



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: WPX ENERGY

CH082862 SAVAGE RWF 514-25

API No: RULISON

05045219890000 GARFIELD State COLORADO

25 6S 94W Location

RWF 23-25 PAD SHL: 1610' FSL & 2295' FWL

NABORS 677 BHL: 317' FSL & 435' FWL (SWSW)

SEC 25 TWP 6S RGE 94W

Other Services

RPM

Permanent Datum GL Elevation 6096 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING KB 6122 ft DF GL 6096 ft

Date	14/MAR/14	
Run	ONE	
Service Order	US625360	
Depth Driller	8982 ft	
Depth Logger	8940 ft	
Bottom Logged Interval	8930 ft	
Top Logged Interval	26 ft	
Time Started	0745	
Time Finished	1215	
Operator Rig Time	4.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	73 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	236 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLORIO RENEAU	
Witnessed By	BOB CADY	

- FOLD HERE

In making interpretations of logs, our 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, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record		
Bit Size	From	To
13.5 in	0 ft	1170 ft
8.75 in	1170 ft	8982 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1170 ft
4.5 in	11.6 lbm/ft	1-80	0 ft	8982 ft

Remarks
All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is 16 feet.
Logged with zero PSI at wellhead.
BHT = 236 °F
SJ = 5727'-5751'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10163028	CENT
1	1	GR/CCL	2459XA	10124121	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.780	8945.000
RAL	Amp Gate Start Near	195.000	usec	35.780	8945.000
RAL	Amp Gate Start Radial	195.000	usec	35.780	8945.000
RAL	Amp Gate Width Far	25.000	usec	35.780	8945.000
RAL	Amp Gate Width Near	25.000	usec	35.780	8945.000
RAL	Amp Gate Width Radial	25.000	usec	35.780	8945.000
RAL	casing od	4.500	inches	35.780	8945.000
RAL	casing wt	11.600	lbm/ft	35.780	8945.000
RAL	FB Start Far	291.900	usec	35.780	8945.000
RAL	FB Start Near	180.000	usec	35.780	8945.000
RAL	FB Start Radial	180.000	usec	35.780	8945.000
RAL	FB Thresh Far	10.000	mv	35.780	8945.000
RAL	FB Thresh Near	4.000	mv	35.780	8945.000
RAL	FB Thresh Radial	4.000	mv	35.780	8945.000
RAL	Fluid Travel Time	200.000	usec/ft	35.780	8945.000

DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Plotted by : PlotMgr, v5.4.504

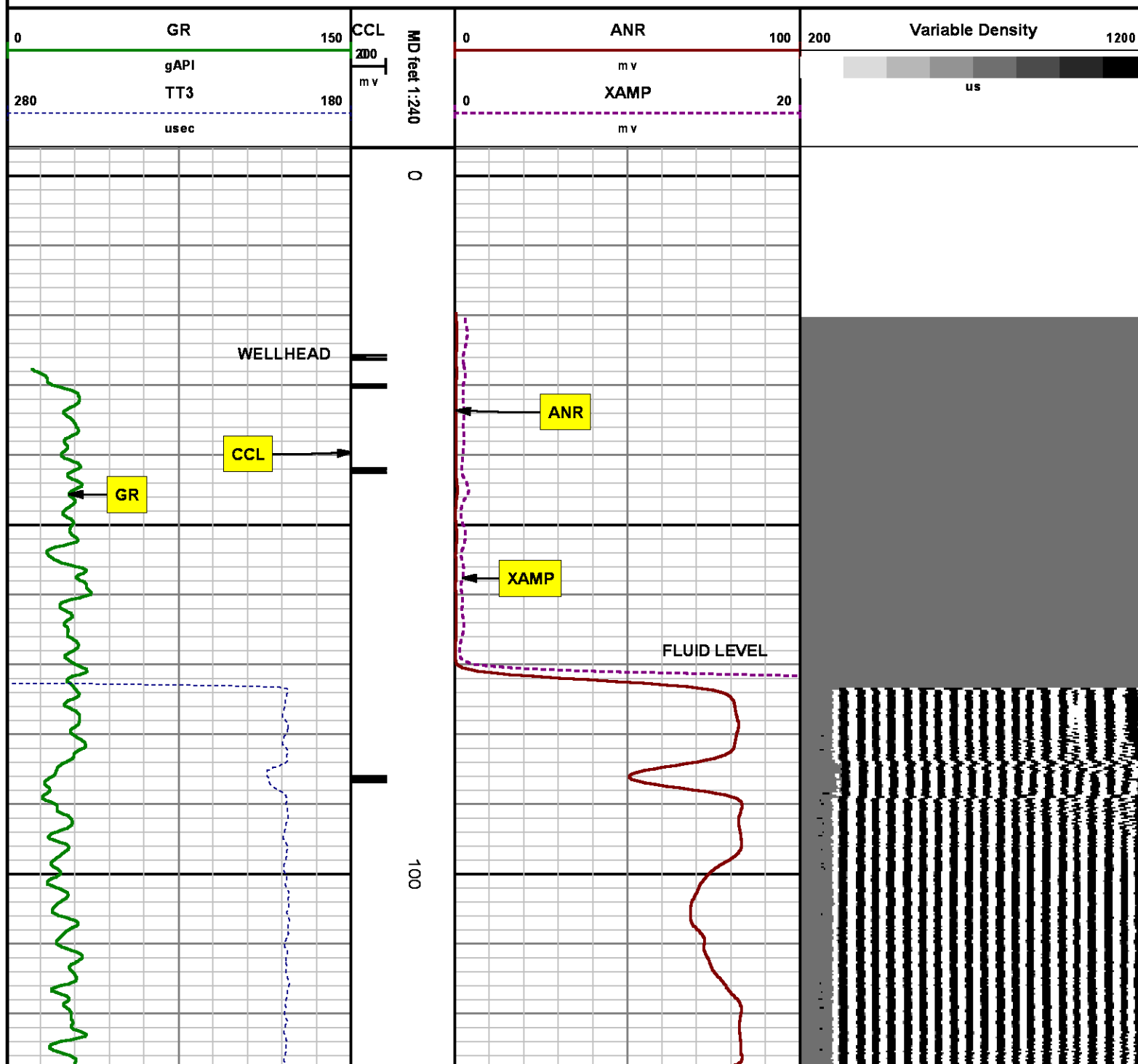
Well : SAVAGE RWF 514-25

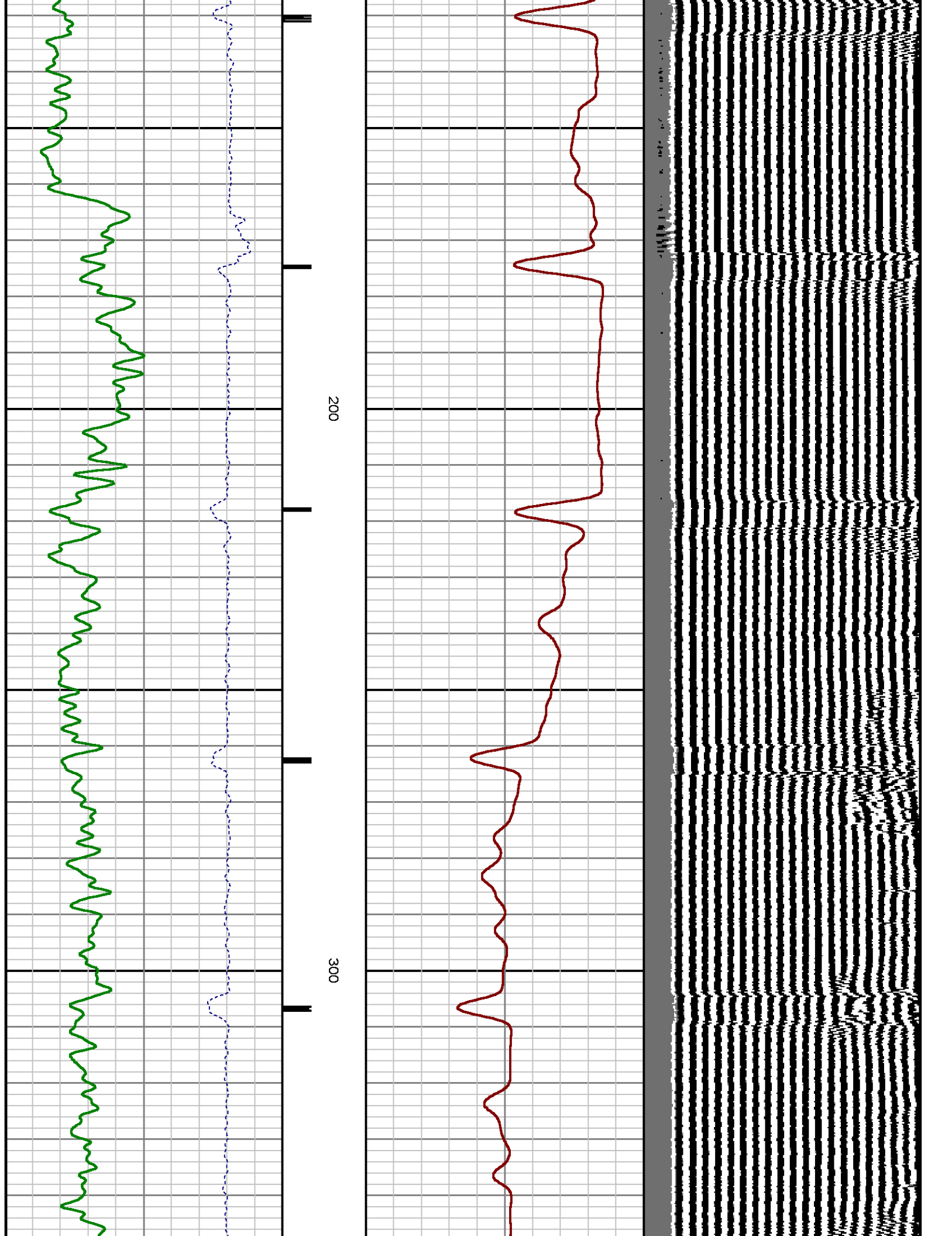
File Name : d:\welldata\wpxl\rwf 514-25\514ra\main.xtf

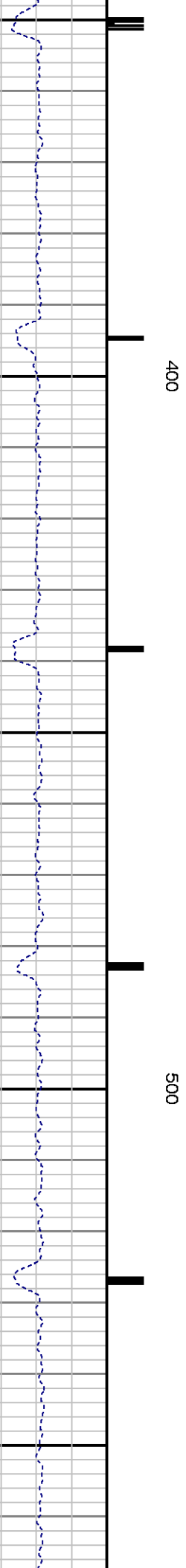
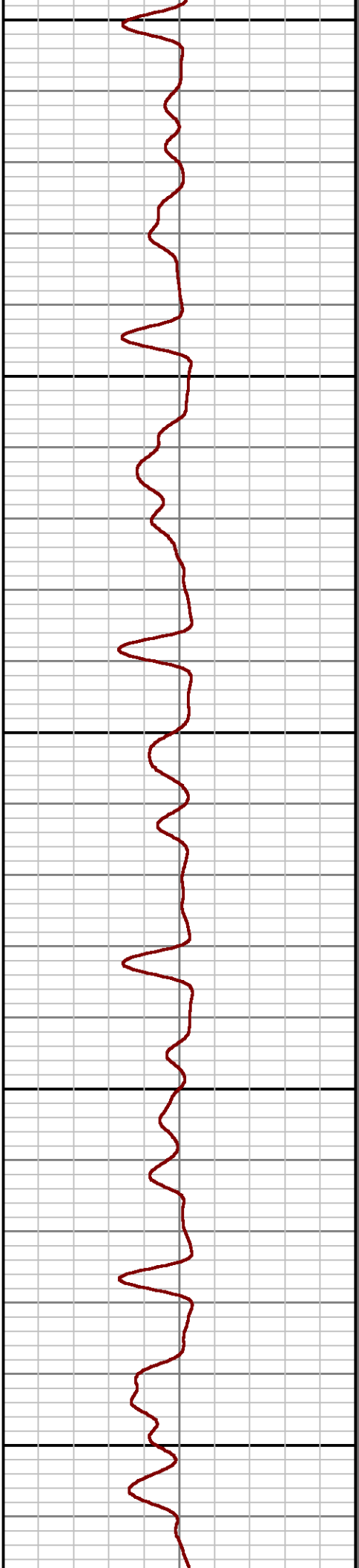
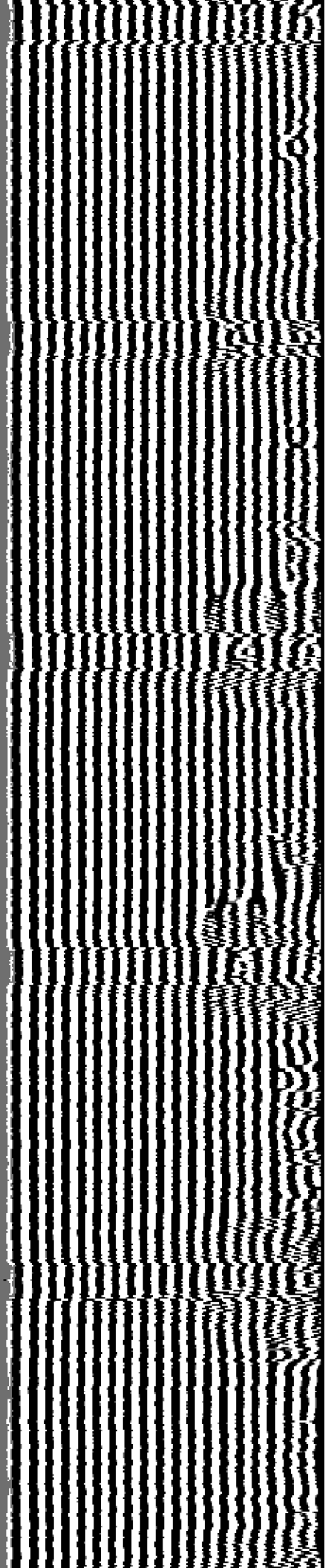
Mode : PlotMgr 5.4.504

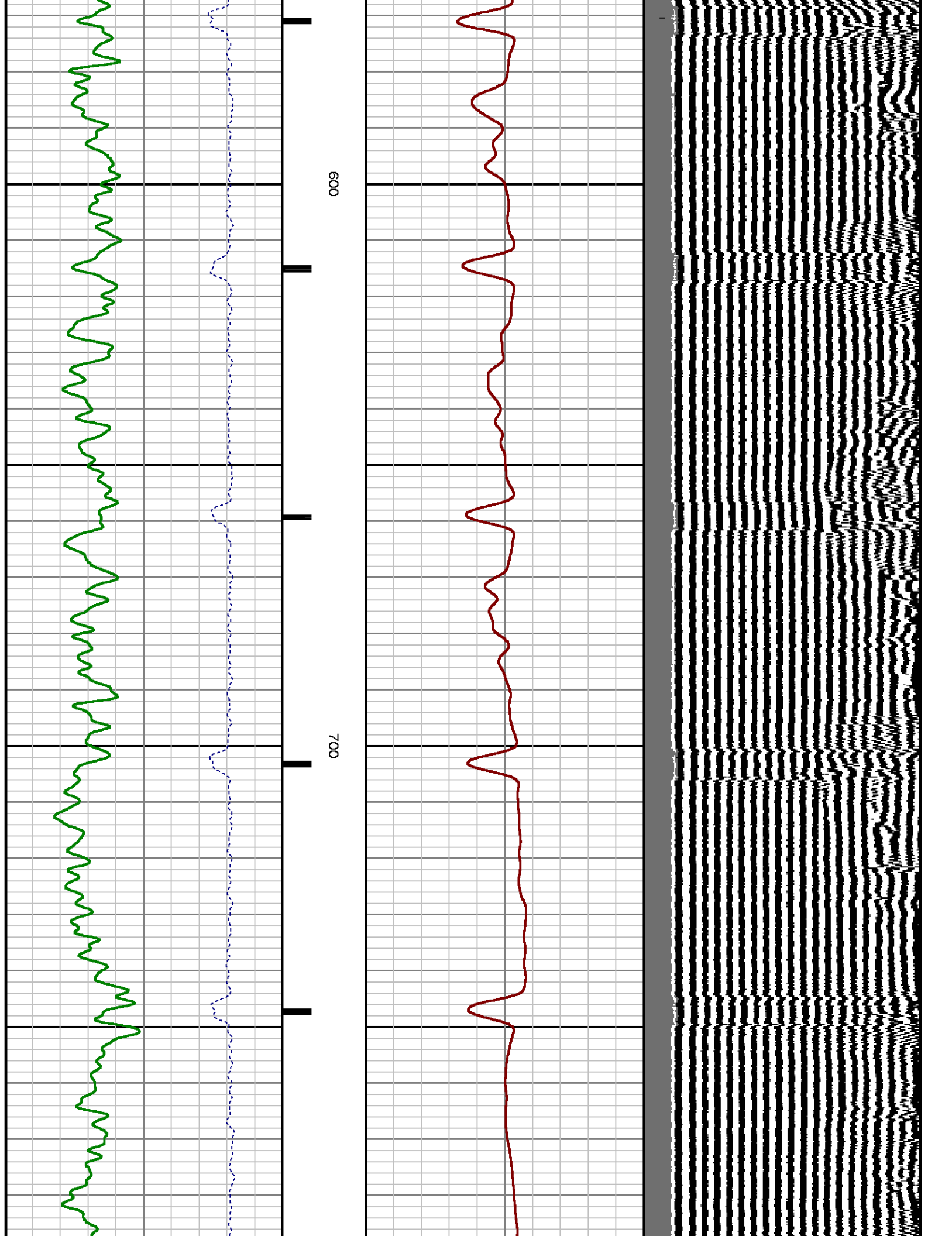
Interval : -4.00 - 8945.00 feet UP

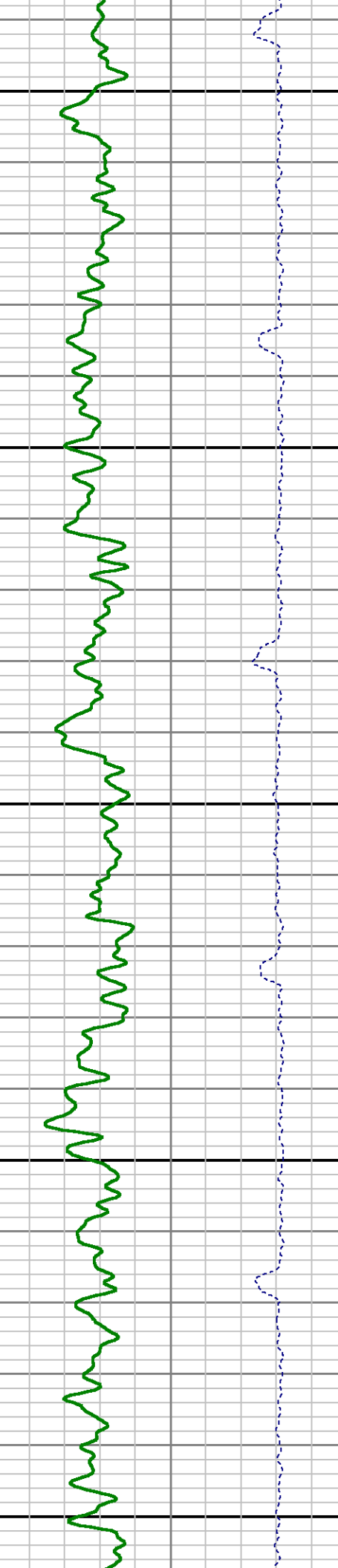
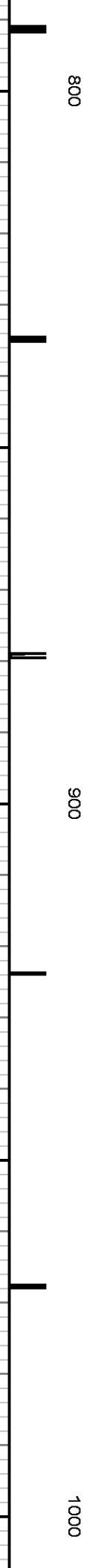
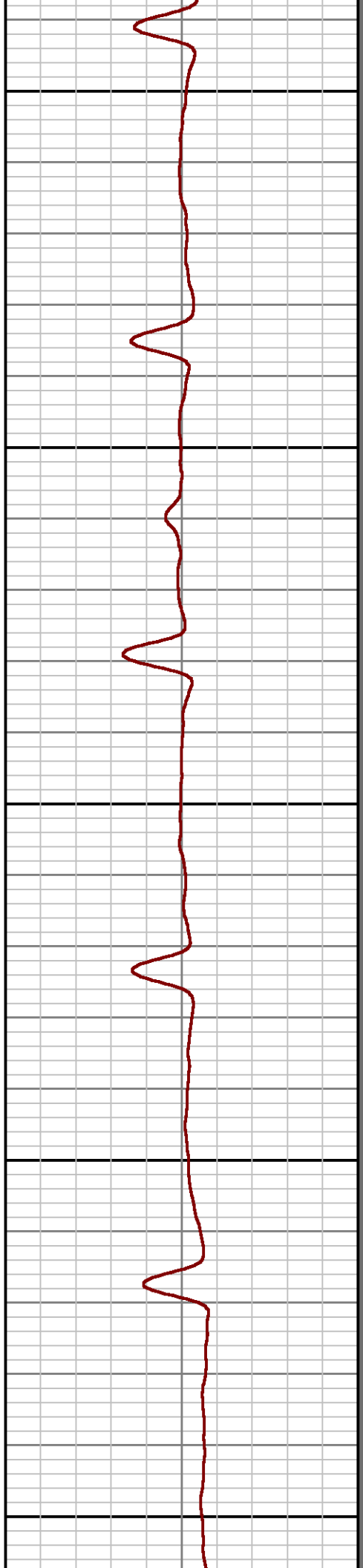
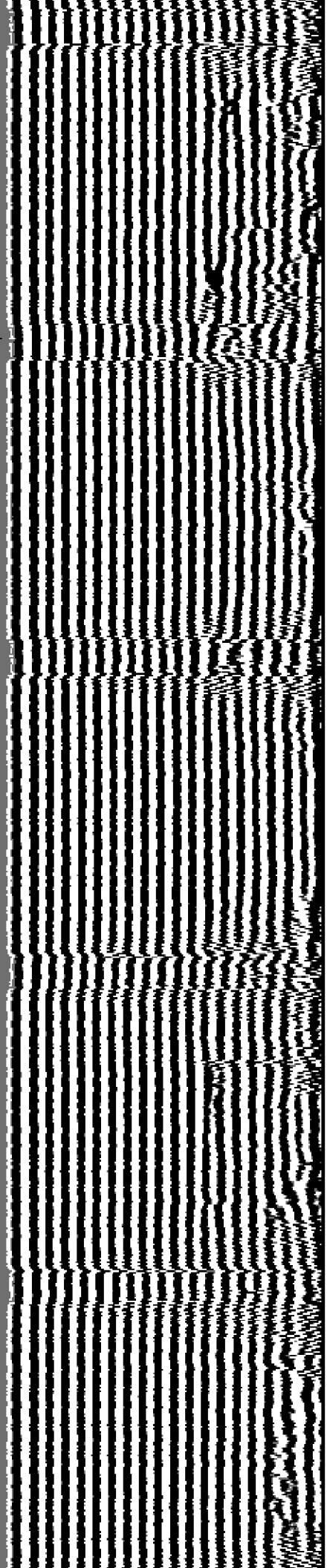
Created : 3/14/2014 9:20:50 AM

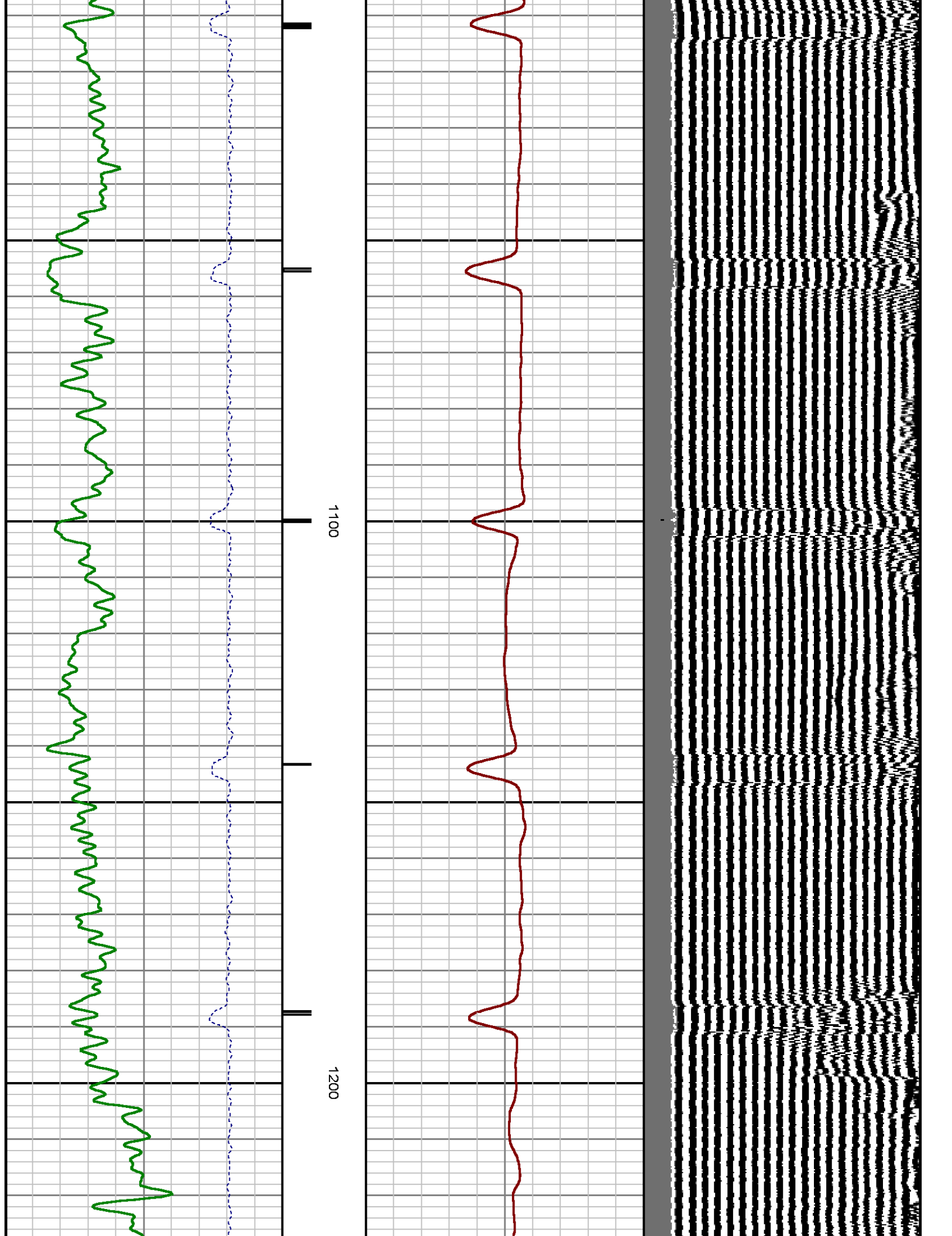


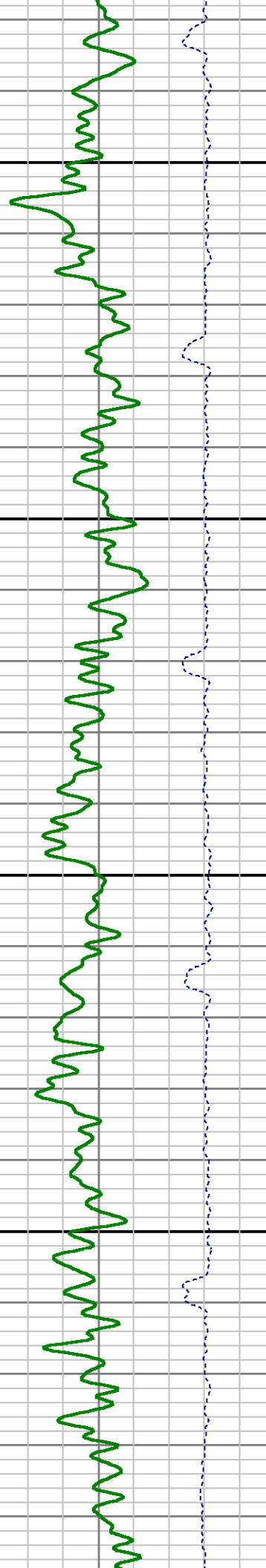
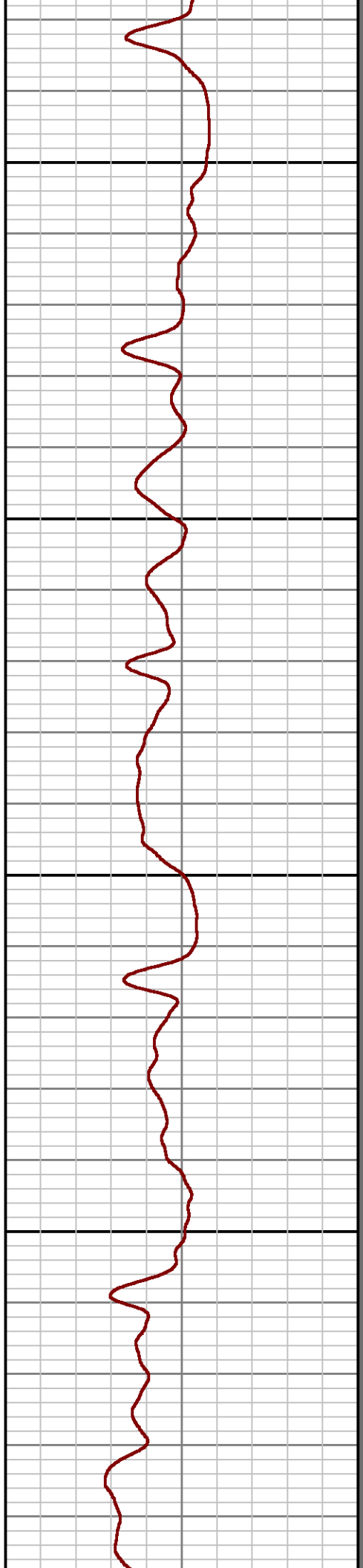
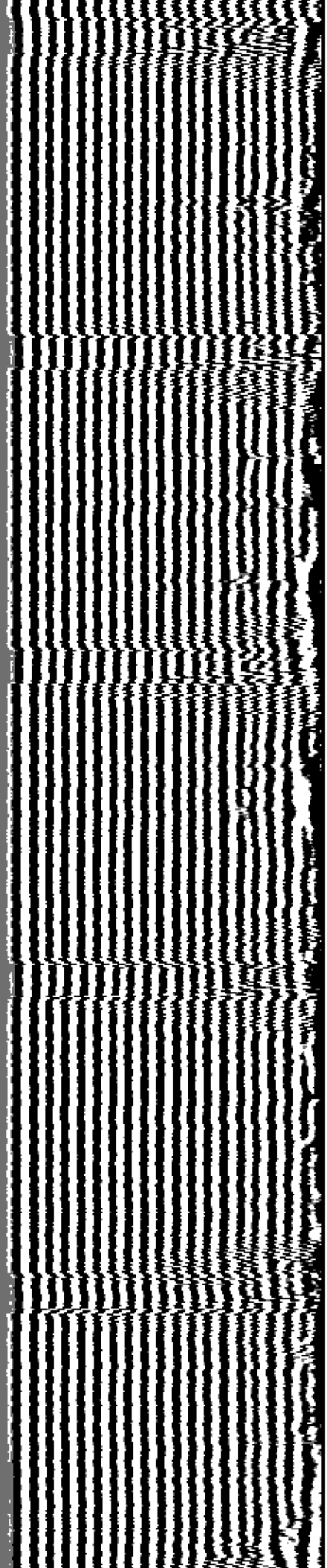






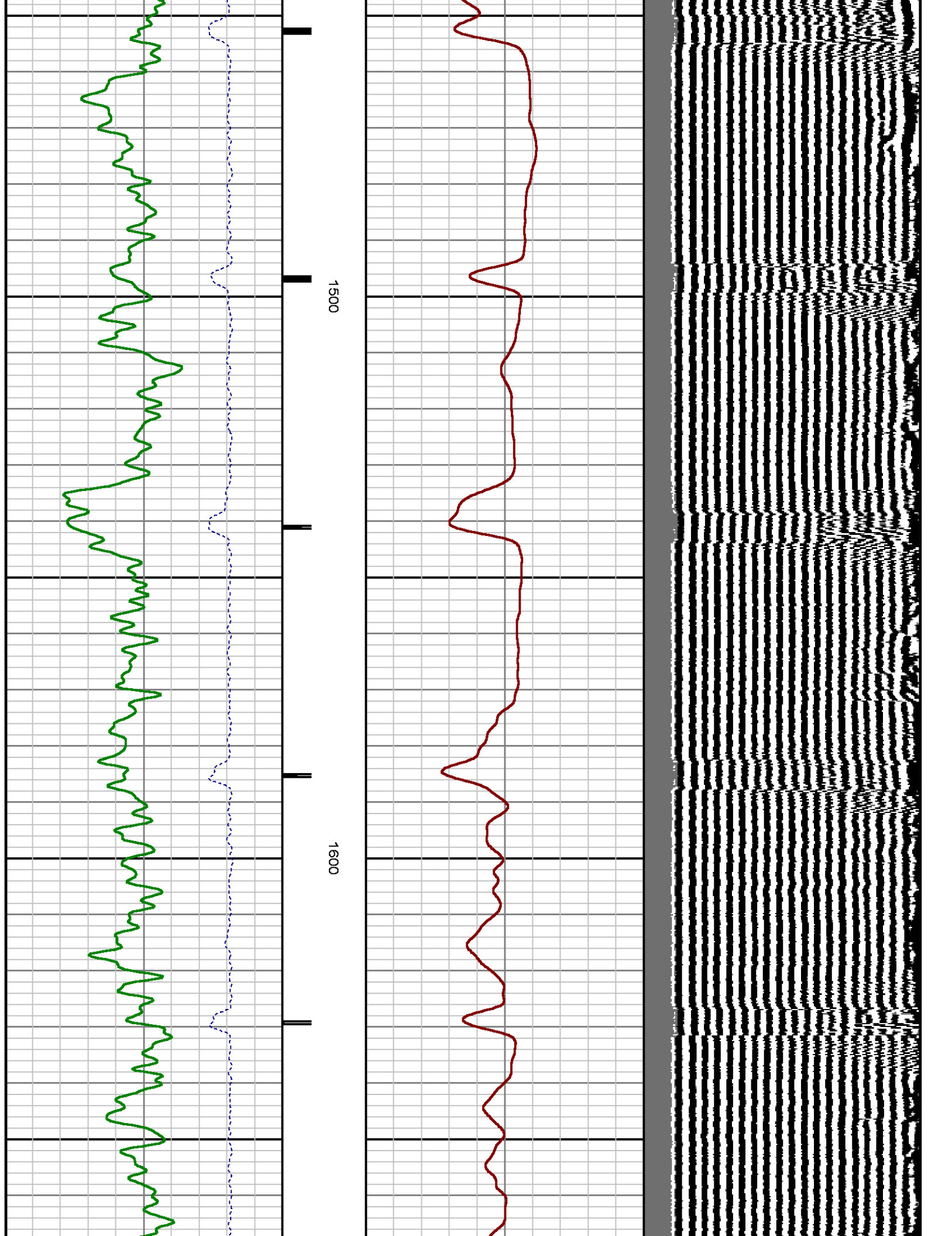


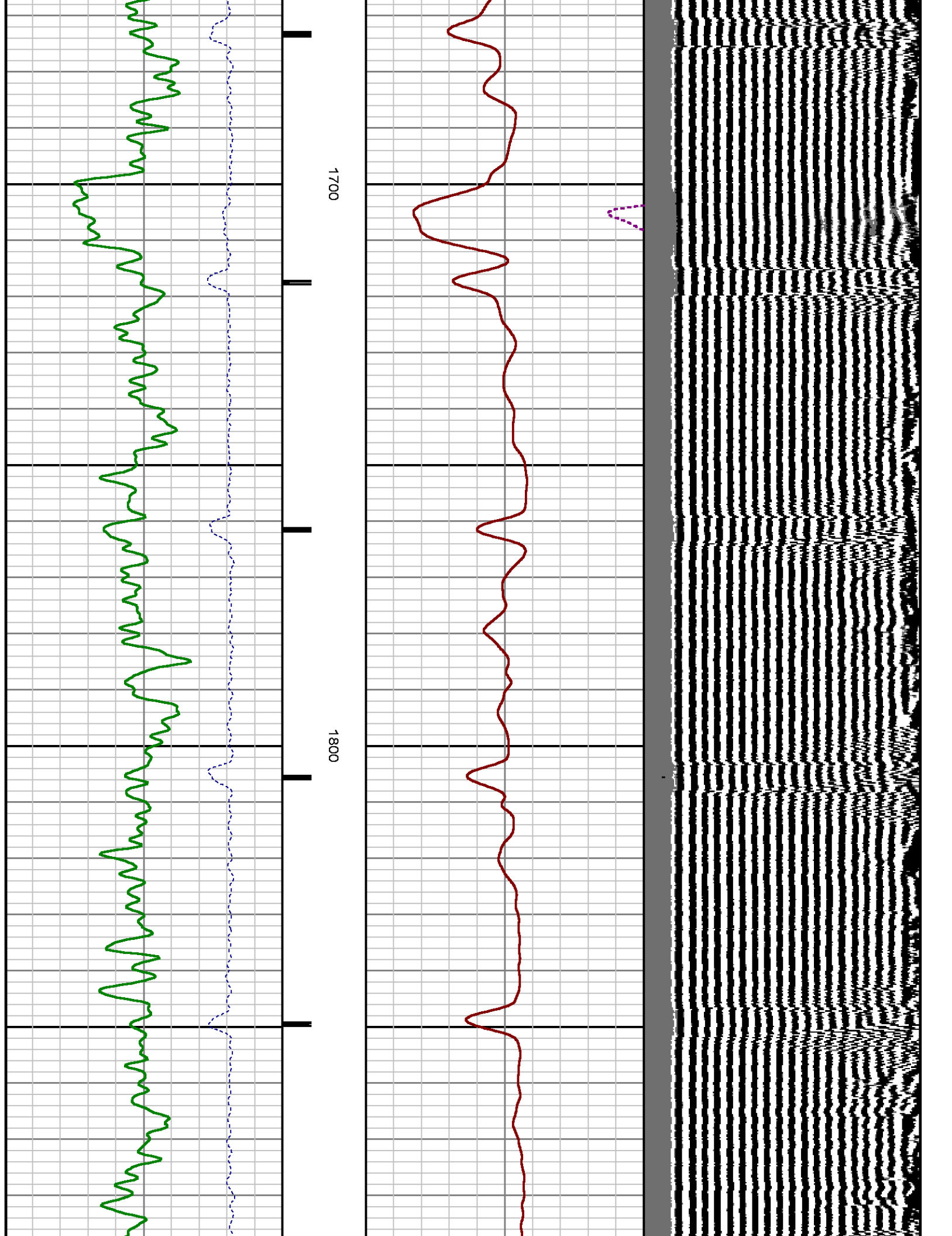


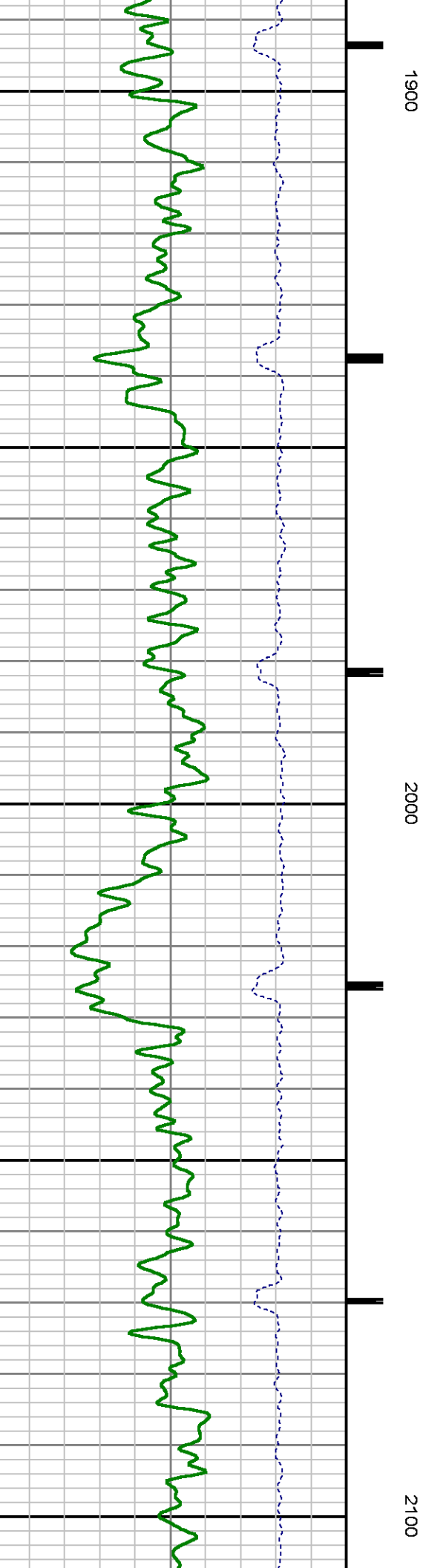
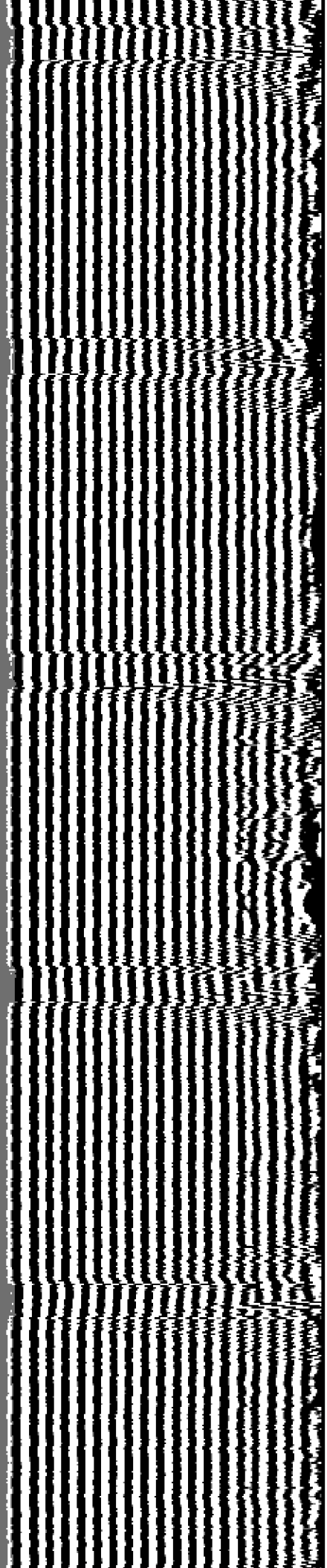


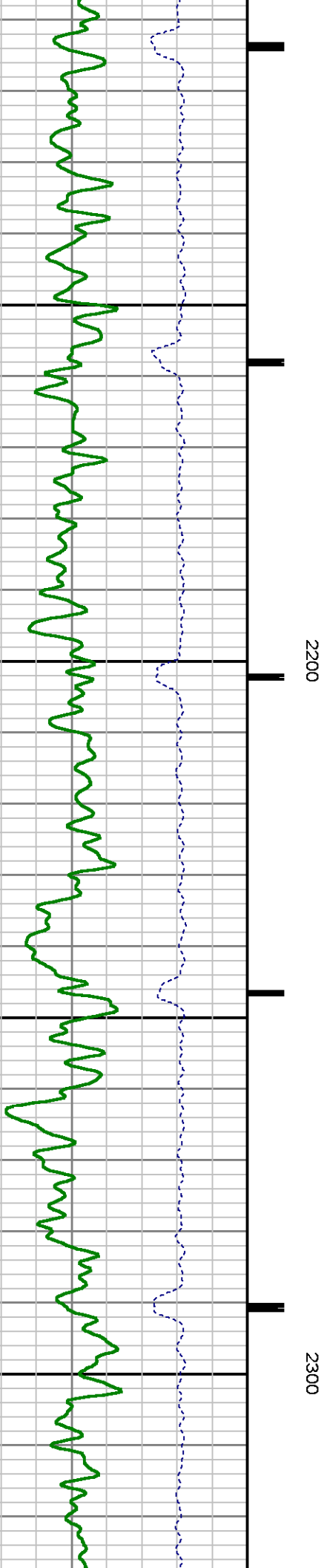
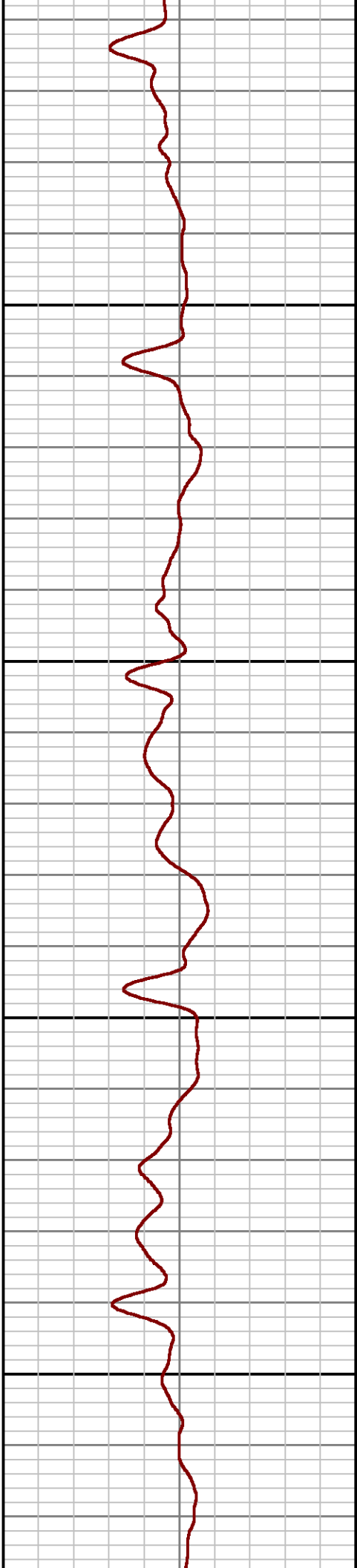
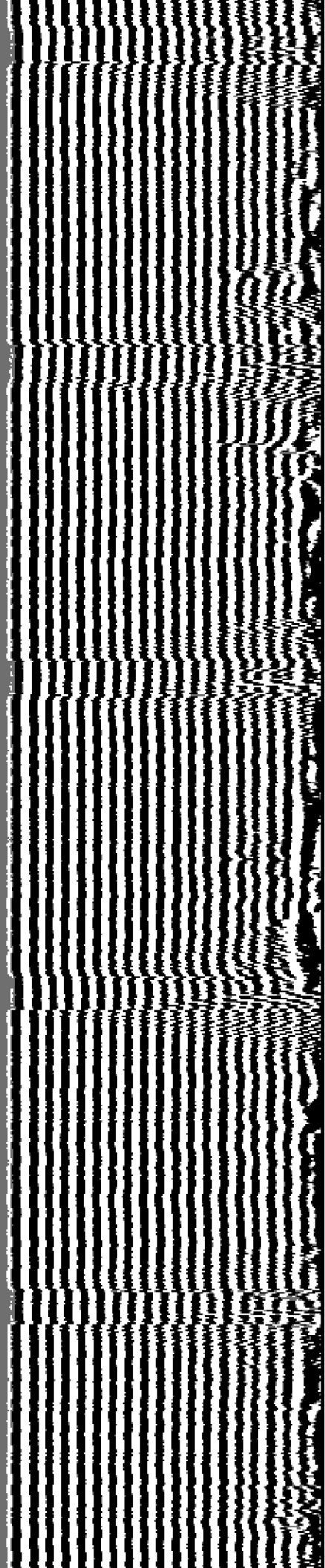
1300

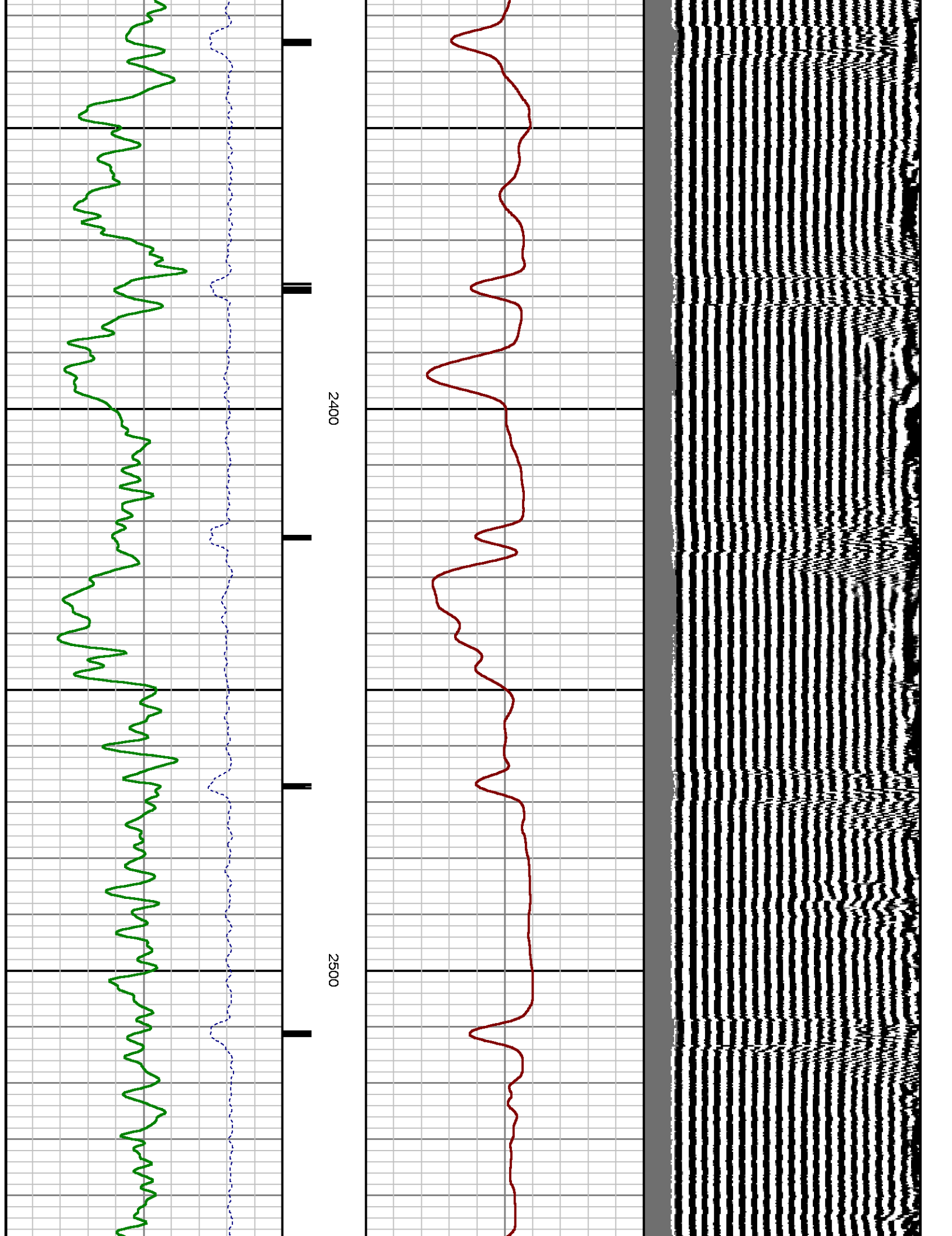
1400

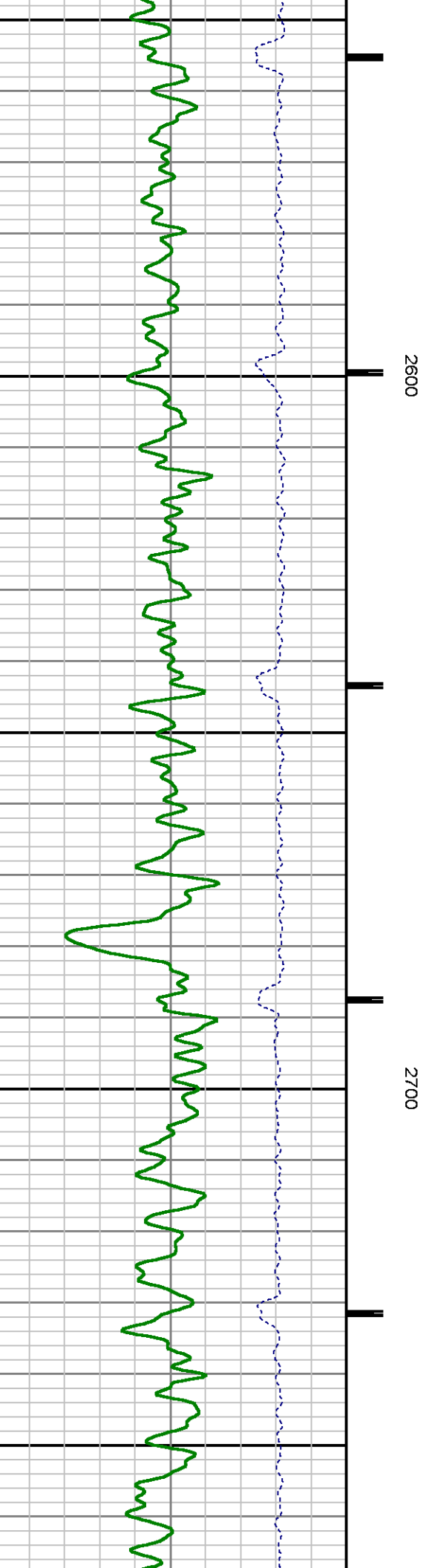
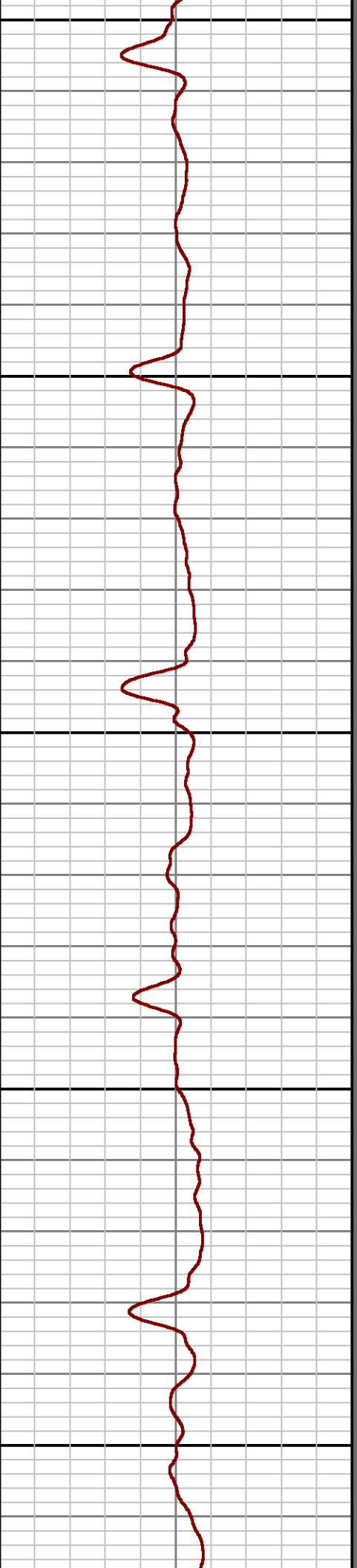
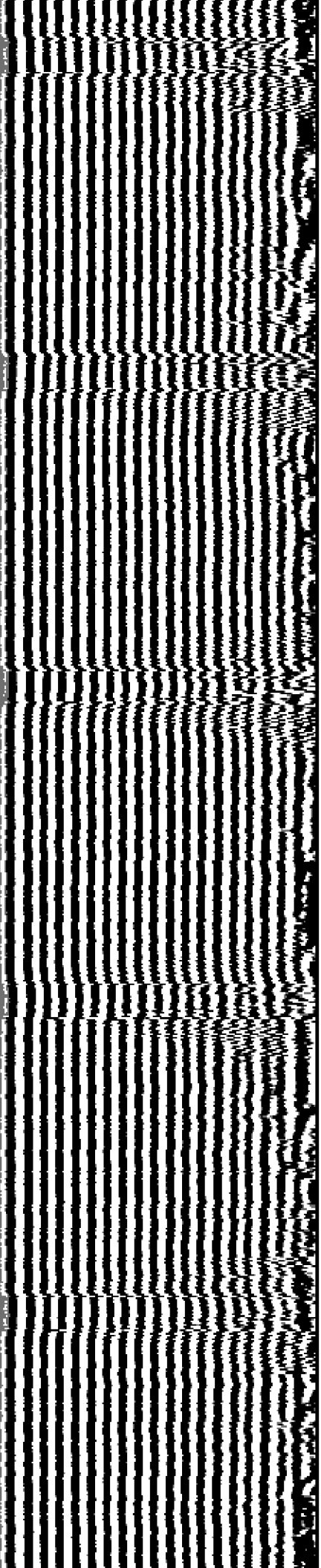


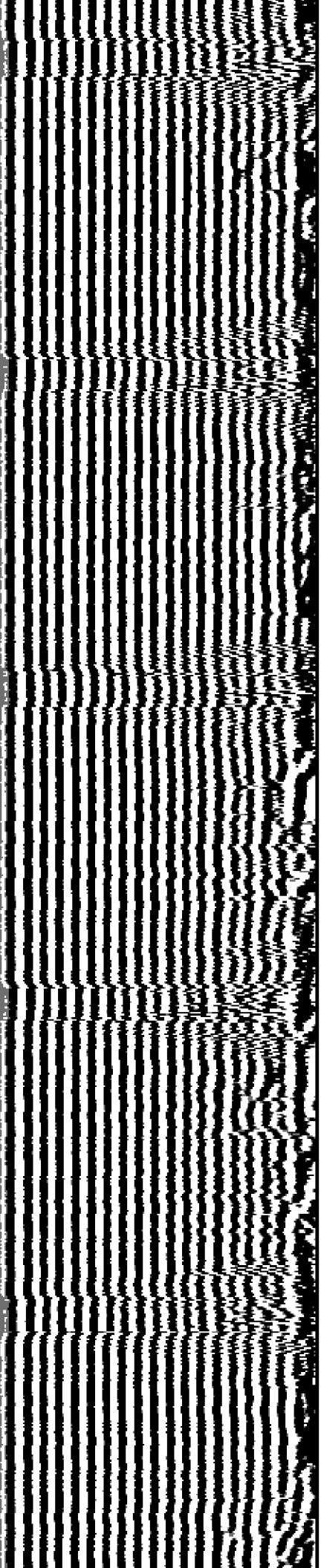






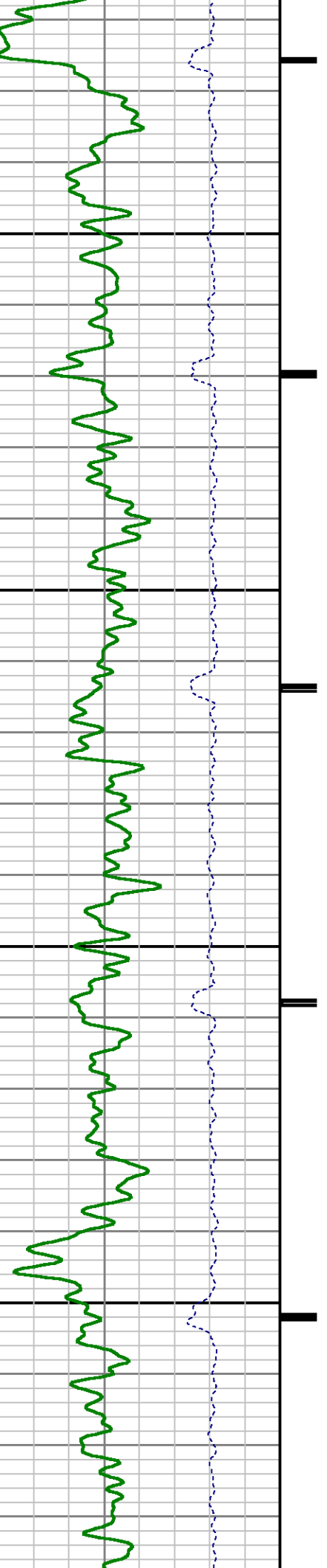


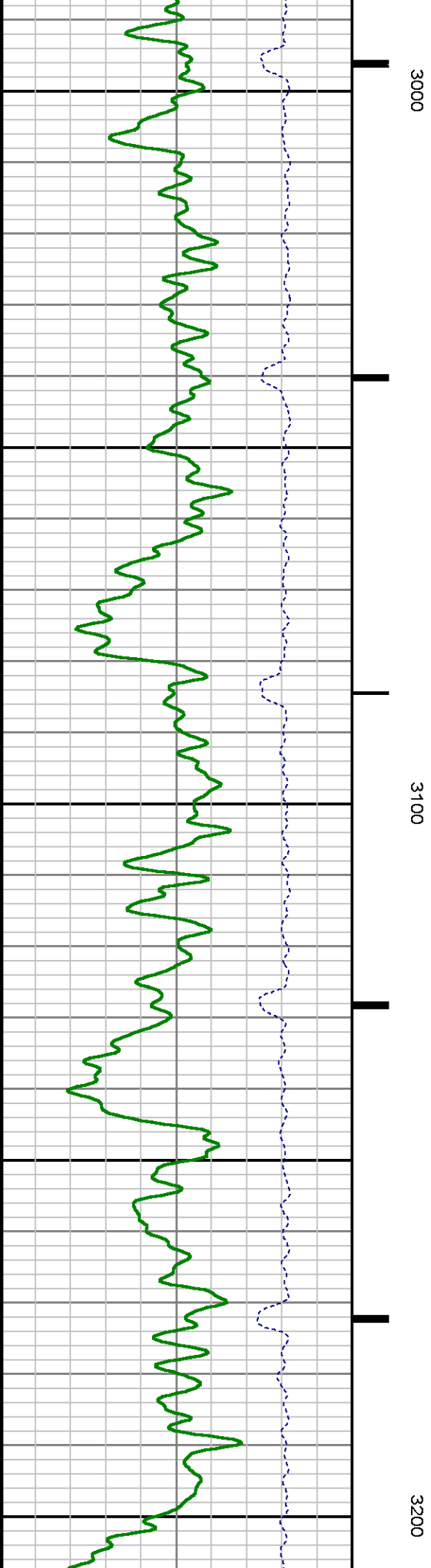
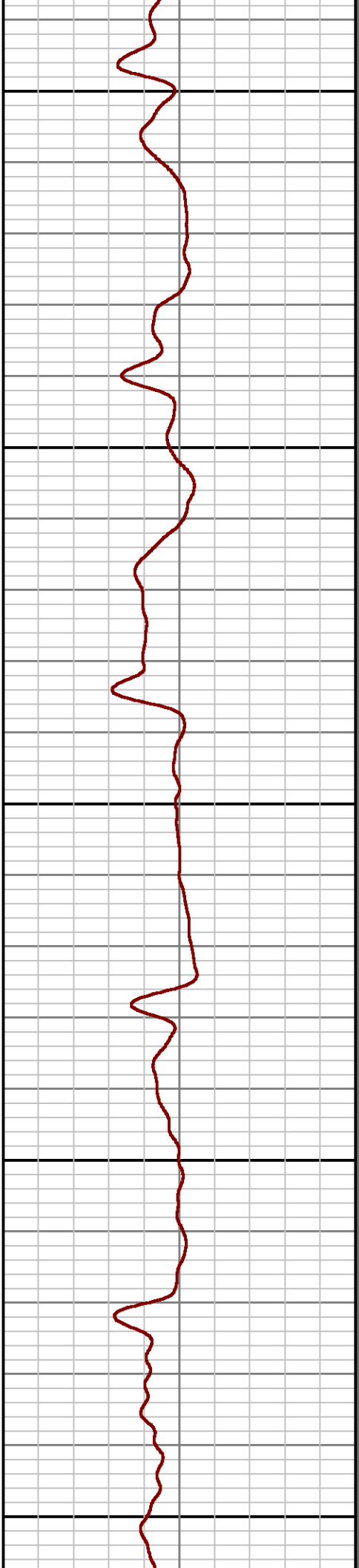
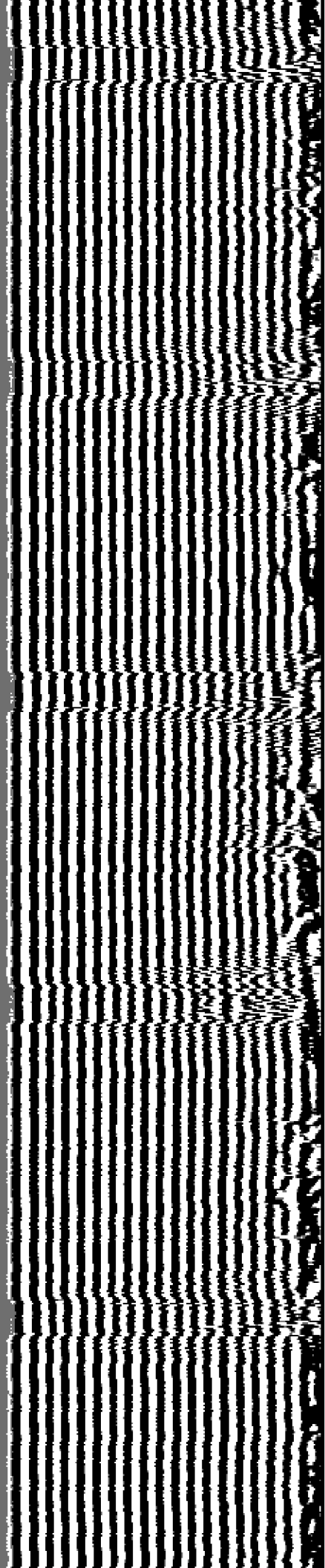


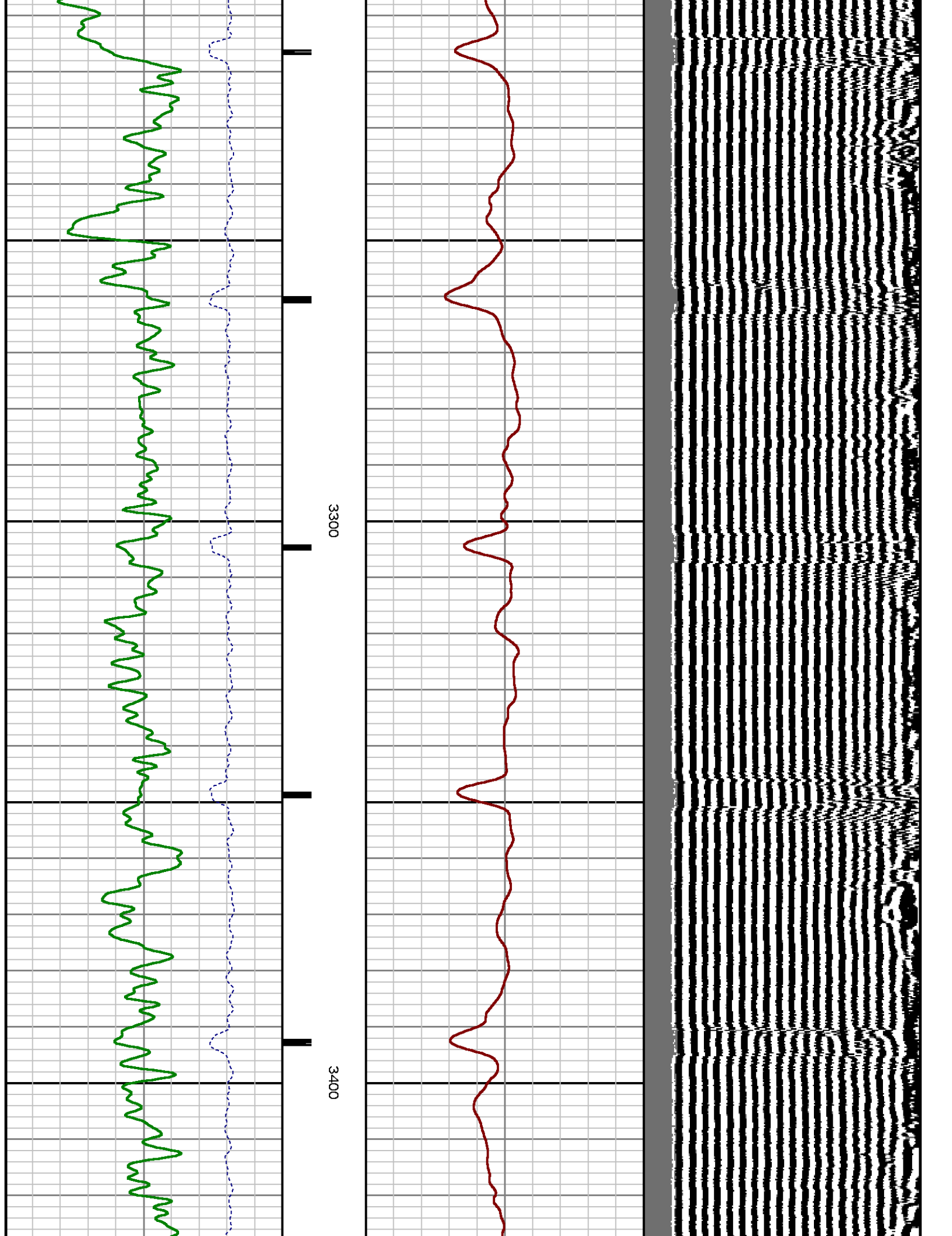


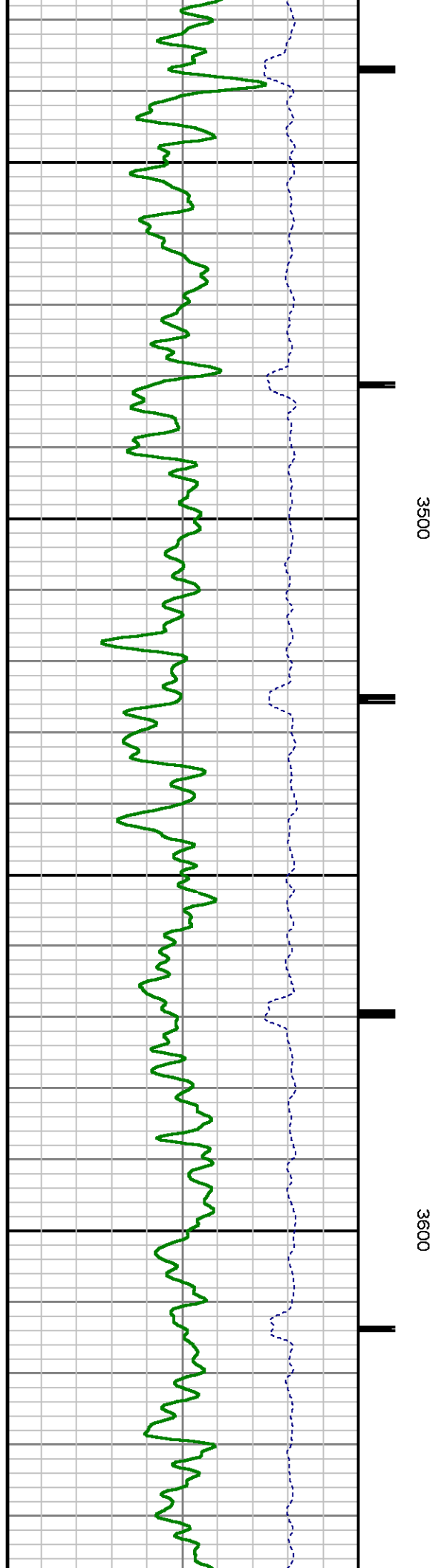
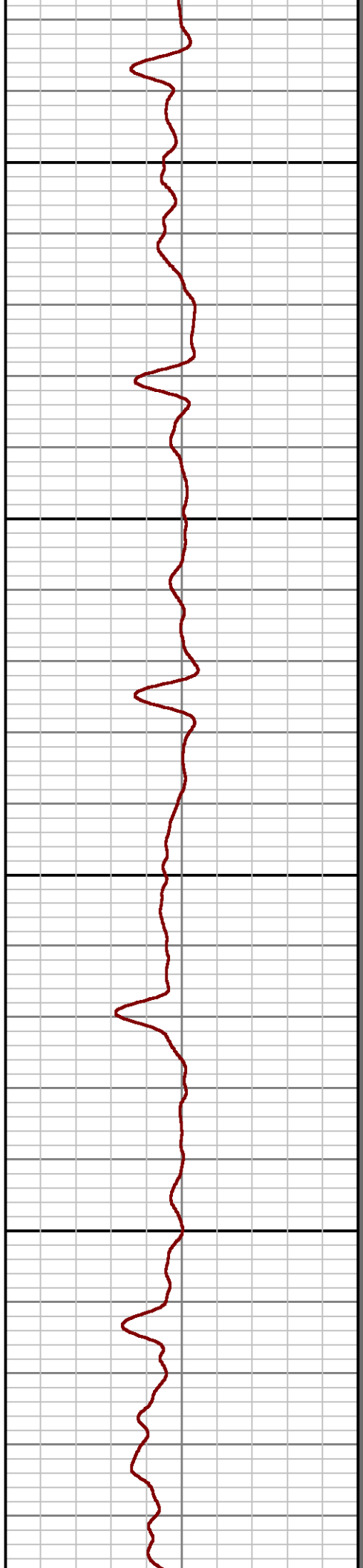
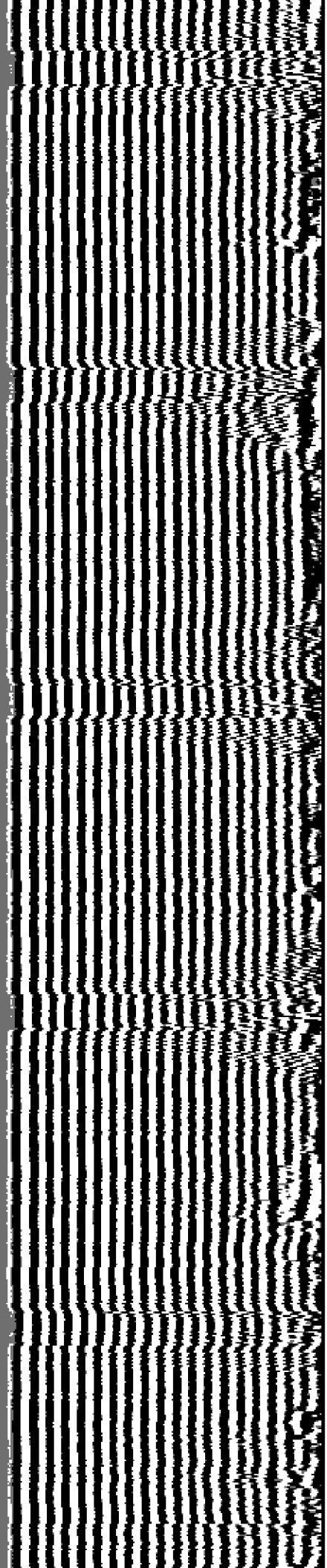
2800

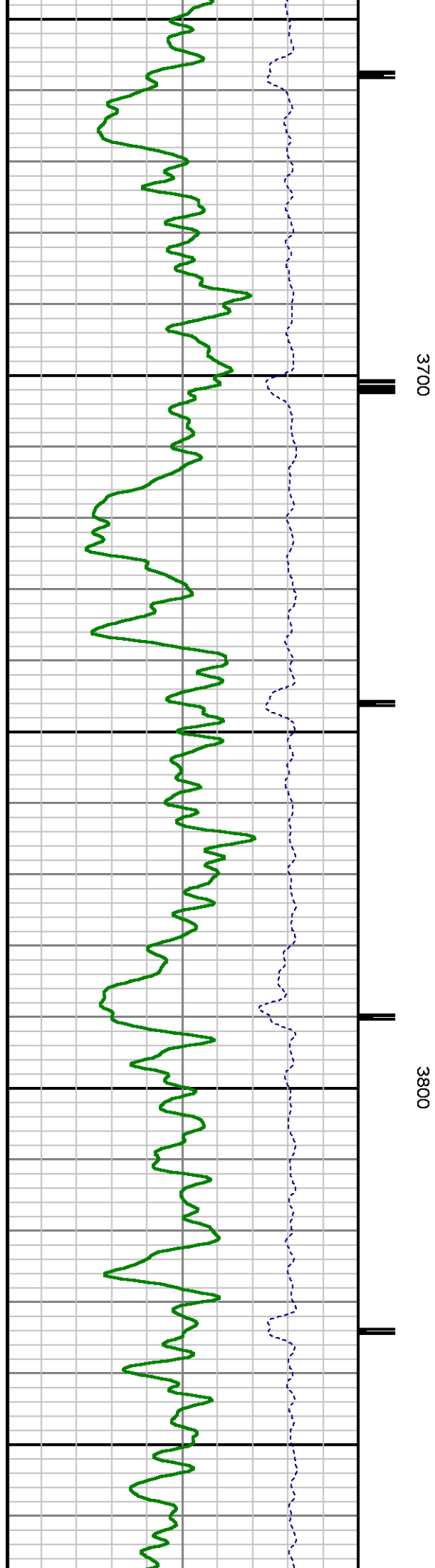
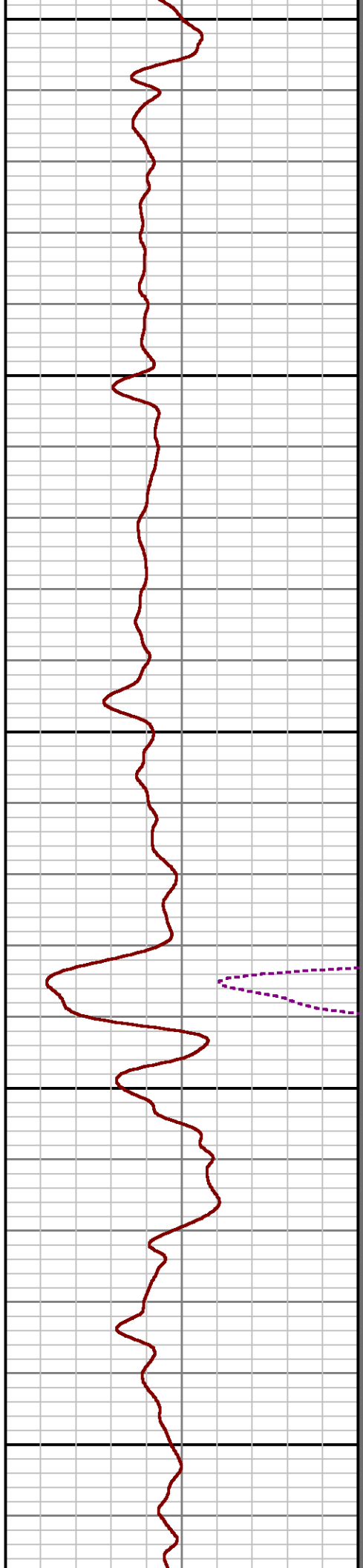
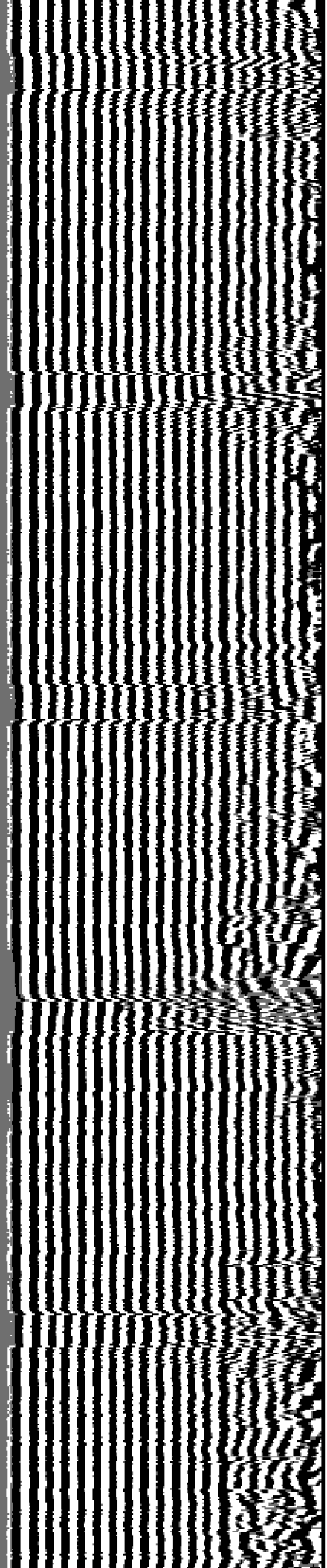
2900

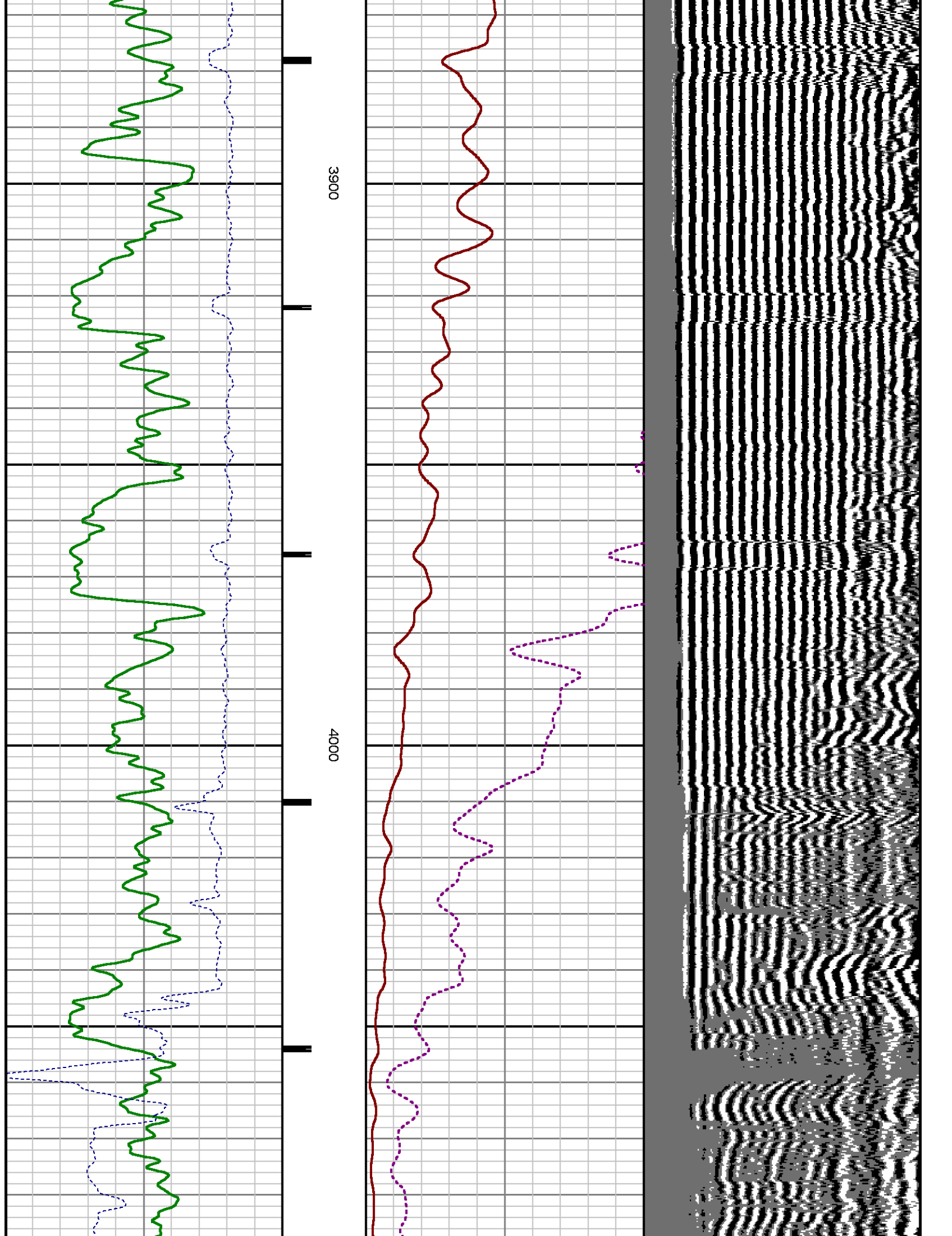


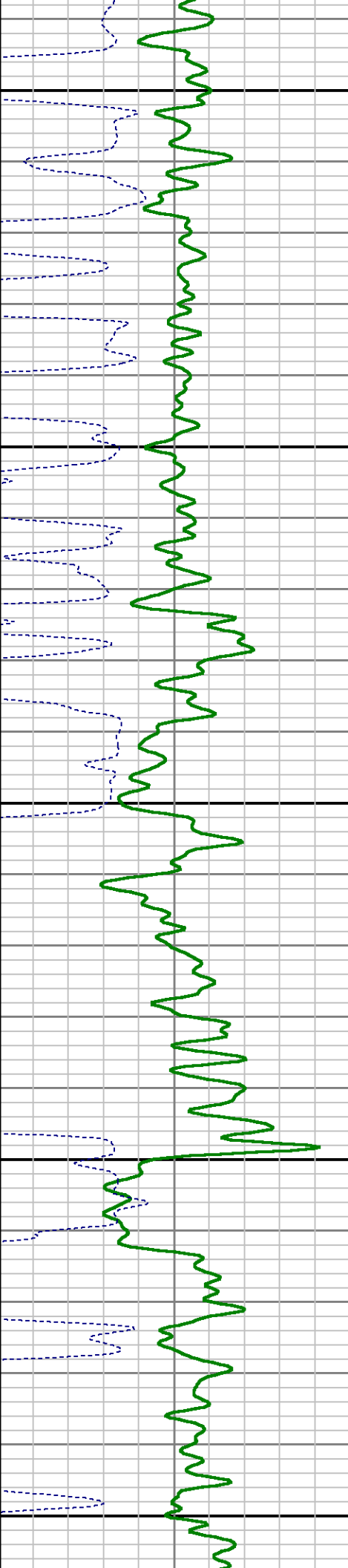
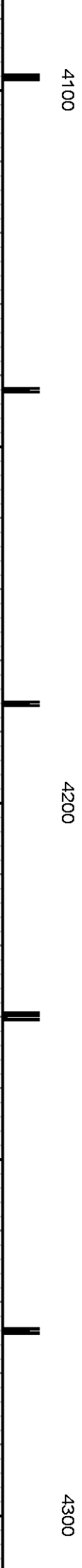
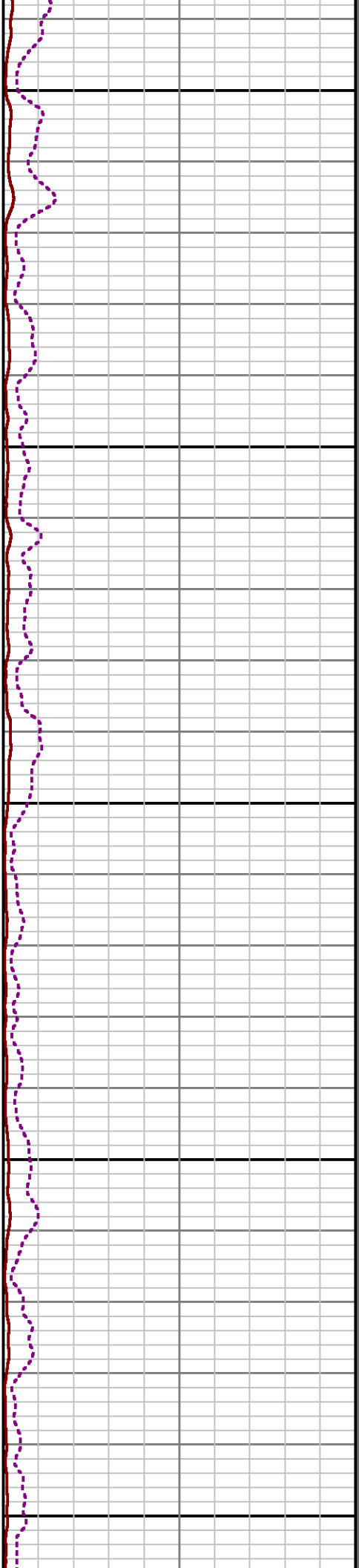
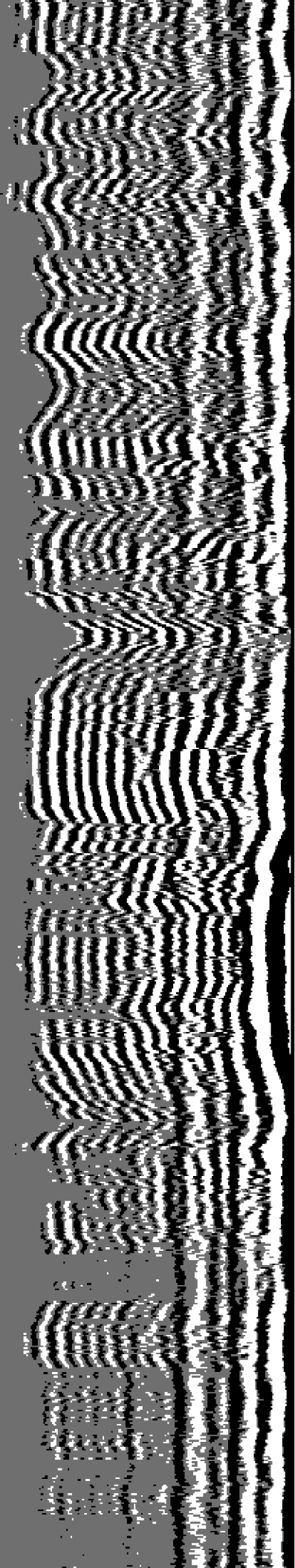


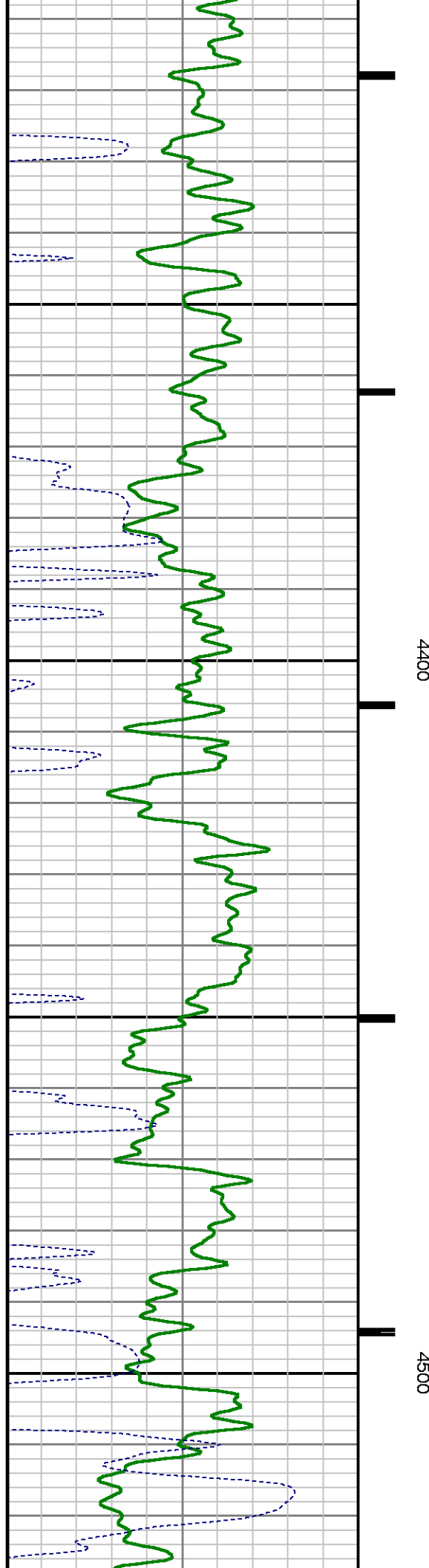
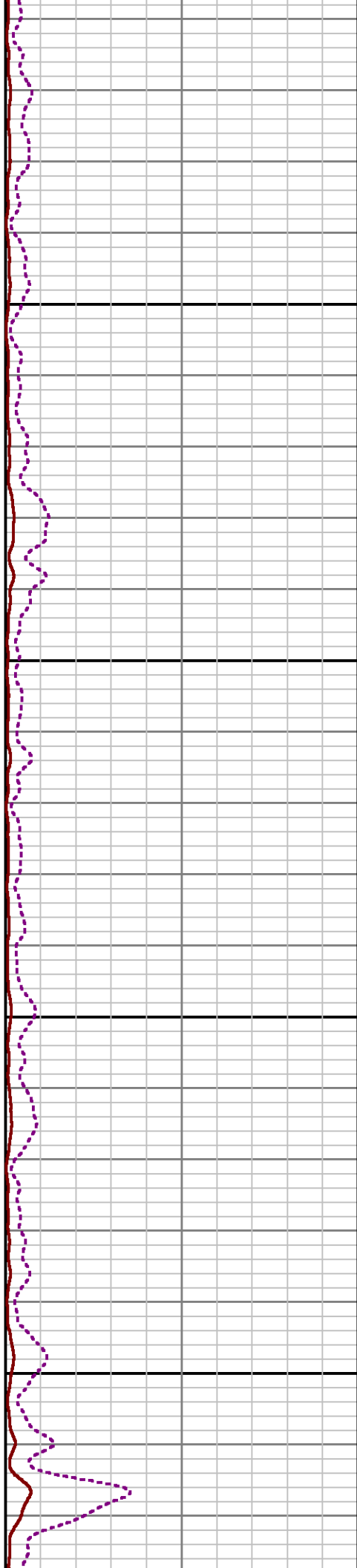
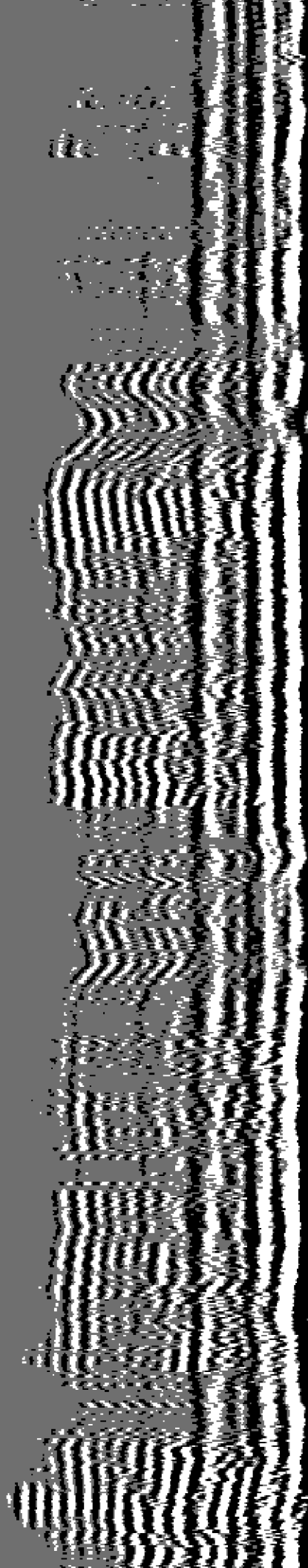


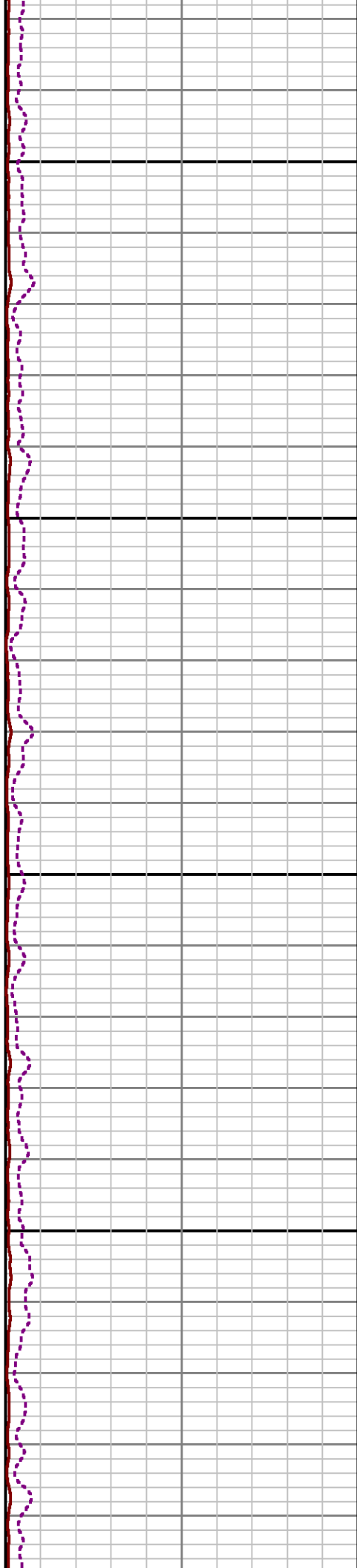
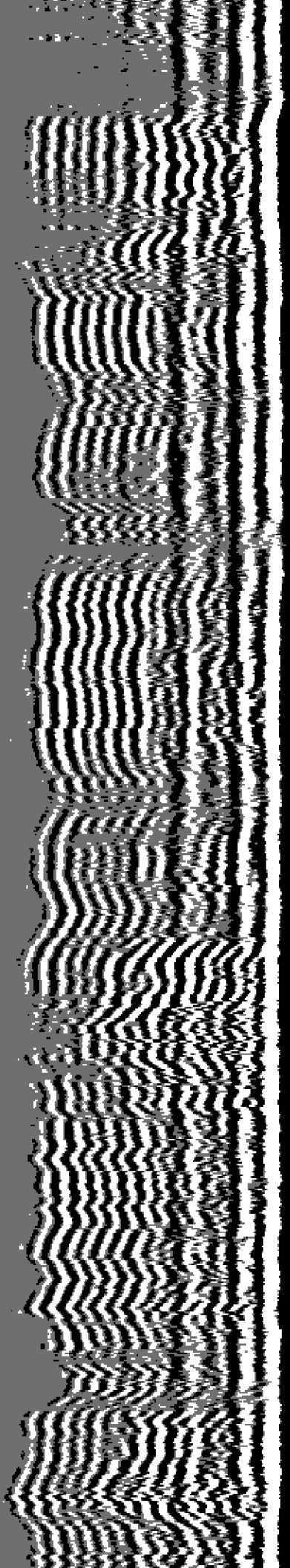






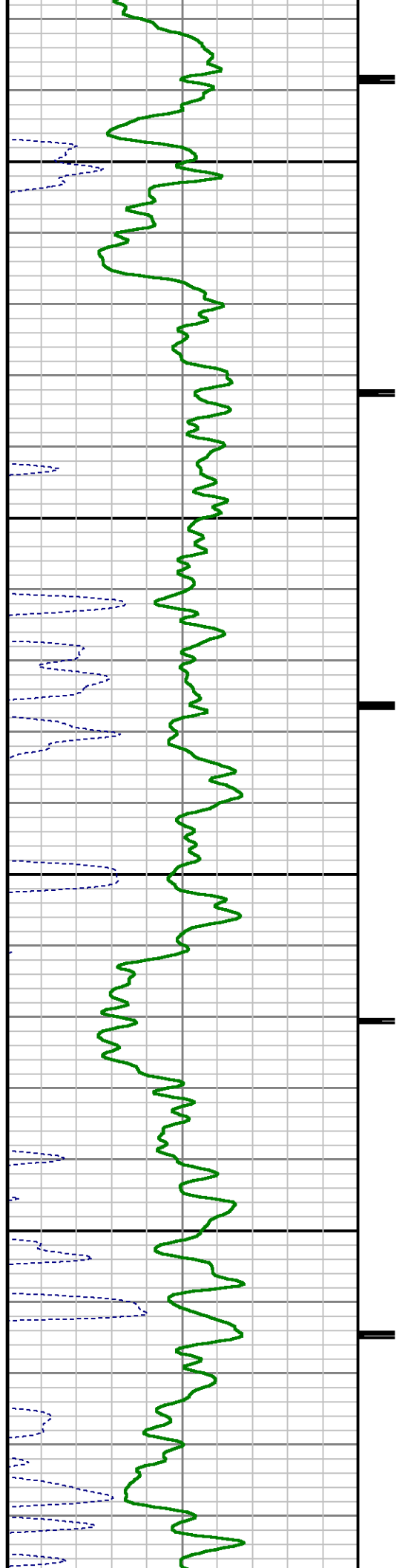


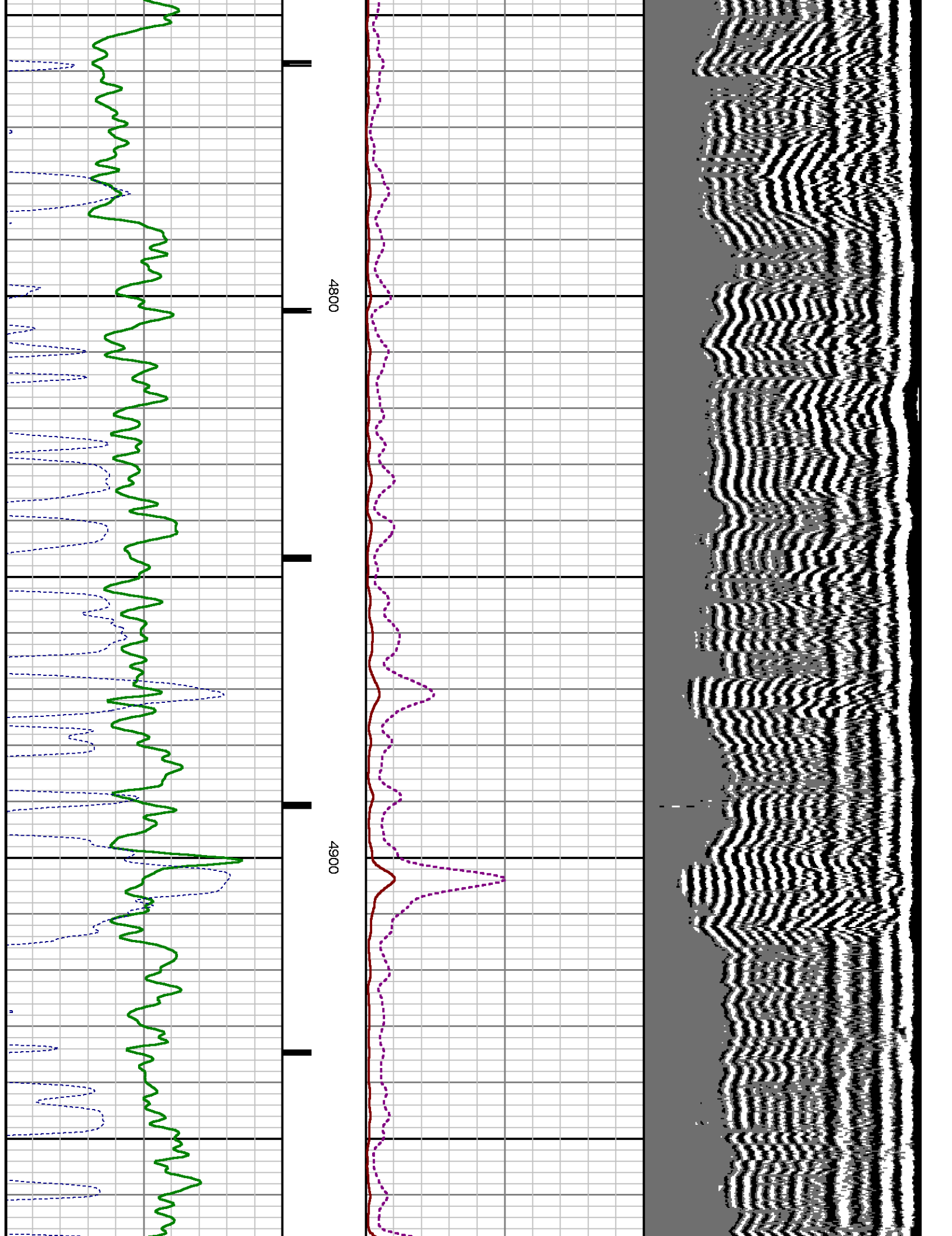


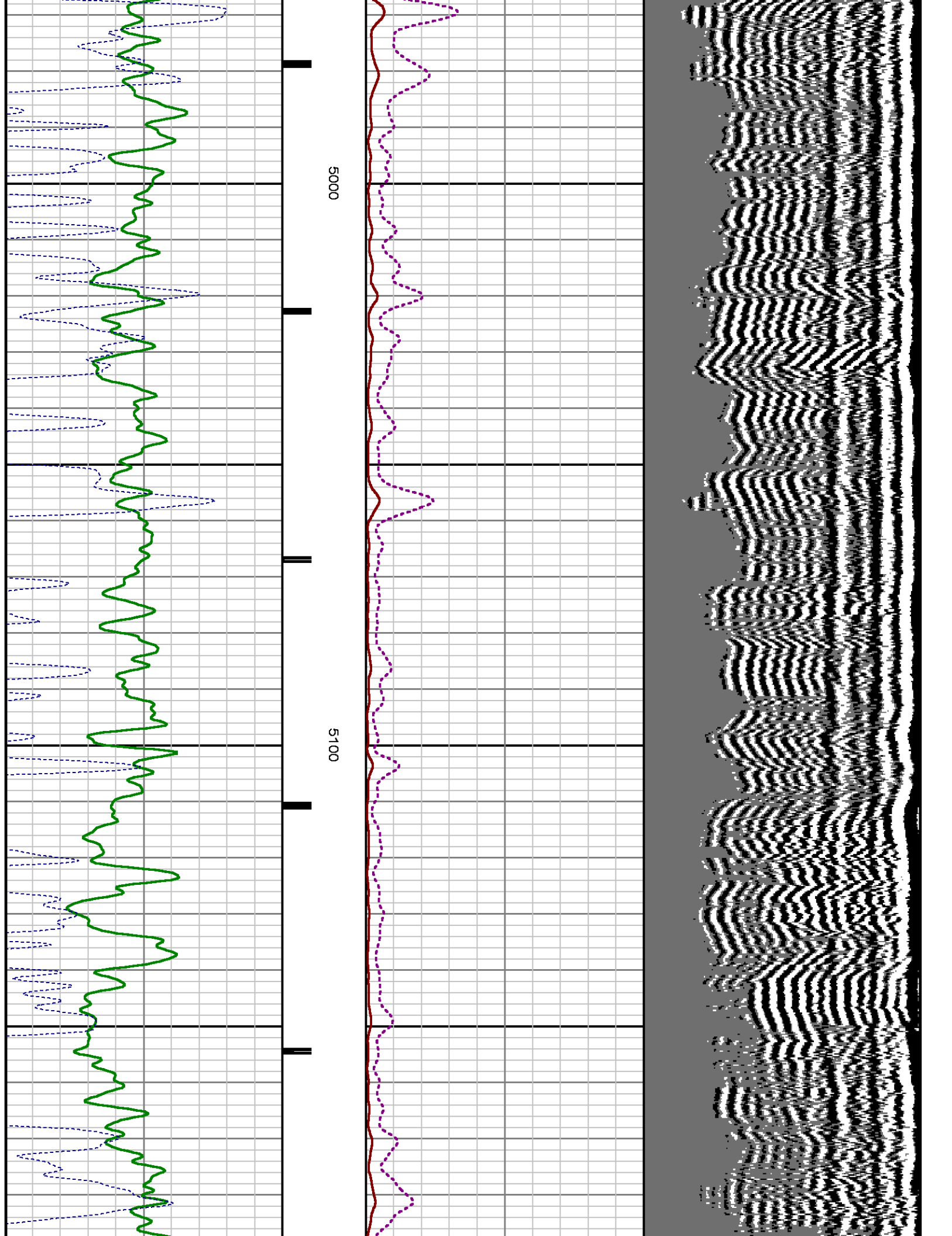


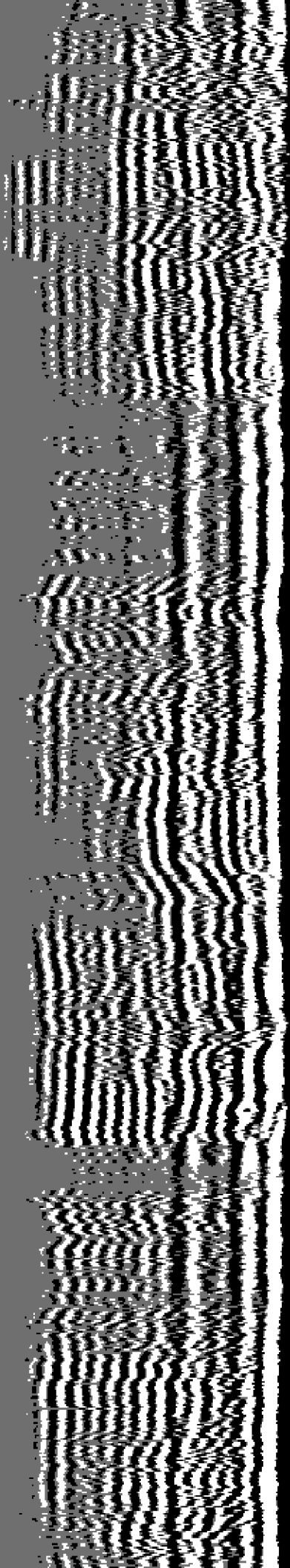
4600

4700





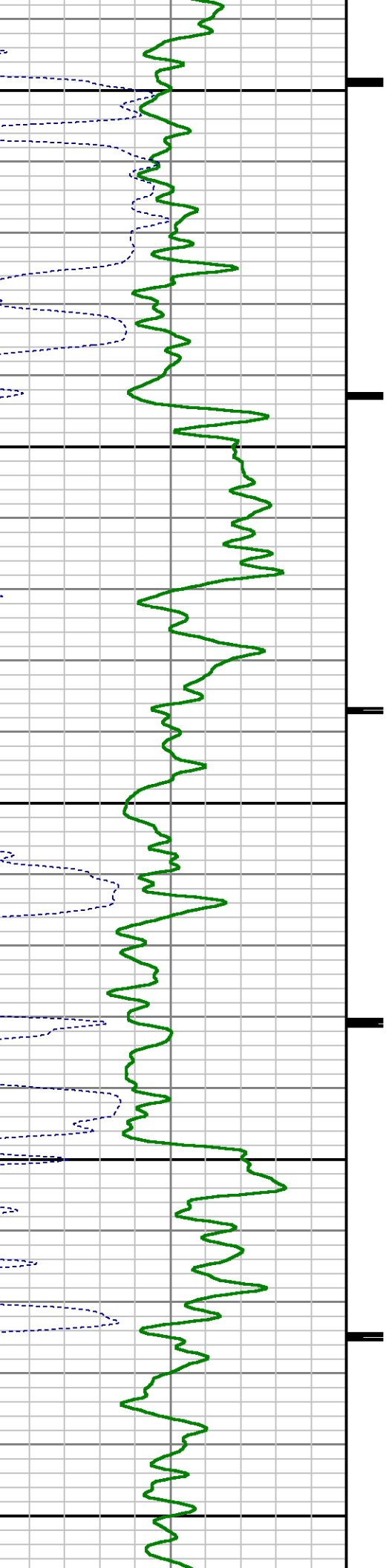


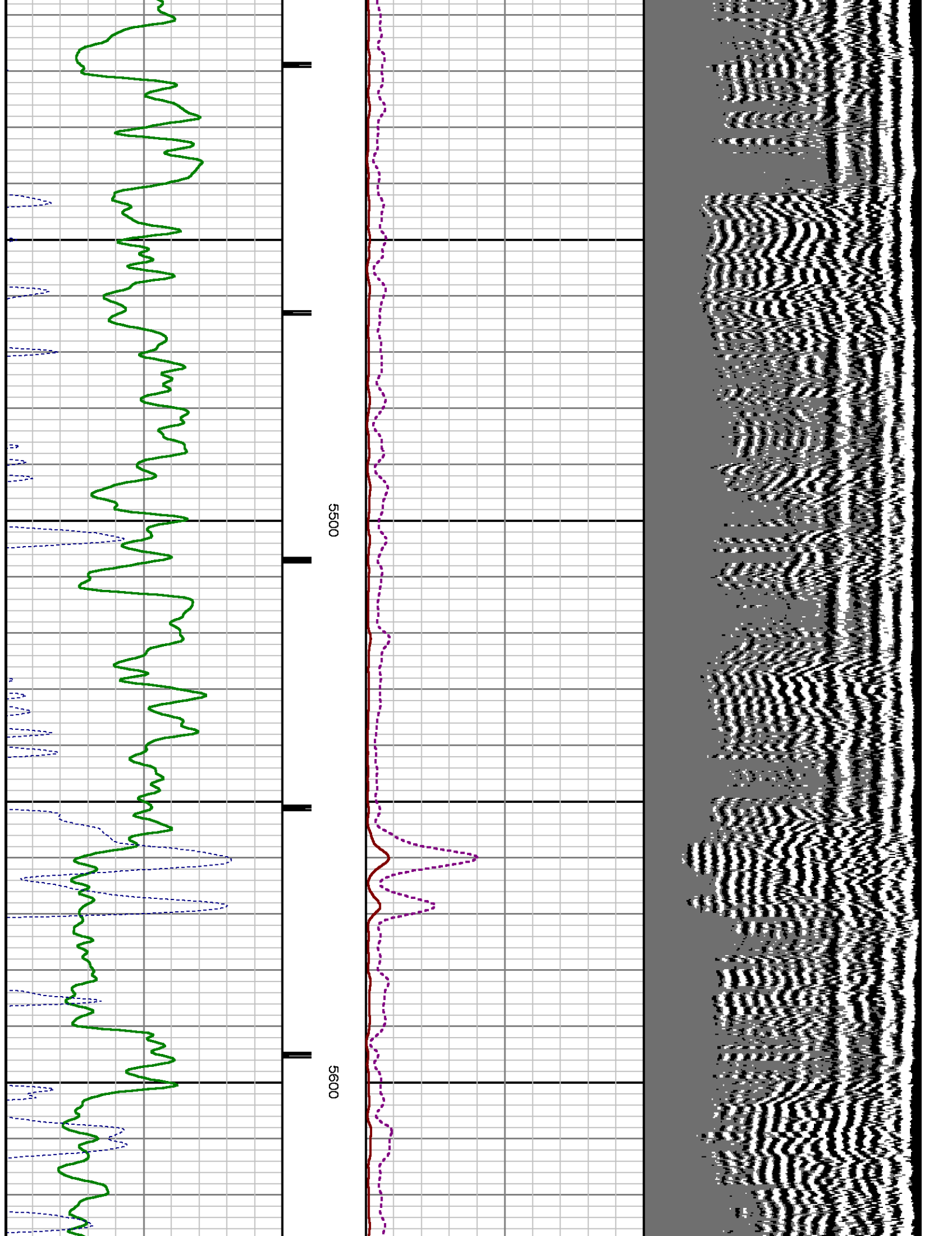


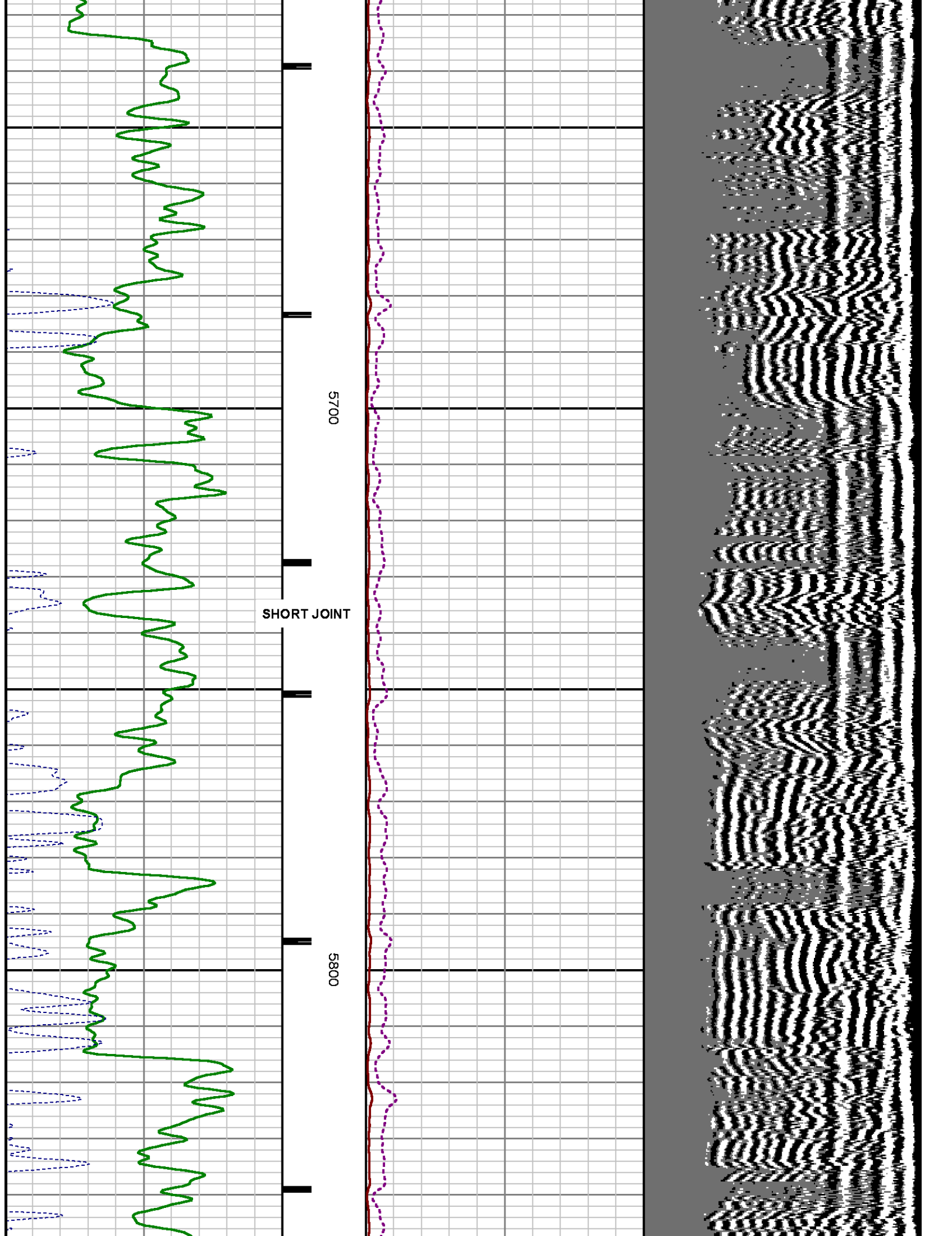
5200

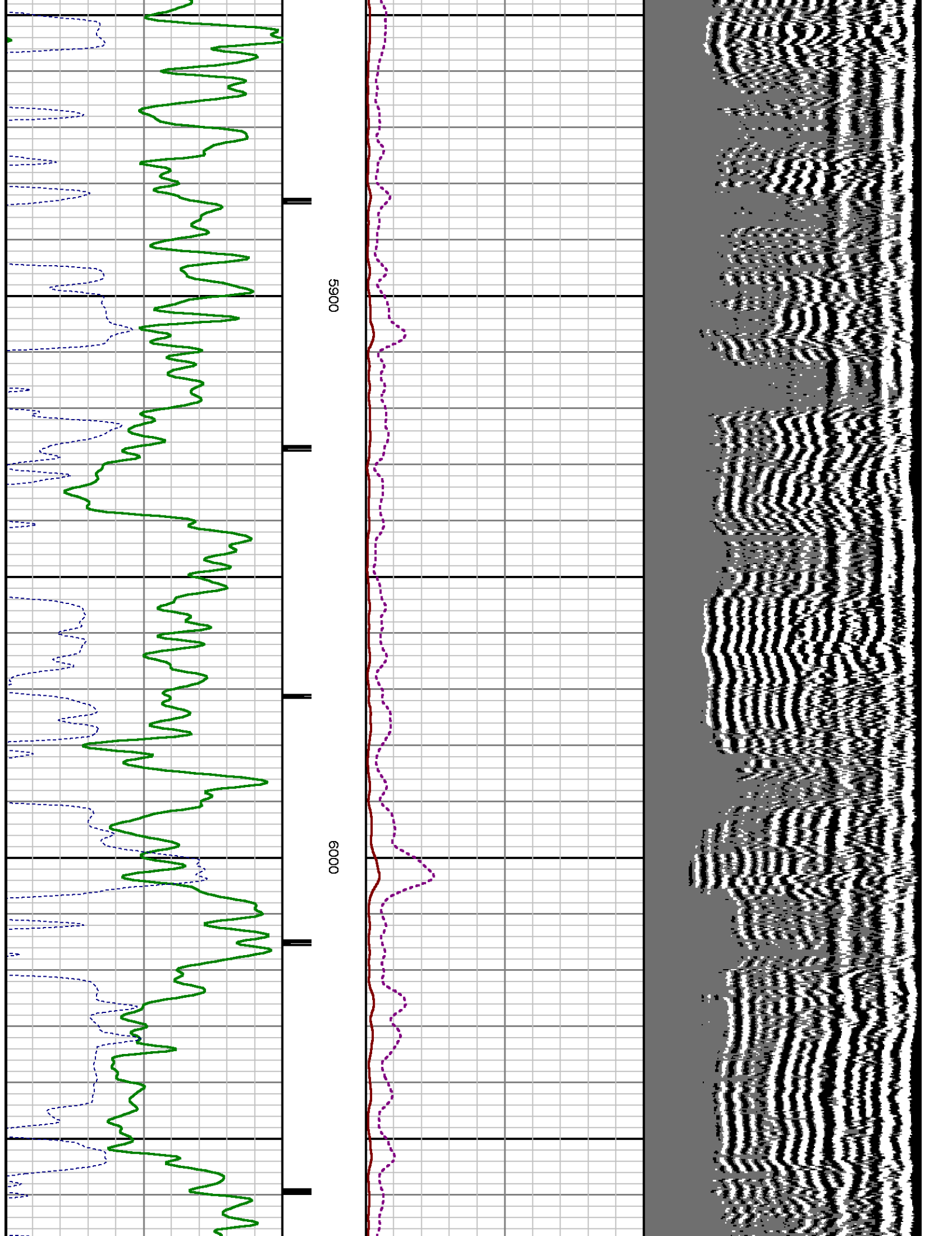
5300

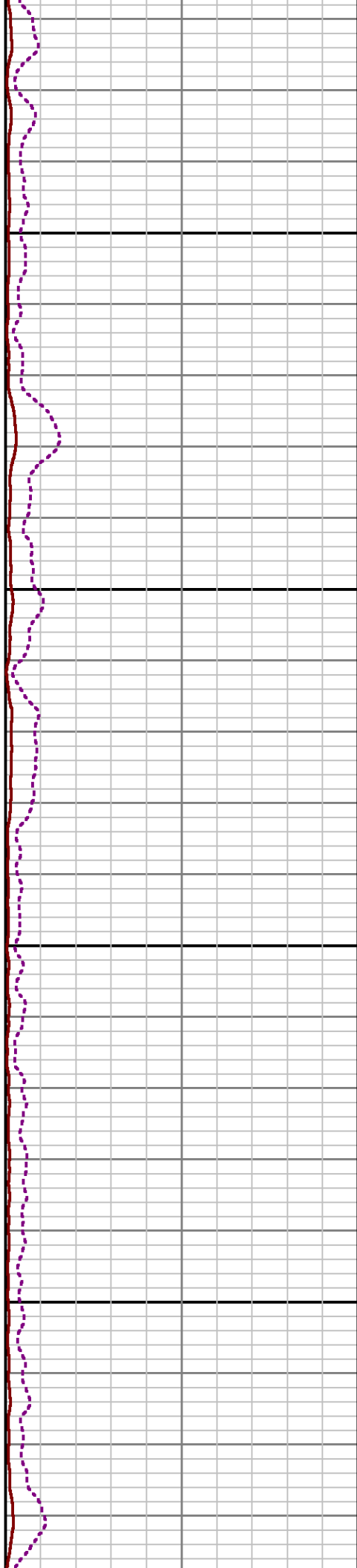
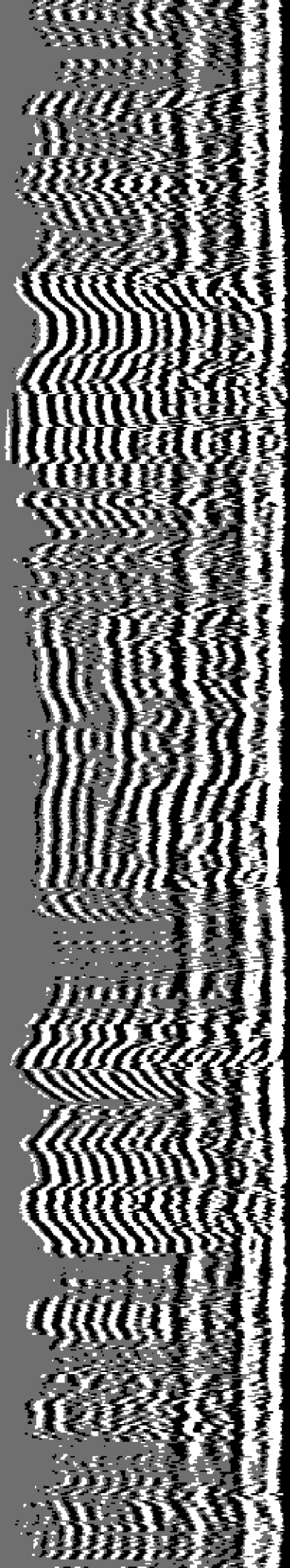
5400





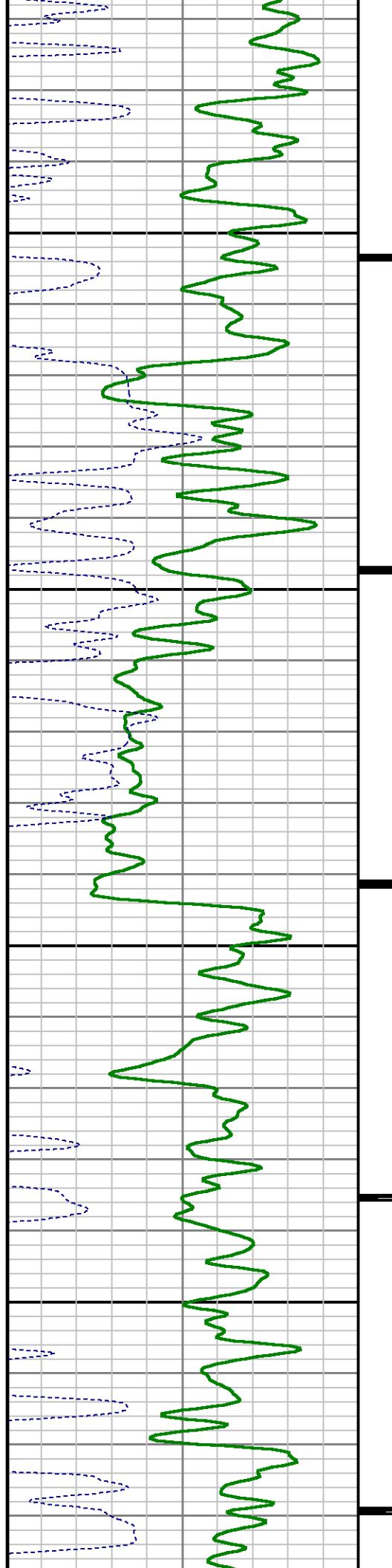


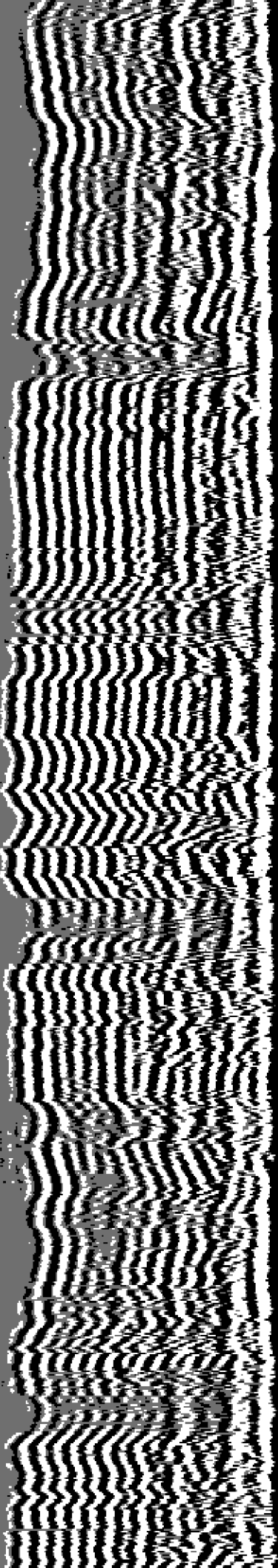




6100

6200

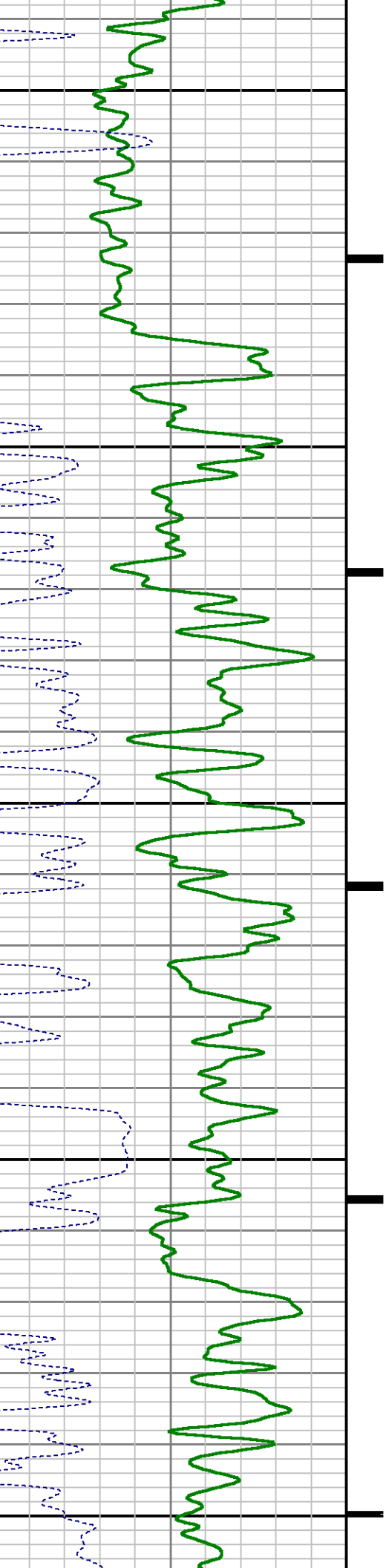


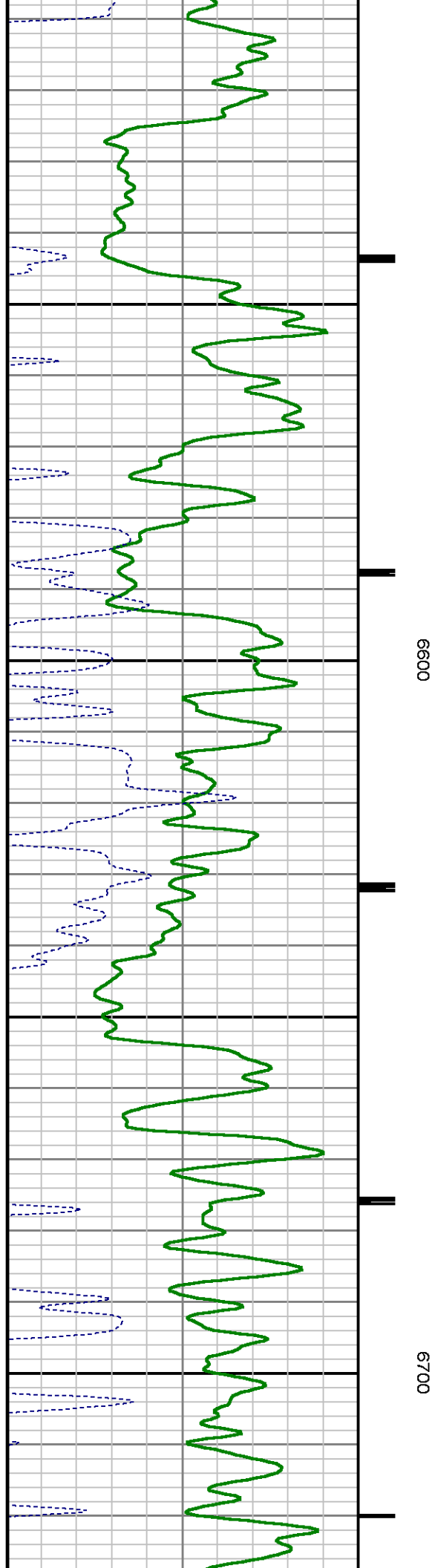
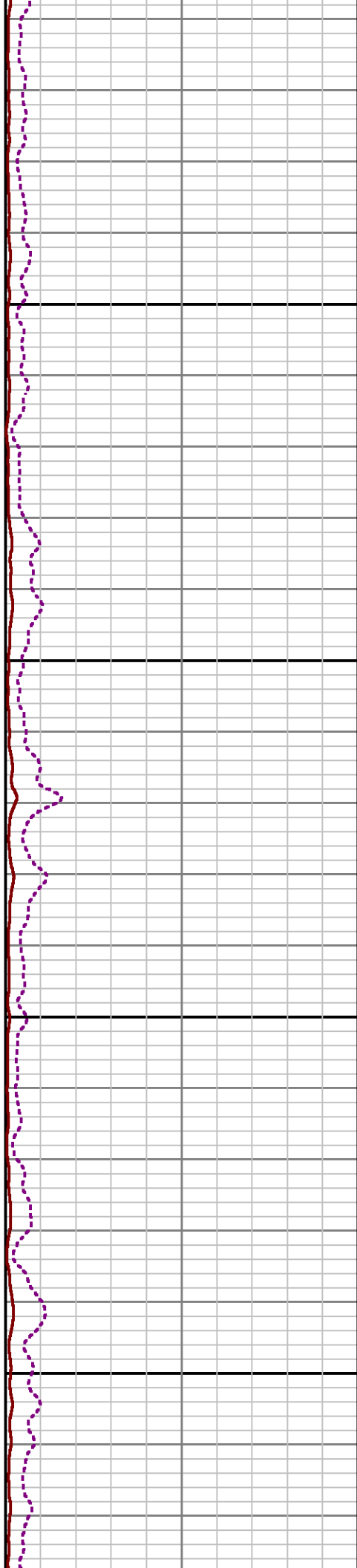
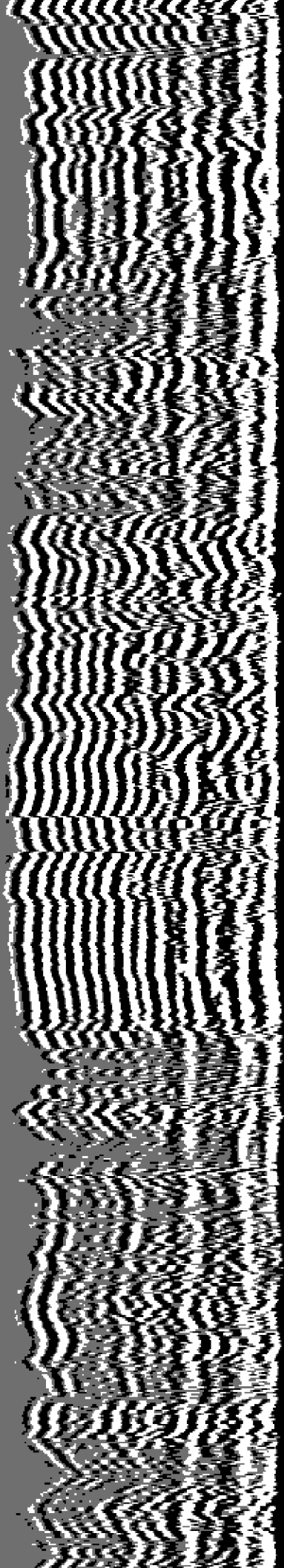


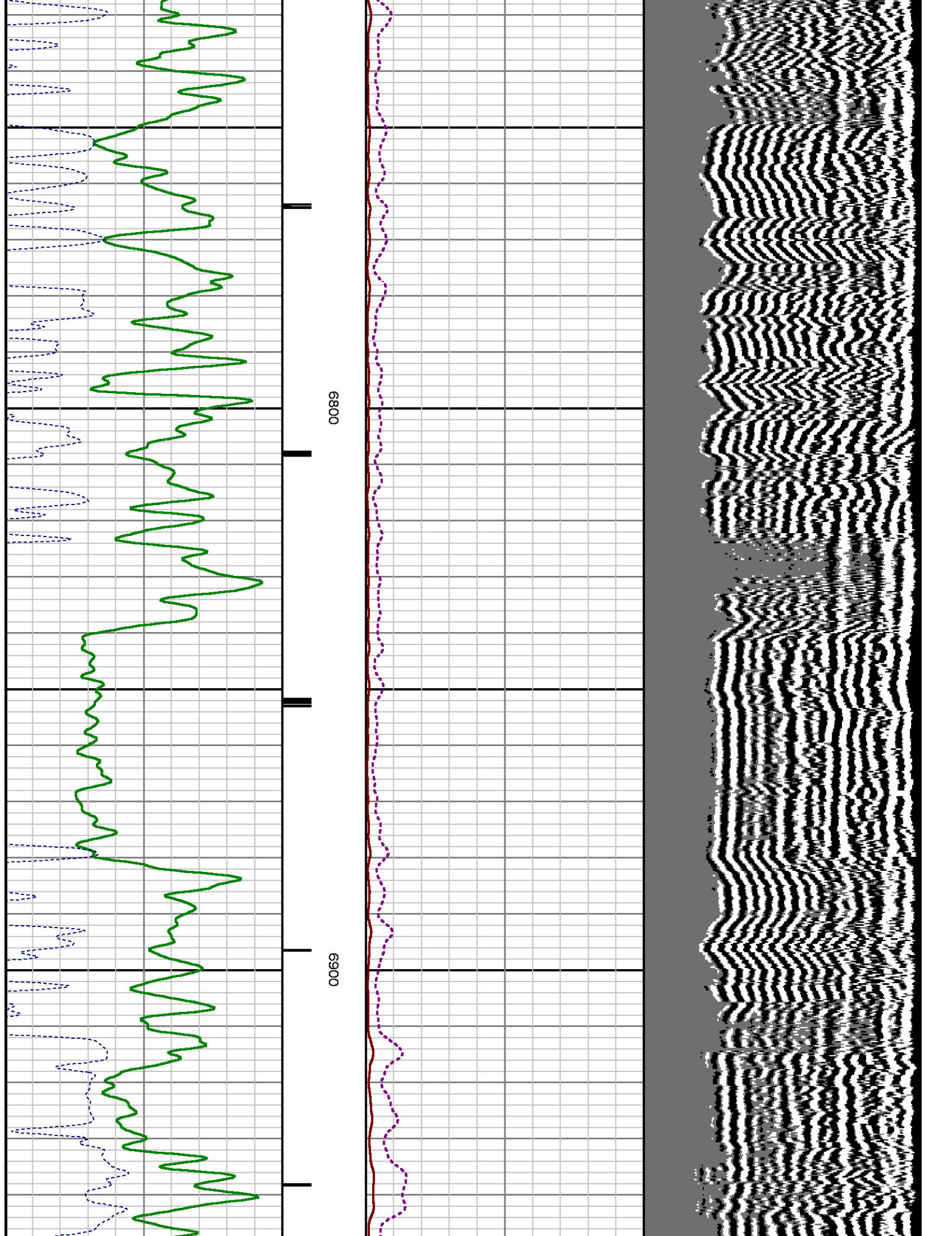
6300

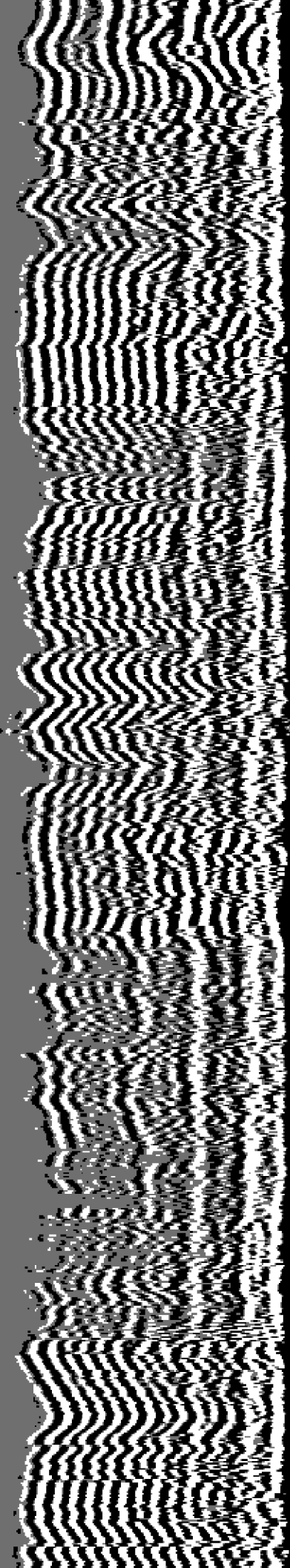
6400

6500



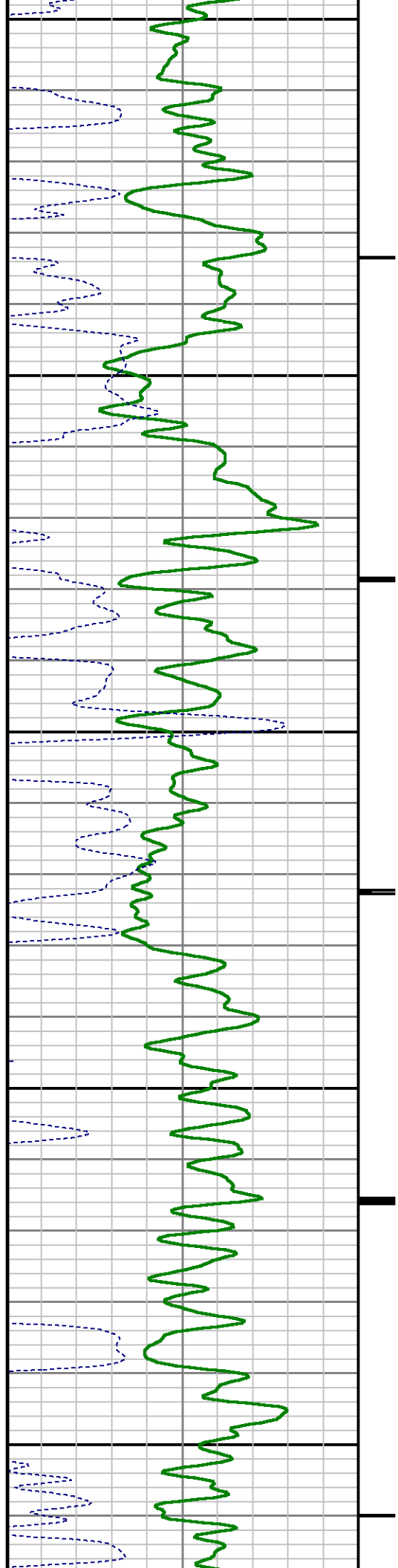


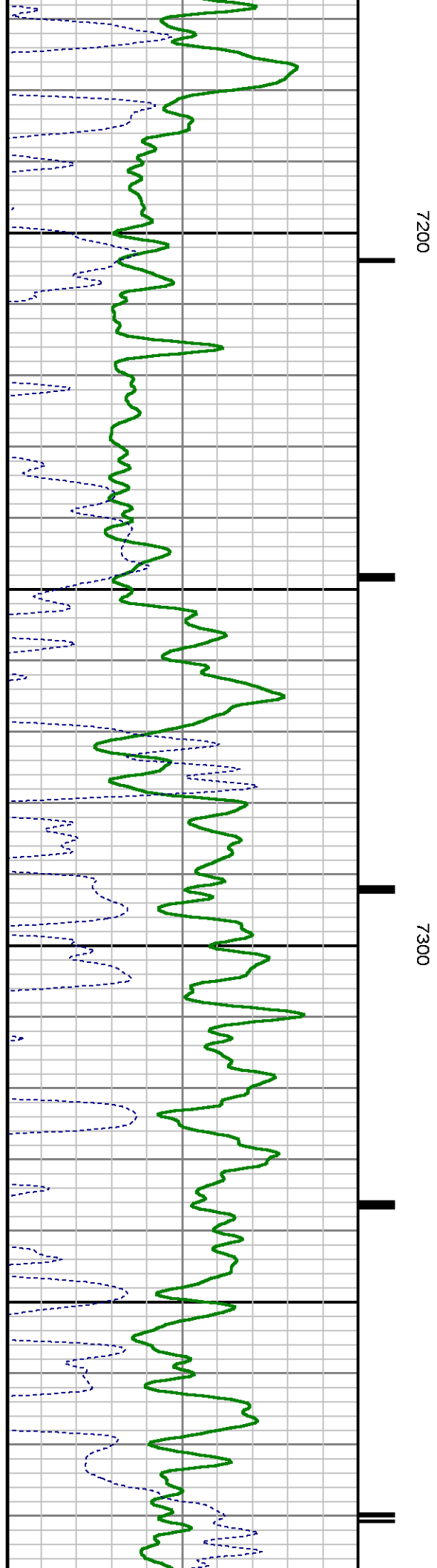
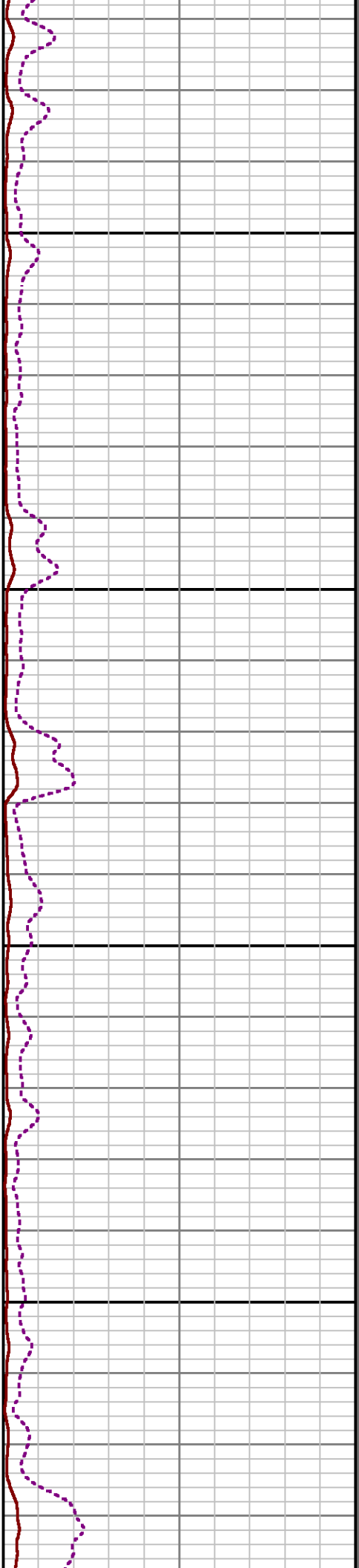
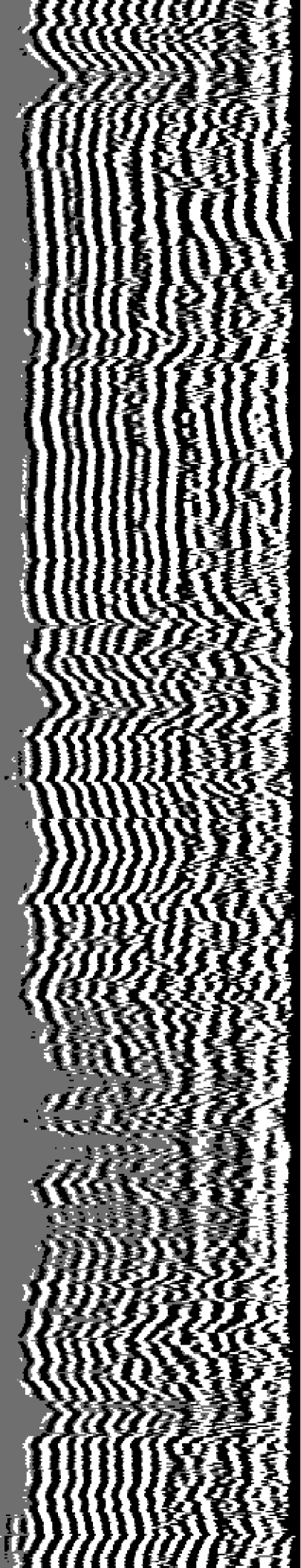


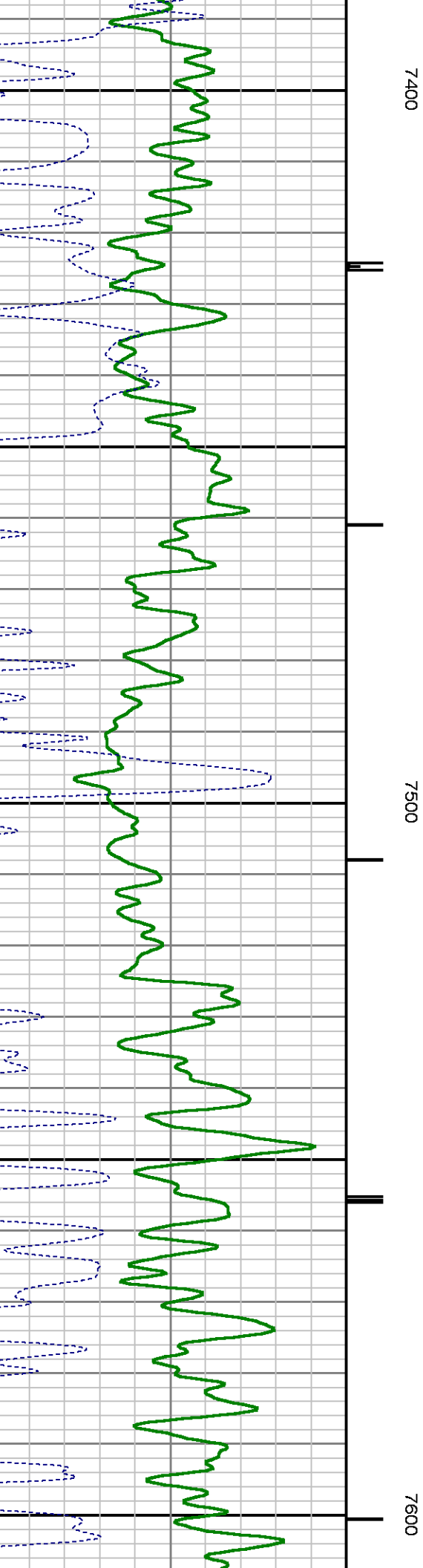
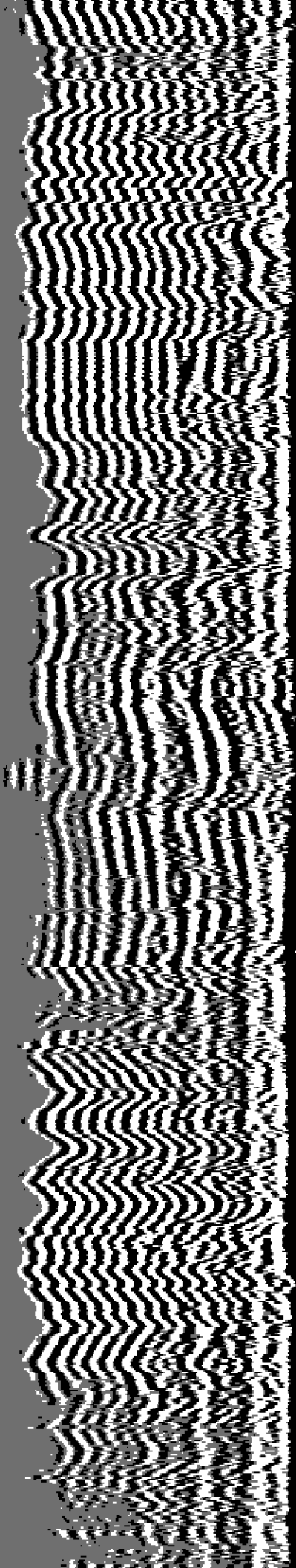


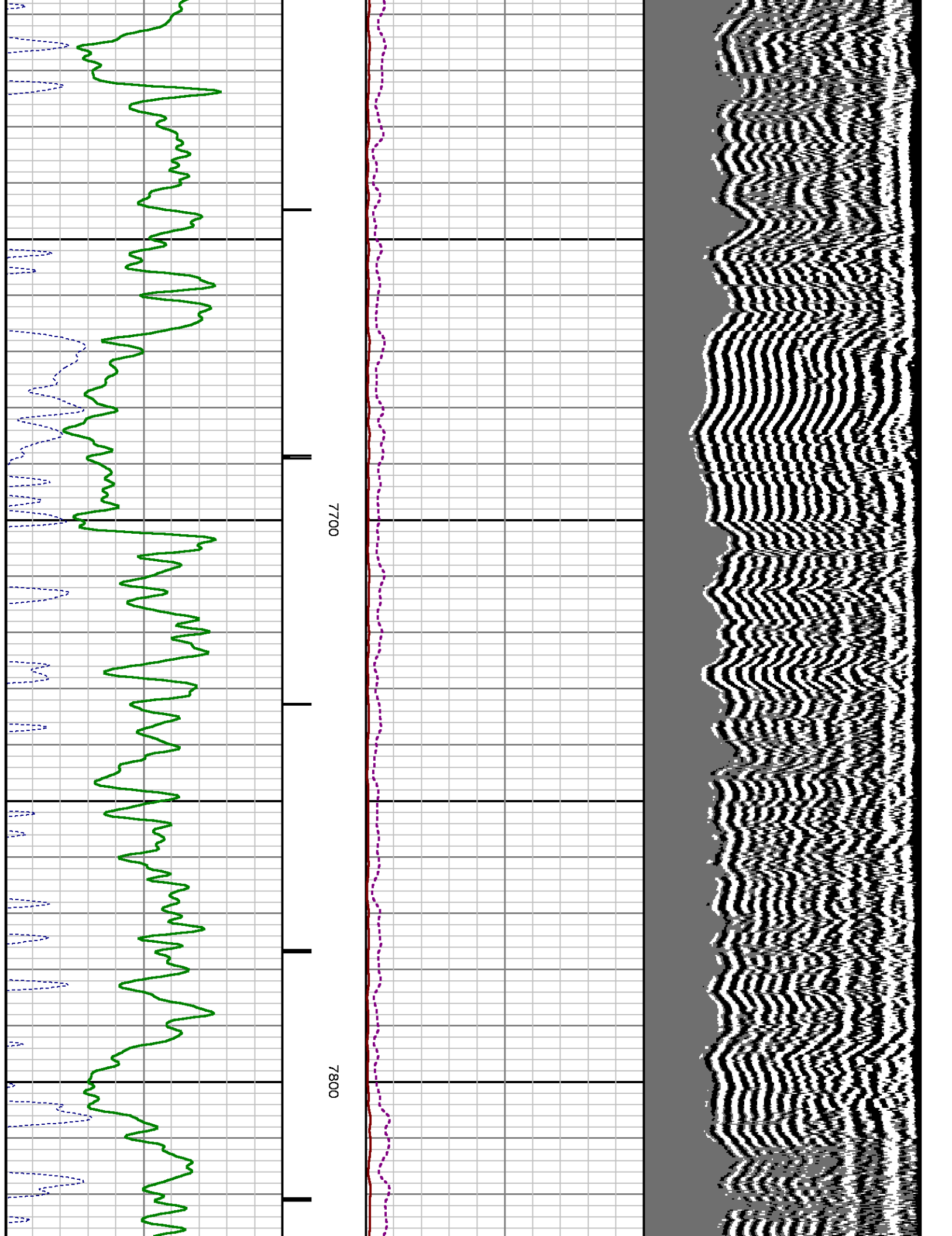
7000

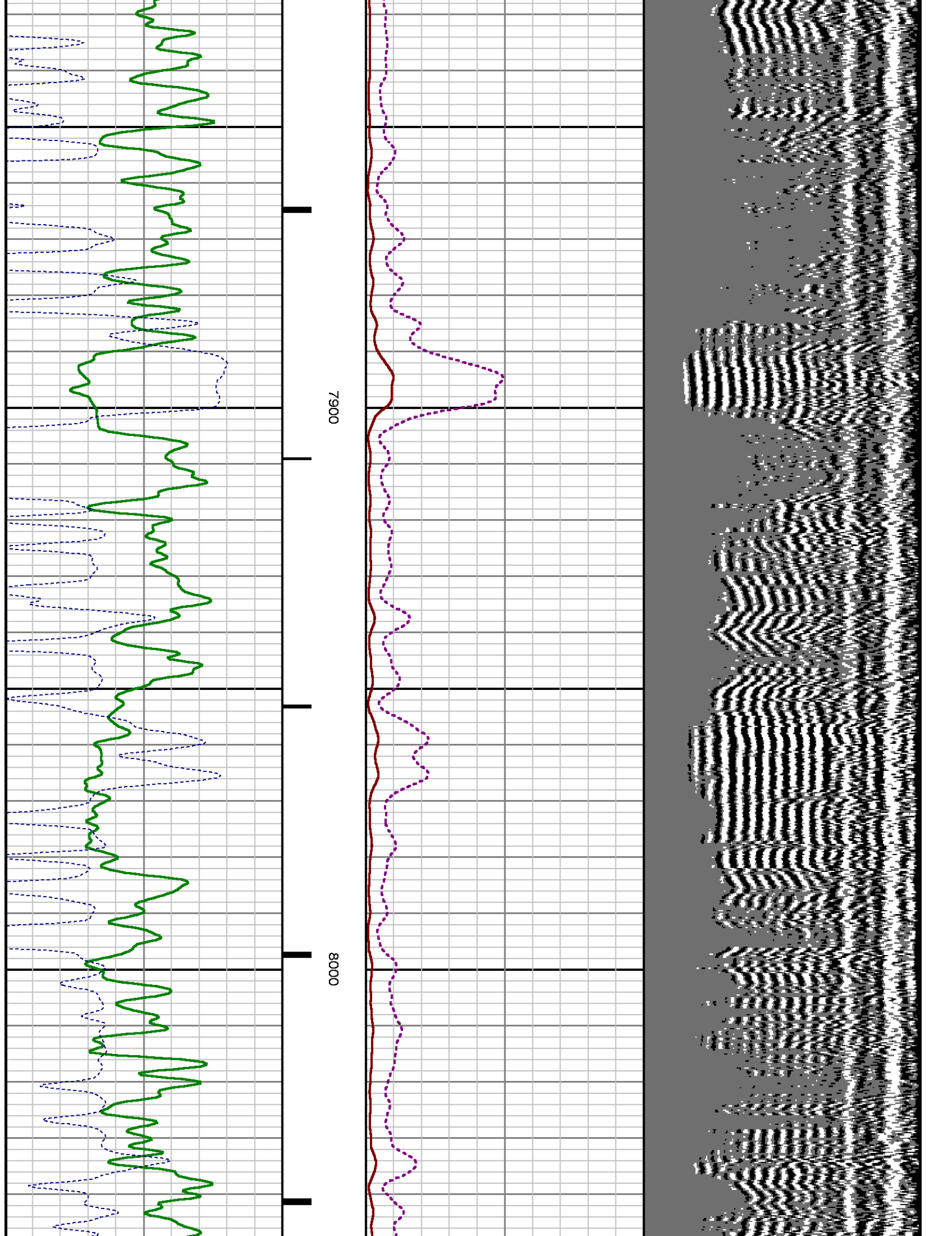
7100

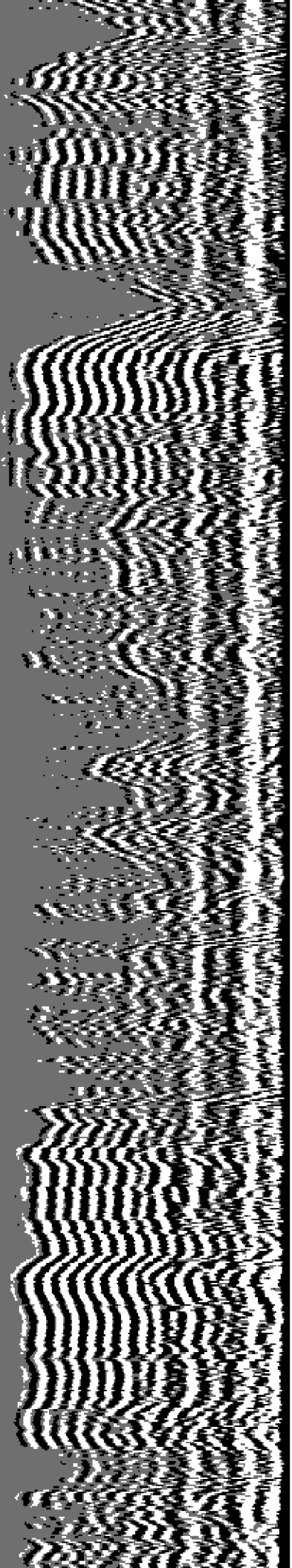






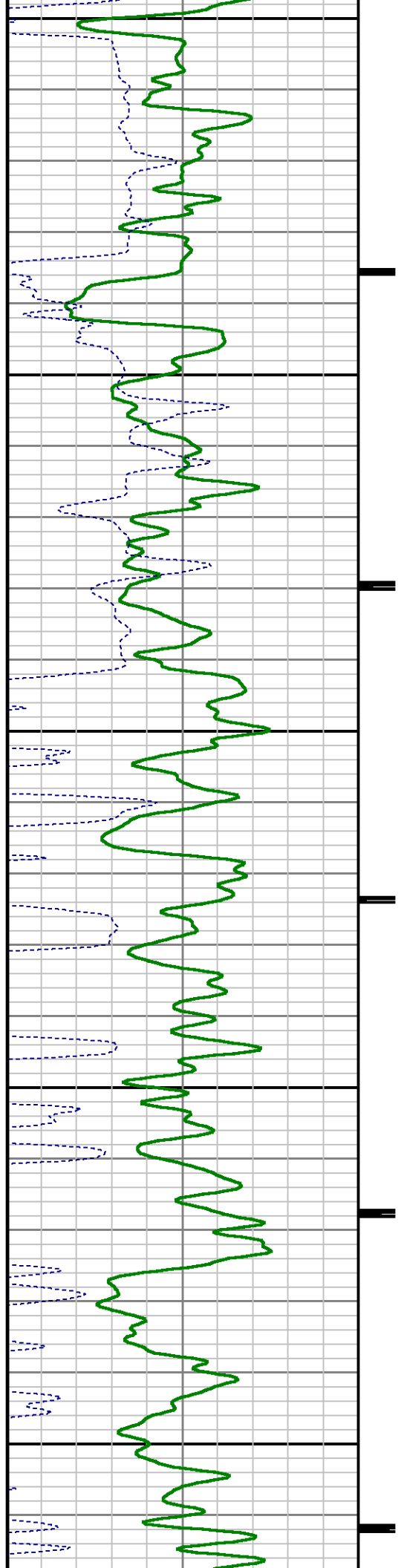


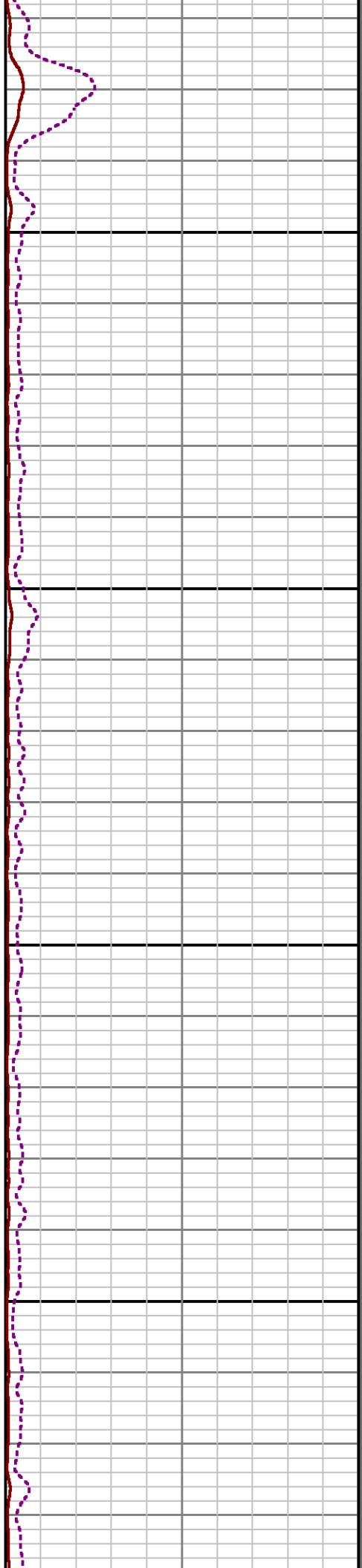
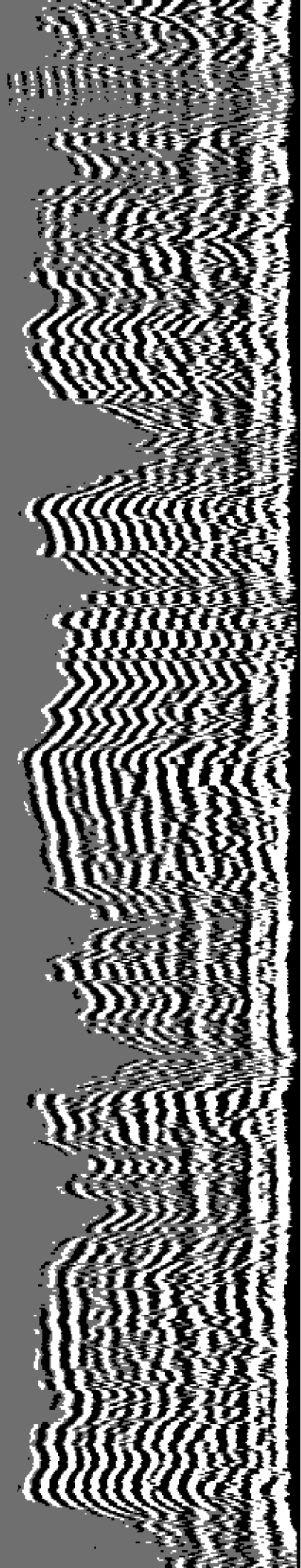




8100

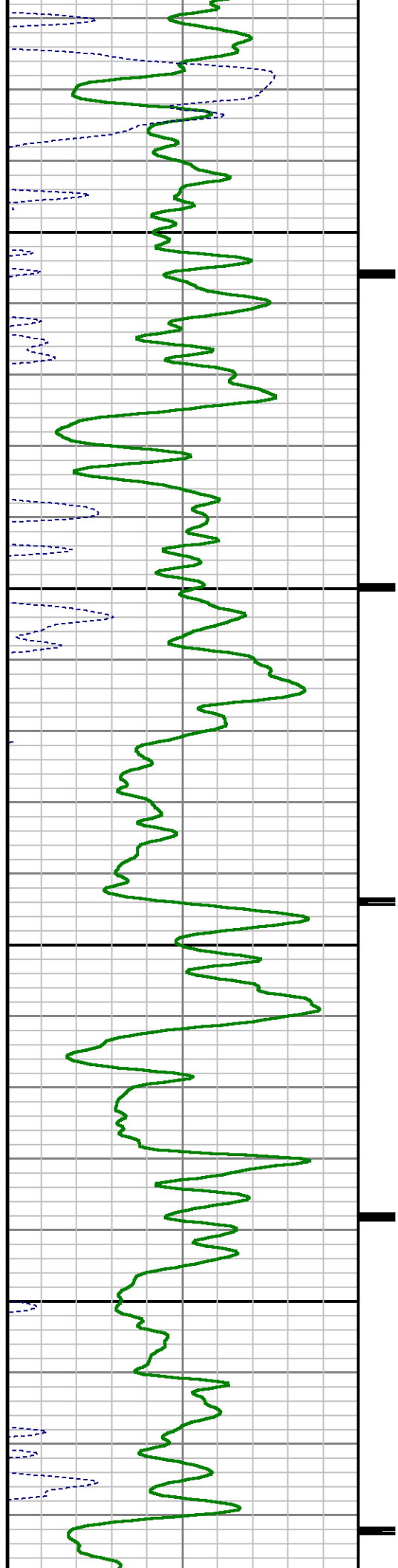
8200

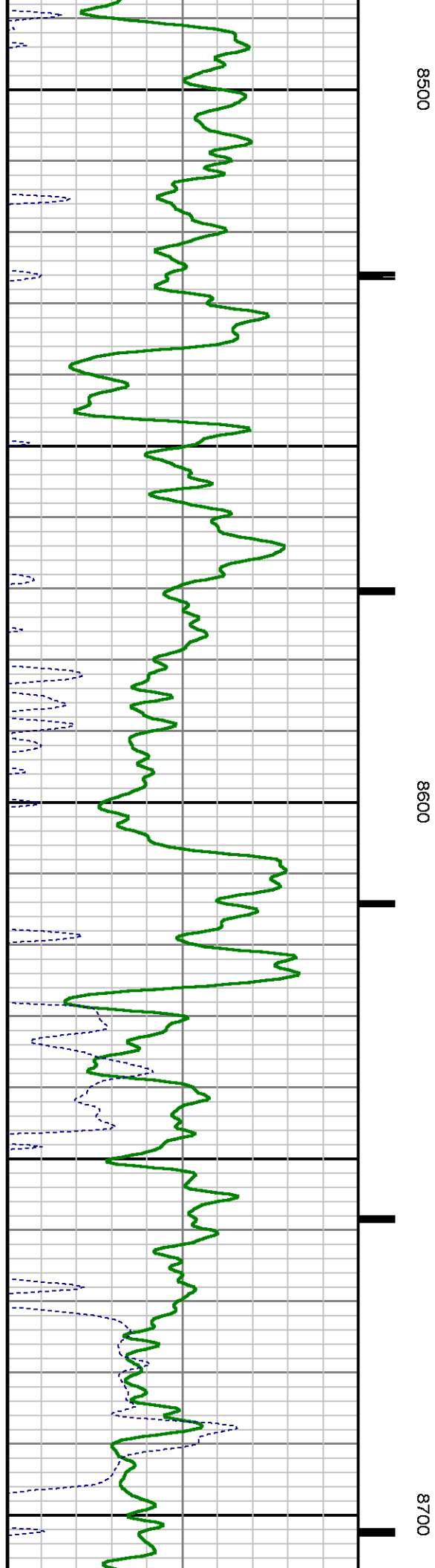
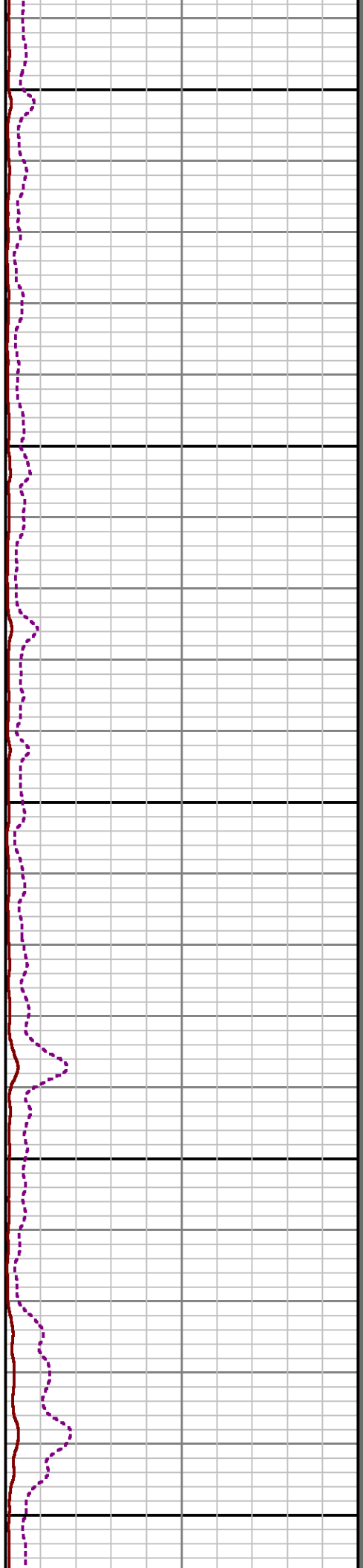
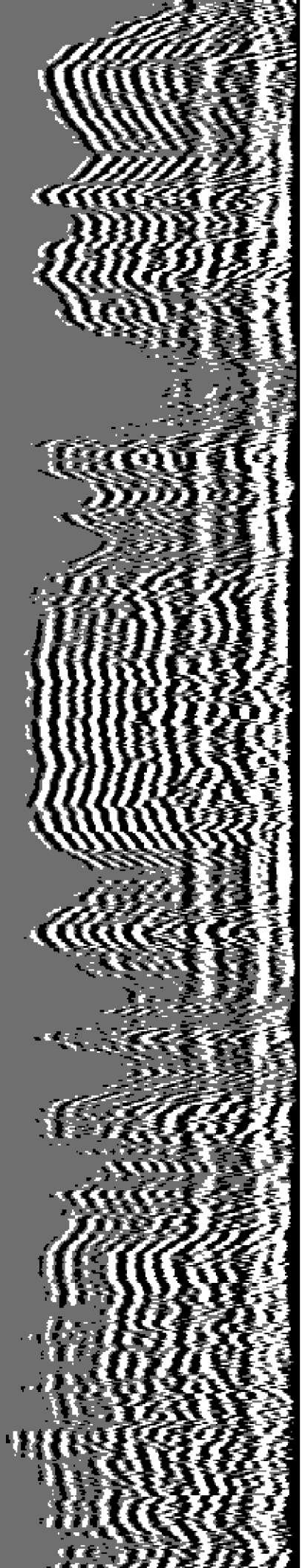


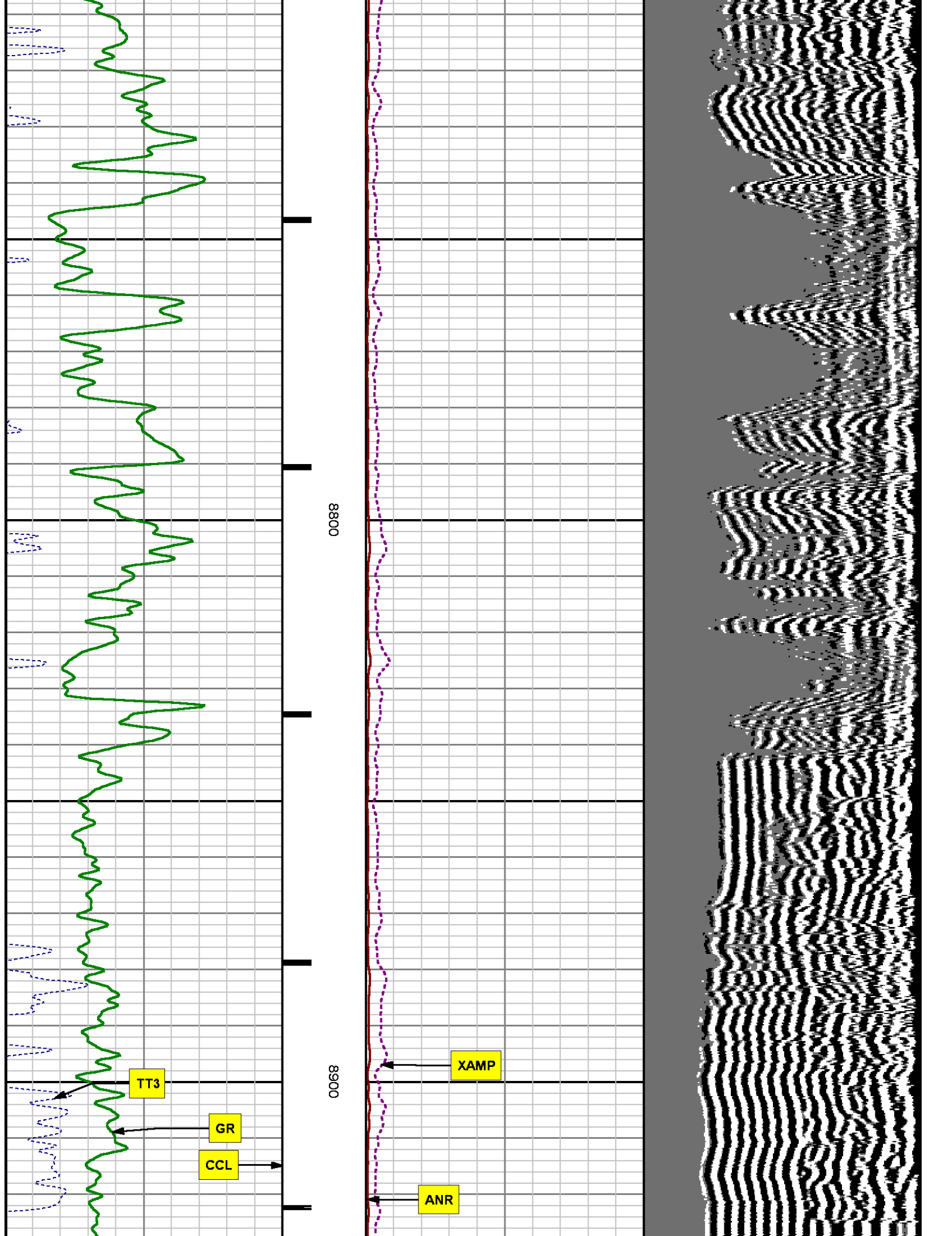


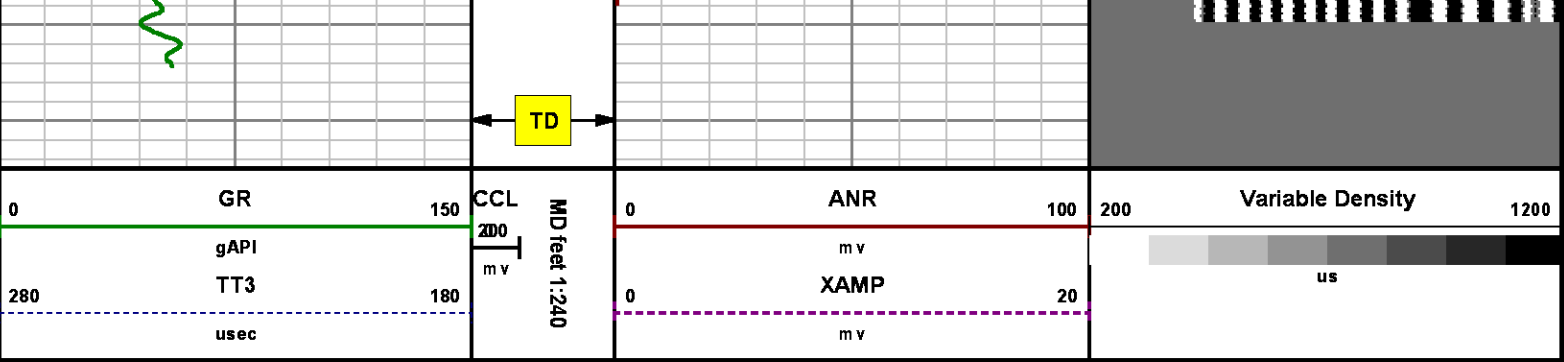
8300

8400









SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.780	8945.000
RAL	Amp Gate Start Near	195.000	usec	35.780	8945.000
RAL	Amp Gate Start Radial	195.000	usec	35.780	8945.000
RAL	Amp Gate Width Far	25.000	usec	35.780	8945.000
RAL	Amp Gate Width Near	25.000	usec	35.780	8945.000
RAL	Amp Gate Width Radial	25.000	usec	35.780	8945.000
RAL	casing od	4.500	inches	35.780	8945.000
RAL	casing wt	11.600	lbm/ft	35.780	8945.000
RAL	FB Start Far	291.900	usec	35.780	8945.000
RAL	FB Start Near	180.000	usec	35.780	8945.000
RAL	FB Start Radial	180.000	usec	35.780	8945.000
RAL	FB Thresh Far	10.000	mV	35.780	8945.000
RAL	FB Thresh Near	4.000	mV	35.780	8945.000
RAL	FB Thresh Radial	4.000	mV	35.780	8945.000
RAL	Fluid Travel Time	200.000	usec/ft	35.780	8945.000

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES						
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4	
		AR5	AR6	AR7	AR8	CHV	FBP2	

1426XA -15.750
 2459XA -11.340
 2459XA -9.490
 2459XA -4.090

FPR3 FPR5 TT3 TTR1 TTR2 TTR3
 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP
 AFAR SIG TT5
 CCL
 GR
 NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

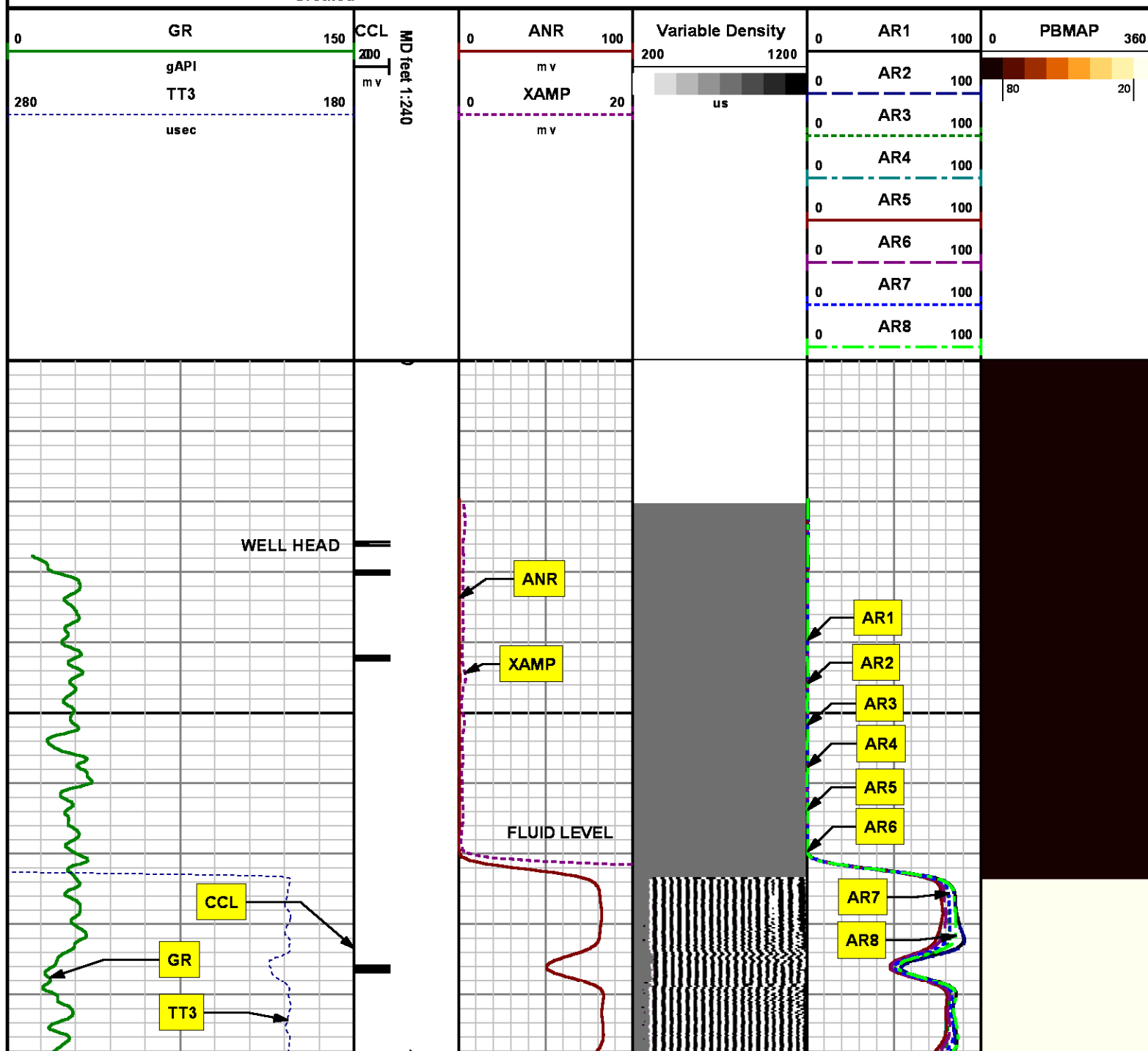
Well : SAVAGE RWF 514-25

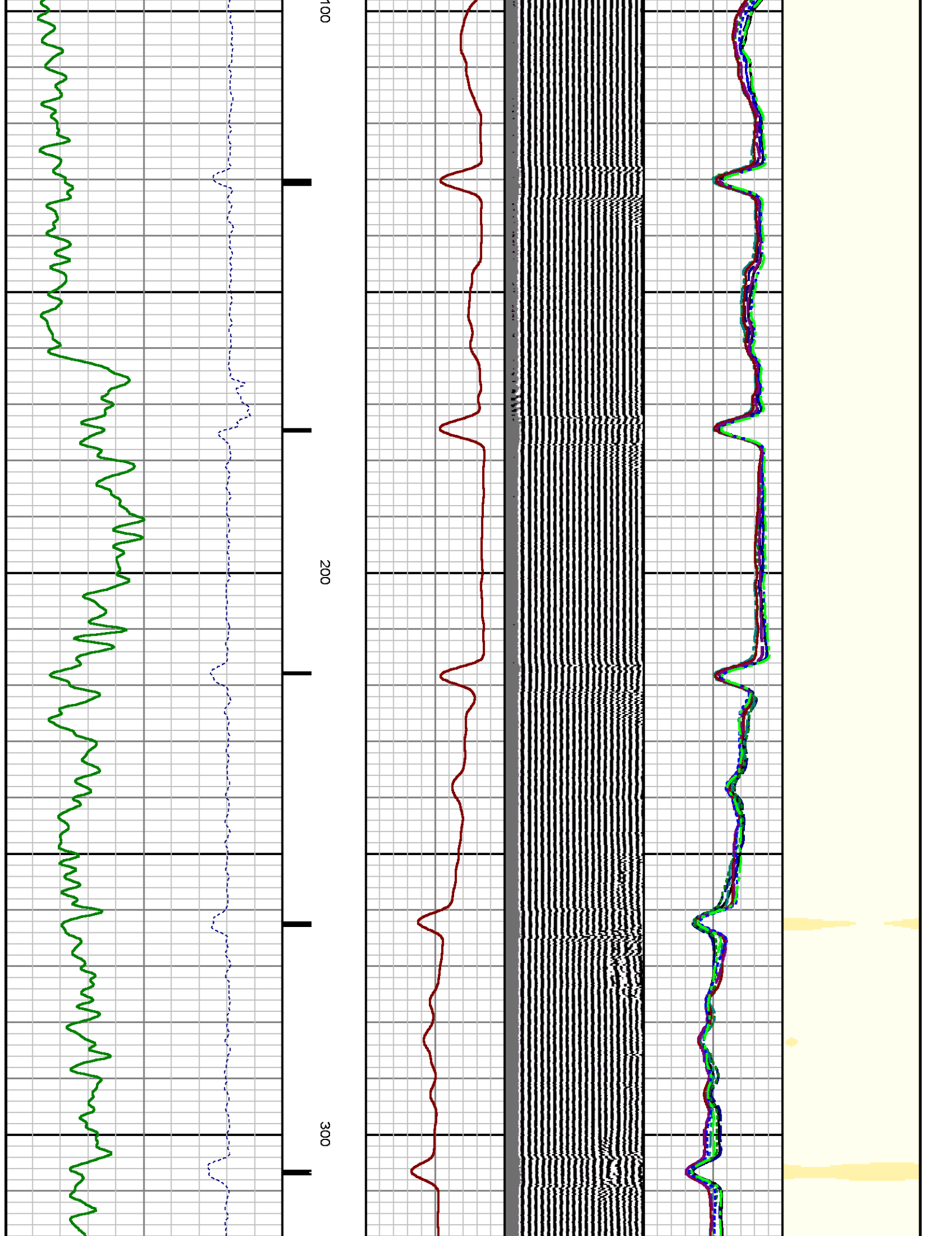
File Name : d:\welldata\wpx\rwf 514-25\514ral\main.xtf

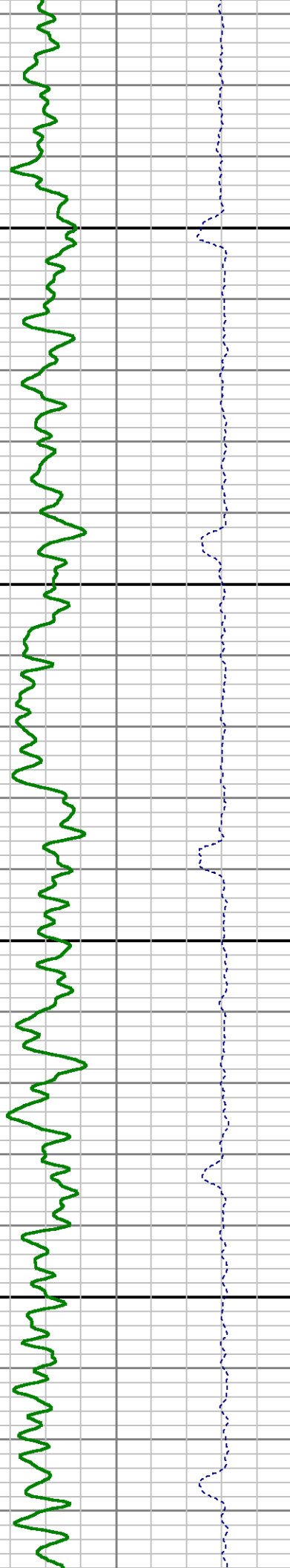
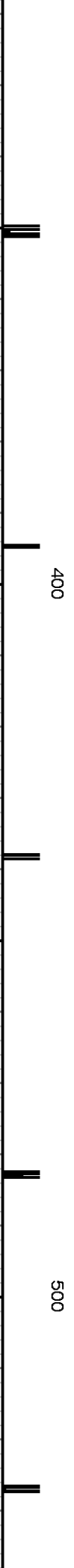
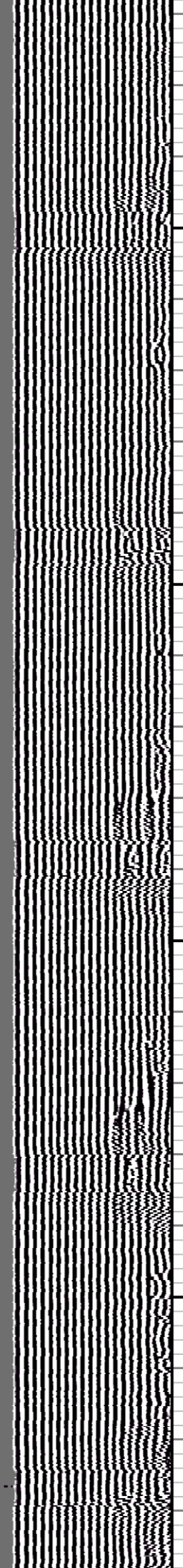
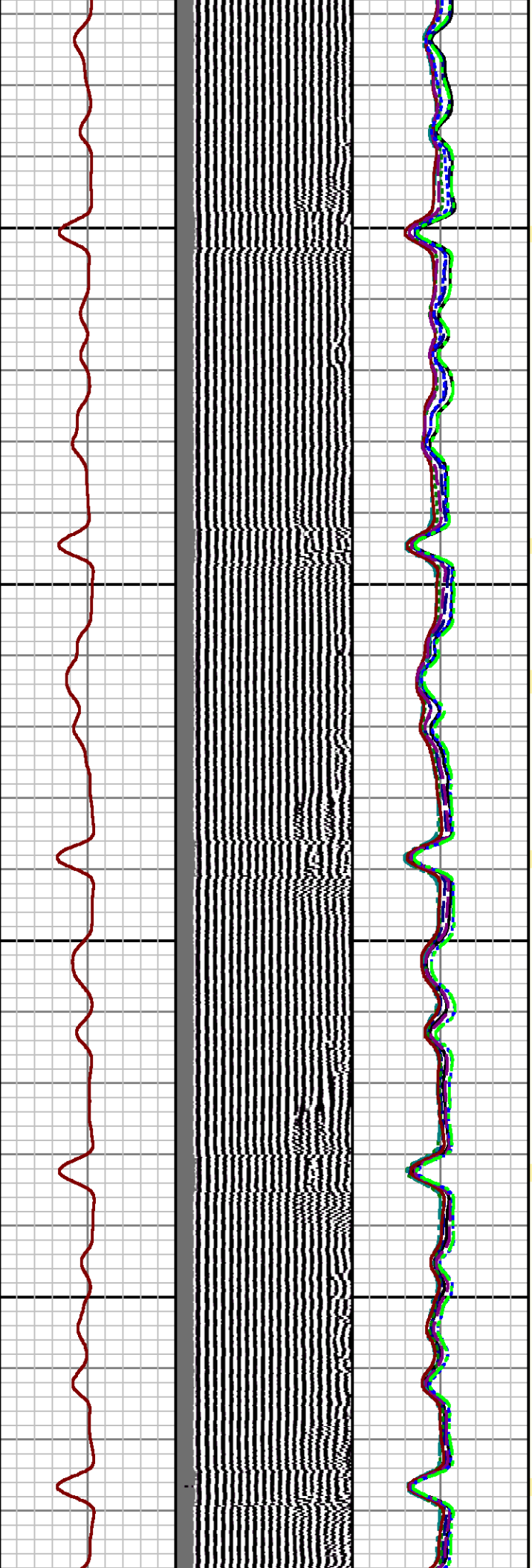
Mode : PlotMgr 5.4.504

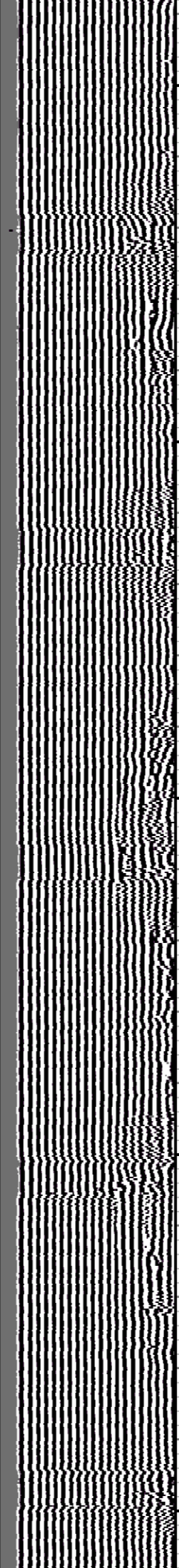
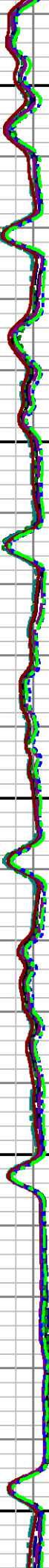
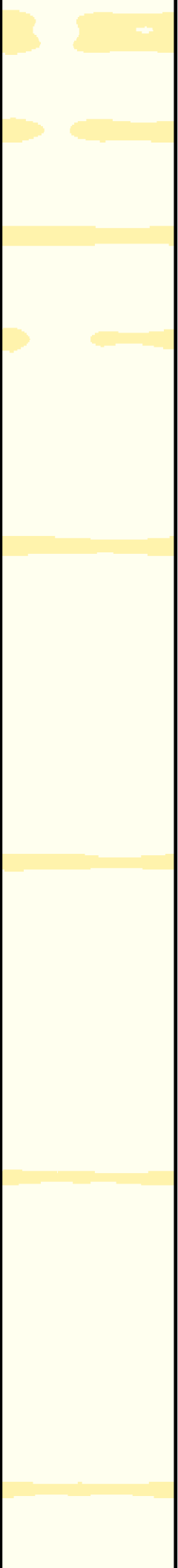
Interval : 0.00 - 8945.00 feet UP

Created : 3/14/2014 9:20:50 AM





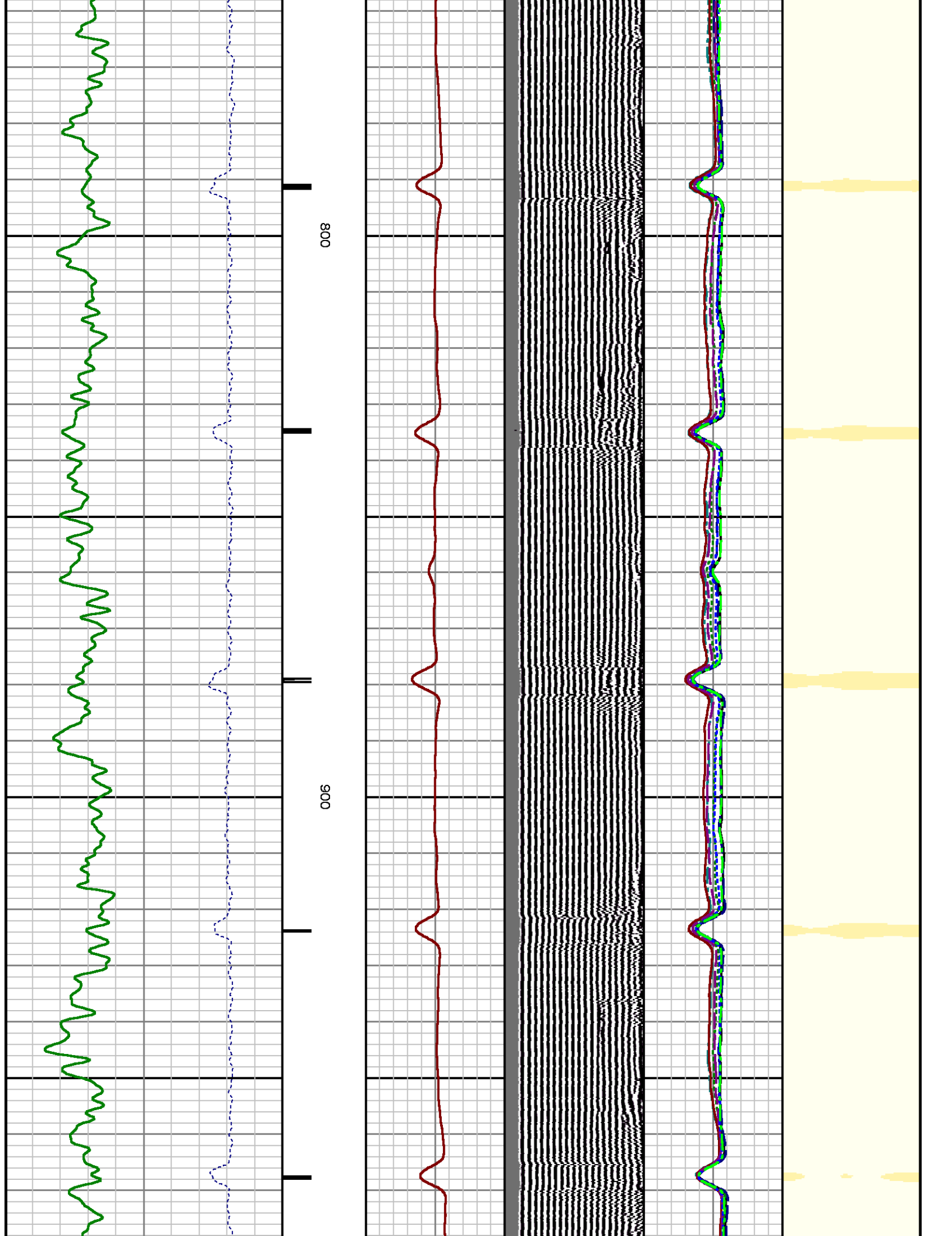


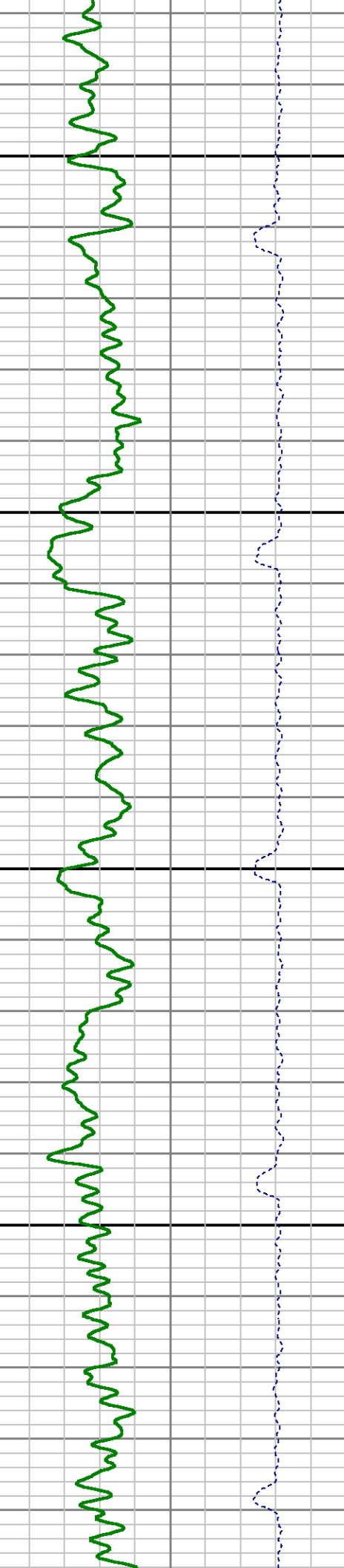
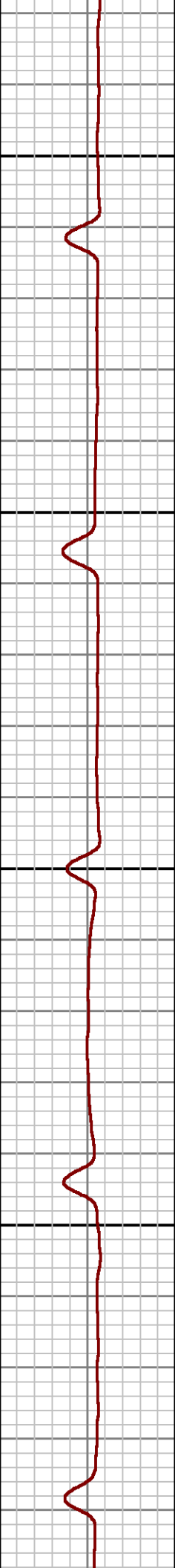
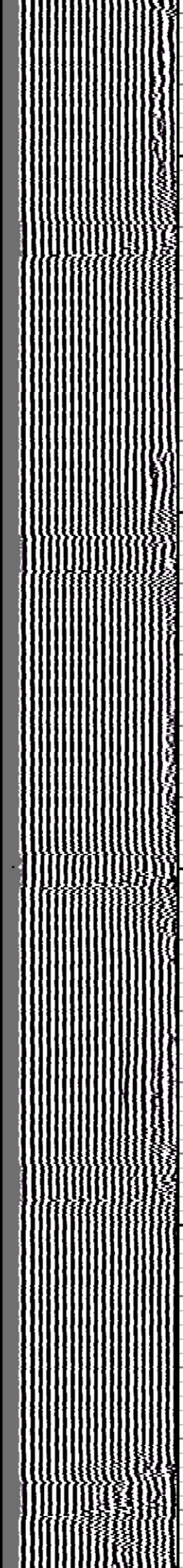
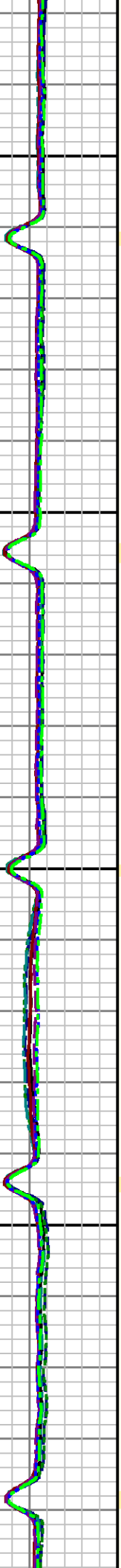


600

700



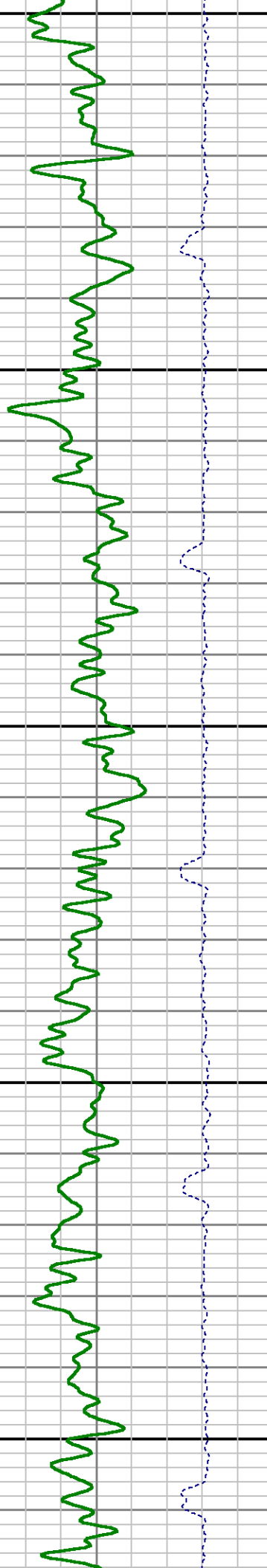
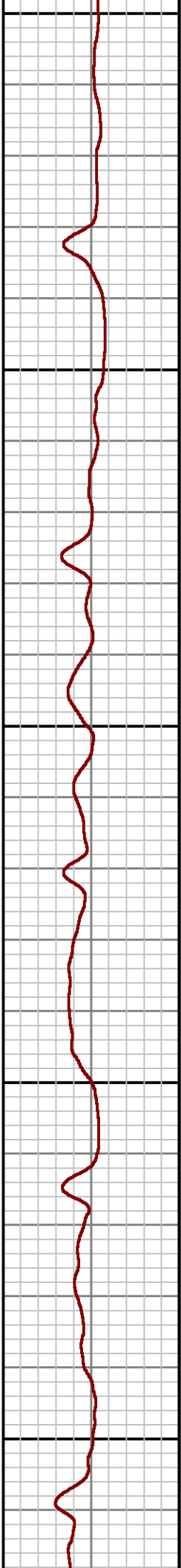
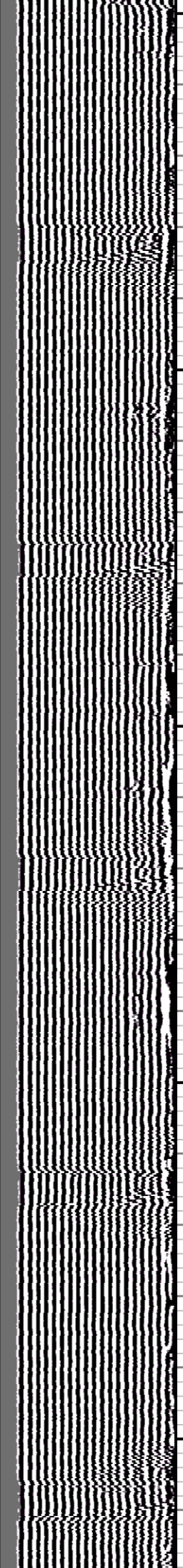
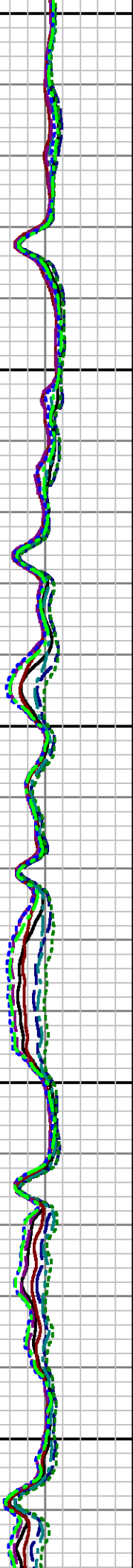
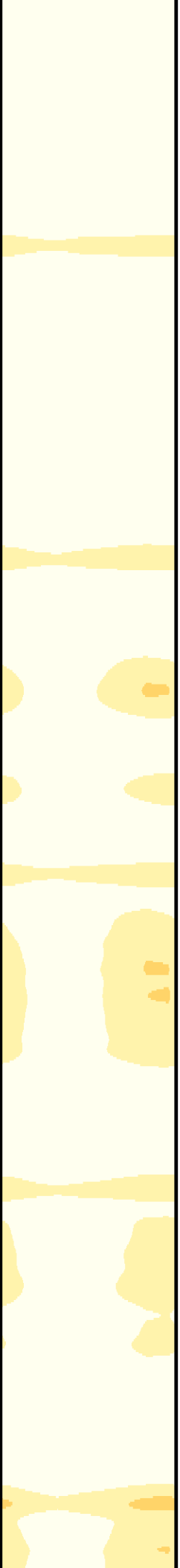


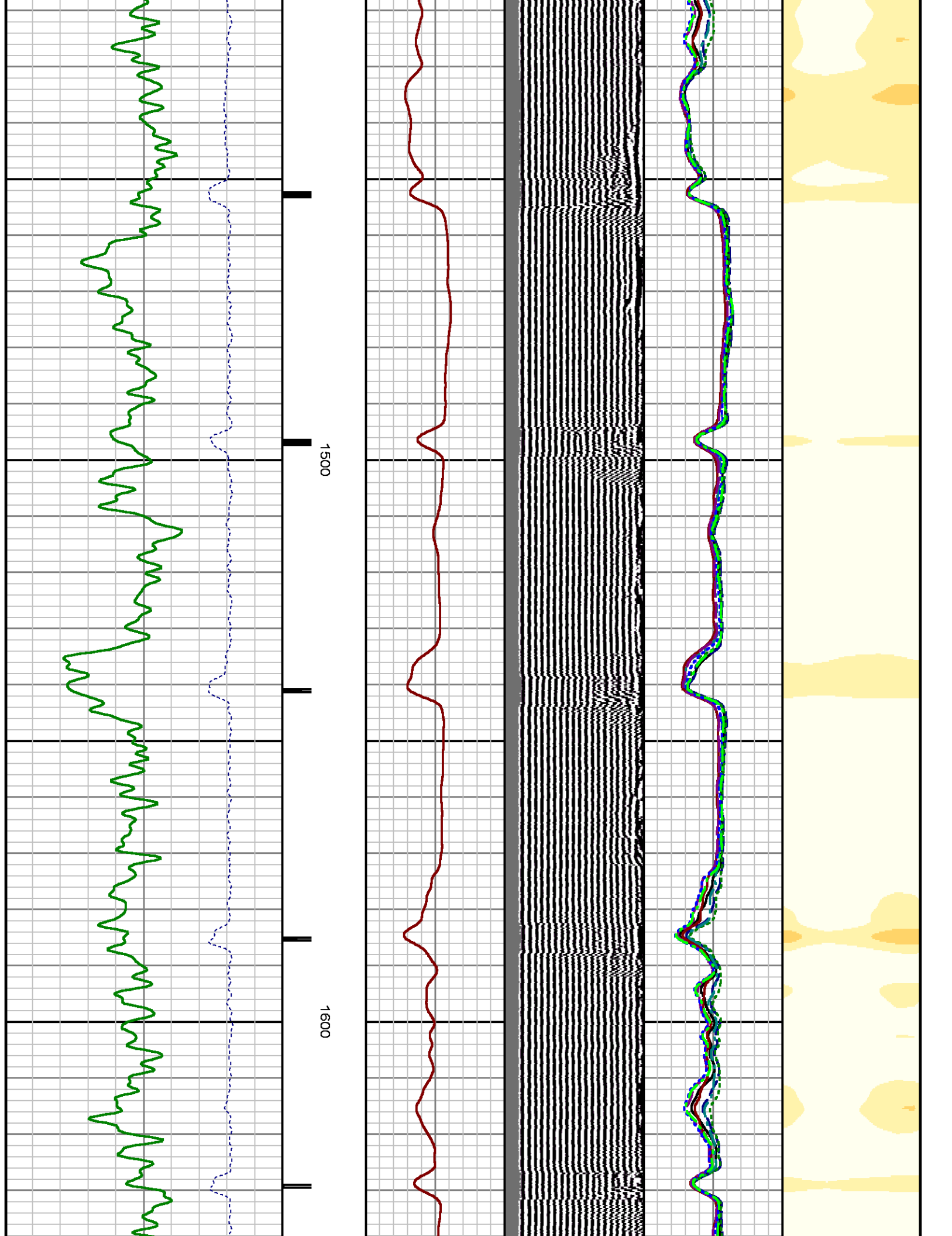


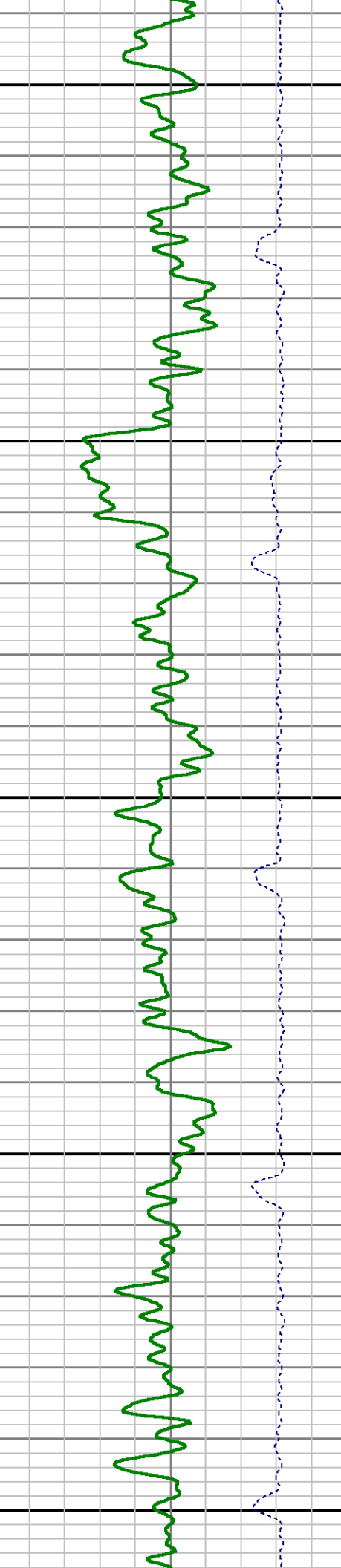
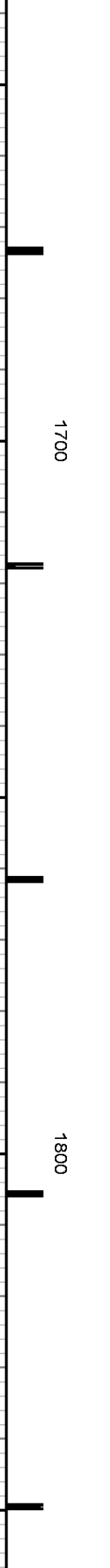
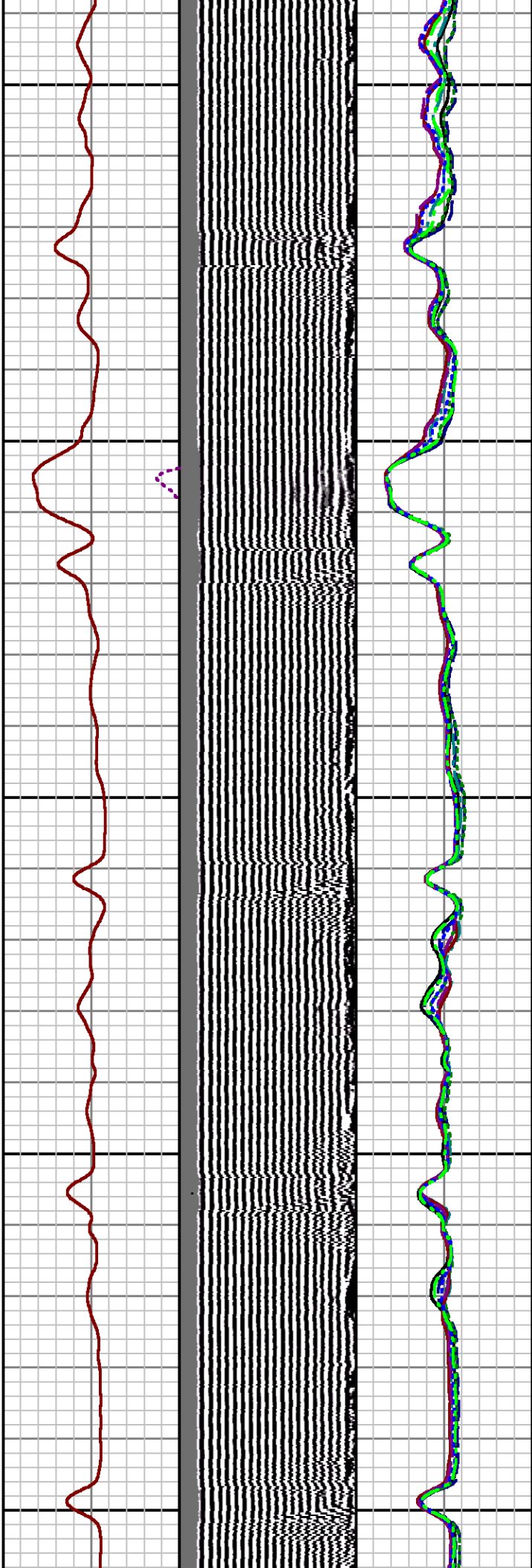
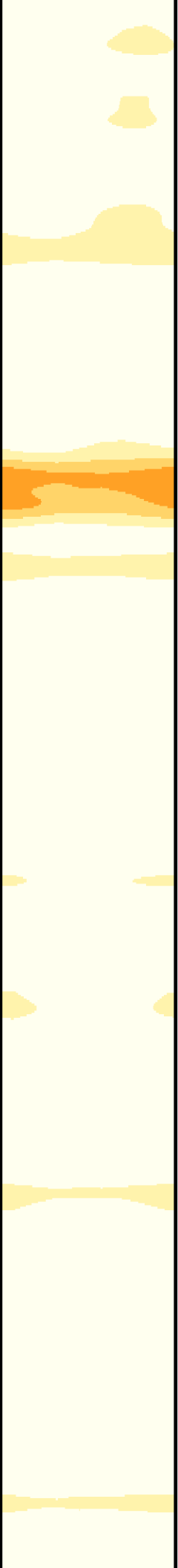
1000

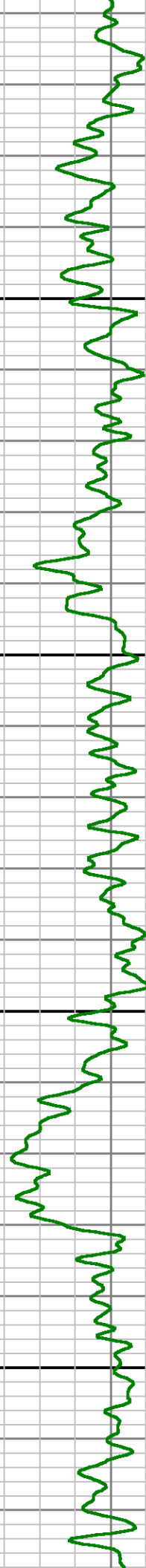
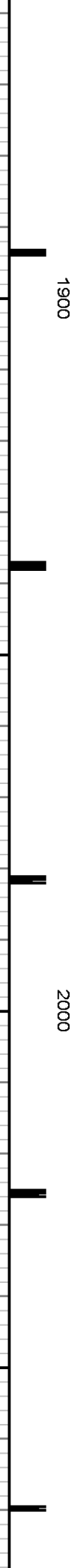
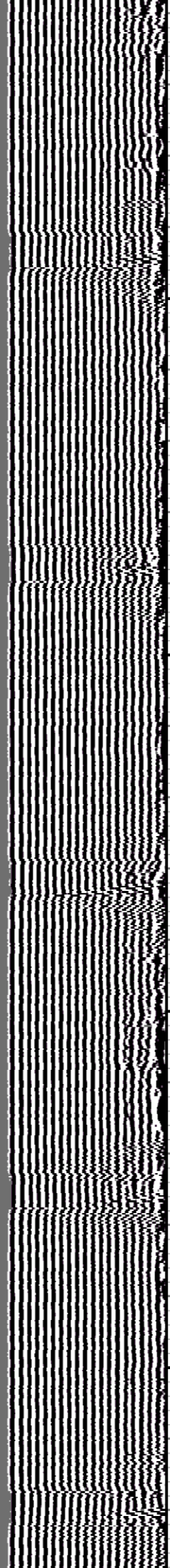
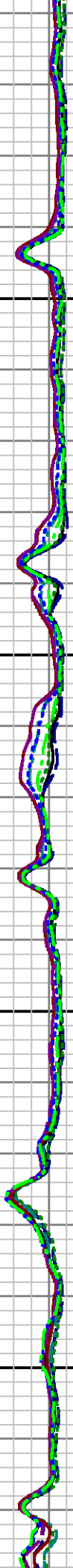
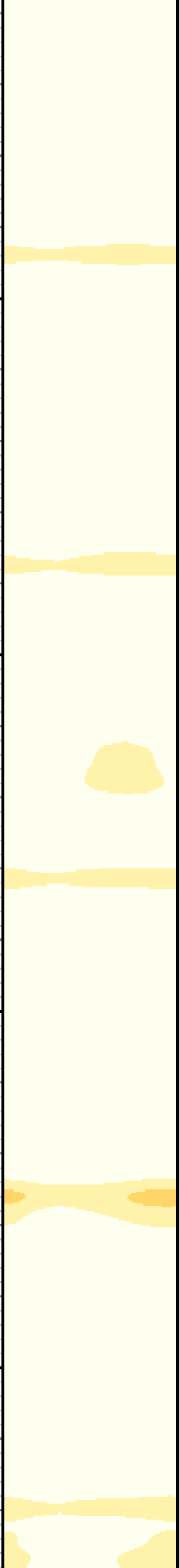
1100

1



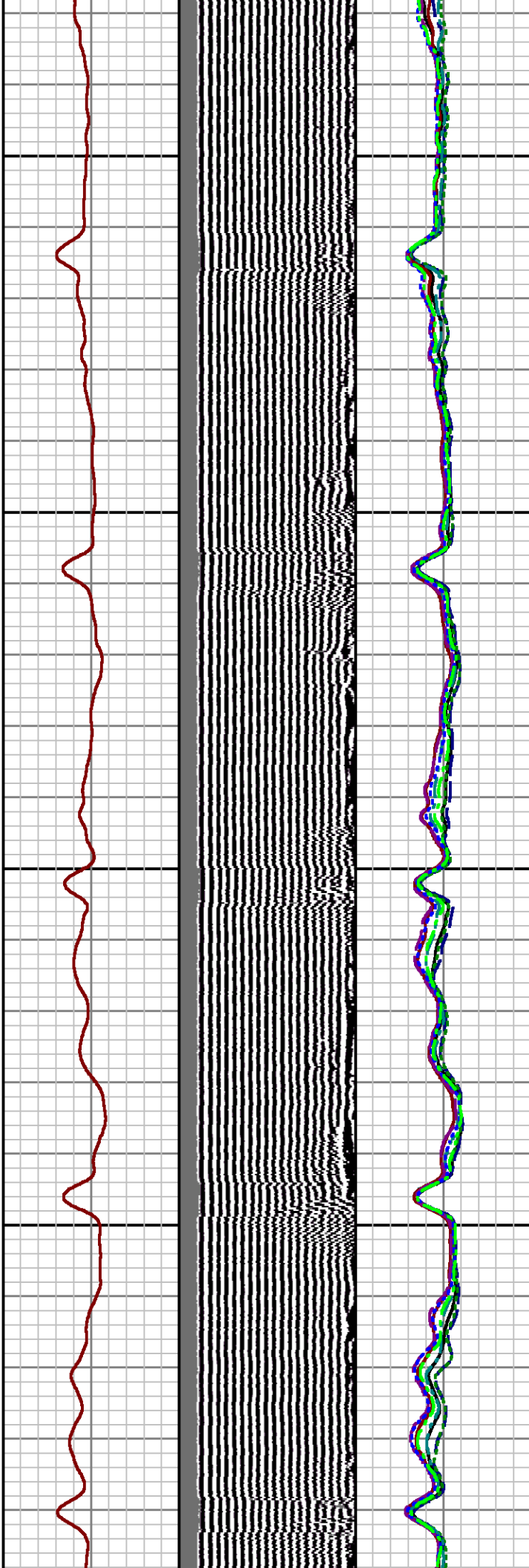
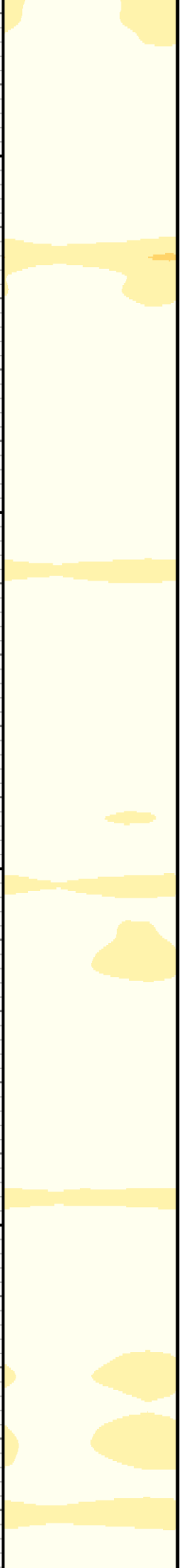






1900

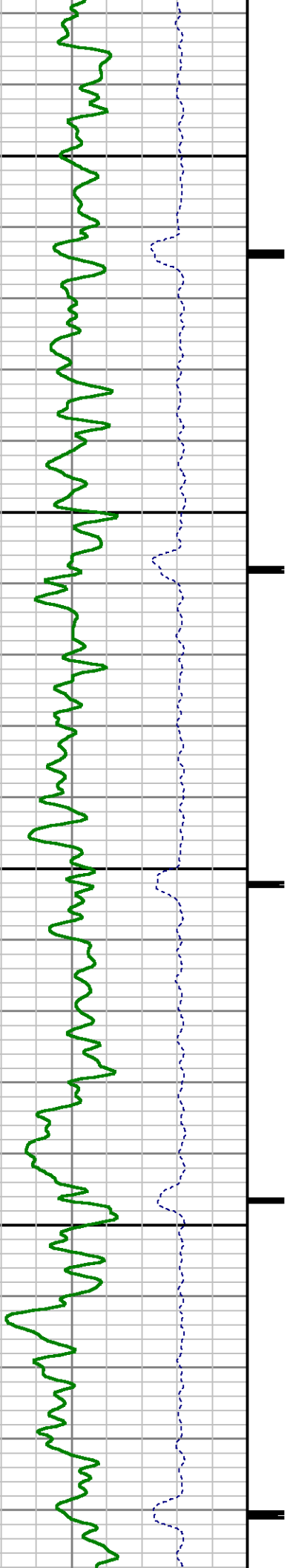
2000

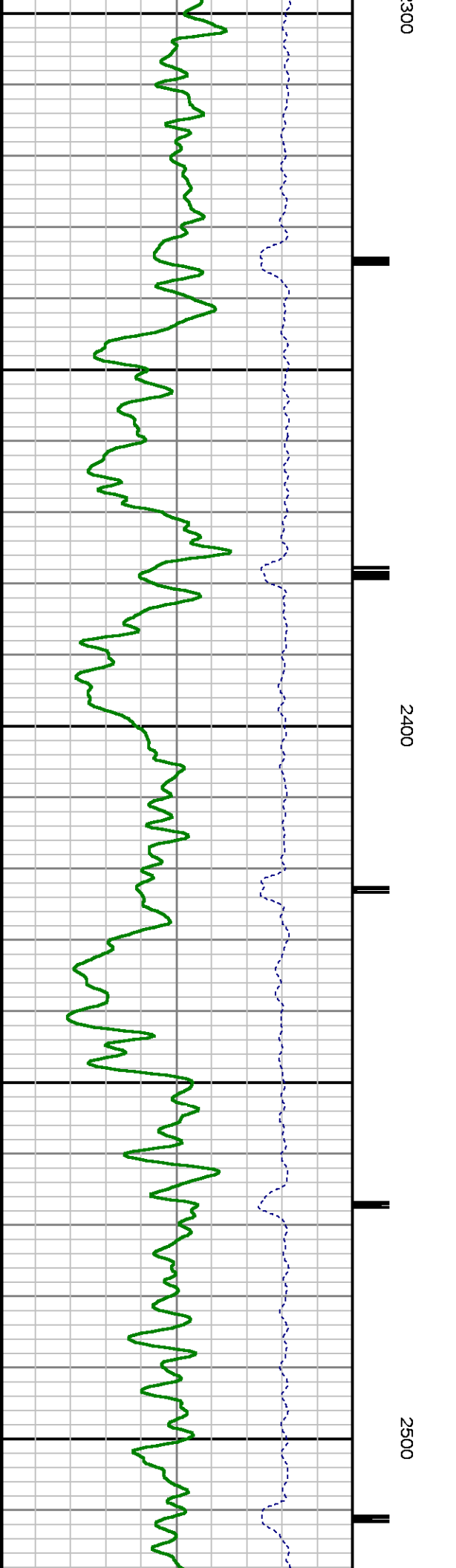
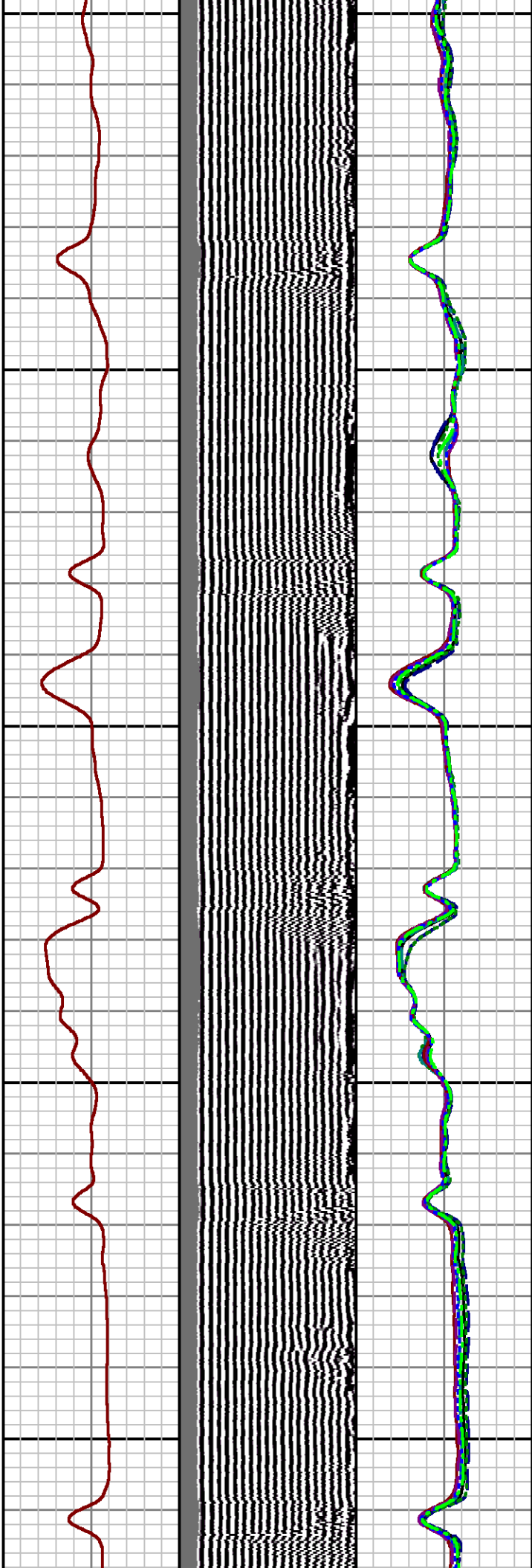
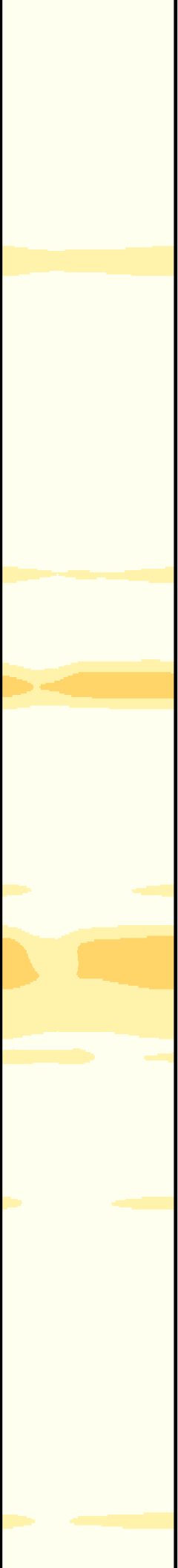


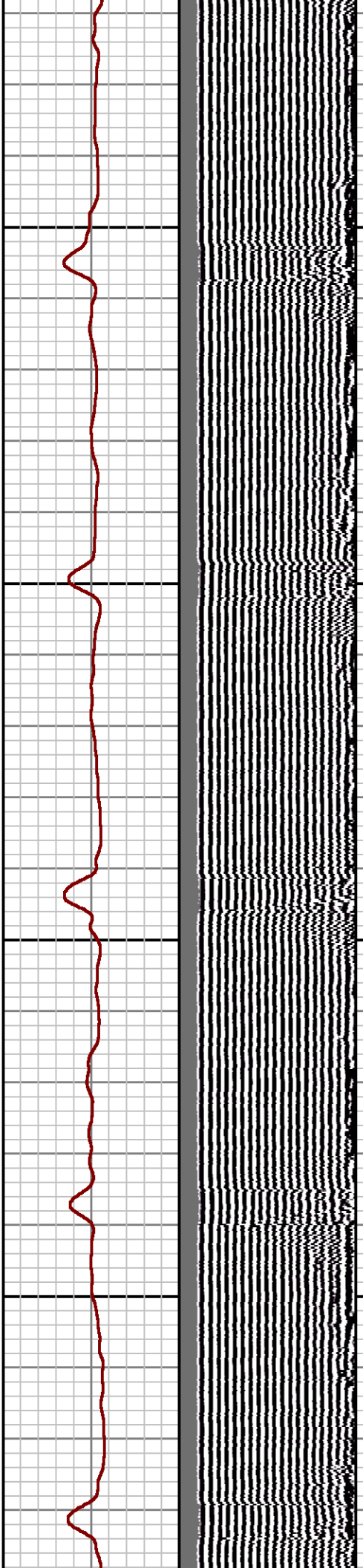
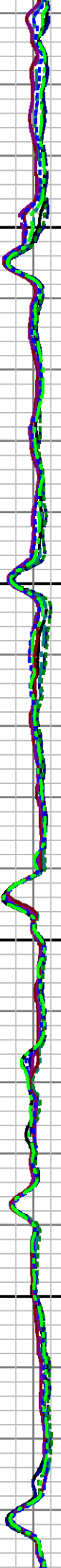
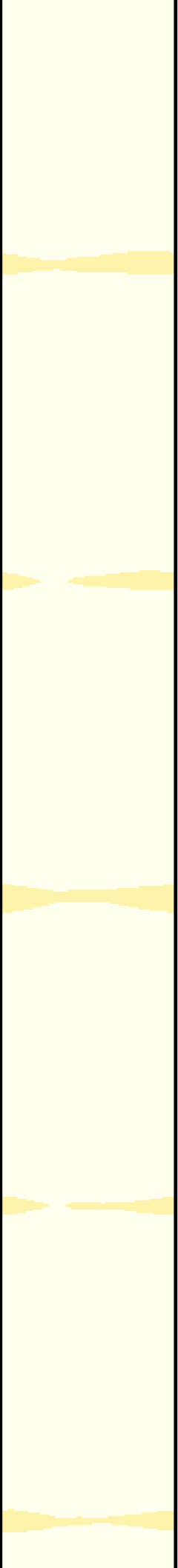
2100

2200

2

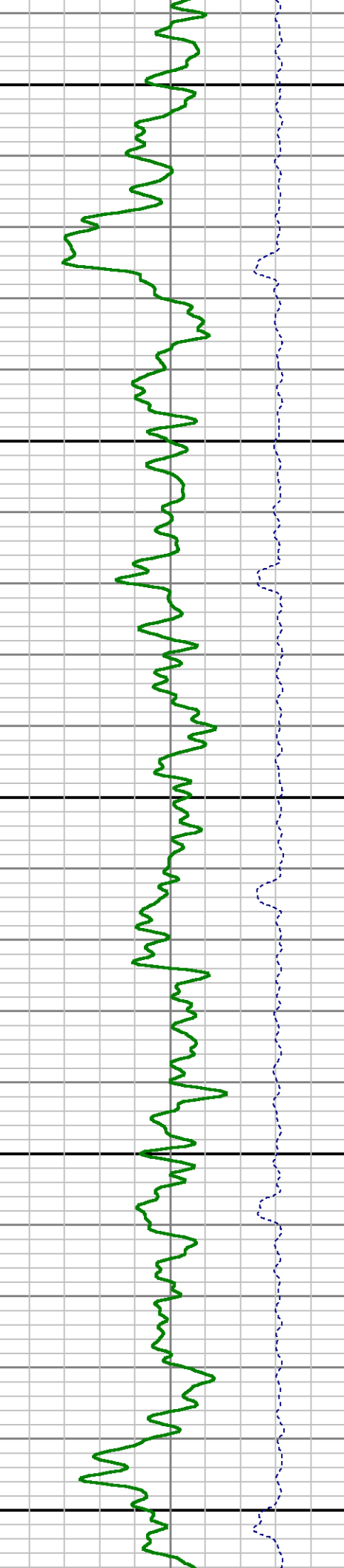
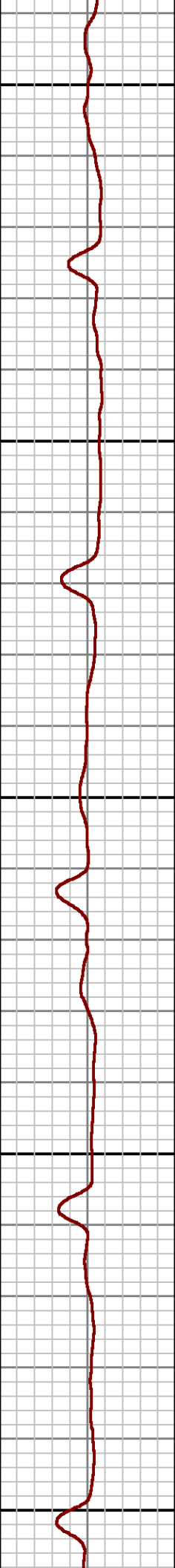
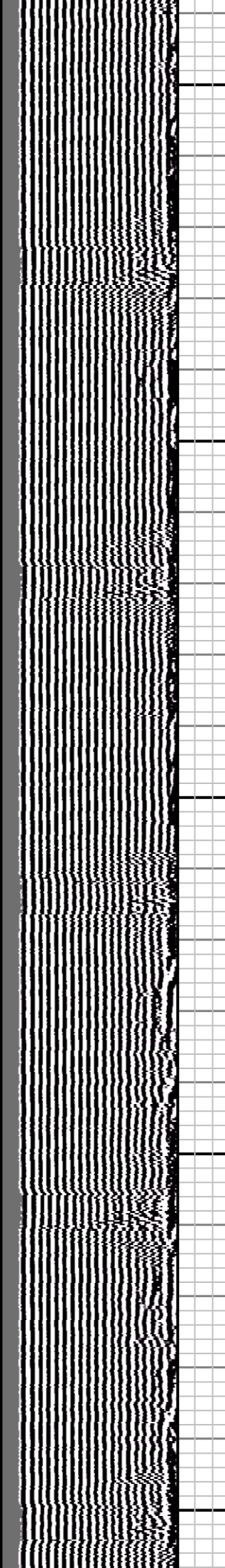
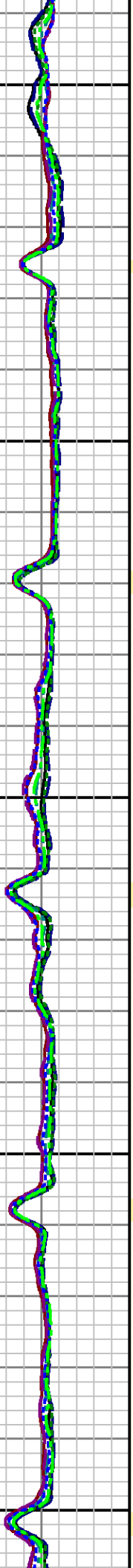


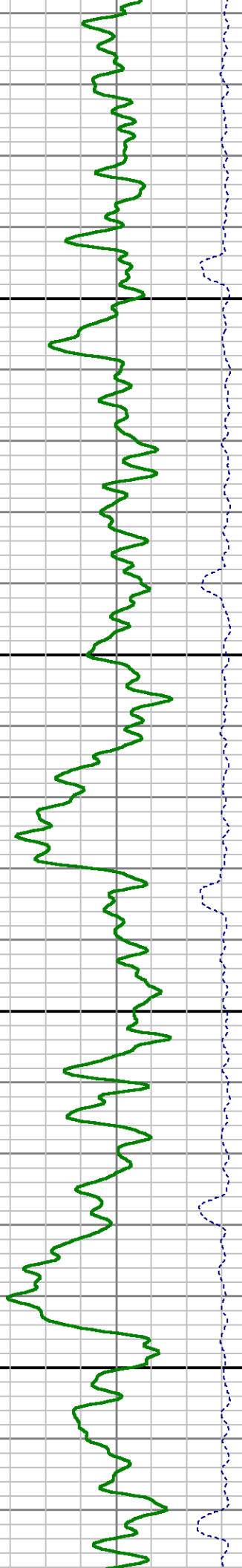
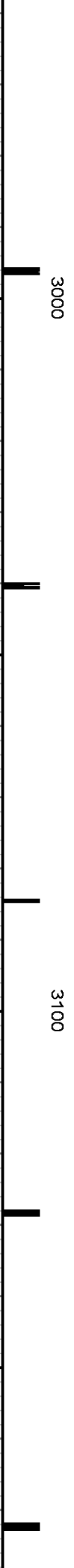
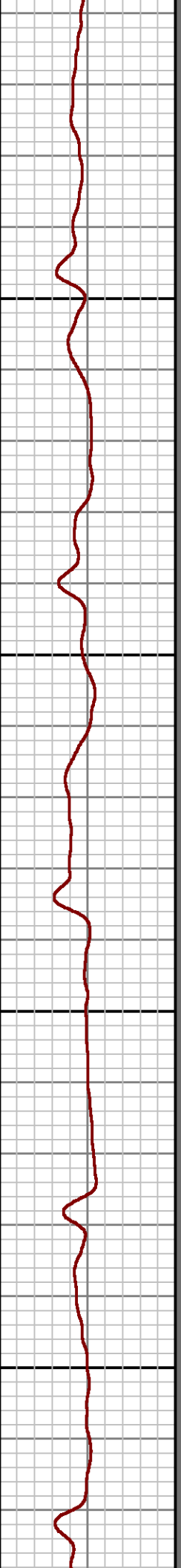
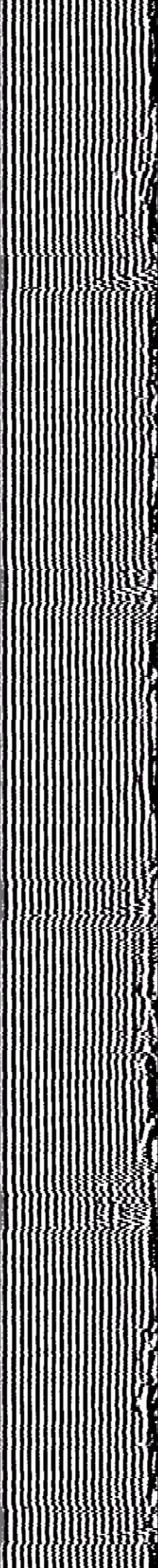
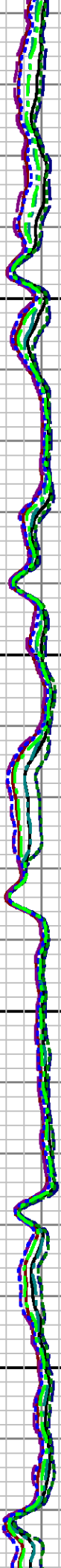
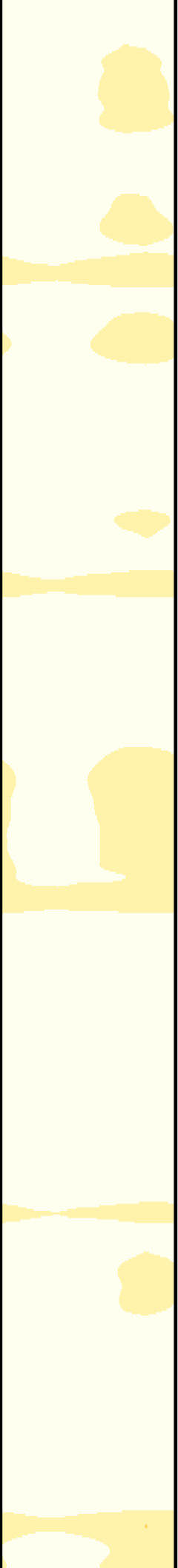


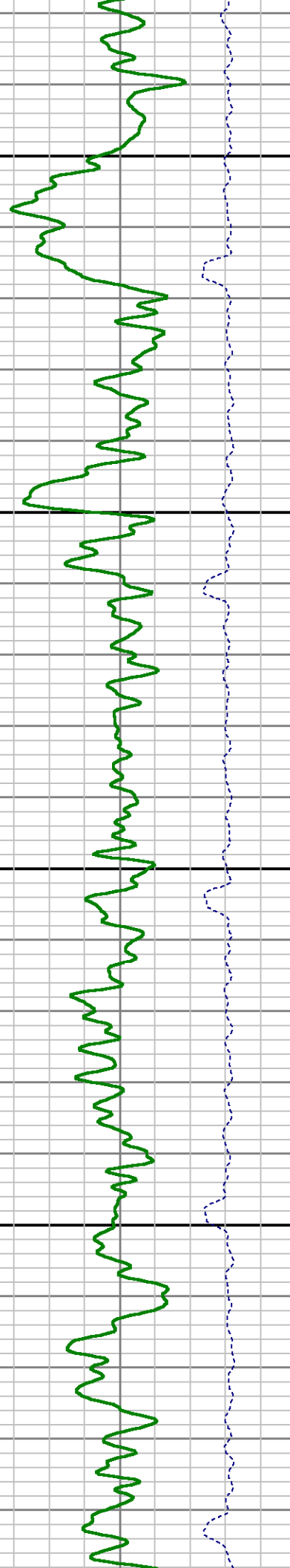
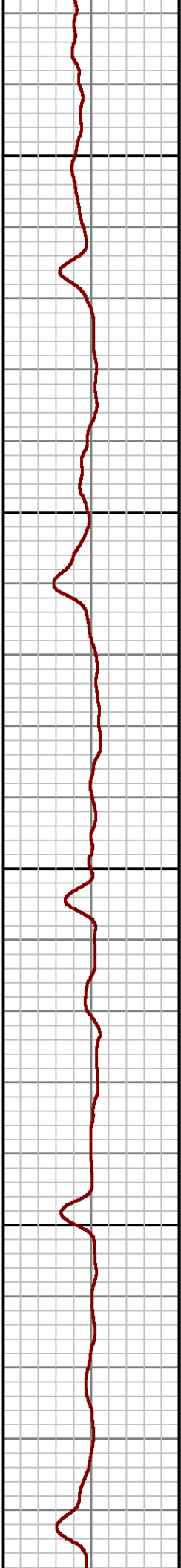
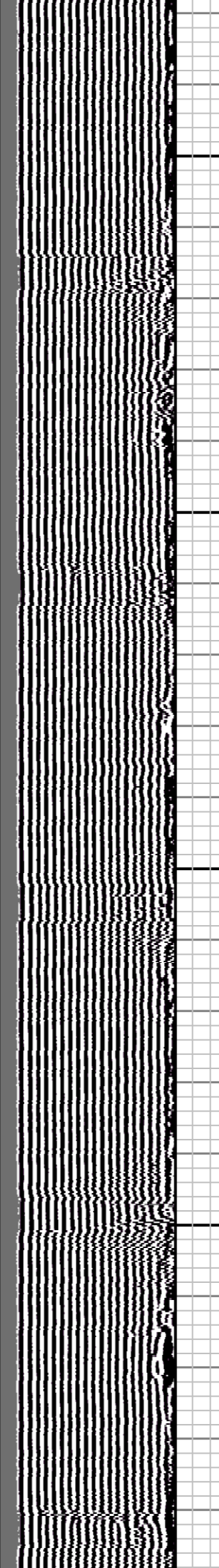
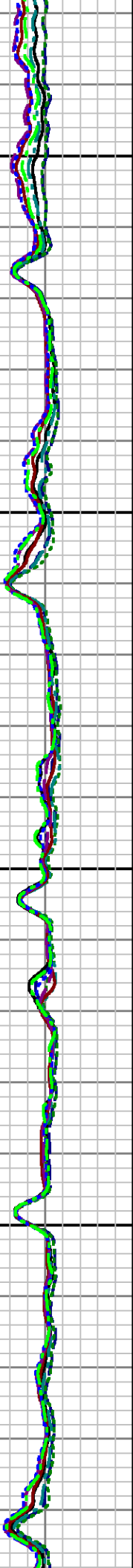
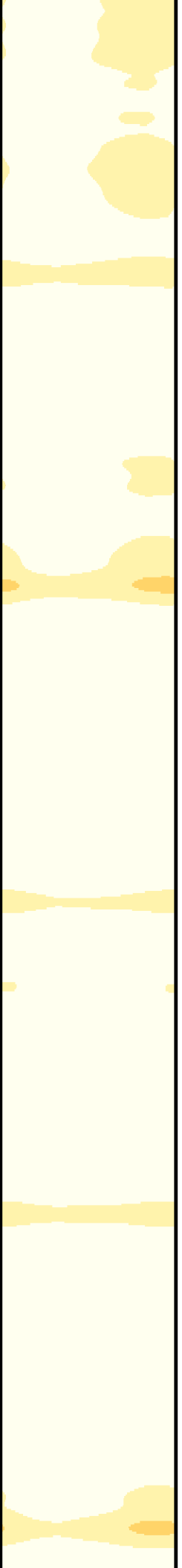


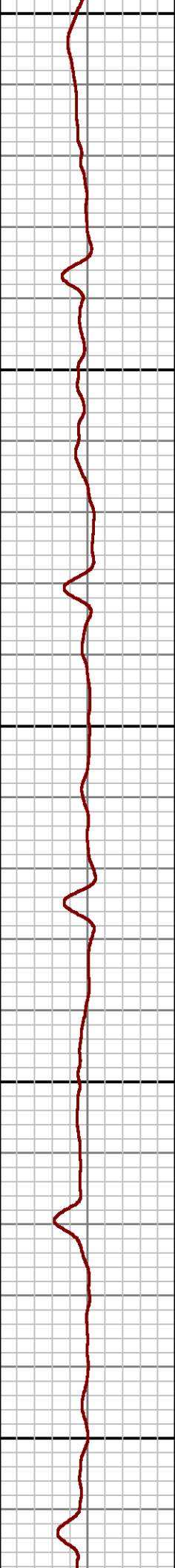
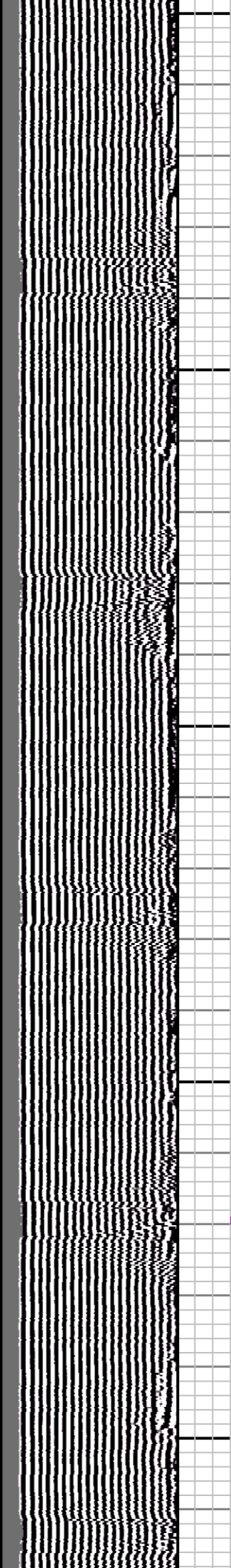
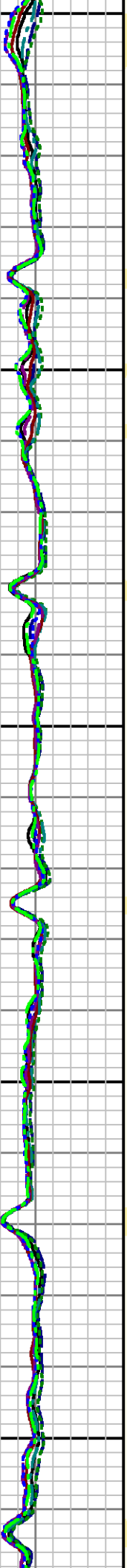
2600

2700





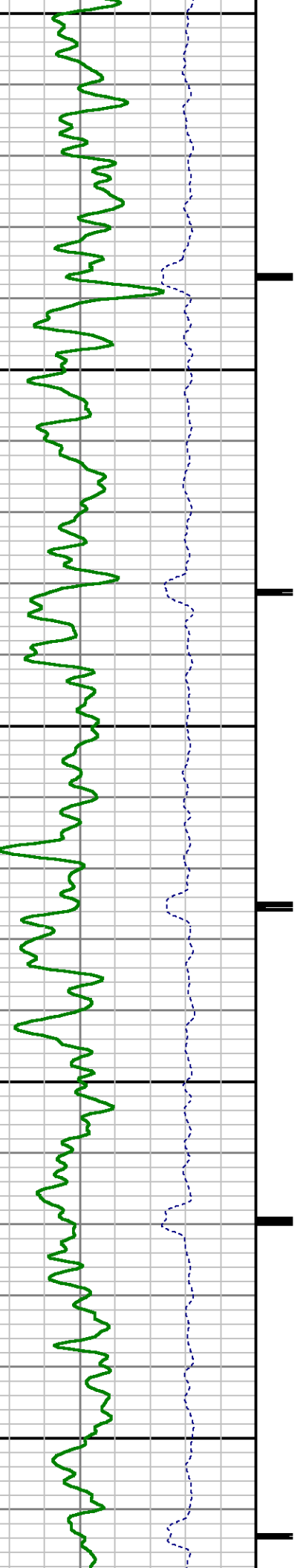


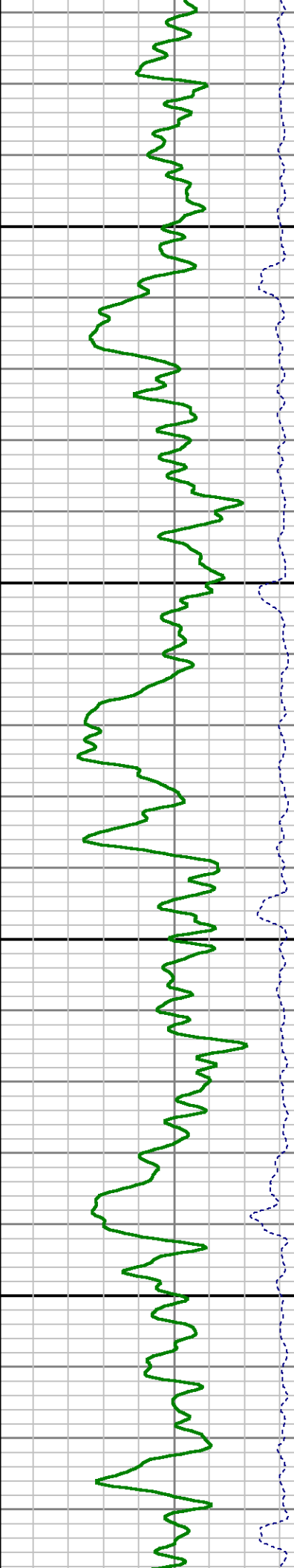
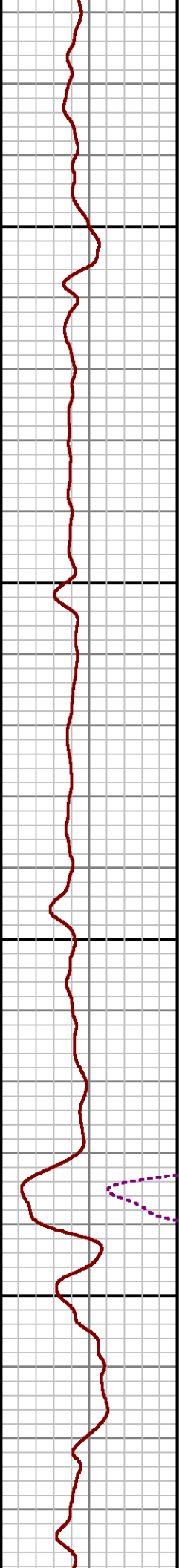
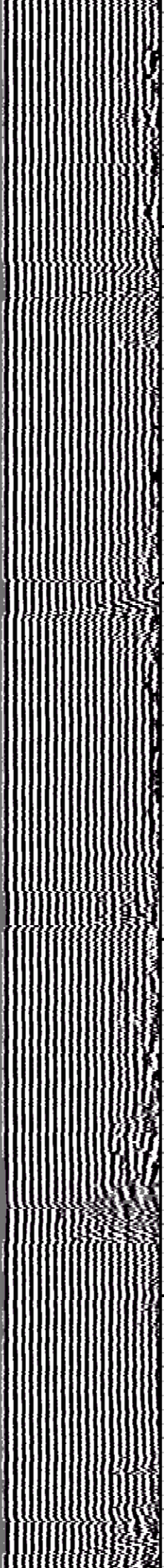
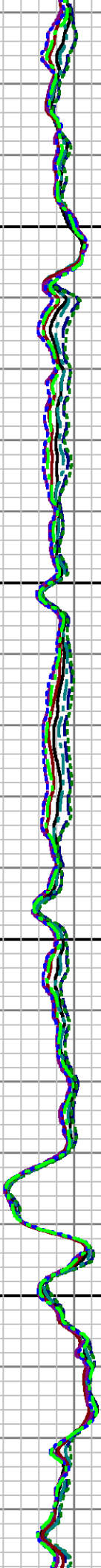
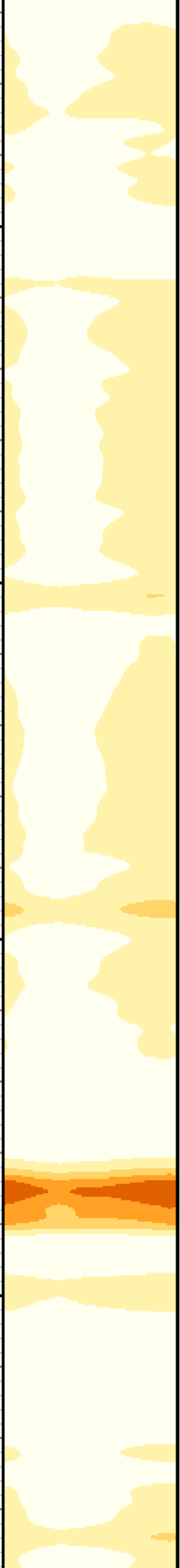


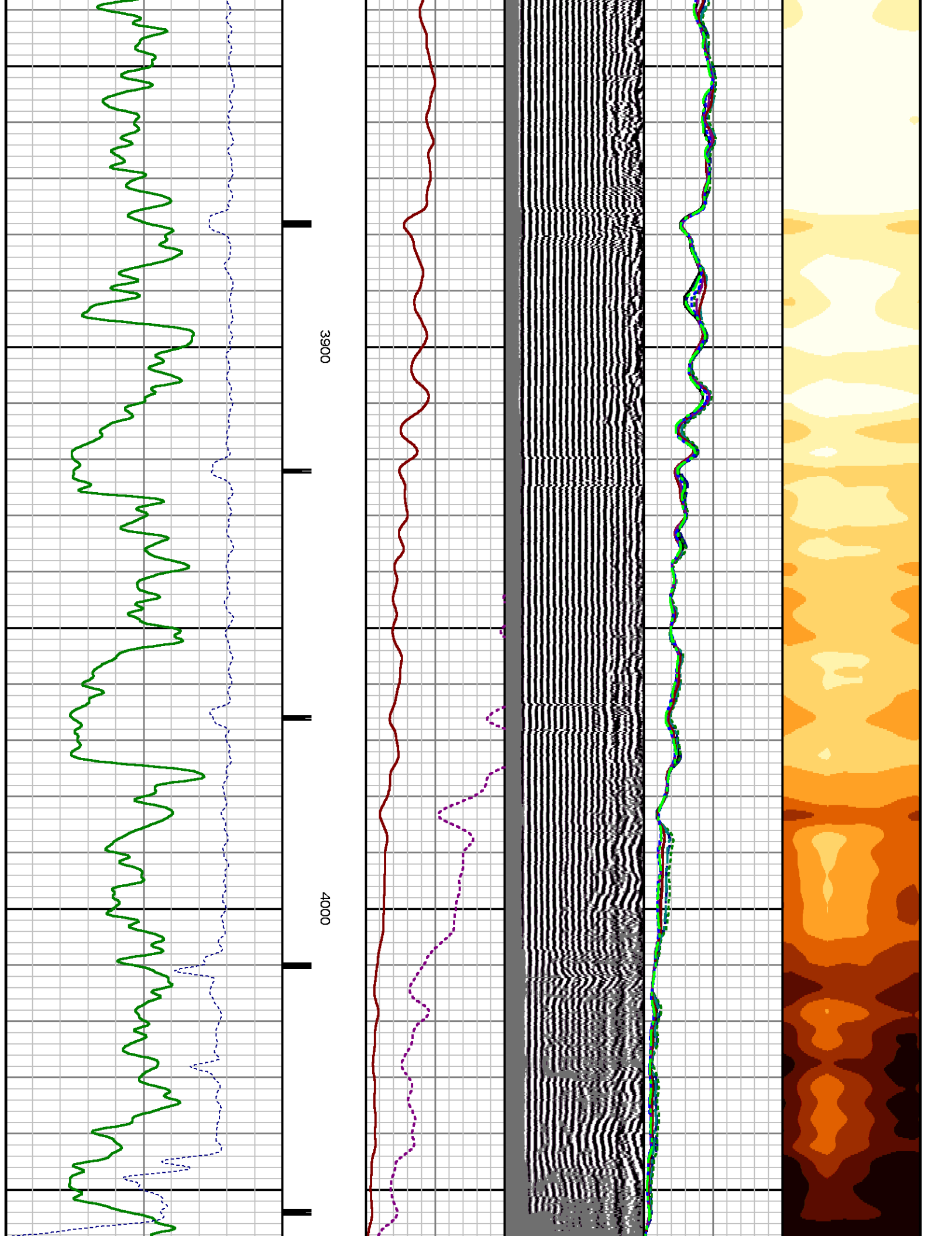
400

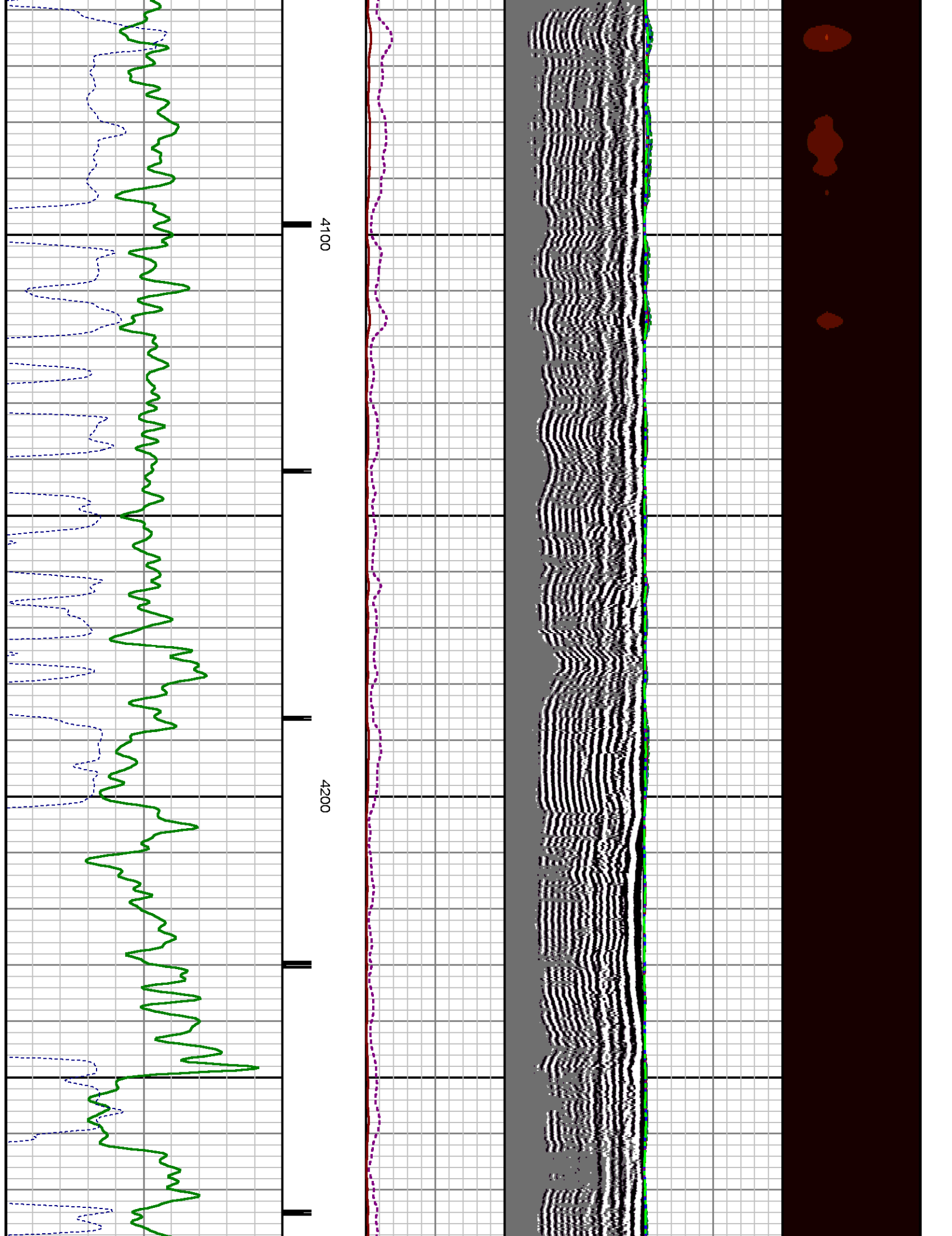
3500

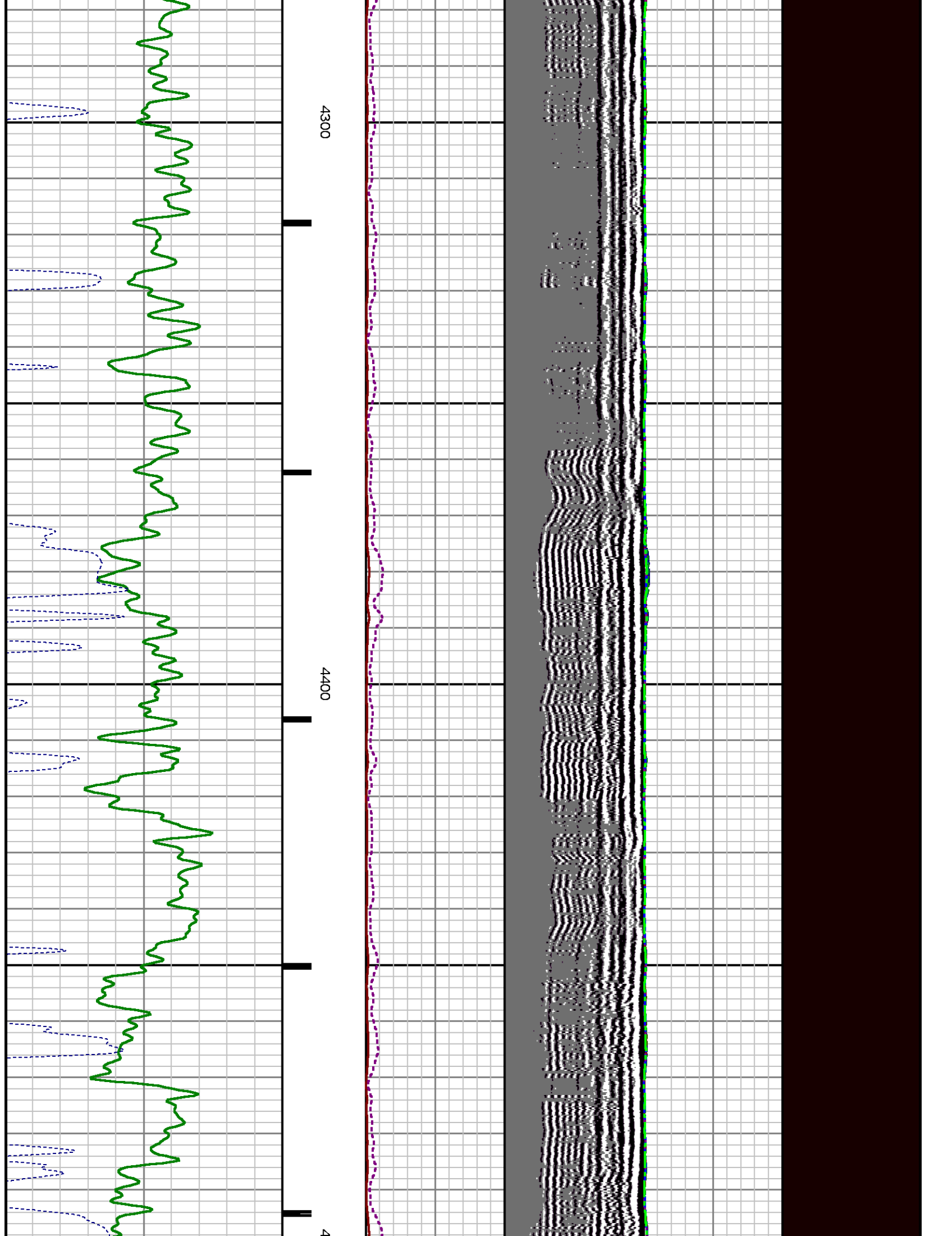
3600

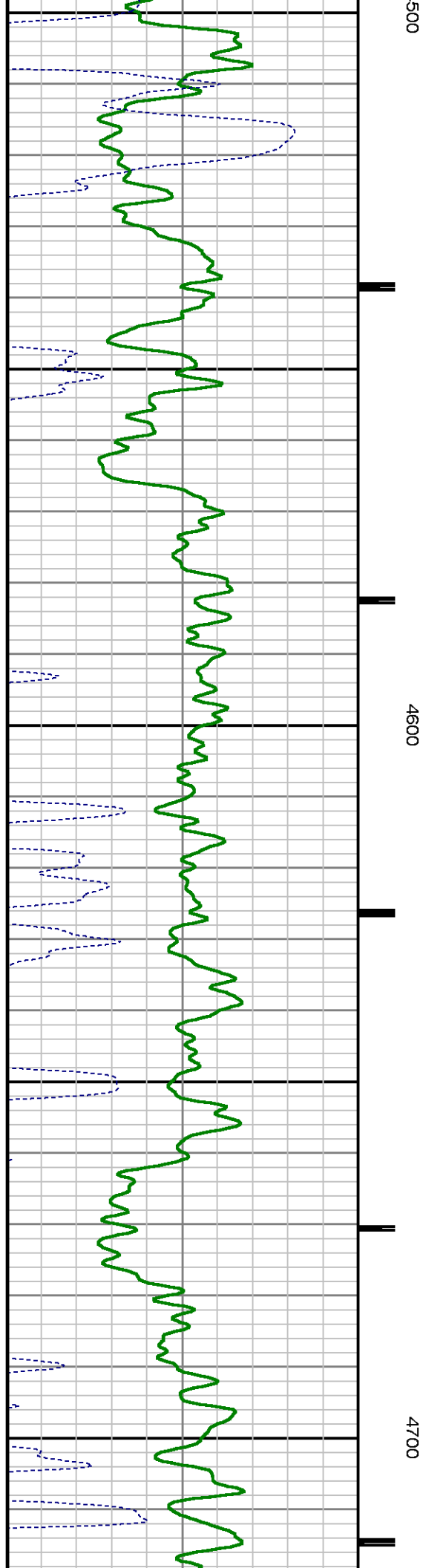
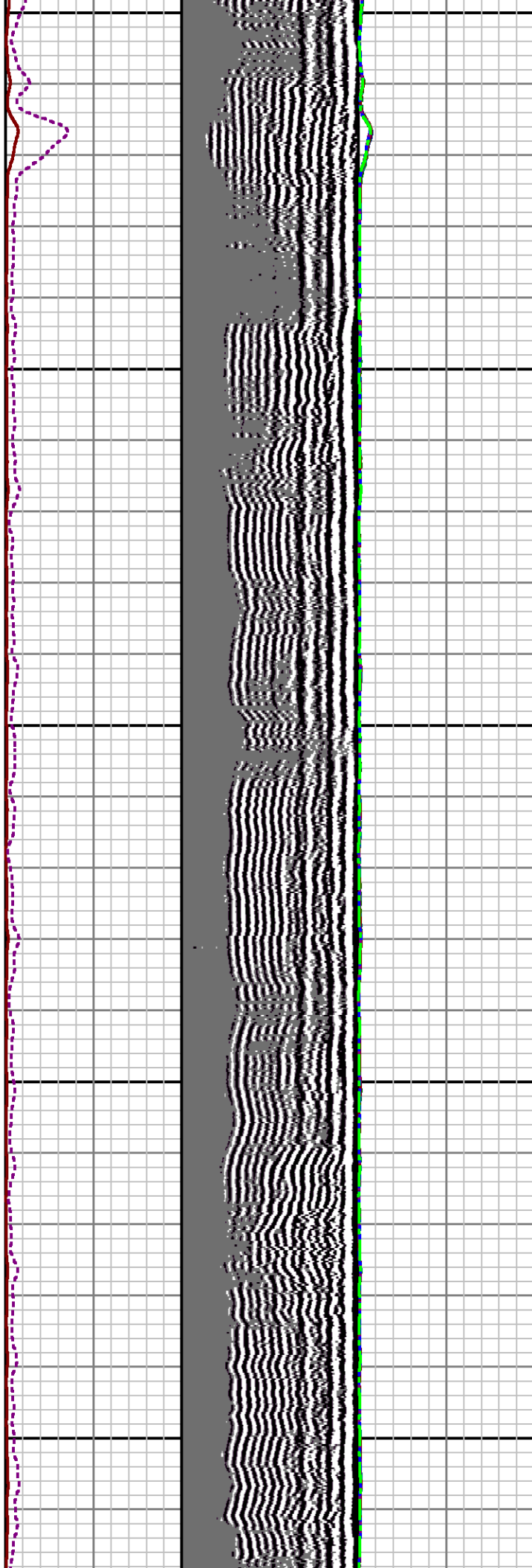


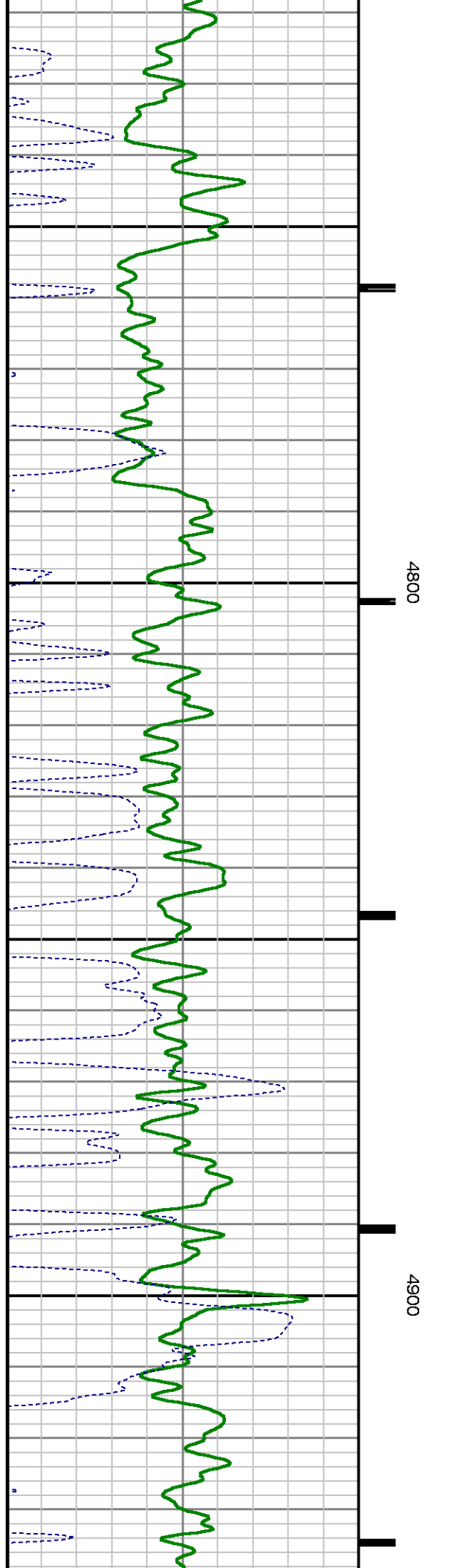
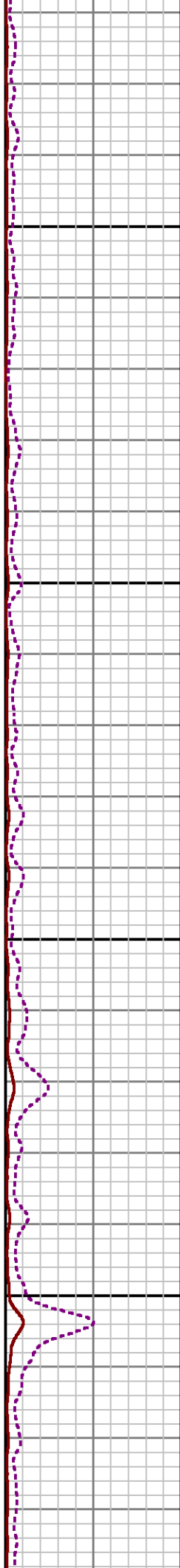
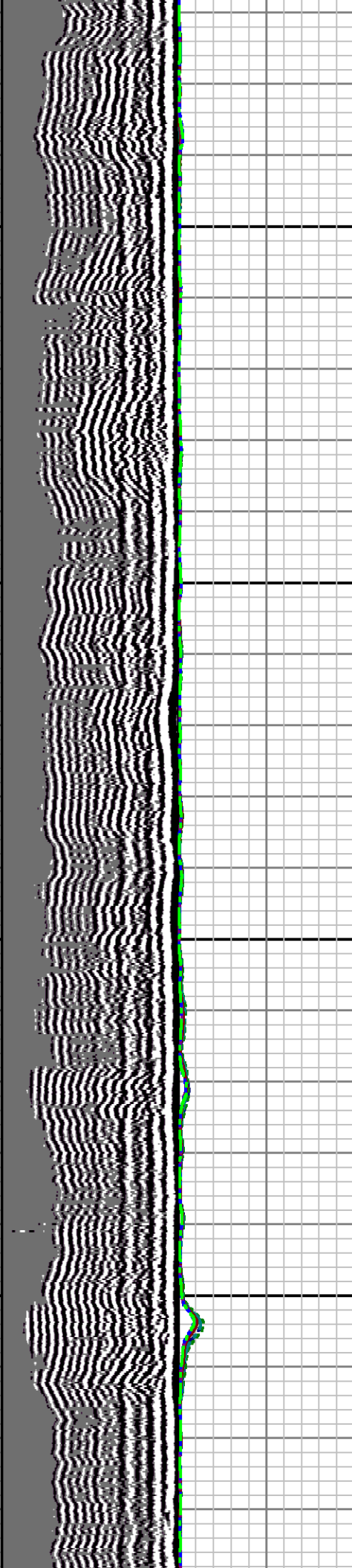


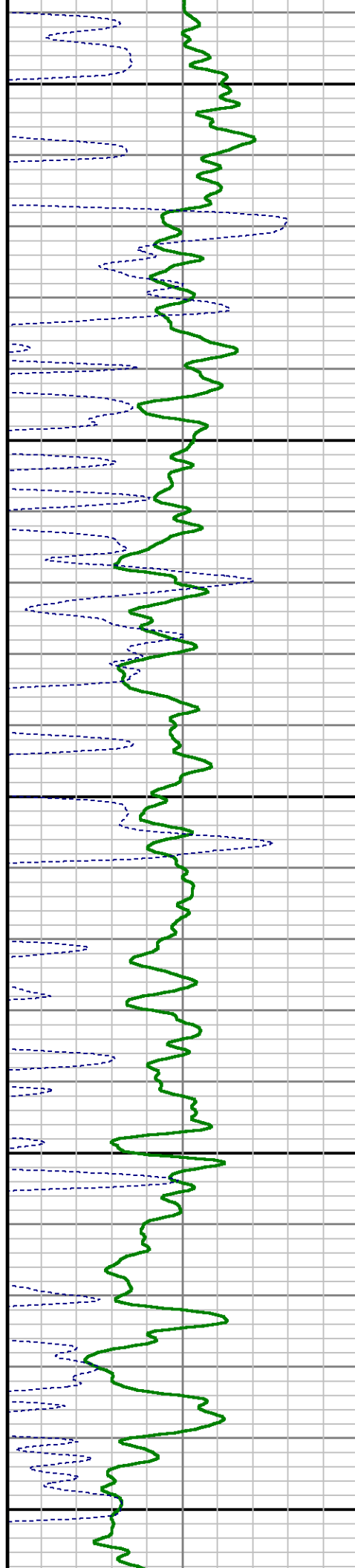
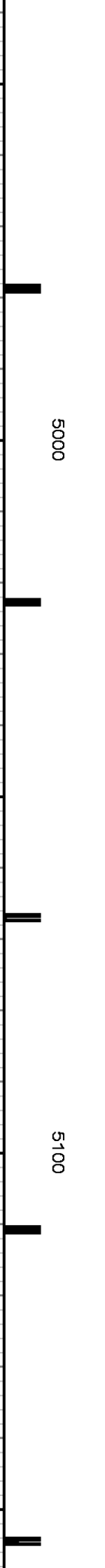
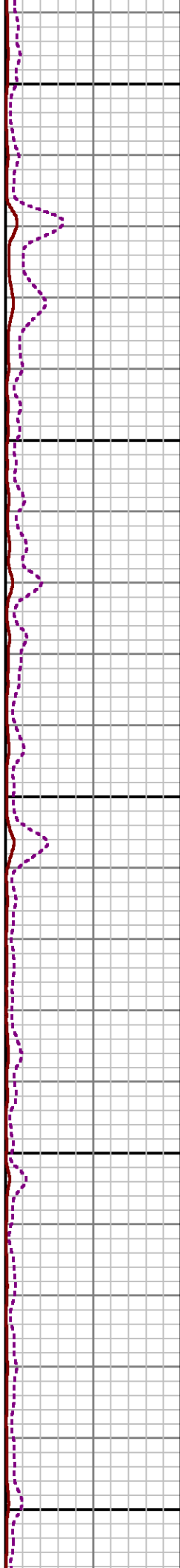
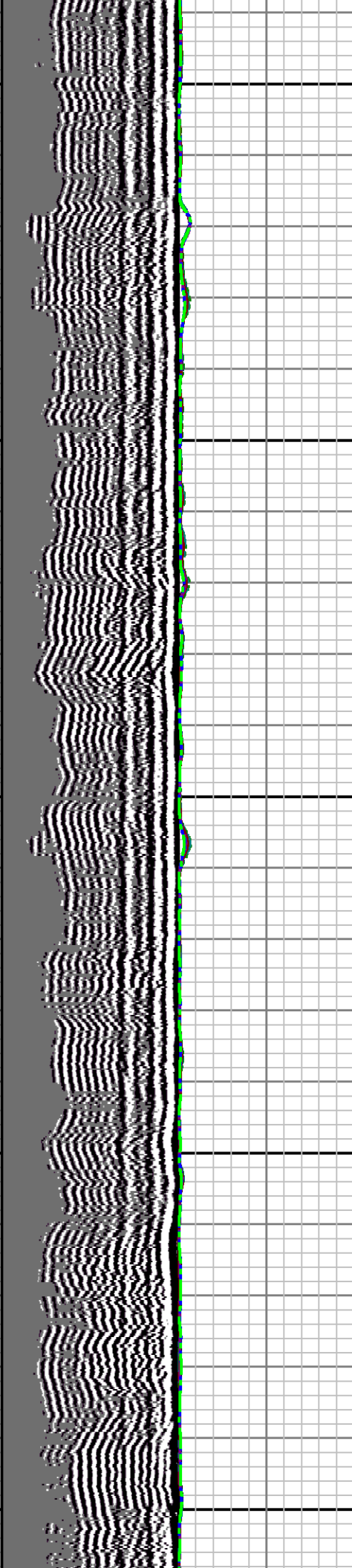
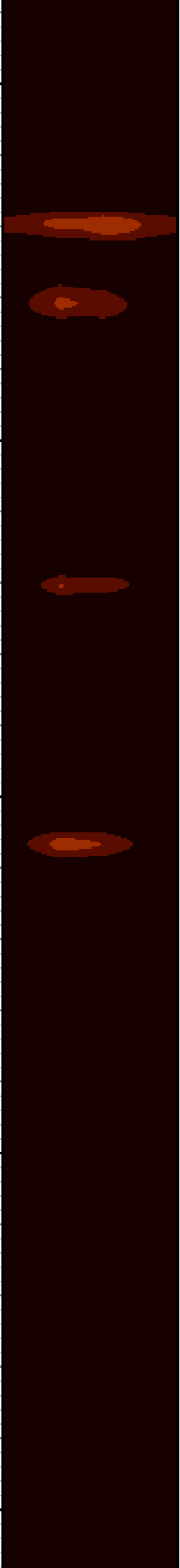


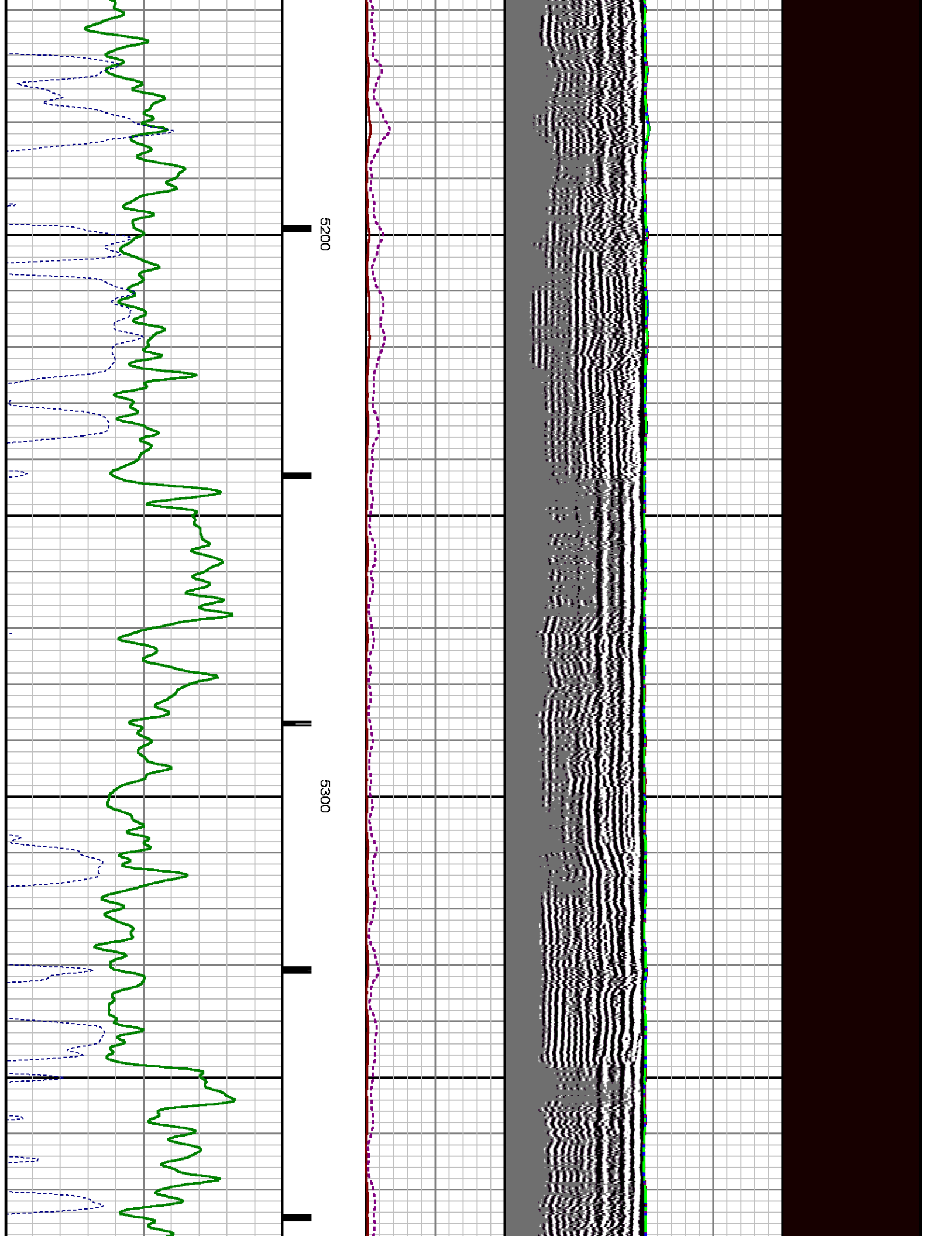


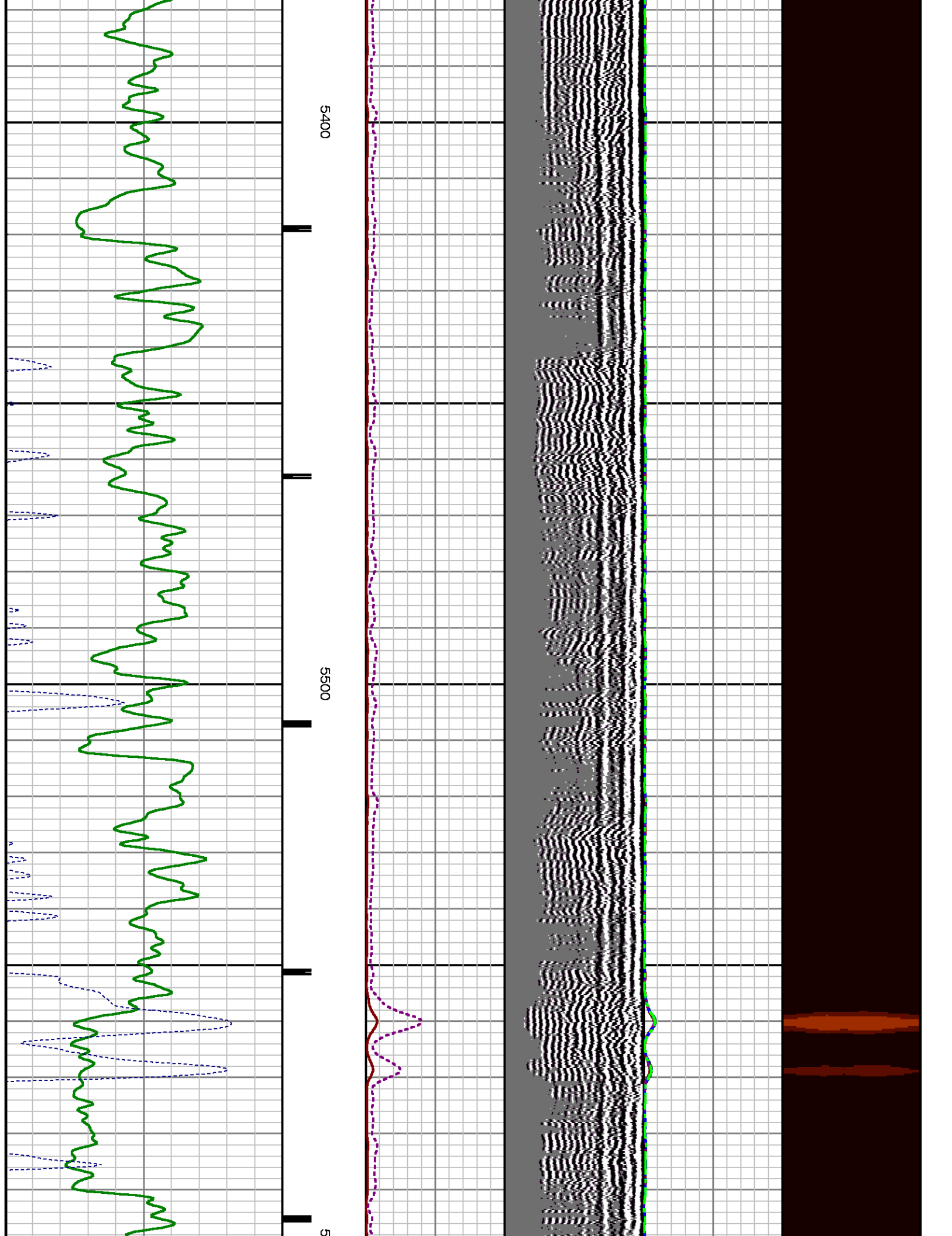


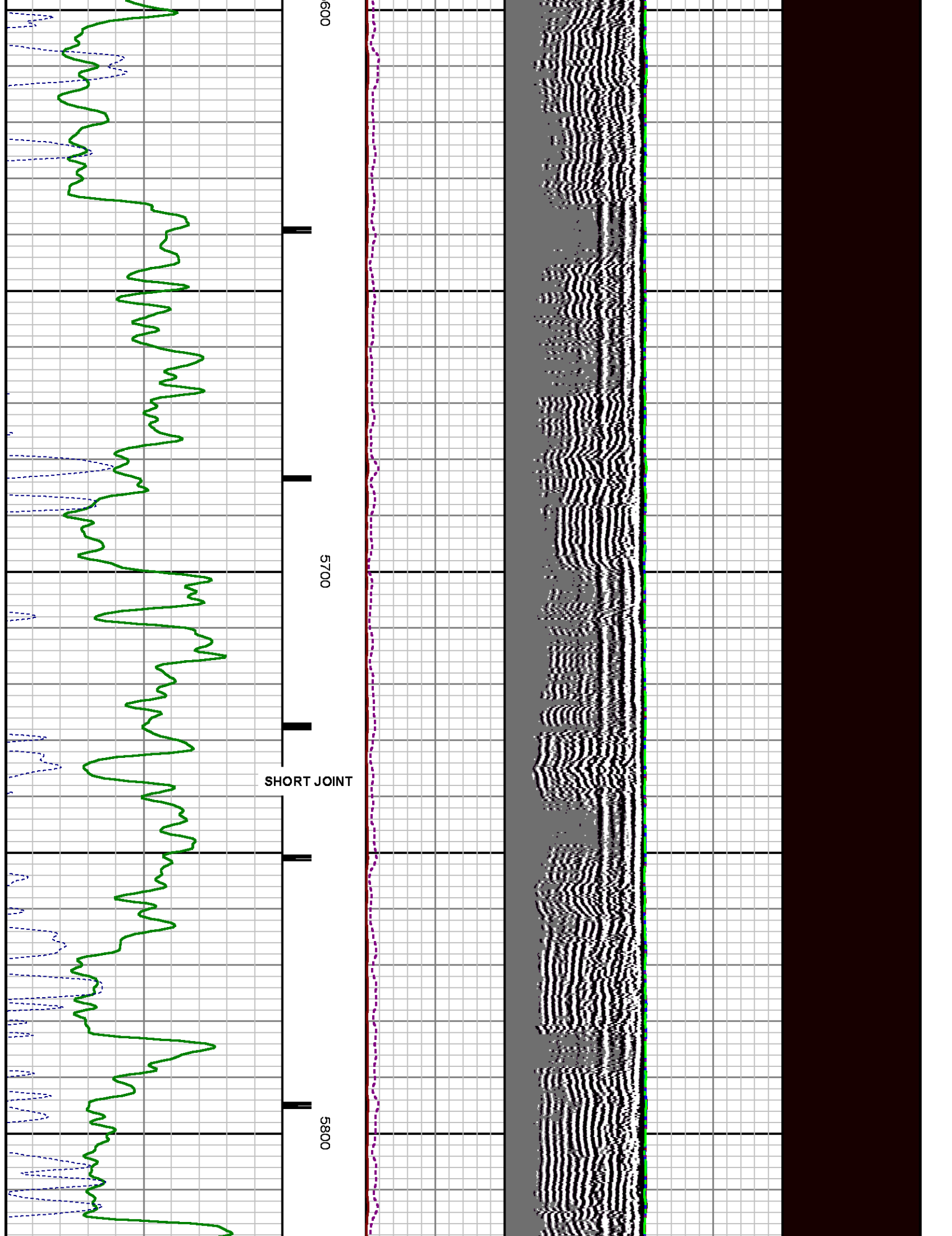


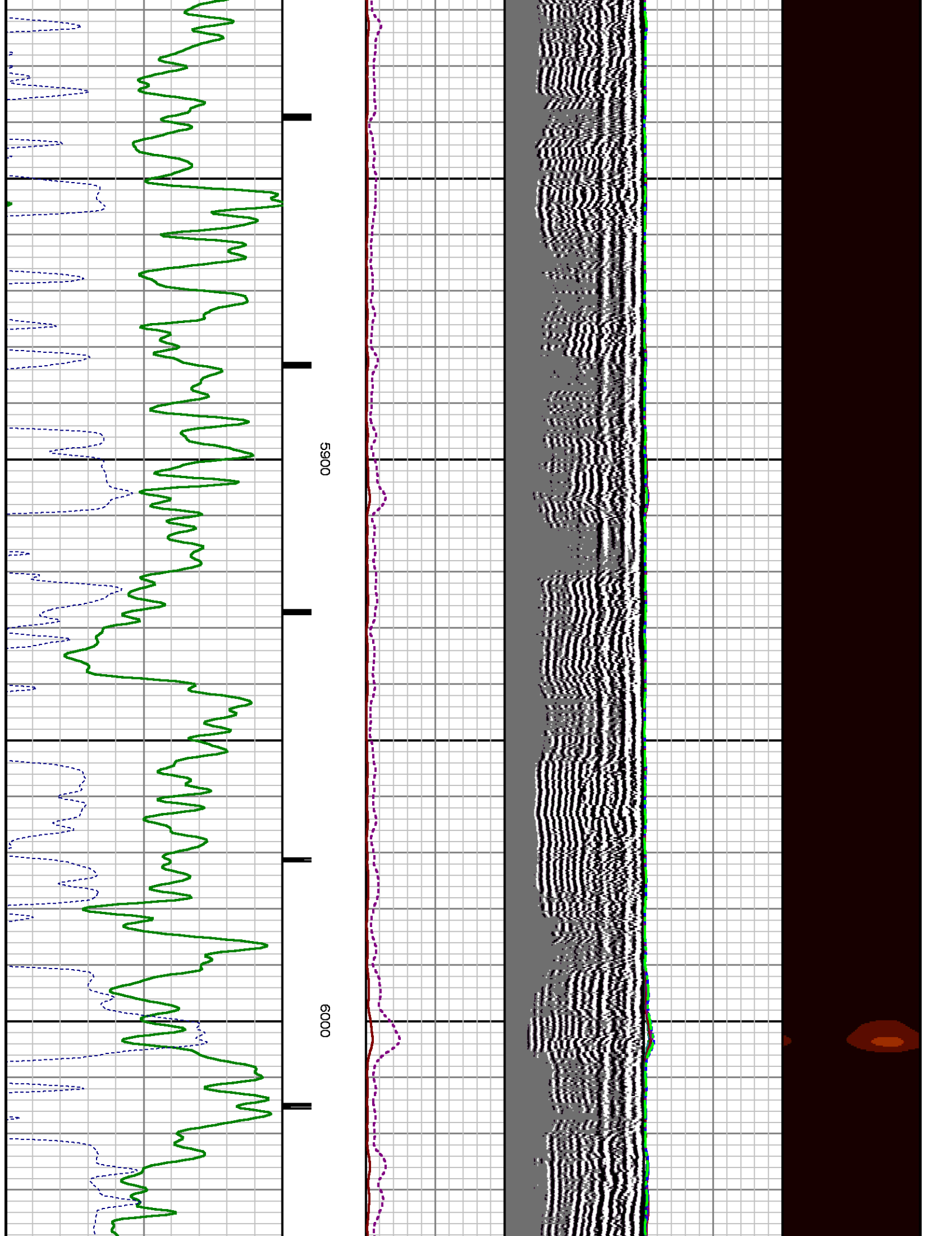


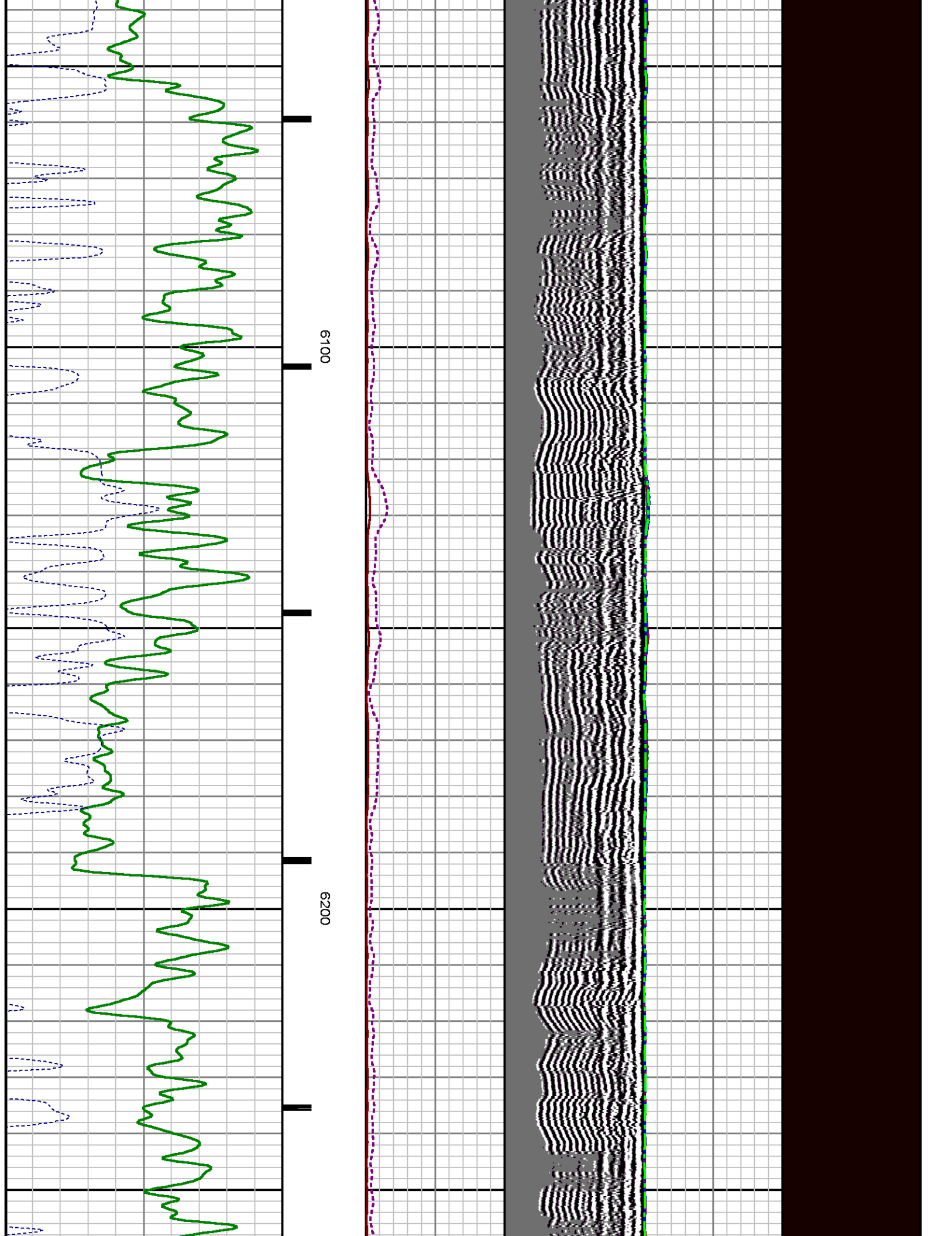


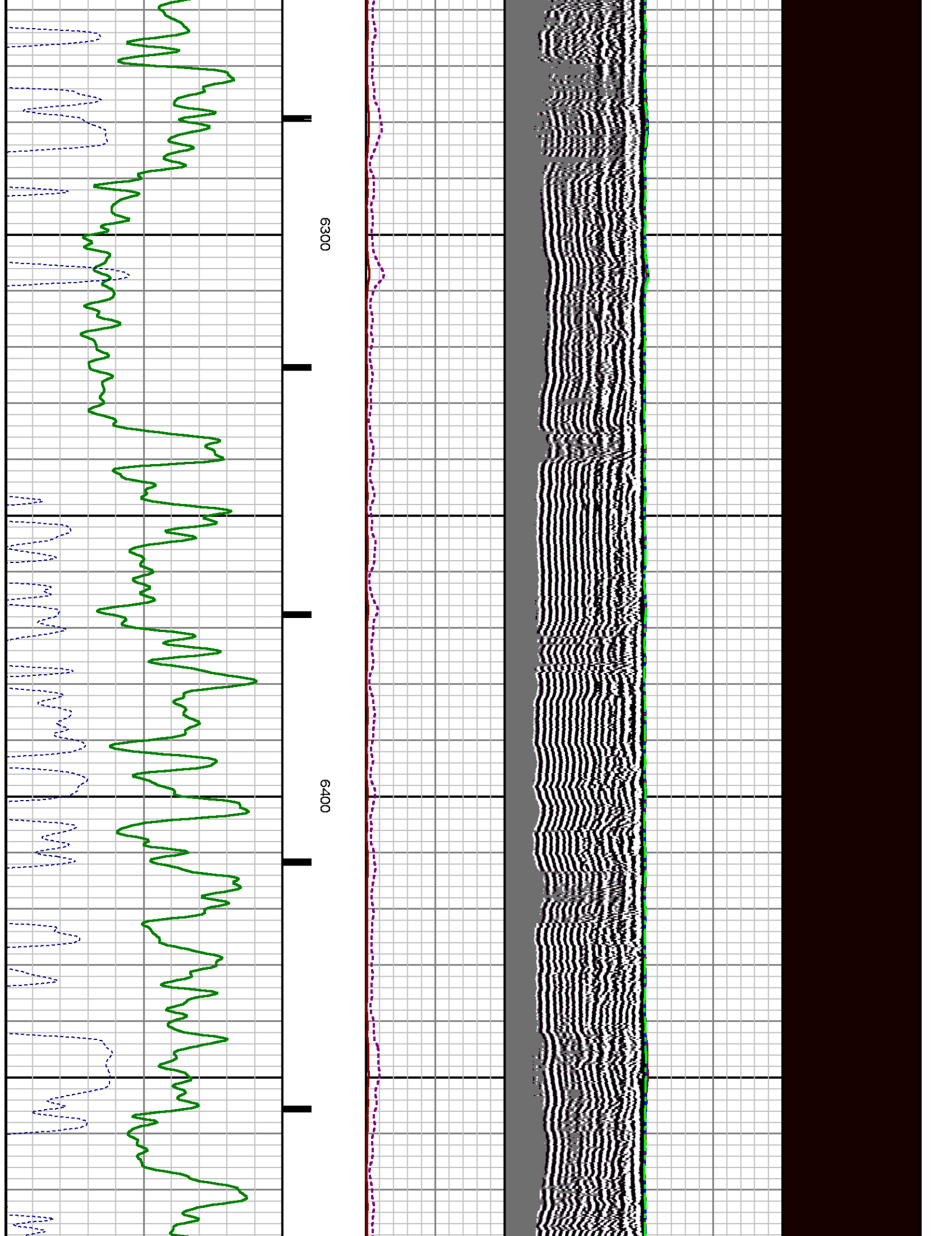


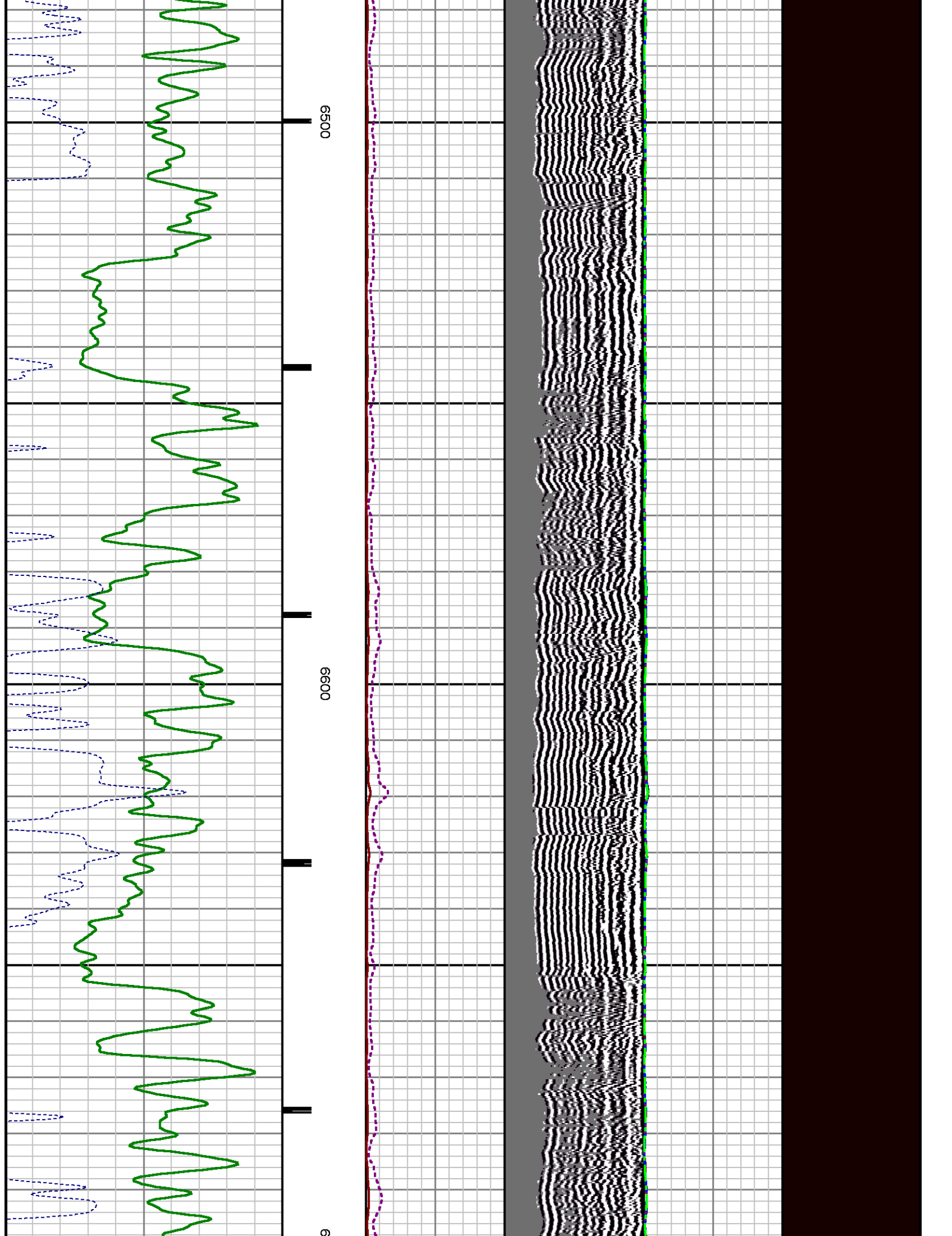


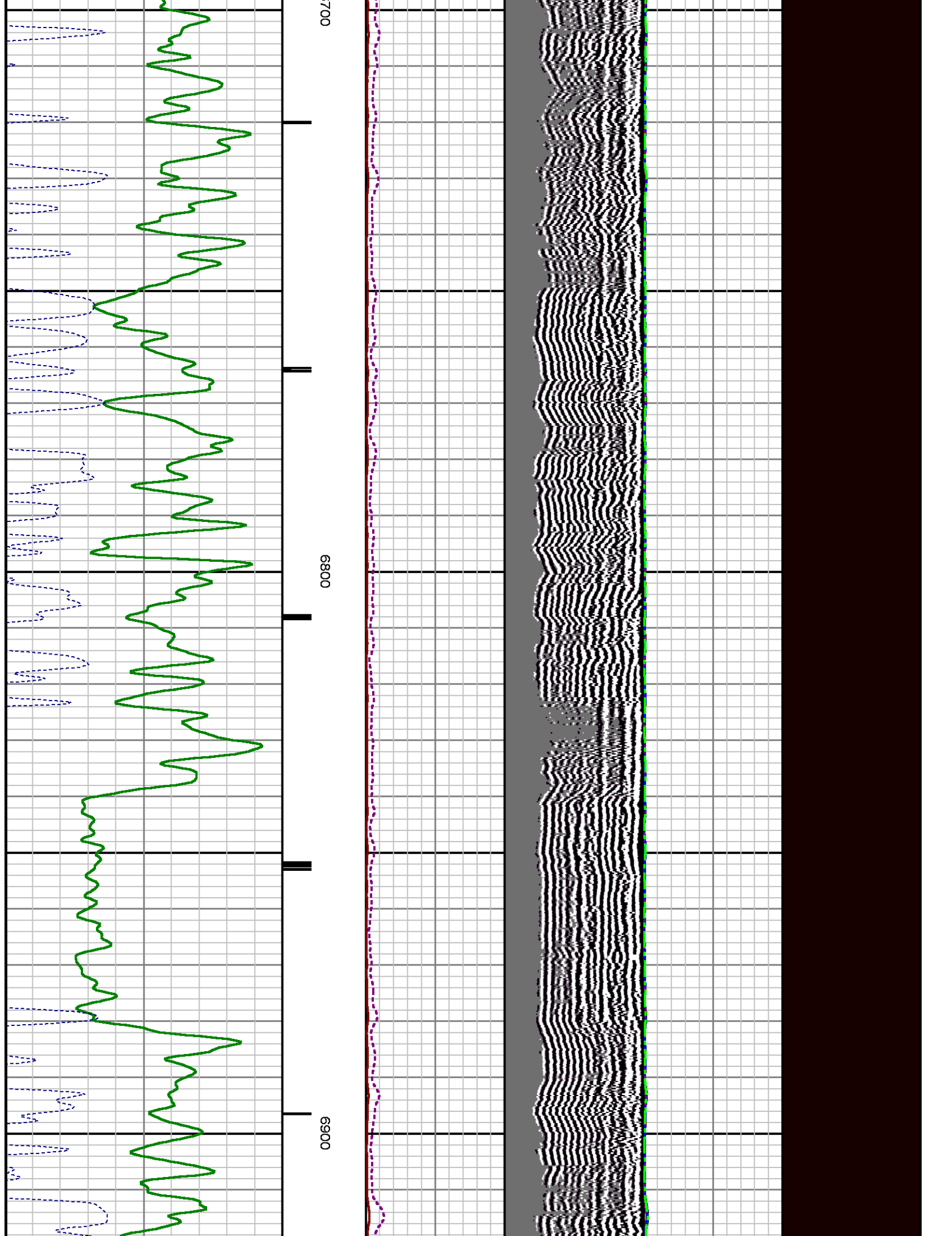


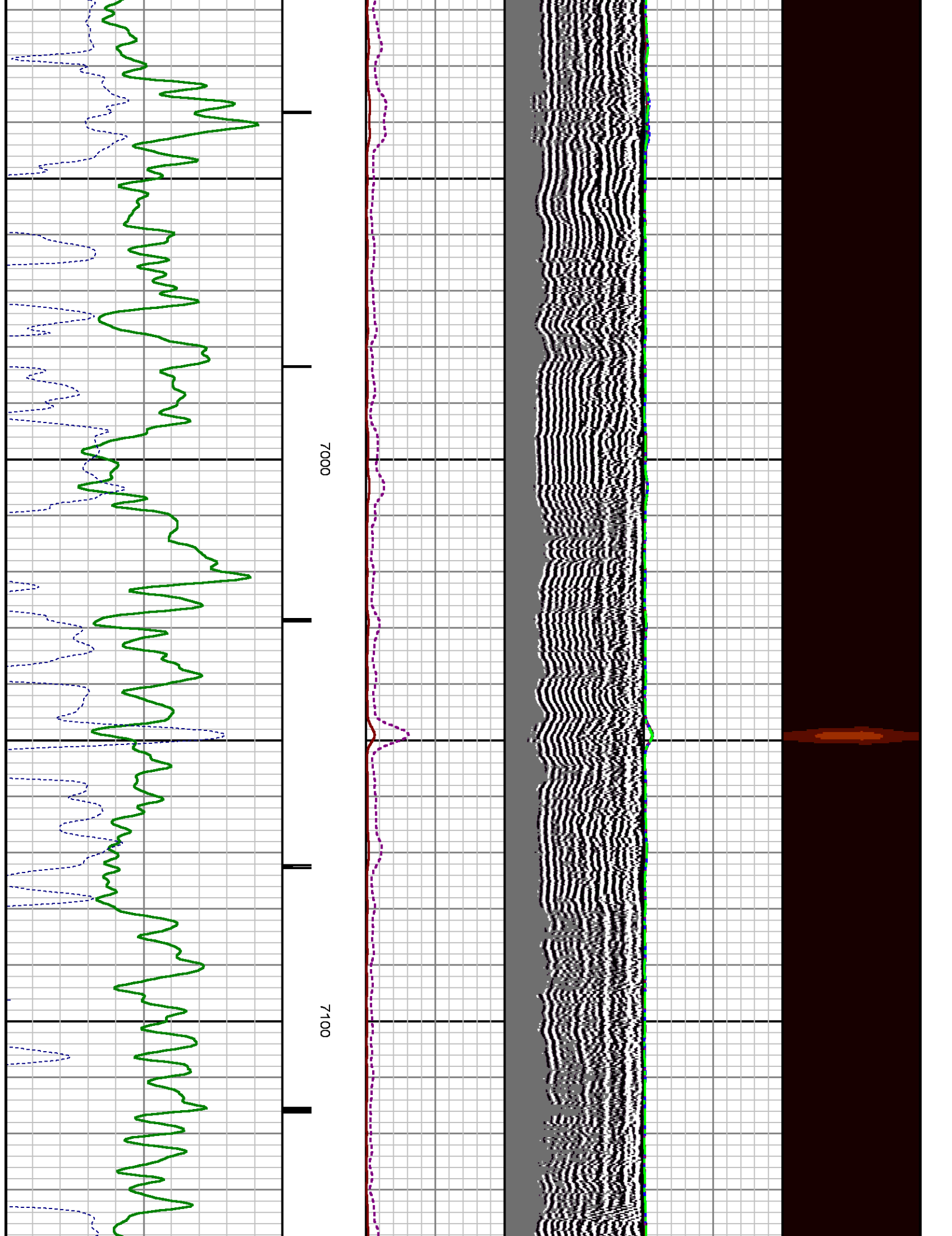


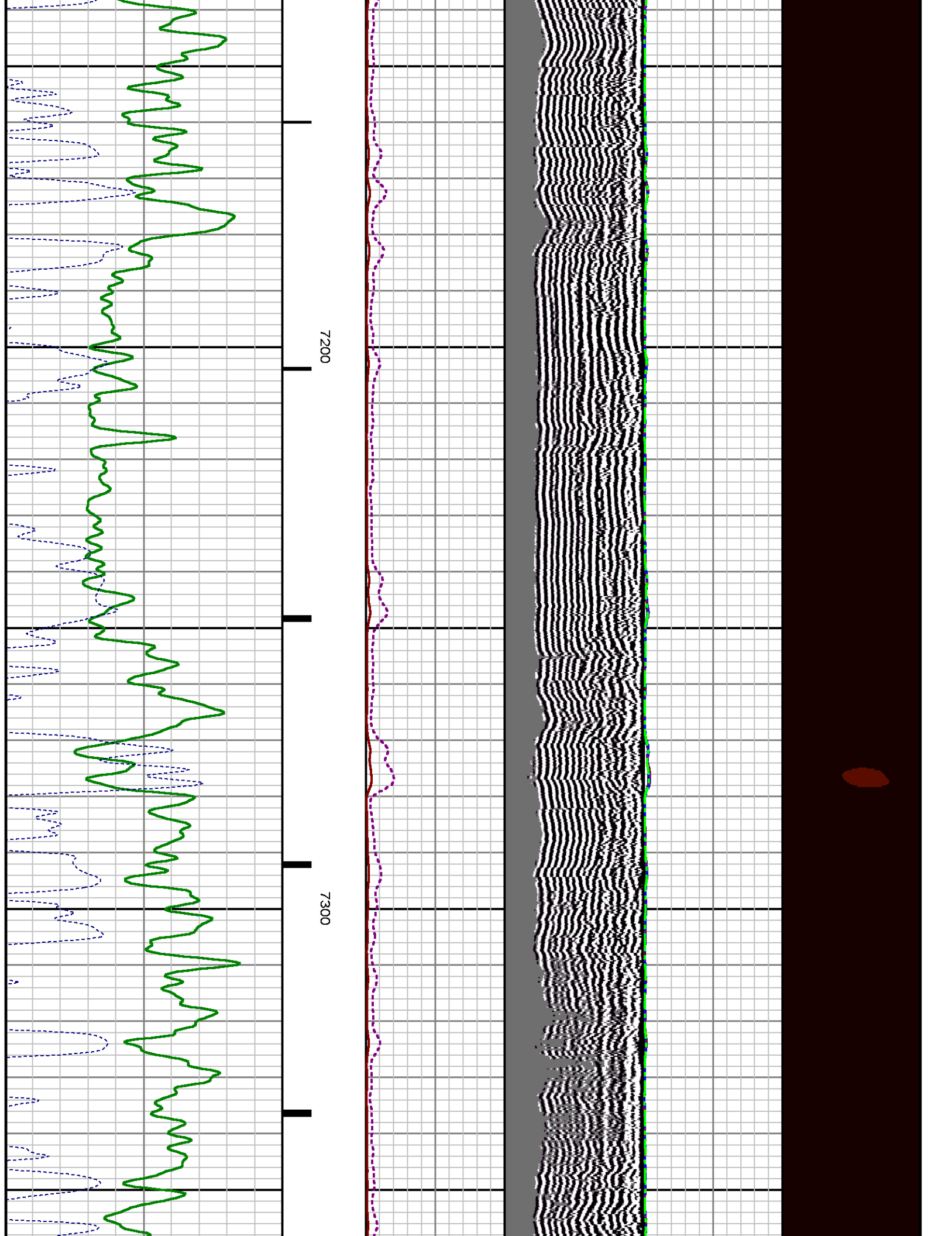


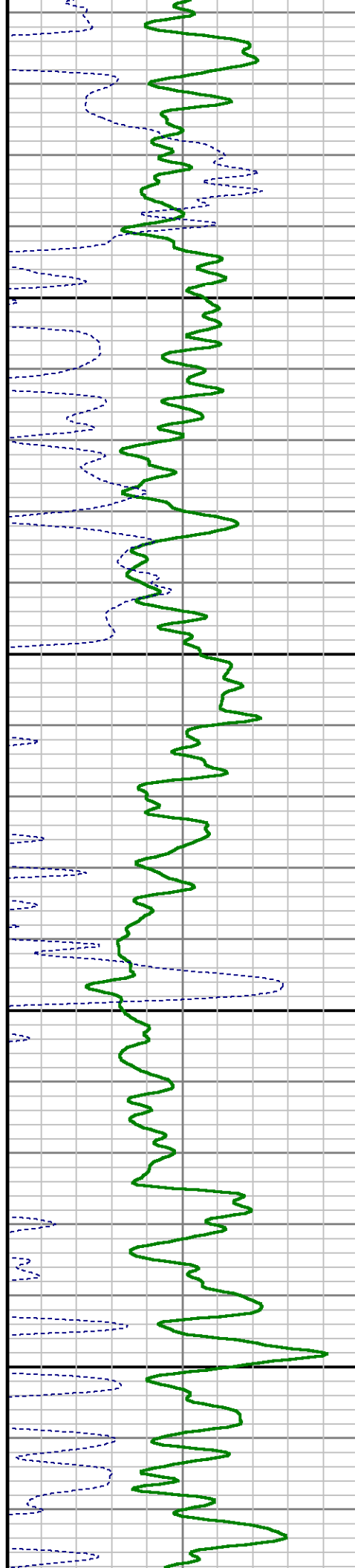
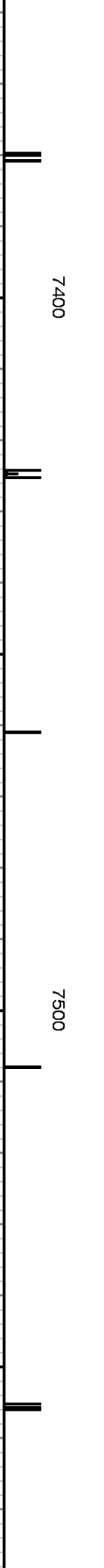
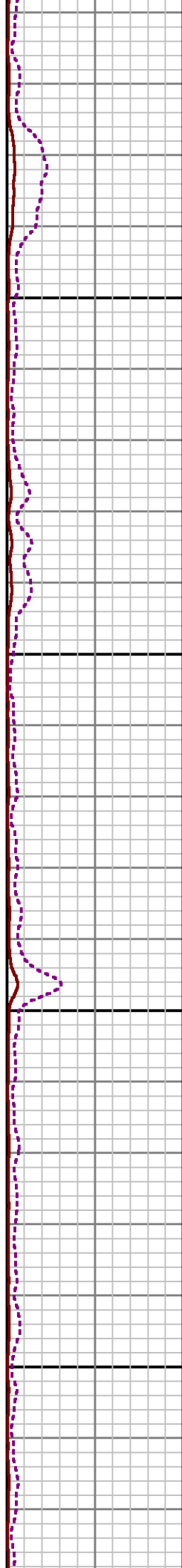
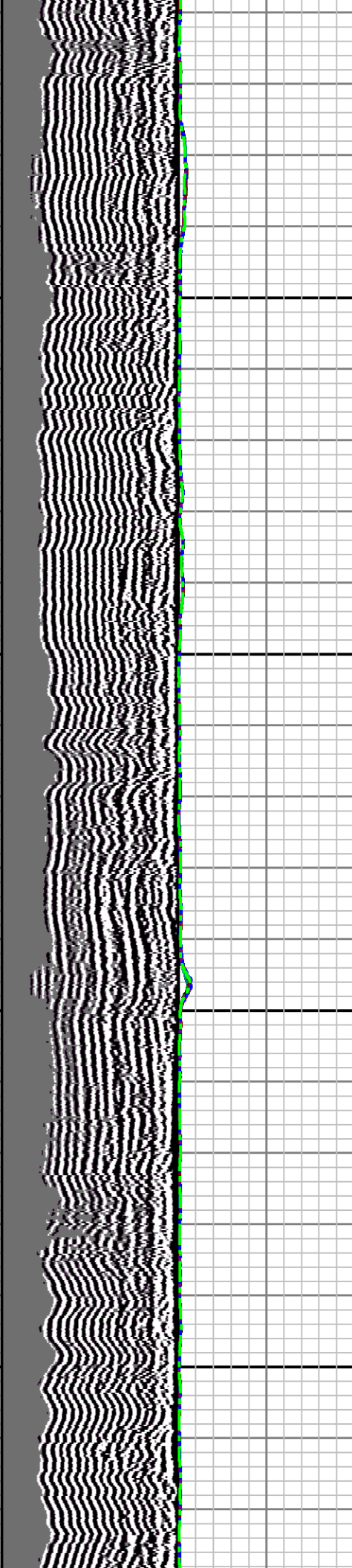


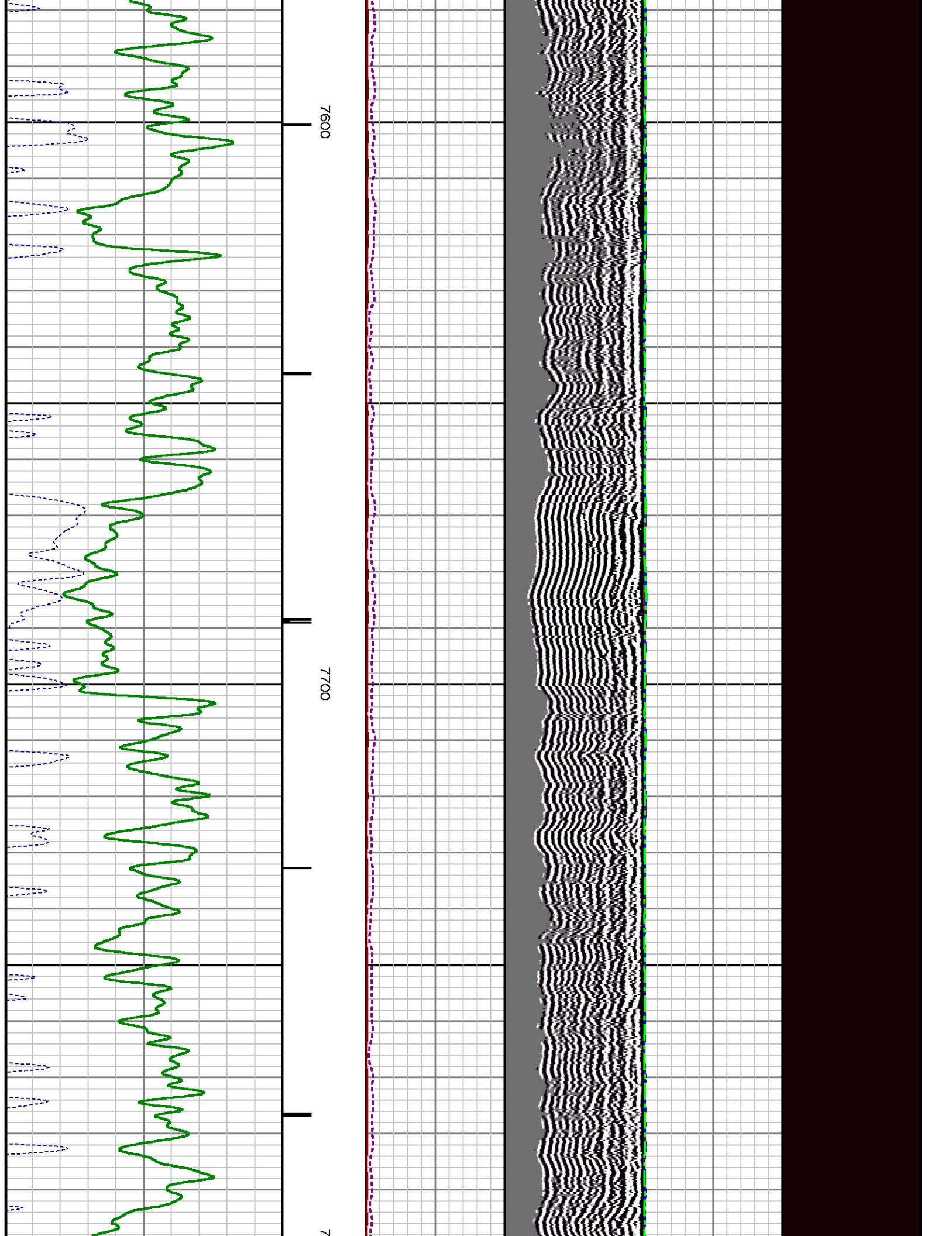


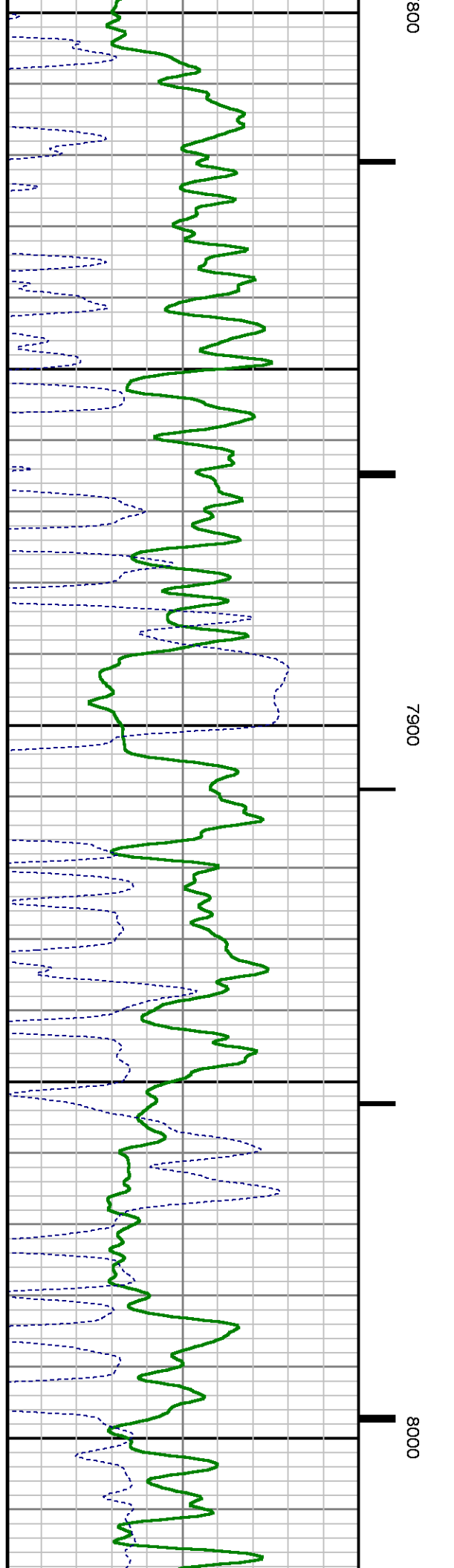
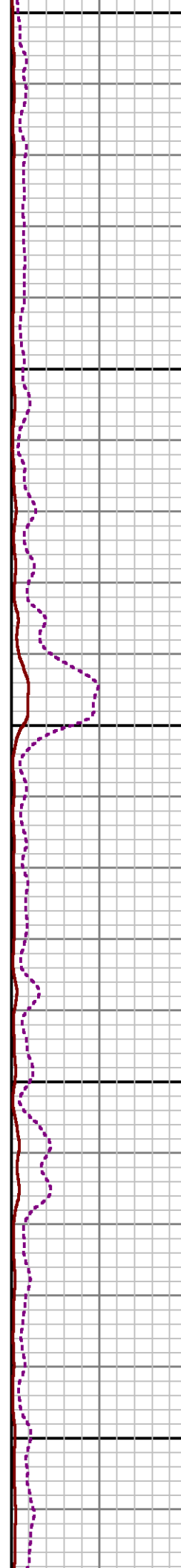
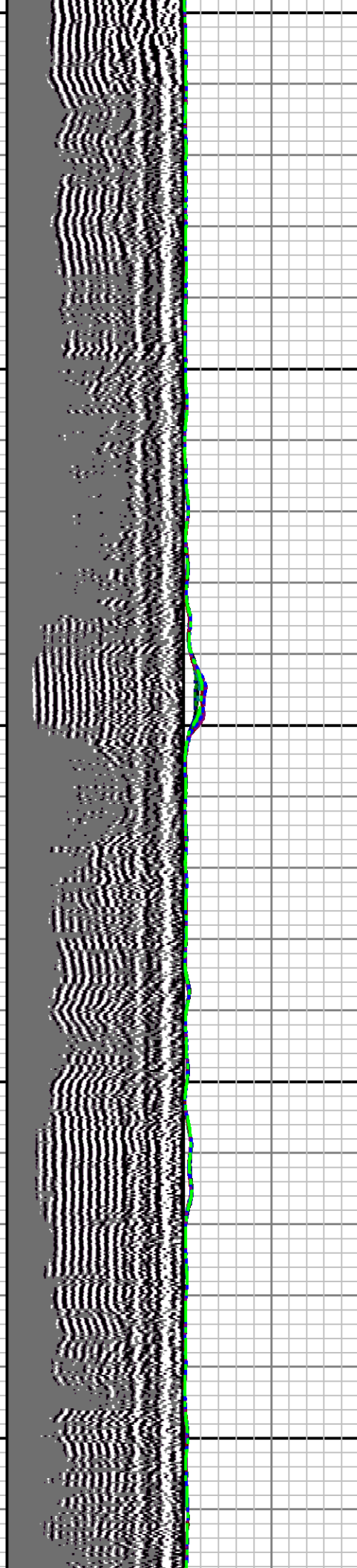


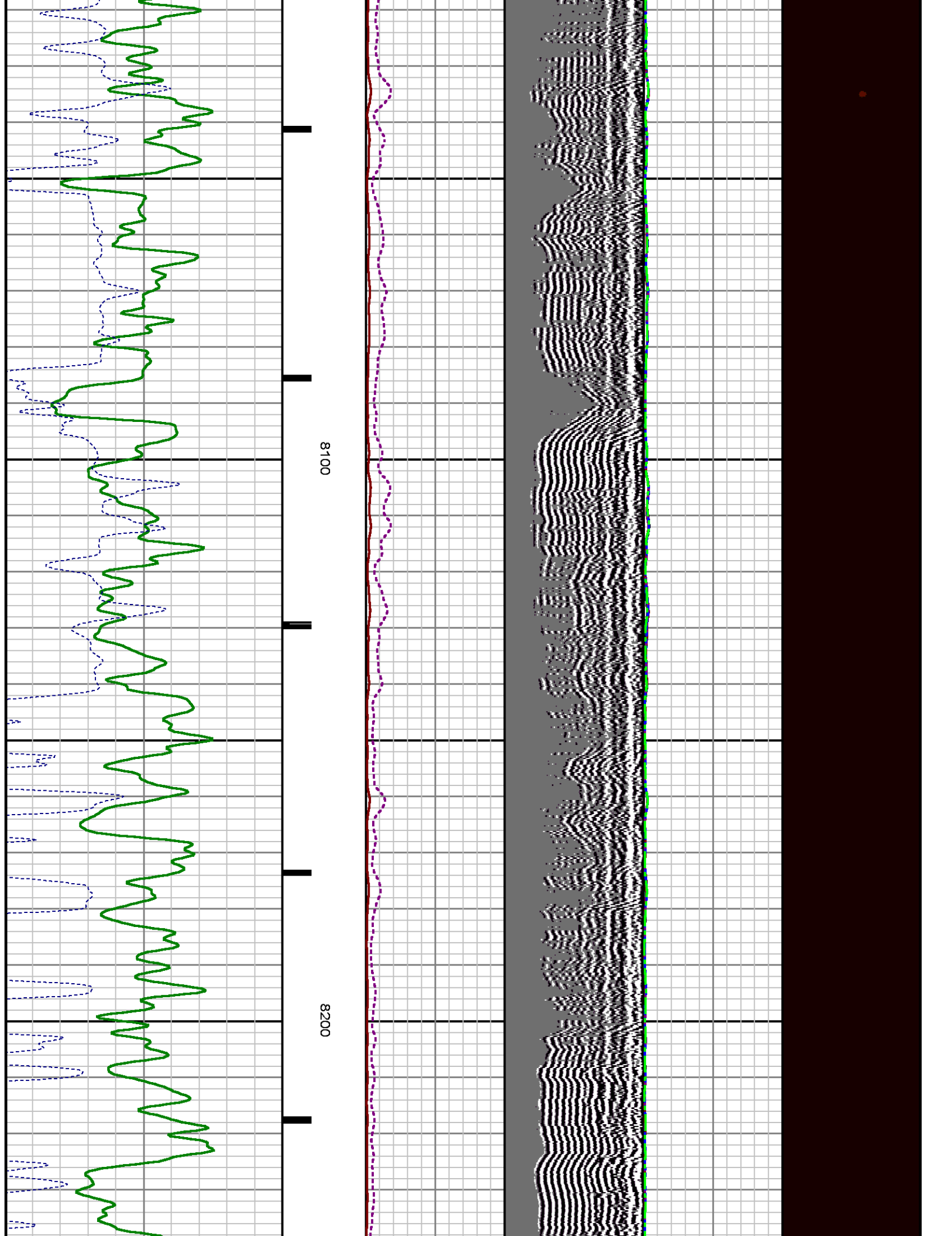




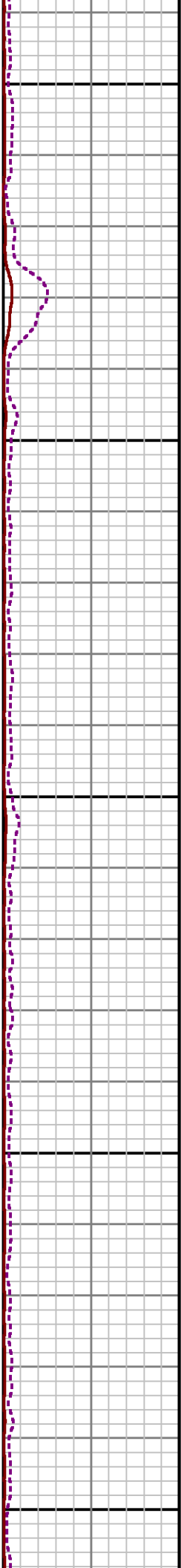
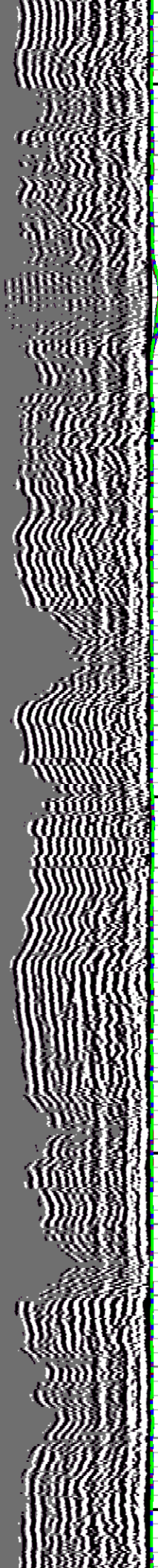






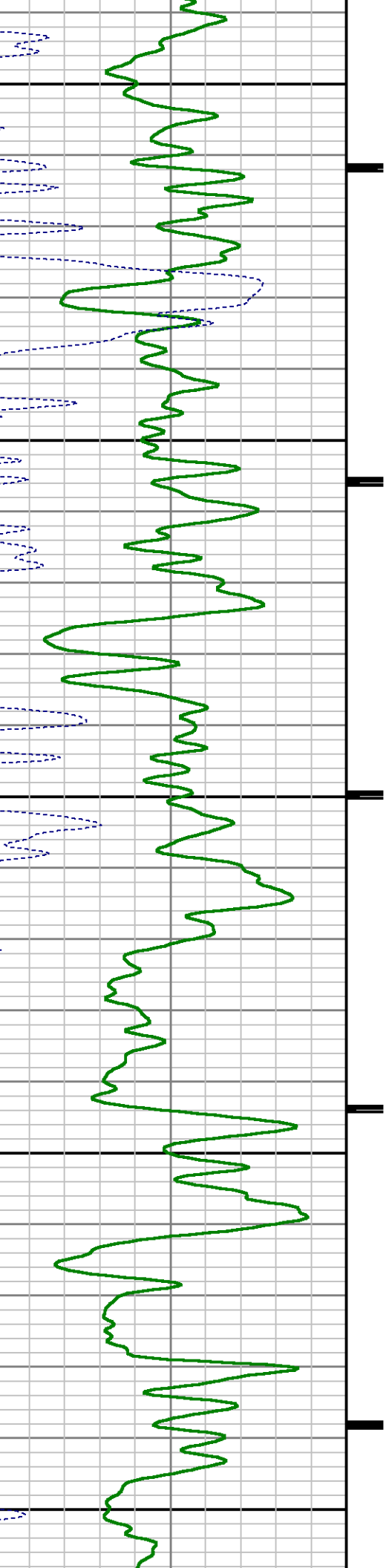


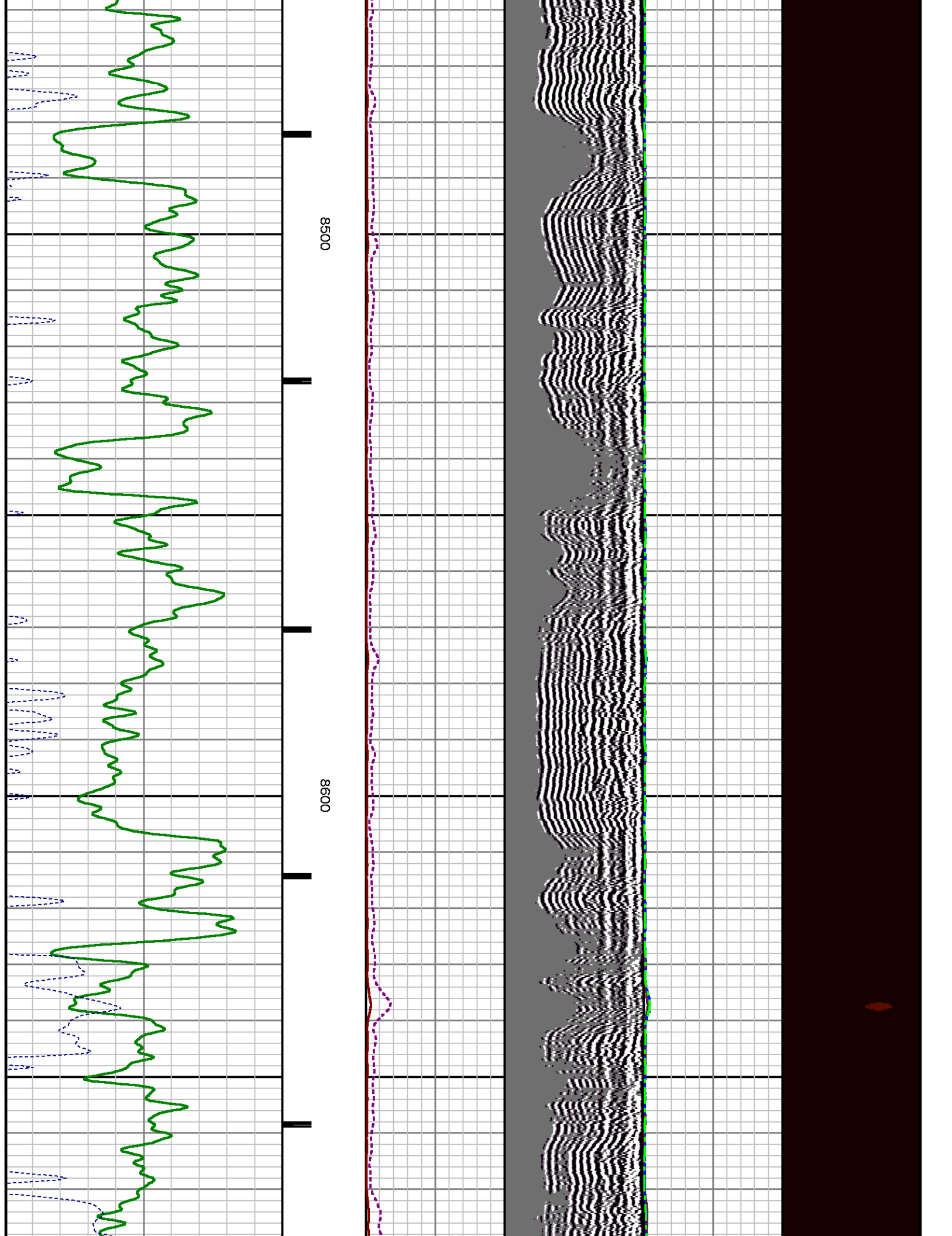
1

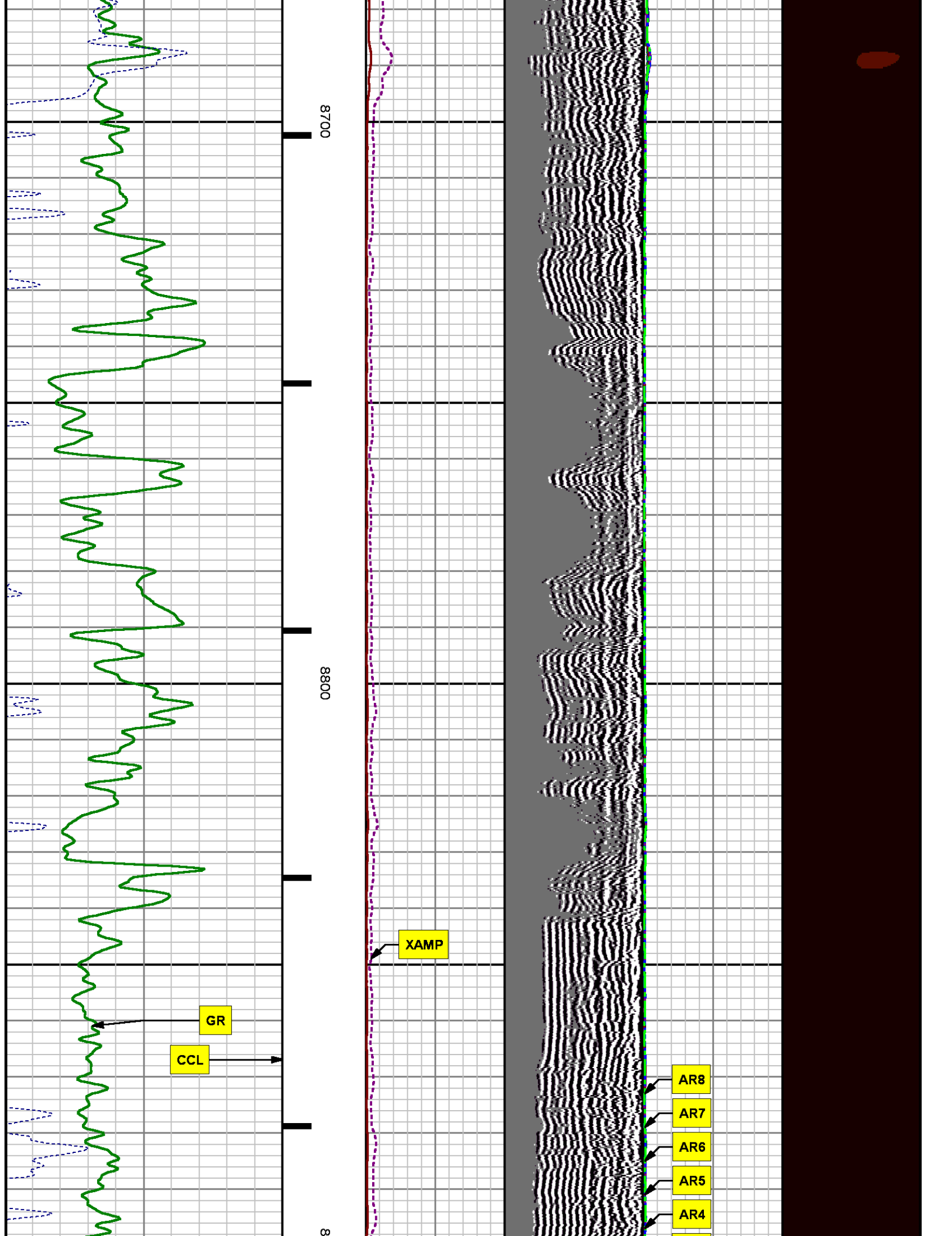


8300

8400

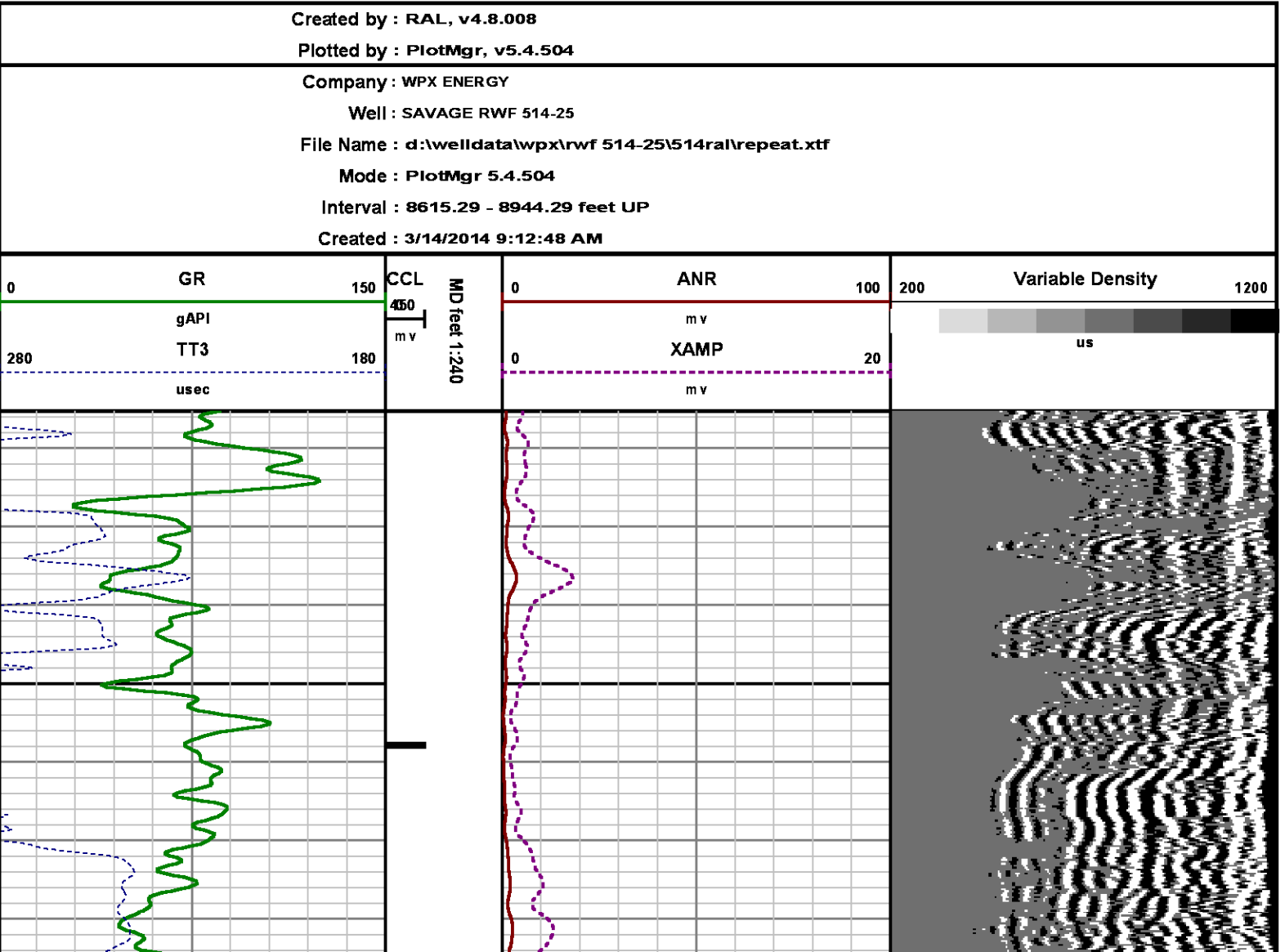


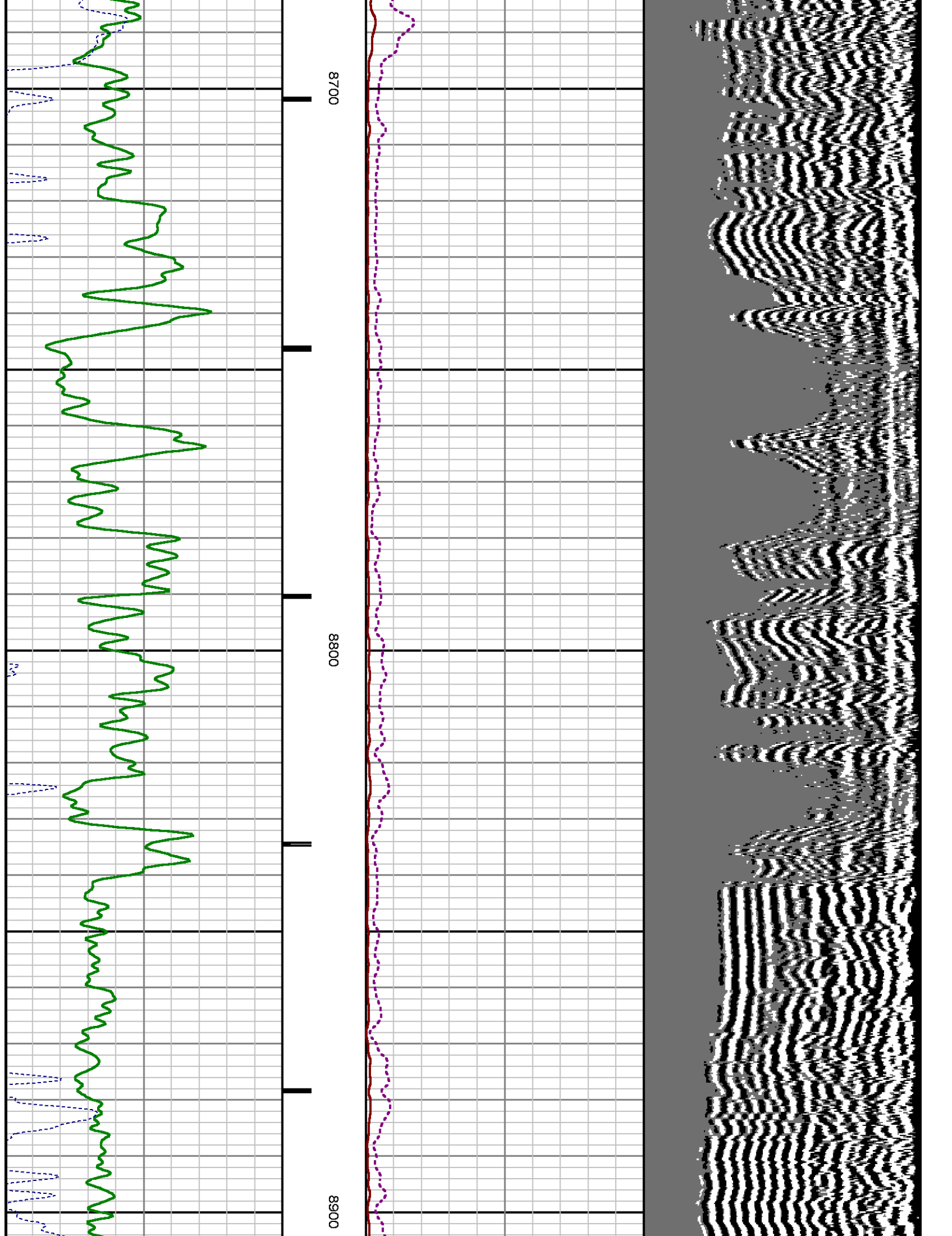


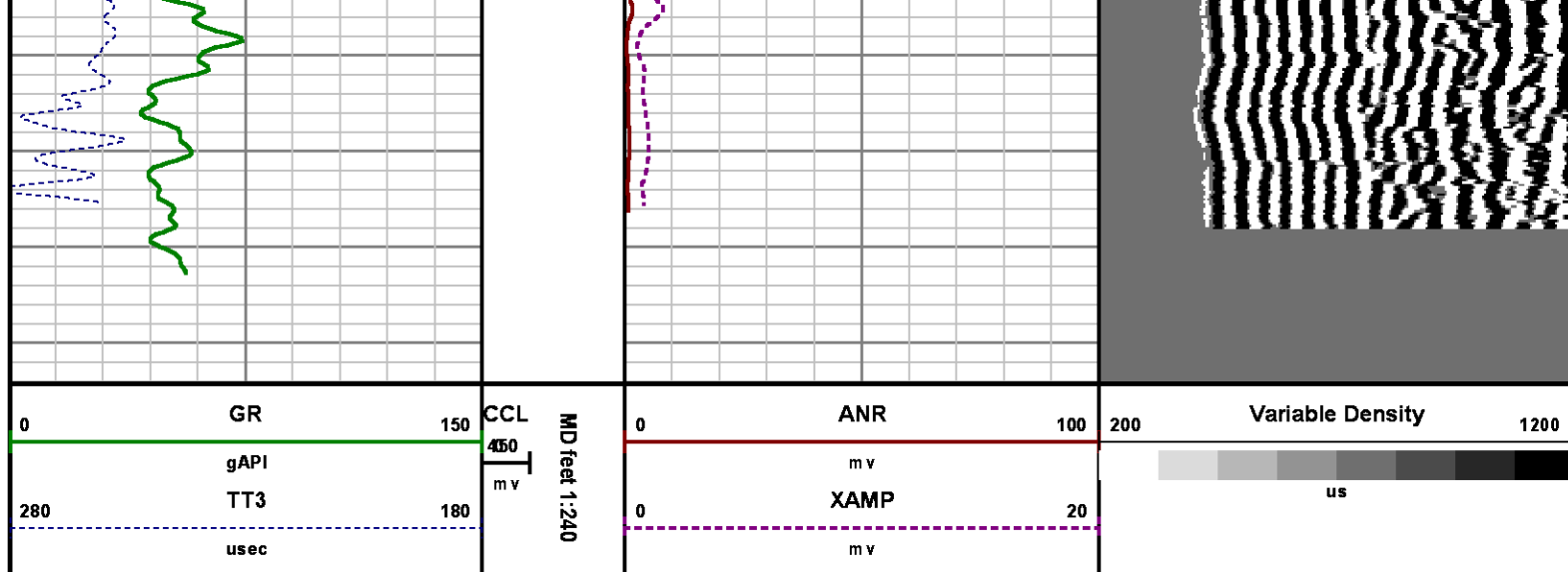


RAL	FB Thresh Near	4.000	mv	8615.040	8944.290
RAL	FB Thresh Radial	4.000	mv	8615.040	8944.290
RAL	Fluid Travel Time	200.000	usec/ft	8615.040	8943.977

DEPTH OFFSETS						
(for Acquired Curves)						
SERIES	DEPTH OFFSET	ACQUIRED CURVES				
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3
		AR5	AR6	AR7	AR8	CHV
		FPR3	FPR5	TT3	TTR1	TTR2
		TTR4	TTR5	TTR6	TTR7	TTR8
						XAMP
1426XA	-15.750	AFAR	SIG	TT5		
2459XA	-11.340	CCL				
2459XA	-9.490	GR				
2459XA	-4.090	NEU				







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\028M14_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Mar 14 11:38:47 2014 TOOL SERIES: 1426XA ASSET: 028 SEQ: M14

Tool Delay [u sec] -56.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [u sec]	Amp. Gate Start [u sec]	Amp. Gate Width [u sec]	Zero Gate Start [u sec]	Zero Gate Width [u sec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	0.367	100.00	0.16
3 Ft. Receiver	218	216	30	192	8	0.829	100.00	0.16
5 Ft. Receiver	326	325	30	212	25	0.613	150.00	0.18
Radial #1	218	216	30	188	11	-1.008	100.00	0.16
Radial #2	218	216	30	188	11	2.710	100.00	0.16
Radial #3	218	216	30	188	11	1.702	100.00	0.16
Radial #4	218	216	30	188	11	1.700	100.00	0.16
Radial #5	218	216	30	188	11	0.777	100.00	0.16
Radial #6	217	216	30	188	11	0.425	100.00	0.16
Radial #7	217	216	30	188	11	0.417	100.00	0.16
Radial #8	218	216	30	188	11	2.815	100.00	0.16

RAI FID

Wellsite Calibration: C:\case\calver\RAILED\028M14_fid.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Mar 14 11:40:40 2014 TOOL SERIES: 1426XA ASSET: 028 SEQ: M14

Tool Delay [usec] -56.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.057	0.000	1.00	100.000
3 Ft. Receiver	195	25	-0.082			
5 Ft. Receiver	305	25	-0.549			
Radial #1	195	25	-0.138			
Radial #2	195	25	-0.030			
Radial #3	195	25	0.043			
Radial #4	195	25	-0.055			
Radial #5	195	25	-0.088			
Radial #6	195	25	-0.138			
Radial #7	195	25	-0.073			
Radial #8	195	25	-0.040			

GAMMA RAY

Calibration File: C:\case\calver\GRV1012412122.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Feb 22 12:18:15 2014 TOOL SERIES: 2459XA ASSET: 10124121 SEQ: 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	36.22	291.56	0.725	26.24	211.24	185.00

Verification File: C:\case\calver\GRV1012412122.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Feb 22 12:19:23 2014 TOOL SERIES: 2459XA ASSET: 10124121 SEQ: 22

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	41.96	293.60	0.725	30.40	212.73	182.33

TOOL DIAGRAM

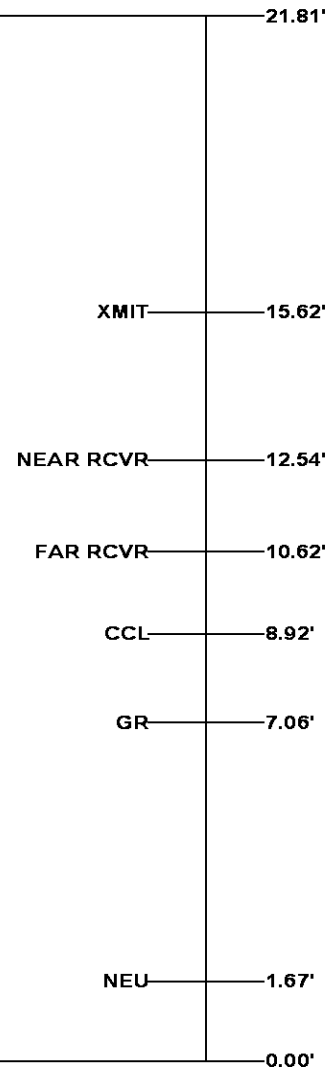
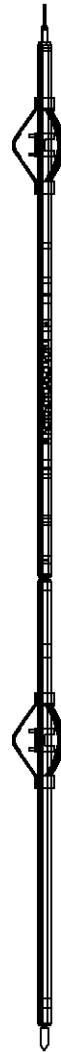
OTA SHORT CABLE HEAD**PROBE 2 3/4 DUAL RECEIVER RADII**

Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

Probe GR/CCL/NEU

Series	2459XA
Mnemonic	PROB
Diameter	2.75"
Length	9.42'
Measure Point	1.21' NEU
Measure Point	6.60' GR
Measure Point	8.46' CCL

Total Length: 21.81'
Total Weight: Not Available
Max Diameter: 0' 2.75"

**Baker Atlas****CASE****Company****WPX ENERGY****Well****SAVAGE RWF 514-25****Field****RULISON****County****GARFIELD****State****COLORADO****Location****SHL: 1610' FSL & 2295' FWL****BHL: 317' FSL & 435' FWL (SWSW)****SEC****25****TWP****6S****RGE****94W****Elevations****KB 6122 ft****DF****GL 6096 ft****File No:****CH082862****API No:****05045219890000****25 6S 94W****RWF 23-25 PAD****NABORS 577**