

Schlumberger

Company: ANADARKO E P ONSHORE LLC

Well: Caboose 1248 21 44

Field: Wildcat

County: Cheyenne

State: Colorado

RESERVOIR SATURATION TOOL-SIGMA
CEMENT BOND LOG
GR, TEMP, PRESSURE, CCL

County: Cheyenne
Field: Wildcat
Location: SHL: SESE 675 FSL & 1100 FEL
Well: Caboose 1248 21 44
Company: ANADARKO E P ONSHORE LLC

LOCATION			
SHL: SESE 675 FSL & 1100 FEL		Elev.: K.B. 4273.00 ft	
		G.L. 4254.00 ft	
		D.F. 4272.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 4254.00 ft	
Log Measured From:	Kelly Bushing	19.00 ft	above Perm. Datum
Drilling Measured From:	Kelly Bushing		
API Serial No. 05-017-07780-00		Section 21	Township 15S Range 48W

				Run 1	Run 2	Run
PVT DATA						
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		13-Feb-2014	
Run Number	2		
Depth Driller	5919 ft		
Schlumberger Depth	5399 ft		
Bottom Log Interval	5390 ft		
Top Log Interval	16 ft		
Casing Fluid Type	Water Based Mud		
Salinity			
Density	8.55 lbm/gal		
Fluid Level	0 ft		
BIT/CASING/TUBING STRING			
Bit Size	8.750 in		
From			
To			
Casing/Tubing Size	7.000 in		
Weight	26 lbm/ft		
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom	13-Feb-2014	18:45	
Unit Number	Location	2135	Fort Morgan
Recorded By	Shelby Langford		
Witnessed By	Justin		

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	Time				
Unit Number	Location				
Recorded By					
Witnessed By					

DEPTH SUMMARY LISTING

Date Created: 13-FEB-2014 21:29:41

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JA	Type:	CMTD-B/A	Type:	7-46P XS
Serial Number:	7027	Serial Number:	1919	Serial Number:	
Calibration Date:	20-AUG-2013	Calibration Date:	30-JAN-2014	Length:	22000 FT
Calibrator Serial Number:		Calibrator Serial Number:	78135	<div>Conveyance Method: Wireline</div> <div>Rig Type: LAND</div>	
Calibration Cable Type:	7-46P XS	Number of Calibration Points:	10		
Wheel Correction 1:	-5	Calibration RMS:	5		
Wheel Correction 2:	-3	Calibration Peak Error:	9		

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	Triple Combo
Reference Log Run Number:	1
Reference Log Date:	09-FEB-2014

Depth Control Remarks

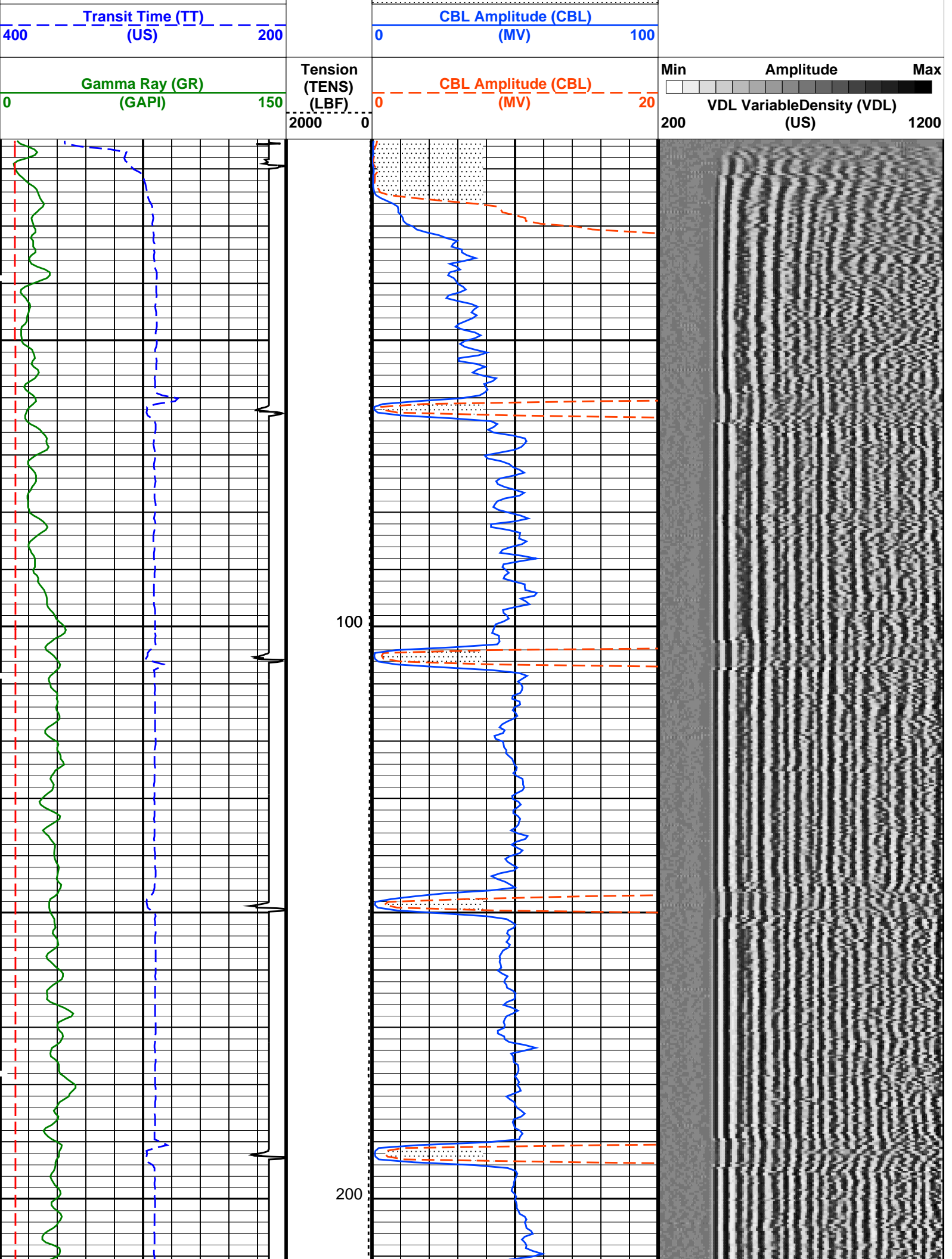
1. IDW is Primary Depth Control
2. Drum Counter is Secondary Depth Control
- 3.
- 4.
- 5.
- 6.

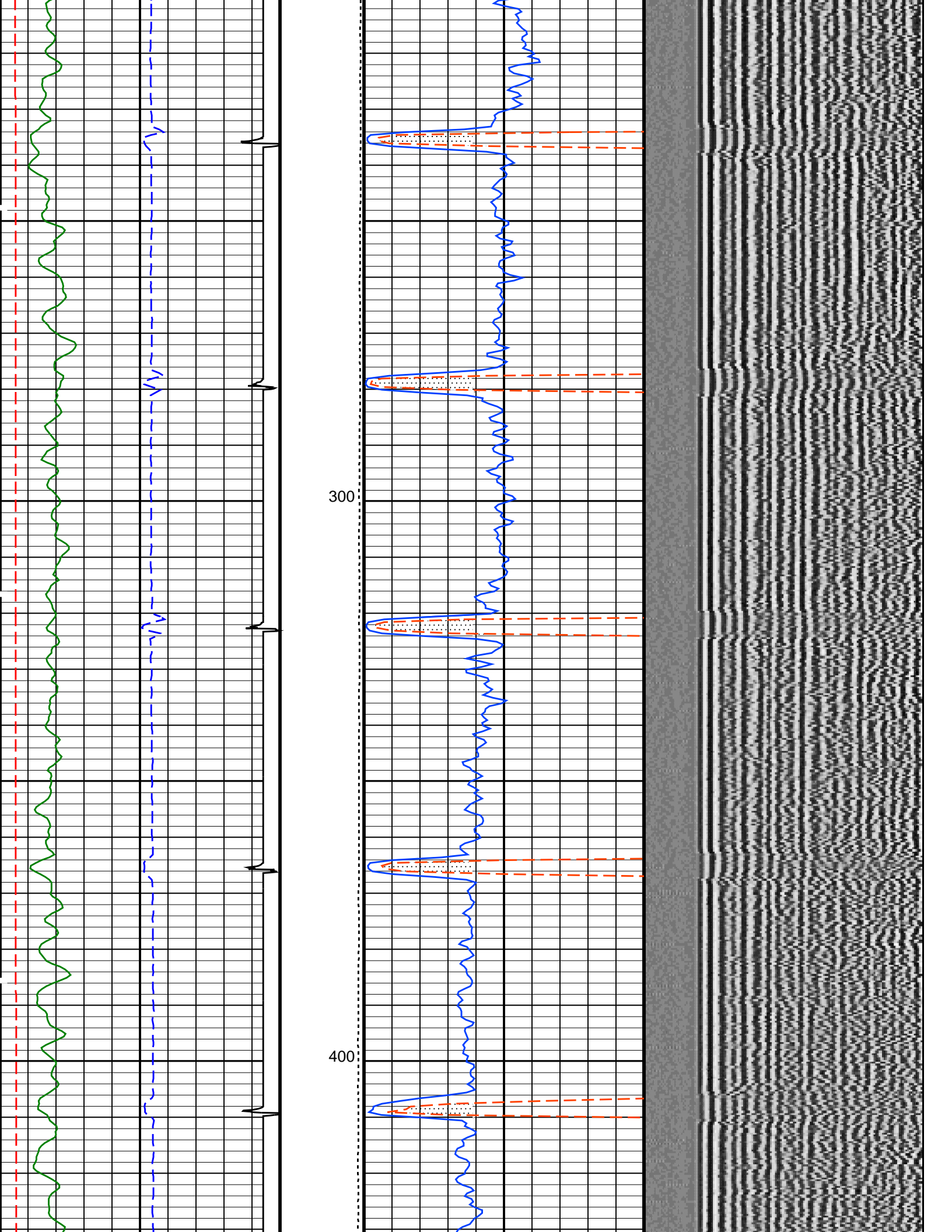
DISCLAIMER

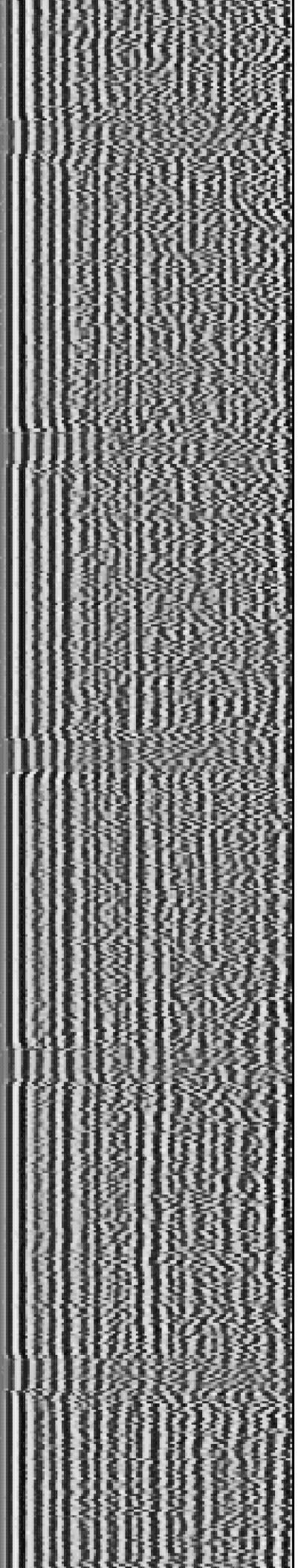
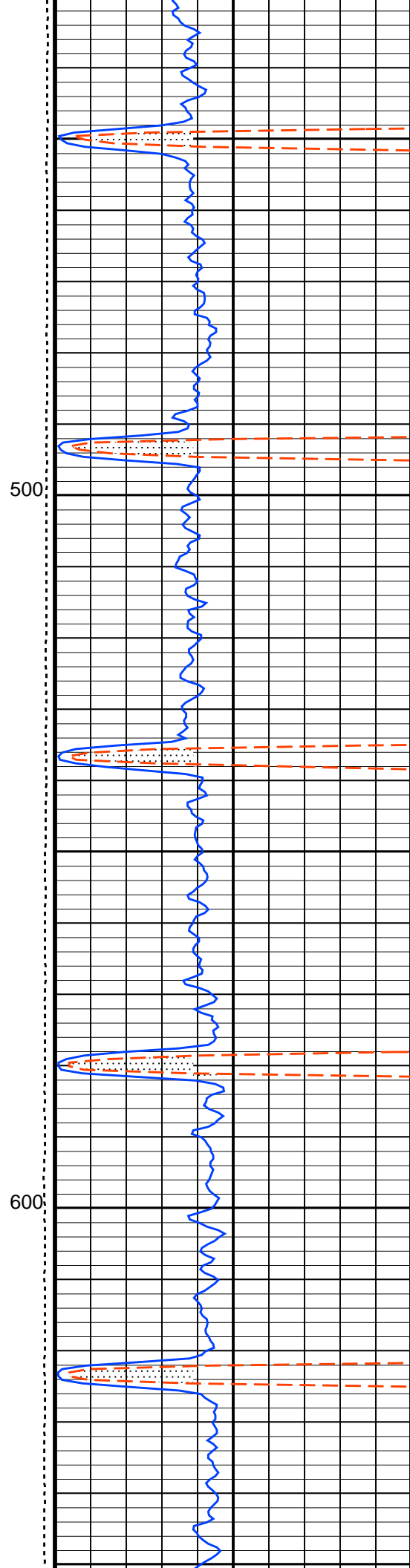
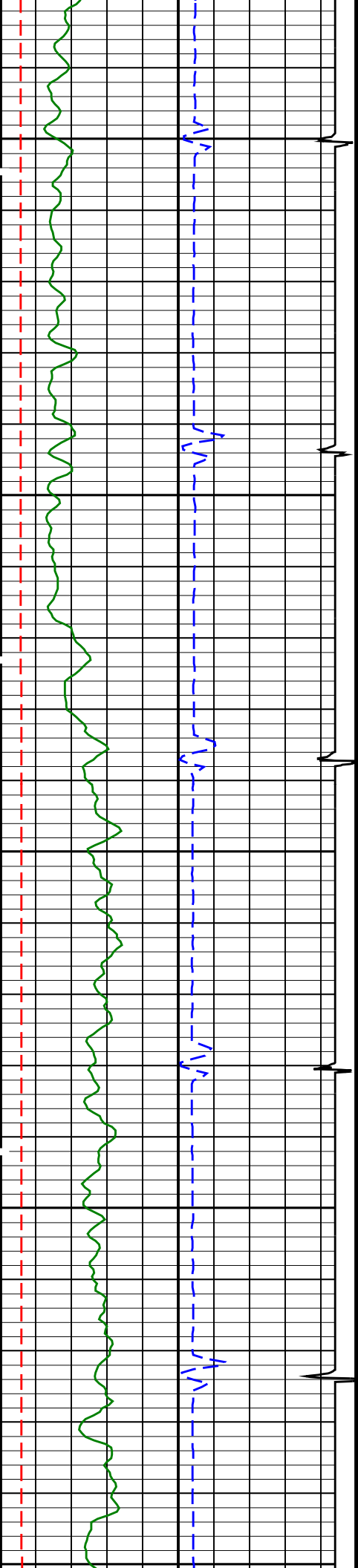
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

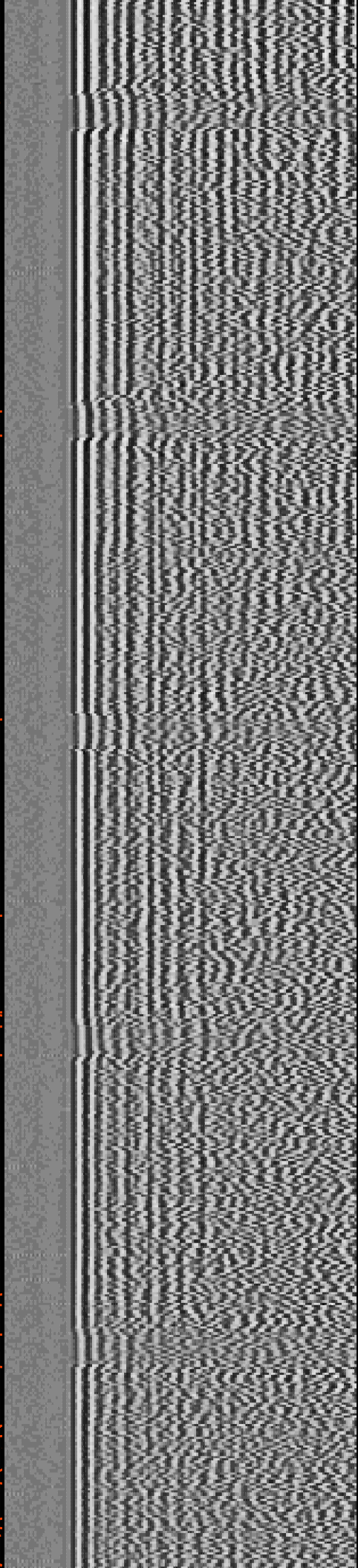
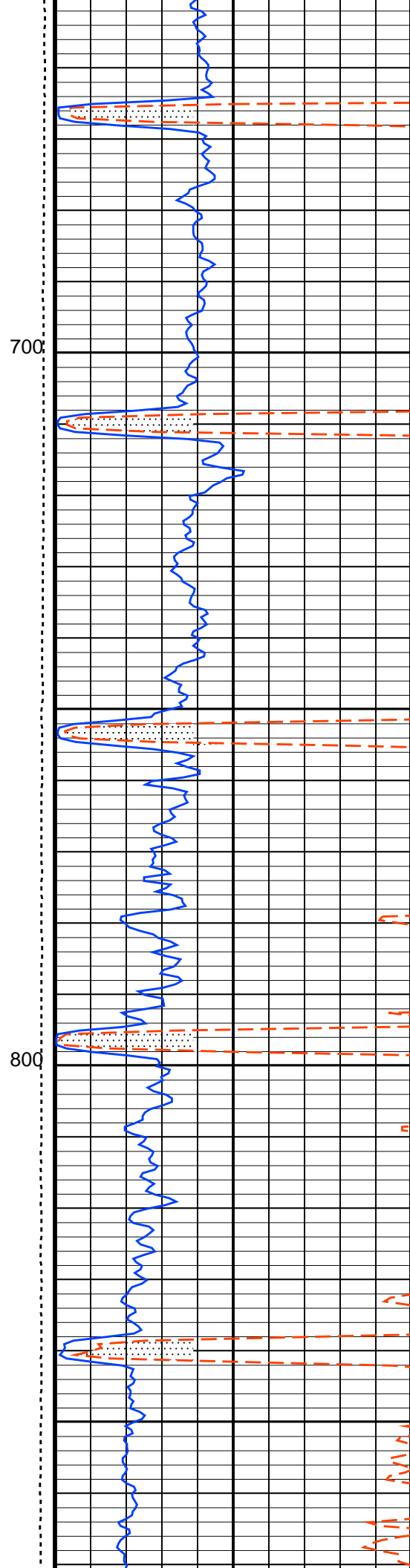
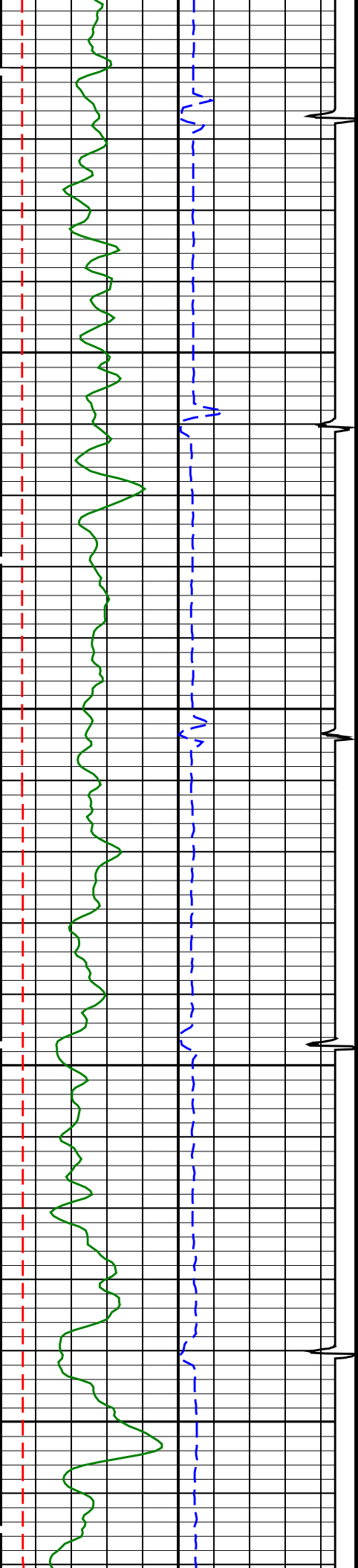
OTHER SERVICES1 OS1: NONE OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Correlated to open hole log ran by Schlumberger on 09-FEB-2014.	
Correlated to GR curve located at 5162' & 4320'	
Run 1. RST and CBL in Combo.	

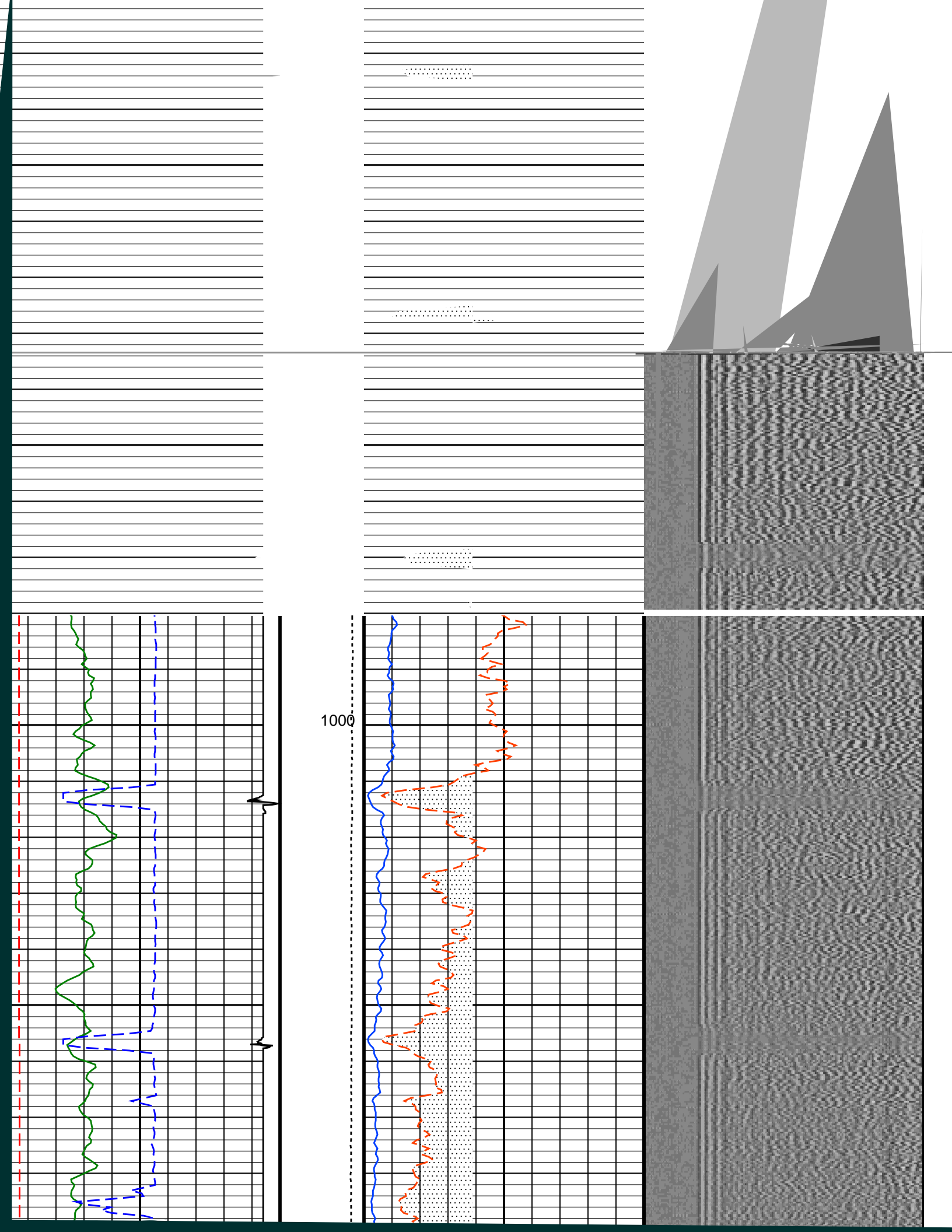
GOOD BOND
From ACBL to GOBO

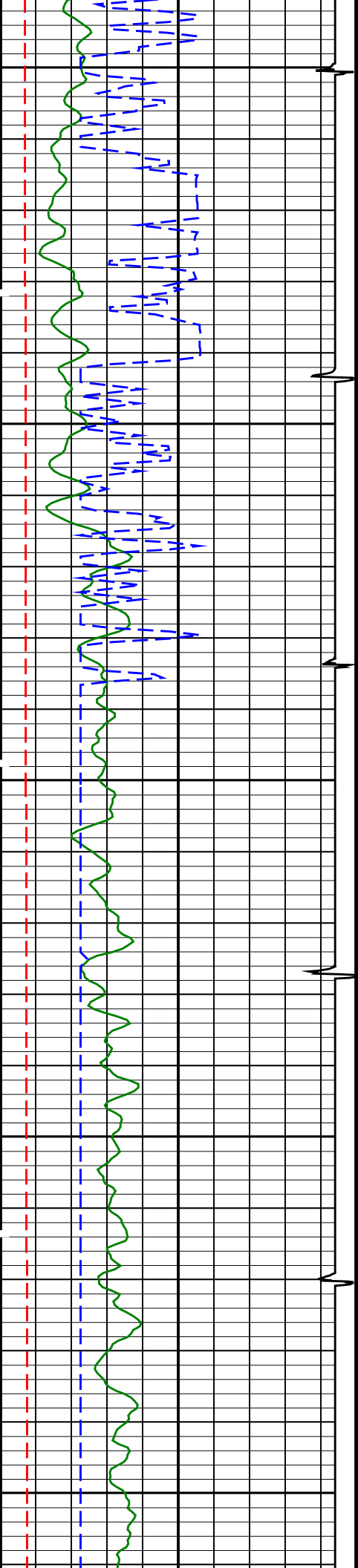








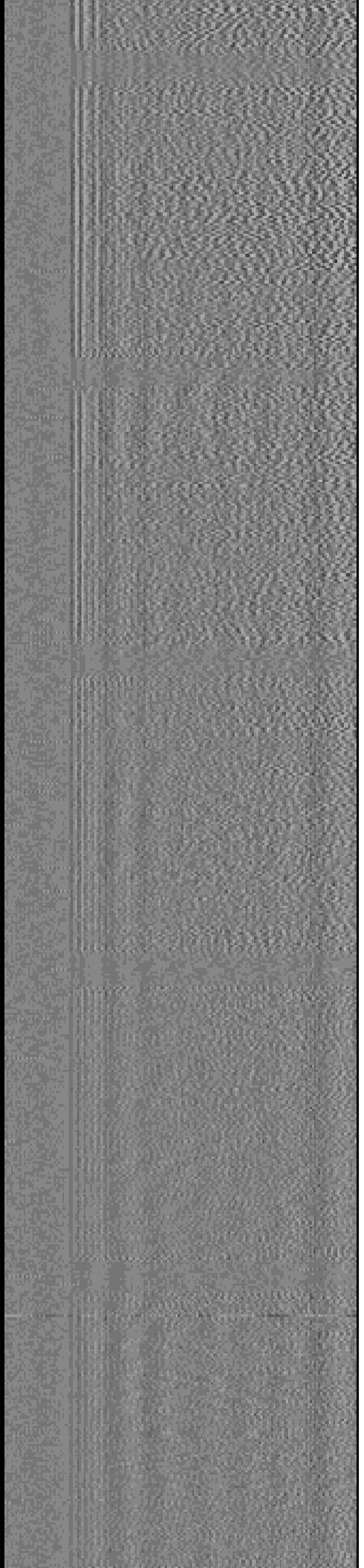
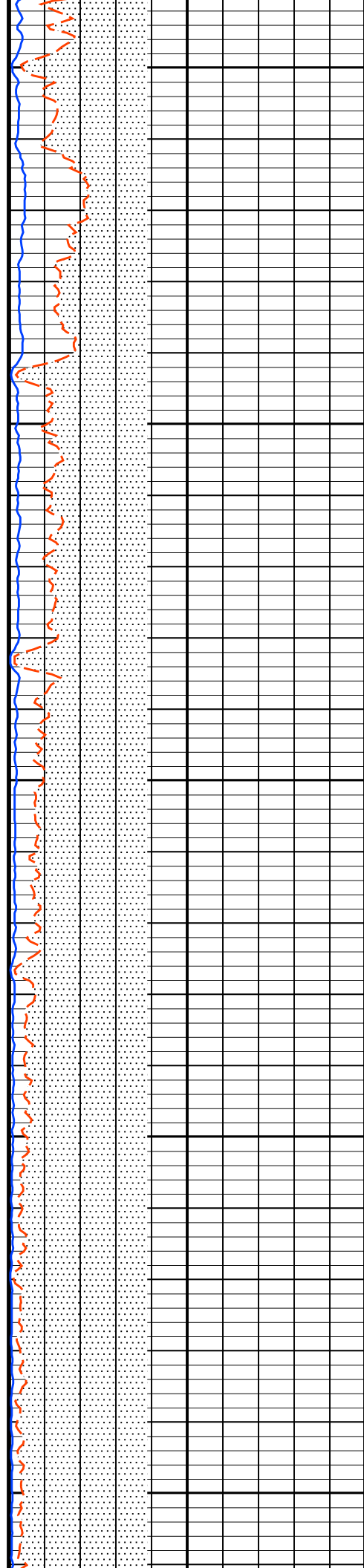


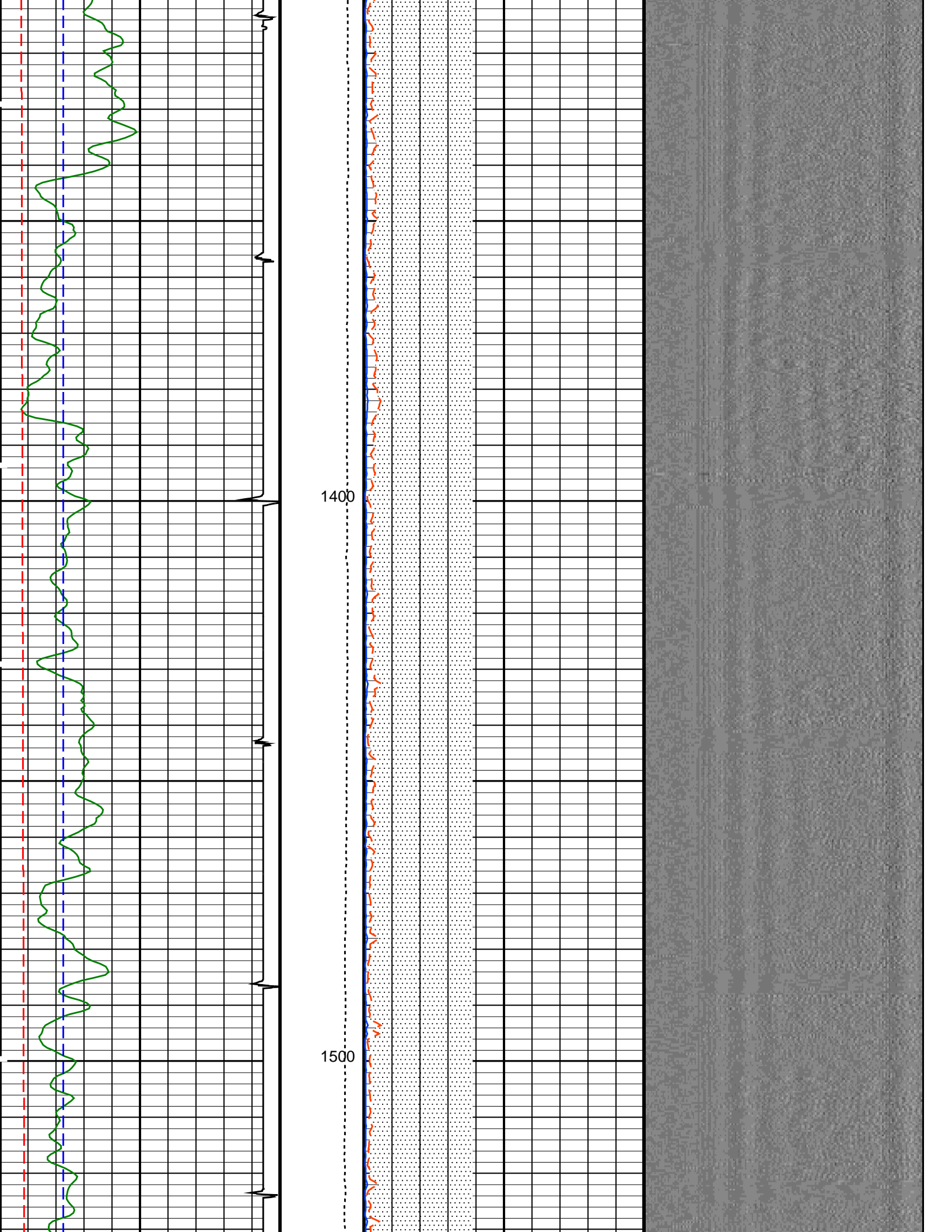


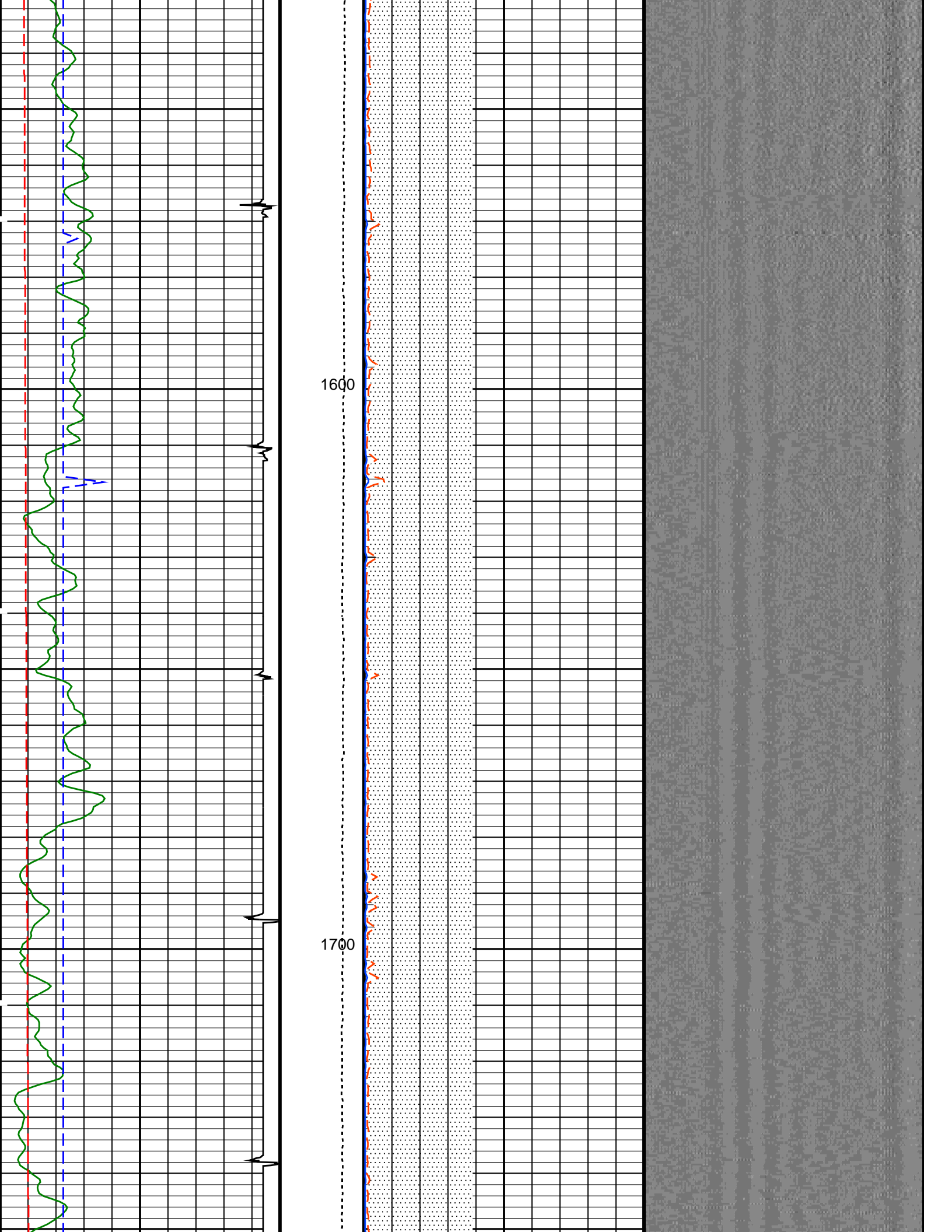
1100

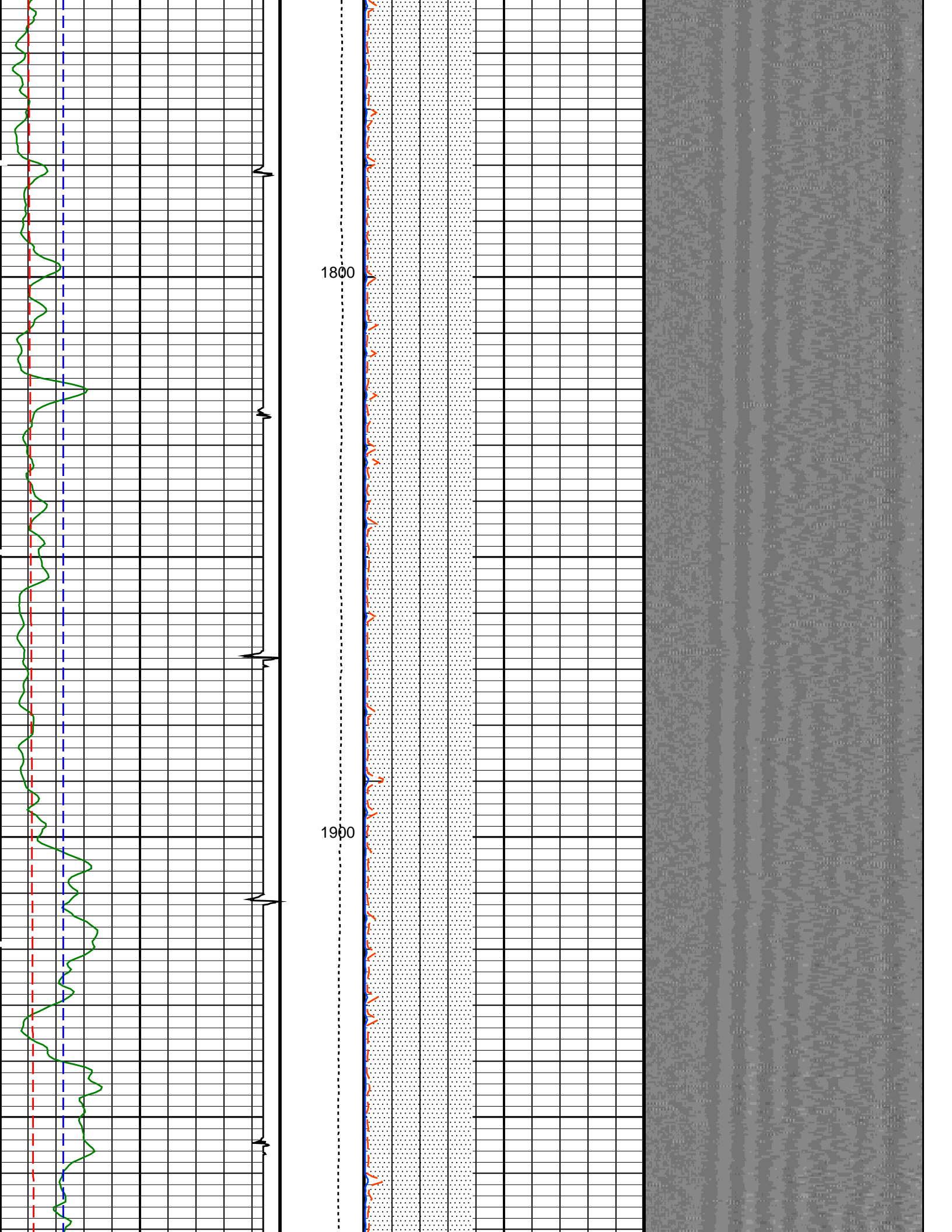
1200

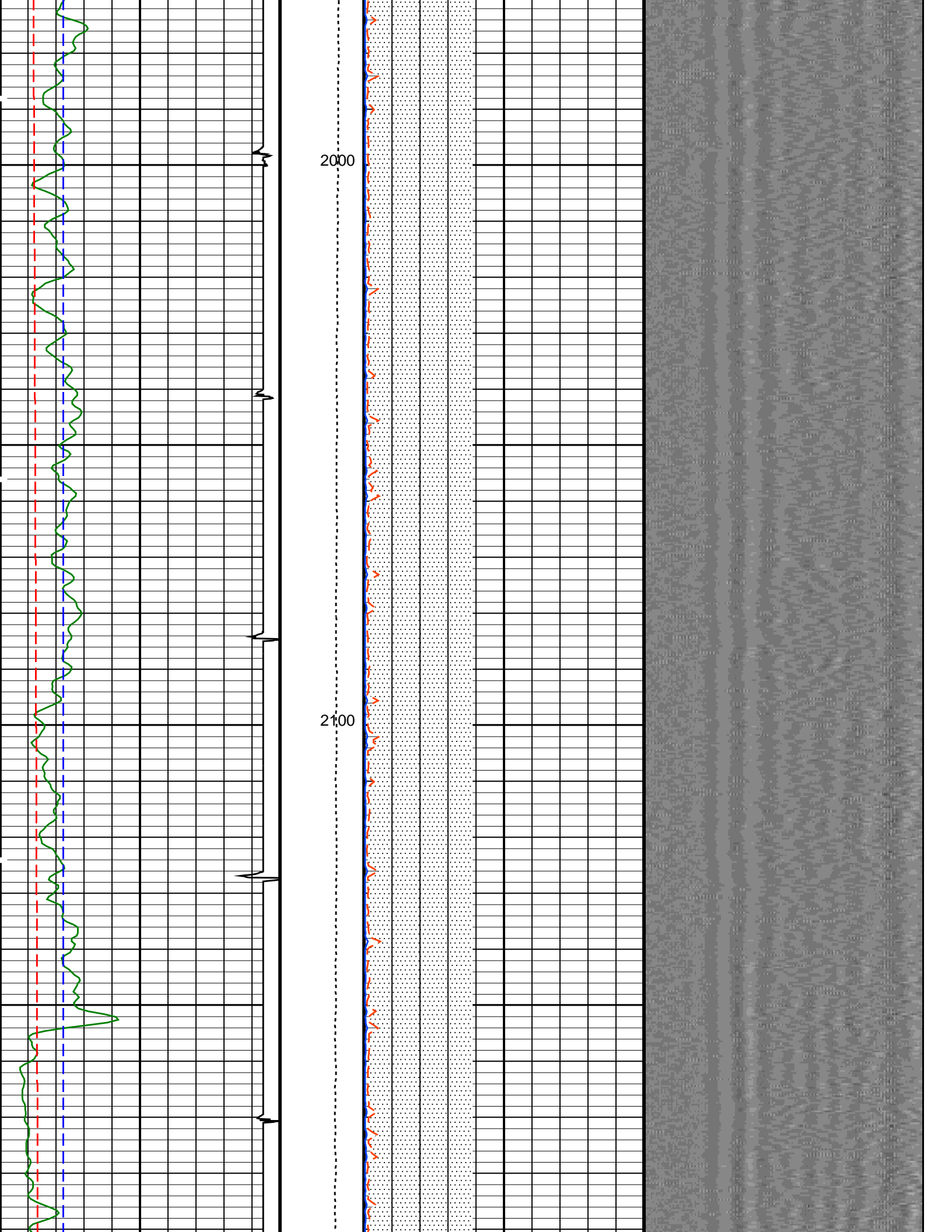
1300

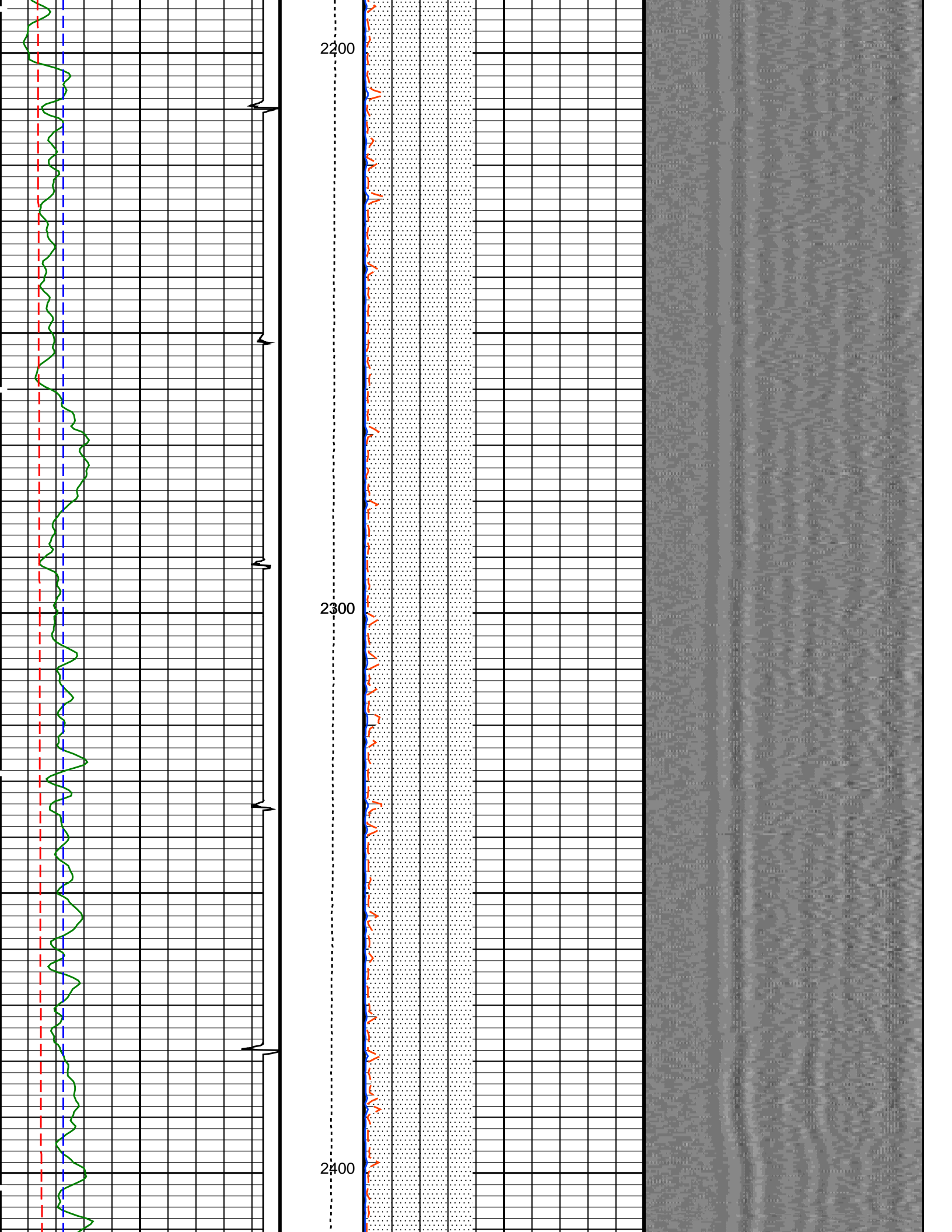


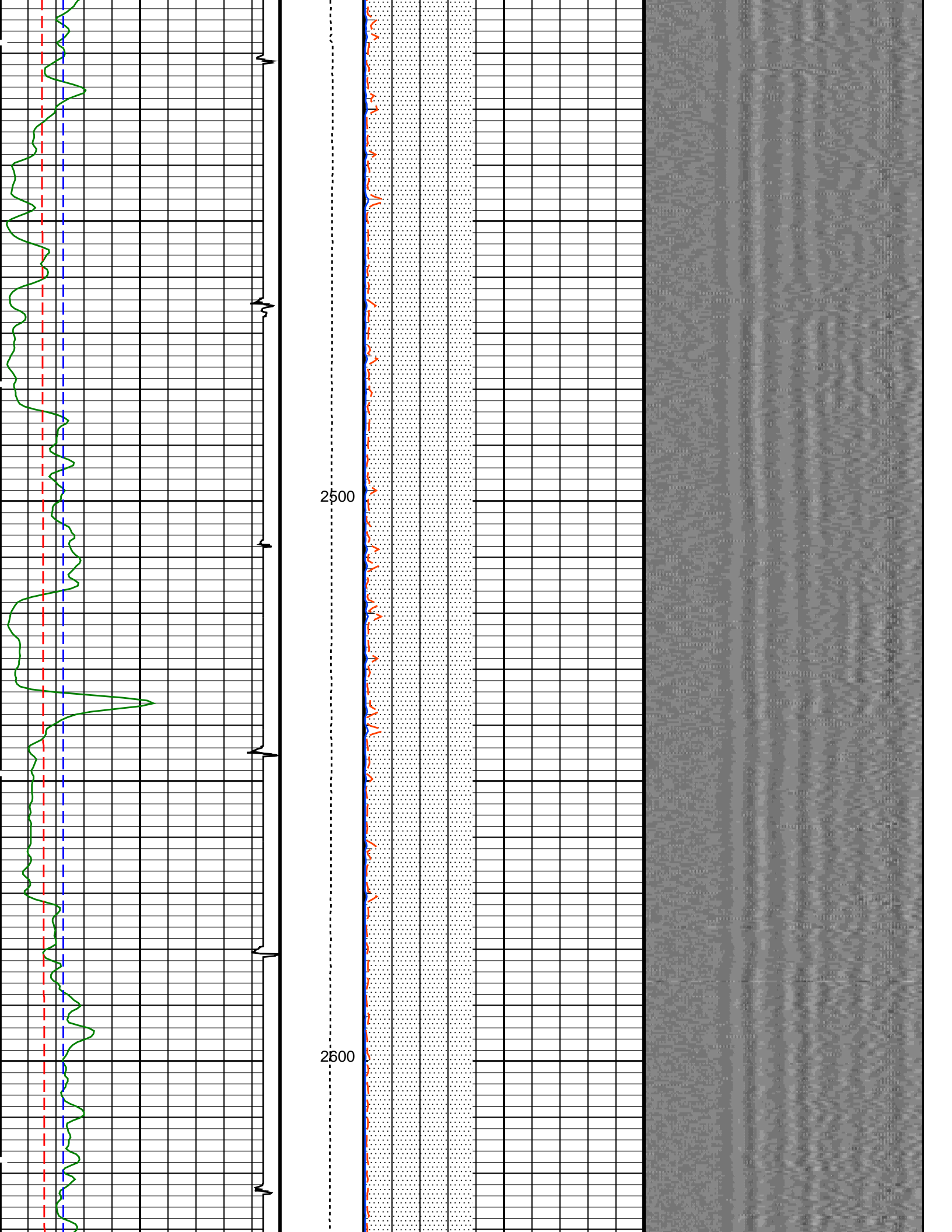


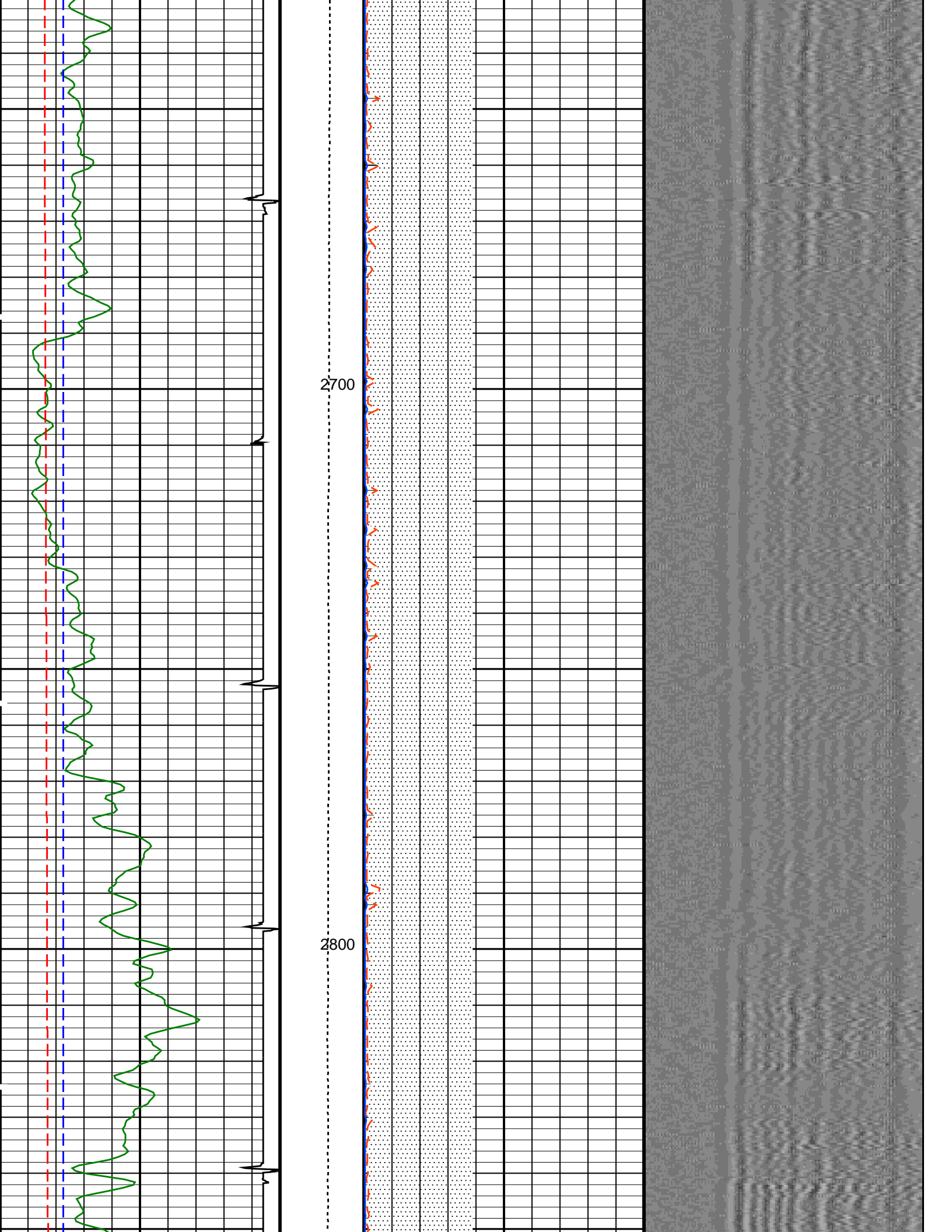


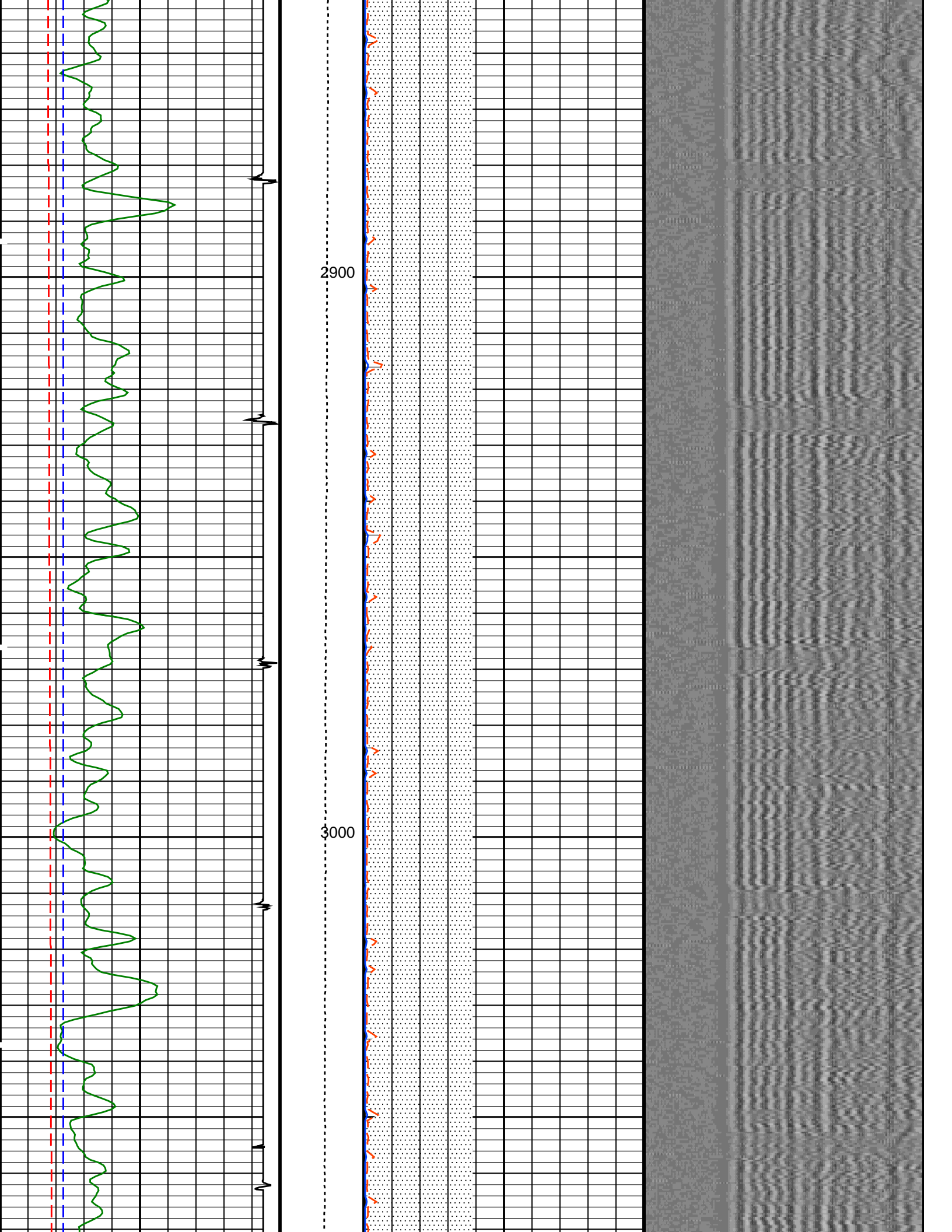


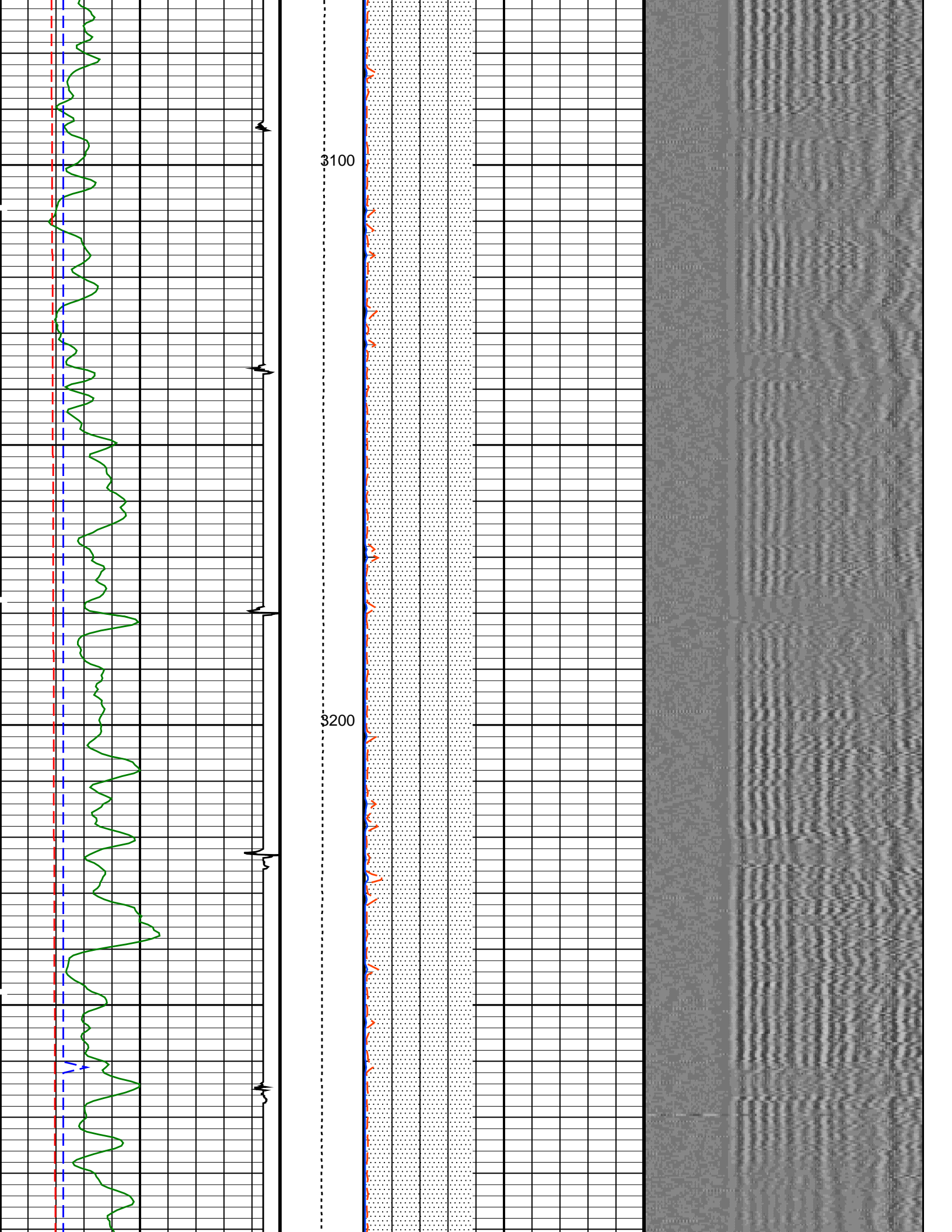


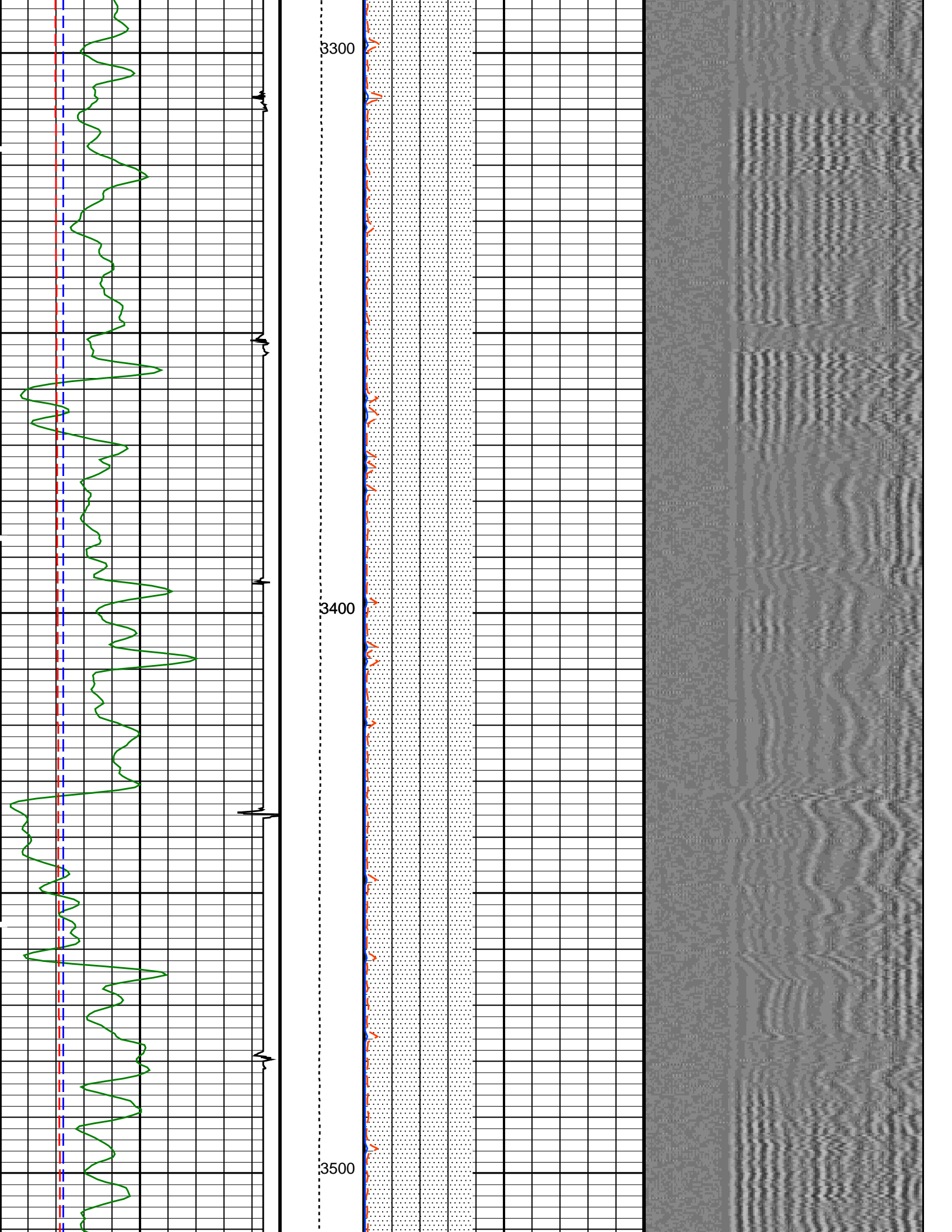


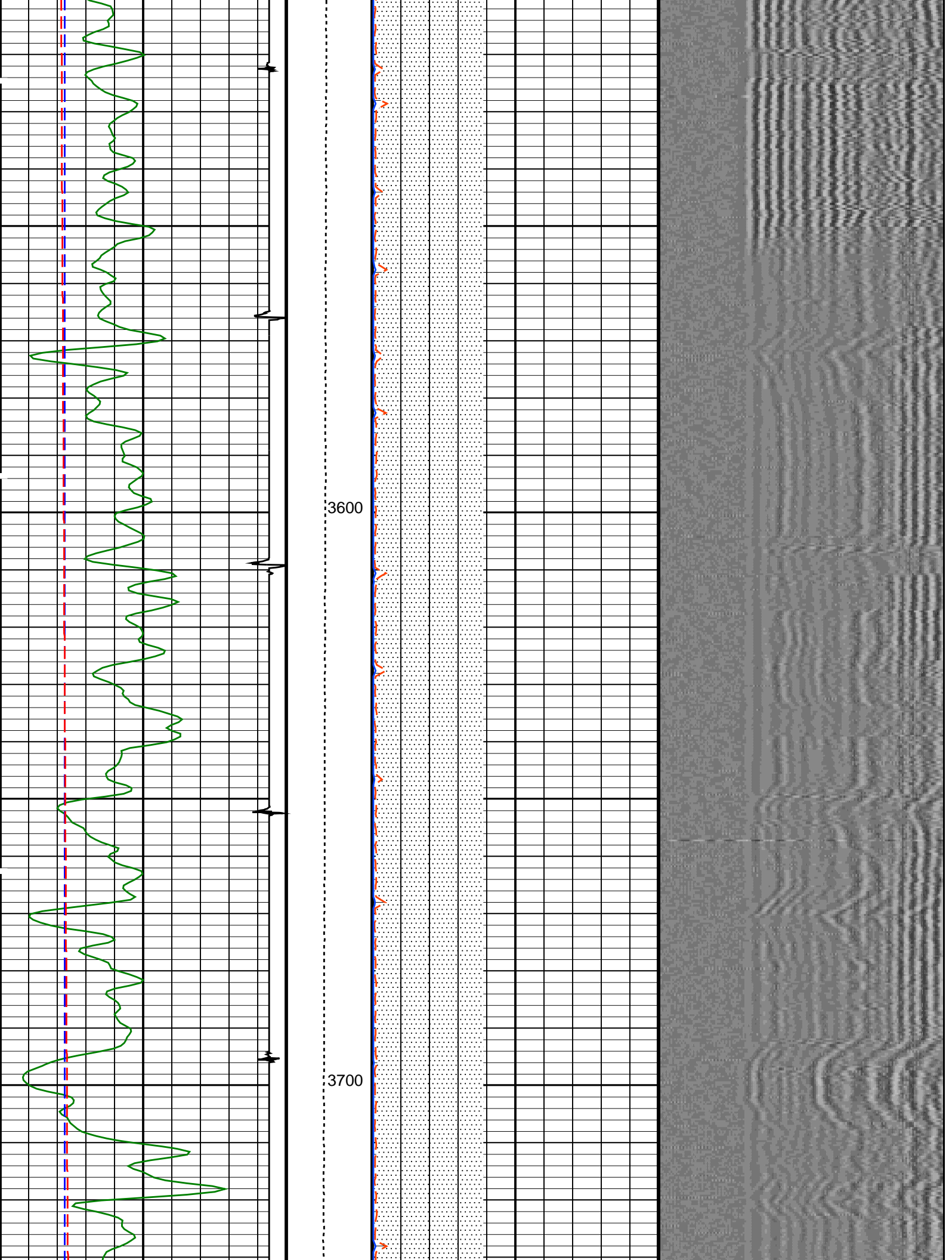


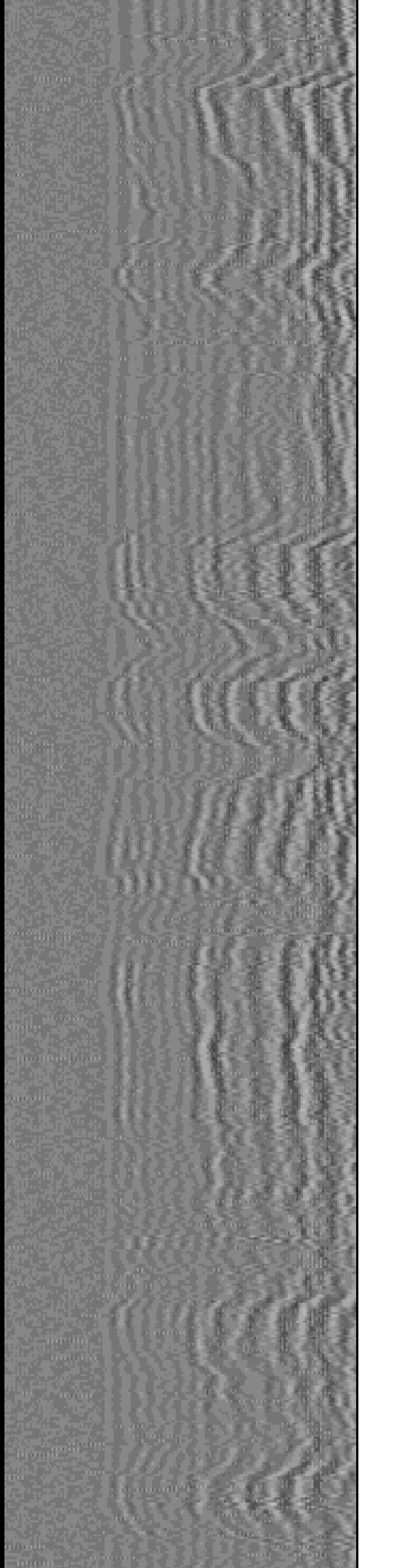
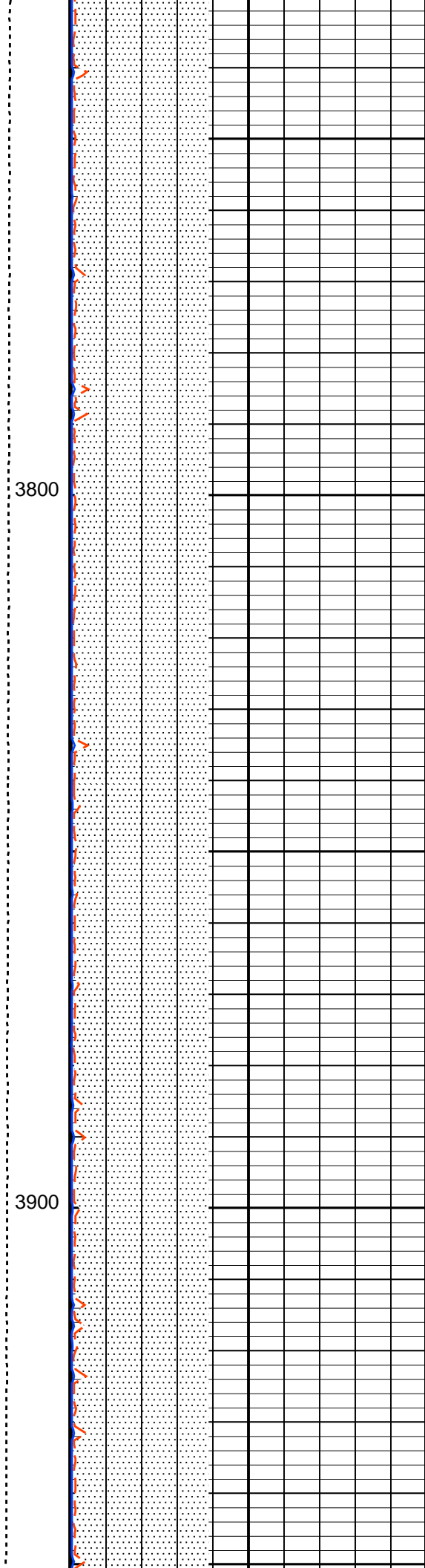
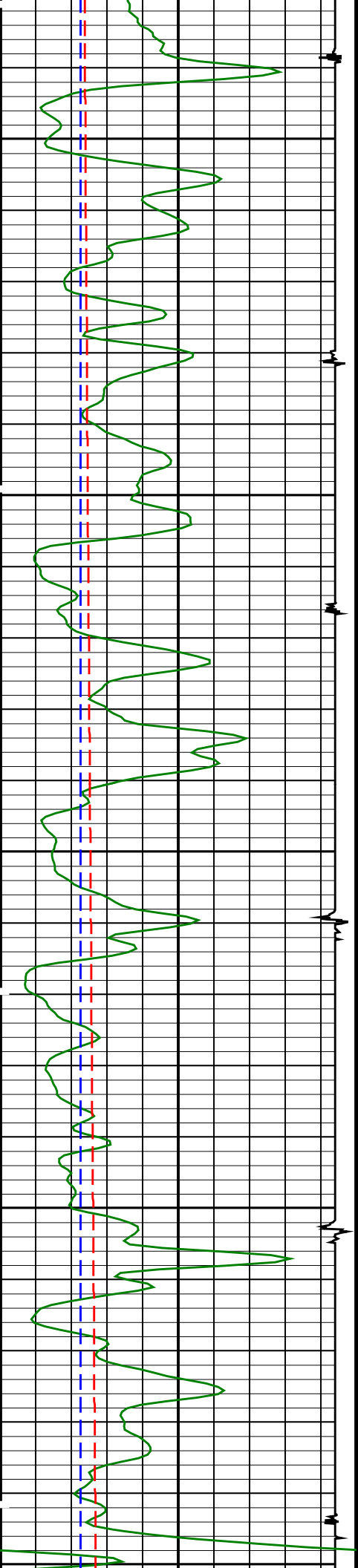


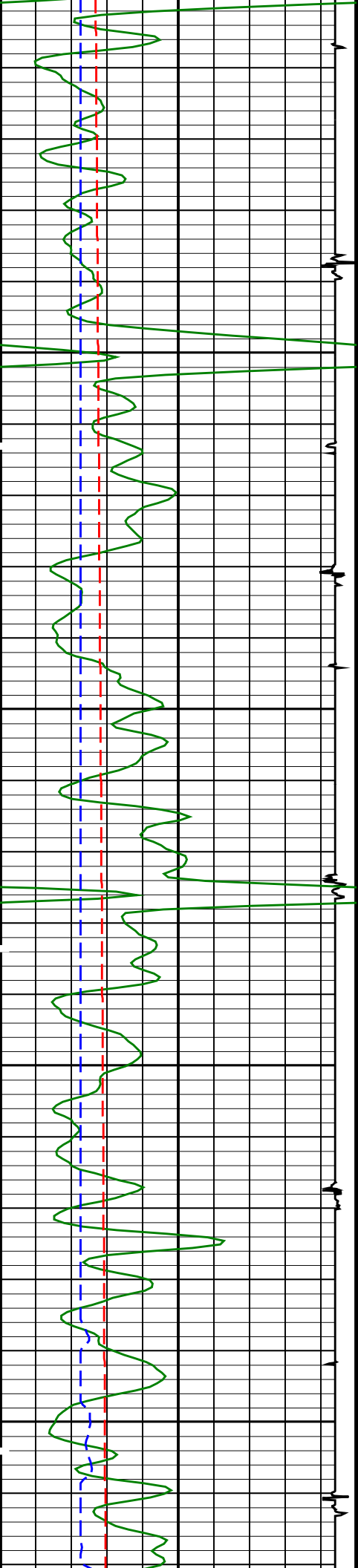






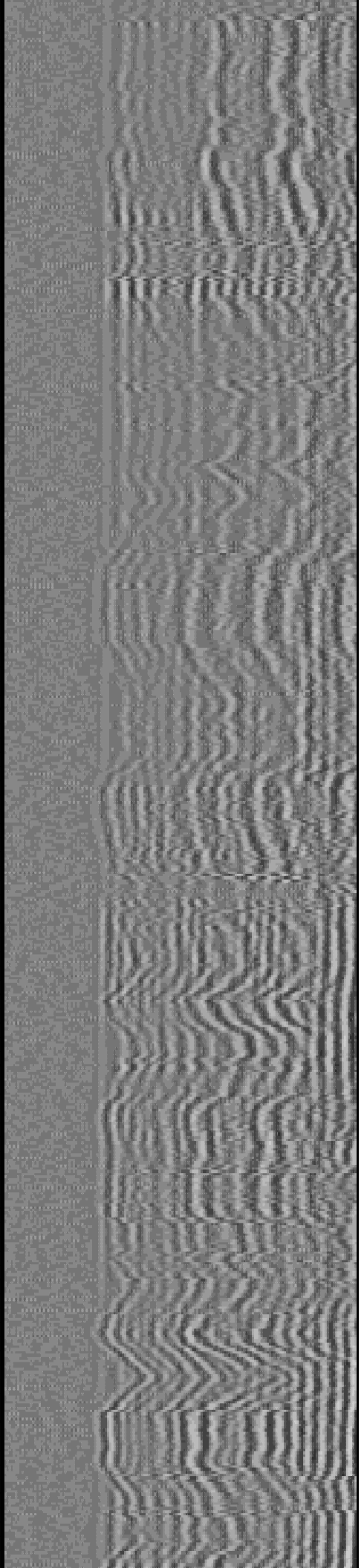
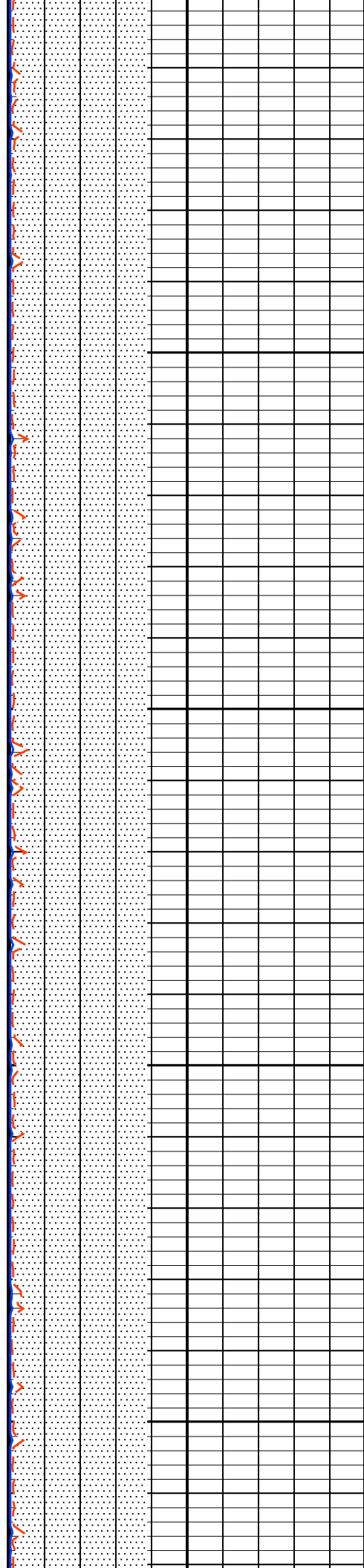


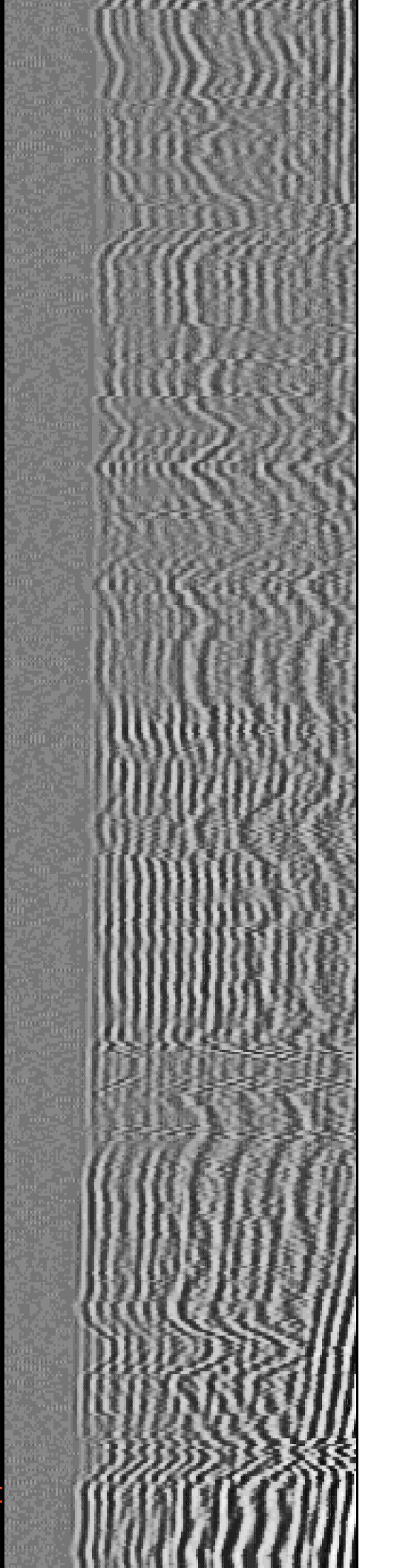
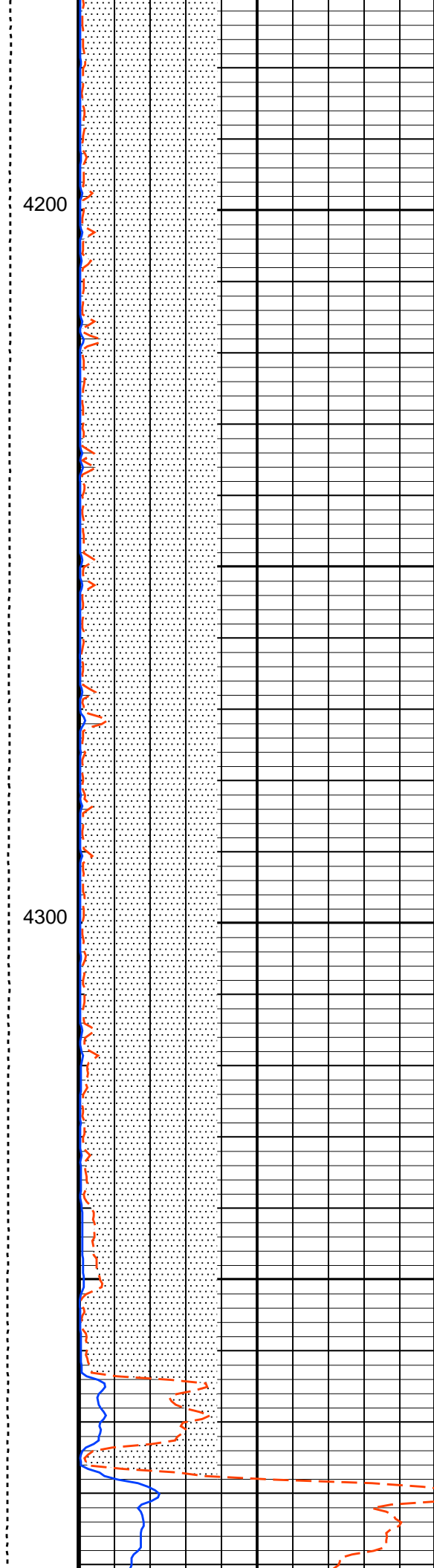
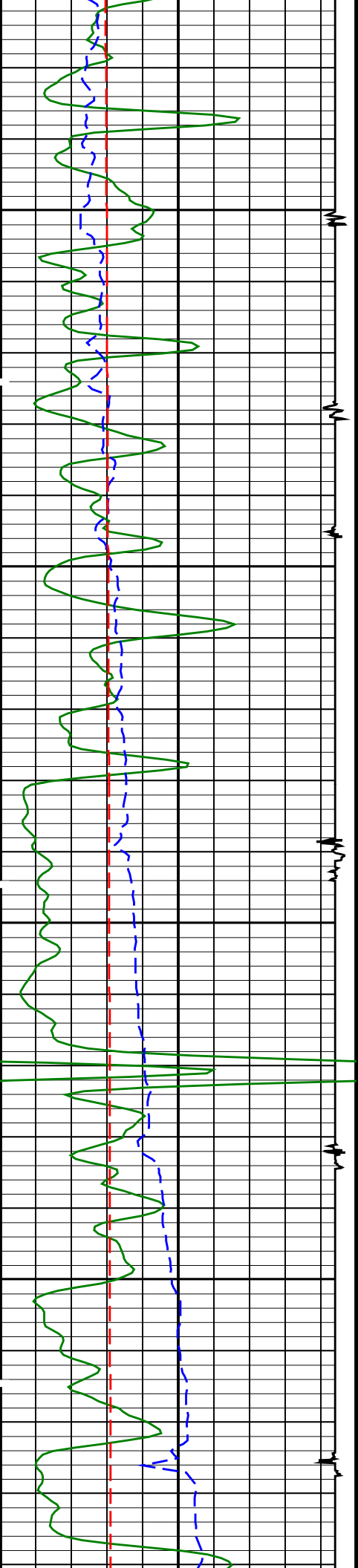


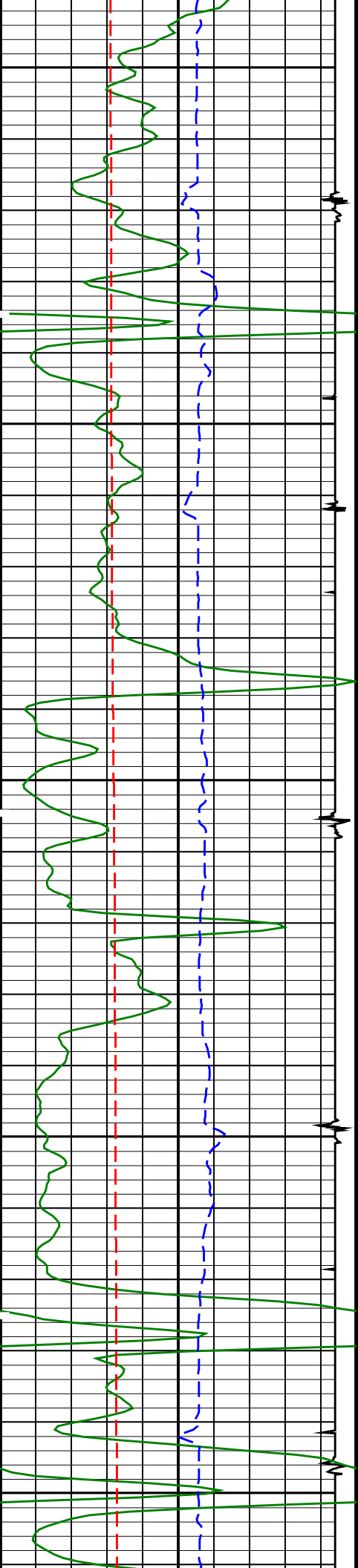


4000

4100



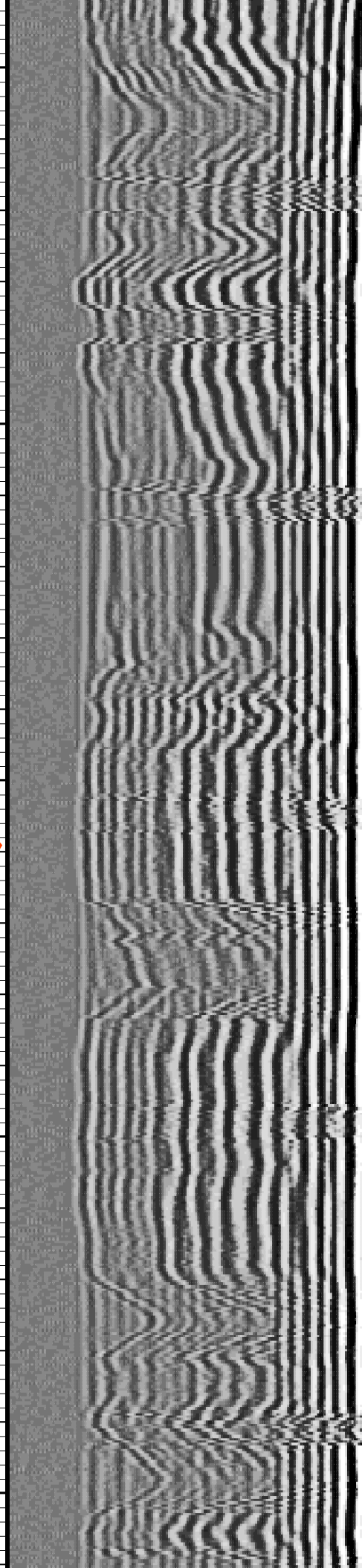
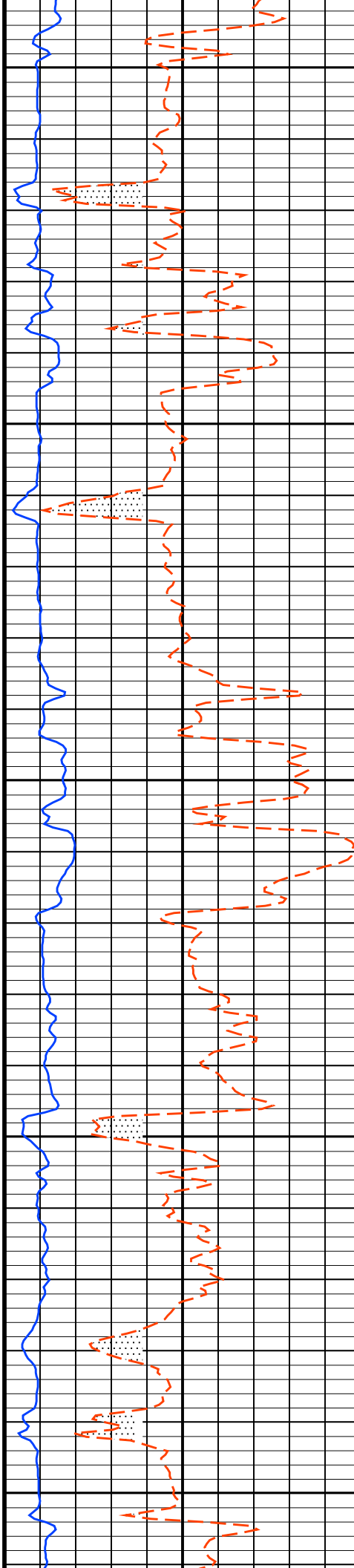


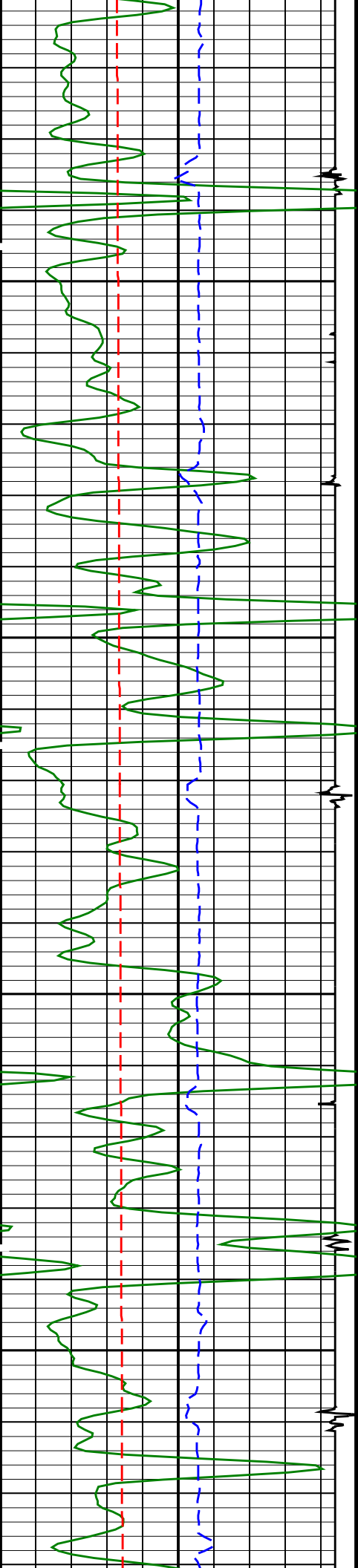


4400

4500

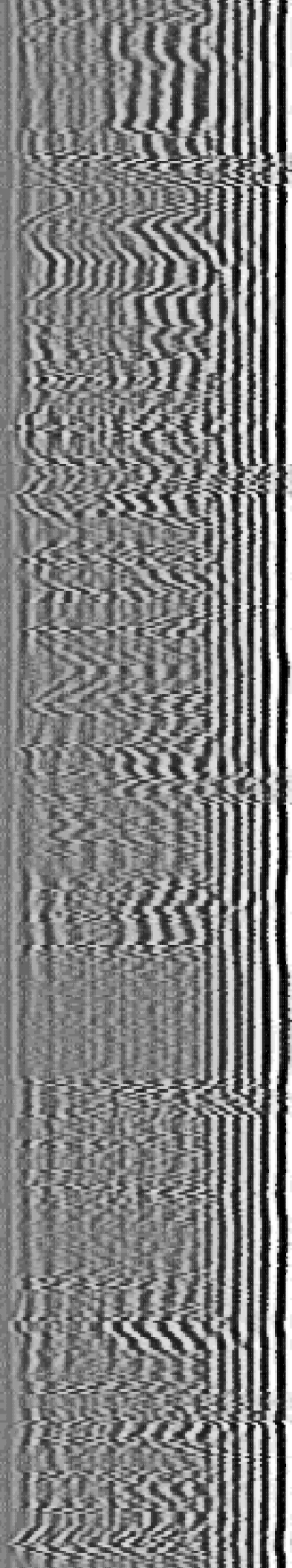
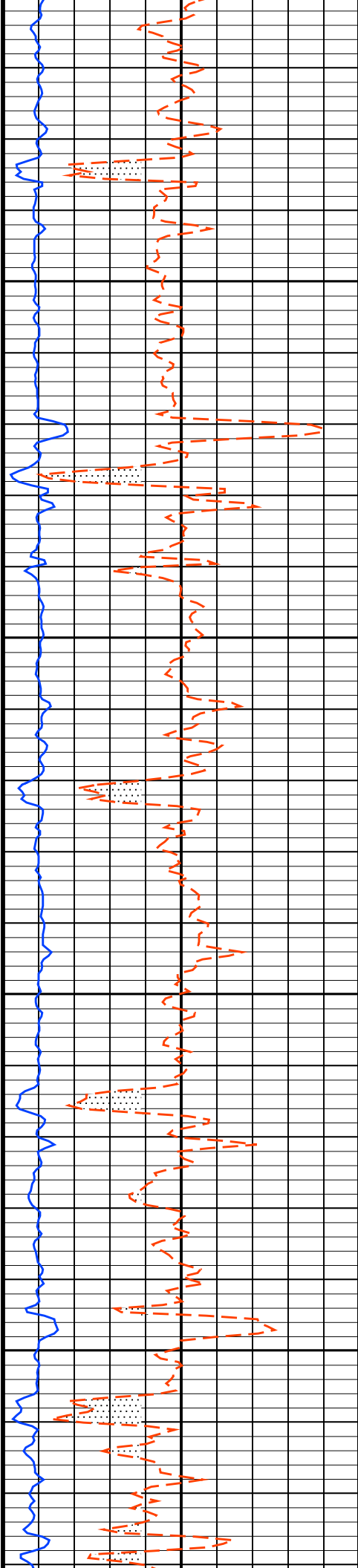
4600

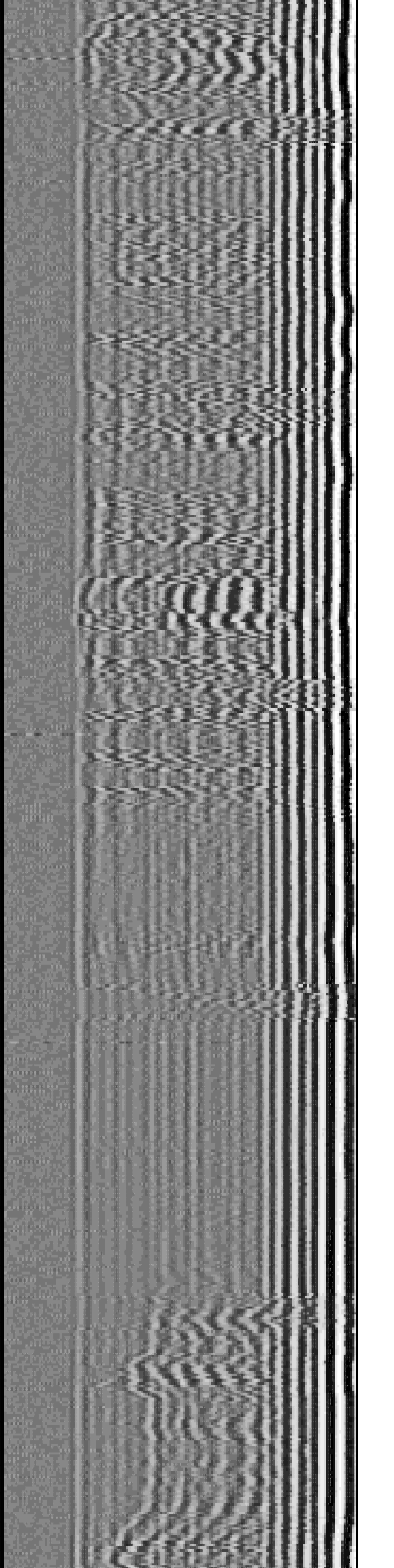
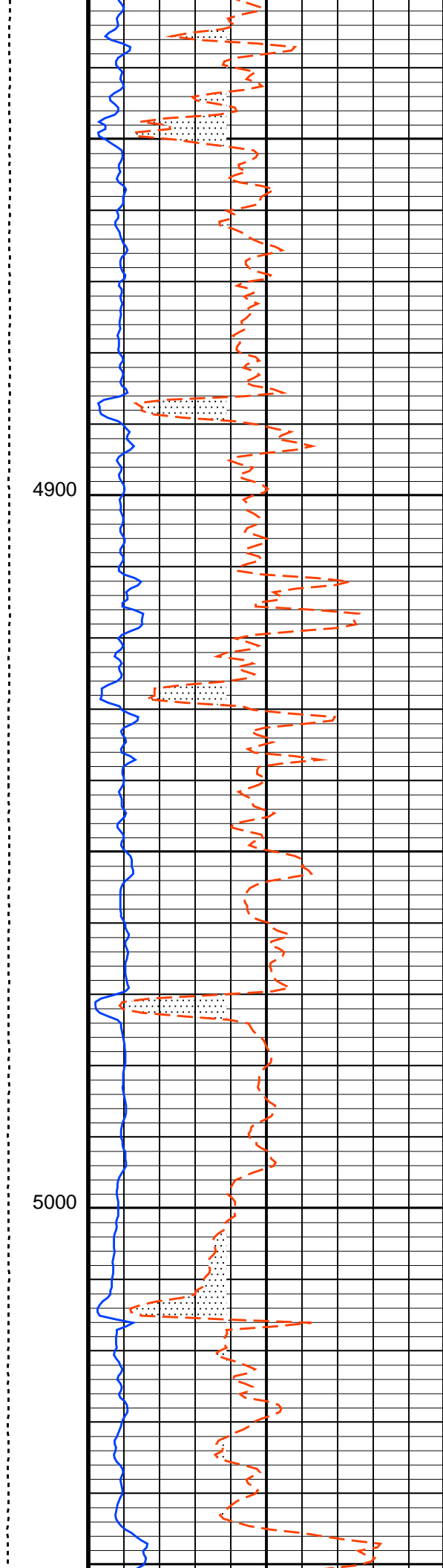
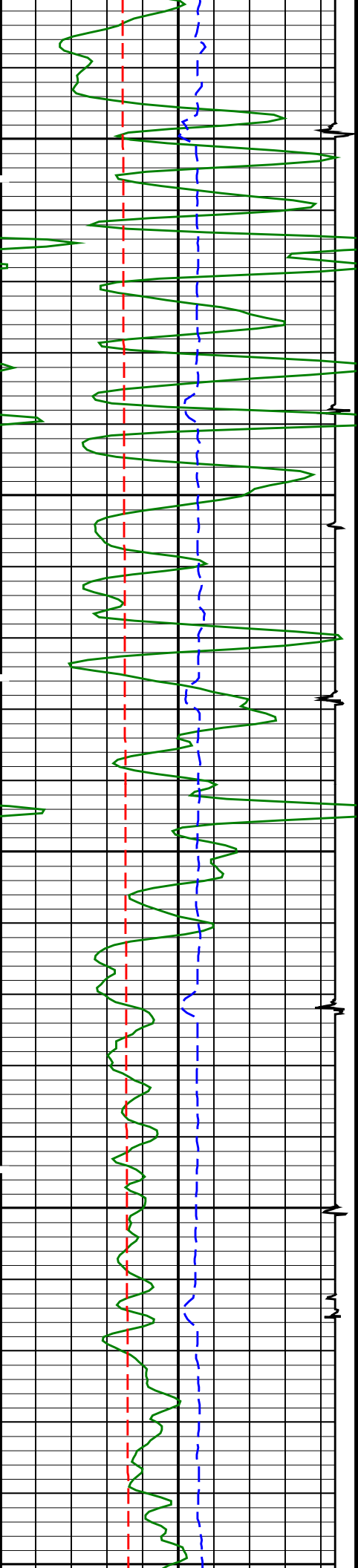


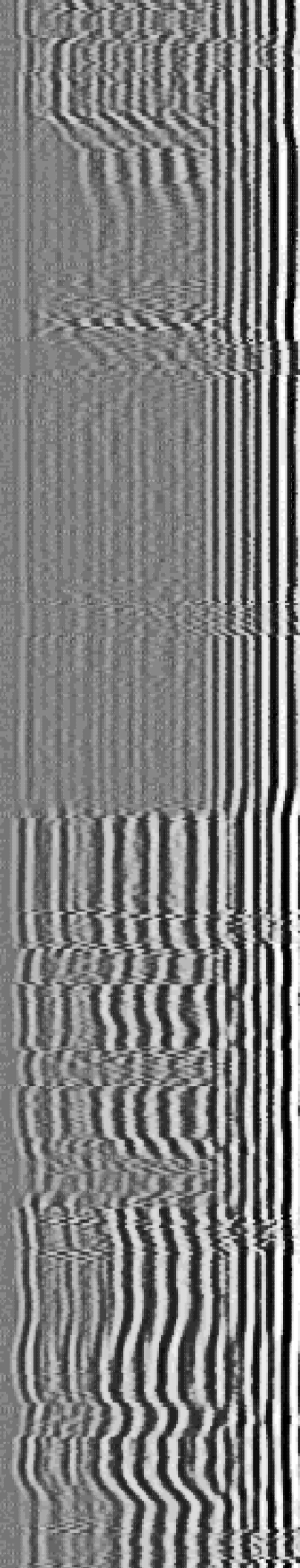
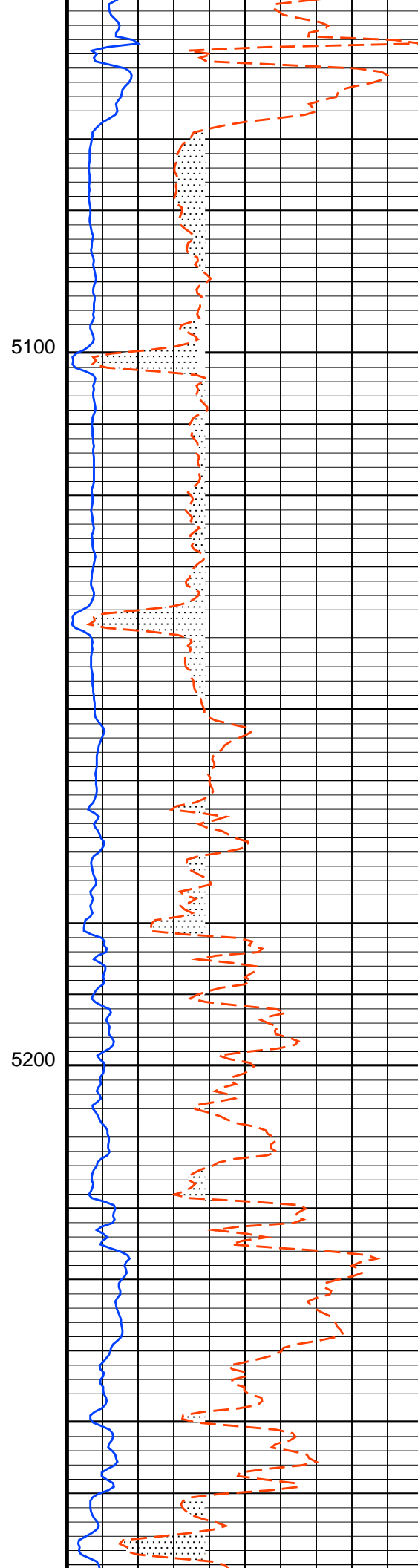
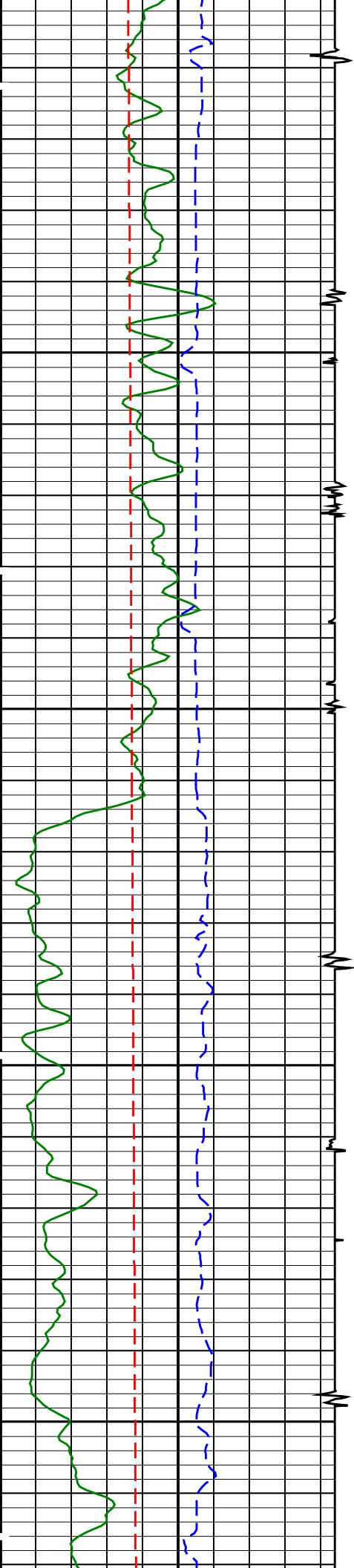


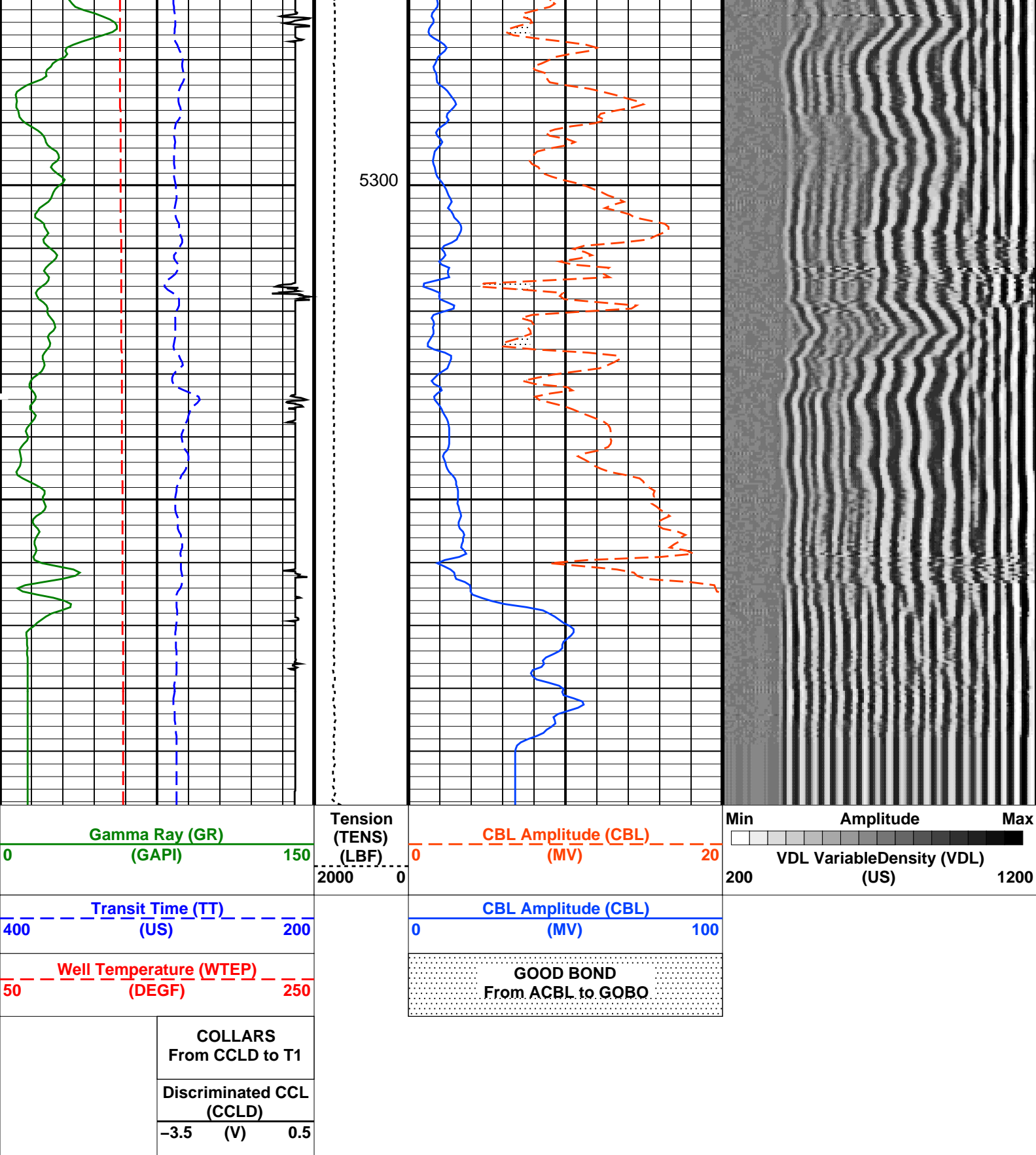
4700

4800









PIP SUMMARY

Time Mark Every 60 S

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	255	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	375	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	62	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMT C	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.366591	IN
DTF	Delta-T Fluid	203	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.975325	
GOBO	Good Bond	3.85141	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	195	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	11.6819	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	3	FT
MMSA	MAP Minimum Sonic Amplitude	11.1834	MV
MSA	Minimum Sonic Amplitude	1.92277	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	7.000	IN
CWEI	Casing Weight	26.00	LB/F
DFD	Drilling Fluid Density	8.55	LB/G
DO	Depth Offset for Playback	-2.0	FT
PP	Playback Processing	NORMAL	
TD	Total Depth	-50000	FT

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 13-Feb-2014 21:24

OP System Version: 19C0-187

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

Input DLIS Files

DEFAULT SCMT_PSP_011LUP FN:10 PRODUCER 13-Feb-2014 19:45 5400.5 FT 16.5 FT

Output DLIS Files

DEFAULT SCMT_PSP_014PUP FN:13 PRODUCER 13-Feb-2014 21:24

Schlumberger

REPEAT PASS

MAXIS Field Log

Company: ANADARKO E P ONSHORE LLC Well: Caboose 1548 21 44

Input DLIS Files

DEFAULT SCMT_PSP_010LUP FN:9 PRODUCER 13-Feb-2014 19:37 5400.0 FT 5097.0 FT

Output DLIS Files

DEFAULT SCMT_PSP_013PUP FN:12 PRODUCER 13-Feb-2014 21:23 5398.0 FT 5095.0 FT

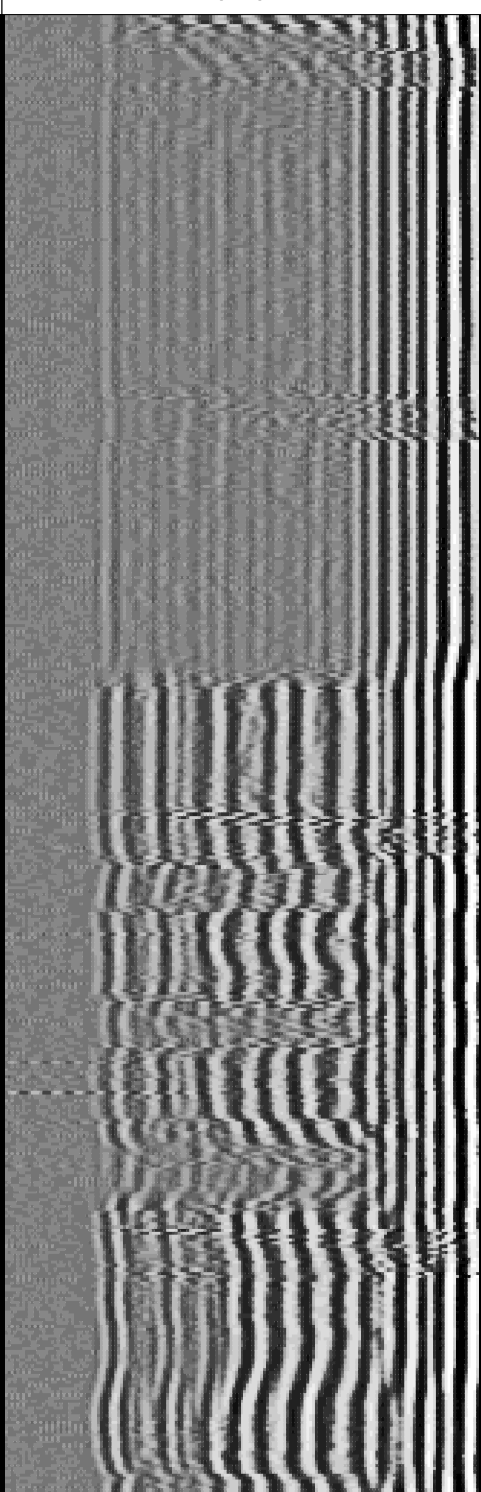
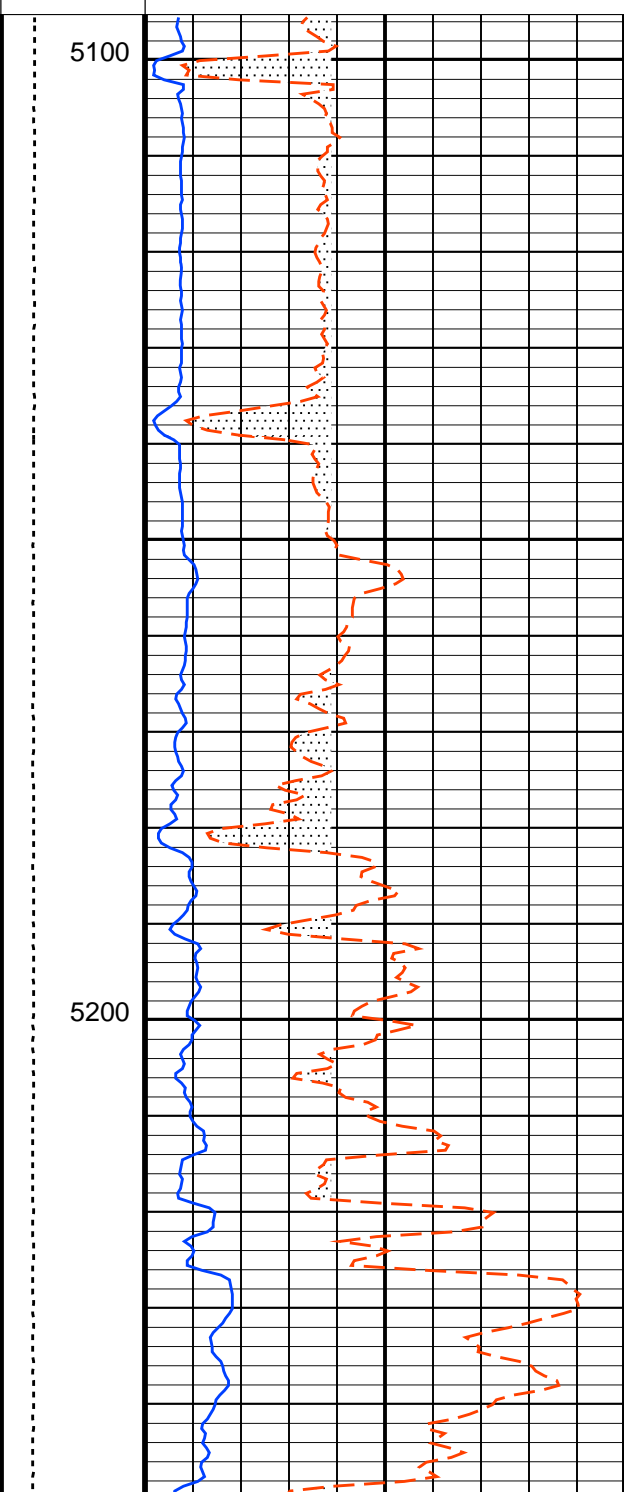
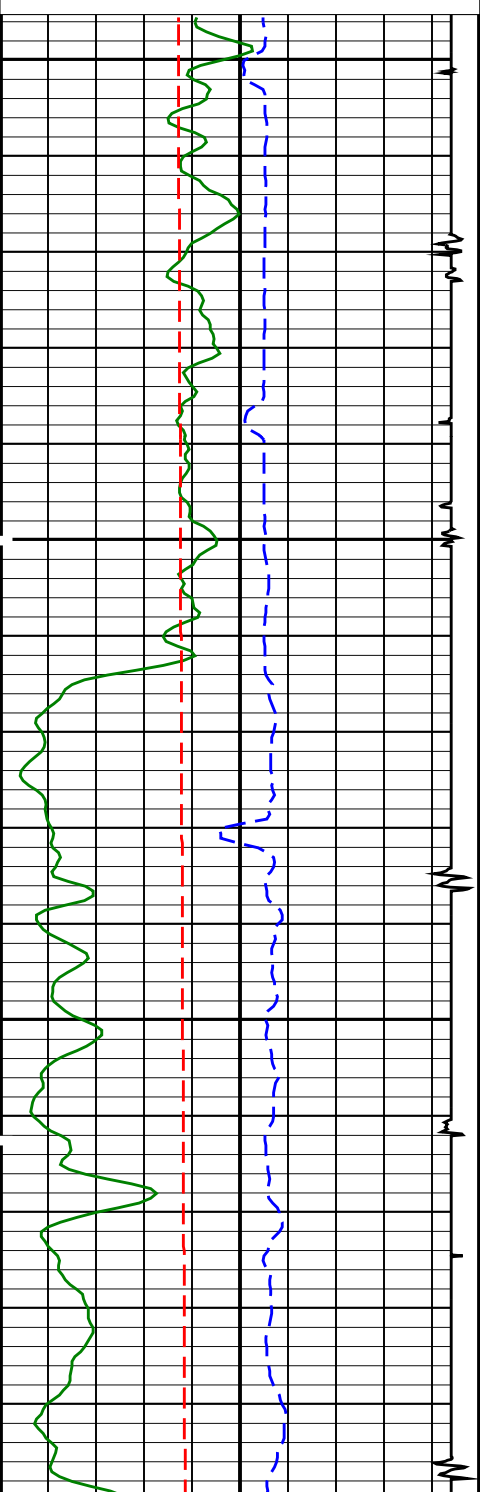
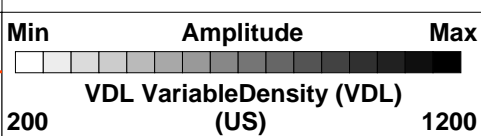
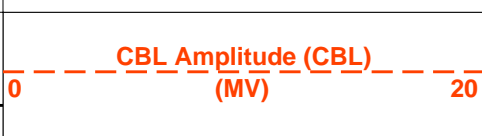
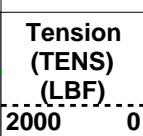
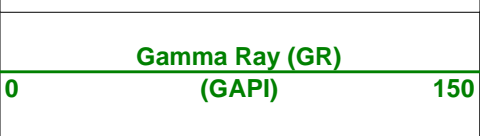
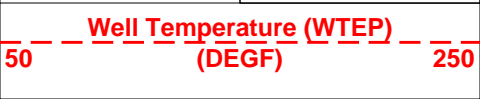
OP System Version: 19C0-187

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

PIP SUMMARY

Time Mark Every 60 S

	Discriminated CCL (CCLD)		
	-3.5	(V)	0.5
	COLLARS From CCLD to T1		



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	255	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	375	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	62	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	0.366591	IN
DTF	Delta-T Fluid	203	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.975325	
GOBO	Good Bond	3.85141	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	195	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	11.6819	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	3	FT
MMSA	MAP Minimum Sonic Amplitude	11.1834	MV
MSA	Minimum Sonic Amplitude	1.92277	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	7.000	IN
CWEI	Casing Weight	26.00	LB/F
DFD	Drilling Fluid Density	8.55	LB/G
DO	Depth Offset for Playback	-2.0	FT
PP	Playback Processing	NORMAL	
TD	Total Depth	-50000	FT

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 13-Feb-2014 21:23

OP System Version: 19C0-187

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

Input DLIS Files

DEFAULT	SCMT_PSP_010LUP	FN:9	PRODUCER	13-Feb-2014 19:37	5400.0 FT	5097.0 FT
---------	-----------------	------	----------	-------------------	-----------	-----------

Output DLIS Files

DEFAULT	SCMT_PSP_013PUP	FN:12	PRODUCER	13-Feb-2014 21:23
---------	-----------------	-------	----------	-------------------

Company: **ANADARKO E P ONSHORE LLC**

Schlumberger

Well: **Caboose 1248 21 44**

Field: **Wildcat**

County: **Cheyenne**

State: **Colorado**

RESERVOIR SATURATION TOOL-SIGMA
CEMENT BOND LOG
GR, TEMP, PRESSURE, CCL