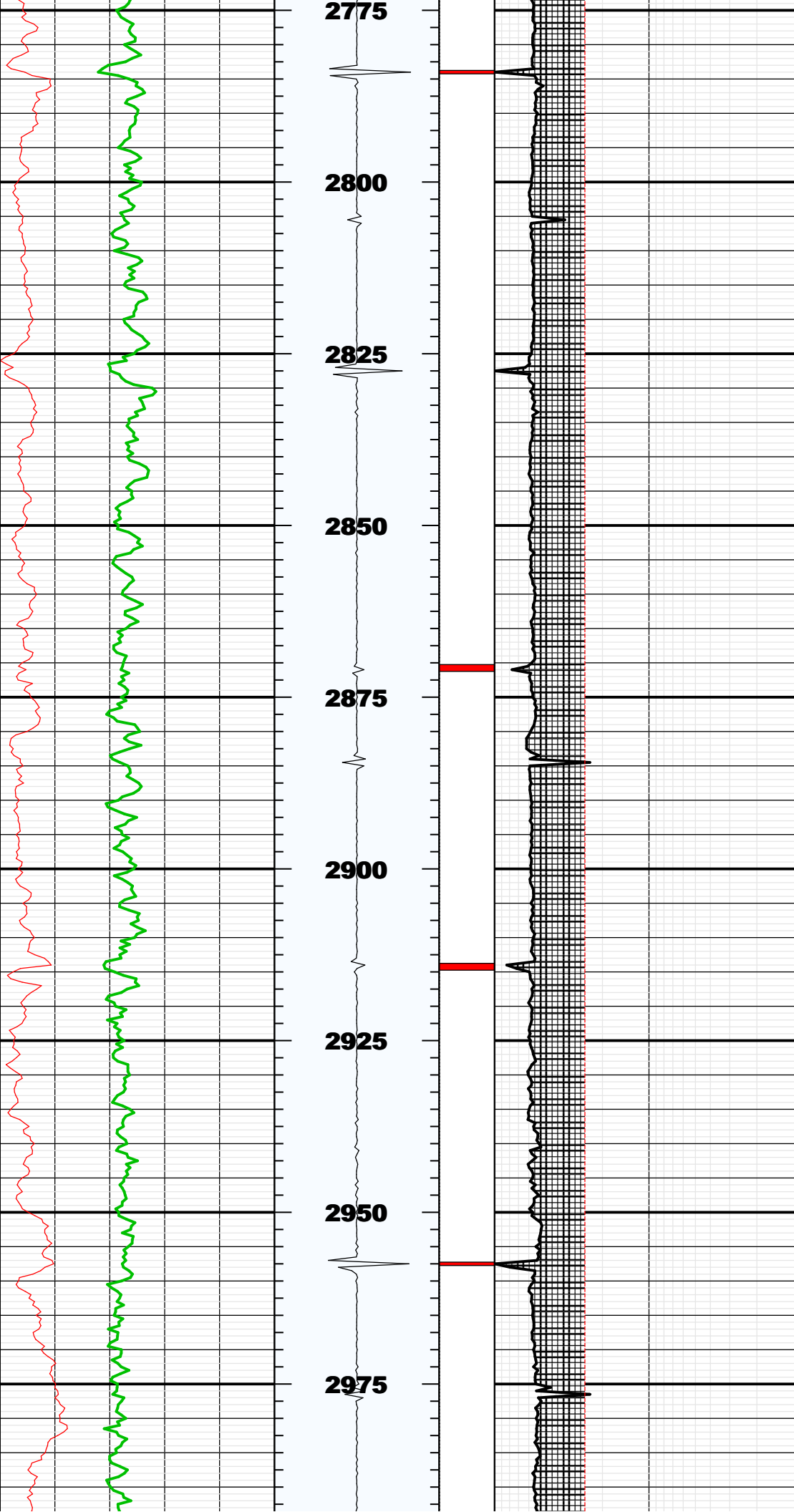


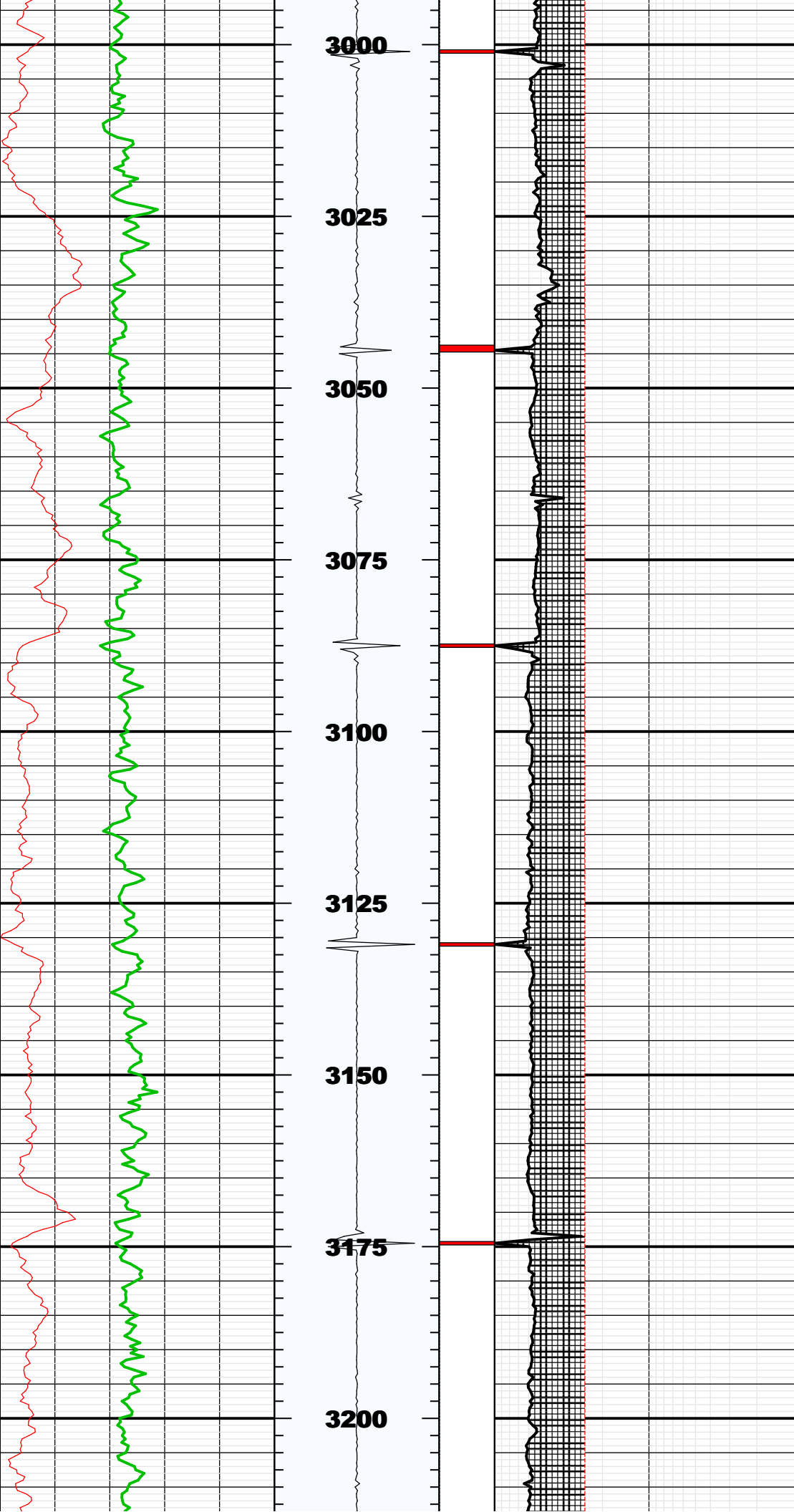


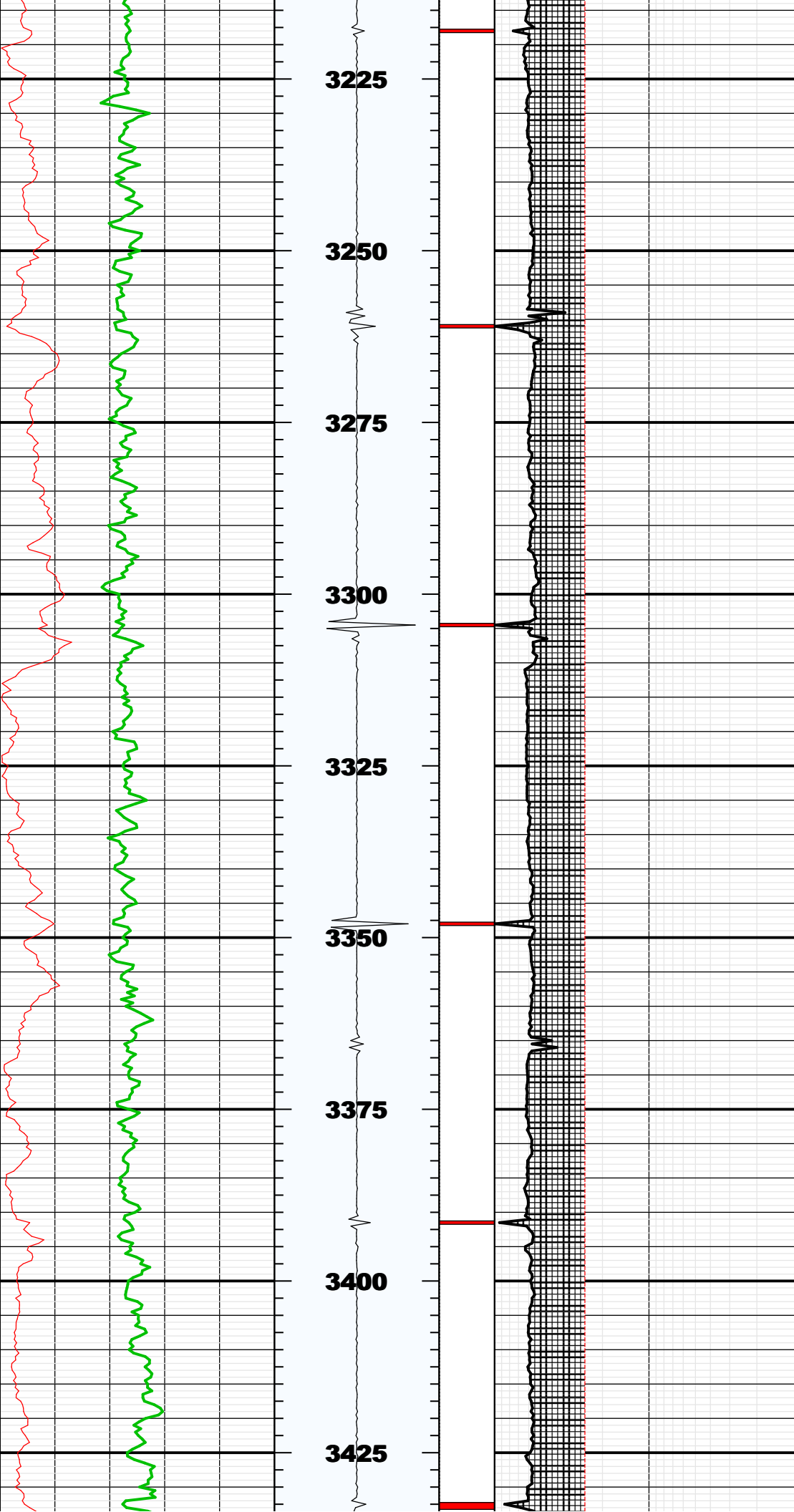


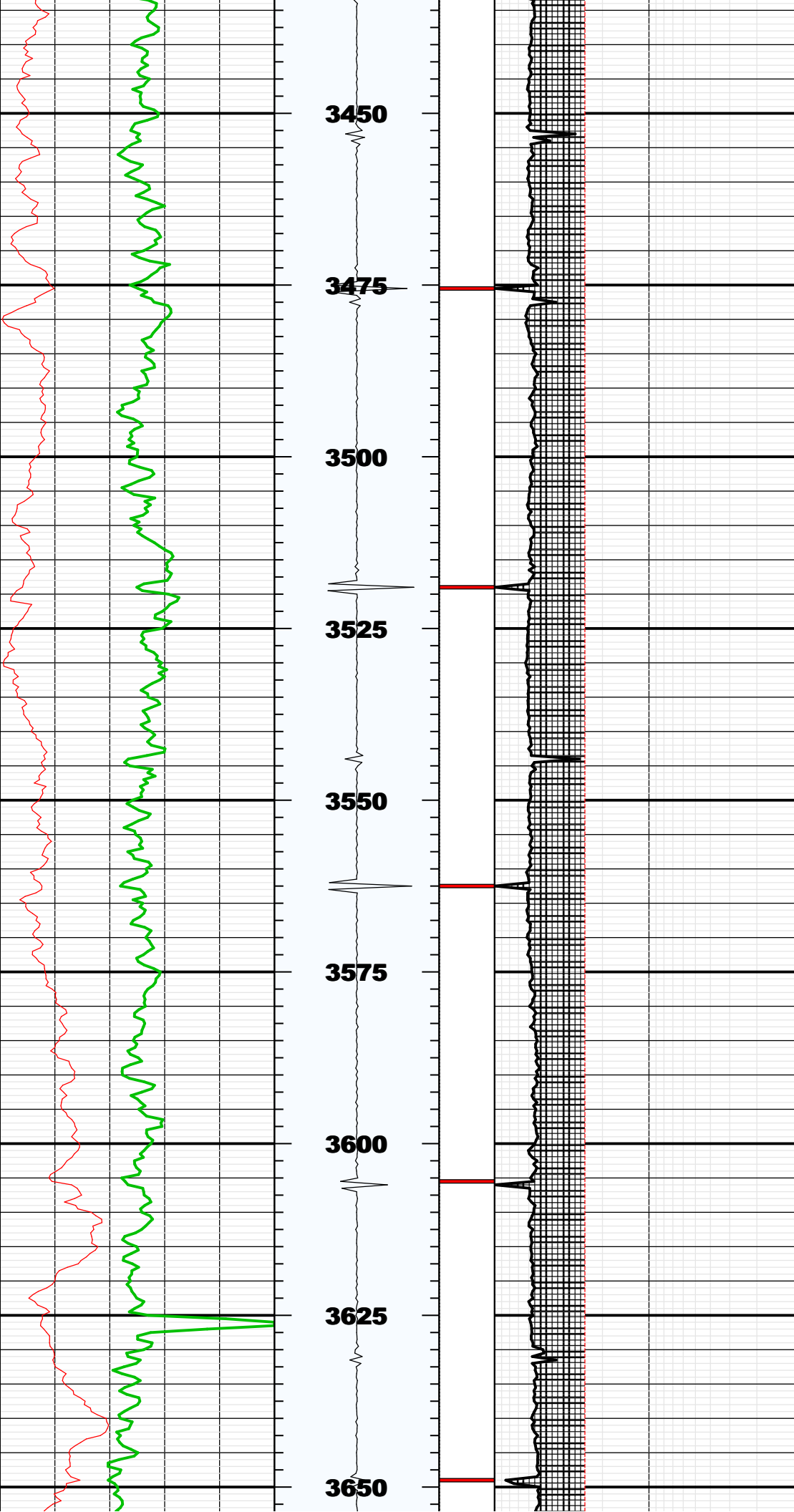


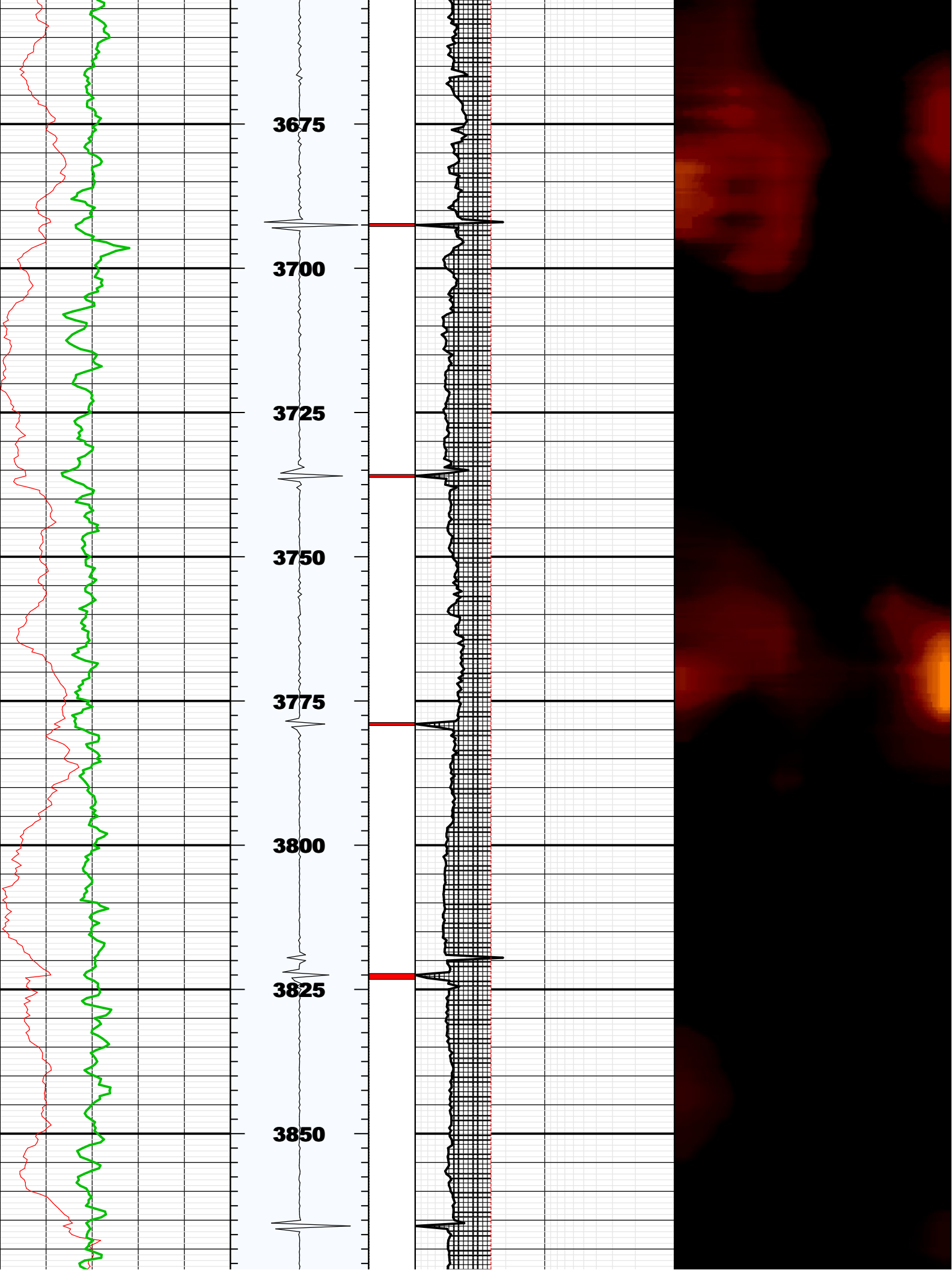


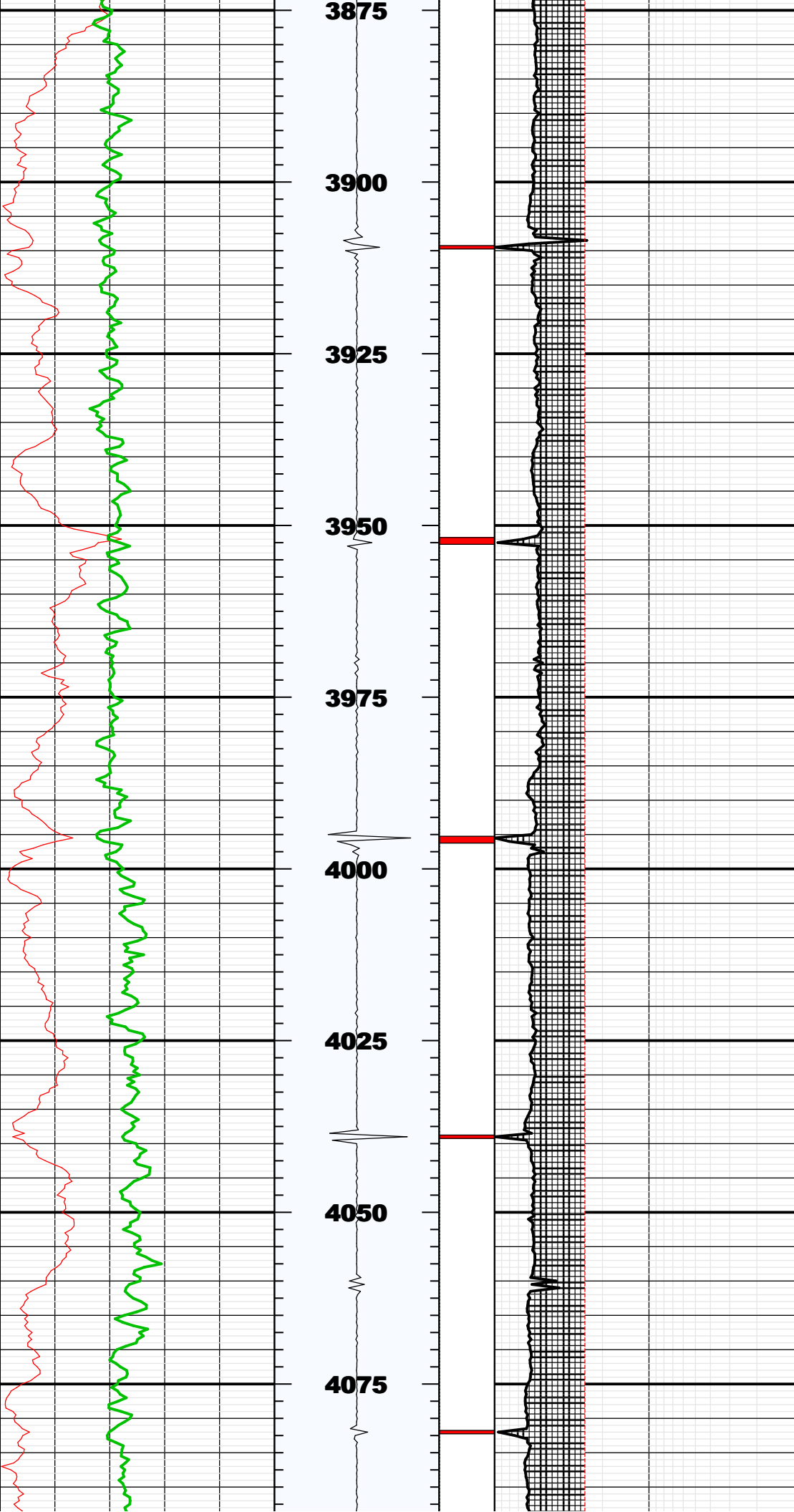


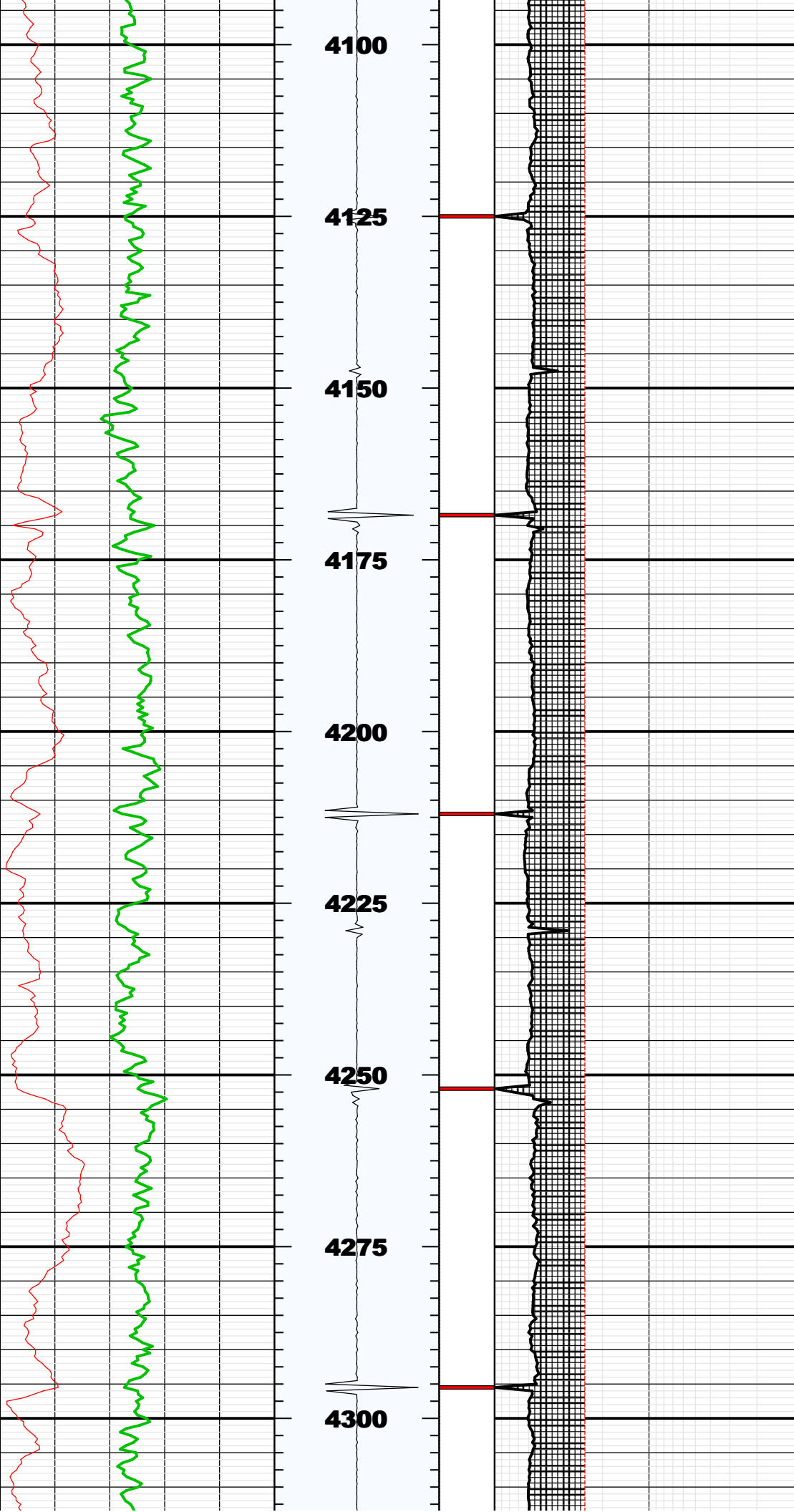


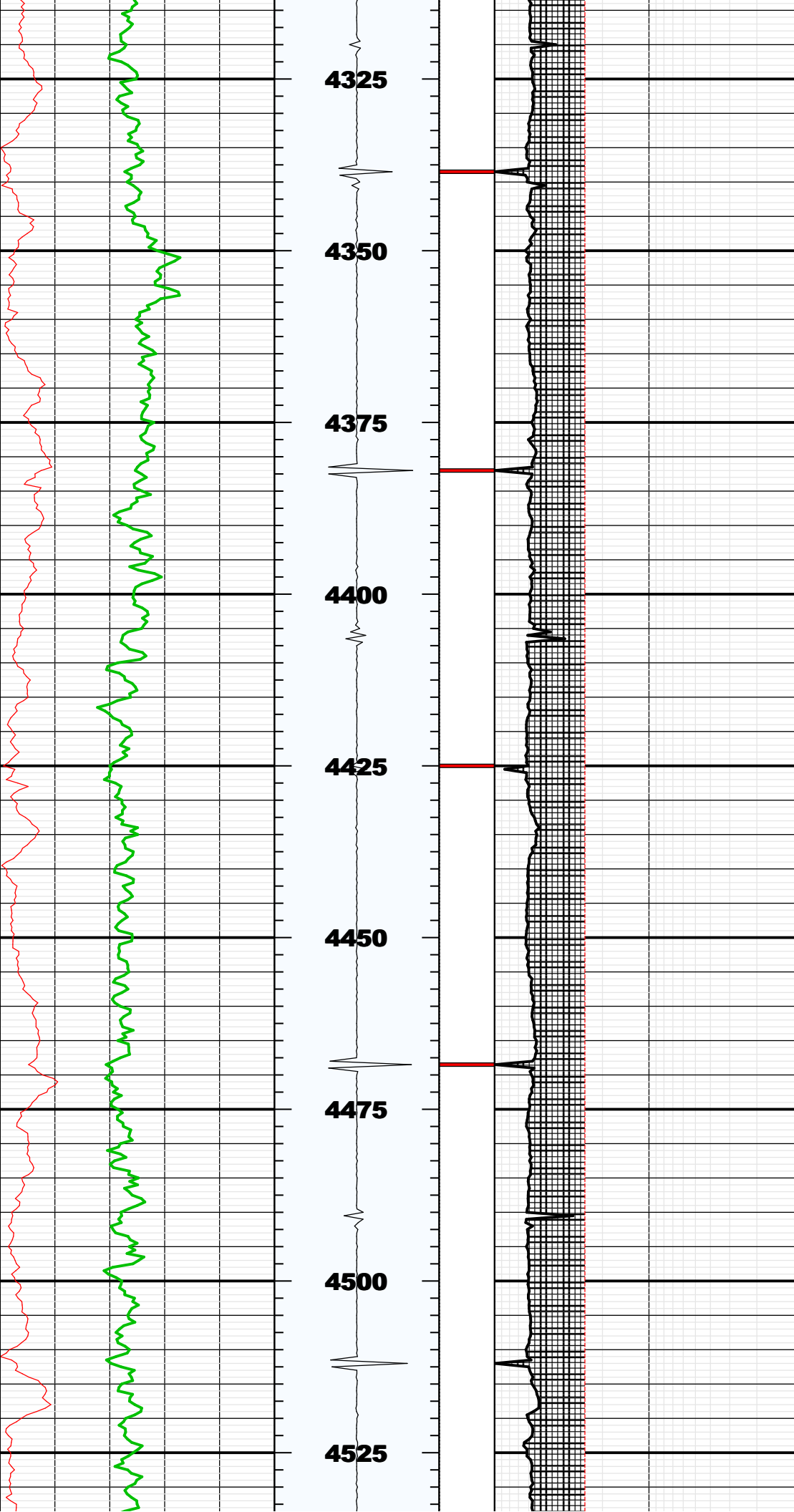


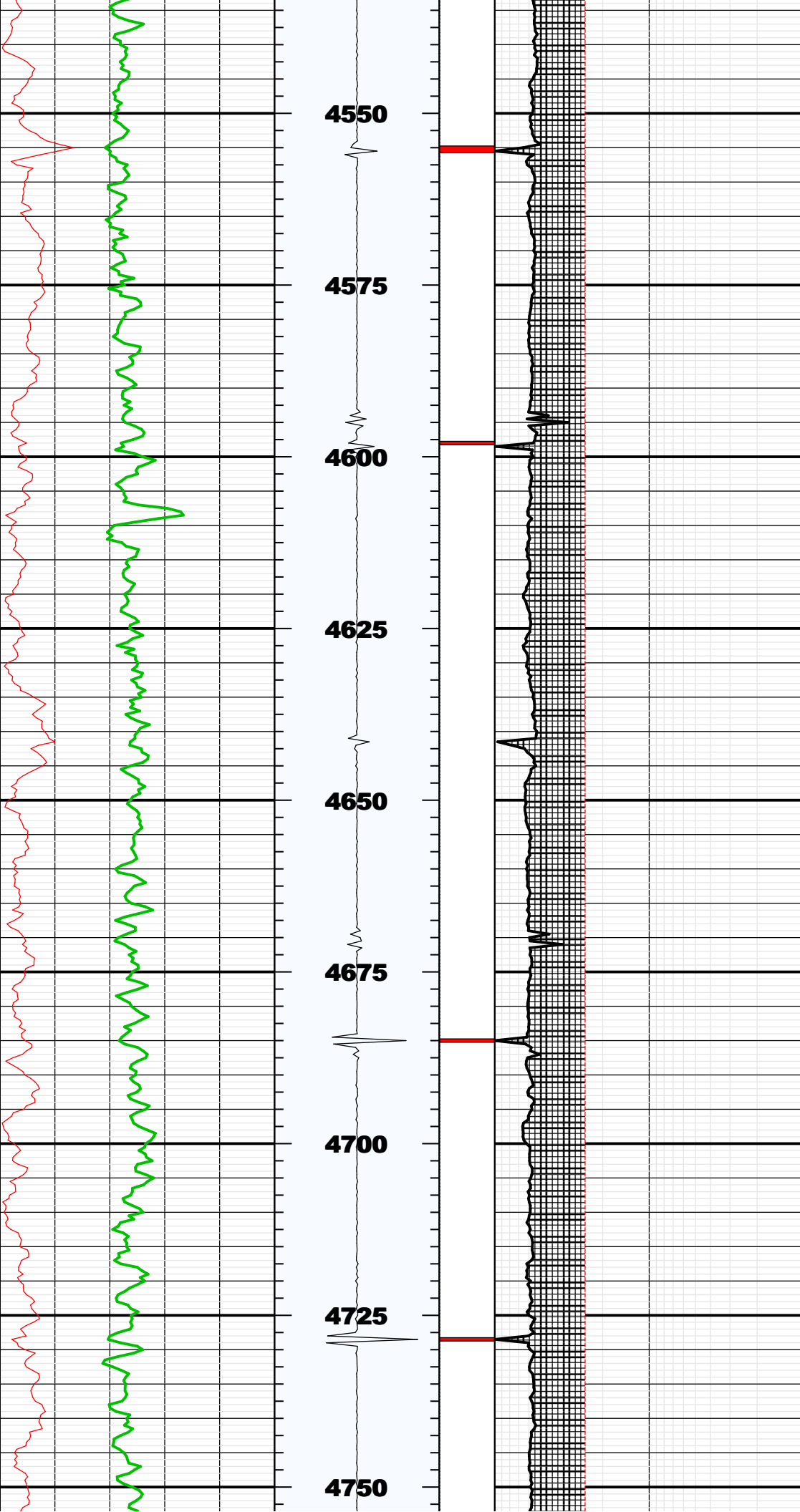


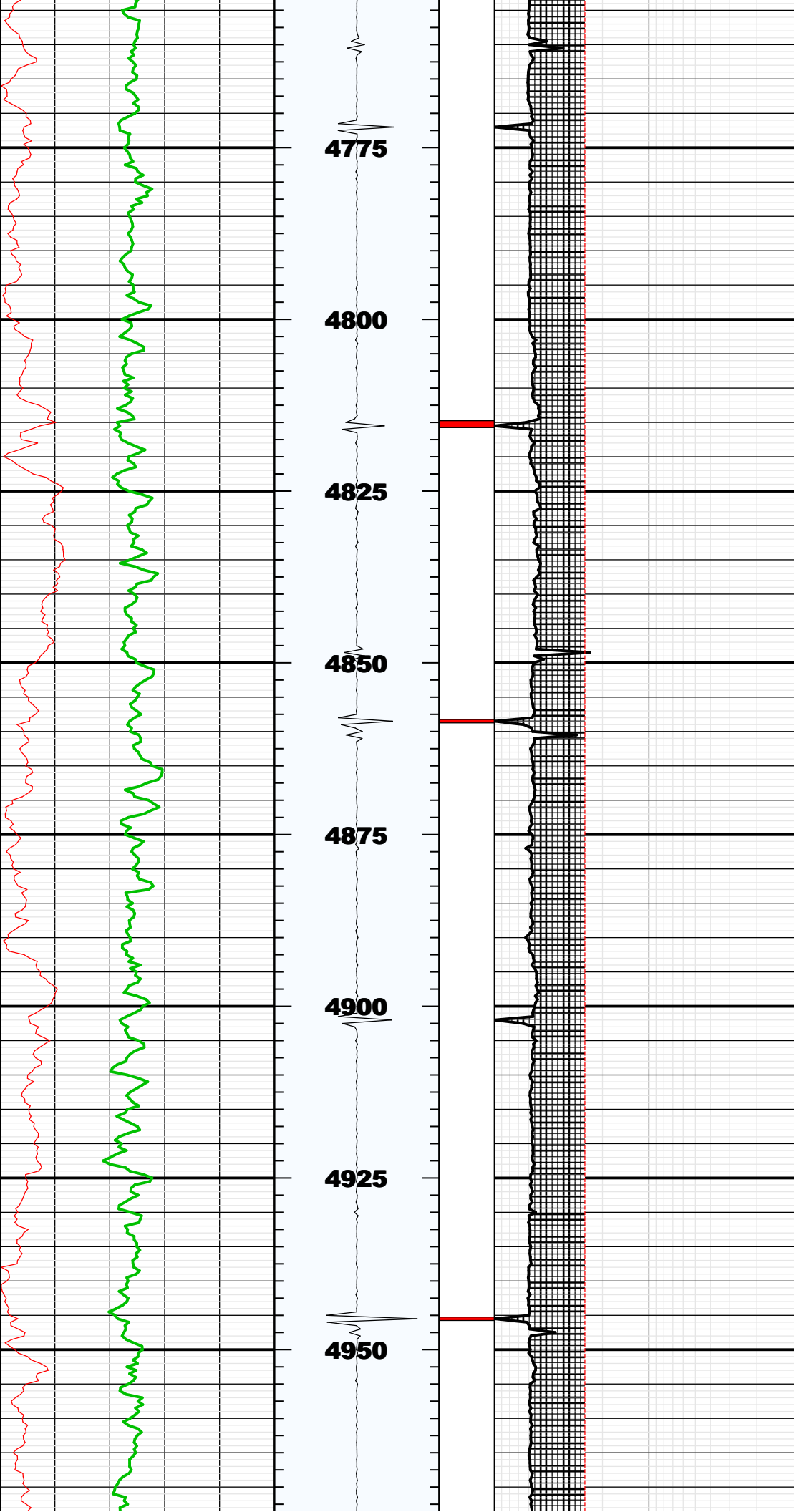


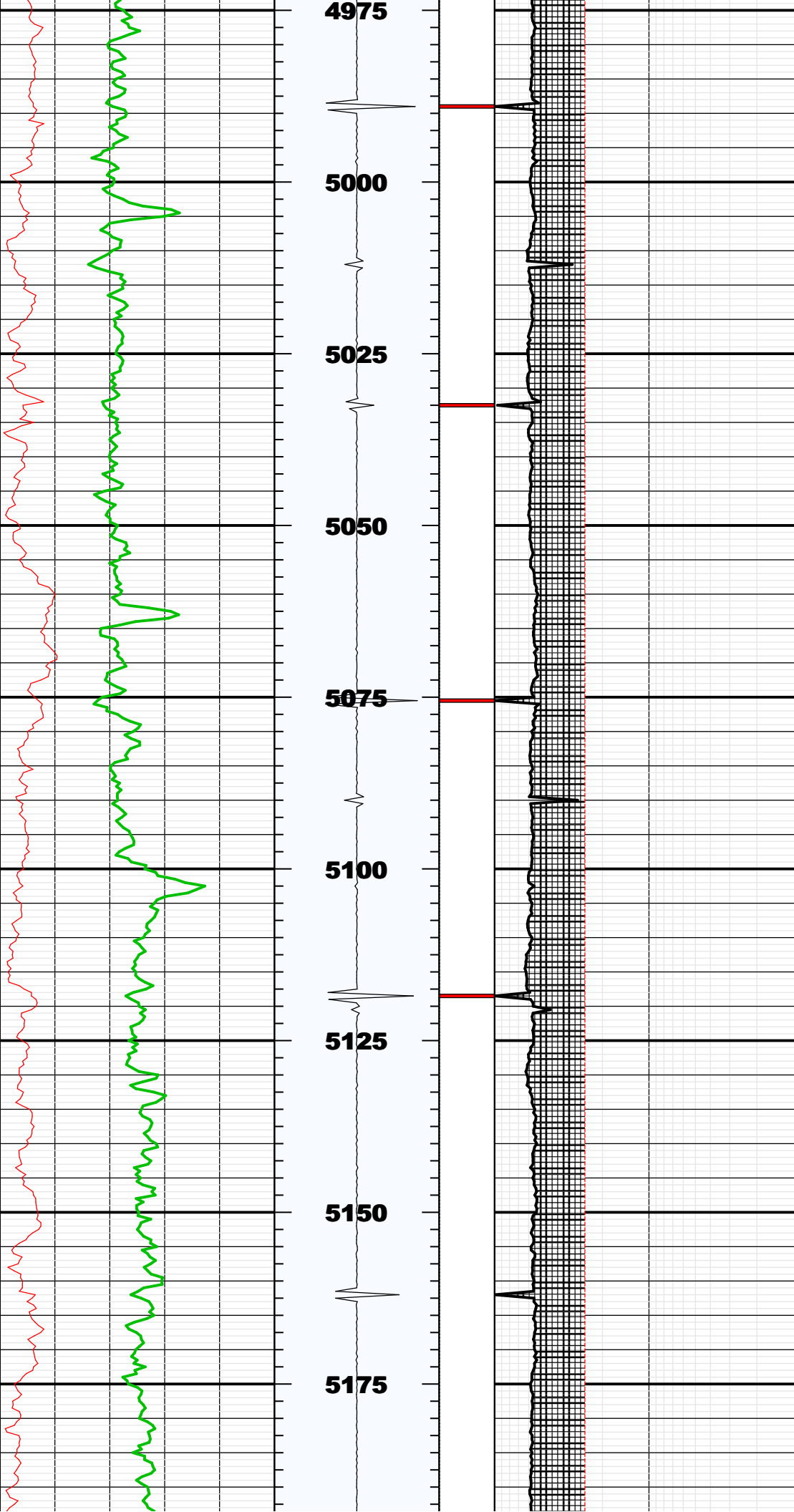


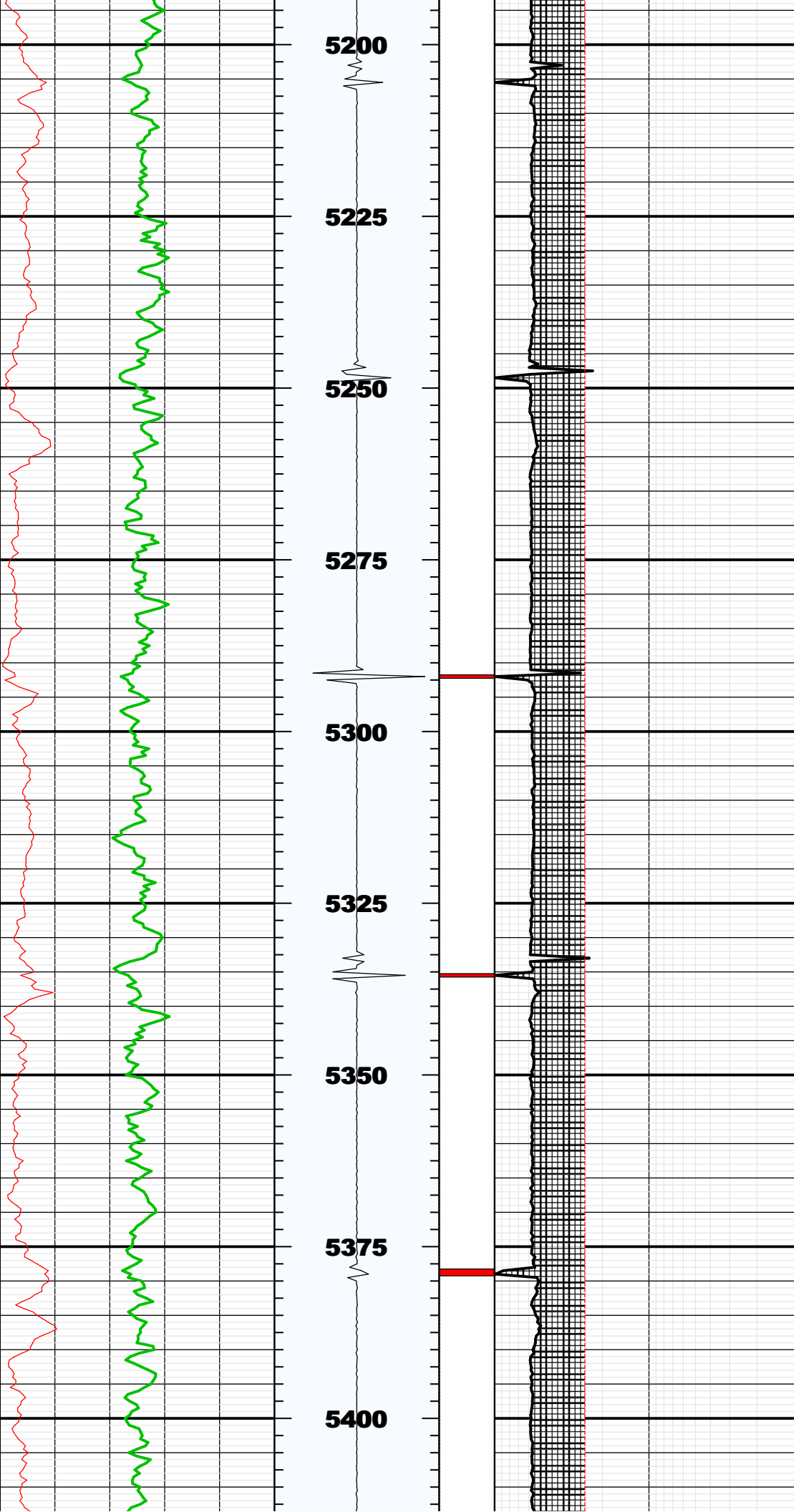


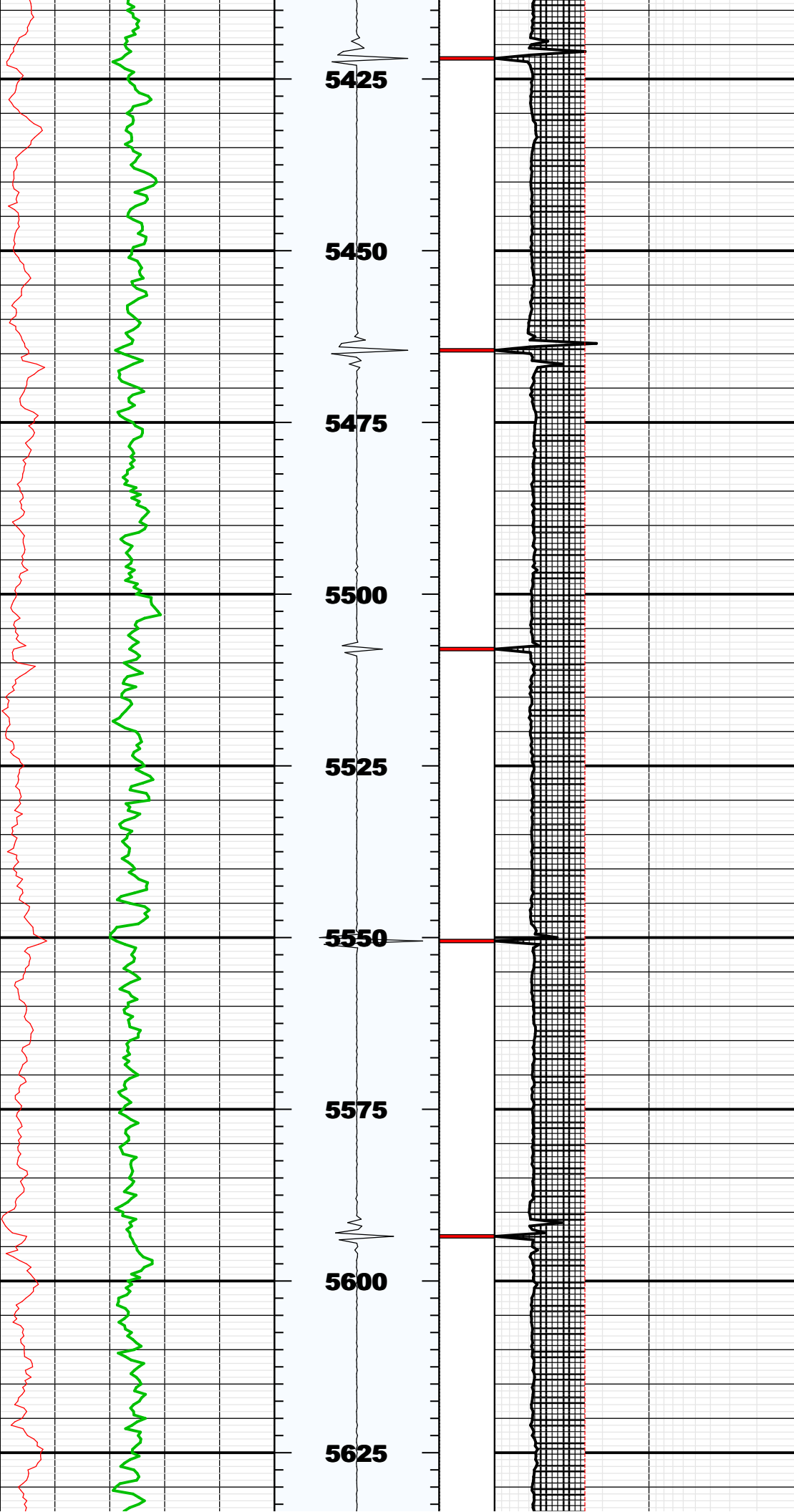


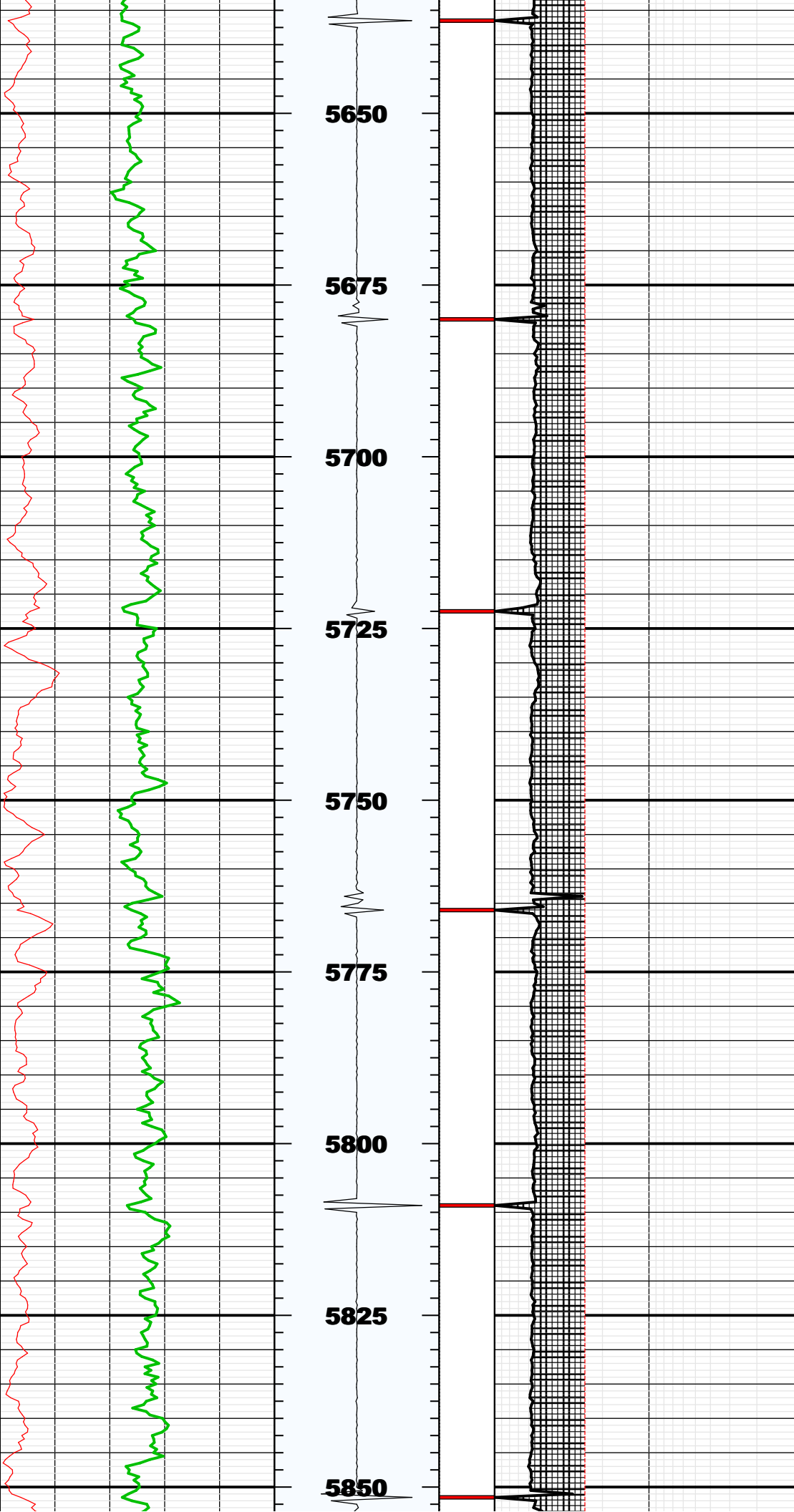


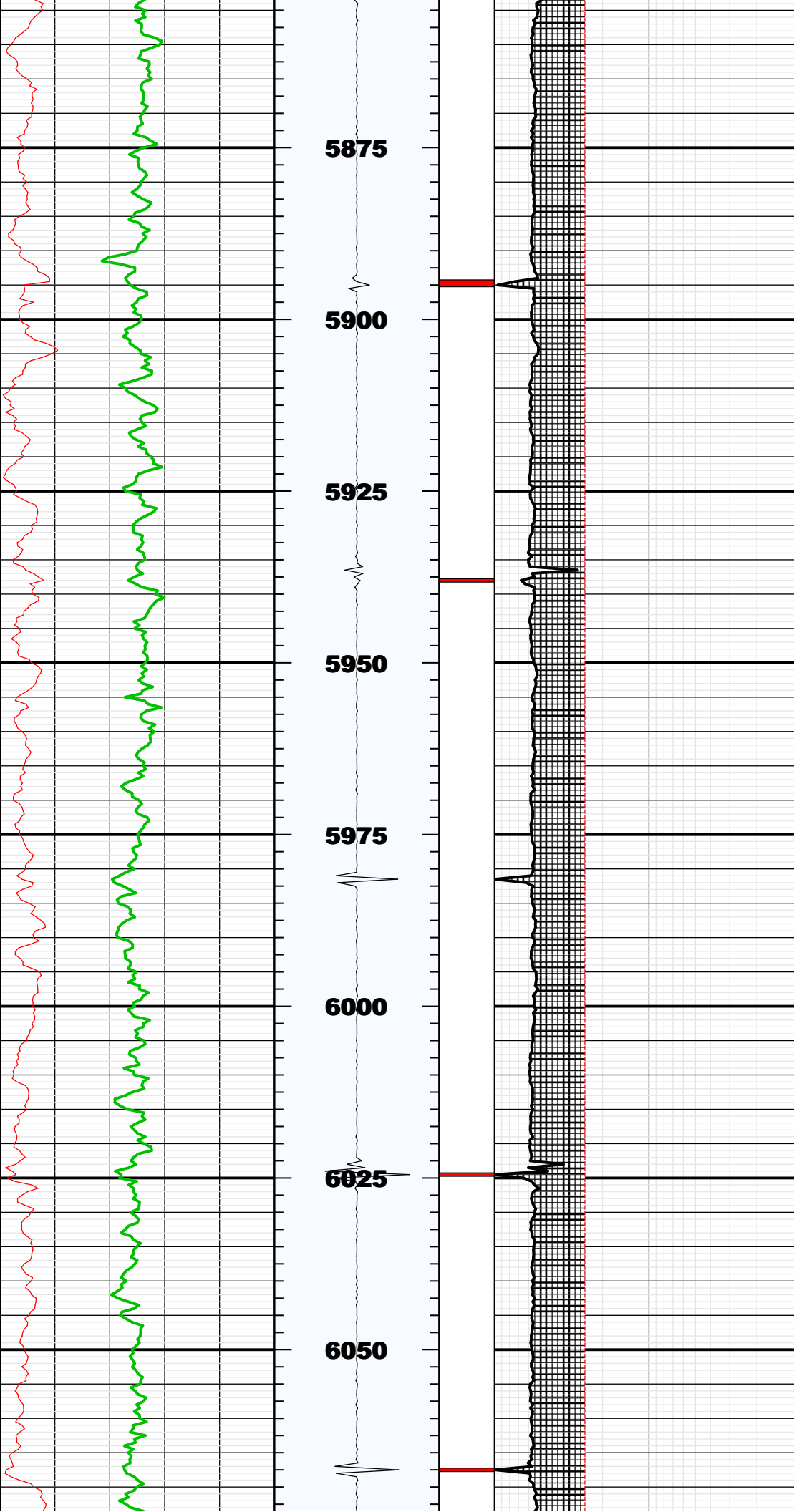


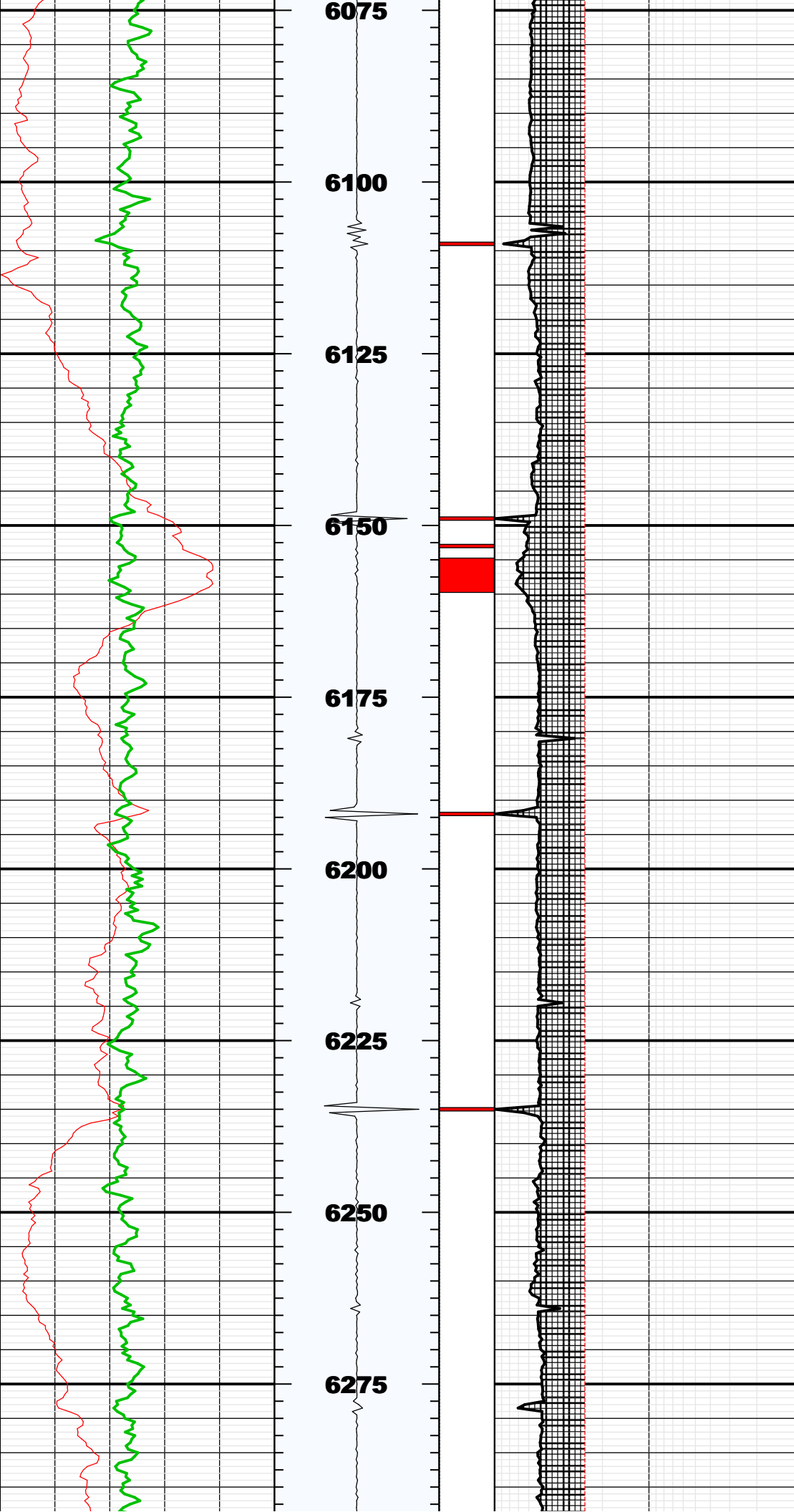


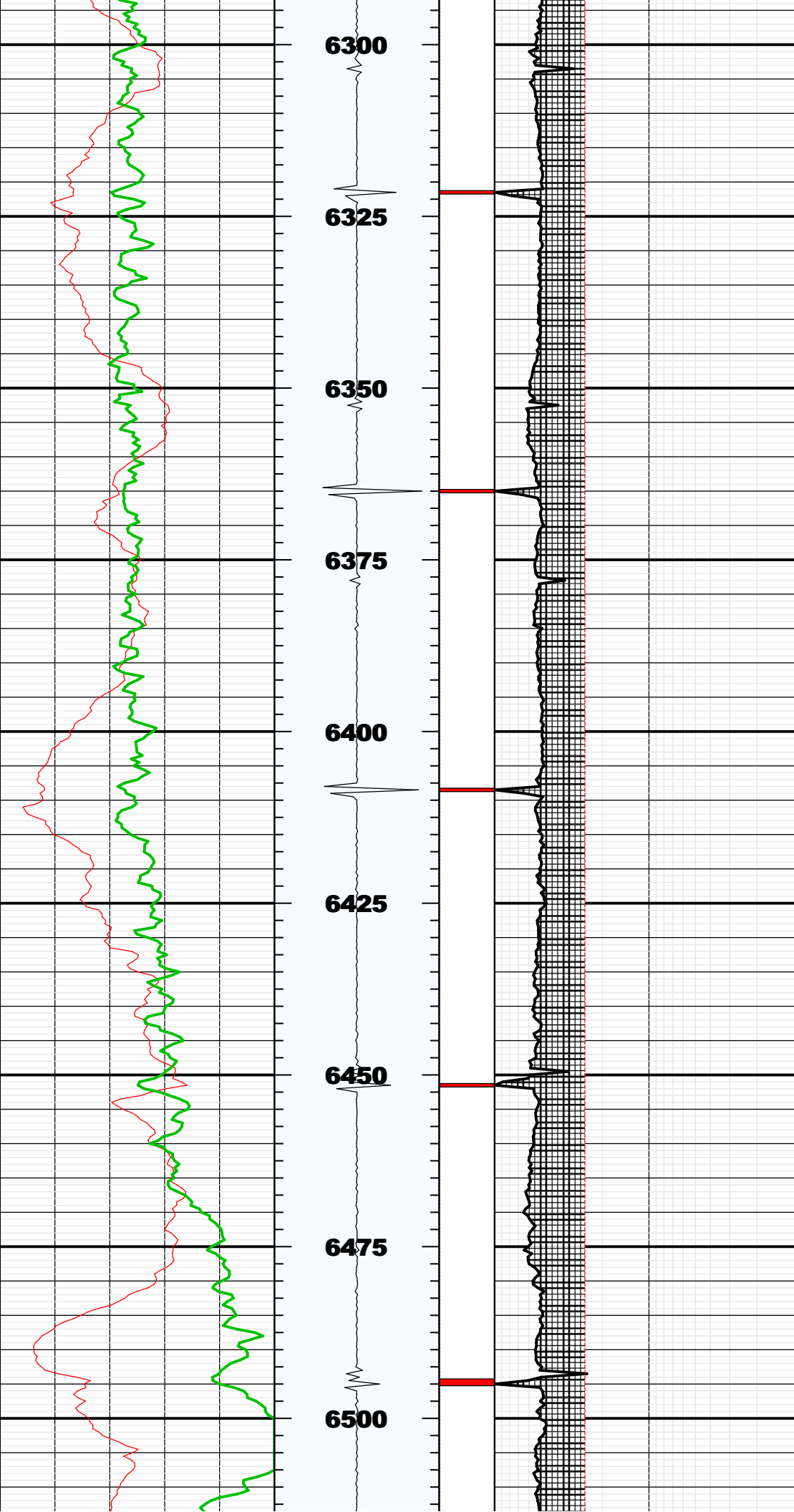


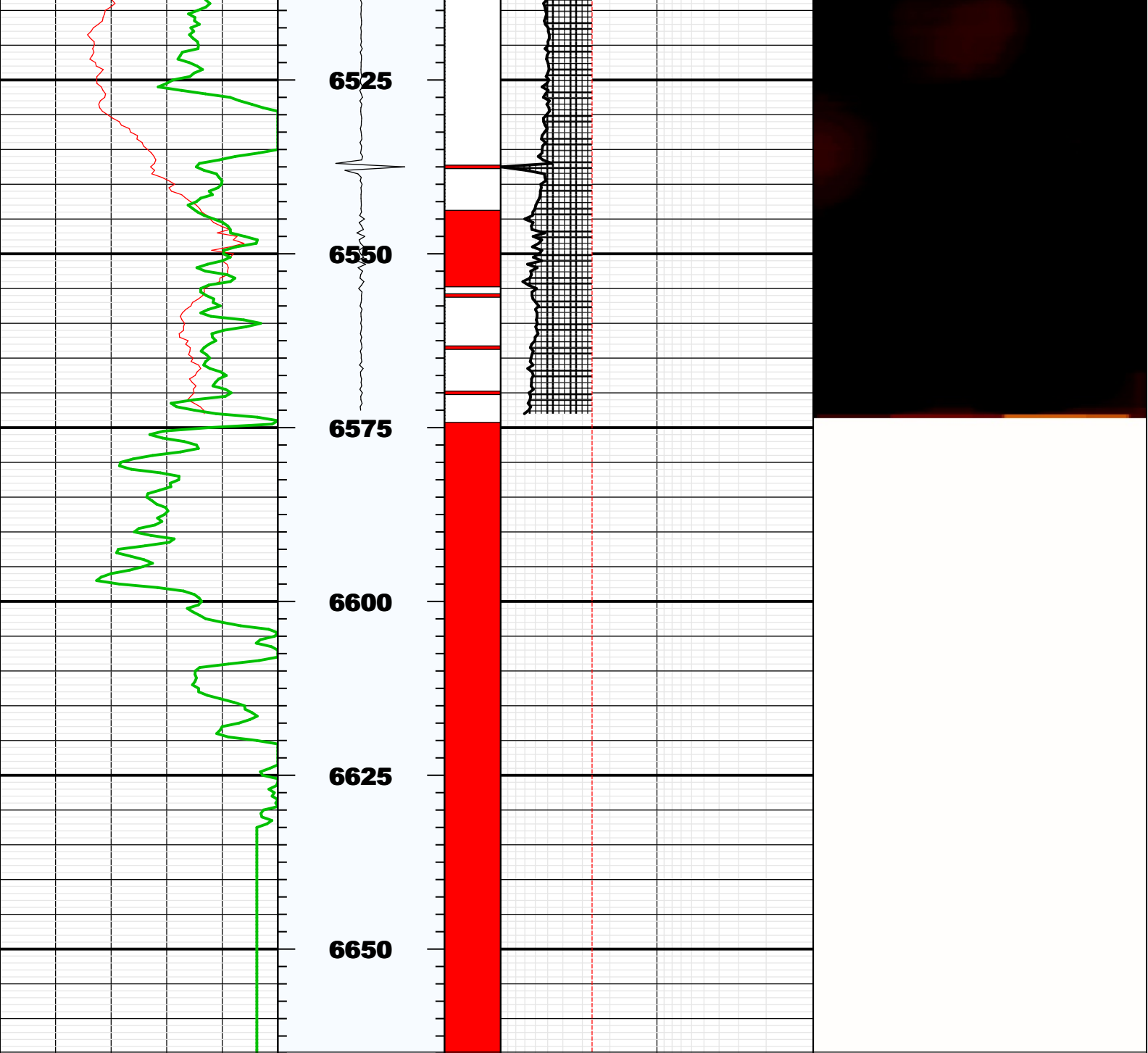








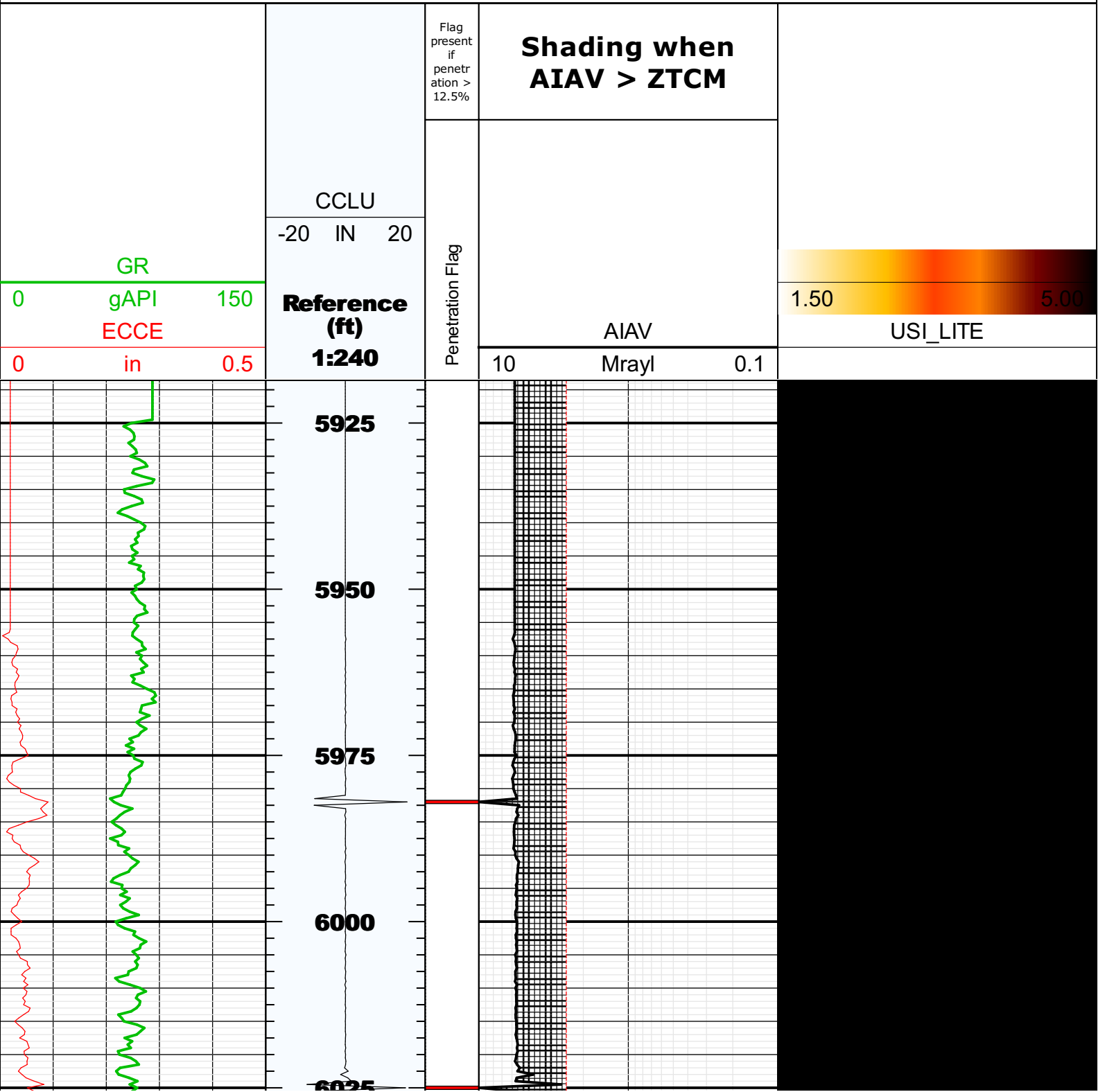


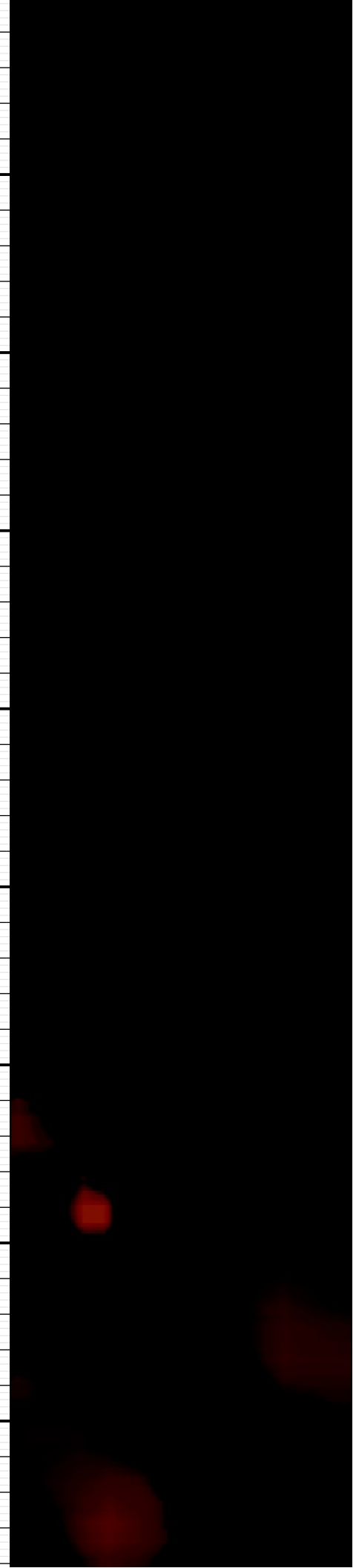
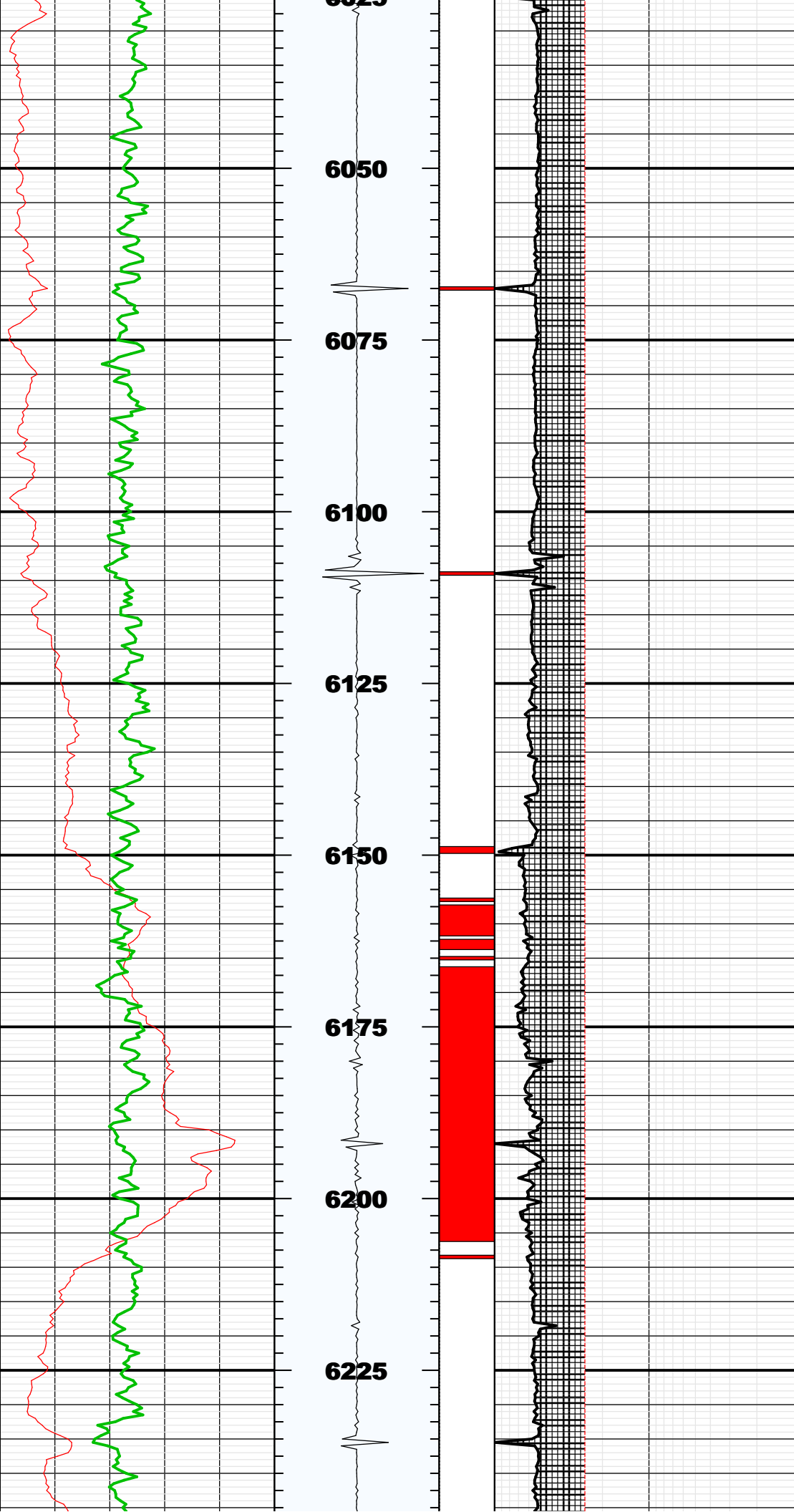


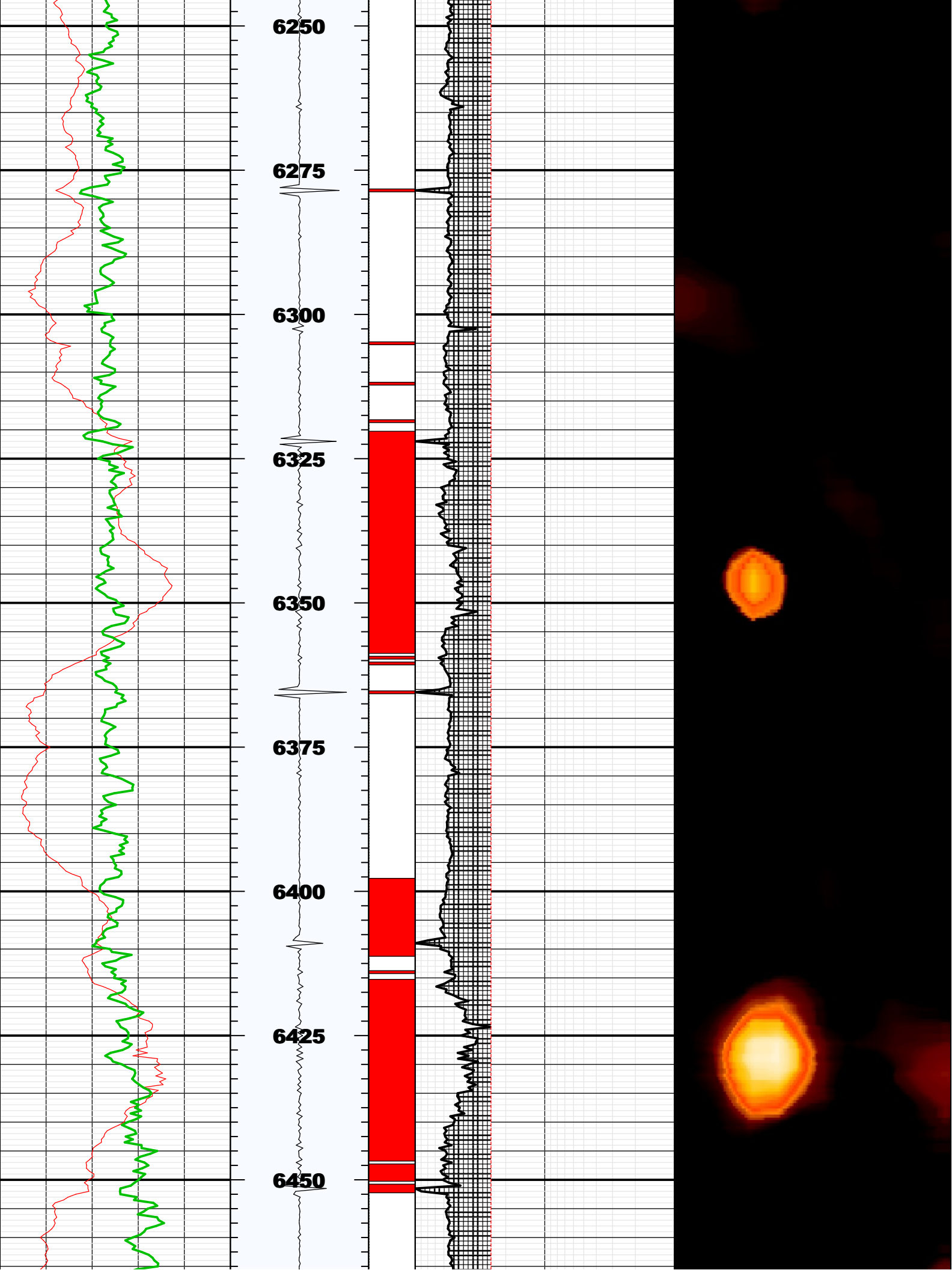
BS	8.75000	IN	Bit Size
CASG	P110		Casing Grade
CDIA	5.50000	IN	Casing Outer Diameter
CSID	4.77800	IN	Casing Inner Diameter
CSIZ	5.50000	IN	Current Casing Size
CWEI	20.00000	LB/F	Casing Weight
DFD	8.70000	LB/G	Drilling Fluid Density
DFVL	206.00000	US/F	Default Fluid Velocity
DO			
DOT	1.75600	IN	Diameter of Transducer Sensor
EMXV	125	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	D603010L		Working Mode
VCAS	51.40000	US/F	Ultrasonic Transversal Velocity in Casing
WINB	20.20651	US	Window Begin Time
WINE	93.28999	US	Window End Time
ZCAS	46.25000	MRAY	Acoustic Impedance of Casing
ZINI	-1.00000	MRAY	Initial Estimate of Cement Impedance
ZMUD	1.76000	MRAY	Acoustic Impedance of Mud
ZTCM	2.60000	MRAY	Acoustic Impedance Threshold for Cement
ZTGS	0.30000	MRAY	Acoustic Impedance Threshold for Gas
WLEN	22.43907	US	T^3 Processing Length

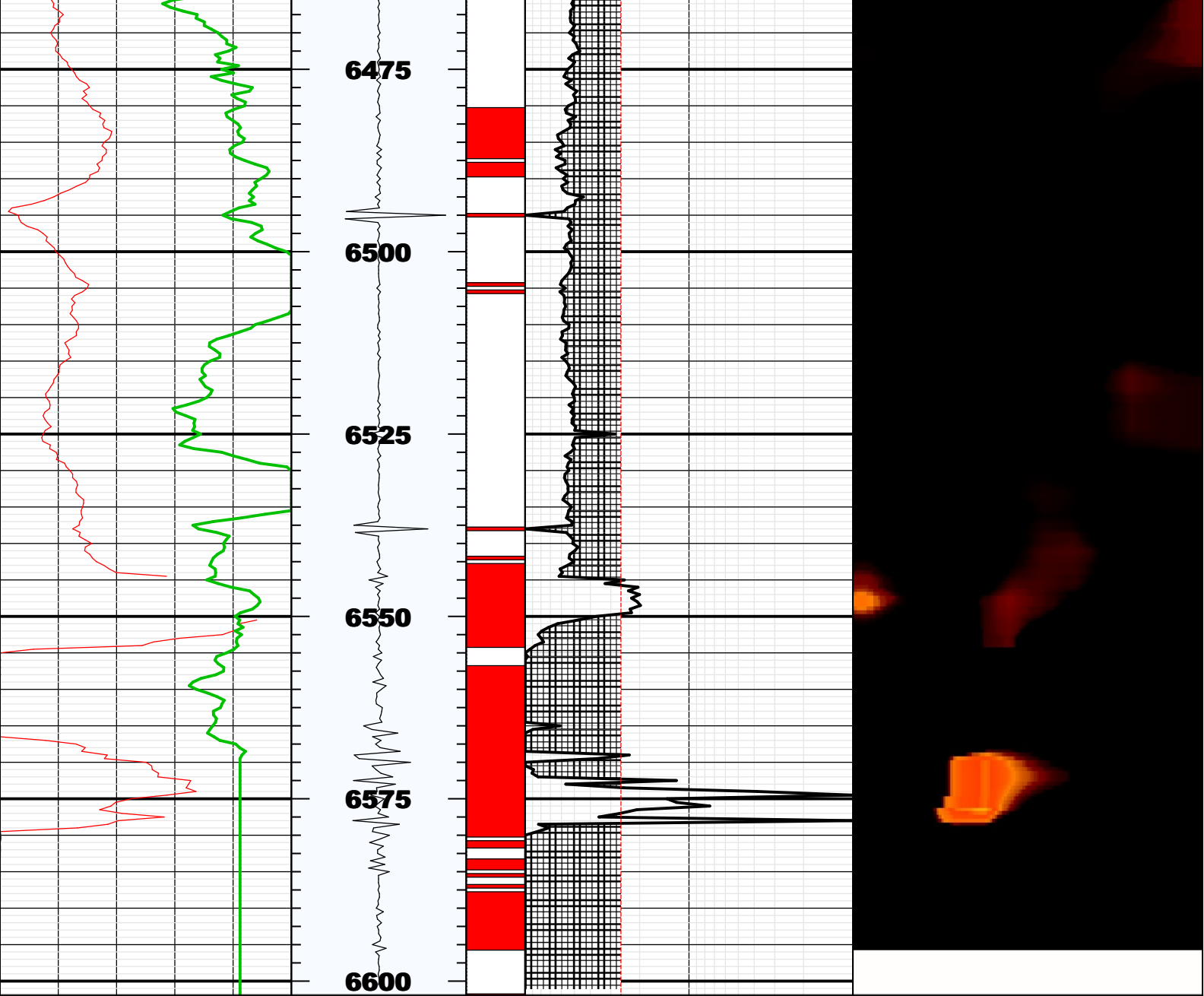
Repeat Pass

Company: Noble Energy Inc
Well: Crow Creek AA01-743
Field: Wattenberg



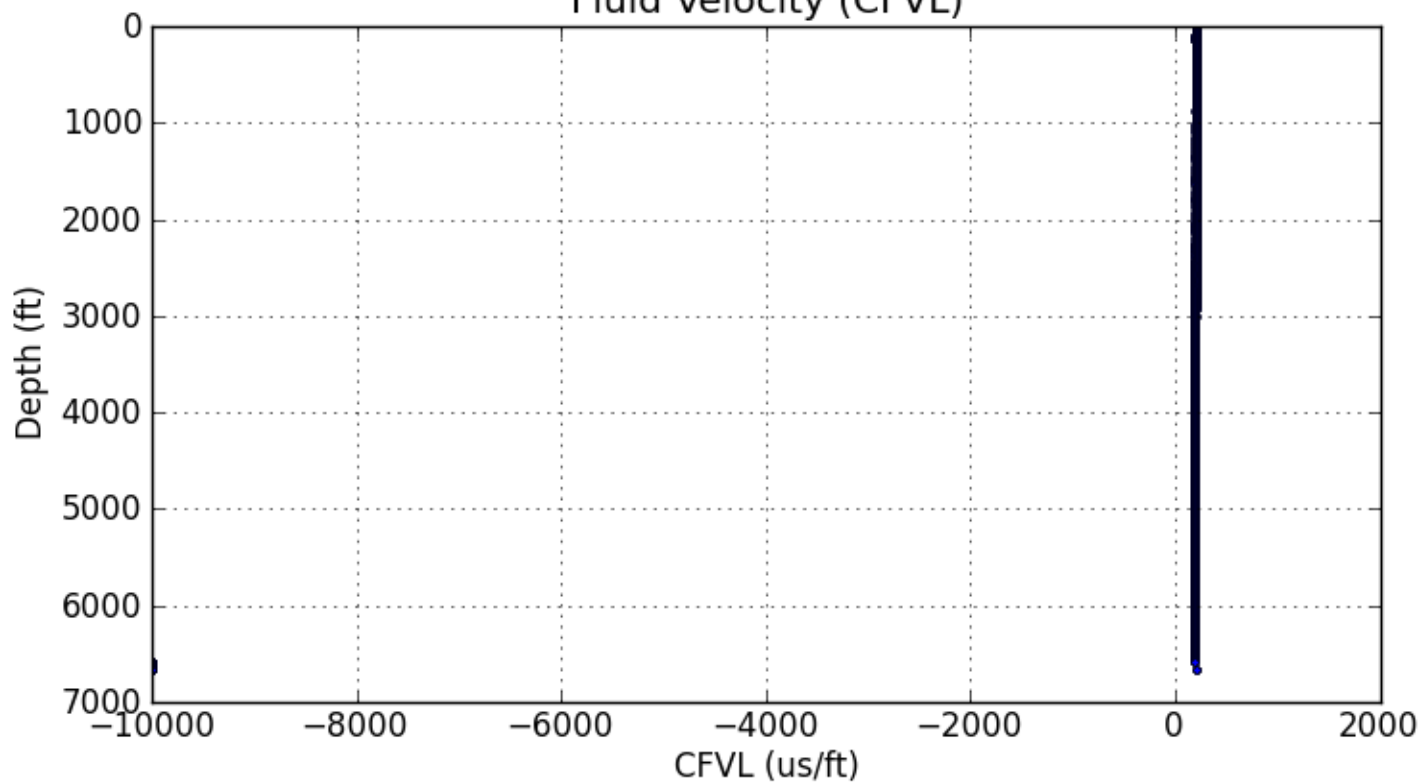






Fluid Properties Used for Main Pass

Fluid Velocity (CFVL)



Acoustic Impedance of Mud (CZMD)

