

HALLIBURTON				CEMENT BOND LOG			
Company		URSA OPERATING COMPANY LLC		Company URSA OPERATING COMPANY LLC Well MONUMENT RIDGE B 44D-08-7-95 Field PARACHUTE County GARFIELD State CO			
Well		MONUMENT RIDGE B 44D-08-7-95					
Field		PARACHUTE					
County		GARFIELD State CO					
Permanent Datum		GROUND LEVEL		Elevation		5702'	
Log Measured From		KB		K.B.		5719'	
Drilling Measured From		KB		D.F.		5719'	
		KB		G.L.		5702'	
Date @ Time Logged		28 NOV 2016 @ 21:35		Type Fluid in Hole		FRESH WATER	
Run No.		ONE		Density of Fluid		8.4 PPG	
Depth - Driller		7132'		Fluid Level		SURFACE	
Depth - Logger		6889'		Cement Top Est. Logged		2380'	
Bottom - Logged Interval		6870'		Equipment / Location		11808537 / RS. WY	
Top - Log Interval		1676'		Recorded by		P. DIMPFL	
Max. Recorded Temp.		224 degF		Witnessed by		R. TOLLE	
CEMENTING DATA		Surface		Protection		Liner	
		String		String		N/A	
Date / Time Cemented		N/A		N/A		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	
		N/A		N/A		N/A	
		N/A		N/A		N/A	
Run Number		Bit		From		To	
ONE		24"		SURFACE		60'	
TWO		12.25"		60'		1726'	
THREE		7.875"		1726'		7132'	
						</	

Service Ticket No.	903682890	API No.	05045229170000	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.	12095949
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'	3200'	0 PSI	20	REPEAT			
TWO	6889'	1676'	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			

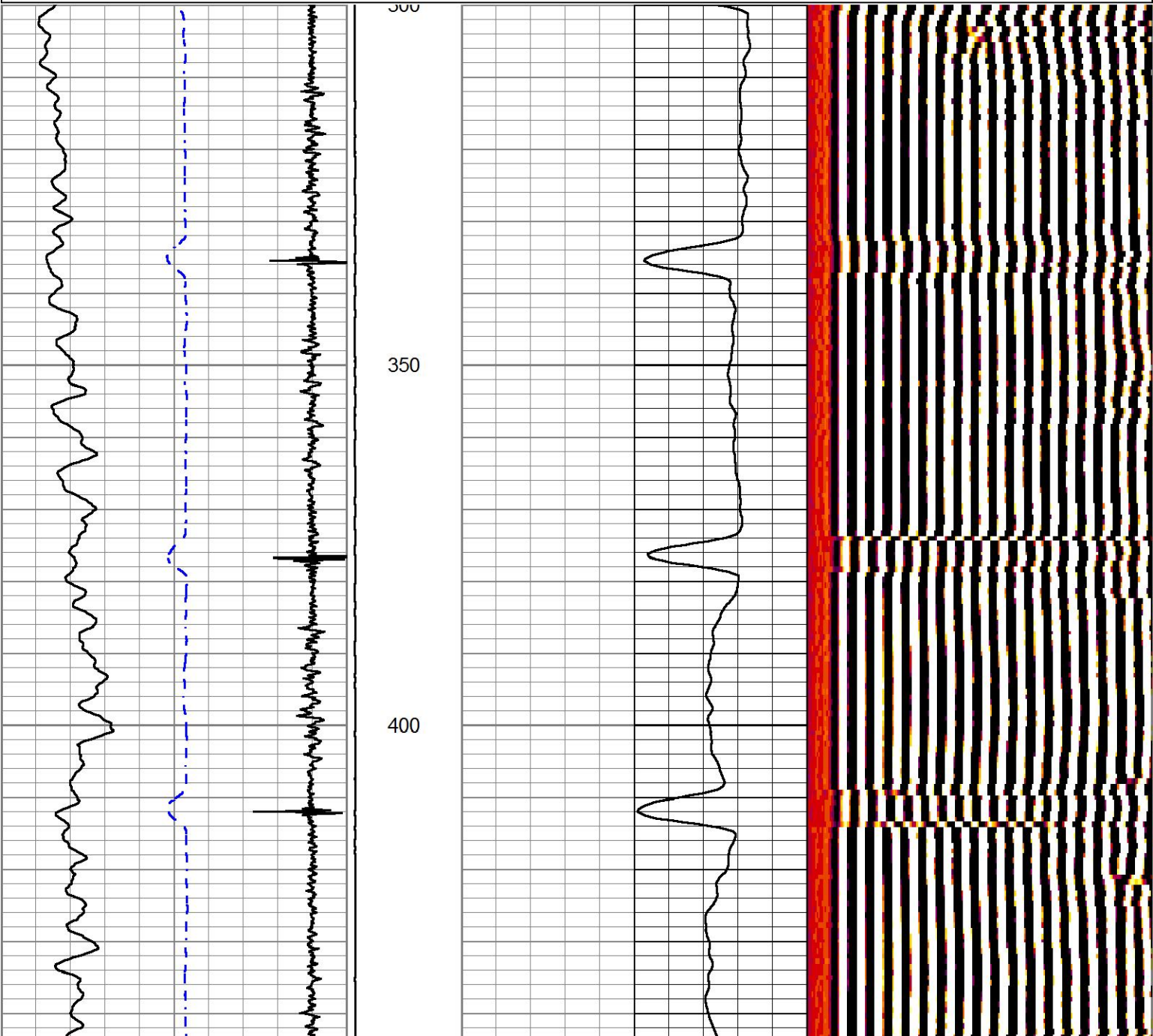
HALLIBURTON

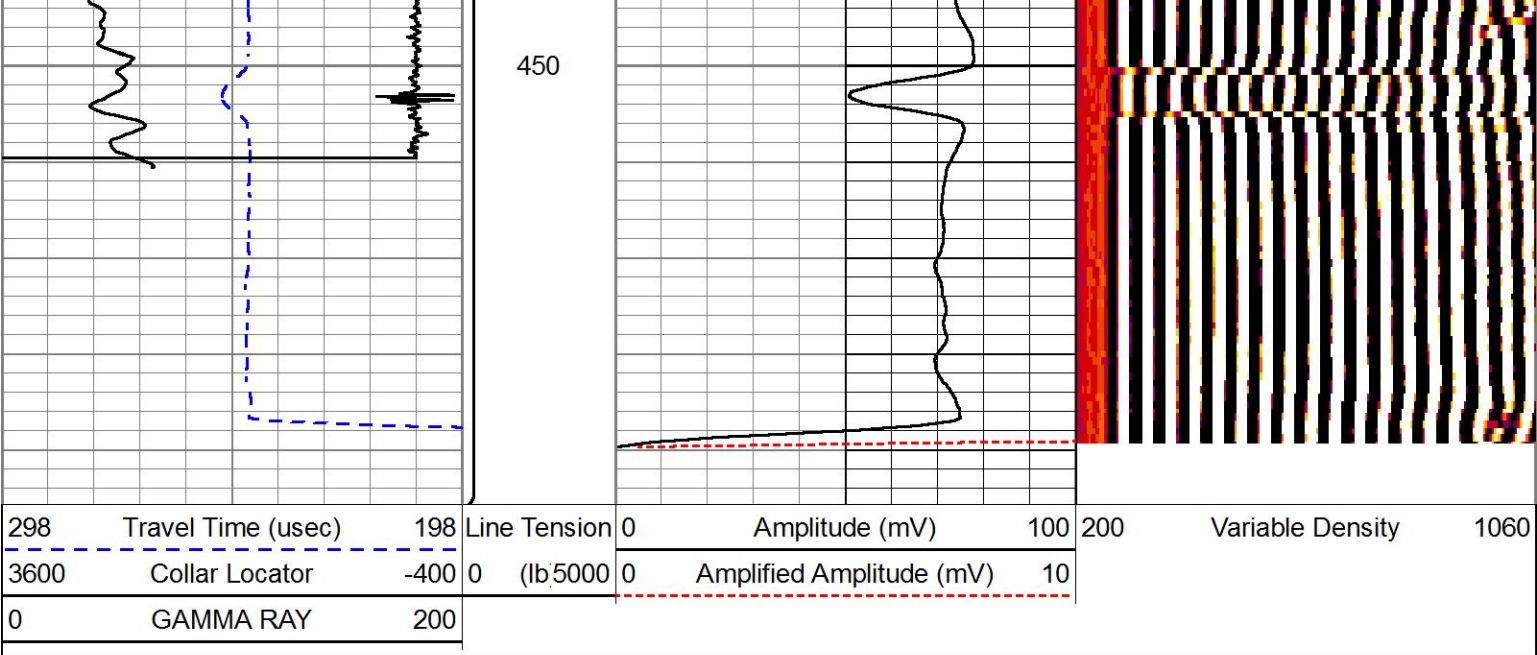
FREE PIPE SECTION

5" = 100'

Database File	mr_b_44d_08_7_95.db
Dataset Pathname	FREE
Presentation Format	!1!!cbl_rmti
Dataset Creation	Mon Nov 28 19:55:30 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

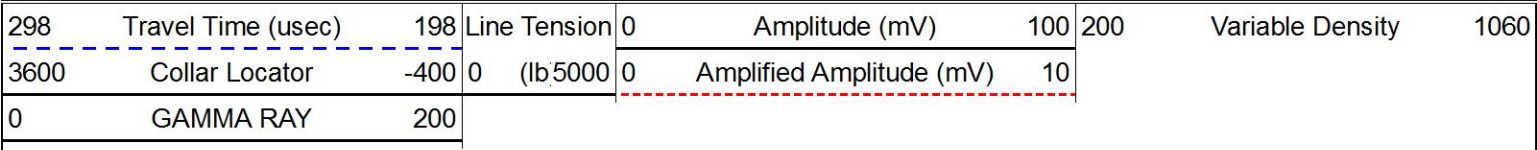
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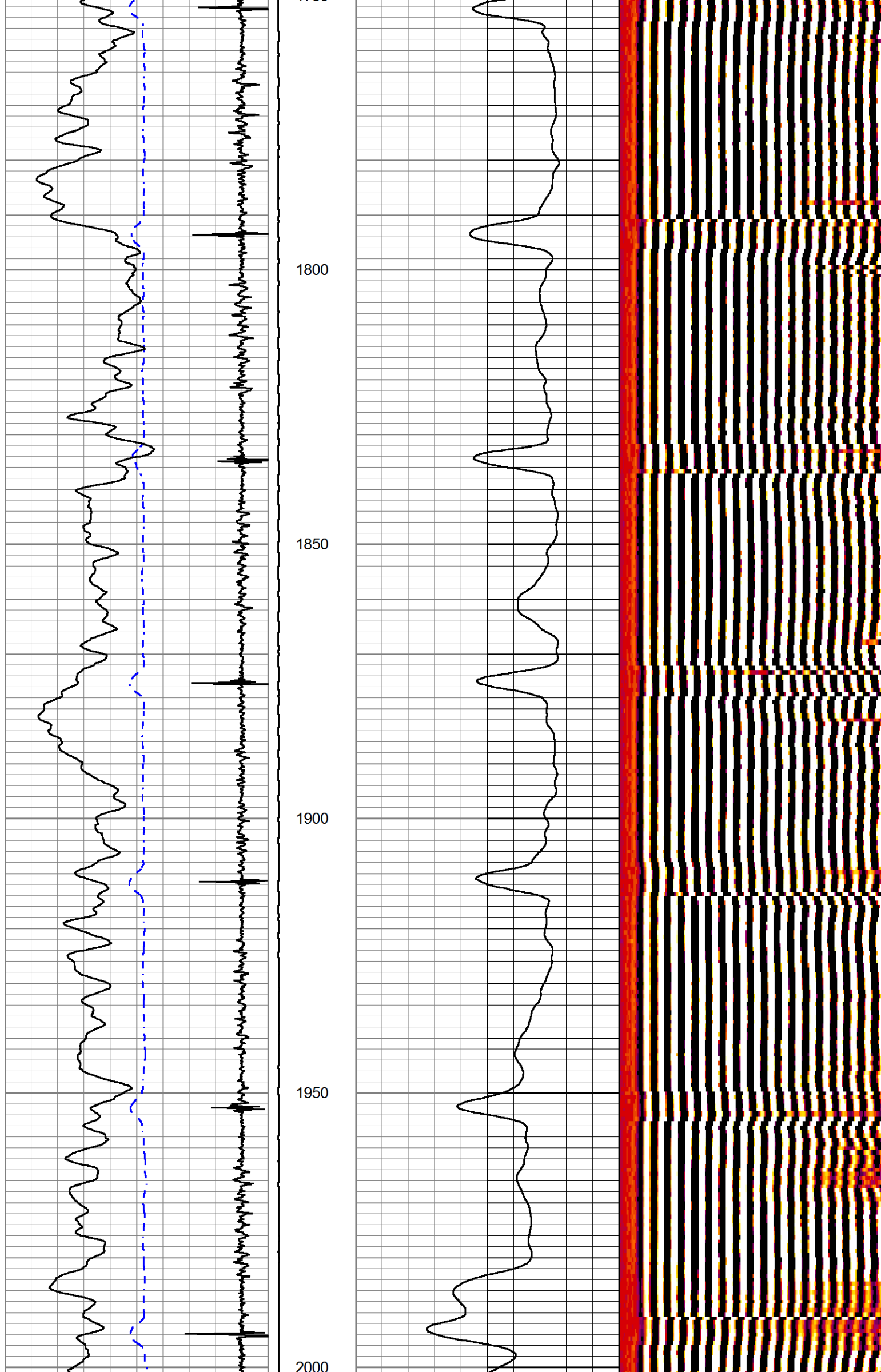
MAIN PASS

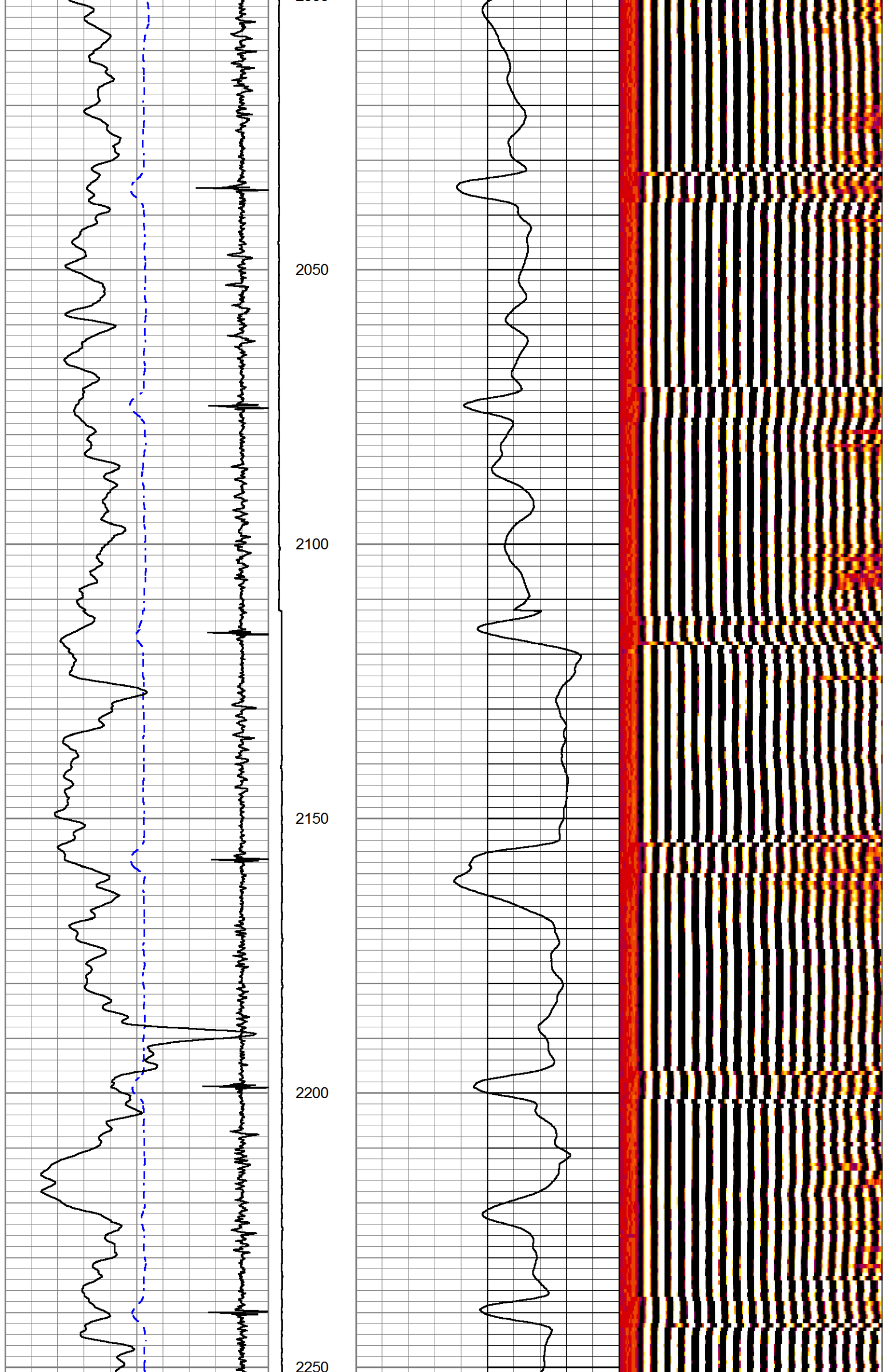
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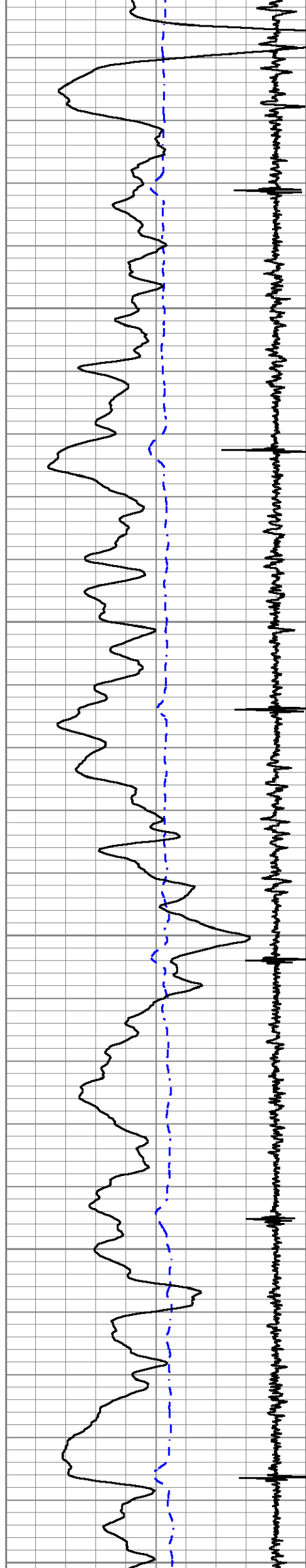
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Dataset Pathname merge2
Presentation Format !1!!cbl_rmti
Dataset Creation Tue Nov 29 11:38:30 2016
Charted by Depth in Feet scaled 1:240









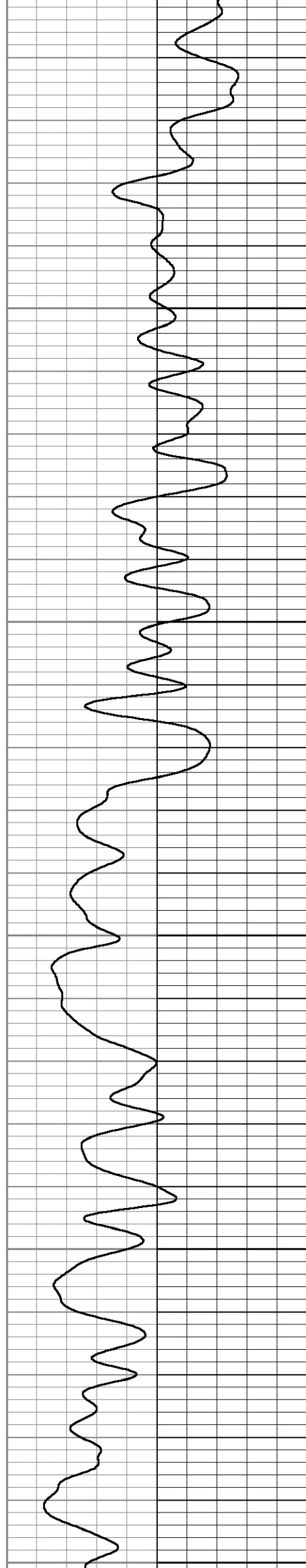
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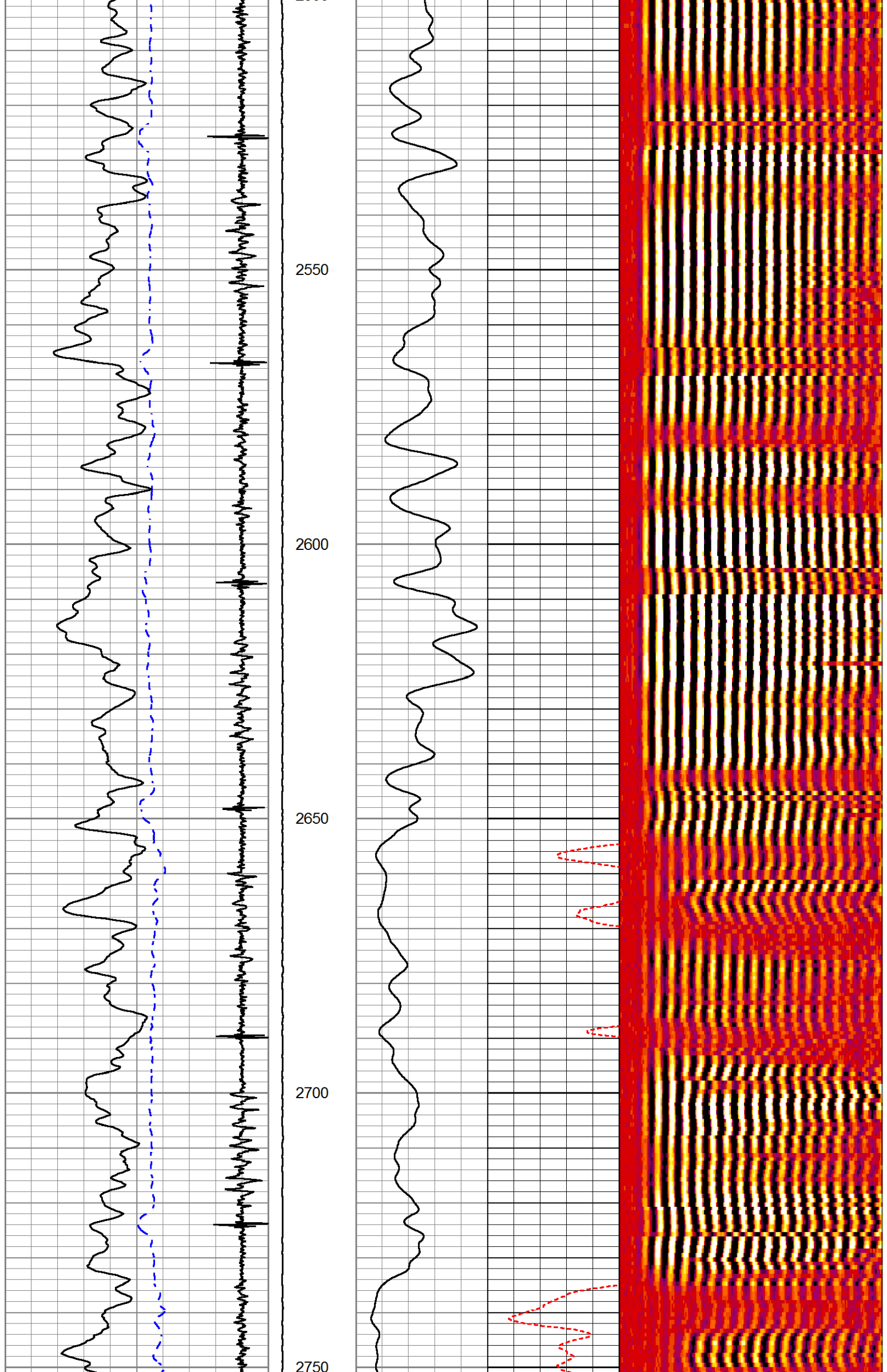
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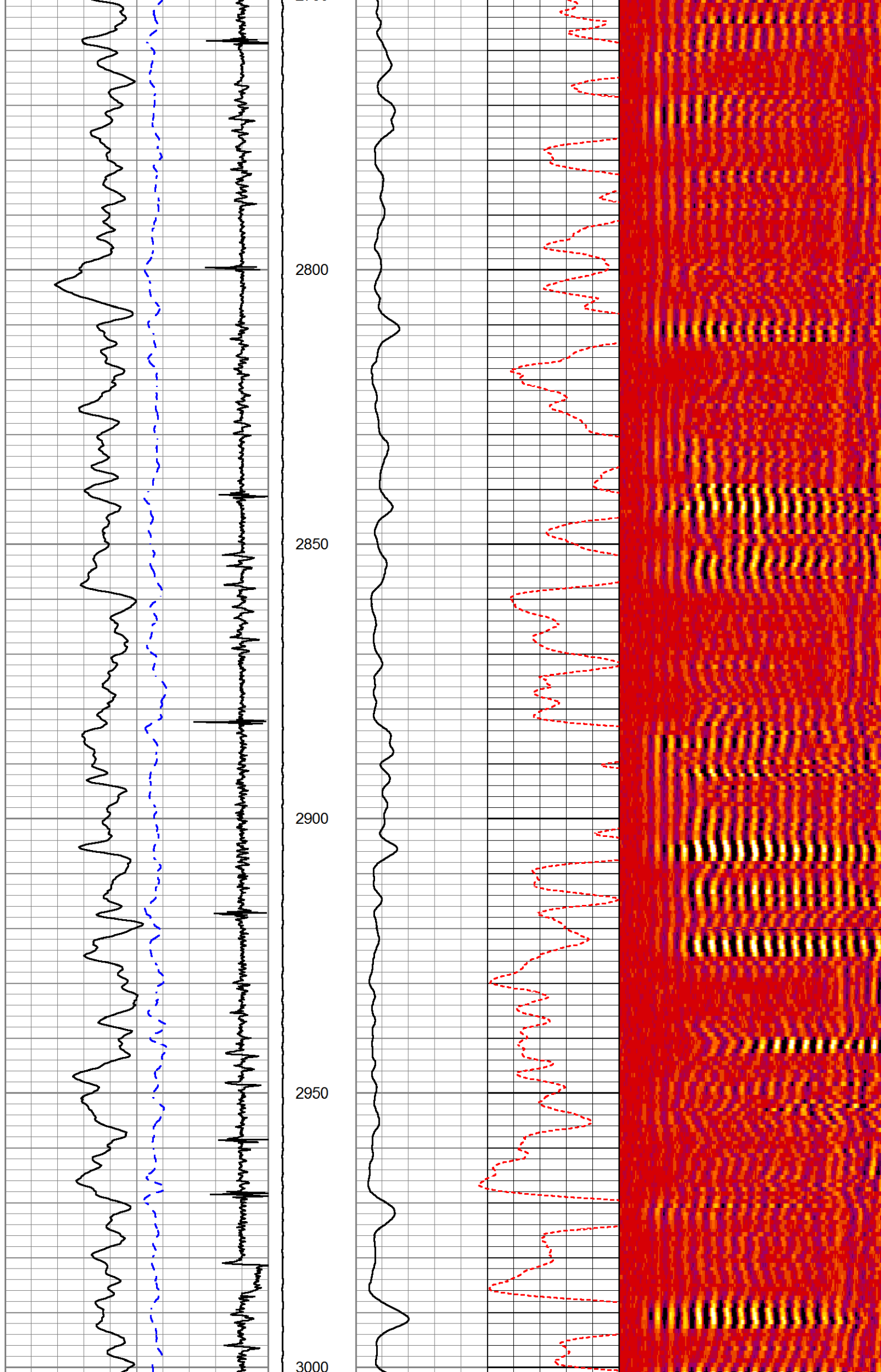
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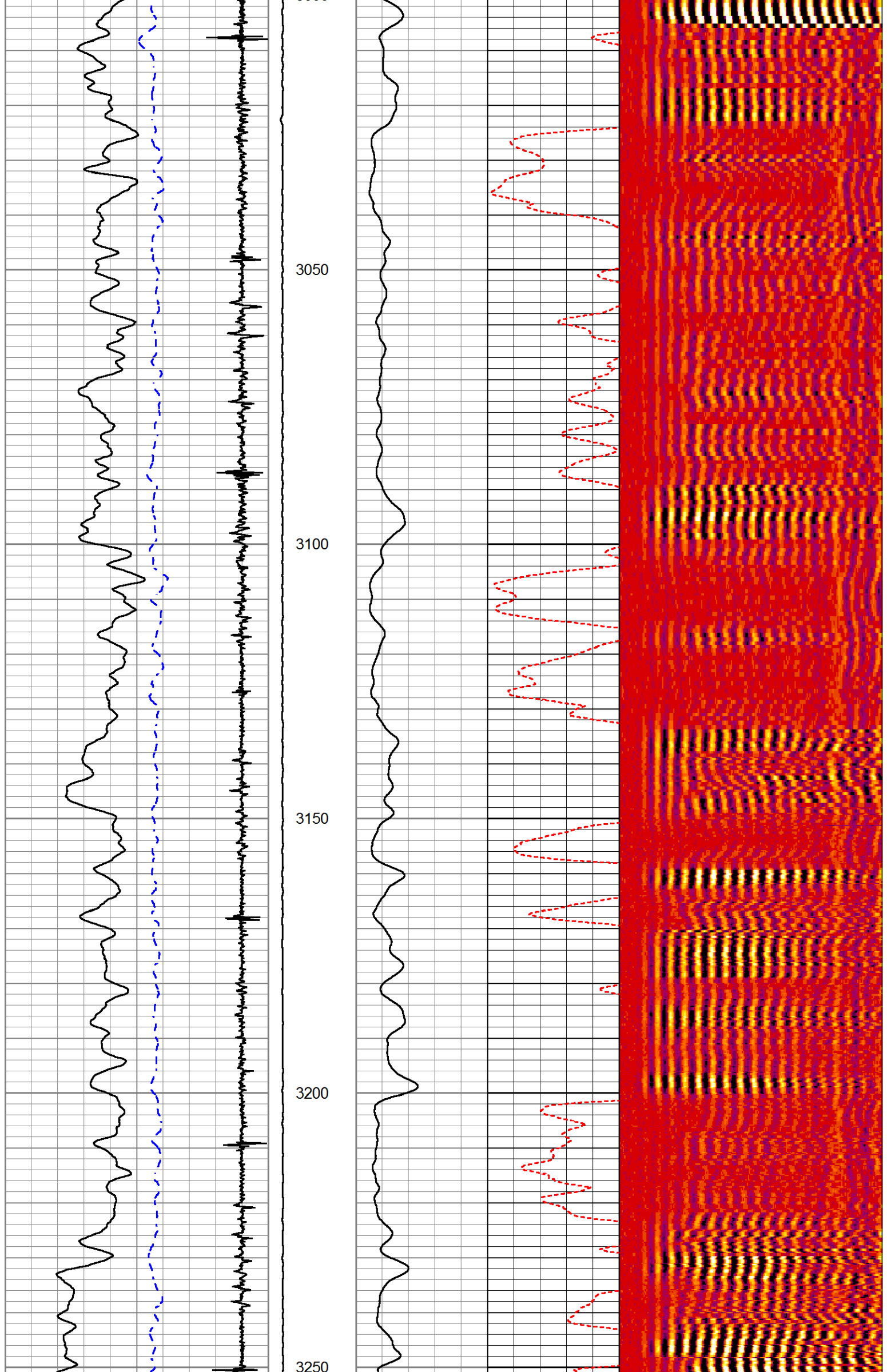
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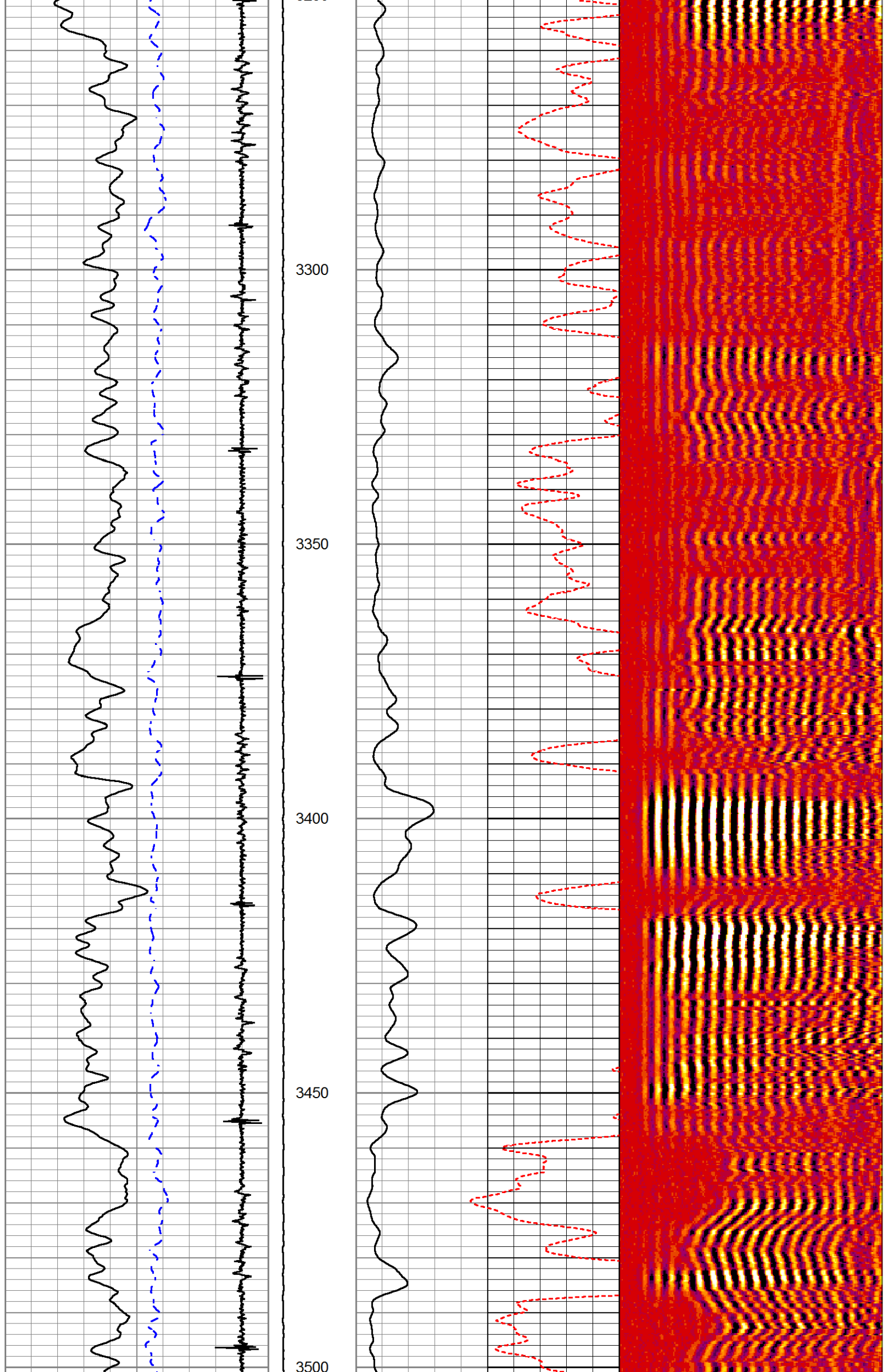
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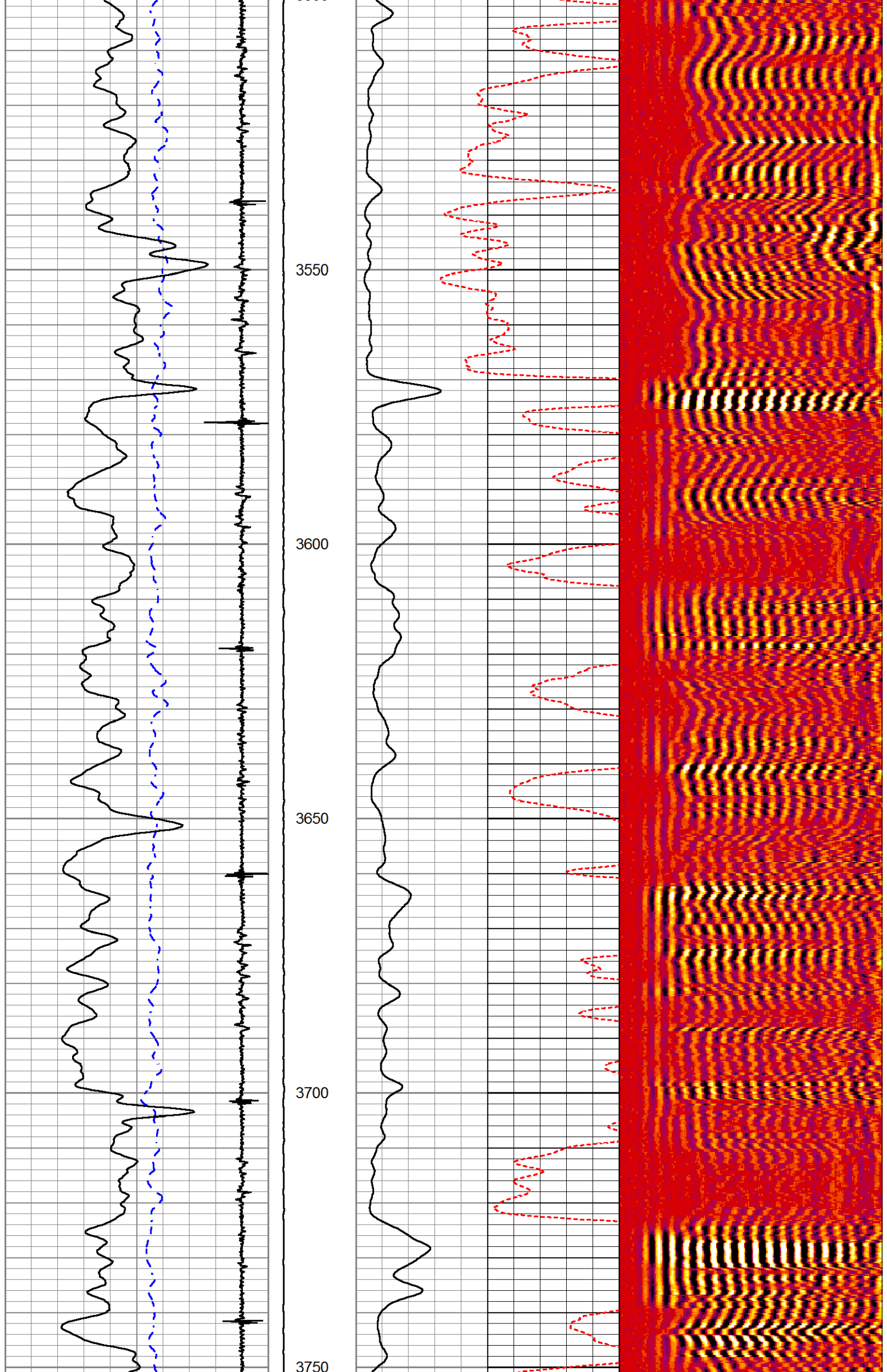


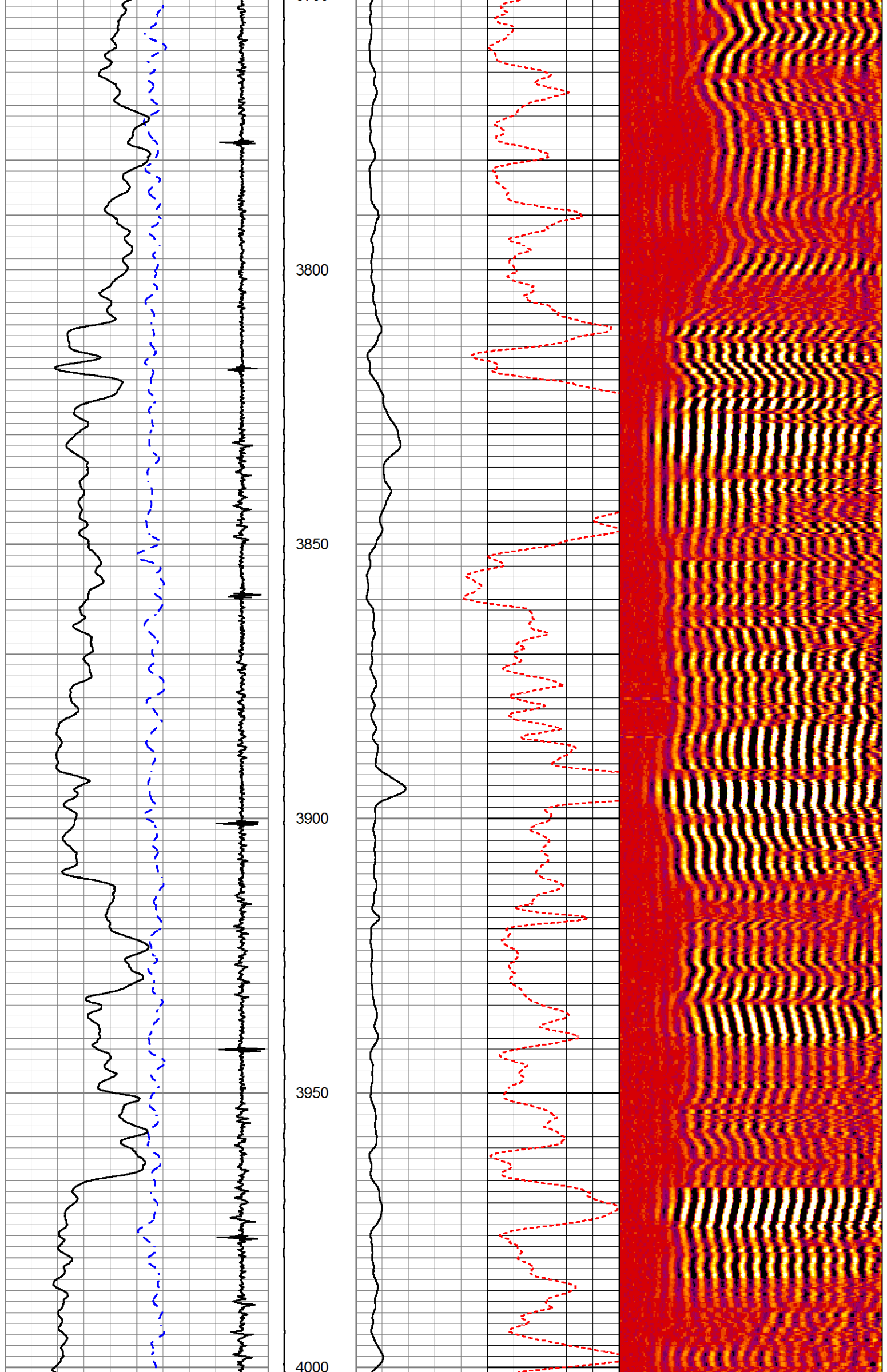


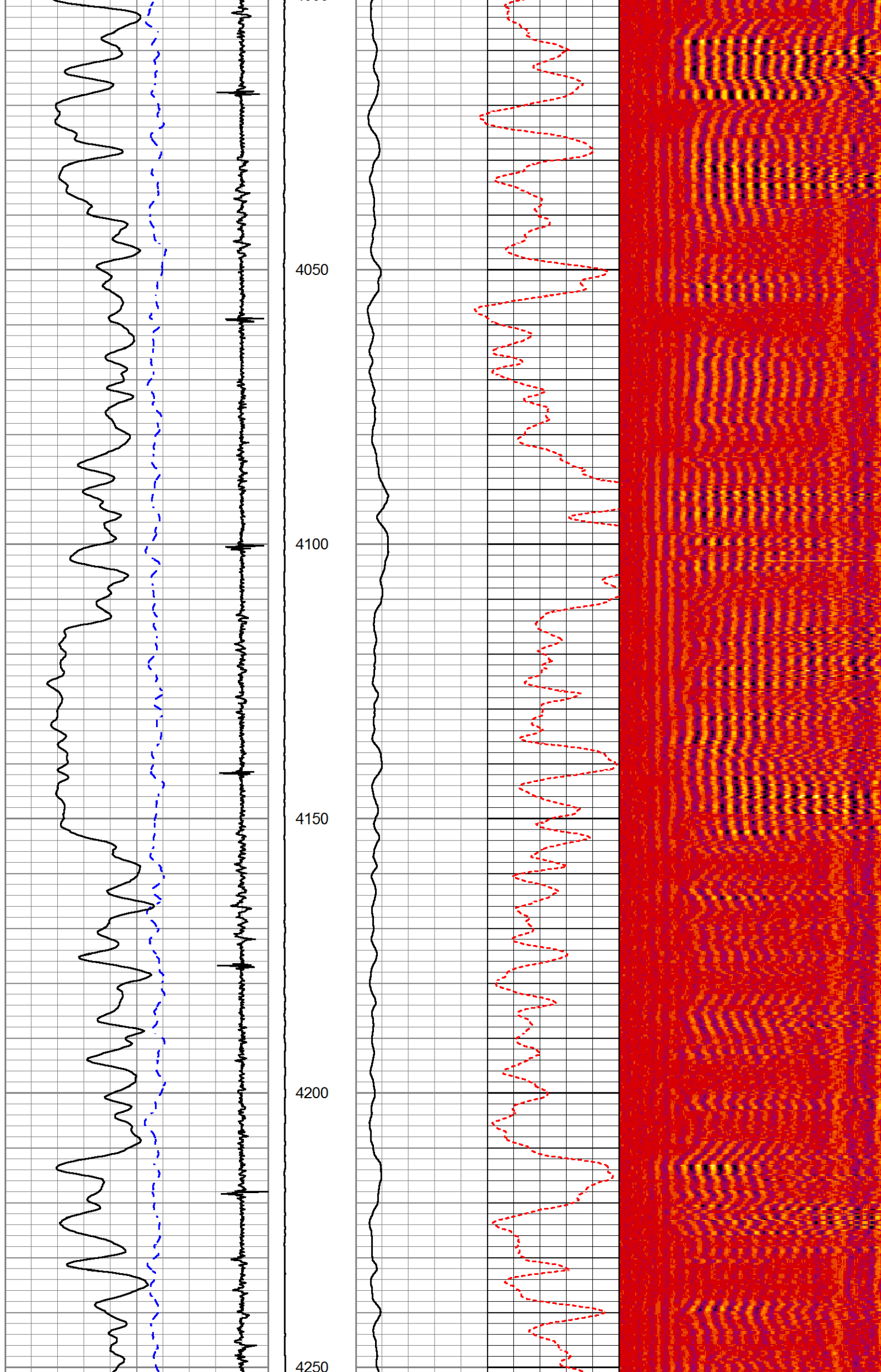


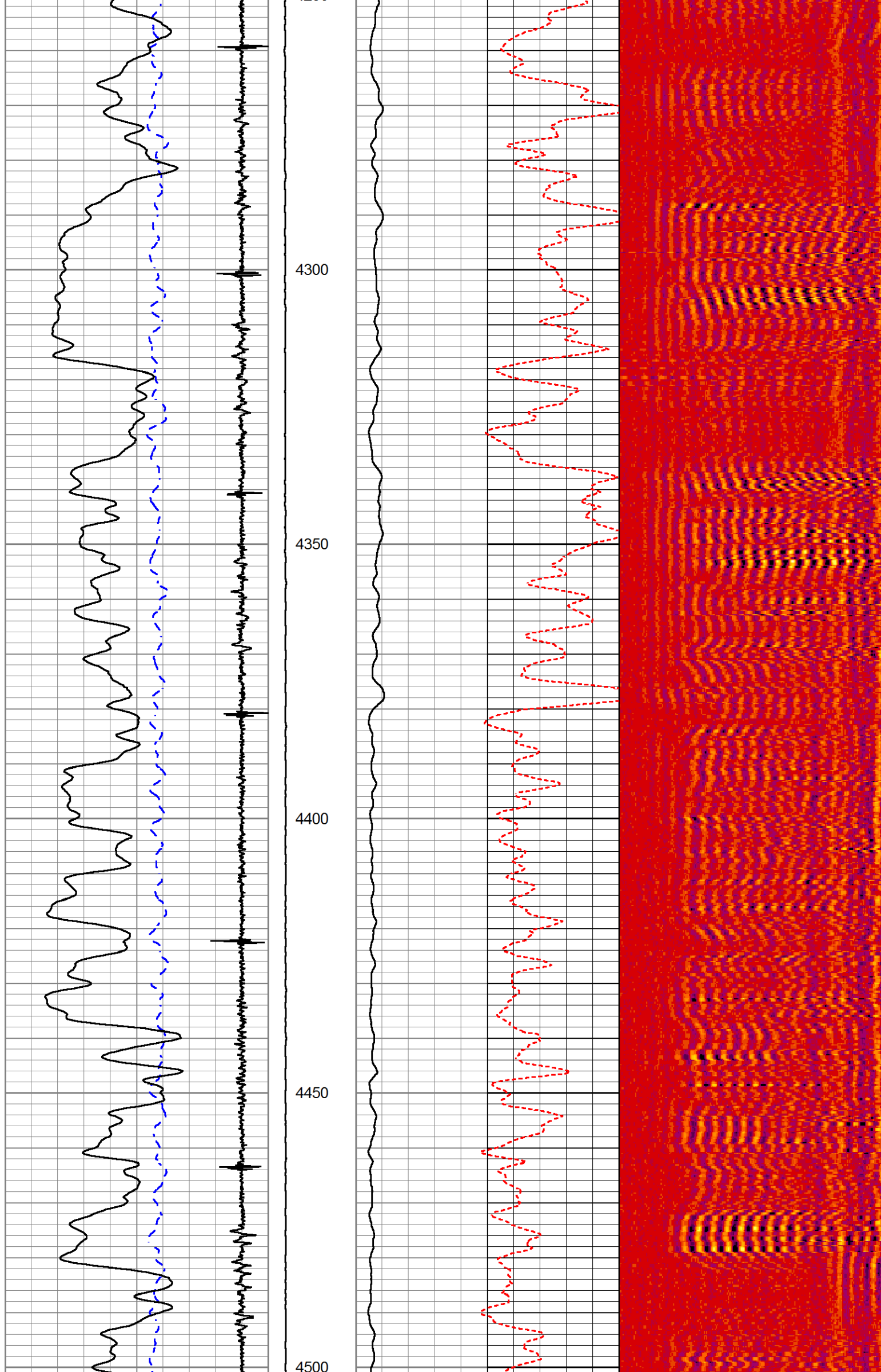


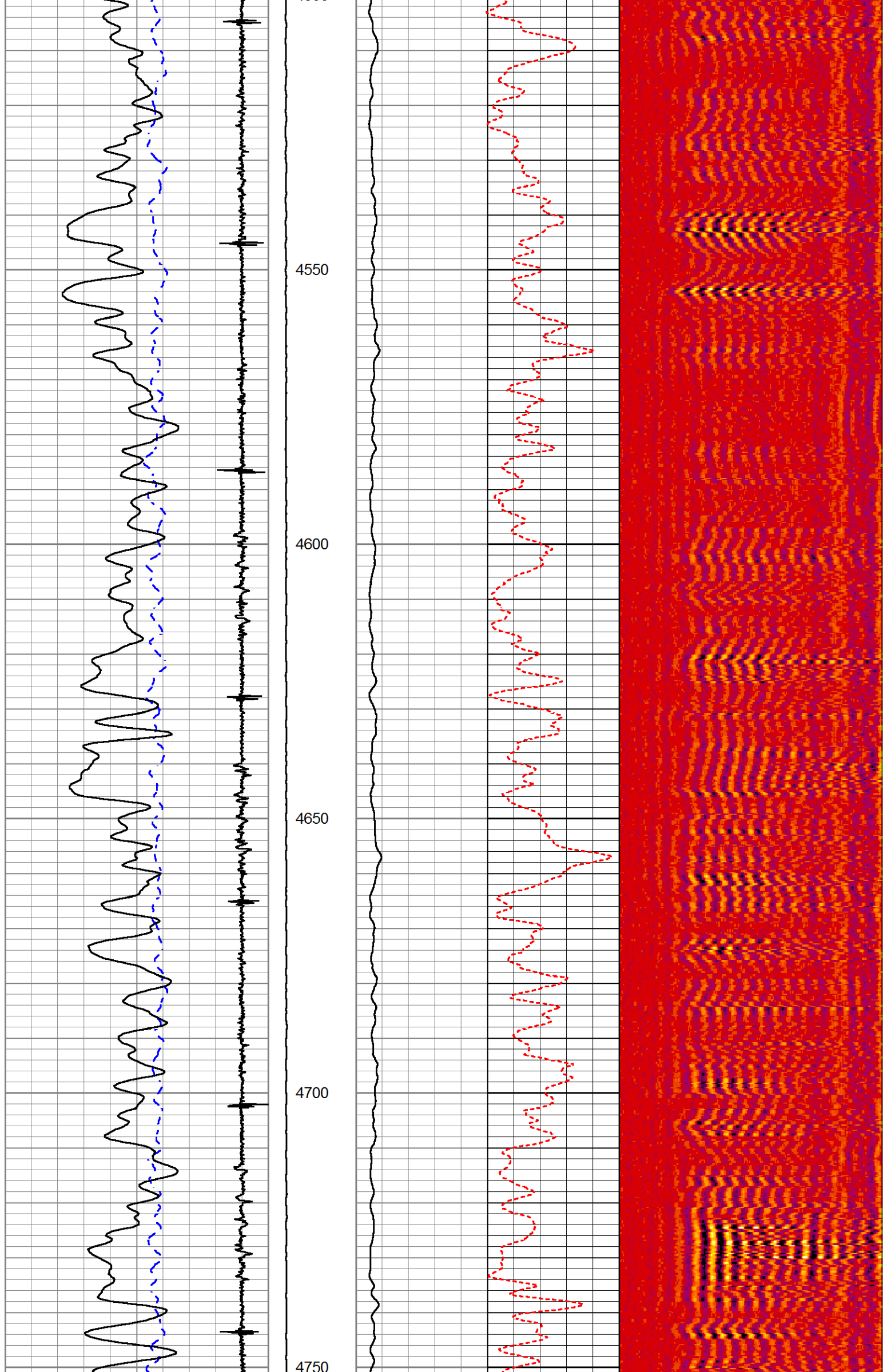


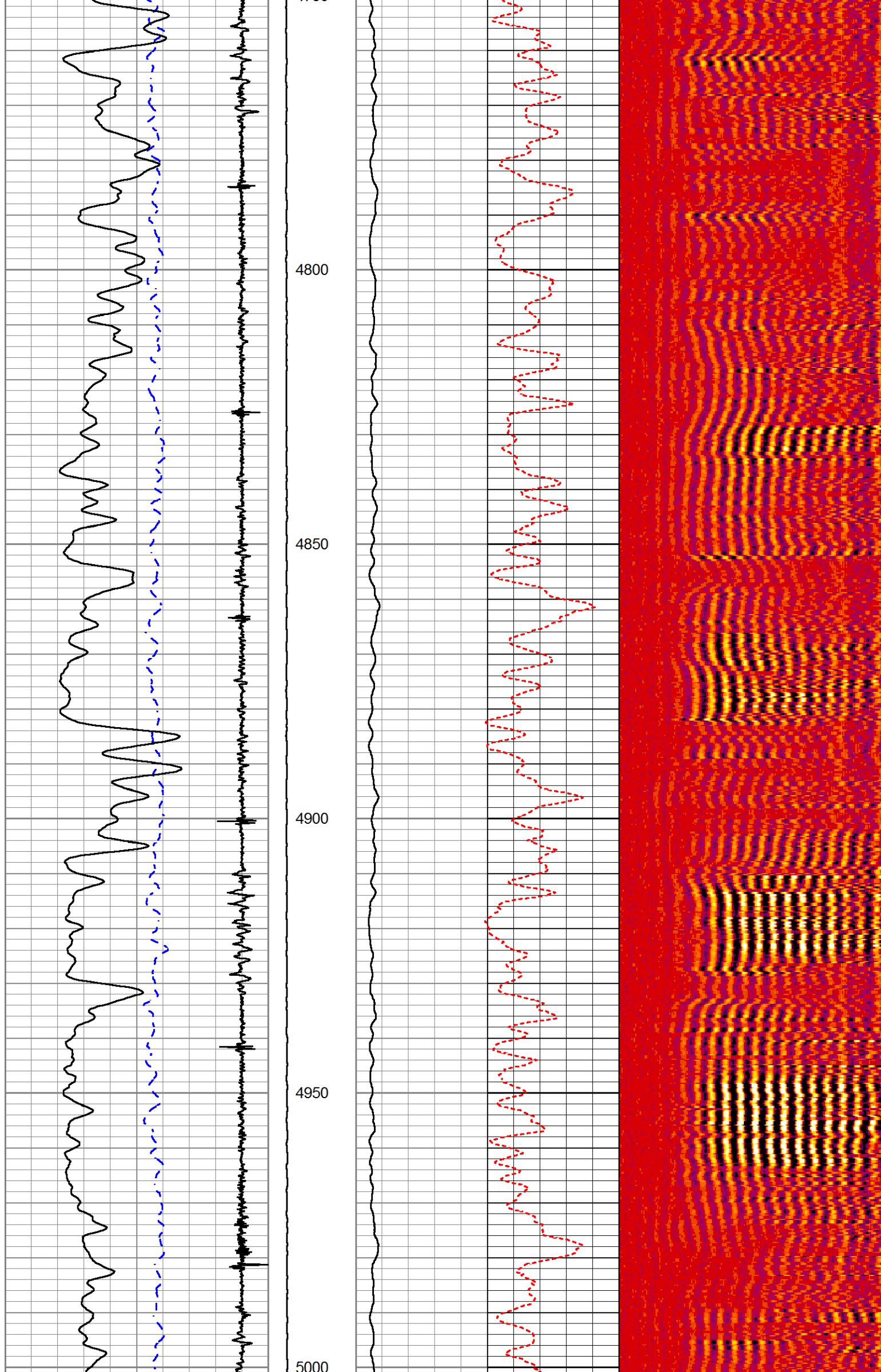


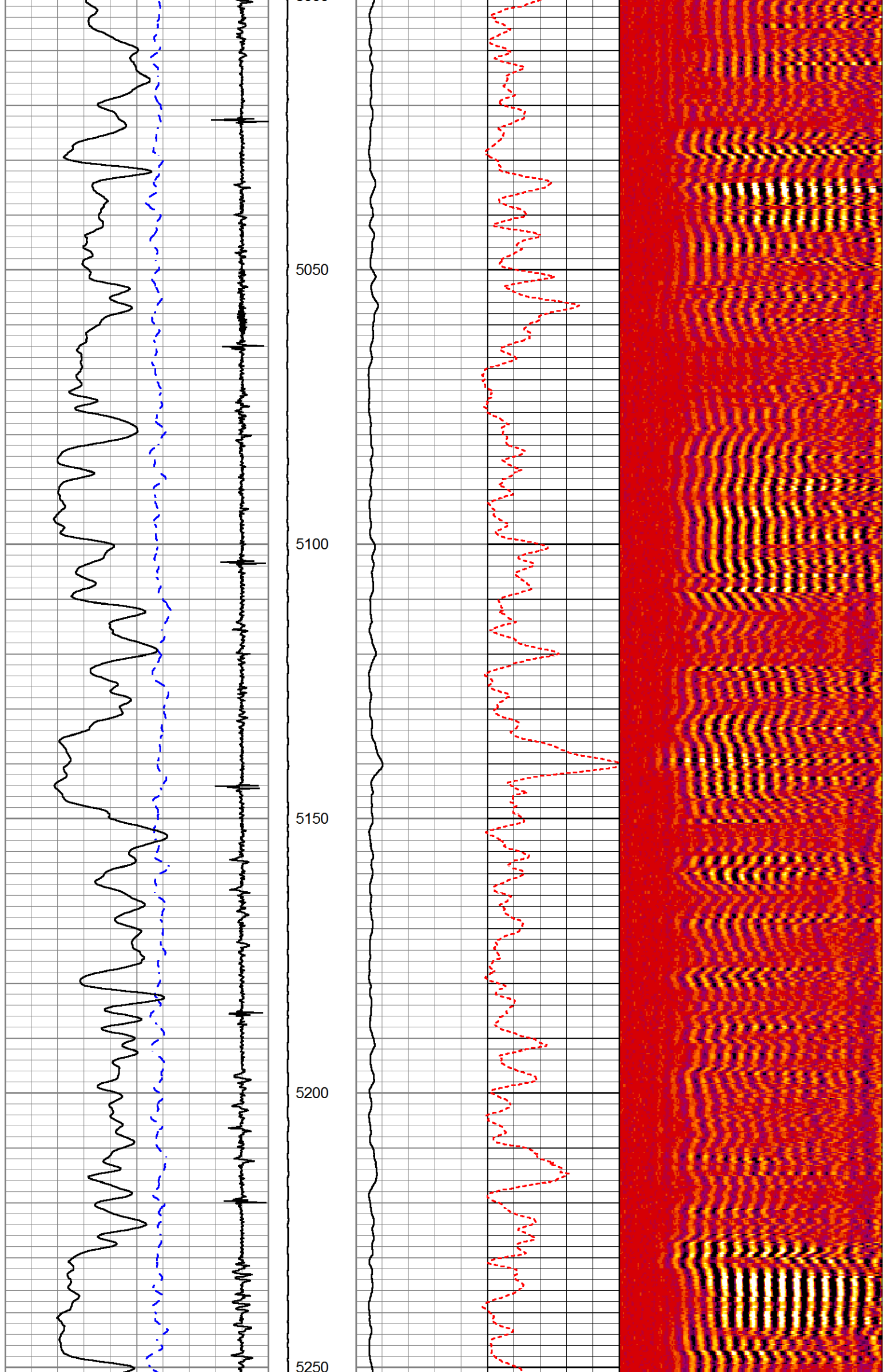


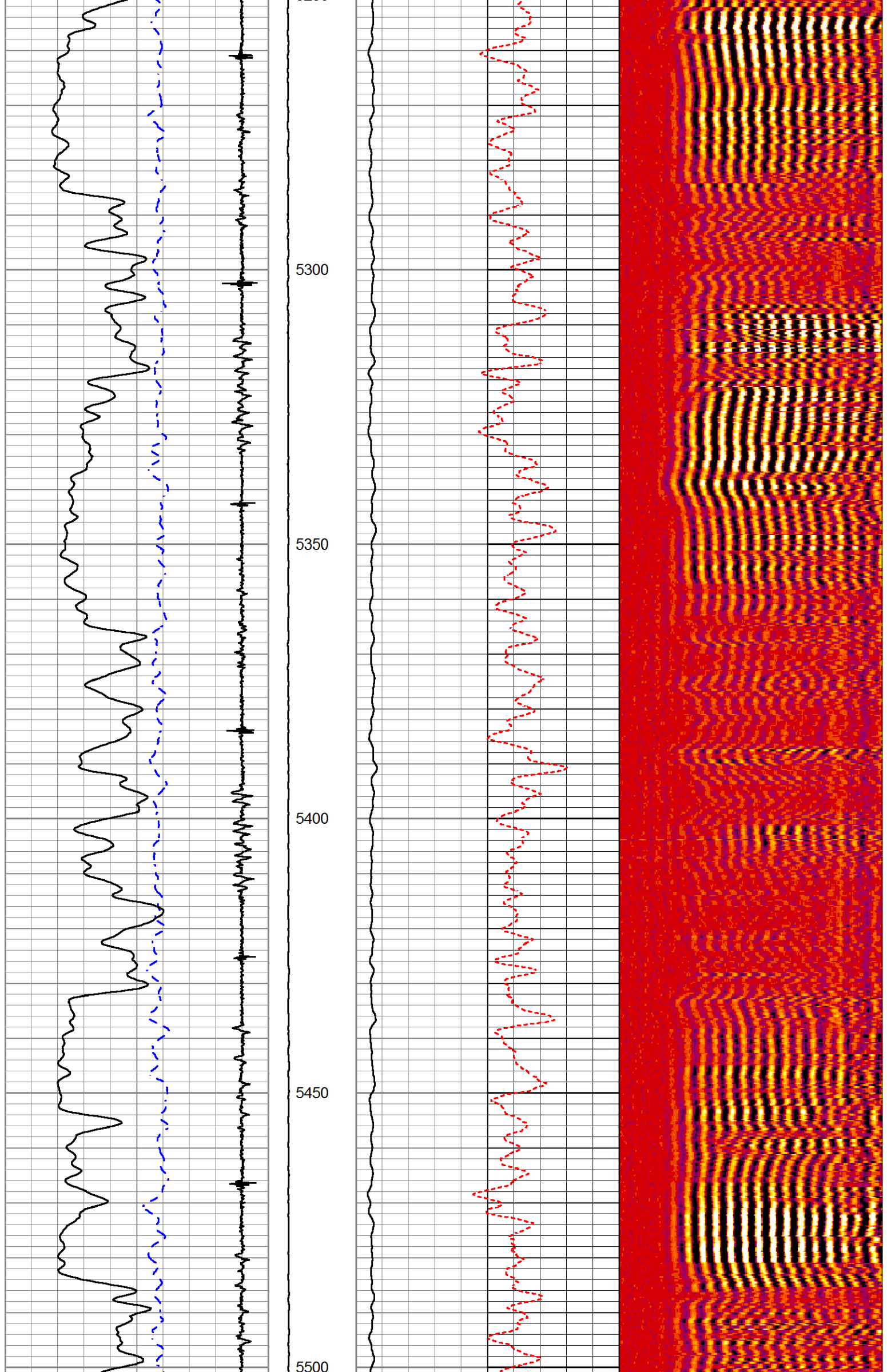


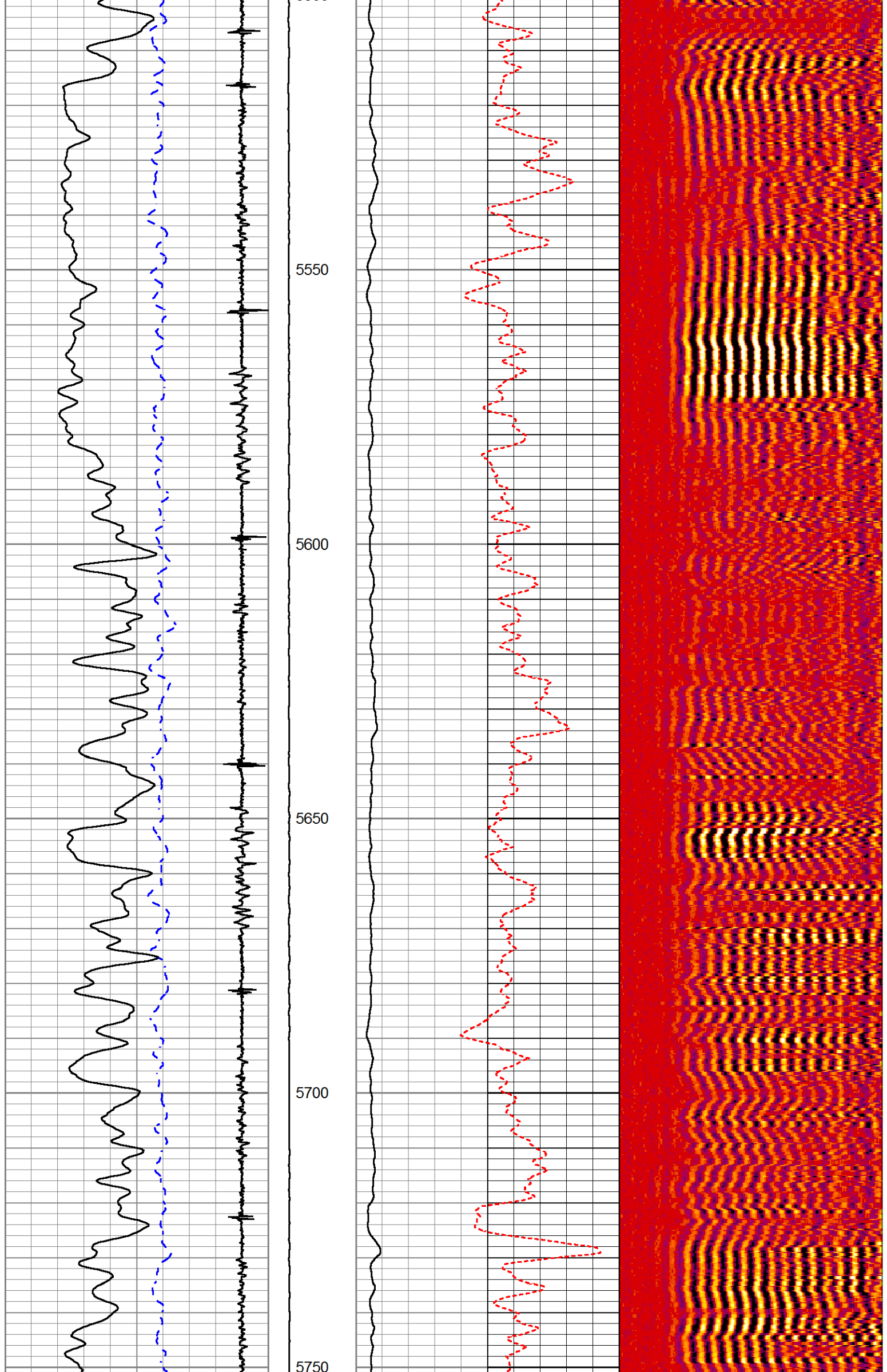


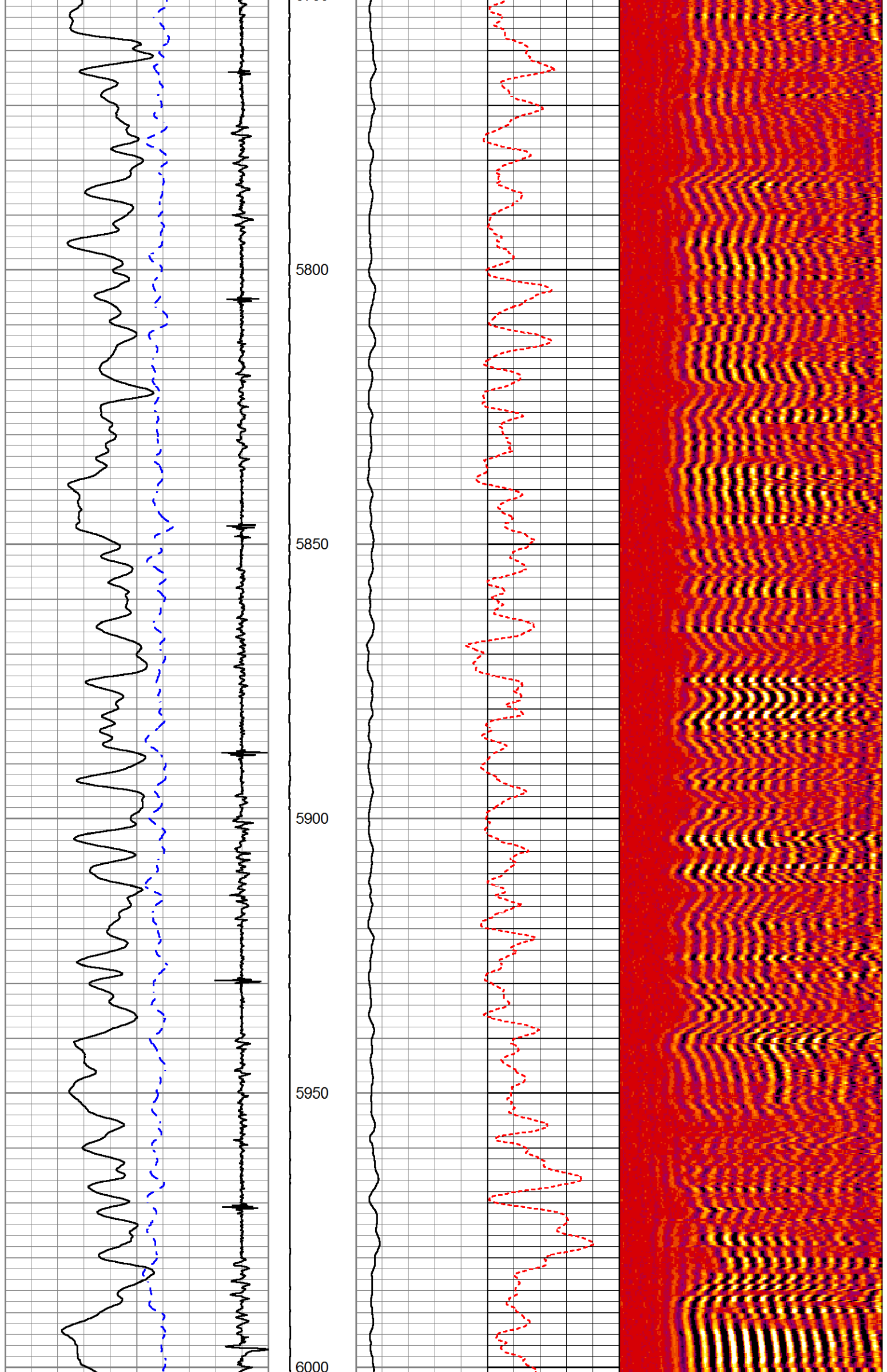


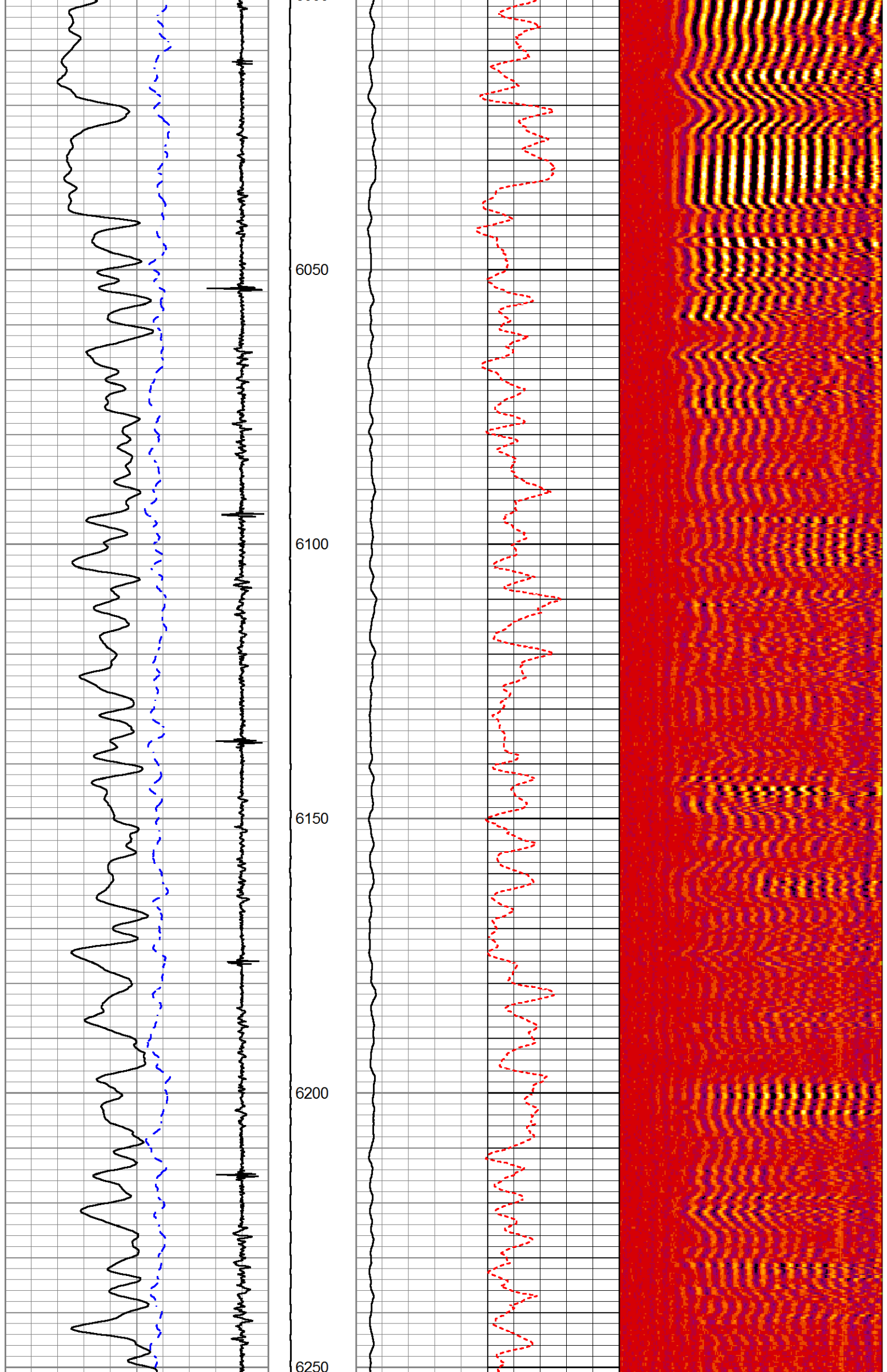


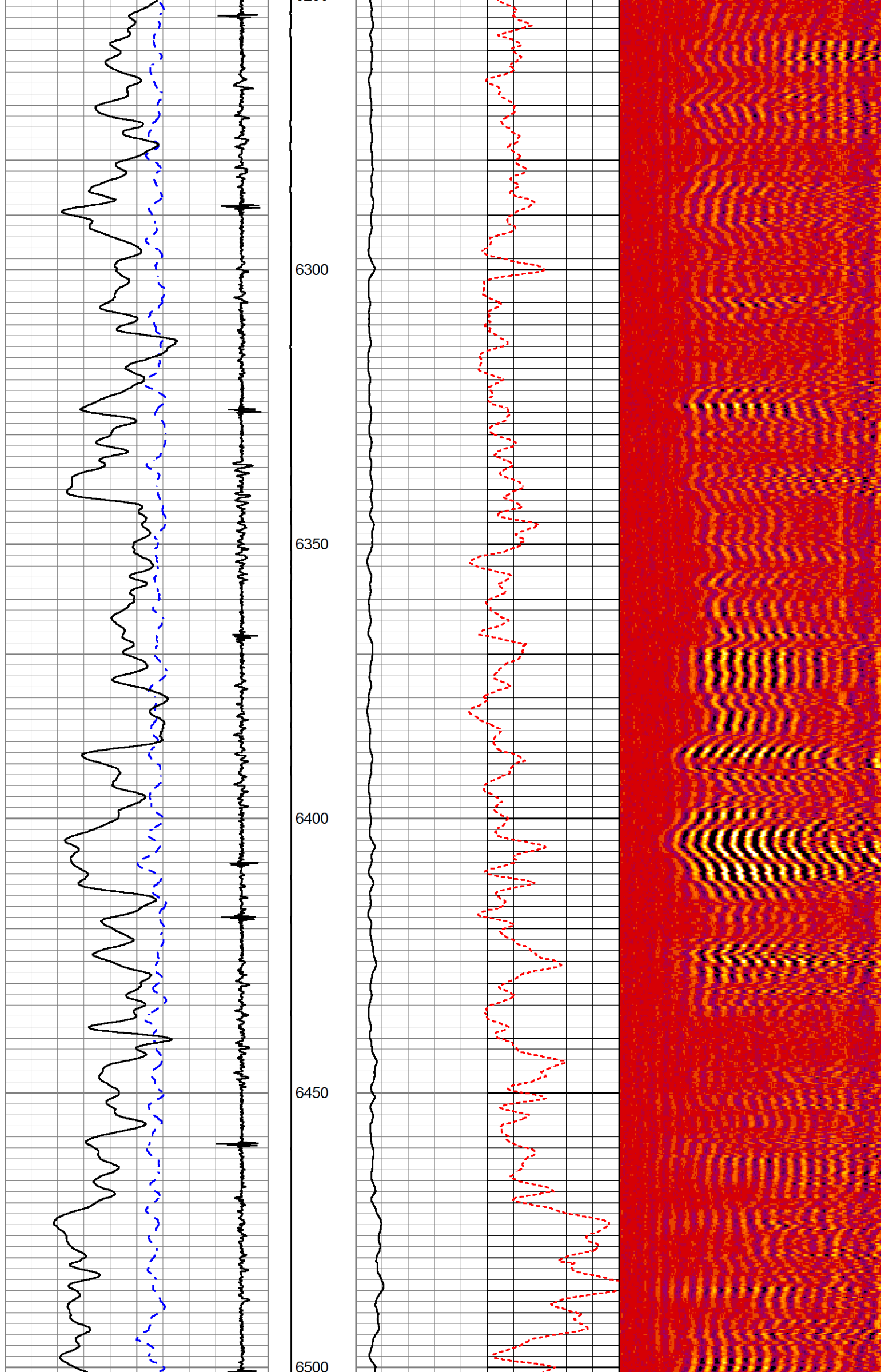


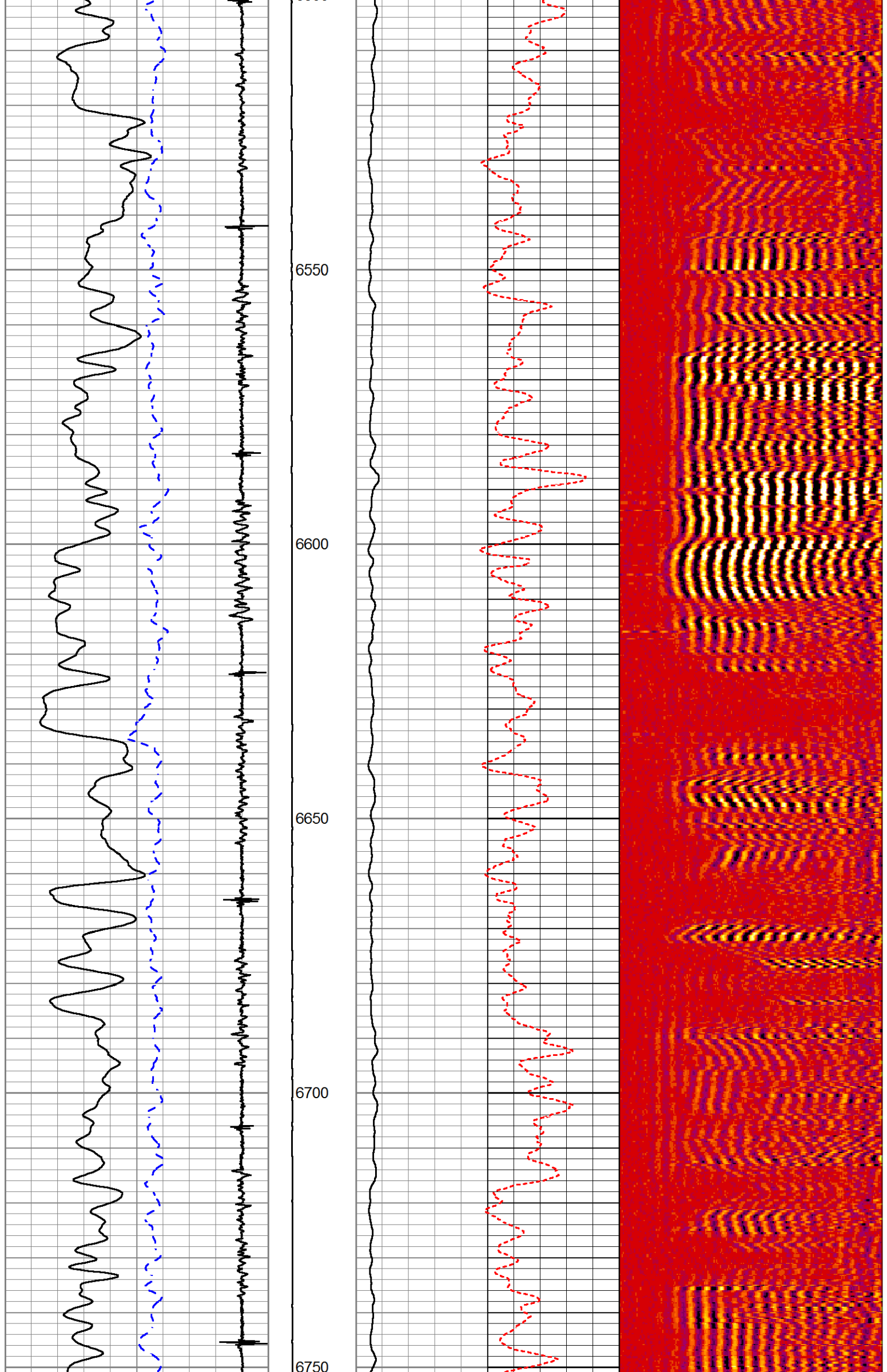


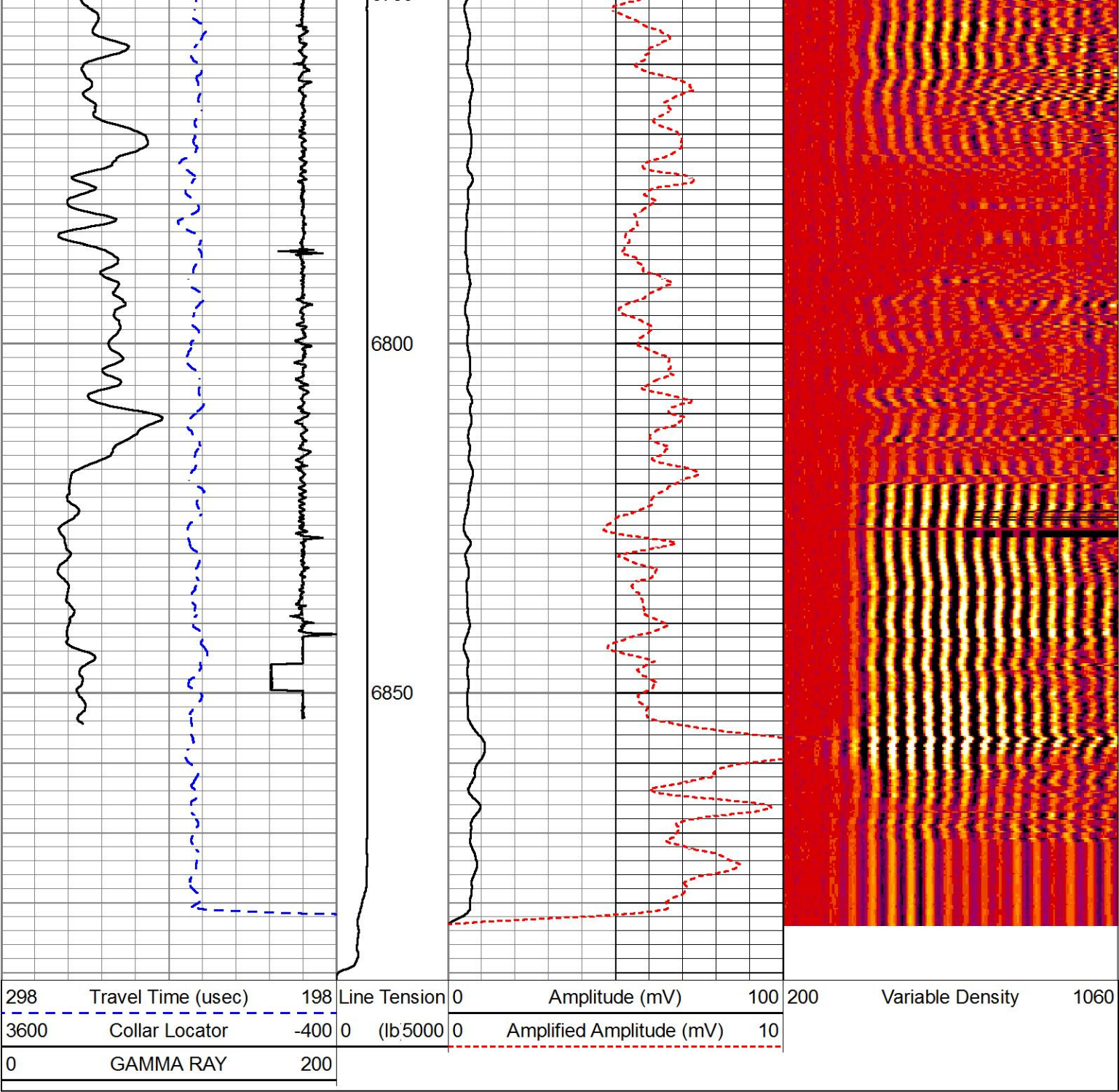












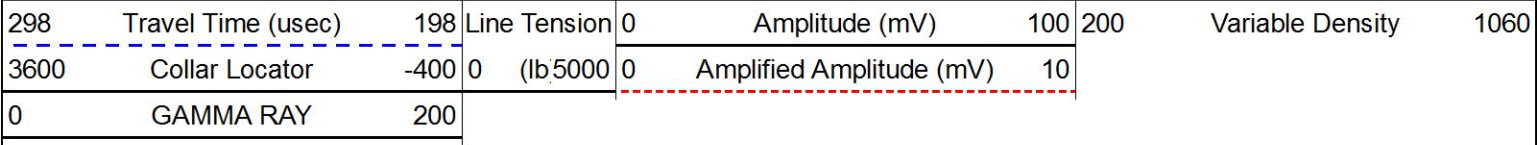
MAIN PASS

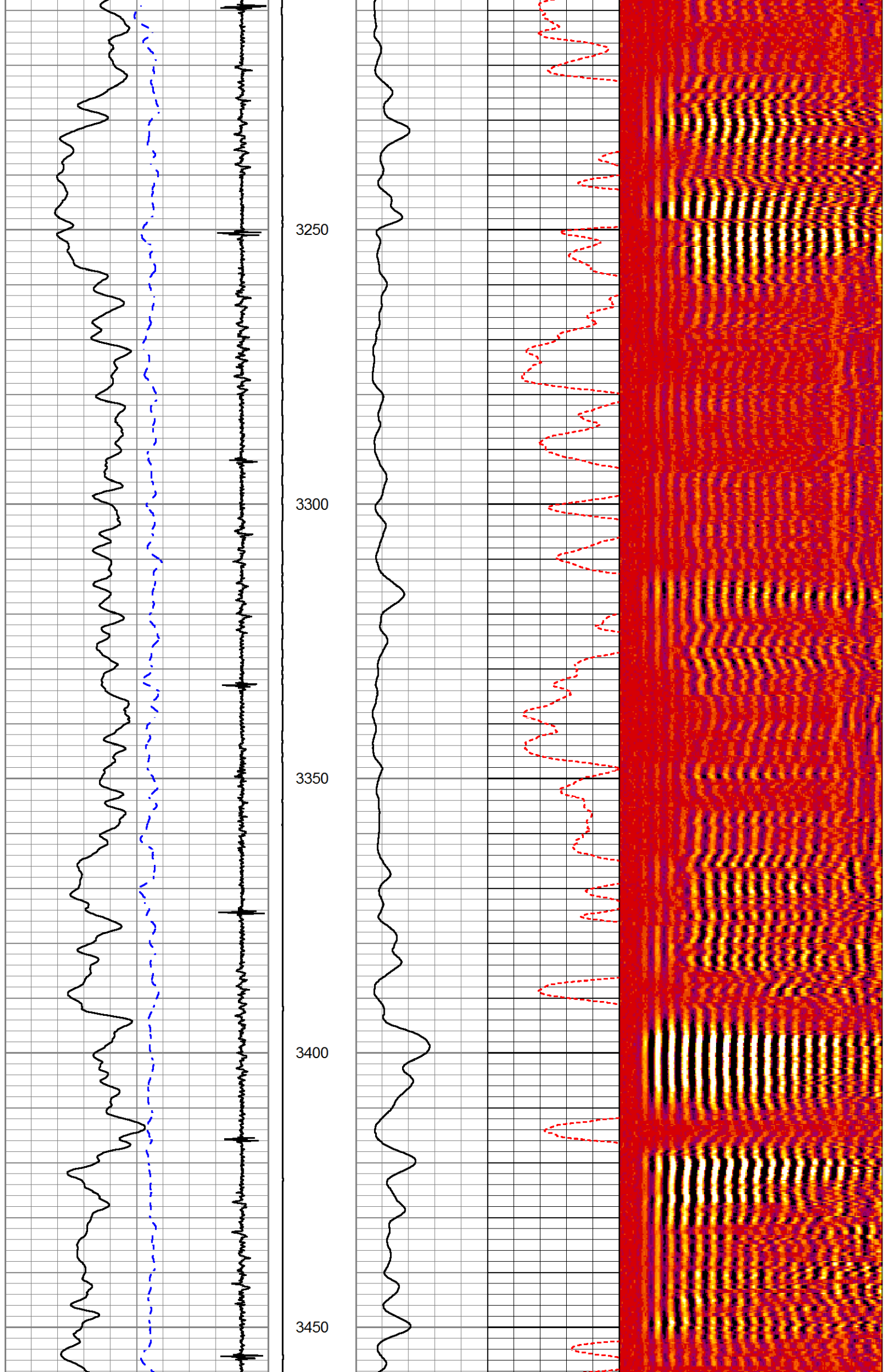
5" = 100'

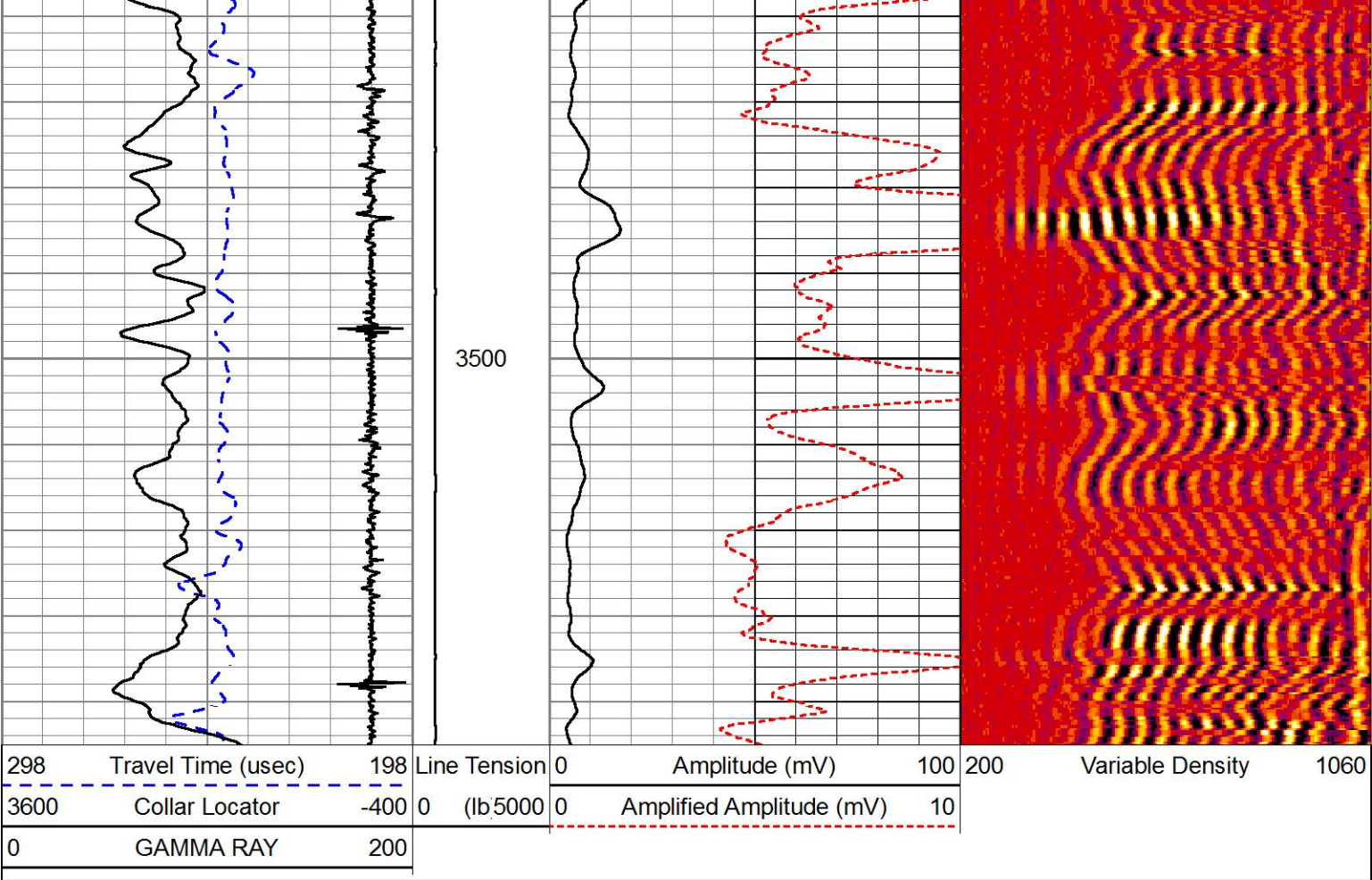
REPEAT PASS

5" = 100'

Database File mr_b_44d_08_7_95.db
Dataset Pathname REPEAT
Presentation Format !1!!cbl_rmti
Dataset Creation Mon Nov 28 20:44:49 2016
Charted by Depth in Feet scaled 1:240







REPEAT PASS

HALLIBURTON

5" = 100'

Log Variables

DatabaseC:\ProgramData\Warrior\Data\mr_b_44d_08_7_95.db
Dataset field/well/run1/MAIN4/_vars_

Top - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE	BORSAL	BOTTEMP	CASED?	CASEOD
1	0	TEMP	in 10	kppm 150	degF 210	Yes	in 4.5
CASETHCK	CASEWGHT	LTH	MAXAMPL	MINAMPL	MINATTN	MSGGN	MudWgt
in 0.25	lb/ft 11.6	Sandstone	mV 0	mV 1	db/ft 0.8	1	lb/gal 8.4
PERFS	POROS1	POROS2	PPT	RHOCF	SO	SRFTEMP	TDEPTH
0	1	0	usec 0	0.25	in 0	degF 30	ft 7100
UHSGC	USERFTT	ZREF					
NONE	usec/ft 0	MRayl 1.7					

Calibration Report

Database File mr_b_44d_08_7_95.db
Dataset Pathname MAIN4
Dataset Creation Tue Nov 29 04:52:16 2016

Cement Bond Log Shop Calibration Report

Serial-Model: 12091451-A
Calibration Performed: Mon Nov 28 11:51:11 2016



TT	Measured	Units
Amplitude	244.4	usec
Log Base Line	560.6	mV
	7.4	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	0.147	


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			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	34.1				cps
Calibrator	297.9				cps
		1.3950			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
			TTTCU-002 (11214503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
GR	33.56		XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00

RmtTFGT	22.91		RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtTNGT	22.41					
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: mr_b_44d_08_7_95.db: field/well/run1/MAIN4 Total length: 39.39 ft Total weight: 356.50 lb O.D.: 3.13 in						

Company	URSA OPERATING COMPANY LLC				
Well	MONUMENT RIDGE B 44D-08-7-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON	CEMENT BOND LOG				