

GAMMA RAY COLLAR CEMENT BOND LOG

(GR-CBL)

<<< 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
NO OPEN HOLE LOGS RUN ON THIS WELL USED 17' K.B. FOR DEPTH CONTROL RMTI LOGGED TD TO 100' ABOVE SURFACE CASING AS PER CUSTOMERS REQUEST " THANK YOU FOR USING HALLIBURTON ENERGY SERVICES " YOUR CREW FOR TODAY: F. ALIAS; F. NAVARRO MBU. #BK0606 RIG: HES CRANE

Service Ticket No.	903507632	API No.	045-22471	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.	12029128	Serial No.	12157979	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	

No.	FROM	TO	Pressure	Gamma				
ONE	6990'	6790'	0 PSI	20'	REPEAT			
TWO	6990'	1600'	0 PSI	20'	MAIN			
	GAMMA							
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
1-3	0	200						
4	0	200						
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

<div>HALLIBURTON</div>	Company	URSA OPERATING CO., LLC.		
	Well	TOMPKINS 31A-08-07-95		
	Field	PARACHUTE		
	County	GARFIELD		
	State	CO		Country U.S.A.

HALLIBURTON

MAIN PASS

Database File

ursa-tom-31a_sigma2.db

Dataset Pathname

pass3

Presentation Format

!1!!cbl_rmti

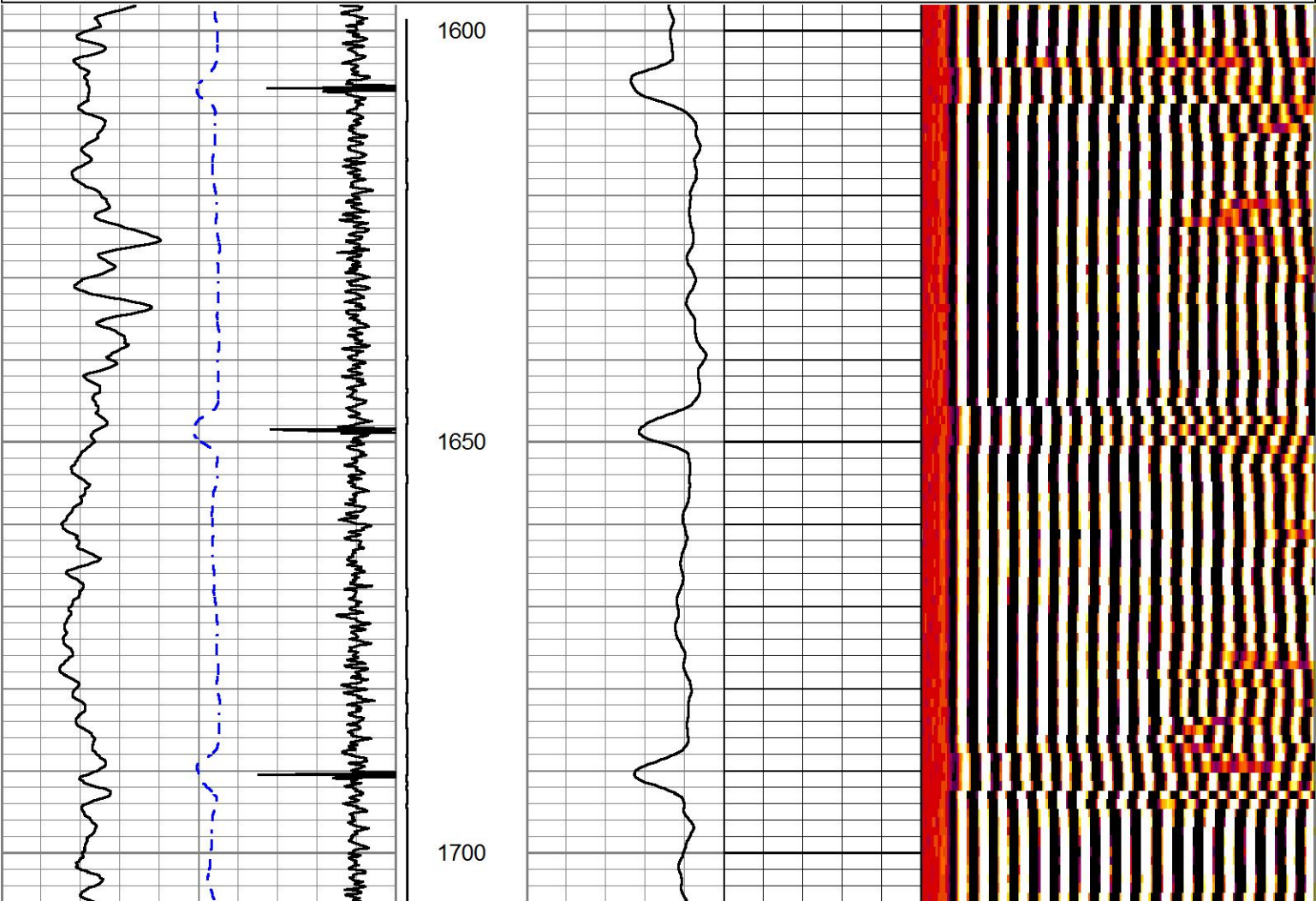
Dataset Creation

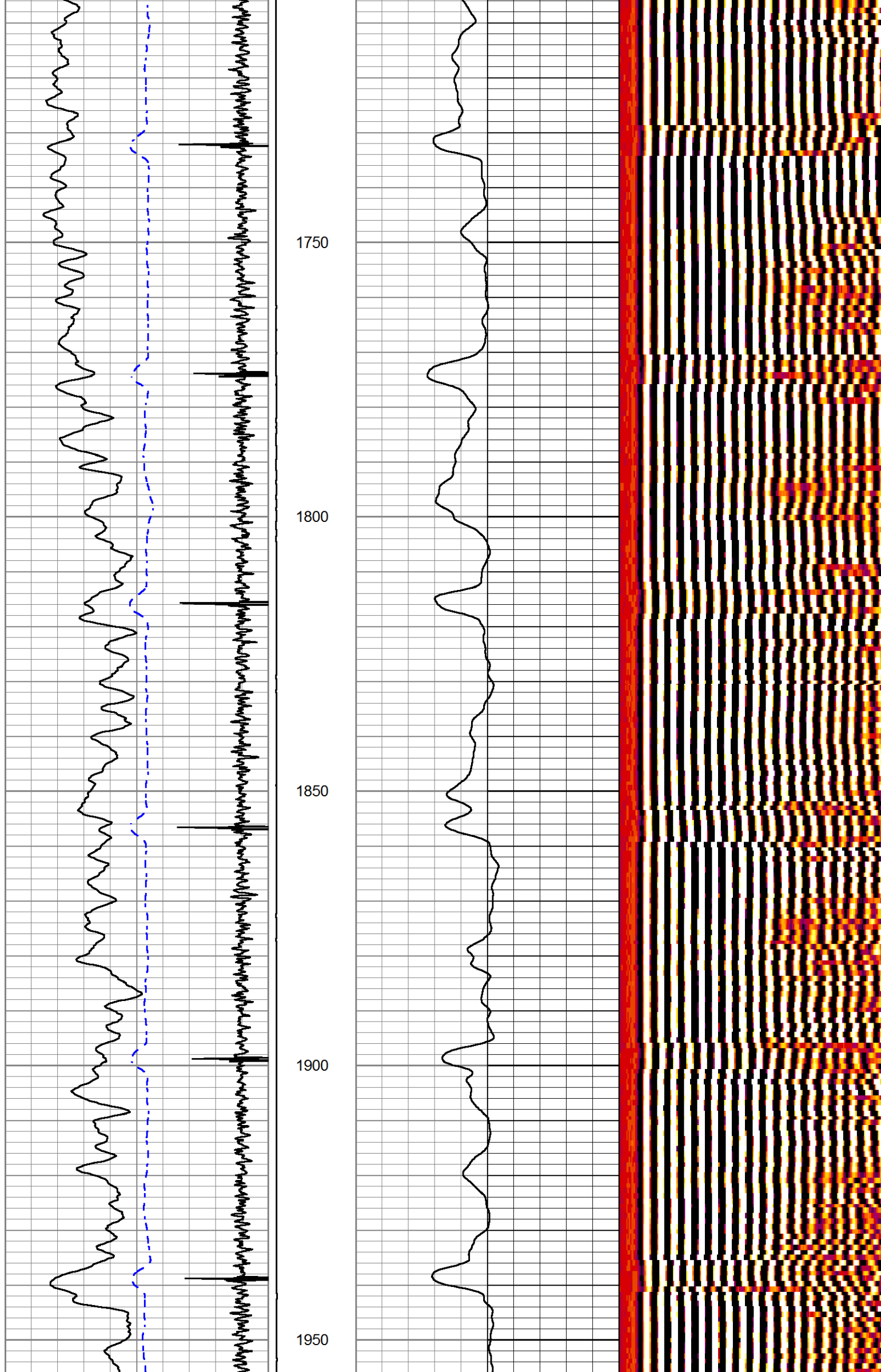
Tue Aug 30 10:47:23 2016

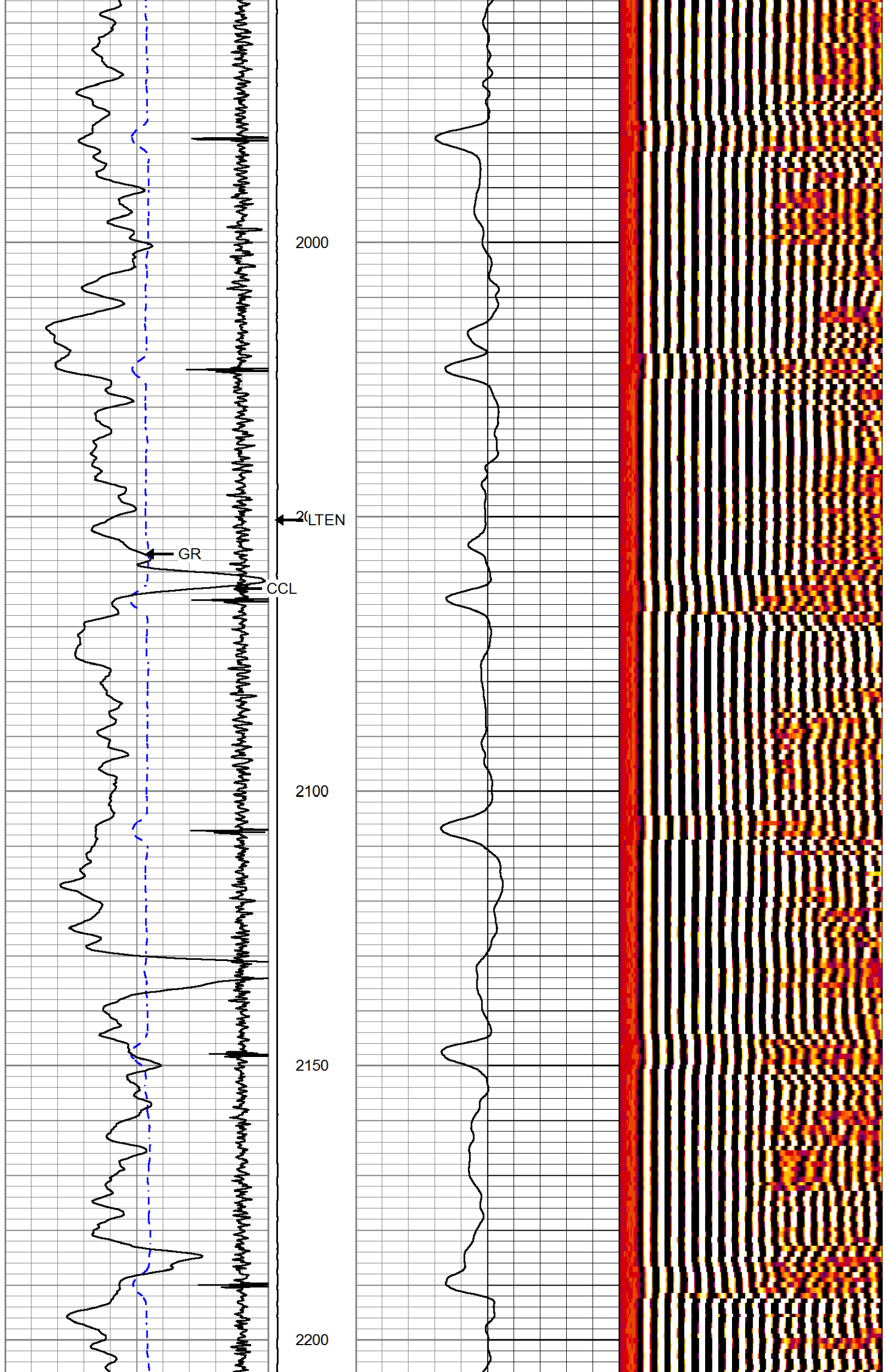
Charted by

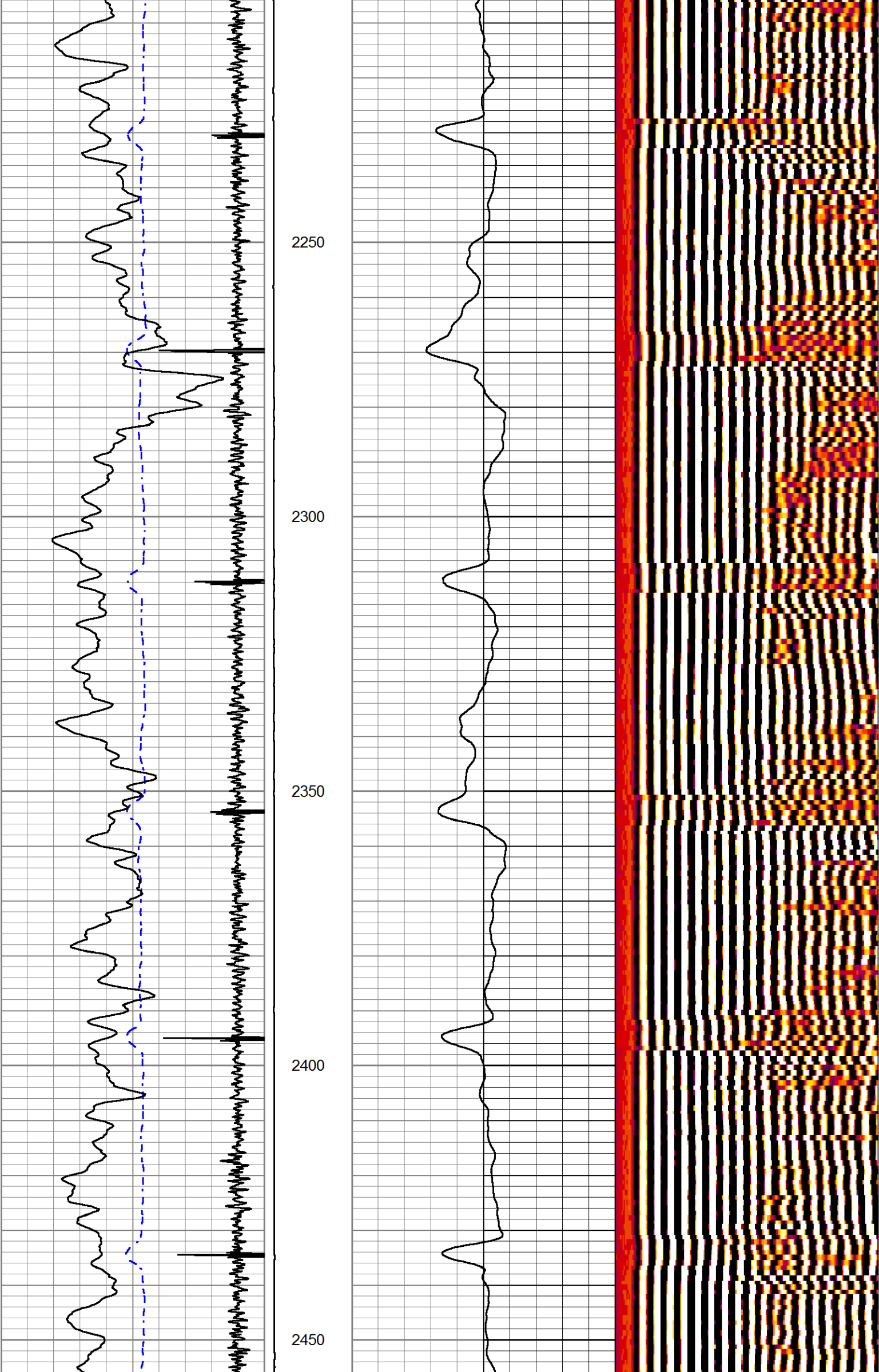
Depth in Feet scaled 1:240

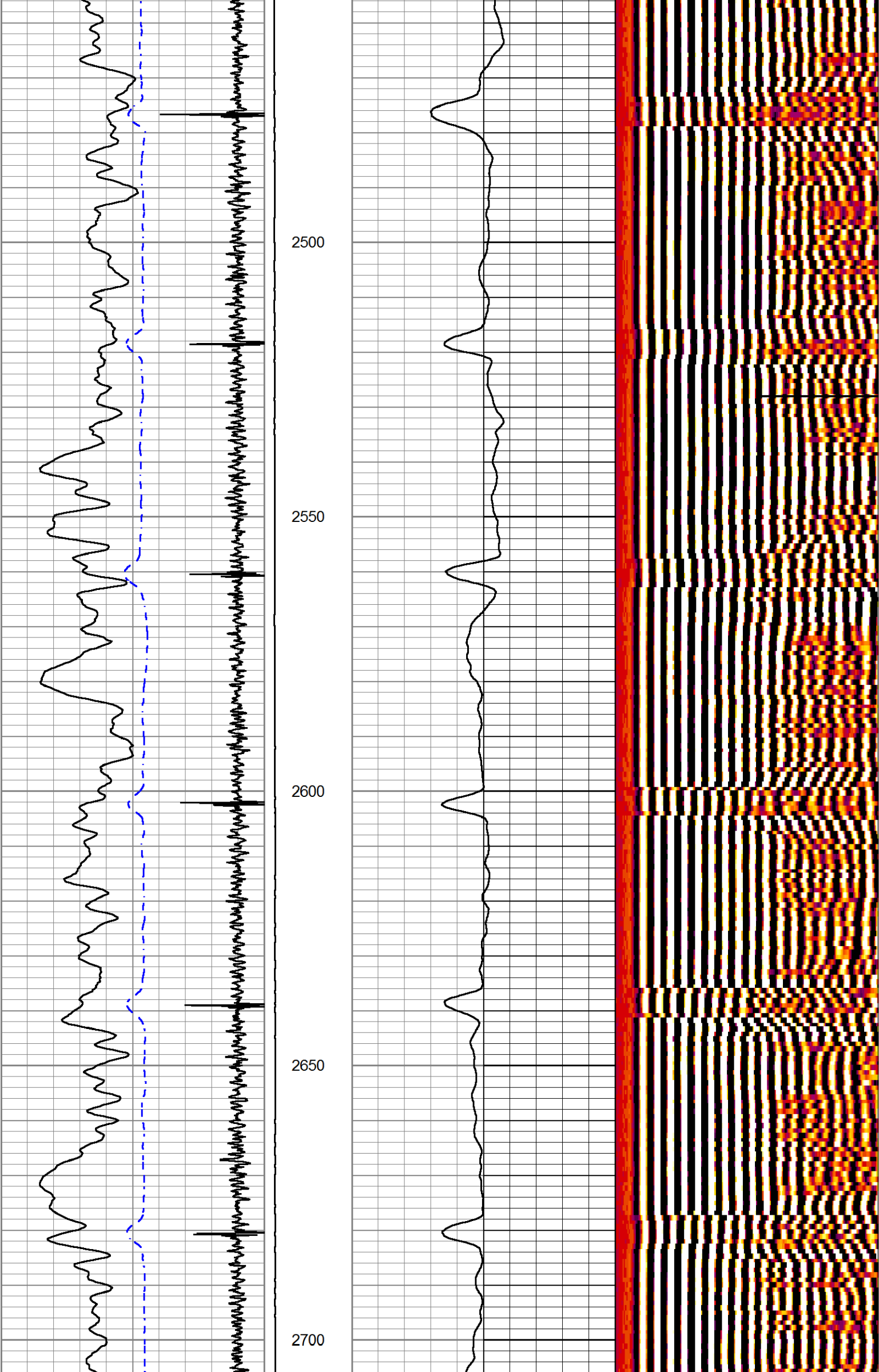
298	Travel Time (usec)	198	Line Tension	0	Amplitude (mV)	100	200	Variable Density	1060
3600	Collar Locator	-400	0	(lb)5000	0	Amplified Amplitude (mV)	10		
0	GAMMA RAY	200							

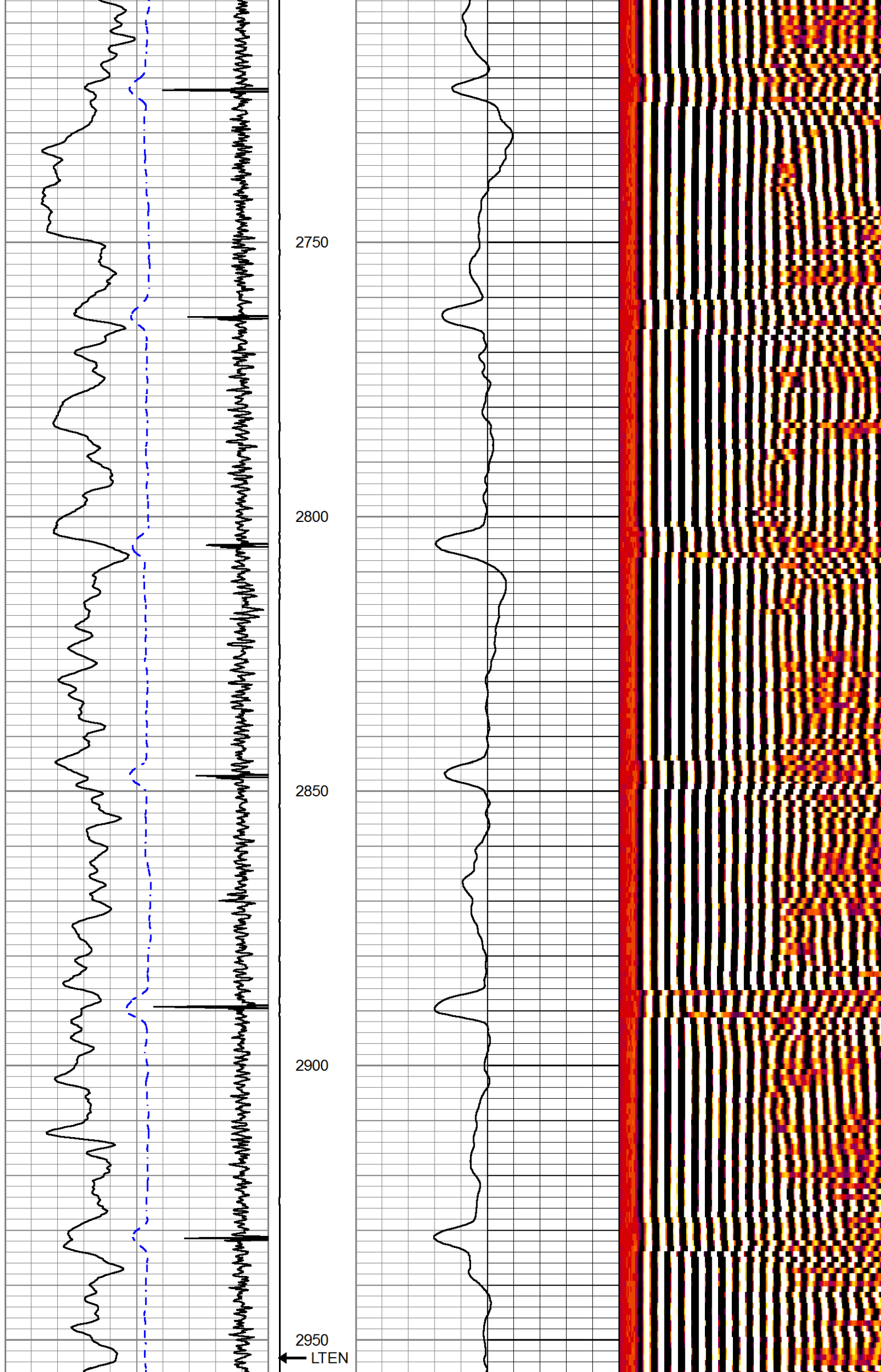


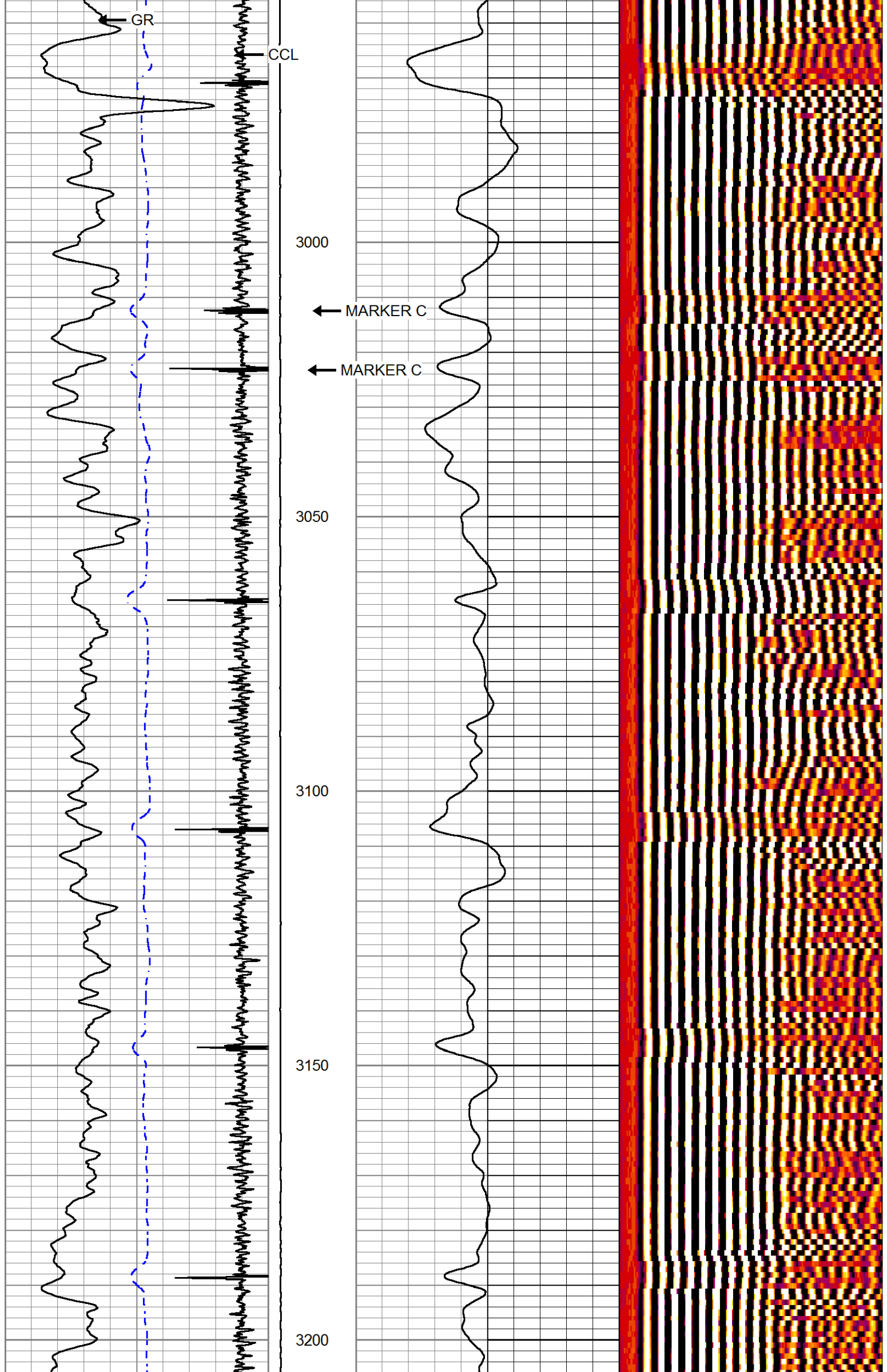


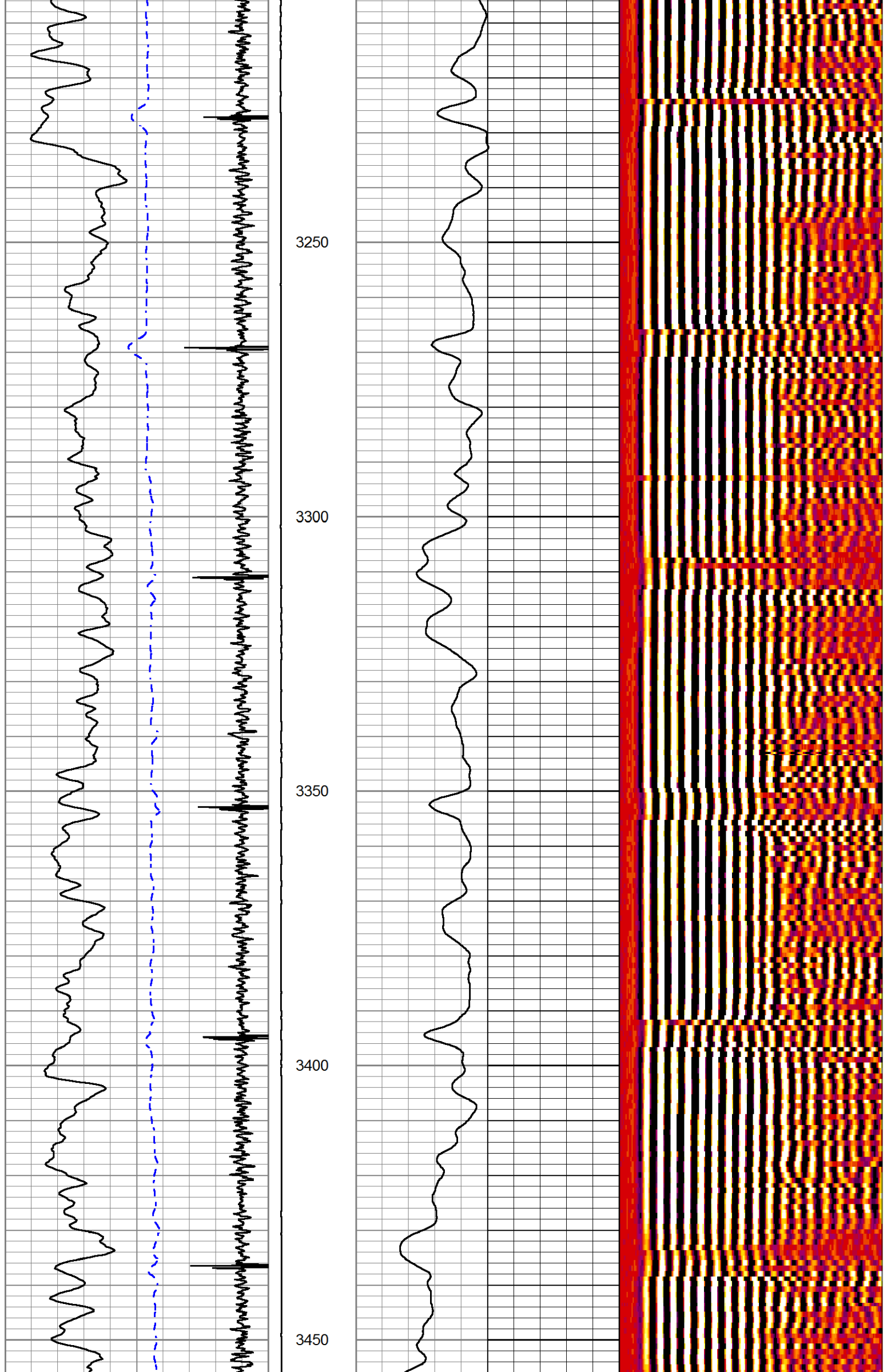


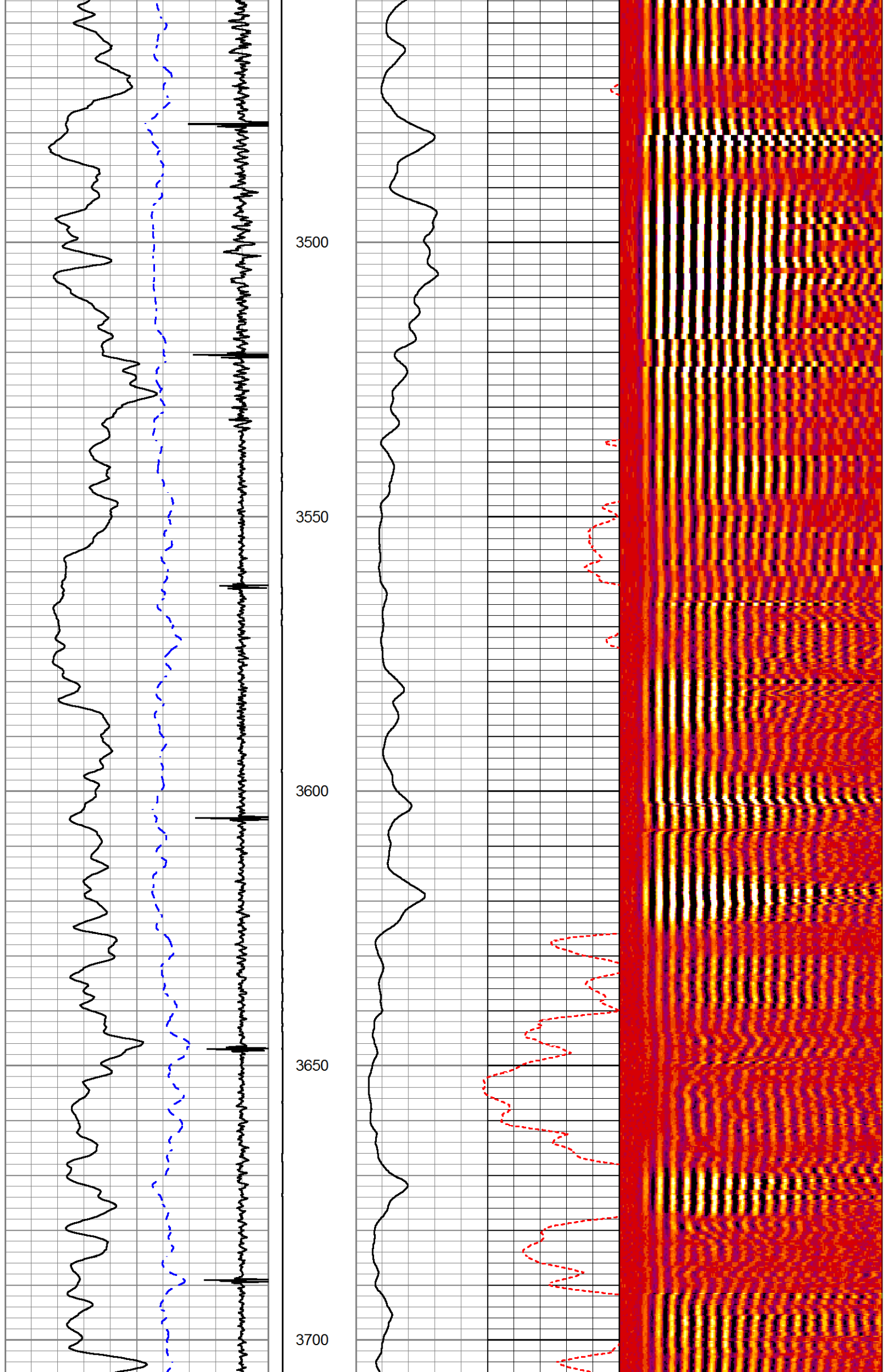


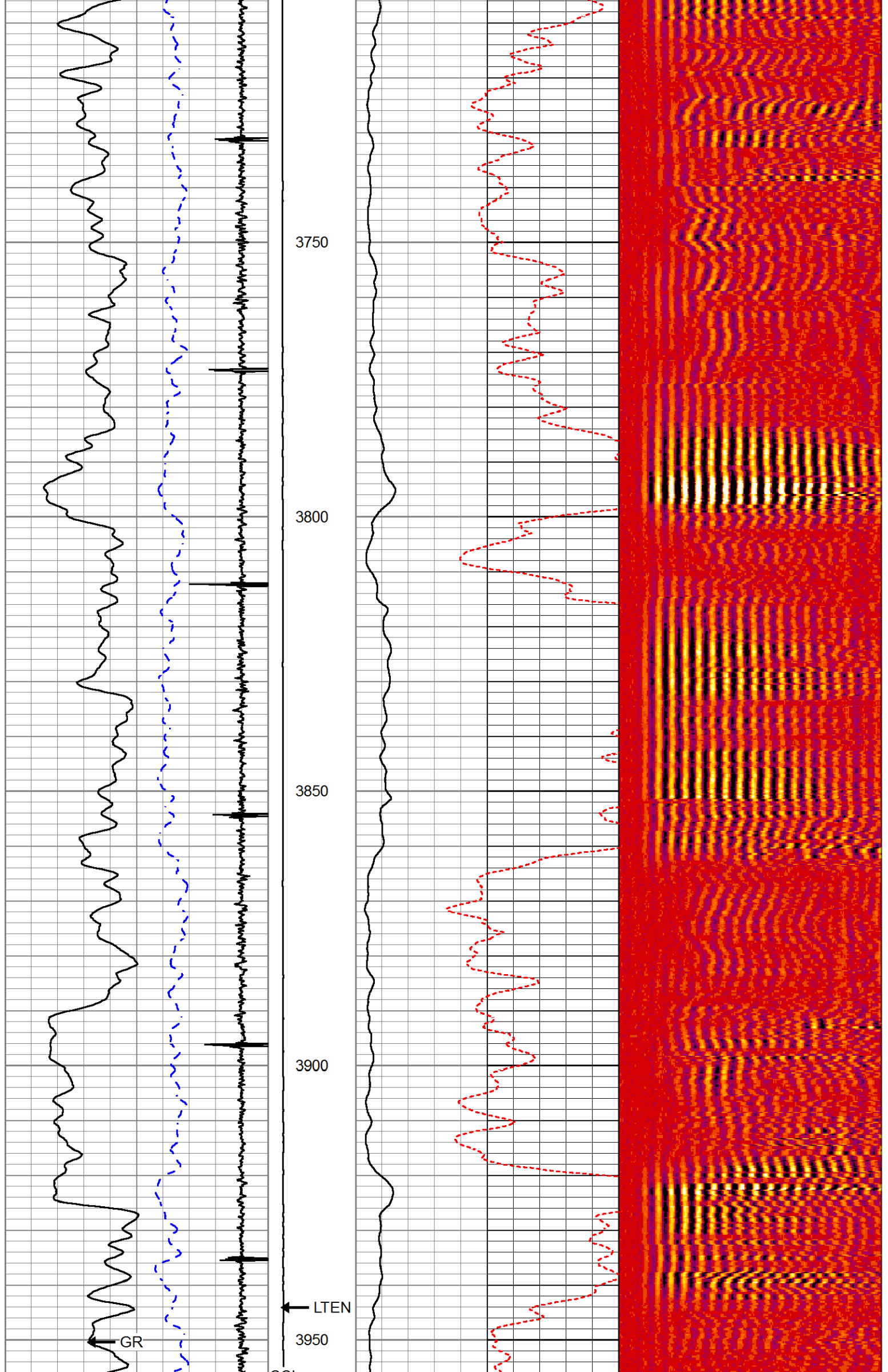


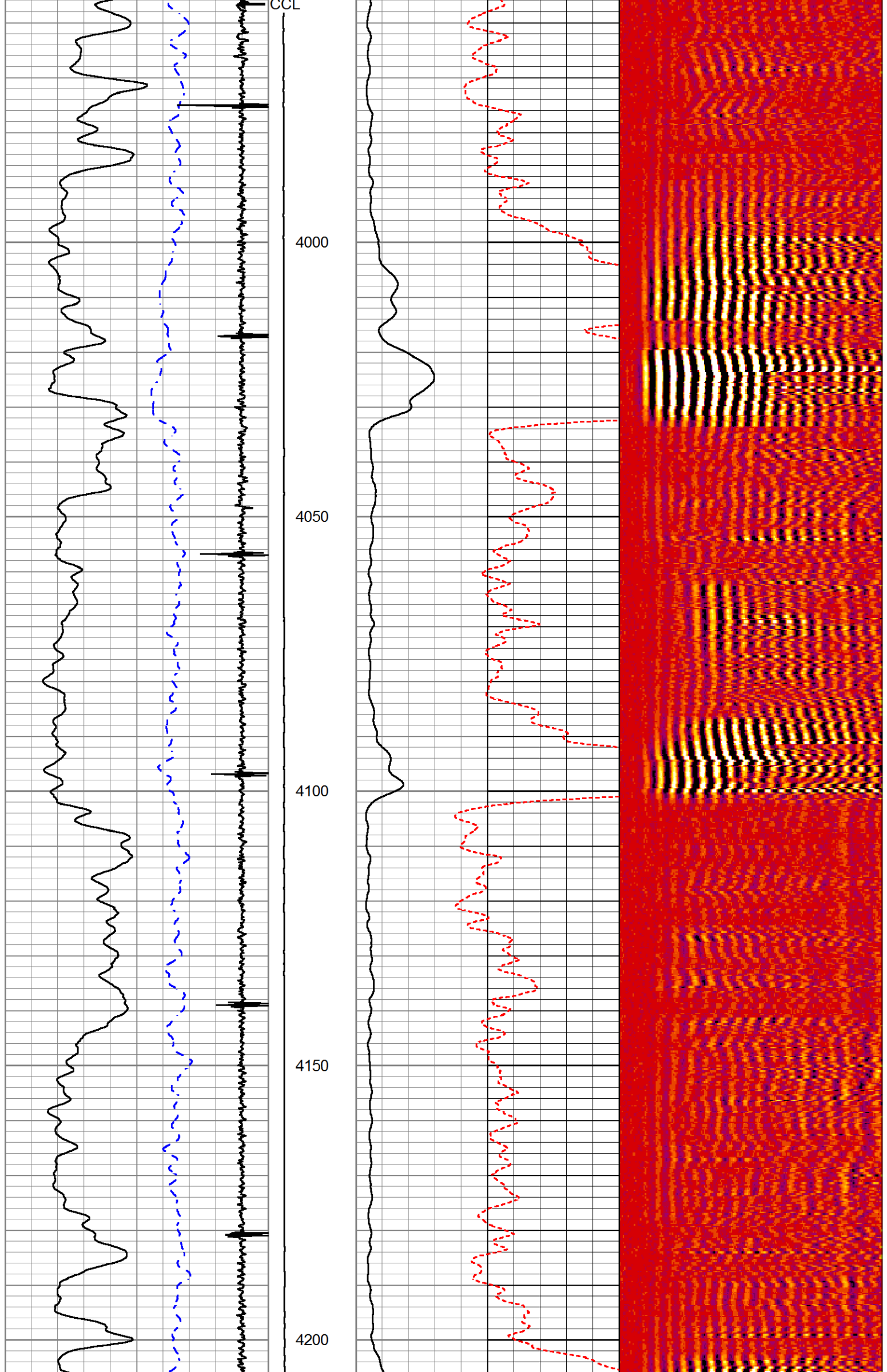


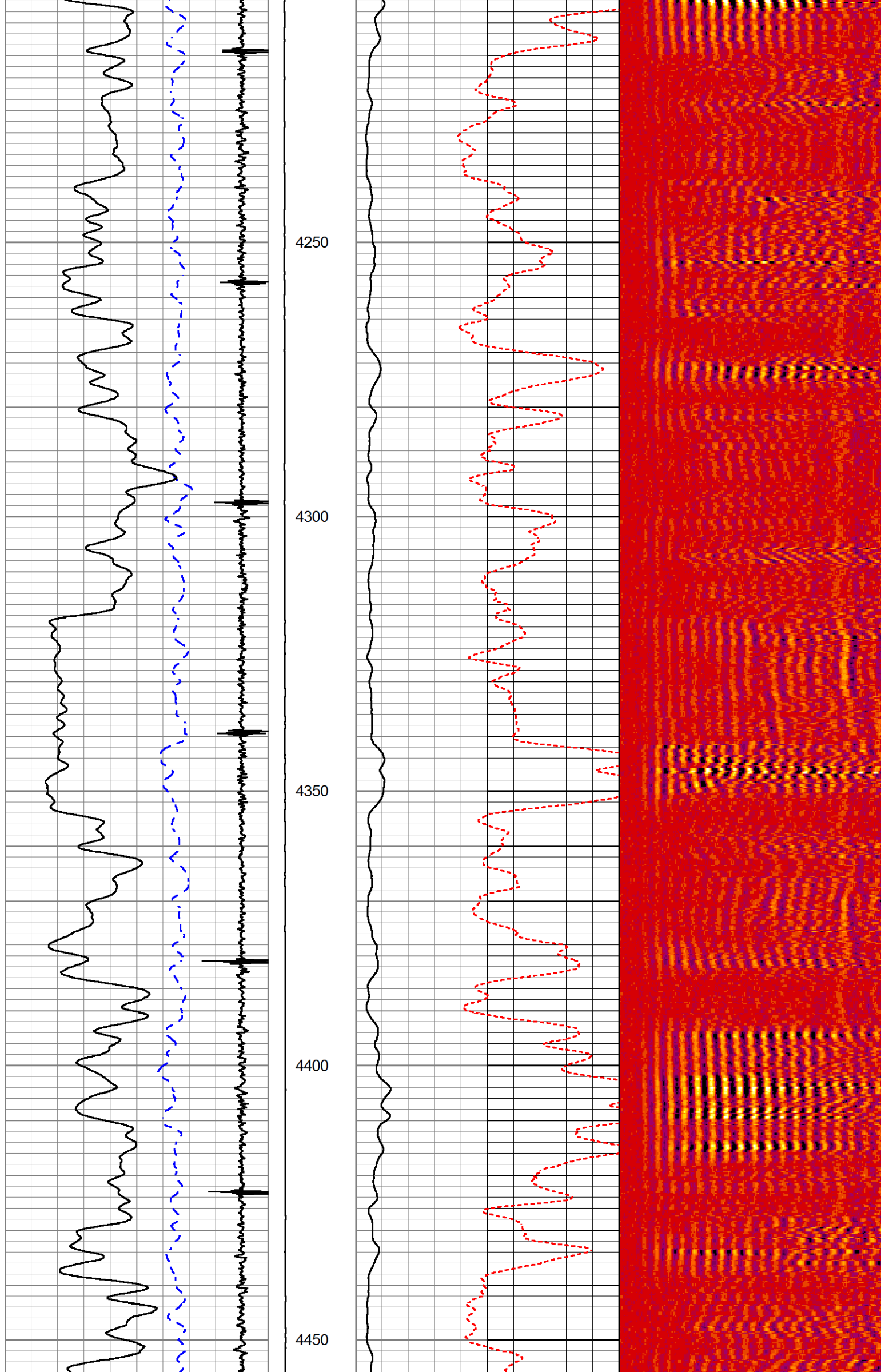


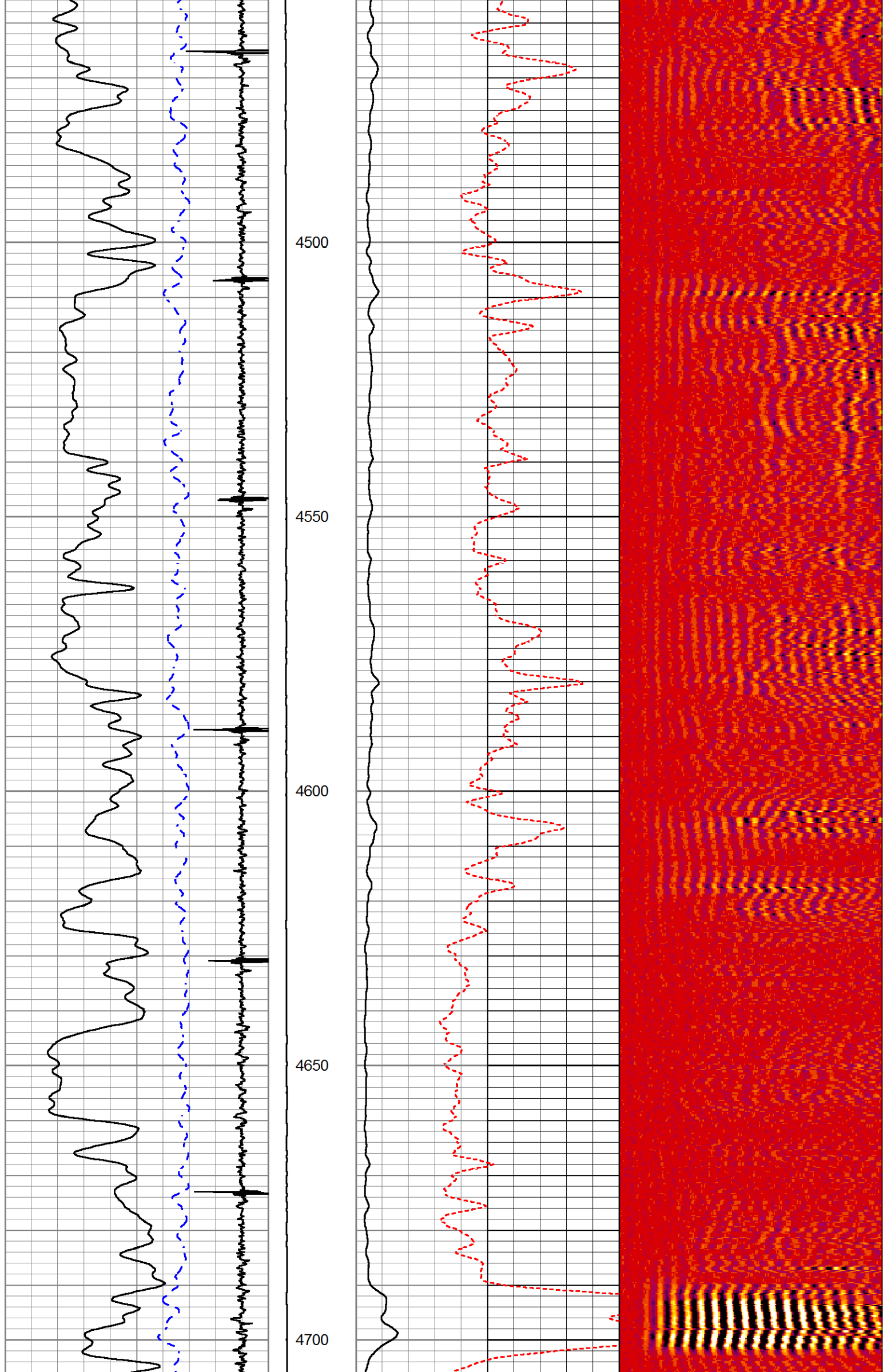


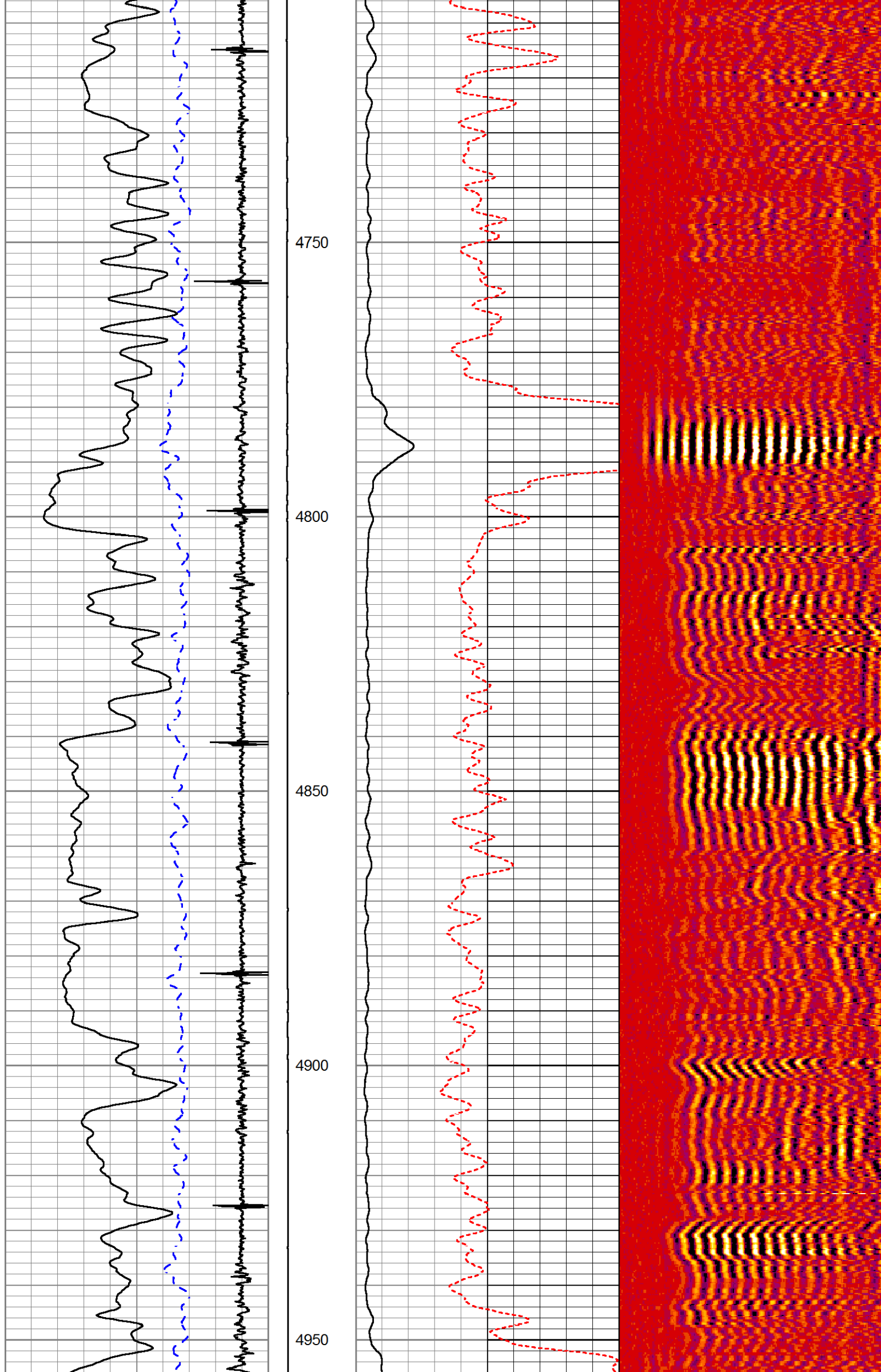


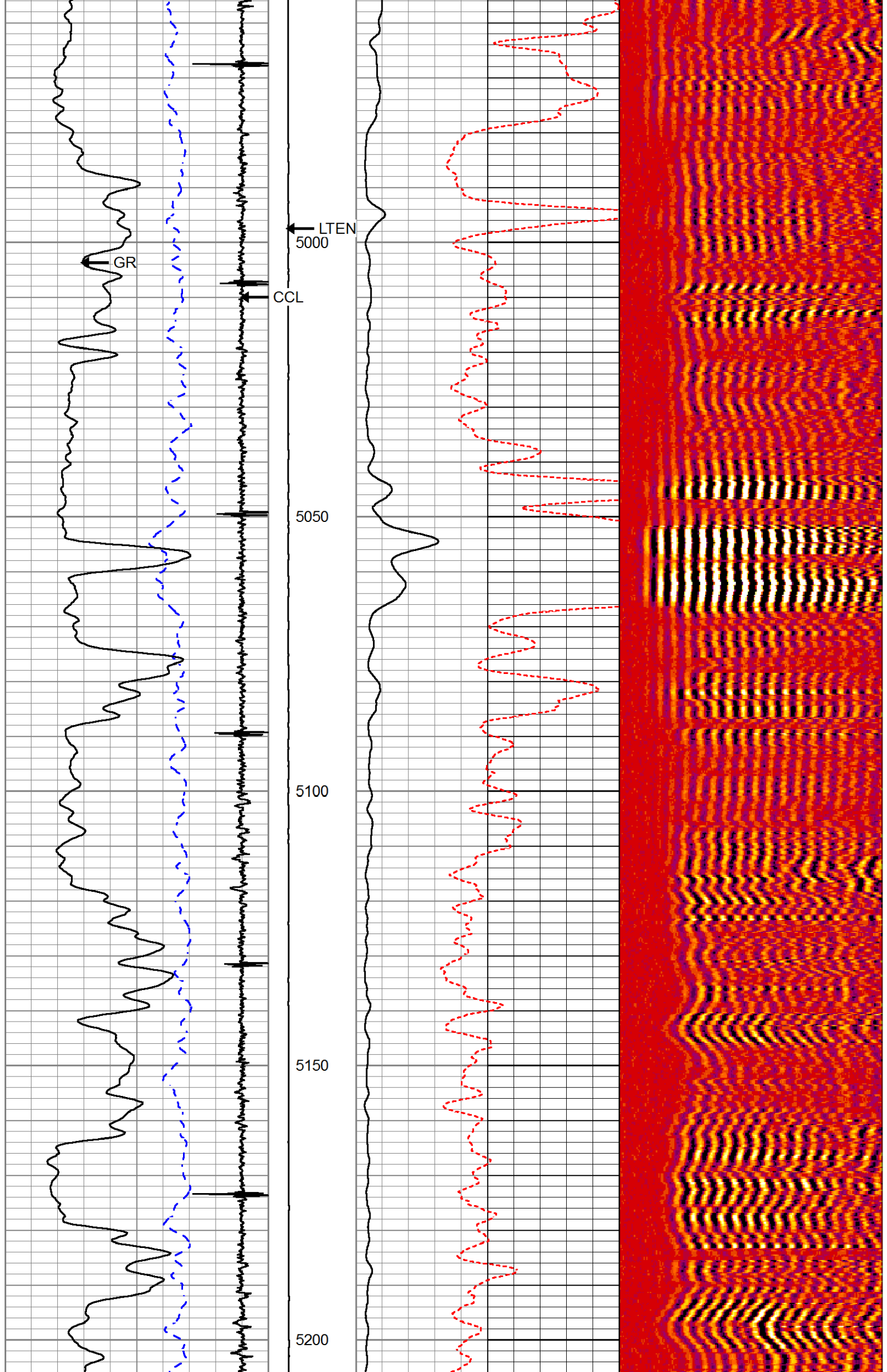


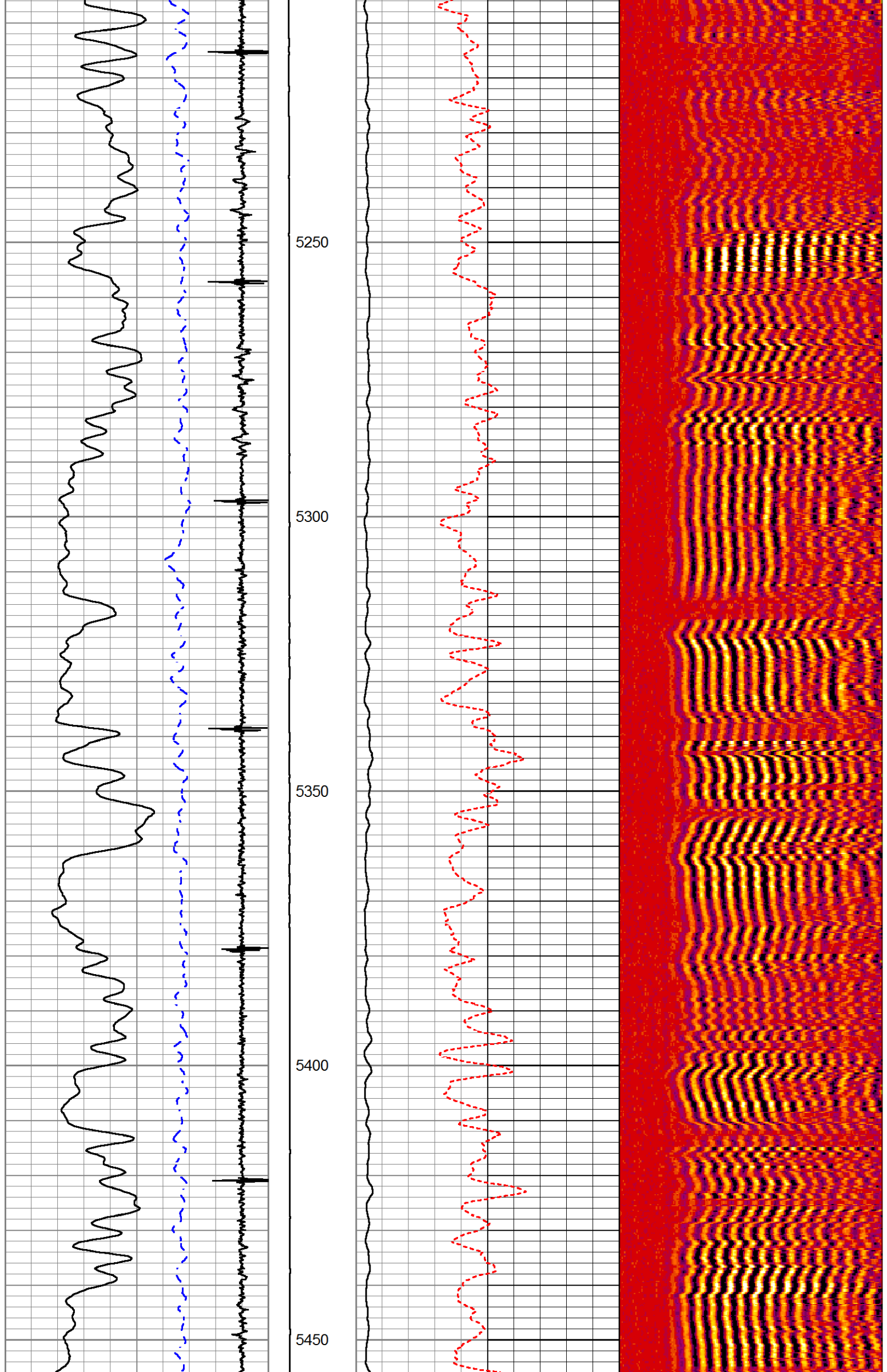


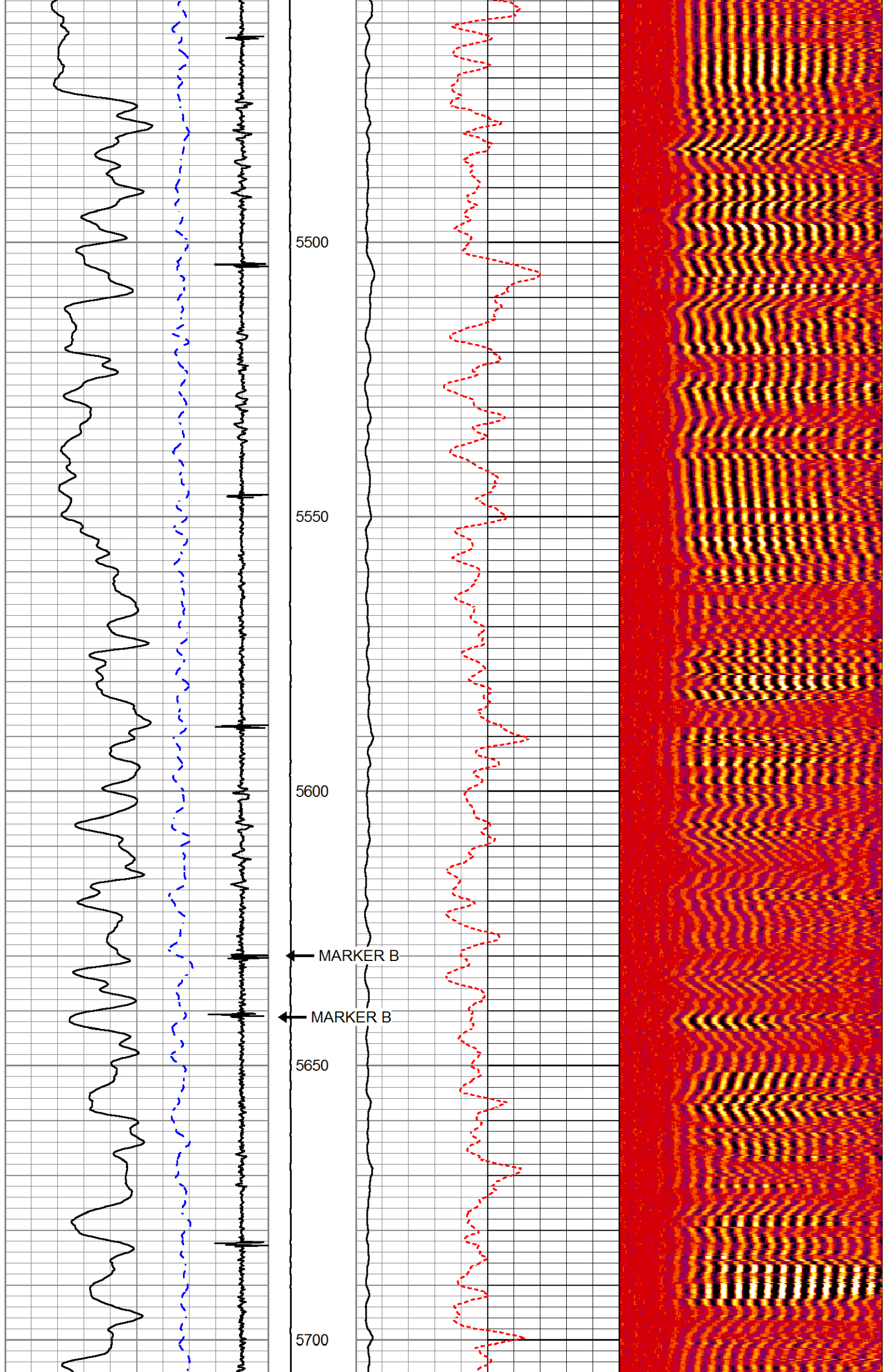


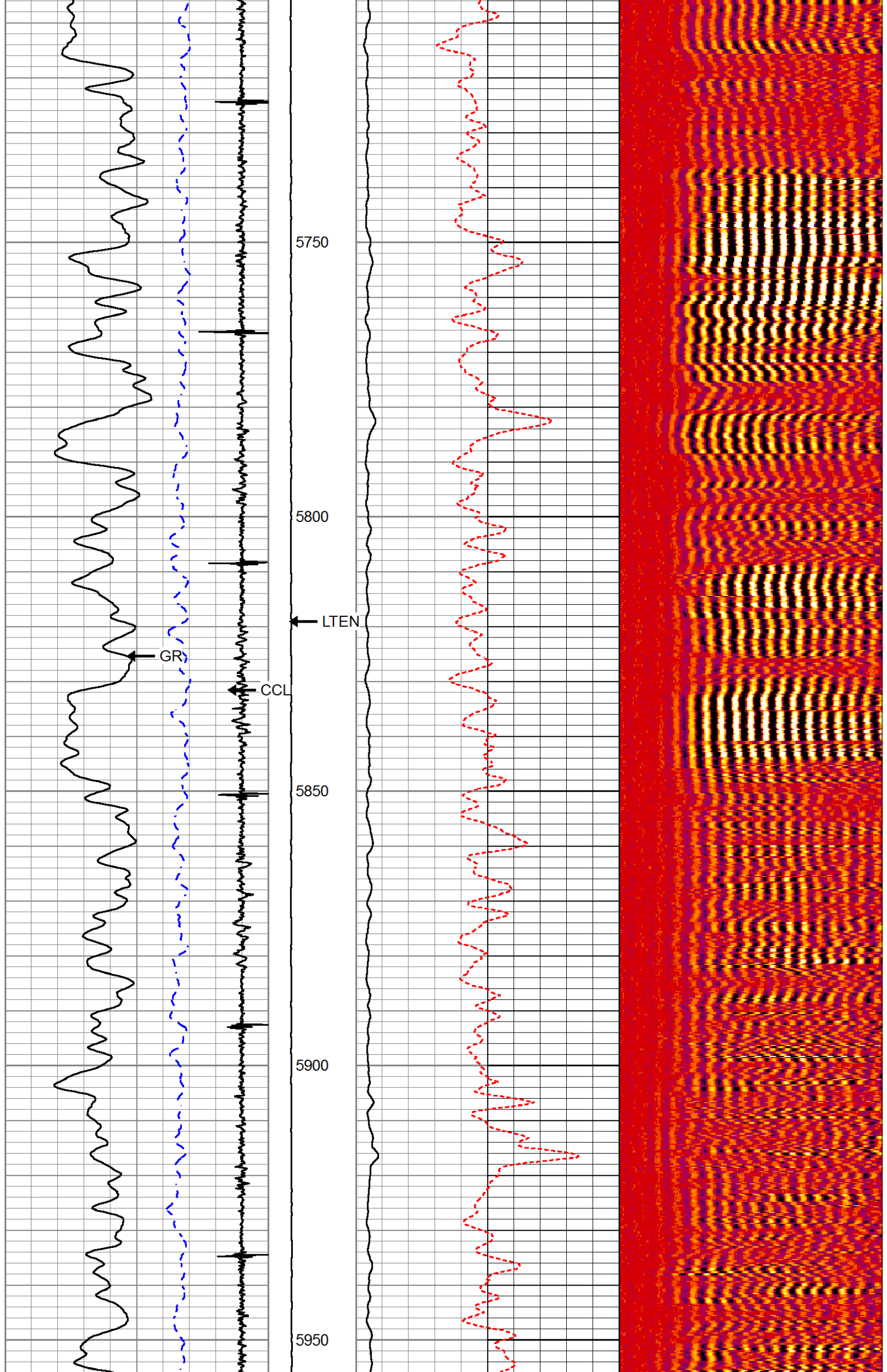


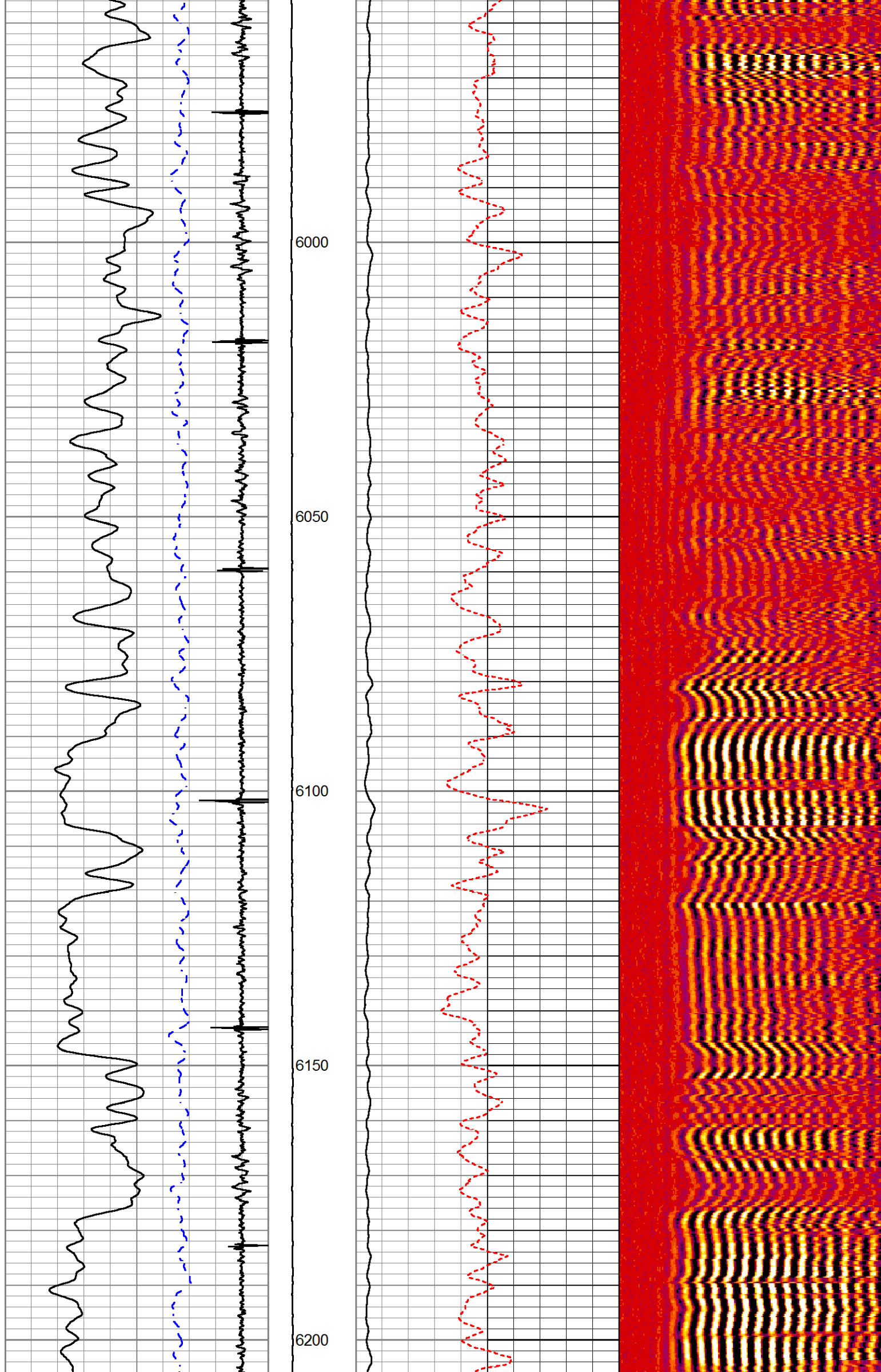


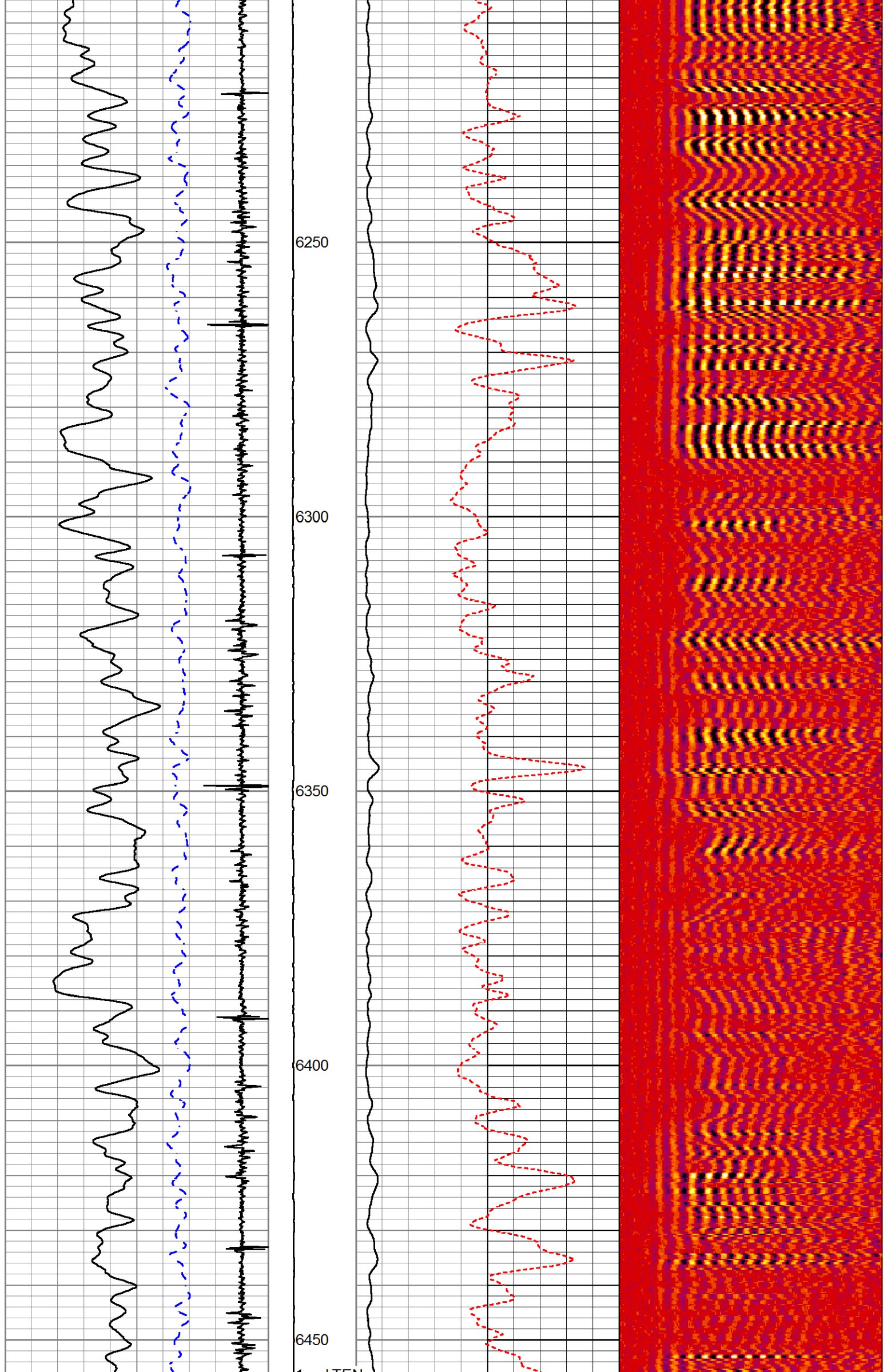


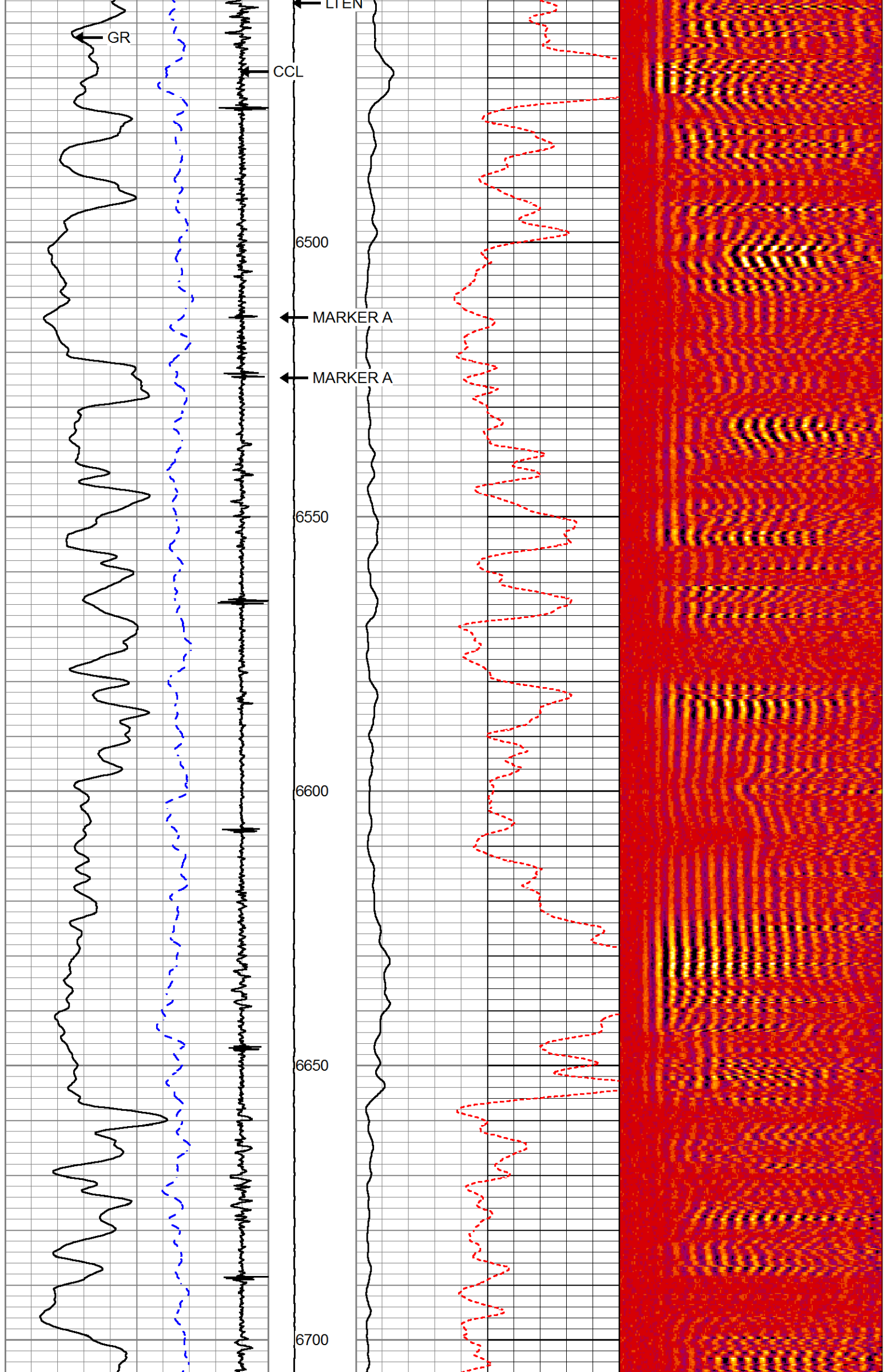


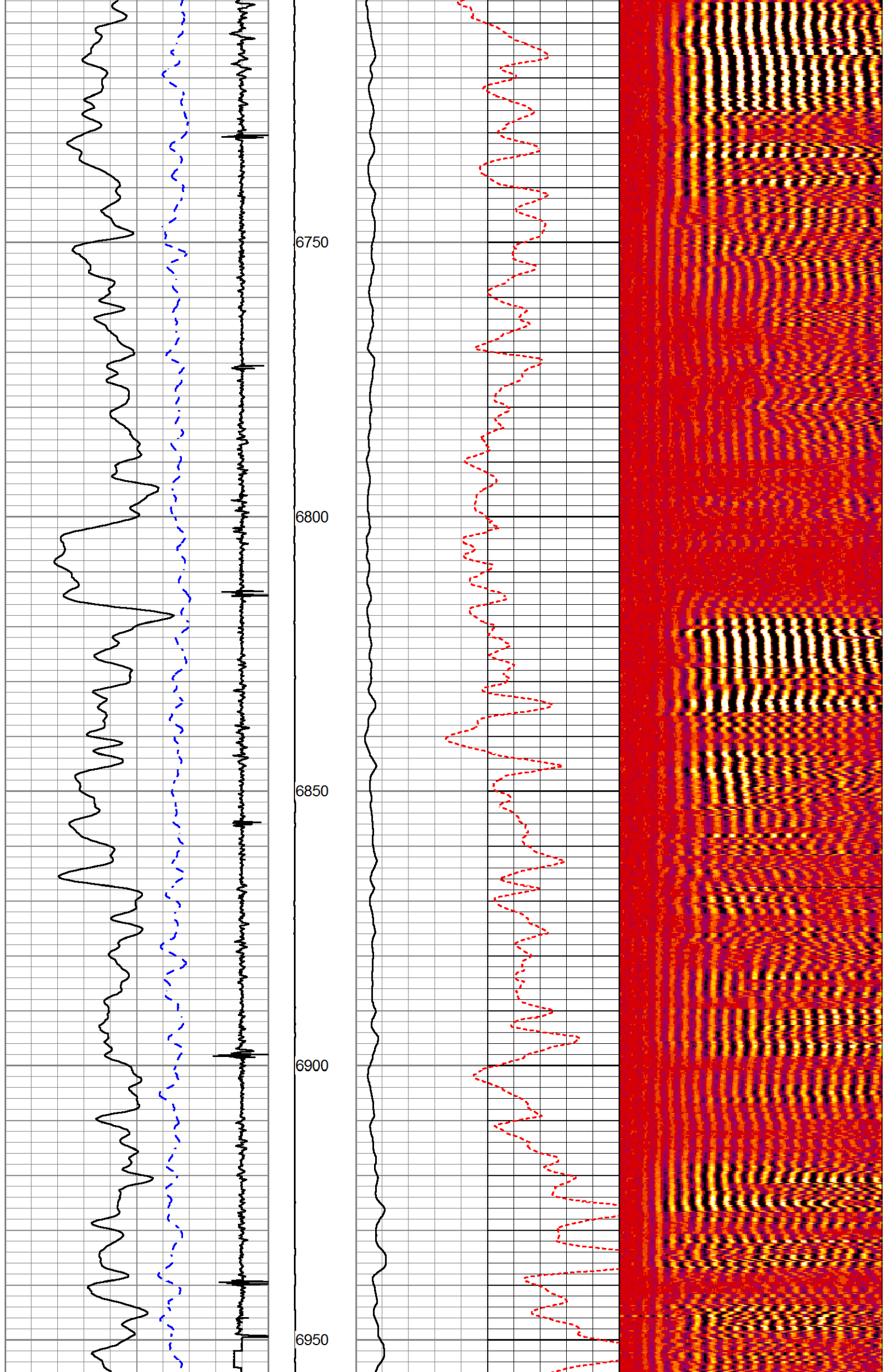


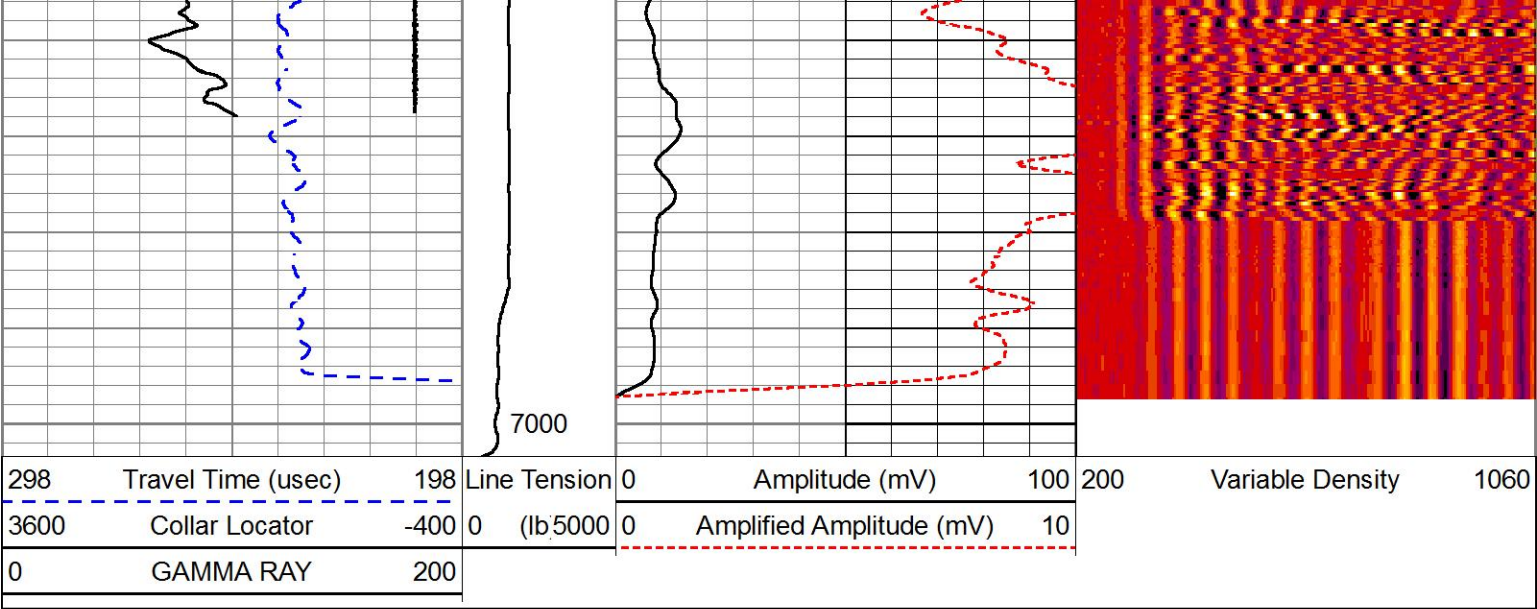








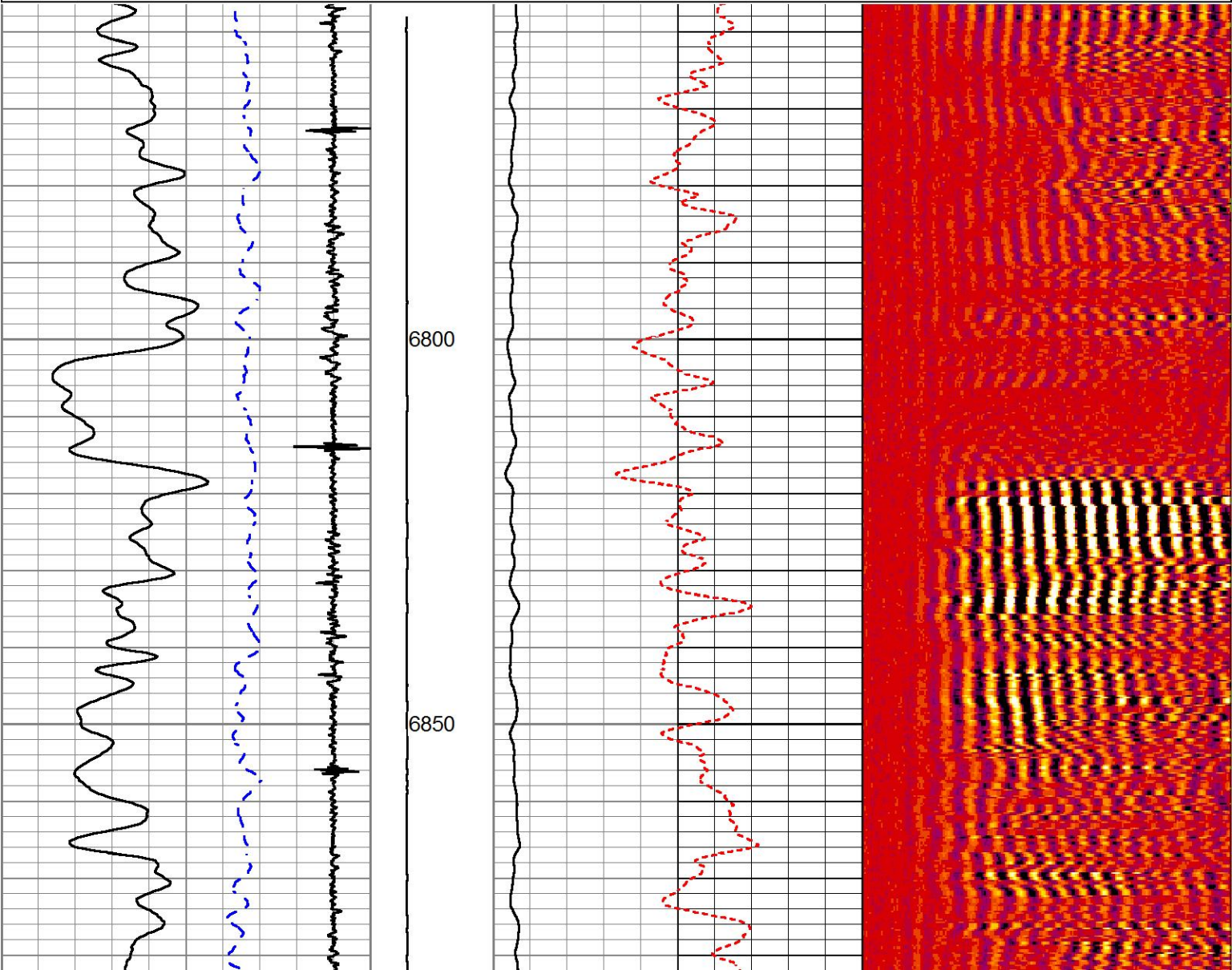
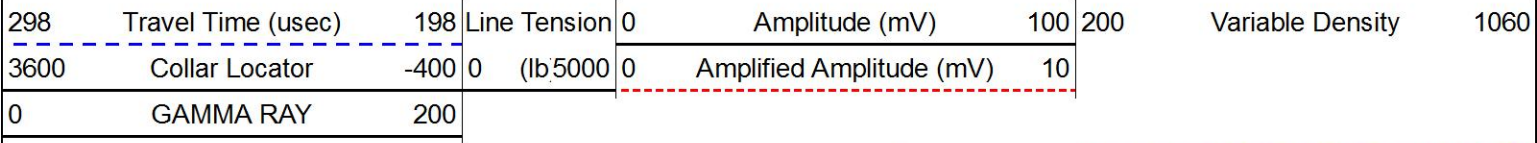


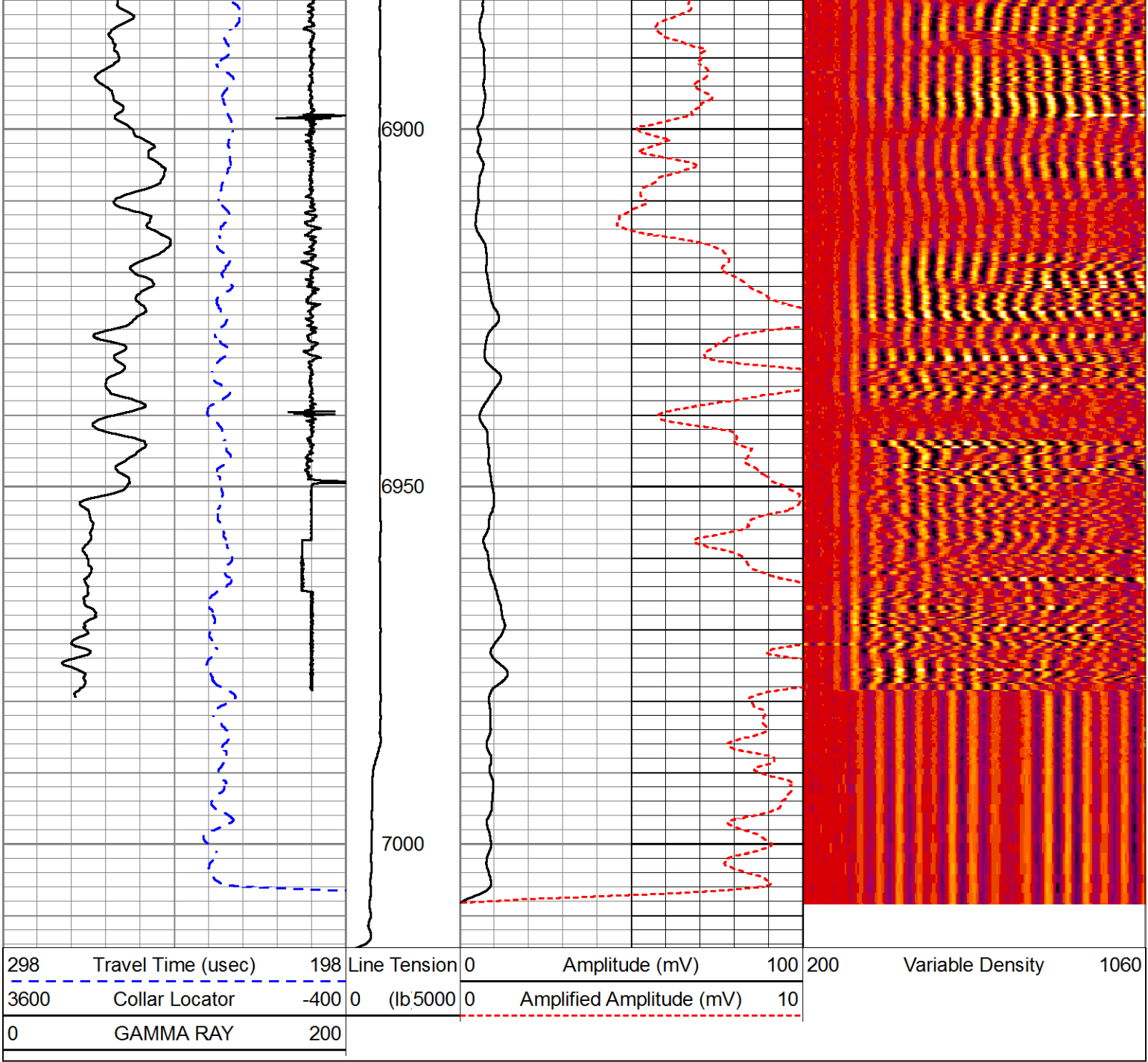


HALLIBURTON

REPEAT PASS

Database File ursa-tom-31a_sigma2.db
Dataset Pathname pass2
Presentation Format !1!!cbl_rmti
Dataset Creation Tue Aug 30 10:33:37 2016
Charted by Depth in Feet scaled 1:240





Log Variables

DatabaseD:\Warrior_data\ursa-tom-31d_sigmacbl.db
Dataset field/well/run1/pass5/_vars_

Top - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE	BORSAL	BOTTEMP	CASED?	CASEID
1	0	TEMP	in 7.875	kppm 150	degF 120	Yes	in 5.012
CASEOD	CASETHCK	CASEWGHT	LTH	MSGGN	MudWgt	PERFS	POROS1
in 4.5	in 0.25	lb/ft 11.6	Sandstone	1	lb/gal 8.45	0	1
POROS2	RHOCF	SO	SRFTEMP	TDEPTH	UHSGC	USERFTT	ZREF
0	0.25	in 0	degF 0	ft 0	NONE	usec/ft 0	MRayl 1.7

Calibration Report

Database File ursa-tom-31a_sigma2.db
Dataset Pathname pass3
Dataset Creation Tue Aug 30 10:47:23 2016

Cement Bond Log Shop Calibration Report

Serial-Model: 12091451-A
Calibration Performed: Tue Aug 30 10:10:25 2016

Free Pipe Calibration		
TT	Measured	Units
Amplitude	245.6	usec
Log Base Line	573.8	mV
	7.6	mV
Calibration References and Gain		
Name	Value	Units
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	79.0	mV
Amp. Gain	0.120	

Reservoir Monitor Tool I Calibration Report	
Serial-Model:	11680597-A
Shop Calibration Performed:	Sat Aug 27 17:21:57 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					
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		
N/F	1.22	1.27	-0.05	+/-0.10	


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					
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Type / Serial:		002 / 12105780			
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SHOP CALIBRATION		Wed Aug 17 17:47:54 2016			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	27.8				cps
Calibrator	295.2				cps
		1.3760			GAPI/cps
PRIMARY VERIFICATION					
Background	39.3				cps
Calibrator	407.7				cps
Difference				368.5	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	35.78		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	33.52		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	22.87		RMTI-A (11680597) Halliburton RMTI Tool	14.00	2.13	77.00
RmtTNGT	22.37					
RmtFP5V	14.62		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
RmtNFwvMcsP	14.62		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
RmtCommFWa	14.62					
Temp	9.49					
TT3FT	7.24		HCBLM-A (12091451) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	7.24					
WVF5FT	6.28					
WVF3FT	2.76		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
LLMTEN	0.00		AUH-001 (000001) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: ursa-tom-31a_sigma2.db: field/well/run1/pass3 Total length: 39.35 ft Total weight: 356.20 lb O.D.: 3.13 in						

	Company	URSA OPERATING CO., LLC.				
	Well	TOMPKINS 31A-08-07-95				
	Field	PARACHUTE				
	County	GARFIELD				
	State	CO				Country U.S.A.