

HALLIBURTON										CEMENT BOND LOG									
Company   URSA OPERATING COMPANY LLC Well   MONUMENT RIDGE B 31D-17-7-95 Field   PARACHUTE County   GARFIELD   State   CO										Company   URSA OPERATING COMPANY LLC Well   MONUMENT RIDGE B 31D-17-7-95 Field   PARACHUTE County   GARFIELD   State   CO									
API No.:   05045228990000   Serv #:   903681440 Location:   SHL: 890' FSL & 144' FEL BHL: 1306' FNL & 1982' FEL										Other Services									
Sec: 8   Twp: 7S   Rge: 95W										RMT-1									
Permanent Datum										GROUND LEVEL   Elevation   5702'									
Log Measured From										KB   ,   17' Ft. above perm. datum									
Drilling Measured From										KB   G.L.   5702'									
Date @ Time Logged										2 DEC 2016 @ 04:30   Type Fluid in Hole									
Run No.										ONE   Density of Fluid									
Depth - Driller										7914'   Fluid Level									
Depth - Logger										7686'   Cement Top Est. Logged									
Bottom - Logged Interval										7680'   Equipment / Location									
Top - Log Interval										1793'   Recorded by									
Max. Recorded Temp.										222 degF   Witnessed by									
CEMENTING DATA										Surface   Protection									
Date / Time Cemented										String   String									
Primary / Squeeze										N/A   N/A									
Expected										N/A   N/A									
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									
Cement Type / Weight										N/A   /   N/A   N/A   /   N/A   N/A   /   N/A									
Formulation										N/A   N/A   N/A									
Mud Type / Mud Wgt.										N/A   /   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'		1843'		8.625"		32.0 #		SURFACE		1843'					
THREE		7.875"		1843'		7914'		4.5"		11.6 #		SURFACE		7882'					

<<< 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

ESTIMATED TOP OF CEMENT : 1732'  
GAMMA BLANKET : 408 GAPI  
FREE PIPE CALIBRATION DEPTH : 370'  
  
TENSION PULLED AT 6653'

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SVCS.  
YOUR CREW TODAY: B. RIDDEL, D. FLINDERS, B. BURDERER

Service Ticket No.		903681440		API No.		05045228990000		PGM Ver		15.10.29001	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client											
EQUIPMENT DATA											
XHU		GAMMA		RMTI		CBL					
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE				
Serial No.	12146425	Serial No.	11224503	Serial No.	12095949	Serial No.	12091451				
Model No.	XHU-3	Model No.	TTTCU-02	Model No.	RMTI	Model No.	CBLM				
Diameter	1 11/16"	Diameter	1 11/16"	Diameter	2.25"	Diameter	2.75"				
LOGGING DATA											
General Data											
Pass	Depths		Well Head	Speed	Logging Run Comments						
No	From	To	Pressure	Ft/Min							

ONE	4250'	4010'	0 PSI	20	REPEAT			
TWO	7686'	1793'	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			

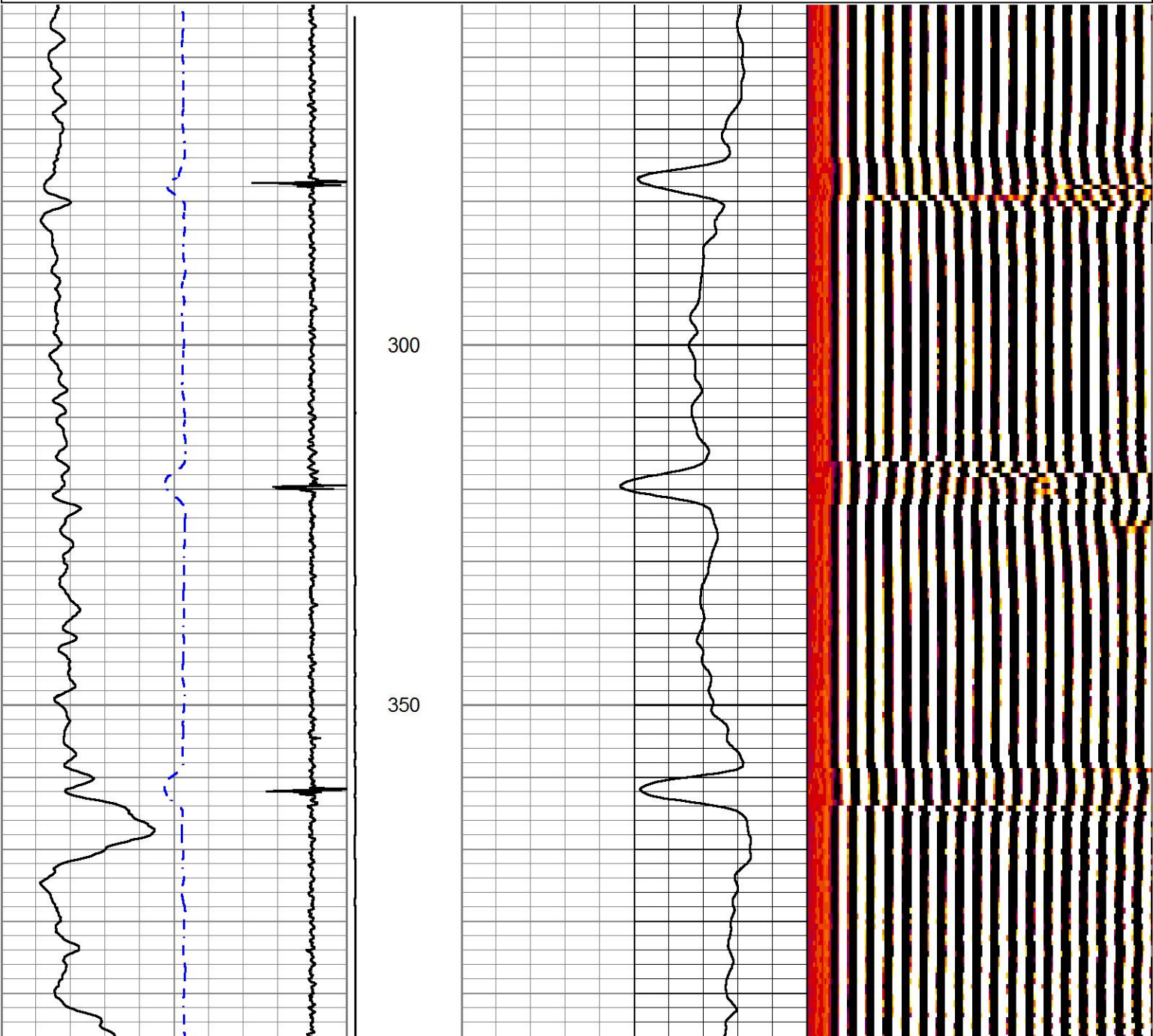
HALLIBURTON

FREE PIPE SECTION

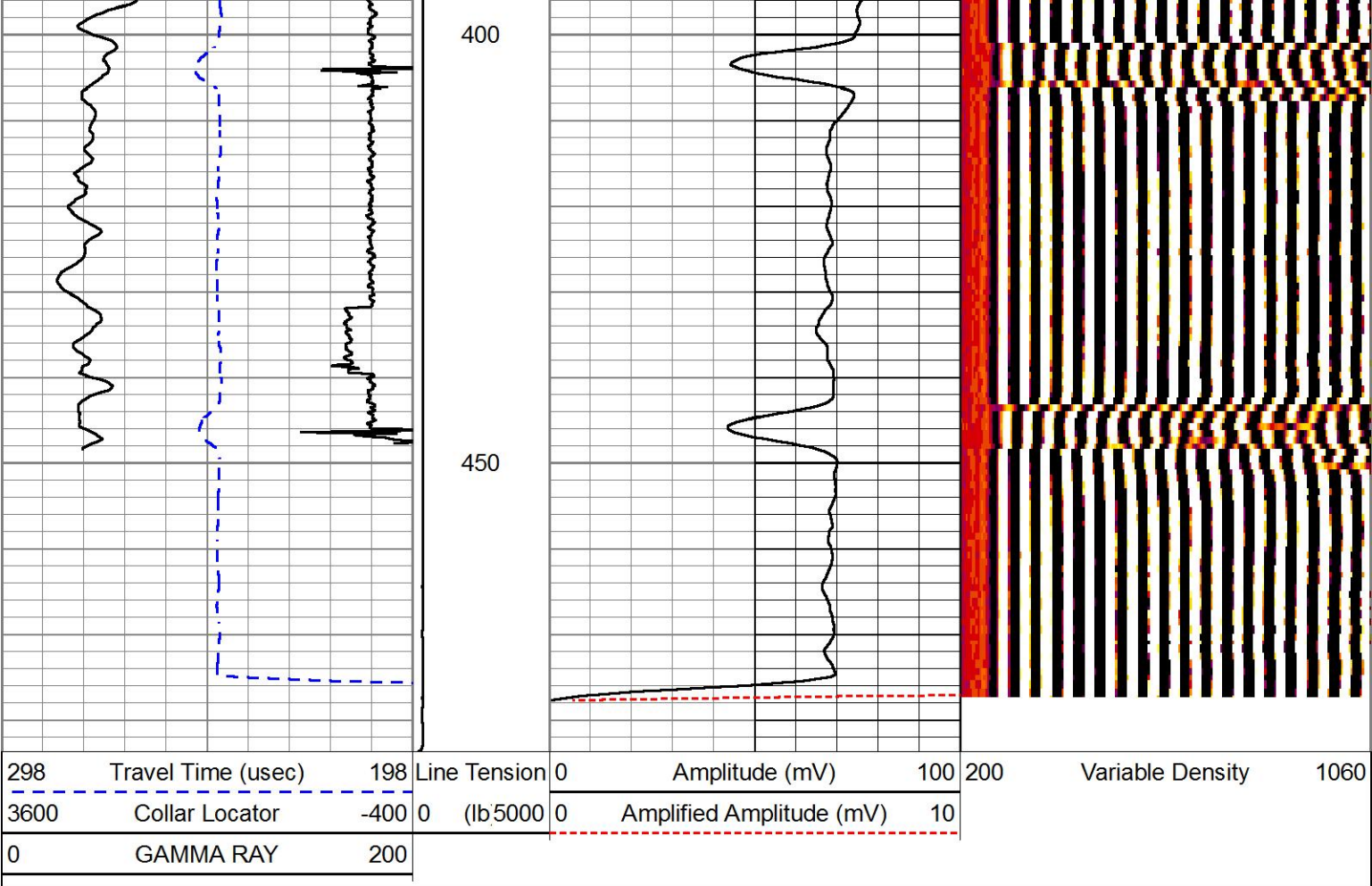
5" = 100'

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Dataset Pathname	FREE
Presentation Format	!1!!cbl_rmti
Dataset Creation	Fri Dec 02 03:16:08 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							



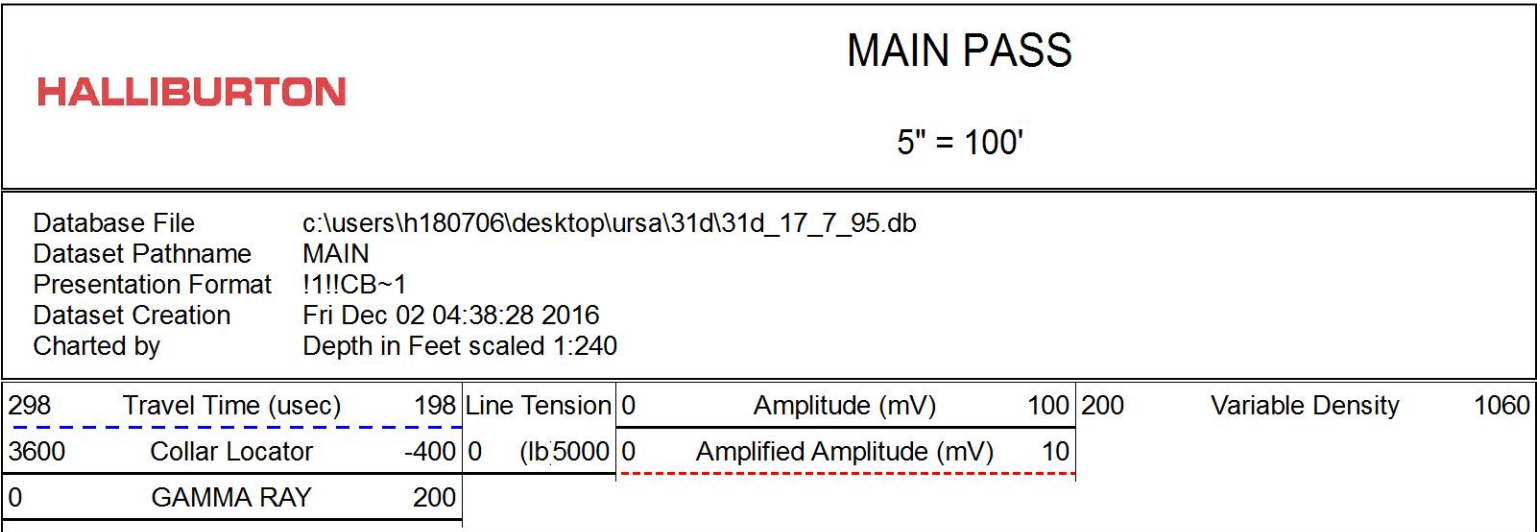




FREE PIPE SECTION

HALLIBURTON

5" = 100'

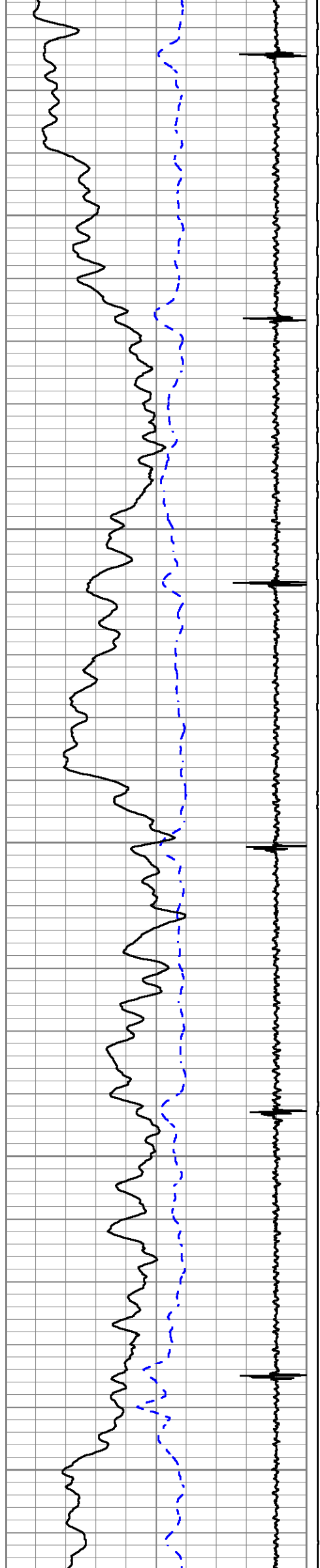


MAIN PASS

HALLIBURTON

5" = 100'

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Presentation Format !1!!CB~1  
Dataset Creation Fri Dec 02 04:38:28 2016  
Charted by Depth in Feet scaled 1:240



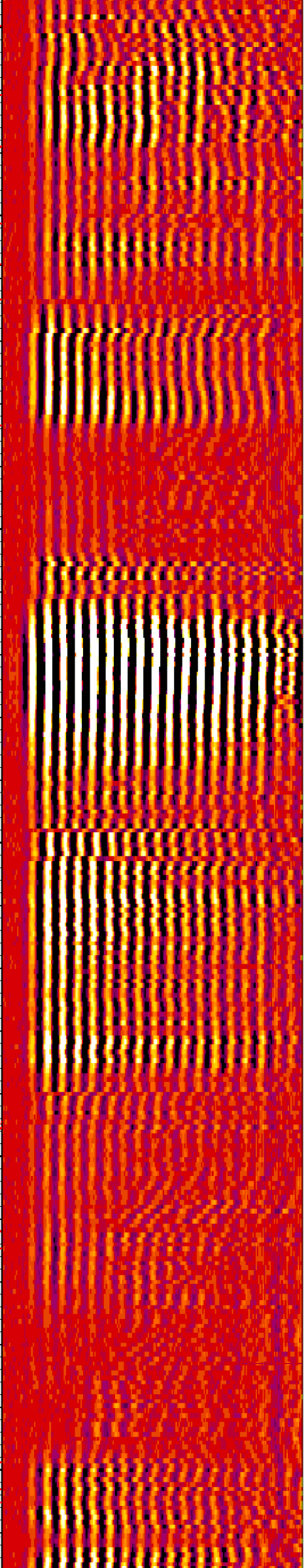
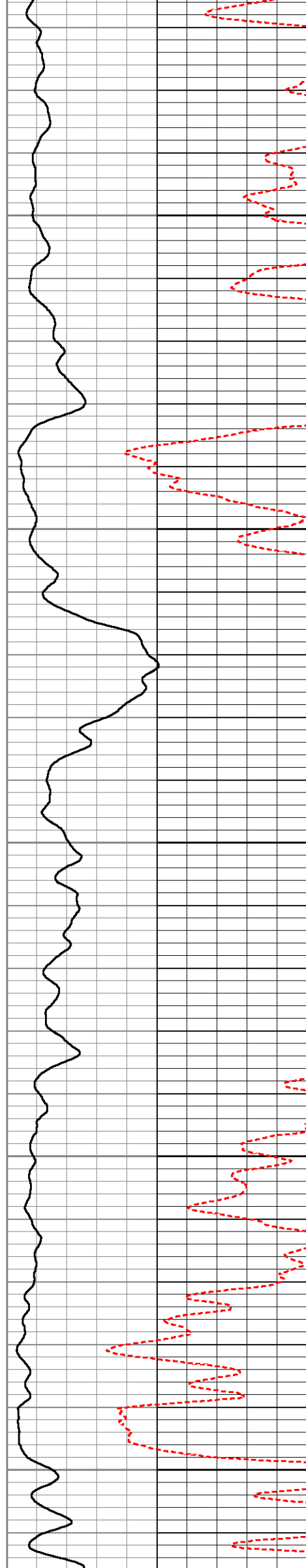
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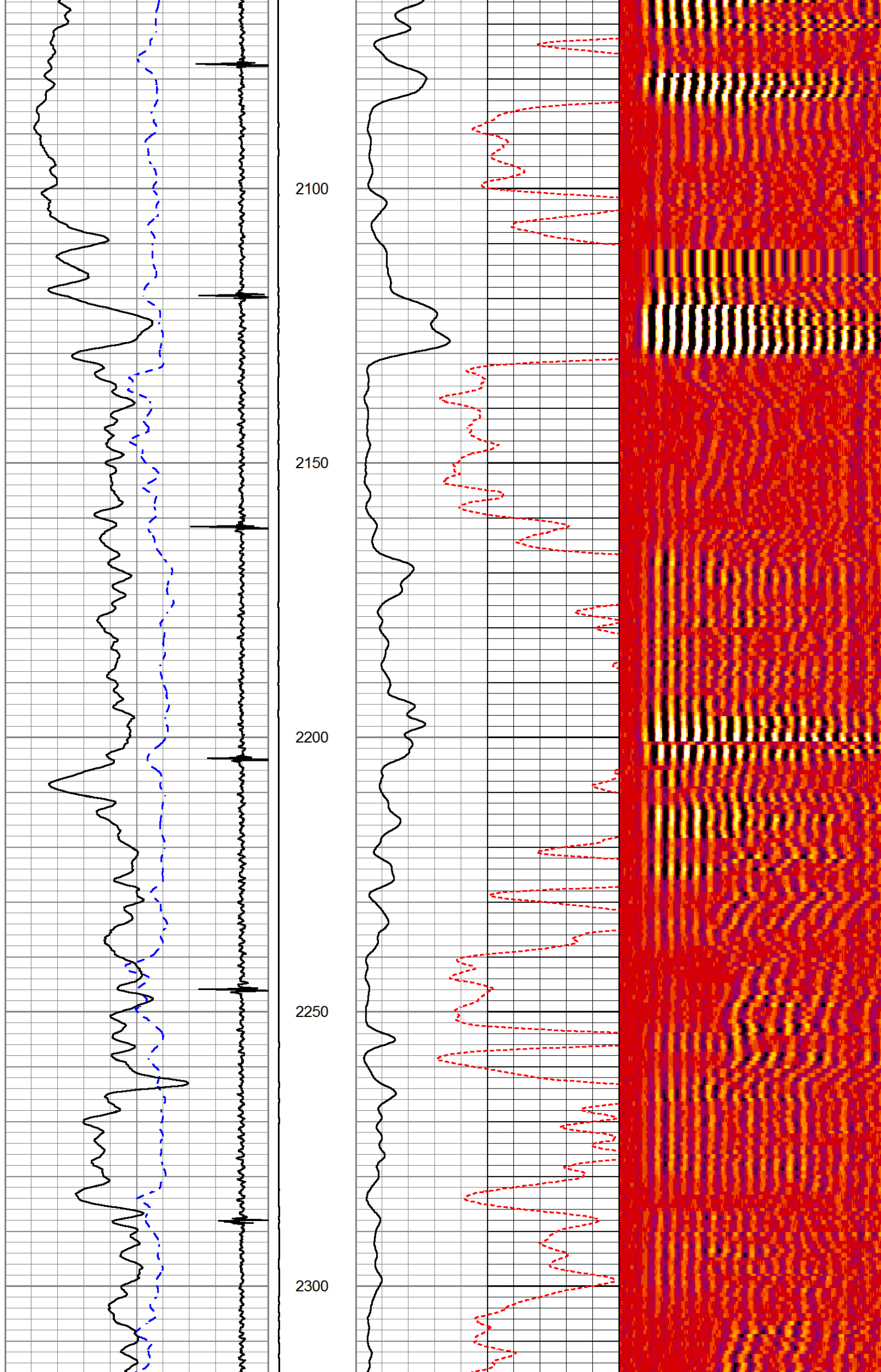
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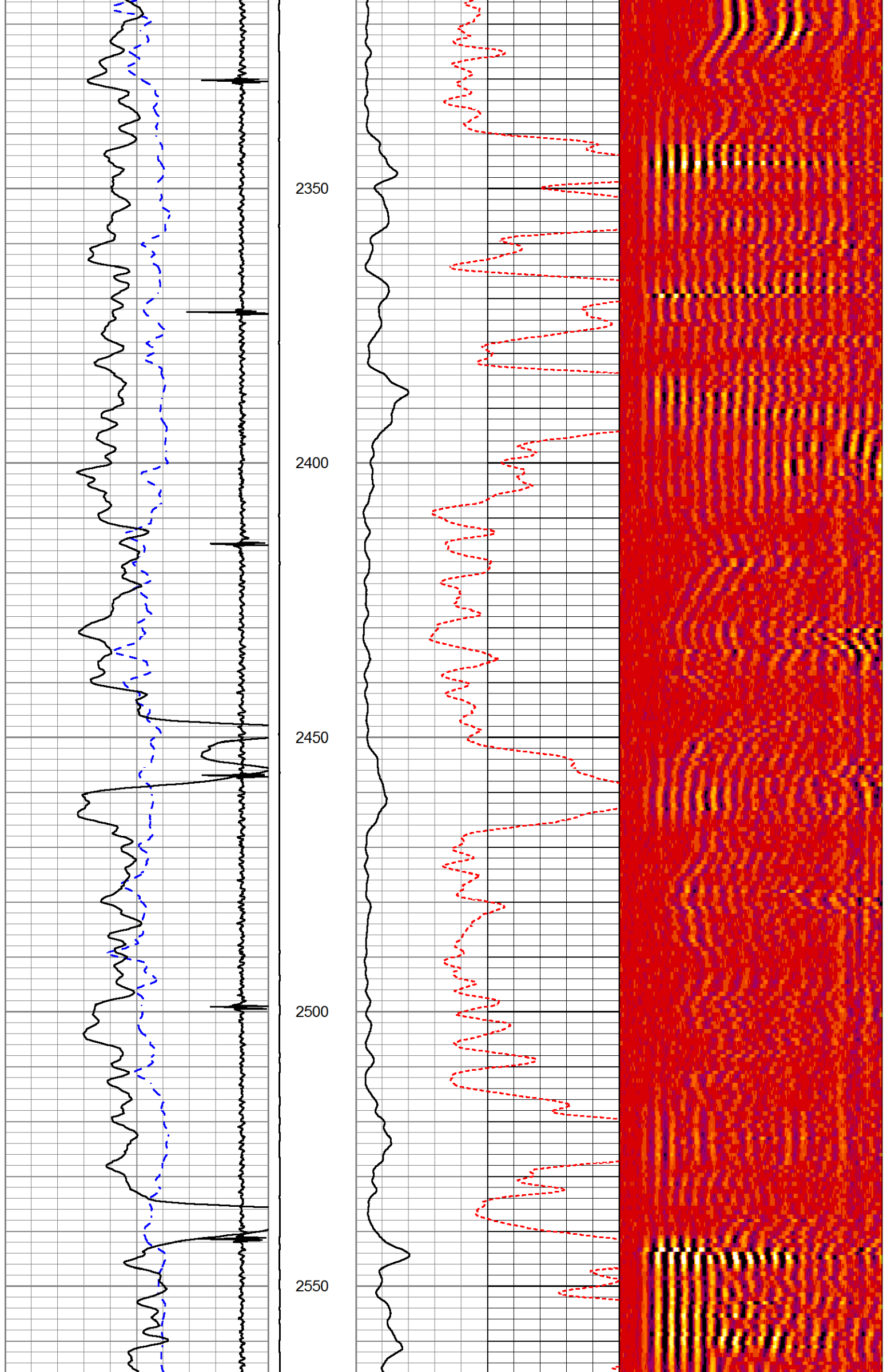
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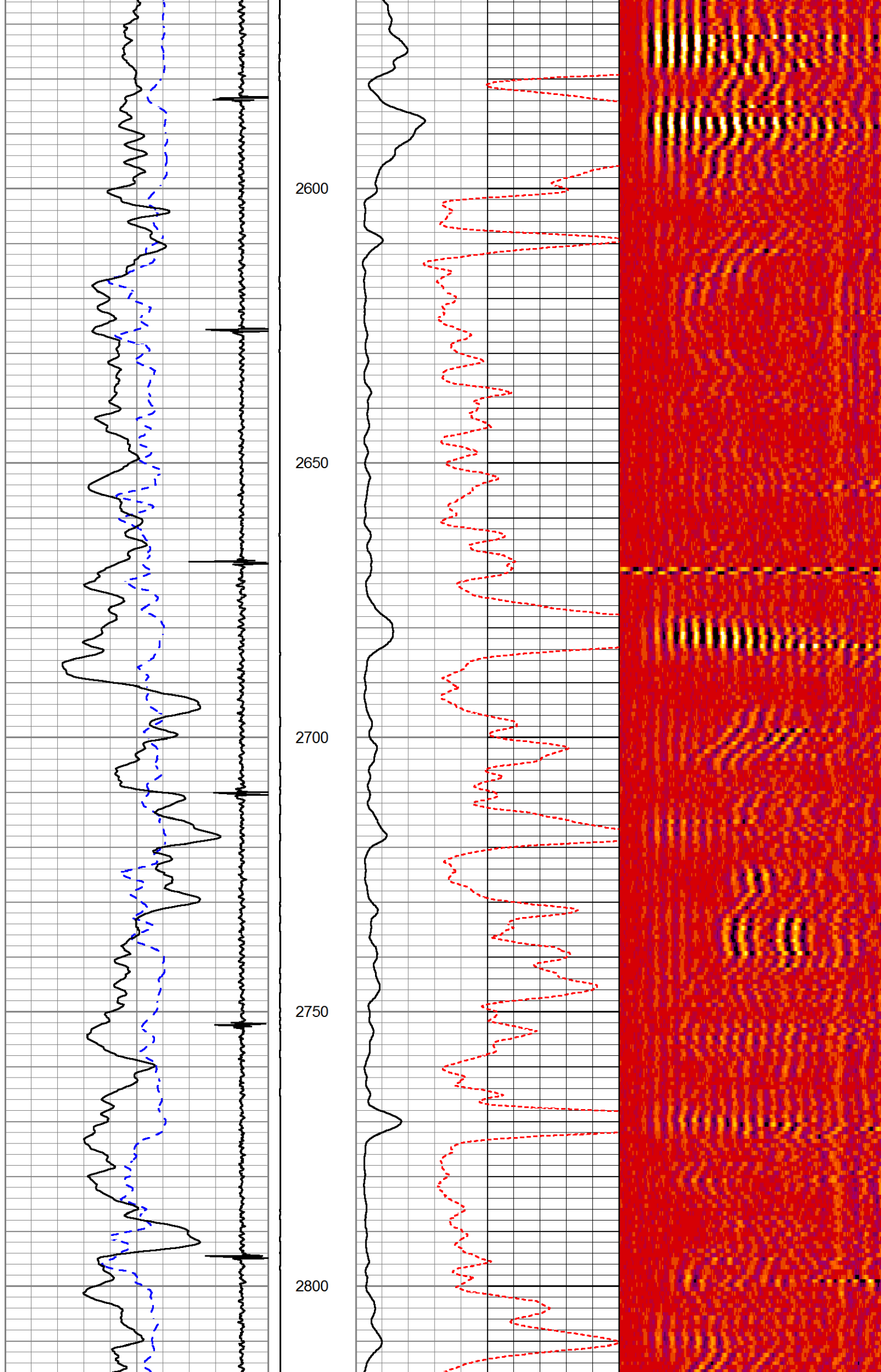
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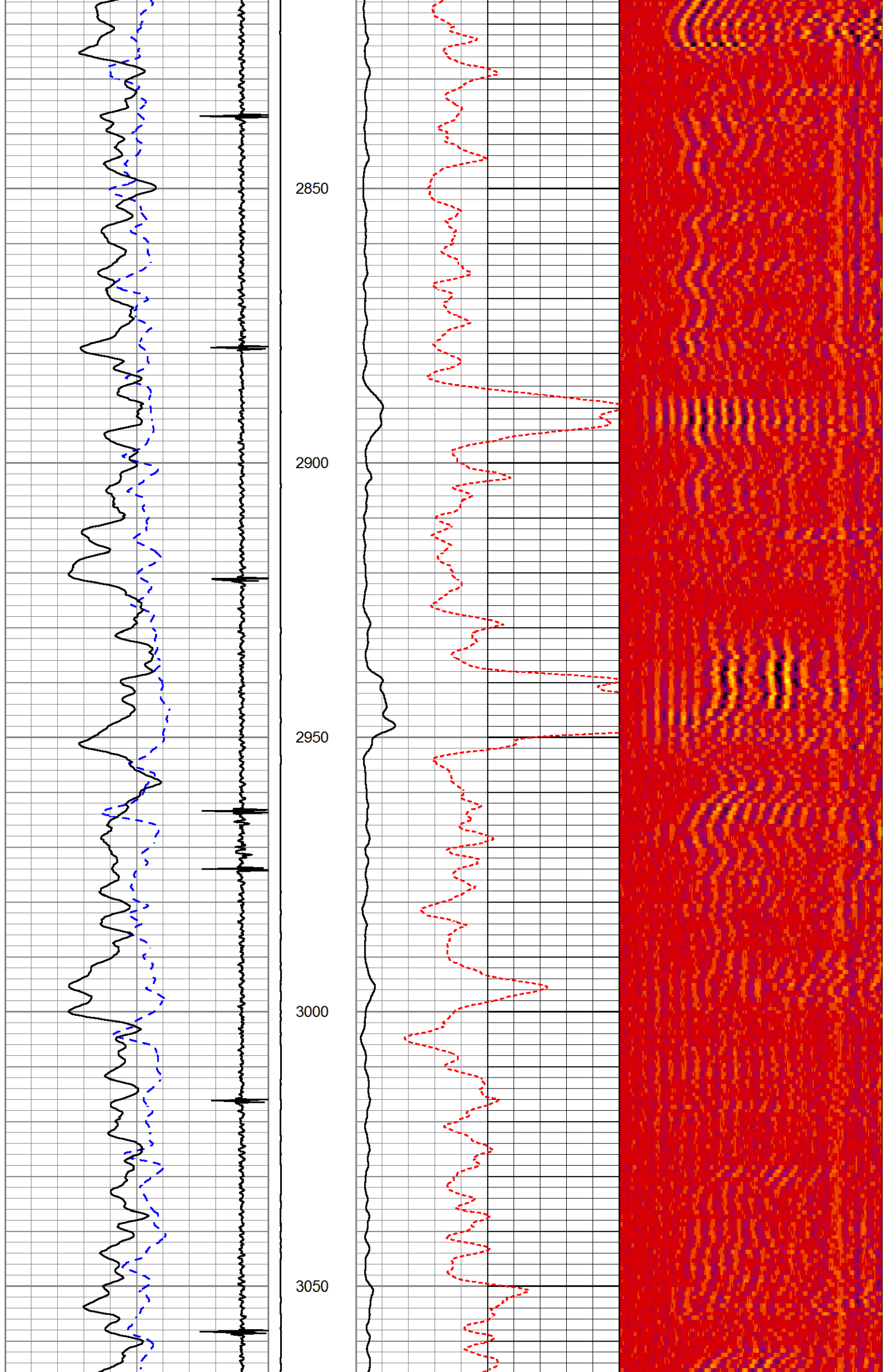




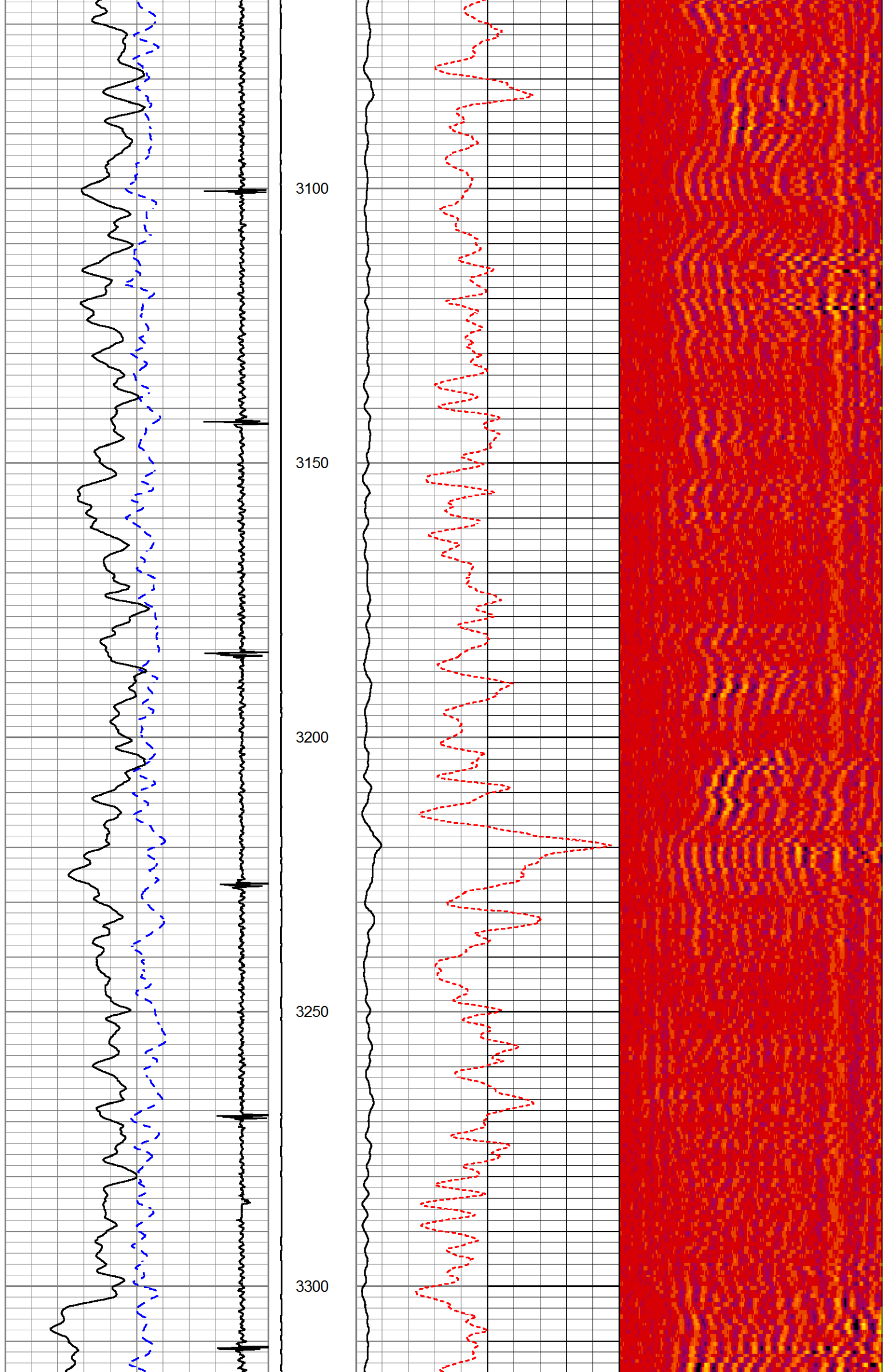


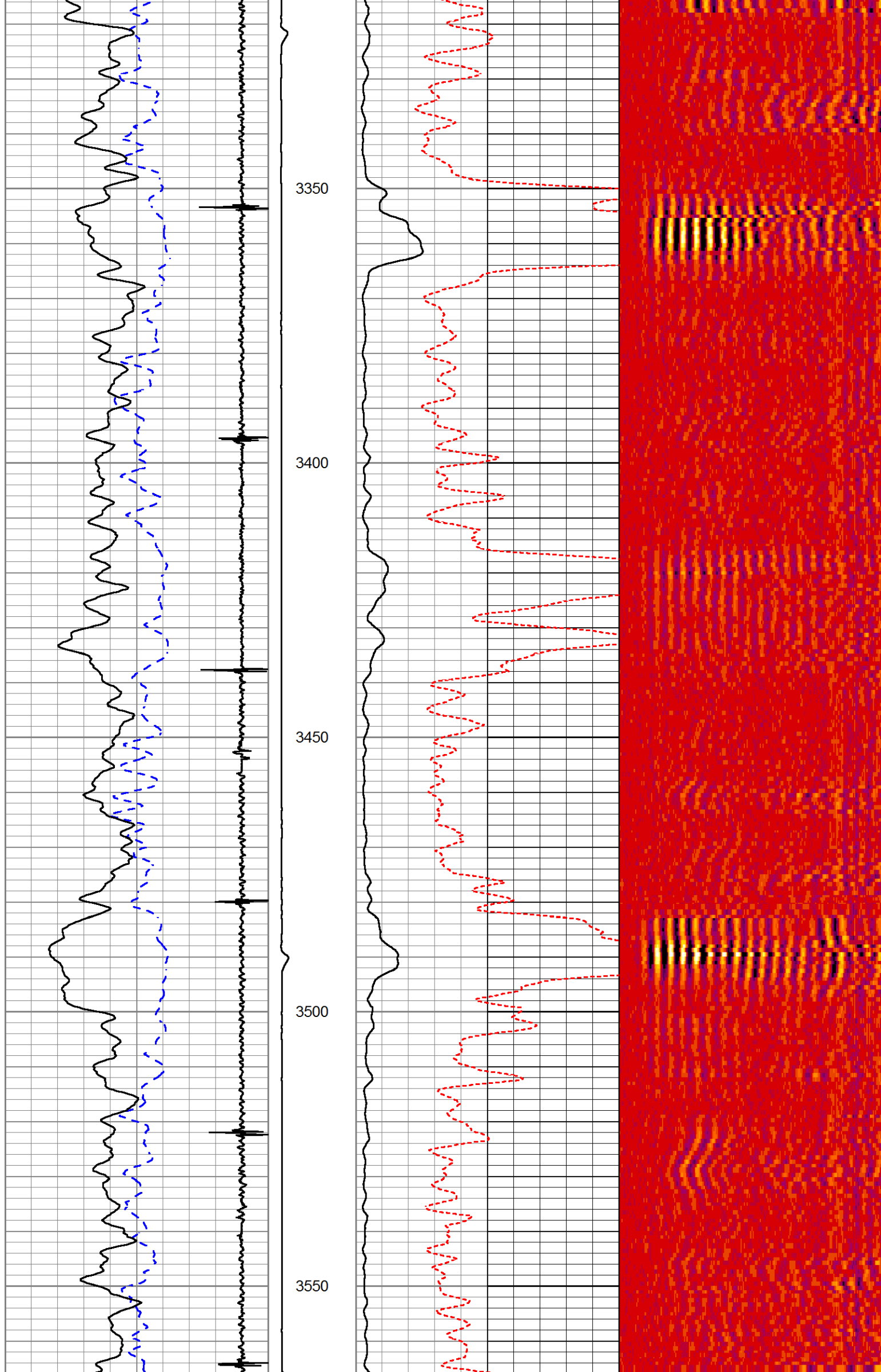


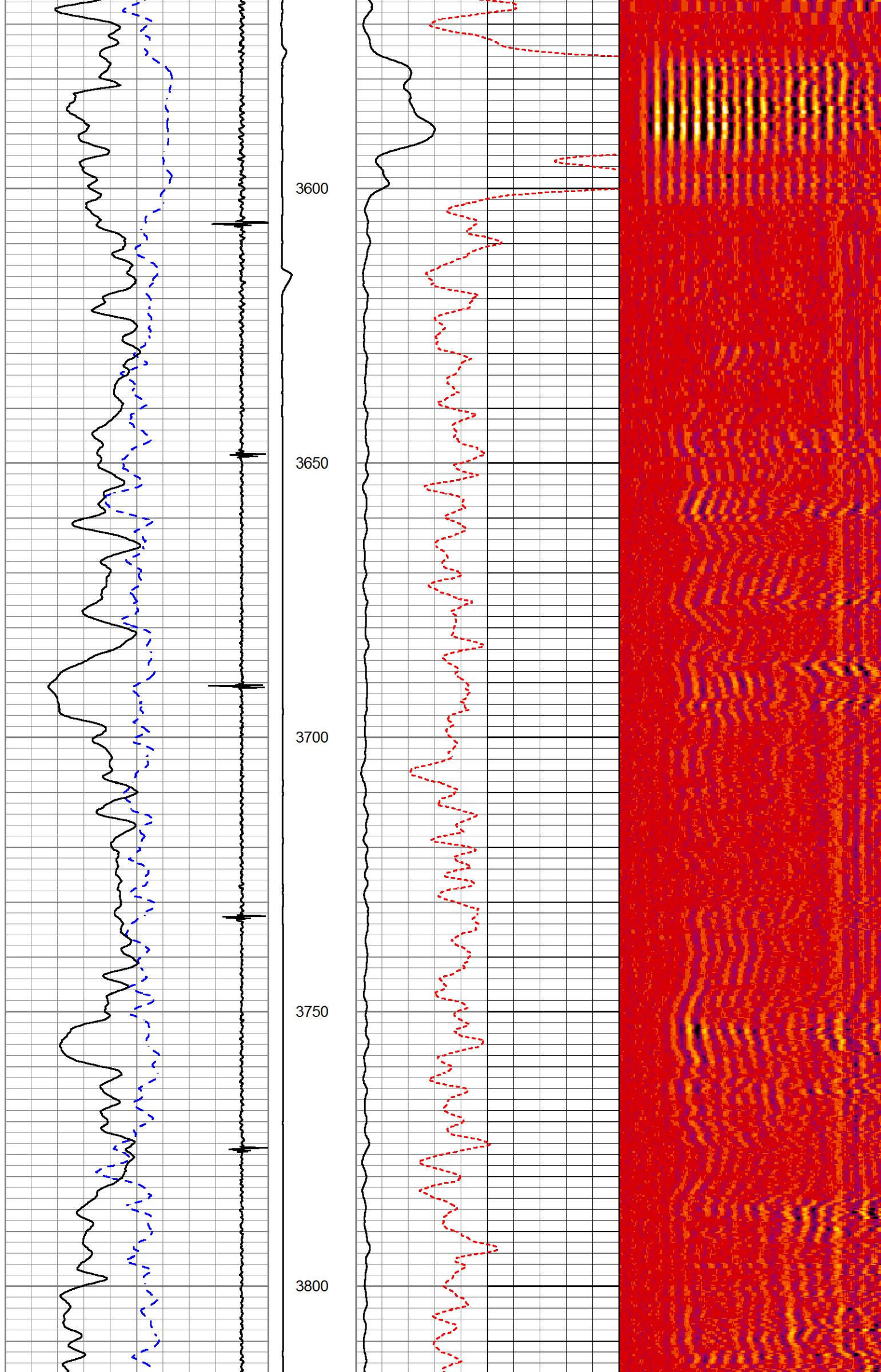




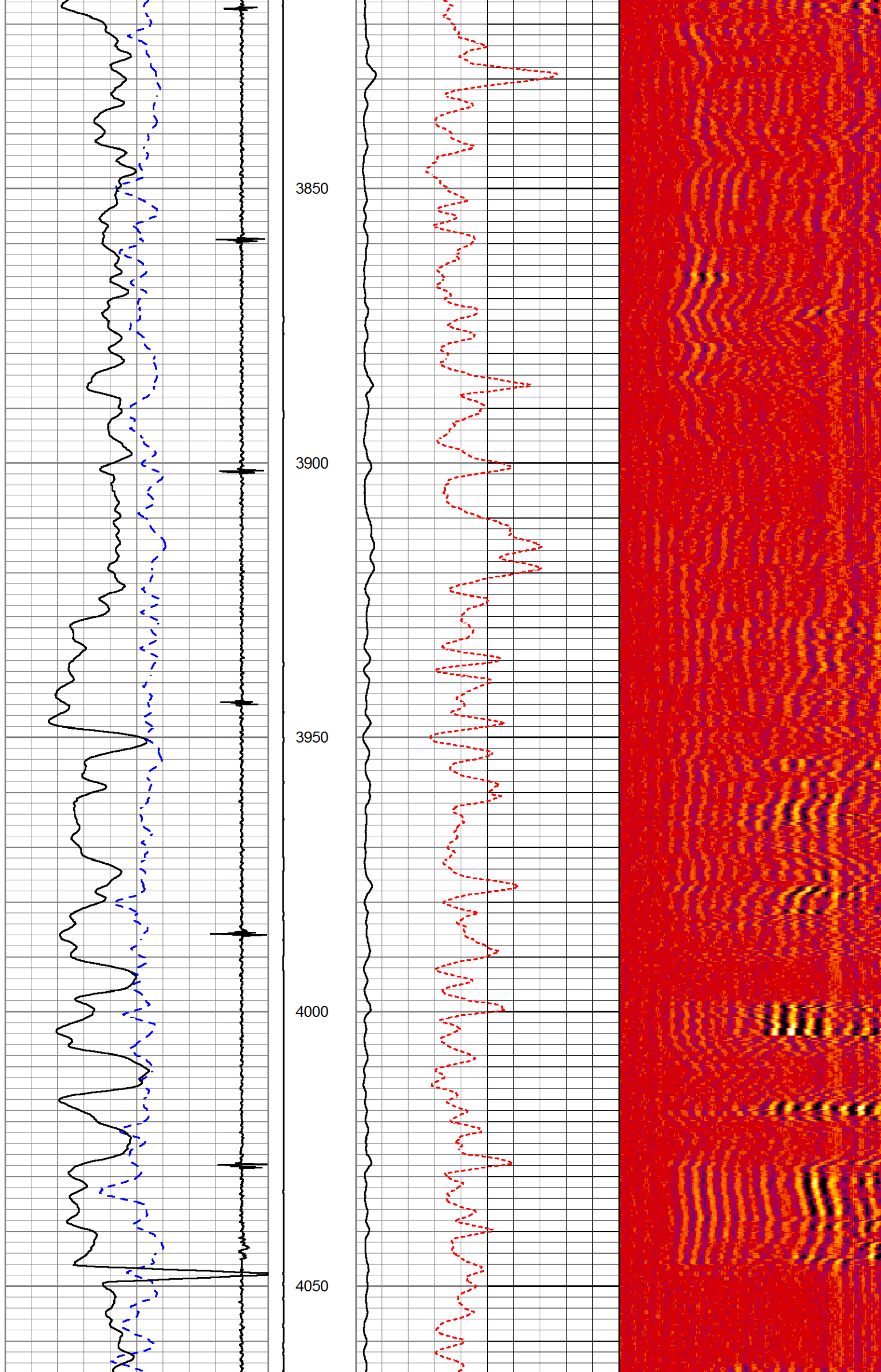


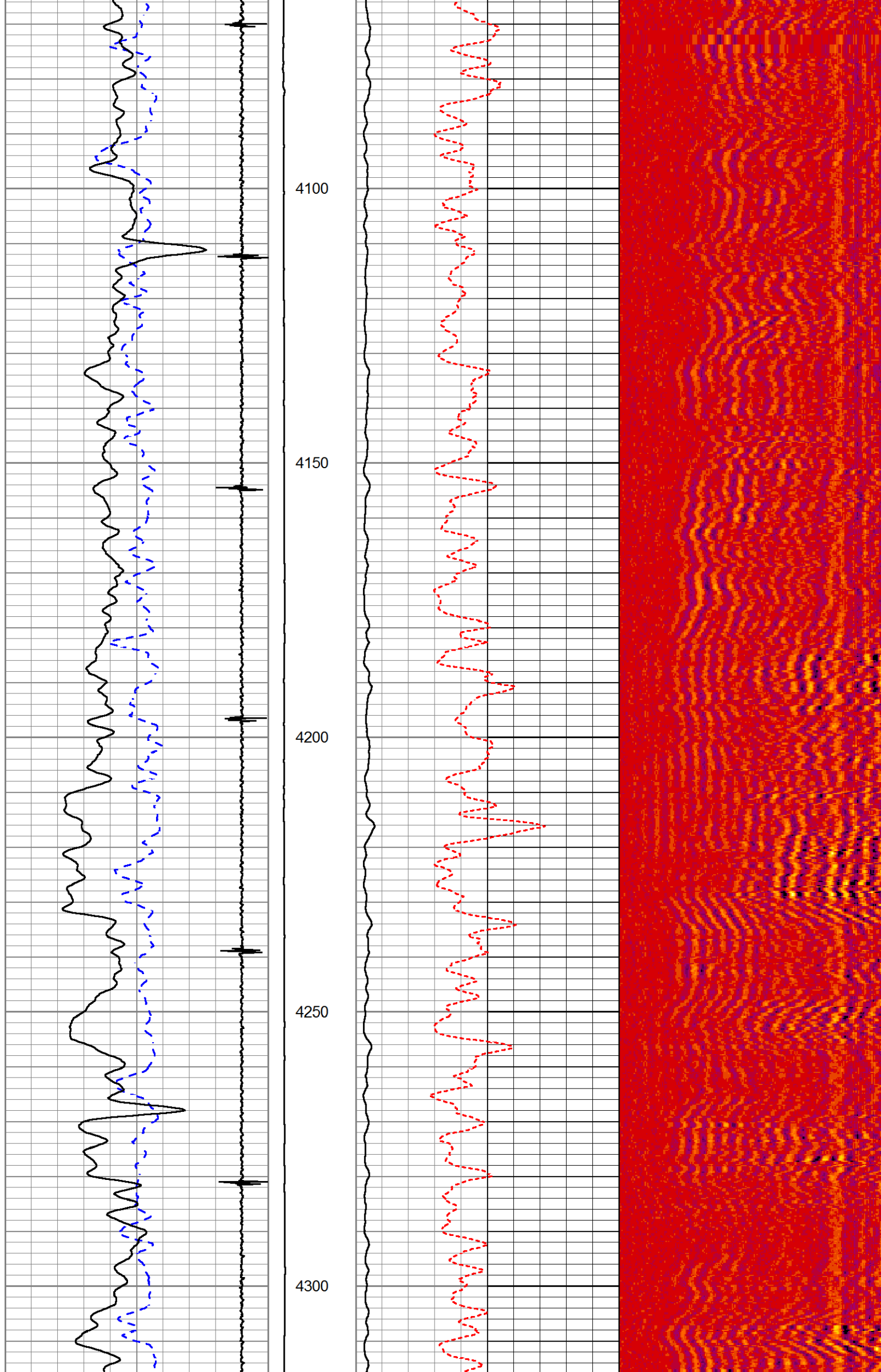


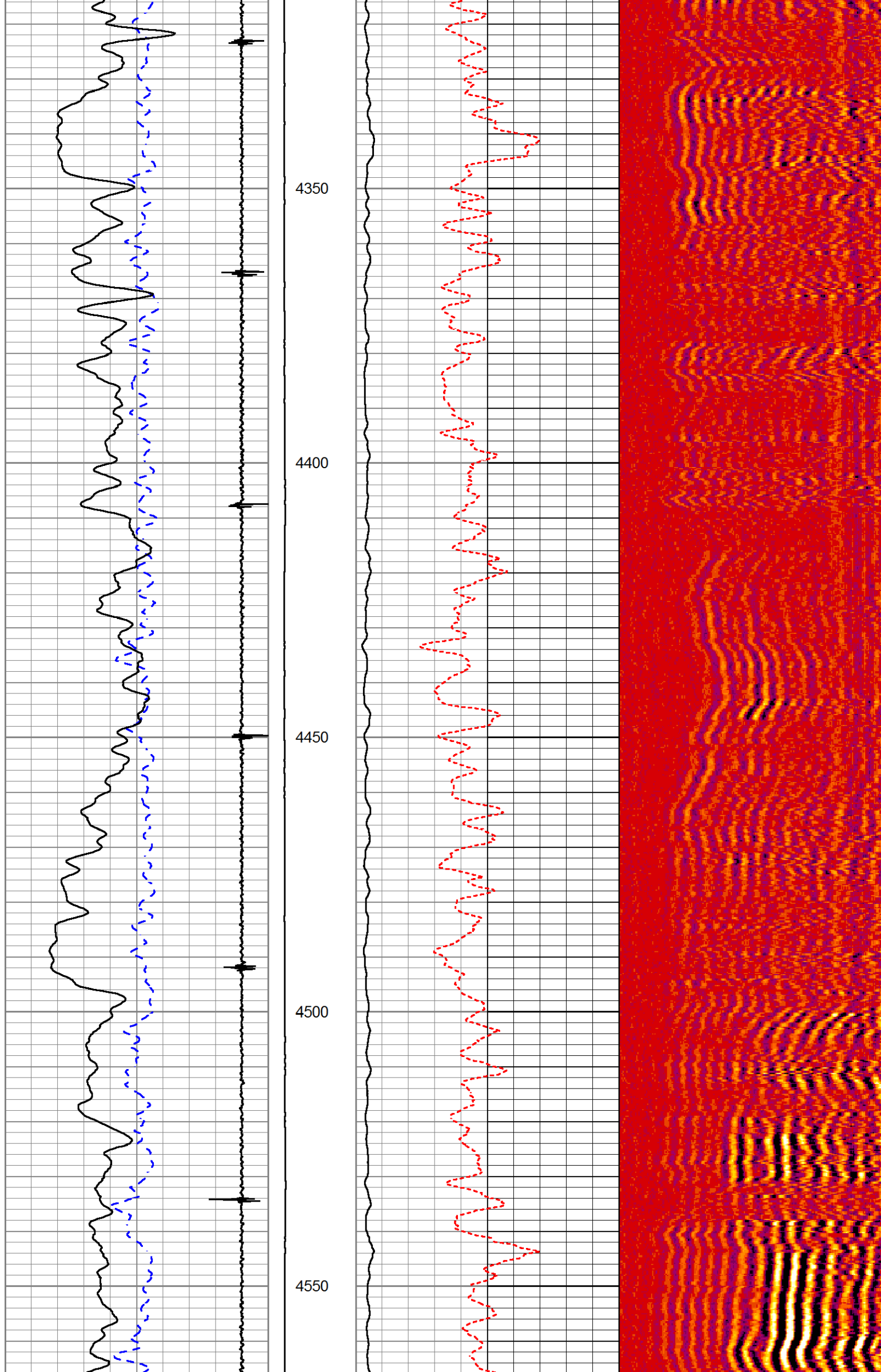




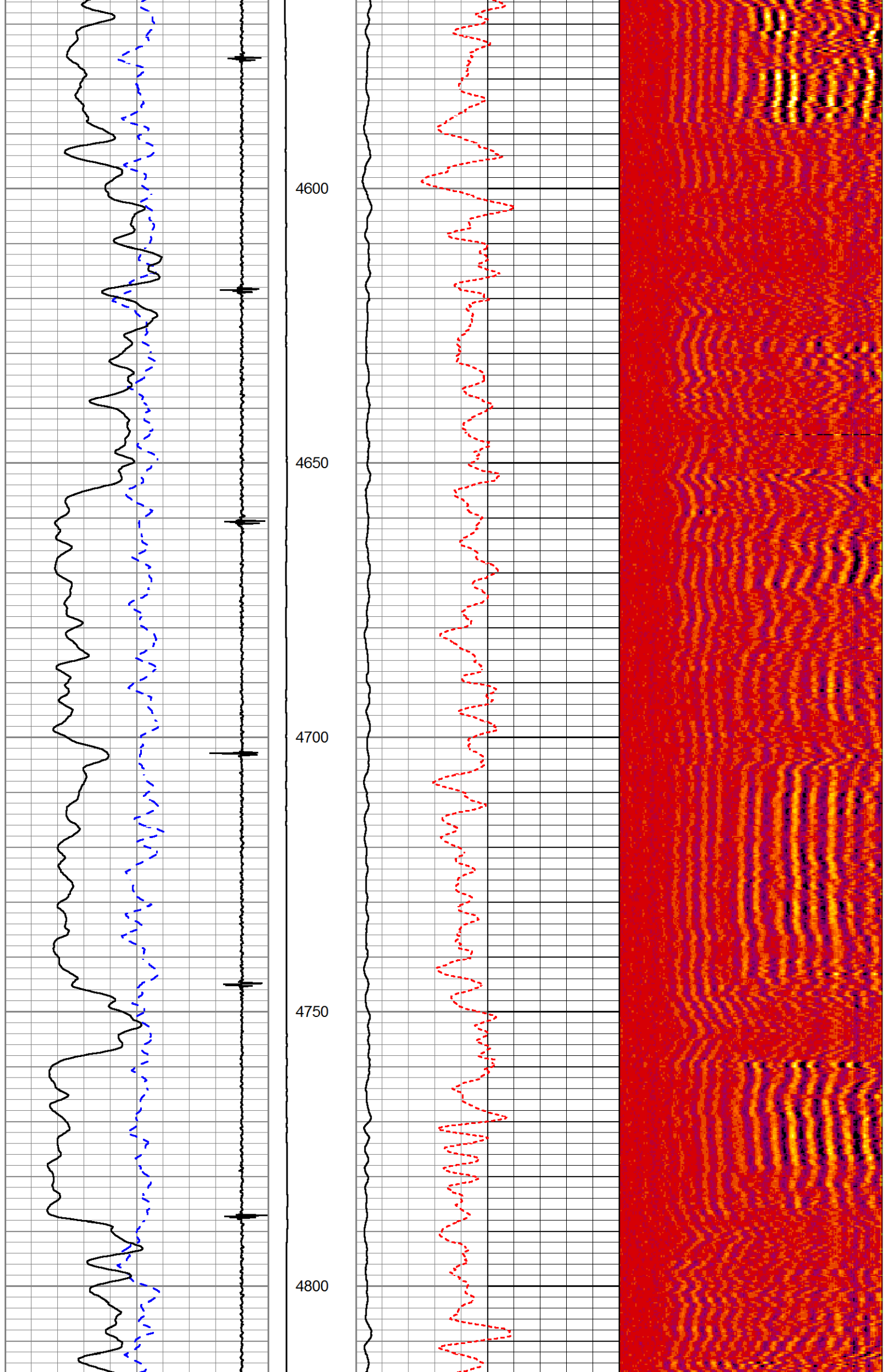


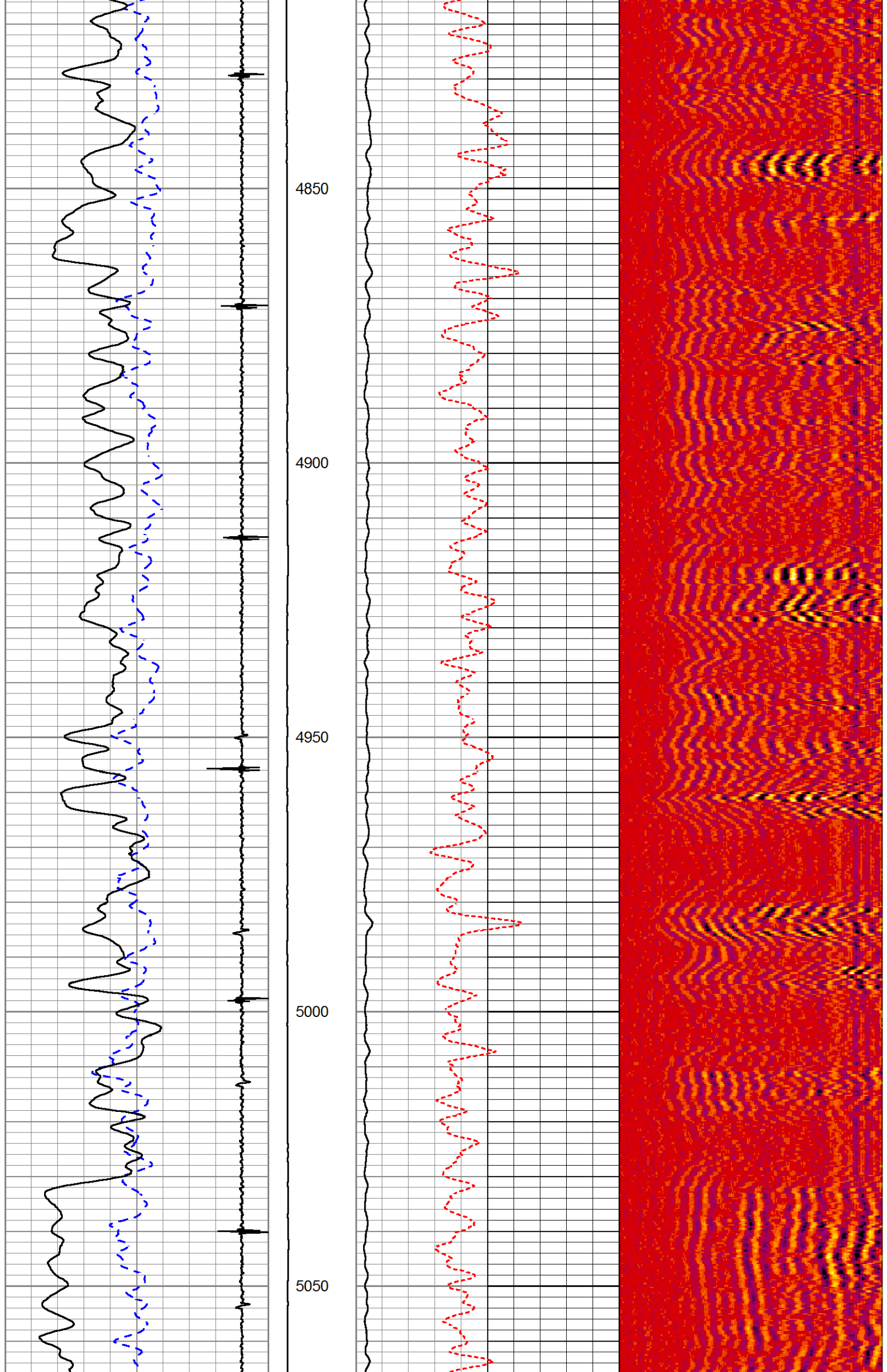


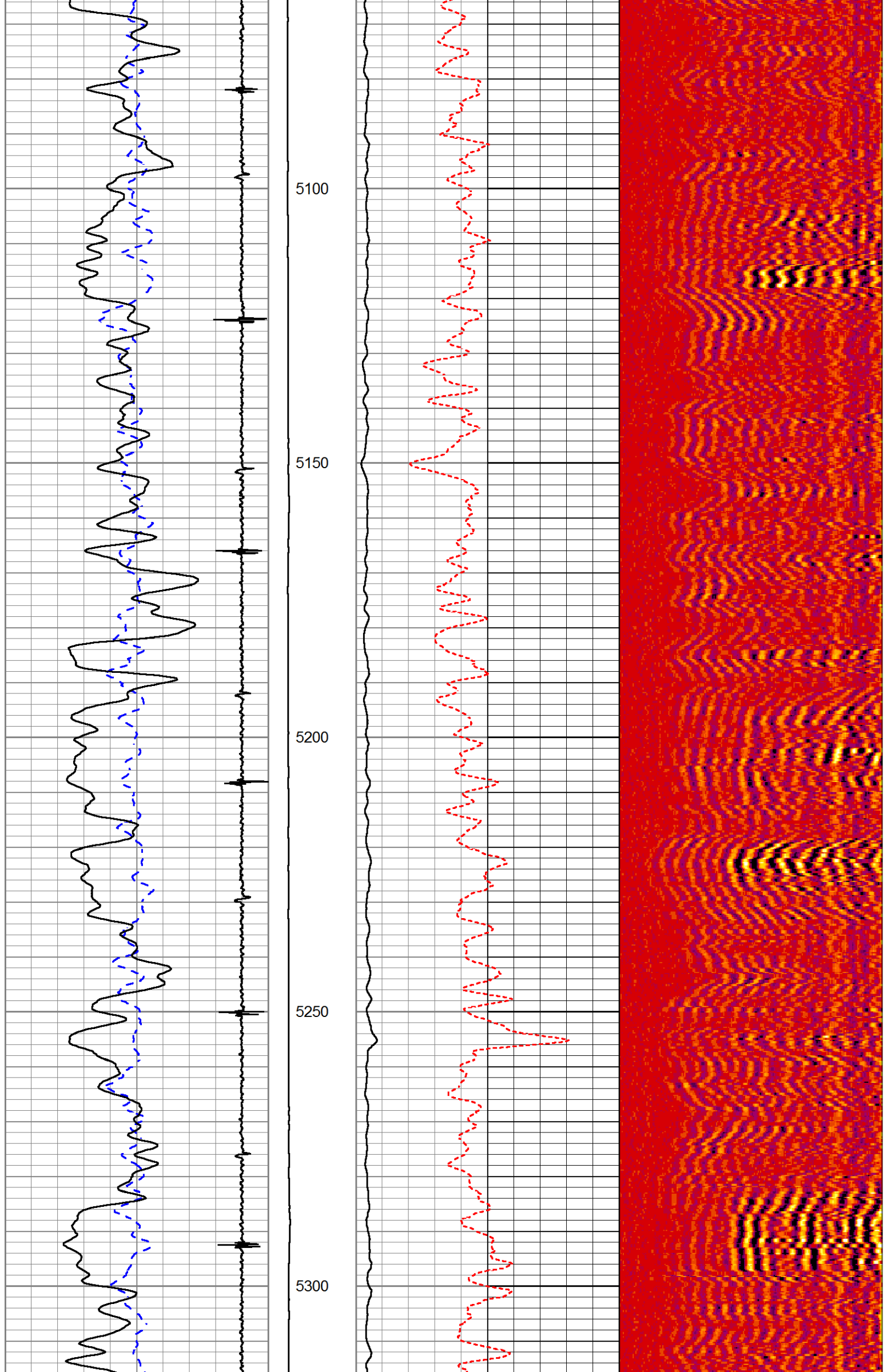




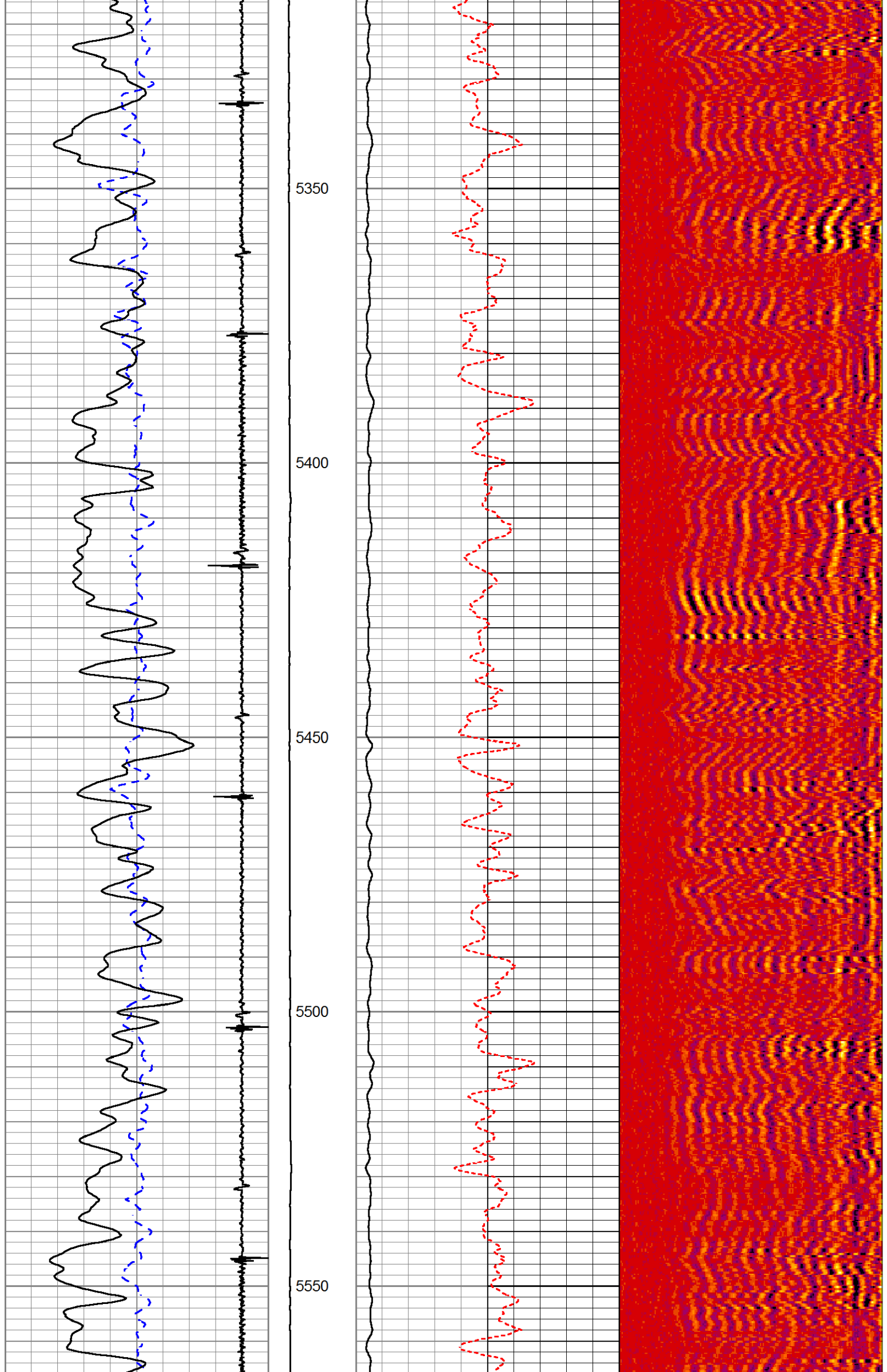


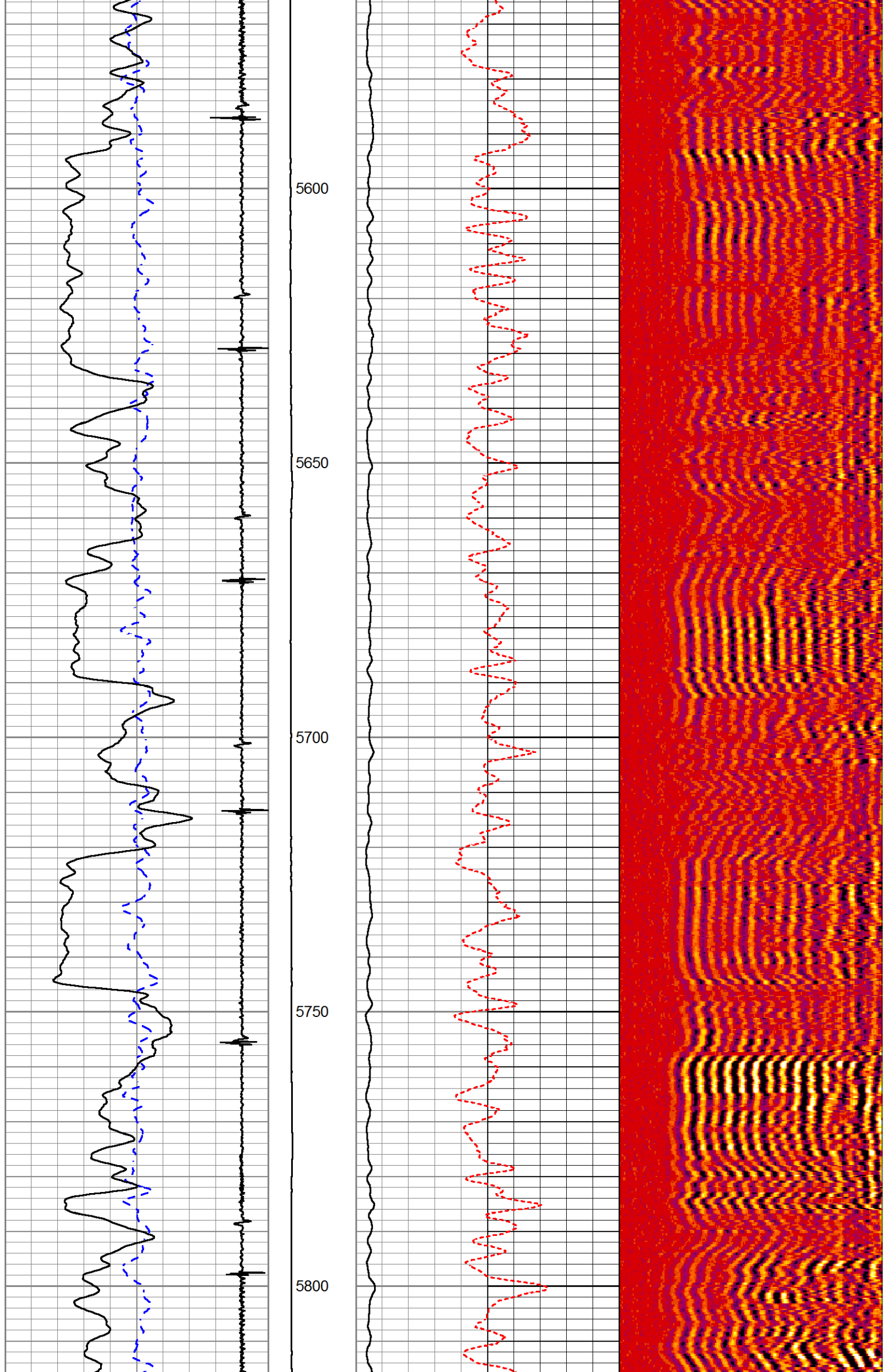


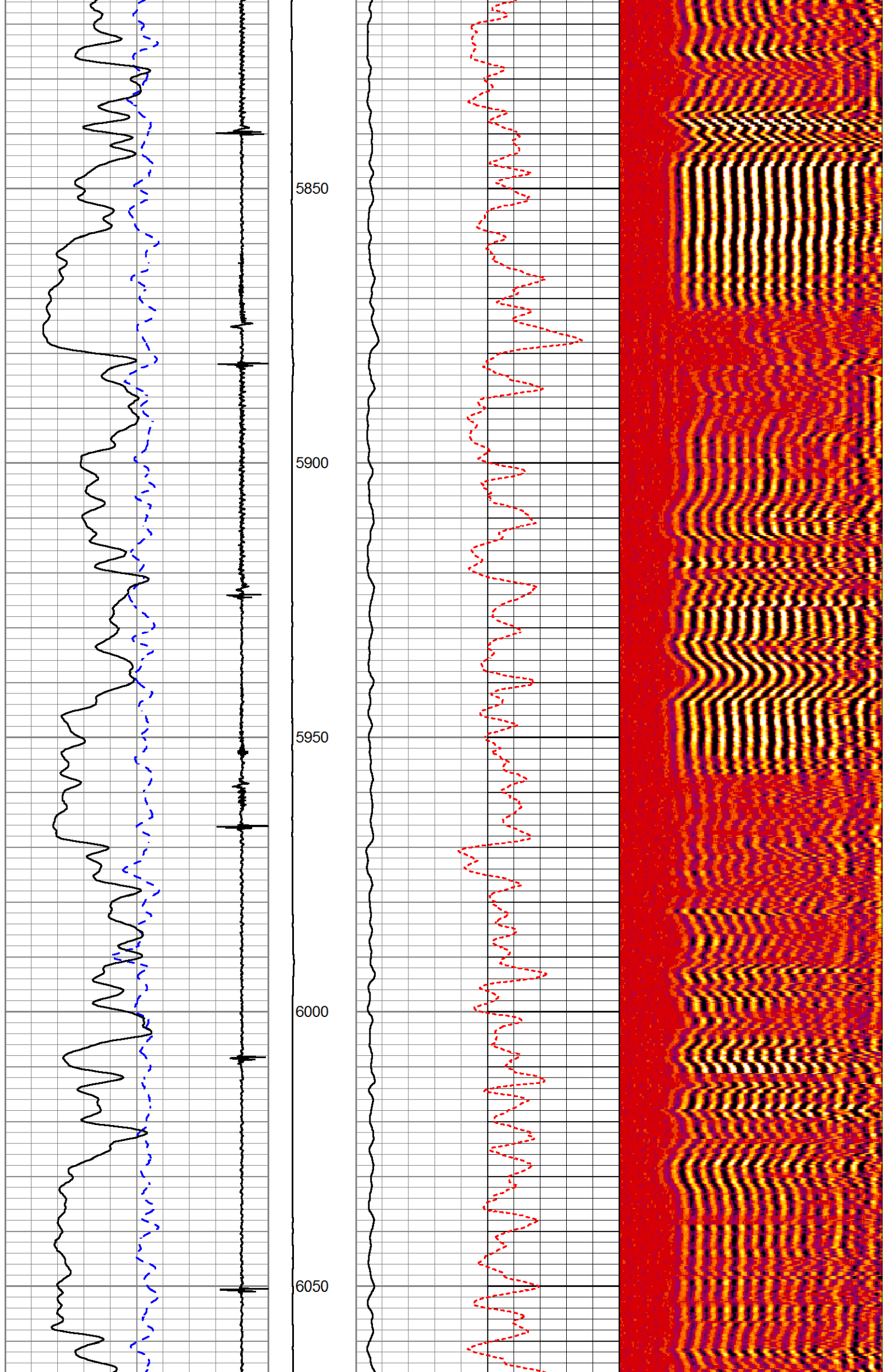




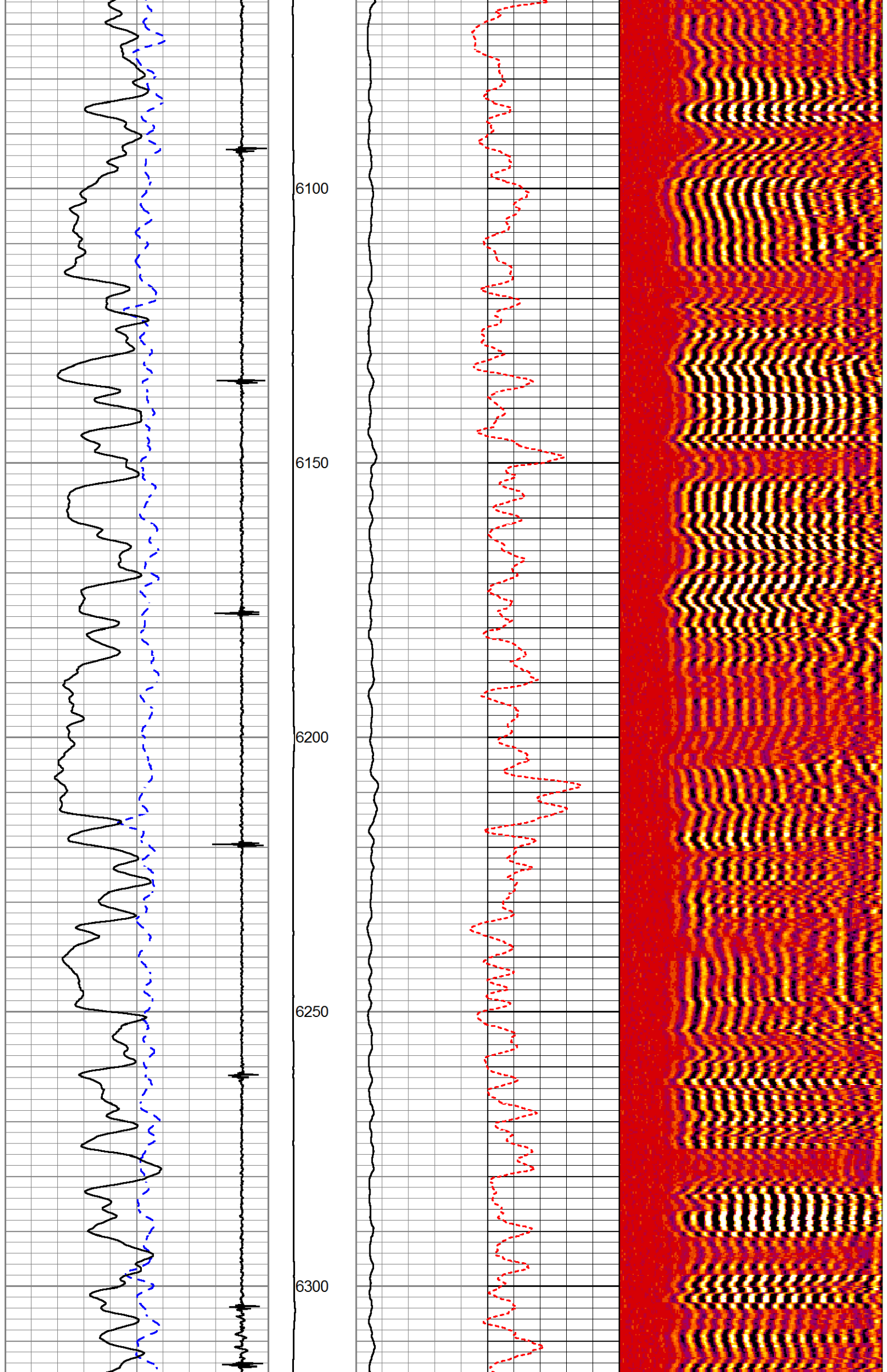


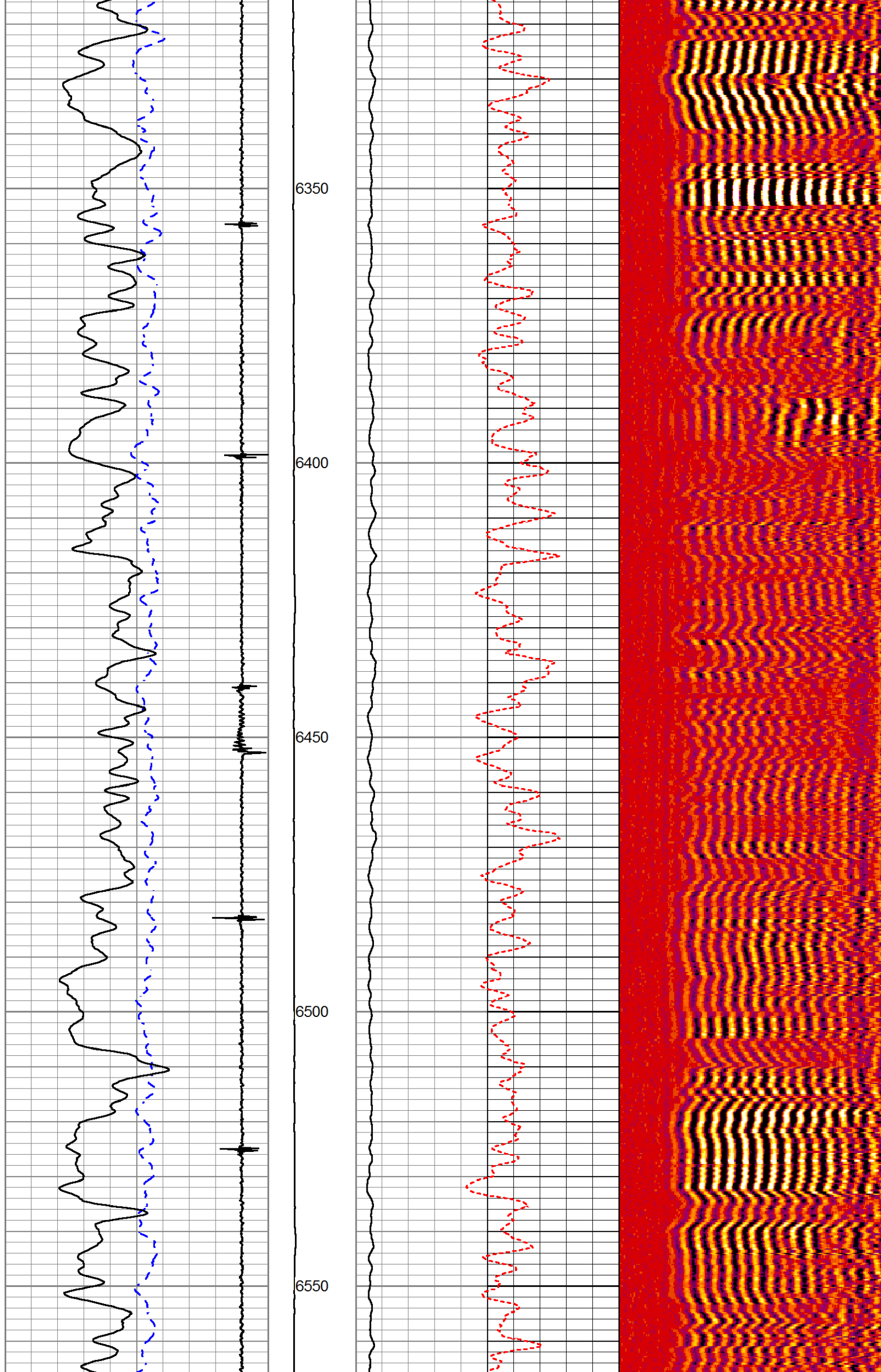


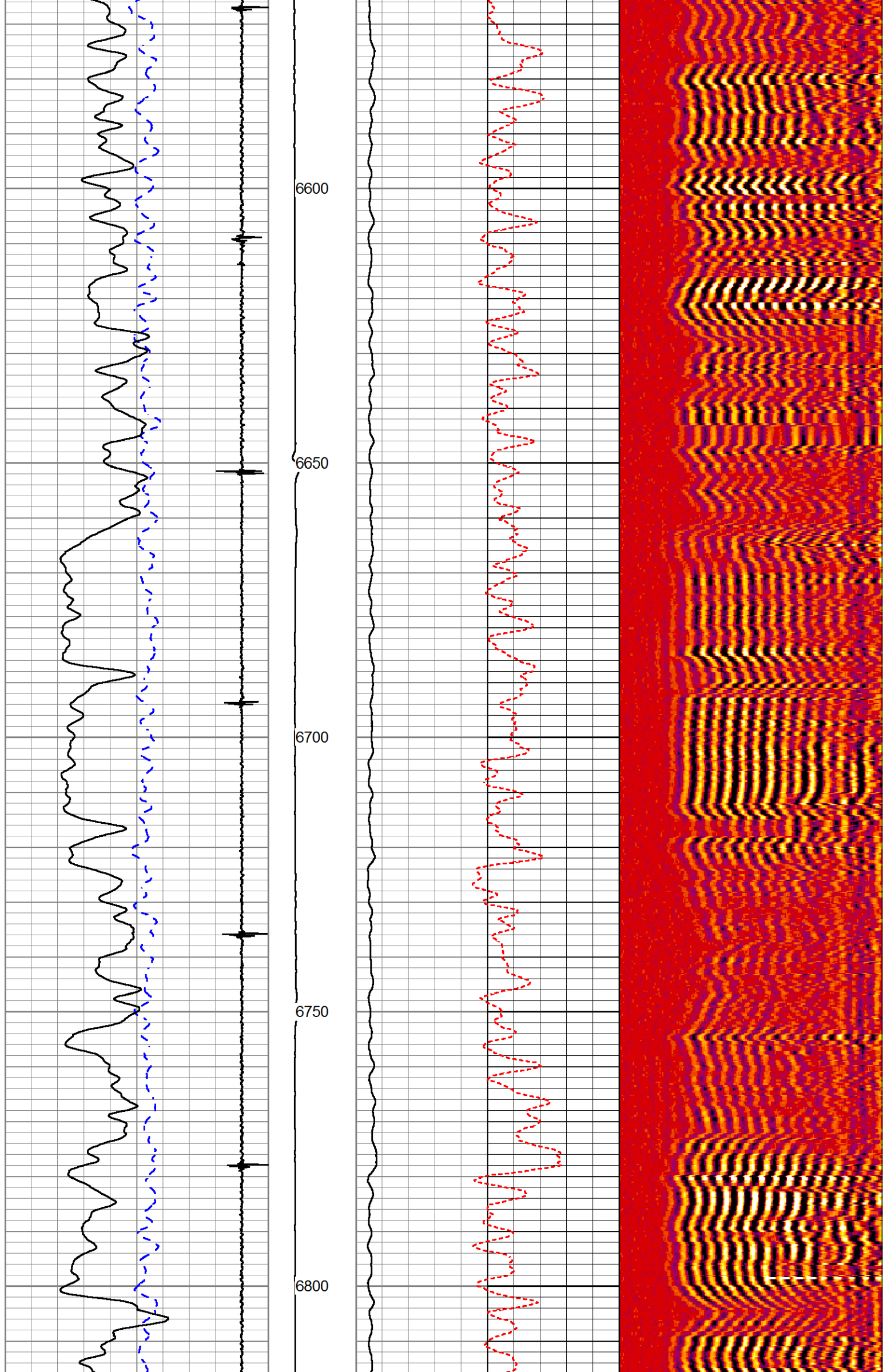




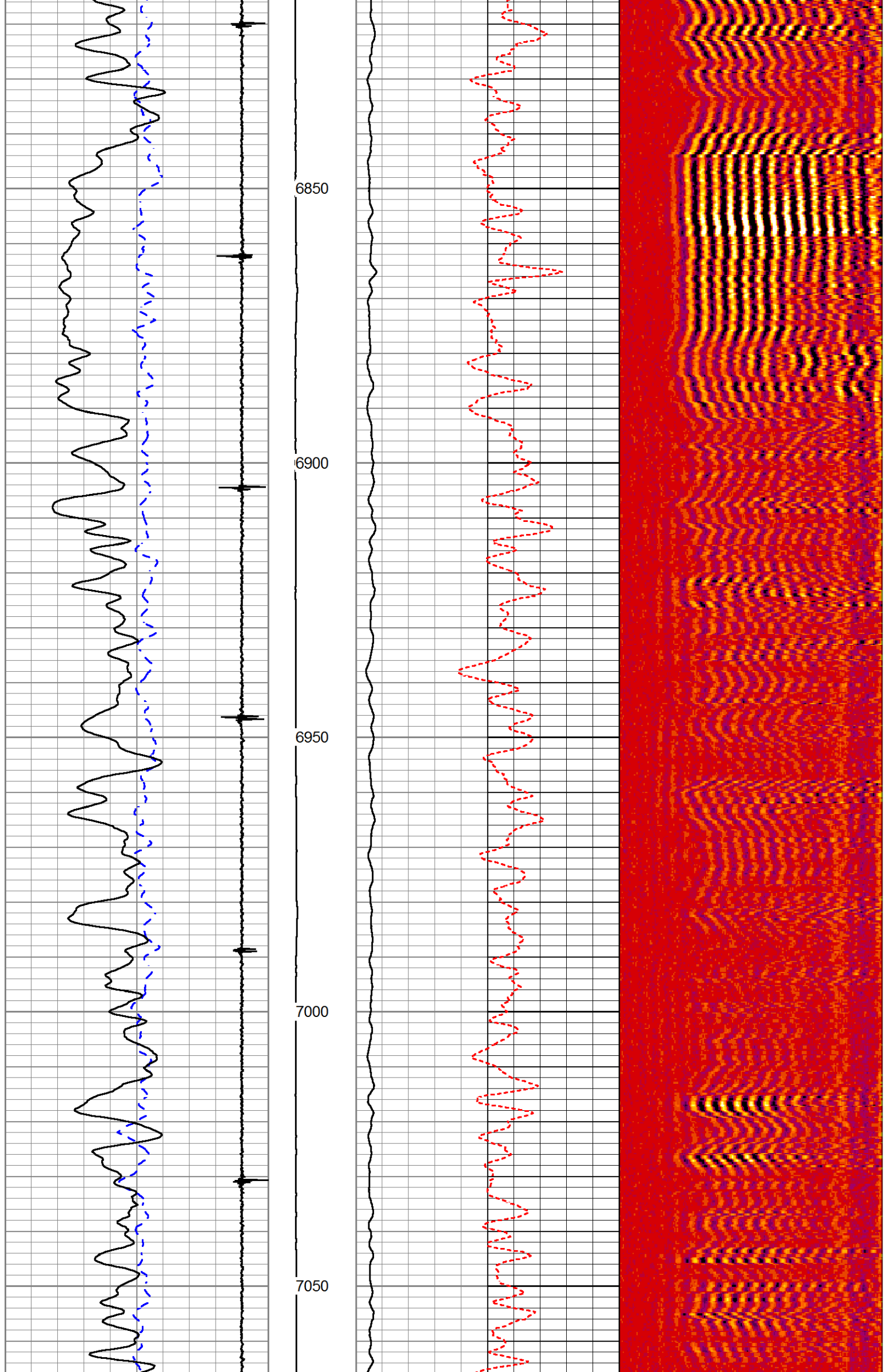


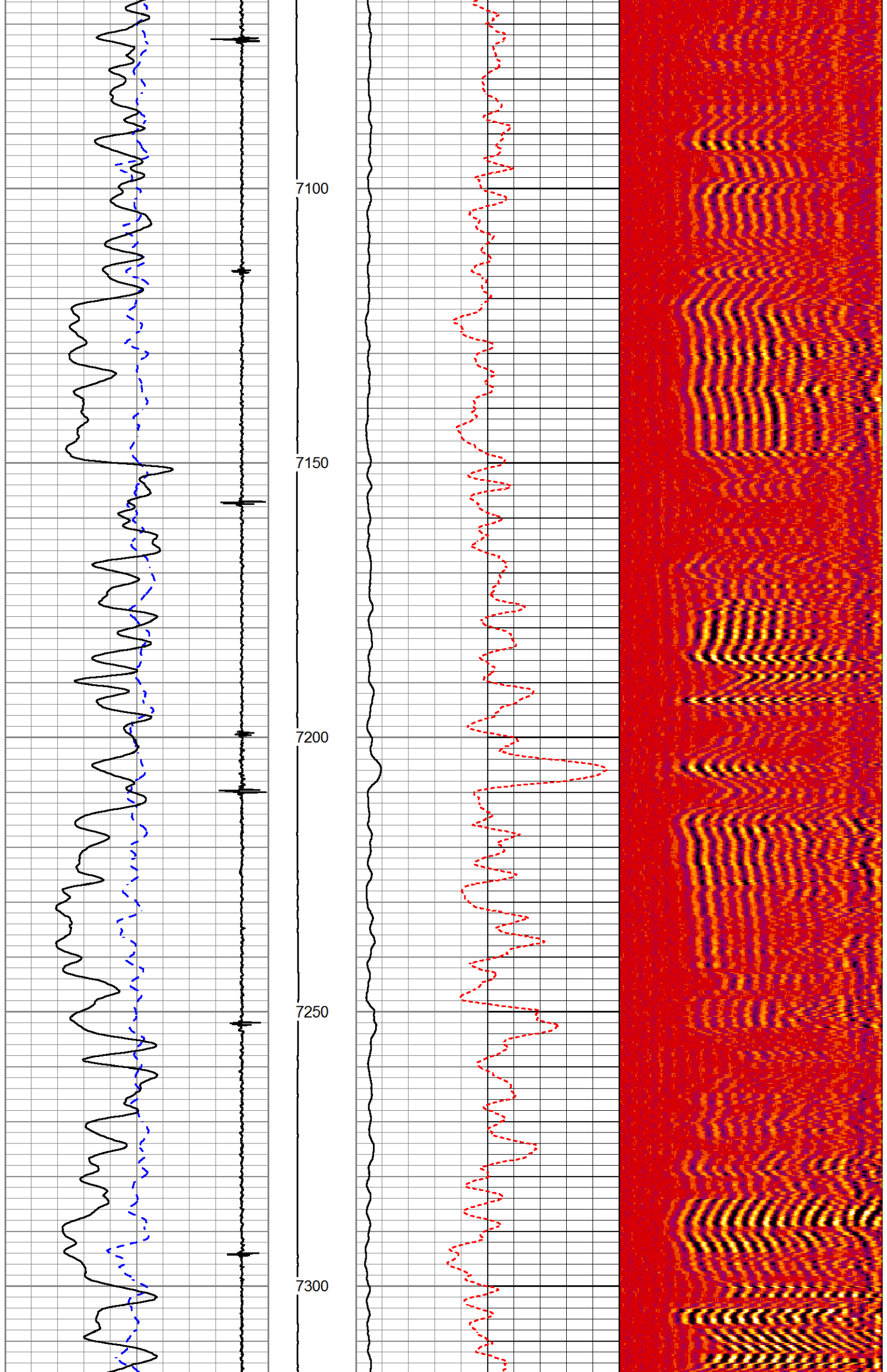


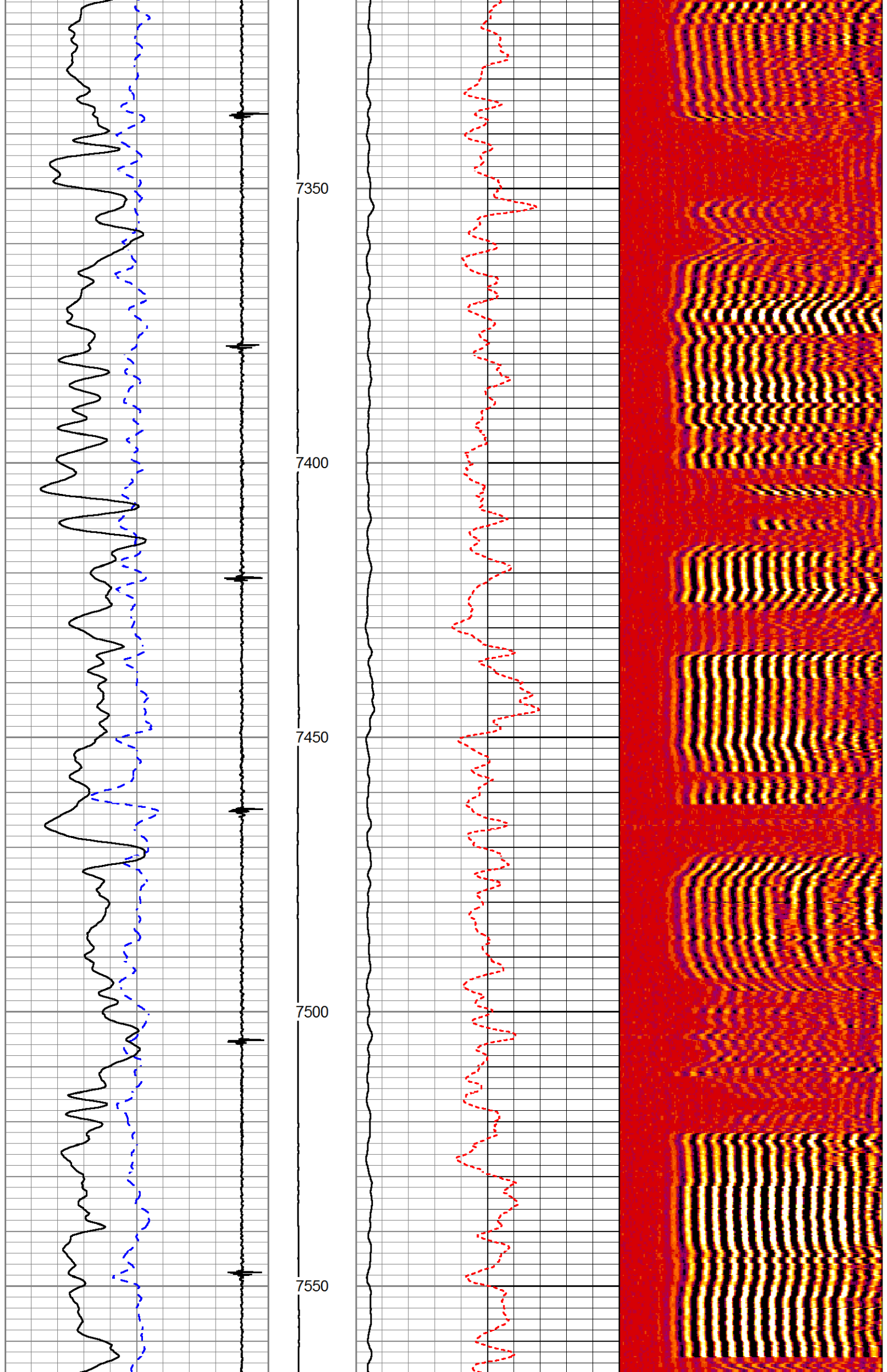




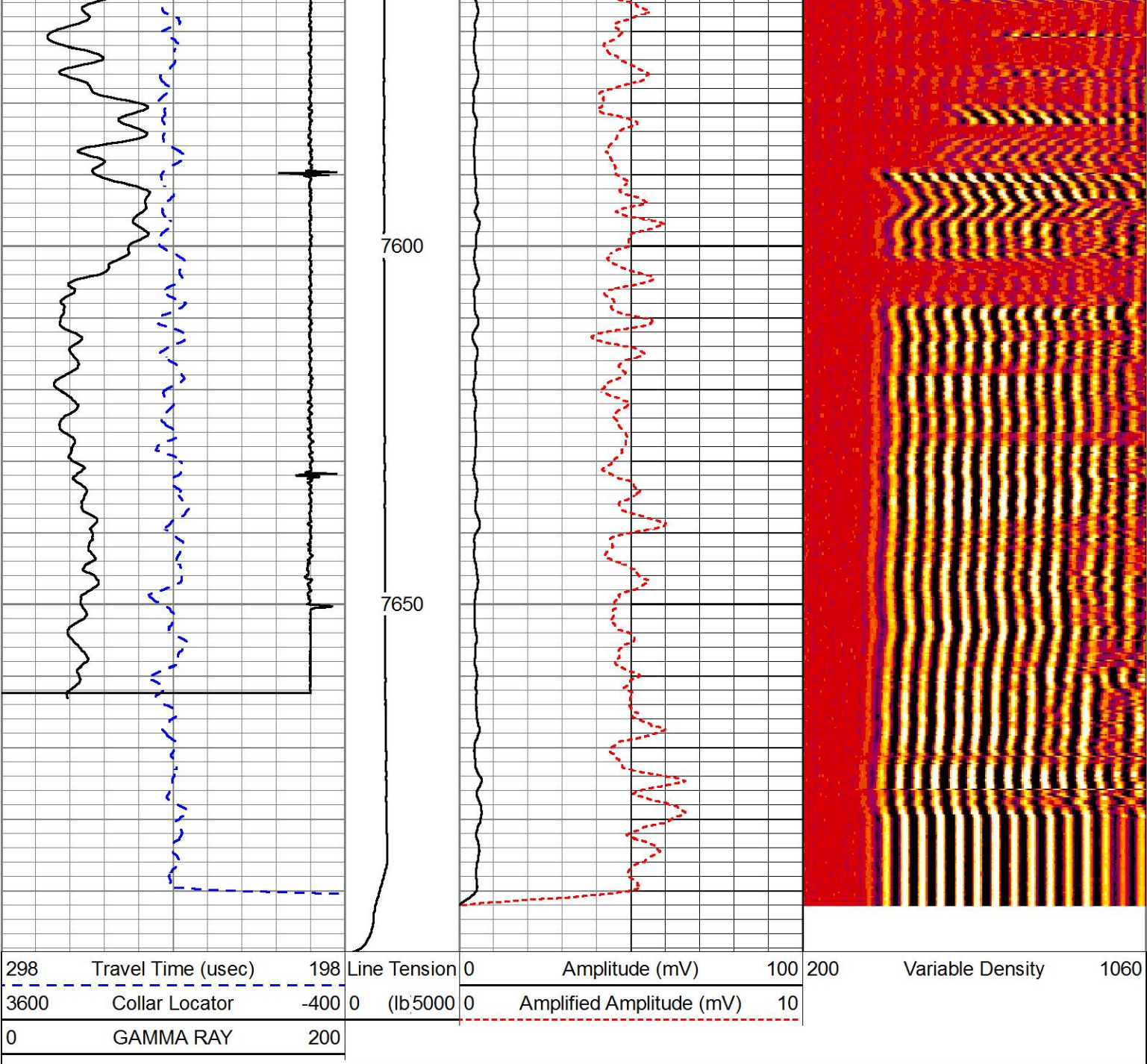












MAIN PASS

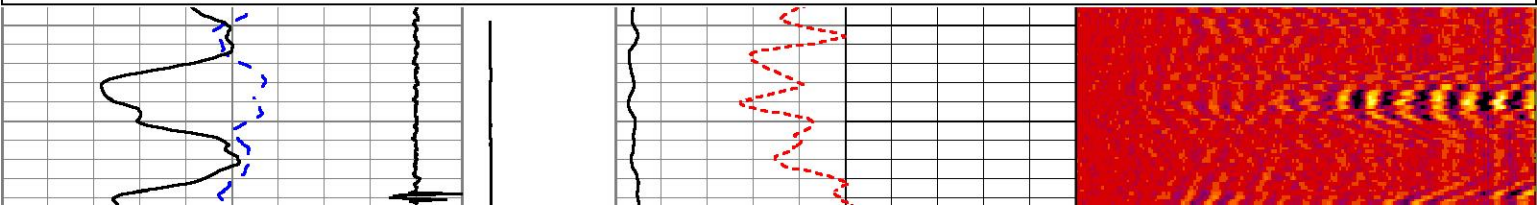
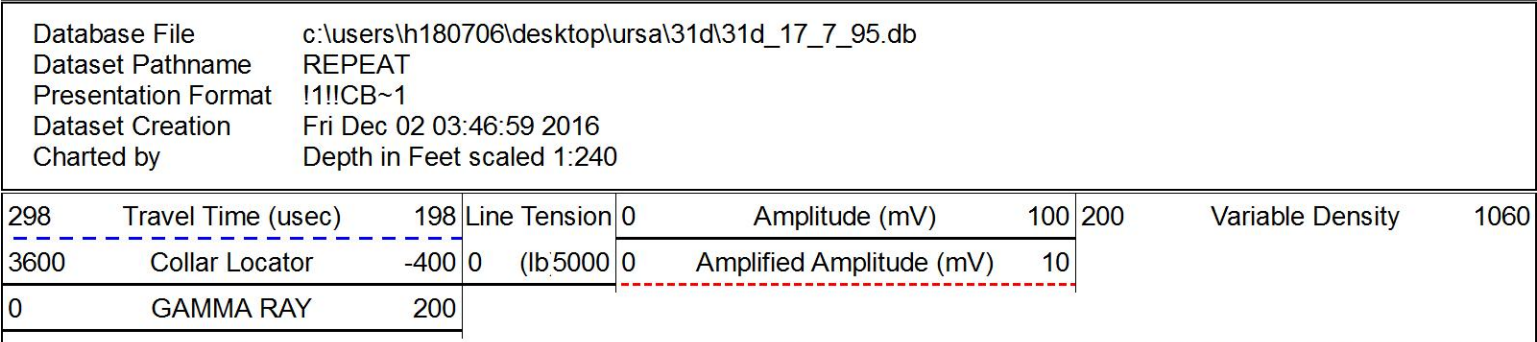
5" = 100'

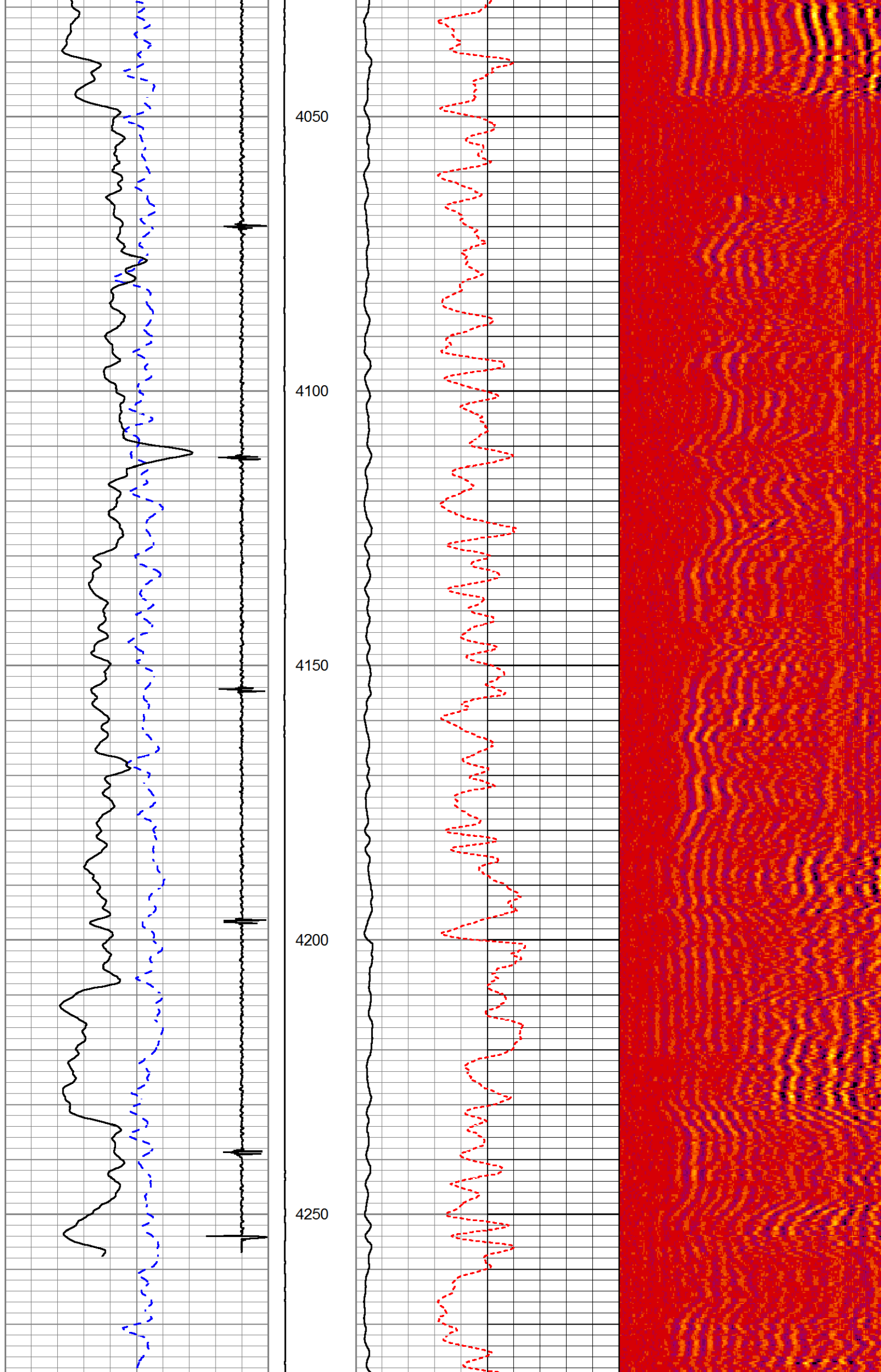
HALLIBURTON

REPEAT PASS

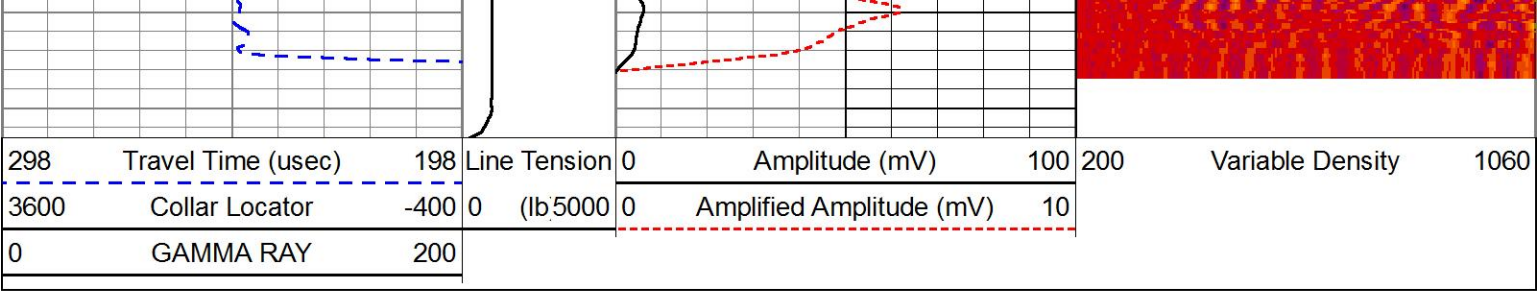
5" = 100'

HALLIBURTON









HALLIBURTON

REPEAT PASS

5" = 100'

Log Variables

Database:c:\users\h180706\desktop\ursa\31d\31d\_17\_7\_95.db

Dataset field/well/run1/MAIN/\_vars\_

Top - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE	BORSAL	BOTTEMP	CASED?	CASEOD
1	0	TEMP	in 7.875	kppm 150	degF 220	Yes	in 4.5
CASETHCK	CASEWGHT	LTH	MSGGN	MudWgt	PERFS	POROS1	POROS2
in 0.25	lb/ft 11.6	Sandstone	1	lb/gal 8.4	0	1	0
RHOCF	SO	SRFTEMP	TDEPTH	UHSGC	USERFTT	ZREF	
0.25	in 0	degF 0	ft 7700	NONE	usec/ft 0	MRayl 1.7	

Calibration Report		
Database File	c:\users\h180706\desktop\ursa\31d\31d_17_7_95.db	
Dataset Pathname	MAIN	
Dataset Creation	Fri Dec 02 04:38:28 2016	
Cement Bond Log Shop Calibration Report		
Serial-Model:	12091451-A	
Calibration Performed:	Thu Dec 01 13:19:47 2016	
Free Pipe Calibration		
TT	Measured	Units
Amplitude	244.6	uSec
Log Base Line	552.0	mV
	5.9	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	0.149	

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




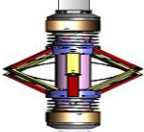
Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	90.00	80.00	10.00	+/-15.00	V
FCAP	9856	10000	-144	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.96	0.95	0.01		
N/F Inel Norm	0.62	0.61	0.01		
RNF	1.04	1.07	-0.03	+/-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


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 / 11214503

SHOP CALIBRATION	Wed Nov 09 16:25:32 2016
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	Background	Counts/Sec.	Gain	Offset	Jig	Units
	Calibrator	34.1				cps
		297.9	1.3950			cps
						GAPI/cps
PRIMARY VERIFICATION						
	Background	42.3				cps
	Calibrator	413.8				cps
	Difference				371.5	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	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		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	14.66					

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 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			BUL-001 (000001) Bullnose	0.30	1.69	1.50
Dataset:			31d_17_7_95.db: field/well/run1/MAIN			
Total length:		39.39 ft				
Total weight:		356.50 lb				
O.D.:		3.13 in				

Company	URSA OPERATING COMPANY LLC				
Well	MONUMENT RIDGE B 31D-17-7-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	CEMENT BOND LOG				