

Company URSA OPERATING COMPANY
 Well BMC D 22C-18-07-95
 Field WILDCAT
 County GARFIELD State CO

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 County GARFIELD State CO

API No.: 05045233260000 Serv #: 904058185 Other Services
 Location: SHL:1272' FNL 2307' FWL
 BHL 2258' FNL & 1901' FWL
 Sec: 18 Twp: 7S Rge: 95W
 Ground Level Elevation 5268'
 KB, 17 Ft. above perm. datum
 KB
 Elevation
 K.B. 5285'
 D.F. 5286'
 G.L. 5268'
 JB-GR
 RMT-I

Permanent Datum	28-MAY-2017		Type Fluid in Hole	FRESH WATER	
Log Measured From	ONE		Density of Fluid	8.4 PPG	
Drilling Measured From	KB		Fluid Level	FULL	
Date @ Time Logged	28-MAY-2017		Cement Top Est. Logged	N/A	
Run No.	ONE		Equipment / Location	11808537 / RS	
Depth - Driller	6717.6 FT		Recorded by	Pedro Gonzalez Baqueiro	
Depth - Logger	6264 FT		Witnessed by	Luke Grieger	
Bottom - Logged Interval	6256 FT		CEMENTING DATA	Surface String	
Top - Log Interval	1700 FT		Protection String	String	
Max. Recorded Temp.	195 °F		Production String	String	
CEMENTING DATA	Surface String		Liner		
Date / Time Cemented					
Primary / Squeeze					
Expected Compressive Strength	psi@ hrs				
Cement Volume	psi@ hrs				
Cement Type / Weight Formulation	/				
Mud Type / Mud Wgt.	/				
Borehole Record			Casing & Tubing Record		
Run Number	Bit	From	To	Size	Weight
ONE	24"	SURFACE	60'	16"	75
TWO	12.25"	SURFACE	1756'	8.625"	32
THREE	7.875"	SURFACE	6717.6'	4.5"	11.6
		From	To		
		SURFACE	60'		
		SURFACE	1756.5'		
		SURFACE	6717.6'		

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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

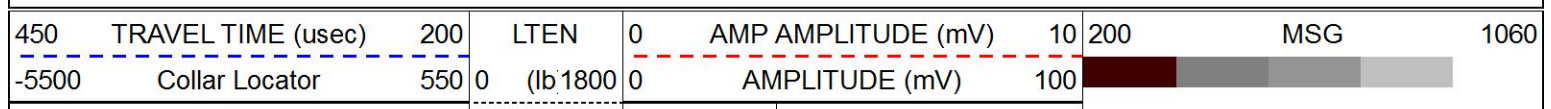
HES Reservoir Monitor Log First run in to the Hole
 Log Correlated By the KB 17'
 Log Interval per customer Request
 Log Ran in combo with RMTI tool
 THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES ROCK SPRING WY

MAIN PASS



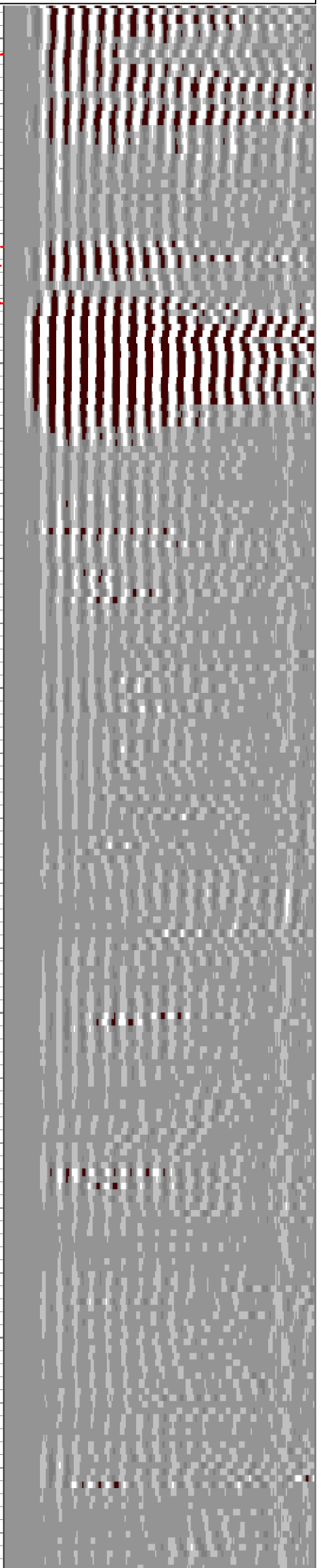
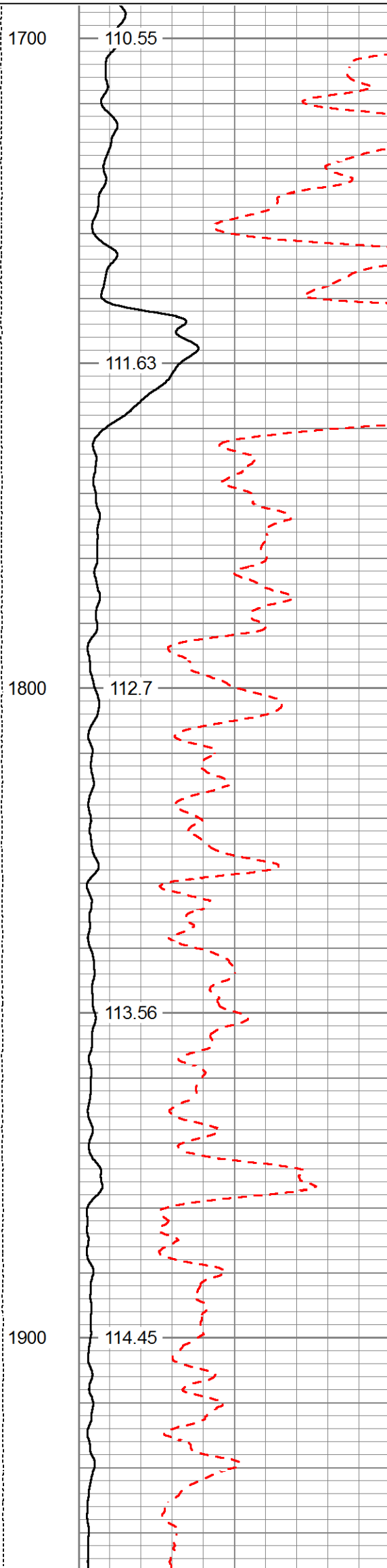
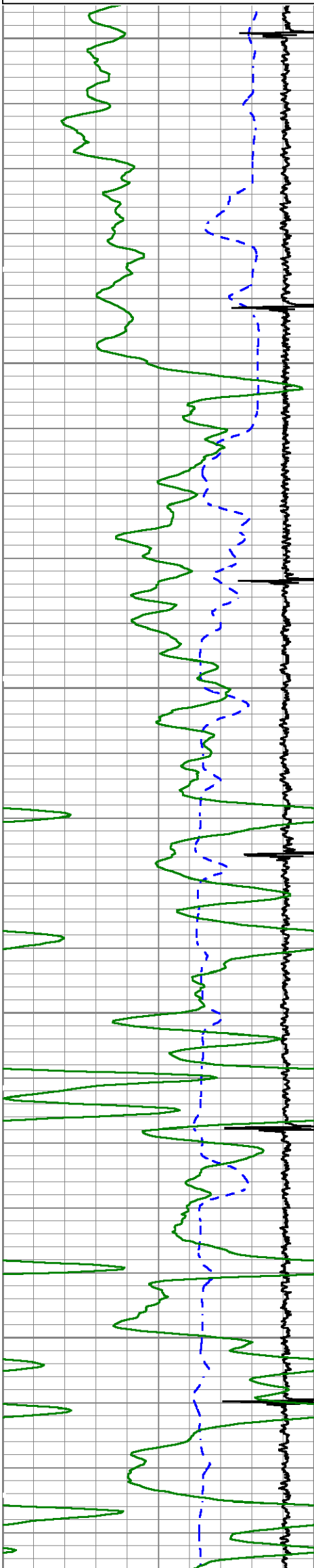
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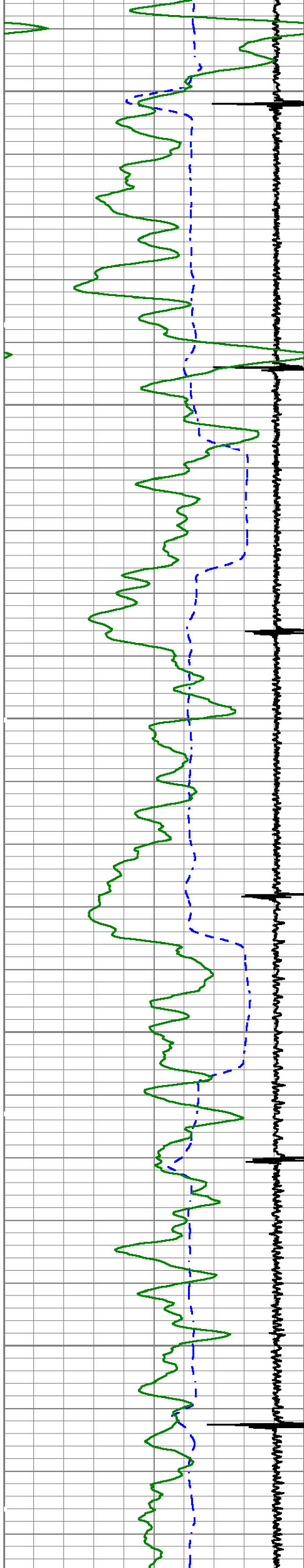
Database File bmc d 22c-18-07-95.db
 Dataset Pathname WC/BMC_D_22C-18-07-95/run1/MAIN
 Presentation Format cbl_main
 Dataset Creation Sun May 28 08:48:07 2017
 Charted by Depth in Feet scaled 1:240



0 Gamma Ray (GAPI) 150

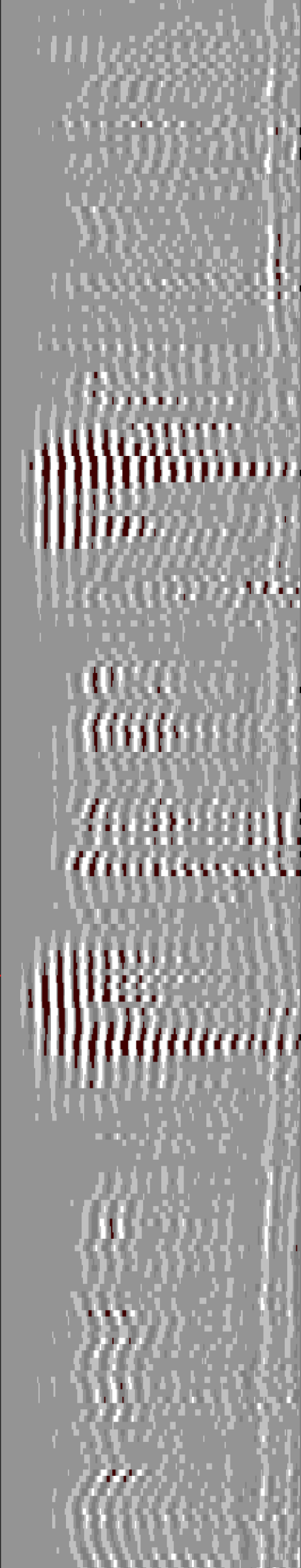
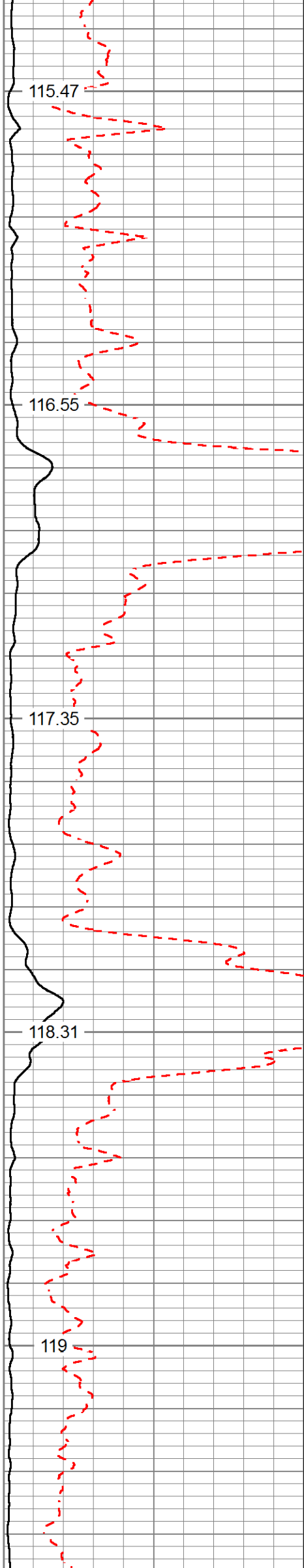
Cbit temp
(degF)

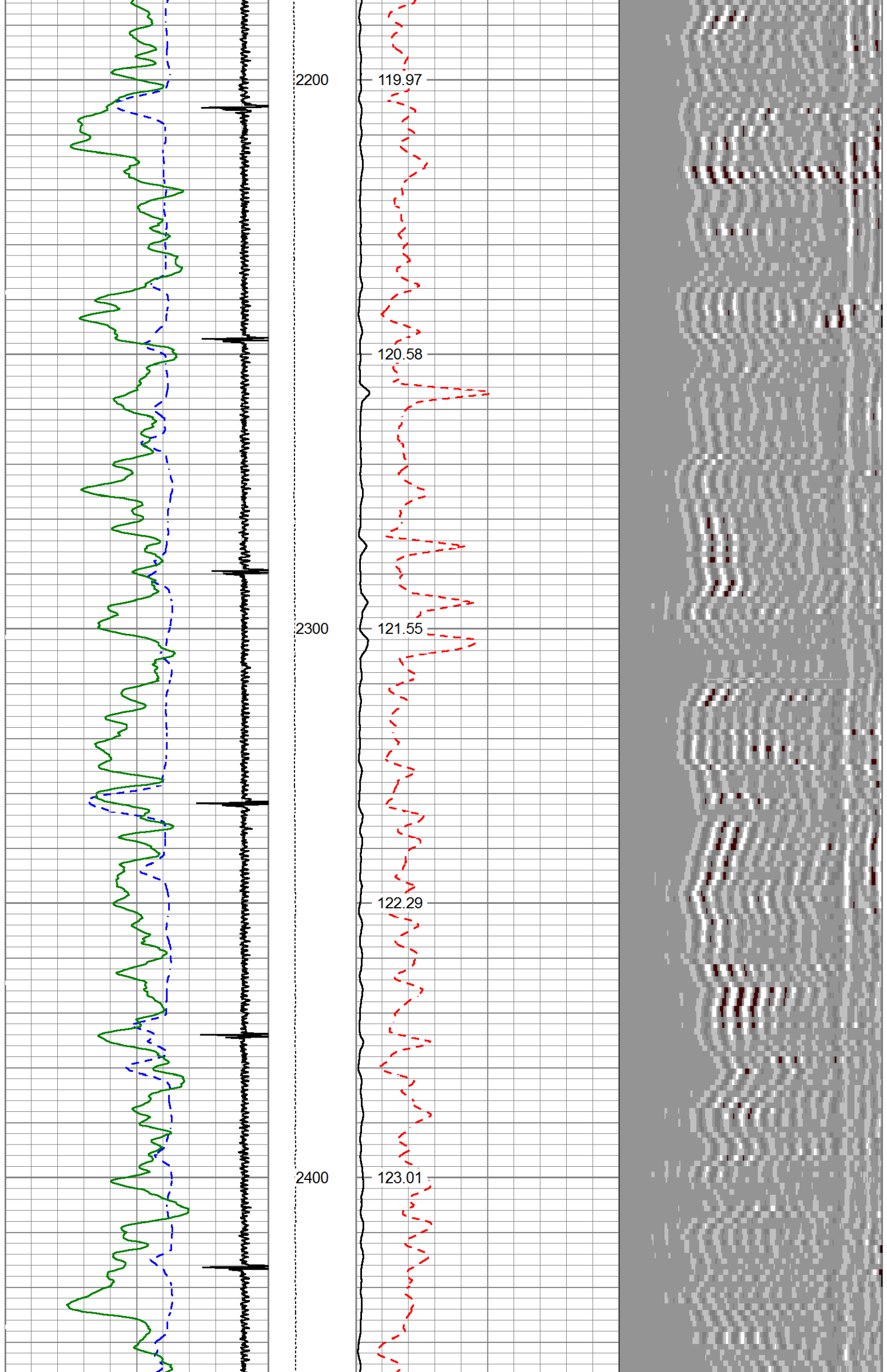


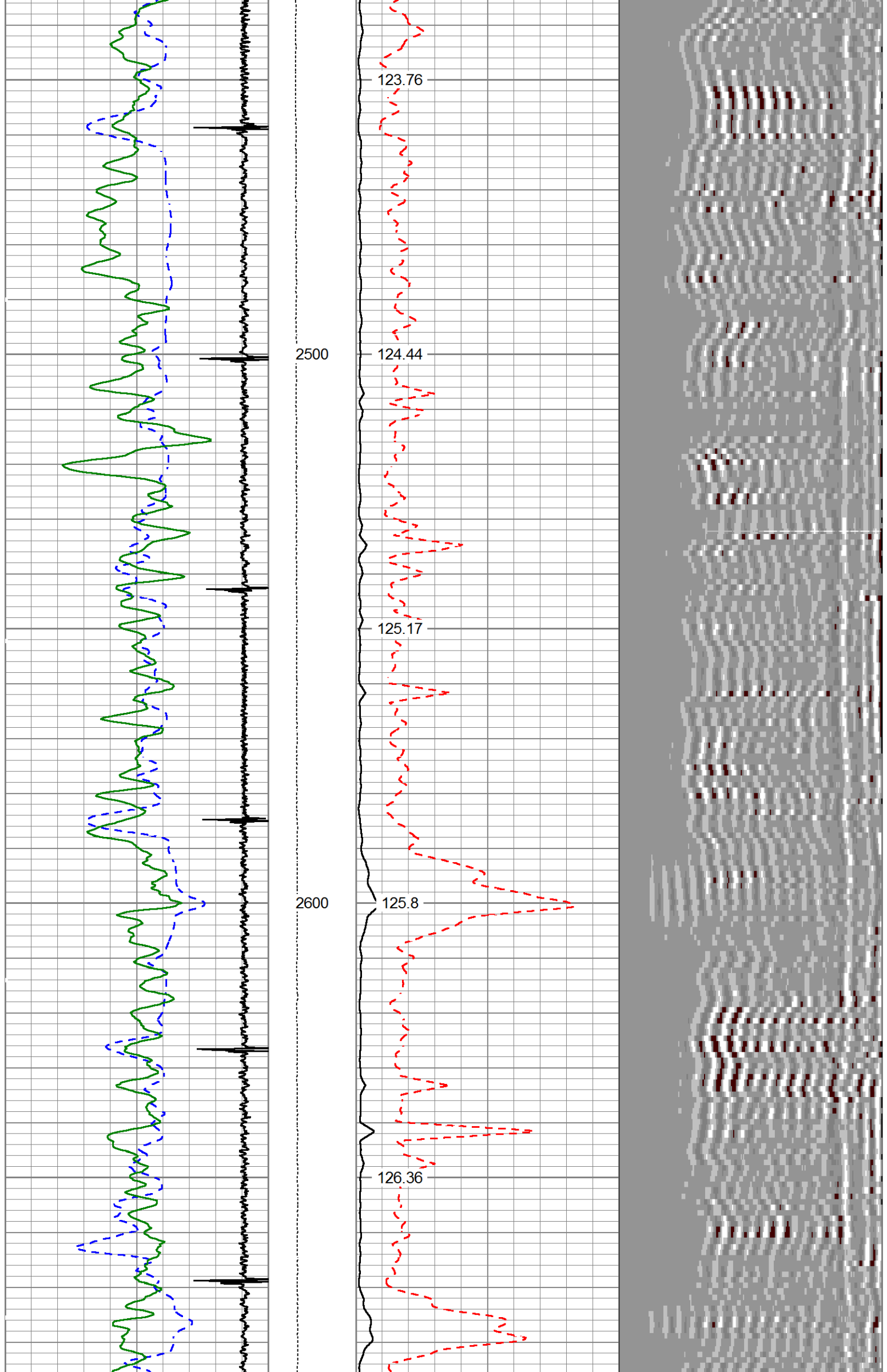


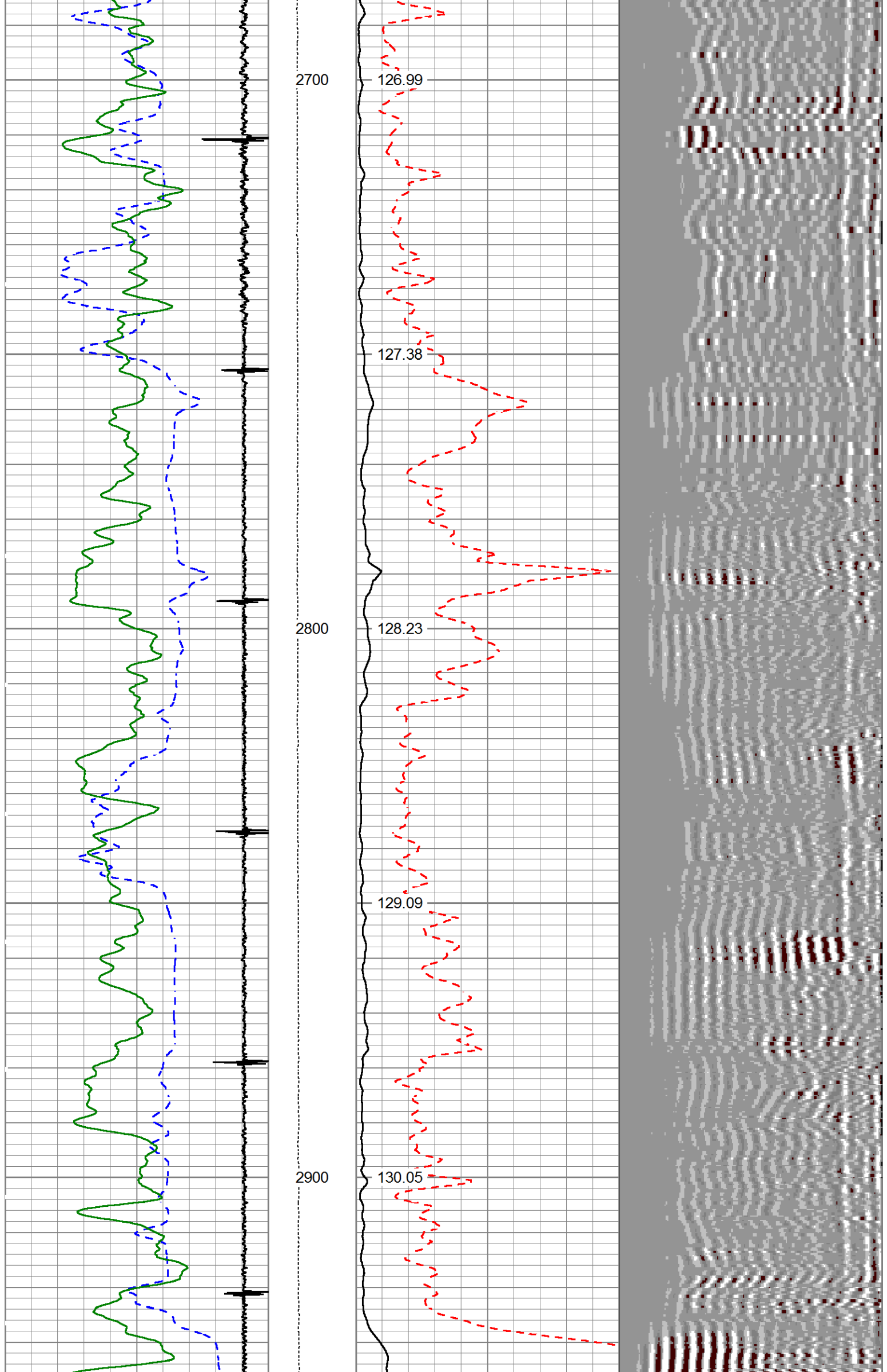
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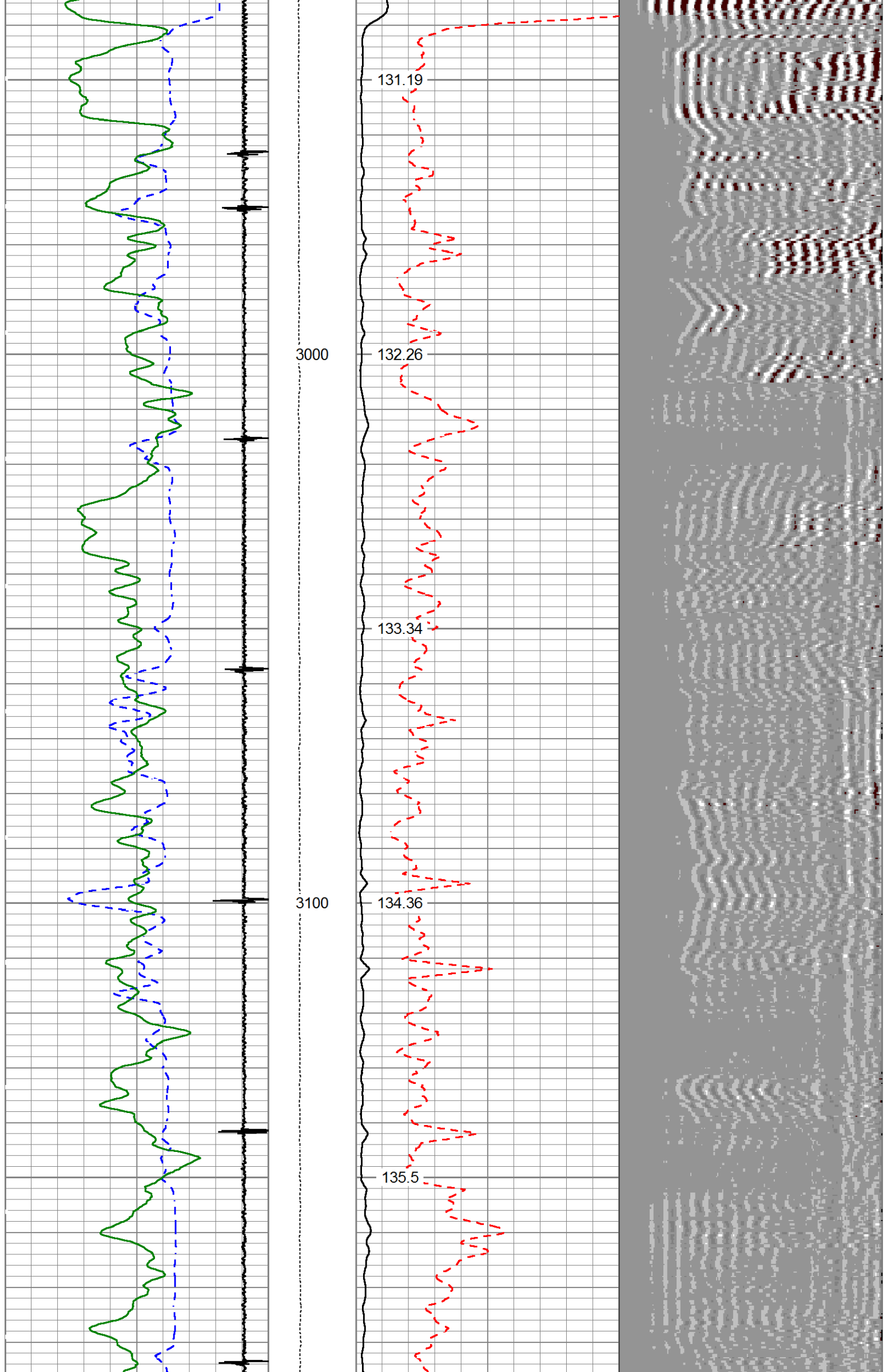
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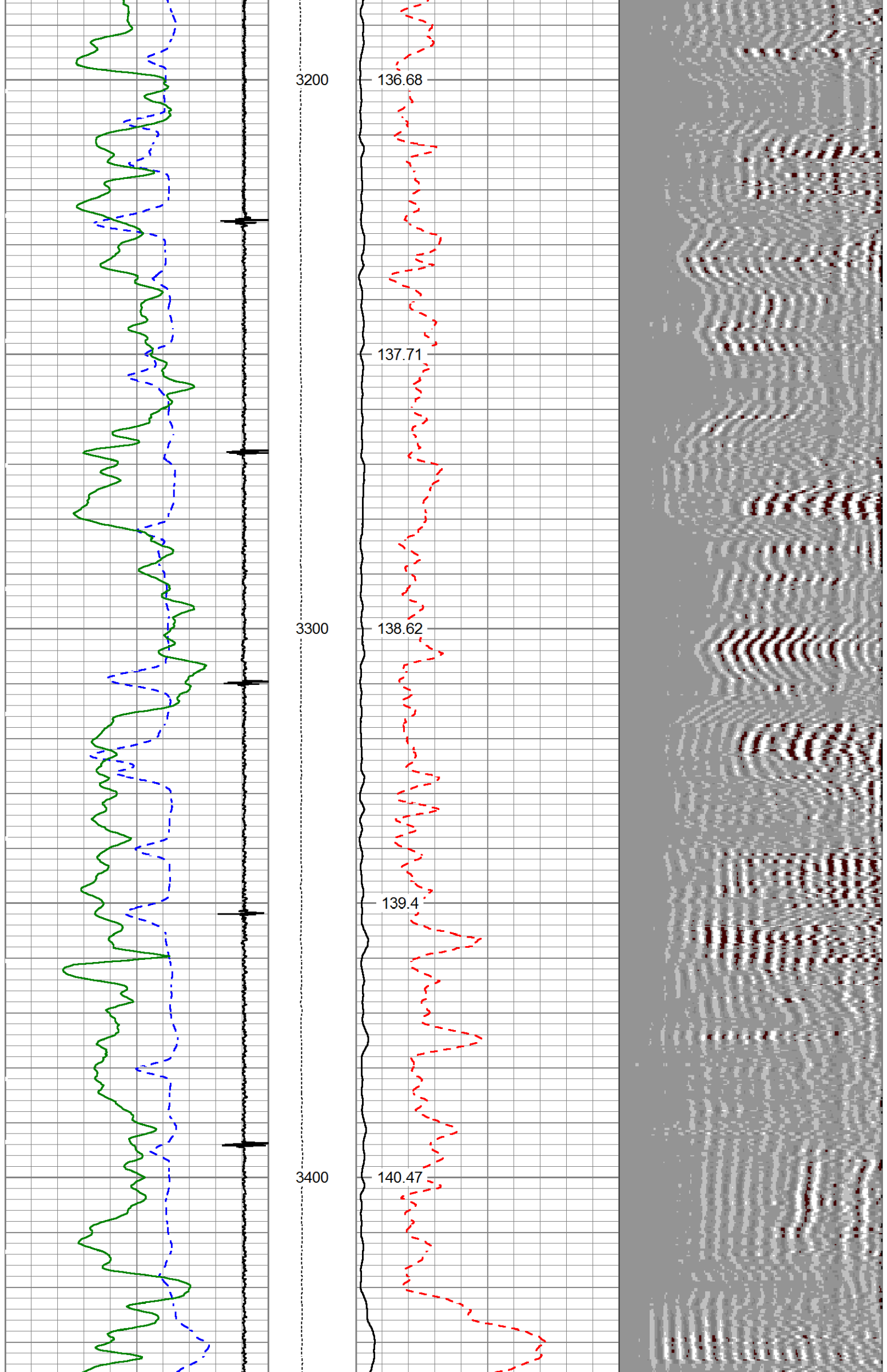


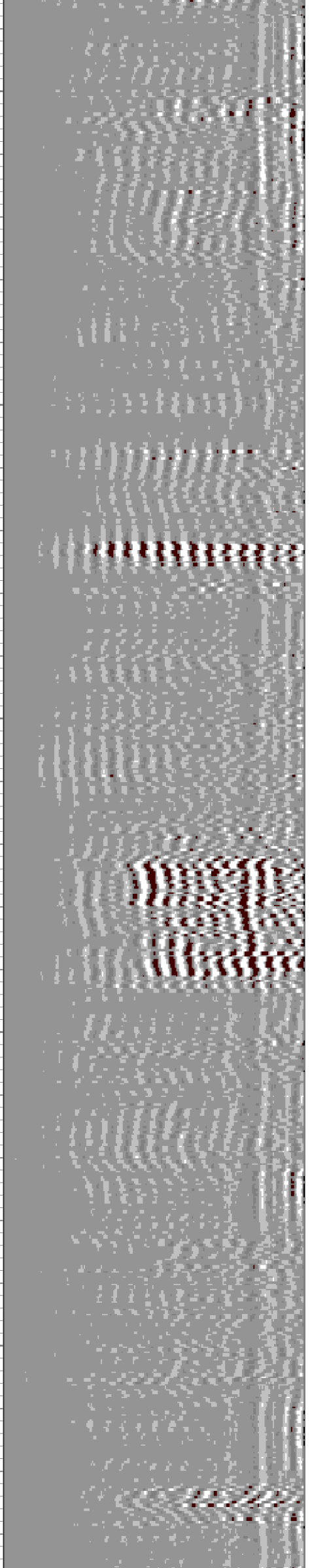
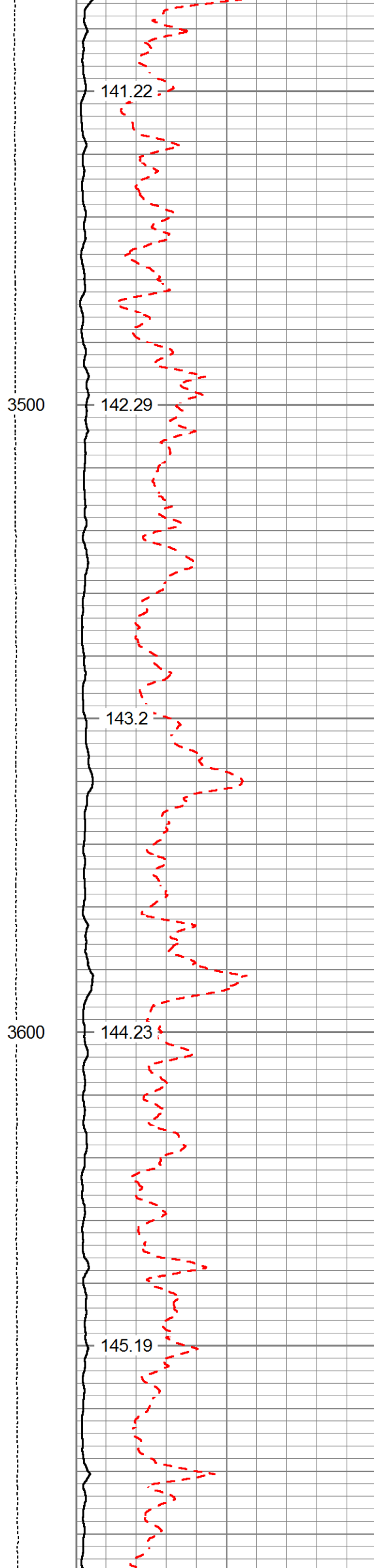
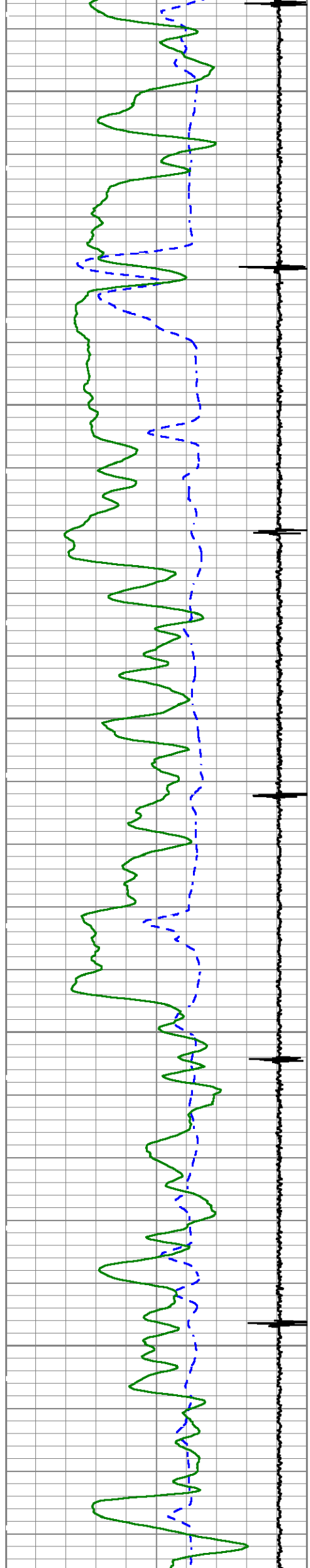












3500

3600

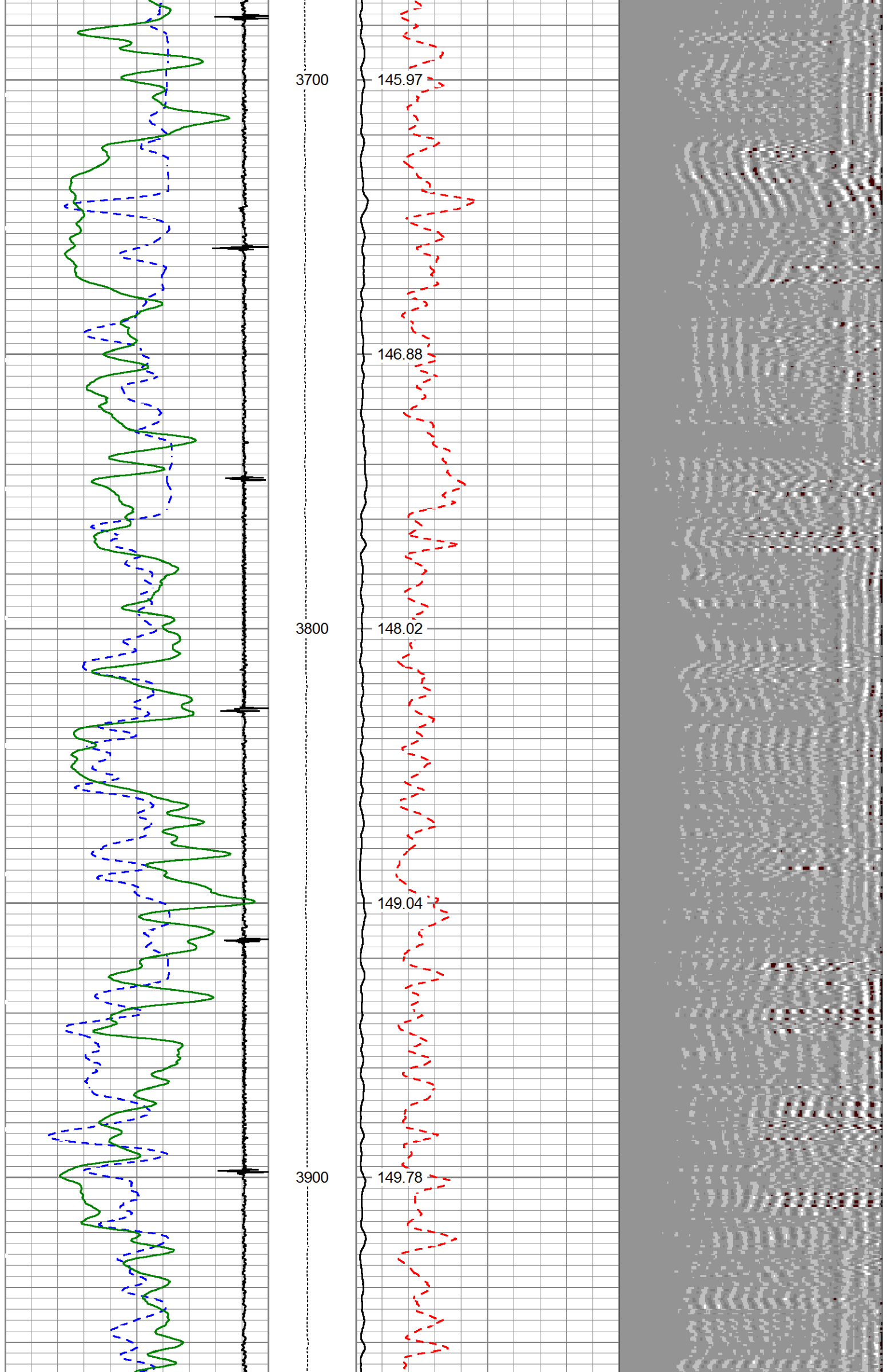
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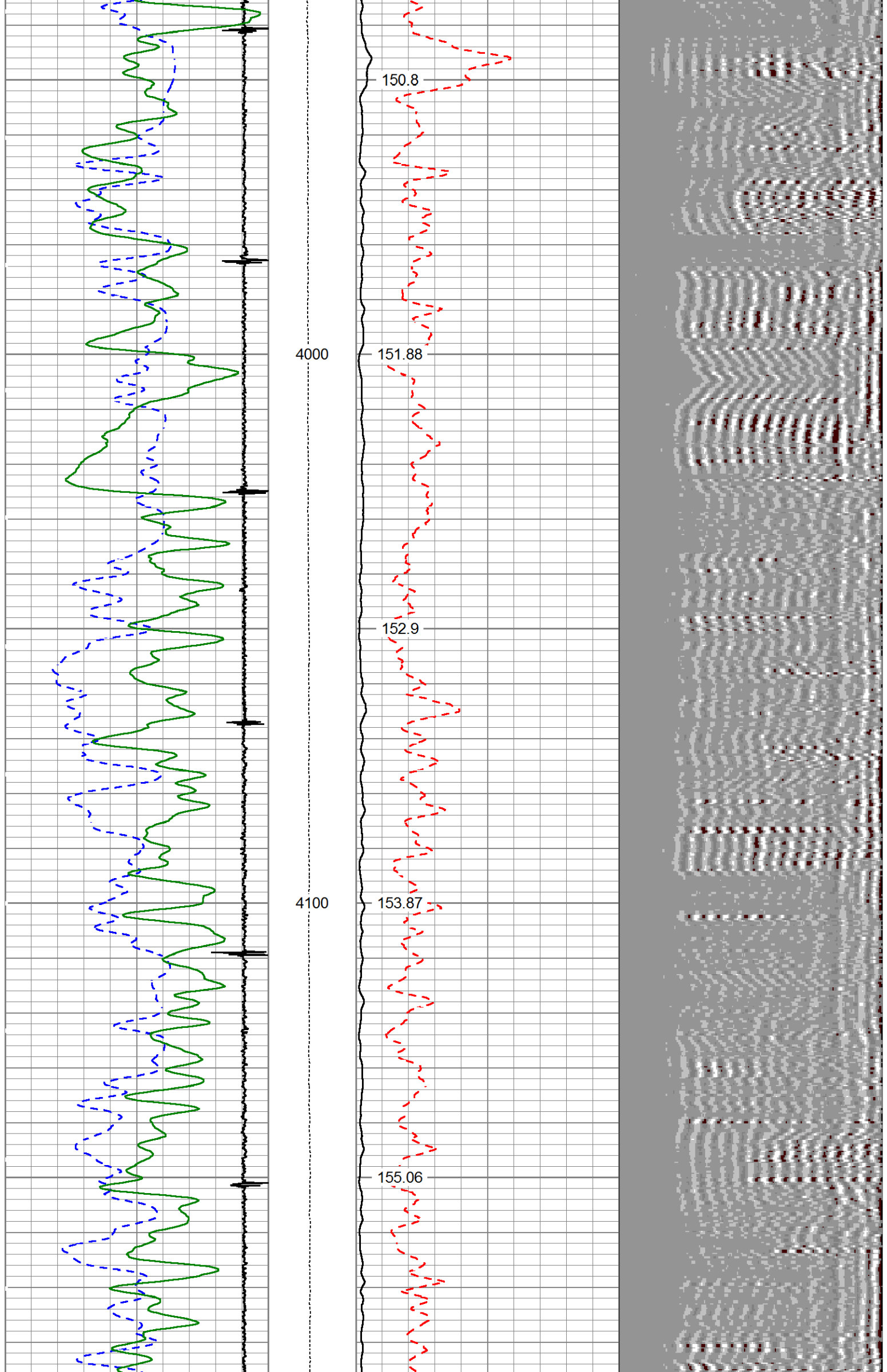
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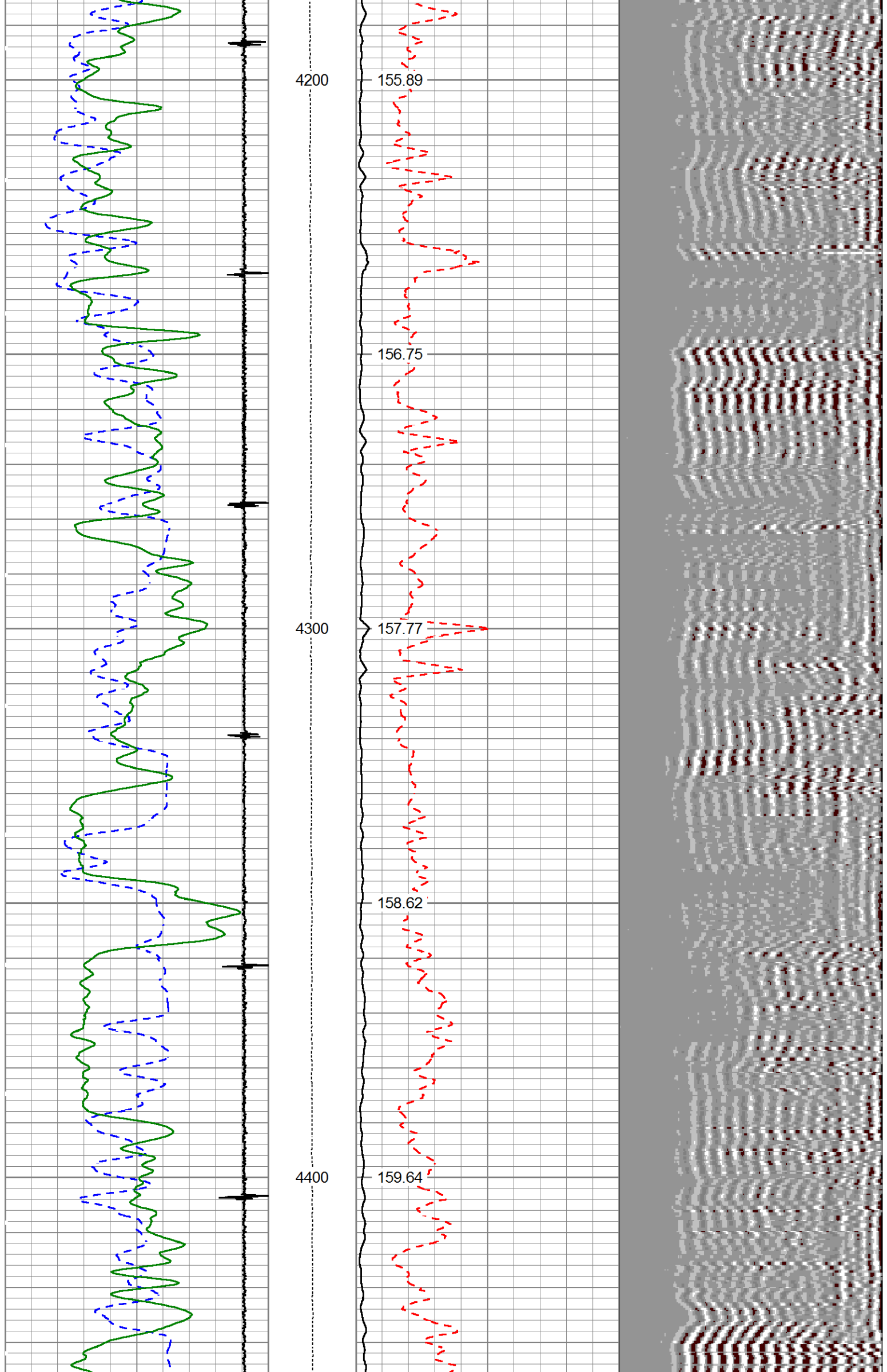
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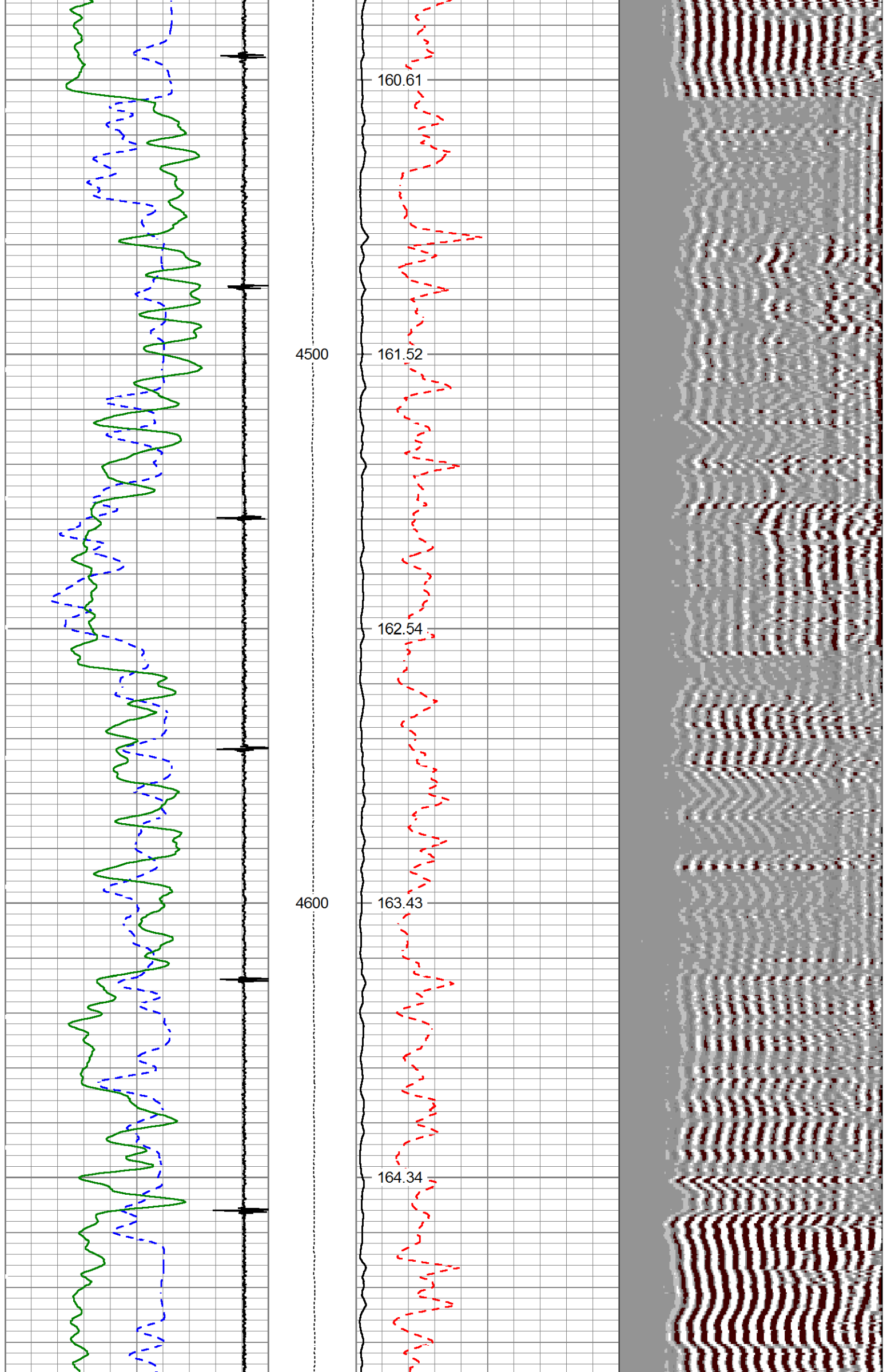
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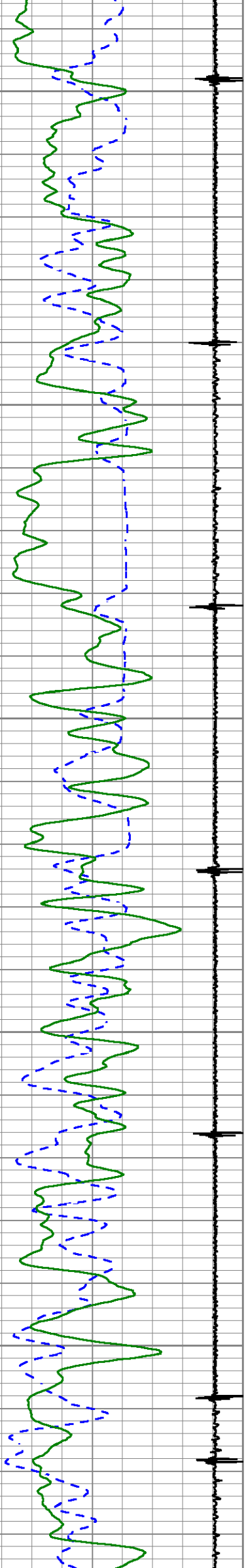
145.19











4700

165.25

166.39

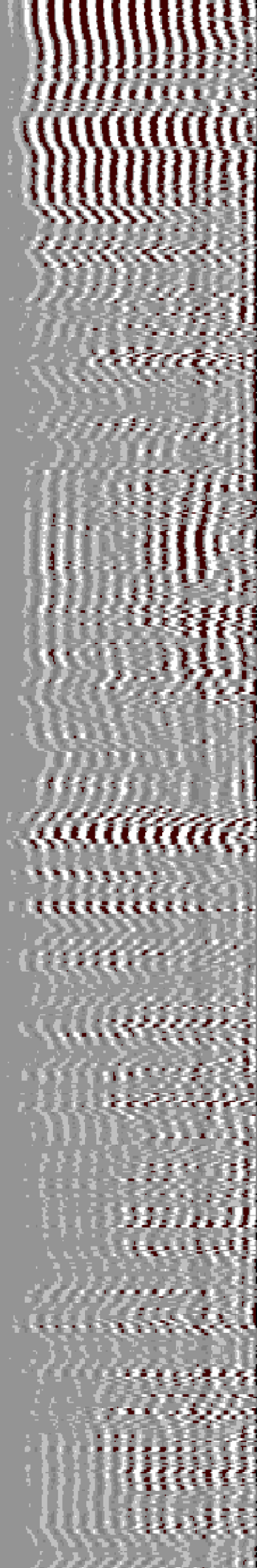
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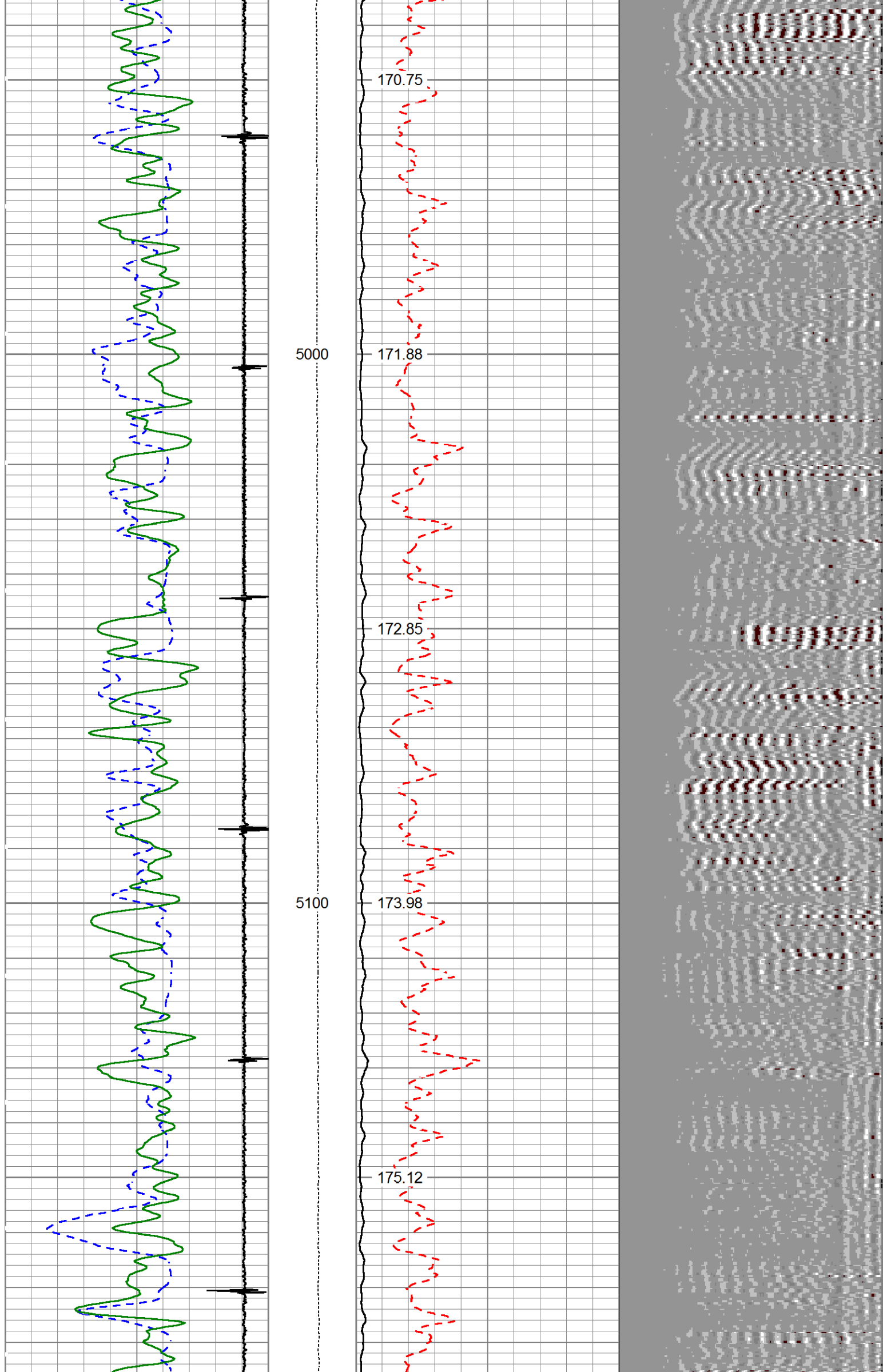
167.46

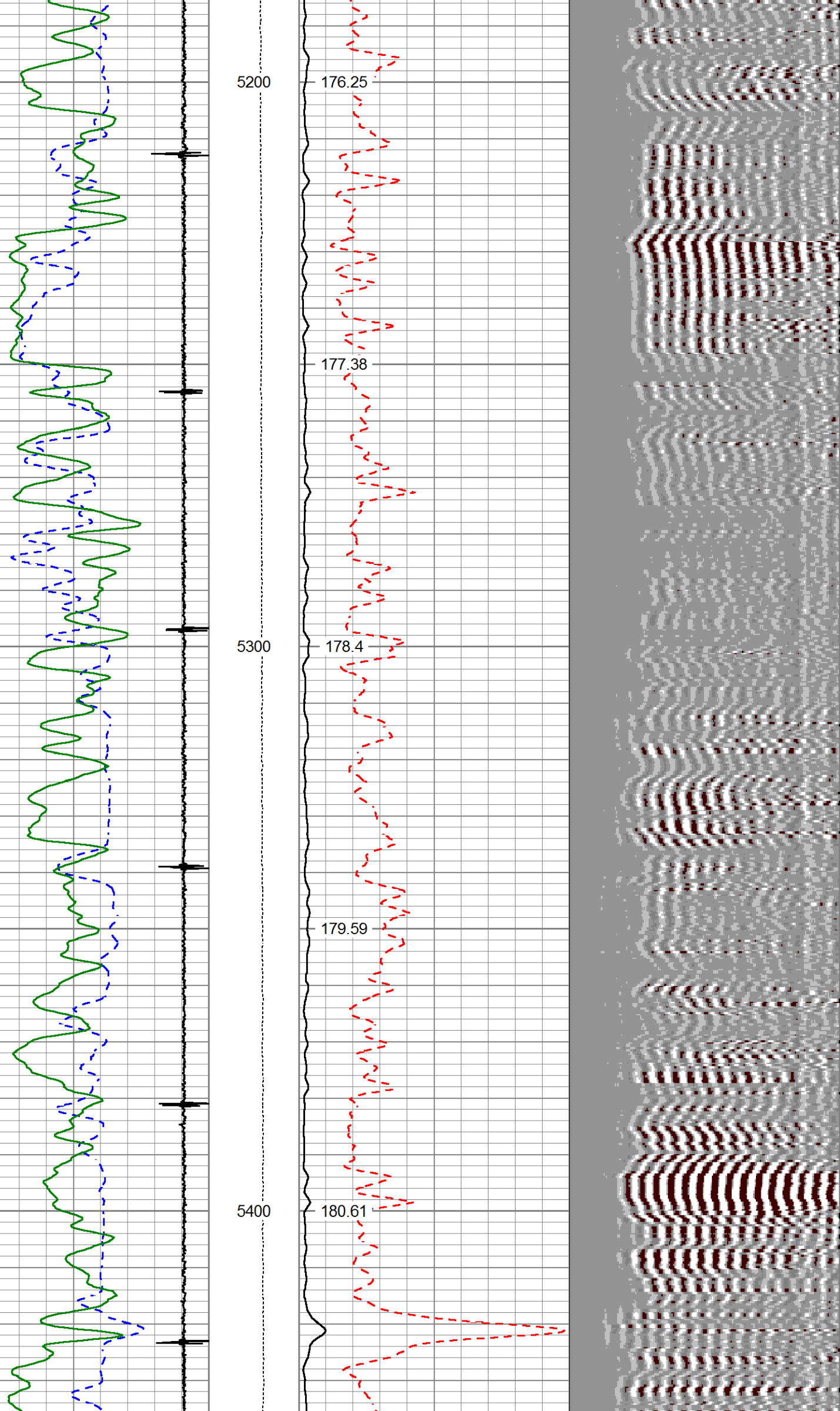
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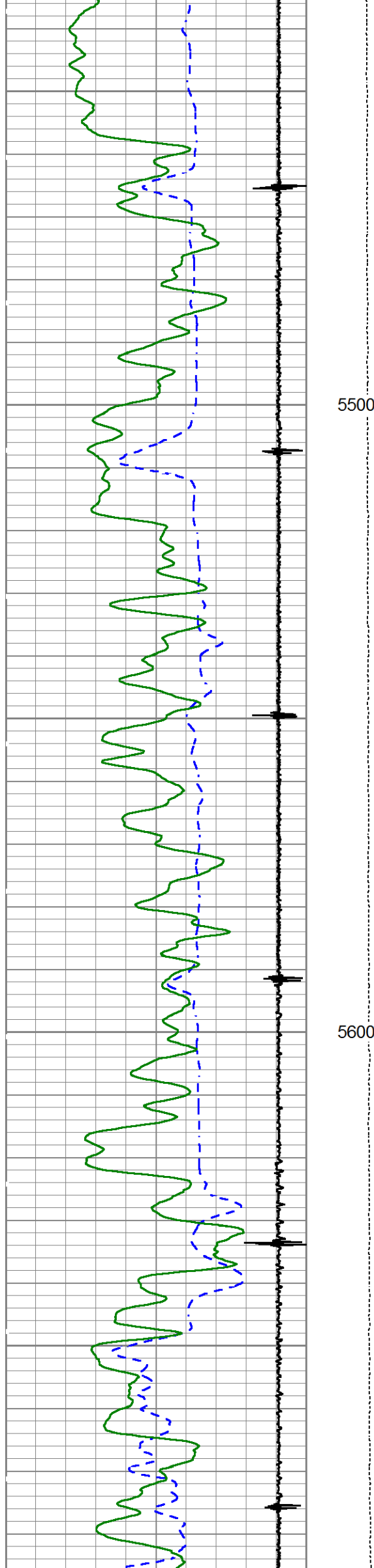
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169.56



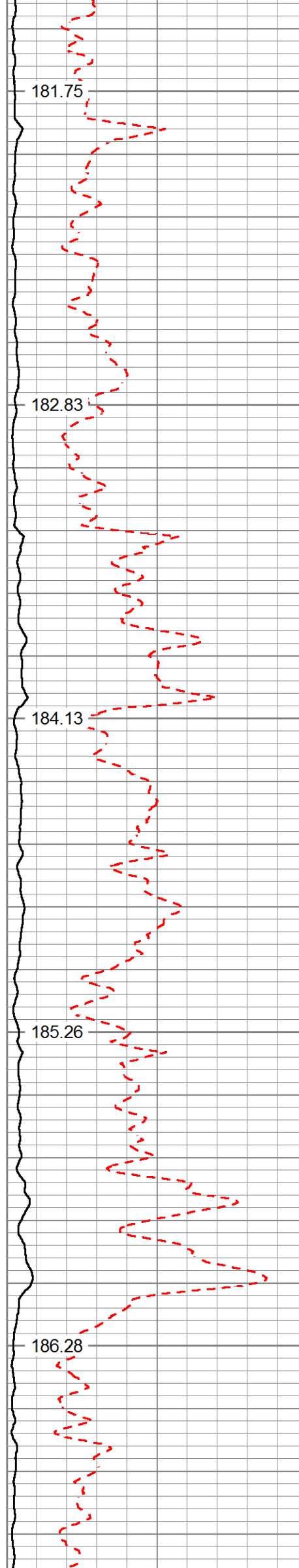






5500

5600



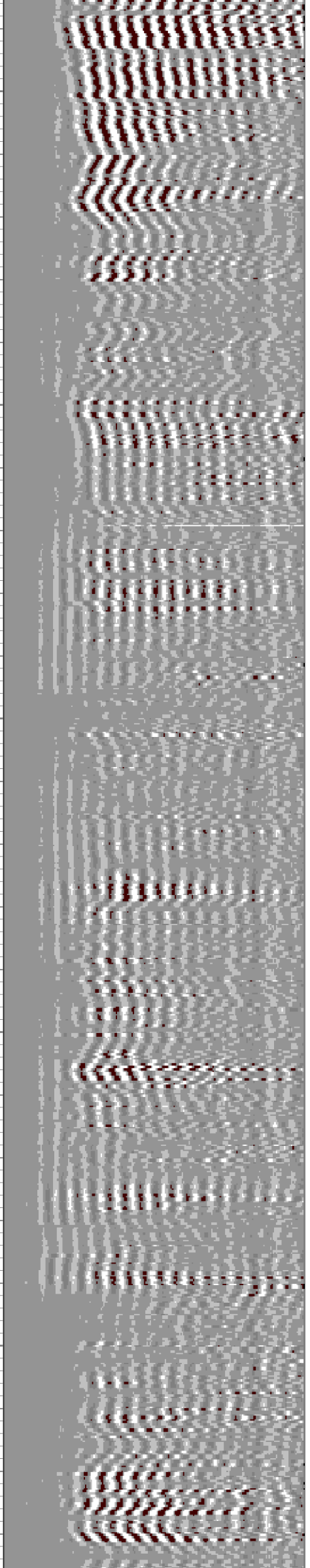
181.75

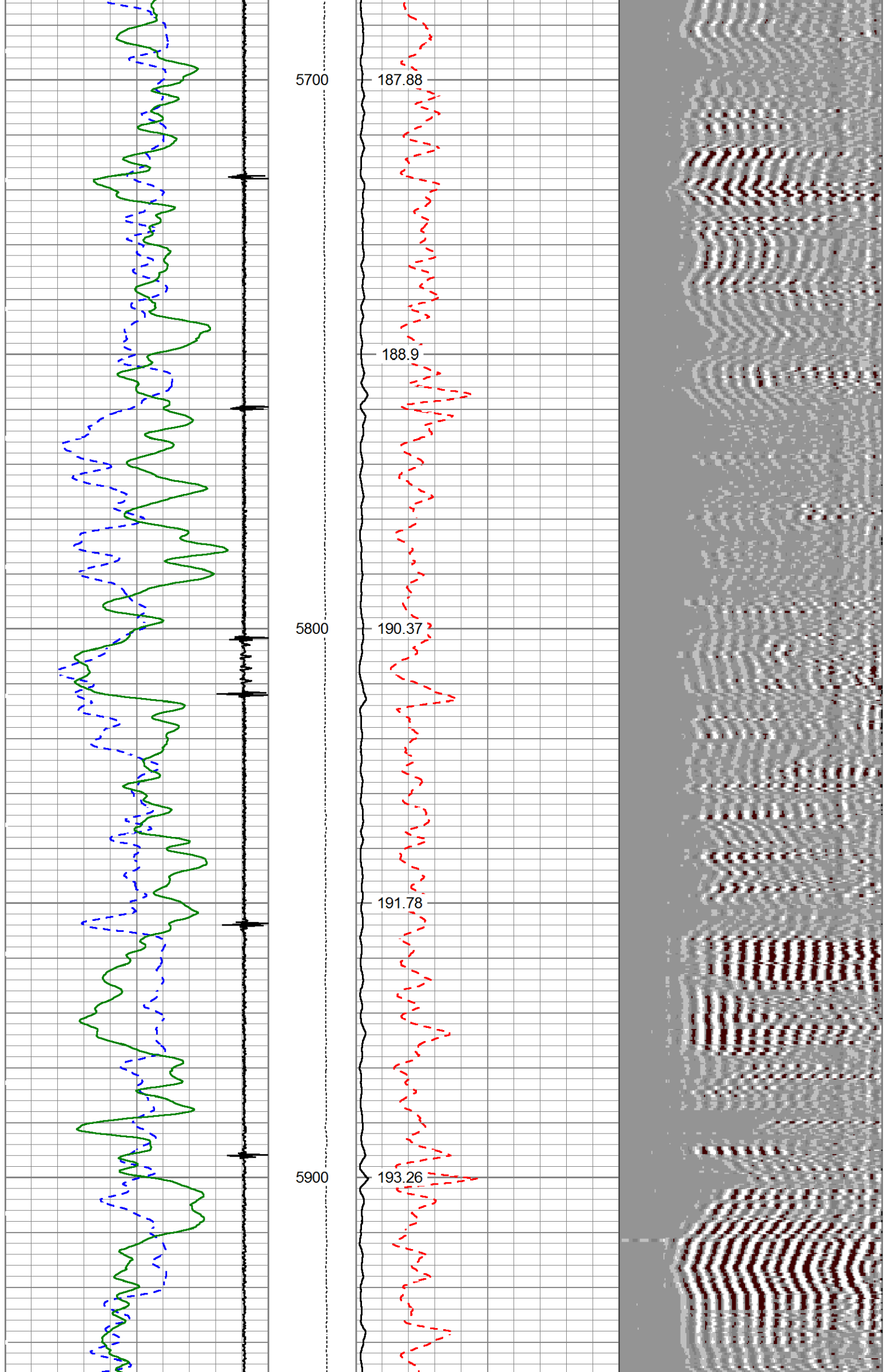
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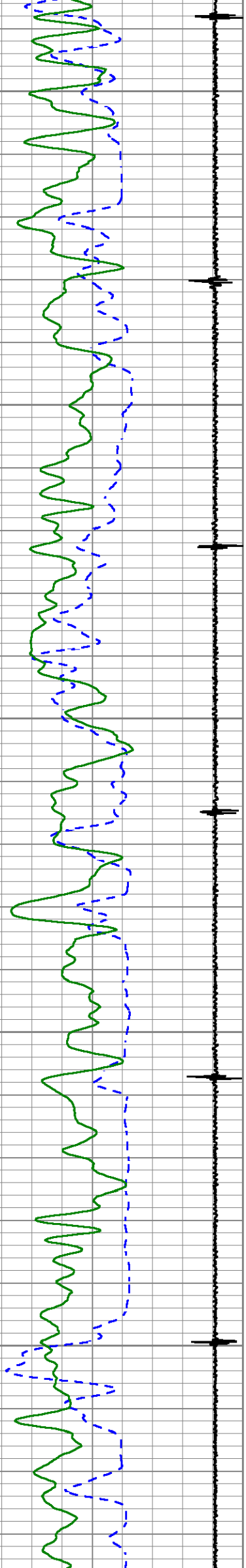
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185.26

186.28

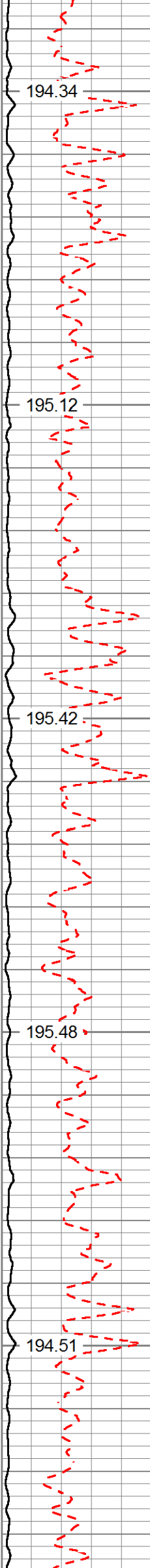






6000

6100



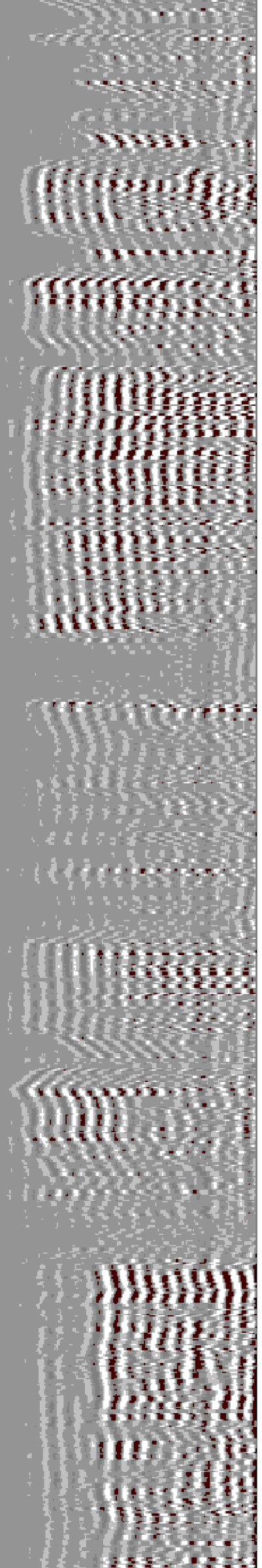
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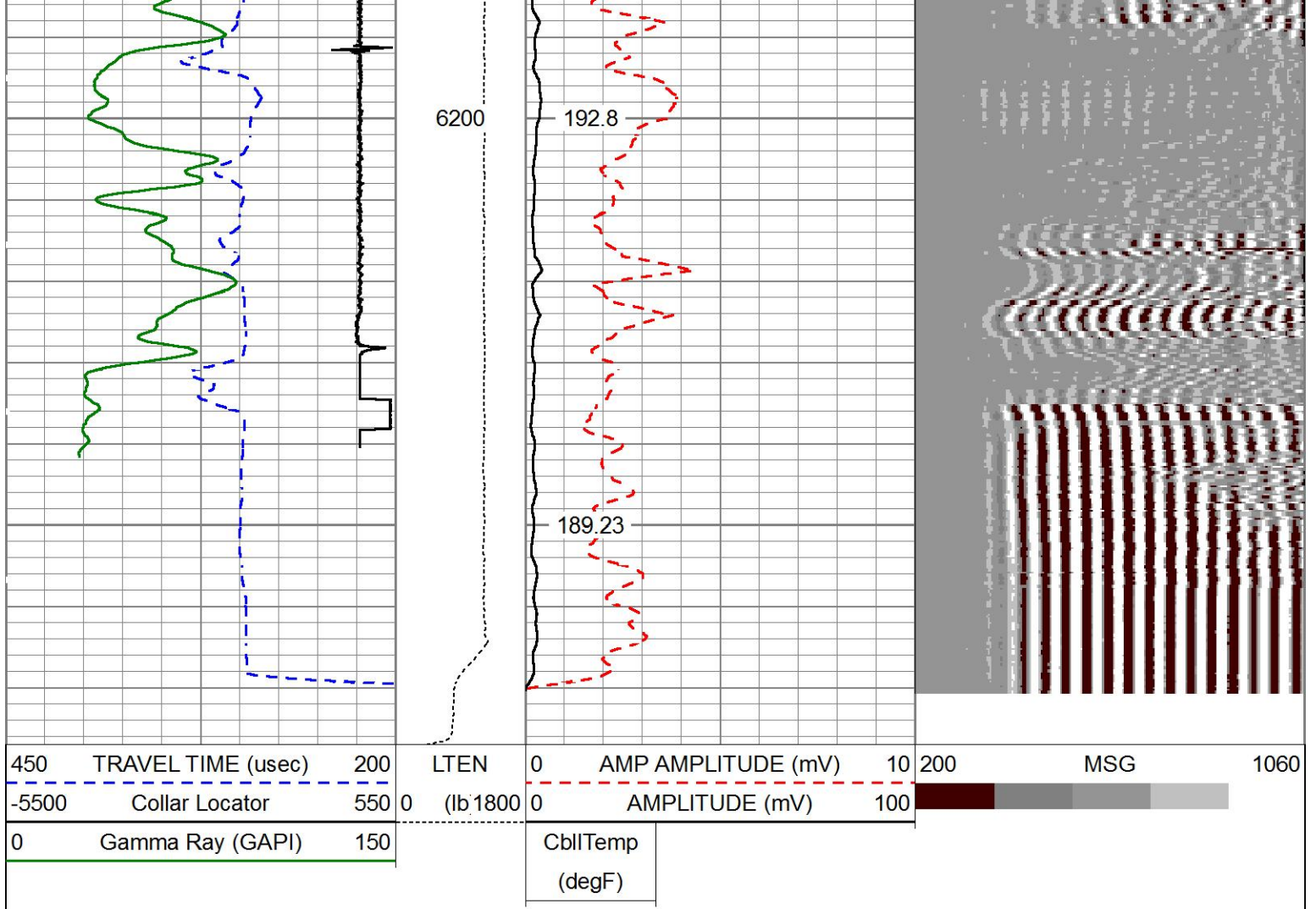
195.12

195.42

195.48

194.51





MAIN PASS

HALLIBURTON

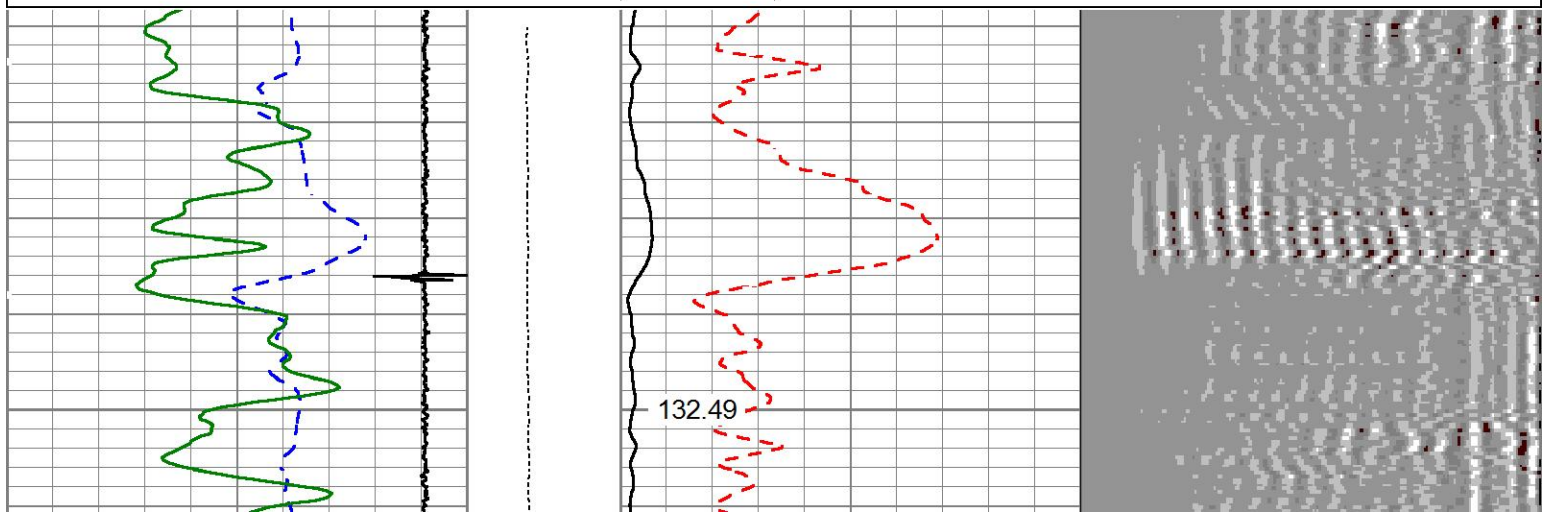
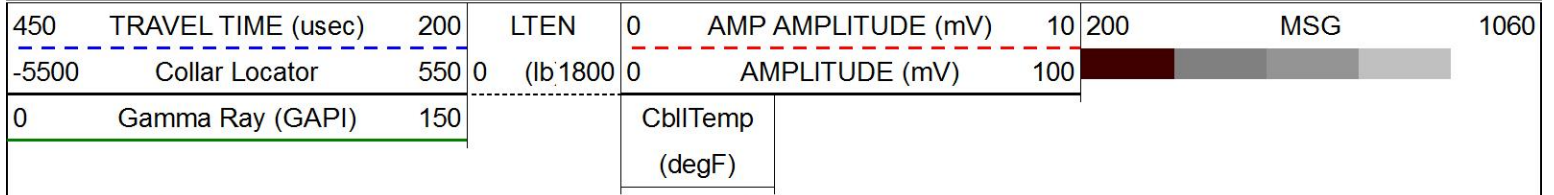
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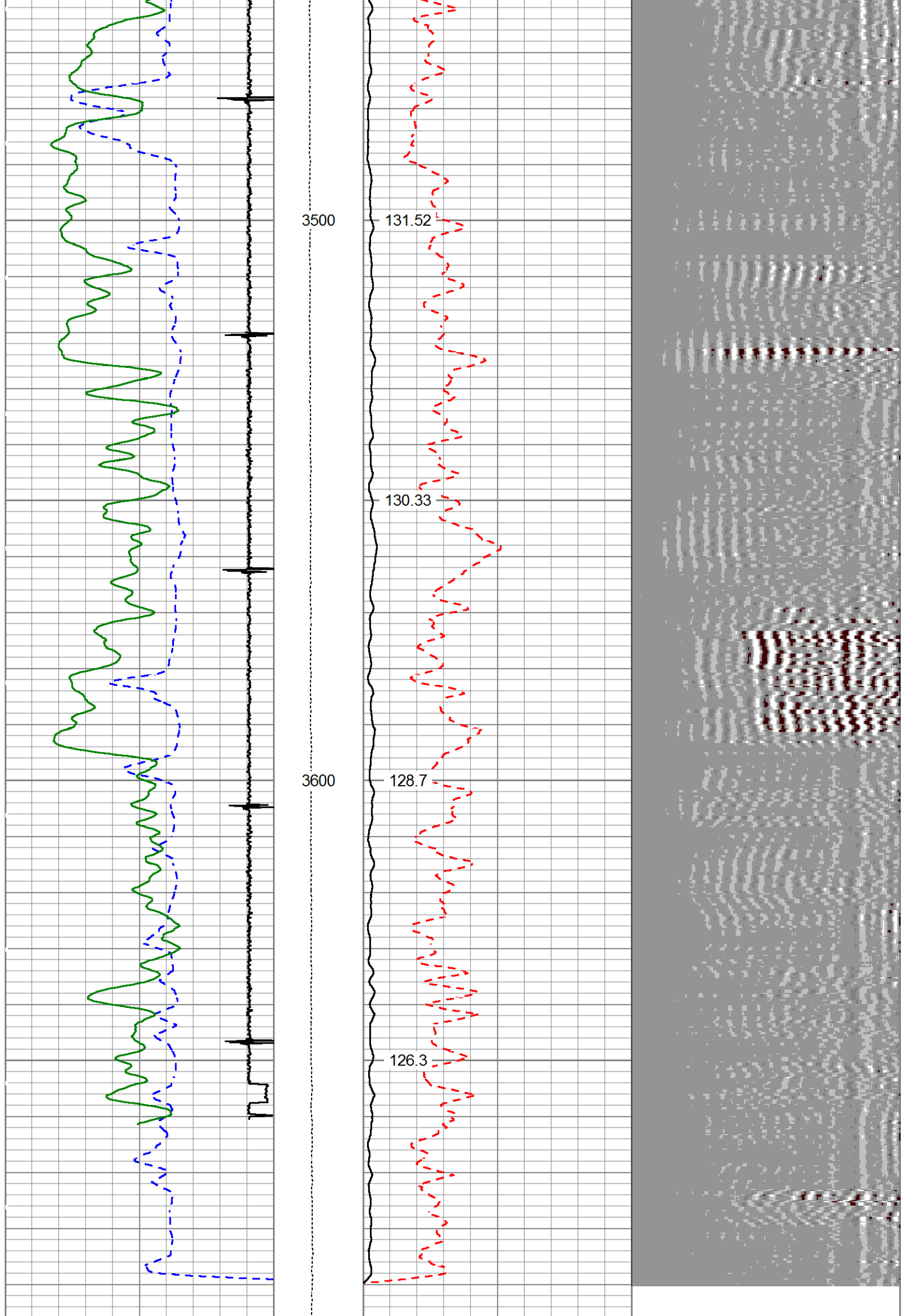
REPEAT PASS

HALLIBURTON

5"=100'

Database File bmc d 22c-18-07-95.db
 Dataset Pathname WC/BMC_D_22C-18-07-95/run1/REPEAT
 Presentation Format cbl_main
 Dataset Creation Sun May 28 08:18:30 2017
 Charted by Depth in Feet scaled 1:240





450	TRAVEL TIME (usec)	200	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1060
-5500	Collar Locator	550	0 (lb.1800)	0	AMPLITUDE (mV)	100			
0	Gamma Ray (GAPI)	150			CblTemp				

ITCR2	4834	4000	834	+/-1000	cps
	3081	3200	-119	+/-250	cps
Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	87.00	80.00	7.00	+/-15.00	V
FCAP	9885	10000	-115	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.96	0.95	0.01		
N/F Inel Norm	0.62	0.61	0.01		
RNF	1.05	1.07	-0.02	+/-0.12	
RINC	1.62	1.64	-0.02	+/-0.18	
SGFN	24.10	24.00	0.10	+/-0.50	cu
SGFF	22.95	22.85	0.10	+/-0.50	cu
FSIN	23623	24000	-377	+/-2000	cps
FCAP	9982	10000	-18	+/-1000	cps
NFTR	0.83			<5.00	
FFTR	0.92			<5.00	
NBKG	178			<500	cps
FBKG	99			<500	cps
RTN	0.41	0.40	0.01	+/-0.10	usec
RTF	0.43	0.40	0.03	+/-0.10	usec

Calibration Software Modules

HRMTI Module 2015.5.4.0
RMTI Module 2015.10.16.1

Log Data Acquisition Software Modules

HRMTI Module 2015.5.4.0
RMTI Module 2015.10.16.1

Gamma Ray Calibration Report

Type / Serial: 002 / 11527445

SHOP CALIBRATION

Mon May 22 11:40:46 2017

	Counts/Sec.	Gain	Offset	Jig	Units
Background	22.8				cps
Calibrator	291.4				cps
		1.3703			GAPI/cps

PRIMARY VERIFICATION


Background	32.5				cps
Calibrator	395.1				cps
Difference				362.6	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)
			STNDCH-STND CH	1.50	1.44	1.00

				1.4375 IN CABLE HEAD				
CCL	35.86							
GR	33.60			TTTCU-002 (11527445) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	37.00	
				XHU-003 (12461937) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00	
RmtTFGT	22.95							
RmtTNGT	22.45			RMTI-A (12376244) Halliburton RMTI Tool	14.00	2.13	77.00	
RmtFP5V	14.70			X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00	
RmtNFwvMcsPI	14.70			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00	
RmtCommFWa	14.70							
Temp	9.57							
TT3FT	7.32			HCBLM-A (12091451) Halliburton HCBLM Tool	9.38	2.75	116.00	
AMP3FT	7.32							
WVF5FT	6.36							
WVF3FT	2.84			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00	
LLMTEN	0.00			AUH-001 (11734726) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00	
				BUL-001 (000001) Bullnose	0.30	1.69	1.50	
Dataset:		bmc d 22c-18-07-95.db: WC/BMC_D_22C-18-07-95/run1/MAIN						
Total length:		39.43 ft						
Total weight:		293.50 lb						
O.D.:		3.13 in						

Company ORSA OPERATING COMPANY

Well BMC D 22C-18-07-95

Field WILDCAT

County GARFIELD

State CO

HALLIBURTON

CEMENT BOND LOG
GR-CCL