

Company: Noble Energy Inc

Well: Wells Ranch AE30-66-1AHNC
Field: Wattenberg
County: Weld State: Colorado

| | | | |
|---|----------------|----------------|---|
| County: Weld | | | |
| Field: Wattenberg | | | |
| Location: SWNW Sec 29 T6N R62W | | | |
| Well: Wells Ranch AE30-66-1AHNC | | | |
| Company: Noble Energy Inc | | | |
| USI-LITE | | | |
| | | | |
| Permanent Datum: Log Measured From: Drilling Measured From: | | GL KB KB | Elev: K.B. 4788.0 F G.L. 4764.0 F D.F. 4764.0 F |
| API Serial No. 05-123-38649-0000 | | Section 29 | Township 6N |
| Range 62W | | | |
| Logging Date | 30-Apr-2014 | | |
| Run Number | Run 1 | | |
| Depth Driller | 12105.0 F | | |
| Schlumberger Depth | 12105.0 F | | |
| Bottom Log Interval | 6749.9 F | | |
| Top Log Interval | 50.0 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 | | |
| To | 664.0 F | | |
| Casing Size | 6895.0 F | | |
| Weight | 7.00 IN | | |
| Grade | 26.00 LB/F | | |
| From | P110 | | |
| To | 0.0 F | | |
| Max Recorded Temp | 6884.4 F | | |
| Logger on bottom (date) | -999.2 | | |
| Location | 30-Apr-2014 | | |
| 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: 2858 Calibration Date: Calibrator Serial Number: Number Of Calibration Points: Calibration RMS: Calibration Peak Error: | Serial Number: 713277 Length: 18240.00000 |

DISCLAIMER

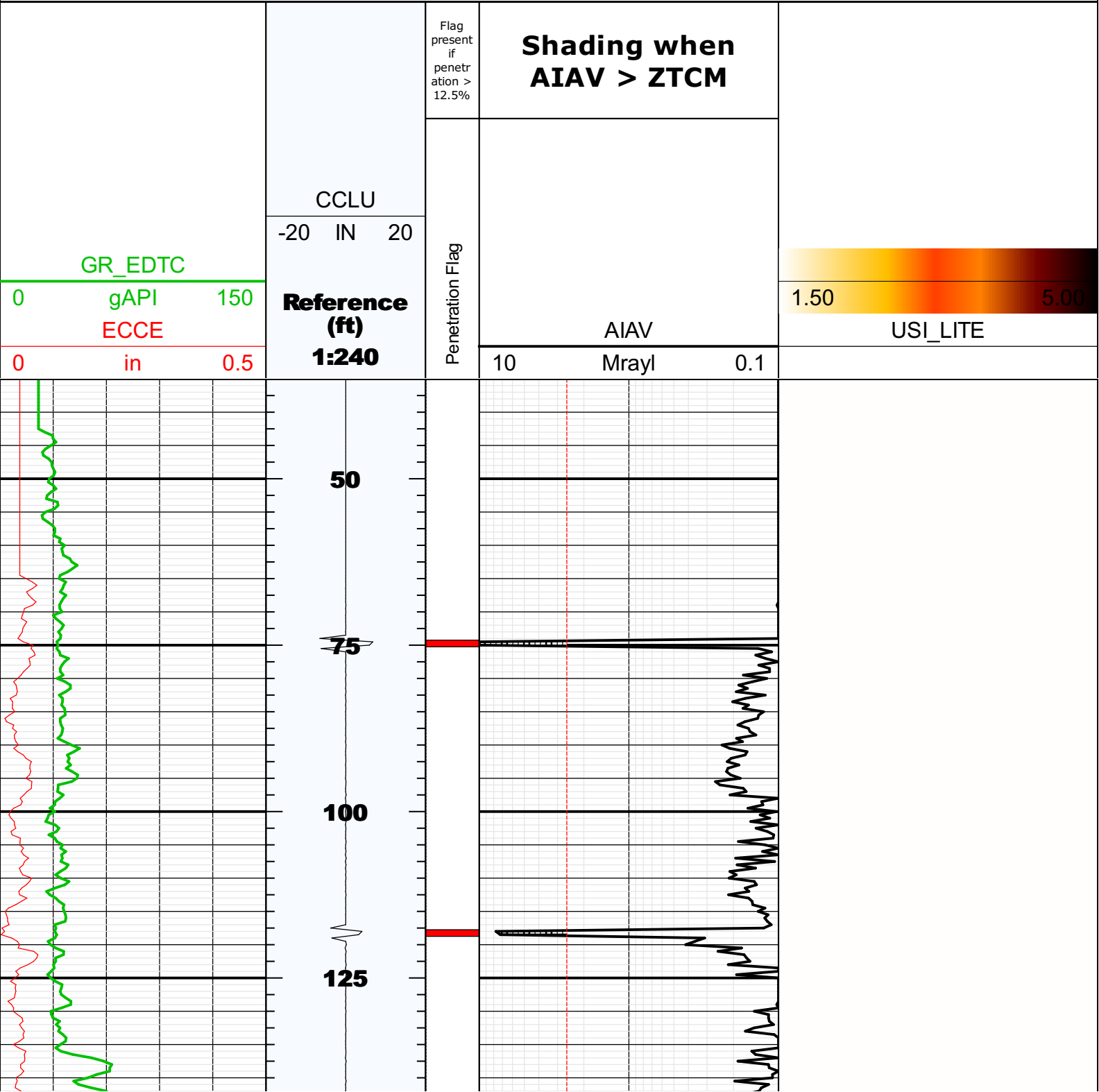
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIIONS ON USE OF THE RECORDED-DATA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

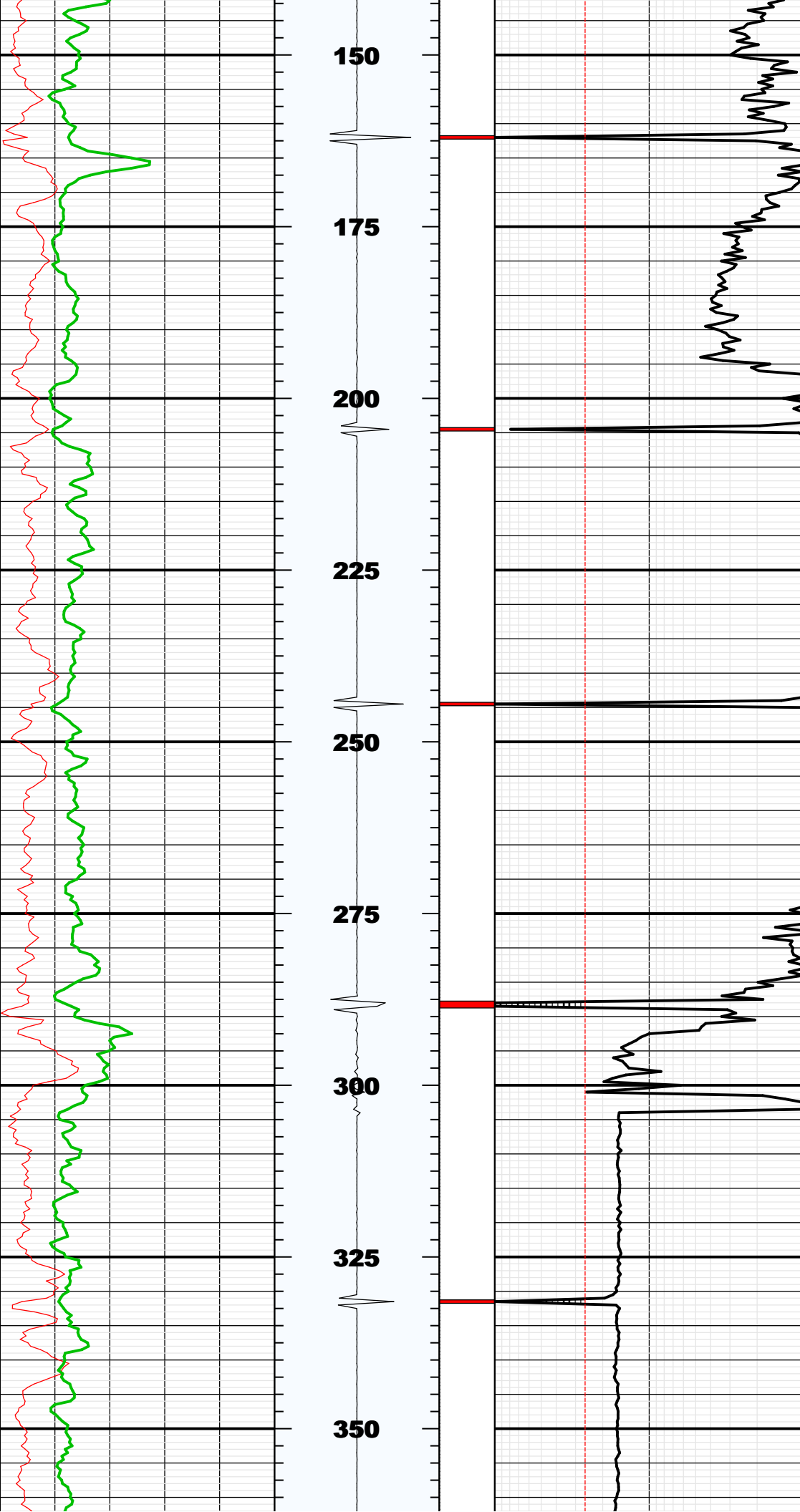
Toolstring run as per toolsketch.
Lead cement 12.5 ppg Tail cement 13.8 ppg
0 PSI repeat pass 2500 PSI main pass.
Liner top at 6765.2 feet.
Bottom log interval at 6795 feet to maintain distance from liner top.
Estimated TOC @ 1100 feet

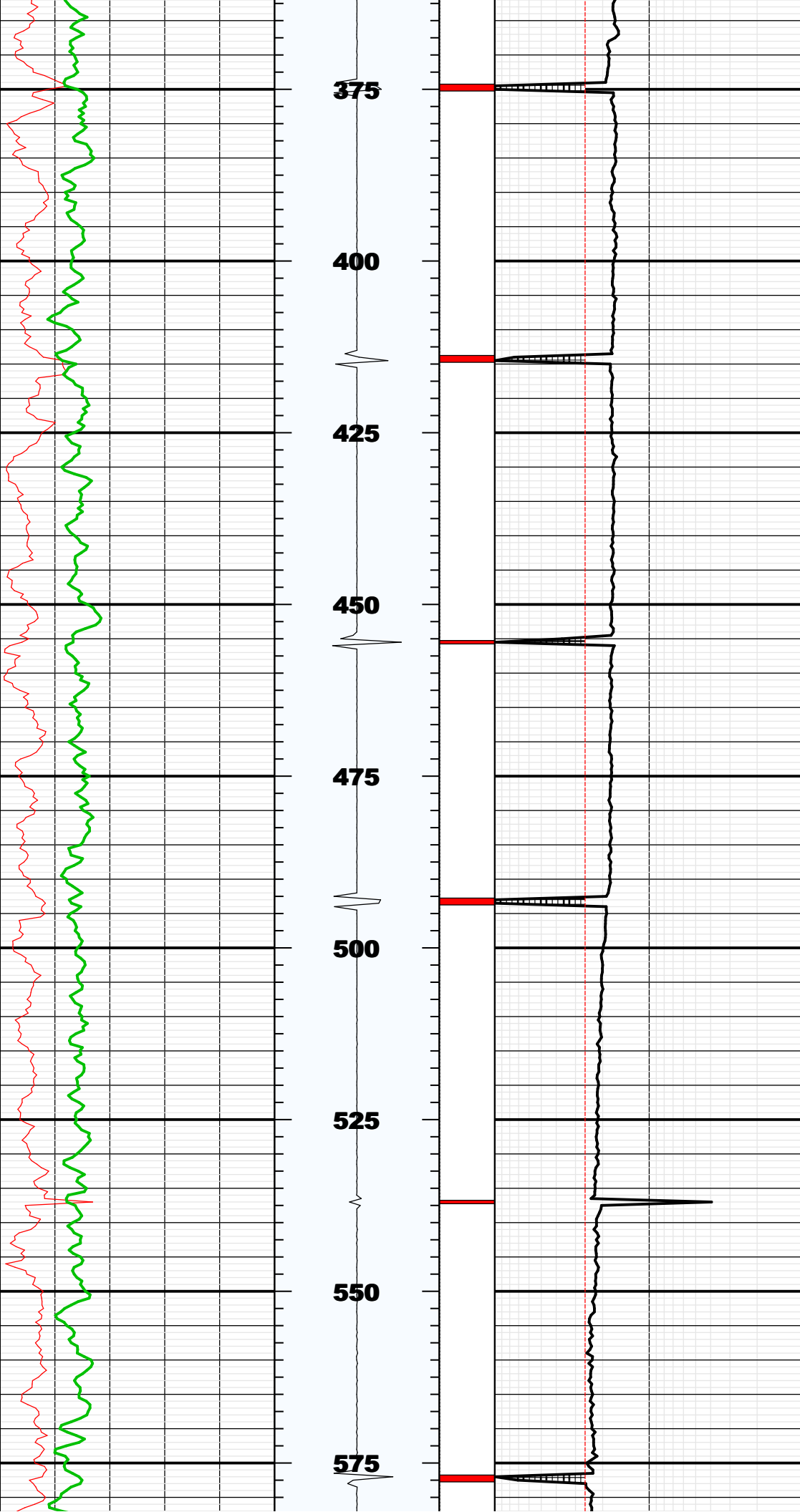
Thank you for choosing Schlumberger Wireline.
Schlumberger Crew Josh Strand Derrick Hunter.

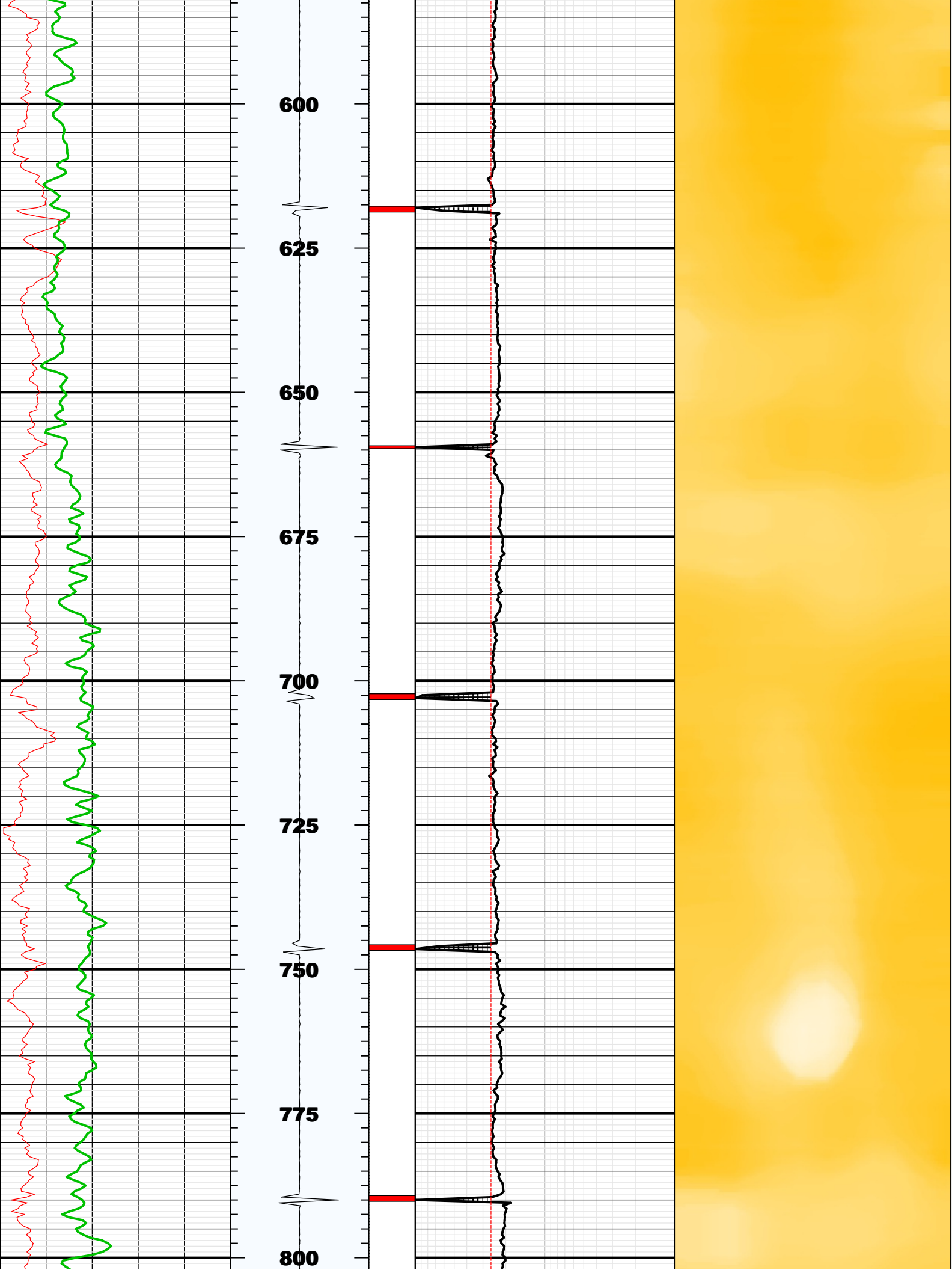
Main Pass

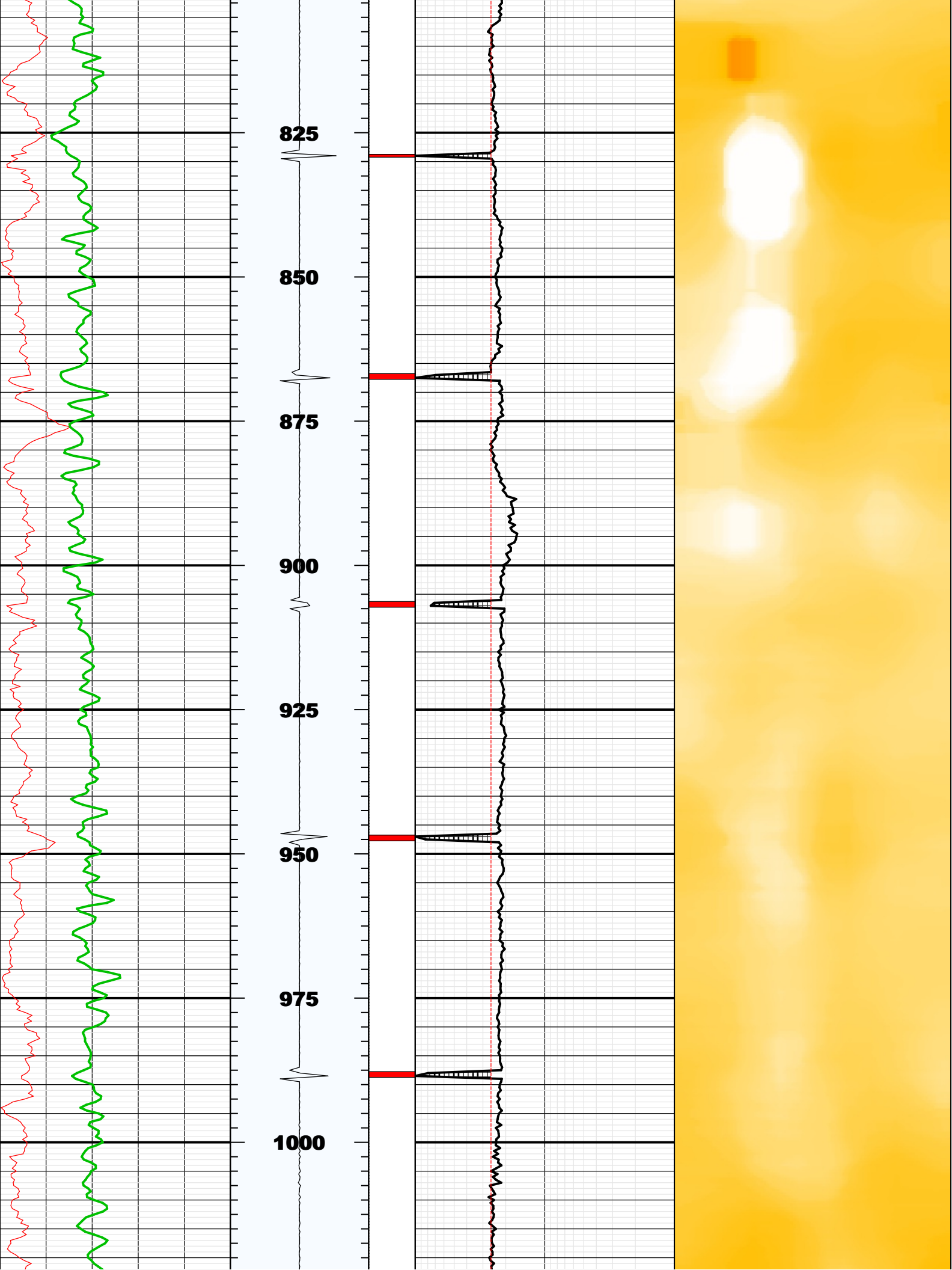
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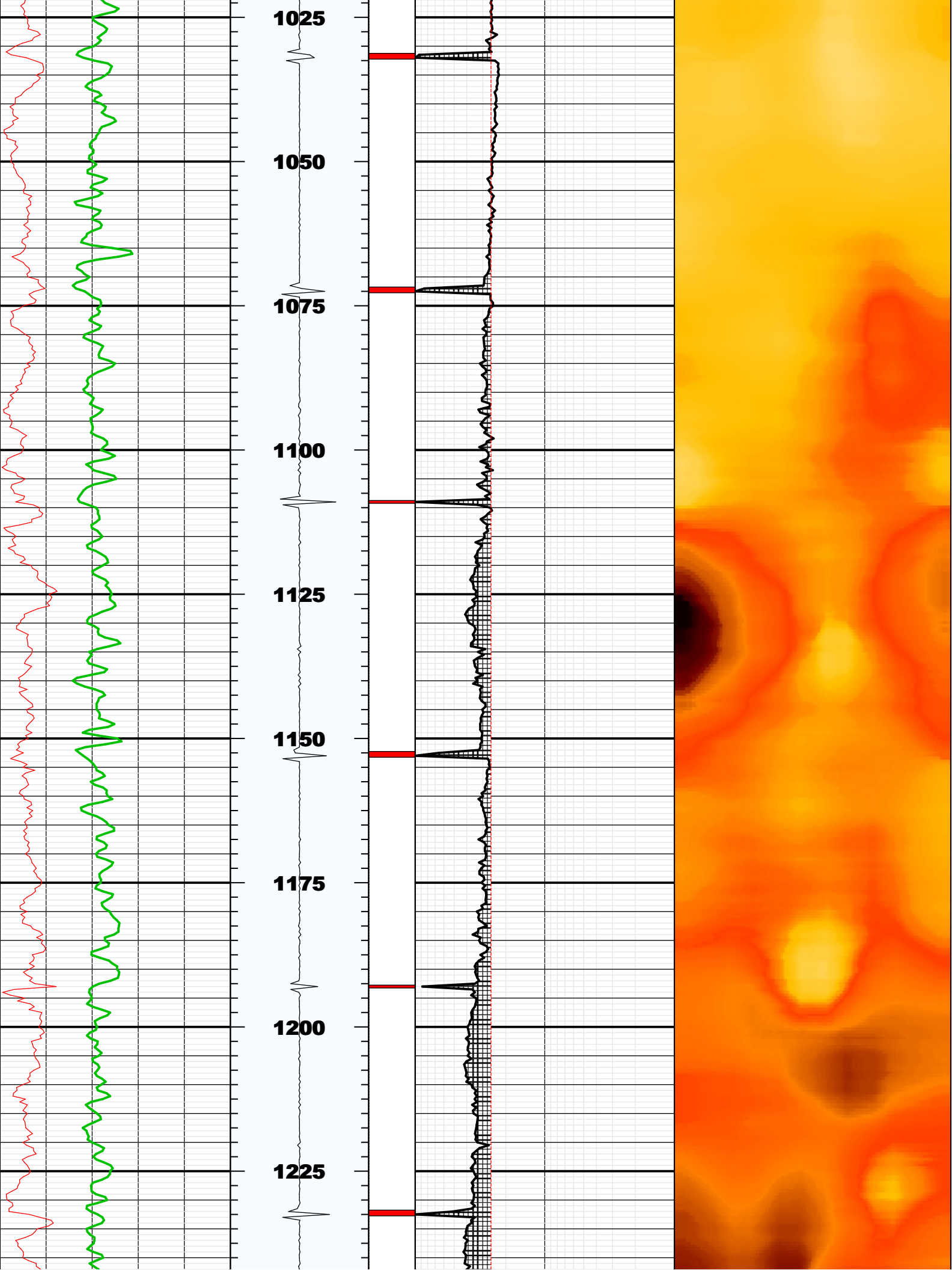


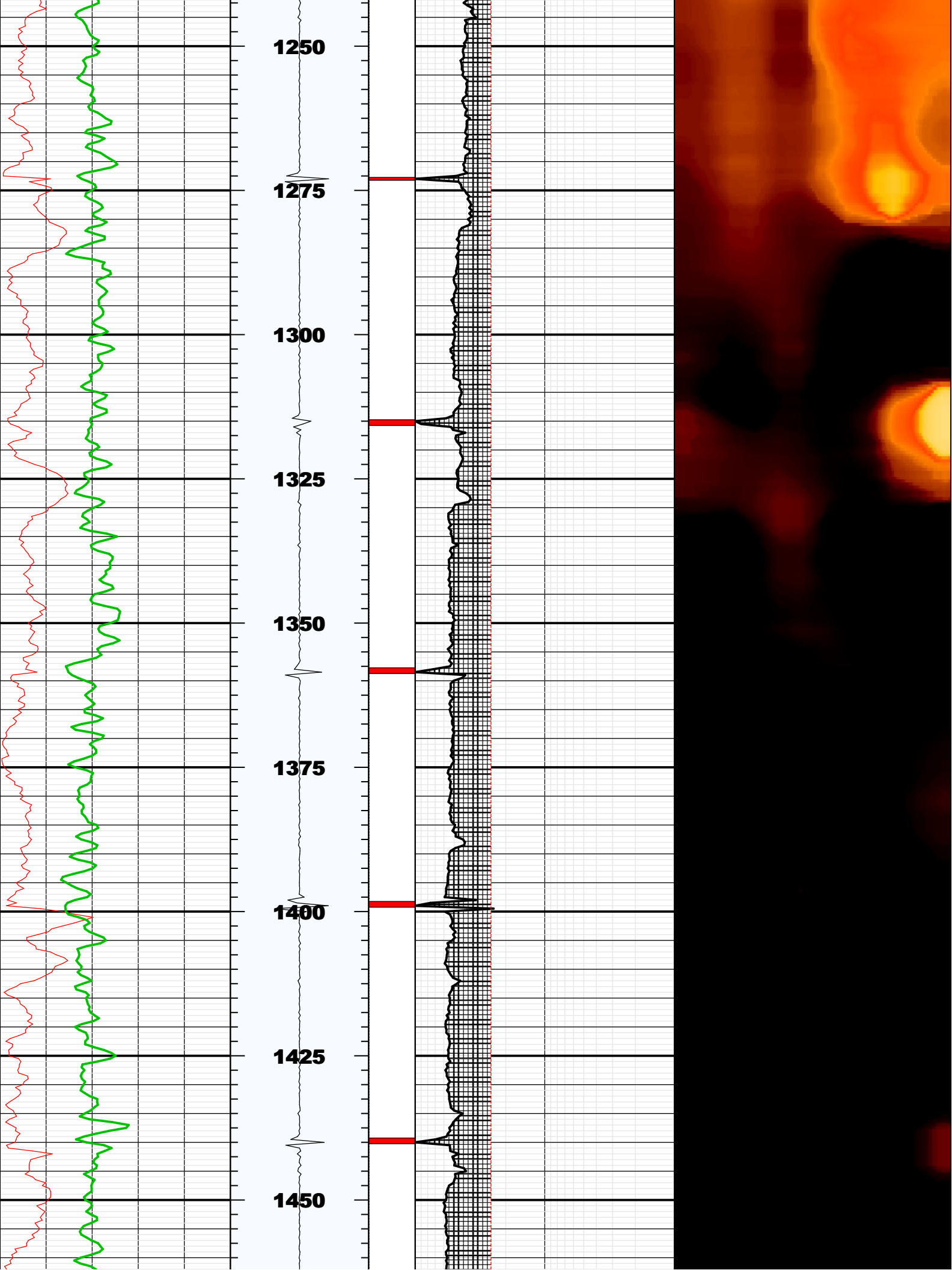


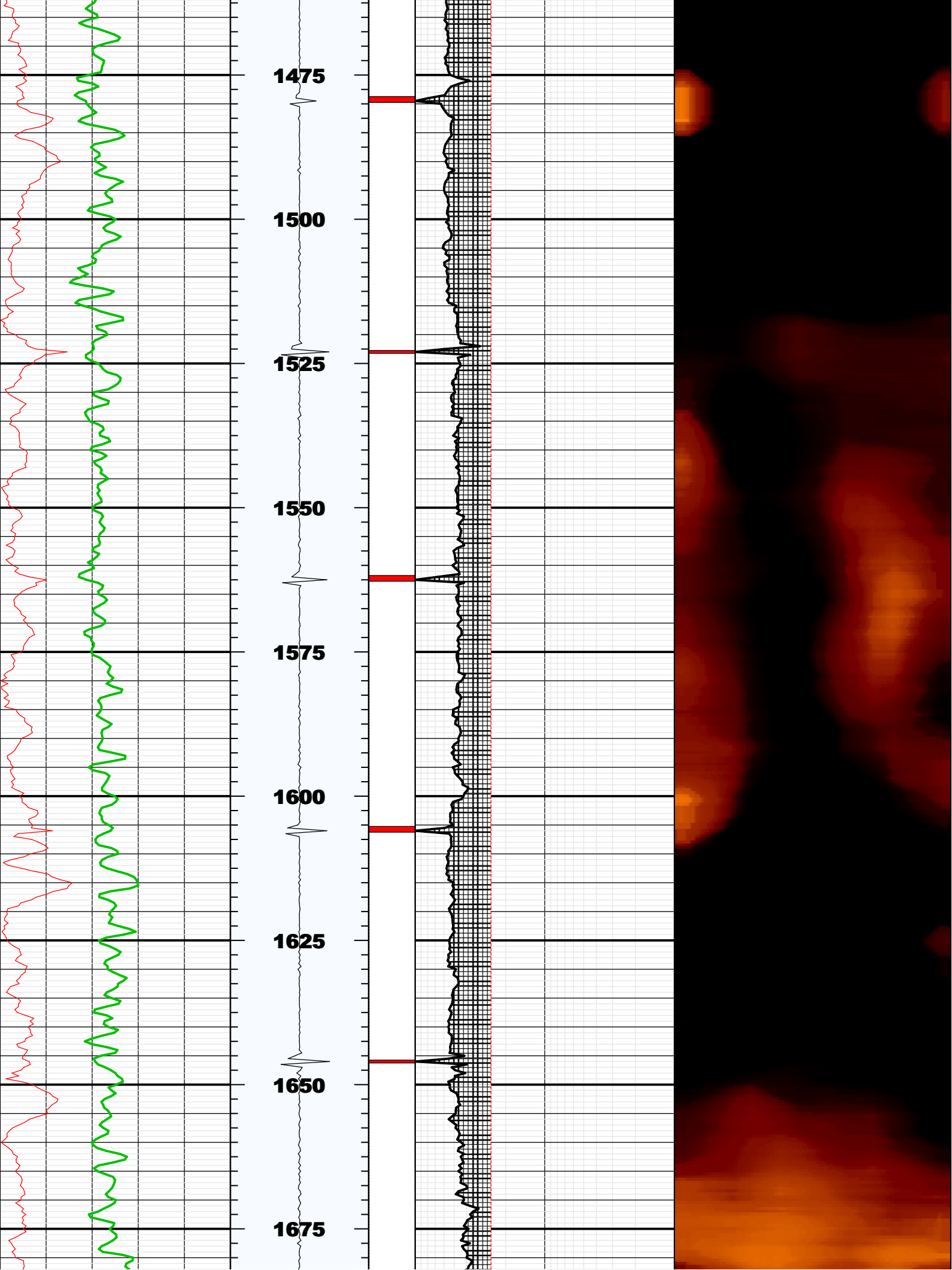


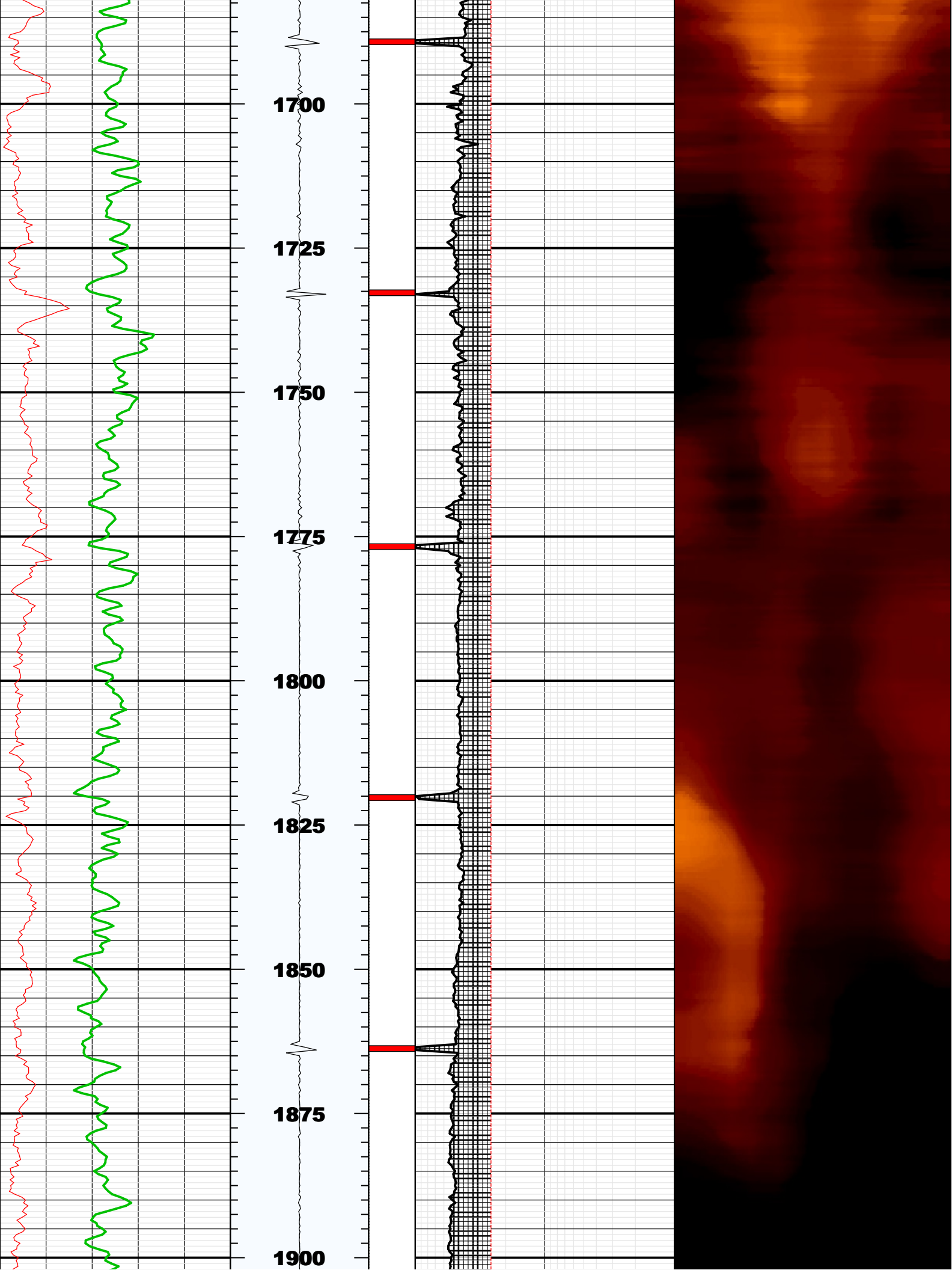


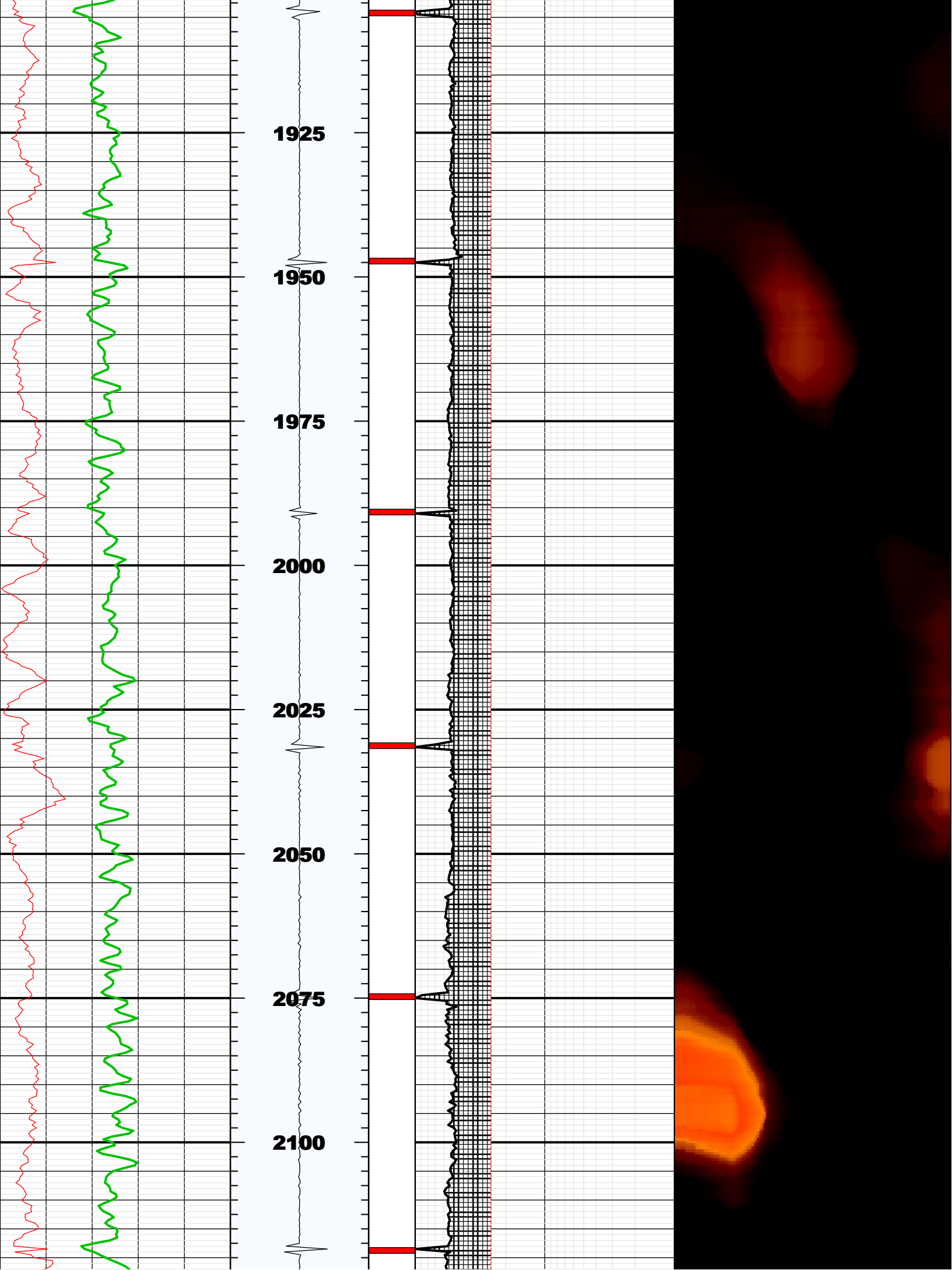


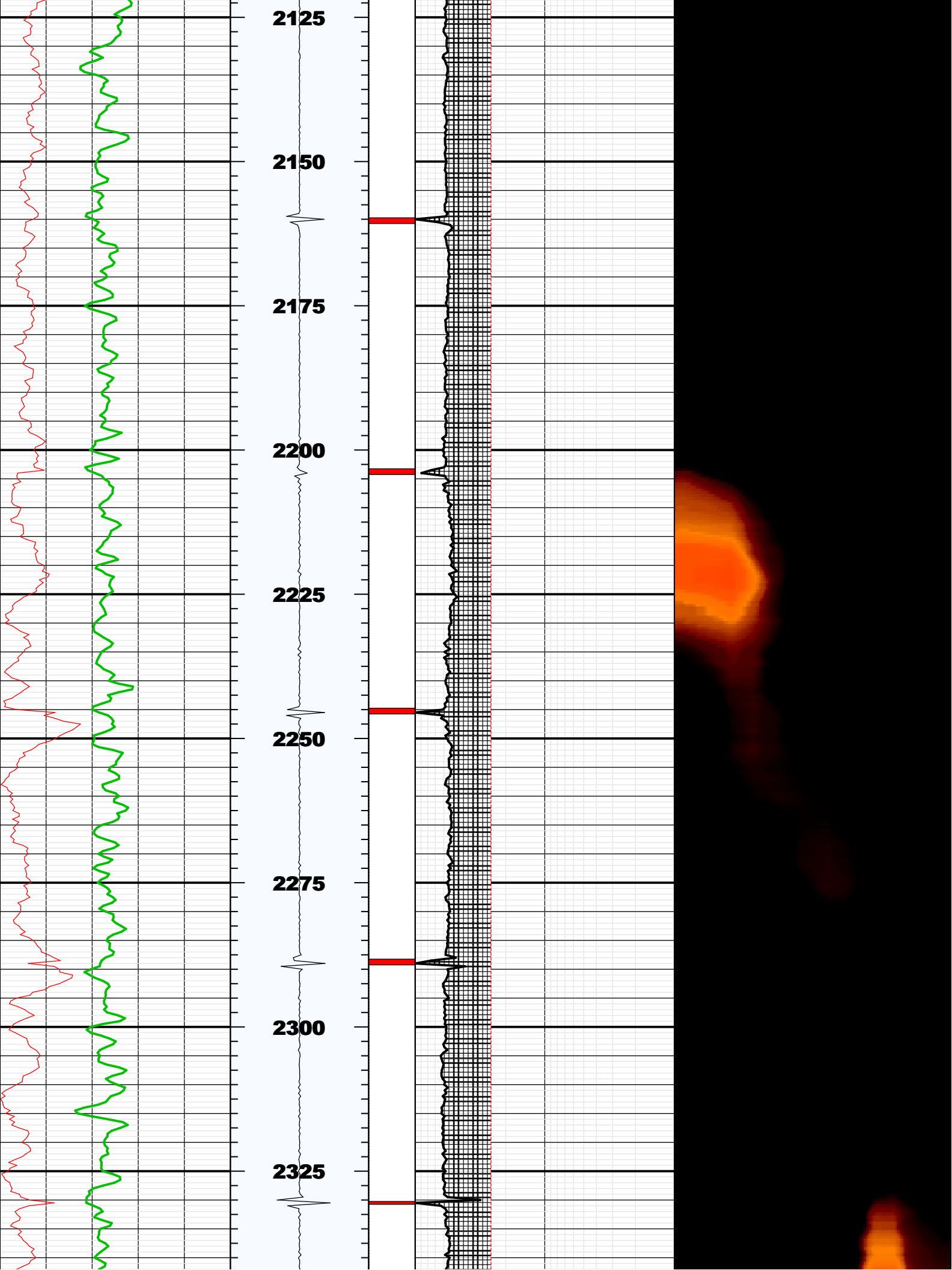


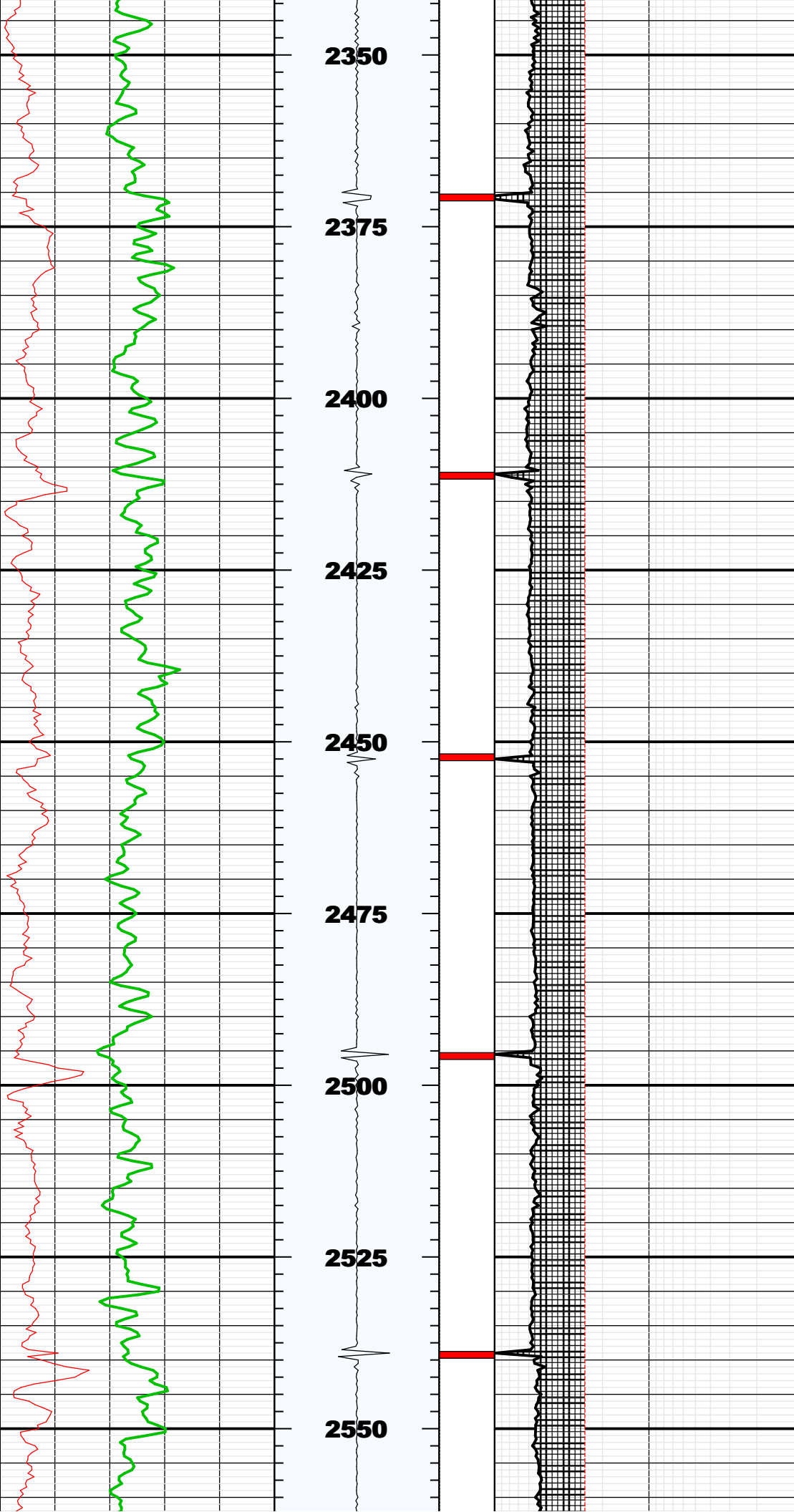


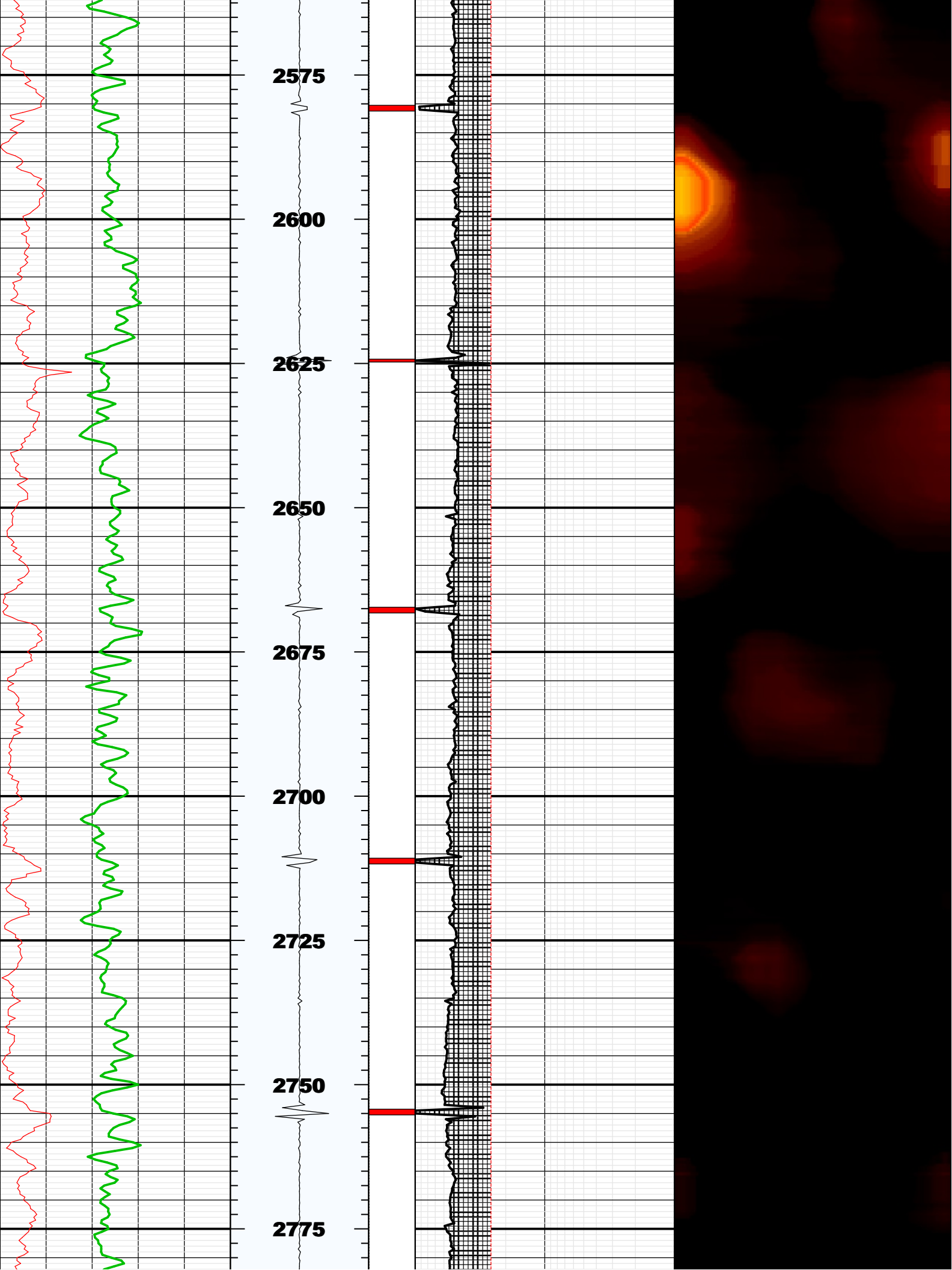


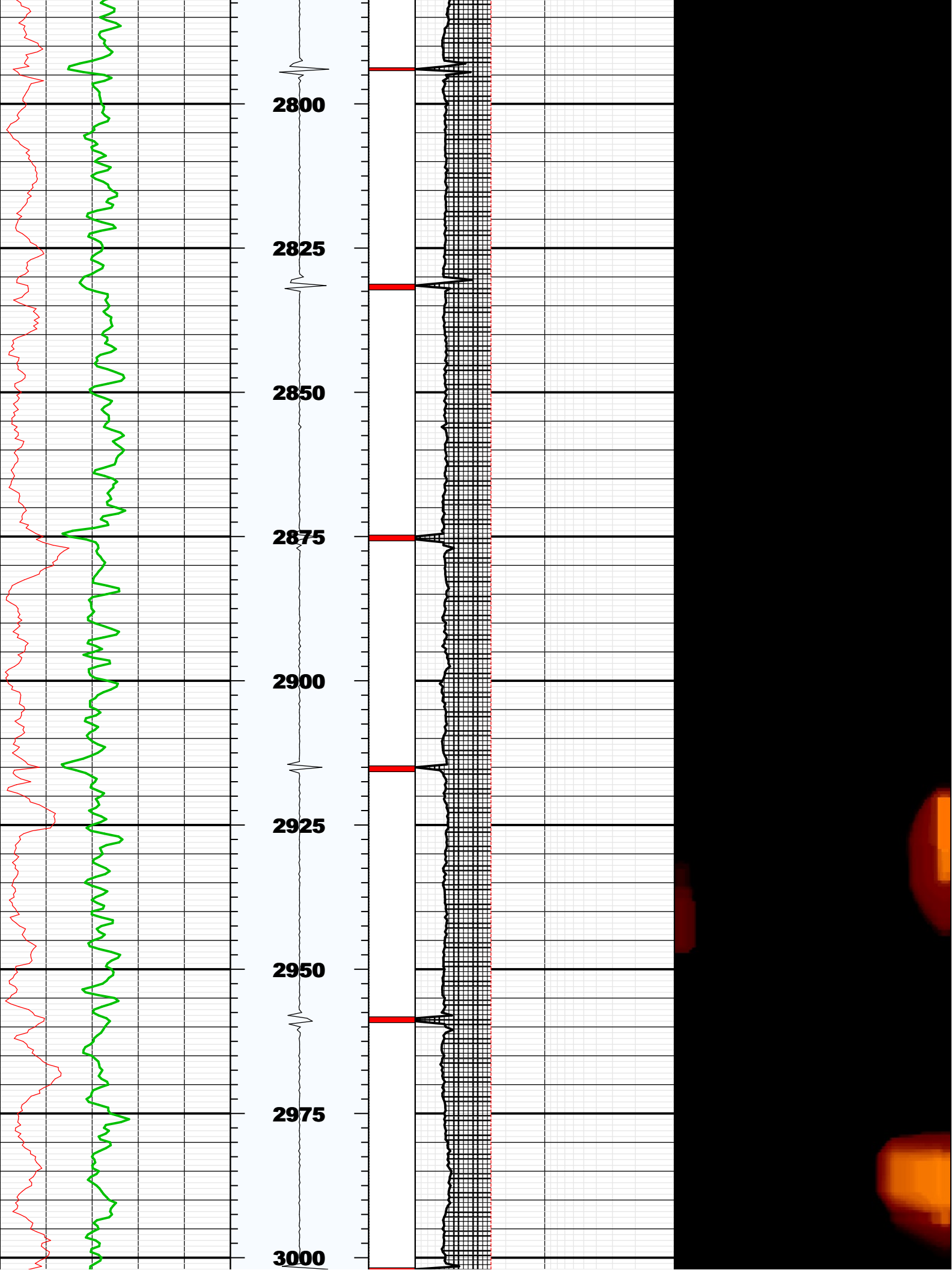


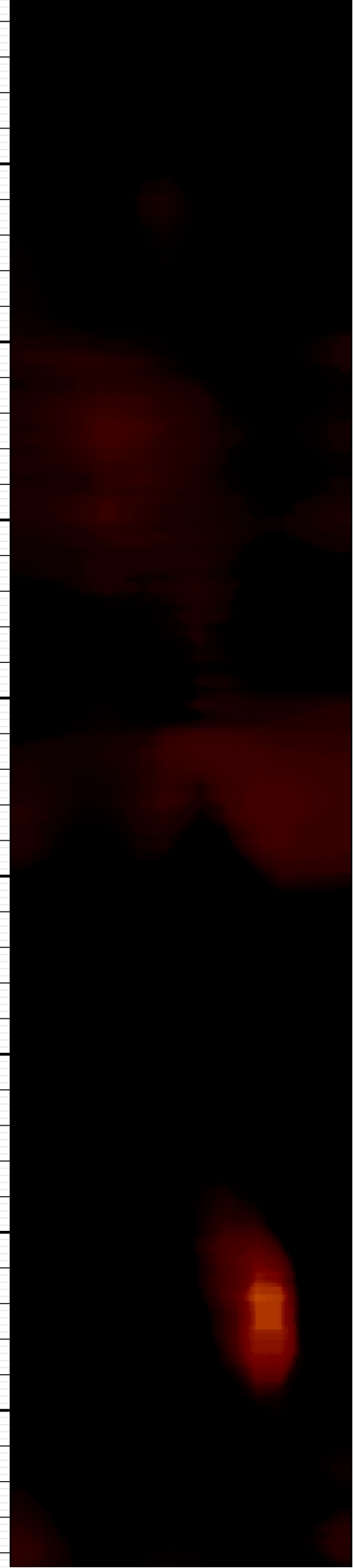
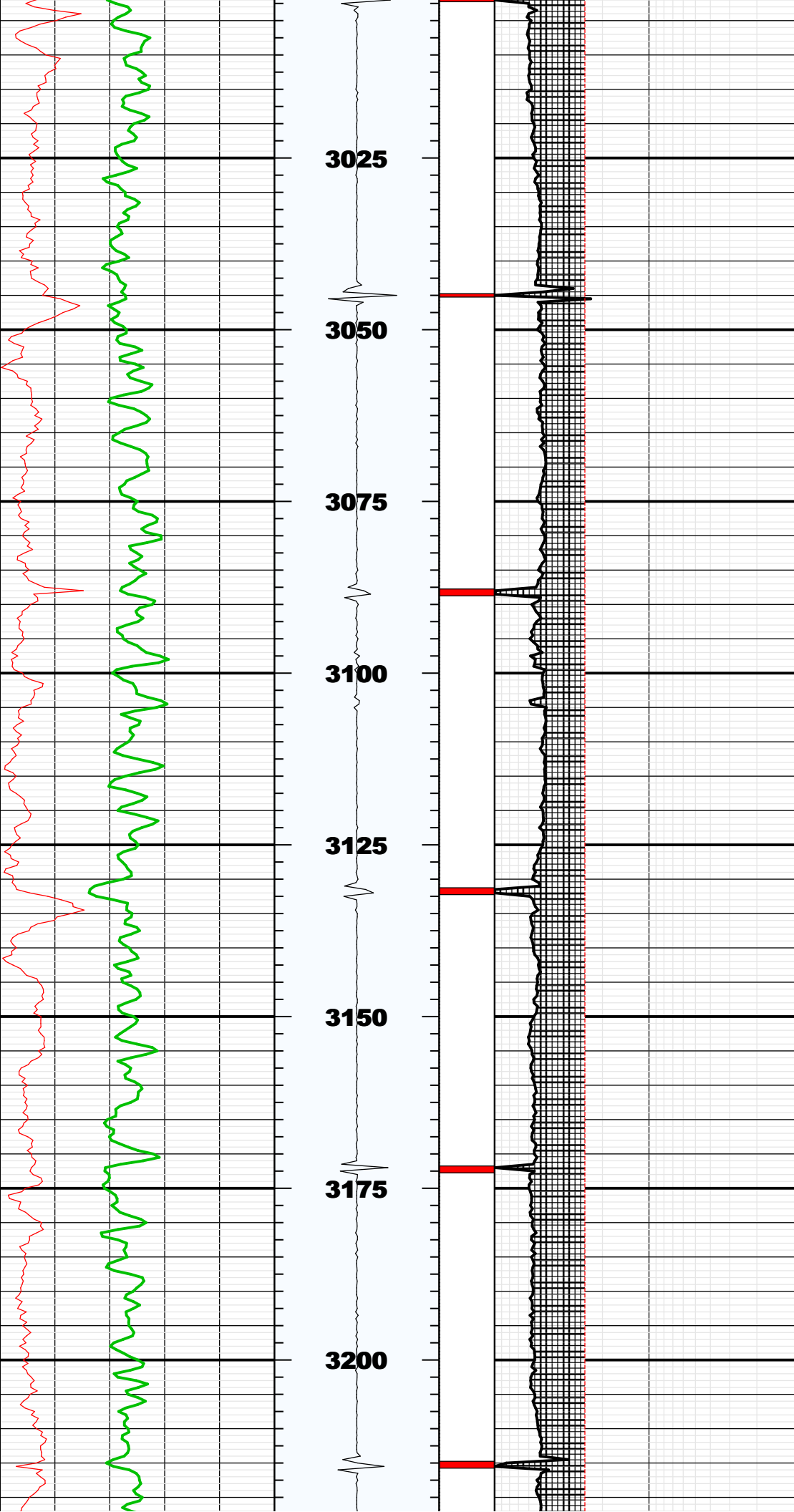


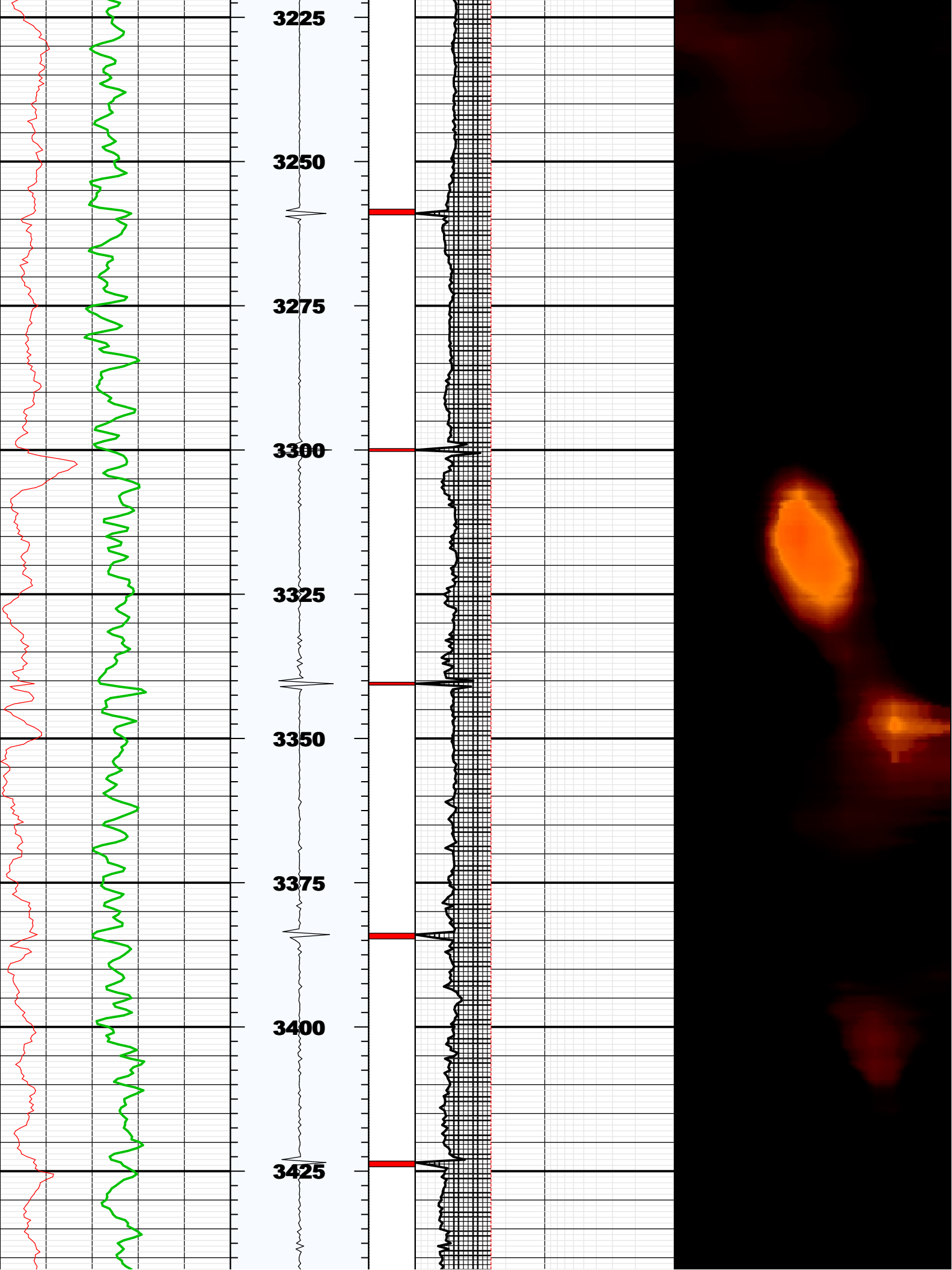


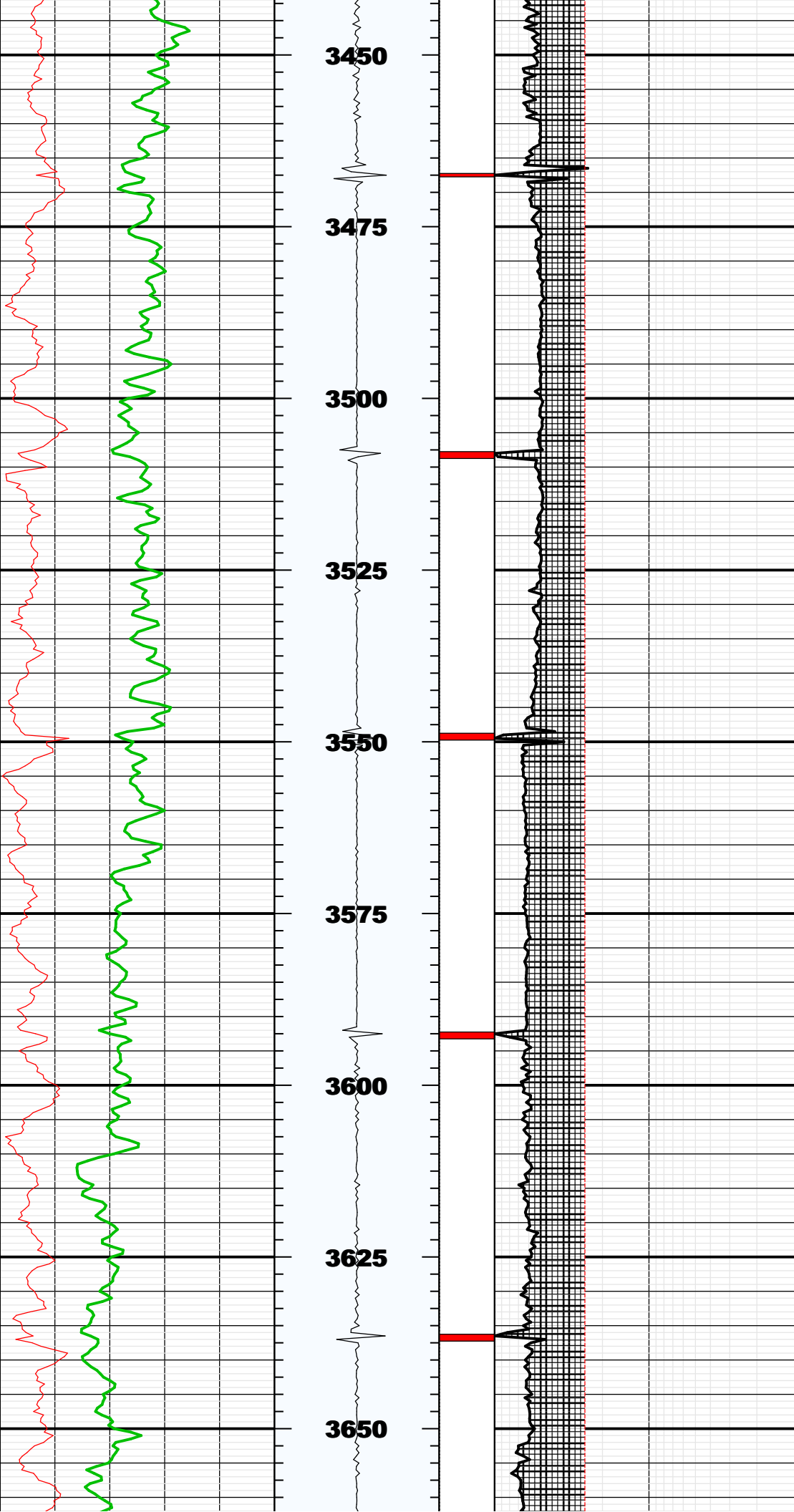


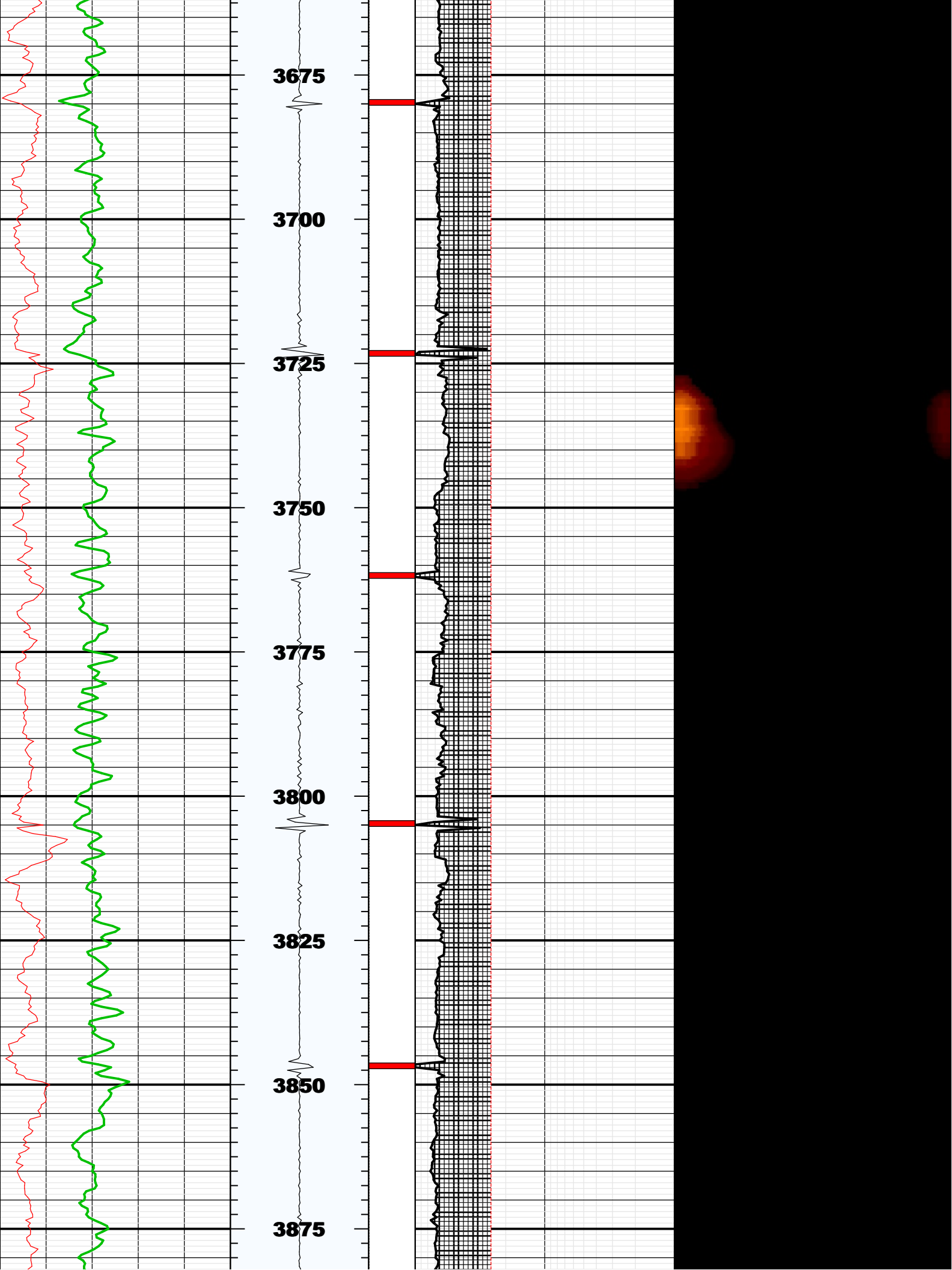


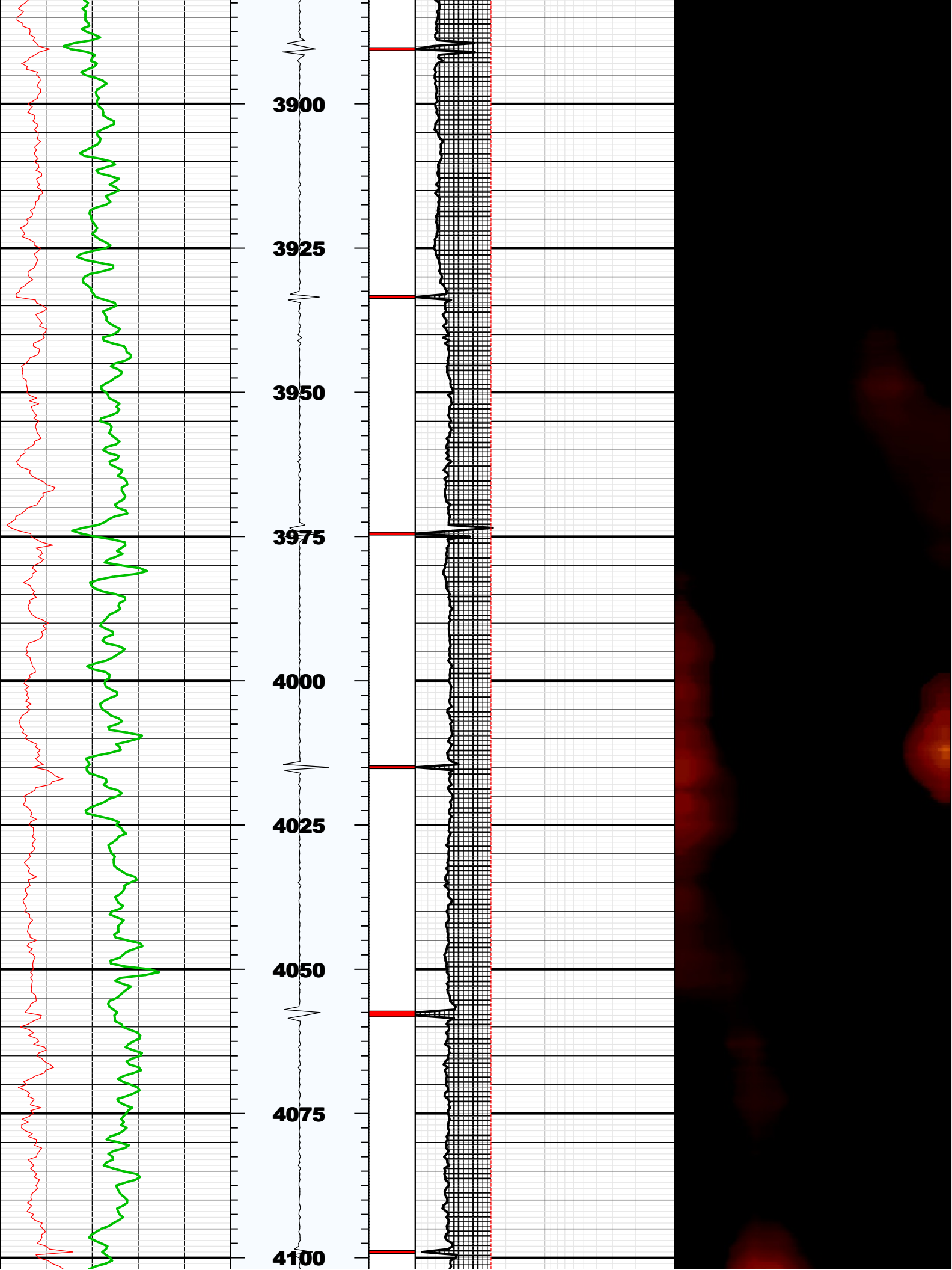


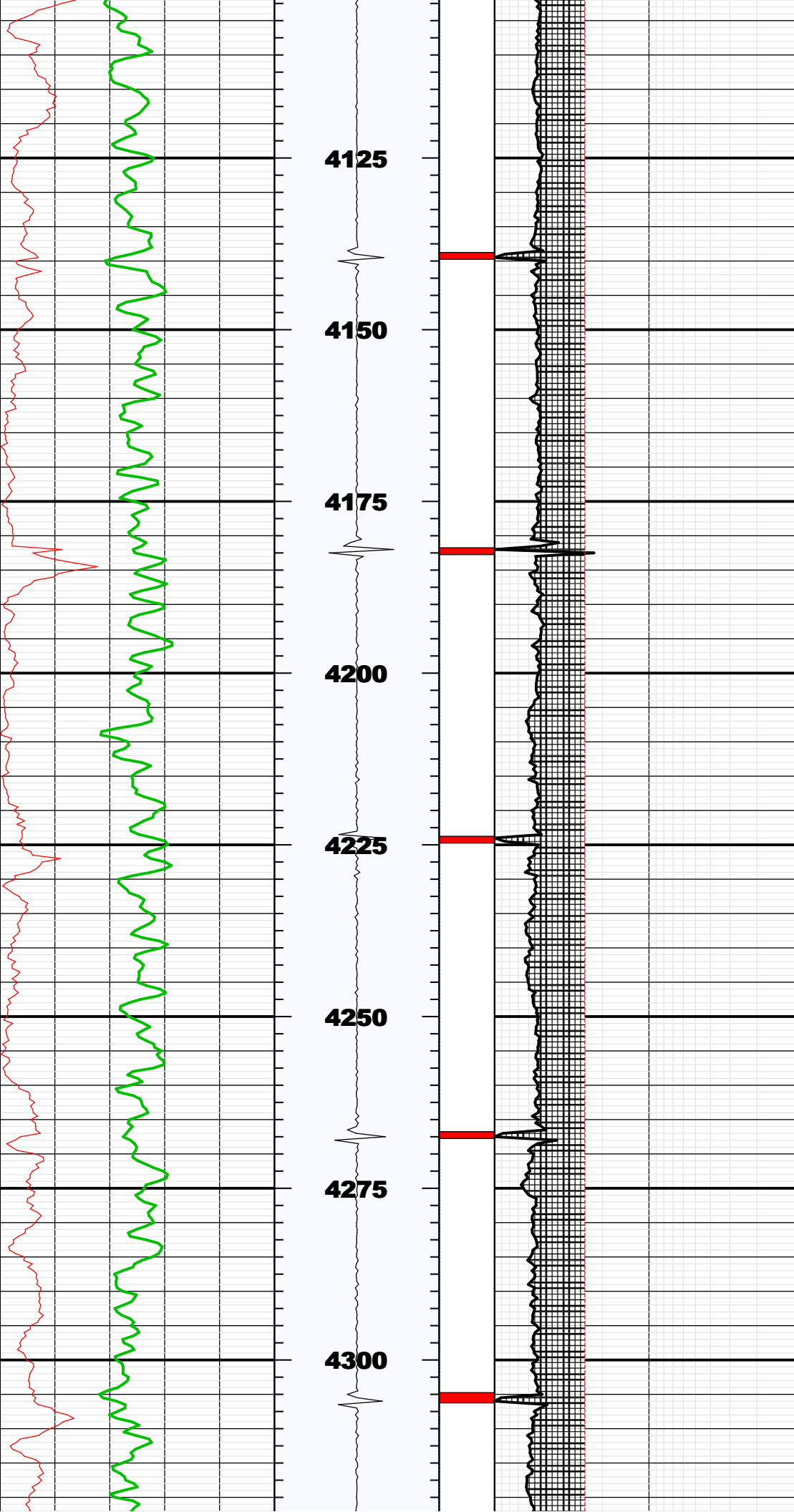


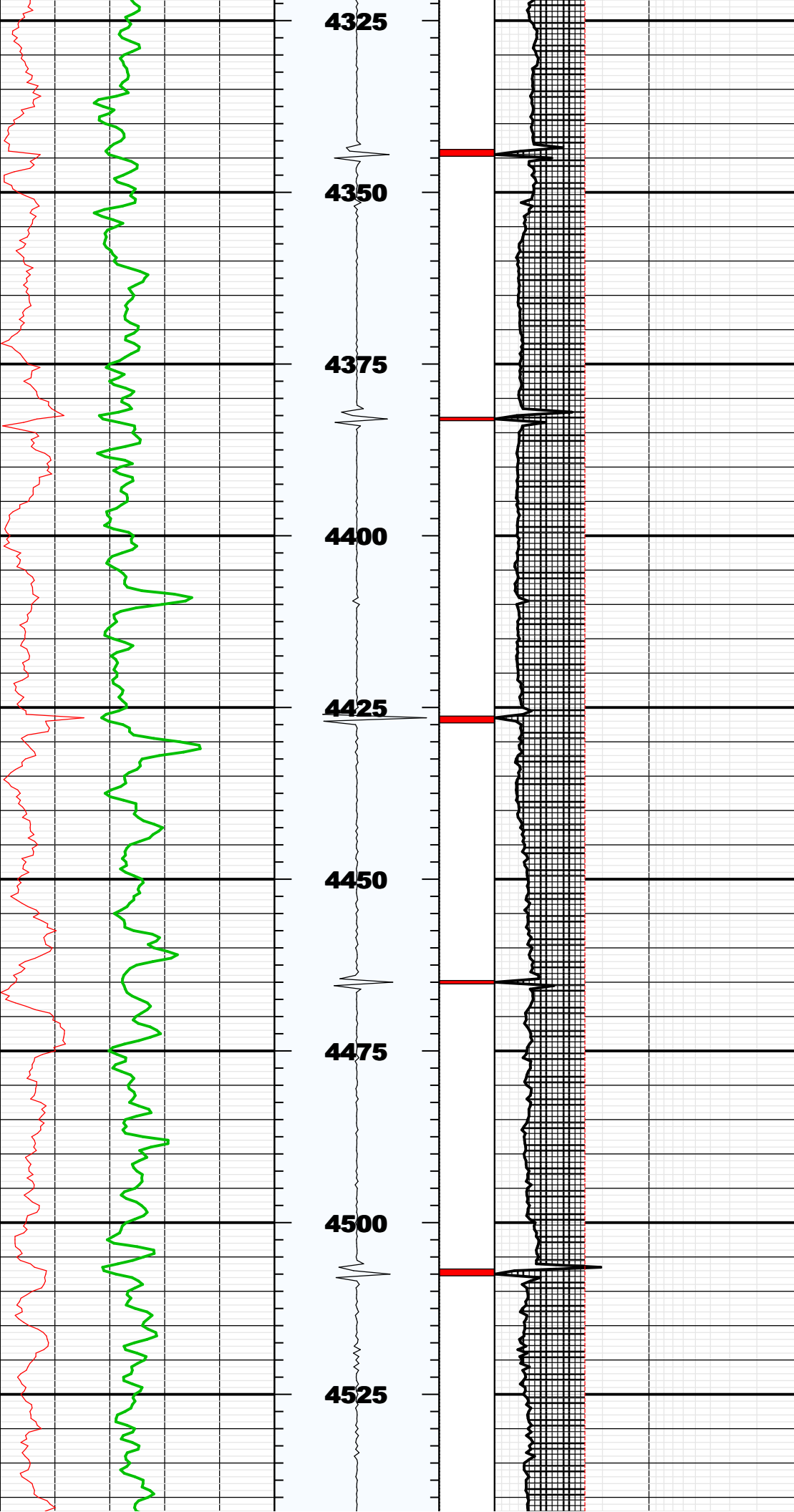


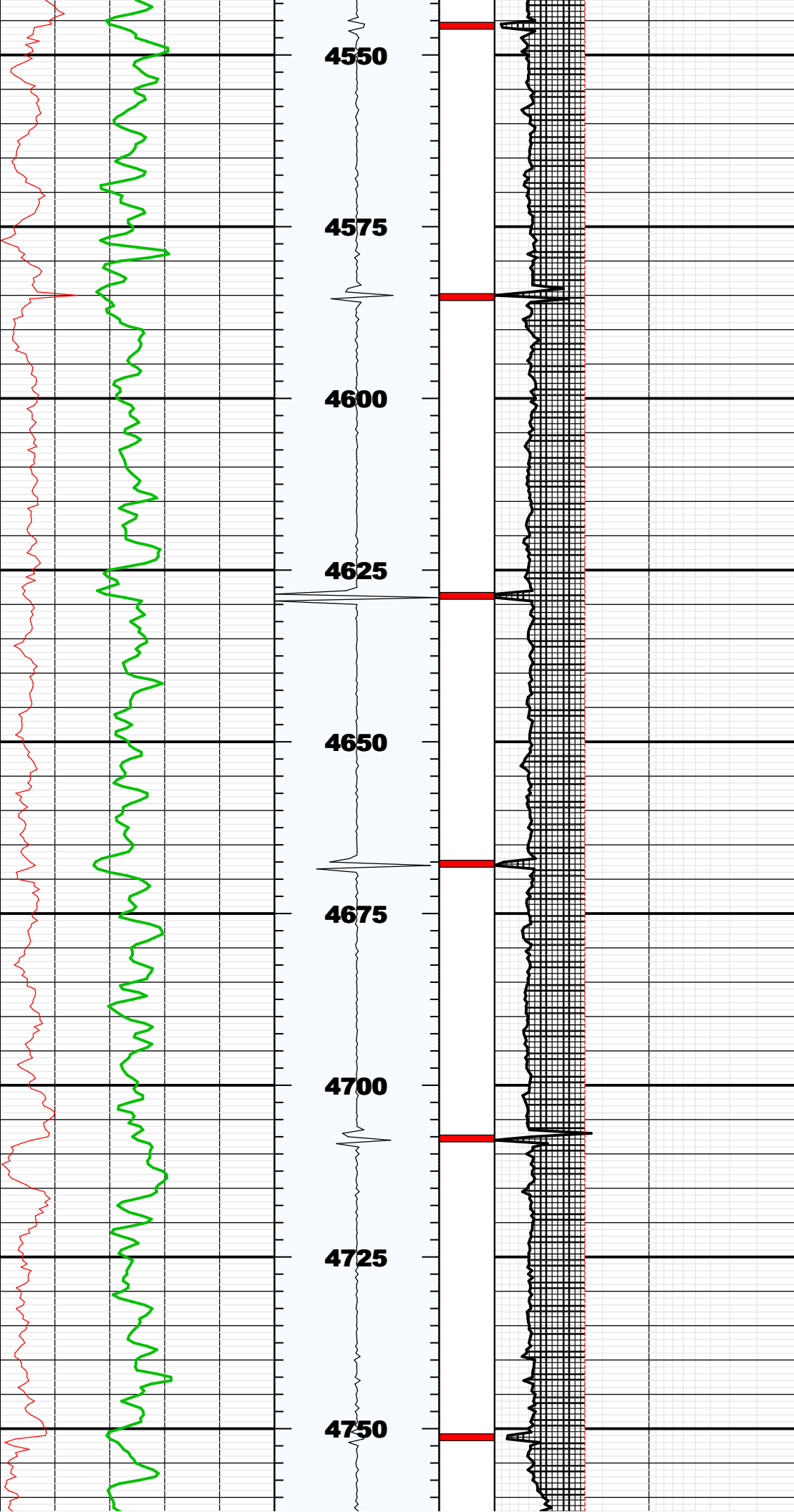


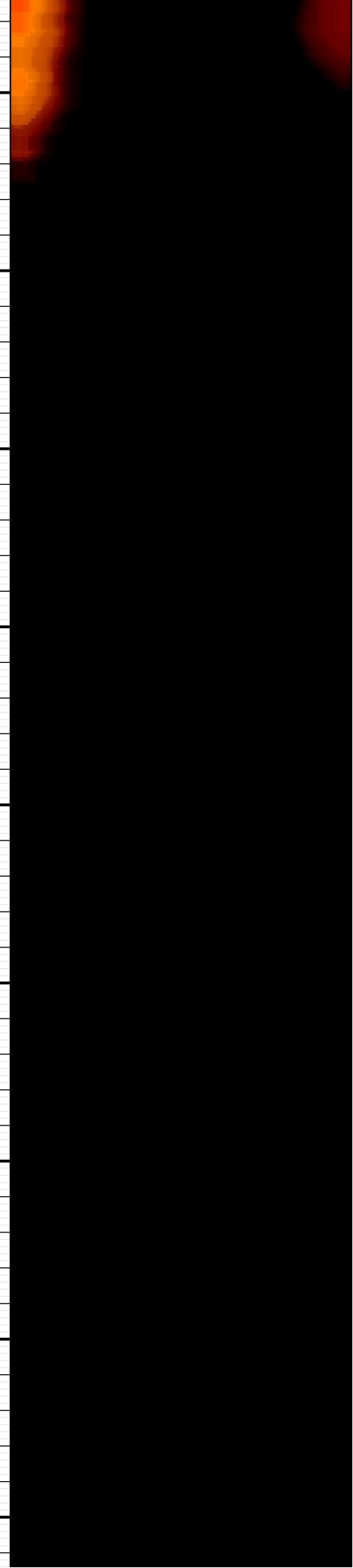
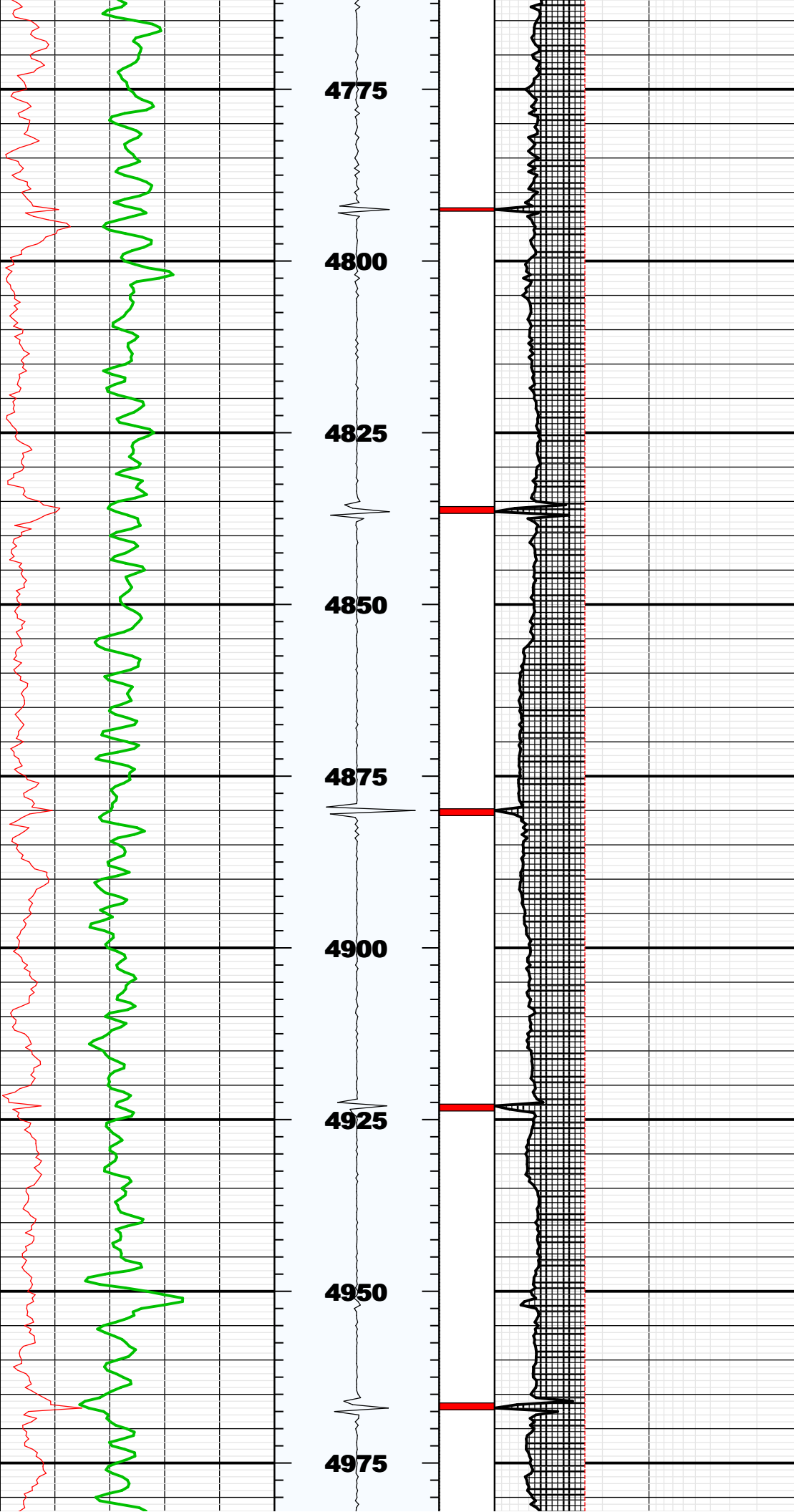


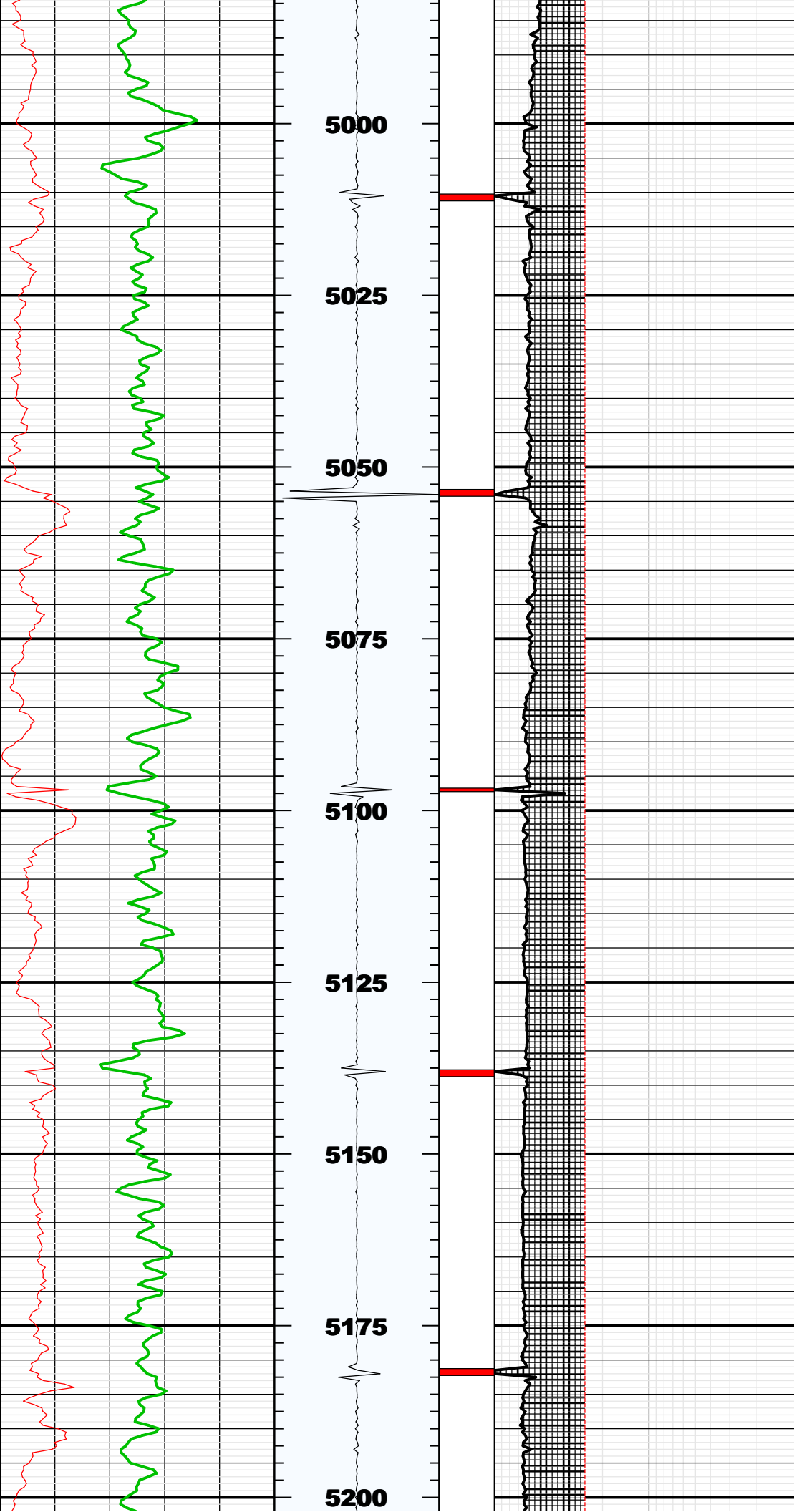


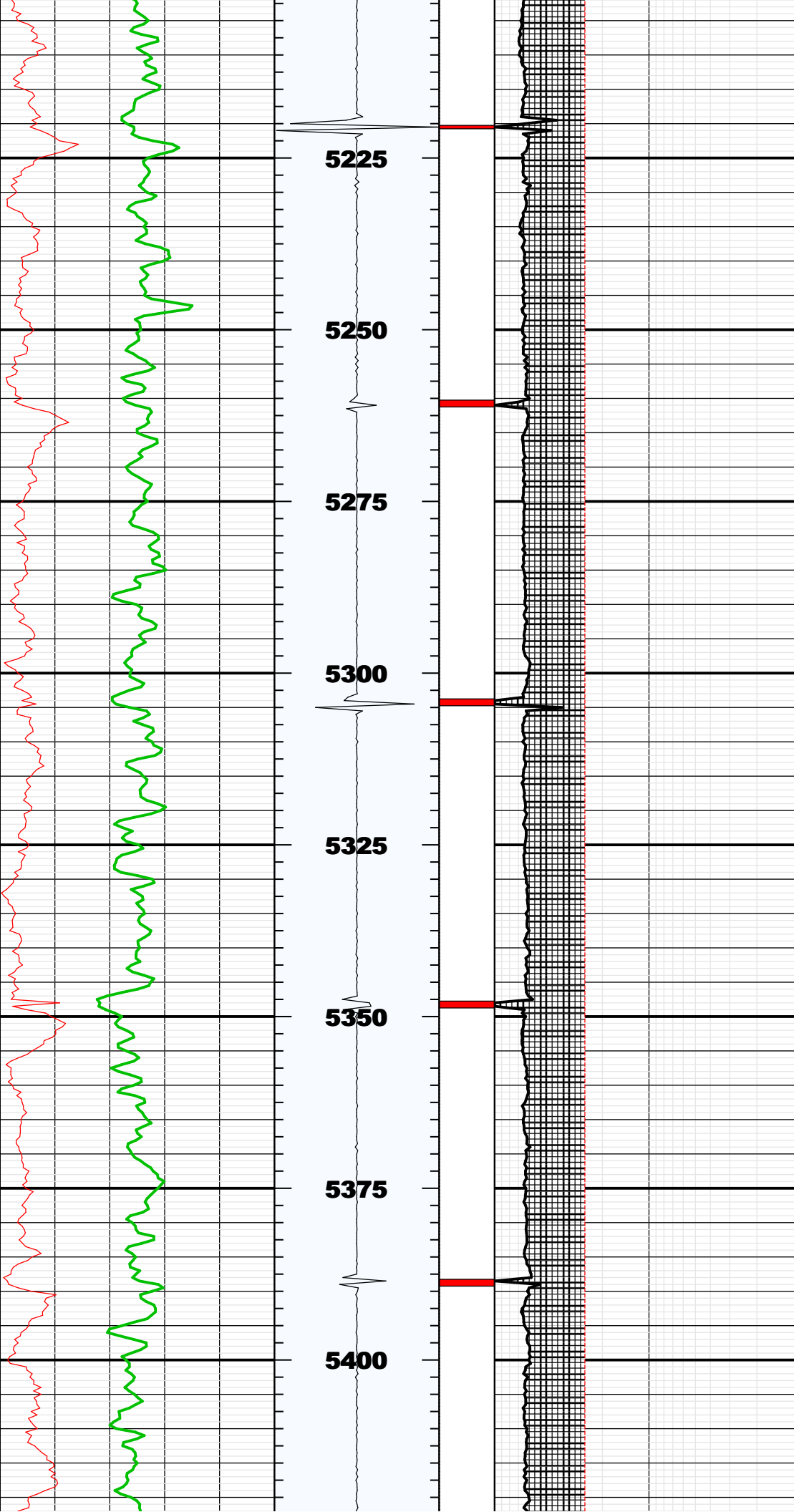


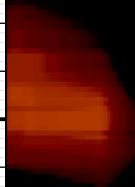
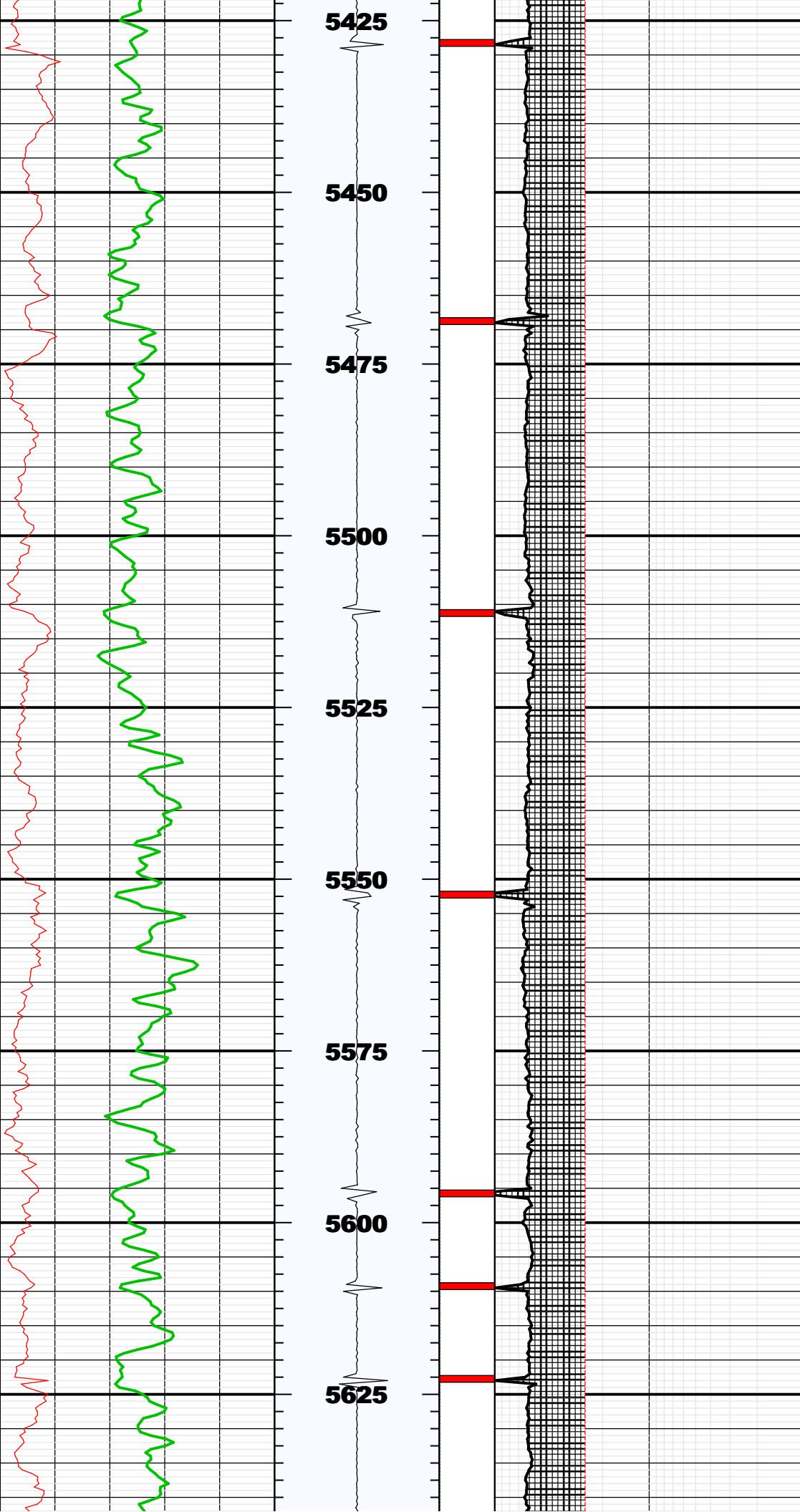


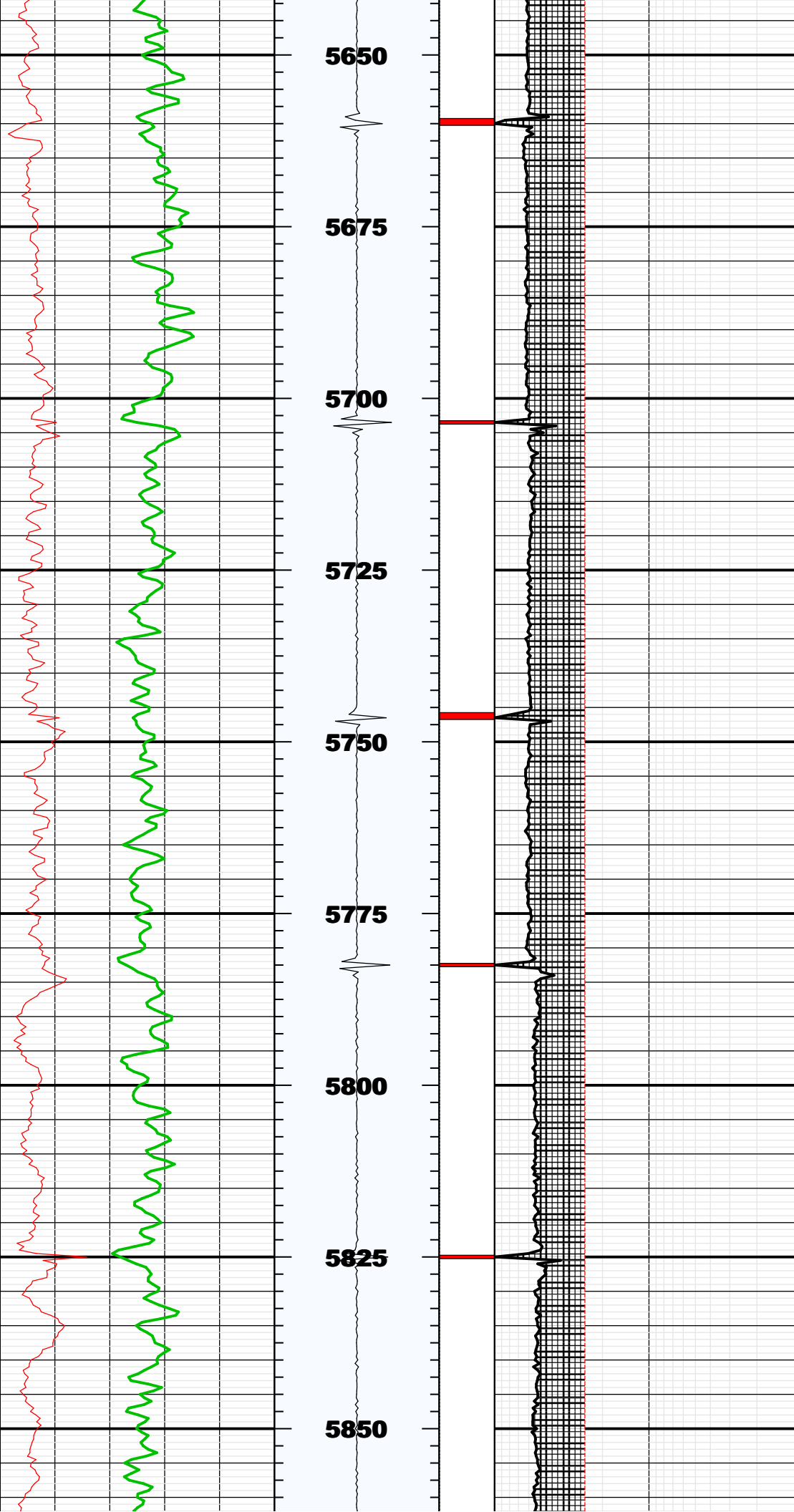


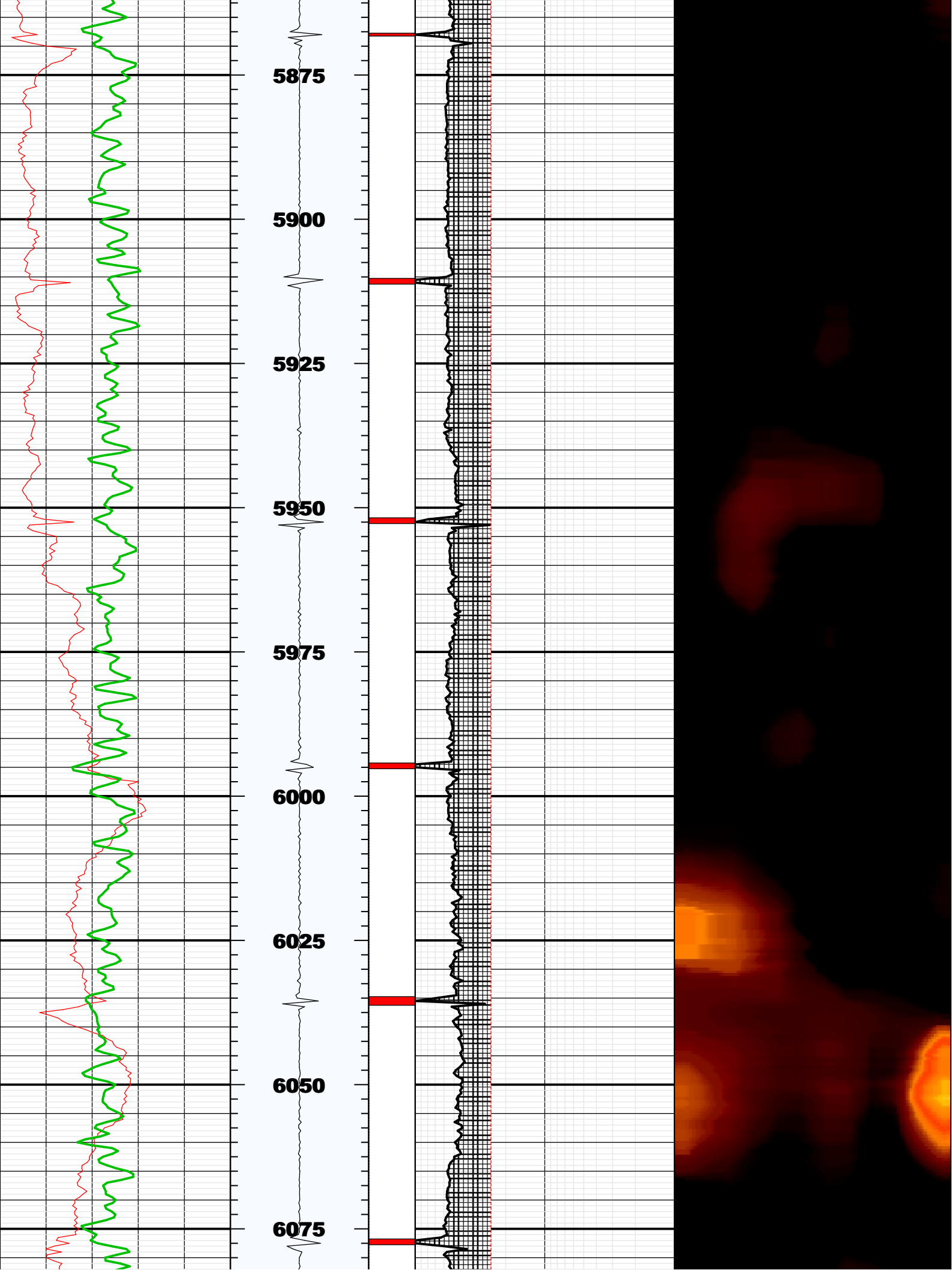


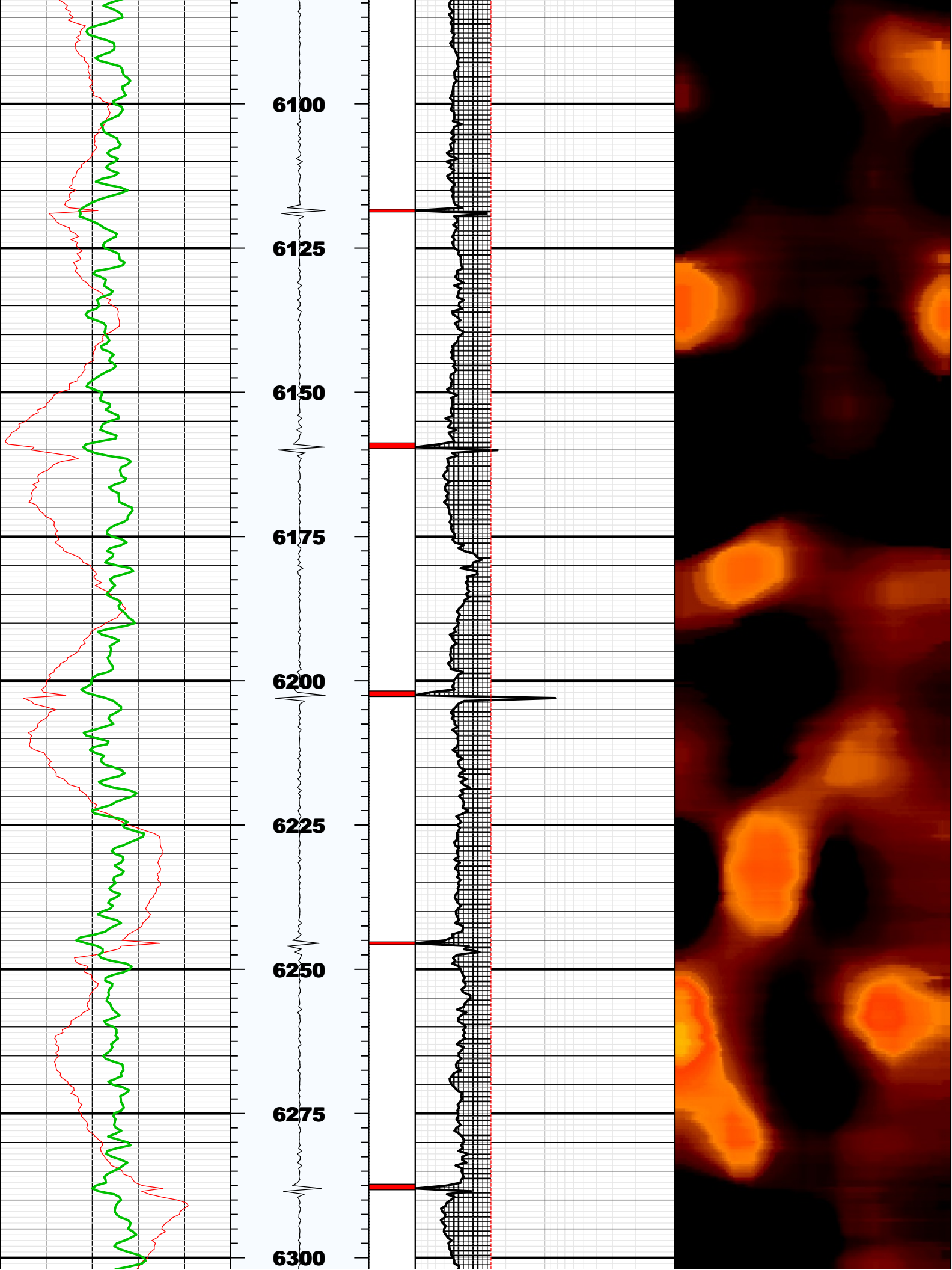


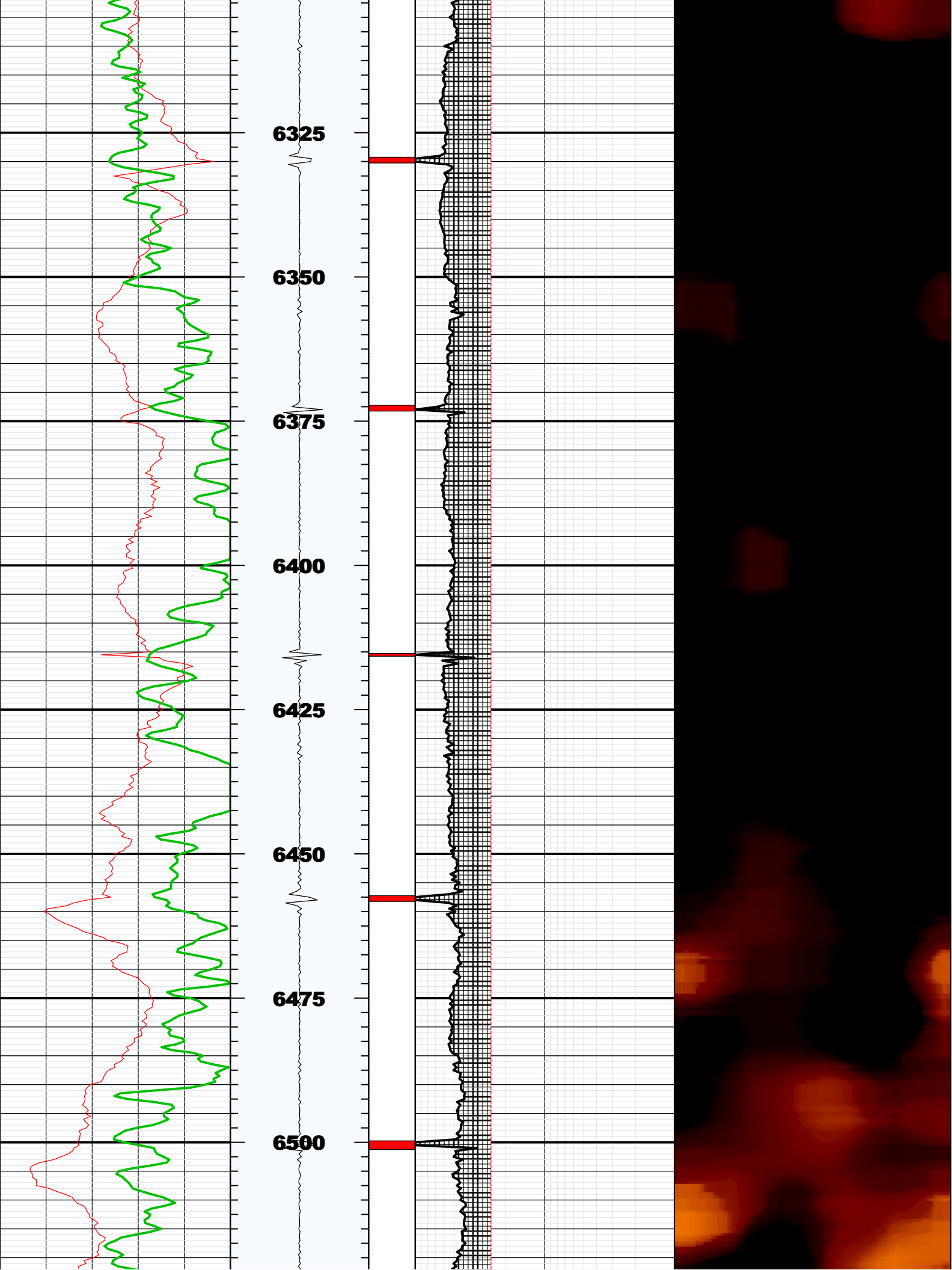


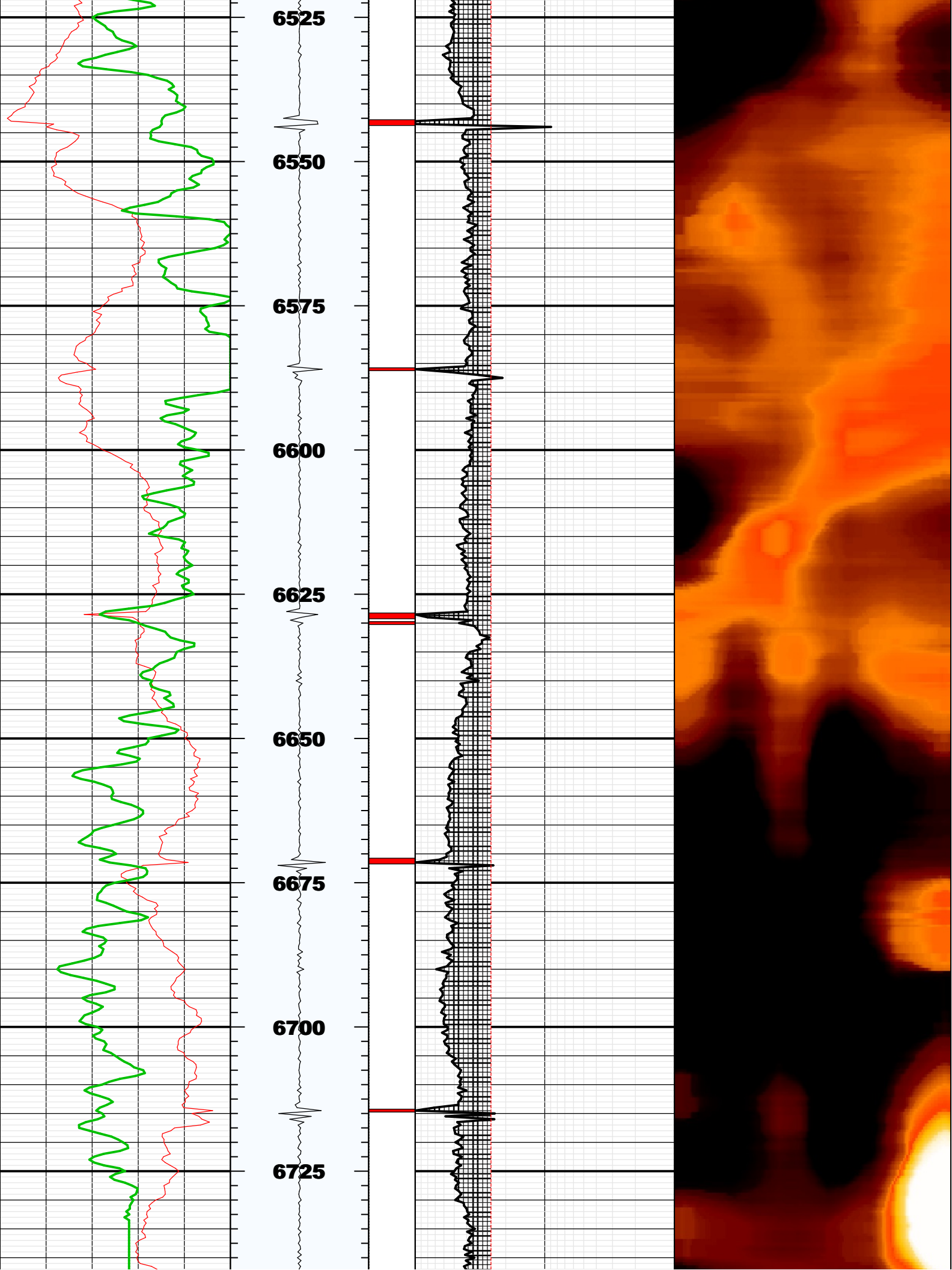


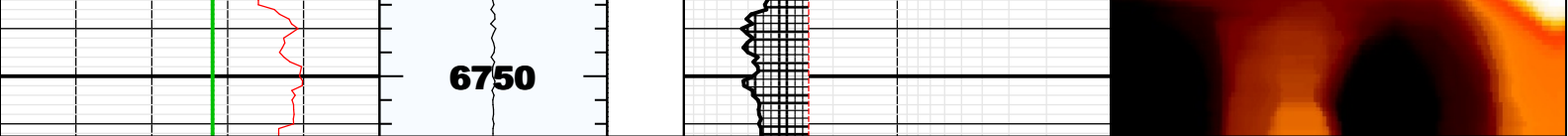








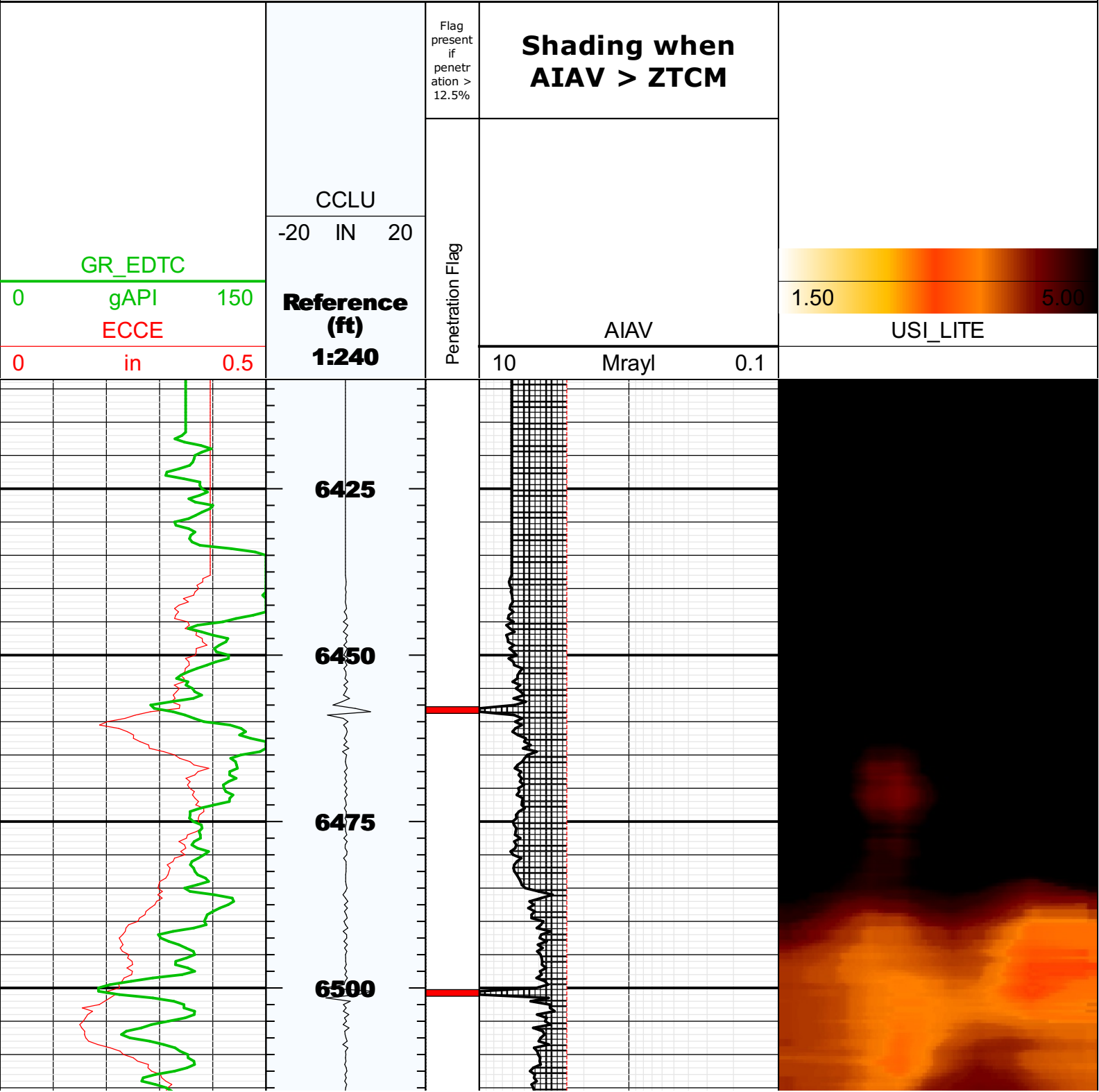


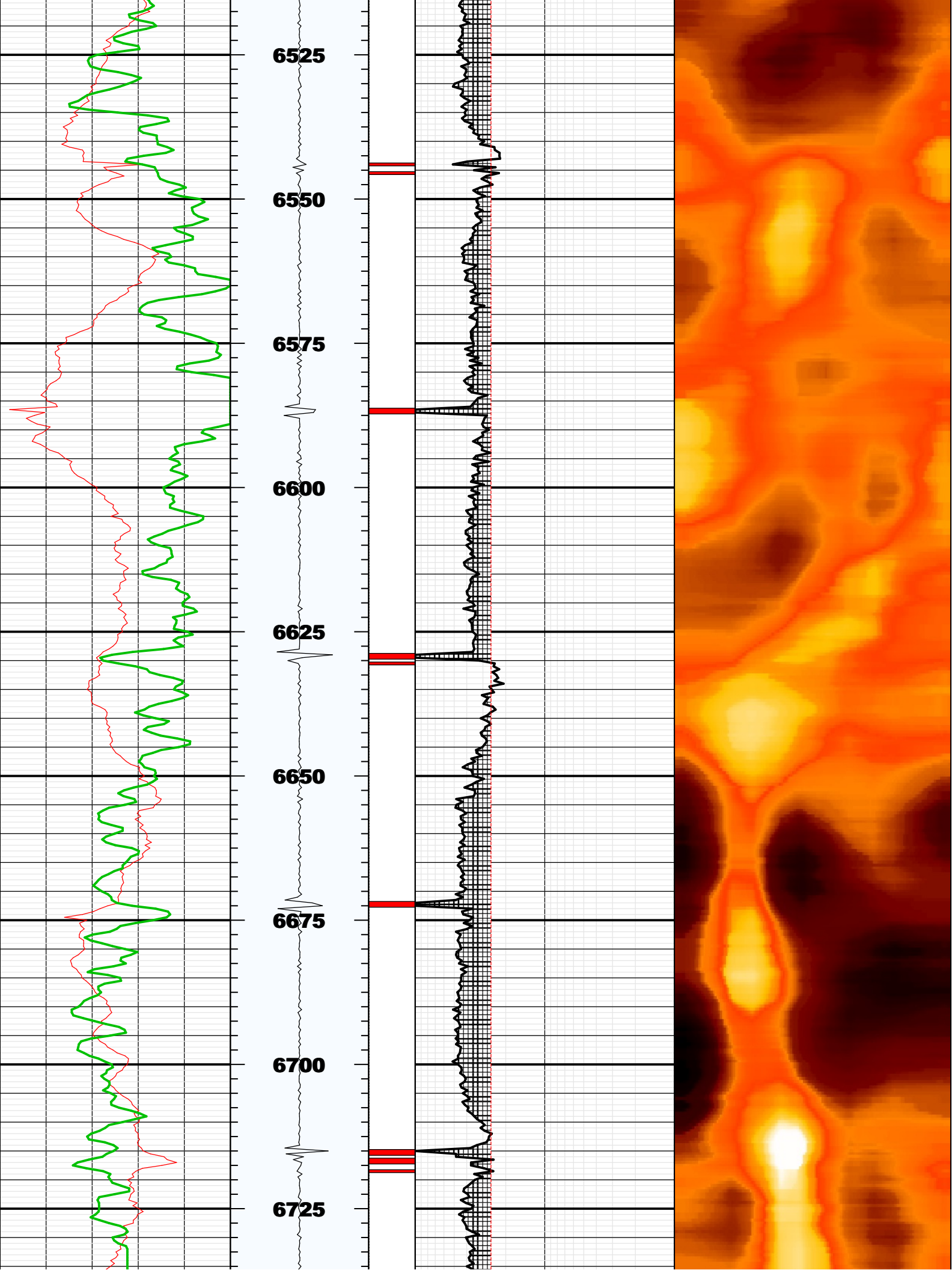


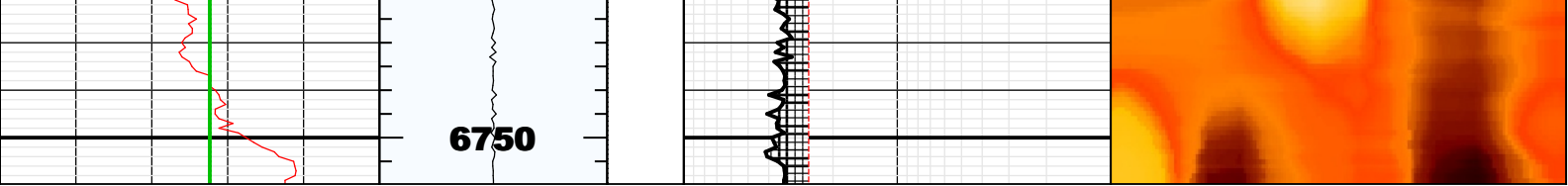
| | | | |
|-------------|-------------|------|--|
| BS | 8.75000 | IN | Bit Size |
| CASG | P110 | | Casing Grade |
| CDIA | 7.00000 | IN | Casing Outer Diameter |
| CSID | | | |
| CSIZ | 7.00000 | IN | Current Casing Size |
| CWEI | 26.00000 | LB/F | Casing Weight |
| DFD | 8.40000 | LB/G | Drilling Fluid Density |
| DFVL | 206.00000 | US/F | Default Fluid Velocity |
| DO | | | |
| DOT | 2.87400 | IN | Diameter of Transducer Sensor |
| EMXV | 78 | 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 | 1.79000 | 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 AE30-66-1AHNC
Field: Wattenberg







Fluid Properties Used for Main Pass

