



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Youberg SR 331-12
Field Rulison
County Garfield
State Colorado

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Location: API #: 05-045-23296

Other Services

SEC 12 TWP 7S RGE 94W

Elevation

Permanent Datum Ground Level Elevation 7254'
Log Measured From Kelly Bushing 24 FT
Drilling Measured From Kelly Bushing

K.B. 7278'
D.F. 7277'
G.L. 7254'

Date 05-JUL-2017

Run Number	One		
Depth Driller	9403 FT		
Depth Logger	9306 FT		
Bottom Logged Interval	9306 FT		
Top Log Interval	Surface		
Open Hole Size	8.75"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	242° F		
Estimated Cement Top	See Log		
Time Well Ready	16:00		
Time Logger on Bottom	17:30		
Equipment Number	HDO359		
Location	Grand Junction		
Recorded By	Michael Kochevar		
Witnessed By	Dustin Welsh		

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	1100 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9403 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 5693 FT - 5714 FT
Log ran from 9306 FT to surface
Recorded with 0 PSI surface induced pressure

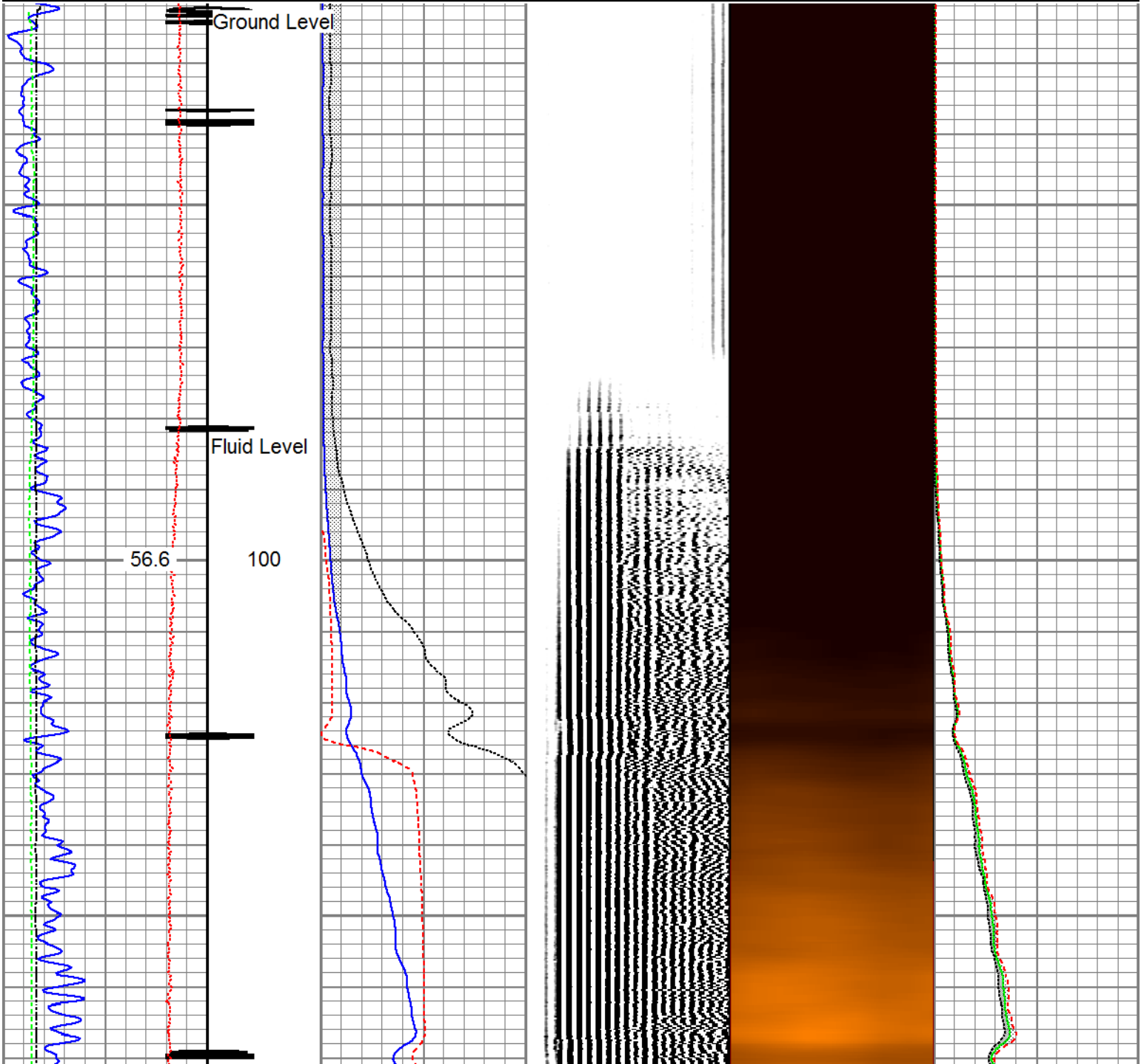
Thank you for choosing Reliance Oilfield Services, LLC!!

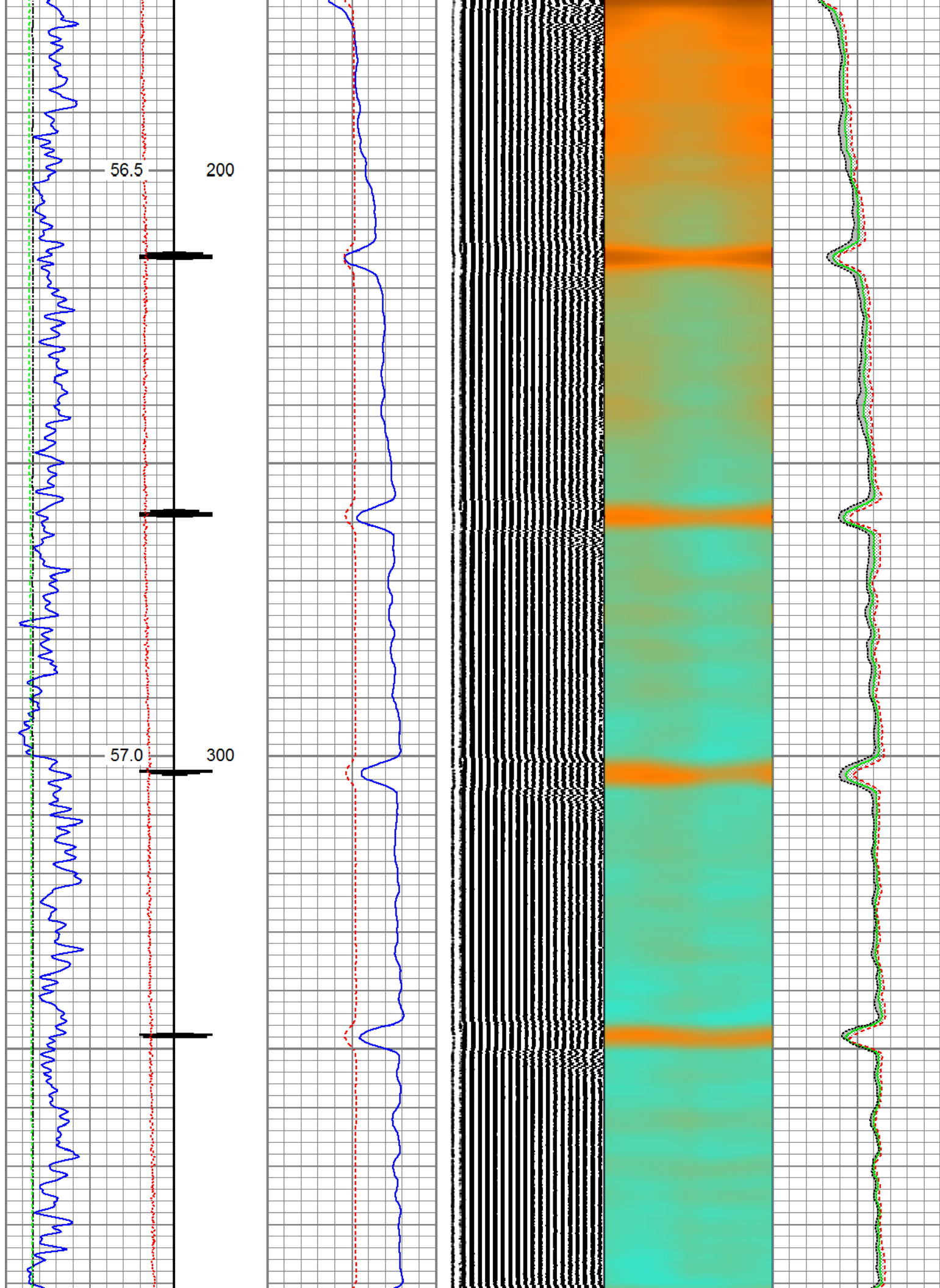


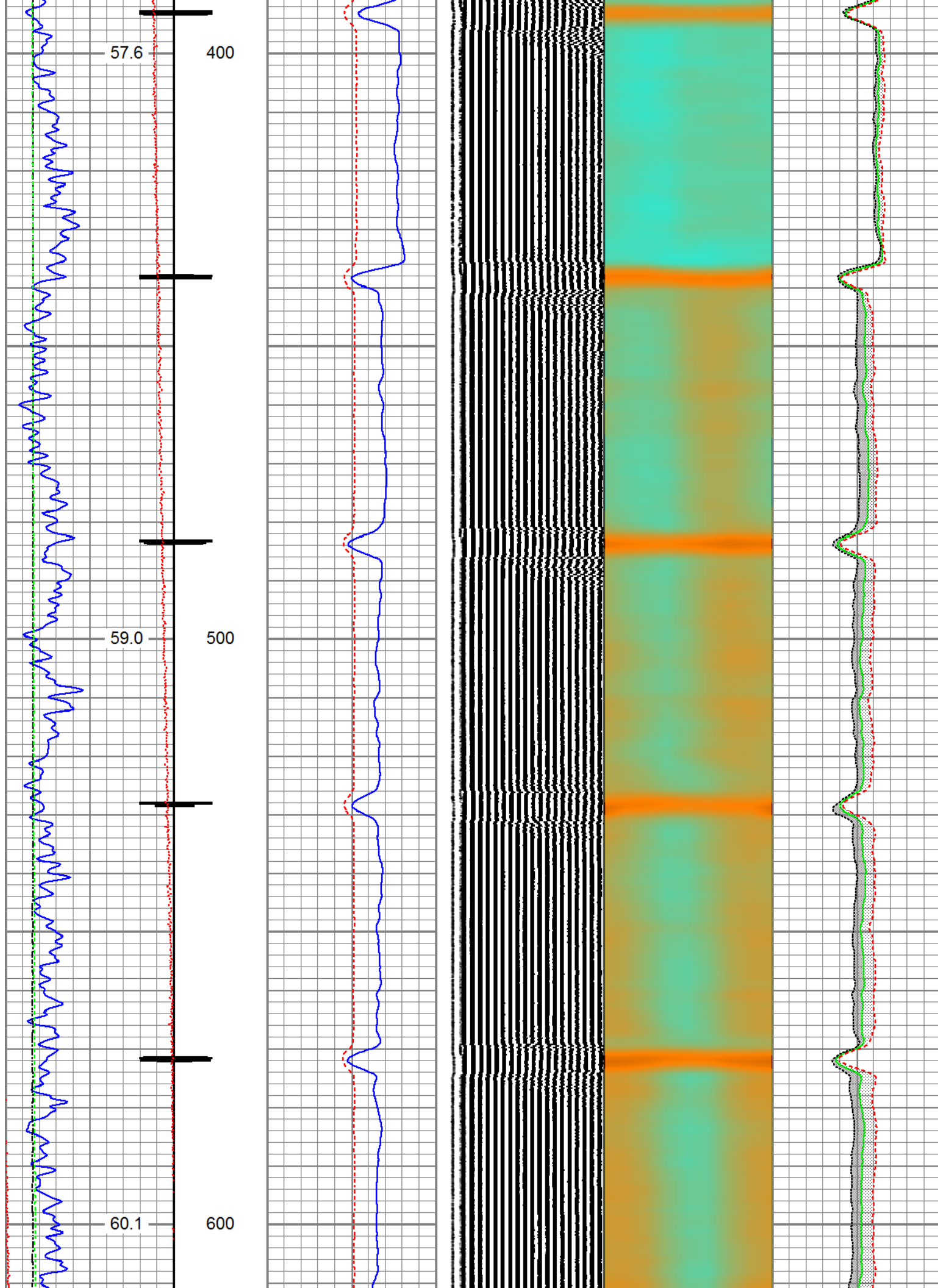
Main Pass

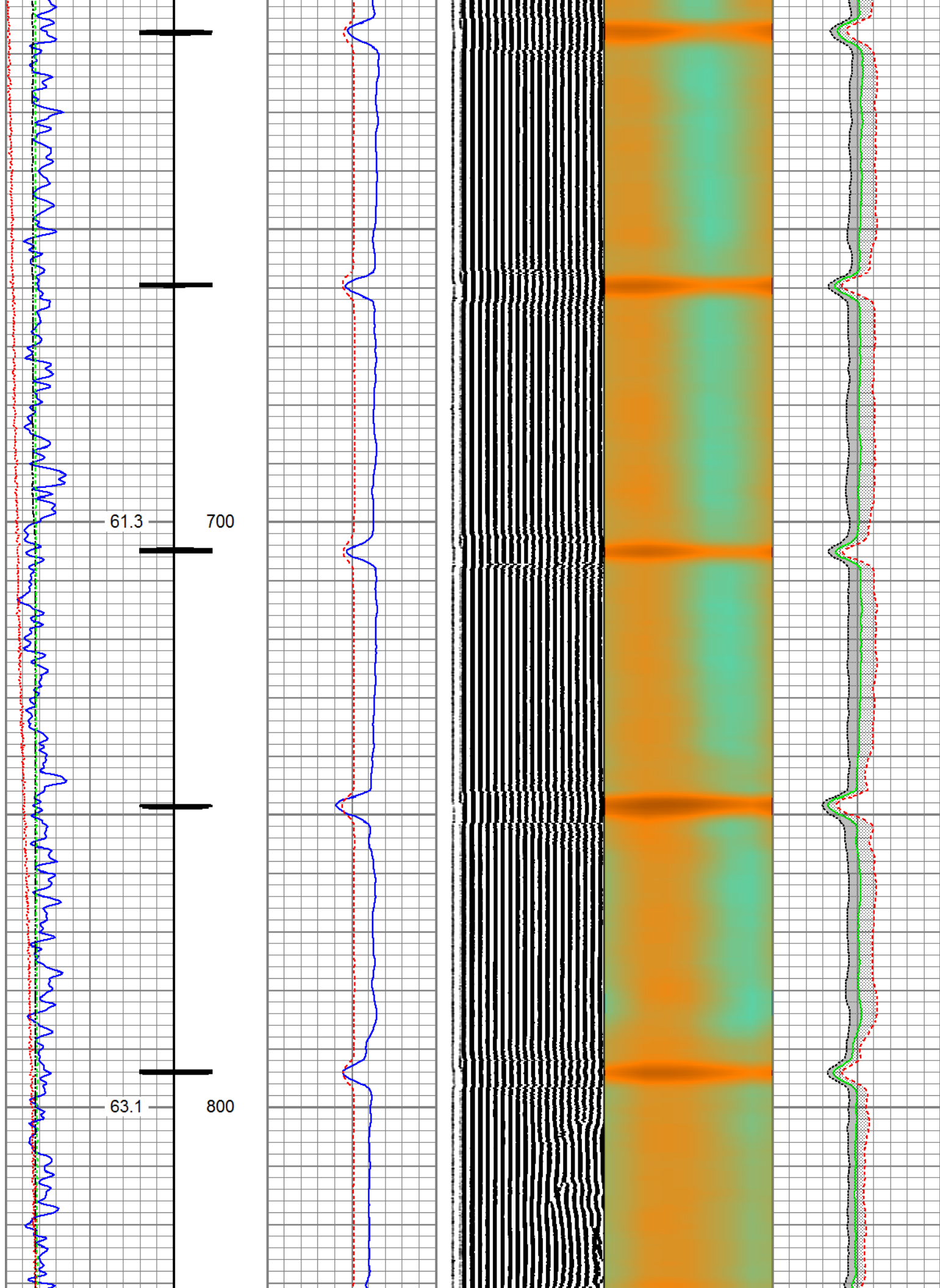
Recorded with 0 PSI Surface Induced Pressure

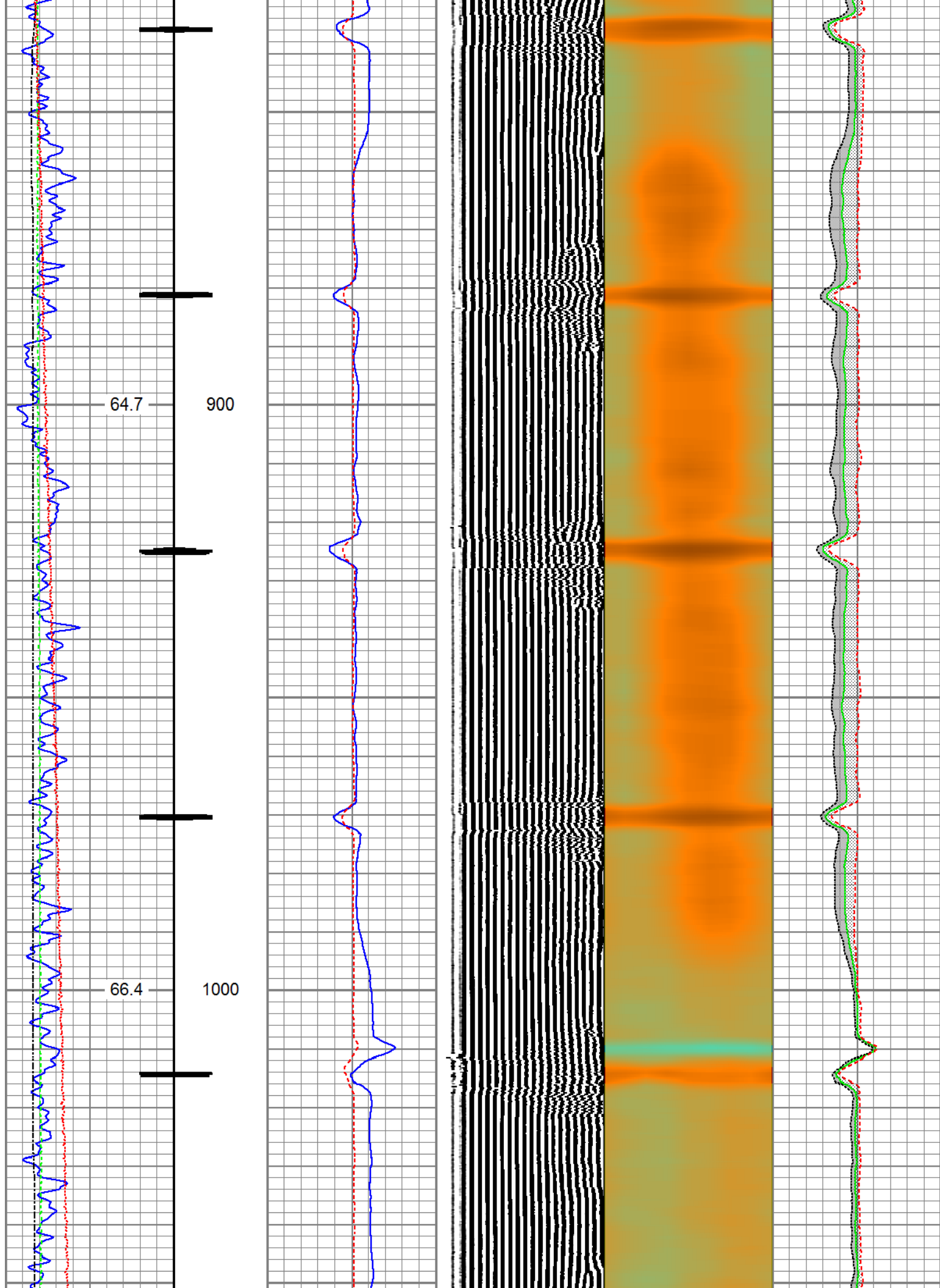
Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150
Casing Collar Locator		3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb)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

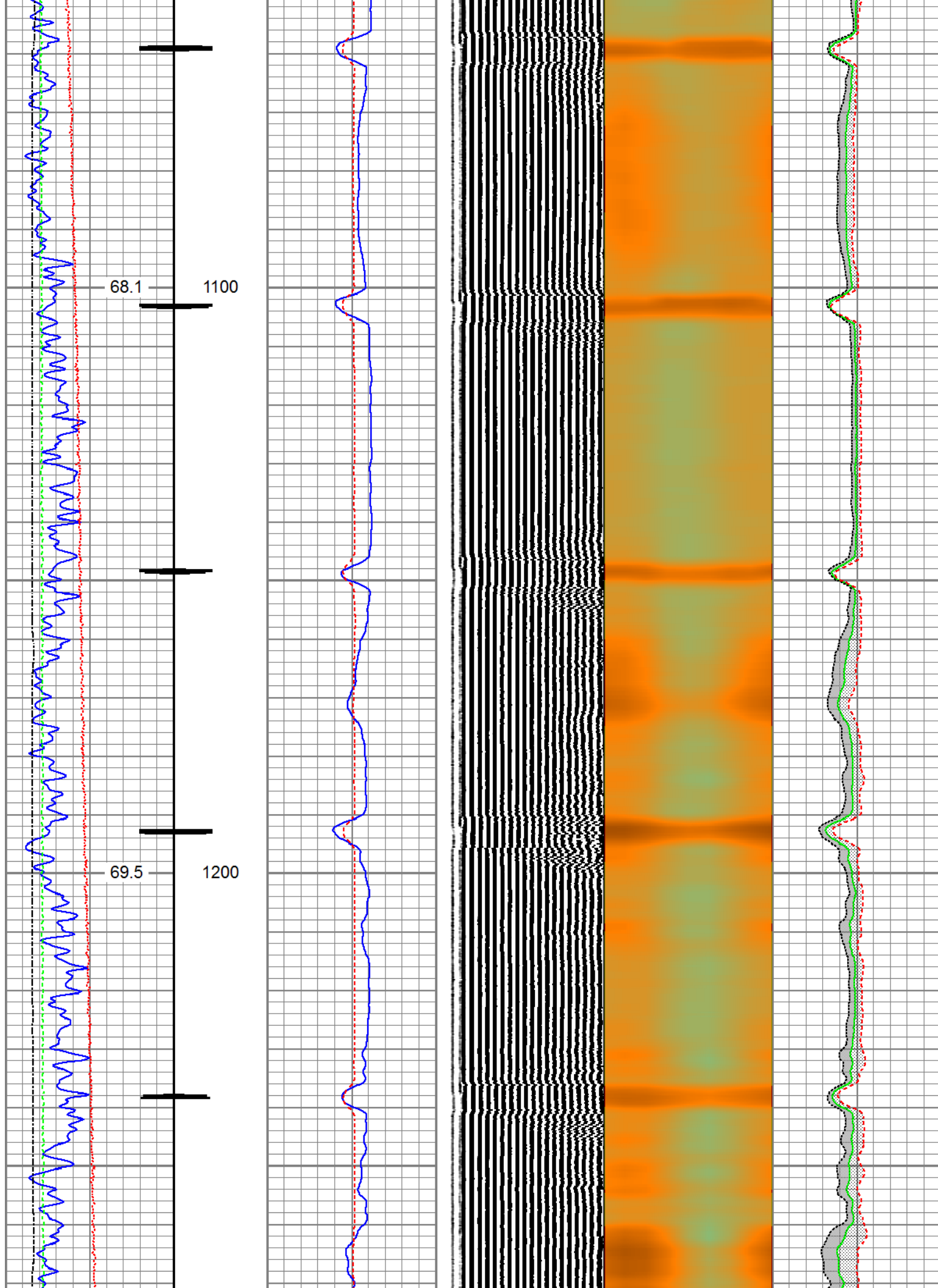


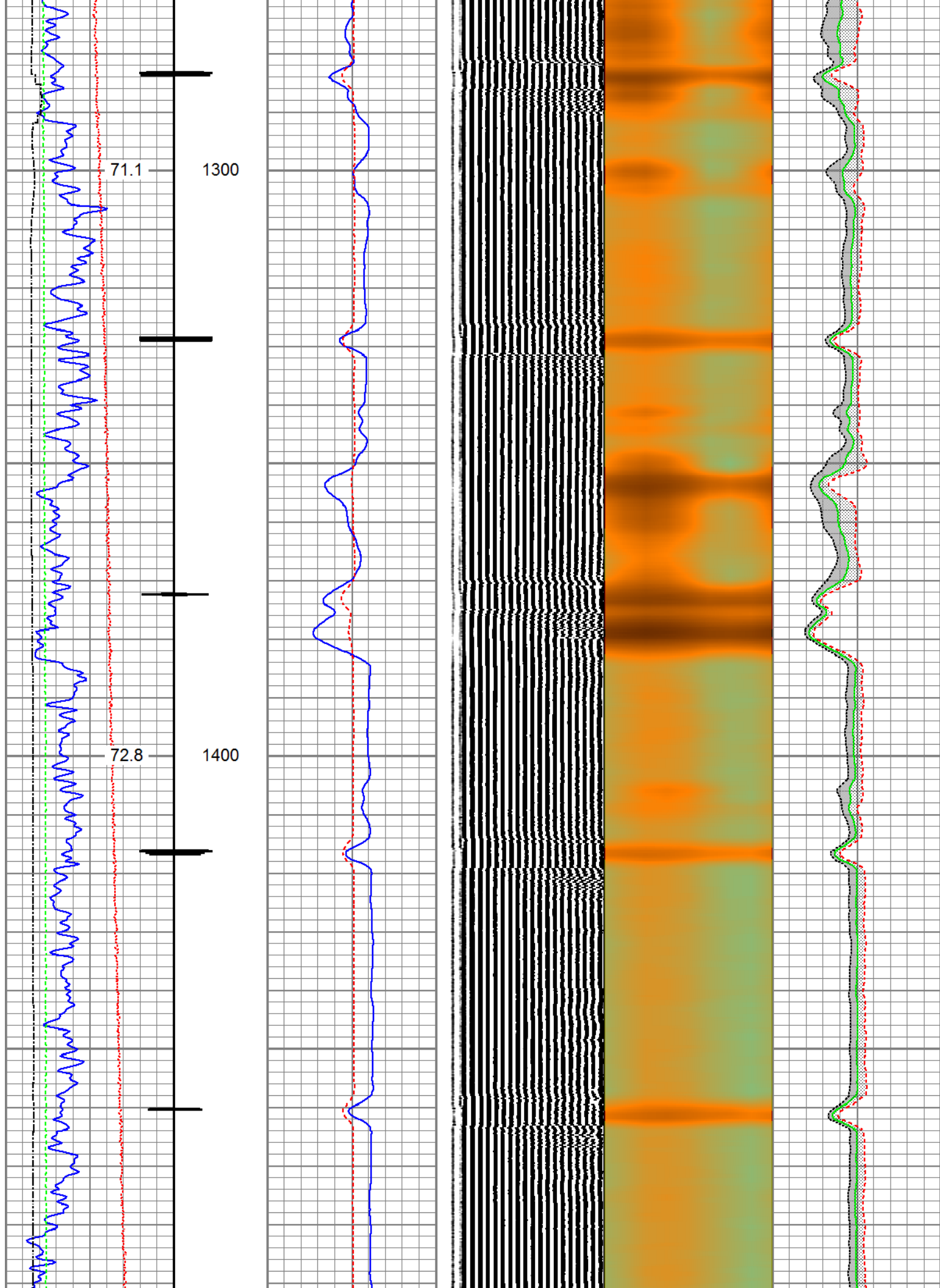


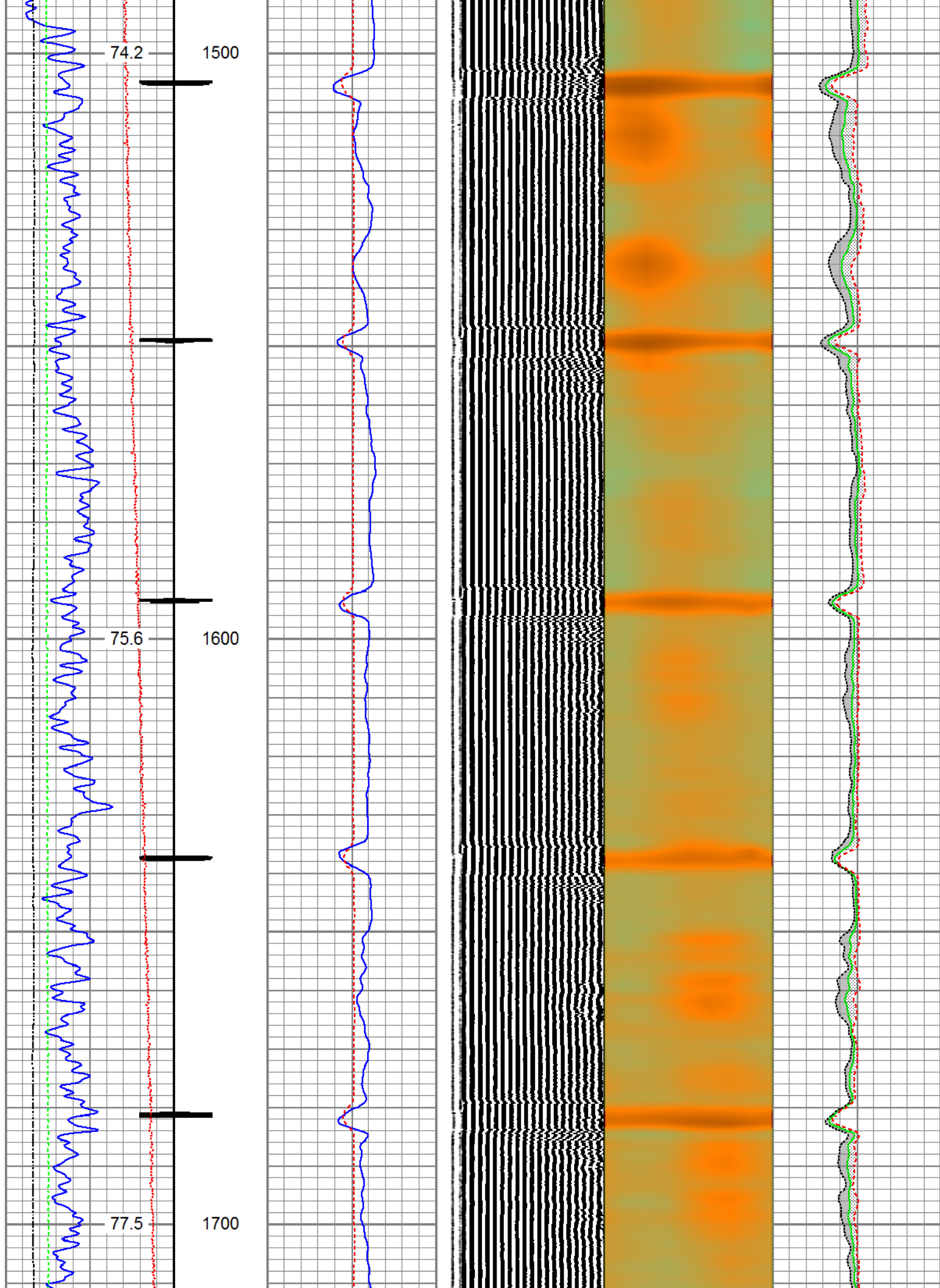


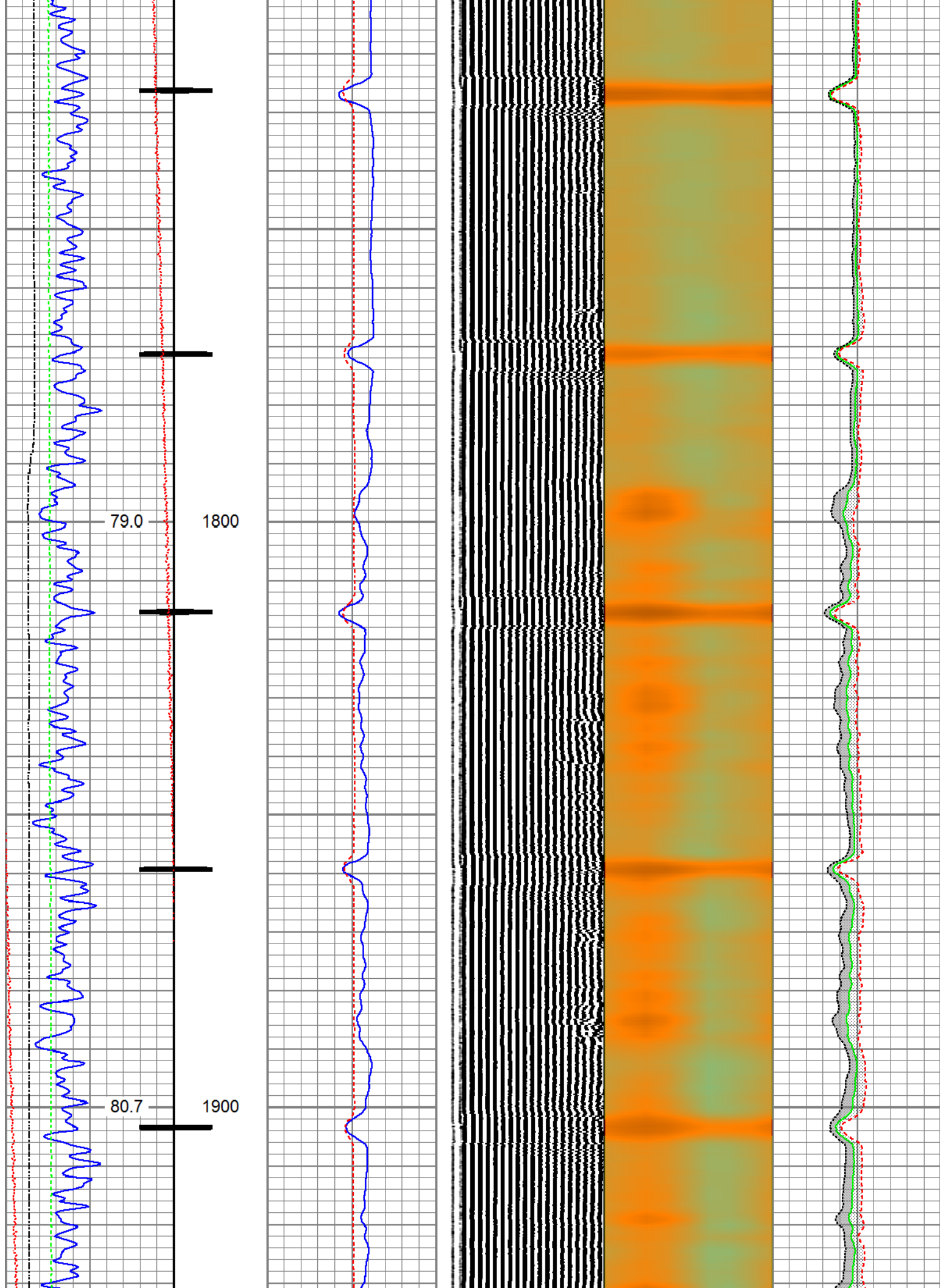


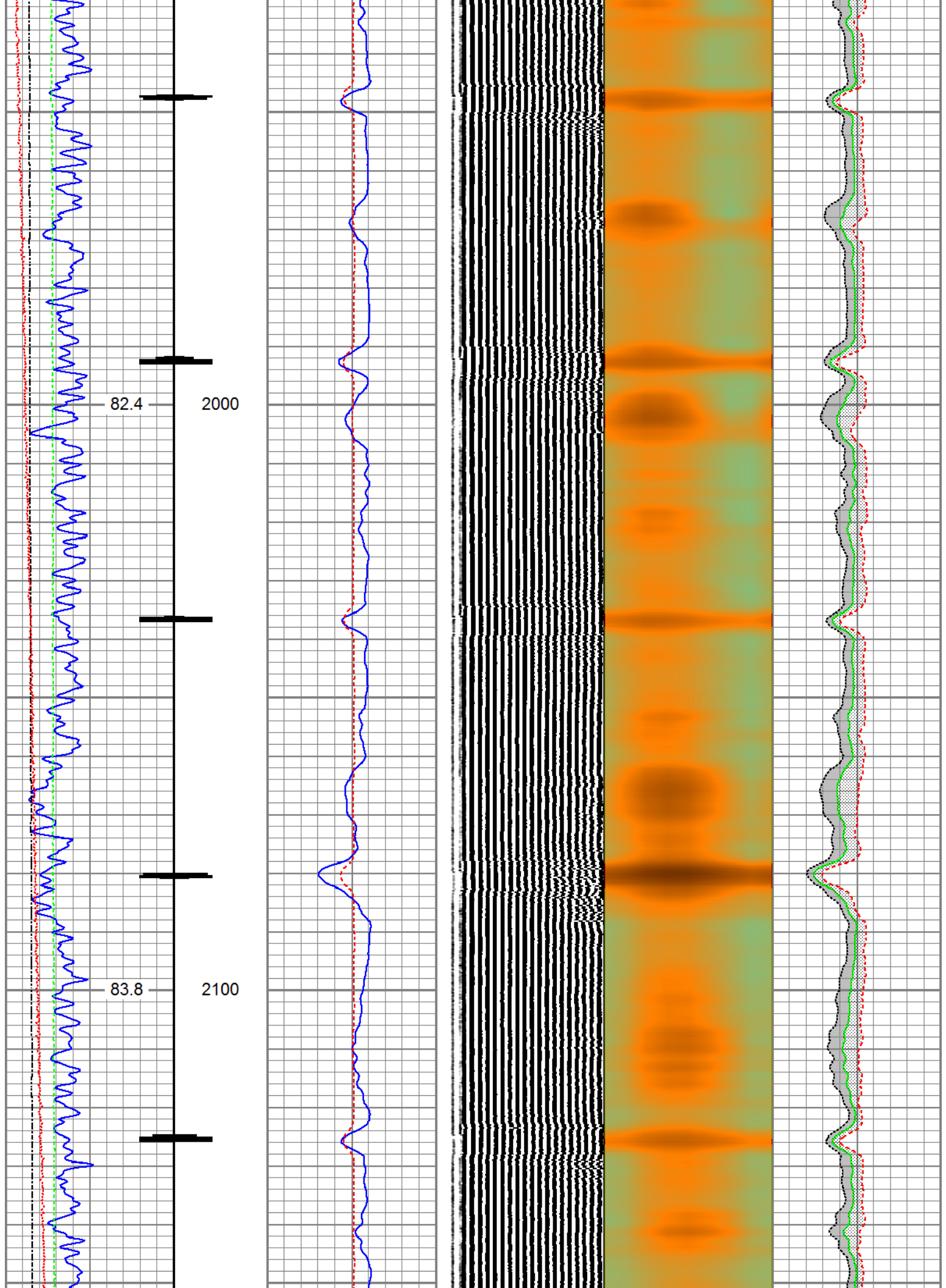


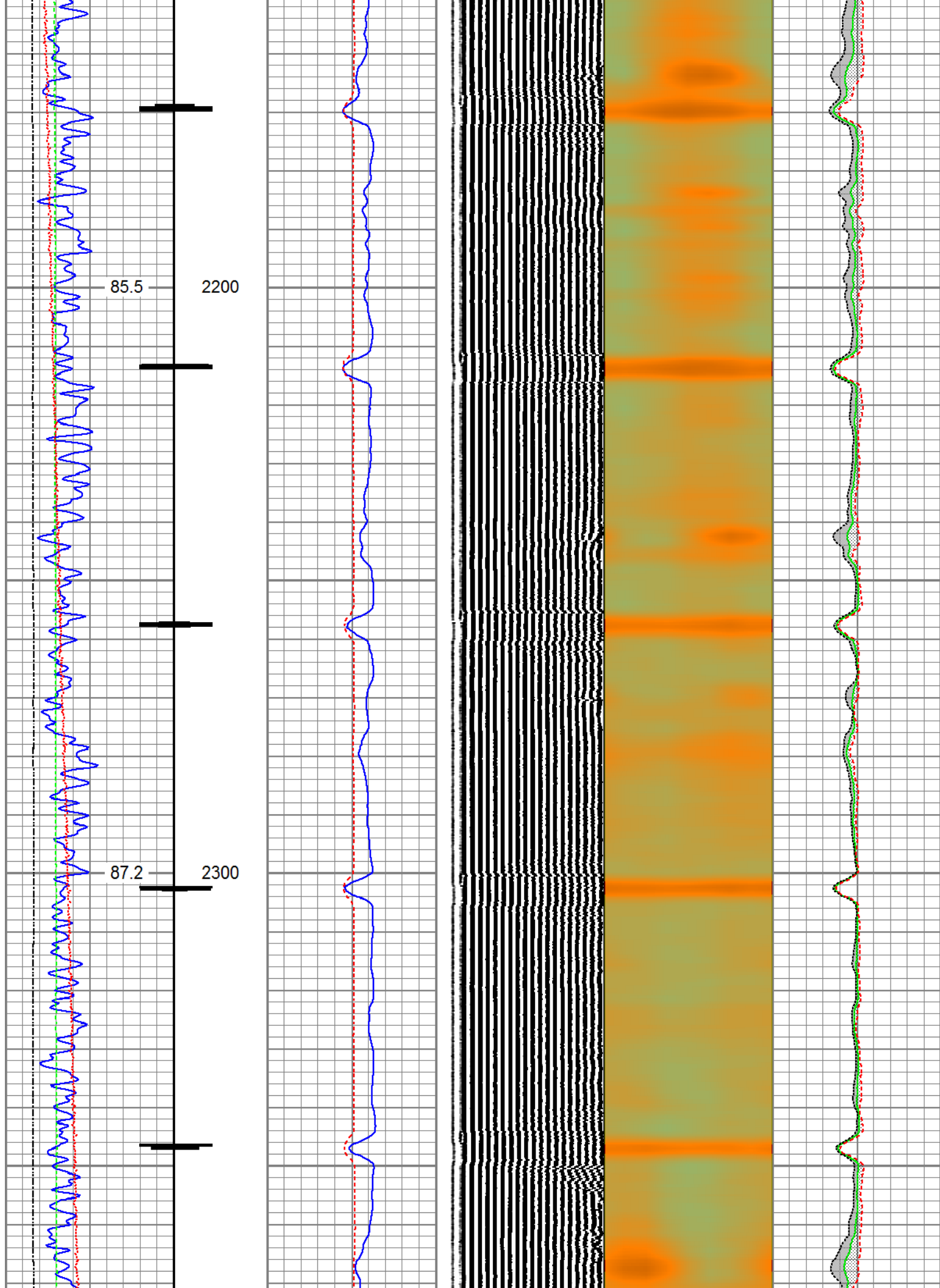


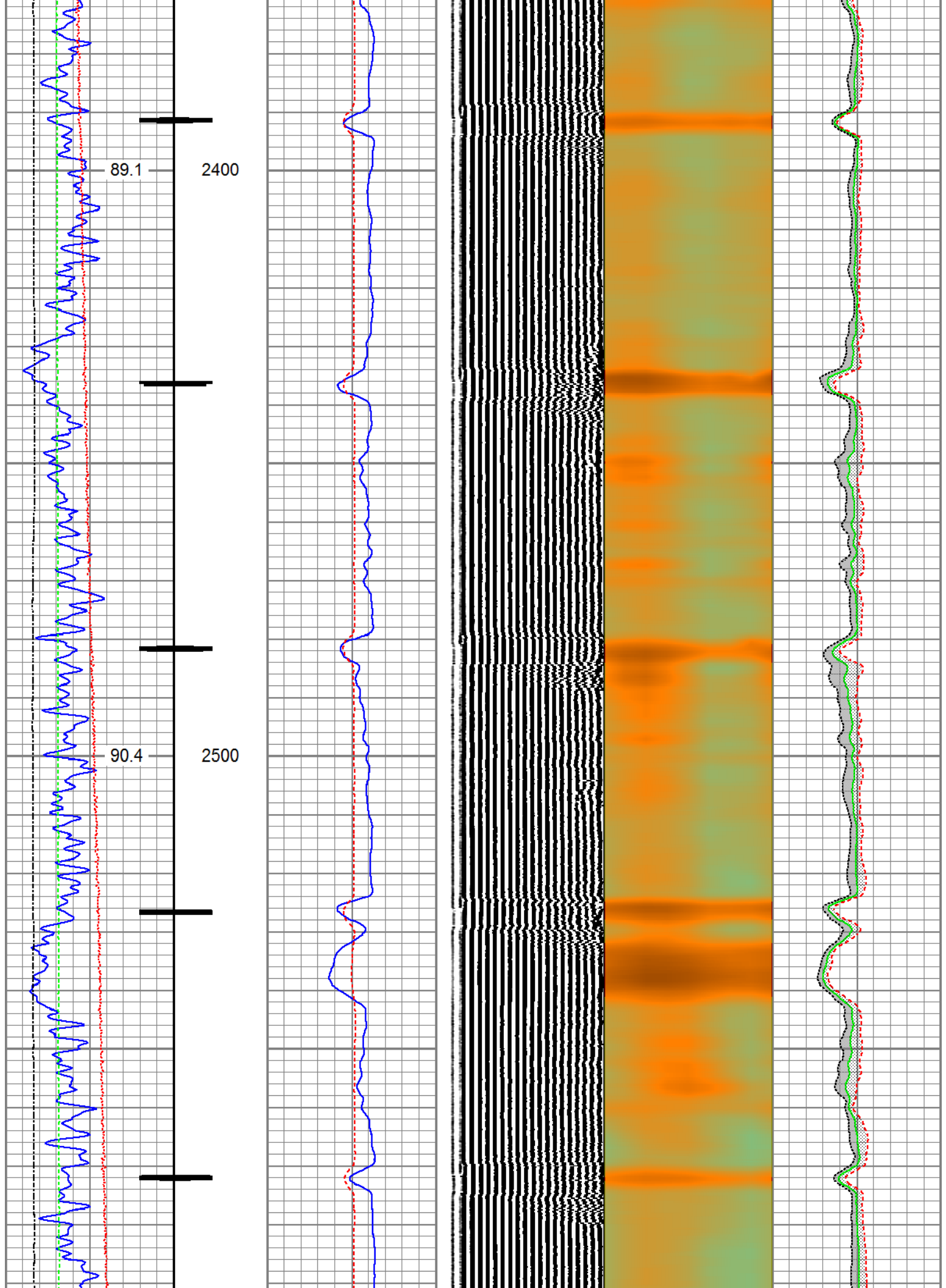


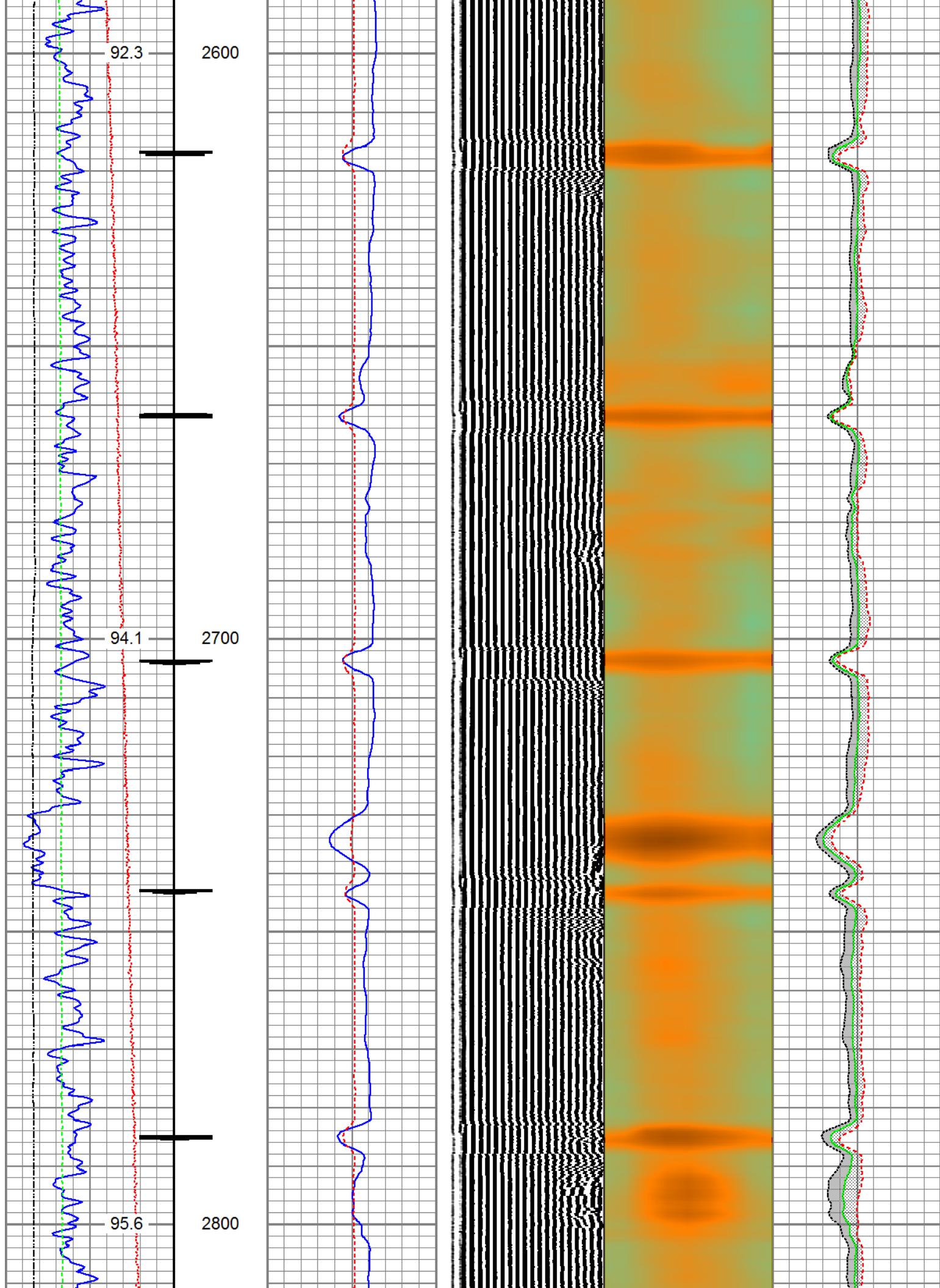


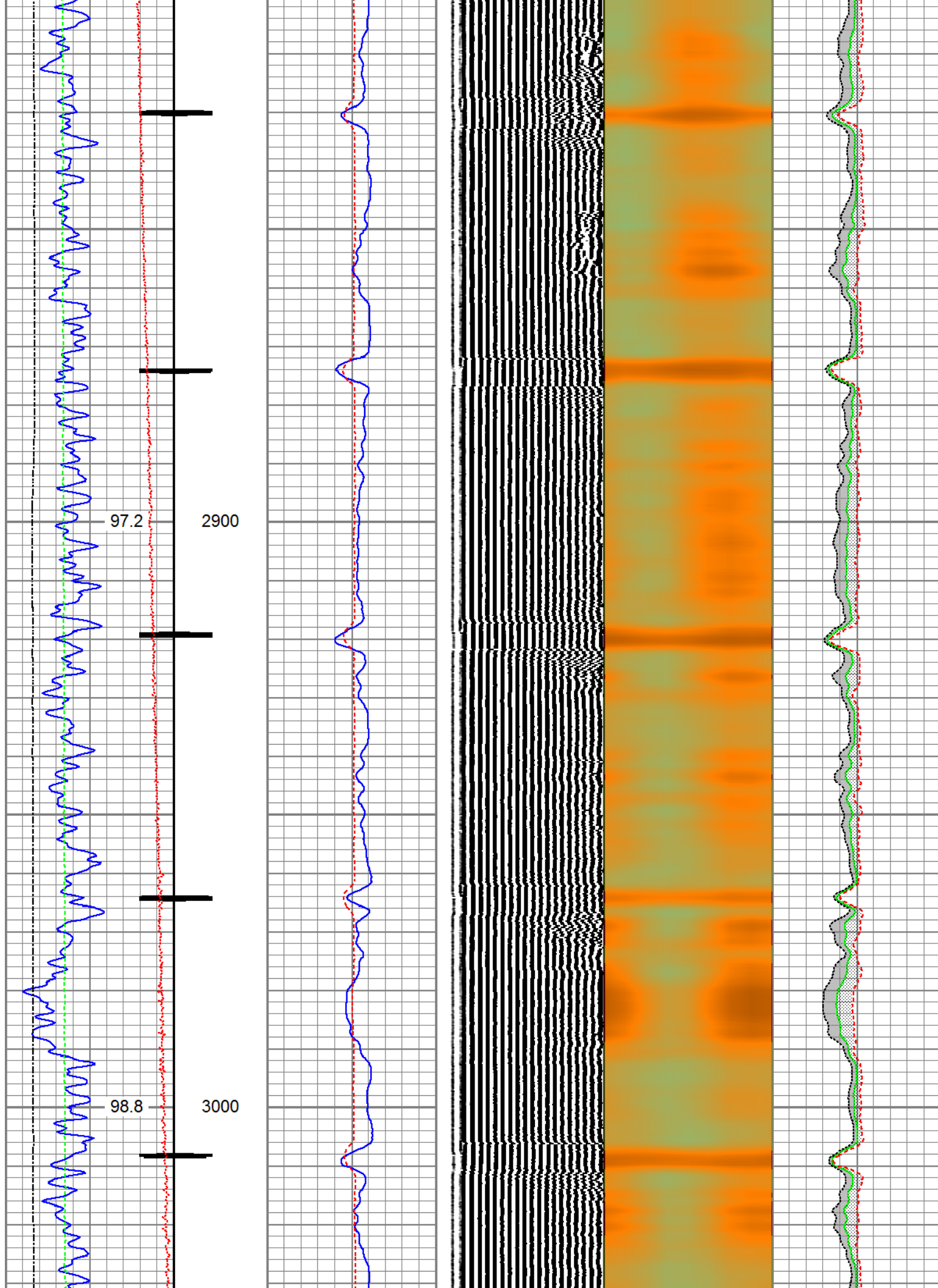


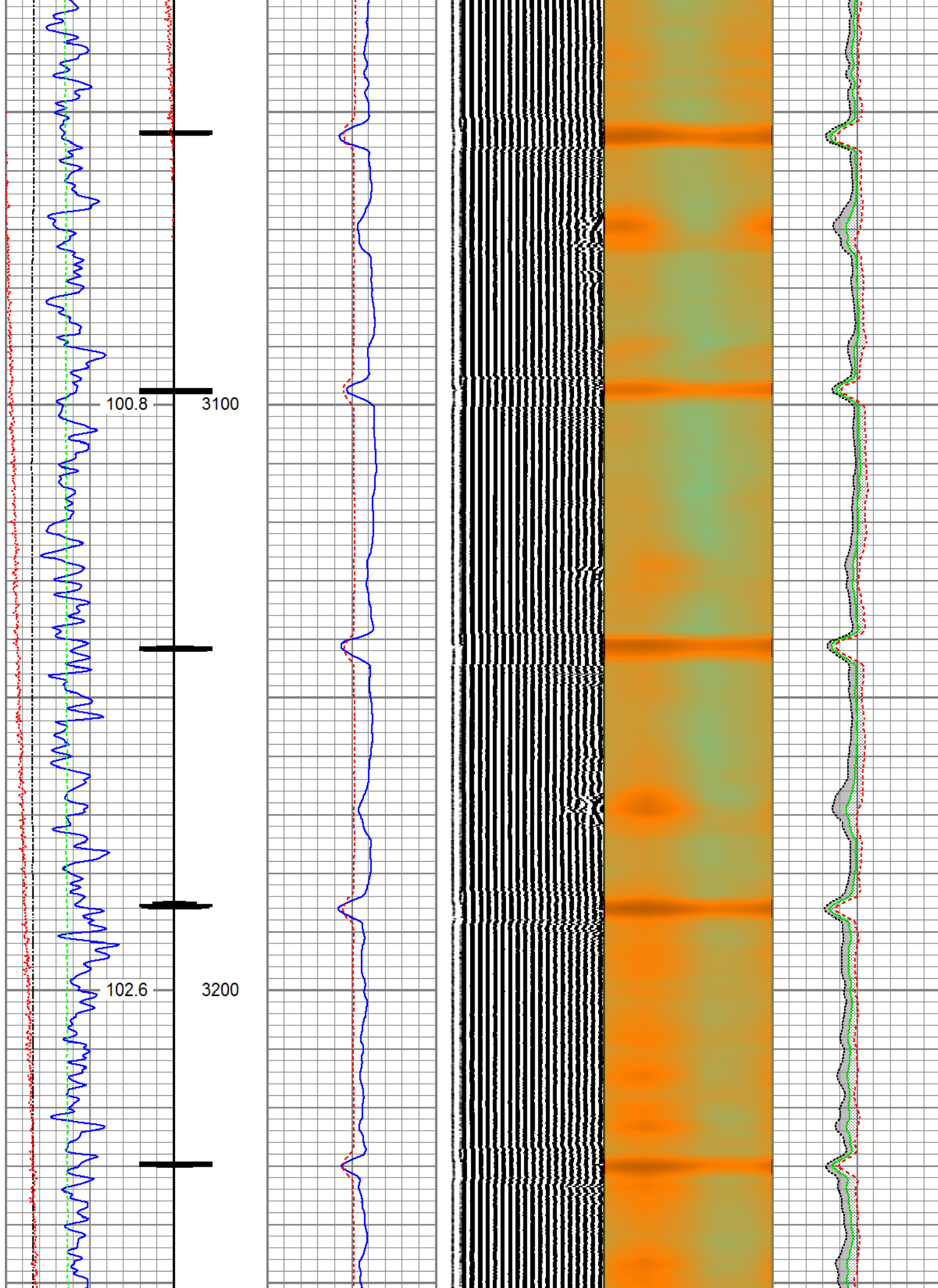


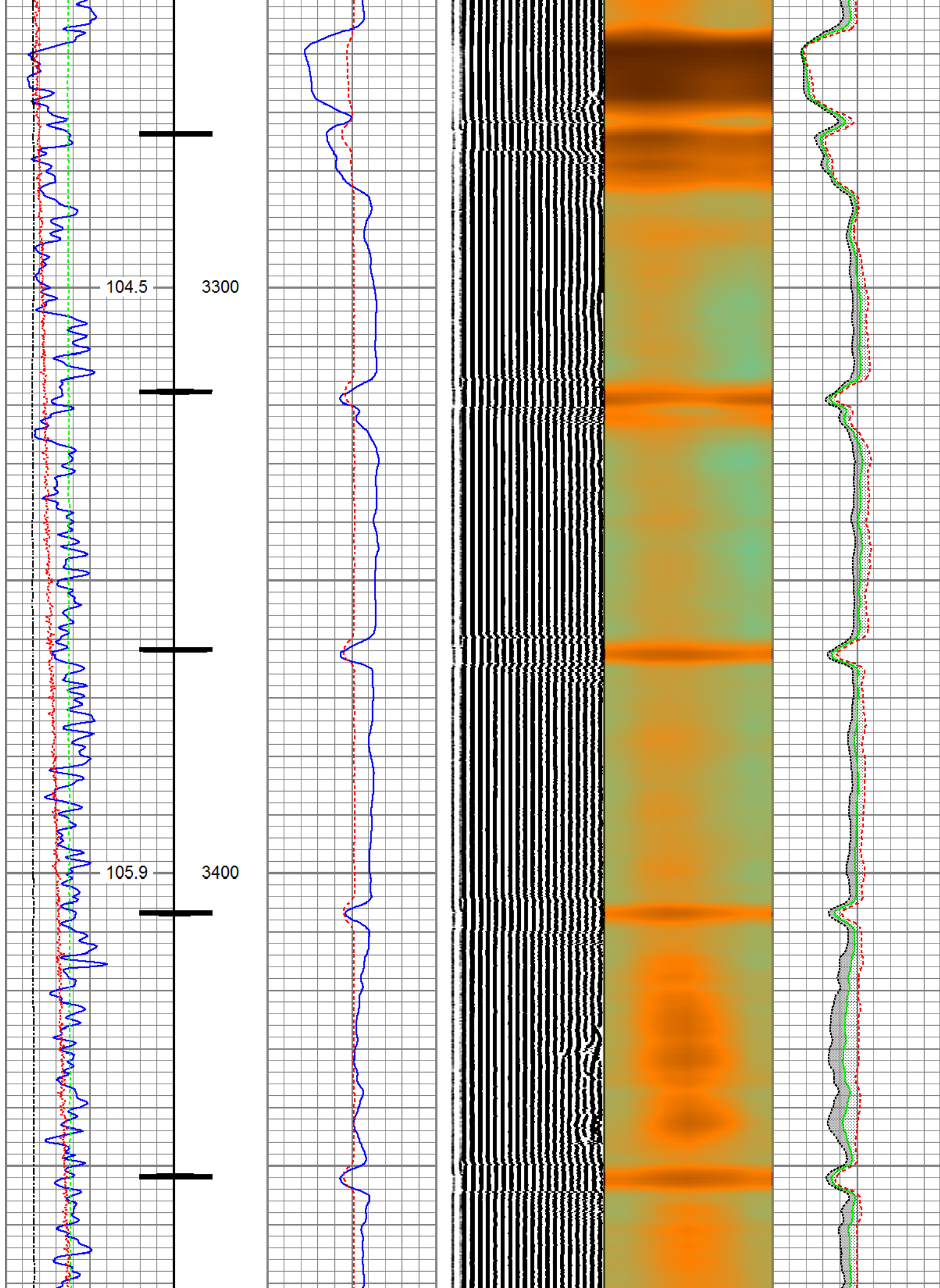


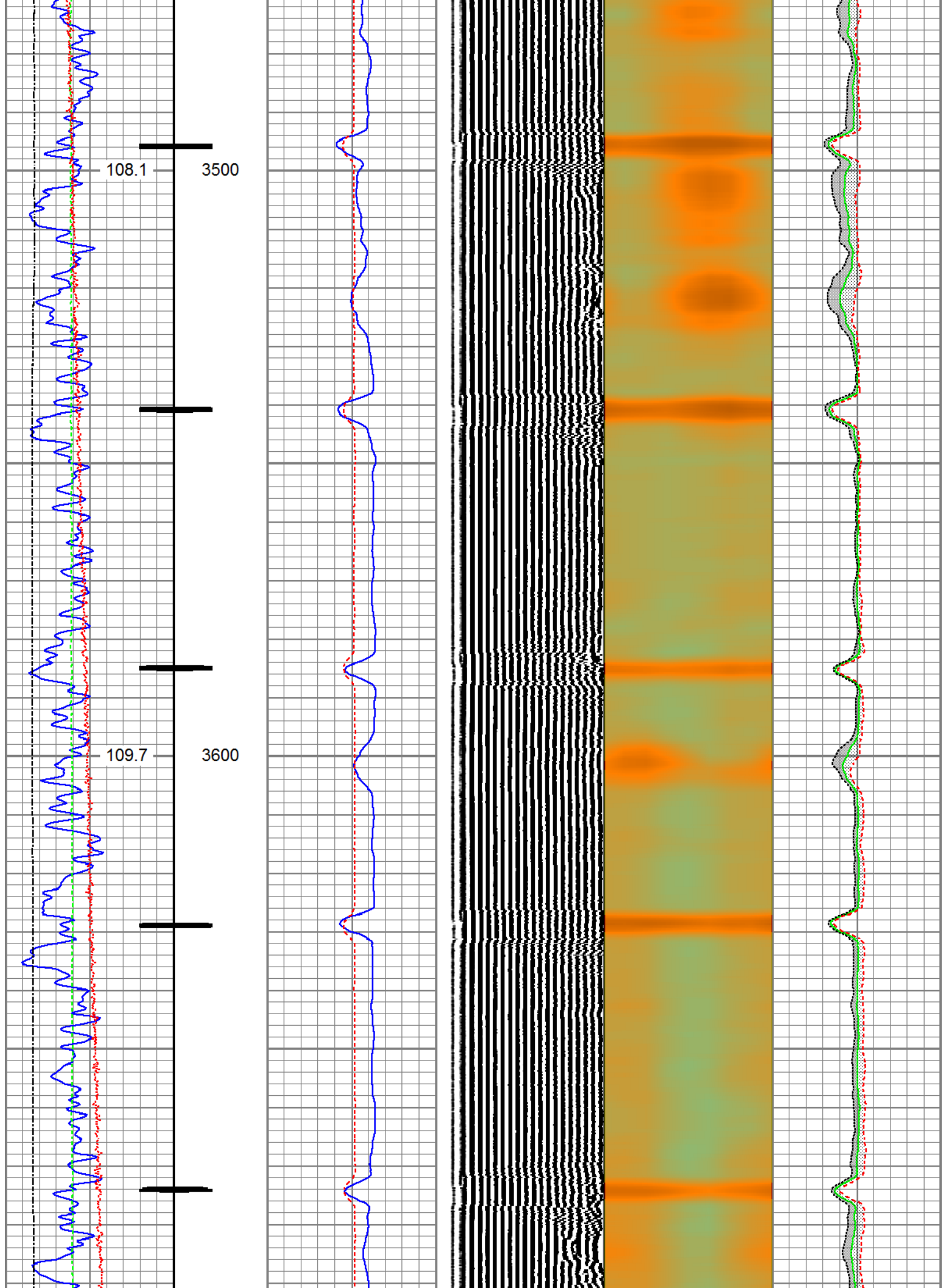


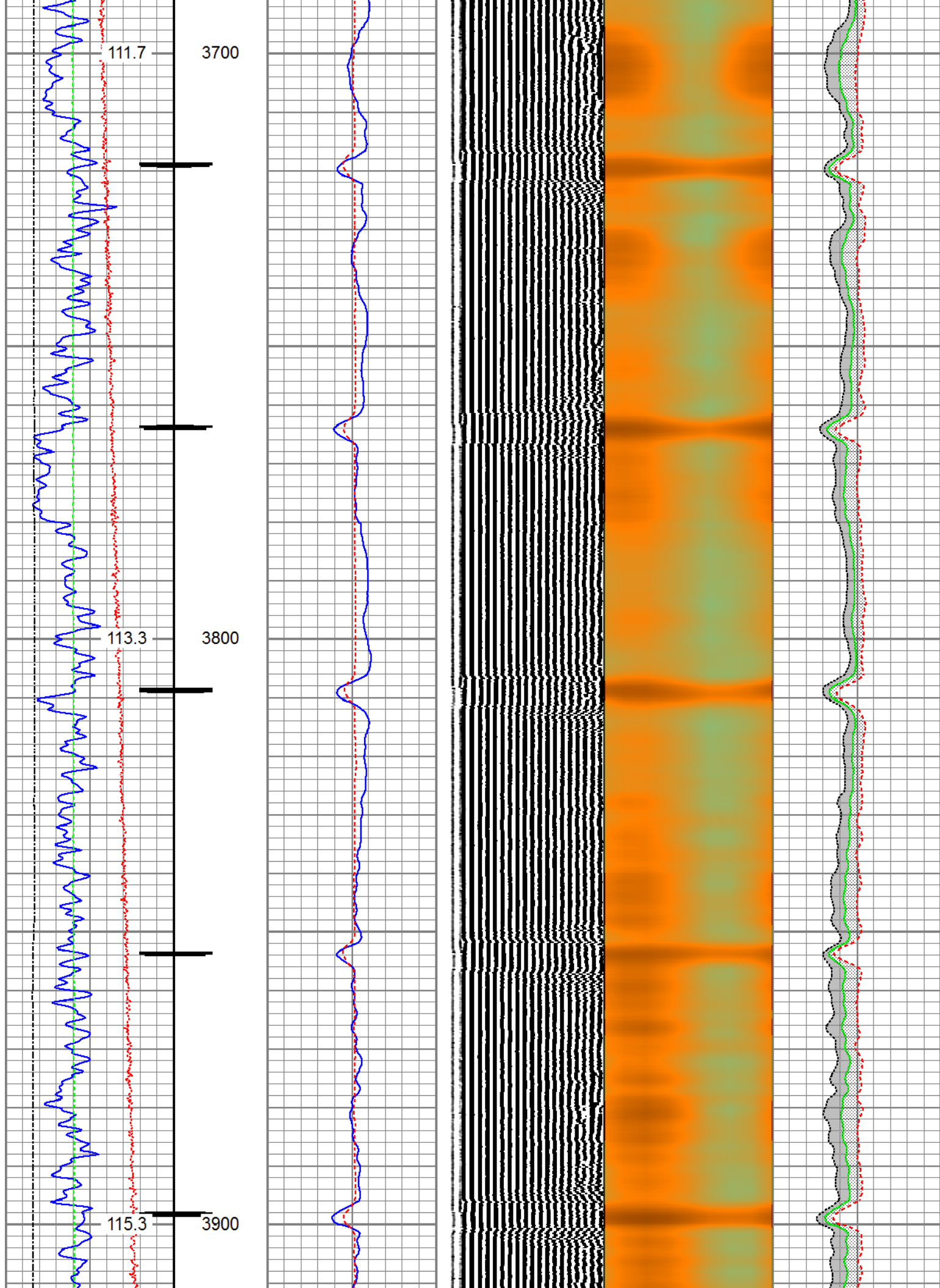


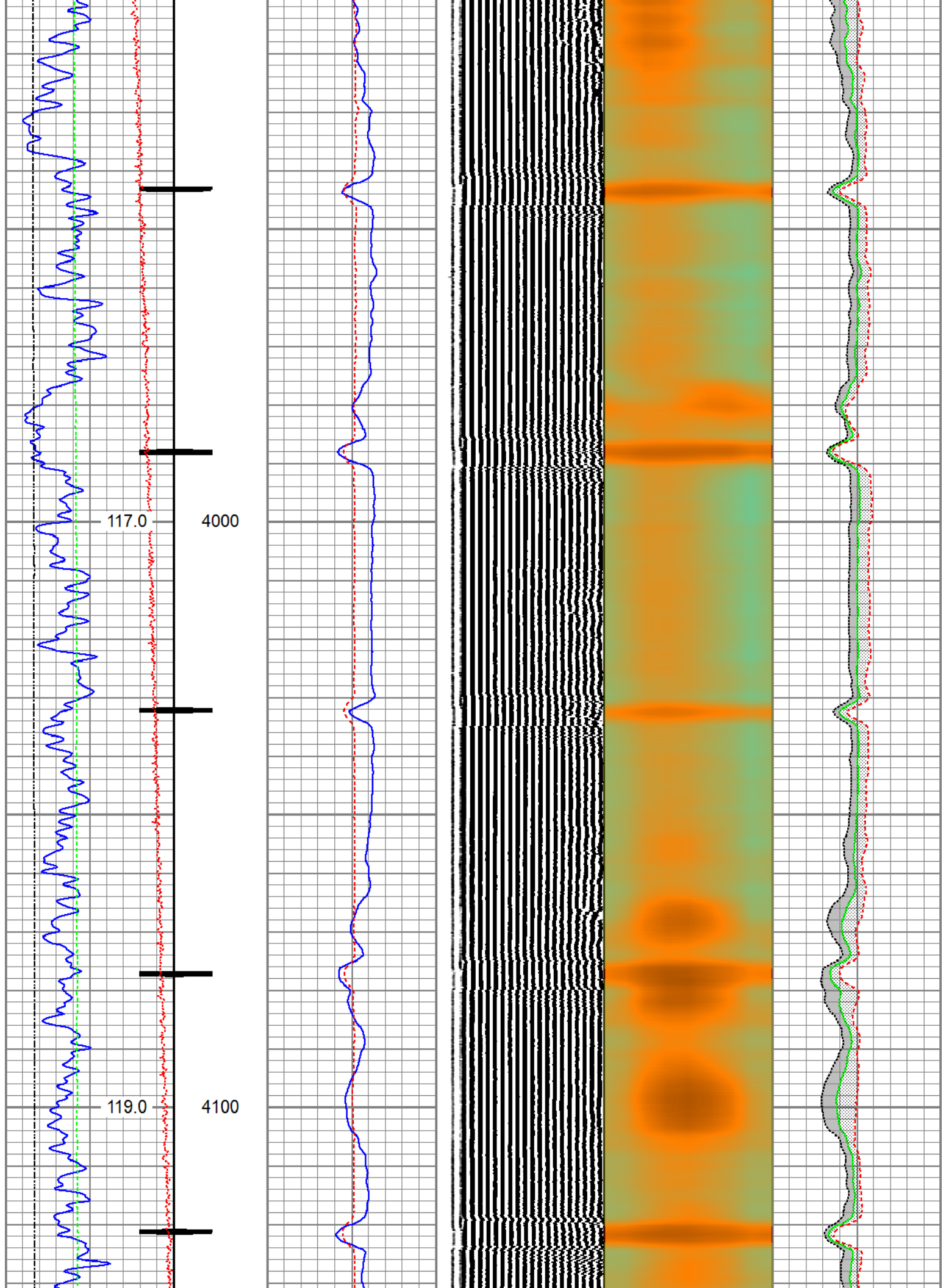


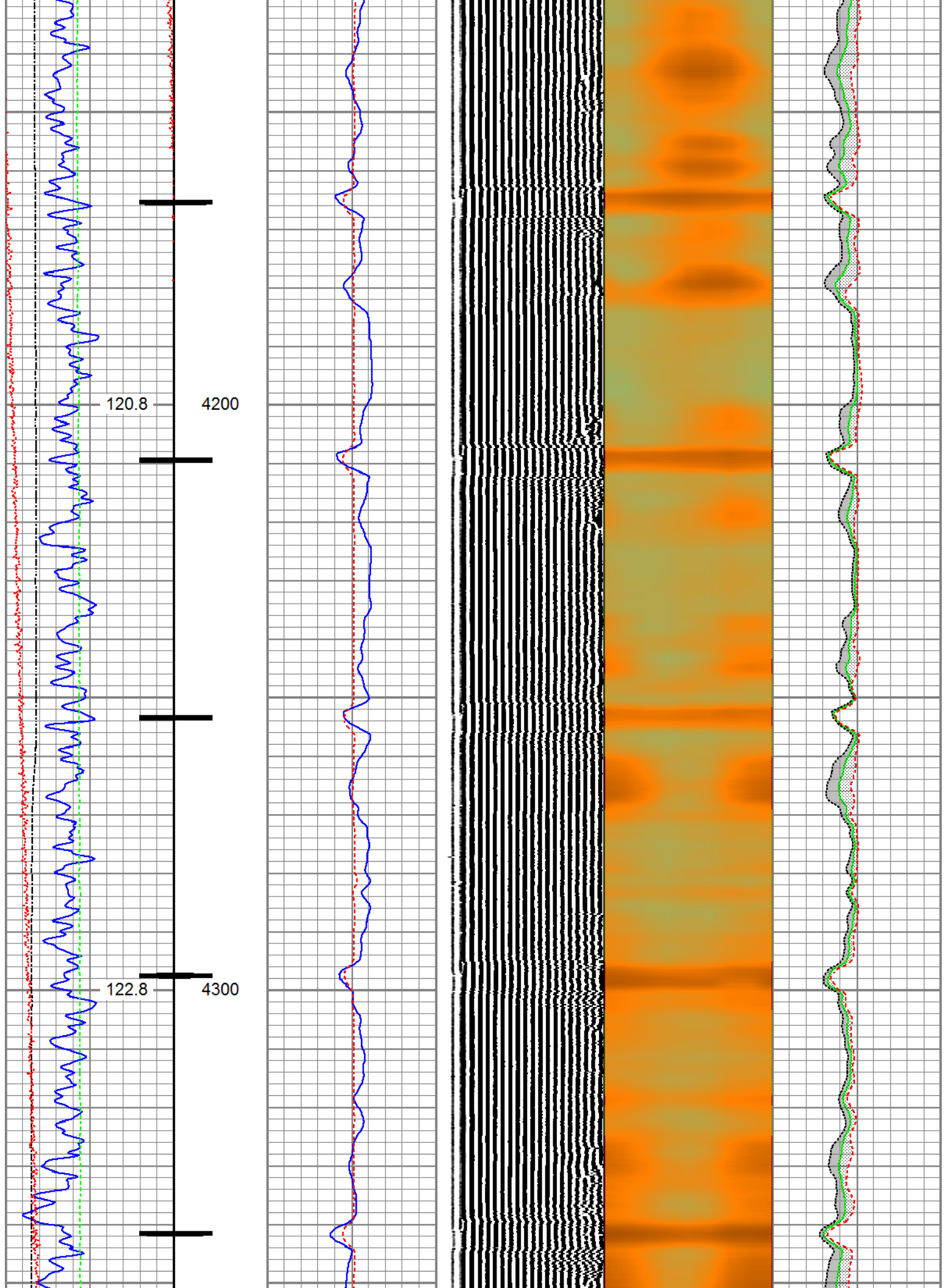


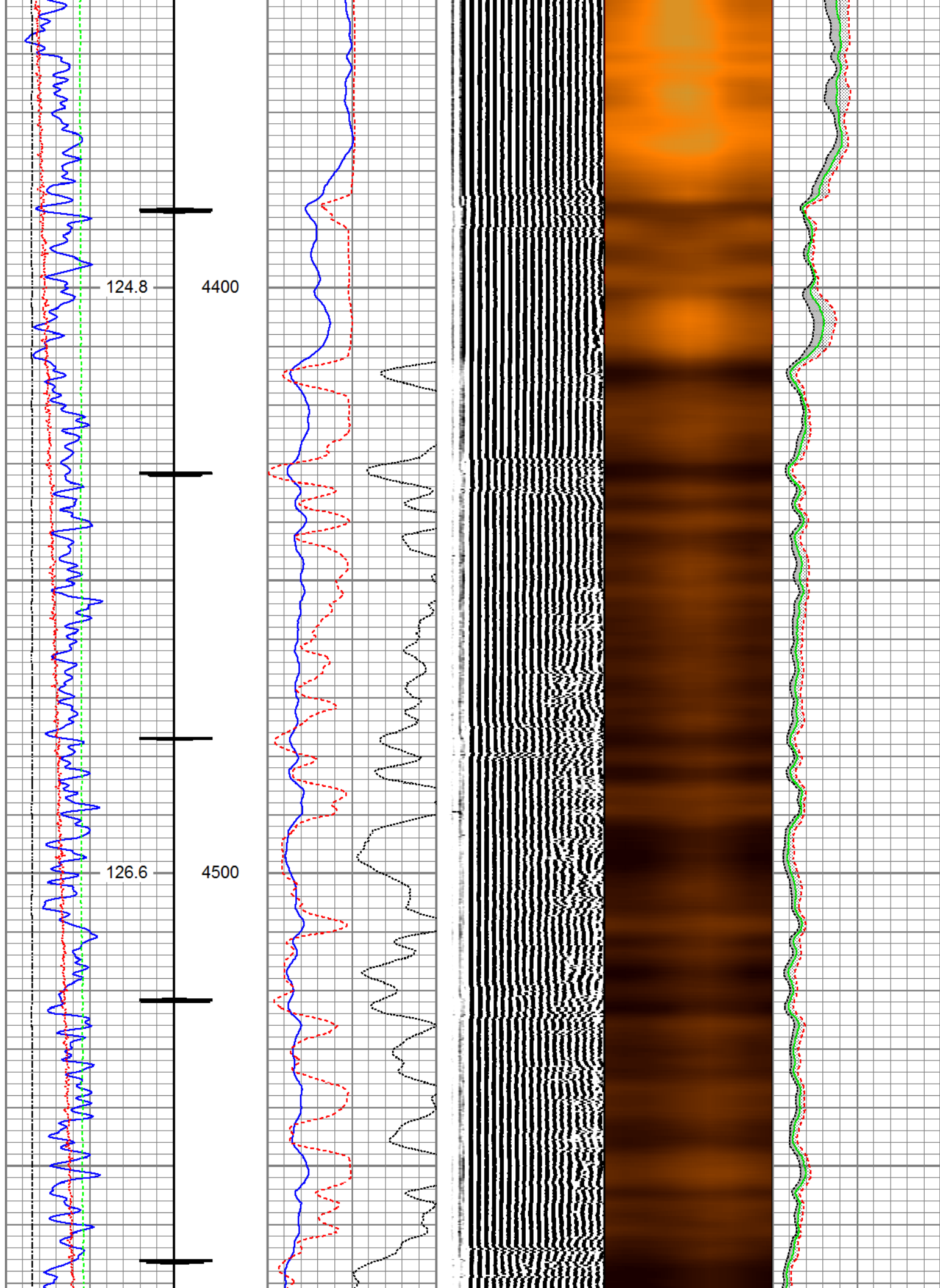


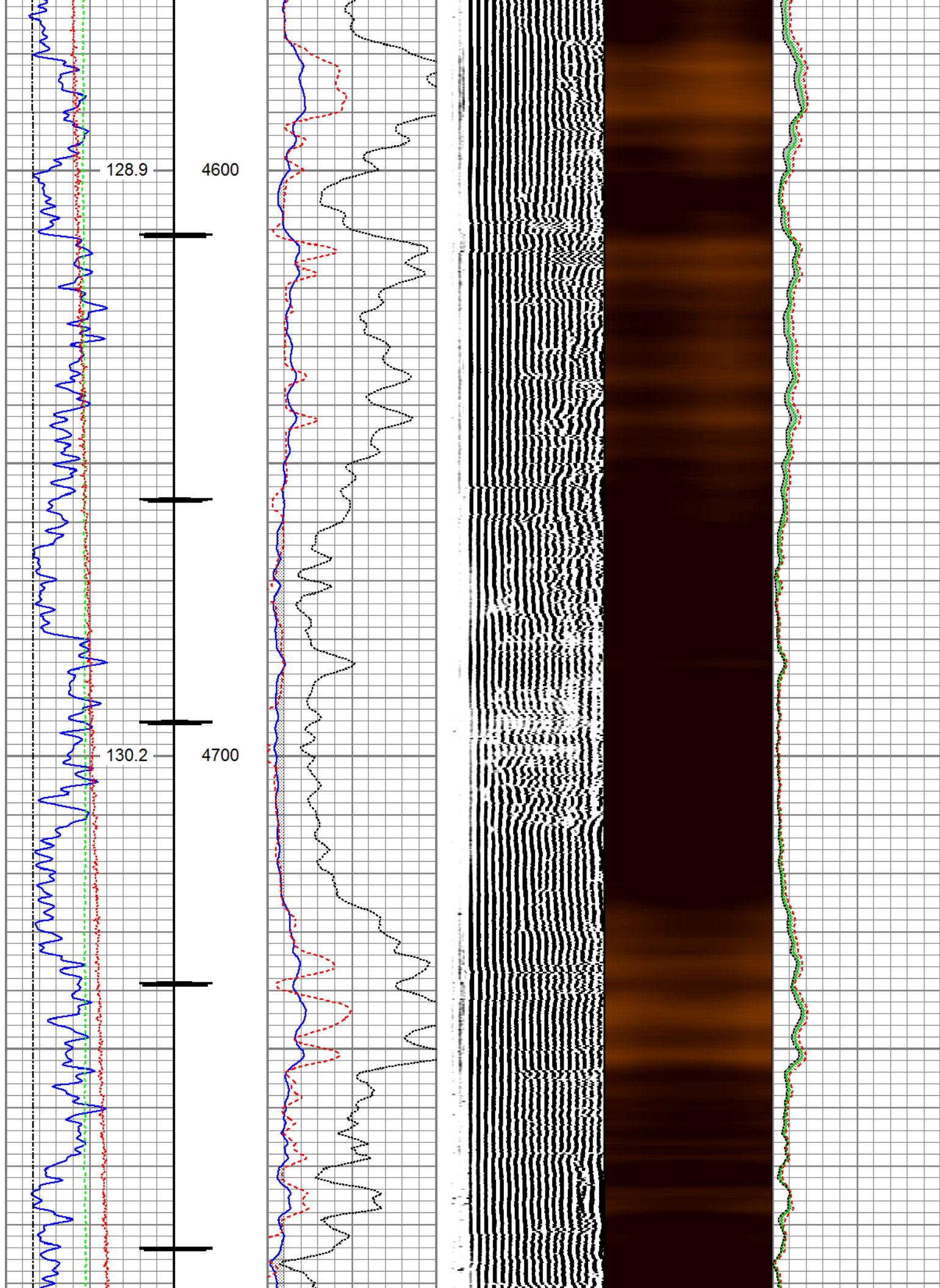


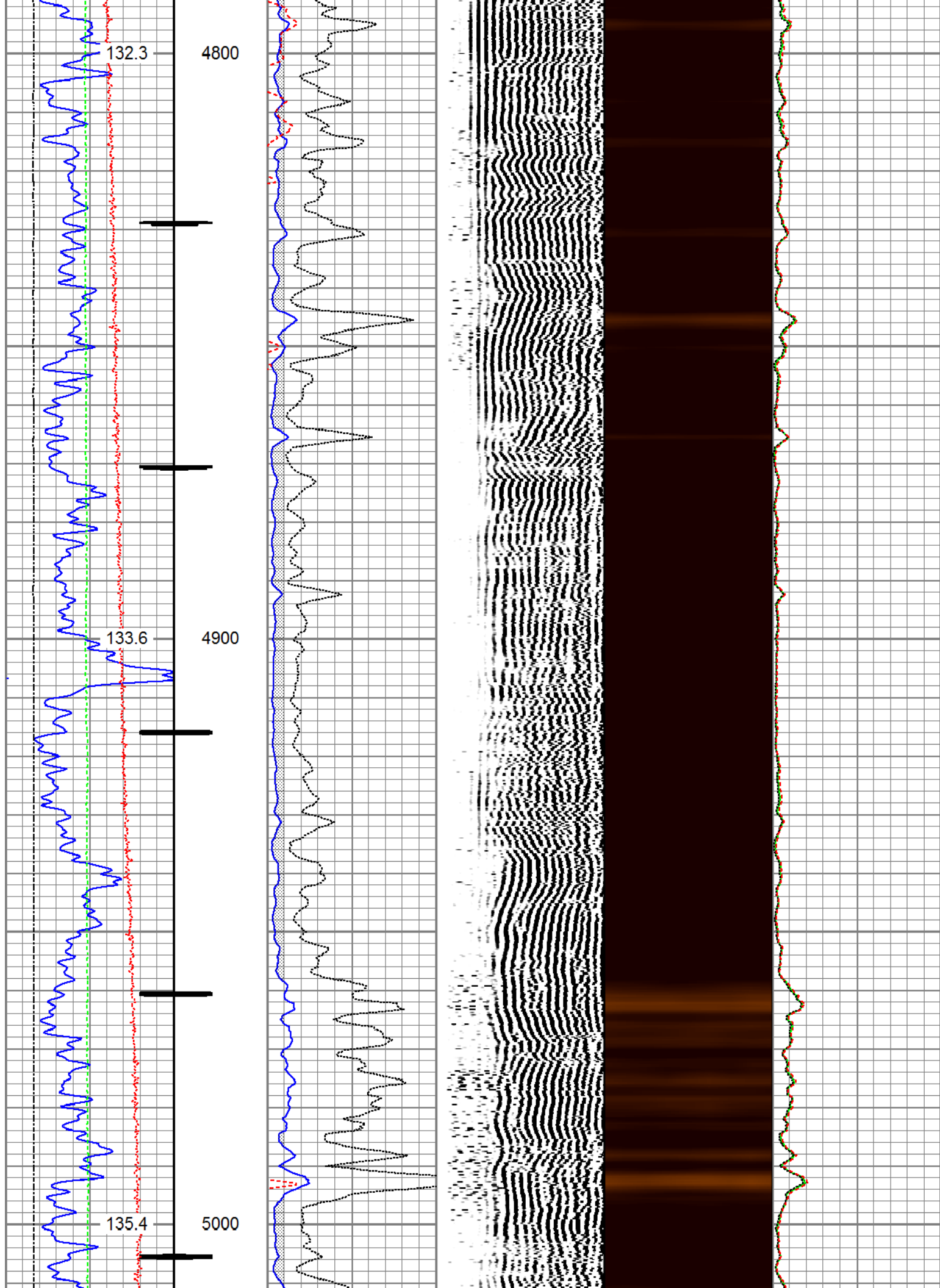


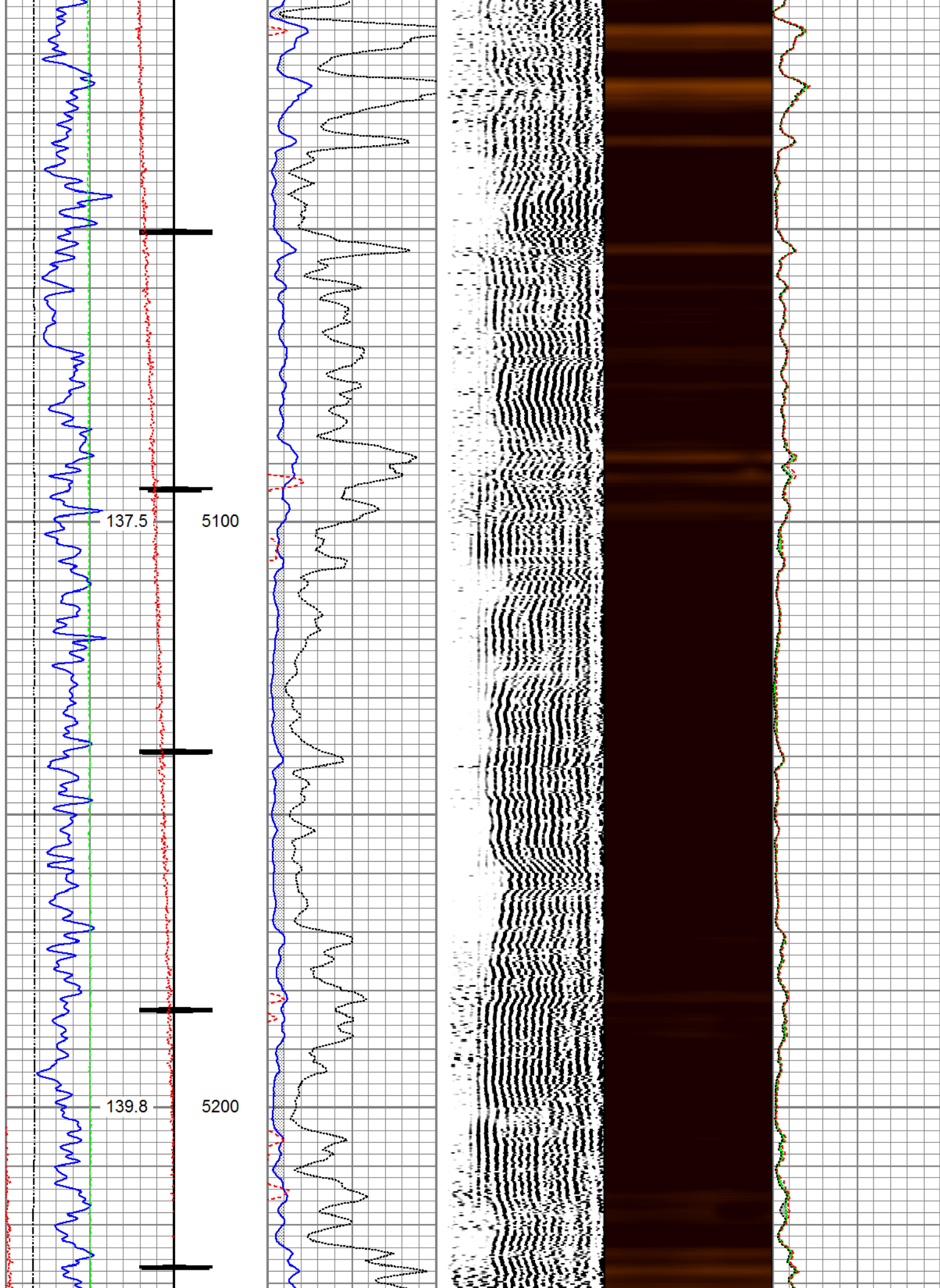


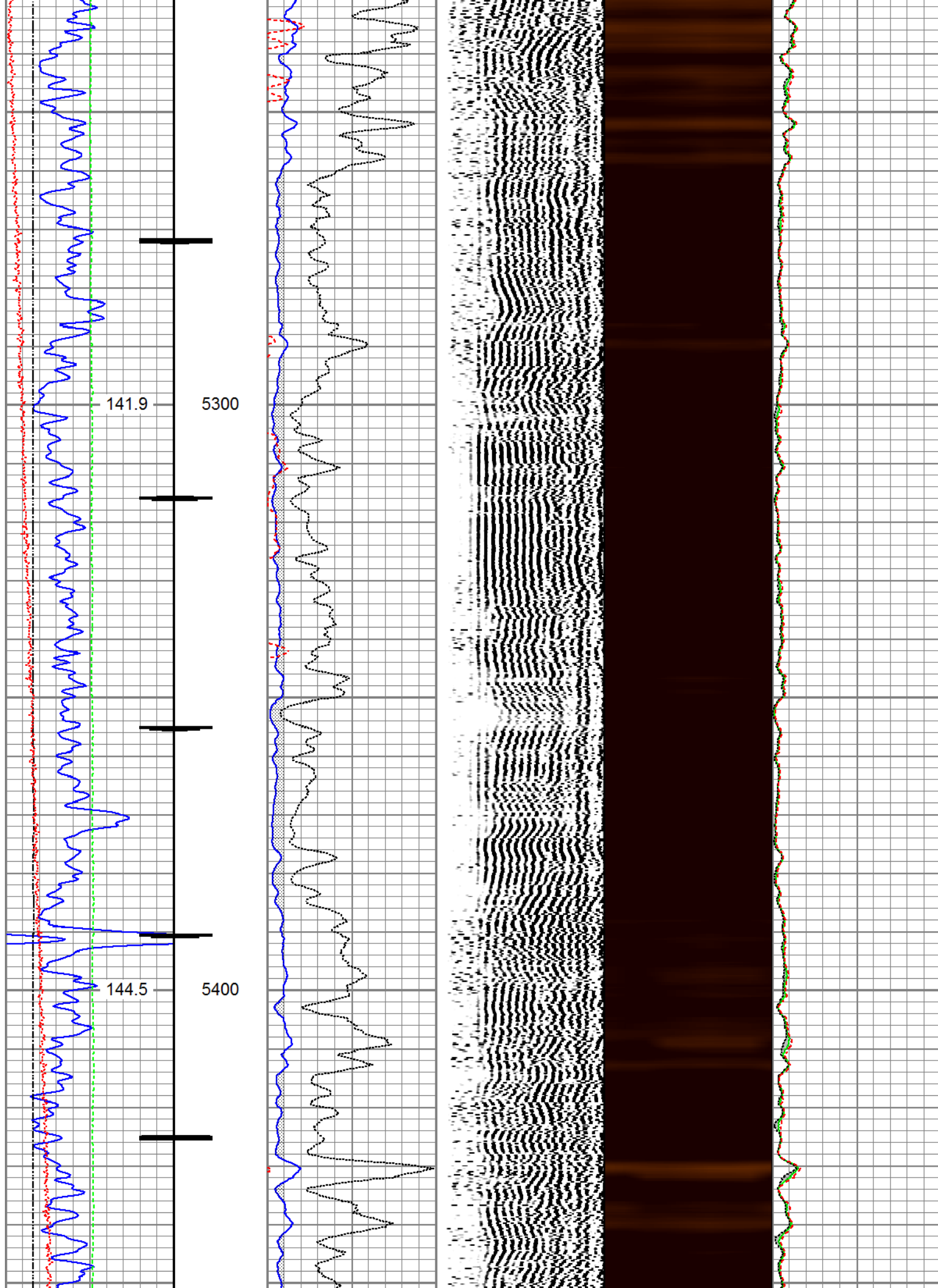


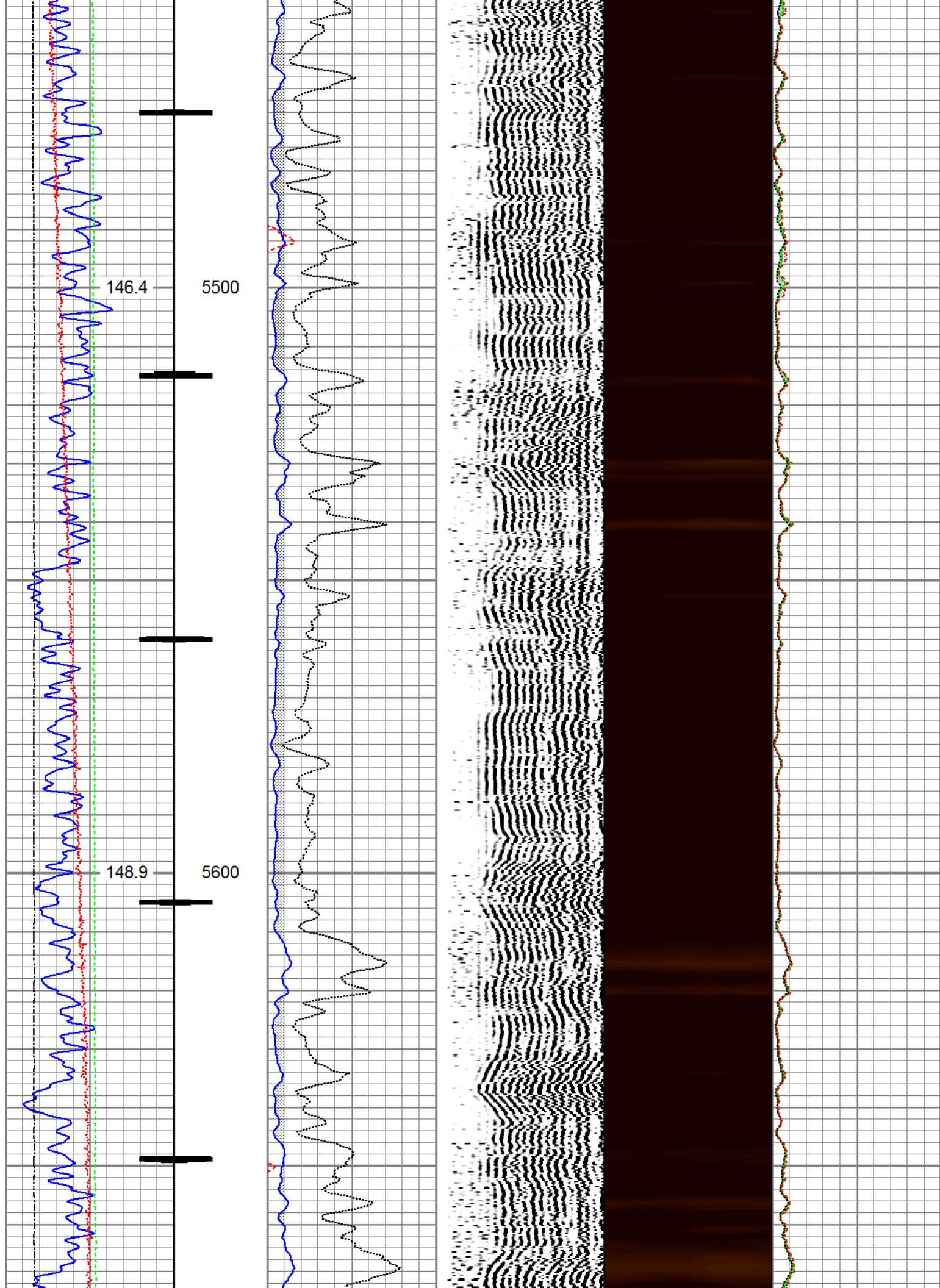


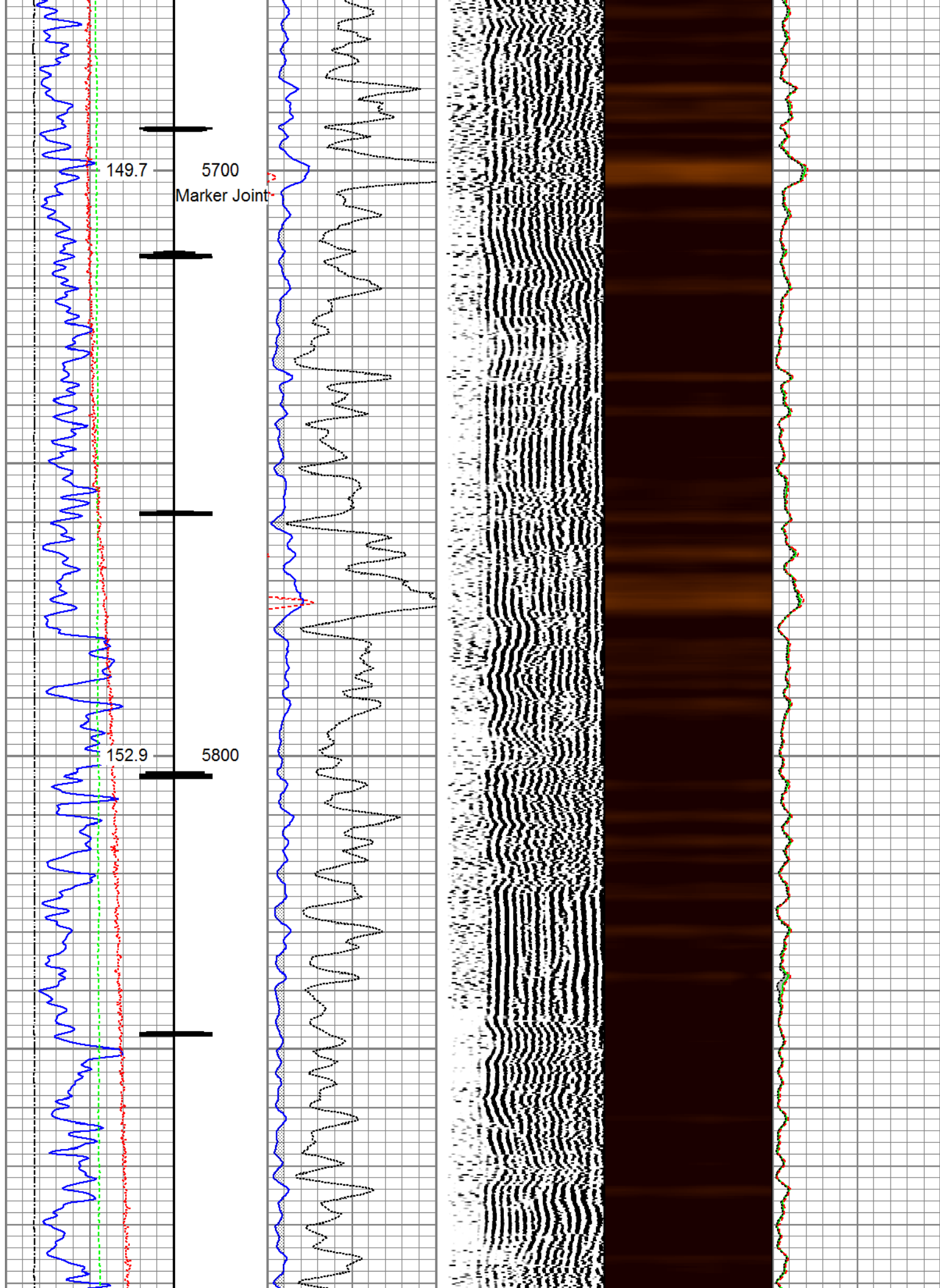


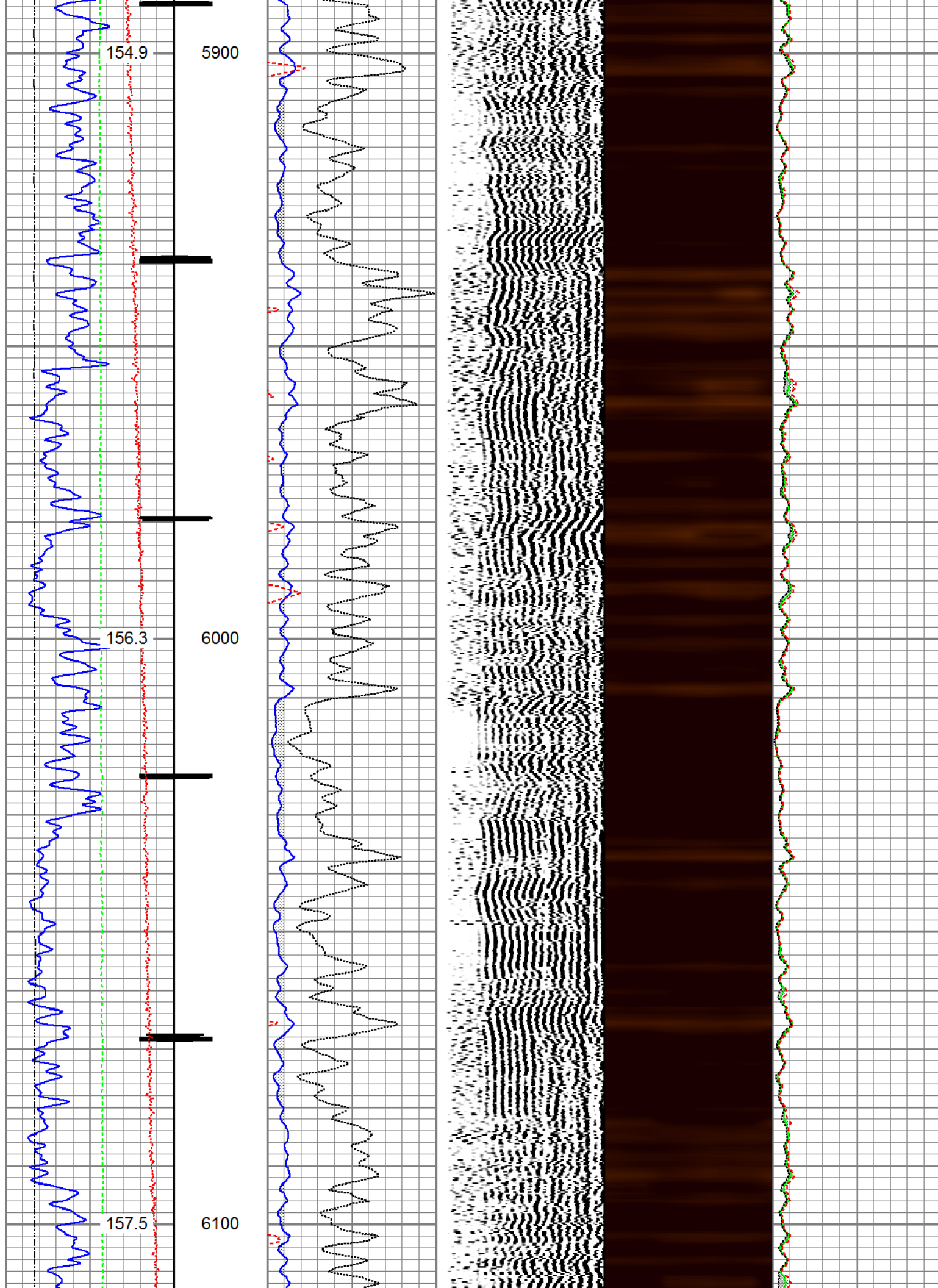


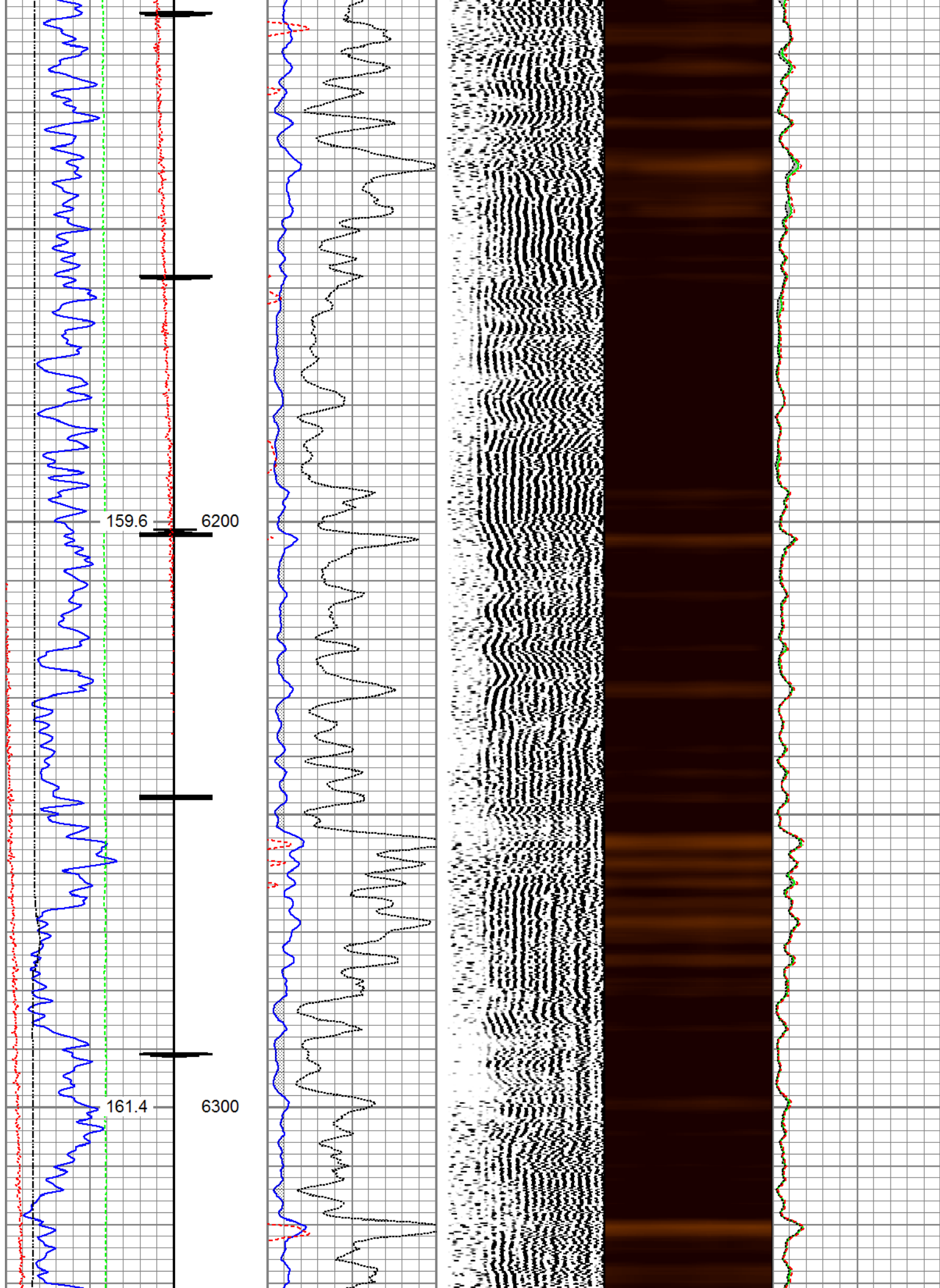


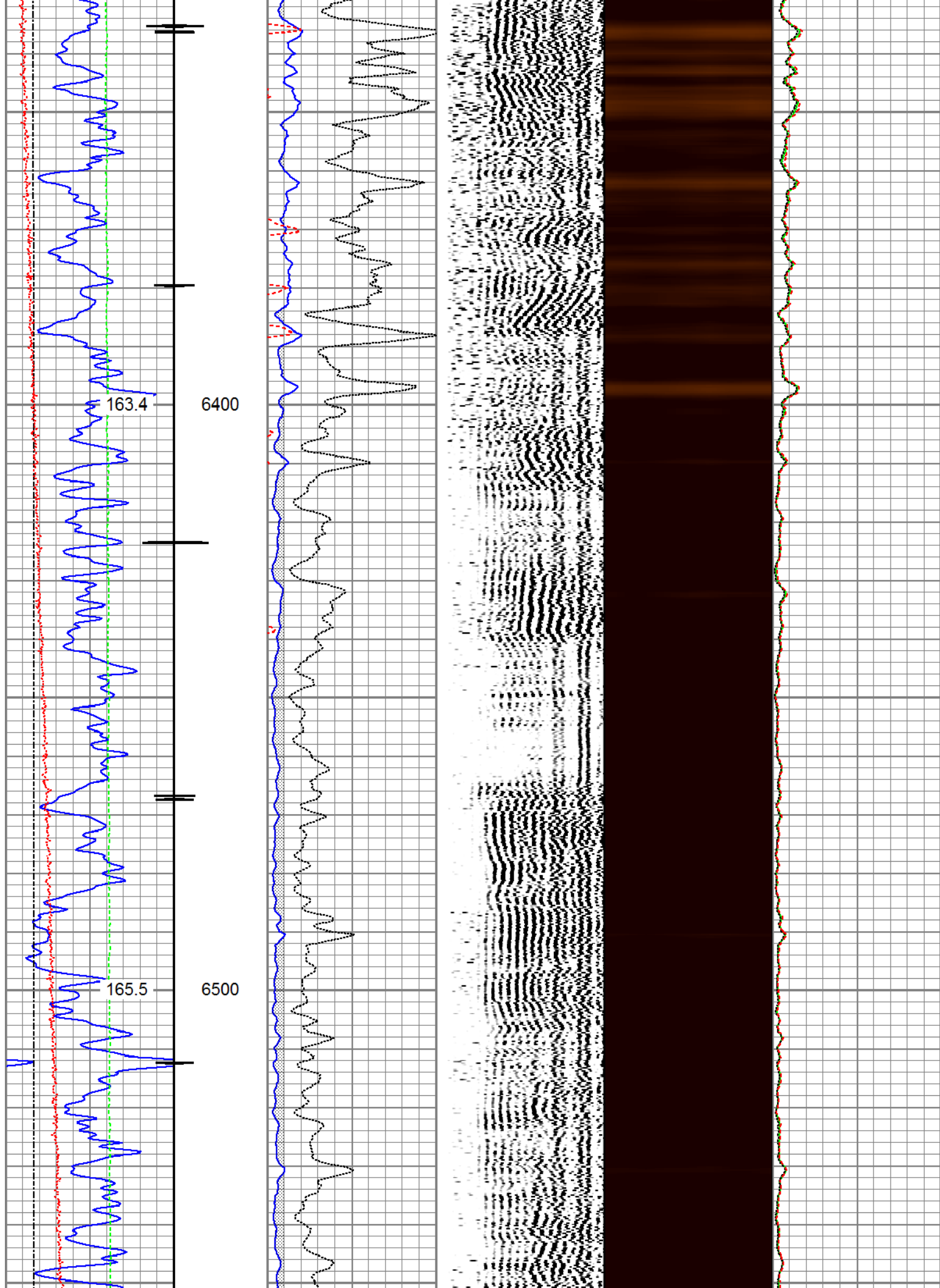


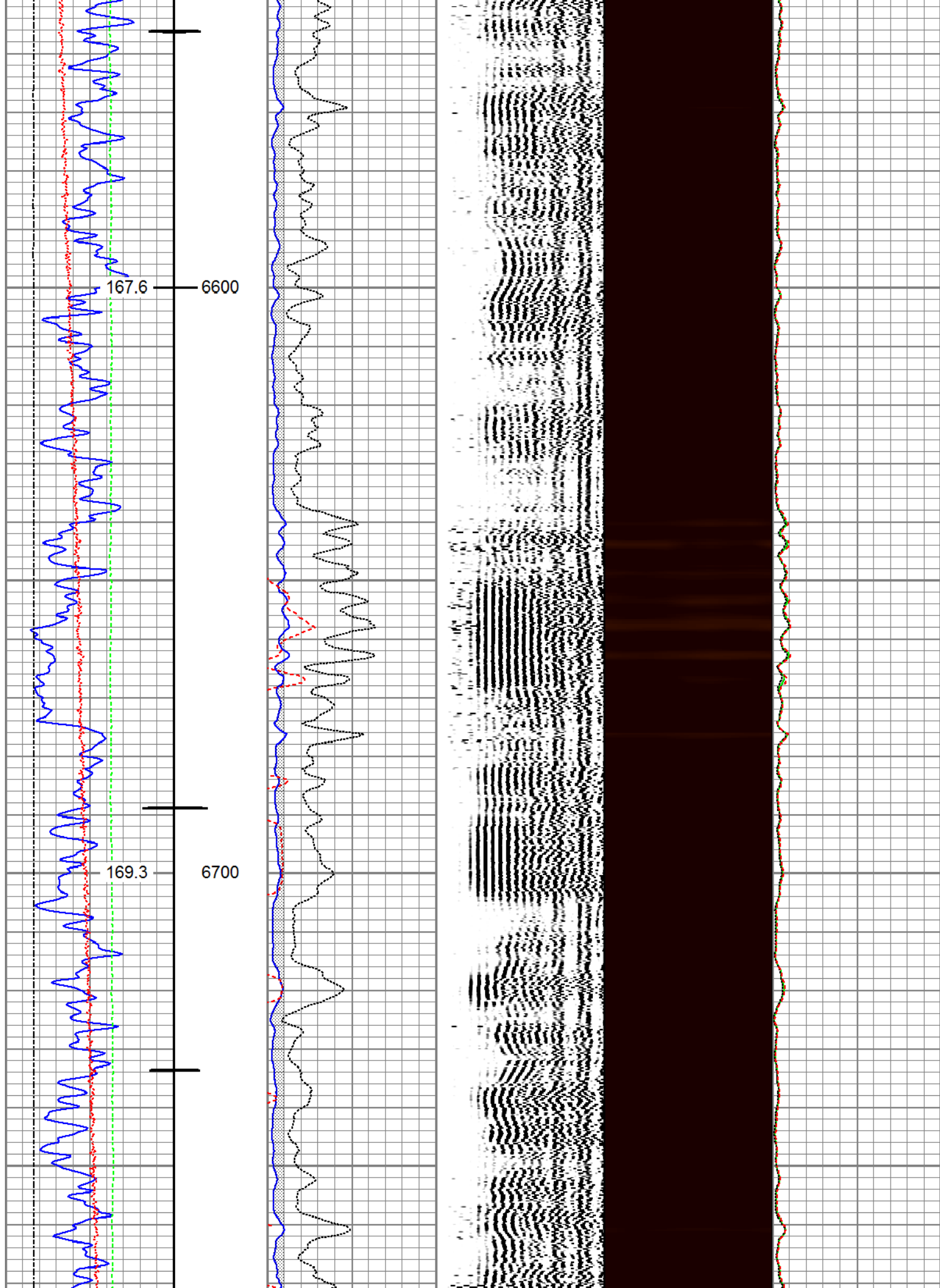


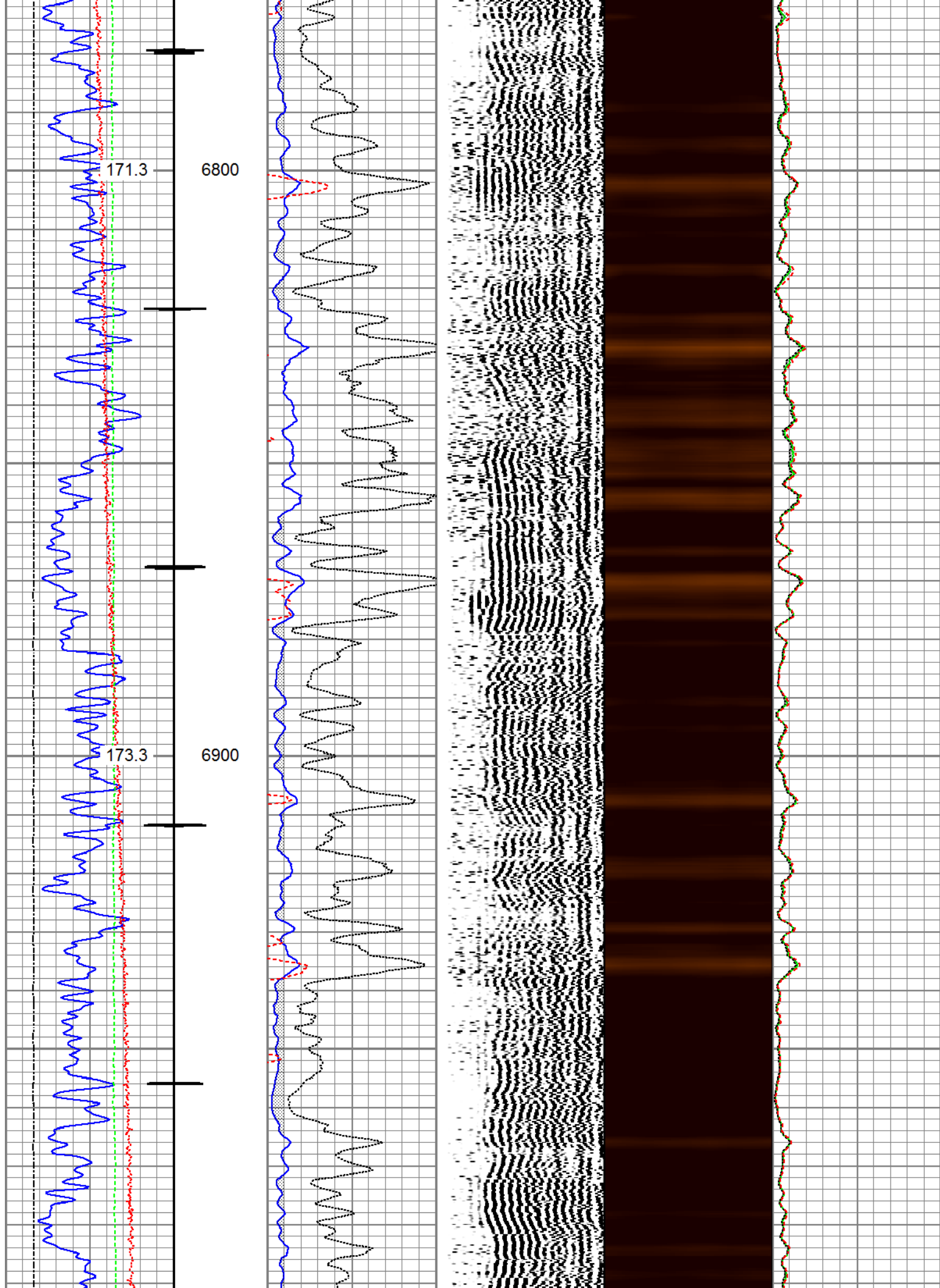


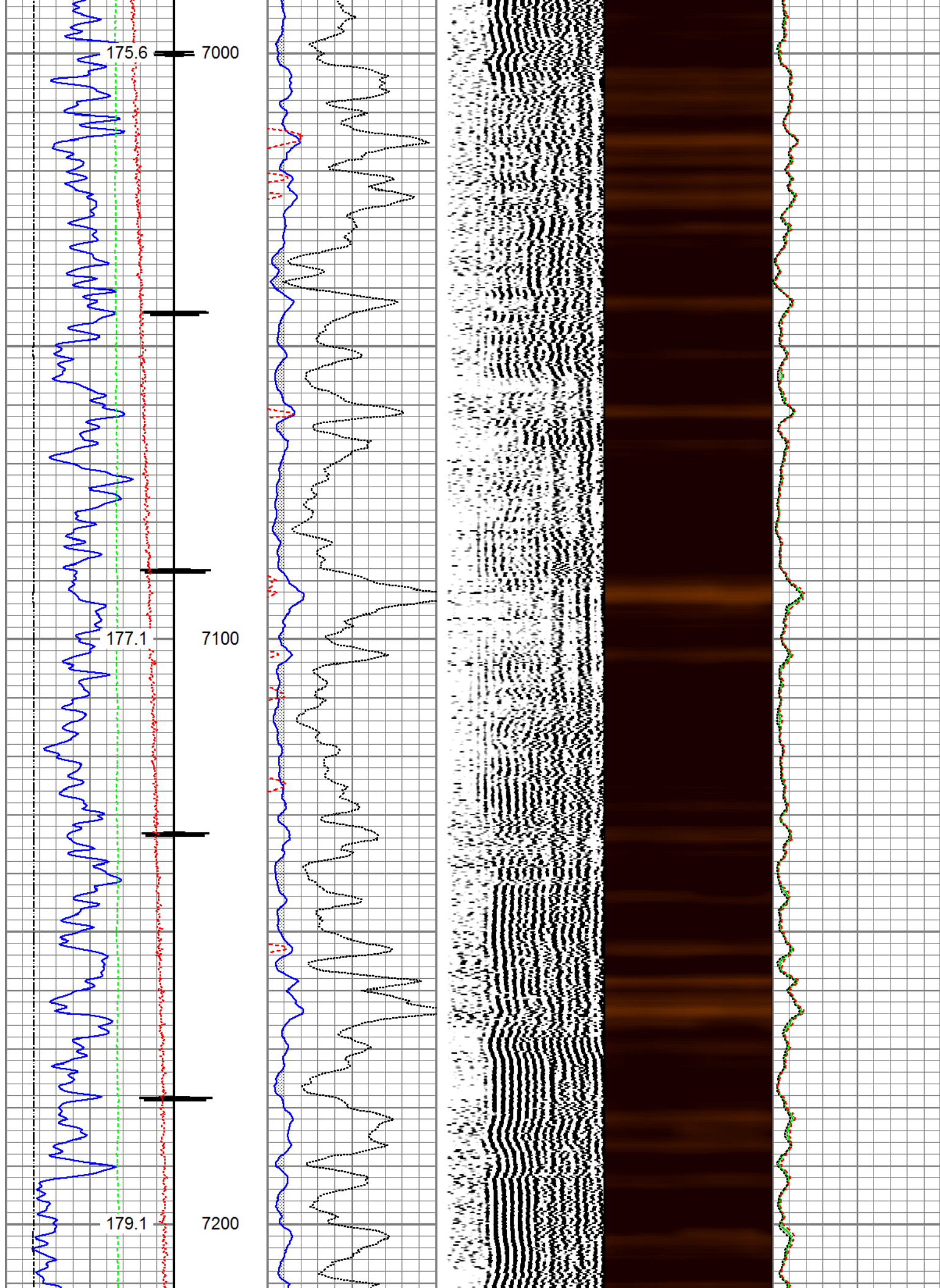


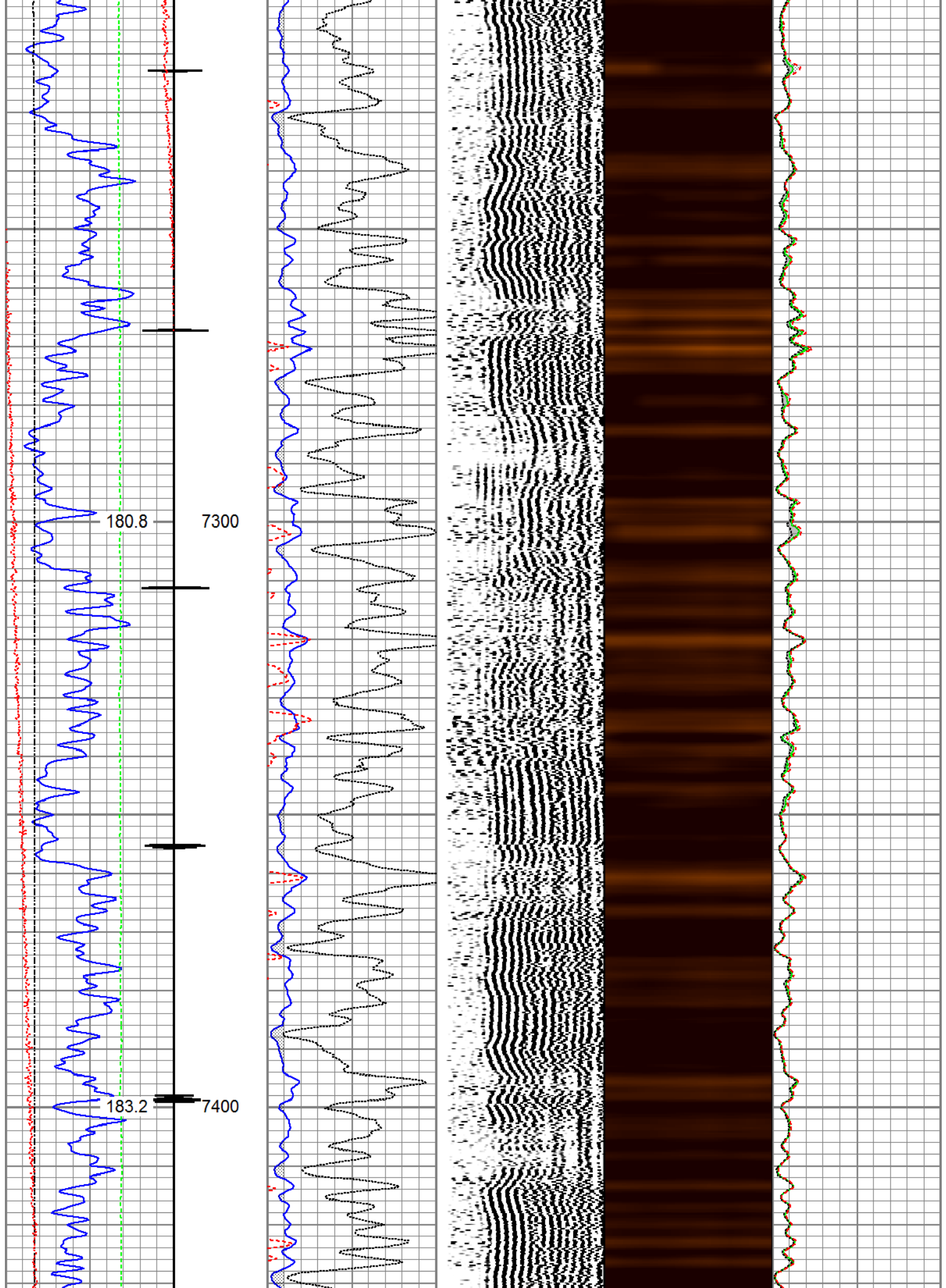


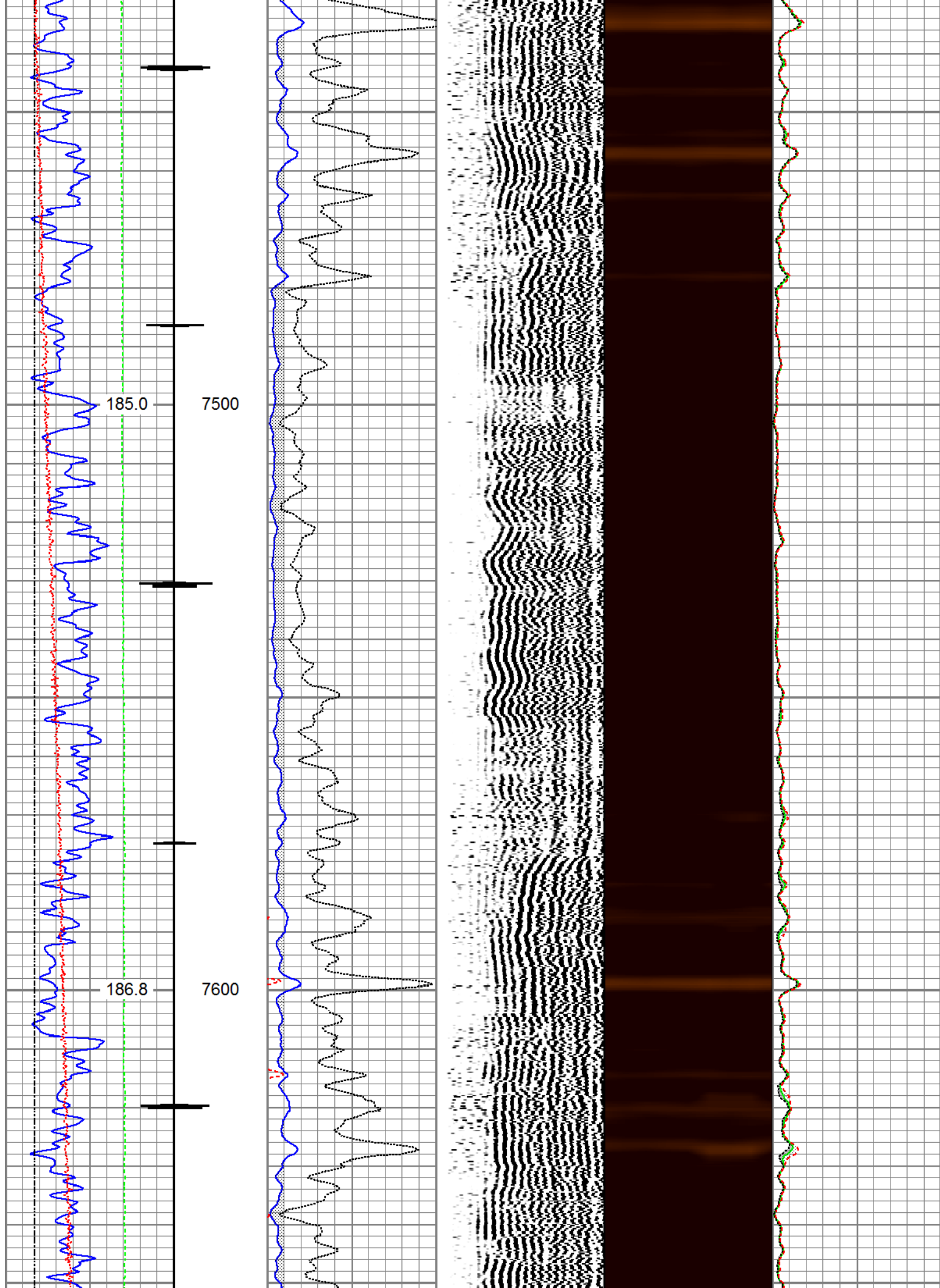


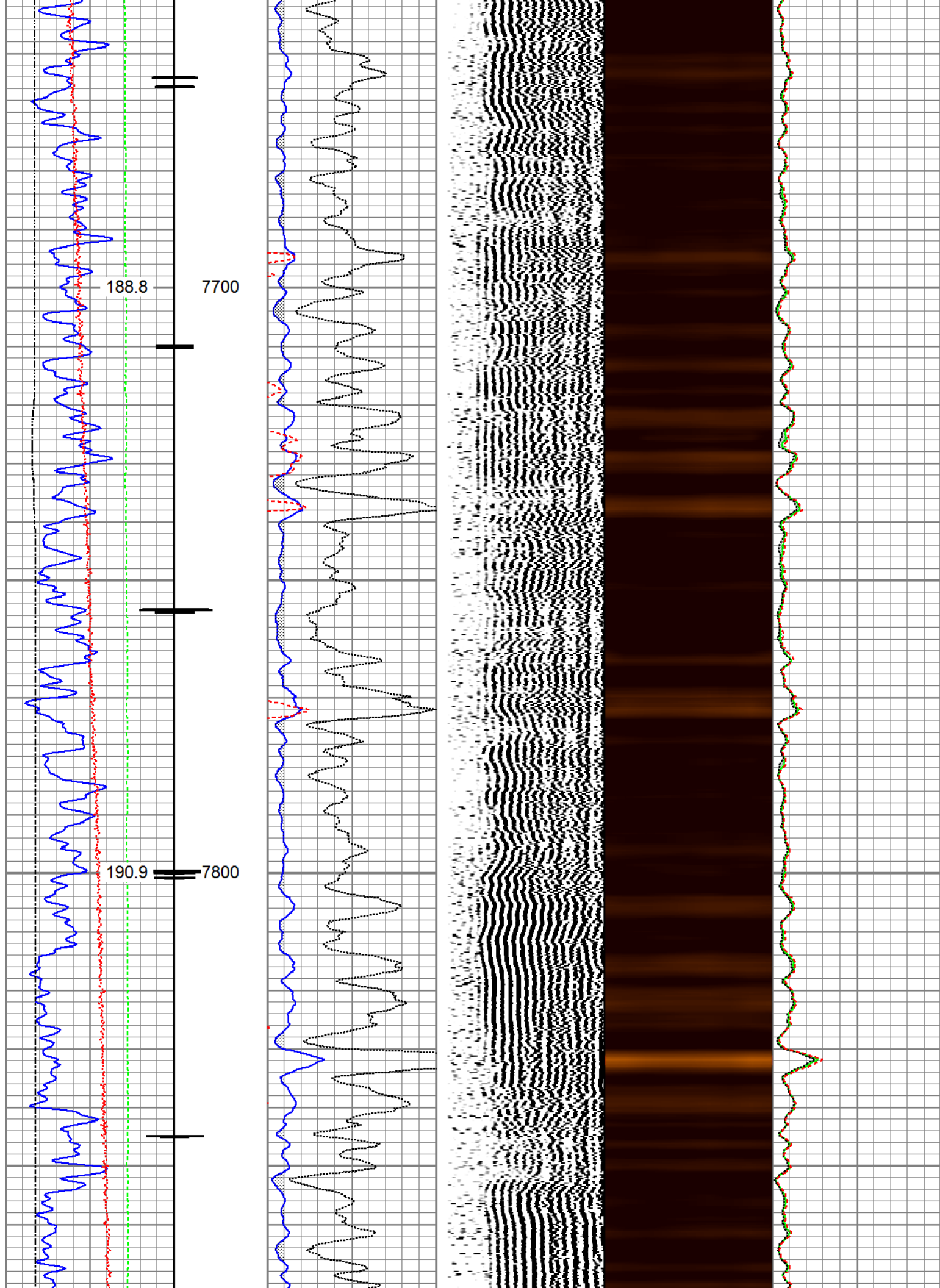


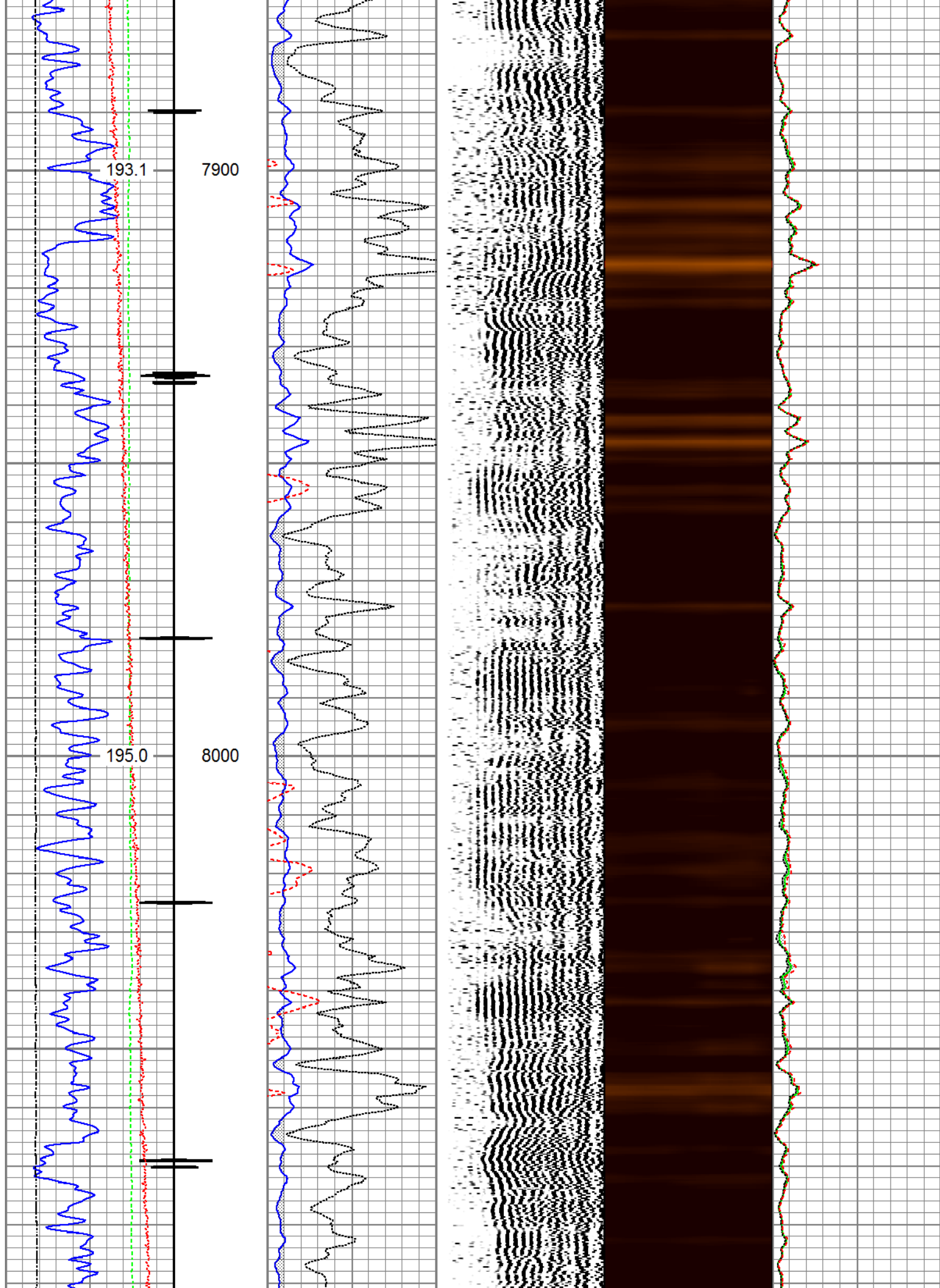


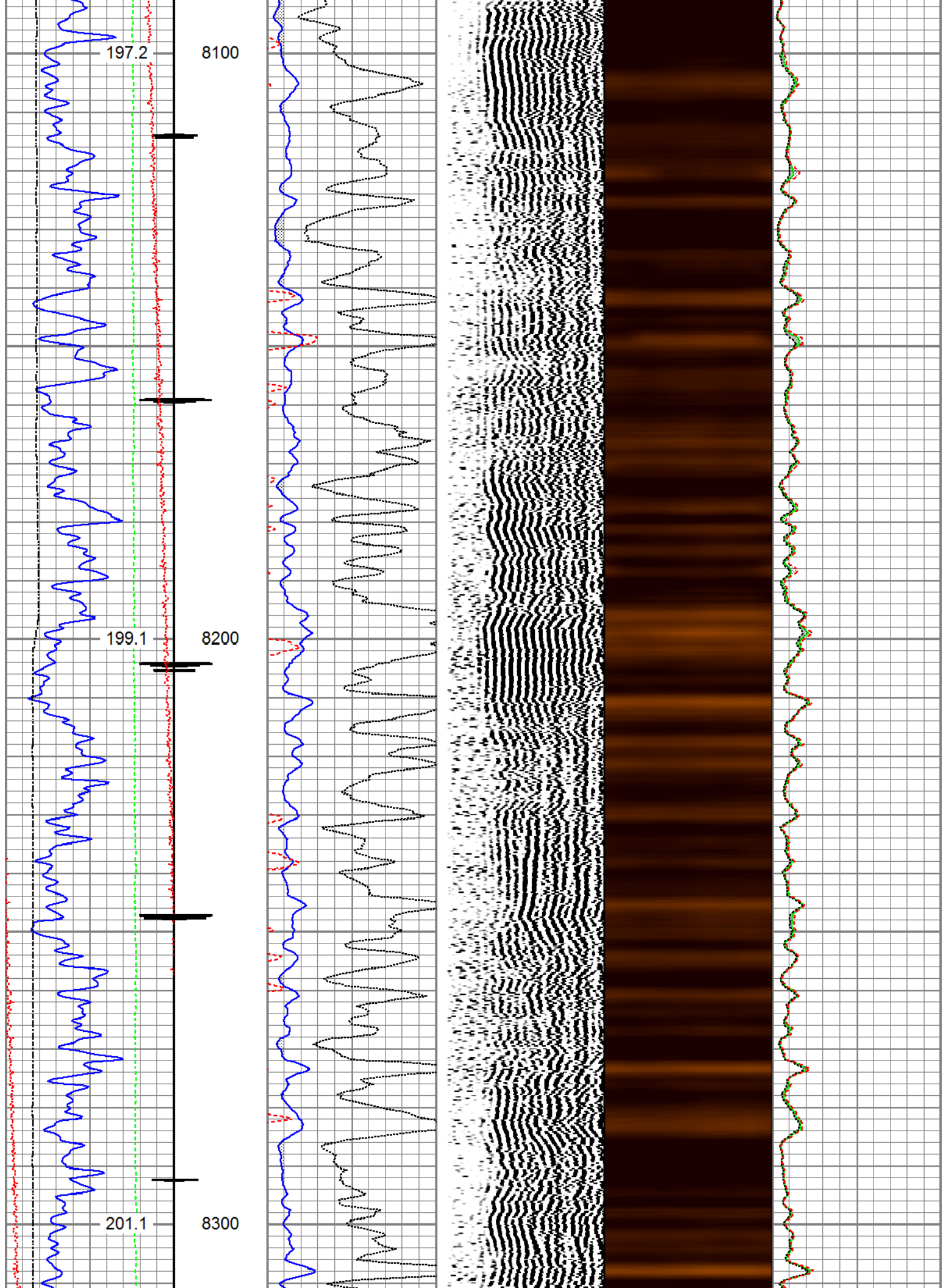


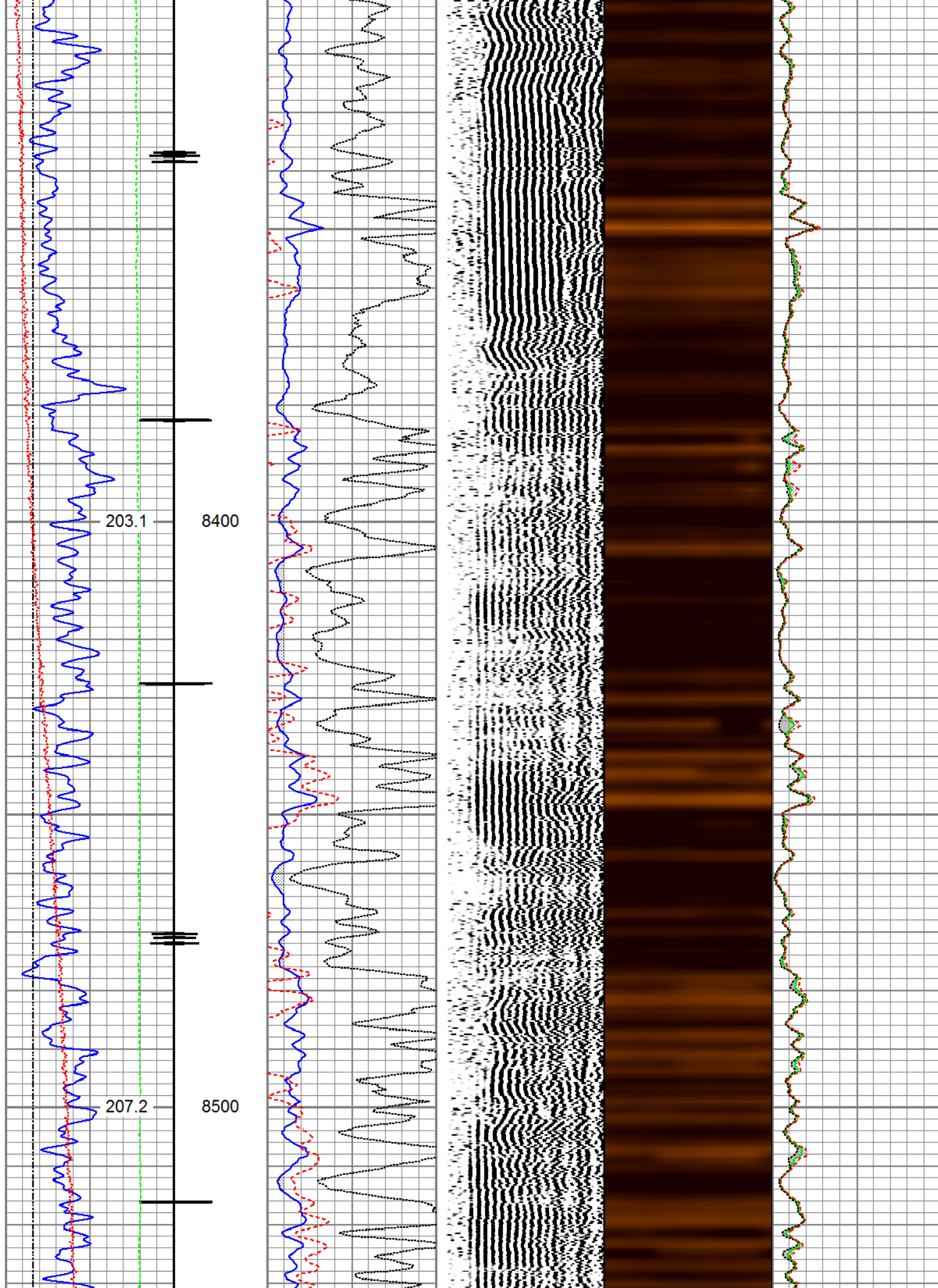


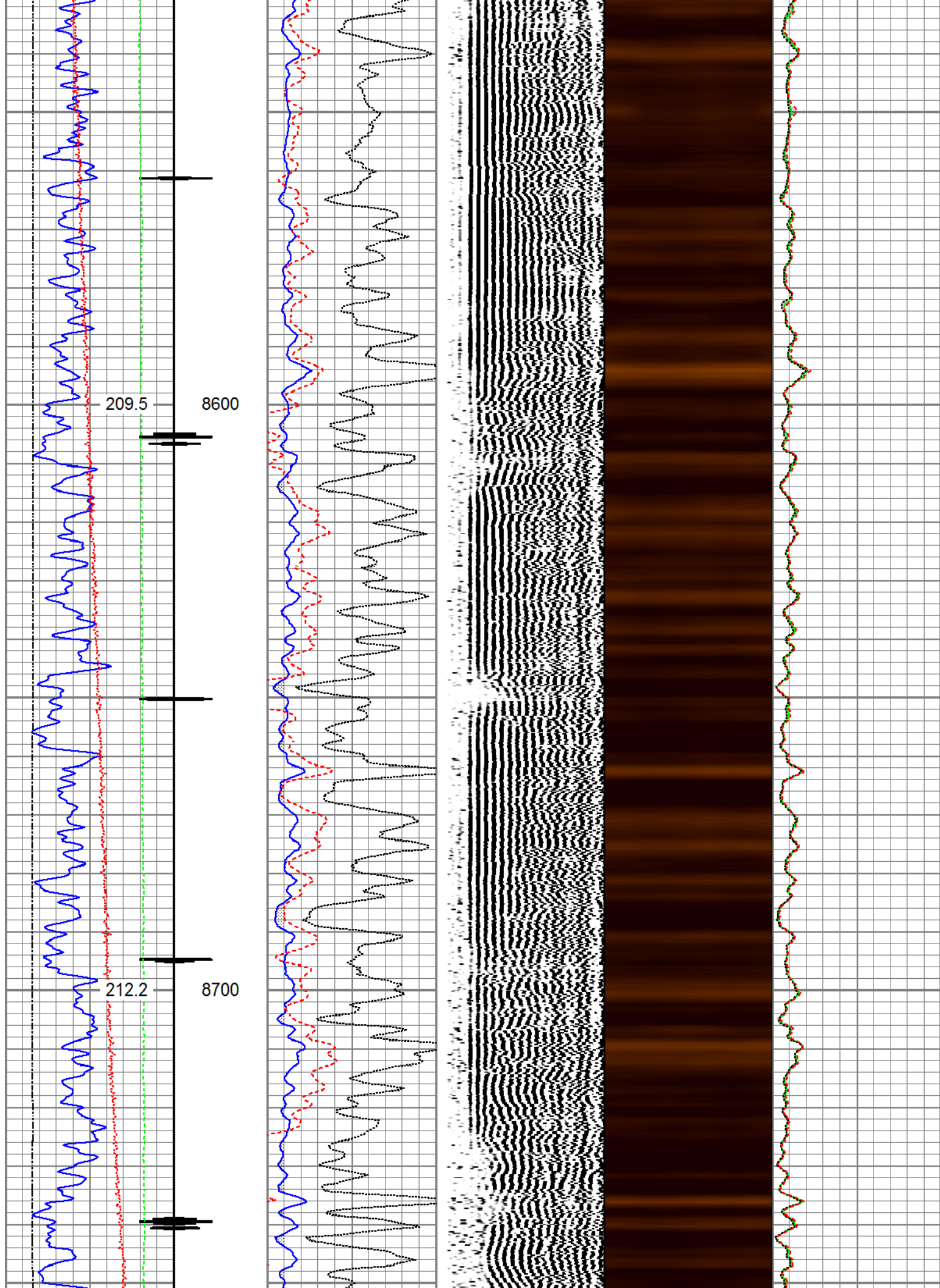


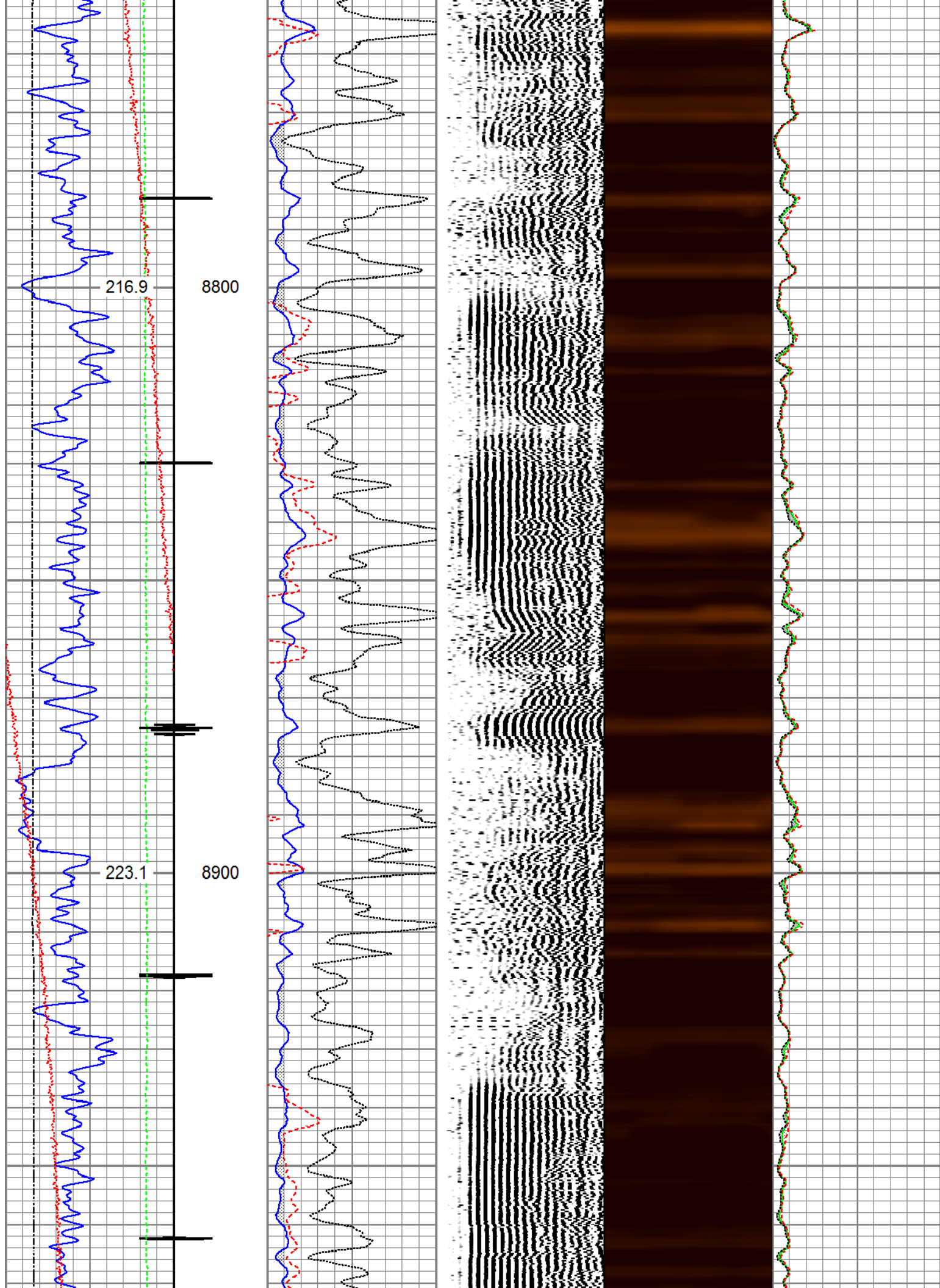


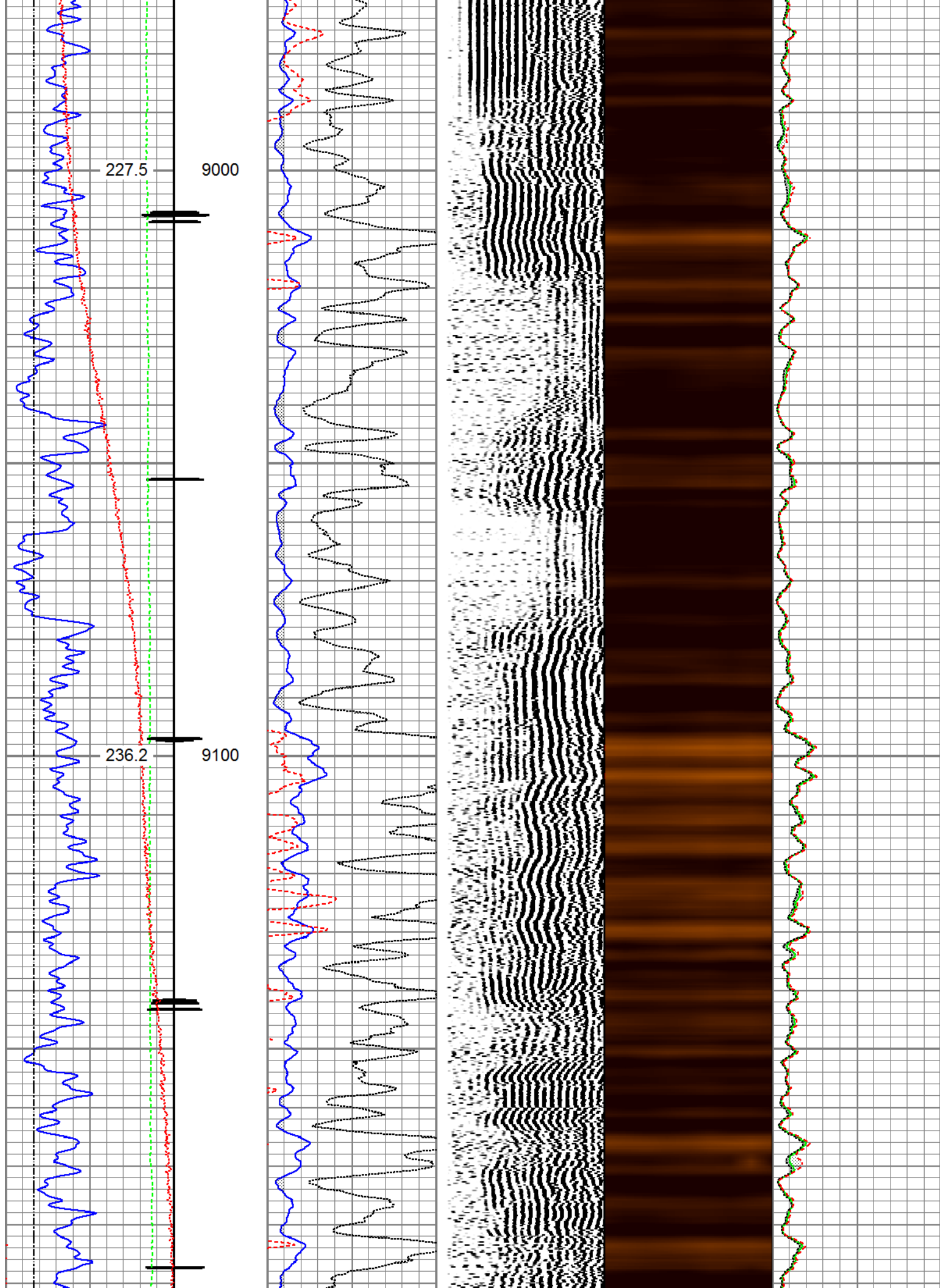


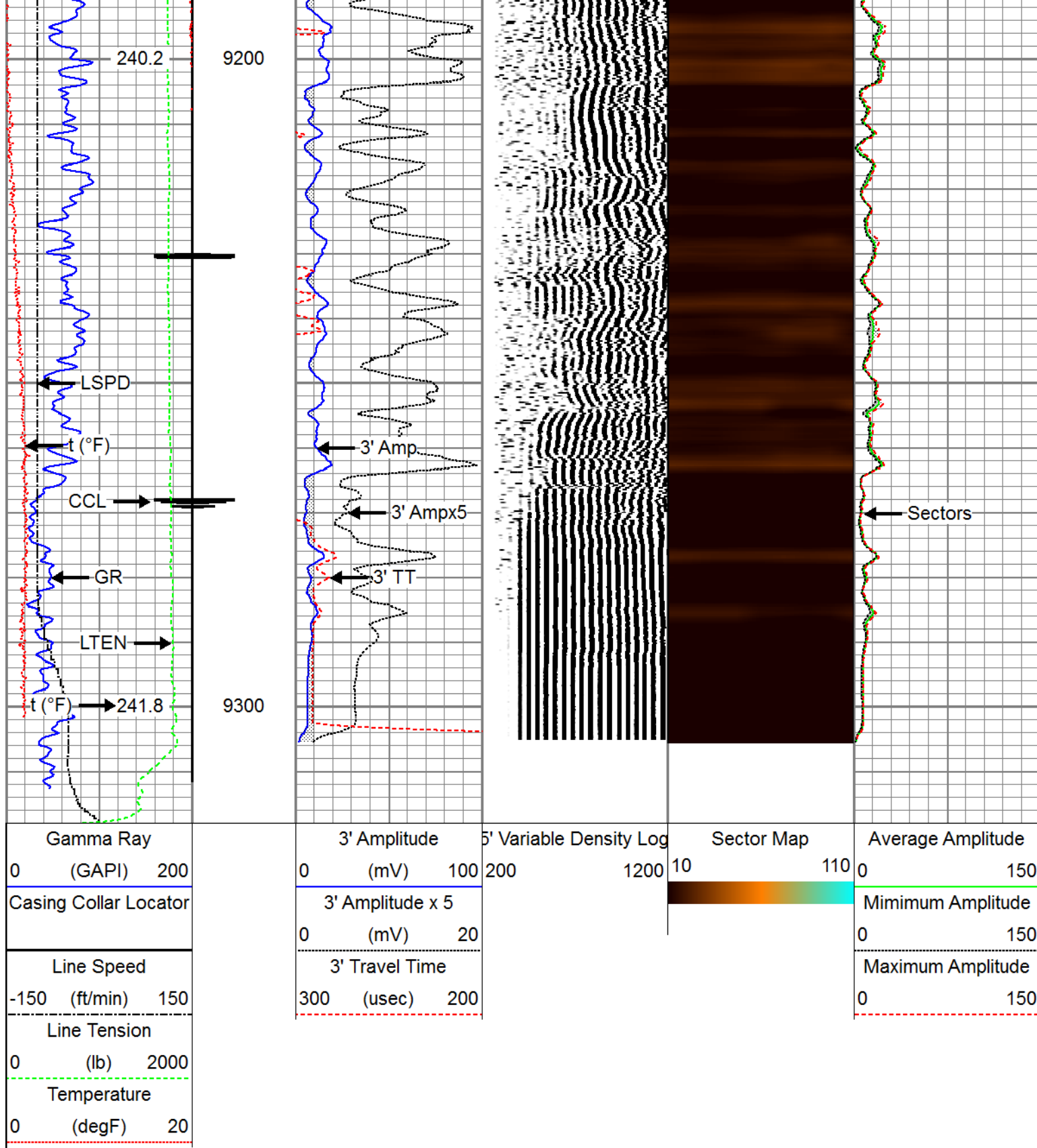











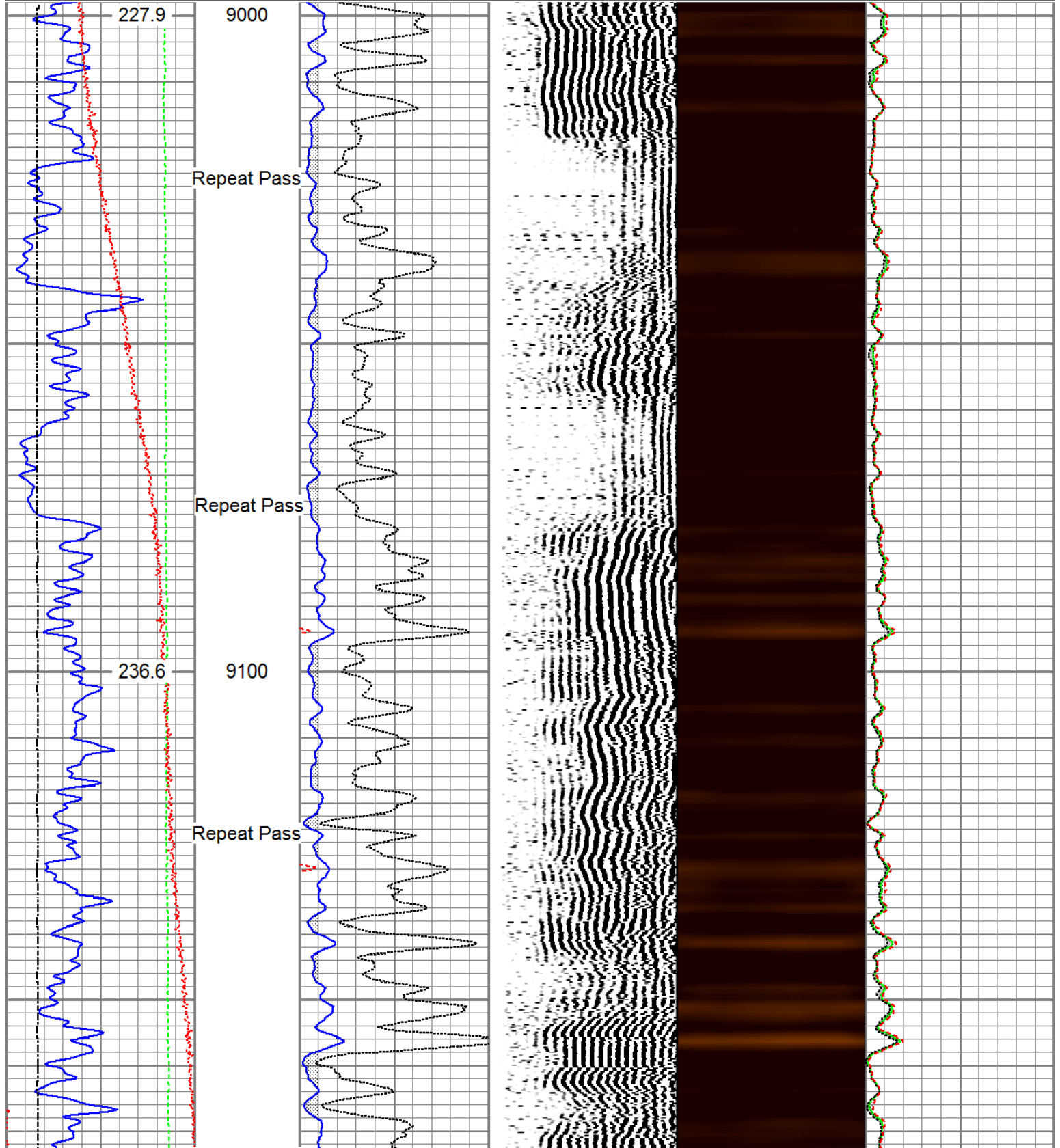


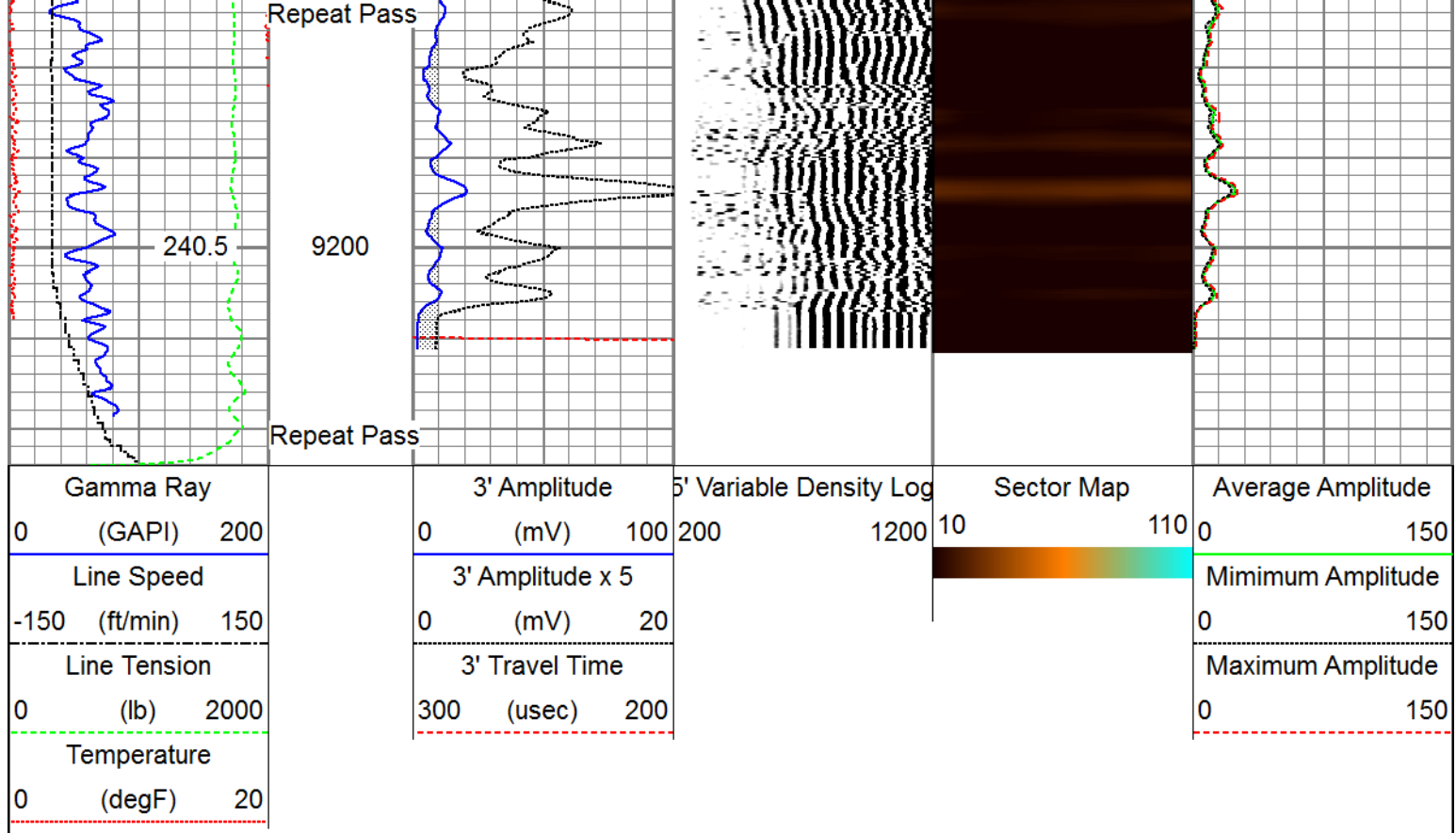
Repeat Pass

Recorded with 0 PSI Surface Induced Pressure

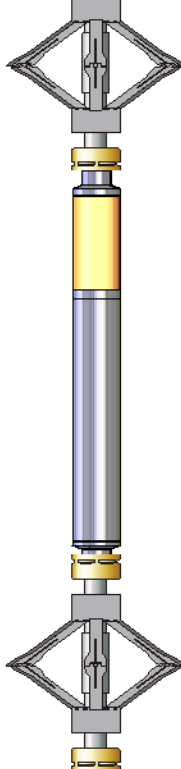
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 Dataset Pathname pass1.1
 Presentation Format ros_rbt004_tep
 Dataset Creation Thu Jul 06 13:51:37 2017
 Charted by Depth in Feet scaled 1:240

Gamma Ray			3' Amplitude		5' Variable Density Log		Sector Map		Average Amplitude					
0	(GAPI)	200	0	(mV)	100	200	1200	10	110	0	150			
Line Speed			3' Amplitude x 5						Minimum Amplitude					
-150	(ft/min)	150	0	(mV)	20					0	150			
Line Tension			3' Travel Time						Maximum Amplitude					
0	(lb)	2000	300	(usec)	200					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"	1.03	1.69	5.40
			Electric Cable Head with 1" Fishing Neck			
			DSS_RAC-RAC_5-Arm	2.55	2.75	32.00
			5 Arm 2-3/4" Roller Centralizer			
Temp	16.05					
WVFS8	13.88		Probe_RADII-C-P_RBT_2750 (FW1305-0989.19)	989.19	2.75	105.00
WVFS7	13.88		Probe 2-3/4" Sector Cement Bond Tool with			
WVFS6	13.88		Temperature Probe			
WVFS5	13.88					
WVFS4	13.88					
WVFS3	13.88					
WVFS2	13.88					
WVFS1	13.88					
WVFCAL	13.88					
WVF3FT	13.88					
WVF5FT	12.88					
HeadVolt	9.63					

DCCL CCL GR	6.18		DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
	6.18		Probe_GR_CCL-P_CGR_2750_S (FW1211-4.54) Probe 2-3/4" Digital CCL / Gamma Ray Combined	11.454	2.75	55.00
	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 331-12_rbl_07-05-17.db: field/well/run1/pass3.1 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 331-12_rbl_07-06-17\processed_tep_youberg sr 331-12_
Dataset Pathname	pass3.1
Dataset Creation	Thu Jul 06 13:40:11 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:	24.030	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.007	0.644	0.800	81.196	123.419	1.678
CAL	0.006	0.741				

CAL	-0.008	0.741	0.800	81.196	160.388	2.917
5'	-0.013	0.488				
SUM						
S1	-0.009	0.650	0.000	100.000	151.749	1.423
S2	-0.006	0.670	0.000	100.000	148.000	0.892
S3	-0.007	0.703	0.000	100.000	140.801	1.046
S4	-0.009	0.712	0.000	100.000	138.722	1.198
S5	-0.009	0.705	0.000	100.000	140.020	1.245
S6	-0.009	0.667	0.000	100.000	147.799	1.368
S7	-0.004	0.645	0.000	100.000	153.932	0.690
S8	-0.006	0.623	0.000	100.000	159.068	0.909

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	0.741	1.000	0.000

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

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	-0.006		0.000		0.000	
5'	-0.003		0.000		-0.000	
SUM						
S1	-0.009		0.000		-0.000	
S2	-0.006		0.000		0.000	
S3	-0.006		0.000		0.000	
S4	-0.004		0.000		0.000	
S5	-0.003		0.000		0.000	
S6	-0.006		0.000		0.000	
S7	-0.002		0.000		0.000	
S8	-0.002		0.000		0.000	



Company TEP Rocky Mountain LLC
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