

Company CAERUS OIL & GAS, LLC.
 Well NOLTE 44B-14
 Field GRAND VALLEY
 County GARFIELD State CO

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 Well NOLTE 44B-14
 Field GRAND VALLEY
 County GARFIELD State CO

Sec: 14 Twp: 07S Rge: 96W
 GROUND LEVEL Elevation 5088'
 KB , 24 Ft. above perm. datum
 KB
 BOTTOM HOLE LOCATION:
 0925' FSL & 0660' FEL

Gauge Ring
 CBL

API No.: 05-045-22297-0000 Serv. #: 901365501
 Location: SURFACE HOLE LOCATION:
 0774' FSL & 0367' FEL
 Other Services

Permanent Datum	GROUND LEVEL		Elevation	5088'	K.B. 5112' D.F. 5111' G.L. 5088'		
Log Measured From	KB		24 Ft. above perm. datum		KB		
Drilling Measured From	KB				G.L.		
Date @ Time Logged	28 MAY 2014		Type Fluid in Hole	WATER			
Run No.	ONE		Density of Fluid	8.4#			
Depth - Driller	6800'		Fluid Level	62'			
Depth - Logger	5704'		Cement Top Est. Logged	N/A			
Bottom - Logged Interval	5704'		Equipment / Location	10971668 / G.J.			
Top - Log Interval	SURFACE		Recorded by	D. SOLIS			
Max. Recorded Temp.	N/A		Witnessed by	B. STEWART			
CEMENTING DATA				Production	String		
Surface	String		Protection	String			
String	N/A		String	N/A			
String	N/A		String	N/A			
Date / Time Cemented	N/A		String	N/A			
Primary / Squeeze	N/A		String	N/A			
Expected Compressive Strength	psi@ hrs		String	N/A			
Cement Volume	psi@ hrs		String	N/A			
Cement Type / Weight	psi@ hrs		String	N/A			
Formulation	psi@ hrs		String	N/A			
Mud Type / Mud Wgt.	psi@ hrs		String	N/A			
Borehole Record				Casing & Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	N/A	SURFACE	1040'	9.25"	36.0#	SURFACE	1040'
TWO	8.75"	1040'	5800'	4.5"	11.6#	SURFACE	5771'

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

CORRELATEDON BOTTOM TO HES DENSITY-NEUTRON-RESISTIVITY LOG DAED: 22 MAR 2014

GR-RMT-CBL RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

SHORT JOINTS @: 4054' - 4064' AND 5506'-5516'.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No. 901365501 API No. 05-045-22297-0000 PGM Ver 14.02.28001

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

TELEMETRY		CEMENT BOND TOOL		RESERVOIR MONITOR TOOL	
Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	12105786	Serial No.	11002212	Serial No.	12095949
Model No.	TTTC-U-002	Model No.	RBT-004	Model No.	RMTI-A
Diameter	1.688"	Diameter	3.125"	Diameter	2.125"

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

ONE	5704'	SURFACE	0	25	MAIN LOG SECTION			
	GAMMA RAY		TRAVEL TIME		AMPLITUDE		MSG	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	150	370	170	0	100	200	1200
DIRECTIONAL INFORMATION								
Maximum Deviation	N/A	deg. @	N/A	KOP	N/A			

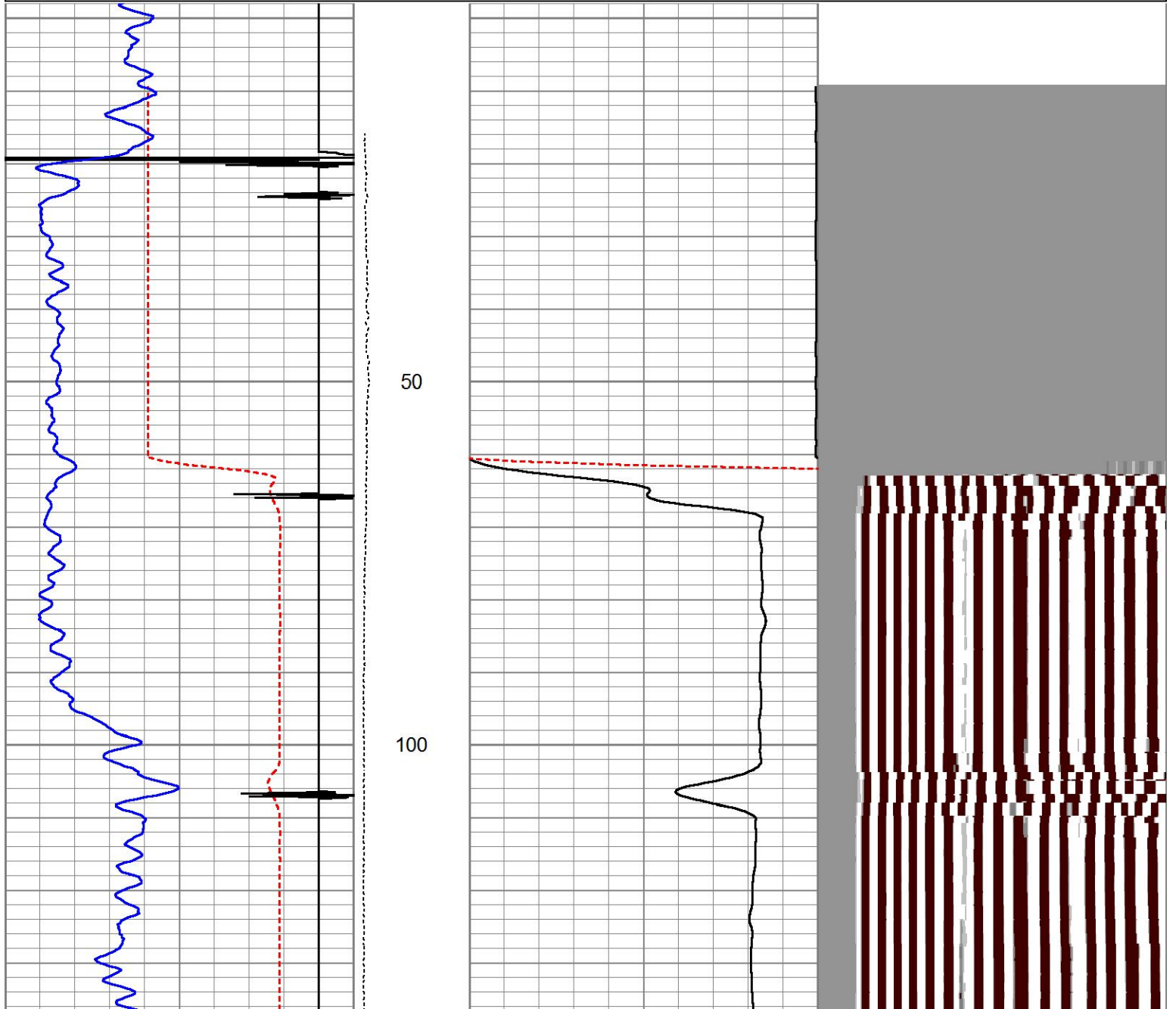
MAIN LOG SECTION

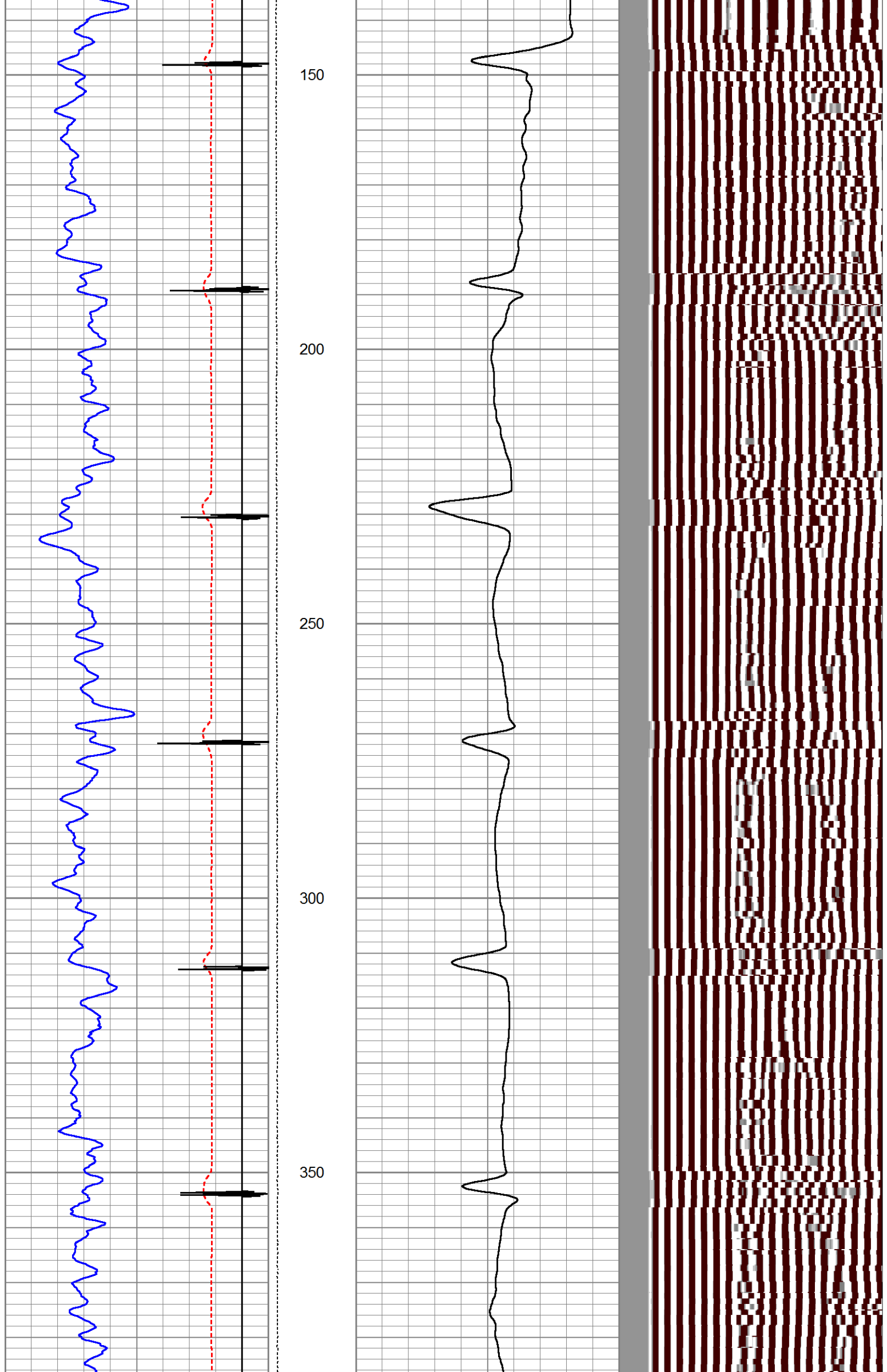
HALLIBURTON

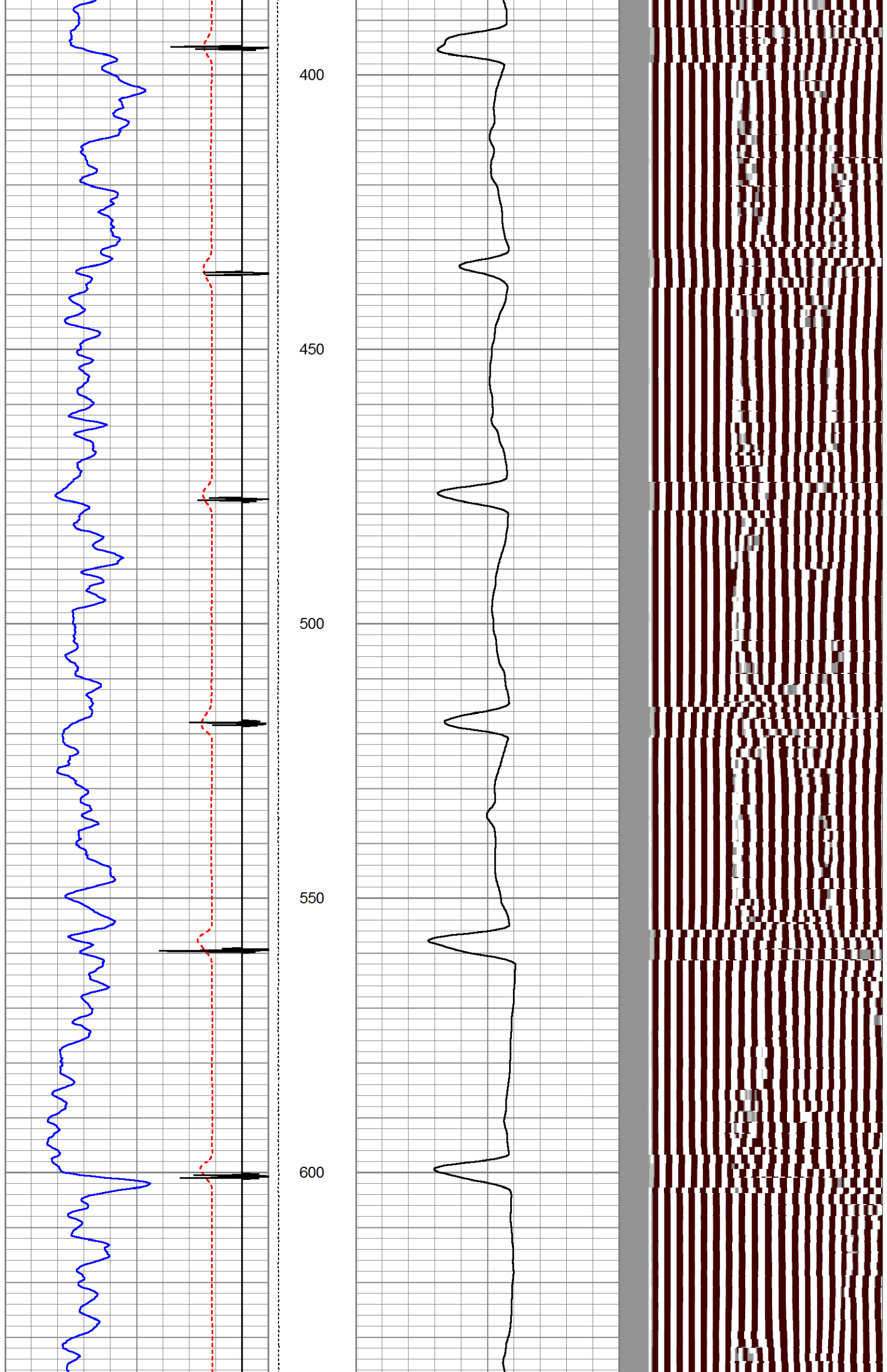
5" = 100'

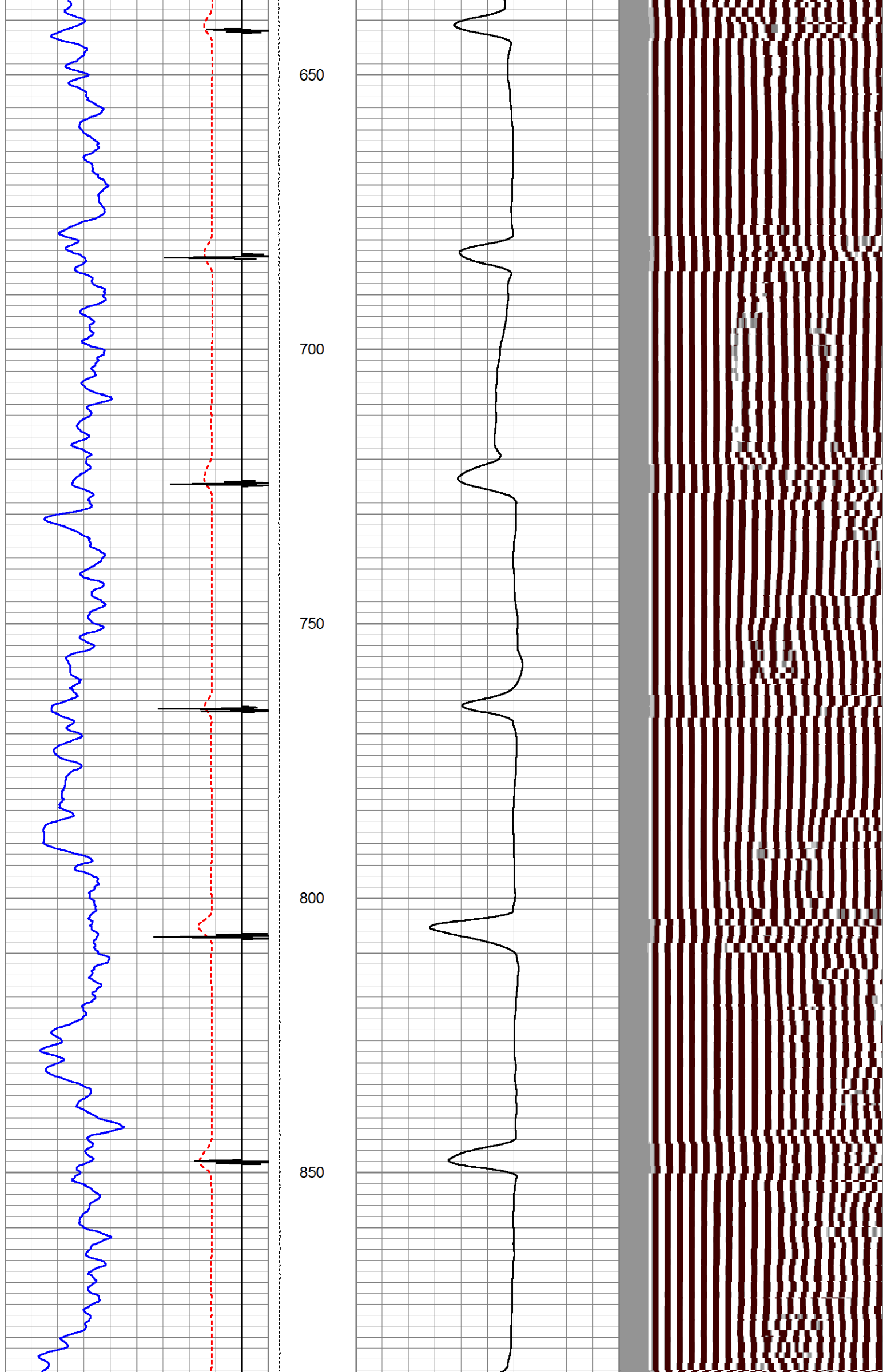
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Dataset Pathname 44b14/run1/MAIN1
Presentation Format cbl-radi
Dataset Creation Wed May 28 17:06:28 2014
Charted by Depth in Feet scaled 1:240

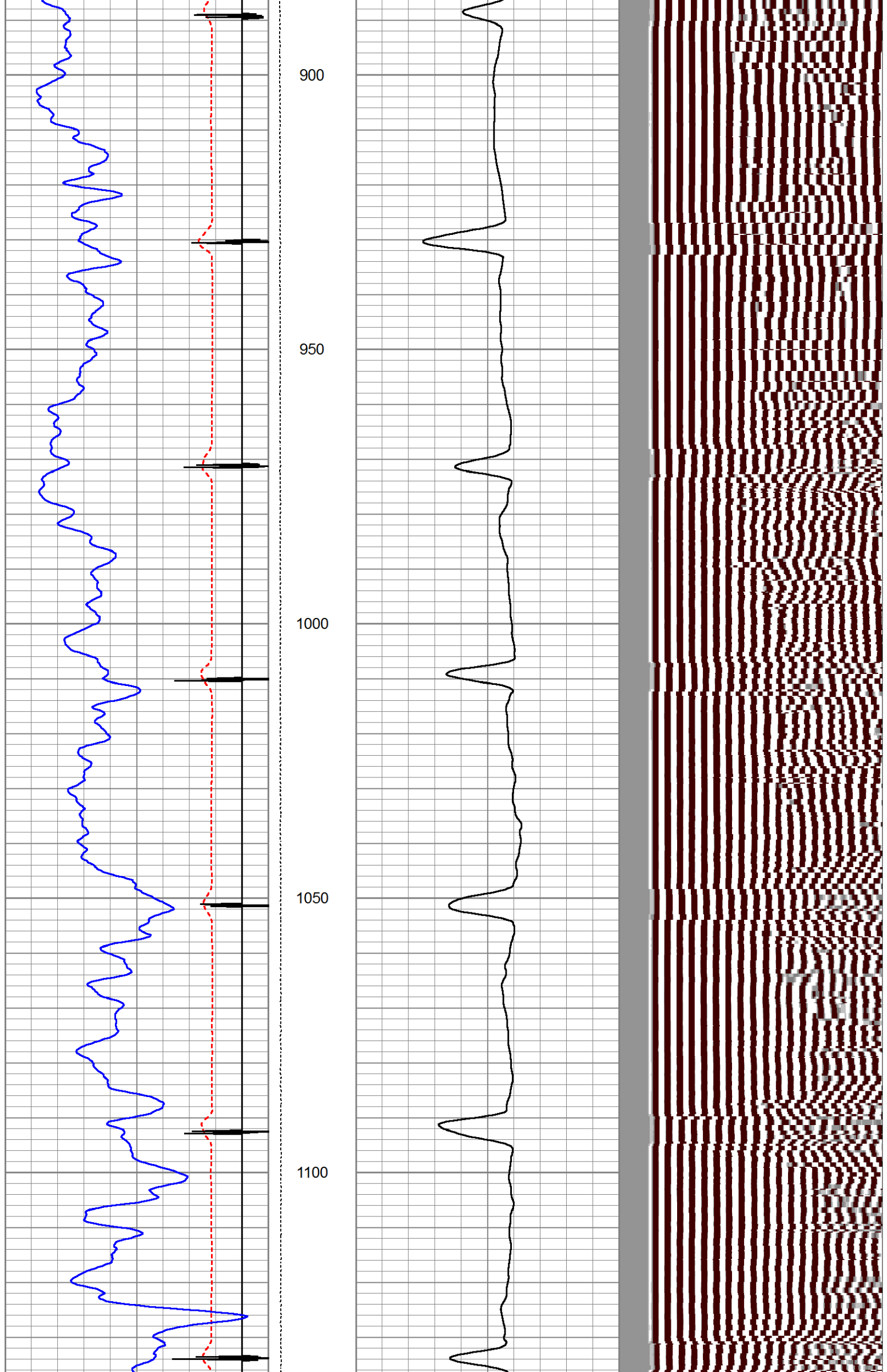
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-2700	COLLARS	300	0	(lb4000	0	AMPLIFIED AMPLITUDE (mV)	10		
0	GAMMA RAY (GAPI)	150							

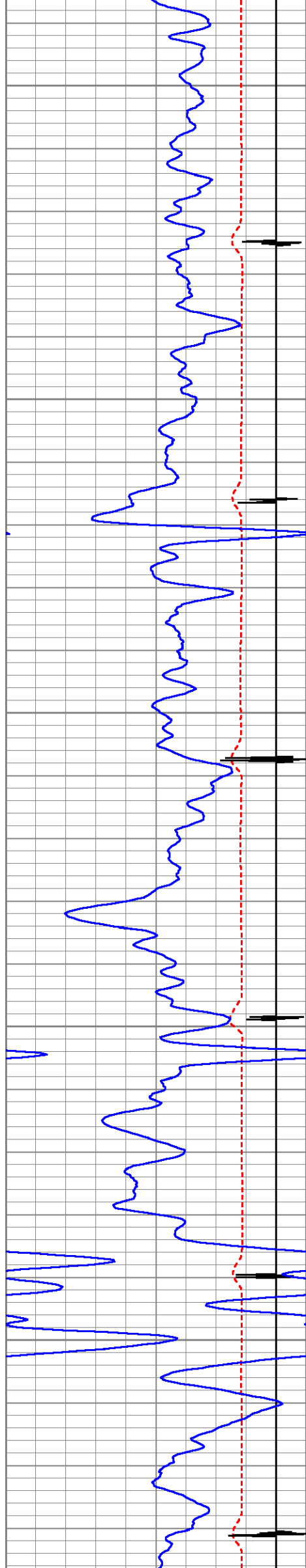












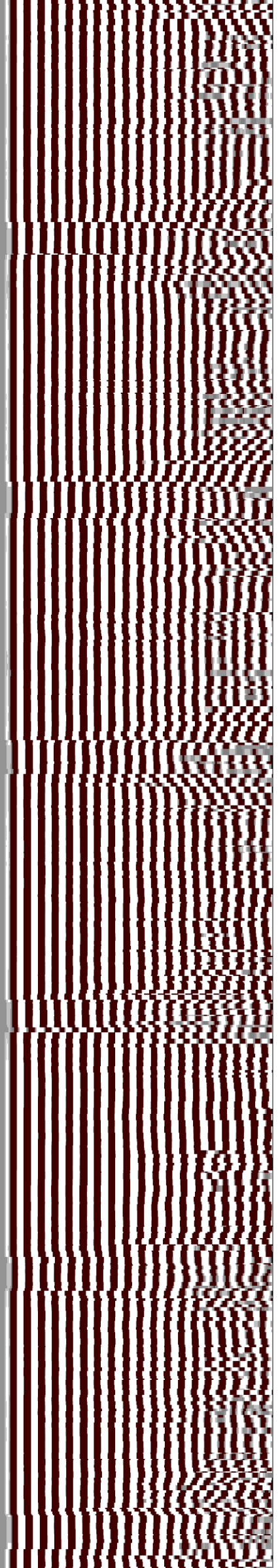
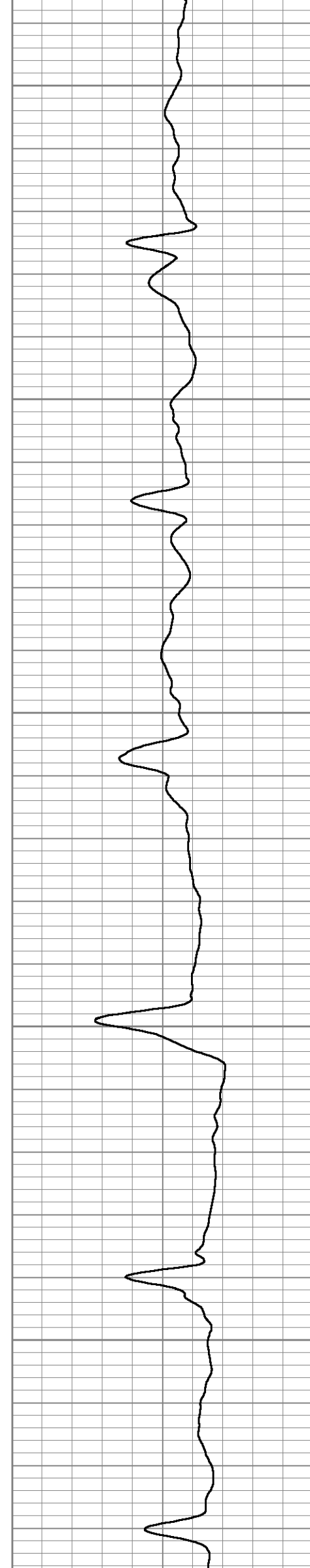
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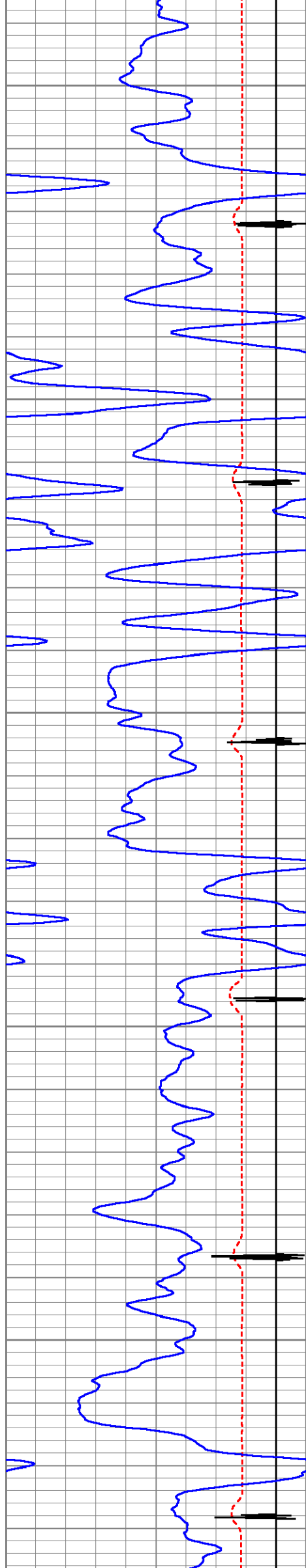
1200

1250

1300

1350





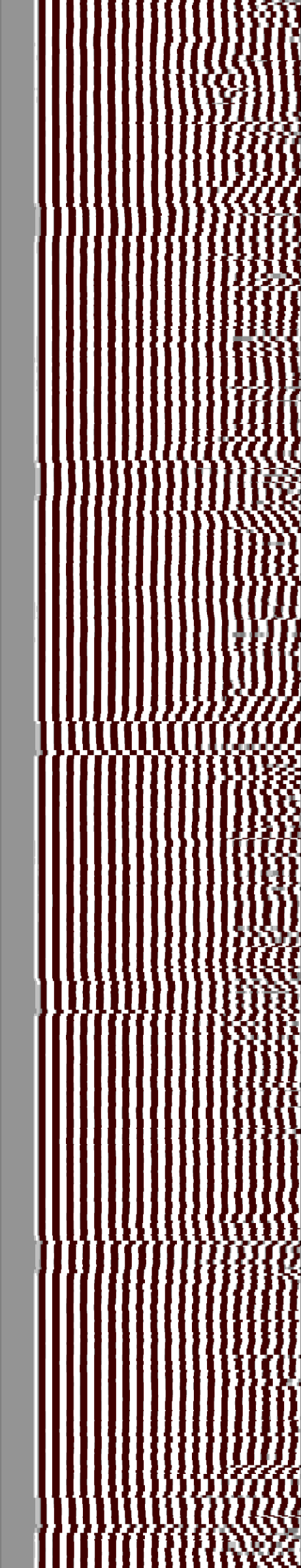
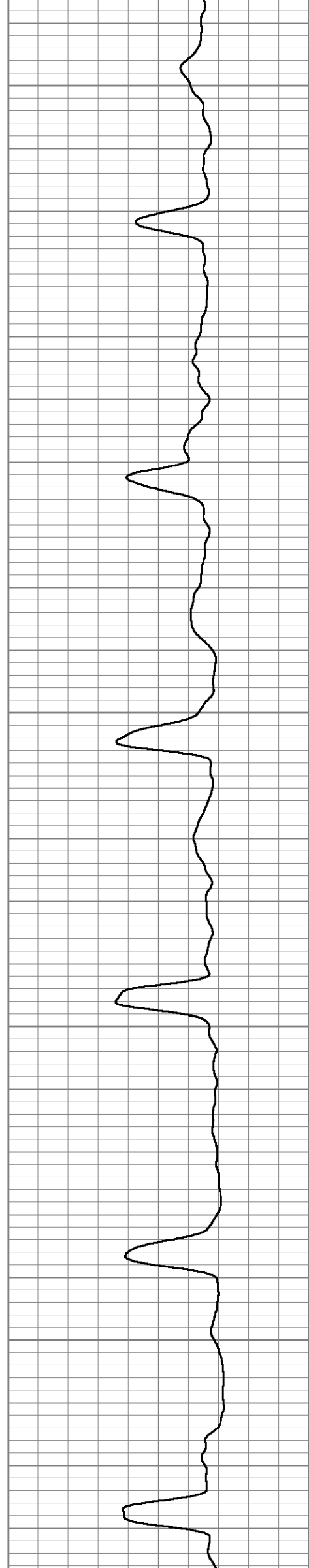
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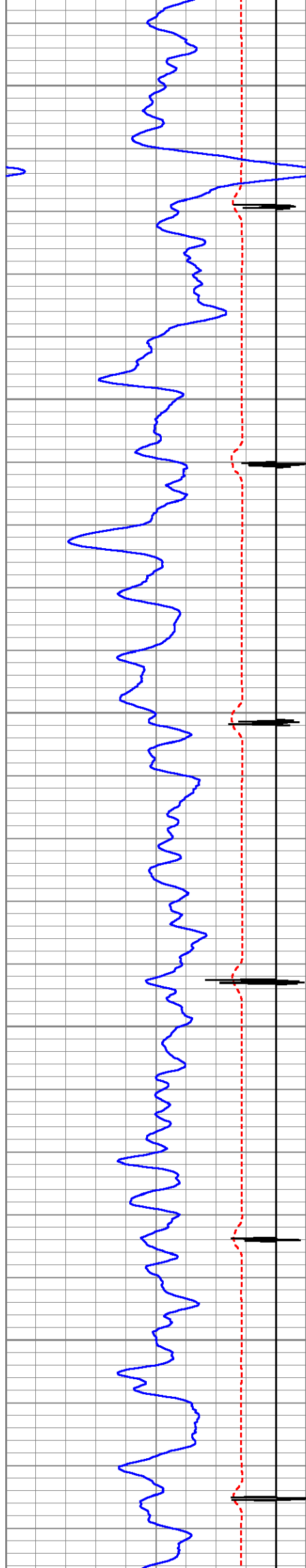
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1500

1550

1600





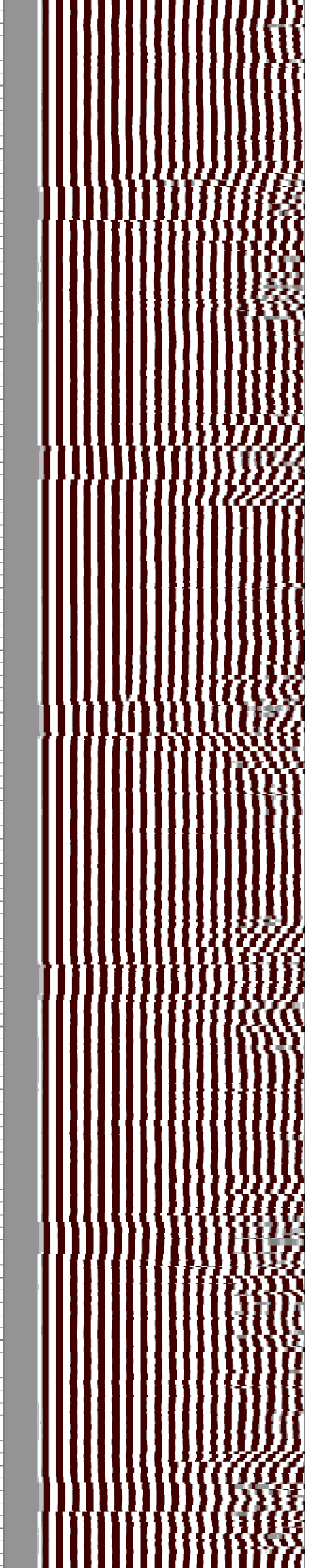
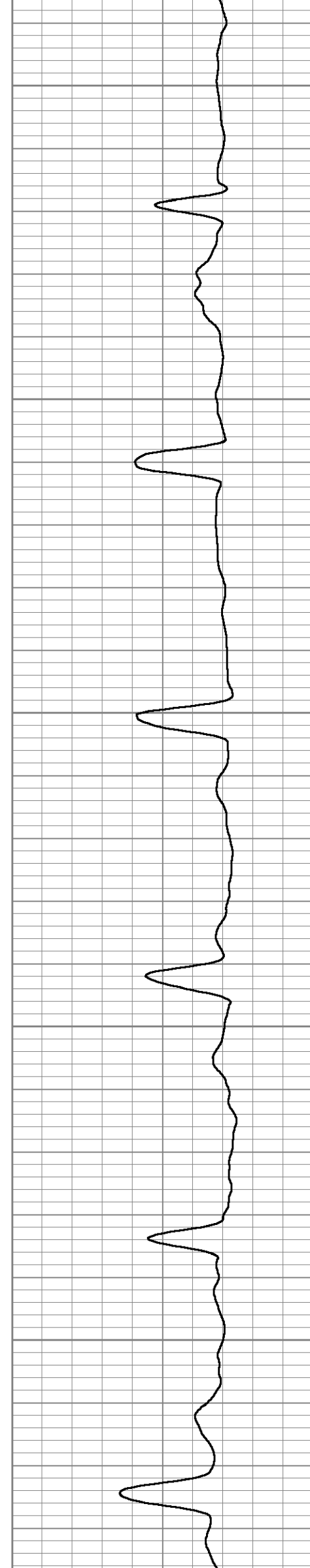
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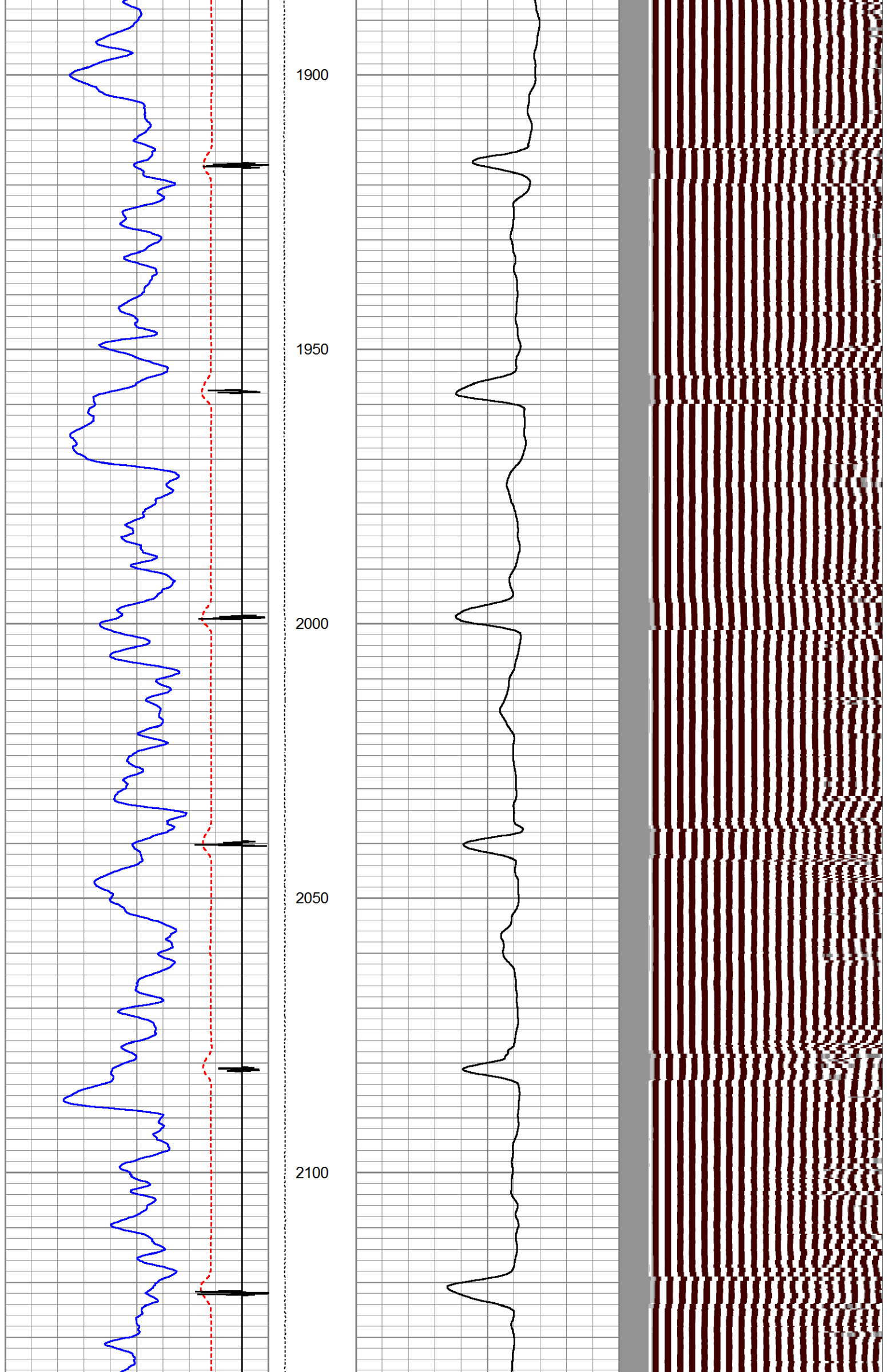
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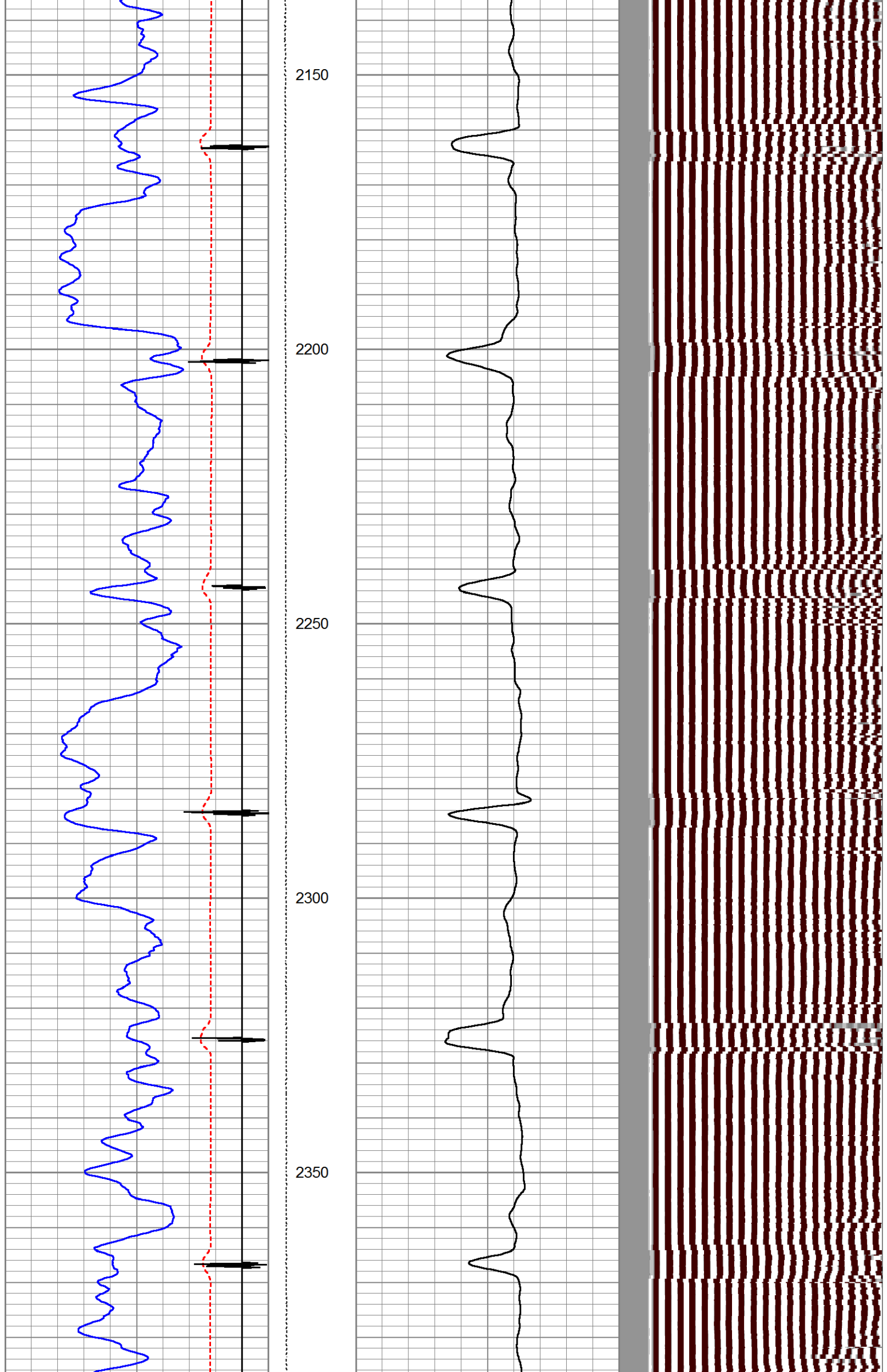
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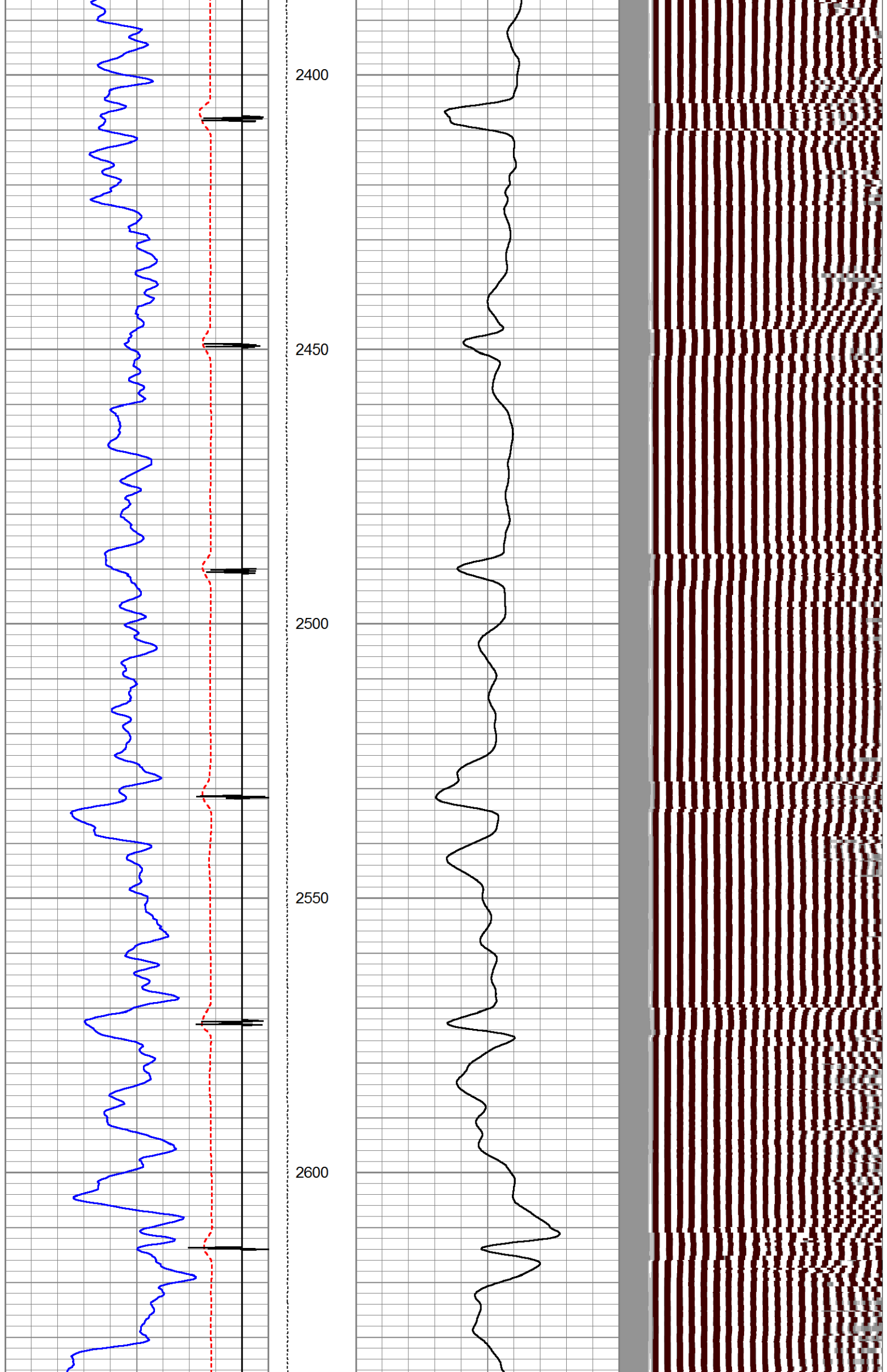
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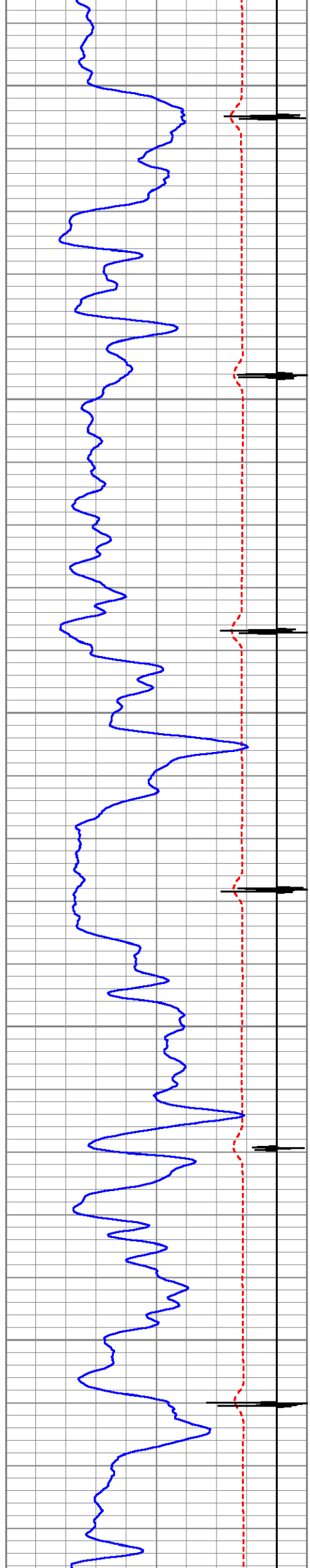
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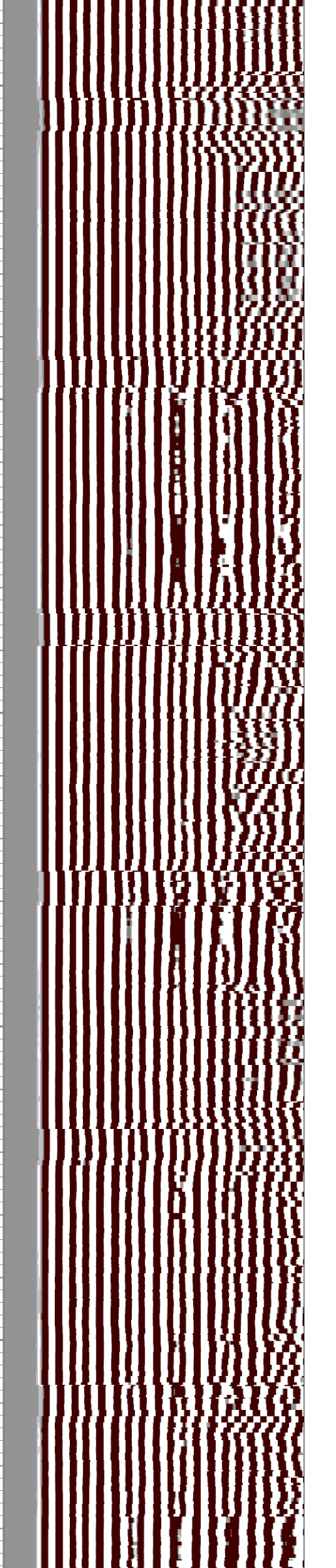
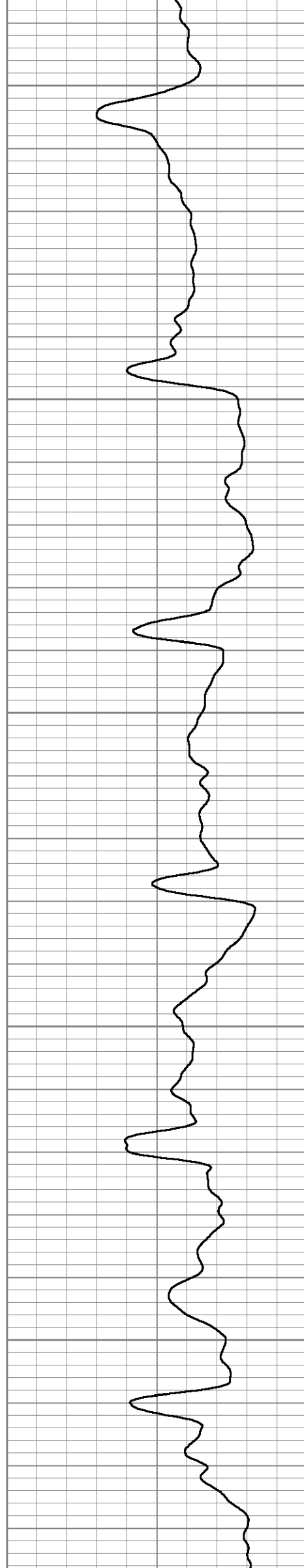
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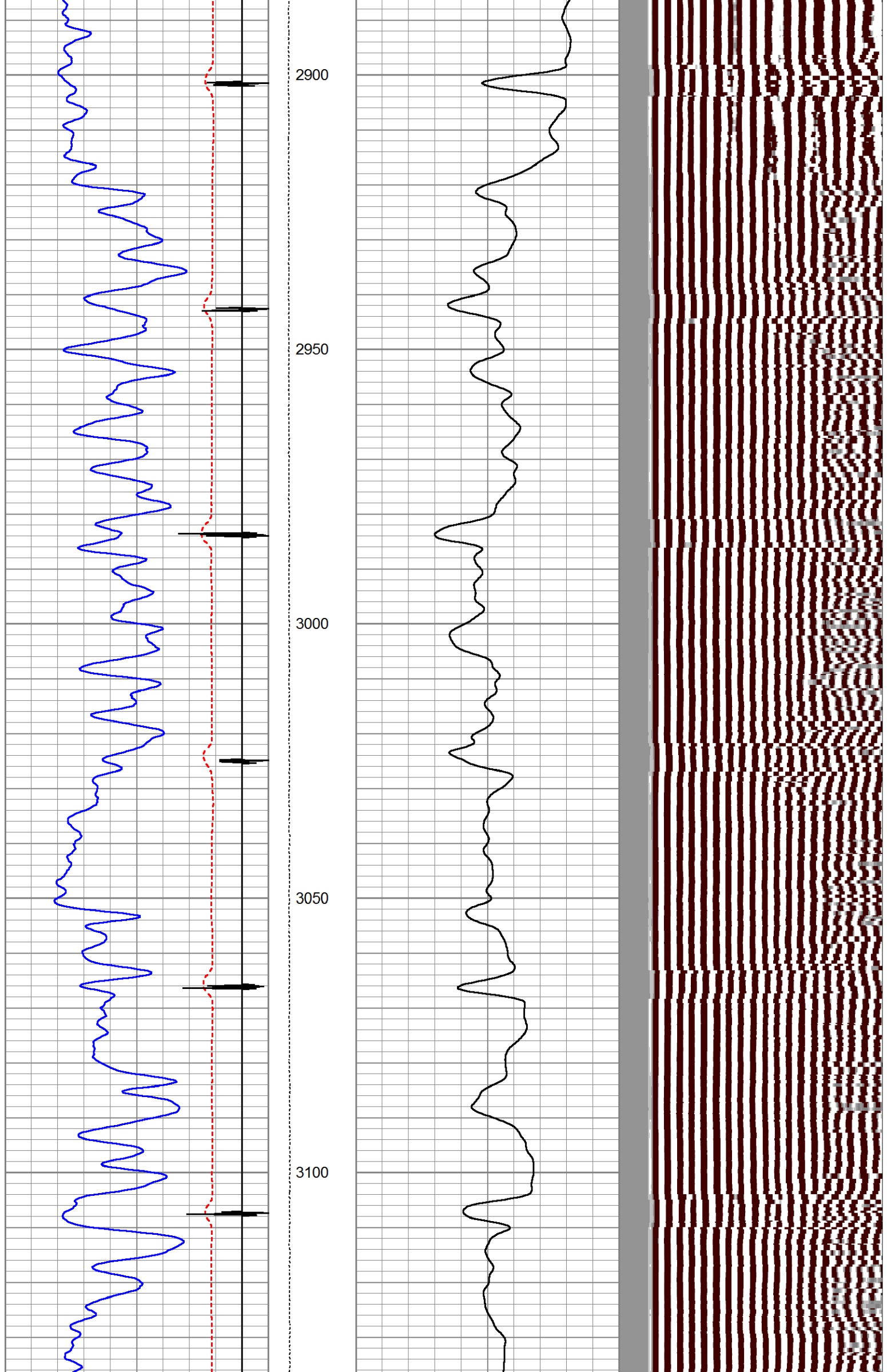
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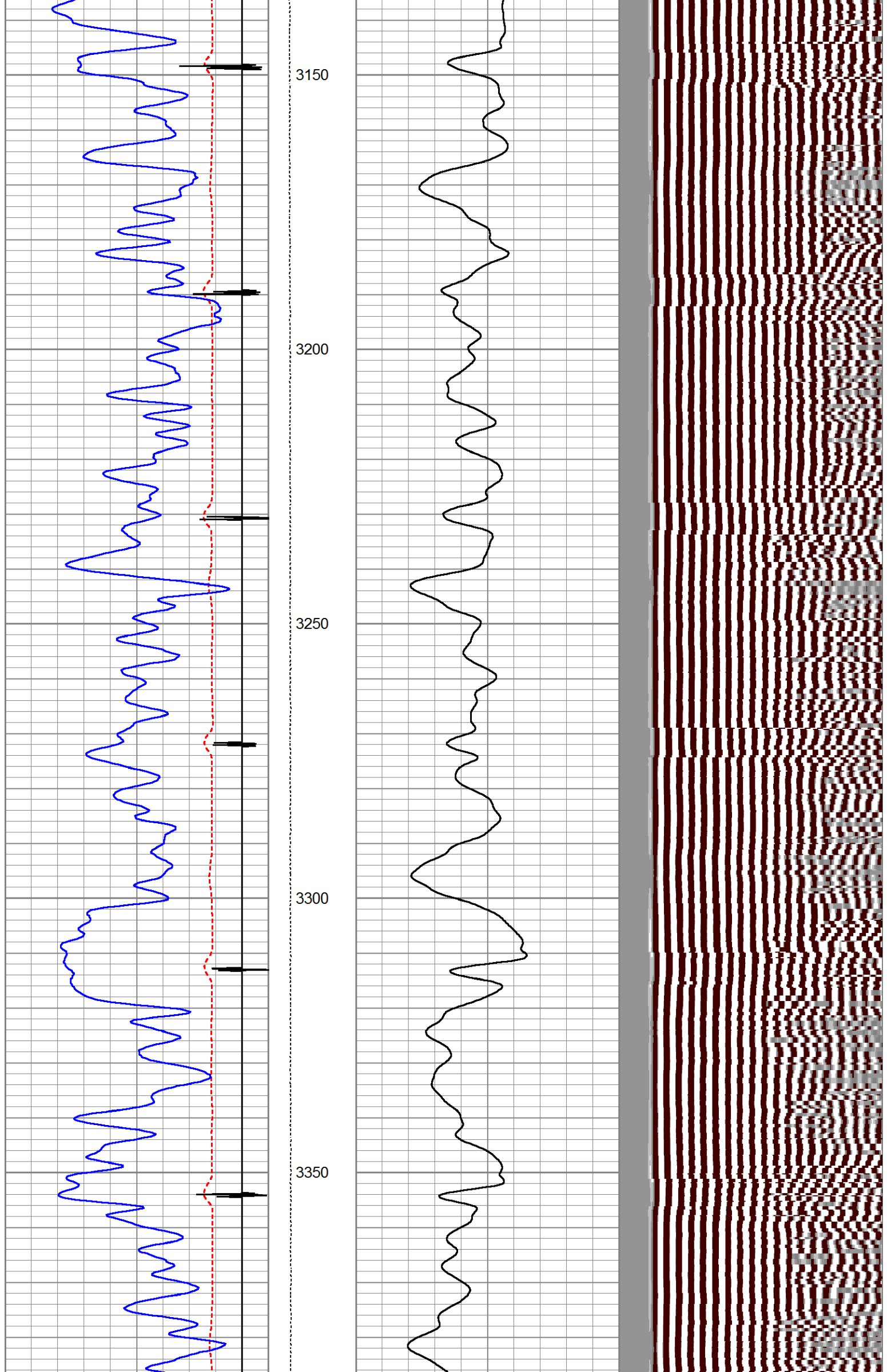
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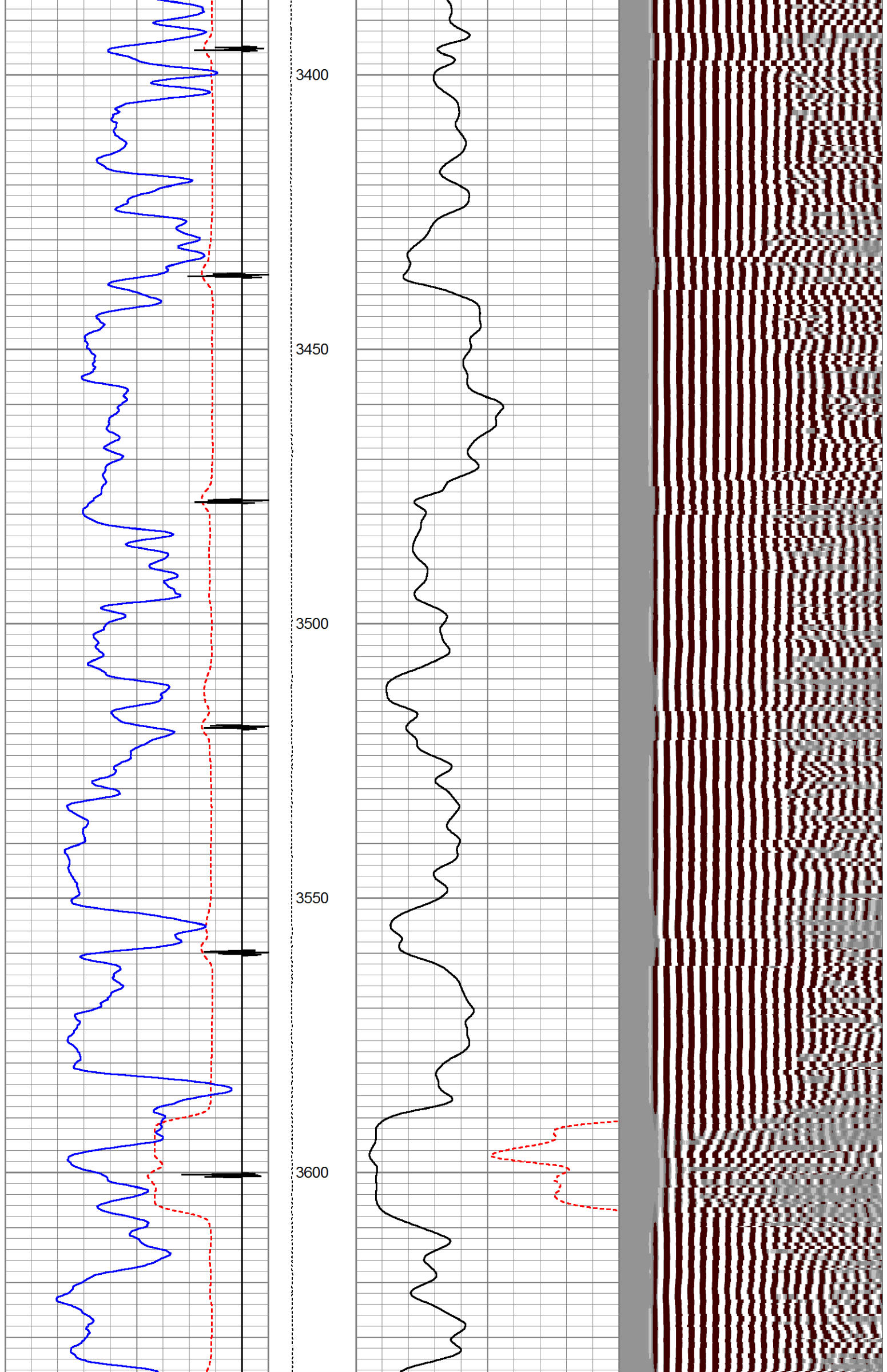
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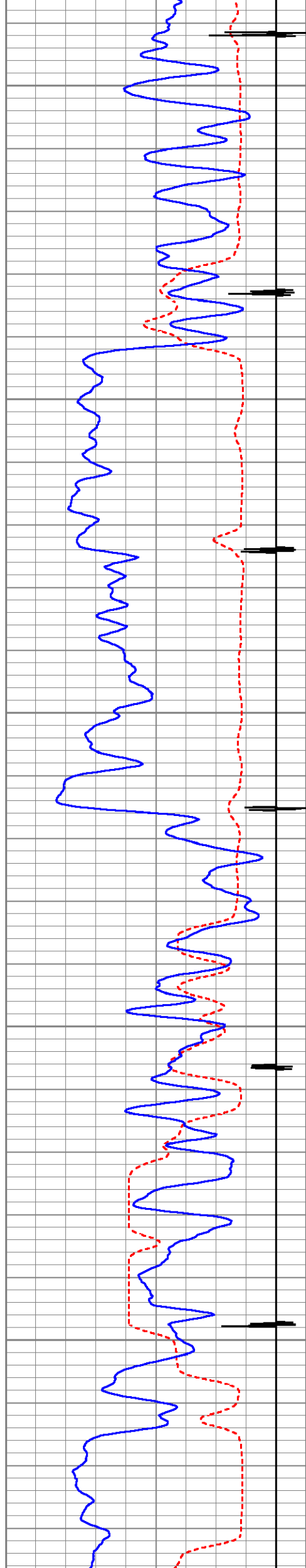
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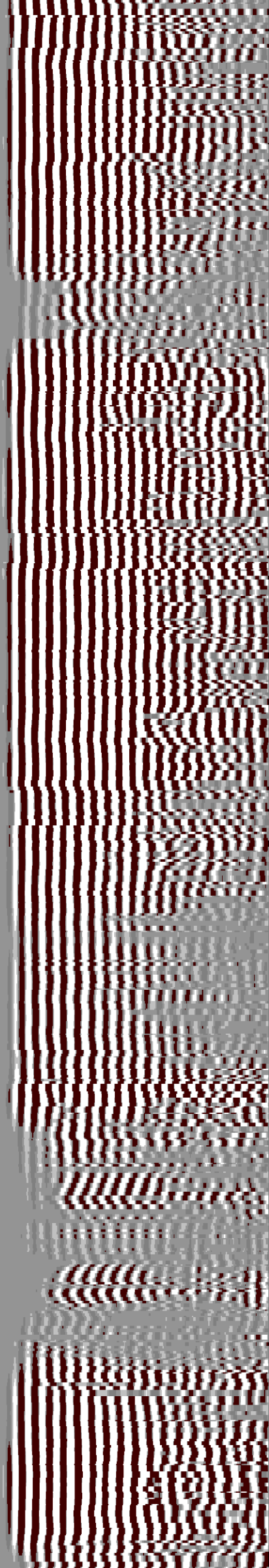
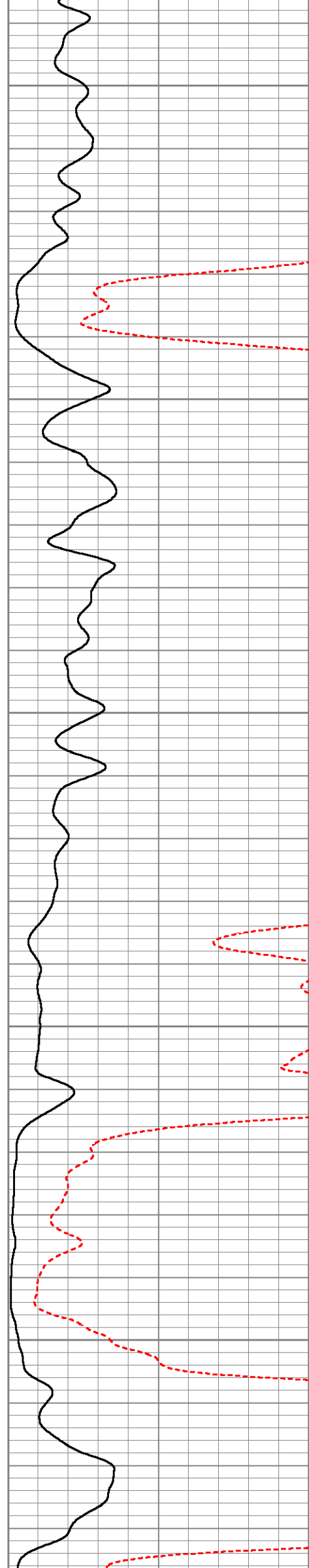
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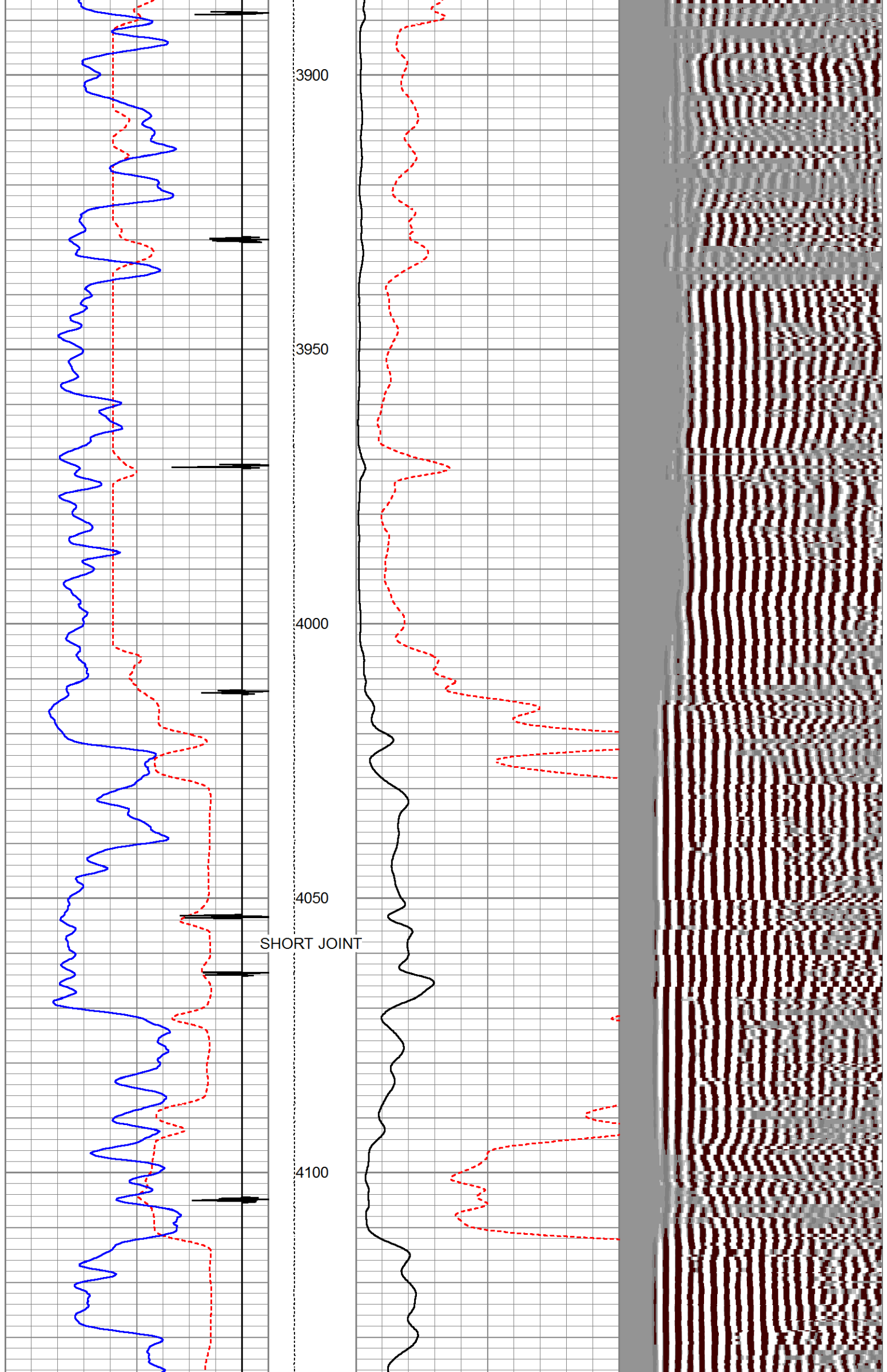
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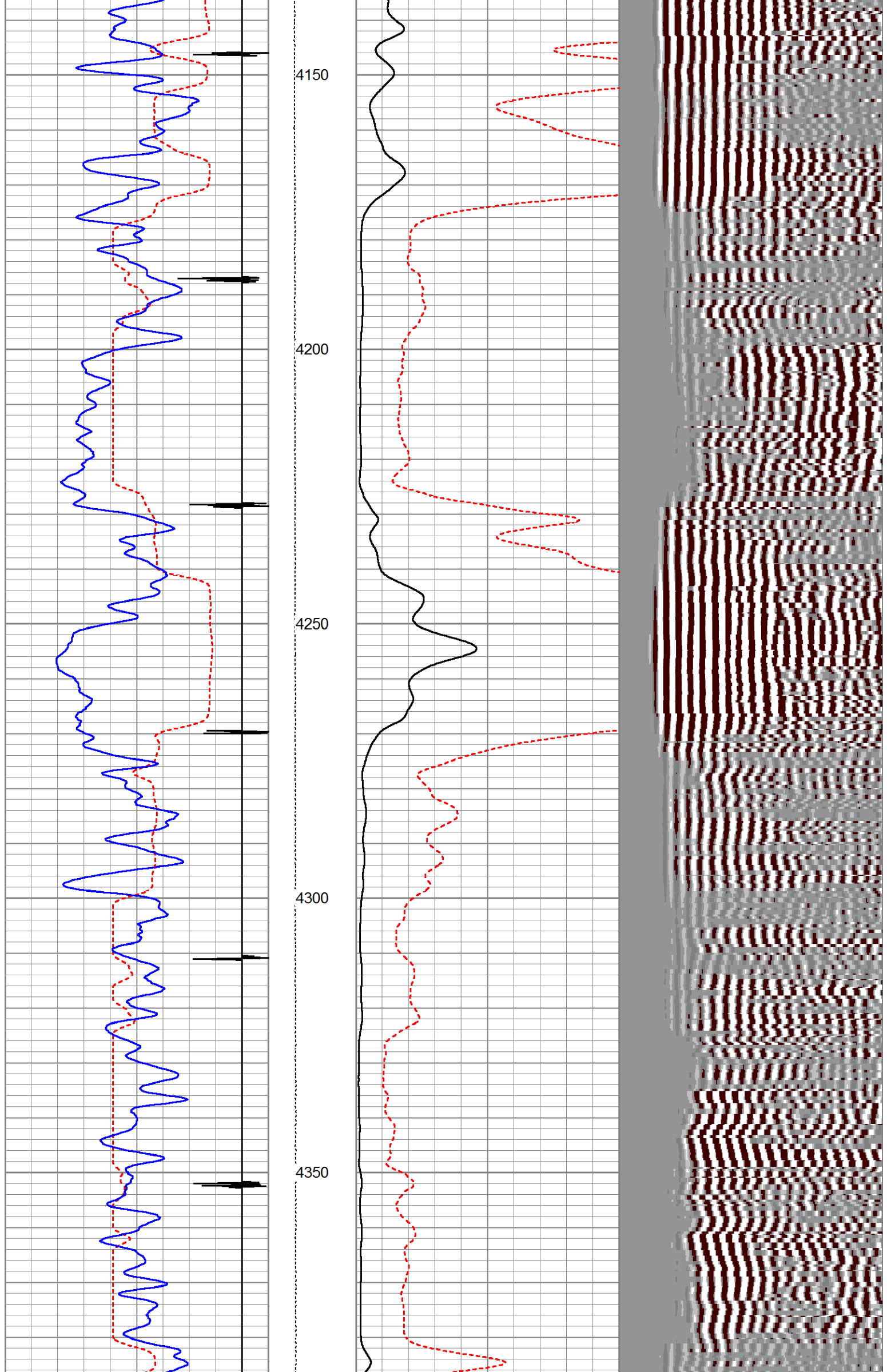
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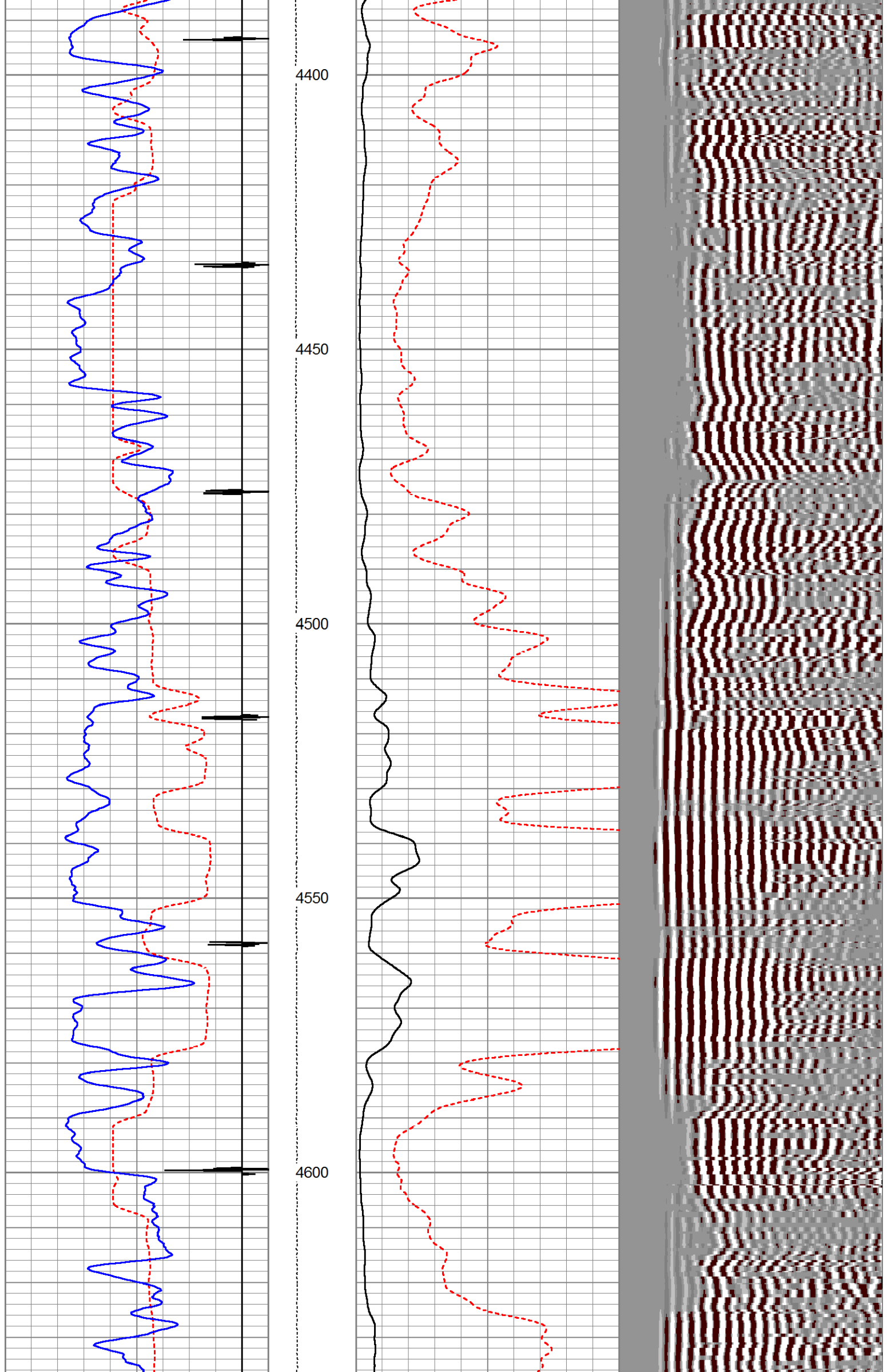
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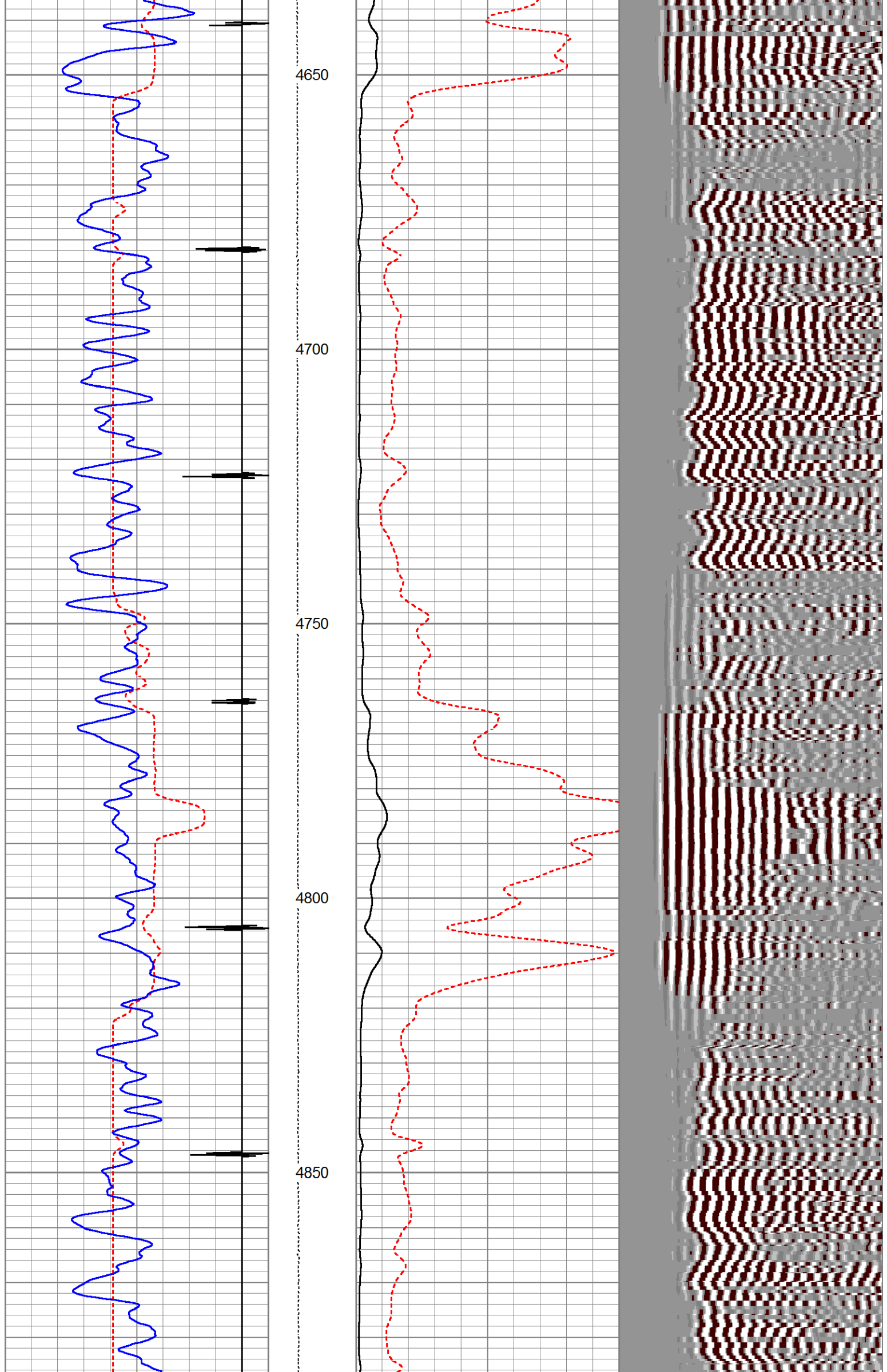
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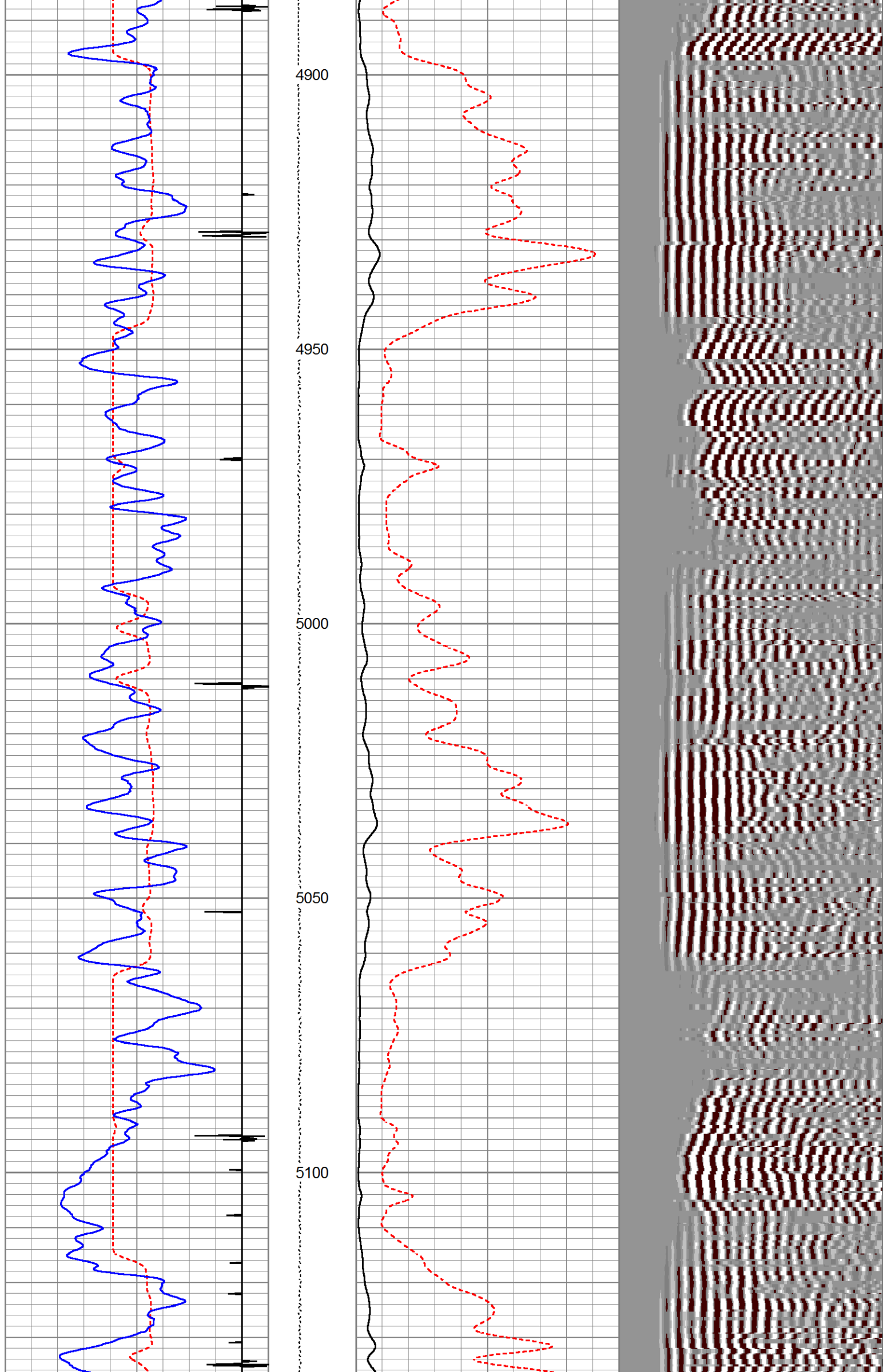


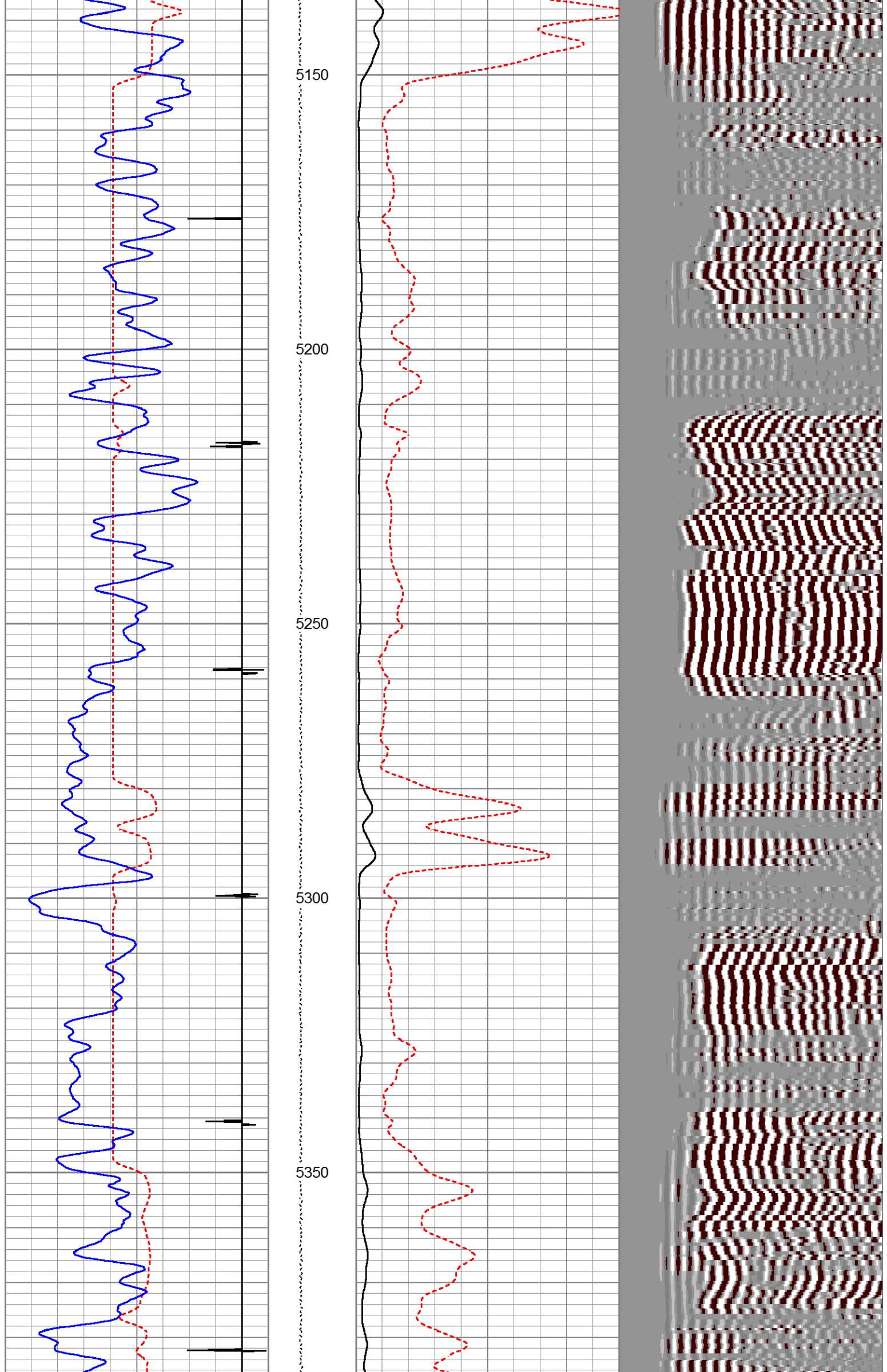


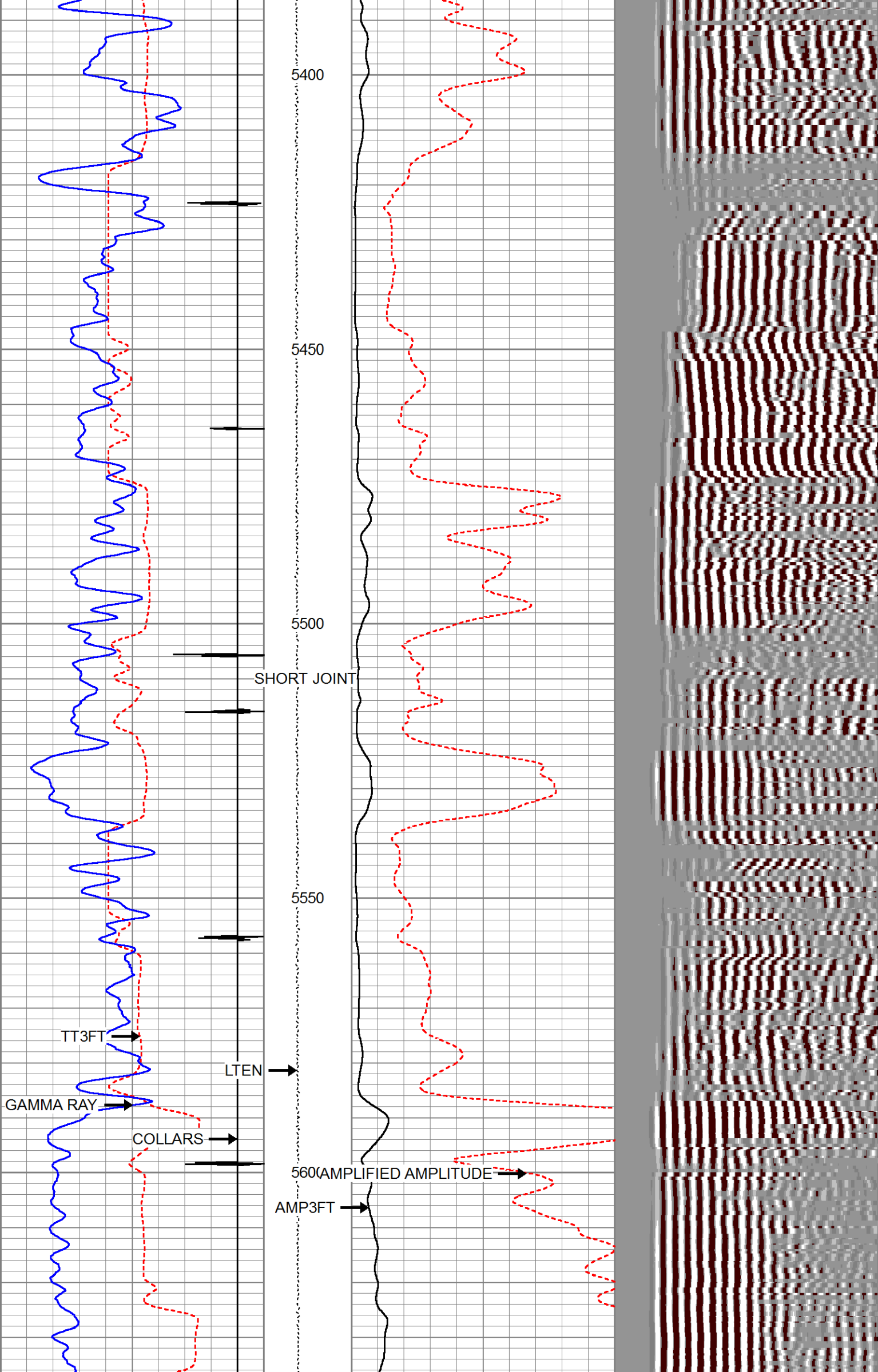


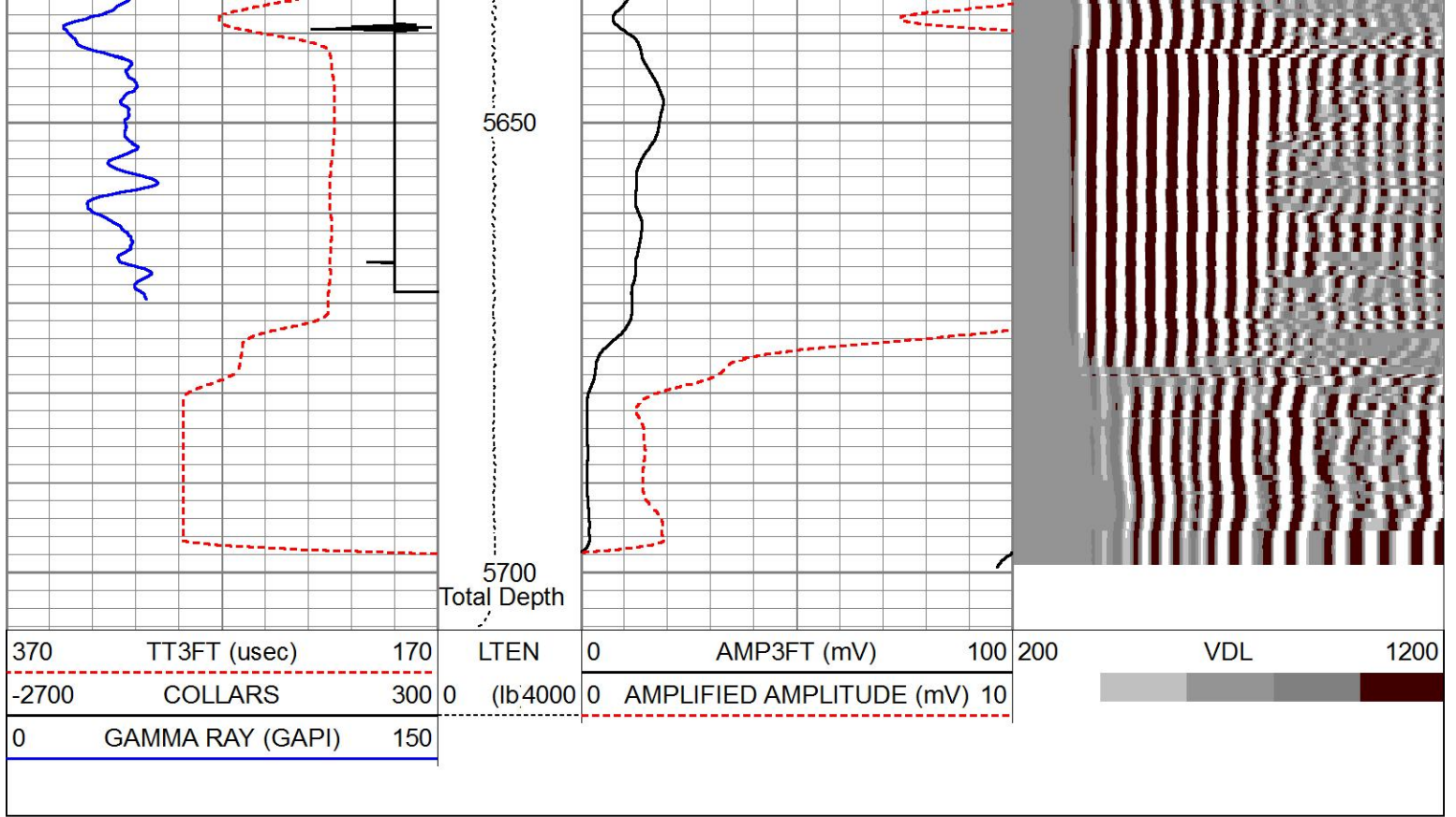












MAIN LOG SECTION

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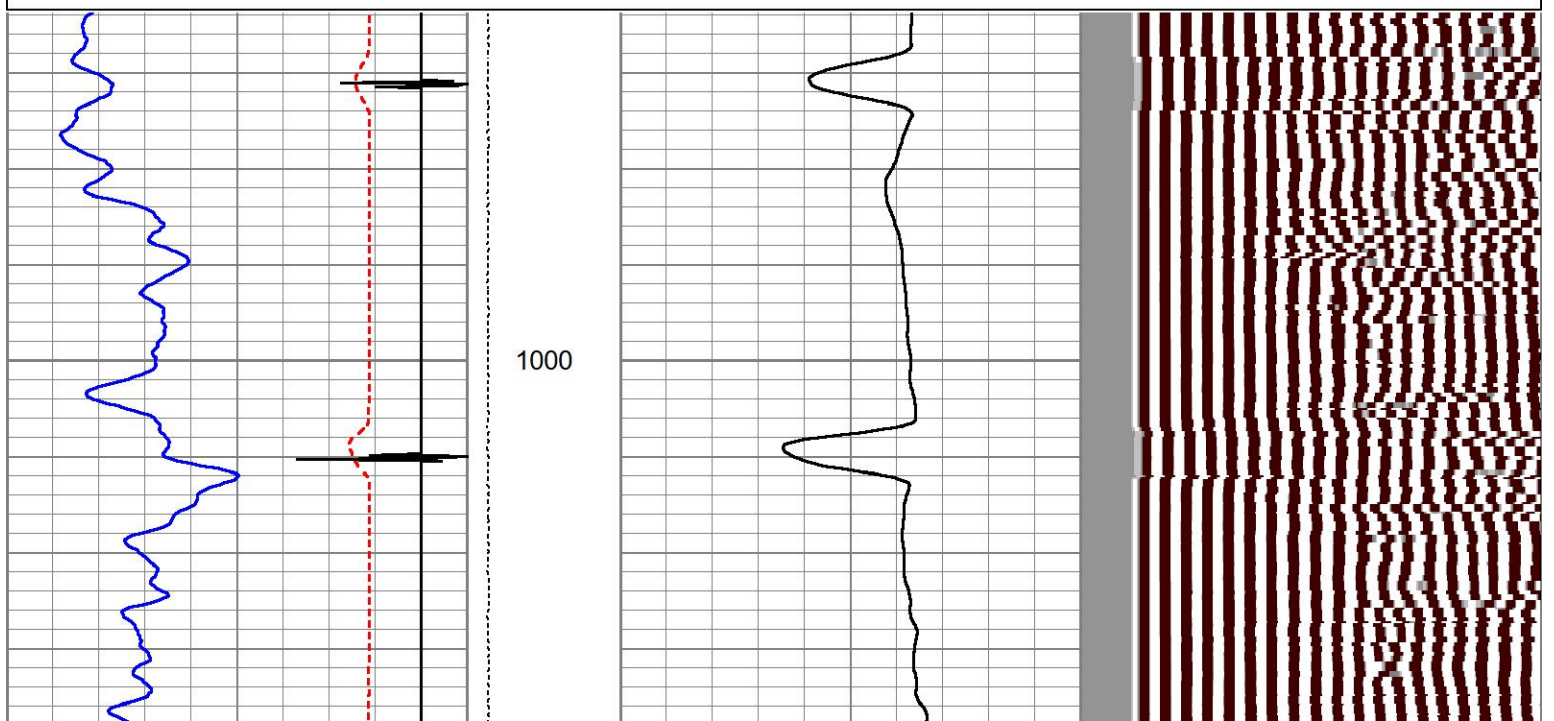
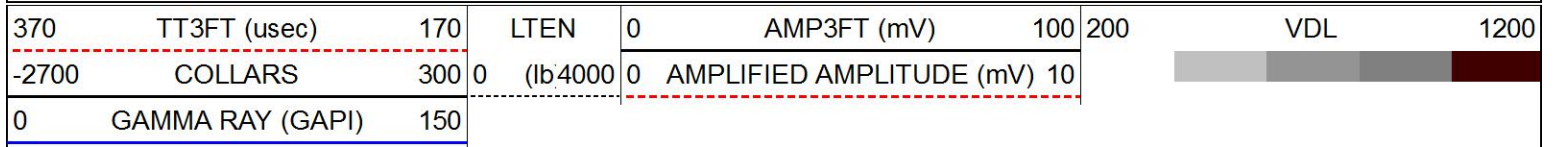
5" = 100'

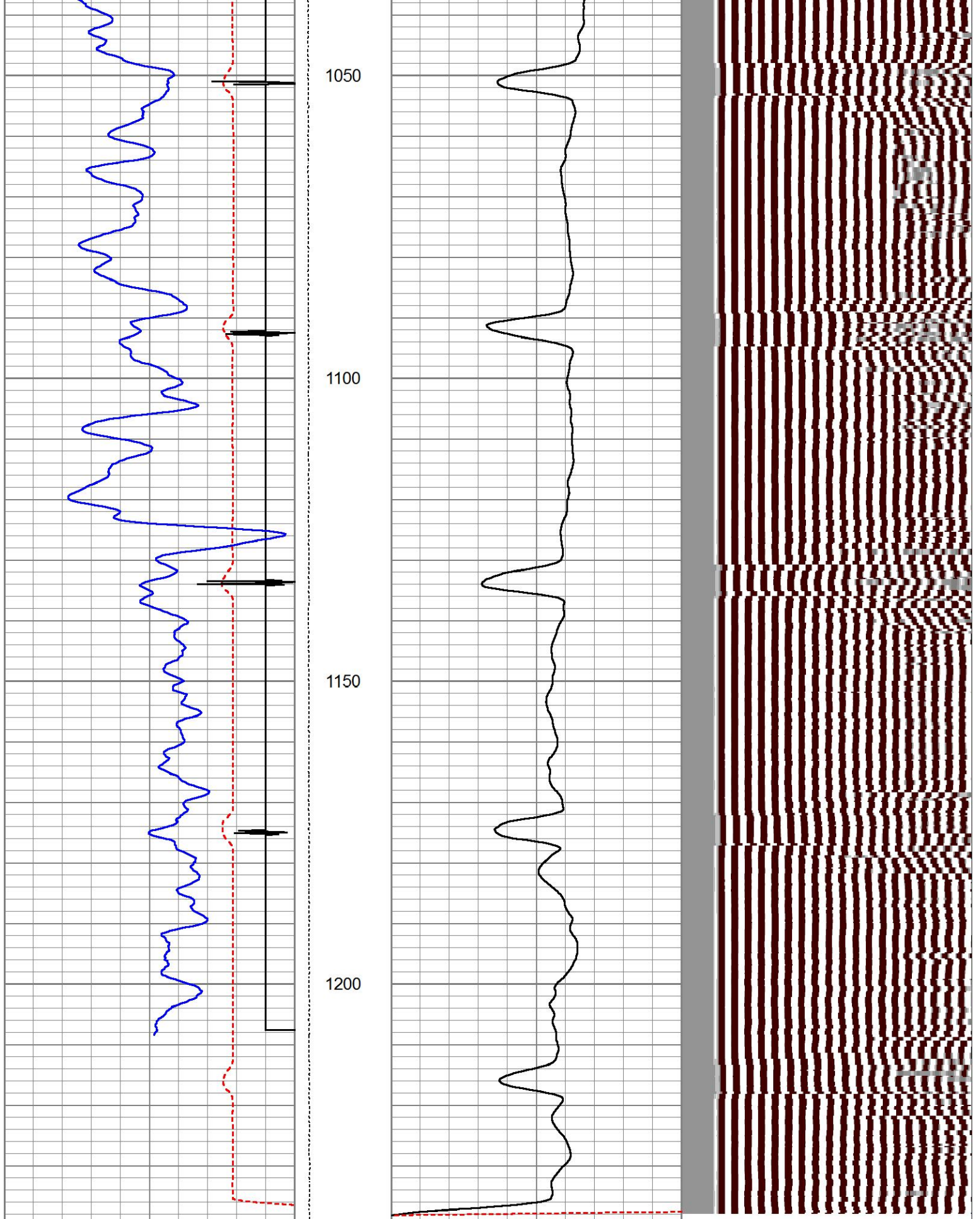
REPEAT LOG SECTION

HALLIBURTON

5" = 100'

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 Dataset Pathname 44b14/run1/RPT1
 Presentation Format cbl-radi
 Dataset Creation Wed May 28 16:31:37 2014
 Charted by Depth in Feet scaled 1:240





370	TT3FT (uSec)	170	LTEN	0	AMP3FT (mV)	100	200	VDL	1200
-2700	COLLARS	300	0	(lb4000	0	AMPLIFIED AMPLITUDE (mV)	10		
0	GAMMA RAY (GAPI)	150							

REPEAT LOG SECTION

HALLIBURTON

5" = 100'

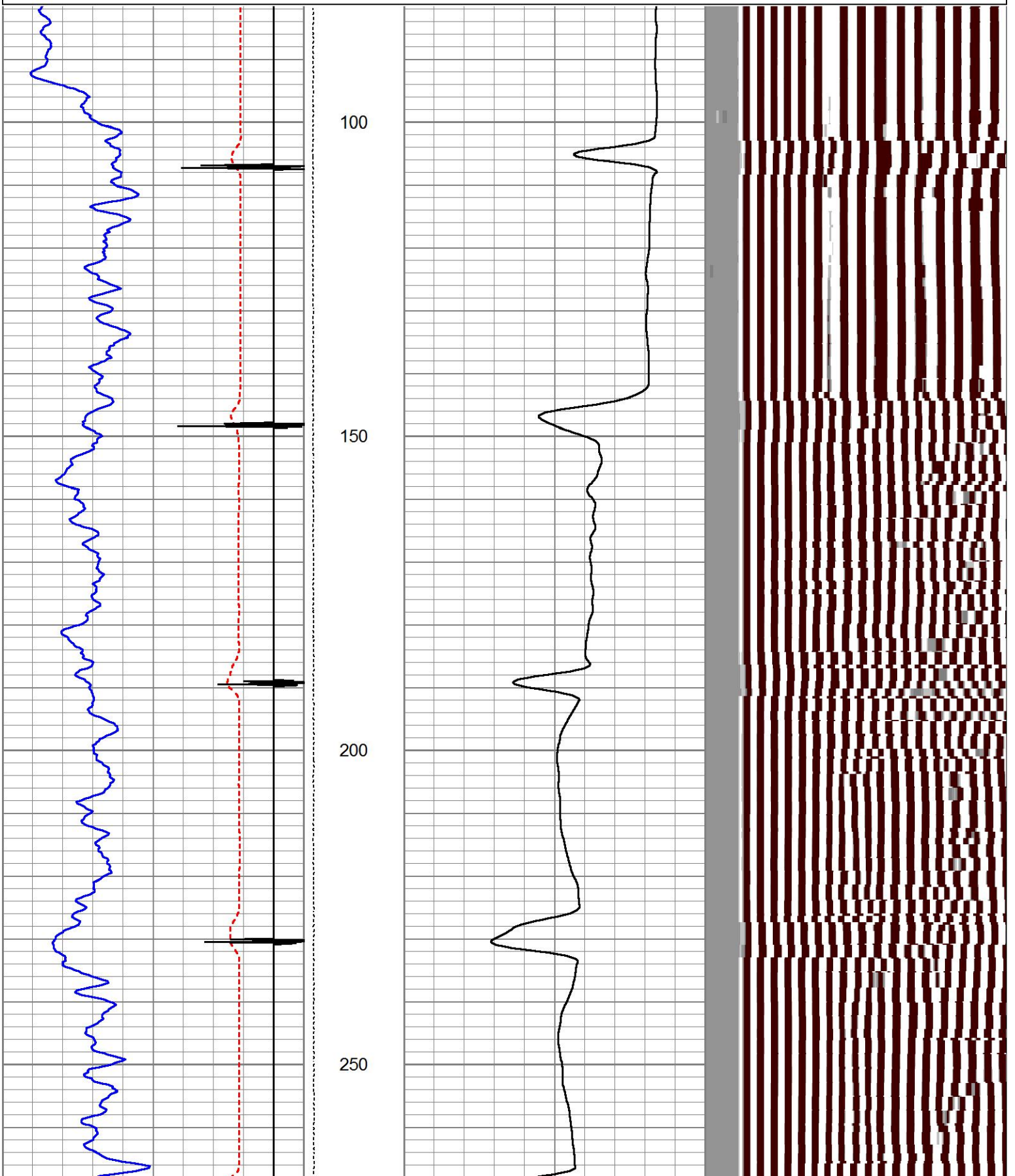
FREE PIPE LOG SECTION

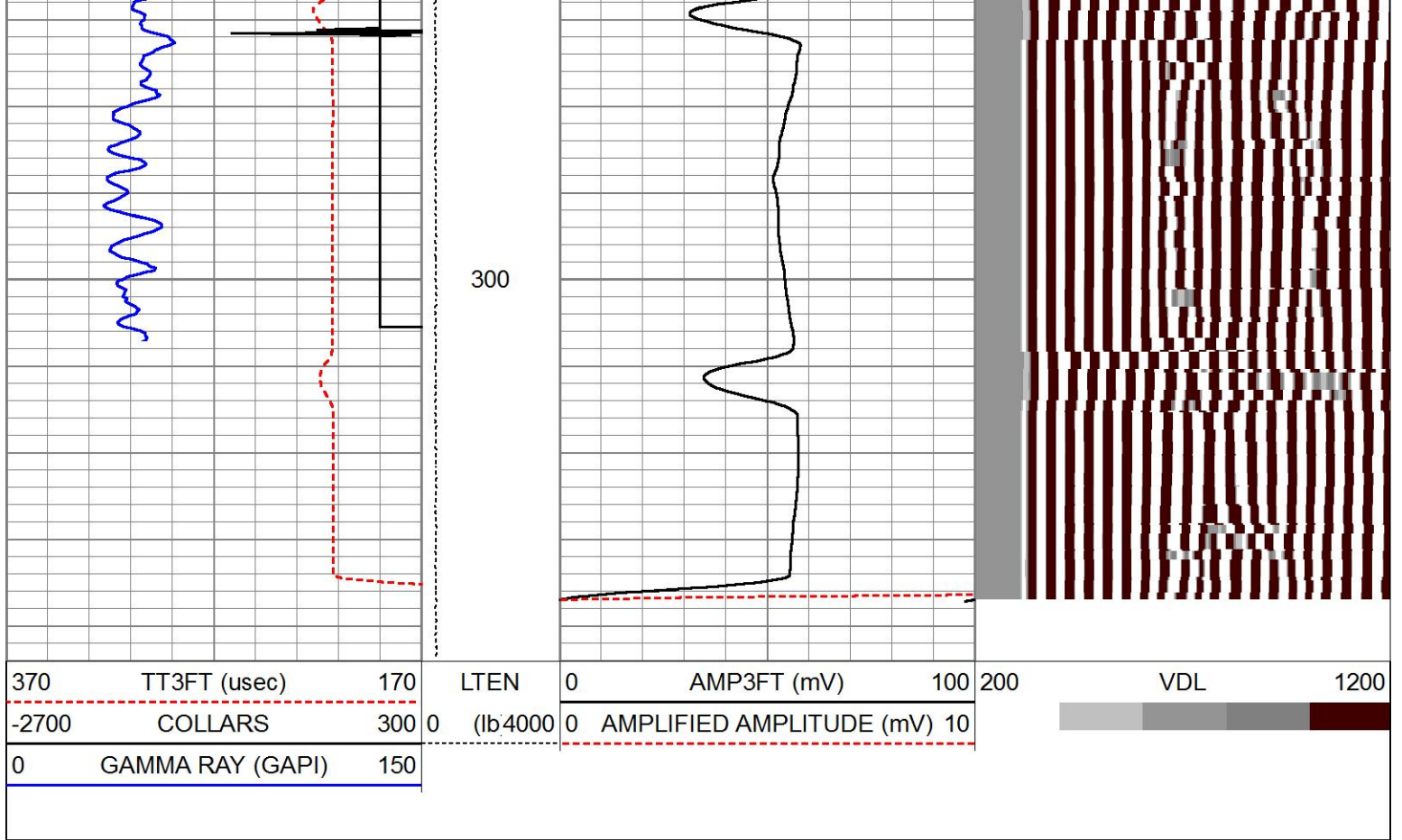
HALLIBURTON

5" = 100'

Database File nolte_44b14_cmb.db
 Dataset Pathname 44b14/run1/FREE1
 Presentation Format cbl-radi
 Dataset Creation Wed May 28 16:17:09 2014
 Charted by Depth in Feet scaled 1:240

370	TT3FT (usec)	170	LTEN	0	AMP3FT (mV)	100	200	VDL	1200
-2700	COLLARS	300	0	(lb4000	0	AMPLIFIED AMPLITUDE (mV)	10		
0	GAMMA RAY (GAPI)	150							





FREE PIPE LOG SECTION

HALLIBURTON

5" = 100'

Log Variables DatabaseD:\Warrior_data\nolte_44b14_cmb.db Dataset field/44b14/run1/MAIN1

Top - Bottom

GAINCO	RINOR	RTF	RTN	RNOR	BHSAL2	BHSAL1	POROS2
0	0.971547	0.916631	0.93876	4.66536	0	1	0
POROS1	LTH	UHSGC	RHOFC	SO in	BORSAL kppm	CASED?	PPT uSec
1	Sandstone	1	0.33	0	100	Yes	0
CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	MudWgt lb/gal	CASETHCK in	CASEOD in
11.6	0	1	0.8	0	8.4	0.25	4.5
PERFS	TDEPTH ft	BOTTEMP degF	BITSIZE in				
0	0	100	8.75				

Calibration Report

Database File nolte_44b14_cmb.db
 Dataset Pathname 44b14/run1/MAIN1
 Dataset Creation Wed May 28 17:06:28 2014

Segmented Cement Bond Log Calibration Report

Serial Number: 11002212
 Tool Model: 004

 Calibration Casing Diameter: 4.500 in
 Calibration Depth: 140.078 ft

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.034	0.549	1.500	81.196	154.867	-3.755
5FT	0.015	0.869	1.500	81.196	93.381	0.095
S1	0.033	0.738	0.000	100.000	141.772	-4.626
S2	0.030	0.568	0.000	100.000	185.887	-5.539
S3	0.029	0.671	0.000	100.000	155.718	-4.452
S4	0.031	0.736	0.000	100.000	141.735	-4.334
S5	0.029	0.696	0.000	100.000	149.908	-4.324
S6	0.024	0.347	0.000	100.000	309.507	-7.534
S7	0.025	0.434	0.000	100.000	244.596	-6.184
S8	0.022	0.199	0.000	100.000	563.490	-12.285

Calibration Report

	Serial Number:	11002212
	Tool Model:	004
	Performed:	
	Reference (degF)	Reading ()
Low:	0.000	0.000
High:	1.000	1.000
	Gain = 1.000	Offset = 0.000

Reservoir Monitor Tool I Calibration Report

Serial-Model:	12095949-A
Shop Calibration Performed:	Fri May 16 12:02:32 2014

Carbon/Oxygen Mode

Stabilization						
Result	Logged	Expected Value	Diff.	Tol.	Units	
GENV	101.00	80.00	21.00	+/-15.00	V	
ITCR2	3211	3250	-39	+/-250	cps	
Near Detector						
	Channel	Expected Value	Amplitude	FWHM	Tol.	
H	59	60 +/-2	0.0242	5.85	<6.00	
Fe	206	206 +/-2	0.0964	----	----	
NGAIN = 0.992		NZOFF = 1.4				
Far Detector						
	Channel	Expected Value	Amplitude	FWHM	Tol.	
H	60	60 +/-2	0.0306	6.23	<6.50	
Fe	210	208 +/-2	0.0917	----	----	
FGAIN = 0.989		FZOFF = 0.9				
Flask Temperature	73.5 degF					
Result	Logged	Expected Value	Diff.	Tol.	Units	
COIR2	0.45	0.45	-0.00	+/-0.02		
LIRI2	1.63	1.64	-0.01	+/-0.05		
TCCR2	7303	5000	2303	+/-1000	cps	
ITCR2	3134	3200	-66	+/-250	cps	

Sigma Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
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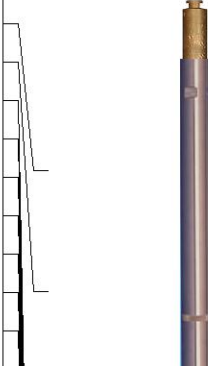
GENV	94.00	80.00	14.00	+/-15.00	V
FCAP	9837	10000	-163	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.96	0.95	0.01	+/-0.10	
N/F Inel Norm	0.62	0.61	0.01	+/-0.06	
RNF	1.04	1.07	-0.03	+/-0.12	
RINC	1.61	1.64	-0.03	+/-0.18	
SGFN	24.16	24.00	0.16	+/-0.50	cu
SGFF	22.94	22.85	0.09	+/-0.50	cu
FSIN	23711	24000	-289	+/-2000	cps
FCAP	9973	10000	-27	+/-1000	cps
NFTR	0.84			<5.00	
FFTR	0.88			<5.00	
NBKG	190			<500	cps
FBKG	95			<500	cps
RTN	0.39	0.40	-0.01	+/-0.10	usec
RTF	0.39	0.40	-0.01	+/-0.10	usec

Calibration Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.4.24.99				
Log Data Acquisition Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.4.24.99				

Gamma Ray Calibration Report

Type / Serial: 002 / 12105786

SHOP CALIBRATION		Wed May 28 09:47:21 2014			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	42.5				cps
Calibrator	324.0				cps
		1.4493			GAPI/cps
PRIMARY VERIFICATION					
Background	58.6				cps
Calibrator	471.1				cps
Difference				412.5	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	37.31		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.10	1.44	1.00
GR	35.05					
RmtTFGT	24.39					
RmtFBACK	24.39					
RmtFCAPT	24.39					
RmtFINEL	24.39					
RmtTNGT	23.89		TTTCU-002 (12105786) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
RmtNBACK	23.89					
RmtNCAPT	23.89					
RmtNINEL	23.89					

