



**RADIAL CEMENT  
GAMMA RAY  
CCL  
TEMP**

Company		SRC ENERGY	
Well		SANFORD 31N-30B-M	
Field		WATTENBERG	
County		WELD	
State		COLORADO	
Location:		API # : 05-123-49929	
Permanent Datum		SEC 29 TWP 5N RGE 66W	
Log Measured From		GROUND LEVEL	
Drilling Measured From		GROUND LEVEL	
Other Services		NONE	
Elevation		4904'	
K.B.		D.F.	
G.L.		4904'	
Date		23-June-2019	
Run Number		ONE	
Depth Driller		15411'	
Depth Logger		6841'	
Bottom Logged Interval		6842'	
Top Log Interval		SURFACE	
Open Hole Size		8.50"	
Type Fluid		WATER	
Density / Viscosity		~8.3#	
Max. Recorded Temp.		219 DEG F	
Estimated Cement Top		SEE LOG	
Time Well Ready		ROA	
Time Logger on Bottom		07:34	
Equipment Number		W-110	
Location		WINDSOR, CO	
Recorded By		E. ATWOOD	
Witnessed By		B. TOURNEY	
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size	
Surface String		9.625"	
Prot. String		36#	
Production String		5.5"	
Liner		20#	
Wgt/Ft		Top	
Bottom		1750'	
Bottom		15411'	

<<< Fold Here >>>

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

THANK YOU FOR CHOOSING CUTTERS WIRELINE SERVICE.

Calibration Report

Database File c:\users\zach\desktop\sanford 31n-30b-m.db  
Dataset Pathname pass4  
Dataset Creation Sun Jun 23 07:39:07 2019

Serial Number: 060110  
Tool Model: 1.375TEMP  
Performed: Thu Jul 19 15:12:47 2018

	Reference	Reading
Low Reference:	35.00 degF	237.00 cps
High Reference:	100.00 degF	977.48 cps
Gain:	0.09	
Offset:	14.20	
Delta Spacing	1	

#### Gamma Ray Calibration Report

Serial Number: 060109  
Tool Model: Probe  
Performed: Thu Sep 14 19:11:58 2017

Calibrator Value: 185.2 GAPI

Background Reading: 4.8 cps  
Calibrator Reading: 200.0 cps

Sensitivity: 1.2000 GAPI/cps

#### Segmented Cement Bond Log Calibration Report

Serial Number: 060112\_55  
Tool Model: Probe

Calibration Casing Diameter: 5.500 in  
Calibration Depth: -32.075 ft

Master Calibration, performed Sun Jun 23 06:57:24 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	0.756	0.000	71.921	96.370	-0.903
CAL	-0.008	1.194				
5'	0.006	0.325	0.000	71.921	225.246	-1.323
SUM						
S1	0.031	0.829	0.000	100.000	125.304	-3.839
S2	0.015	0.841	0.000	100.000	121.053	-1.760
S3	0.009	0.772	0.000	100.000	131.045	-1.121
S4	0.010	0.734	0.000	100.000	138.217	-1.399
S5	0.011	0.735	0.000	100.000	138.029	-1.518
S6	0.009	0.772	0.000	100.000	130.995	-1.169
S7	0.010	0.836	0.000	100.000	120.946	-1.166
S8	0.009	0.753	0.000	100.000	134.445	-1.196

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.008	1.194	1.000	0.000


Air Zero Calibration, performed Sun Jun 23 06:56:56 2019:

	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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable_Head-Standard Standard Cable Head	1.00	1.69	1.00
WVFS8	9.50		RBT-Probe (060112_55) Probe 2.75" Radii Bond Tool	8.92	2.75	130.00
WVFS7	9.50					
WVFS6	9.50					
WVFS5	9.50					
WVFS4	9.50					
WVFS3	9.50					
WVFS2	9.50					
WVFS1	9.50					
WVFCAL	9.50					
WVF3FT	9.50					
WVF5FT	8.50					
CCL	4.89		GR-Probe (060109) Probe 2.75" 4 Channel Pulse	4.00	2.75	30.00

GR	2.15							
TEMP	0.08			TEMP-1.375TEMP (060110) Temperature Tool	1.25	1.38	30.00	
Dataset: sanford 31n-30b-m.db: field/well/run1/pass4 Total length: 15.17 ft Total weight: 191.00 lb O.D.: 2.75 in								



**FREE PIPE PASS (0 PSI)**

**5" = 100'**

Database File c:\users\zach\desktop\sanford 31n-30b-m.db

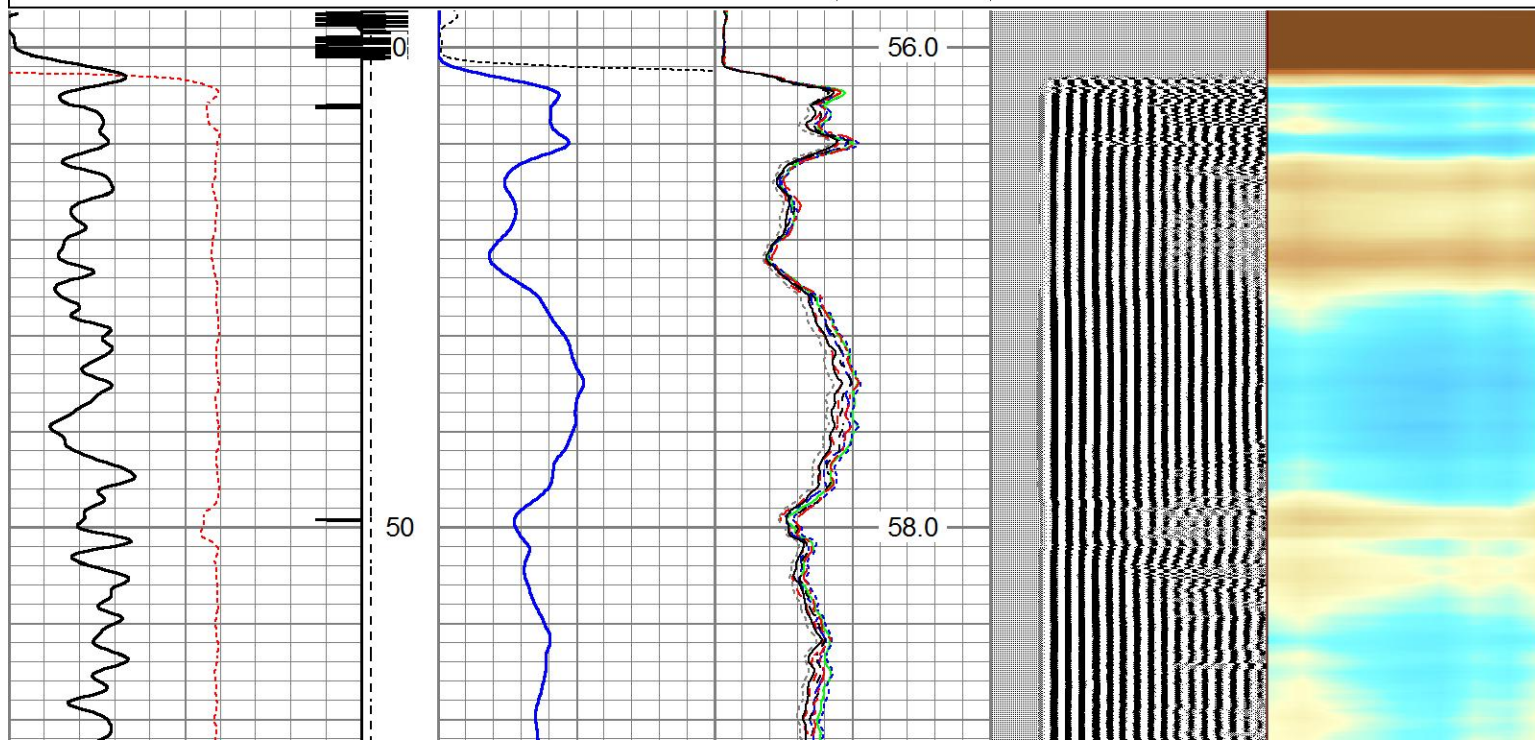
Dataset Pathname pass1

Presentation Format rbl55

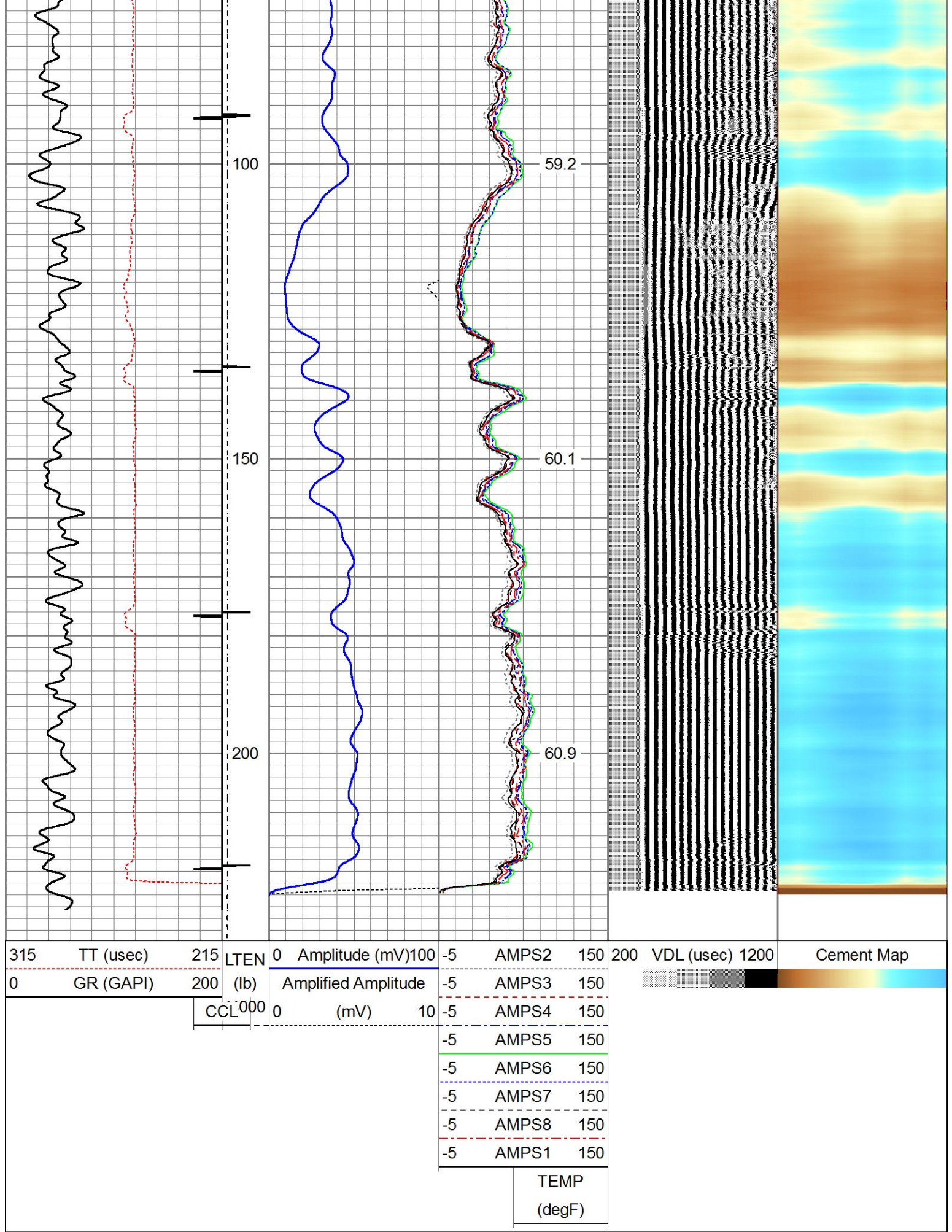
Dataset Creation Sun Jun 23 07:05:09 2019

Charted by Depth in Feet scaled 1:240

315	TT (usec)	215	LTEN	0	Amplitude (mV)100	-5	AMPS2	150	200	VDL (usec) 1200	Cement Map
0	GR (GAPI)	200	(lb)		Amplified Amplitude	-5	AMPS3	150			
			CCL000	0	(mV) 10	-5	AMPS4	150			
						-5	AMPS5	150			
						-5	AMPS6	150			
						-5	AMPS7	150			
						-5	AMPS8	150			
						-5	AMPS1	150			
							TEMP				
							(degF)				



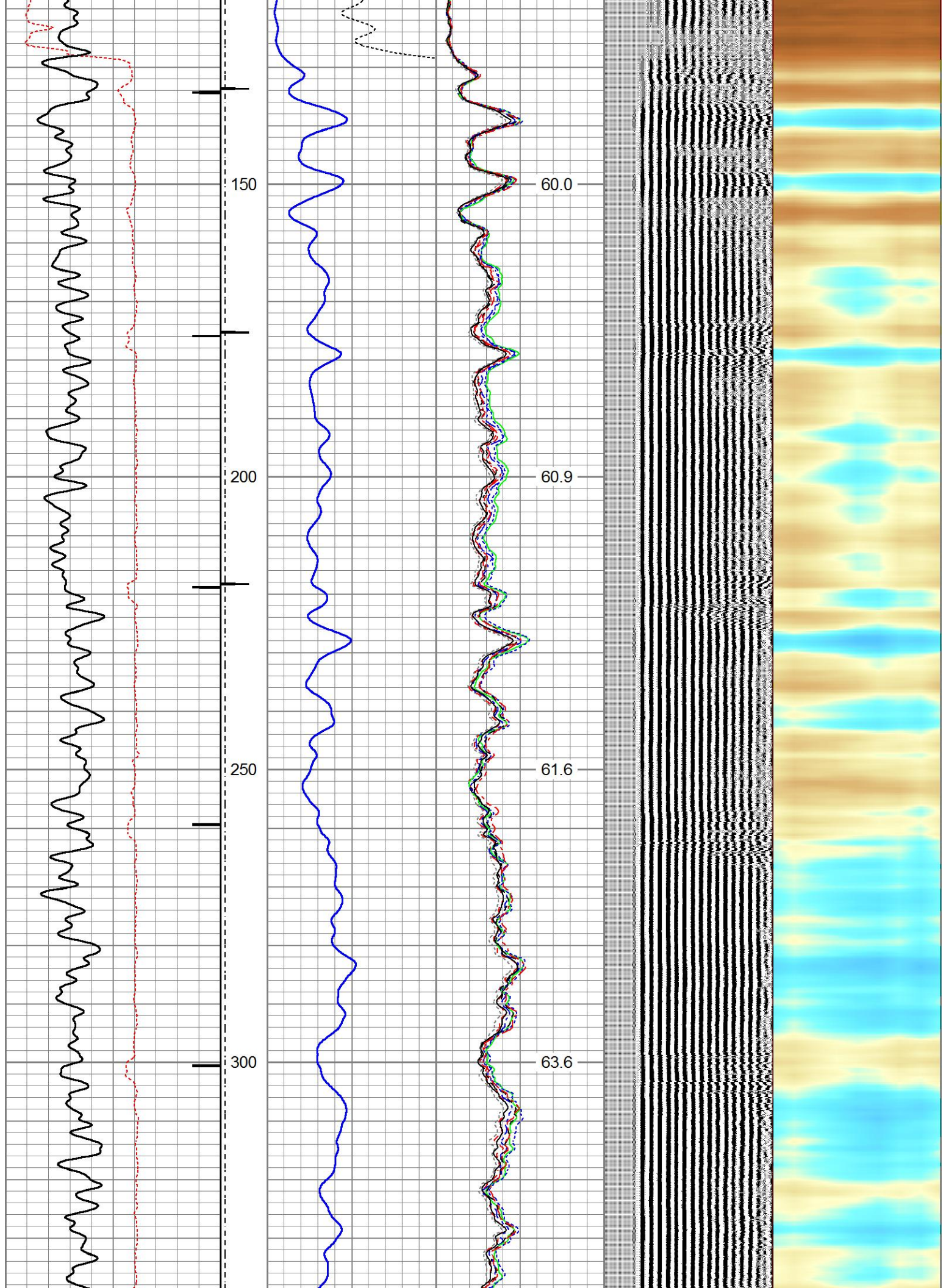




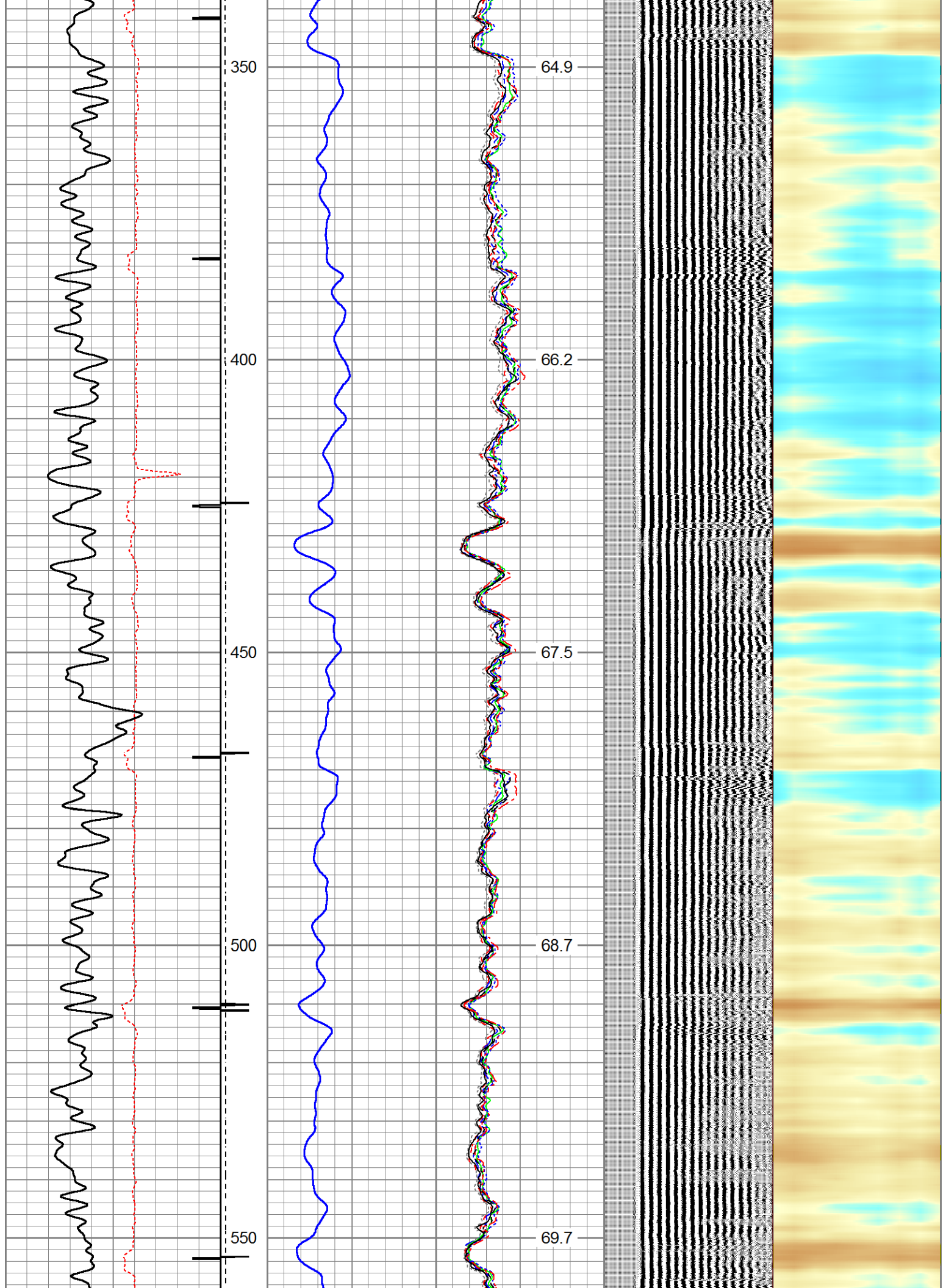




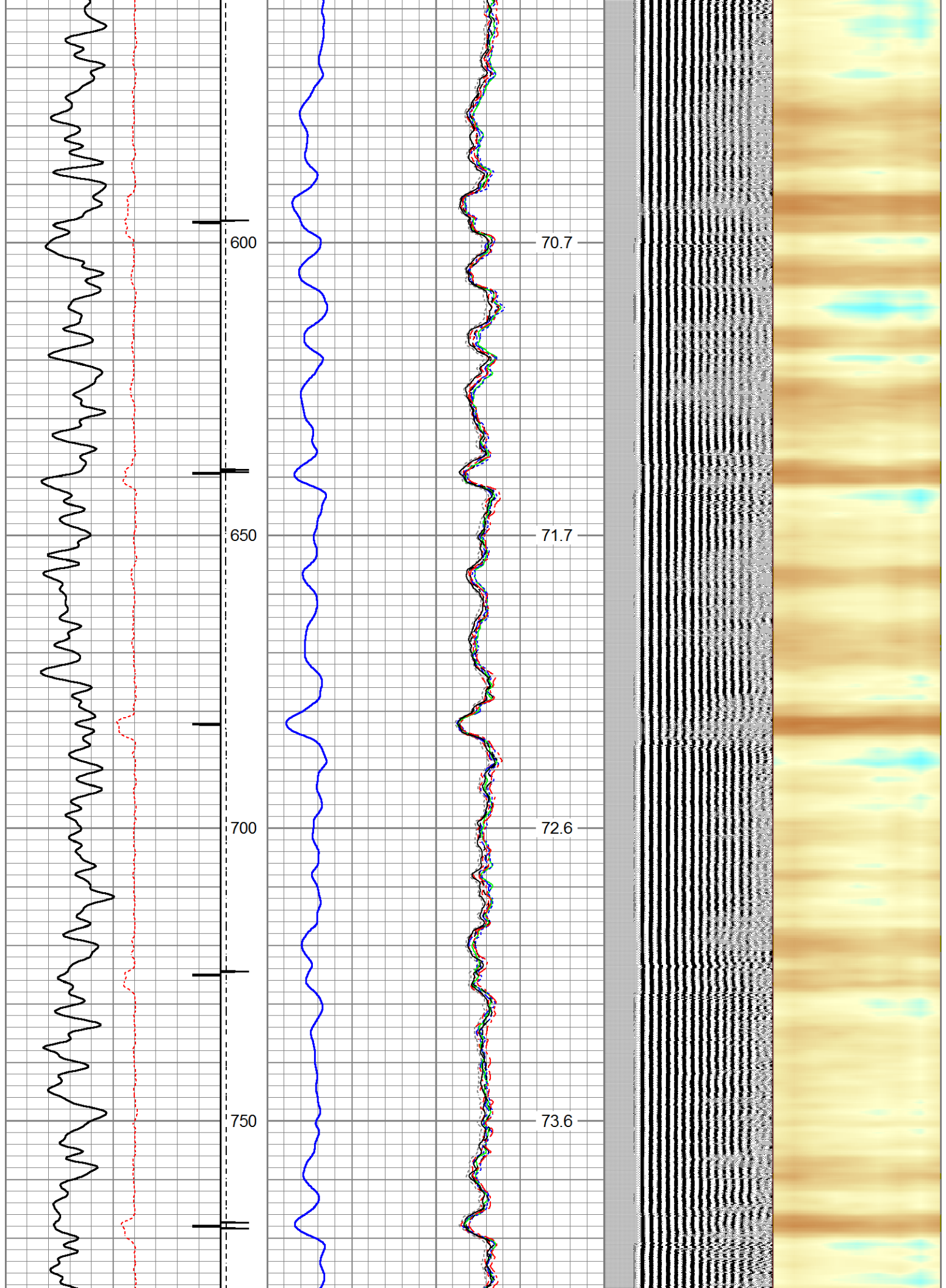


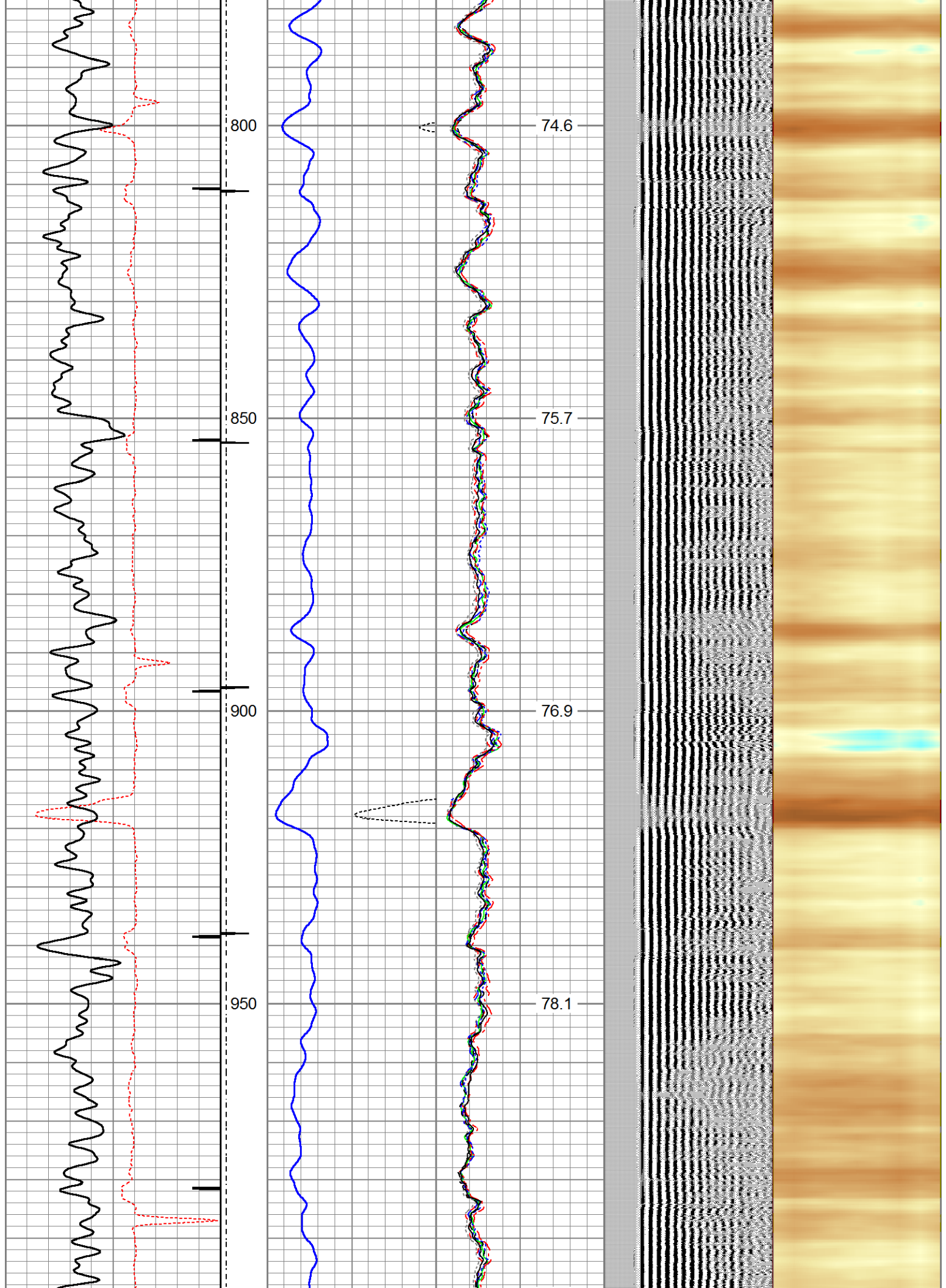




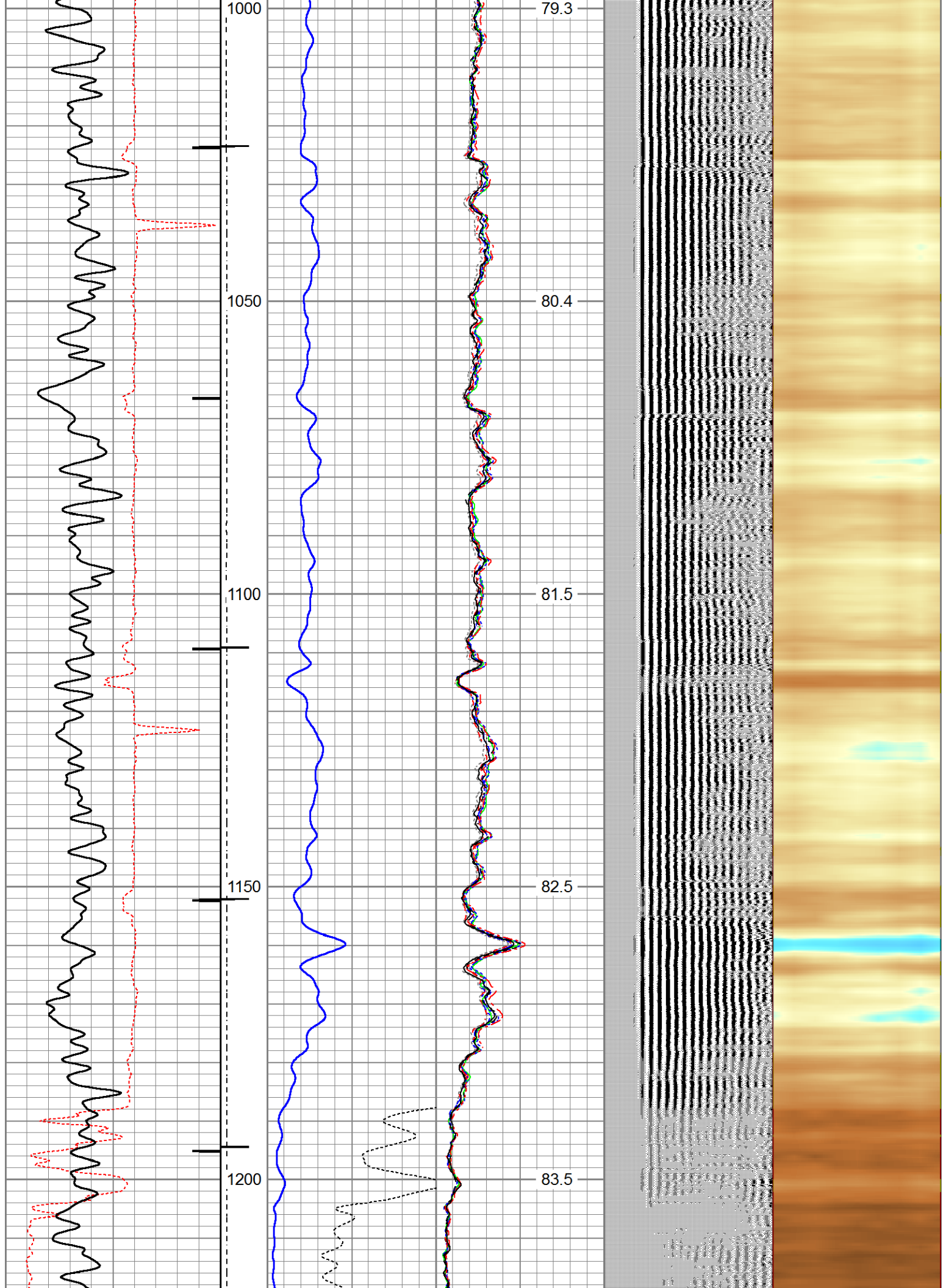




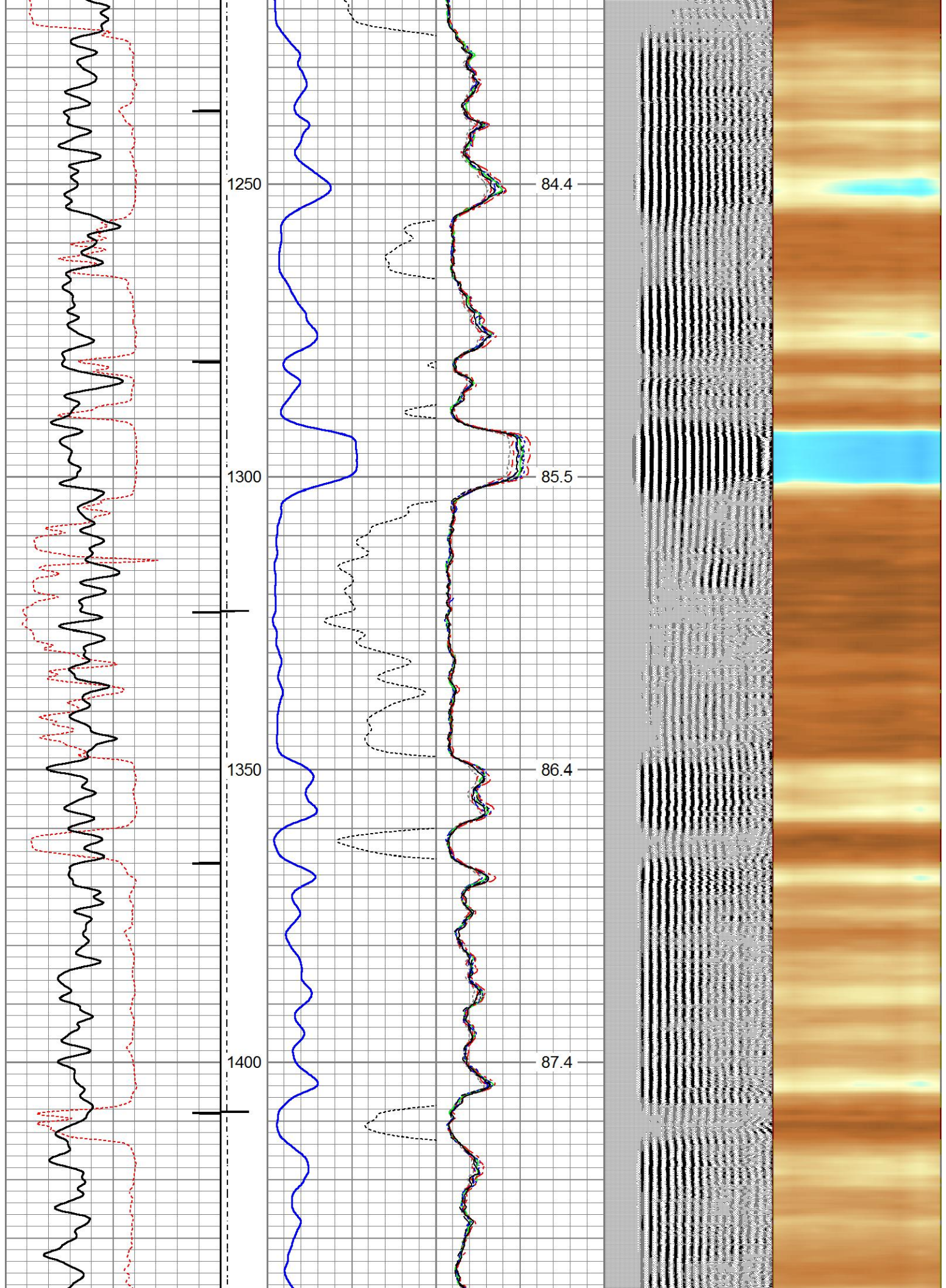




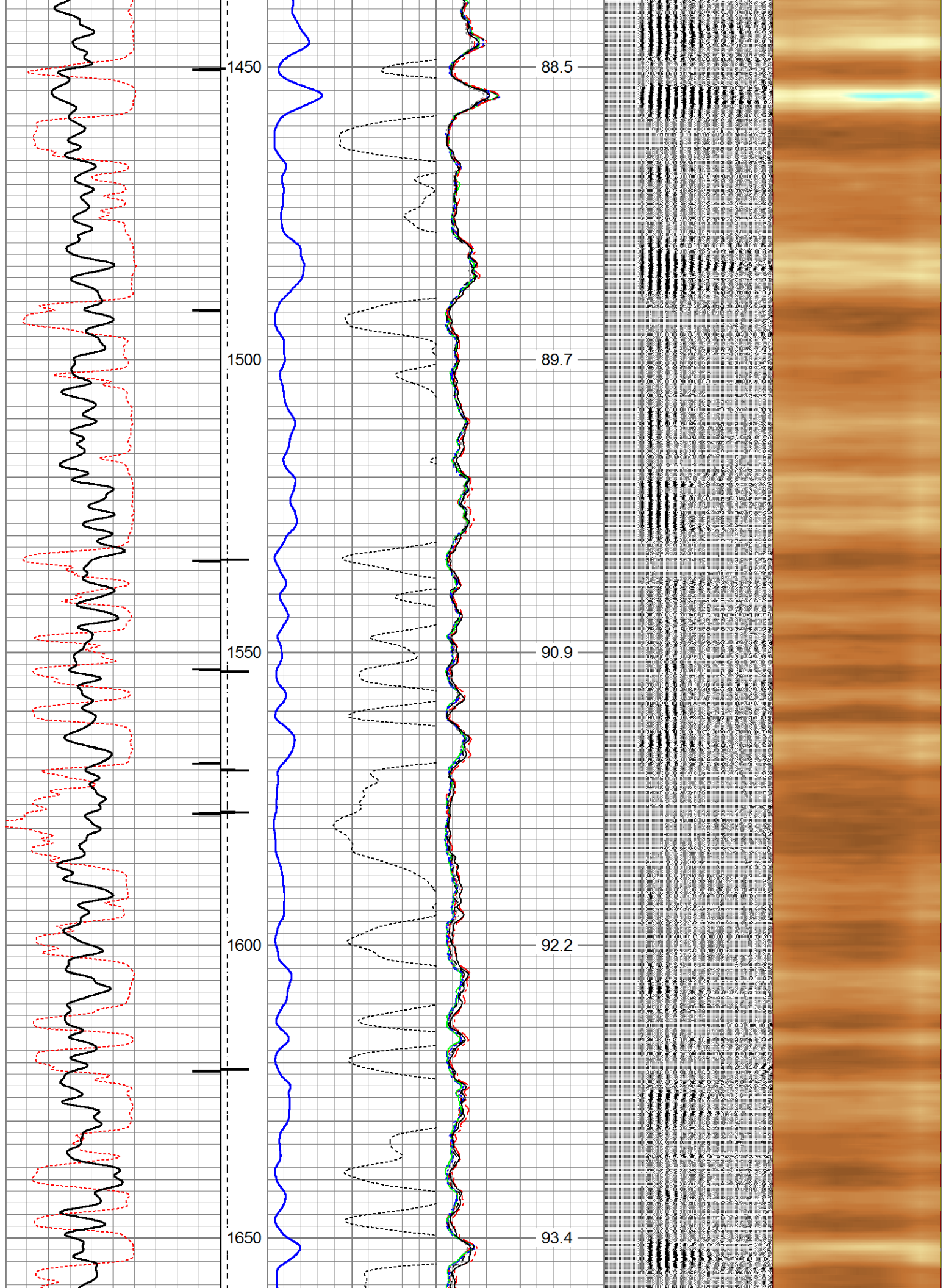


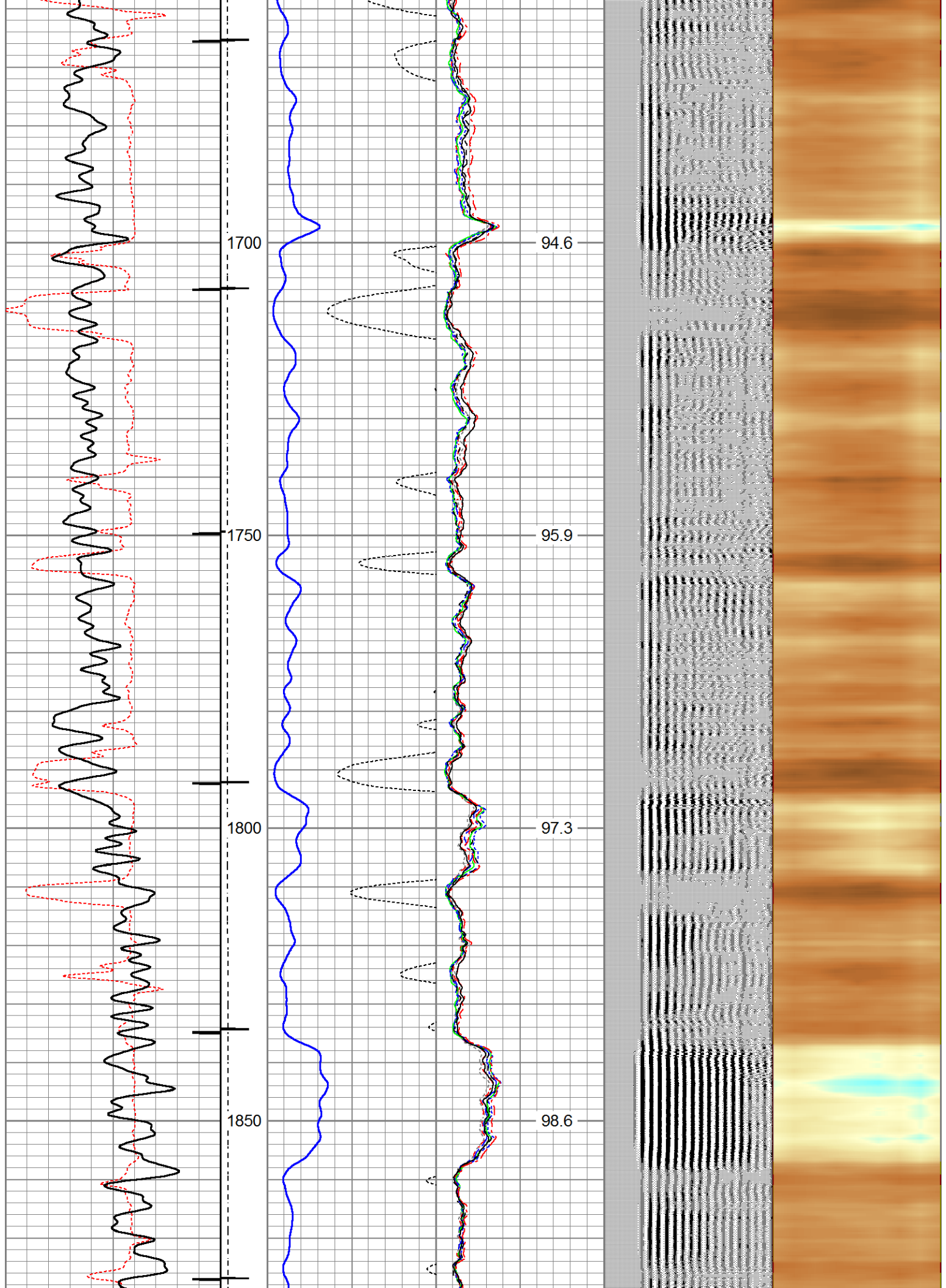




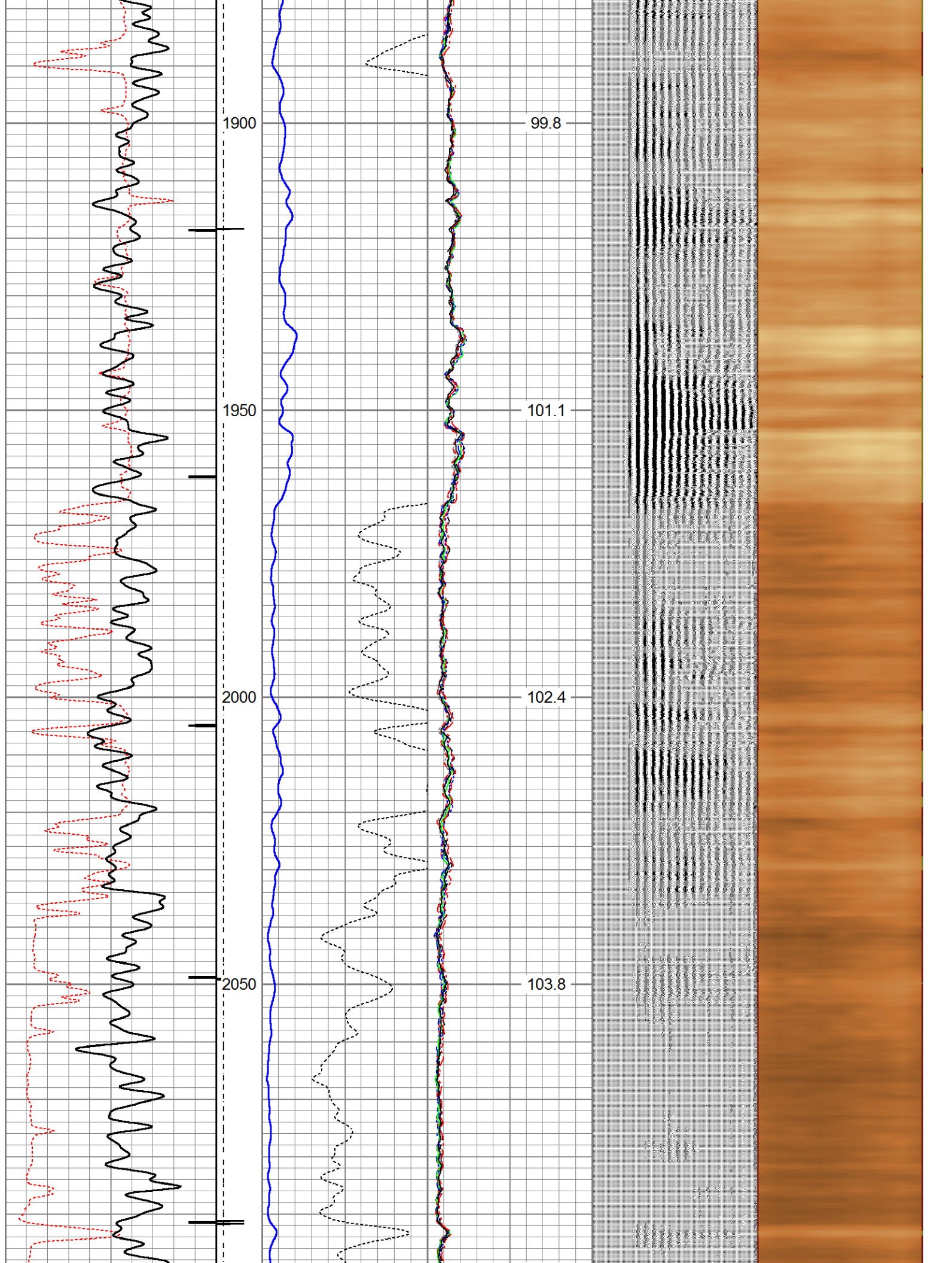


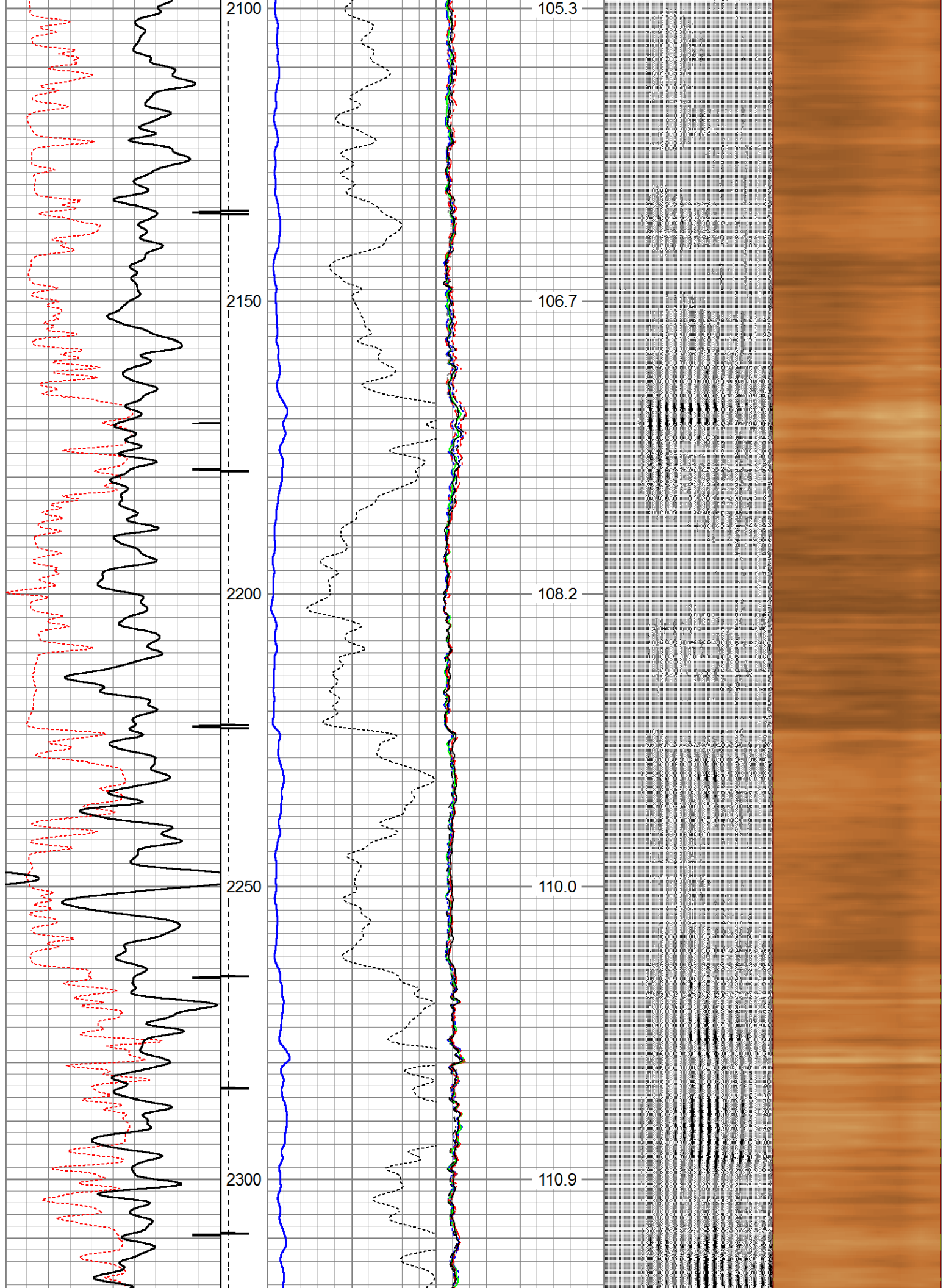




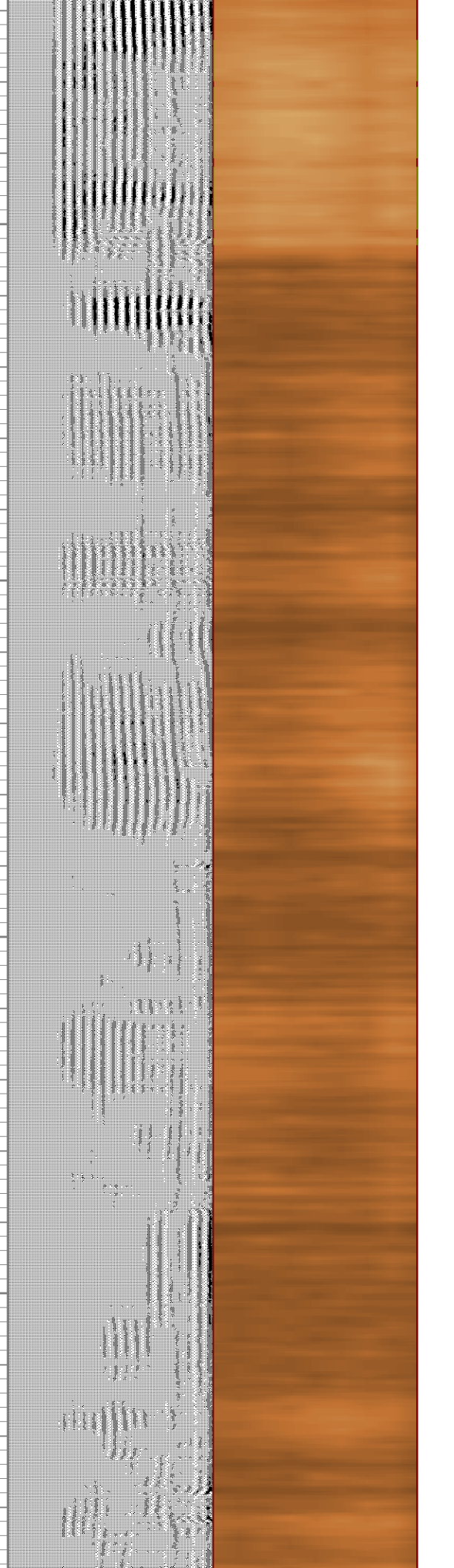
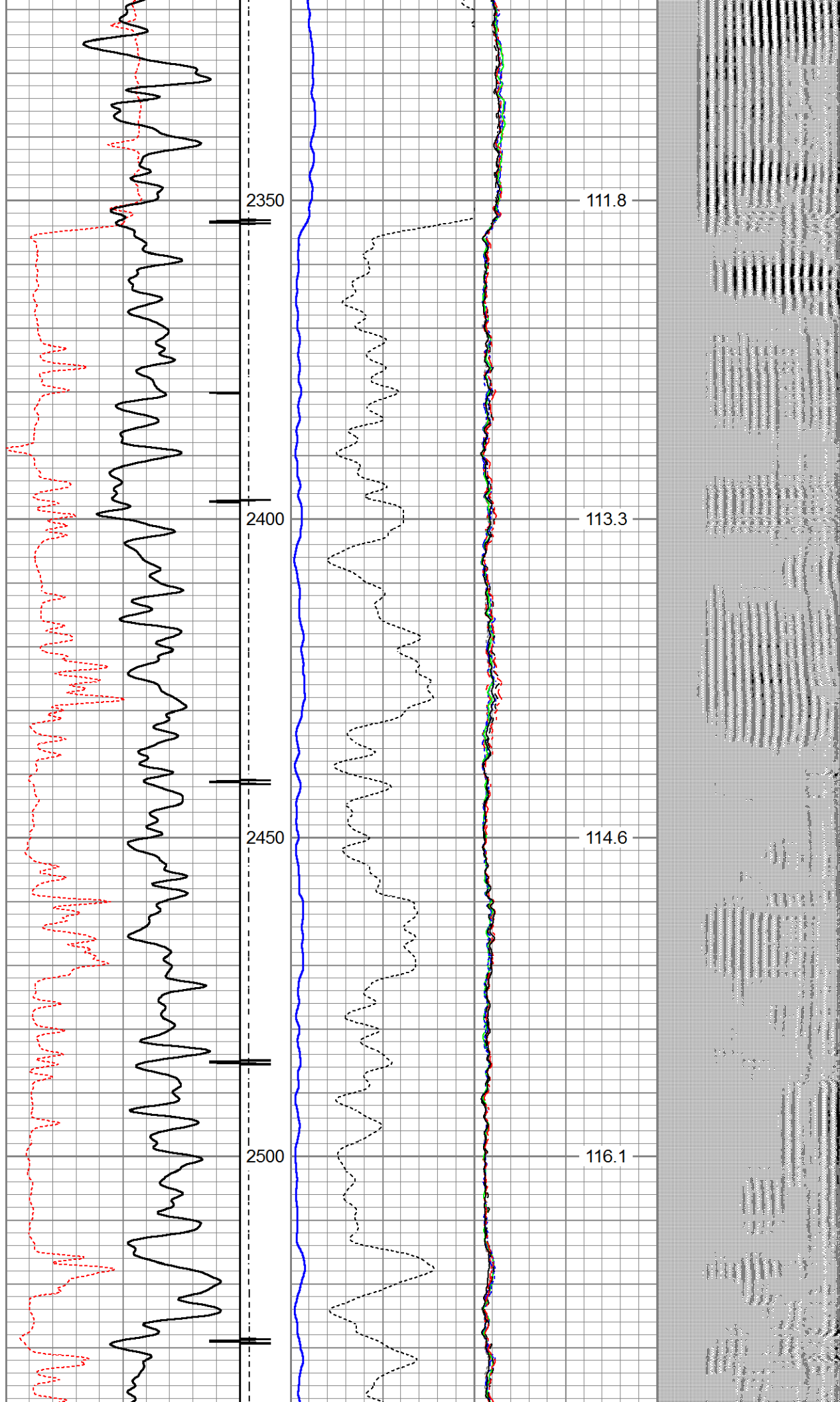


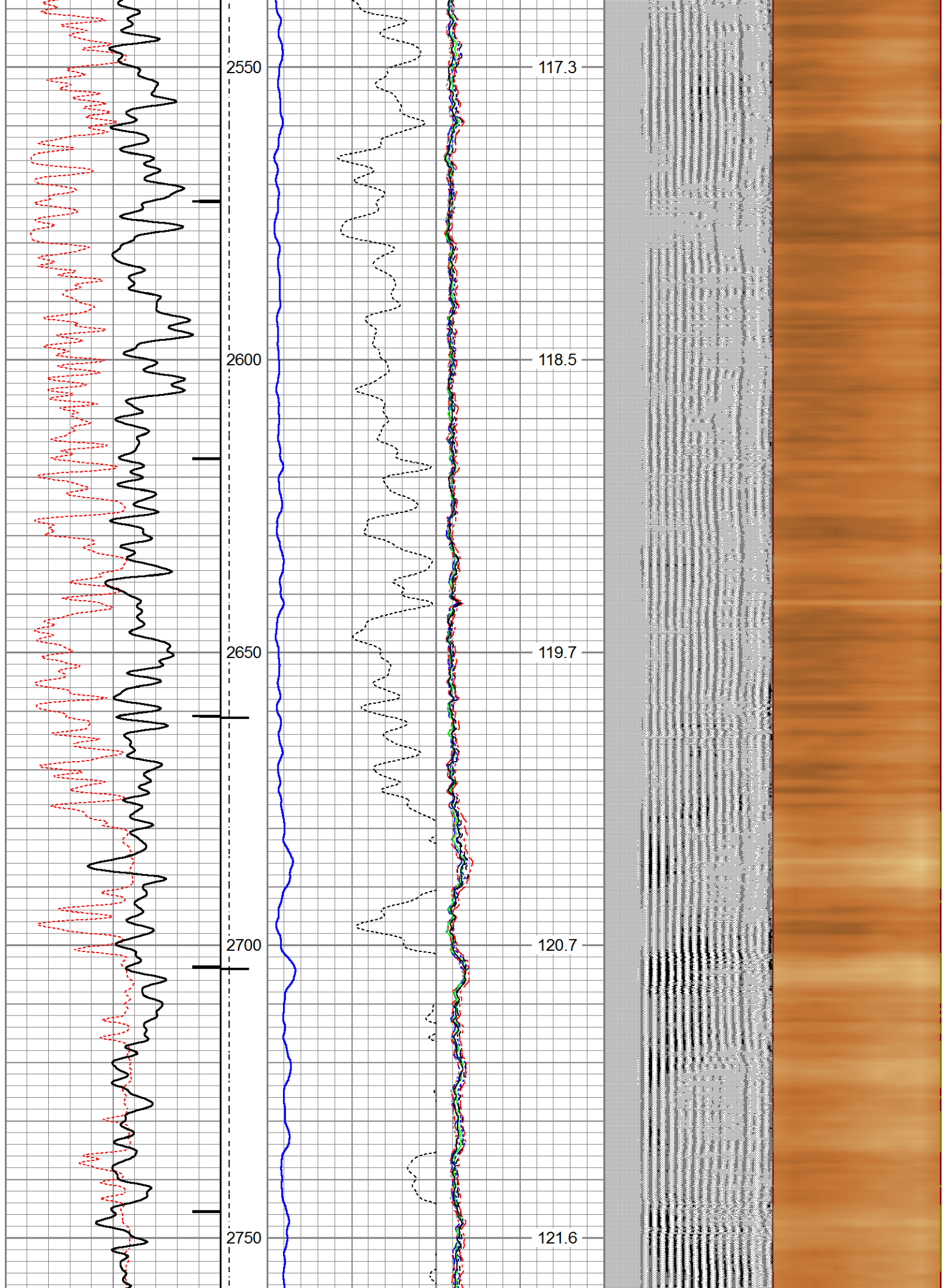




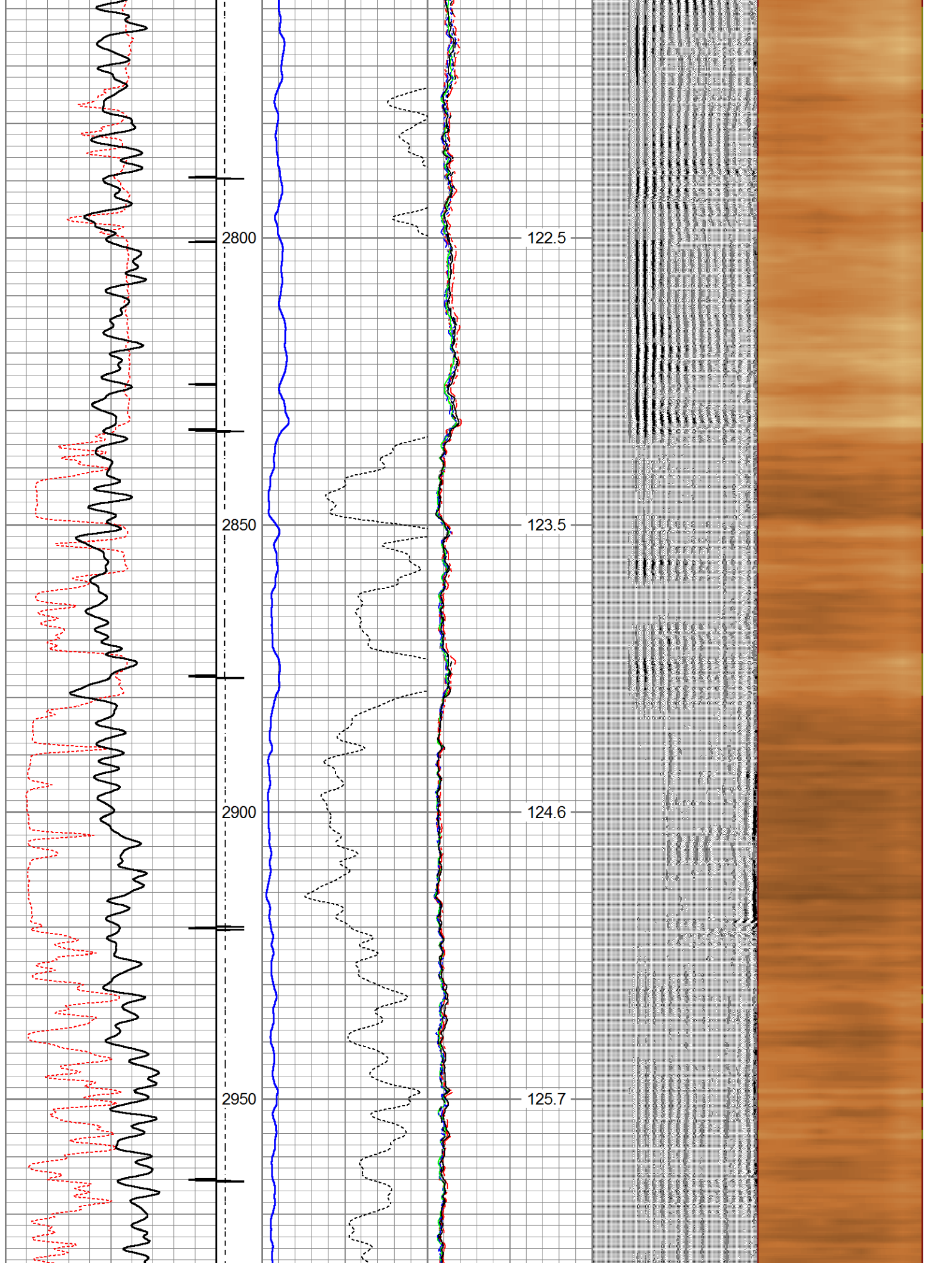


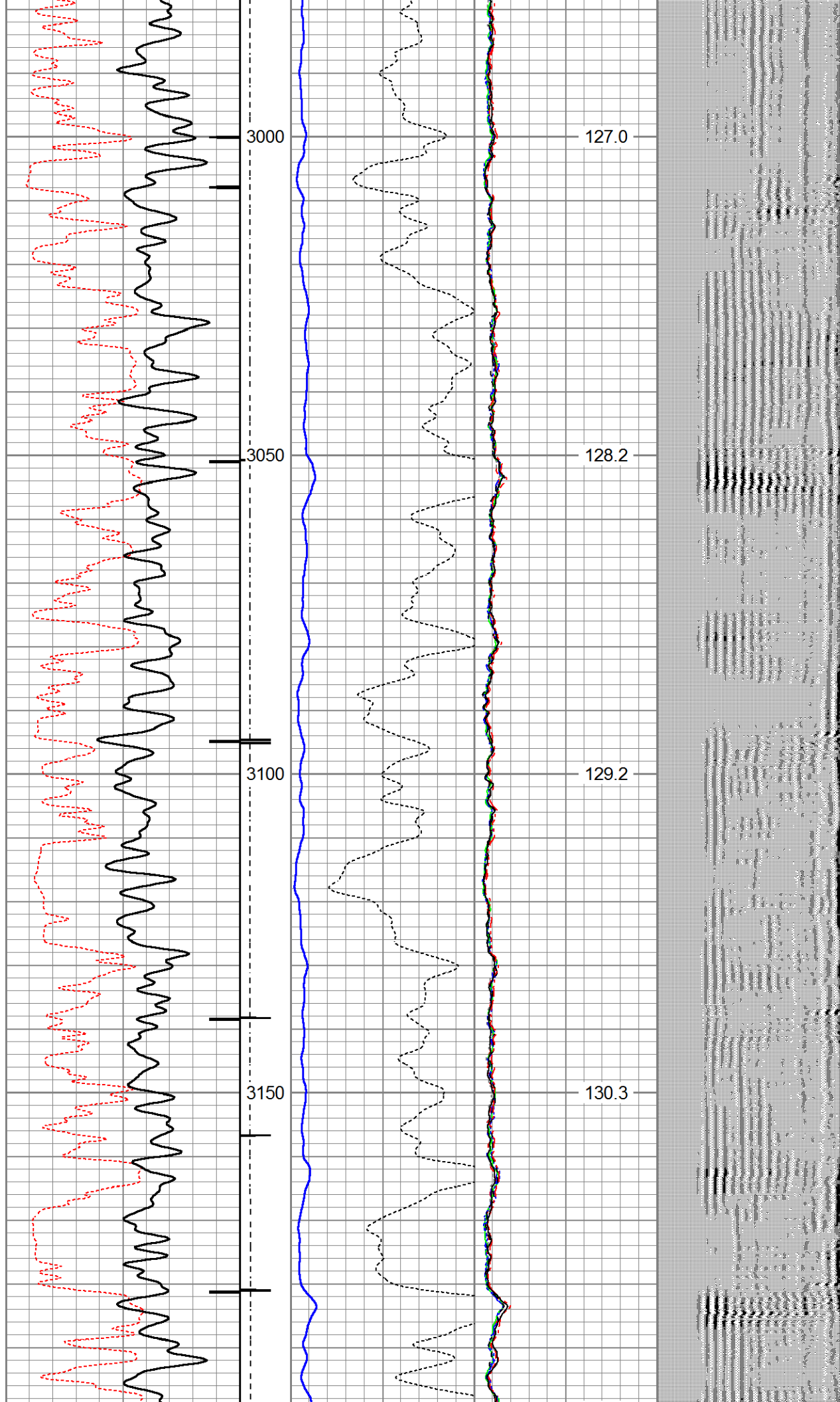




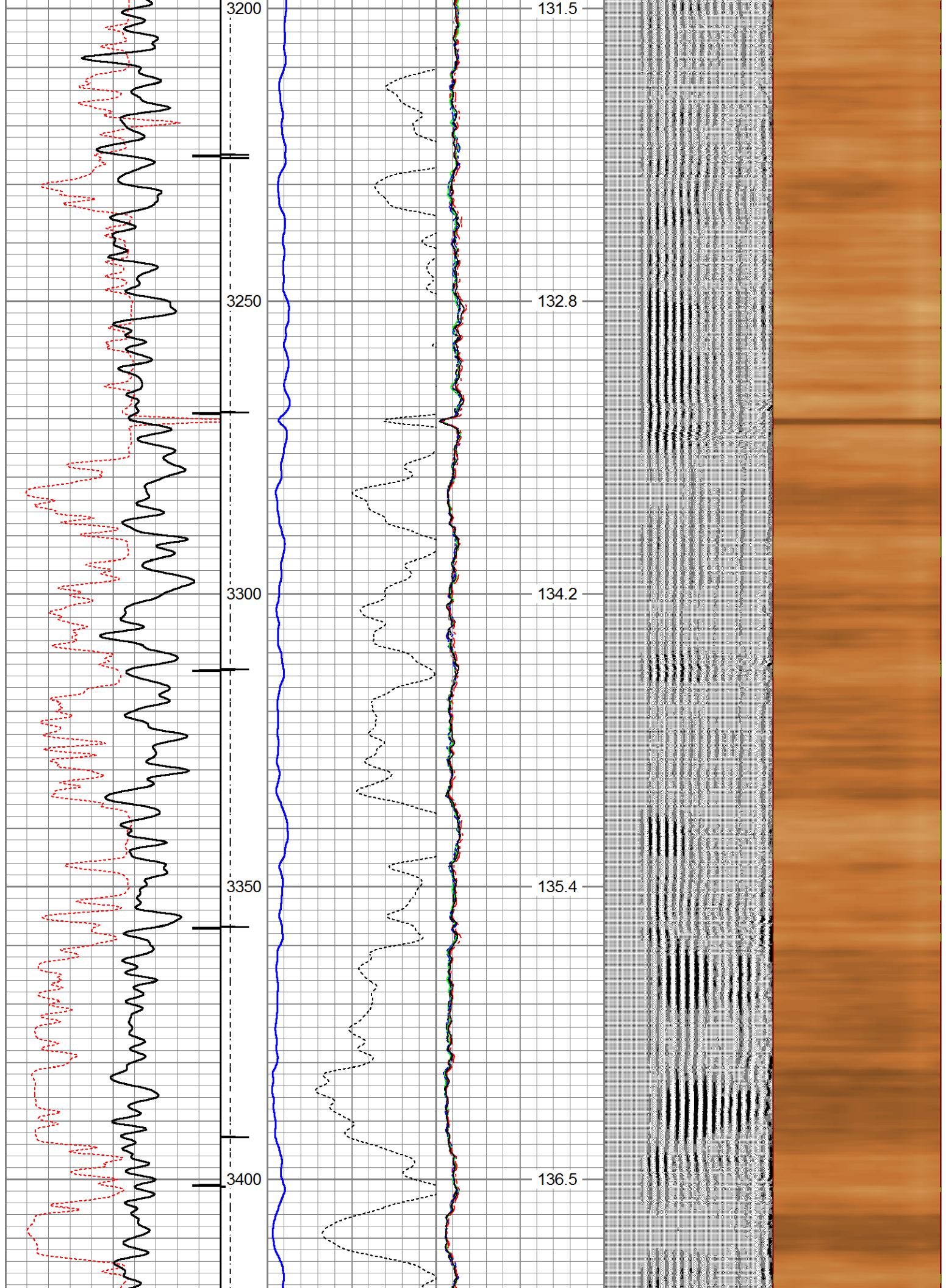


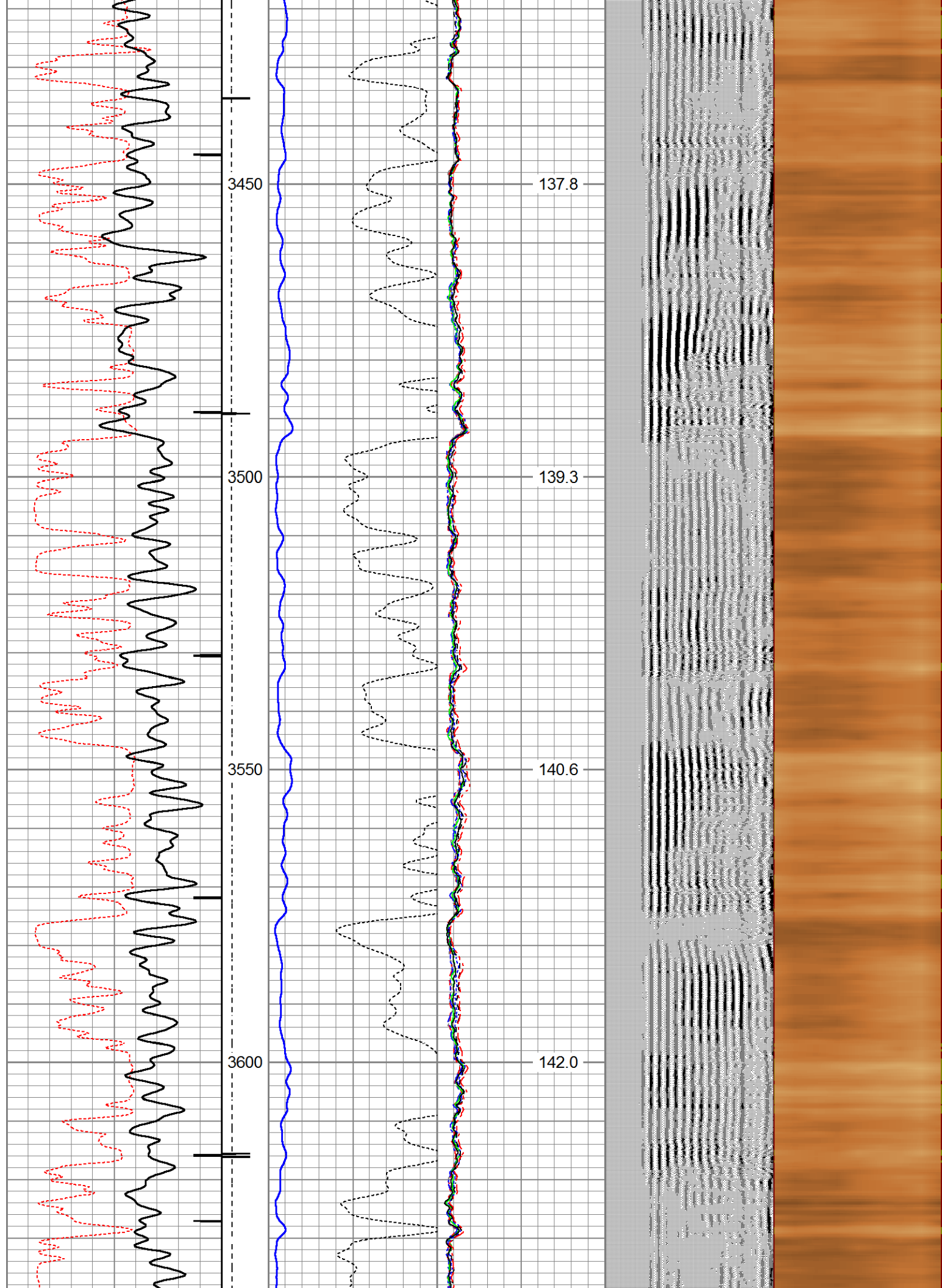




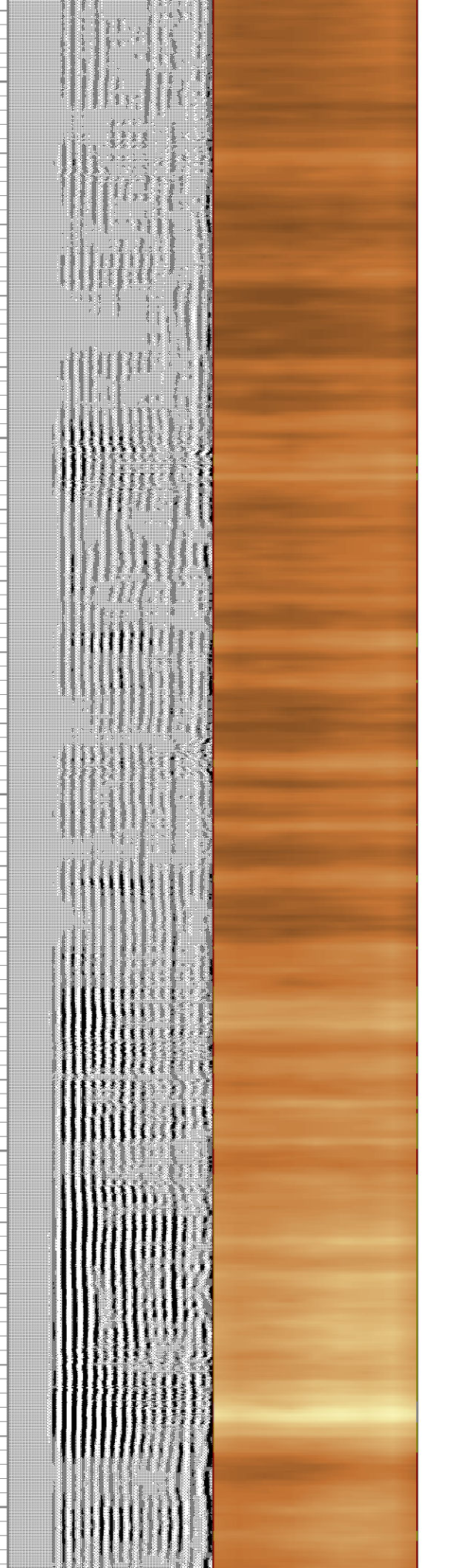
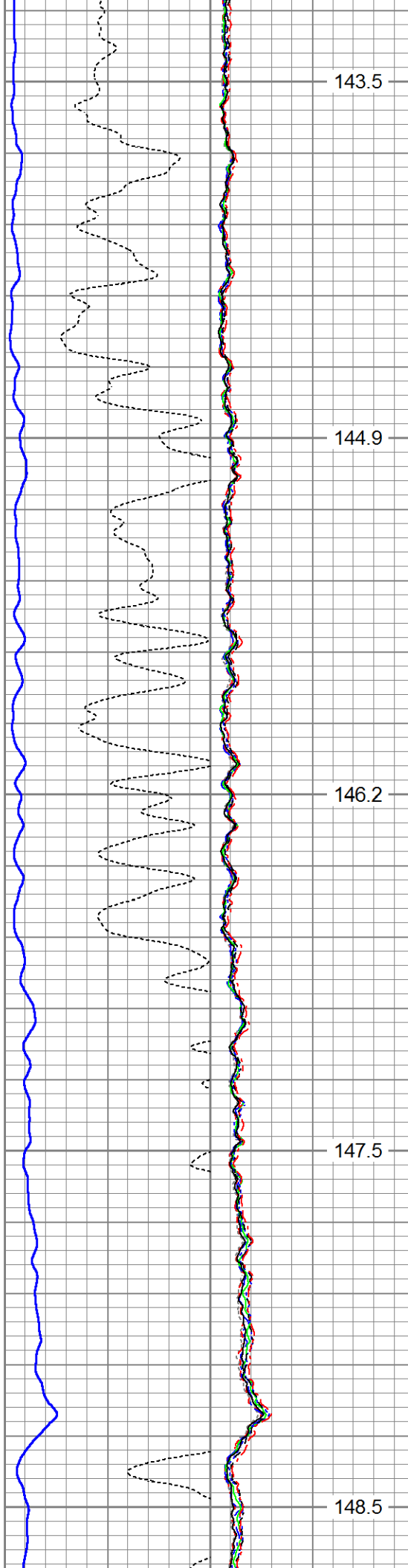
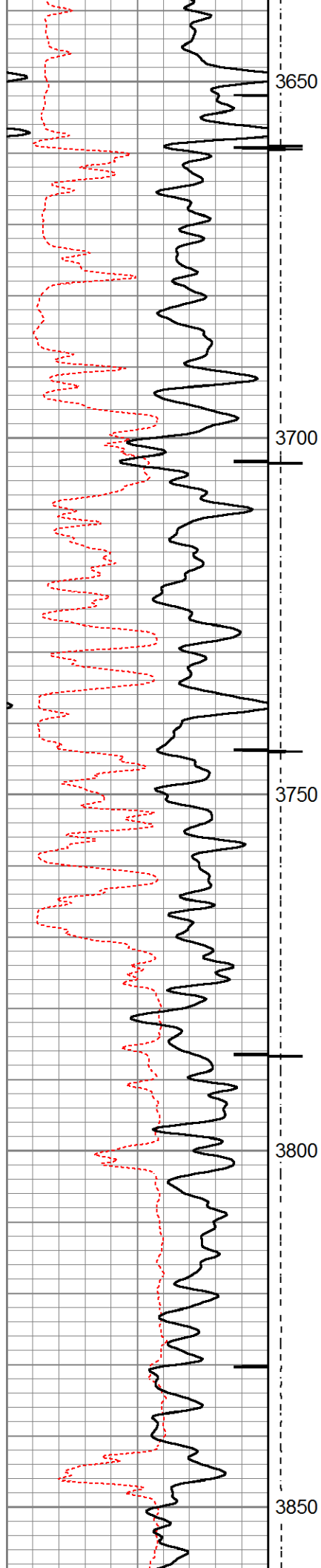


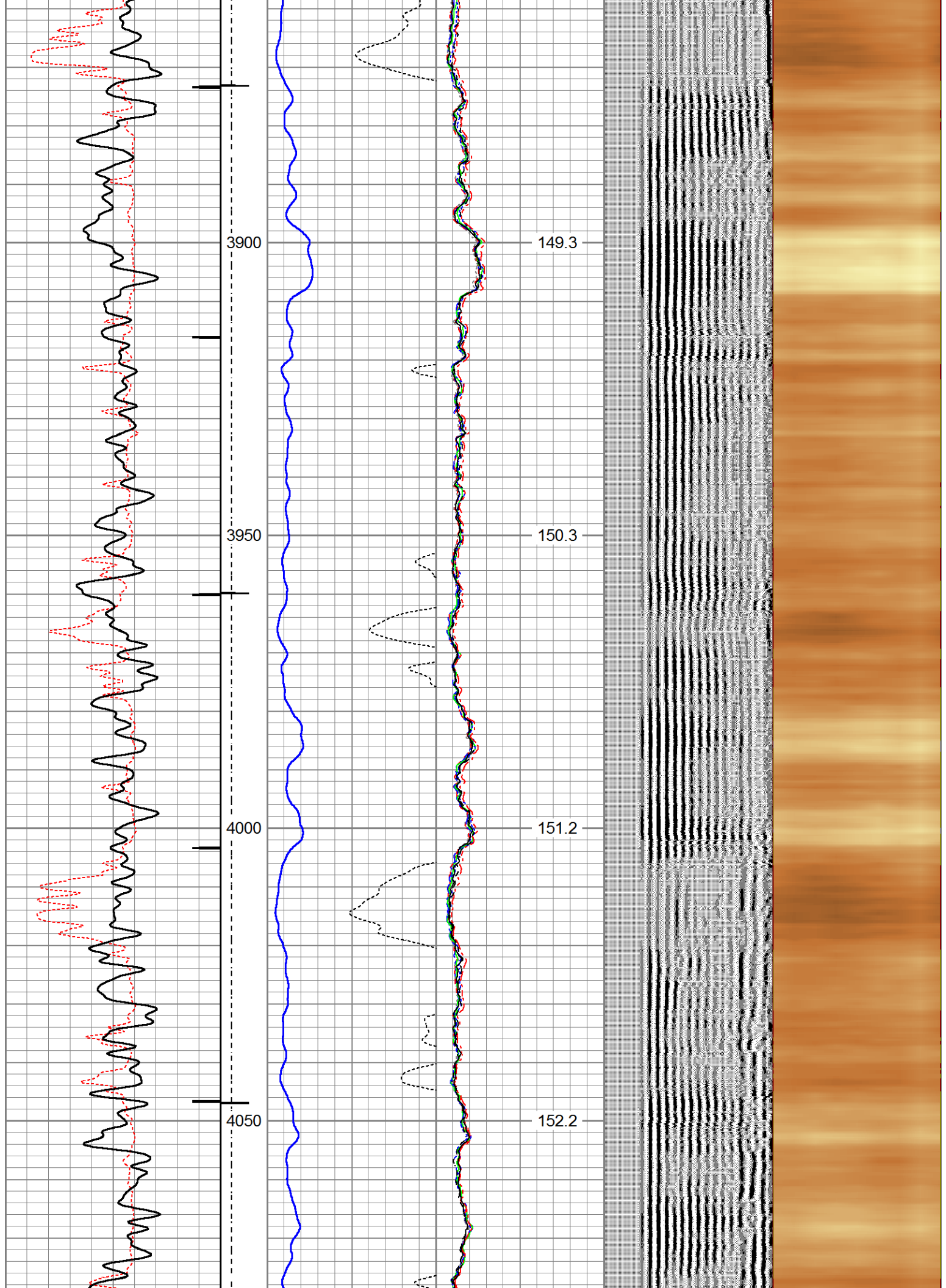




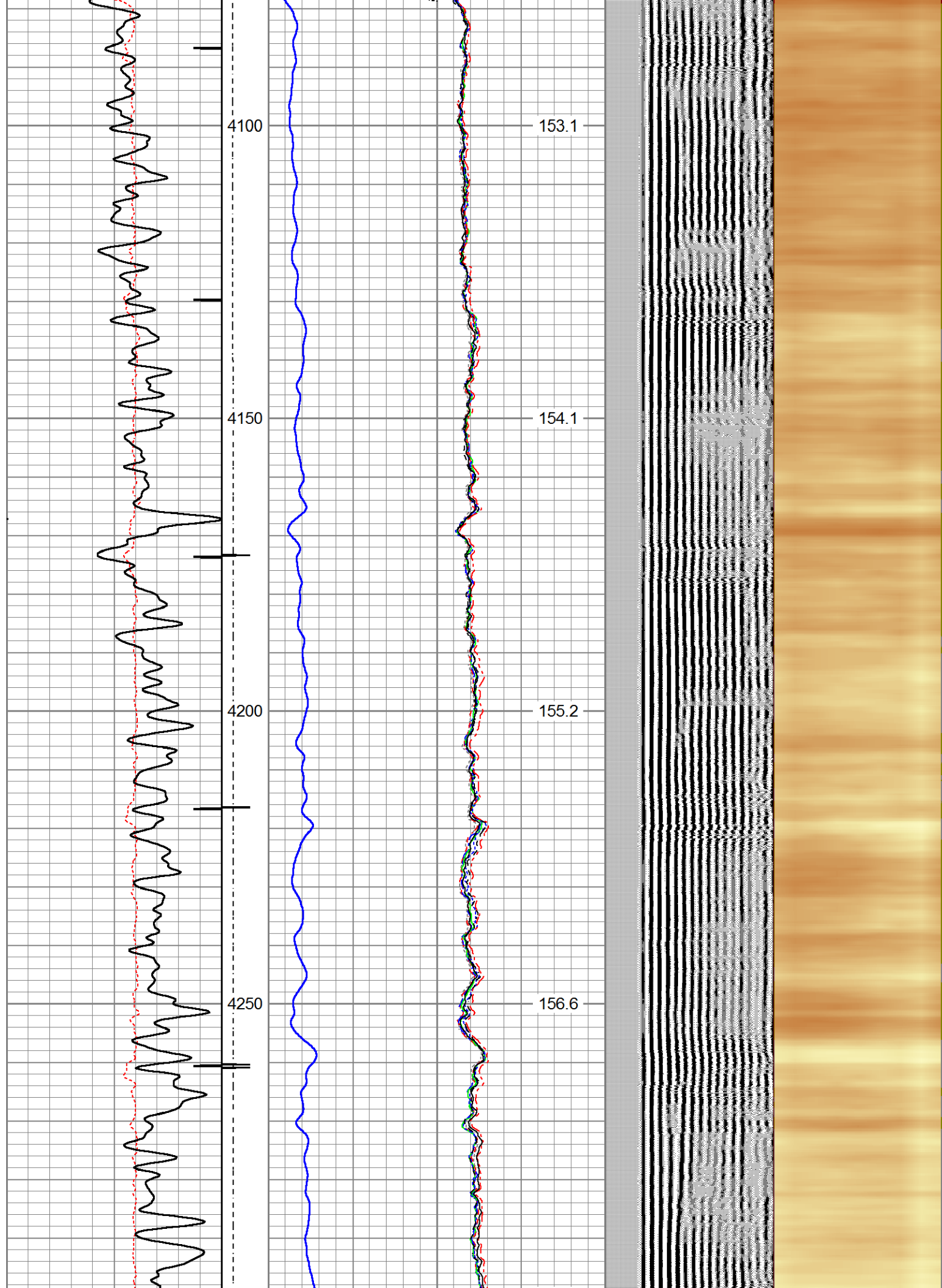


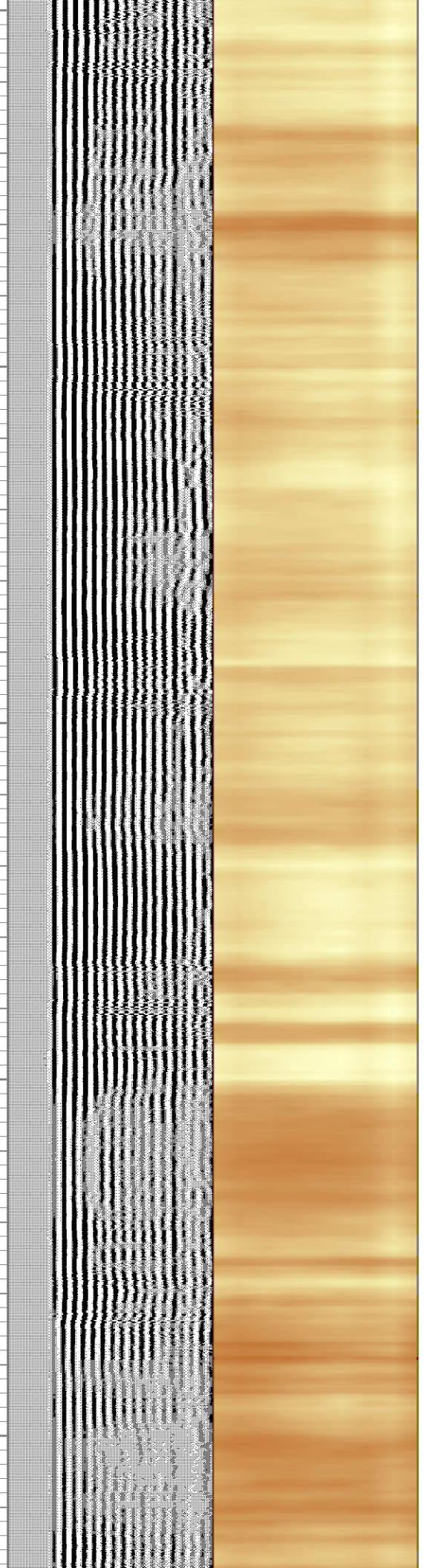
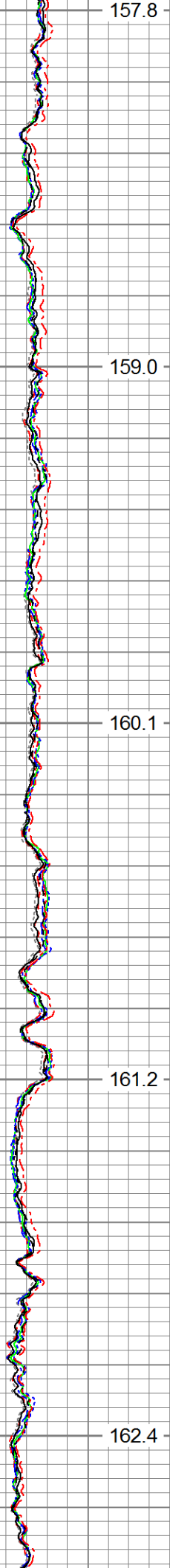
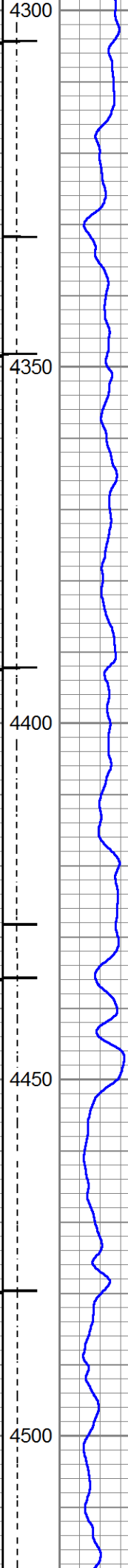
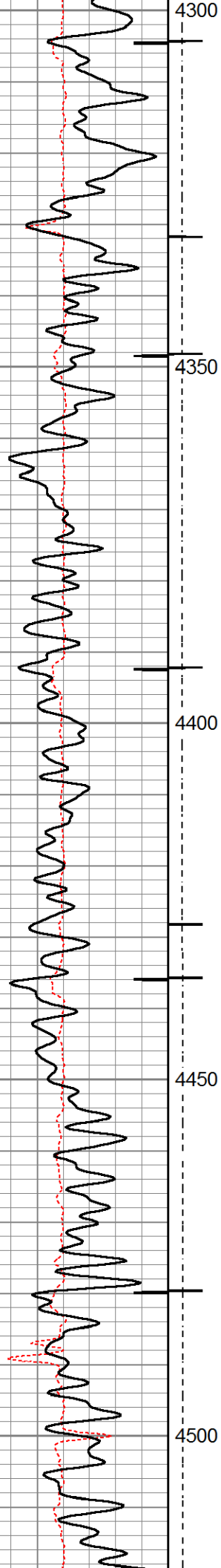




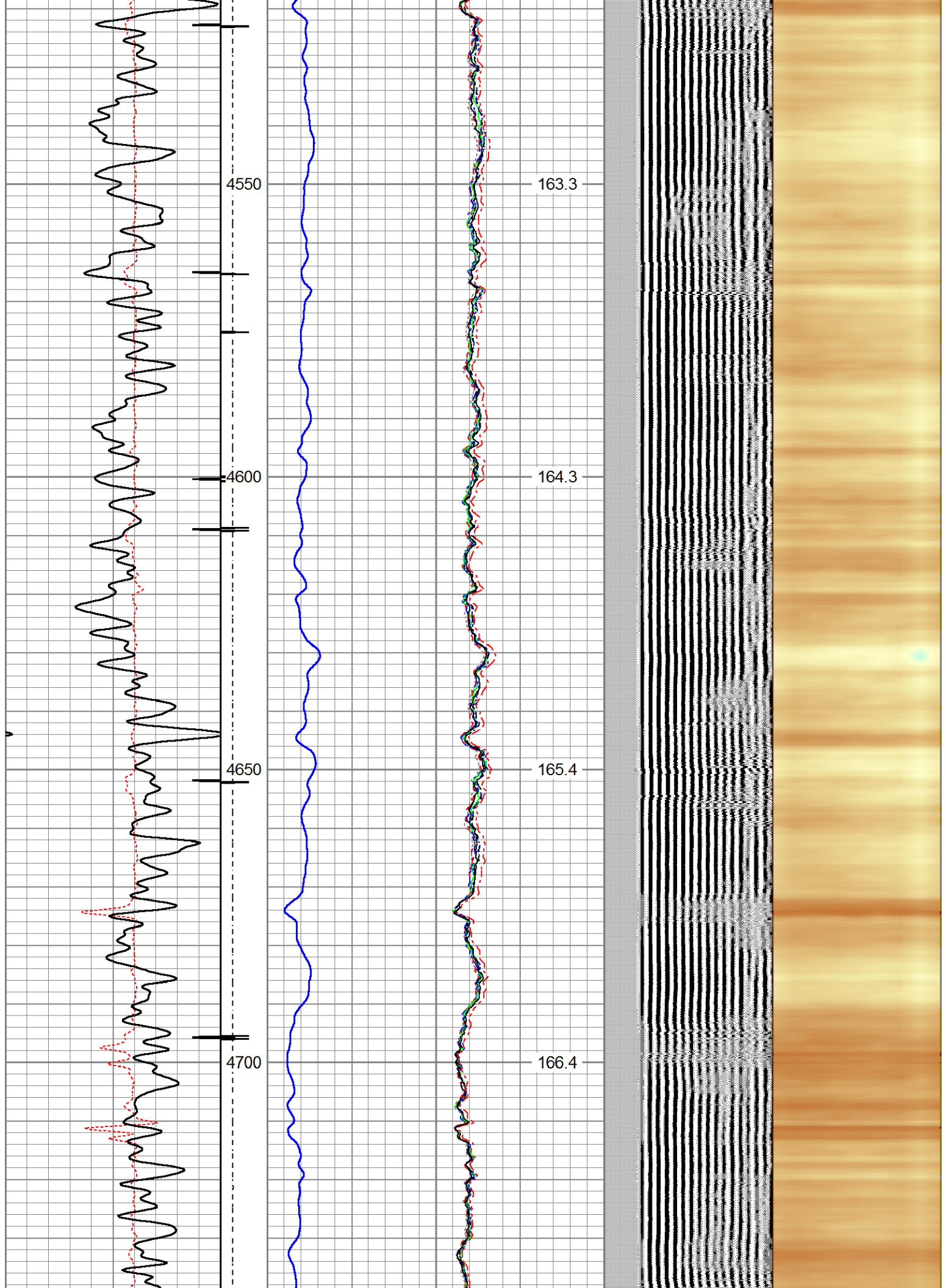


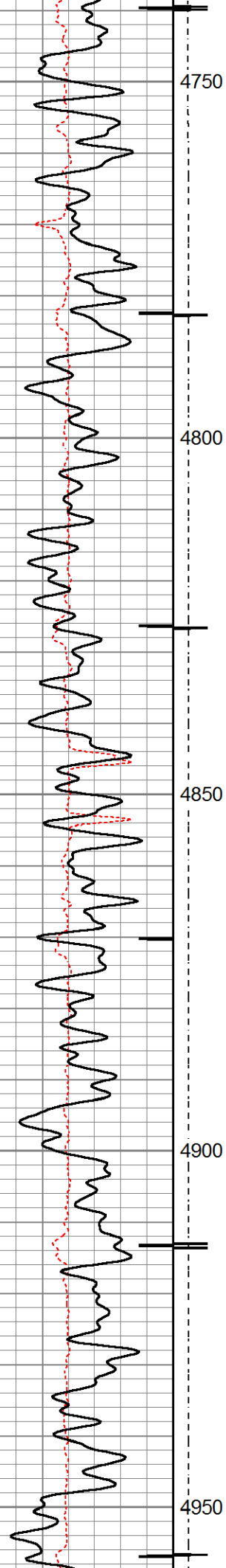












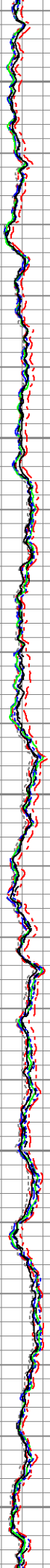
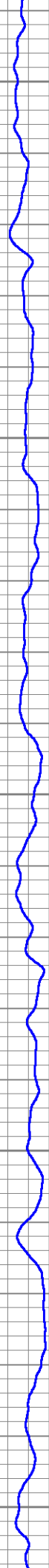
4750

4800

4850

4900

4950



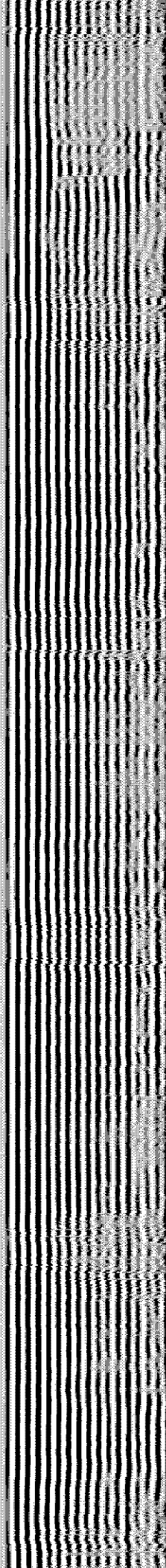
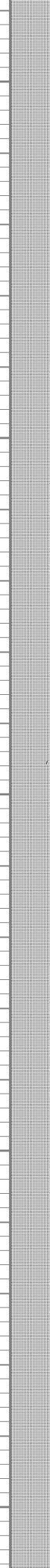
167.6

168.7

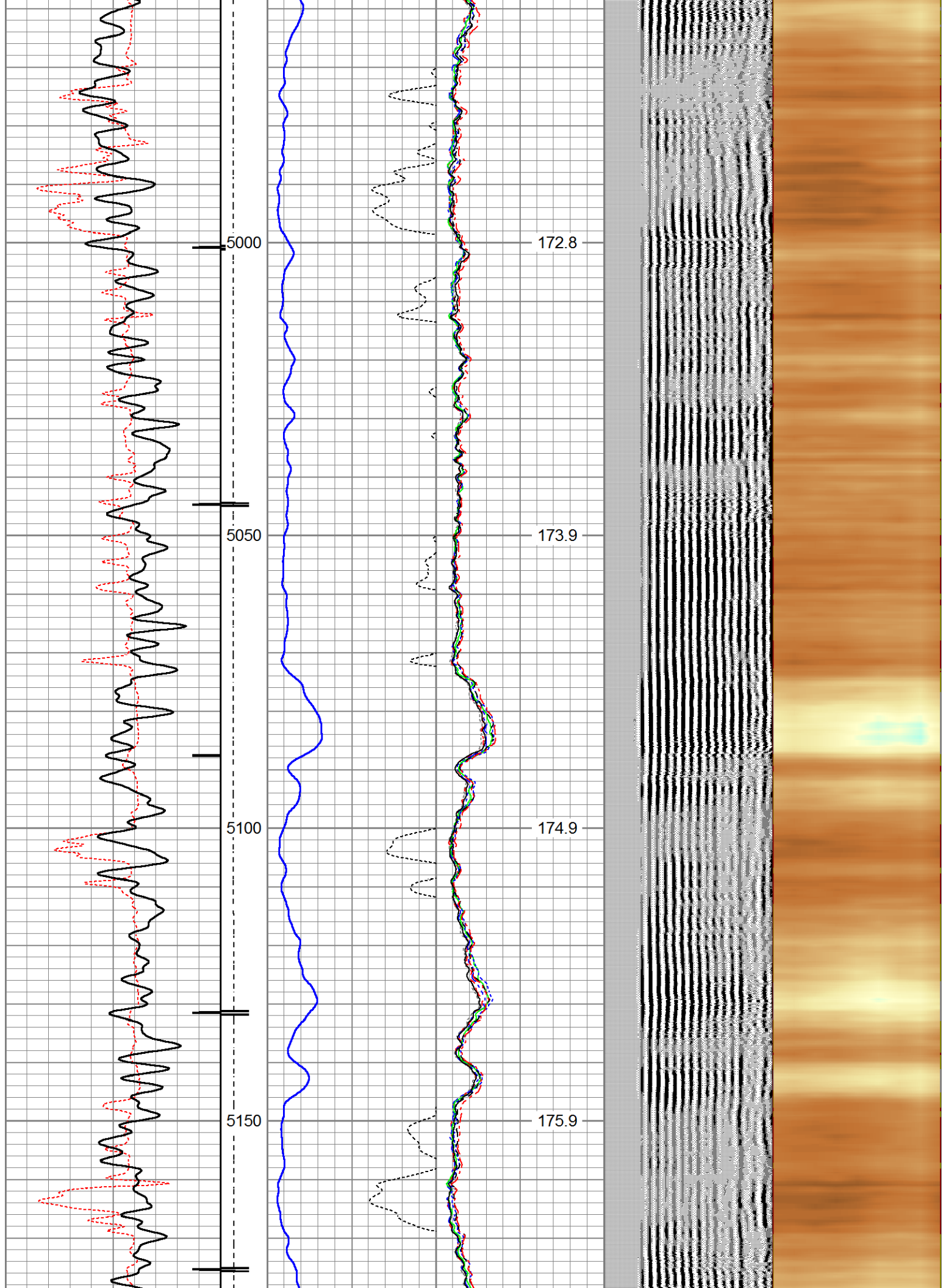
169.9

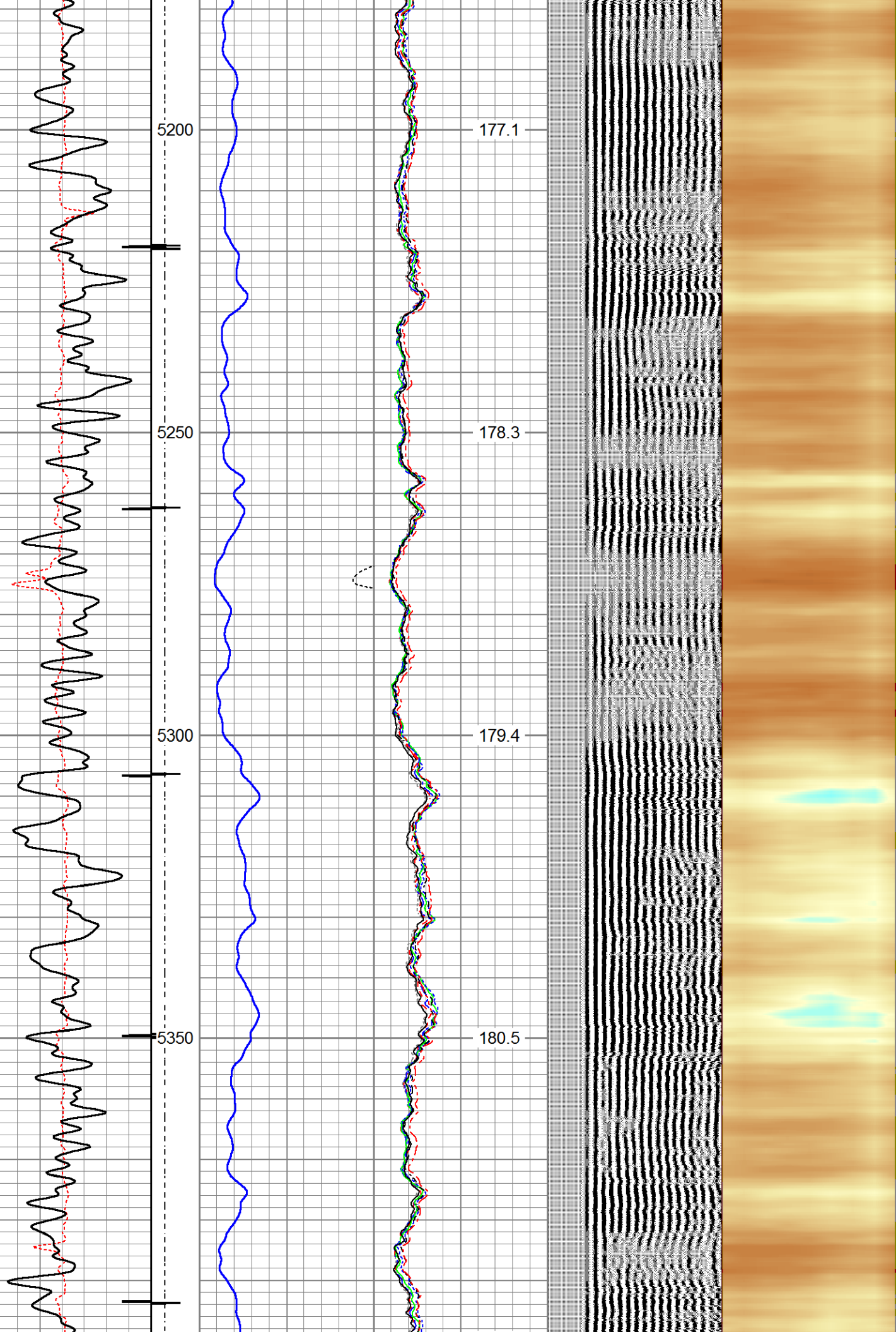
170.9

172.0

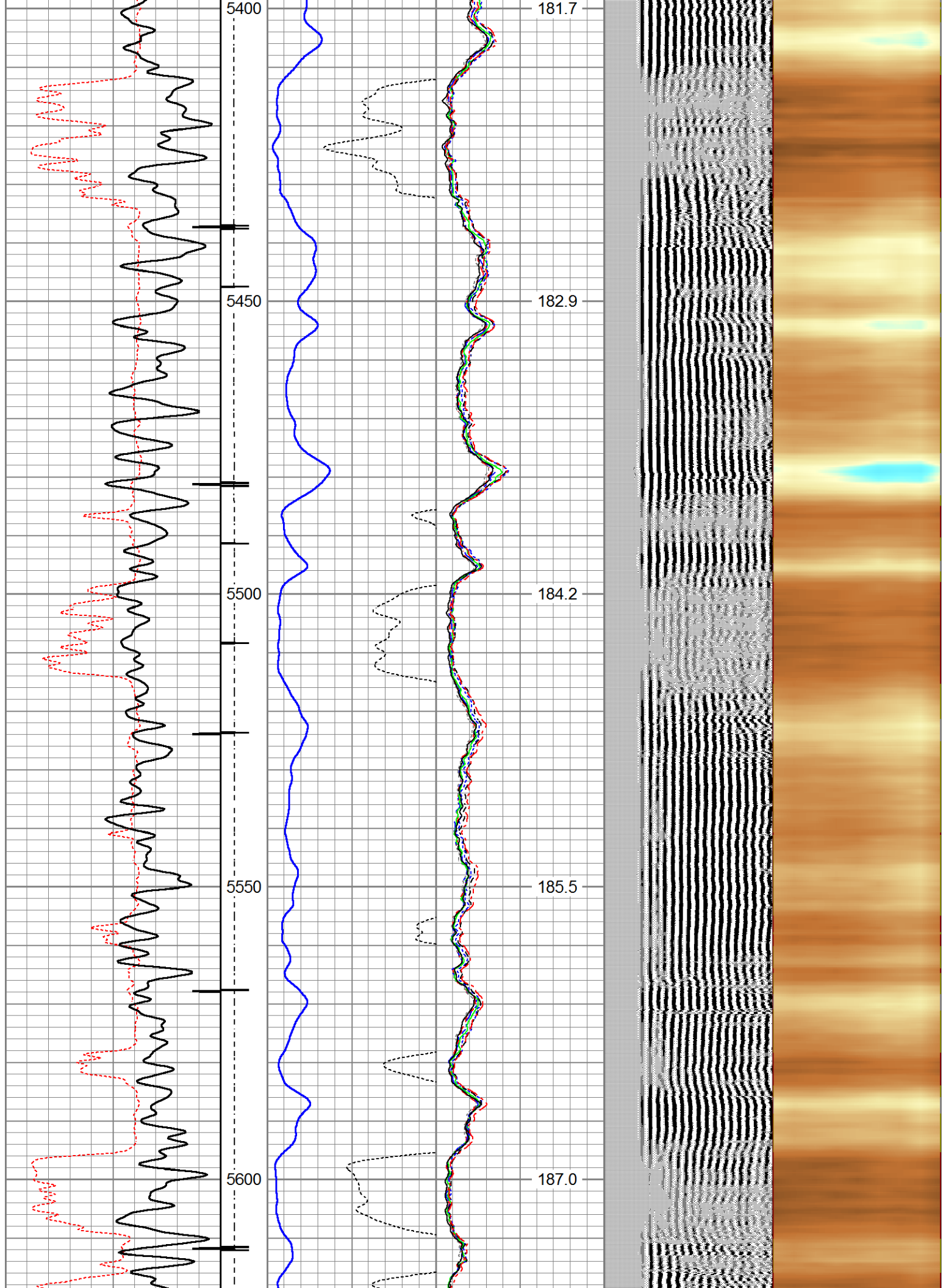


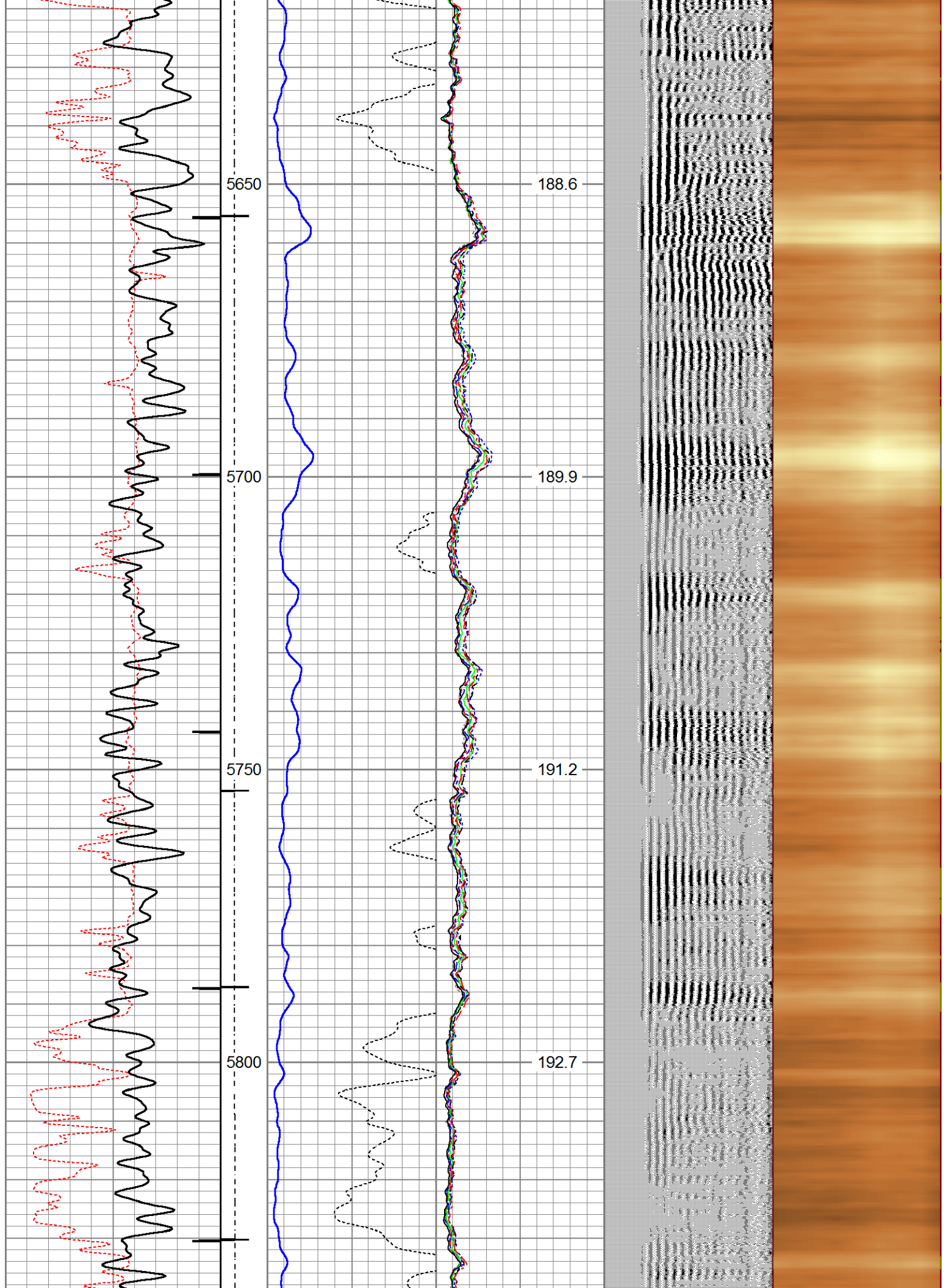




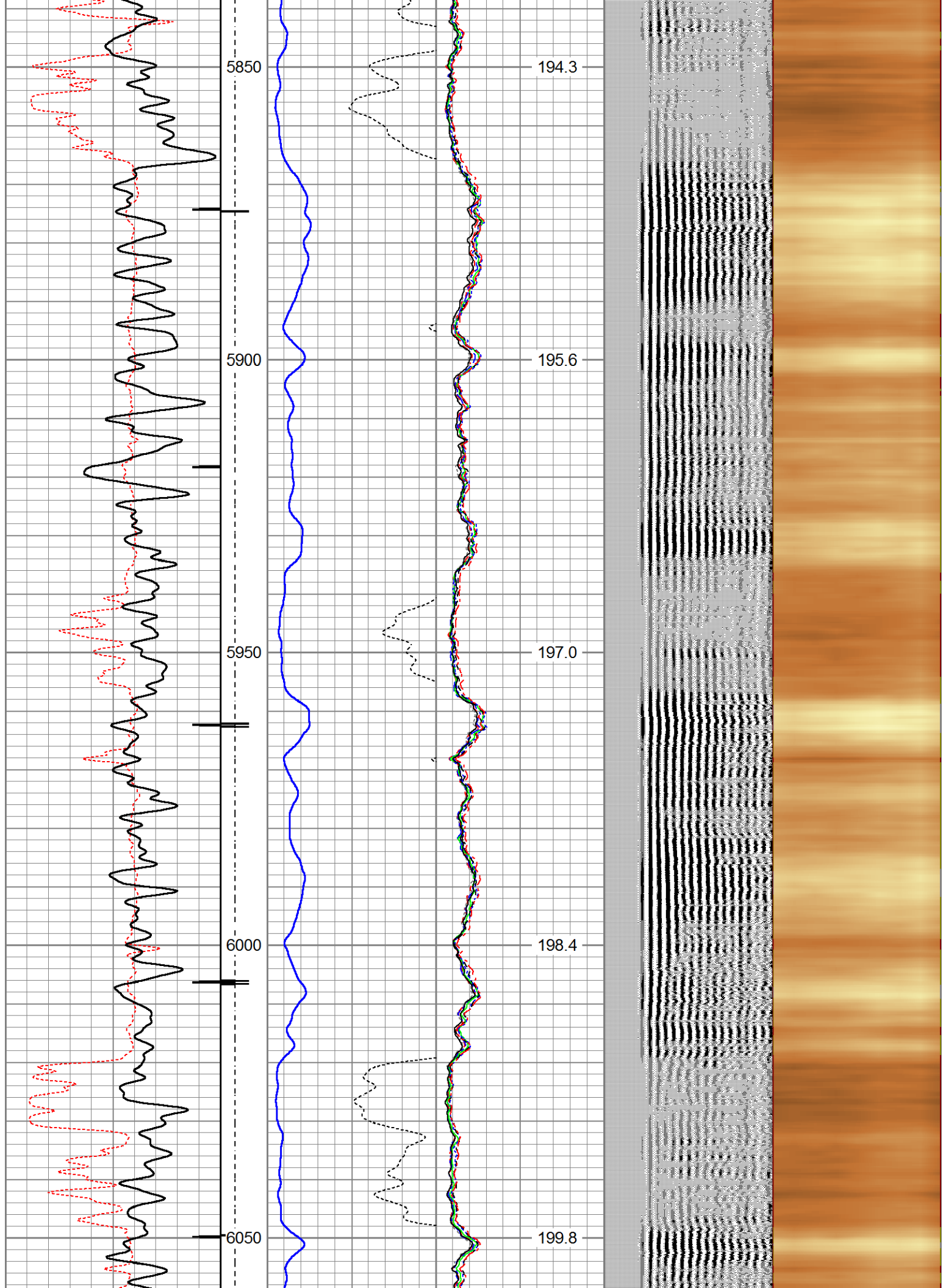


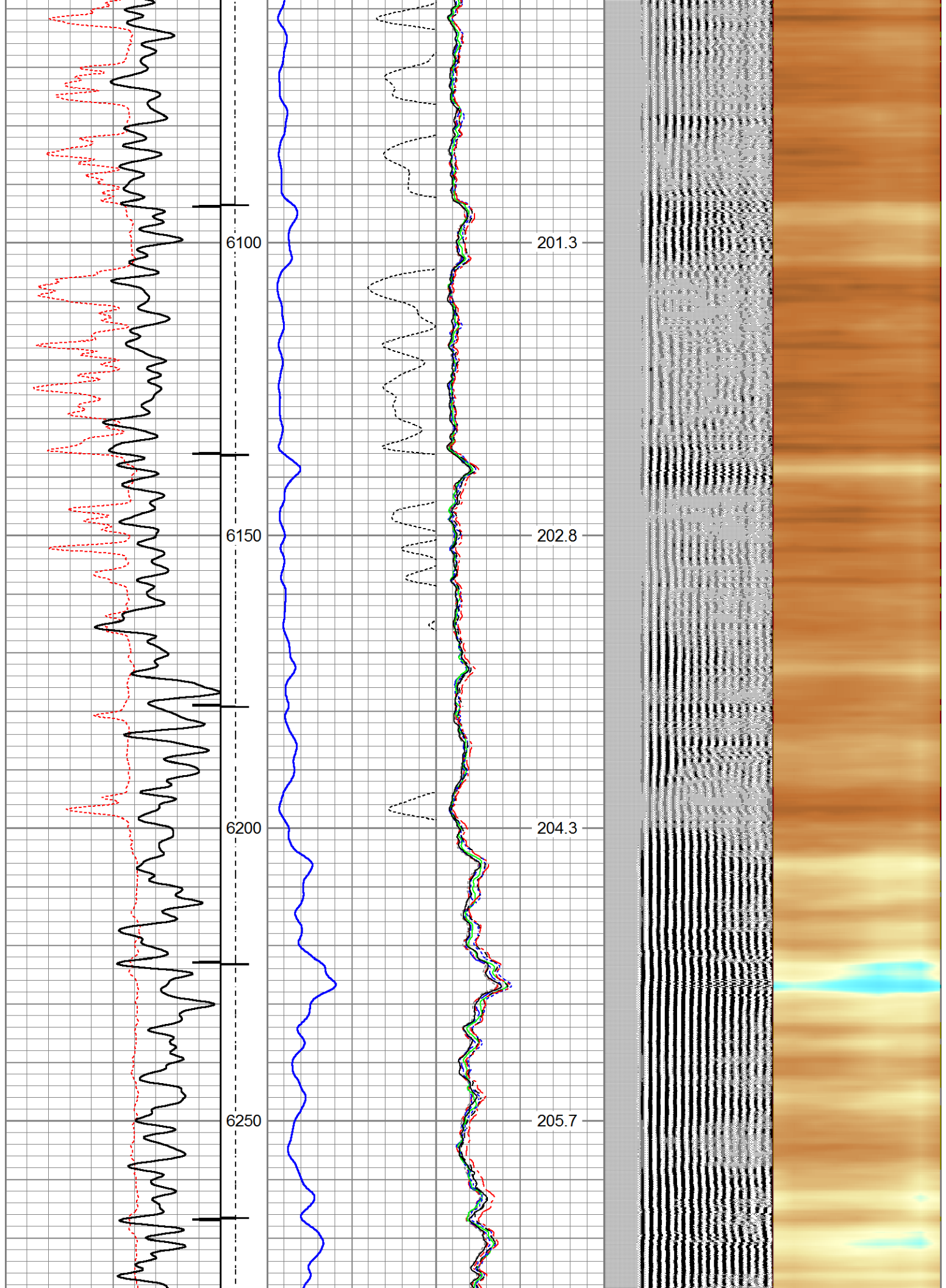




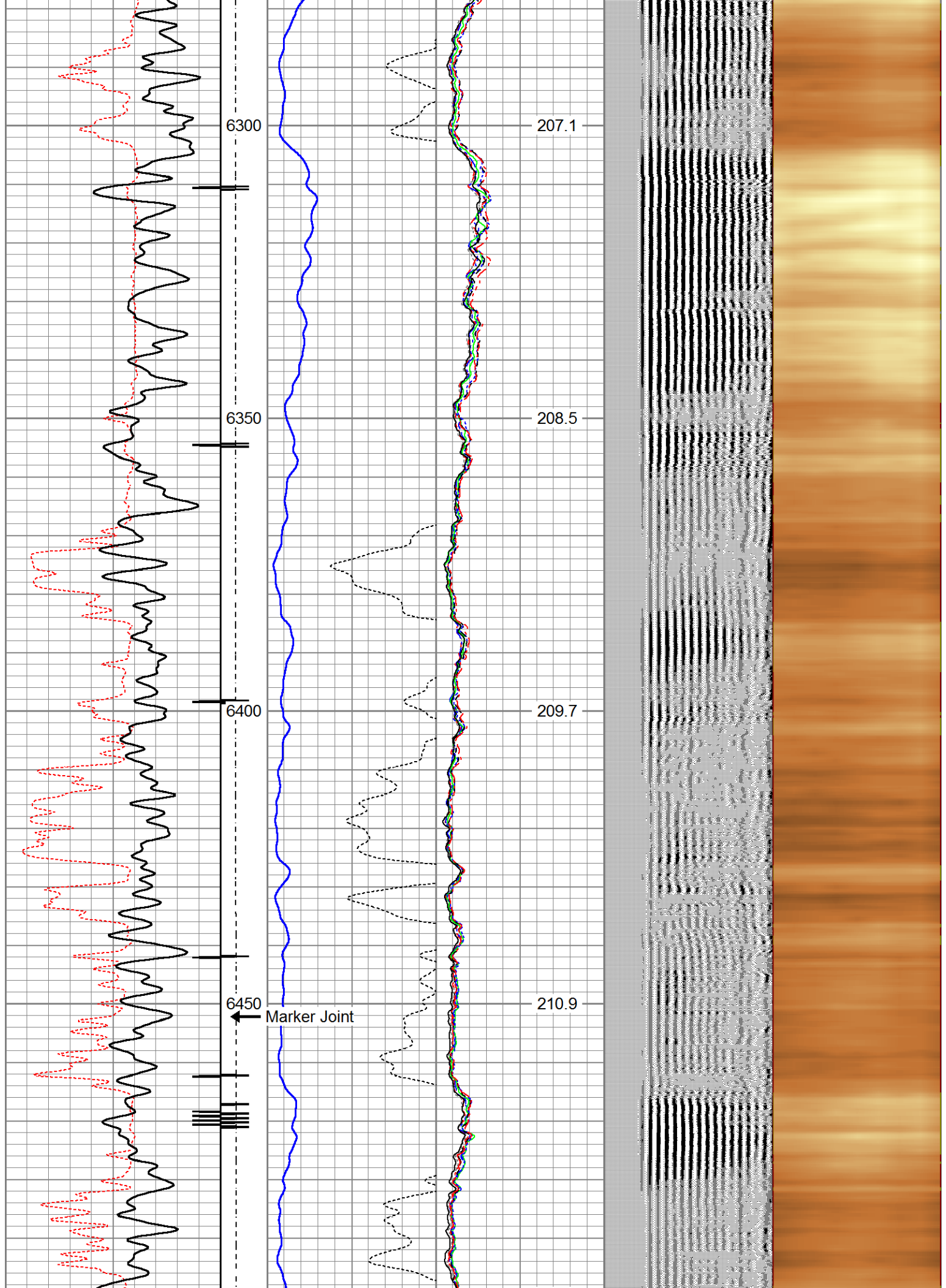


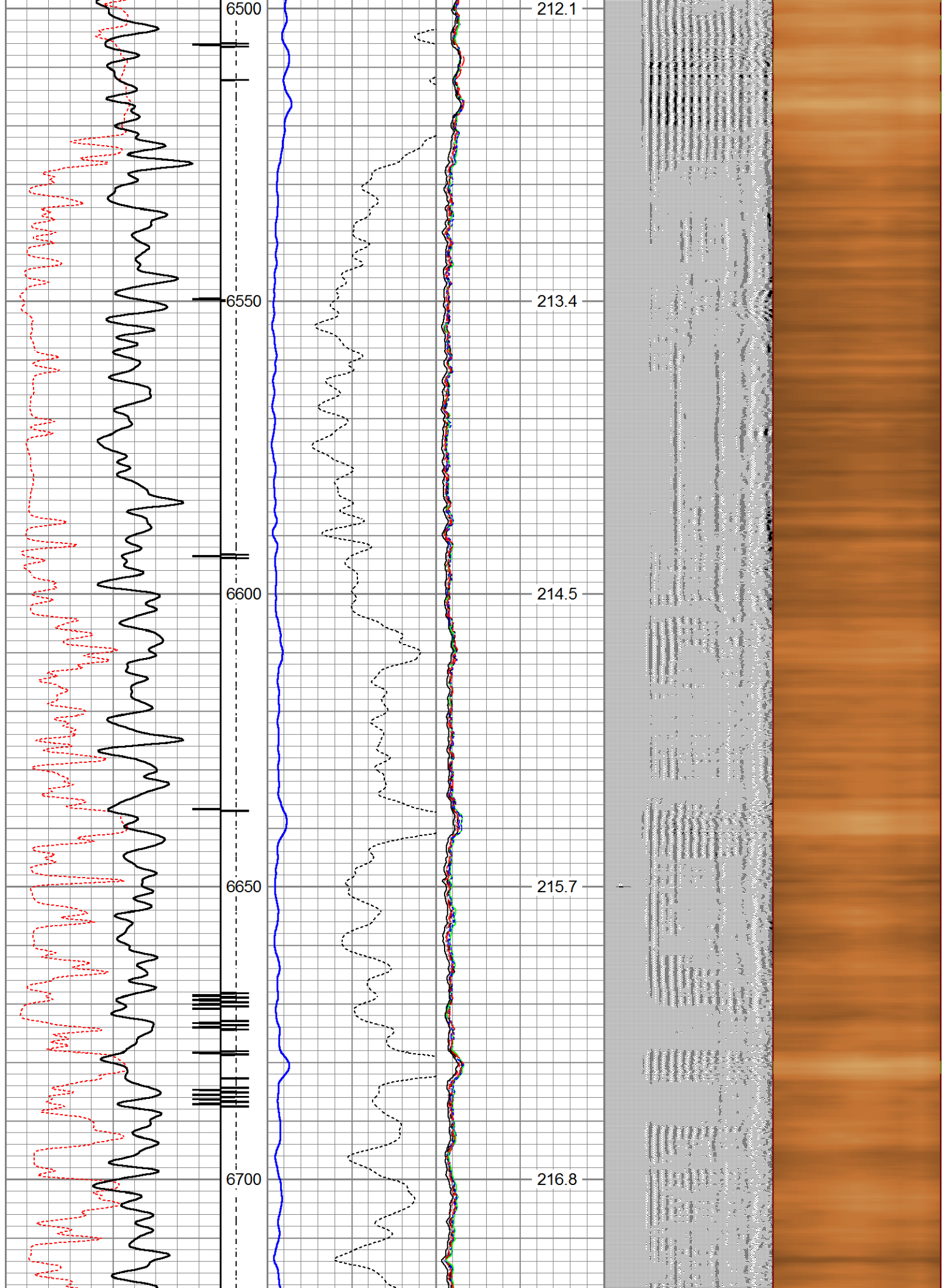











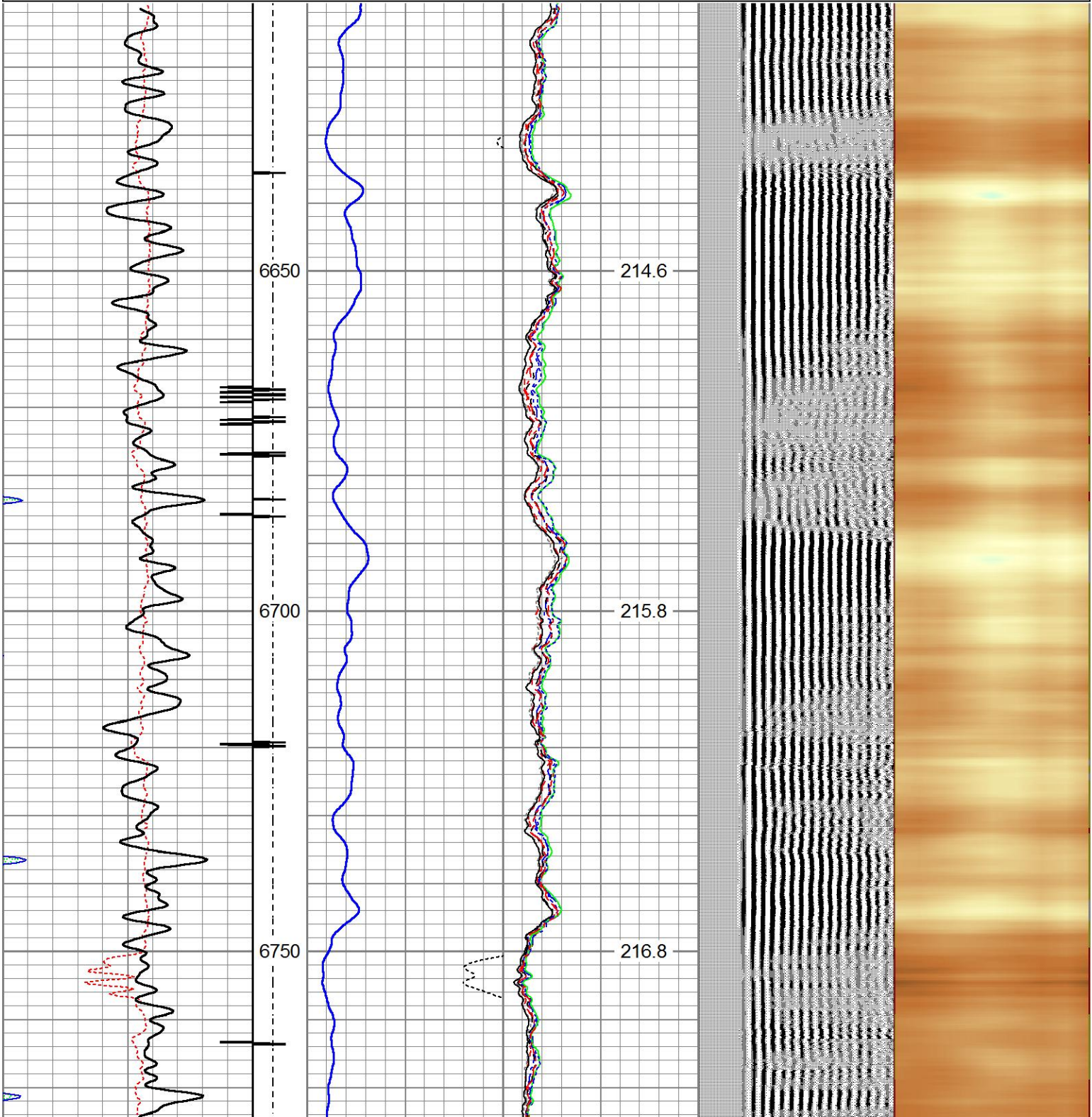




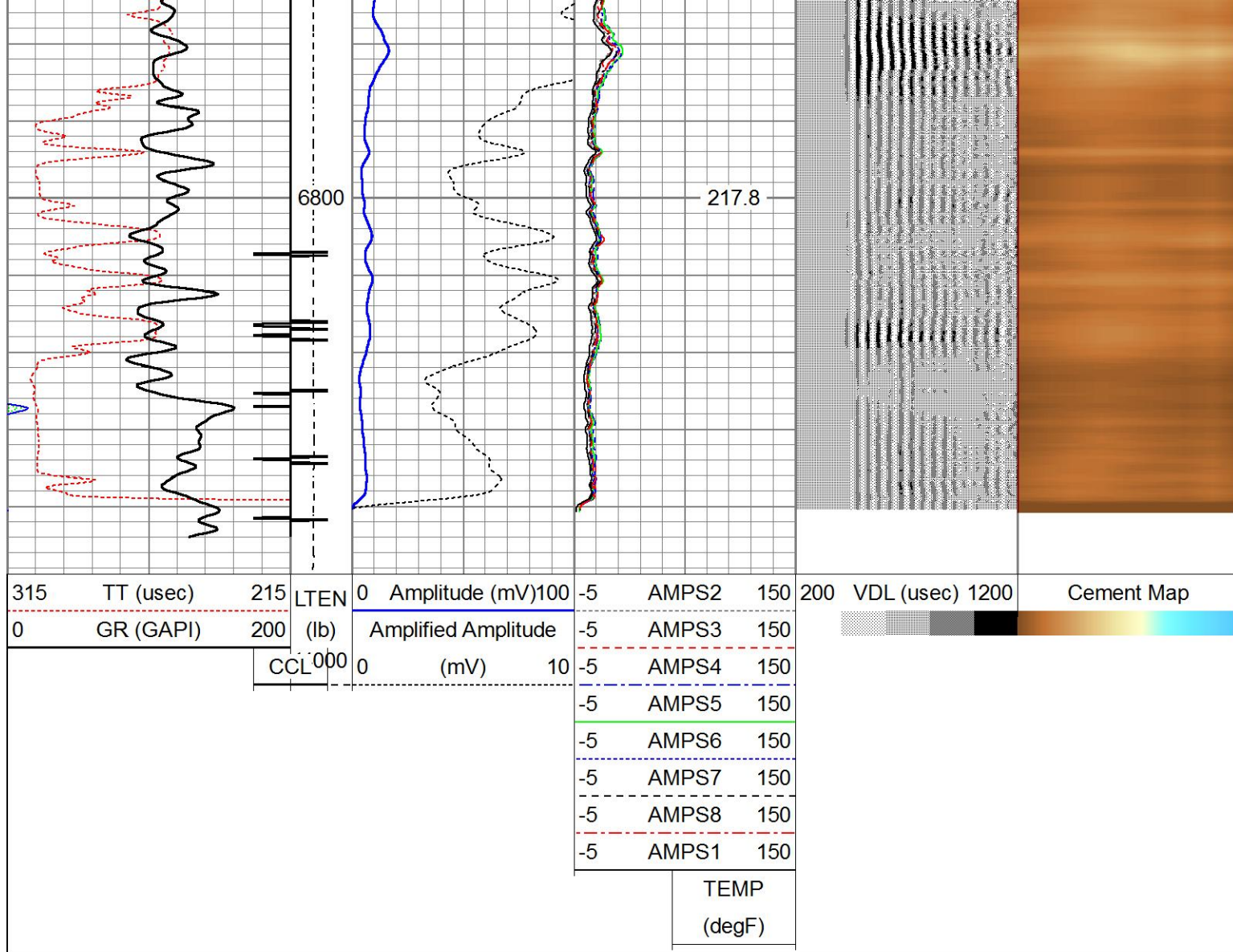




Dataset Creation		Sun Jan 20 07:20:00 2019									
Charted by		Depth in Feet scaled 1:240									
315	TT (usec)	215	LTEN	0	Amplitude (mV)100	-5	AMPS2	150	200	VDL (usec) 1200	Cement Map
0	GR (GAPI)	200	(lb)		Amplified Amplitude	-5	AMPS3	150			
		CCL000		0	(mV)	10	-5	AMPS4	150		
							-5	AMPS5	150		
							-5	AMPS6	150		
							-5	AMPS7	150		
							-5	AMPS8	150		
							-5	AMPS1	150		
							TEMP				
							(degF)				







<b>Company</b>	SRC ENERGY
<b>Well</b>	SANFORD 31N-30B-M
<b>Field</b>	WATTENBERG
<b>County</b>	WELD
<b>State</b>	COLORADO