

HALLIBURTON				CEMENT BOND LOG			
Company		URSA OPERATING COMPANY LLC		Company		URSA OPERATING COMPANY LLC	
Well		MONUMENT RIDGE B 34B-08-7-95		Well		MONUMENT RIDGE B 34B-08-7-95	
Field		PARACHUTE		Field		PARACHUTE	
County		GARFIELD State CO		County		GARFIELD State CO	
Permanent Datum		GROUND LEVEL Elevation 5702'		Other Services			
Log Measured From		KB , 17' Ft. above perm. datum		RMT-1			
Drilling Measured From		KB					
Date @ Time Logged		27 NOV 2016 @ 12:00		Type Fluid in Hole		FRESH WATER	
Run No.		ONE		Density of Fluid		8.4 PPG	
Depth - Driller		7491'		Fluid Level		SURFACE	
Depth - Logger		7303'		Cement Top Est. Logged		1836'	
Bottom - Logged Interval		7300'		Equipment / Location		11808537 / RS. WY	
Top - Log Interval		1728'		Recorded by		B. RIDDEL	
Max. Recorded Temp.		210 degF		Witnessed by		R. TOLLE	
CEMENTING DATA		Surface		Protection		Liner	
Date / Time Cemented		String		String		N/A	
Primary / Squeeze		N/A		N/A		N/A	
Expected Compressive Strength		N/A		psi@ N/A hrs		psi@ N/A hrs	
Cement Volume		N/A		N/A		N/A	
Cement Type / Weight		N/A		N/A		N/A	
Formulation		N/A		N/A		N/A	
Mud Type / Mud Wgt.		N/A		N/A		N/A	
Run Number		ONE		TWO		THREE	
Borehole Record		Casing & Tubing Record					
Bit		From		To		Size	
24"		SURFACE		60'		16"	
12.25"		60'		1778'		8.625"	
7.875"		1778'		7491'		4.5"	

Service Ticket No.	903665397	API No.	05045229090000	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.	12146425	Serial No.	11224503	Serial No.	11680606
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	

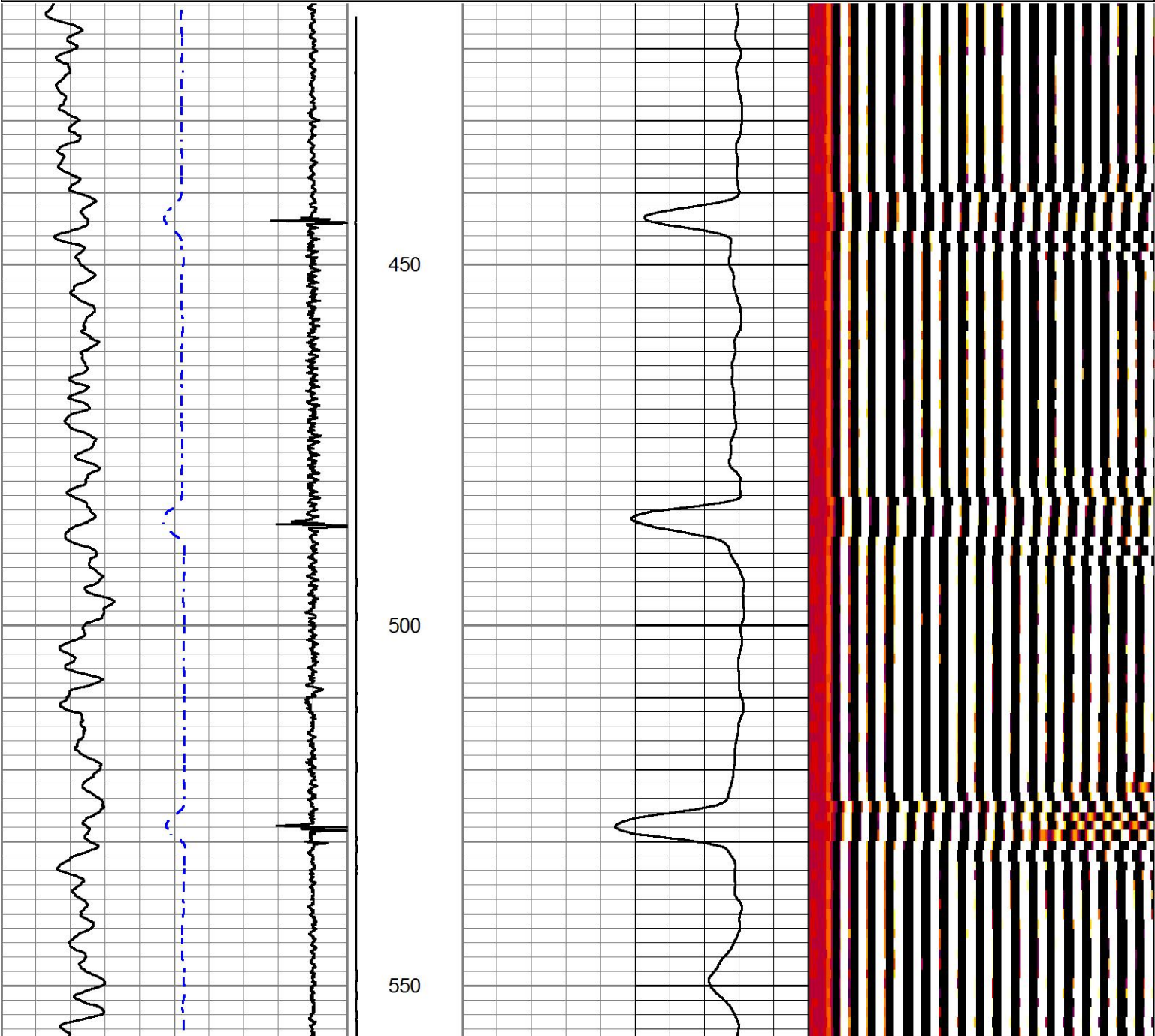
ONE	4500'	4198'	0 PSI	20	REPEAT			
TWO	7303'	1728'	0 PSI	20	MAIN			
	GAMMA		SIGMA		AMPLITUDE			
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	60	0	0	100		
TWO	0	200	60	0	0	100		
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

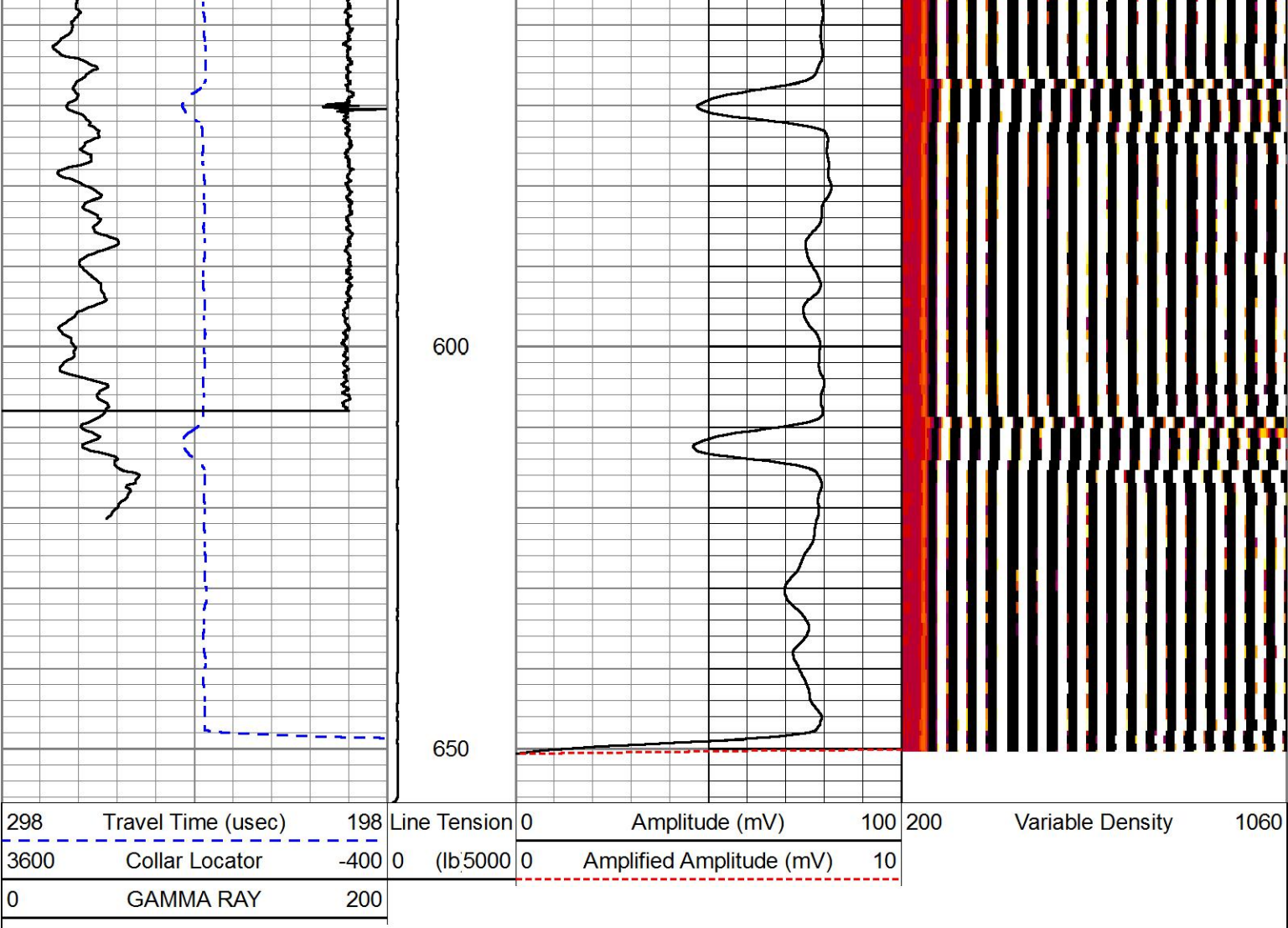
HALLIBURTON

FREE PIPE SECTION

5" = 100'

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Dataset Pathname		pass5									
Presentation Format		!1!!cbl_rmti									
Dataset Creation		Sun Nov 27 10:34:02 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									

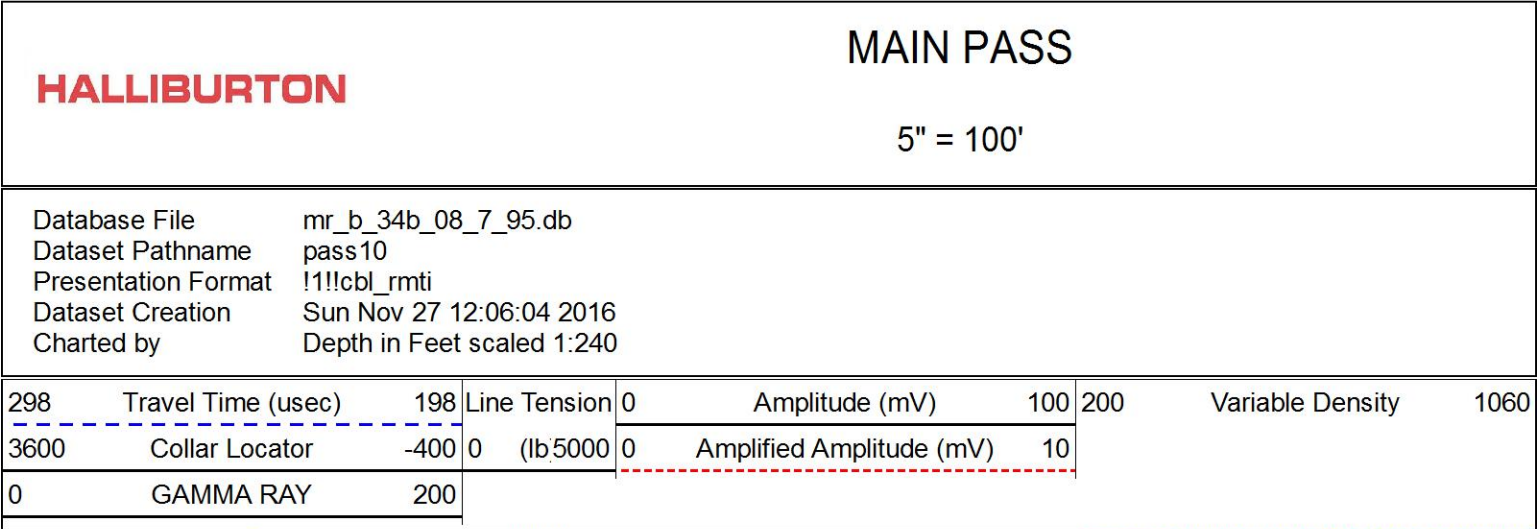




FREE PIPE SECTION

HALLIBURTON

5" = 100'

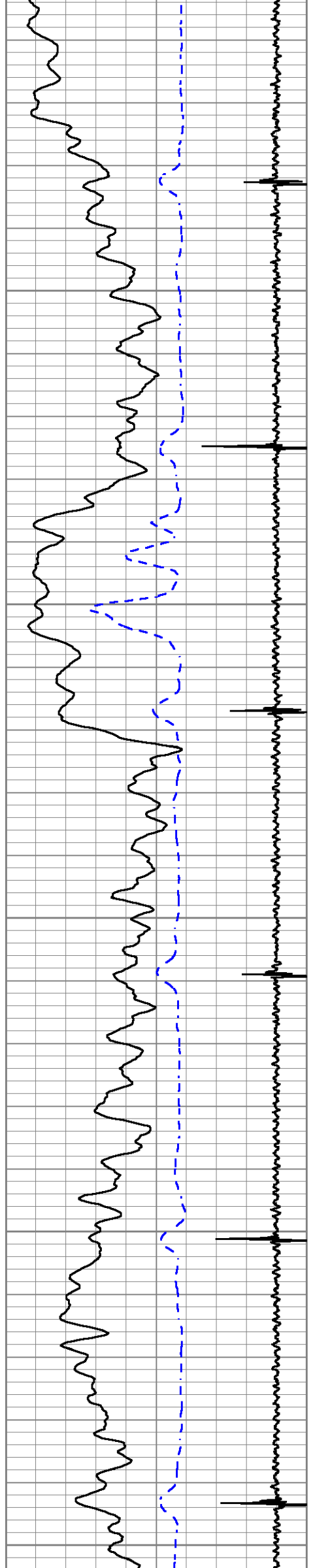


MAIN PASS

HALLIBURTON

5" = 100'

Database File mr_b_34b_08_7_95.db
Dataset Pathname pass10
Presentation Format !1!!cbl_rmti
Dataset Creation Sun Nov 27 12:06:04 2016
Charted by Depth in Feet scaled 1:240



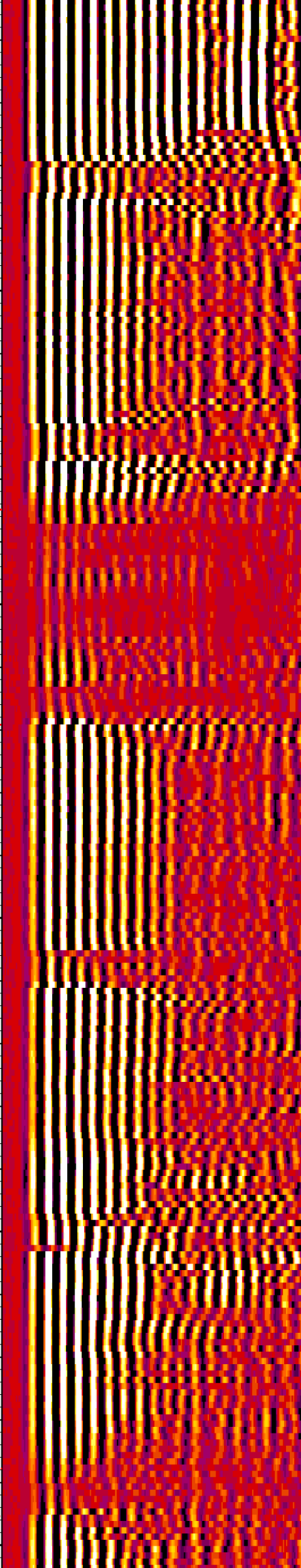
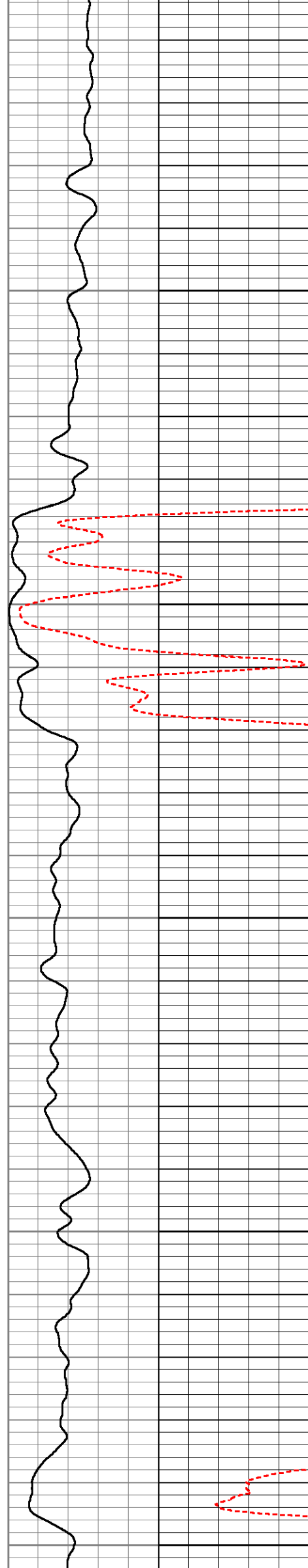
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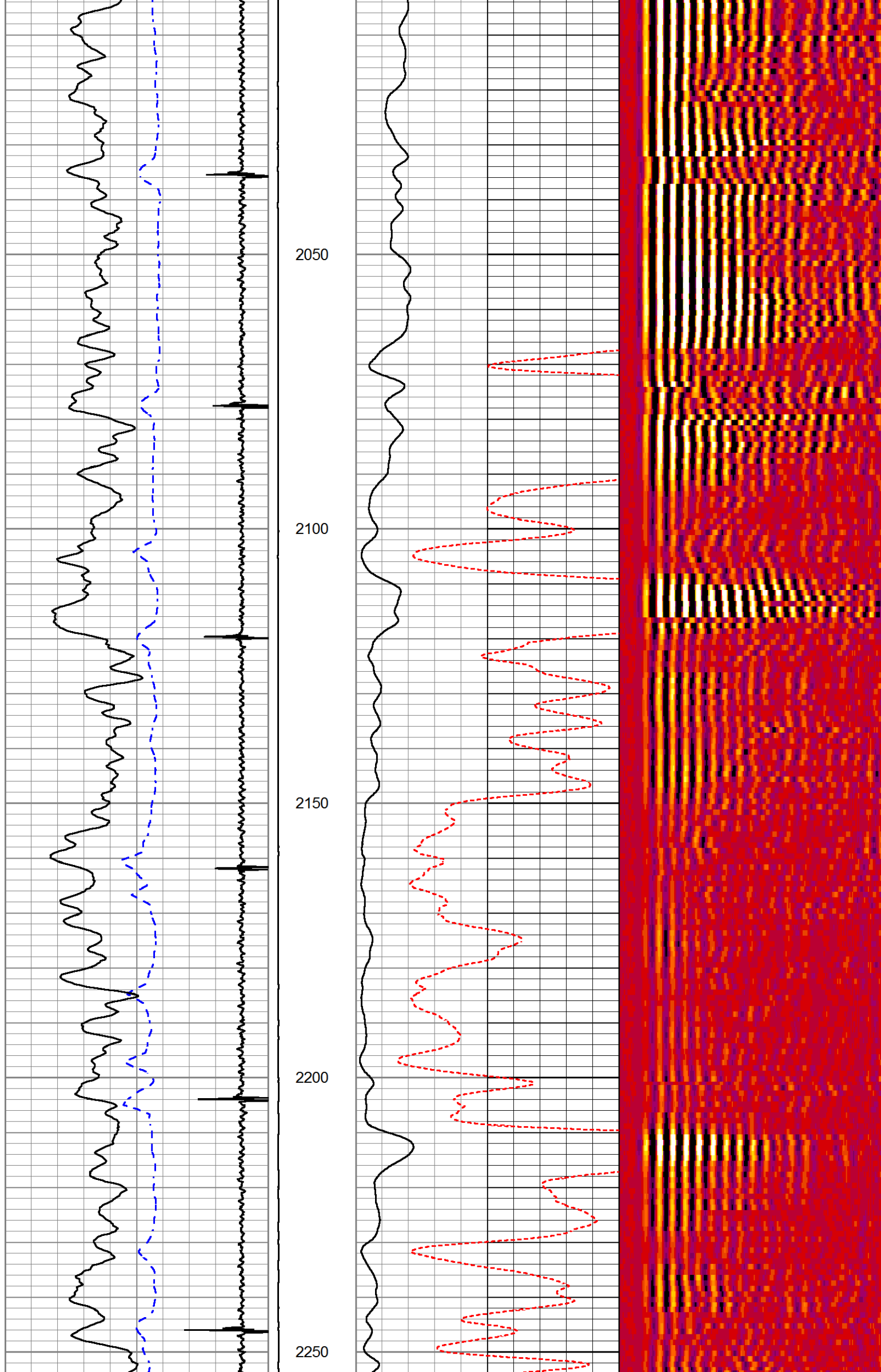
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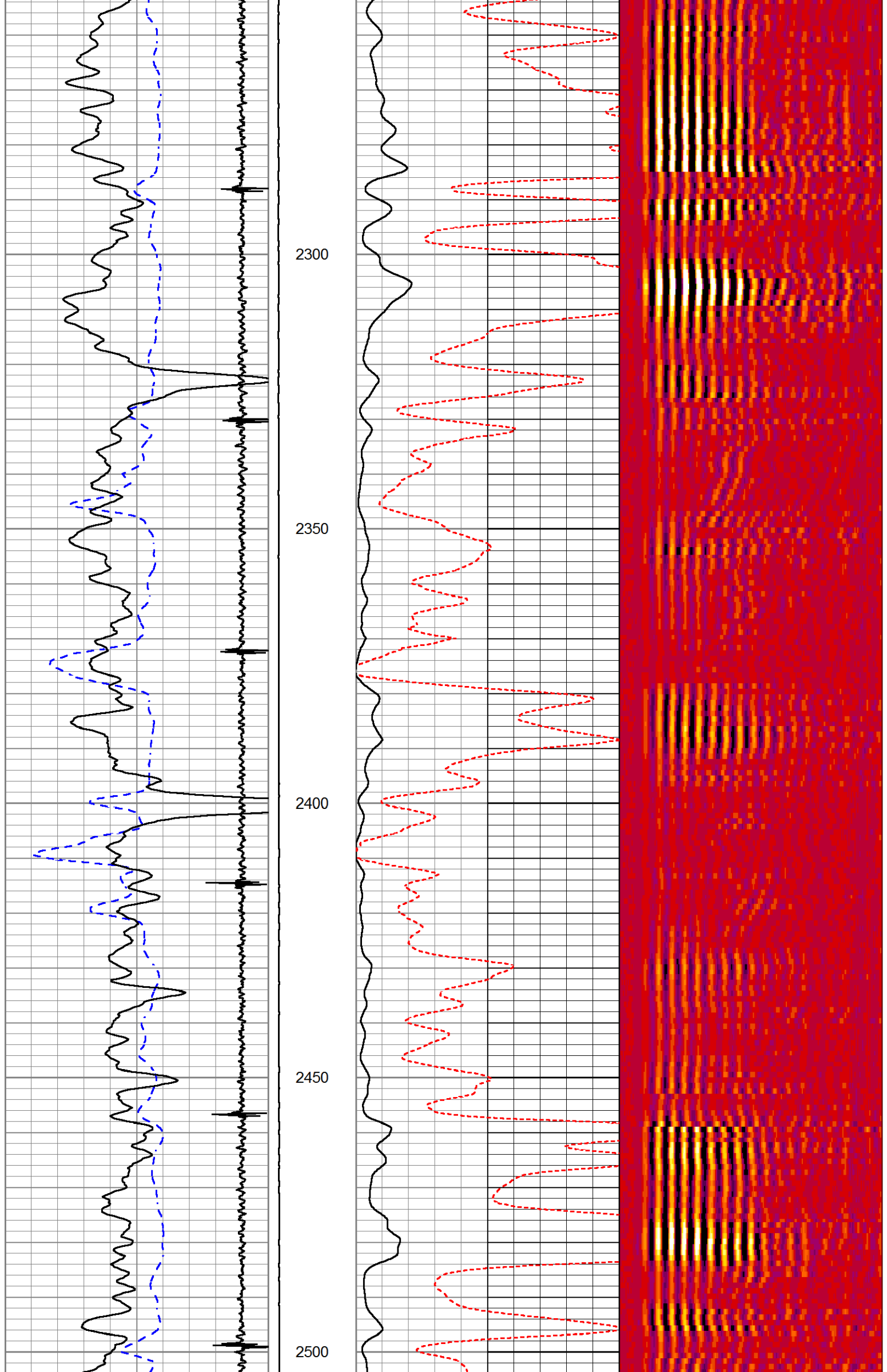
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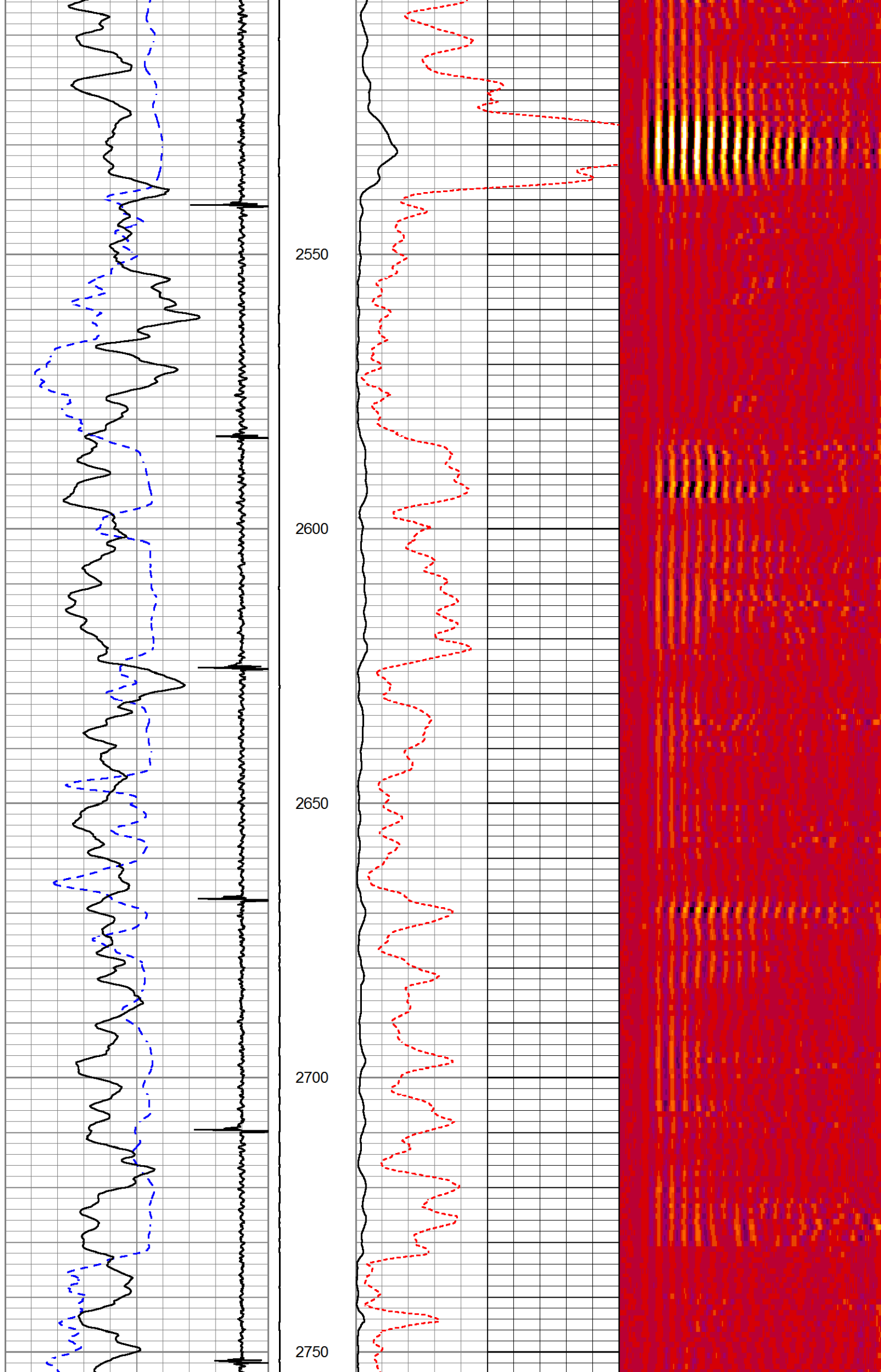
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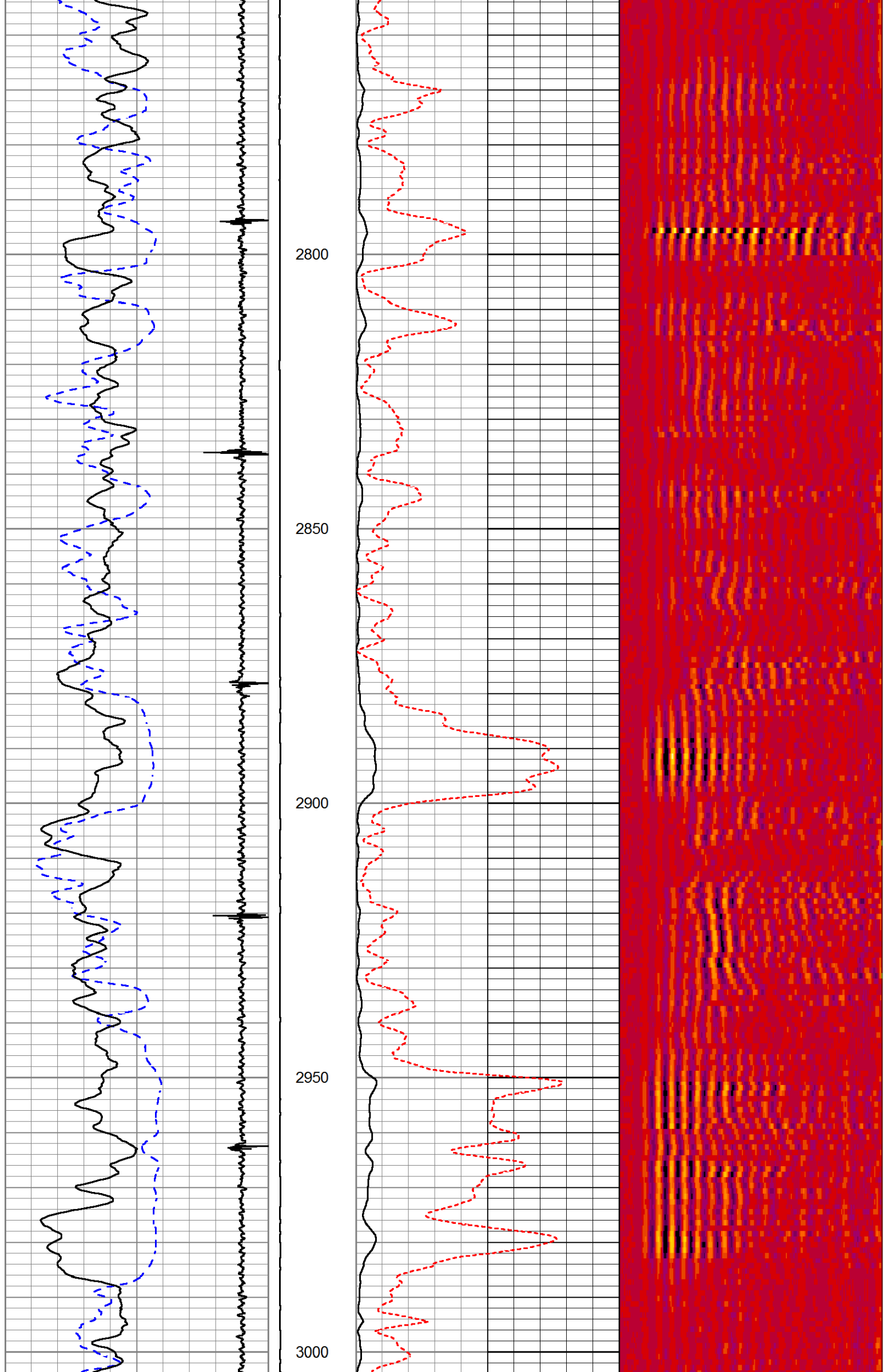
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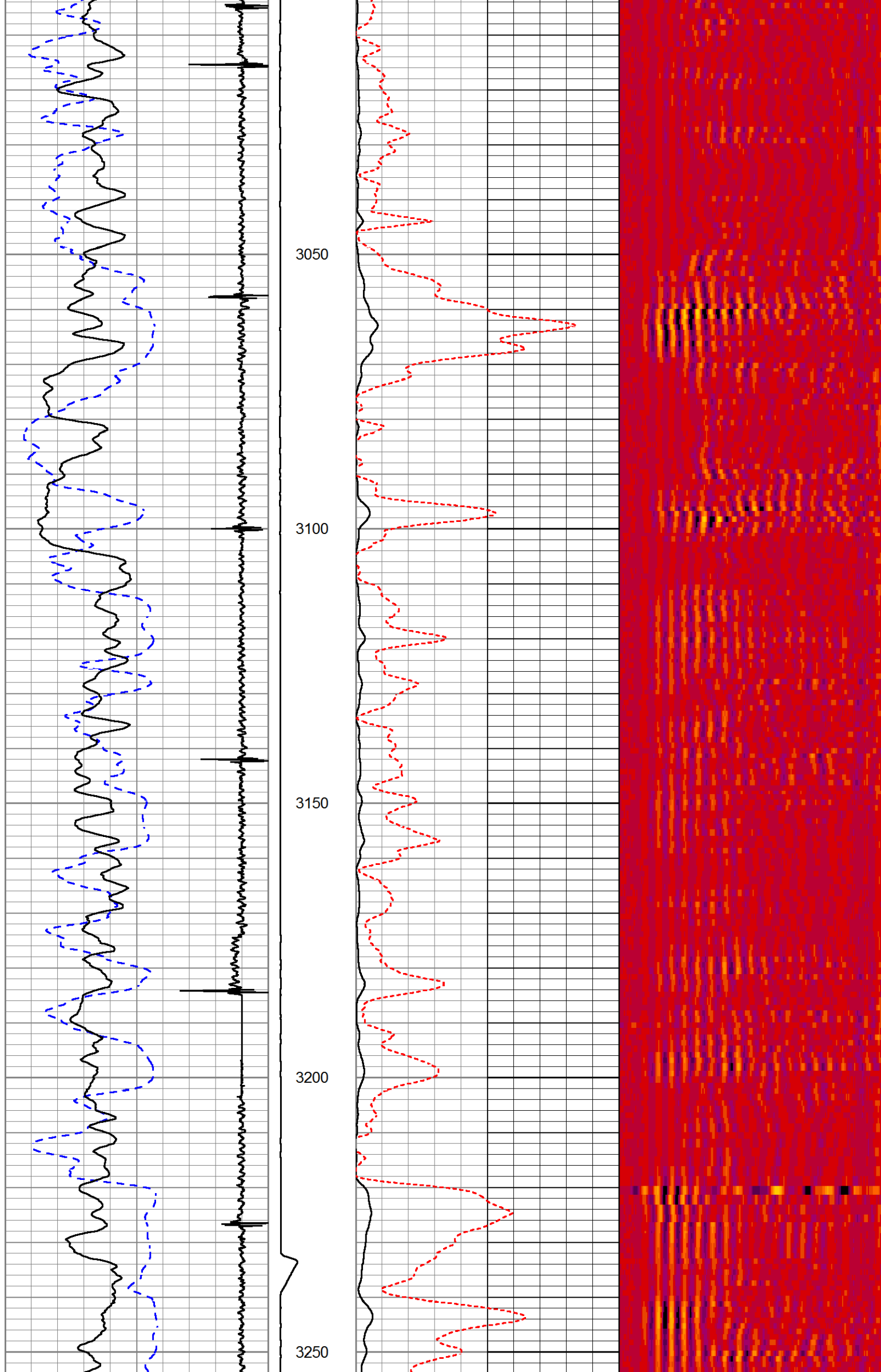


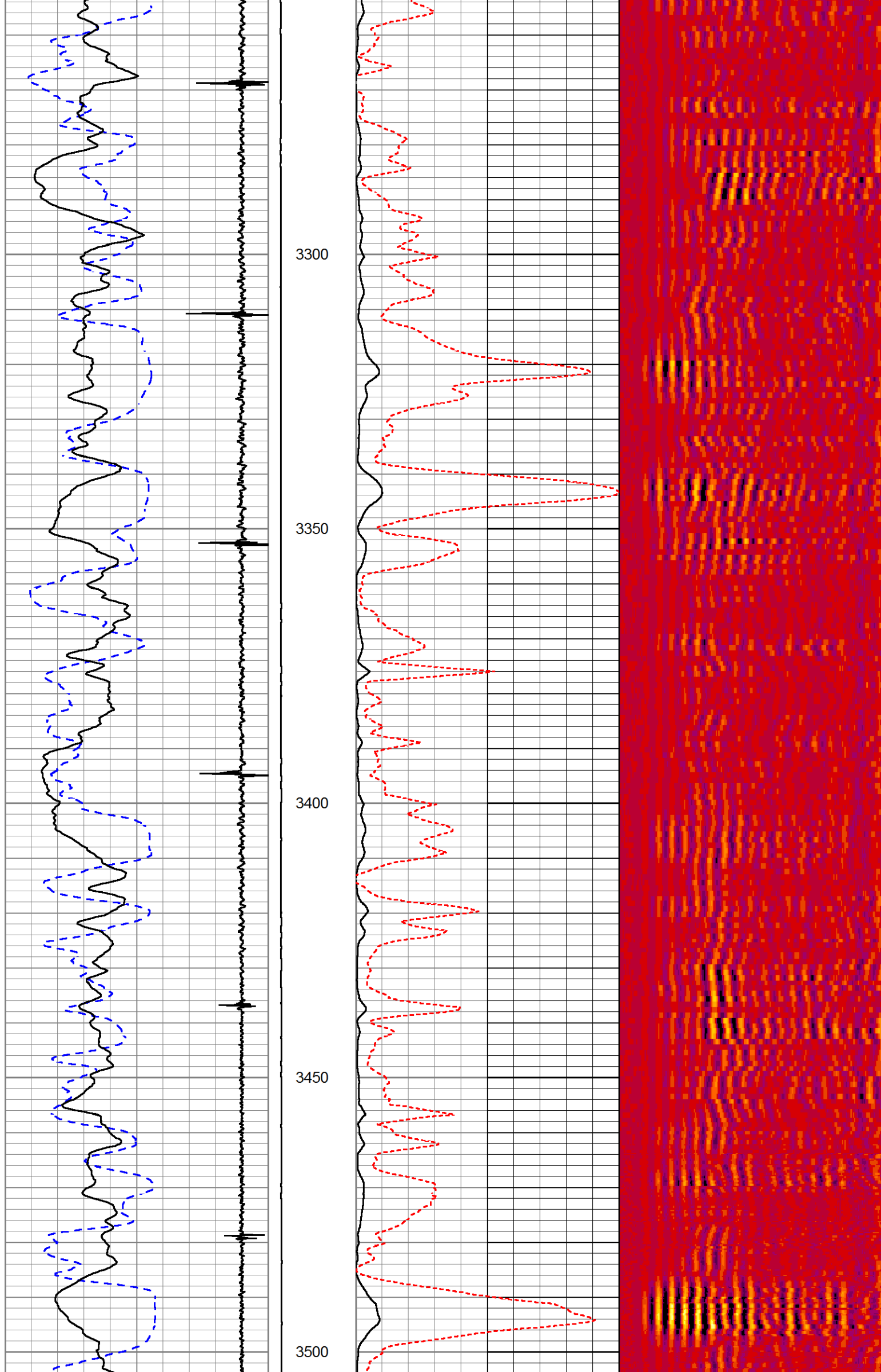


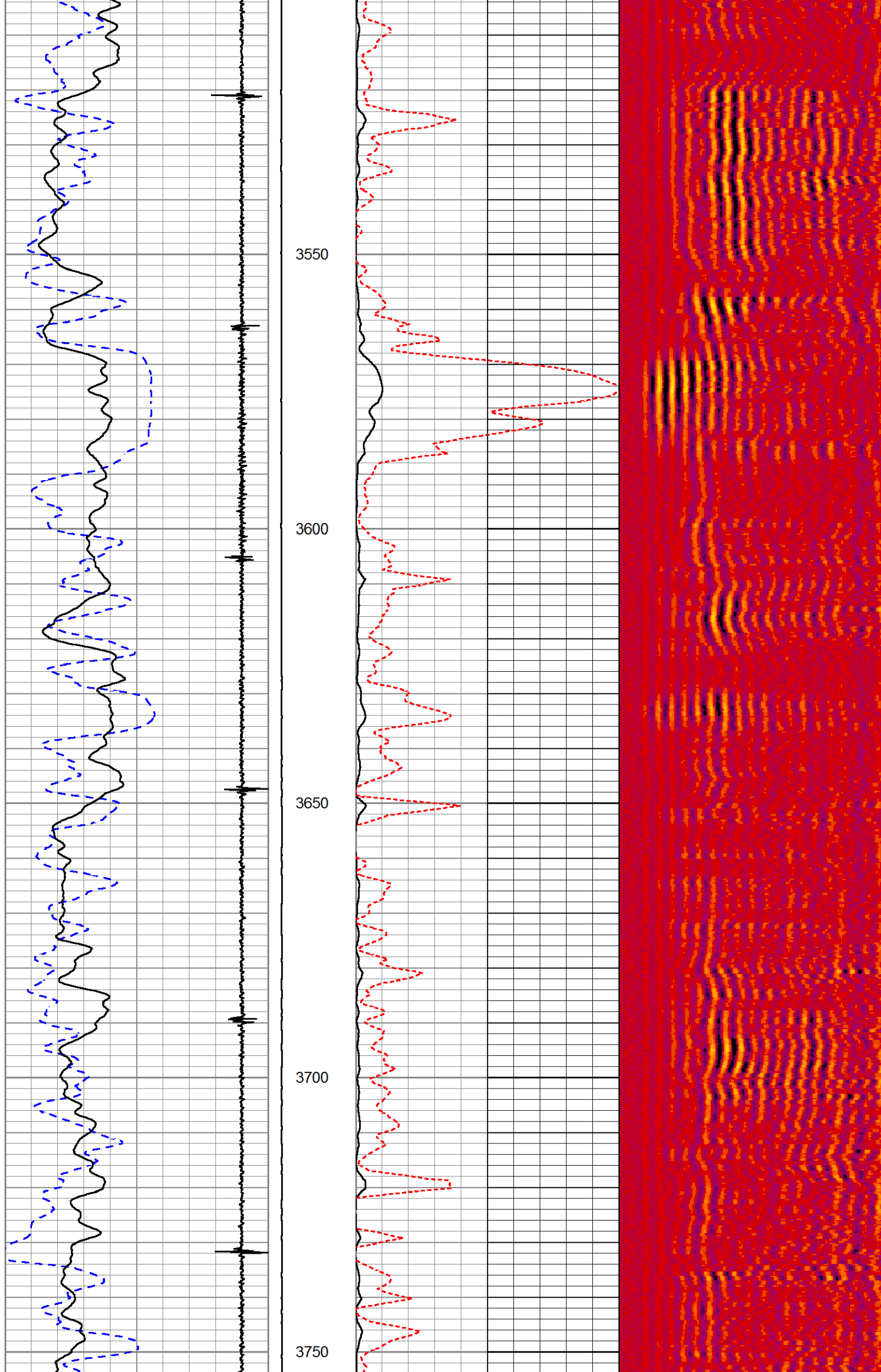


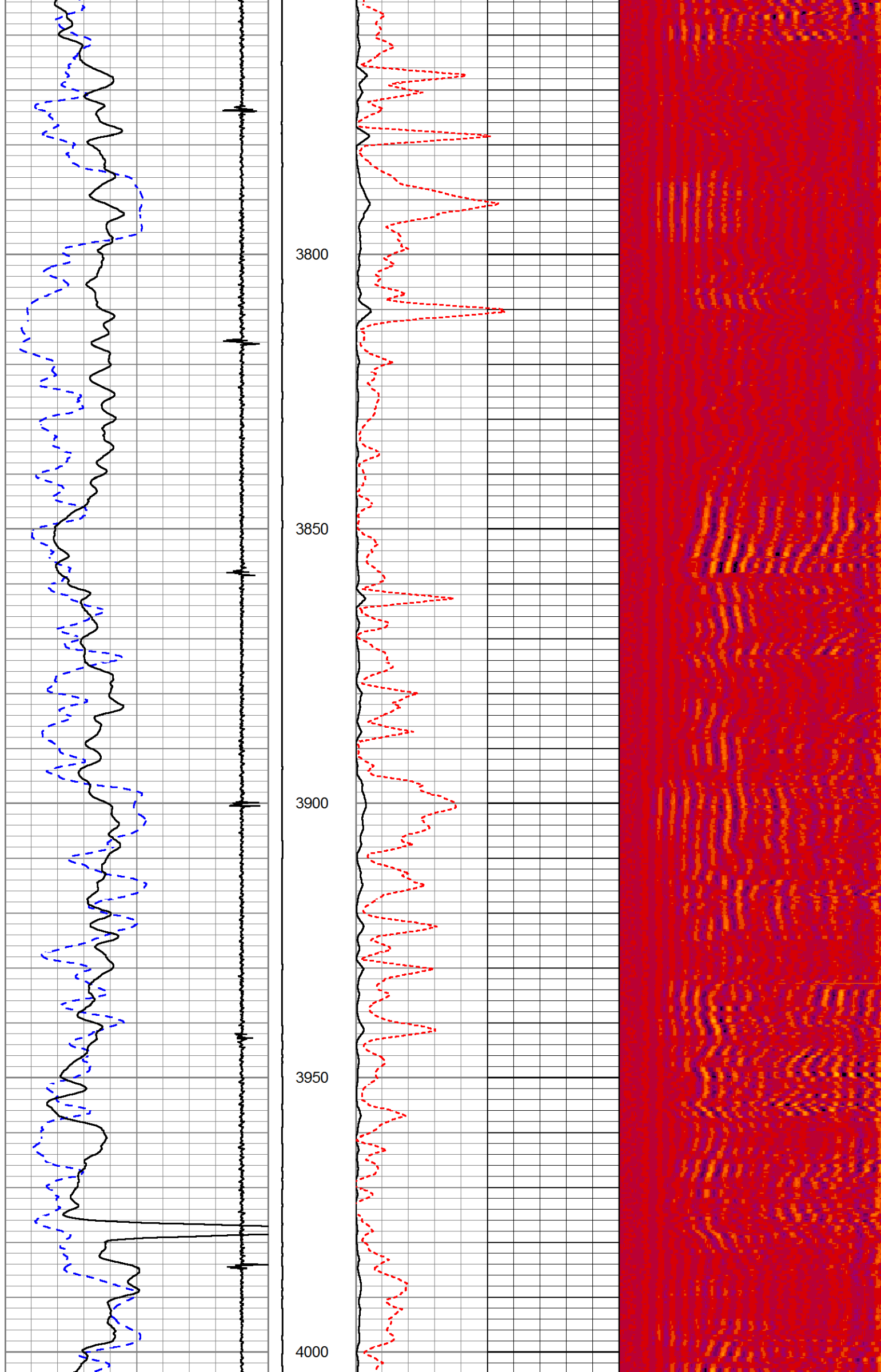


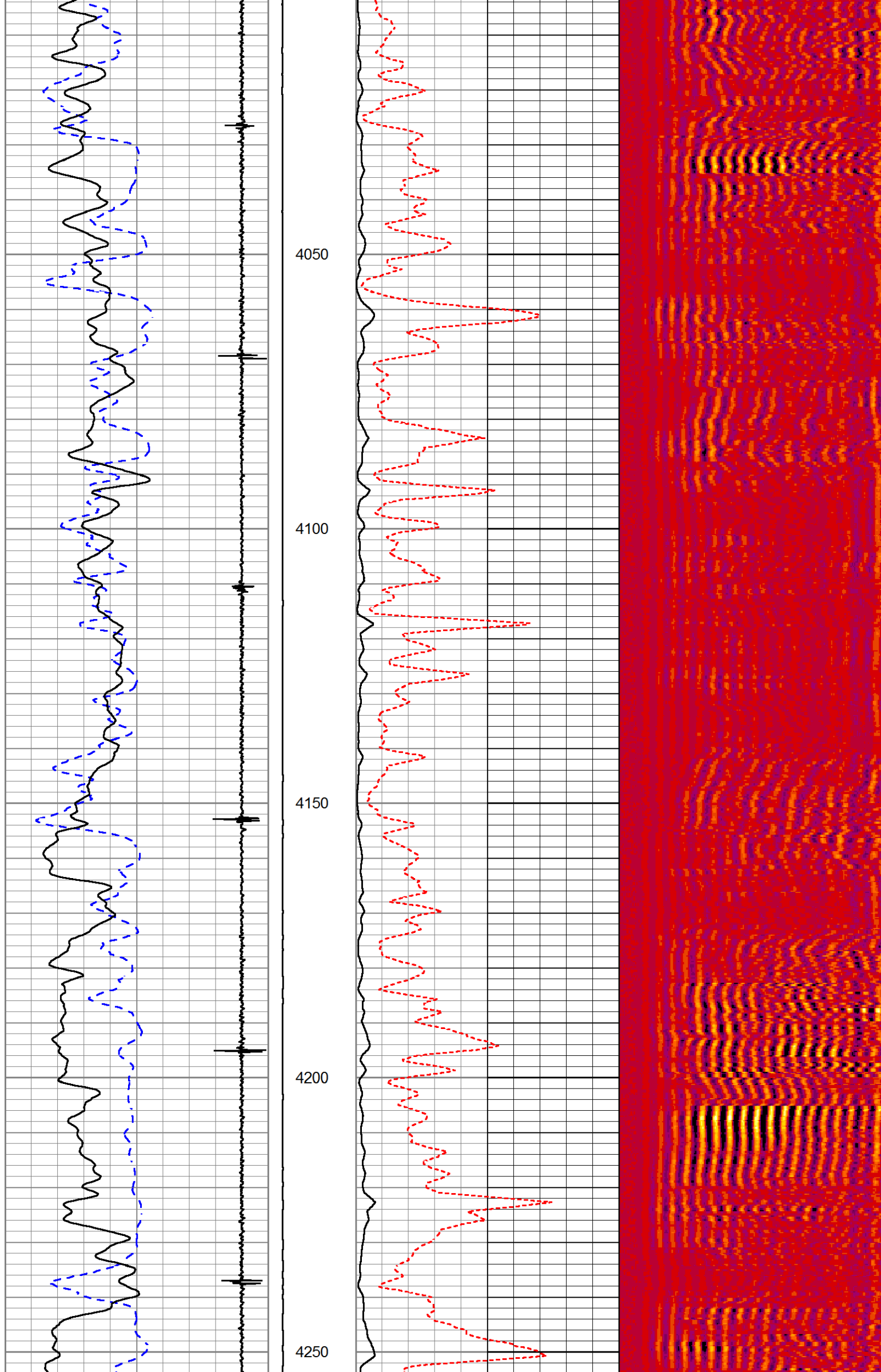


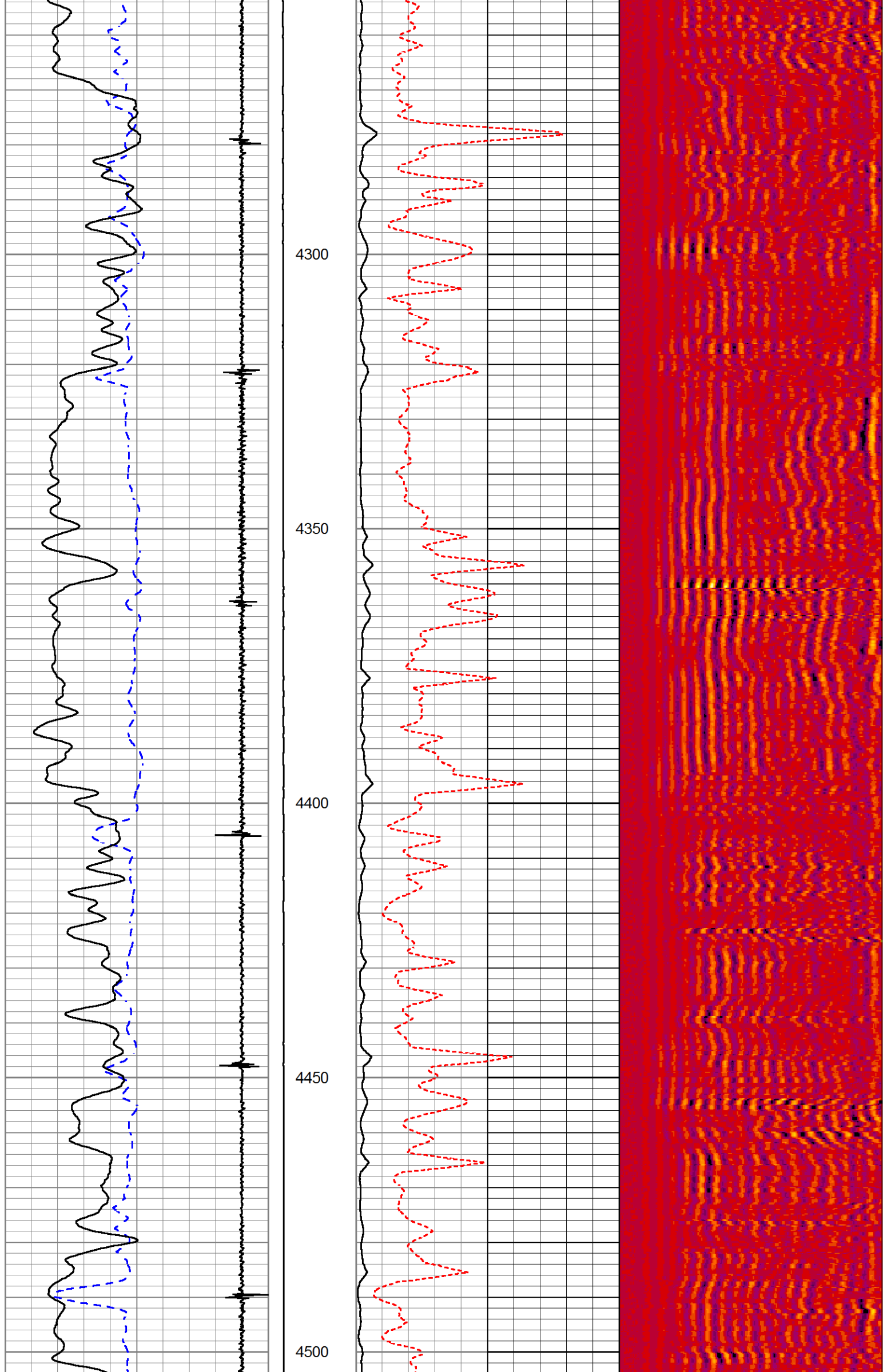


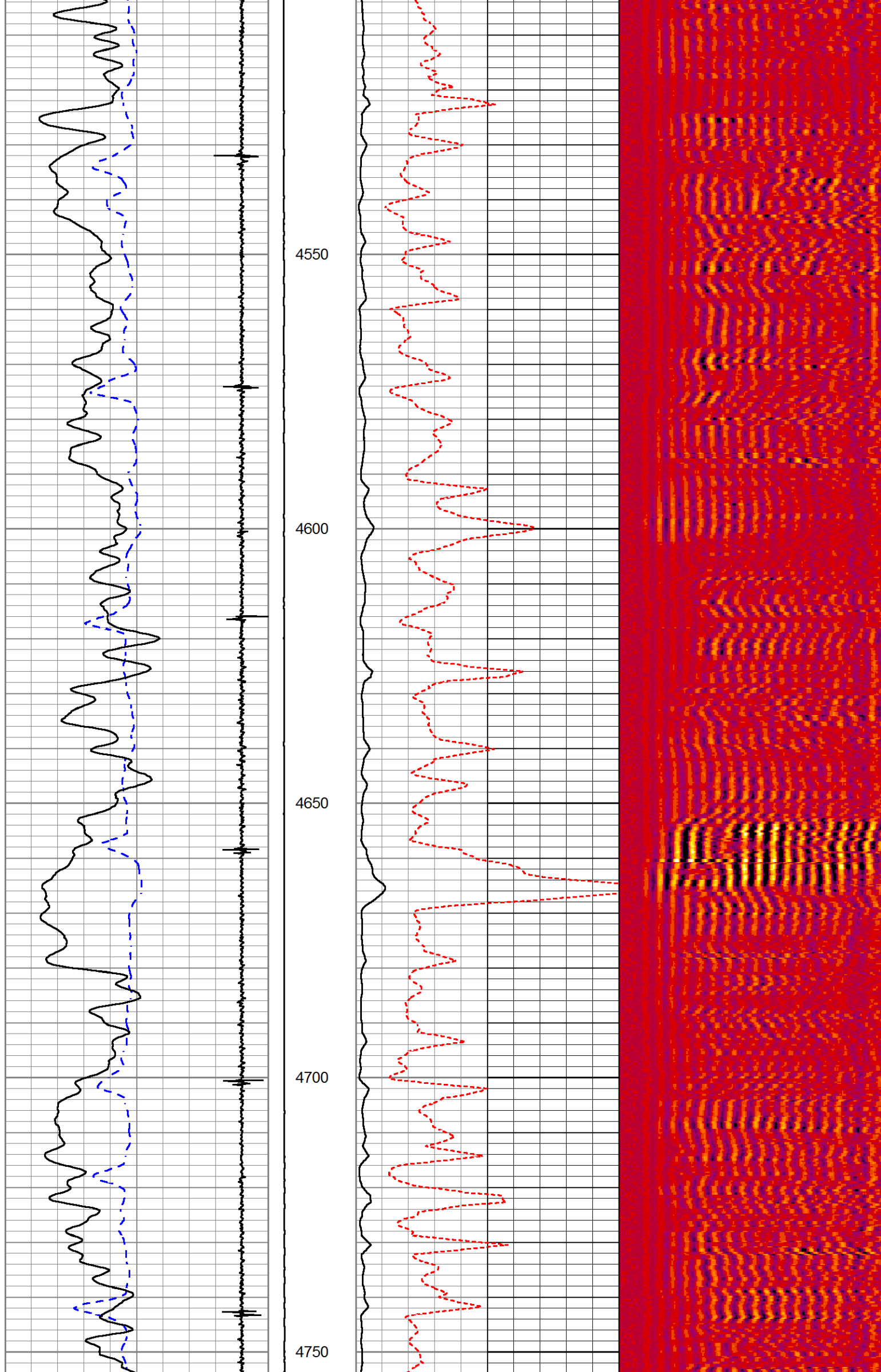


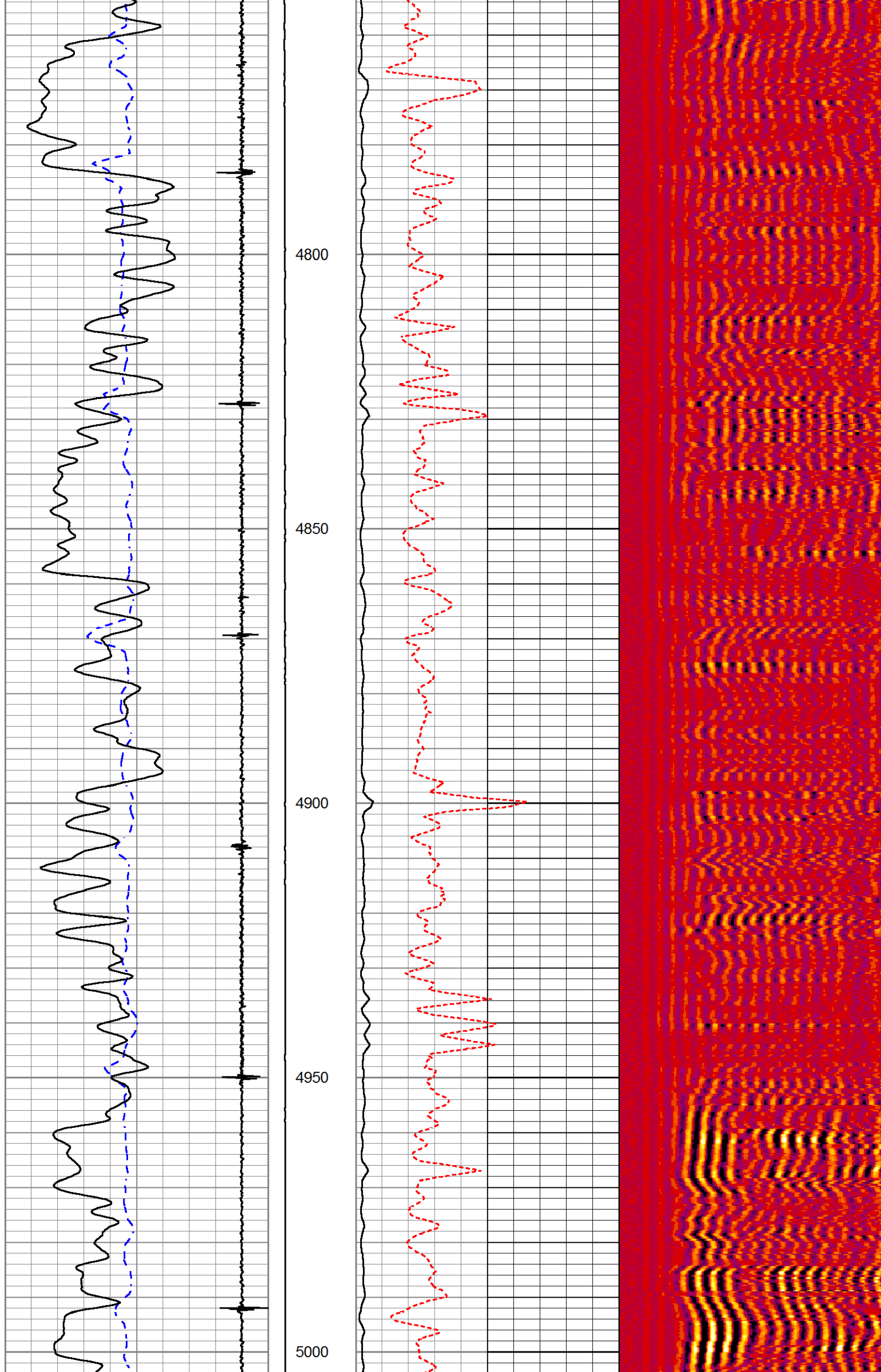


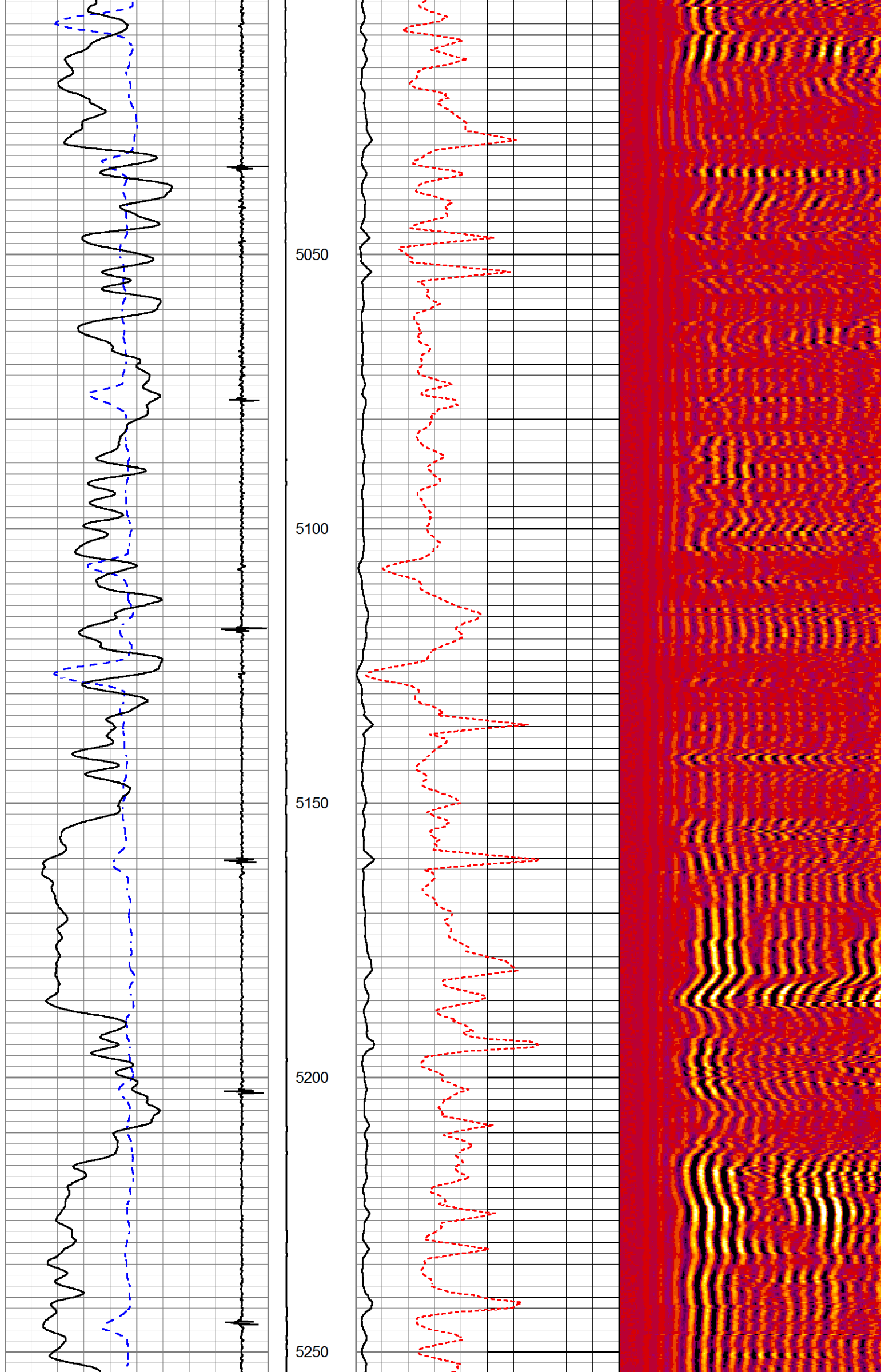


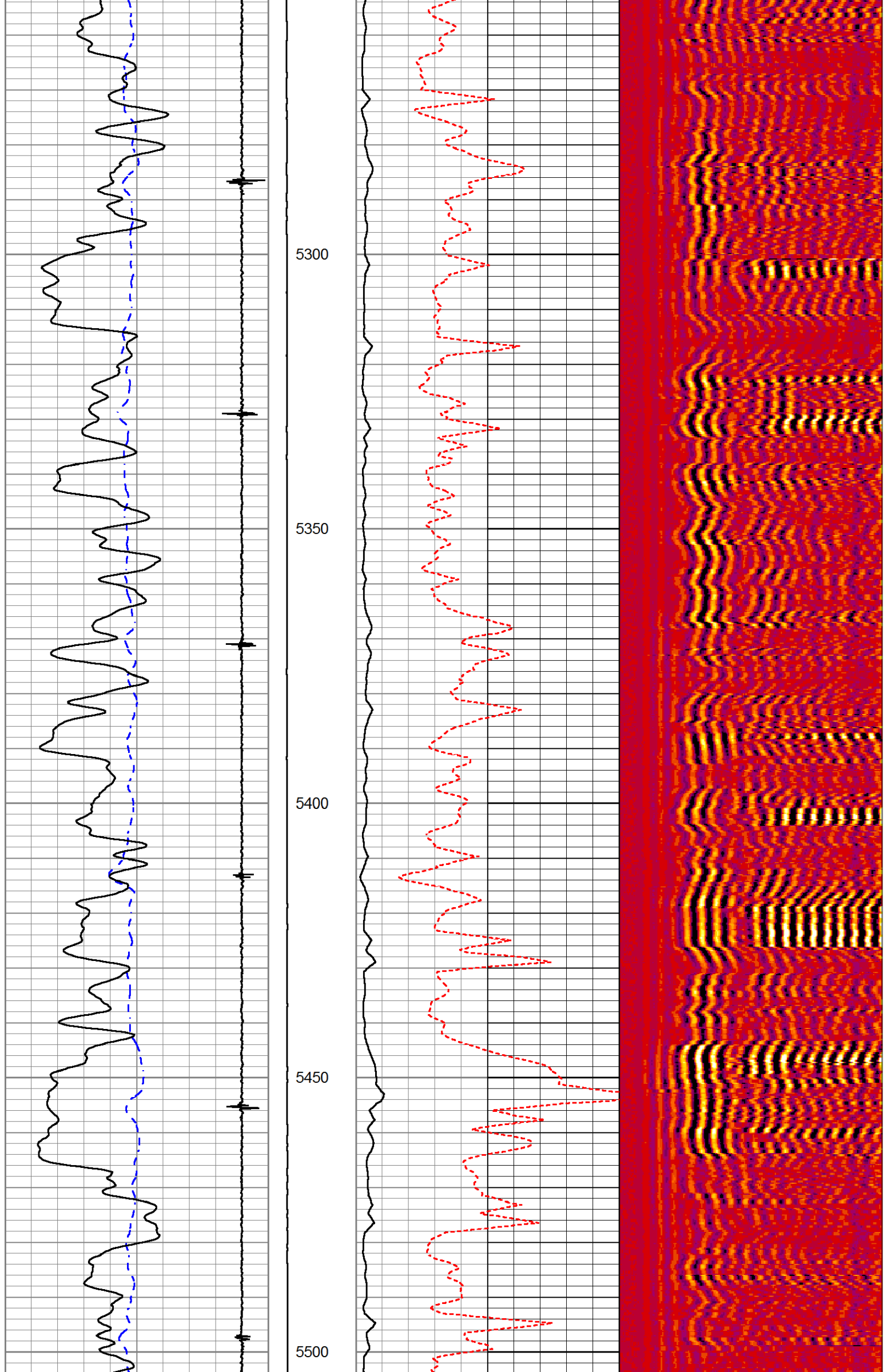


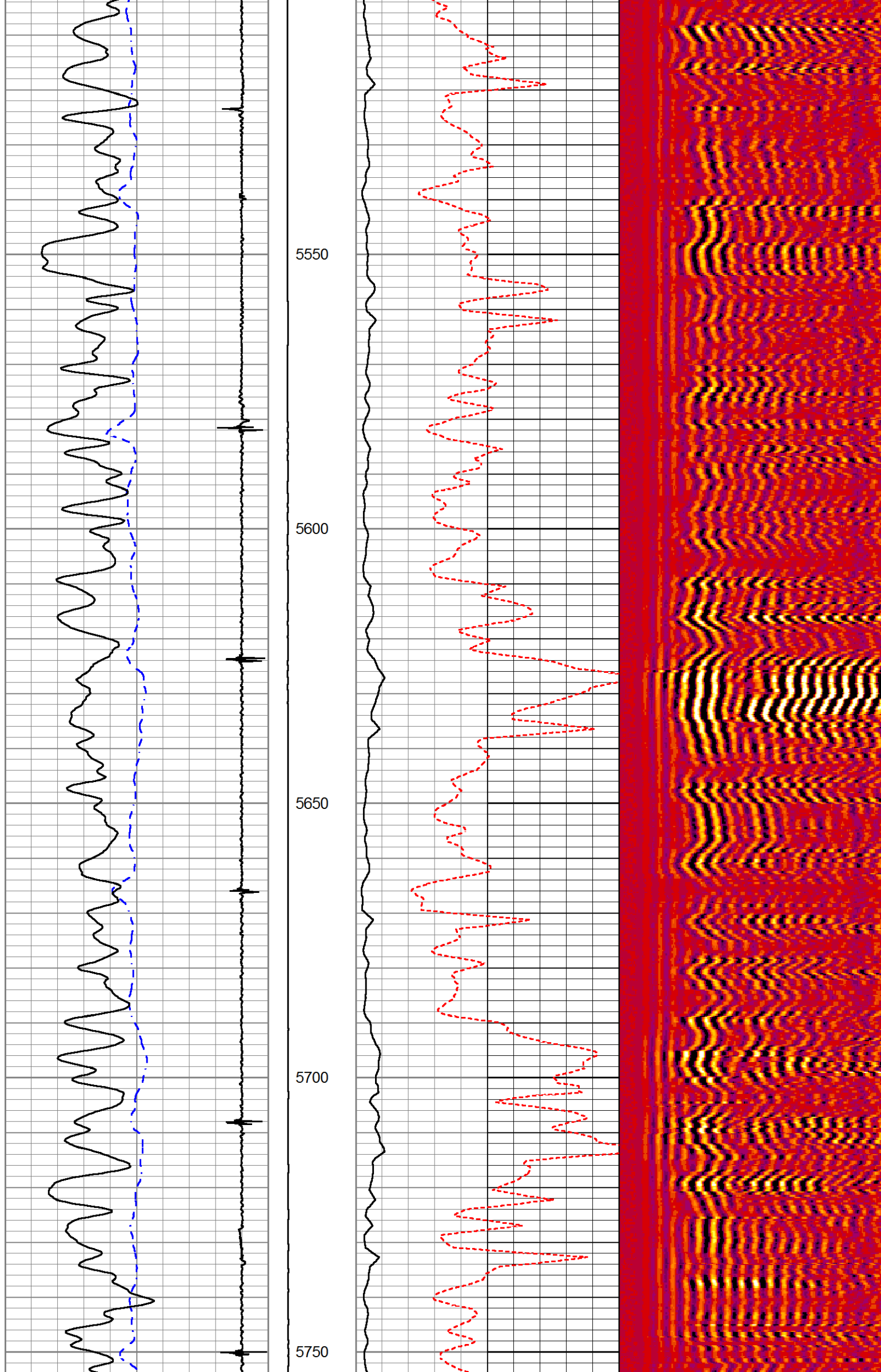


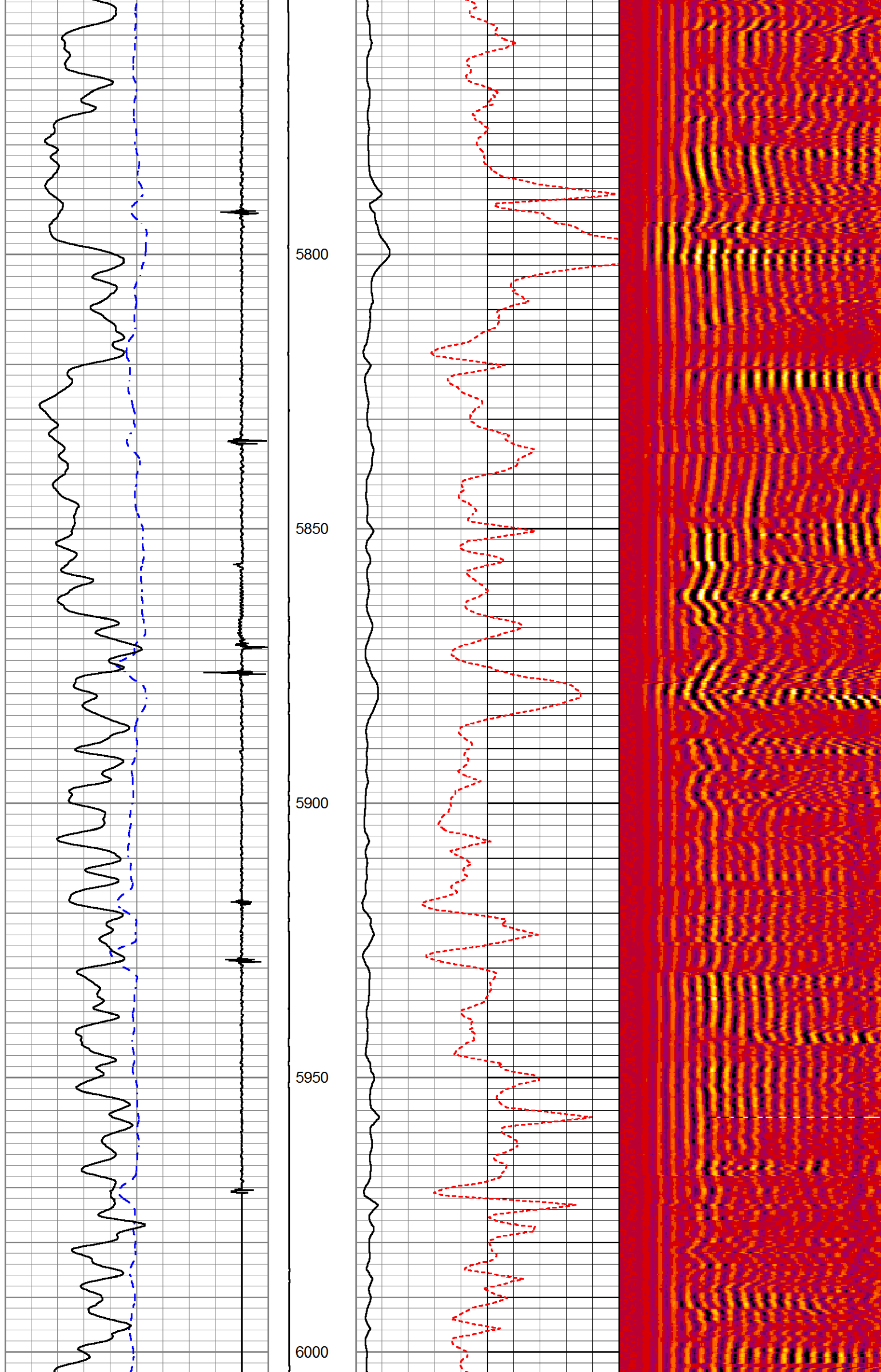


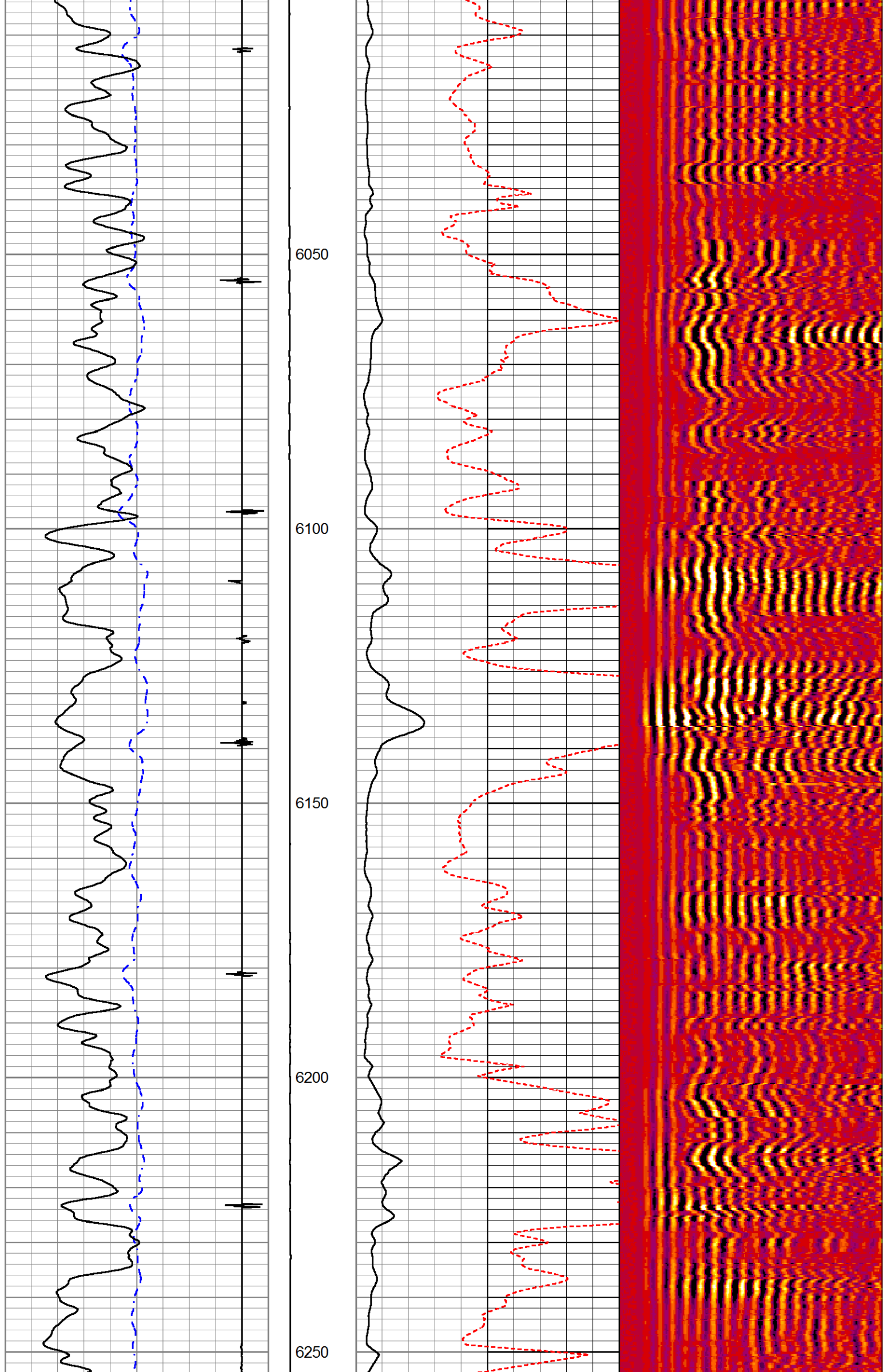


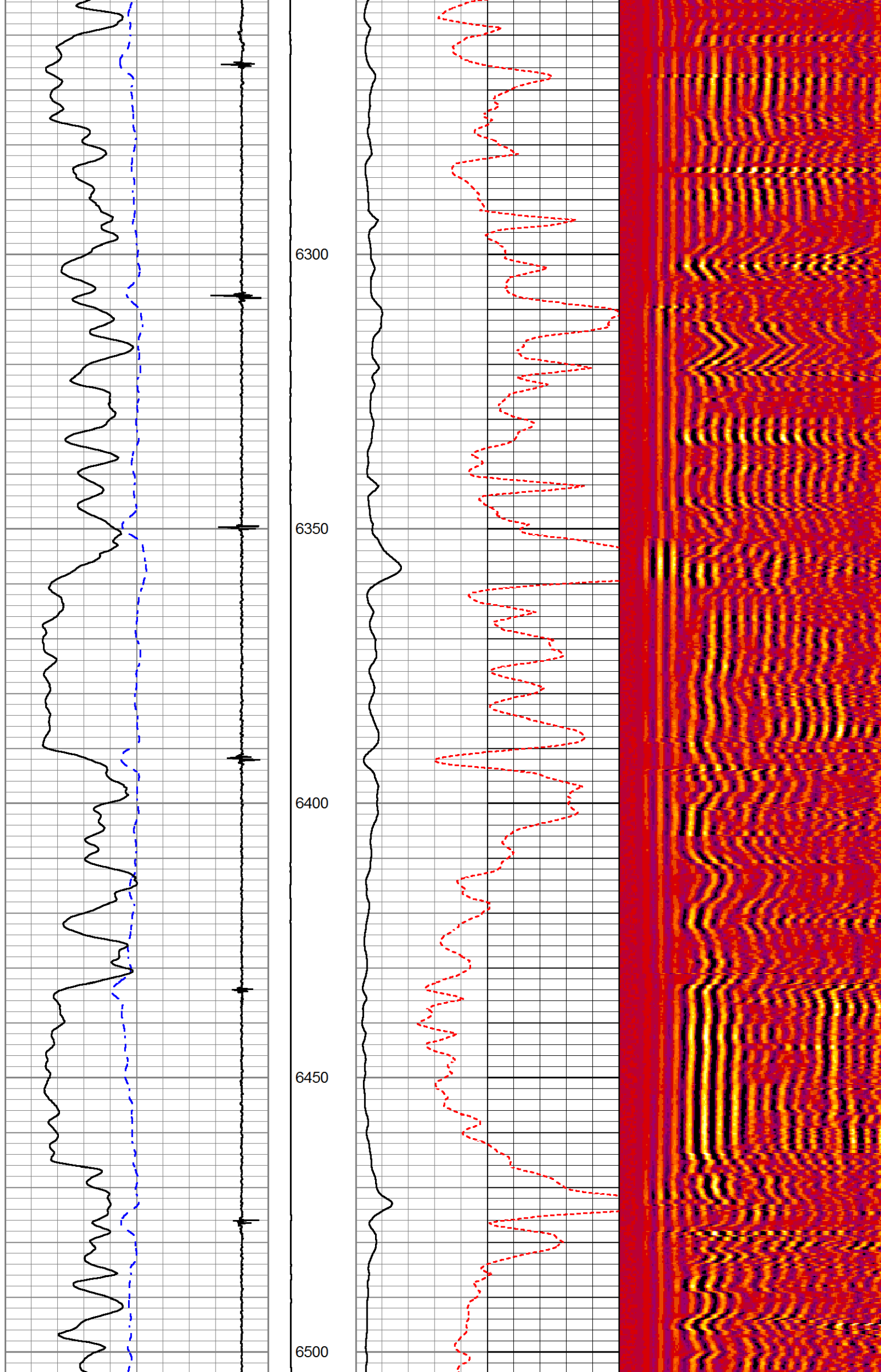


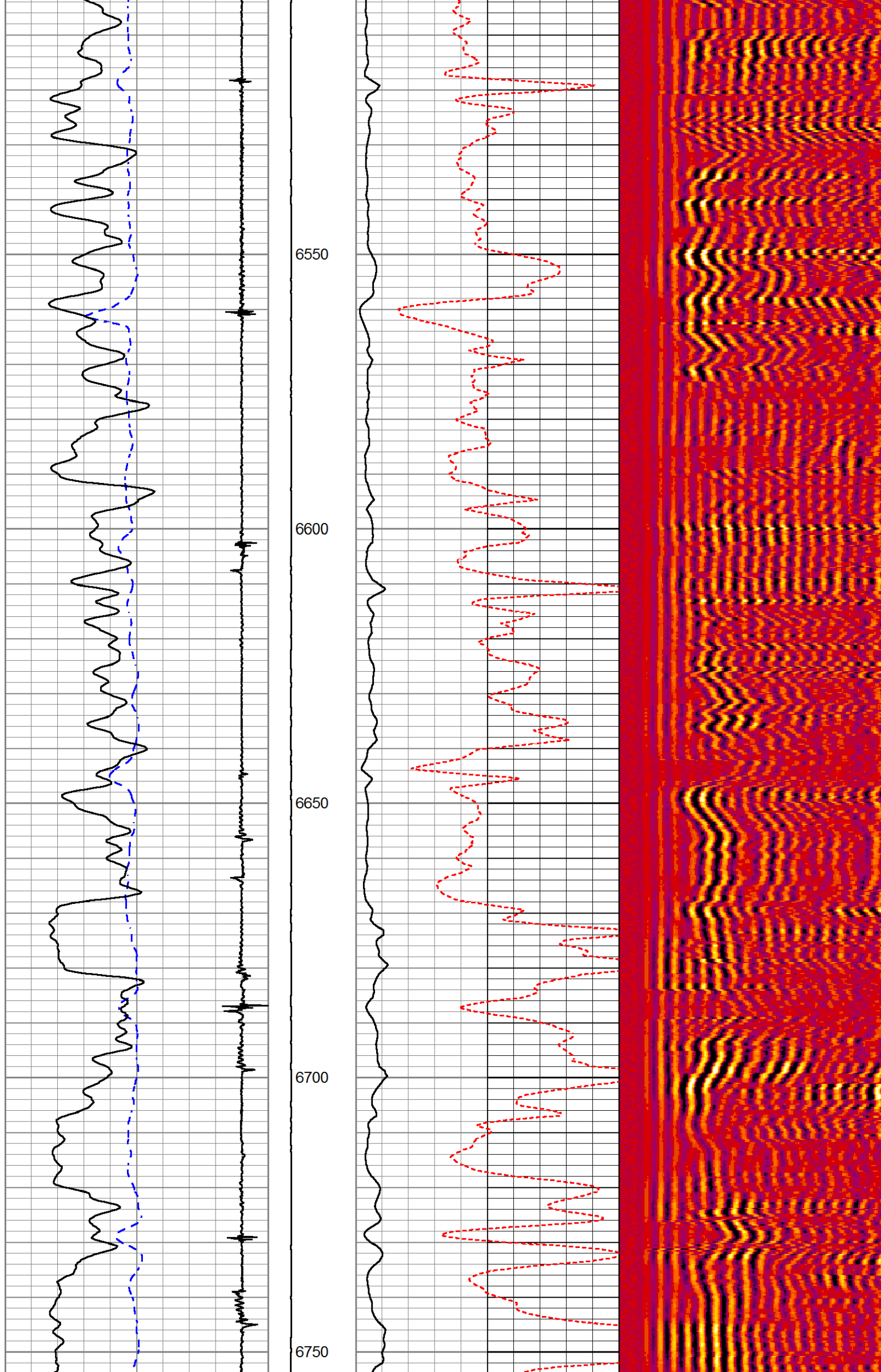


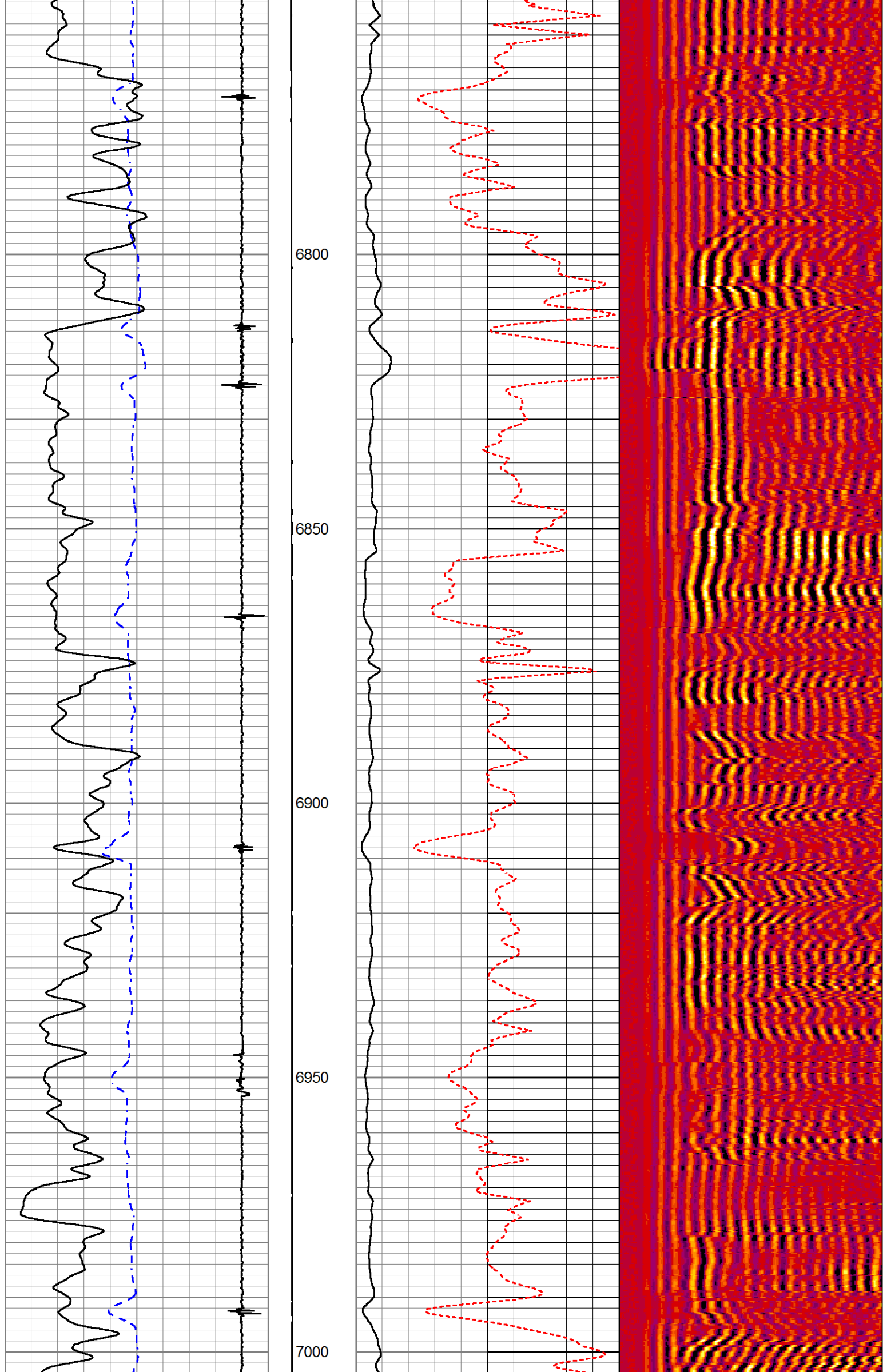


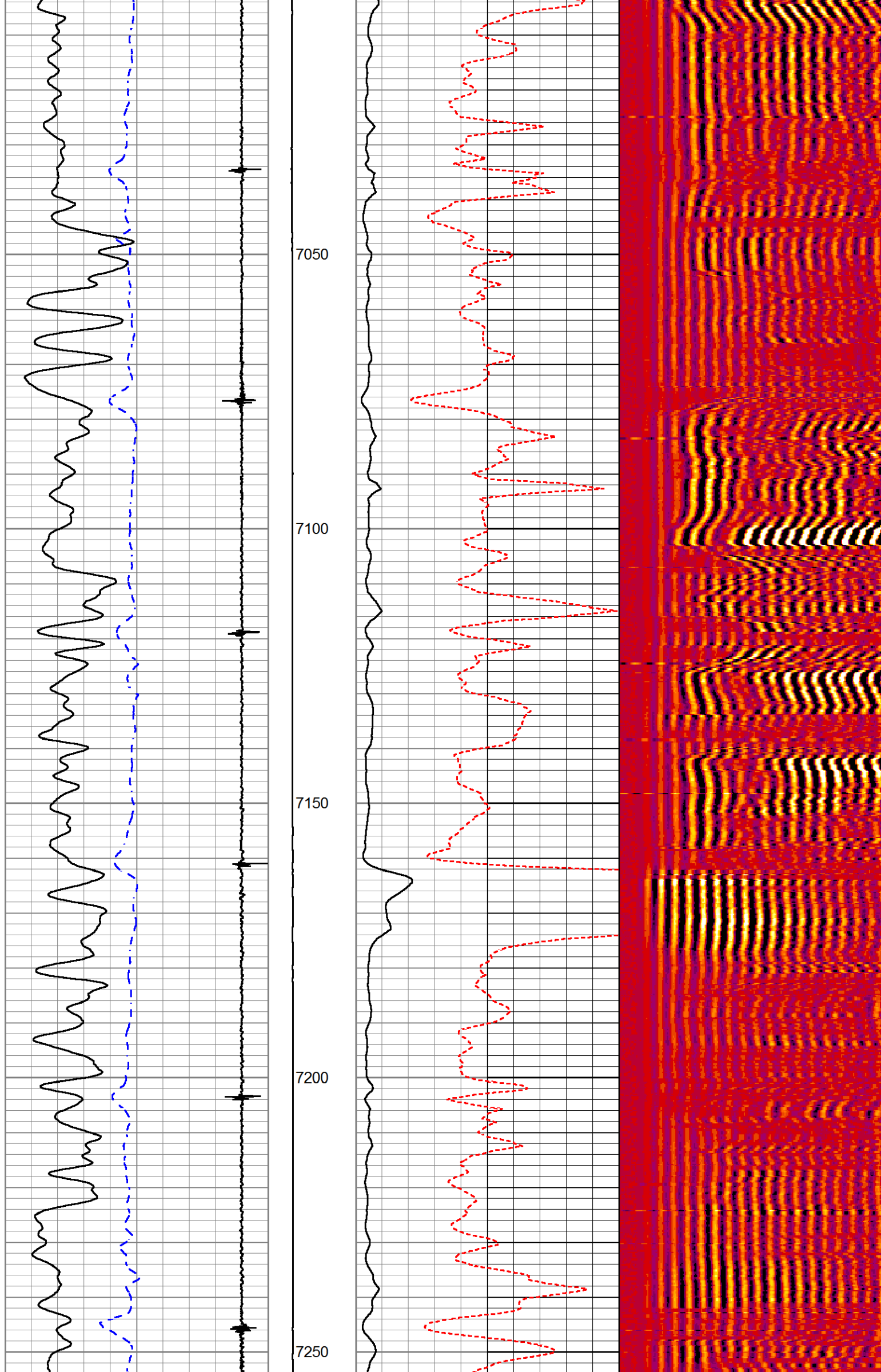


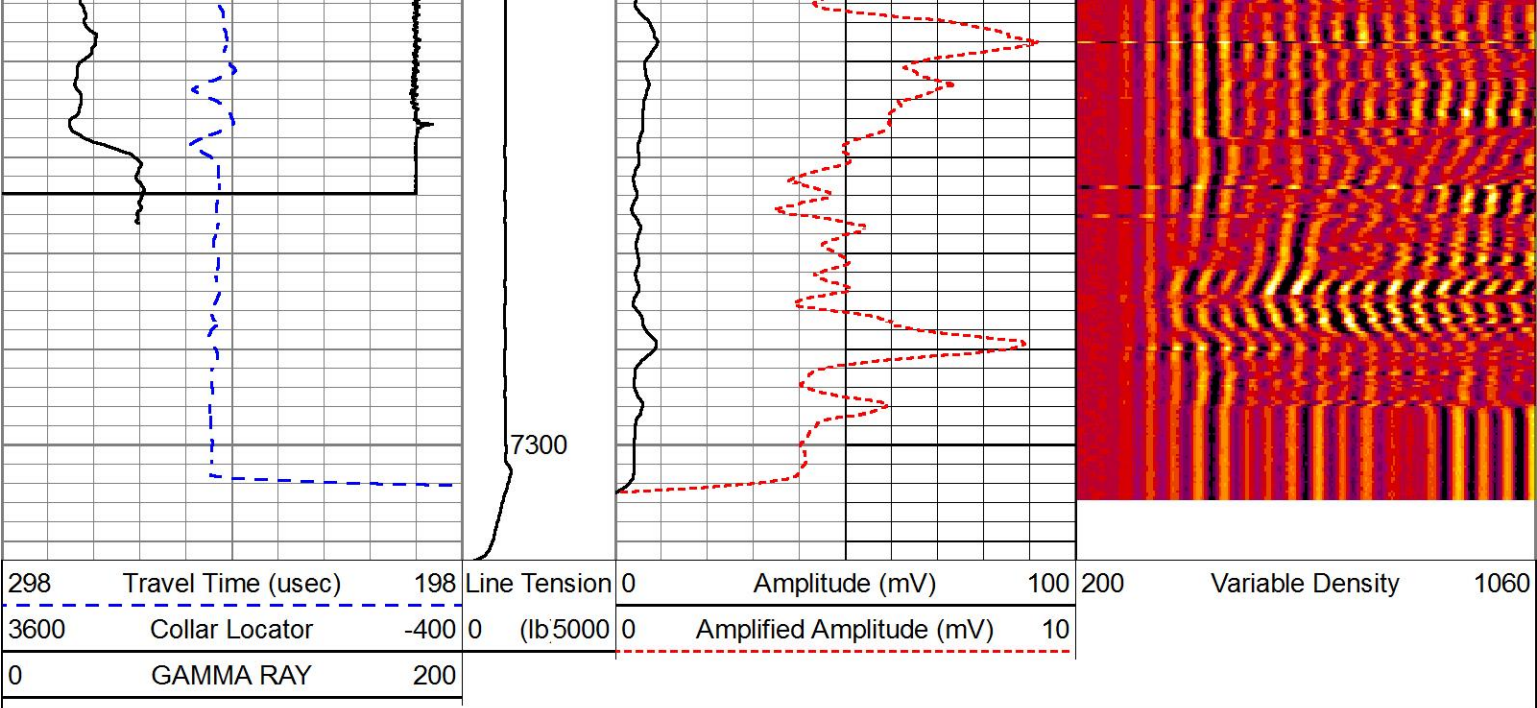












MAIN PASS

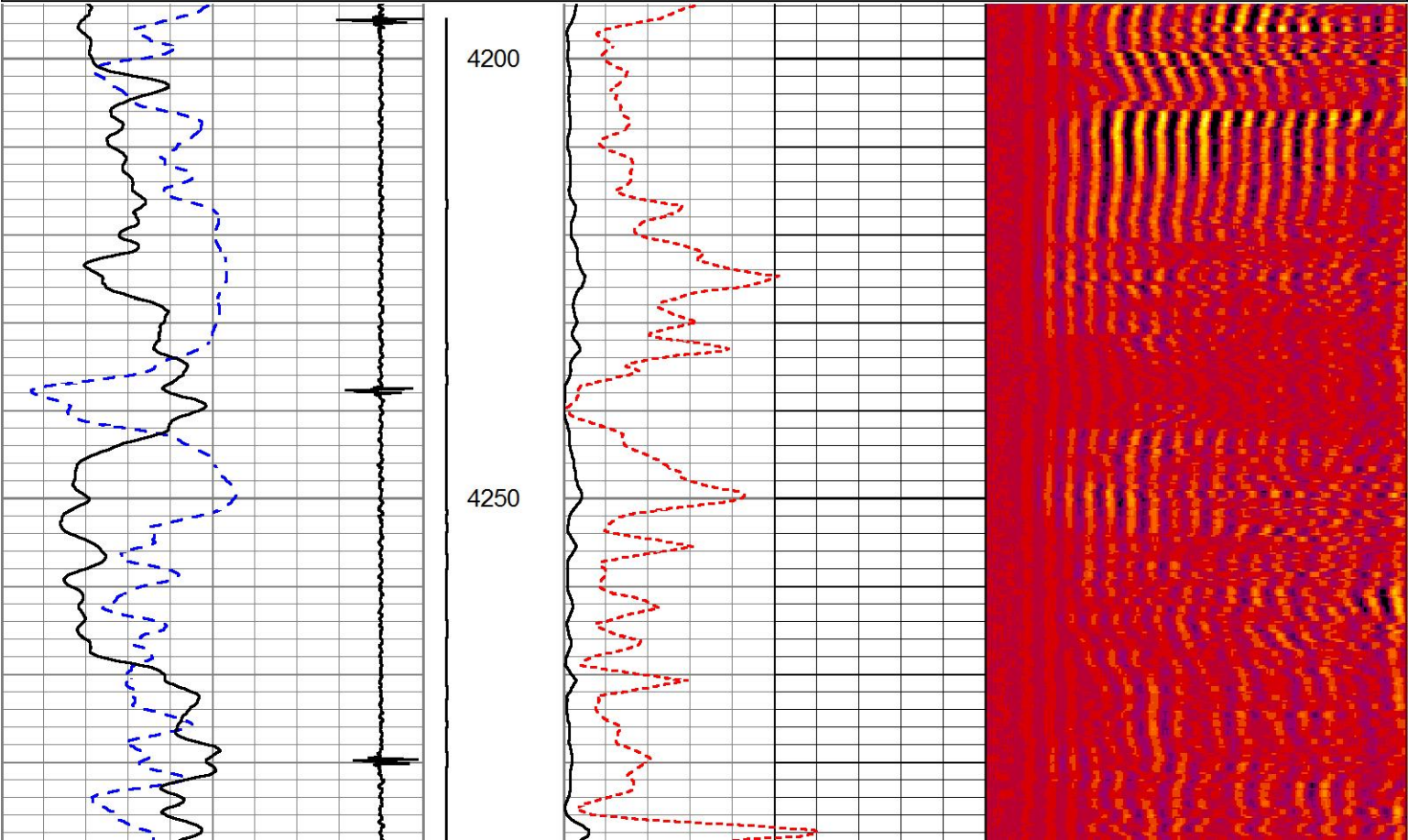
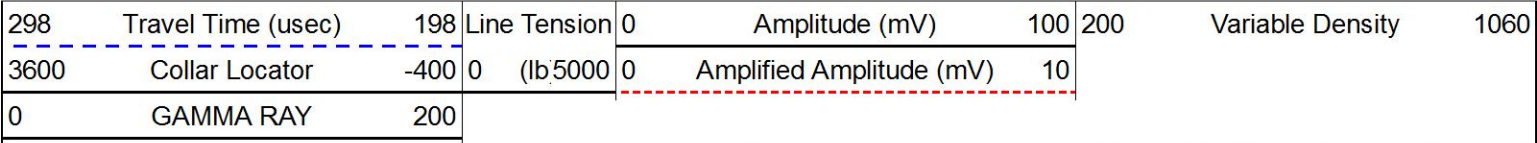
5" = 100'

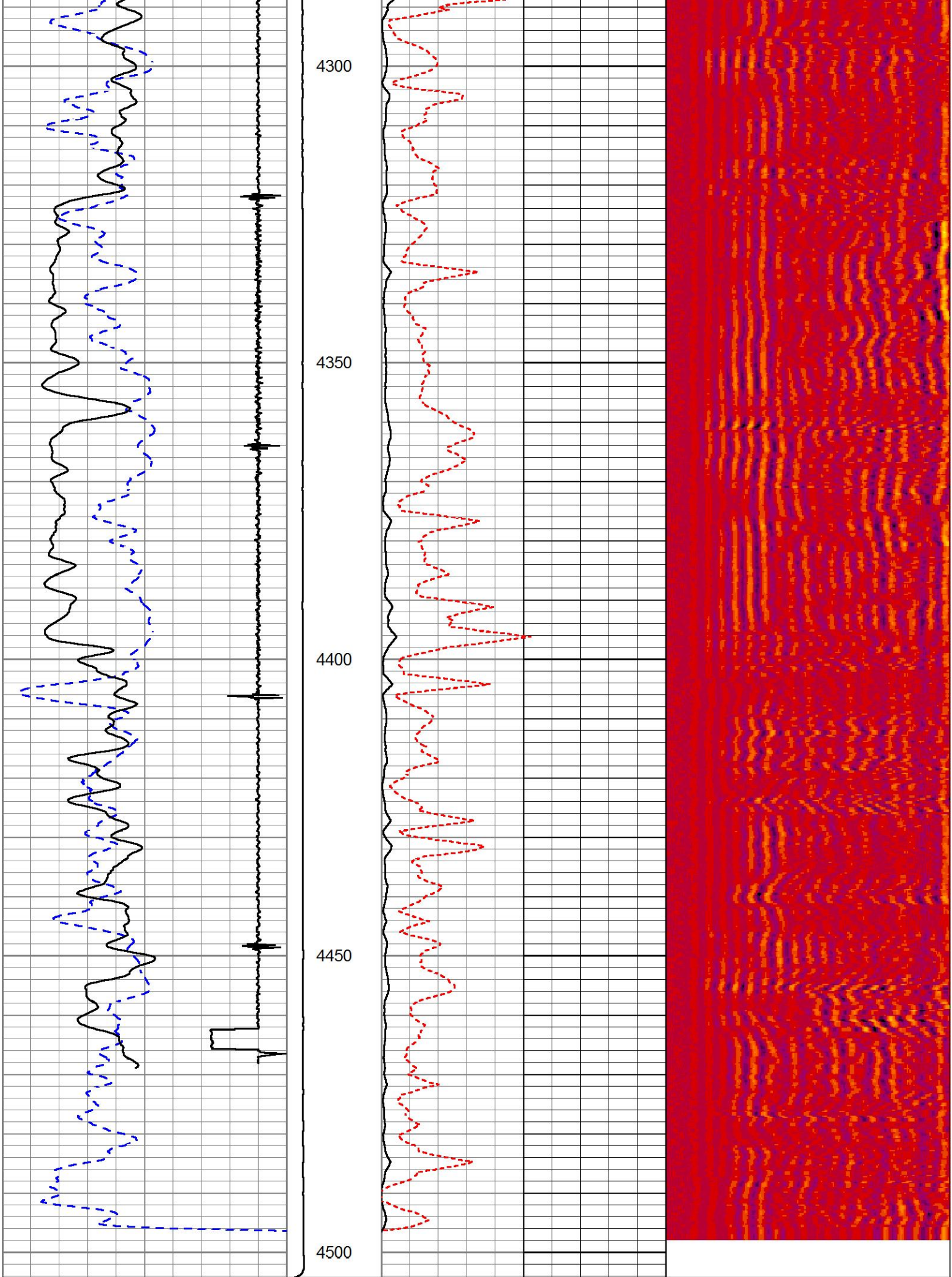
HALLIBURTON

REPEAT PASS

5" = 100'

Database File mr_b_34b_08_7_95.db
Dataset Pathname pass8
Presentation Format !1!!cbl_rmti
Dataset Creation Sun Nov 27 11:24:25 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'

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 0.625	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 0	TDEPTH ft 7490	UHSGC NONE	USERFTT usec/ft 0	ZREF MRayl 1.7	

Calibration Report

Database File mr_b_34b_08_7_95.db
Dataset Pathname pass10
Dataset Creation Sun Nov 27 12:06:04 2016

Cement Bond Log Shop Calibration Report

Serial-Model: 11836468-A
Calibration Performed: Sun Nov 27 10:32:16 2016

Free Pipe Calibration

	Measured	Units
TT	245.4	usec
Amplitude	556.4	mV
Log Base Line	19.7	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	0.151	

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.
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H	Channel	Expected Value	Amplitude	FWHM	Tol.
Fe	60	60 +/-2	0.0356	5.76	<6.50
FGAIN = 0.990	210	208 +/-2	0.0903	-----	-----
	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




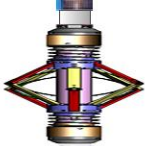



Calibration Software Modules	
HRMTI Module	2015.5.4.0
RMTI Module	2015.10.16.1
Log Data Acquisition Software Modules	
HRMTI Module	2015.5.4.0
RMTI Module	2015.10.16.1

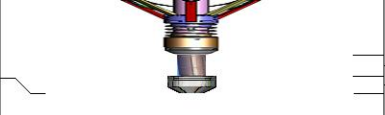
Gamma Ray Calibration Report

Type / Serial:002 / 11214503

SHOP CALIBRATION		Wed Nov 09 16:25:32 2016			
Background Calibrator	Counts/Sec.	Gain	Offset	Jig	Units
	34.1				cps
	297.9	1.3950			cps GAPI/cps
PRIMARY VERIFICATION					
Background Calibrator Difference	42.3				cps
	413.8				cps
				371.5	GAPI
BEFORE SURVEY VERIFICATION					
Background Calibrator	0.0				cps
	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
RmtNFwvMcsPI	14.66		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	14.66					
Temp	9.57		HCBLM-A (11836468) Halliburton HCBLM Tool	9.38	2.75	116.00
TT3FT	7.32					
AMP3FT	7.32					
WVF5FT	6.36					
WVF3FT	2.84		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
			AUH-001 (11072111)	0.38	1.69	3.00

LLMTEN	0.00		Adaptor Ultrawire/Halliburton BUL-001 (000001) Bullnose	0.30	1.69	1.50
Dataset: mr_b_34b_08_7_95.db: field/well/run1/pass10 Total length: 39.39 ft Total weight: 356.50 lb O.D.: 3.13 in						

Company	URSA OPERATING COMPANY LLC				
Well	MONUMENT RIDGE B 34B-08-7-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	CEMENT BOND LOG				