



Radial Cement Bond
w/Variable Density
Gamma Ray/CCL/Temp Log
FINAL PRINT: 3500 PSI

Company	Great Western Oil & Gas Company
Well	Rio LC 12-332HN
Field	Wattenberg
County	Adams
State	Colorado

Company	Great Western Oil & Gas Company
Well	Rio LC 12-332HN
Field	Wattenberg
County	Adams
	State
	Colorado

Location:	API # : 05-001-10461		Other Services
	NWNNW		
	39.999578/ -104.939783		Gauge Ring
	SEC 6 TWP 1S RGE 67W		
Permanent Datum	GL	Elevation	5068'
Log Measured From	KB		
Drilling Measured From	KB		
		Elevation	K.B. 5088' D.F. G.L. 5068'

Date	Sep 14 2019
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Run Number	Two		
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Open Enrollment	2017	
Death nager	83867	

bottom second third	8384'	
top Loggi	8380	

Loggeu Intervall	0304	
Confidanzintervall		

Top Log Interval	Surface		
11-12	6.45"		

Open Hole Size	8 1/2"		
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type Fluid	H2O		
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Density / Viscosity

Max. Recorded Temp.	235 Deg F		
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Estimated Cement Top			

Time Well Ready	15:00	
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Time Power on Bottom	15:30	
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Equipment Number	59		
Time Logged on Board	10:00		

Equipment Number	Plate #	Plate #
33	33	33

Location	Plattville, MO		
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Recorded By	S Cornett		
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Witnessed By	Dave Pozas		
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Borehole Record	Tubing Record

Run Number	Bit	From	To	Size	Weight	From
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[illegible][illegible]

Surface String	9 5/8"	36# J-55	Surface	1772'
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Root String	1	2	3	4
9	1	2	3	4

Production String	5 1/2"	17#P-110	Surface	13772
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inner	outer	inner	outer
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
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33	33	33	33
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76	76	76	76
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79	79	79	79
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82	82	82	82
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84	84	84	84
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88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
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97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

[illegible]


Comments

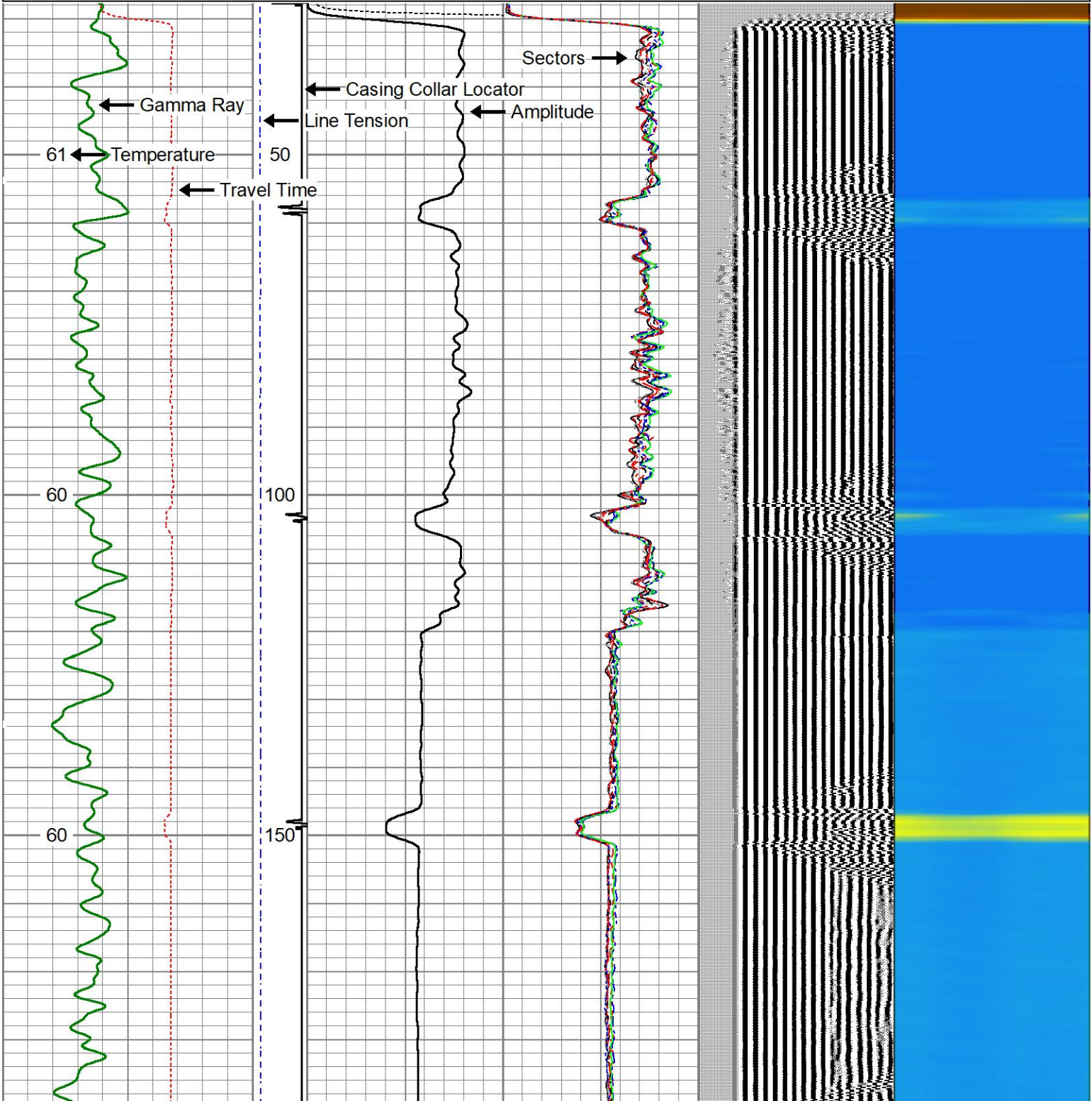
Logged with 3500 PSI
Log Correlated to Short Joint @ 7760'-7770'
Tool Ran with 3 Gemco Centerlizers

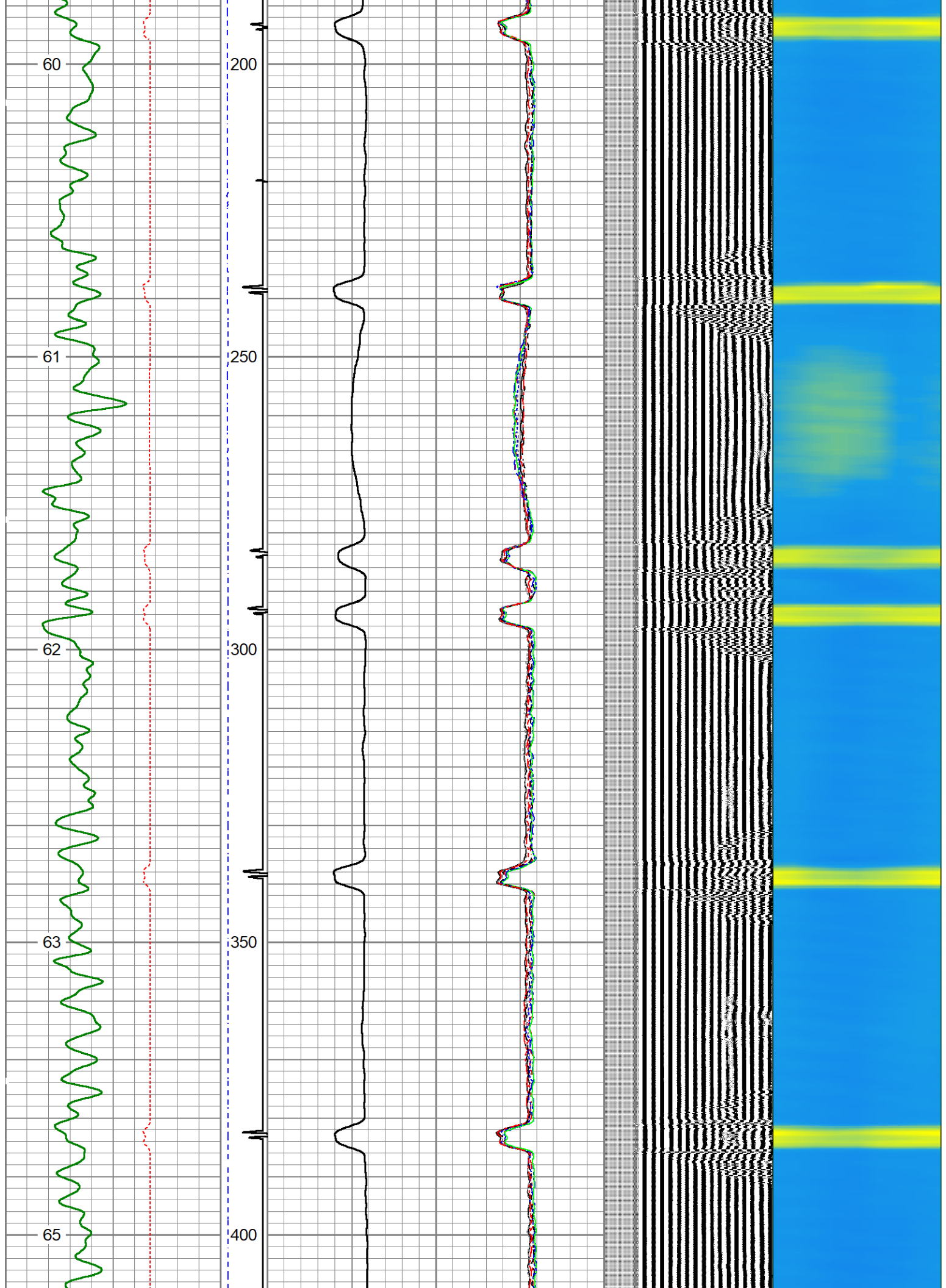
Thank You for choosing KLX Energy Services.

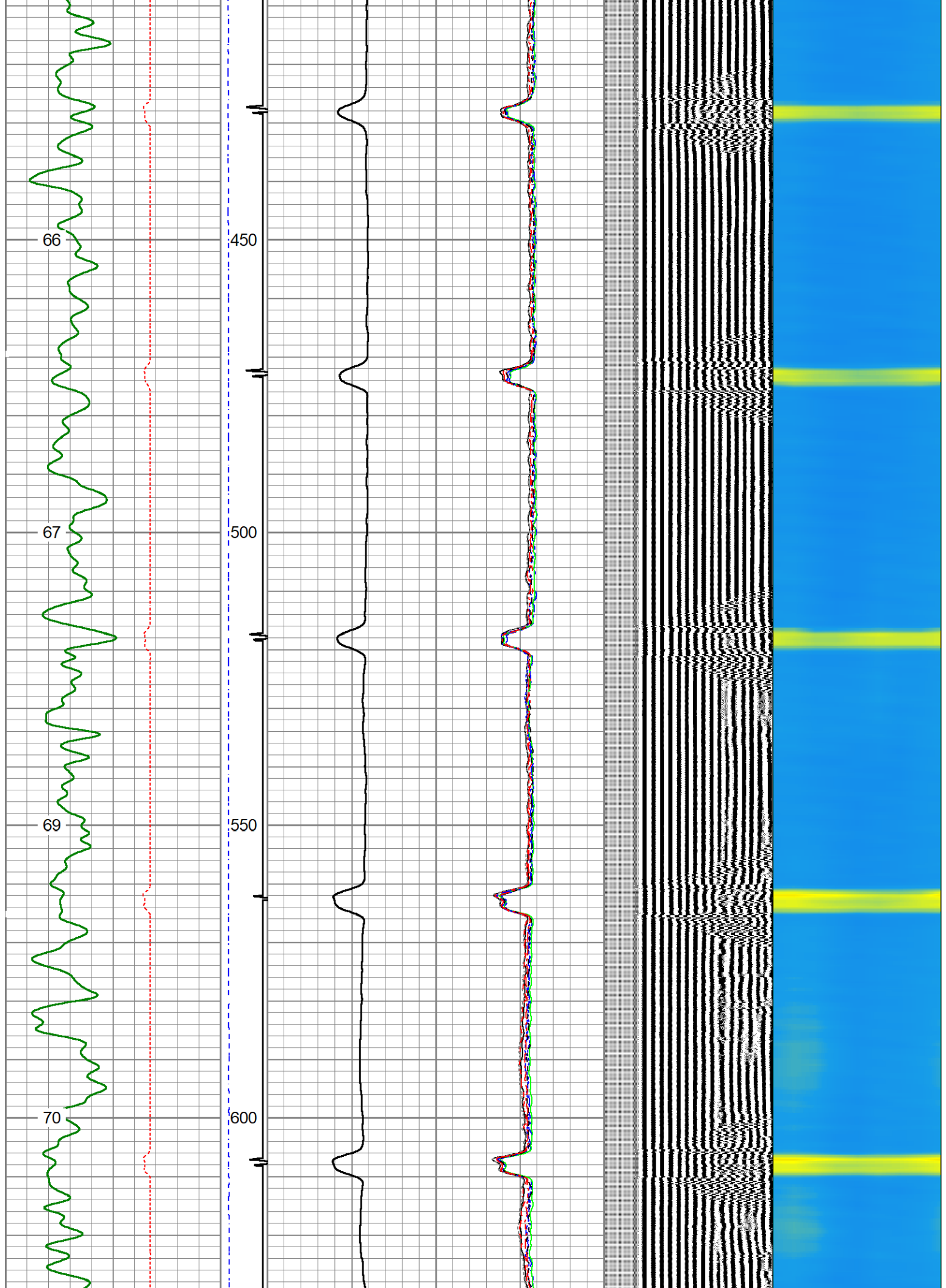


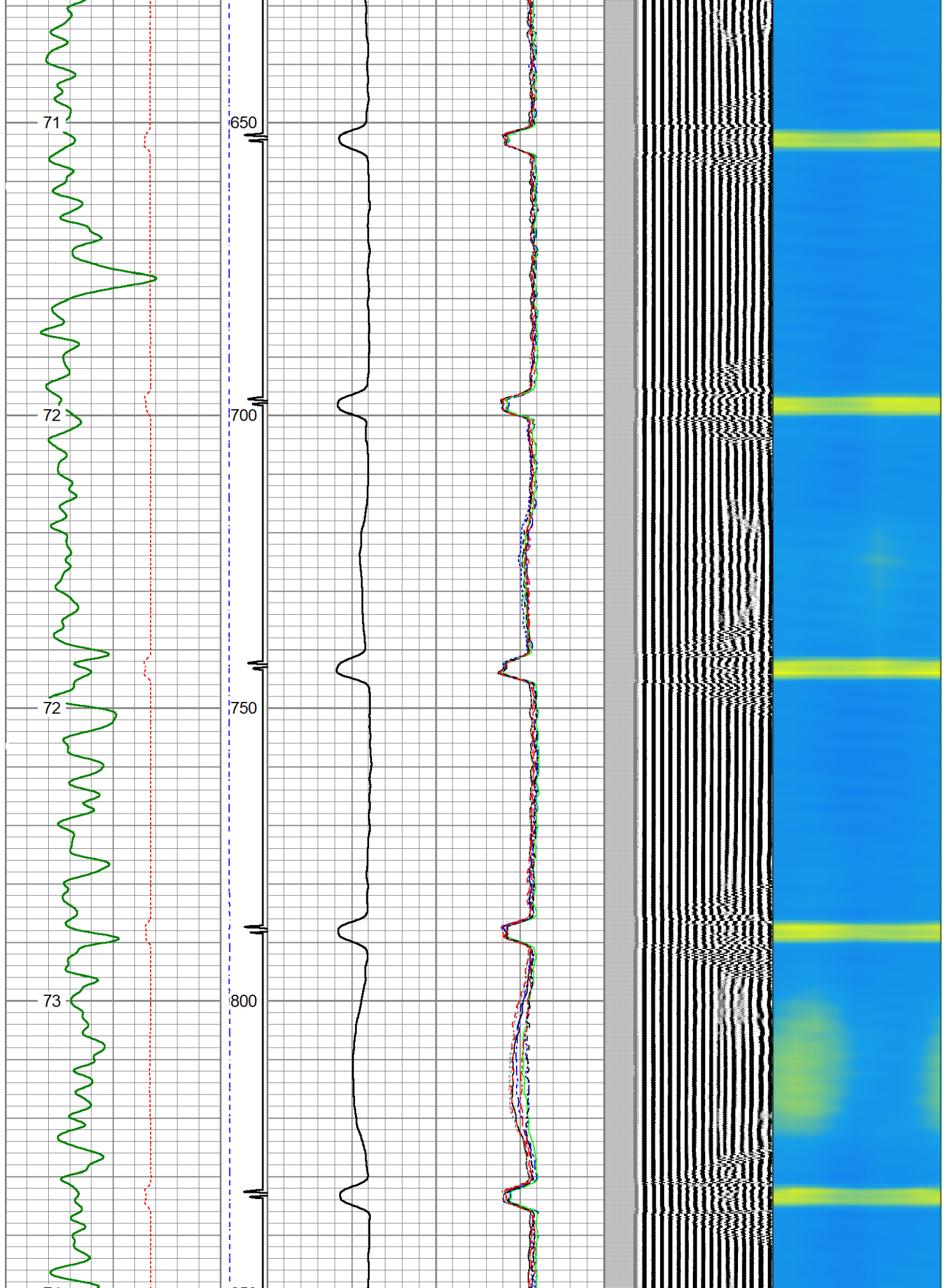
Main Pass 3500 PSI

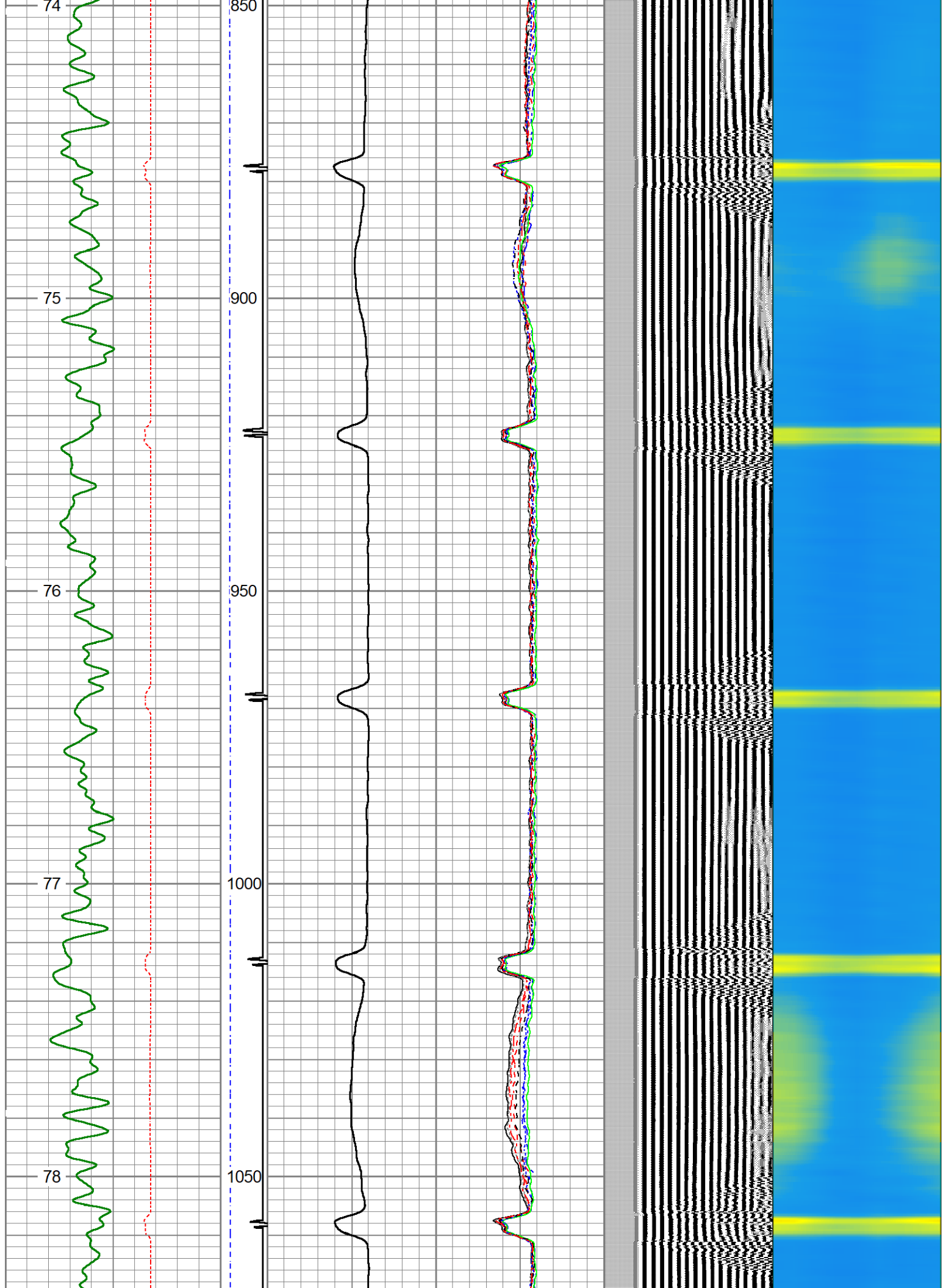
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Dataset Pathname		pass5										
Presentation Format		scbl03										
Dataset Creation		Sat Sep 14 15:30:11 2019										
Charted by		Depth in Feet scaled 1:240										
400 Travel Time (usec) 200		CCL	0	Amplitude (mV)100	-5	Sector 1	150	Variable Density		1	Cement Map	8
0 Gamma Ray (GAPI) 150				Amplified Amplitude	-5	Sector 2	150	200 (usec) 1200				
TEMP		9 -1	0	(mV) 10	-5	Sector 3	150					
(degF)		LTEN			-5	Sector 4	150					
		(lb)			-5	Sector 5	150					
		(2000			-5	Sector 6	150					
					-5	Sector 7	150					
					-5	Sector 8	150					

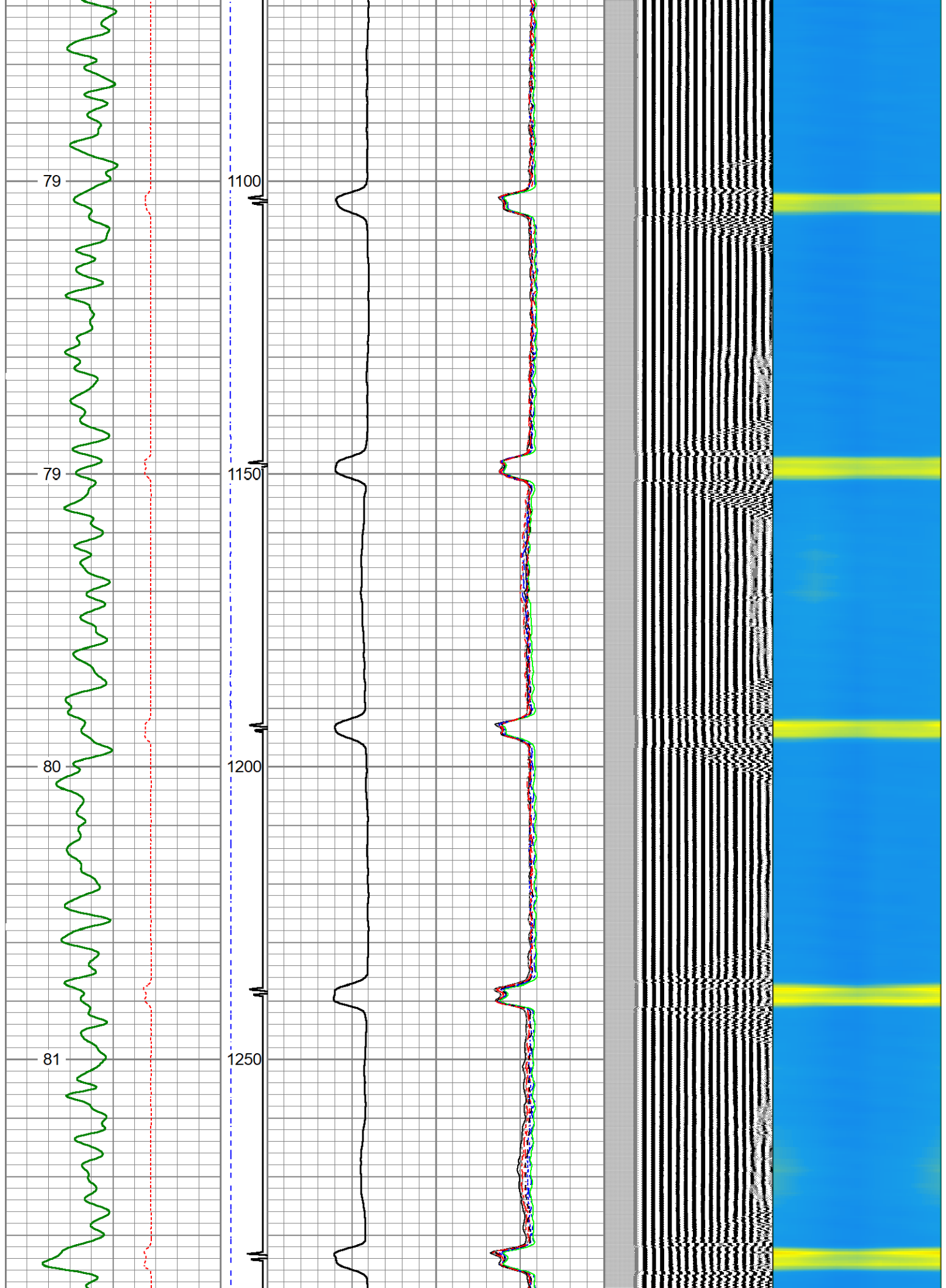


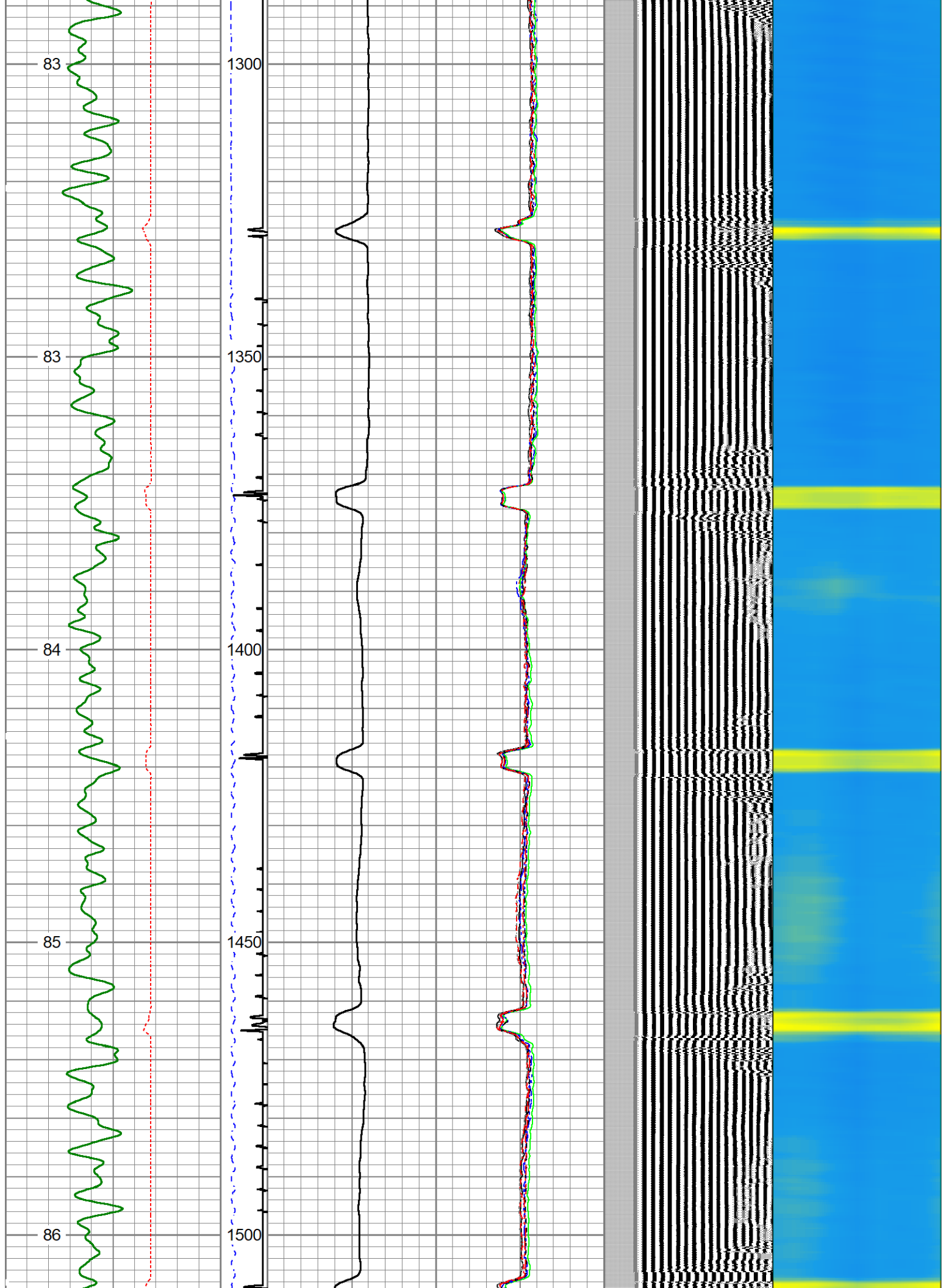


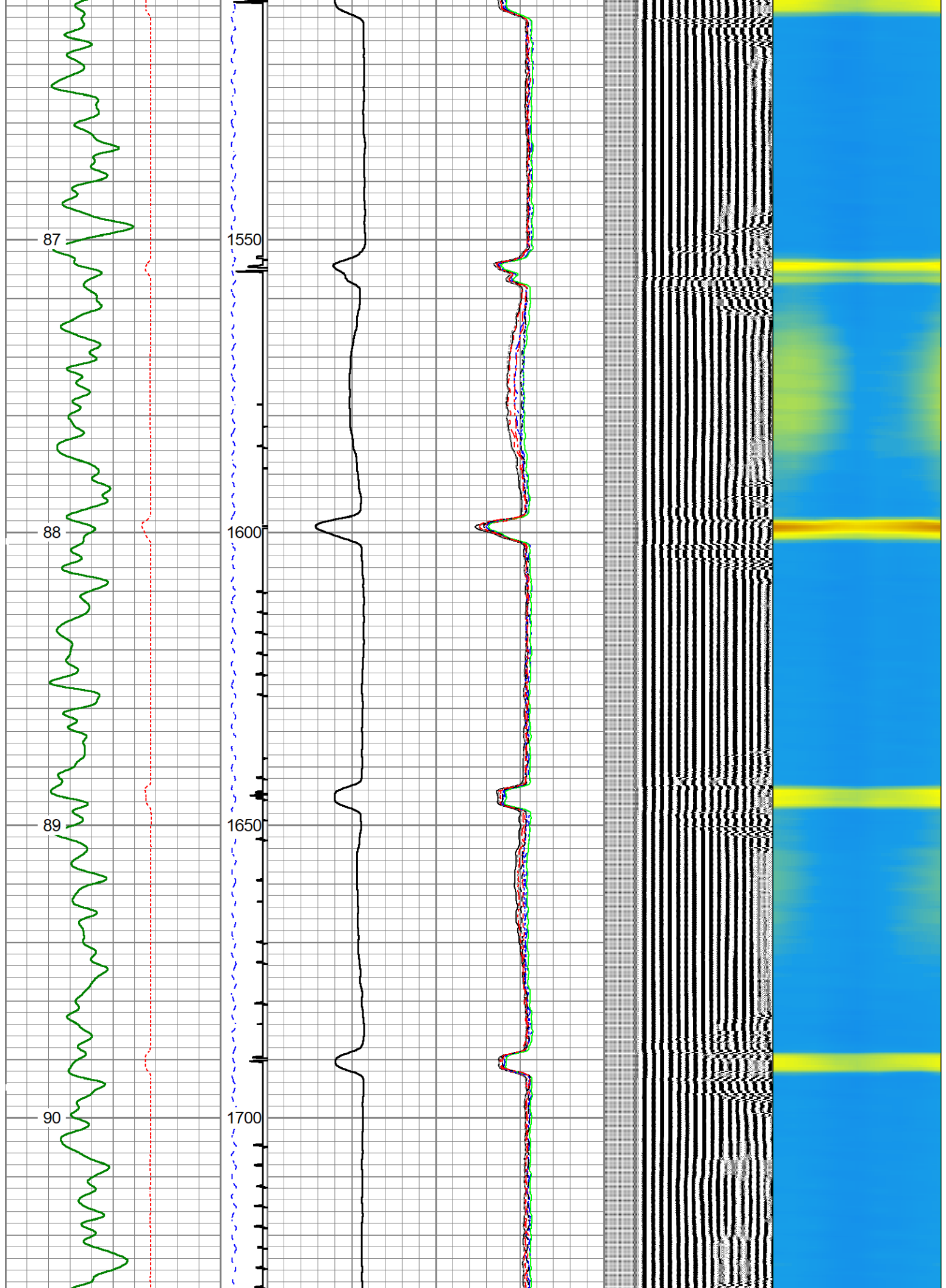


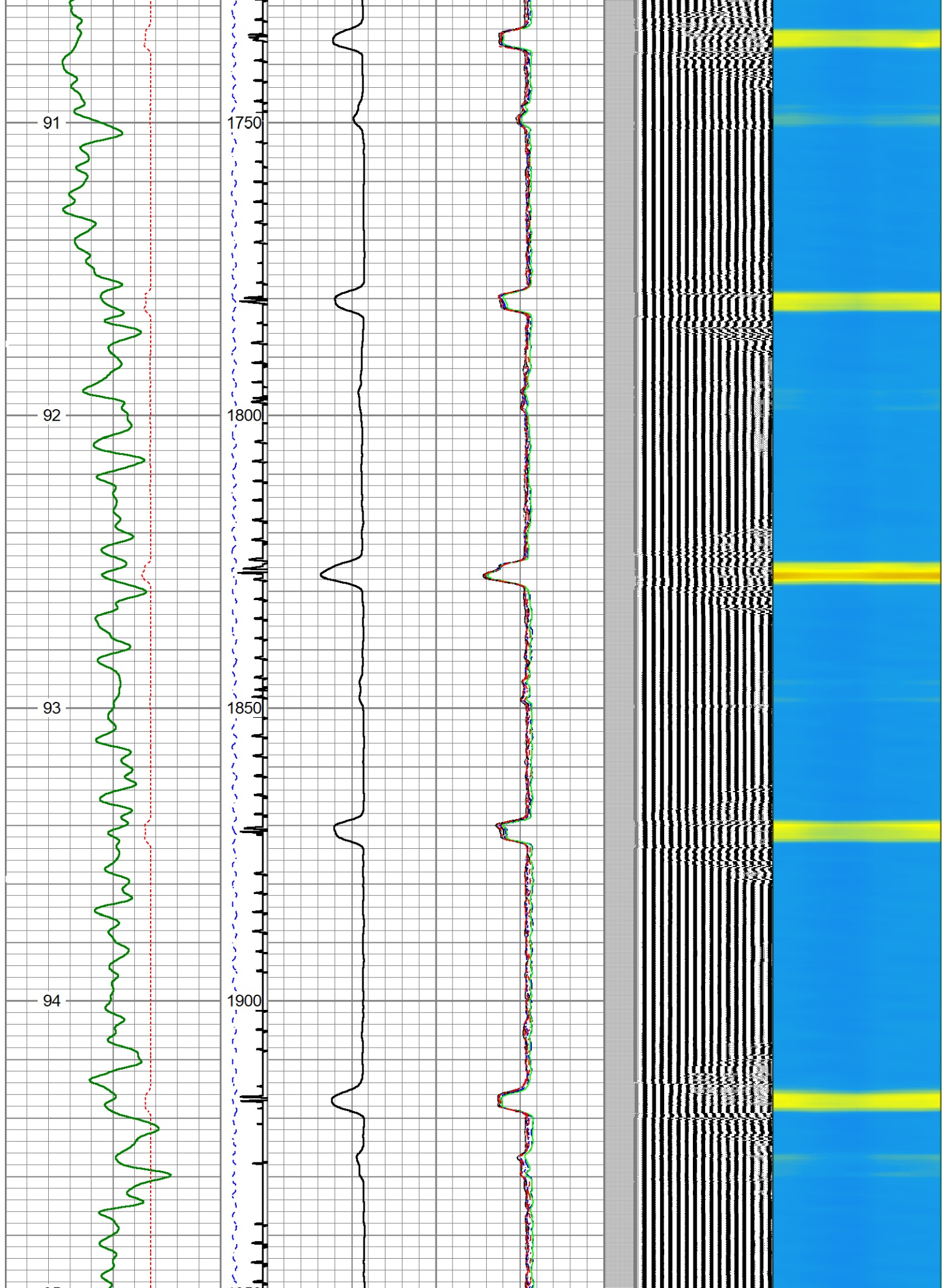


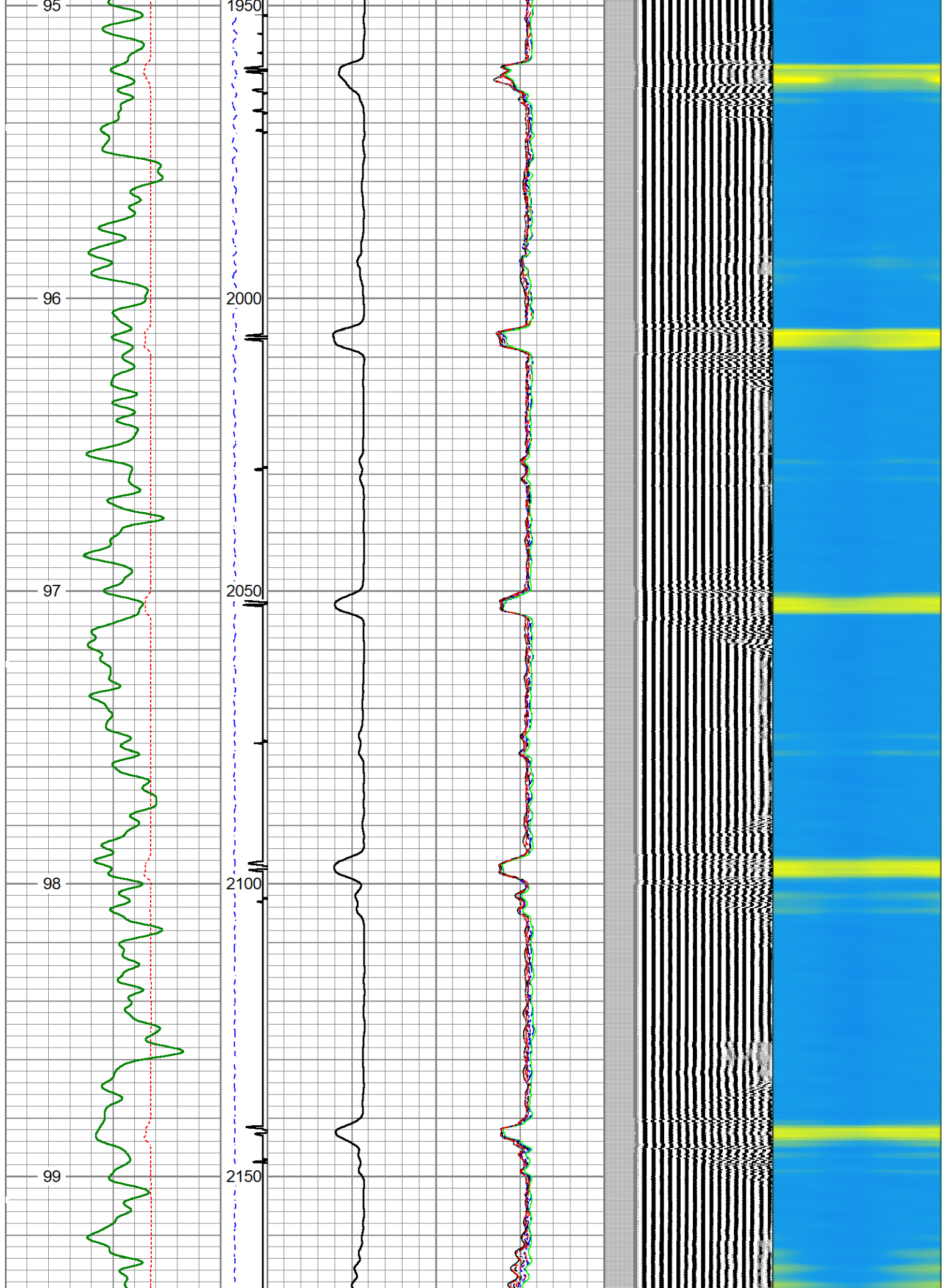


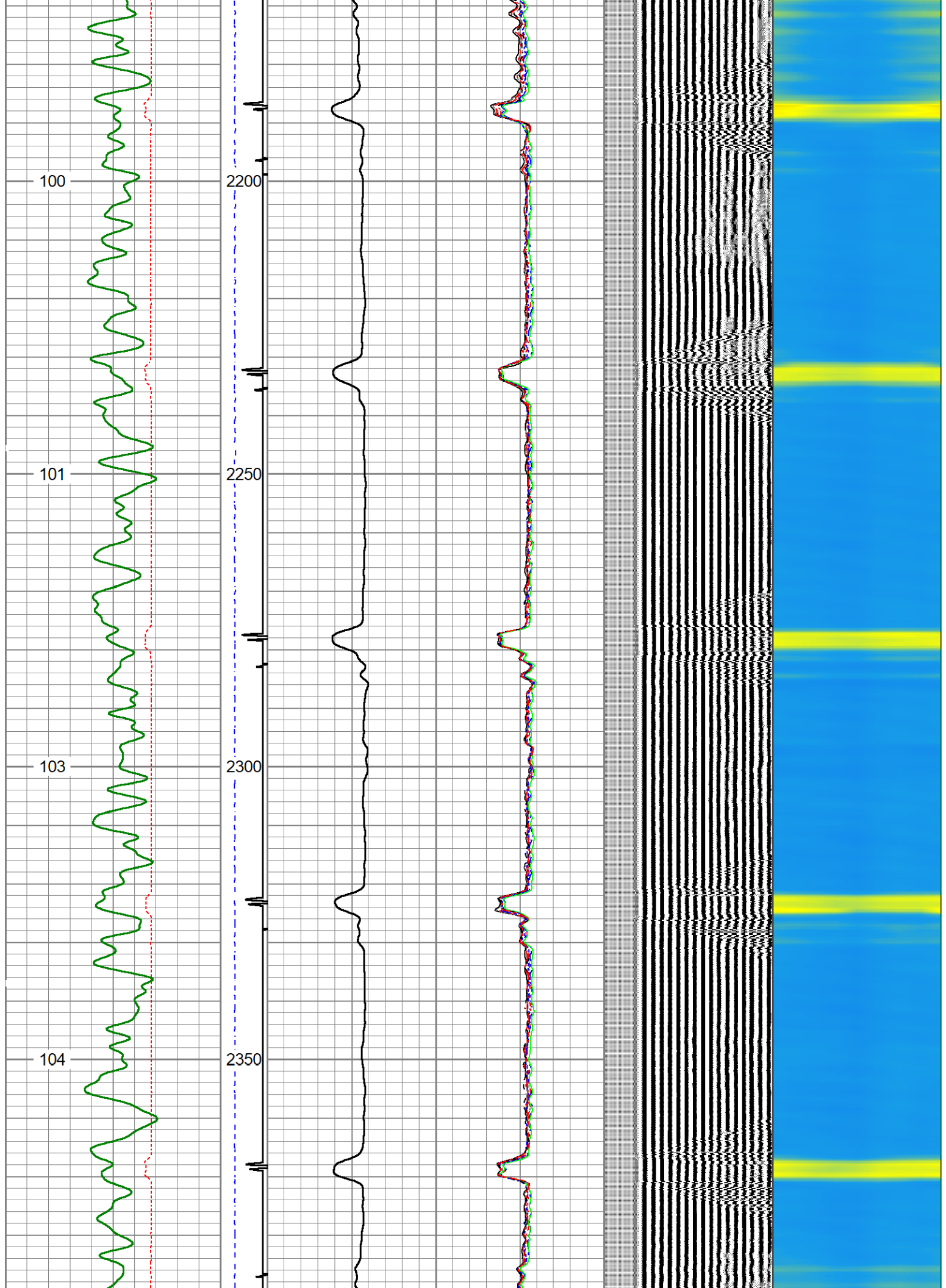


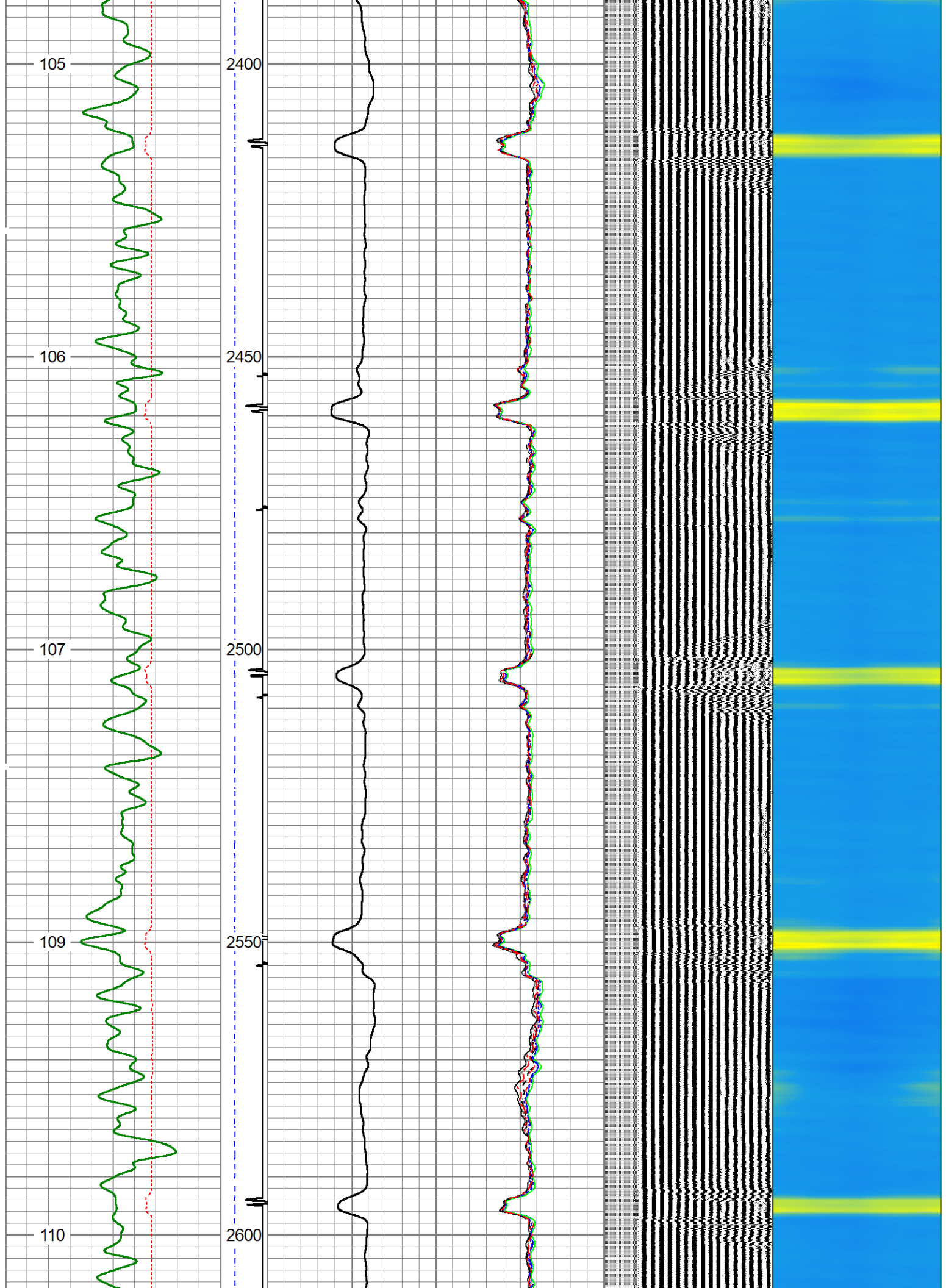


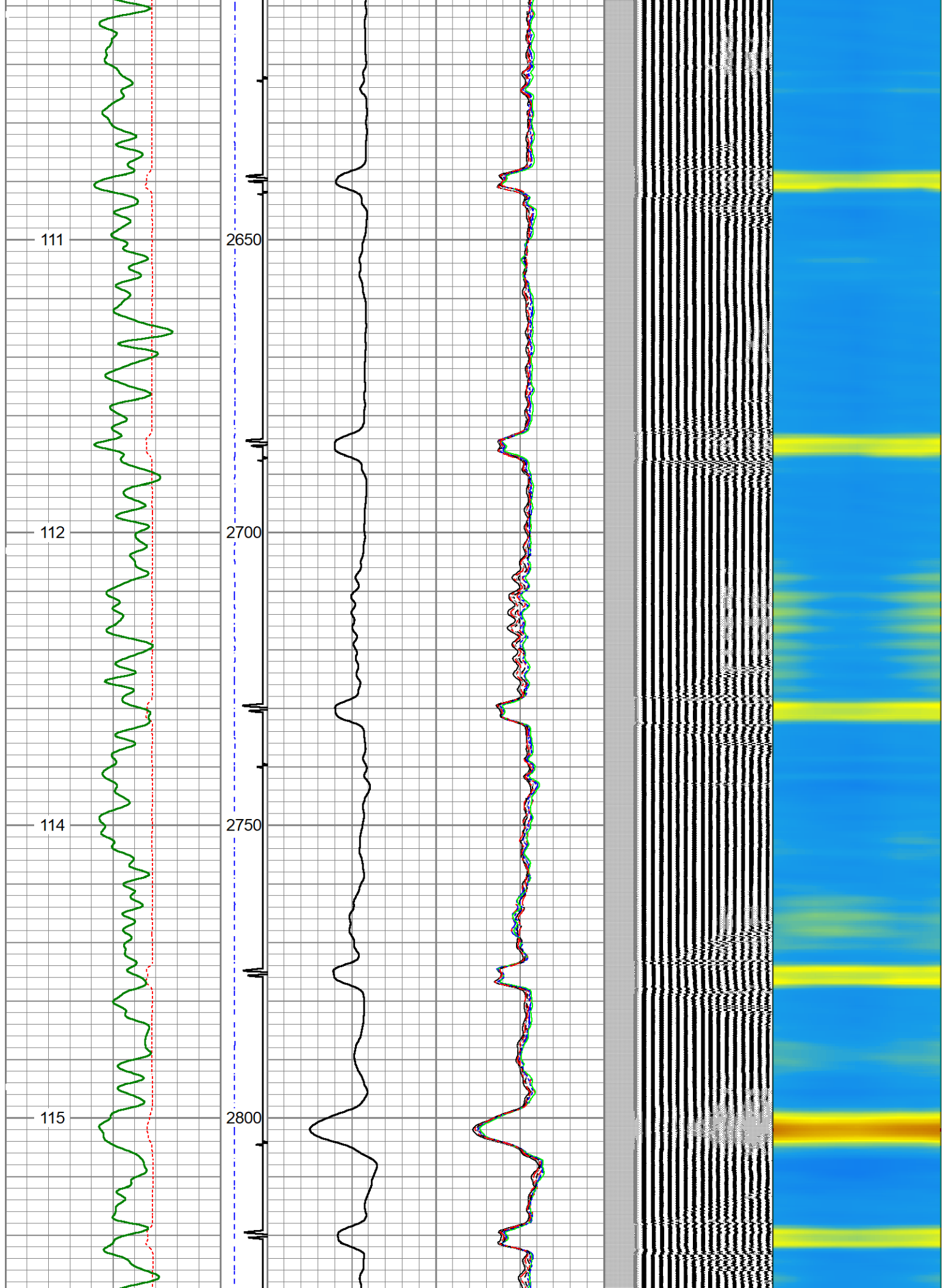


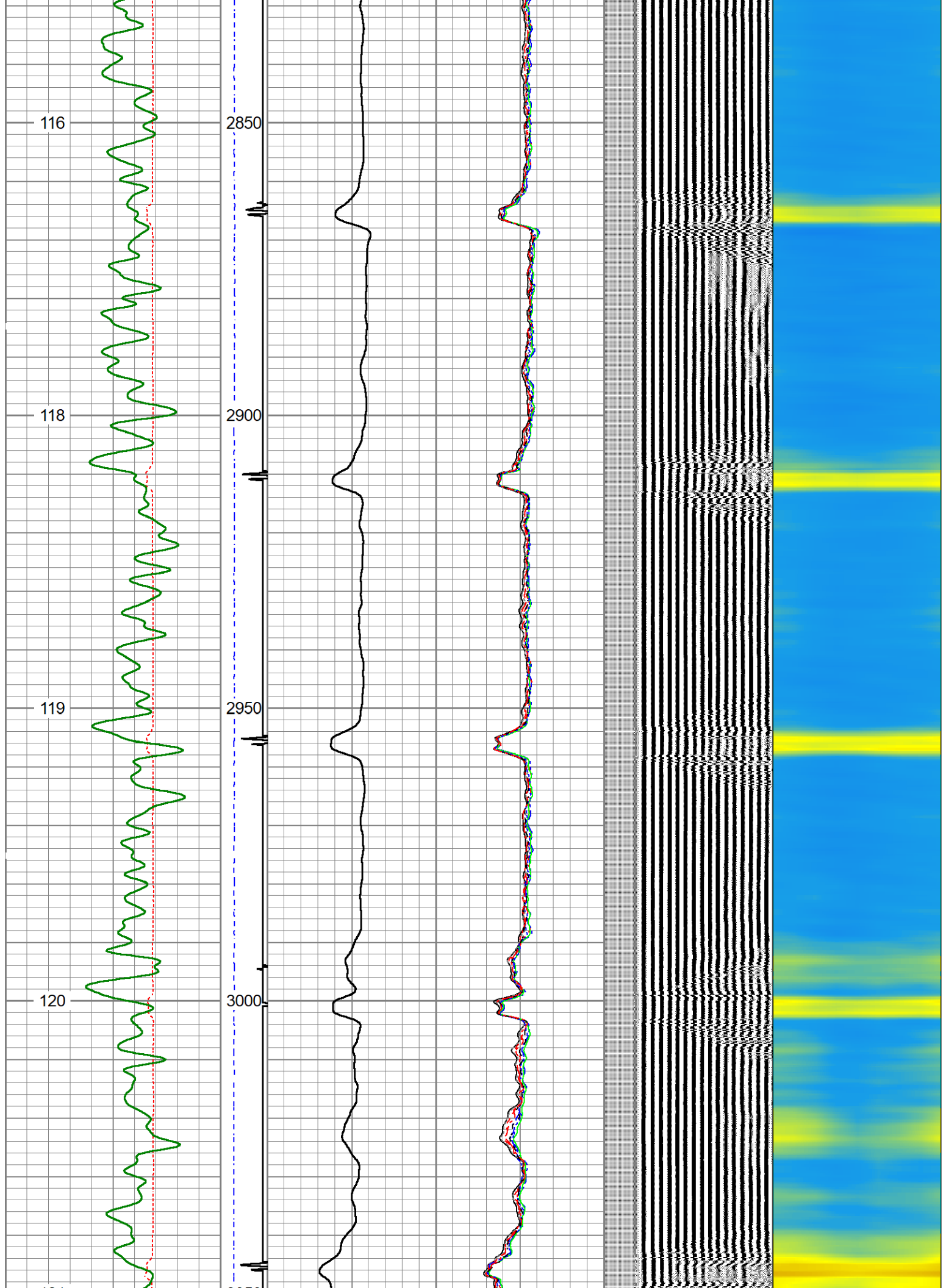


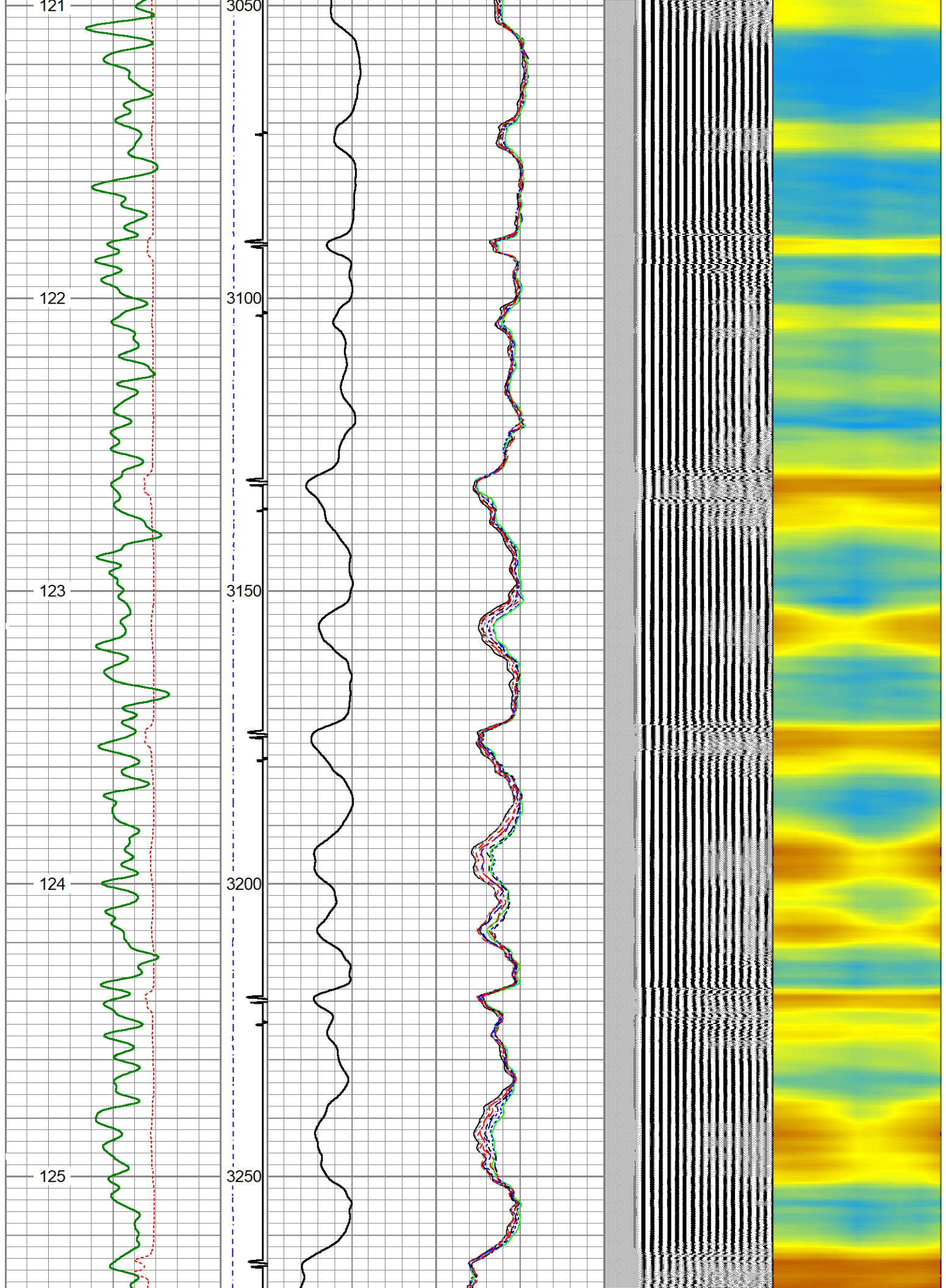


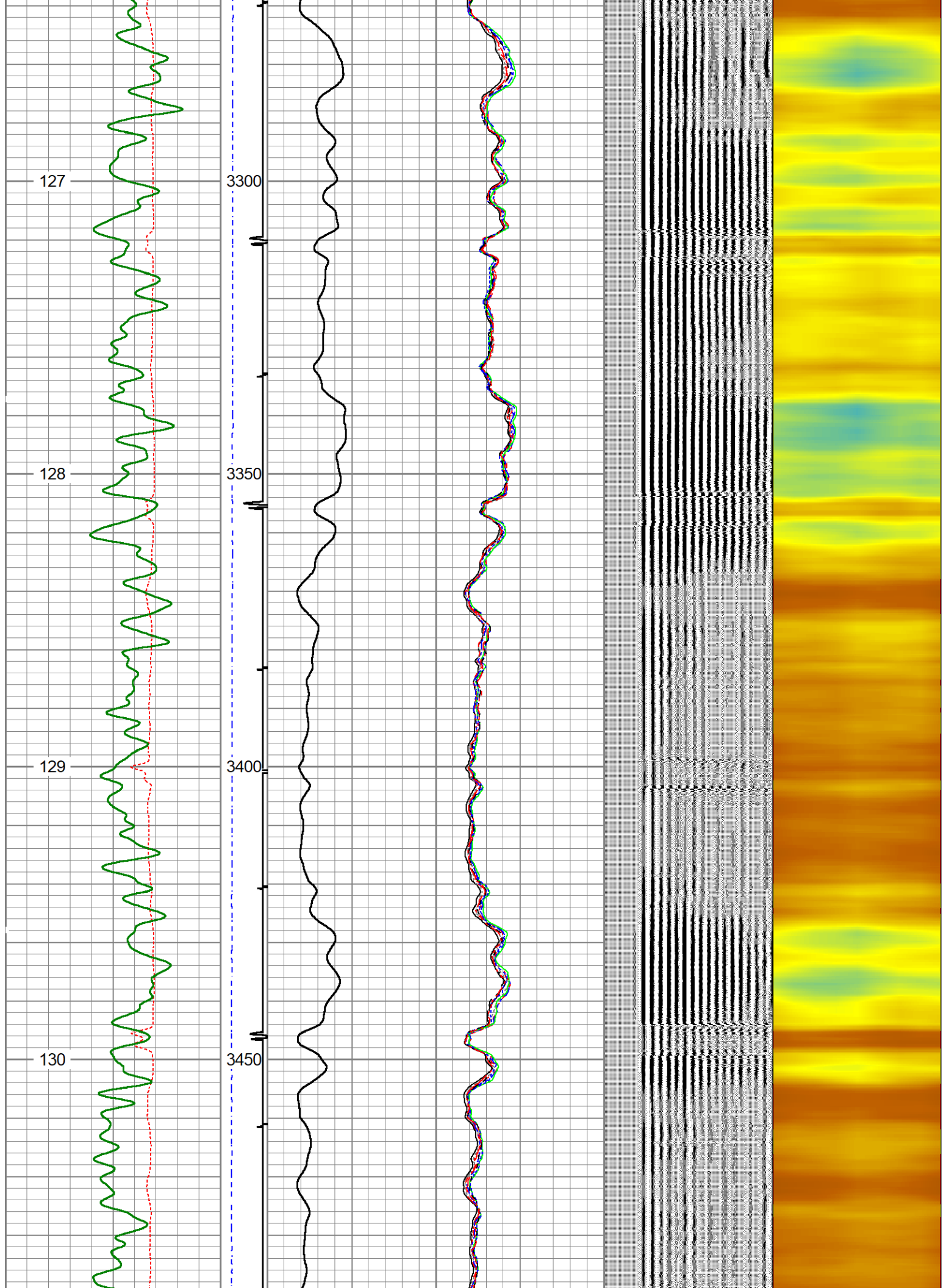


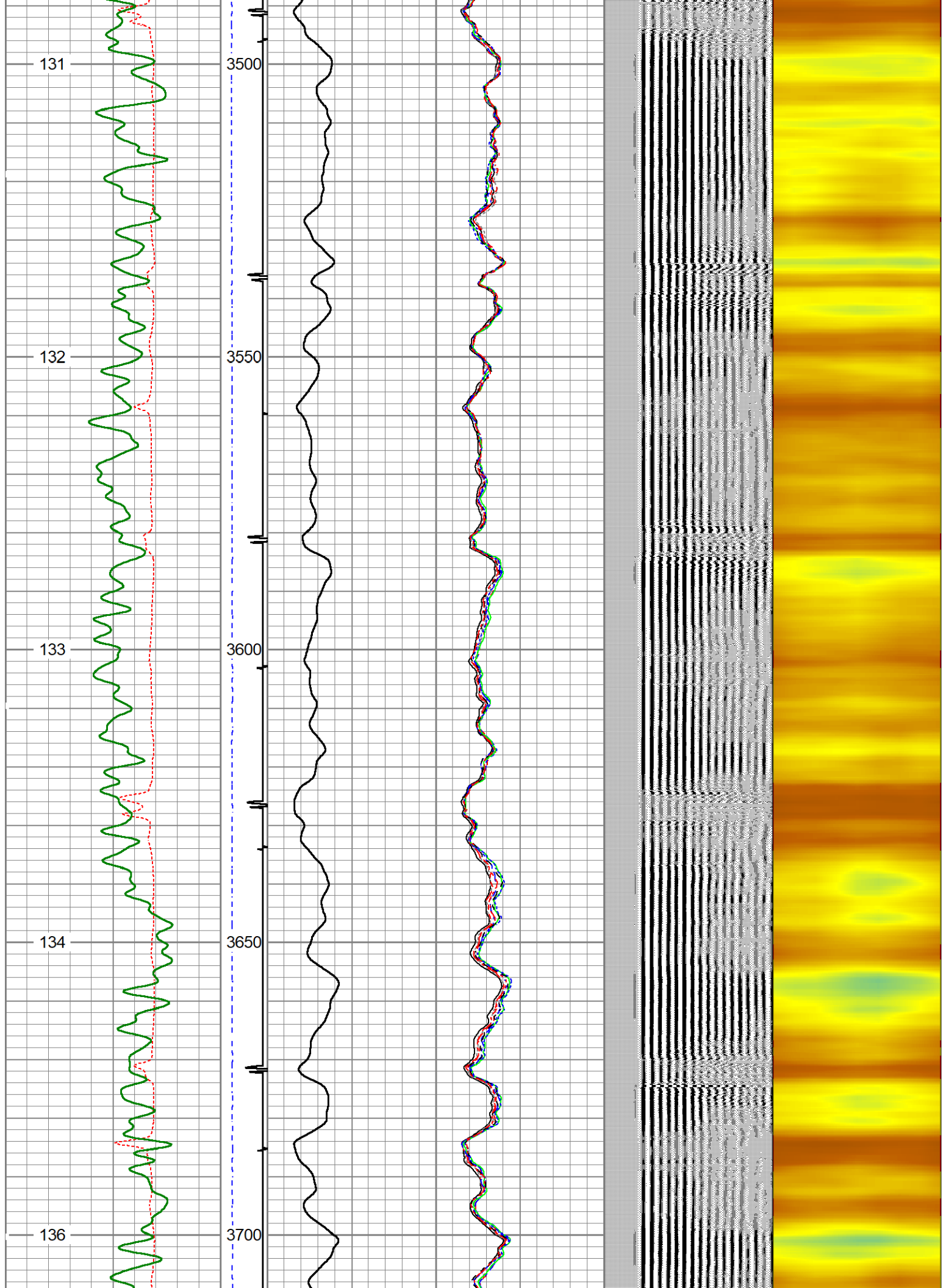


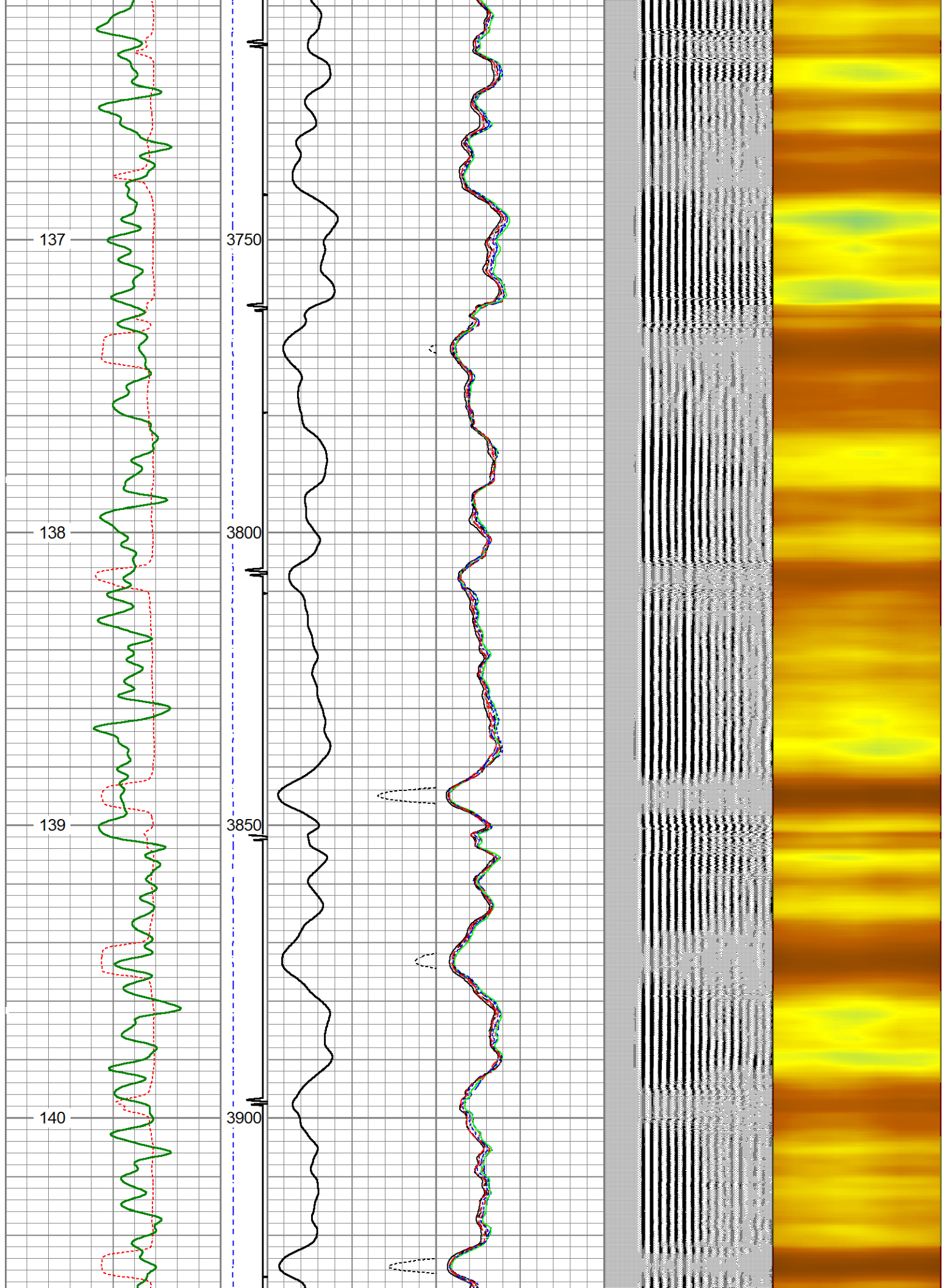


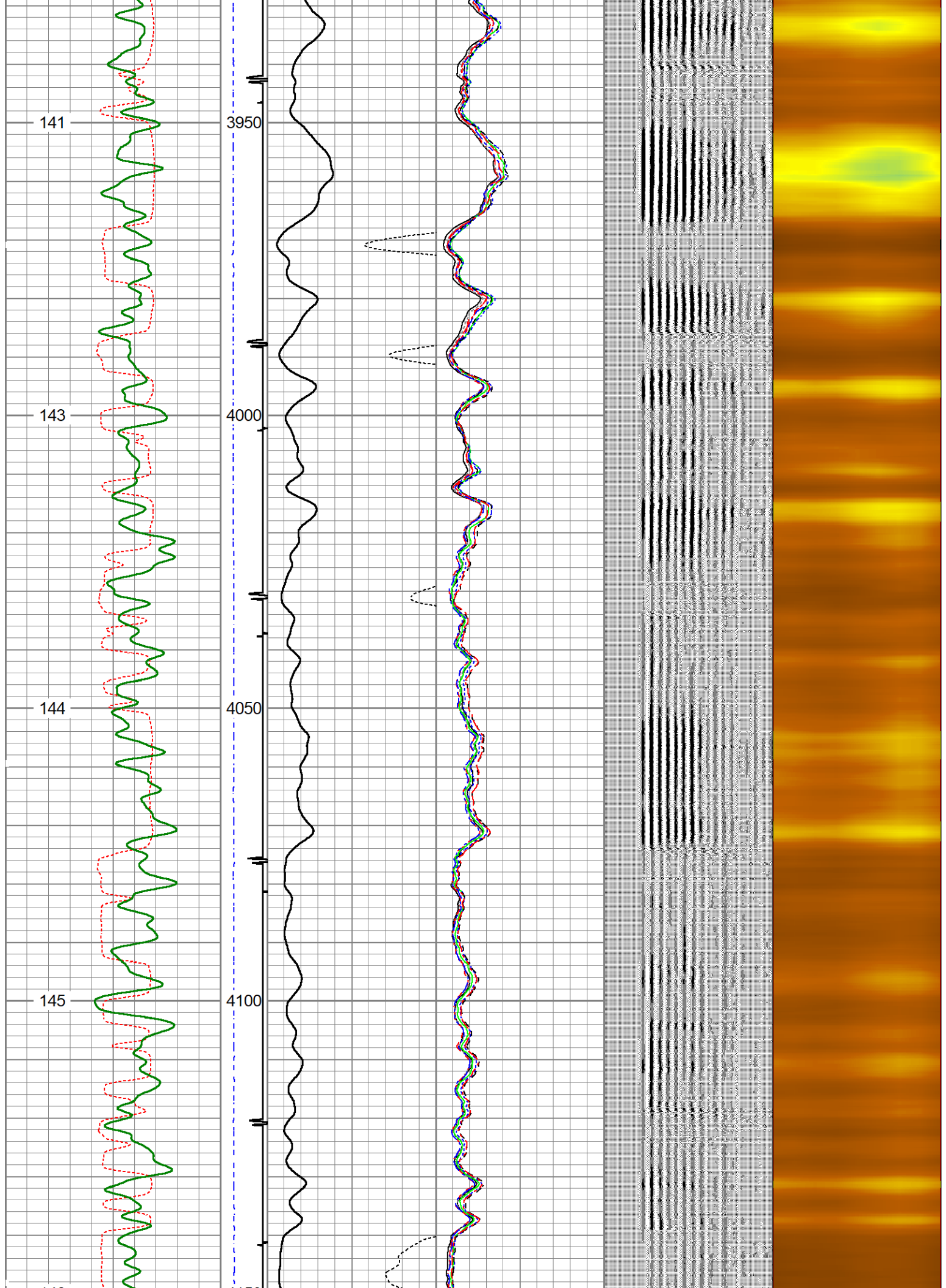


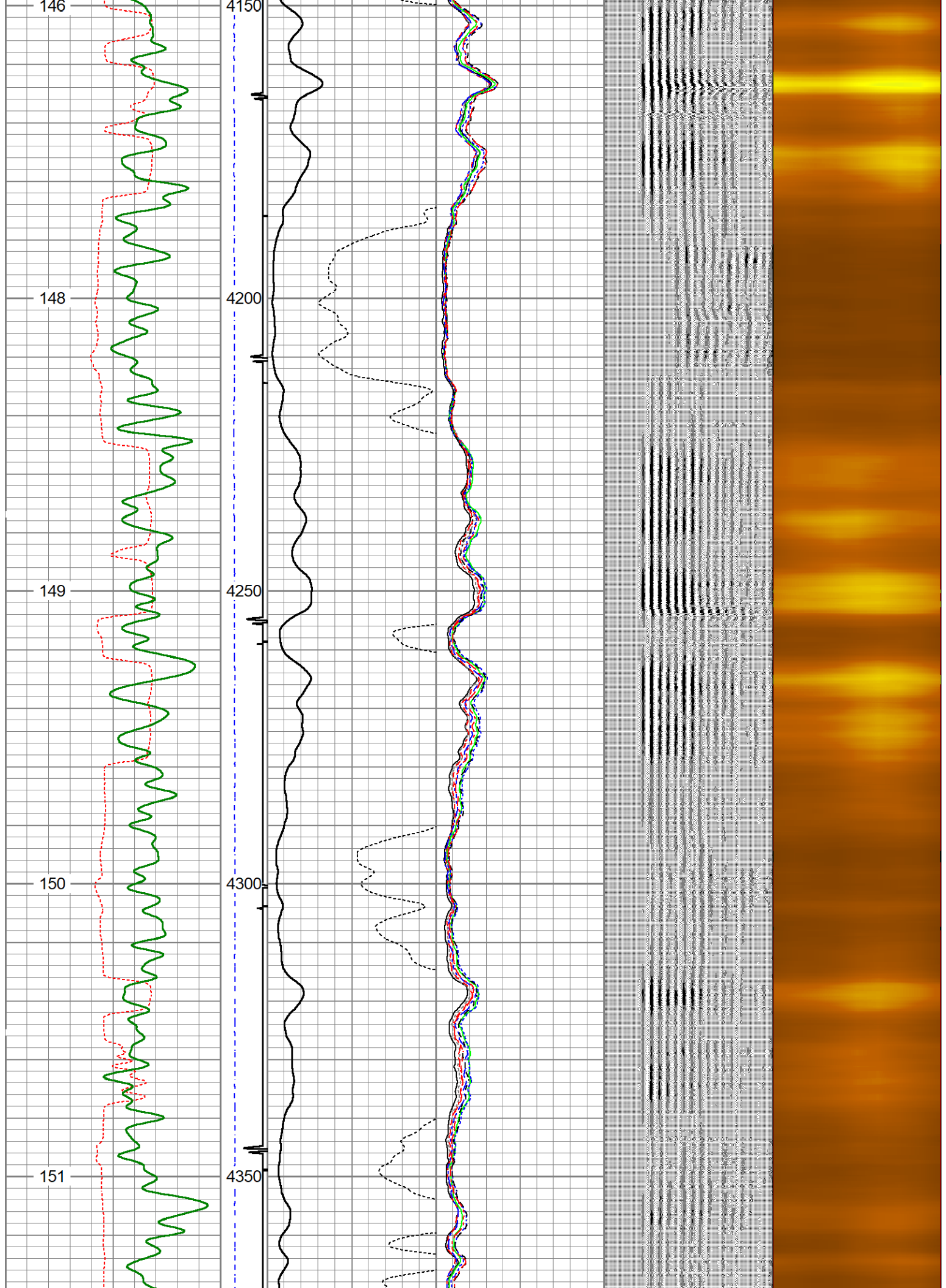




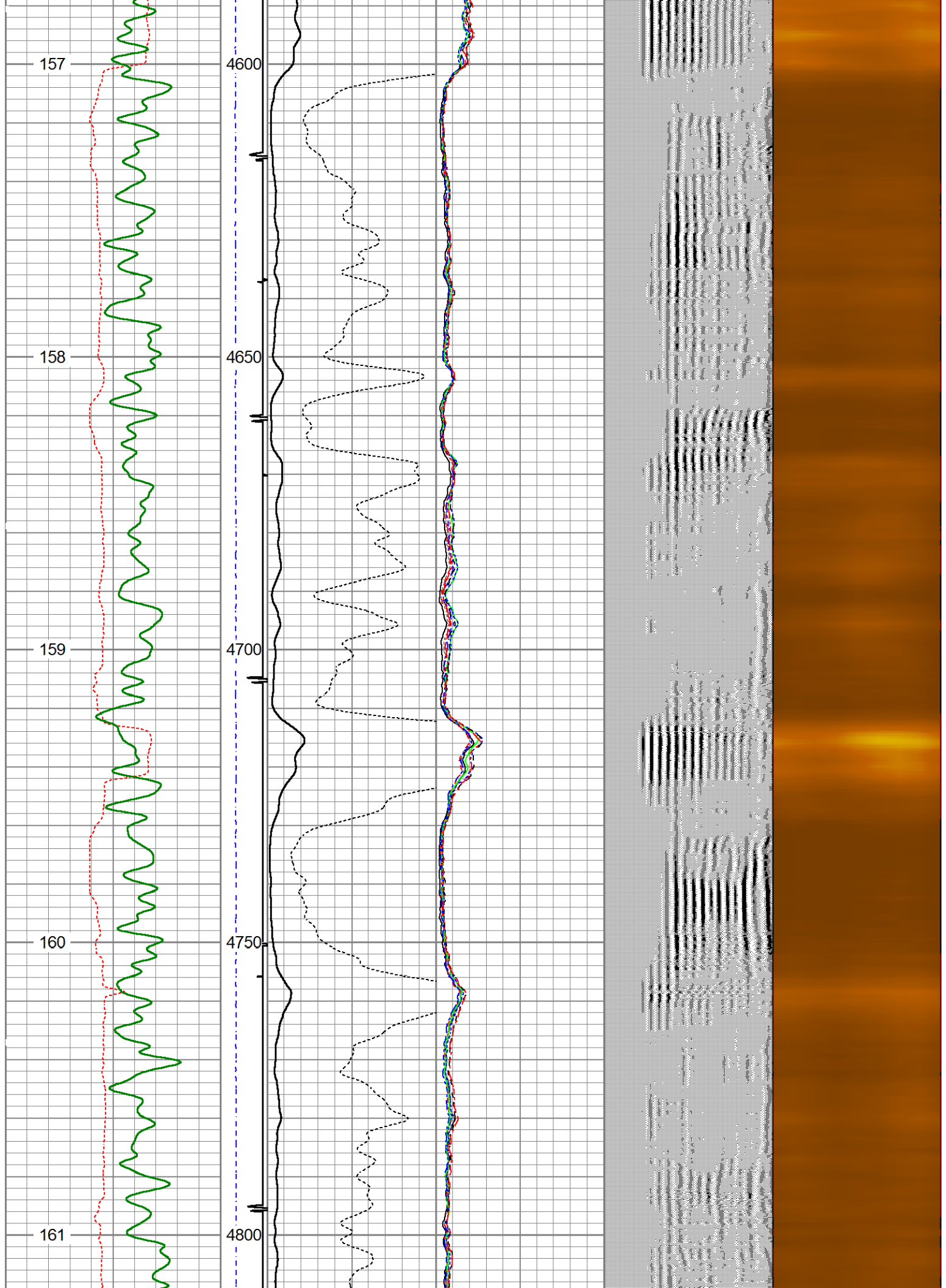


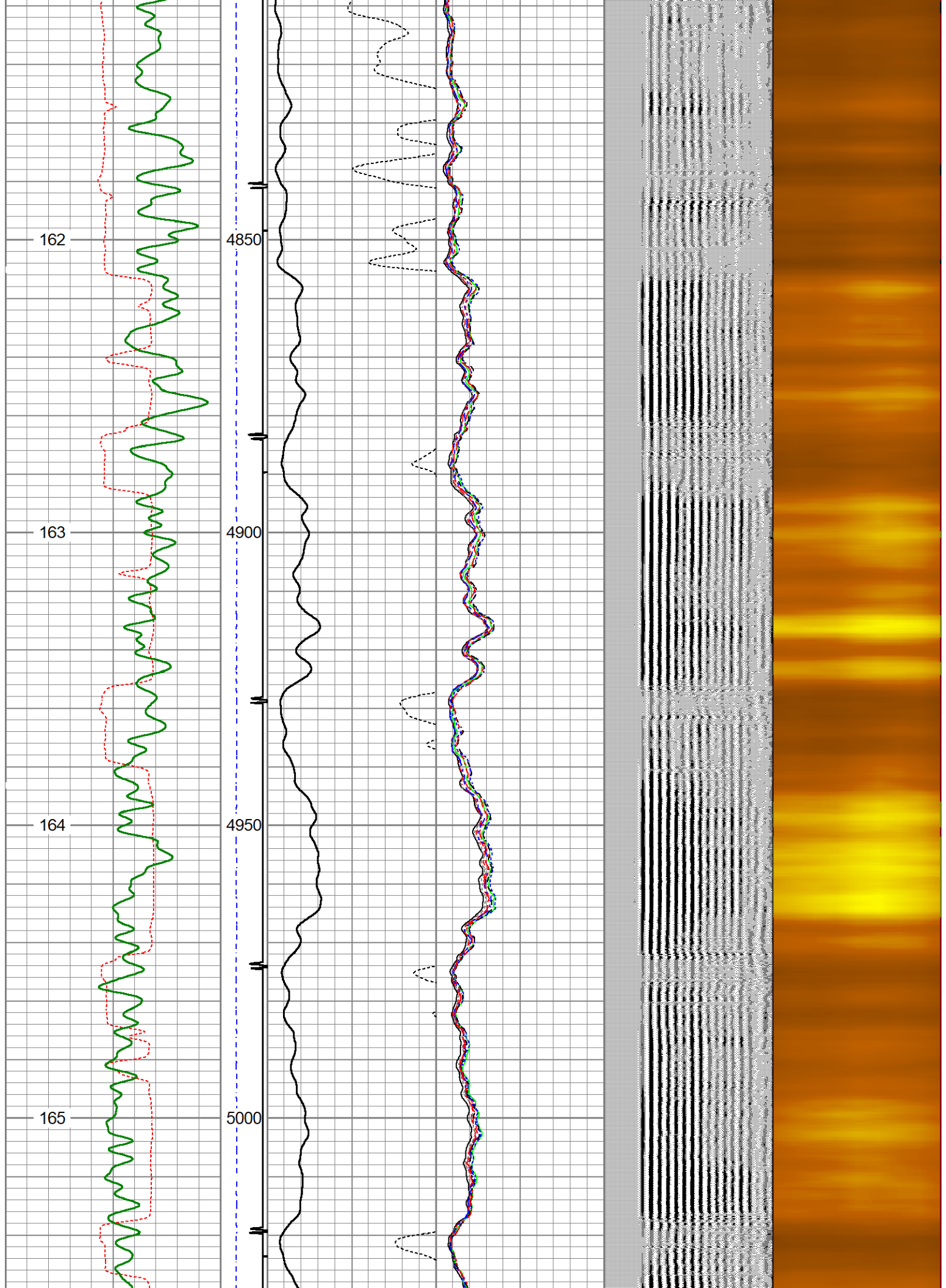


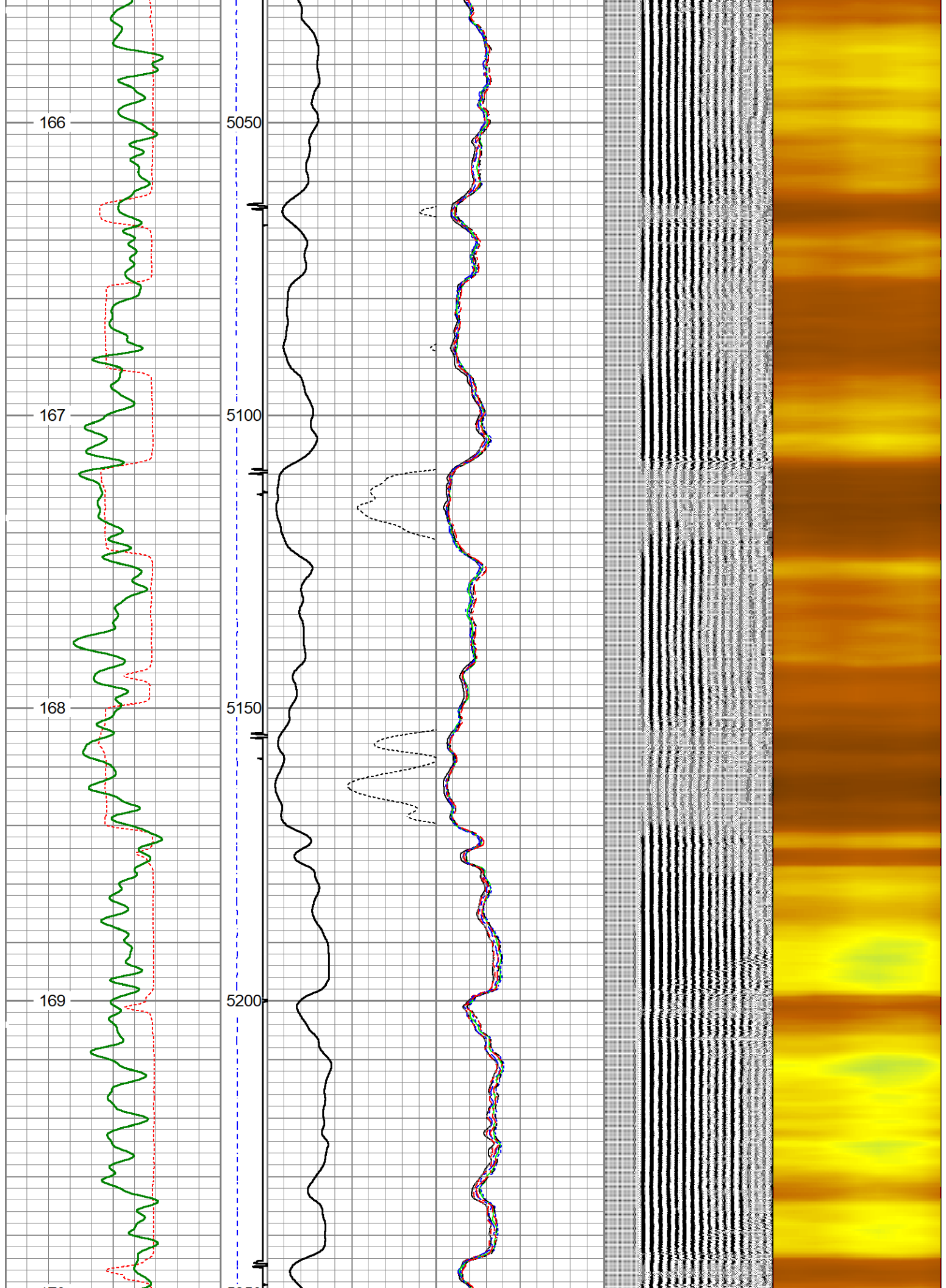


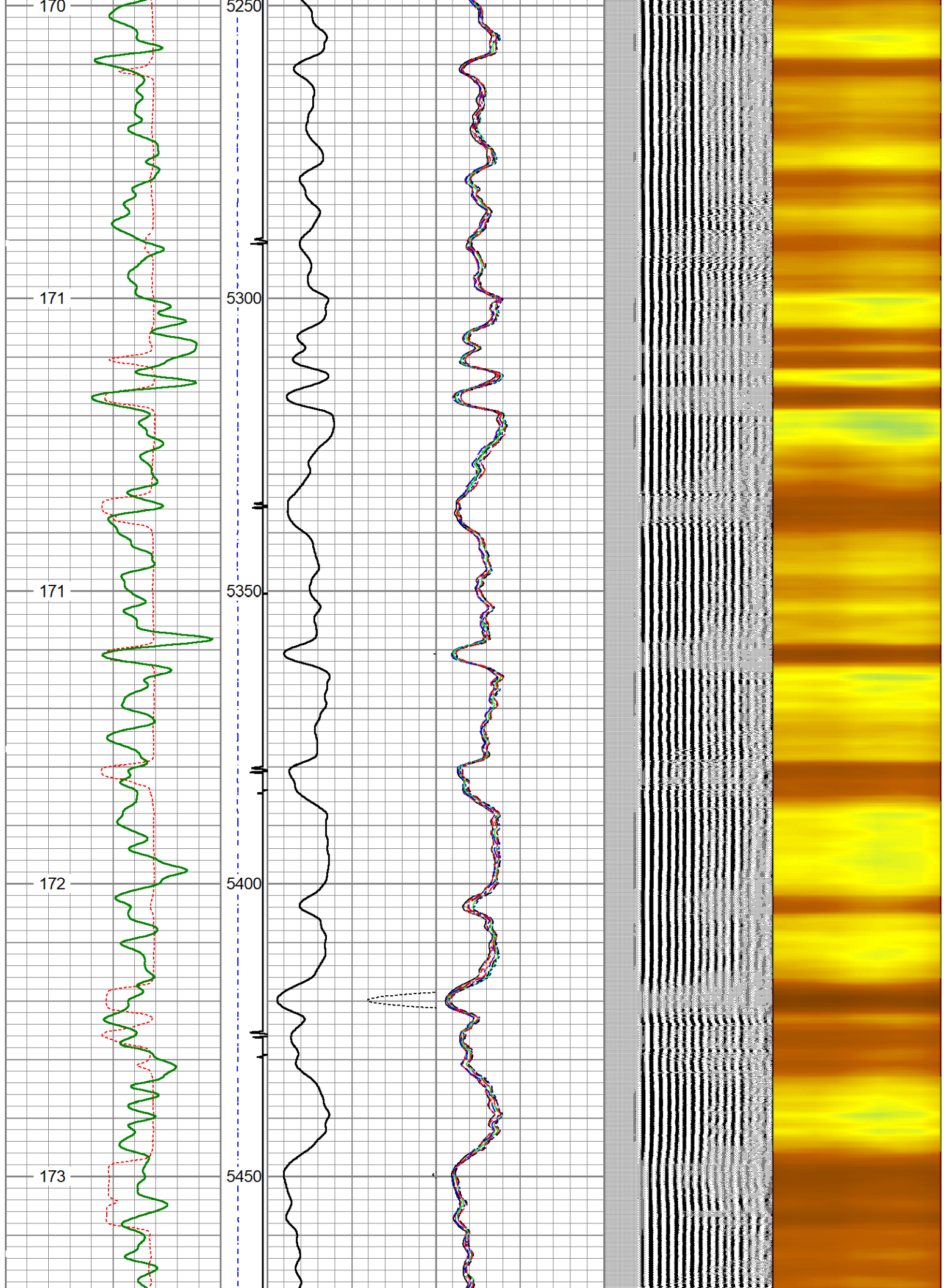


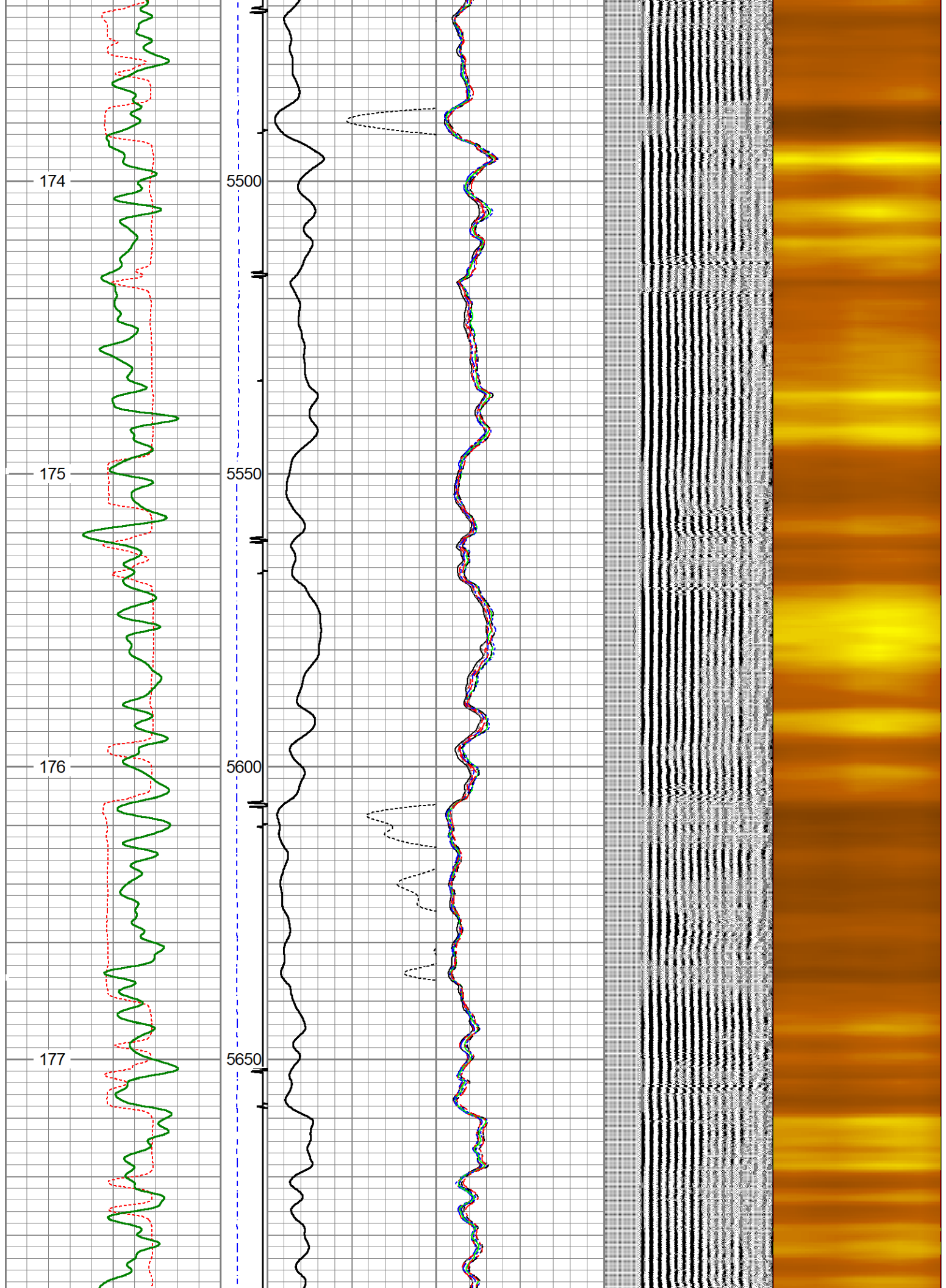


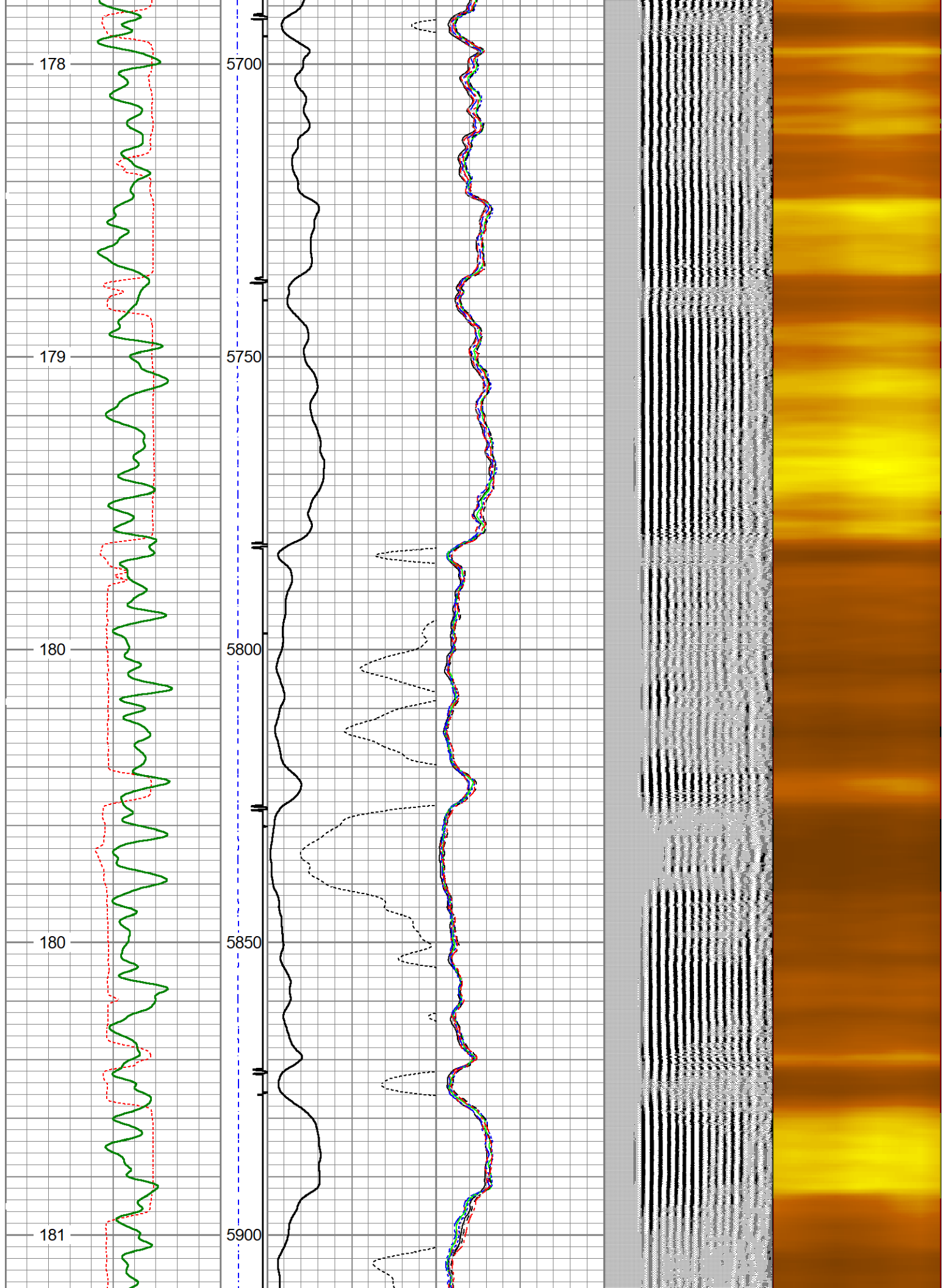


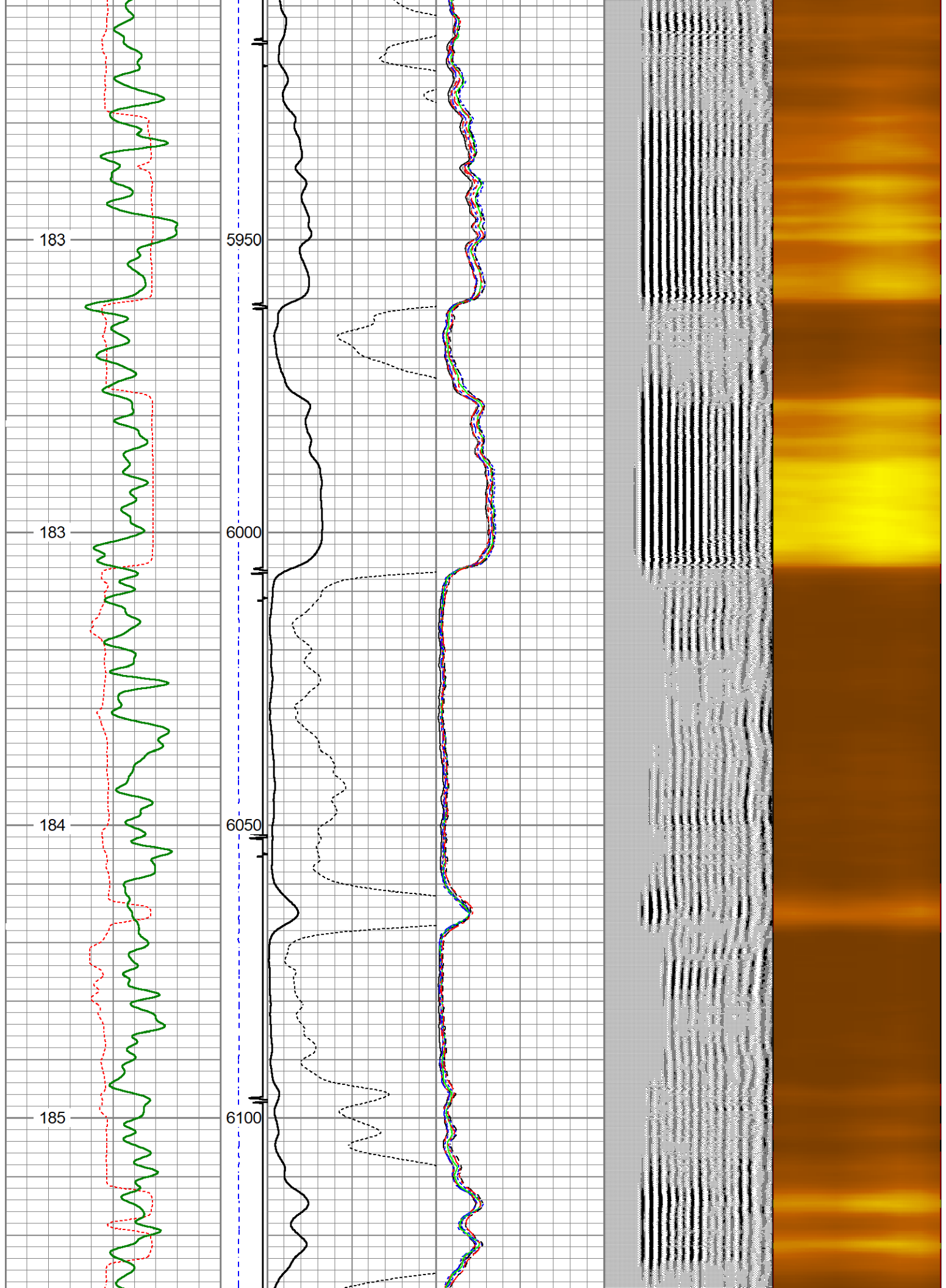


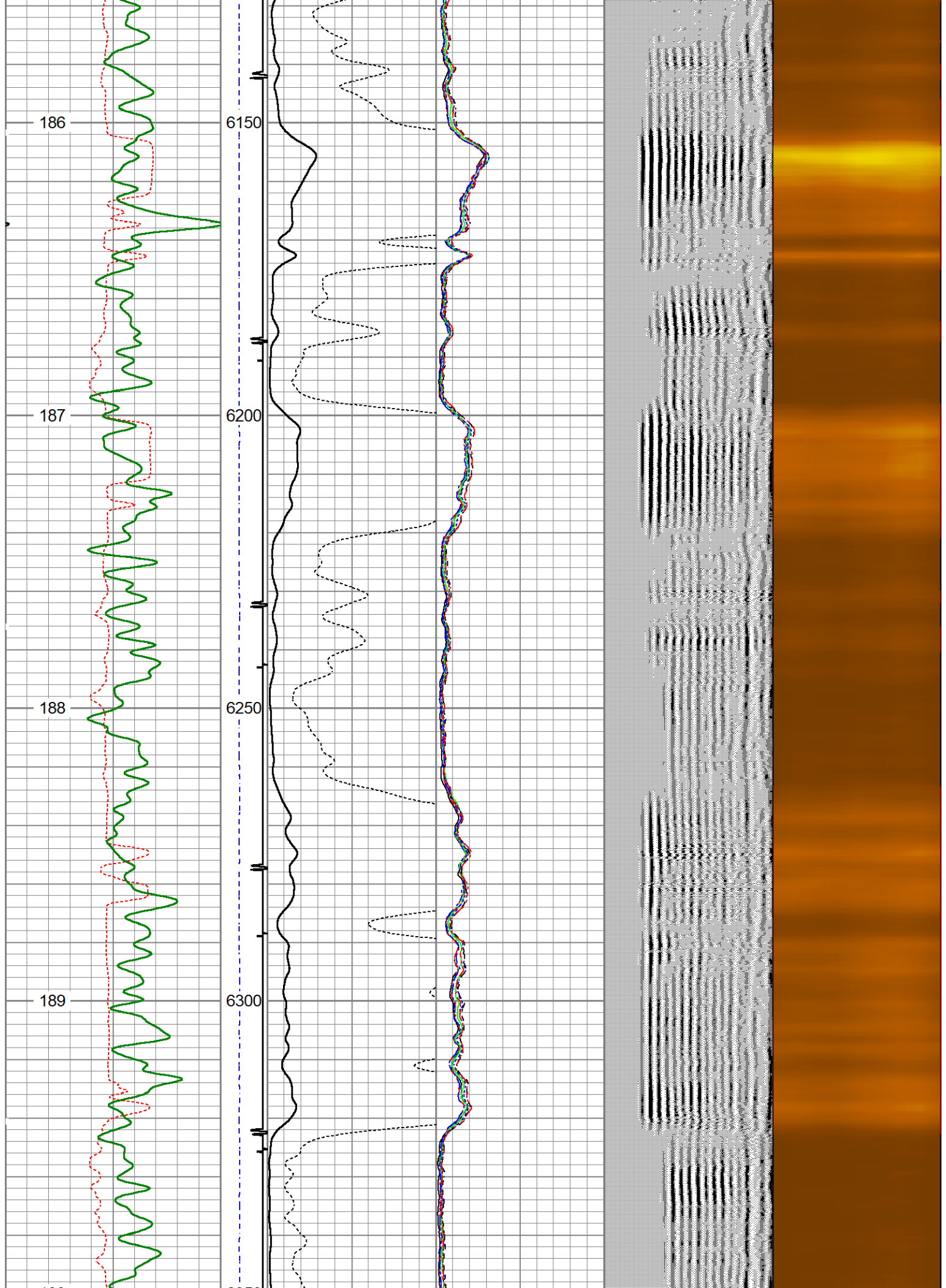


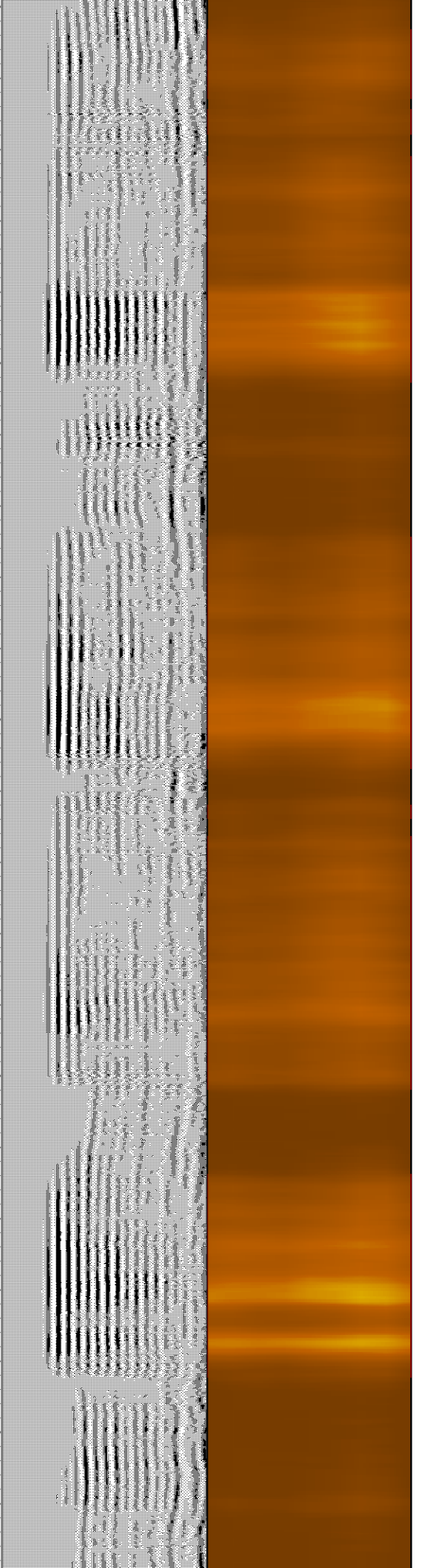
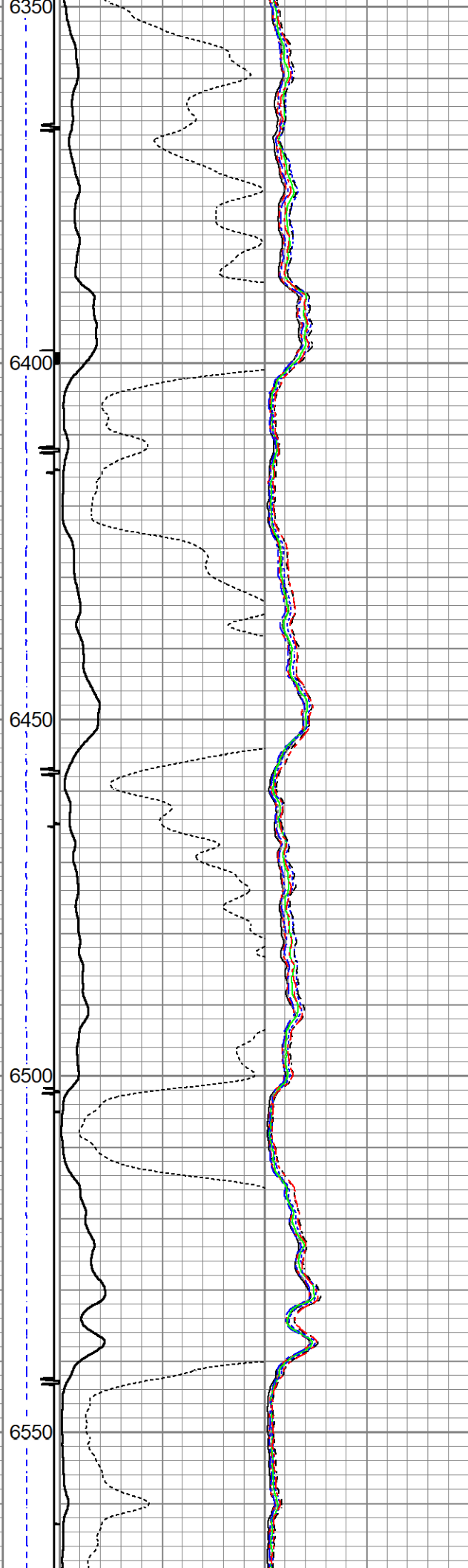
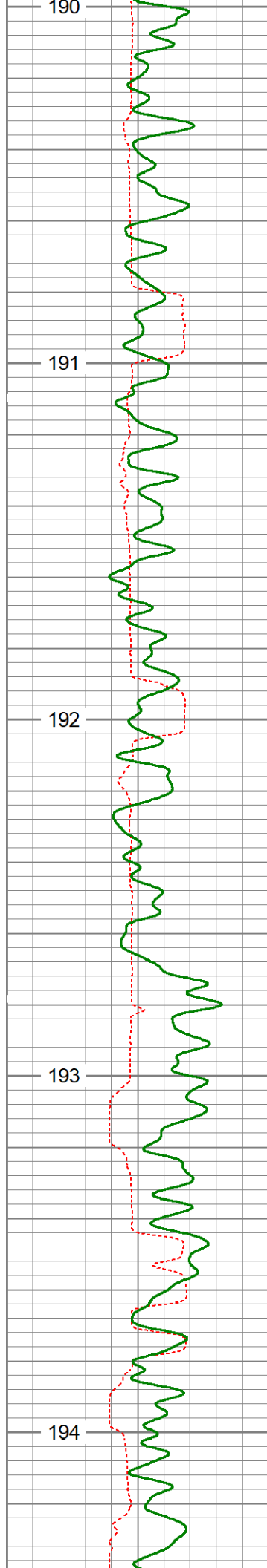


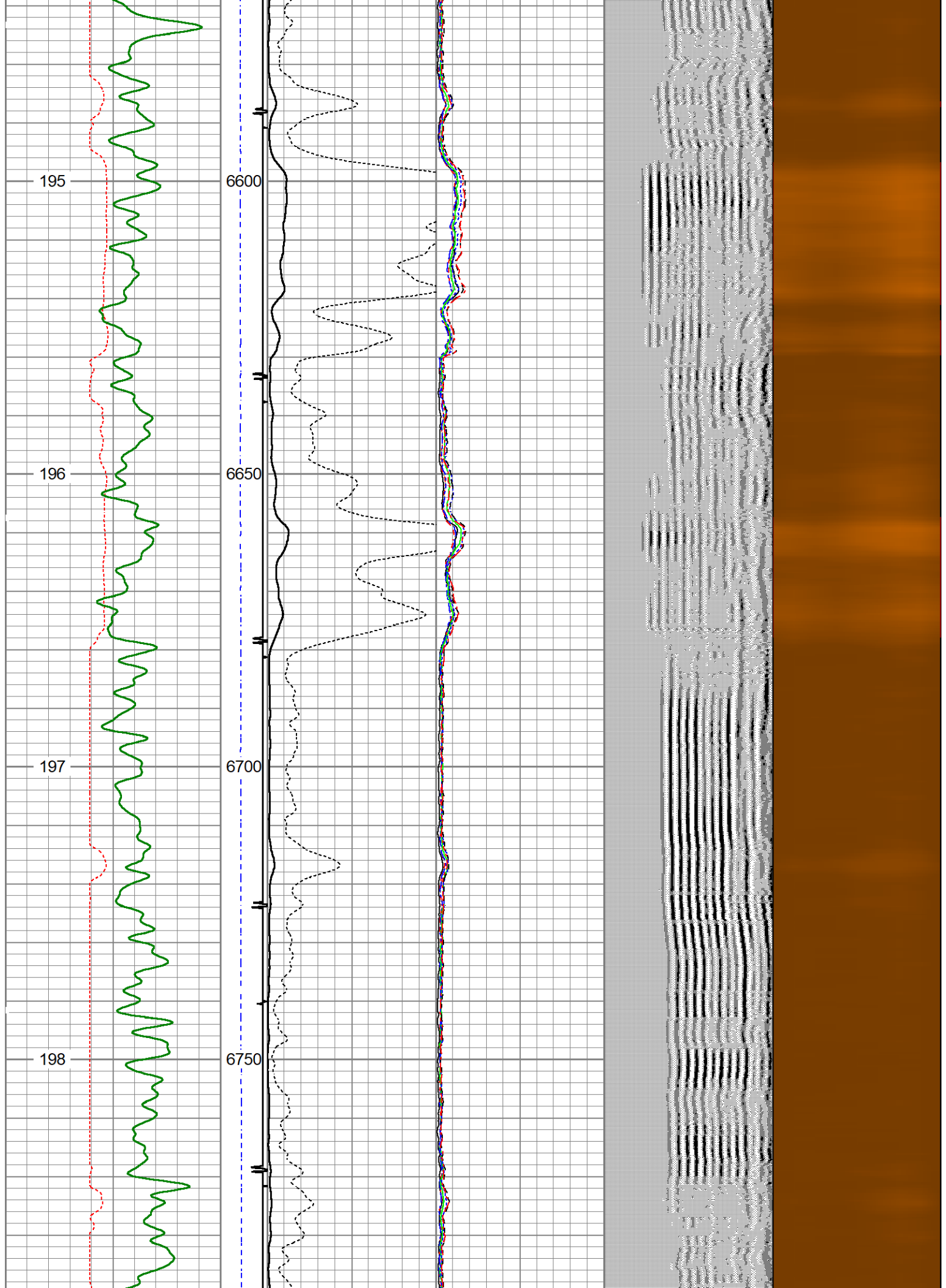


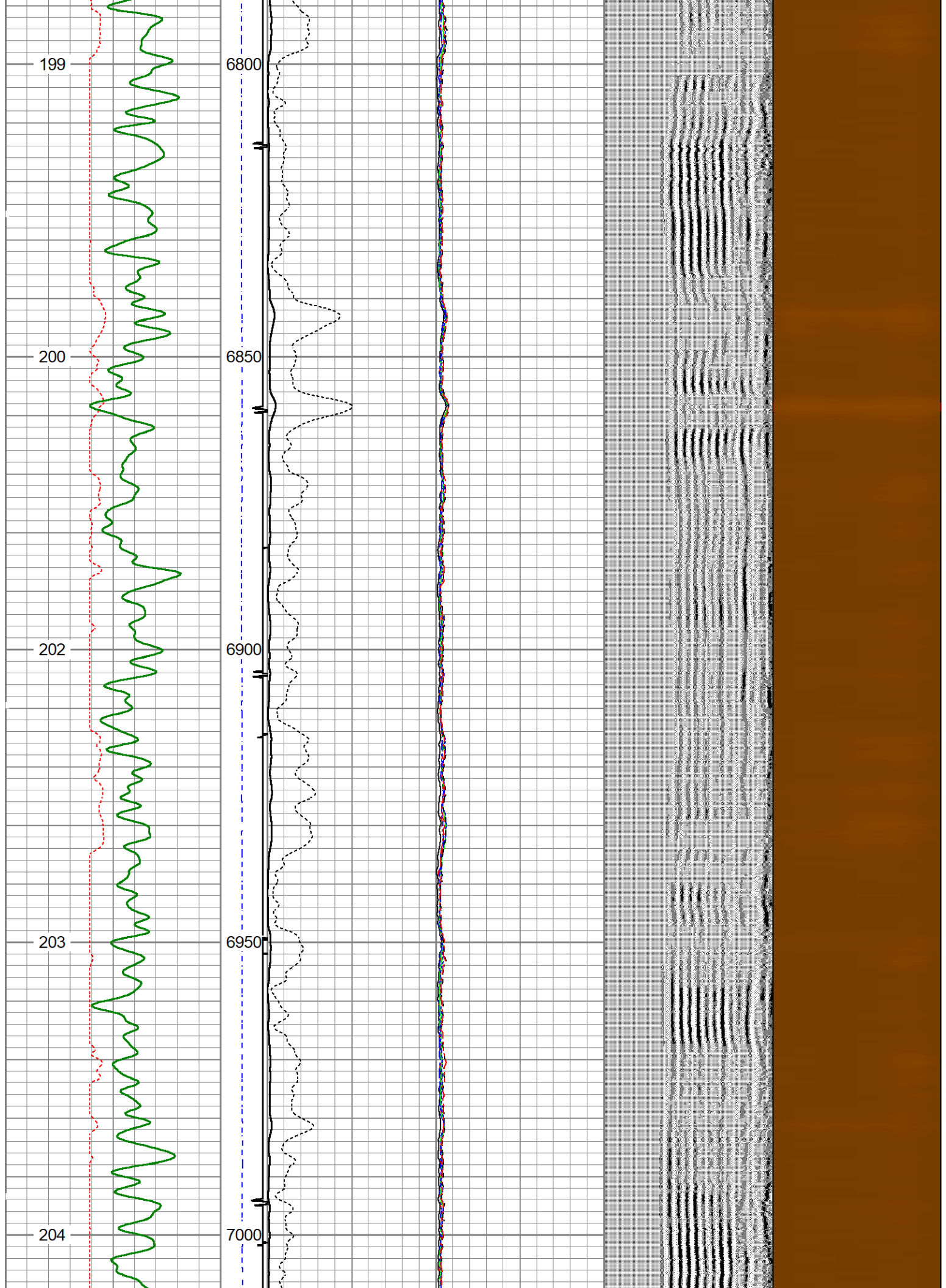


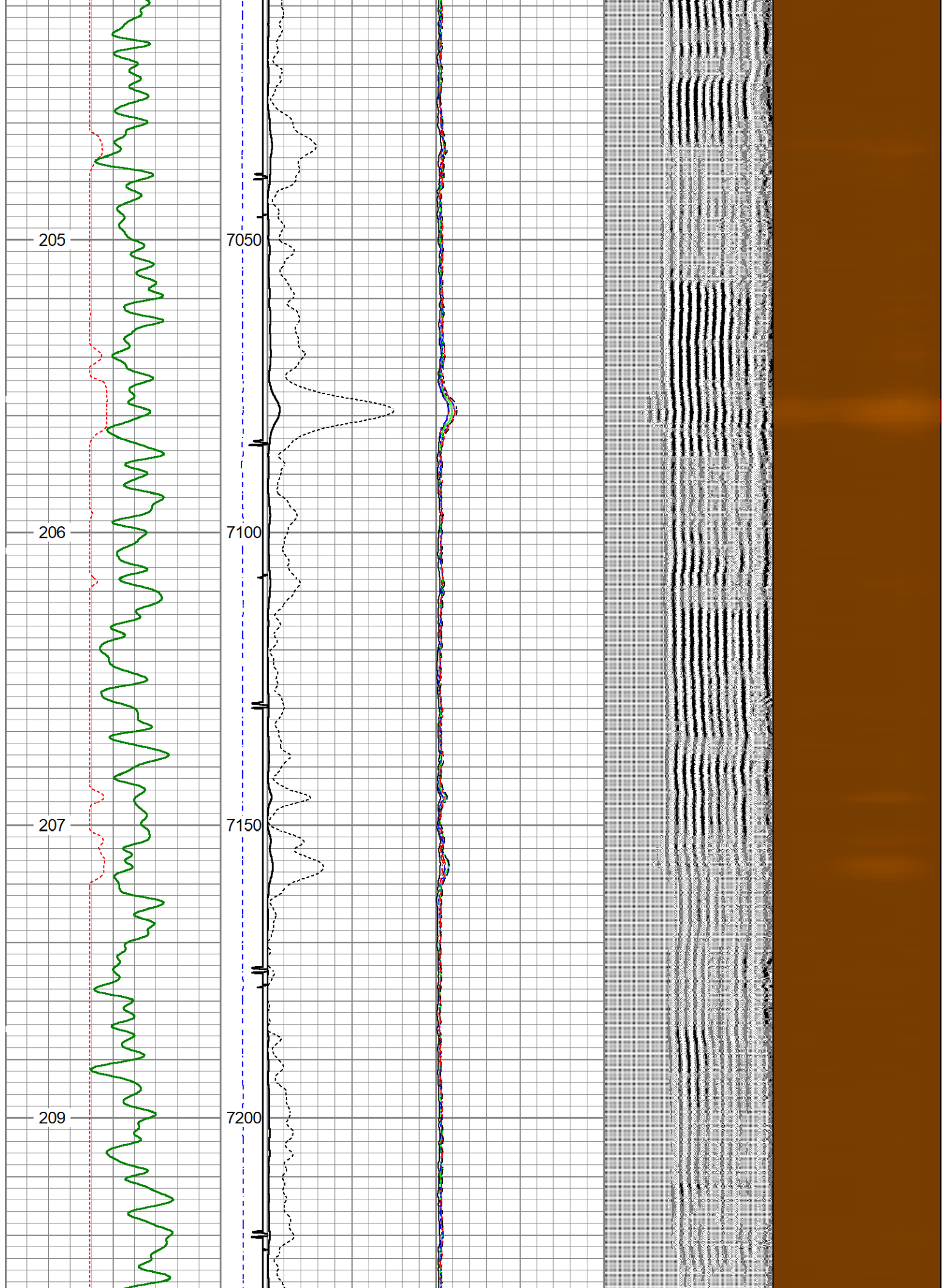


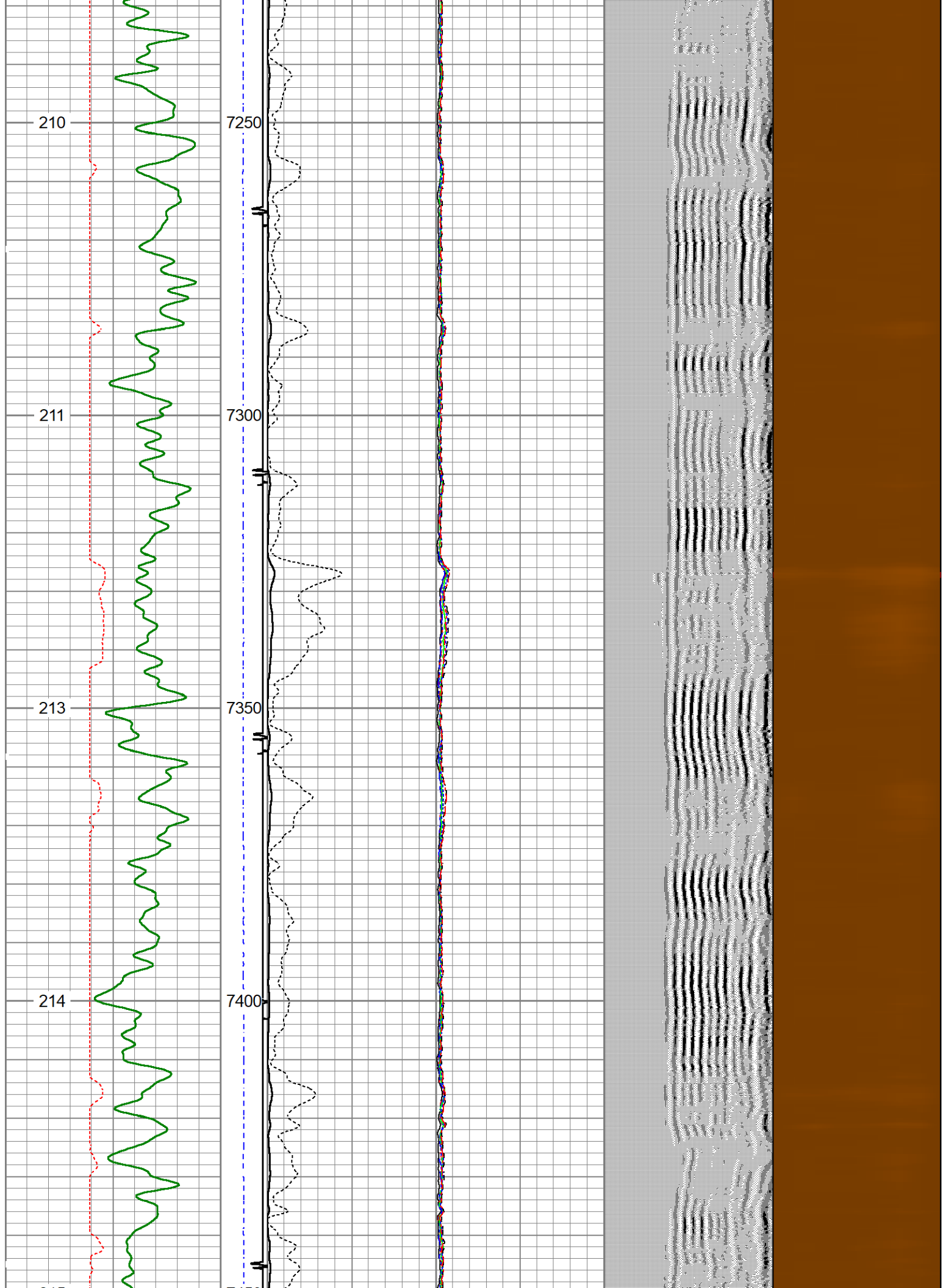


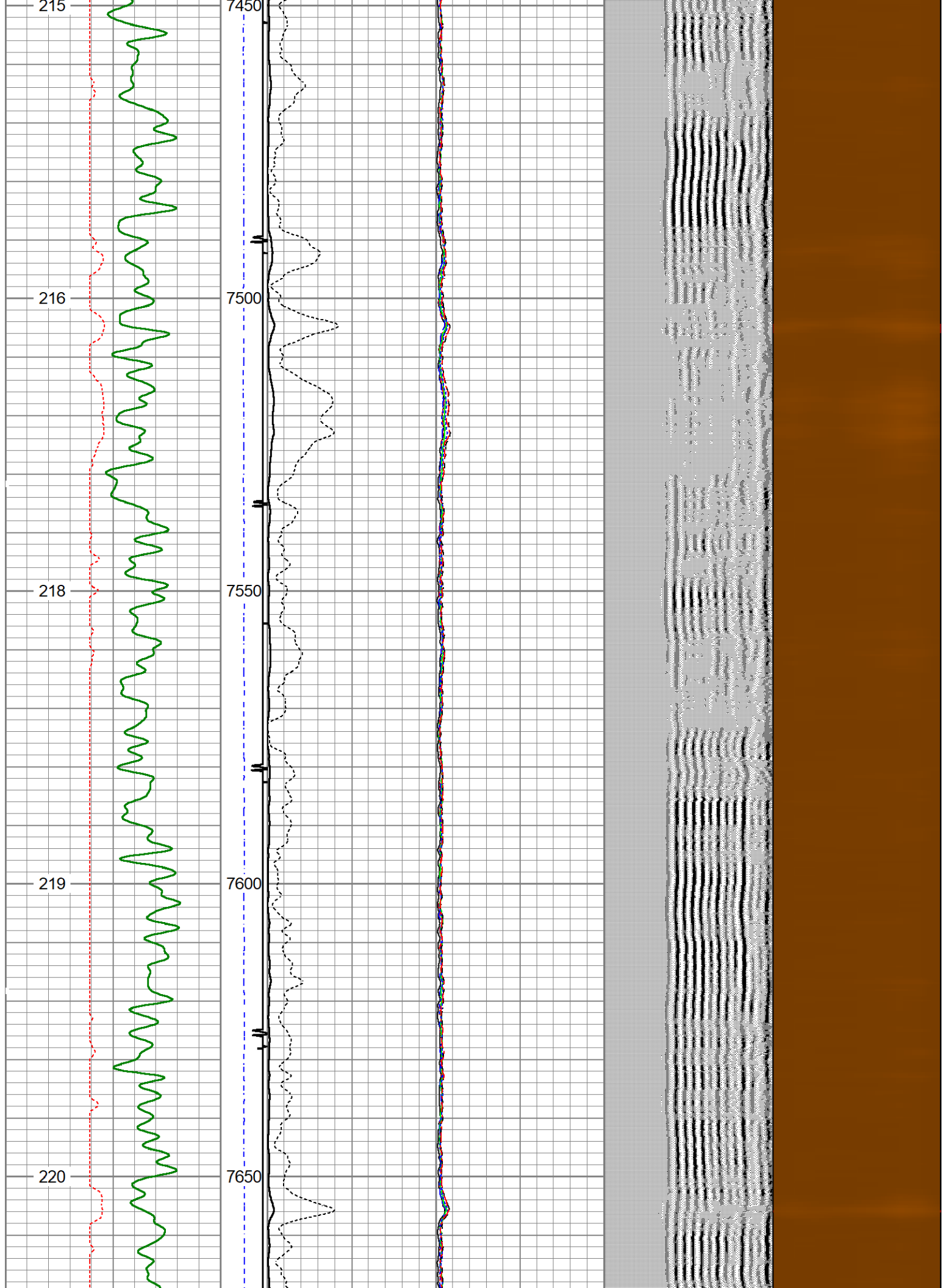


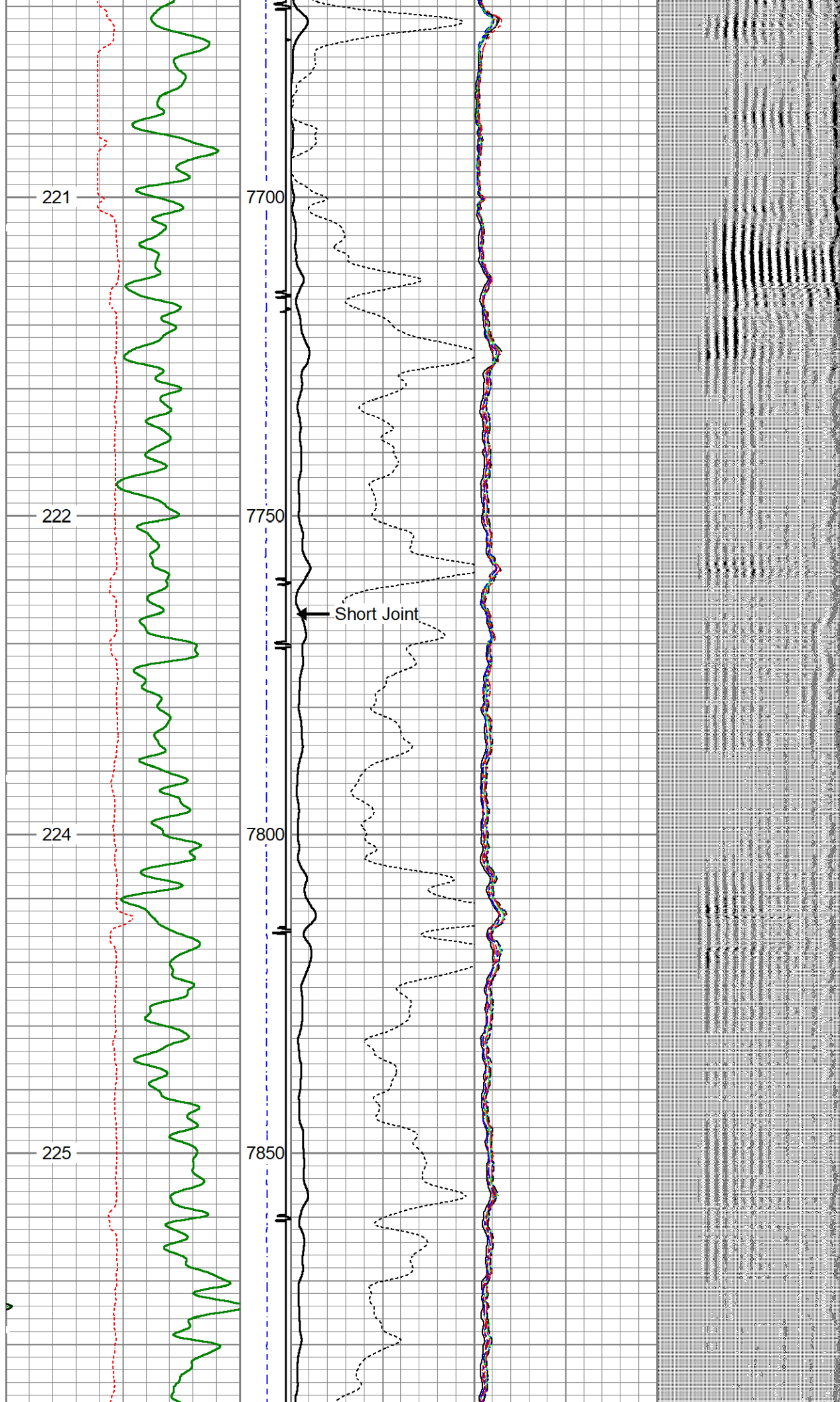


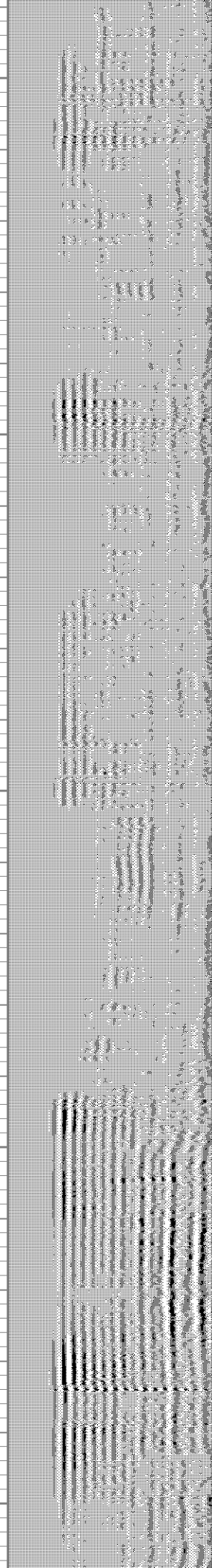
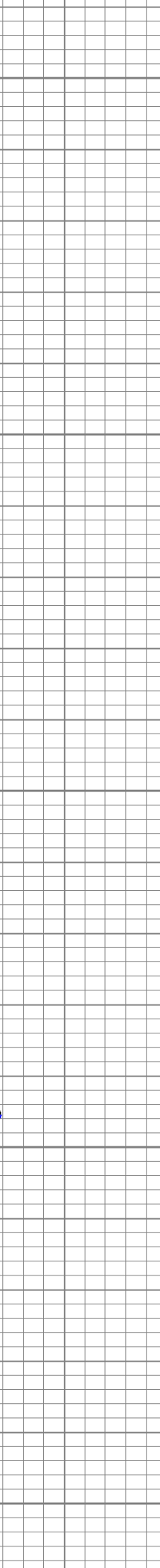
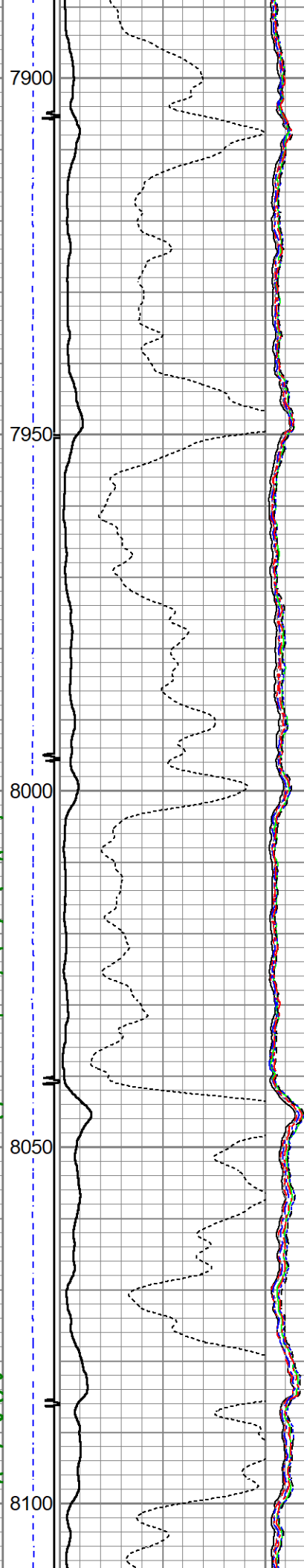
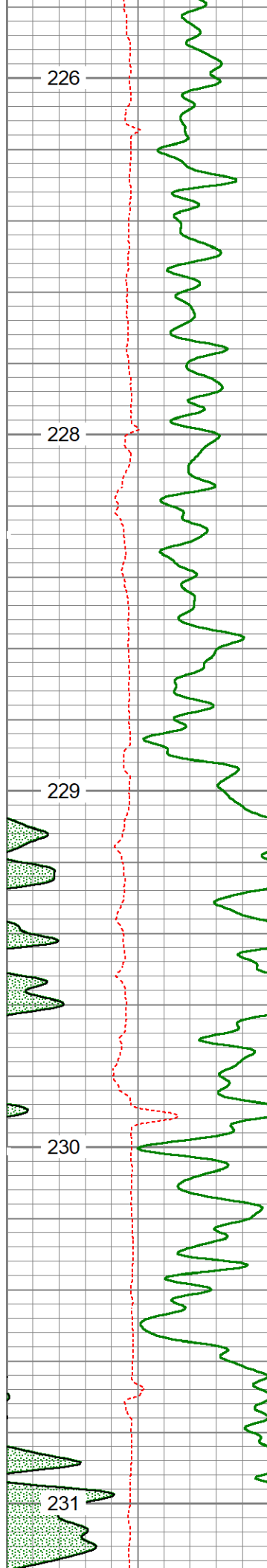


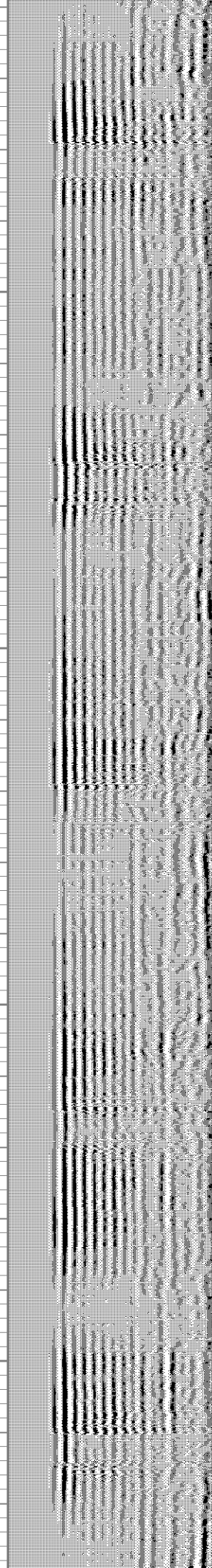
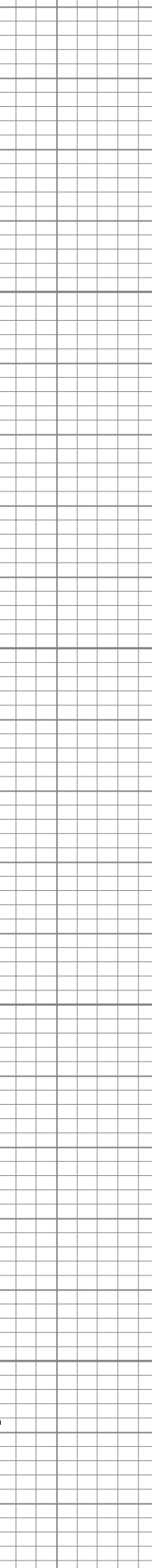
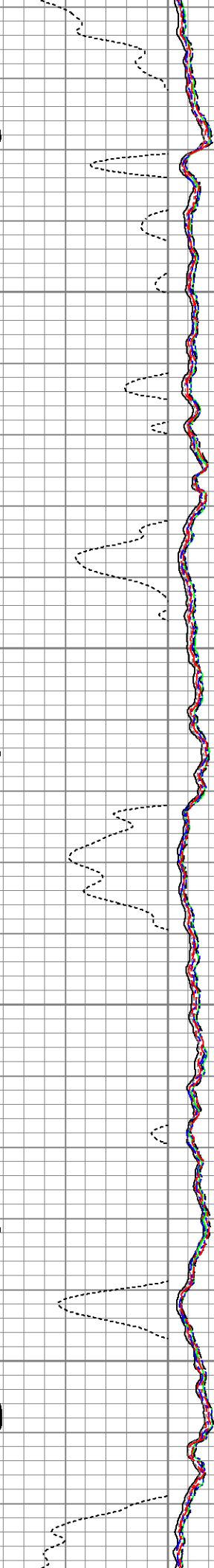
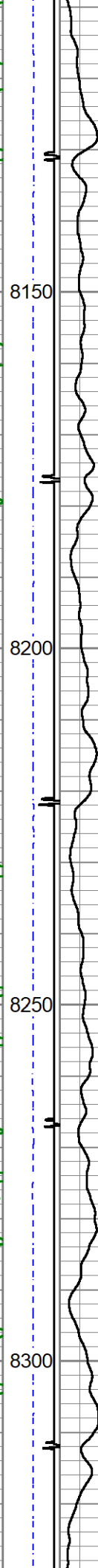
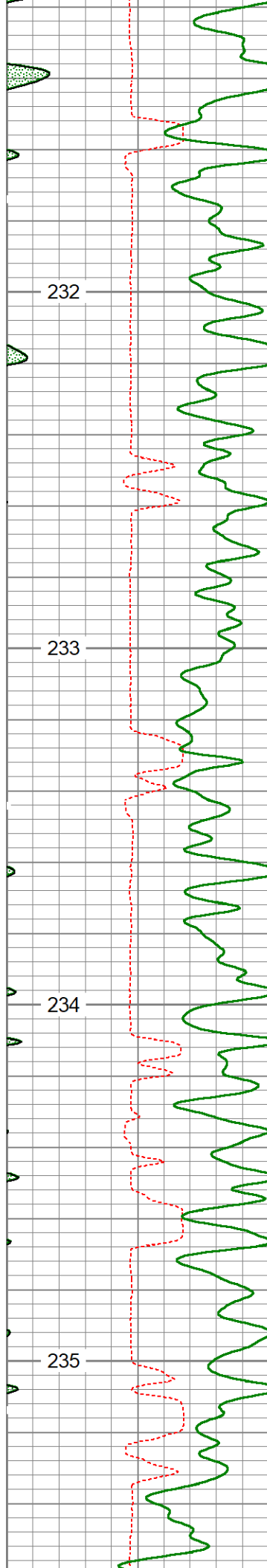


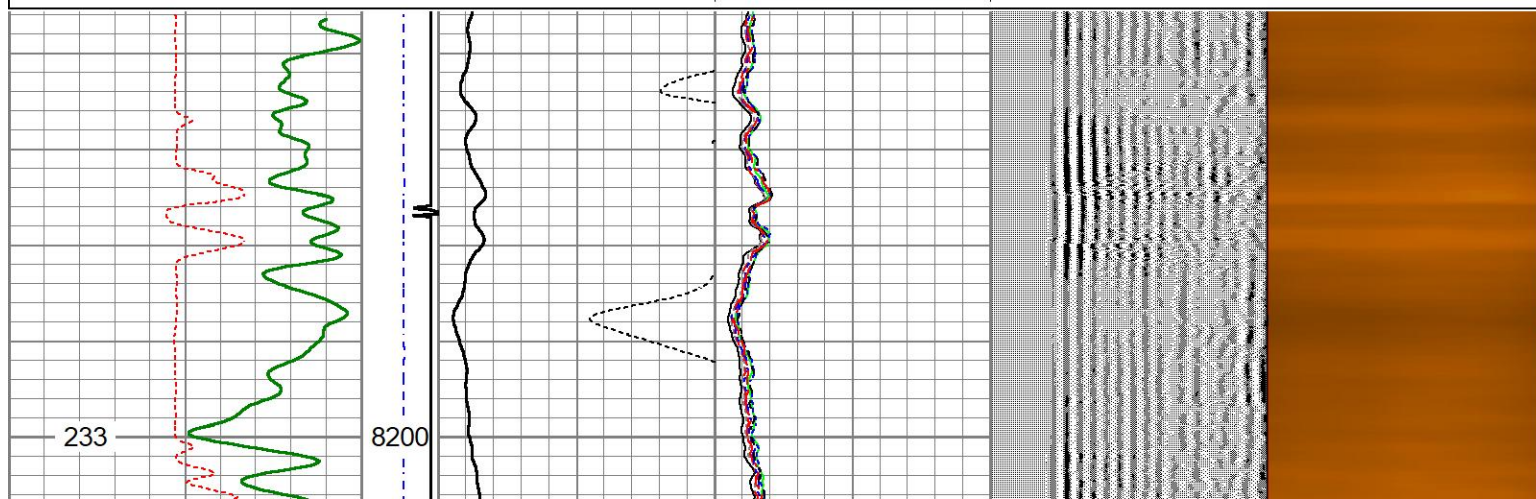
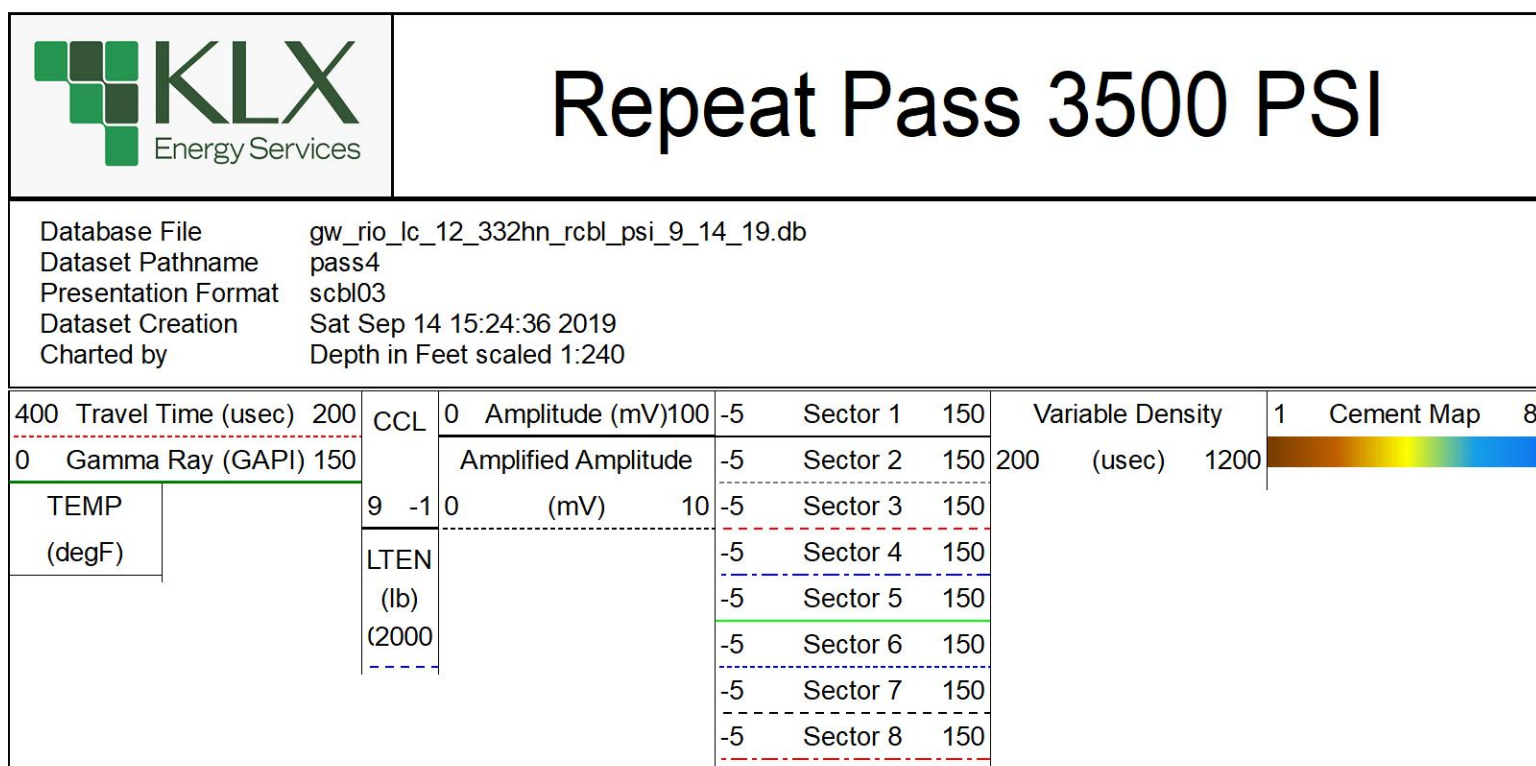
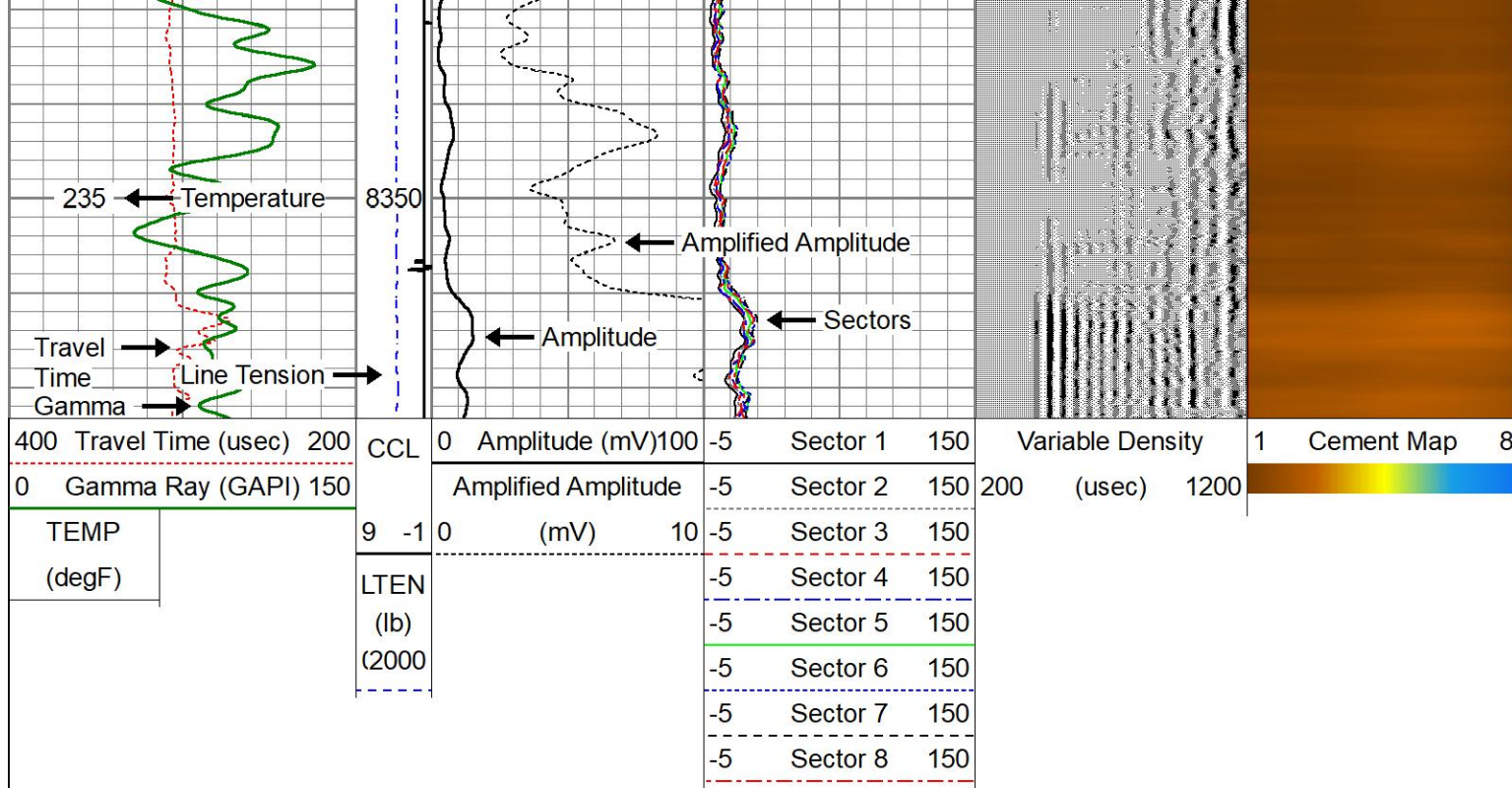


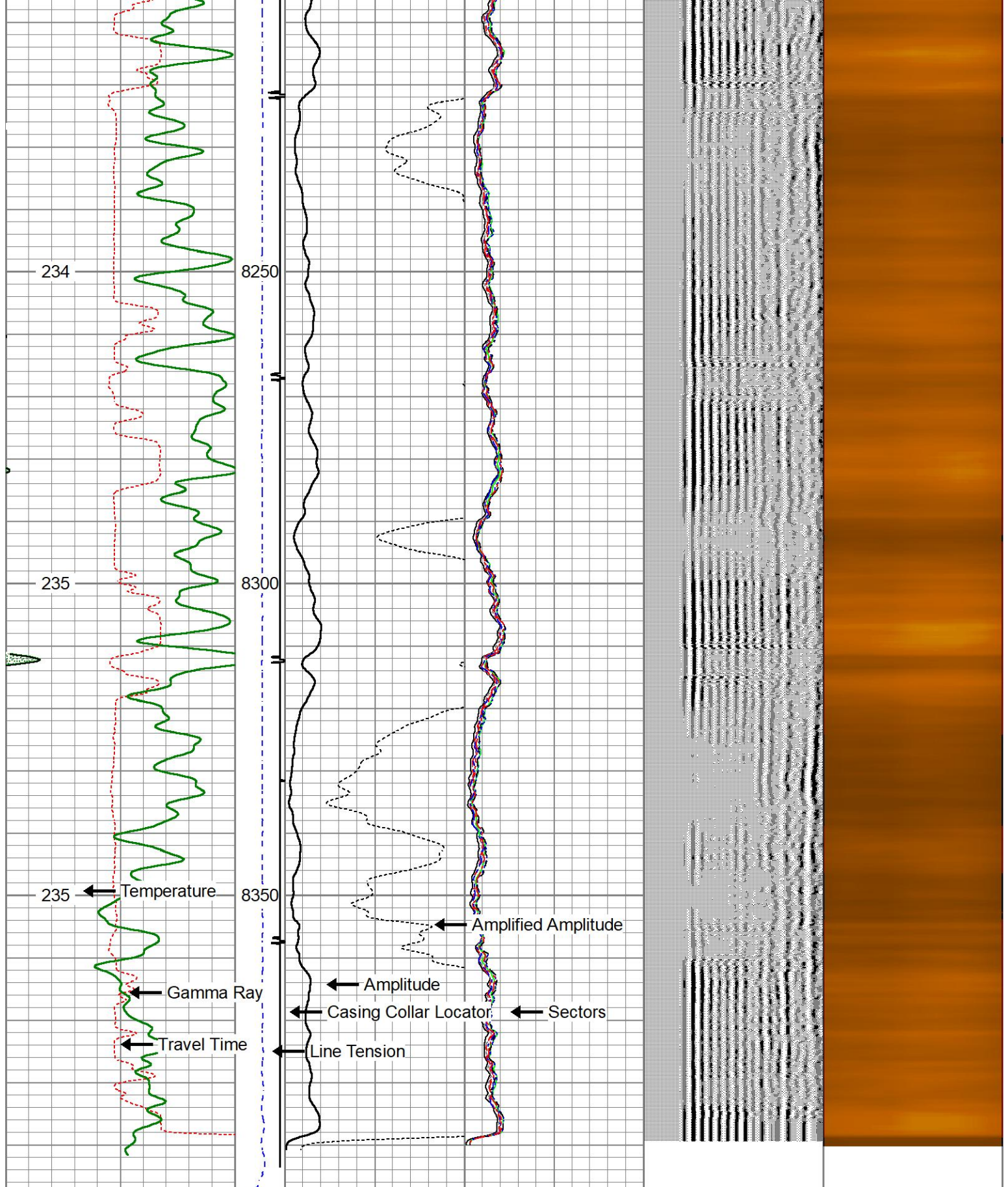












400	Travel Time (usec)	200	CCL	0	Amplitude (mV)	100	-5	Sector 1	150	Variable Density	1	Cement Map	8
0	Gamma Ray (GAPI)	150			Amplified Amplitude		-5	Sector 2	150	200	(usec)	1200	
TEMP			9	-1	(mV)	10	-5	Sector 3	150				
(degF)			LTEN				-5	Sector 4	150				
			(lb)				-5	Sector 5	150				
			(2000				-5	Sector 6	150				

-5	Sector 7	150
-5	Sector 8	150

Calibration Report

Database File gw_rio_lc_12_332hn_rcbl_psi_9_14_19.db
Dataset Pathname pass5
Dataset Creation Sat Sep 14 15:30:11 2019

Gamma Ray Calibration Report

Serial Number: FW1304-44
Tool Model: Probe275
Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 121043
Tool Model: Probe 2.75 Radii W/Temp

Calibration Casing Diameter: 5.500 in
Calibration Depth: 2838.242 ft

Master Calibration, performed Sat Sep 14 16:25:50 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.280	1.000	71.921	253.948	0.886
CAL	0.000	0.365				
5'	-0.001	0.013	1.000	71.921	5364.590	3.947
SUM						
S1	0.010	0.288	0.000	100.000	359.046	-3.432
S2	0.002	0.290	0.000	100.000	347.398	-0.585
S3	0.001	0.287	0.000	100.000	349.443	-0.375
S4	0.002	0.281	0.000	100.000	357.698	-0.620
S5	0.001	0.277	0.000	100.000	363.088	-0.483
S6	0.002	0.281	0.000	100.000	358.105	-0.616
S7	0.001	0.278	0.000	100.000	361.279	-0.419
S8	0.001	0.278	0.000	100.000	360.484	-0.361

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.365	1.000	0.000

Air Zero Calibration, performed Thu Sep 05 16:44:52 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)
HeadVolt	14.13		CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00
Temp	11.28					
			RBT-Probe 2.75 Radii W/Temp (121043) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	9.05					
WVFS7	9.05					
WVFS6	9.05					
WVFS5	9.05					
WVFS4	9.05					
WVFS3	9.05					
WVFS2	9.05					
WVFS1	9.05					
WVFCAL	9.05					
WV3FT	9.05					
WV5FT	8.05					
HEADVOLT	4.80					
CCL	3.92					
GR	2.58		GR-Probe275 (FW1304-44) Probe 2 3/4" Logging Gamma Ray 6 Pin	4.80	2.75	57.00

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Dataset:	gw_rio_lc_12_332hn_rcbl_psi_9_14_19.db: field/well/run1/pass5
Total length:	15.19 ft
Total weight:	152.00 lb
O.D.:	2.75 in

	Company	Great Western Oil & Gas Company				
	Well	Rio LC 12-332HN				
	Field	Wattenberg				
	County	Adams				
	State	Colorado				Country