



Radial Cement Bond
Gamma Ray
Casing Collar Log

COMPANY: Kerr McGee Oil & Gas Onshore LP.

WELL: Cook 1C-16HZ

FIELD: Wattenberg

COUNTY: Weld STATE: Colorado

Location: API #: 05-123-42240

SHL: 530 FSL 769 FEL SESE

BHL: Latitude: 40.132876

Section: 16 Township: 2N Range: 65W Longitude: -104.662336

Permanent Datum: G.L. Elevation: 4878' Other Services

Drill Measured From: K.B.

Log Measured From: K.B. = 25 above Permanent Datum

API #: 05-123-42240

Company: Kerr McGee Oil & Gas Onshore LP.

Well: Cook 1C-16HZ

Field: Wattenberg

County: Weld State: Colorado

Date: 08-03-2016

Run Number: One

Depth Driller: 12698 FT

Depth Logger: 7690 FT

Bottom Logged Interval: 7650 FT

Top Logged Interval: 200 FT

Fluid Type: Water

Fluid Top: Surface

Max. Rec. Temperature: 260° F

Estimated Cement Top: Surface

Time on Bottom: 10:25

Unit Number: HD-264

Location: Grand Junction

Recorded By: A. Ellsworth

Witnessed By: K. Wieser

Borehole Record

Run Number	Bit Size	Top	Bottom	Size	Weight	Top	Bottom
One	13.5"	0 FT	1925 FT				
Two	8.5"	1925 FT	12698 FT				

Casing Record

String	Size	Weight	Top	Bottom
Surface	9.625"	36 lbs/ft	Surface	1925 FT
Production	5.5"	17 lbs/ft	Surface	12686 FT

API #: 05-123-42240	Kerr McGee Oil & Gas Onshore LP.	Cook 1C-16HZ
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EQUIPMENT DATA

Run	Trip	Instrument	Series No.	Serial No.	Distance to Reference
		Inline Centralizer	029	0595t	4.810 ft
		RSBT	010	1333A	7.697 ft
		Inline Centralizer		0595b	17.480 ft
		Knuckle Joint		0814	20.367 ft
		PDN	029	1471A	23.222 ft

REMARKS

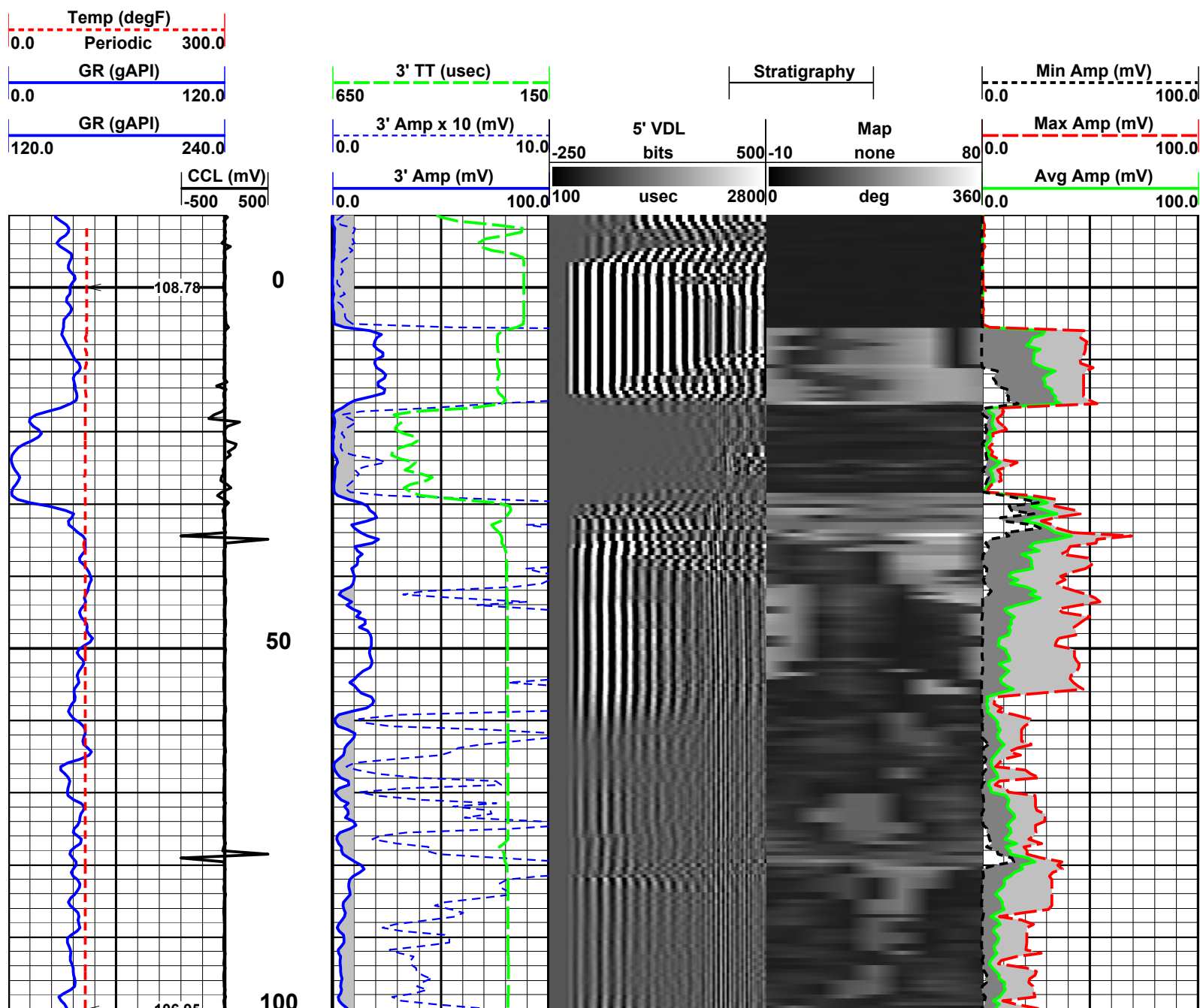
Log ran as per customer request
Depth referenced to marker joint @ 6634 FT
Adjusted log +5 FT to correlate with marker joint
Log ran from 7650 FT to Surface
Recorded with 2800 PSI surface induced pressure
Logging tools were clean and free of debris upon completion of operations

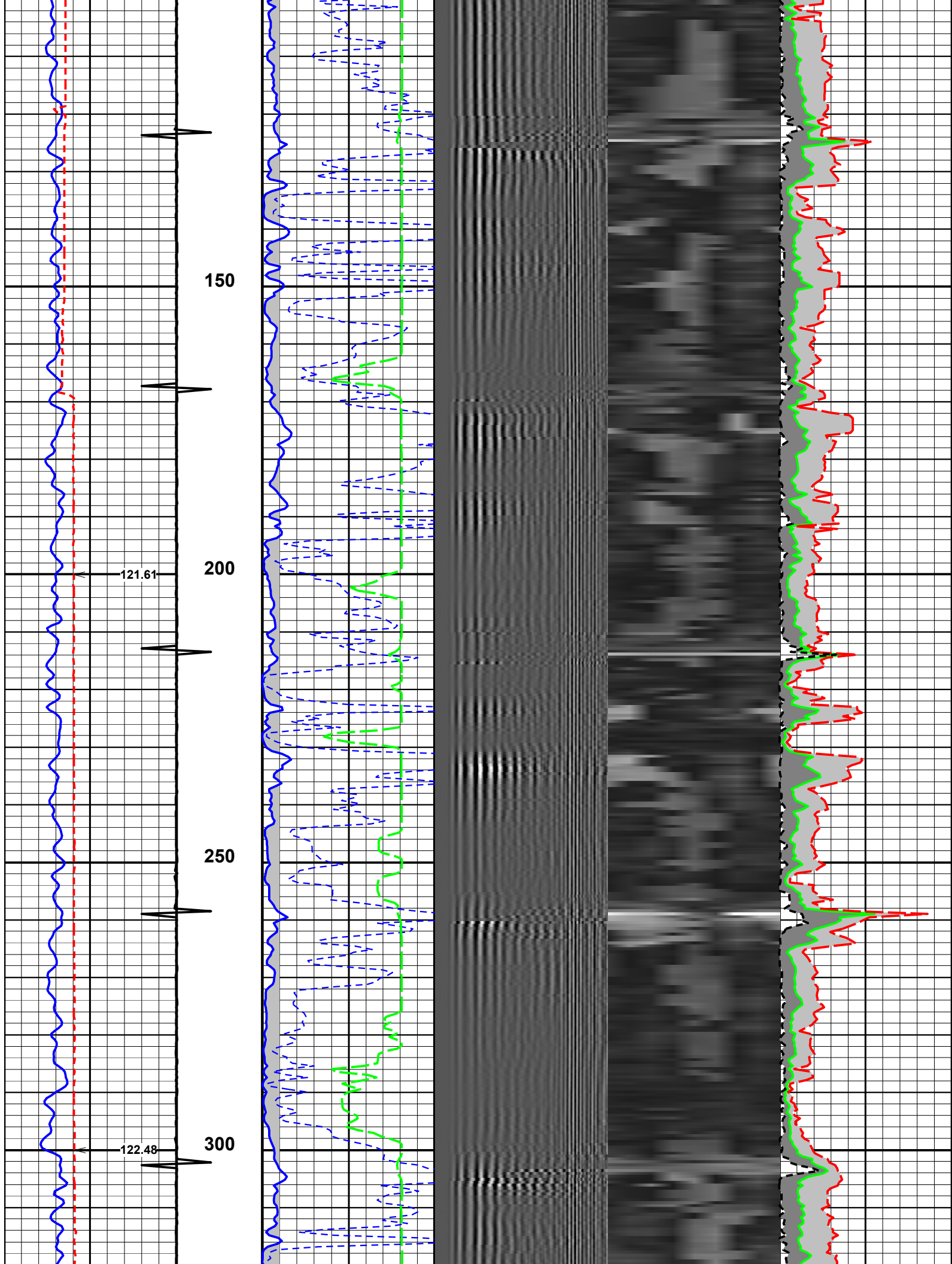
Thank you for choosing Reliance Oil Field Services

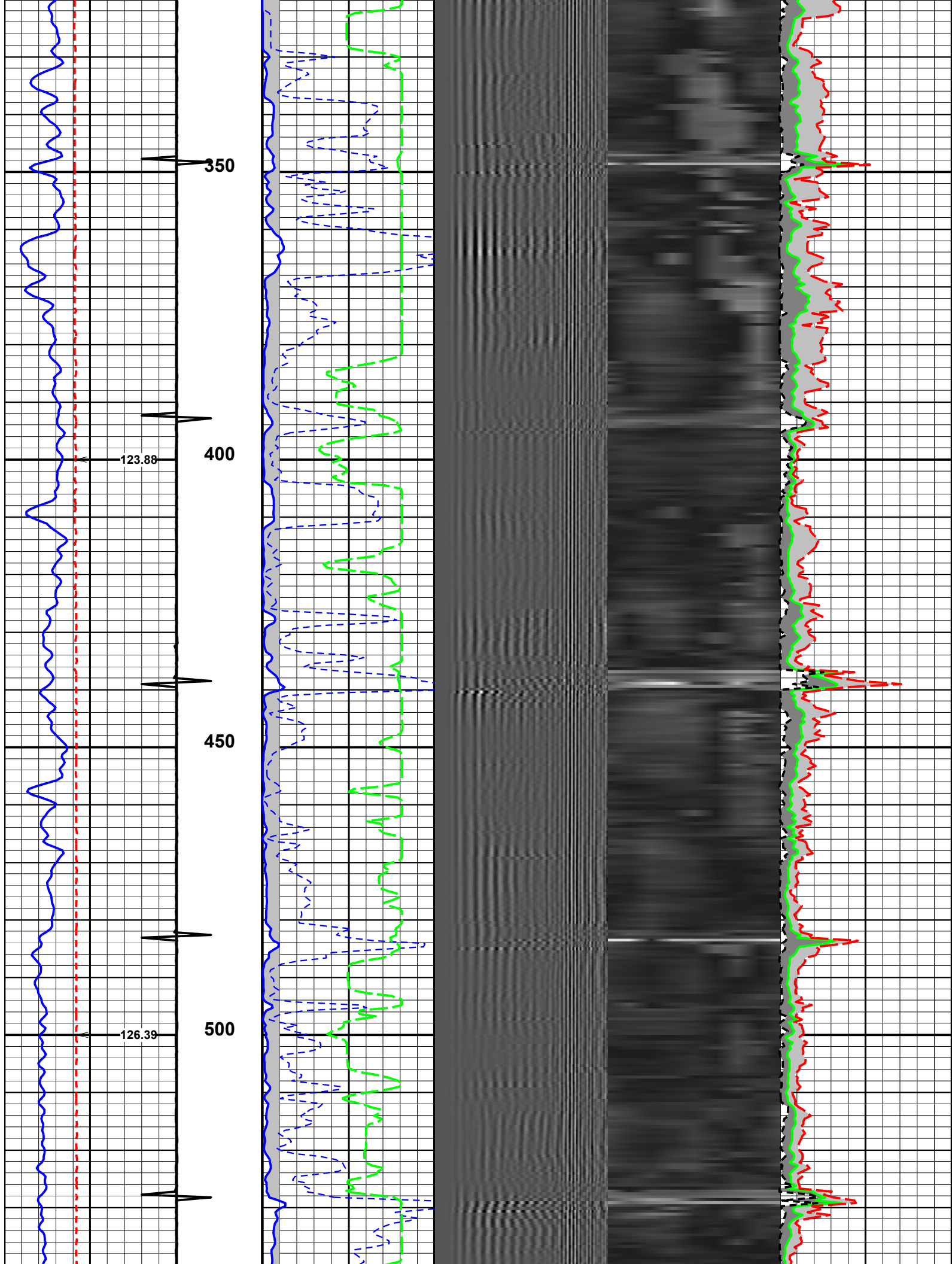
In making interpretations of logs, Contractor's employees will give the customer the benefit of their best judgement, but since all interpretations are opinions, based on inferences from electrical or other measurements, Contractor cannot, and does not, guarantee the accuracy or the correctness of any interpretation.

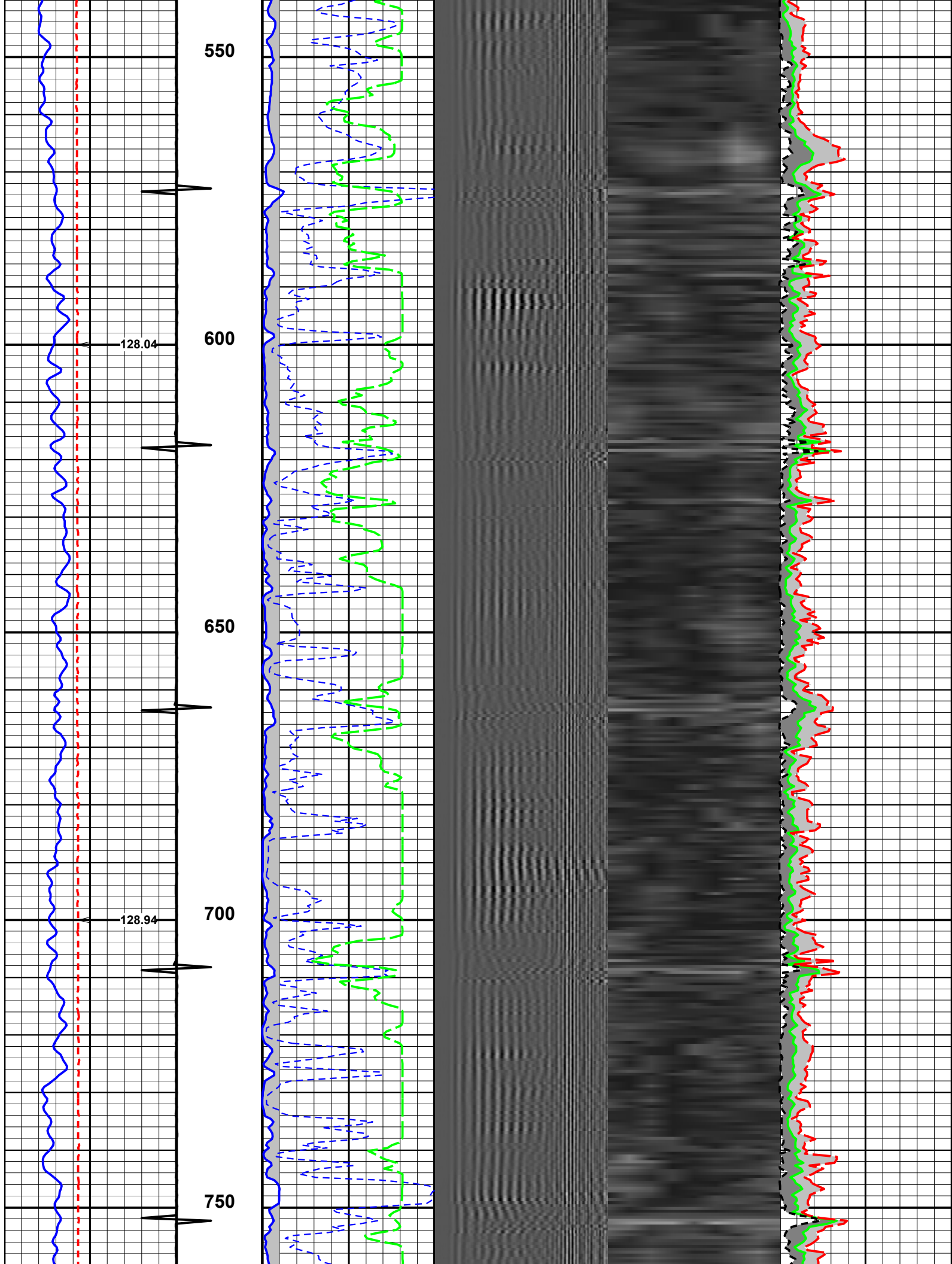
Main Pass Logged with 2800 PSI surfaced induced pressure

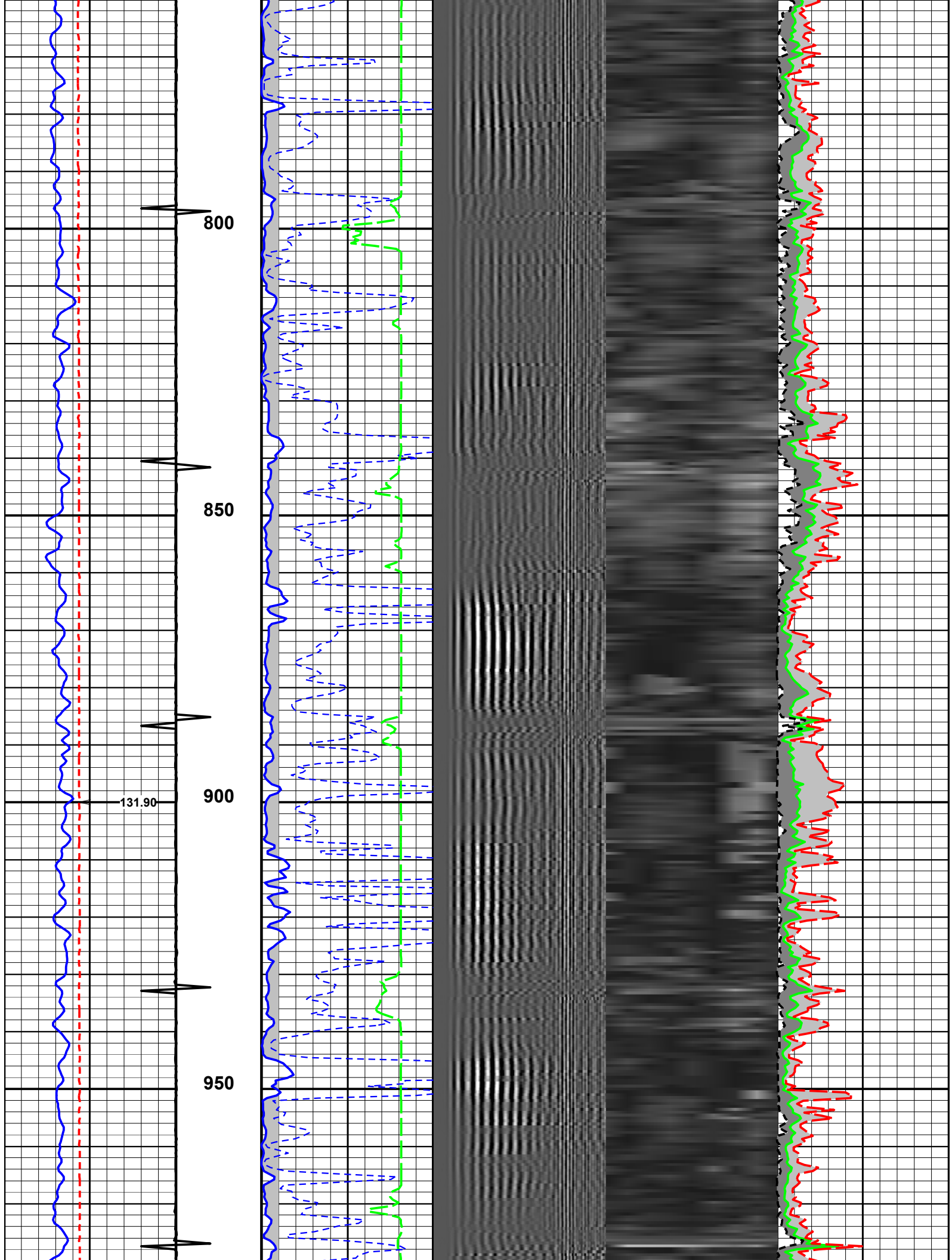
Company	:	Date	:	03.08.2016
Well	:	Time	:	10:36:14
Scale	:	Remarks	:	
Depth in	:			
Software	:	File Name	:	Main Spliced-Shifted

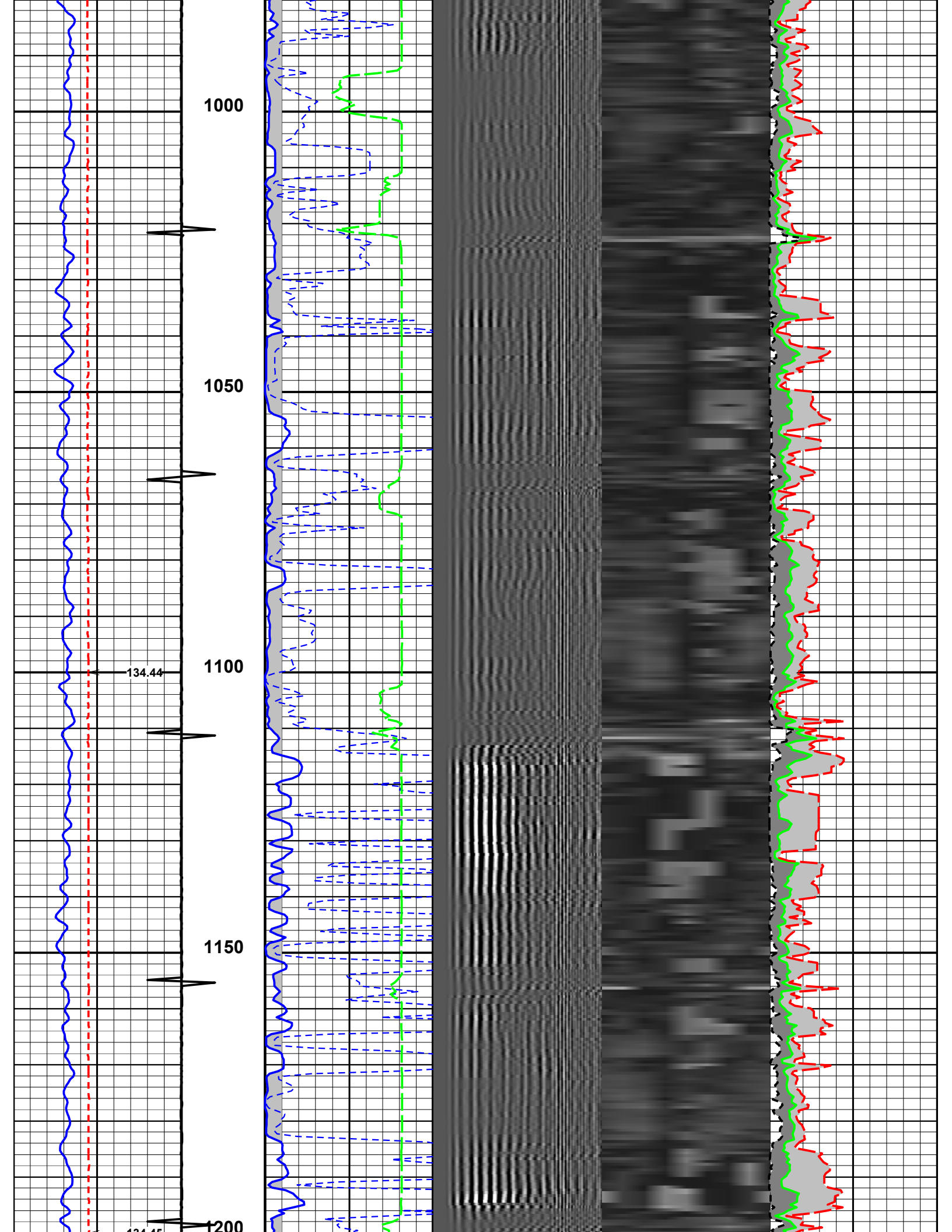


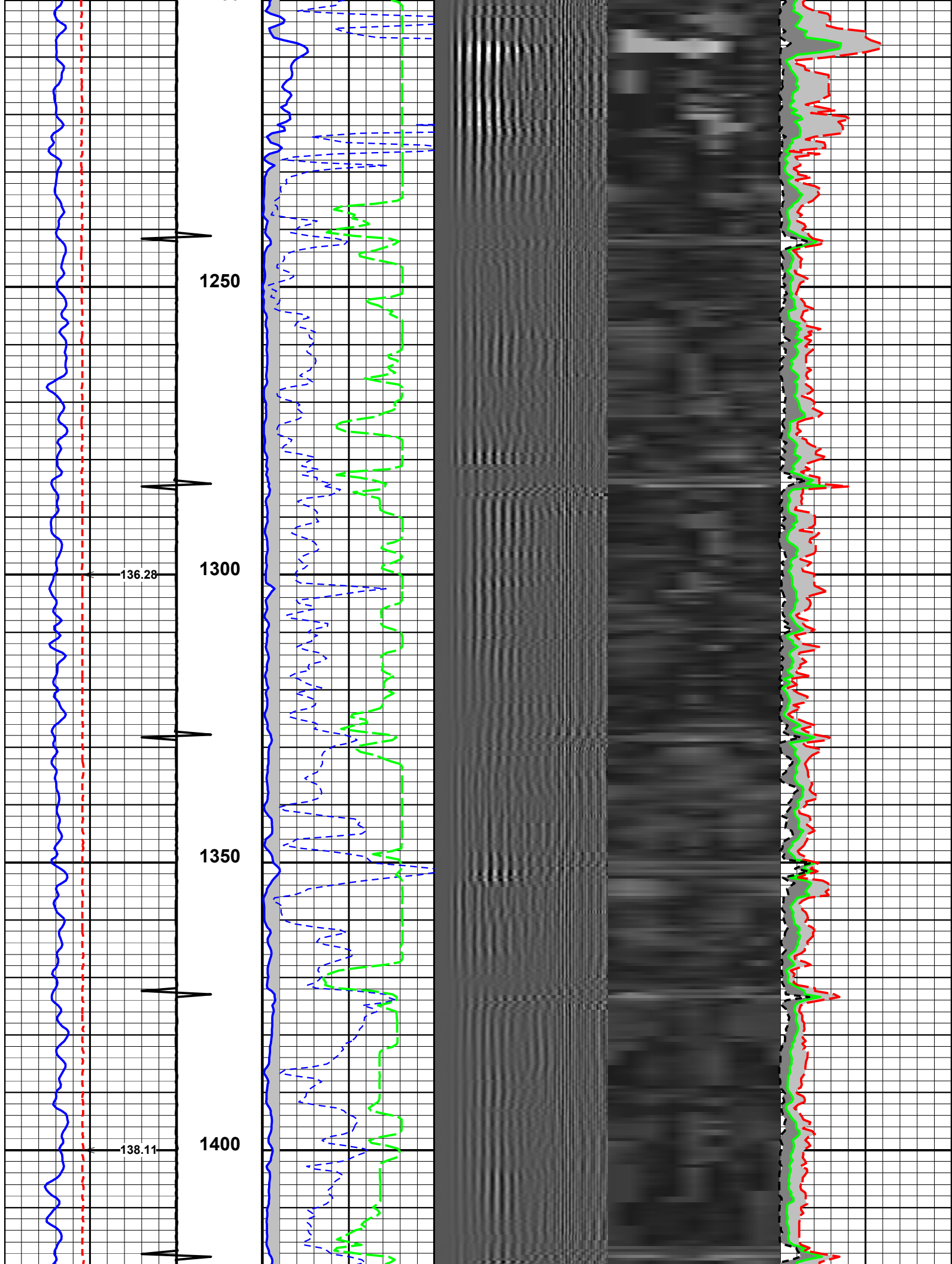


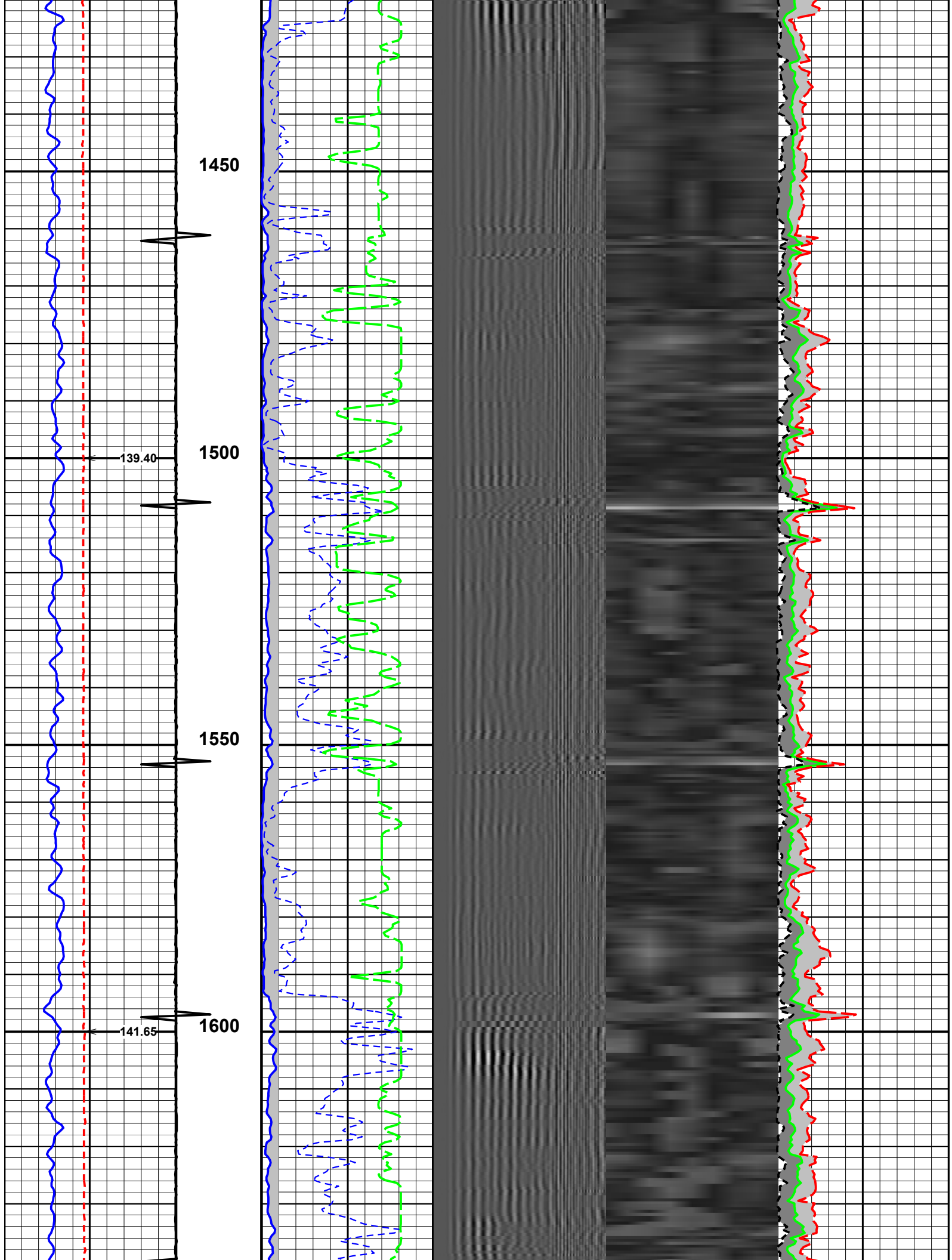


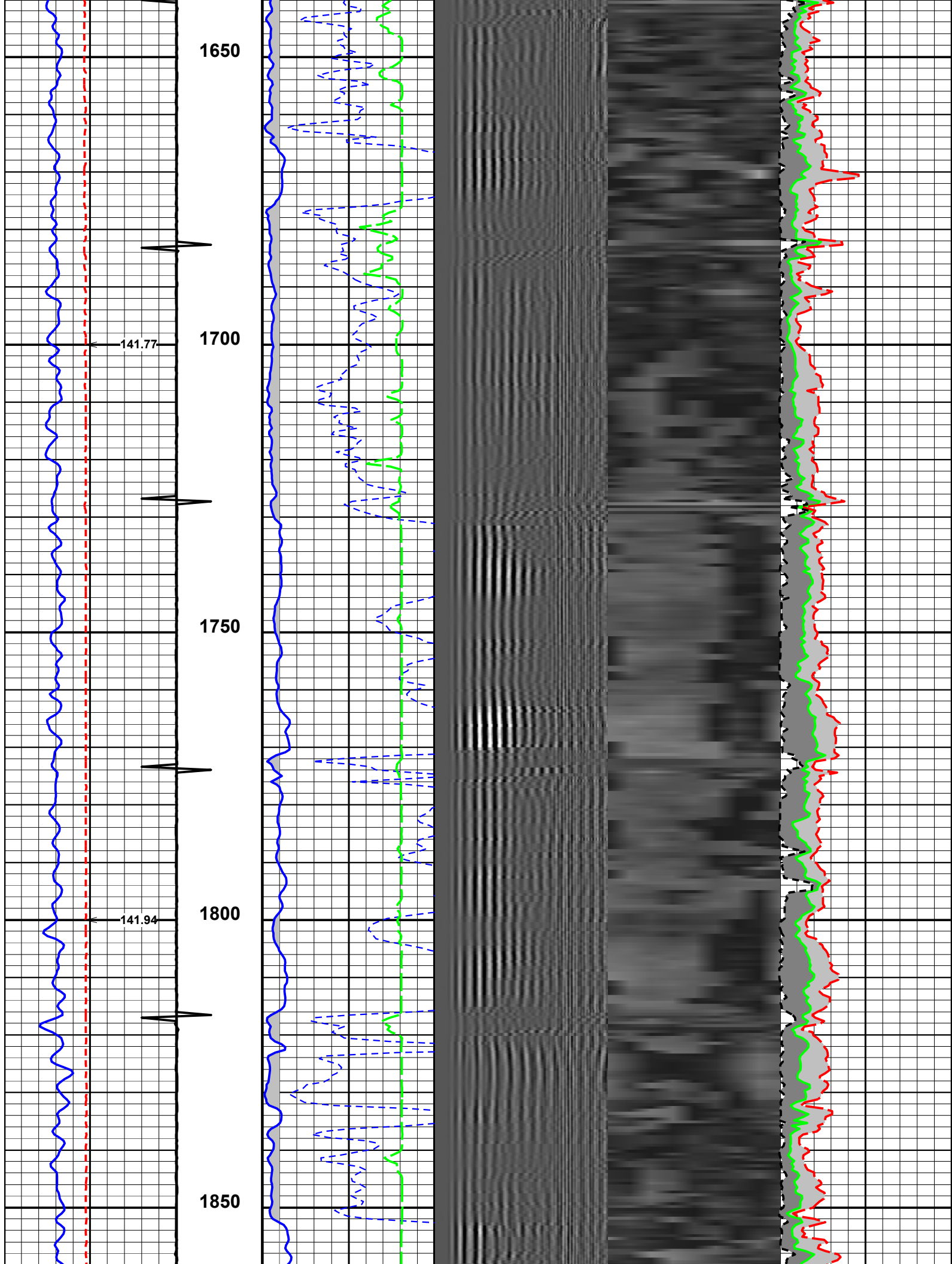


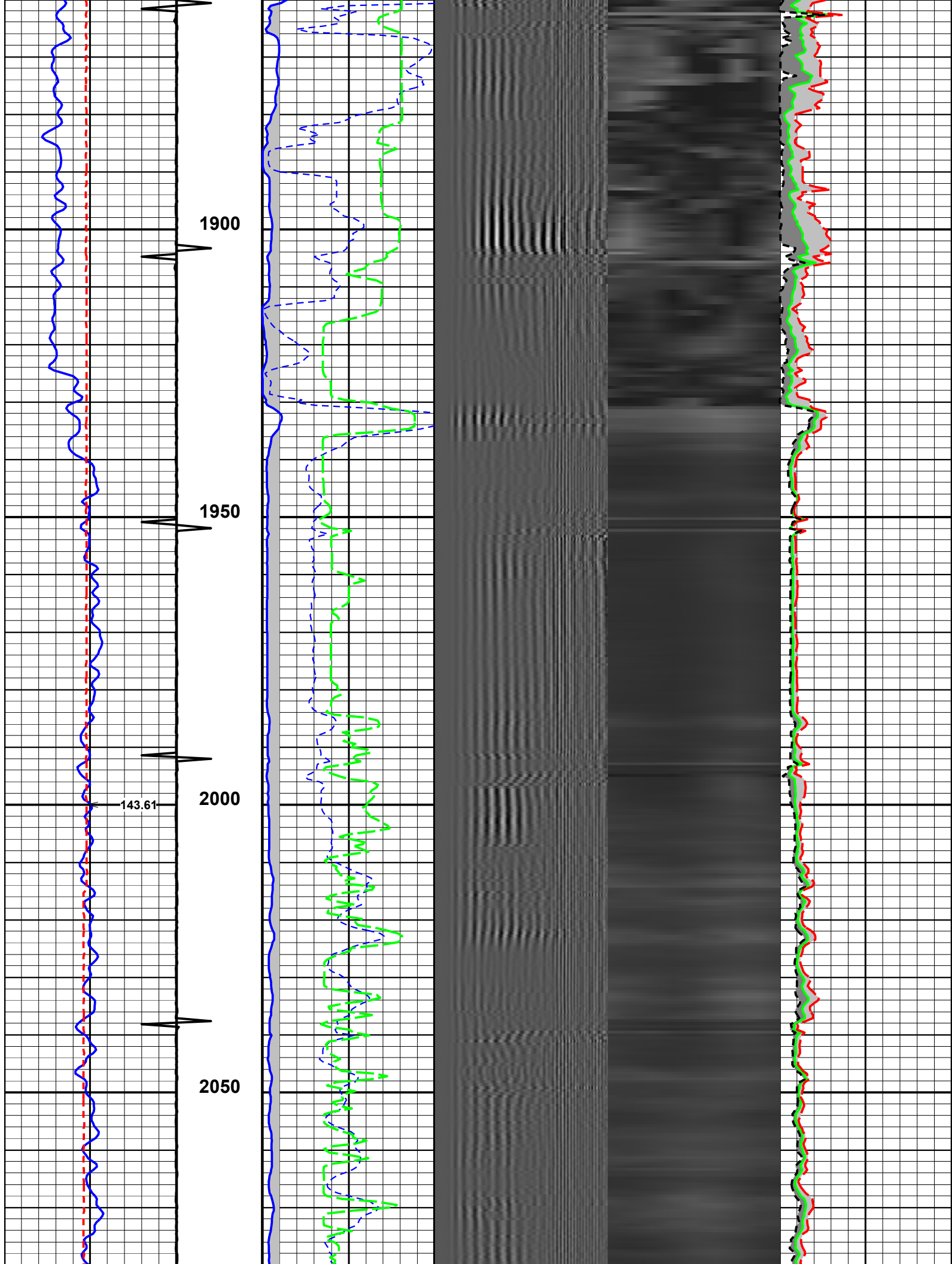


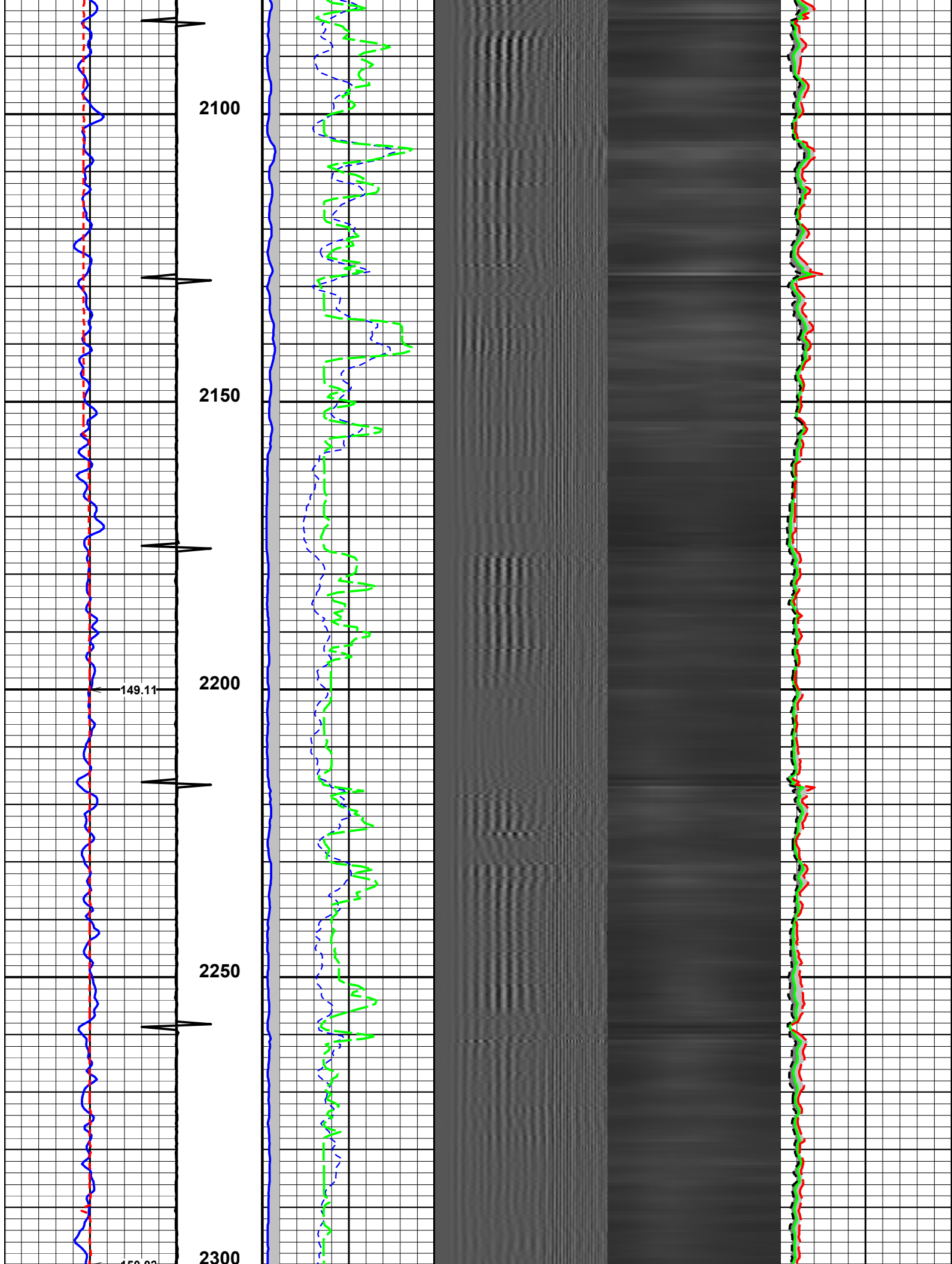


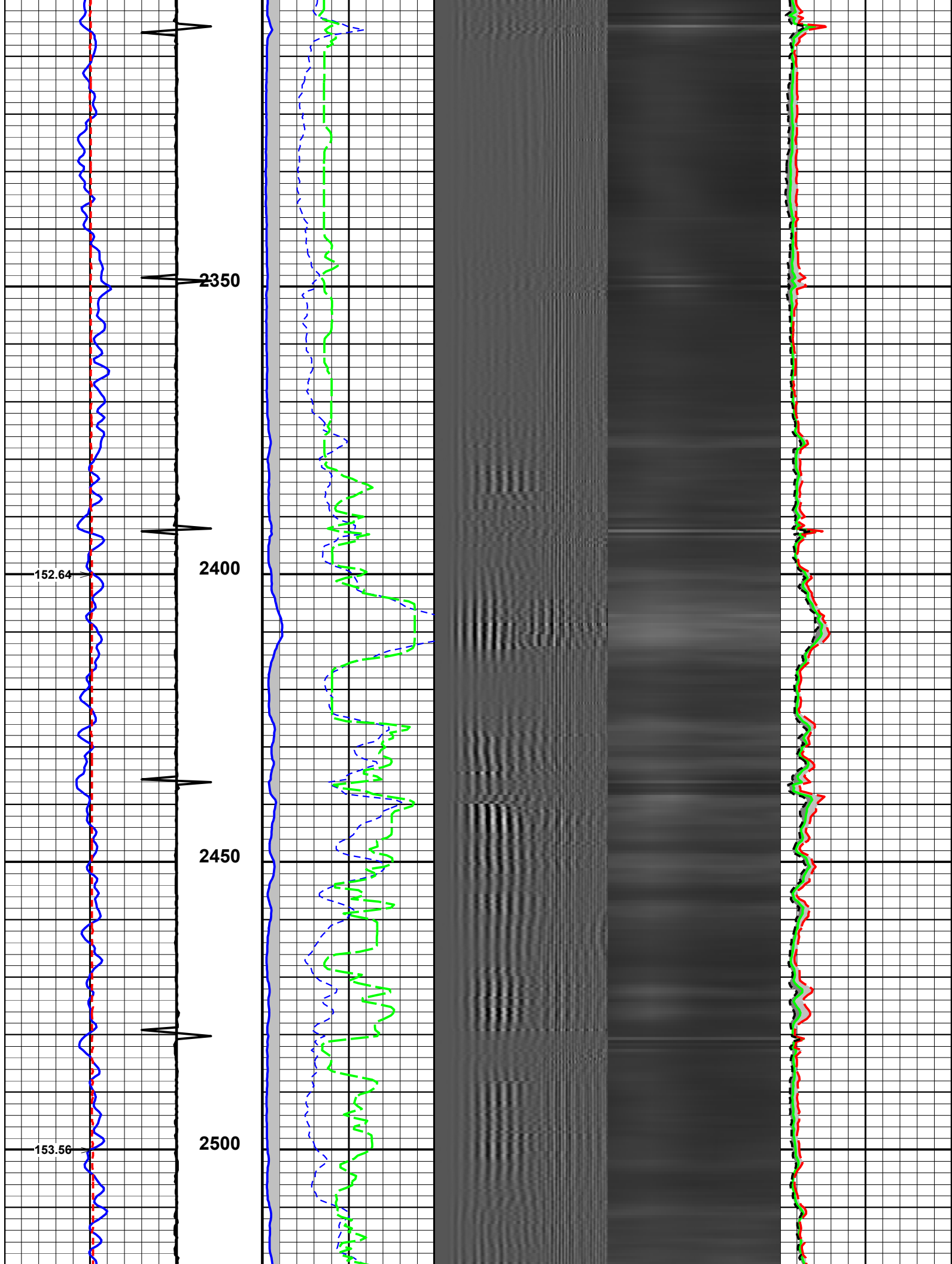


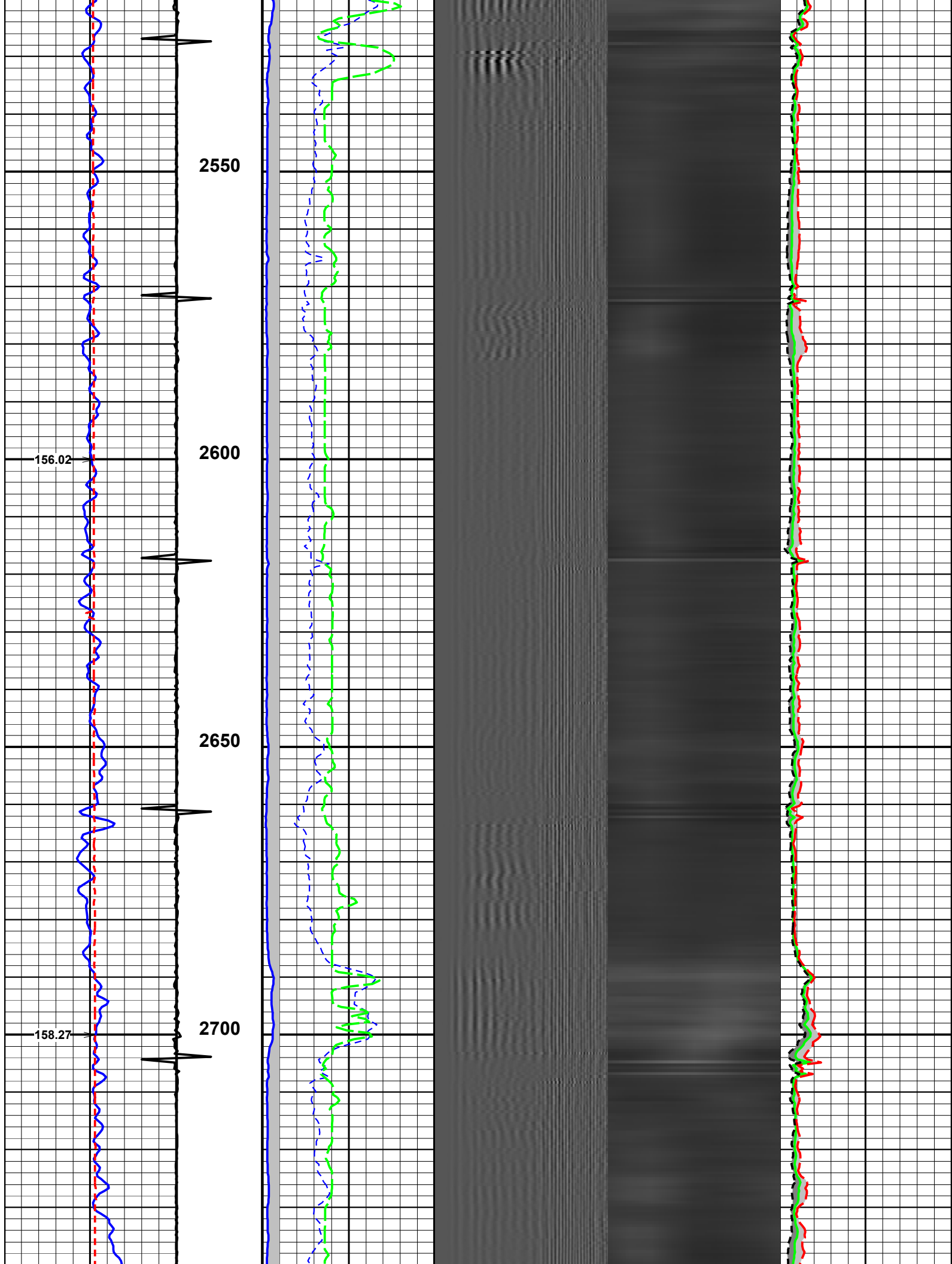


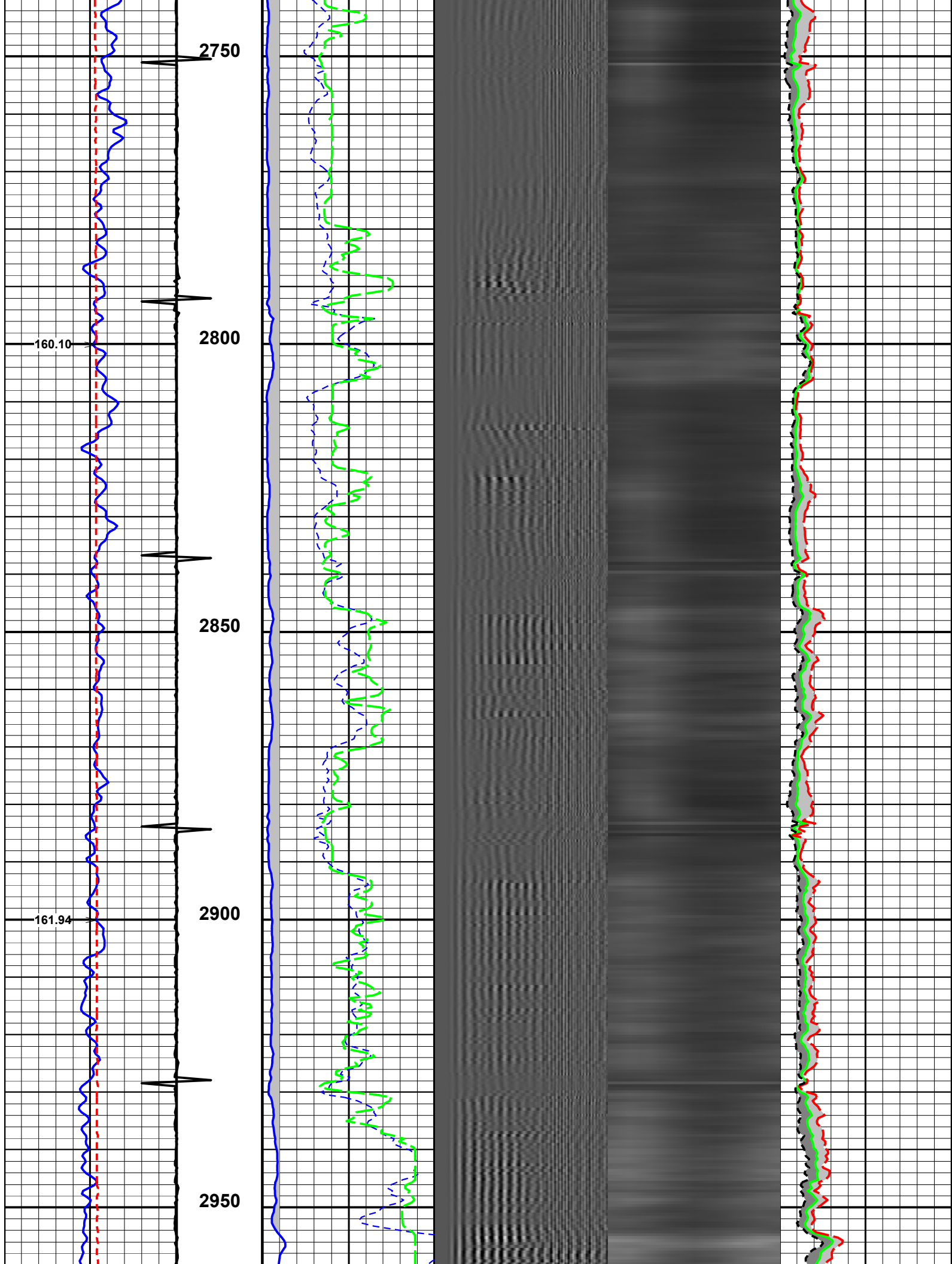


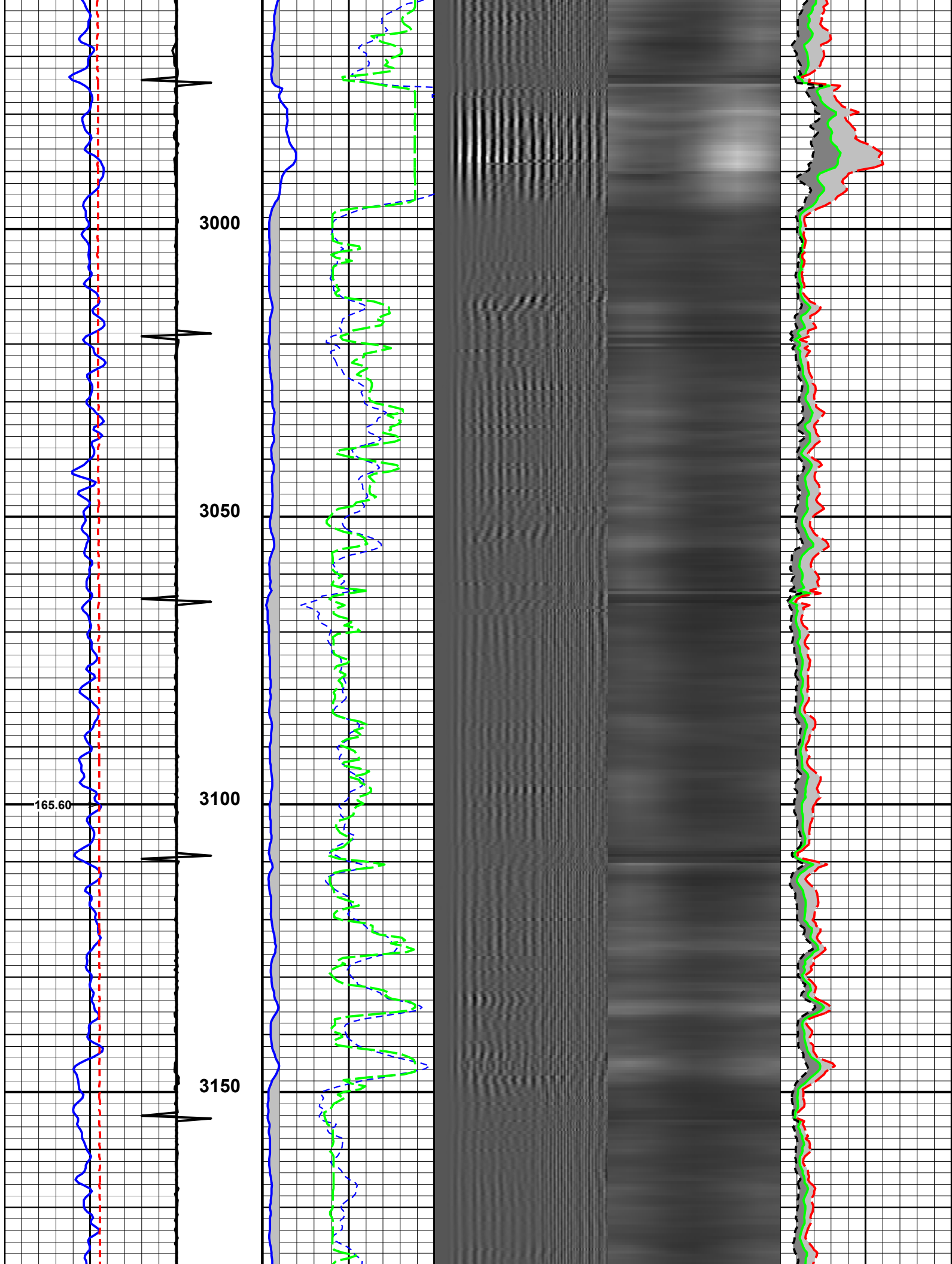


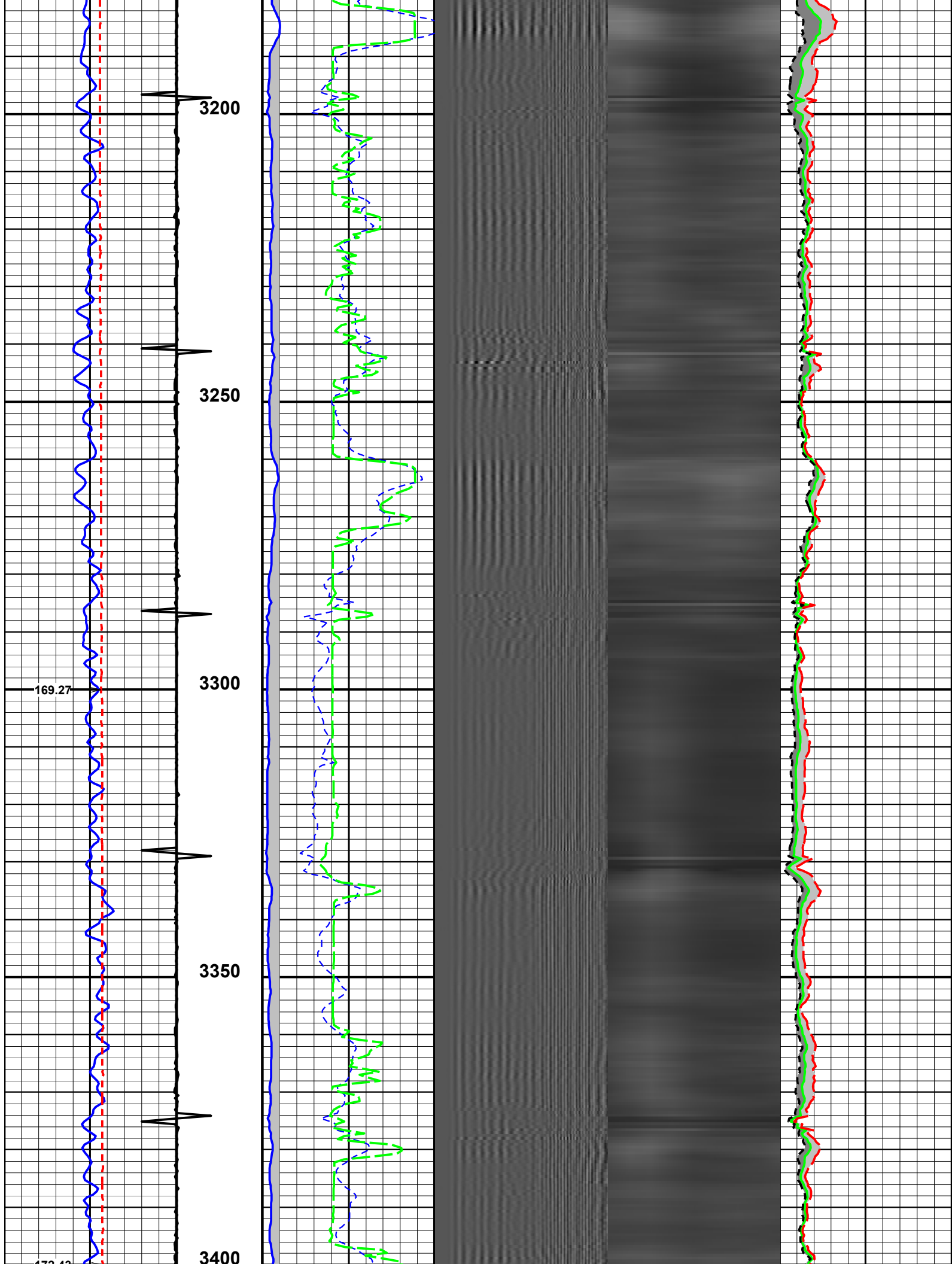


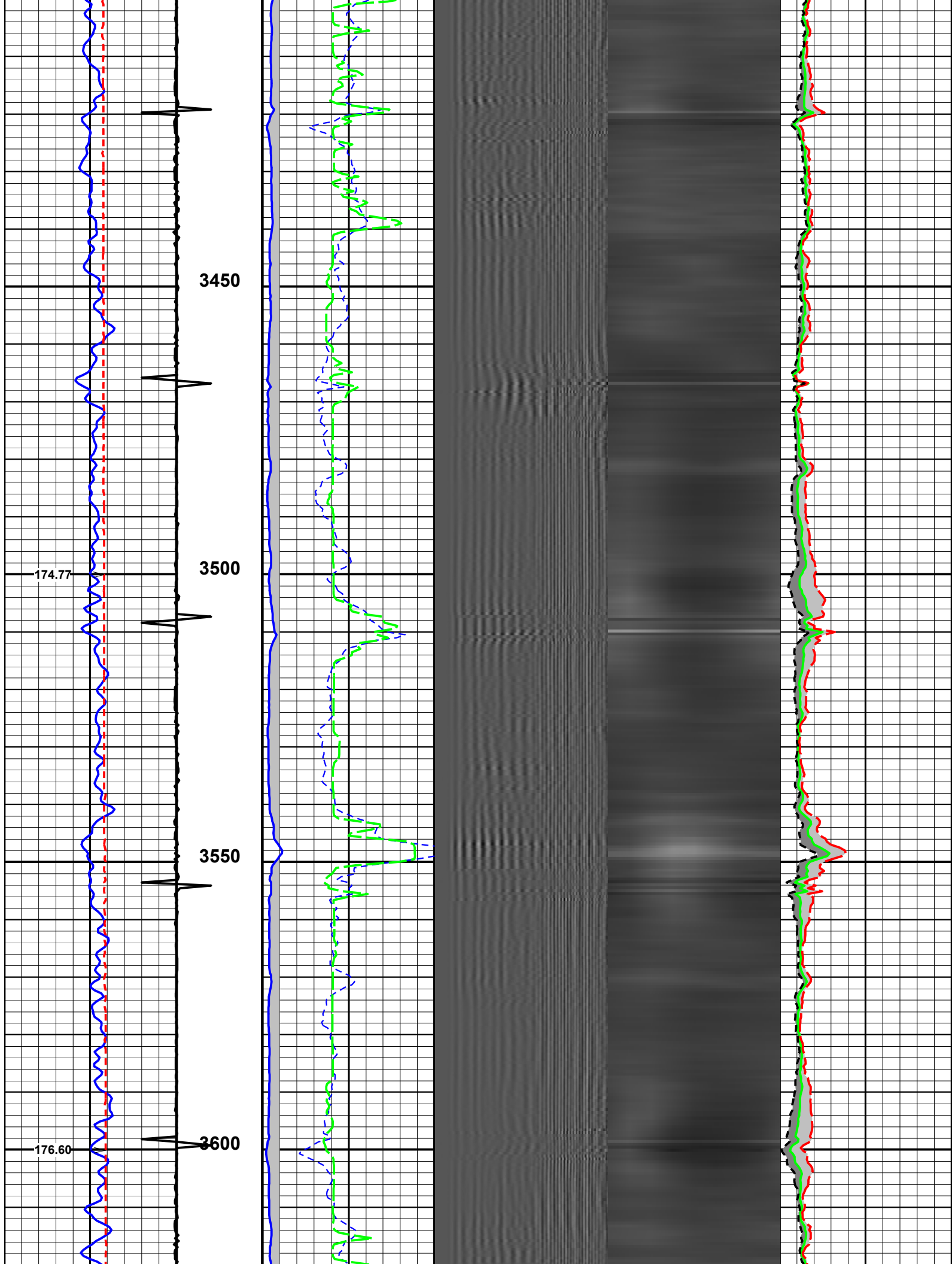


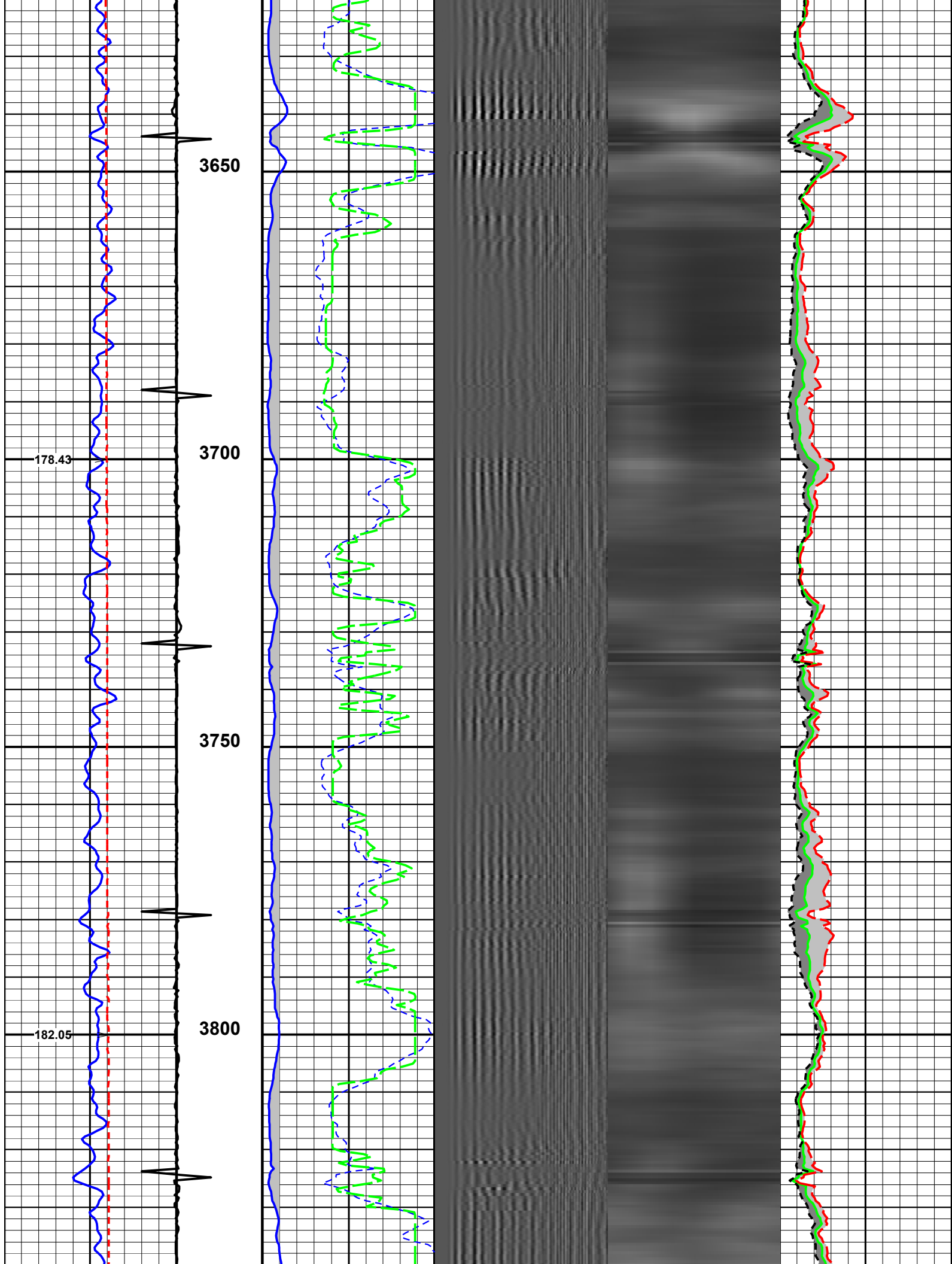


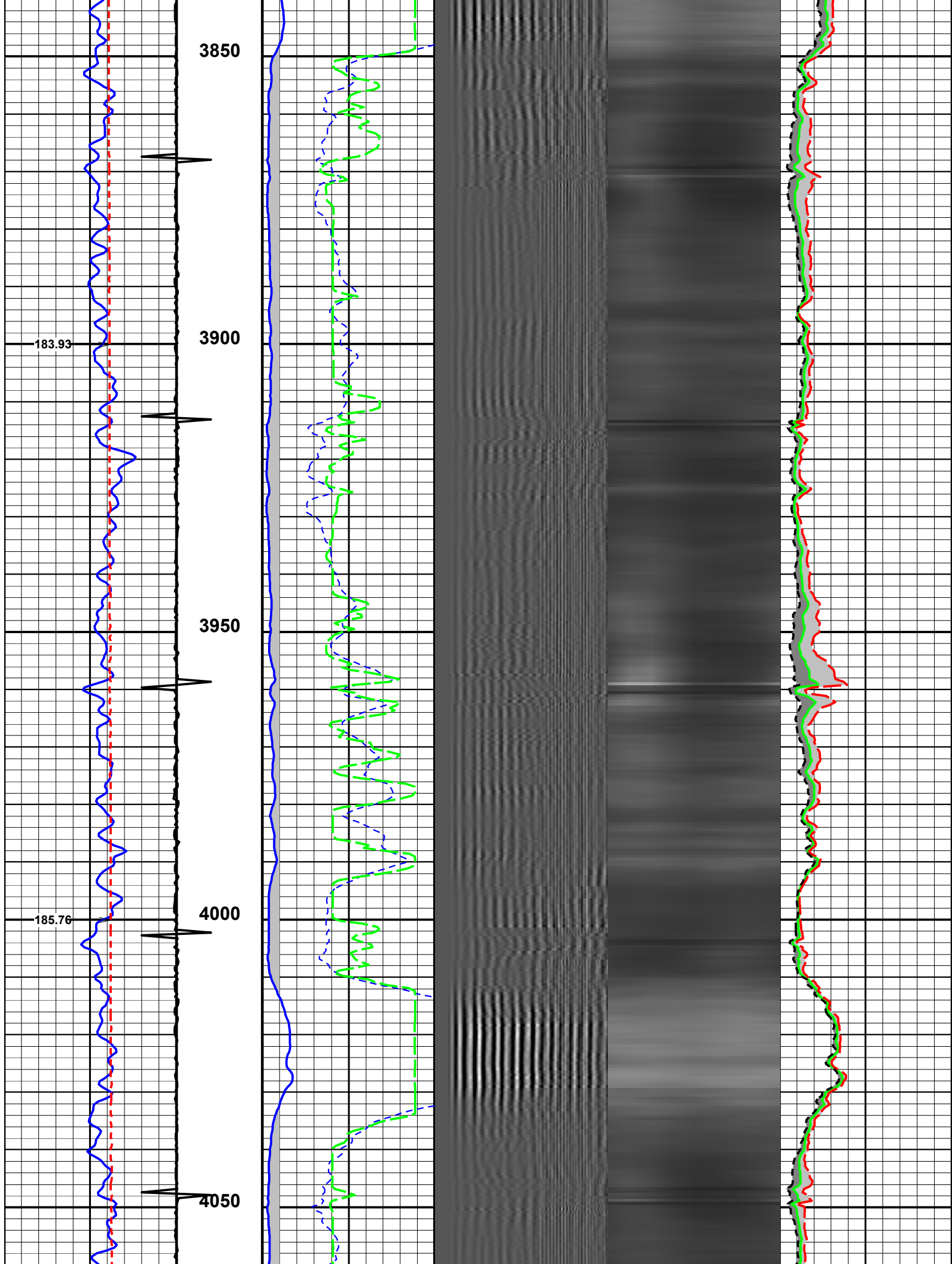


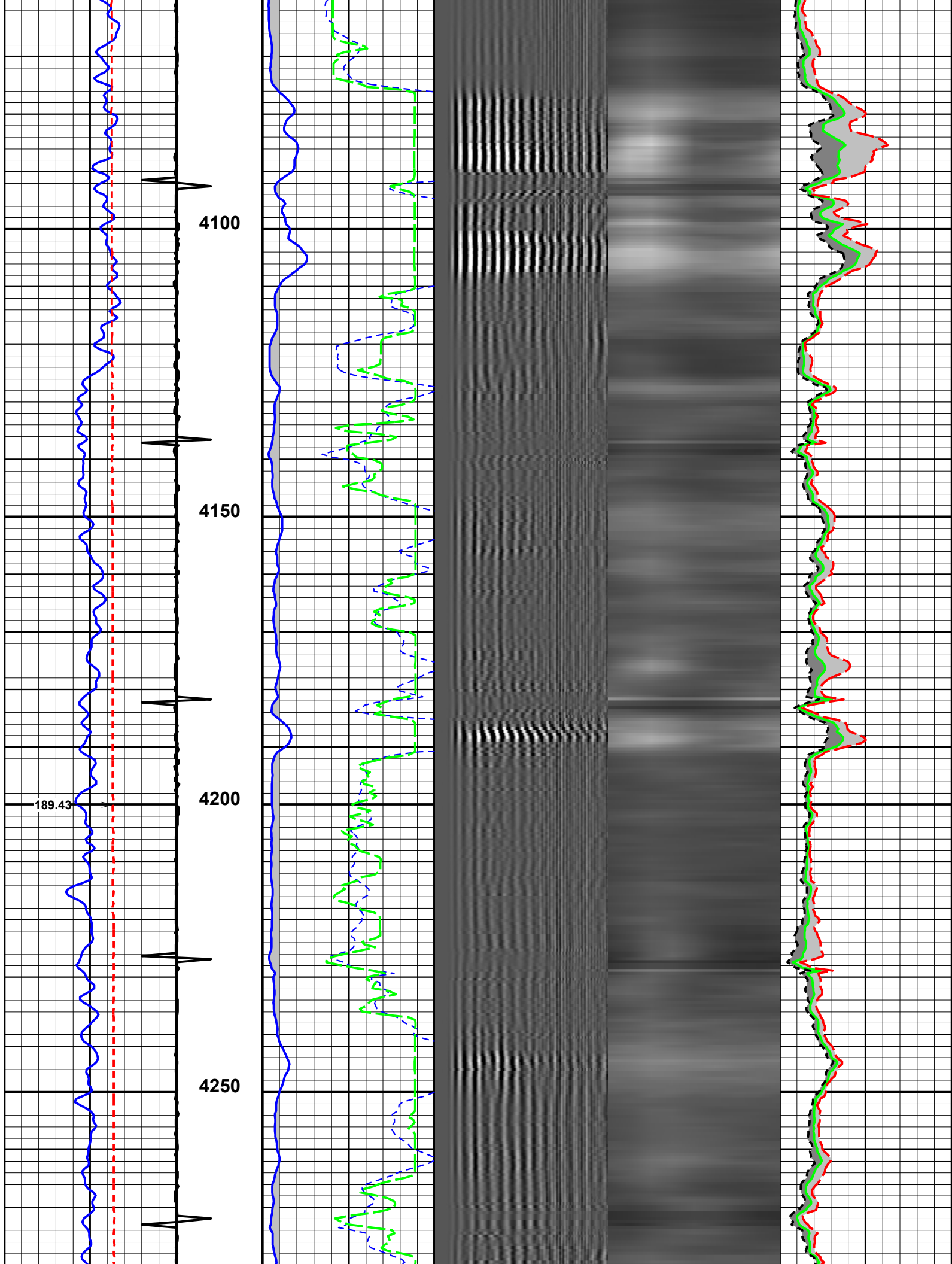


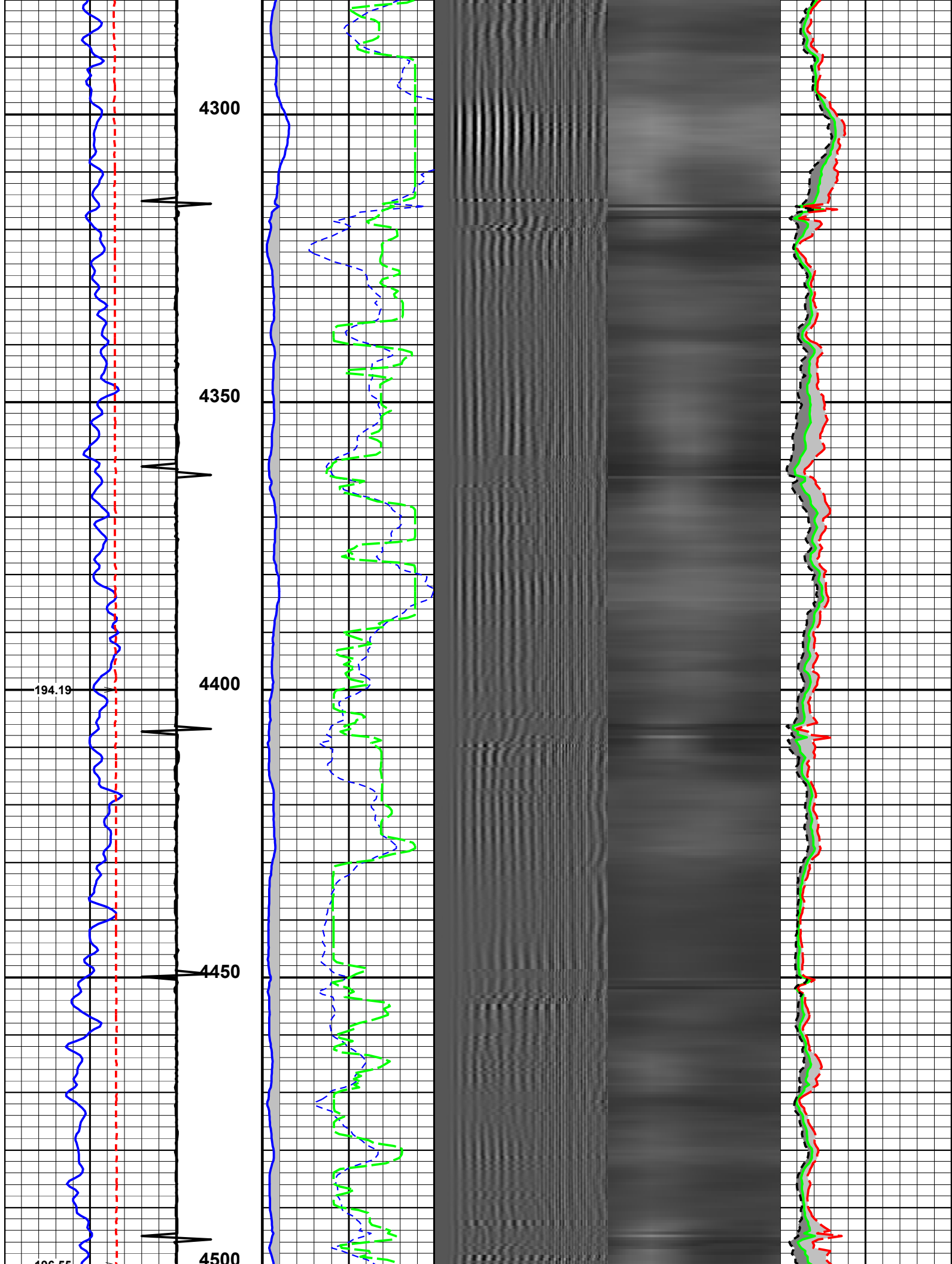


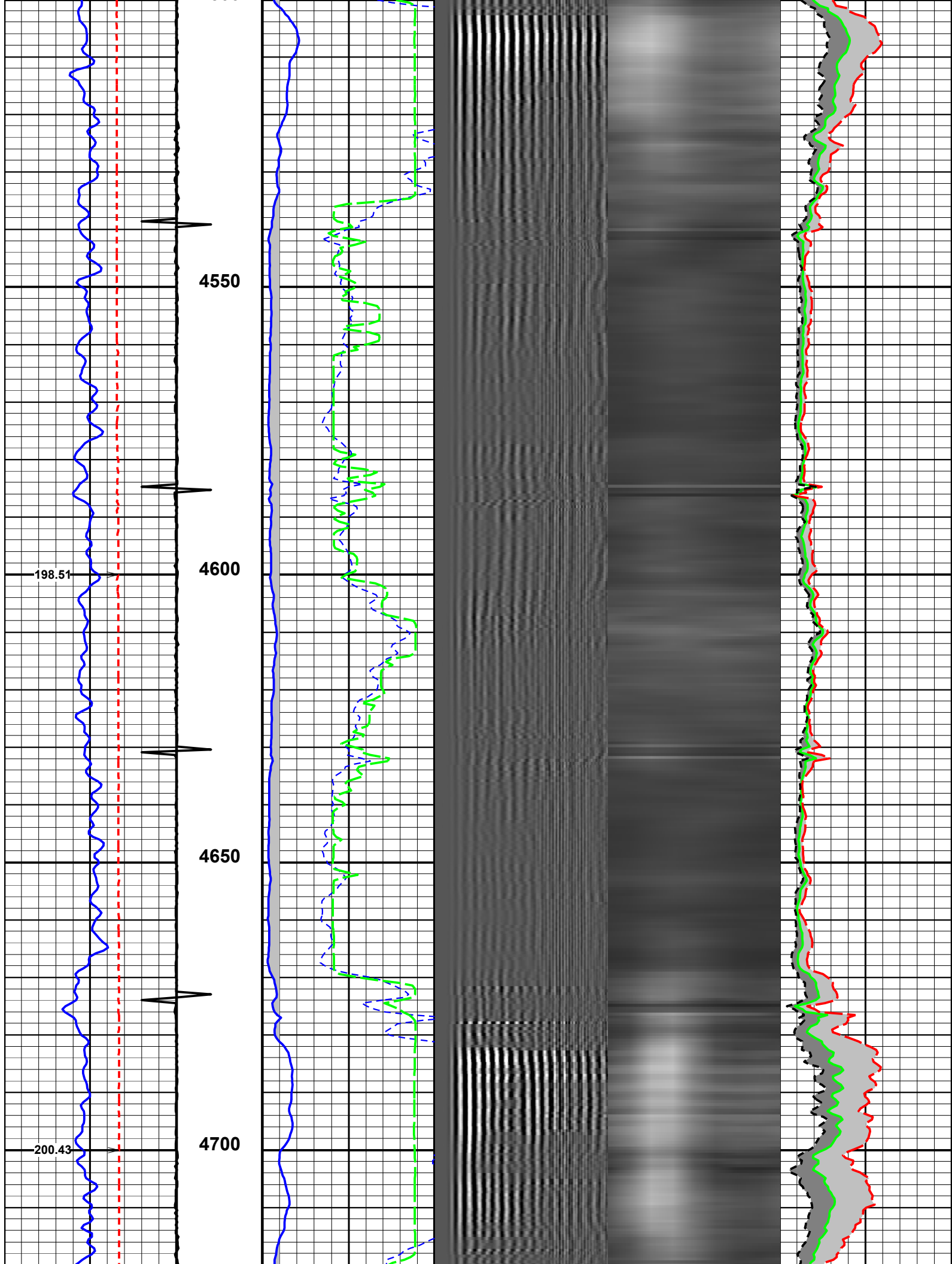


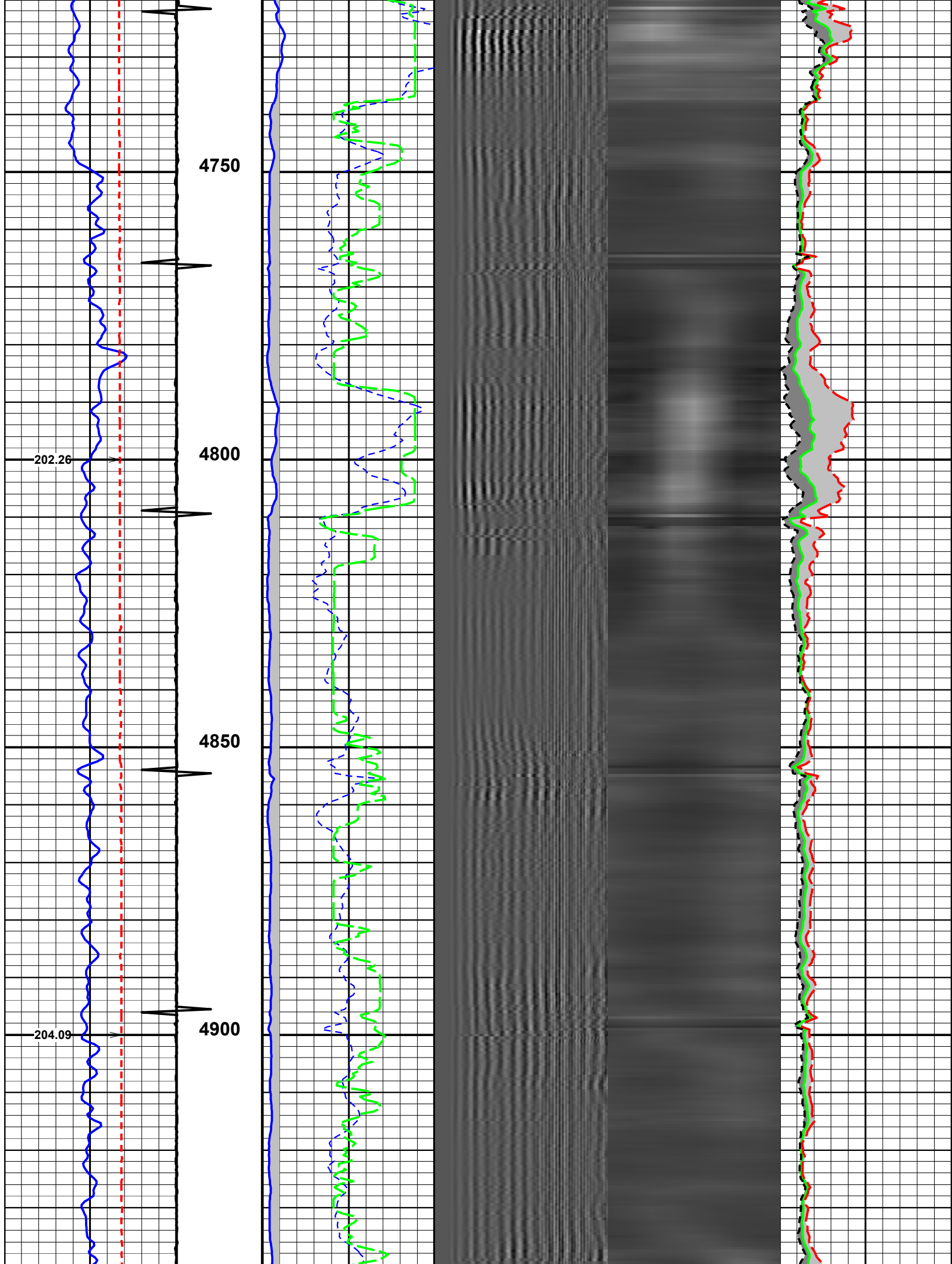


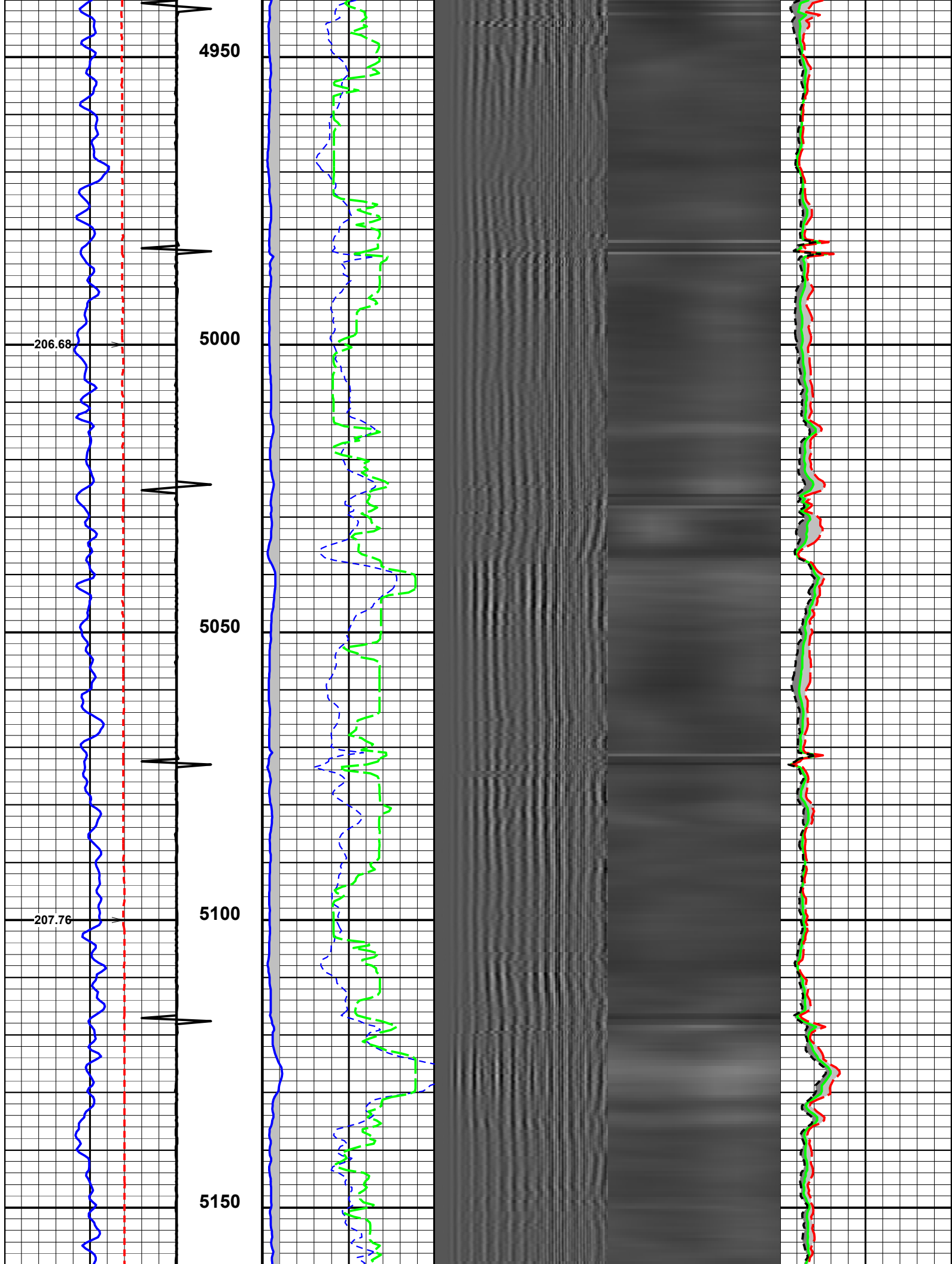


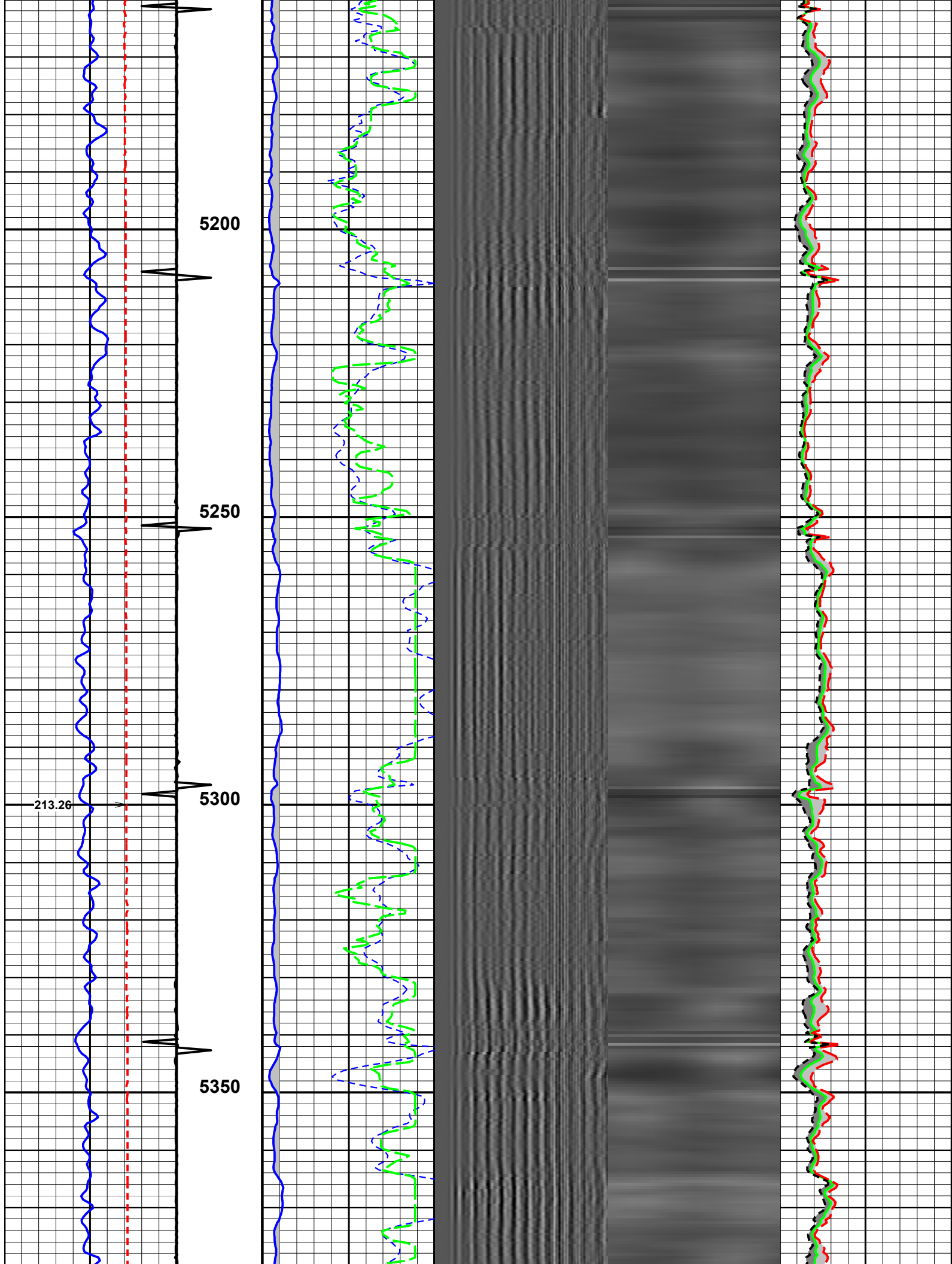


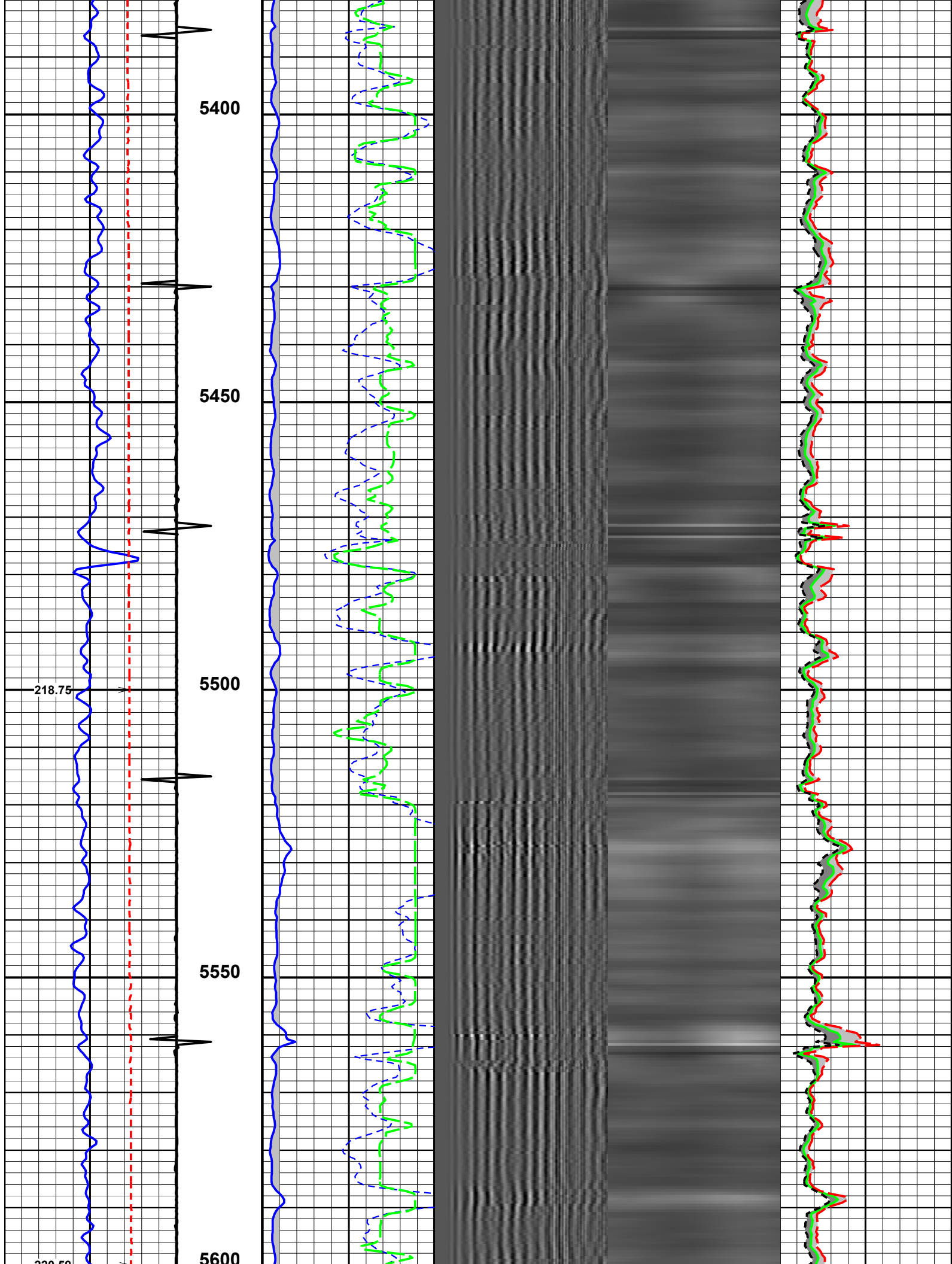


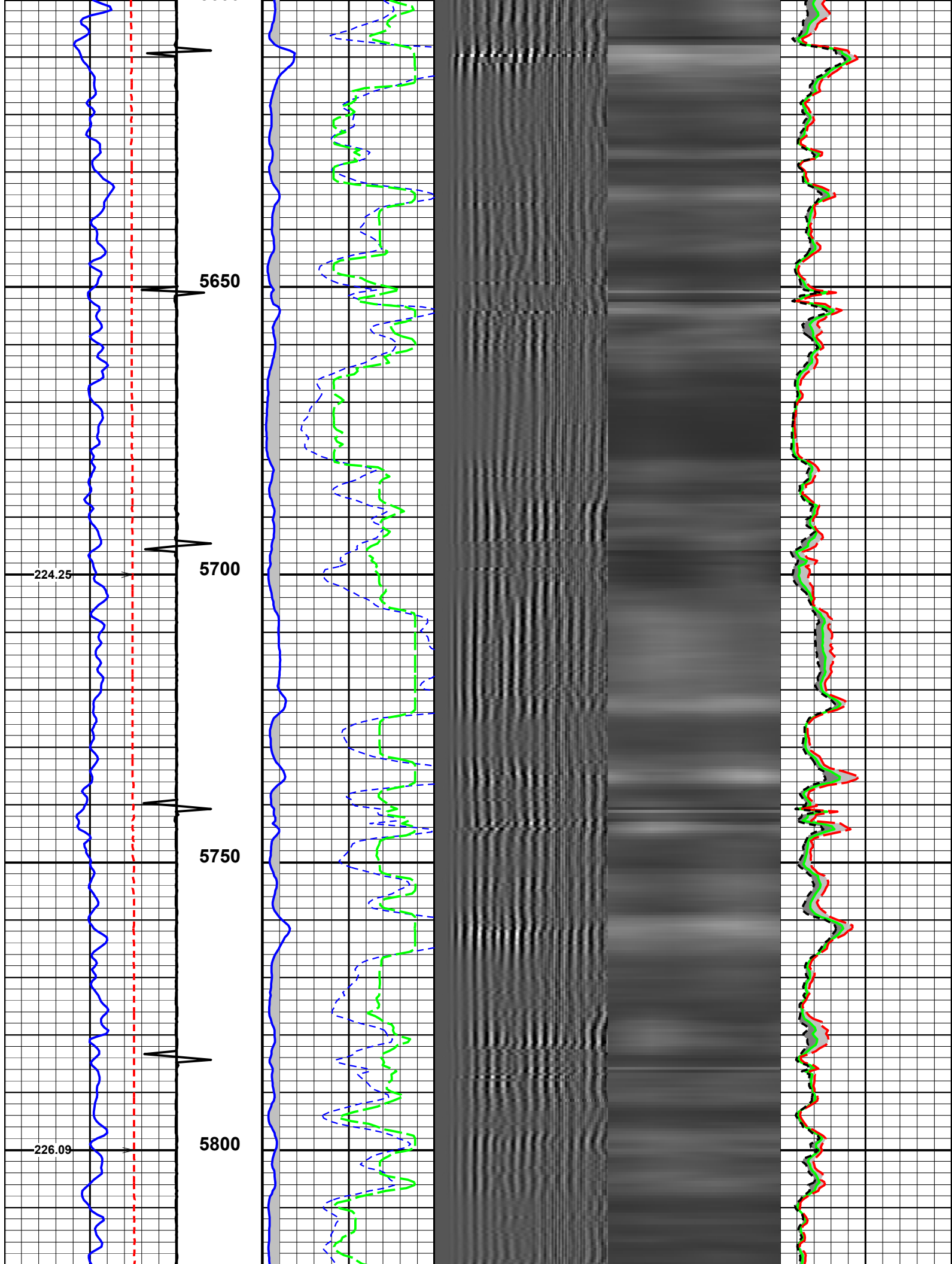


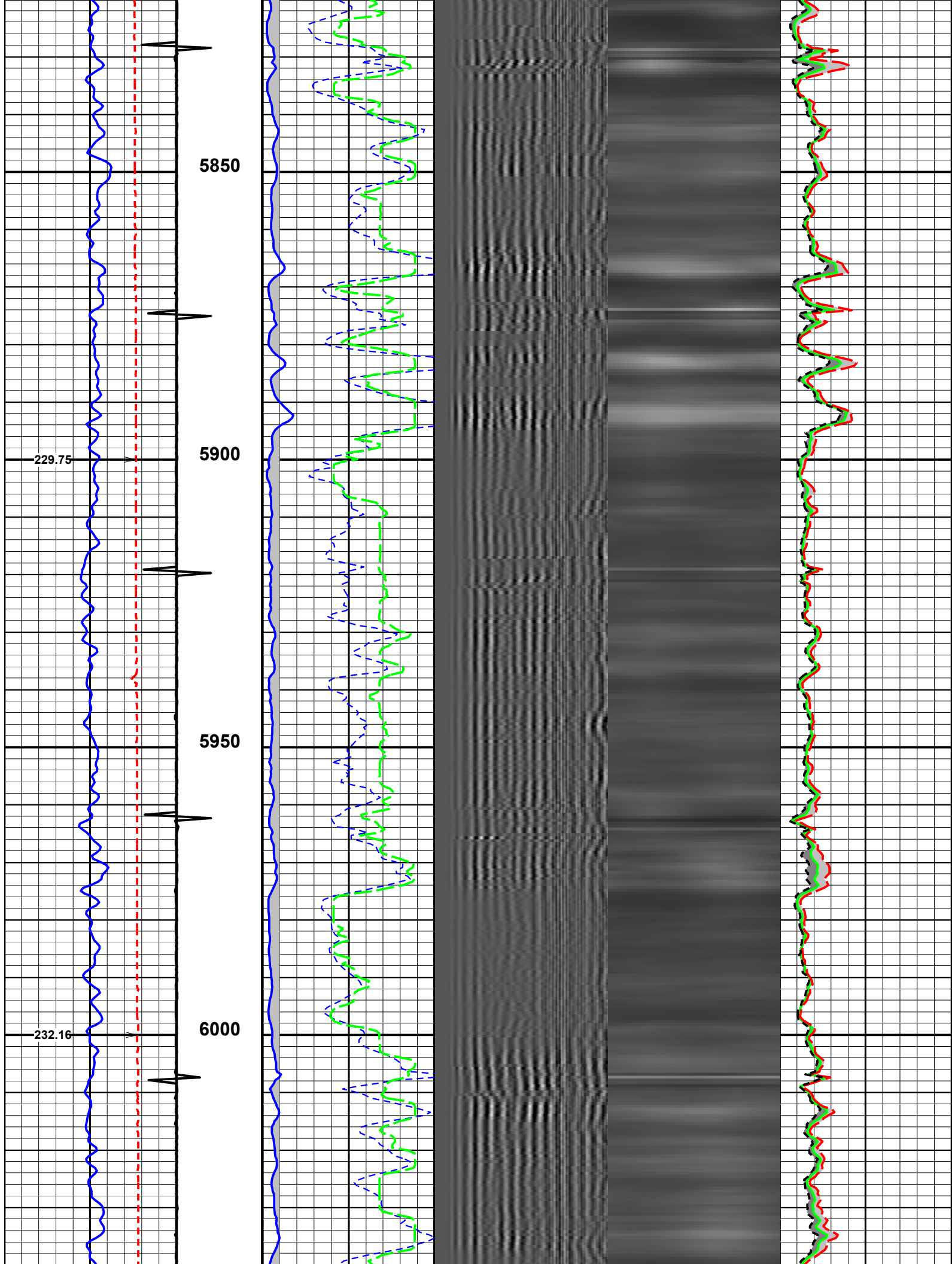


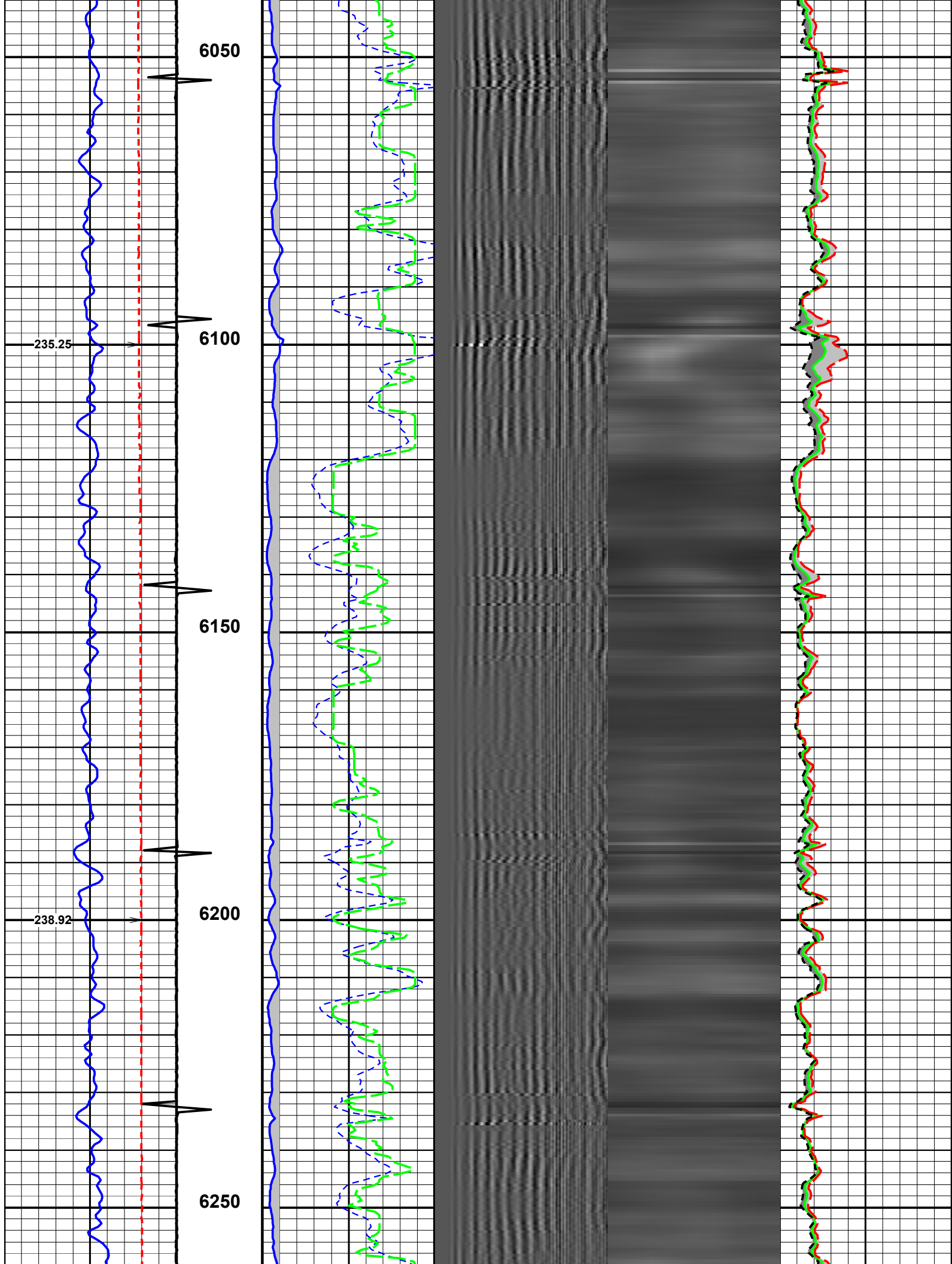


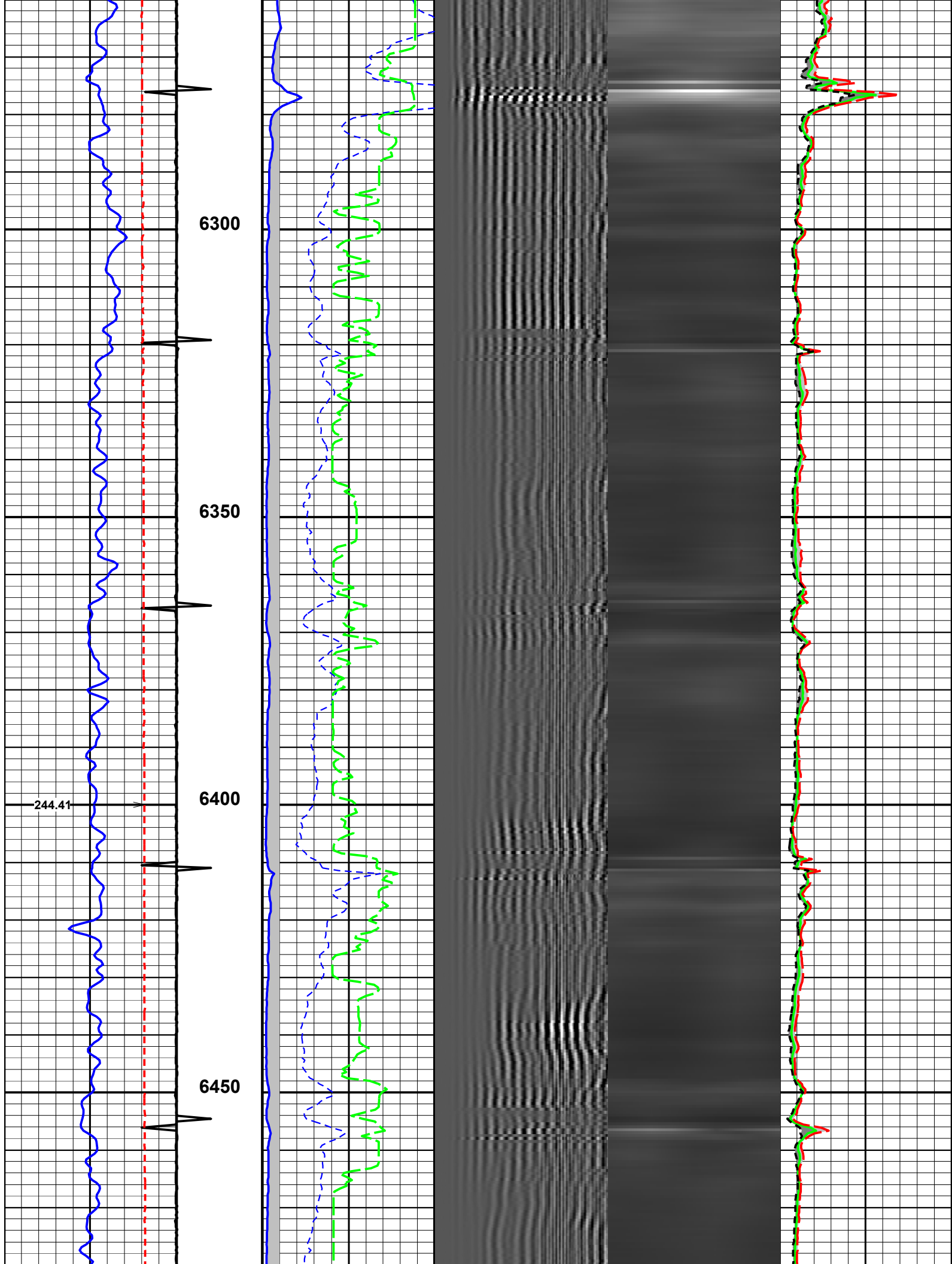


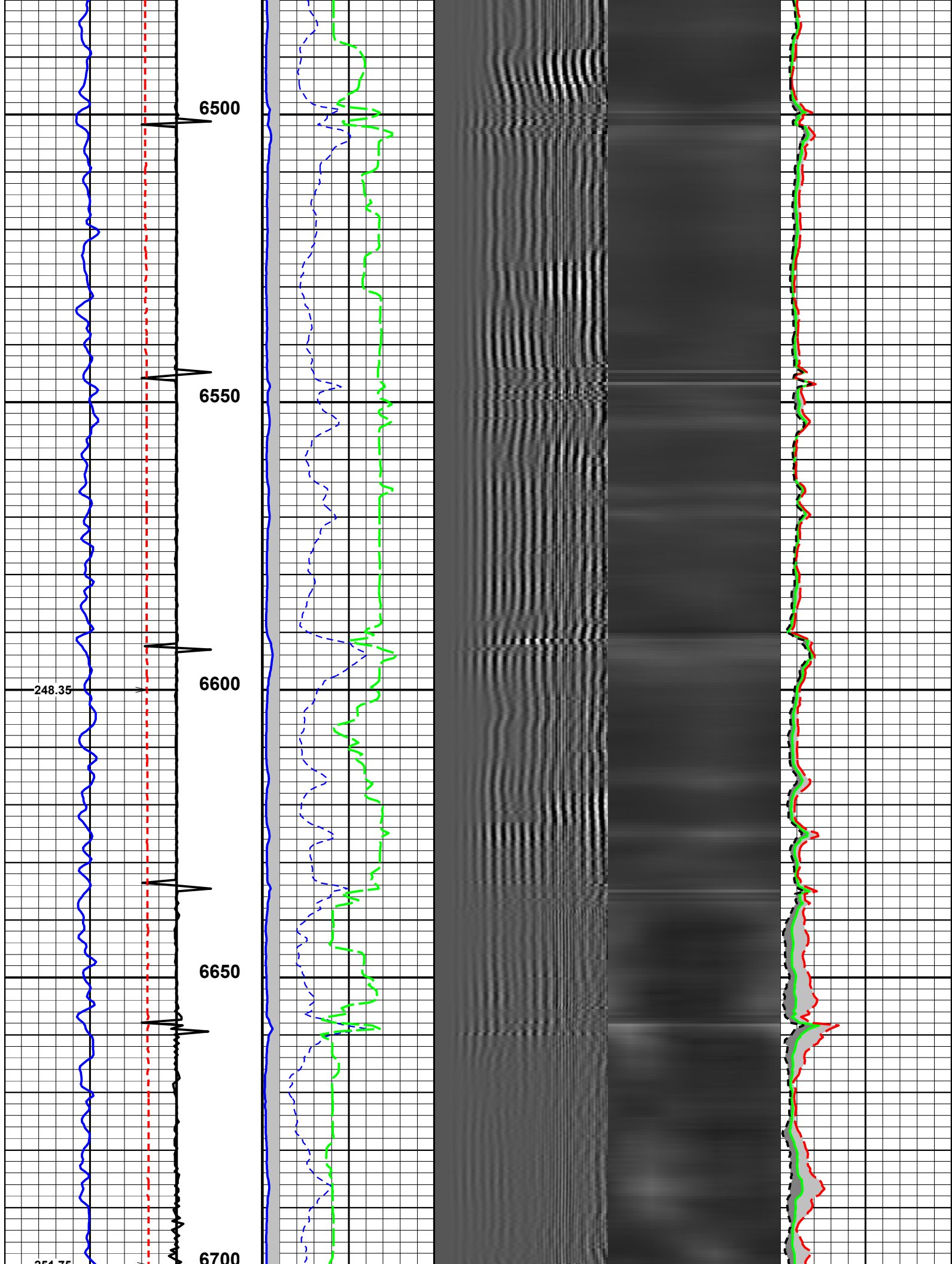


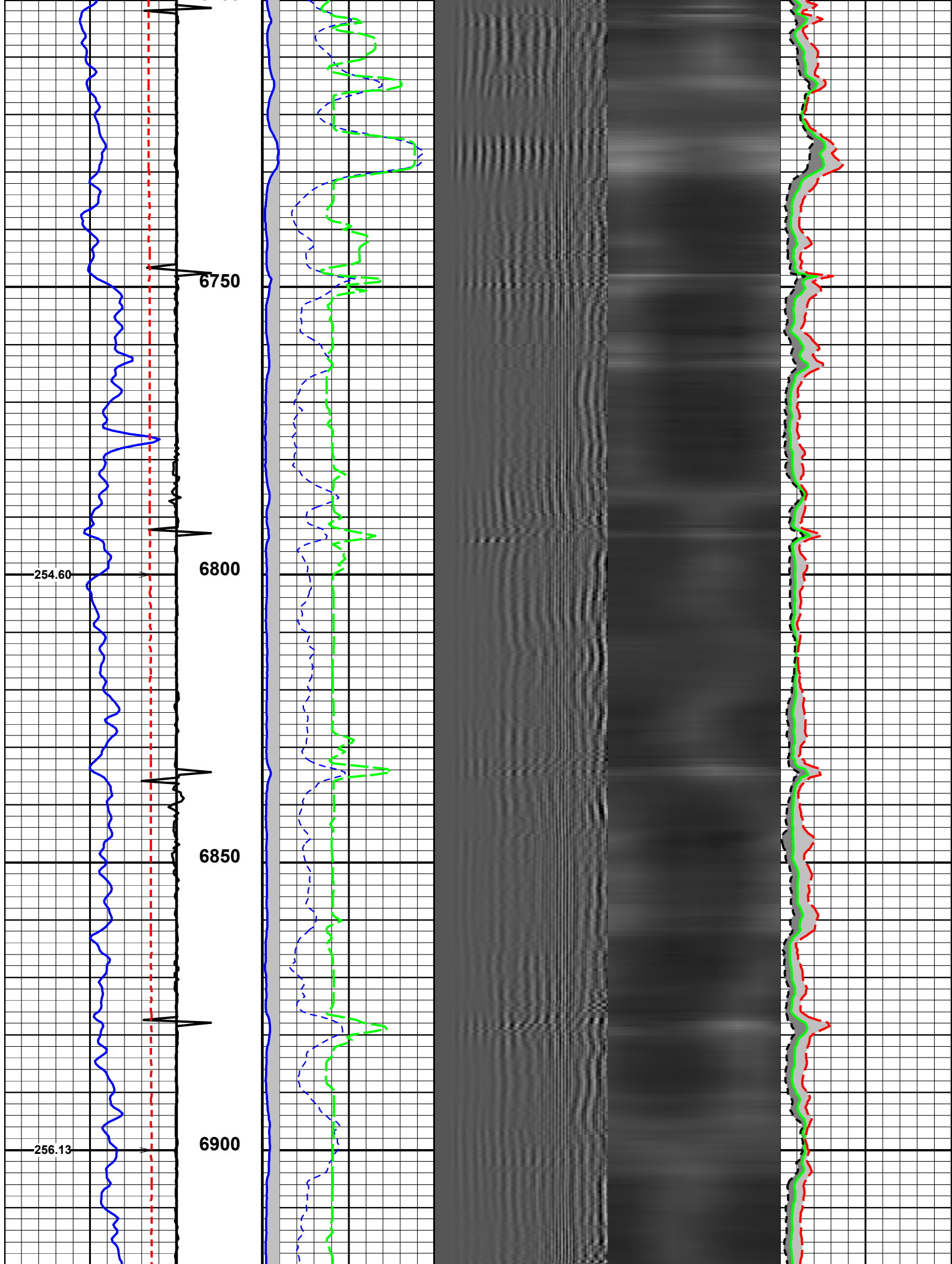


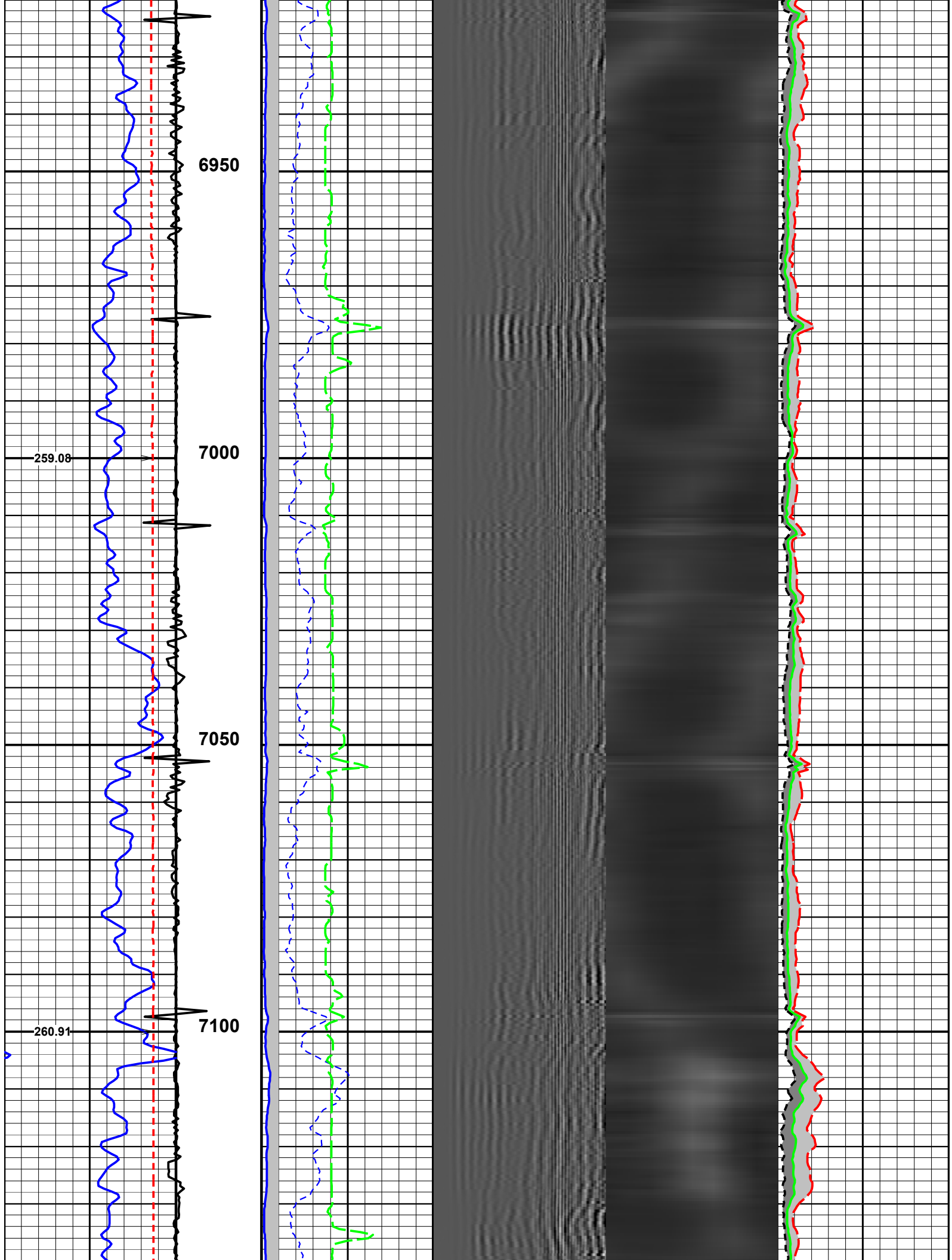


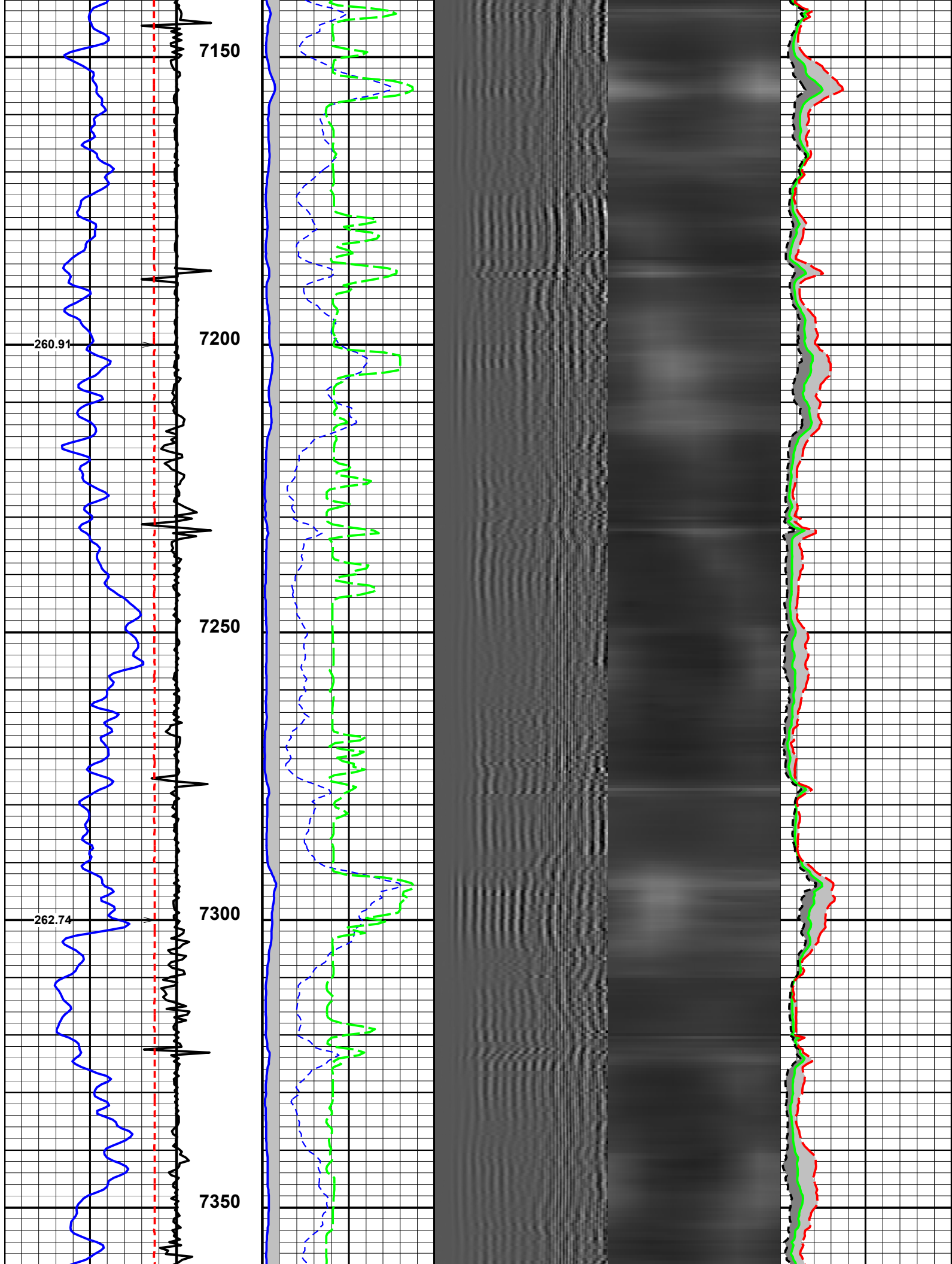


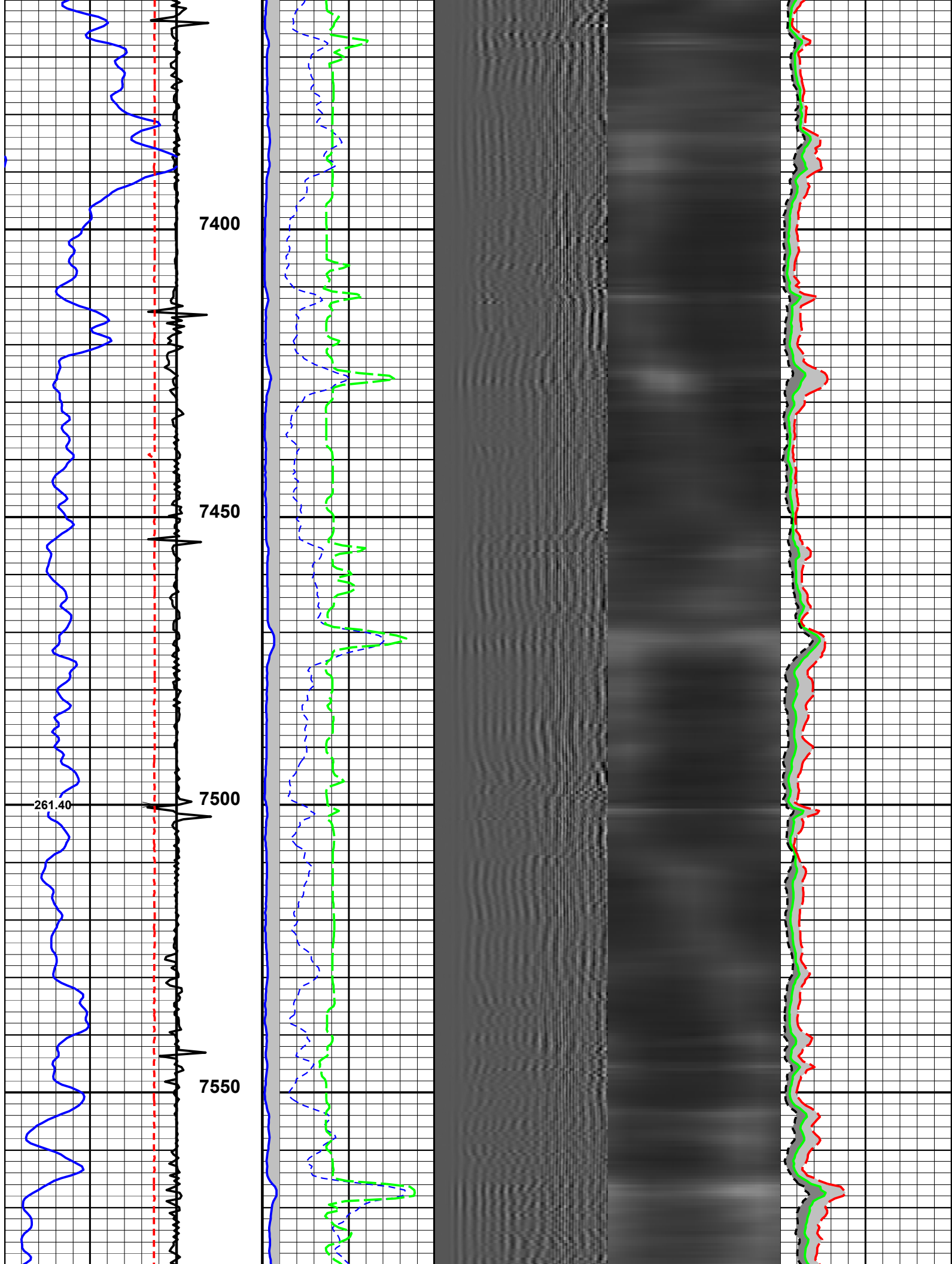


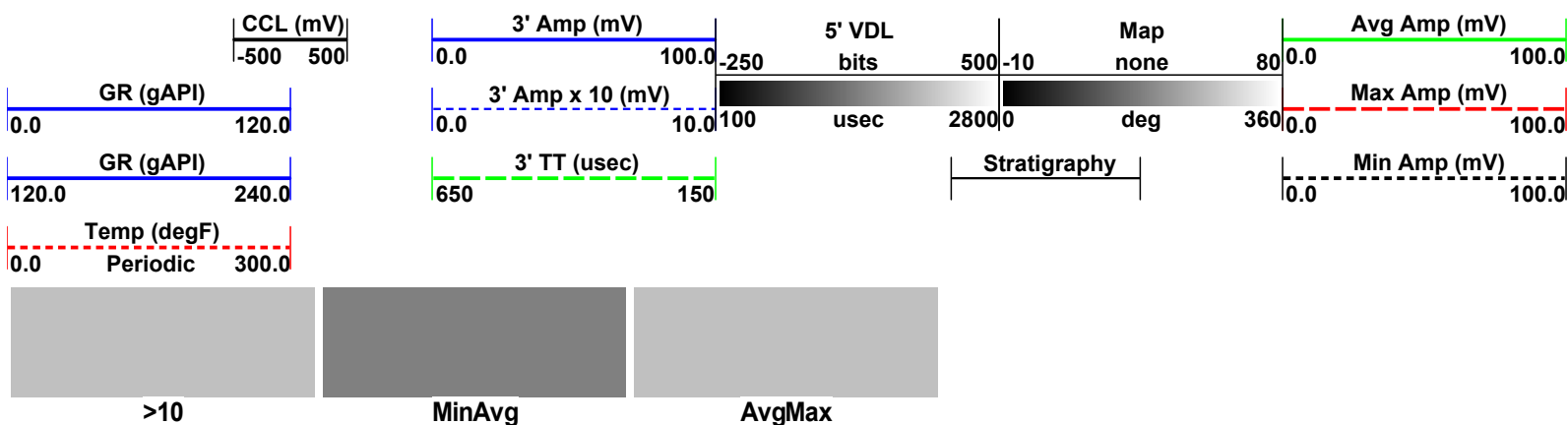
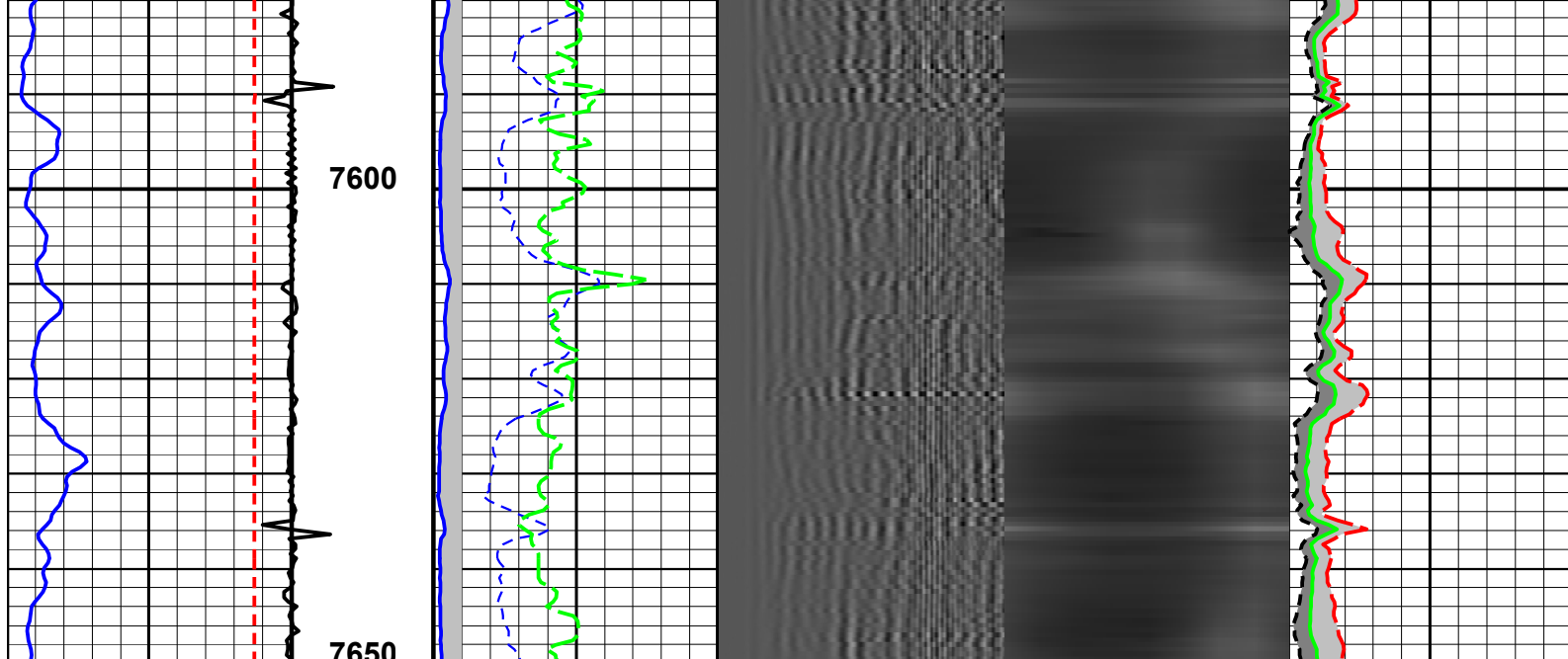








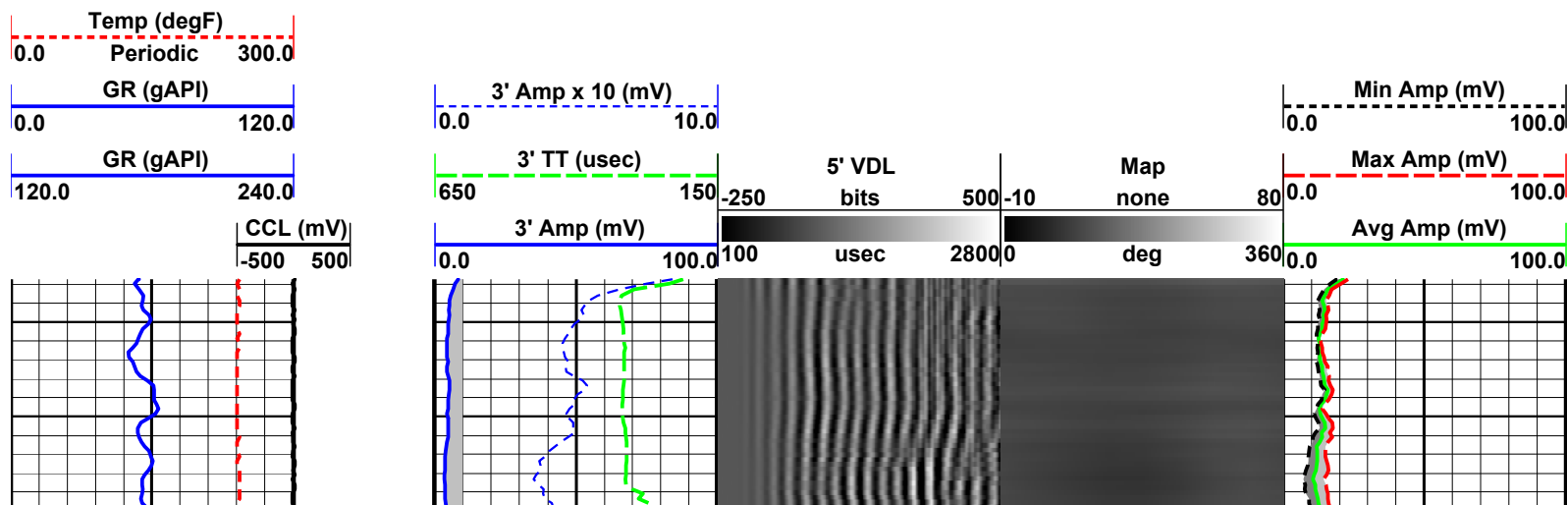


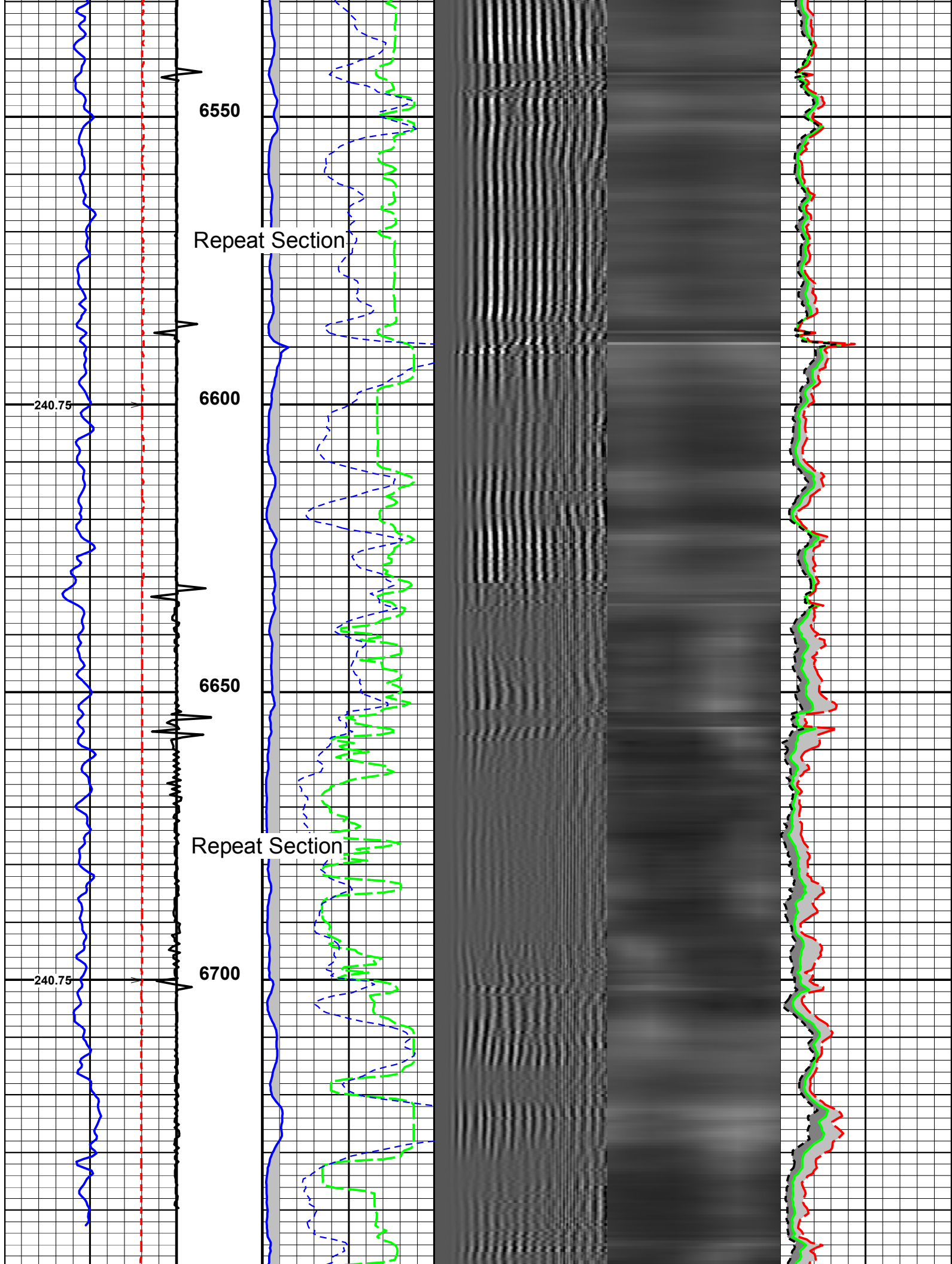


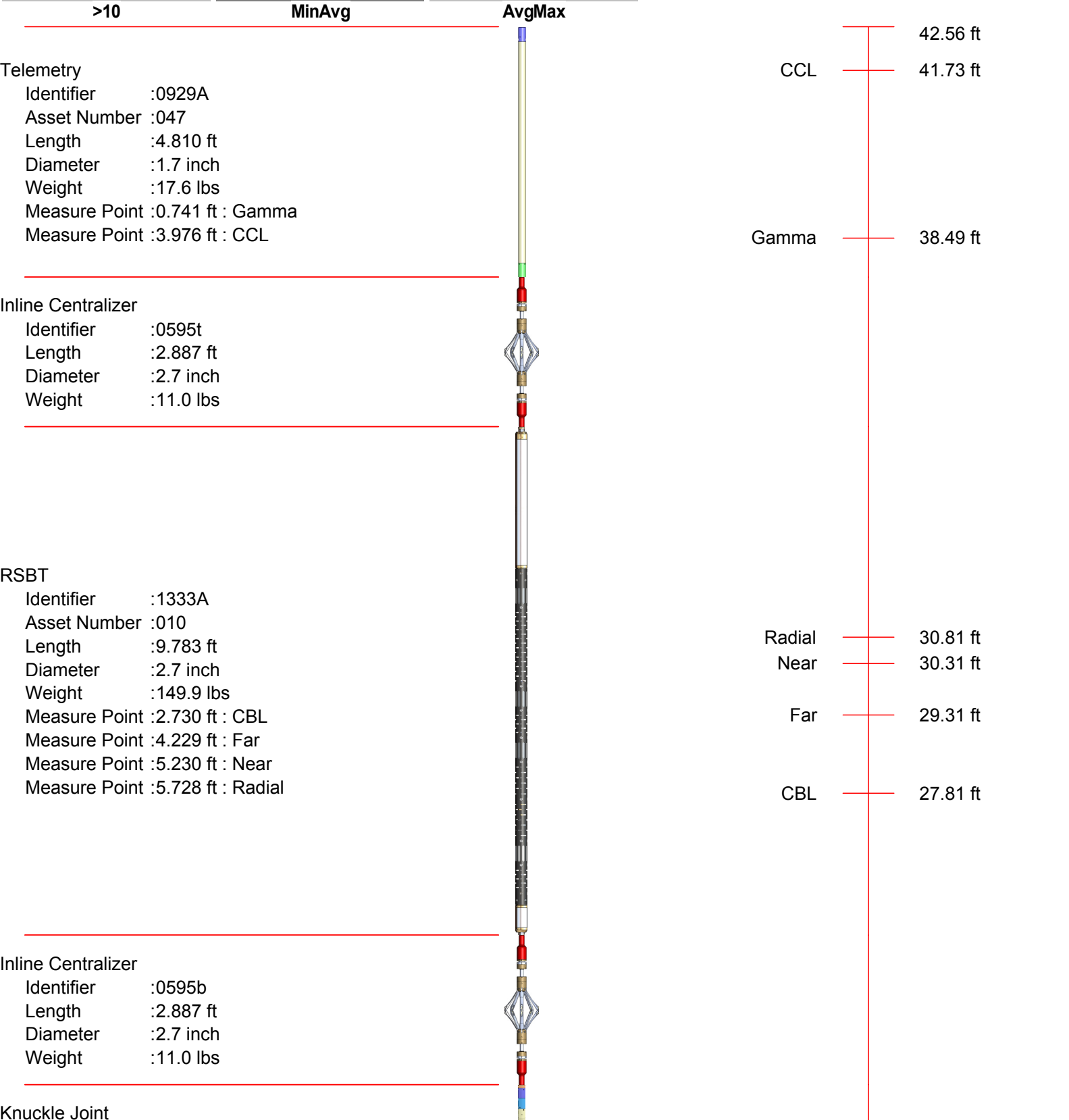
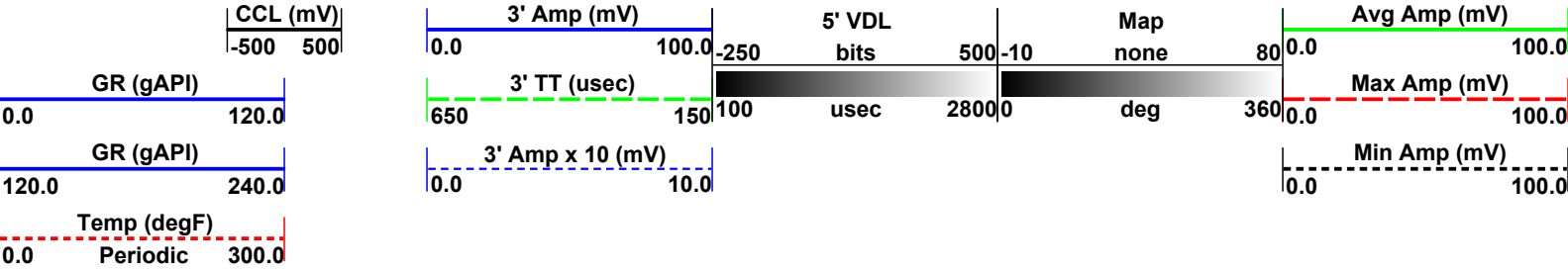
Repeat Pass
Logged with 0 PSI surfaced induced pressure

Company :
Well : Cook 1C-16HZ
Scale : 1 : 240
Depth in : ft
Software : WinAPIot Ver. 5, 92, 12, 0

Date : 03.08.2016
Time : 10:07:03
Remarks :
File Name : Repeat with pdn







Identifier :0814
Length :2.854 ft
Diameter :1.7 inch
Weight :16.5 lbs

PDN
Identifier :1471A
Asset Number :029
Length :19.337 ft
Diameter :1.7 inch
Weight :85.8 lbs
Measure Point :7.575 ft : ShortSpace
Measure Point :8.051 ft : LongSpace

LongSpace 8.05 ft
ShortSpace 7.58 ft

Total Length : 42.56 ft
Total Weight : 291.89 lbs
Max Diameter : 2.7 inch

0.00 ft

File : C:\...\UserData\Job Files\COOK 1C-16HZ\ASF_0929A_047.cvf

Tool name : **Telemetry** Asset : **047** Series : **0929A** Source ID :

Gamma

Gamma Calibration

Time

Setup

Description

Setup Version 00000

Block	Raw Value	User Value	Device	Device SN	Mult.
Background	0				
Jig ON	1				
Gamma	1	0.9 gAPI			0.9

Tool name : **Telemetry** Asset : **047** Series : **0929A** Source ID :

Acc

Two Point Calibration

Time

Setup

Description

Setup Version 00000

Curve Name	pt	Raw Value	User Value	Device	Mult.	Add.
Accel	1	0	0 g		0.991621	-0.000
Accel	2	1.00845	1 g			

File : C:\...\UserData\Job Files\COOK 1C-16HZ\ASF_1333A_010.cvf

Tool name : **RSBT** Asset : **010** Series : **1333A** Source ID :

GoodAmpPercentF

Array Calibration

Time

Setup

Description

Setup Version 00000

No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
01:	10										

Tool name : **RSBT** Asset : **010** Series : **1333A** Source ID :

GoodAmpPercentN

Array Calibration

Time

Setup

Description

Setup Version 00000

No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
01:	10										

Tool name : **RSBT** Asset : **010** Series : **1333A** Source ID :

GoodAmpPercentS

Array Calibration

Time

Setup

Description

Setup Version 00000

No	Value	No	Value	No	Value	No	Value	No	Value
01:	10								

Tool name : **RSBT**Asset : **010**Series : **1333A**

Source ID :

Amplitudes**RSBT Amplitude Calibration**

Time

Setup

Description

Setup Version 00000

Device Description

Casing ID 4.78 inch

Fluid Velocity 1500 m/s

Amplitude 100 %

Instrument Readings

	Near	Far
CBL Amplitudes	6490.870	7339.970

	1	2	3	4	5	6	7	8
Radial Amplitudes	5565.980	5479.440	5792.180	6143.380	6237.380	5866.010	5760.950	5637.710

File : C:\...\UserData\Job Files\COOK 1C-16HZ\ASF_1471A_029.cvf

Tool name : **PDN**Asset : **029**Series : **1471A**

Source ID :

Ratio**Compensated Neutron Calibration**

Time

Setup

Description

Setup Version 00000

Curve Name	pt	Raw Value	User Value	Device	Mult.
Ratio	1	5.271	5.271 none		1.000000



API #: 05-123-42240
 COMPANY: Kerr McGee Oil & Gas Onshore LP.
 WELL: Cook 1C-16HZ
 FIELD: Wattenberg
 COUNTY: Weld

DATE : 08-03-2016

STATE: Colorado

Radial Cement Bond
Gamma Ray
Casing Collar Log