

Company: ANADARKO

Well: TROUDT 14C-33HZ

Field: WATTENBERG

County: WELD

State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL

County: WELD
Field: WATTENBERG
Location: 304/FSL, 1650/FWL
Well: TROUDT 14C-33HZ
Company: ANADARKO

LOCATION

304/FSL, 1650/FWL
SESW SEC 33 T2N R67W
Elev.: K.B. 5062.00 ft
G.L. 5037.00 ft
D.F. 5061.00 ft
Permanent Datum: GROUND LEVEL
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING
Elev.: 25.00 ft above Perm. Datum

API Serial No. 0512339282
Section 33
Township 2N
Range 67W

Logging Date 10-Jul-2015

Run Number 1

Depth Driller 12749 ft

Schlumberger Depth 7969 ft

Bottom Log Interval 7960 ft

Top Log Interval 25 ft

Casing Fluid Type BIOCID TREATED WATER

Salinity

Density 8.4 lbm/gal

Fluid Level 25 ft

BIT/CASING/TUBING STRING

Bit Size 9.750 in

From 25 ft

To 12749 ft

Casing/Tubing Size 5.500 in

Weight 17 lbm/ft

Grade HCP-110

From 25 ft

To 12749 ft

Maximum Recorded Temperatures 53.8 degF

Logger On Bottom 10-Jul-2015 8:15

Unit Number 354 PLATTEVILLE

Recorded By KIRSTIE BUNTING

Witnessed By DARREL BOTHWELL

Run 1

Run 2

Run

Oil Density
Water Salinity
Gas Gravity
Bo

Bw

1/Bq

Bubble Point Pressure

Bubble Point Temperature

Solution GOR

Maximum Deviation

CEMENTING DATA

Primary/Squeeze

Casing String No

Lead Cement Type

Volume

Density

Water Loss

Additives

Tail Cement Type

Volume

Density

Water Loss

Additives

Expected Cement Top

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

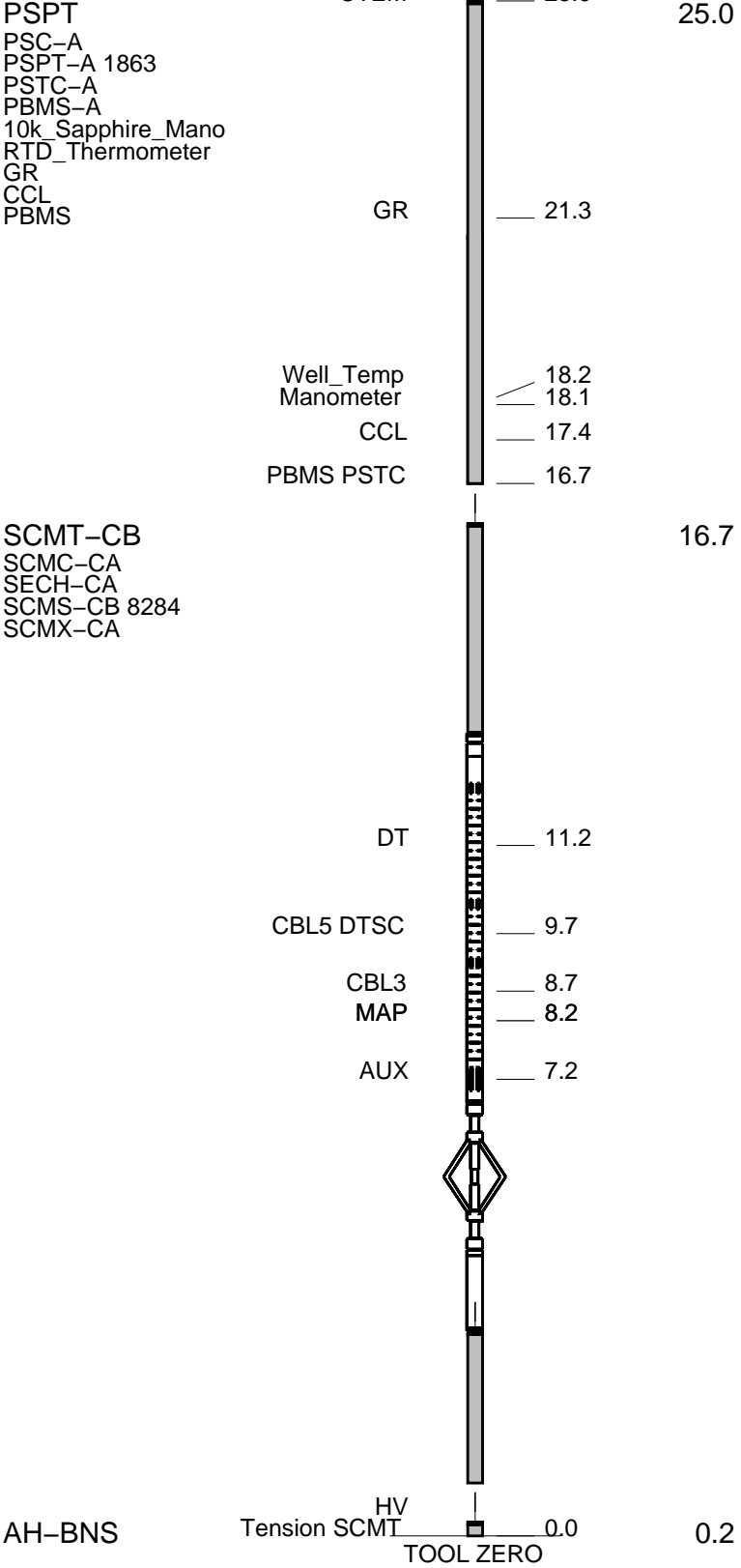
Maximum Recorded Temperatures

Logger On Bottom

Unit Number

Recorded By

Witnessed By



MAXIMUM STRING DIAMETER 1.69 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET



MAIN PASS (2500PSI) CBL–VDL

MAXIS Field Log

Company: ANADARKO Well: TROUDT 14C–33HZ

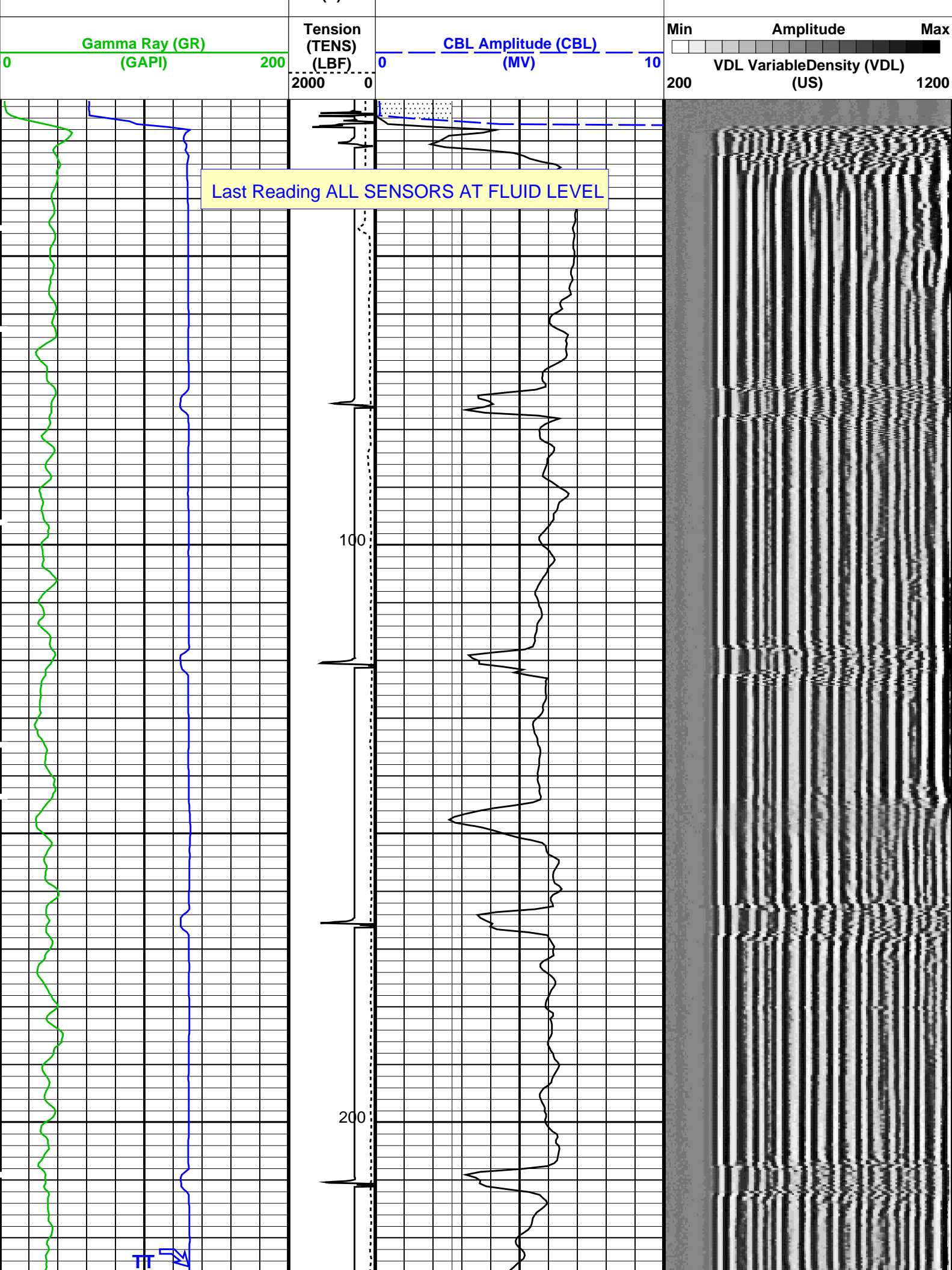
Input DLIS Files						
DEFAULT	SCMT_PSP_022LUP	FN:21	PRODUCER	10–Jul–2015 08:26	7999.0 FT	16.2 FT
Output DLIS Files						
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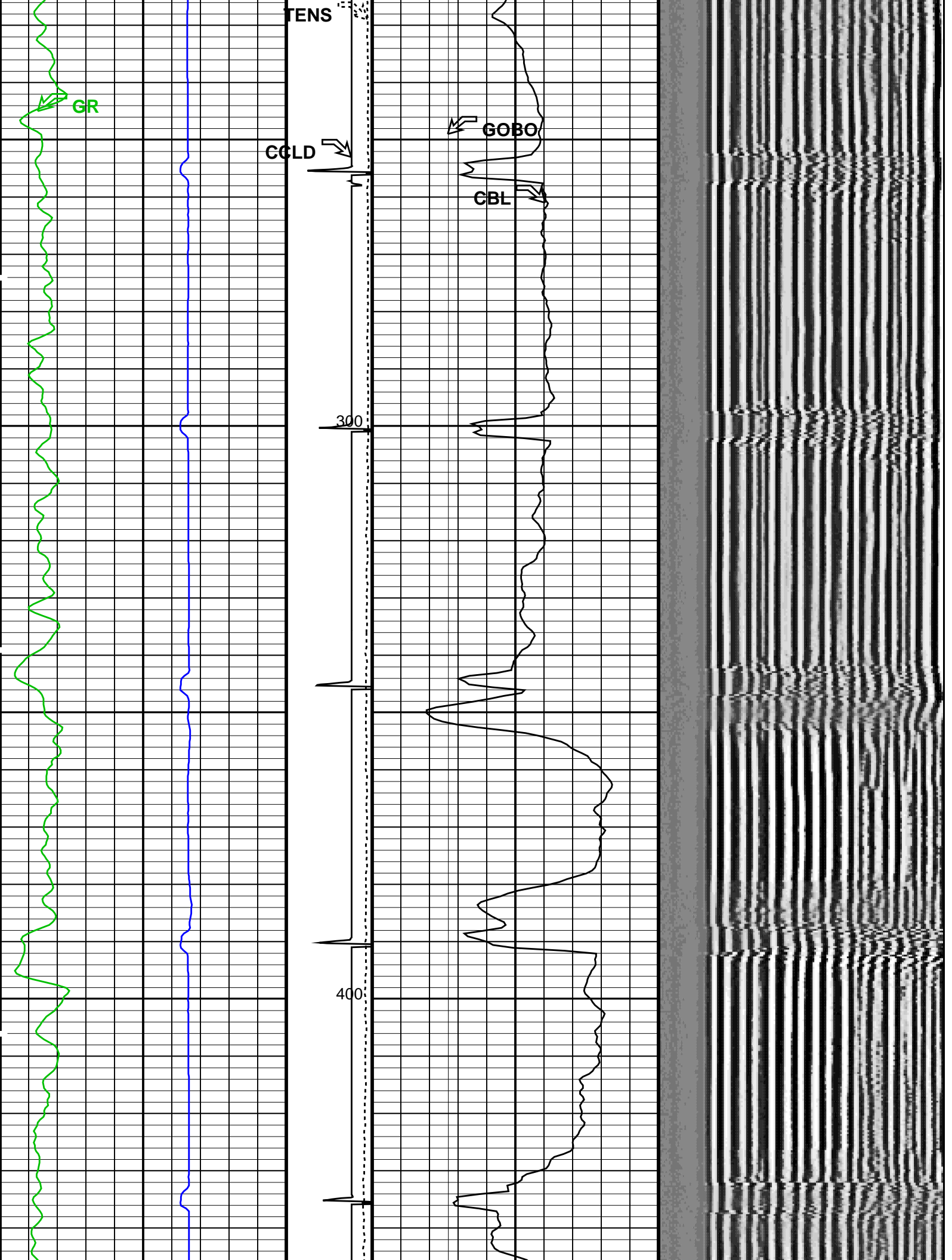
OP System Version: 19C0–187			
SCMT–CB	19C0–187	PSPT	19C0–187

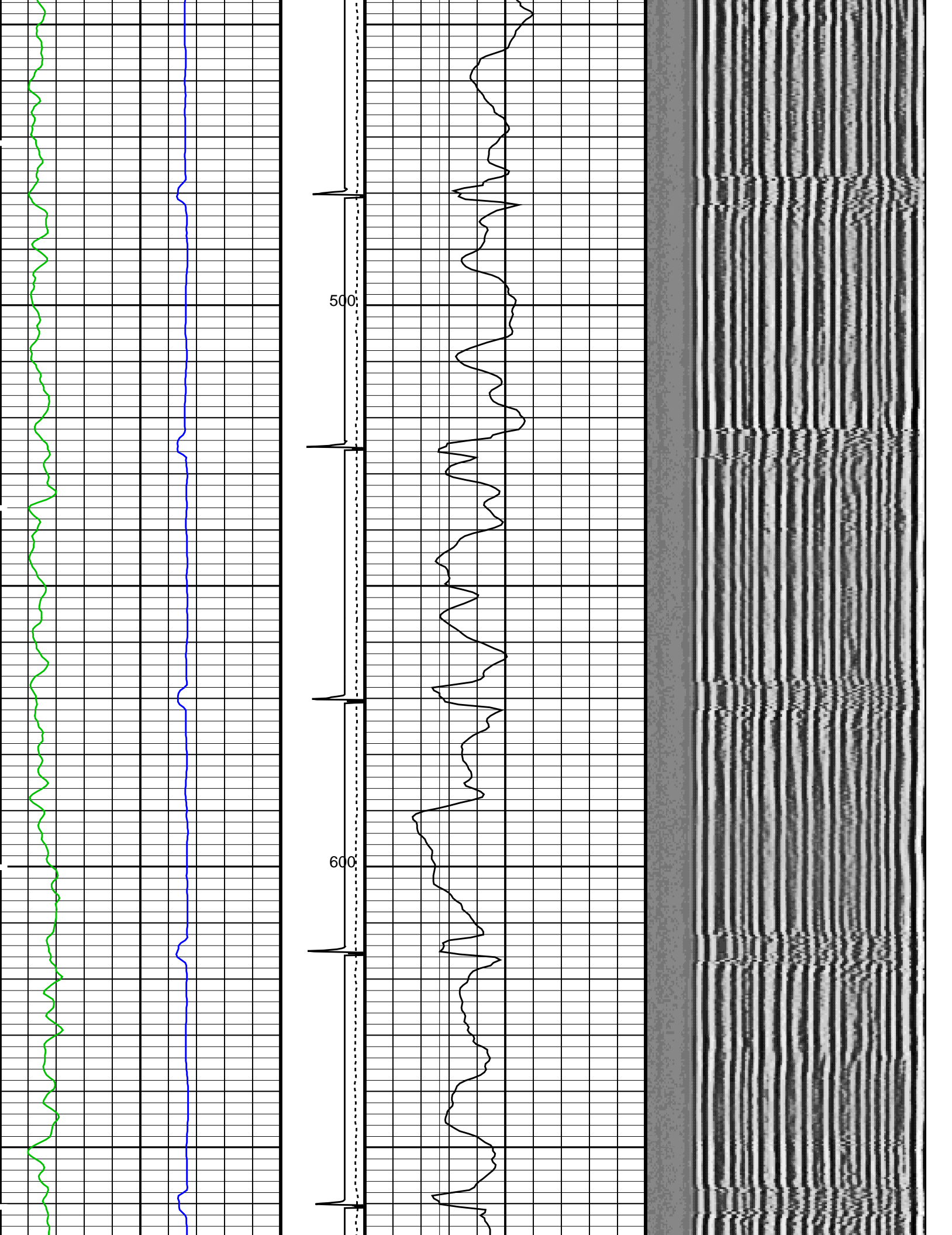
PIP SUMMARY

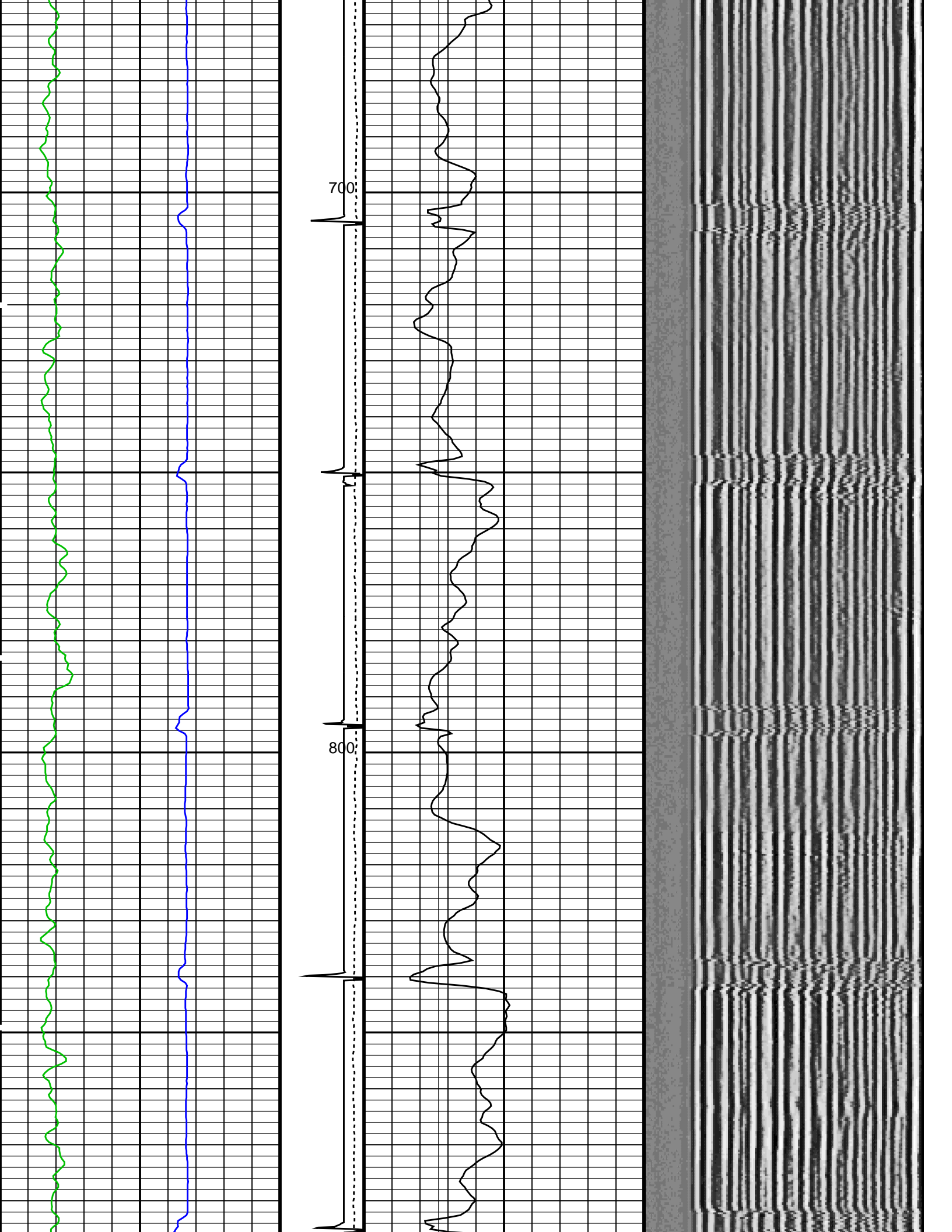
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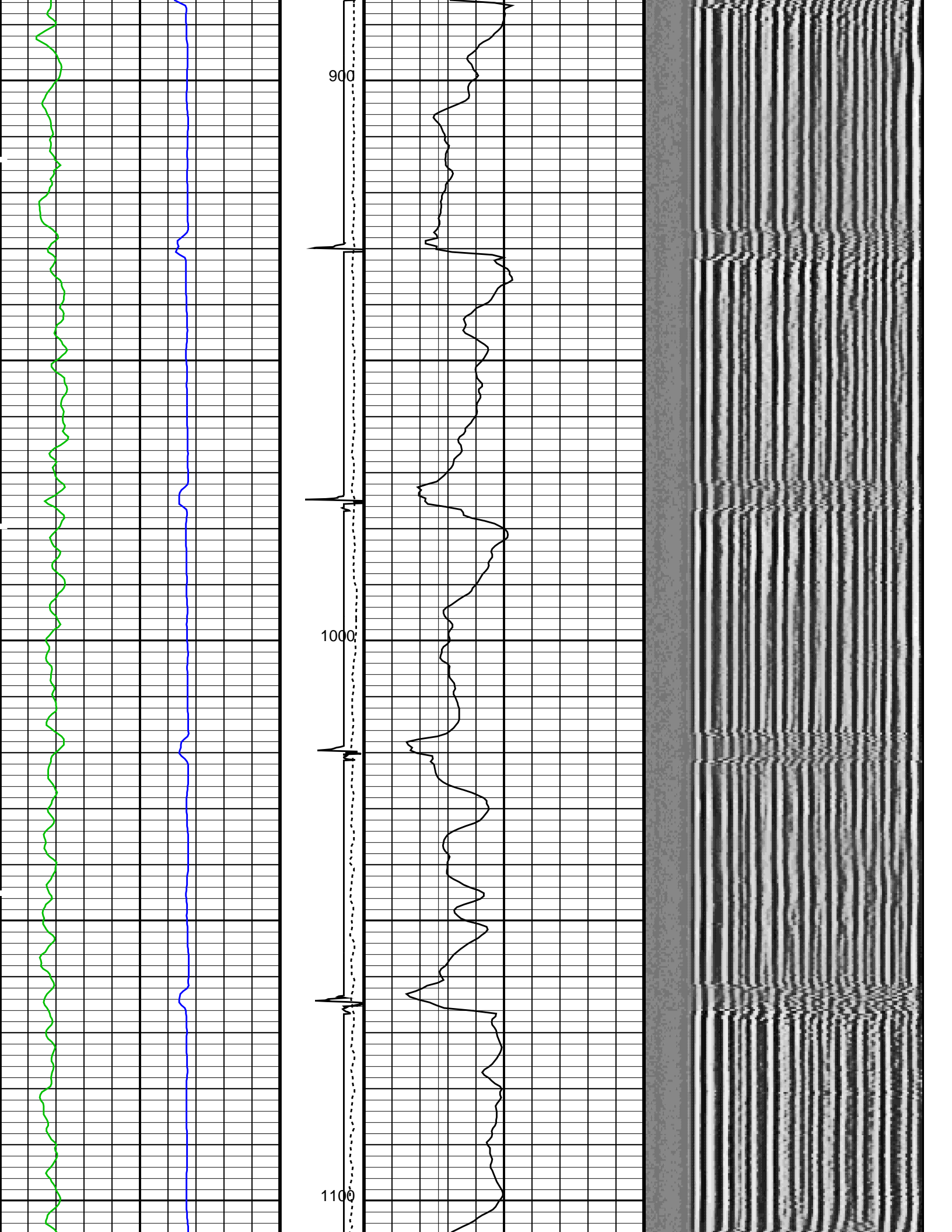
		GoodBond From ACBL to GOBO	
		Good Bond (GOBO)	
		0 (MV)	10
Transit Time (TT)		CBL Amplitude (CBL)	
400 (US)	200	0 (MV)	100
Discriminat ed CCL (CCLD)			
3 (V) –1			

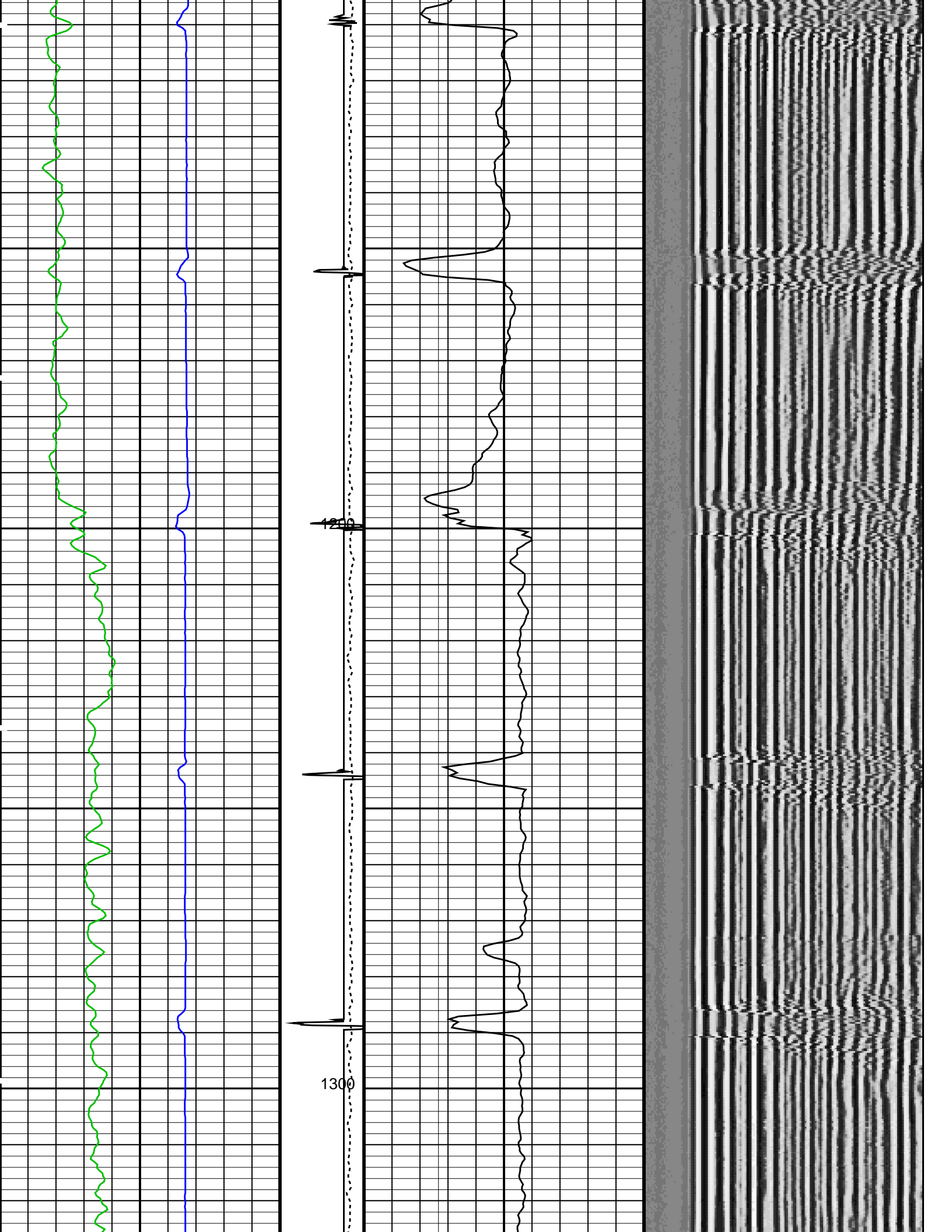


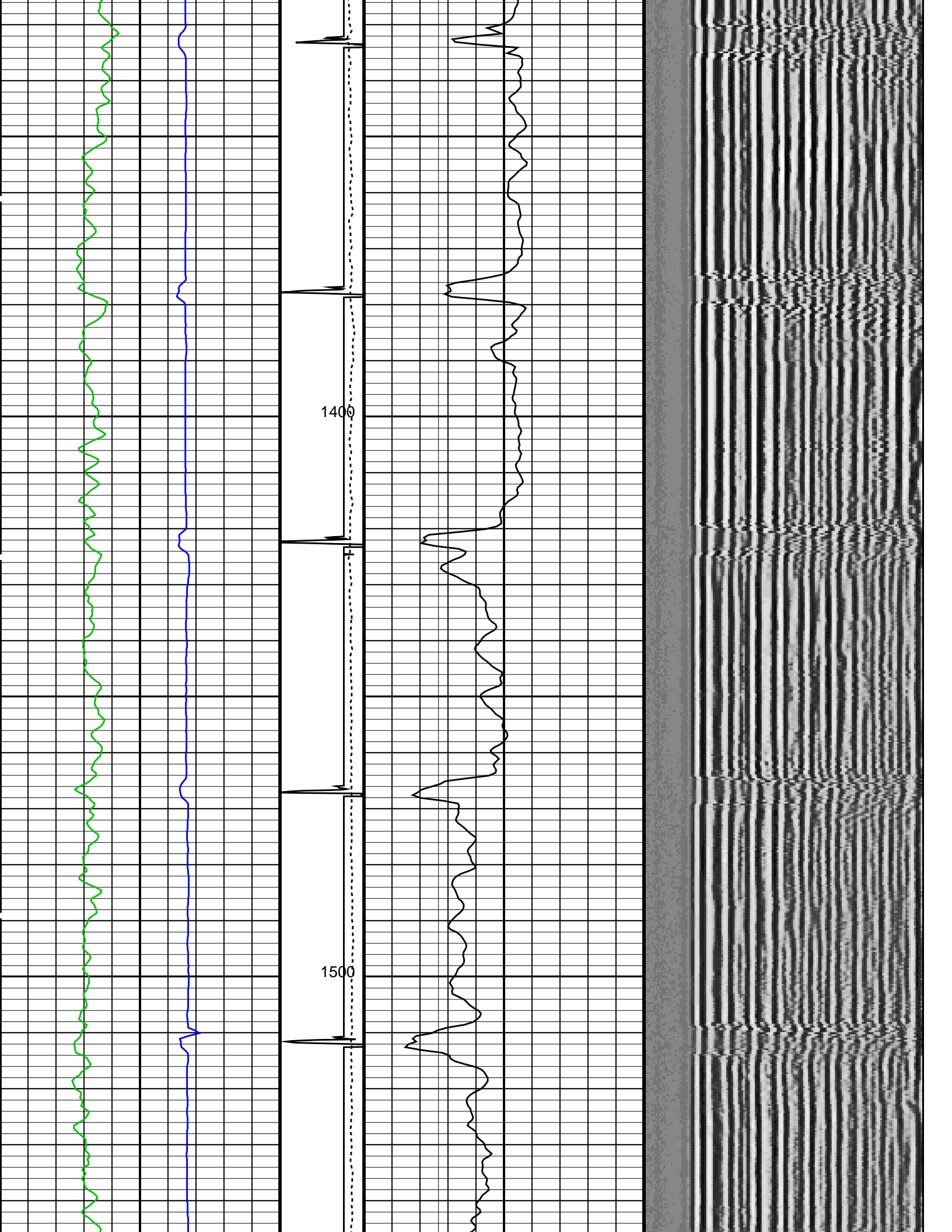


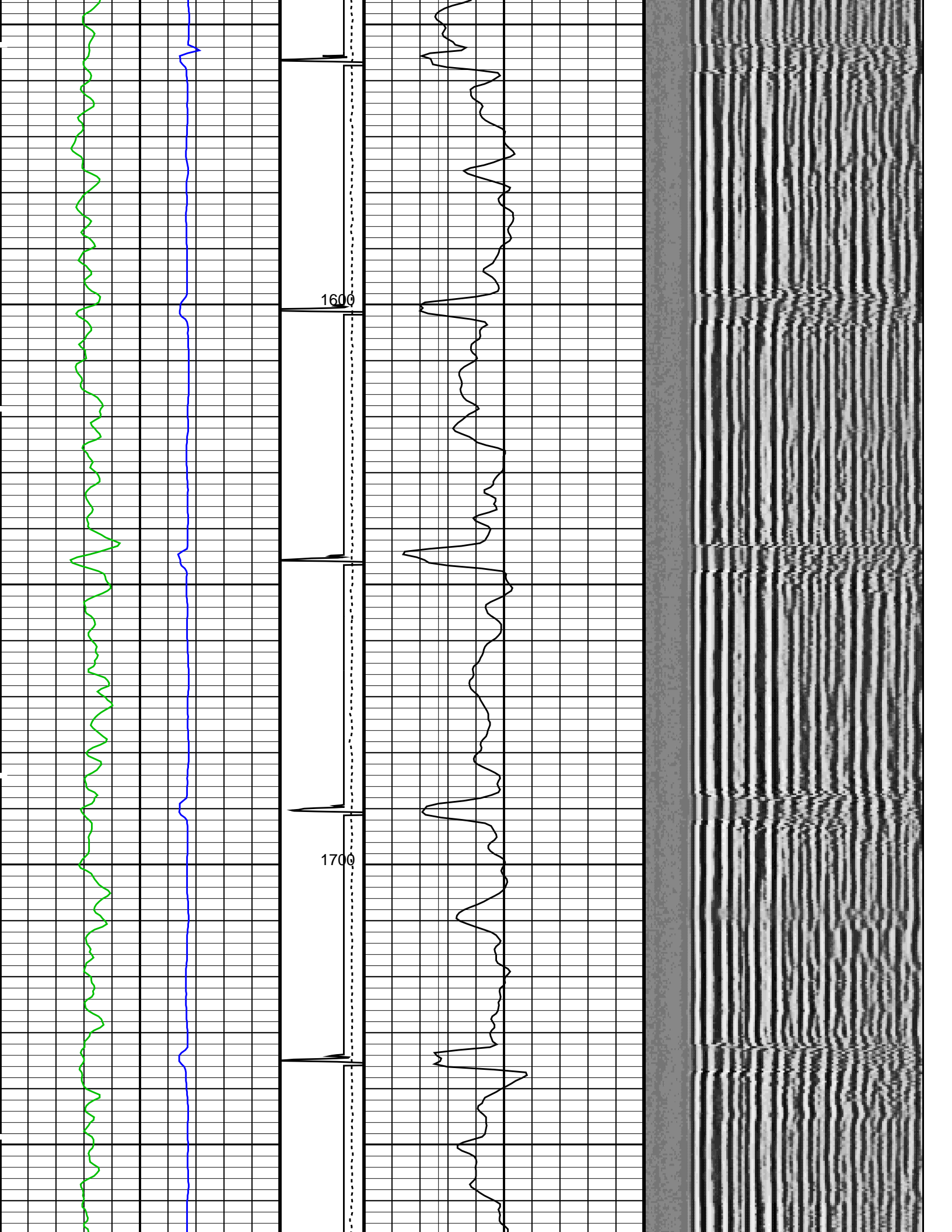


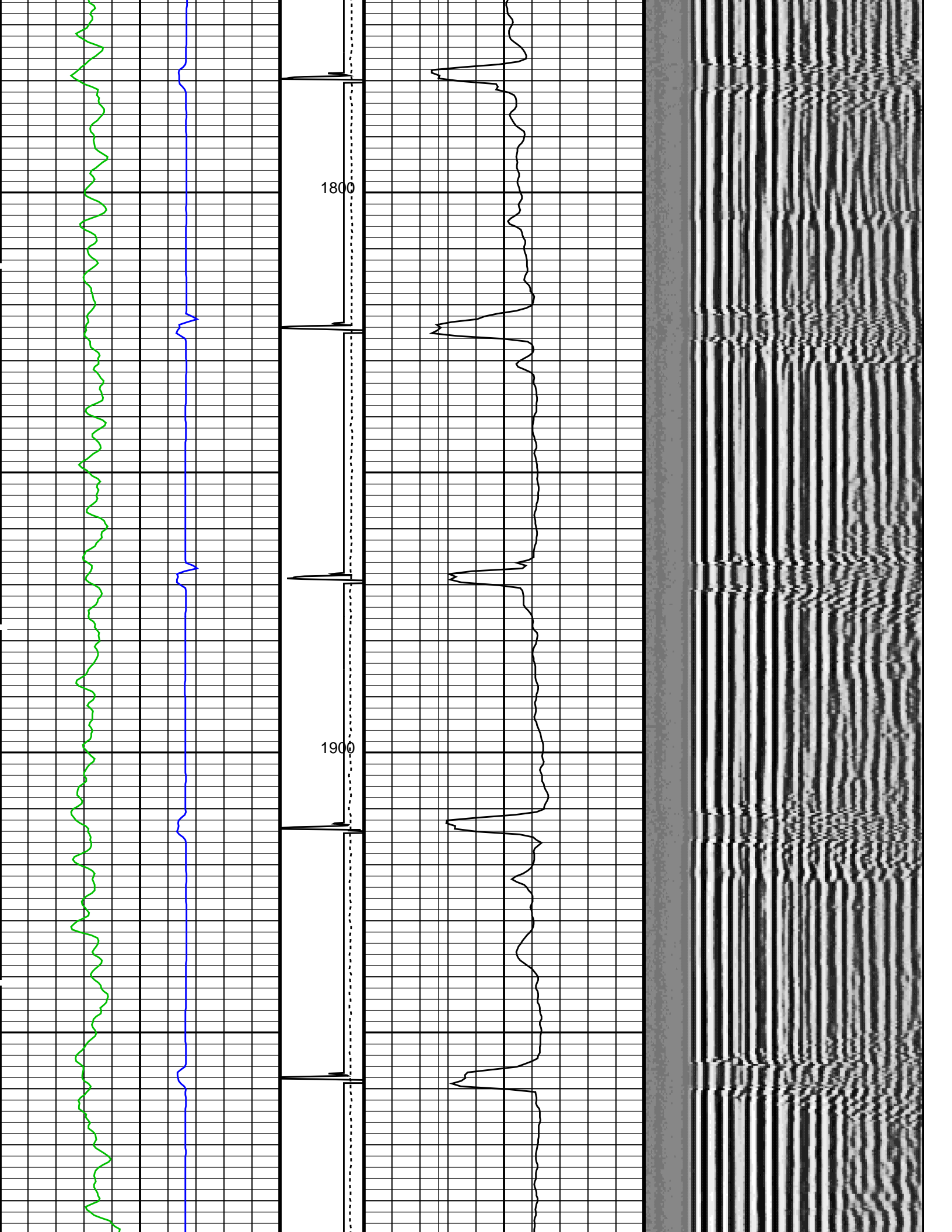


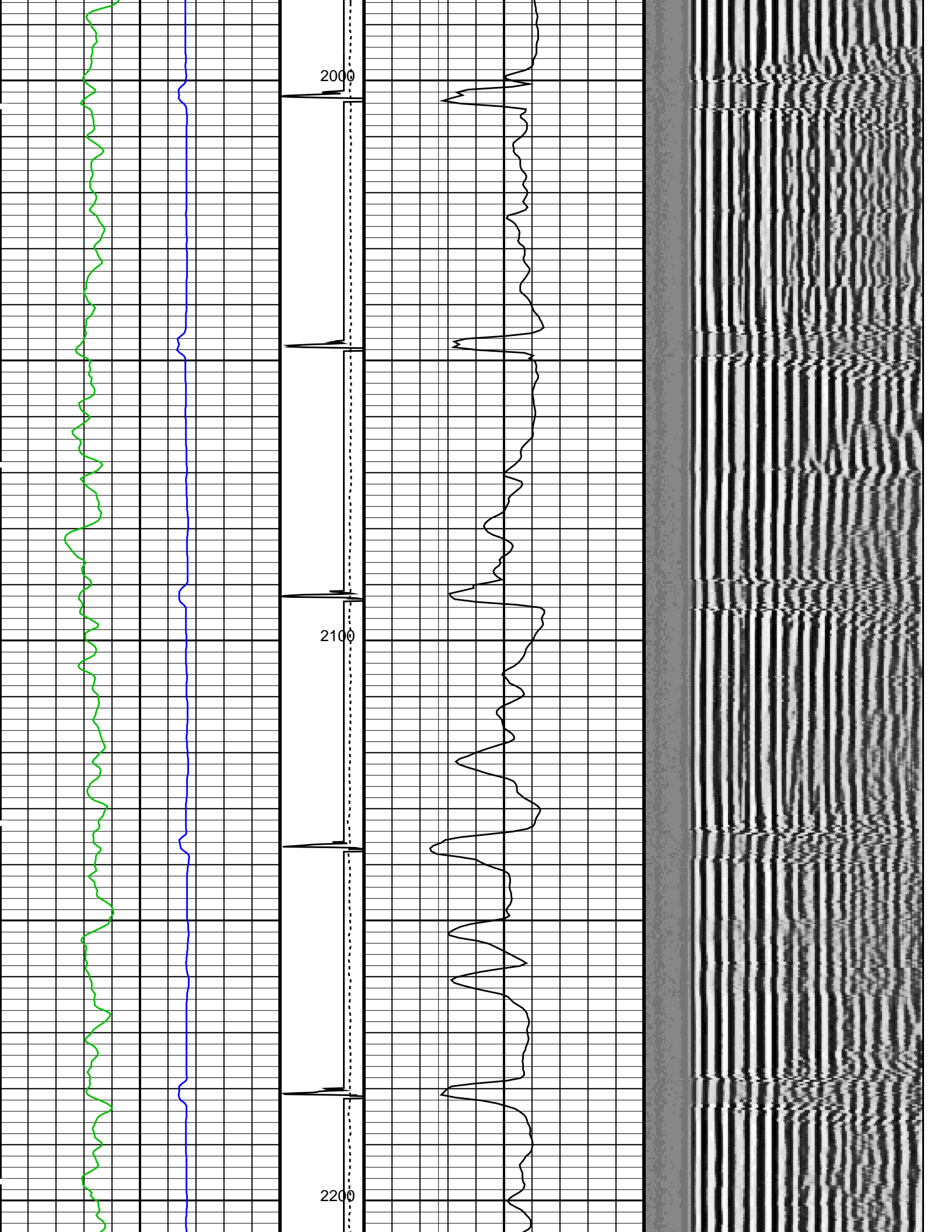


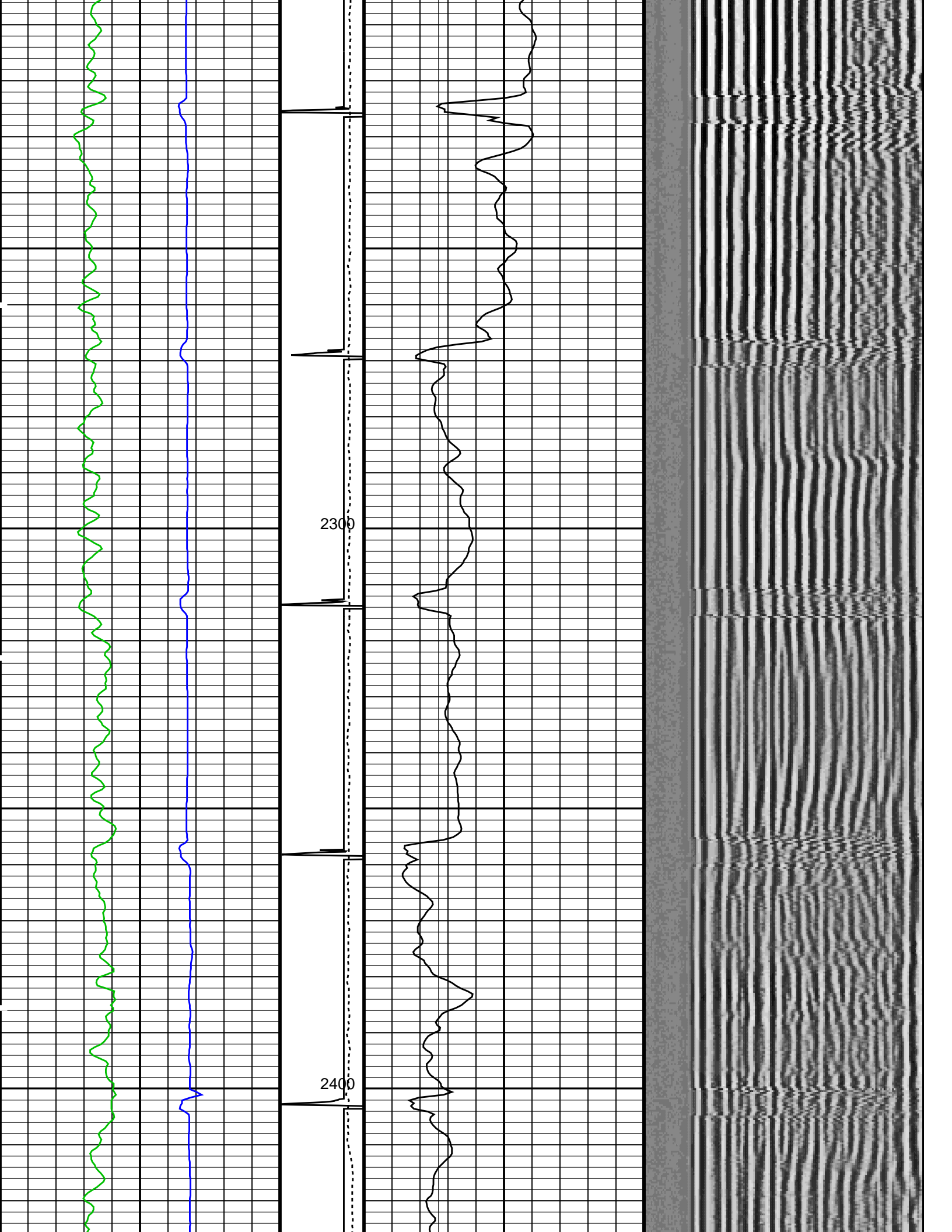


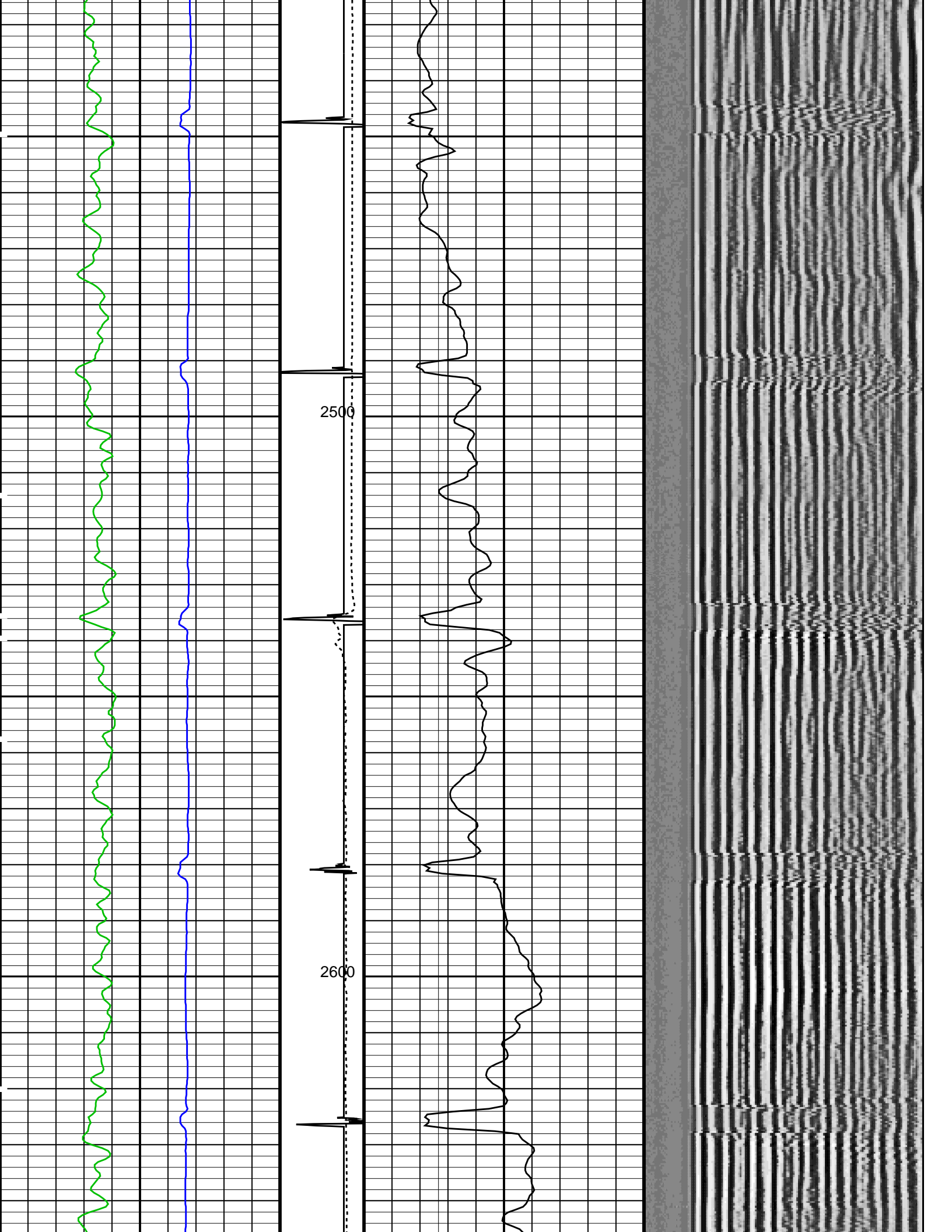


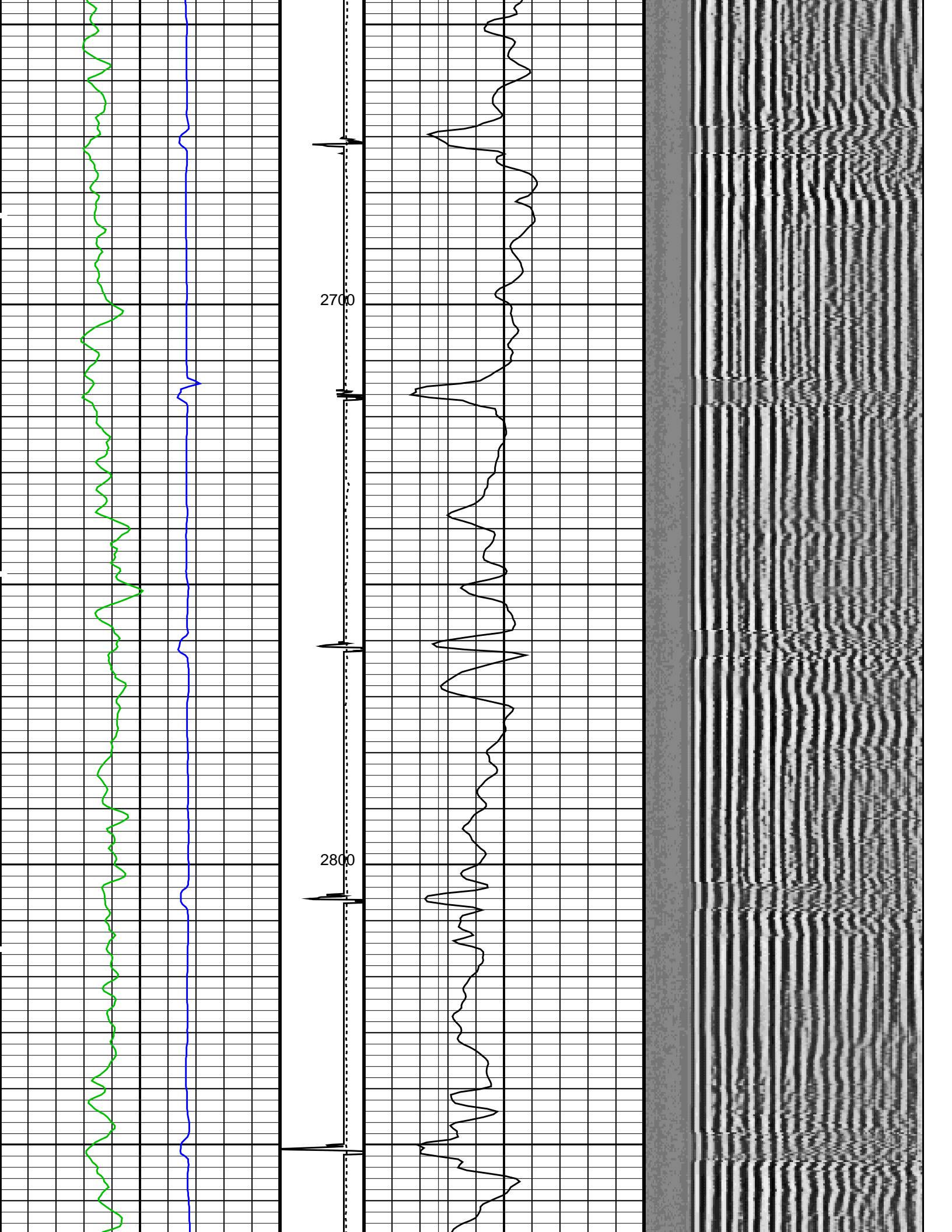


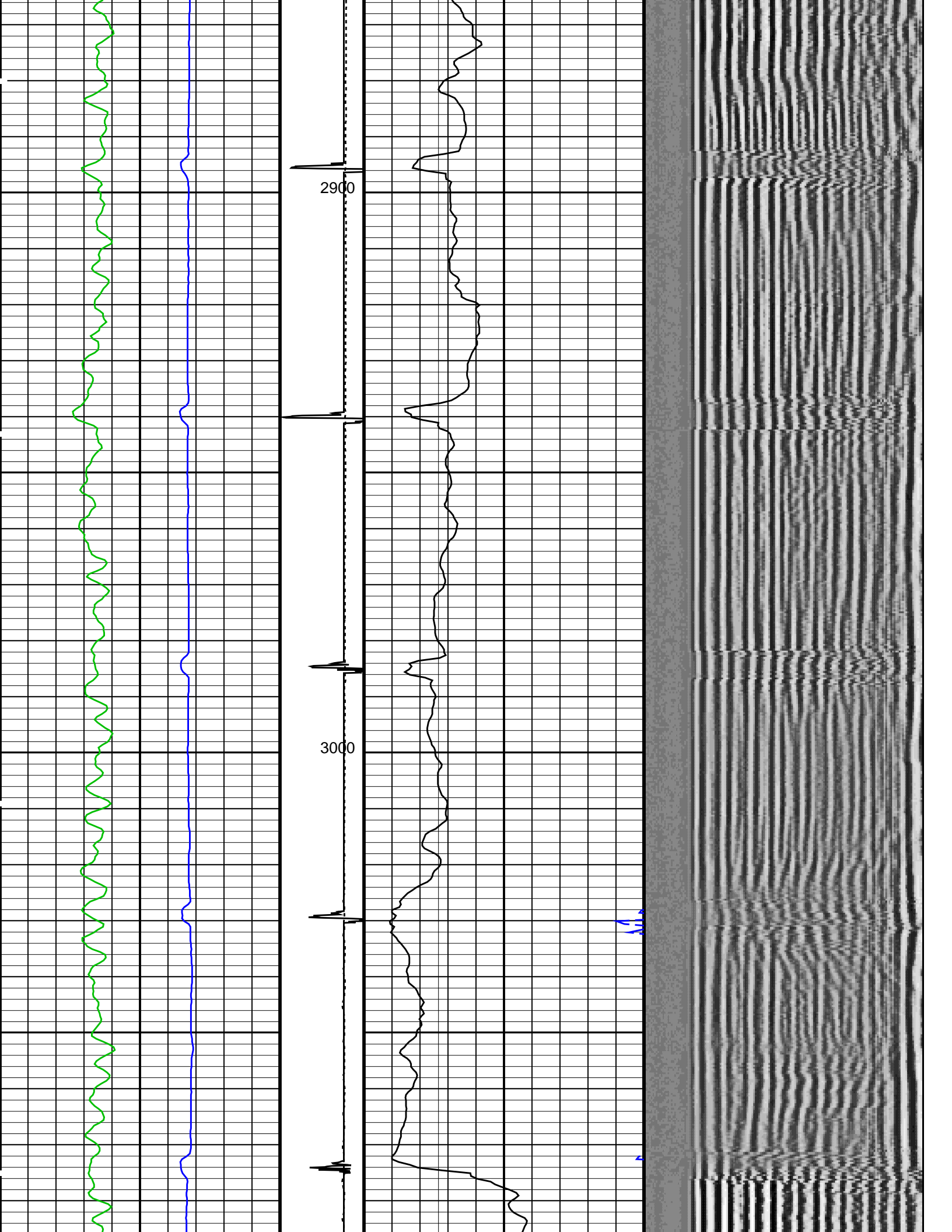


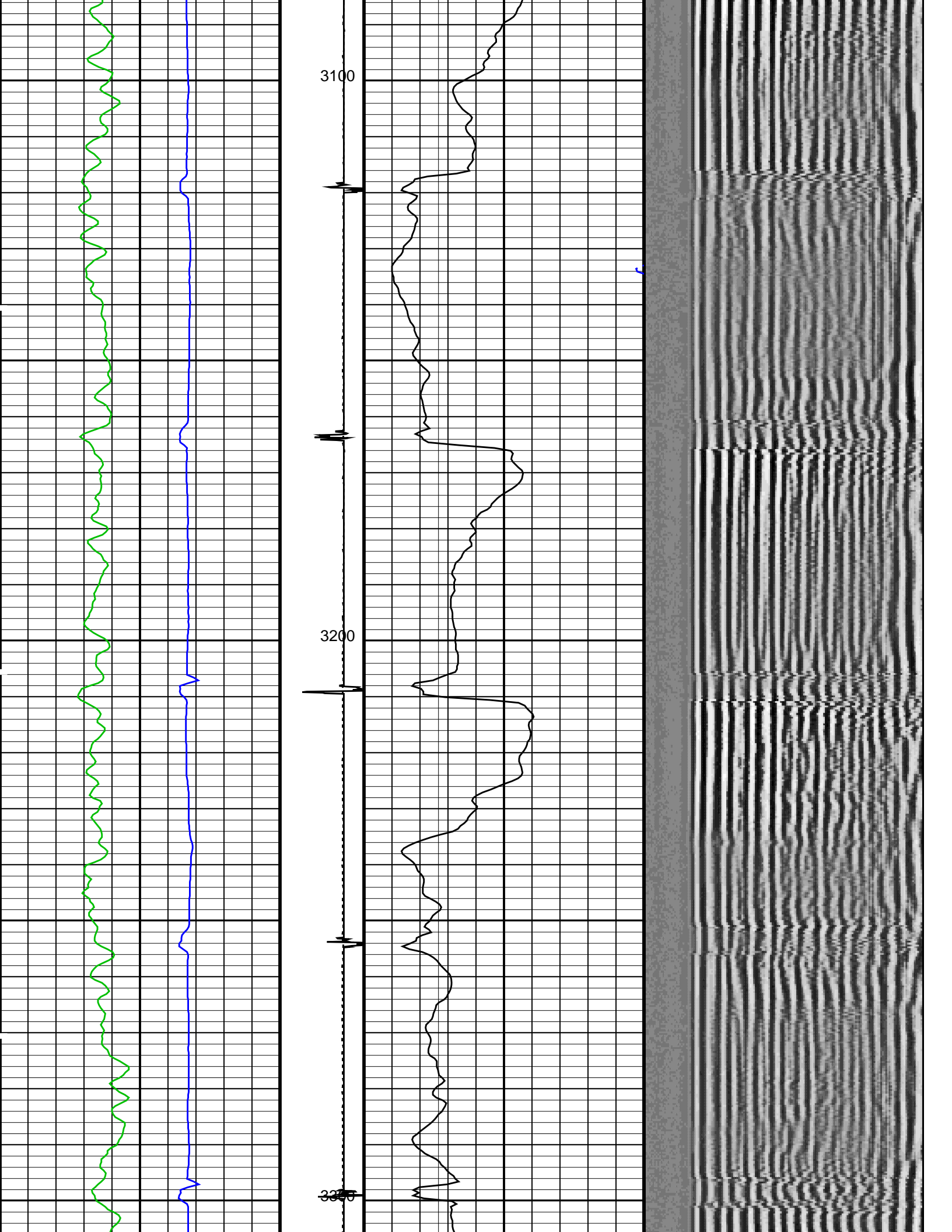


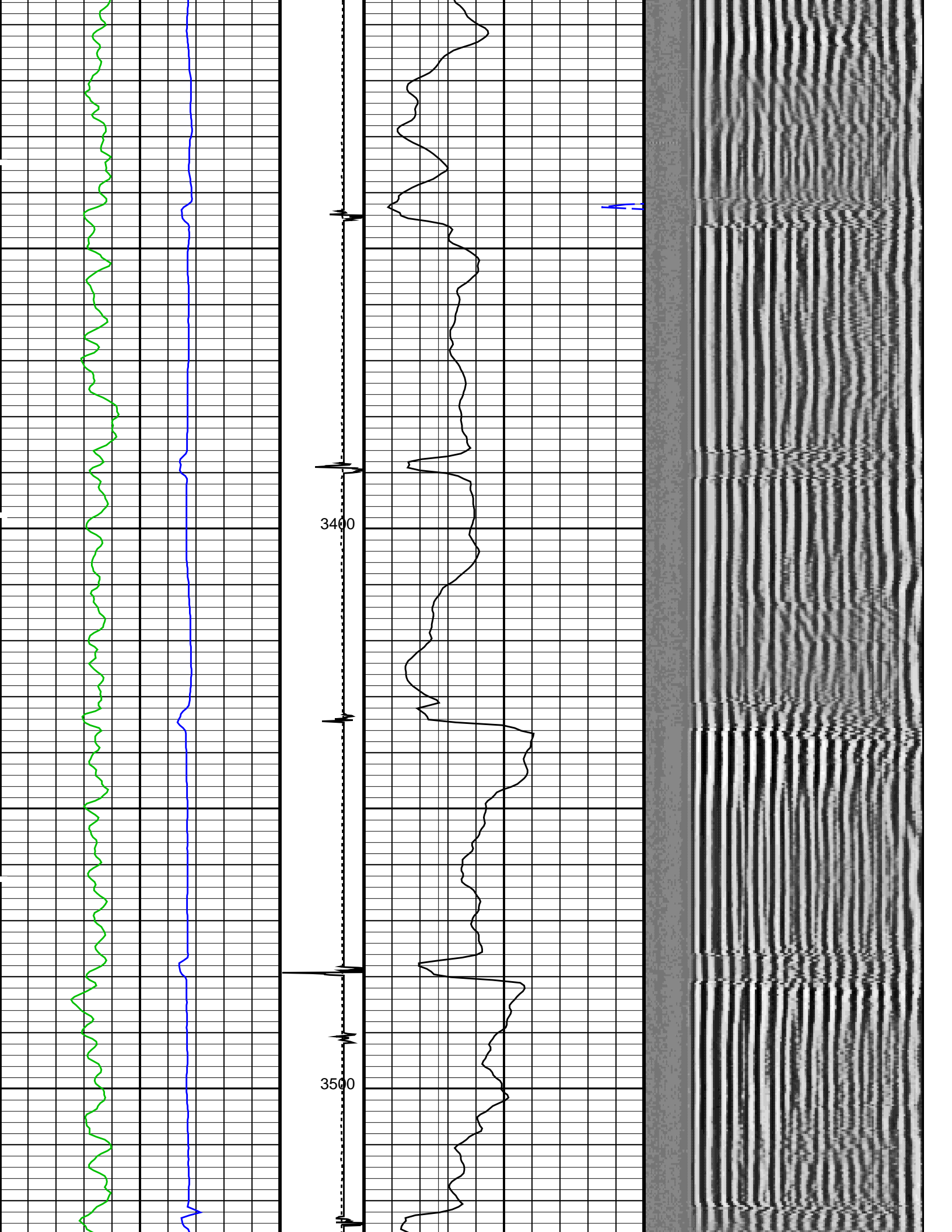


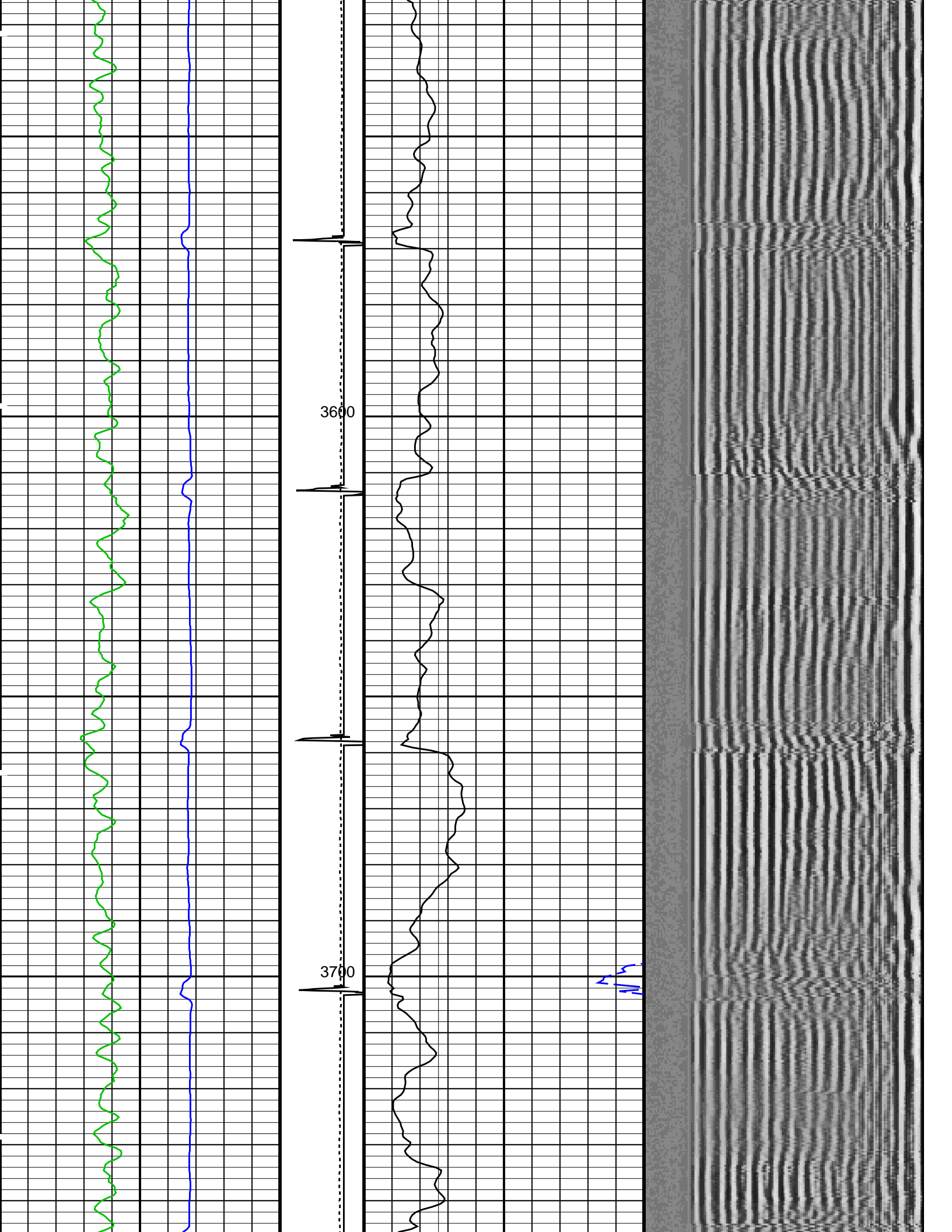


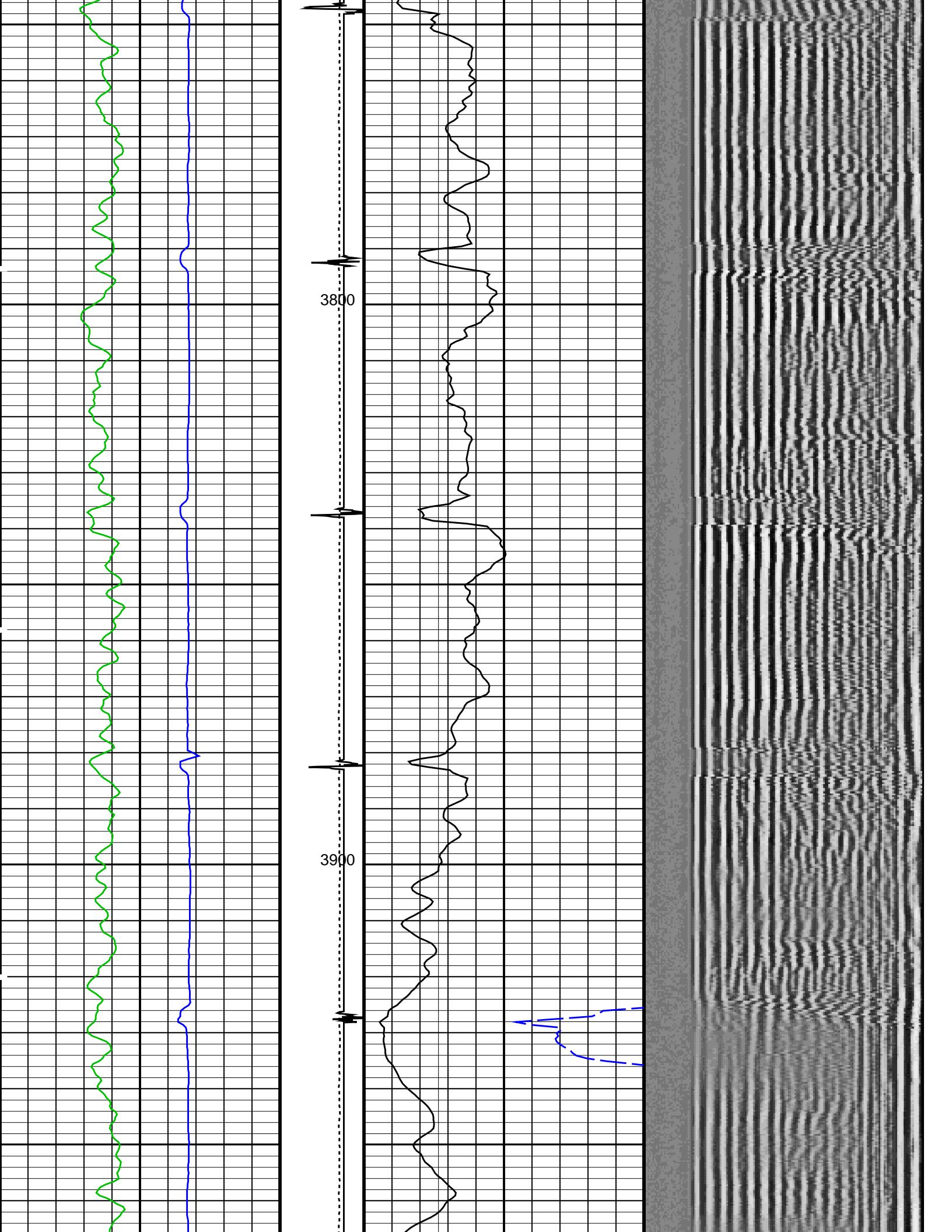


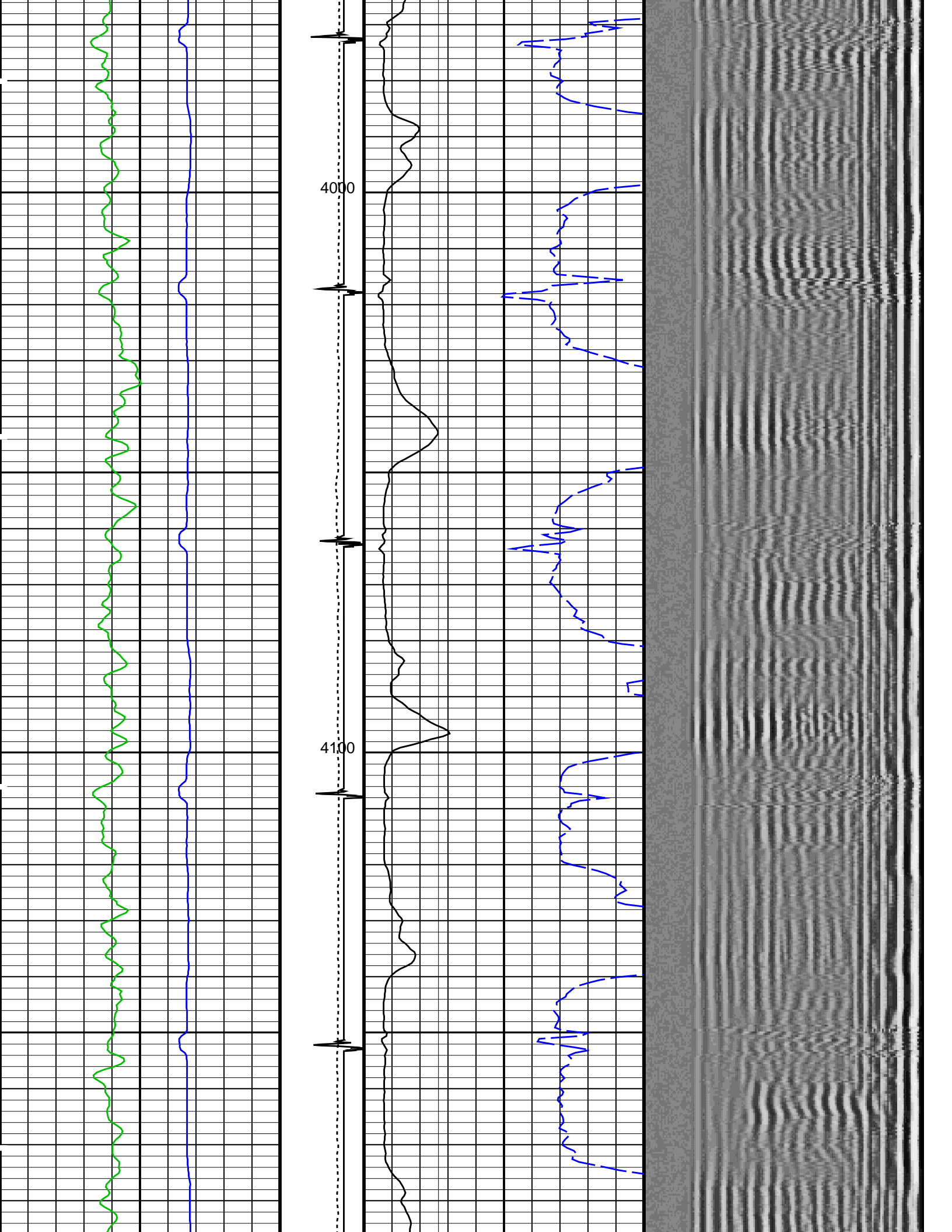


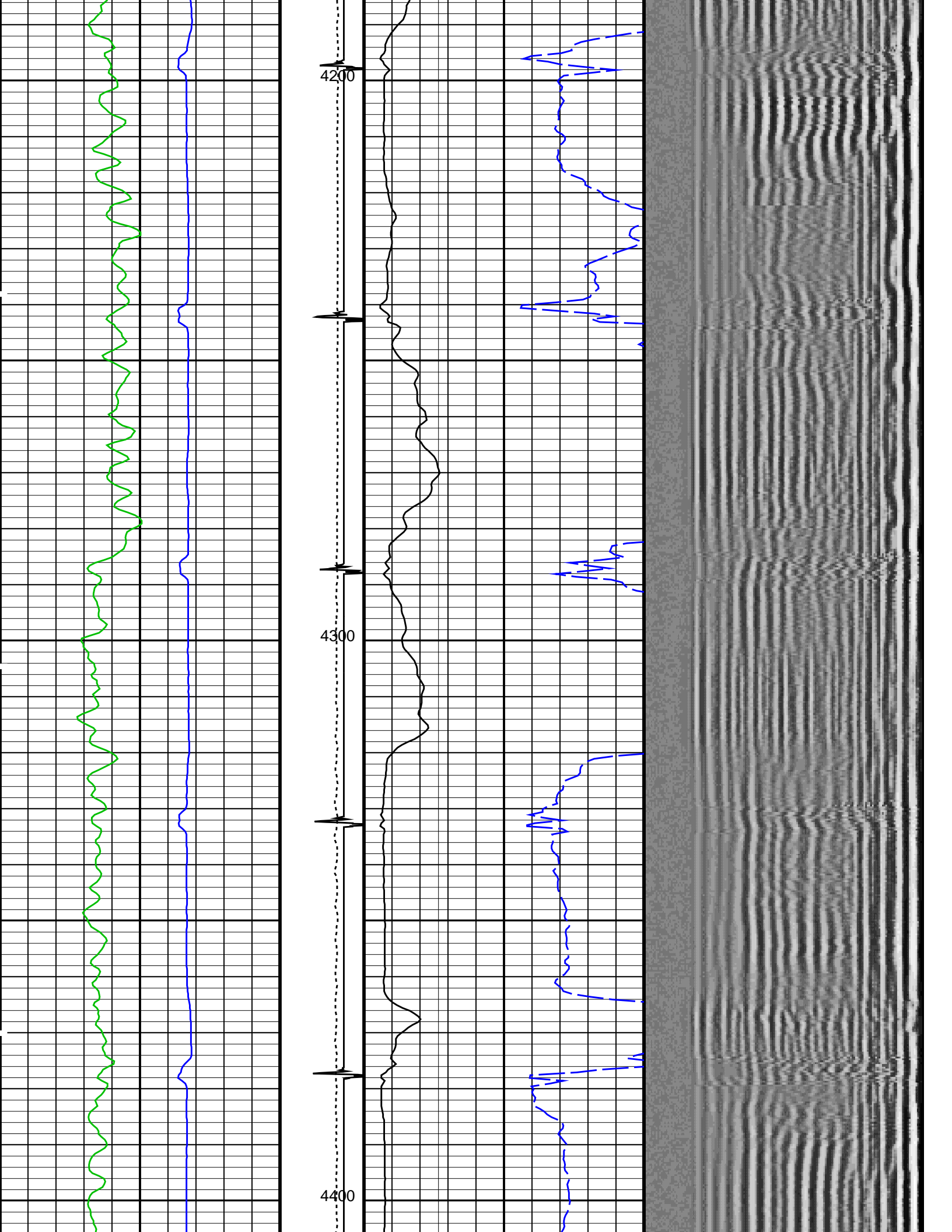


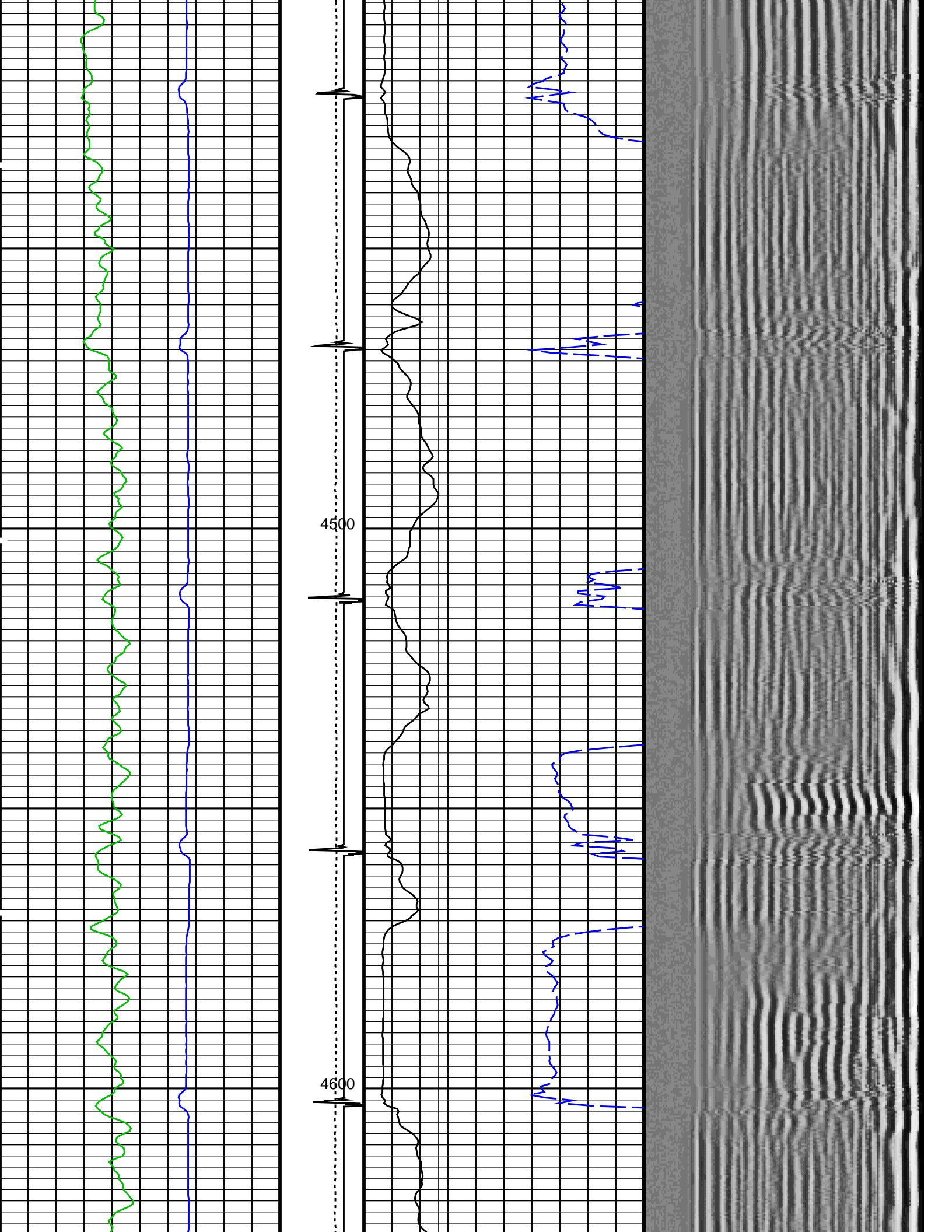


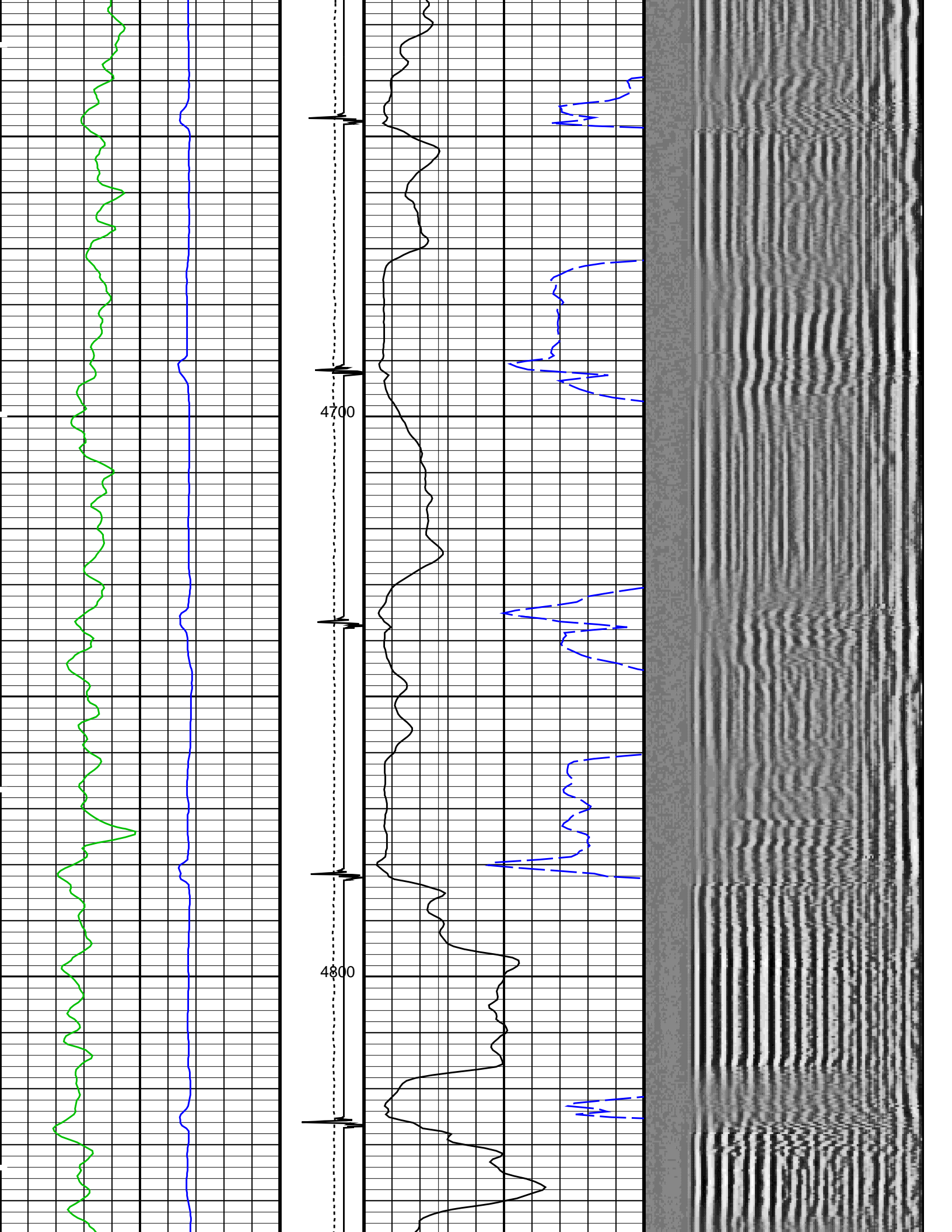


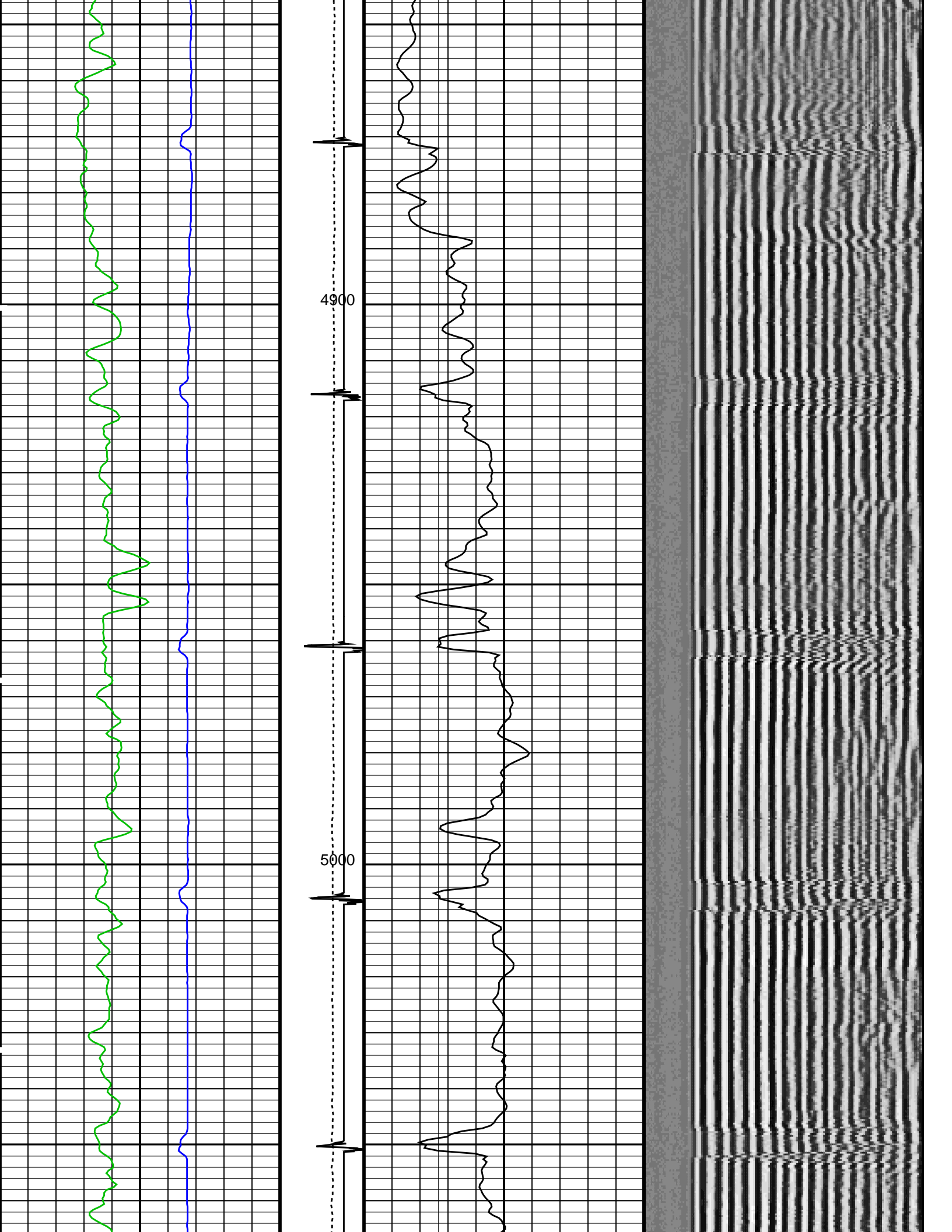


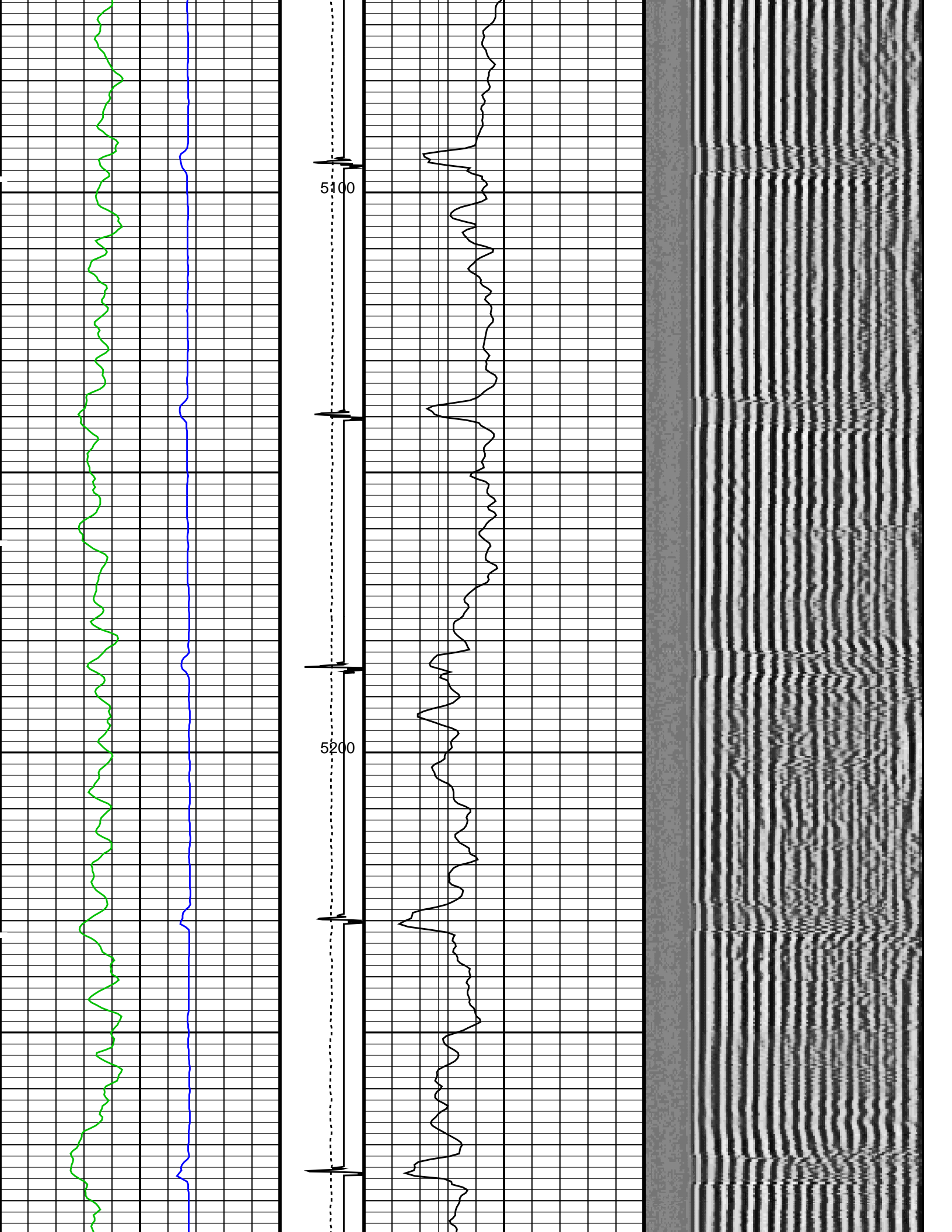


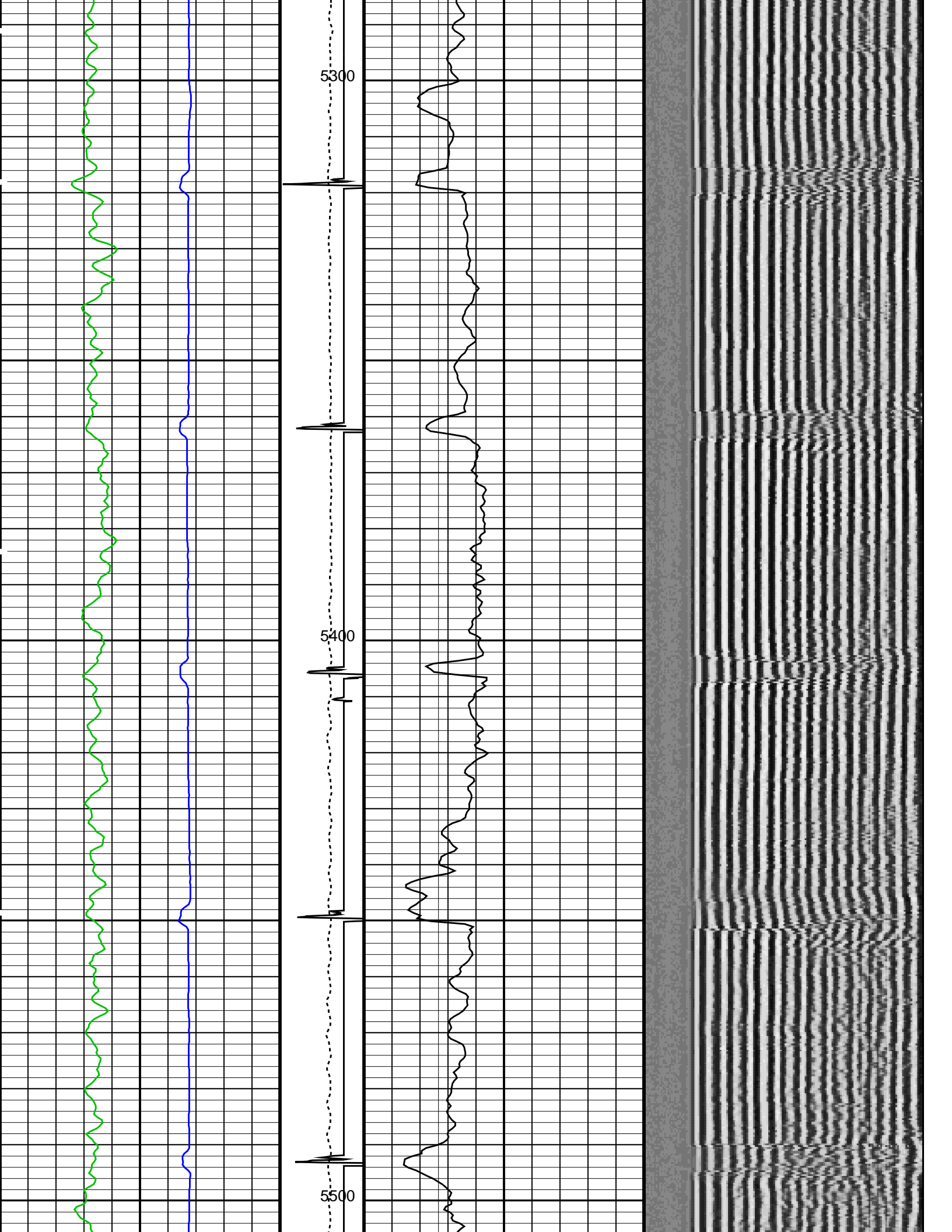


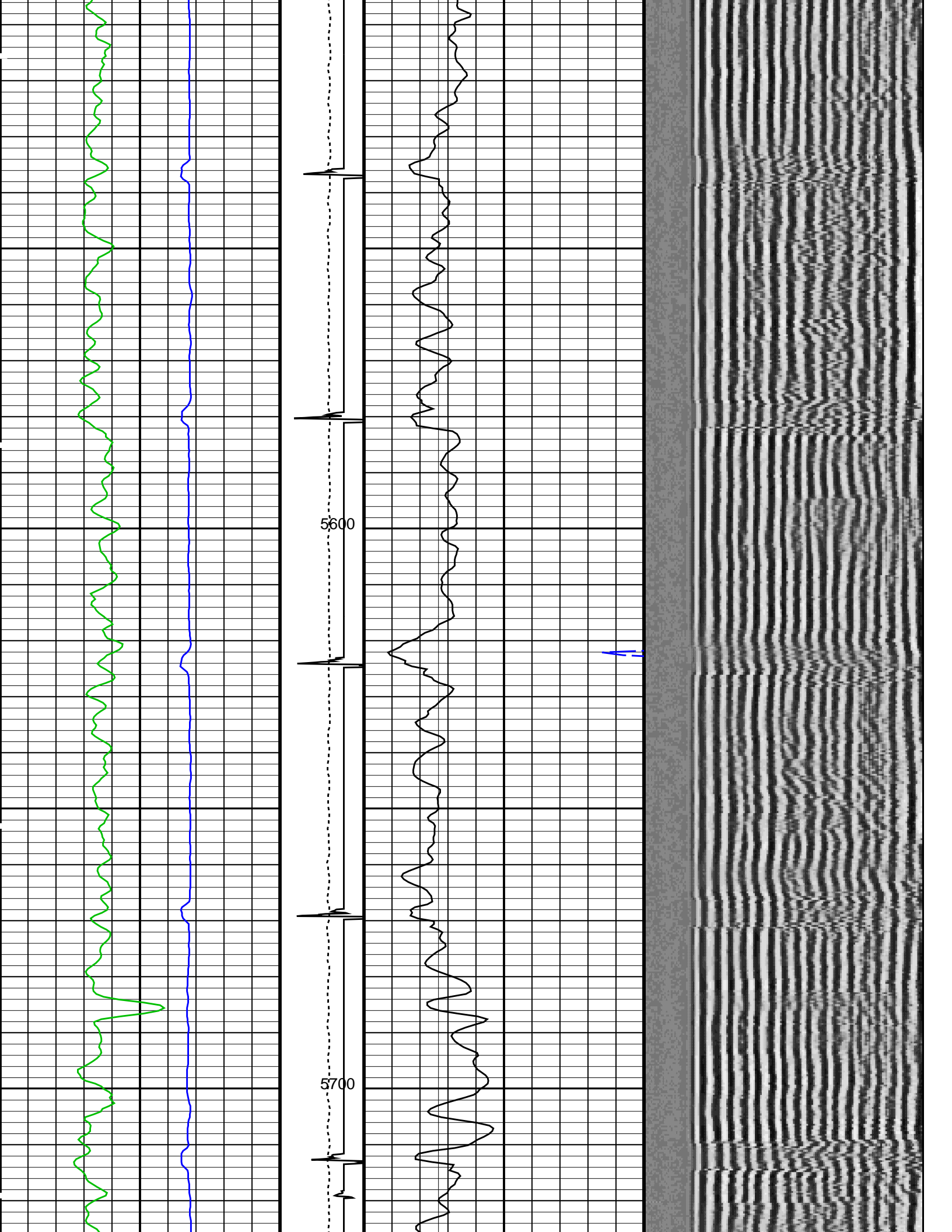


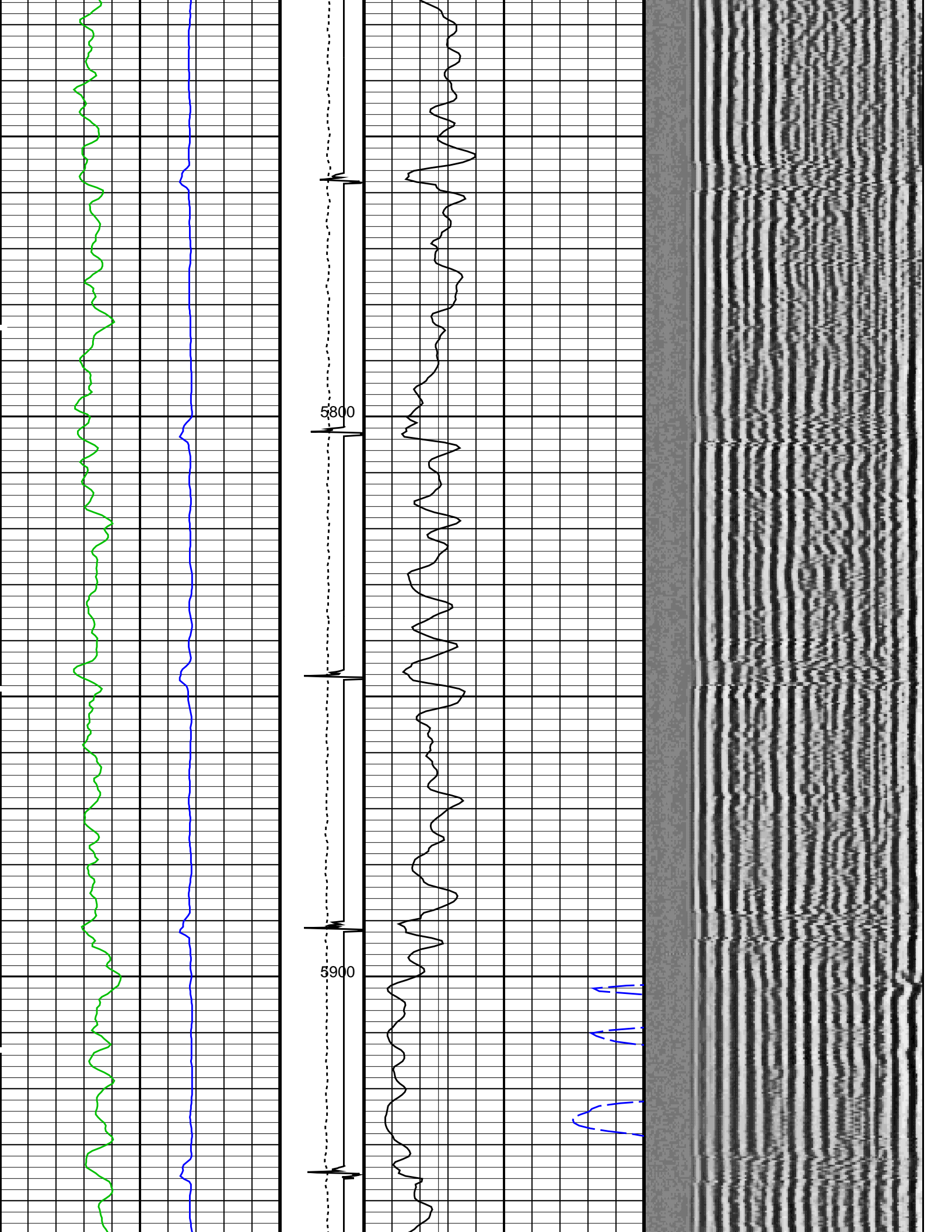


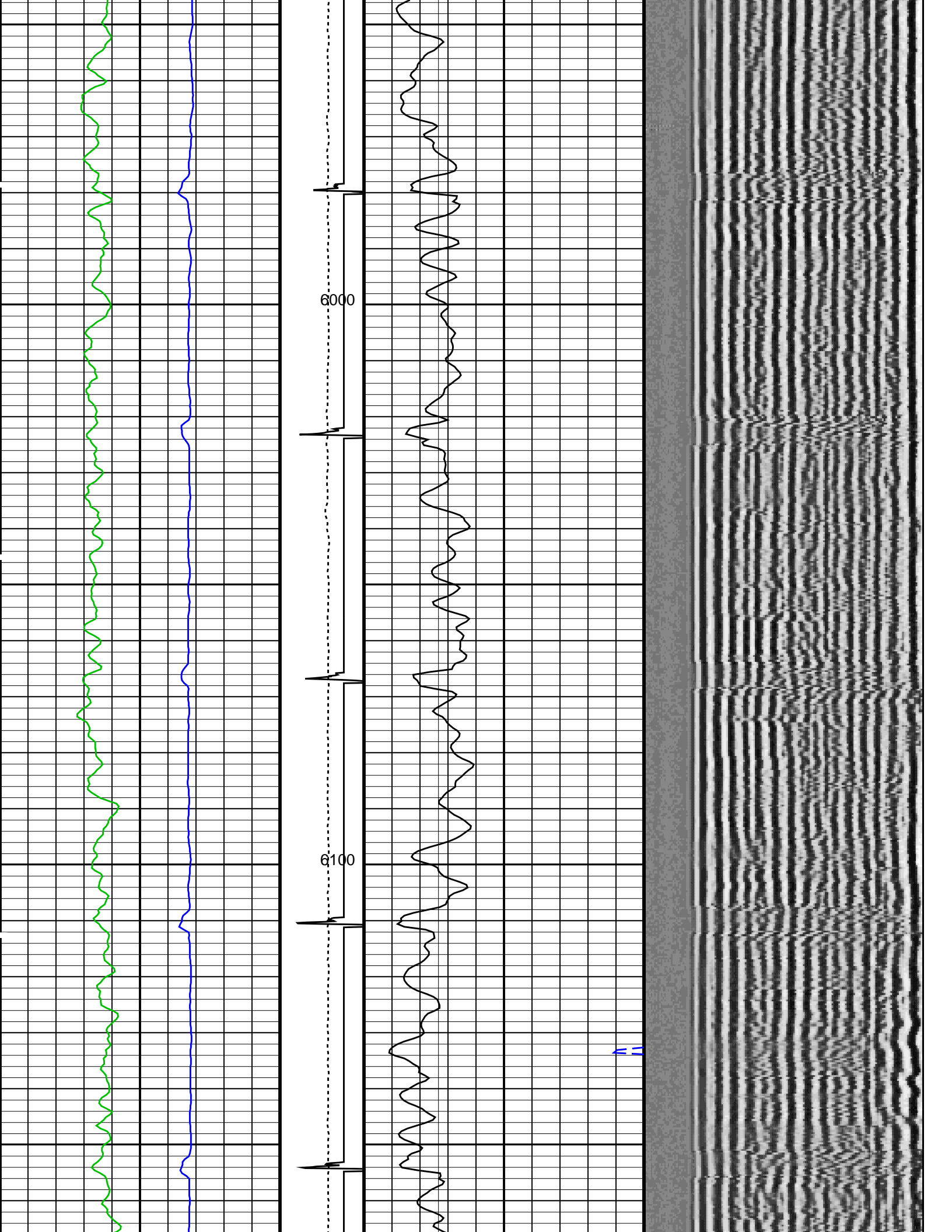


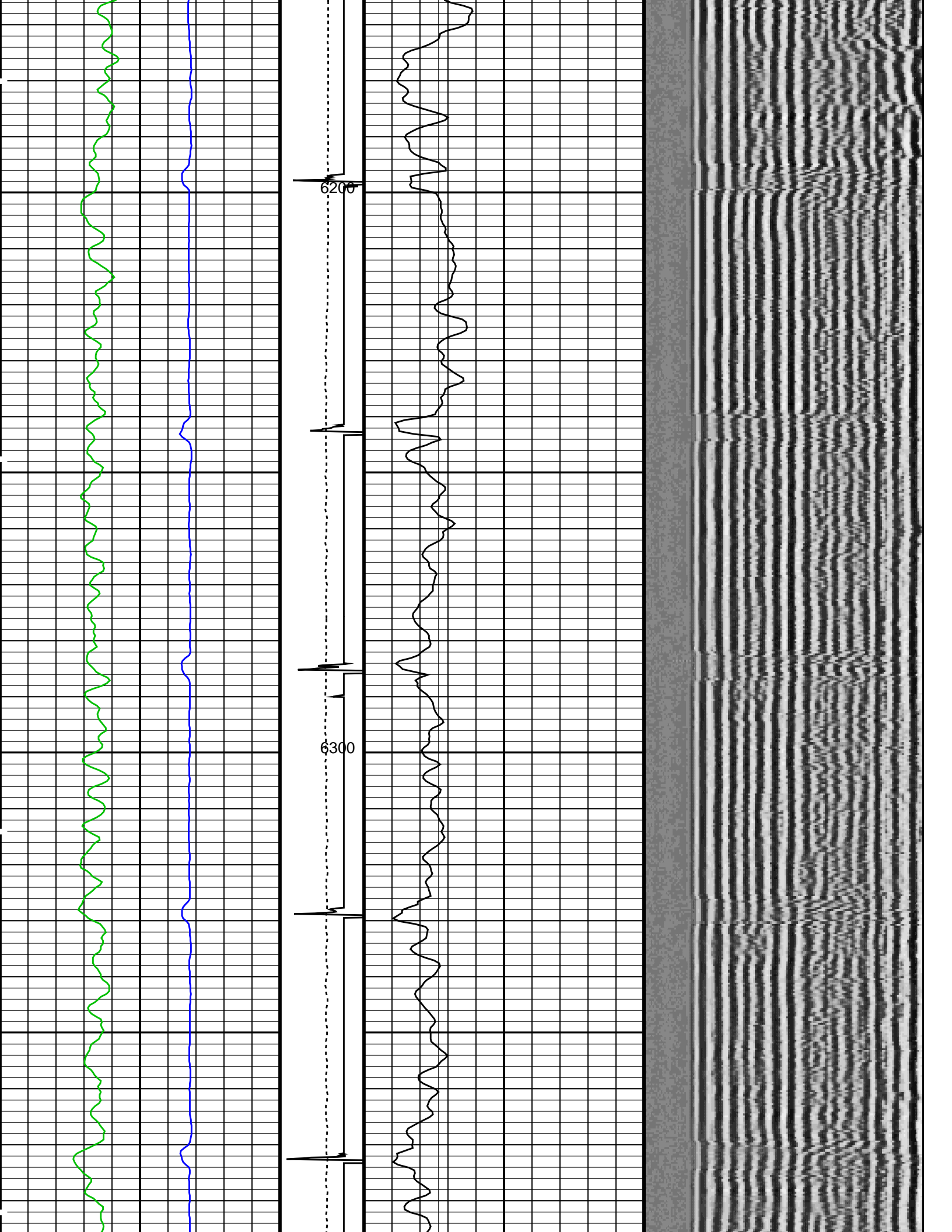


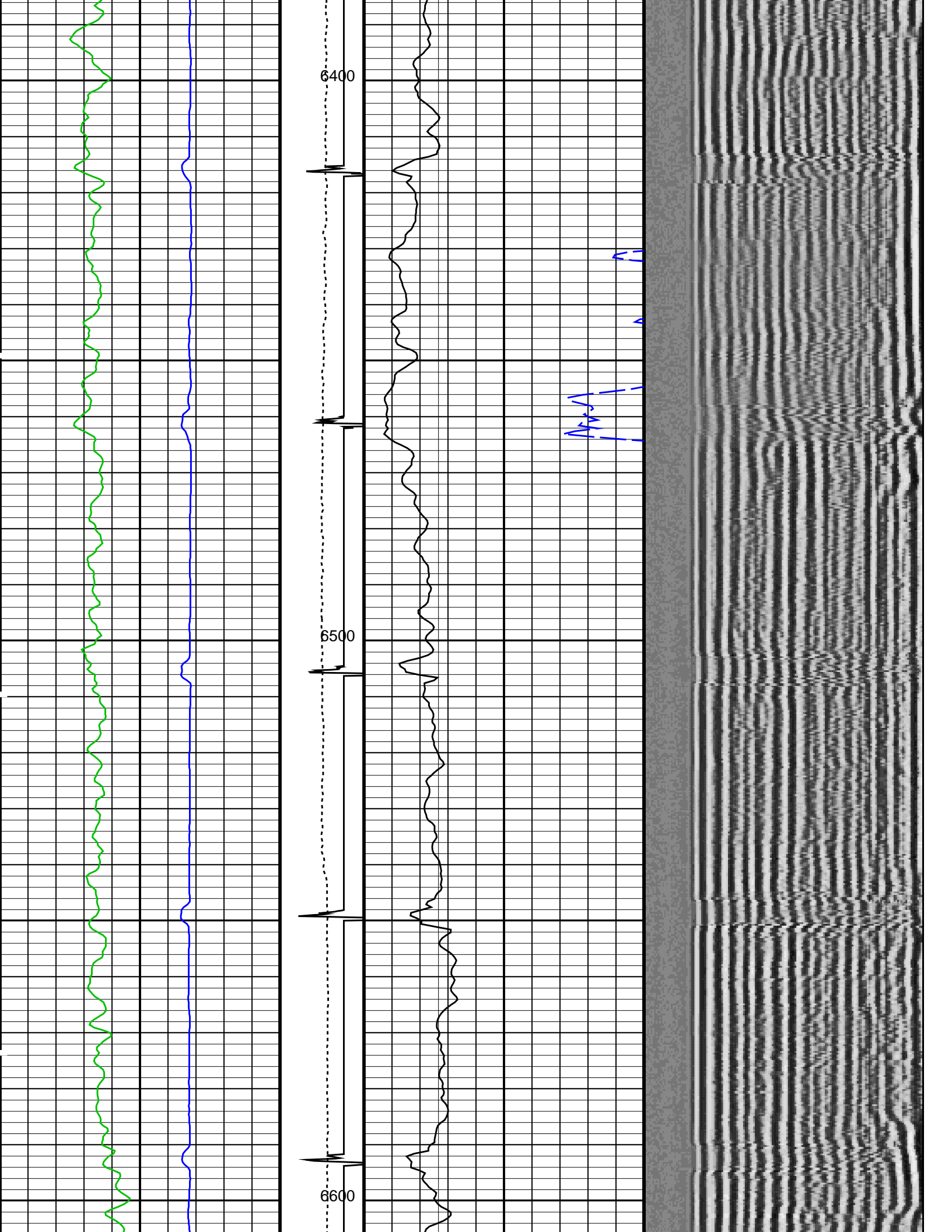


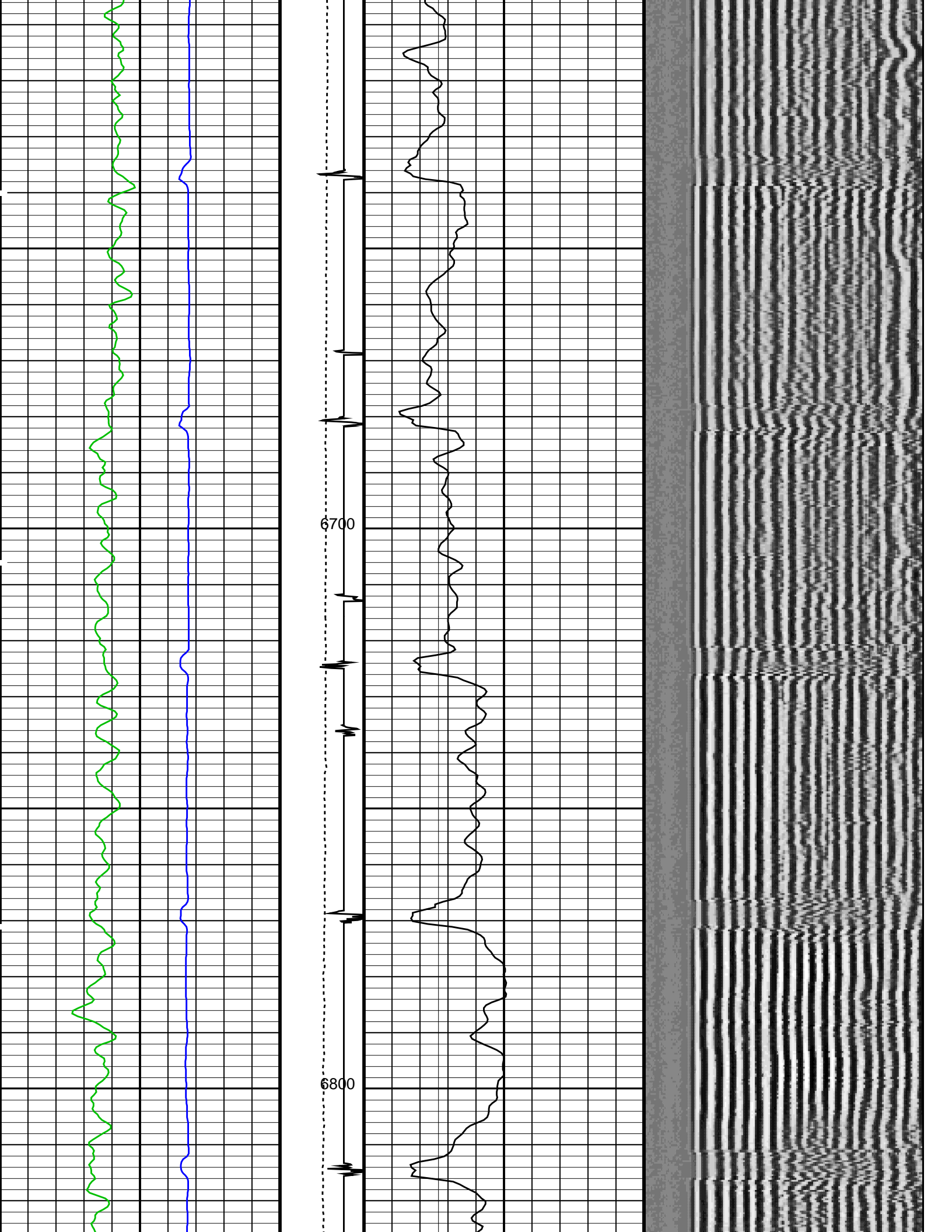


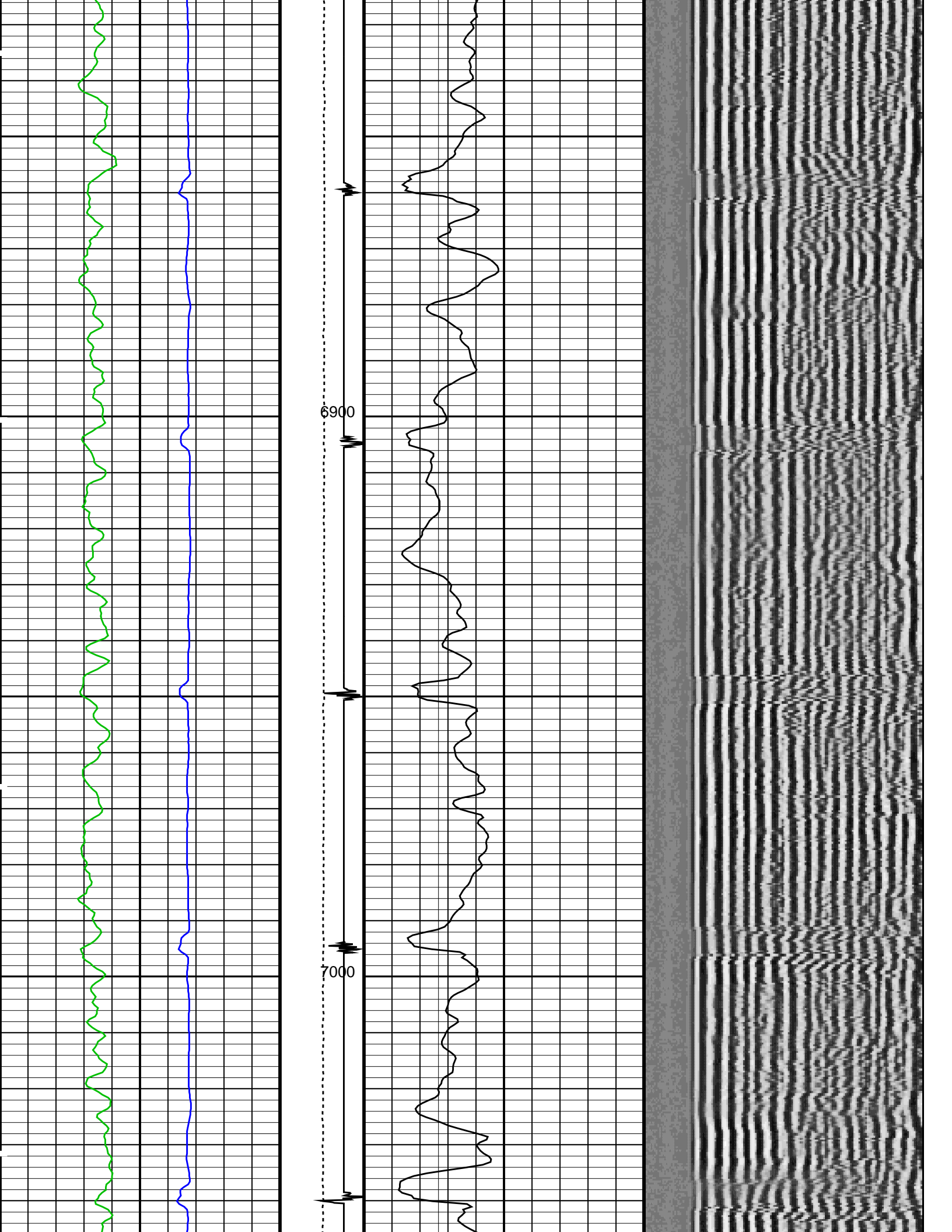


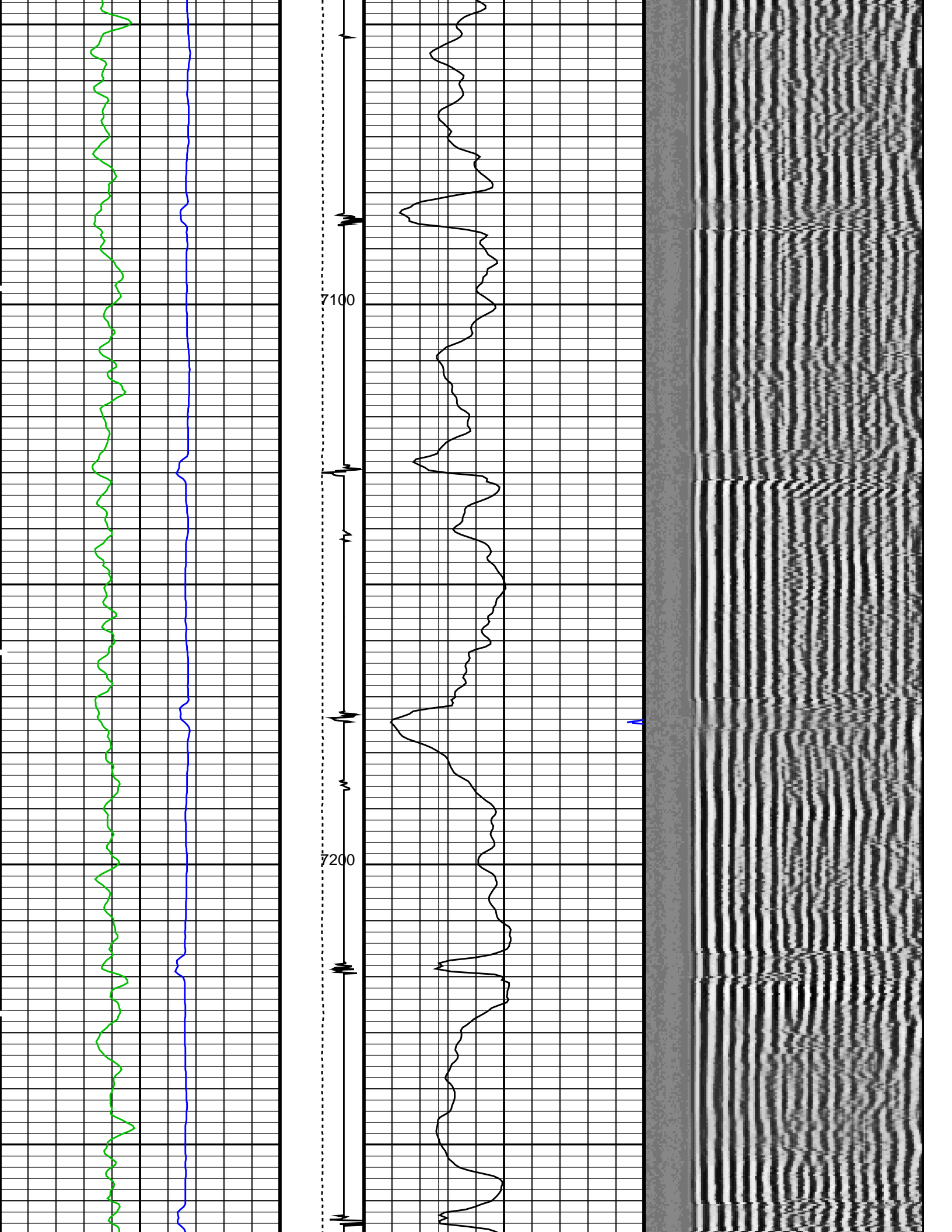


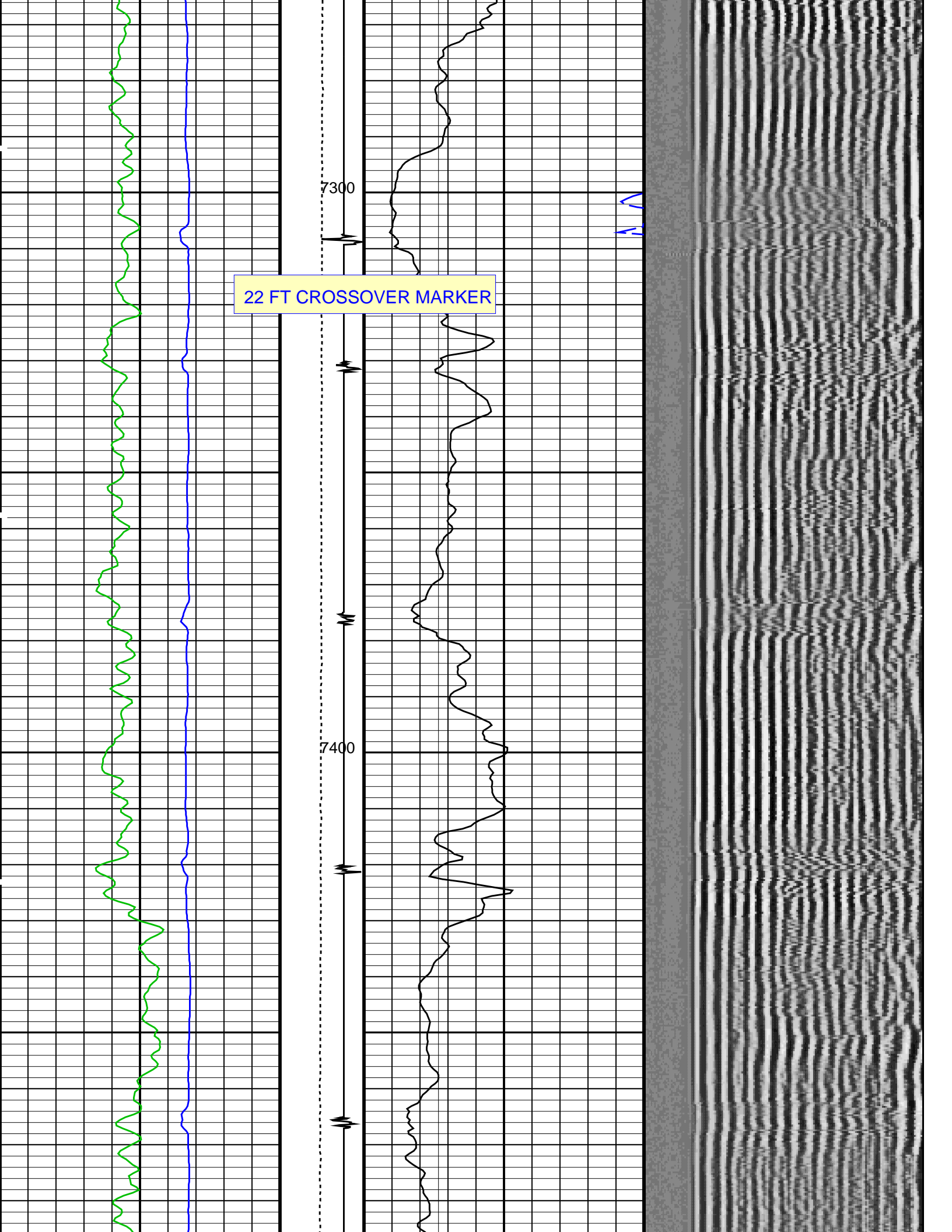


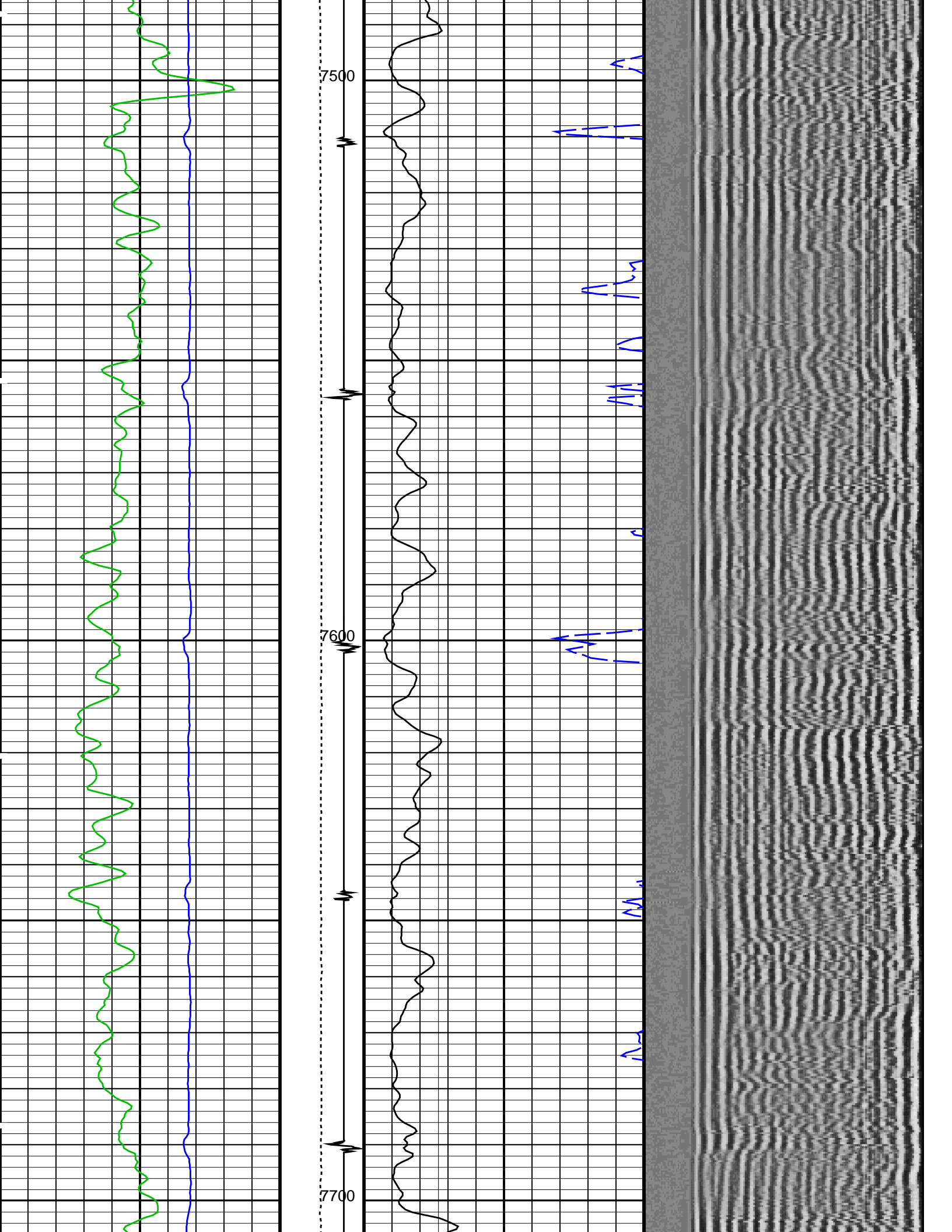


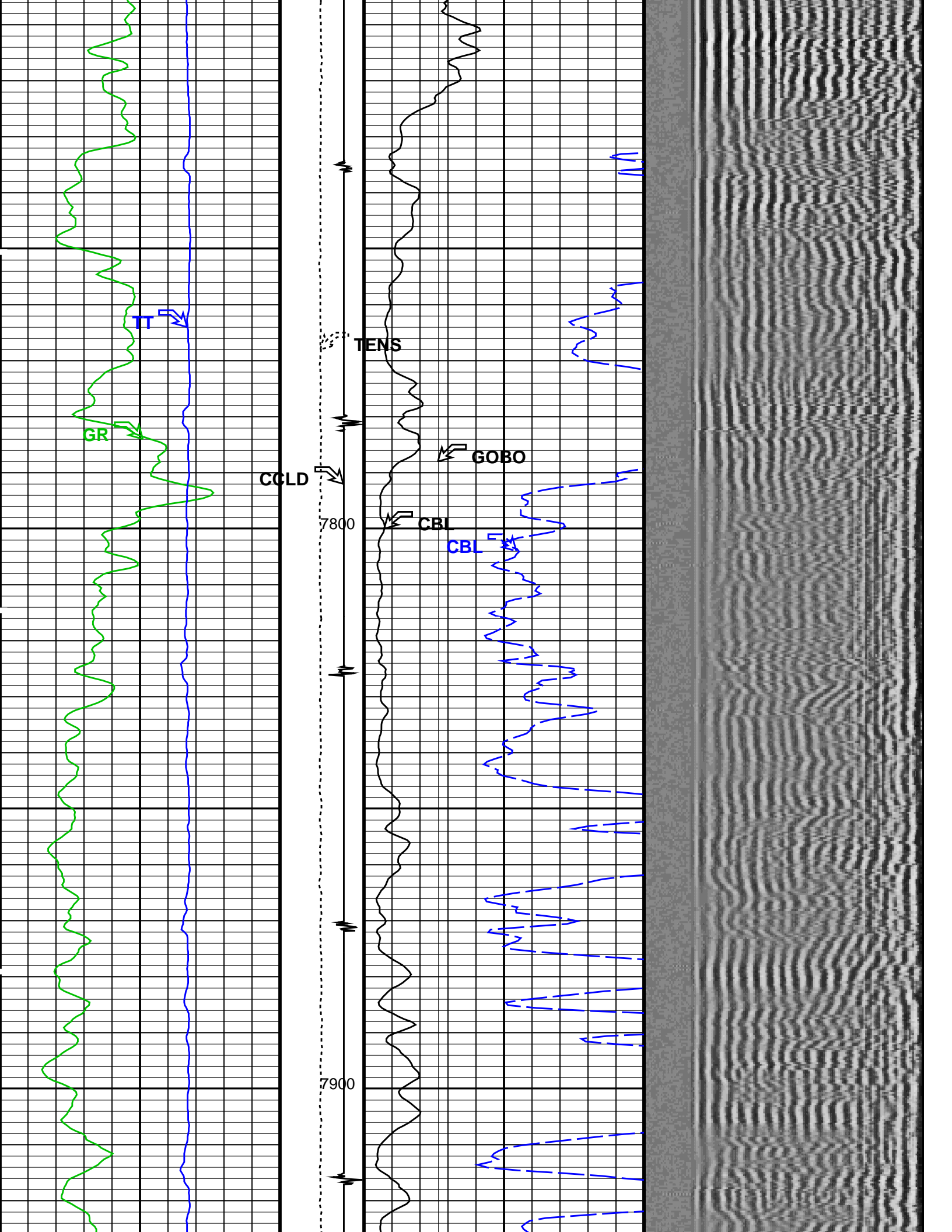


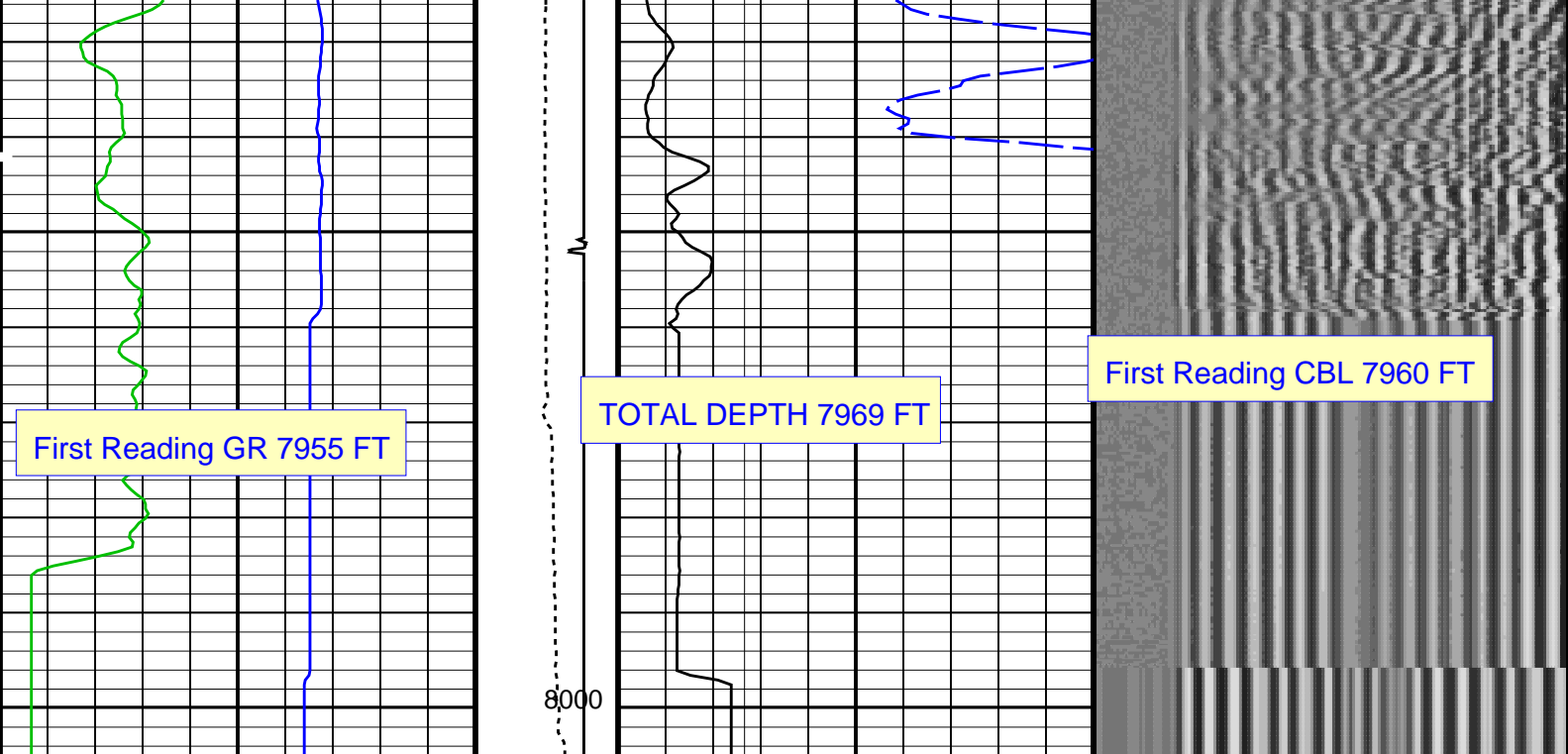












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min Amplitude Max 200 VDL VariableDensity (VDL) (US) 1200
0	200	2000 0	0 10	
Transit Time (TT) (US)		Discriminated CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)	
400	200	3 -1	0 100	
			Good Bond (GOBO) (MV)	
			0 10	
			GoodBond From ACBL to GOBO	

PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 10-Jul-2015 11:05

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	6.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	7969	FT

Input DLIS Files

DEFAULT	SCMT_PSP_022LUP	FN:21	PRODUCER	10-Jul-2015 08:26	7999.0 FT	16.2 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_028PUP	FN:27	PRODUCER	10-Jul-2015 11:05
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Schlumberger

REPEAT PASS (0PSI) CBL-VDL

MAXIS Field Log

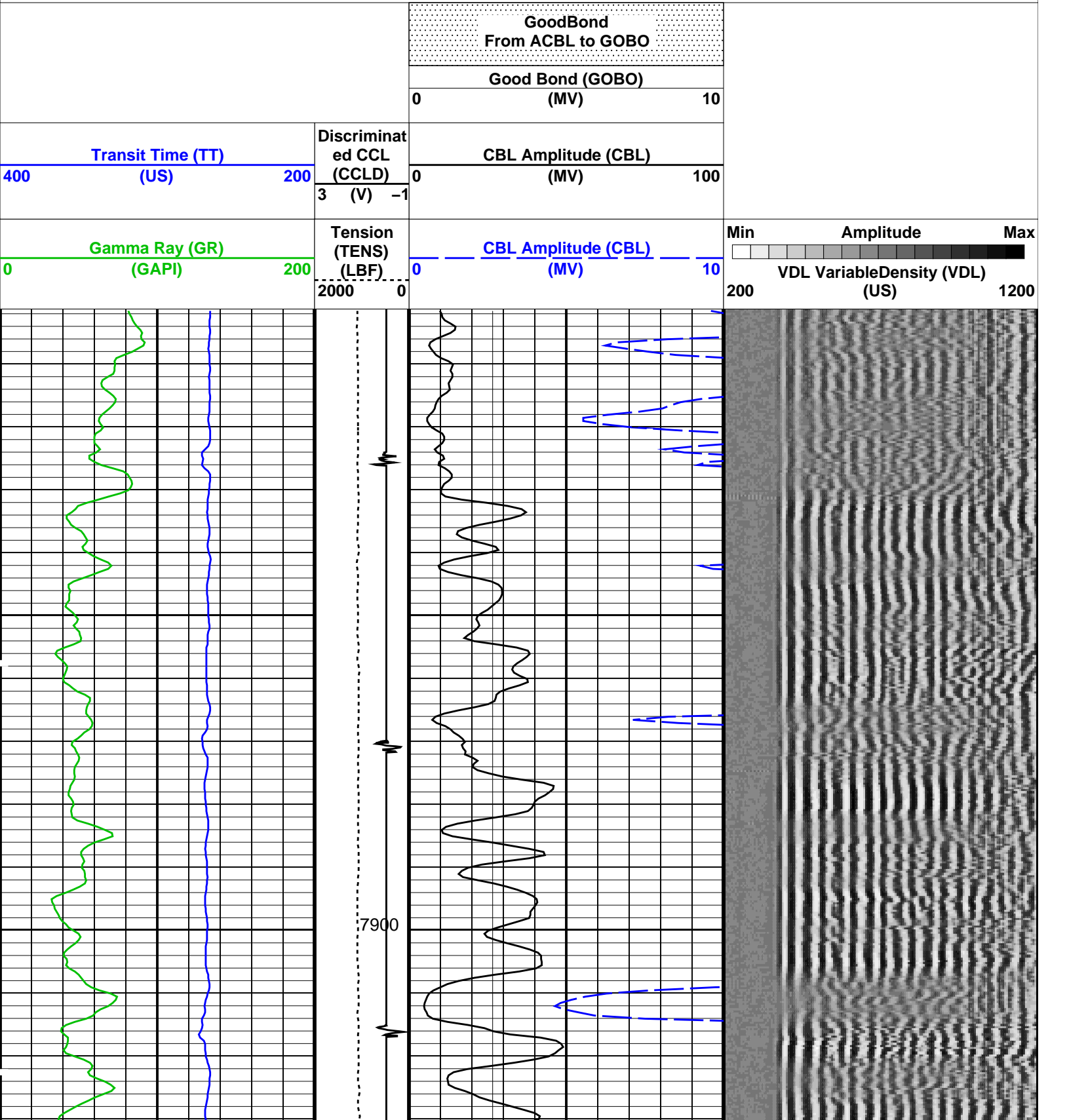
Output DLIS Files

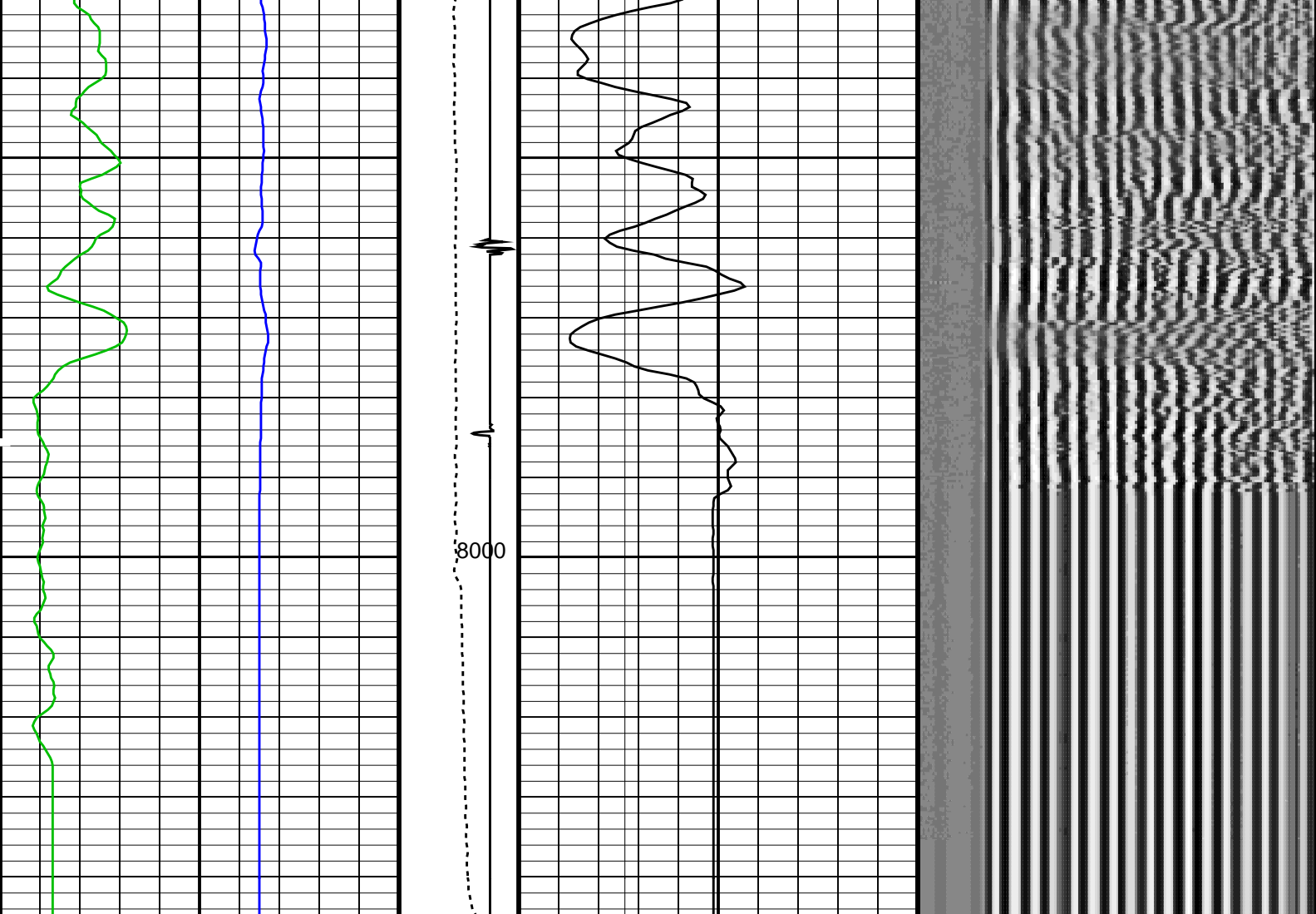
OP System Version: 19C0-187

SCMT-CB19C0-187PSPT19C0-187

PIP SUMMARY

Time Mark Every 60 S





Gamma Ray (GR) (GAPI)	0	200	Tension (TENS) (LBF)	2000	0	CBL Amplitude (CBL) (MV)	0	10	Min	Amplitude	Max
Transit Time (TT) (US)	400	200	Discriminat ed CCL (CCLD) (V)	3	-1	CBL Amplitude (CBL) (MV)	0	100	VDL VariableDensity (VDL) (US)		
						Good Bond (GOBO) (MV)	0	10			
						GoodBond From ACBL to GOBO					

PIP SUMMARY

Time Mark Every 60 S
Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 10-Jul-2015 11:11

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	71 MV
Minimum Sonic Amplitude	1.15842 MV (100% Cement)

In Free Pipe Section		MAP Minimum Sonic Amplitude	2.63842 MV (80% Cement)
			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		

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DLIS Name	Description	Value	
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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
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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	5.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	7969	FT

Input DLIS Files						
DEFAULT	SCMT_PSP_020LUP	FN:19	PRODUCER	10-Jul-2015 08:12	8040.0 FT	7795.7 FT
Output DLIS Files						
DEFAULT	SCMT_PSP_030PUP	FN:29	PRODUCER	10-Jul-2015 11:11		

MAXIS Field Log

Client: ANADARKO

Field: WATTENBERG

Well: TROUDT 14C-33HZ

Run date: 10-Jul-2015

Tool: PSP

Sub Type: PBMS

Sensor: 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

Client: ANADARKO

Field: WATTENBERG

Well: TROUDT 14C-33HZ

Run date: 10-Jul-2015

Tool: PSP

Sub Type: PBMS

Sensor: Sapphire

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

Sensor Serial NB1863

Calib Date ddmmyy261007

Matrix Size66

Coeff CRCF756

COEFFICIENTS FOR SAPPHIRE PBMS-A.1863 S/N:

Pres Coeff

T***0

T***1

T***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	+.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

Field:WATTENBERG

Well:TROUDT 14C-33HZ

Run date:10-Jul-2015

Tool:PSP

Sub Type:PBMS

Sensor:GR

PBMS Gamma Ray

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

RESISTORS FOR GR SENSOR N.33499,TOOL PBMS-AA1863. SENSOR S/N:

33499

100402

12

DFA9

GR HV Rt

Rt**0

Rt**1

Rt**0

+.150000000000e+04

+.241000000000e+04

Client:ANADARKO

Field:WATTENBERG

Well:TROUDT 14C-33HZ

Run date:10-Jul-2015

Tool:PSP

Sub Type:PBMS

Sensor:WellTemp RTD

PBMS RTD Well Thermometer

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: TROUDT 14C-33HZ

Field: WATTENBERG

County: WELD

State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GR-CCL