

Company: ANADARKO

Well: CHEESE STATE 27N-21HZ

Field: WATTENBERG

County: WELD State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL

County: WELD

Field: WATTENBERG

Location: 428' FNL, 875' FEL, T3N R65W S

Well: CHEESE STATE 27N-21HZ

Company: ANADARKO

LOCATION

428' FNL, 875' FEL, T3N R65W SEC 28 NENE

Elev.: K.B. 4843.00 ft
G.L. 4818.00 ft
D.F. 4842.00 ft

Permanent Datum: _____
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

GROUN LEVEL _____
Elev.: 4818.00 ft
25.00 ft above Perm. Datum

API Serial No. 0512340955

Section 28

Township 3N

Range 65W

PVT DATA				Run 1	Run 2	Run 3
Oil Density						
Water Salinity						
Gas Gravity						
Bo						
Bw						
1/Bg						
Bubble Point Pressure						
Bubble Point Temperature						
Solution GOR						
Maximum Deviation						
CEMENTING DATA						
Primary/Squeeze	Primary					
Casing String No						
Lead Cement Type						
Volume						
Density						
Water Loss						
Additives						
Tail Cement Type						
Volume						
Density						
Water Loss						
Additives						
Expected Cement Top						

Logging Date 15-Jul-2015

Run Number 1

Depth Driller 12660 ft

Schlumberger Depth 7210 ft

Bottom Log Interval 7201 ft

Top Log Interval 25 ft

Casing Fluid Type WATER

Salinity

Density 8.4 lbm/gal

Fluid Level 25 ft

BIT/CASING/TUBING STRING

Bit Size 8.500 in

From 25 ft

To 12660 ft

Casing/Tubing Size 5.500 in

Weight 17 lbm/ft

Grade HCP-110 LTC

From 25 ft

To 12652 ft

Maximum Recorded Temperatures 252 degF

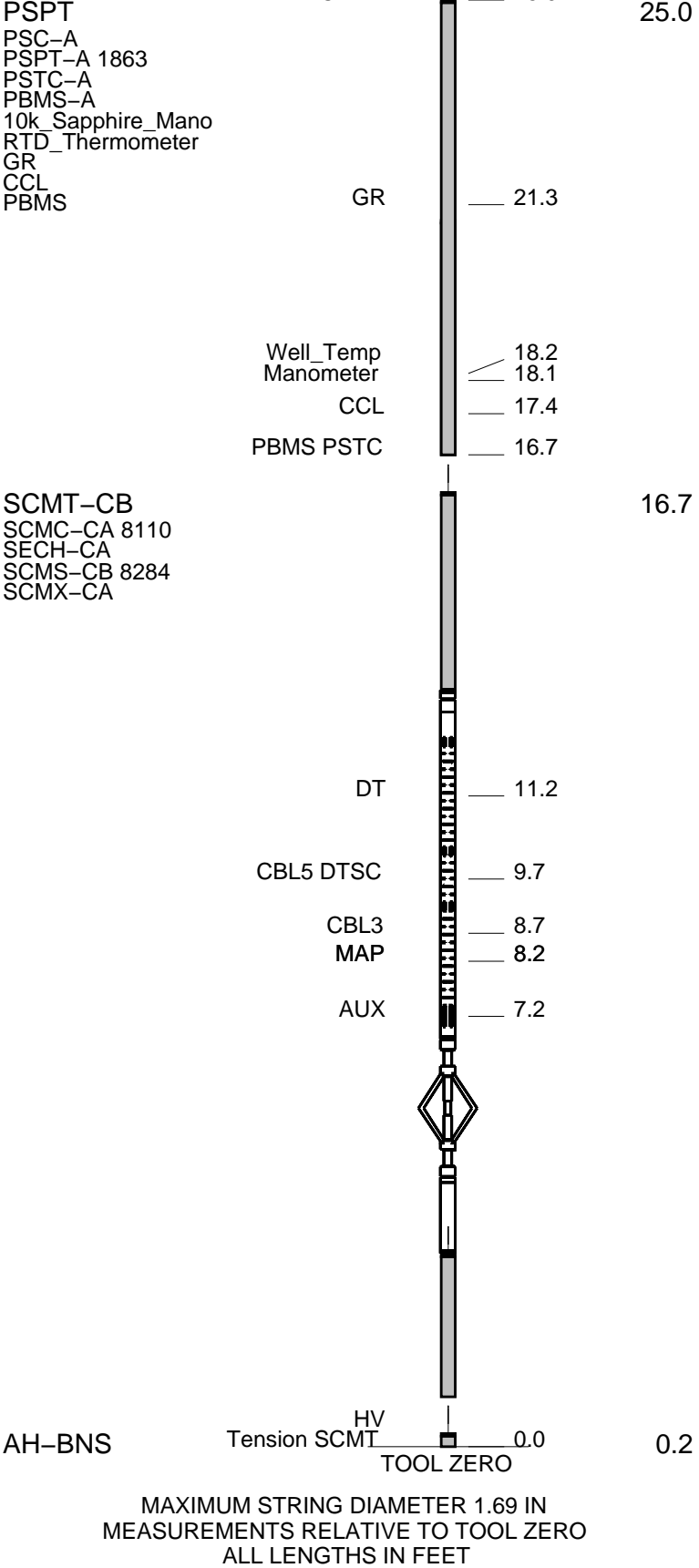
Logger On Bottom 15-Jul-2015 9:30

Unit Number 354 Location PLATTEVILLE

Recorded By KIRSTIE BUNTING

Witnessed By VAN FRANKE

Logging Date						
Run Number						
Depth Driller						
Schlumberger Depth						
Bottom Log Interval						
Top Log Interval						
Casing Fluid Type						
Salinity						
Density						
Fluid Level						
BIT/CASING/TUBING STRING						
Bit Size						
From						
To						
Casing/Tubing Size						
Weight						
Grade						
From						
To						
Maximum Recorded Temperatures						
Logger On Bottom						
Unit Number						
Recorded By						
Witnessed By						





MAIN PASS CBL–VDL 2800PSI

MAXIS Field Log

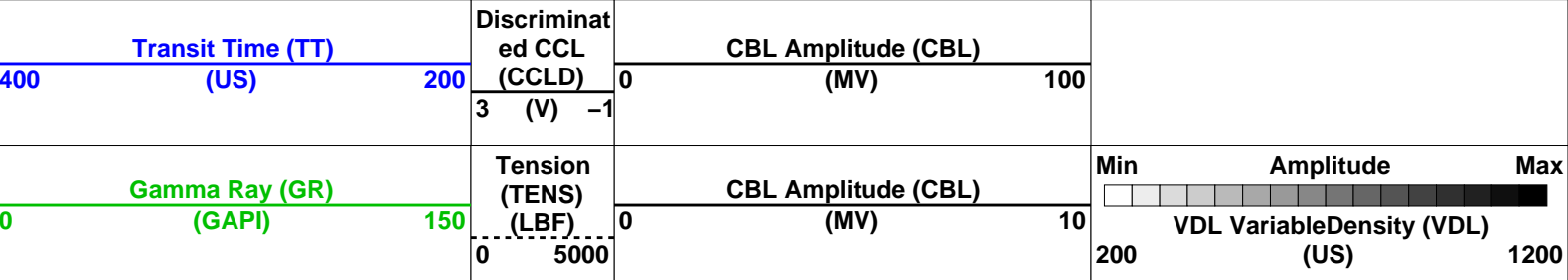
Company: ANADARKO Well: CHEESE STATE 27N–21HZ

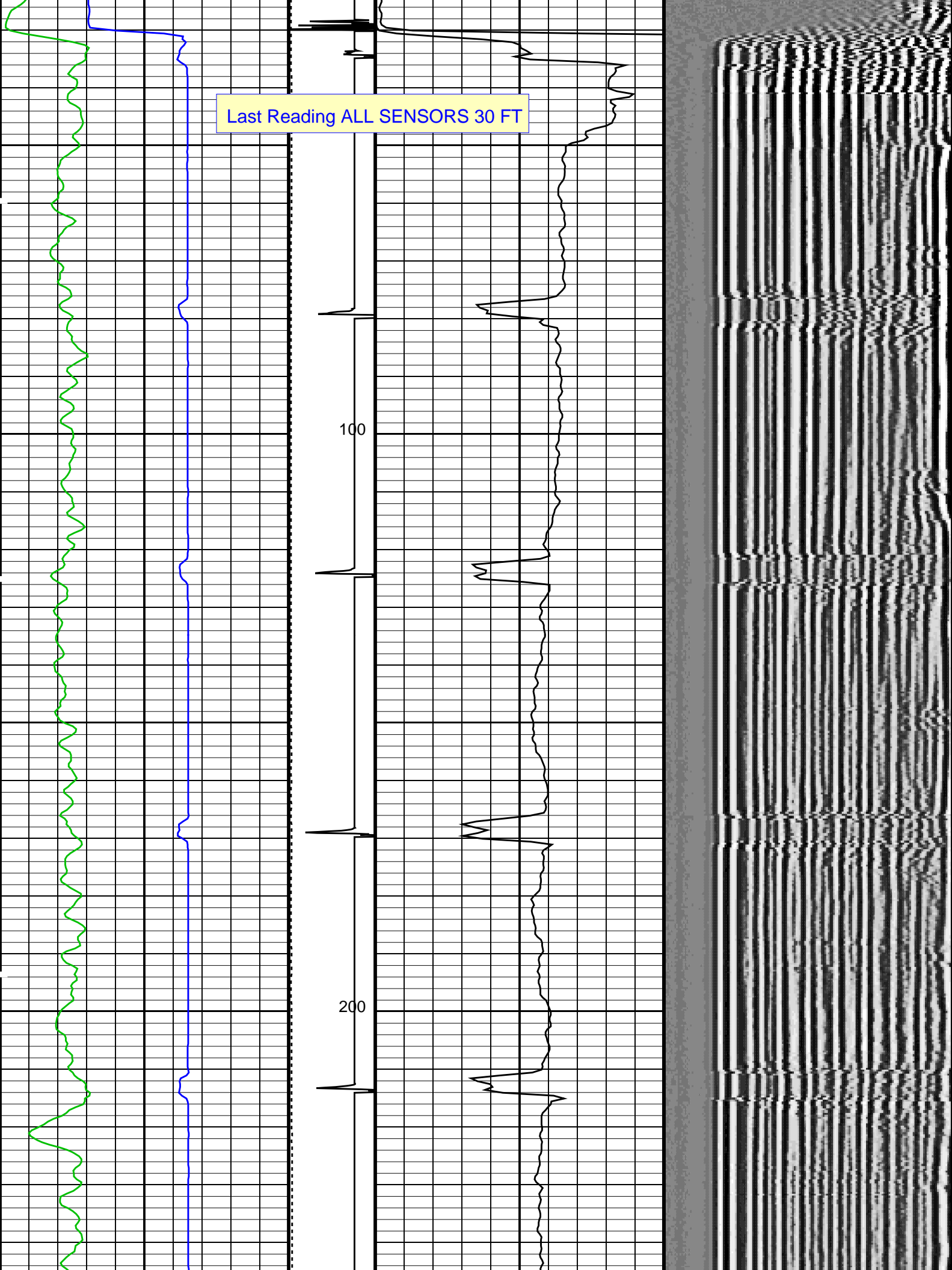
Input DLIS Files						
DEFAULT	SCMT_PSP_006PUP	FN:5	PRODUCER	15–Jul–2015 19:43	7242.5 FT	22.5 FT
Output DLIS Files						
DEFAULT	SCMT_PSP_004PUP	FN:3	PRODUCER	15–Jul–2015 21:33	7242.5 FT	22.5 FT

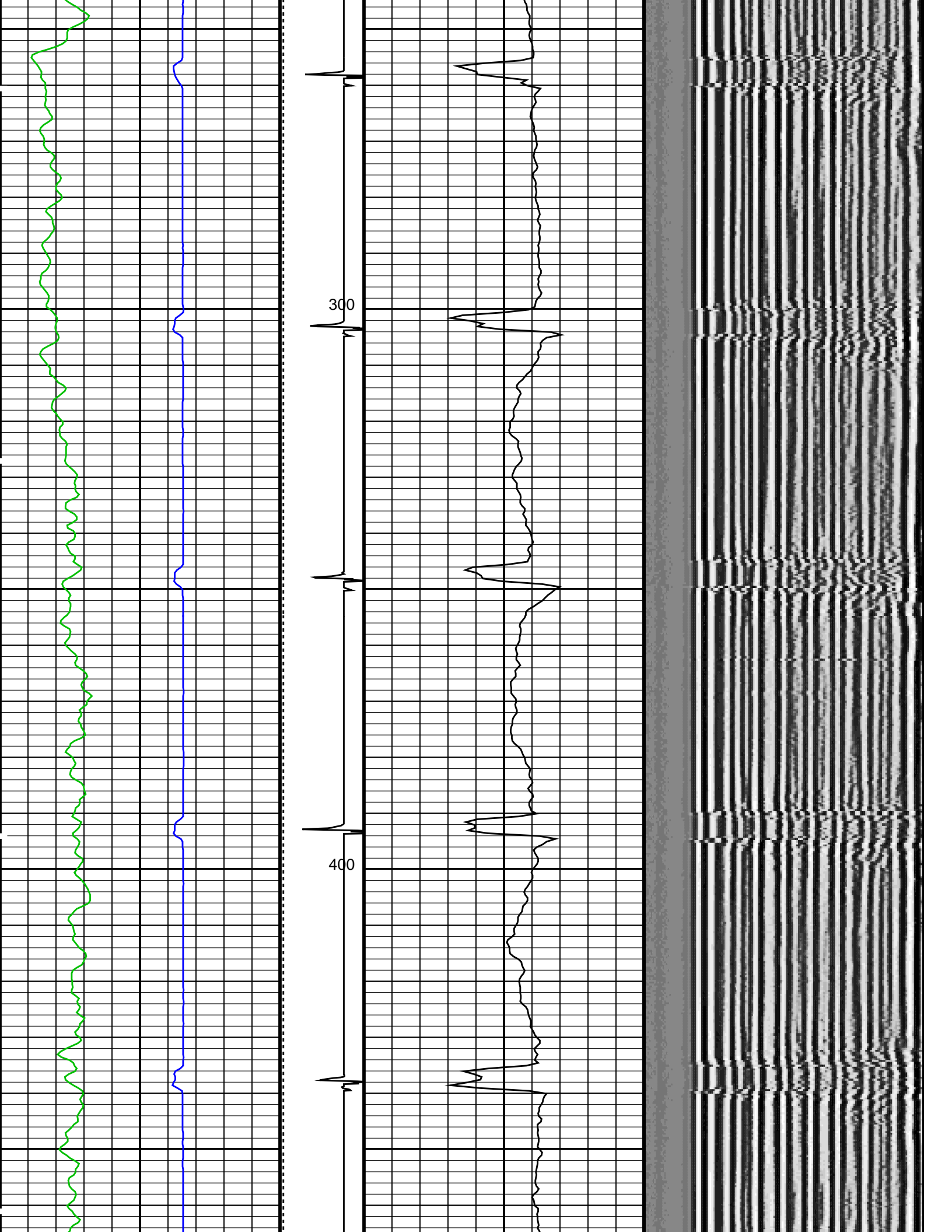
OP System Version: 19C0–187			
SCMT–CB	19C0–187	PSPT	19C0–187

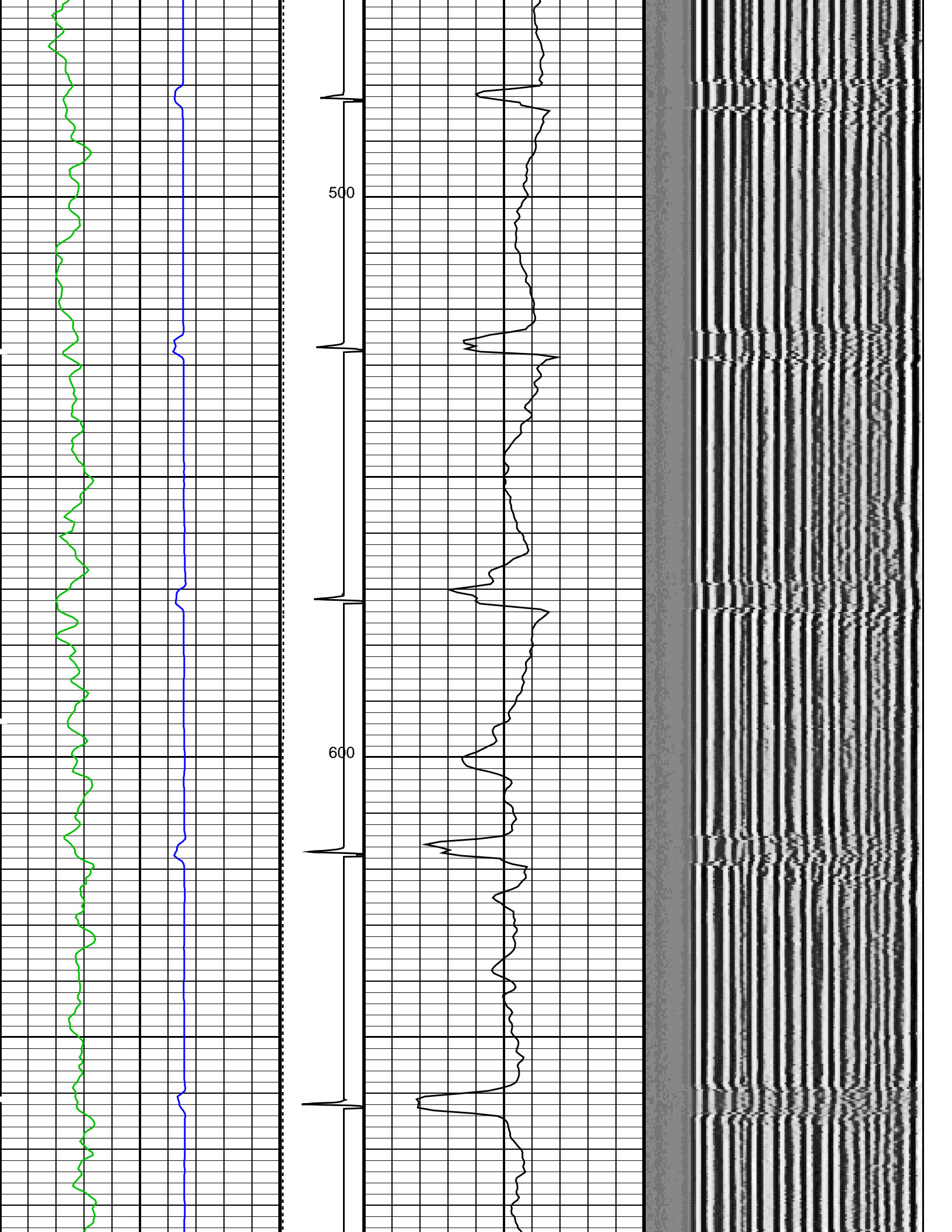
PIP SUMMARY

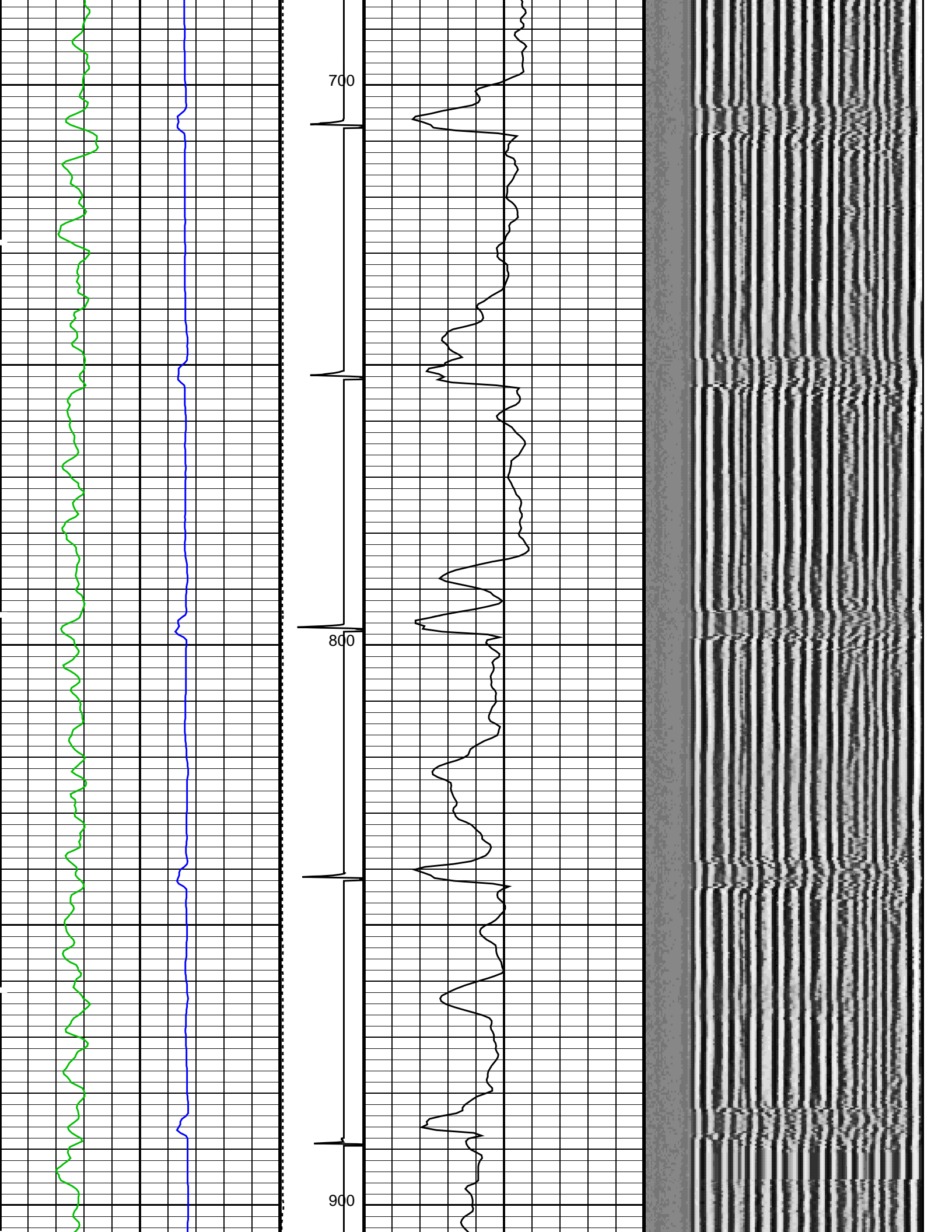
☐ Time Mark Every 60 S

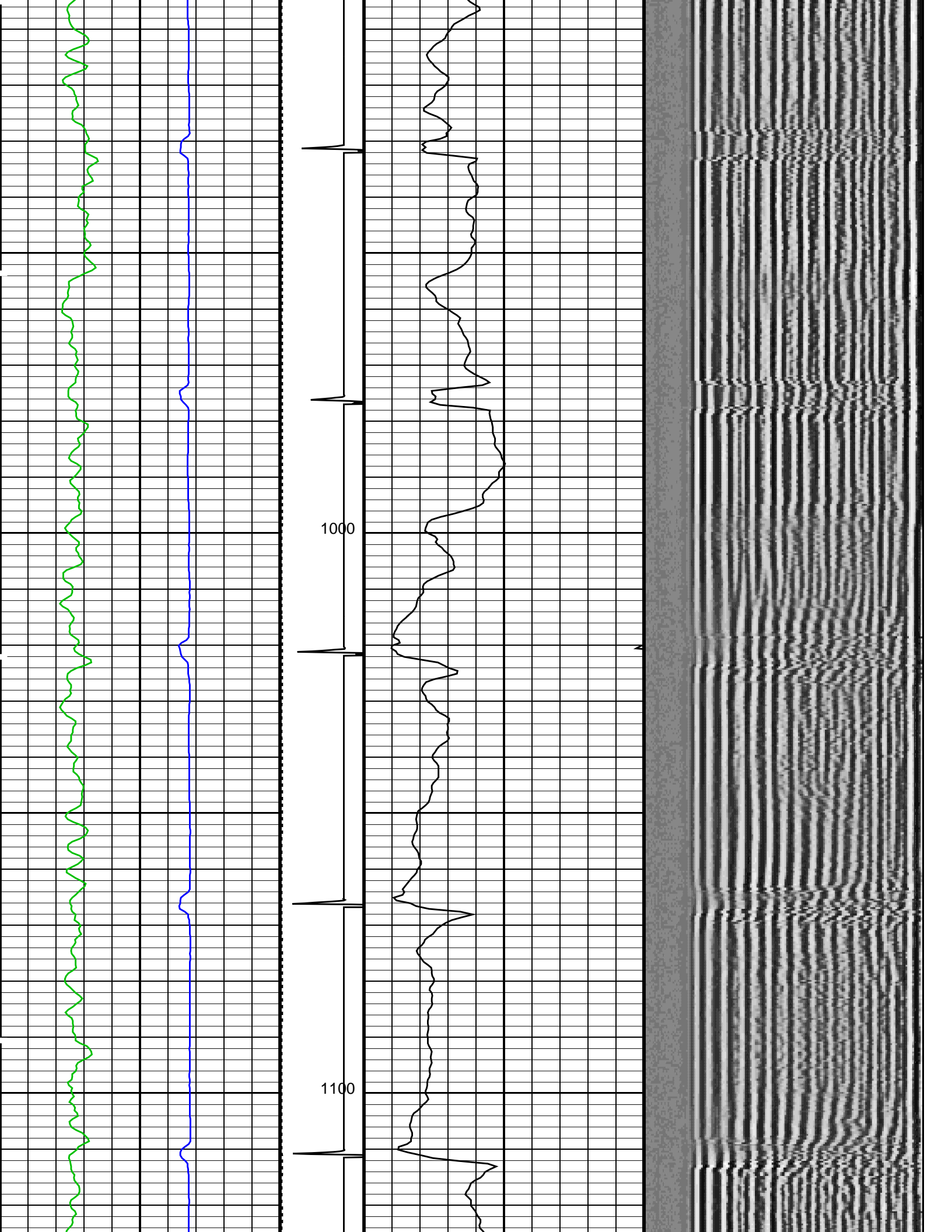


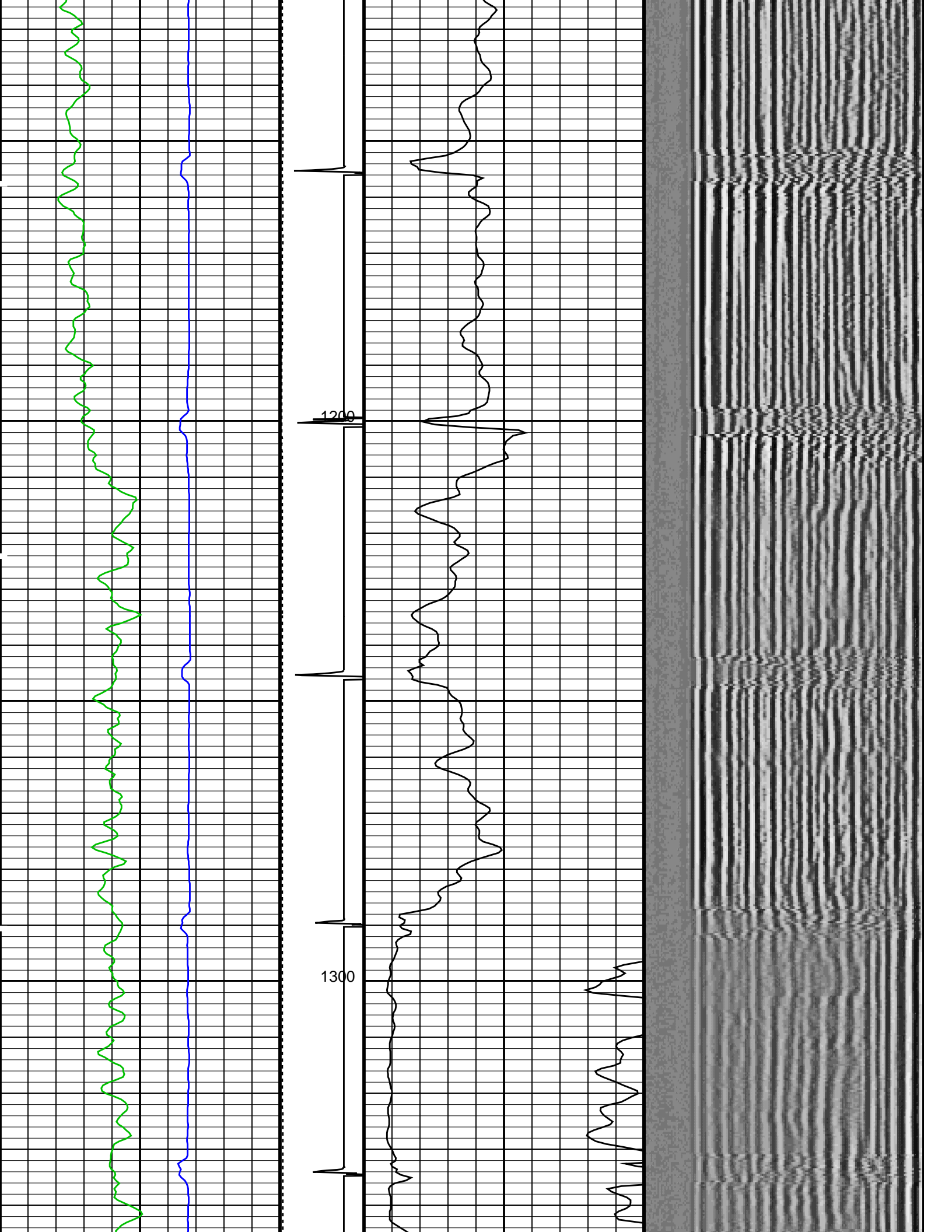


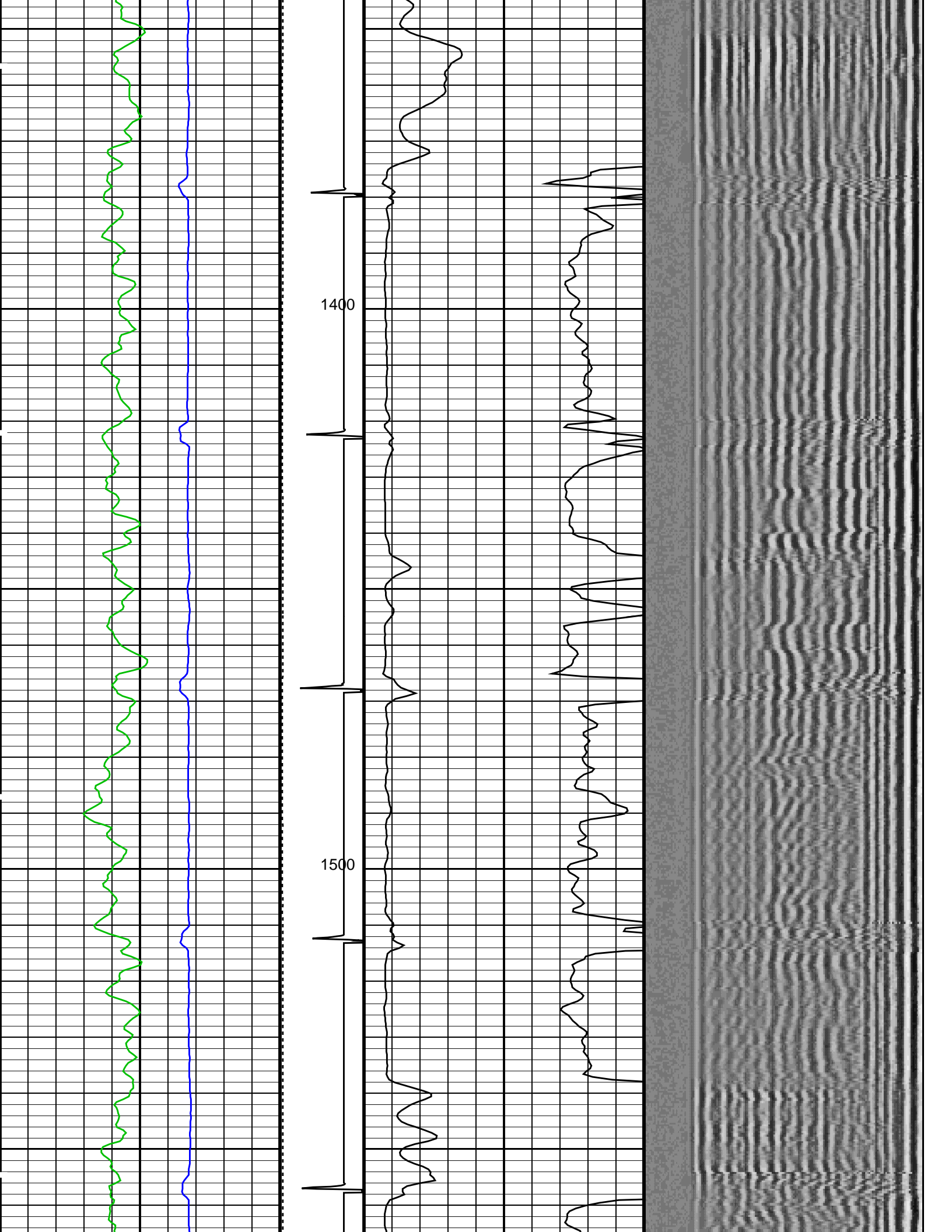


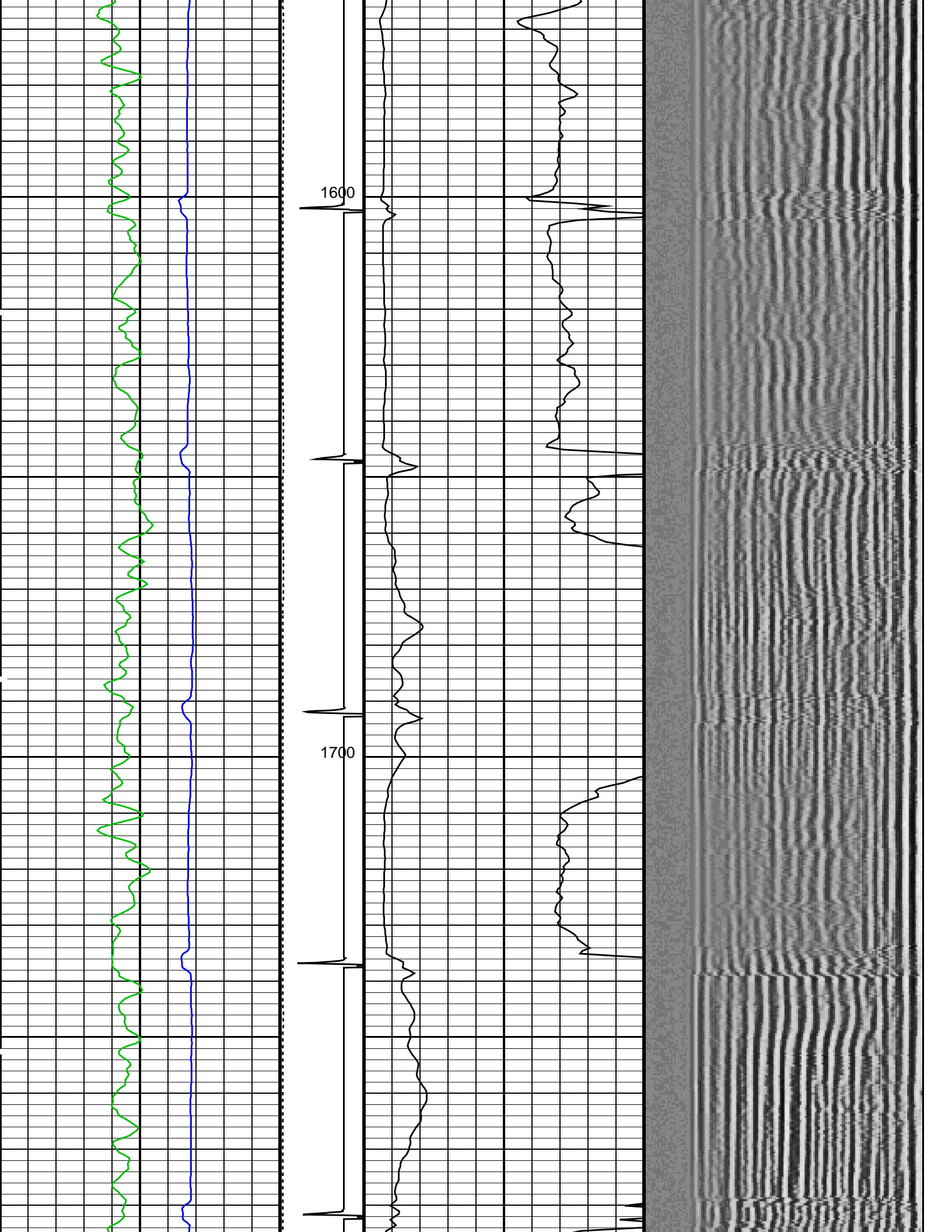


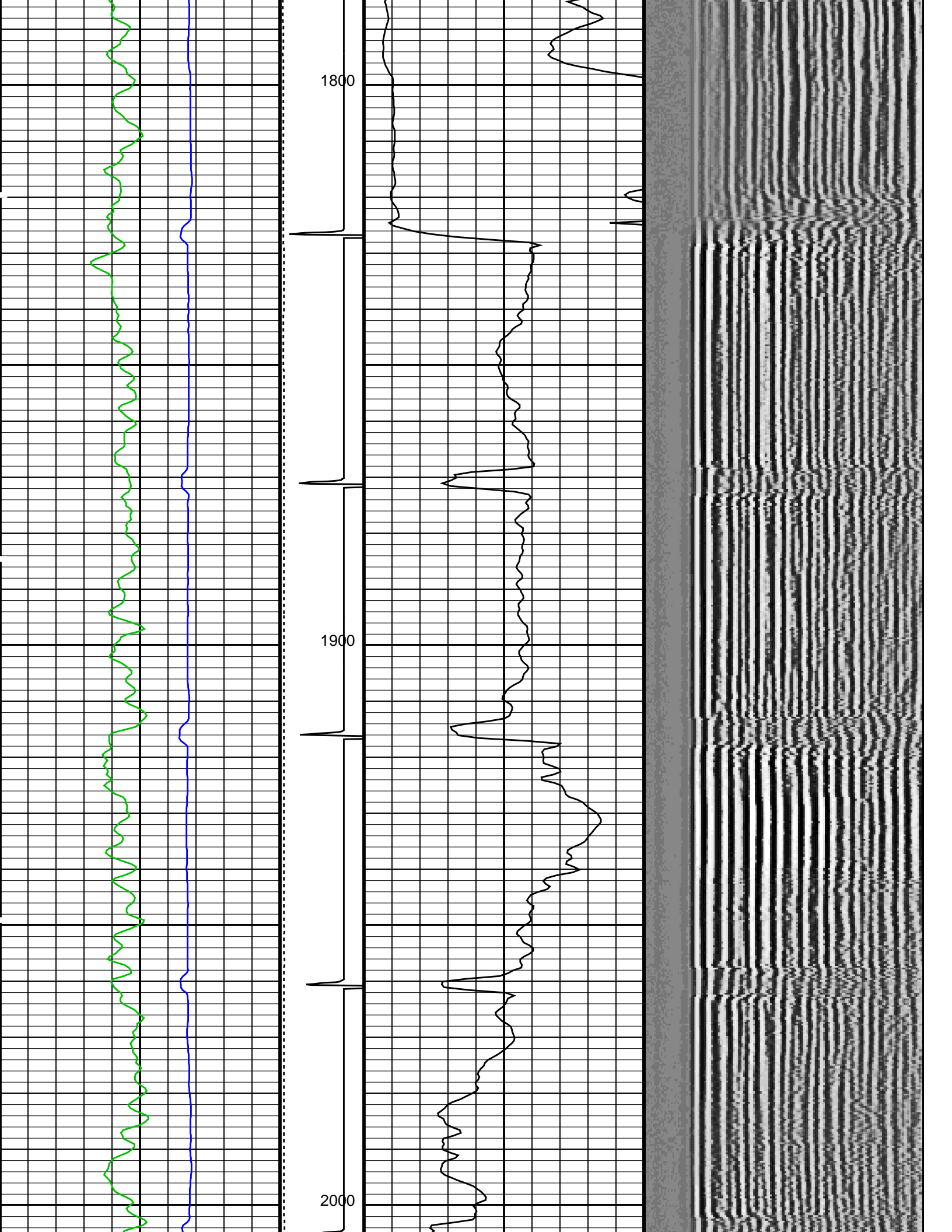


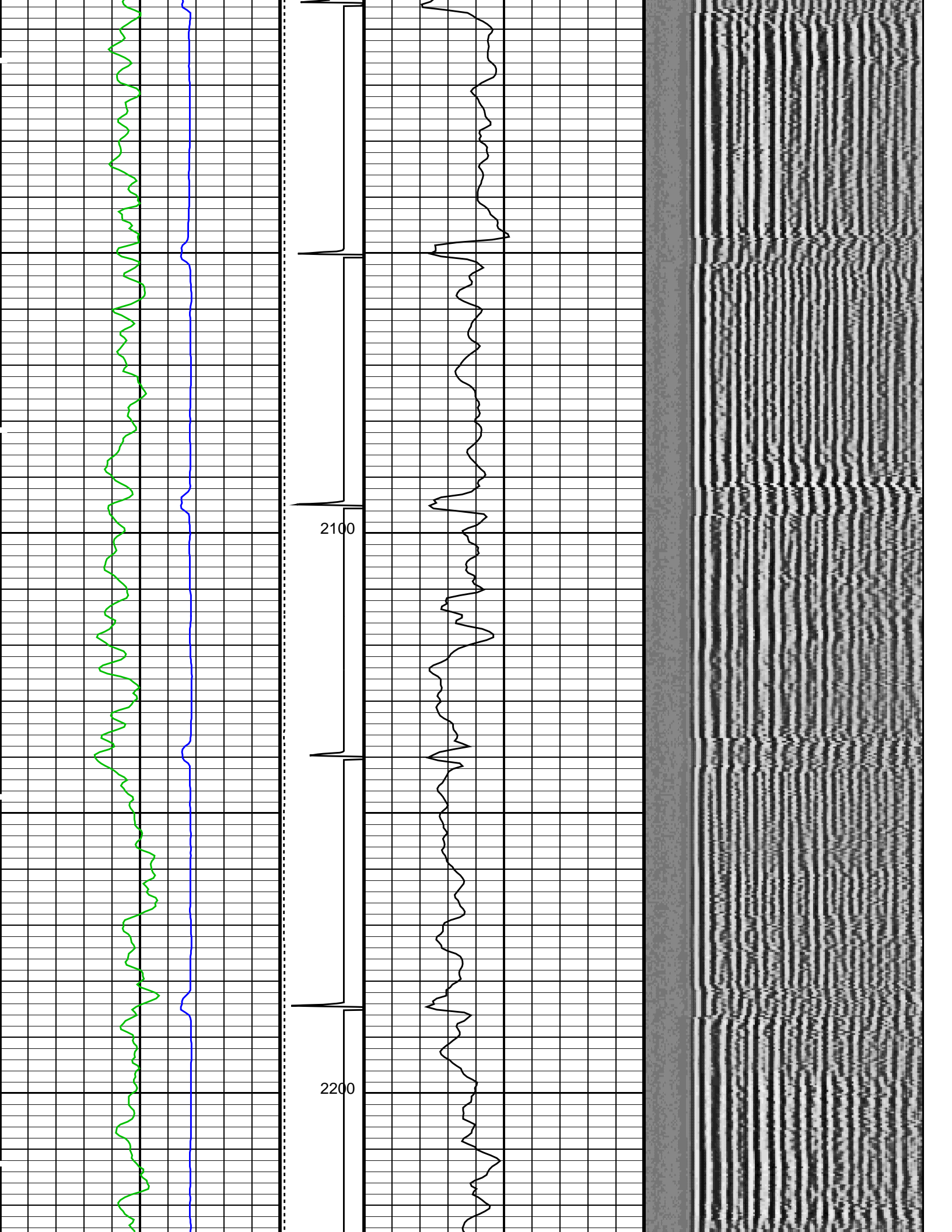


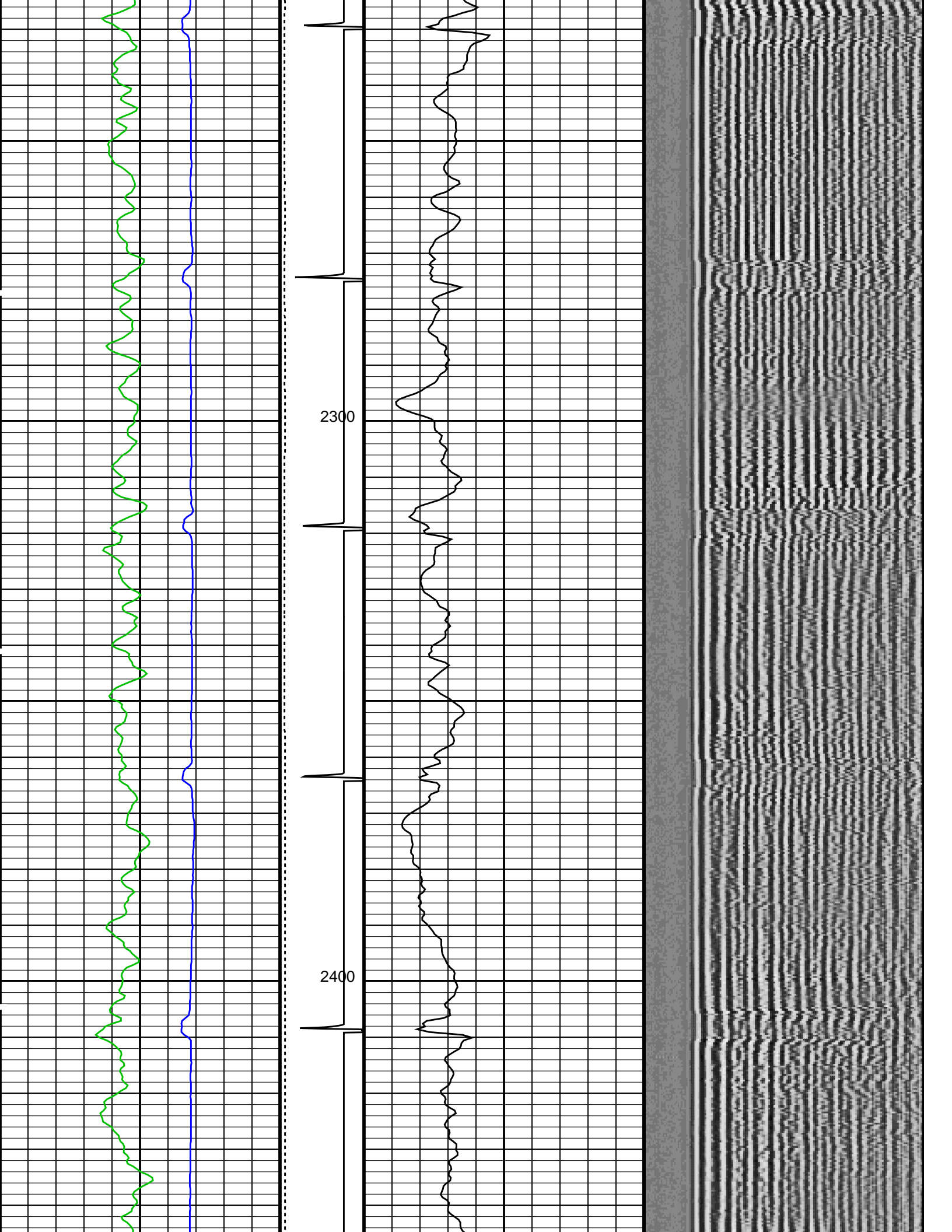


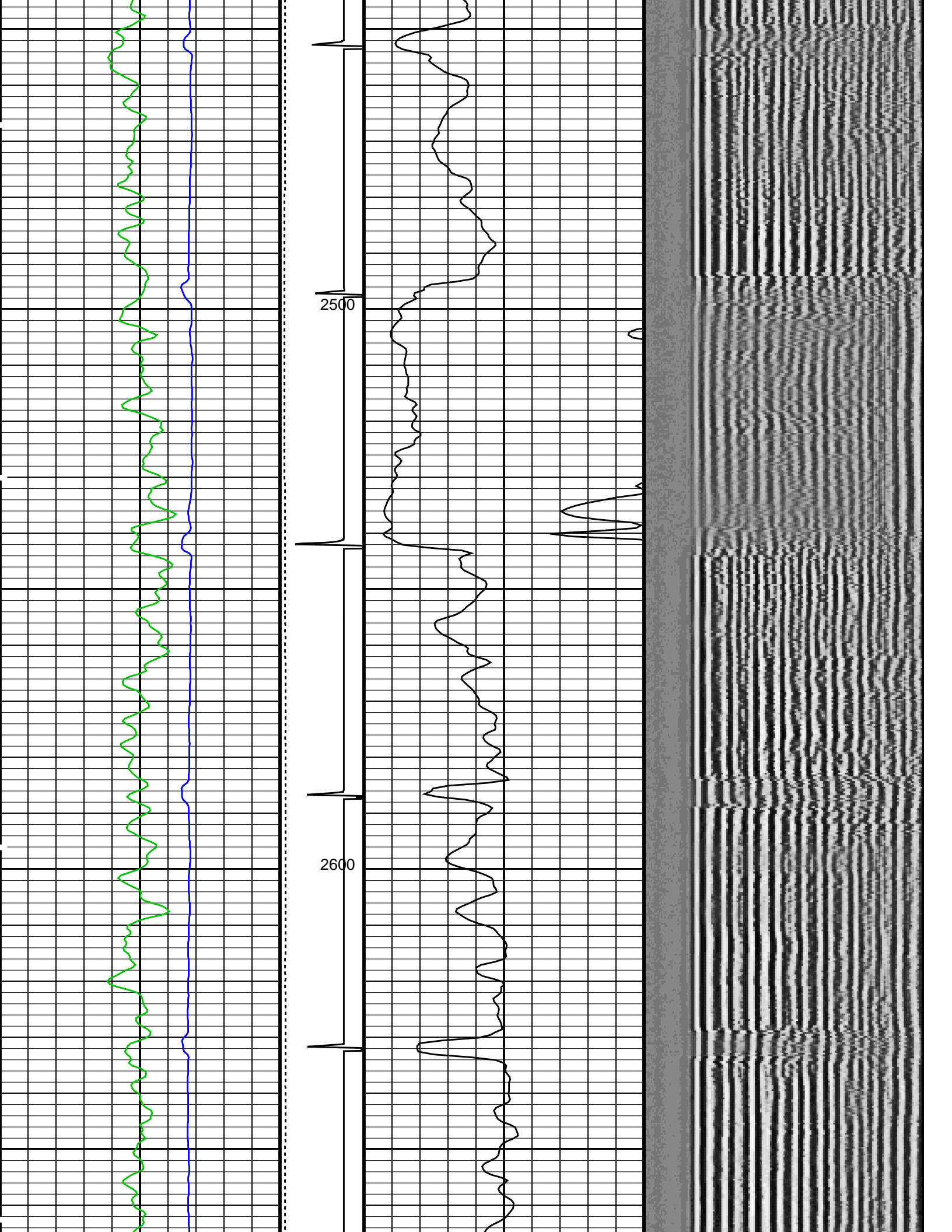


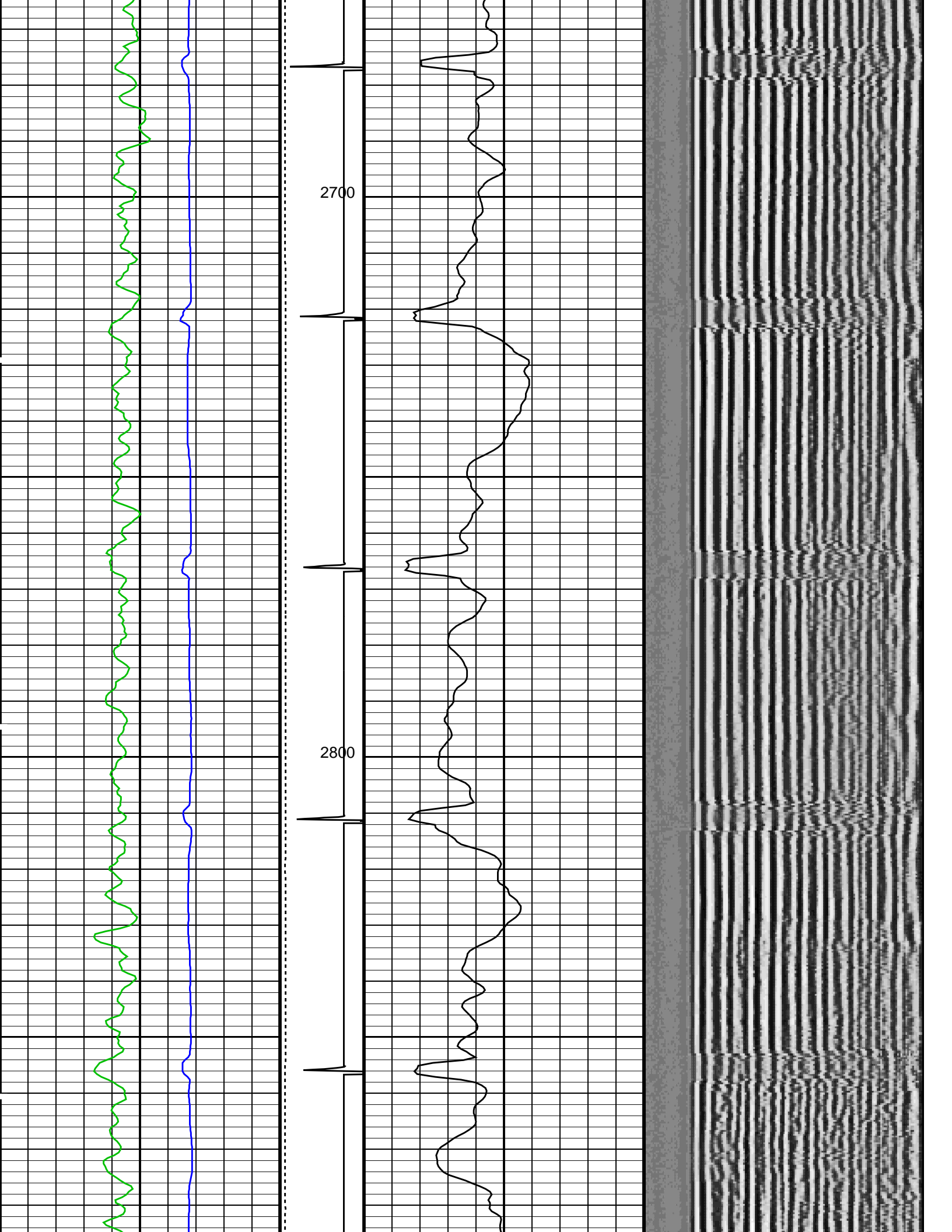


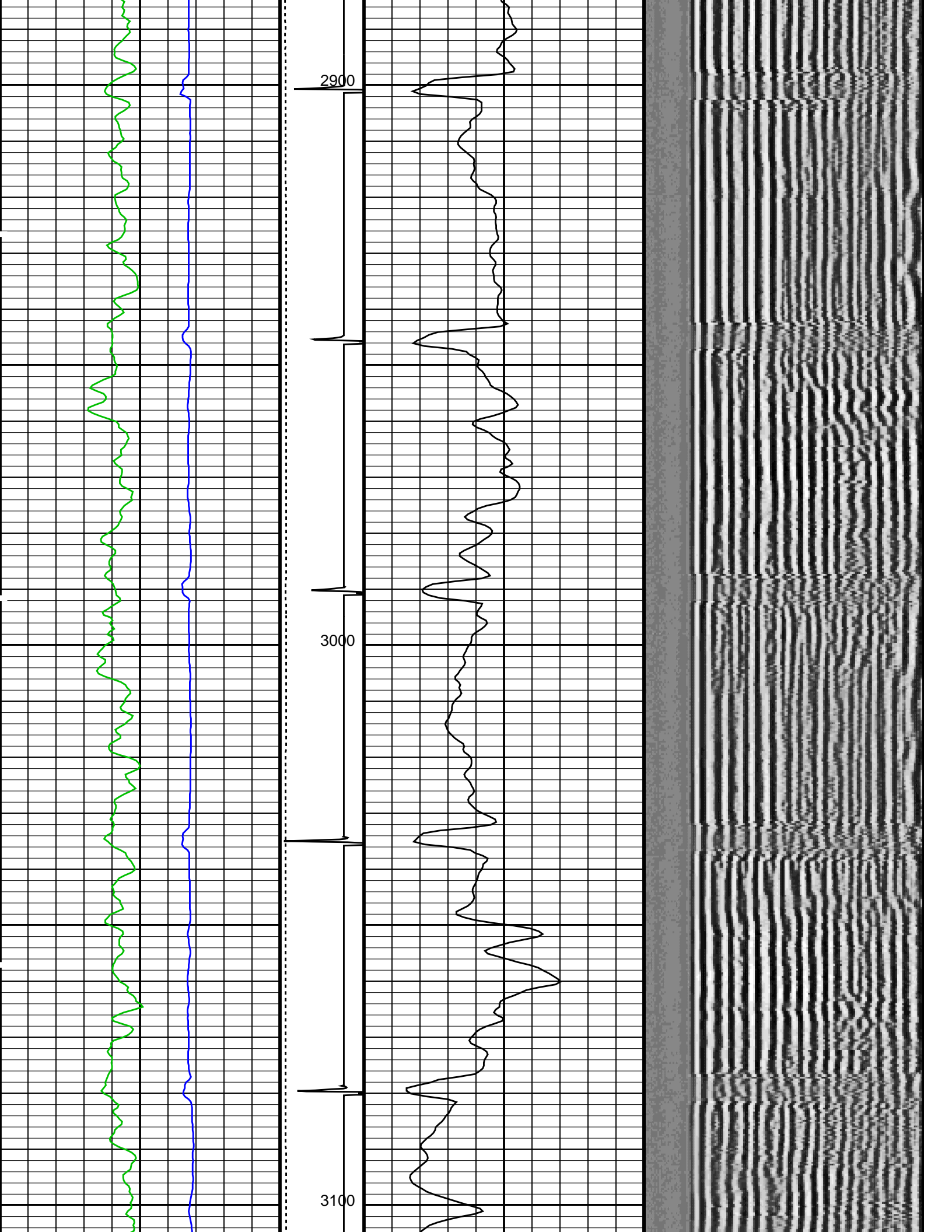


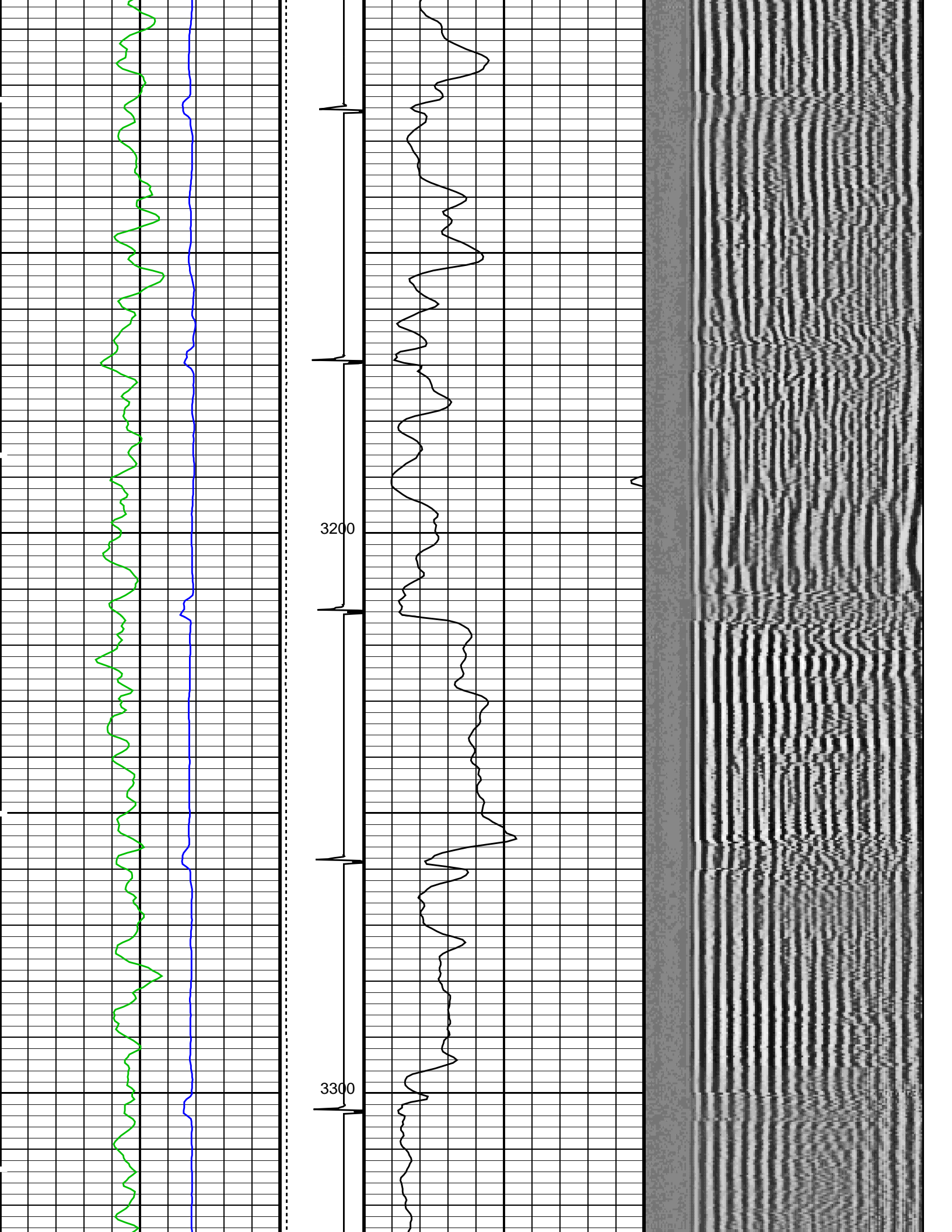


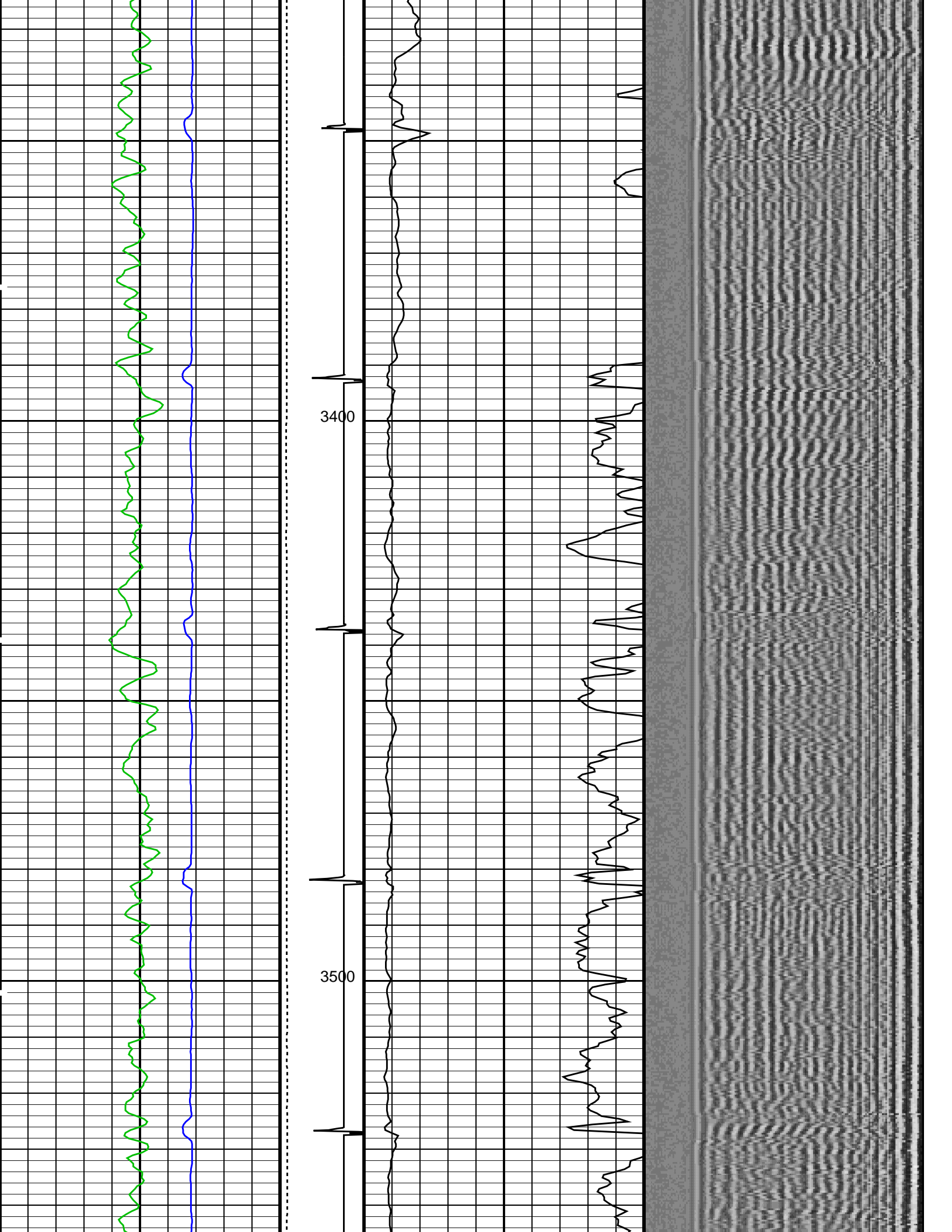


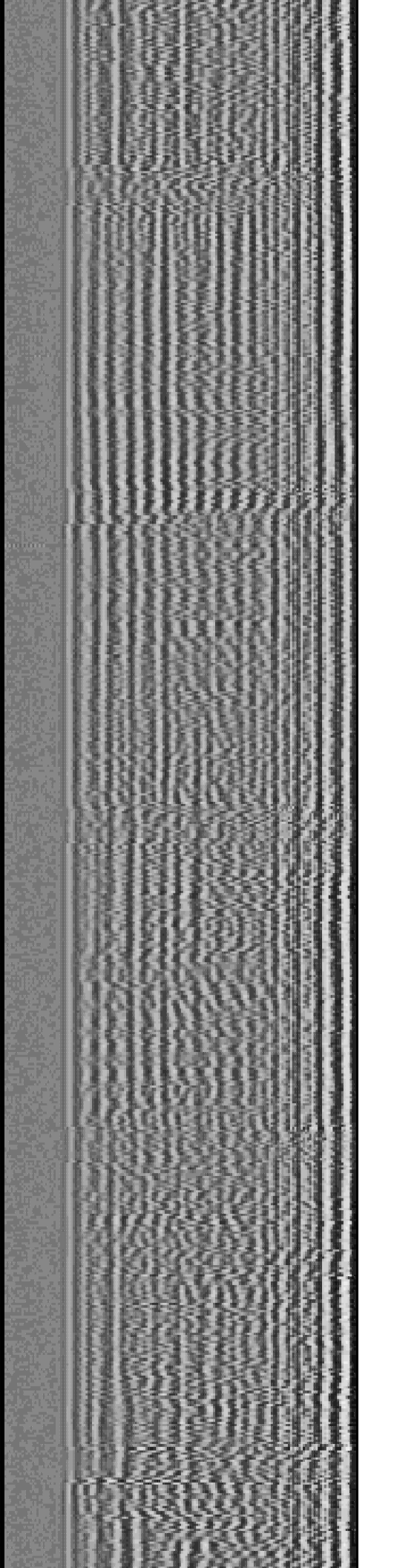
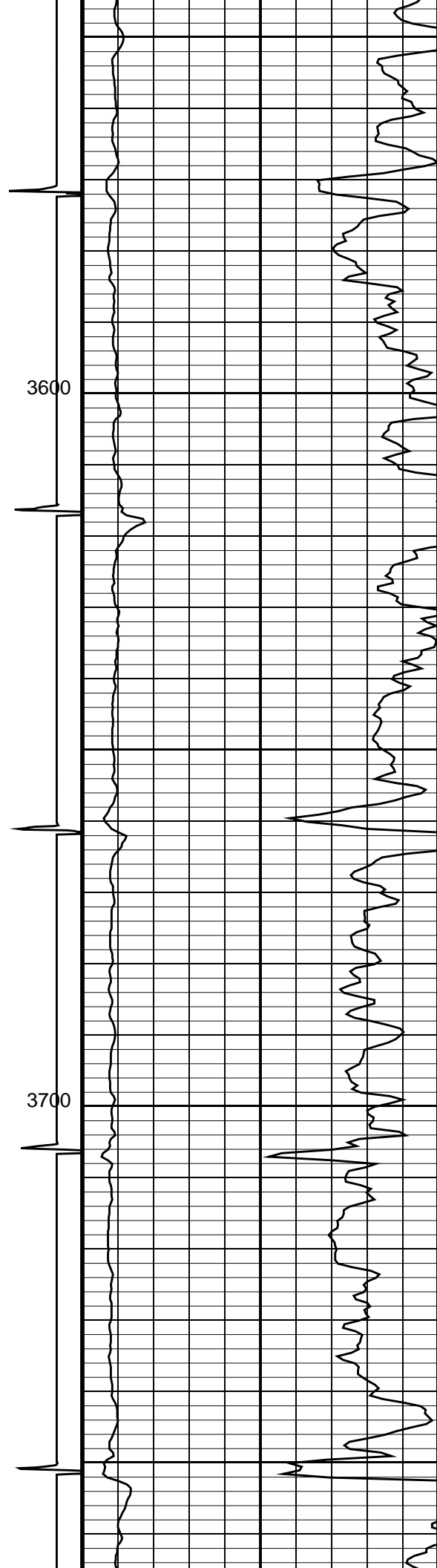
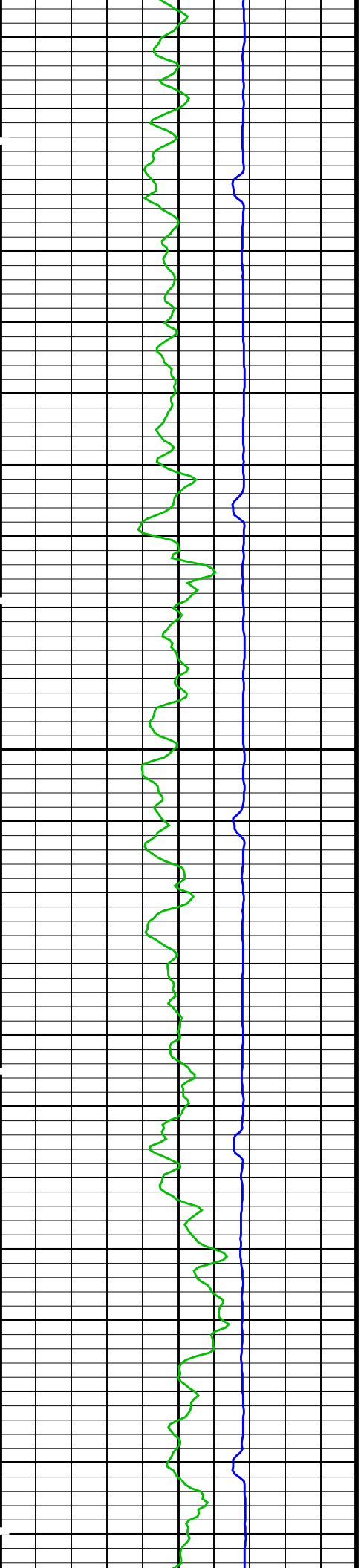


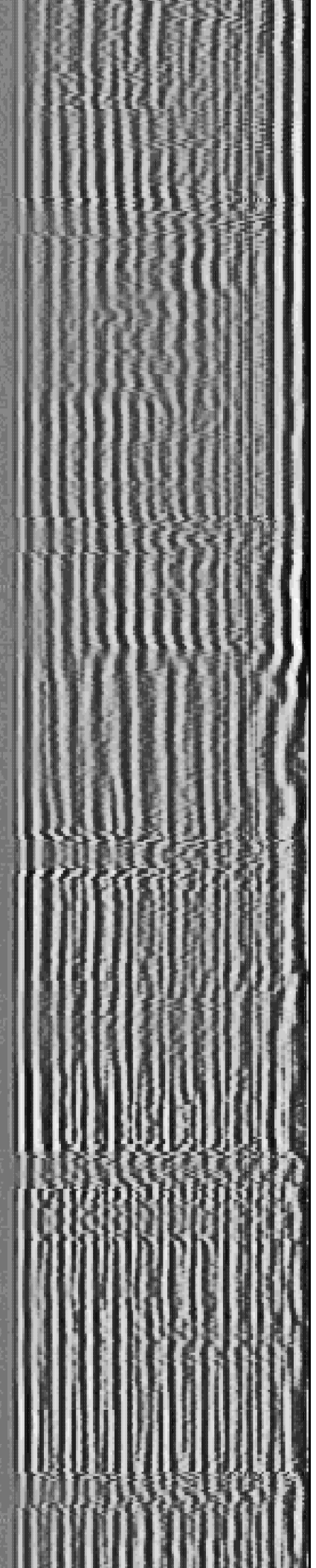
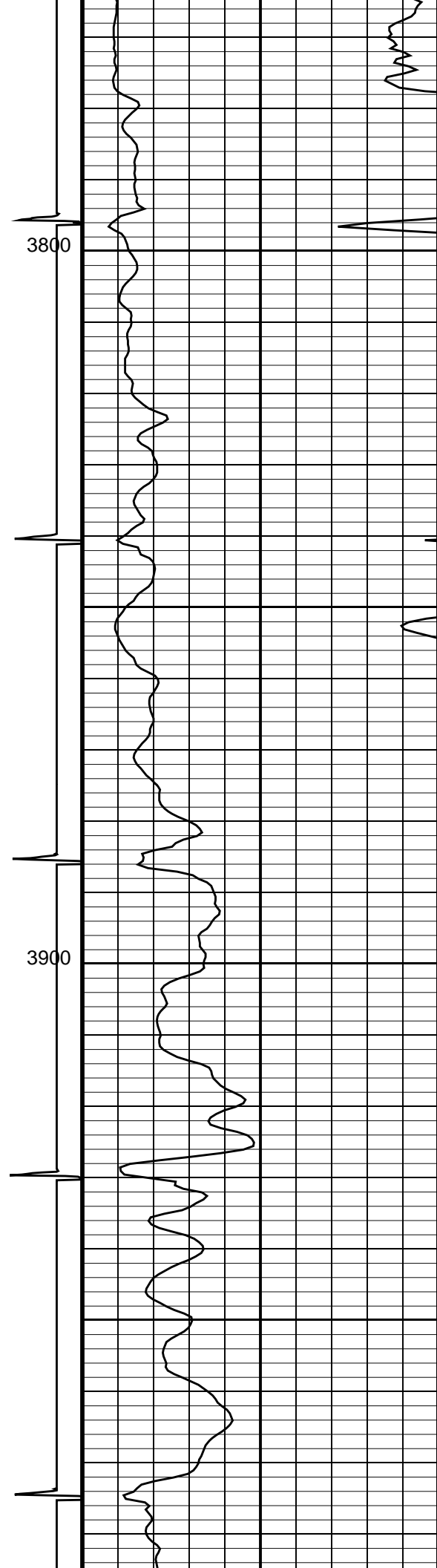
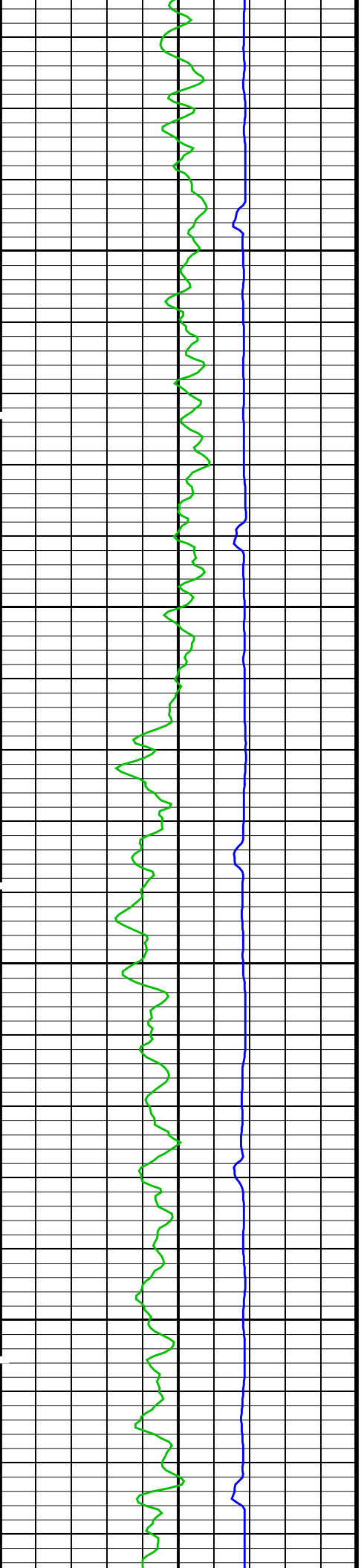


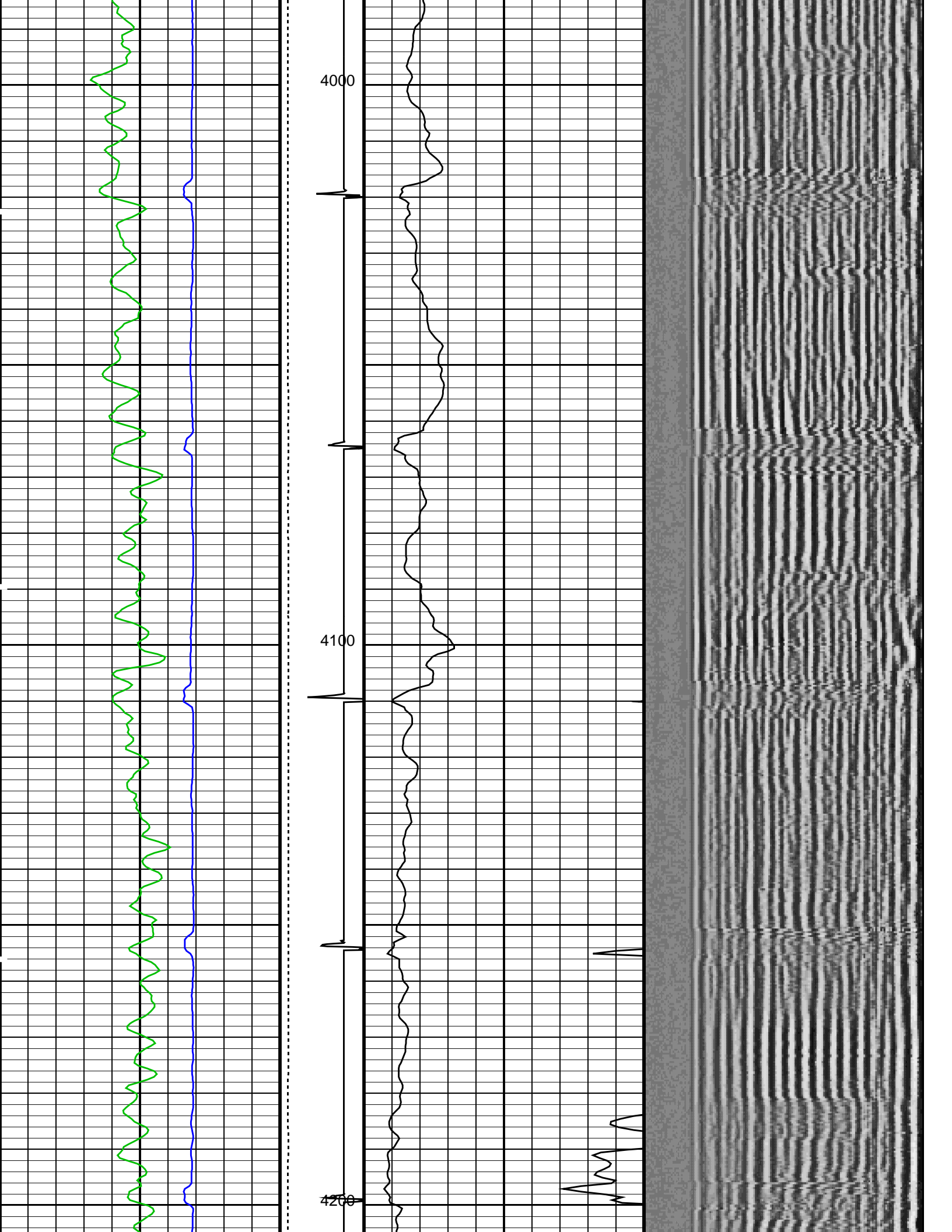


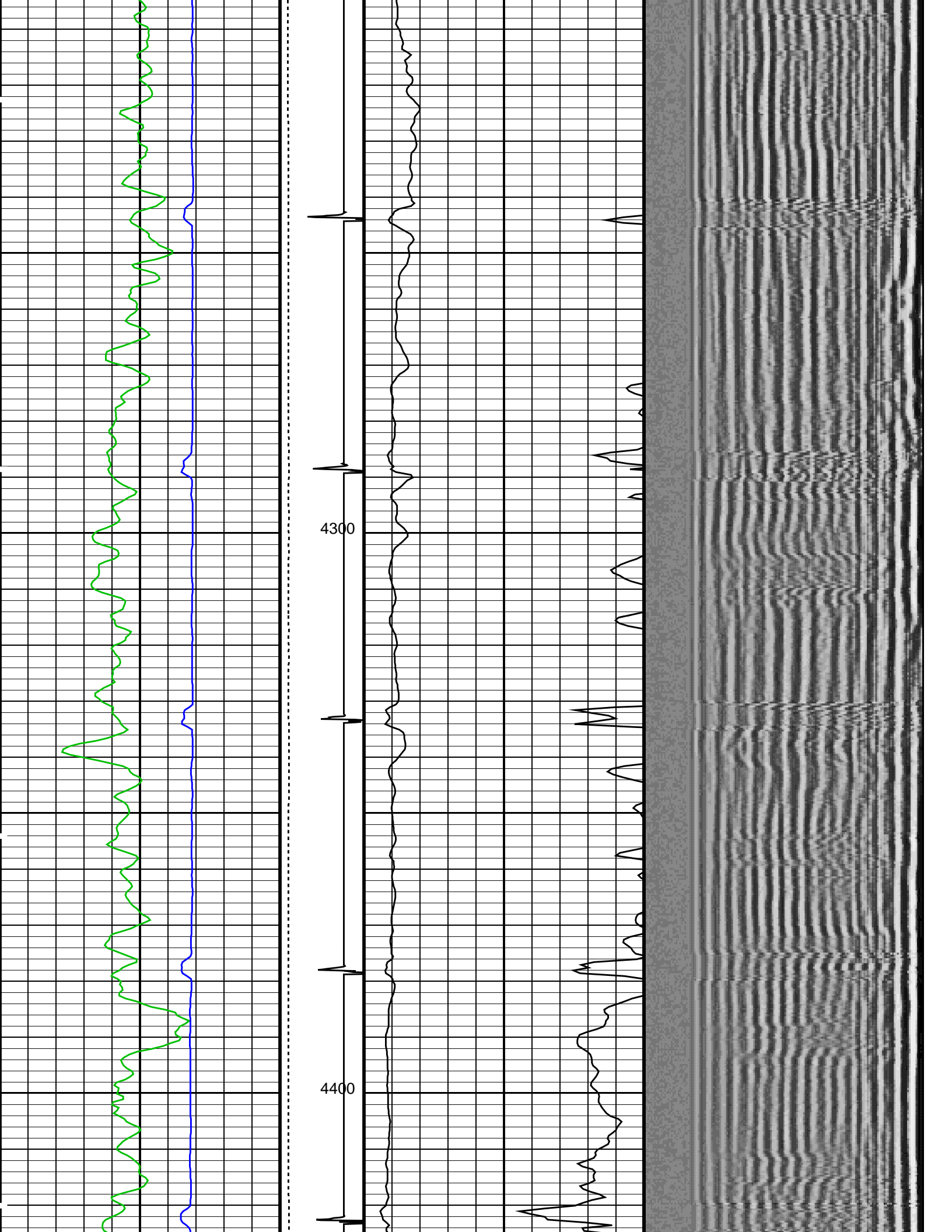


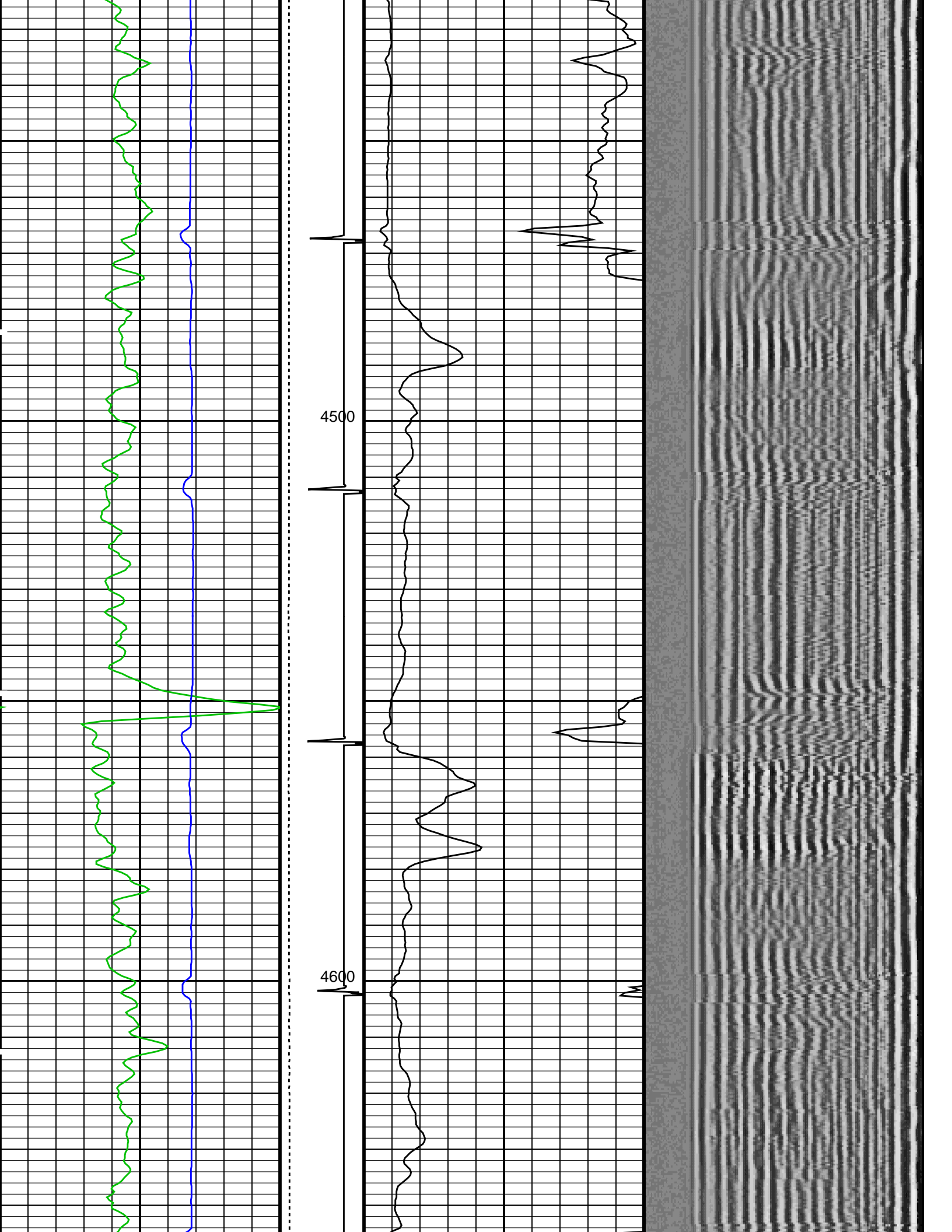


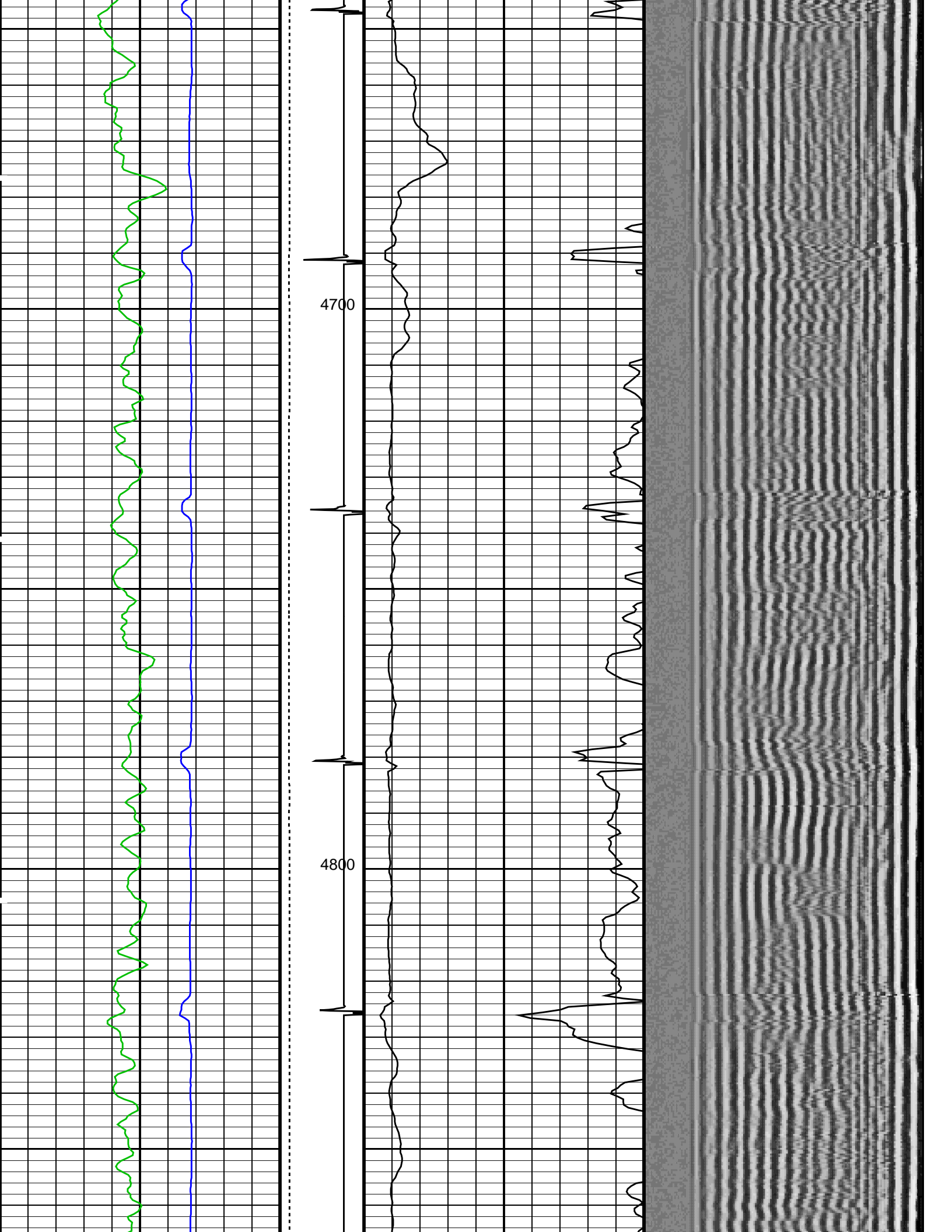


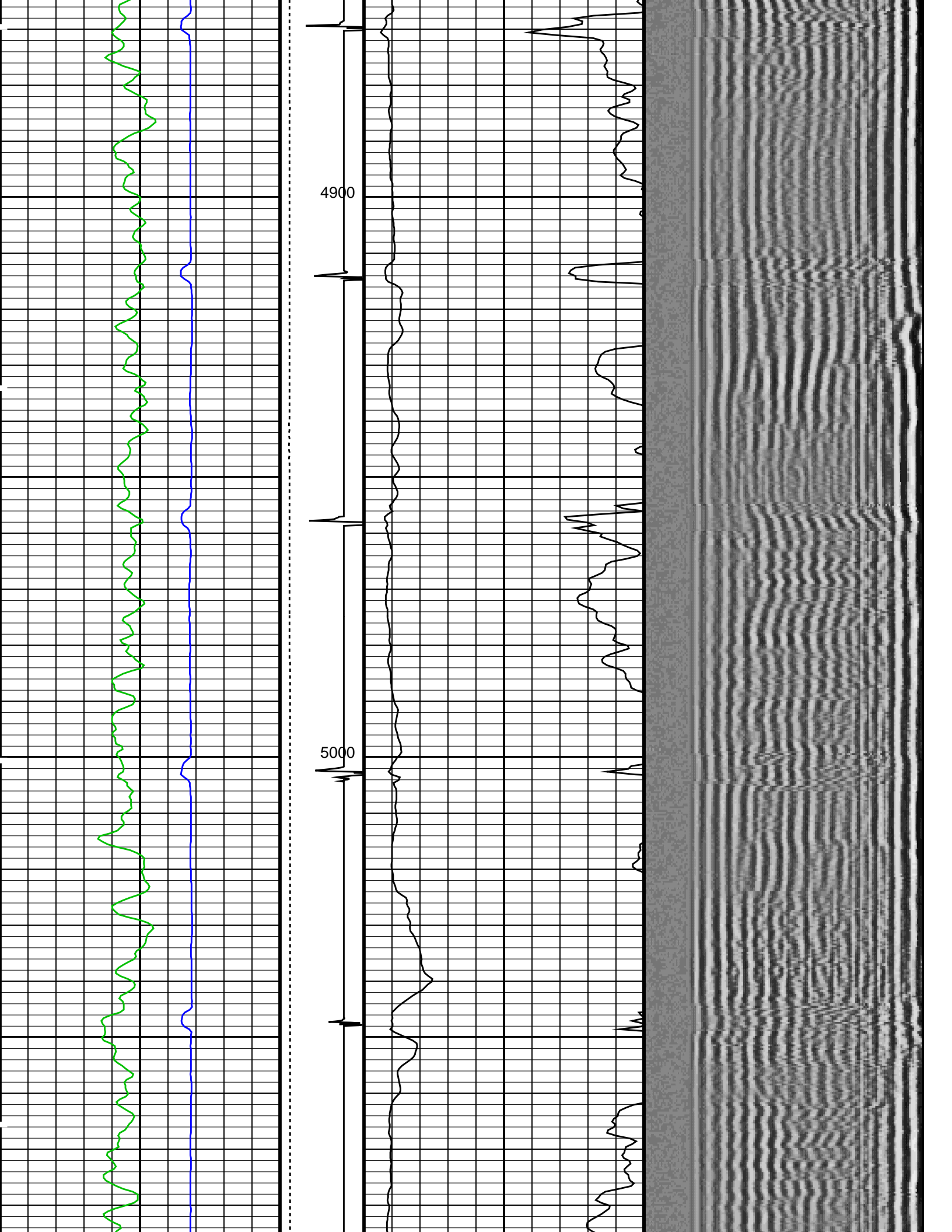


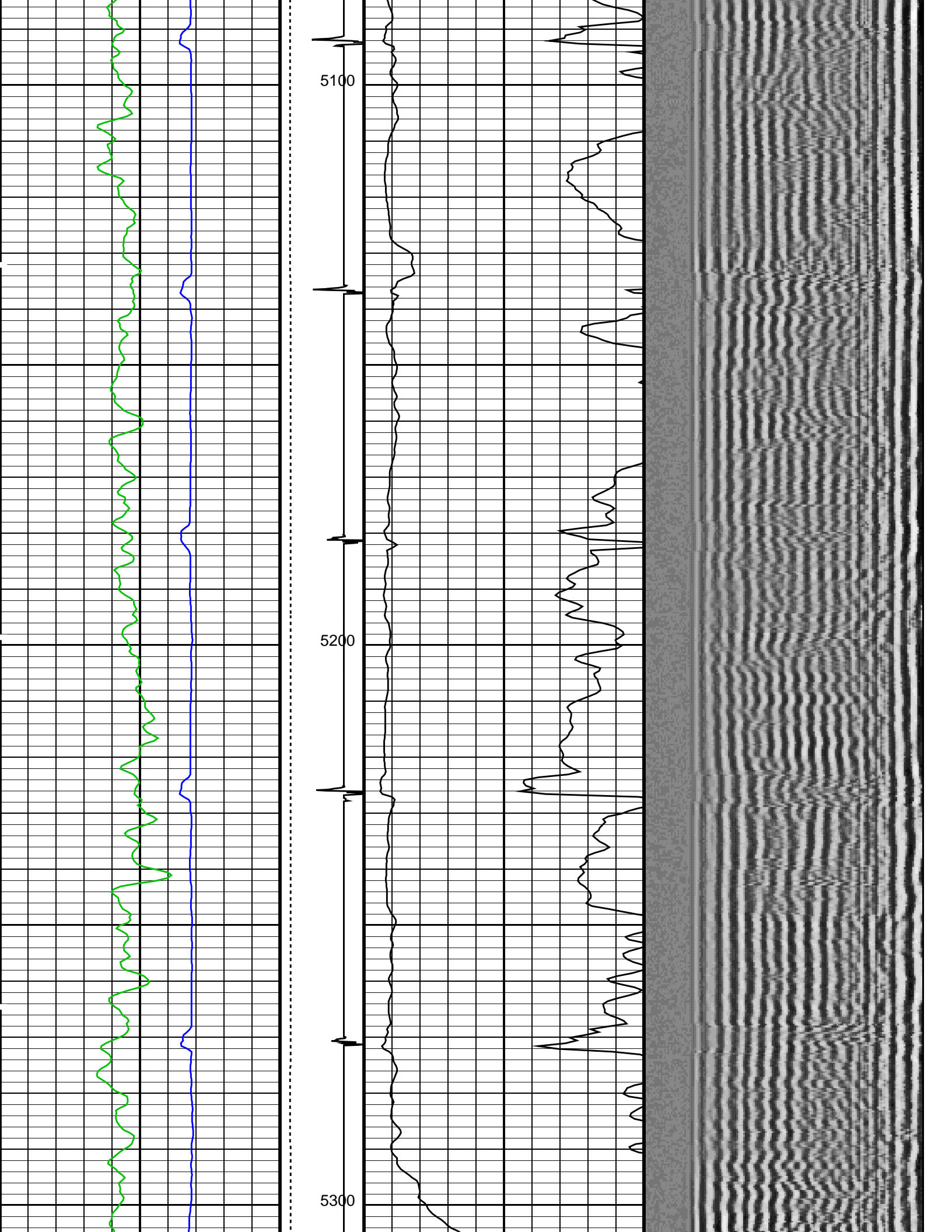


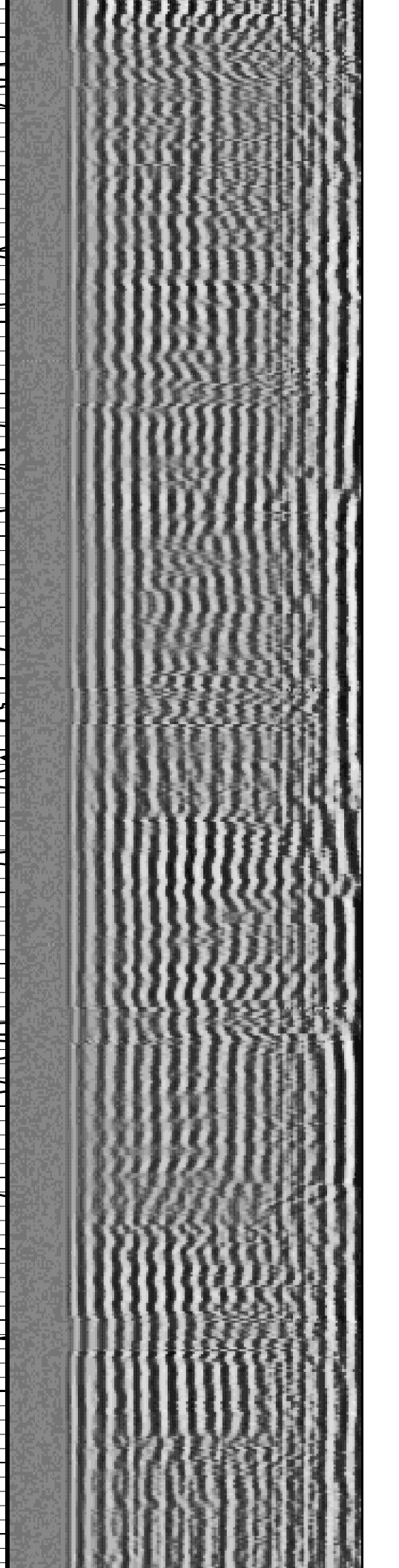
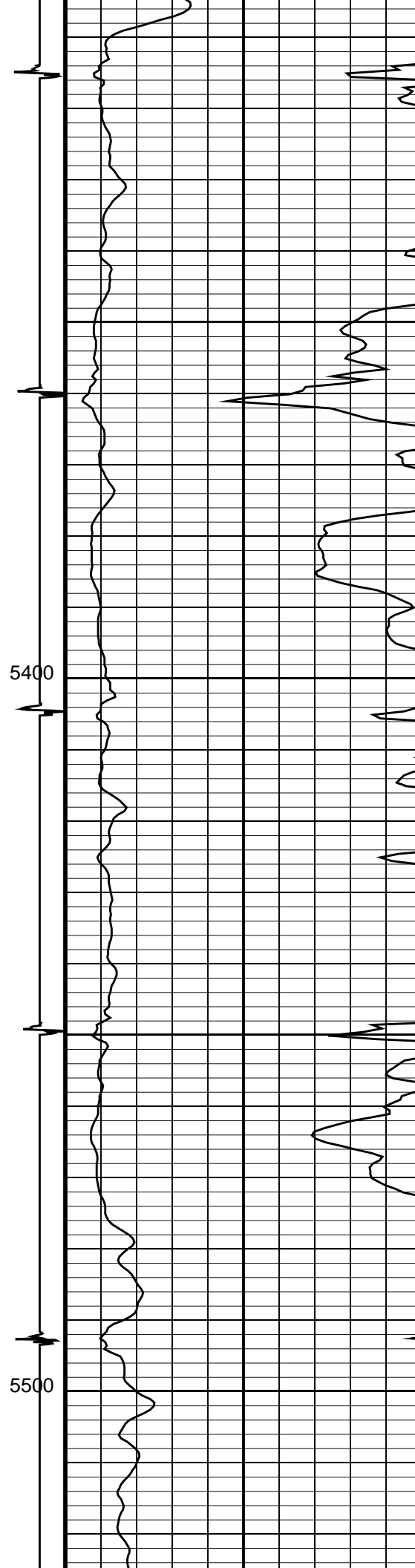
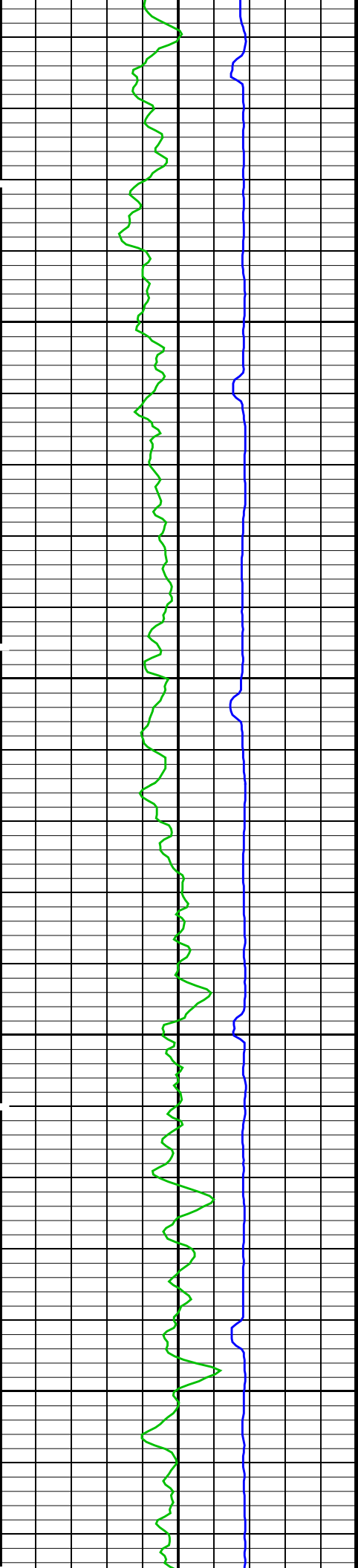


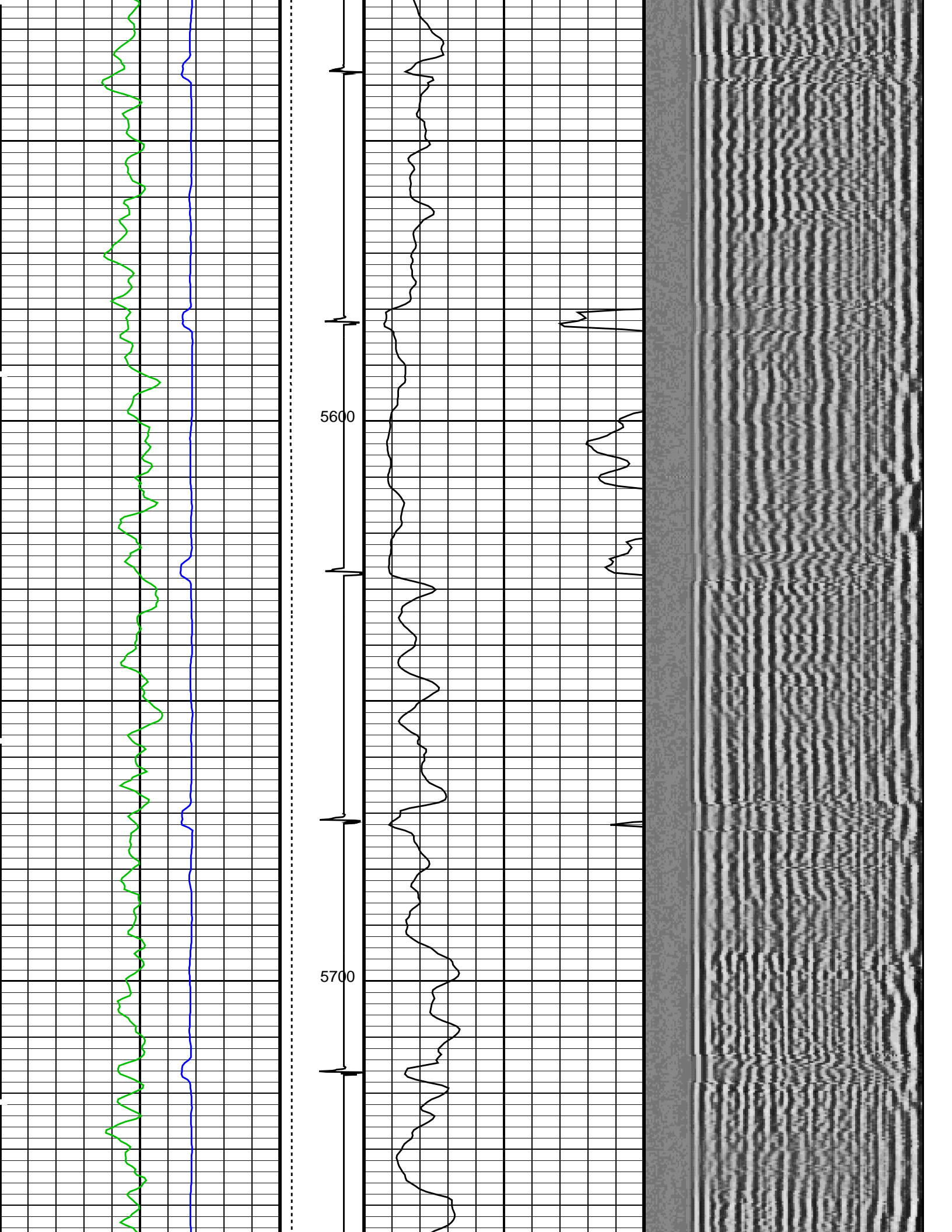


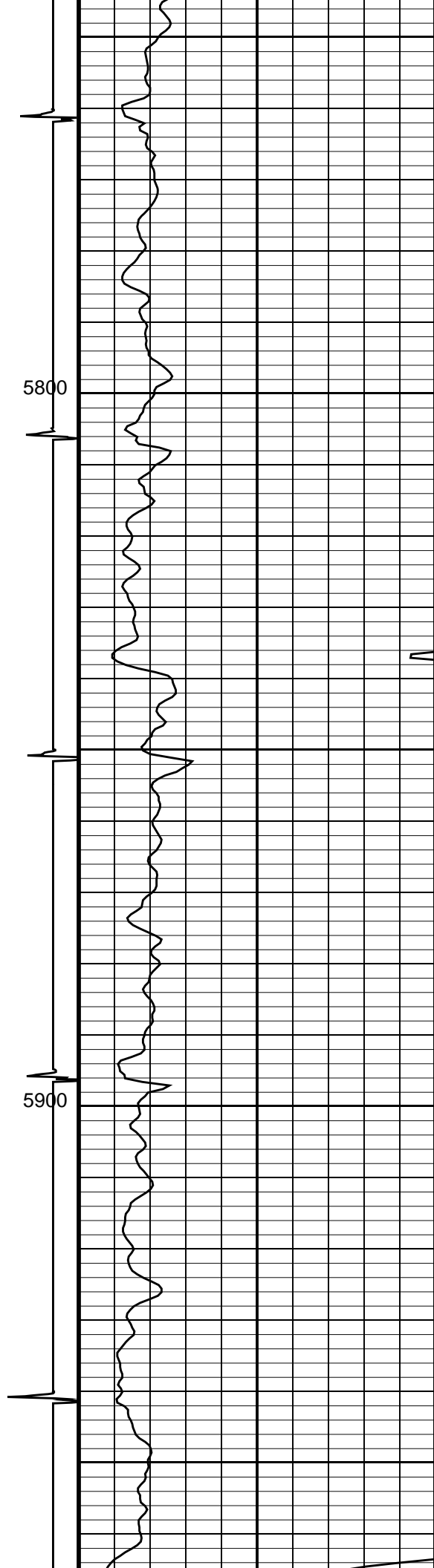
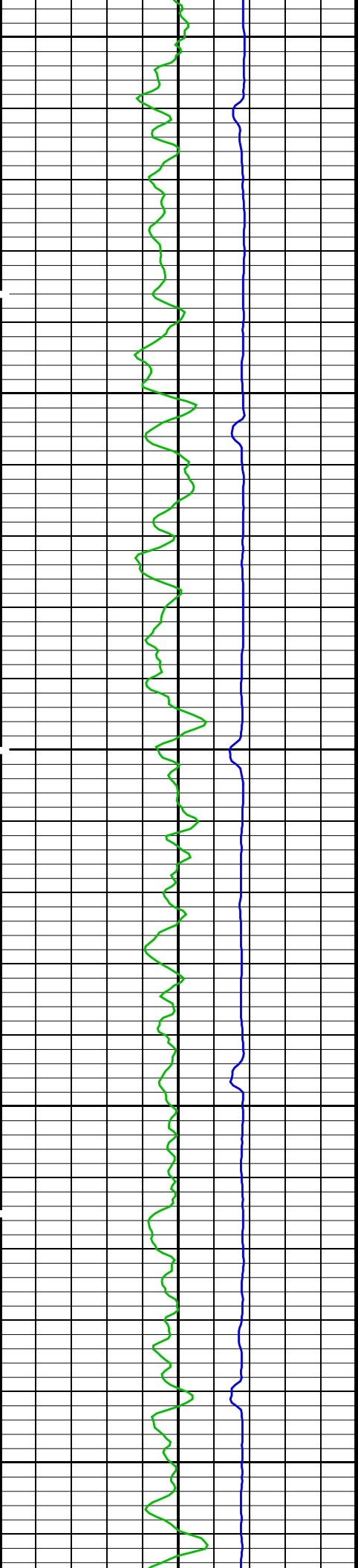


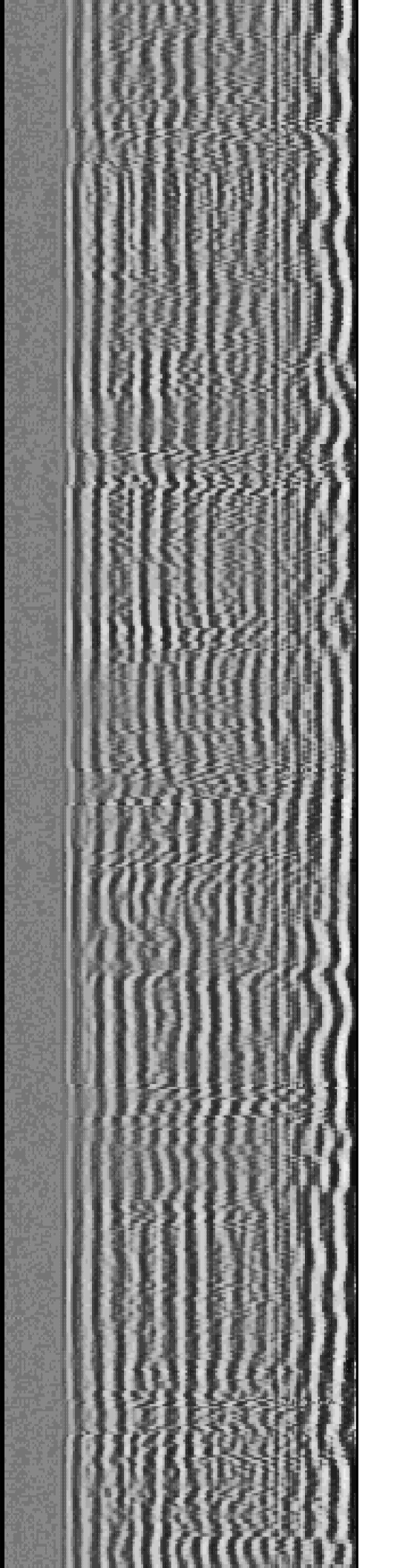
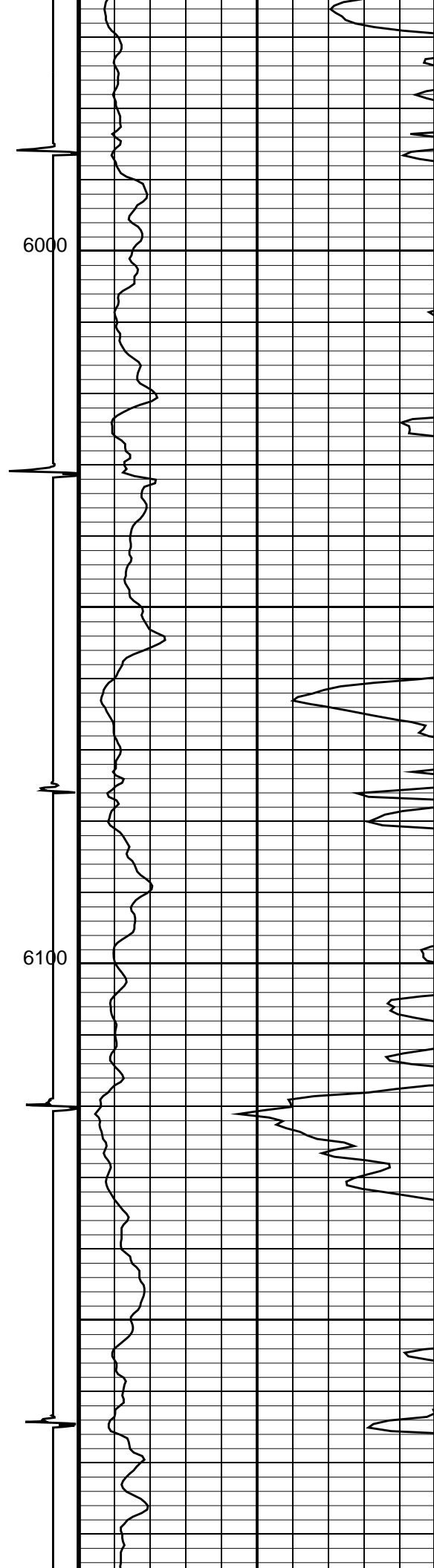
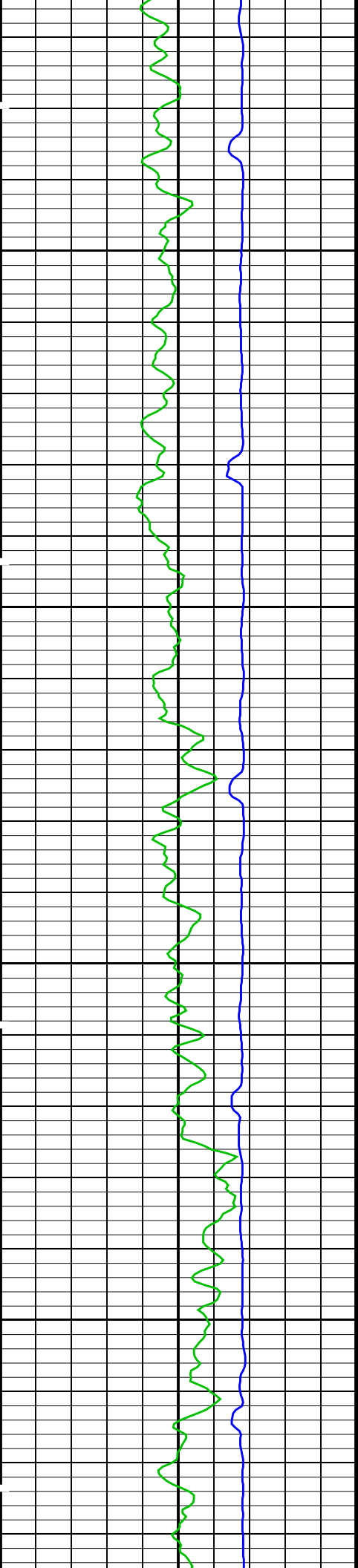


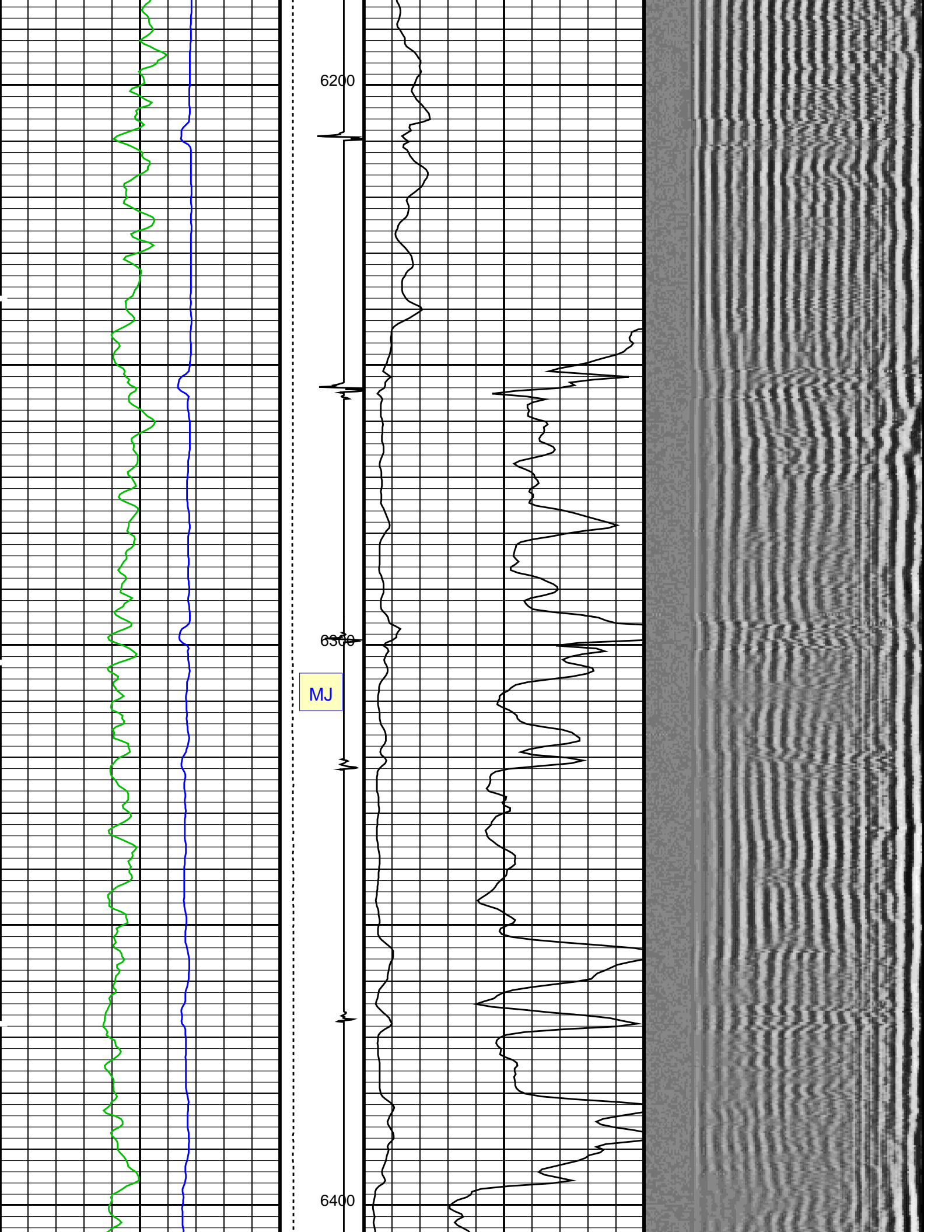


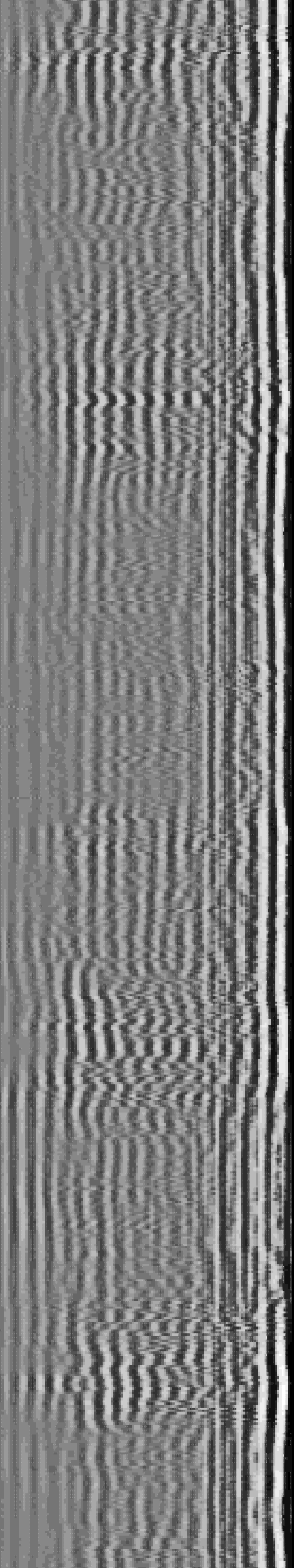
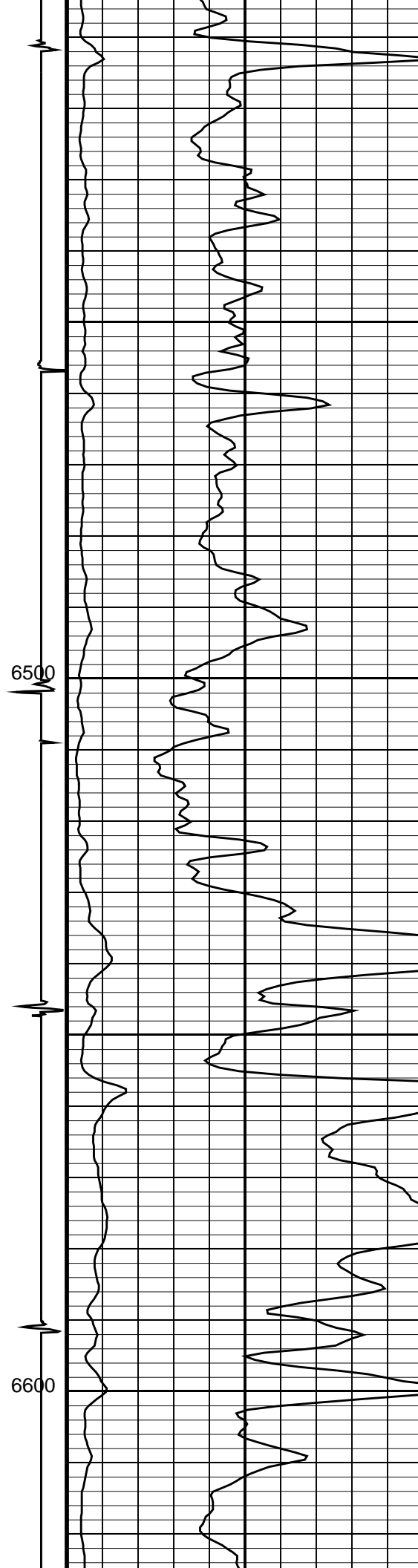
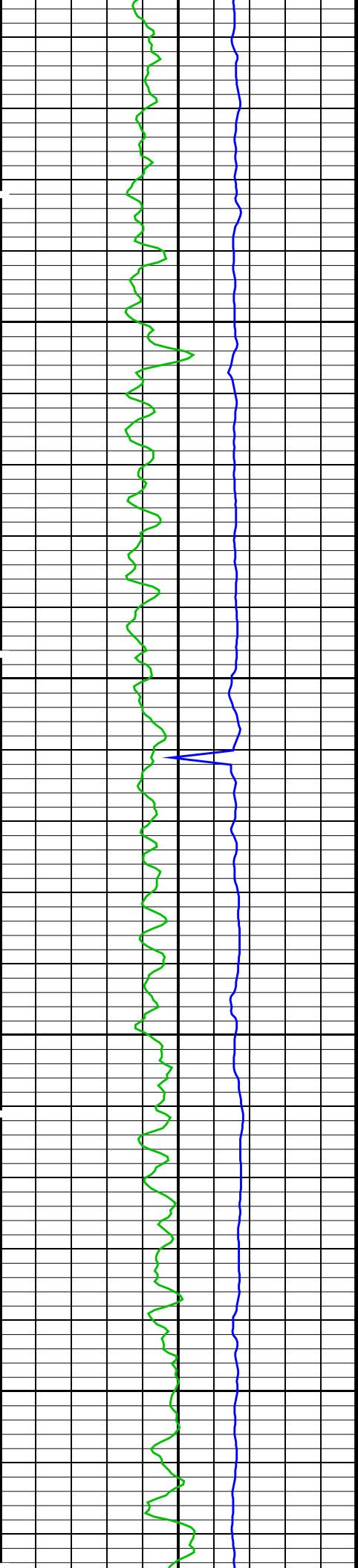


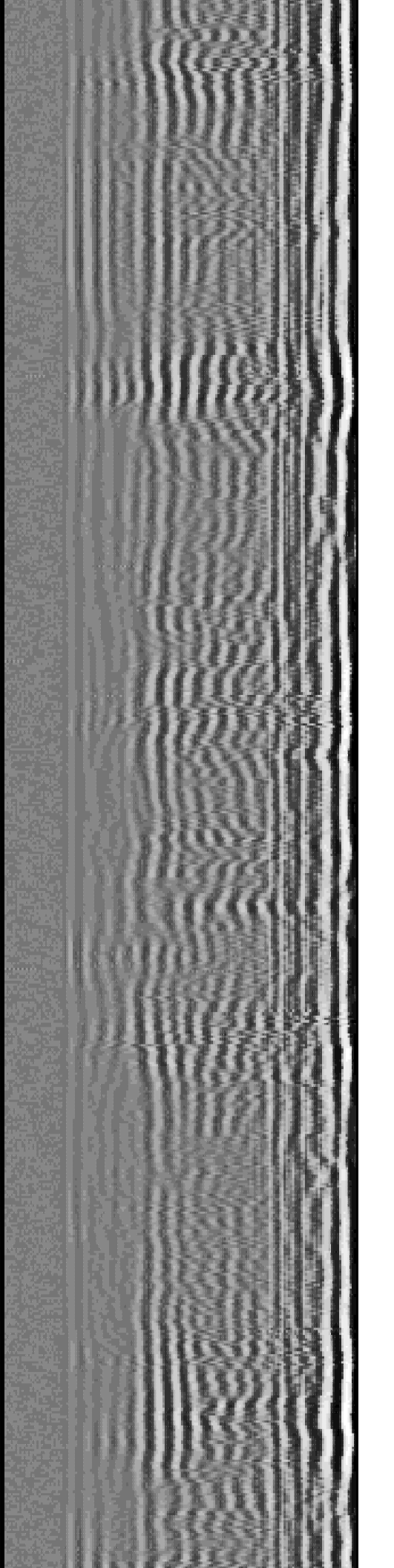
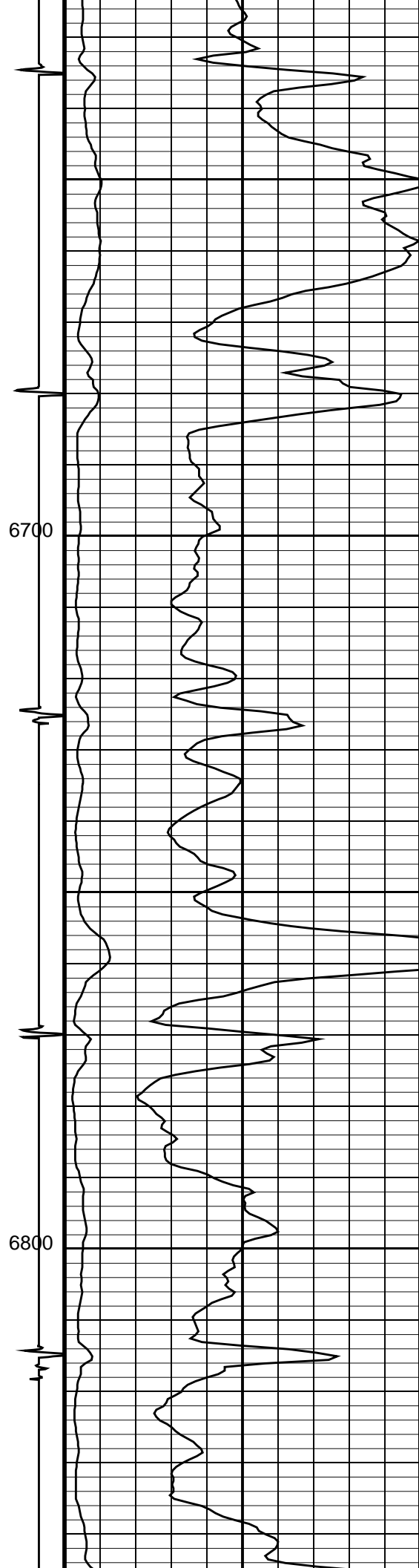
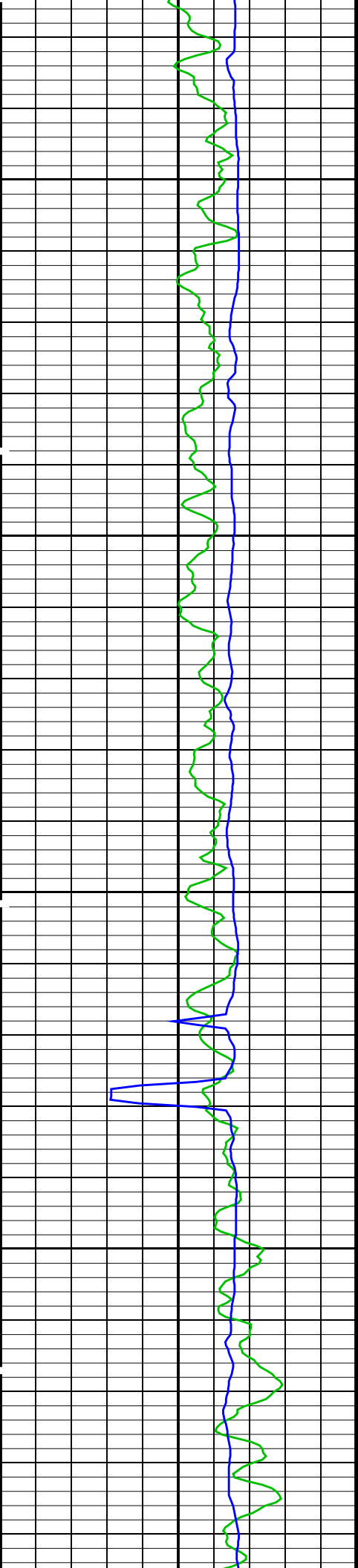


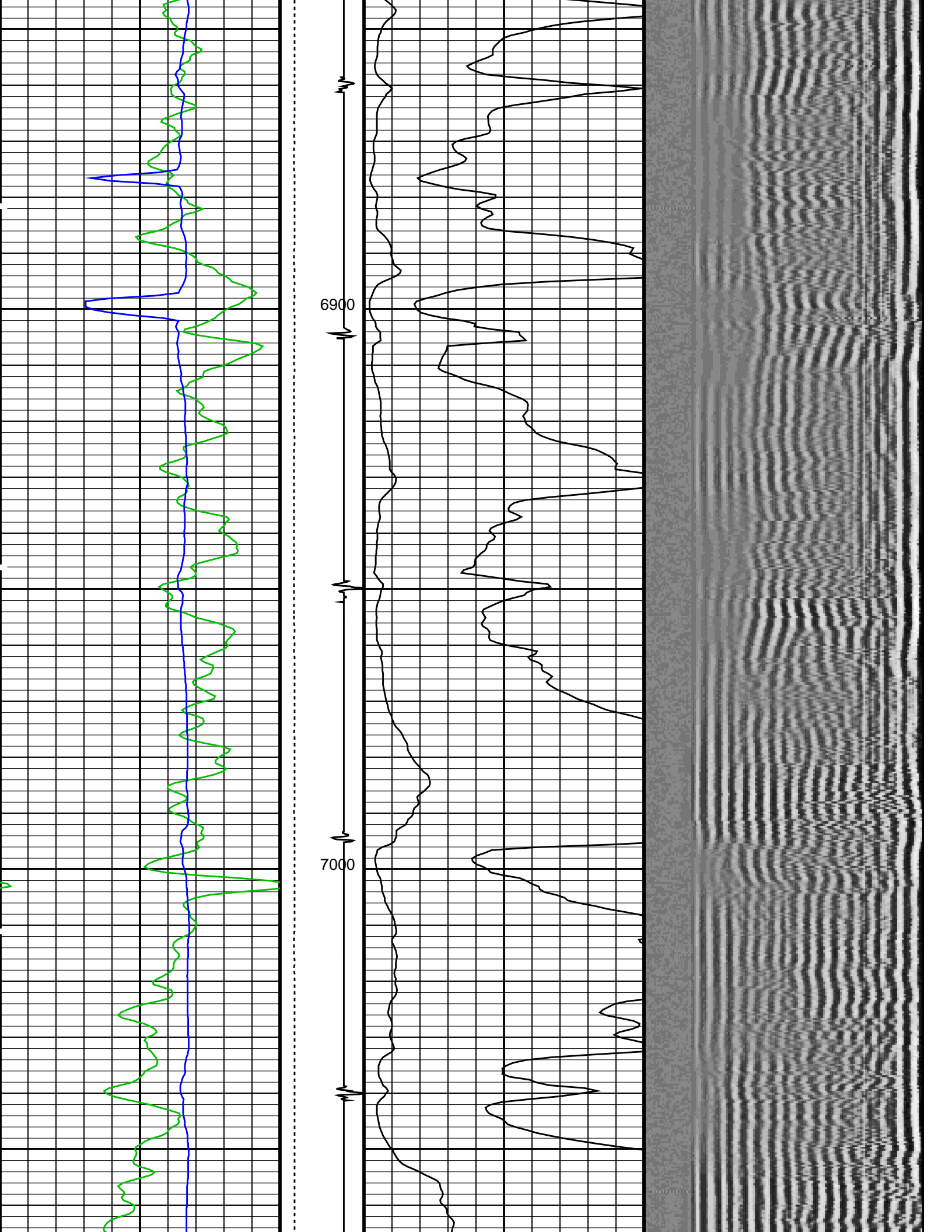


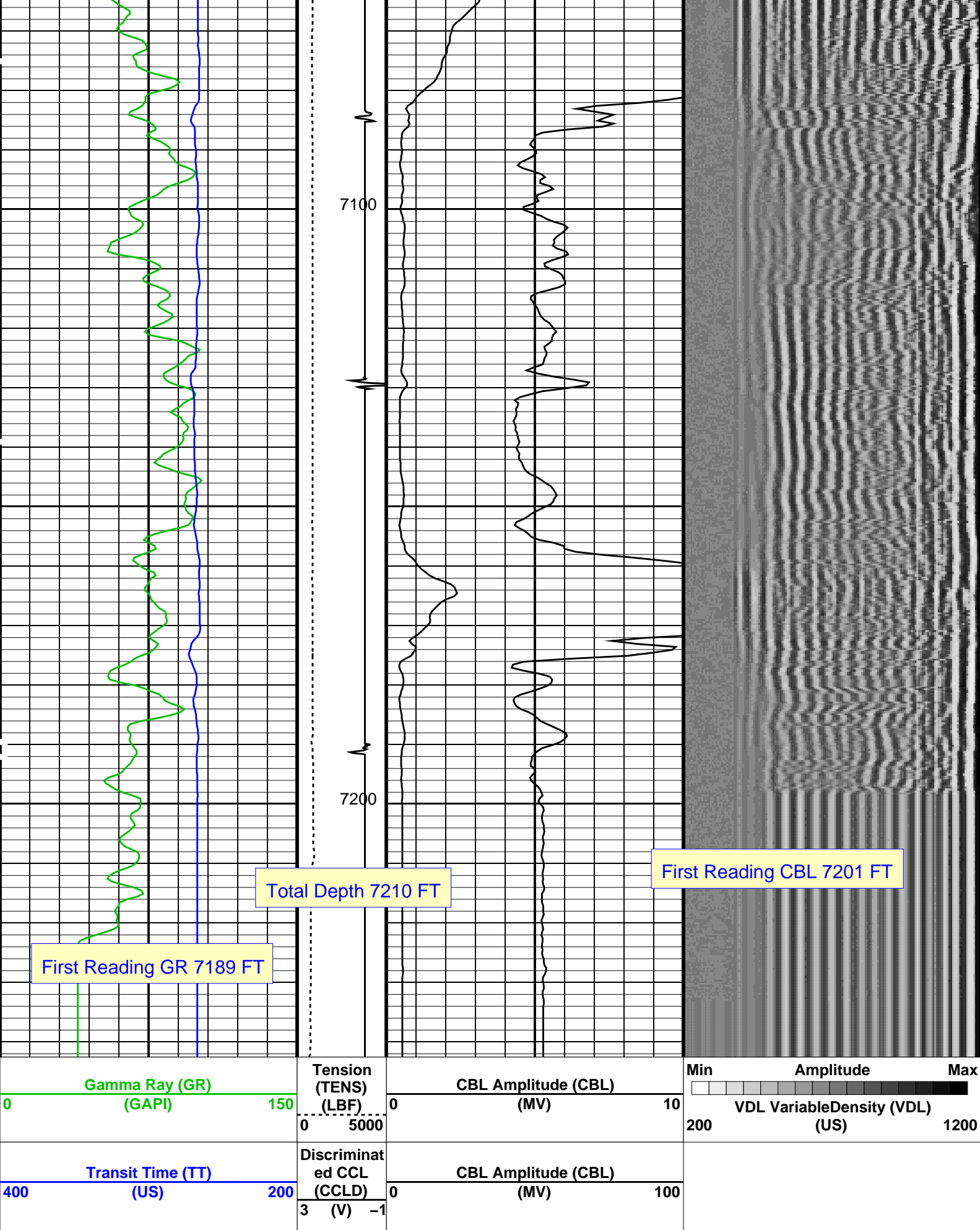












Input DLIS Files

DEFAULT SCMT_PSP_006PUP FN:5 PRODUCER 15-Jul-2015 19:43 7242.5 FT 22.5 FT

Output DLIS Files

DEFAULT SCMT_PSP_004PUP FN:3 PRODUCER 15-Jul-2015 21:33



REPEAT PASS CBL-VDL 0PSI

MAXIS Field Log

Company: ANADARKO Well: CHEESE STATE 27N-21HZ

Input DLIS Files

DEFAULT SCMT_PSP_007PUP FN:6 PRODUCER 15-Jul-2015 19:43 7348.0 FT 7102.0 FT

Output DLIS Files

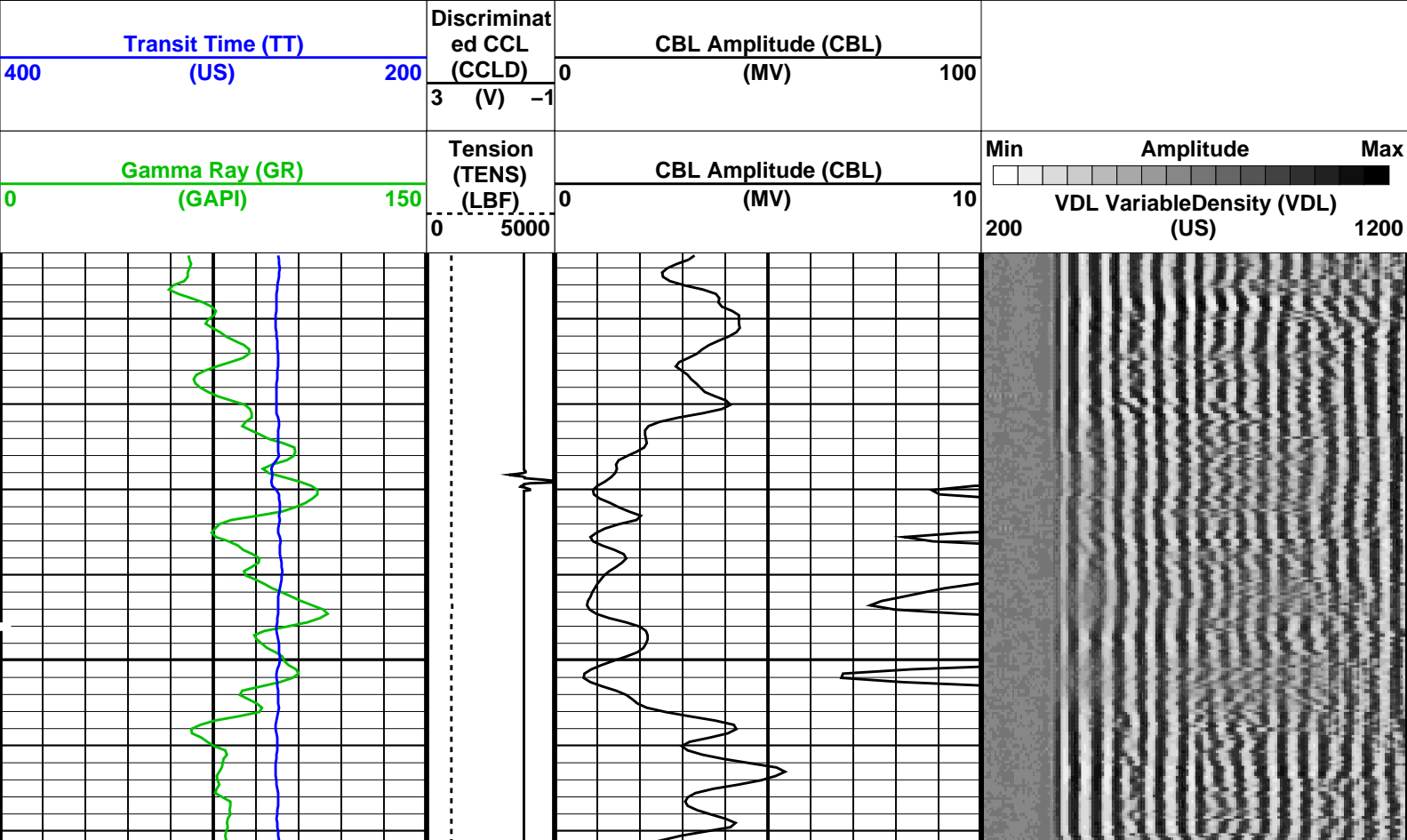
DEFAULT SCMT_PSP_005PUP FN:4 PRODUCER 15-Jul-2015 21:38 7348.0 FT 7102.0 FT

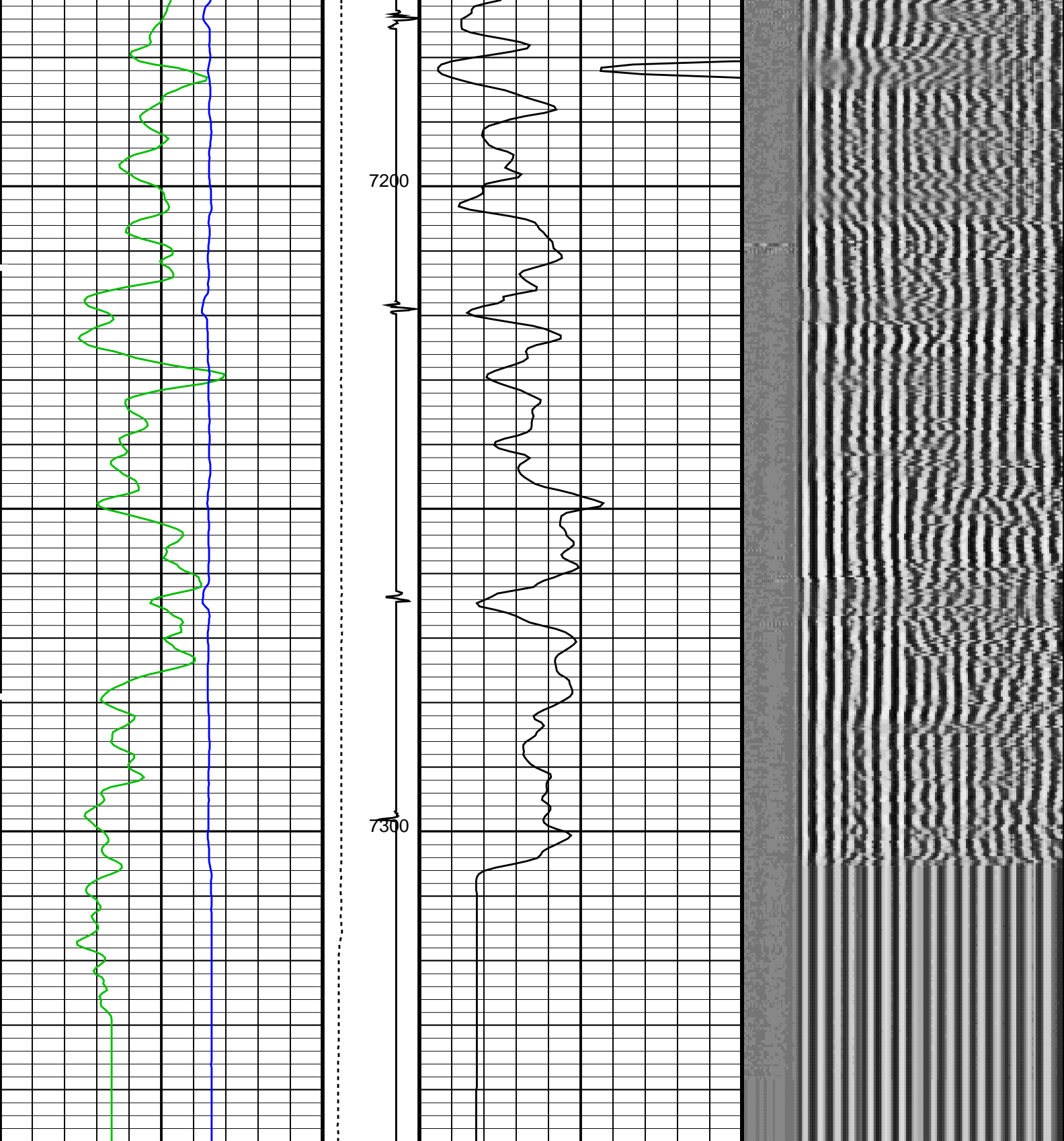
OP System Version: 19C0-187

SCMT-CB 19C0-187 PSPT 19C0-187

PIP SUMMARY

Time Mark Every 60 S





<p>Gamma Ray (GR) (GAPI)</p> <p>0 150</p>	<p>Tension (TENS) (LBF)</p> <p>0 5000</p>	<p>CBL Amplitude (CBL) (MV)</p> <p>0 10</p>	<p>Min Amplitude Max</p> <p>200 VDL VariableDensity (VDL) (US) 1200</p>
<p>Transit Time (TT) (US)</p> <p>400 200</p>	<p>Discriminat ed CCL (CCLD) (V)</p> <p>3 -1</p>	<p>CBL Amplitude (CBL) (MV)</p> <p>0 100</p>	

PIP SUMMARY

OP System Version: 19C0-187

SCMT-CB 19C0-187 PSPT 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CB 8284		
Current Casing Size	5.50000 IN		
Casing Weight	17.0 LB/F		
Expected CBL Amplitude in Free Pipe Section	71 MV	Minimum Sonic Amplitude	1.15842 MV (100% Cement)
			2.63842 MV (80% Cement)
		MAP Minimum Sonic Amplitude	7.35072 MV (100% Cement)
			12.3898 MV (80% Cement)
Master Calibration (Normalization)	Before Calibration (Adjustment)		
Date of Master Calibration	21-JUN-2013		
CBL Correction Factor	0.0743795	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.105721	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.132315		
MAP 3 Correction Factor	0.146735		
MAP 4 Correction Factor	0.109791		
MAP 5 Correction Factor	0.114089		
MAP 6 Correction Factor	0.110732		
MAP 7 Correction Factor	0.116601		
MAP 8 Correction Factor	0.0804110		

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	238.059	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	352.059	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	50	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	71	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.306128	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	2.63842	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	181.059	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	13.848	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	4.75	FT
MMSA	MAP Minimum Sonic Amplitude	7.35072	MV
MSA	Minimum Sonic Amplitude	1.15842	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	17.00	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	7210	FT

Input DLIS Files

Output DLIS Files



PBMS COEFFICIENTS

MAXIS Field Log

Client:ANADARKOField:WATTENBERGWell:CHEESE STATE 27N-21HZRun date:15-Jul-2015

Tool:PSPSub Type:PBMSSensor:Clock Model

PBMS Digitalization Clock

Sonde Serial NB

Sensor Serial NB1863

Calib Date ddmmyy261007

Matrix Size16

Coeff CRC3AB0

Clock Coeff

	Temp**0	Temp**1	Temp**2
Temp**0	-.151788334201E+03	-.102873785445E+01	-.167225792957E+00
	Temp**3	Temp**4	Temp**5
Temp**0	+.136689035753E-02	+.538068013029E-06	0.0

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

1863

261007

66

F756

Pres Coeff

	Tt**0	Tt**1	Tt**2
Tp**0	-.359590231743E+05	+.299188234803E+05	-.107446687531E+05
Tp**1	+.237648969480E+05	-.186021128720E+05	+.671109848596E+04
Tp**2	-.149422117989E+03	+.596502883584E+02	-.652553761493E+01
Tp**3	+.143644323931E+01	-.305754161348E+00	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

	Tt**3	Tt**4	Tt**5
Tp**0	+.180759727775E+04	-.117082497700E+03	0.0
Tp**1	-.113521285304E+04	+.740106734909E+02	0.0
Tp**2	0.0	0.0	0.0
Tp**3	0.0	0.0	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

:

1863

261007

66

89EB

Temp Coeff

	Tp**0	Tp**1	Tp**2
Tt**0	+.196657284828E+04	+.100051500932E+02	-.971524337955E+01
Tt**1	-.124071500899E+04	-.116824853877E+00	+.270298401768E+01
Tt**2	+.276001008305E+03	-.113239508435E+01	-.340525434373E-01
Tt**3	-.216436996942E+02	+.118632399044E+00	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

	Tp**3	Tp**4	Tp**5
Tt**0	+.25573222557326E+04	-.2504272222246E+02	0.0
Tt**1	-.25573222557326E+04	+.2504272222246E+02	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

Tt**0	+.255739855736E+01	-.250107203346E+00	0.0
Tt**1	-.674177192949E+00	+.655237399131E-01	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

Client:	ANADARKO	Tool:	PSP
Field:	WATTENBERG	Sub Type:	PBMS
Well:	CHEESE STATE 27N-21HZ	Sensor:	GR
Run date:	15-Jul-2015		

PBMS Gamma Ray

Sonde Serial NB	RESISTORS FOR GR SENSOR N.33499,TOOL PBMS-AA1863. SENSOR S/N:
Sensor Serial NB	33499
Calib Date ddmmyy	100402
Matrix Size	12
Coeff CRC	DFA9

GR HV Rt		
	Rt**0	Rt**1
Rt**0	+.150000000000e+04	+.241000000000e+04

Client:	ANADARKO	Tool:	PSP
Field:	WATTENBERG	Sub Type:	PBMS
Well:	CHEESE STATE 27N-21HZ	Sensor:	WellTemp RTD
Run date:	15-Jul-2015		

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR RTD THERMOMETER PBMS-A.1863 S/N:
1863
261007
16
3DE3

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	−.445369658202E+03	+.231013910229E+03	−.562860354452E+02
	Tt**3	Tt**4	Tt**5
Tt**0	+.107489365785E+02	−.720697242025E+00	0.0

Company:

ANADARKO

Schlumberger

Well:

CHEESE STATE 27N–21HZ

Field:

WATTENBERG

County:

WELD

State:

COLORADO

SLIM CEMENT MAPPING LOG

CBL–VDL

GR–CCL