

HALLIBURTON										CEMENT BOND LOG									
Company URSA OPERATING COMPANY LLC Well TOMPKINS 42A-08-07-95 Field PARACHUTE County GARFIELD State CO										Company URSA OPERATING COMPANY LLC Well TOMPKINS 42A-08-07-95 Field PARACHUTE County GARFIELD State CO									
API No.: 05045224780000 Location: SHL: 200' FSL & 560' FEL BHL: 1430' FNL & 660' FEL										Other Services									
Sec: 11 Twp: 6S Rge: 92W										RMT-1									
Permanent Datum GROUND LEVEL Elevation 5532'										Elevation									
Log Measured From KB , 17' Ft. above perm. datum										K.B. 5549' D.F. 5549' G.L. 5532'									
Drilling Measured From KB																			
Date @ Time Logged 07 SEPT 2016 @ 12:00										Type Fluid in Hole FRESH WATER									
Run No. ONE										Density of Fluid 8.4 PPG									
Depth - Driller 7294'										SURFACE									
Depth - Logger 7024'										Cement Top Est. Logged 3250'									
Bottom - Logged Interval 7024'										Equipment / Location 11808537 / RS. WY									
Top - Log Interval 1671'										Recorded by S. BURGIE									
Max. Recorded Temp. 200 degF										Witnessed by N/A									
CEMENTING DATA										Protection String									
Date / Time Cemented N/A										String N/A									
Primary / Squeeze N/A										N/A									
Expected Compressive Strength N/A										psi@ N/A hrs N/A									
Cement Volume N/A										N/A									
Cement Type / Weight N/A										N/A									
Formulation N/A										N/A									
Mud Type / Mud Wgt. N/A										N/A									
Borehole Record										Casing & Tubing Record									
Run Number Bit From To Size Weight From To																			
ONE 24" SURFACE 60' 16" 75.5 # SURFACE 60'																			
TWO 12.25" 60' 1771' 8.625" 32.0 # SURFACE 1771'																			
THREE 7.875" 1771' 7294' 4.5" 11.6 # SURFACE 7294'																			
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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																			
ESTIMATED TOP OF CEMENT : 3250' GAMMA BLANKET : 223 GAPI FREE PIPE CALIBRATION DEPTH : 230'																			
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SVCS. YOUR CREW TODAY : SONNY BURGIE, BLAKE RIDDEL, DANIEL FLINDERS, CHUCK SIMONS, BRAD BRUDERER																			

Service Ticket No.	903517876	API No.	05045224780000	PGM Ver	15.10.29001
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client					
EQUIPMENT DATA					
XHU		GAMMA		RMTI	
Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	00000001	Serial No.	12105780	Serial No.	11680597
Model No.	XHU-3	Model No.	TTTC-U2	Model No.	RMTI
Diameter	1 11/16"	Diameter	1 11/16"	Diameter	2.25"
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

ONE	3600'	3365'	0 PSI	20	REPEAT			
TWO	7024'	1671'	0 PSI	20	MAIN			
	GAMMA RAY		SIGMA		AMPLITUDE			
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	60	0	0	100		
TWO	0	200	60	0	0	100		
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

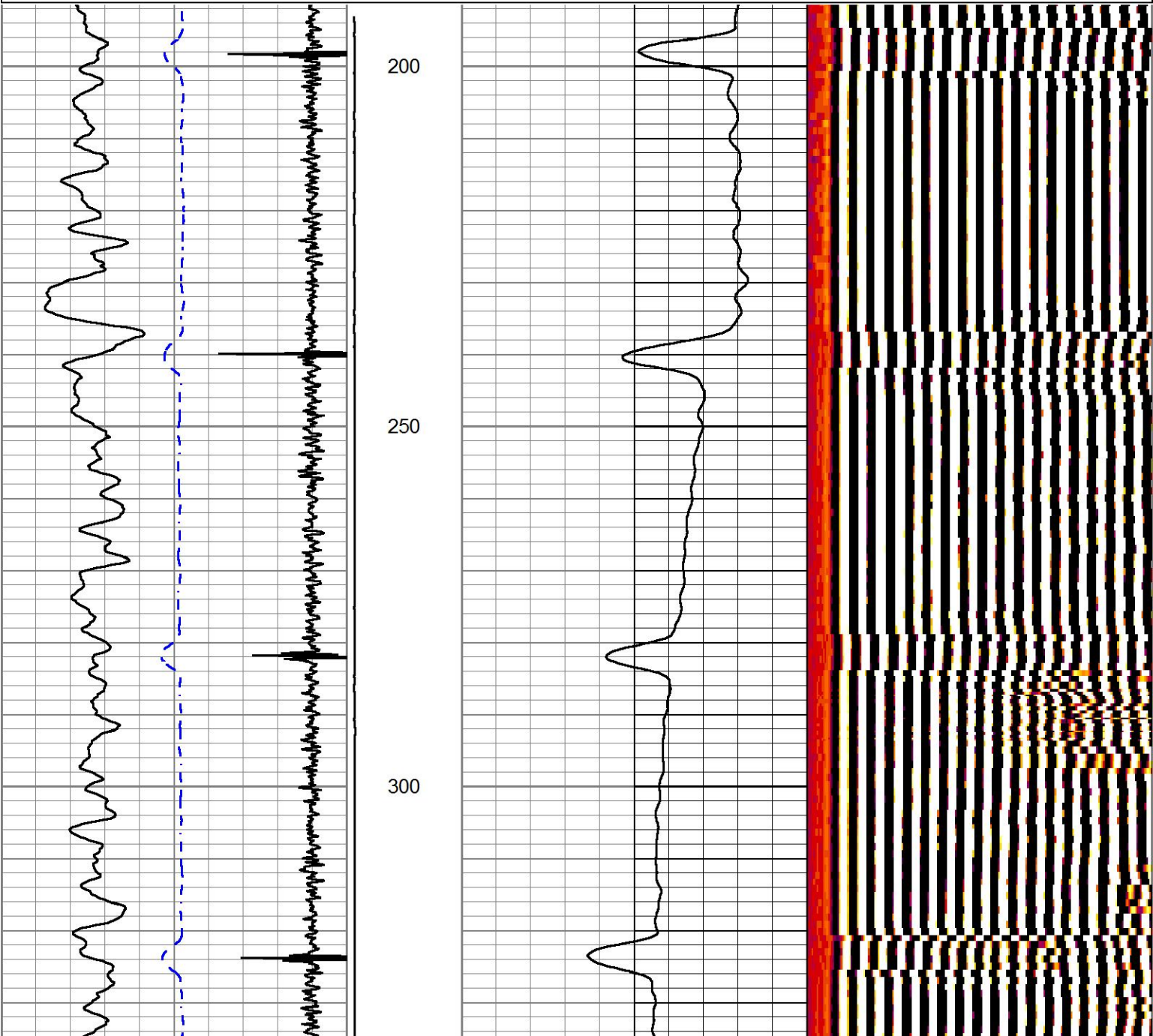
HALLIBURTON

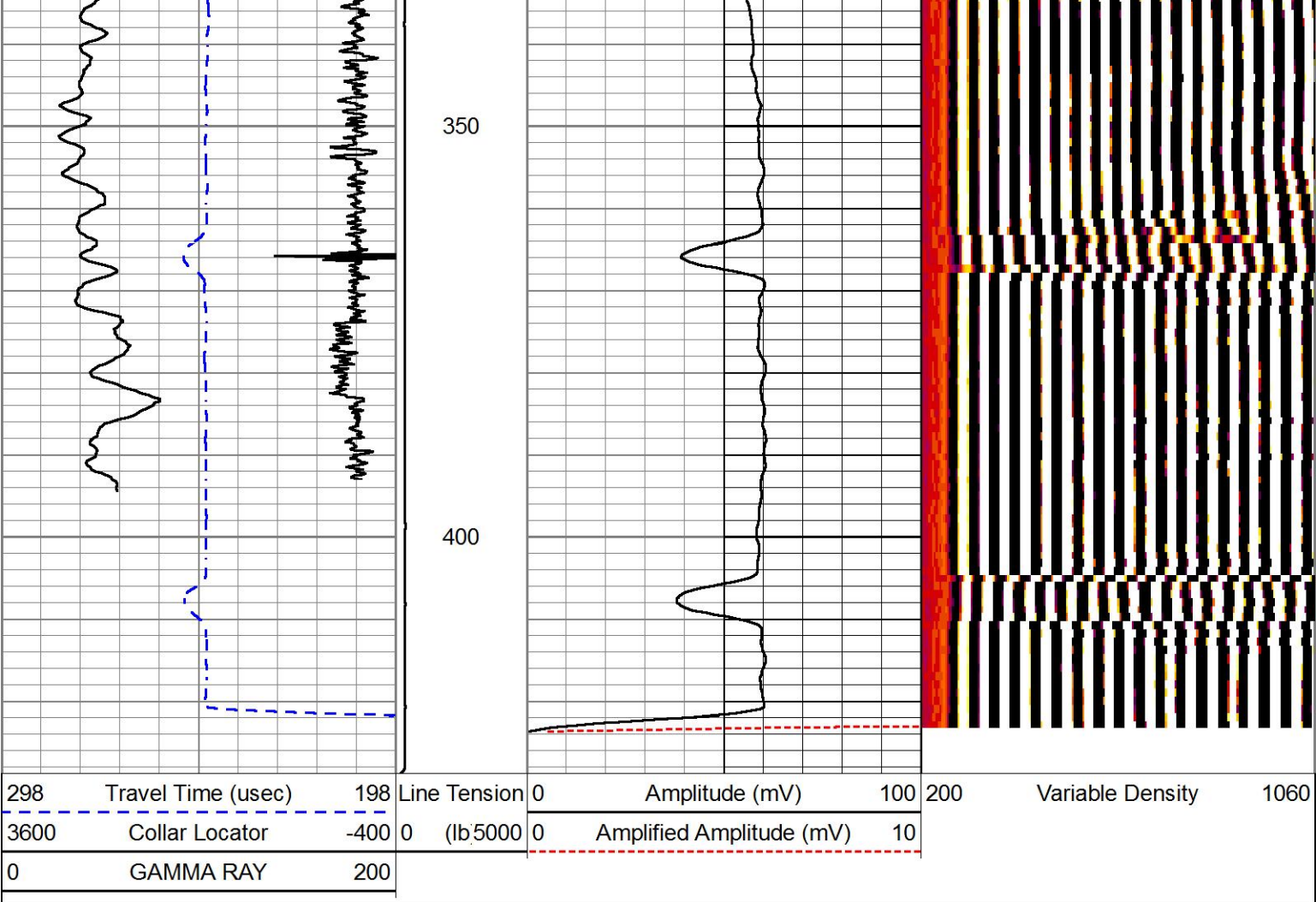
FREE PIPE SECTION

5" = 100'

Database File	thompkins_42a_08_07_95.db
Dataset Pathname	pass7
Presentation Format	!1!!cbl_rmti
Dataset Creation	Wed Sep 07 13:07:17 2016
Charted by	Depth in Feet scaled 1:240

298	Travel Time (usec)	198	Line Tension	0	Amplitude (mV)	100	200	Variable Density	1060
3600	Collar Locator	-400	0 (lb/5000	0	Amplified Amplitude (mV)	10			
0	GAMMA RAY	200							





FREE PIPE SECTION

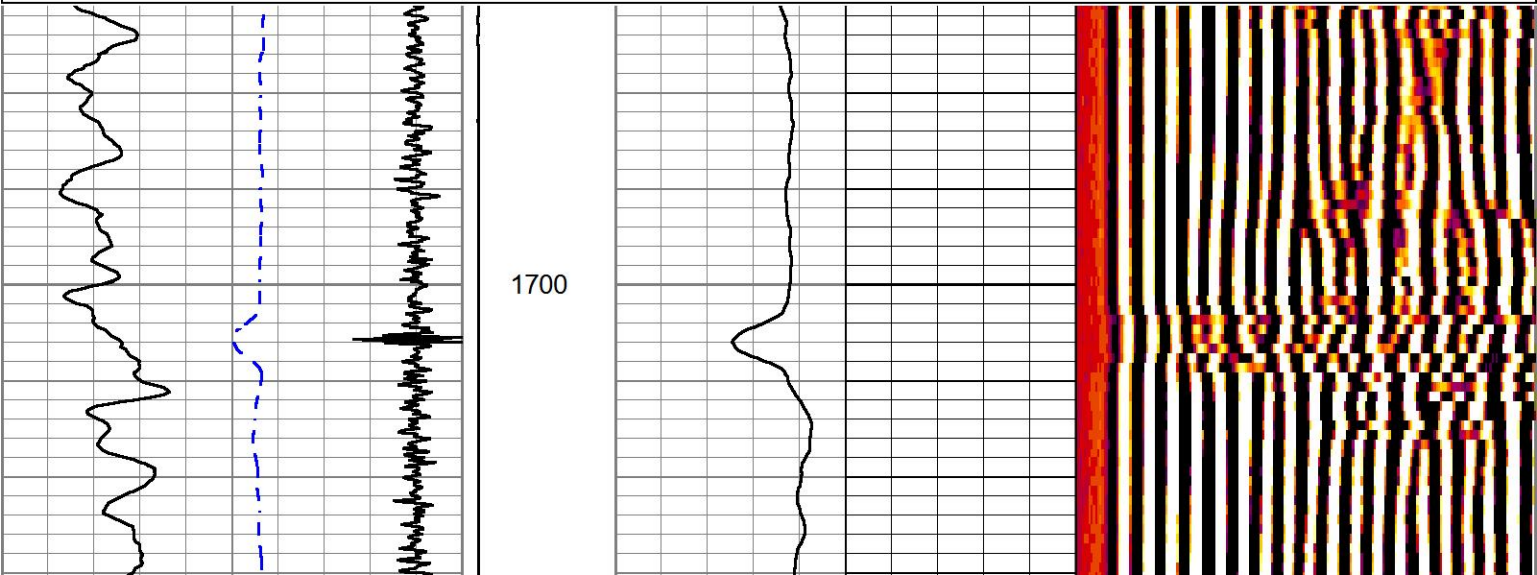
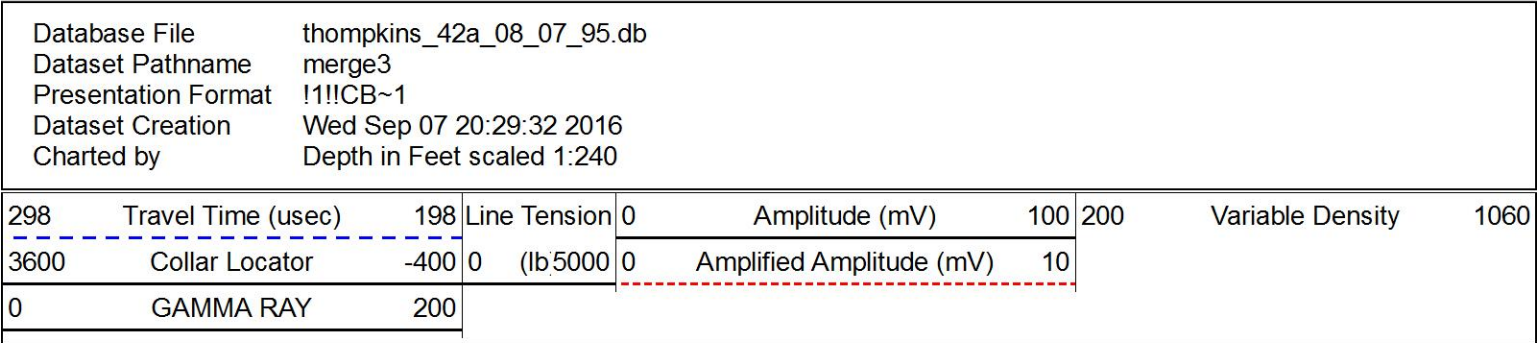
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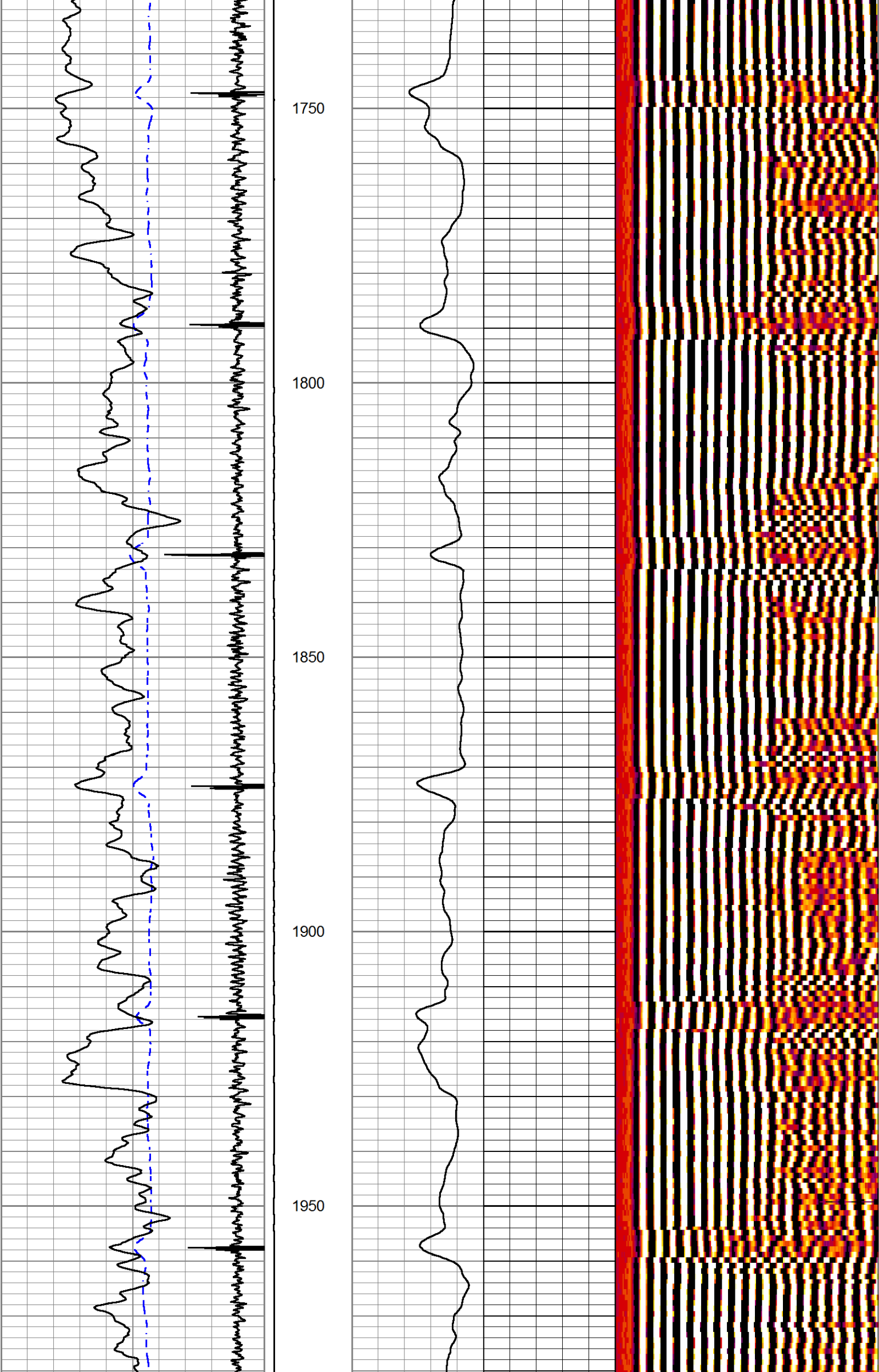
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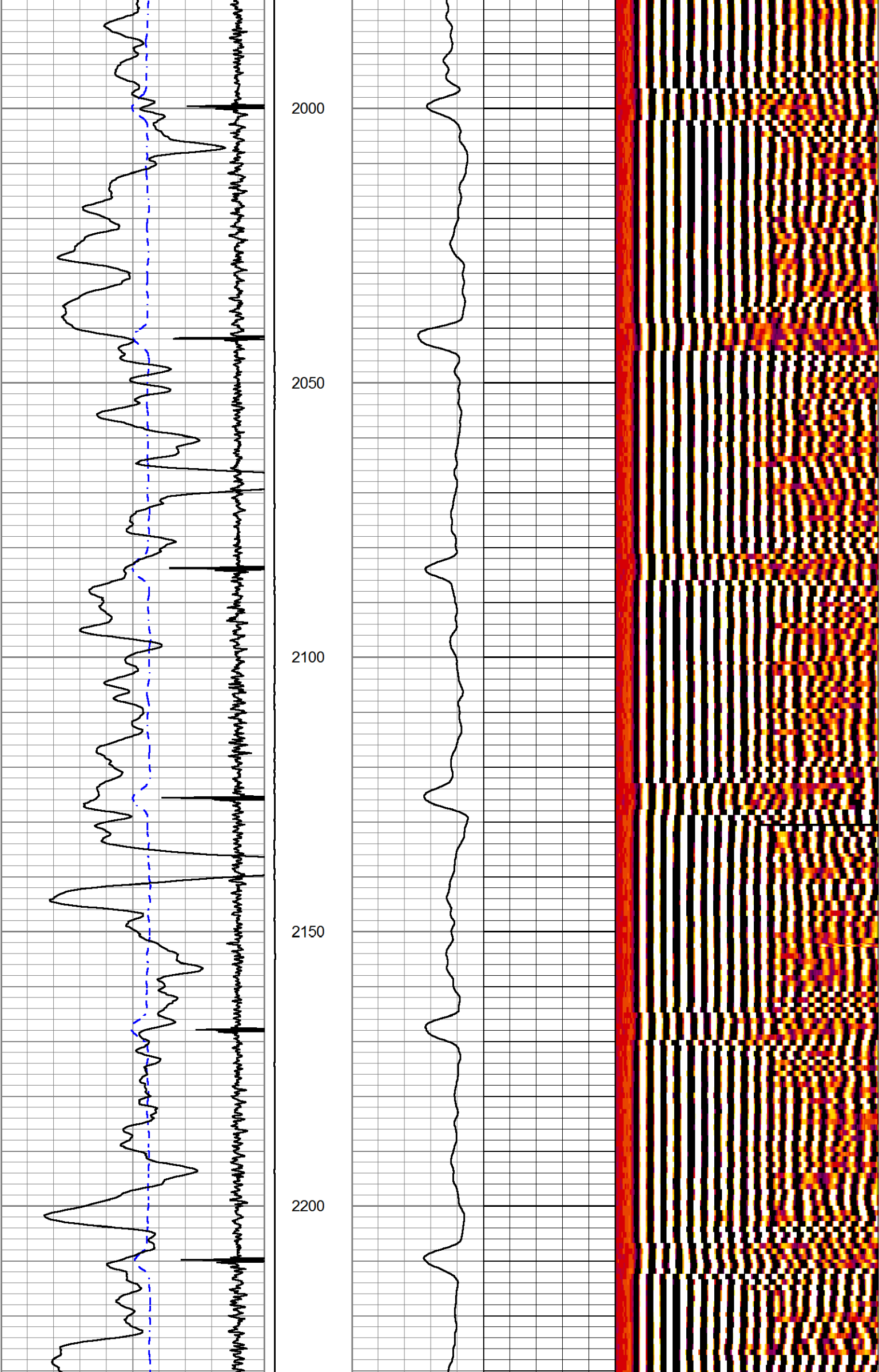
MAIN PASS

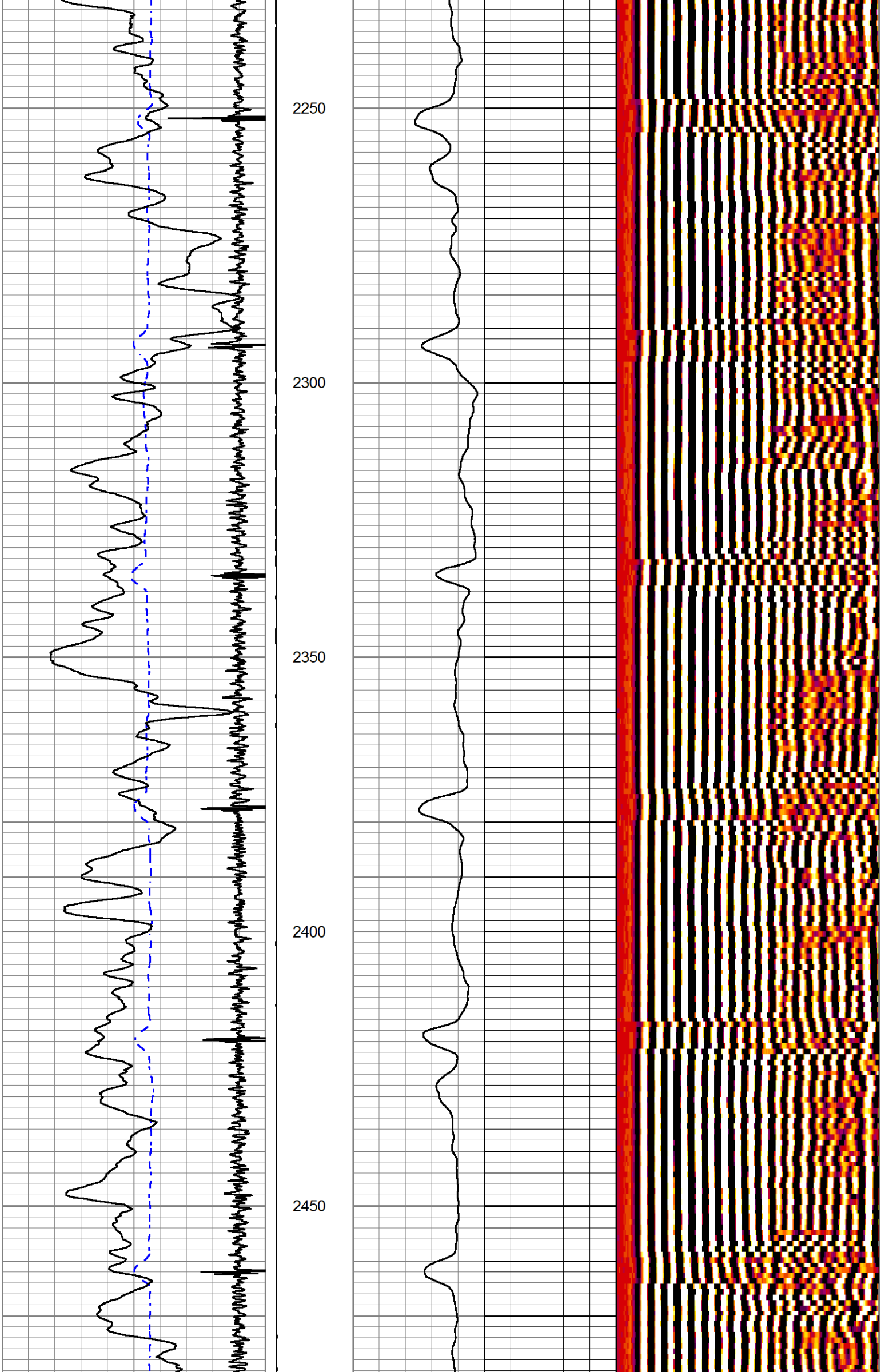
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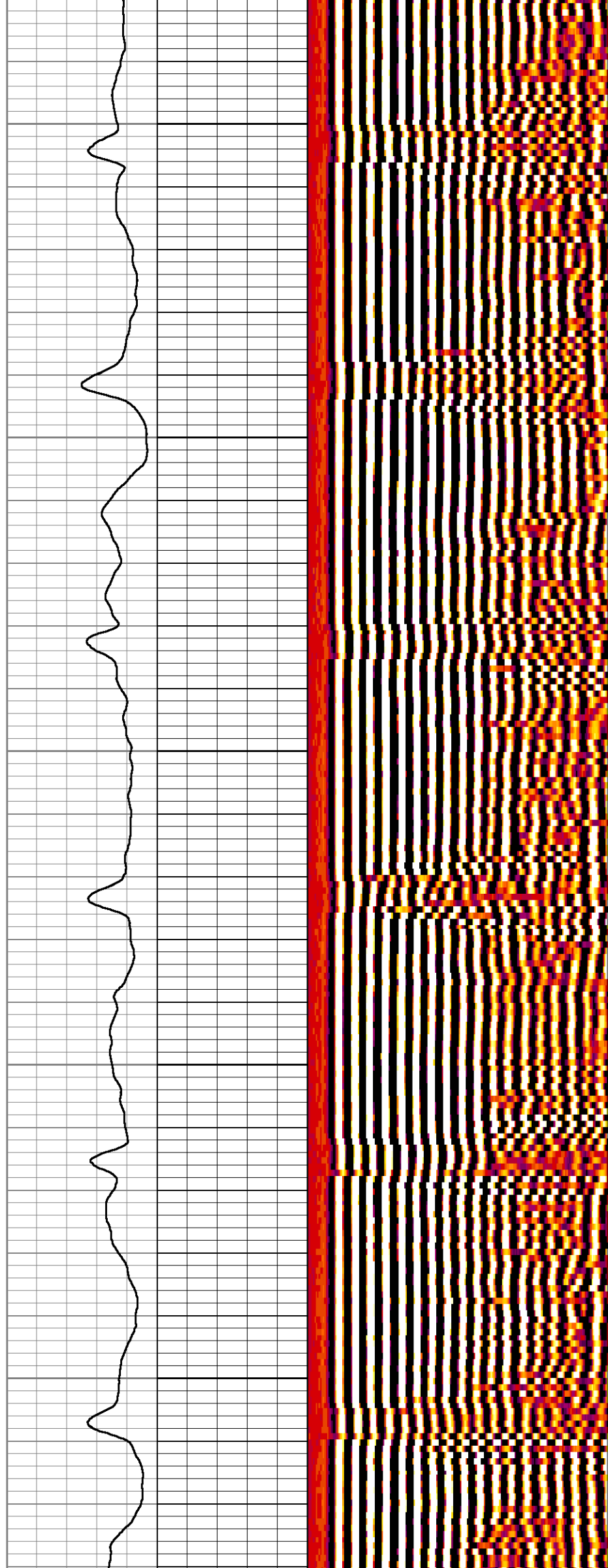
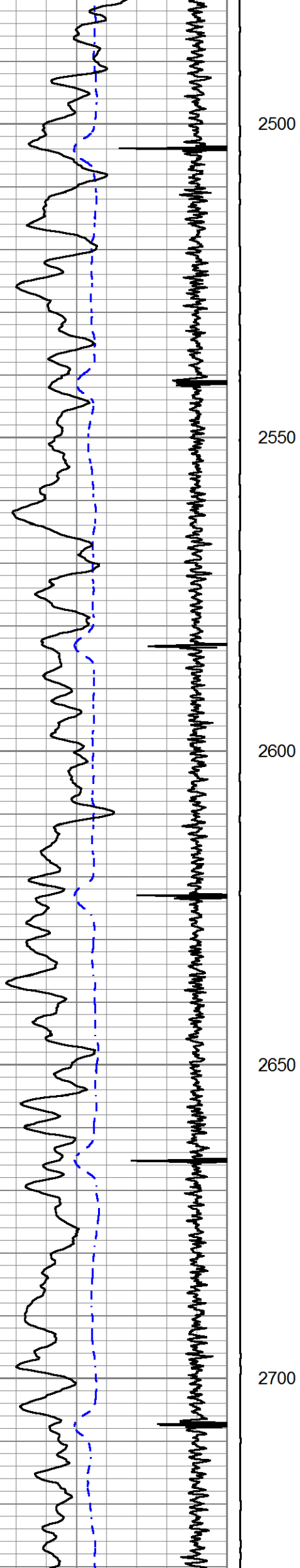
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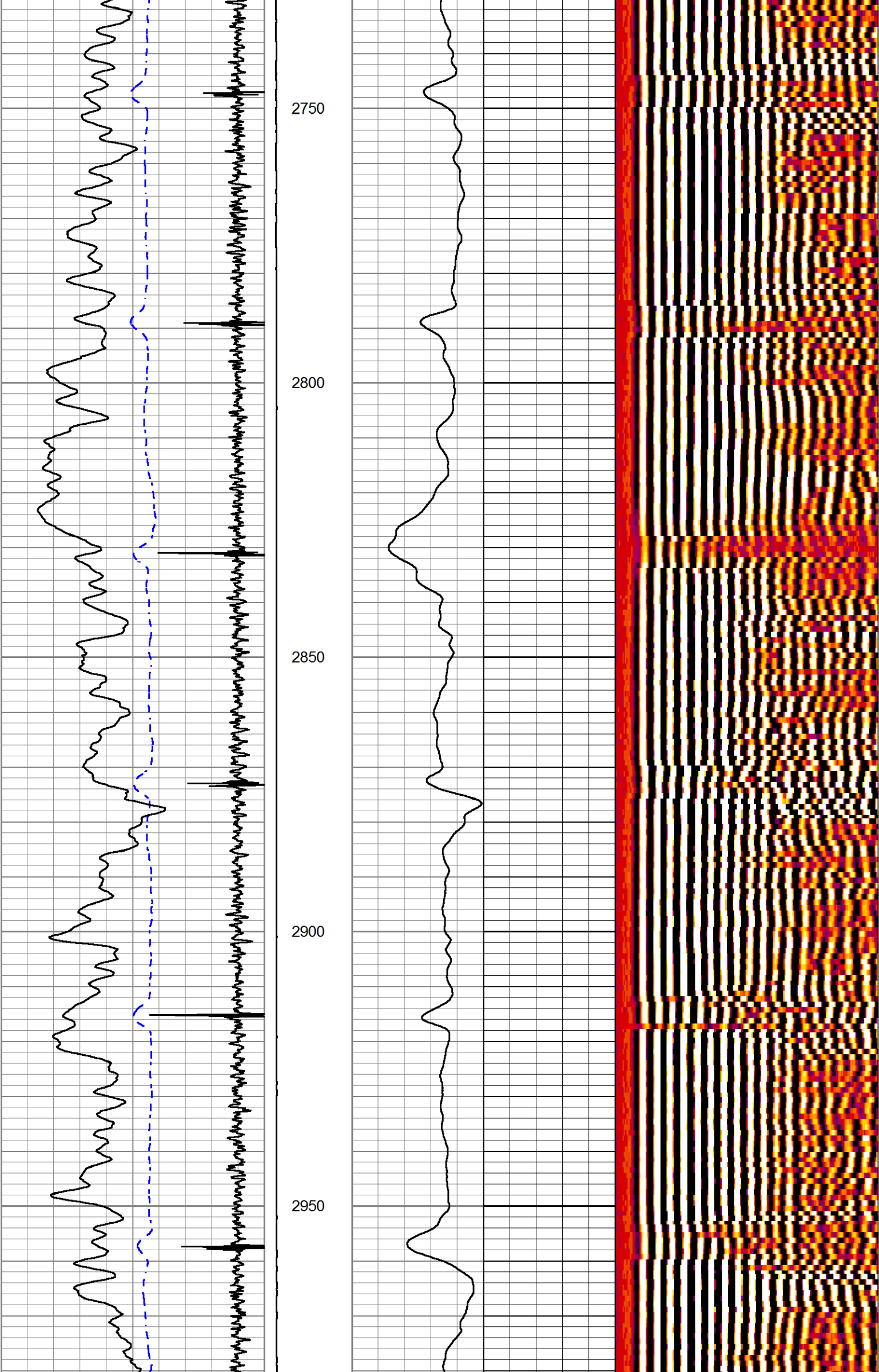


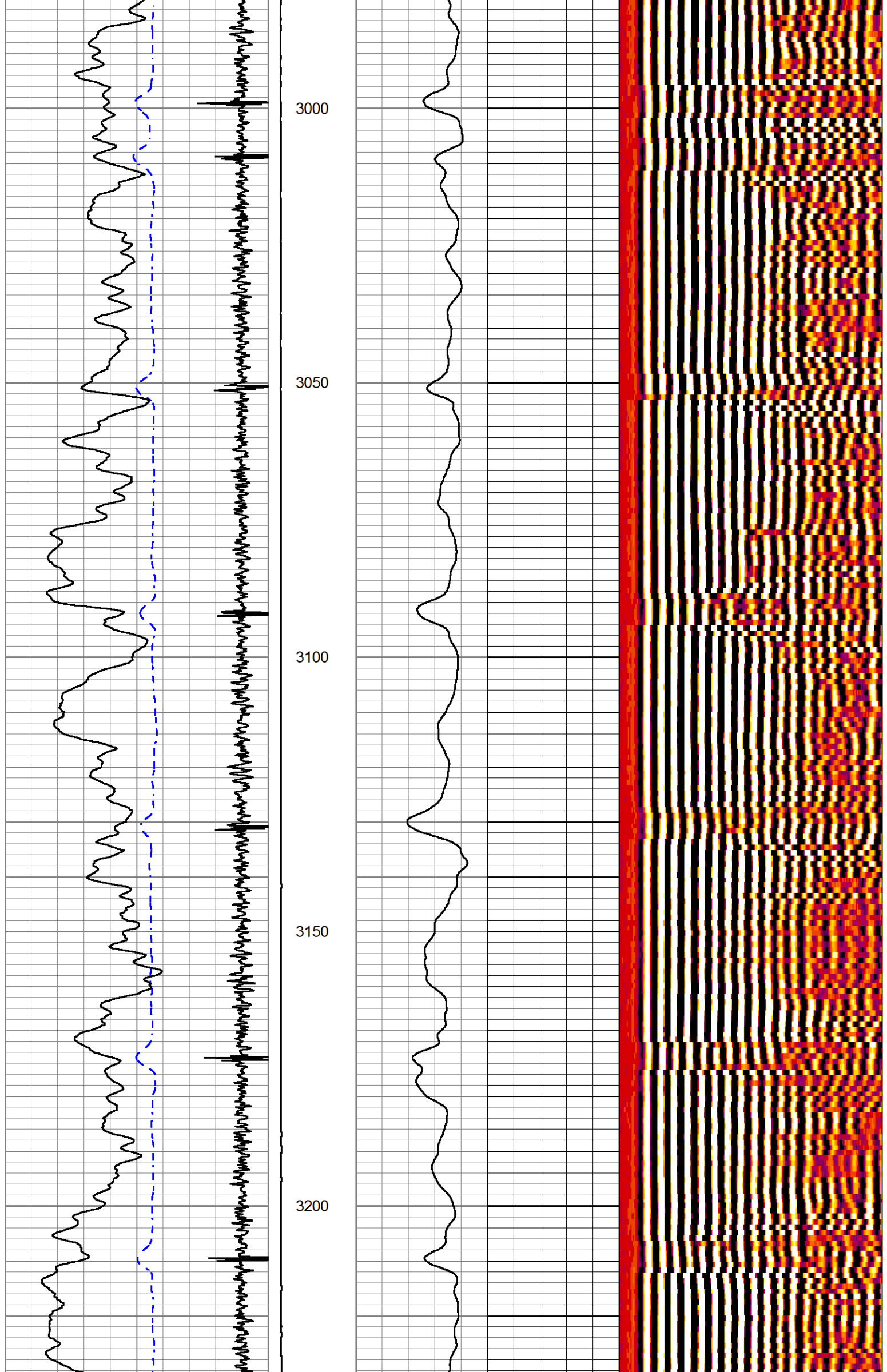


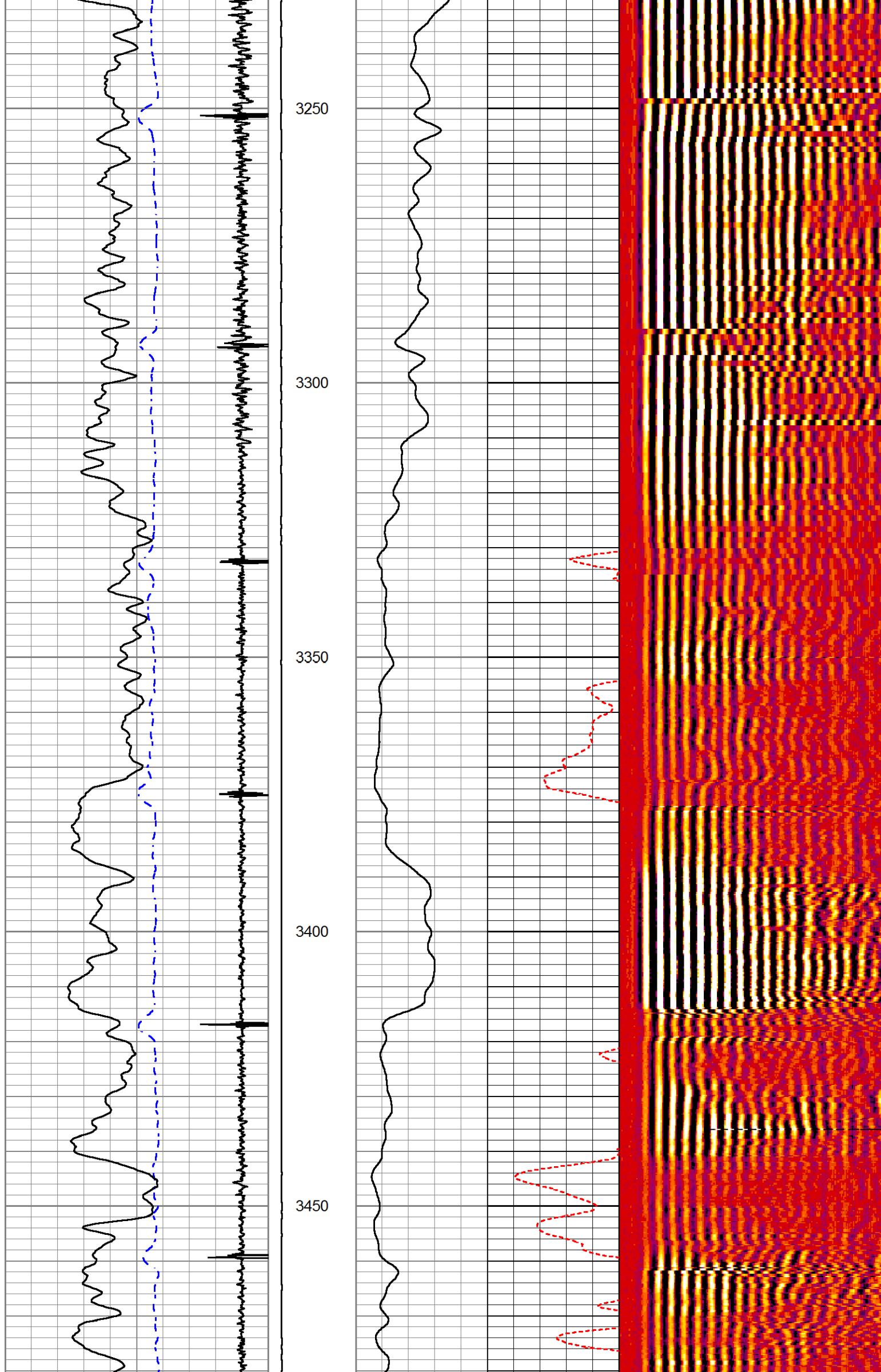


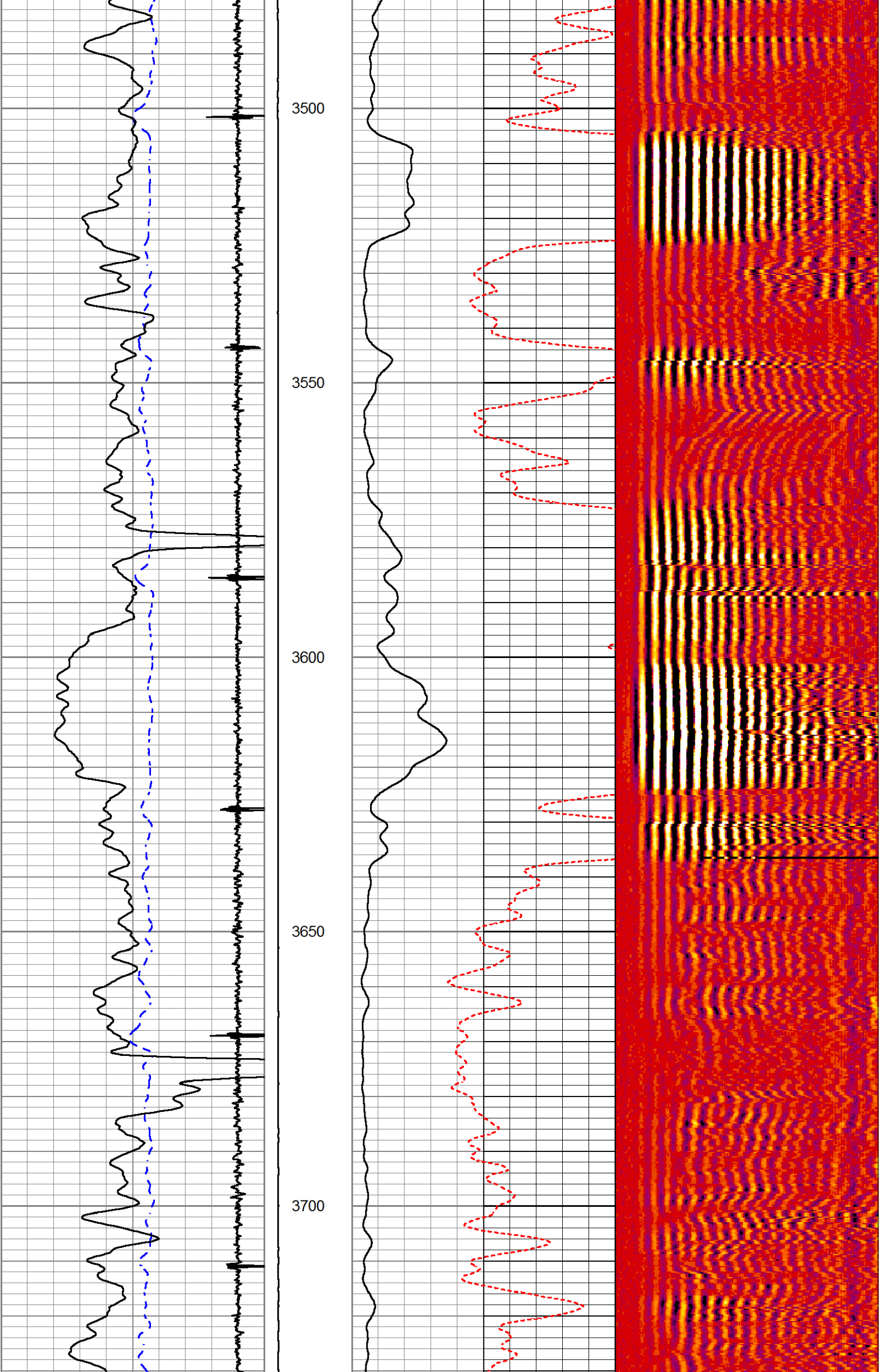


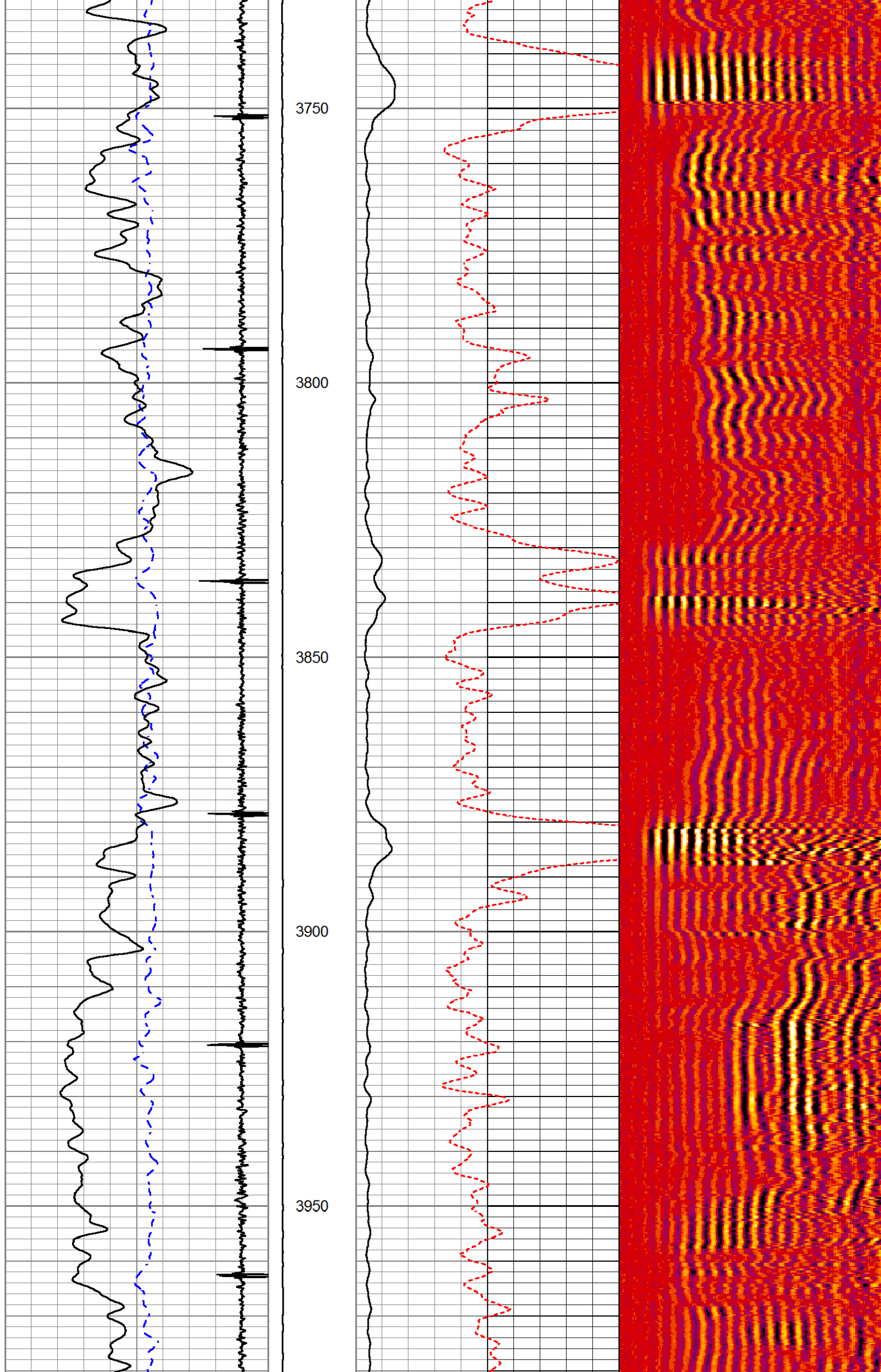


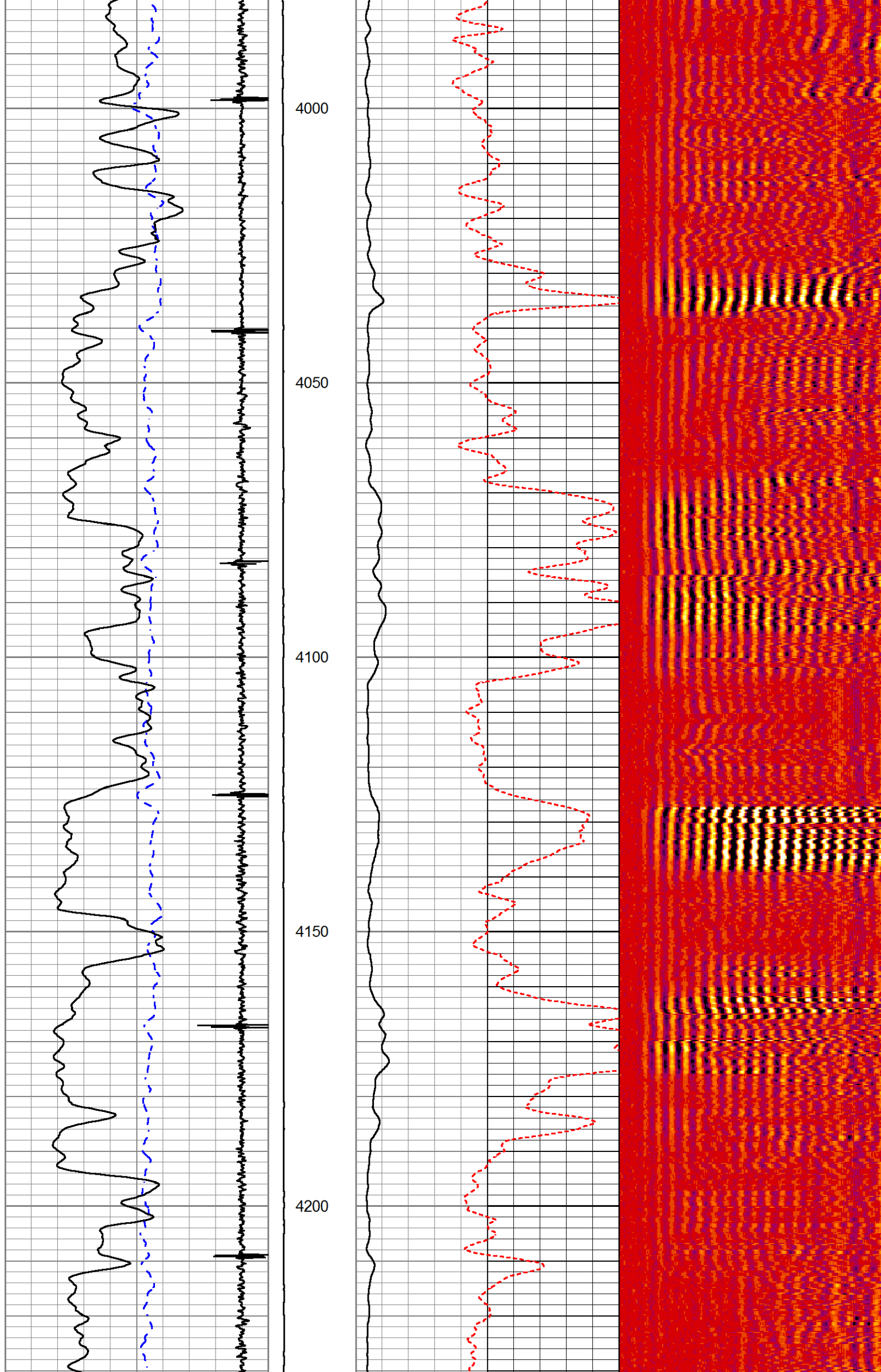


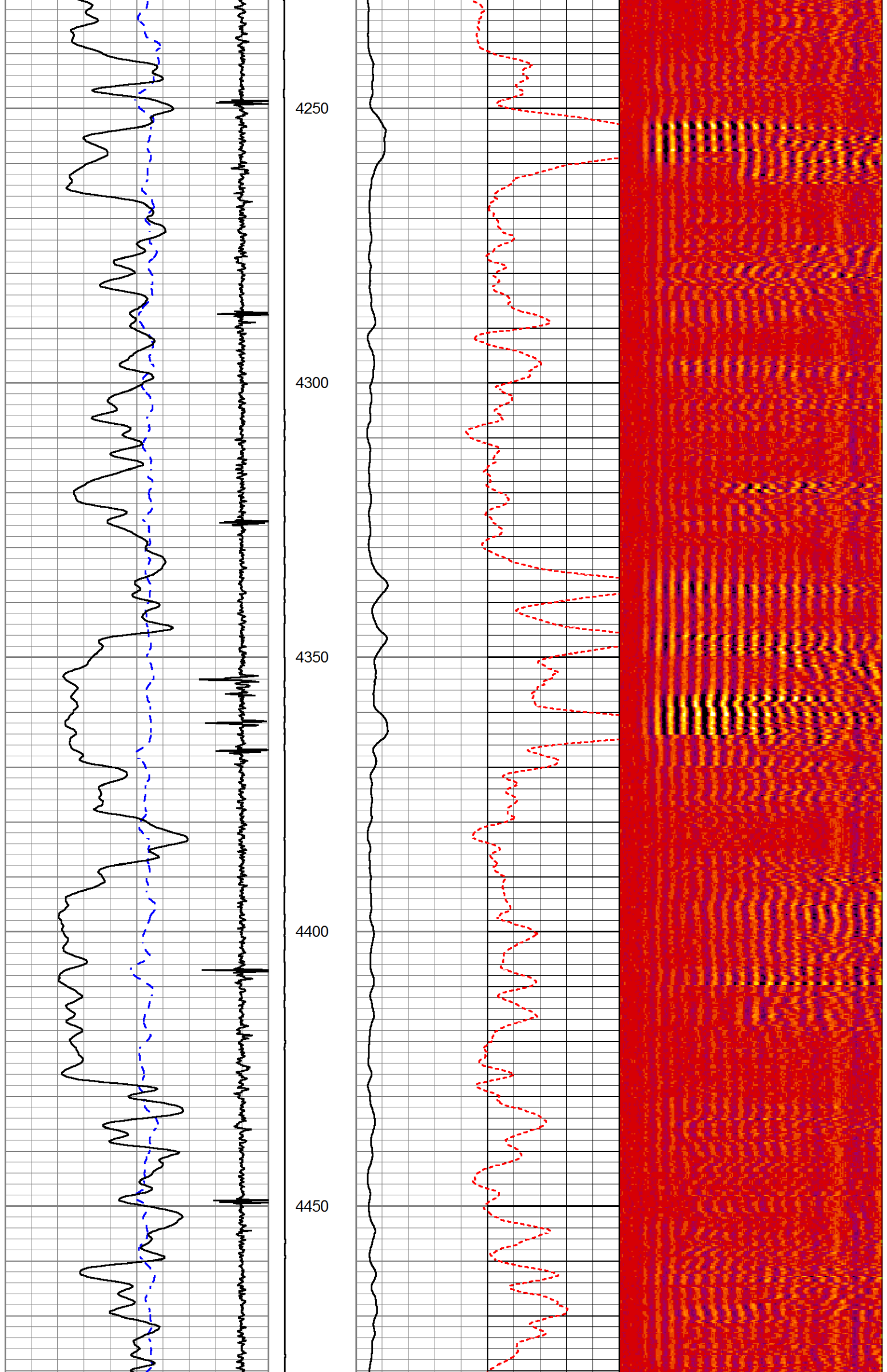


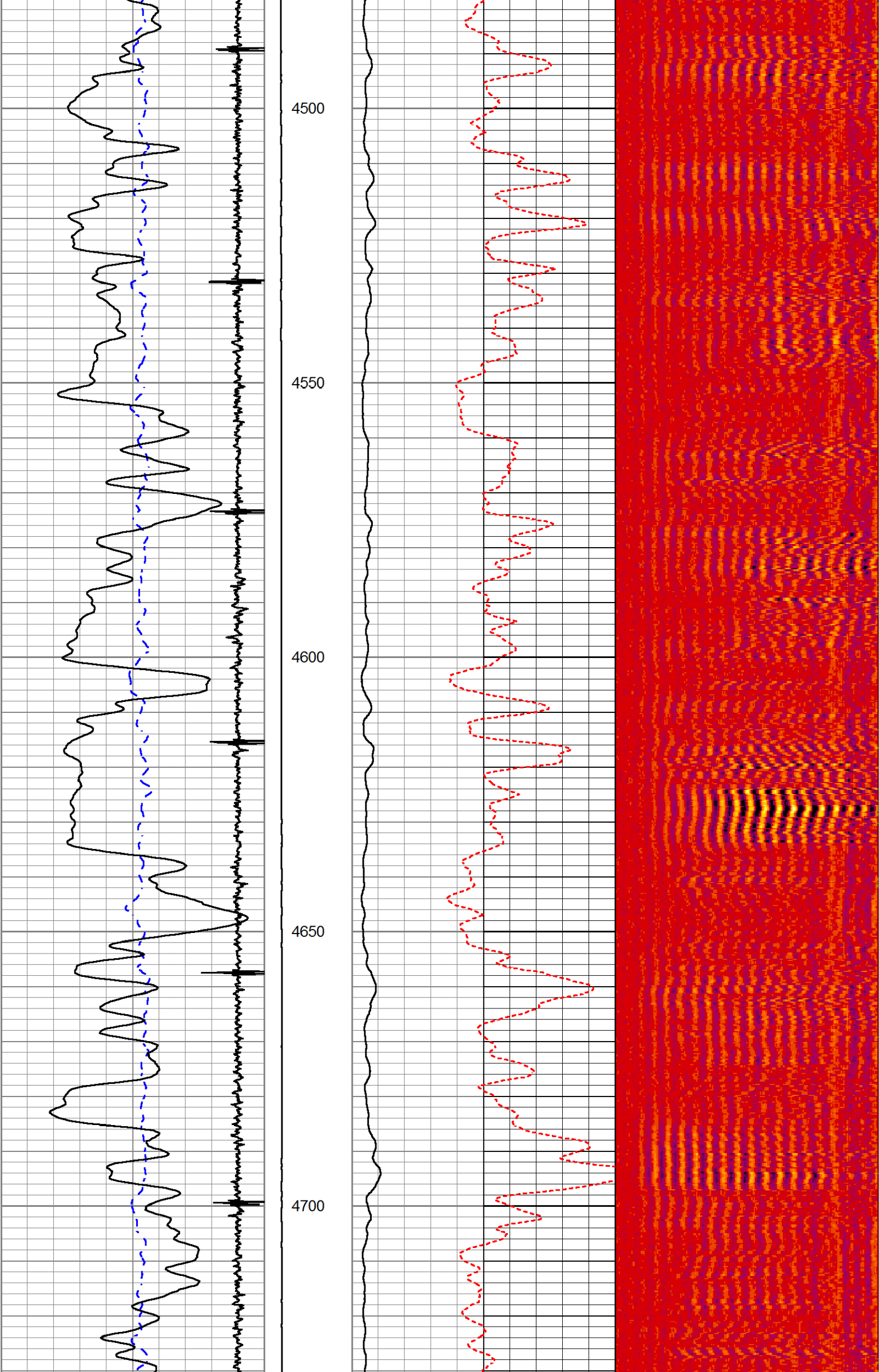


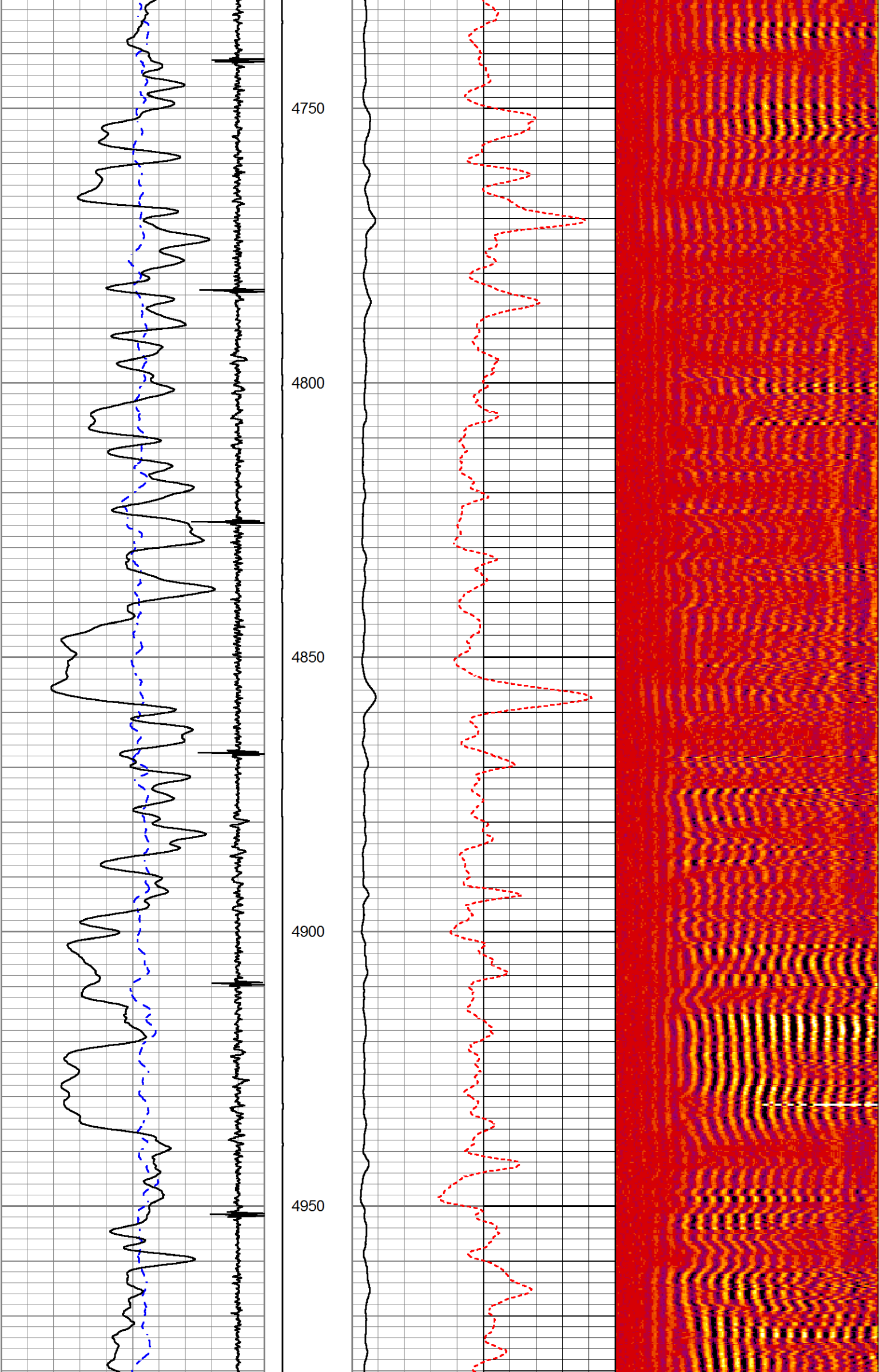


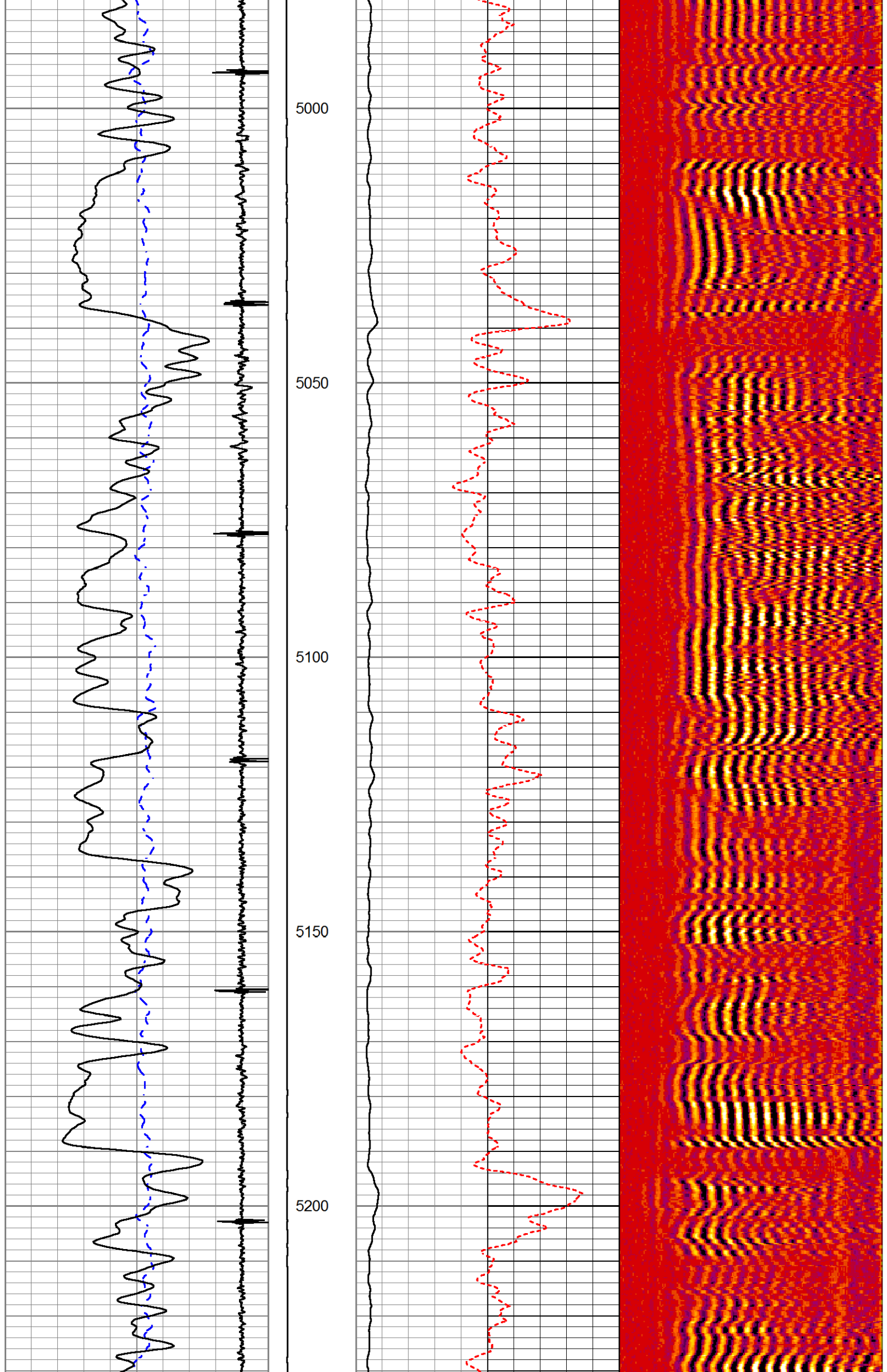


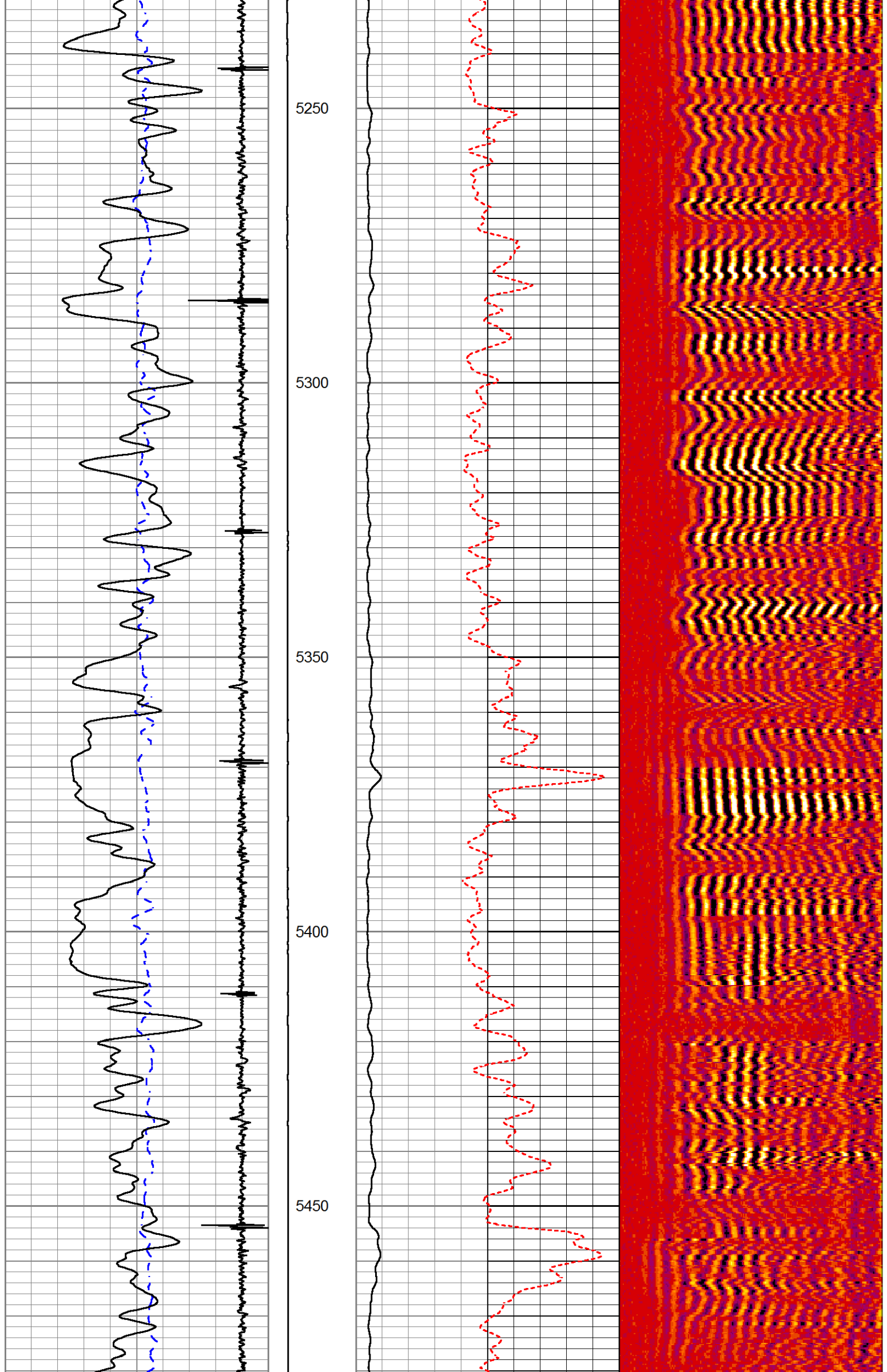


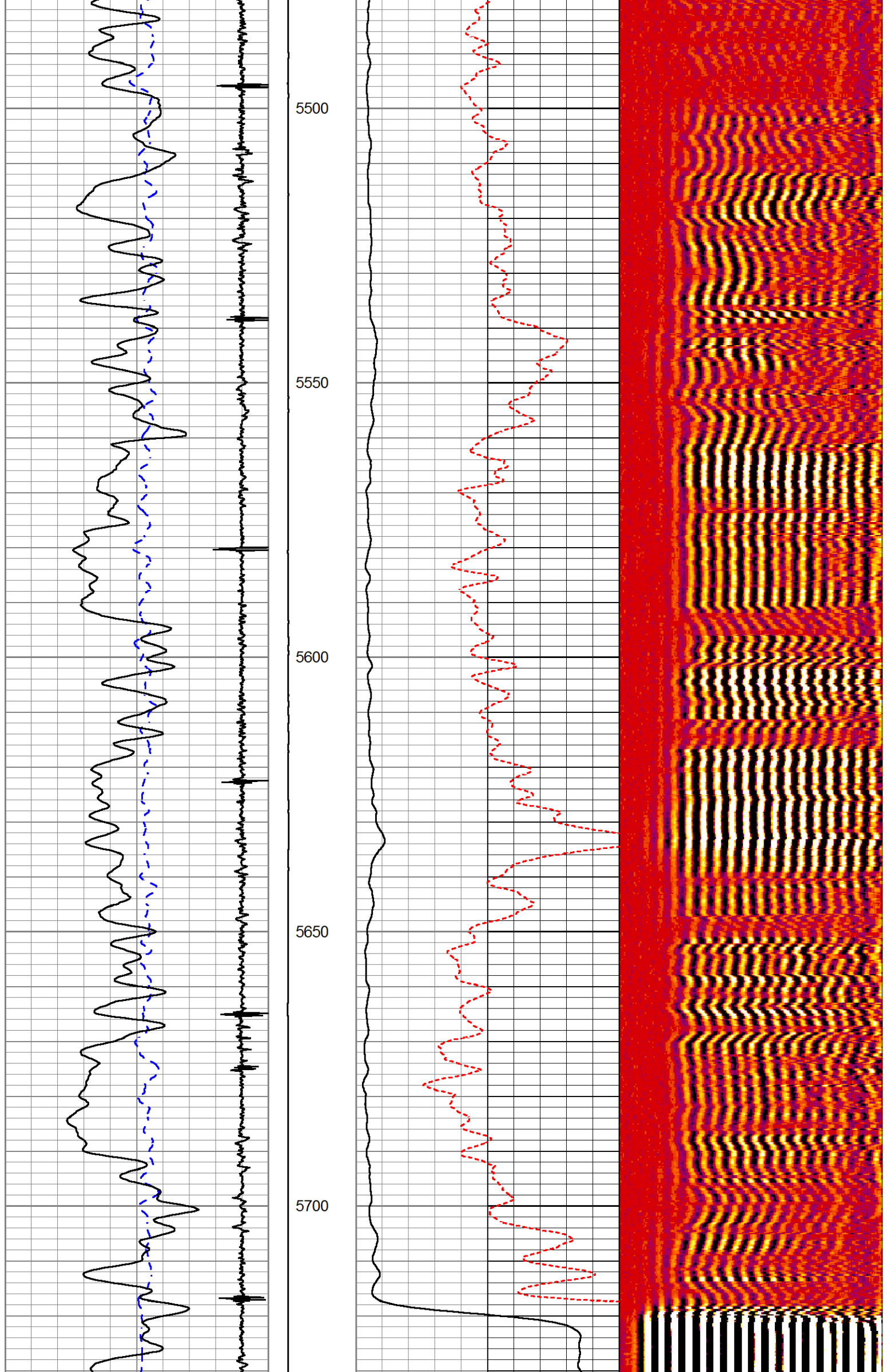


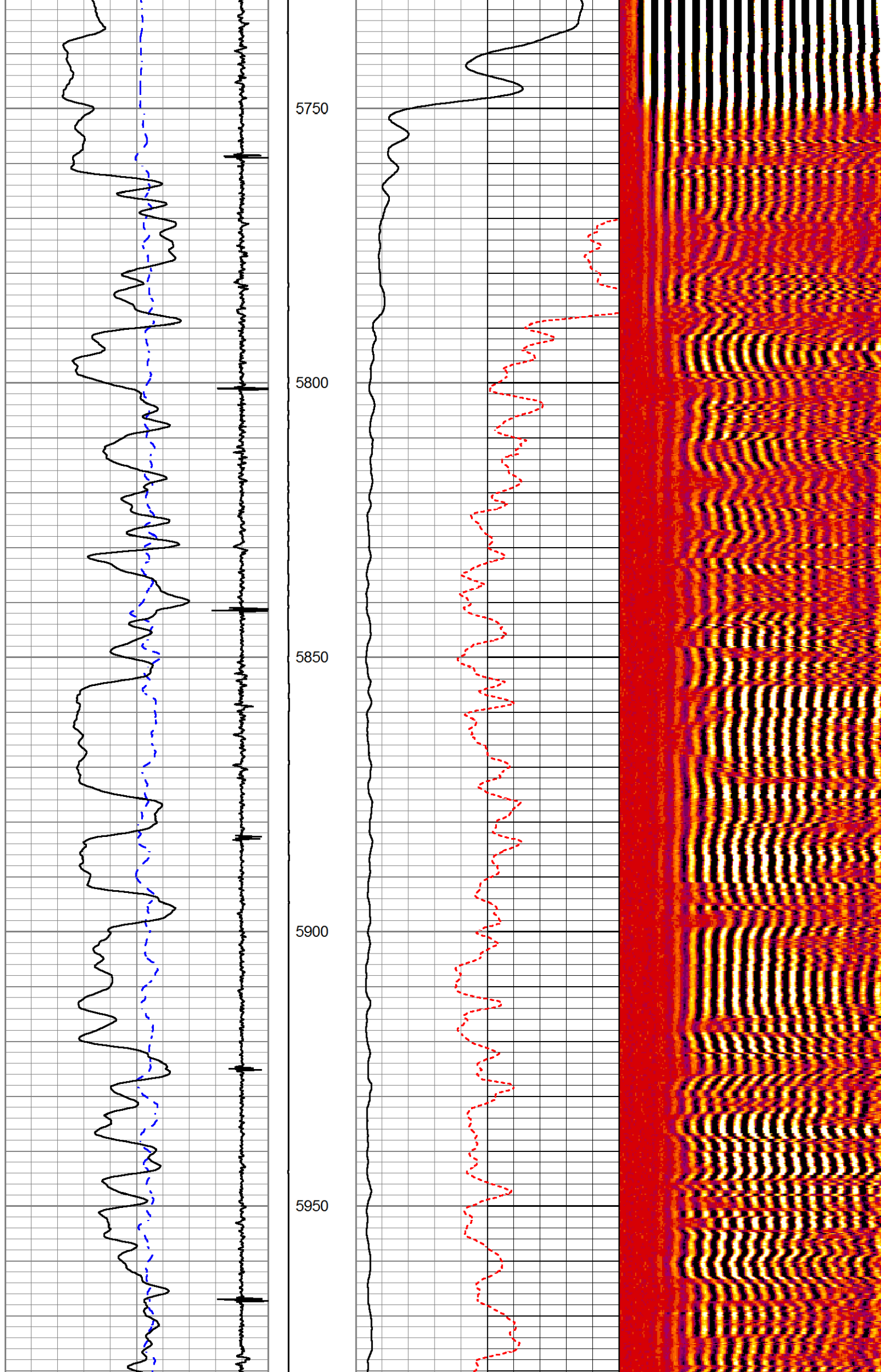


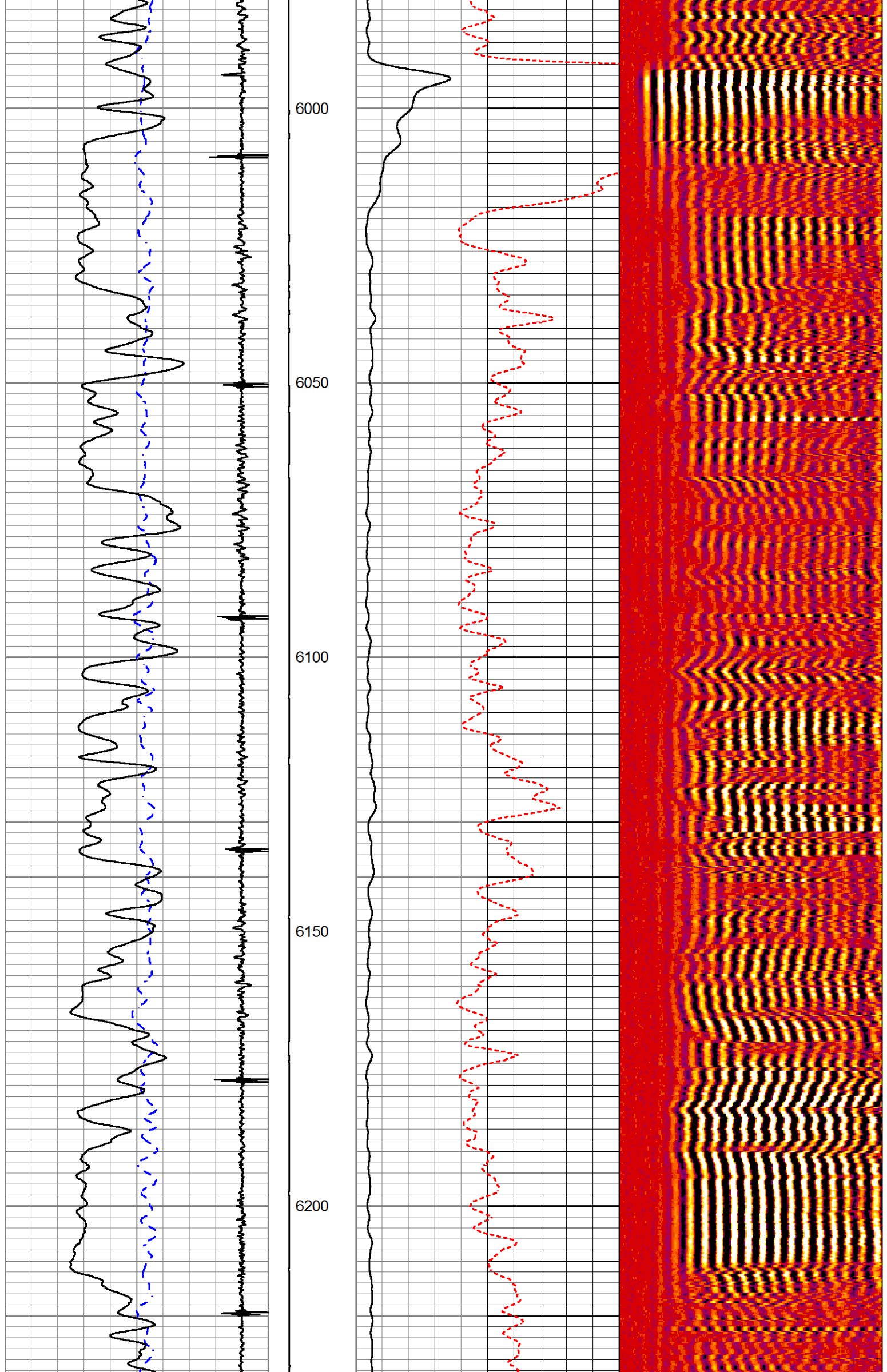


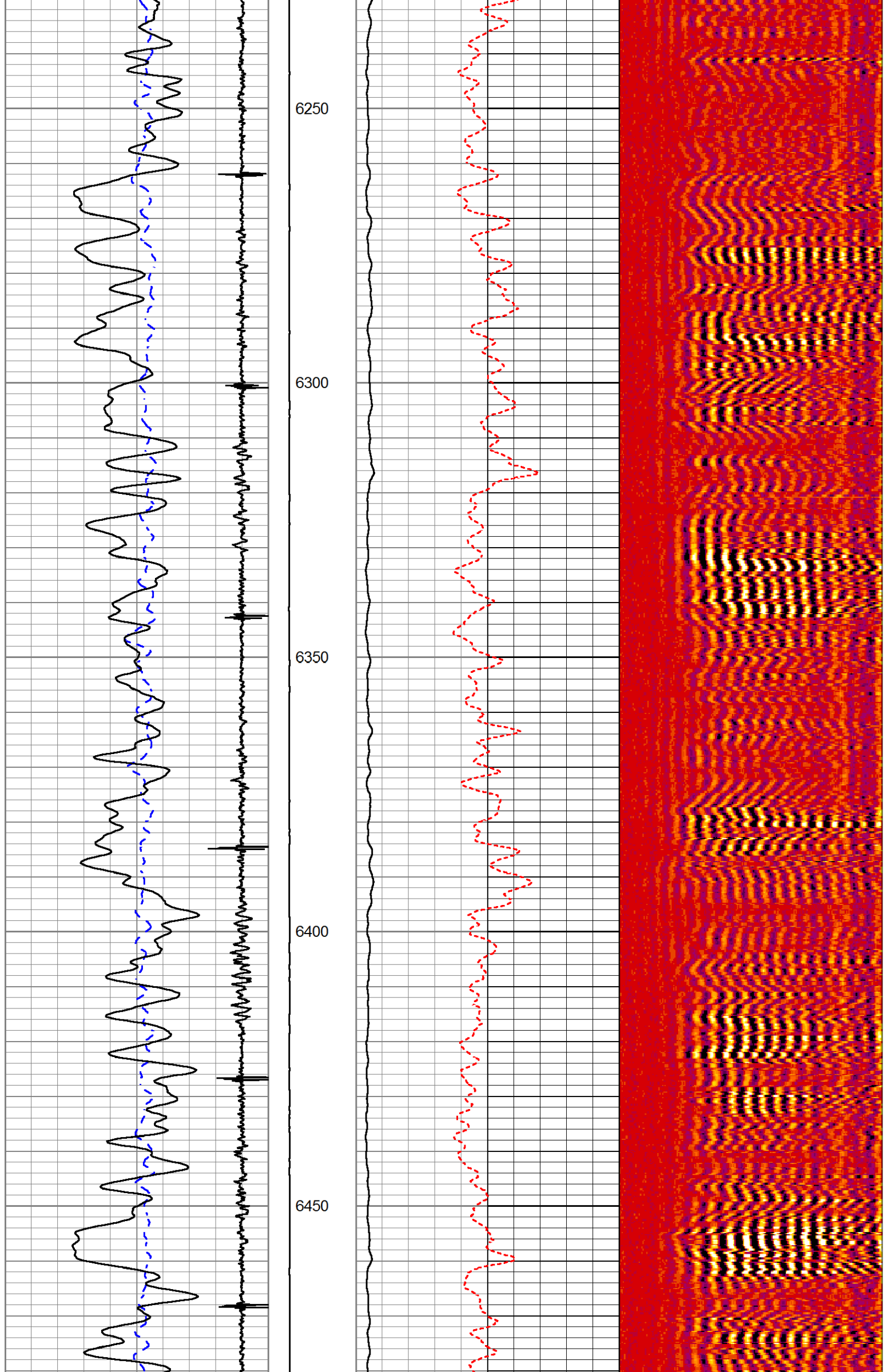


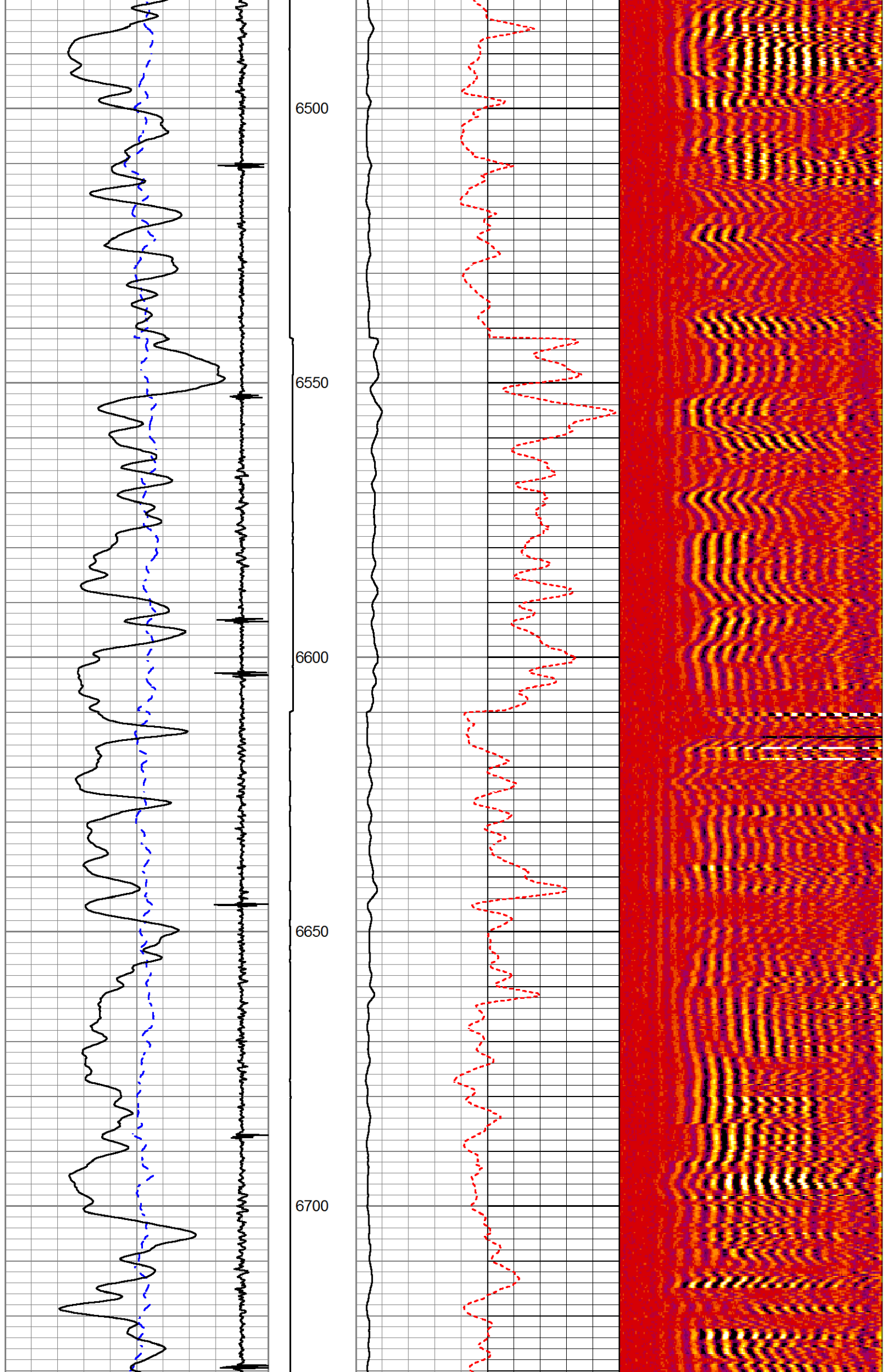


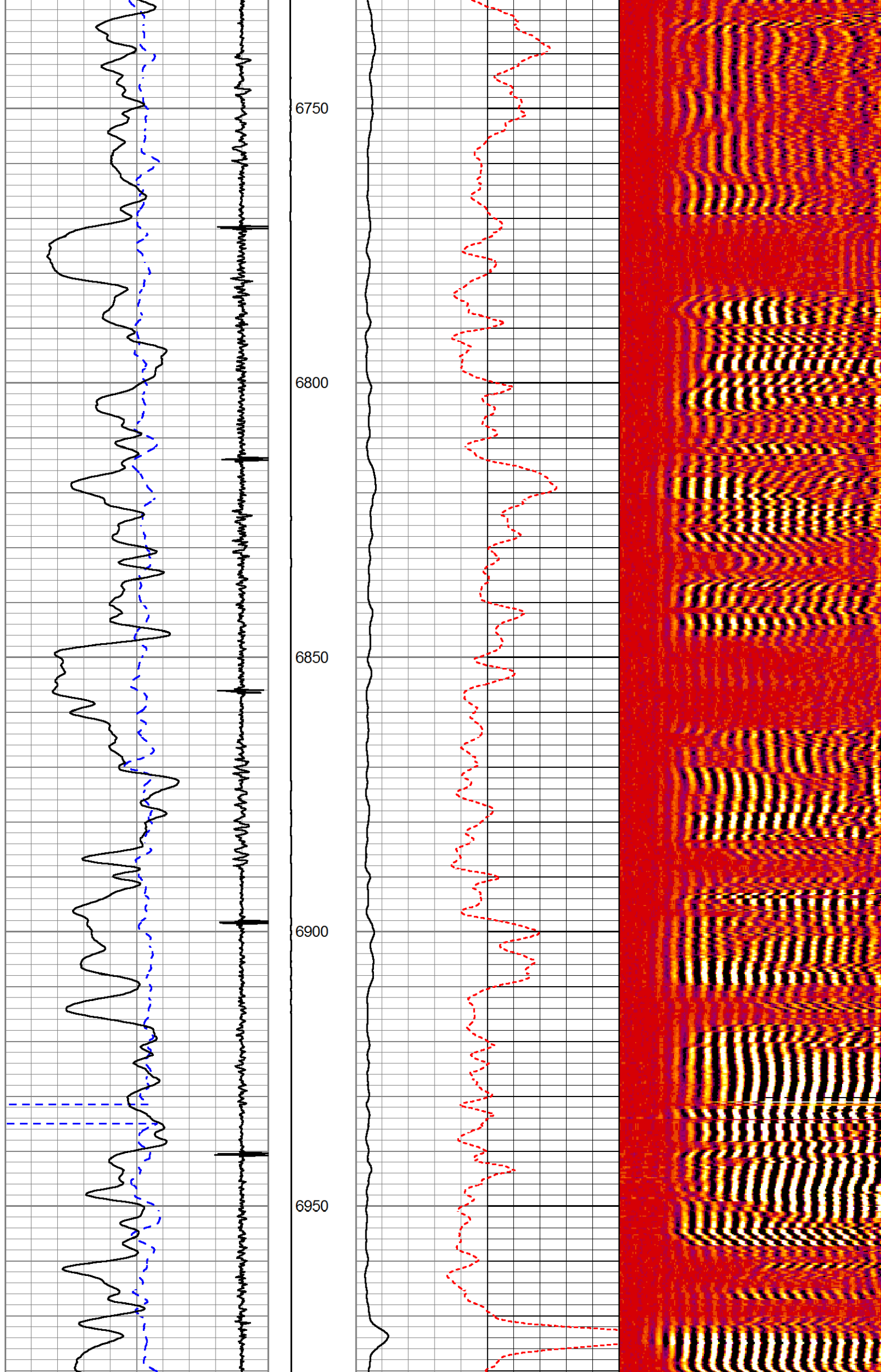


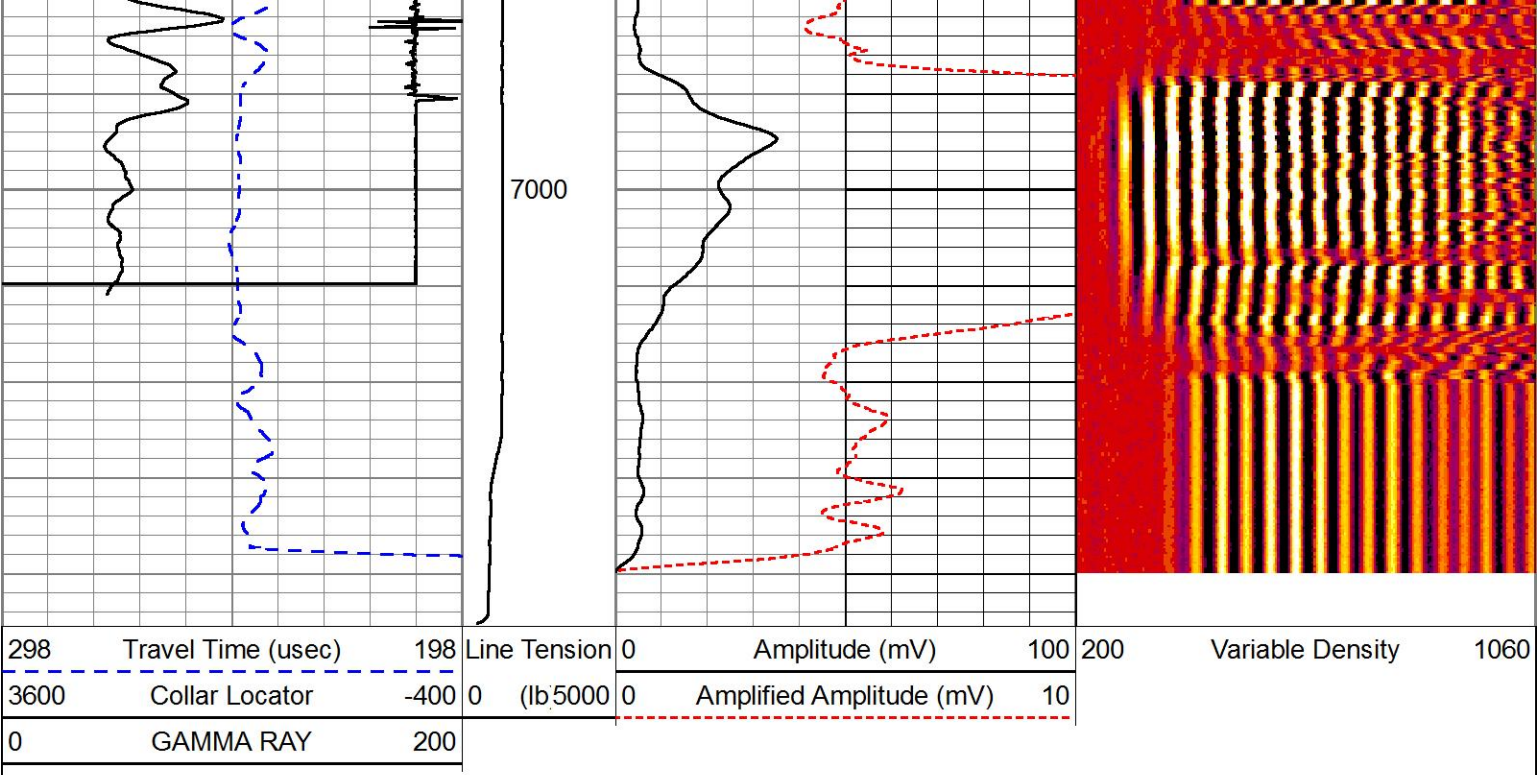








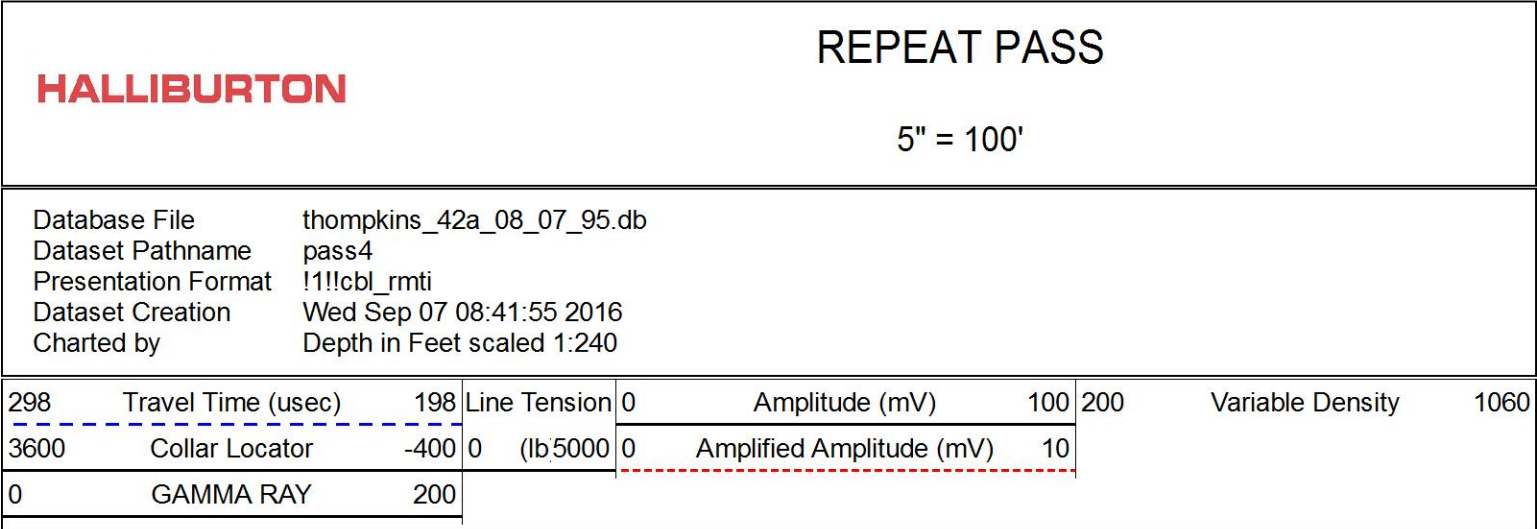




MAIN PASS

5" = 100'

HALLIBURTON

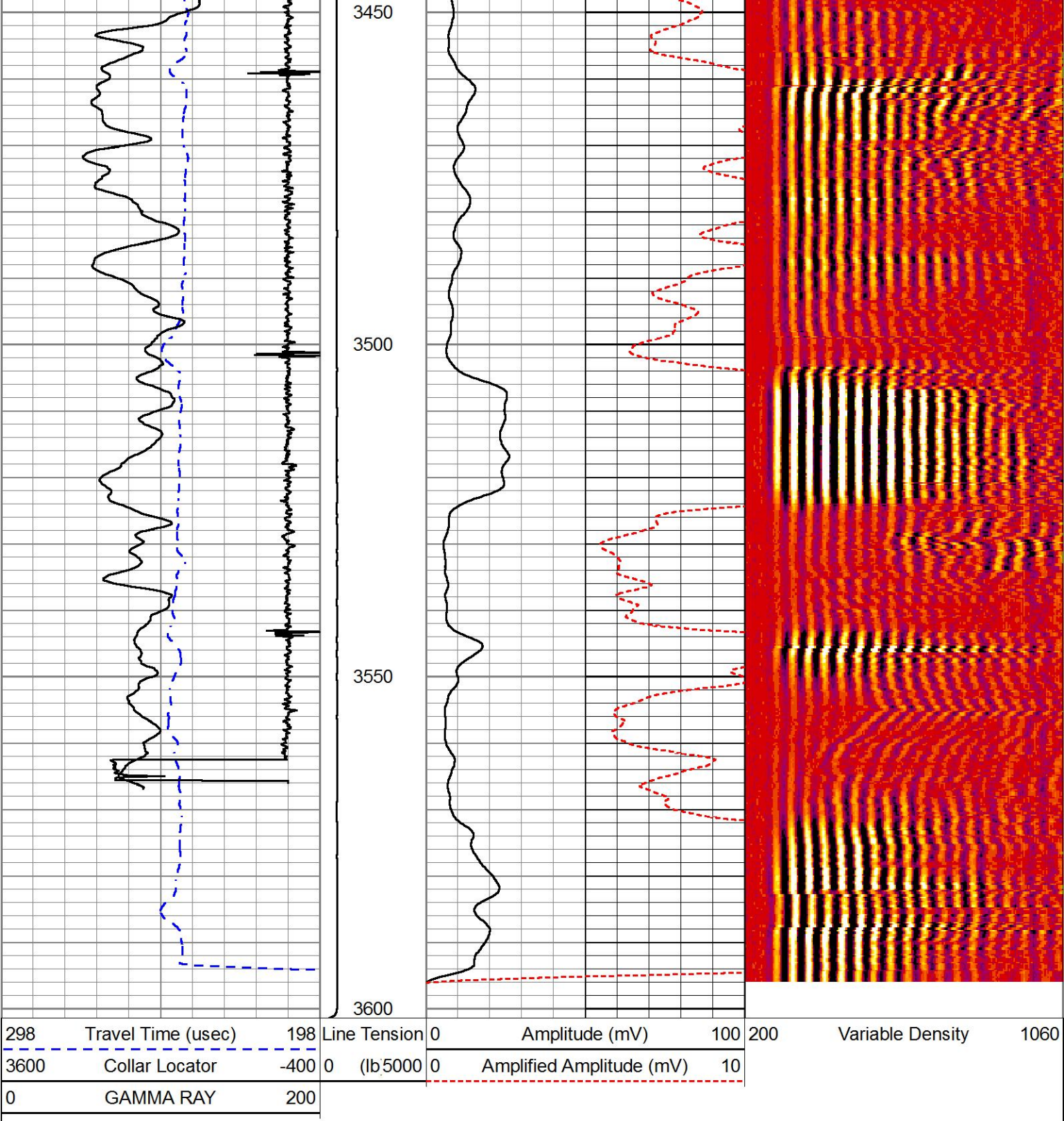


REPEAT PASS

5" = 100'

HALLIBURTON

Database File thompkins_42a_08_07_95.db
Dataset Pathname pass4
Presentation Format !1!!cbl_rmti
Dataset Creation Wed Sep 07 08:41:55 2016
Charted by Depth in Feet scaled 1:240



REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables

DatabaseC:\ProgramData\Warrior\Data\thompkins_42a_08_07_95.db
Dataset field/well/run1/pass4/_vars_


Top - Bottom

BHSAL1 1	BHSAL2 0	BHTEMP_Src TEMP	BITSIZE in 10	BORSAL kppm 150	BOTTEMP degF 100	CASED? Yes	CASEOD in 4.5
CASETHCK in 0	CASEWGHT lb/ft 11.6	LTH Sandstone	MSGGN 1	MudWgt lb/gal 8.4	PERFS 0	POROS1 1	POROS2 0
RHOFC 0.25	SO in 0	SRFTEMP degF 0	TDEPTH ft 7294	UHSGC NONE	USERFTT uSec/ft 0	ZREF MRayl 1.7	

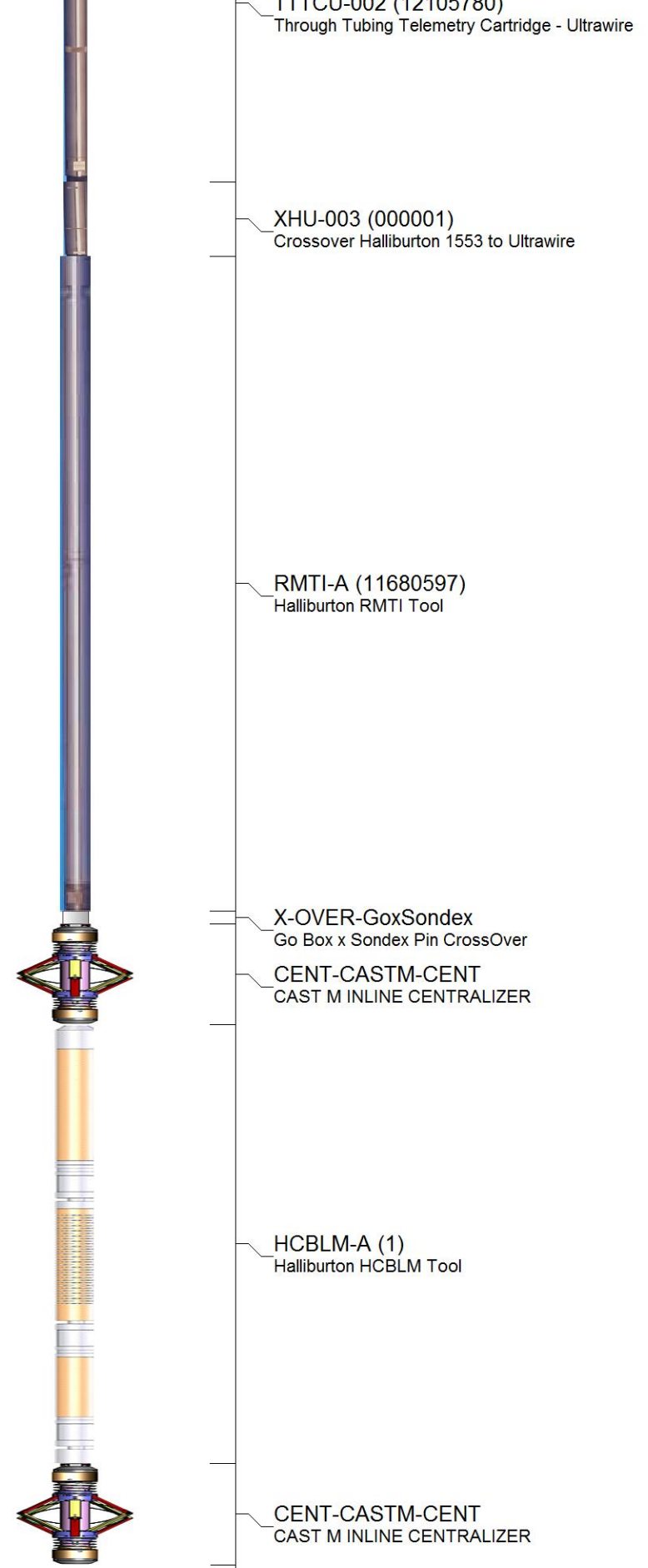
Database File			thompkins_42a_08_07_95.db		
Dataset Pathname			pass4		
Dataset Creation			Wed Sep 07 08:41:55 2016		
Cement Bond Log Shop Calibration Report					
Serial-Model:			1-A		
Calibration Performed:			Wed Sep 07 08:13:15 2016		
Free Pipe Calibration					
TT	Measured	244.2	Units	usec	
Amplitude		798.5		mV	
Log Base Line		7.8		mV	
Calibration References and Gain					
Name	Value		Units		
Pipe O.D.	4.500		in		
Pipe Weight	11.6		lb/ft		
Pipe Ref. Amp.	81.2		mV		
Amp. Gain	0.103				
Reservoir Monitor Tool I Calibration Report					
Serial-Model:			11680597-A		
Shop Calibration Performed:			Sat Aug 27 18:21:57 2016		
Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	84.00	80.00	4.00	+/-15.00	V
ITCR2	3130	3250	-120	+/-250	cps
Near Detector					
H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0278	5.69	<6.00
NGAIN = 0.992	207	206 +/-2	0.0967	-----	-----
	NZOFF = 0.8				
Far Detector					
H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0382	5.90	<6.50
FGAIN = 0.992	209	208 +/-2	0.0926	-----	-----
	FZOFF = 0.8				
Flask Temperature	57.6 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.44	0.45	-0.01	+/-0.02	
LIRI2	1.37	1.36	0.01	+/-0.05	
TCCR2	3766	4000	-234	+/-1000	cps
ITCR2	3102	3200	-98	+/-250	cps

Sigma Mode					
Stabilization					

Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	84.00	80.00	4.00	+/-15.00	V
FCAP	9744	10000	-256	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.92	0.95	-0.03		
N/F Inel Norm	0.60	0.61	-0.01		
RNF	1.09	1.07	0.02	+/-0.12	
RINC	1.68	1.64	0.04	+/-0.18	
SGFN	24.13	24.00	0.13	+/-0.50	cu
SGFF	22.93	22.85	0.08	+/-0.50	cu
FSIN	23037	24000	-963	+/-2000	cps
FCAP	9704	10000	-296	+/-1000	cps
NFTR	0.80			<5.00	
FFTR	0.91			<5.00	
NBKG	216			<500	cps
FBKG	105			<500	cps
RTN	0.37	0.40	-0.03	+/-0.10	usec
RTF	0.42	0.40	0.02	+/-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 / 12105780		
SHOP CALIBRATION			Mon Sep 05 10:59:30 2016		
	Counts/Sec.	Gain	Offset	Jig	Units
Background	28.5				cps
Calibrator	160.5				cps
		1.6899			GAPI/cps
PRIMARY VERIFICATION					
Background	46.0				cps
Calibrator	265.1				cps
Difference				219.0	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	35.14		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00

Tool Joint	Length (ft)	Weight (lb)	O.D. (in)	Tool Joint	Length (ft)	Weight (lb)	O.D. (in)
GR	32.88			TTTCU-002 (12105780) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
				XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT	22.23						
RmtTNGT	21.73			RMTI-A (11680597) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	13.98			X-OVER-GoxSondex Go Box x Sondex Pin CrossOver	0.27	1.69	1.00
RmtNFwvMcsPI	13.98			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	13.98						
Temp	8.89						
TT3FT	6.64			HCBLM-A (1) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	6.64						
WVF5FT	5.68						
WVF3FT	2.16						
LLMTEN	0.00			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00



Dataset: thompkins_42a_08_07_95.db: field/well/run1/pass5

Total length: 38.71 ft

Total weight: 352.00 lb

O.D.: 3.13 in

