



County Adams State Colorado

K.B.	5076"
D.F.	---
G.L.	5049"

ate	02-APR-2019
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Run Number	One
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Depth Driller	12525 FT
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Depth Logger 7899 FT

Bottom Logged Interval	7884 FT
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op Log Interval	Surface
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pen Hole Size	7.875"
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Type Fluid	Water
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
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56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

8.34 lb/qa

Max. Recorded Temp.	235°F
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Estimated Cement Ton	See Loo
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Time Well Ready	ROA
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Time Logger on Bottom	12:00
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Equipment Number	HD-325
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Plattville, MO

Recorded By	J. Morrison
Location	1. HALLWAY, 2.

Witnessed By	Sven Anders
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Barahula Record	0.0000000000
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Run Number	Bit	From	To
Differential Encoding			

[illegible]

Weight	Size (in)	Wot (lbs/ft)
100	10	10
110	11	11
120	12	12
130	13	13
140	14	14
150	15	15
160	16	16
170	17	17
180	18	18
190	19	19
200	20	20
210	21	21
220	22	22
230	23	23
240	24	24
250	25	25
260	26	26
270	27	27
280	28	28
290	29	29
300	30	30
310	31	31
320	32	32
330	33	33
340	34	34
350	35	35
360	36	36
370	37	37
380	38	38
390	39	39
400	40	40
410	41	41
420	42	42
430	43	43
440	44	44
450	45	45
460	46	46
470	47	47
480	48	48
490	49	49
500	50	50
510	51	51
520	52	52
530	53	53
540	54	54
550	55	55
560	56	56
570	57	57
580	58	58
590	59	59
600	60	60
610	61	61
620	62	62
630	63	63
640	64	64
650	65	65
660	66	66
670	67	67
680	68	68
690	69	69
700	70	70
710	71	71
720	72	72
730	73	73
740	74	74
750	75	75
760	76	76
770	77	77
780	78	78
790	79	79
800	80	80
810	81	81
820	82	82
830	83	83
840	84	84
850	85	85
860	86	86
870	87	87
880	88	88
890	89	89
900	90	90
910	91	91
920	92	92
930	93	93
940	94	94
950	95	95
960	96	96
970	97	97
980	98	98
990	99	99
1000	100	100

Surface Casino	9 5/8	36
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intermediate #1	5 1/2	20
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intermediate #2		
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per			
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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 Casing Tally reported Flotation Collar at 6932 FT
Adjusted -17 FT to correlate with Flotation Collar
Using Flotation Collar as Marker Joint
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

Thank you for choosing Reliance Oilfield Services, LLC!!

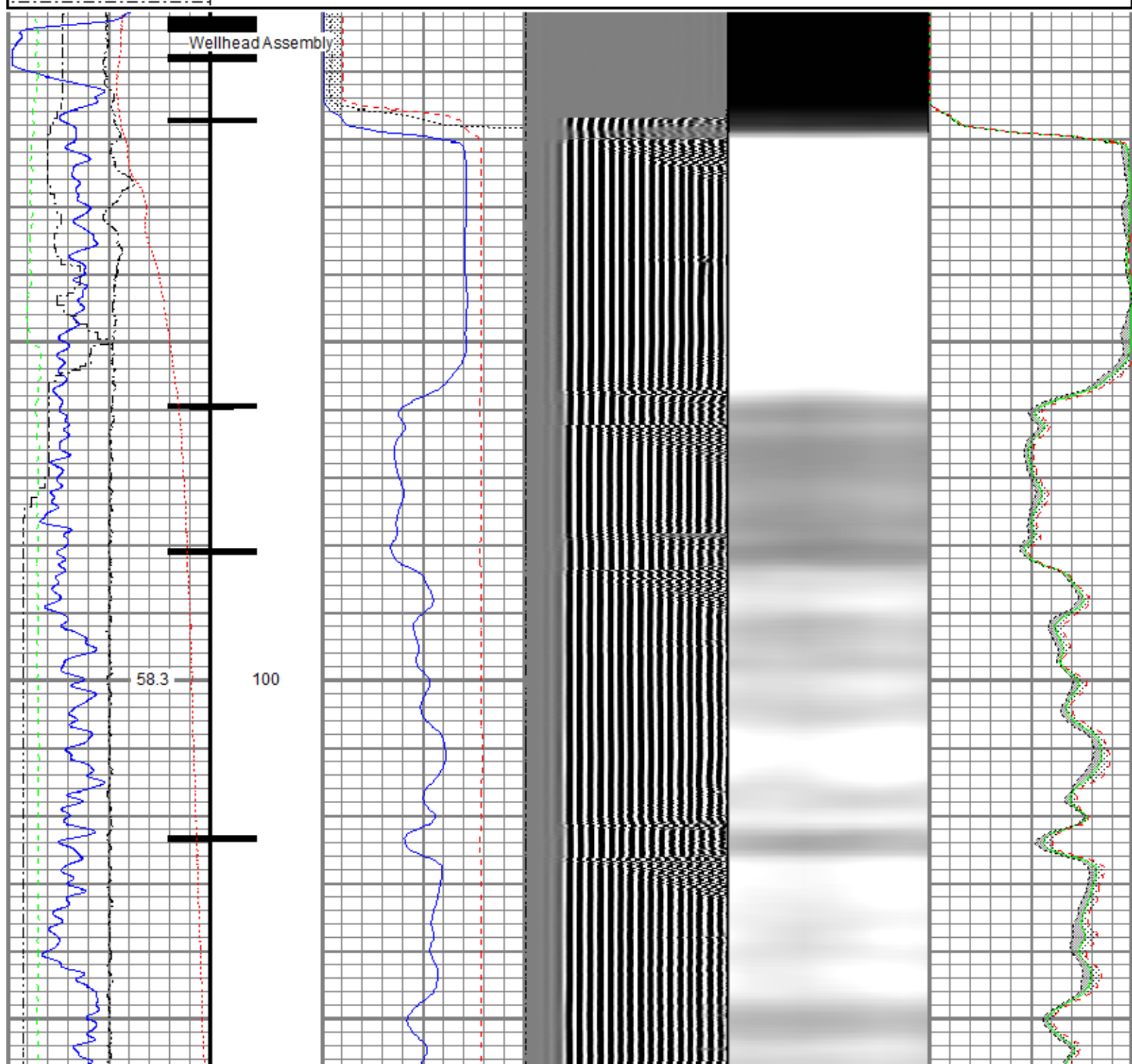
Main Pass

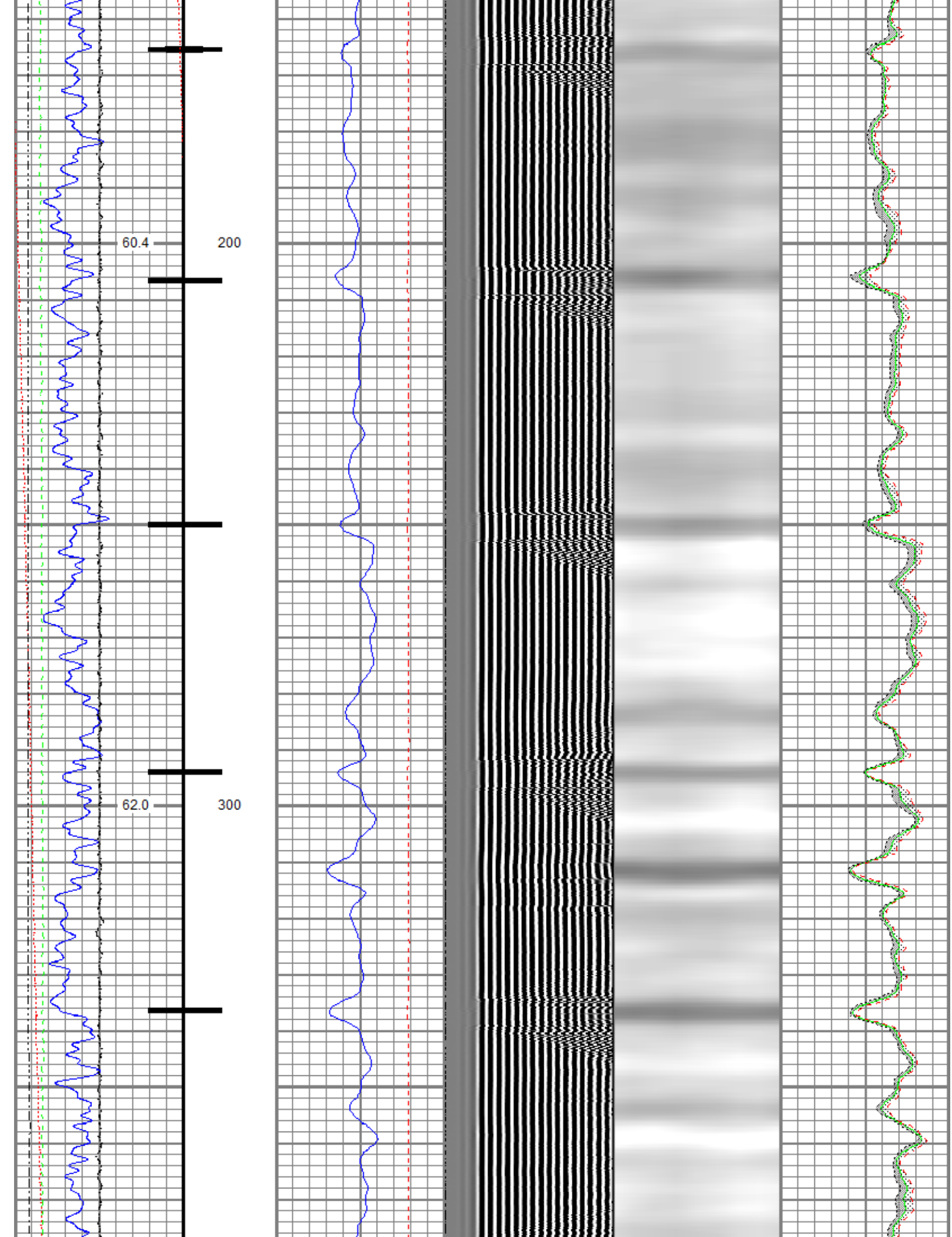


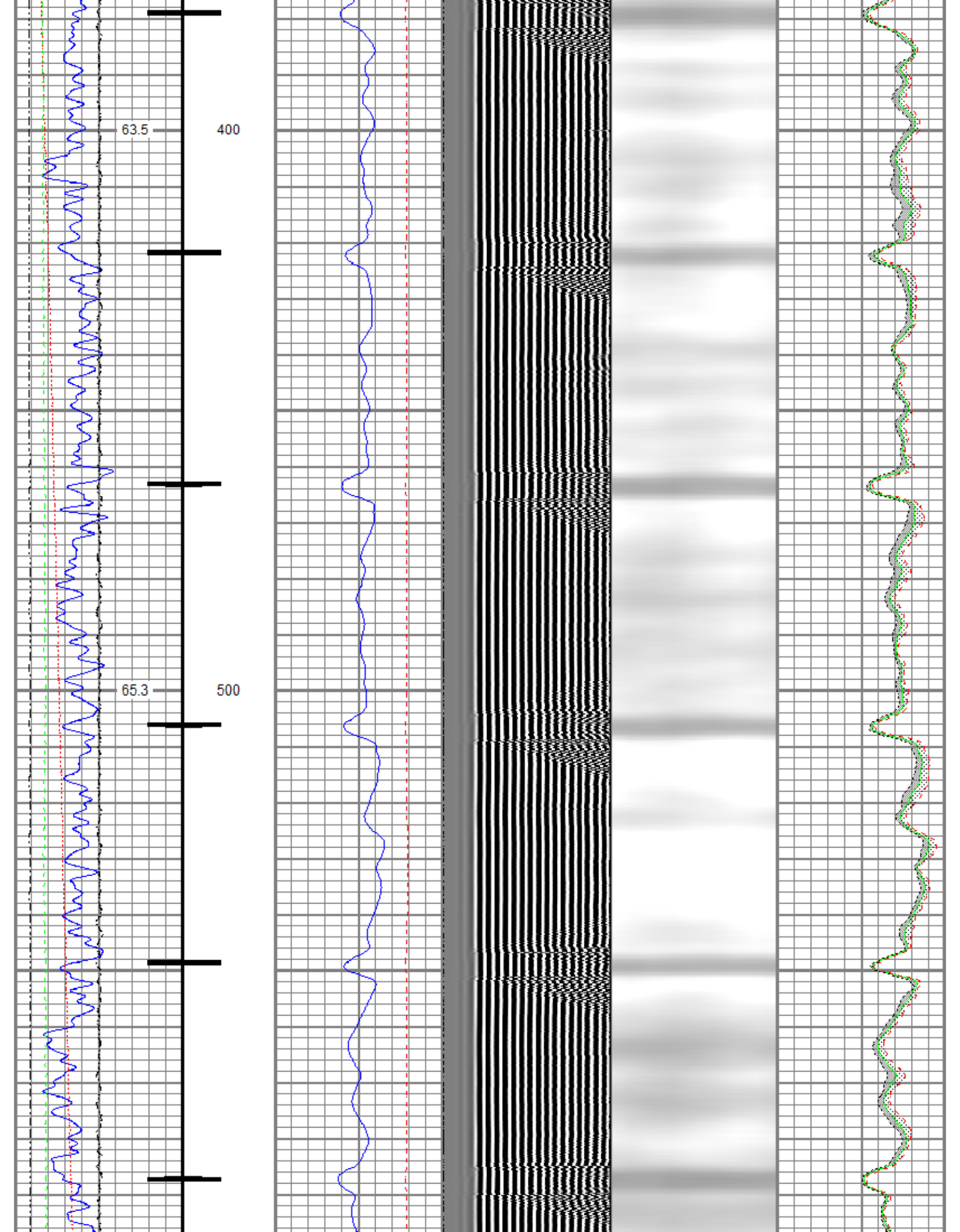
Recorded With A DSL Surface Induced Pressure

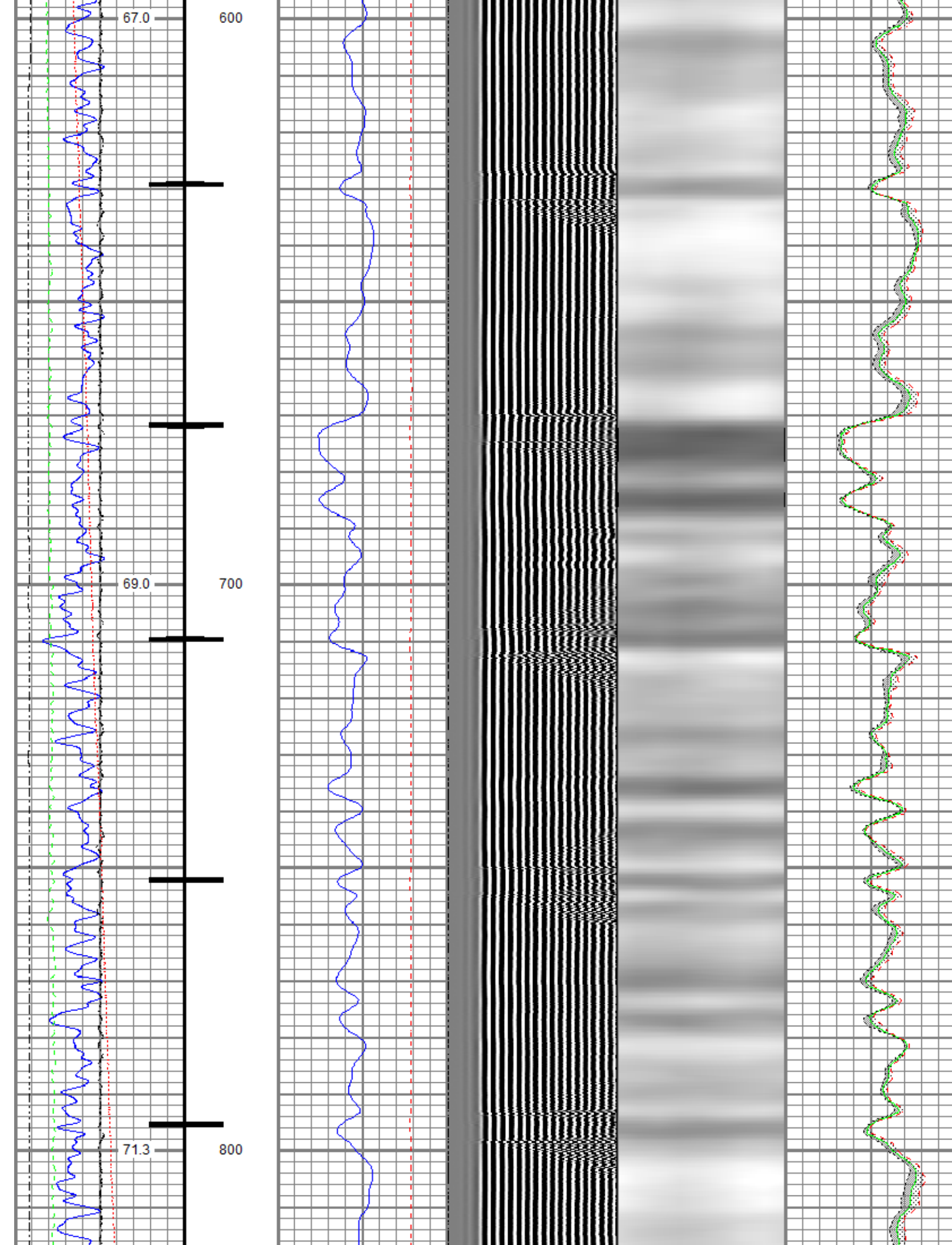
Database File	petro\petro_bef west 15_rbl_04-02-19\petro_bef west 15_rbl_04-02-19.db
Dataset Pathname	Main.3
Presentation Format	ros_radri
Dataset Creation	Tue Apr 02 15:10:15 2019
Charted by	Depth in Feet scaled 1:240

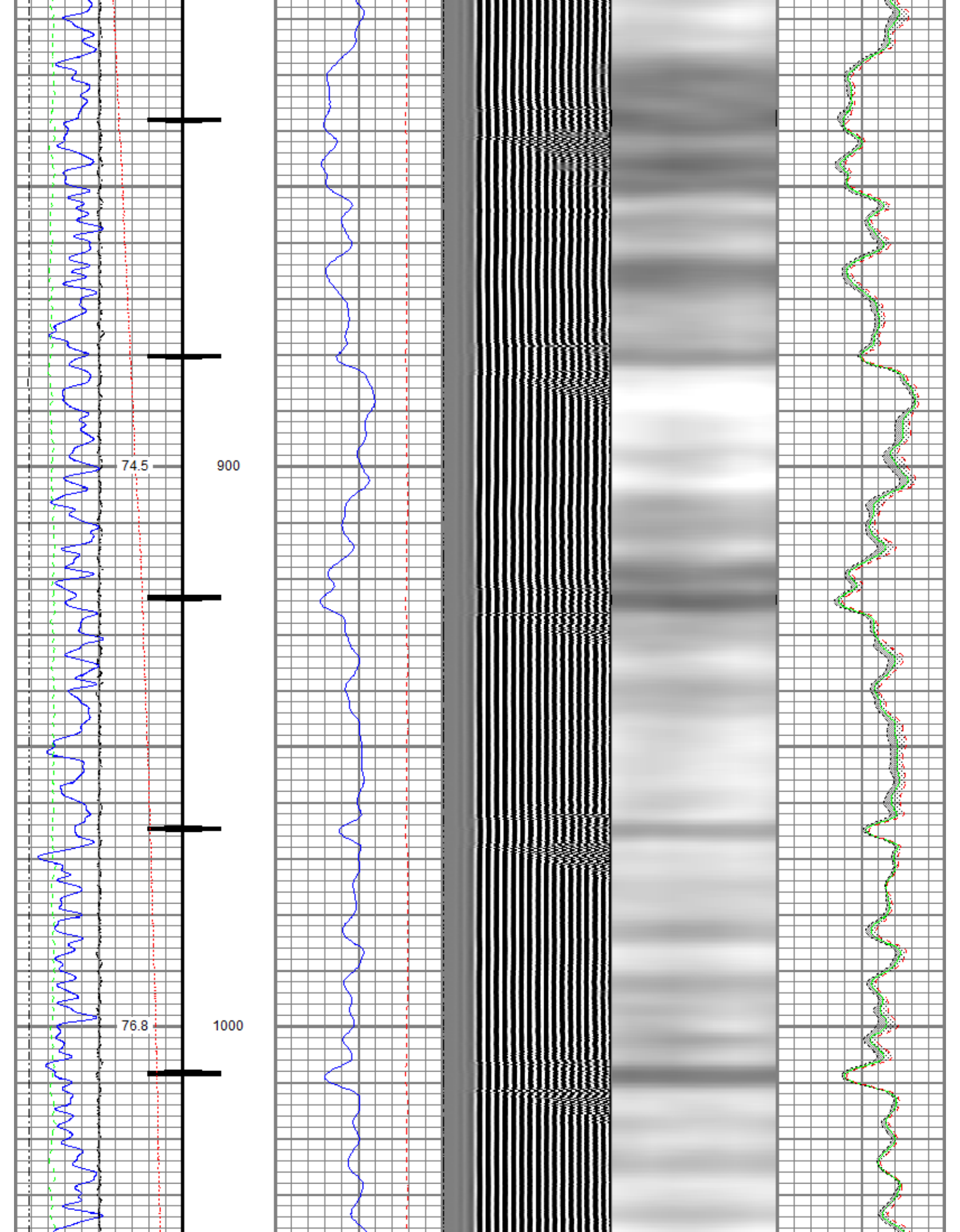
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	1200			Minimum Amplitude	
Casing Collar Locator		0	(mV)	20			0	100
Temperature (degF)	20	3' Travel Time					Maximum Amplitude	
Line Speed		650	(usec)	150			0	100
-150	(ft/min)	150						
Line Tension (lb)	2000							
Differential Temperature								
-2	(degF)	2						

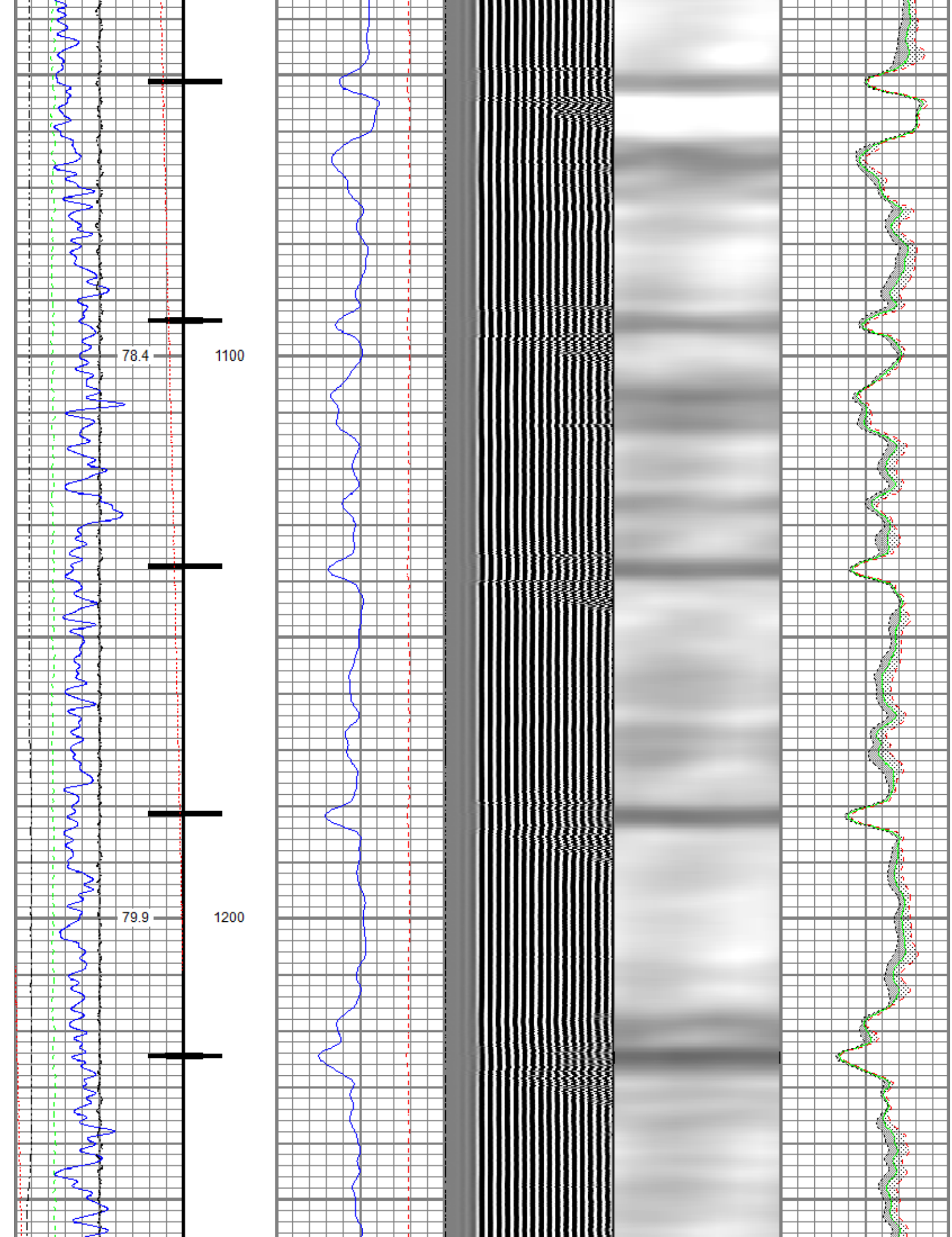


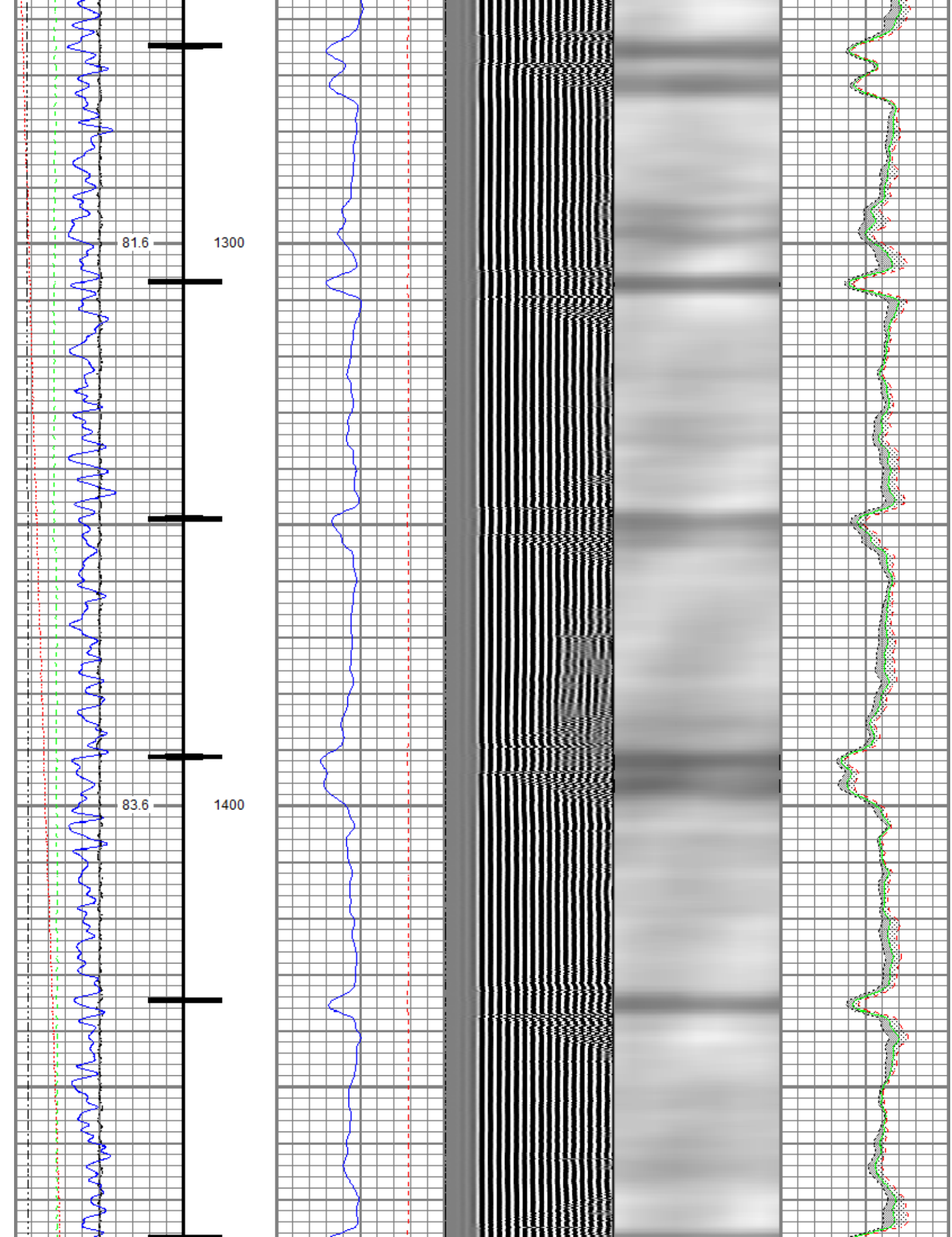


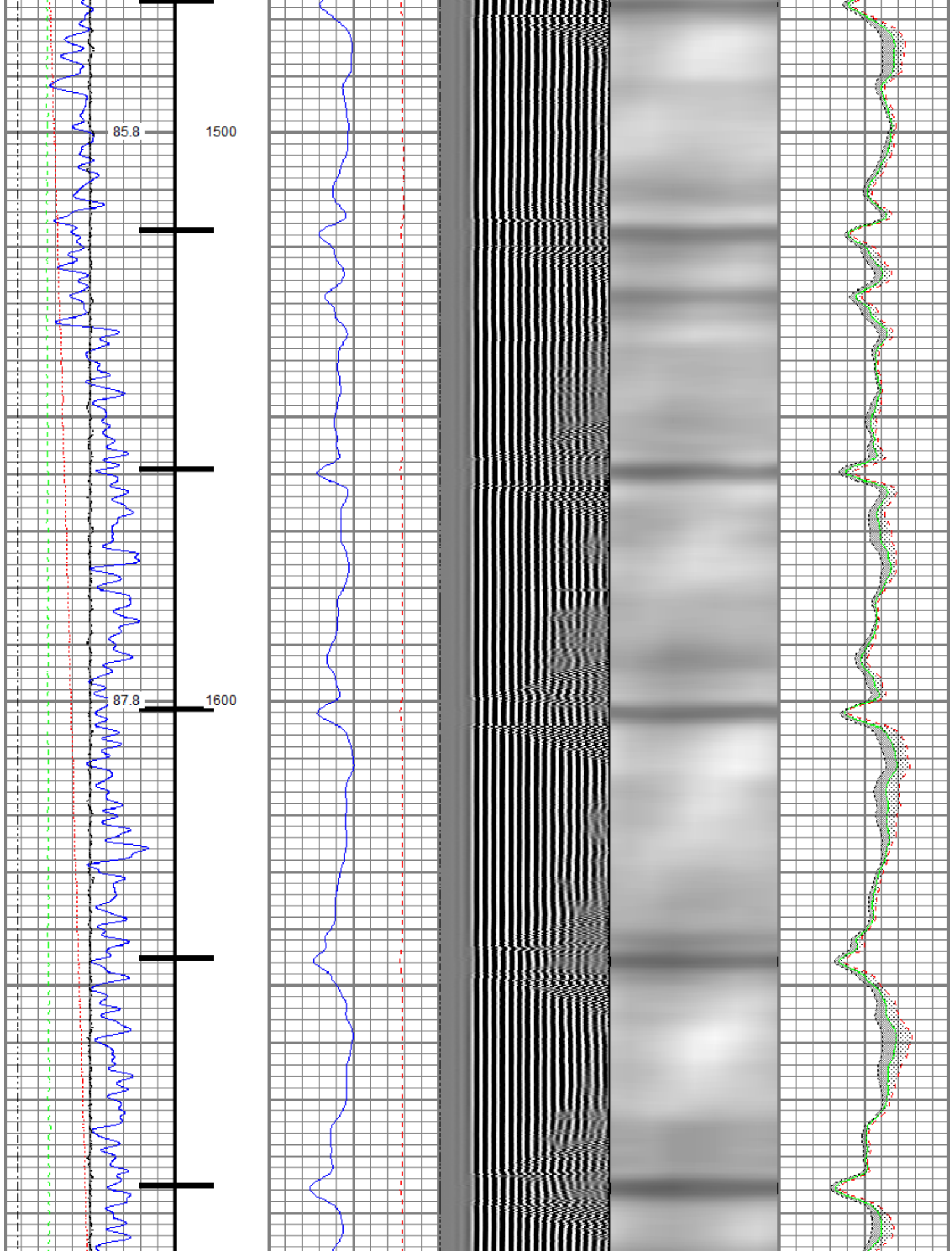


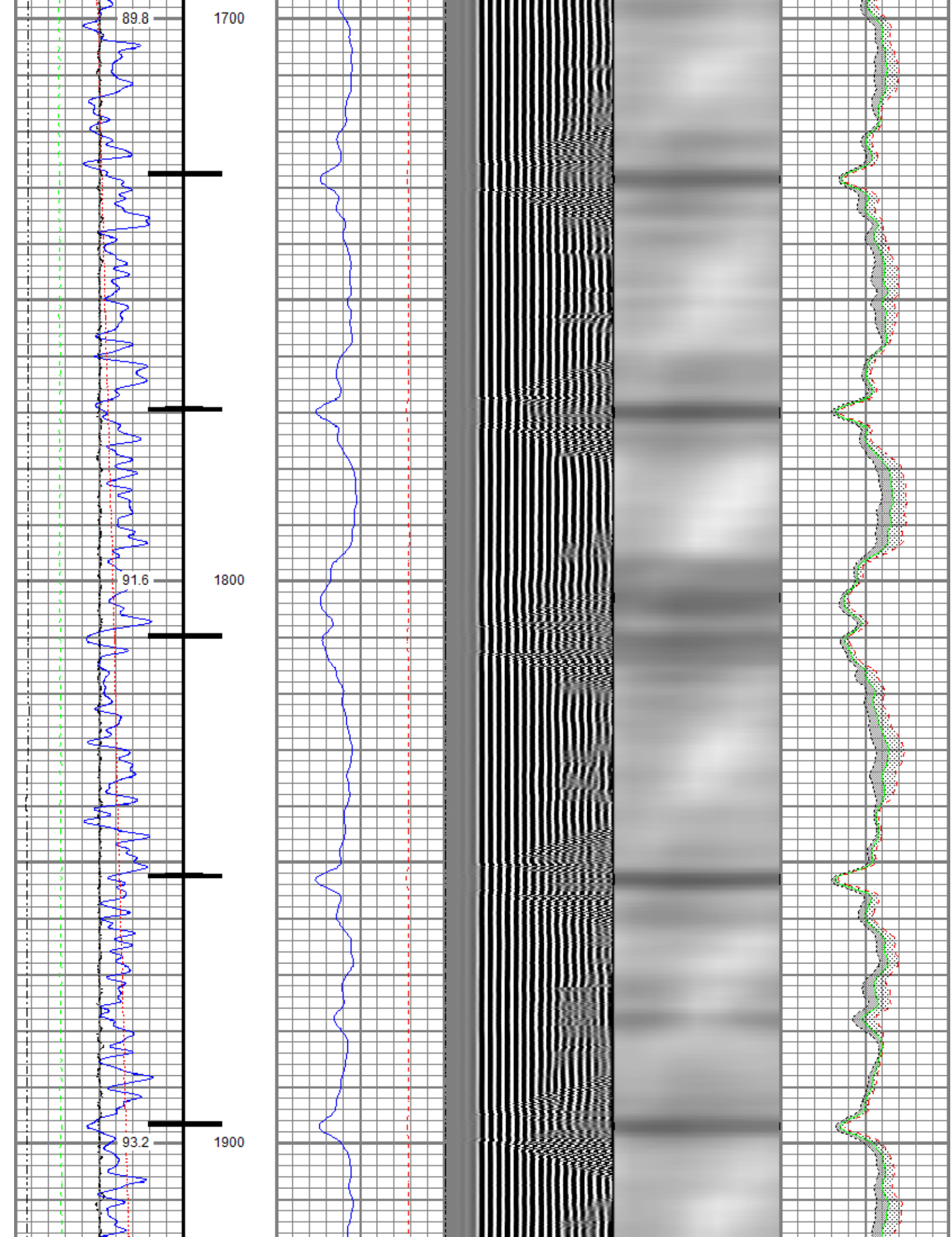


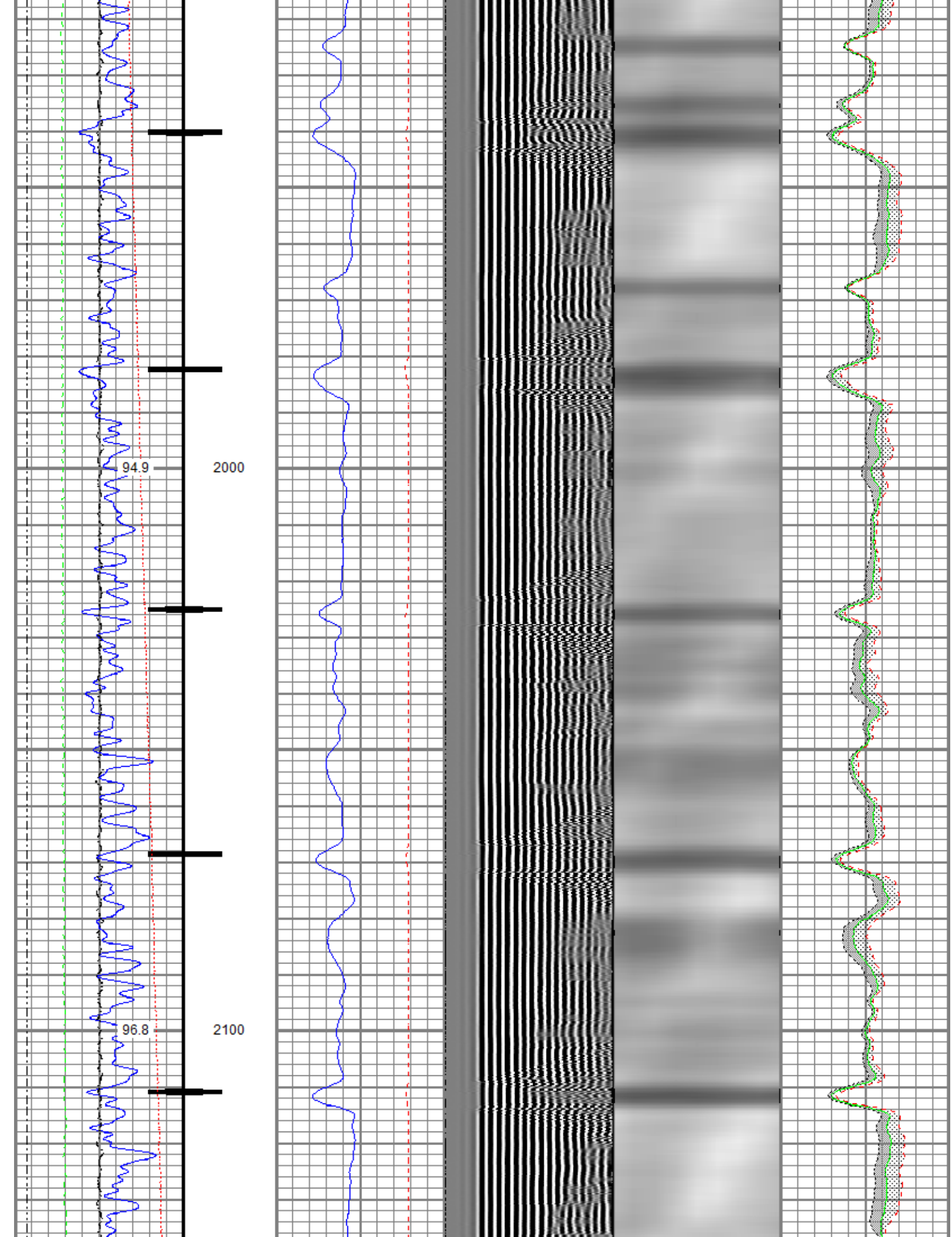


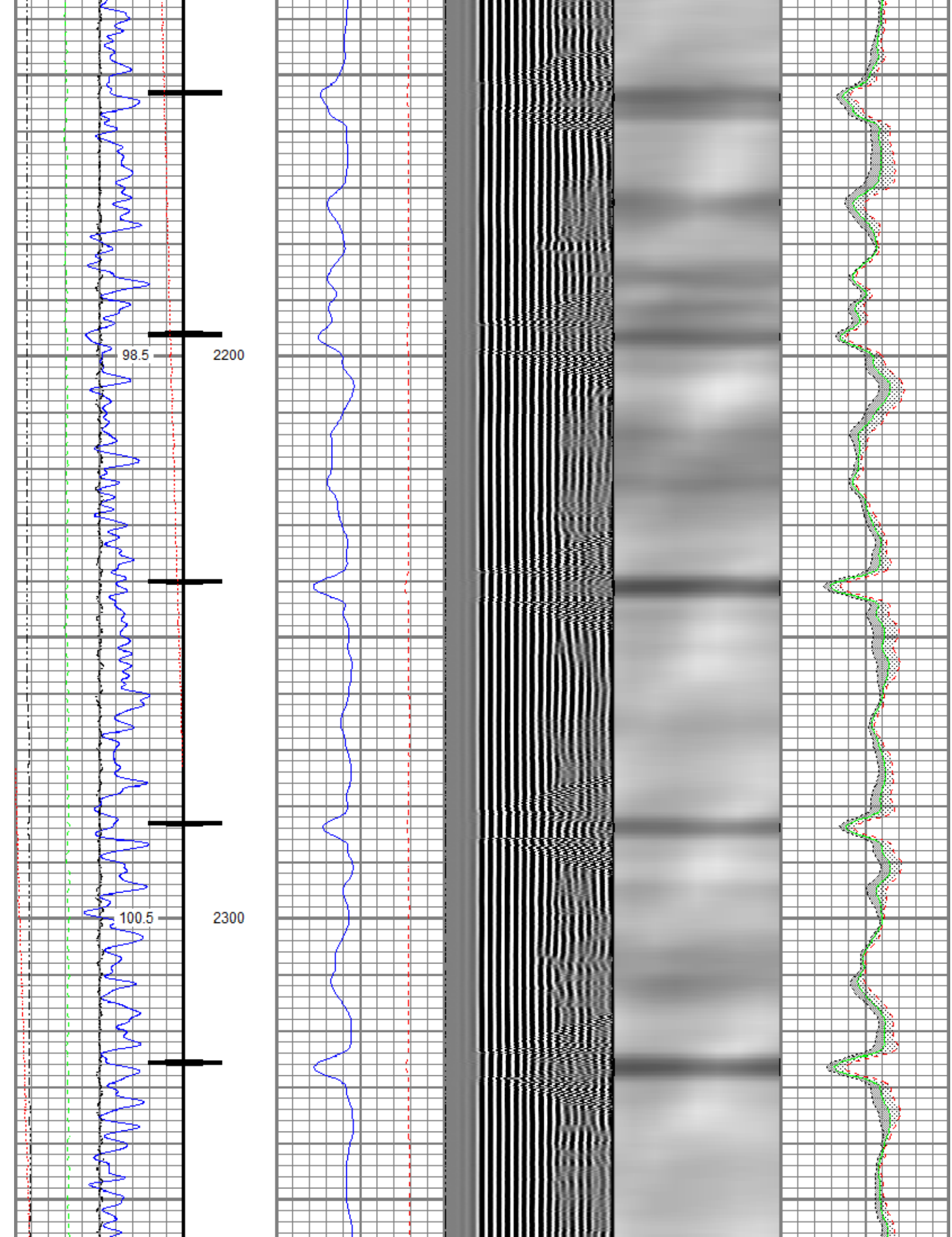


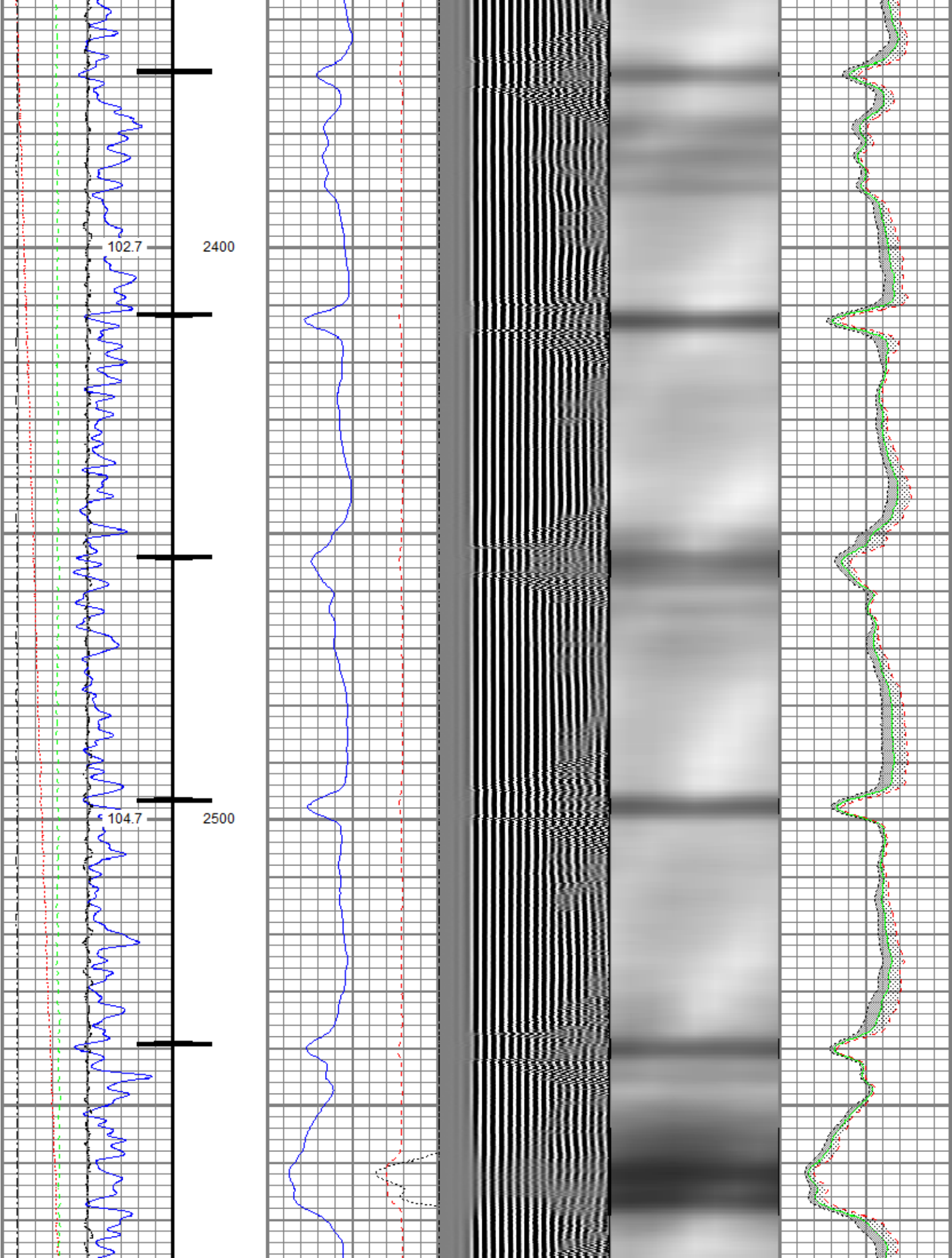


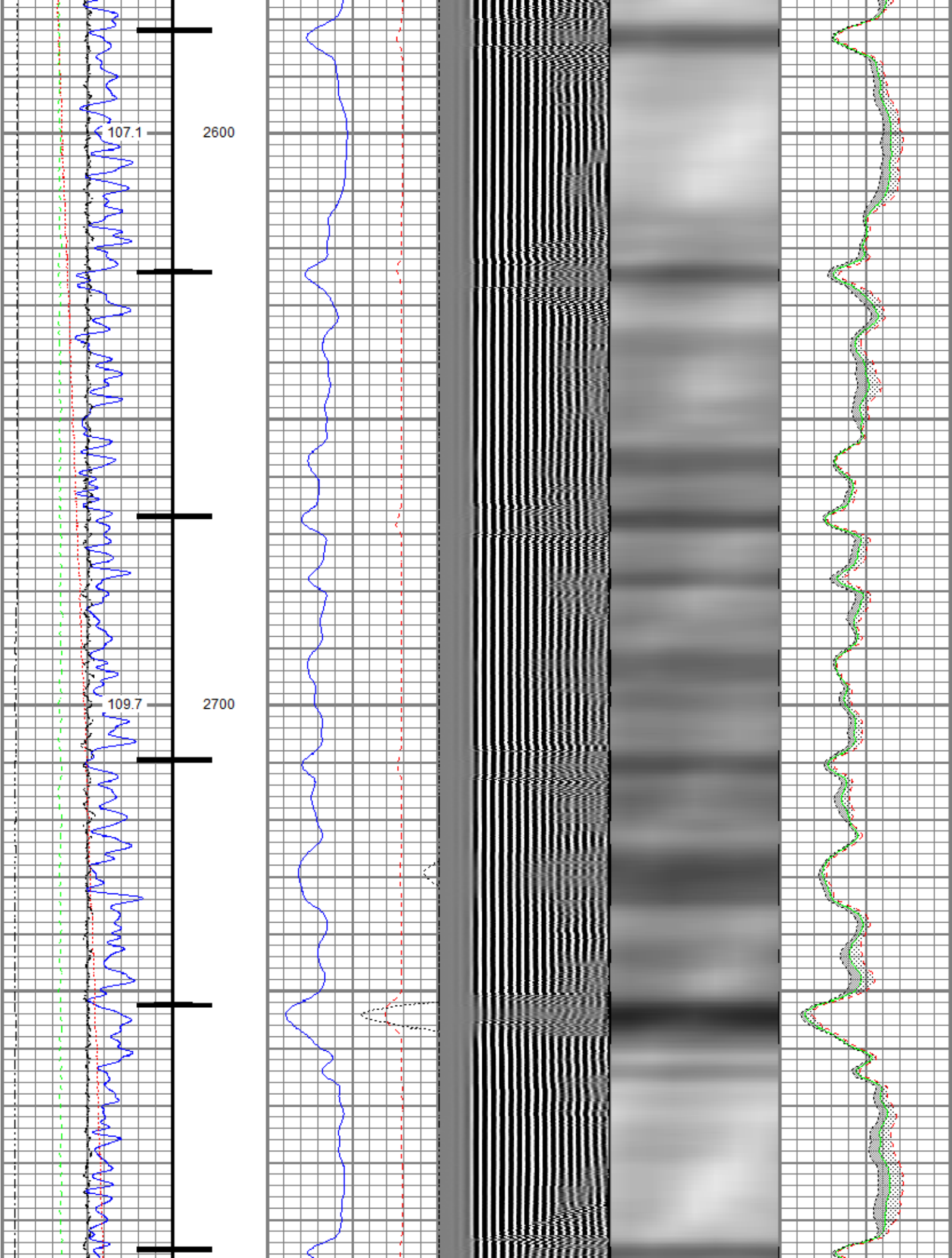


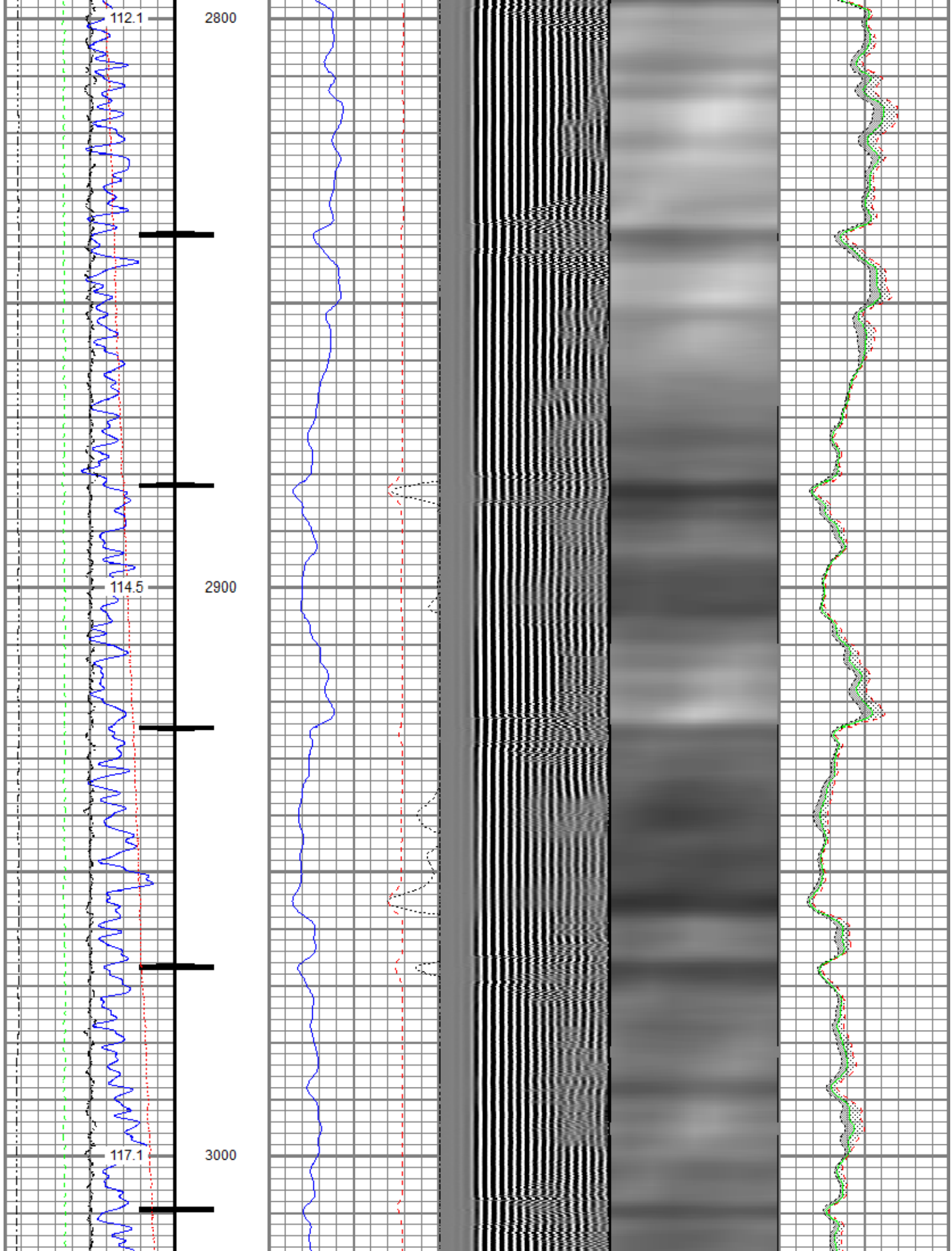


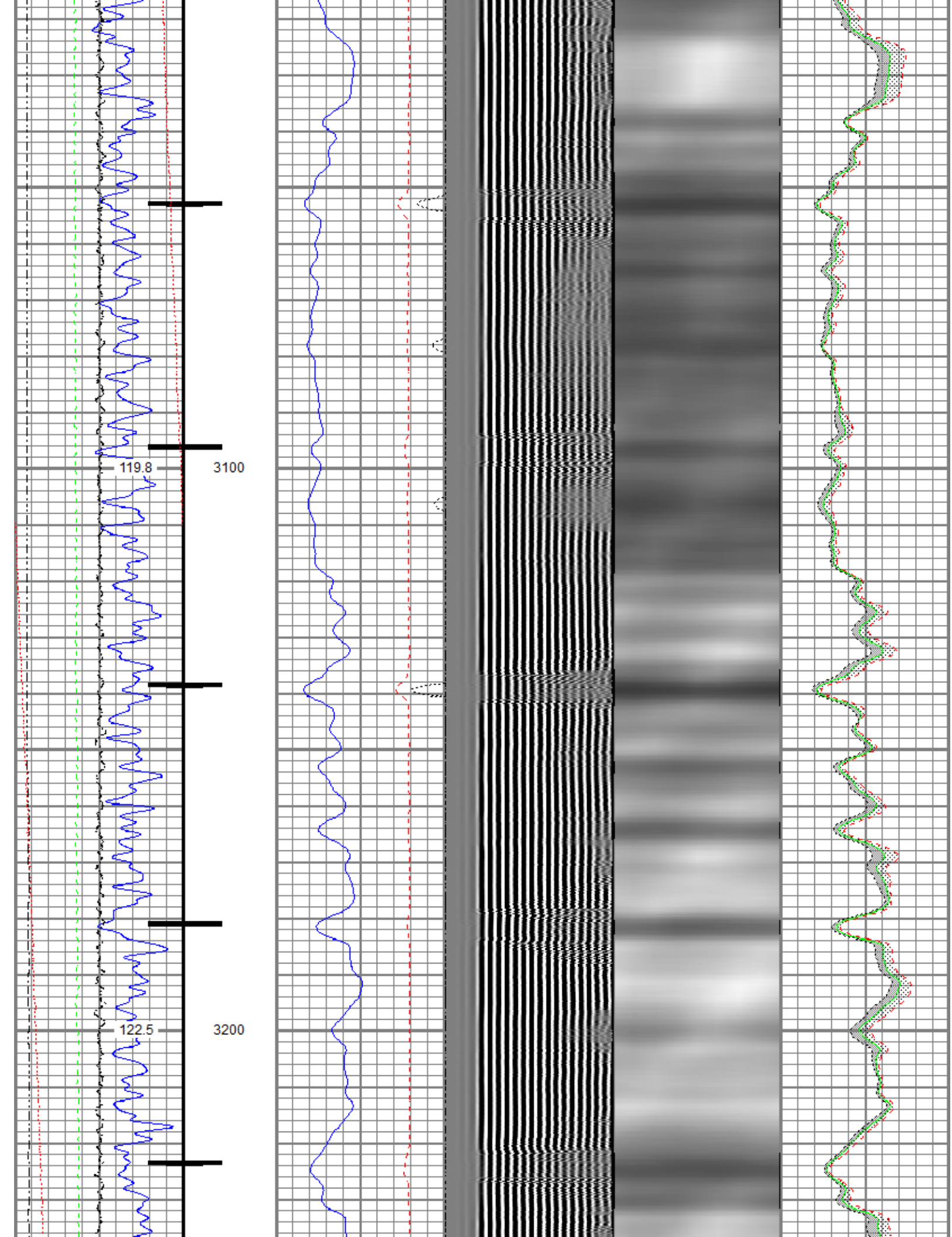


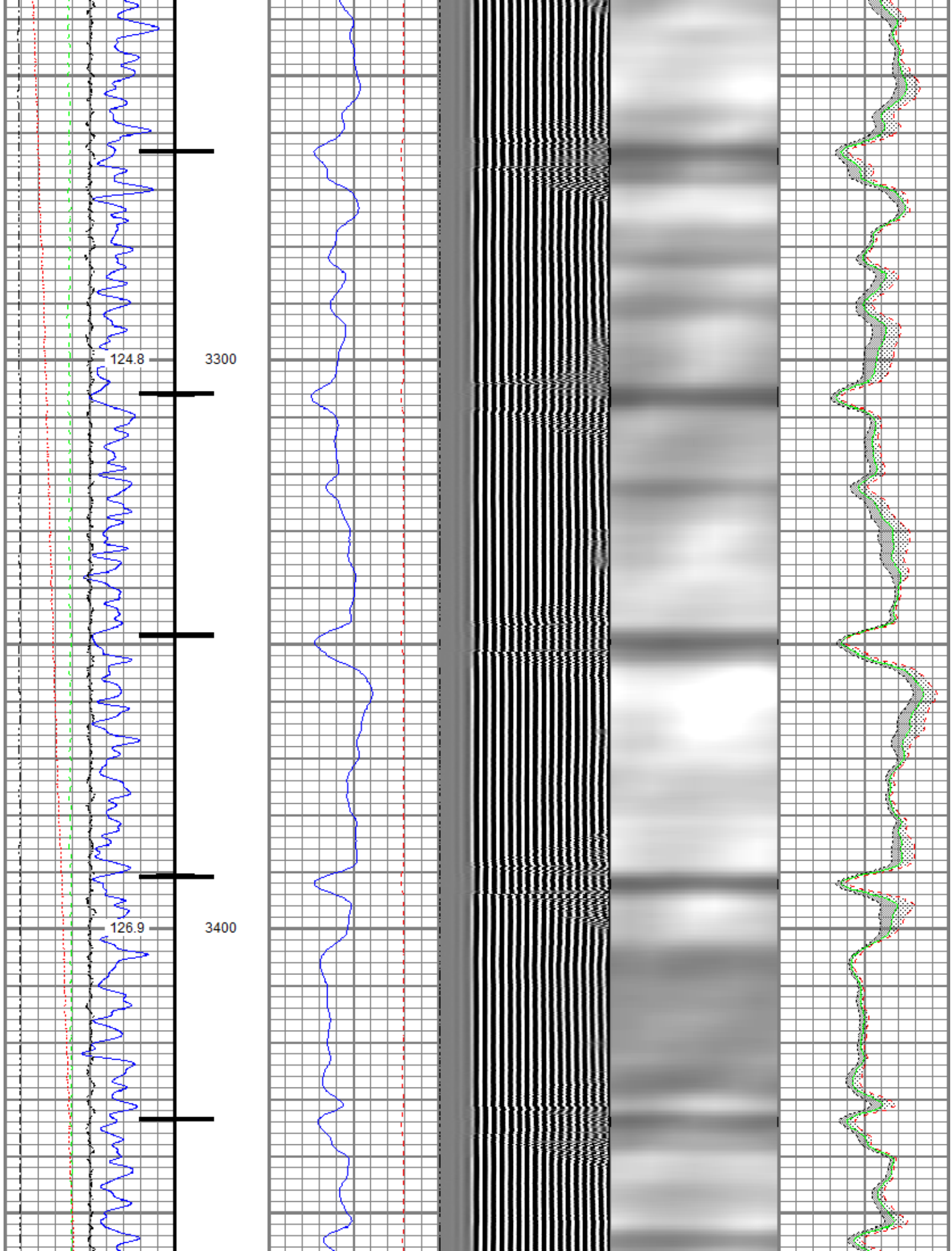


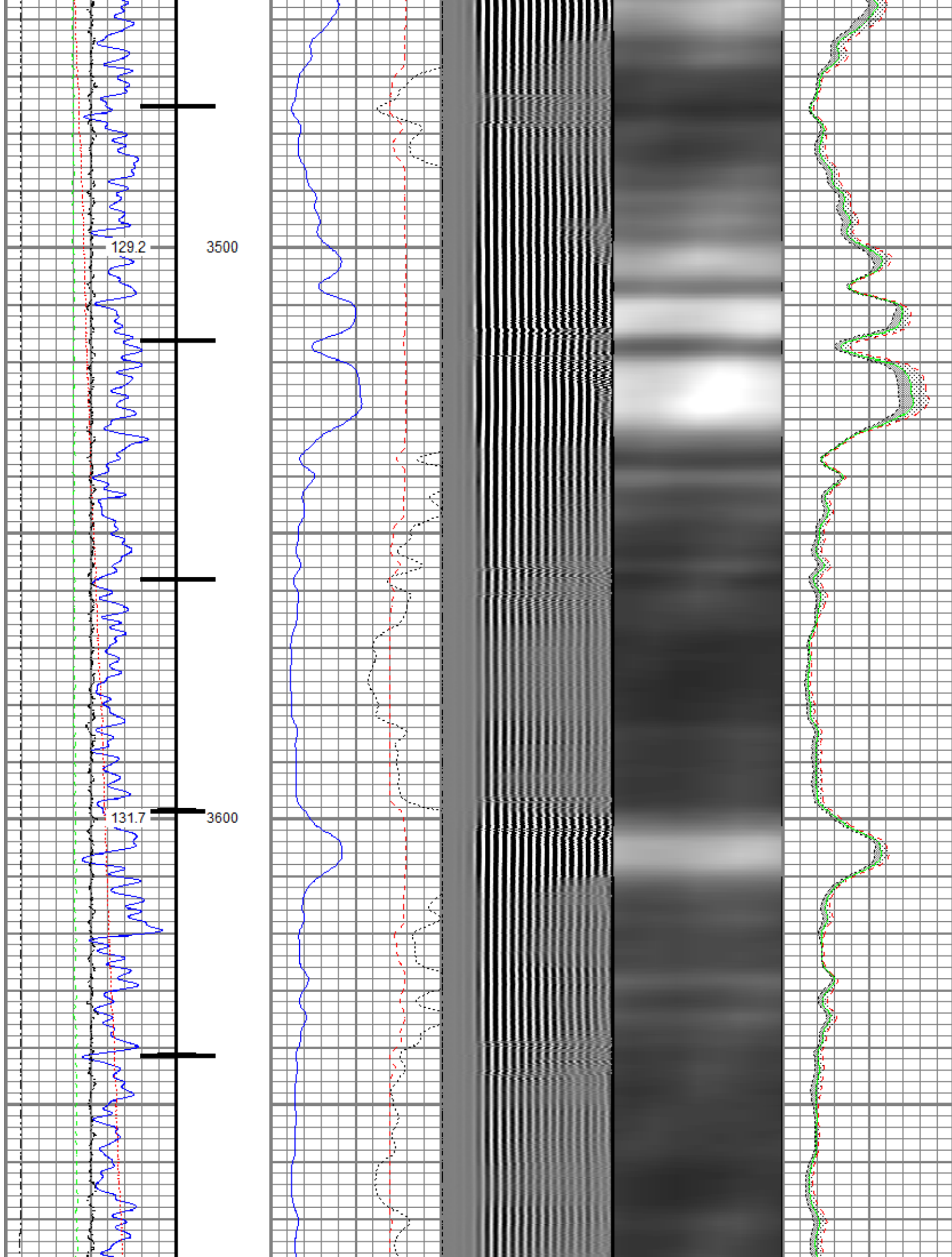


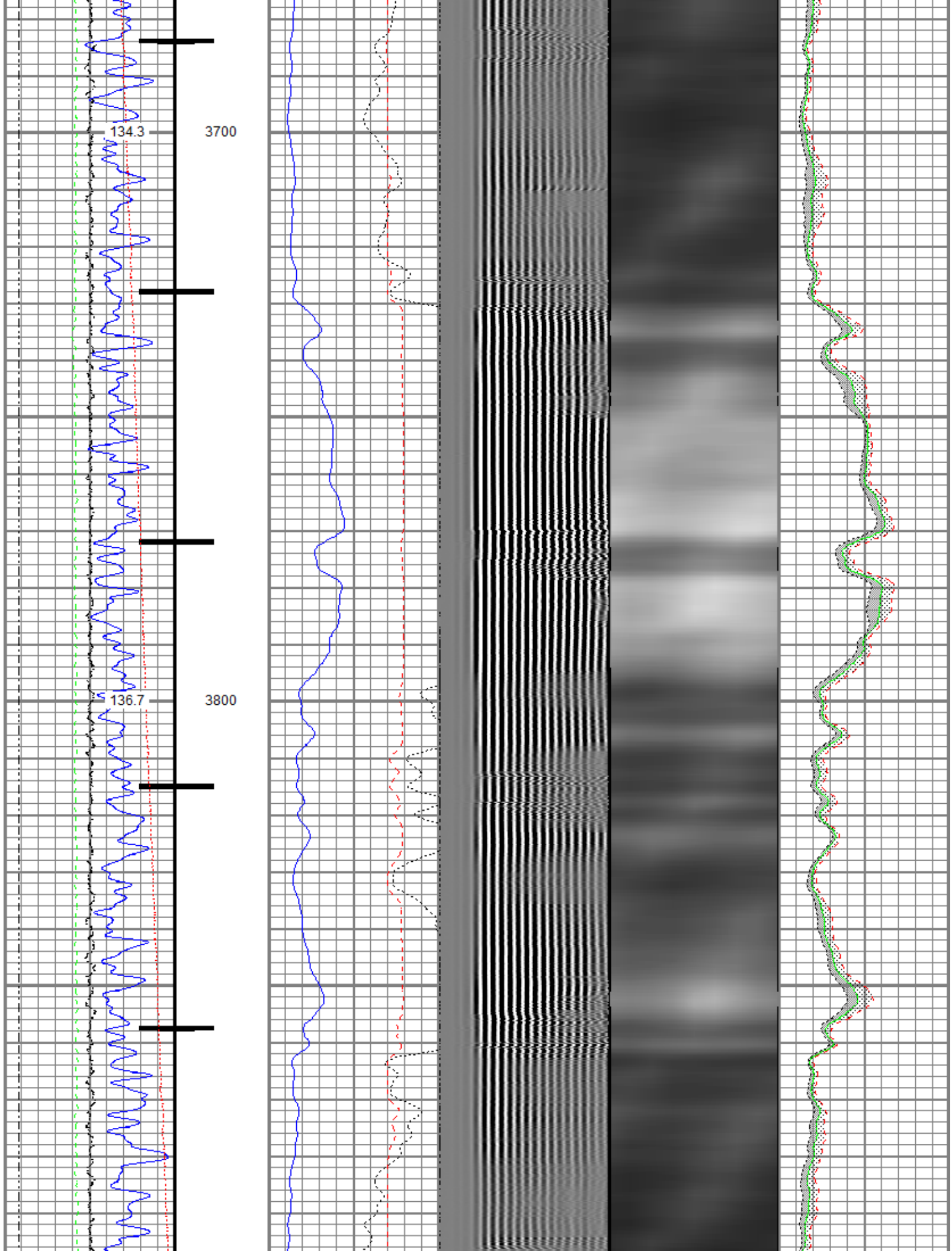


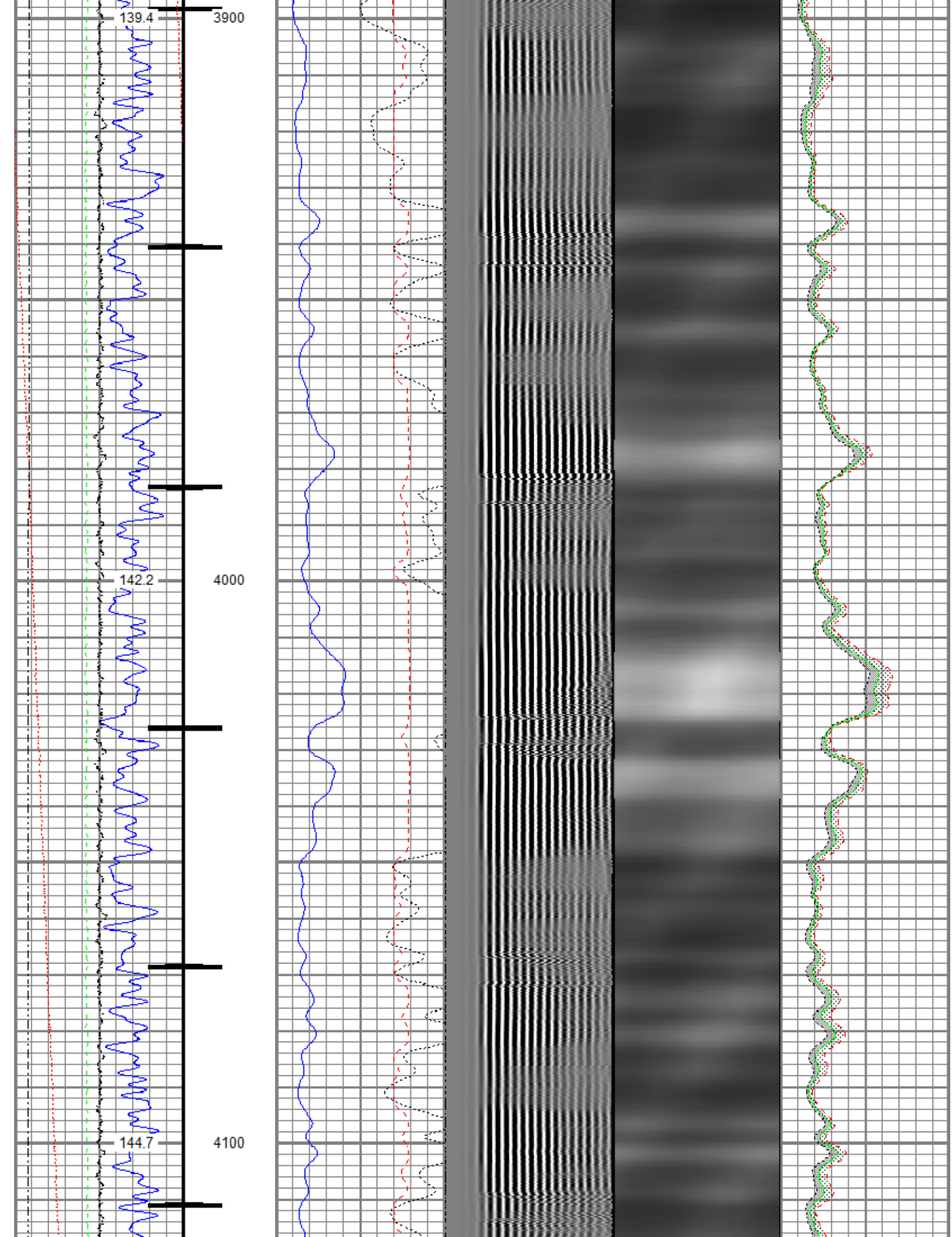


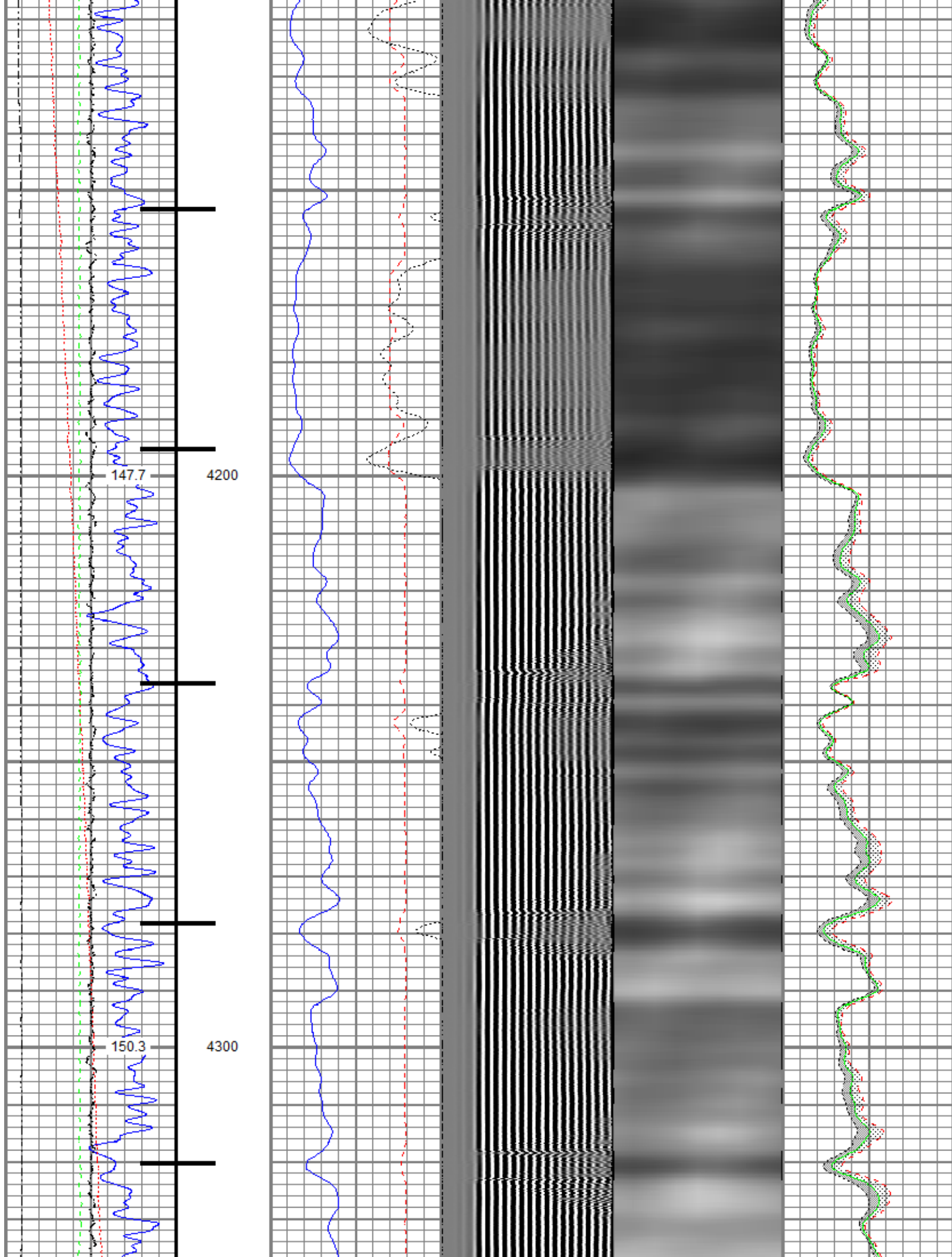


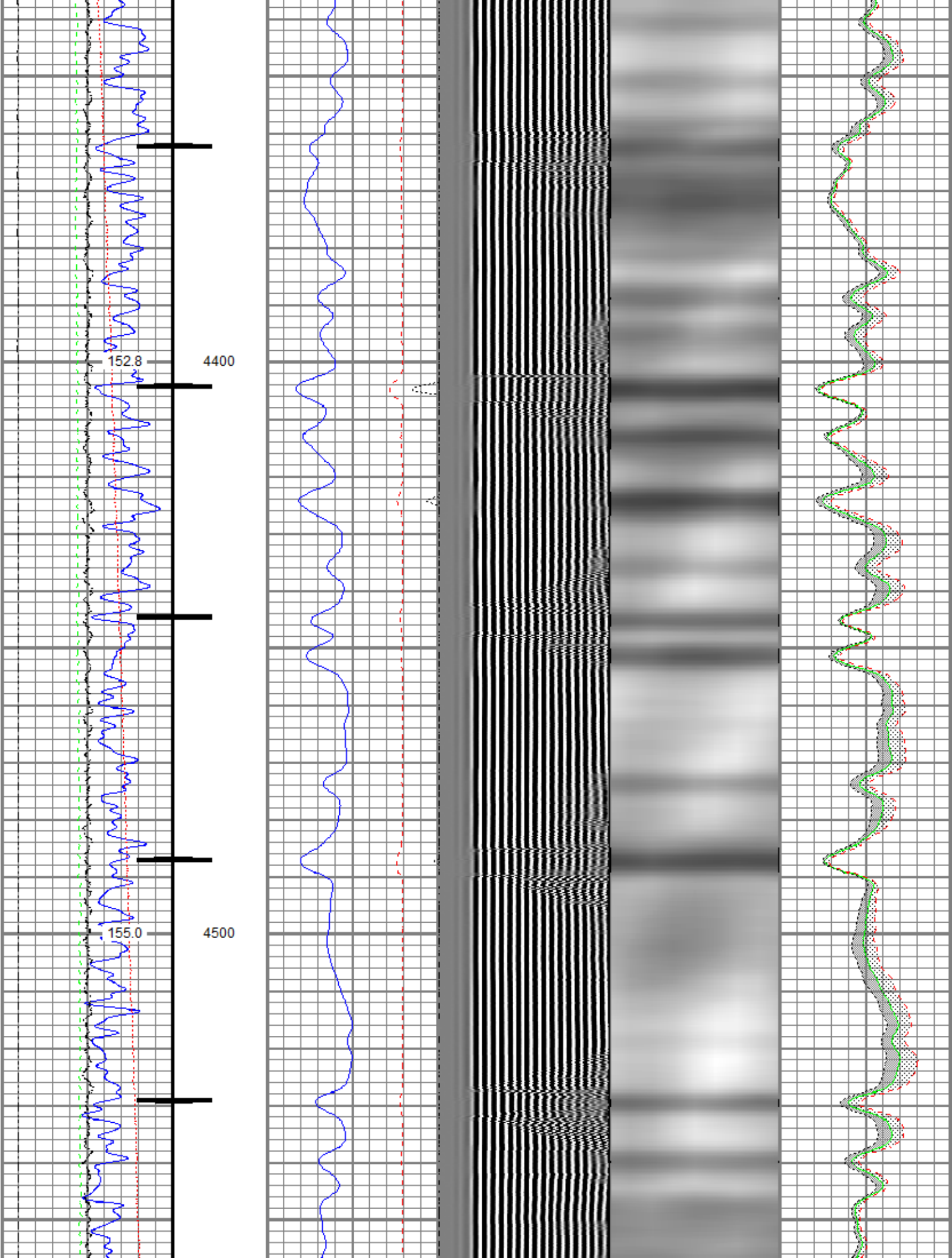


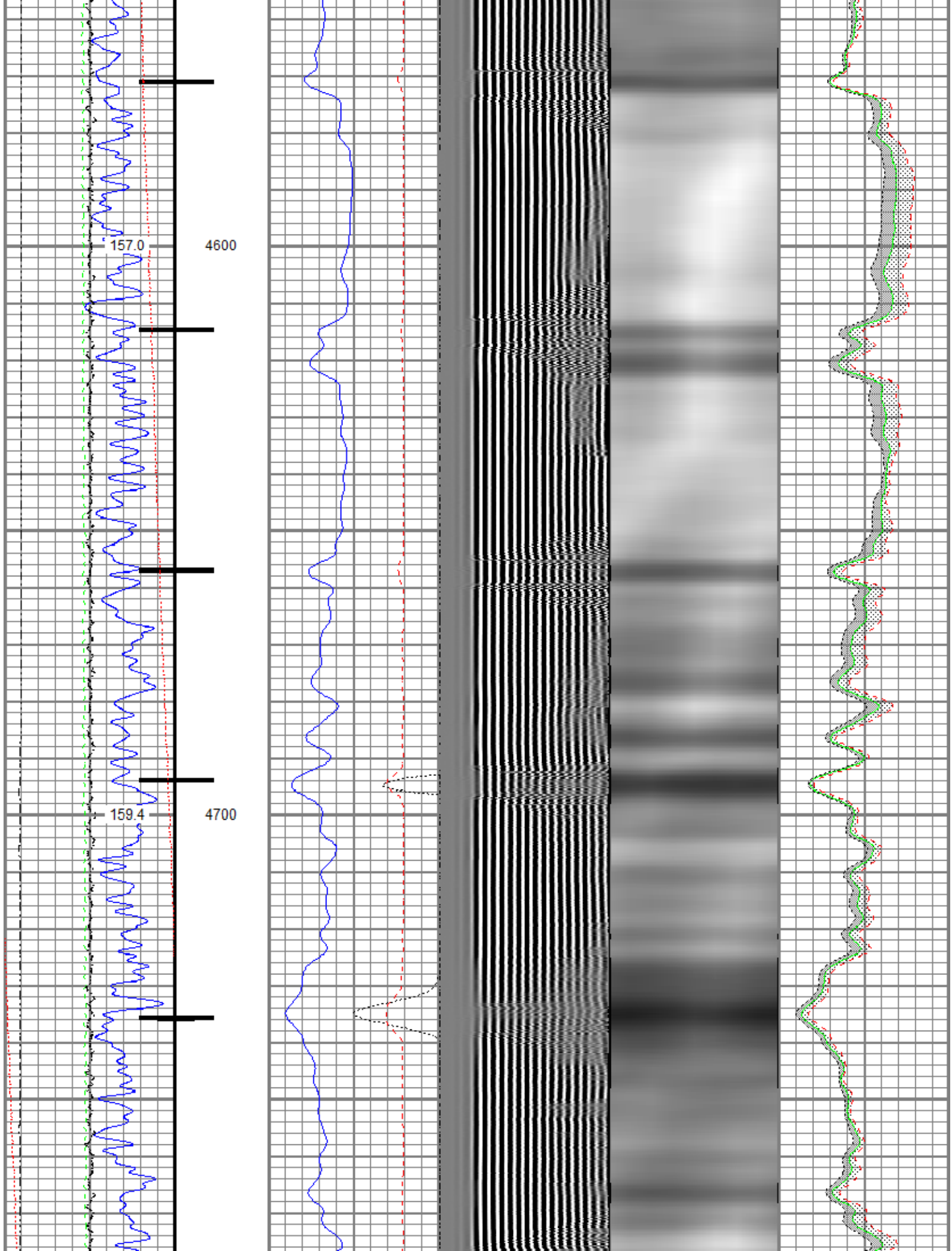


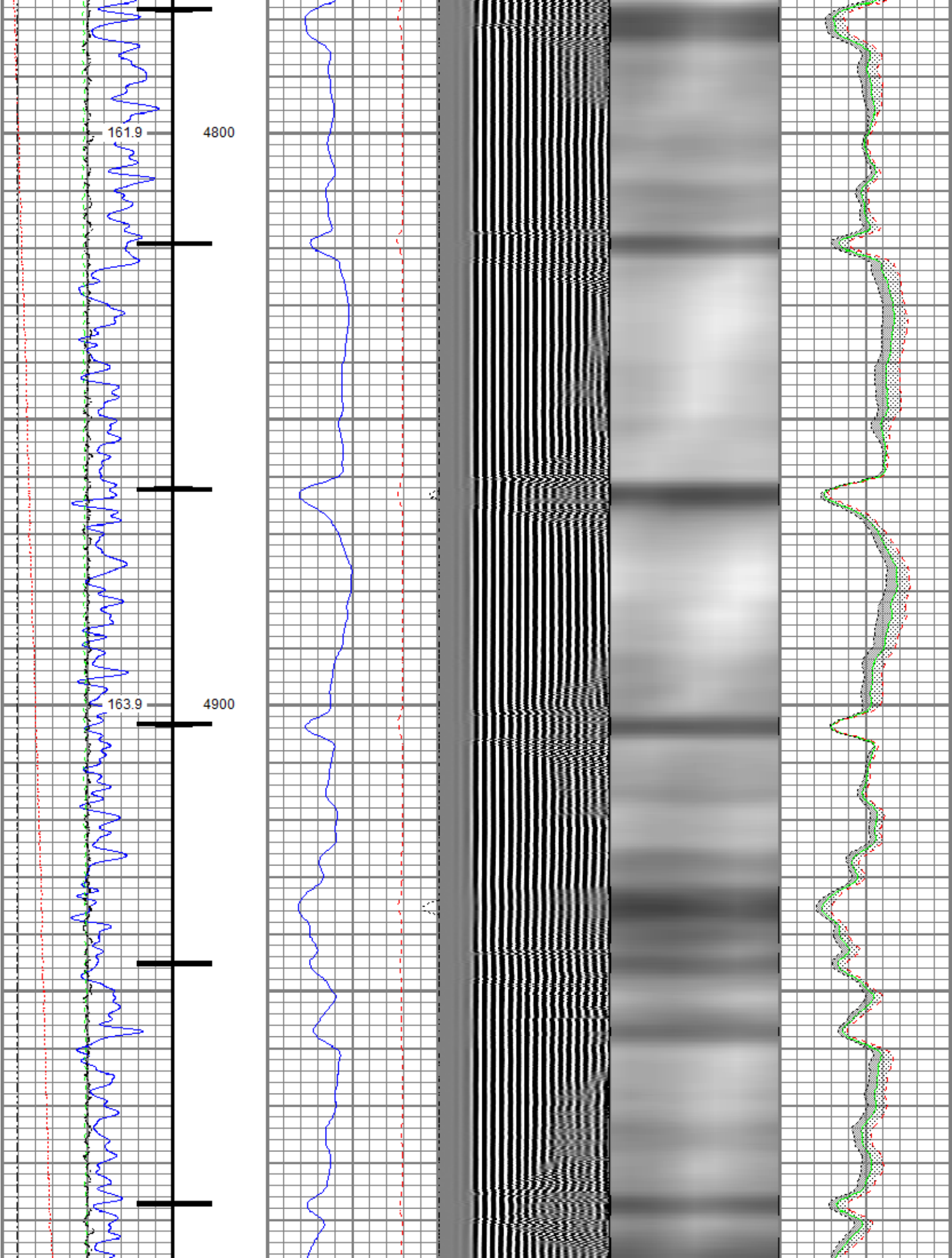


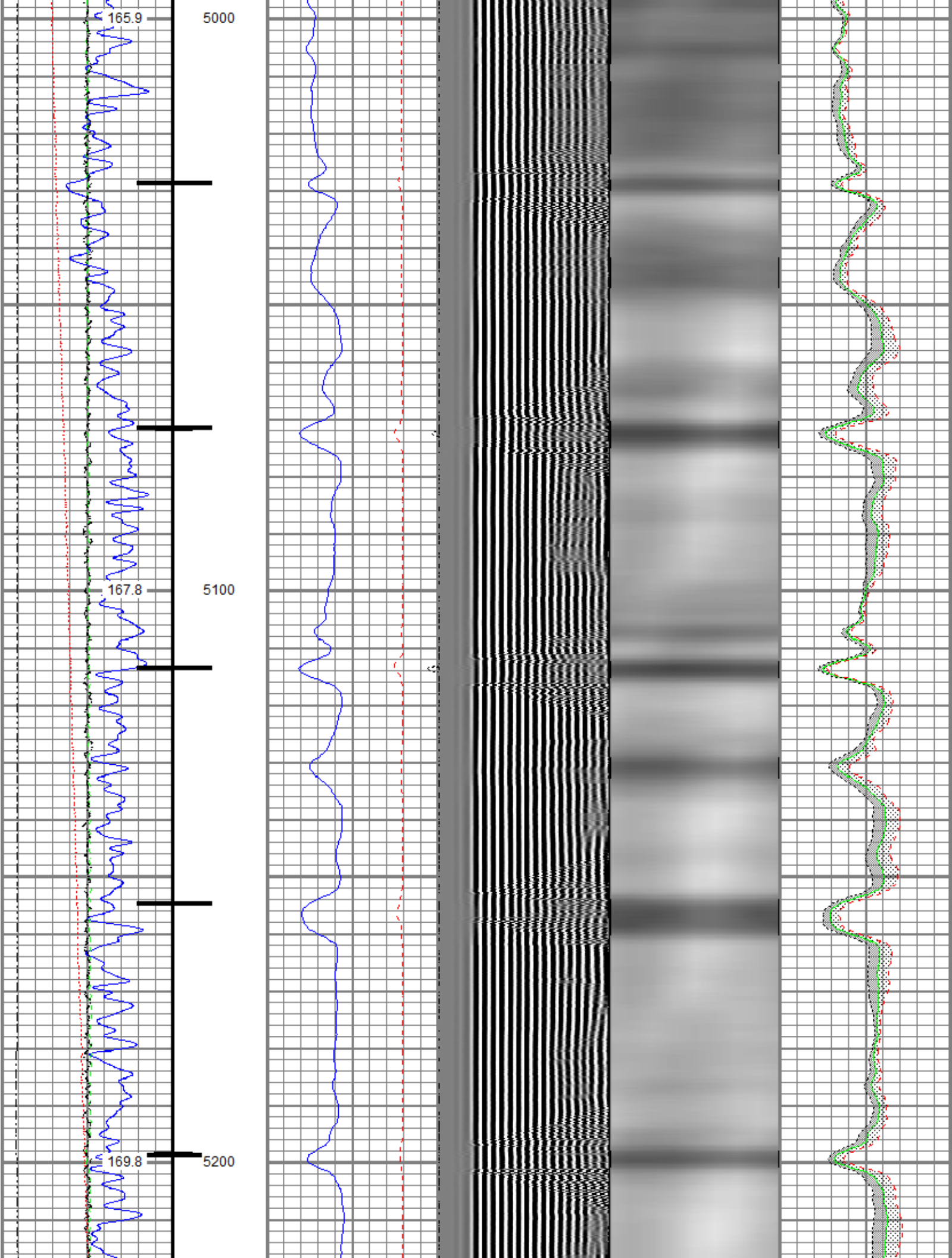


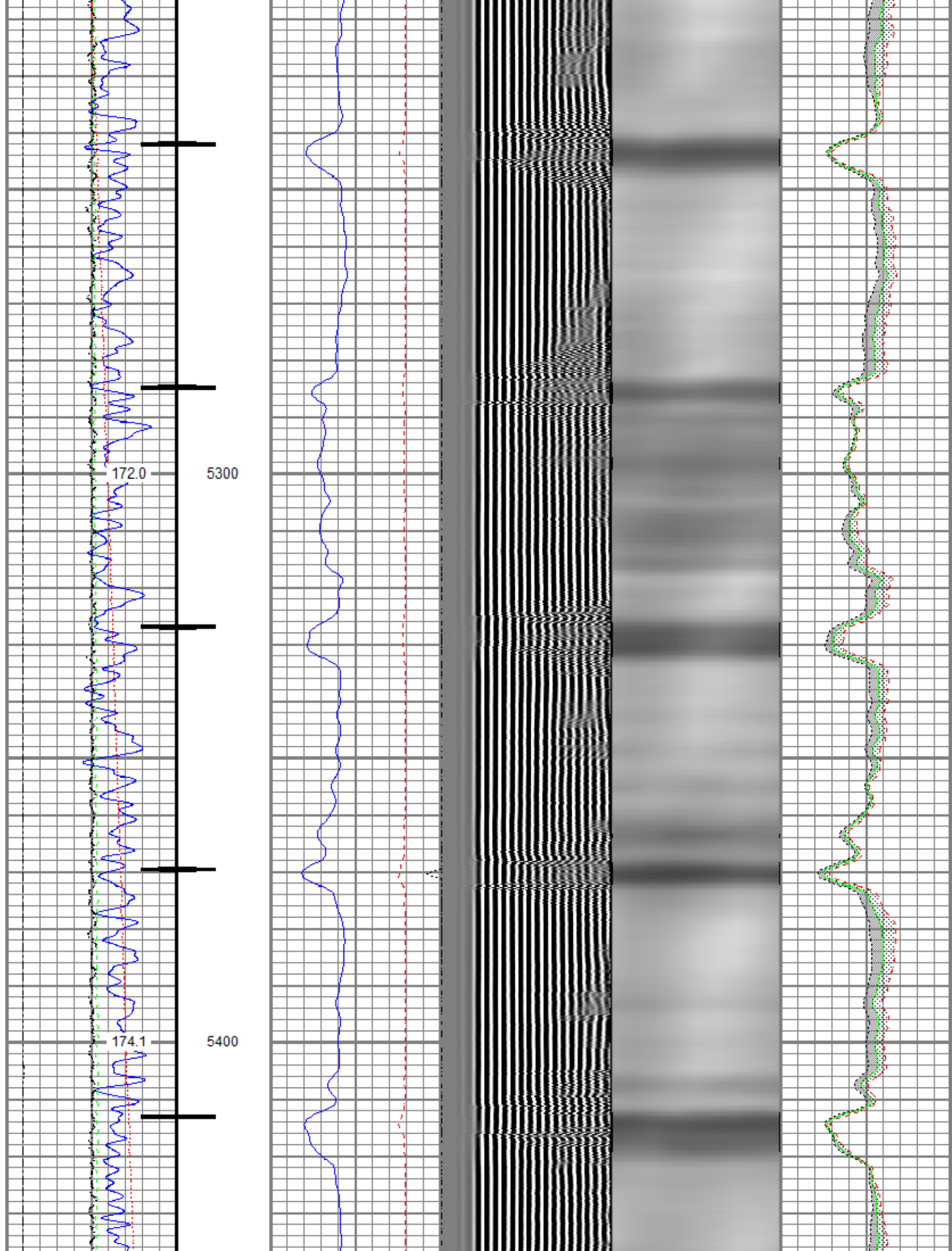


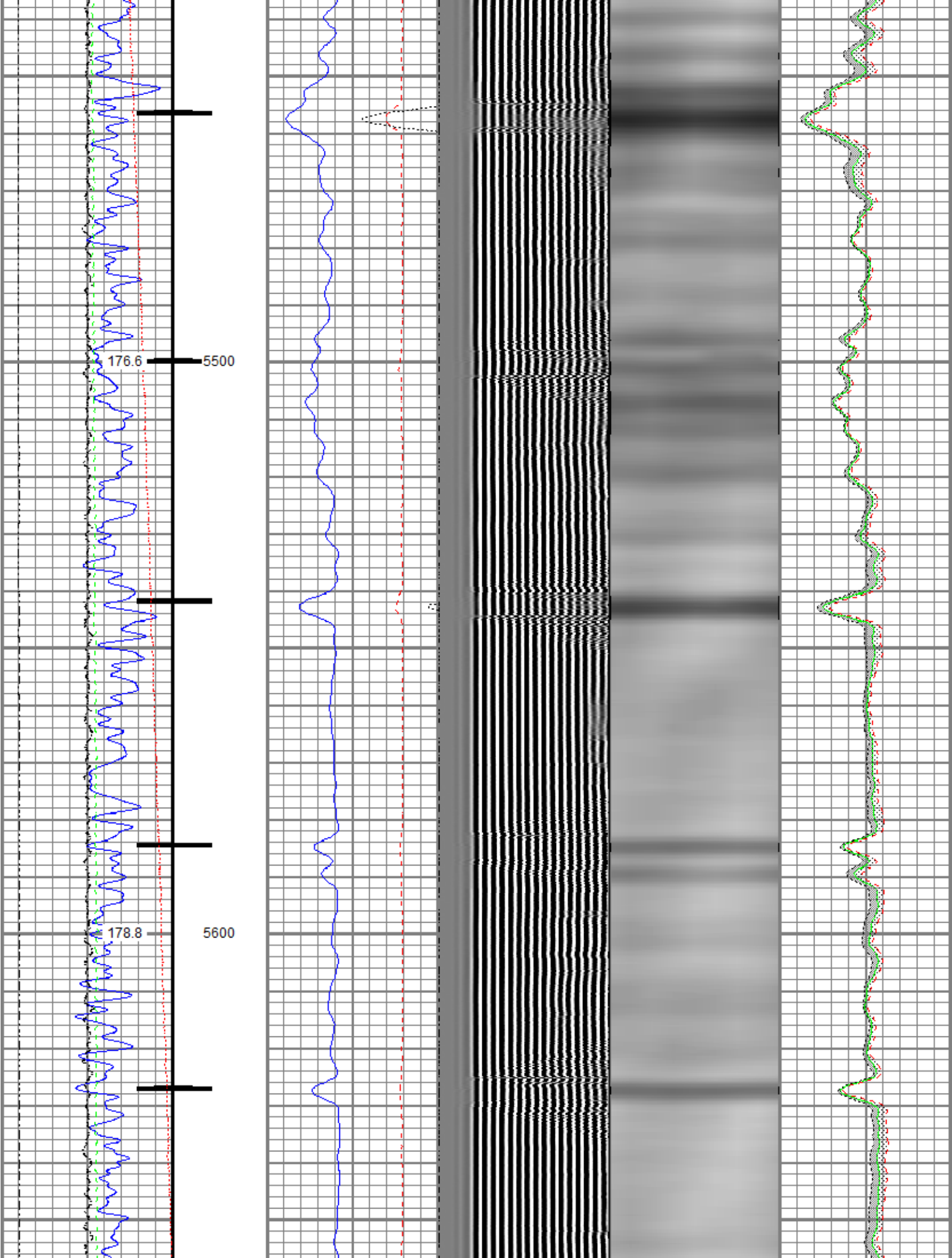


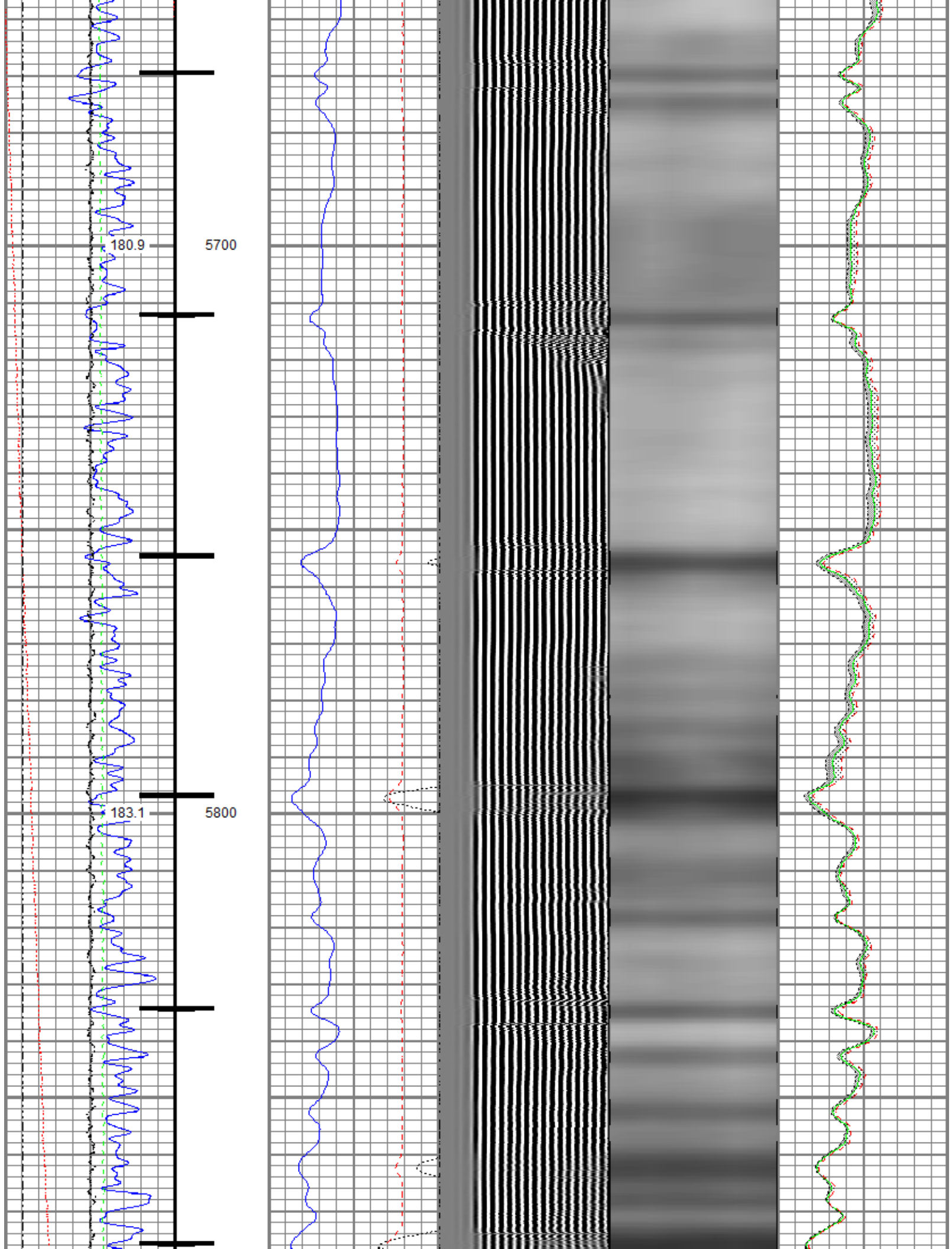


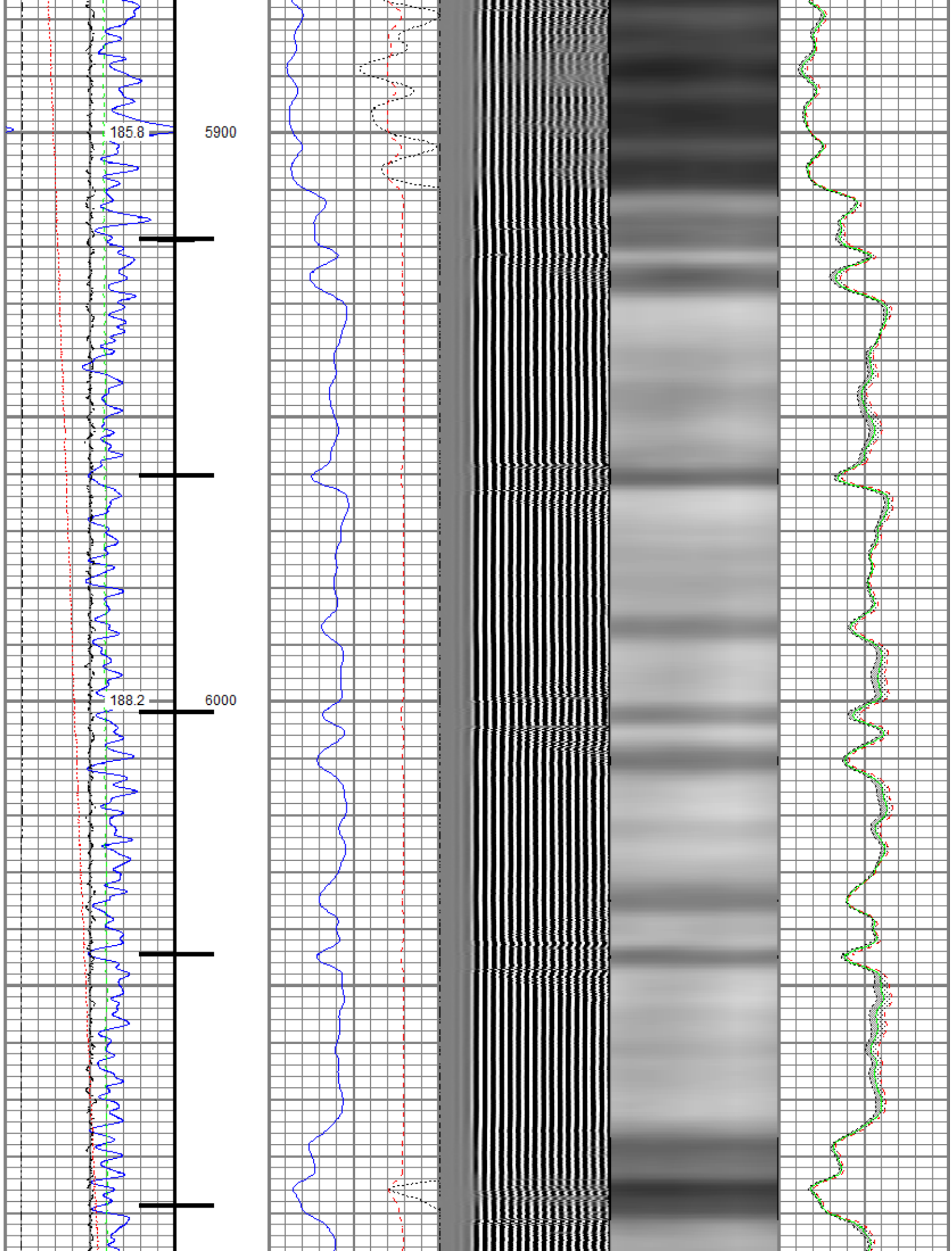








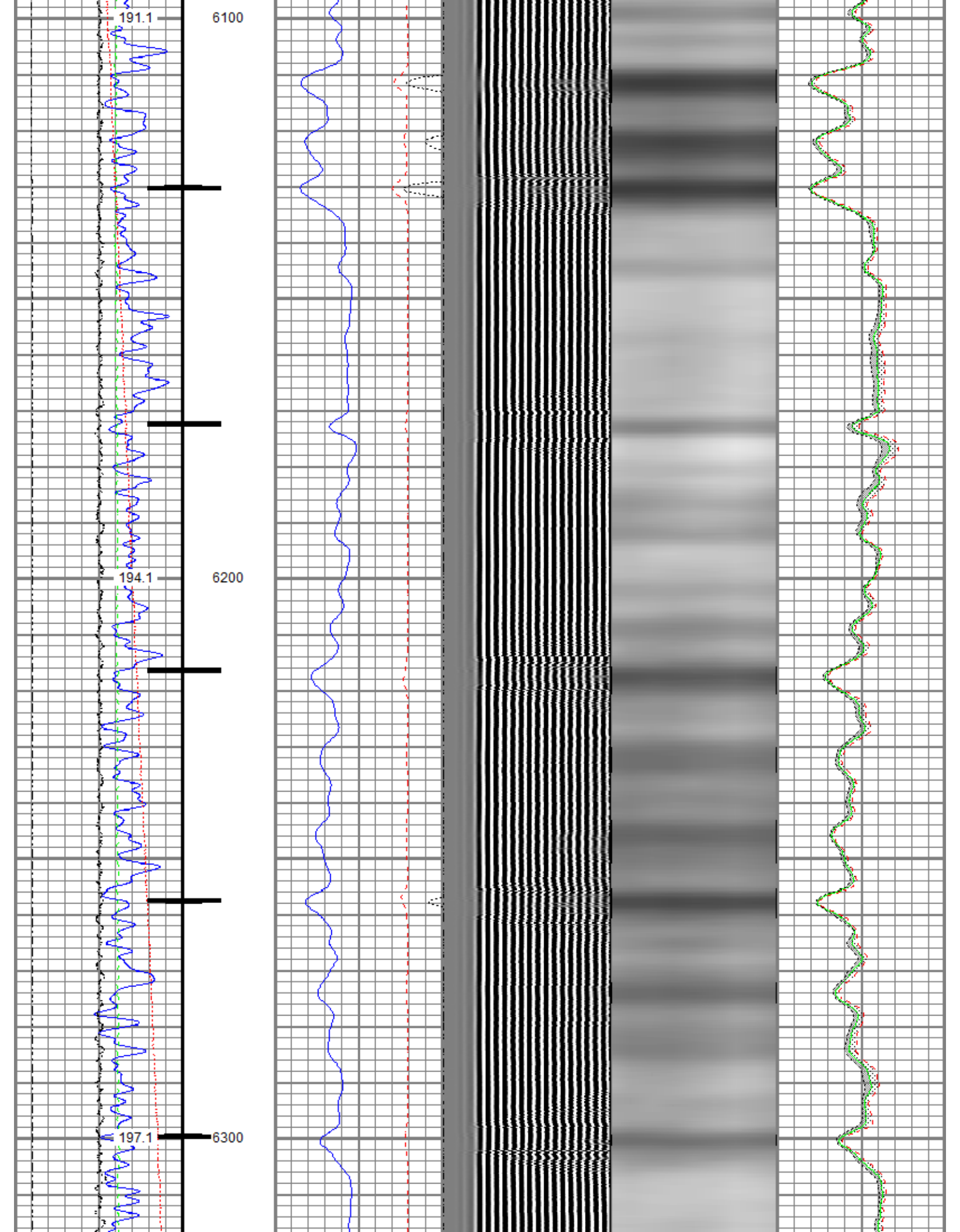


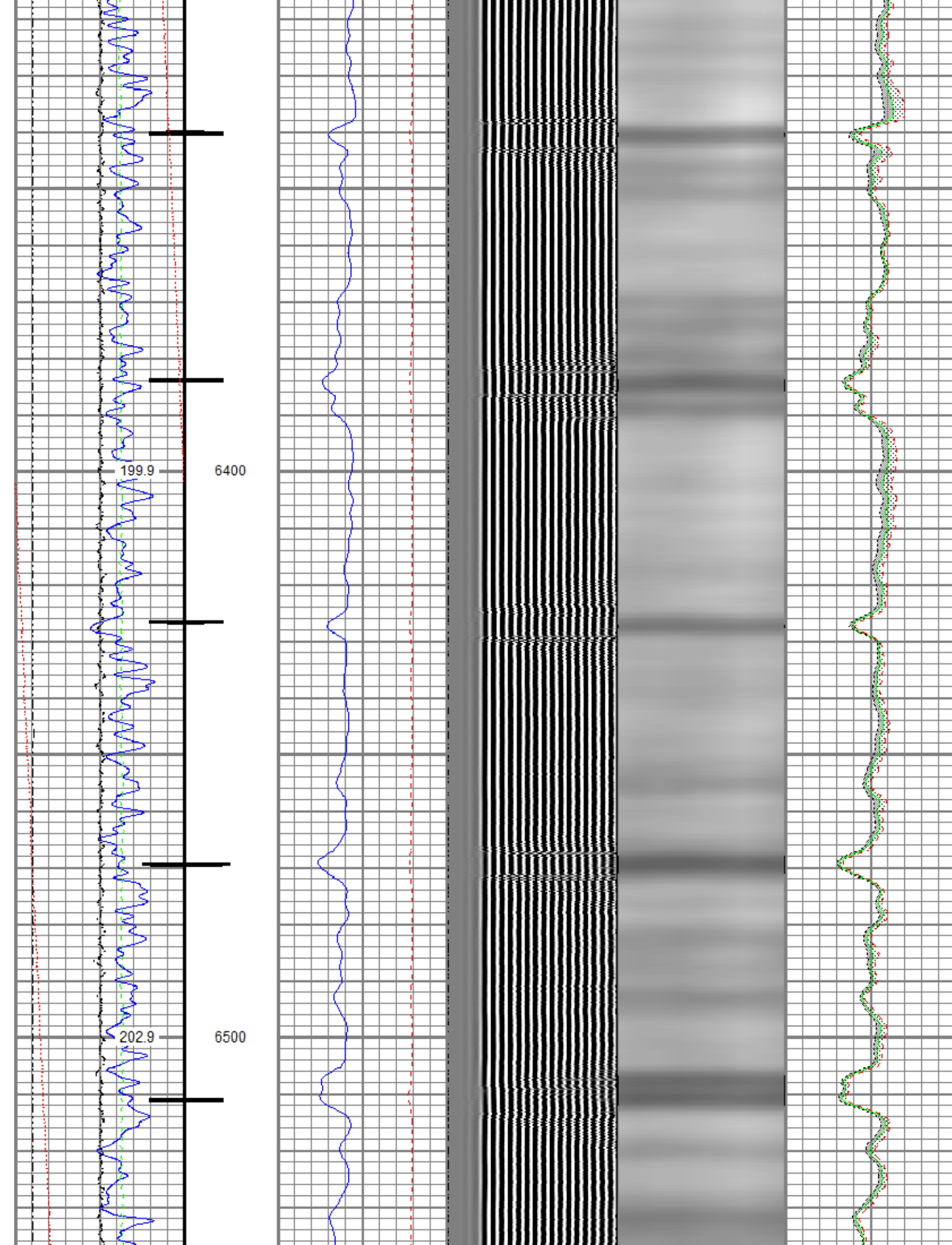


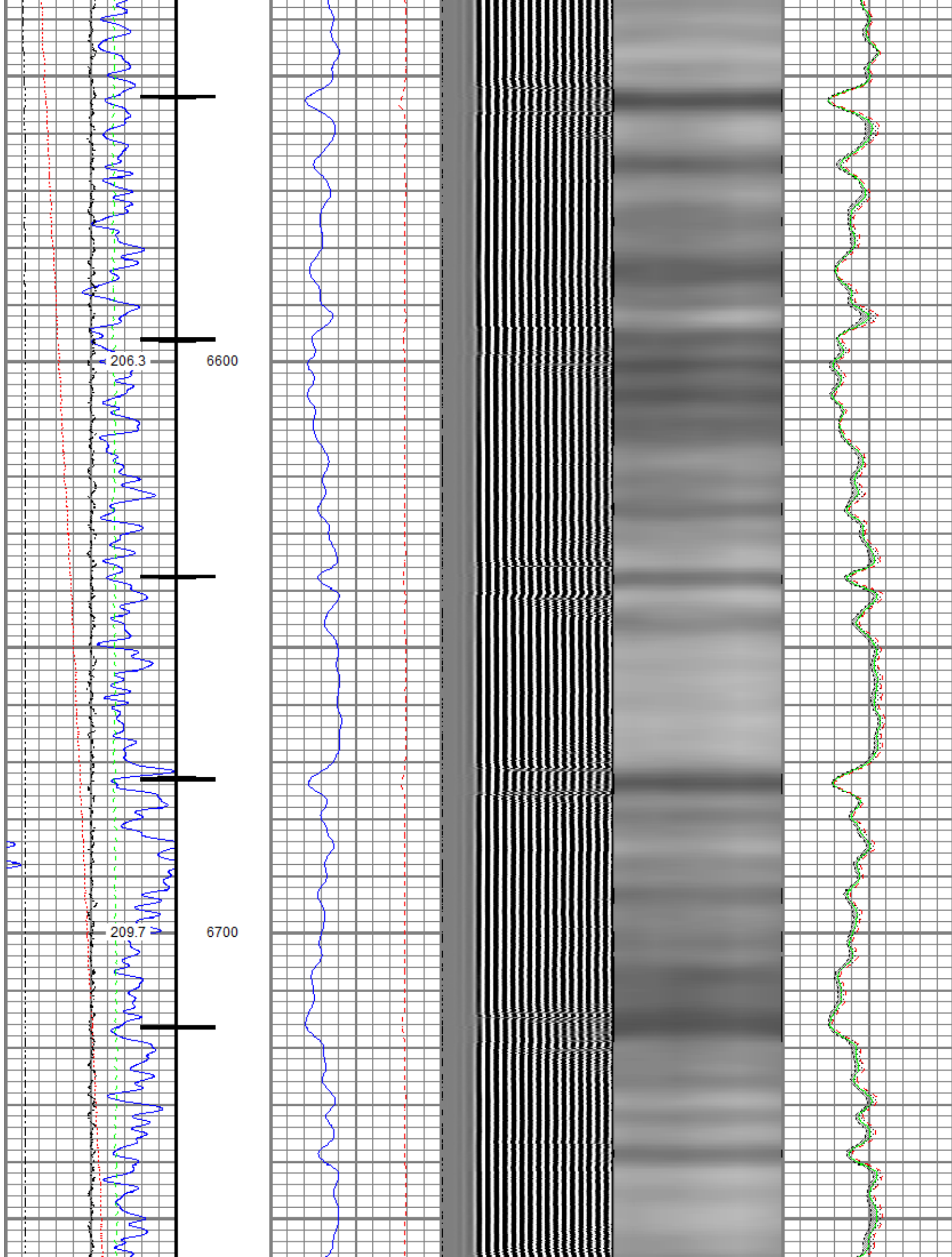
191.1 6100

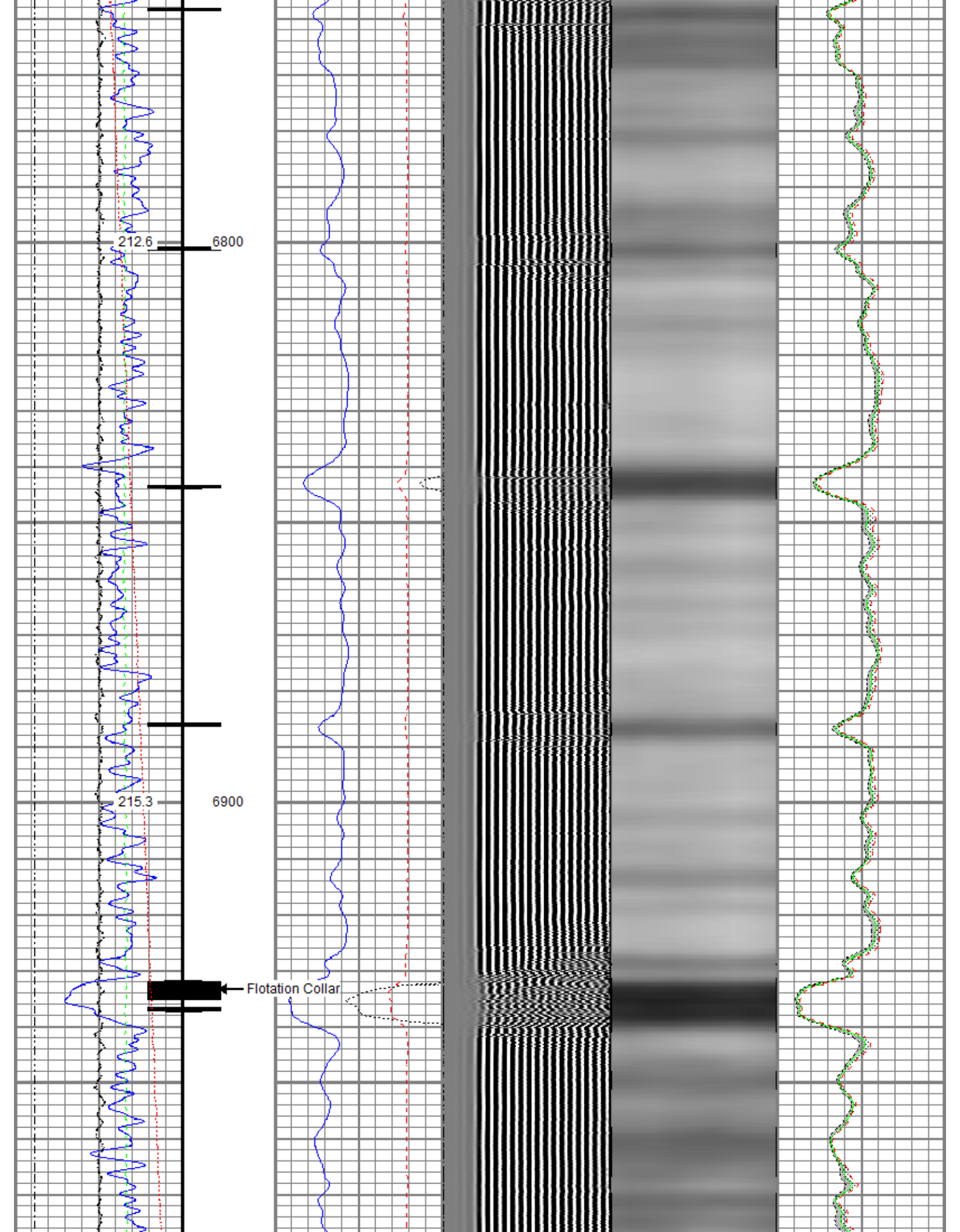
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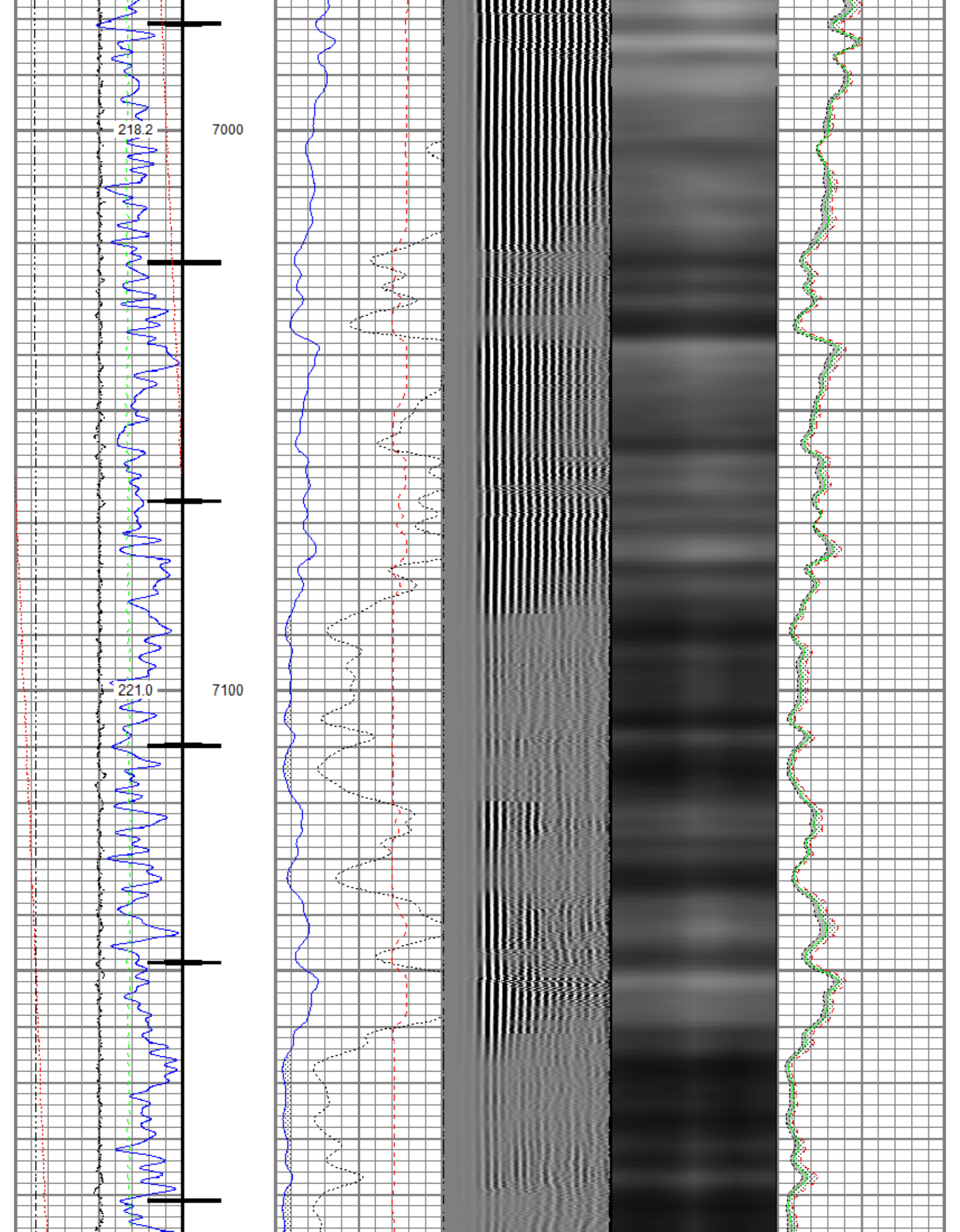
197.1 6300

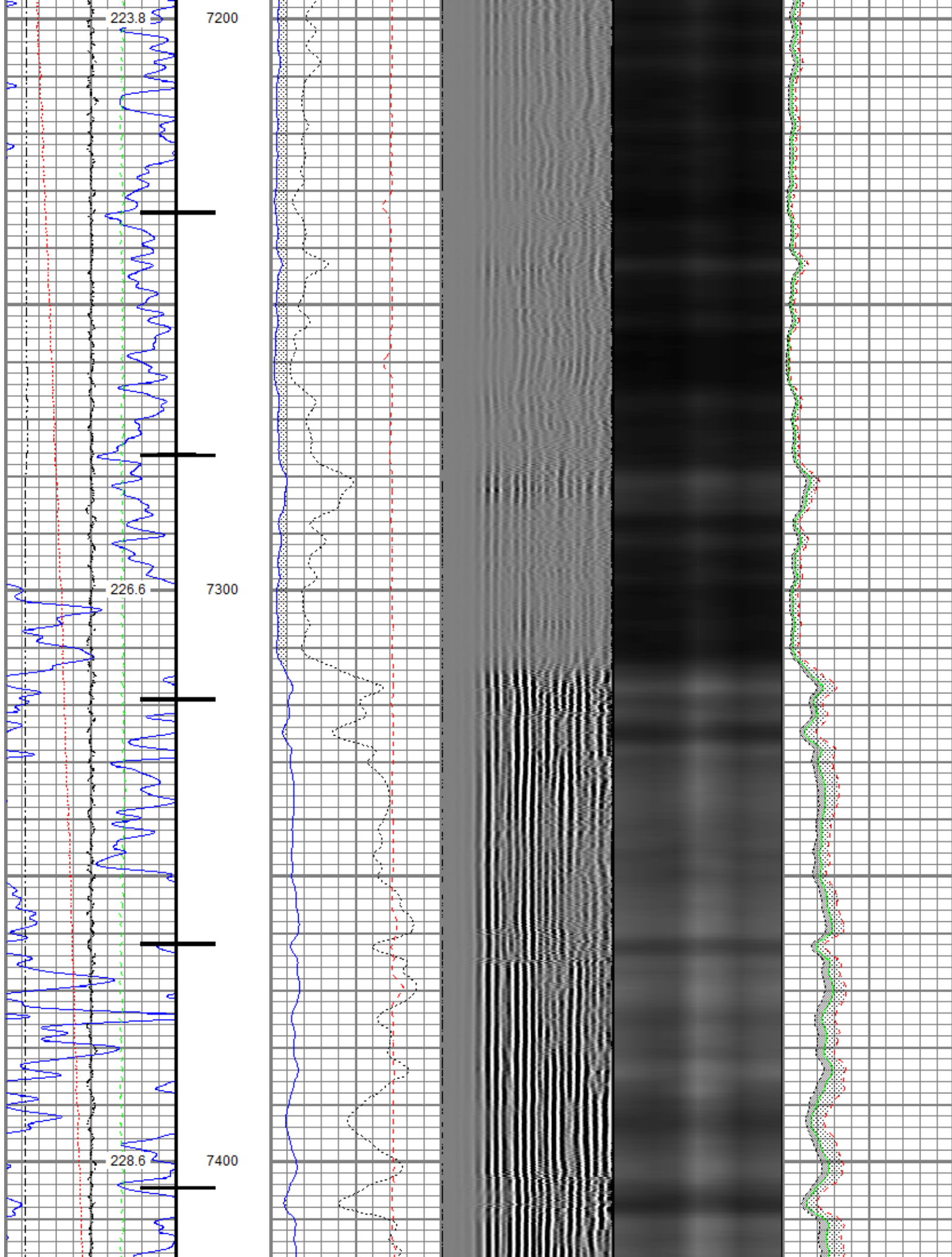


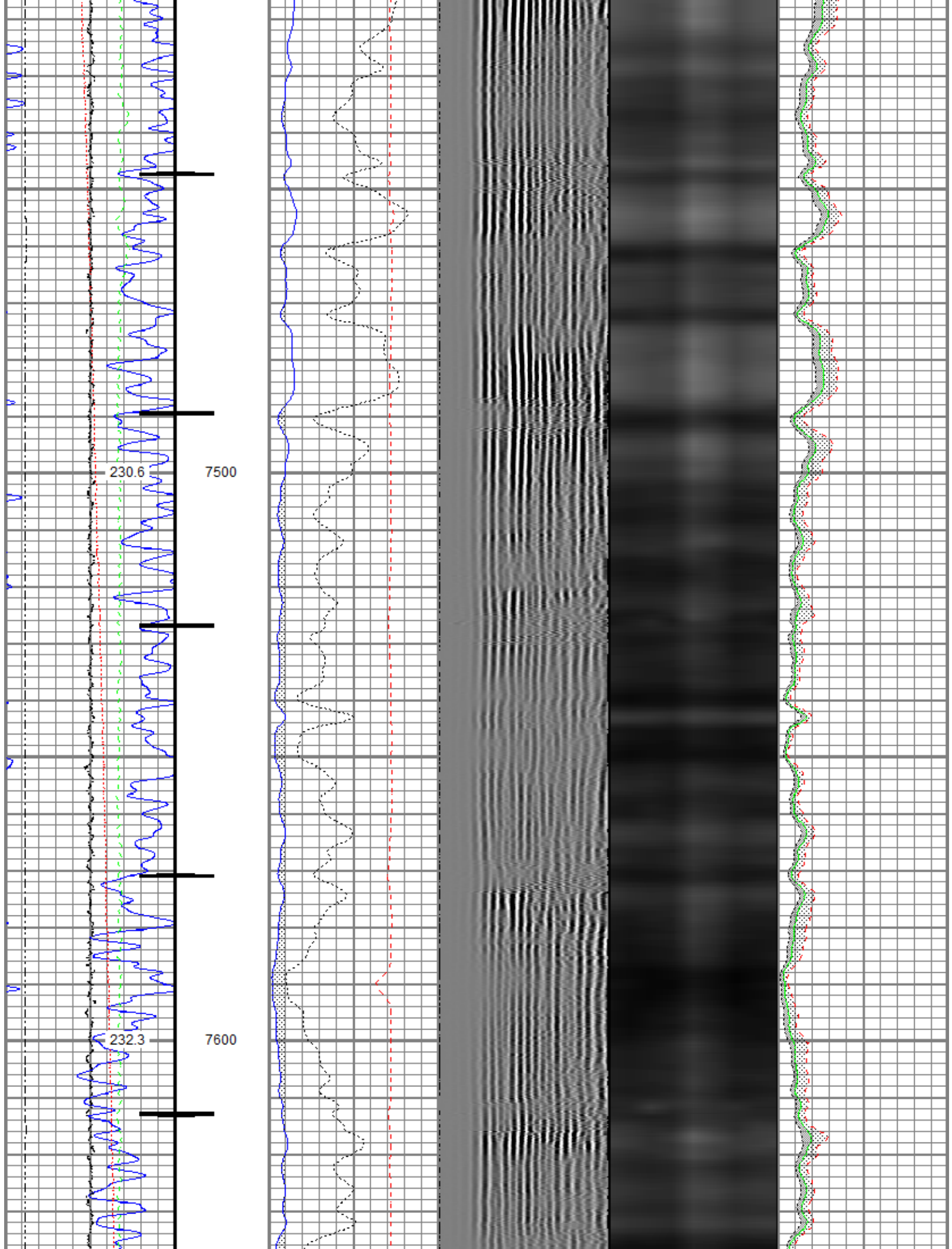


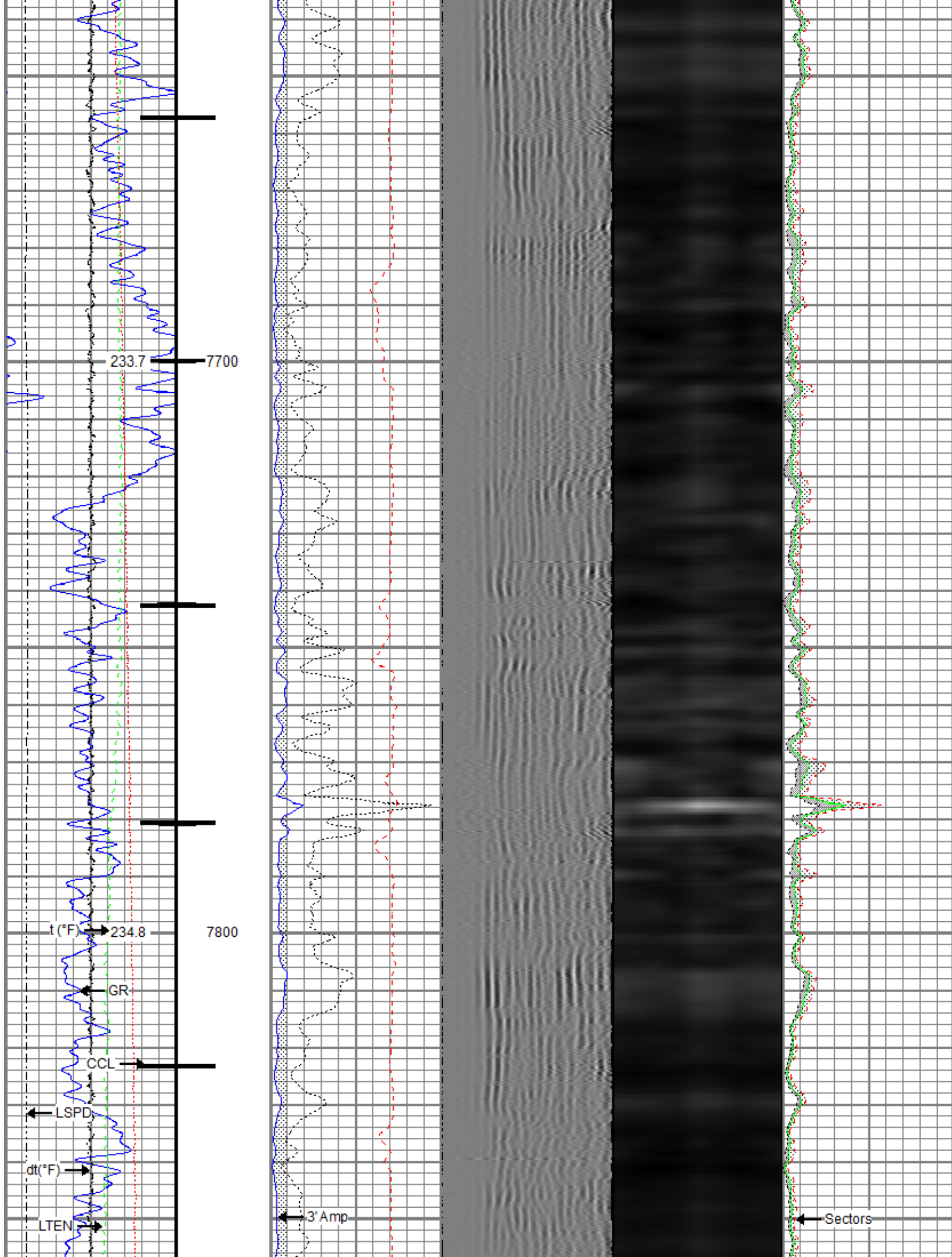


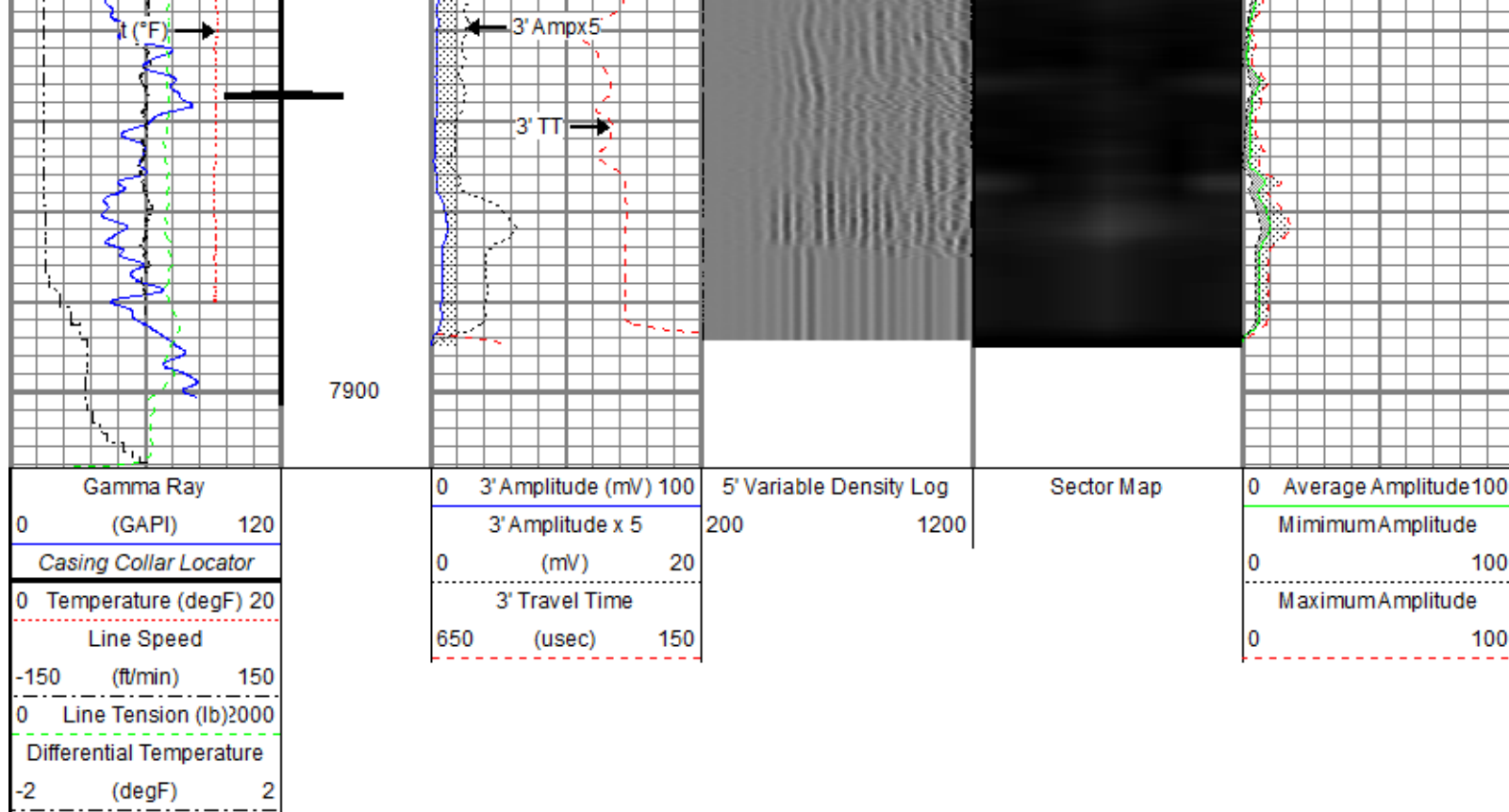








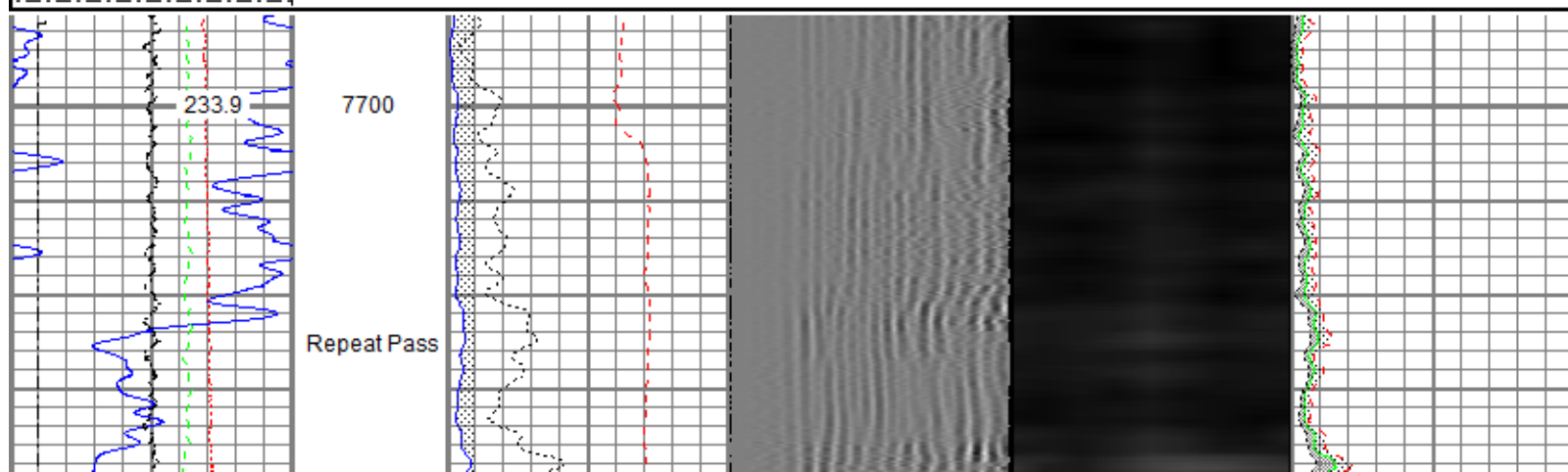
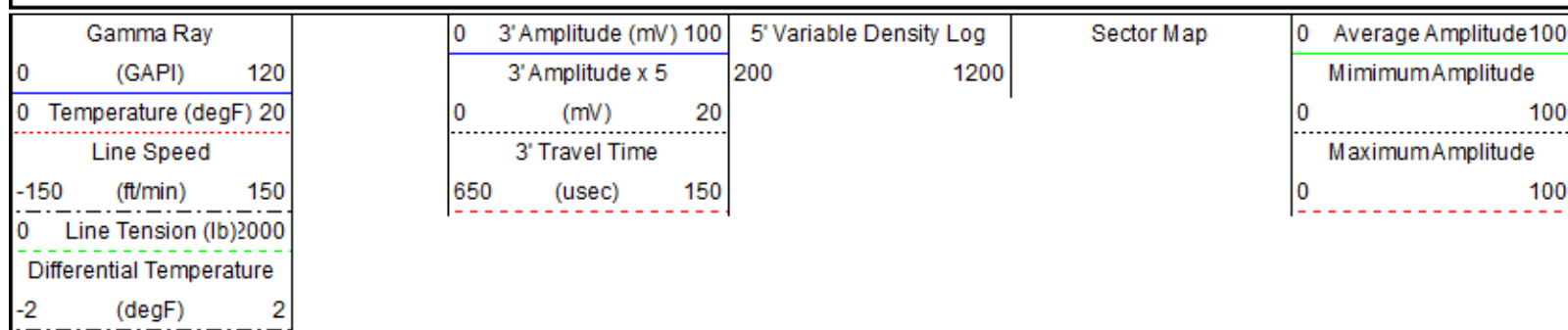


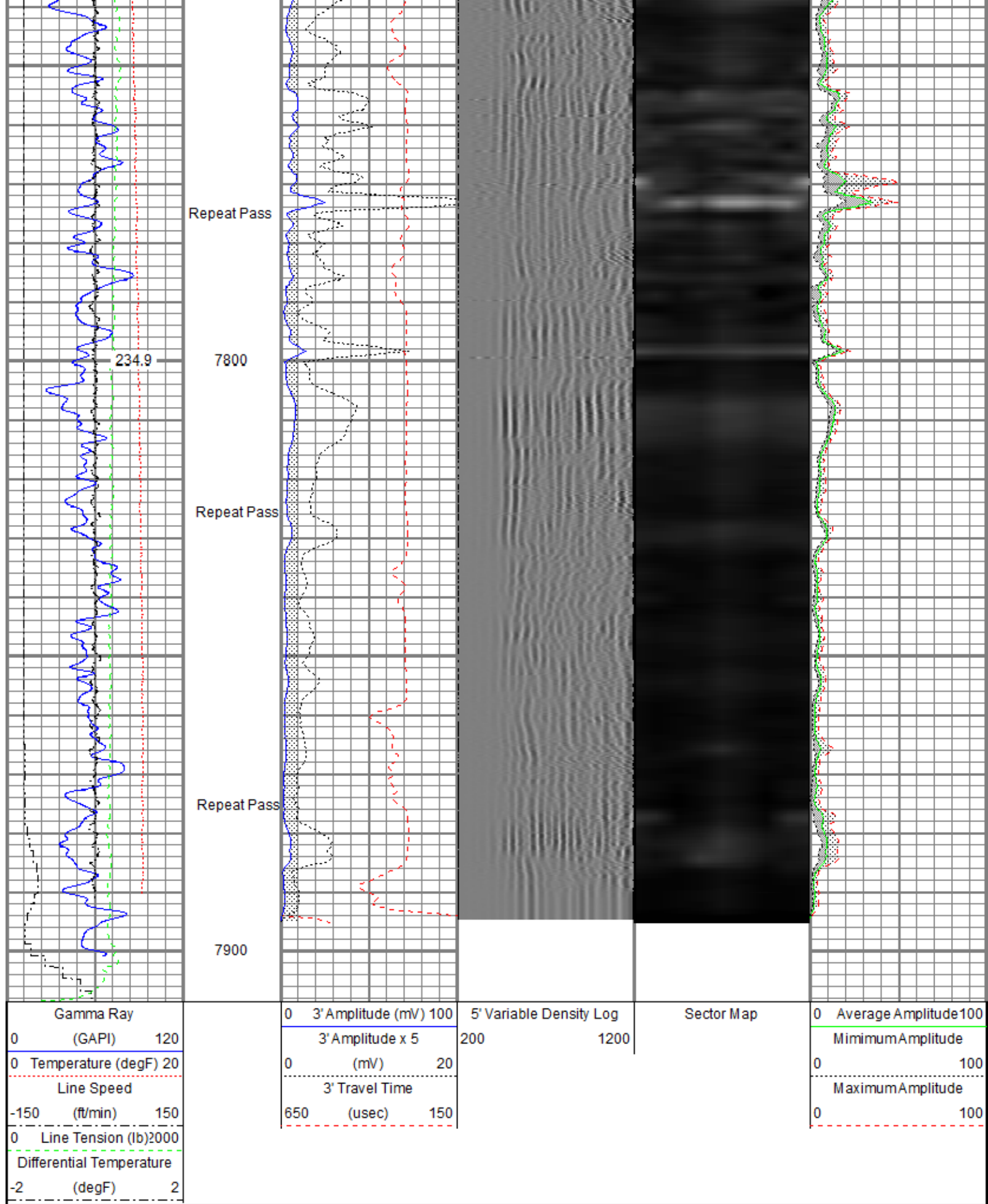


Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File: petro\petro_bef west 15_rbl_04-02-19\petro_bef west 15_rbl_04-02-19.db
 Dataset Pathname: Repeat.3
 Presentation Format: ros_radii
 Dataset Creation: Tue Apr 02 15:15:44 2019
 Charted by: Depth in Feet scaled 1:240





			Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	7.00	2.75	0.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
TEMP	17.04					
WVFS8	14.81		Probe Radii-2750 RBT (FW1308-091) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	14.81					
WVFS6	14.81					
WVFS5	14.81					
WVFS4	14.81					
WVFS3	14.81					
WVFS2	14.81					
WVFS1	14.81					
WVFCAL	14.81					
WVF3FT	14.81					
WVF5FT	13.81					
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
CCL\$2	6.80					
CCL\$1	6.80					
GR	5.46		Probe GR-CCL-2750 6PB (101001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
Dataset: petro_bef west 15_rbl_04-02-19.db: field/well/run1/Main.3 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Gamma Ray Calibration Report

Serial Number: 101001
Tool Model: 2750 6PB
Performed: Mon Oct 01 11:32:32 2018

Calibrator Value: 637.0 GAPI

Background Reading: 100.6 cps
Calibrator Reading: 981.1 cps

Sensitivity: 0.7235 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1308-091
Tool Model: 2750 RBT

Calibration Casing Diameter: 5.500 in
Calibration Depth: -3.706 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.524	0.800	71.921	137.438	-0.147
CAL	0.728	0.728				
5'	0.010	0.497	0.800	71.921	146.178	-0.706
SUM						
S1	0.007	0.514	0.000	100.000	197.204	-1.385
S2	0.008	0.551	0.000	100.000	184.191	-1.473
S3	0.007	0.565	0.000	100.000	179.144	-1.211
S4	0.007	0.557	0.000	100.000	181.962	-1.268
S5	0.006	0.548	0.000	100.000	184.623	-1.117
S6	0.007	0.524	0.000	100.000	193.366	-1.369
S7	0.007	0.495	0.000	100.000	204.748	-1.371
S8	0.008	0.498	0.000	100.000	203.833	-1.590

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.728	0.728	1.000	0.000

Air Zero Calibration, performed Tue Apr 02 09:26:42 2019:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.007	0.000	0.000
5'	0.009	0.000	-0.001
SUM			
S1	0.006	0.000	0.000
S2	0.007	0.000	-0.000
S3	0.006	0.000	0.001
S4	0.007	0.000	-0.000
S5	0.006	0.000	0.000
S6	0.006	0.000	0.000
S7	0.007	0.000	-0.000
S8	0.006	0.000	0.001

Serial Number: FW1308-091
Tool Model: 2750 RBT
Performed: Mon Oct 01 11:32:16 2018

	Reference	Reading
Low Reference:	100.00 degF	104.72 degF
High Reference:	350.00 degF	392.24 degF

Gain: 0.87
Offset: 8.94
Delta Spacing: 1



Company	Petro Operating Company LLC
Well	BEF West 15
Field	Wattenberg
County	Adams
State	Colorado