

HALLIBURTON										CEMENT BOND LOG									
Company URSA OPERATING COMPANY LLC Well MONUMENT RIDGE B 24C-08-7-95 Field PARACHUTE County GARFIELD State CO										Company URSA OPERATING COMPANY LLC Well MONUMENT RIDGE B 24C-08-7-95 Field PARACHUTE County GARFIELD State CO									
API No.: 05045229070000    Serv #: 903679454 Location: SHL: 990' FSL & 144' FEL BHL: 517' FSL & 1983' FEL										Other Services									
Permanent Datum GROUND LEVEL    Elevation 5702' Log Measured From KB    17' Ft. above perm. datum    K.B. 5719' D.F. 5719' G.L. 5702' Drilling Measured From KB										RMT-1									
Sec: 8    Twp: 7S    Rge: 95W																			
Date @ Time Logged 28 NOV 2016 @ 05:00    Type Fluid in Hole FRESH WATER																			
Run No. ONE    Density of Fluid 8.4 PPG																			
Depth - Driller 8105'    Fluid Level SURFACE																			
Depth - Logger 7934'    Cement Top Est. Logged 1850'																			
Bottom - Logged Interval 7930'    Equipment / Location 11808537 / RS. WY																			
Top - Log Interval 1824'    Recorded by B. RIDDEL																			
Max. Recorded Temp. 211 degF    Witnessed by R. TOLLE																			
CEMENTING DATA																			
Surface String    Protection String    Production String    Liner																			
Date / Time Cemented N/A    N/A    N/A    N/A																			
Primary / Squeeze N/A    N/A    N/A    N/A																			
Expected Compressive Strength N/A    psi@ N/A hrs    N/A    psi@ N/A hrs    N/A    psi@ N/A hrs																			
Cement Volume N/A    N/A    N/A    N/A																			
Cement Type / Weight N/A    /    N/A    /    N/A    /    N/A    /    N/A																			
Formulation N/A    N/A    N/A    N/A																			
Mud Type / Mud Wgt. N/A    /    N/A    /    N/A    /    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' 1874' 8.625" 32.0 # SURFACE 1874'																			
THREE 7.875" 1874' 8105' 4.5" 11.6 # SURFACE 8105'																			

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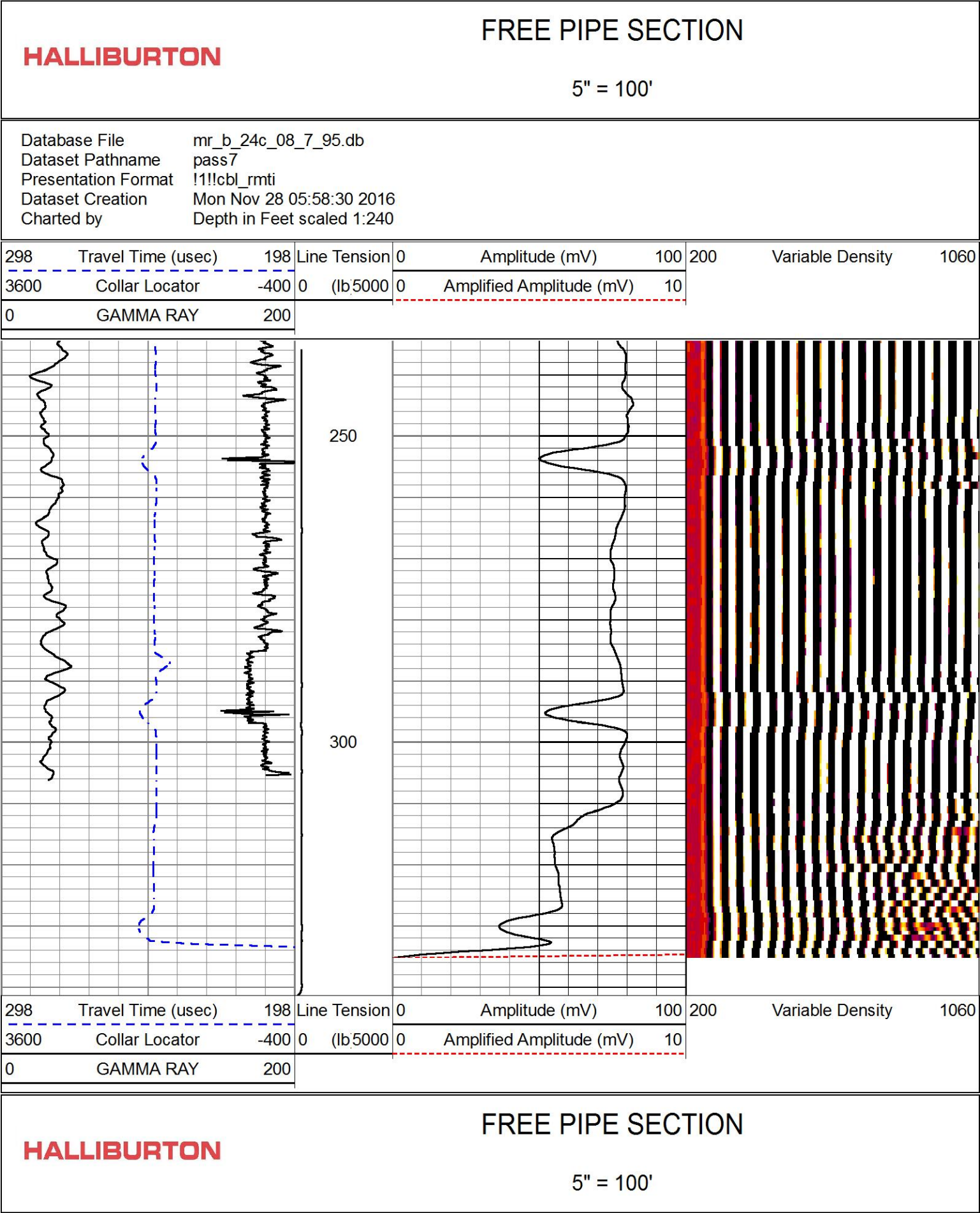
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR 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 : 1850'  
GAMMA BLANKET : 408 GAPI  
FREE PIPE CALIBRATION DEPTH : 255'  
  
PULLED TENSION @ 5007', 4645', 4206' & 3956'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SVCS.  
YOUR CREW TODAY: BLAKE RIDDEL, DANIEL FLINDERS, BRAD BRUDERER

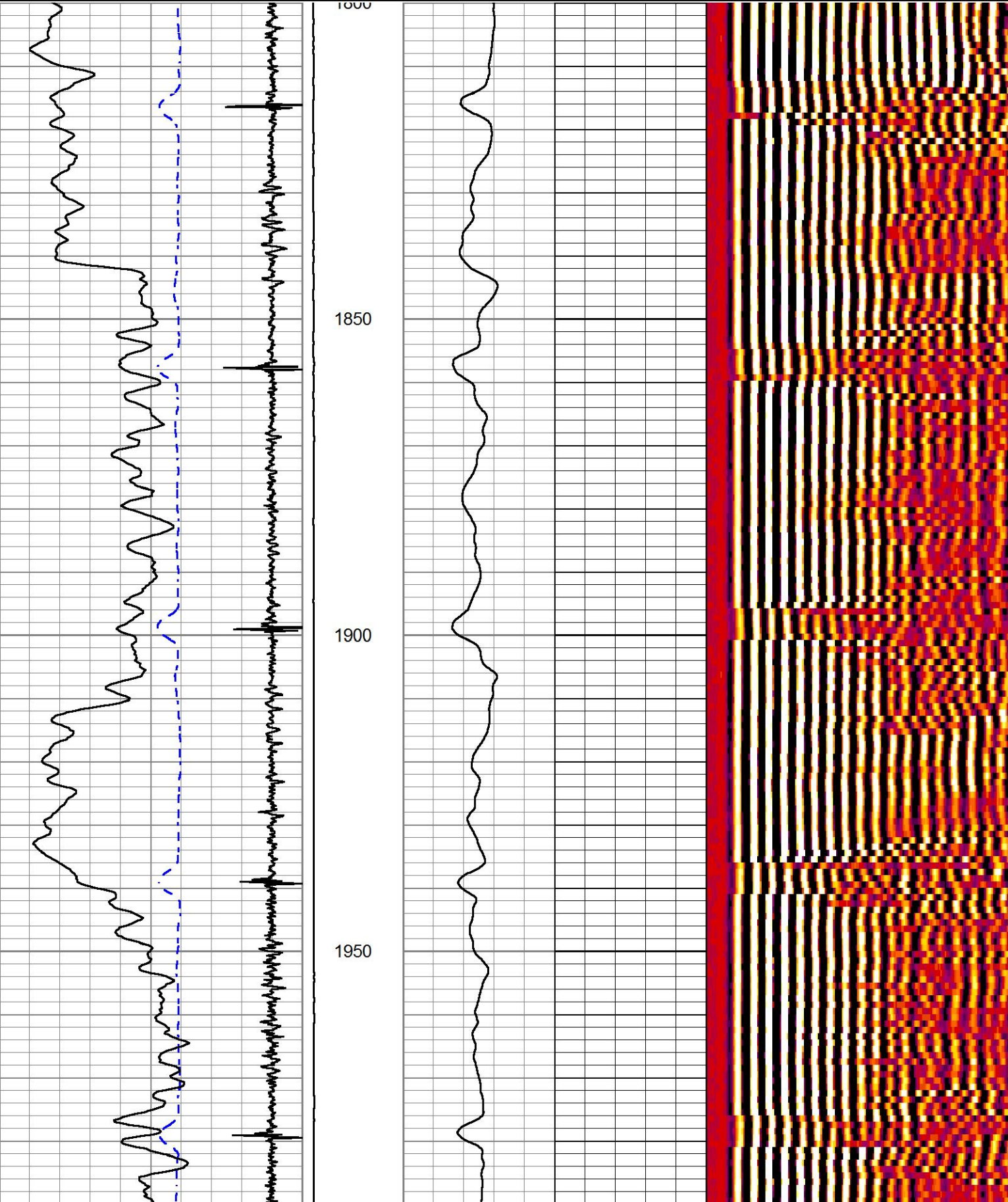
ONE	2000'	1750'	0 PSI	20	REPEAT			
TWO	7934'	1824'	0 PSI	20	MAIN			
	GAMMA		SIGMA		AMPLITUDE			
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	60	0	0	100		
TWO	0	200	60	0	0	100		
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

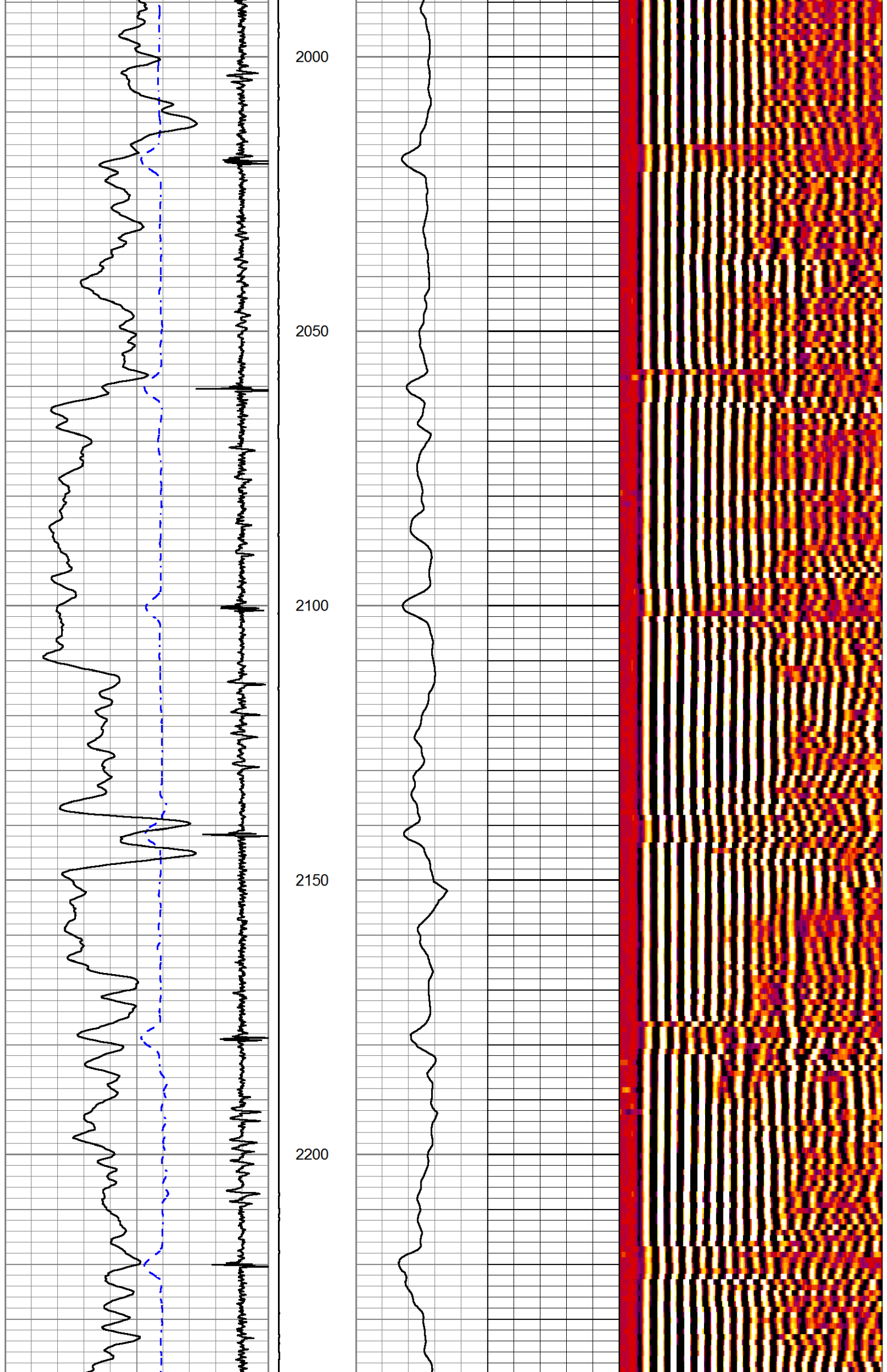


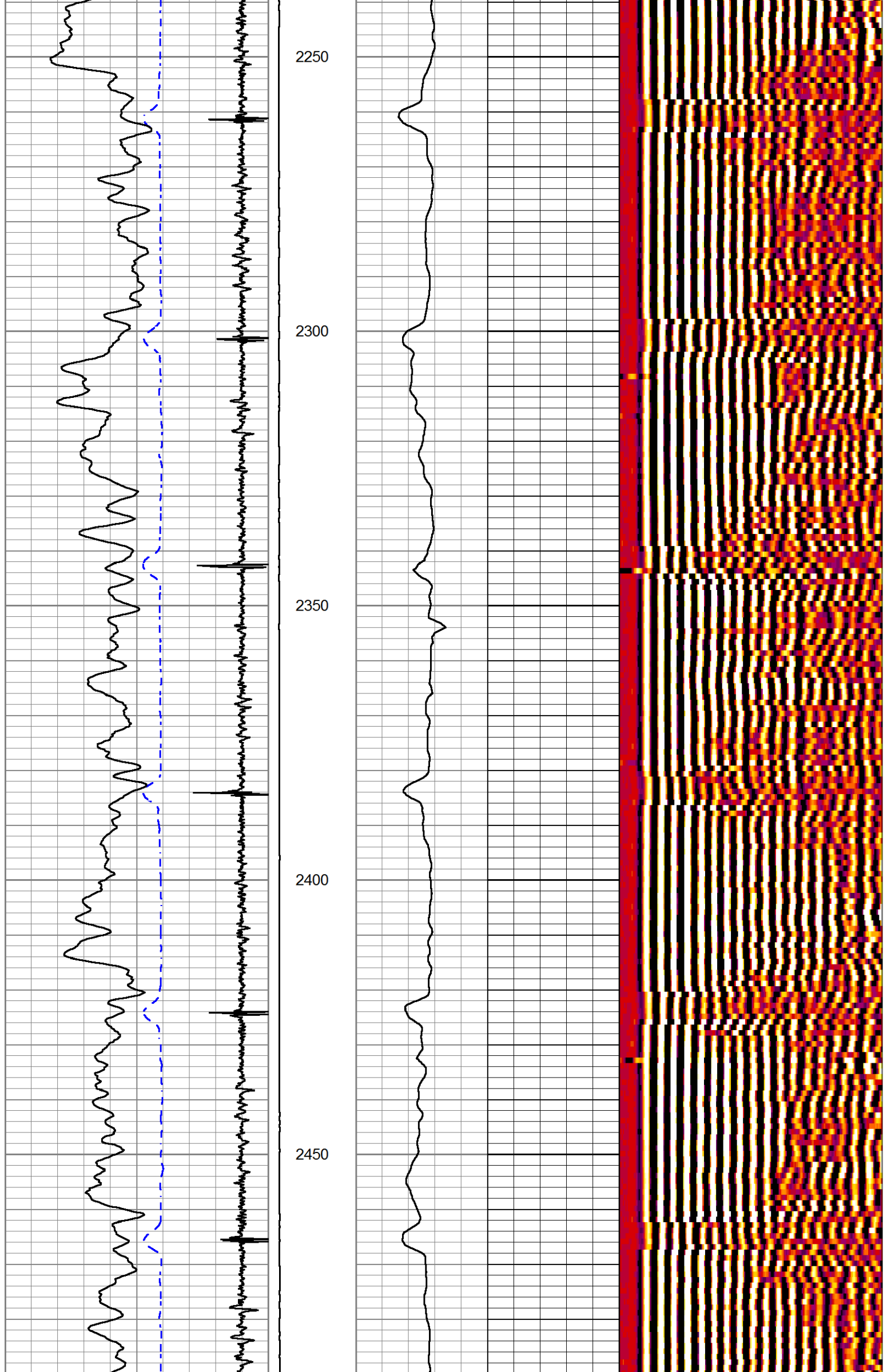


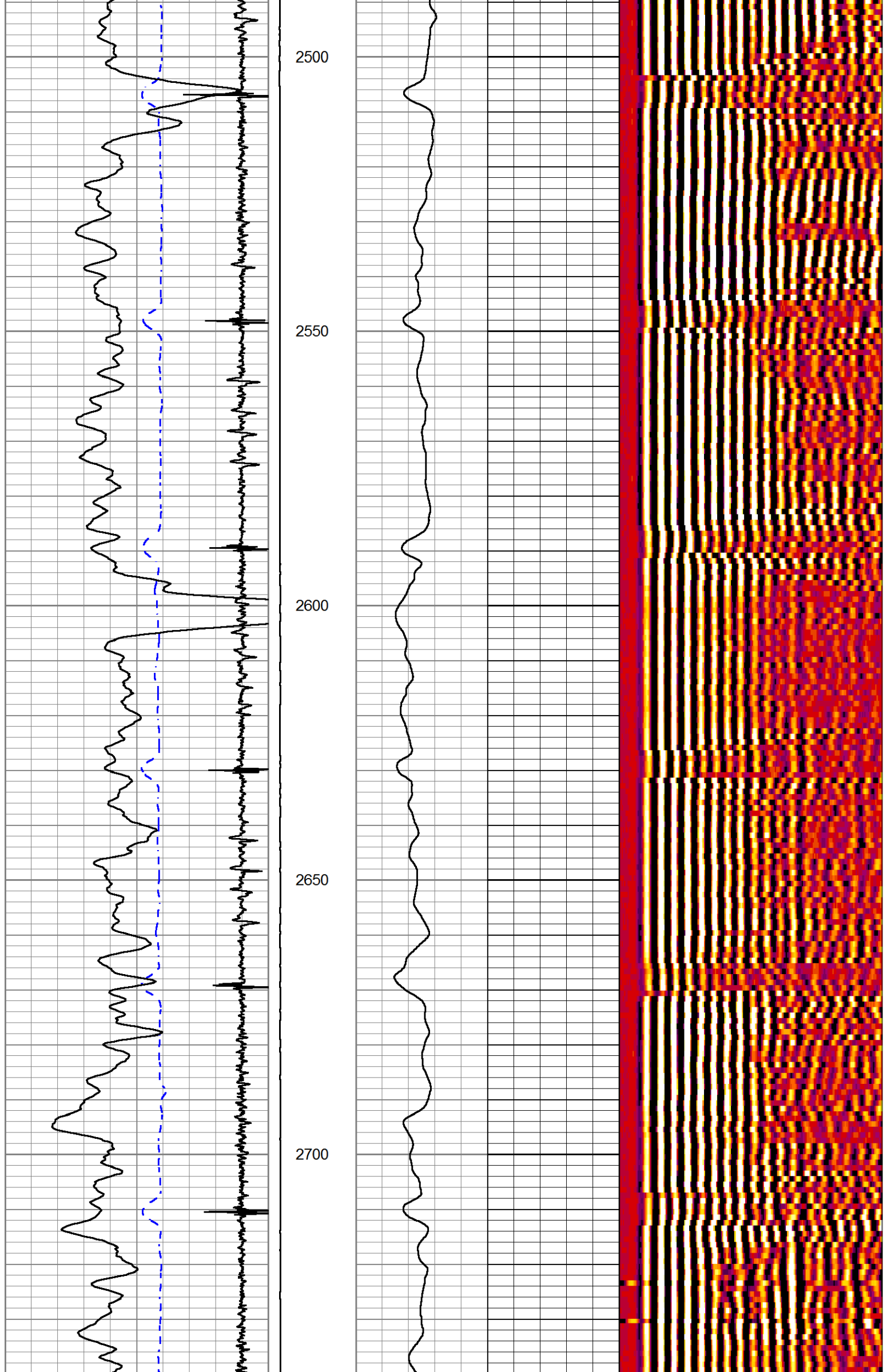
Database File            mr\_b\_24c\_08\_7\_95.db  
Dataset Pathname        pass11.1  
Presentation Format       !1!!CB~1  
Dataset Creation        Mon Nov 28 12:20:14 2016  
Charted by               Depth in Feet scaled 1:240

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							

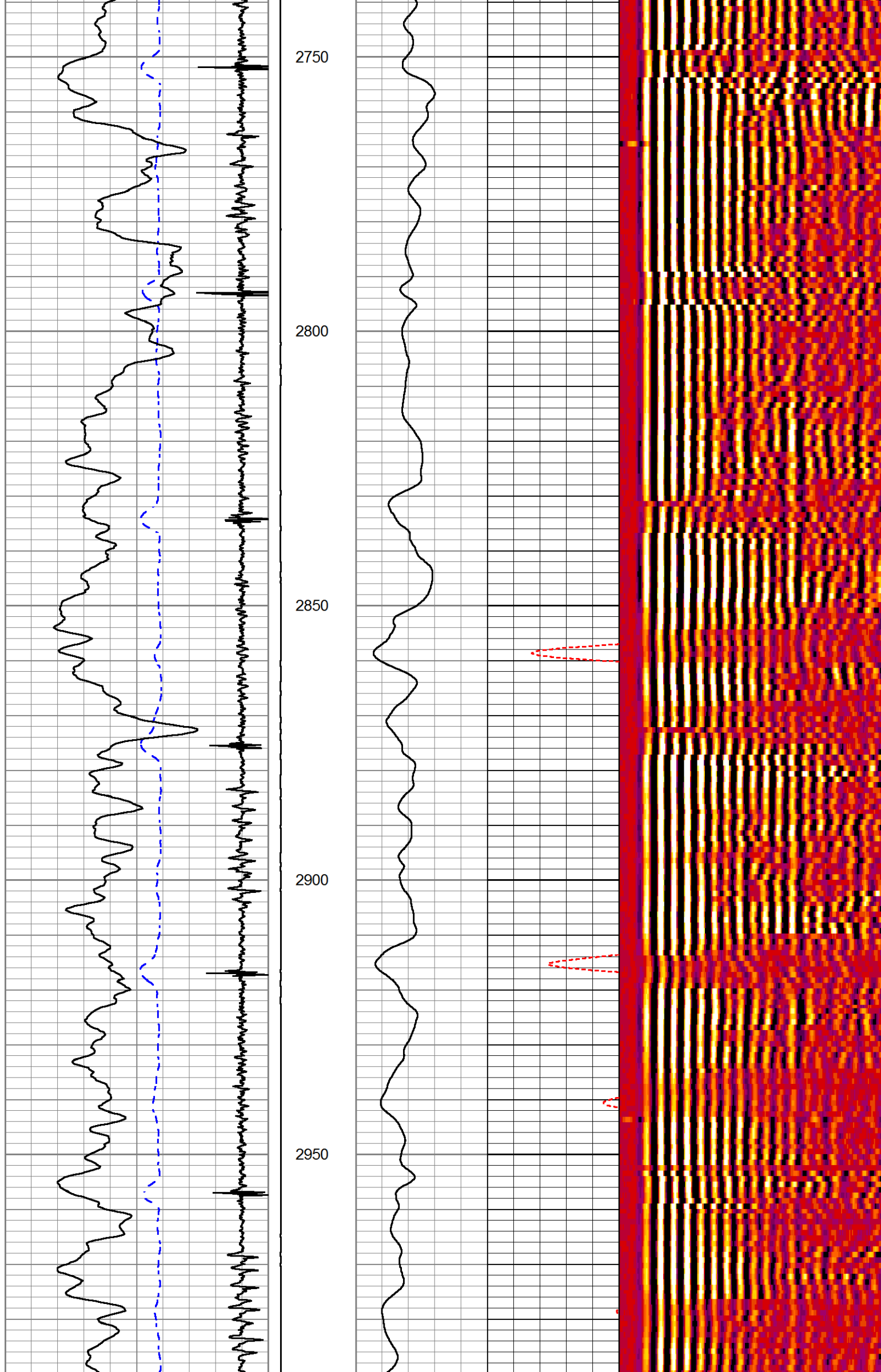


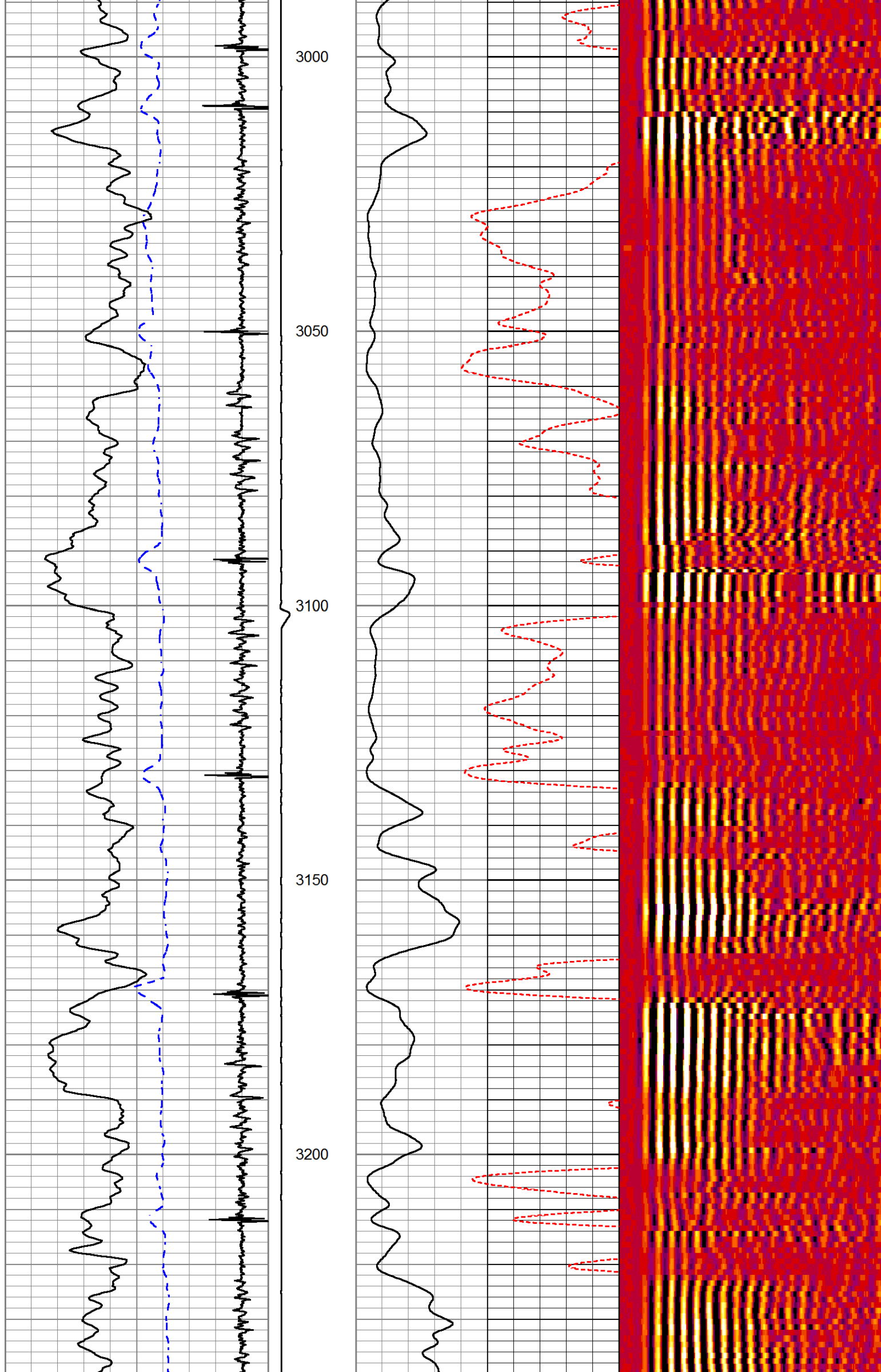




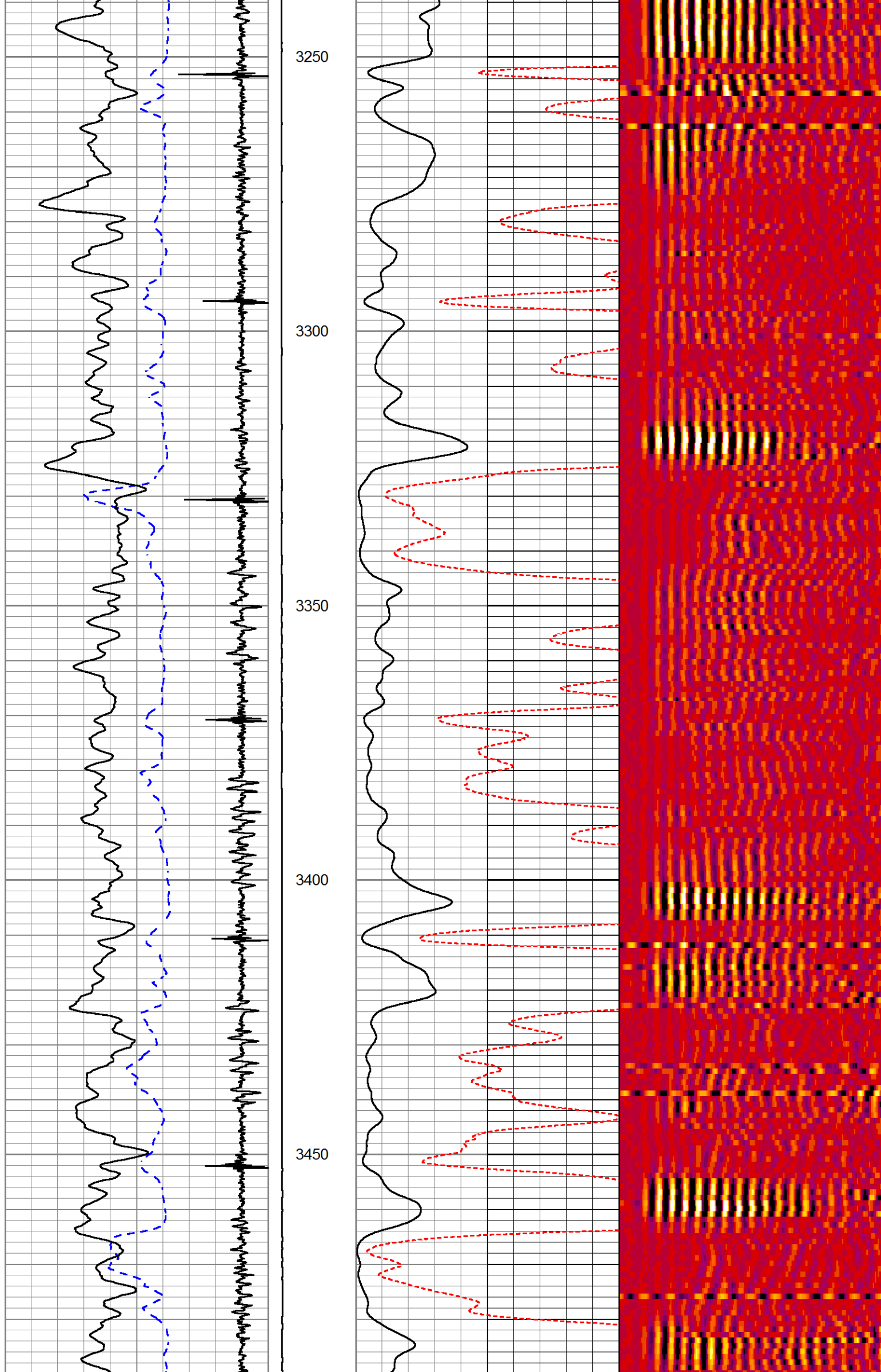


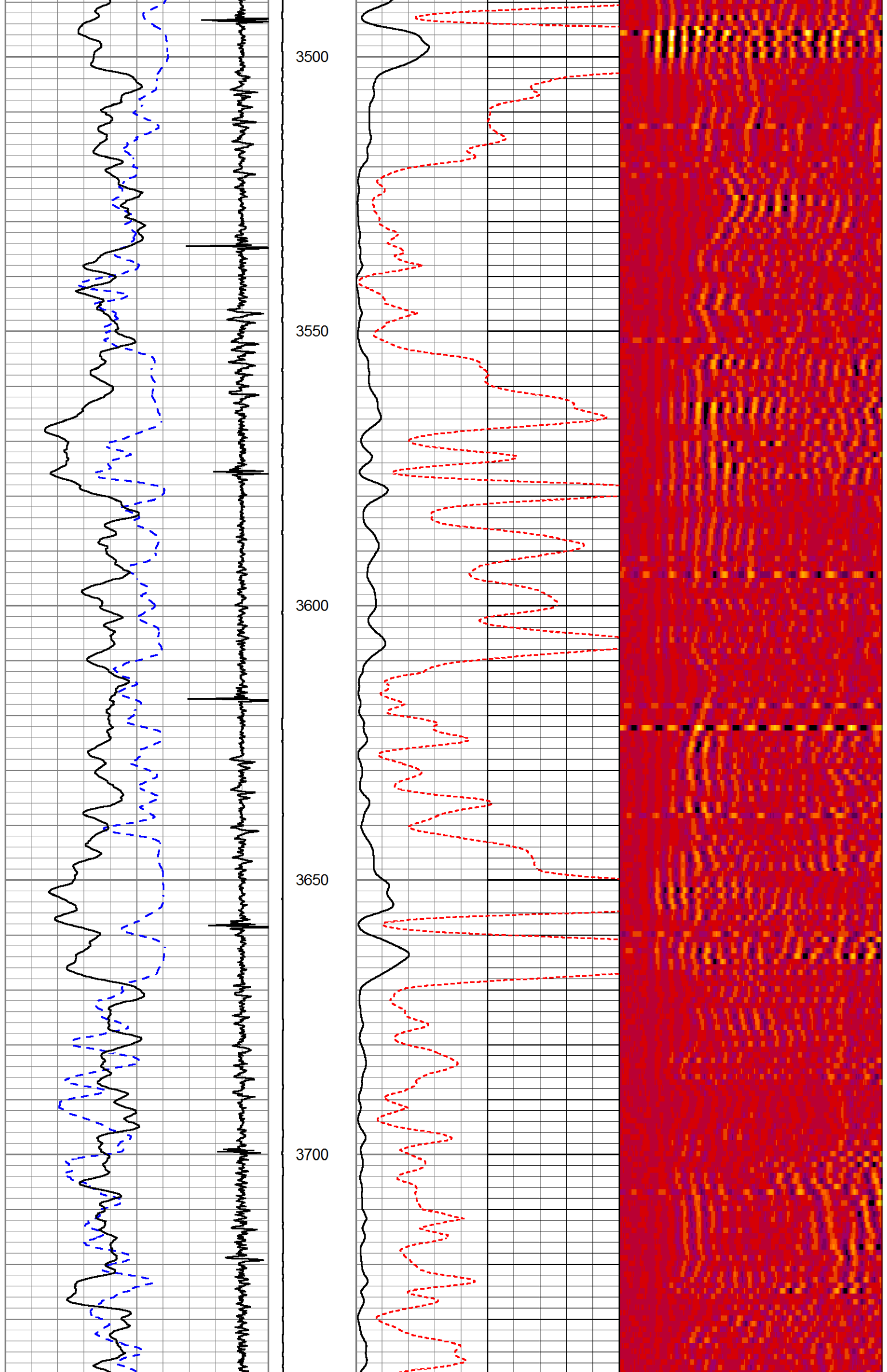


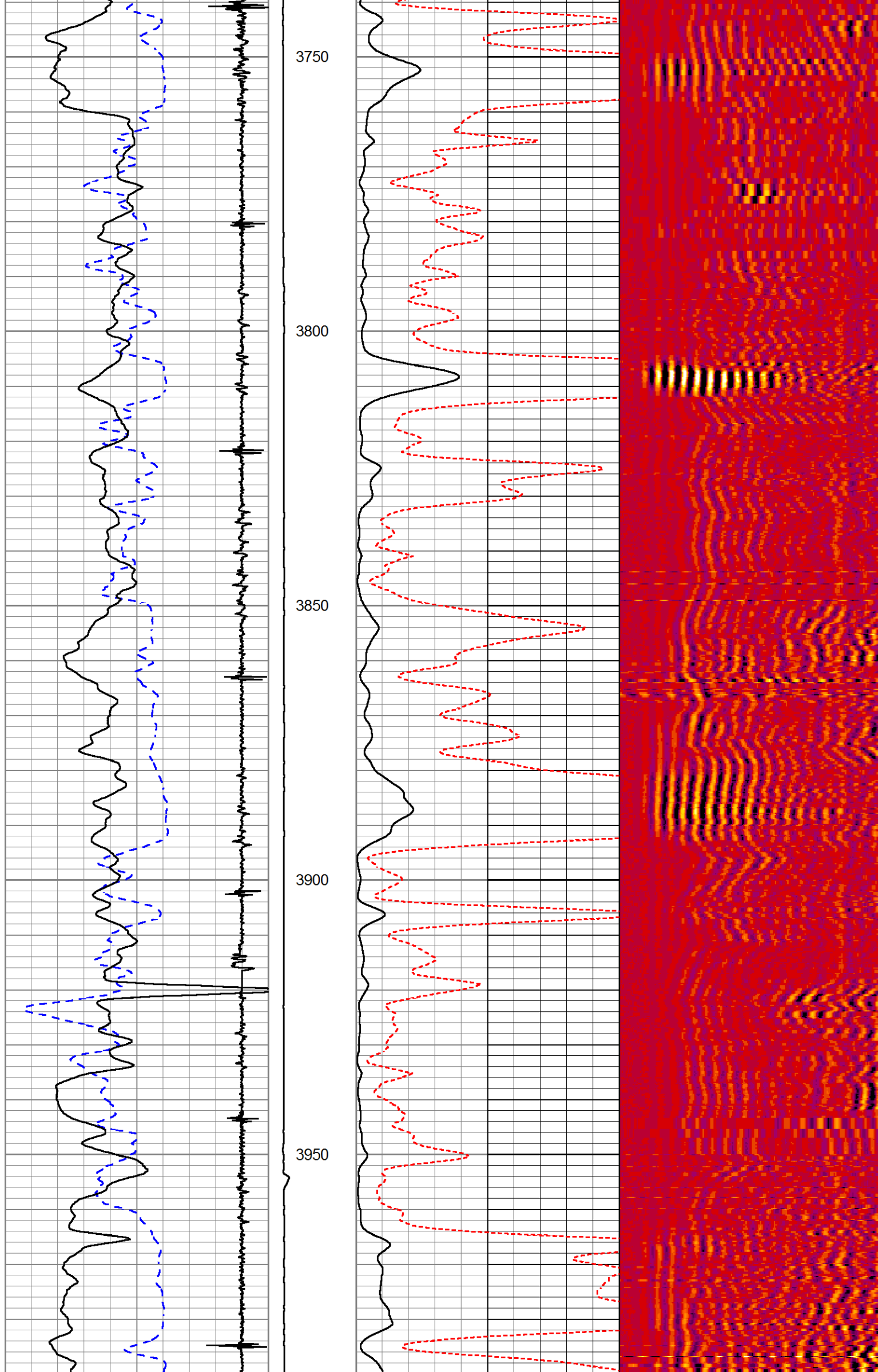




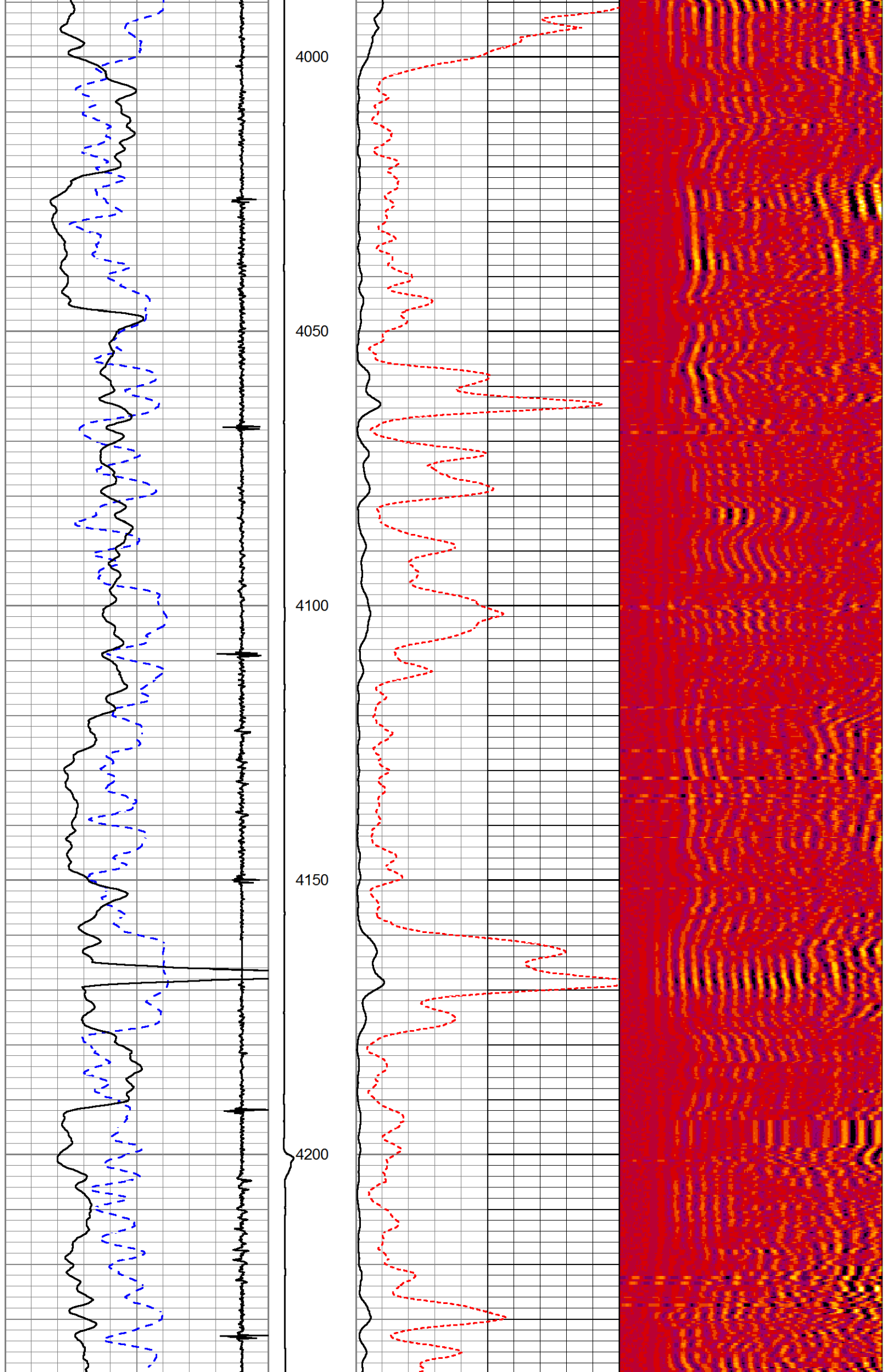


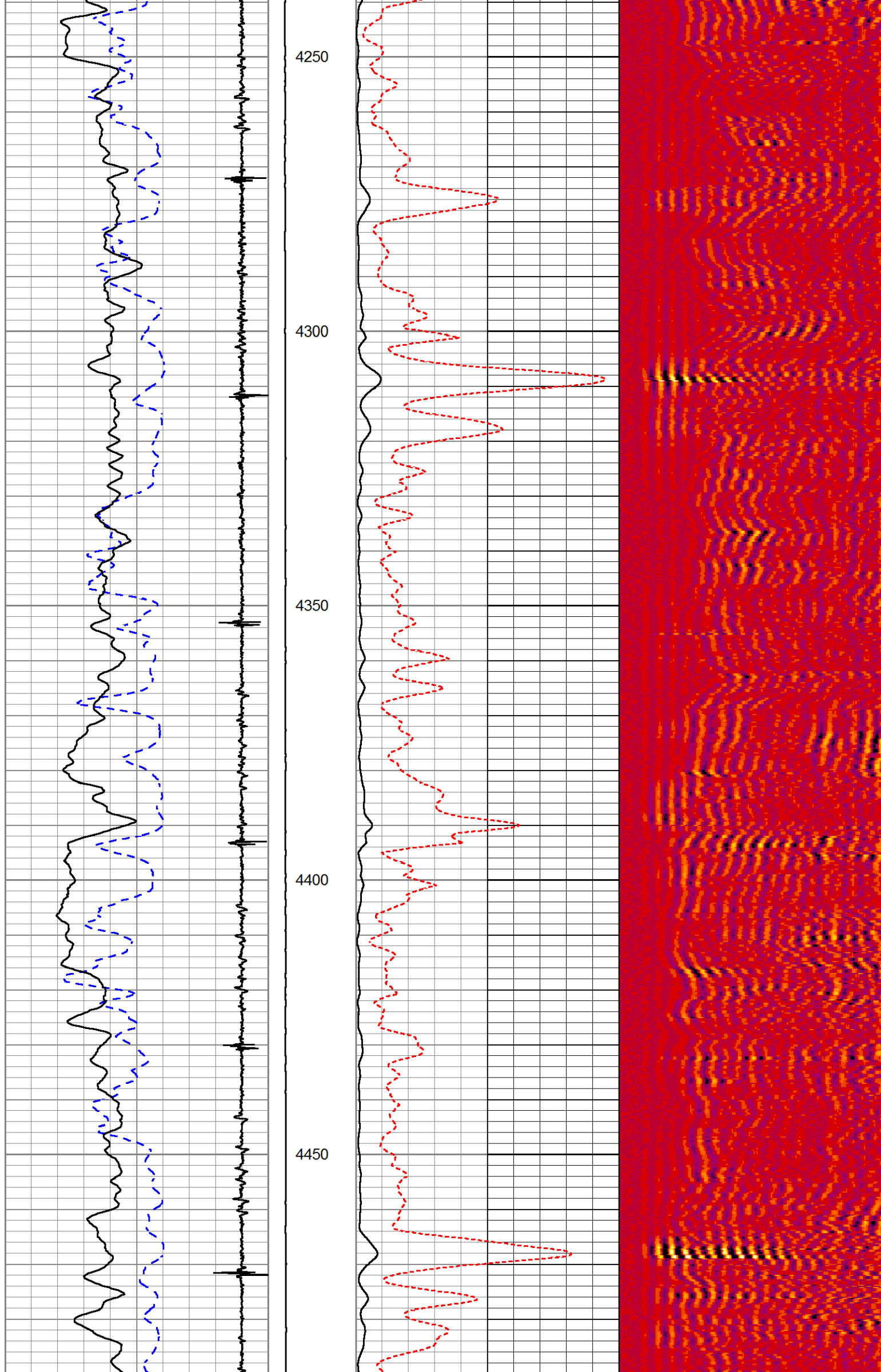


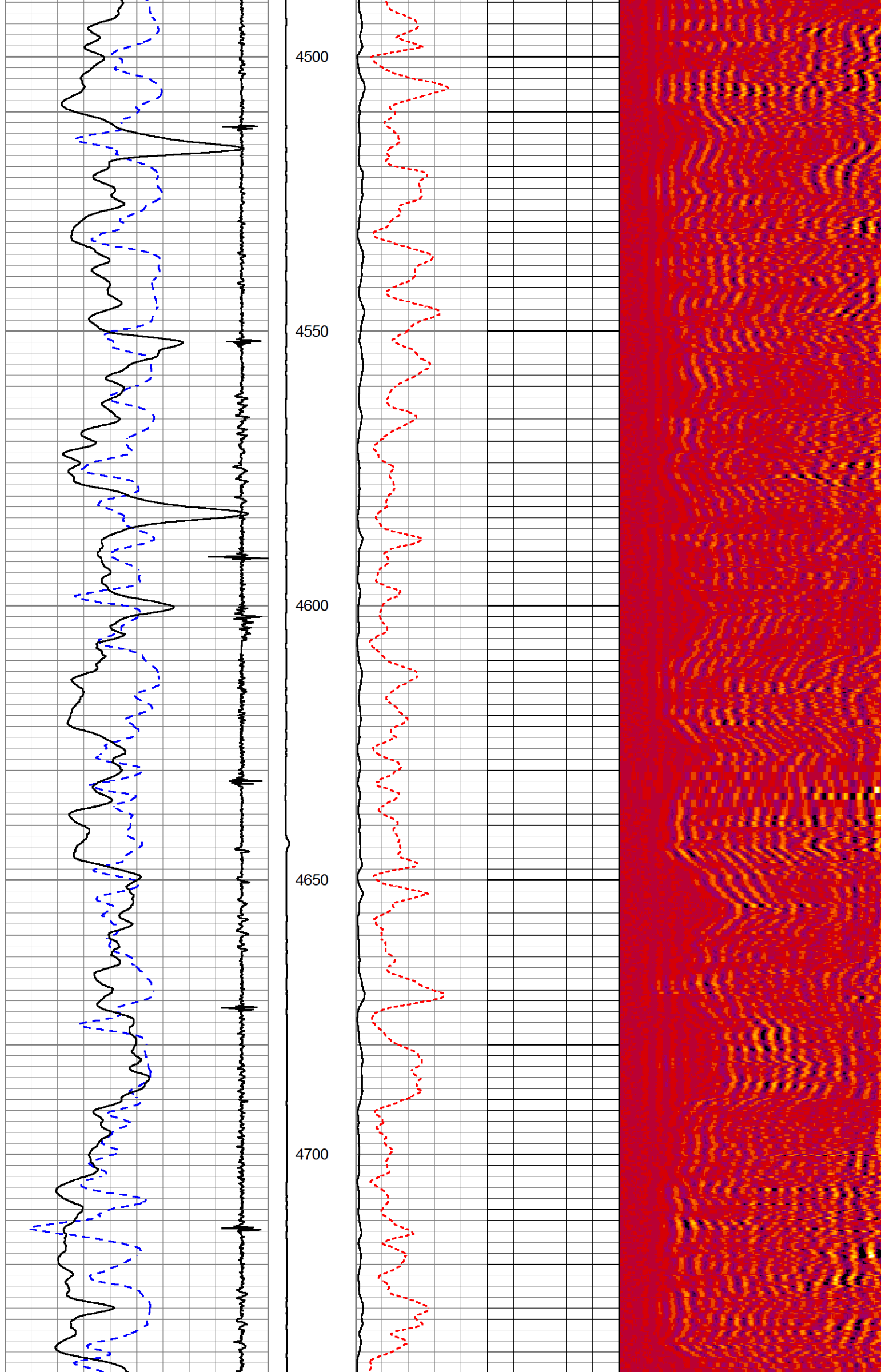




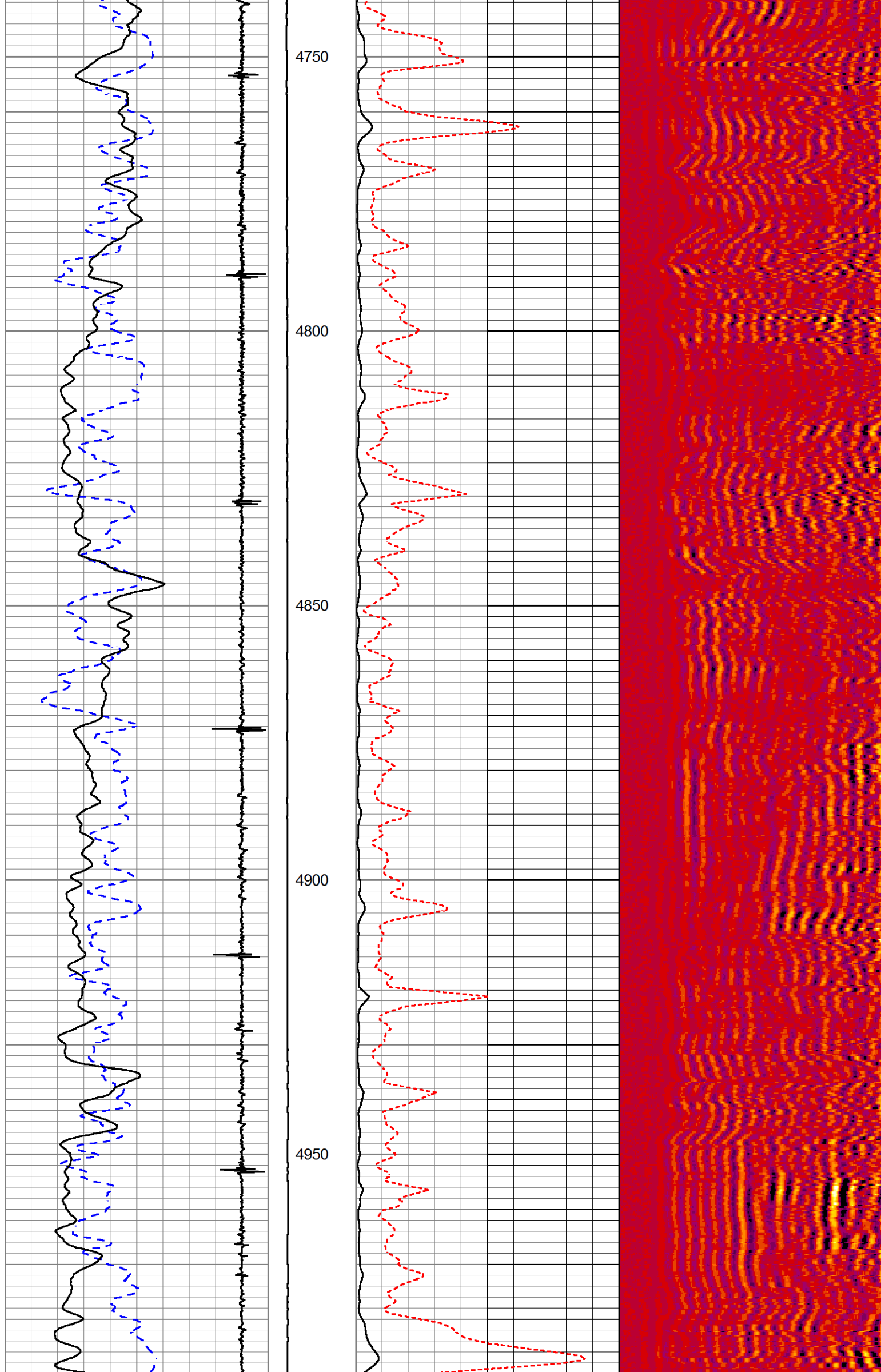


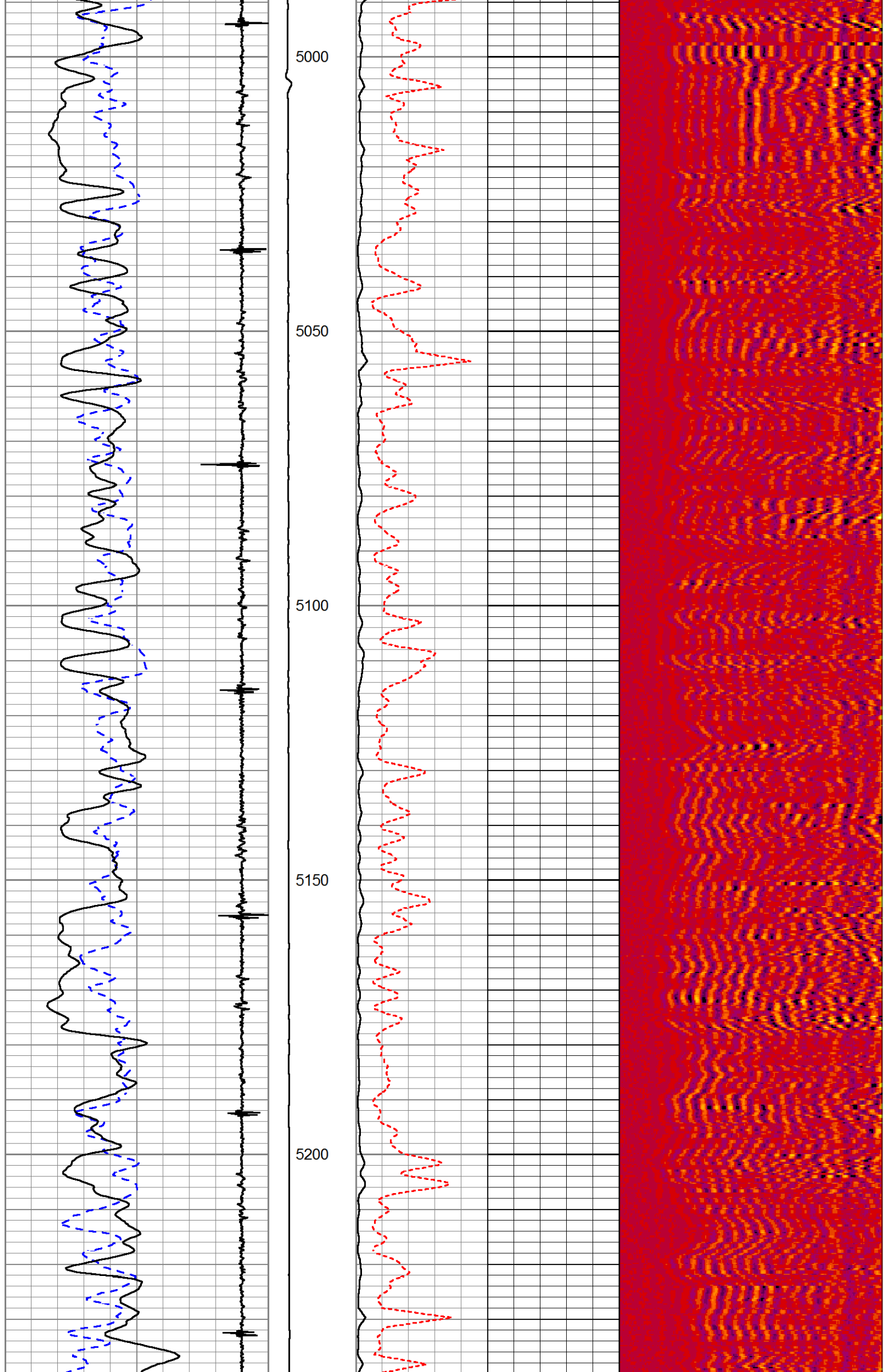


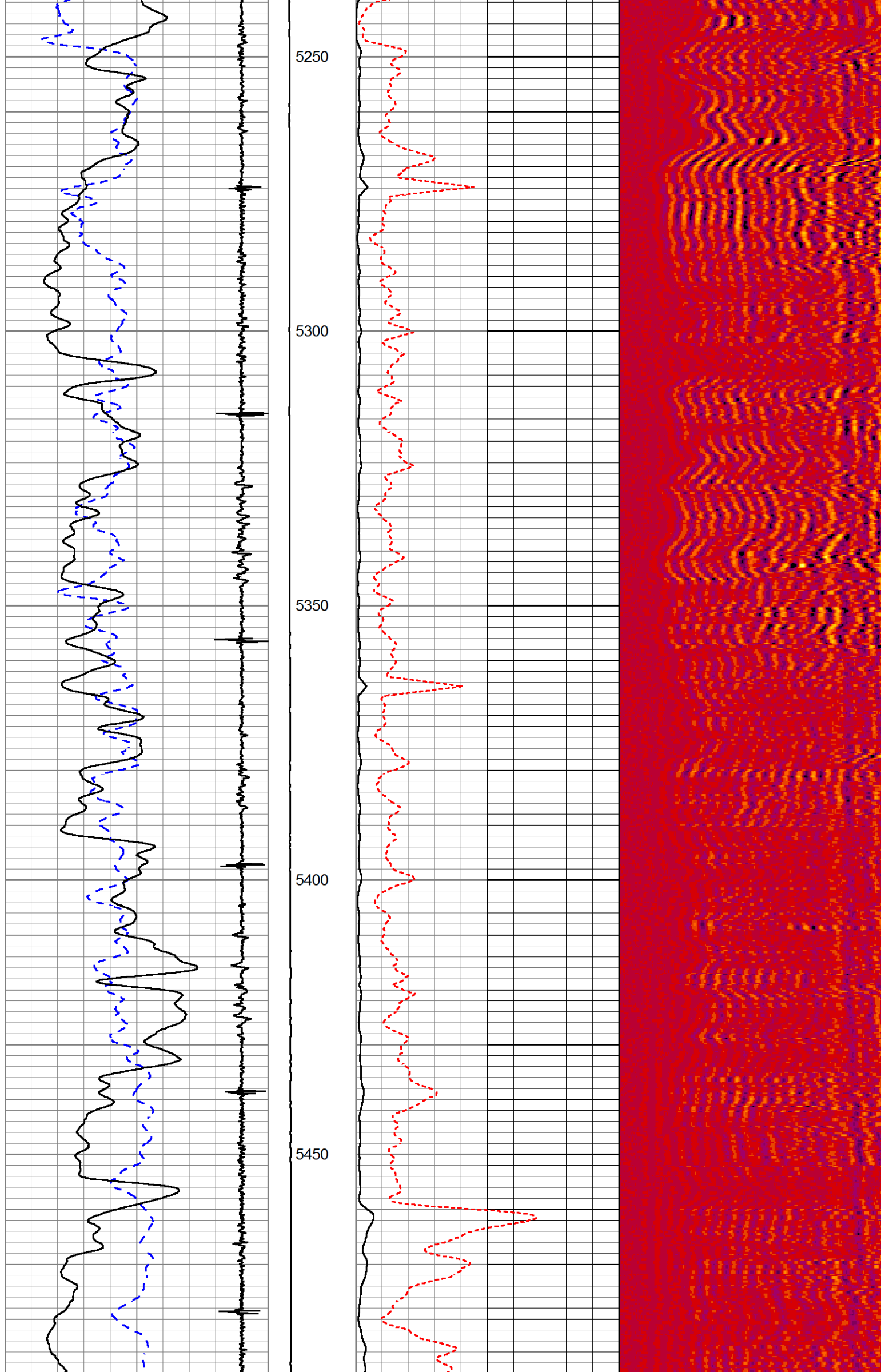




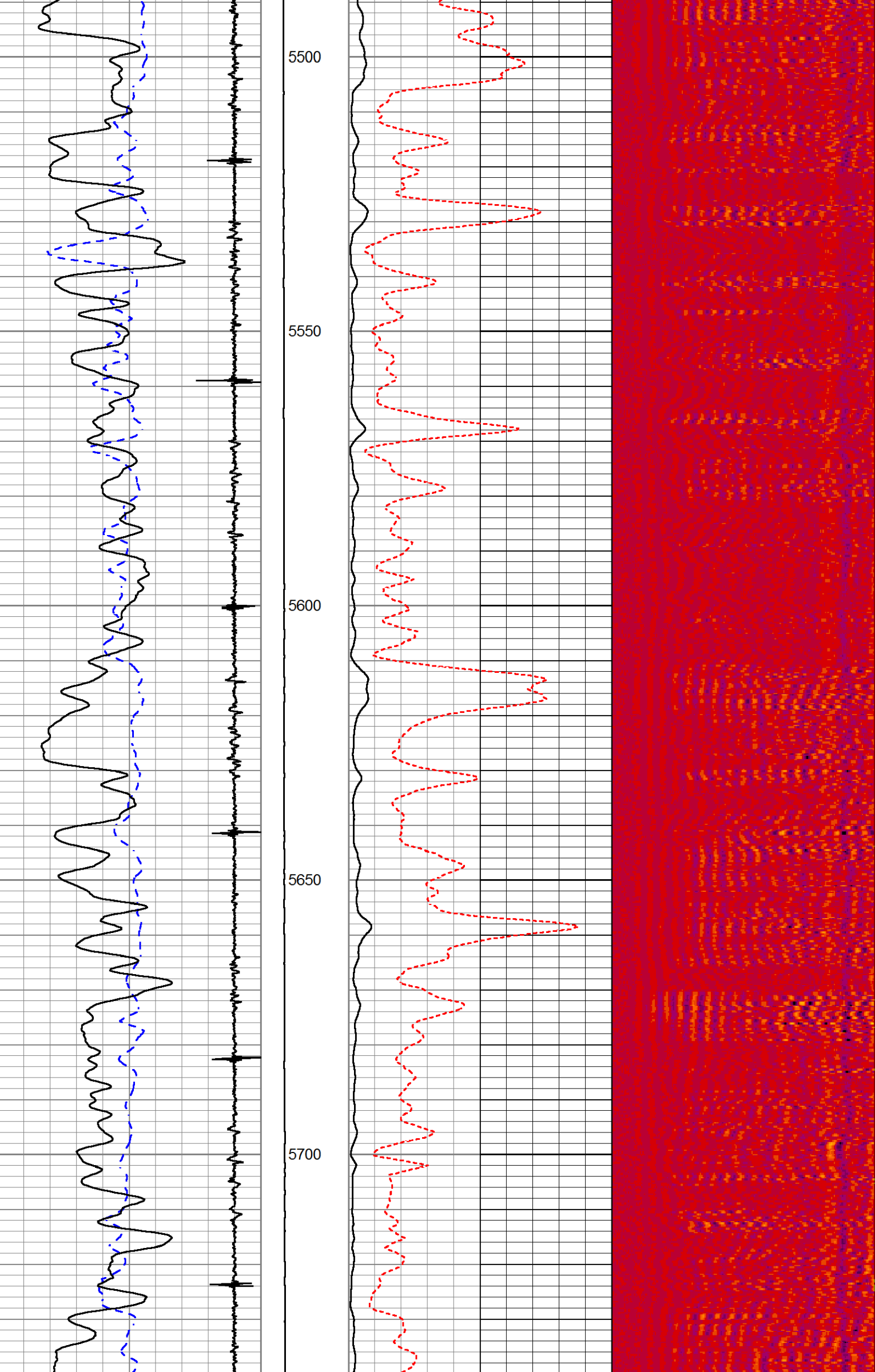


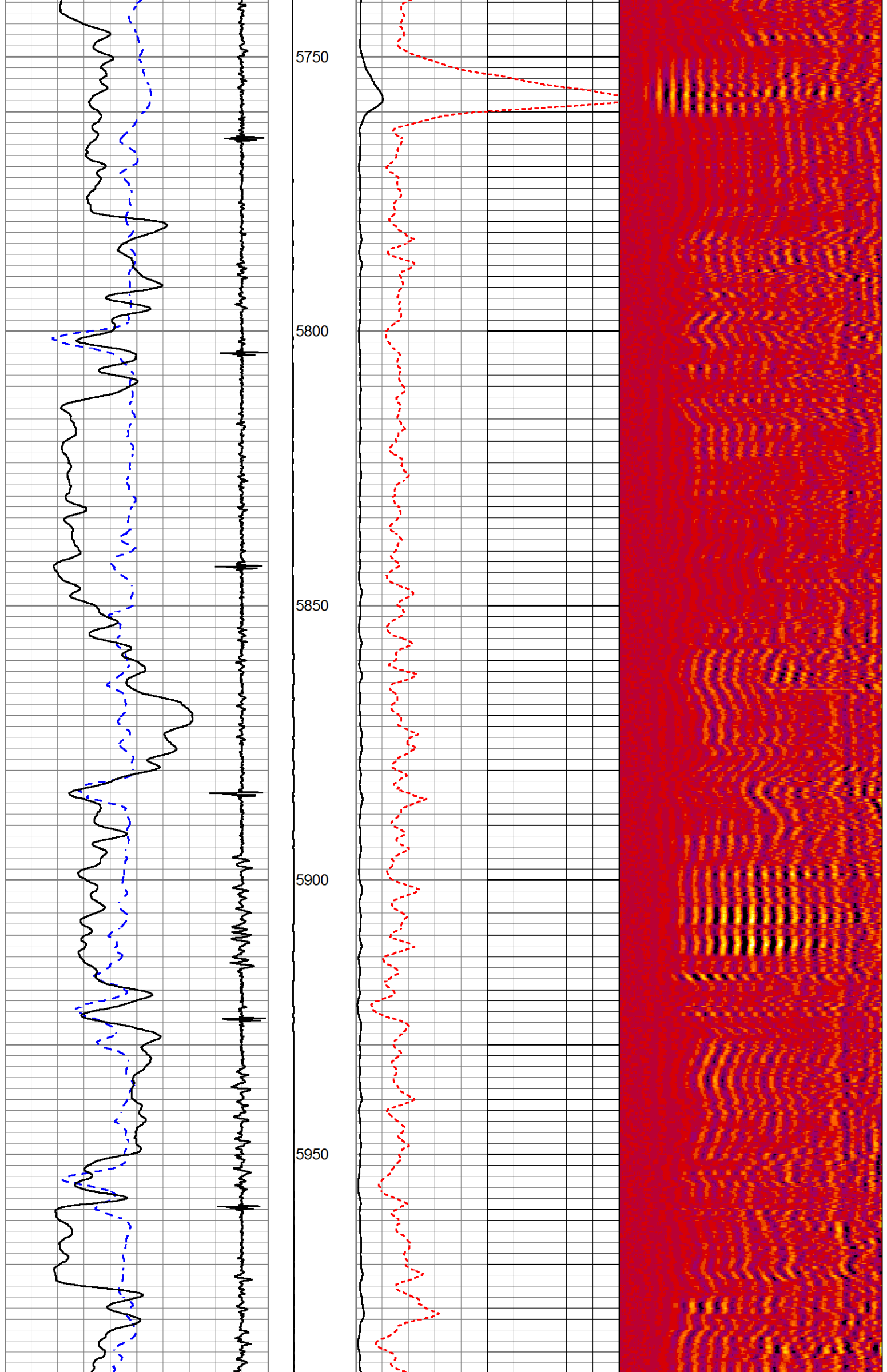


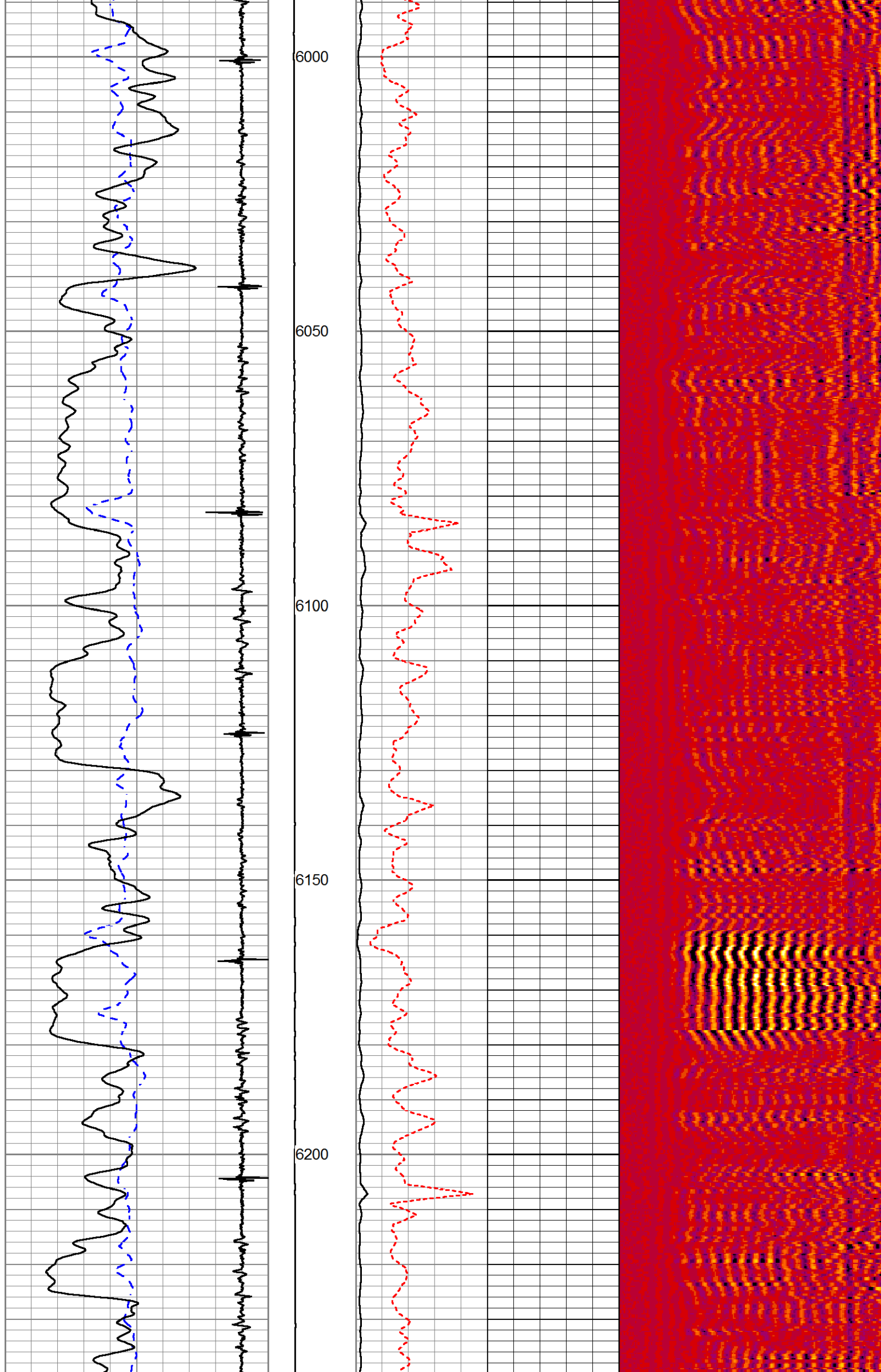




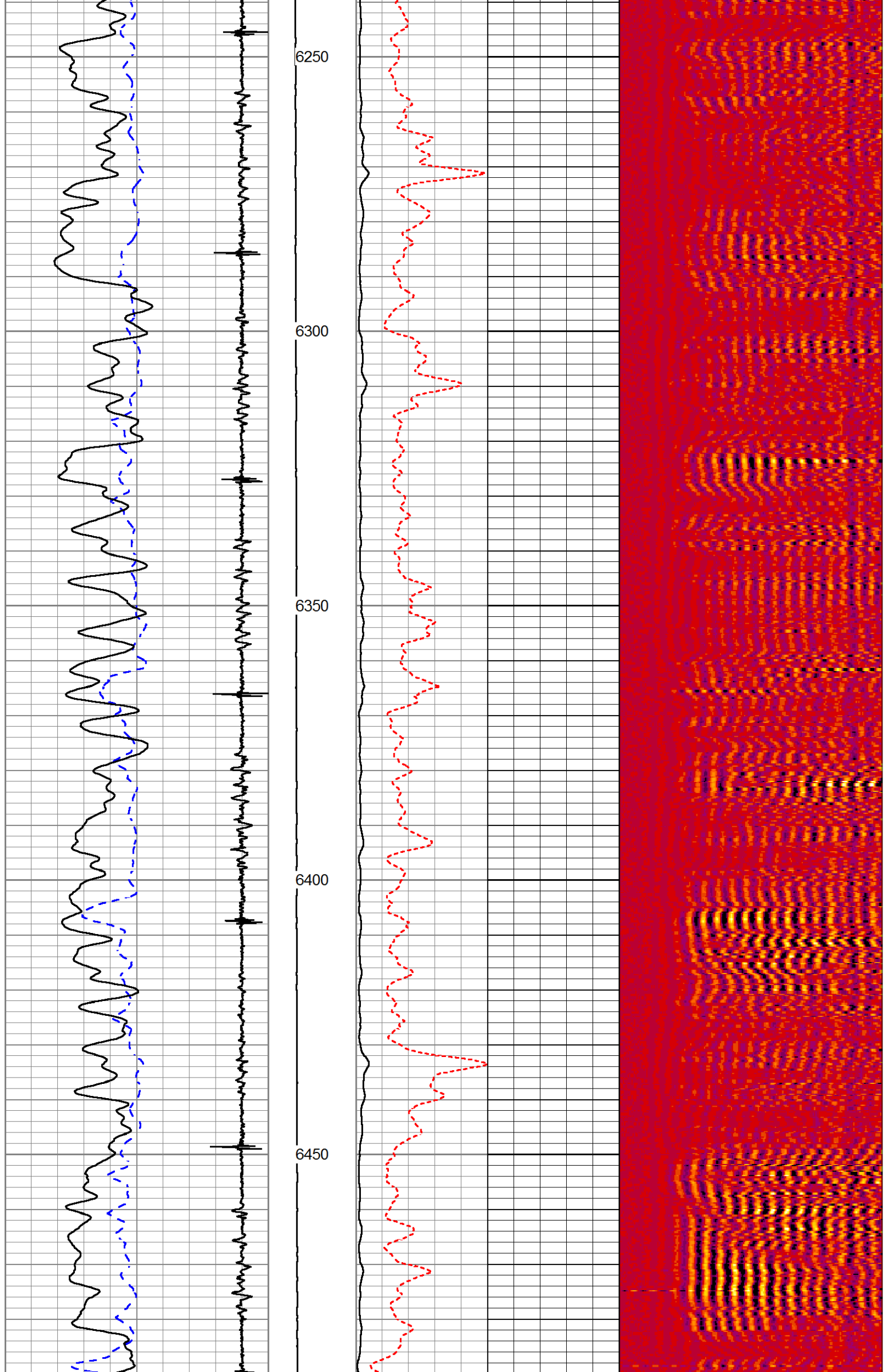


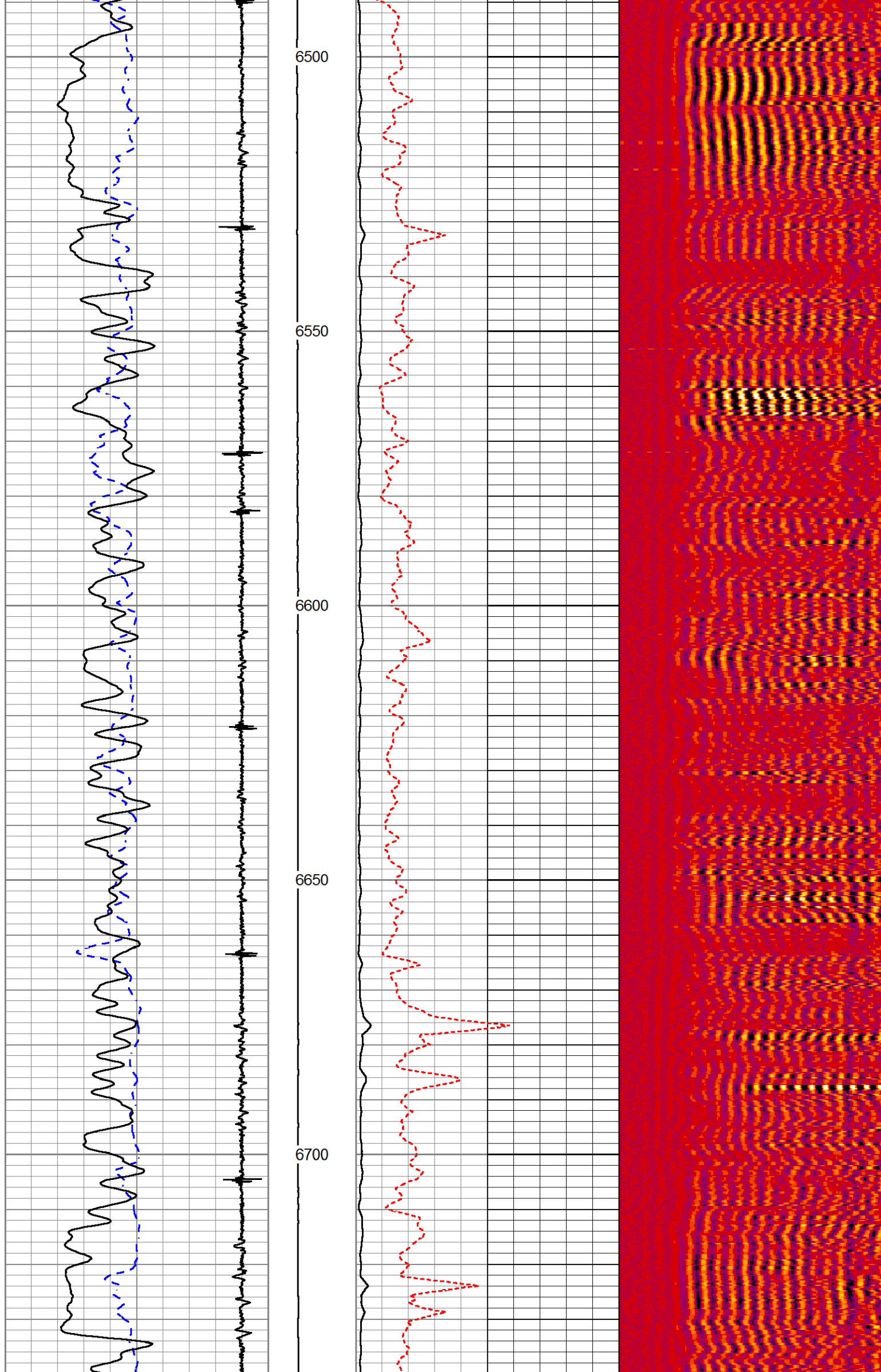


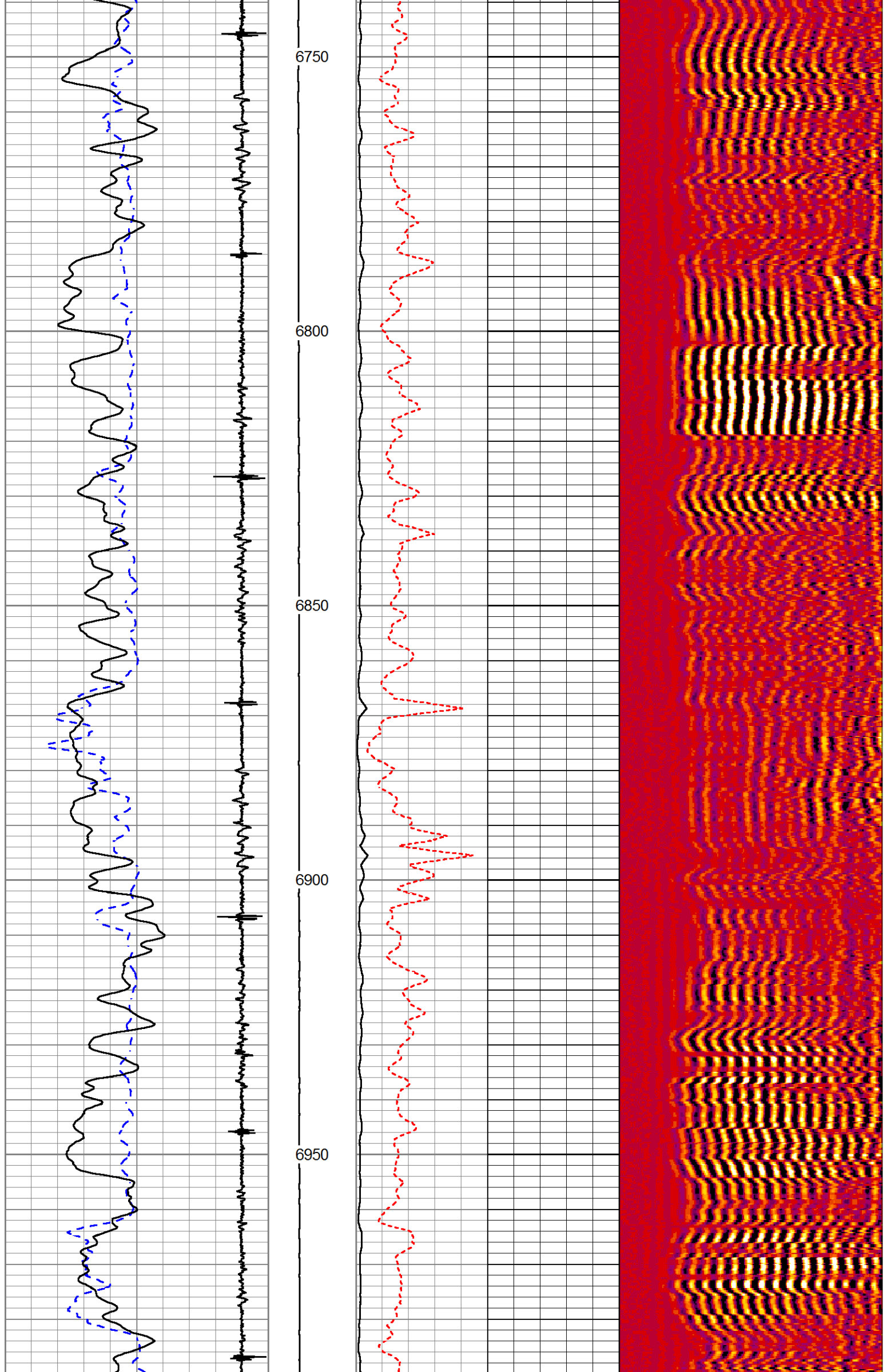




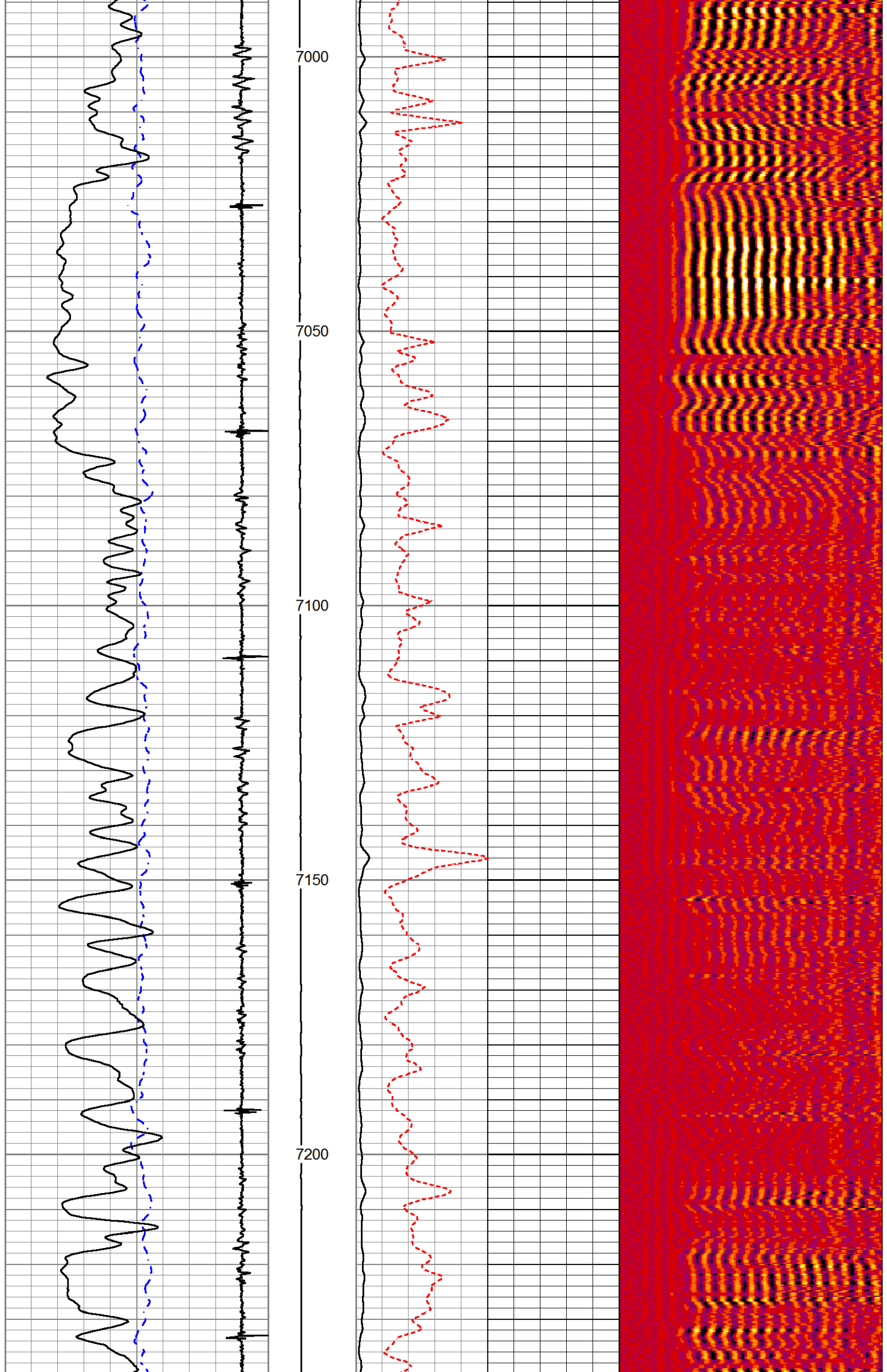




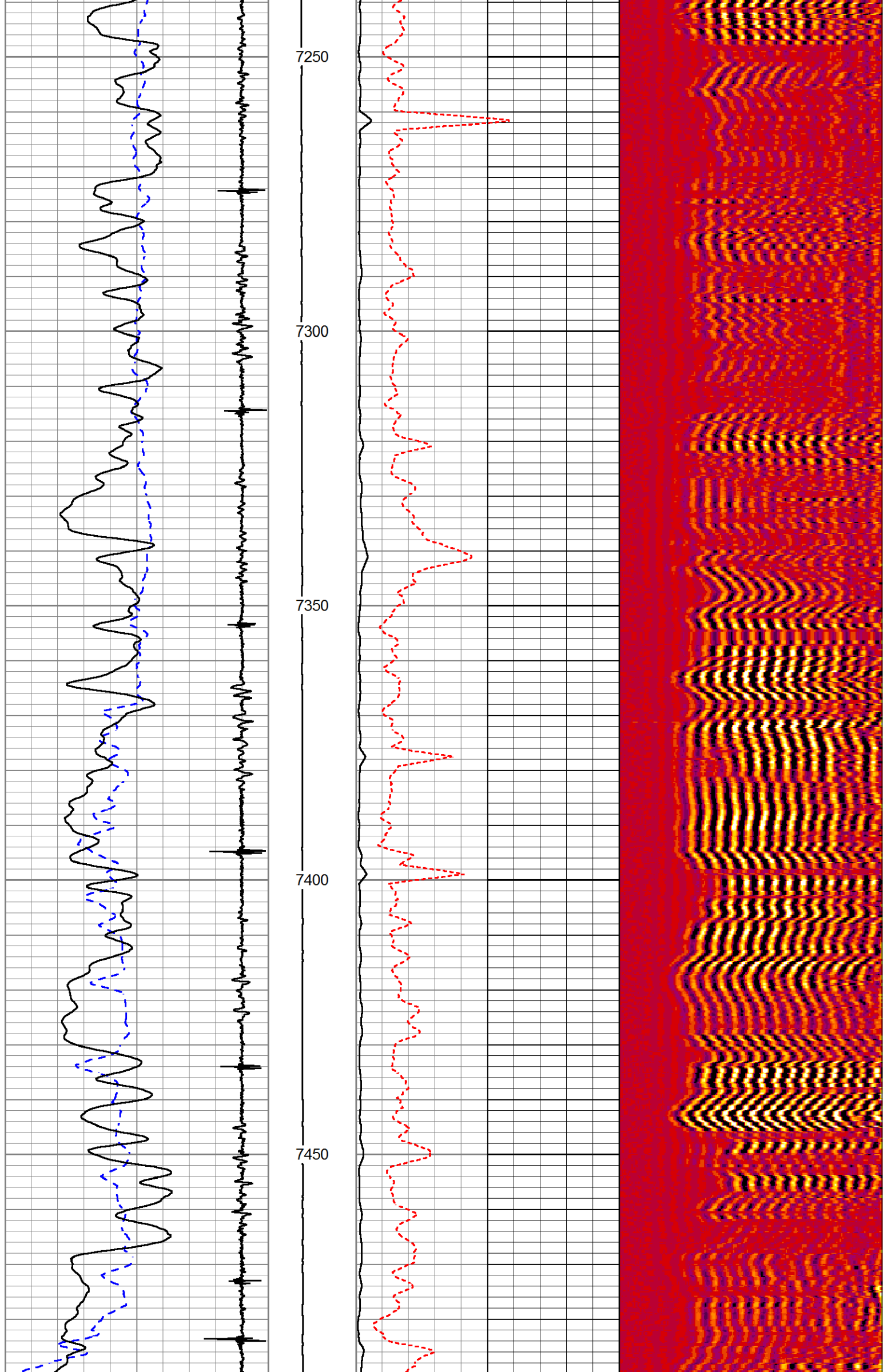


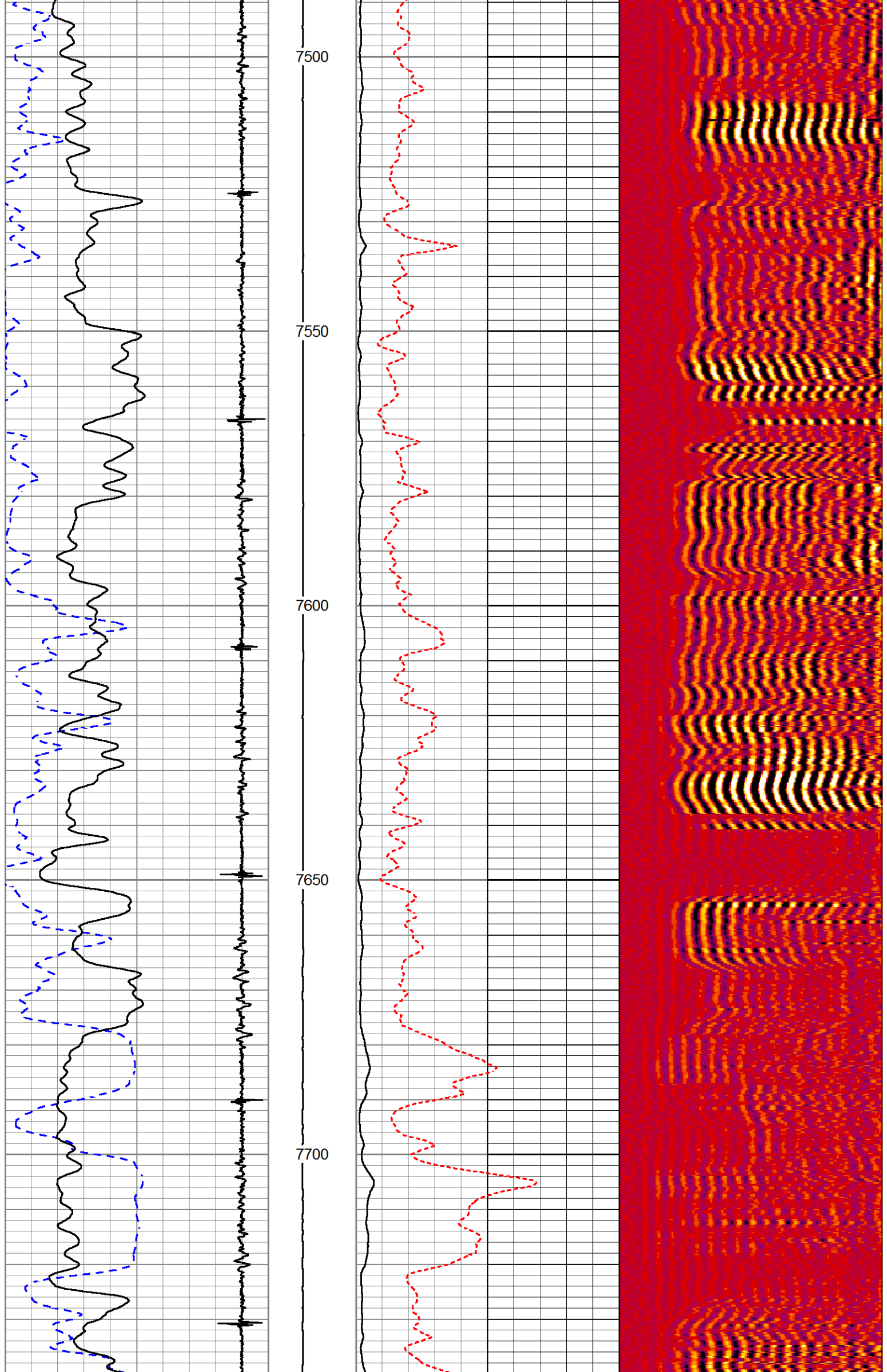




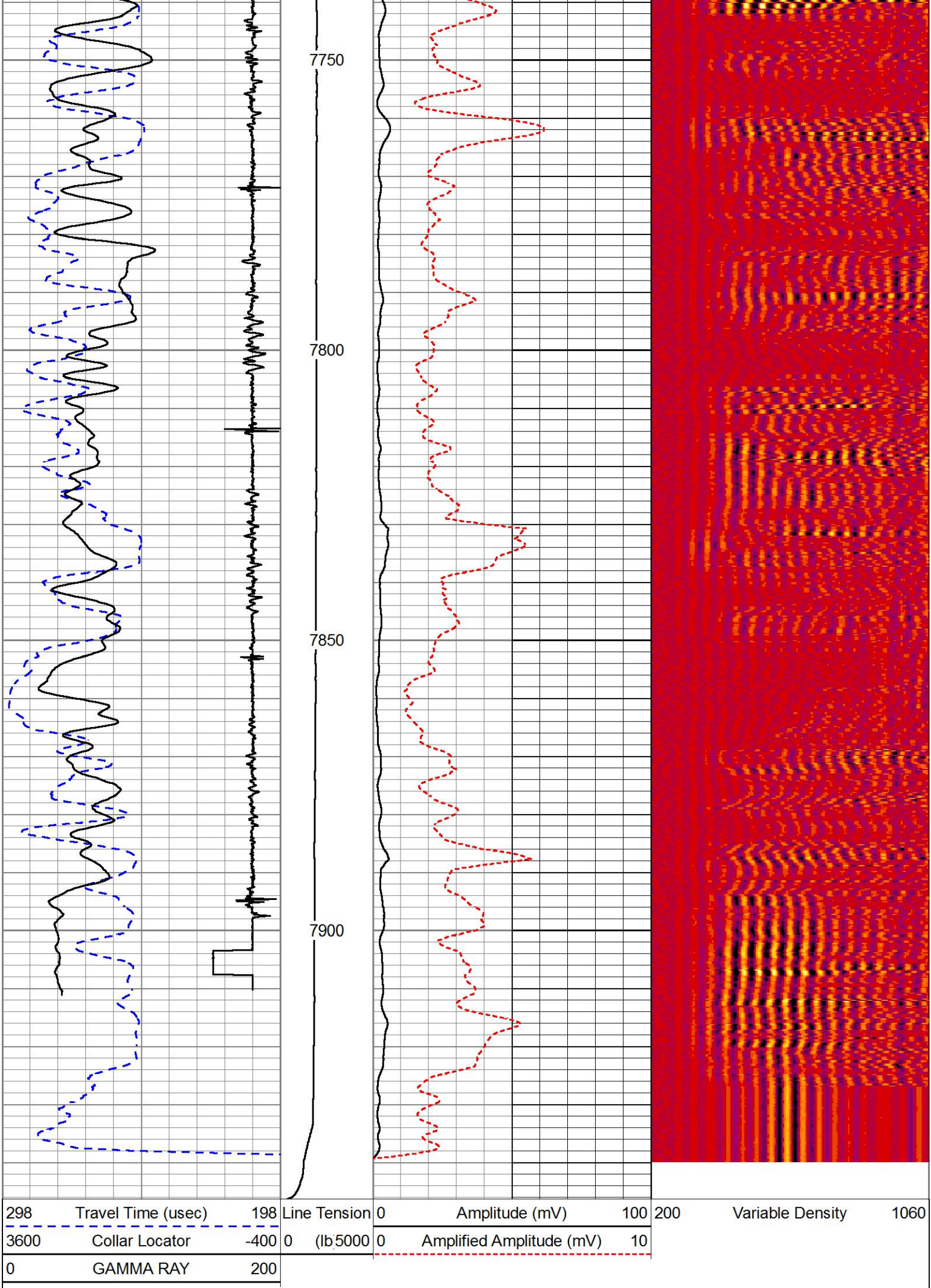












MAIN PASS

HALLIBURTON

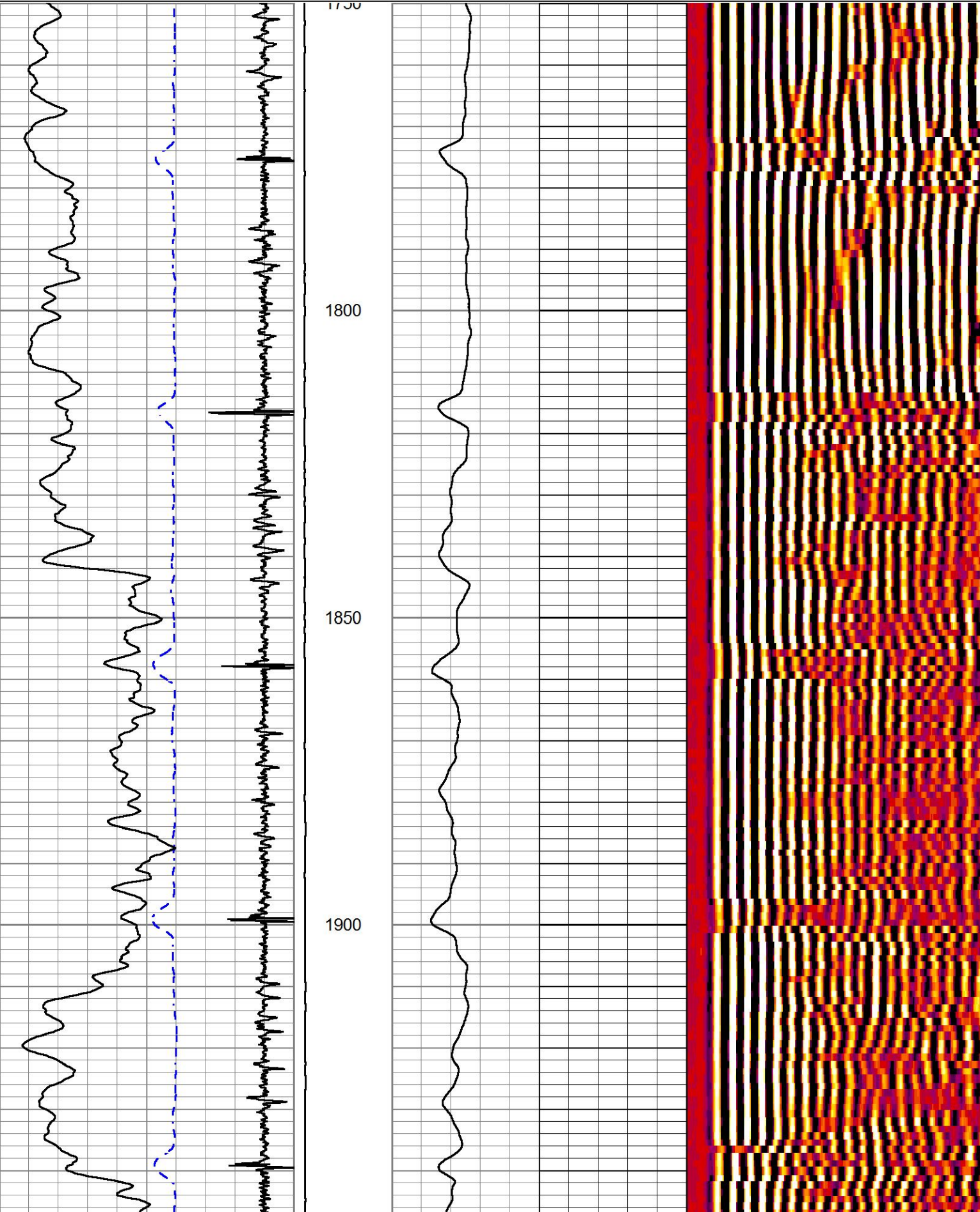
5"= 100'



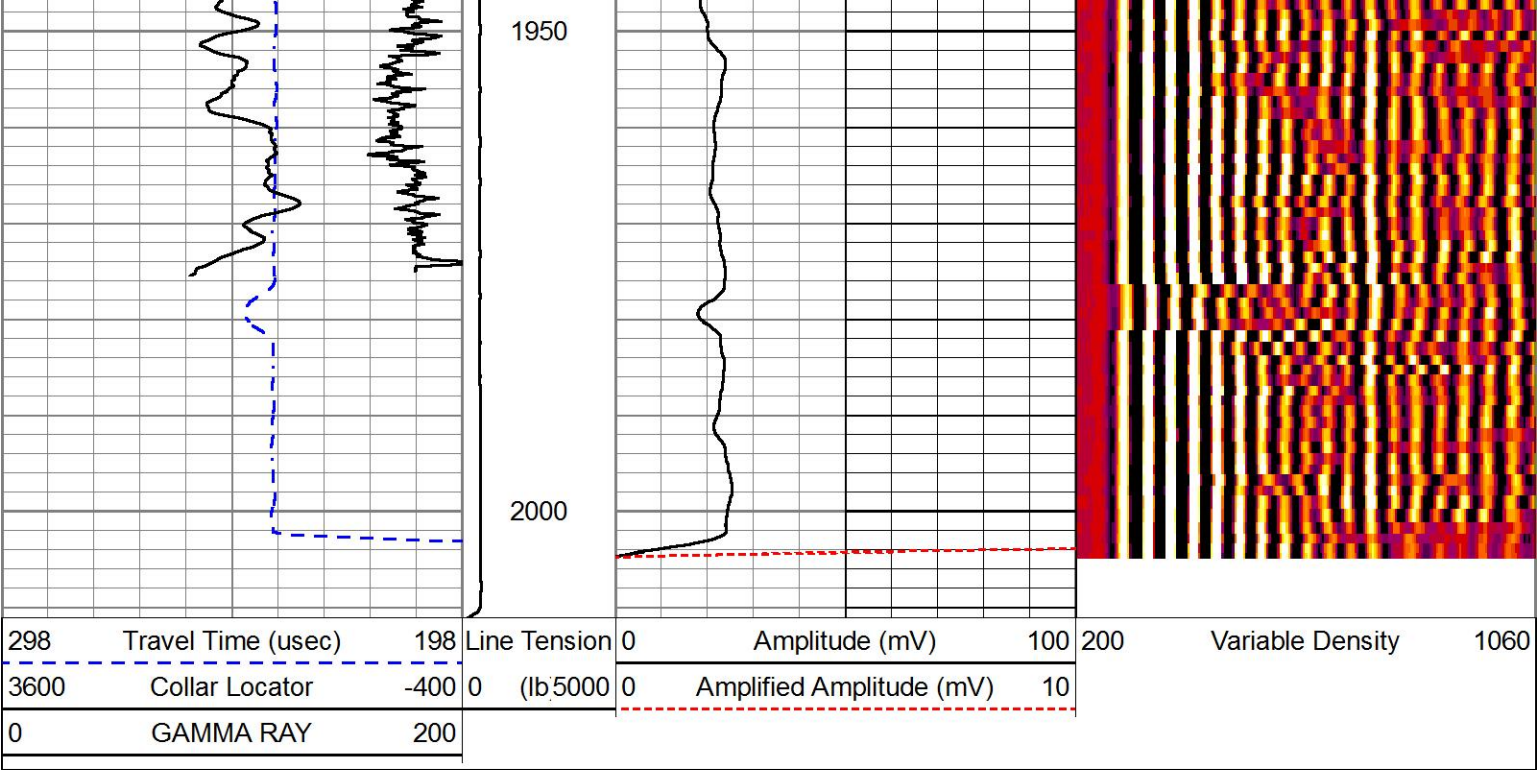
5" = 100'

Database File mr\_b\_24c\_08\_7\_95.db  
Dataset Pathname pass12  
Presentation Format !1!!cbl\_rmti  
Dataset Creation Mon Nov 28 11:04:08 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							







REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables

DatabaseC:\ProgramData\Warrior\Data\mr\_b\_24c\_08\_7\_95.db  
Dataset field/well/run1/pass11.1/\_vars\_

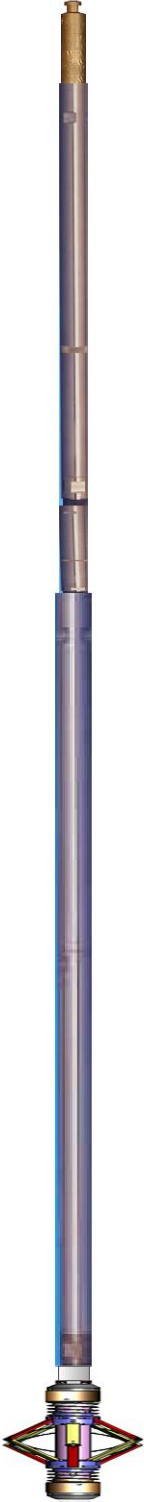
Top - Bottom							
BHSAL1 1	BHSAL2 0	BHTEMP_Src TEMP	BITSIZE in 7.875	BORSAL kppm 150	BOTTEMP degF 210	CASED? Yes	CASEOD in 4.5
CASETHCK in 0.5	CASEWGHT lb/ft 11.6	LTH Sandstone	MSGGN 1	MudWgt lb/gal 8.4	PERFS 0	POROS1 1	POROS2 0
RHOCF 0.25	SO in 0	SRFTEMP degF 40	TDEPTH ft 7700	UHSGC NONE	USERFTT usec/ft 0	ZREF MRayl 1.7	


Calibration Report	
Database File	mr_b_24c_08_7_95.db
Dataset Pathname	pass11.1
Dataset Creation	Mon Nov 28 12:20:14 2016
Cement Bond Log Shop Calibration Report	
Serial-Model:	11836468-A
Calibration Performed:	(Derived)
Free Pipe Calibration	
TT	Measured 245.7 Units usec
Amplitude	227.1 mV
Log Base Line	10.2 mV
Calibration References and Gain	
Name	Value Units
Pipe O.D.	4.500 in
Pipe Weight	11.6 lb/ft
Pipe Ref. Amp	31.0 mV

Pipe Ref. Amp.		0.142			
Reservoir Monitor Tool I Calibration Report					
Serial-Model:		12095949-A			
Shop Calibration Performed:		Thu Nov 24 11:32:44 2016			
Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	90.00	80.00	10.00	+/-15.00	V
ITCR2	3153	3250	-97	+/-250	cps
Near Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0259	5.51	<6.00
Fe	206	206 +/-2	0.0966	-----	-----
NGAIN = 0.996		NZOFF = 0.5			
Far Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0356	5.76	<6.50
Fe	210	208 +/-2	0.0903	-----	-----
FGAIN = 0.990		FZOFF = 0.5			
Flask Temperature	50.0 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.36	1.36	0.00	+/-0.05	
TCCR2	5059	5000	59	+/-1000	cps
ITCR2	3123	3200	-77	+/-250	cps
Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	90.00	80.00	10.00	+/-15.00	V
FCAP	9856	10000	-144	+/-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	1.04	1.07	-0.03	+/-0.12	
RINC	1.61	1.64	-0.03	+/-0.18	
SGFN	24.07	24.00	0.07	+/-0.50	cu
SGFF	22.92	22.85	0.07	+/-0.50	cu
FSIN	23621	24000	-379	+/-2000	cps
FCAP	9956	10000	-44	+/-1000	cps
NFTR	0.82			<5.00	
FFTR	0.92			<5.00	
NBKG	190			<500	cps
FBKG	97			<500	cps
RTN	0.40	0.40	-0.00	+/-0.10	usec
RTF	0.42	0.40	0.02	+/-0.10	usec

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				
Serial Number:	11214503			
Tool Model:	002			
Performed:	Wed Nov 09 16:25:32 2016			
Calibrator Value:	368.0	GAPI		
Background Reading:	34.1	cps		
Calibrator Reading:	297.9	cps		
Sensitivity:	1.3950	GAPI/cps		

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	35.82		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	33.56		TTTCU-002 (11214503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
RmtTFGT RmtTNGT	22.91		XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
	22.41					
			RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V	14.66		X-OVER-GoxSondex Go Box x Sondex Pin CrossOver	0.27	1.69	1.00
RmtNFwvMcsP	14.66					
RmtCommFWa	14.66		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00

Temp	9.57		<div>HCBLM-A (11836468) Halliburton HCBLM Tool</div> <div>CENT-CASTM-CENT CAST M INLINE CENTRALIZER</div> <div>AUH-001 (11072111) Adaptor Ultrawire/Halliburton</div> <div>BUL-001 (000001) Bullnose</div>	9.38	2.75	116.00
TT3FT	7.32					
AMP3FT	7.32					
WVF5FT	6.36					
WVF3FT	2.84					
LLMTEN	0.00			0.30	1.69	1.50
<div>Dataset: mr_b_24c_08_7_95.db: field/well/run1/pass11.1</div> <div>Total length: 39.39 ft</div> <div>Total weight: 356.50 lb</div> <div>O.D.: 3.13 in</div>						

Company	URSA OPERATING COMPANY LLC				
Well	MONUMENT RIDGE B 24C-08-7-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	CEMENT BOND LOG				