



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Youberg SR 11-12
Field Rulison
County Garfield
State Colorado

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Well Youberg SR 11-12
Field Rulison
County Garfield
State Colorado

Location: API #: 05-045-23298

SEC 12 TWP 7S RGE 94W
1882' FNL & 2127' FEL

Permanent Datum Ground Level Elevation 7254'
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Other Services
Elevation
K.B. 7278'
D.F. 7277'
G.L. 7254'

Date 05-JUL-2017

Run Number	One		
Depth Driller	10344 FT		
Depth Logger	10215 FT		
Bottom Logged Interval	10202 FT		
Top Log Interval	Surface		
Open Hole Size	8.75"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	238°F		
Estimated Cement Top	See Log		
Time Well Ready	19:00		
Time Logger on Bottom	20:45		
Equipment Number	HDO359		
Location	Grand Junction		
Recorded By	Michael Kochevar		
Witnessed By	---		

Borehole Record			Tubing Record				
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom
Surface Casing	9 5/8	32.3	H-40	Surface	1285 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10344 FT
Intermediate #2					
Liner					

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log ran as per customer request
Depth referenced to Kelly Bushing at 24 FT
Ground Level 1 FT below cut pipe
Marker joint logged at 6902 FT - 6922 FT
Log ran from 10202 FT to surface
Recorded with 0 PSI surface induced pressure

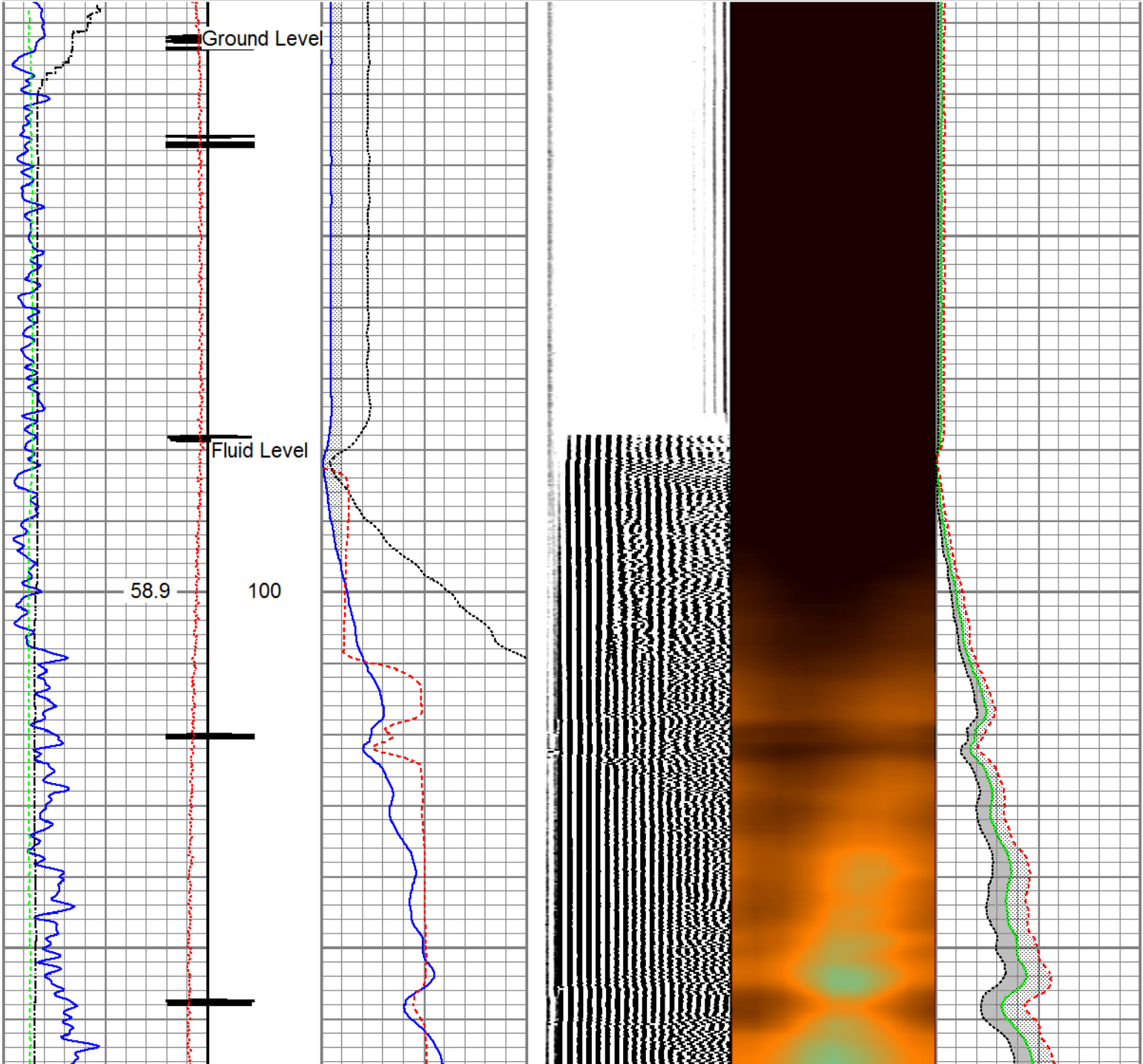
Thank you for choosing Reliance Oilfield Services, LLC!!

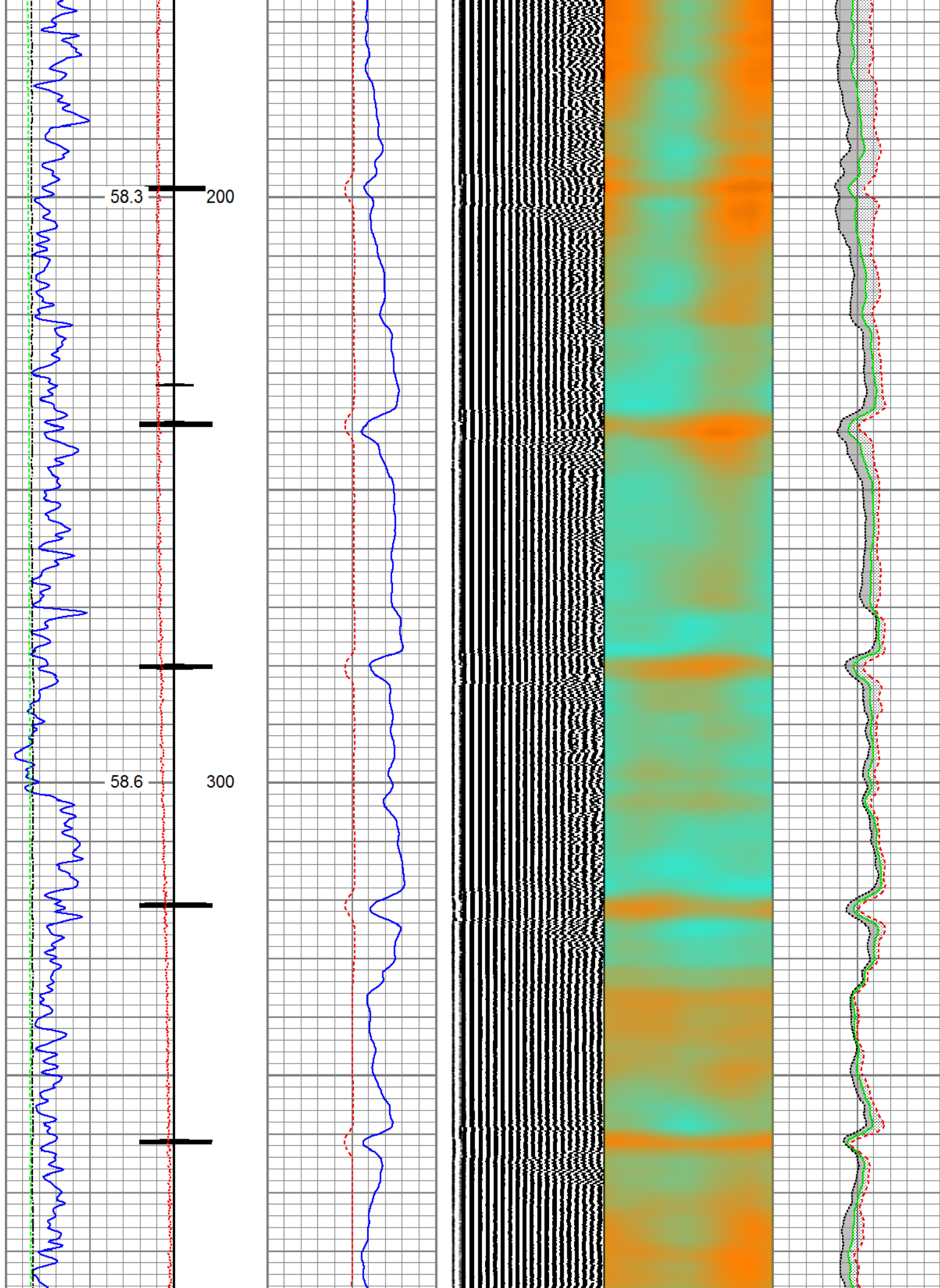


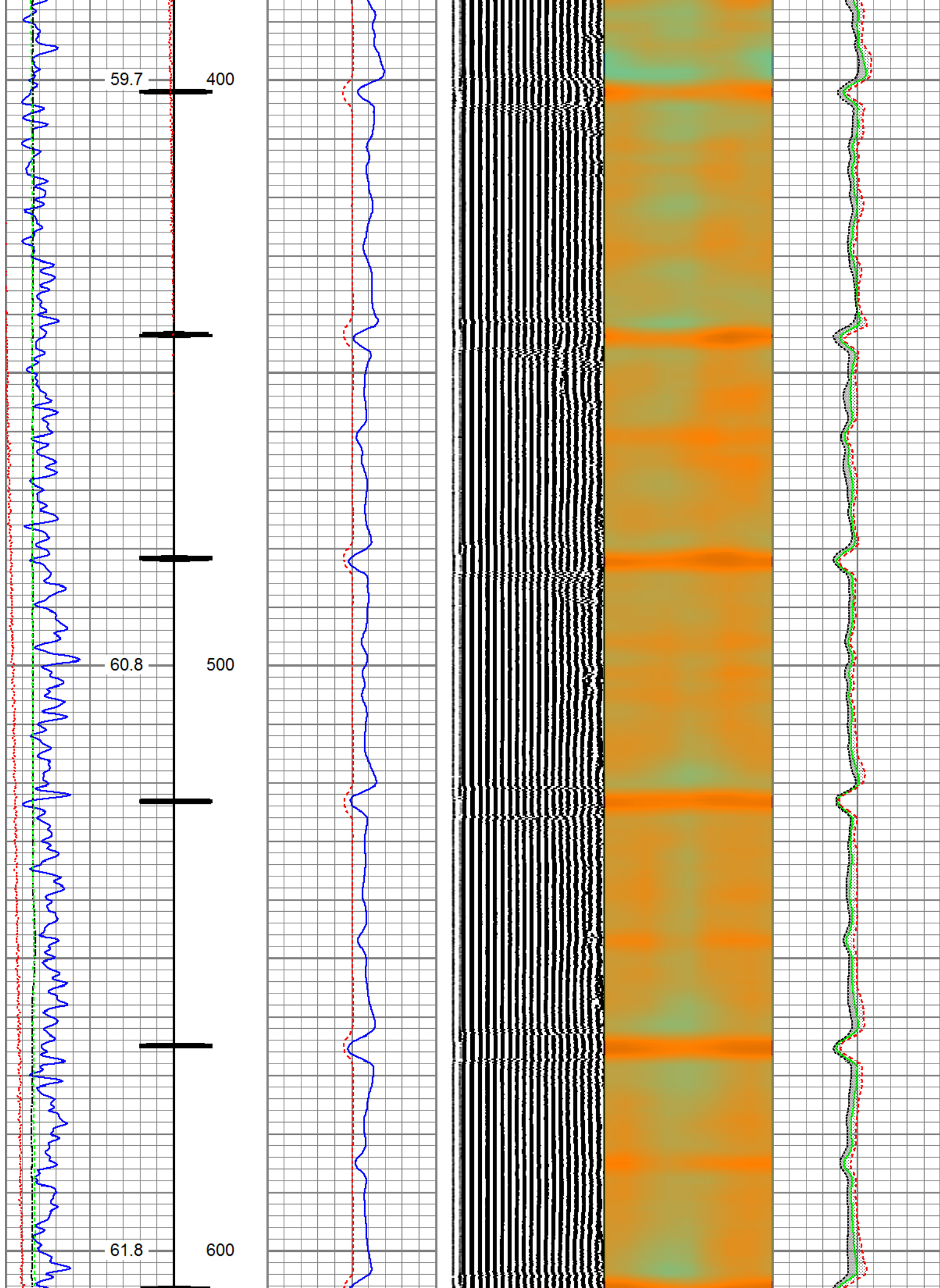
Main Pass

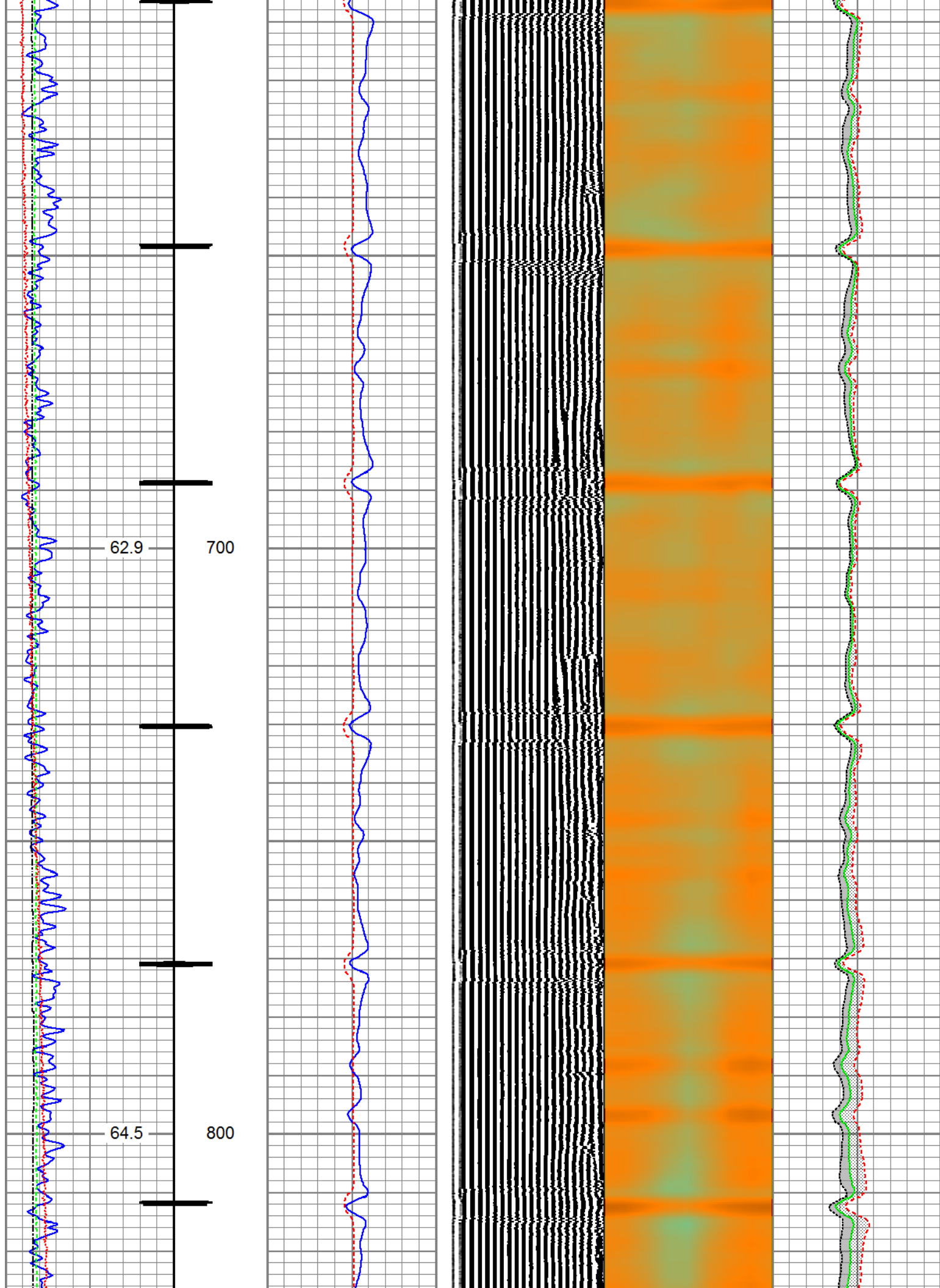
Recorded with 0 PSI Surface Induced Pressure

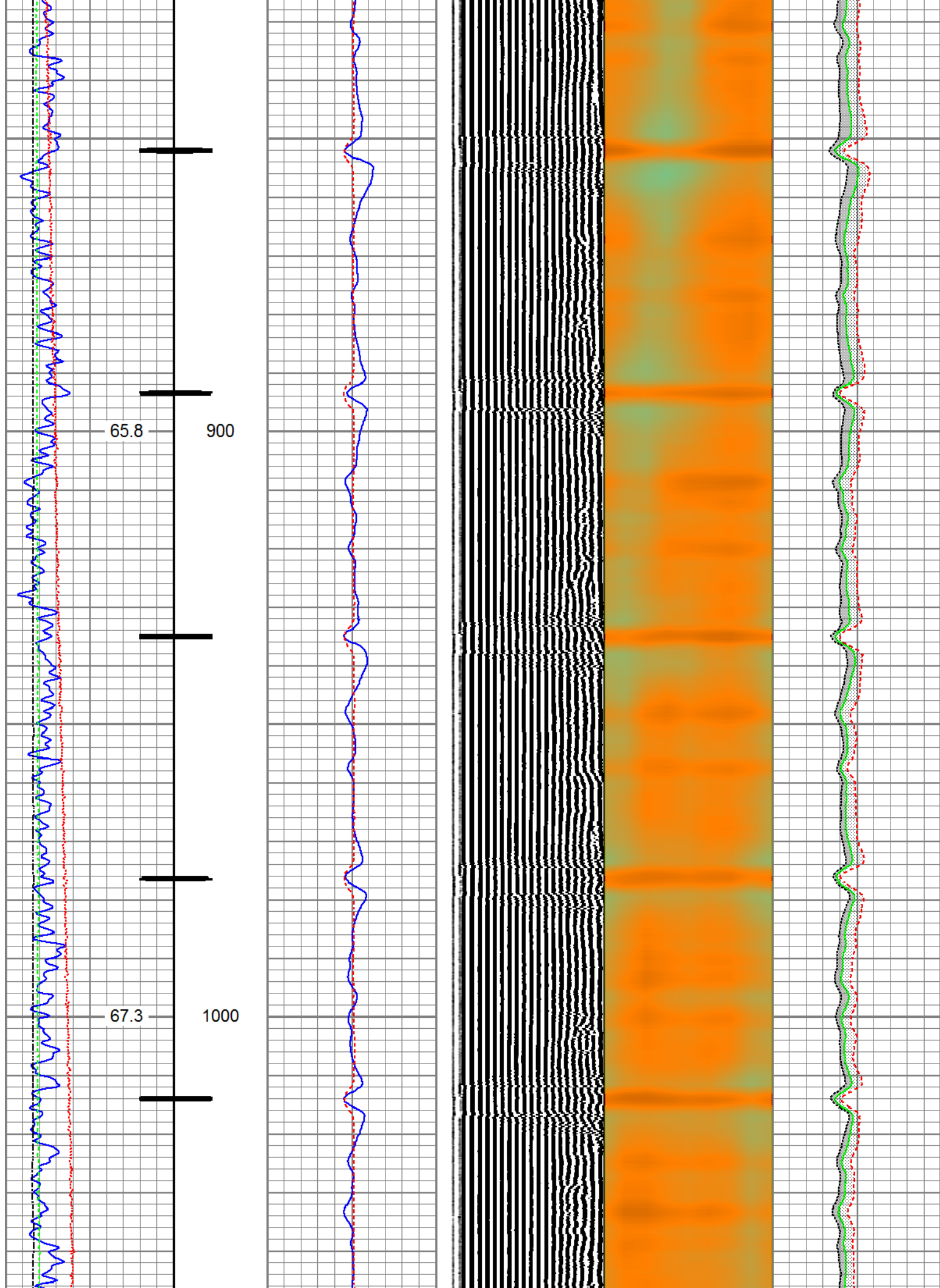
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 1200	10 110	0 150
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 150
Line Speed	3' Travel Time			Maximum Amplitude
-150 (ft/min) 150	300 (usec) 200			0 150
Line Tension				
0 (lb) 2000				
Temperature				
0 (degF) 20				

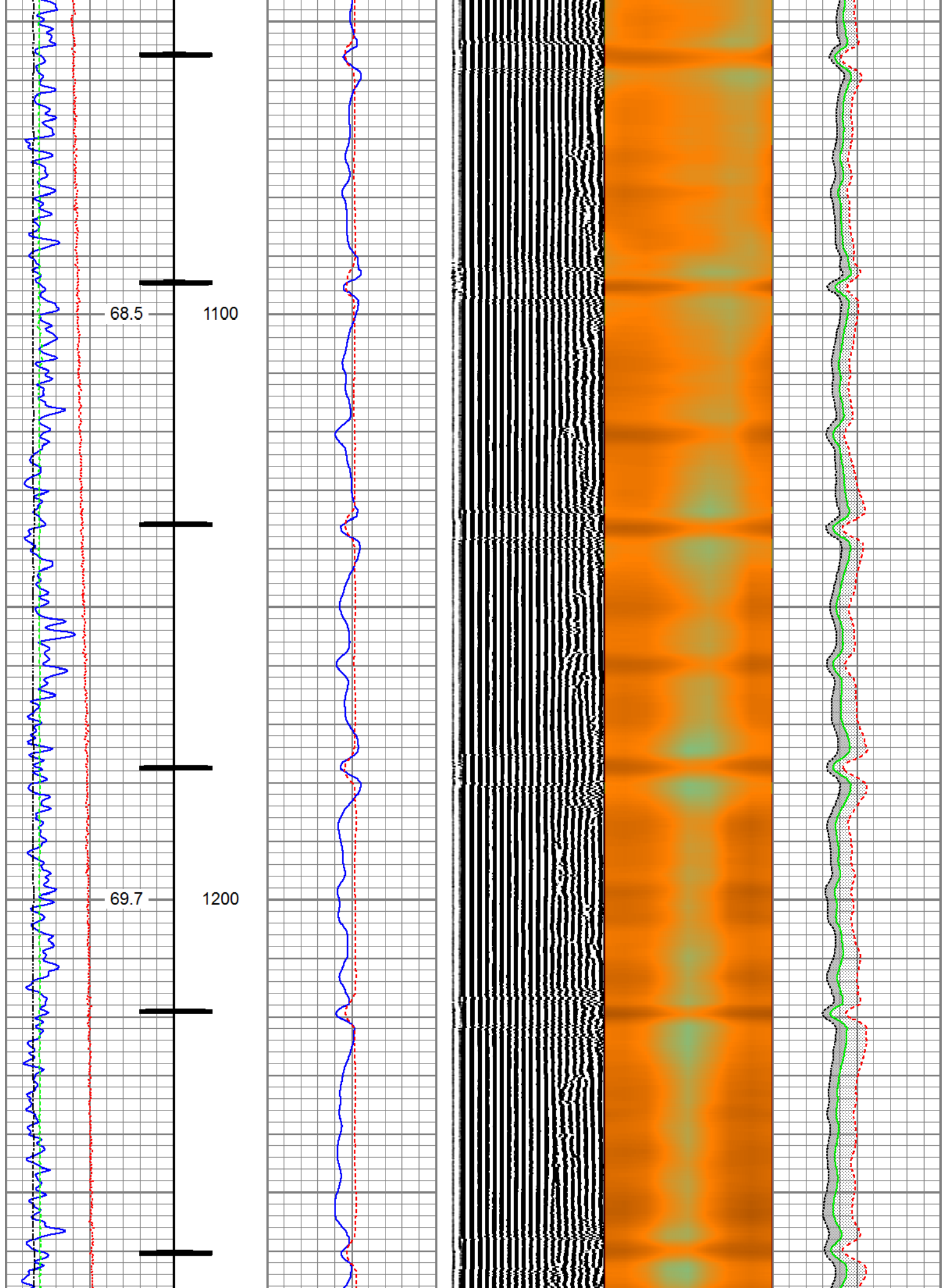


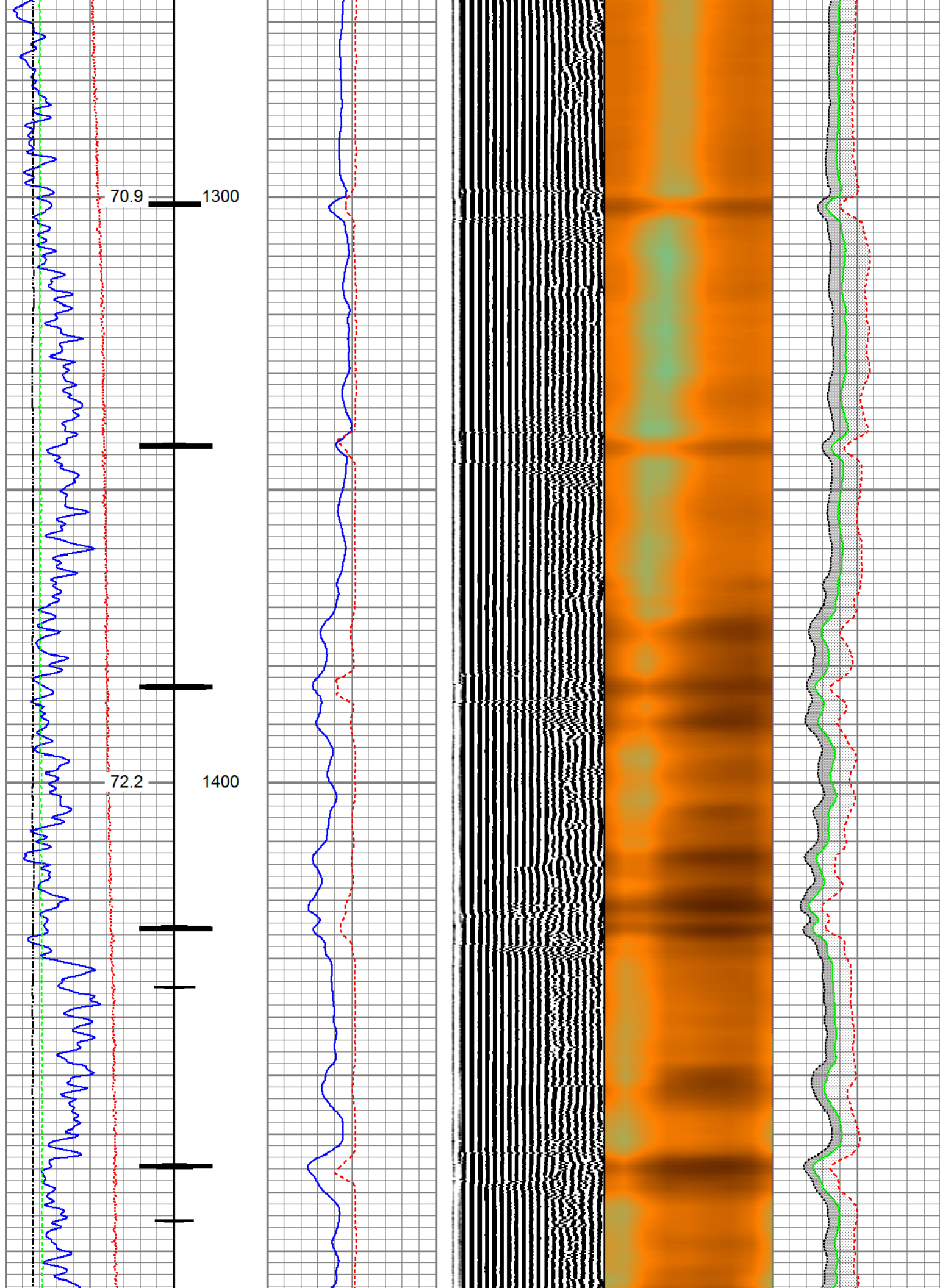


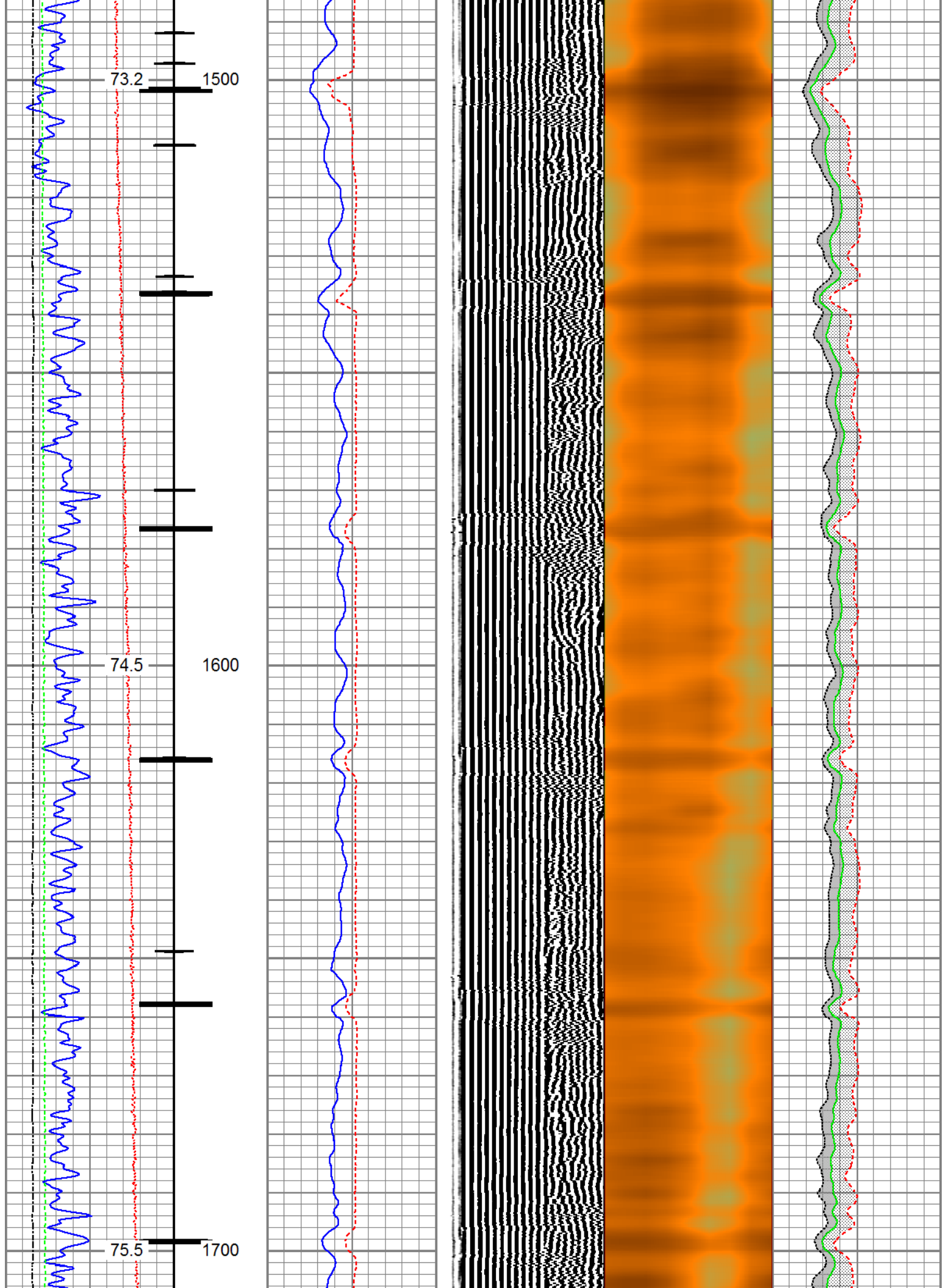


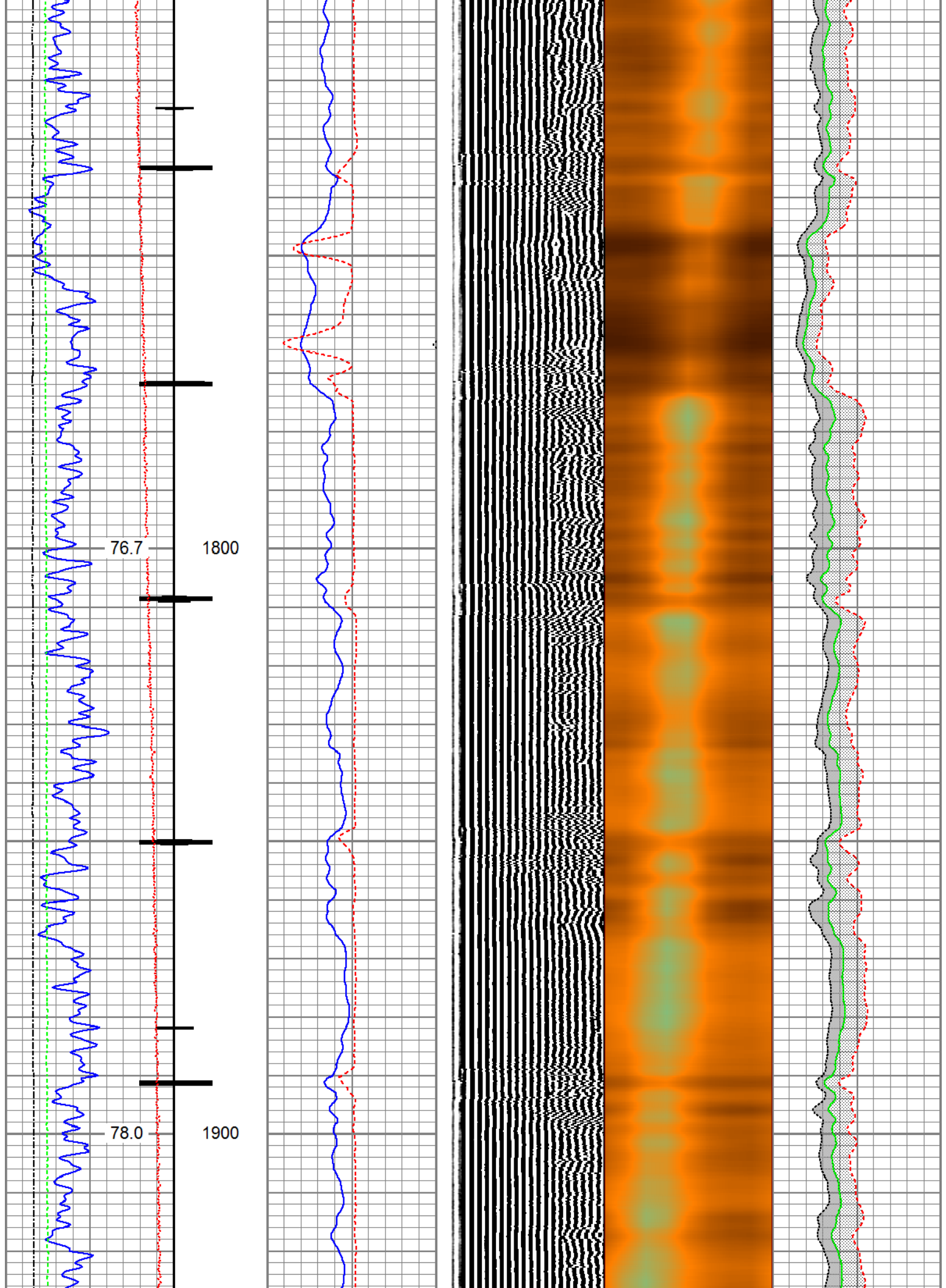


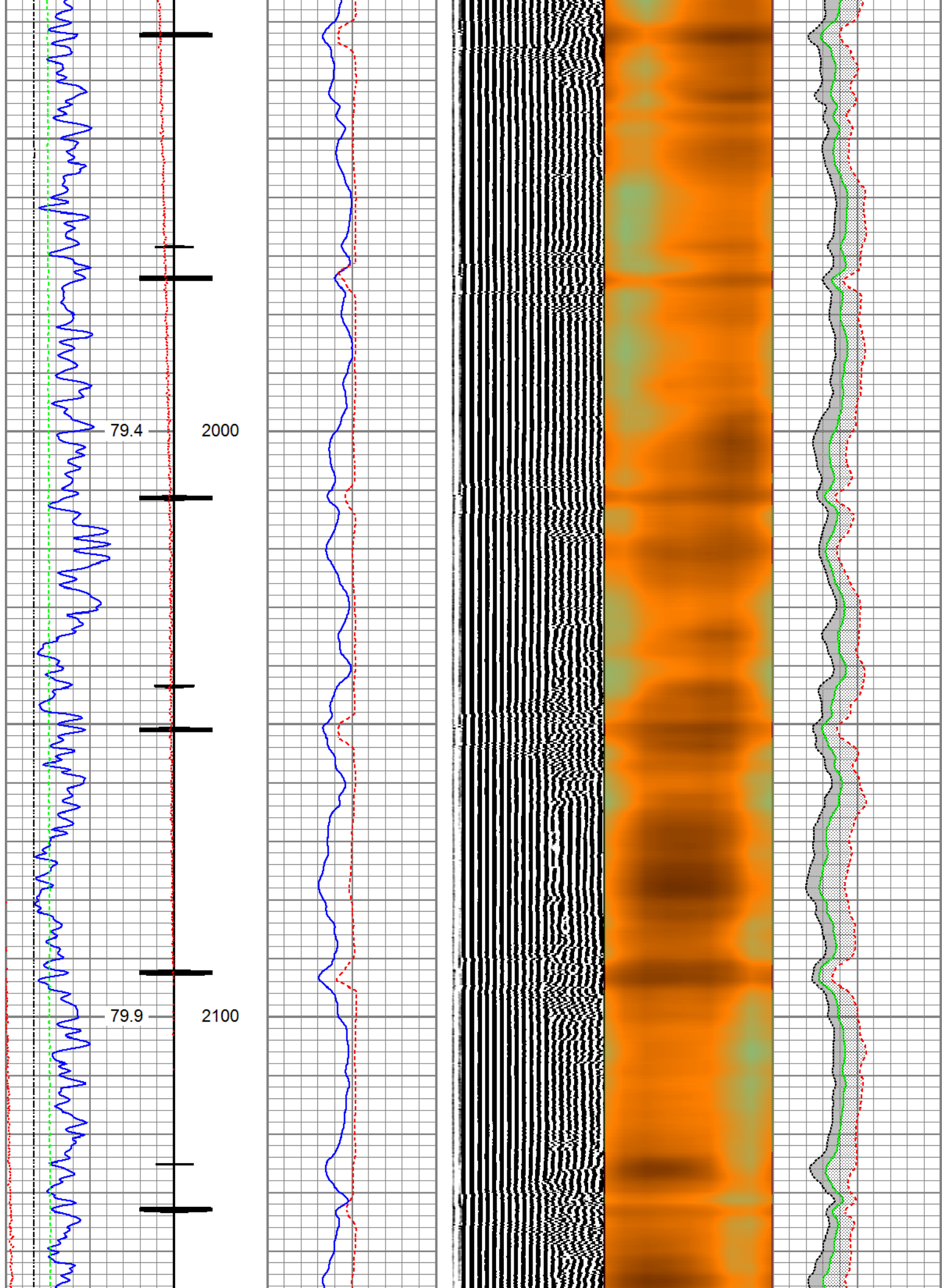


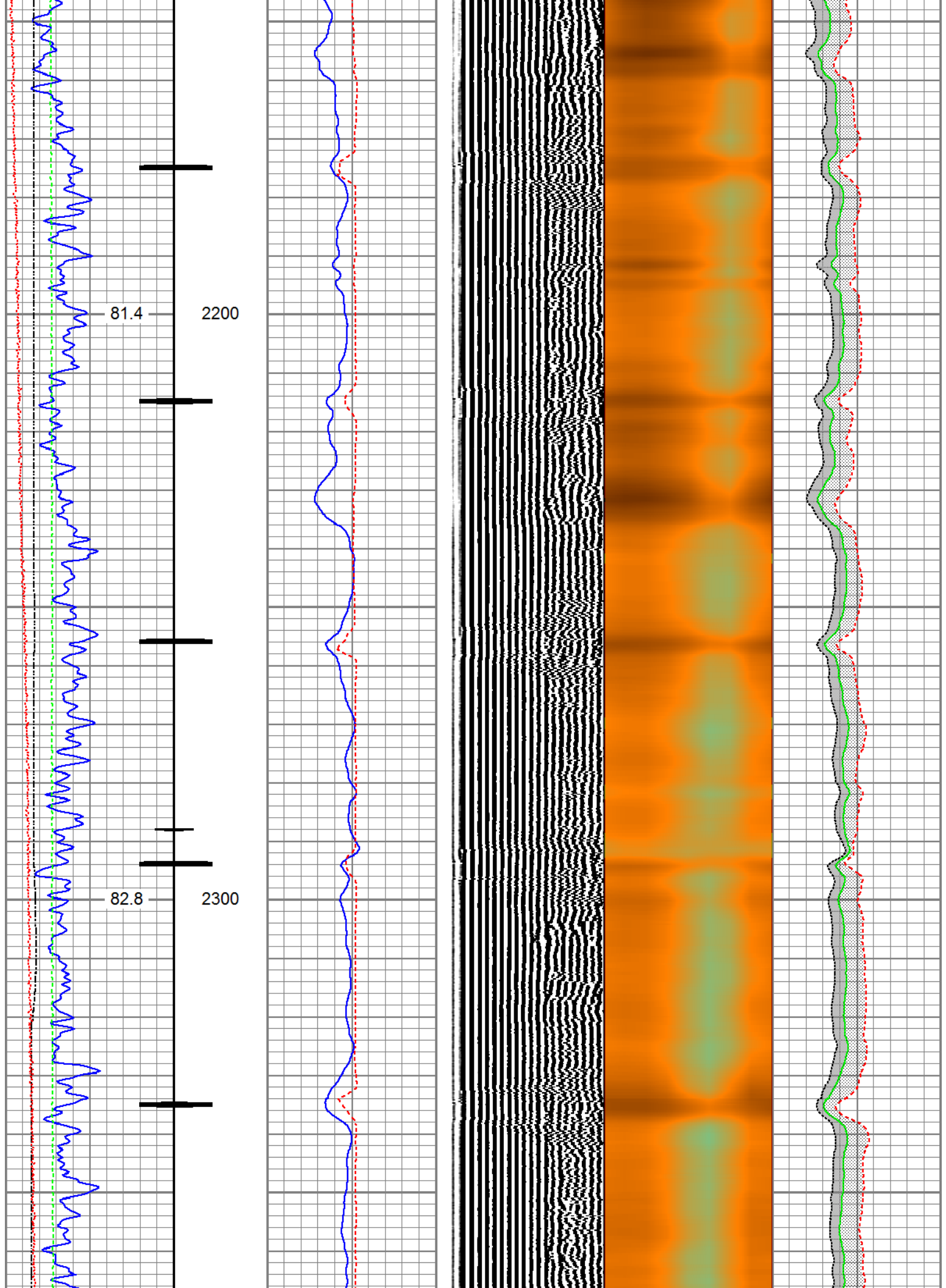


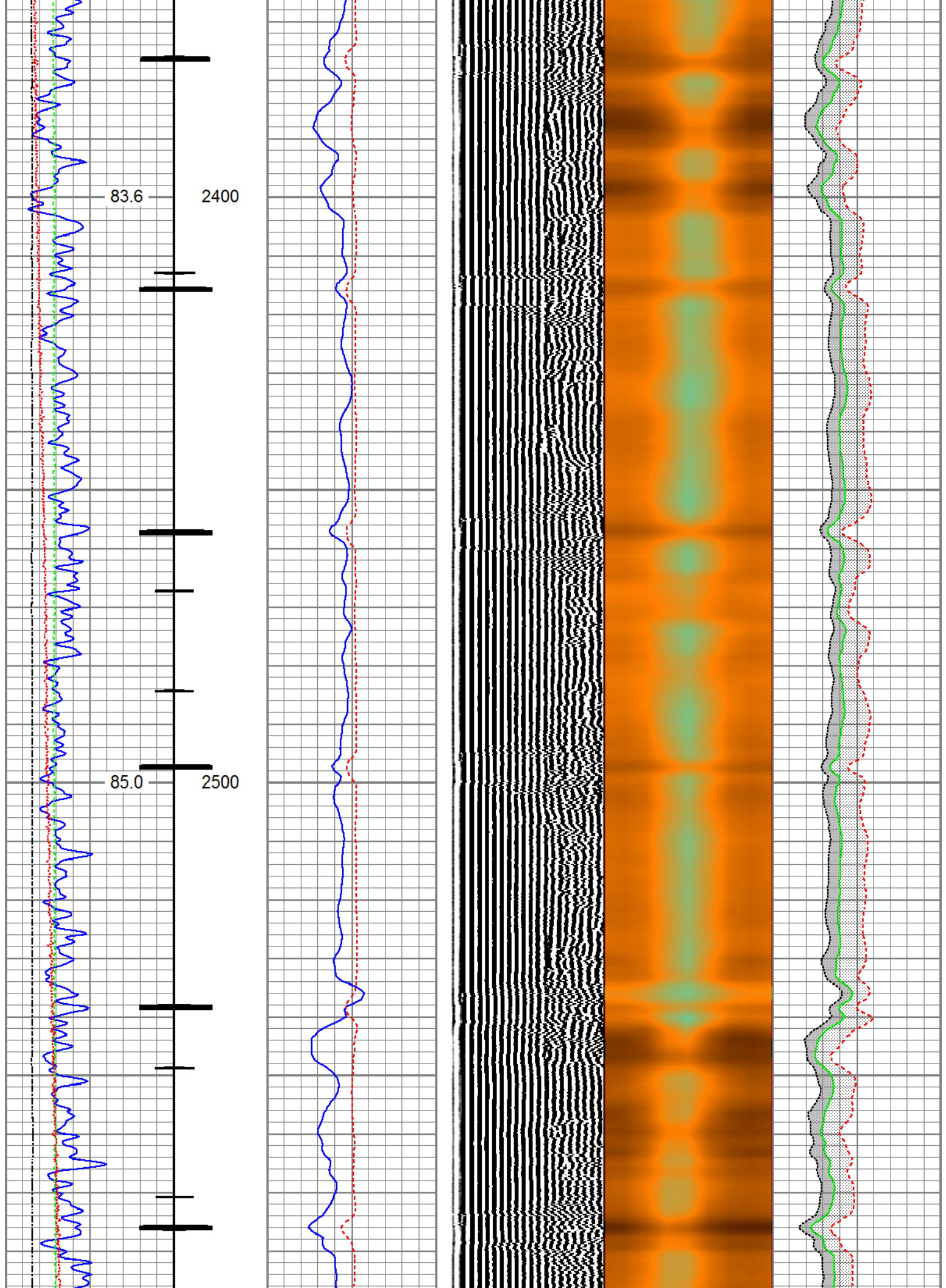


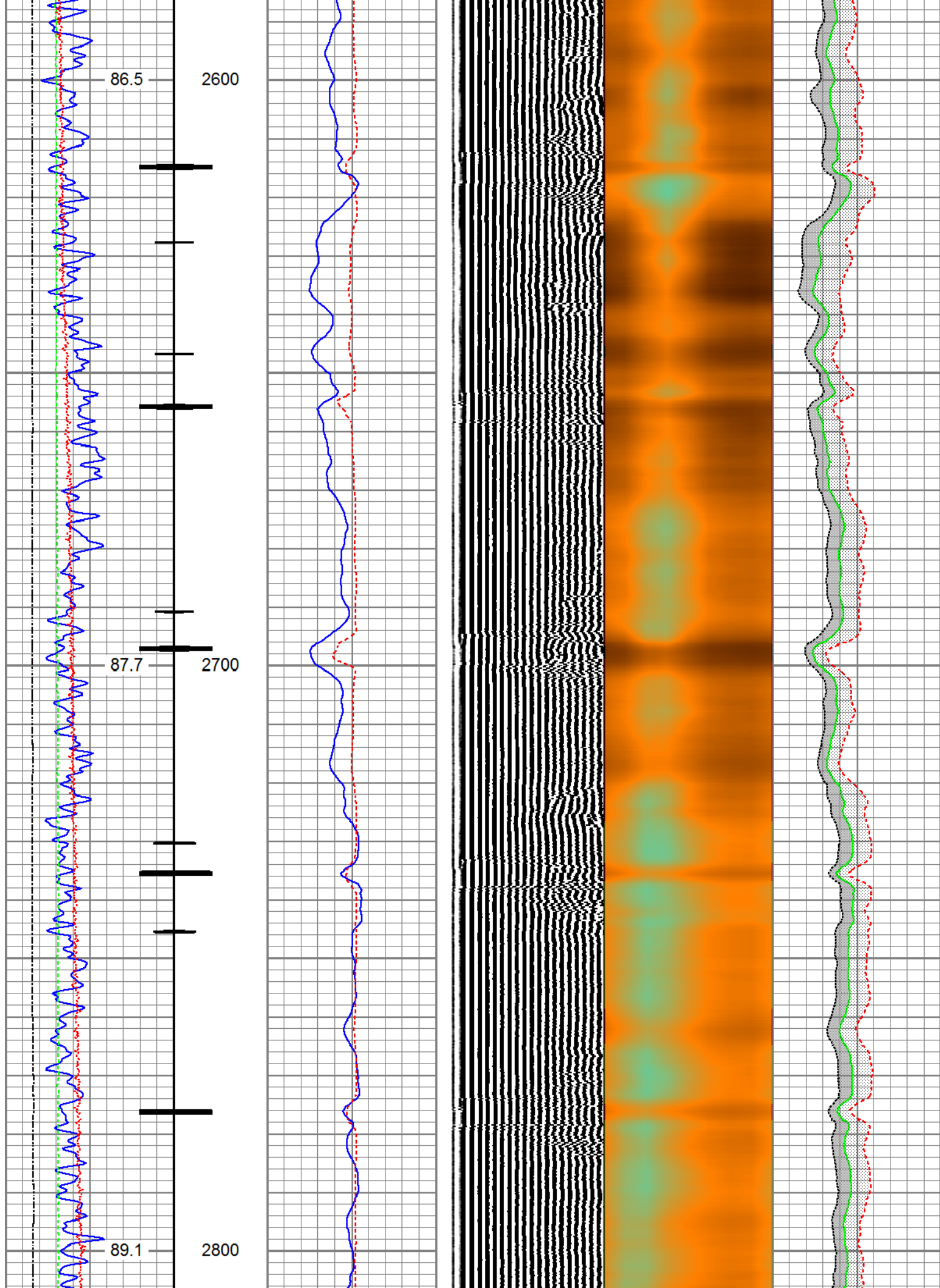


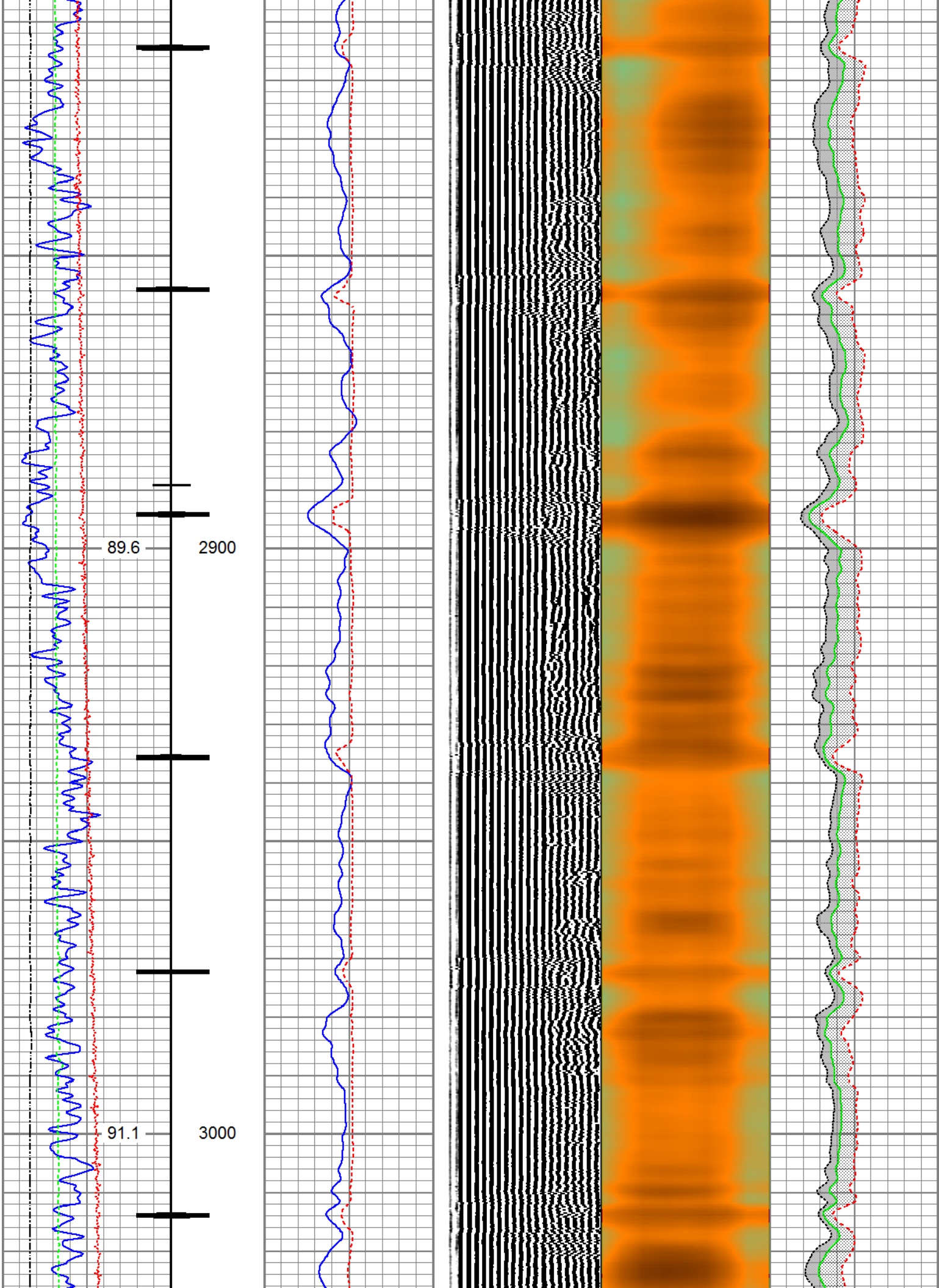


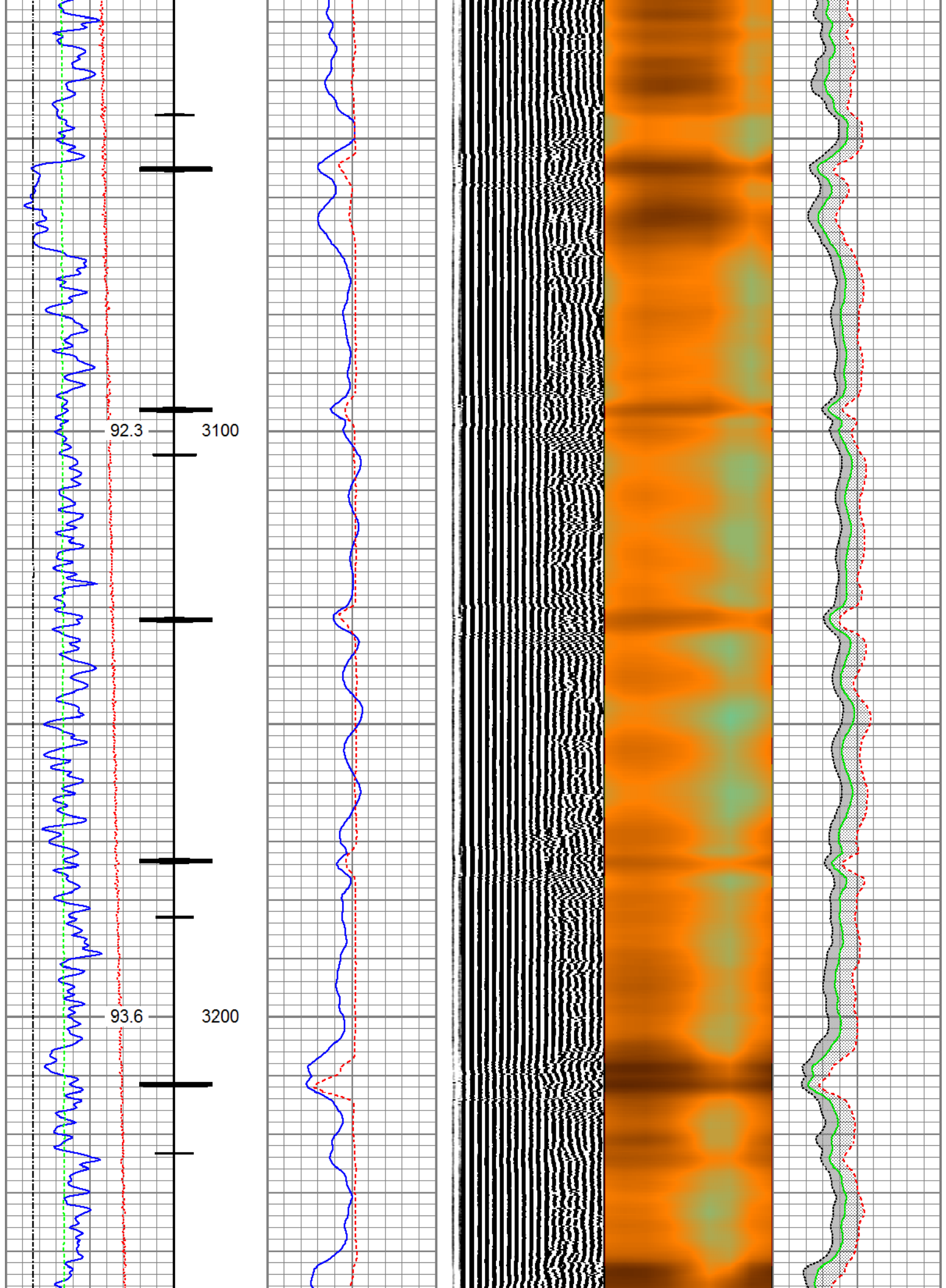


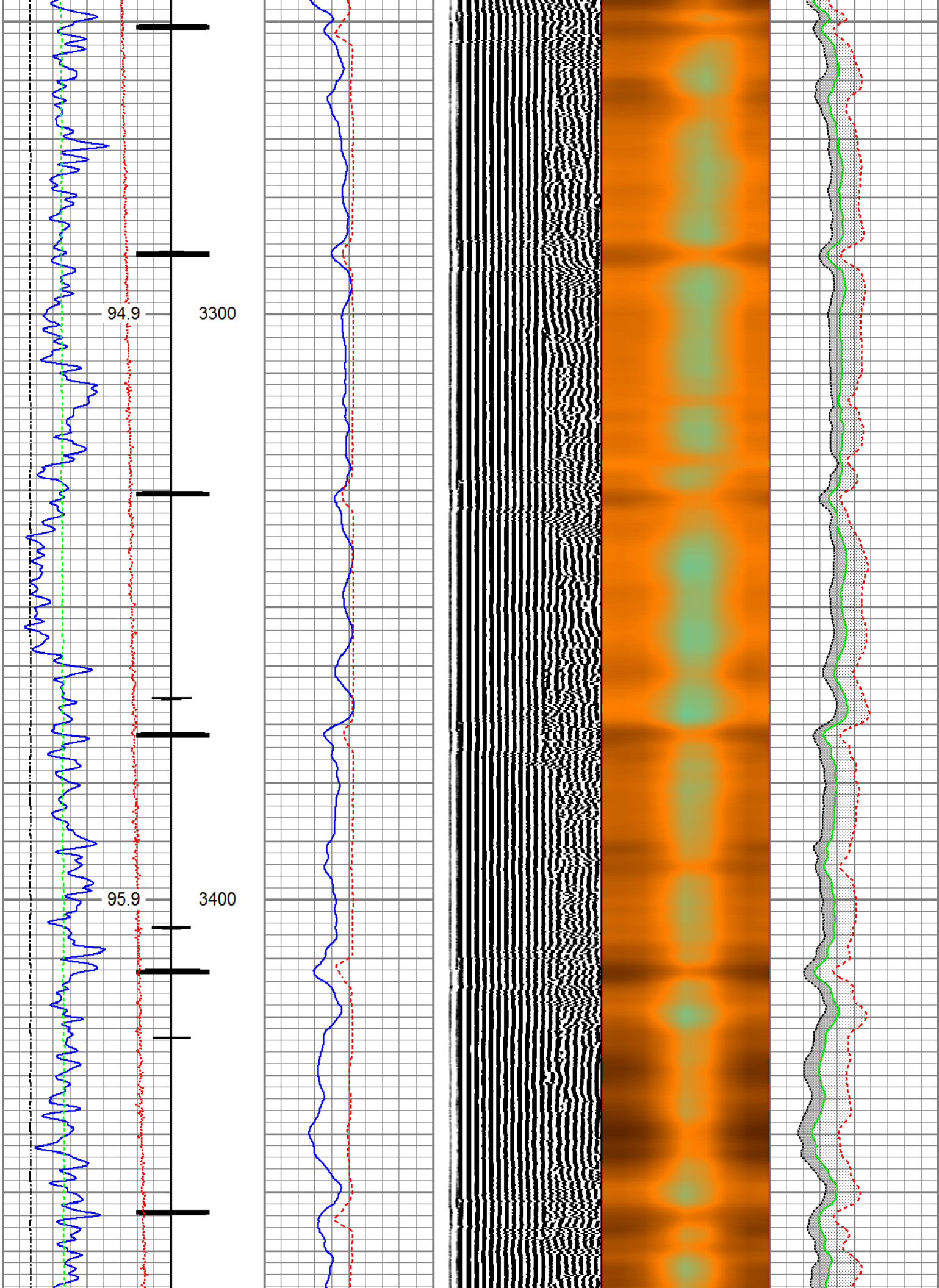


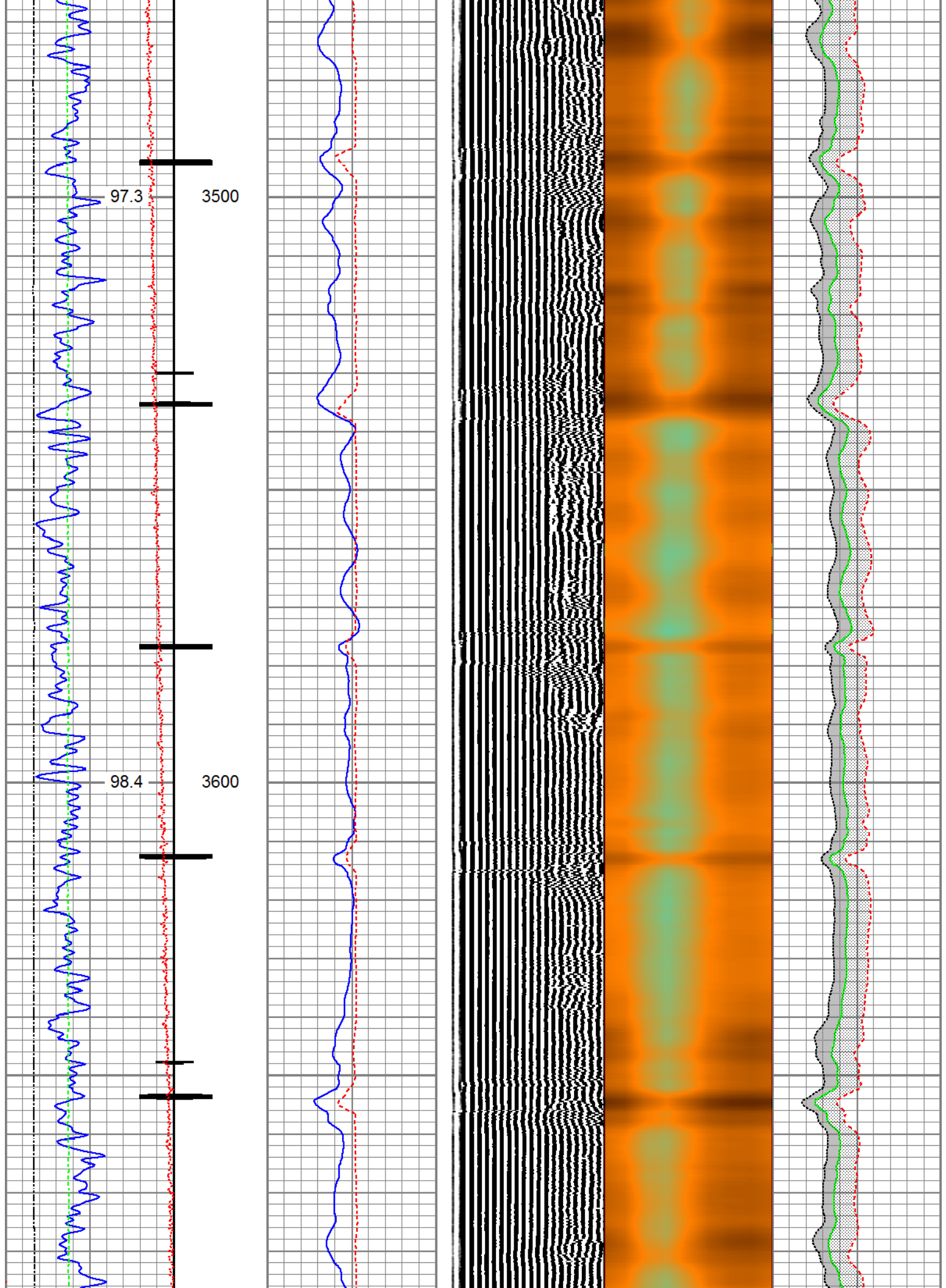


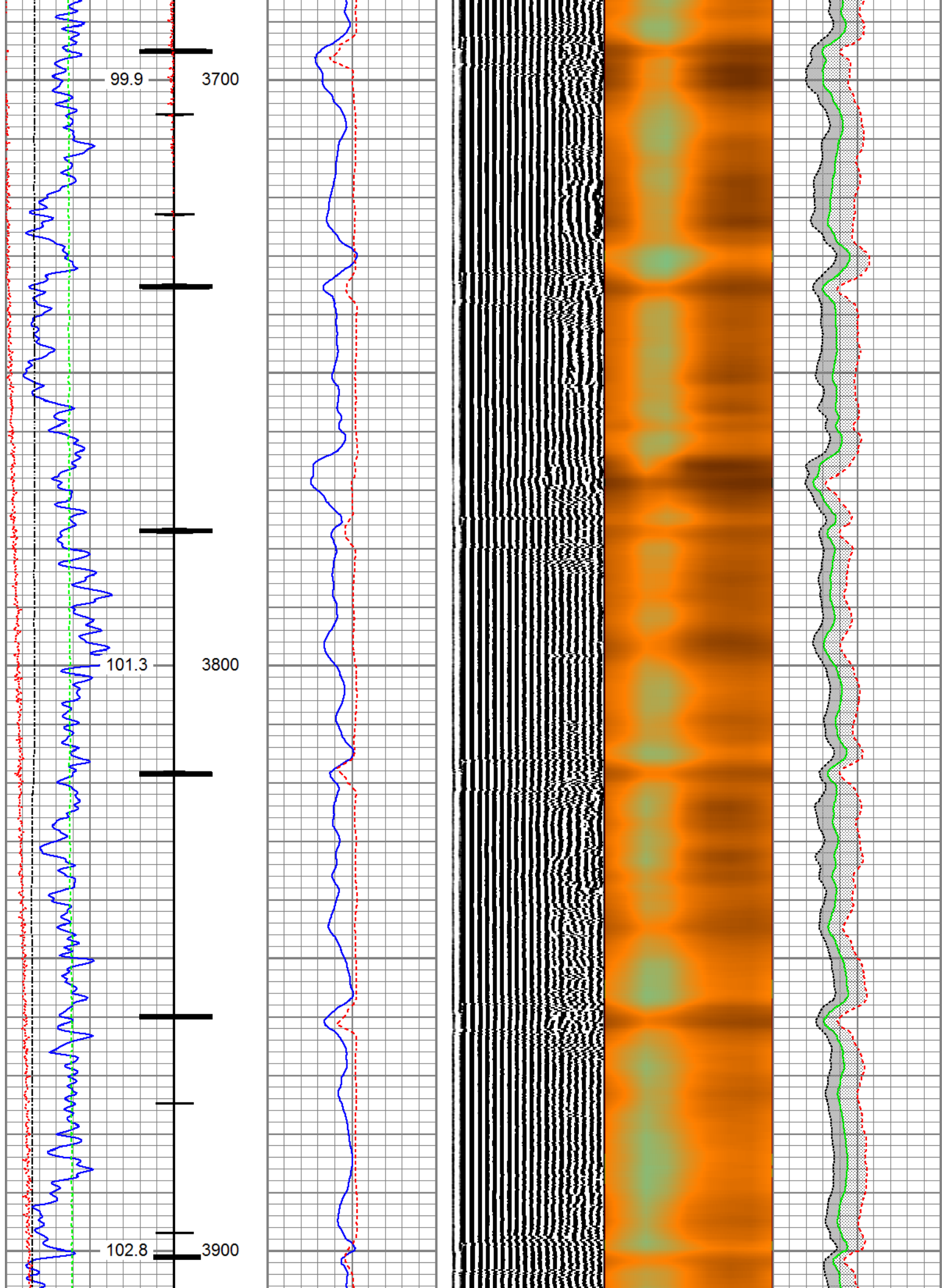


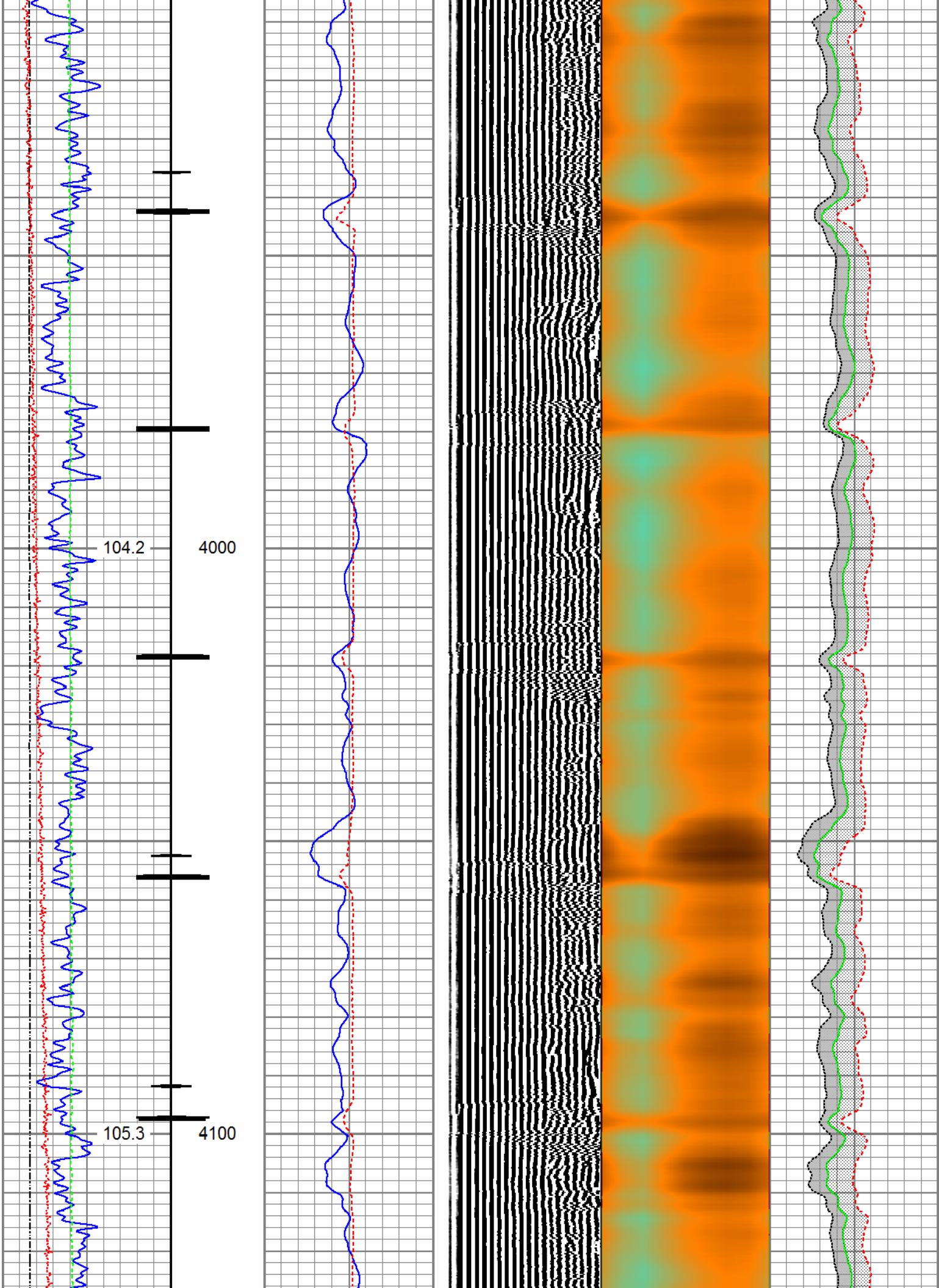


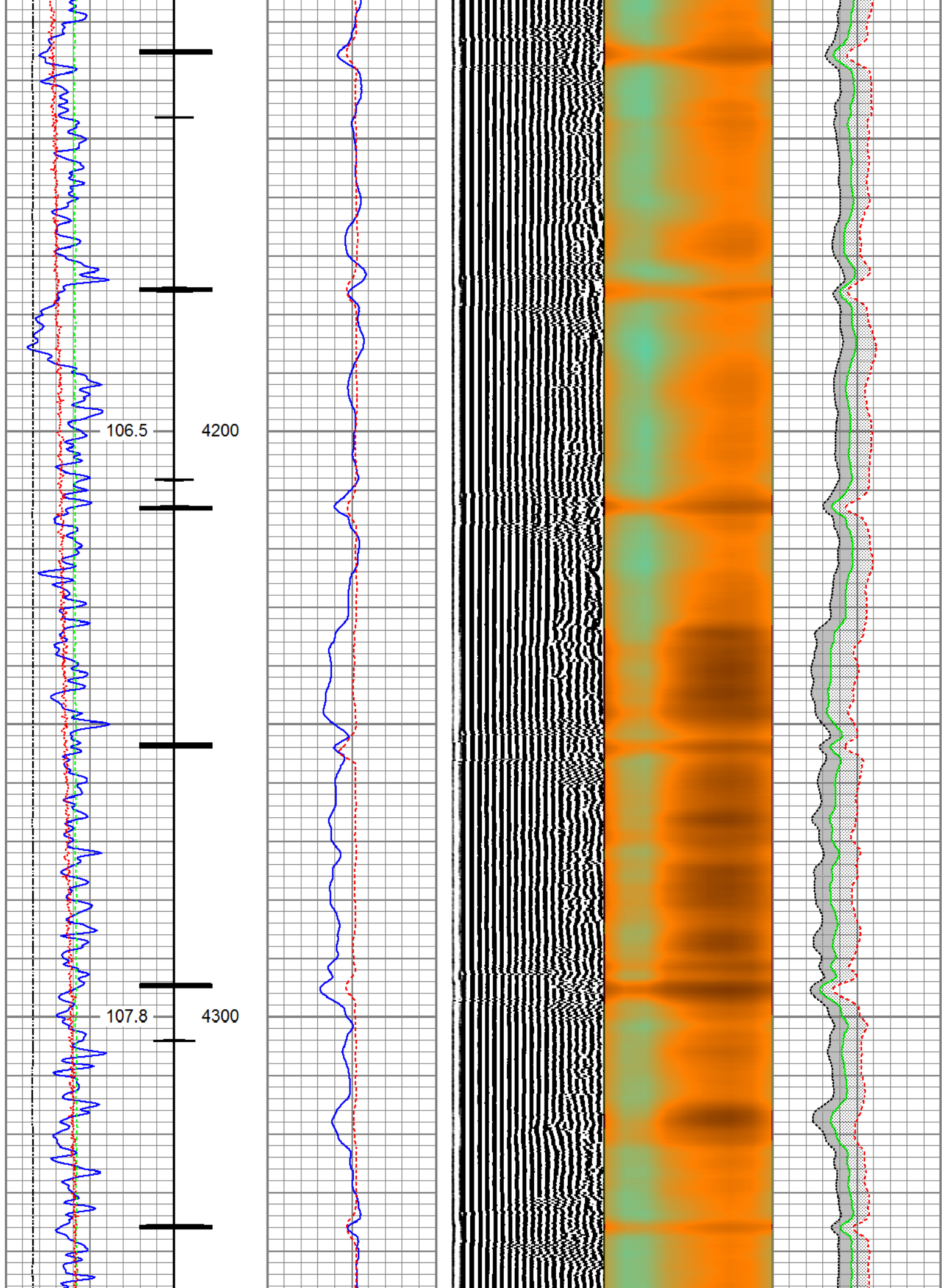


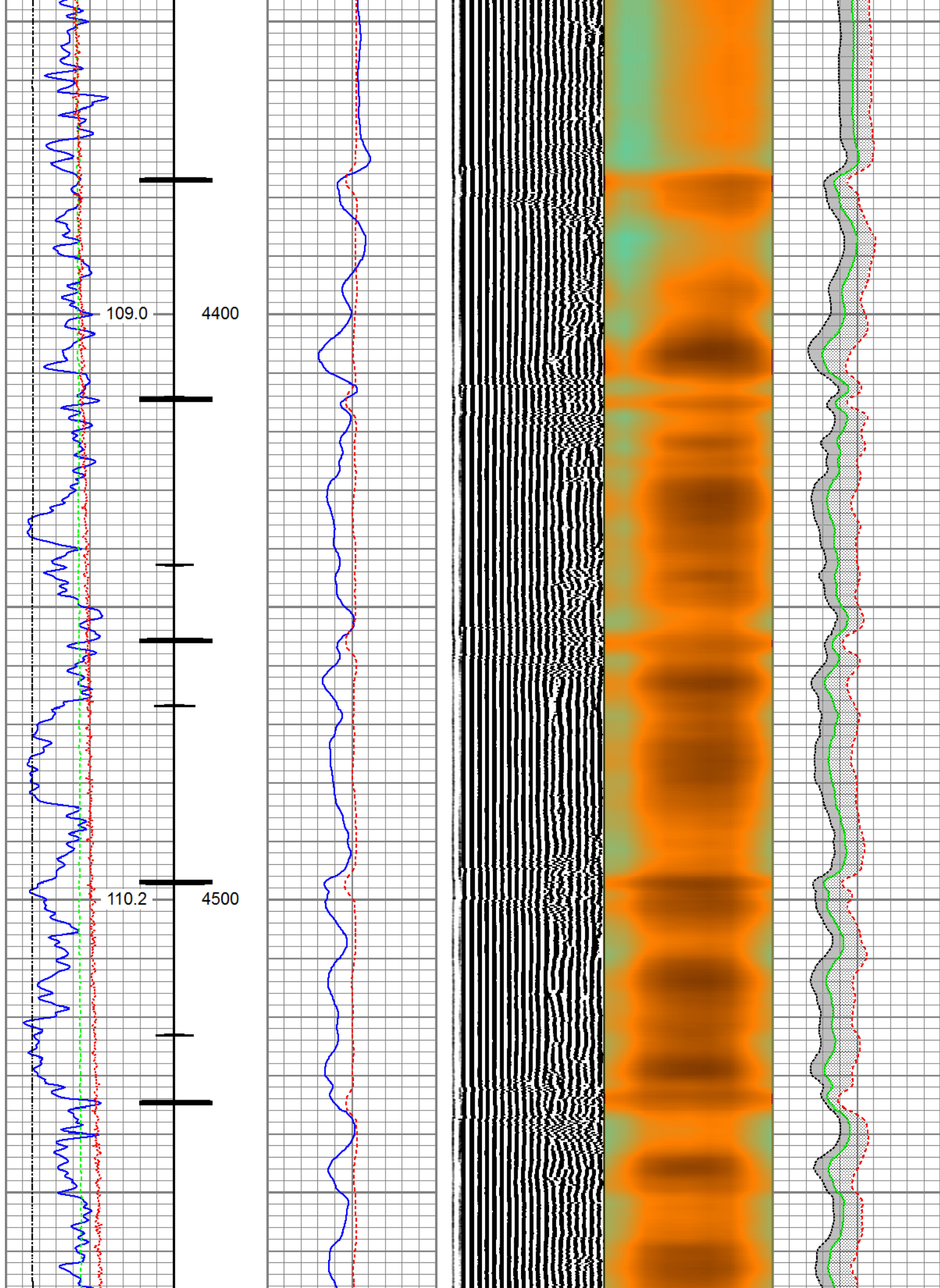


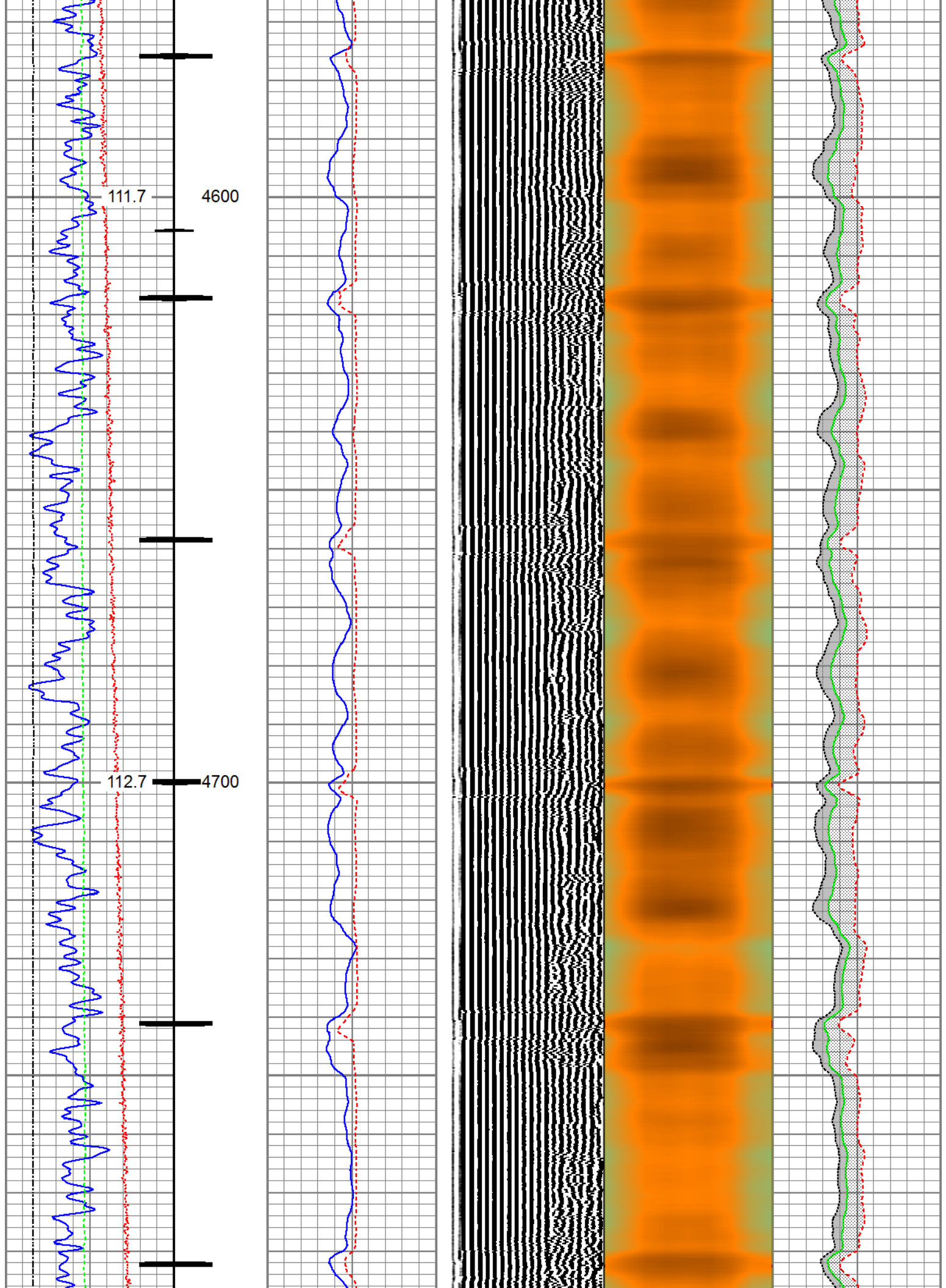


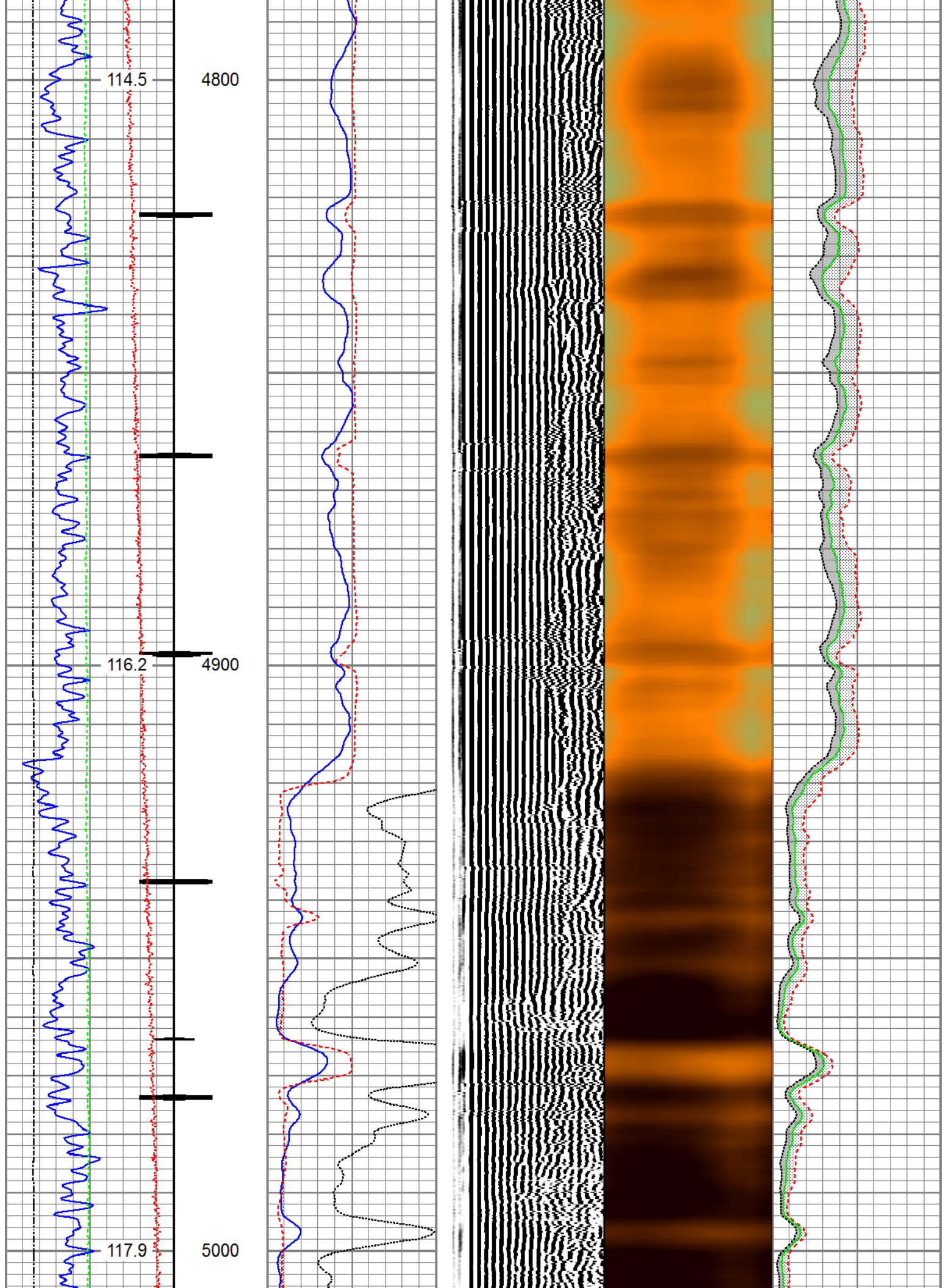


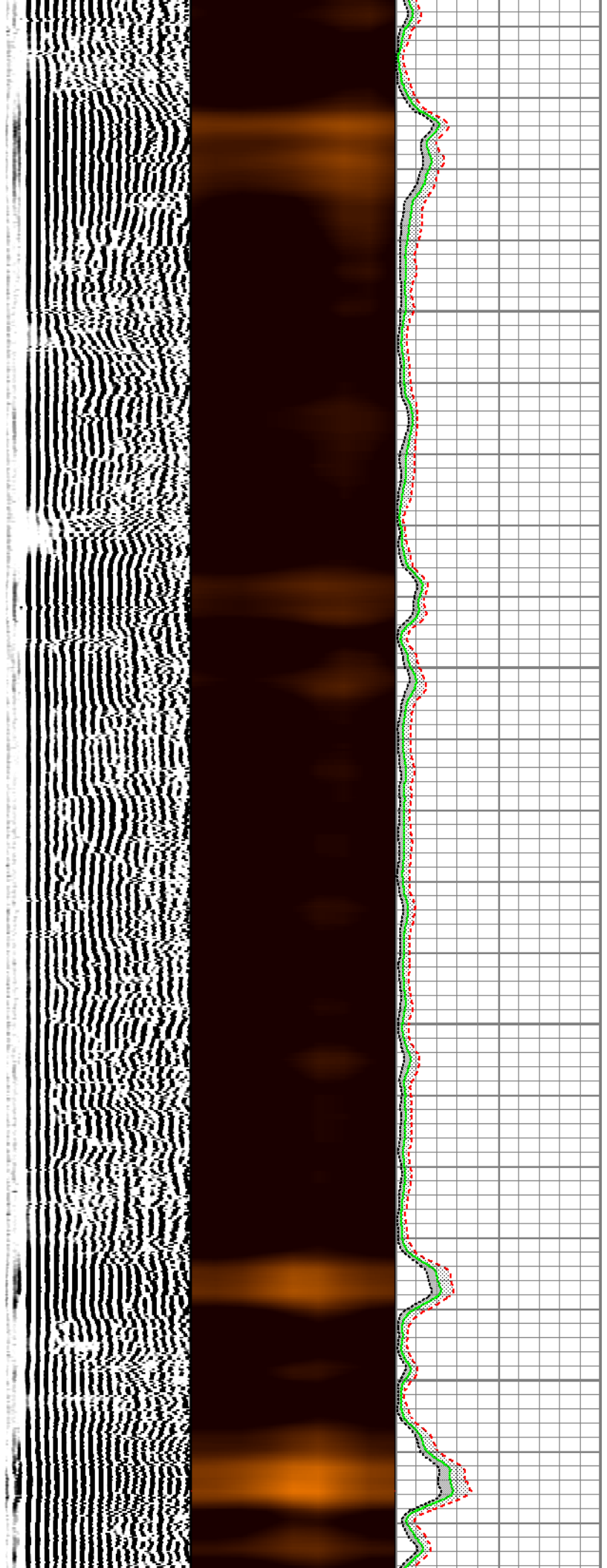
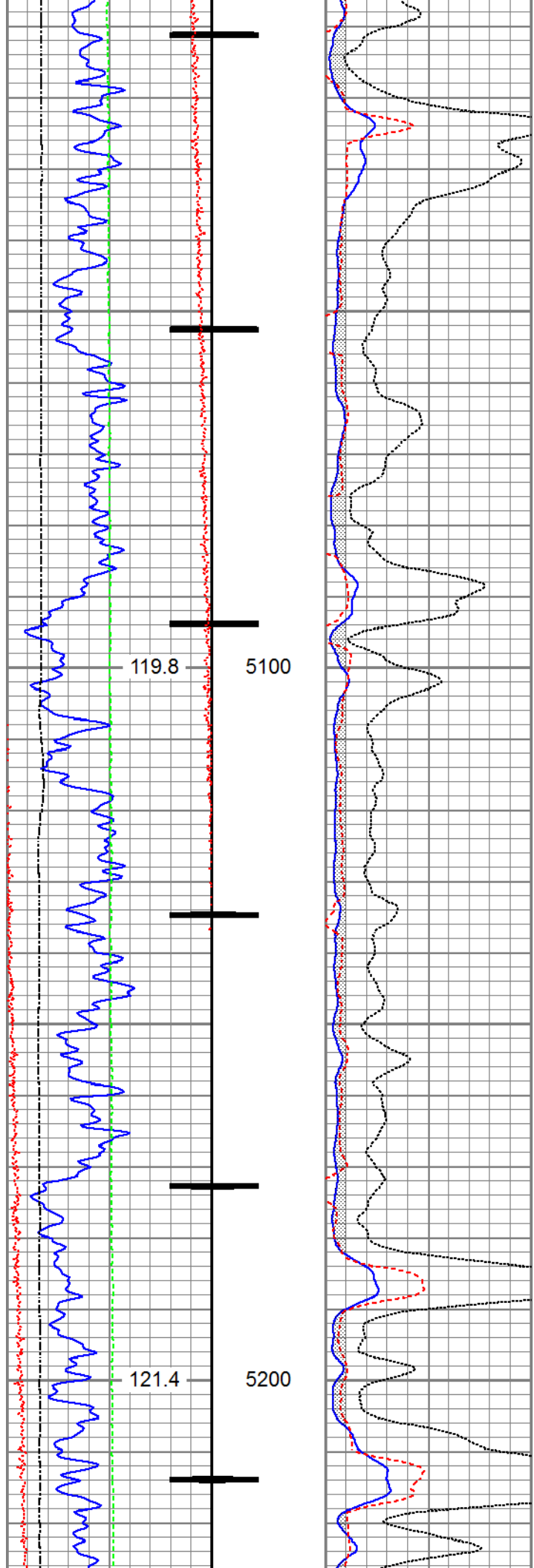


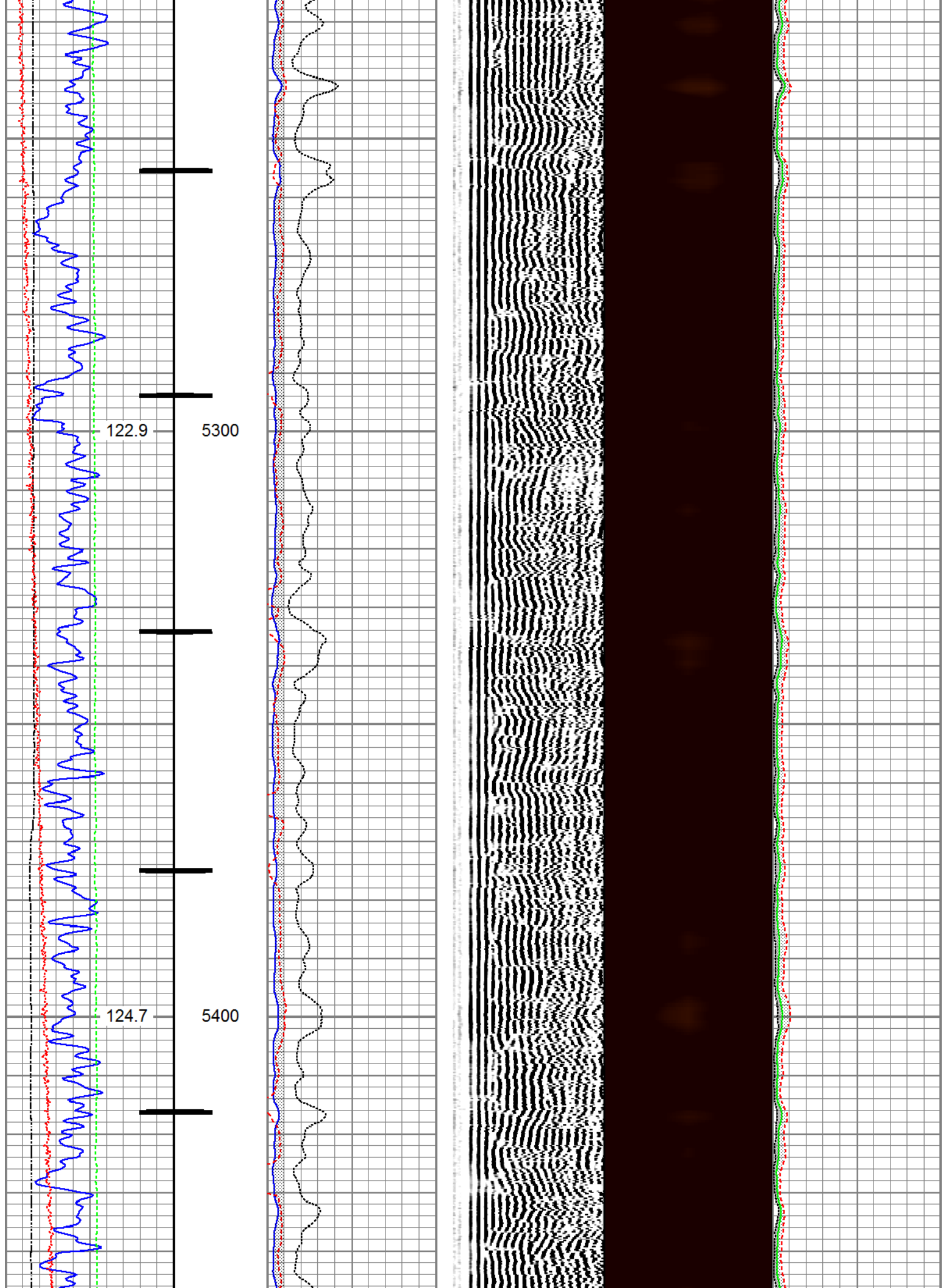


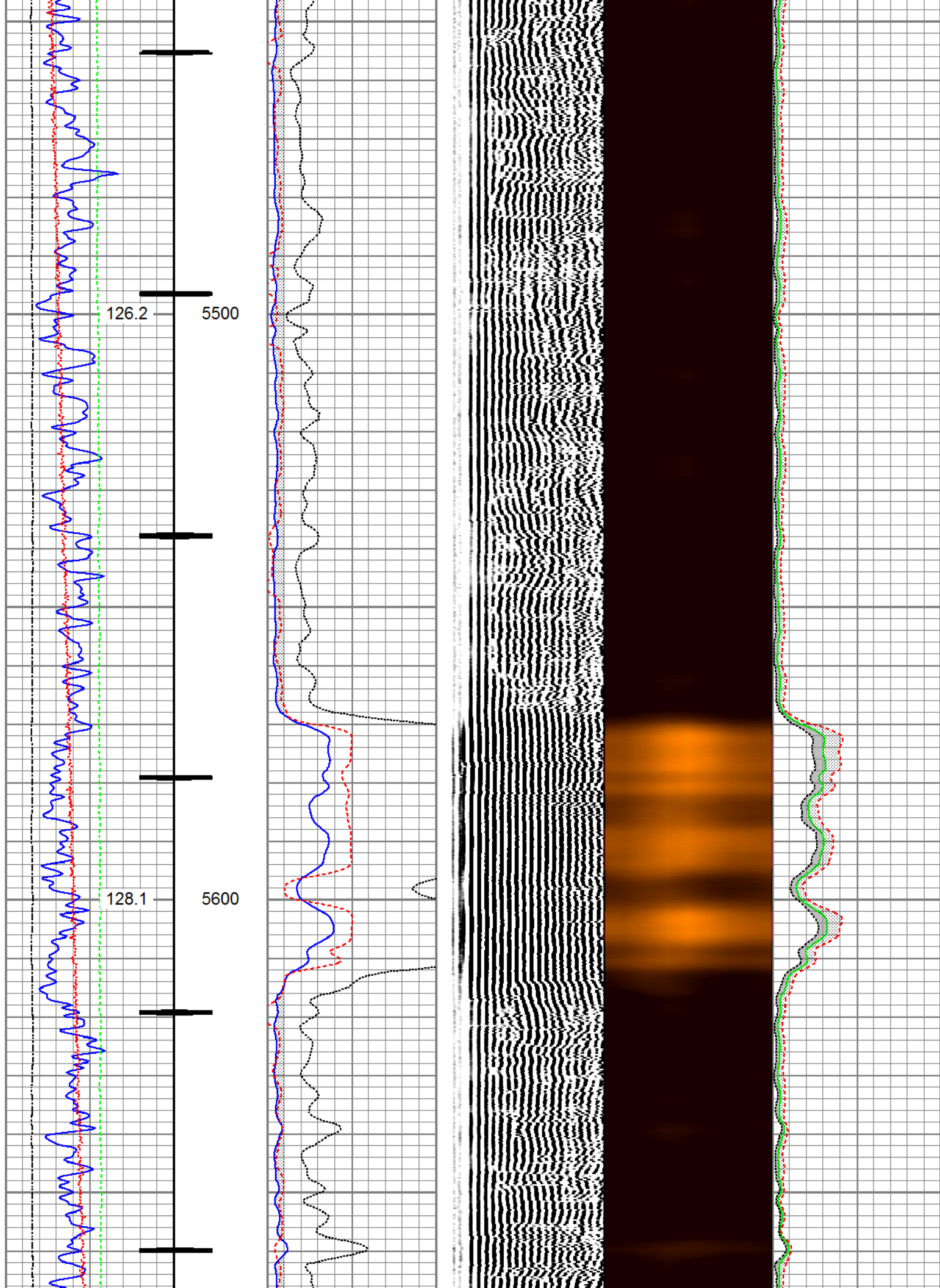


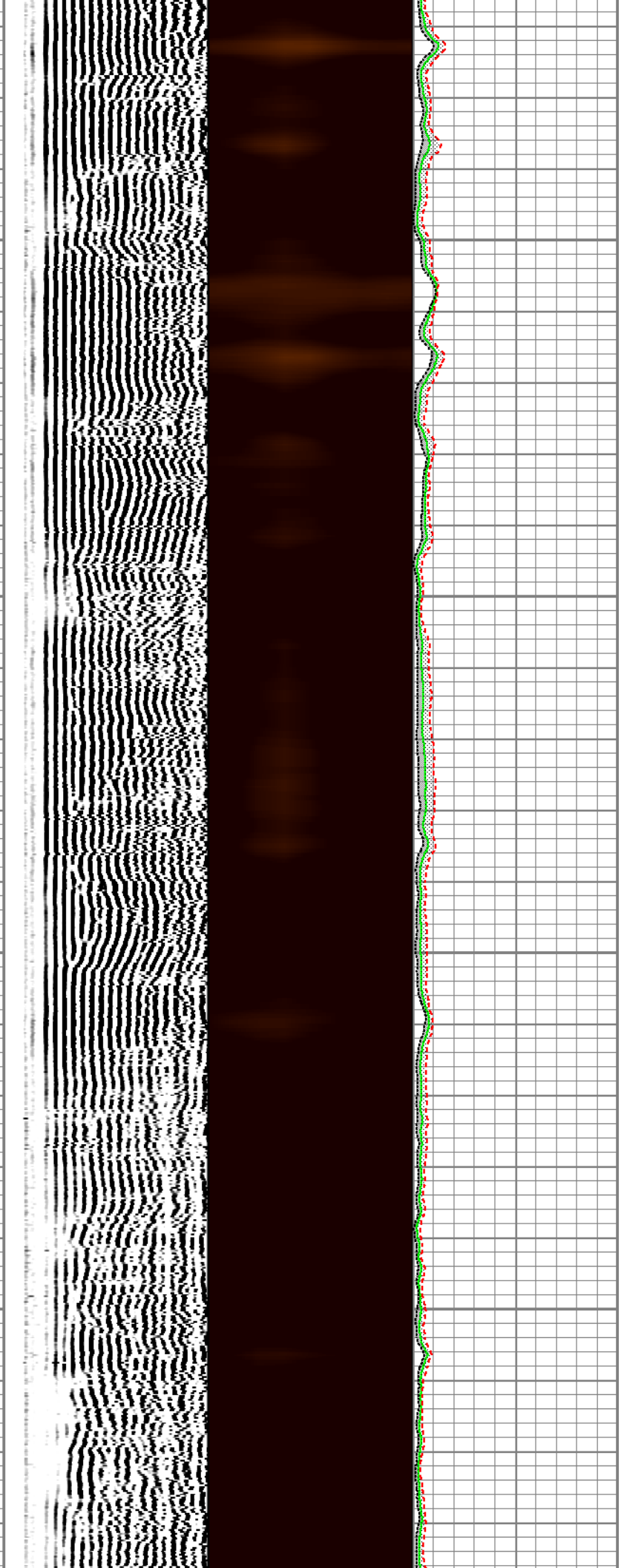
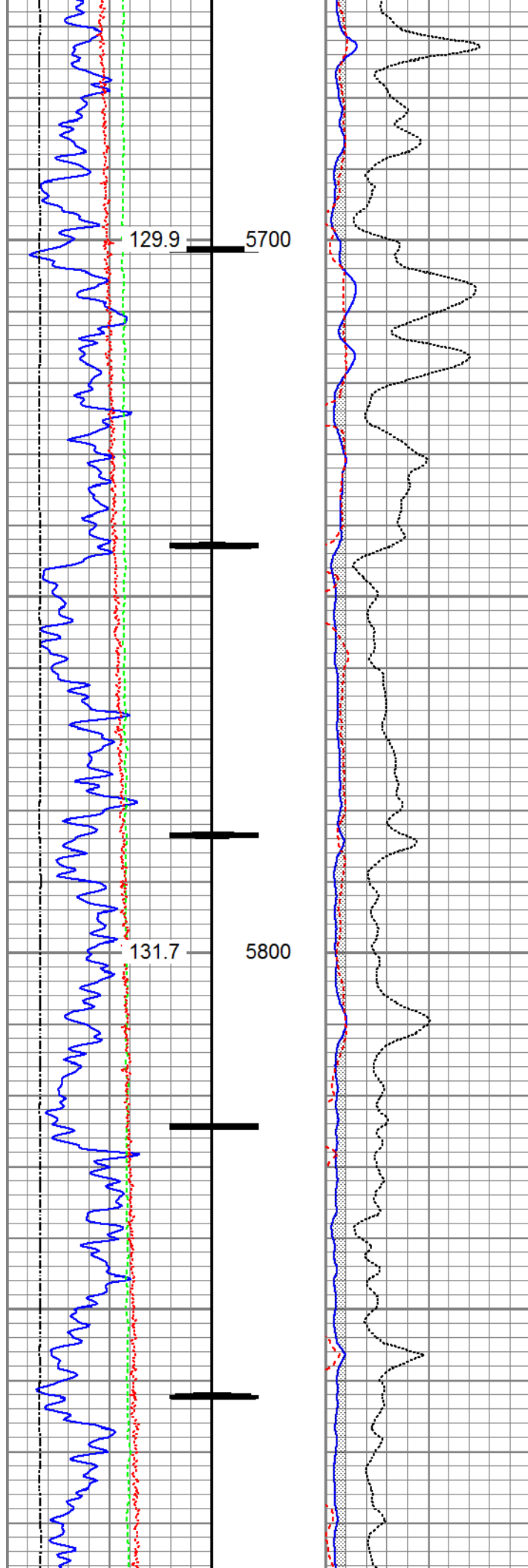


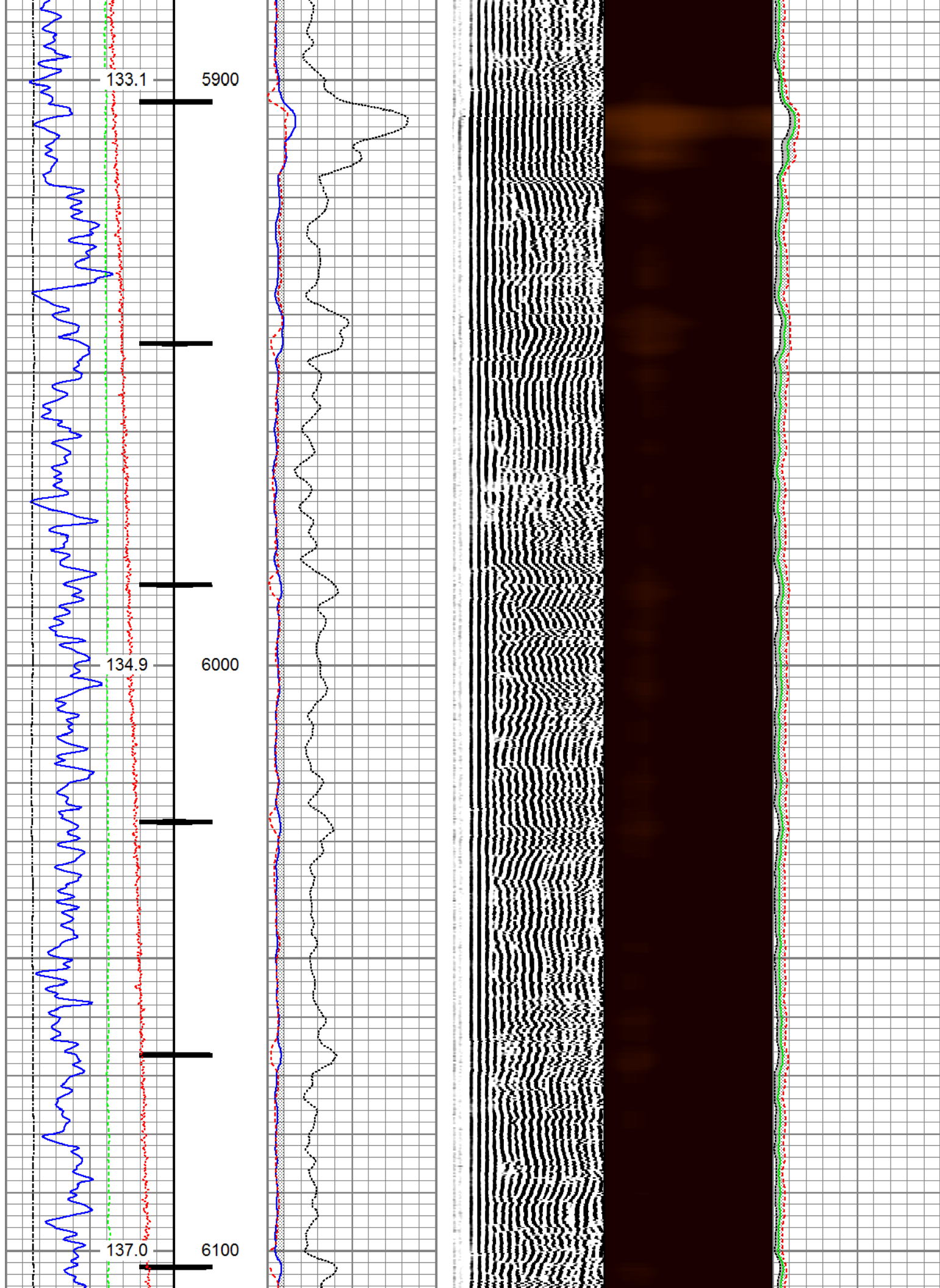


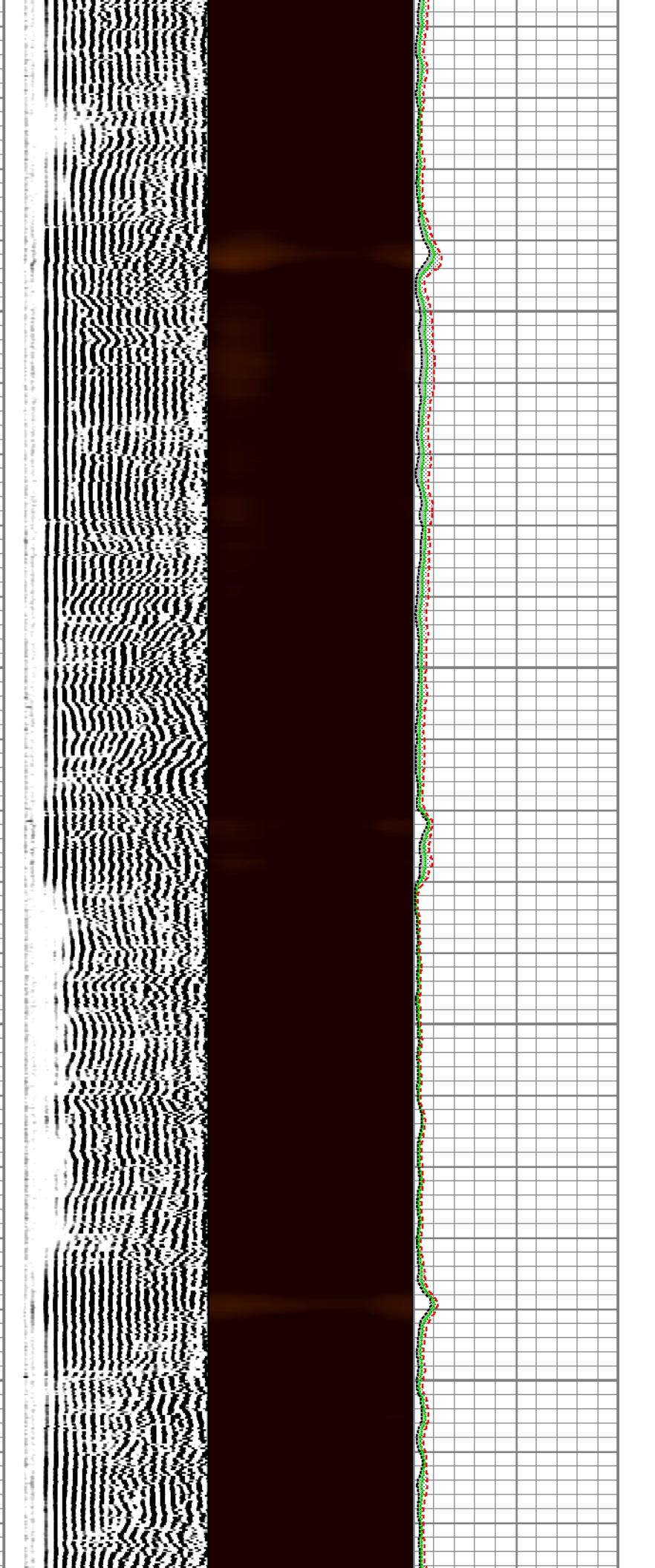
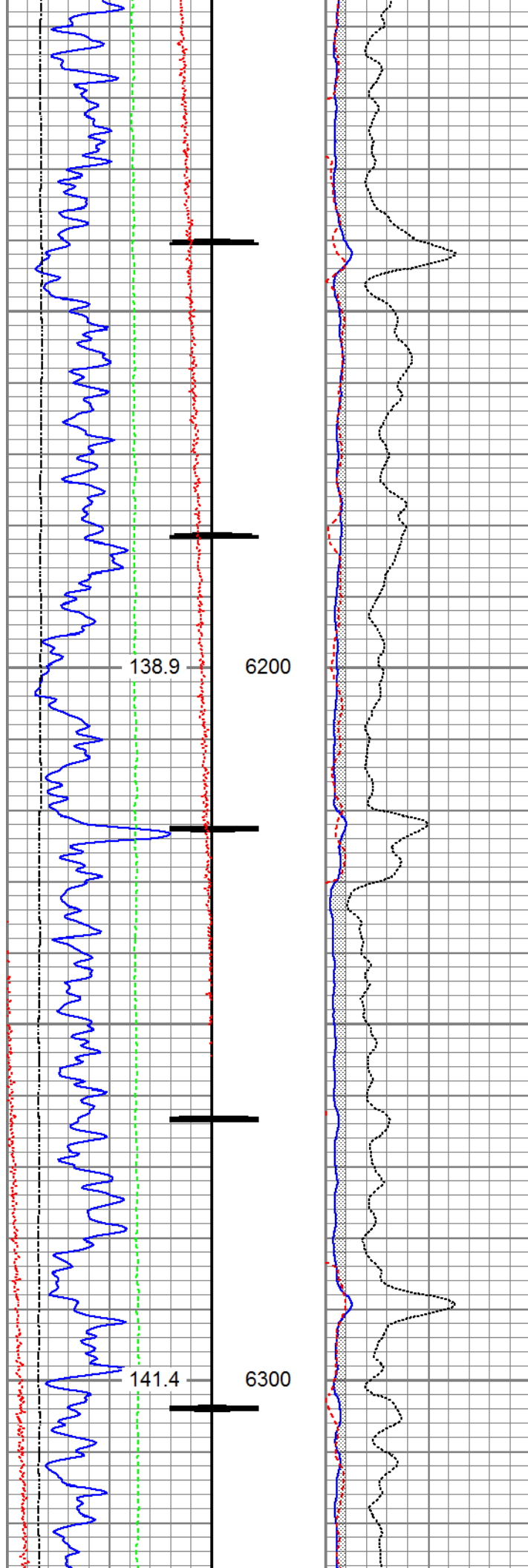


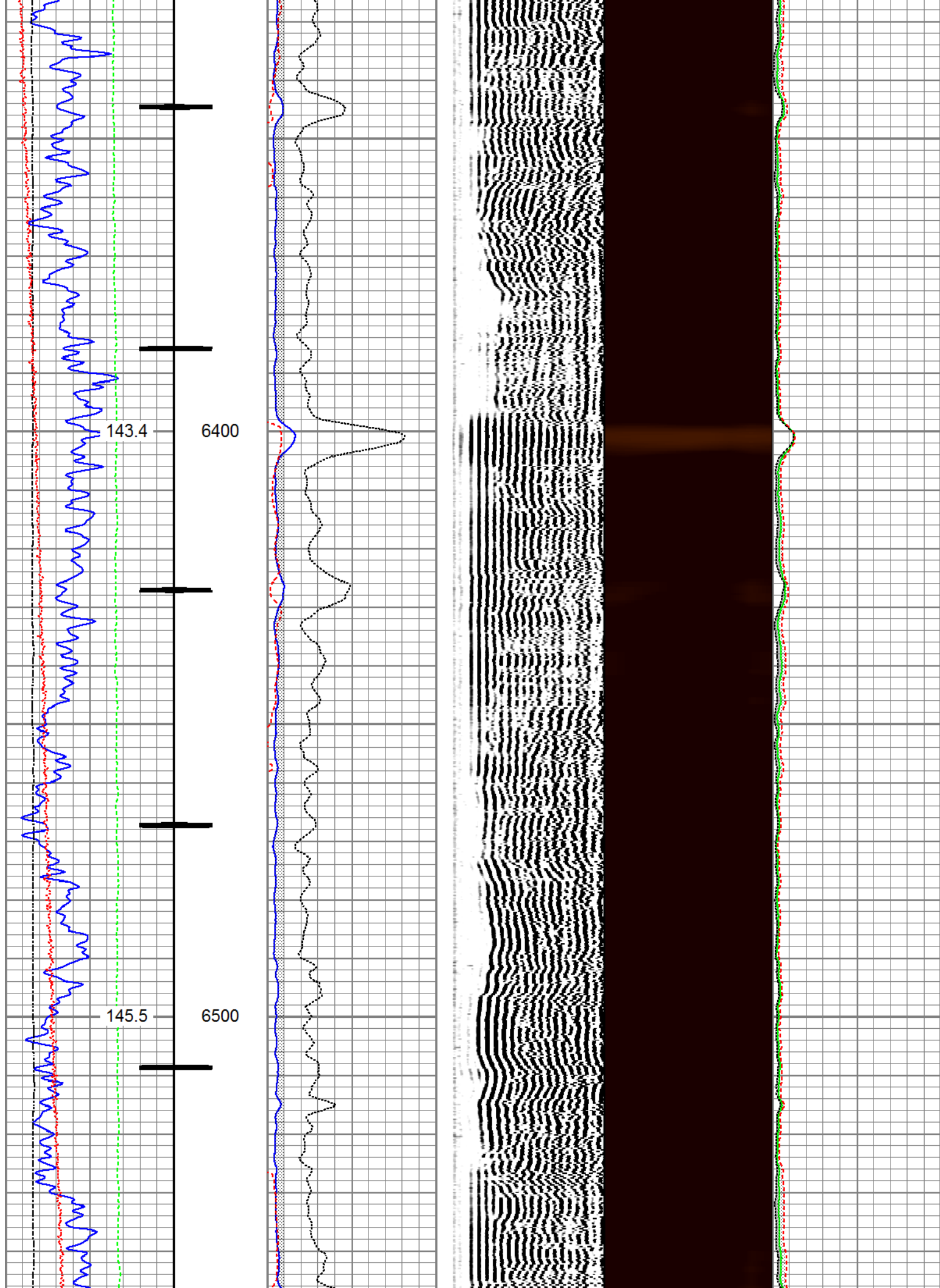


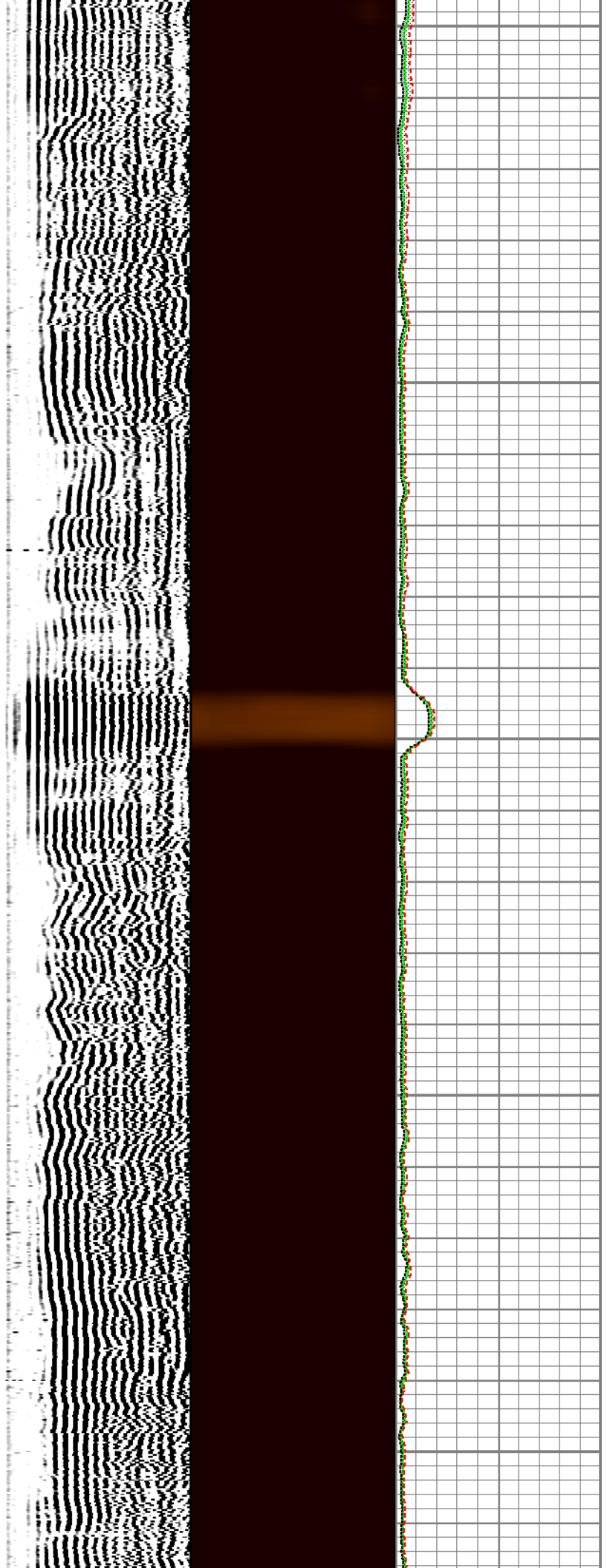
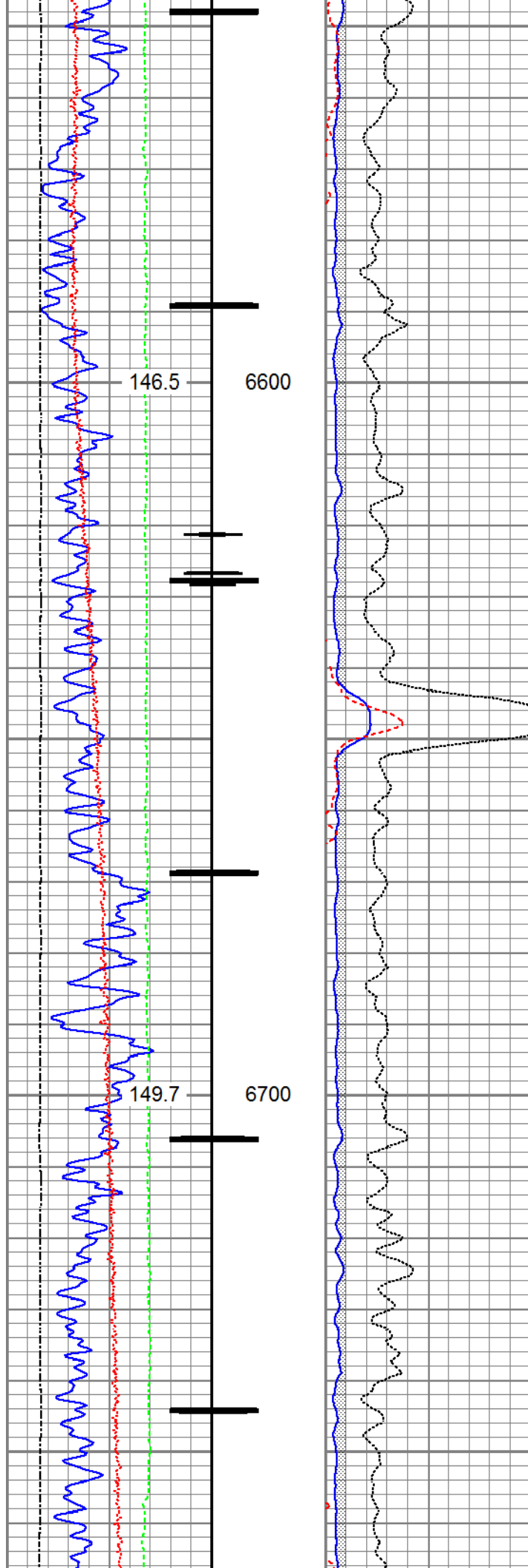


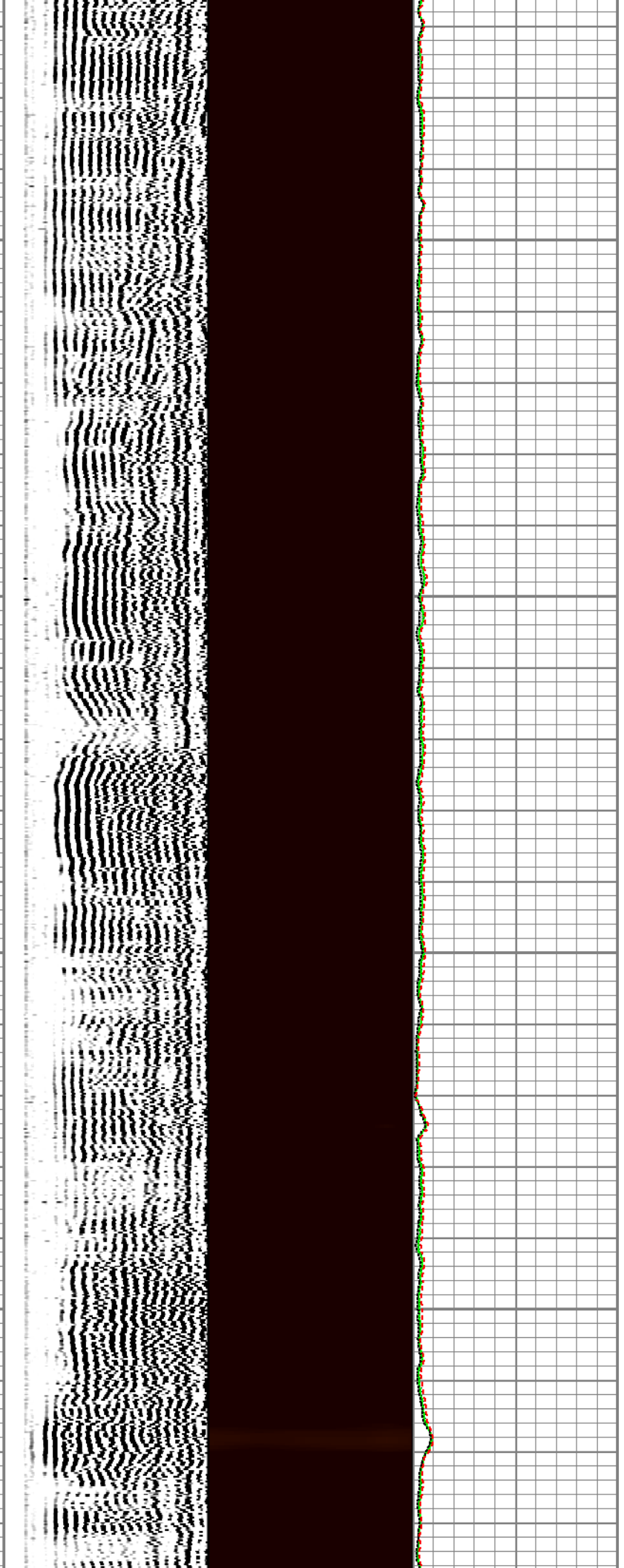
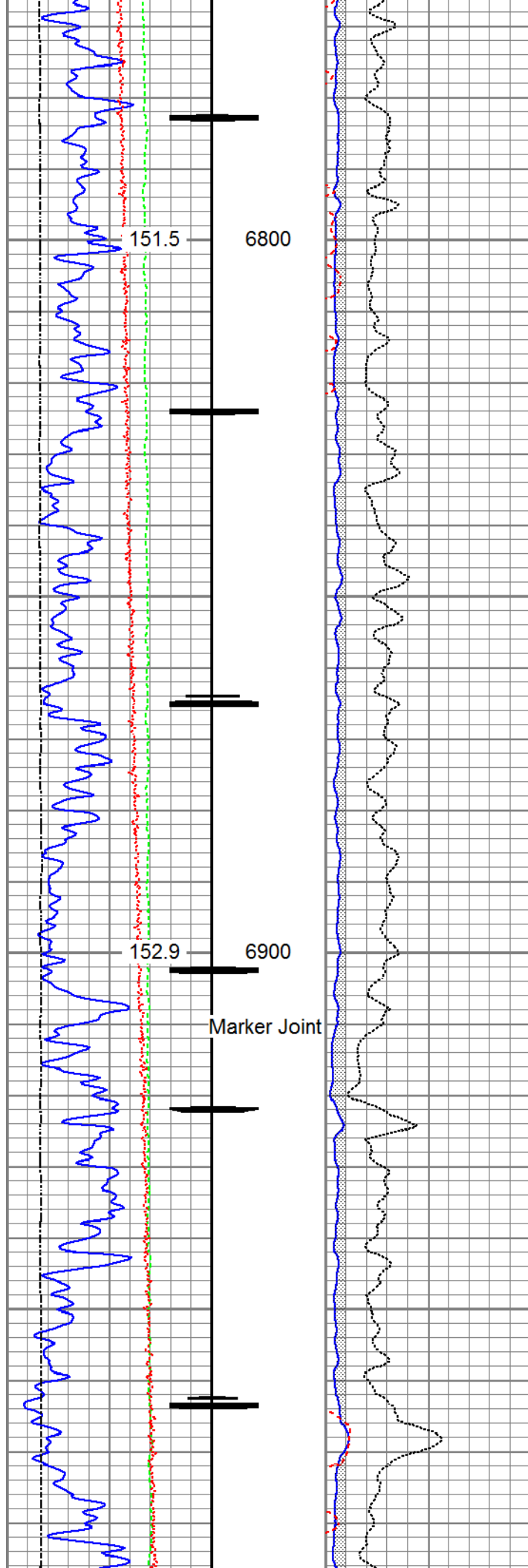


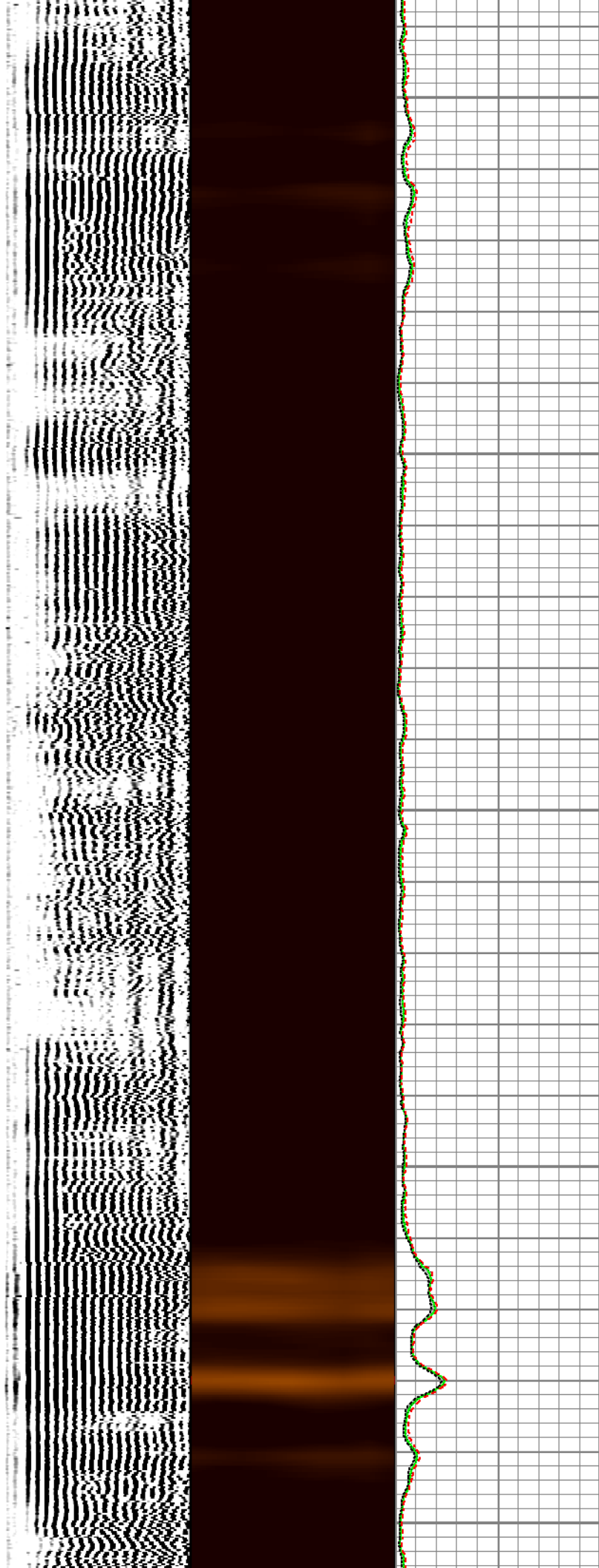
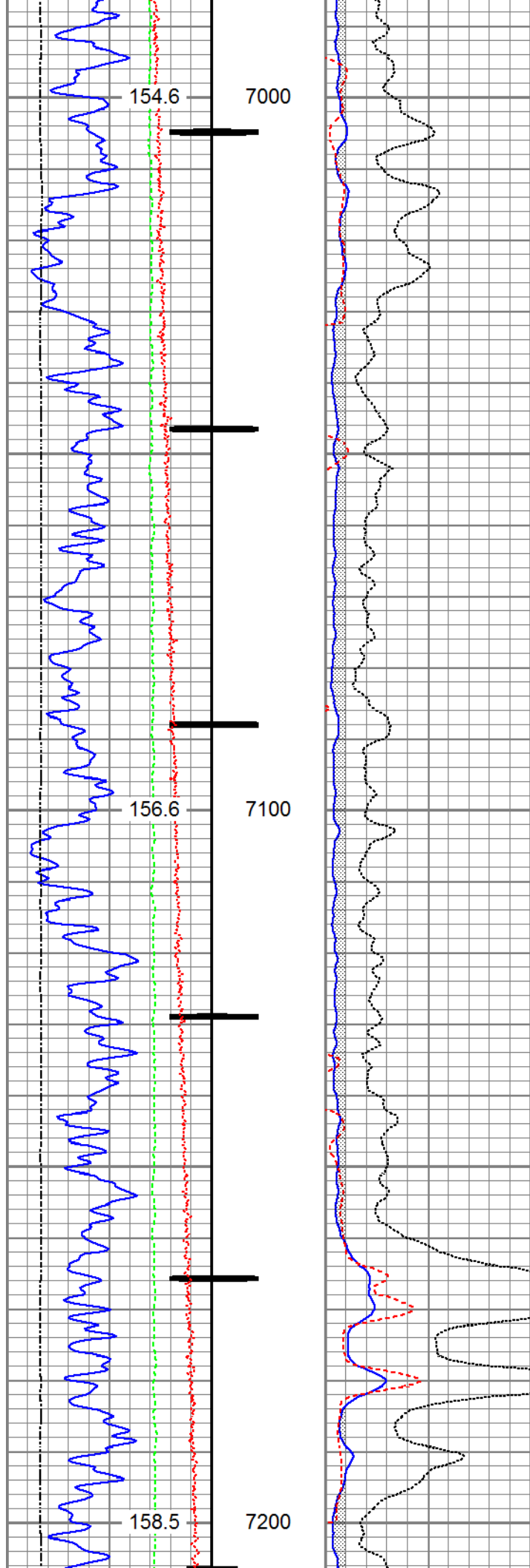


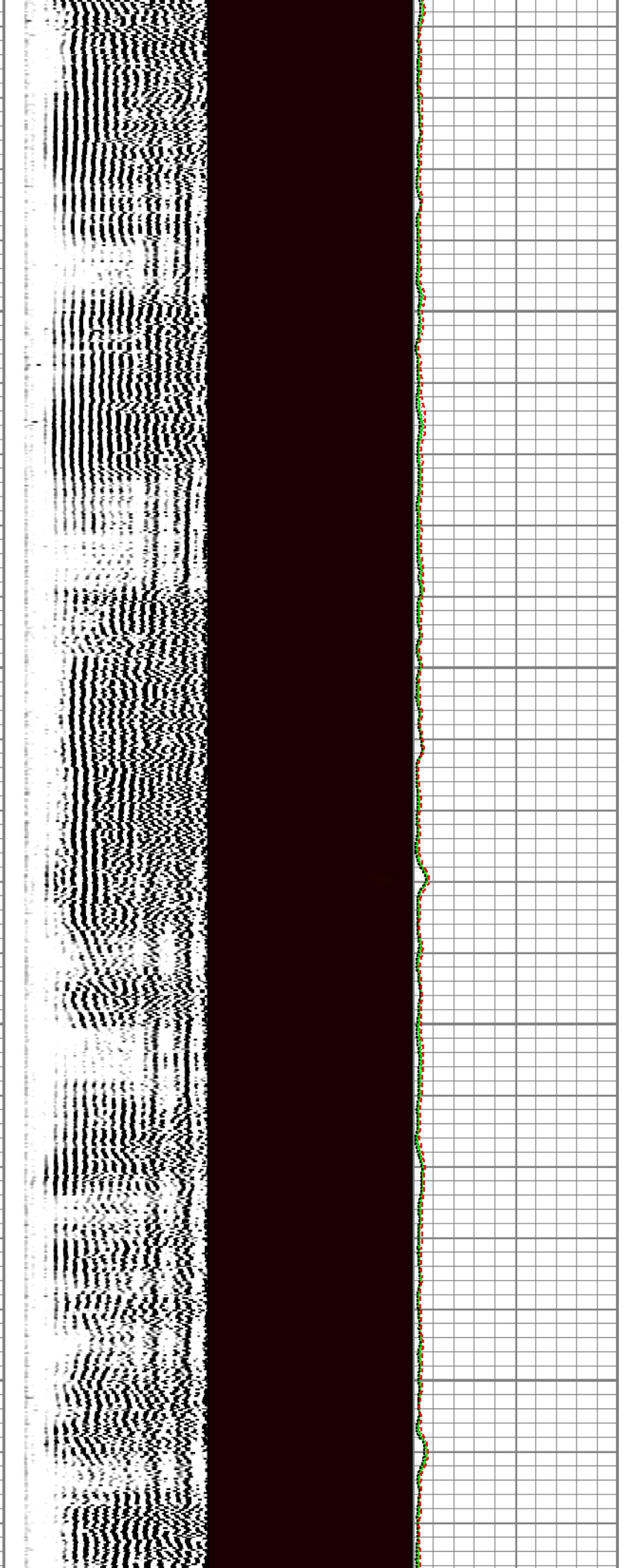
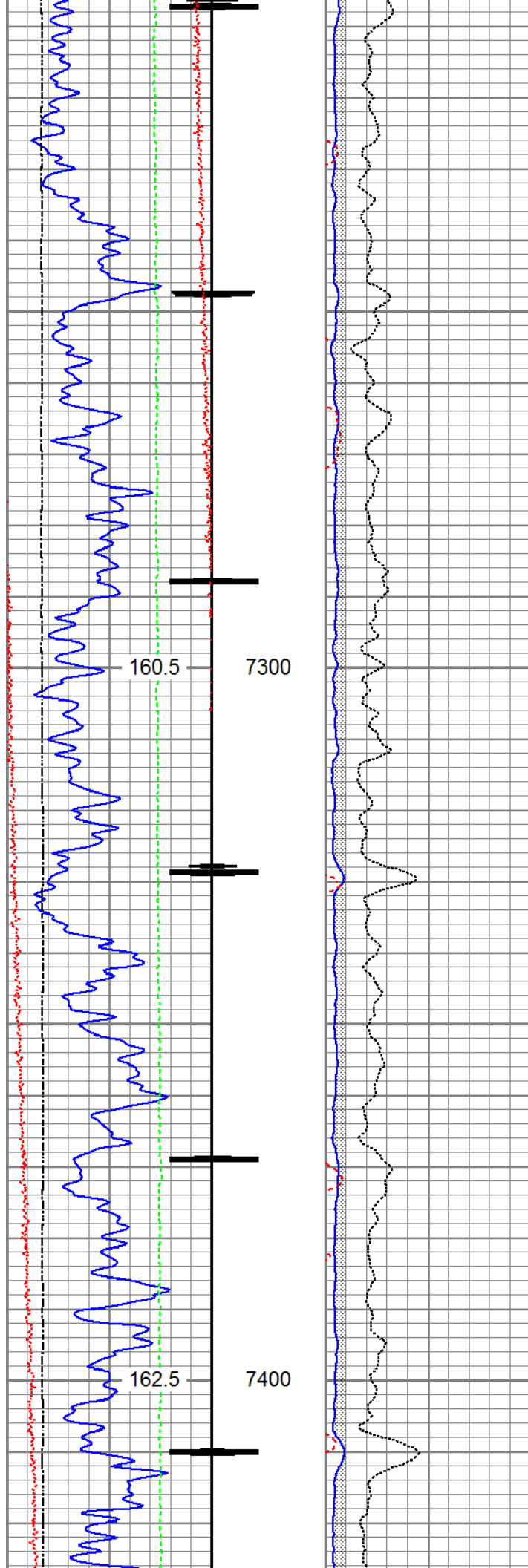


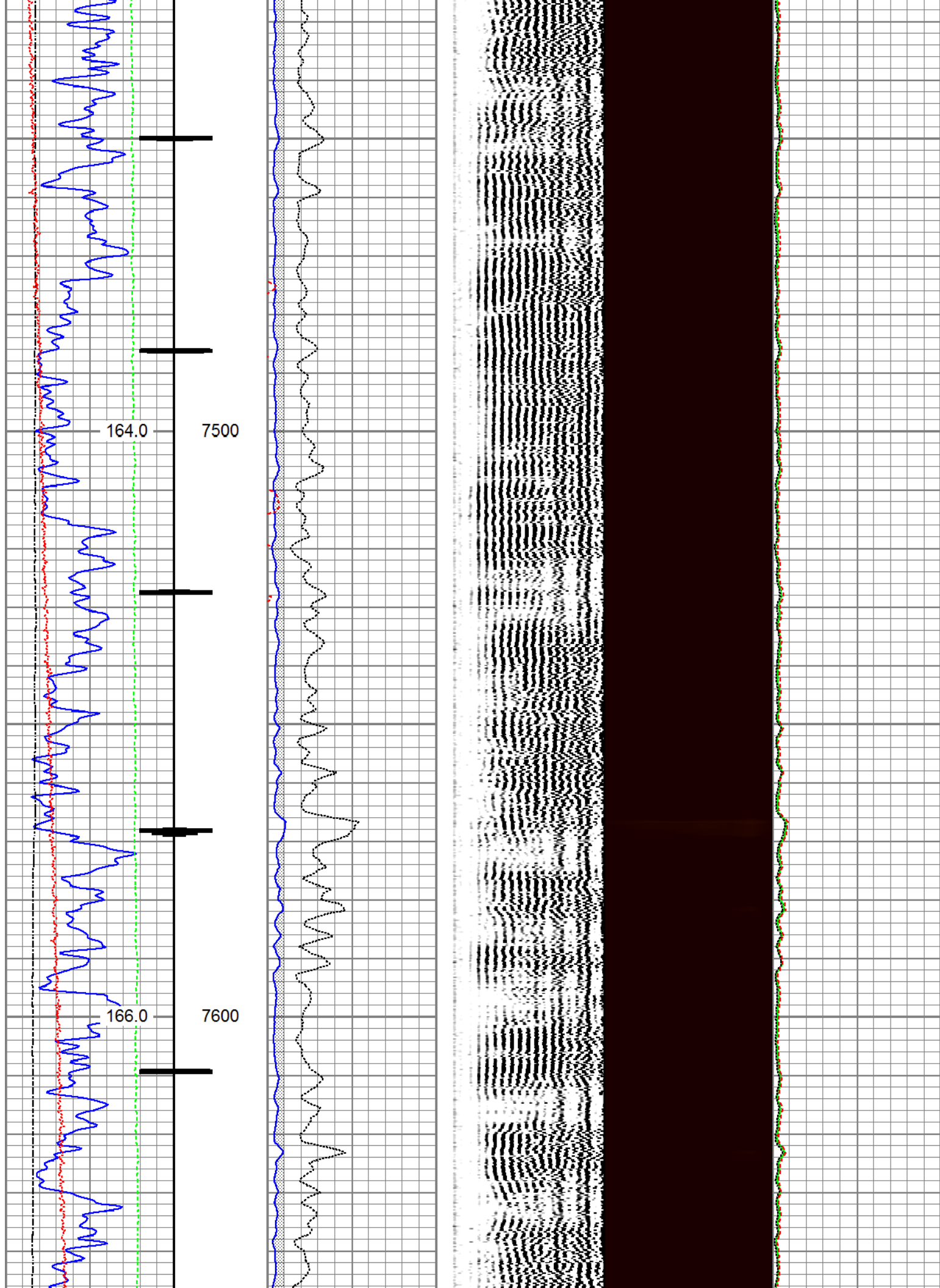


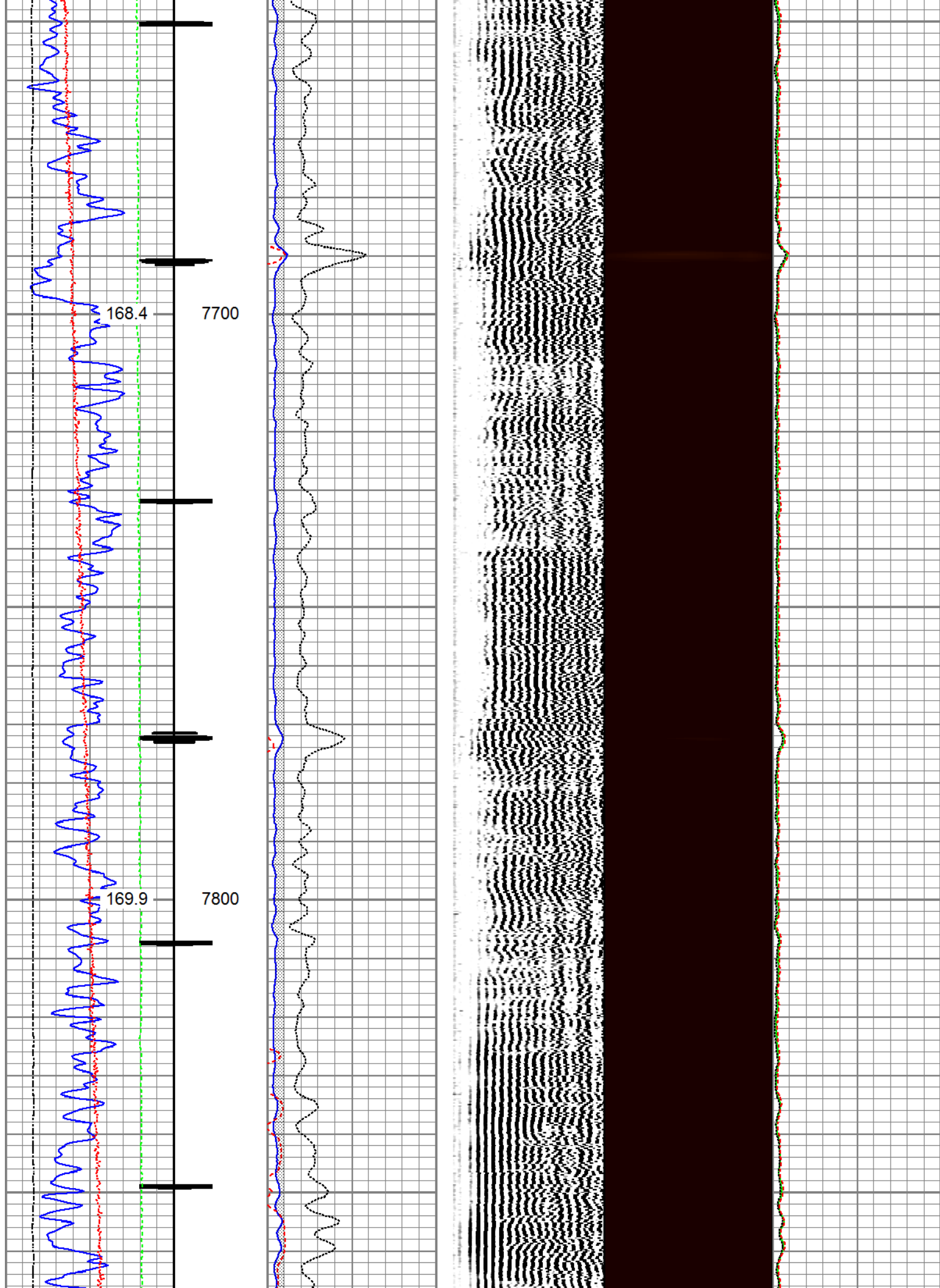


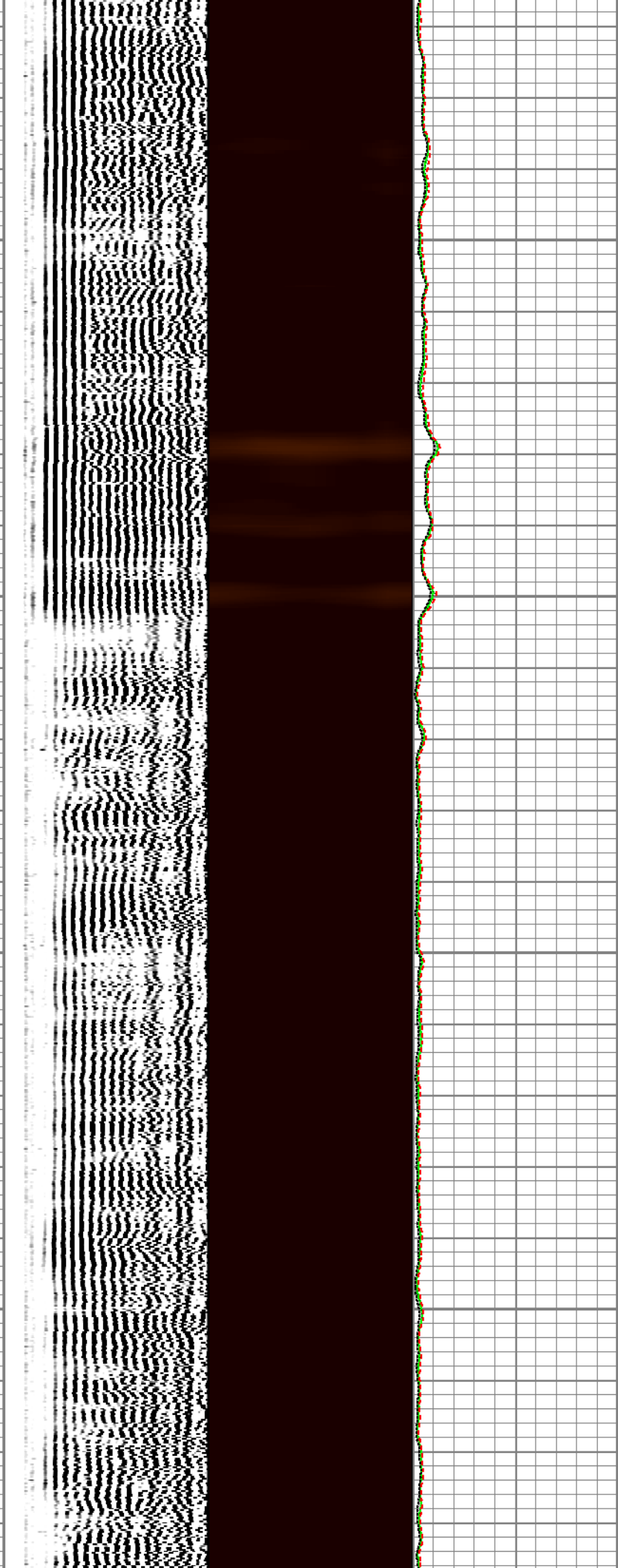
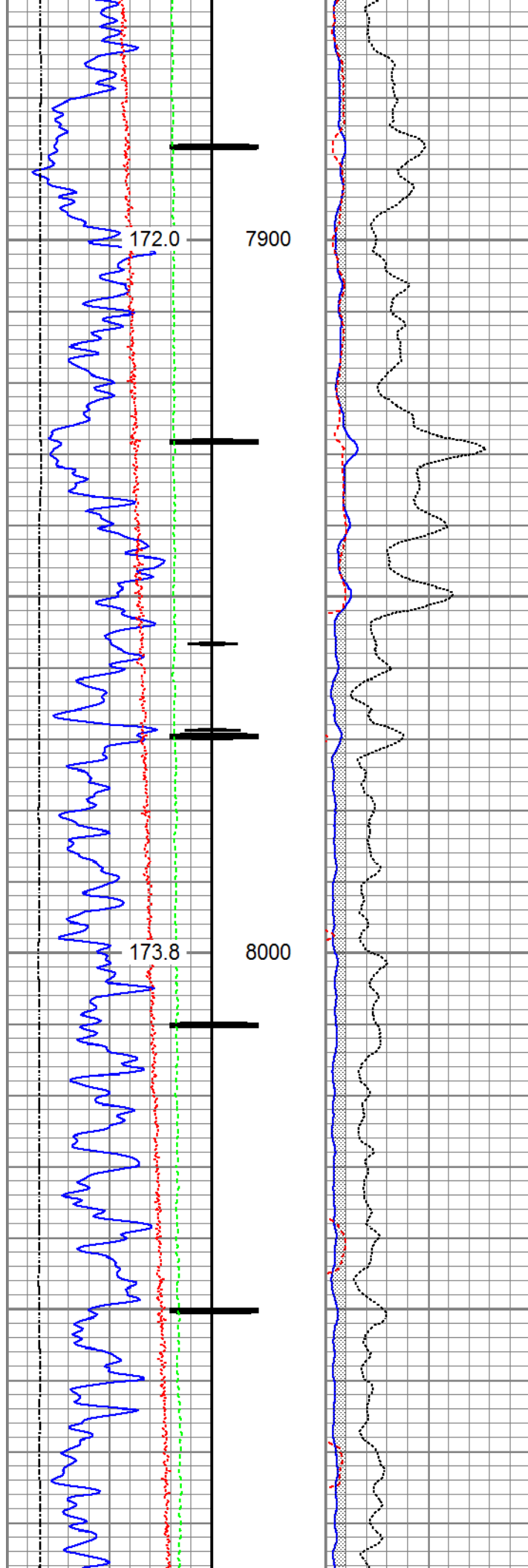


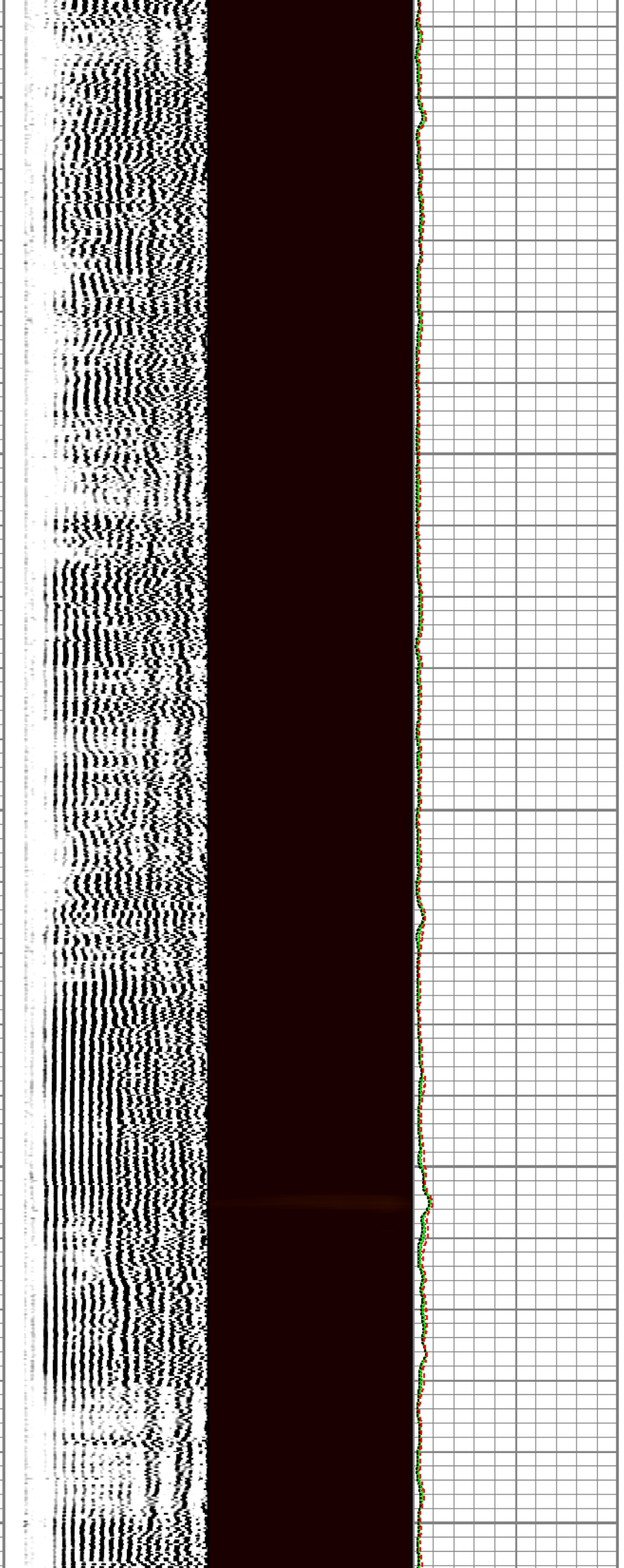
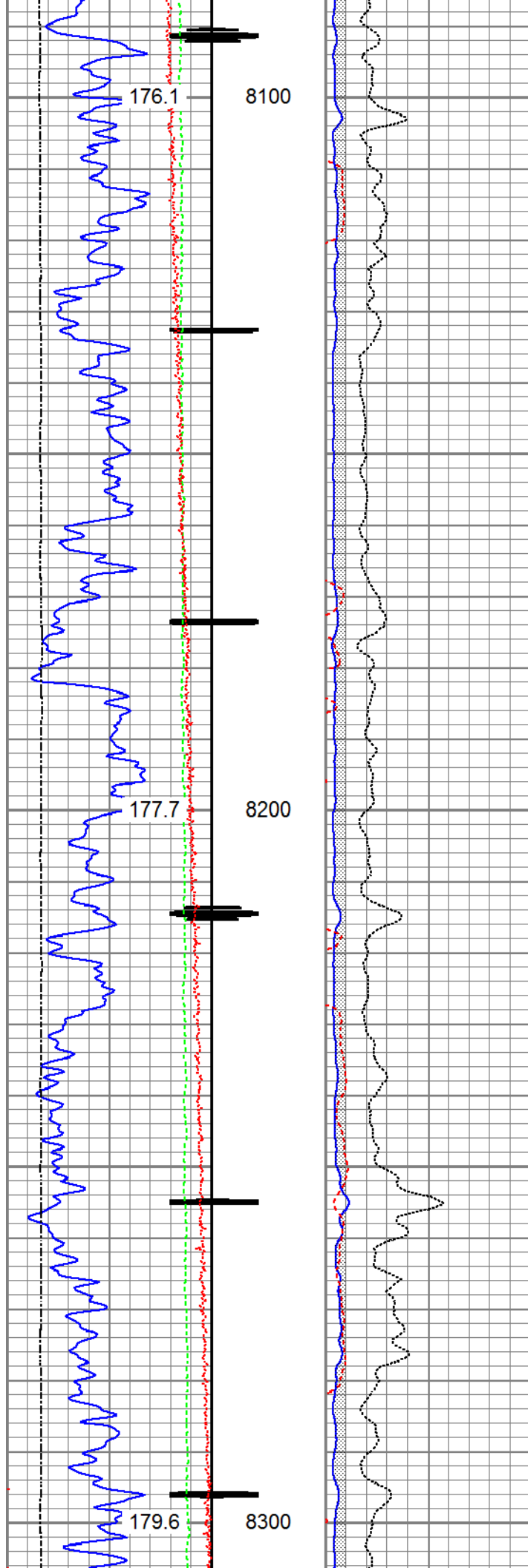


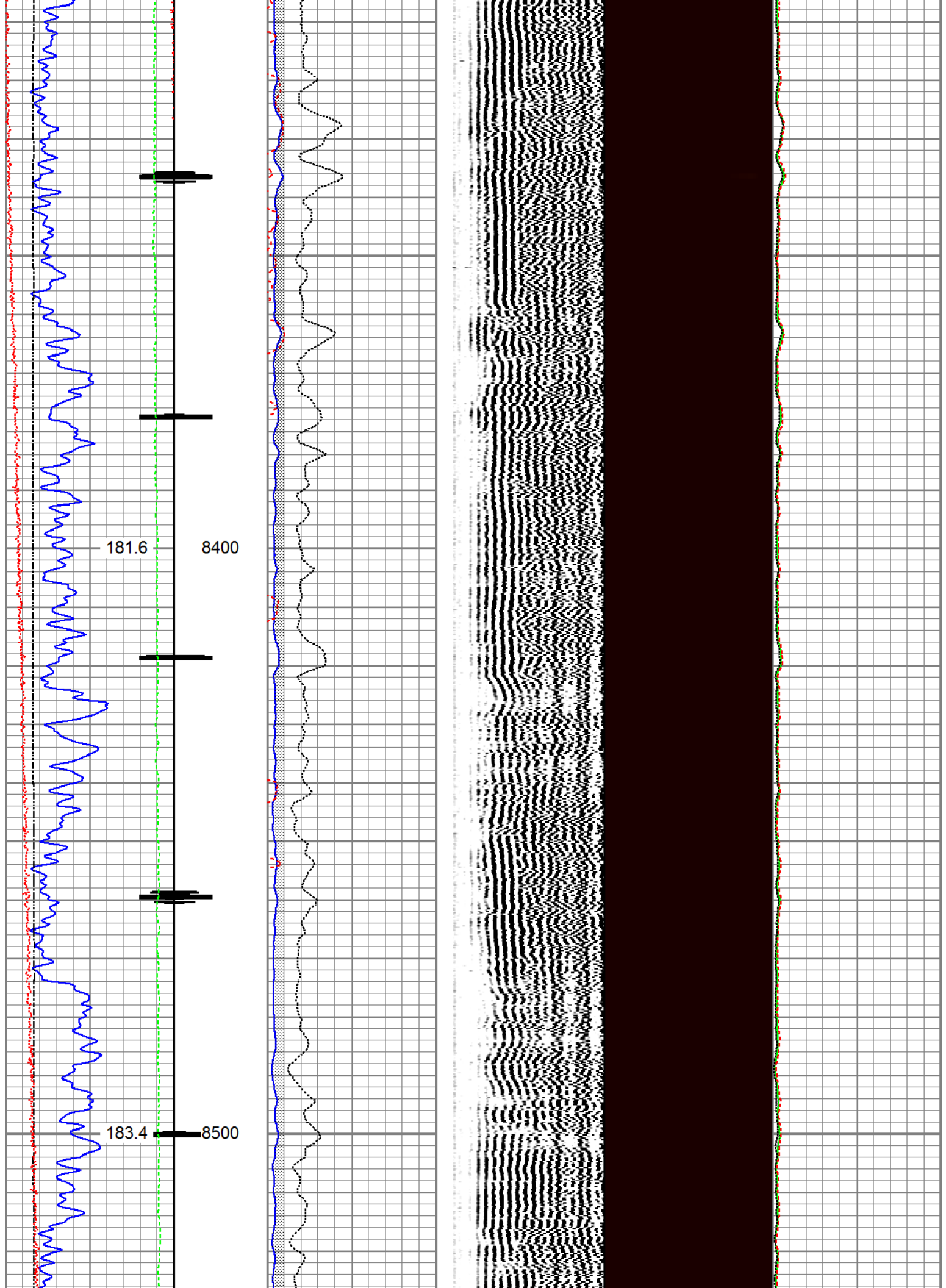


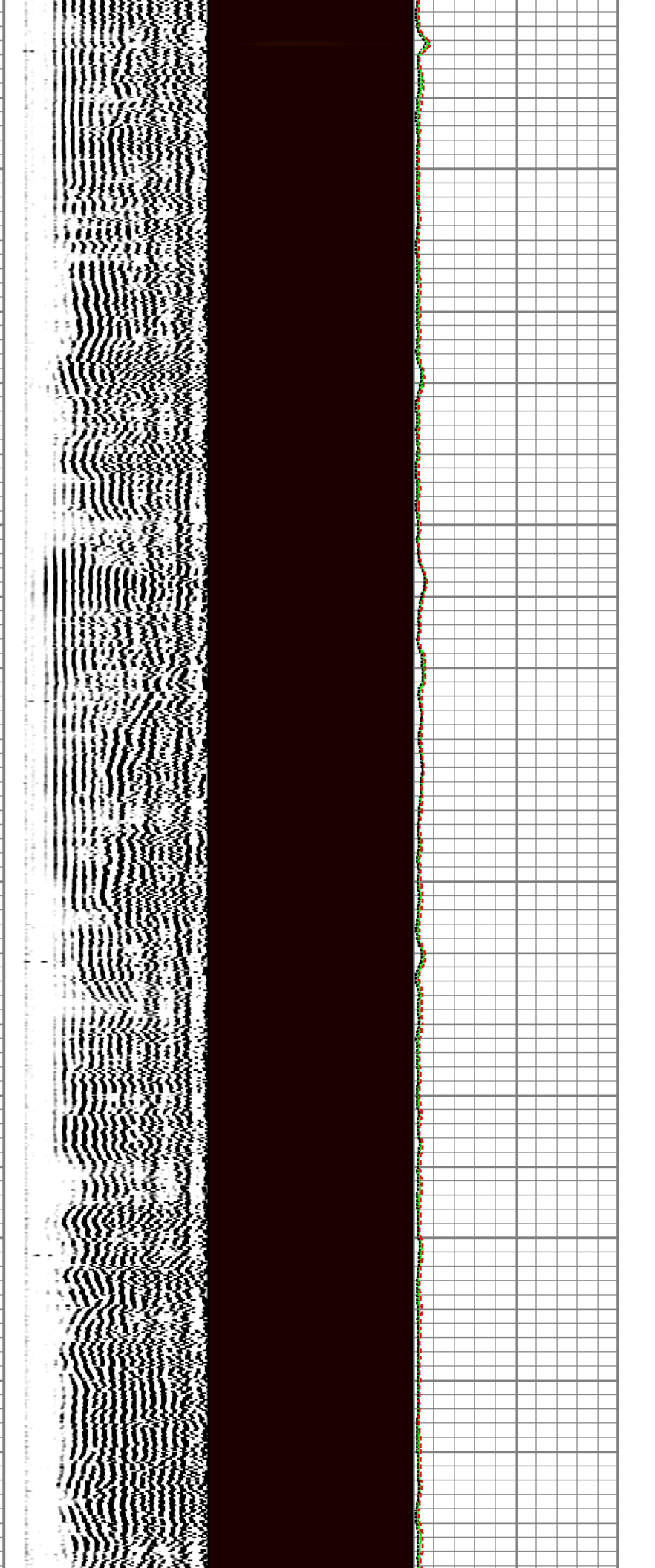
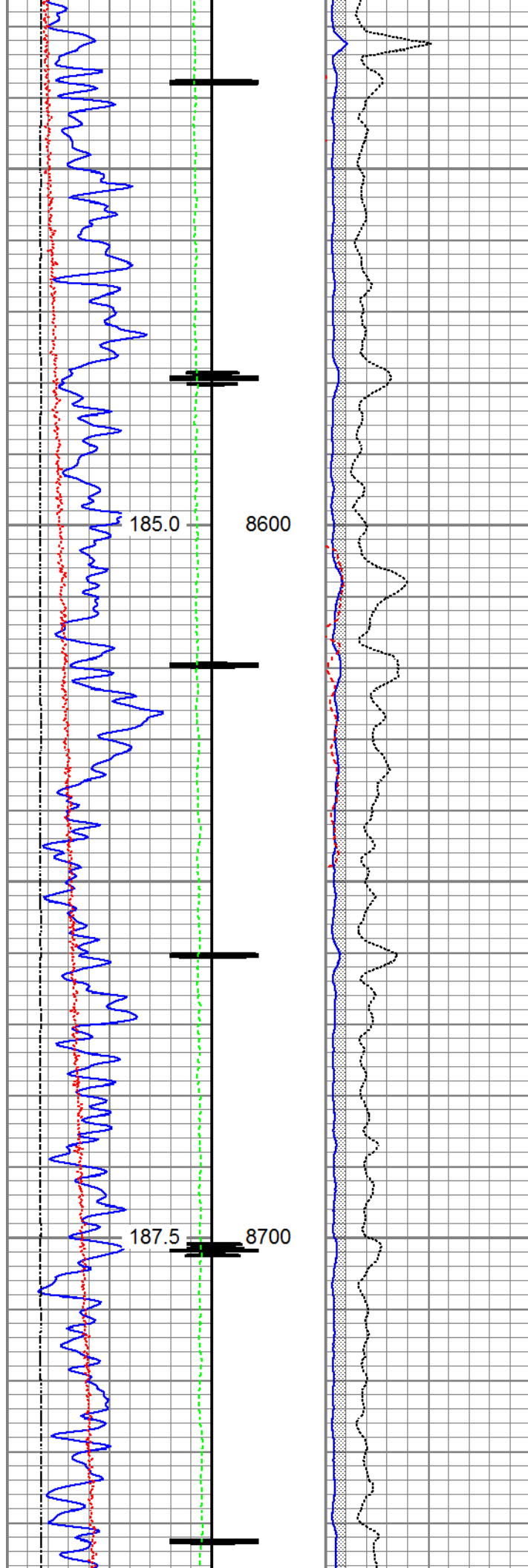


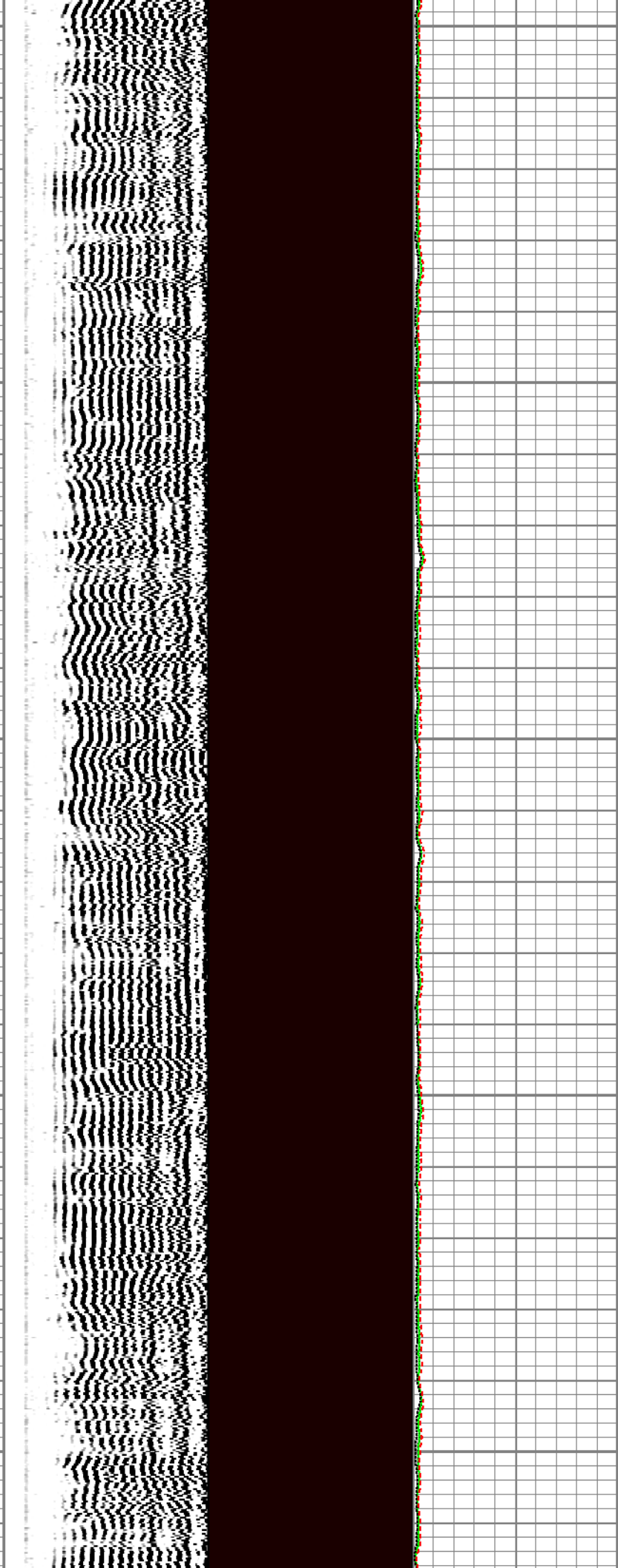
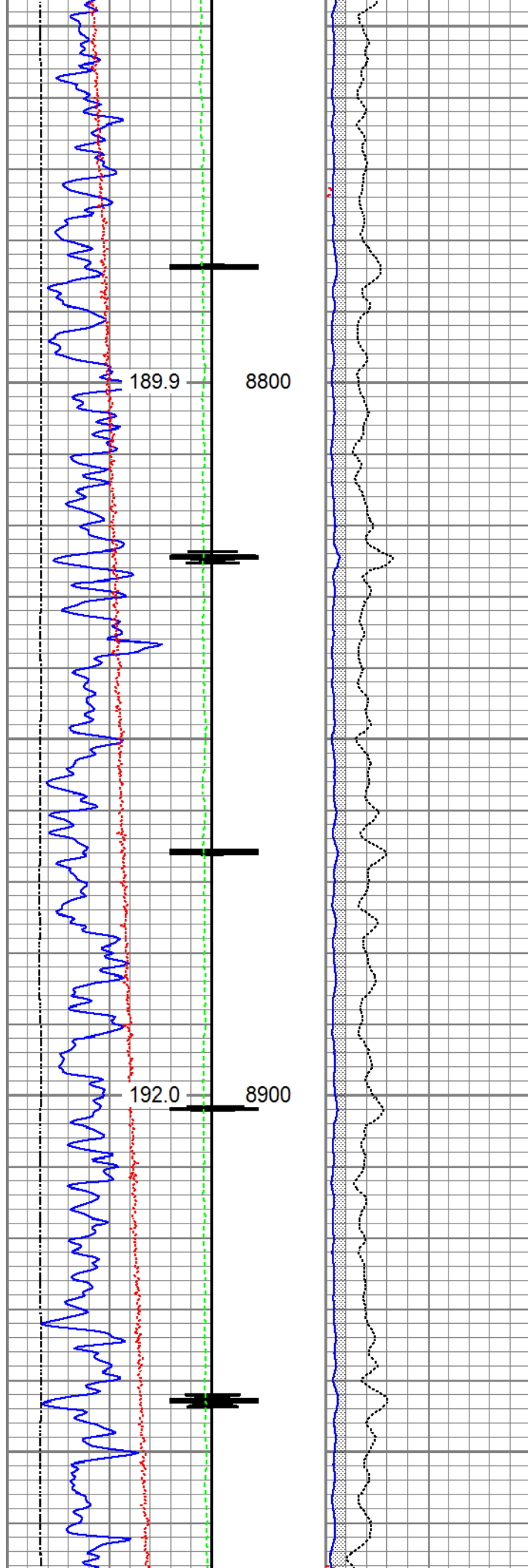


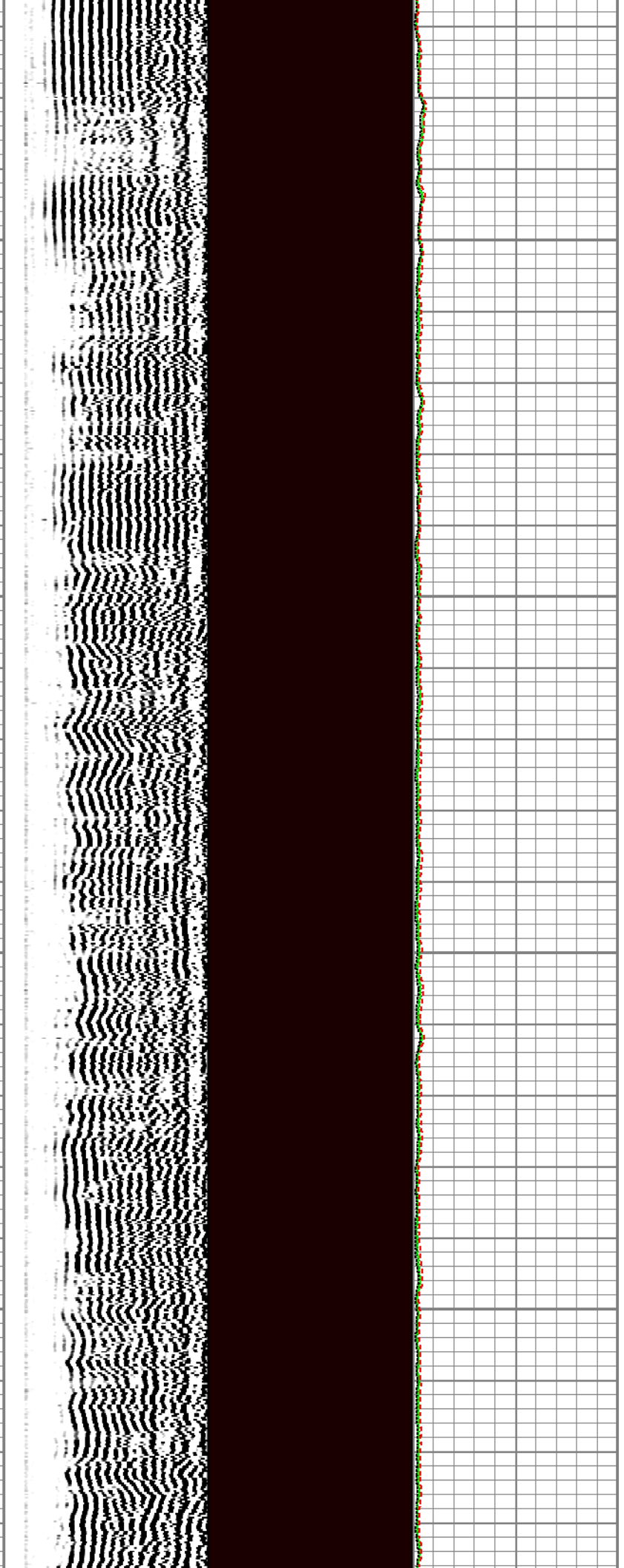
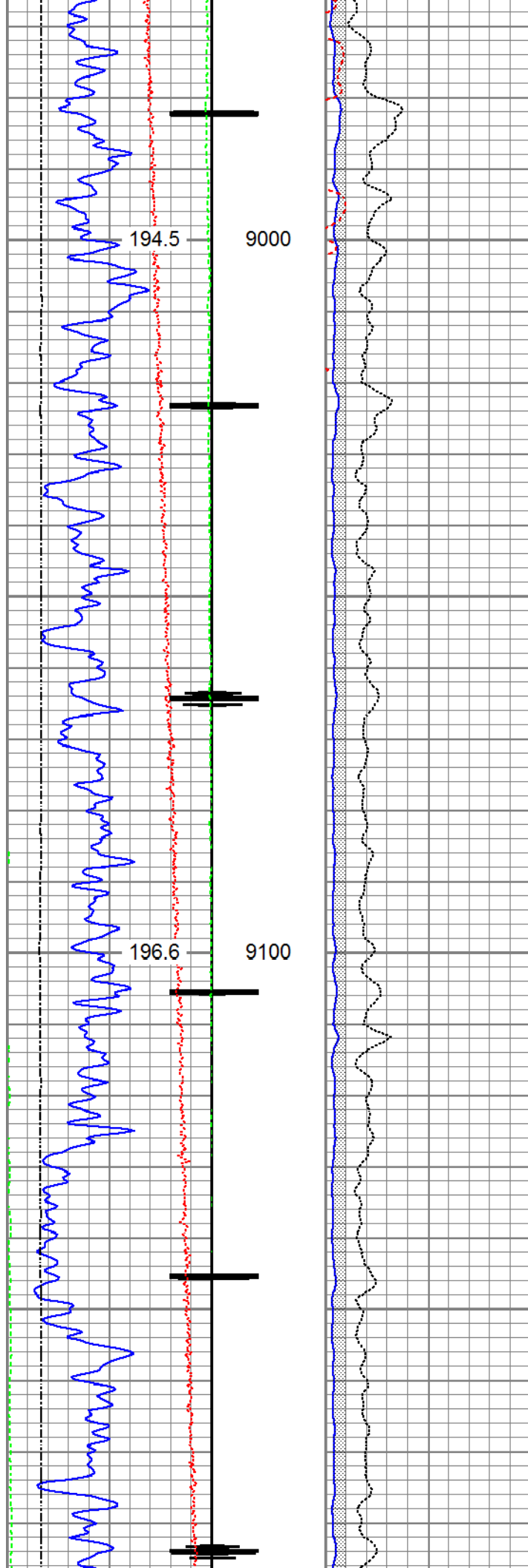


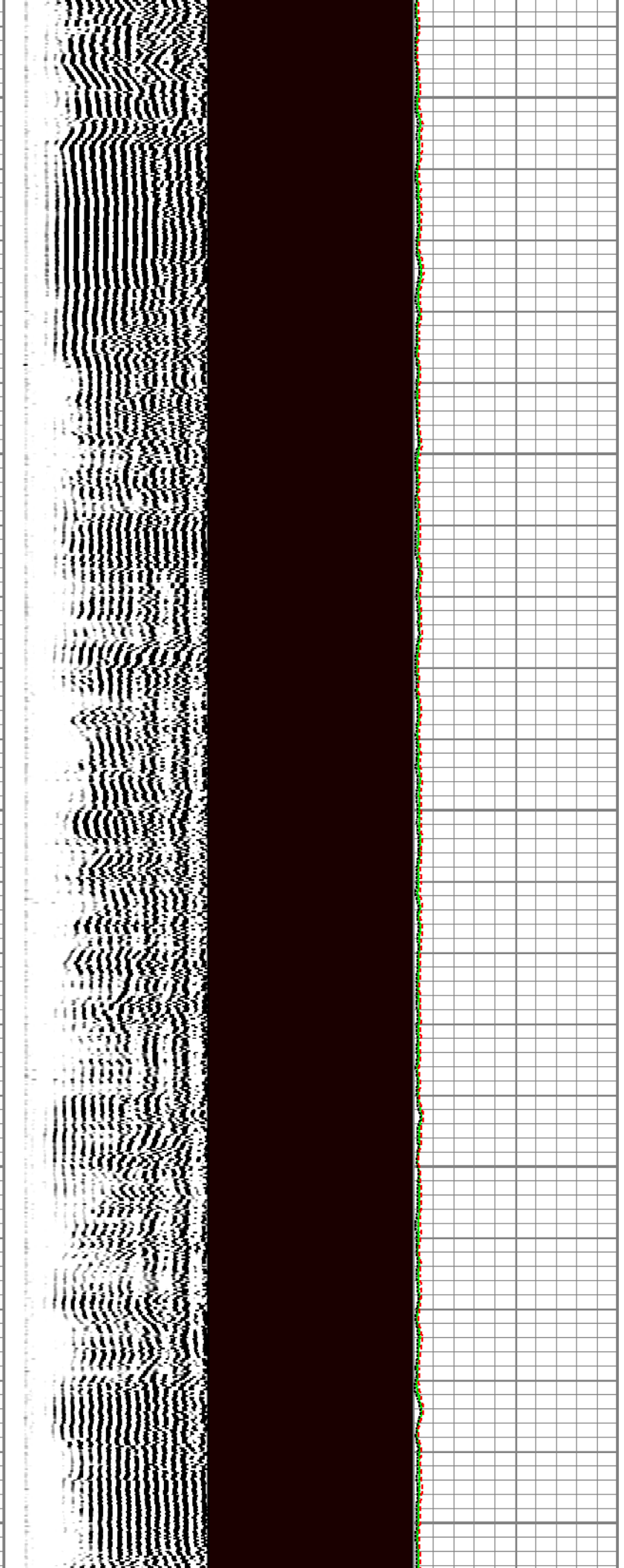
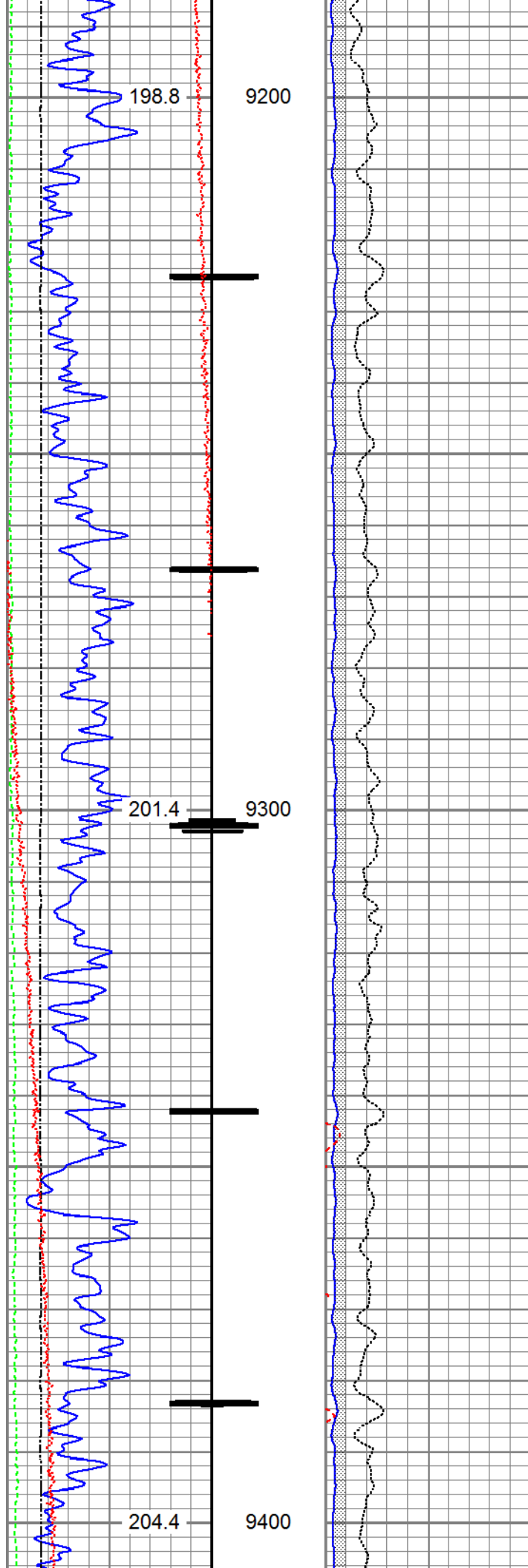


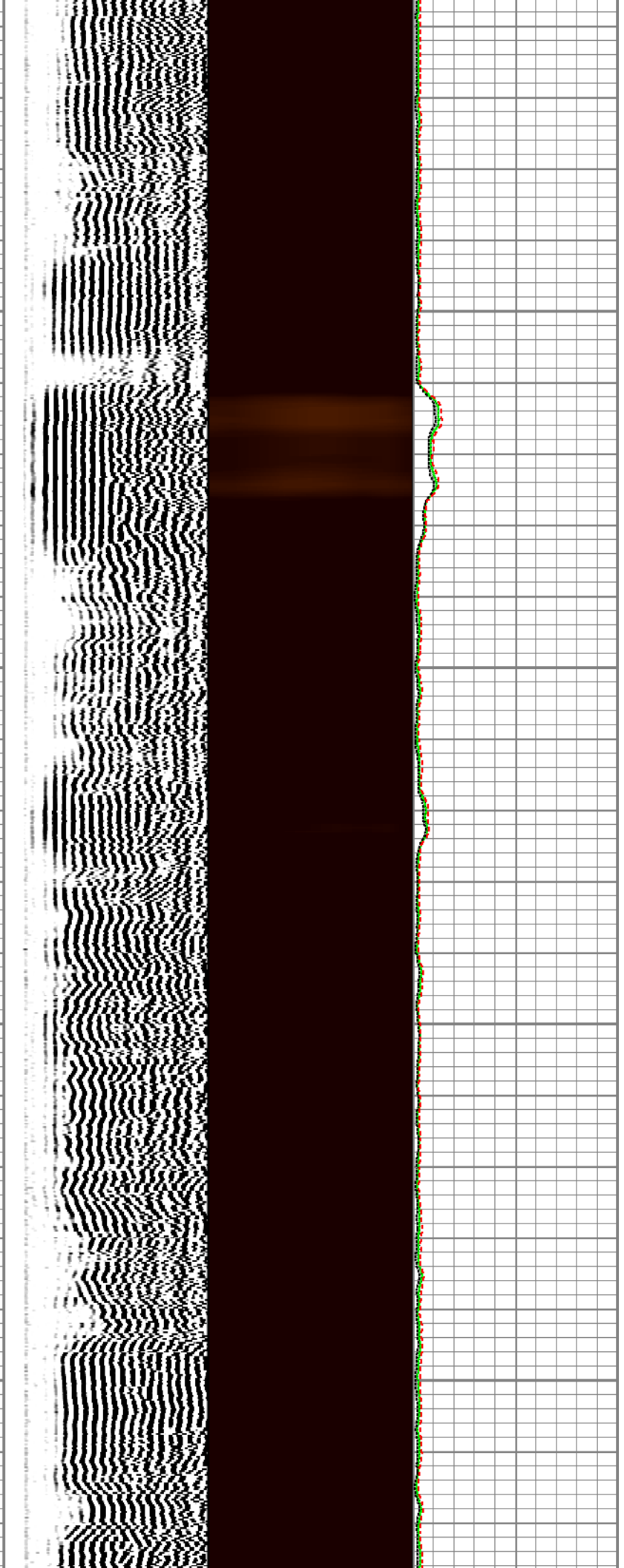
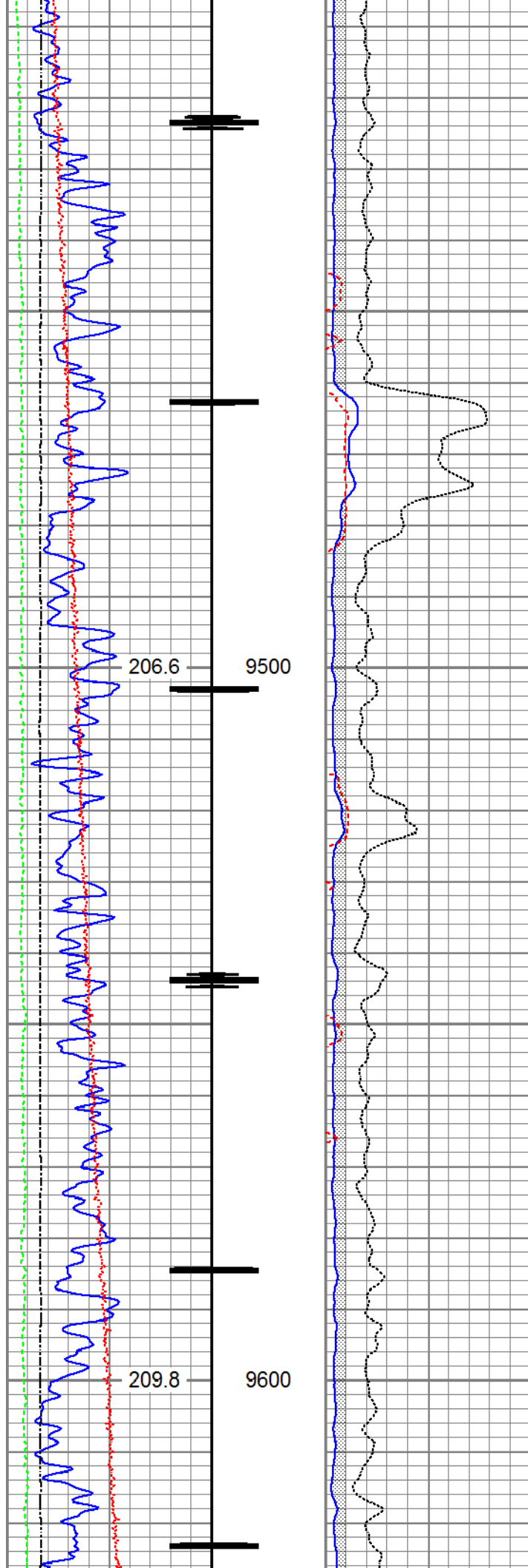


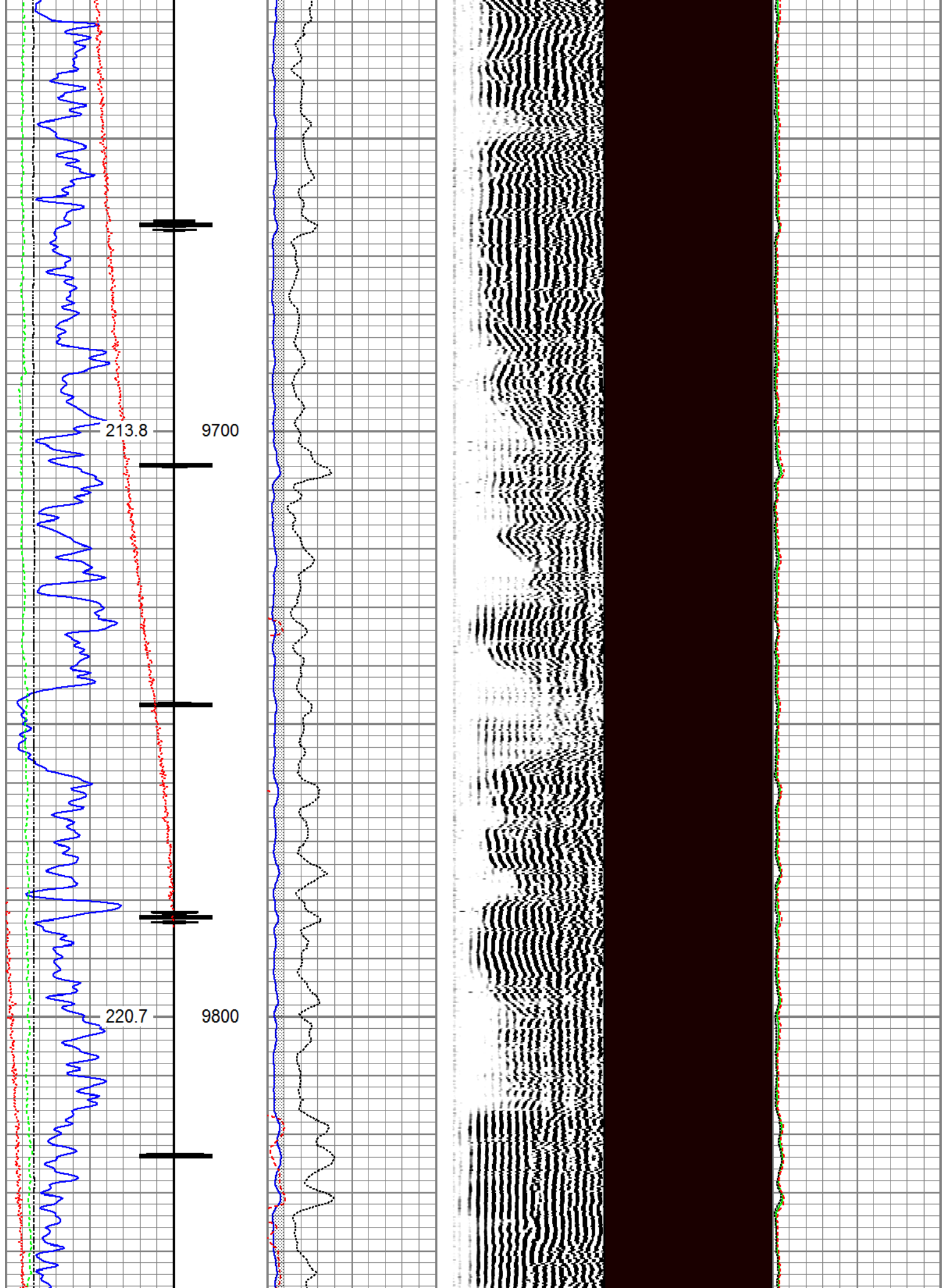


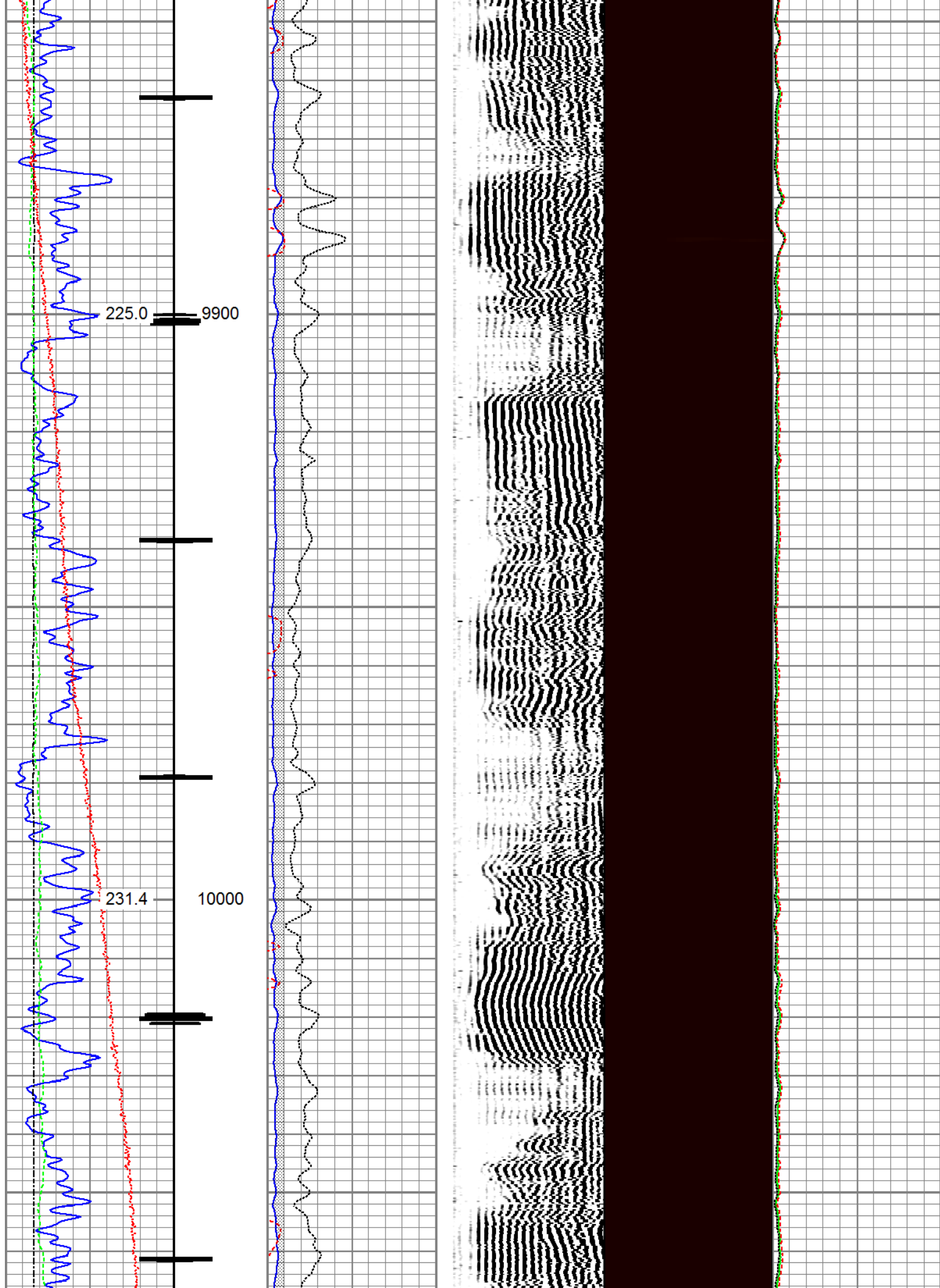


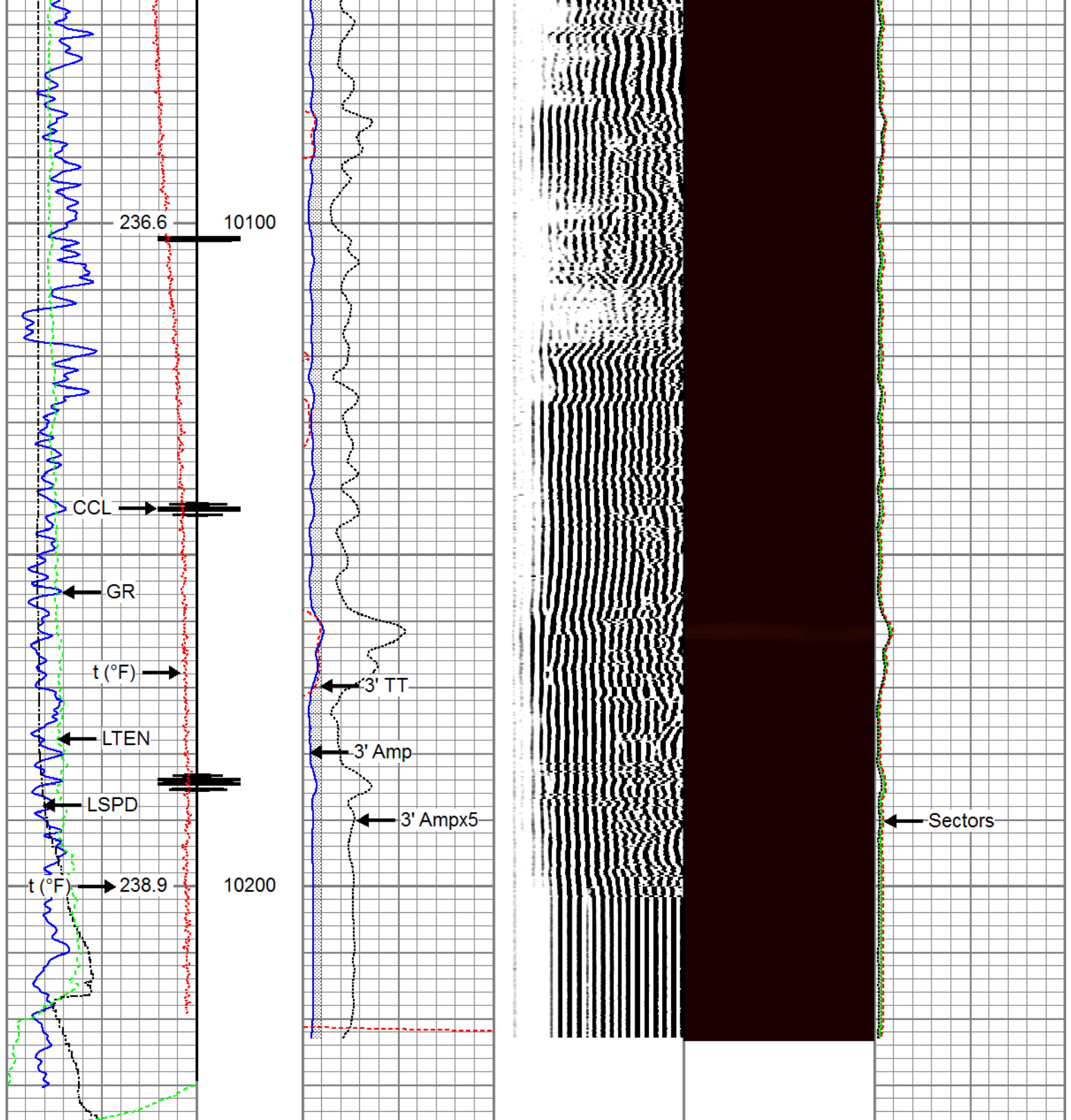












Gamma Ray 0 (GAPI) 200	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150
Casing Collar Locator	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 150
Line Speed -150 (ft/min) 150	3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb) 2000				
Temperature 0 (degF) 20				

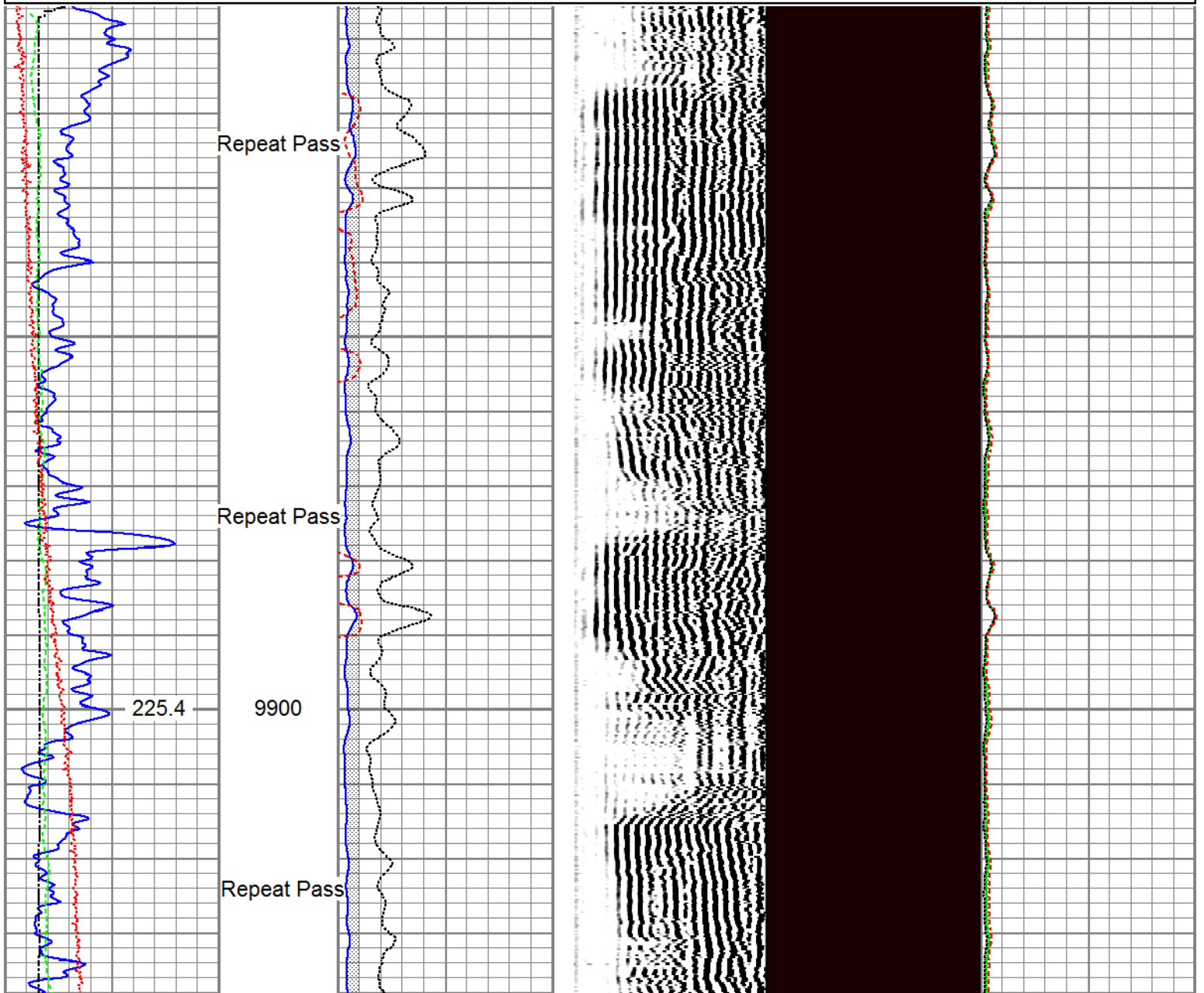


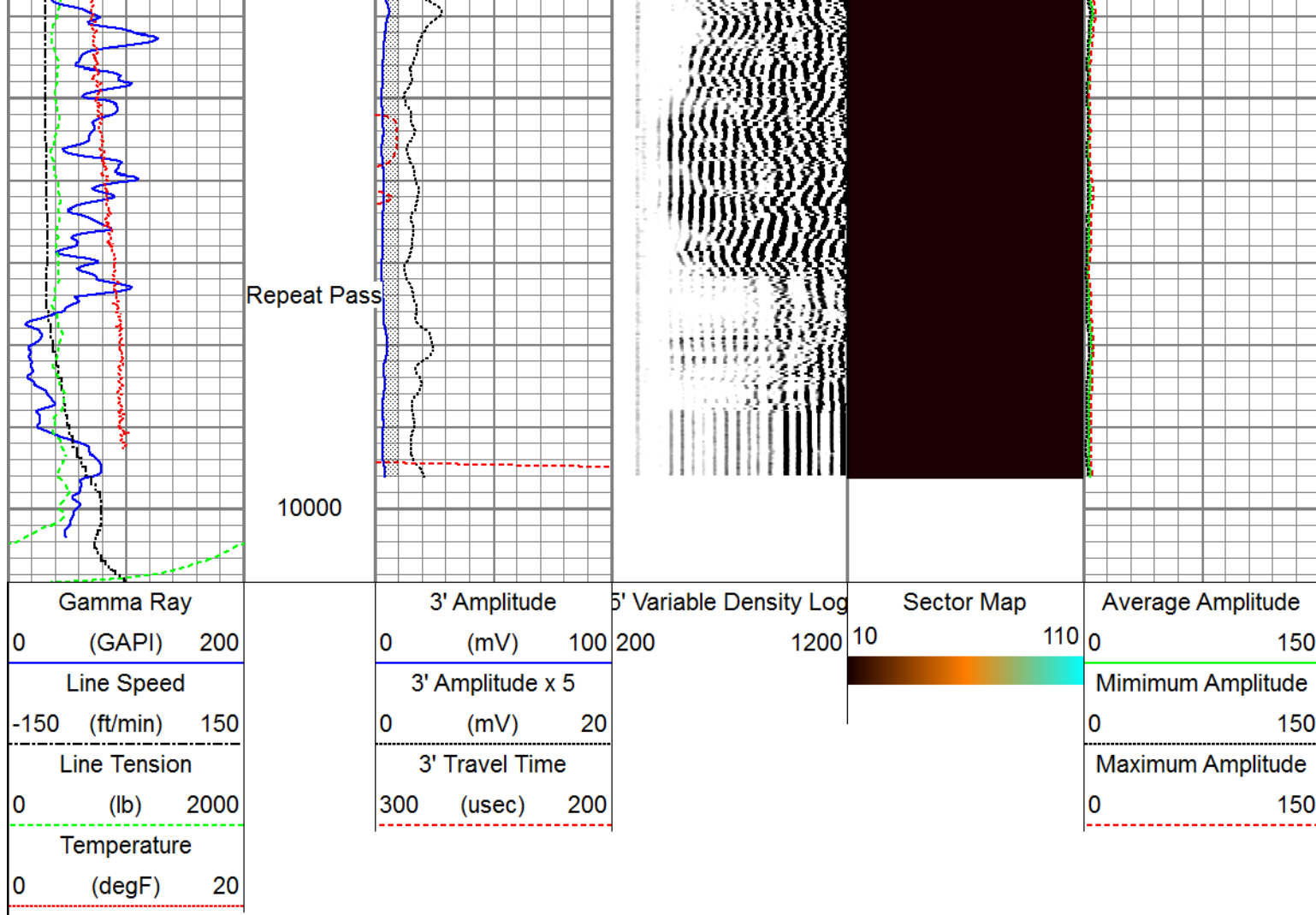
Repeat Pass

Recorded with 0 PSI Surface Induced Pressure

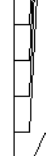



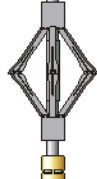
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Dataset Pathname pass3.1
Presentation Format ros_rbt004_tep
Dataset Creation Thu Jul 06 14:23:39 2017
Charted by Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 200	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150
Line Speed -150 (ft/min) 150	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 150
Line Tension 0 (lb) 2000	3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Temperature 0 (degF) 20				





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan_Electric_Cable_Heads-Titan_1-11/16" Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
			Probe_RADII-C-P_RBT_2750 (FW1305-09) 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
Temp	16.05					
WVFS8	13.88					
WVFS7	13.88					
WVFS6	13.88					
WVFS5	13.88					
WVFS4	13.88					
WVFS3	13.88					
WVFS2	13.88					

WVFS2	13.88					
WVFS1	13.88					
WVFCAL	13.88					
WVF3FT	13.88					
WVF5FT	12.88					
HeadVolt	9.63					
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
DCCL	6.18					
CCL	6.18					
			Probe_GR_CCL-P_CGR_2750_S (FW12114.54) Probe 2-3/4" Digital CCL / Gamma Ray Combined		2.75	55.00
GR	3.44					
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00

Dataset: processed_tep_youberg sr 11-12_rbl_07-05-17.db: field/well/run1/pass5.1

Total length: 22.40 ft

Total weight: 261.40 lb

O.D.: 2.75 in

Calibration Report	
Database File	c:\programdata\warrior\data\tep_youberg sr 11-12_rbl_07-05-17\processed_tep_youberg sr 11-12_rbl
Dataset Pathname	pass5.1
Dataset Creation	Thu Jul 06 14:15:00 2017

Gamma Ray Calibration Report		
Serial Number:	FW1211-081	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:31:52 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report			
Serial Number:	FW1305-098		
Tool Model:	P_RBT_2750		
Calibration Casing Diameter:	4.500		in
Calibration Depth:	514.330		ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.025	0.582	0.800	81.196	132.386	4.167
CAL	-0.006	0.756				
5'	-0.001	0.454	0.800	81.196	176.870	0.906
SUM						
S1	-0.015	0.620	0.000	100.000	157.329	2.434
S2	-0.020	0.627	0.000	100.000	154.685	3.040
S3	-0.027	0.623	0.000	100.000	153.820	4.123
S4	-0.024	0.609	0.000	100.000	157.972	3.853
S5	-0.021	0.597	0.000	100.000	161.643	3.431
S6	-0.027	0.613	0.000	100.000	156.348	4.148
S7	-0.026	0.623	0.000	100.000	154.050	4.064
S8	-0.034	0.615	0.000	100.000	154.074	5.205

Internal Reference Calibration, performed Fri May 05 10:29:14 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	0.756	1.000	0.000

Air Zero Calibration, performed Wed Jul 05 14:16:55 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	



Company TEP Rocky Mountain LLC
 Well Youberg SR 11-12
 Field Rulison
 County Garfield
 State Colorado