



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH085726

Company Well WPX ENERGY SAVAGE RWF 313-25

API No: Field RULISON

County GARFIELD State CO

05045219870000

Location

SHL: 1655' FSL & 2294' FWL

RWF 23-25 PAD BHL: 2479' FSL & 723' FWL

25 6S 94W SEC 25 TWP 6S RGE 94W

NABORS 677

Other Services

RPM

Permanent Datum GL Elevation 6096 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KB Elevations KB 6122 ft DF GL 6096 ft

Date	08/MAY/14	
Run	ONE	
Service Order	085726	
Depth Driller	8865 ft	
Depth Logger	8826 ft	
Bottom Logged Interval	8815 ft	
Top Logged Interval	26 ft	
Time Started	8:00	
Time Finished	13:00	
Operator Rig Time	5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	75 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	238 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	GRAND JUNCTION
Recorded By	NEMELL	
Witnessed By	BOB CADDY	

- 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	1145 ft
8.75 in	1145 ft	8876 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1145 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8876 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 11 feet.
Logged with zero PSI at wellhead.
There is a spike in the VDL from 8795'-8798' causing invalid data

BHT = 238 °F
SJ = 5589'5613'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10417456	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.093	8825.750
RAL	Amp Gate Start Near	195.000	usec	36.093	8825.750
RAL	Amp Gate Start Radial	195.000	usec	36.093	8825.750
RAL	Amp Gate Width Far	25.000	usec	36.093	8825.750
RAL	Amp Gate Width Near	25.000	usec	36.093	8825.750
RAL	Amp Gate Width Radial	25.000	usec	36.093	8825.750
RAL	casing od	4.500	inches	36.093	8825.750
RAL	casing wt	11.600	lbm/ft	36.093	8825.750
RAL	FB Start Far	291.900	usec	36.093	8825.750
RAL	FB Start Near	175.391	usec	36.093	8825.750
RAL	FB Start Radial	175.391	usec	36.093	8825.750
RAL	FB Thresh Far	10.000	mV	36.093	8825.750
RAL	FB Thresh Near	4.000	mV	36.093	8825.750
RAL	FB Thresh Radial	4.000	mV	36.093	8825.750
RAL	Fluid Travel Time	200.000	usec/ft	36.093	8826.655

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
--------	--------------	-----------------

1426XA -16.750
2459XA -11.340
2459XA -9.490
2459XA -4.090

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					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

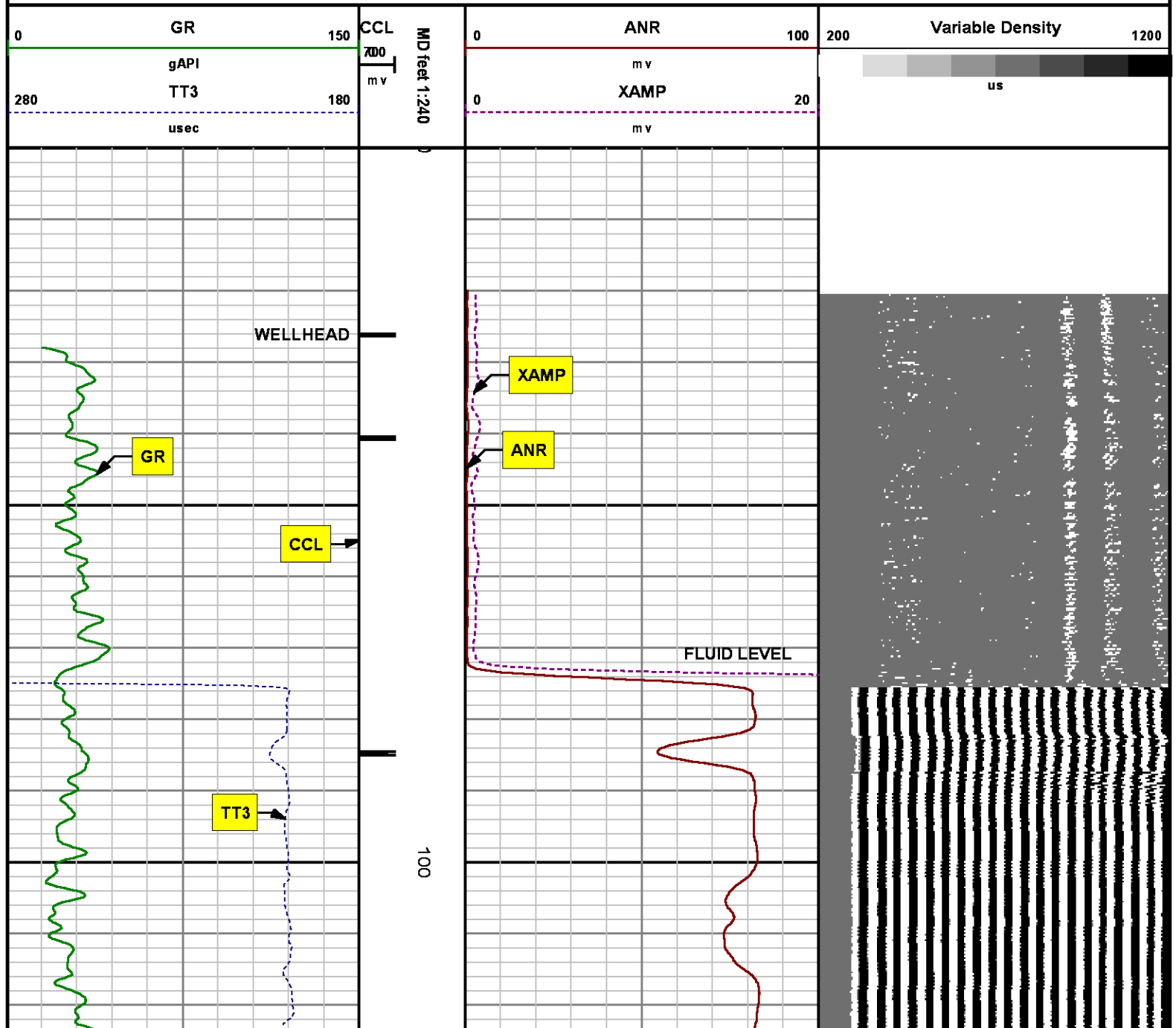
Well : SAVAGE RWF 313-25

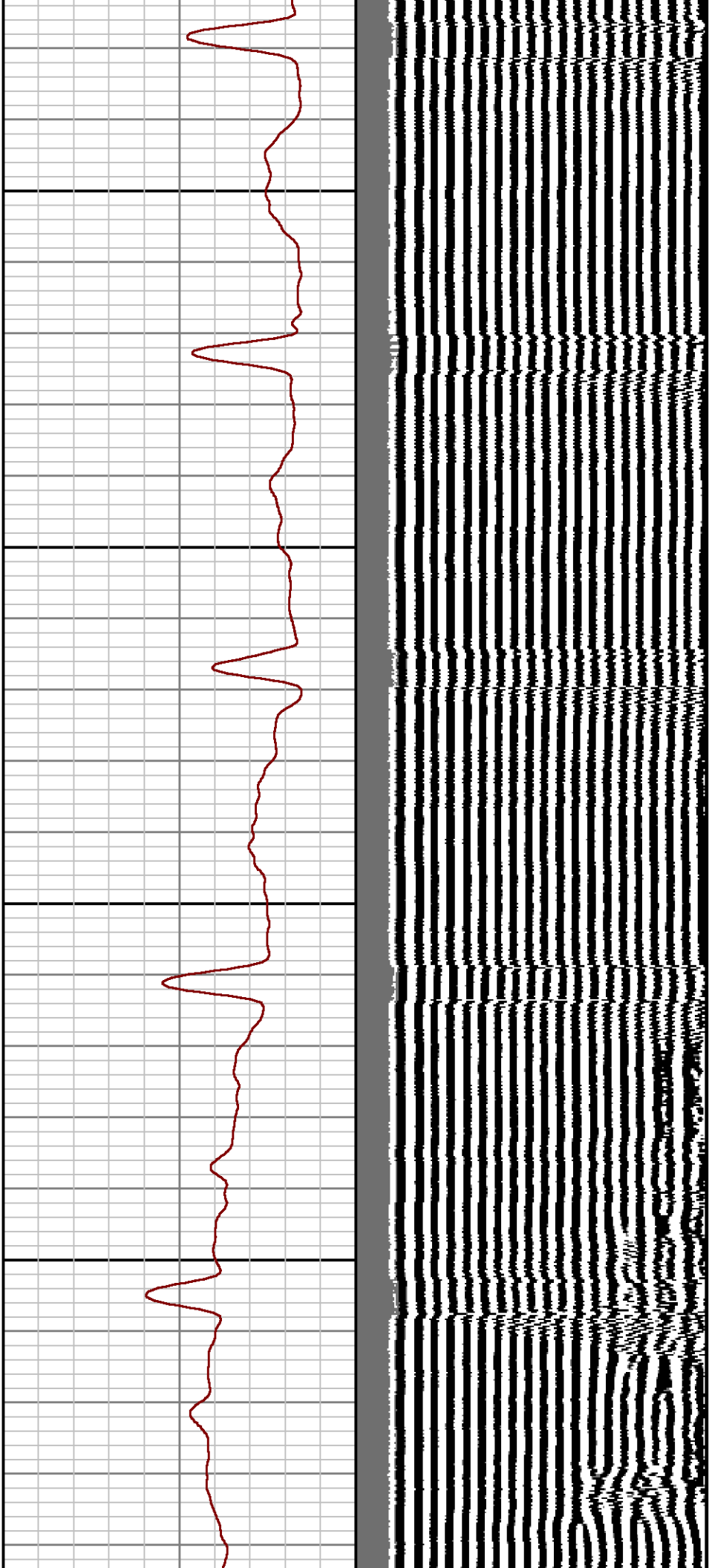
File Name : d:\well\data\wpx\savage rwf 313-25\313cbl\main.xtf

Mode : PlotMgr 5.4.504

Interval : 0.00 - 8830.00 feet UP

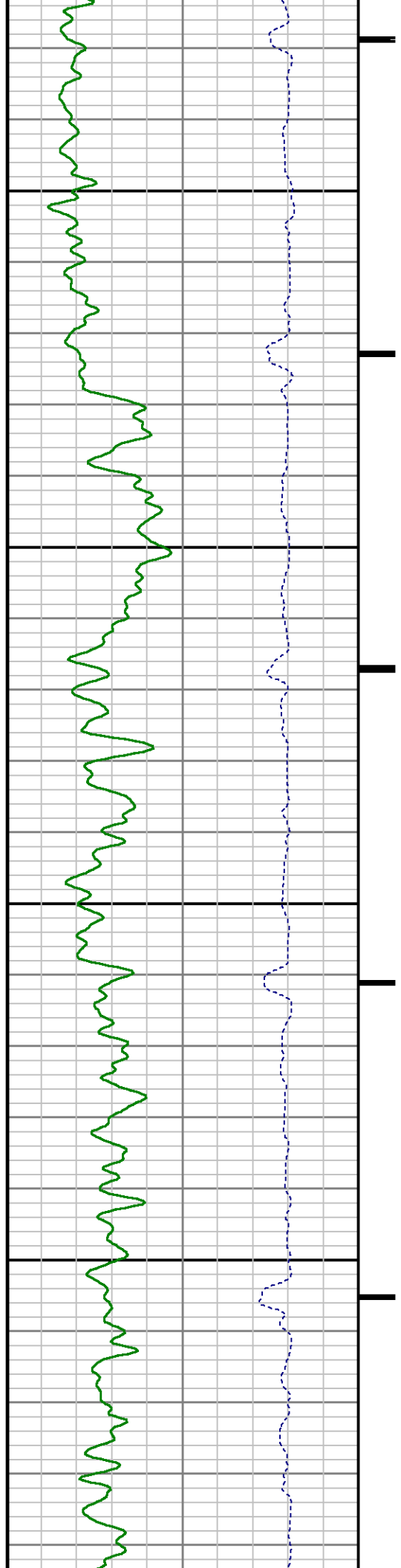
Created : 5/8/2014 8:57:48 PM

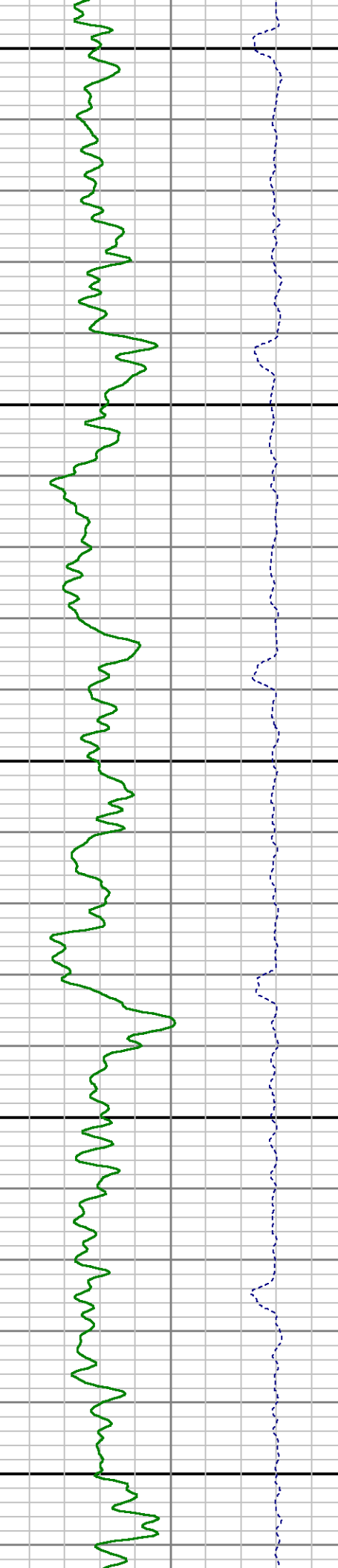
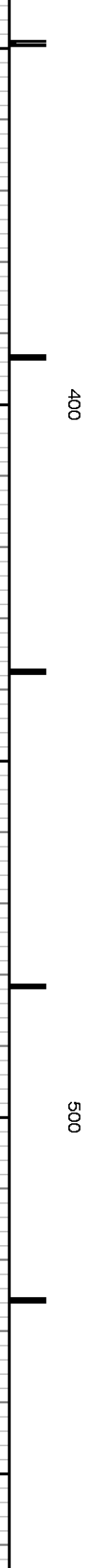
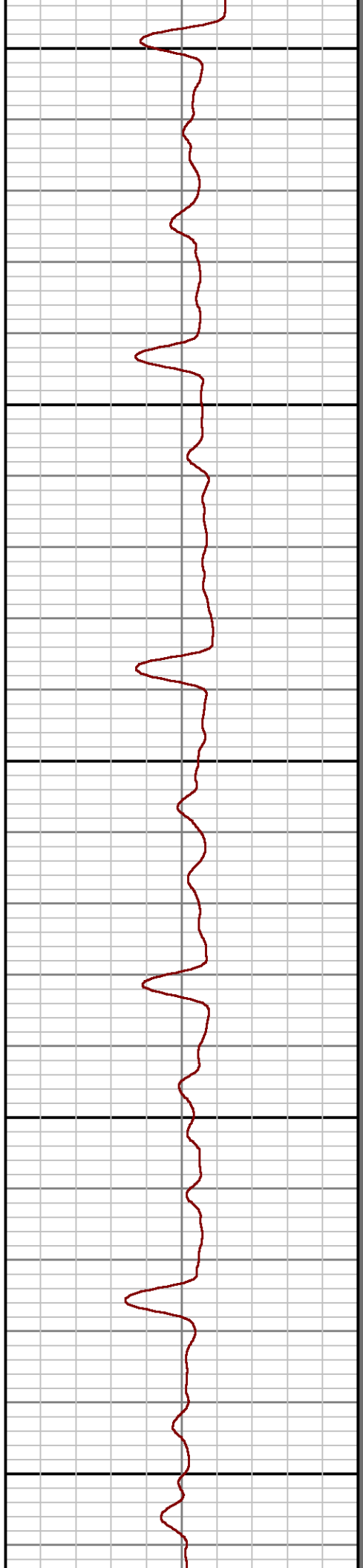
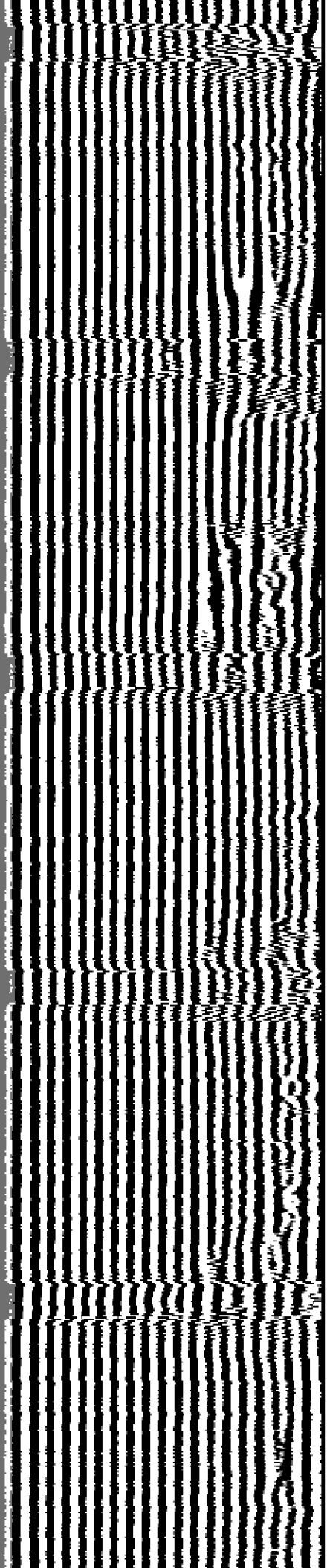


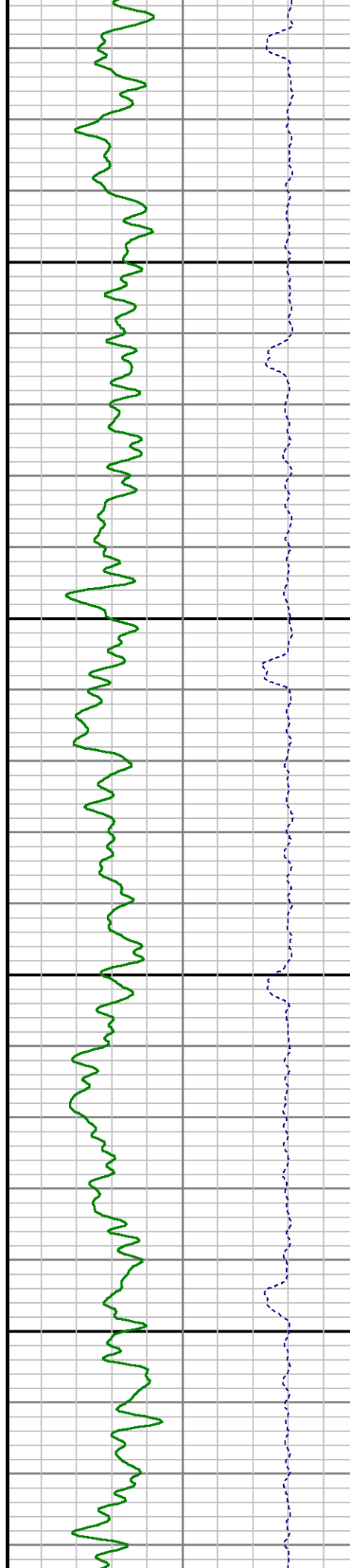
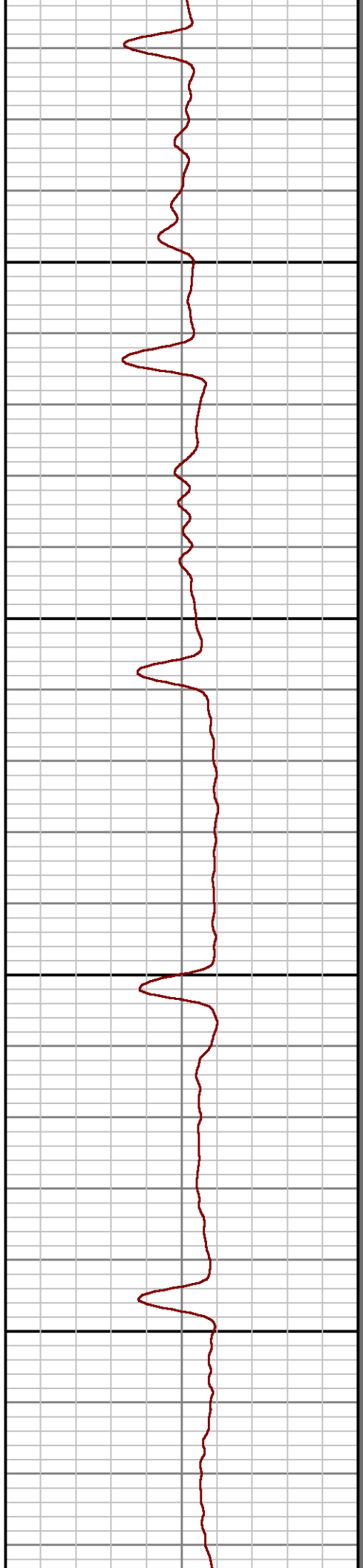
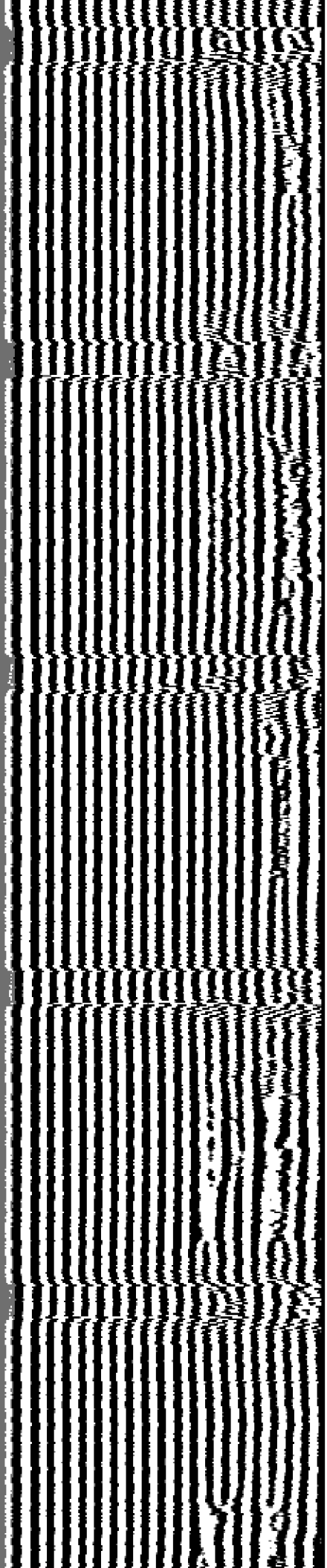


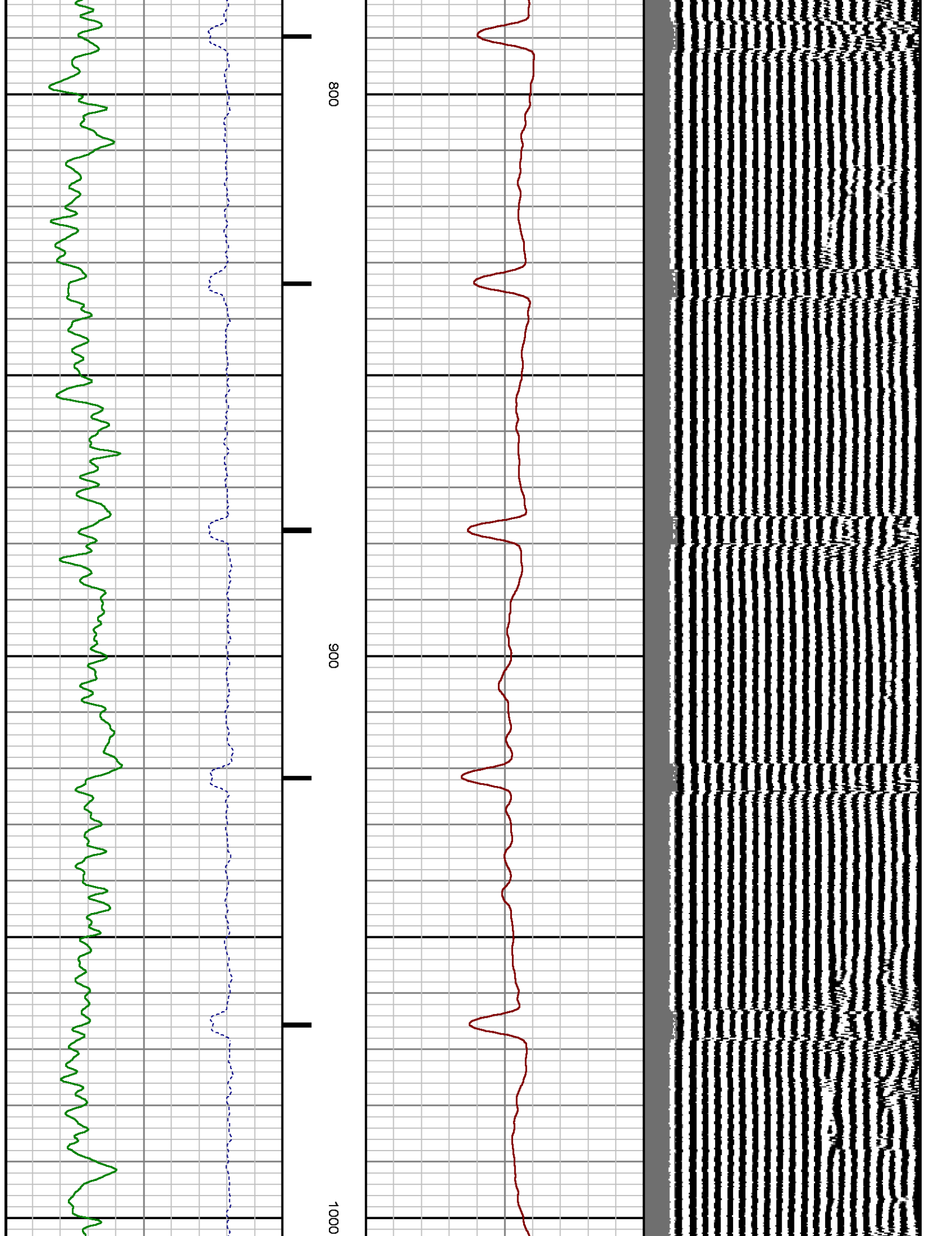
200

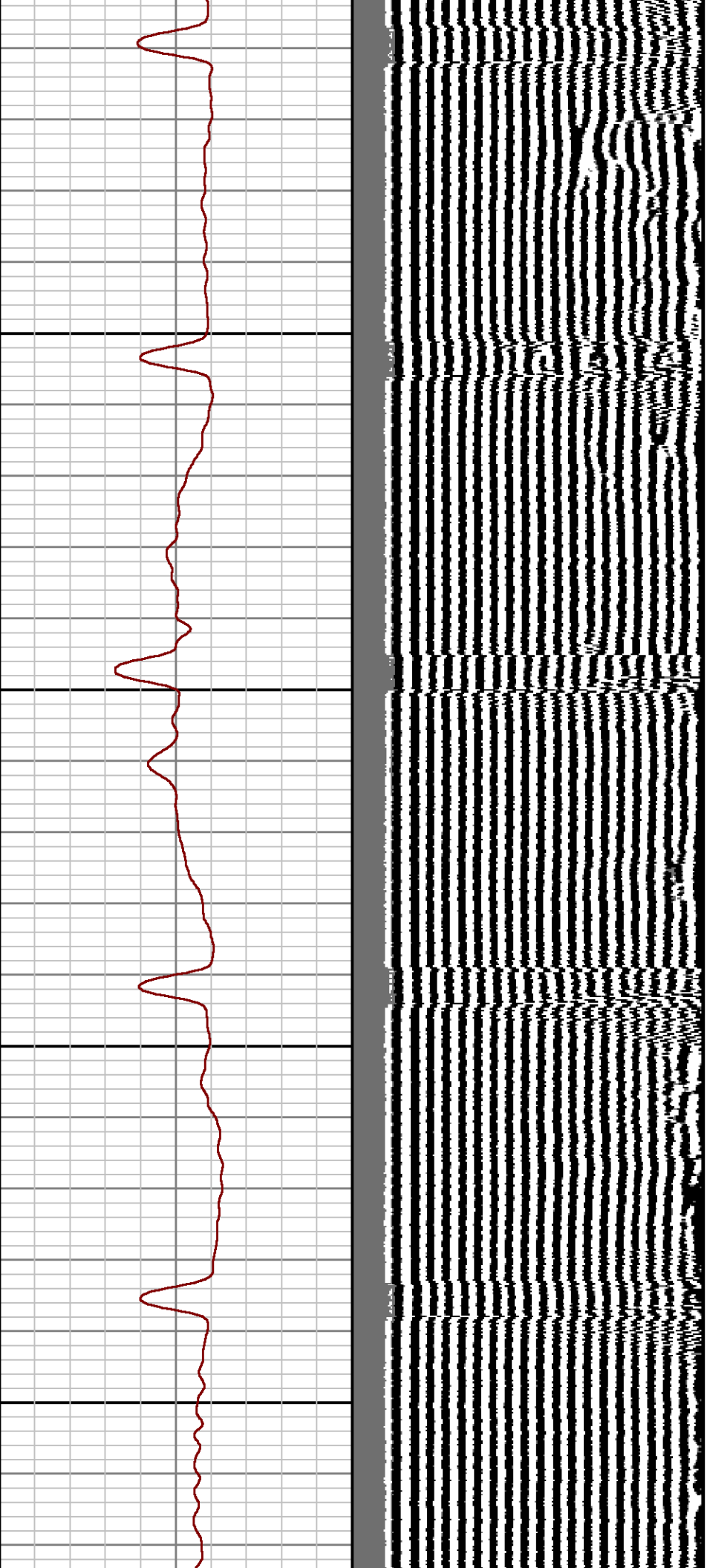
300





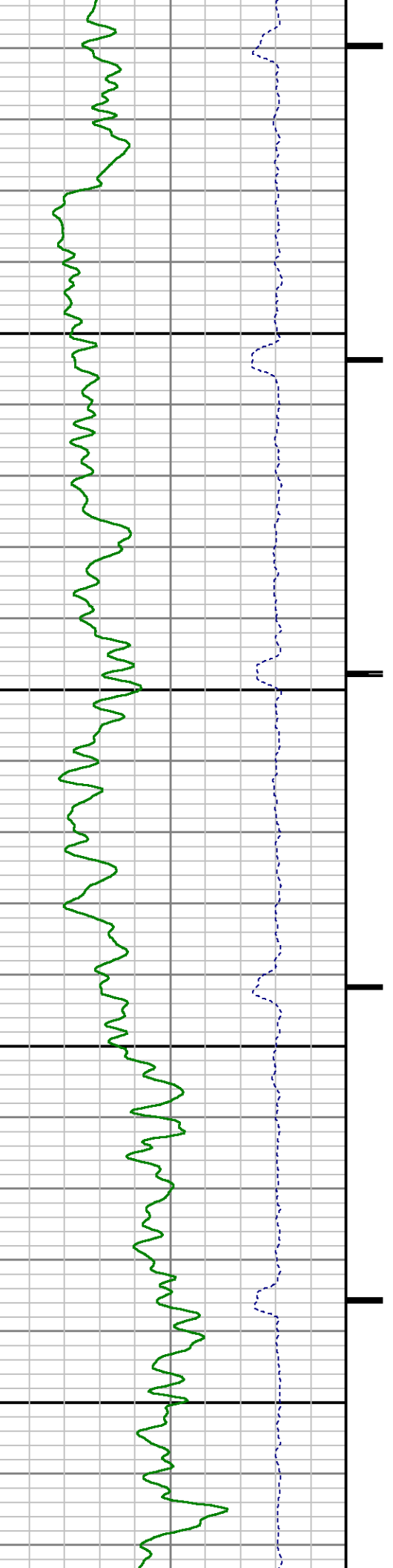


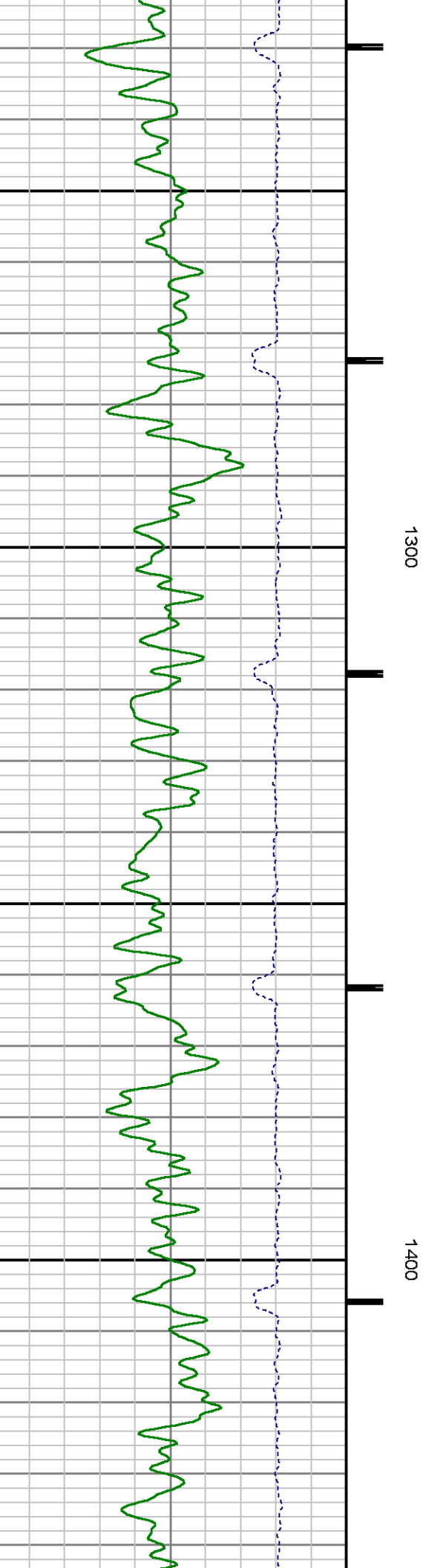
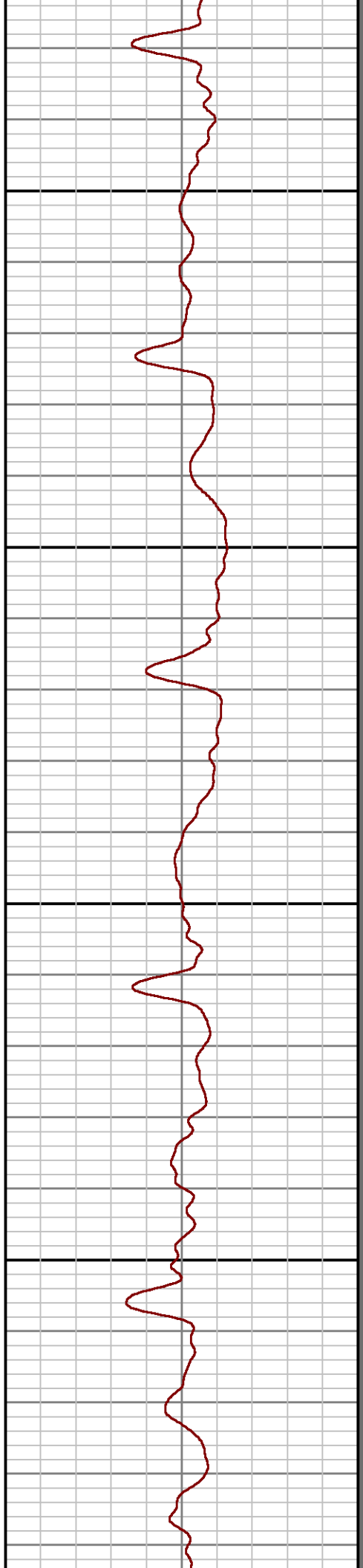
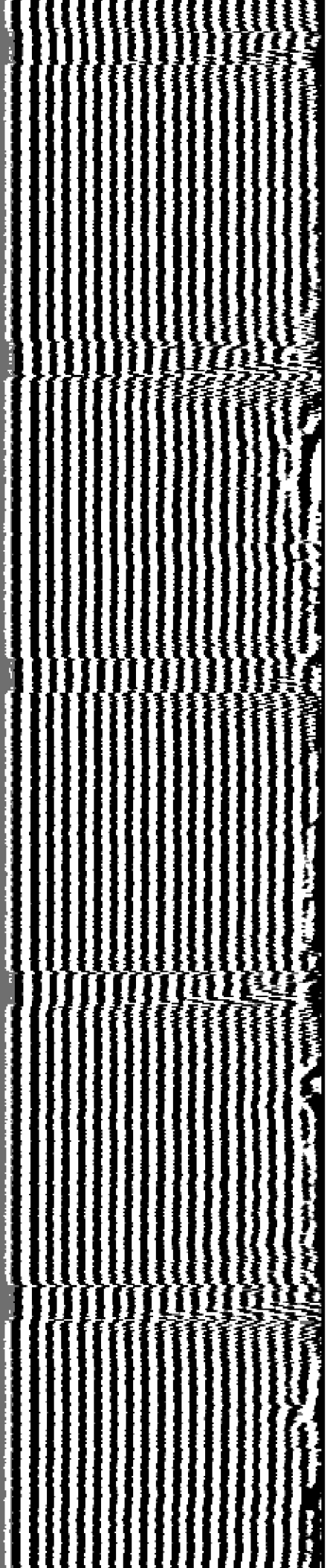


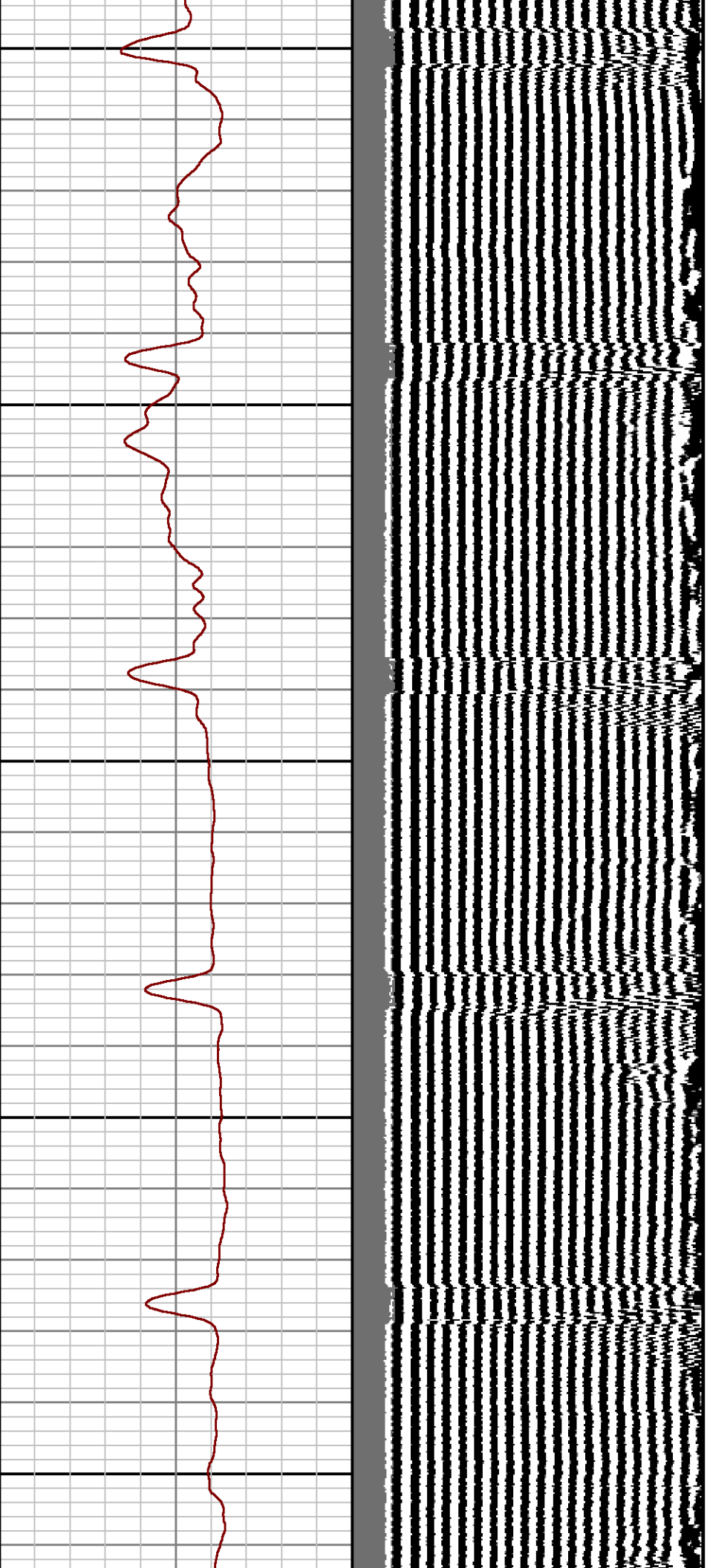


1100

1200

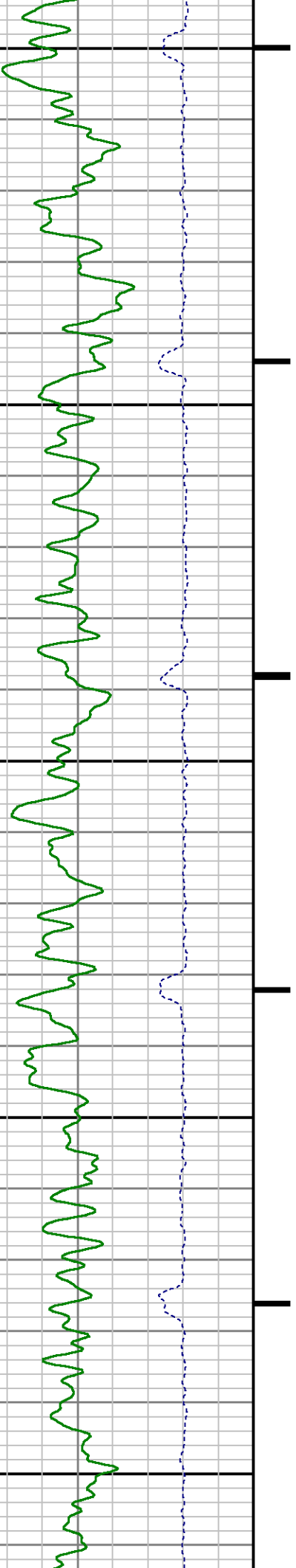


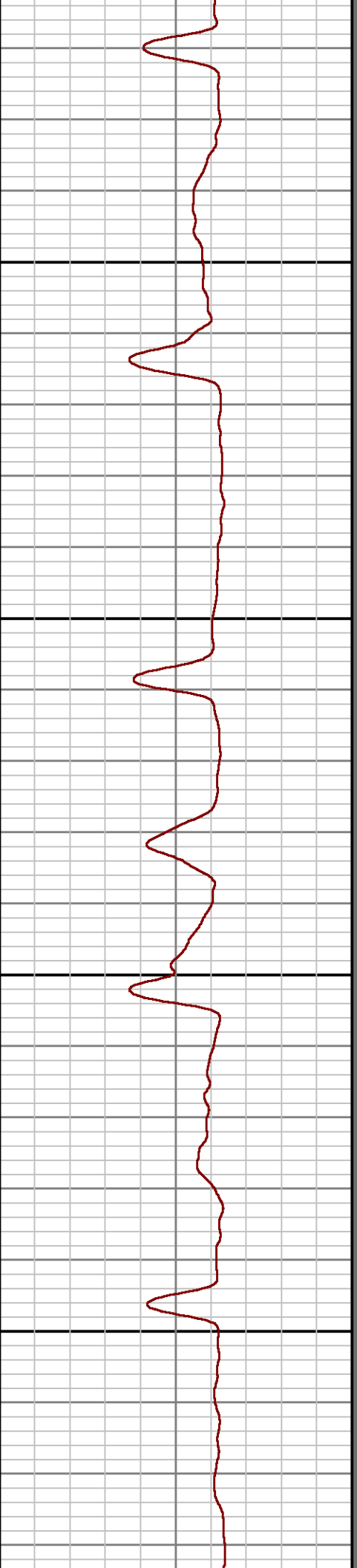
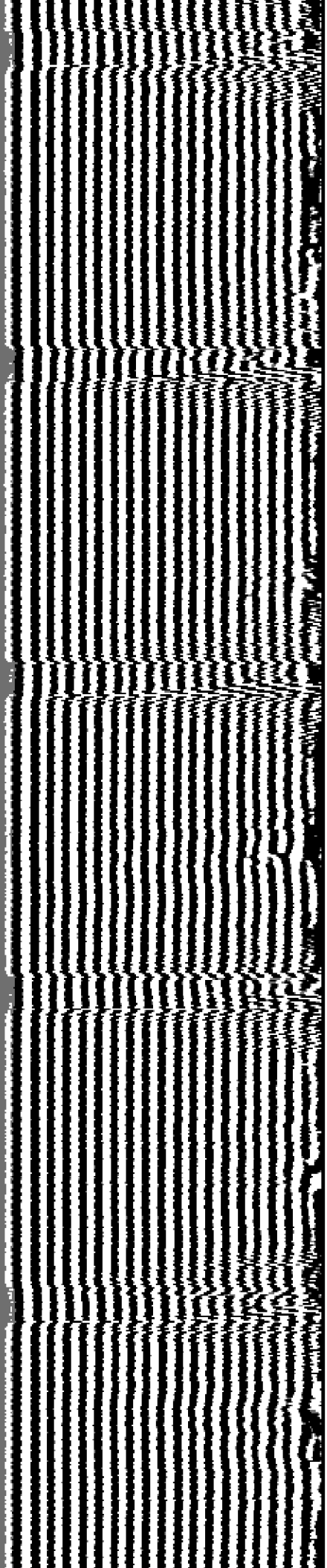




1500

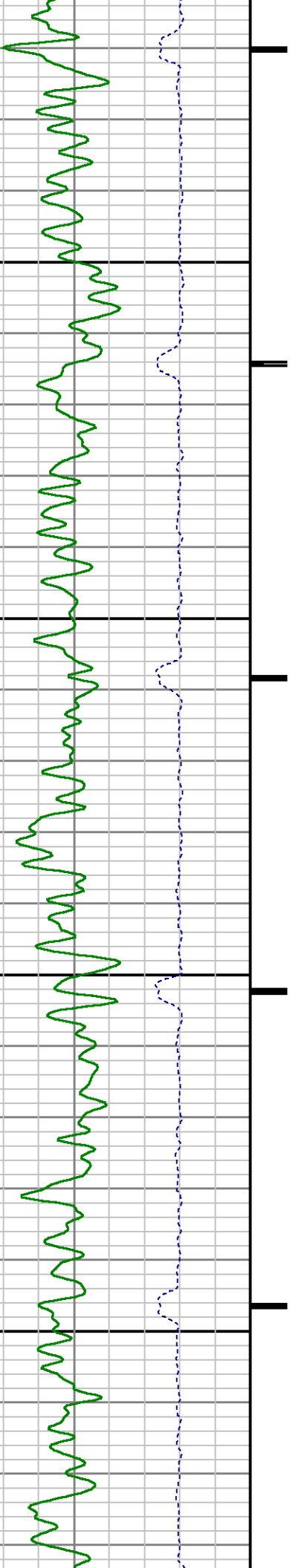
1600

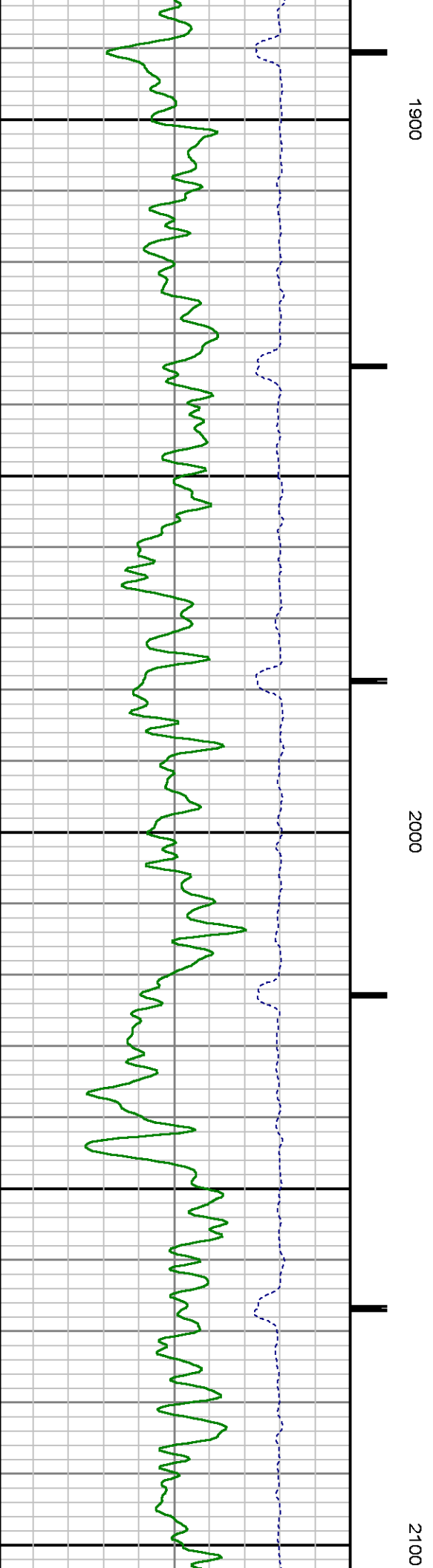
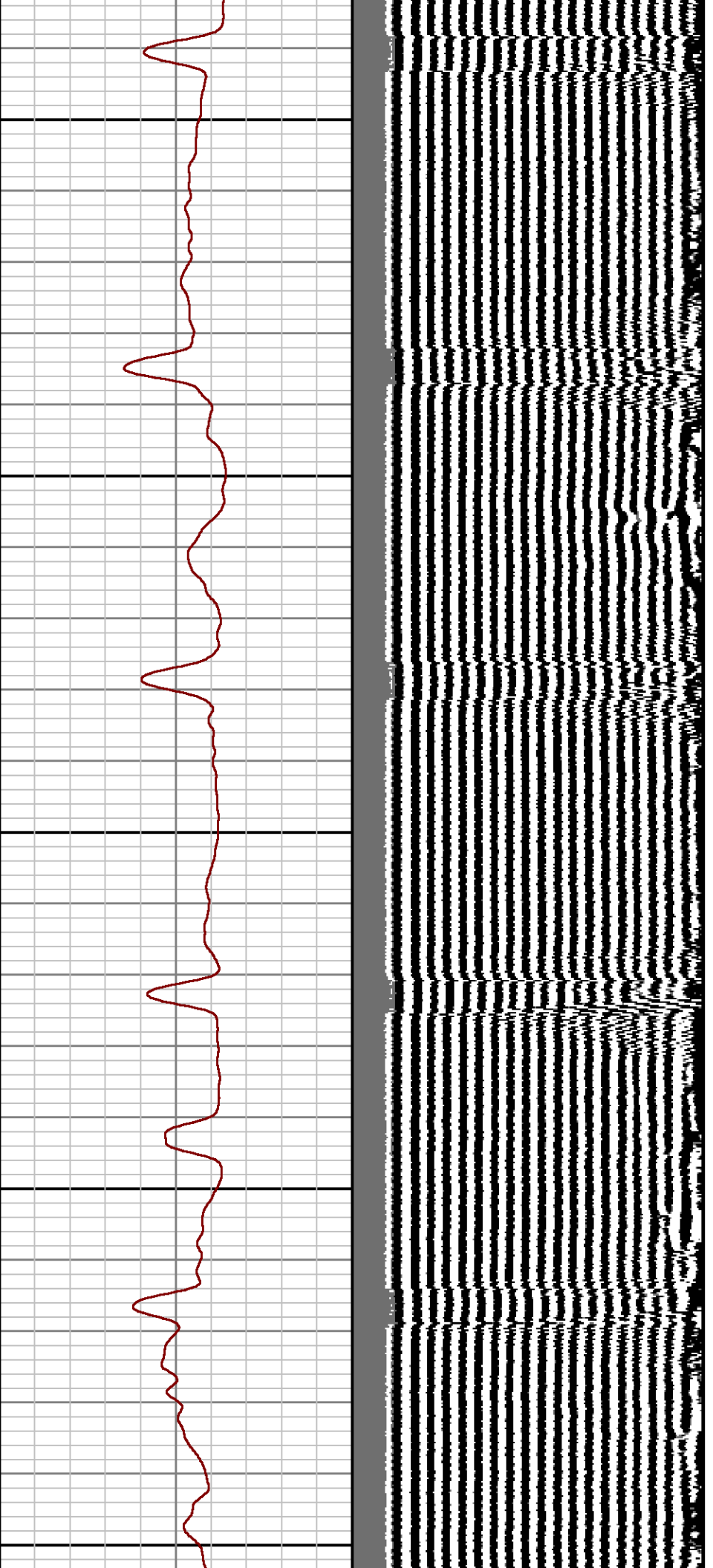


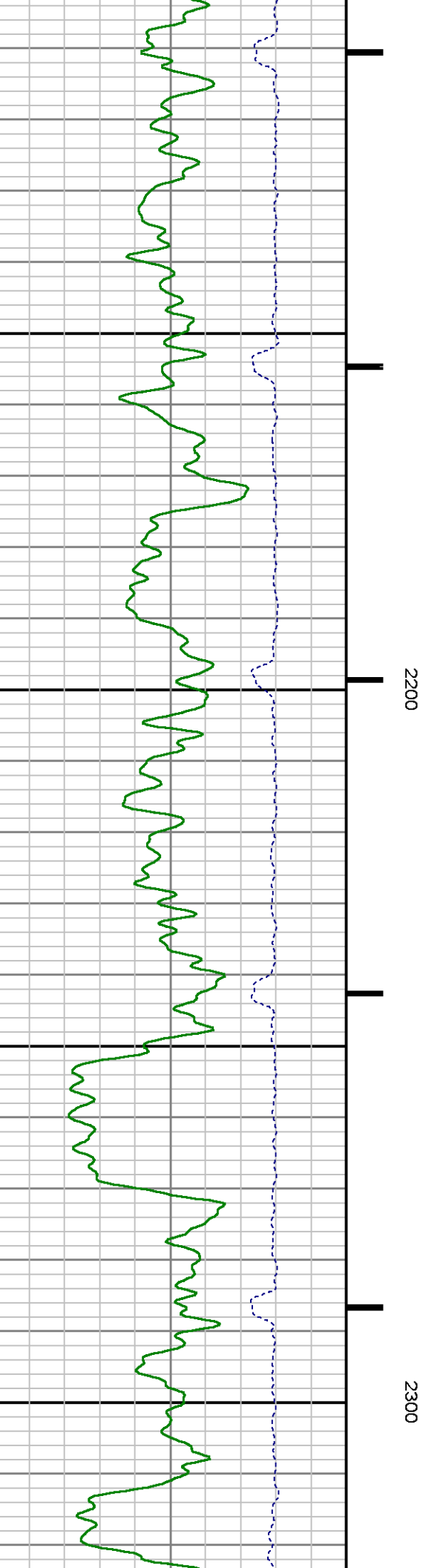
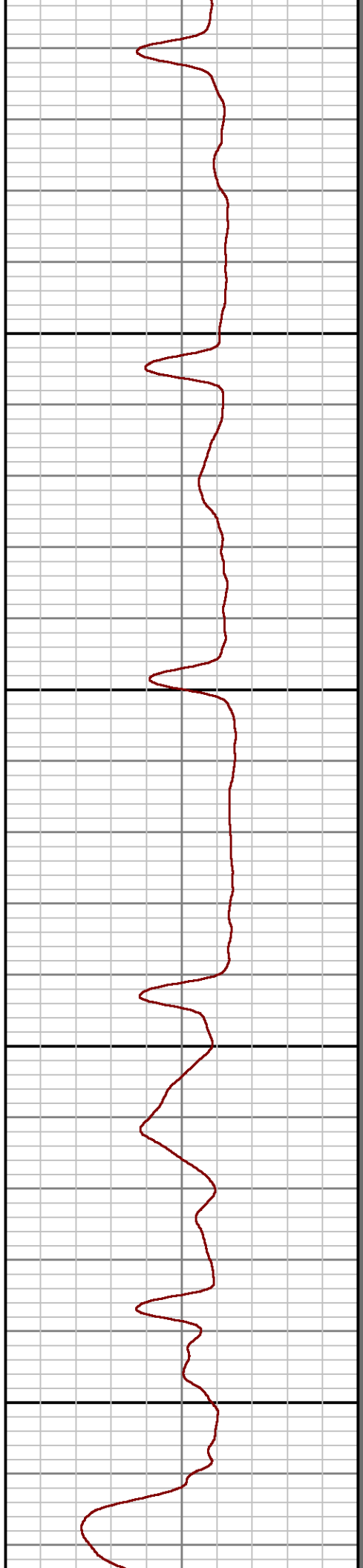
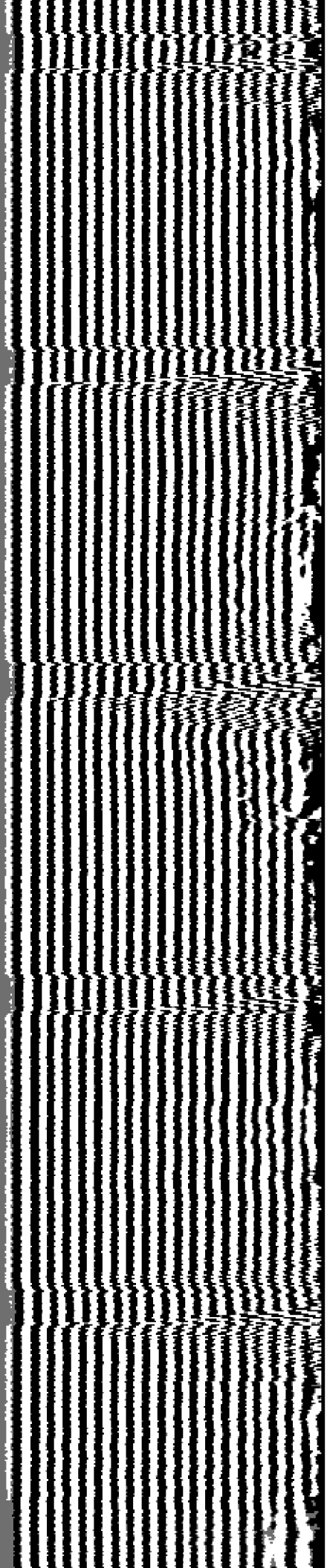


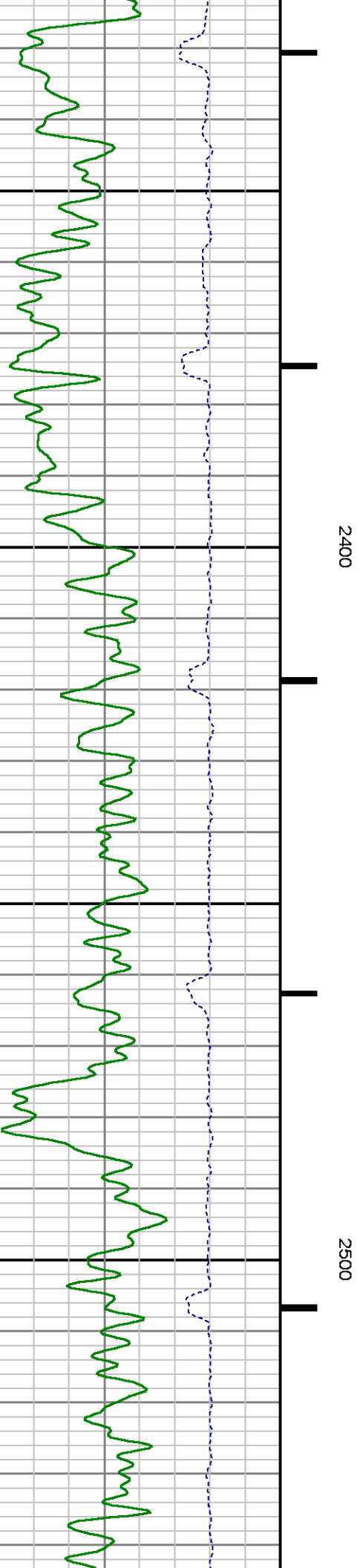
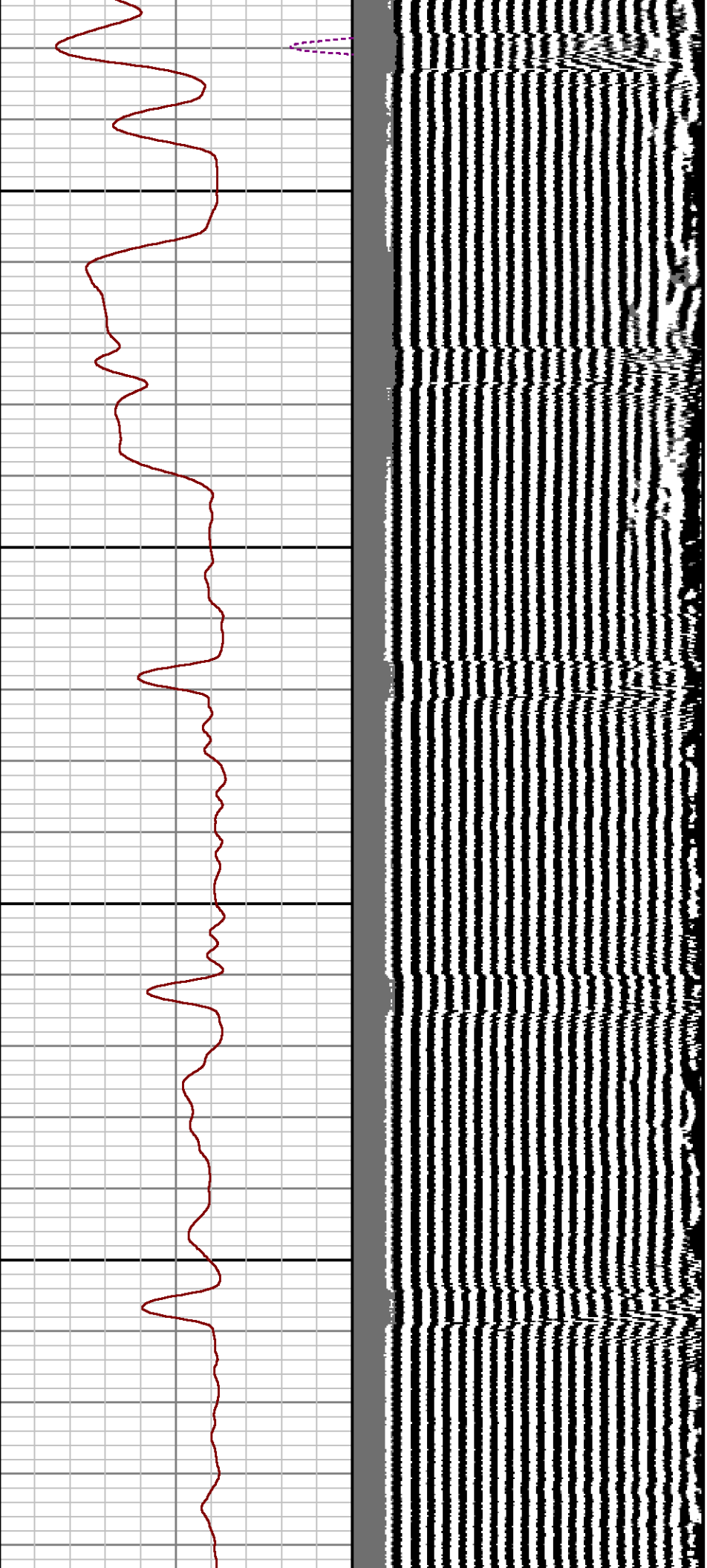
1700

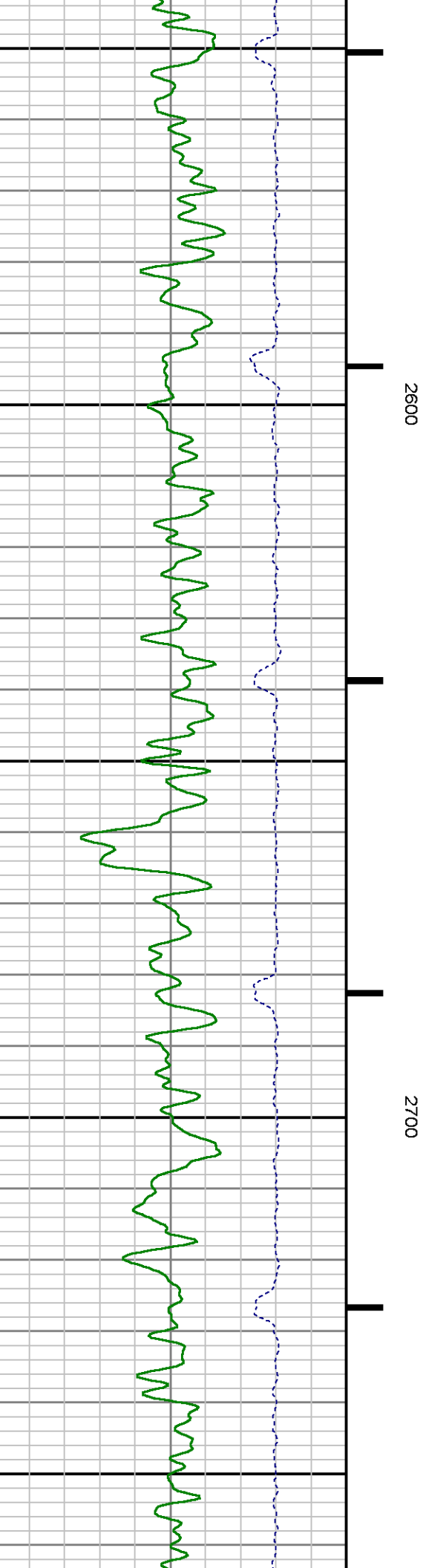
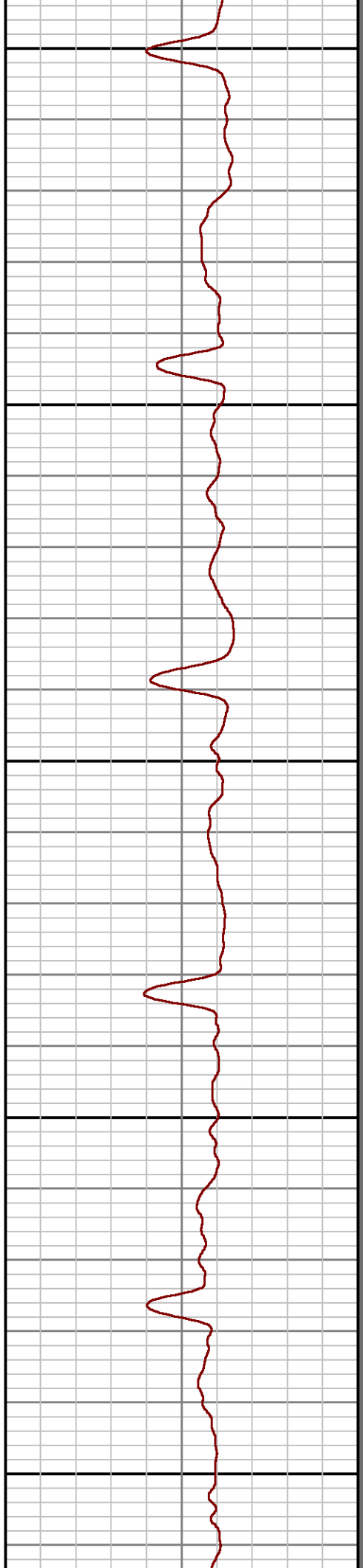
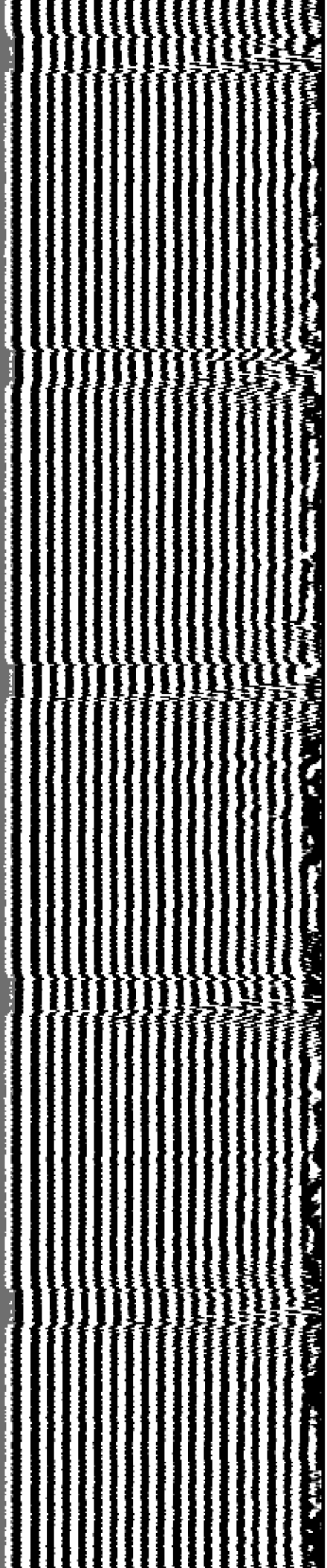
1800

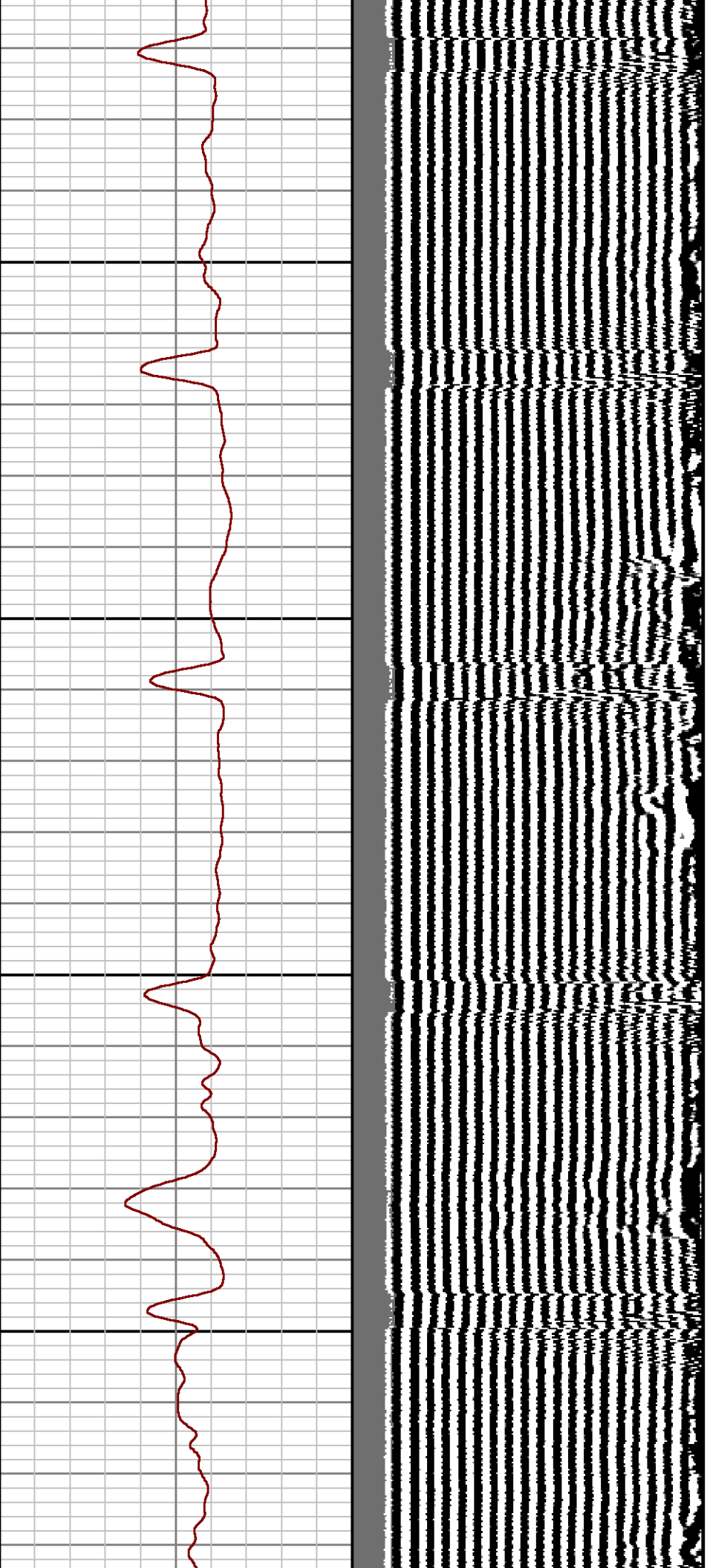






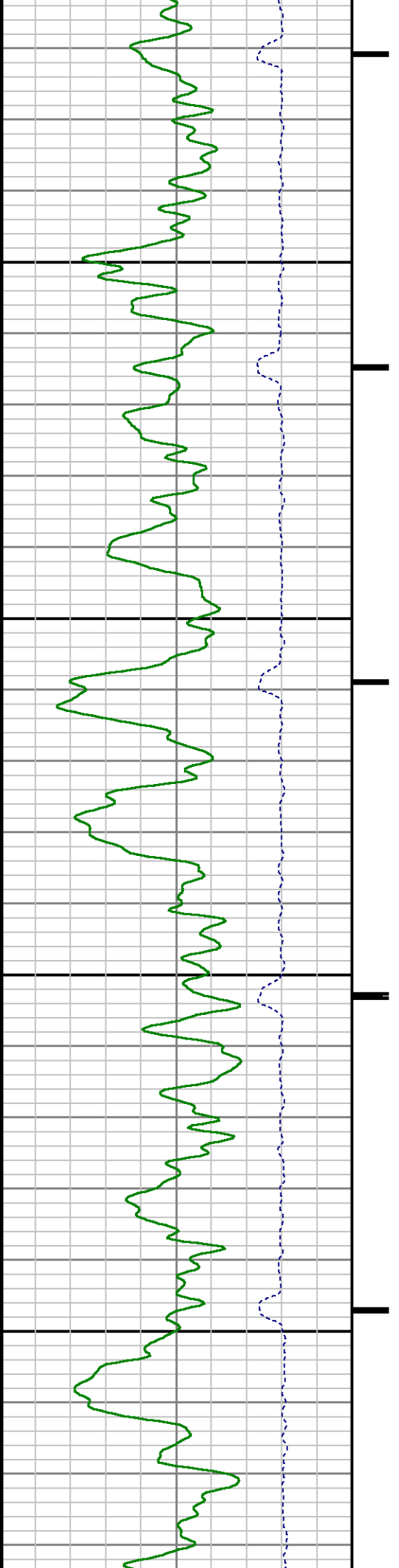


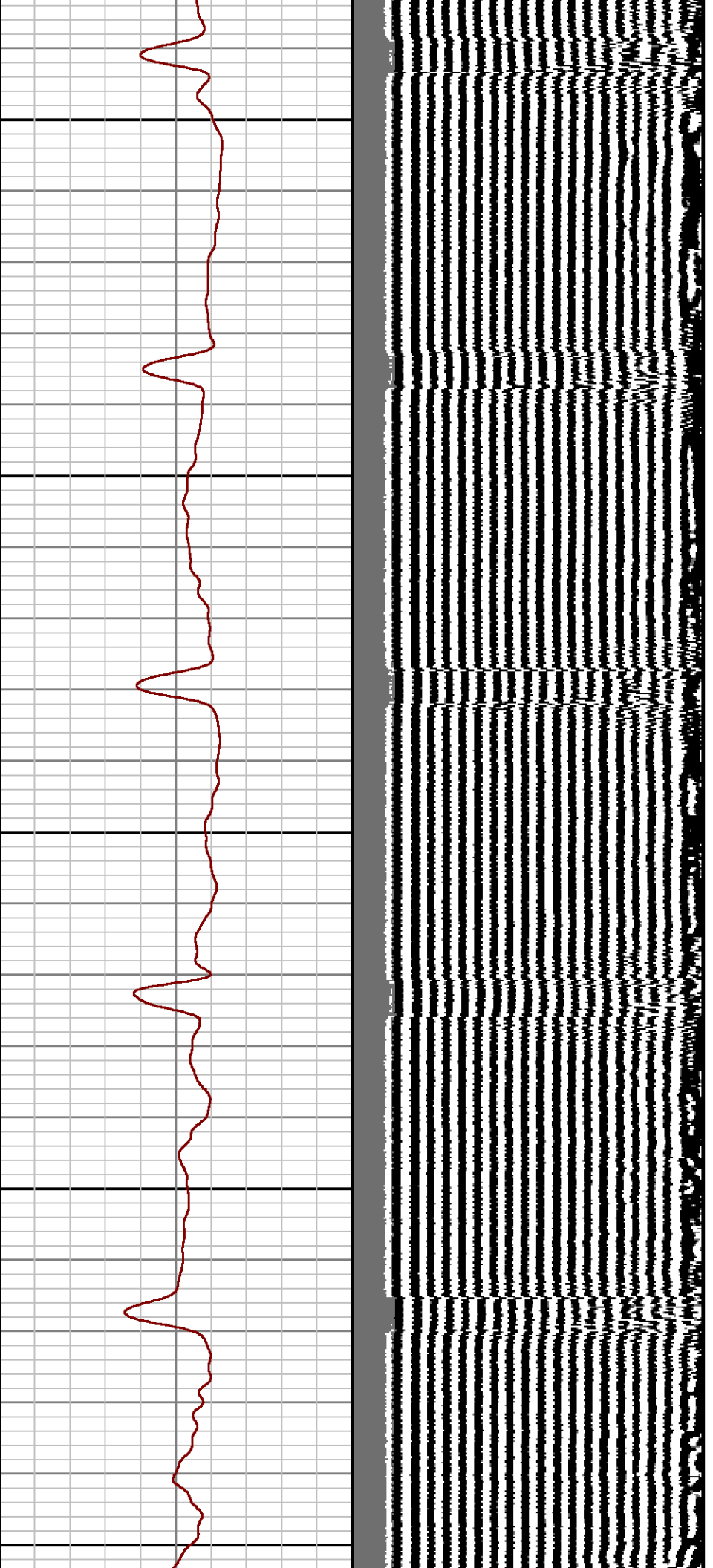




2800

2900

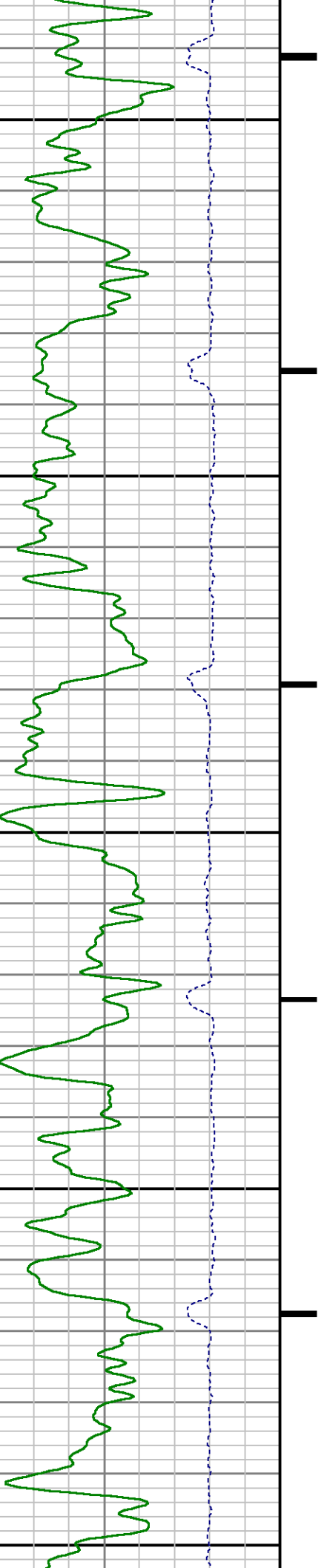


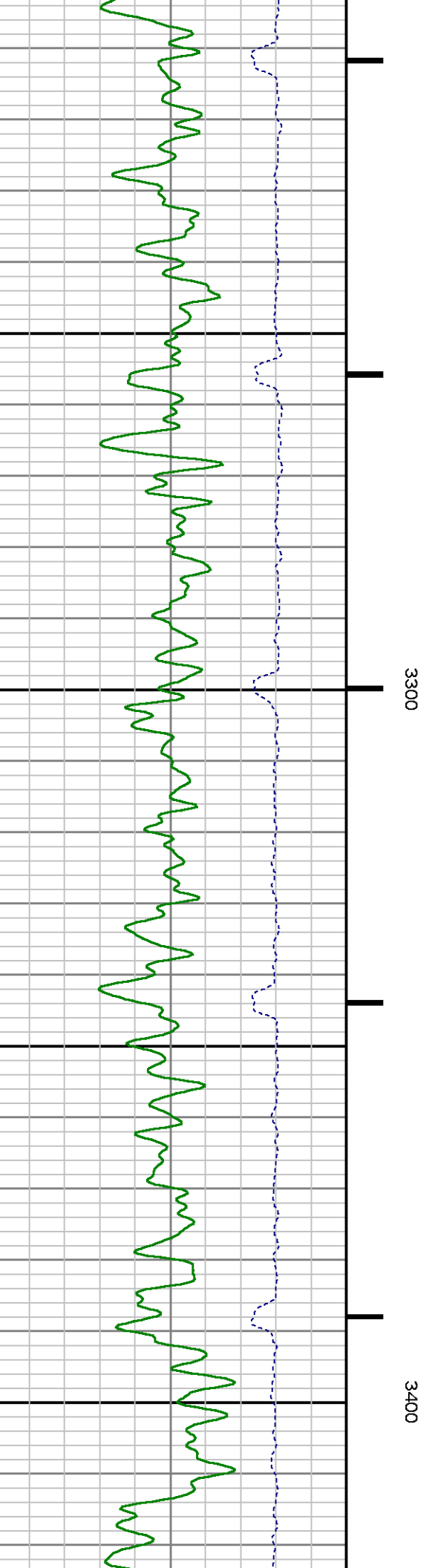
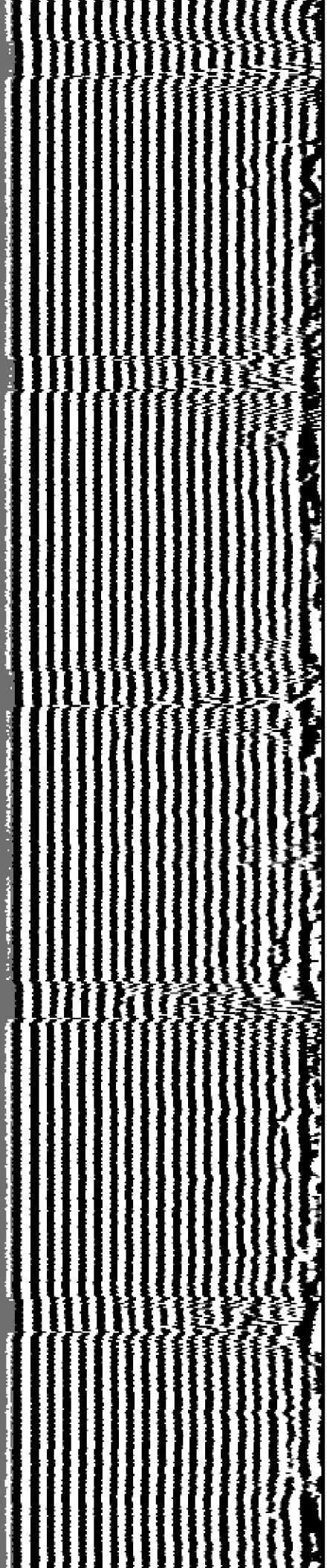


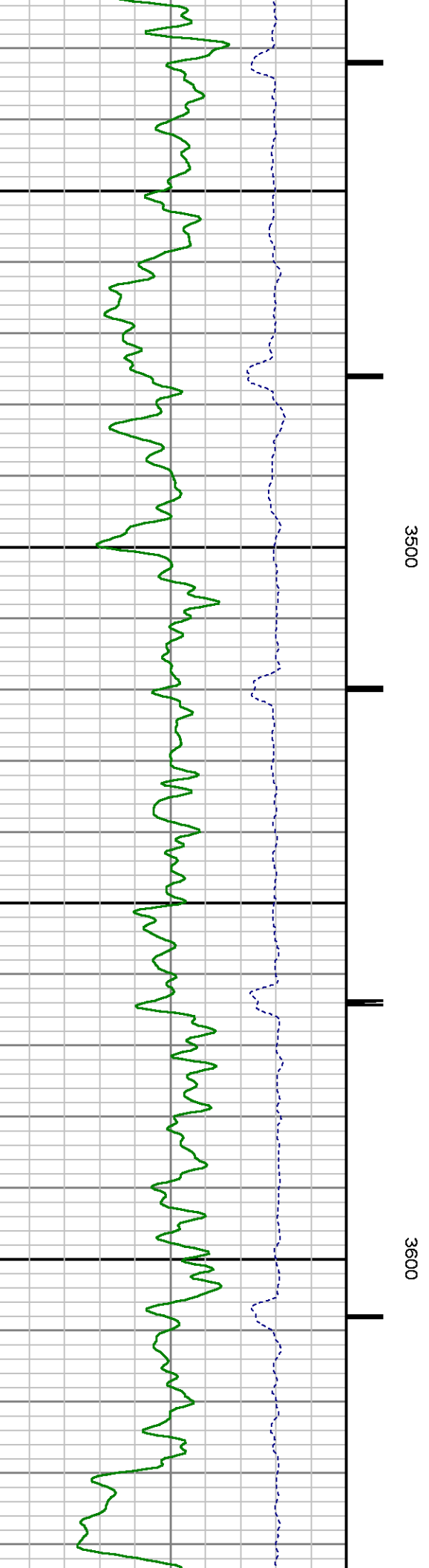
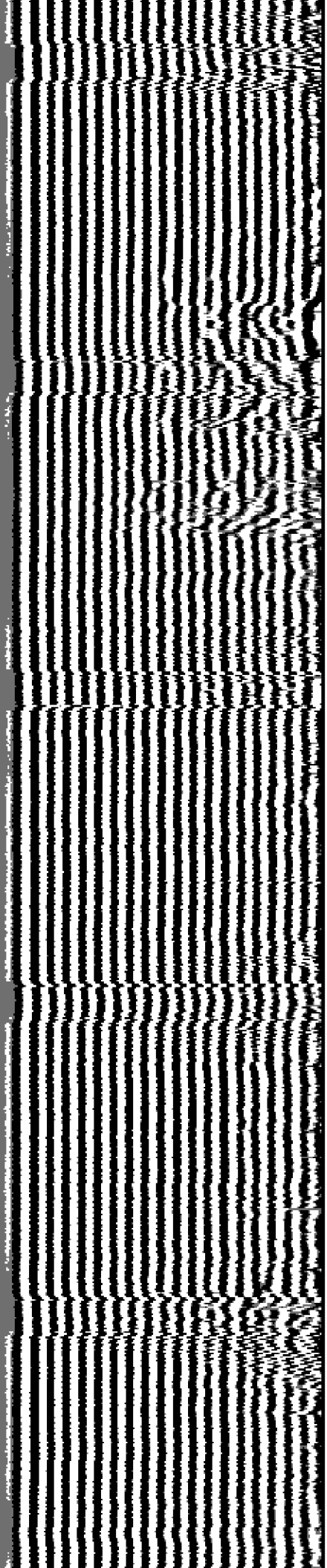
3000

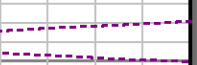
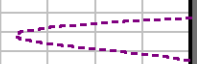
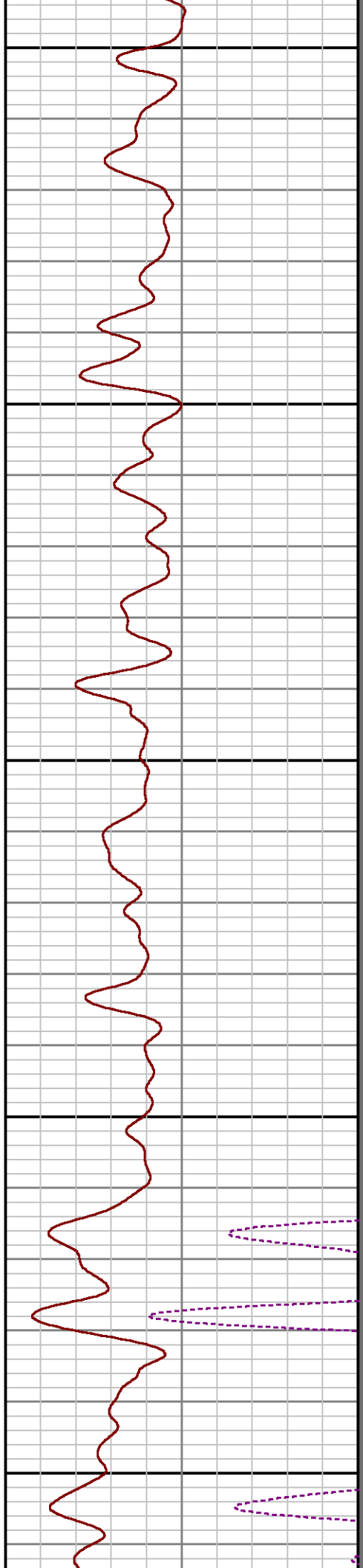
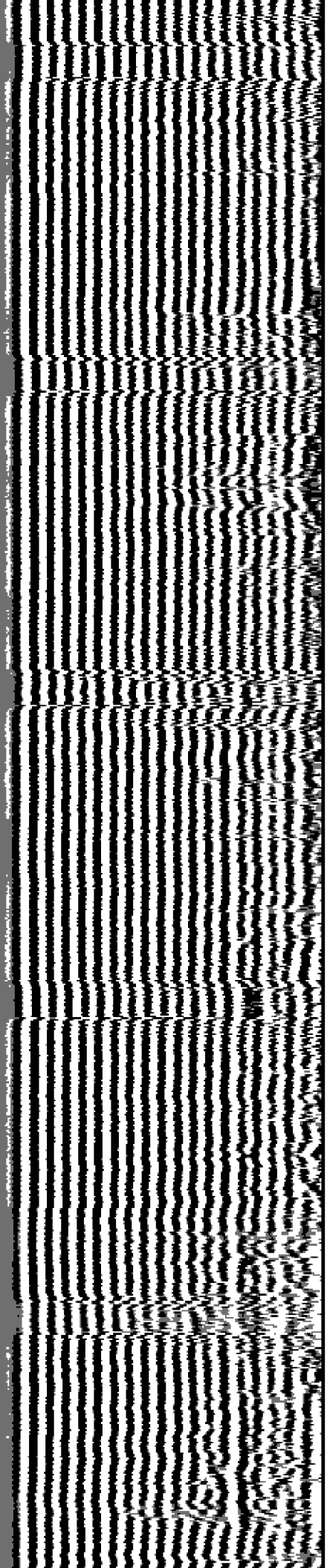
3100

3200



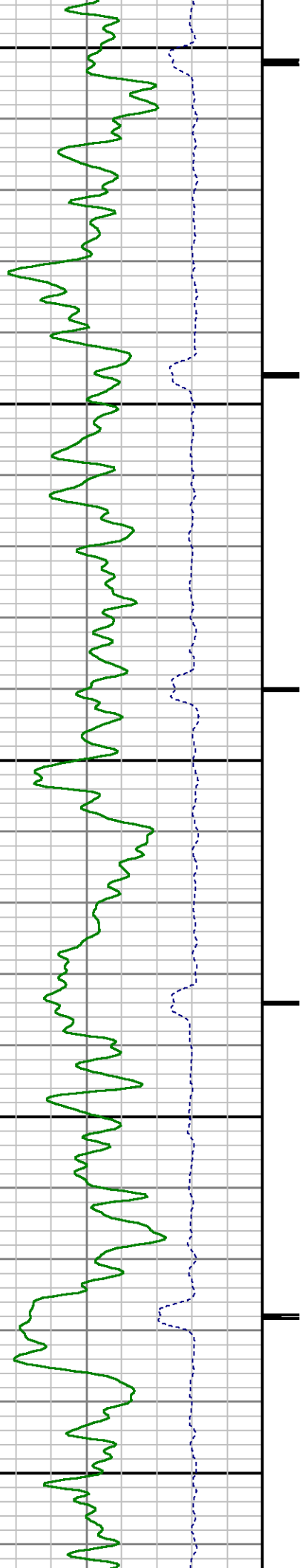


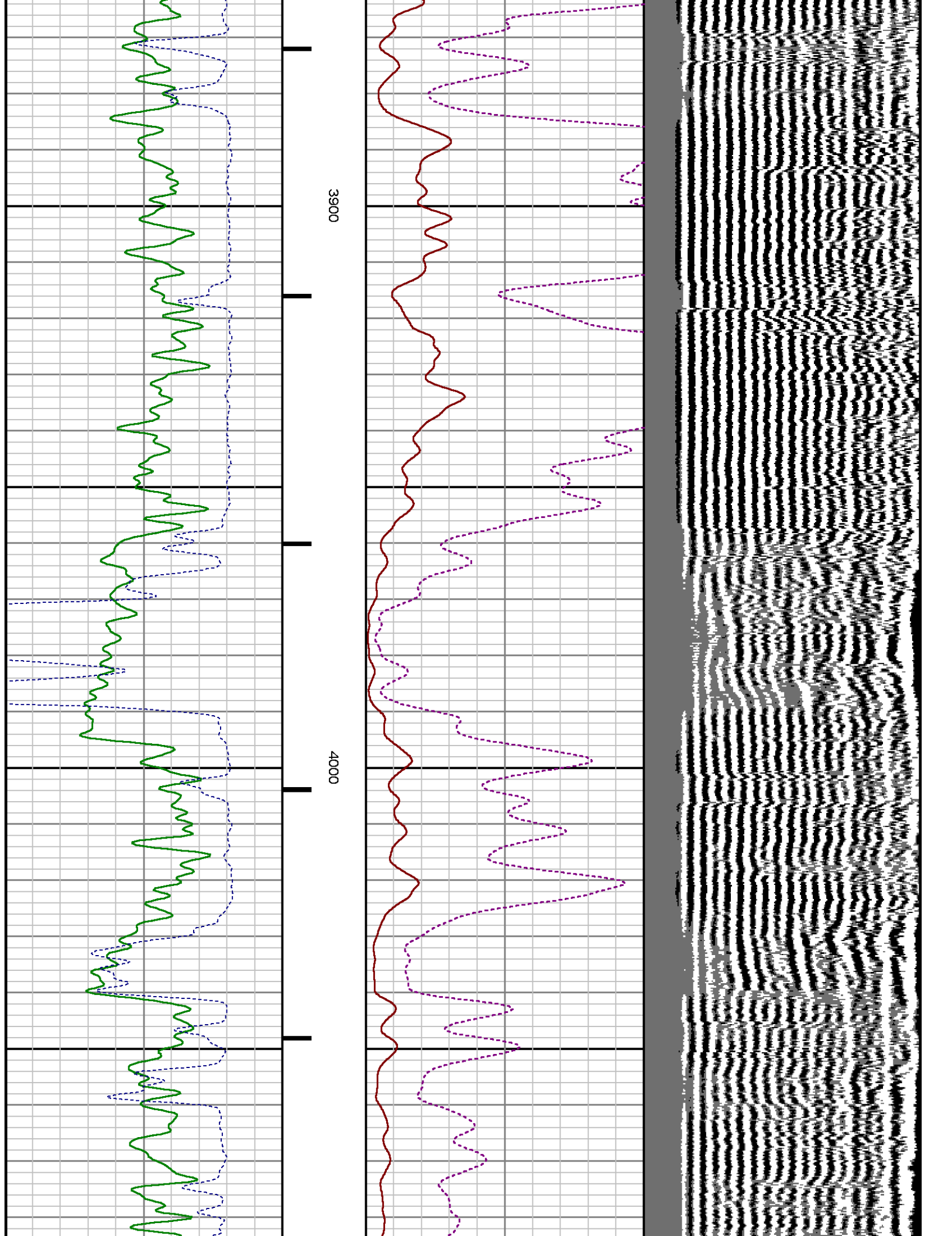


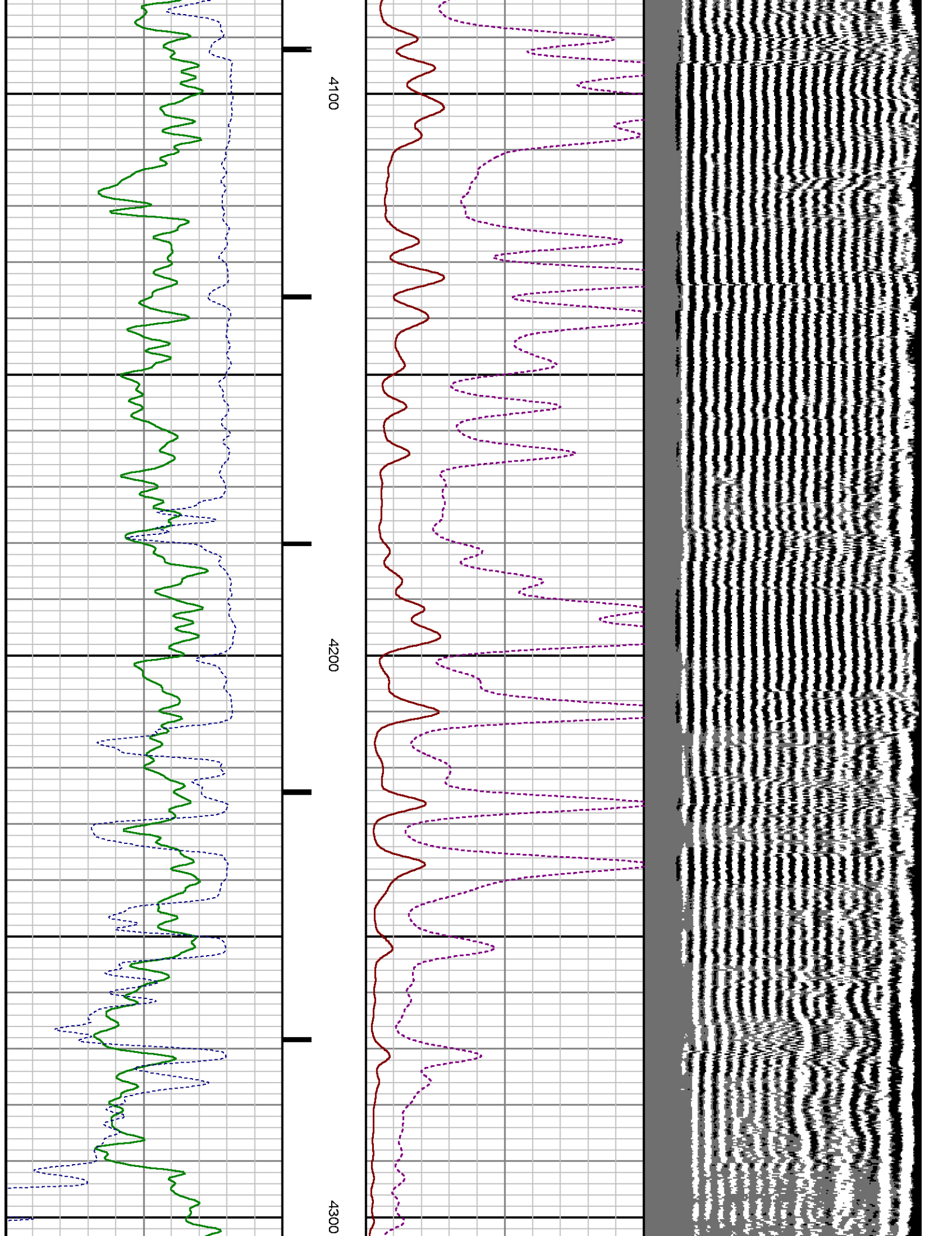


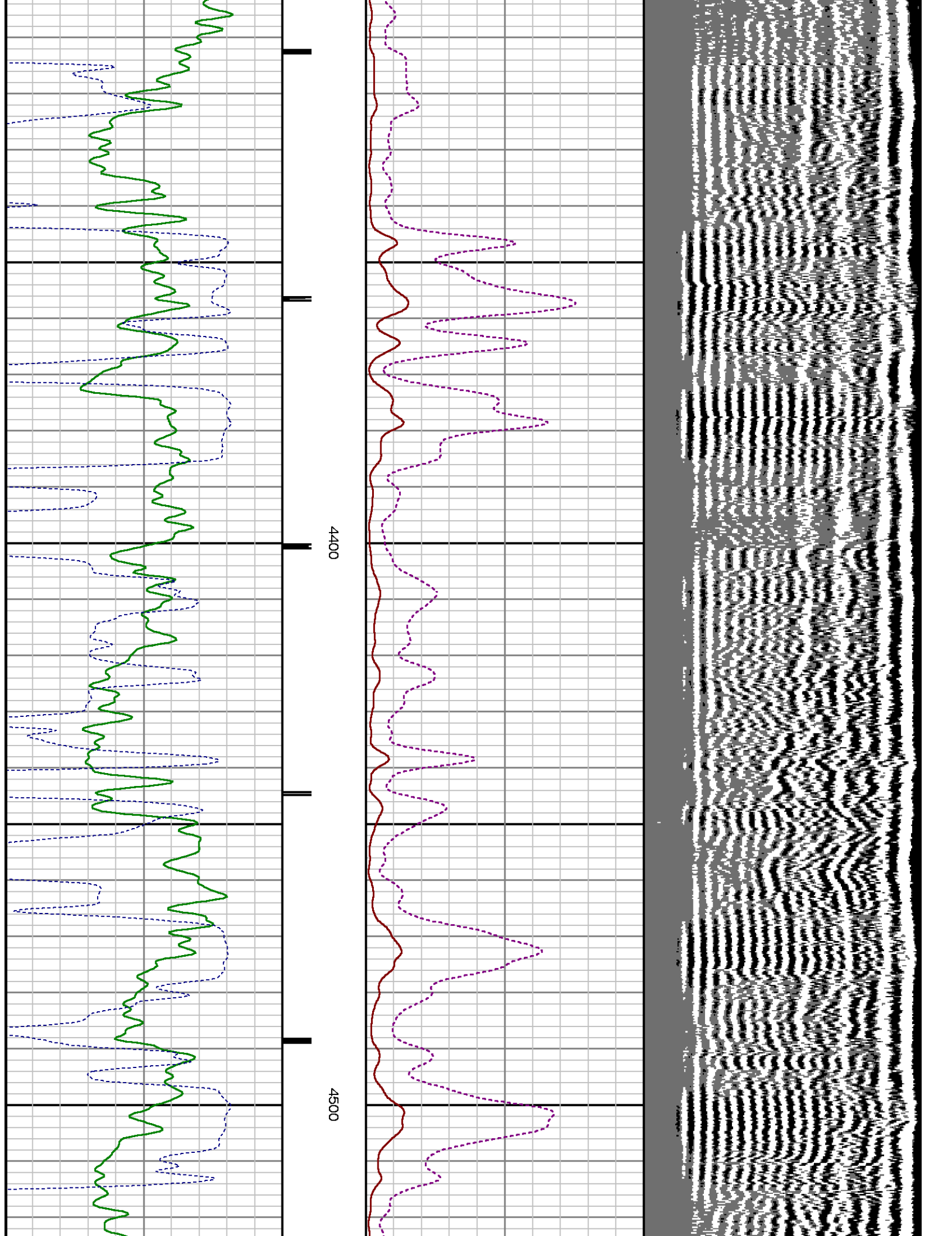
3700

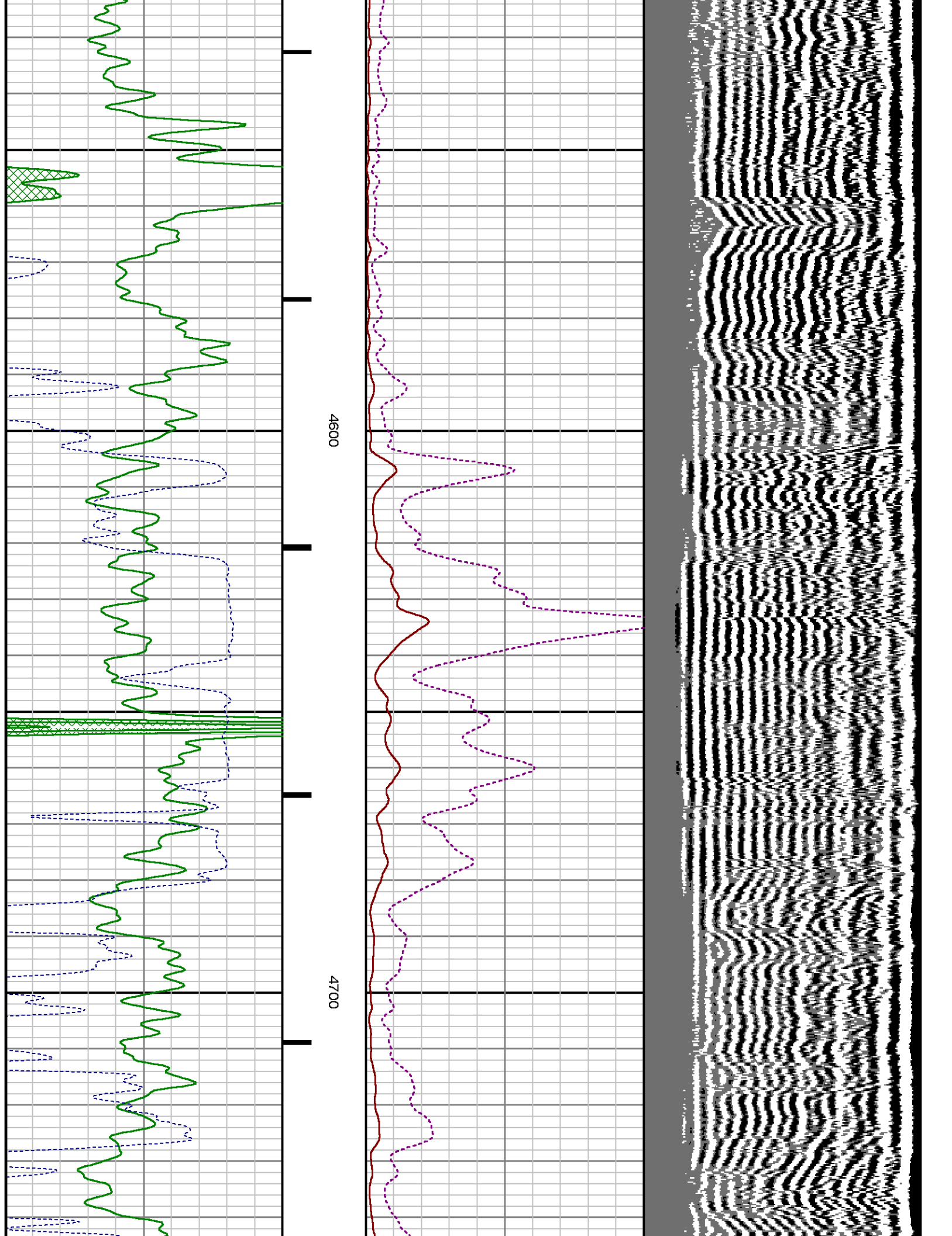
3800

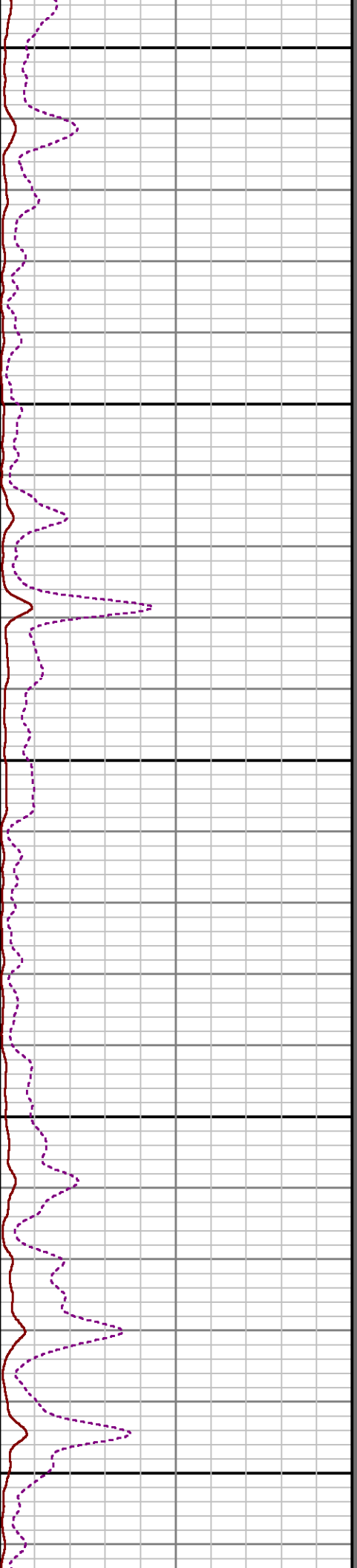
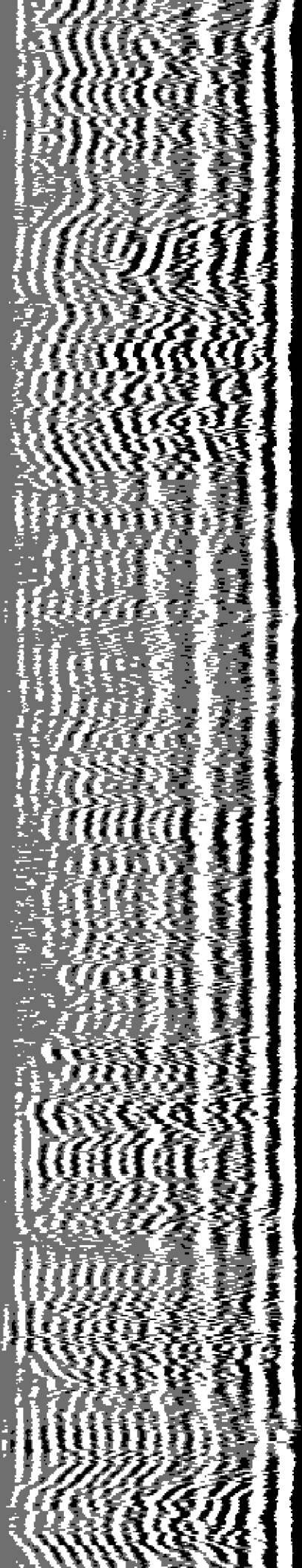






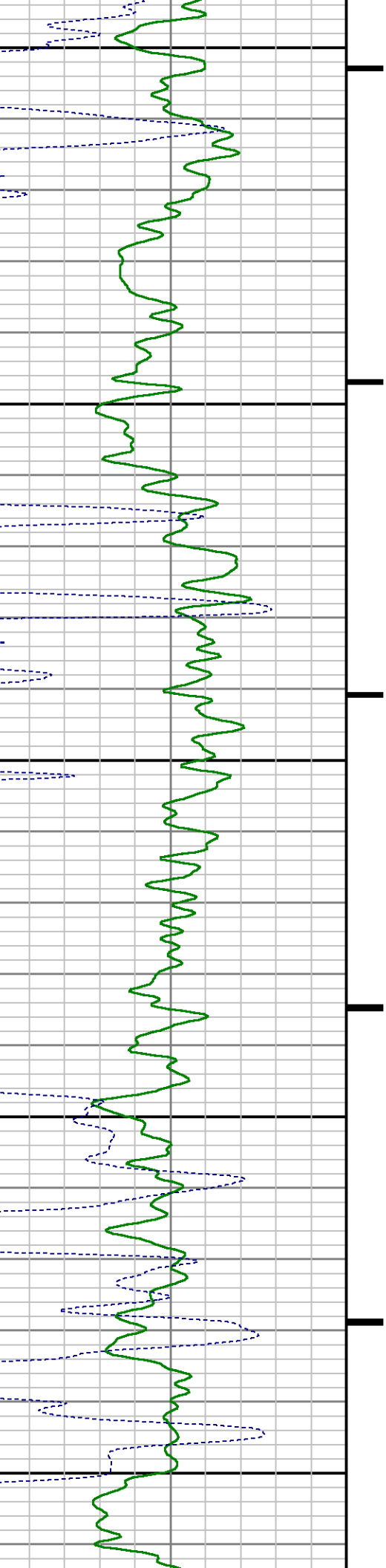


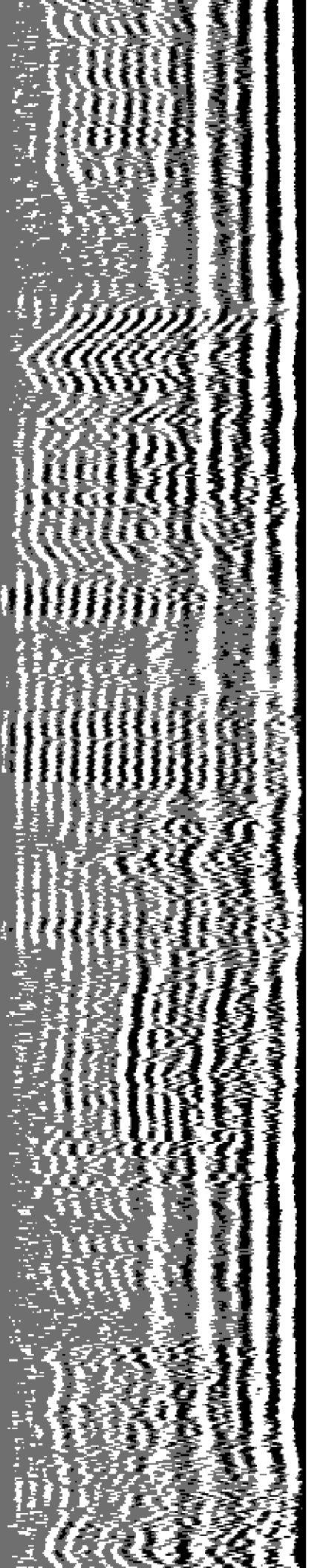




4800

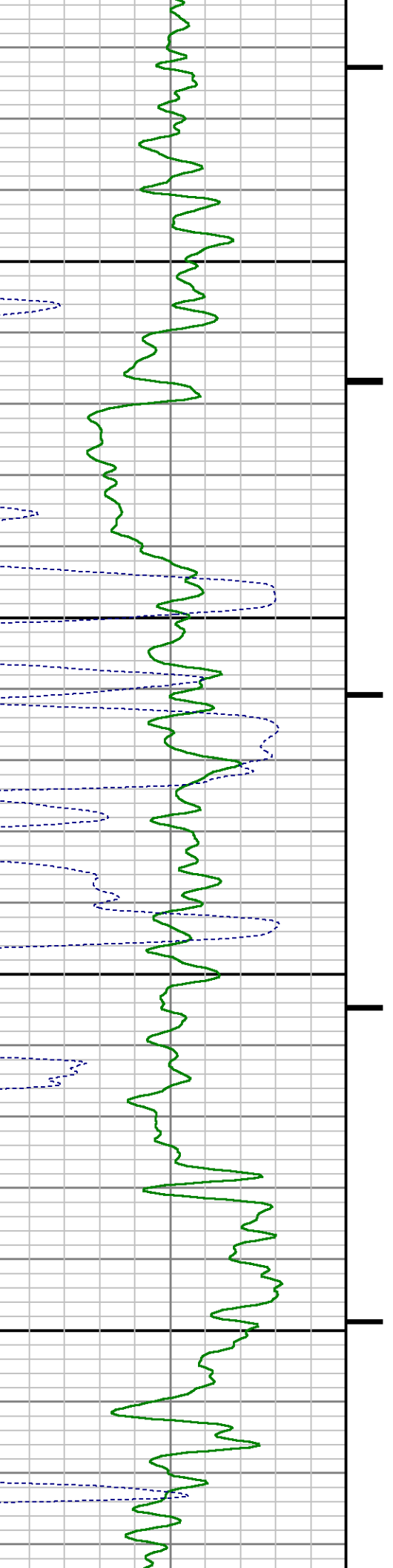
4900

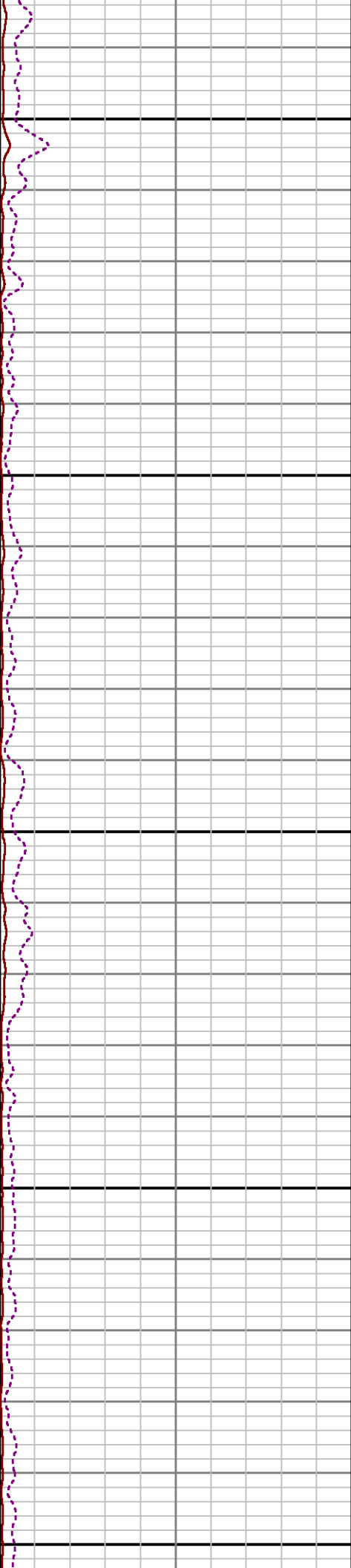
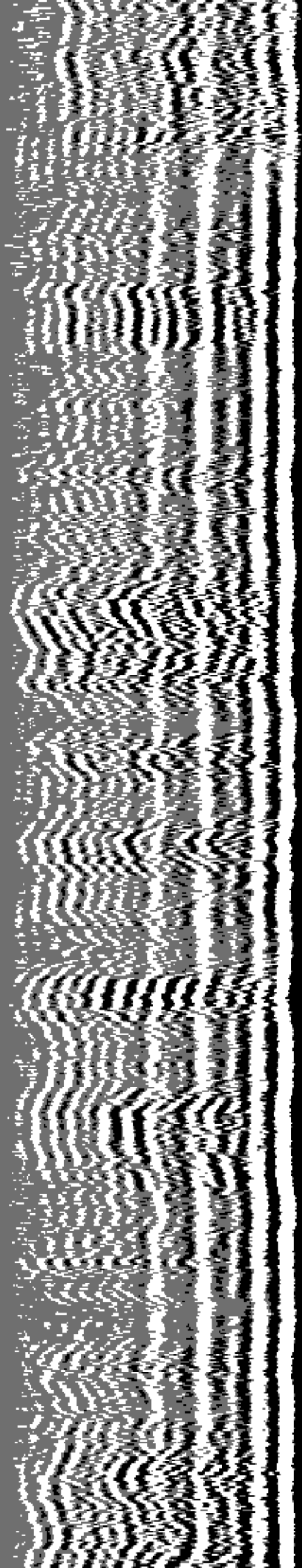




5000

5100

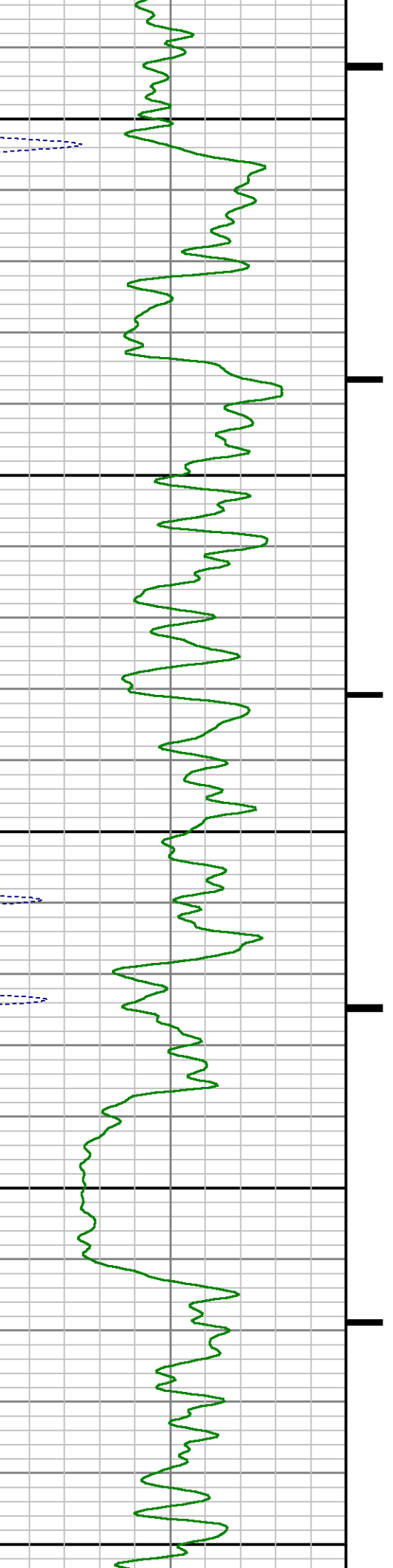


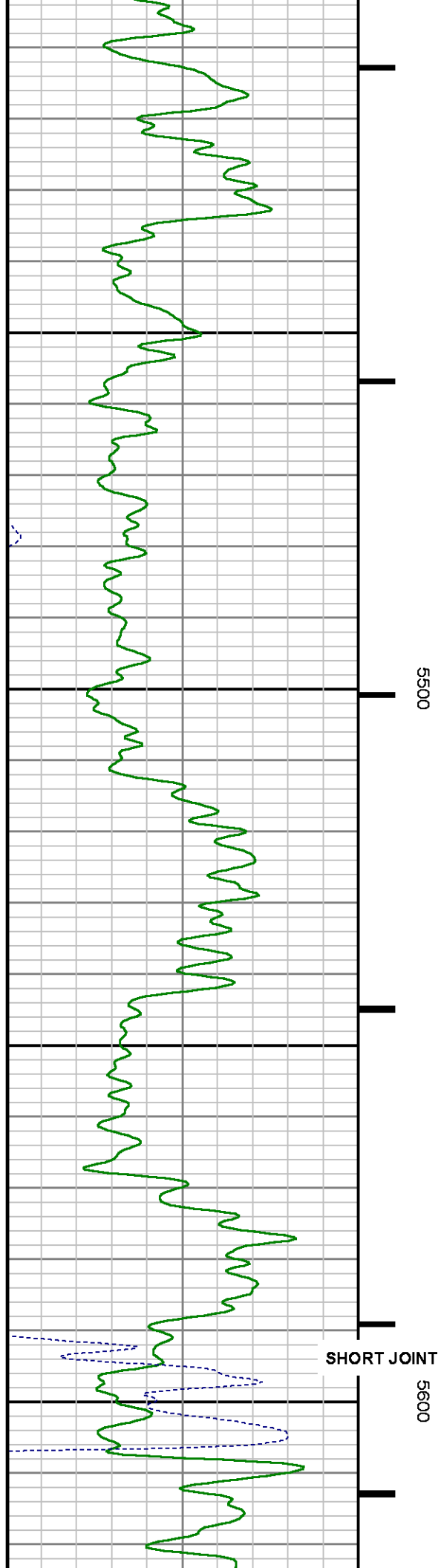
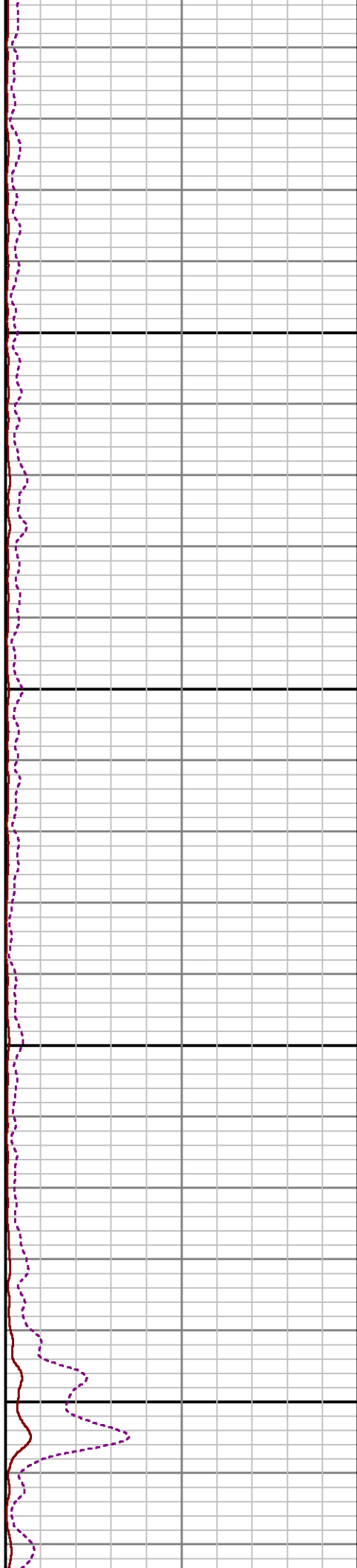
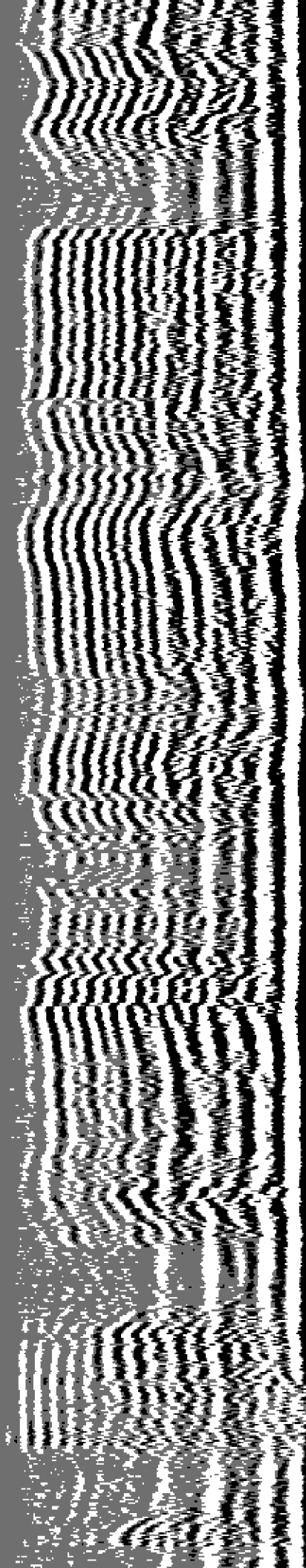


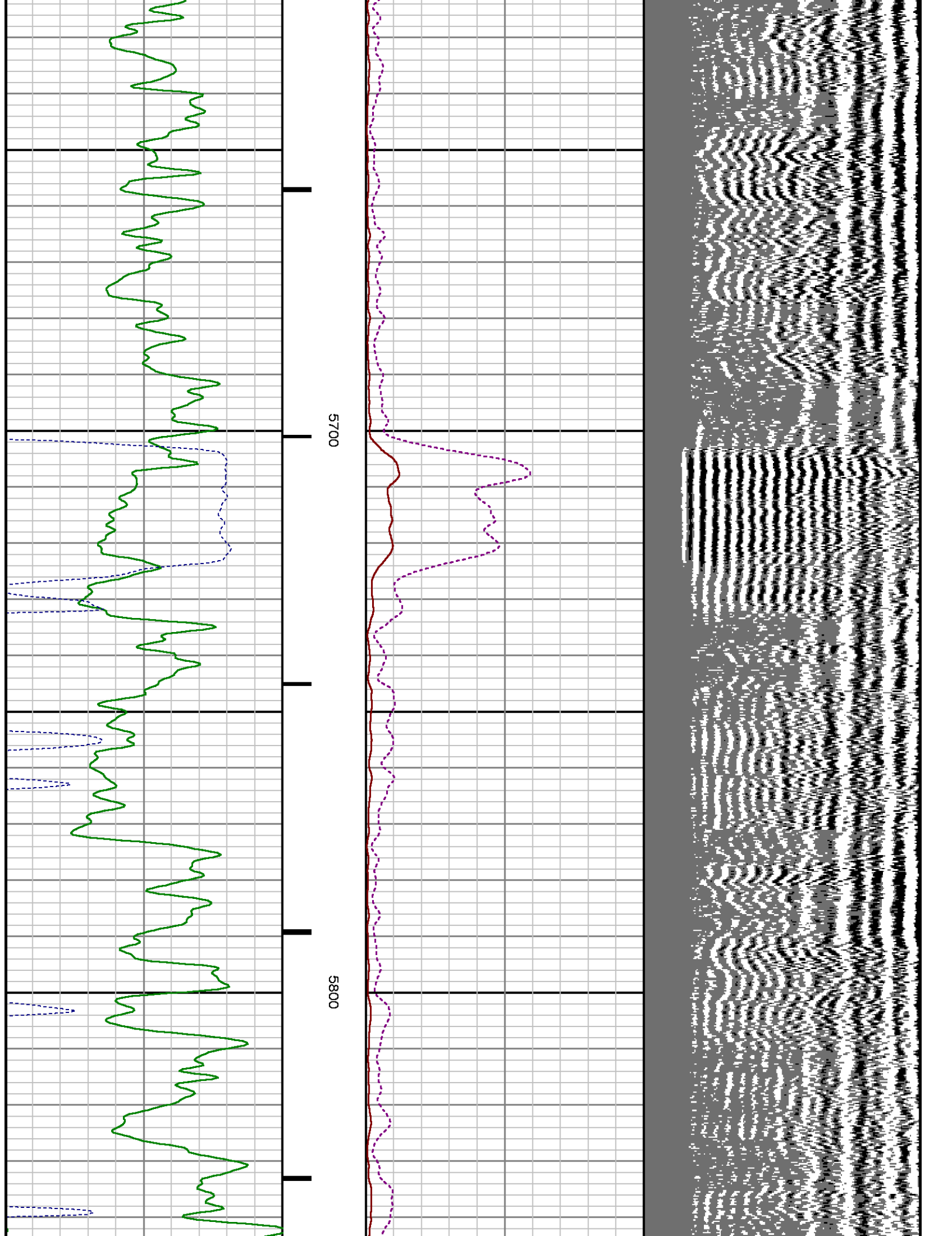
5200

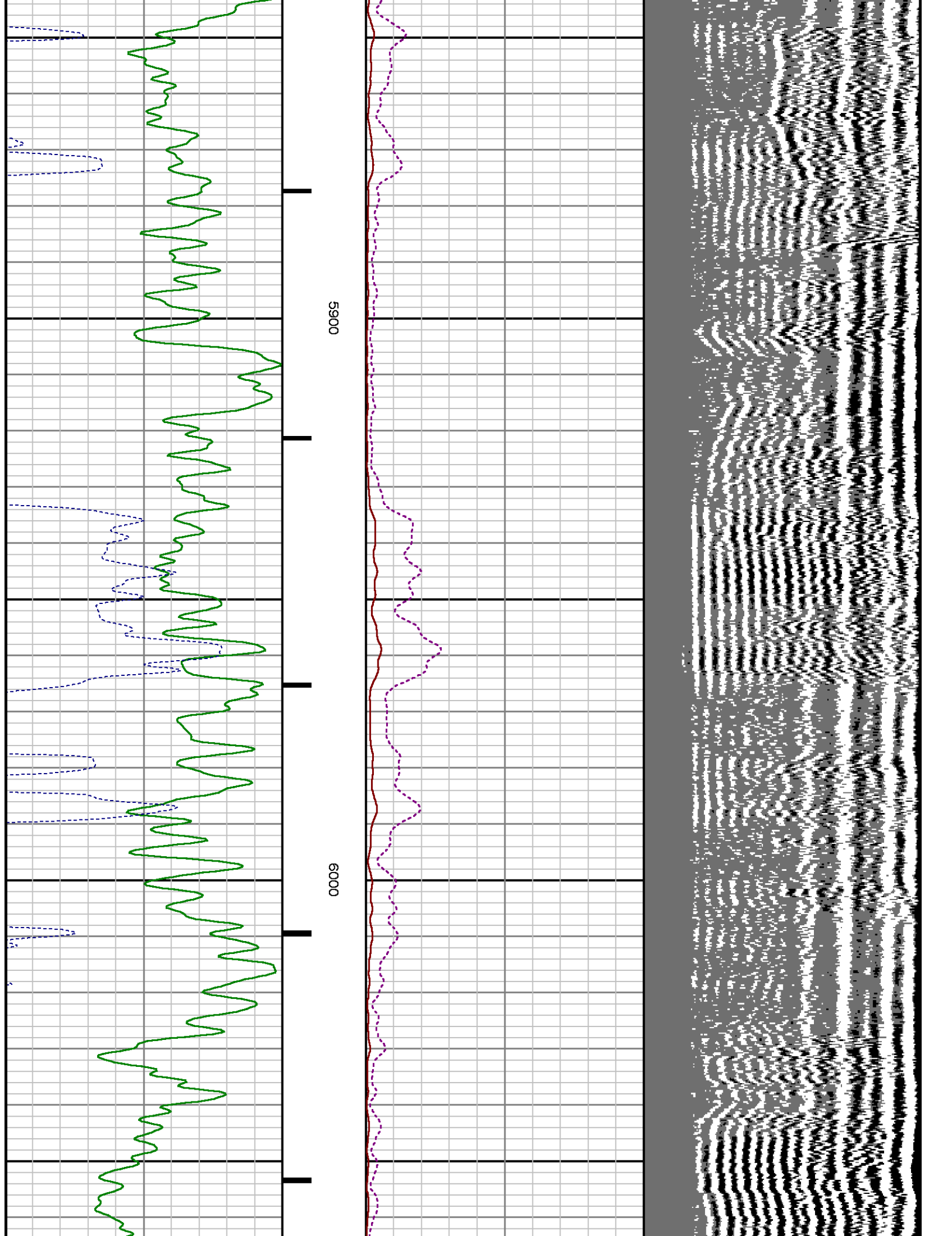
5300

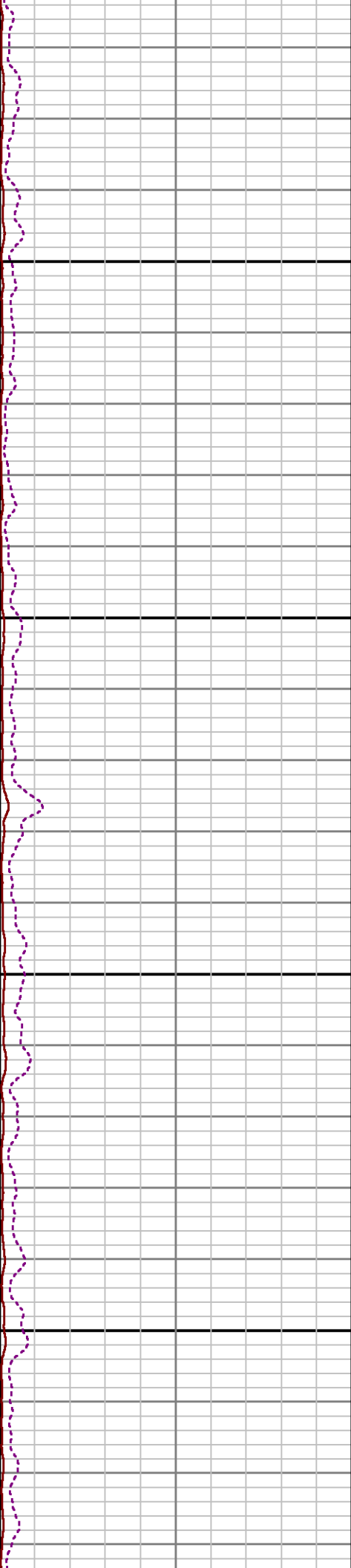
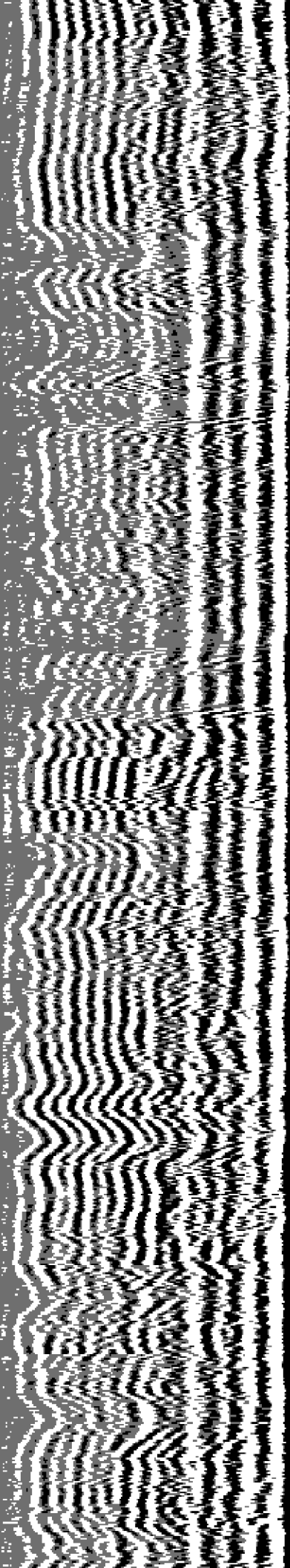
5400





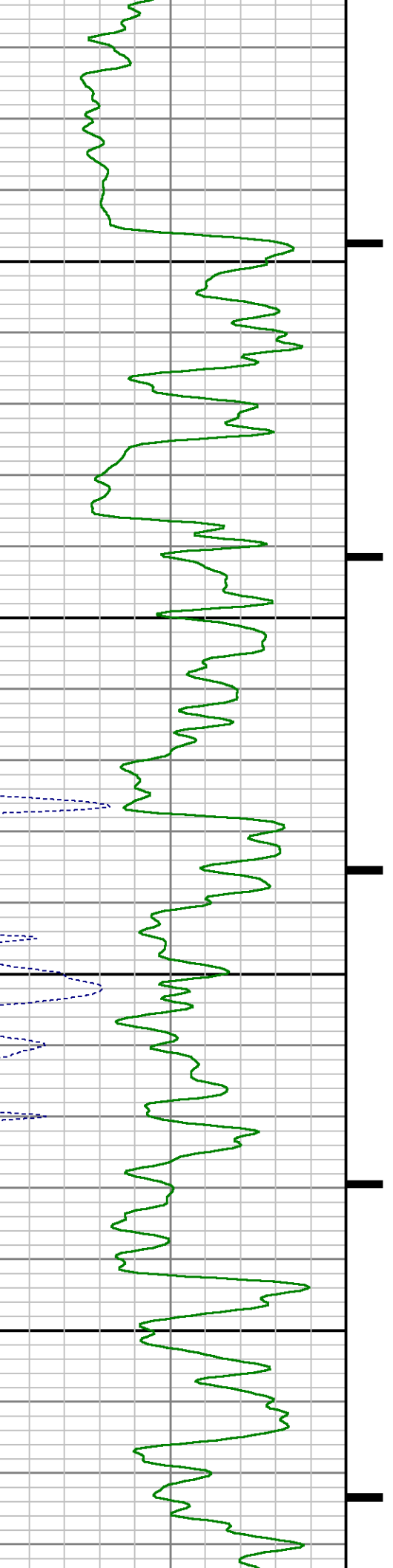


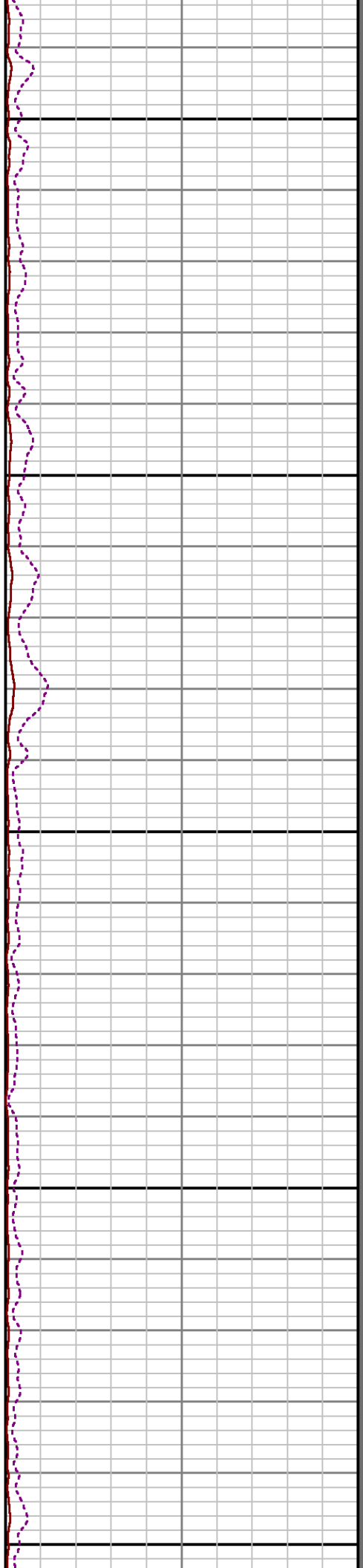
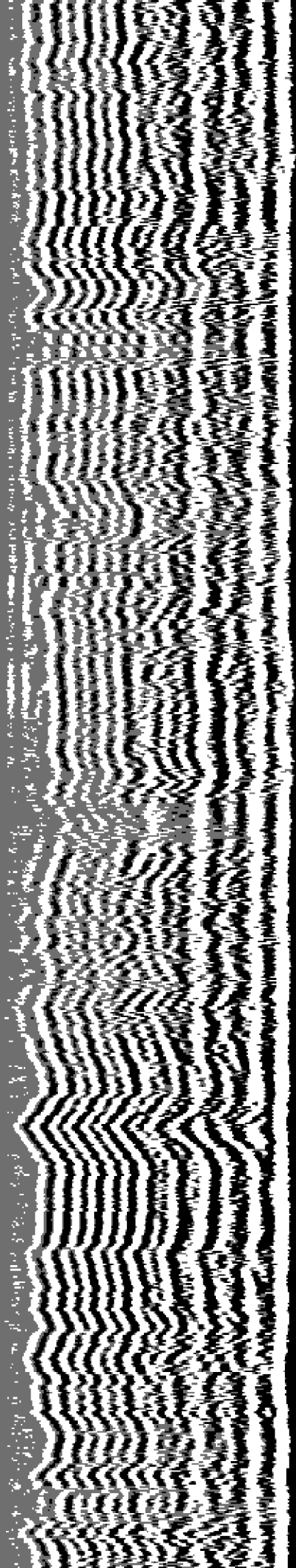




6100

6200

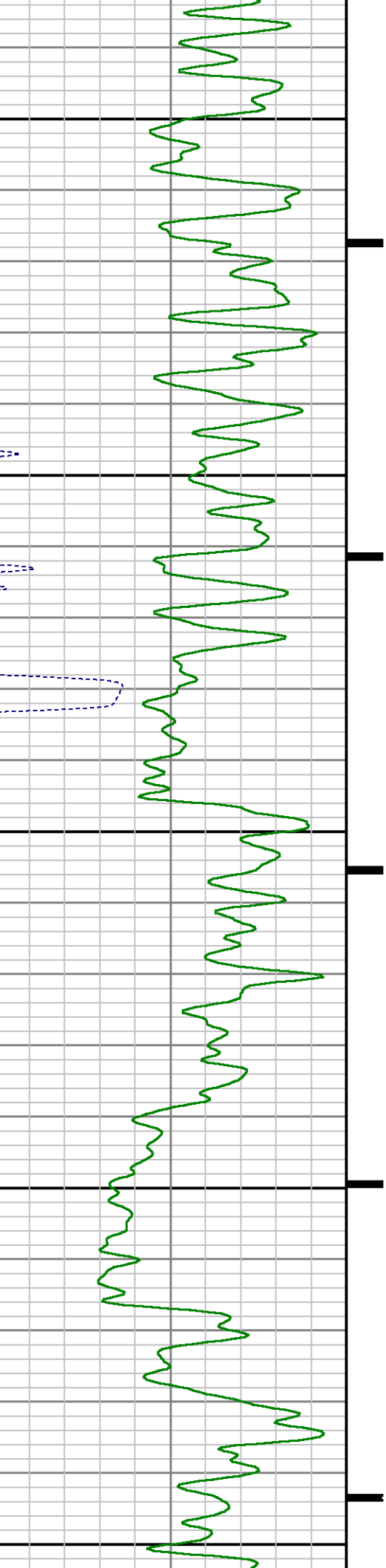


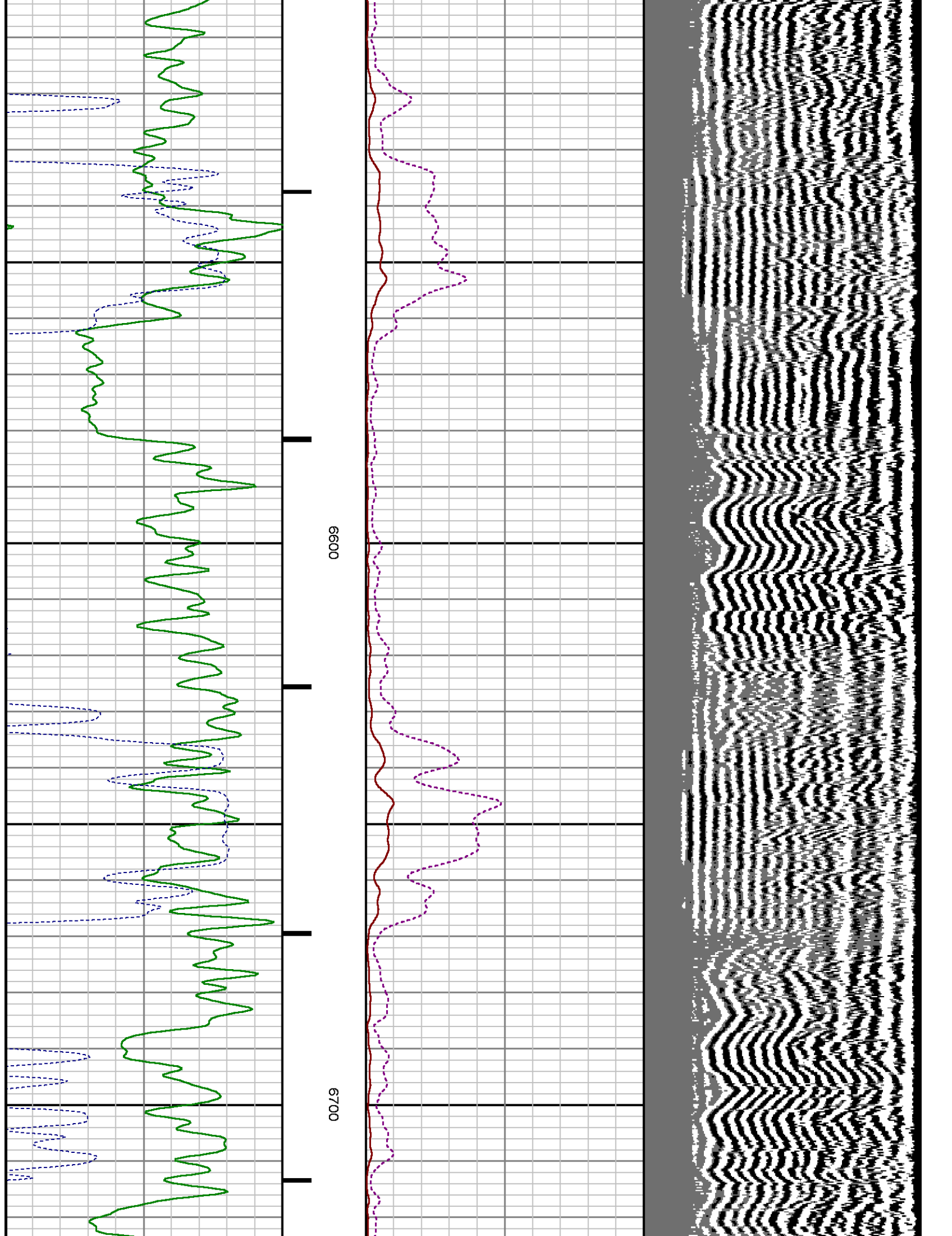


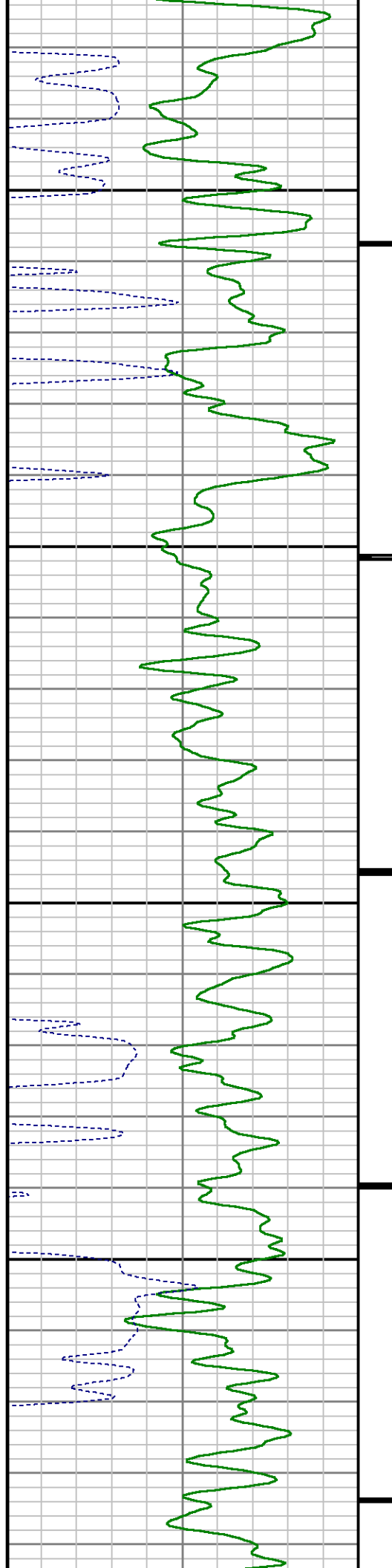
6300

6400

6500

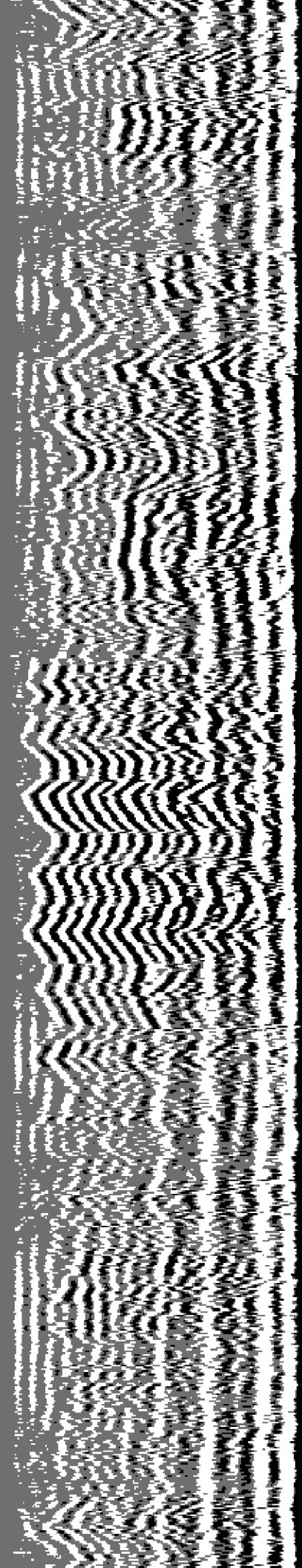
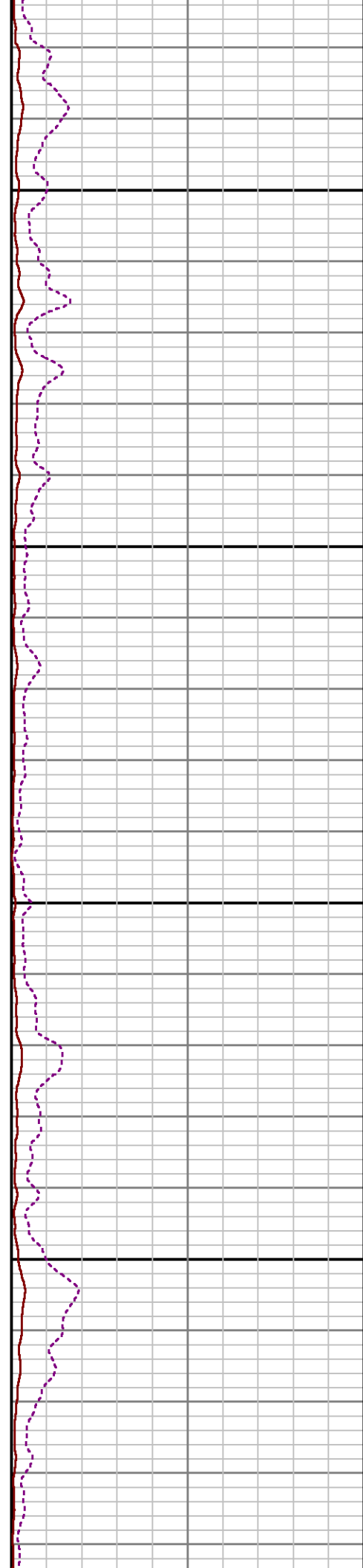


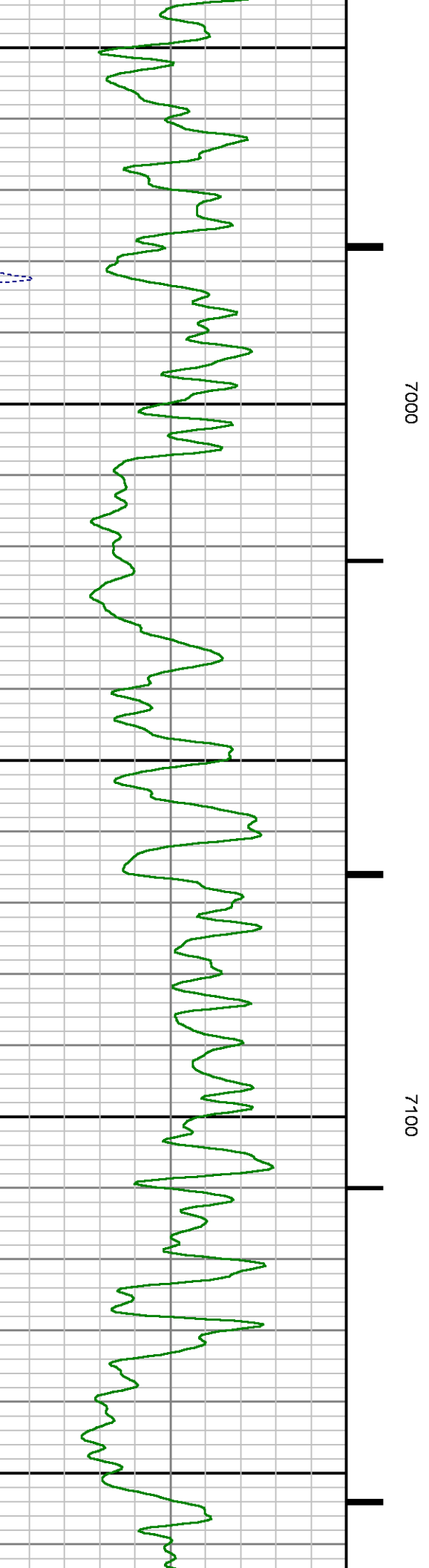
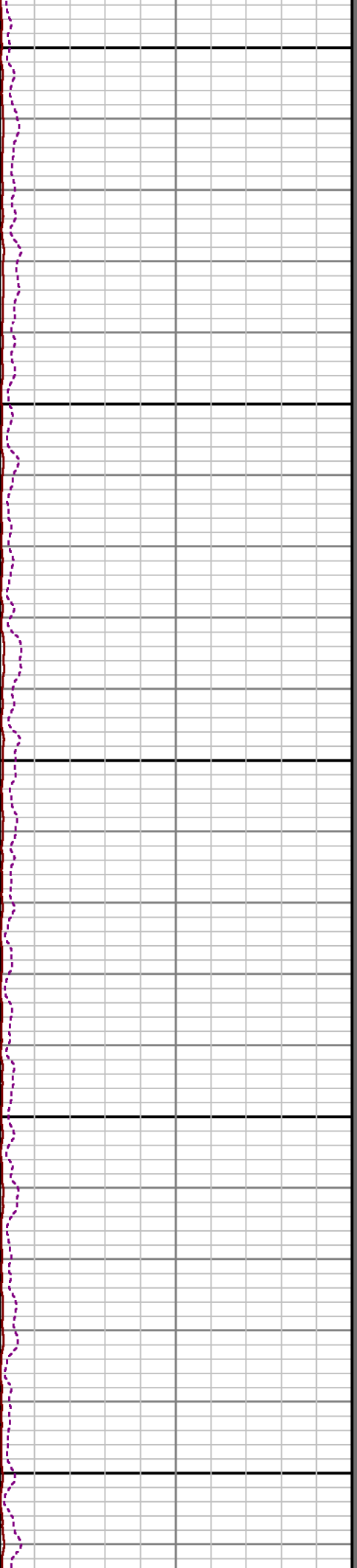
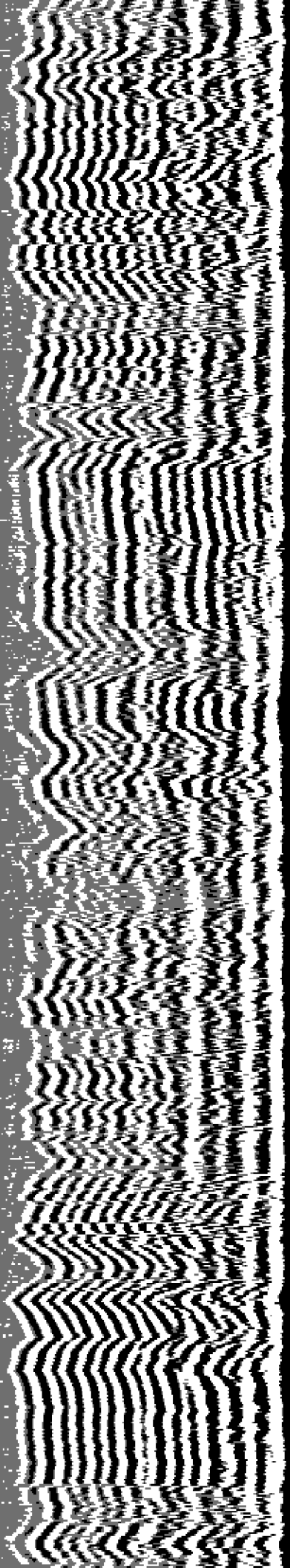


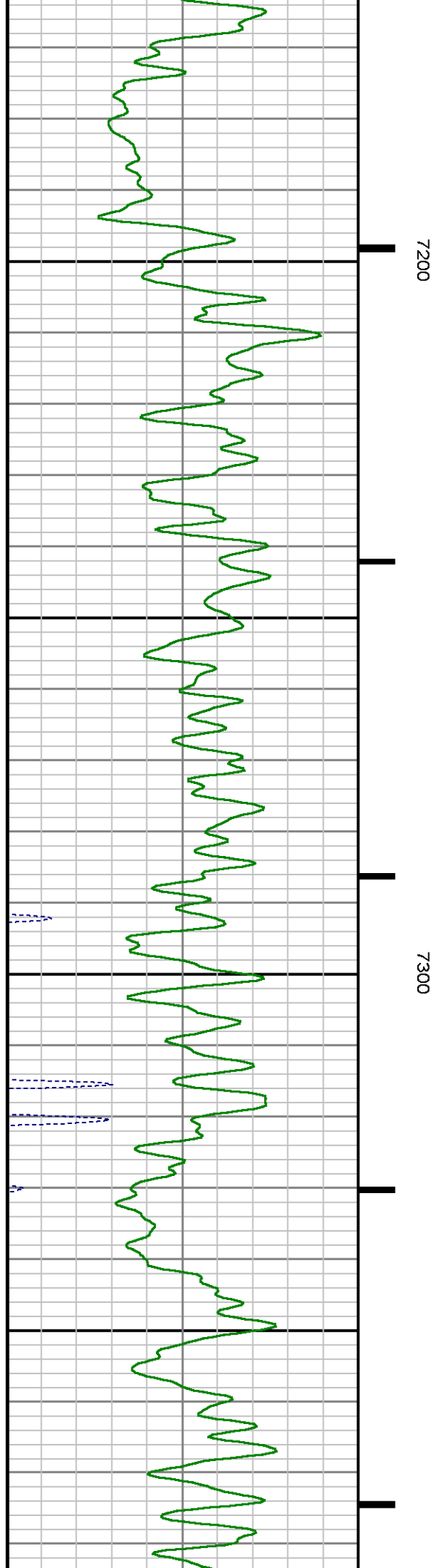
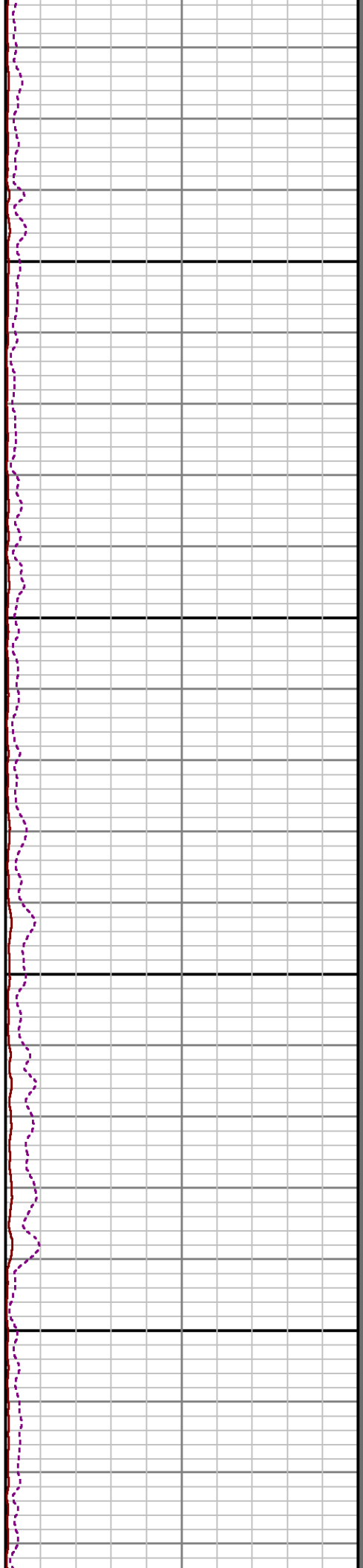
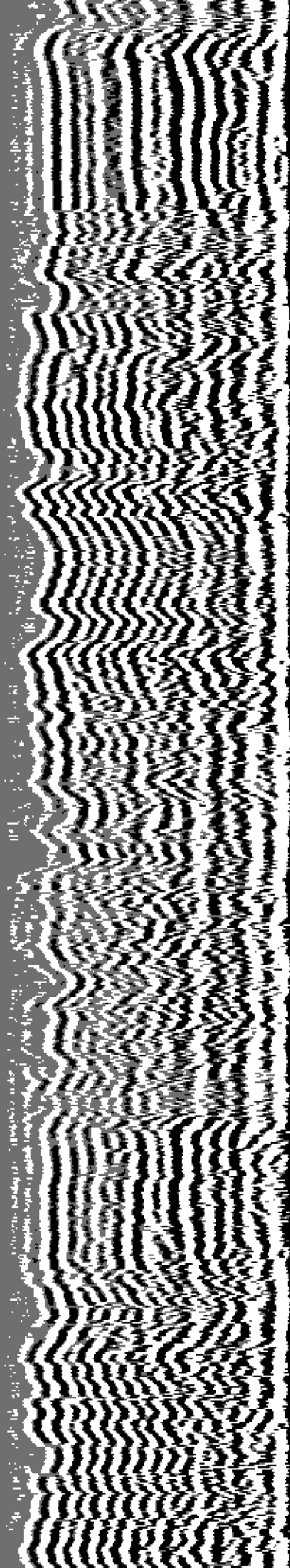


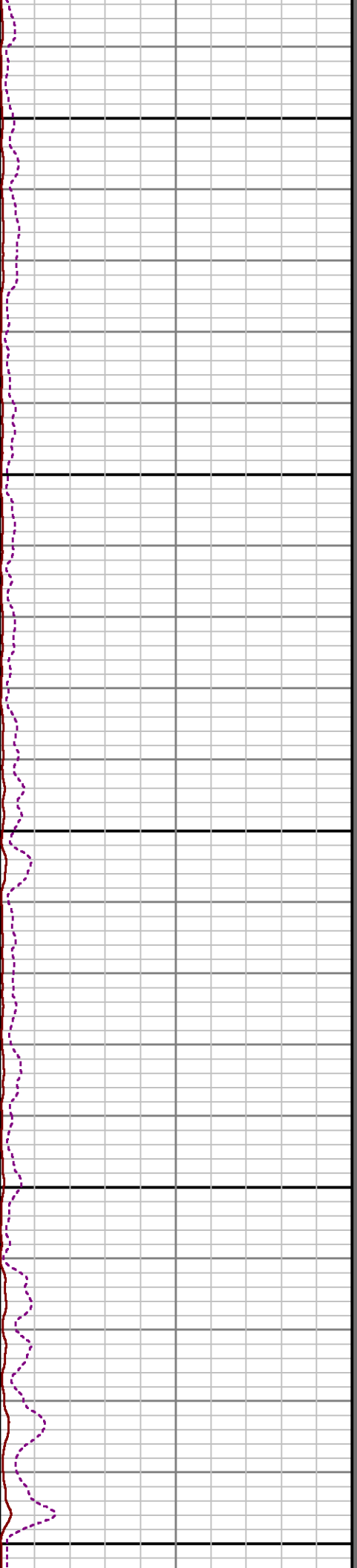
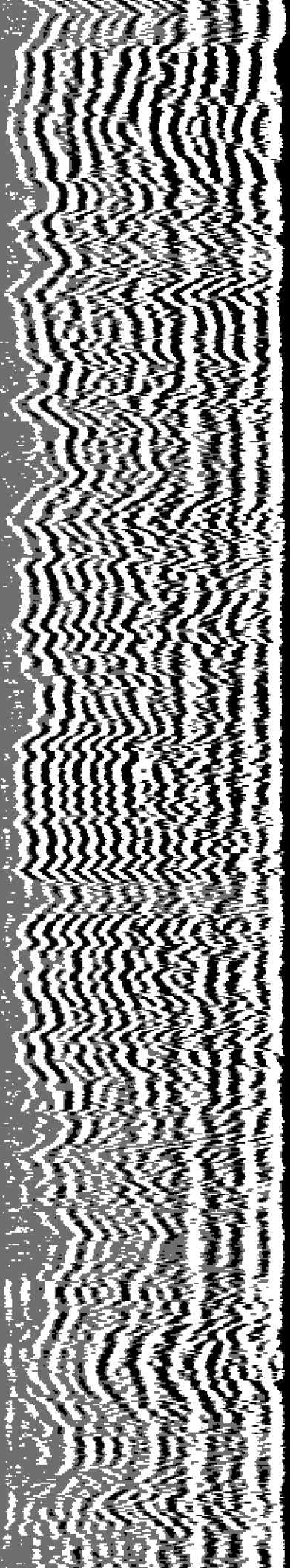
0089

0069





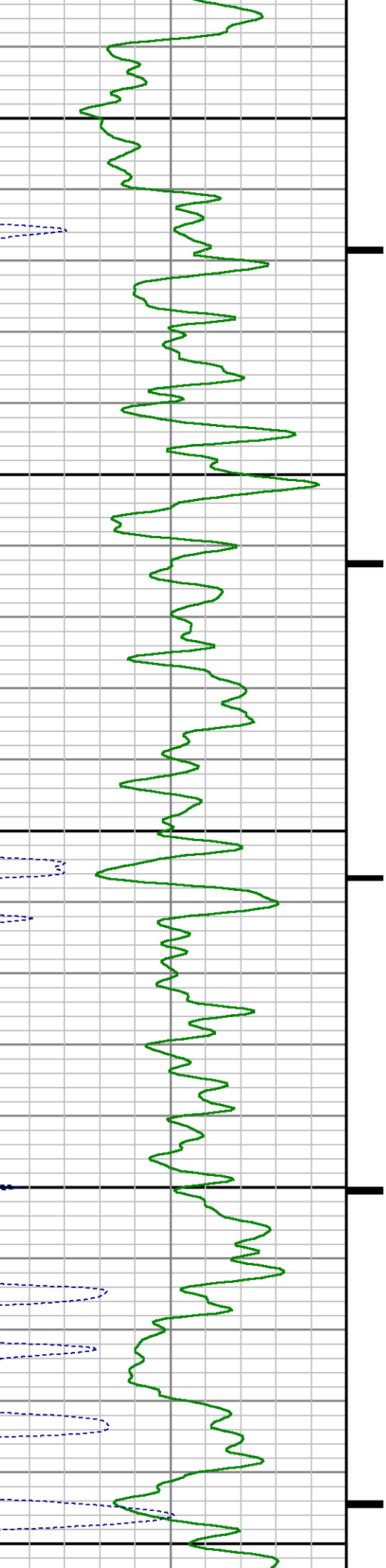


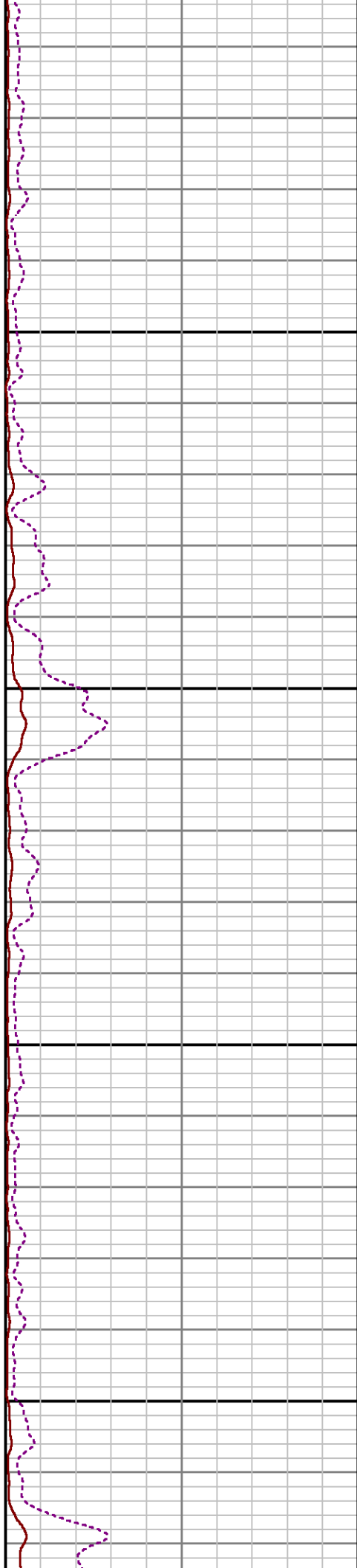
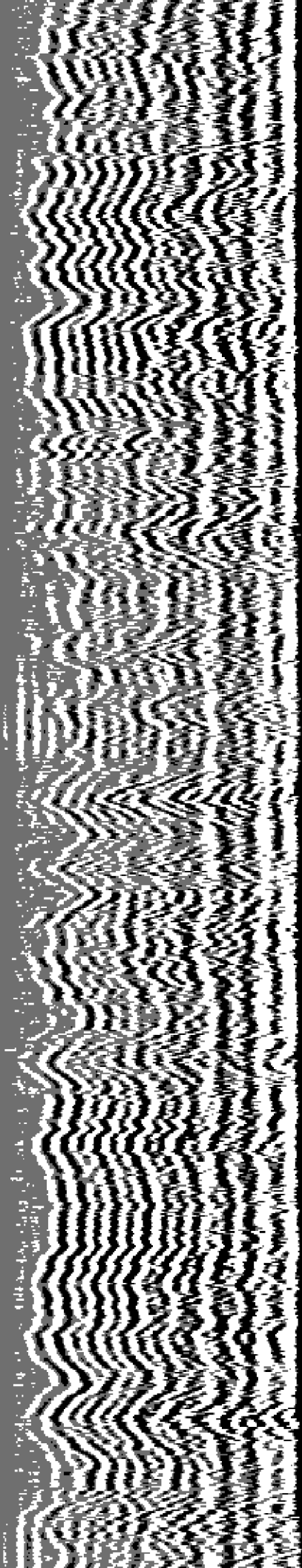


7400

7500

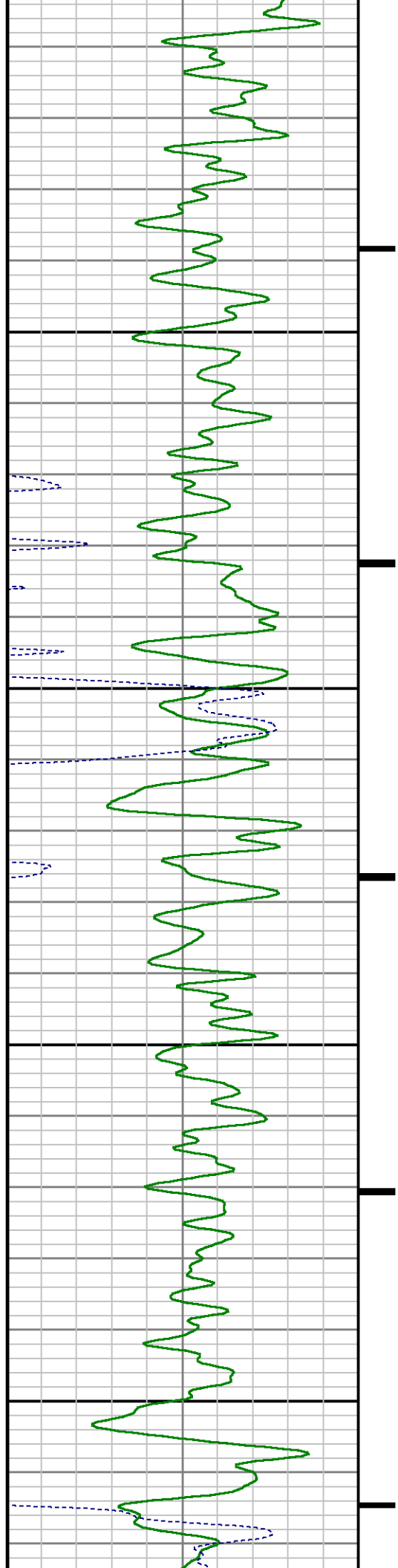
7600

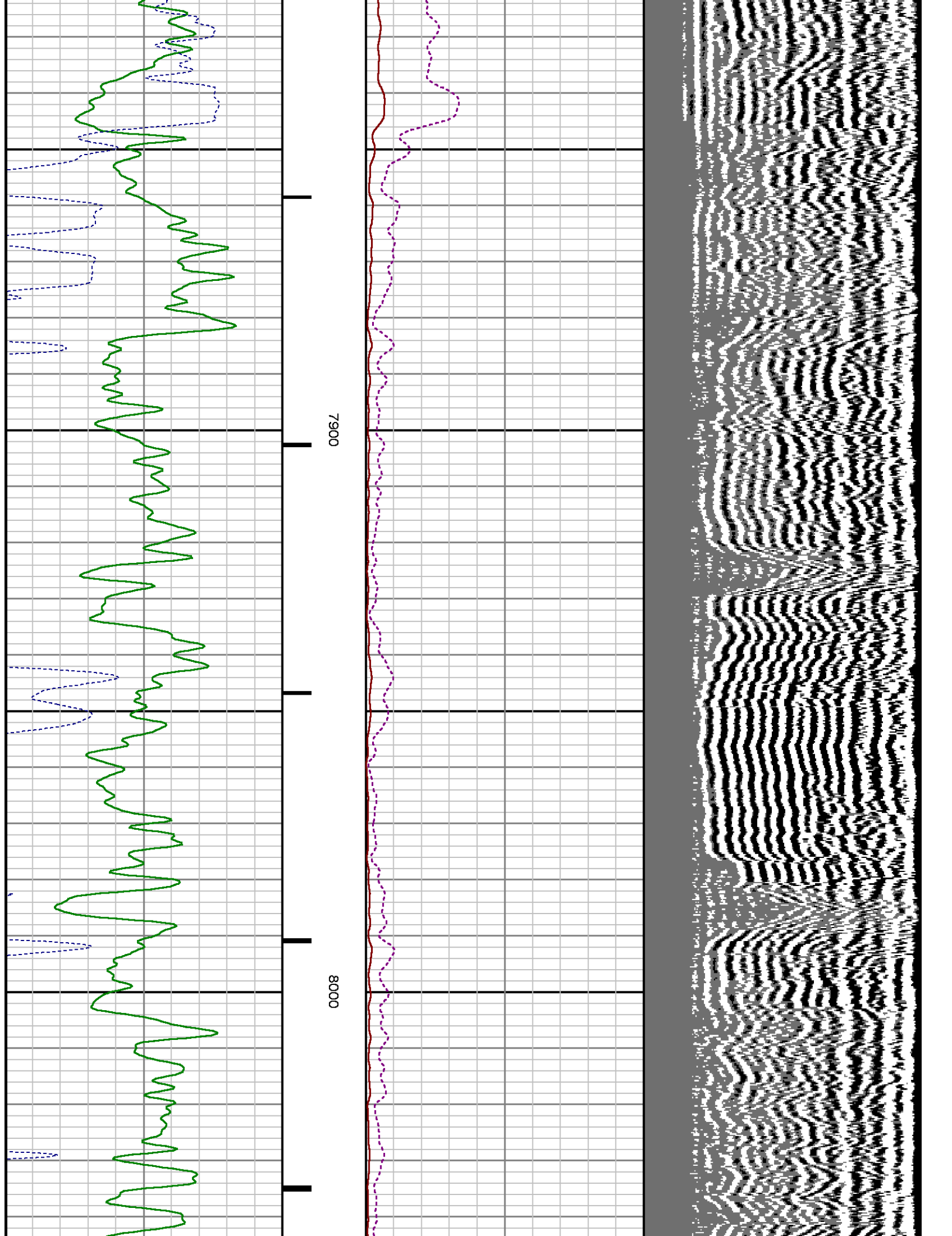


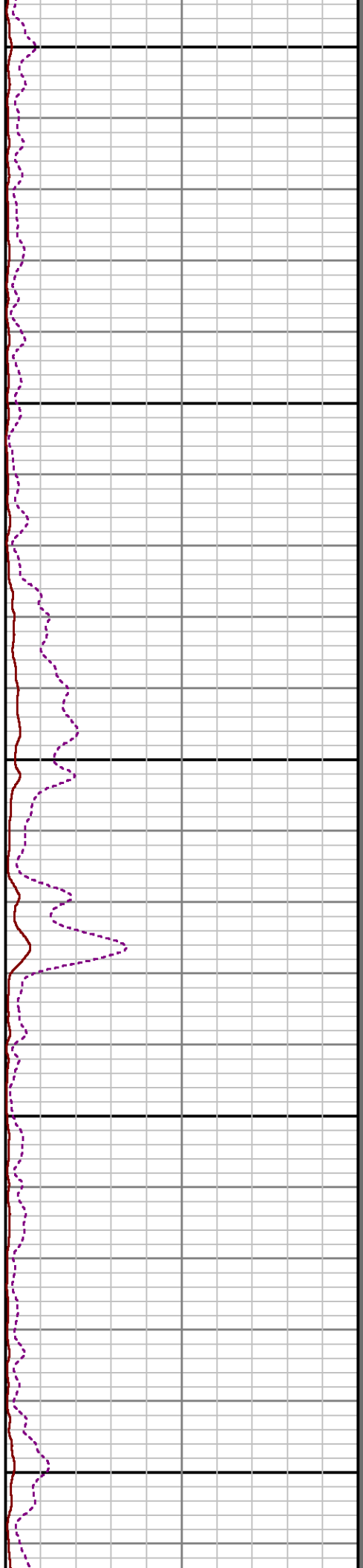
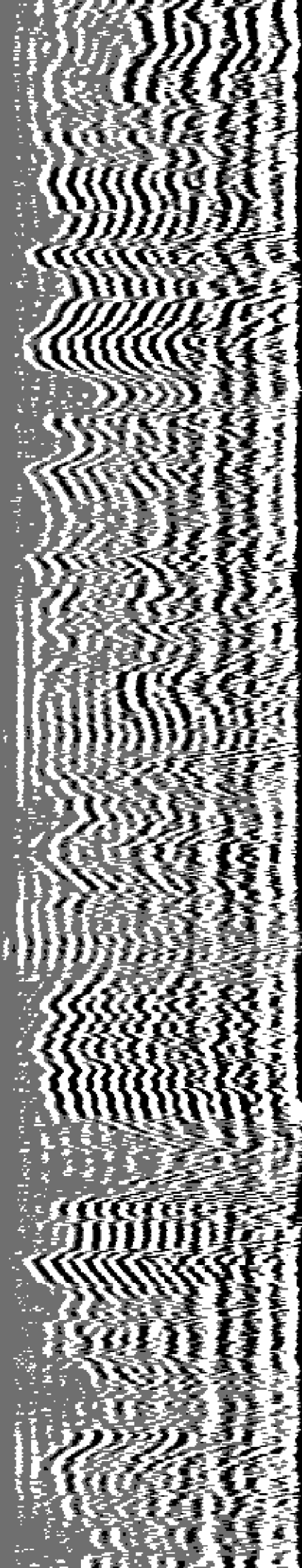


7700

7800

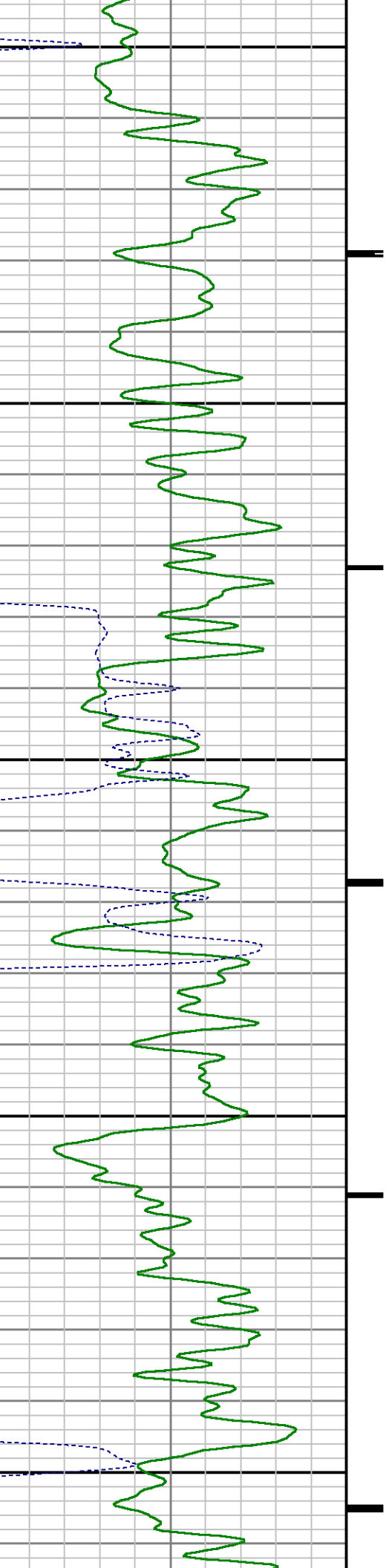


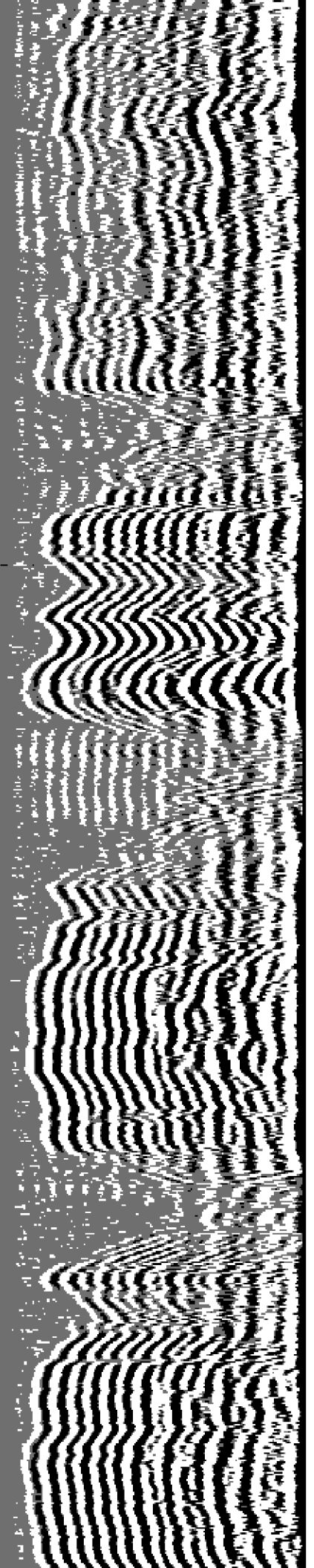




8100

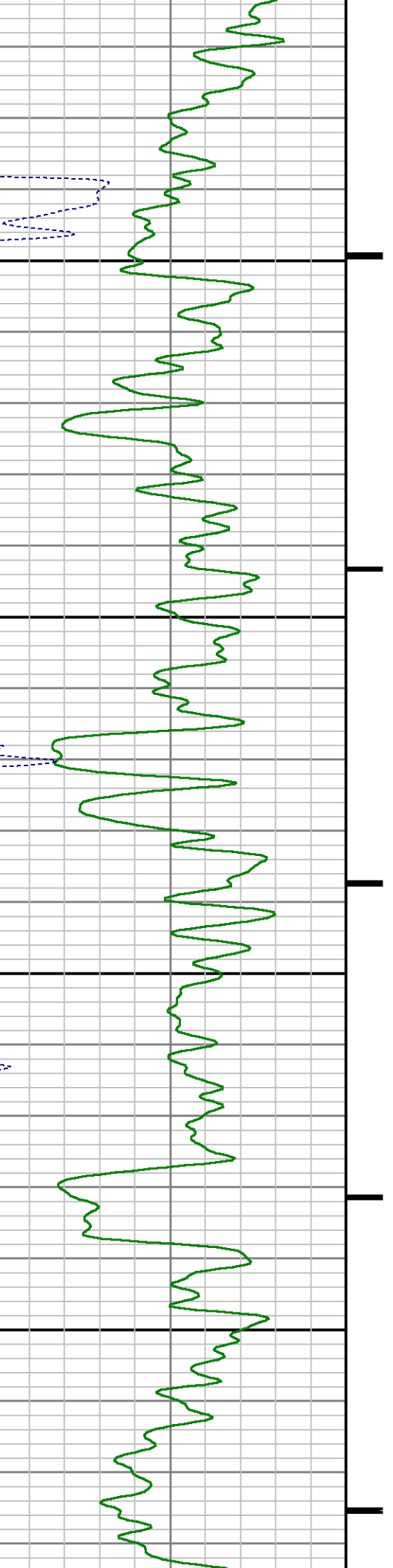
8200

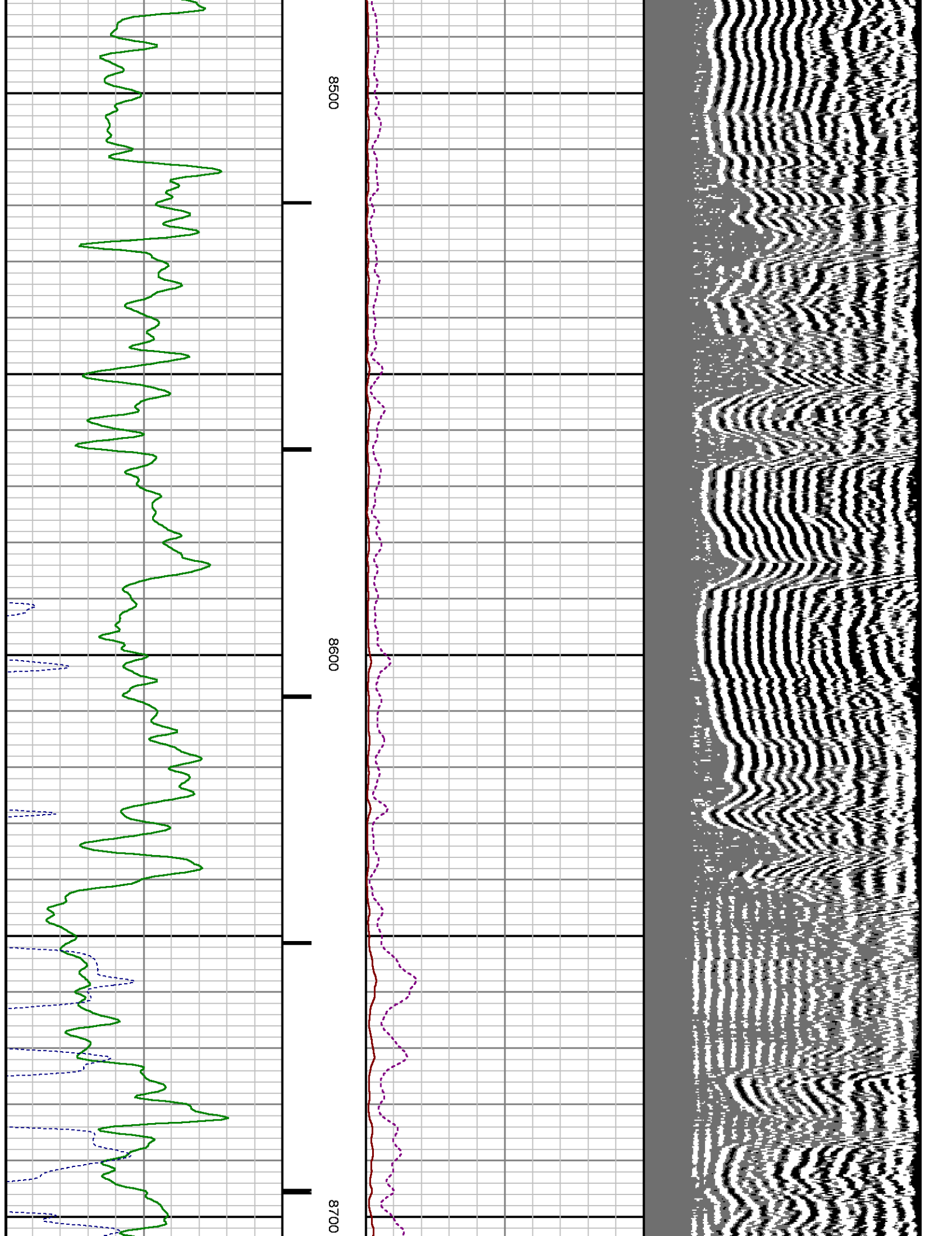


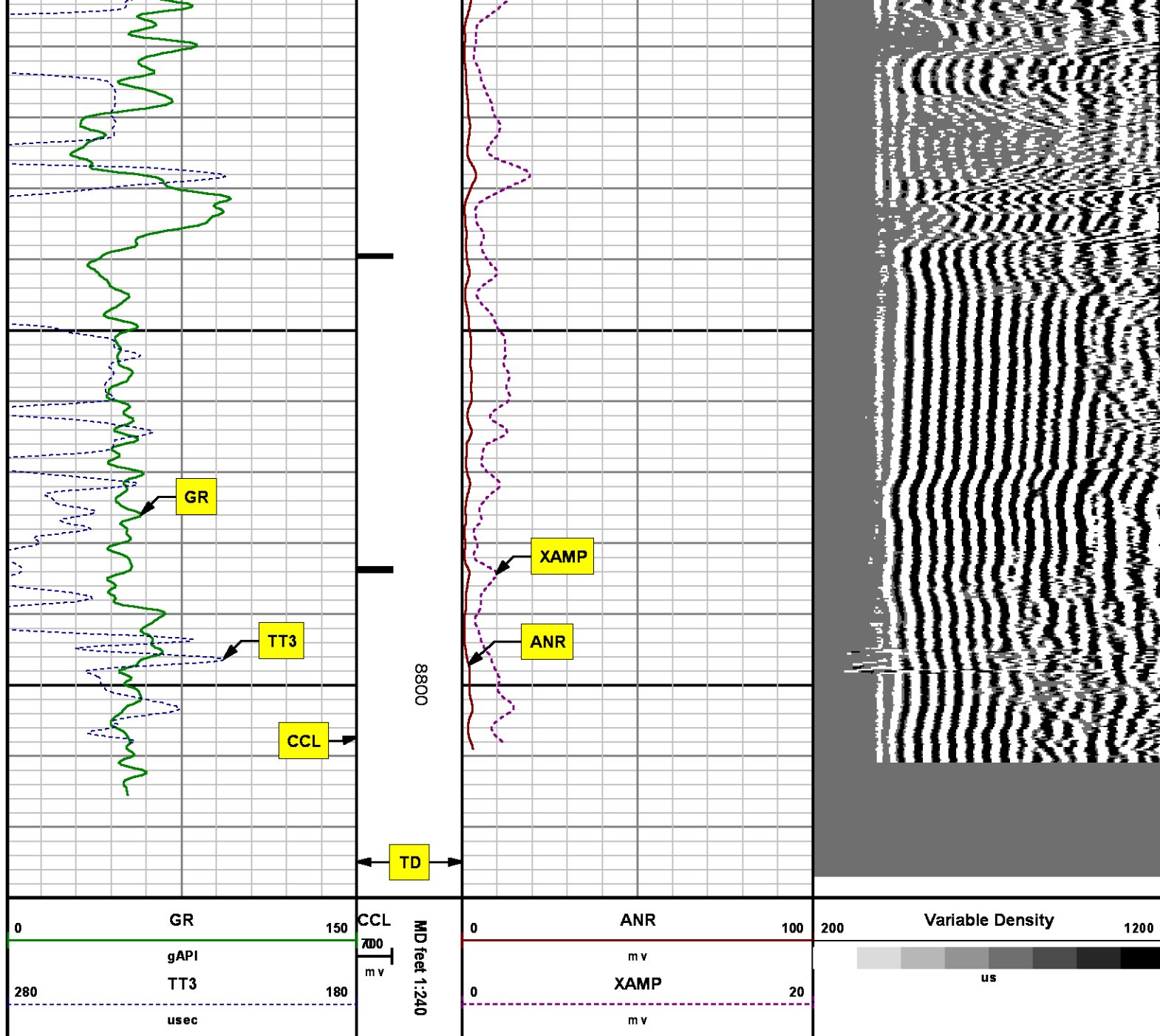


8300

8400







SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
------------------	-----------	-------	-------	-----	--------

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	36.093	8825.750
RAL	Amp Gate Start Near	195.000	usec	36.093	8825.750
RAL	Amp Gate Start Radial	195.000	usec	36.093	8825.750
RAL	Amp Gate Width Far	25.000	usec	36.093	8825.750
RAL	Amp Gate Width Near	25.000	usec	36.093	8825.750
RAL	Amp Gate Width Radial	25.000	usec	36.093	8825.750
RAL	casing od	4.500	inches	36.093	8825.750
RAL	casing wt	11.600	lbm/ft	36.093	8825.750
RAL	FB Start Far	291.900	usec	36.093	8825.750
RAL	FB Start Near	175.391	usec	36.093	8825.750
RAL	FB Start Radial	175.391	usec	36.093	8825.750
RAL	FB Thresh Far	10.000	mv	36.093	8825.750
RAL	FB Thresh Near	4.000	mv	36.093	8825.750
RAL	FB Thresh Radial	4.000	mv	36.093	8825.750
RAL	Fluid Travel Time	200.000	usec/ft	36.093	8826.655

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
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

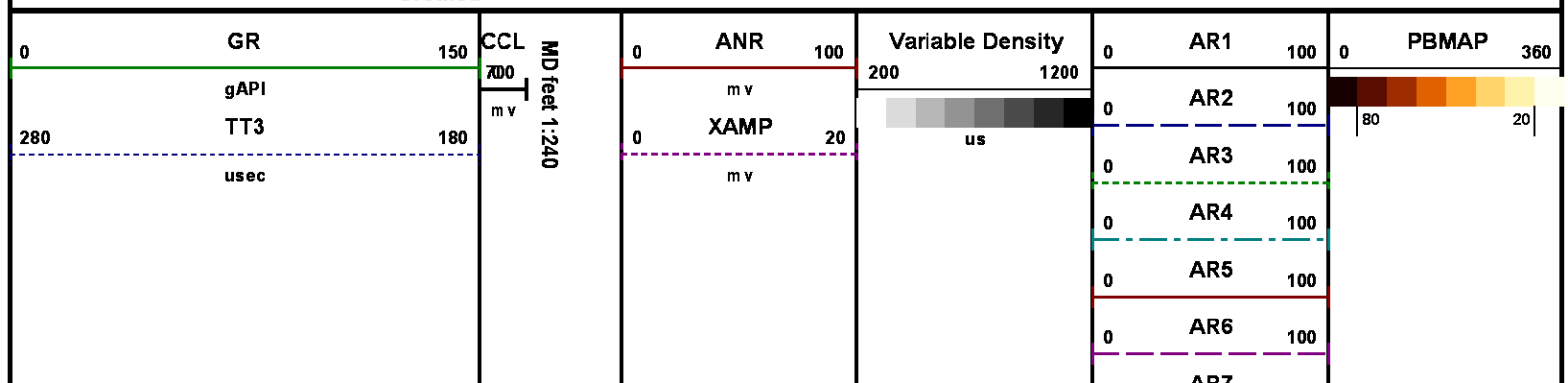
Well : SAVAGE RWF 313-25

File Name : d:\well\data\wpx\savage rwf 313-25\313cbl\main.xtf

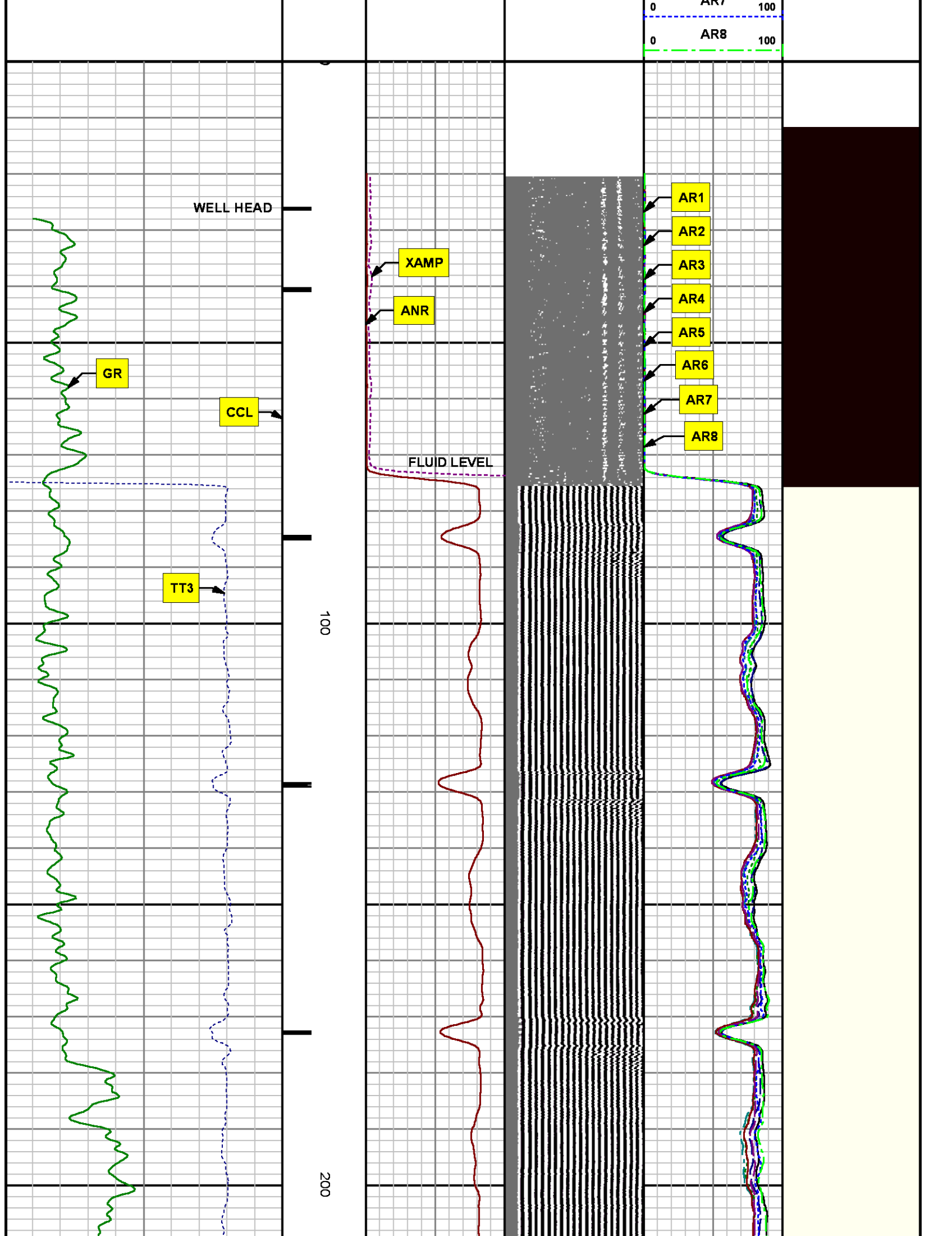
Mode : PlotMgr 5.4.504

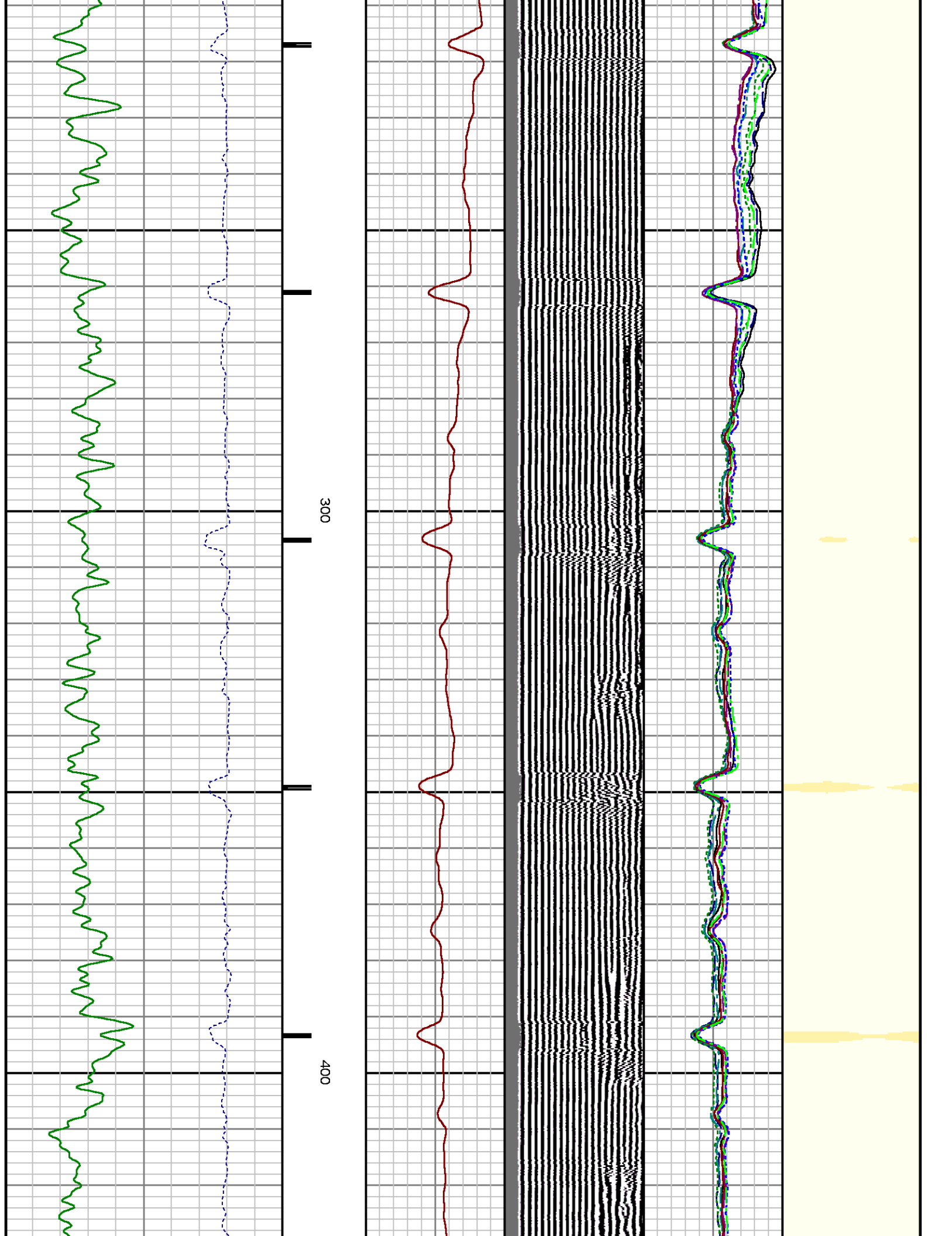
Interval : 0.00 - 8830.00 feet UP

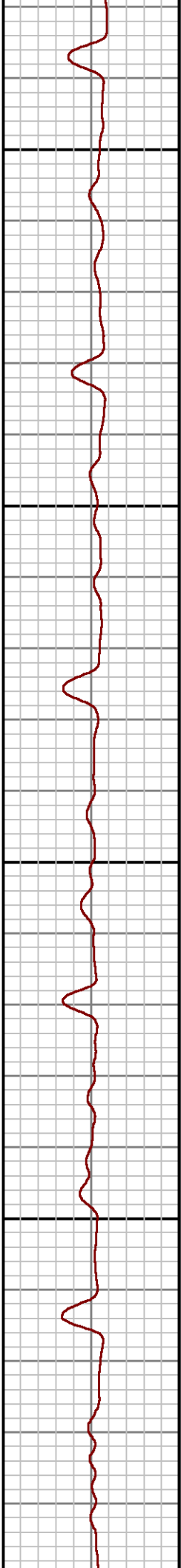
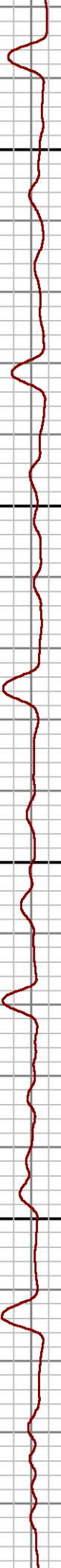
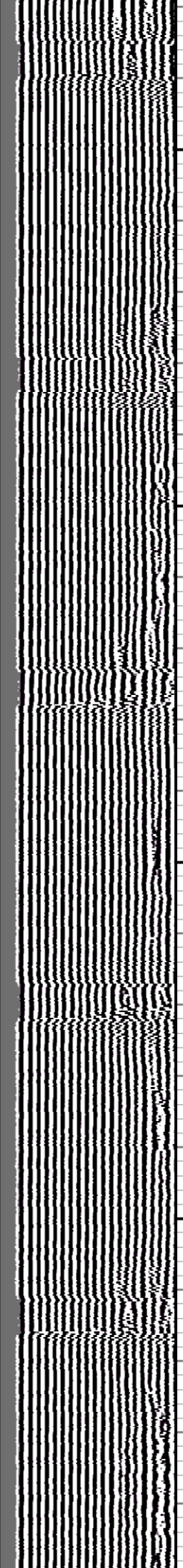
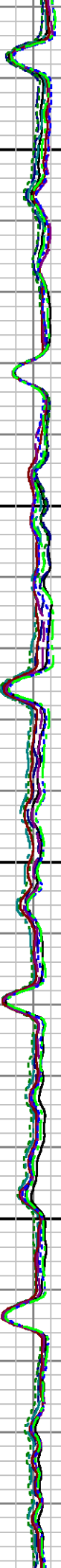
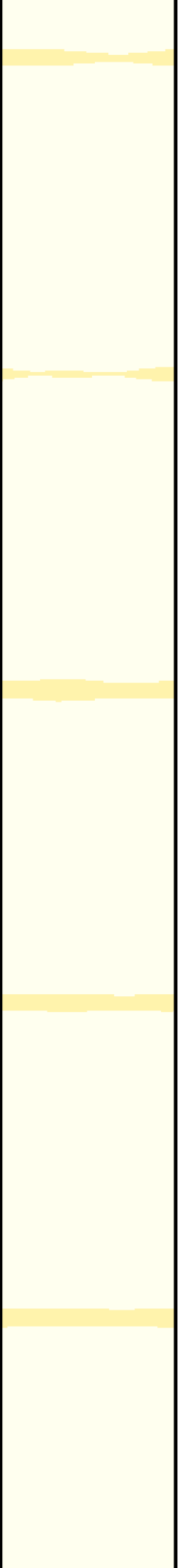
Created : 5/8/2014 8:57:48 PM



0	AR7	100
0	AR8	100

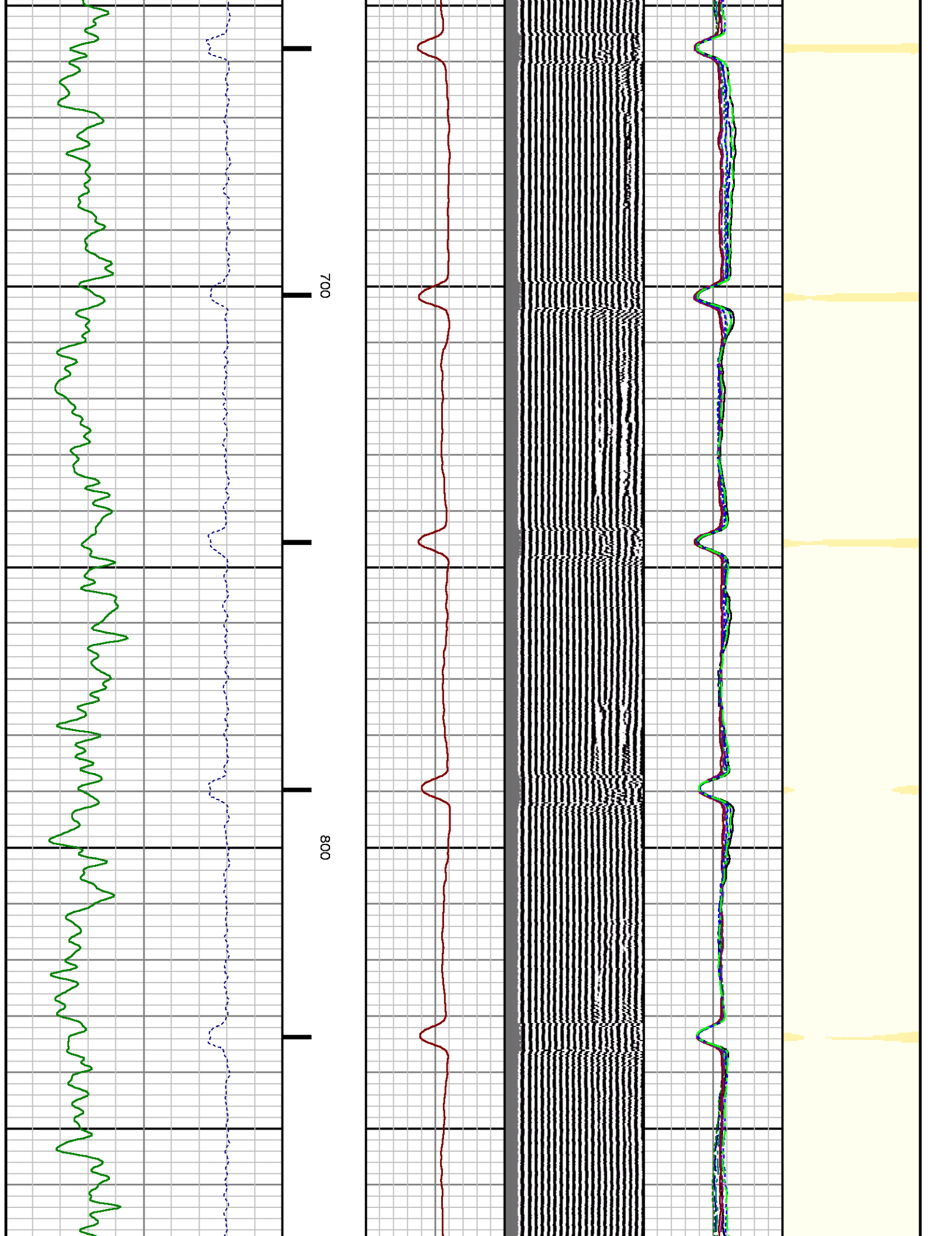


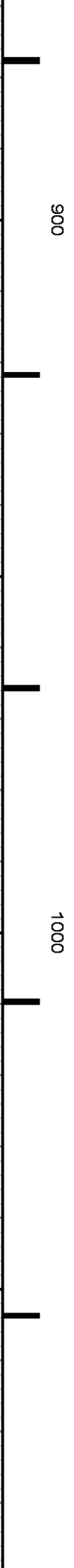
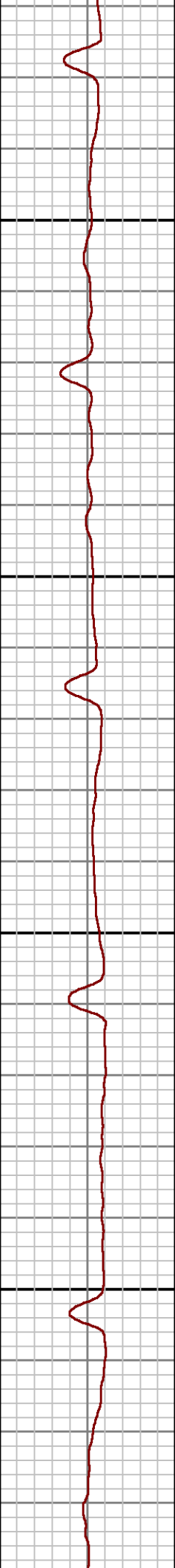
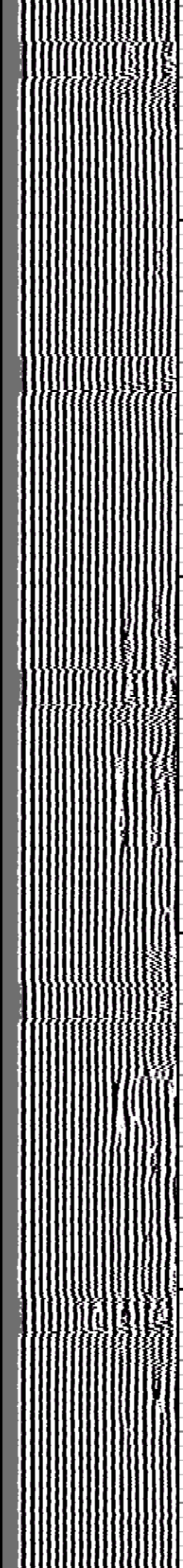
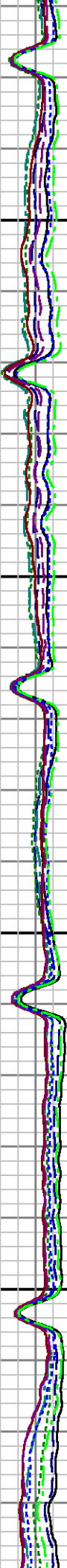
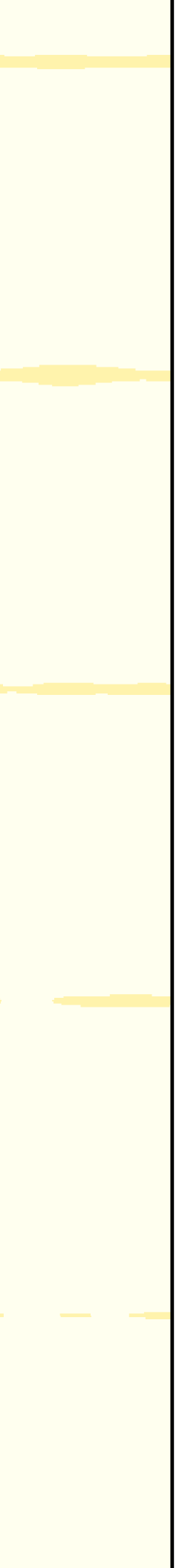




500

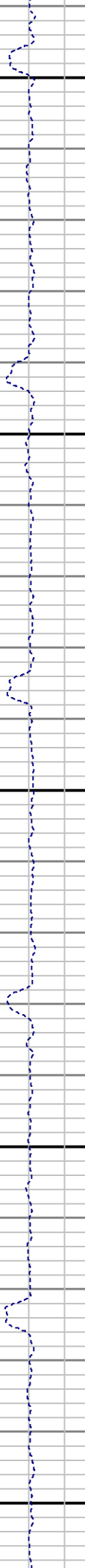
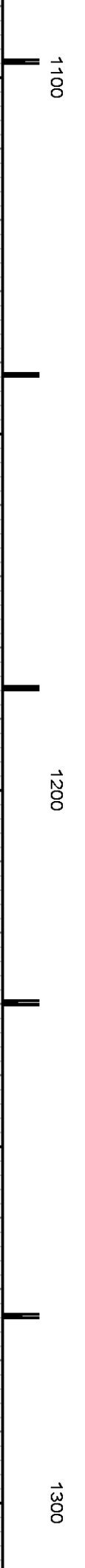
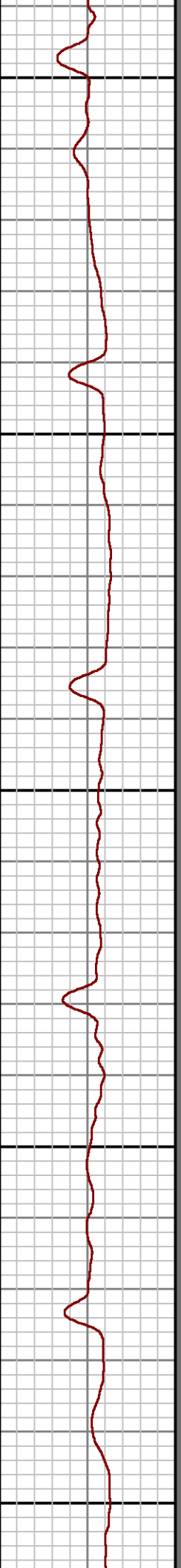
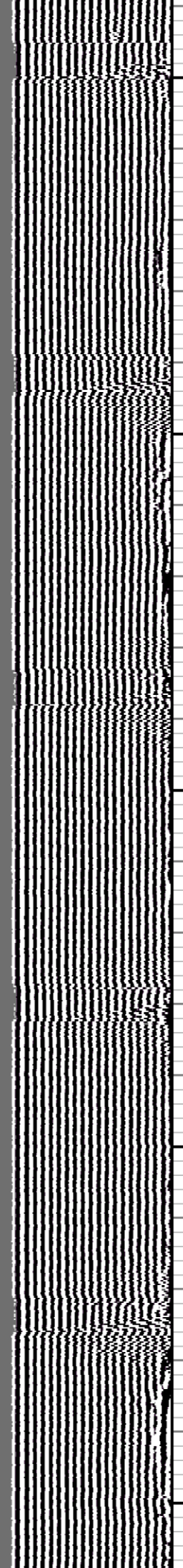
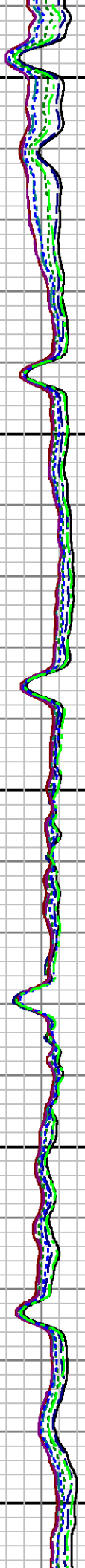
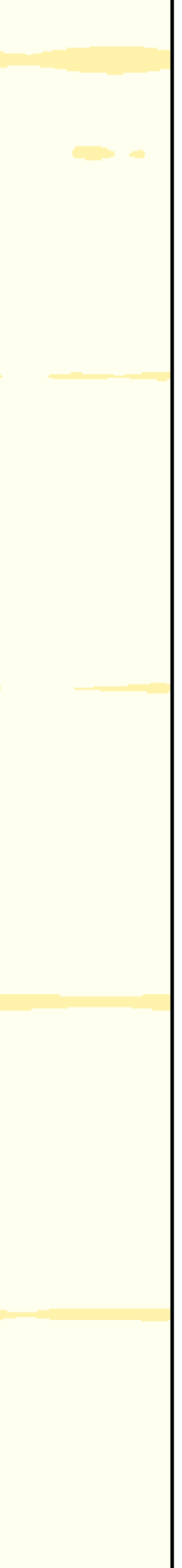
600

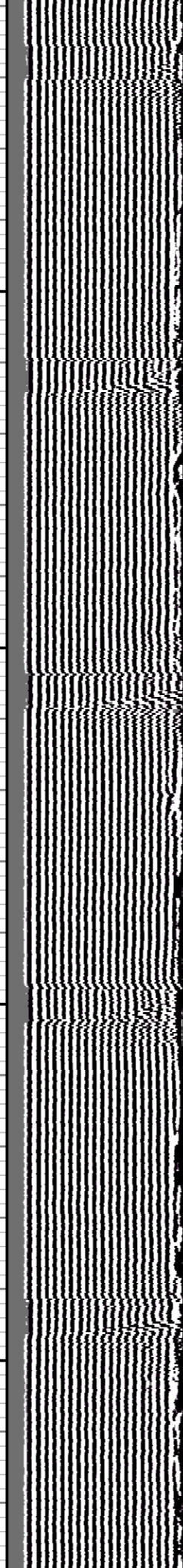
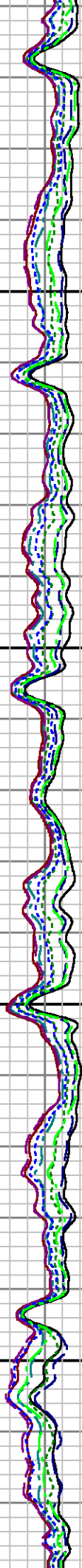
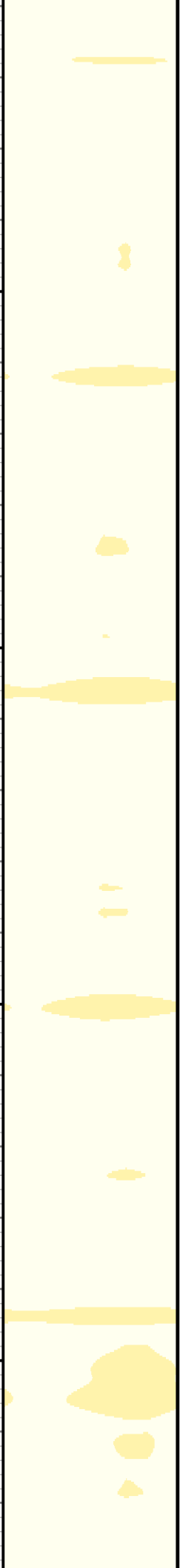




900

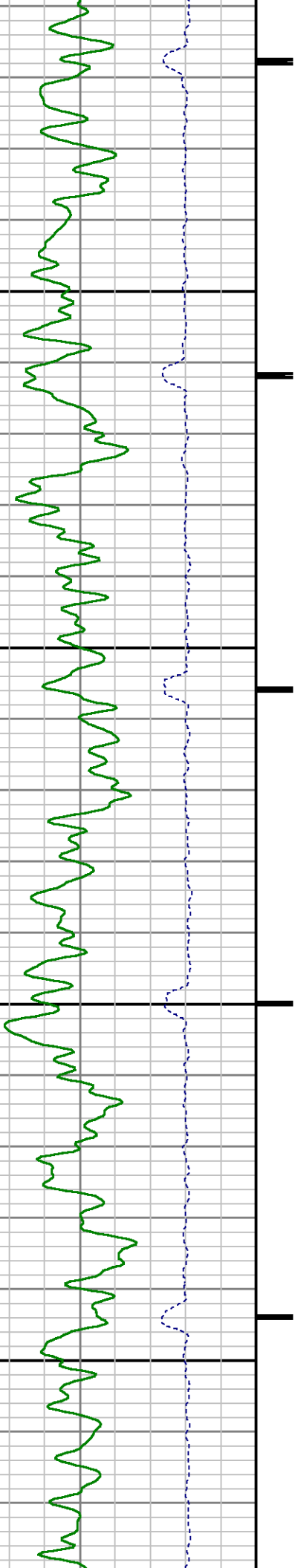
1000

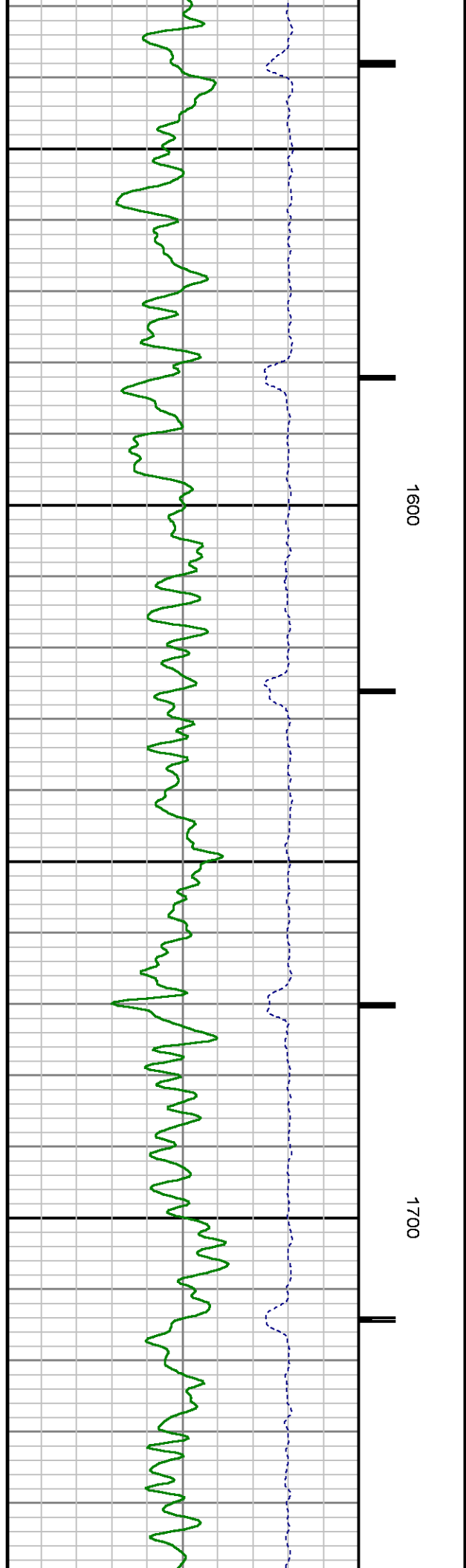
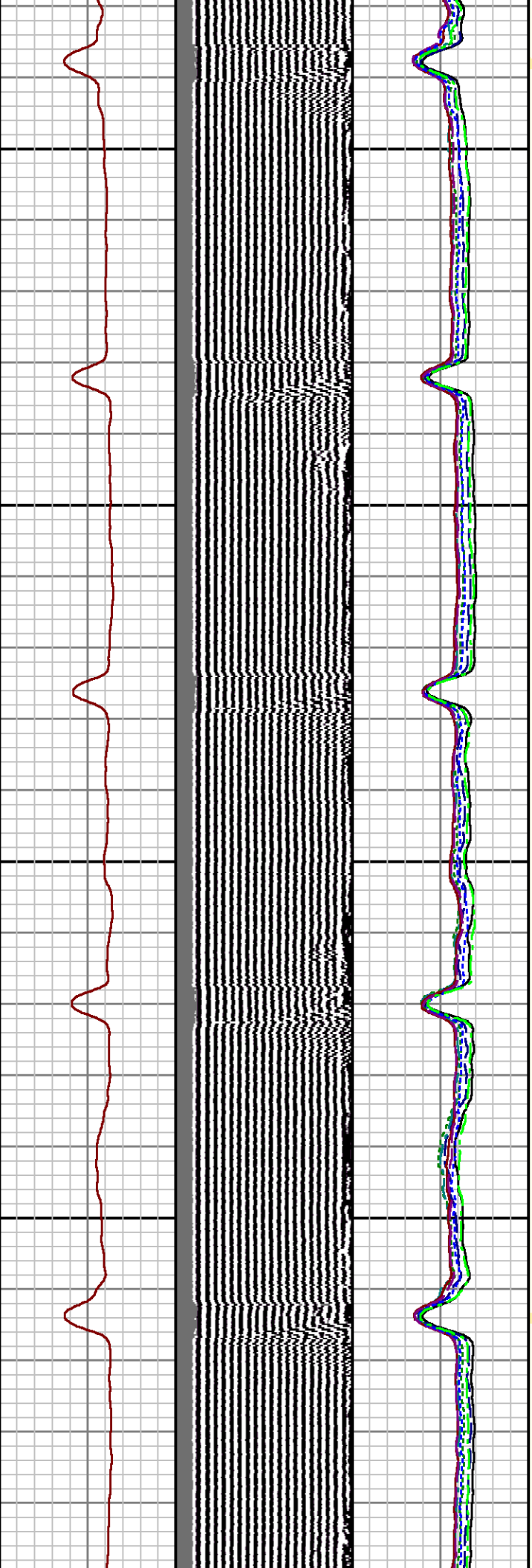


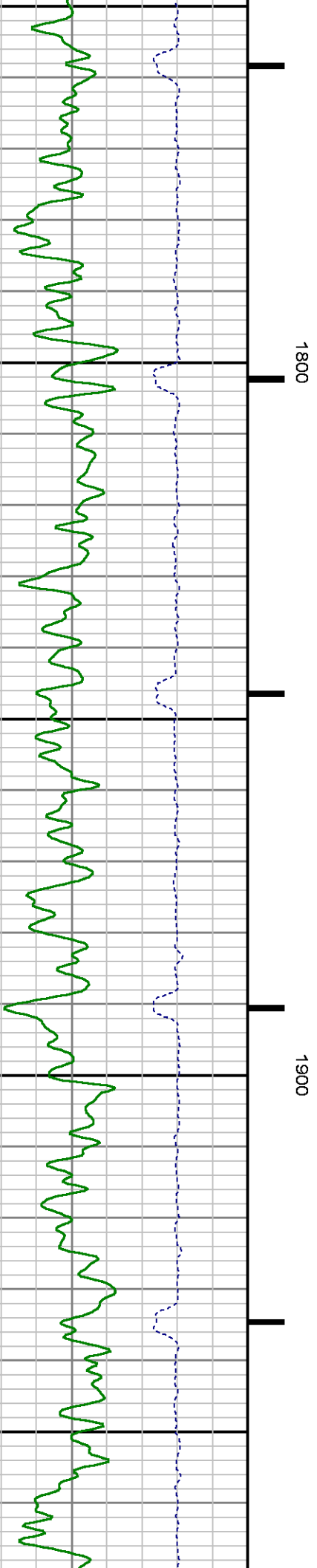
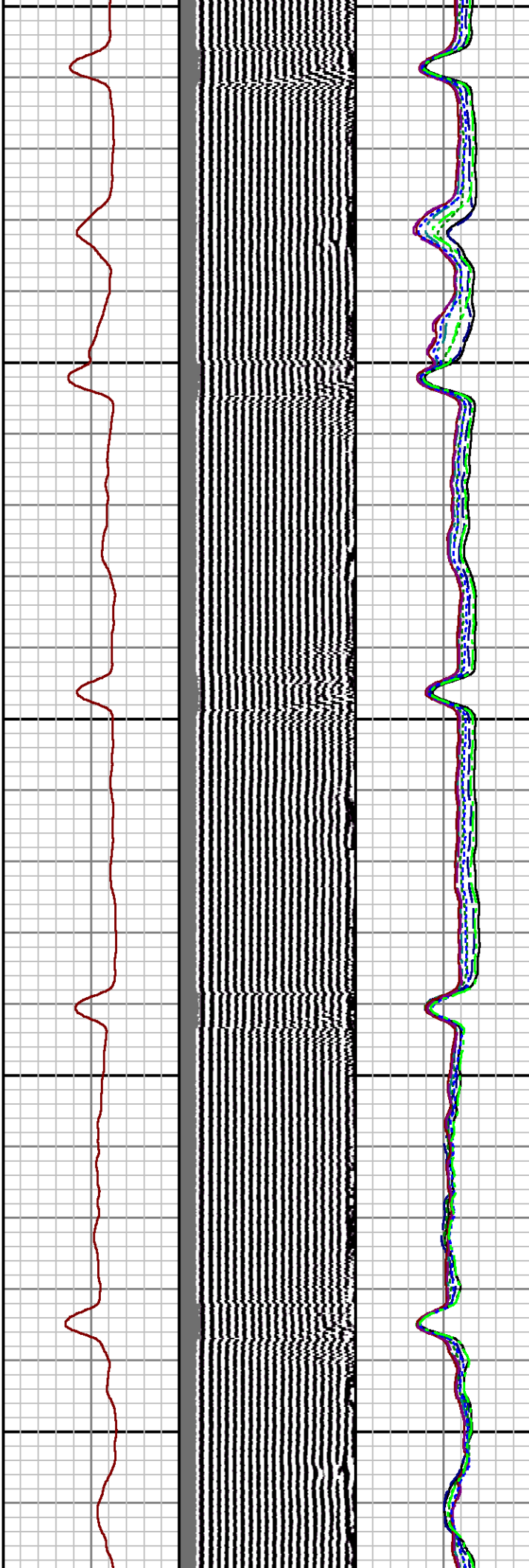
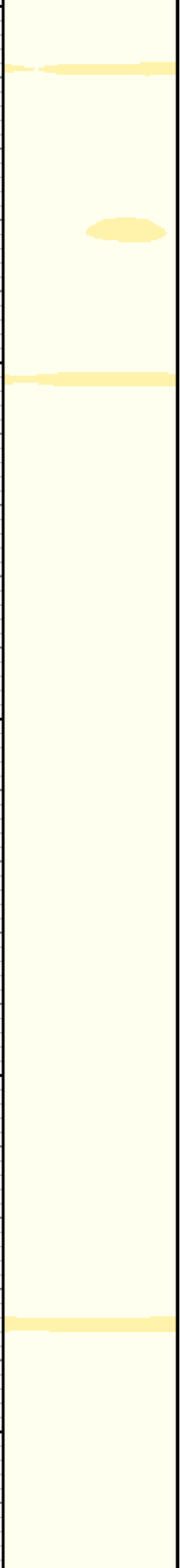


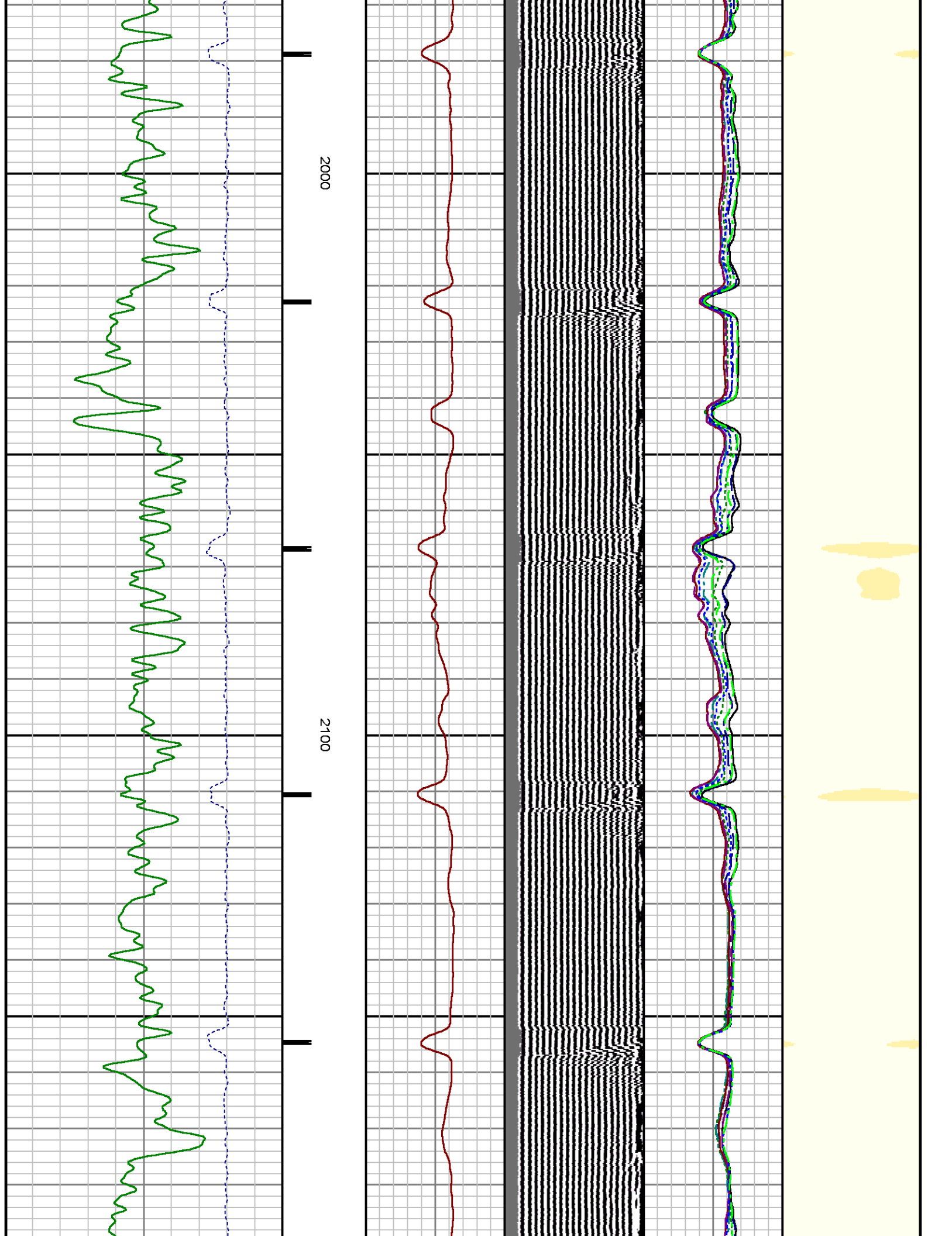
1400

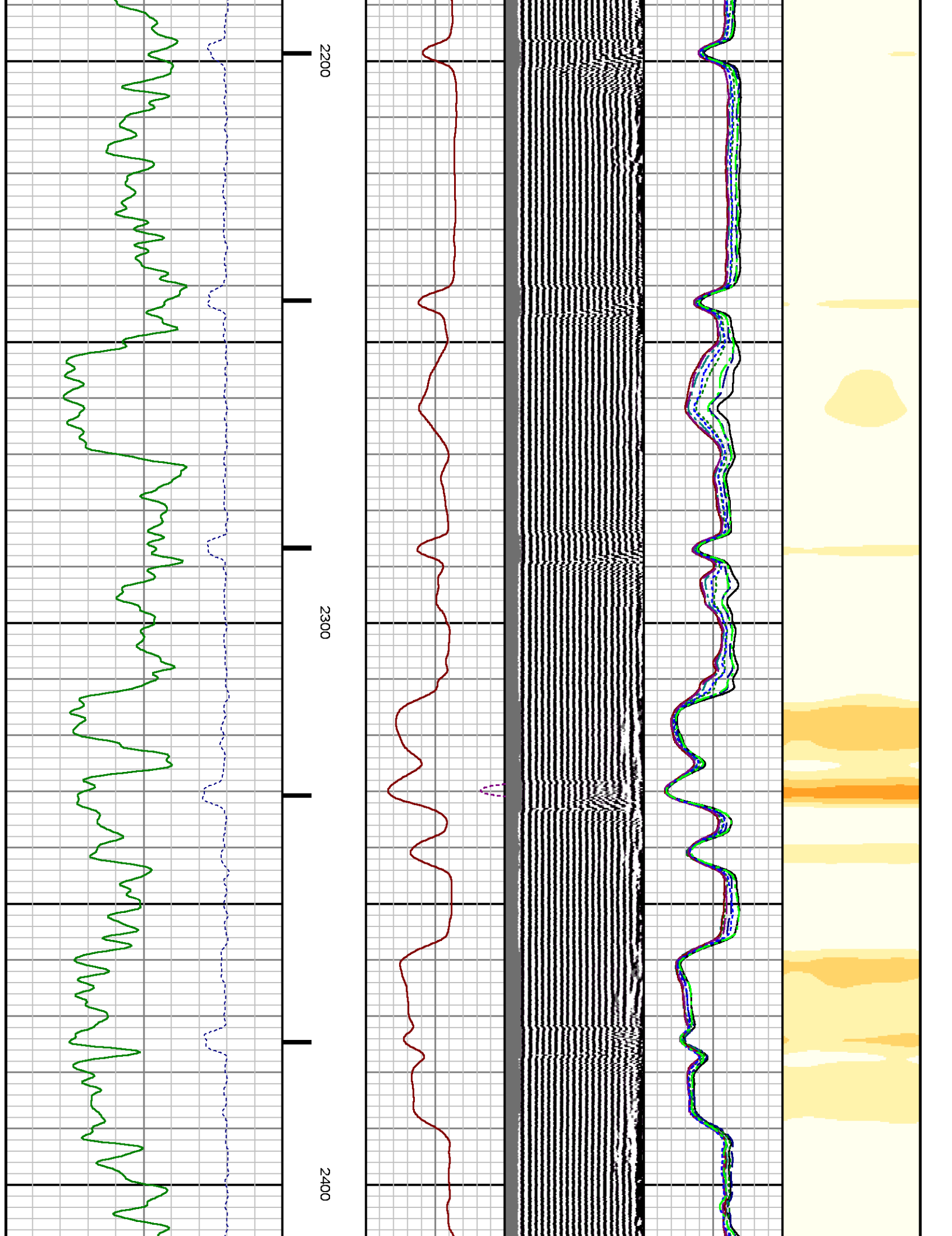
1500

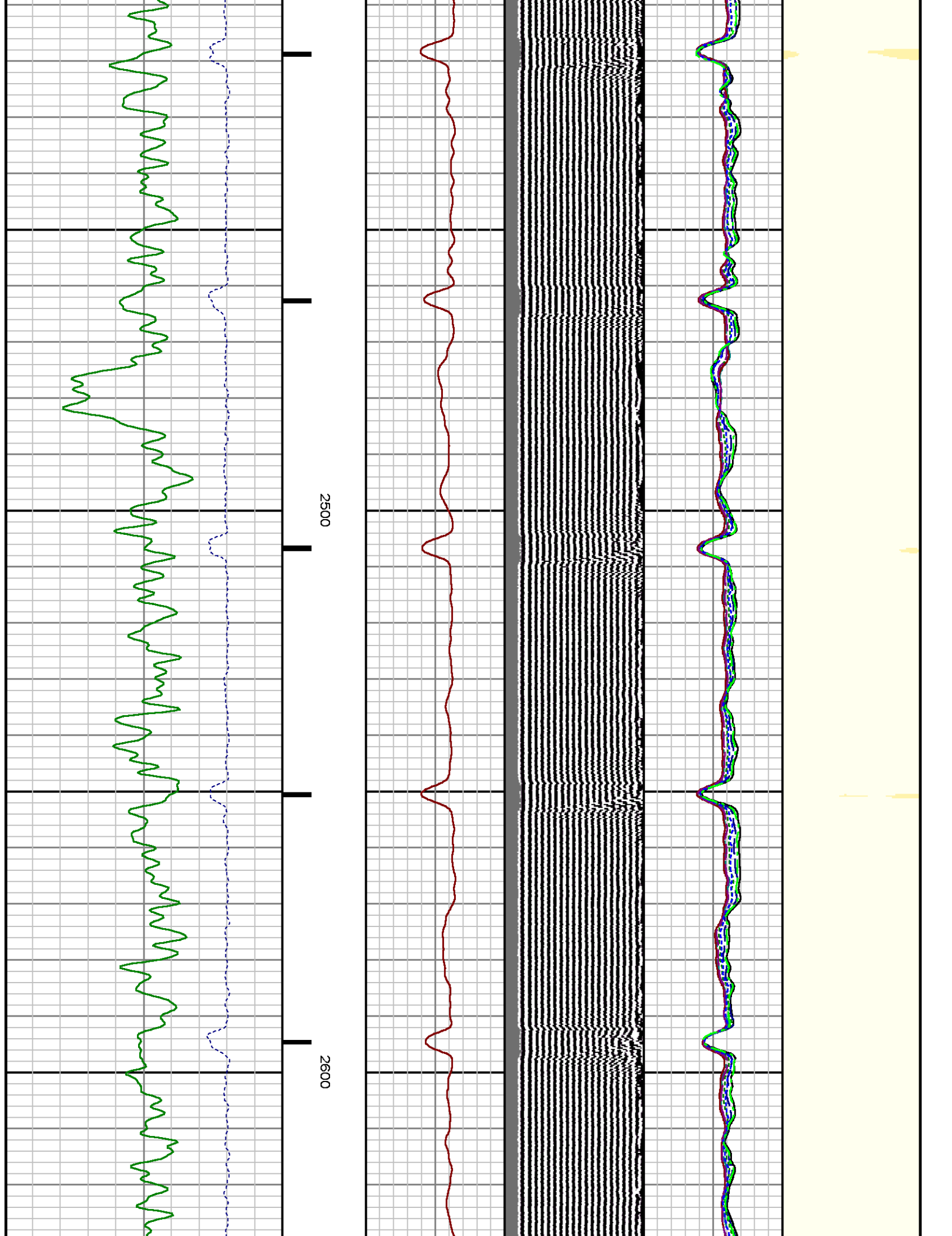


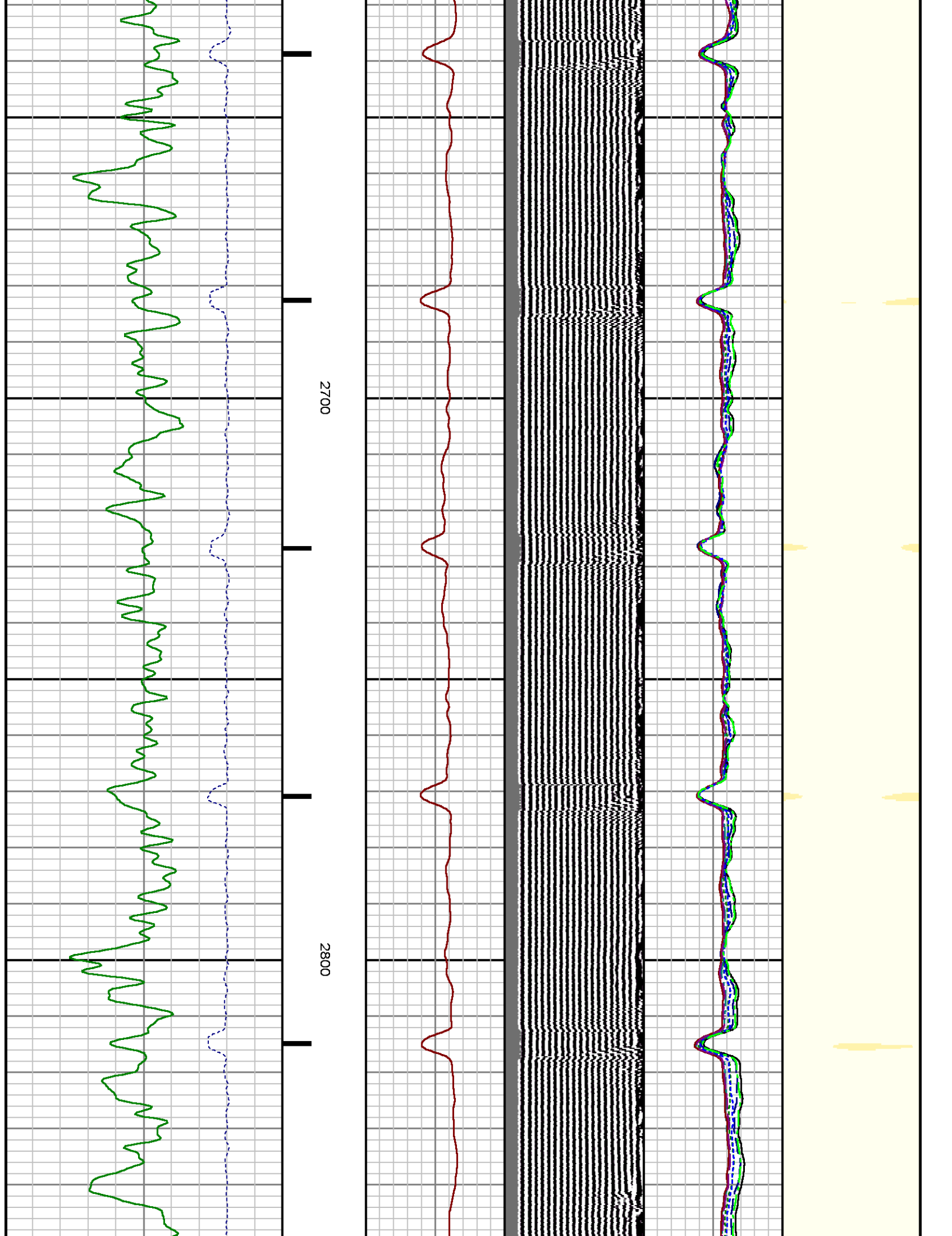


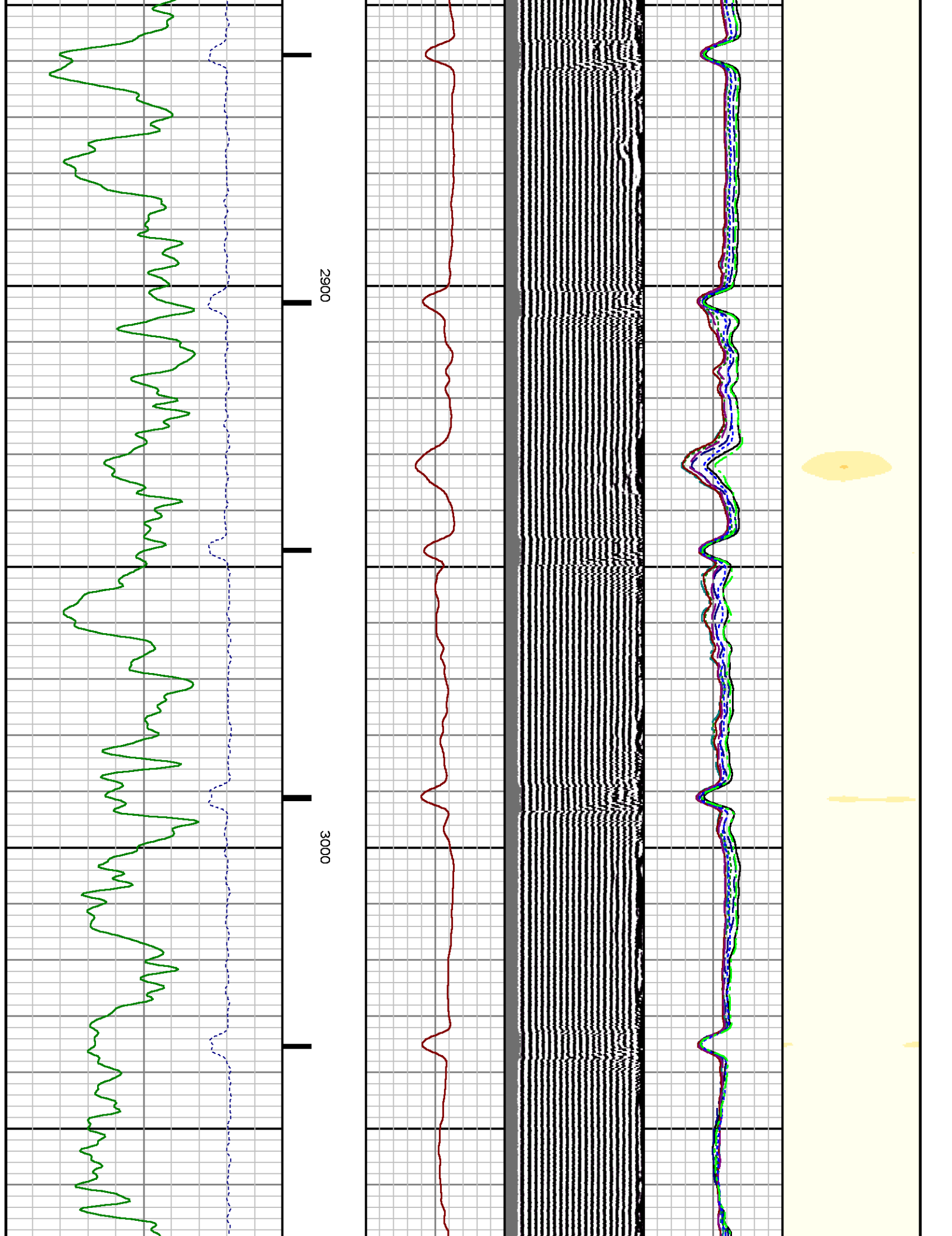


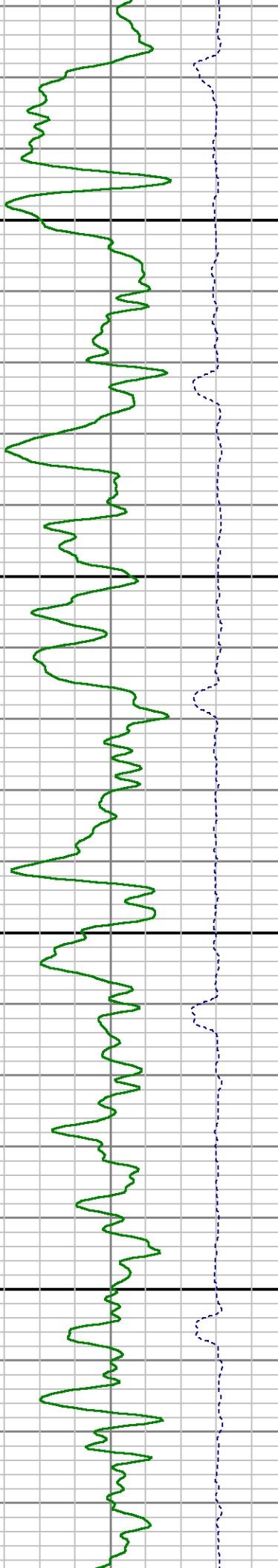
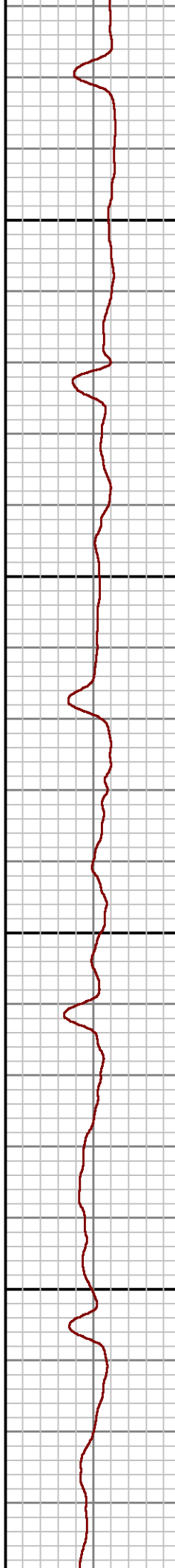
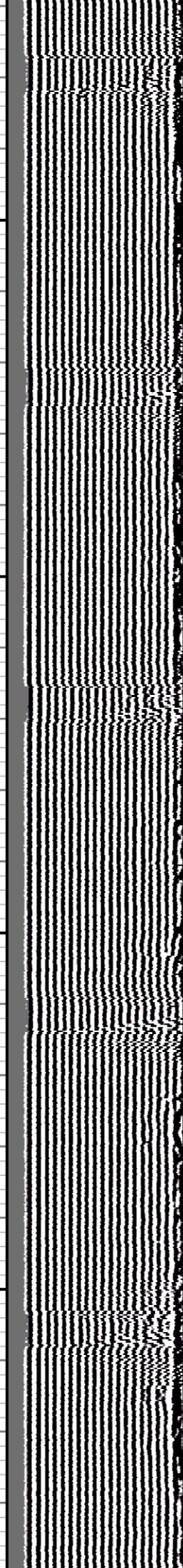
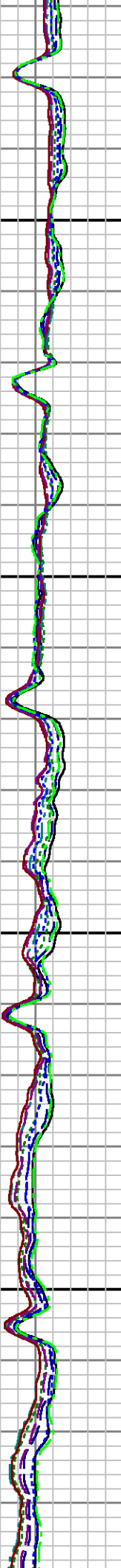
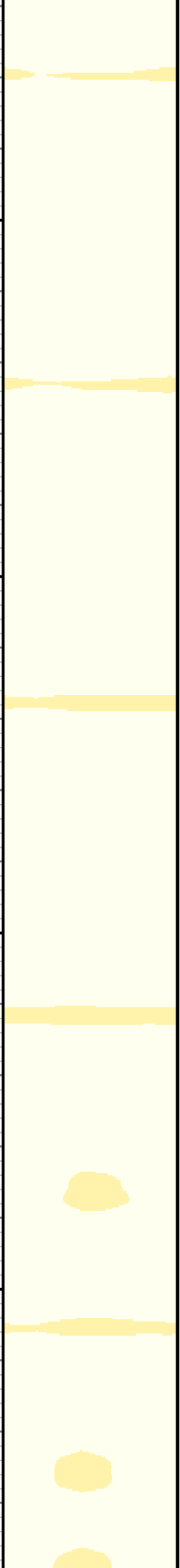


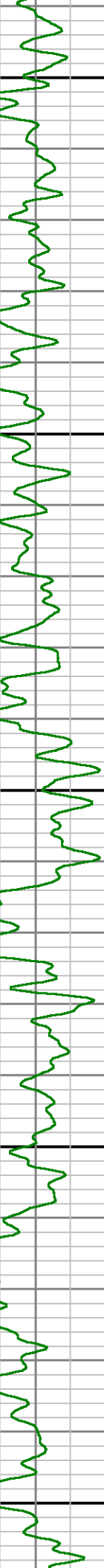
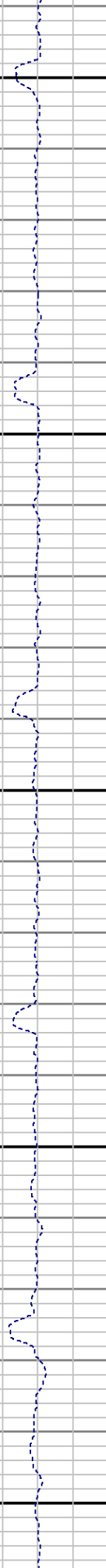
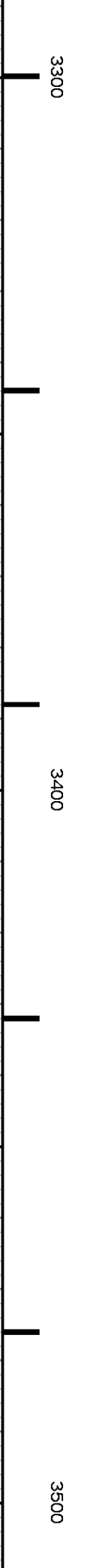
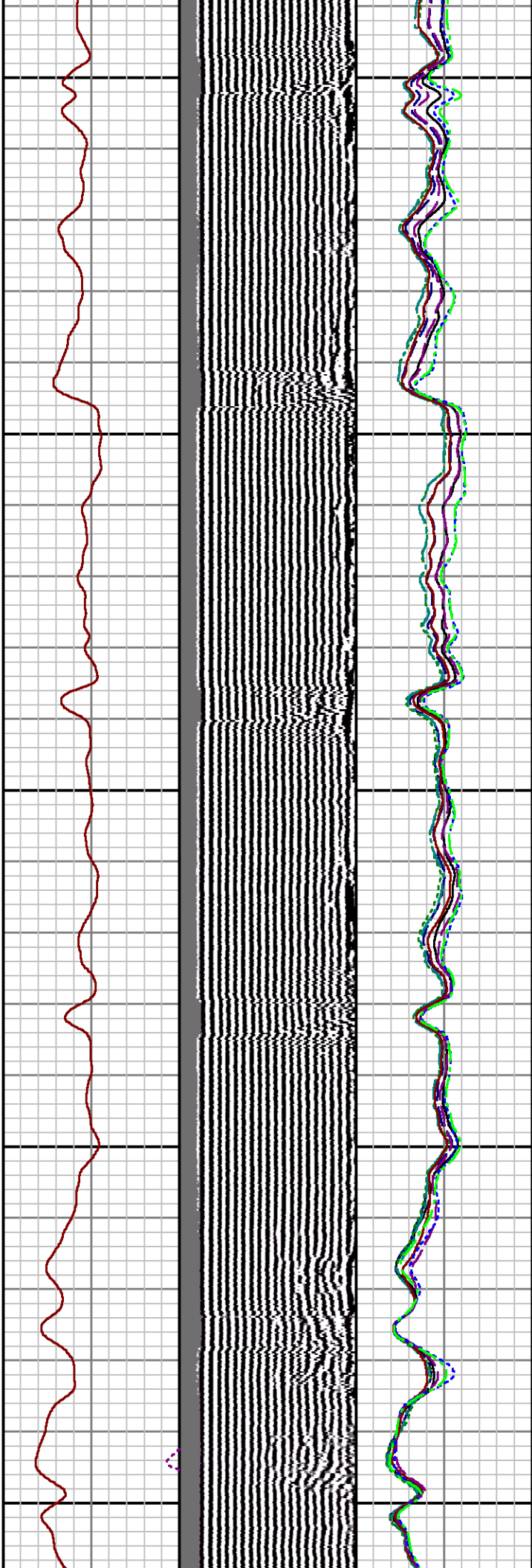
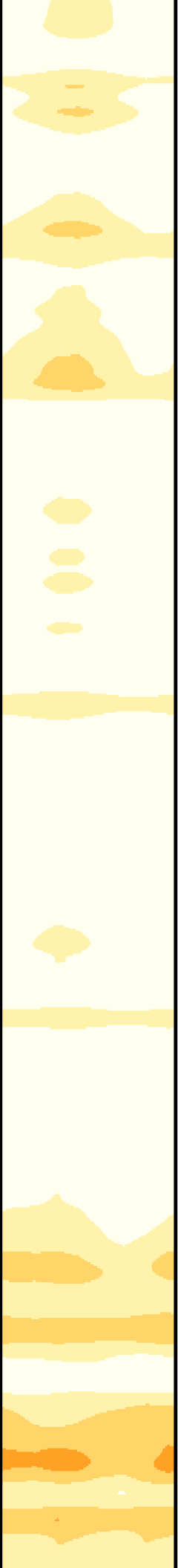


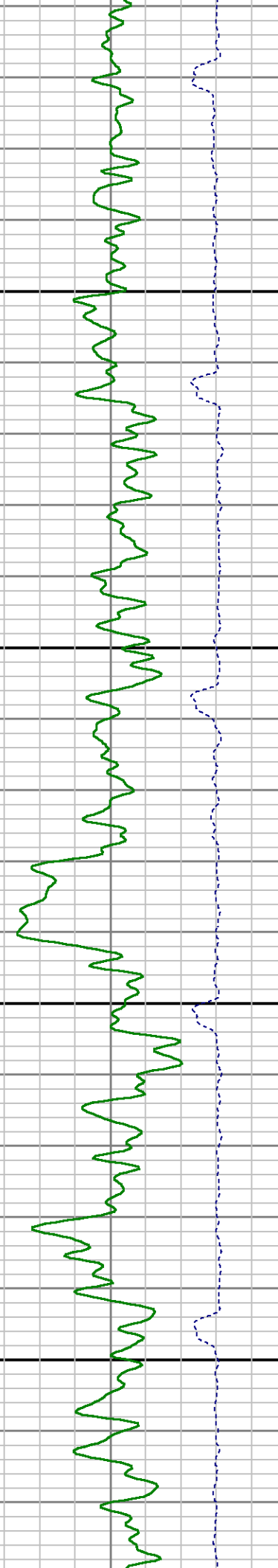
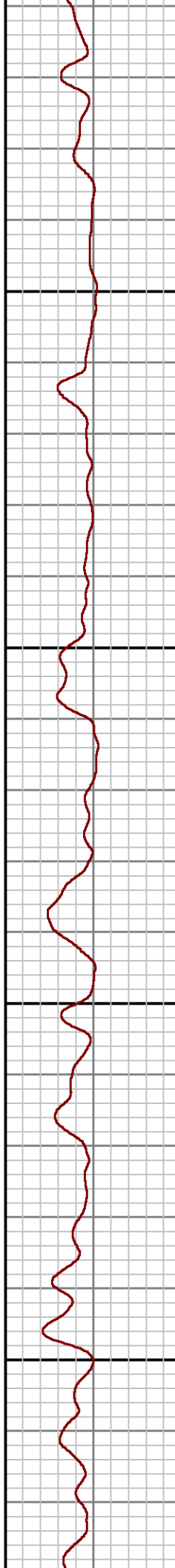
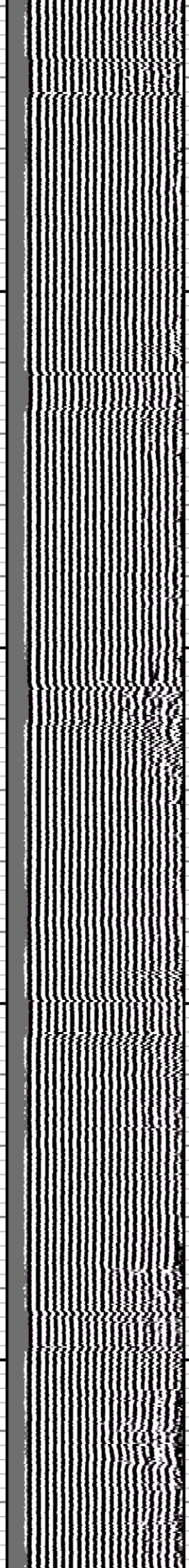
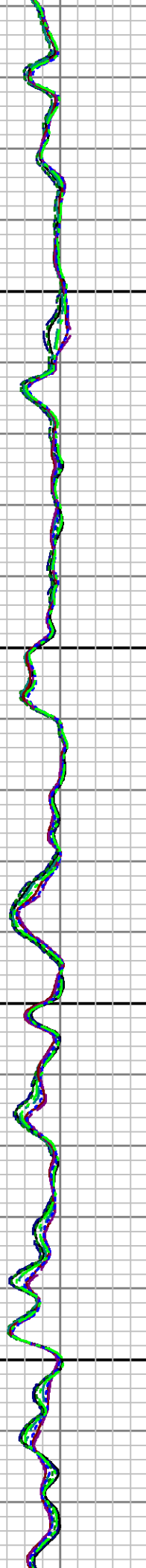
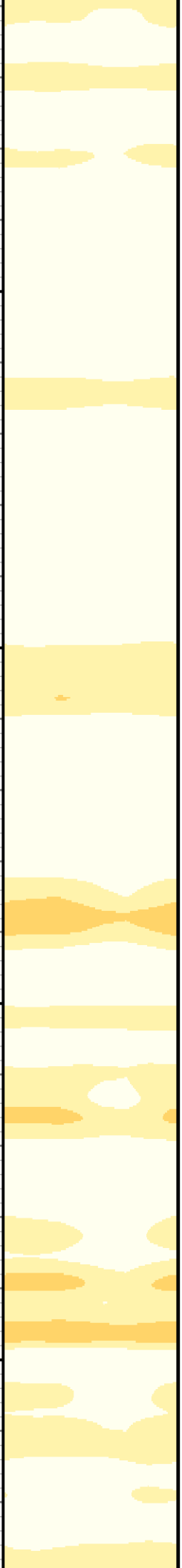


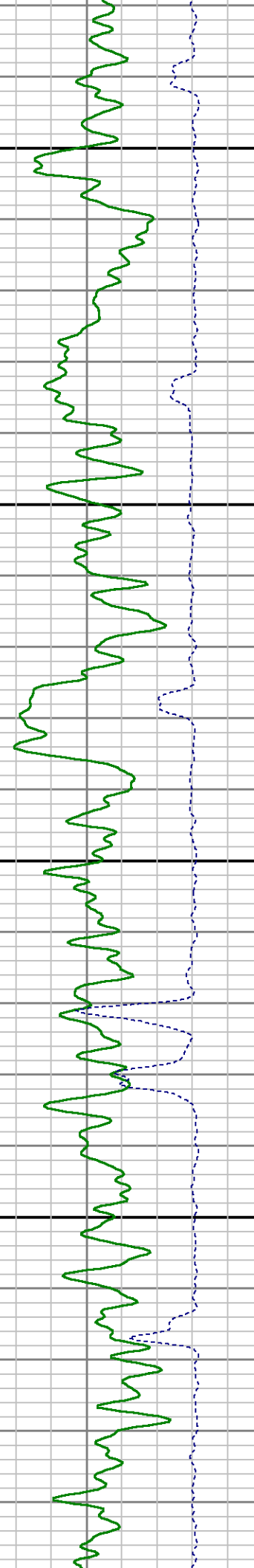
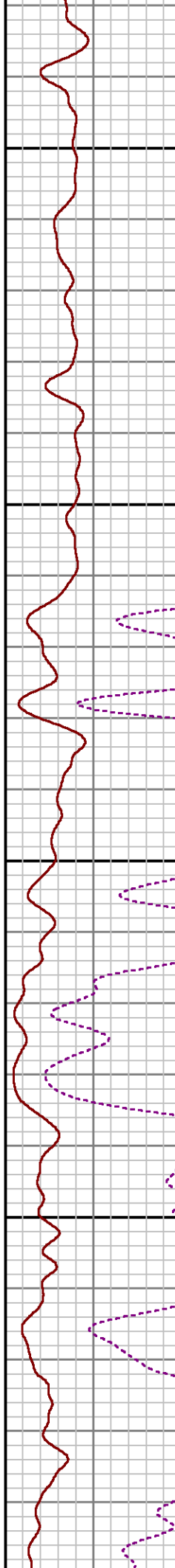
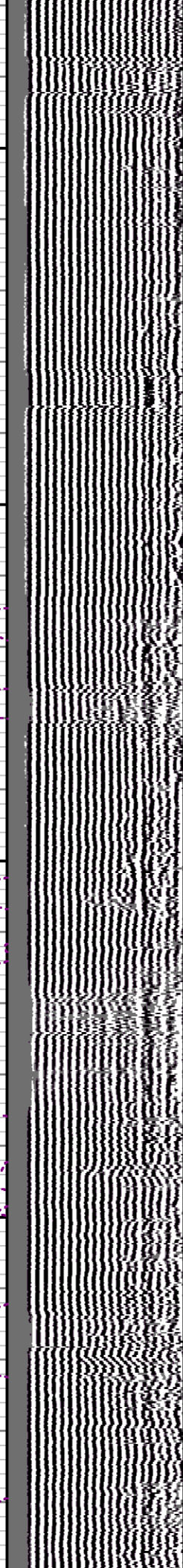
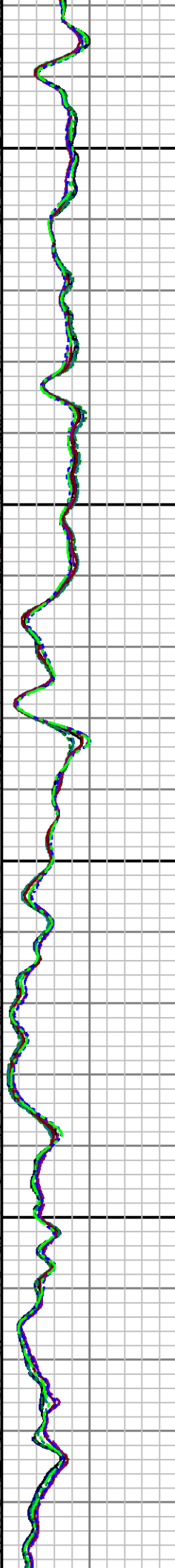
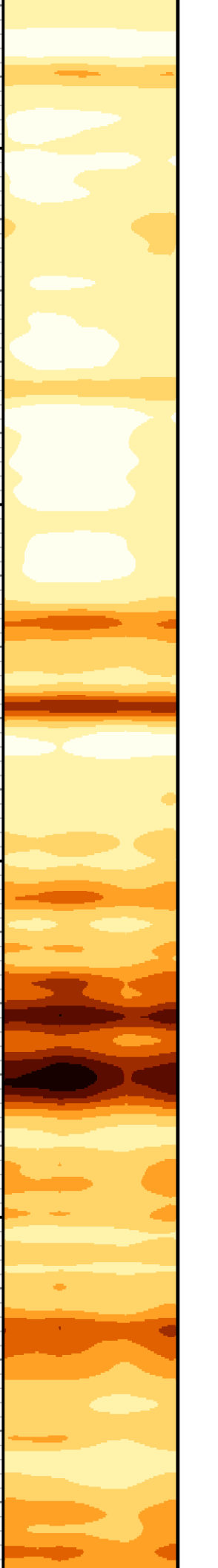


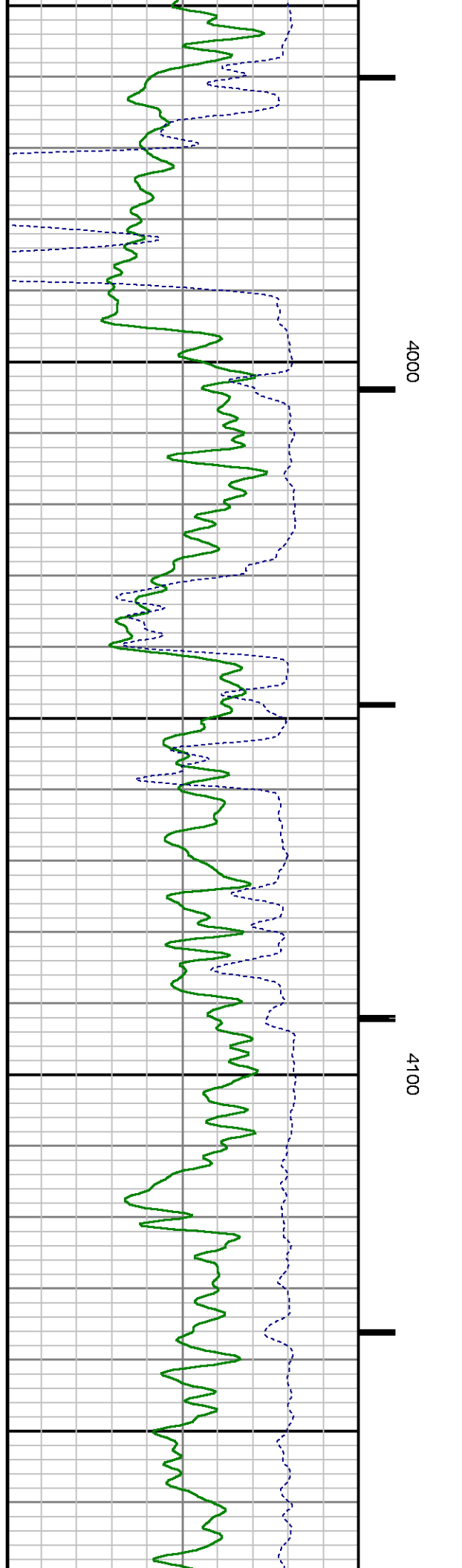
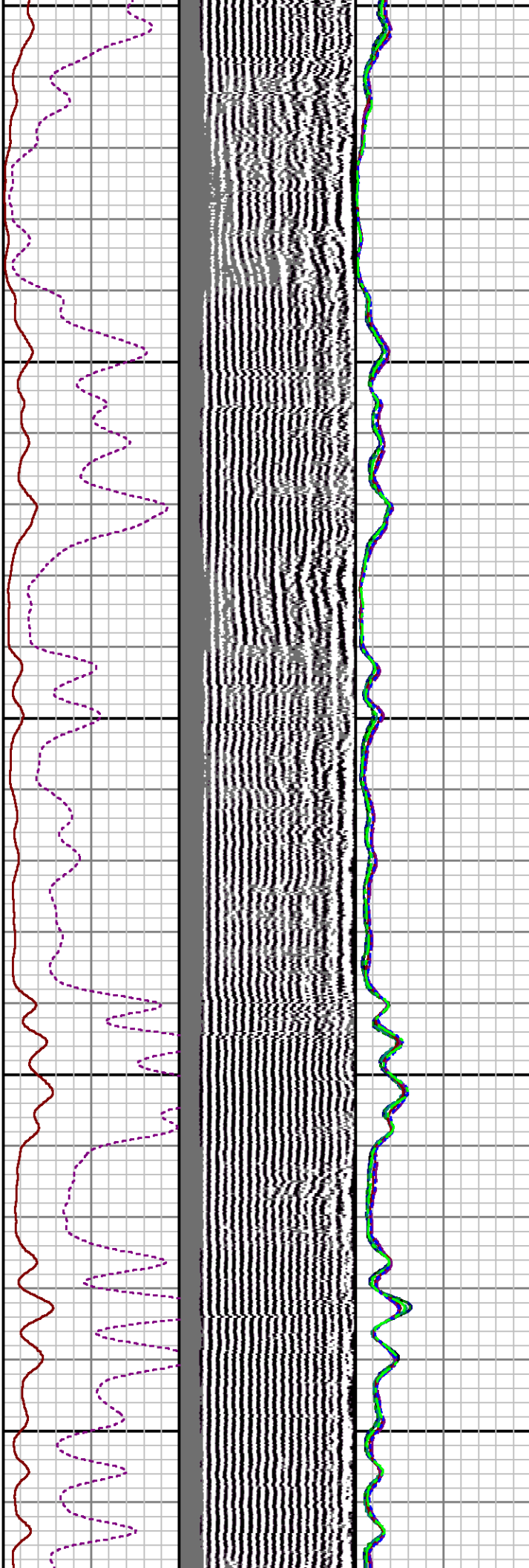
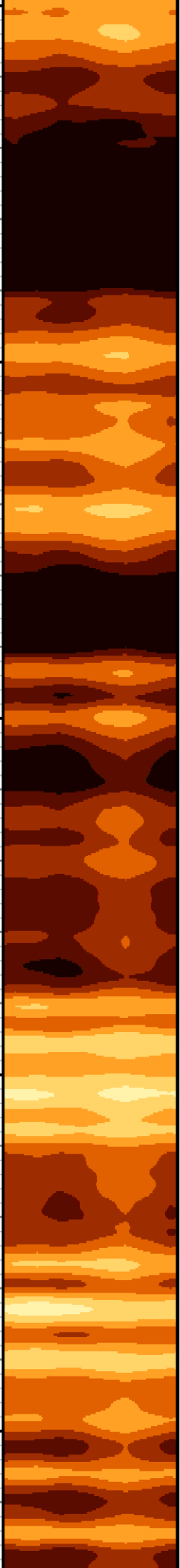


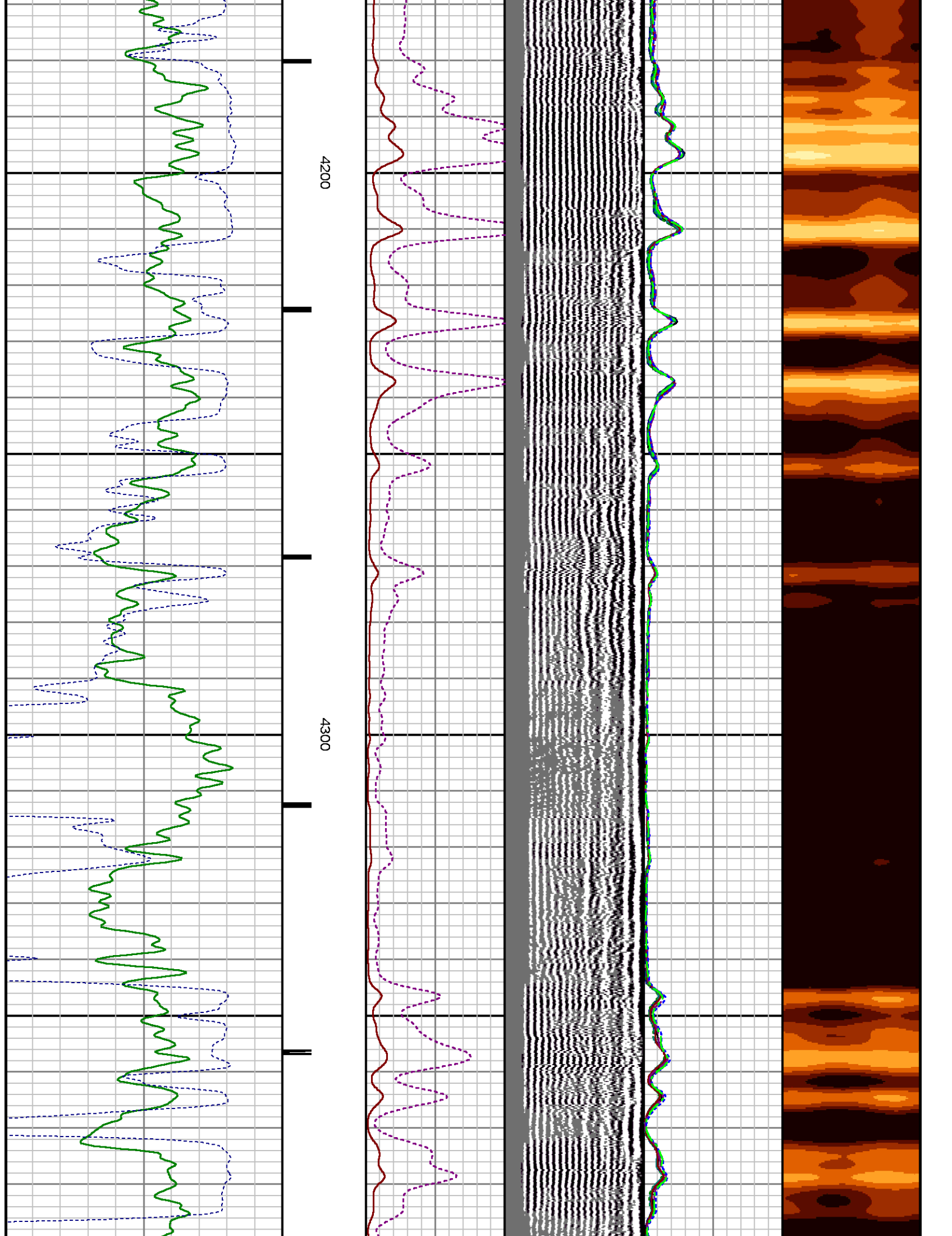


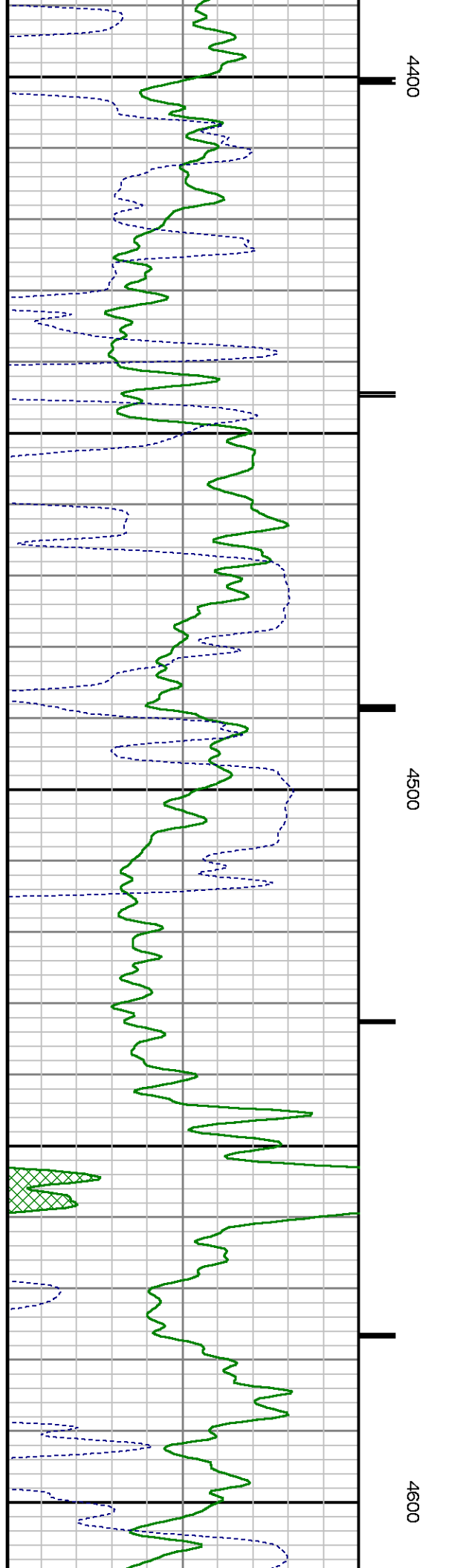
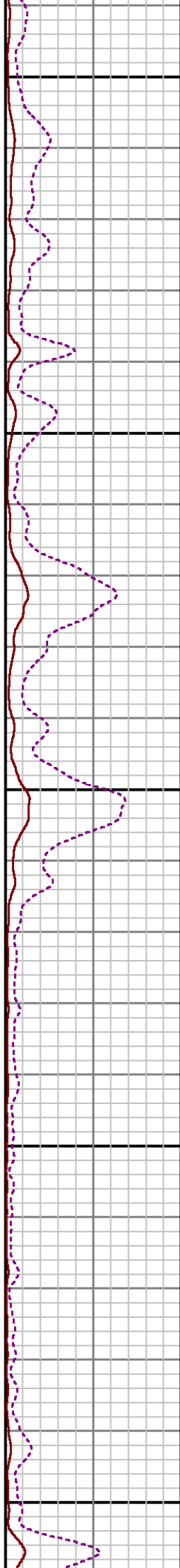
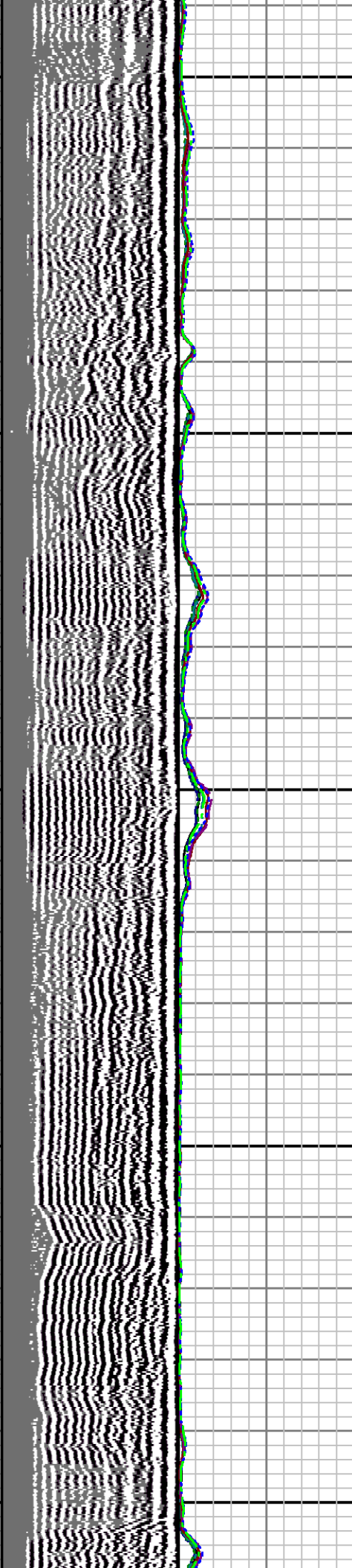
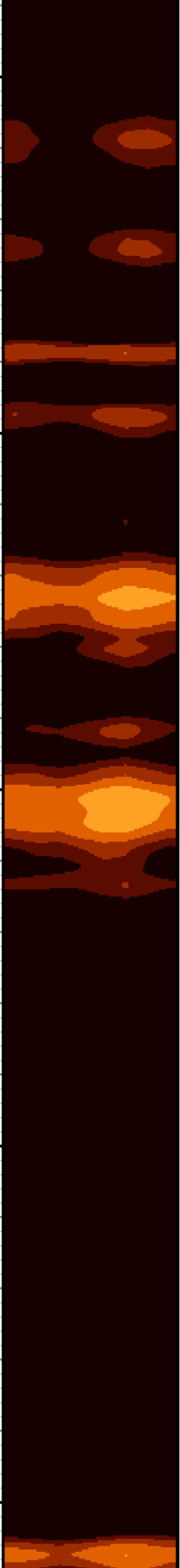


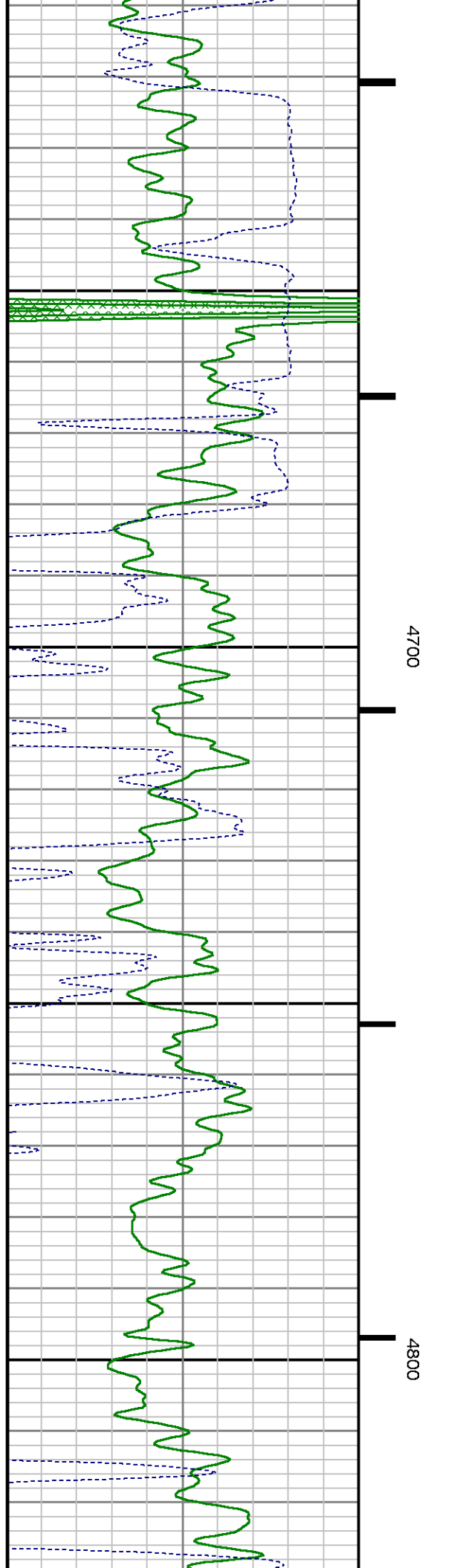
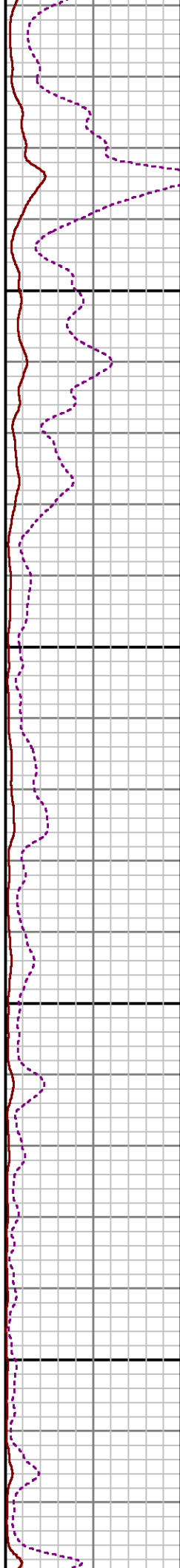
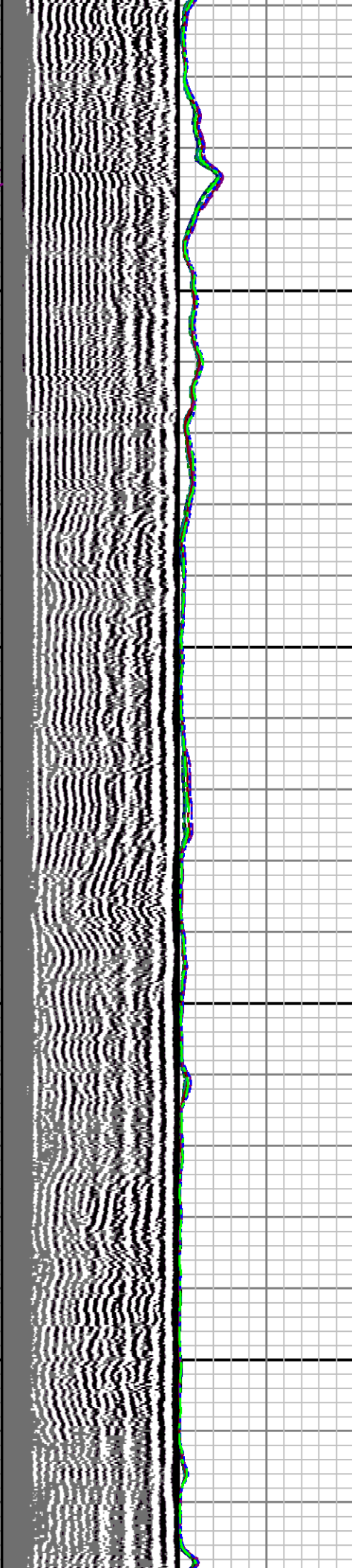
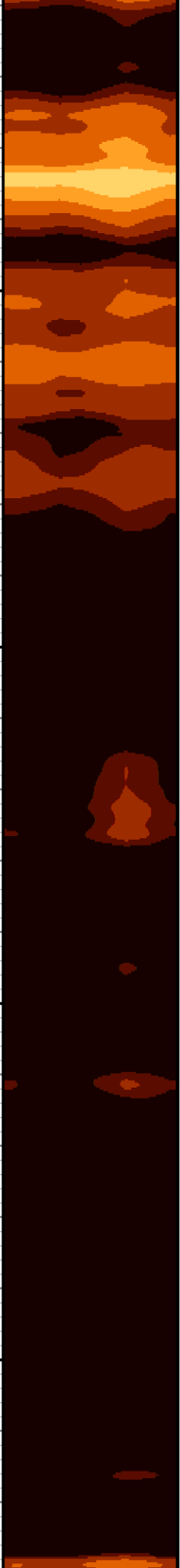


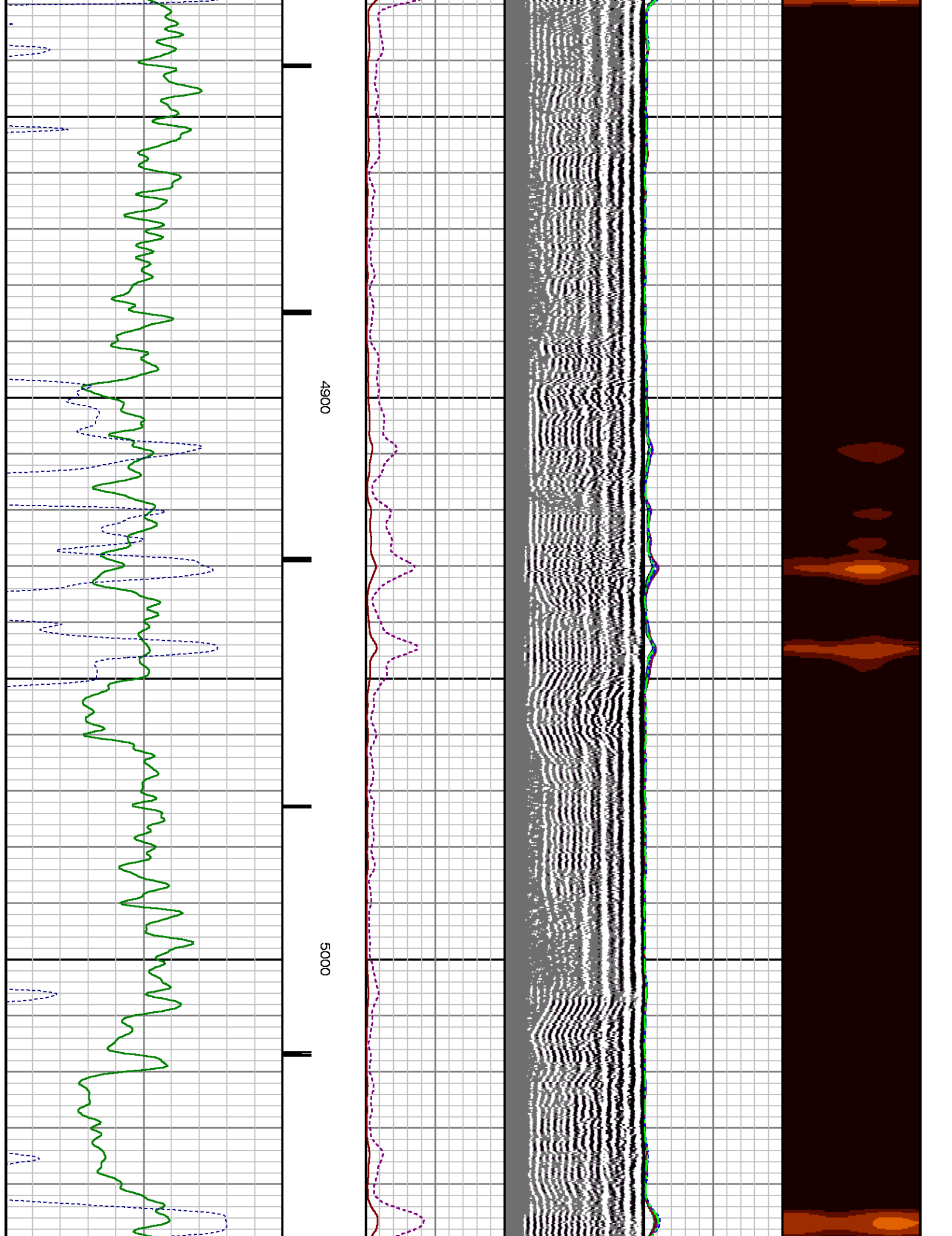


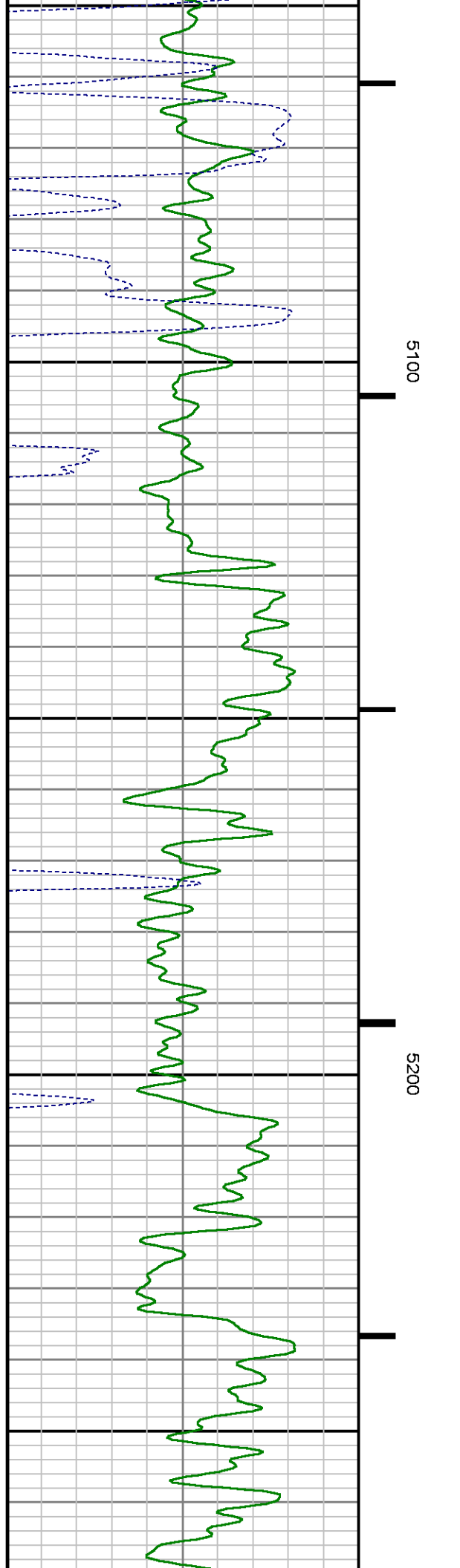
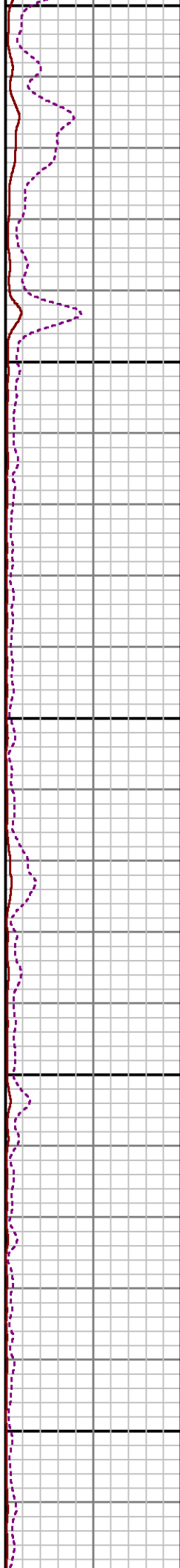
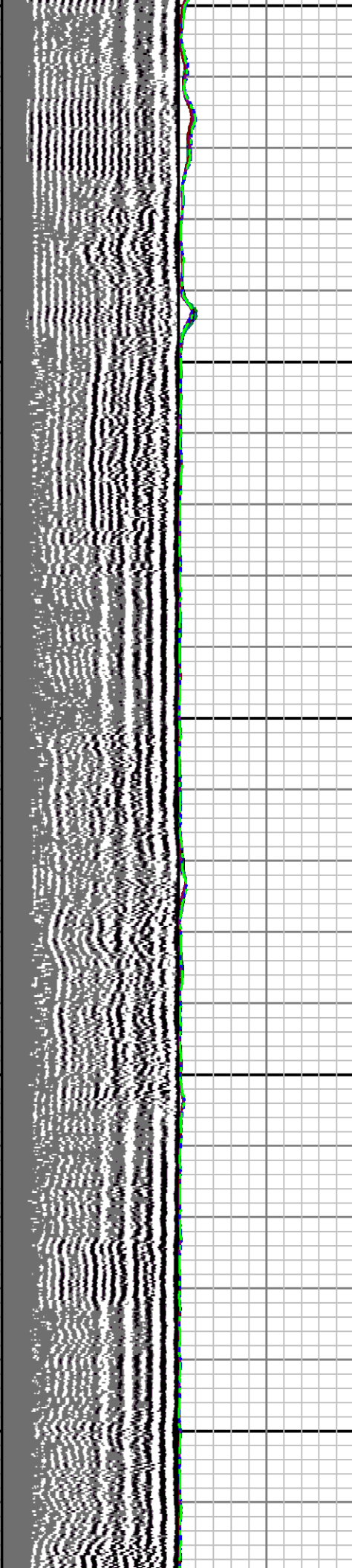


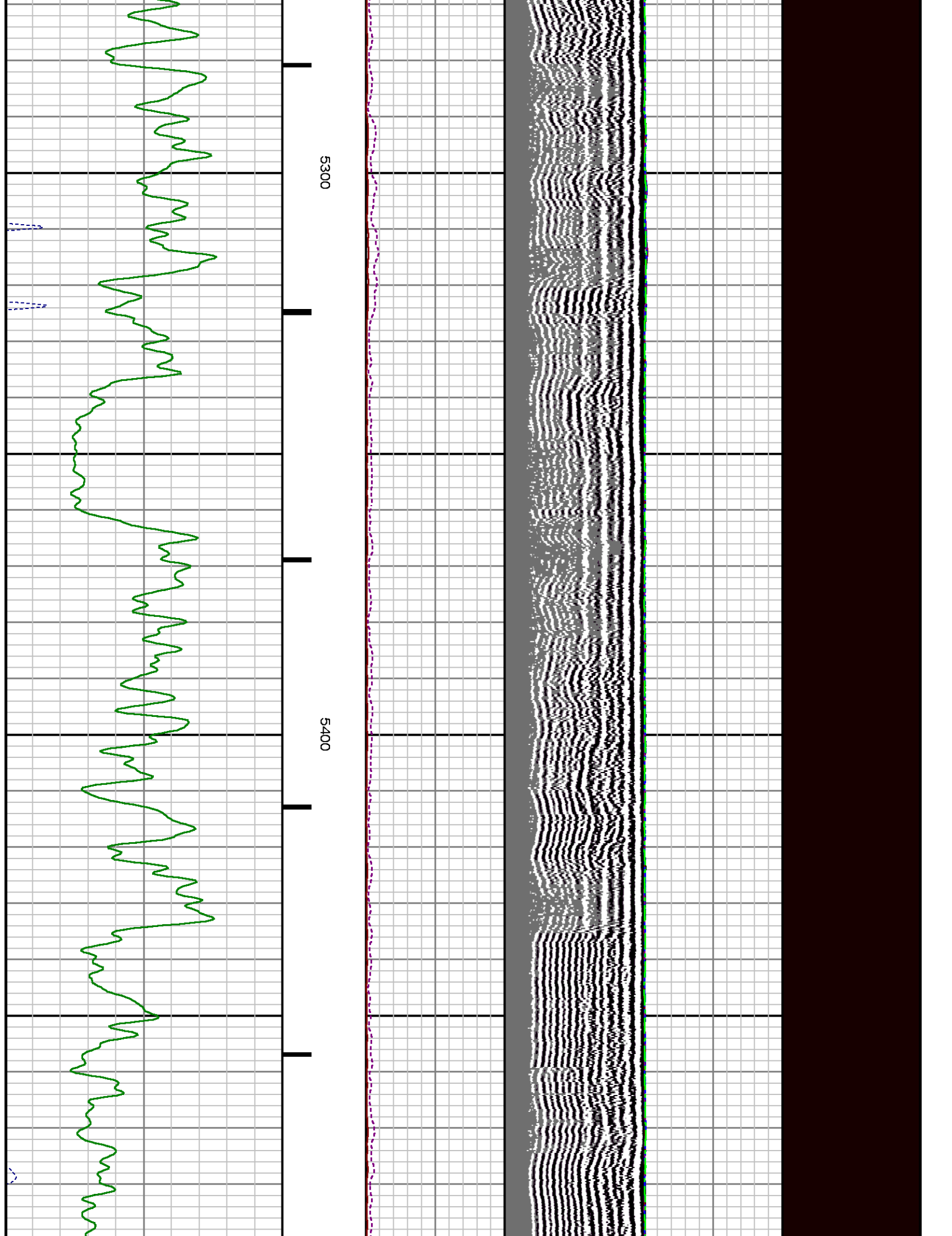


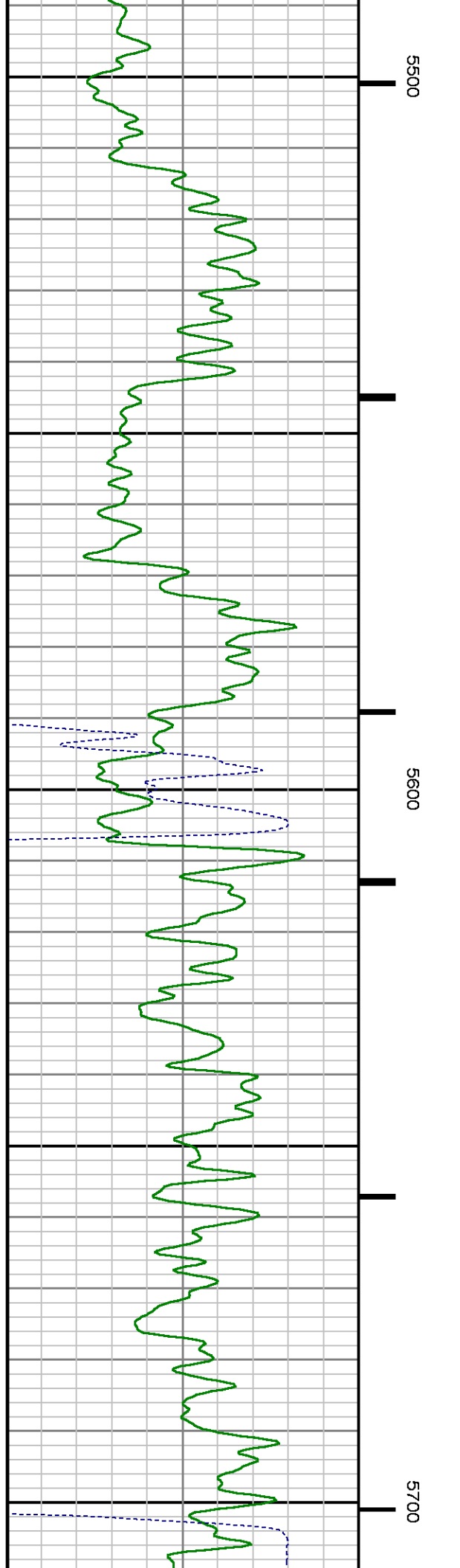
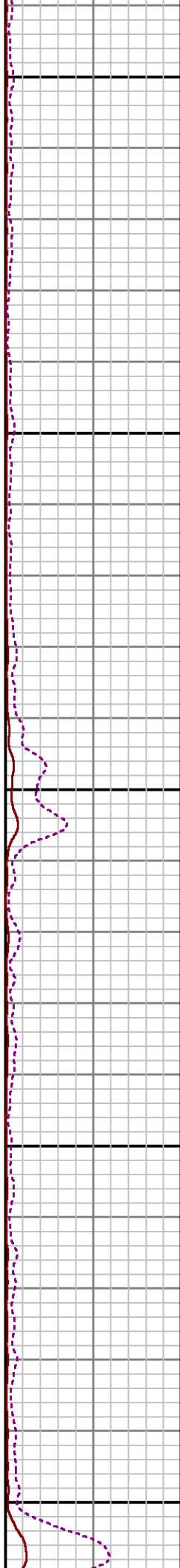
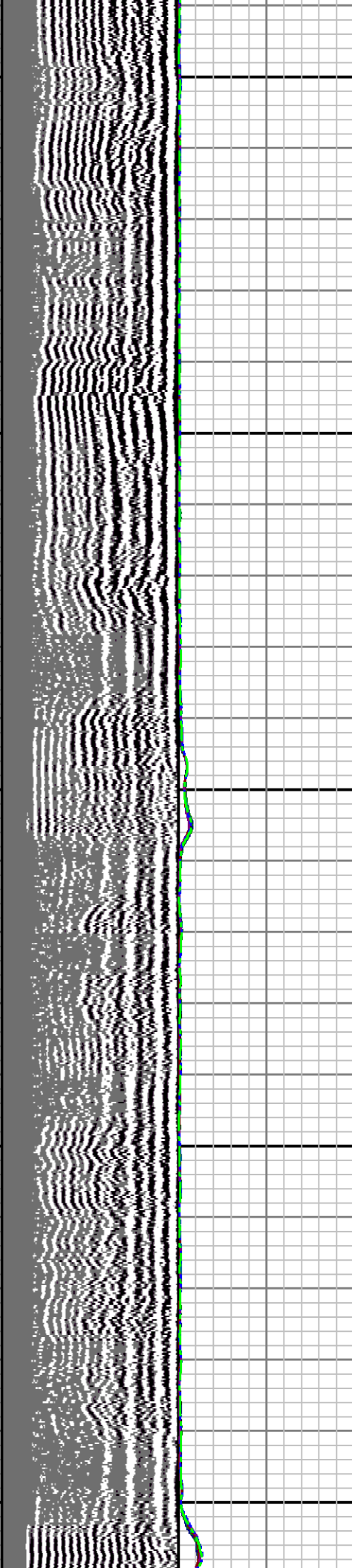
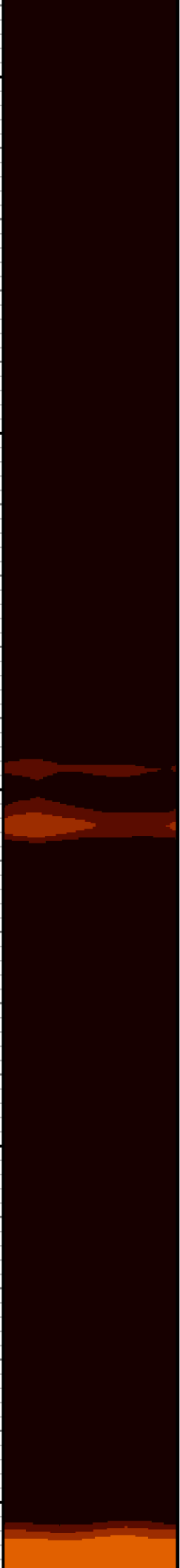


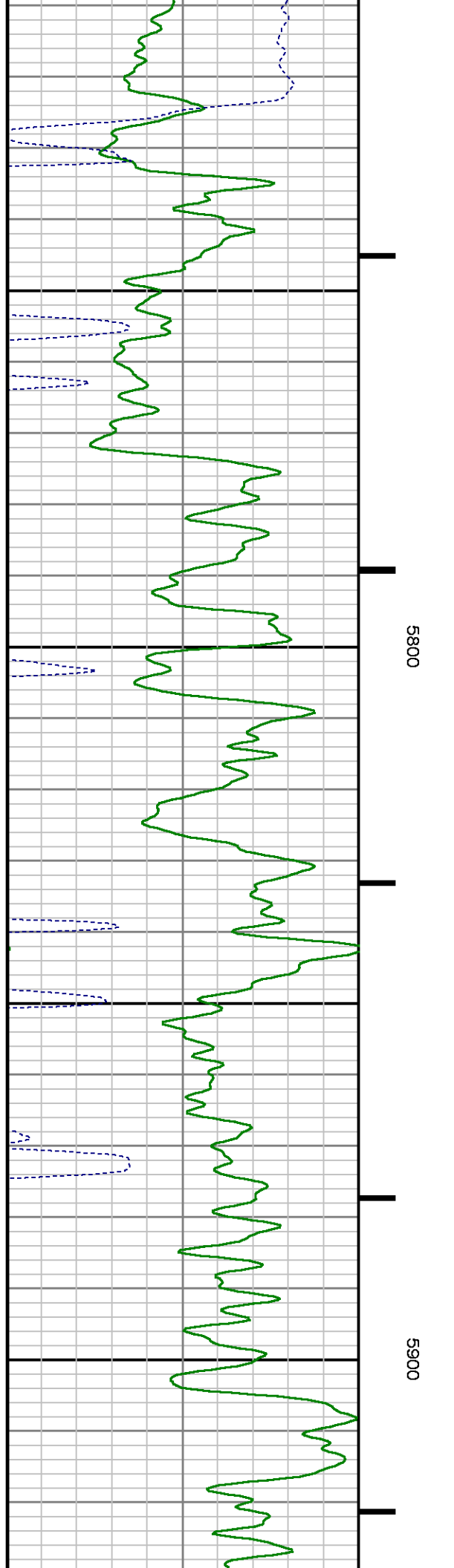
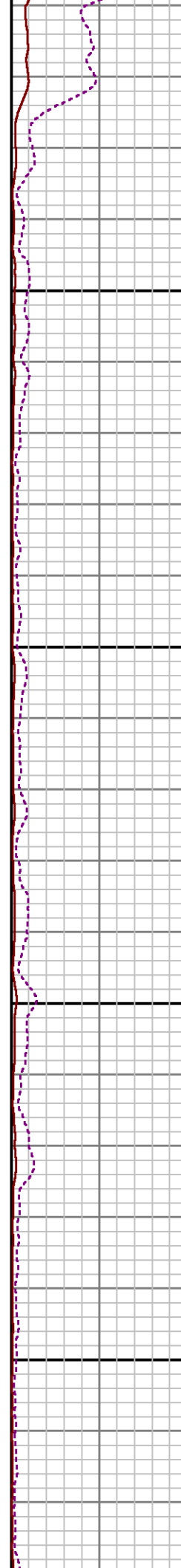
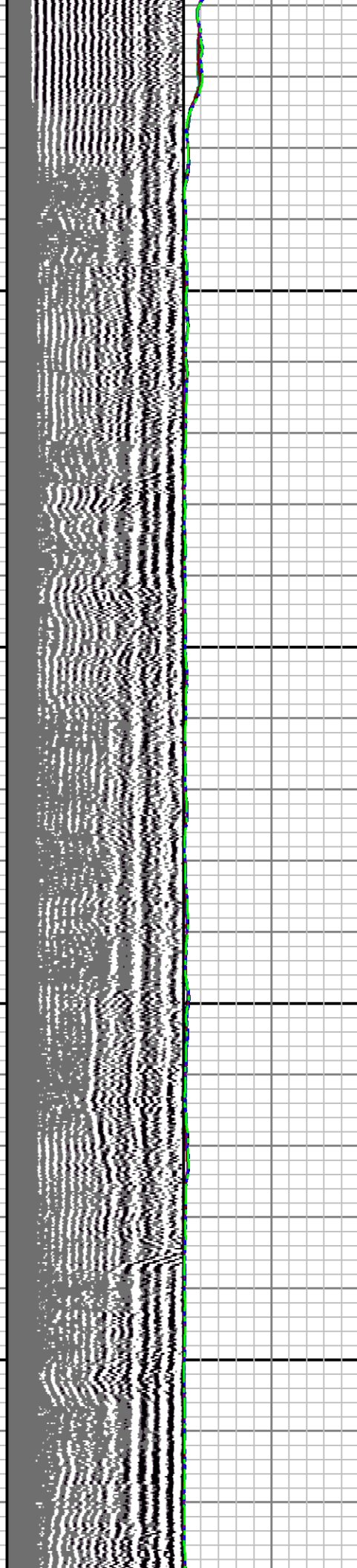


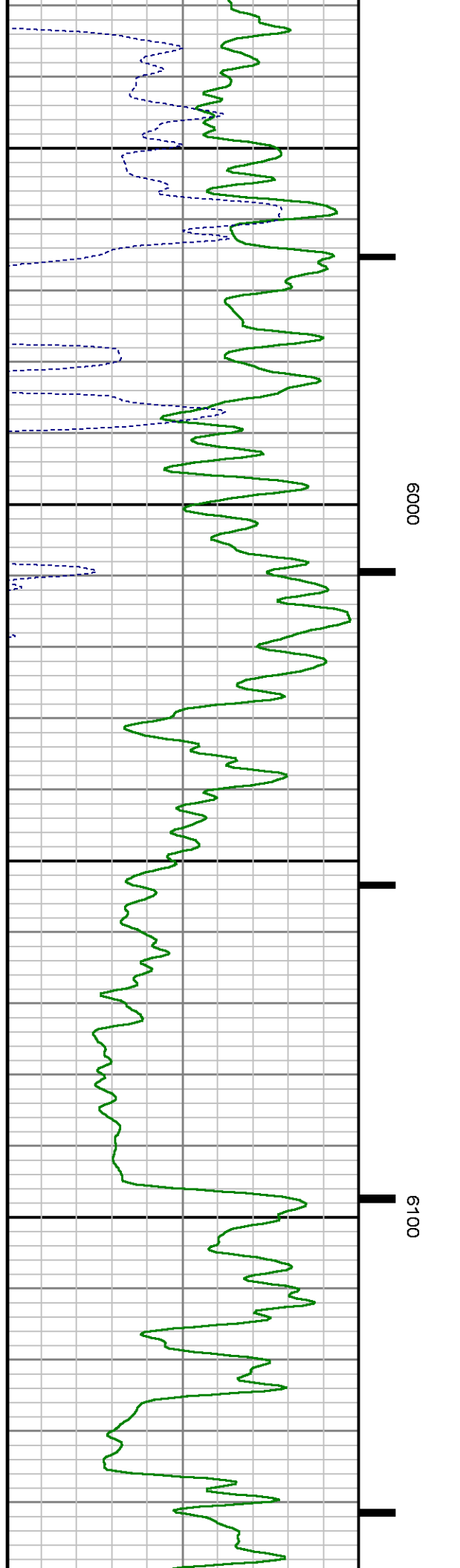
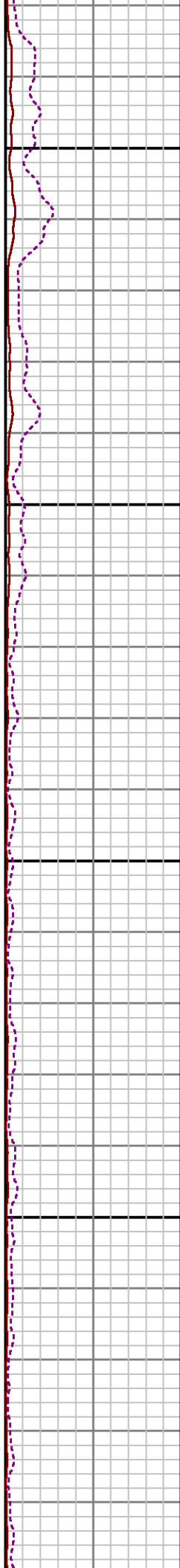
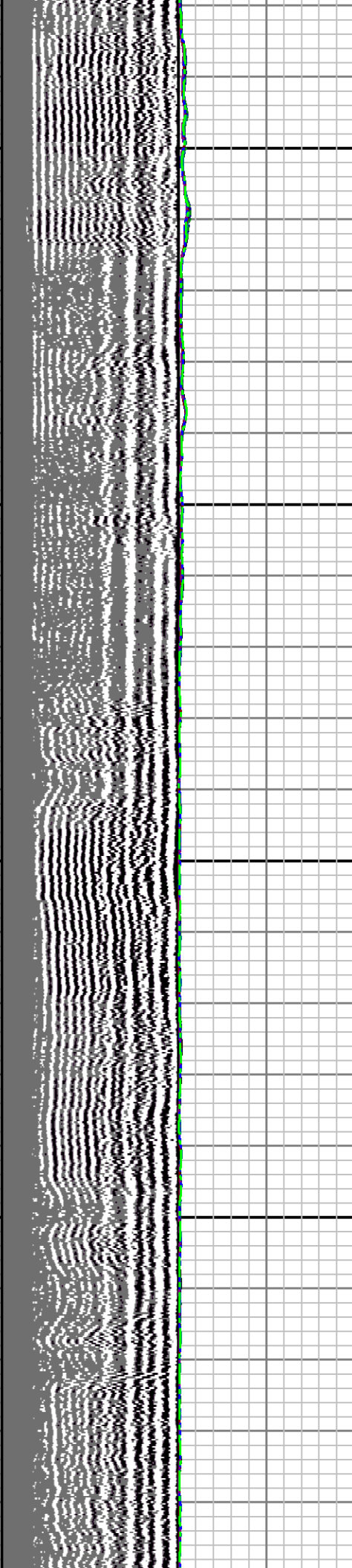
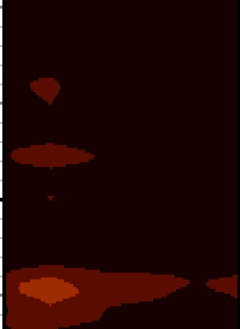


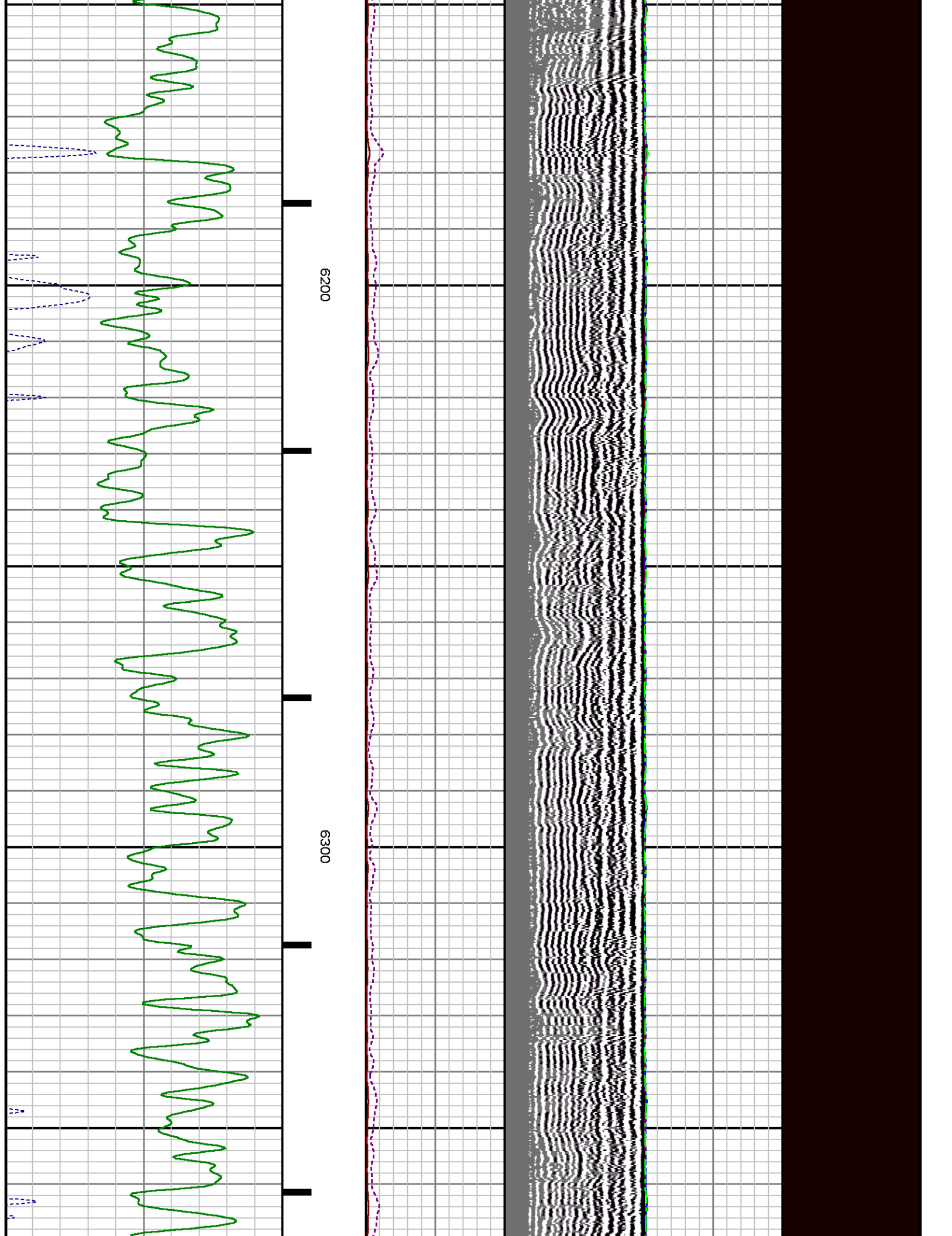


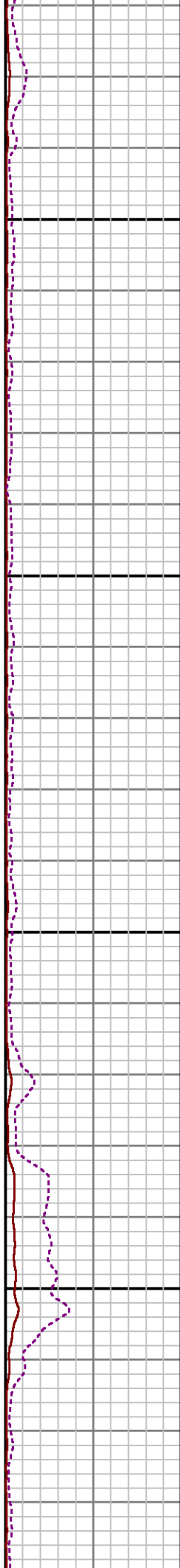
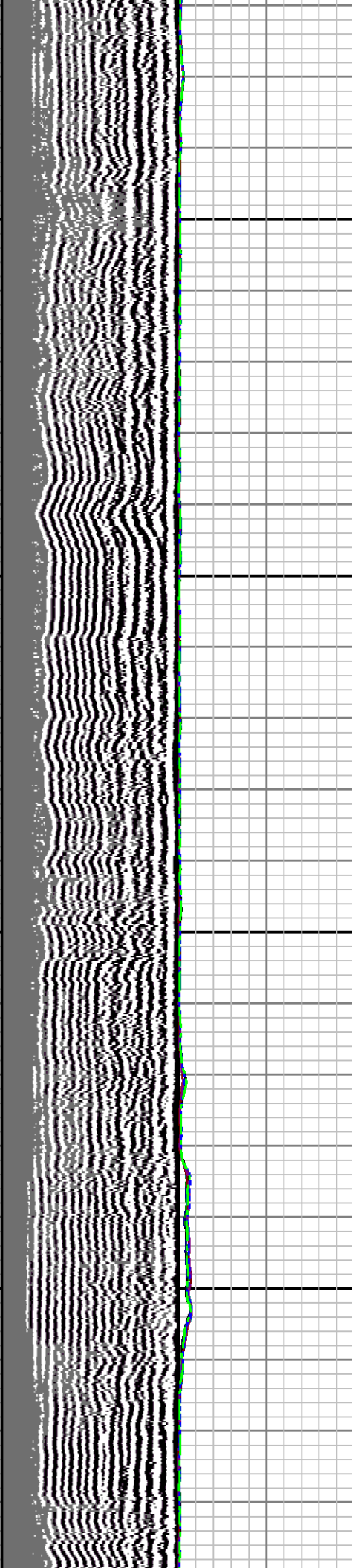






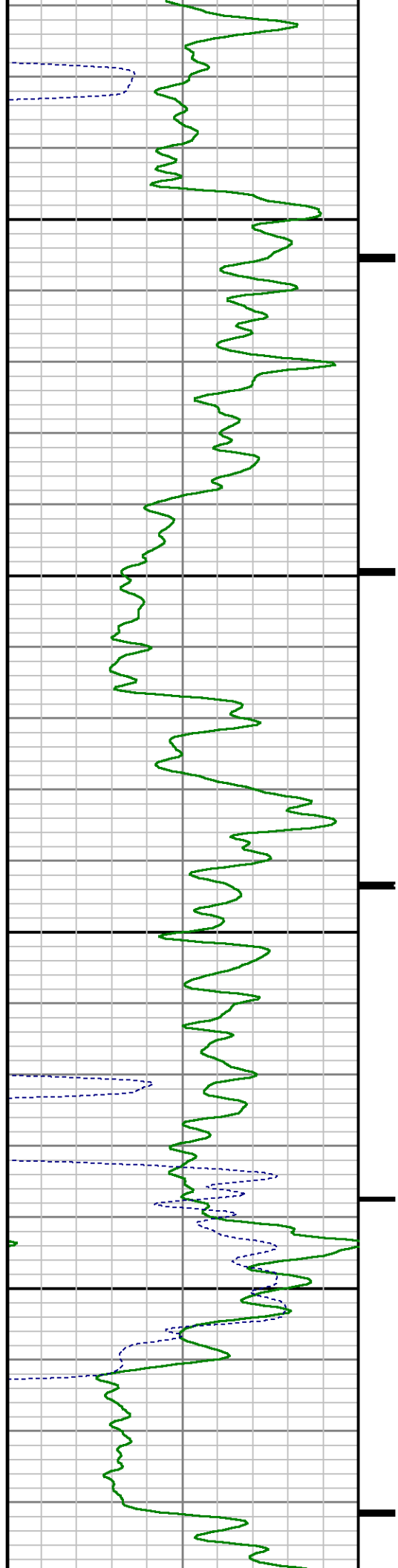


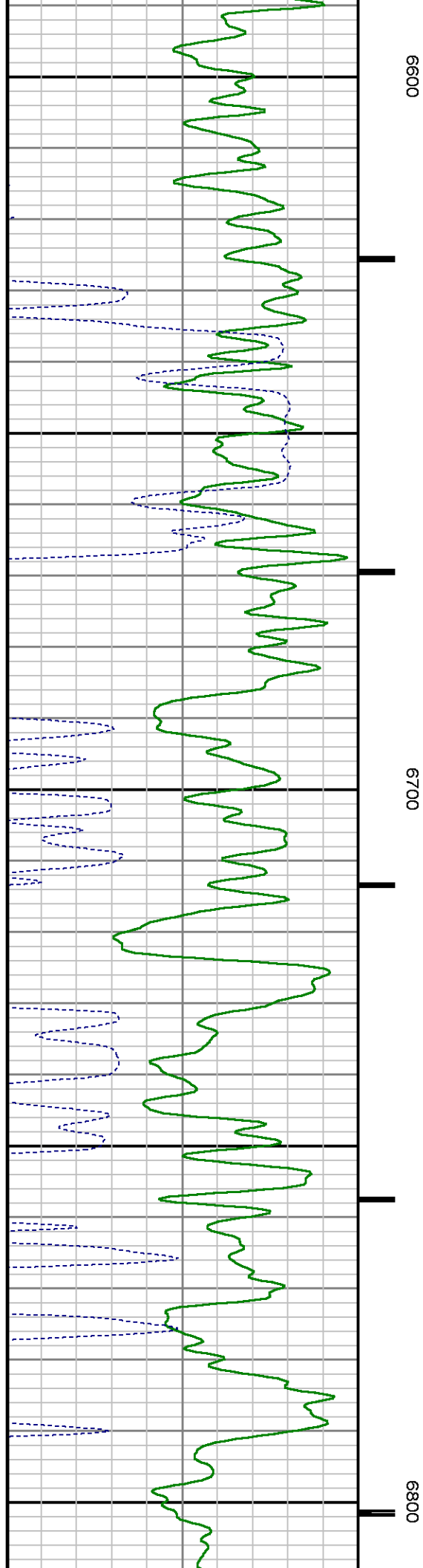
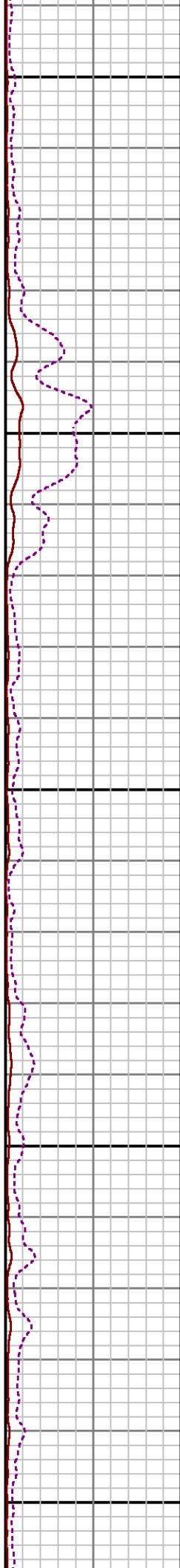
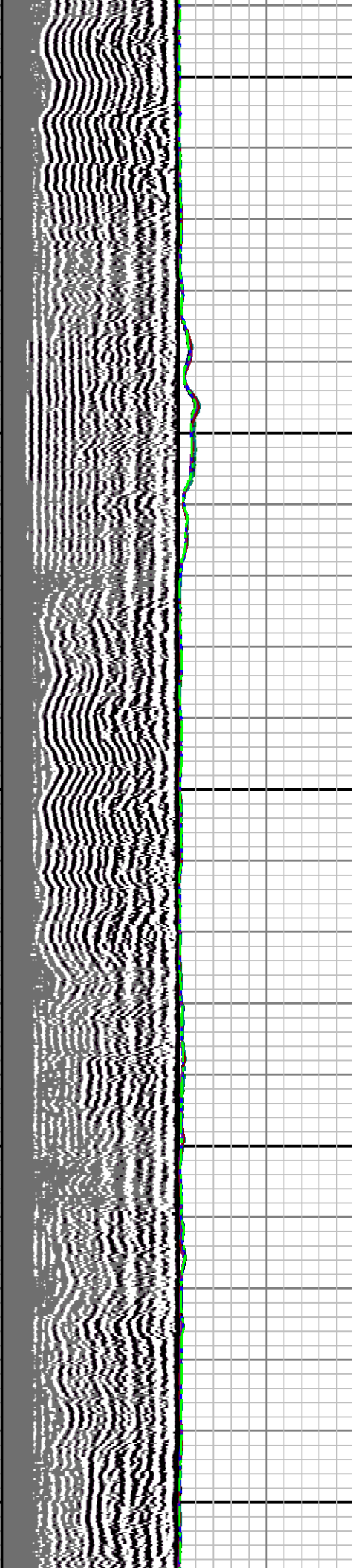


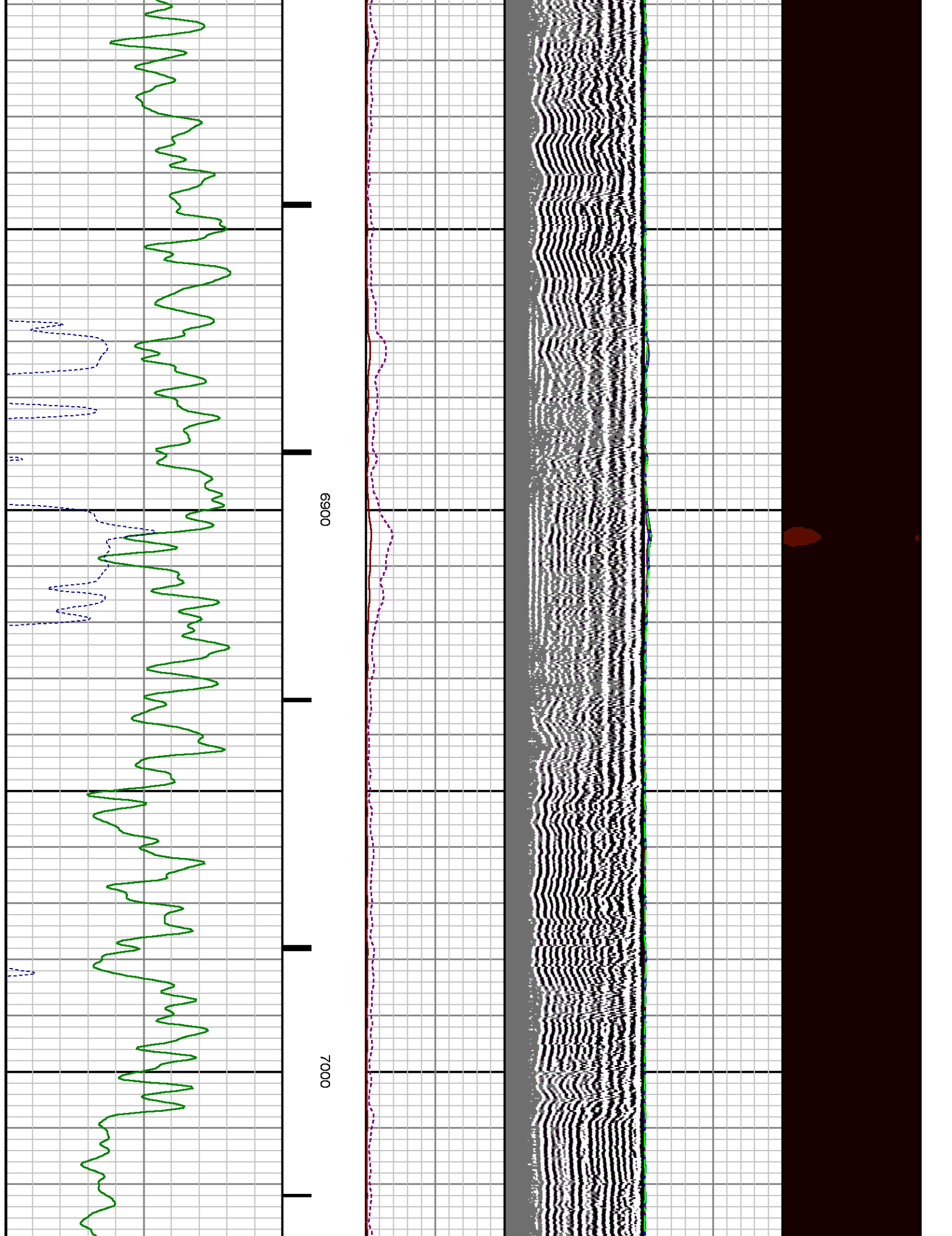


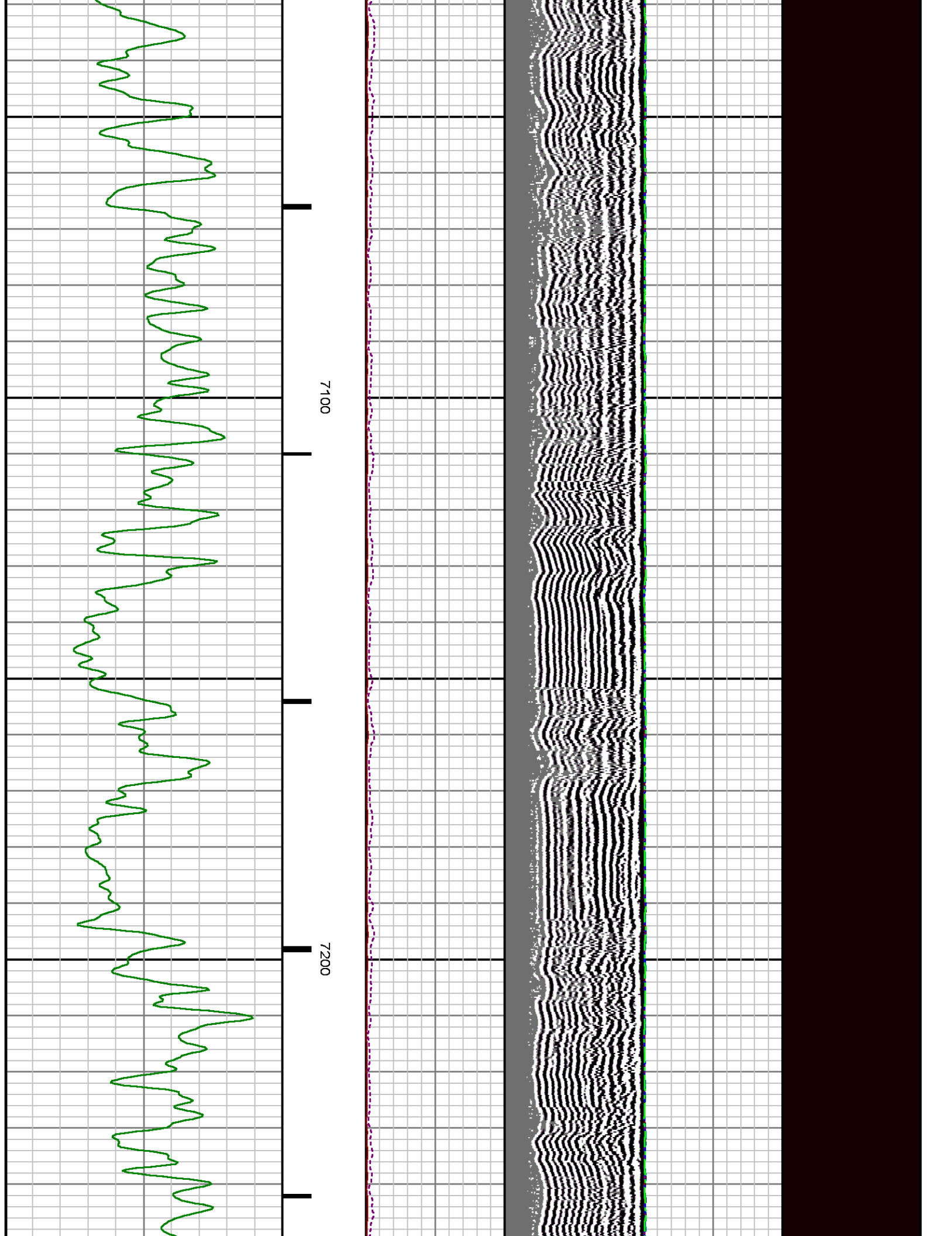
6400

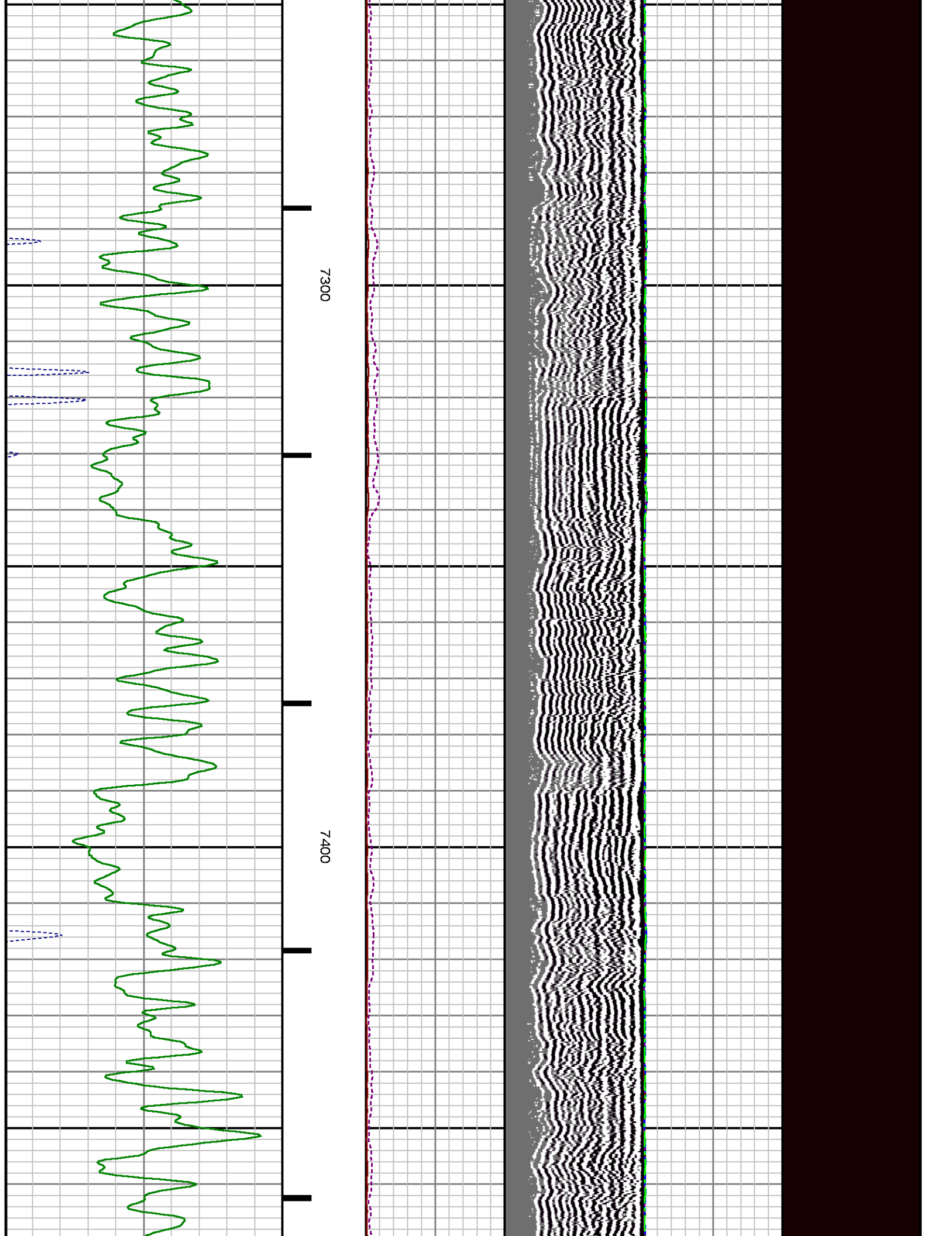
6500

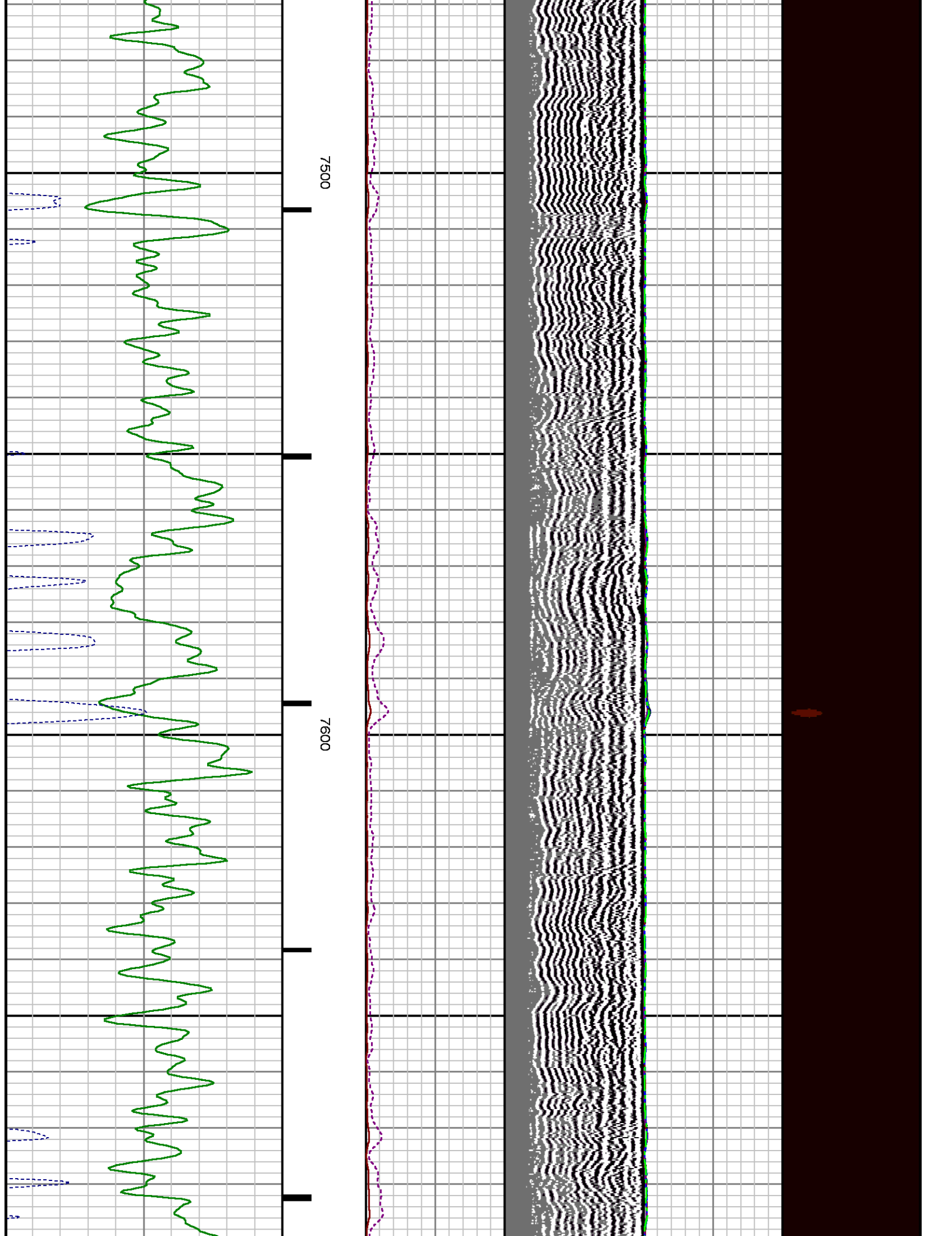


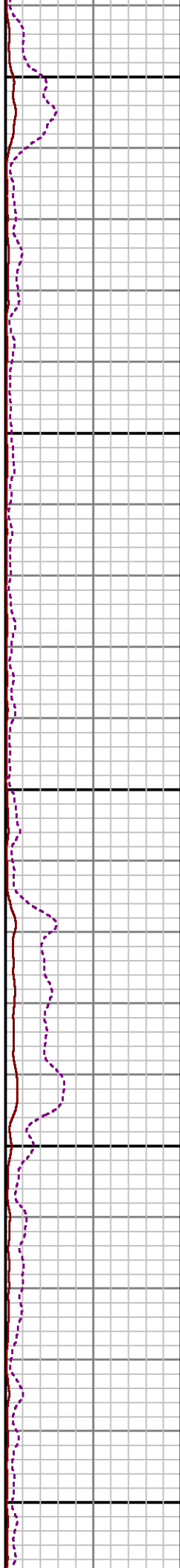
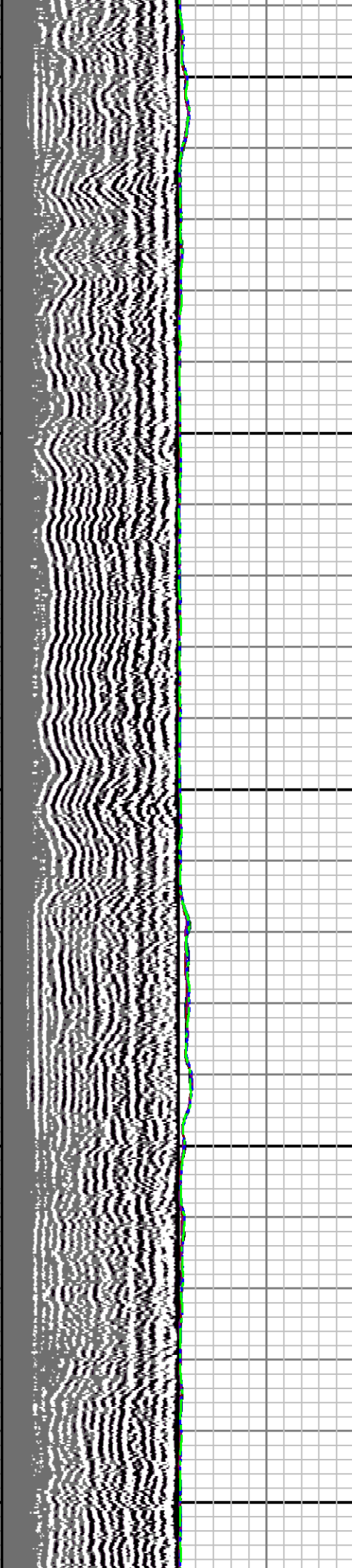








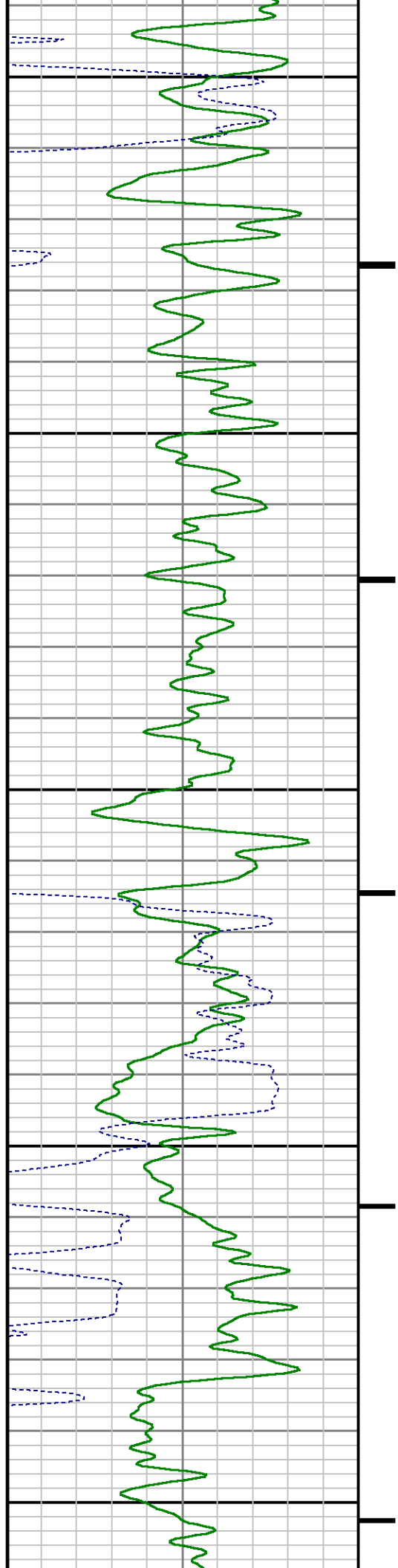


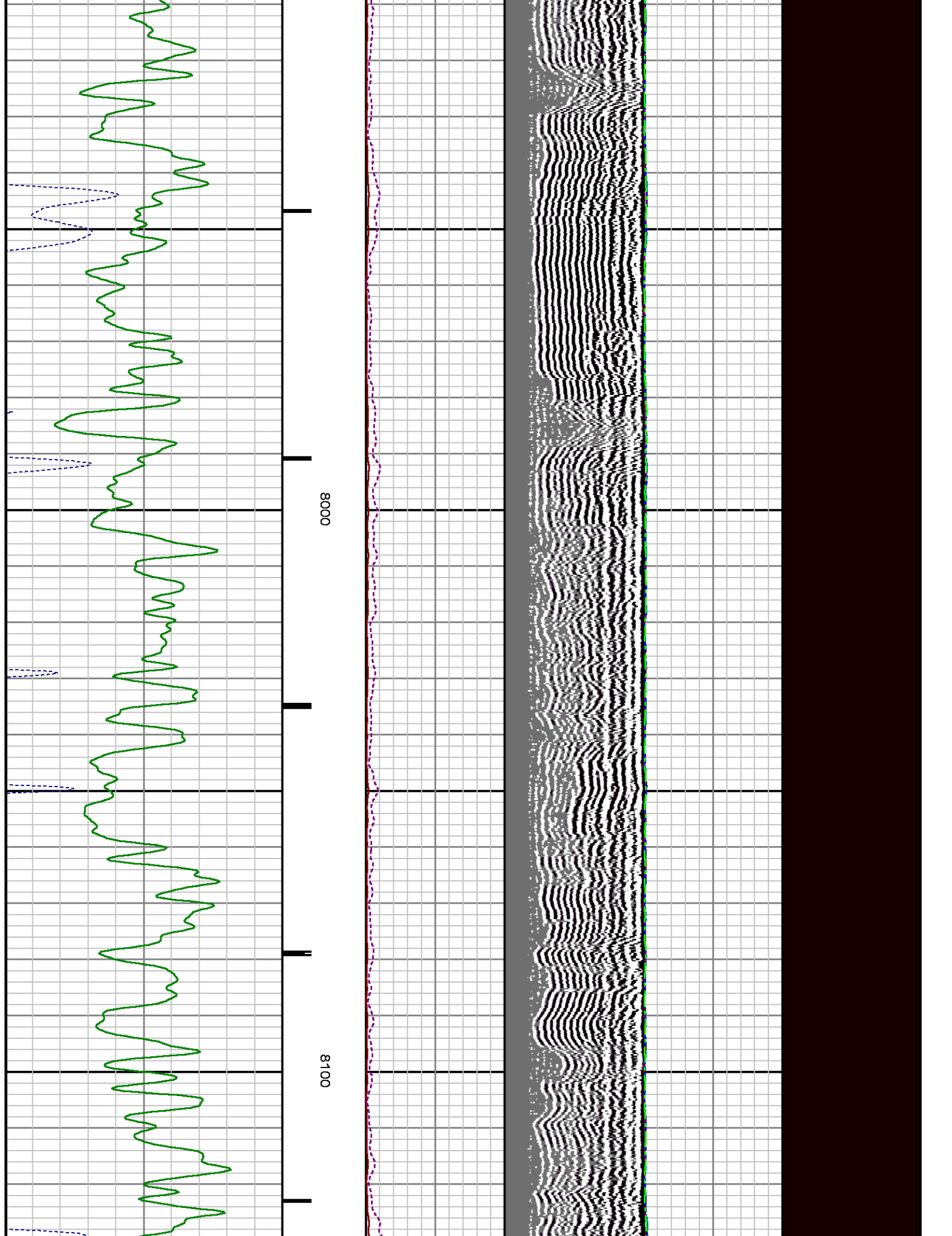


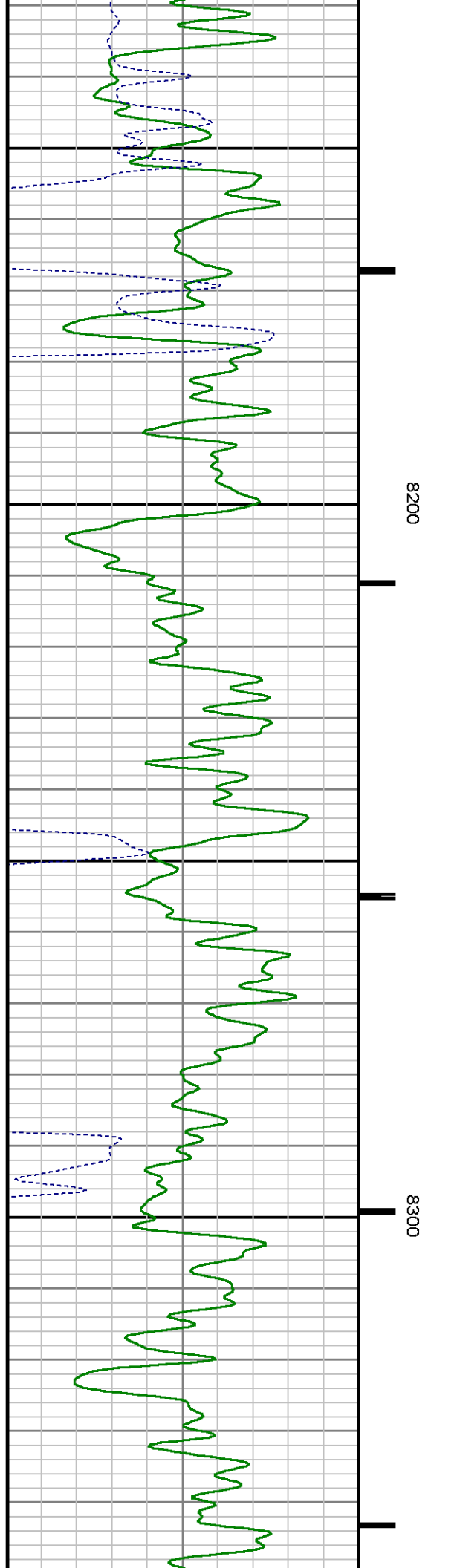
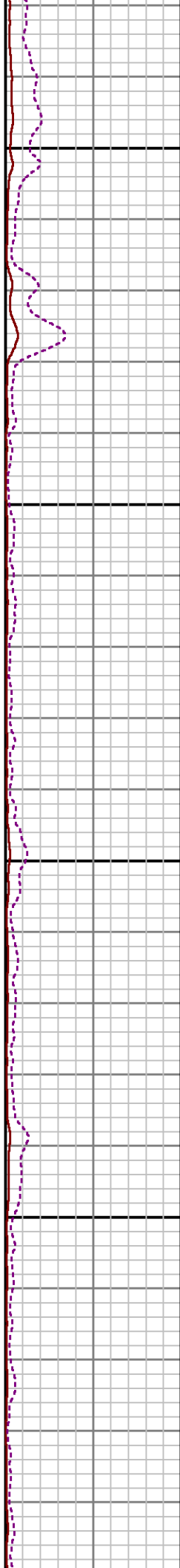
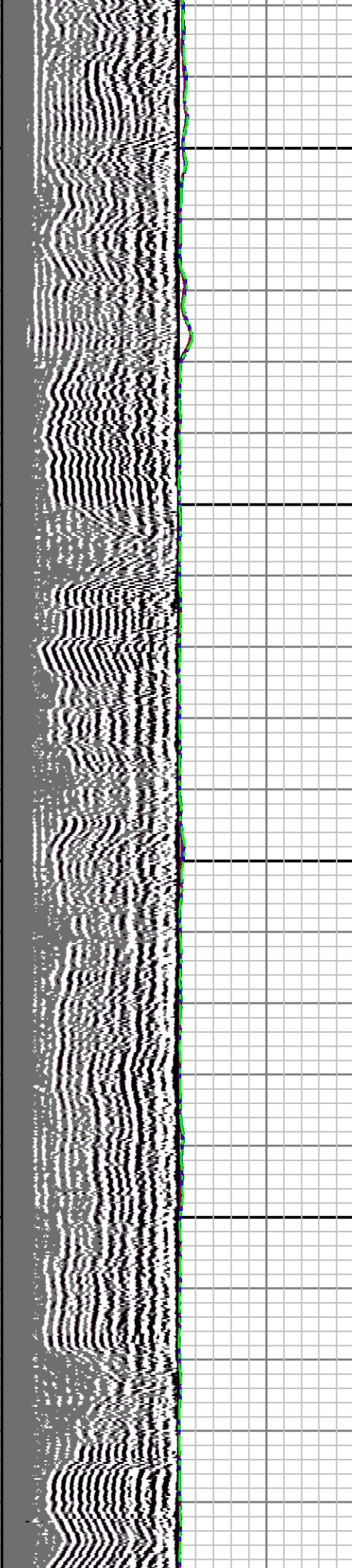
7700

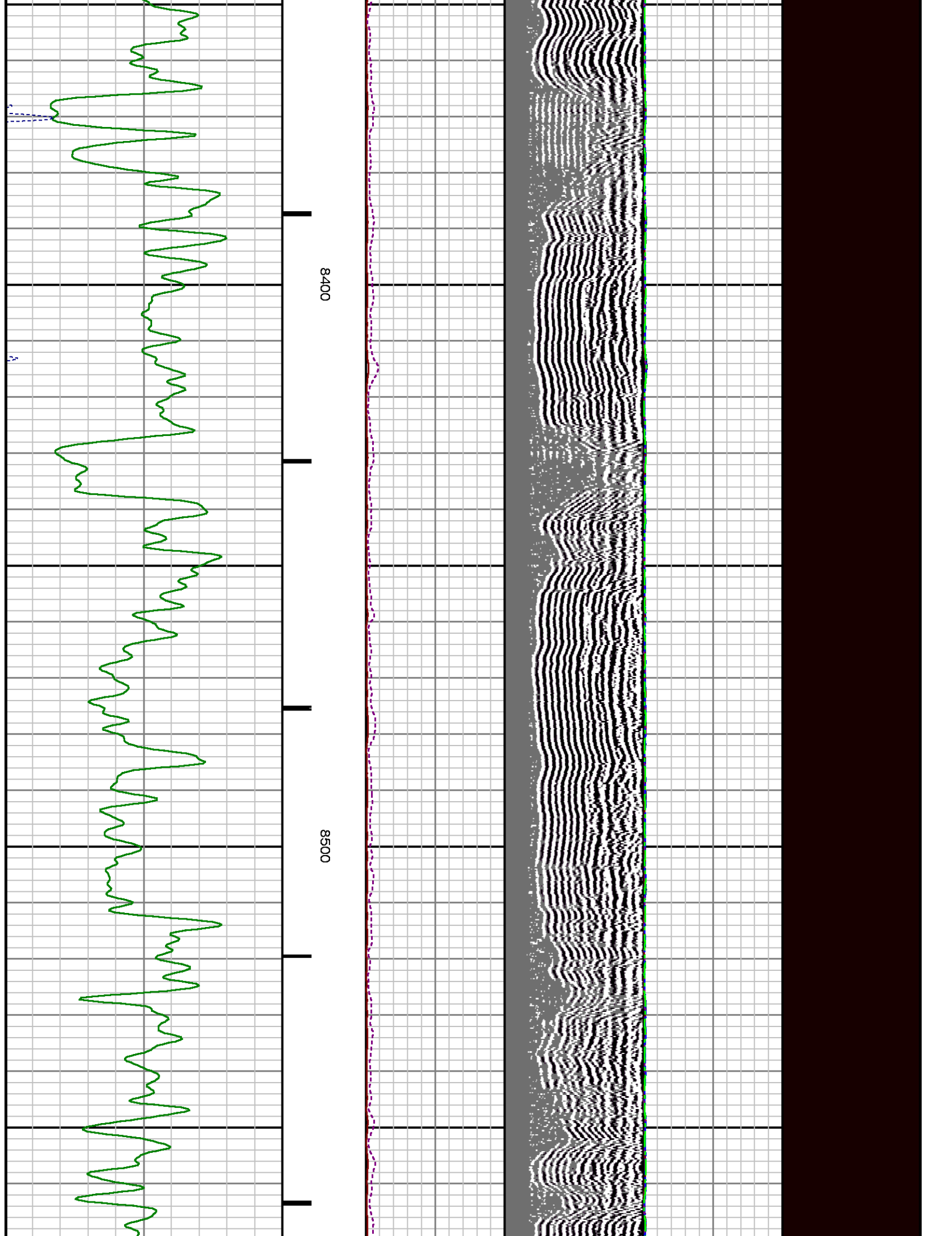
7800

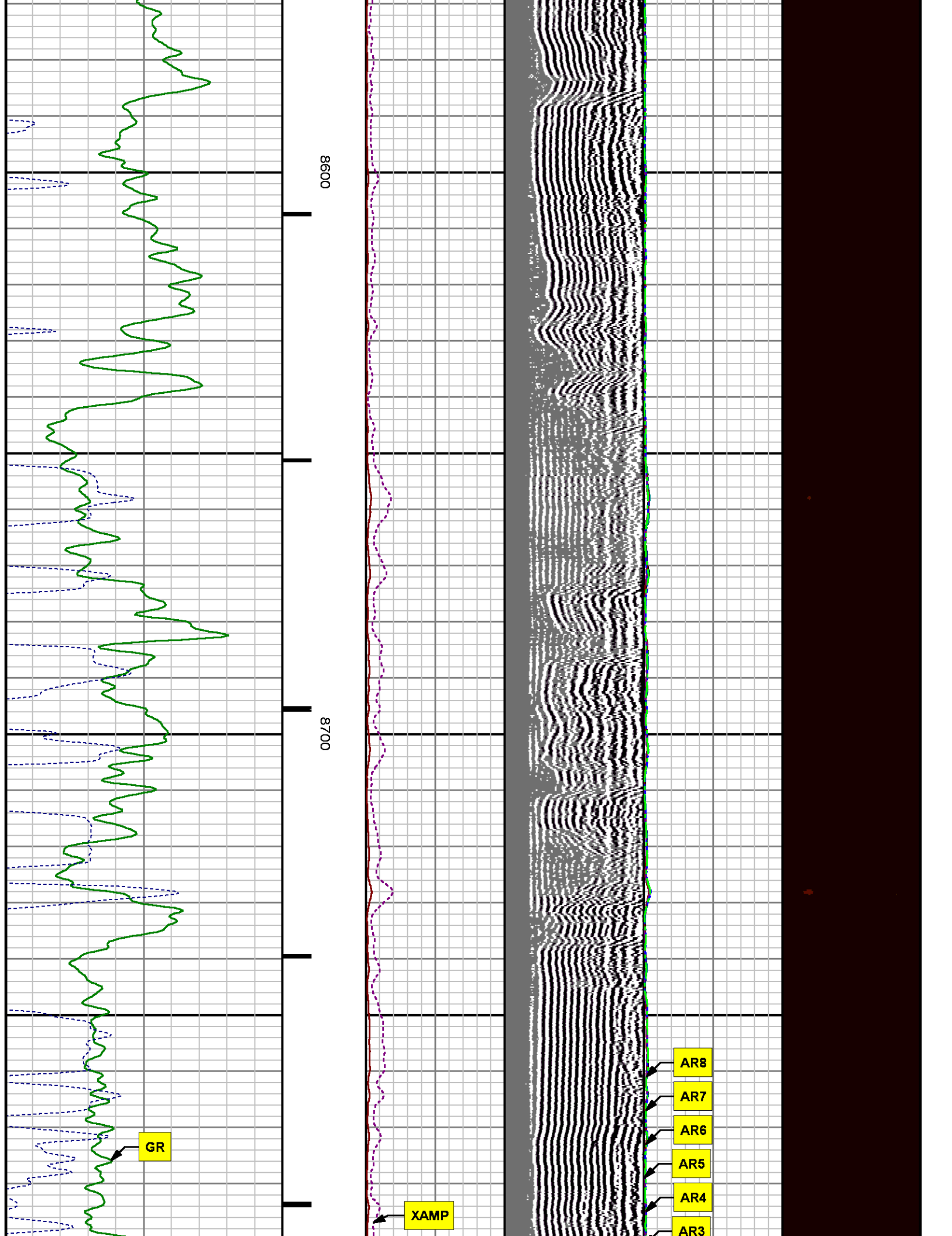
7900

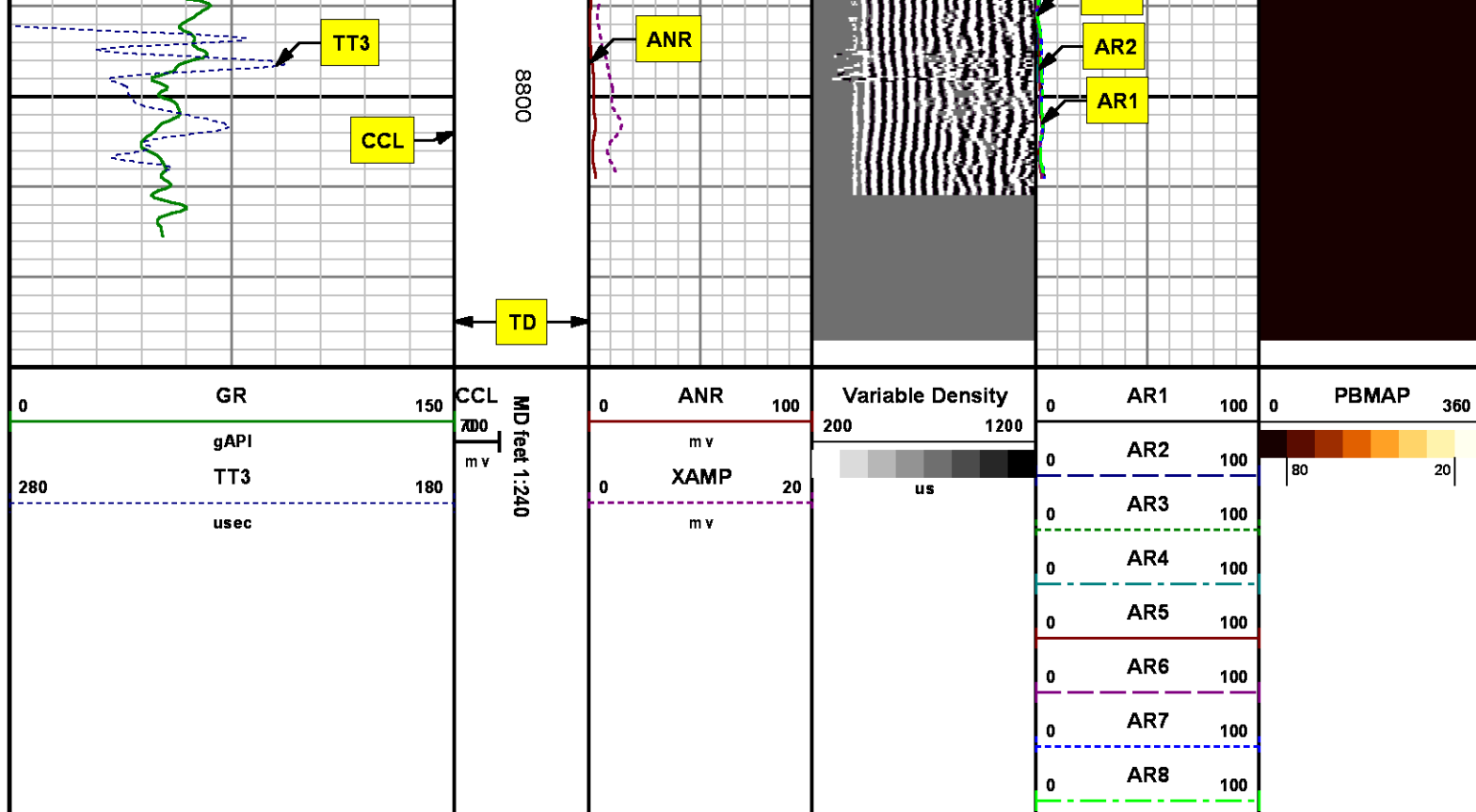












MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8496.490	8824.490
RAL	Amp Gate Start Near	195.000	usec	8496.490	8824.490
RAL	Amp Gate Start Radial	195.000	usec	8496.490	8824.490
RAL	Amp Gate Width Far	25.000	usec	8496.490	8824.490
RAL	Amp Gate Width Near	25.000	usec	8496.490	8824.490
RAL	Amp Gate Width Radial	25.000	usec	8496.490	8824.490
RAL	casing od	4.500	inches	8496.490	8824.490
RAL	casing wt	11.600	lbm/ft	8496.490	8824.490
RAL	FB Start Far	291.900	usec	8496.490	8824.490
RAL	FB Start Near	175.391	usec	8496.490	8824.490
RAL	FB Start Radial	175.391	usec	8496.490	8824.490
RAL	FB Thresh Far	10.000	mv	8496.490	8824.490
RAL	FB Thresh Near	4.000	mv	8496.490	8824.490

RAL	FB Thresh Radial	4.000	mv	8496.490	8824.490
RAL	Fluid Travel Time	200.000	u sec/ft	8496.490	8825.364

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
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

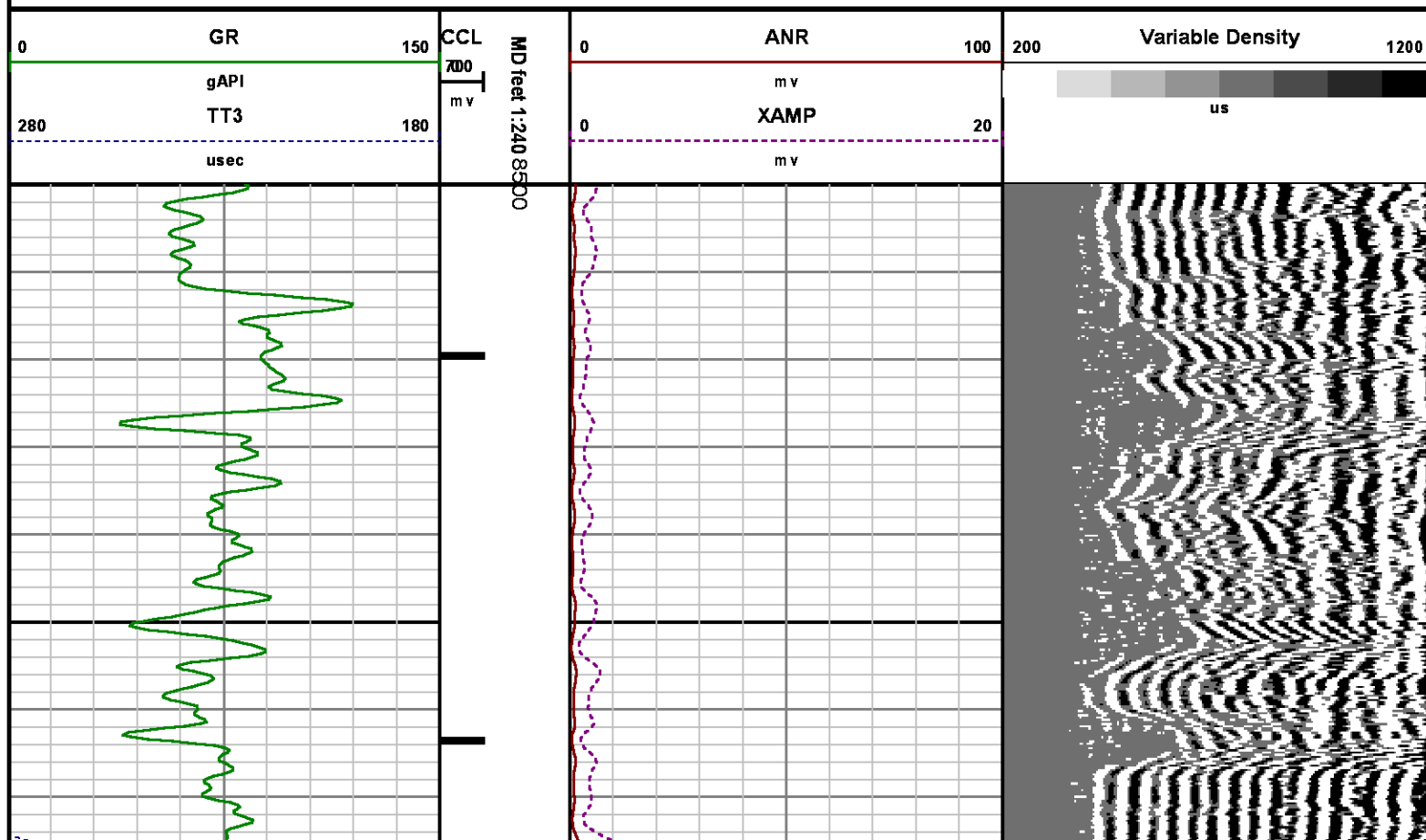
Well : SAVAGE RWF 313-25

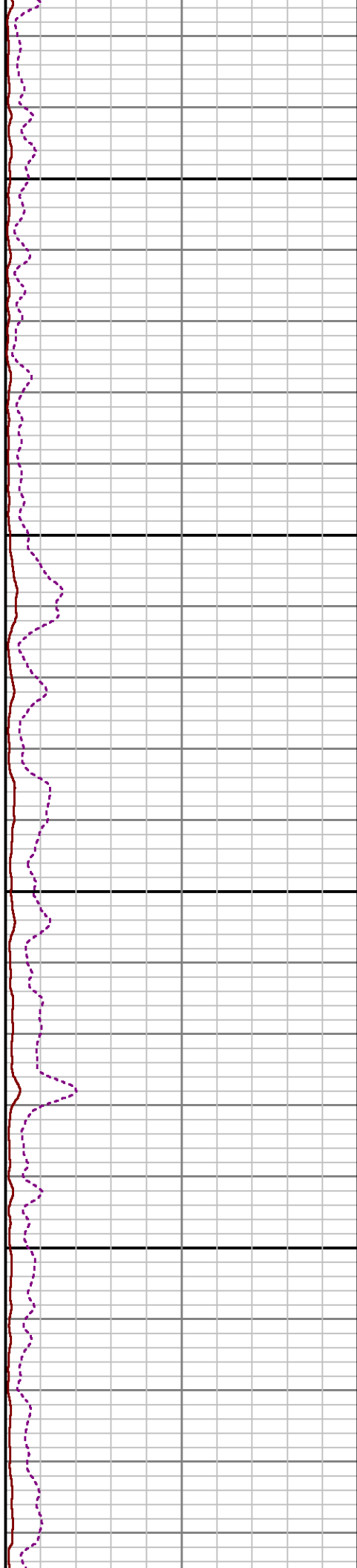
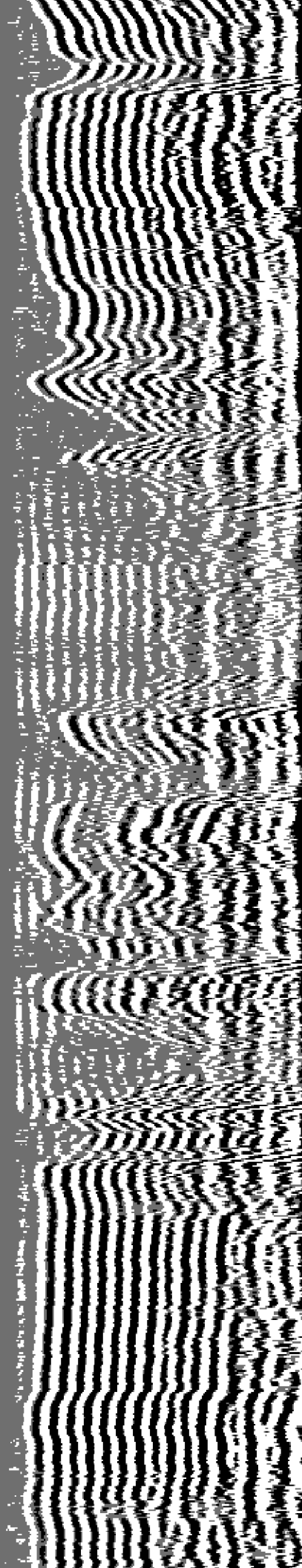
File Name : d:\well\data\wpx\savage rwf 313-25\313cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8500.00 - 8800.00 feet UP

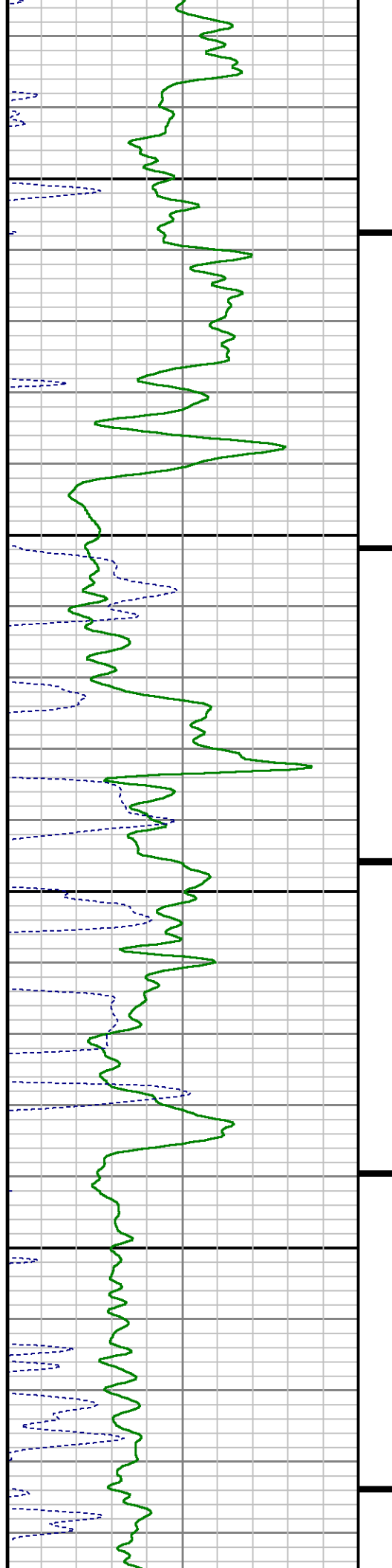
Created : 5/8/2014 9:02:04 PM

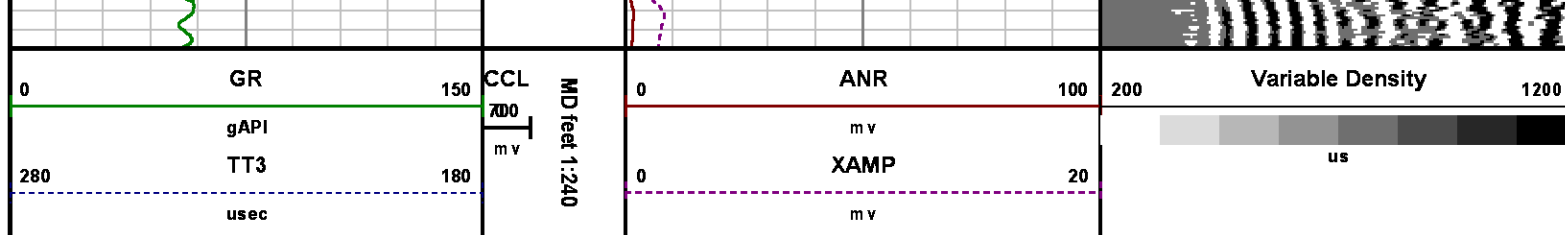




0060

8700





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP496M08_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 09:43:32 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M08

Tool Delay [usec] -53.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	0.001	100.00	0.31
3 Ft. Receiver	217	216	30	166	25	1.488	100.00	0.31
5 Ft. Receiver	327	325	30	264	25	0.986	150.00	0.35
Radial #1	217	216	30	166	25	1.083	100.00	0.31
Radial #2	217	216	30	166	25	0.746	100.00	0.31
Radial #3	218	216	30	166	25	1.043	100.00	0.31
Radial #4	217	216	30	166	25	1.056	100.00	0.31
Radial #5	217	216	30	166	25	1.408	100.00	0.31
Radial #6	216	216	30	166	25	1.222	100.00	0.31
Radial #7	215	216	30	166	25	0.527	100.00	0.30
Radial #8	217	216	30	166	25	1.169	100.00	0.30

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD496M8 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 12:49:28 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M8

Tool Delay [usec] -53.00 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	0.061	0.000	1.00	100.000
3 Ft. Receiver	195	25	3.680			
5 Ft. Receiver	305	25	5.170			
Radial #1	195	25	3.569			
Radial #2	195	25	3.565			
Radial #3	195	25	3.621			
Radial #4	195	25	3.633			
Radial #5	195	25	4.000			
Radial #6	195	25	4.224			
Radial #7	195	25	3.424			
Radial #8	195	25	3.581			

GAMMA RAY #2

Calibration File: C:\case\calver\GR\45608.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 09:48:12 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	97.82	367.47	0.686	67.11	252.11	185.00

Verification File: C:\case\calver\GR\45608.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu May 08 09:49:43 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	98.76	372.44	0.686	67.76	255.53	187.77

TOOL DIAGRAM

OTA SHORT CABLE HEAD



24.23'

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

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

XMIT	18.05'
NEAR RCVR	14.97'
FAR RCVR	13.05'
CCL	11.34'
GR	9.49'
NEU	4.09'
	0.00'

Total Length: 24.23'
Total Weight: Not Available
Max Diameter: 0' 3.12"

**Baker Atlas****CASE****Company****WPX ENERGY****Well****SAVAGE RWF 313-25****Field****RULISON****County****GARFIELD****State****CO****Location****SHL: 1655' FSL & 2294' FWL****BHL: 2479' FSL & 723' FWL****Elevations****KB 6122 ft****DF****GL 6096 ft****File No:****CH085726****API No:****05045219870000****25 6S 94W****RWF 23-25 PAD****NABORS 577****SEC 25****TWP 6S****RGE 94W**