



**RADIAL BOND LOG
WITH GAMMA RAY**

Comp. HIGHPOINT OPERATING CORP.
Field WATTENBERG
Co. WELD
State COLORADO

Company **HIGHPOINT OPERATING CORP.**
Well **Anschutz Equus Farms 4-62-33-6457CSB**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API #: 05-123-45306
1003' FSL & 410' FEL
SE SE
SEC 32 TWP 4N RGE 62W
Other Services
NONE

Date of Service	24 MAY 2018
Run Number	ONE
Depth Driller or P/BD	16432'
Depth Logger	6686'
Bottom Log Interval	6686'
Top Log Interval	SURFACE
Open Hole Size	8.75"
Type Fluid	WATER
Fluid Level	FULL
Fluid Density	N/A
Max. Recorded Temperature	228 F
Max. Wellhead Pressure	ZERO
Wellhead Connection	4" 10-02
Estimated Cement Top	N/A
Unit Number	P-53
Wireline Size	9/32"
Location	FORT MORGAN
Recorded By	SCHOENROGGE
Witnessed By	MR. KELSCH

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
USED COLLAPSIBLE CENTRALIZERS DUE TO LINER AND WELL ACCESS

LOGGING SPEEDS AND HEADING INFORMATION FROM COMPANY MAN

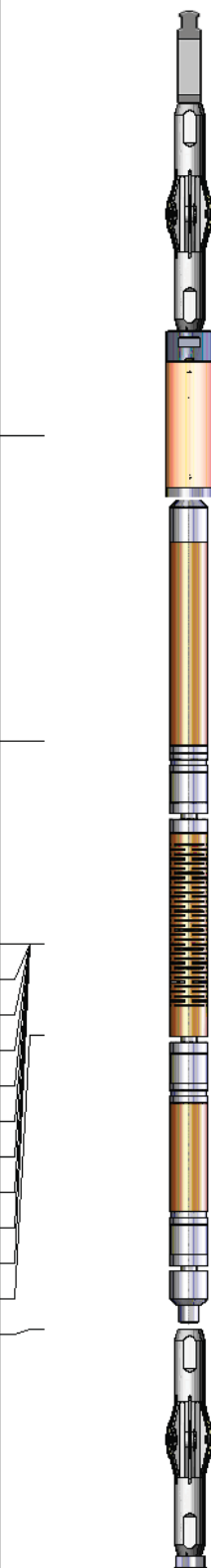
NO FREE PIPE CALIBRATION.

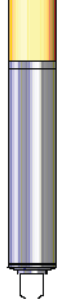
THANK YOU FOR USING PIONEER ENERGY SERVICES!


Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: SCHOENROGGE Operator: REBER Operator: SEGELKE Operator:	SEE DIAGRAM	

Top - Bottom

BHTEMP_Src TEMP	PPT usec 0	CASEWGHT lb/ft 23	MAXAMPL mV 0	MINAMPL mV 2.5	MINATTN db/ft 0.08	SRFTEMP degF 50
CASETHCK in 0.317	CASEOD in 7	PERFS 0	TDEPTH ft 6700	BOTTEMP degF 230	BOREID in 8.75	

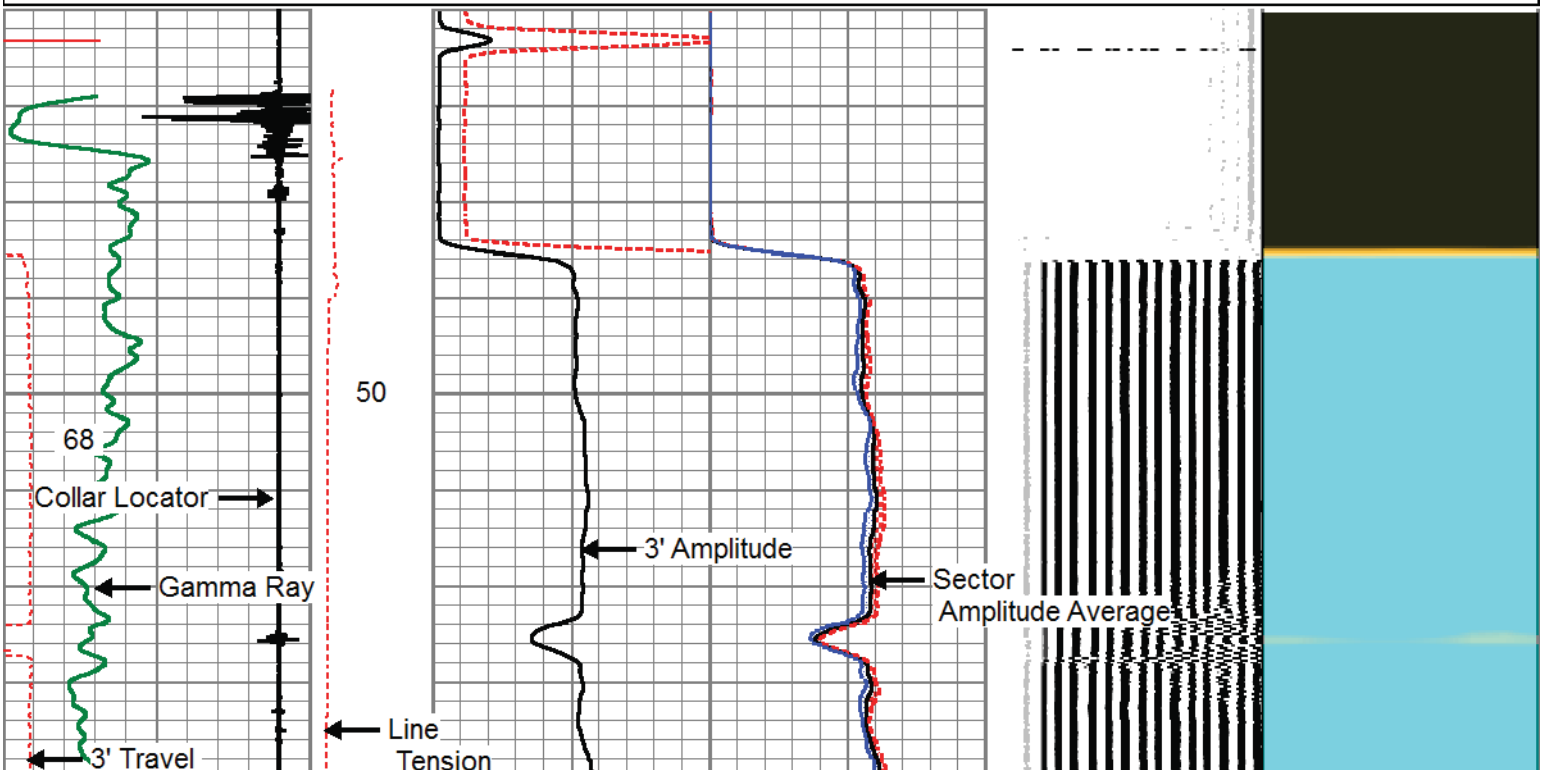
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable Head-Titan 143 1 7/16" Titan Cable Head	1.03	1.43	2.00	
			Centralizer-275 Roller 2.75" Roller Centralizer	2.50	2.75	15.00	
CCL	15.98		CCL_Logging-275 TekCo_2 (TekCo-275) 2 3/4"	1.83	2.75	15.00	
TEMP	12.61						
WVFS8	10.38			SCBL-275 Probe w Temp New Mod (13058-9.17) Probe Radii Bond Tool with Temperature	58.17	2.75	95.00
WVFS7	10.38						
WVFS6	10.38						
WVFS5	10.38						
WVFS4	10.38						
WVFS3	10.38						
WVFS2	10.38						
WVFS1	10.38						
WVFCAL	10.38						
WVF3FT	10.38						
WVF5FT	9.38						
HEADVOLT	6.13						
			Centralizer-275 Roller 2.75" Roller Centralizer	2.50	2.75	15.00	

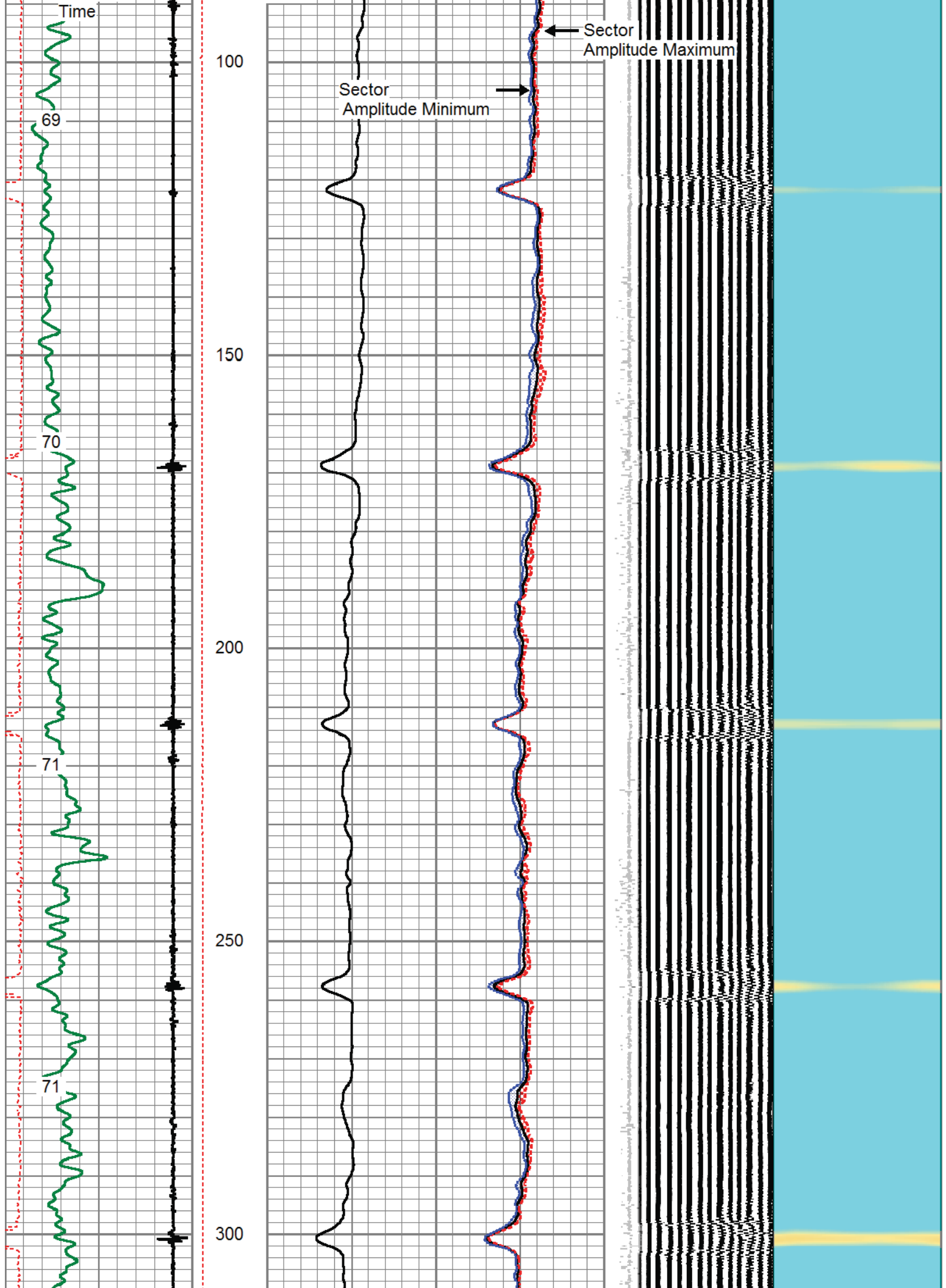
GR	1.18		GR-275 Probe (120903) Probe 2.75" Gamma Ray	3.36	2.75	40.00
			Bullnose-Titan GO Pin Pressure Cap	0.27	1.38	1.00
Dataset: highpoint_anschutz eq farms 4-62-33-6457csb_0512345306_20180524_scbl.db: field/well/run1/pass3 Total length: 20.66 ft Total weight: 183.00 lb O.D.: 2.75 in						

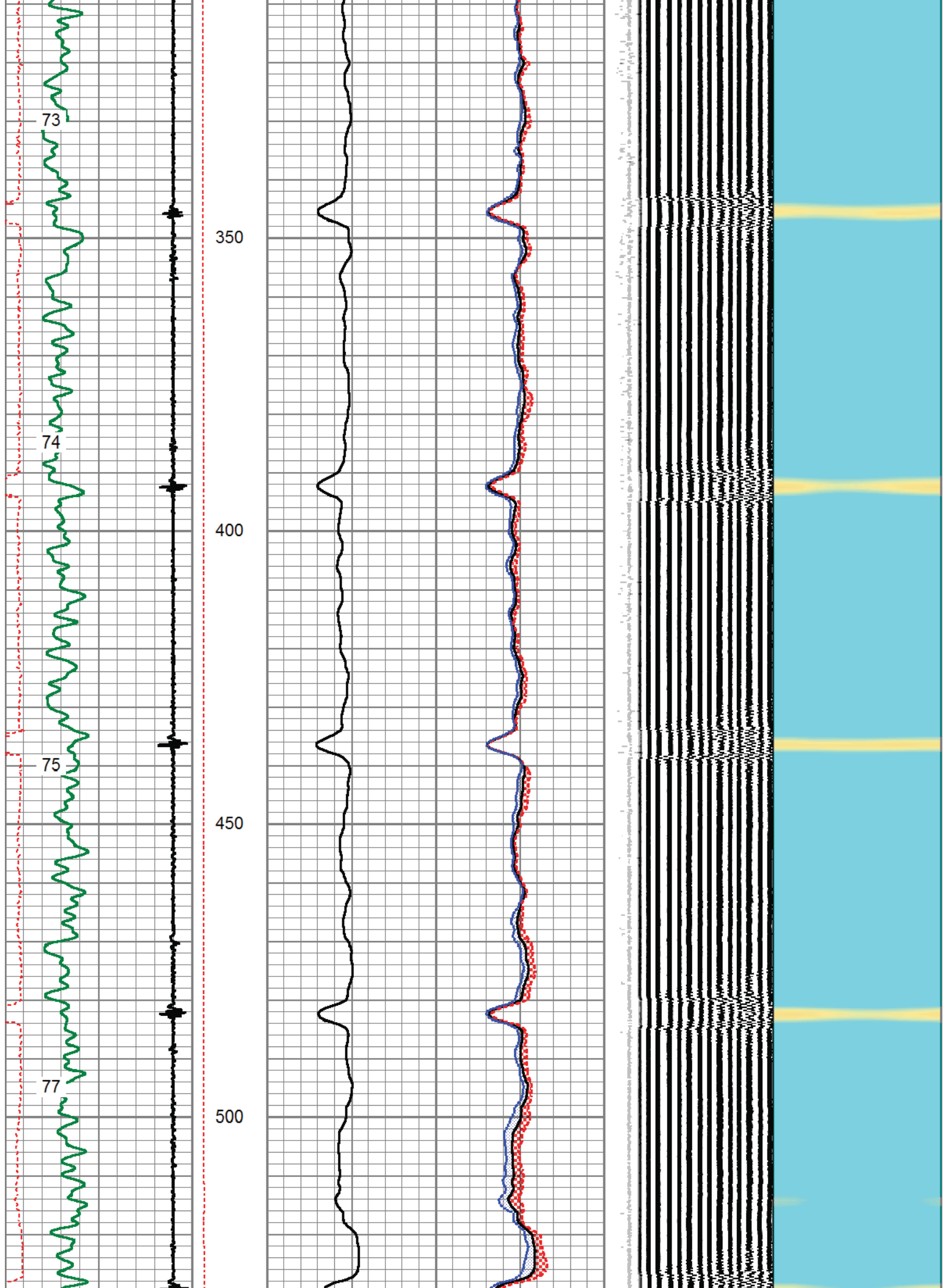
	<h1>MAIN LOG</h1>
	<h2>ZERO PSI APPLIED AT SURFACE</h2>

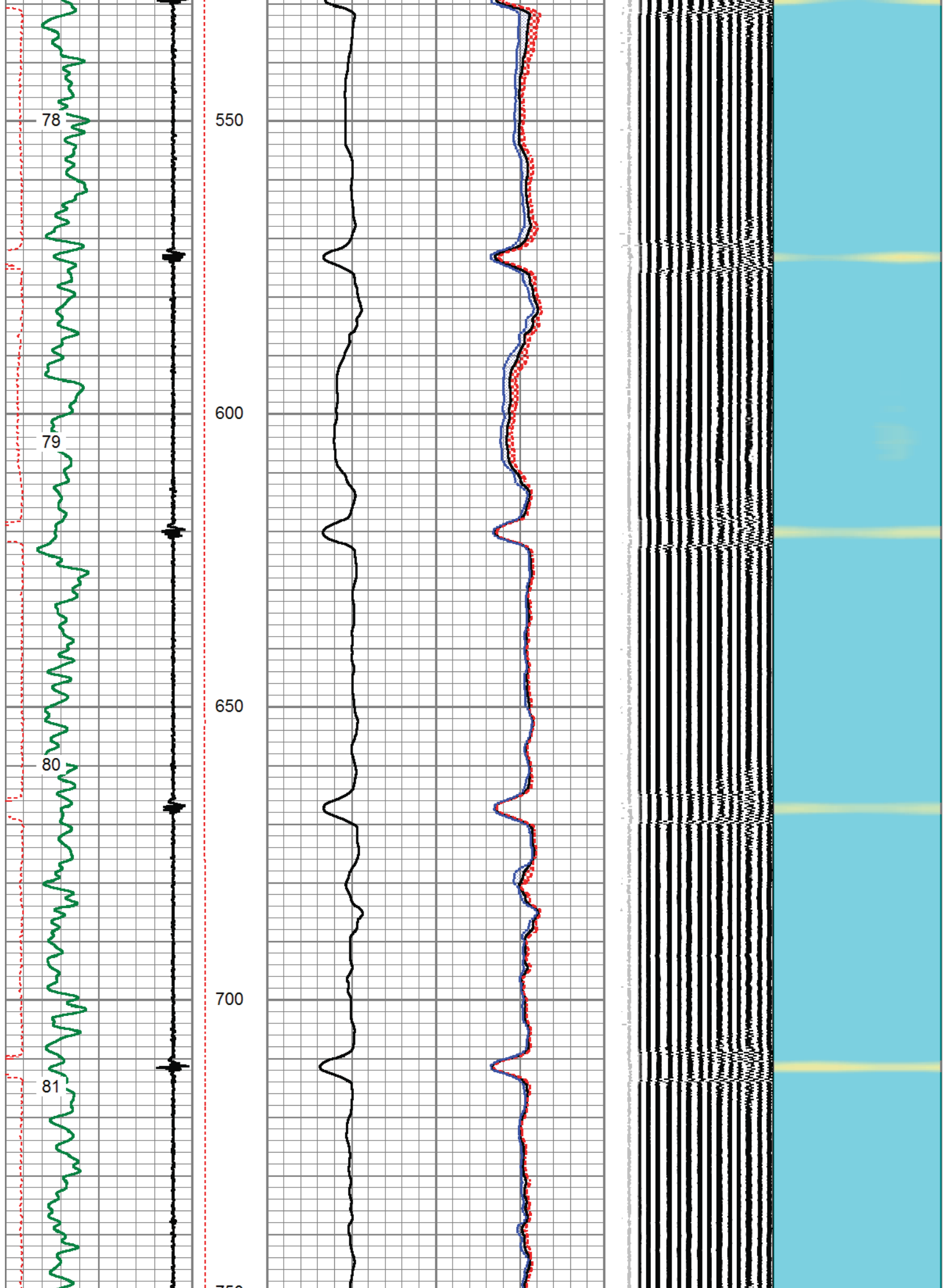
Database File	highpoint_anschutz eq farms 4-62-33-6457csb_0512345306_20180524_scbl.db
Dataset Pathname	pass3
Presentation Format	pinr_scbl
Dataset Creation	Thu May 24 14:05:58 2018
Charted by	Depth in Feet scaled 1:240

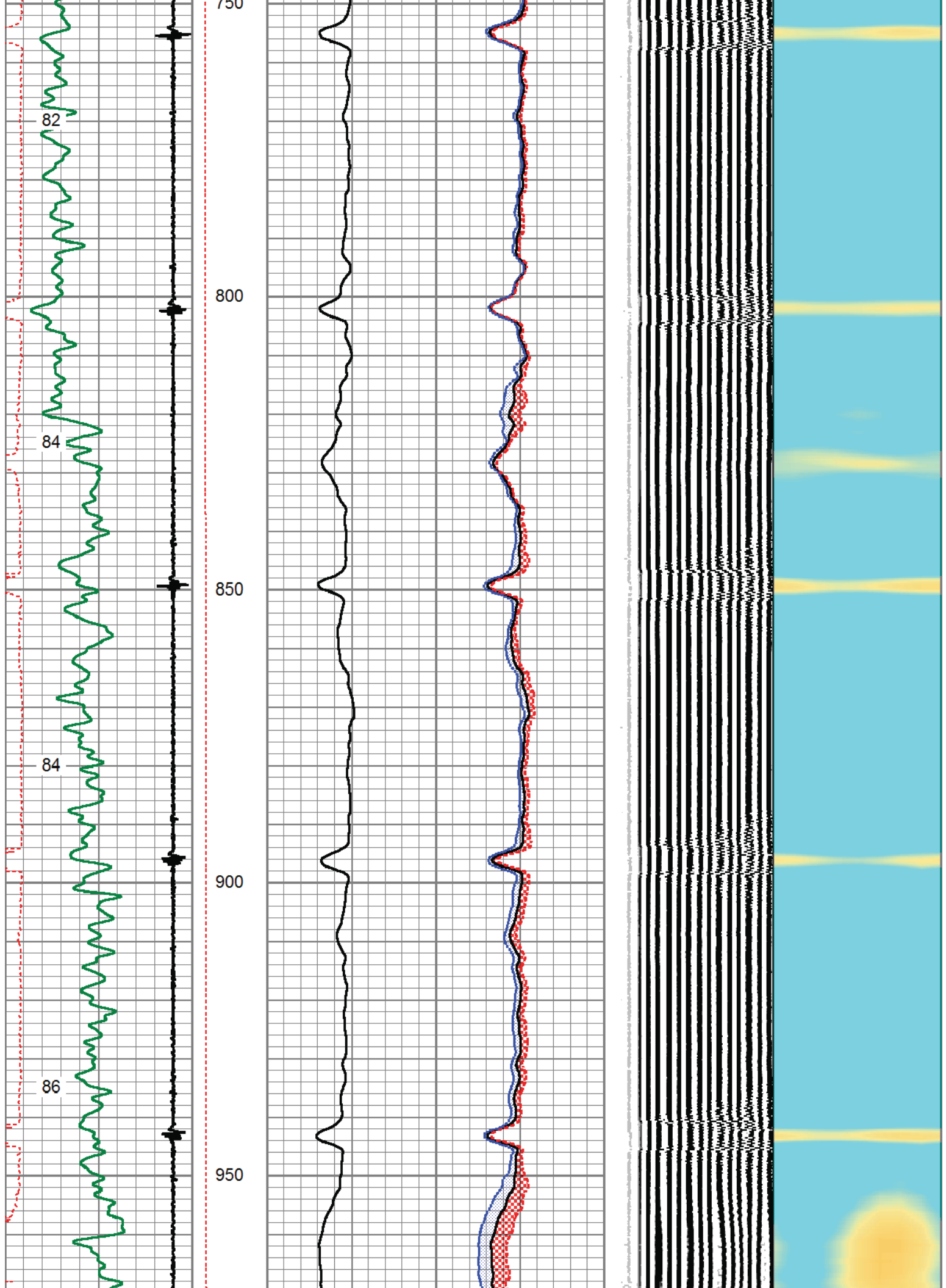
3' Travel Time	Line Tension	3' Amplitude (mV)	Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
300 (usec)	0 (12000)	0	0	150			10		60
-9 Collar Locator		3' Amplified Amplitude X 5	Sector Amplitude Maximum						
Gamma Ray		0 (mV)	0	150					
0 (GAPI)			Sector Amplitude Minimum						
Temp (degF)			0	150					

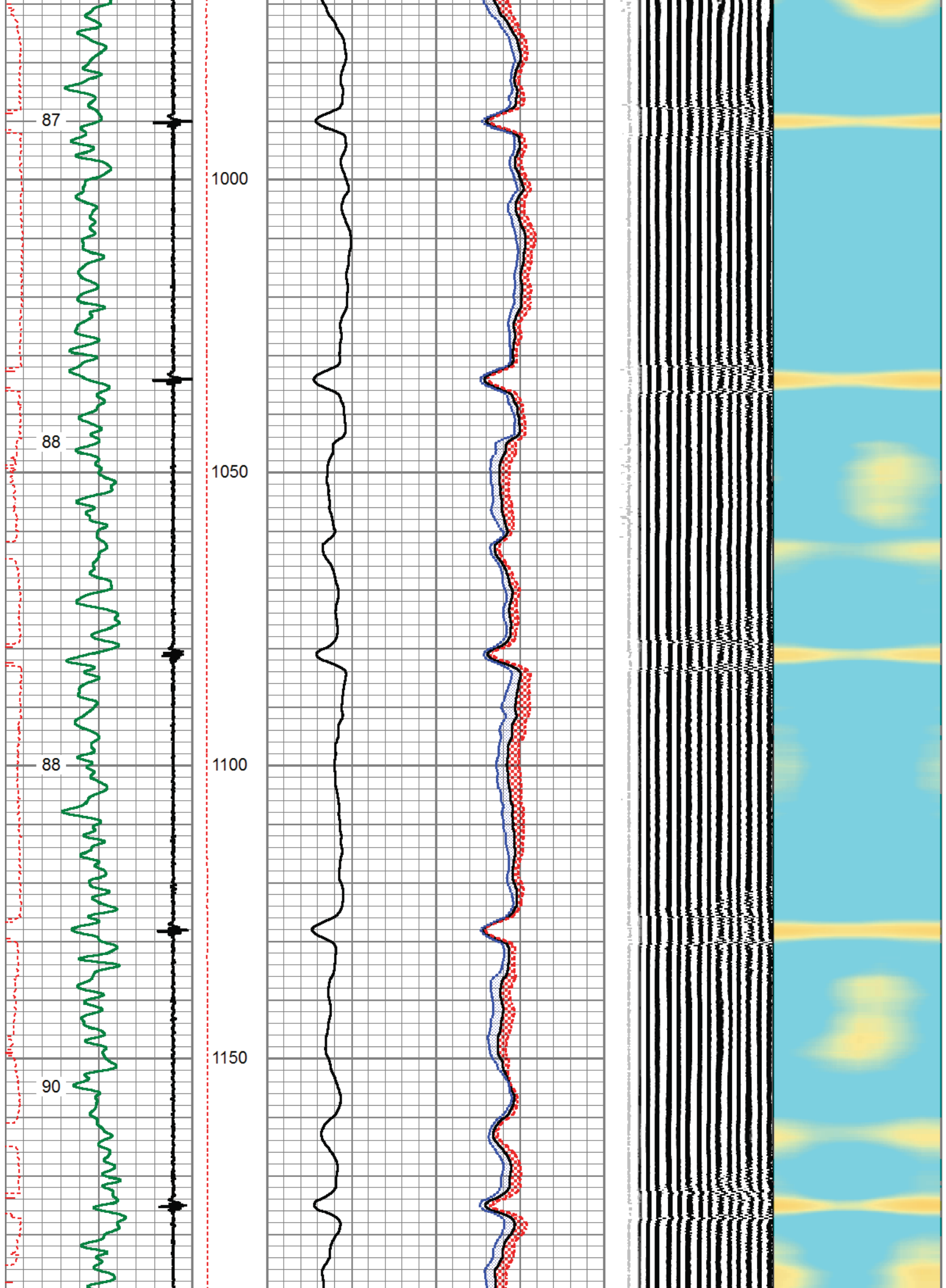


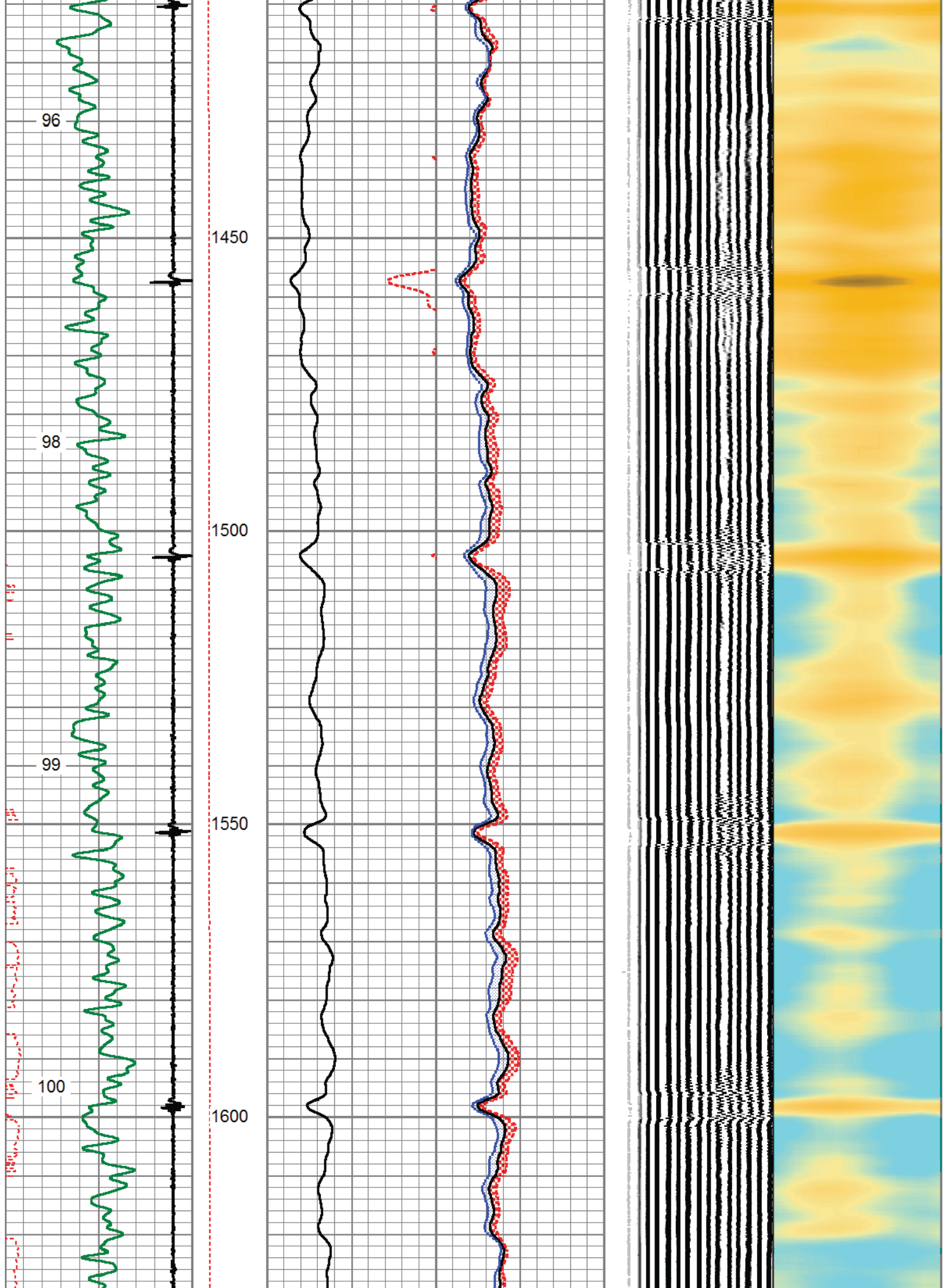


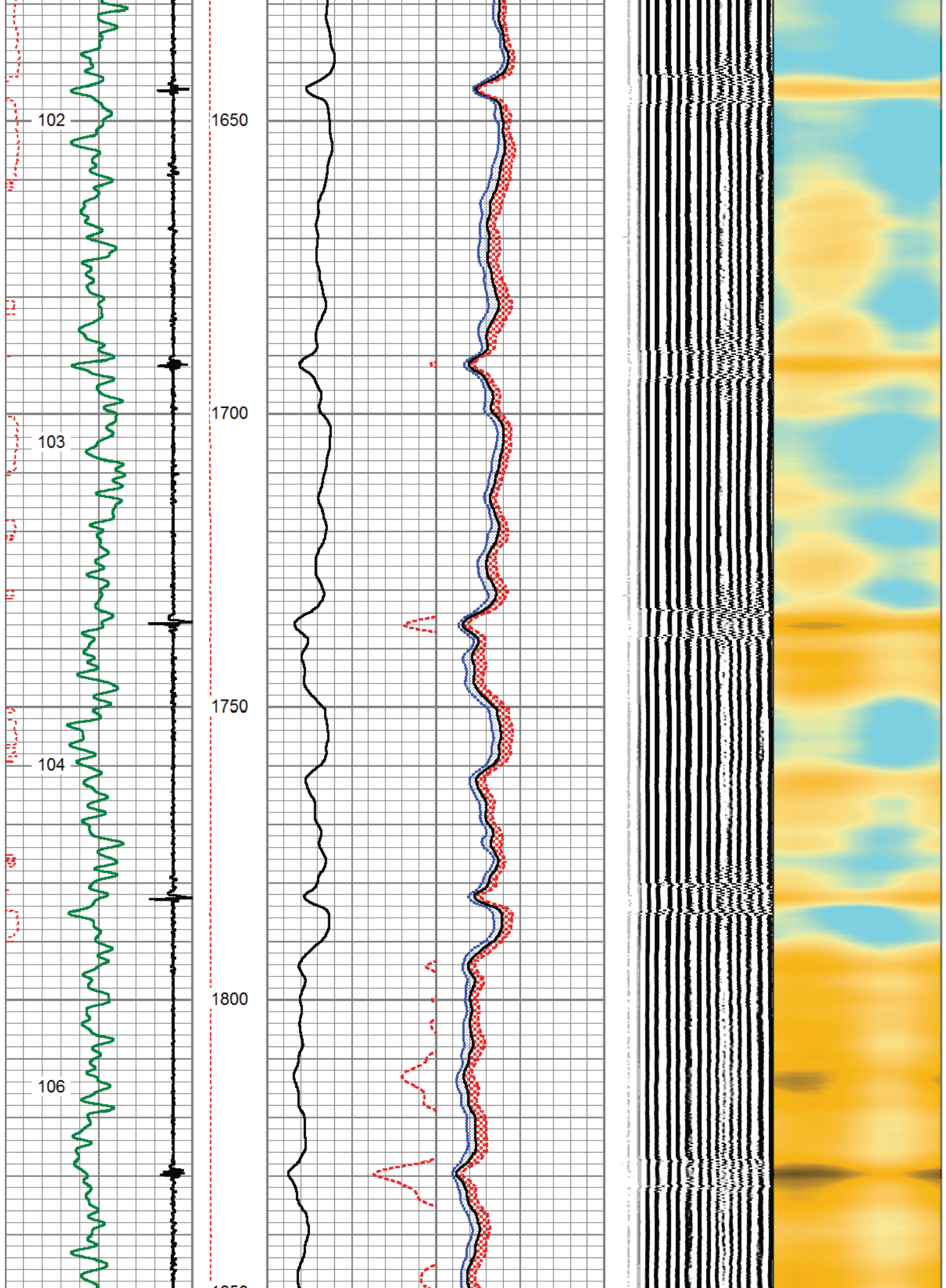












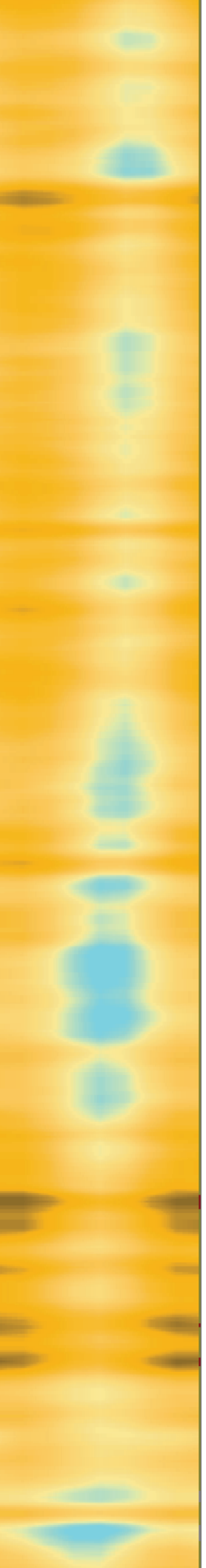
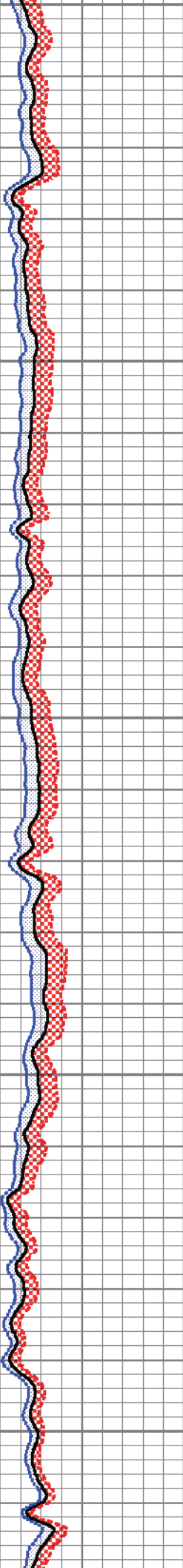
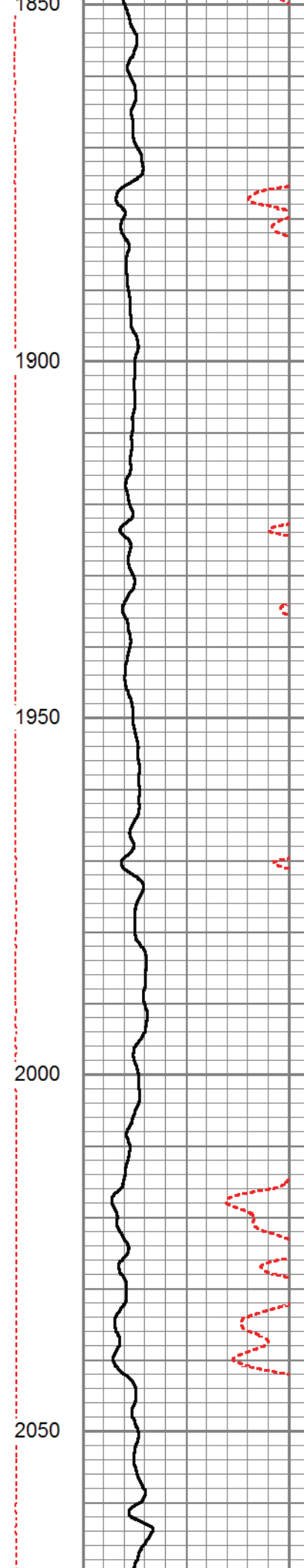
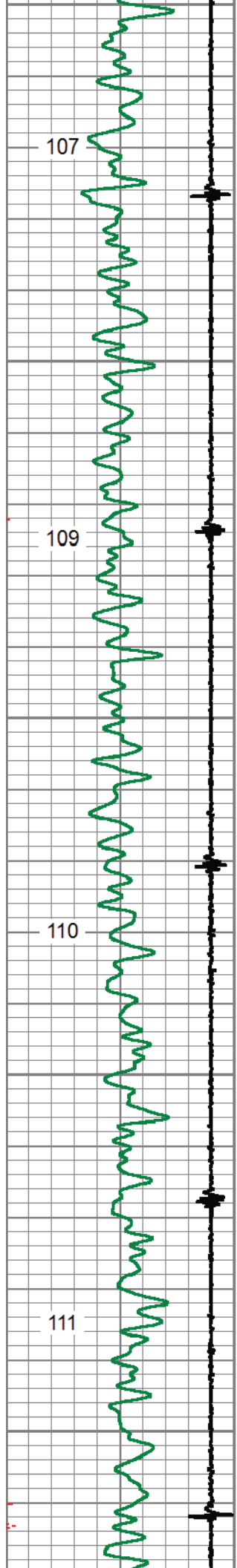
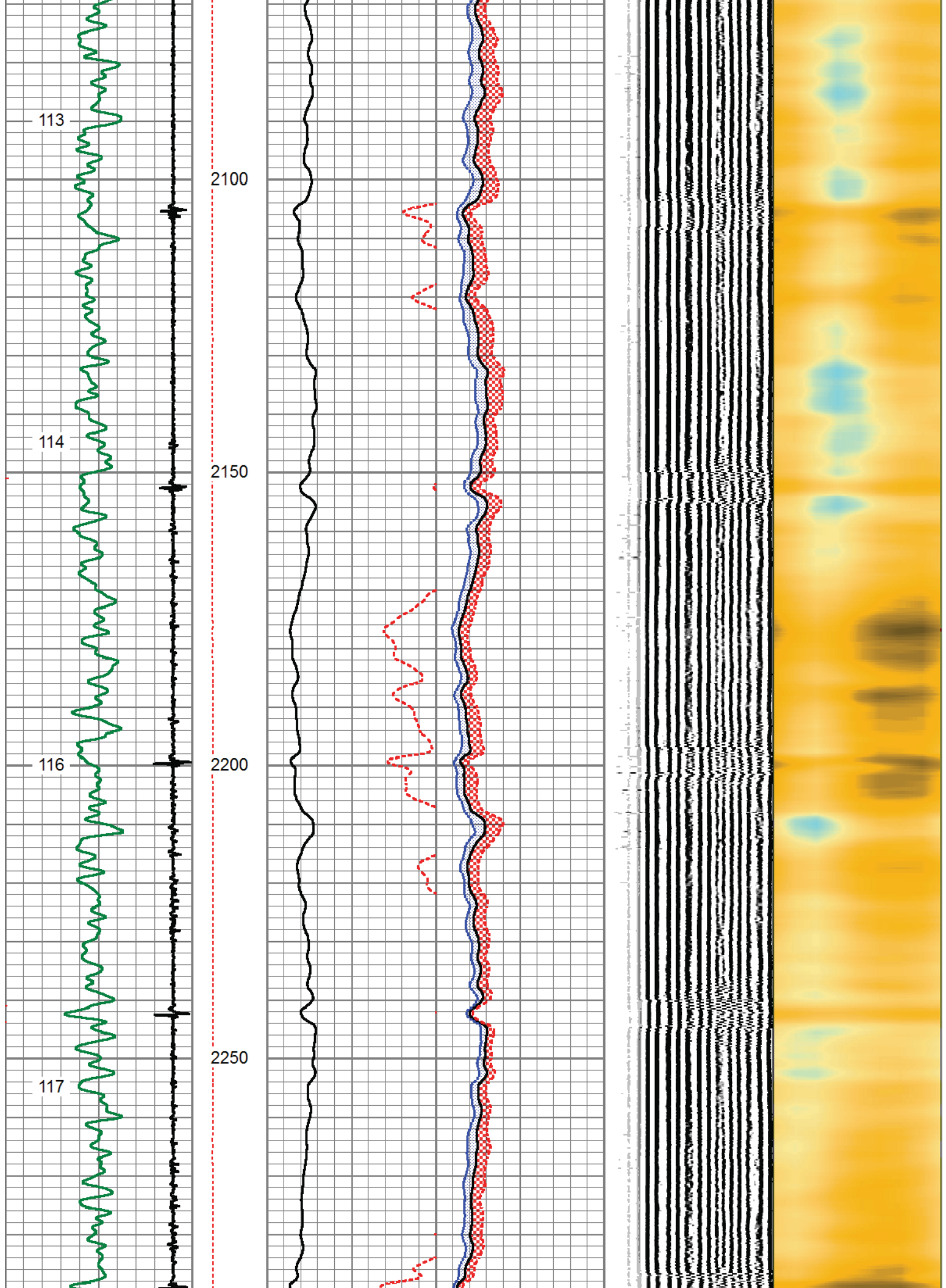
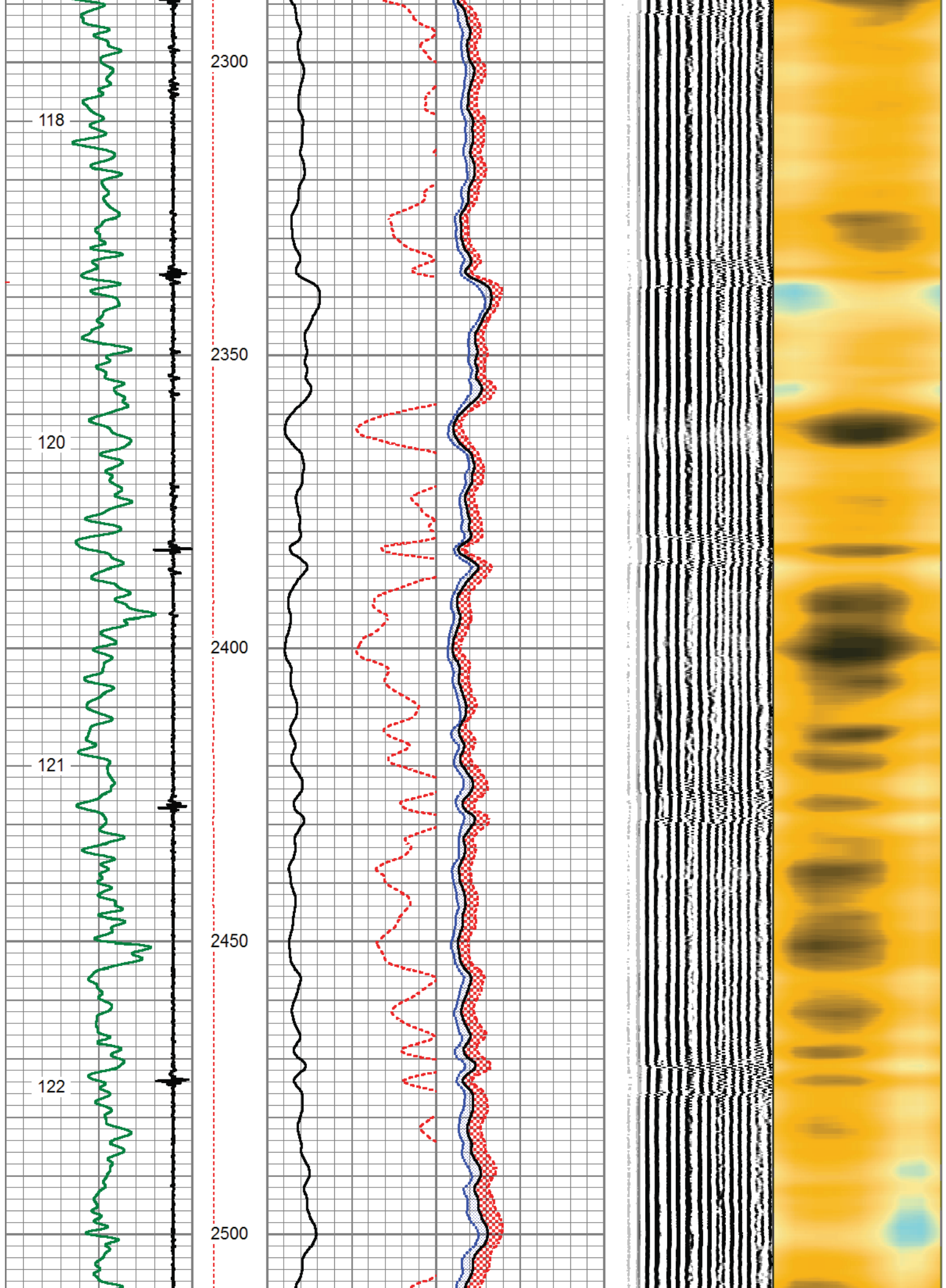
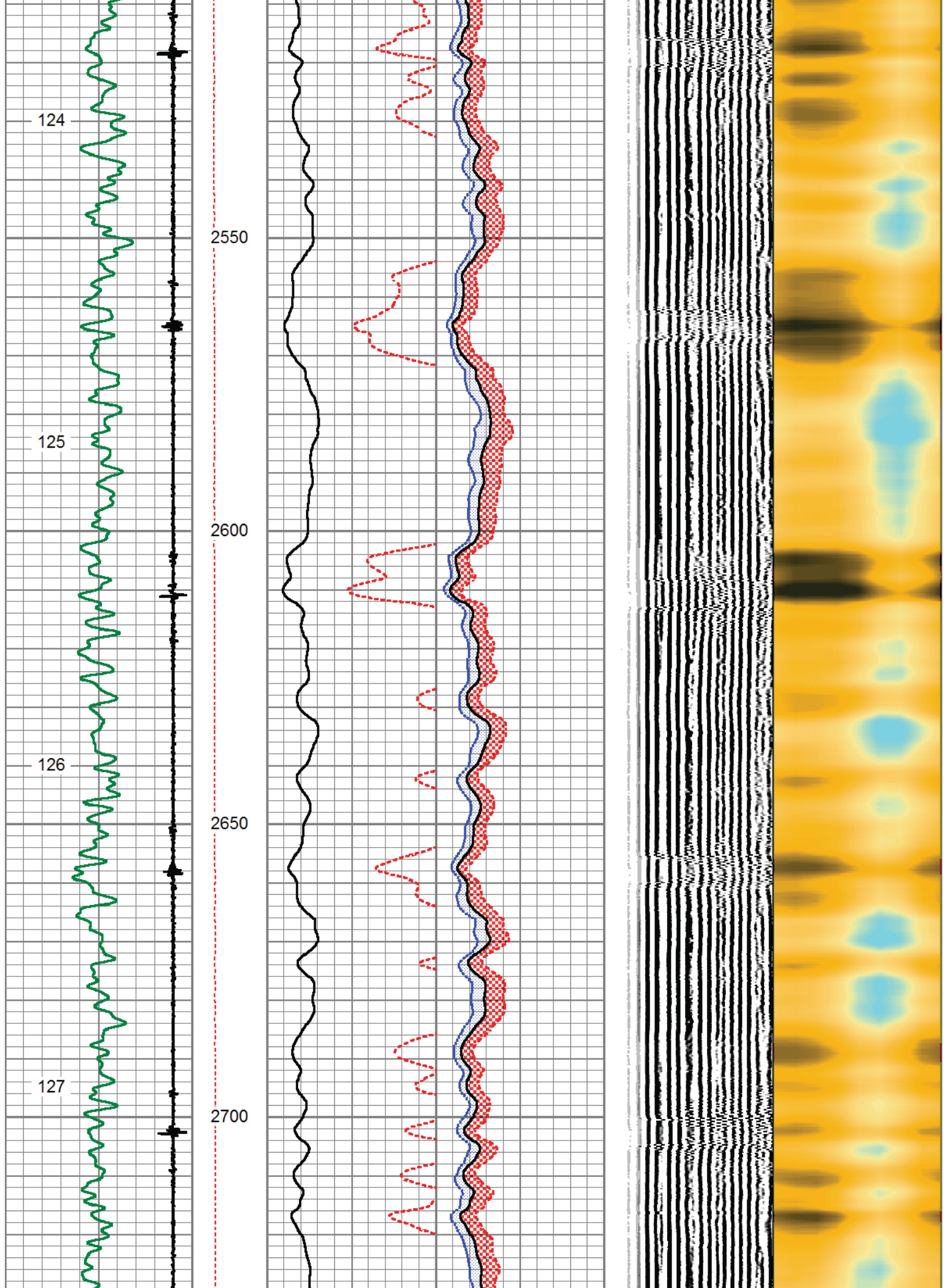
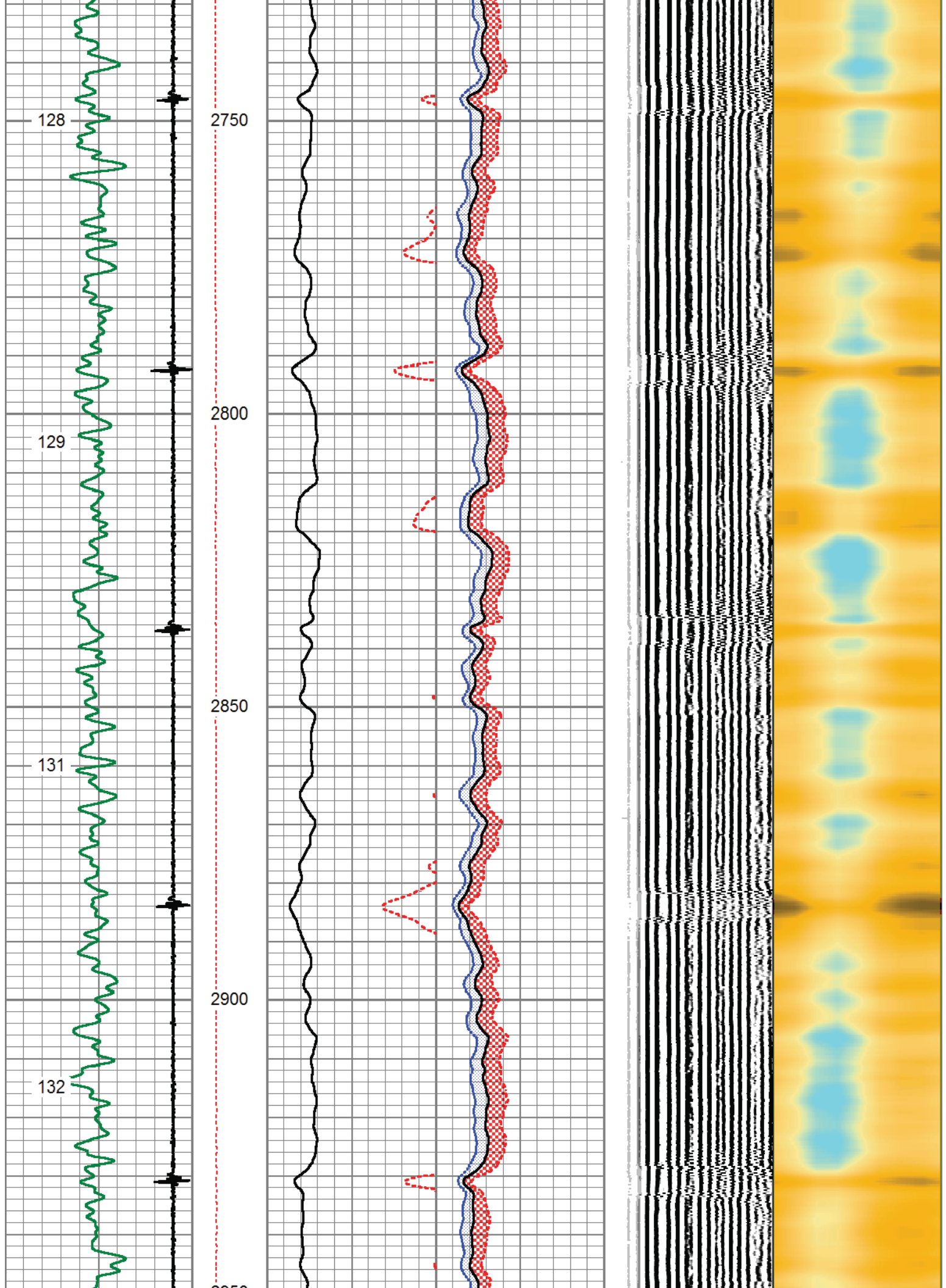


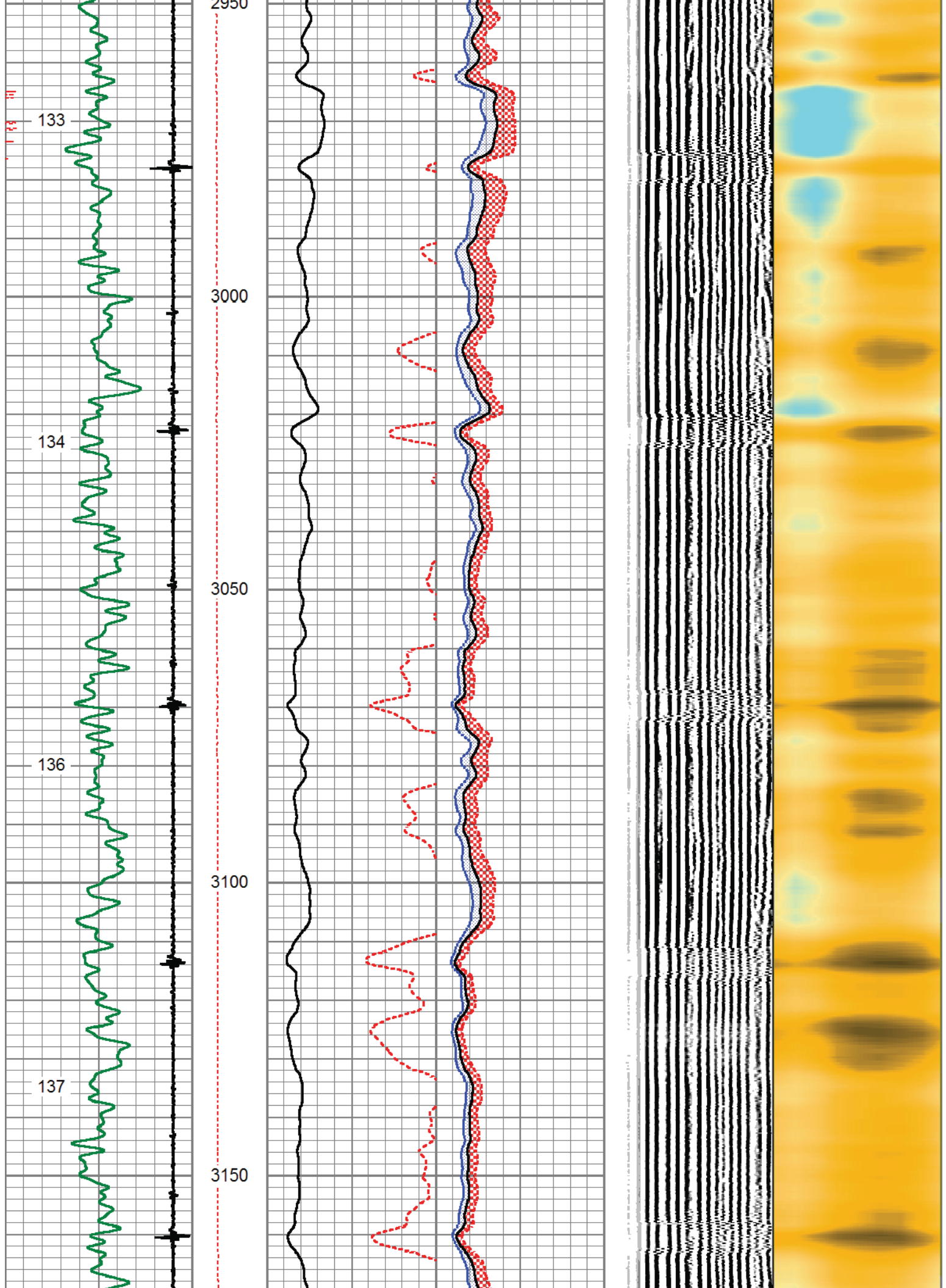
Figure 1: Time-series plots of variables 107, 109, 110, and 111 (left), a single variable (middle), a variable with a shaded confidence interval (right), and a heatmap (far right) from 1850 to 2050. The vertical dashed red line indicates a specific year, likely 1875.

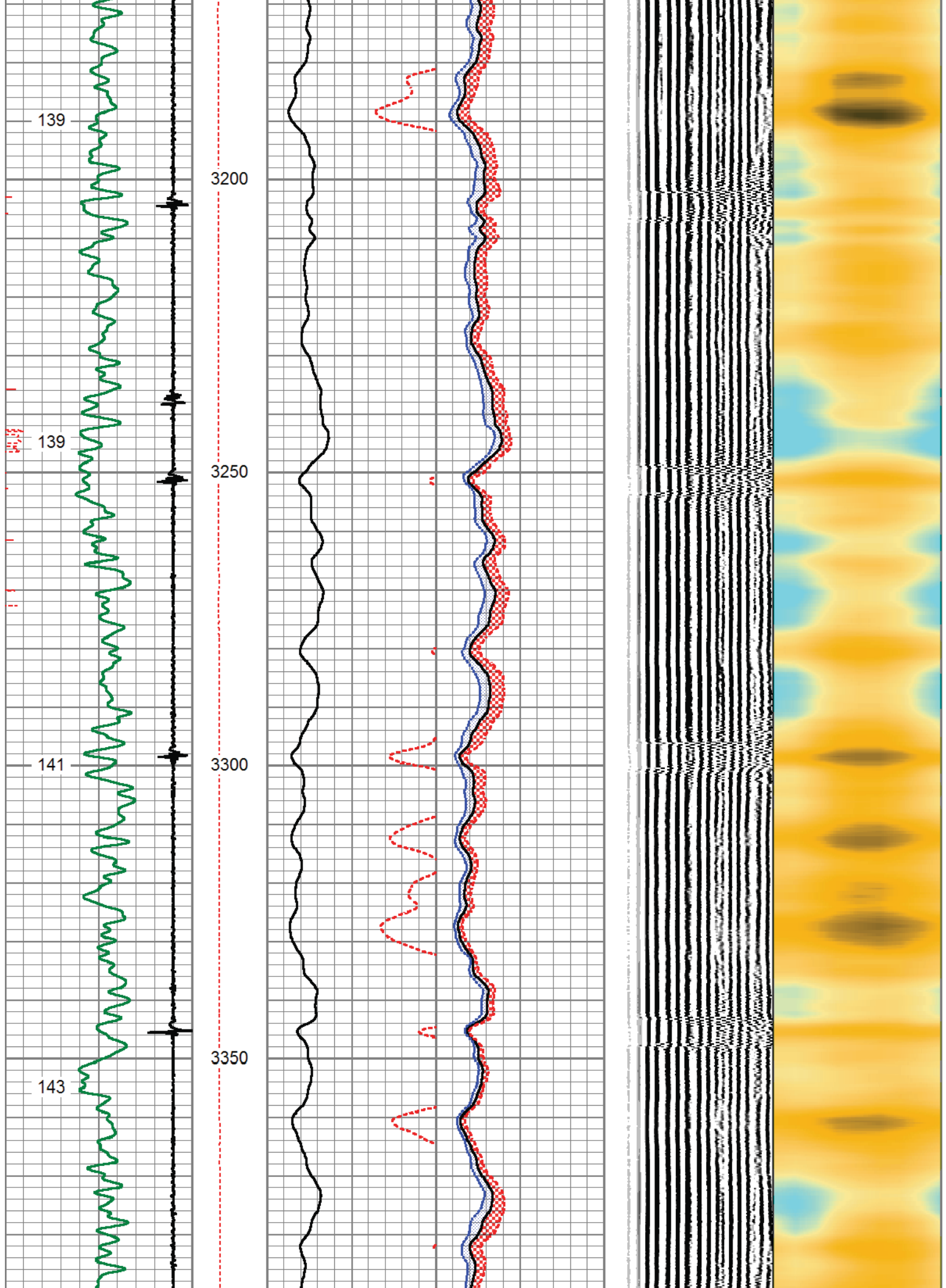


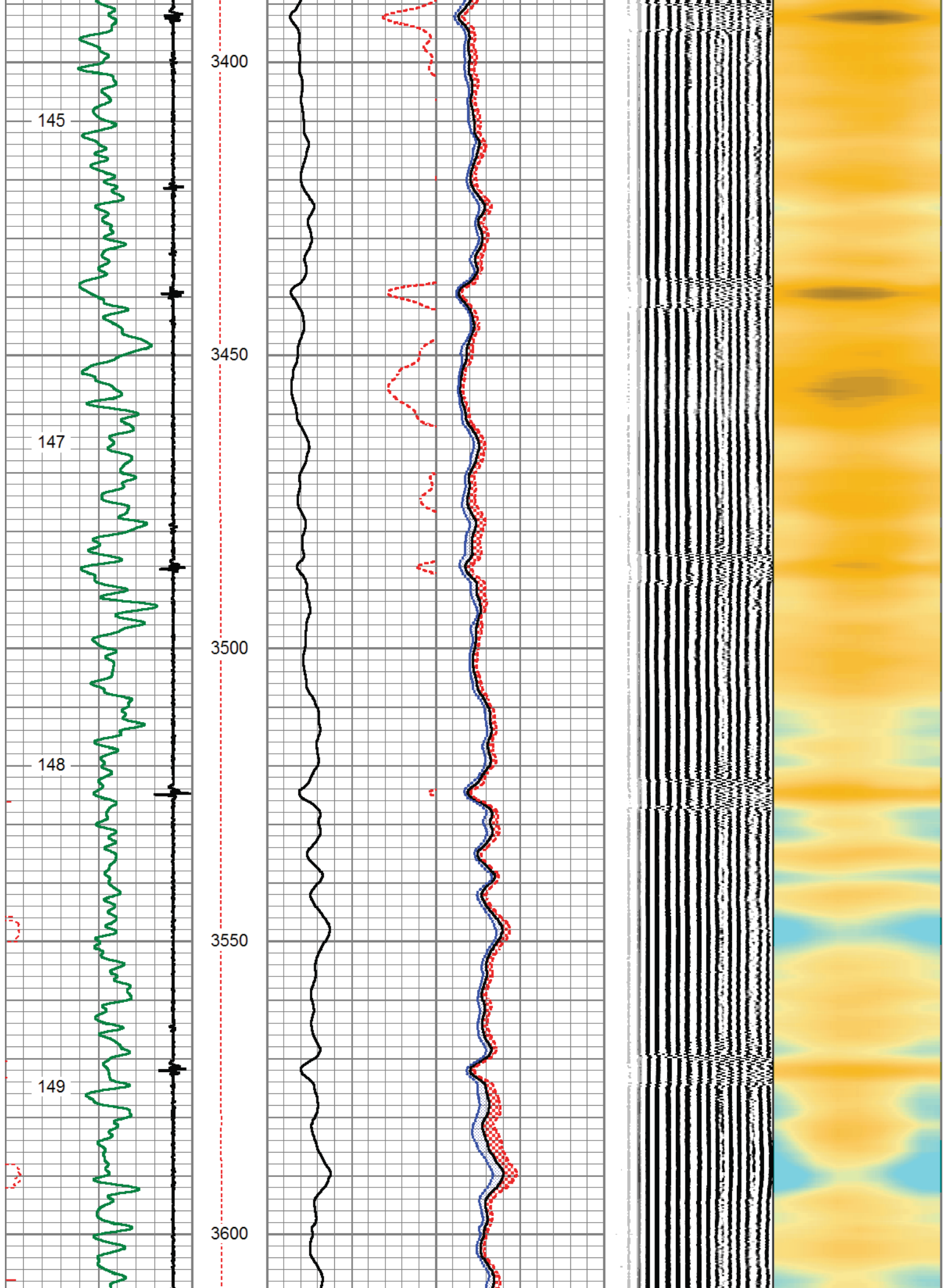


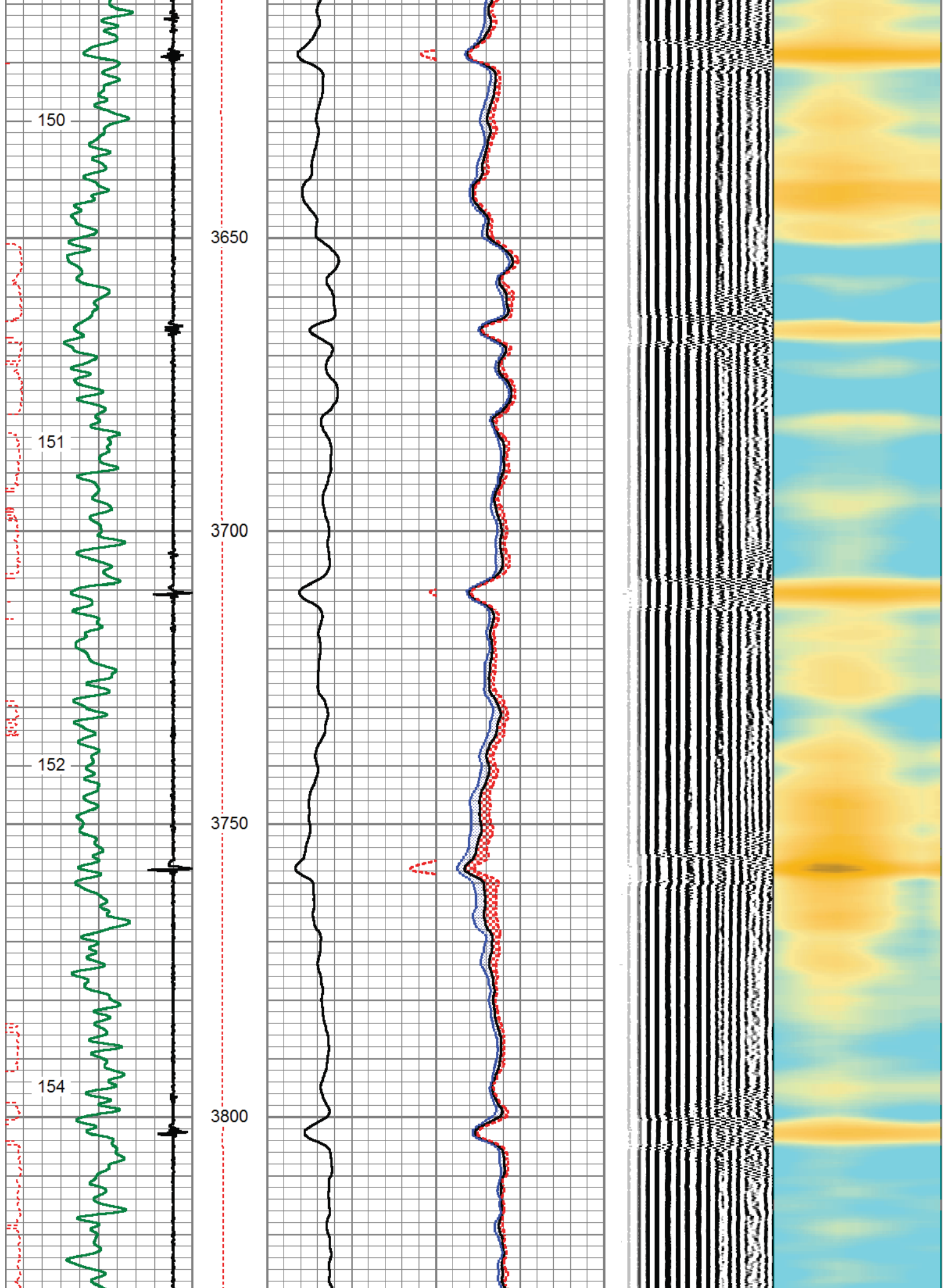


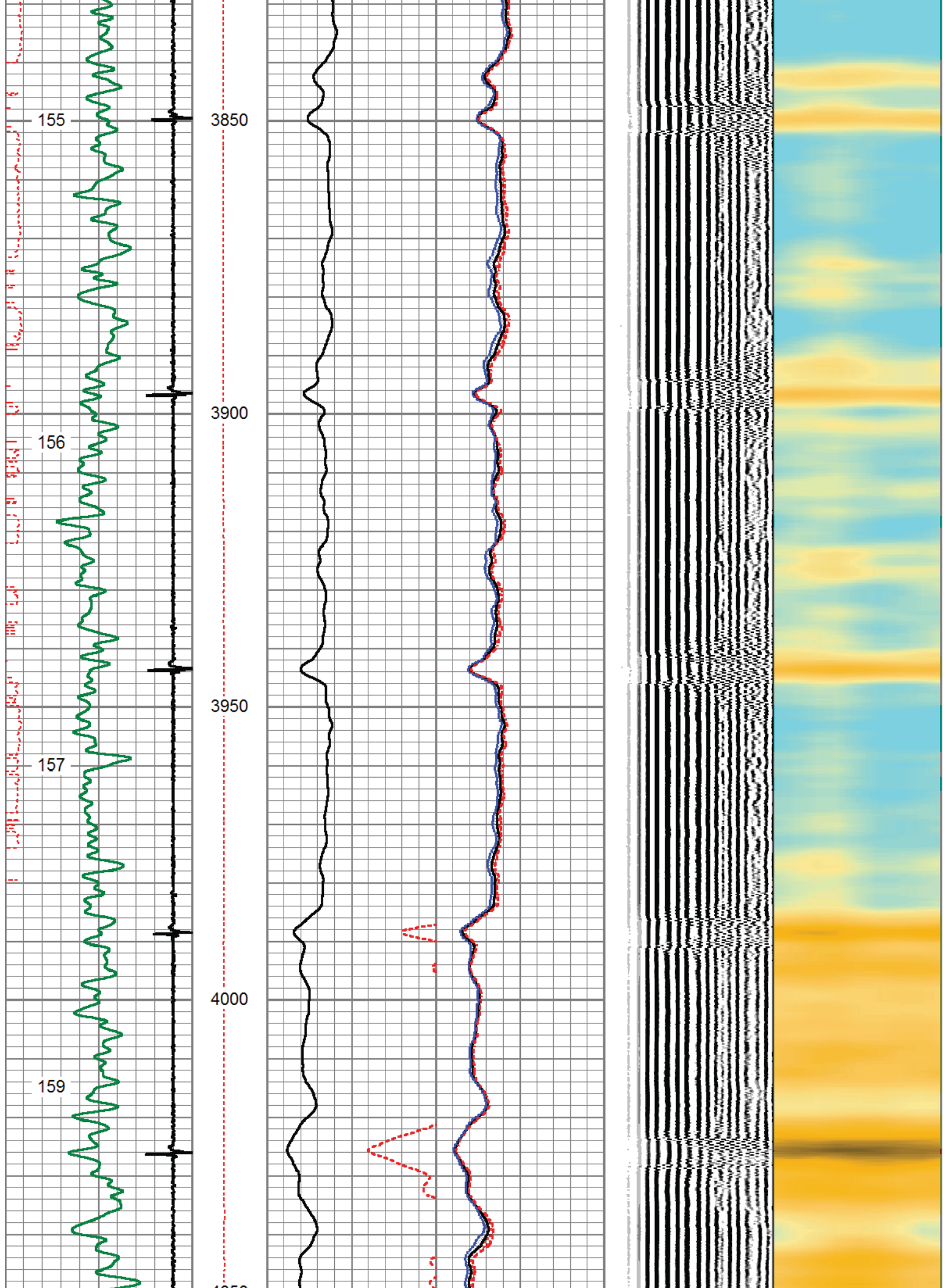


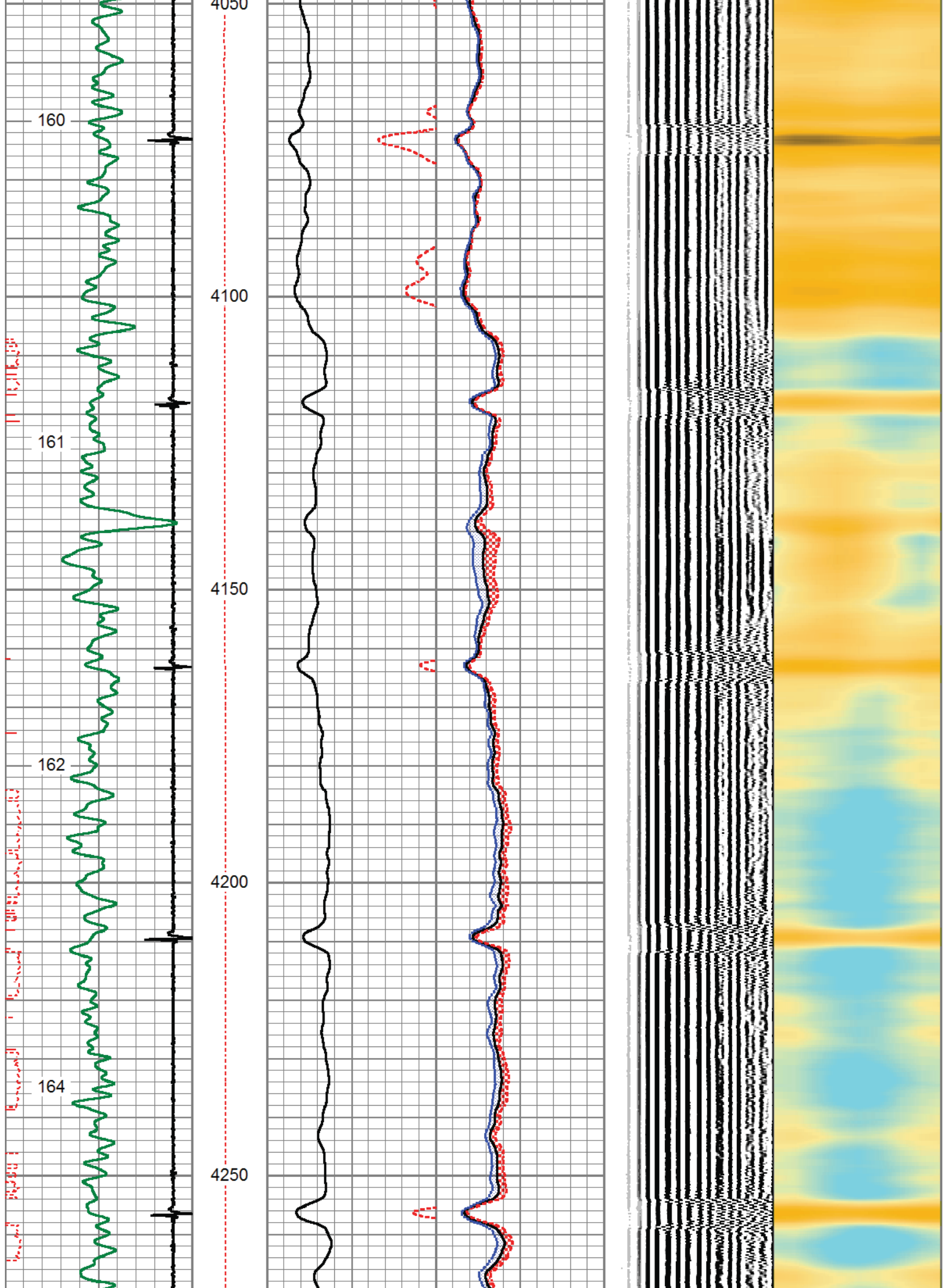


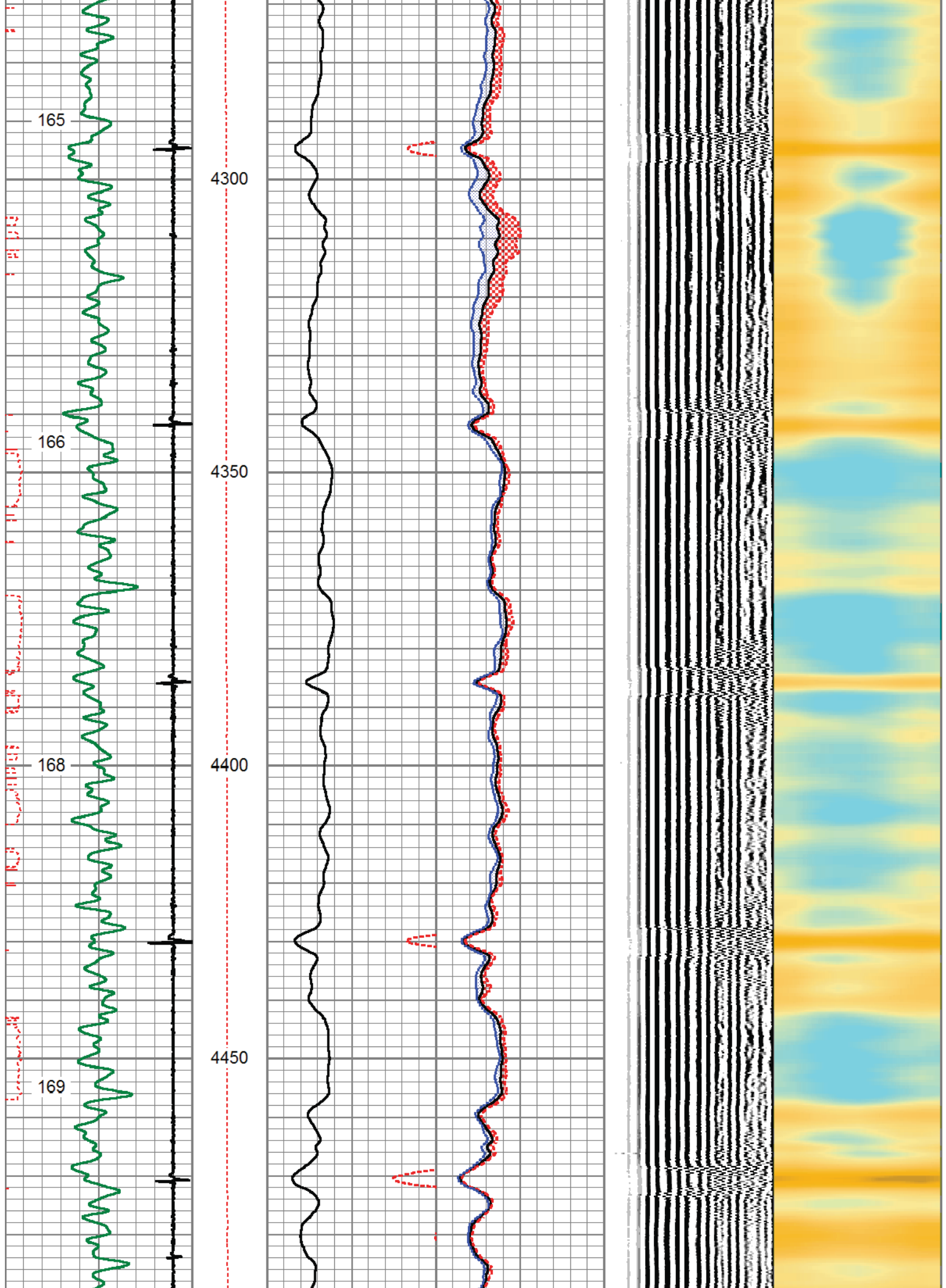


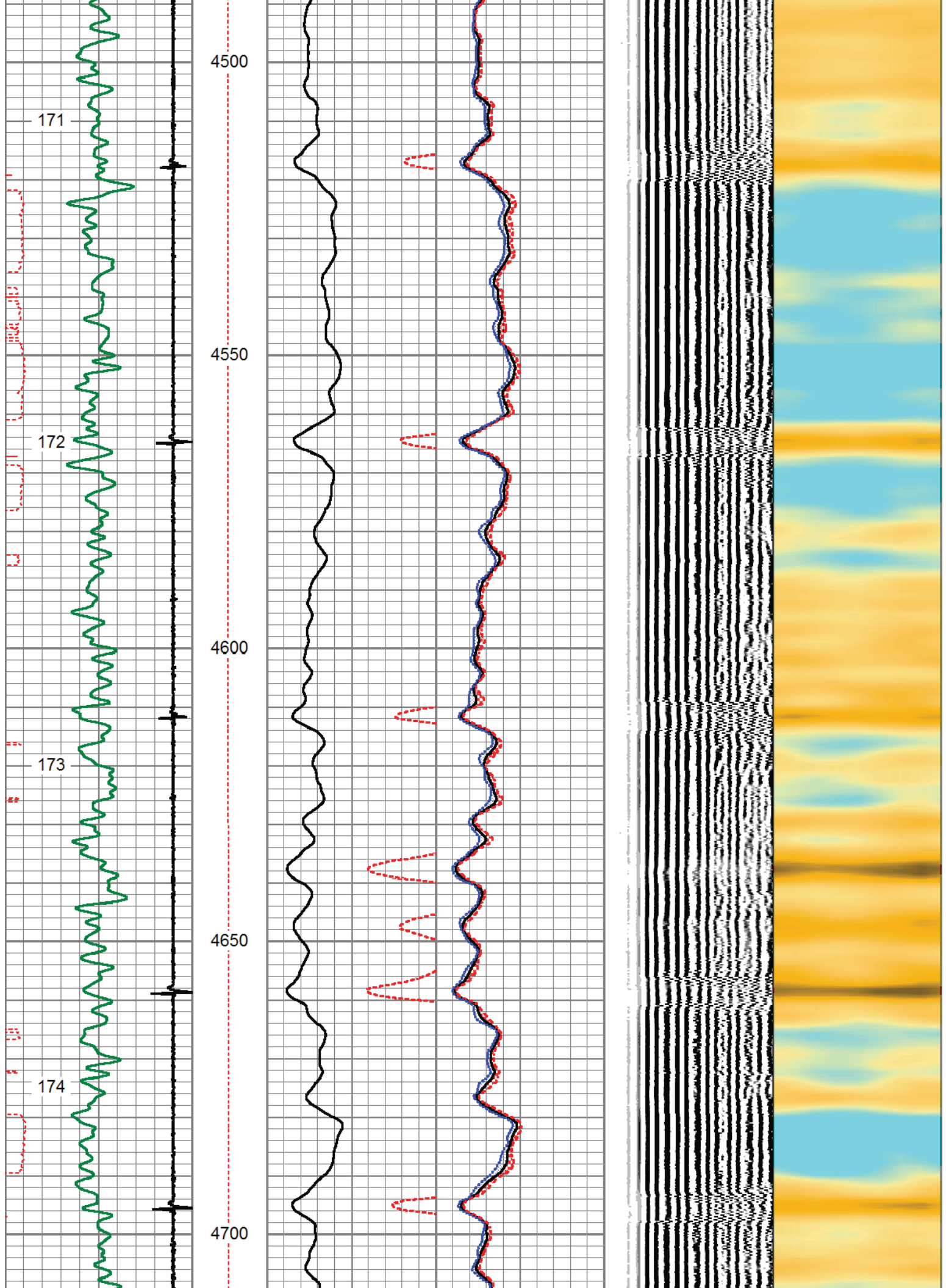


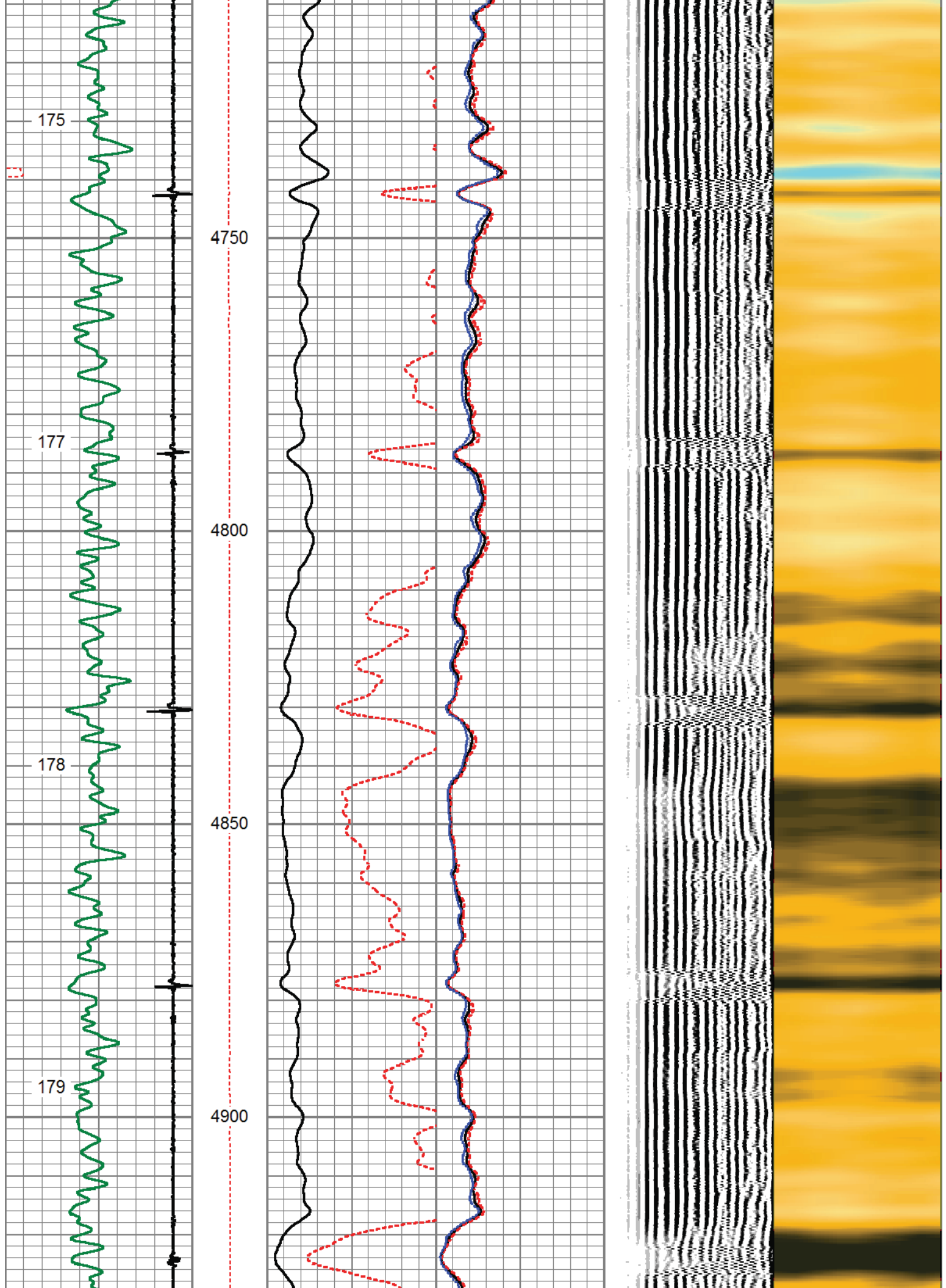


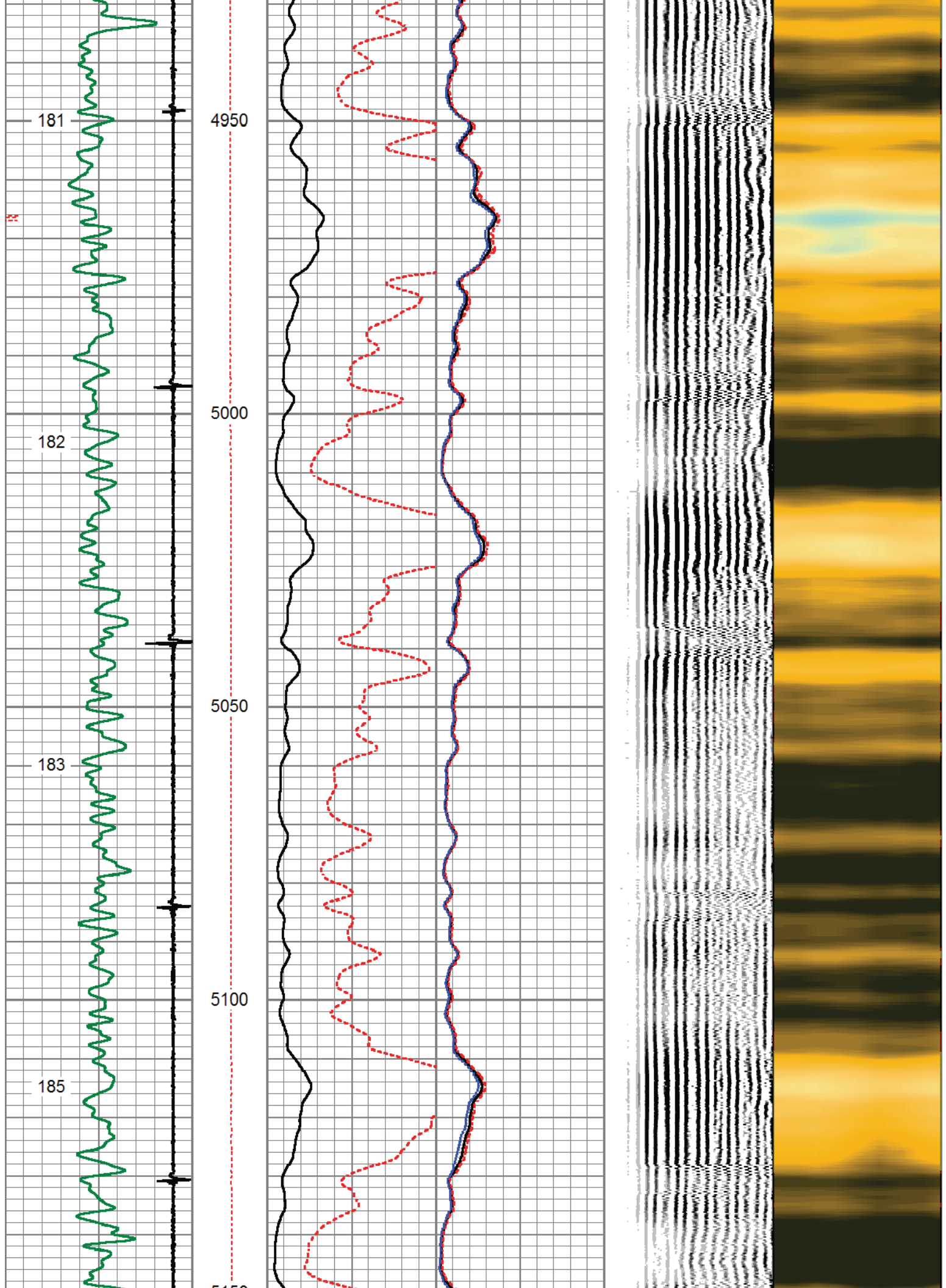


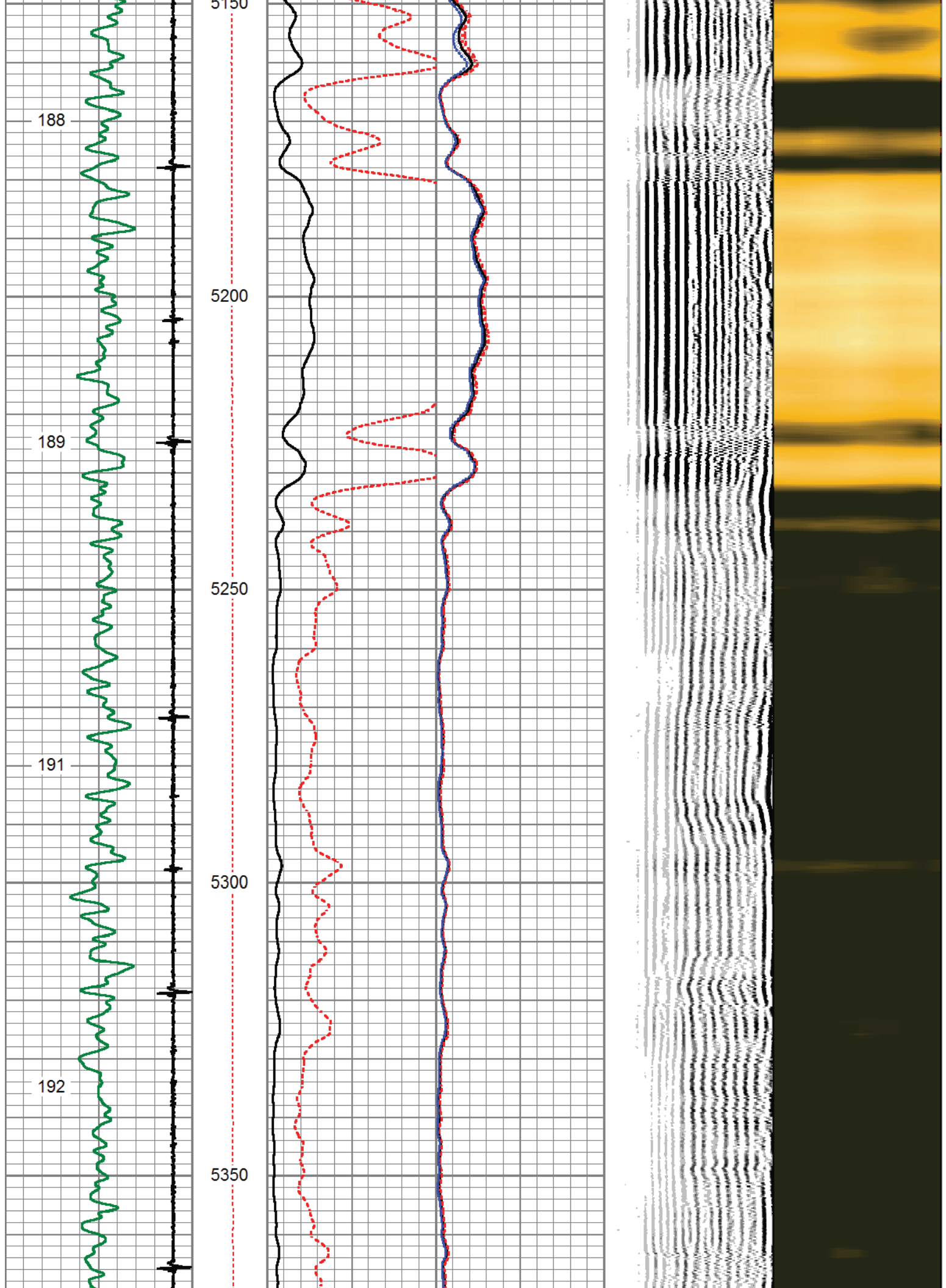


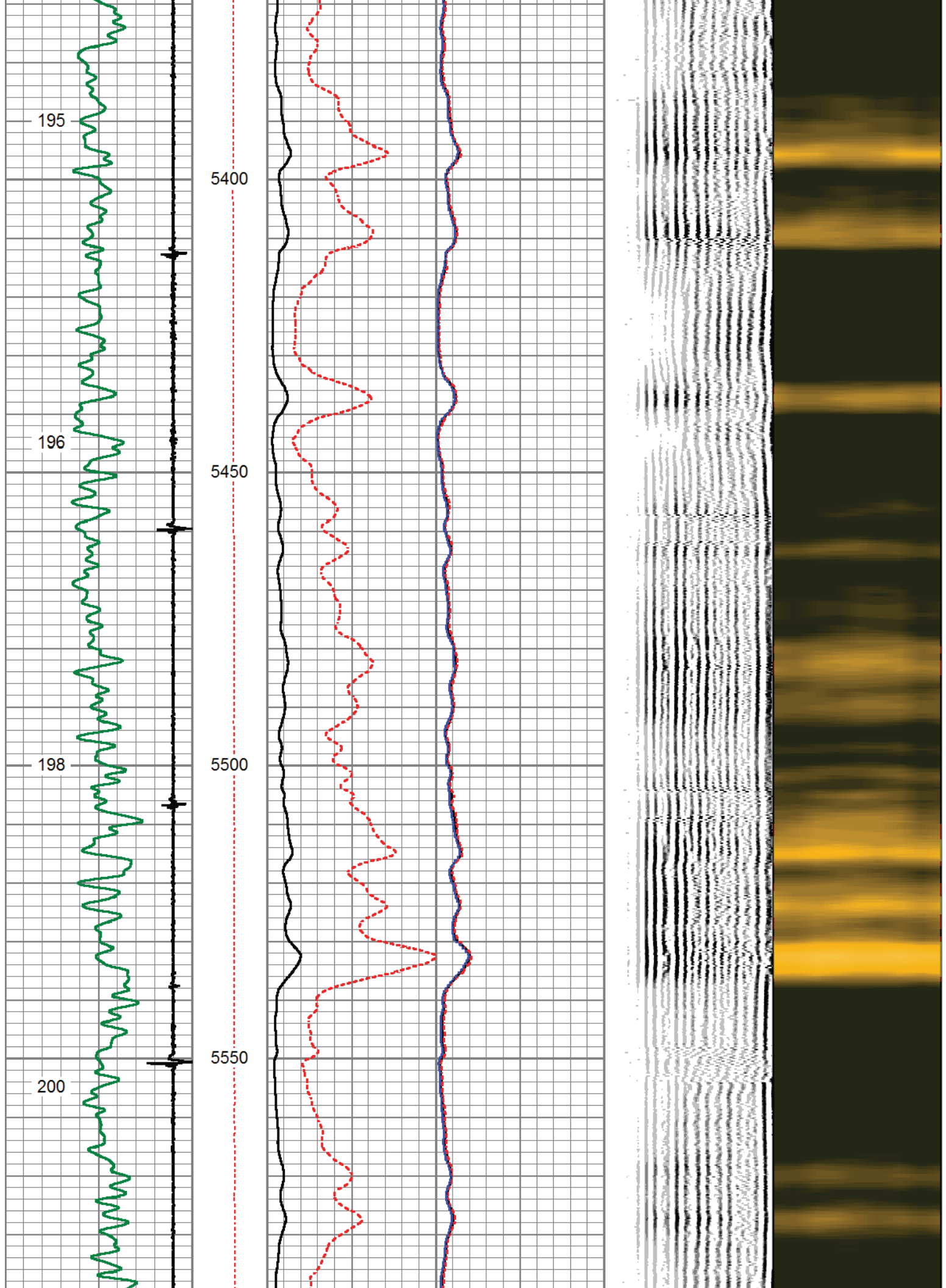


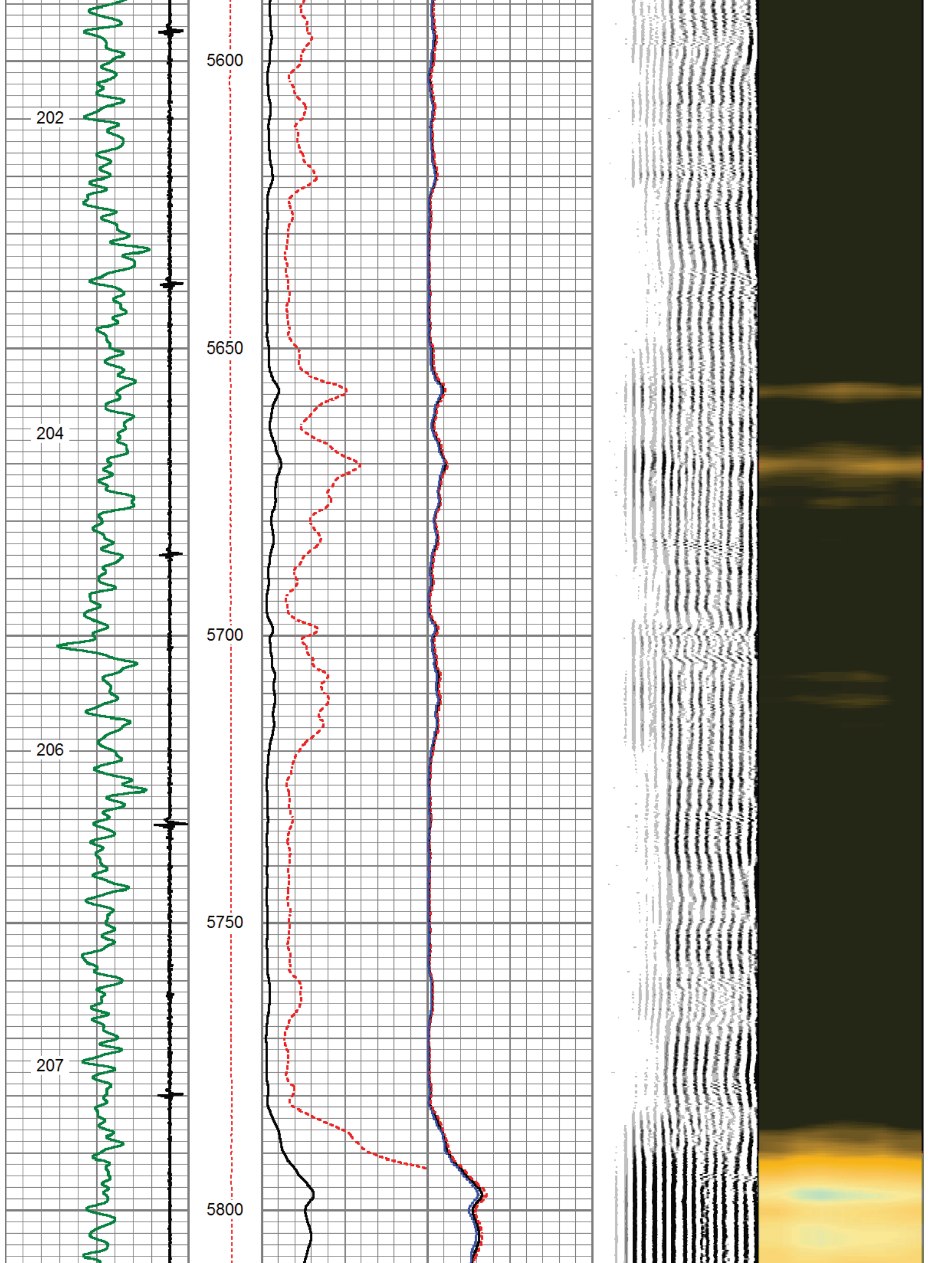


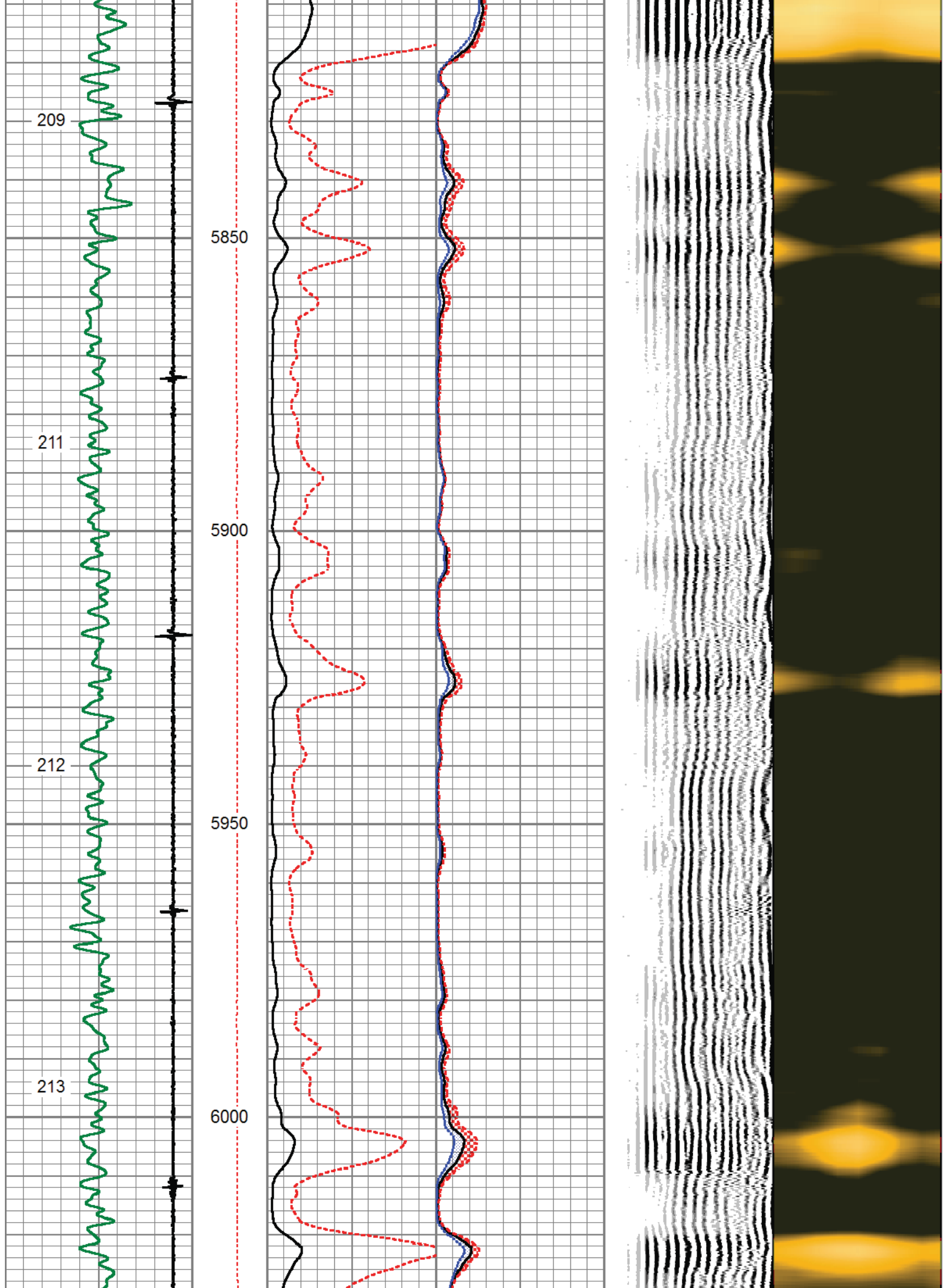


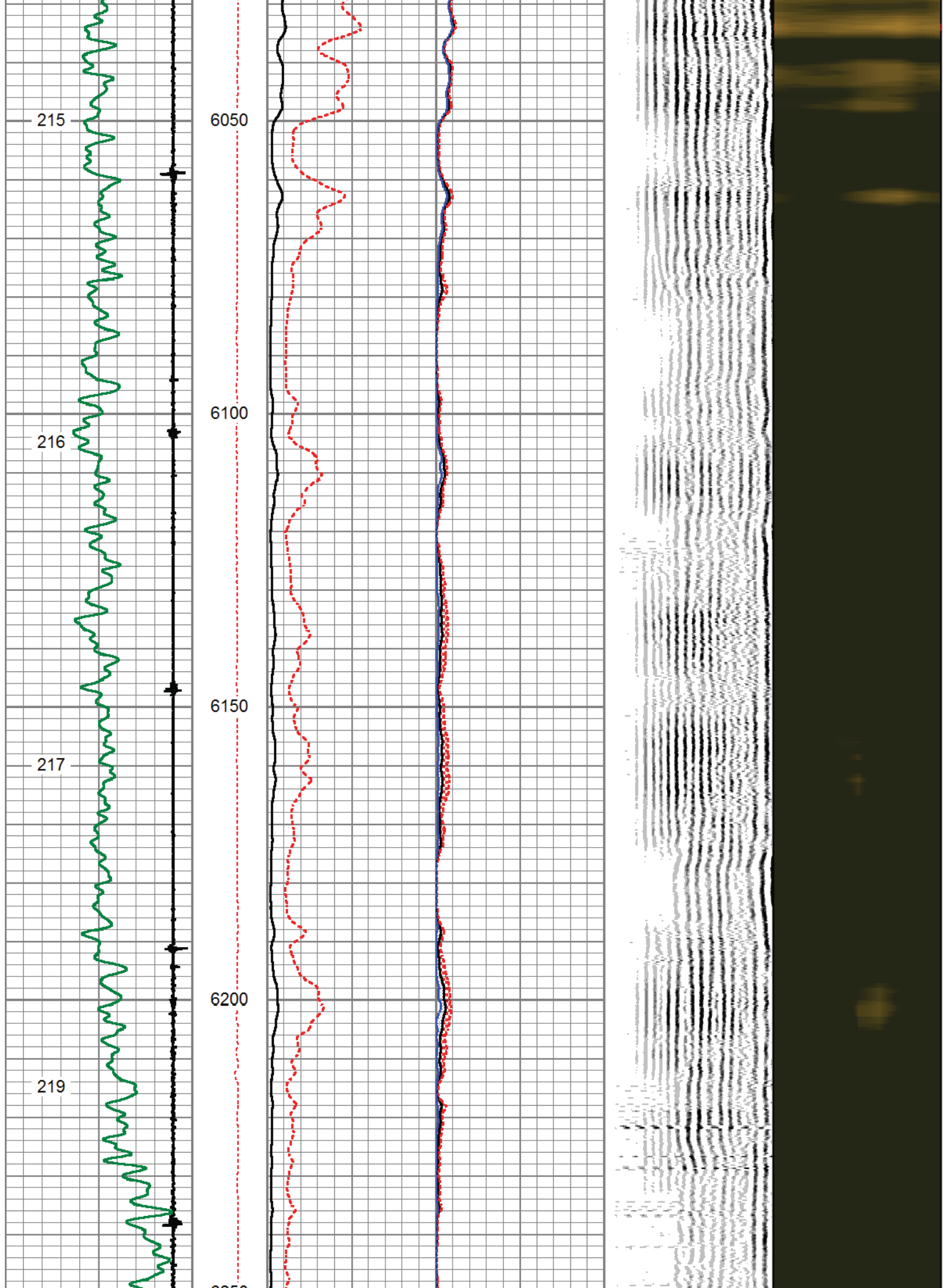


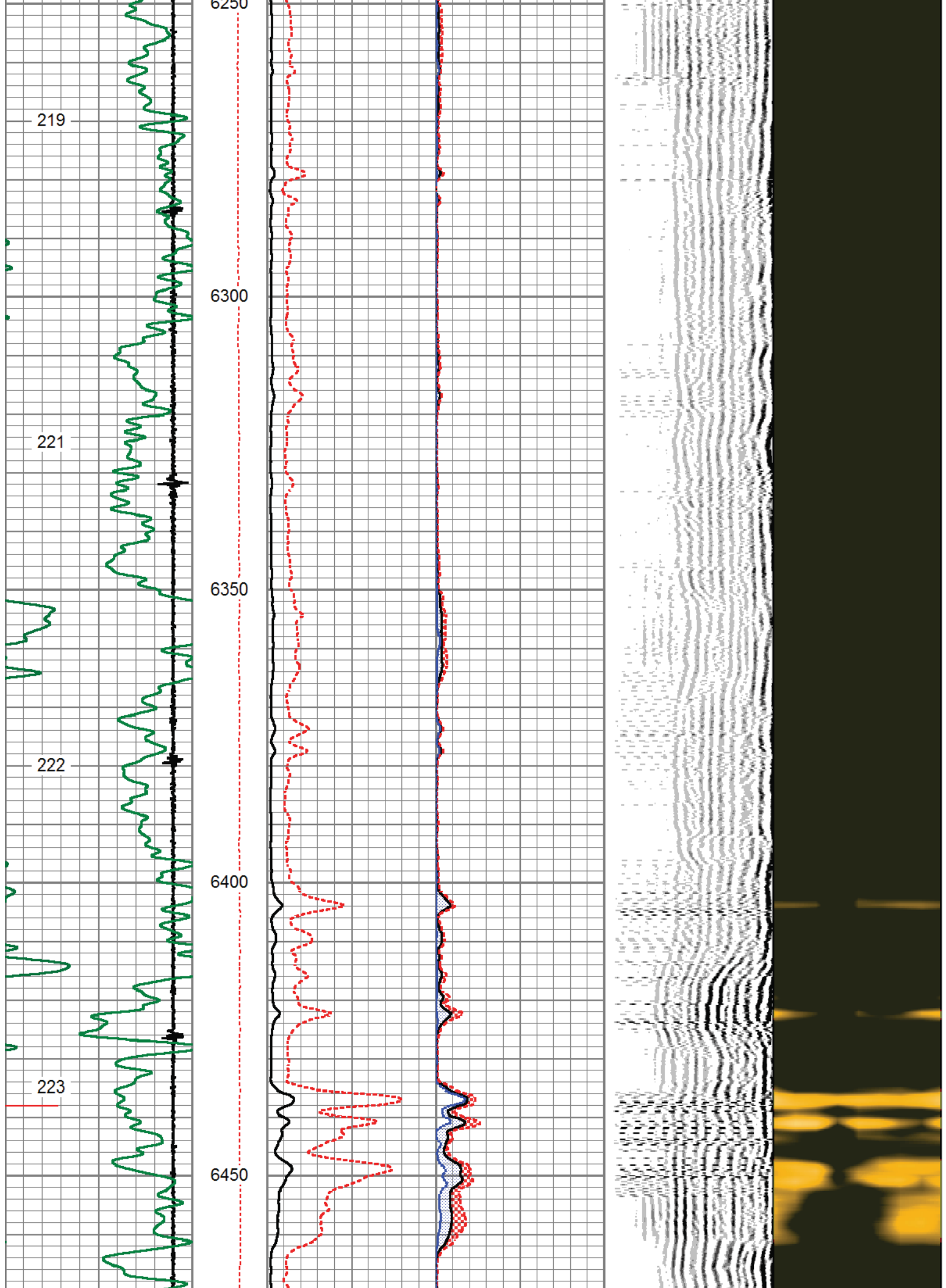


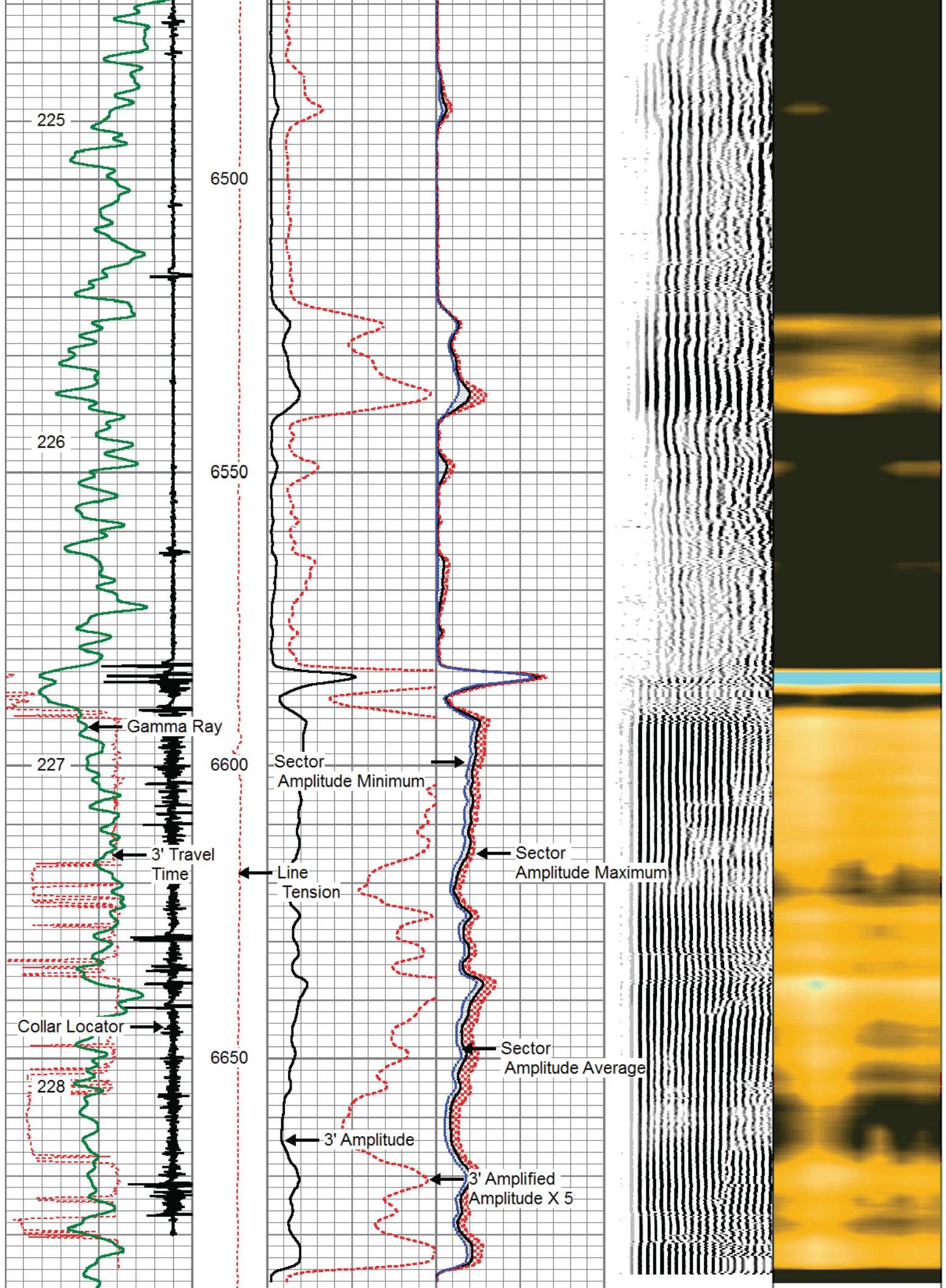














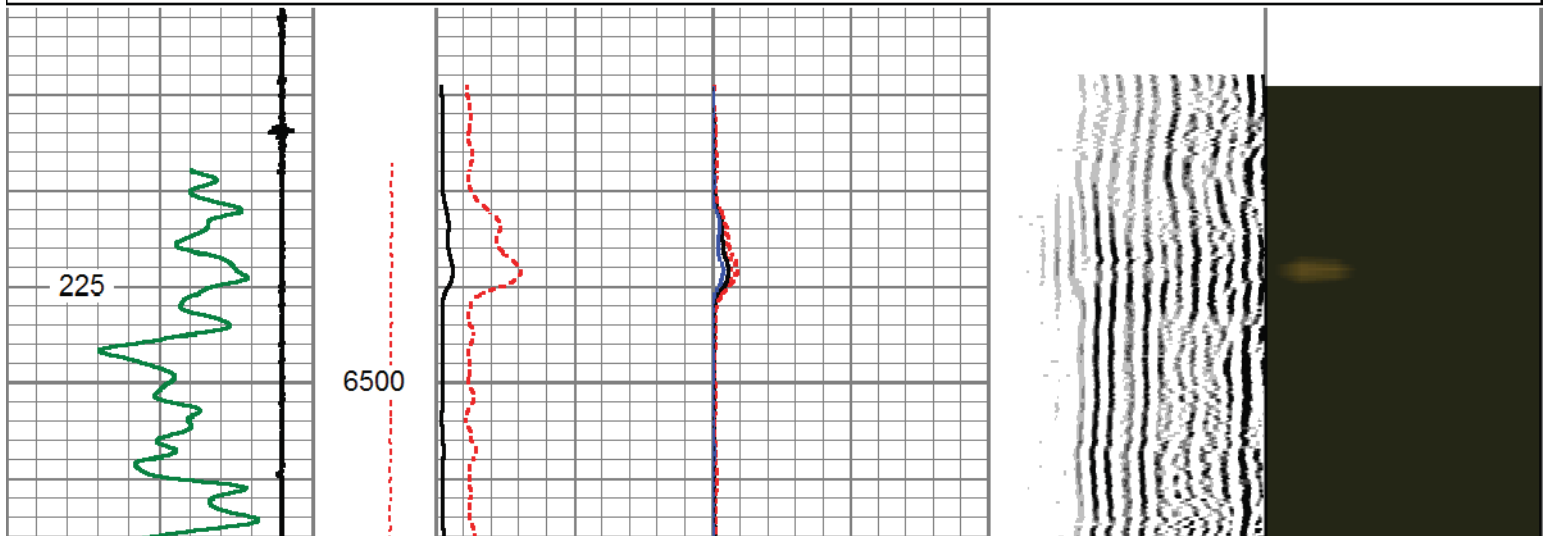
3' Travel Time 300 (usec) 200	Line Tension 0 (I2000)	3' Amplitude (mV) 100	Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150				10		60
Gamma Ray 0 (GAPI) 150		0 (mV) 20	Sector Amplitude Maximum	0 150					
Temp (degF)			Sector Amplitude Minimum	0 150					

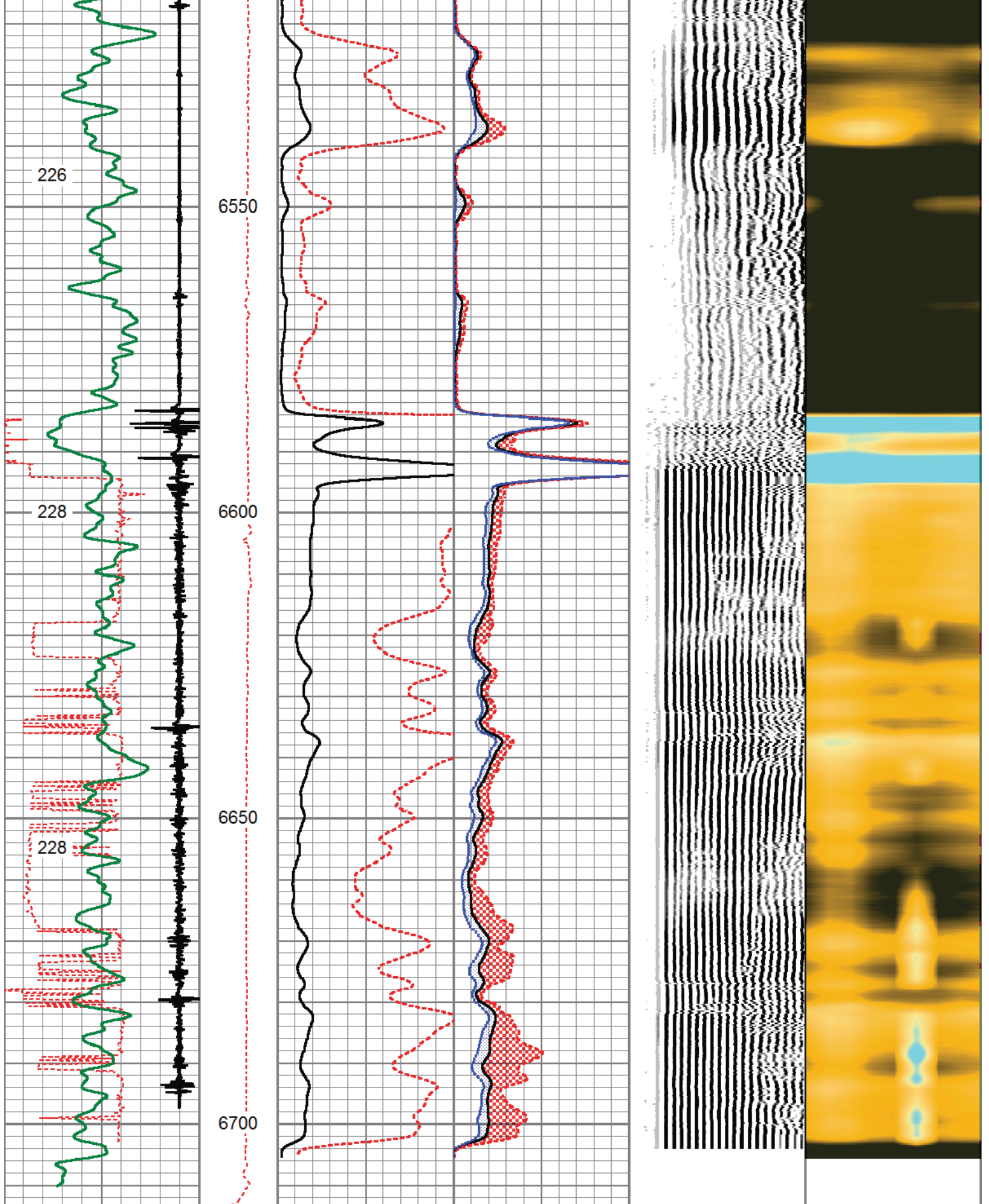
	MAIN LOG
	ZERO PSI APPLIED AT SURFACE

	REPEAT SECTION
	ZERO PSI APPLIED AT SURFACE

Database File	highpoint_anschütz eq farms 4-62-33-6457csb_0512345306_20180524_scbl.db
Dataset Pathname	pass2
Presentation Format	pinr_scbl
Dataset Creation	Thu May 24 13:58:27 2018
Charted by	Depth in Feet scaled 1:240

3' Travel Time 300 (usec) 200	Line Tension 0 (I2000)	3' Amplitude (mV) 100	Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150				10		60
Gamma Ray 0 (GAPI) 150		0 (mV) 20	Sector Amplitude Maximum	0 150					
Temp (degF)			Sector Amplitude Minimum	0 150					





3' Travel Time	Line Tension	3' Amplitude (mV)	Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
300 (usec)	0 (12000)	0 100	0 150				10		60
-9 Collar Locator		3' Amplified Amplitude X 5	Sector Amplitude Maximum						
Gamma Ray		0 20							

Gamma Ray	0	(GAPI)	150	0	150
Temp (degF)				Sector Amplitude Minimum	
				0	150

Calibration Report

Database File highpoint_anschutz eq farms 4-62-33-6457csb_0512345306_20180524_scbl.db
 Dataset Pathname pass2
 Dataset Creation Thu May 24 13:58:27 2018

Gamma Ray Calibration Report

Serial Number: 120903
 Tool Model: 275 Probe
 Performed: Fri Jul 15 10:35:44 2016

Calibrator Value: 240.0 GAPI

Background Reading: 57.3 cps
 Calibrator Reading: 360.9 cps

Sensitivity: 0.7904 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 130584
 Tool Model: 275 Probe w Temp New Mod

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 213.321 ft

Master Calibration, performed Thu May 24 07:48:47 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	1.468	2.500	71.921	47.378	2.360
CAL	0.002	1.512				
5'	0.001	1.469	2.500	71.921	47.294	2.460
SUM						
S1	-0.018	1.474	0.000	100.000	67.010	1.195
S2	0.002	1.488	0.000	100.000	67.294	-0.160
S3	0.002	1.487	0.000	100.000	67.341	-0.144
S4	0.003	1.491	0.000	100.000	67.183	-0.171
S5	0.002	1.486	0.000	100.000	67.411	-0.146
S6	0.002	1.489	0.000	100.000	67.240	-0.140
S7	0.002	1.492	0.000	100.000	67.111	-0.162
S8	0.002	1.497	0.000	100.000	66.915	-0.148

Temperature Calibration Report

Serial Number: 130584
 Tool Model: 275 Probe w Temp New Mod
 Performed: (Not Performed)

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF

Low Reference: 0.00 deg
High Reference: 1.00 degF 0.00 deg 1.00 degF

Gain: 1.00
Offset: 0.00
Delta Spacing 1



PIONEER
Pioneer Energy Services

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