



Radial Cement Bond Gamma Ray / CCL Log

Company Cub Creek Energy		Country USA	
Well Marham 7			
Field Wattenberg			
County Weld			
State Colorado			
Location: API #: 05-123-43245 Section: 32, Township: 4N, Range: 68W SHL: 2357 FSL & 1515 FEL SEC TWP RGE Permanent Datum Ground Level Elevation 5042' Log Measured From K.B. 17' APD Drilling Measured From K.B.		Other Services None Elevation K.B. 5059' D.F. 5058' G.L. 5042'	

Date	10-26-2016
Run Number	One
Depth Driller	12165'
Depth Logger	7594'
Bottom Logged Interval	7594'
Top Log Interval	Surface
Open Hole Size	8.75"
Type Fluid	Water
Density / Viscosity	8.3
Max. Recorded Temp.	224.84 degF
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	See Log
Equipment Number	W-200
Location	Windsor, CO
Recorded By	W. Richardson
Witnessed By	R. Pape

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
One	13 1/4"	0'	1540"				
Two	8 3/4"	0'	12165'				
Casing Record	Size			Wgt/Ft		Top	Bottom
Surface String	9 5/8"			36#		Surface	1539'
Prot. String							
Production String	5 1/2"			17#		Surface	12163'
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.

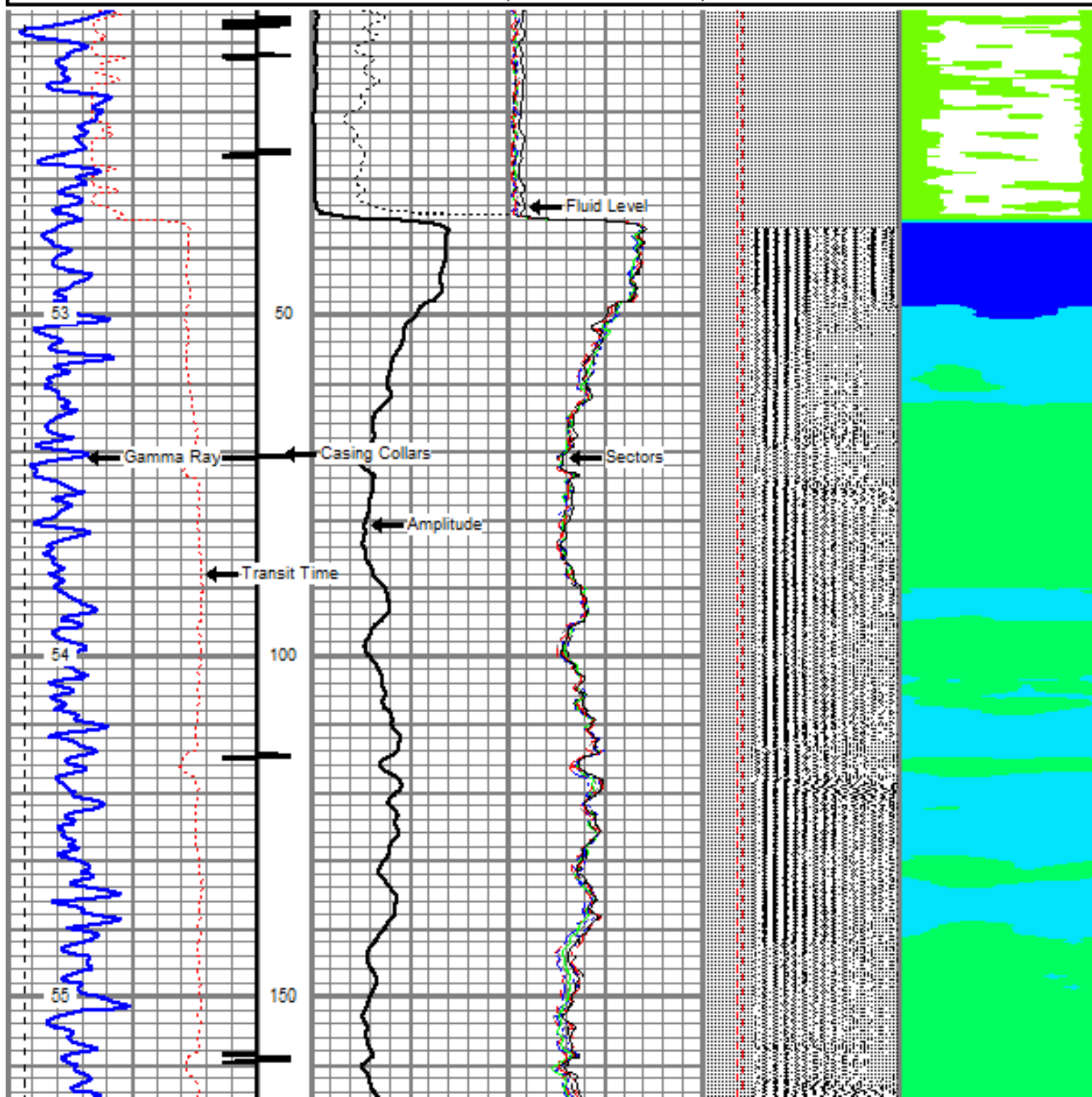
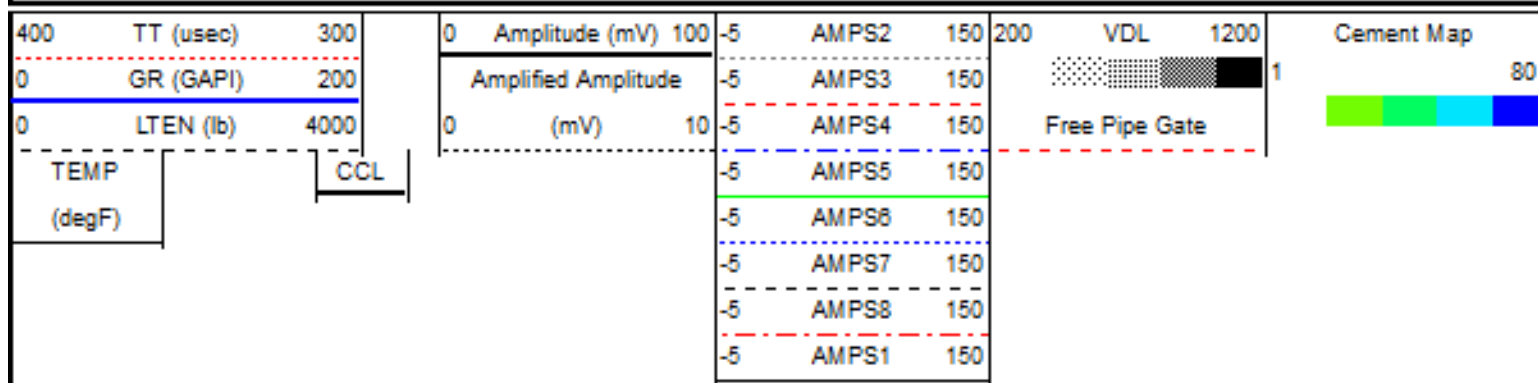
Comments

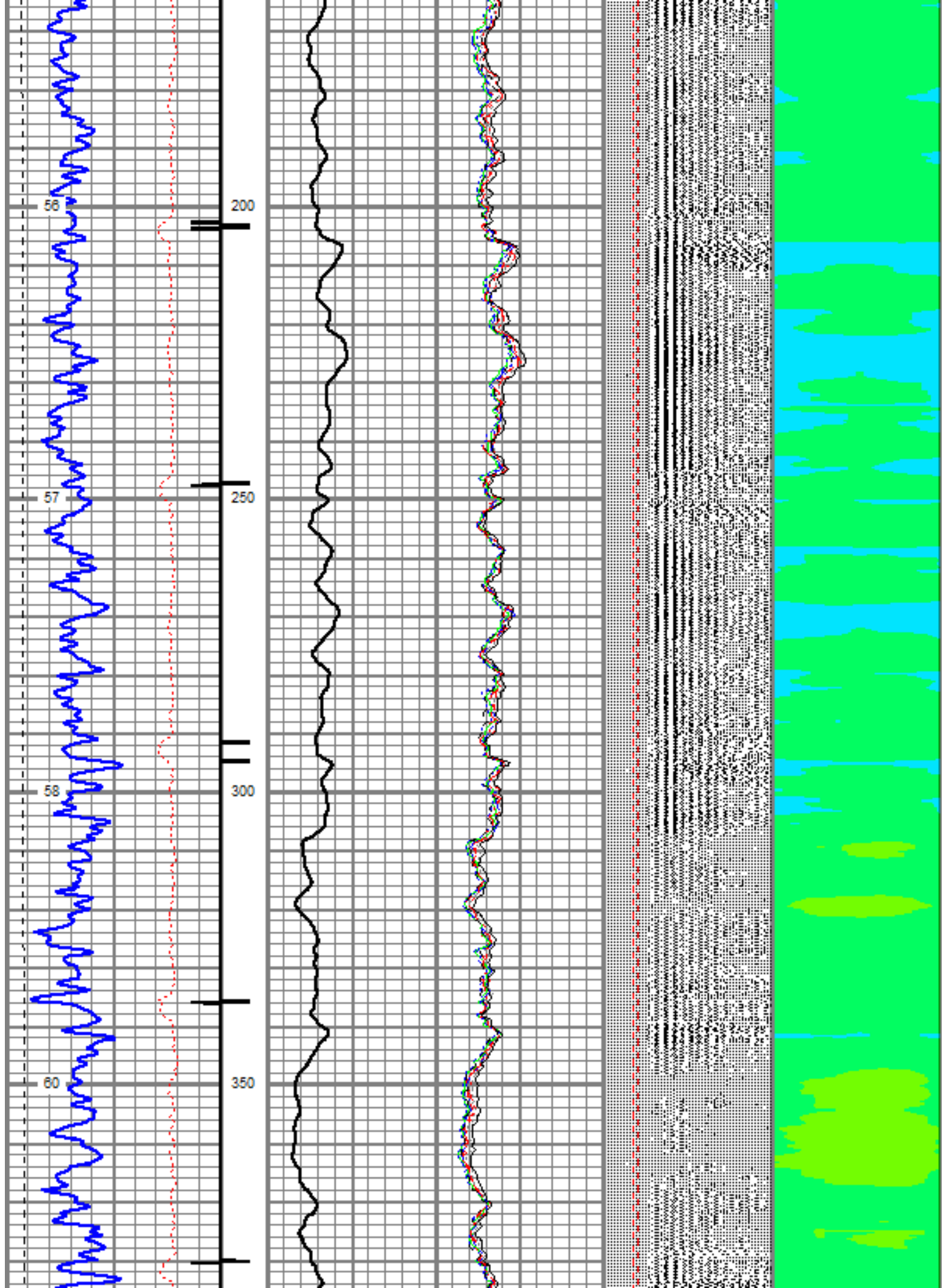
*****Thank You For Using Cutters Wireline*****
 Log Ran as First Log In Well
 Logged with 0 PSI

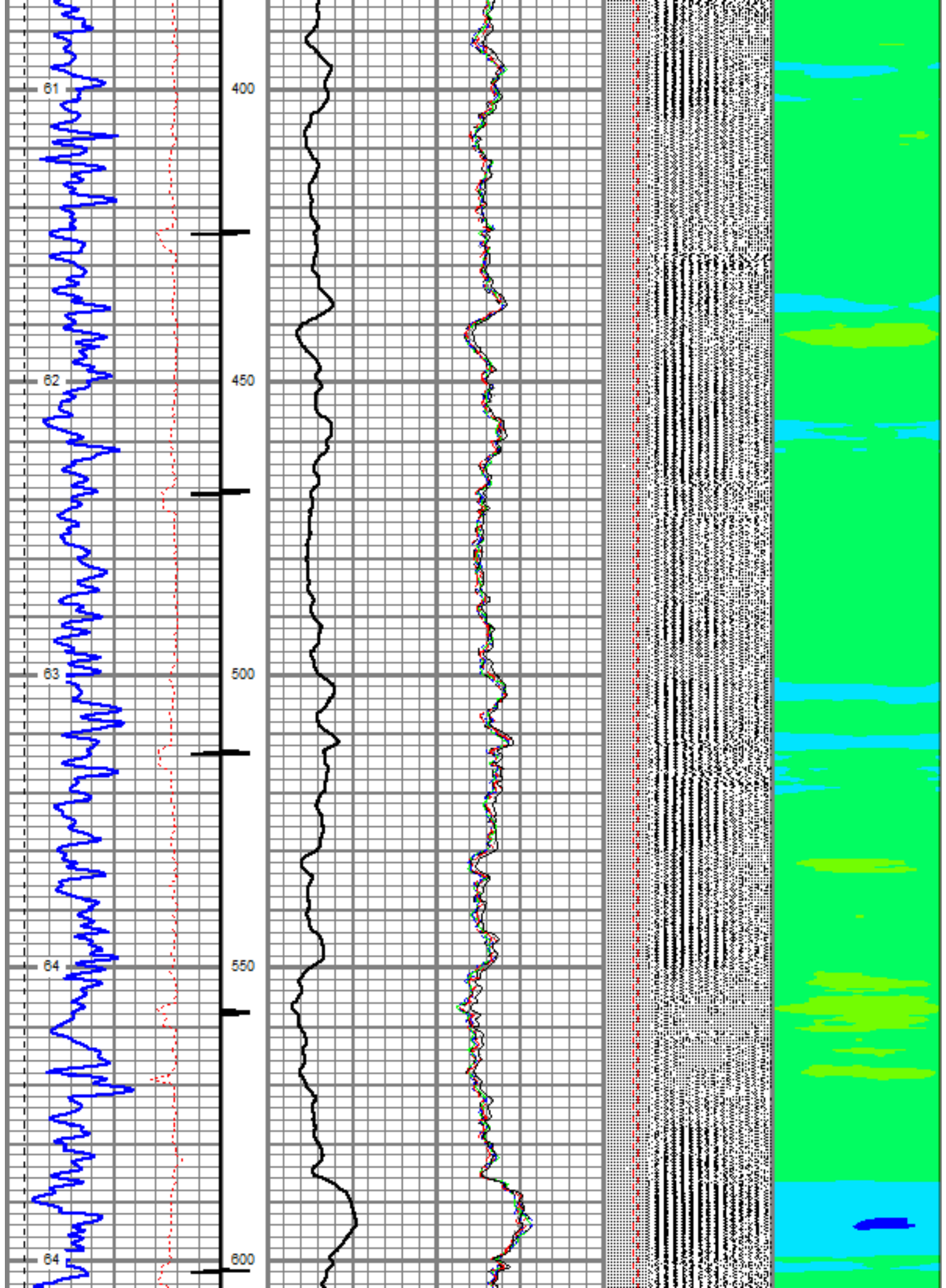


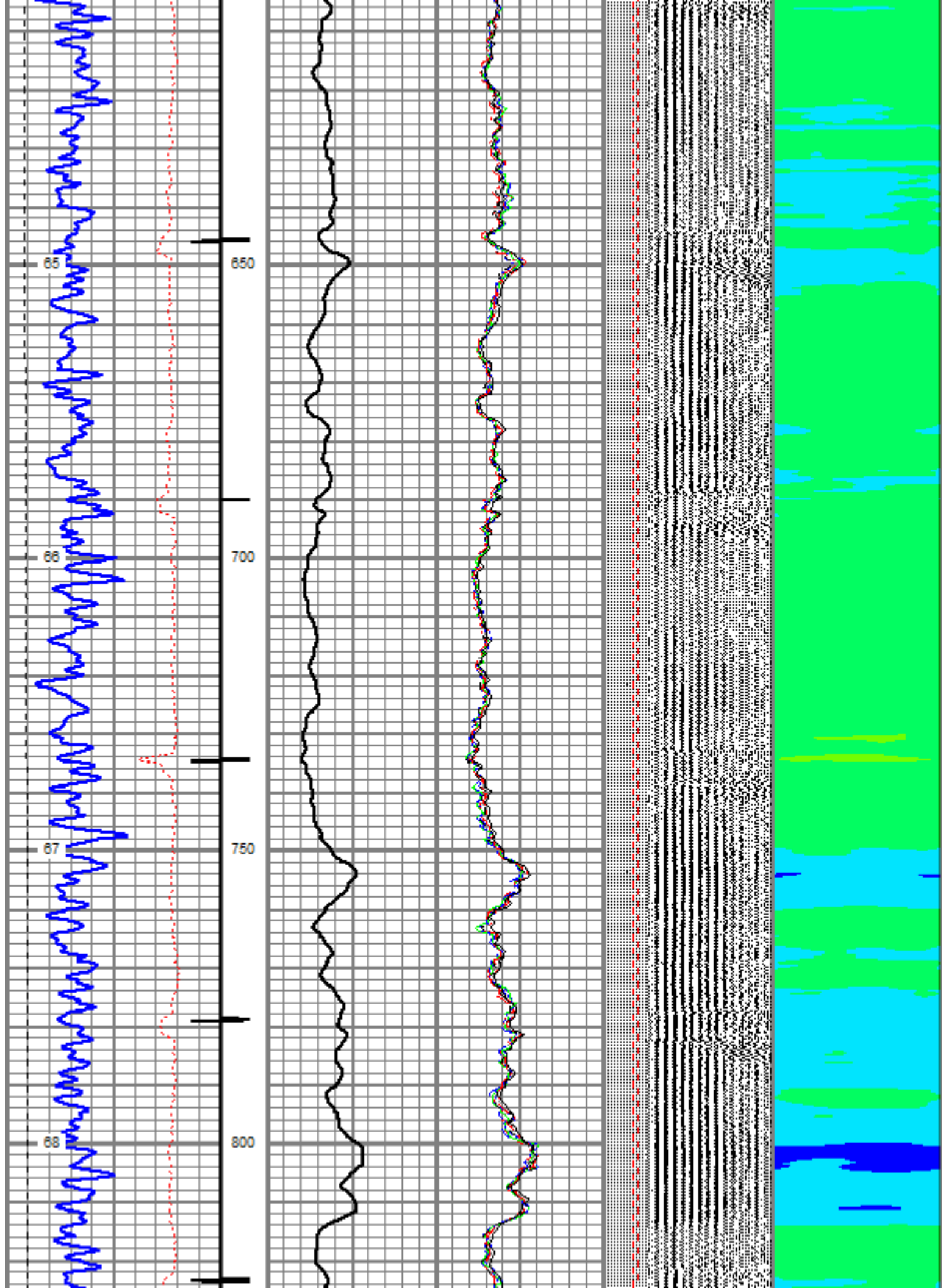
Main Pass 5" = 100'

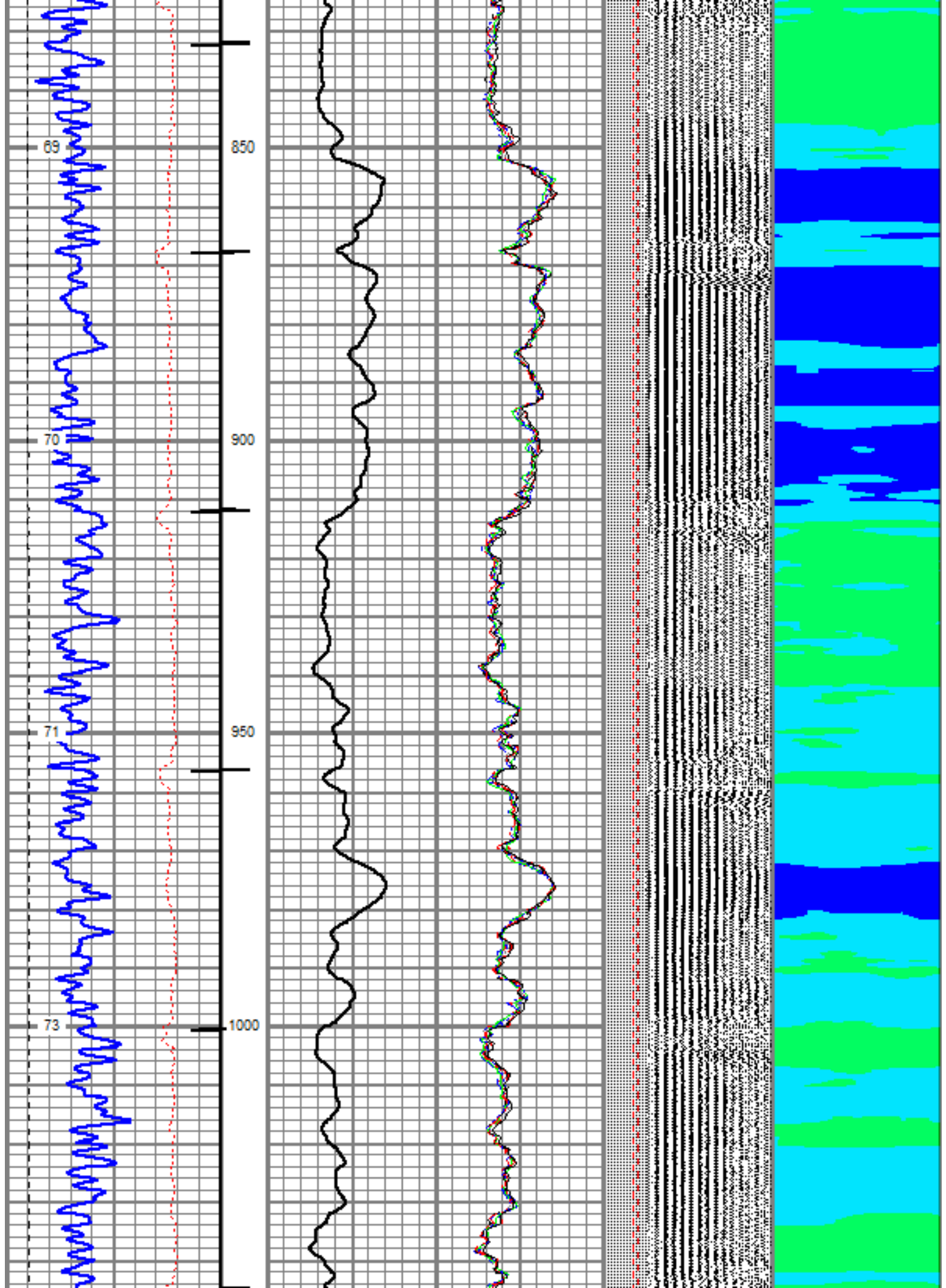
Database File: cub_creek_markham_7.db
 Dataset Pathname: pass15.2
 Presentation Format: rbl55
 Dataset Creation: Wed Oct 26 14:28:05 2016 by Calc Std Casedhole 09061
 Charted by: Depth in Feet scaled 1:240

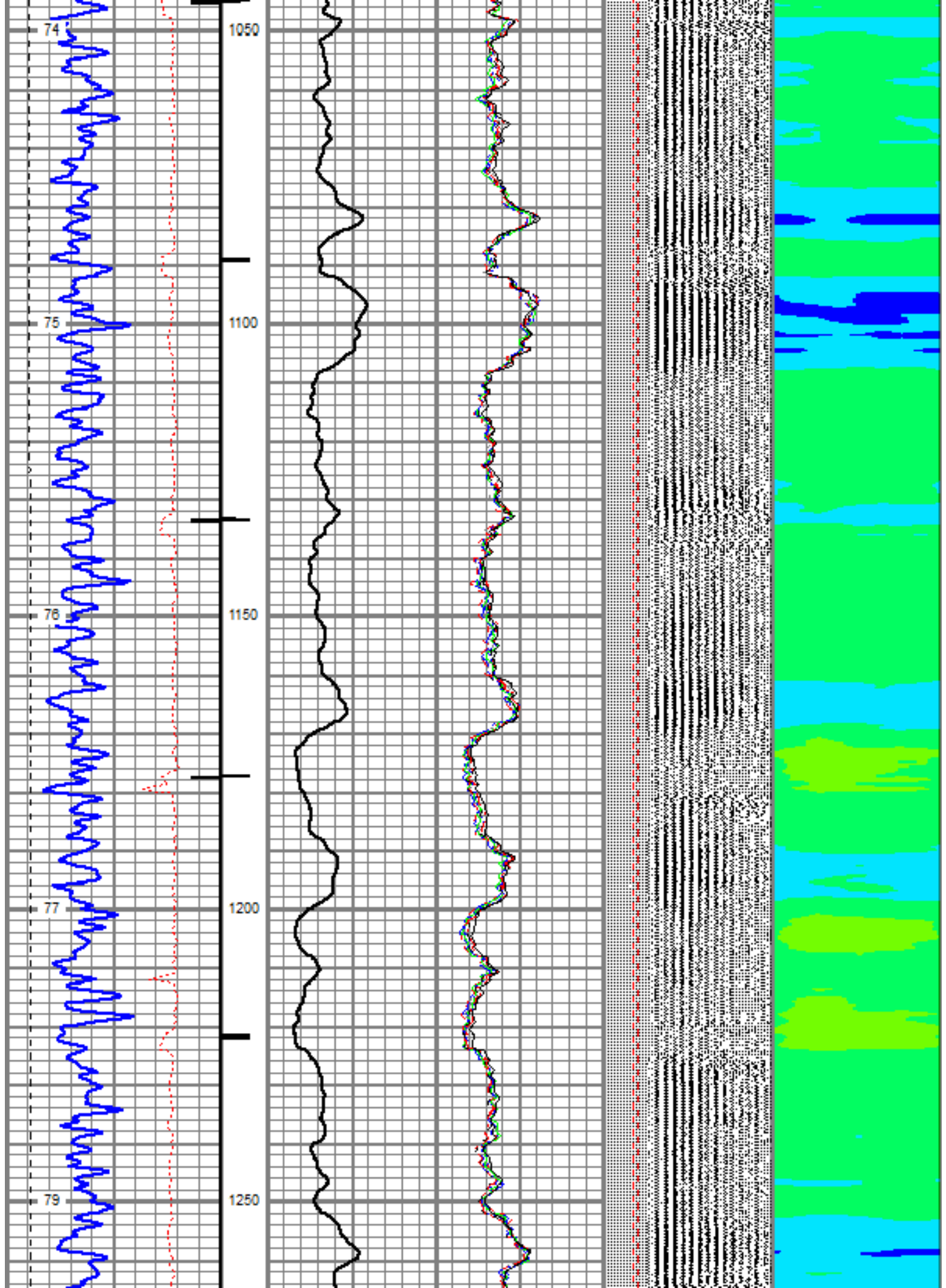


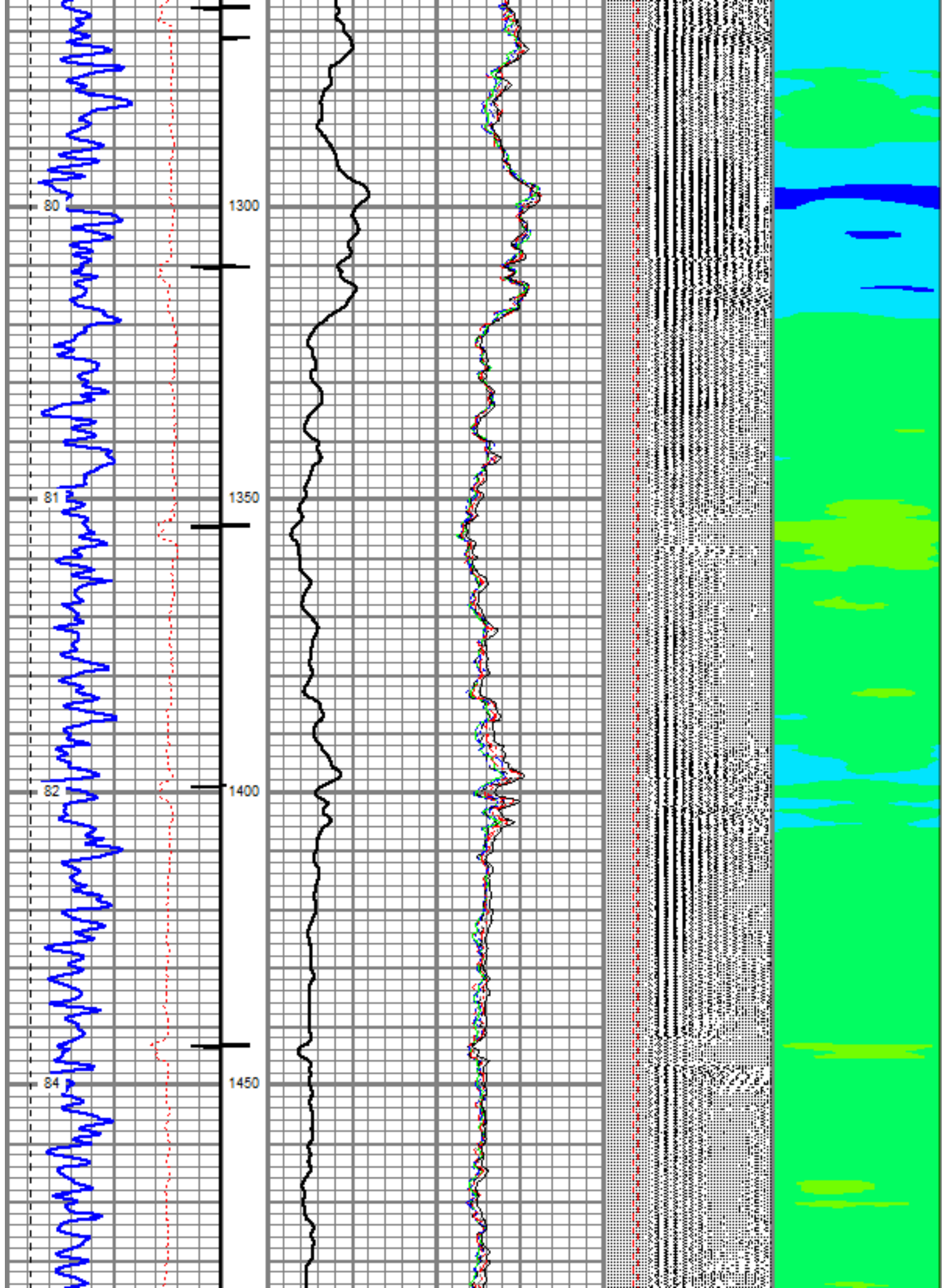


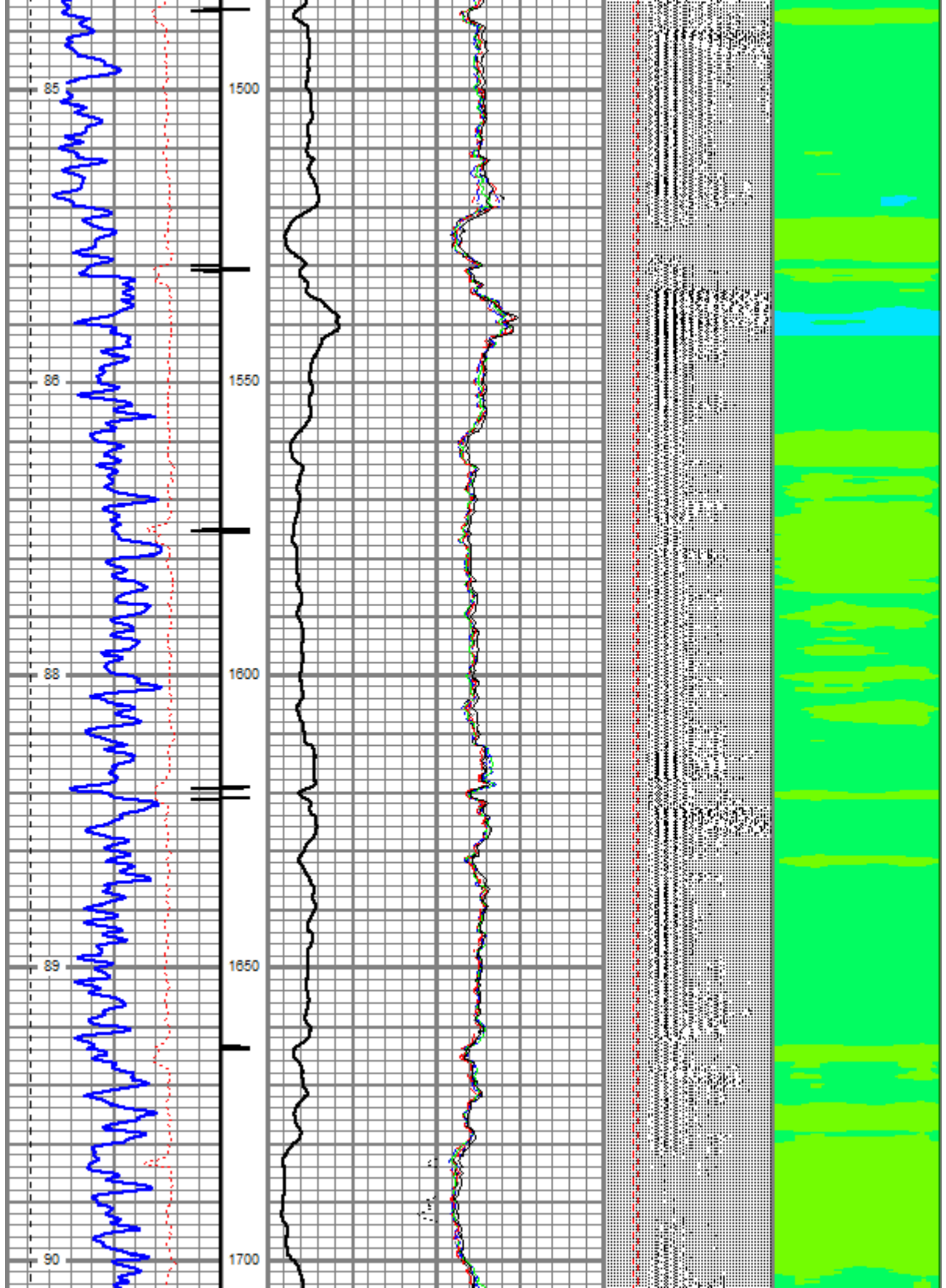


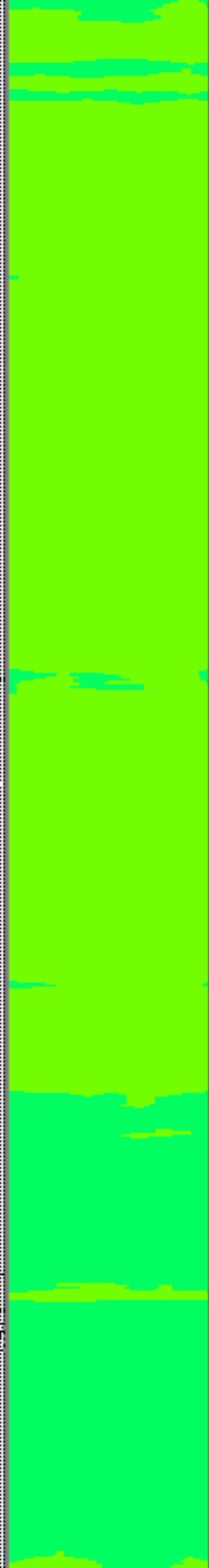
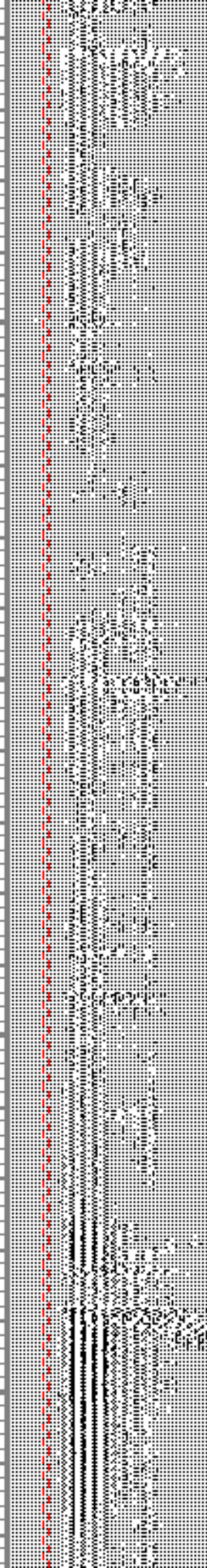
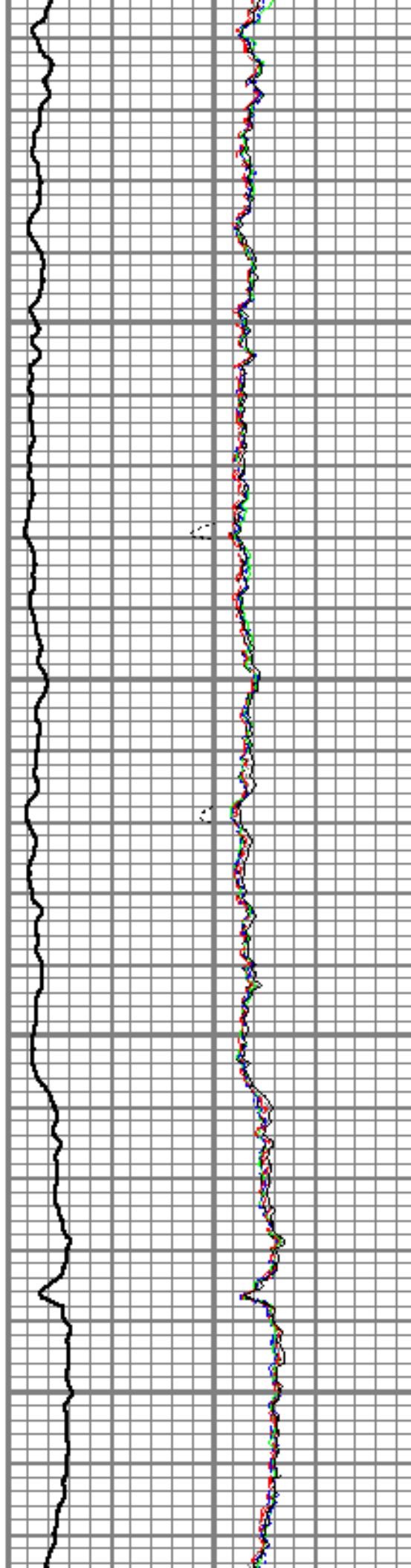
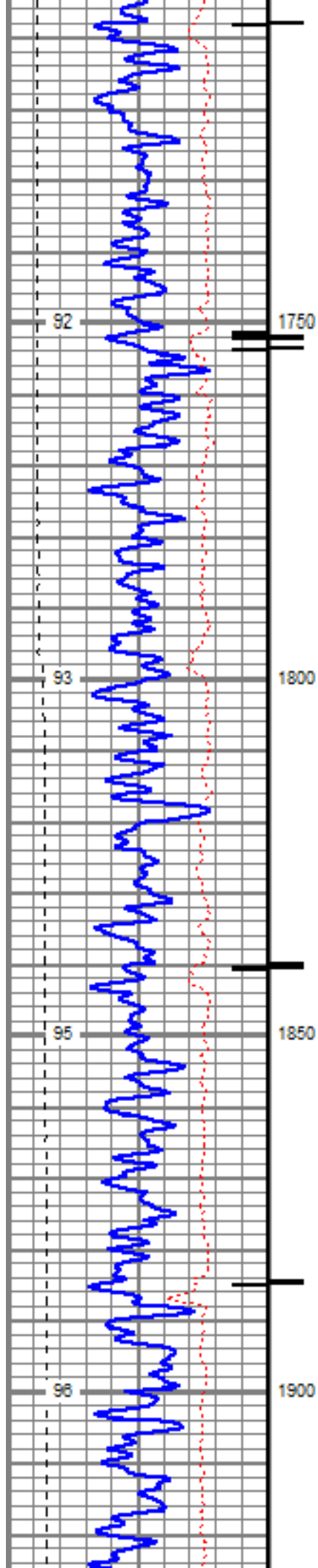


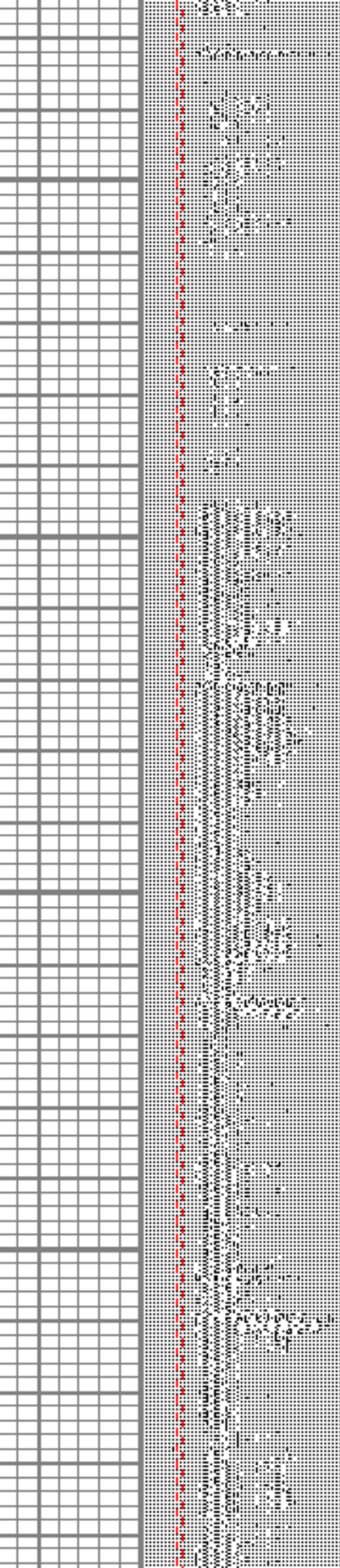
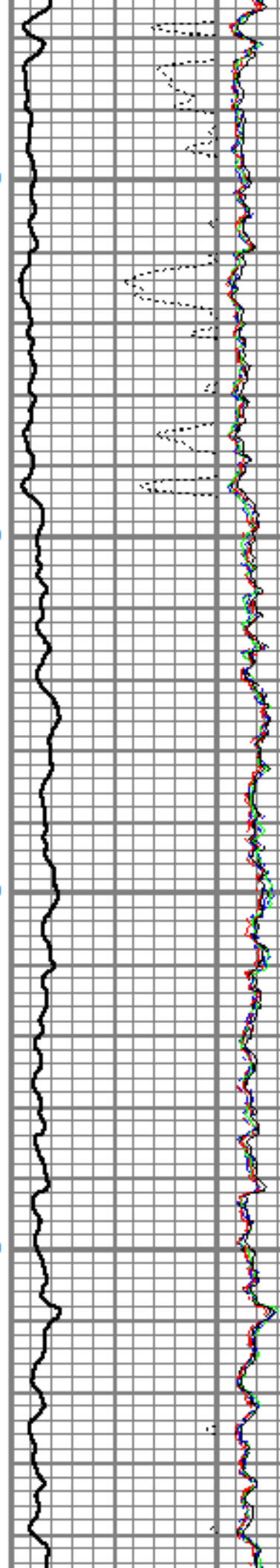
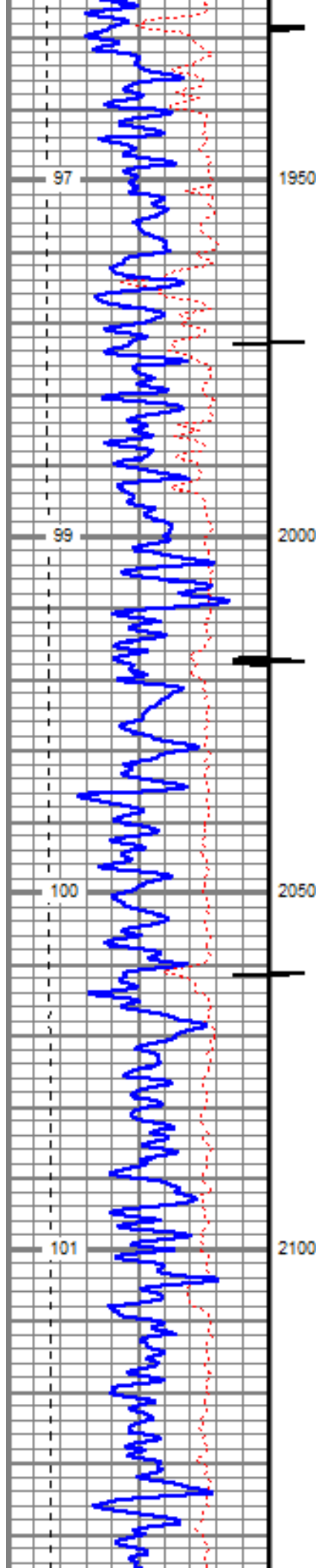


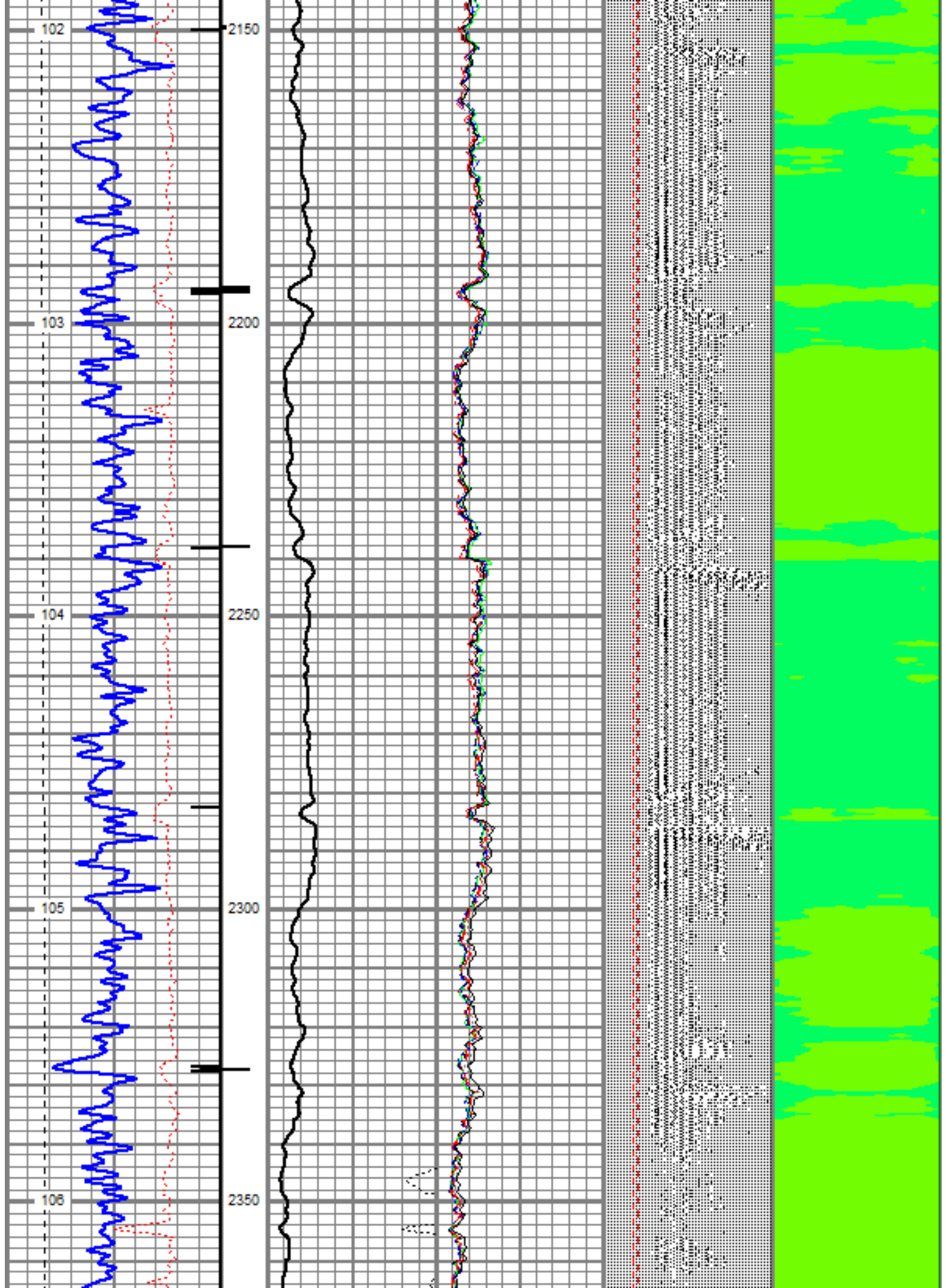


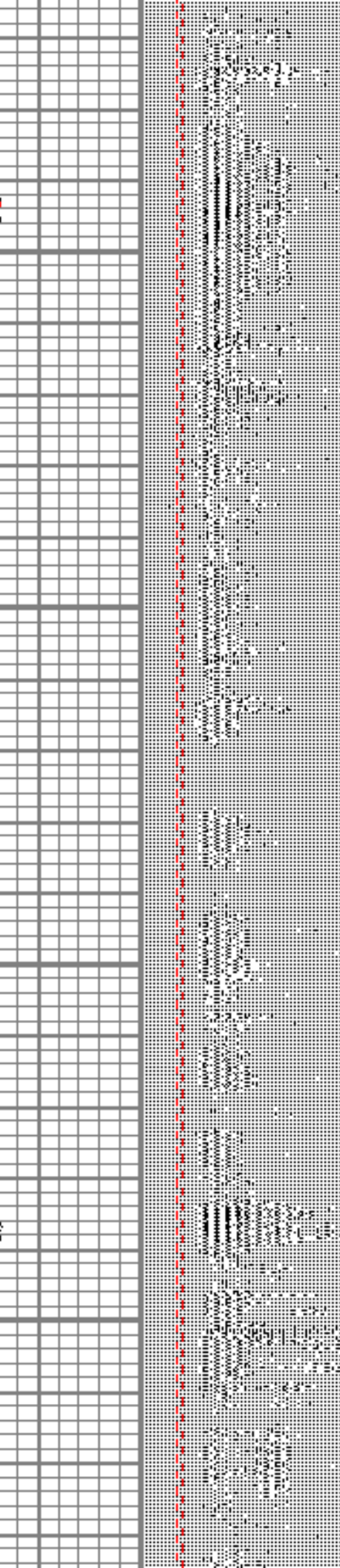
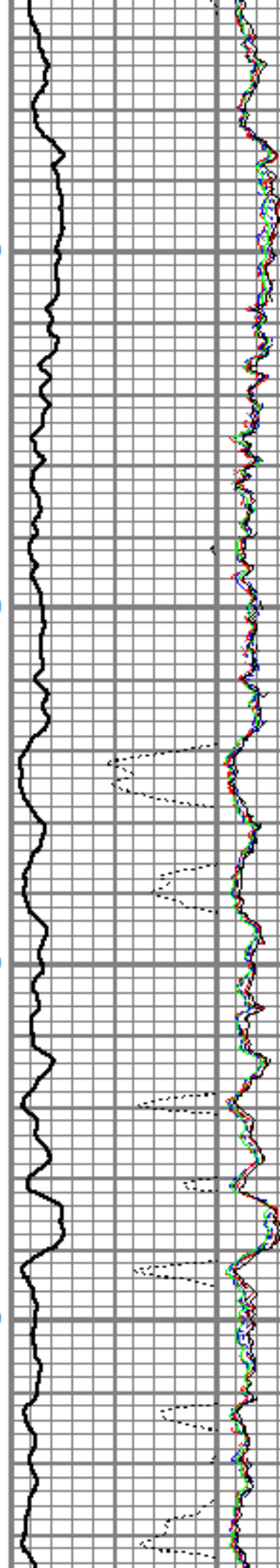
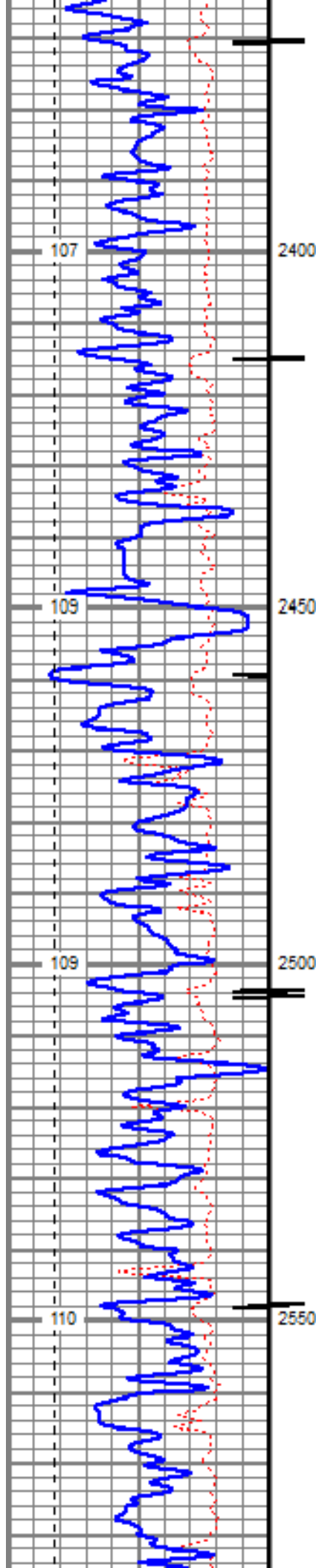


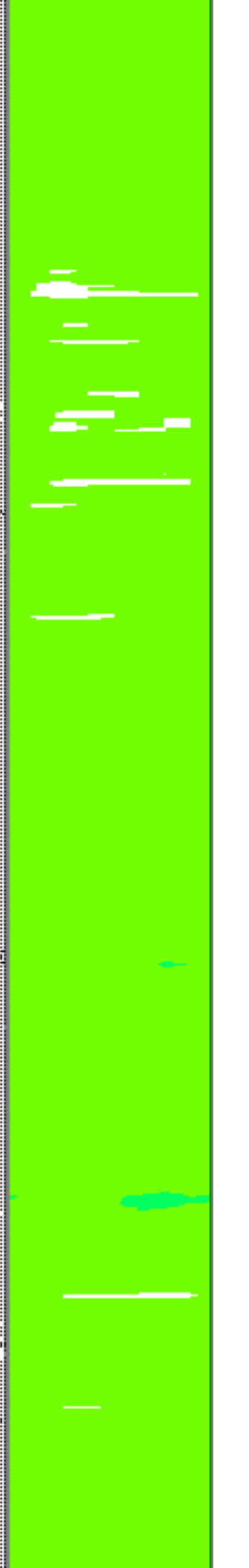
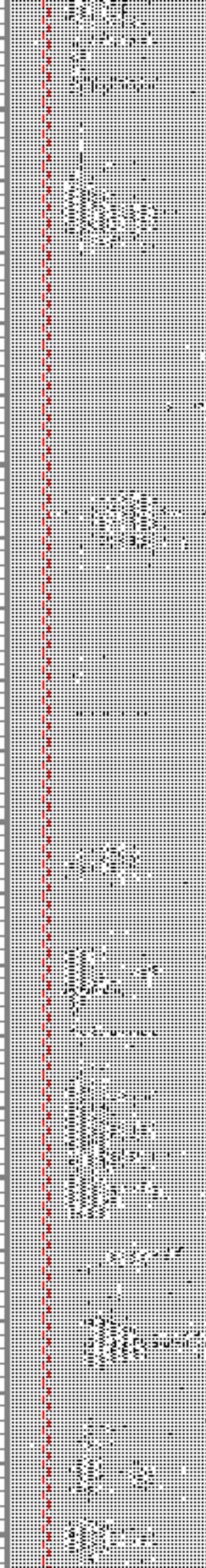
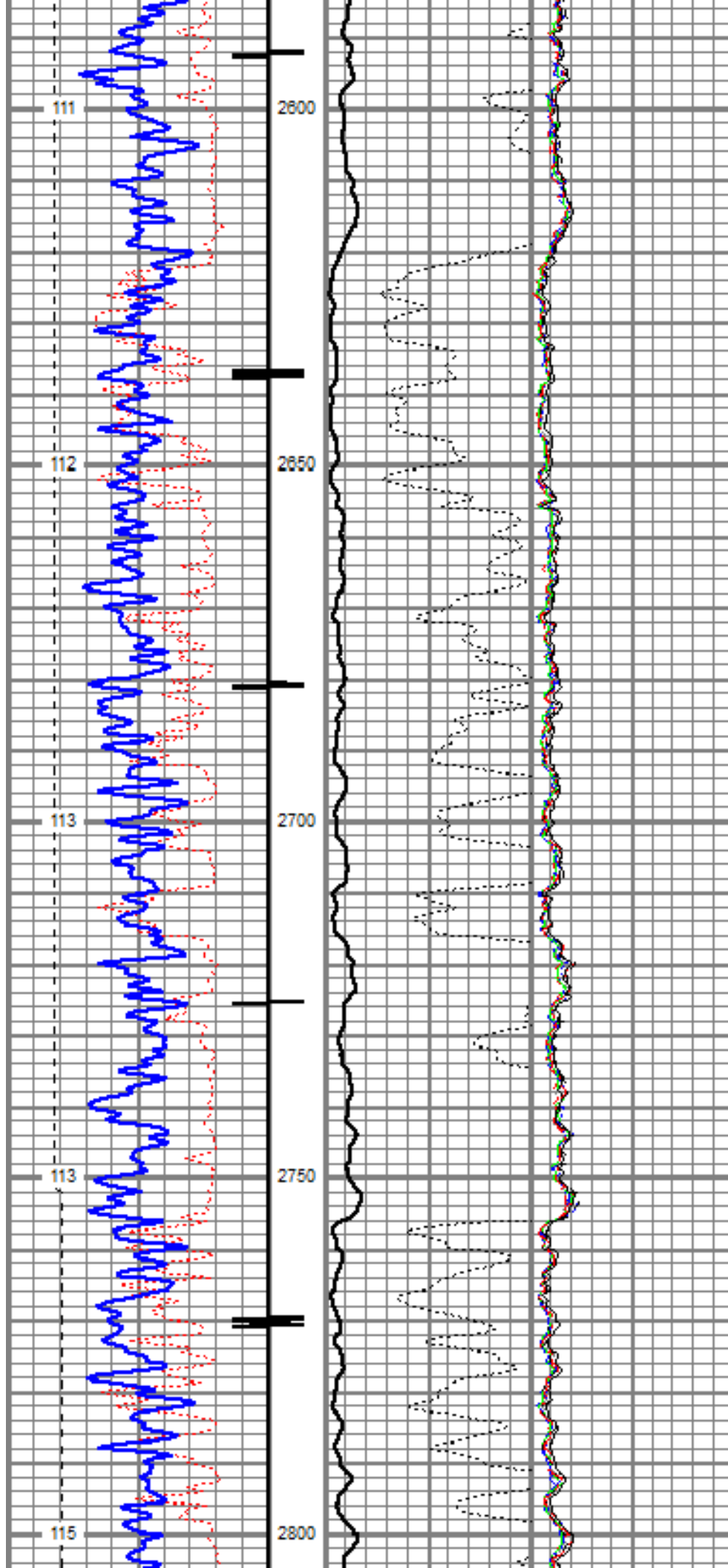


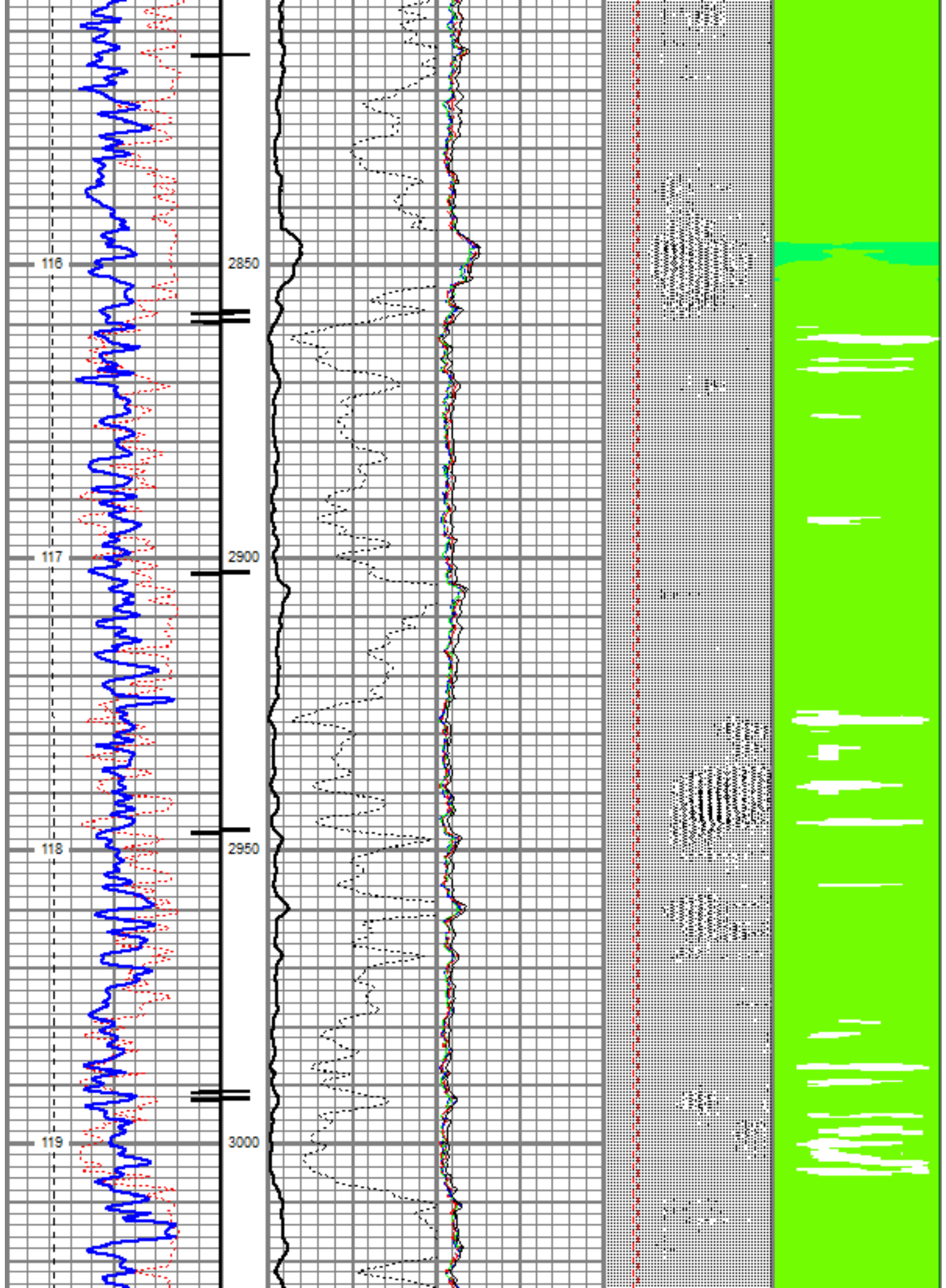


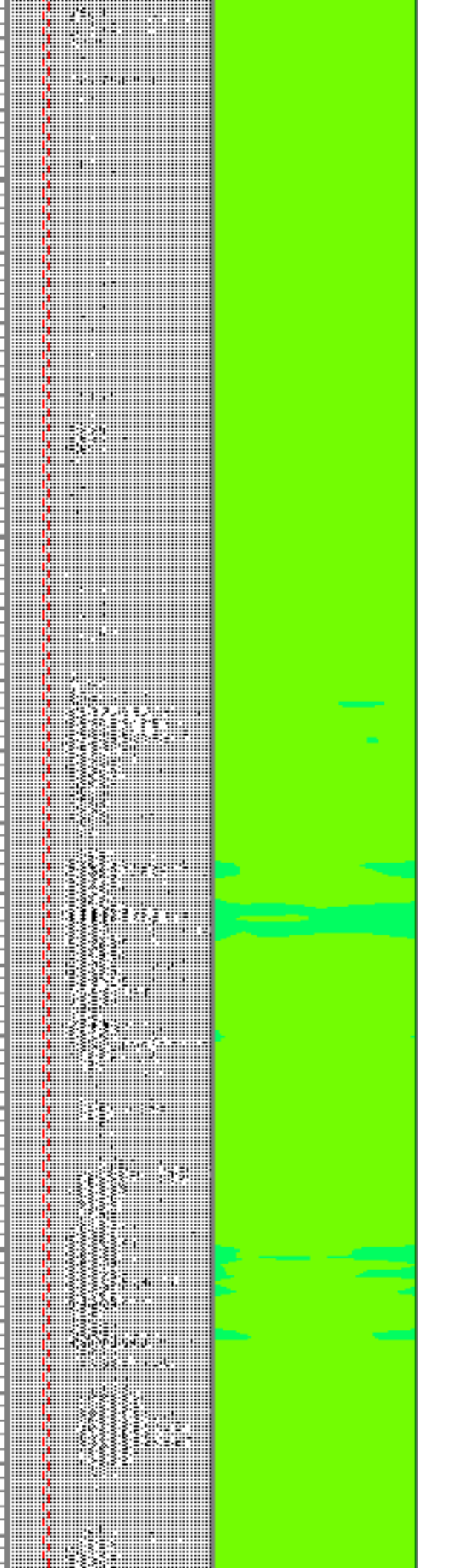
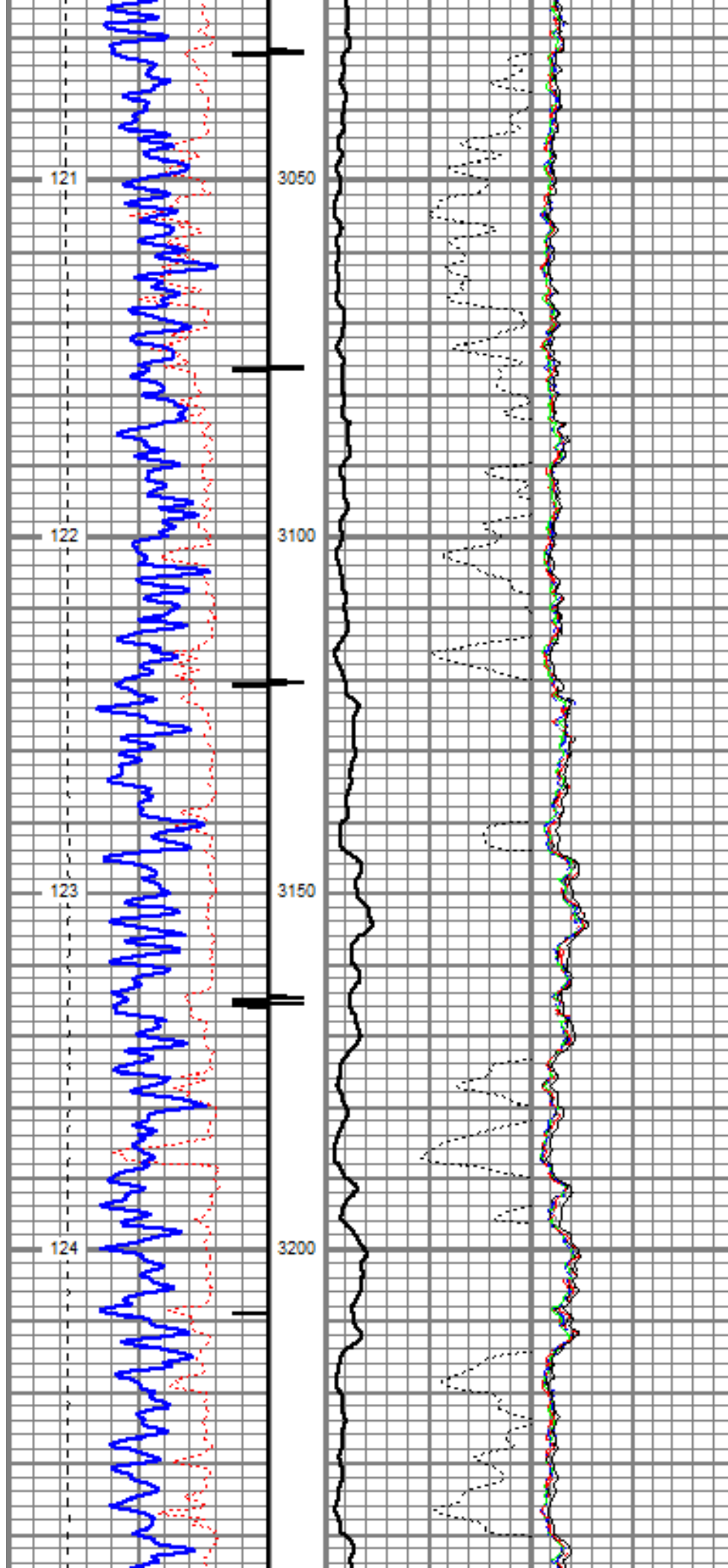


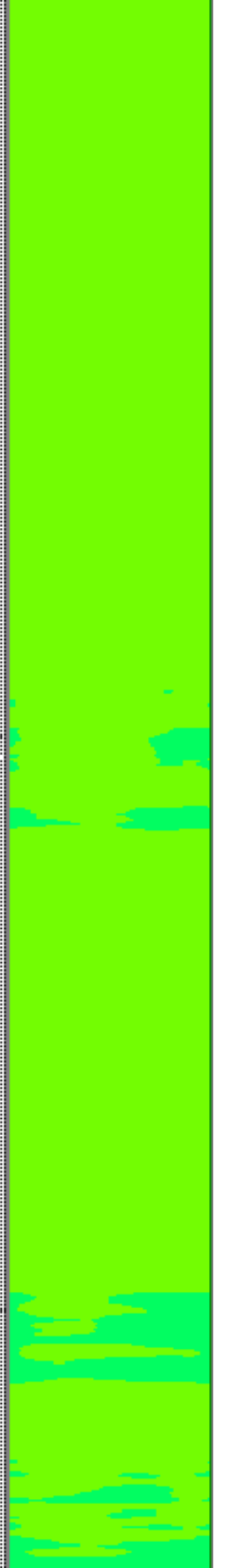
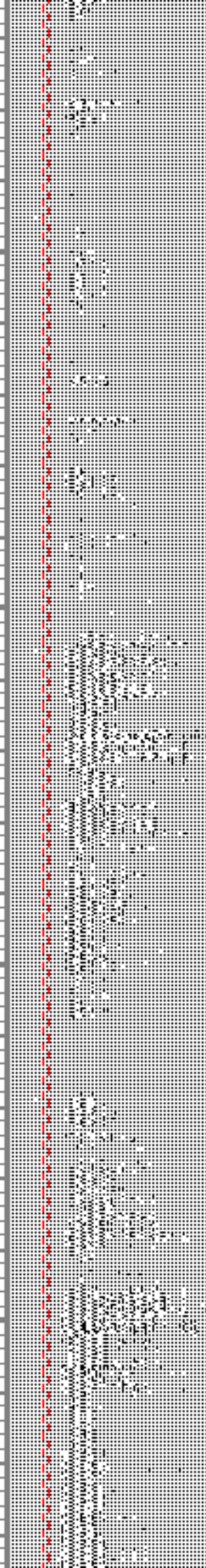
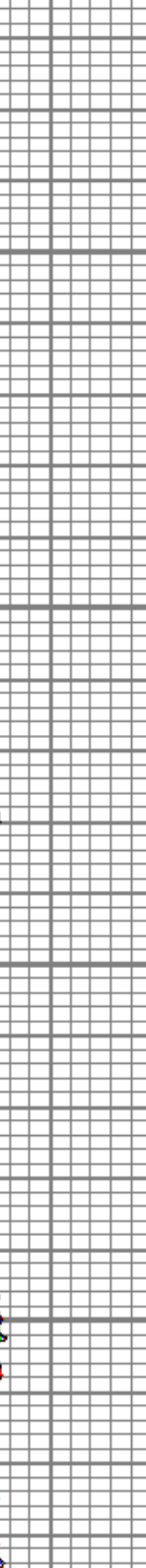
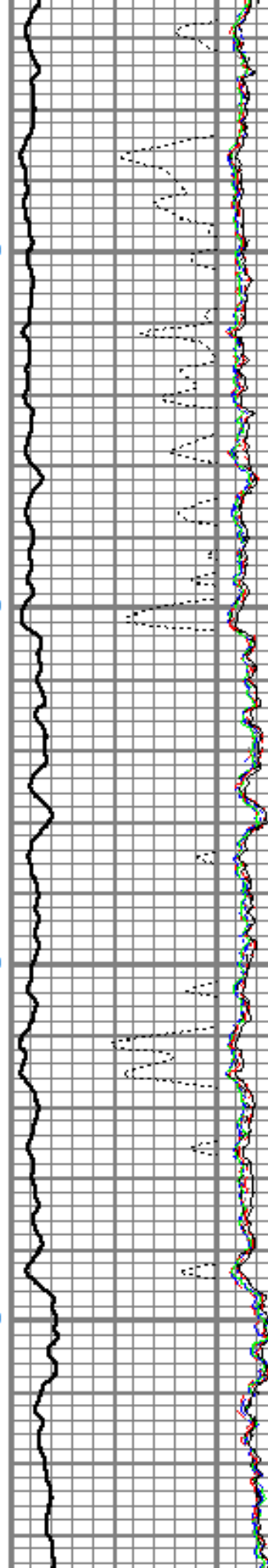
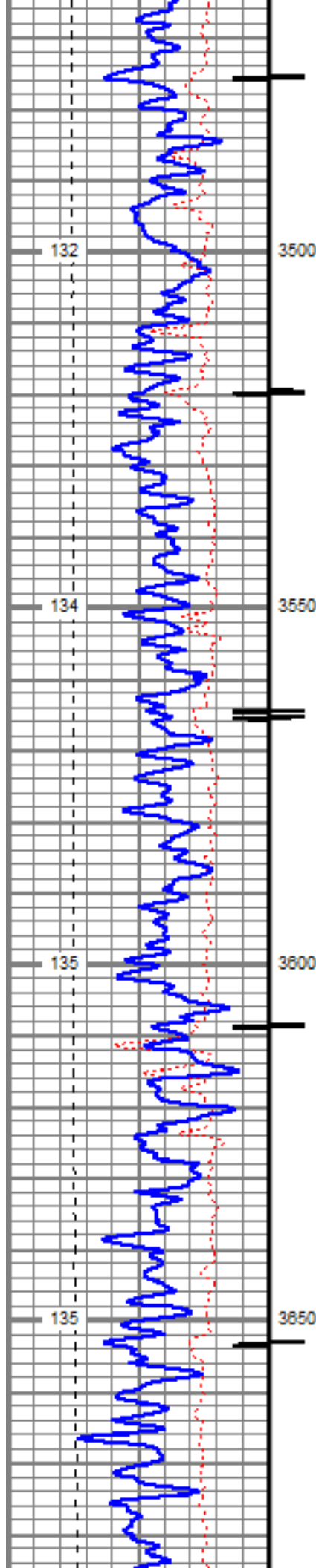


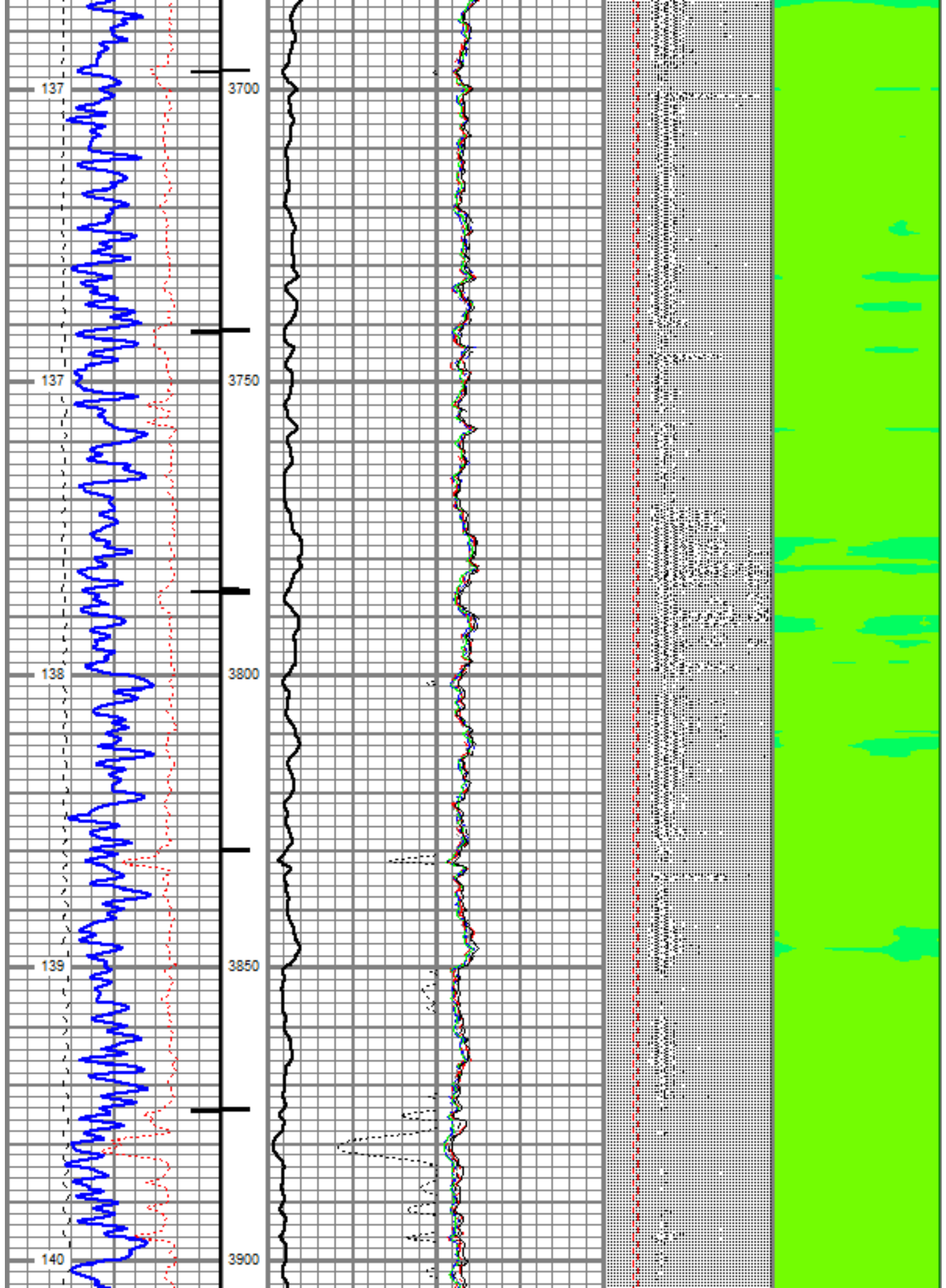


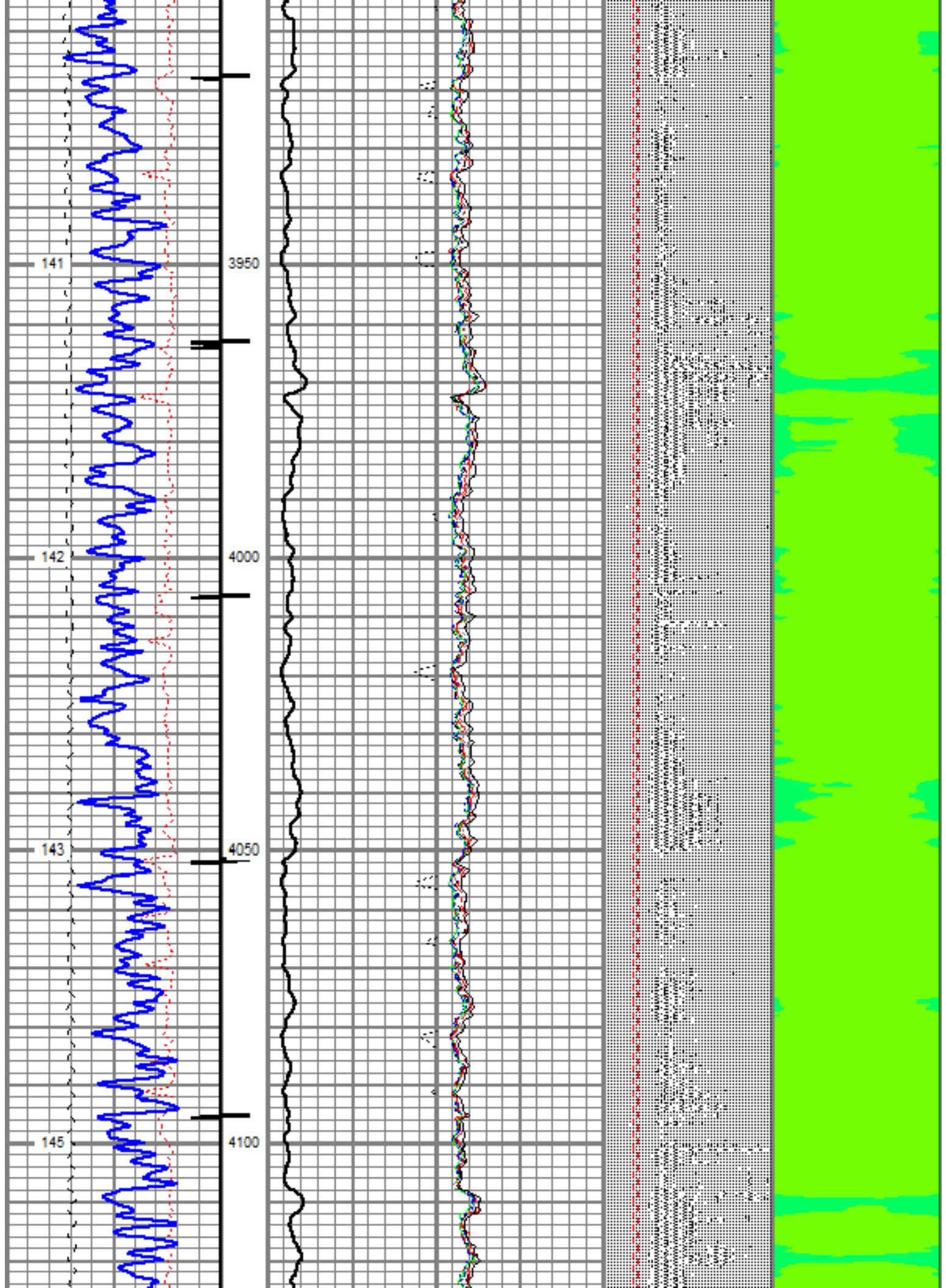


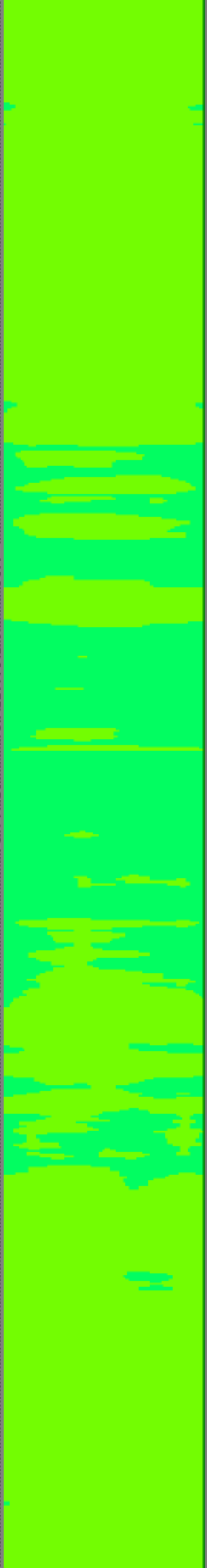
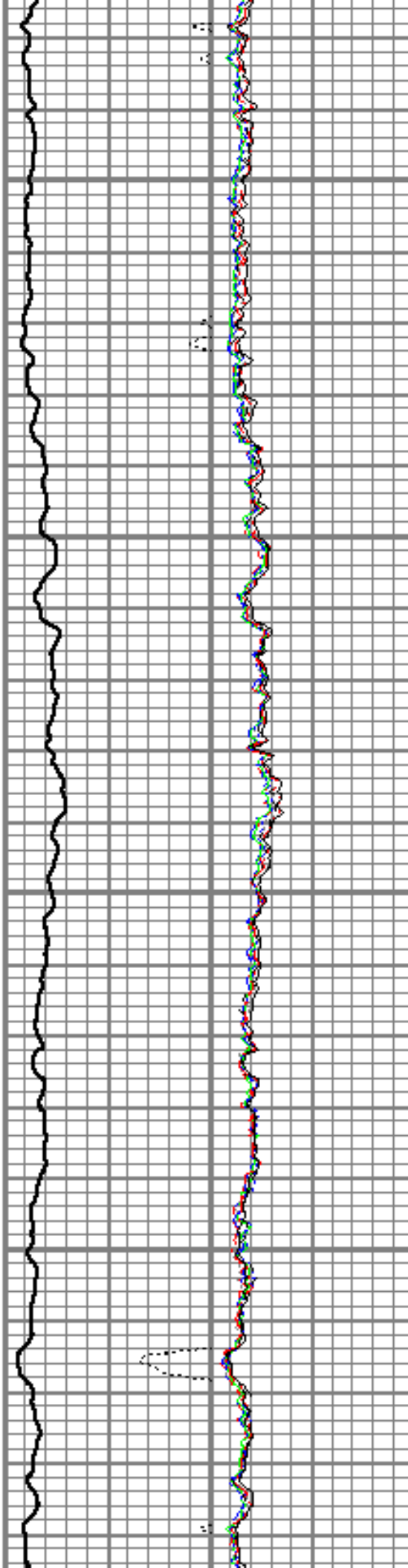
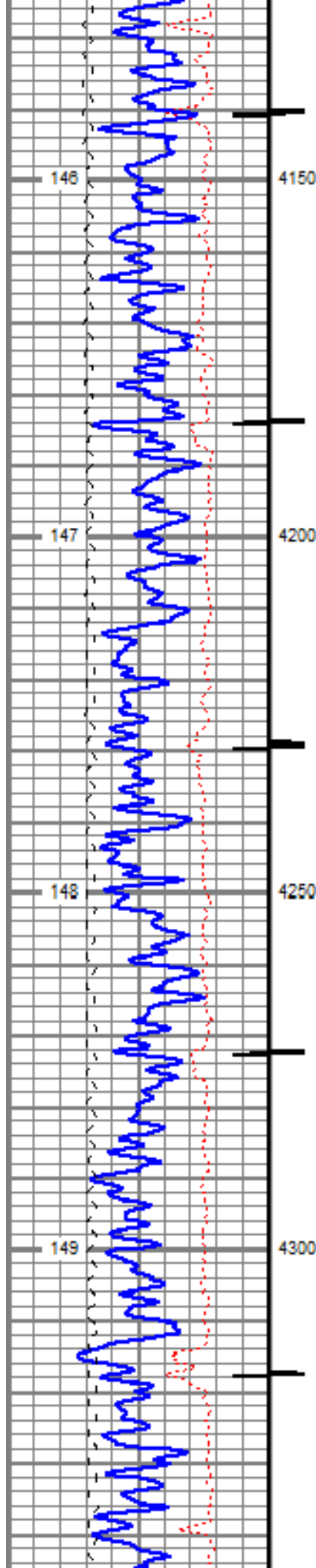


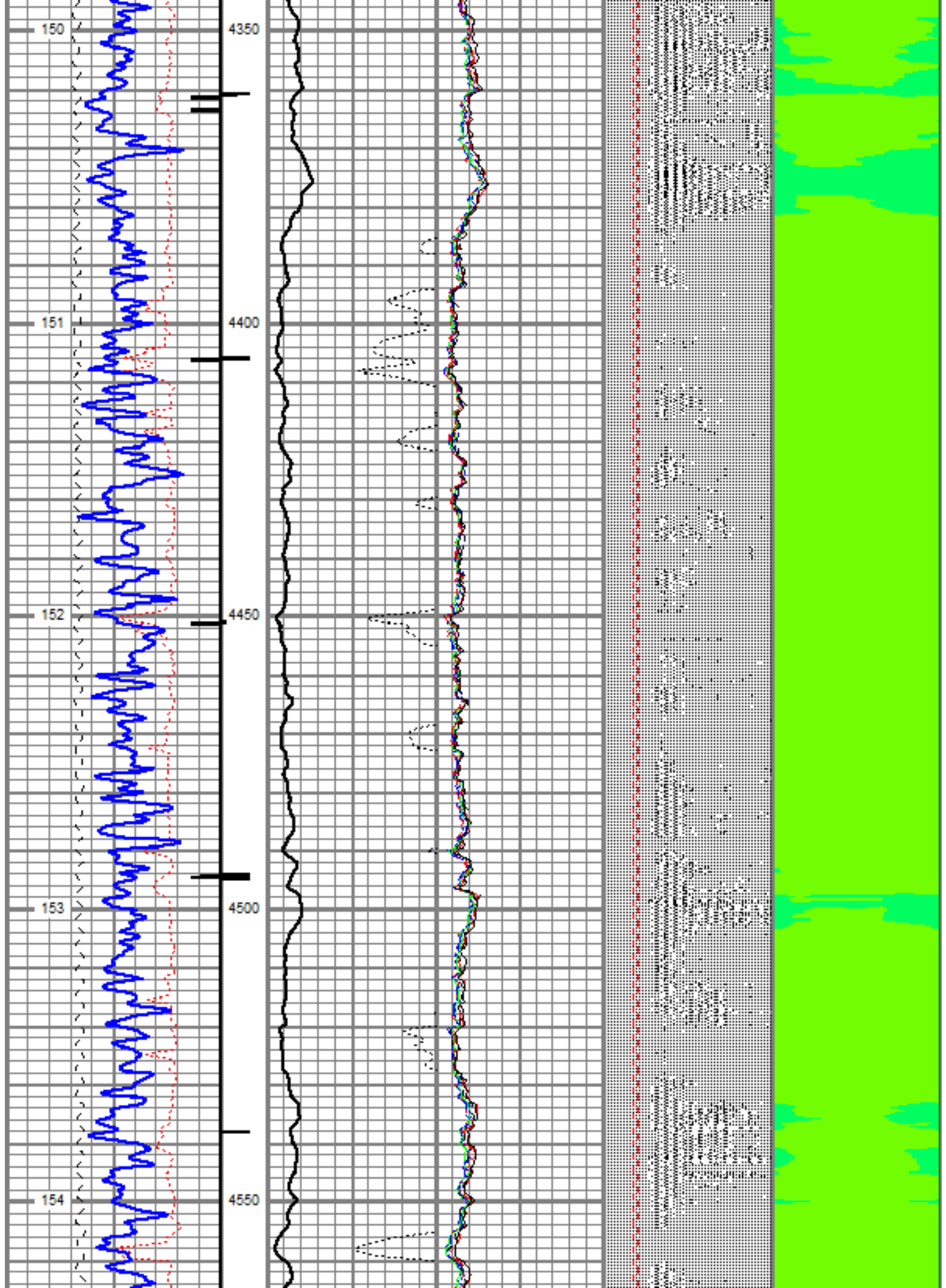


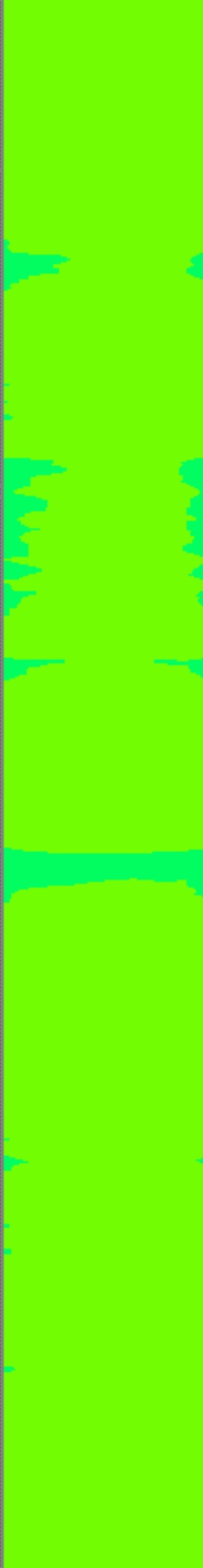
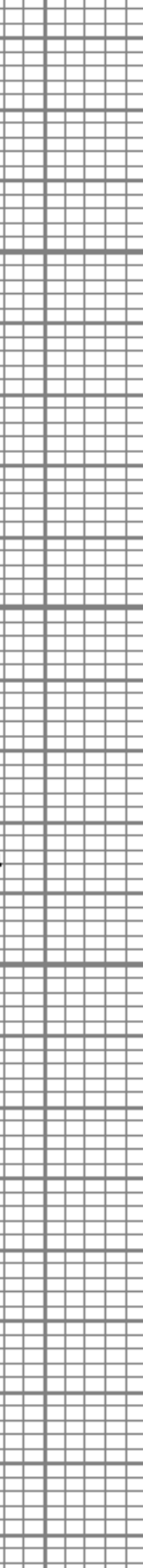
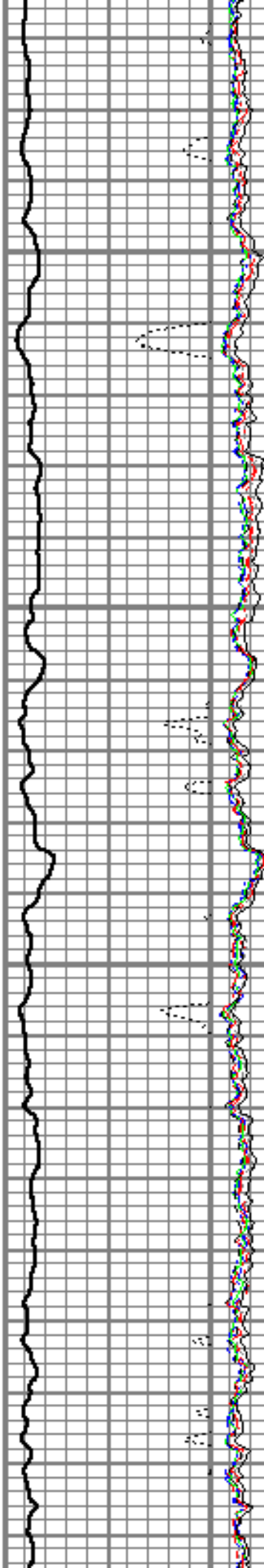
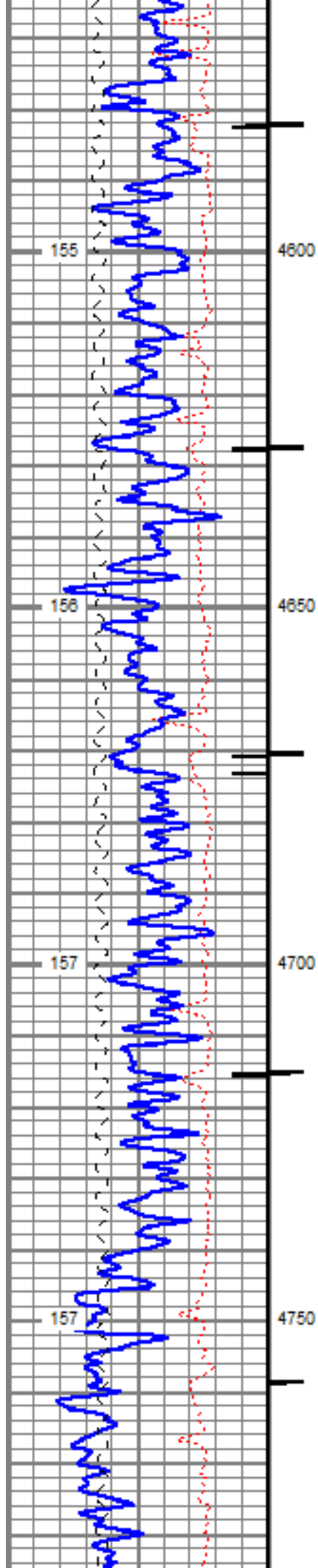


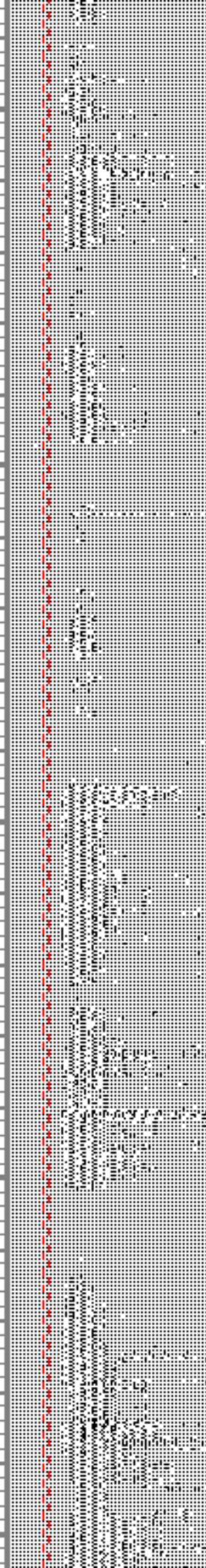
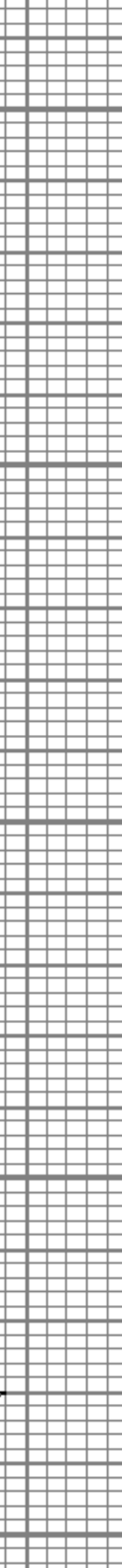
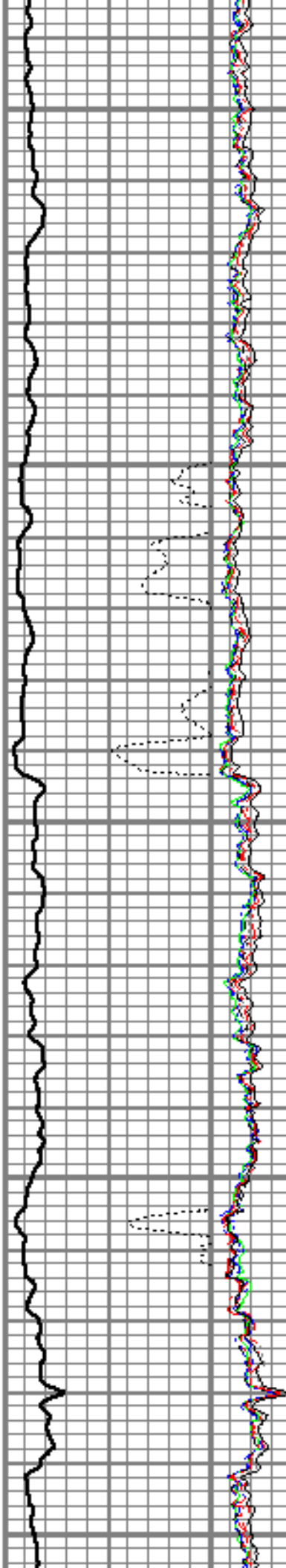
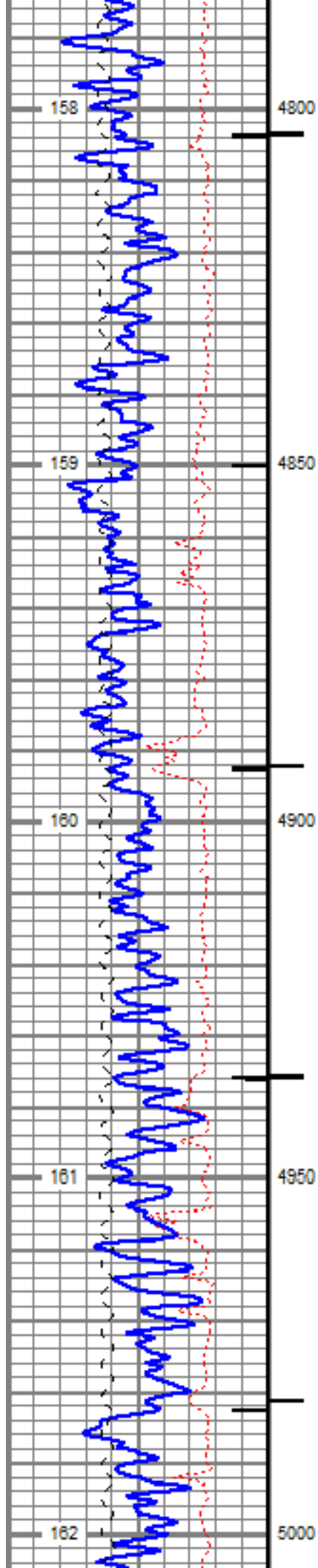


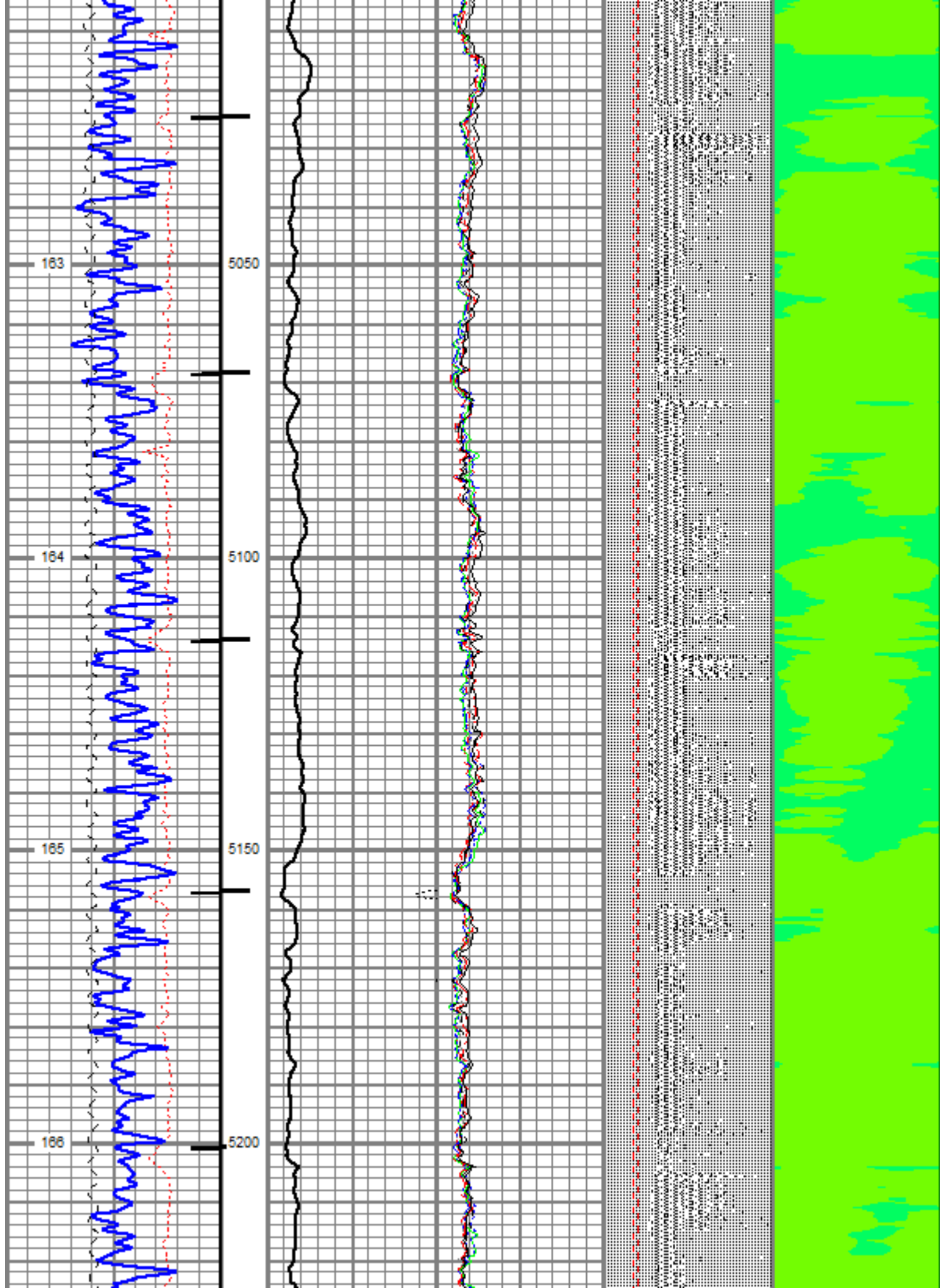


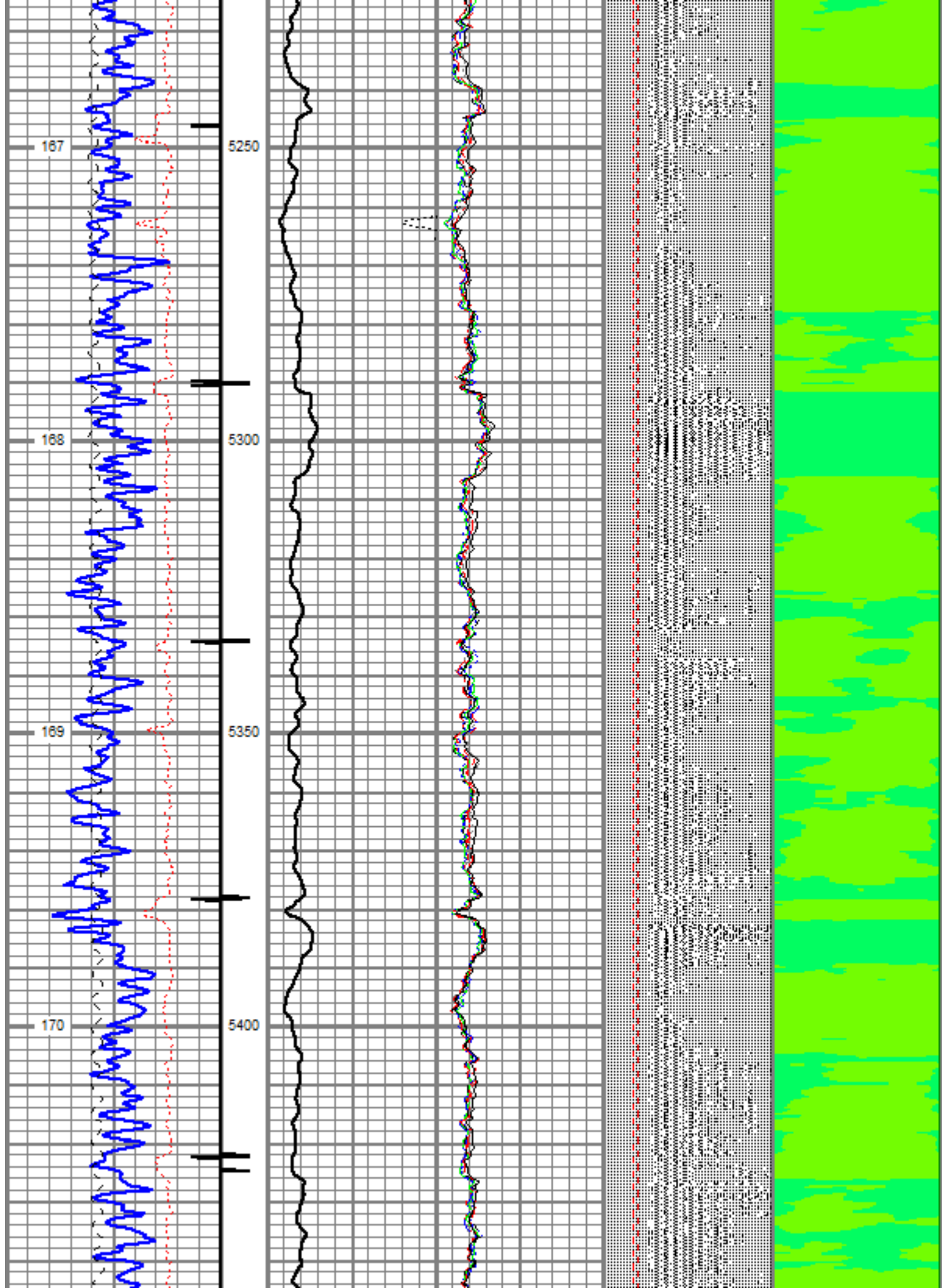


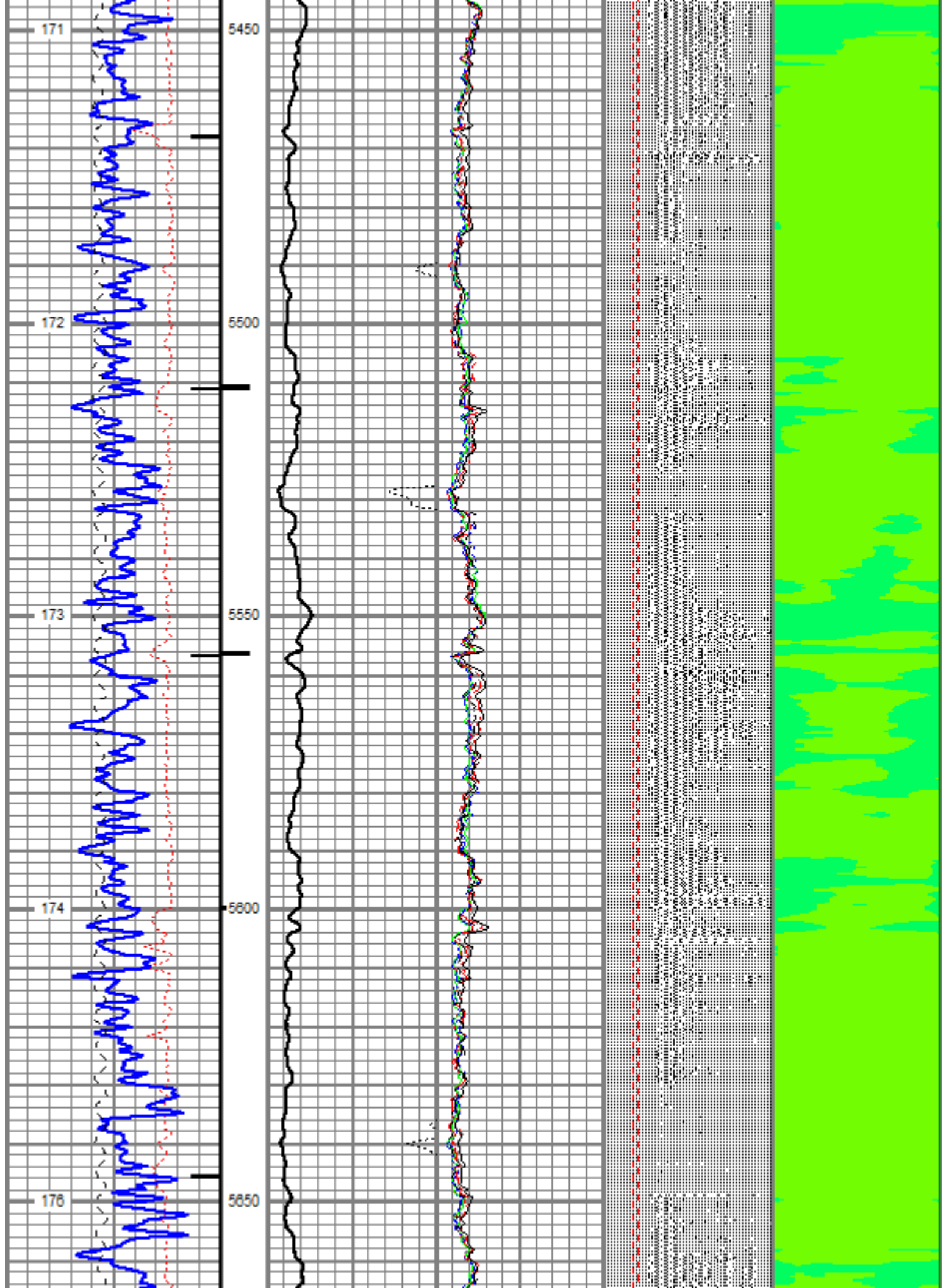


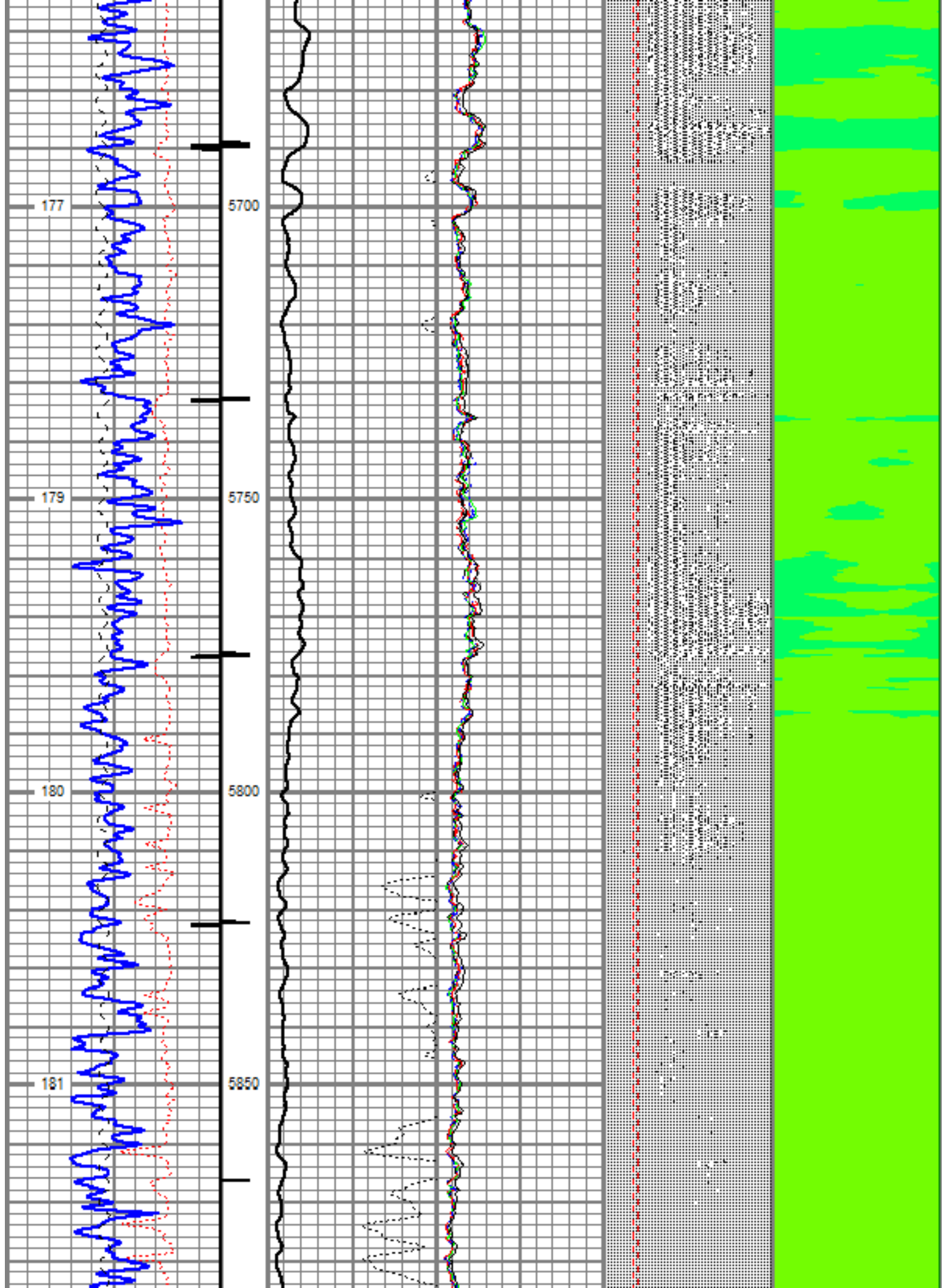


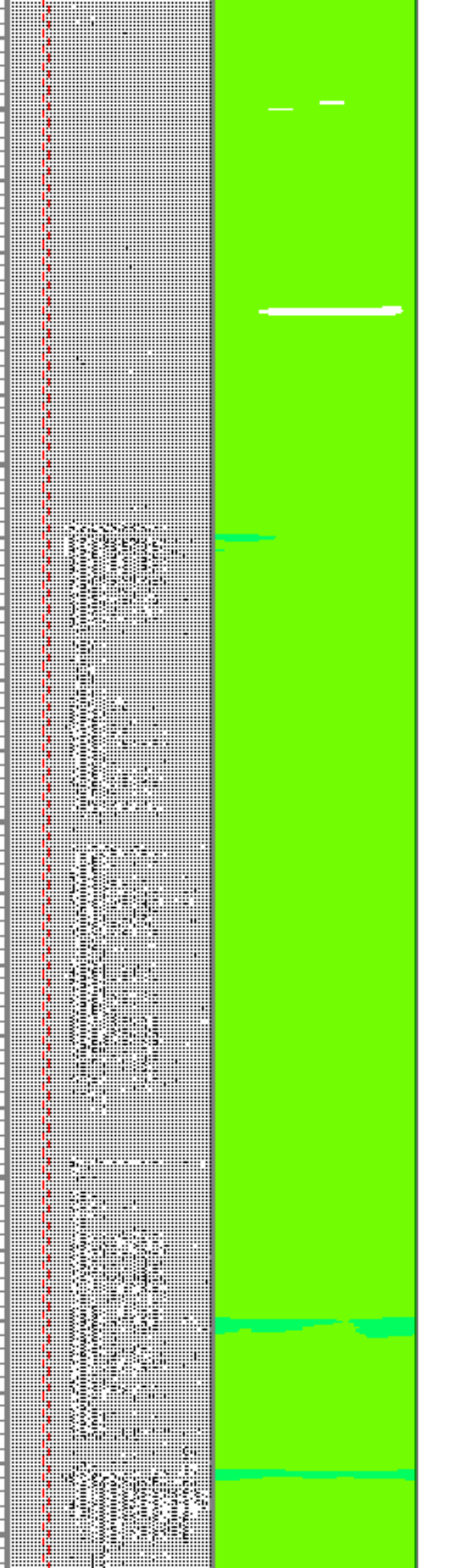
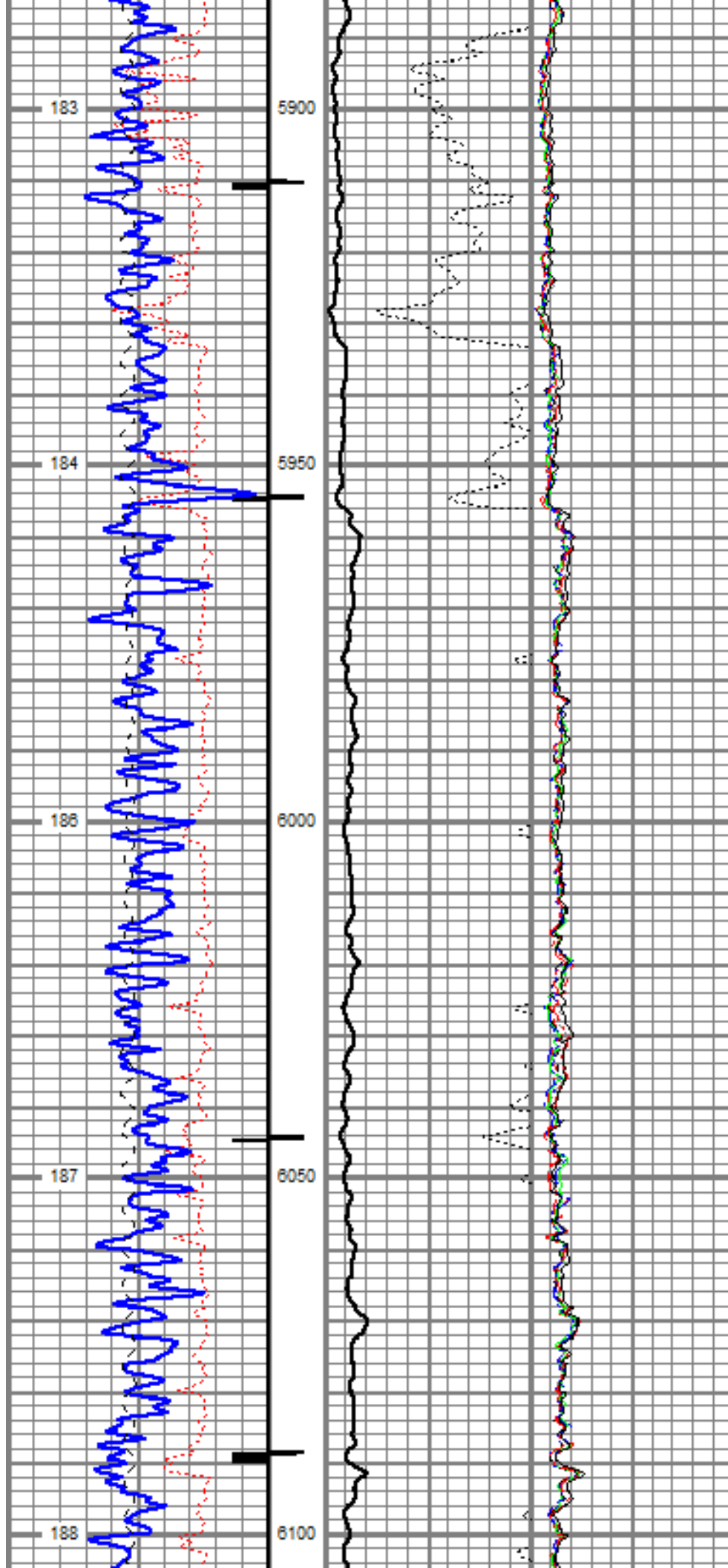


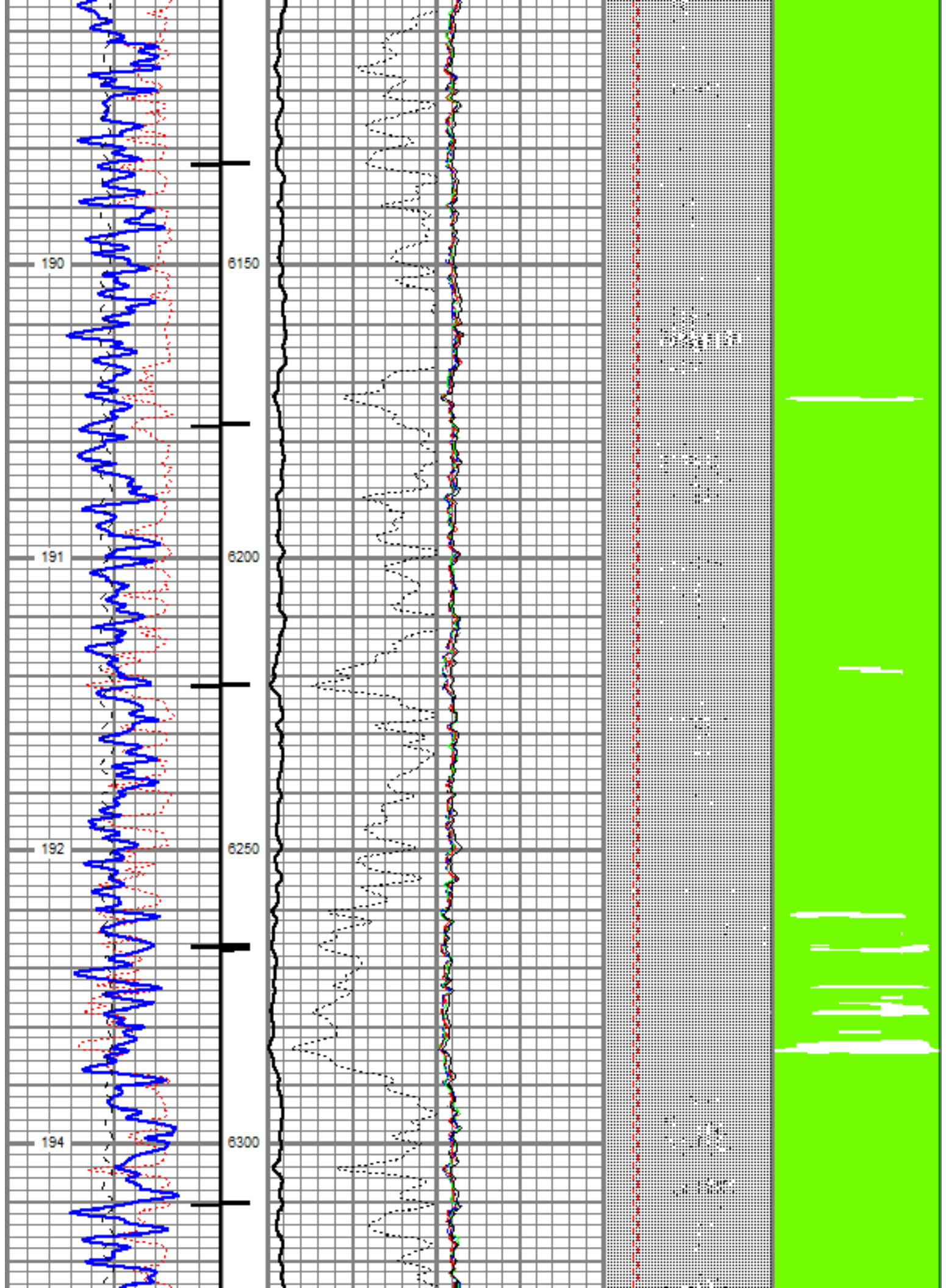


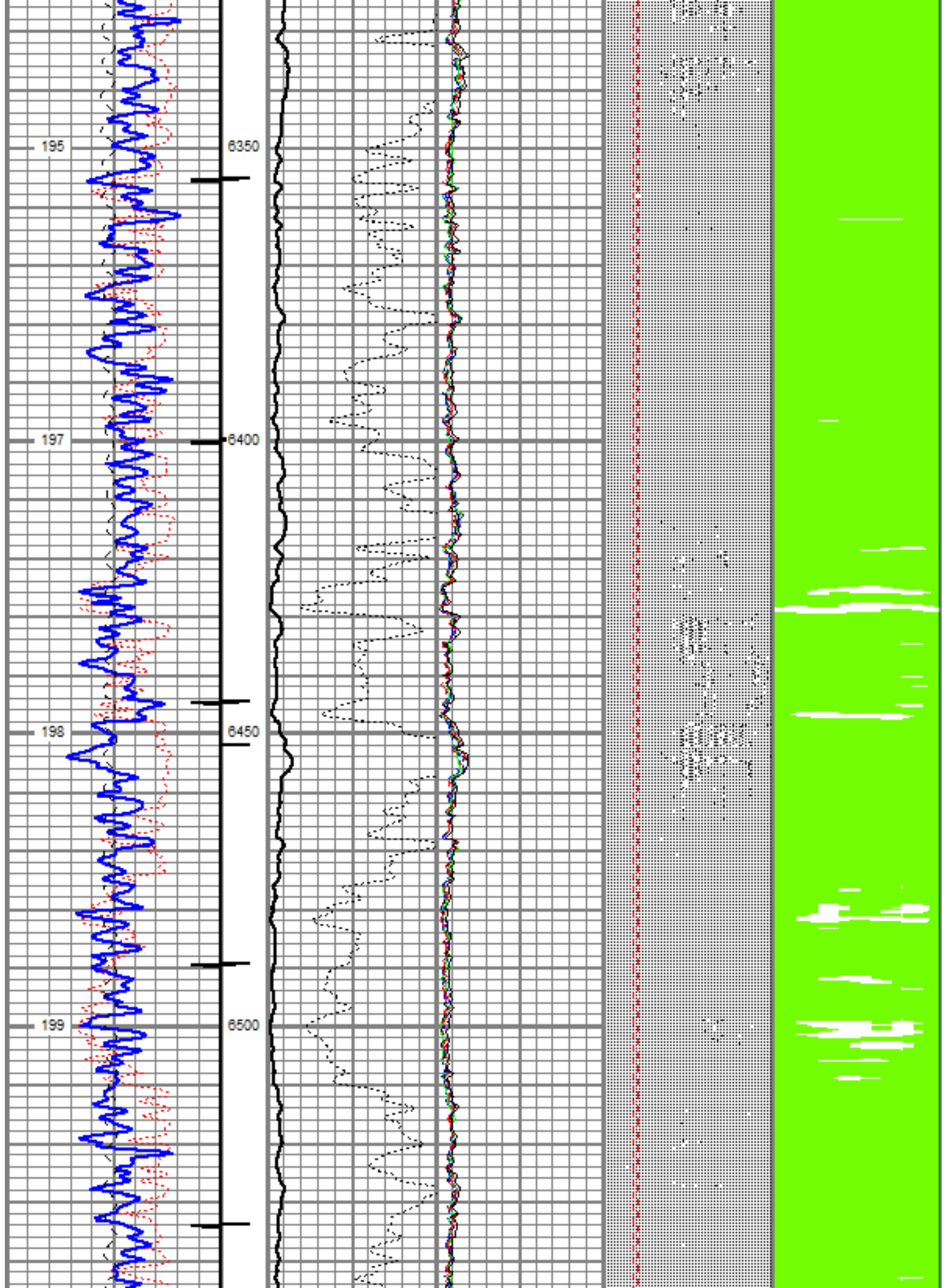


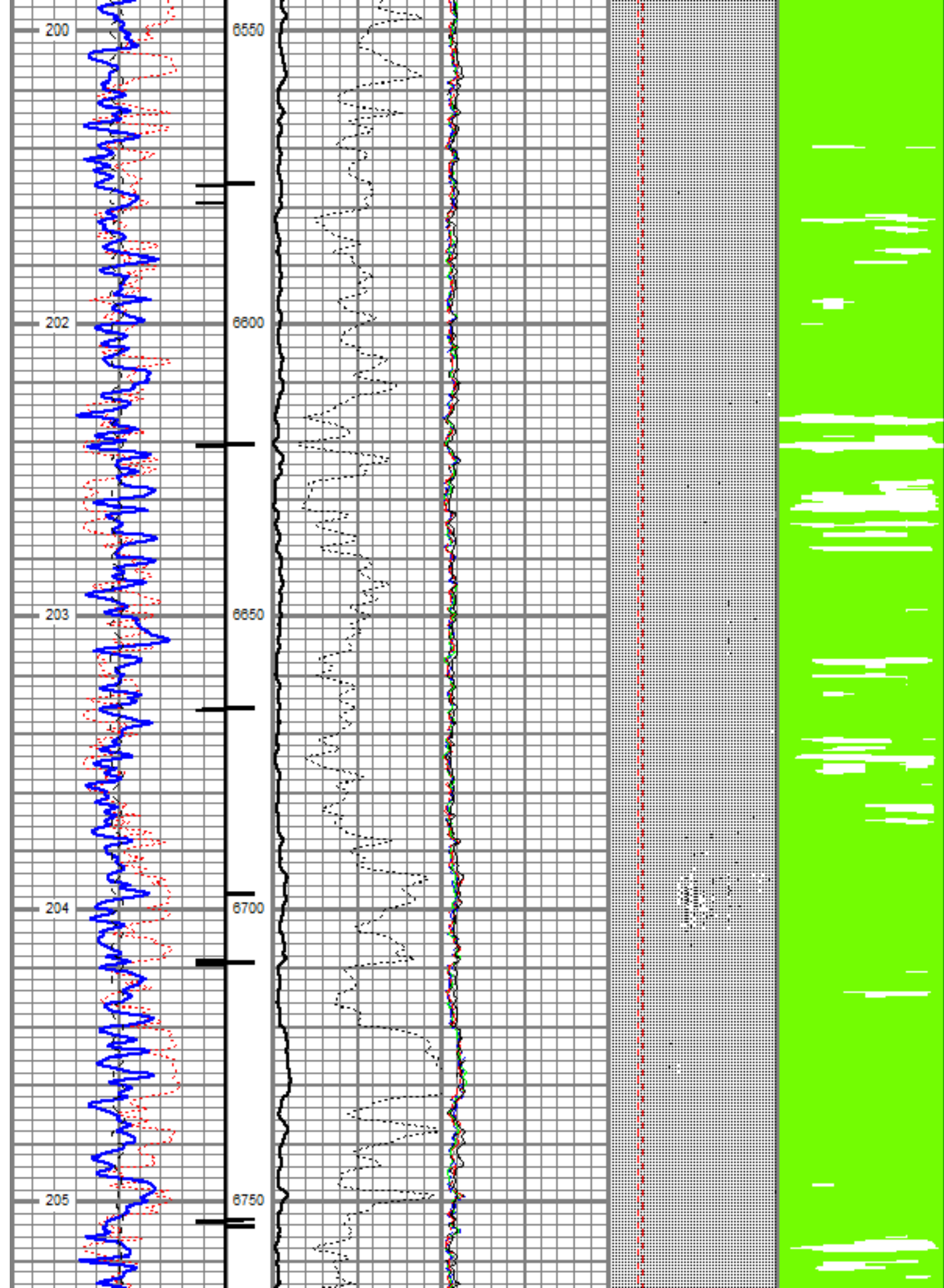


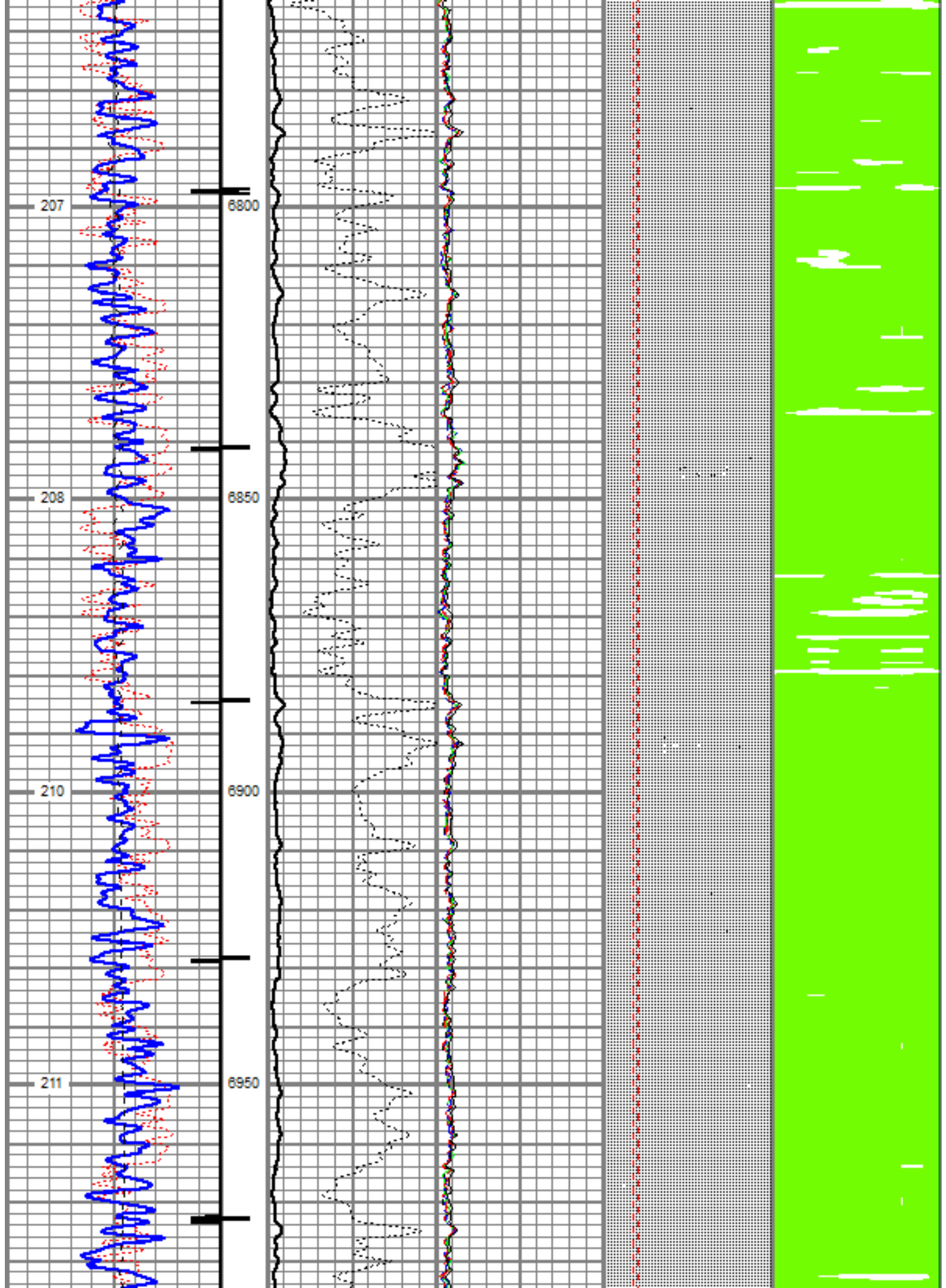


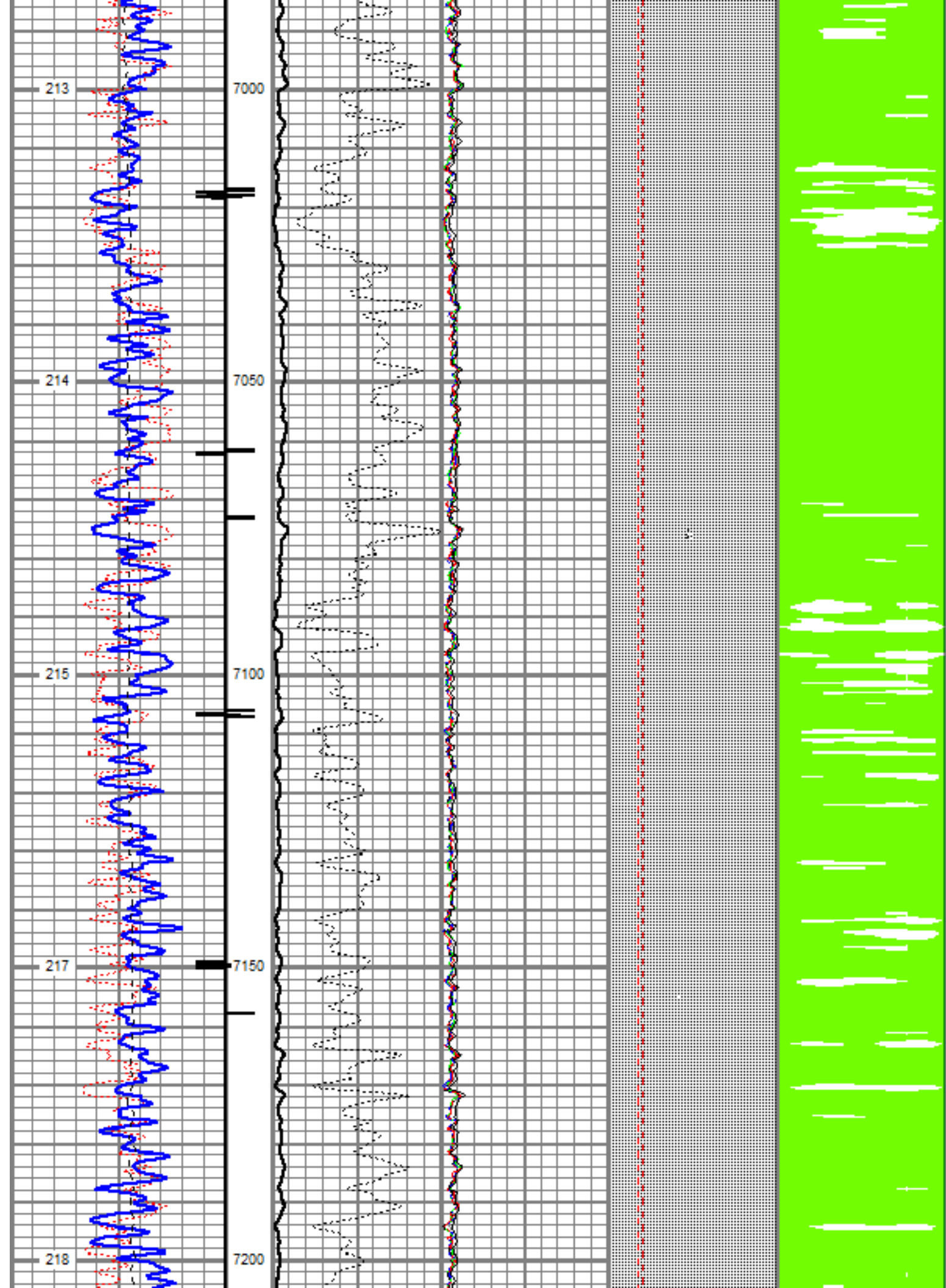


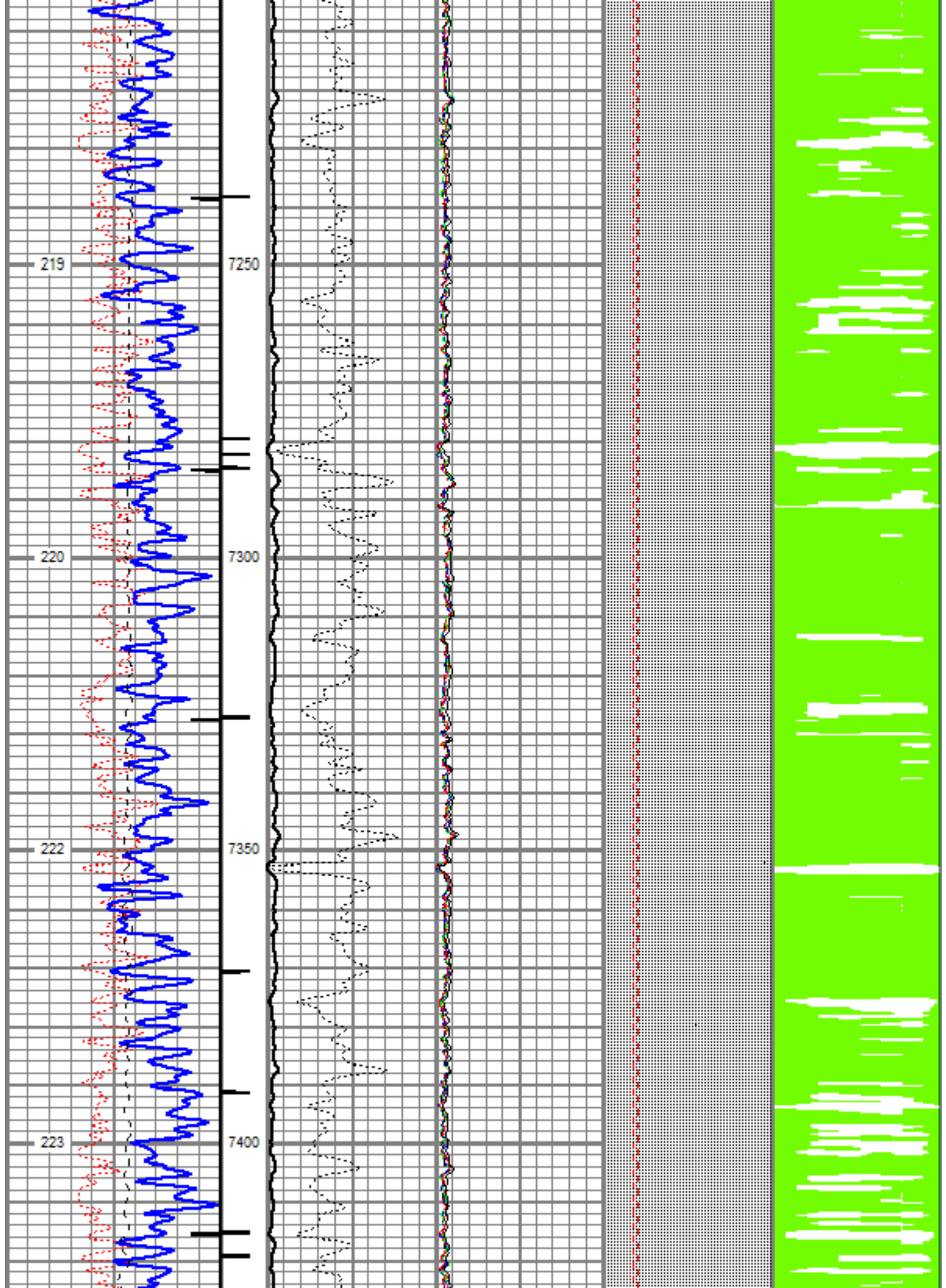


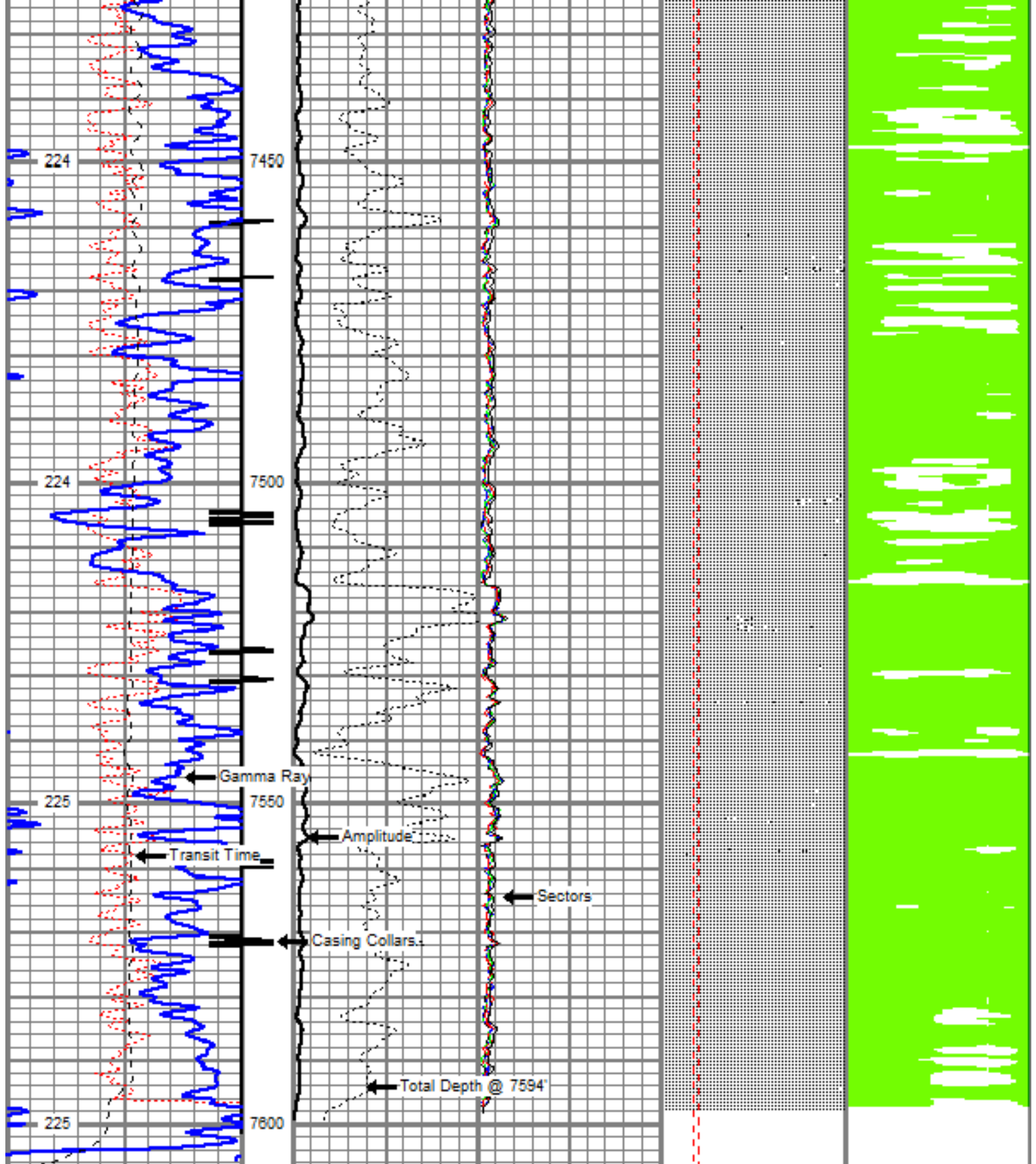










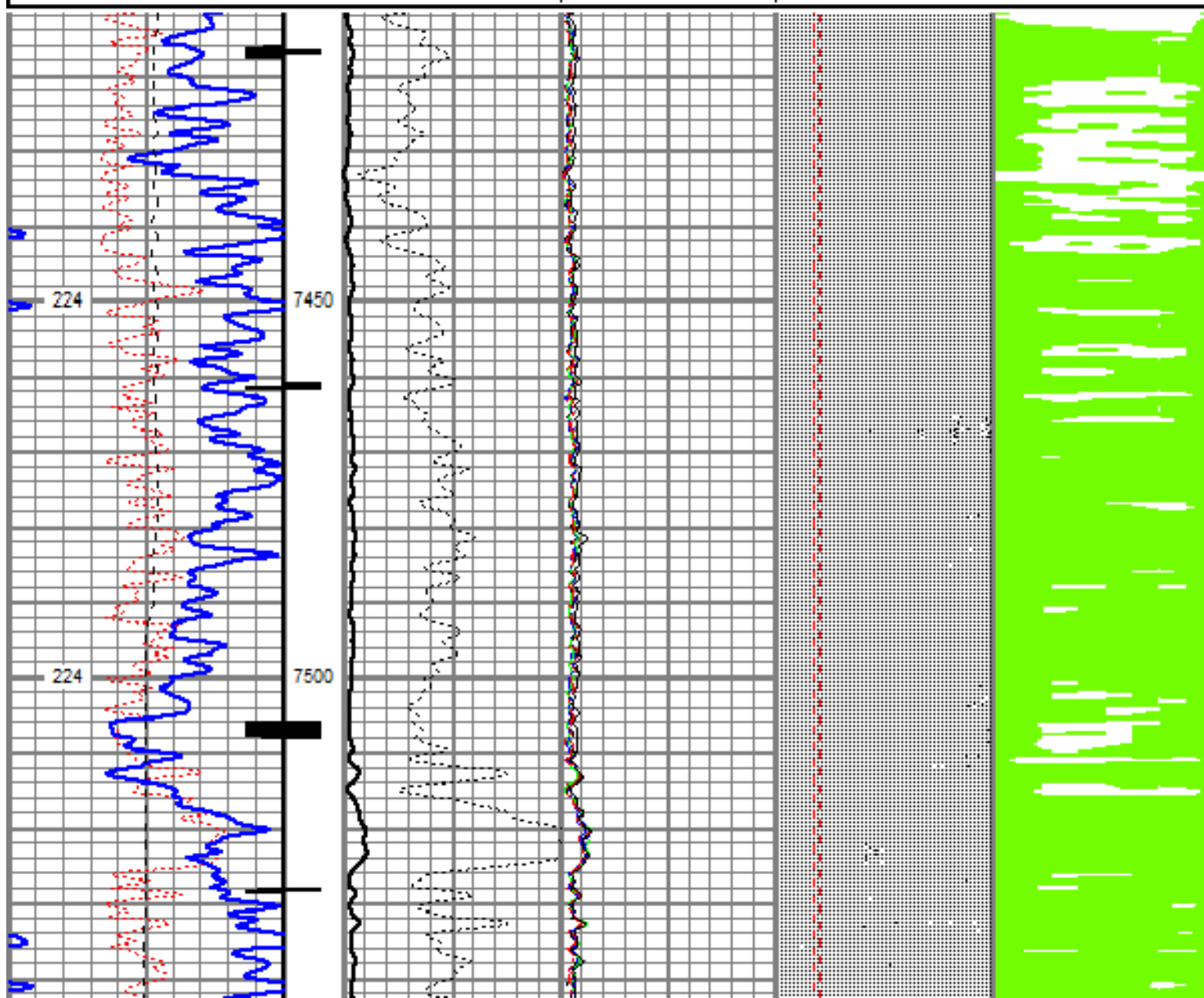


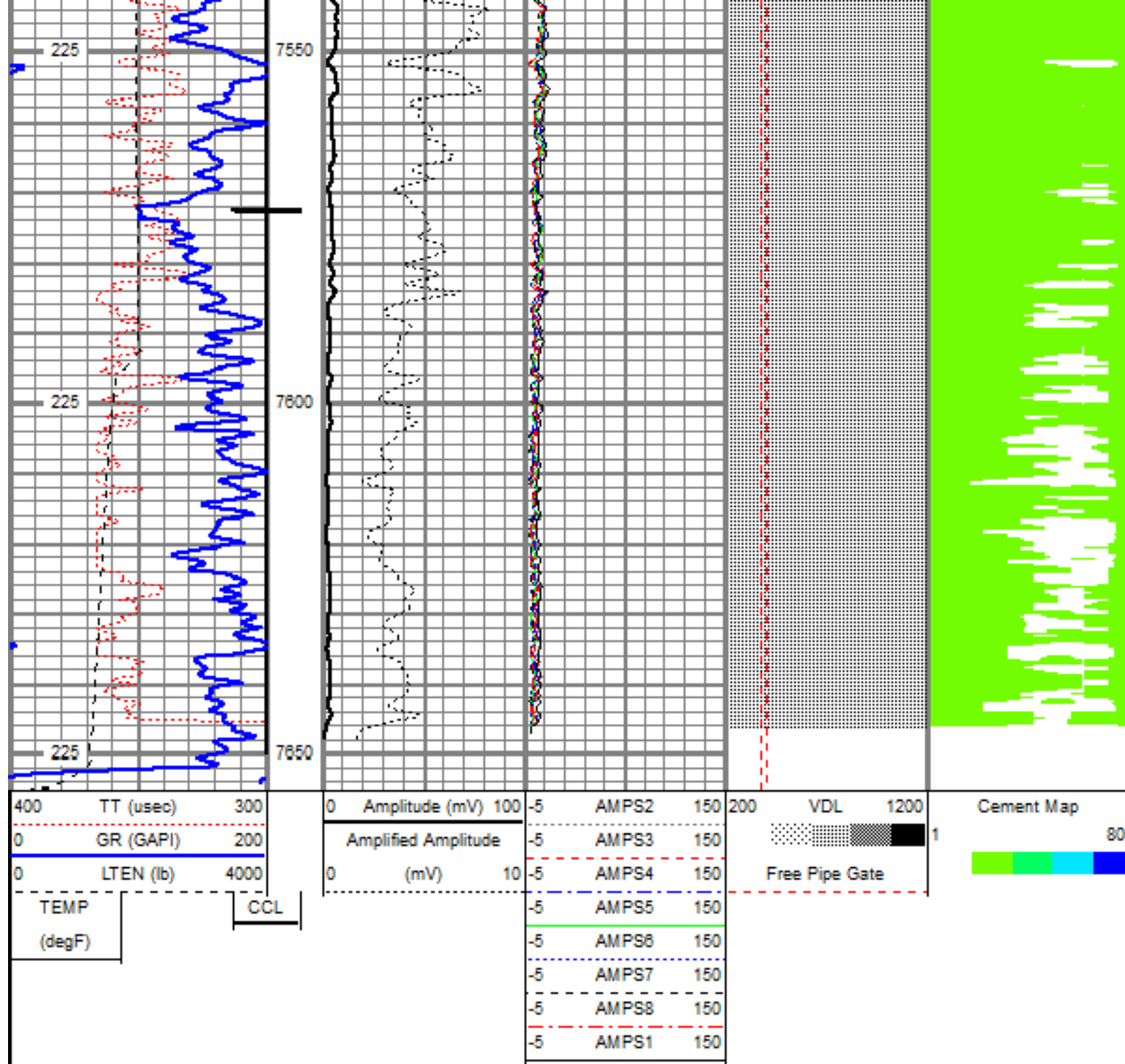
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0	GR (GAPI)	200	0	Amplified Amplitude		-5	AMPS3	150				80
0	LTEN (lb)	4000	0	(mV)	10	-5	AMPS4	150		Free Pipe Gate		
TEMP		CCL				-5	AMPS5	150				
(degF)						-5	AMPS6	150				
						-5	AMPS7	150				
						-5	AMPS8	150				
						-5	AMPS1	150				

Repeat Pass 5" = 100'

Database File: cub_creek_markham_7.db
 Dataset Pathname: pass14
 Presentation Format: rbl55
 Dataset Creation: Wed Oct 26 13:02:06 2016 by Log Std Casedhole 09061
 Charted by: Depth in Feet scaled 1:240

400	TT (usec)	300	0	Amplitude (mV)	100	-5	AMPS2	150	200	VDL	1200	Cement Map
0	GR (GAPI)	200		Amplified Amplitude		-5	AMPS3	150				80
0	LTEN (lb)	4000	0	(mV)	10	-5	AMPS4	150		Free Pipe Gate		
TEMP		CCL				-5	AMPS5	150				
(degF)						-5	AMPS6	150				
						-5	AMPS7	150				
						-5	AMPS8	150				
						-5	AMPS1	150				





Log Variables

Database: C:\Warrior\Data\cub_creek_markham_7.db

Dataset: field/well/run1/pass15.2

Top - Bottom

XXXX	PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASEOD in	PERFS
0	0	17	72	1	0.8	0	5.5	0
TDEPTH ft	BOTTEMP degF	BOREID in						
0	100	7.875						

Calibration Report

Database File: cub_creek_markham_7.db

Dataset Pathname: pass15.2

Dataset Creation: Wed Oct 26 14:28:05 2016 by Calc Std Cascodehole 09081

Temperature Calibration Report

Serial Number: 0001
 Tool Model: 1.375TEMP
 Performed: Mon Mar 21 11:57:52 2016

	Reference	Reading
Low Reference:	10.00 degF	1.00 cps
High Reference:	100.00 degF	1000.00 cps
Gain:	0.10	
Offset:	0.00	
Delta Spacing	1	

Gamma Ray Calibration Report

Serial Number: 060109
 Tool Model: Probe
 Performed: Mon Jan 26 10:19:58 2009

Calibrator Value:	185.2	GAPI
Background Reading:	4.8	cps
Calibrator Reading:	200.0	cps
Sensitivity:	0.9487	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 060113_45
 Tool Model: Probe

Calibration Casing Diameter:	5.500	in
Calibration Depth:	995.175	ft

Master Calibration, performed Wed Oct 26 12:36:10 2016:


	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.303	2.000	71.921	221.778	1.743
CAL	0.001	0.882				
5'	0.001	0.292	2.000	71.921	240.245	1.762
SUM						
S1	0.001	0.320	0.000	100.000	313.725	-0.341
S2	0.001	0.308	0.000	100.000	325.803	-0.362
S3	0.001	0.311	0.000	100.000	322.901	-0.339
S4	0.001	0.316	0.000	100.000	317.433	-0.314
S5	0.001	0.302	0.000	100.000	332.279	-0.300
S6	0.001	0.287	0.000	100.000	350.175	-0.329
S7	0.001	0.282	0.000	100.000	355.263	-0.360
S8	0.001	0.287	0.000	100.000	350.041	-0.385


Internal Reference Calibration, performed Wed Dec 31 18:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.001	0.882	1.000	0.000

Air Zero Calibration, performed Wed Oct 26 07:57:51 2016:

	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	Len (ft)	OD (in)	Wt (lb)
			Standard Standard Cable Head	1.00	1.69	1.00
WVFS1	9.44		RBT-Probe (060113_45) Probe 2.75" RadII Bond Tool	9.39	2.75	90.00
WVFS2	9.44					
WVFS3	9.44					
WVFS4	9.44					
WVFS5	9.44					
WVFS6	9.44					
WVFS7	9.44					
WVFS8	9.44					
WVFS5FT	8.44					
CCL	4.75		GR-Probe (060109)	4.00	2.75	30.00

GR	2.25		Probe 2.75" 4 Channel Pulse			
TEMP	0.08		TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00
Dataset: cub_creek_markham_7.db: field/well/run1/pass15.2 Total Length: 15.64 ft Total Weight: 151.00 lb O.D. 2.75 in						

	Company	Cub Creek Energy	
	Well	Marham 7	
	Field	Wattenberg	
	County	Weld	
	State	Colorado	Country USA