





NO.	FROM	TO	Pressure	Gamma				
ONE	8572	SURFACE	0	80				
	GAMMA RAY		TRAVEL TIME		AMPLITUDE		MSG	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	150	550	200	0	100	200	1200
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

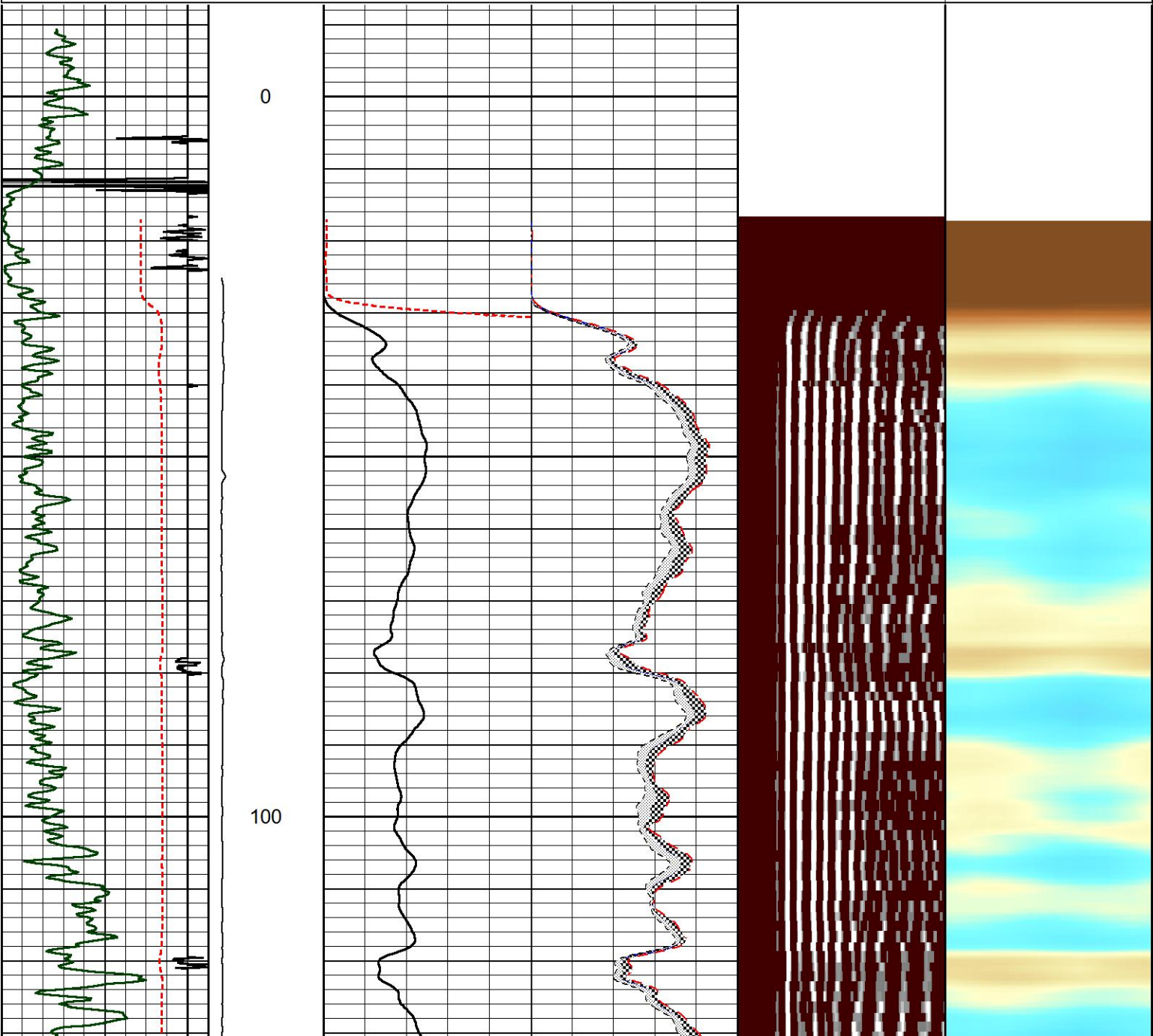
HALLIBURTON

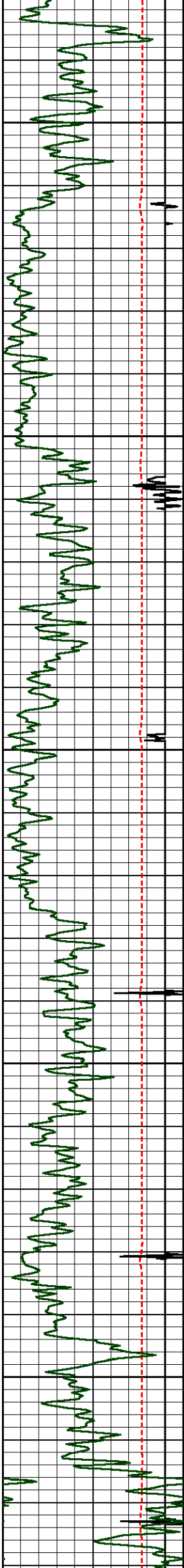
MAIN LOG SECTION

5" = 100'

Database File	km cd 4.db
Dataset Pathname	1-23-15/RBT_7/MERGE_MAIN2
Presentation Format	radial
Dataset Creation	Sat Jan 24 01:56:59 2015
Charted by	Depth in Feet scaled 1:240

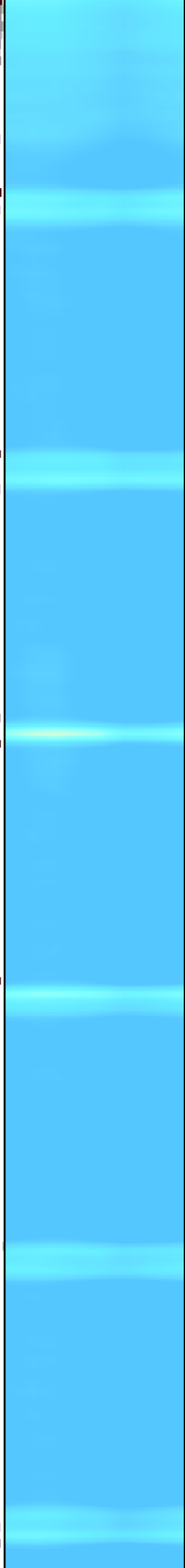
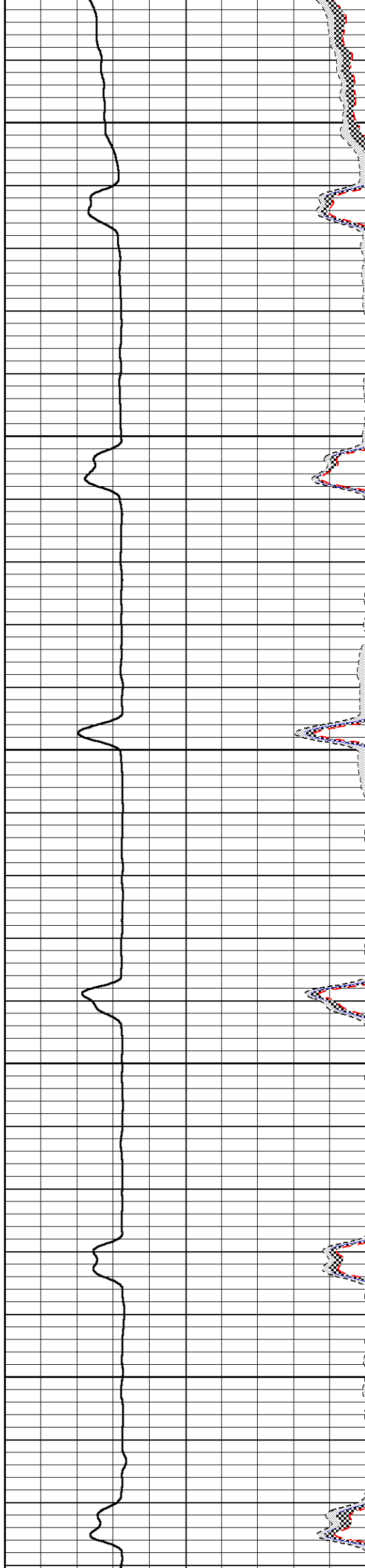
550	TT (usec)	200	TENSION	0	AMP (mV)	100	0	AMPAVG	100	200	MSG	1200	1	SECTORS	8
-2700	CCL	300	0 (lb/4000)	0	AMPx10 (mV)	10	0	AMPMAX	100				1	100	
0	GR (GAPI)	150						0	AMPMIN	100					



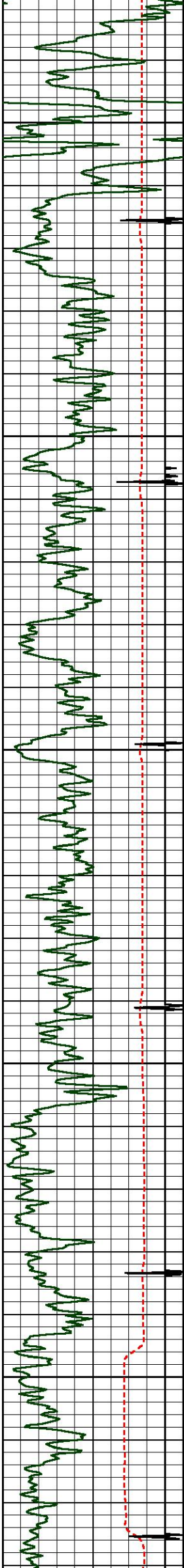


200

300



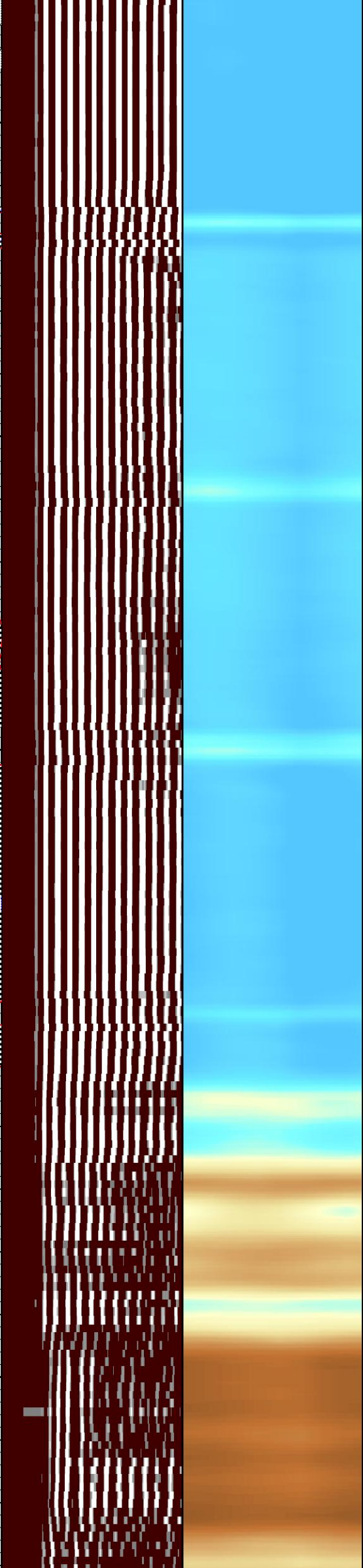
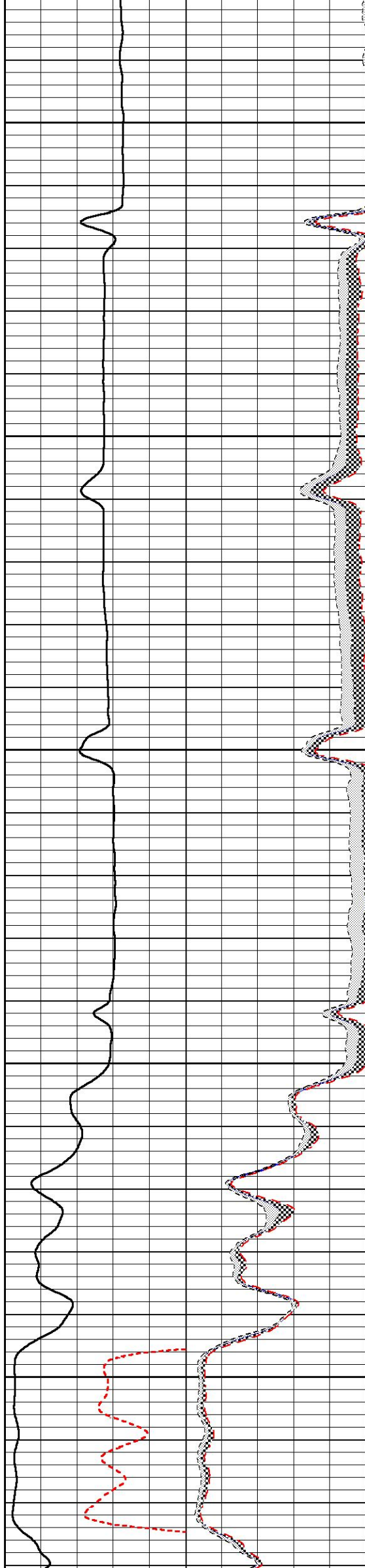


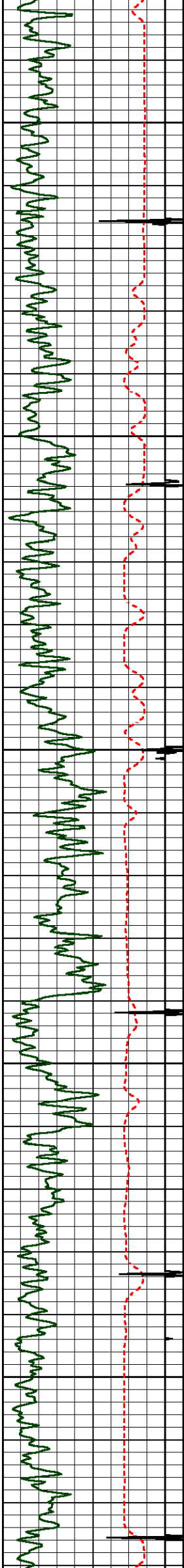


400

500

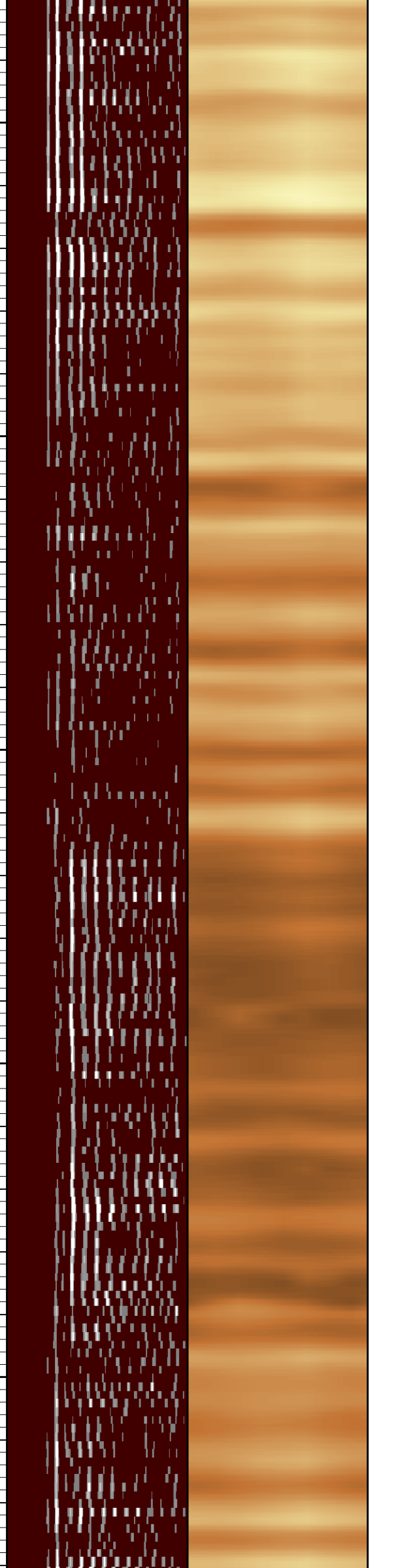
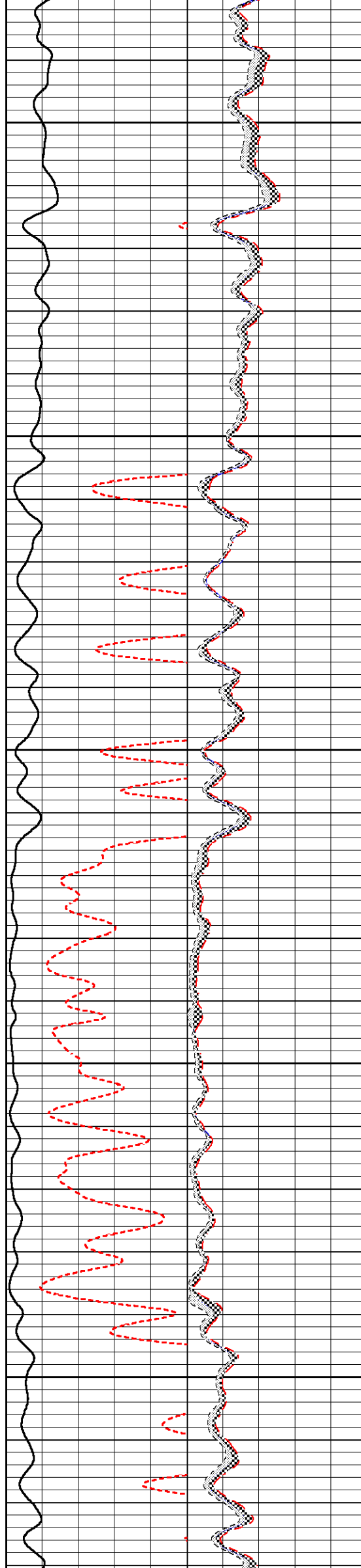
600

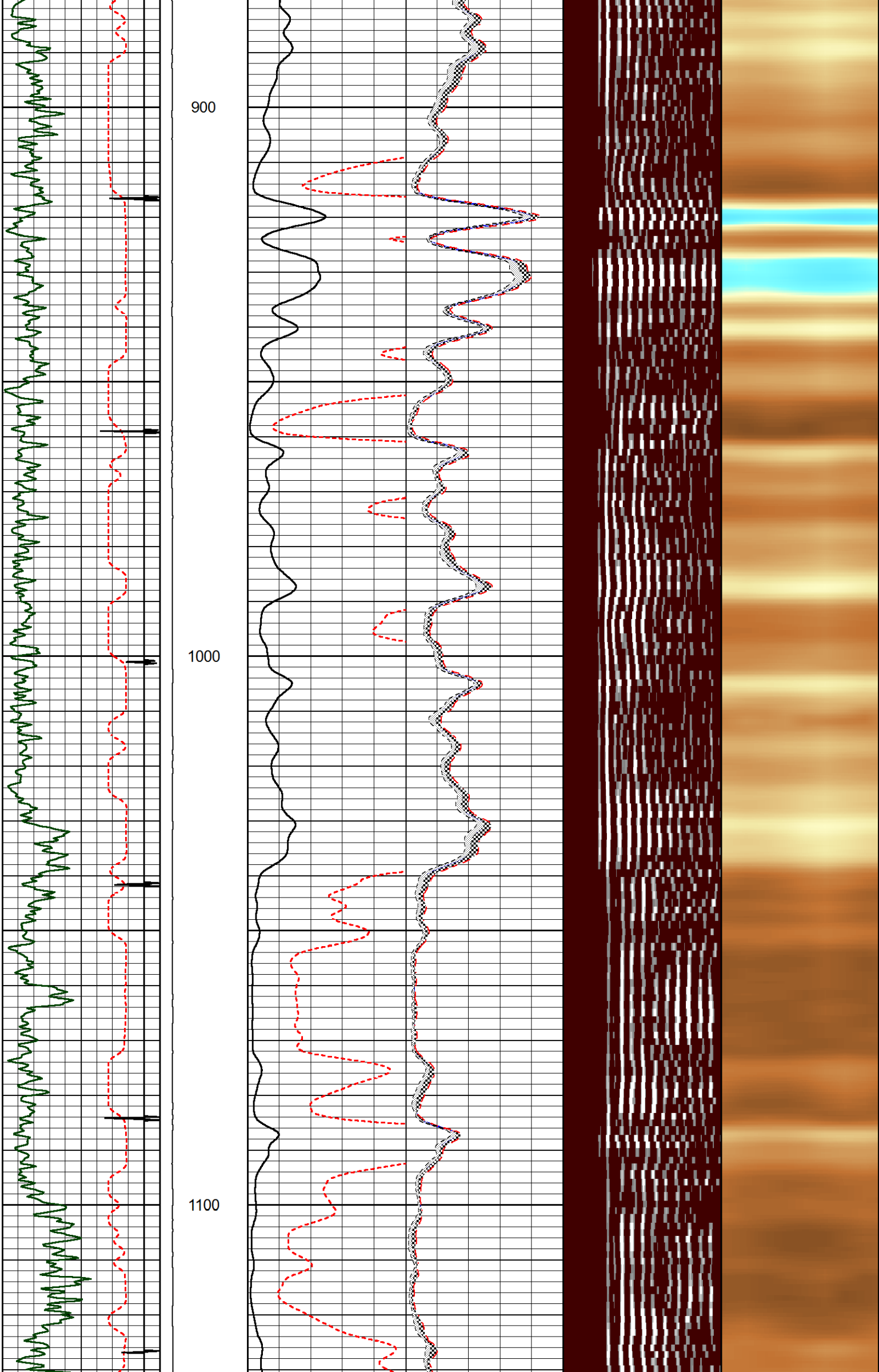




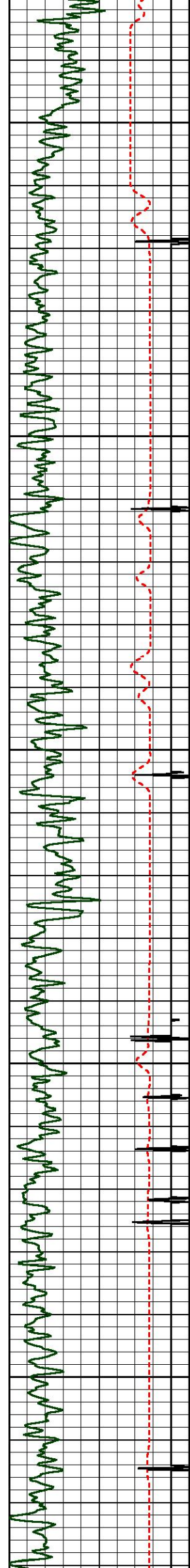
700

800



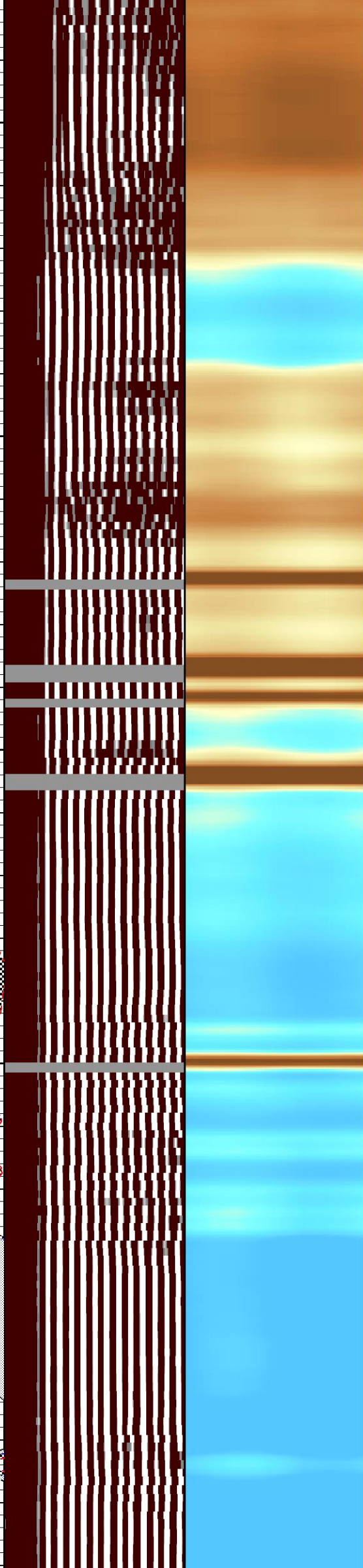
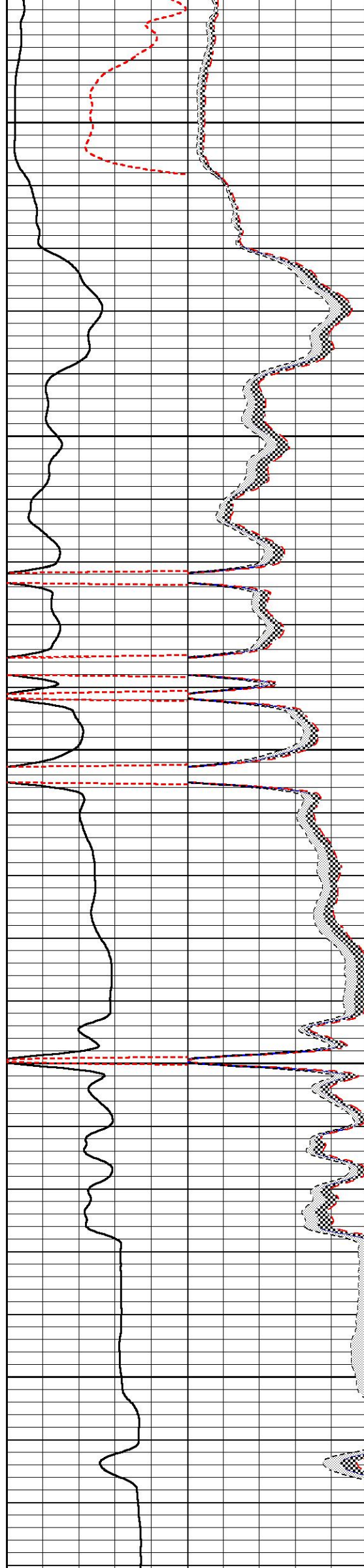


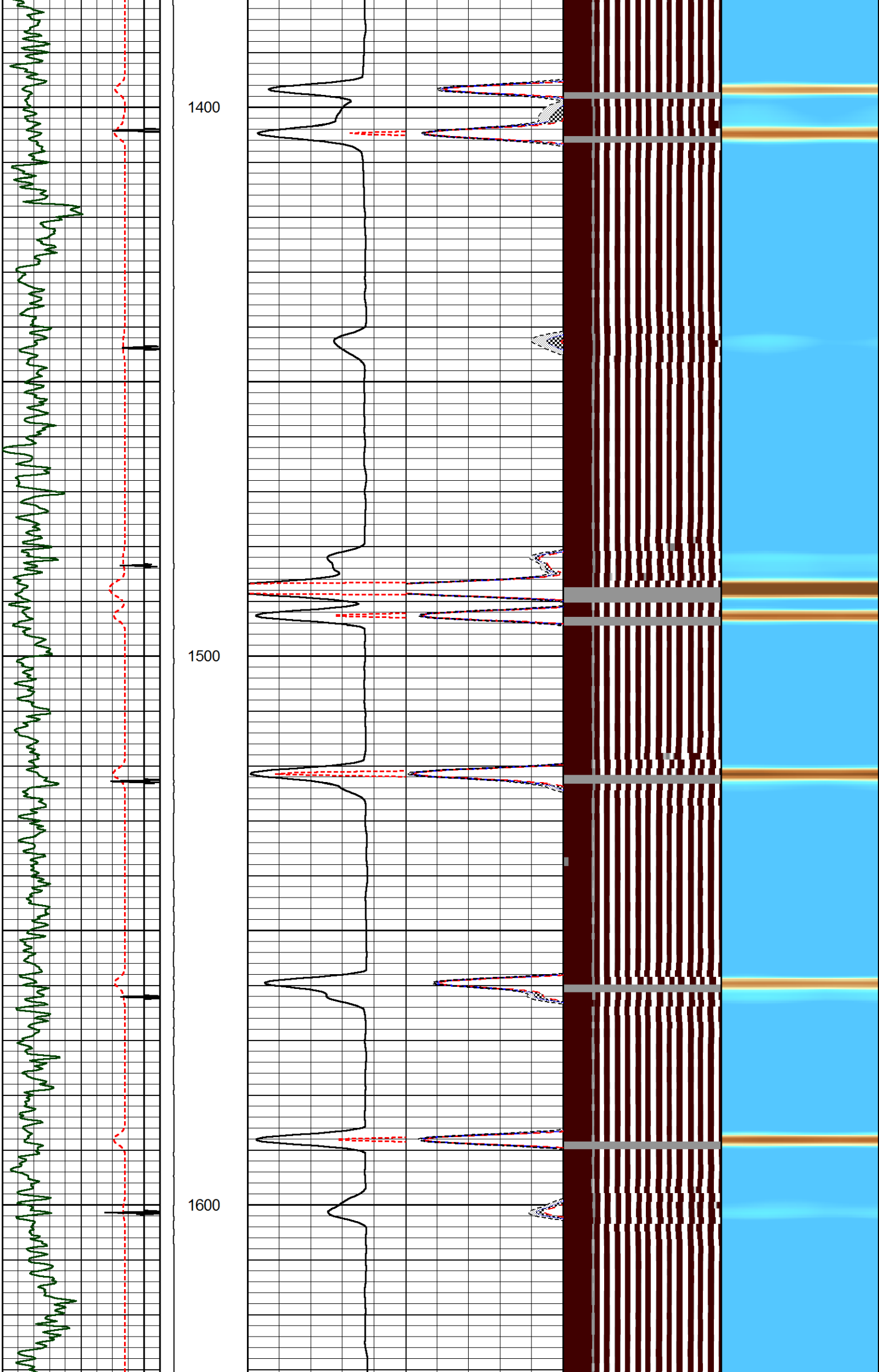




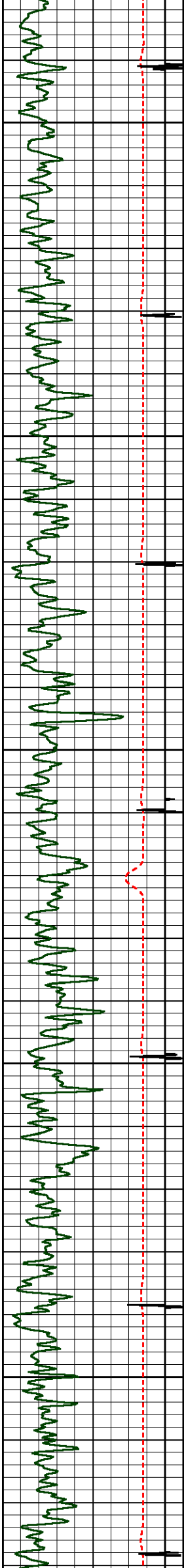
1200

1300



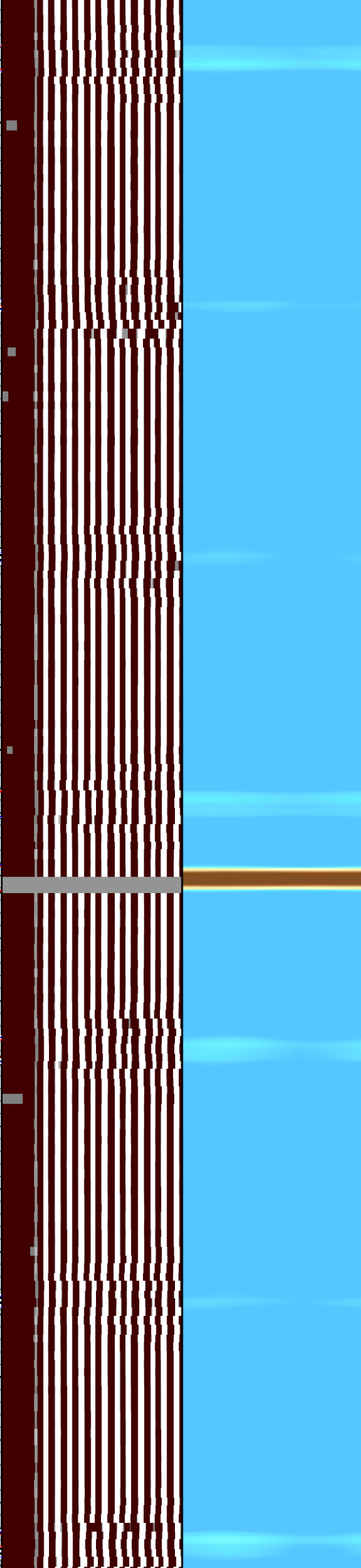
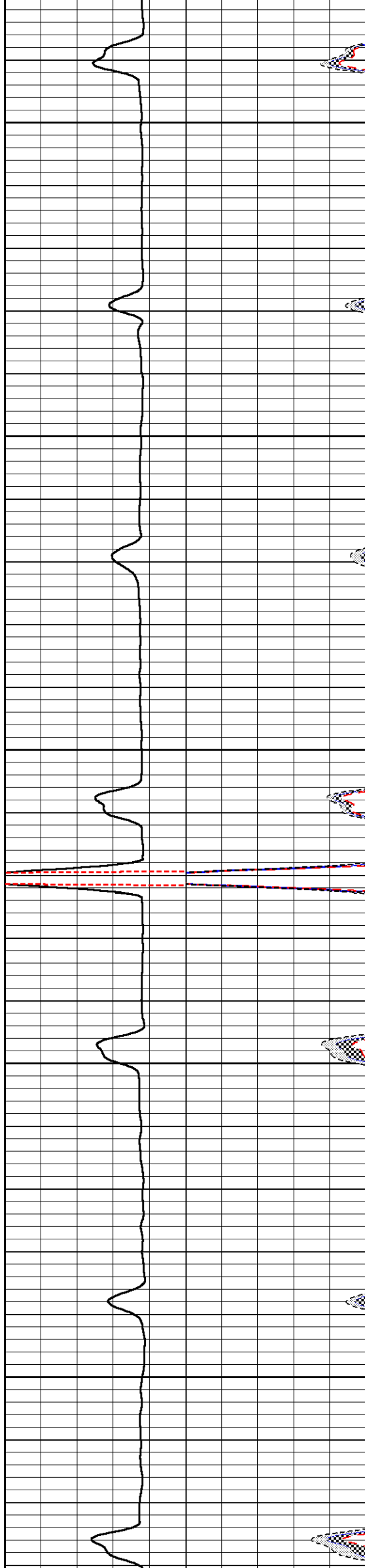


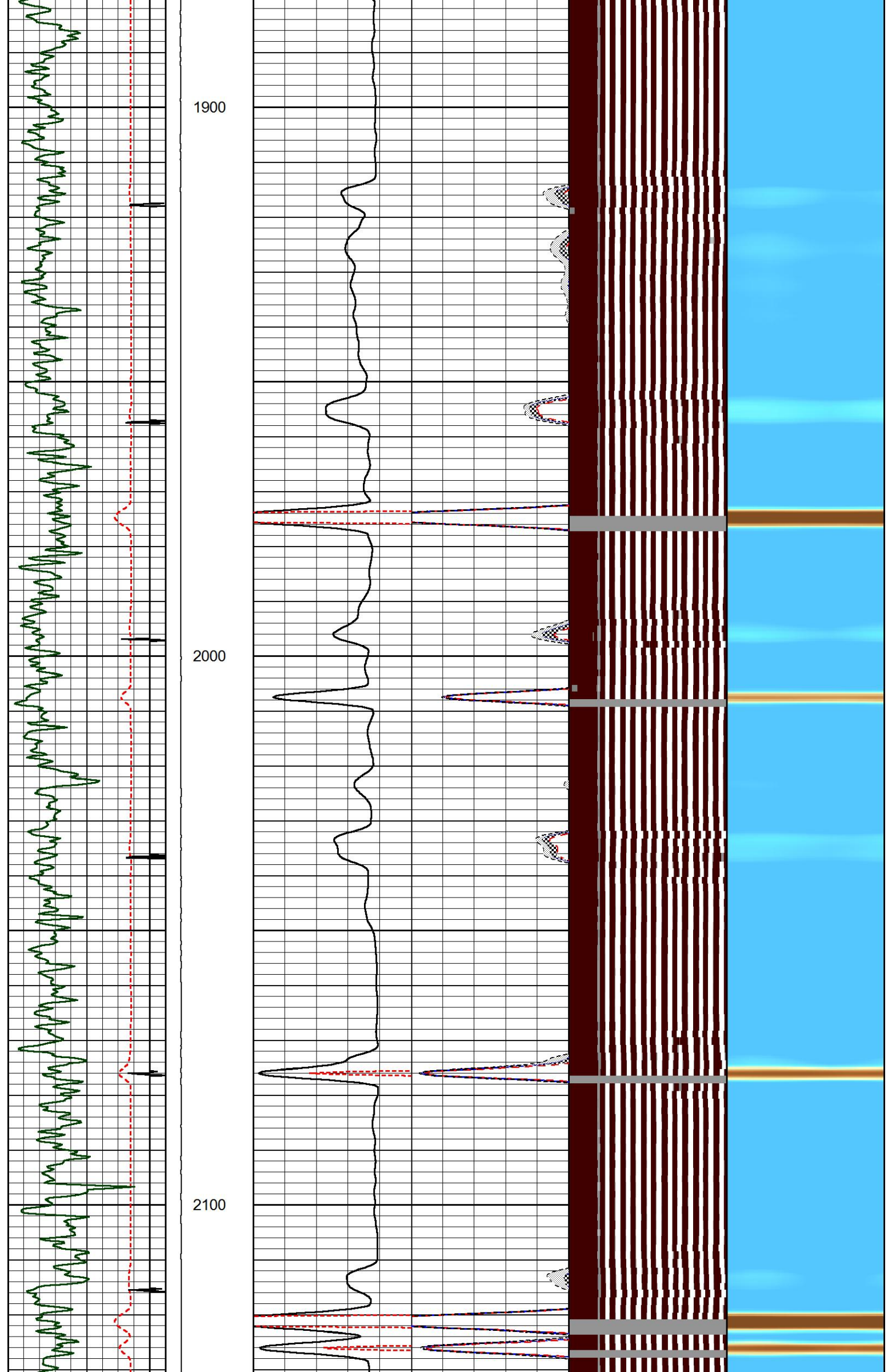


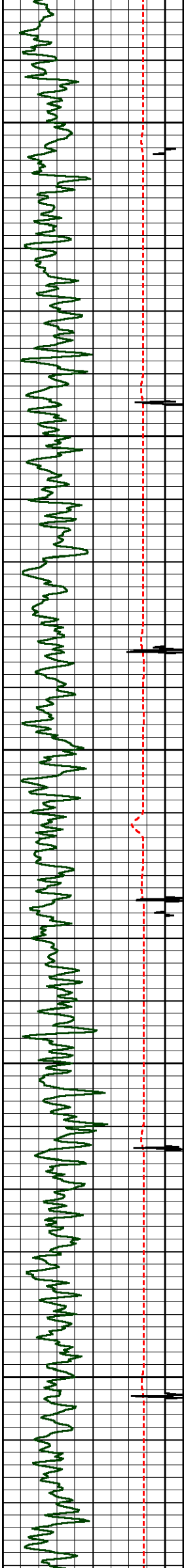


1700

1800

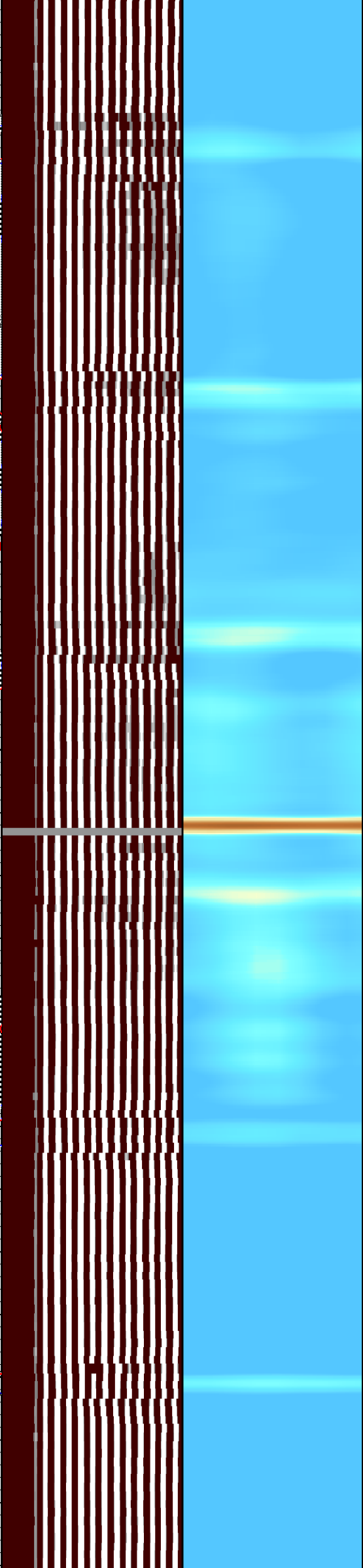
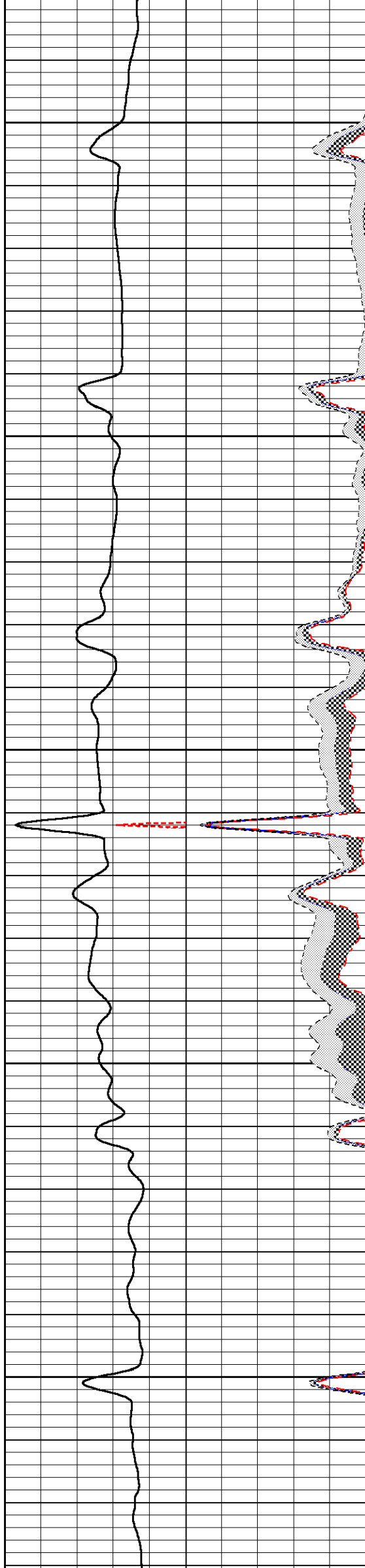




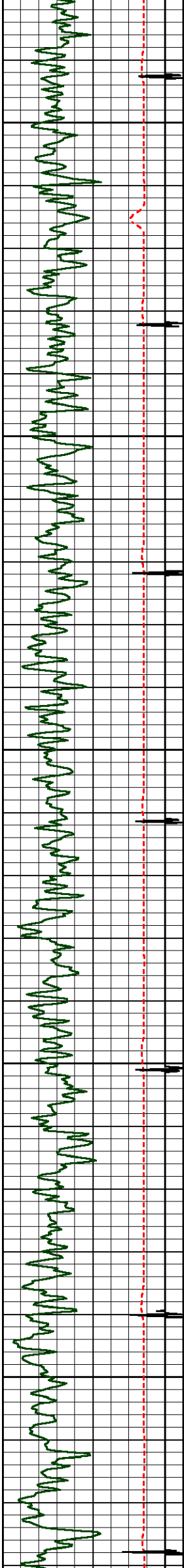


2200

2300



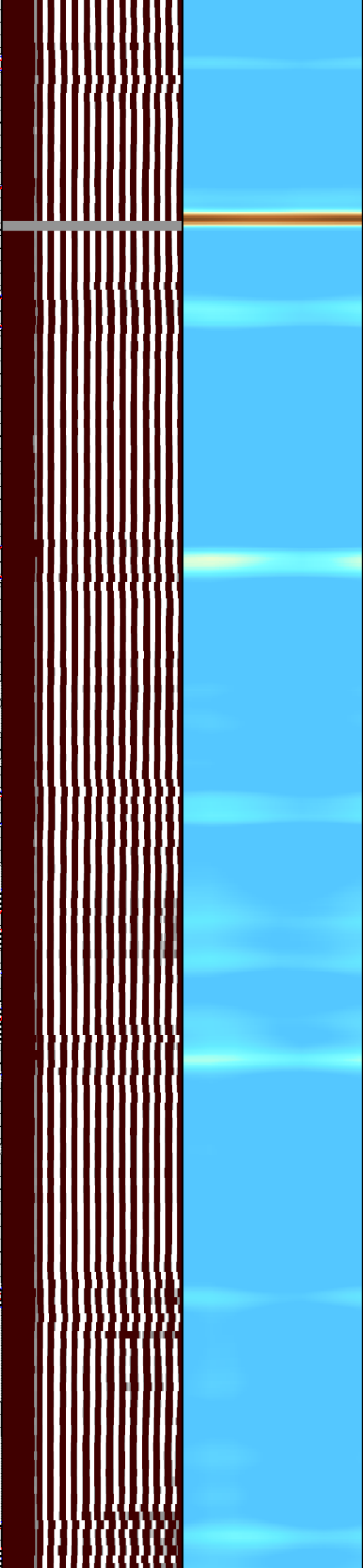
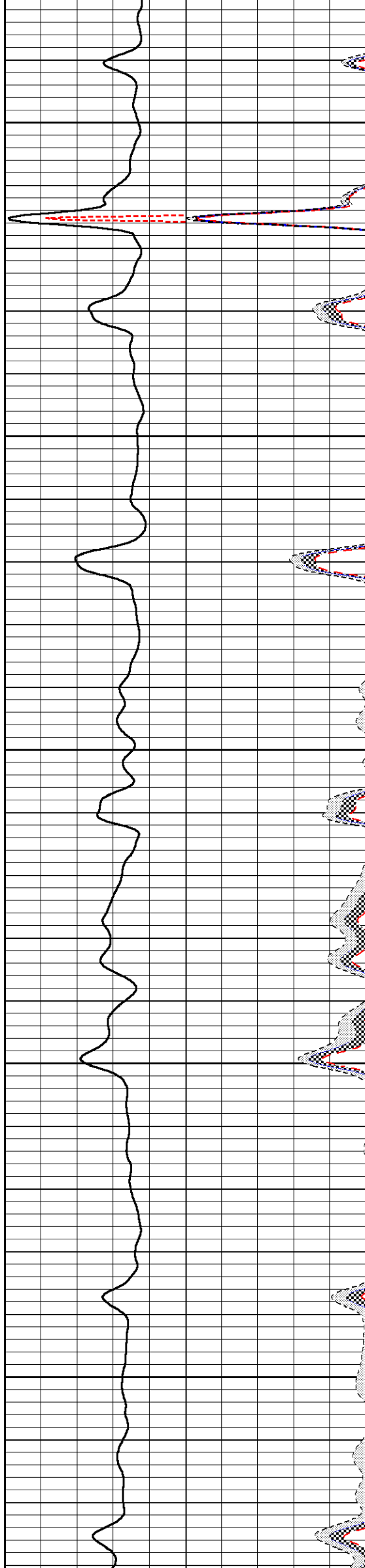


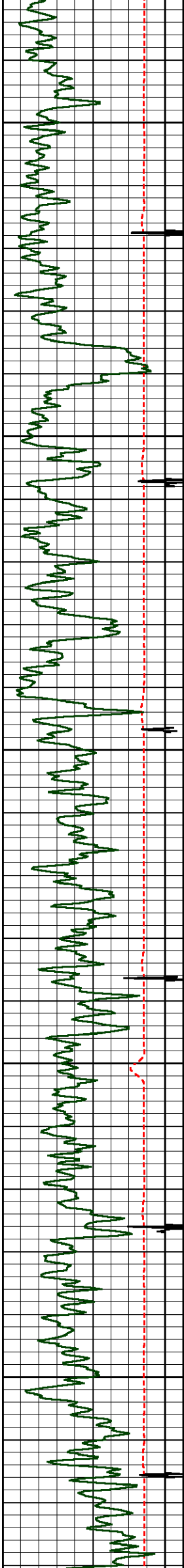


2400

2500

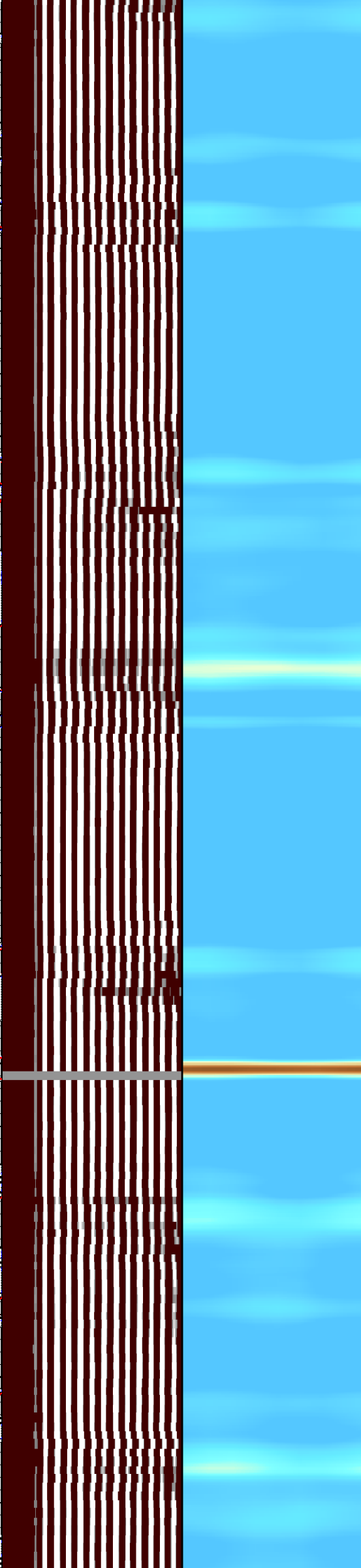
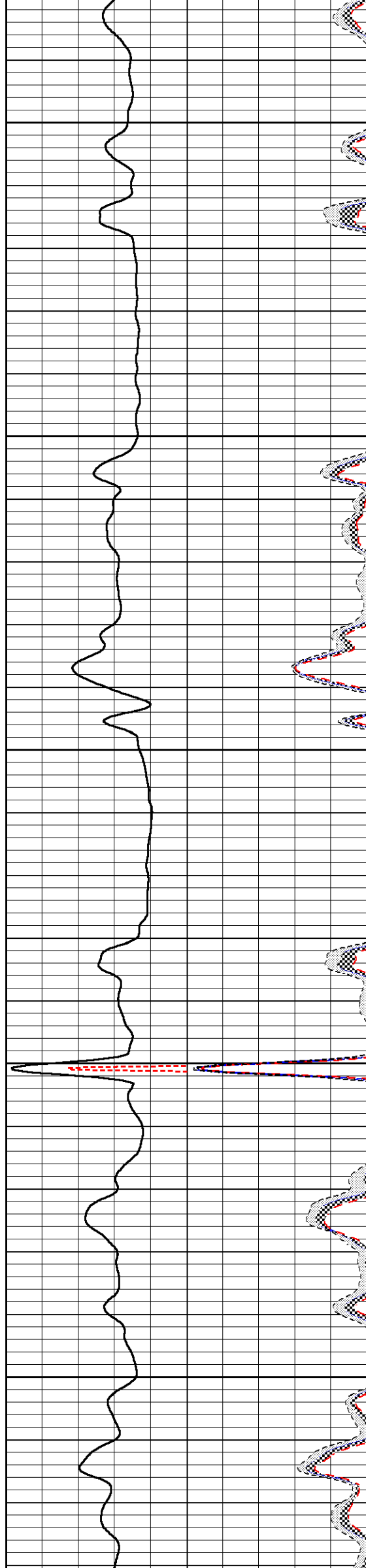
2600

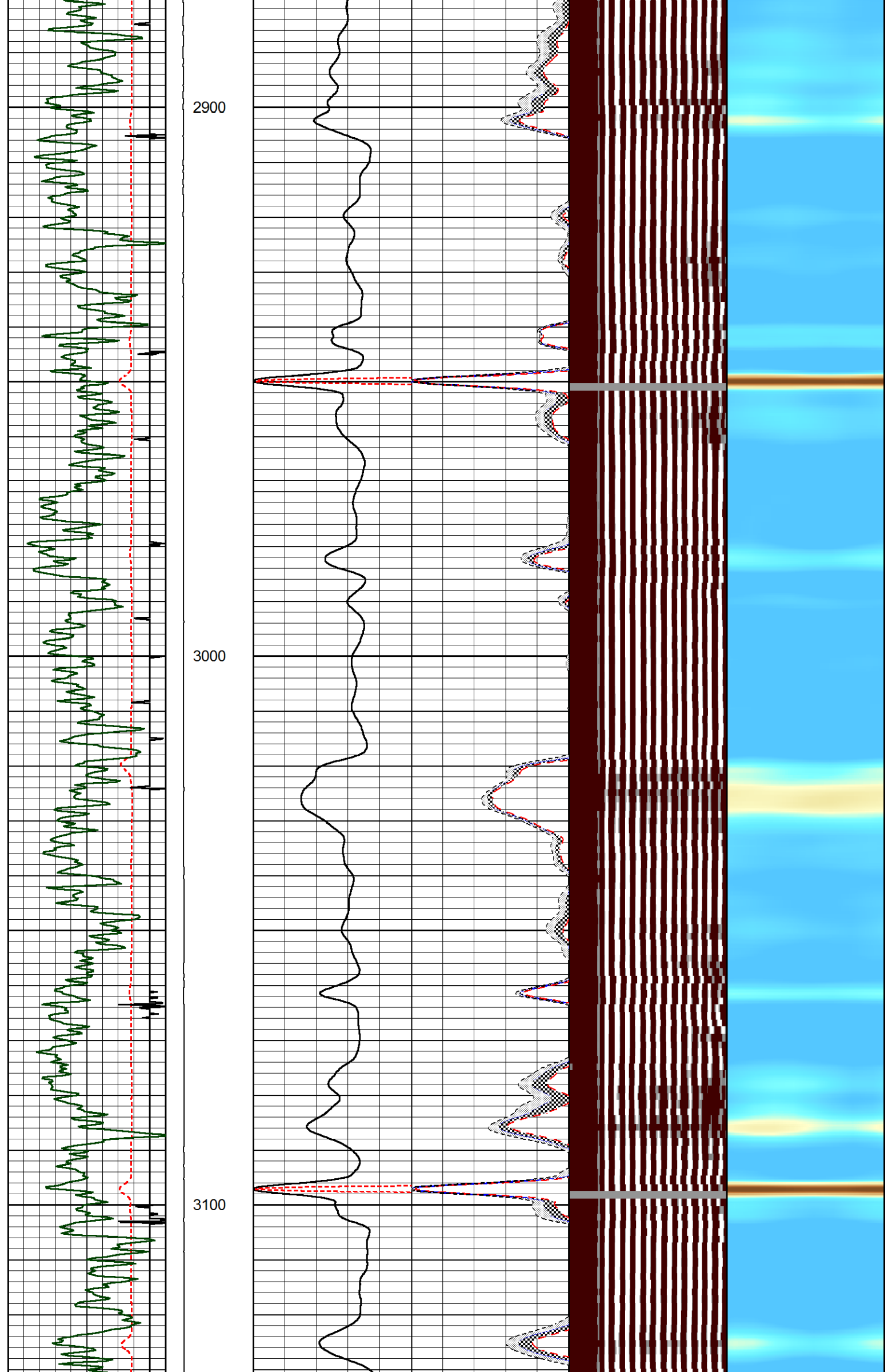




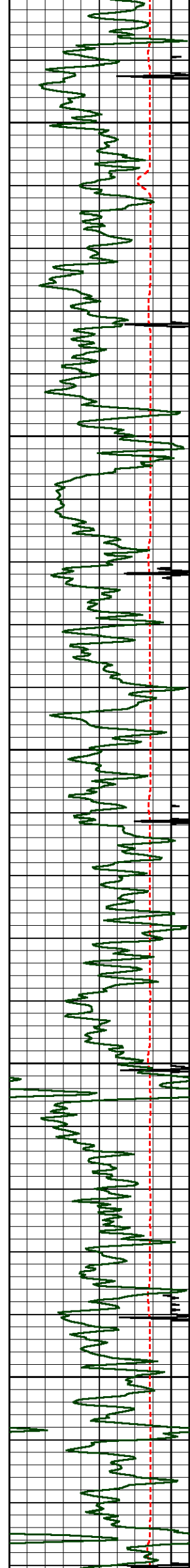
2700

2800



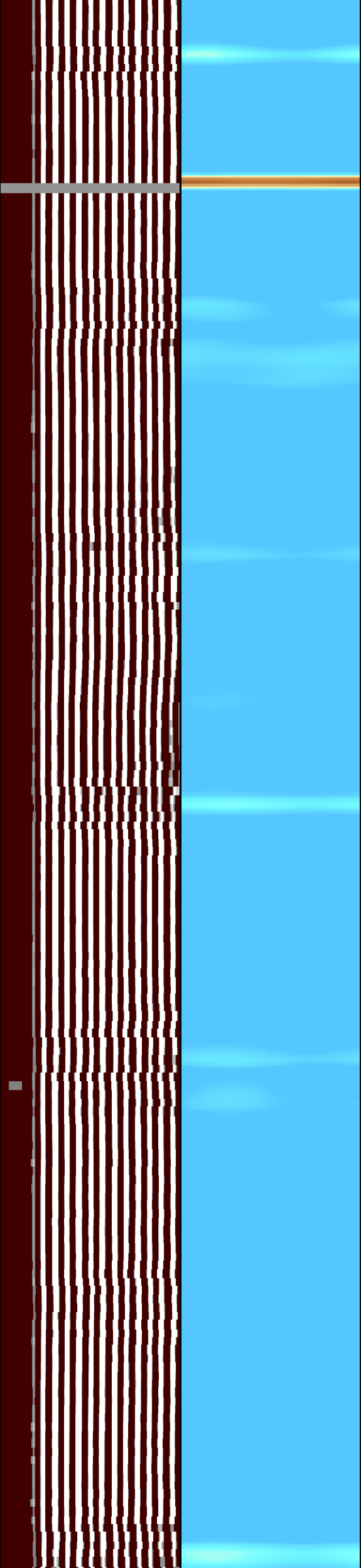
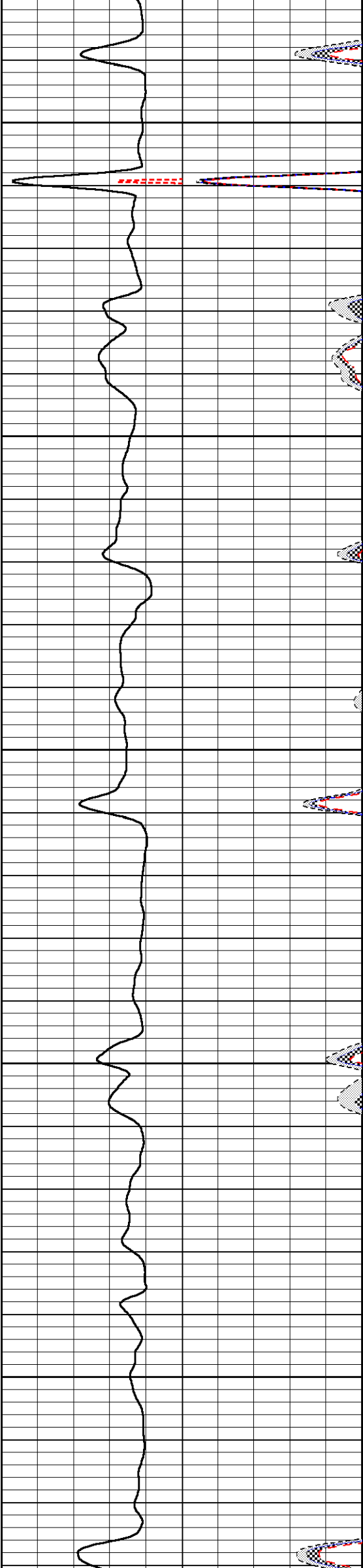


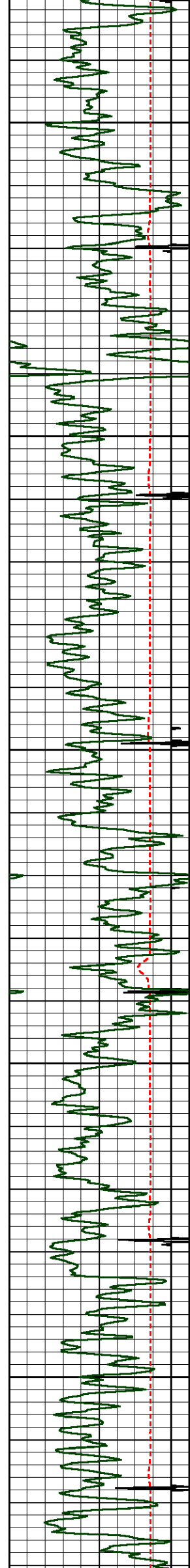




3200

3300

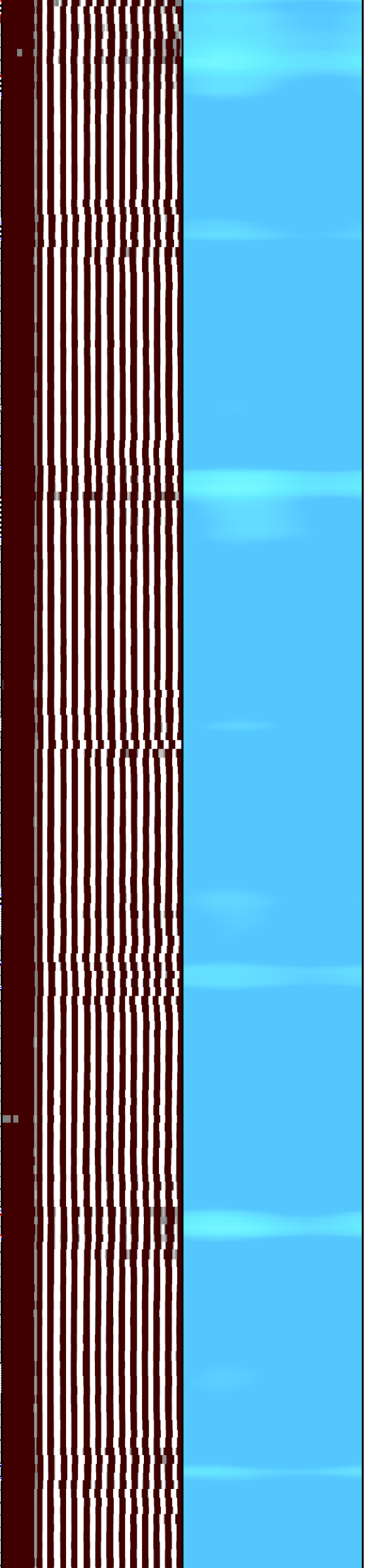
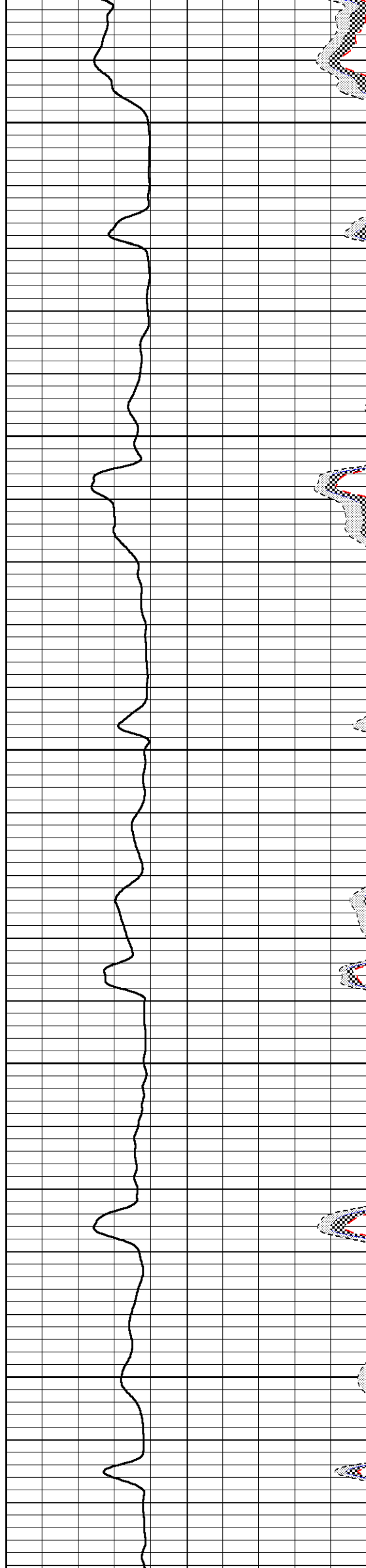


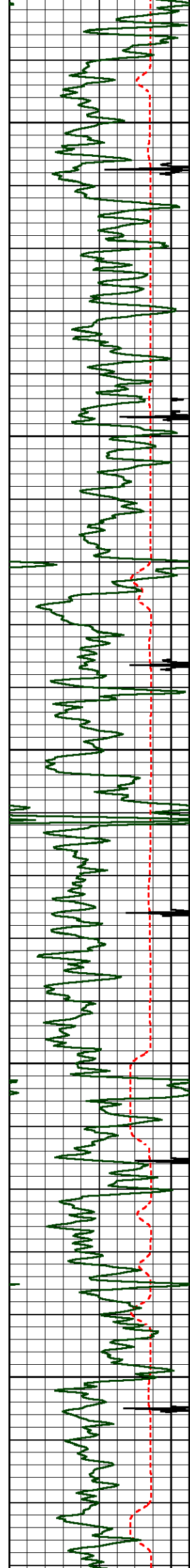


3400

3500

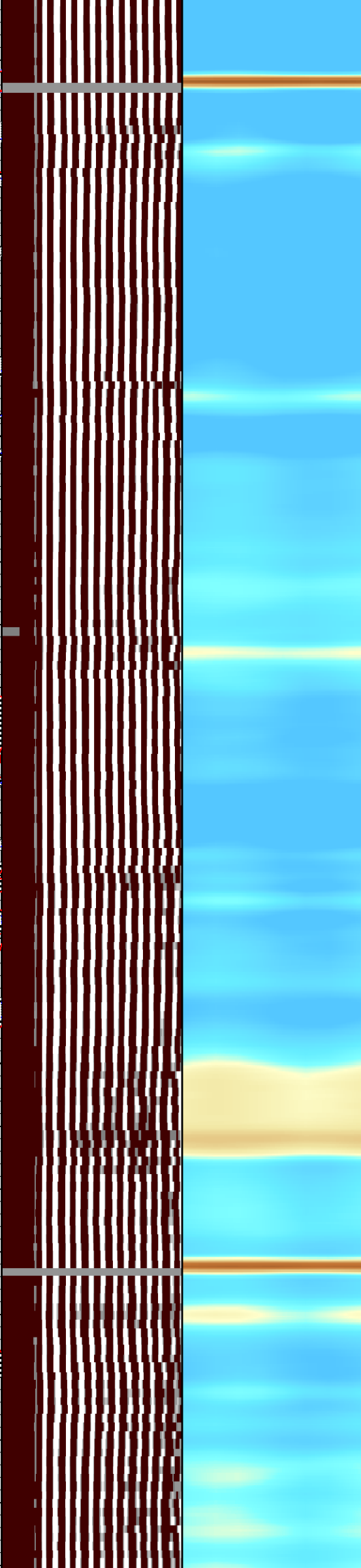
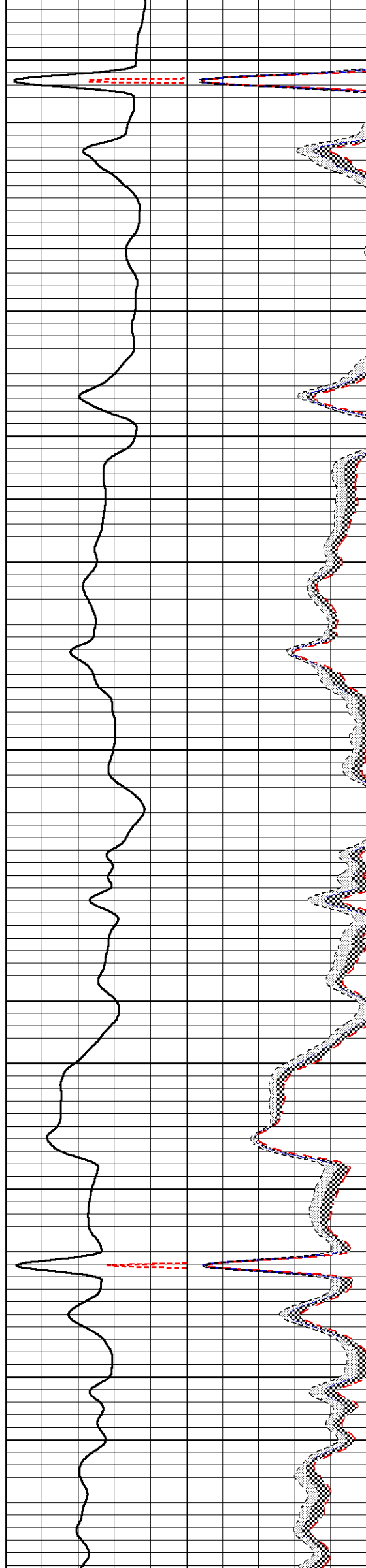
3600



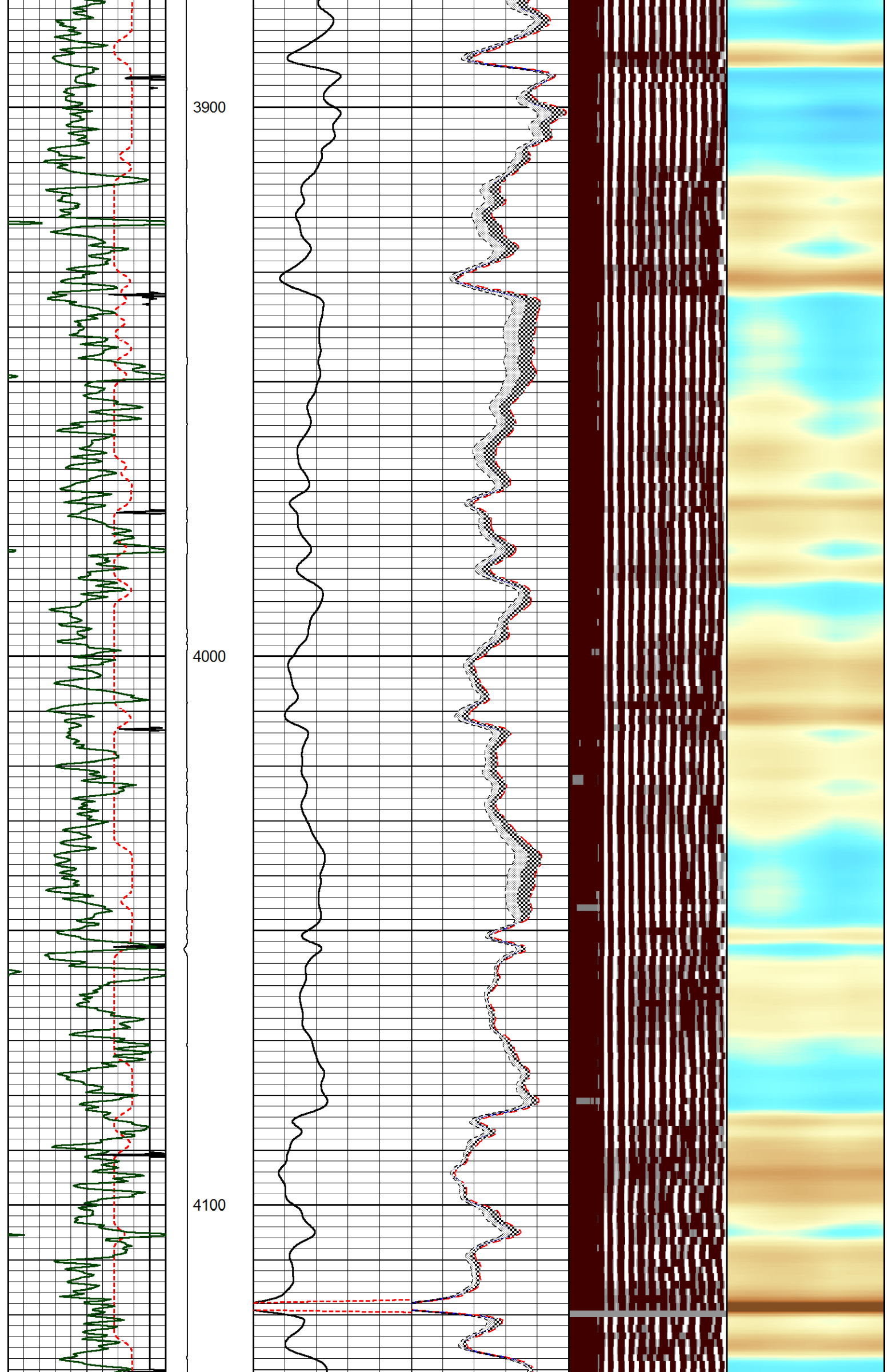


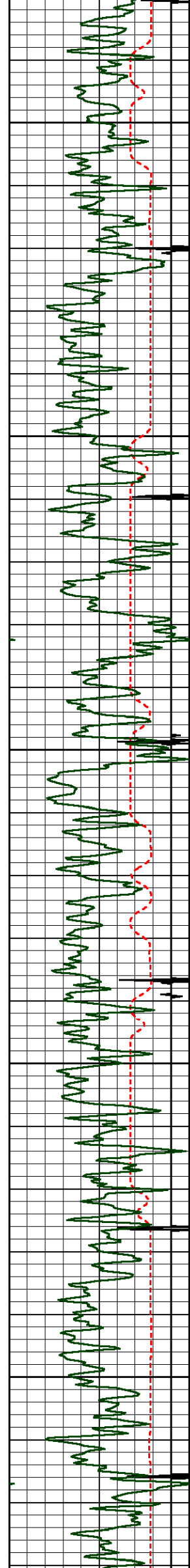
3700

3800



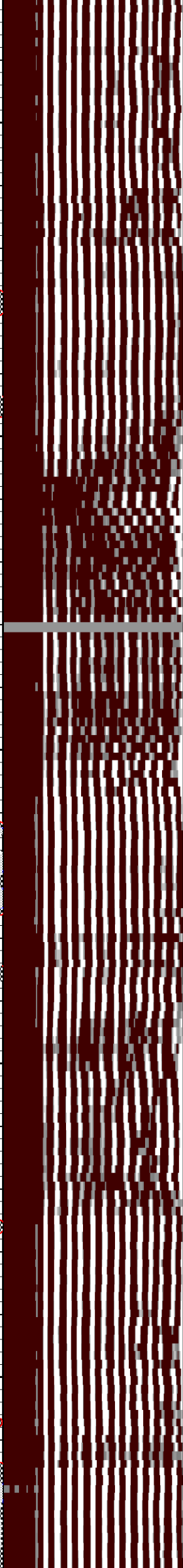
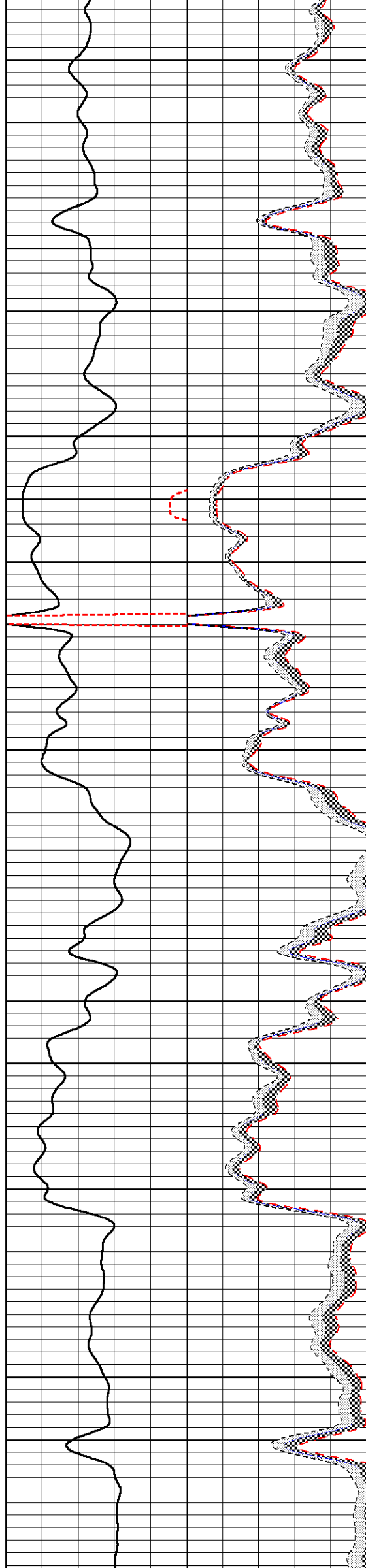


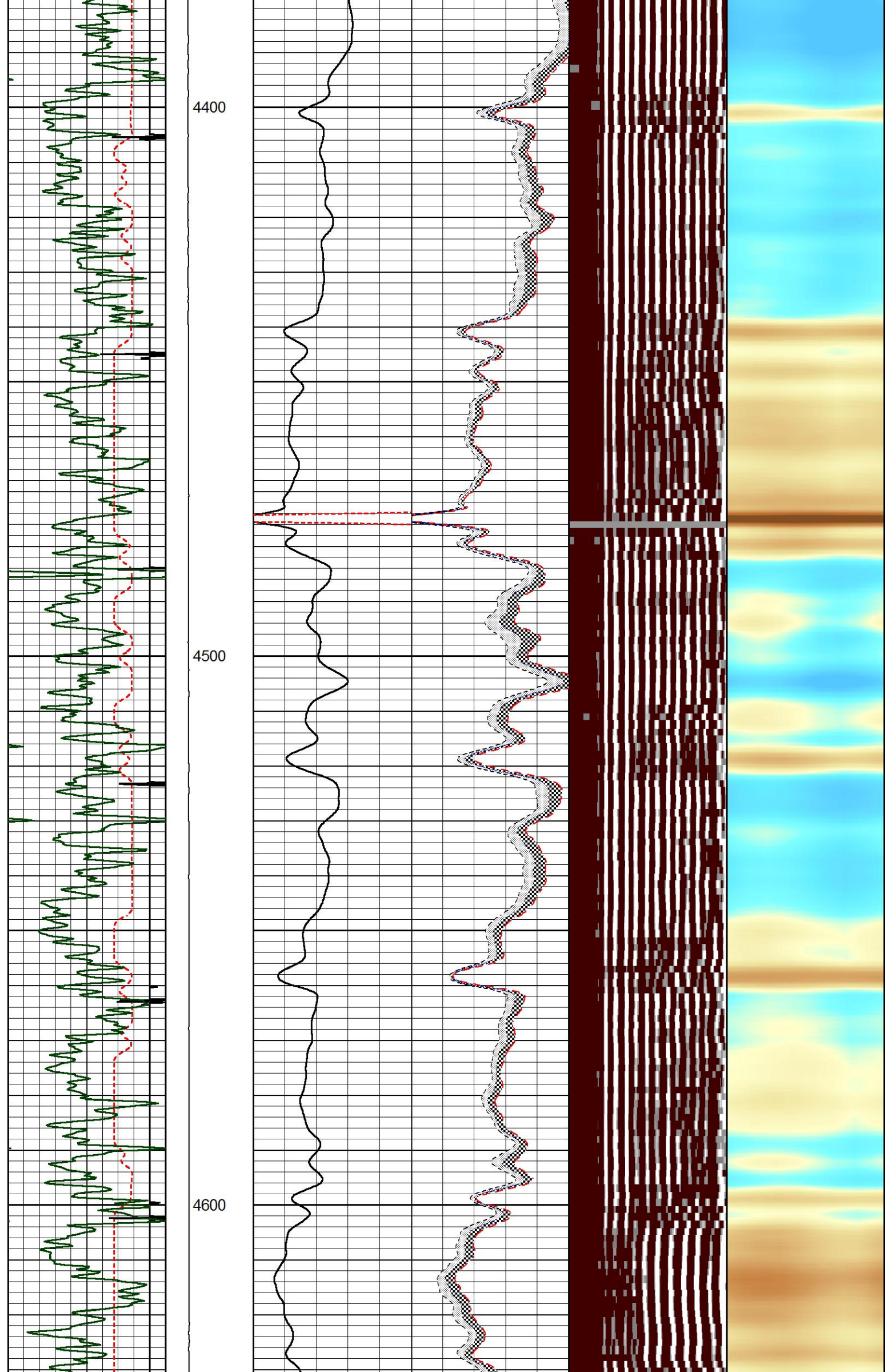


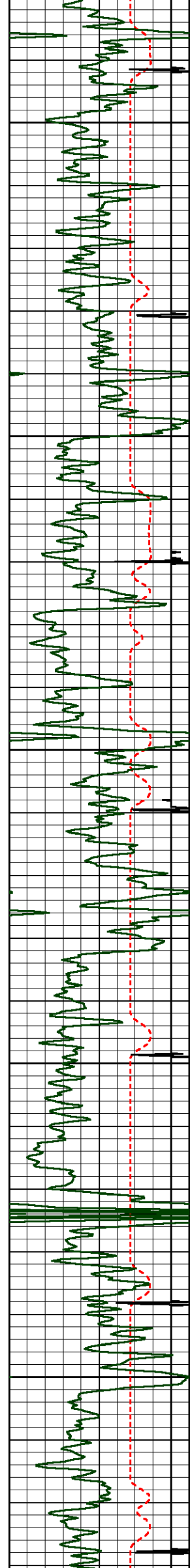


4200

4300

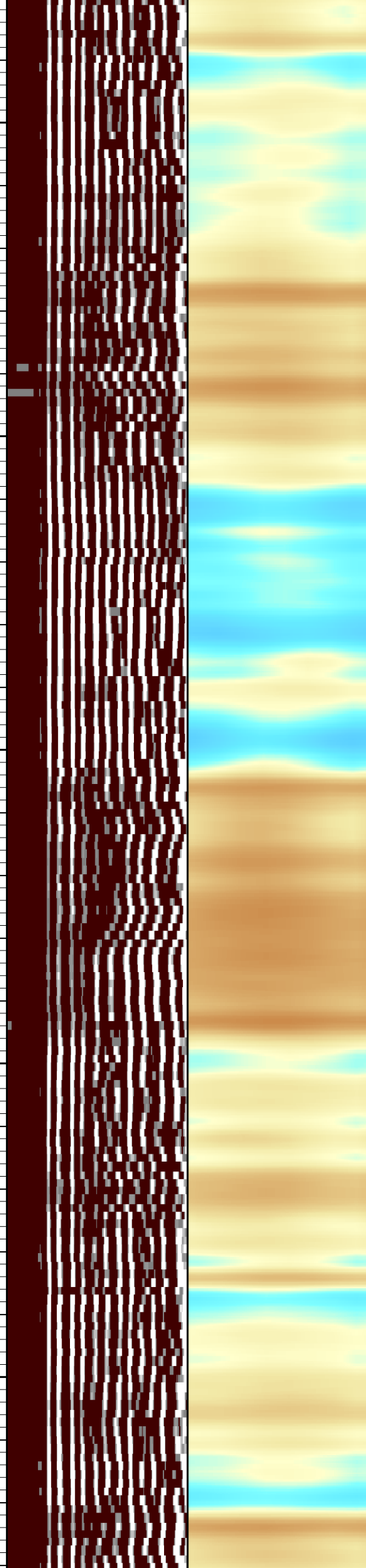
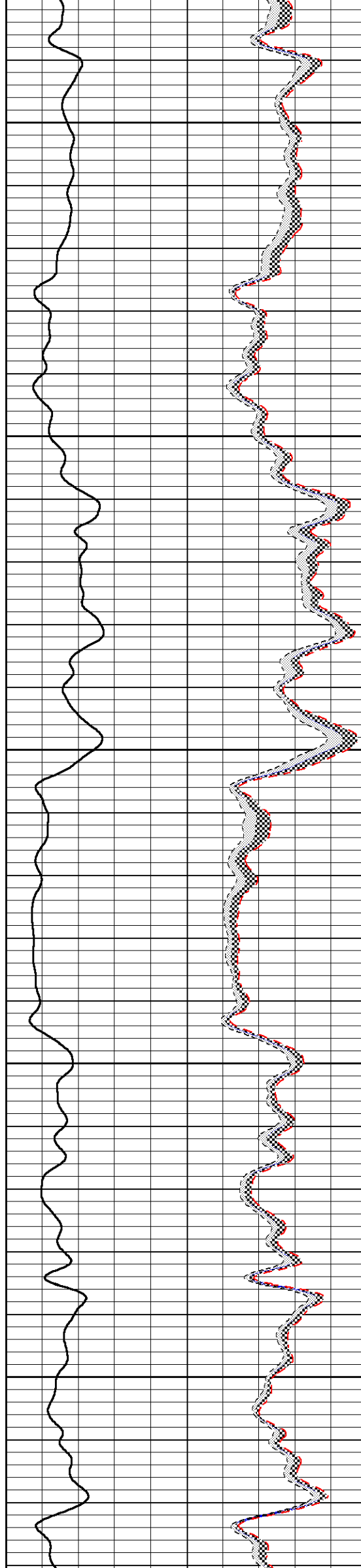




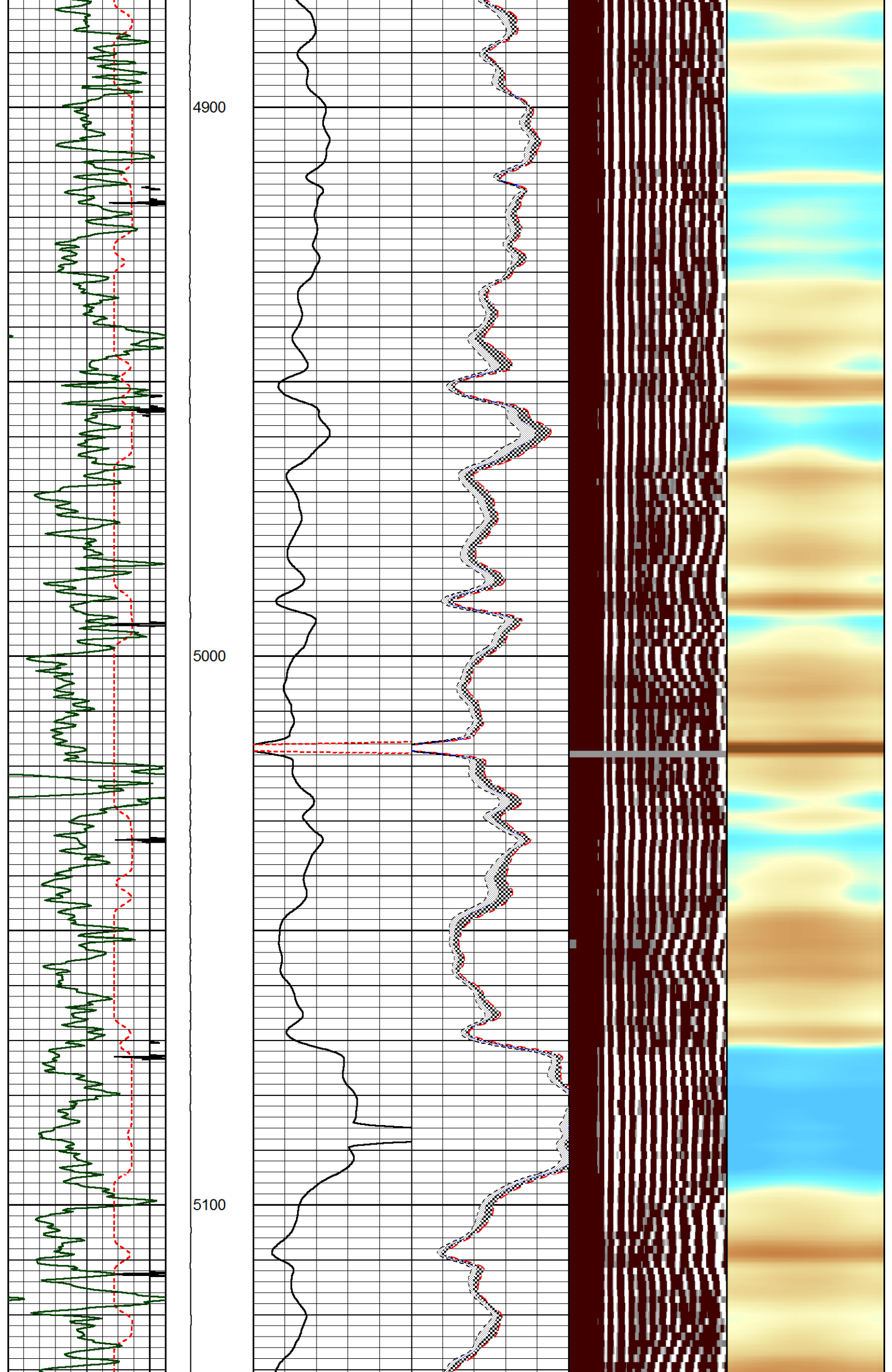


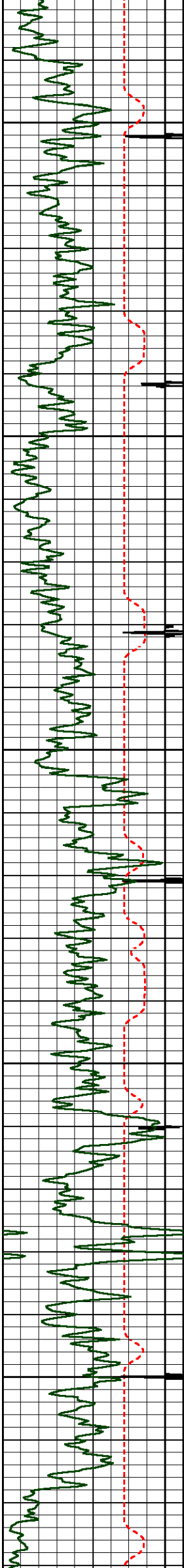
4700

4800



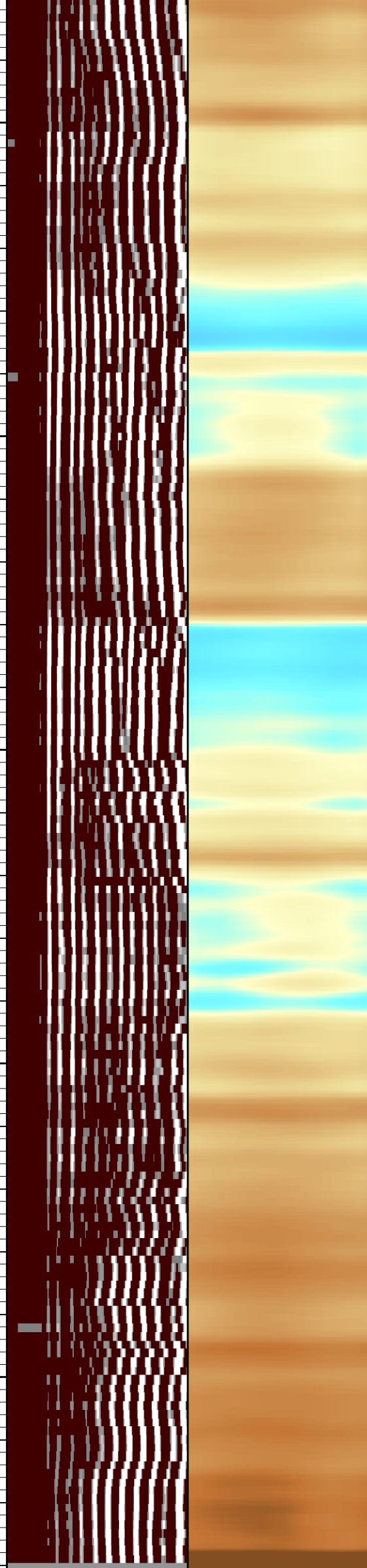
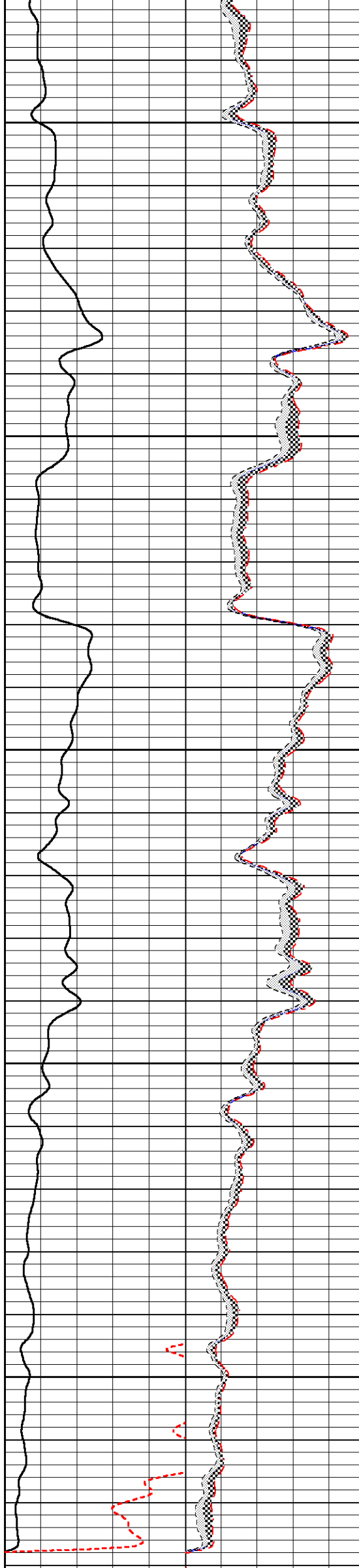


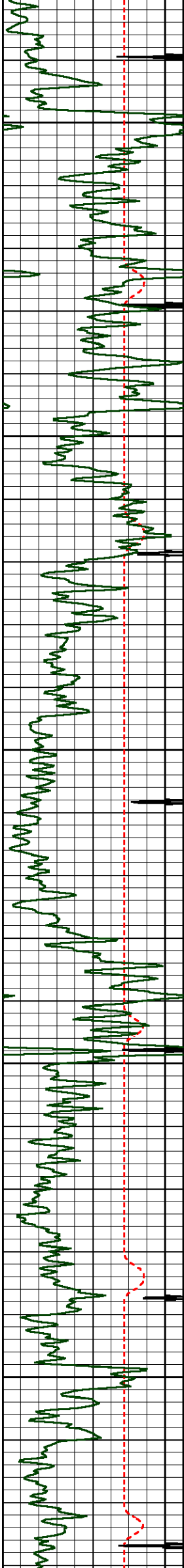




5200

5300

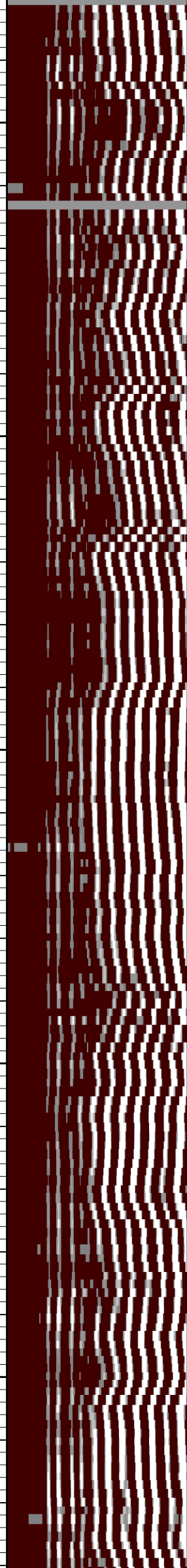
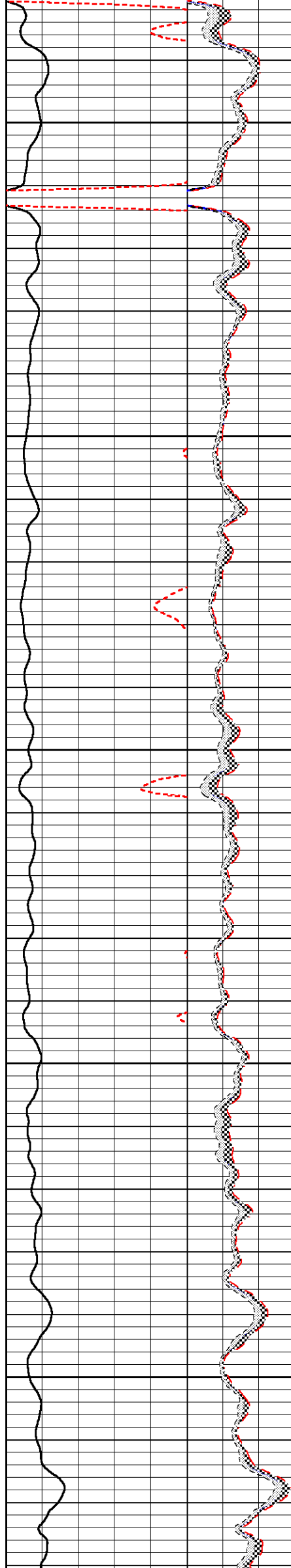


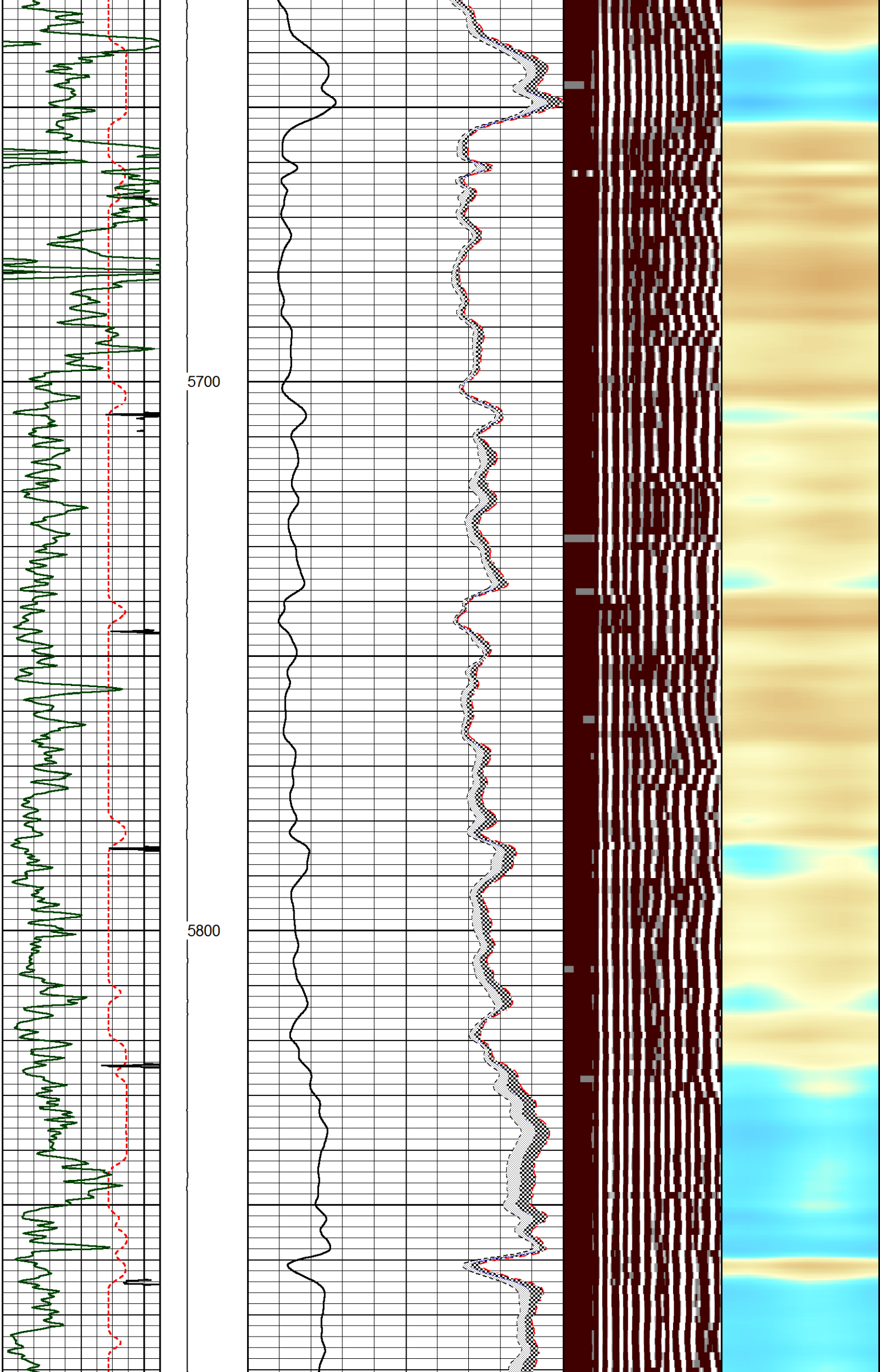


5400

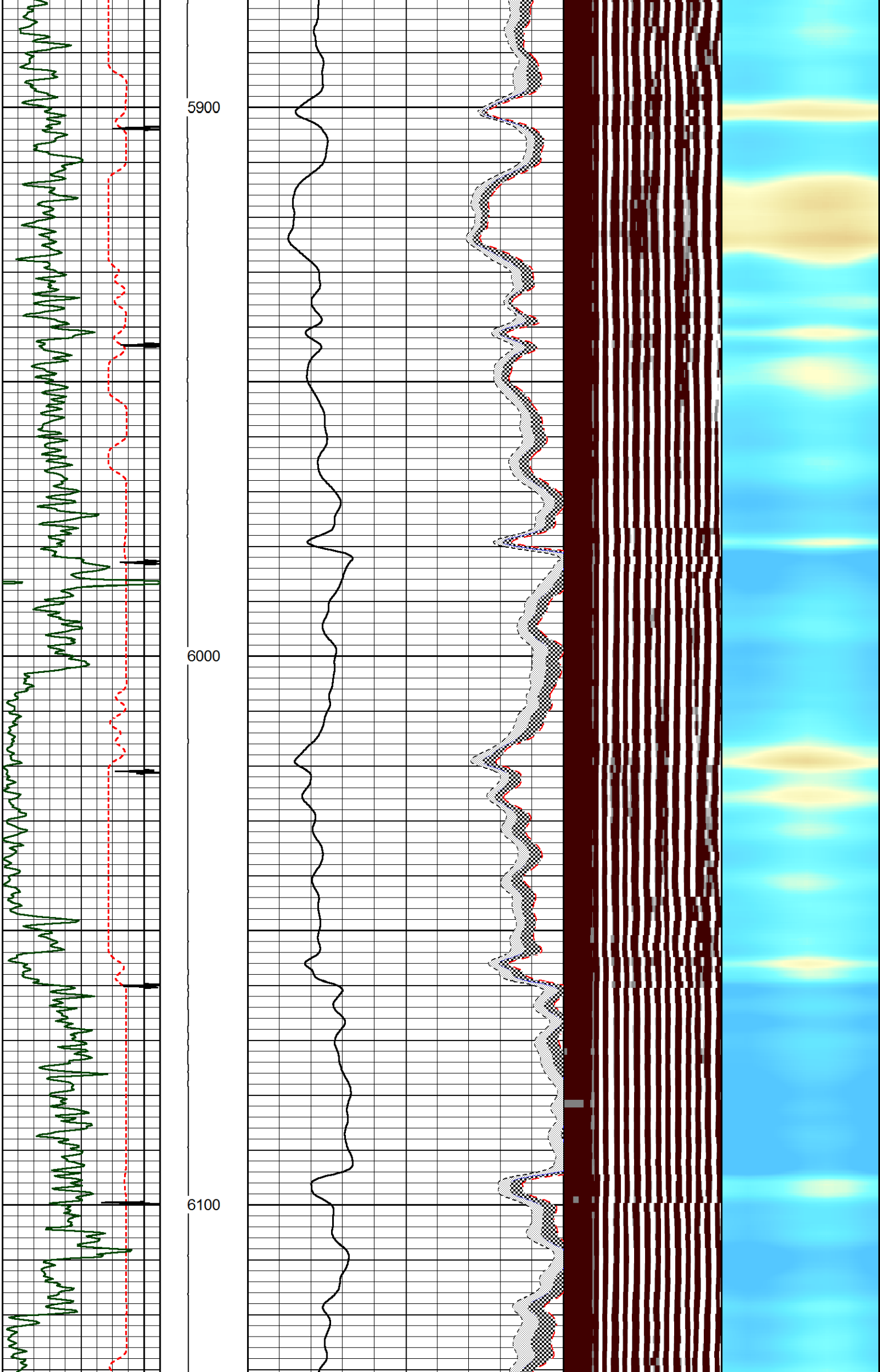
5500

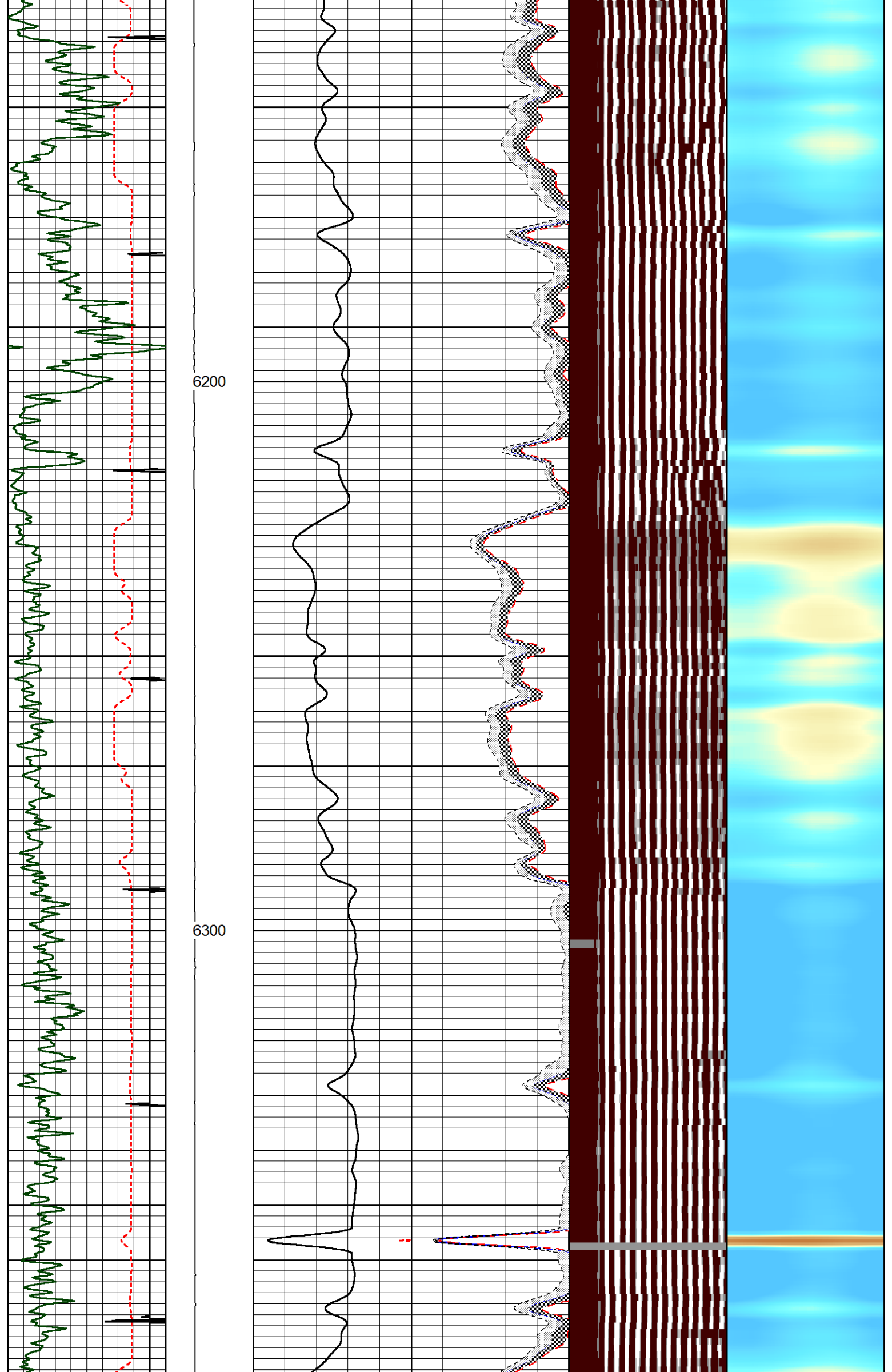
5600

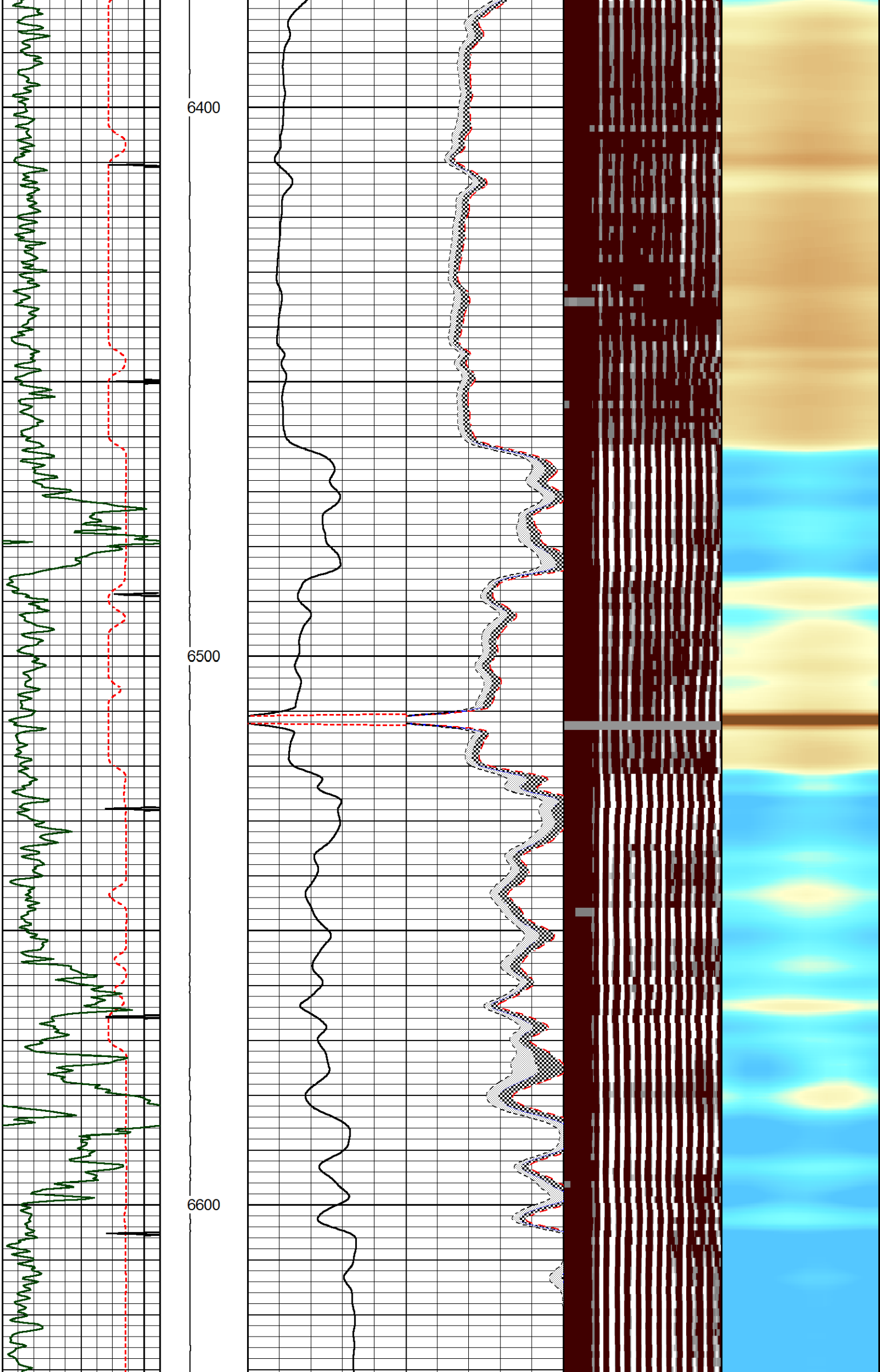


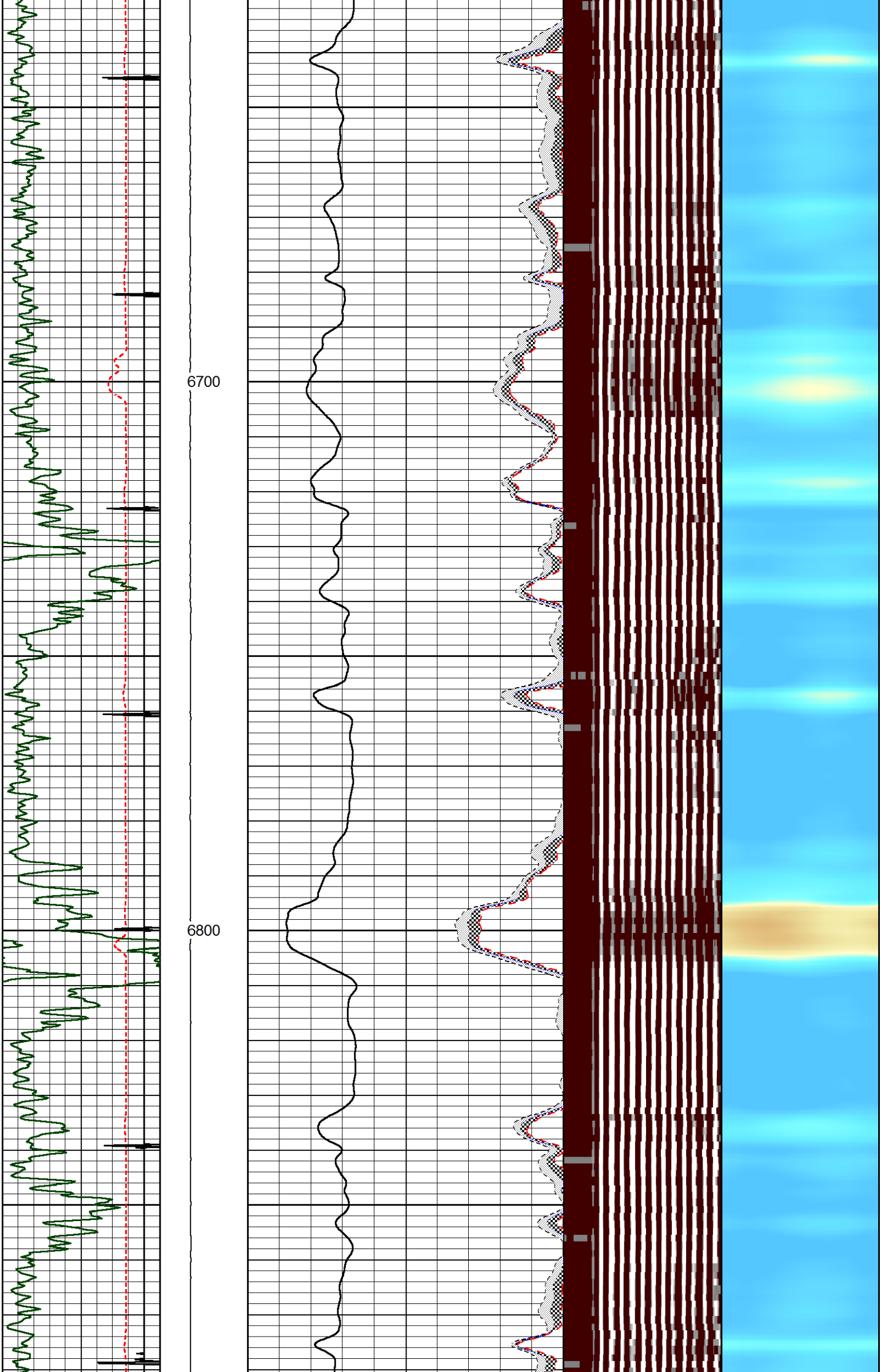




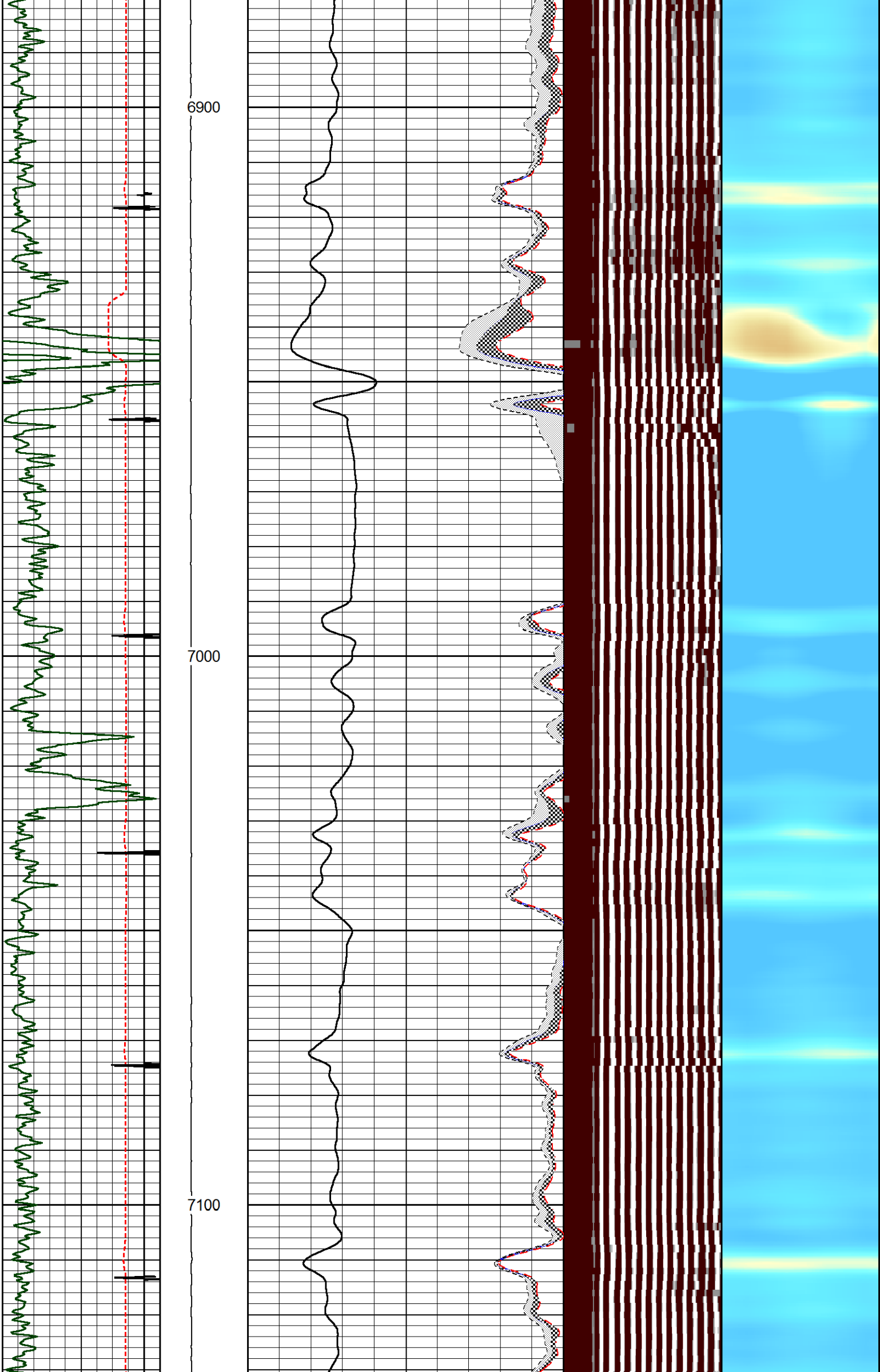


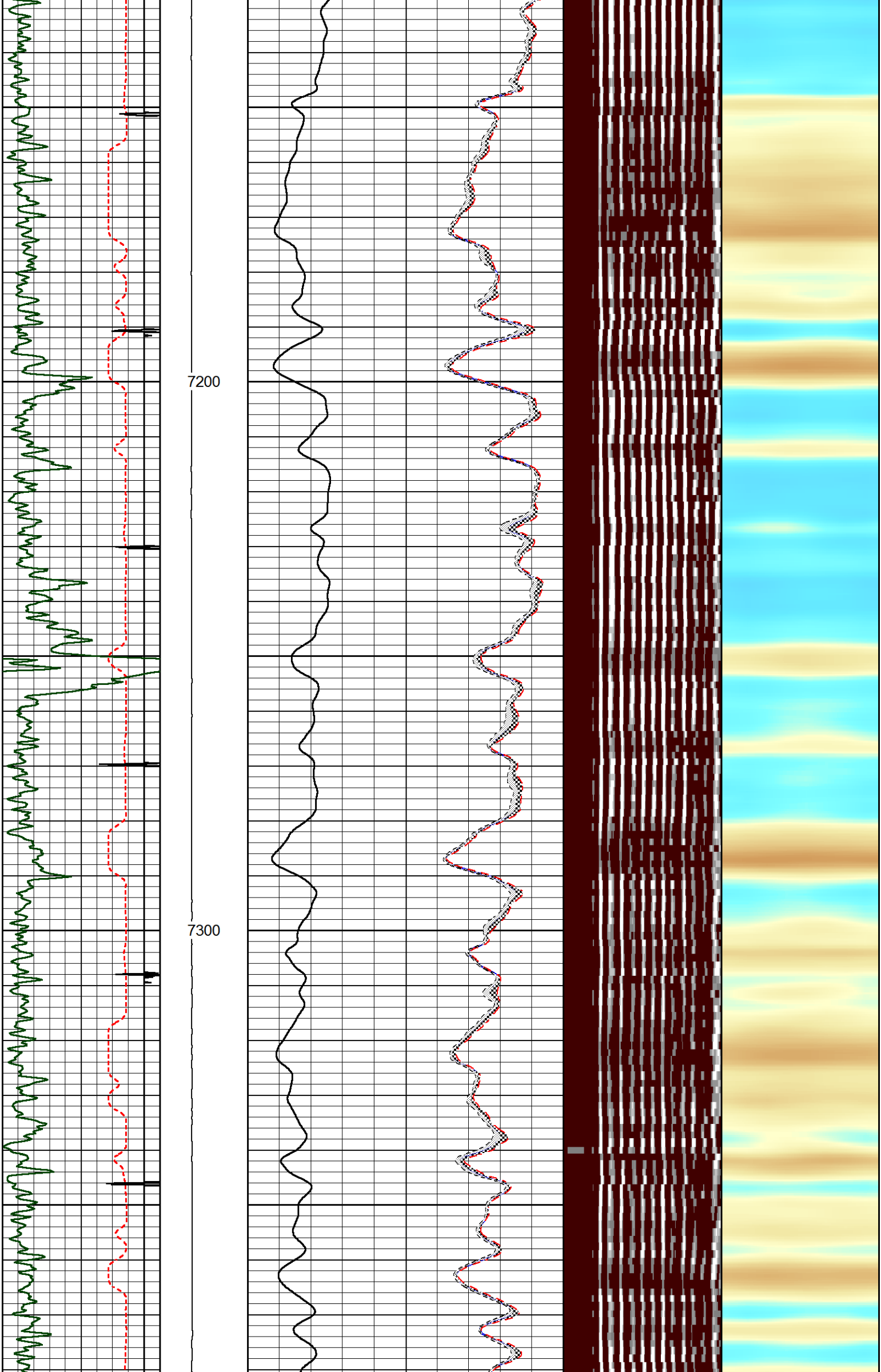


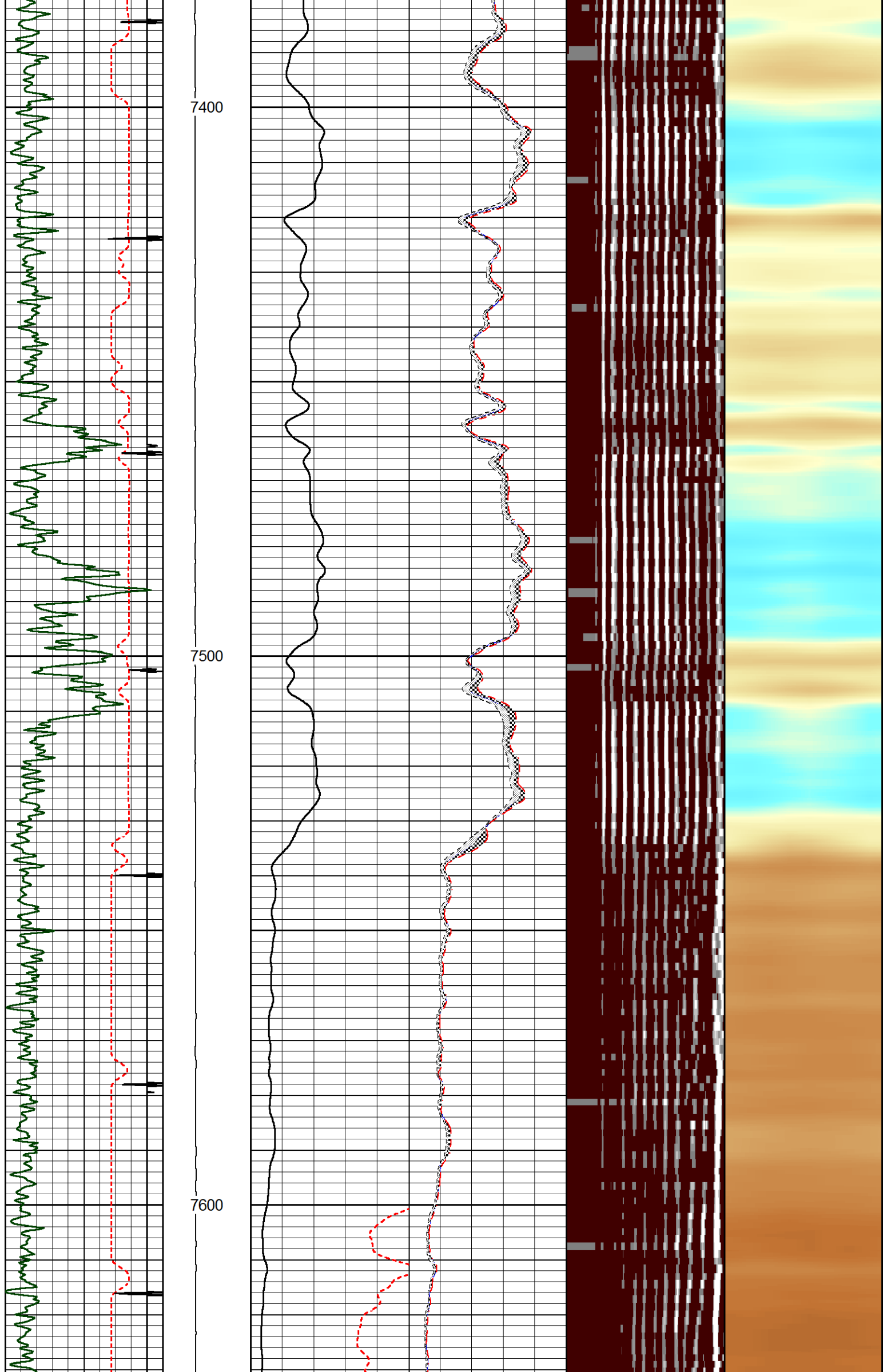


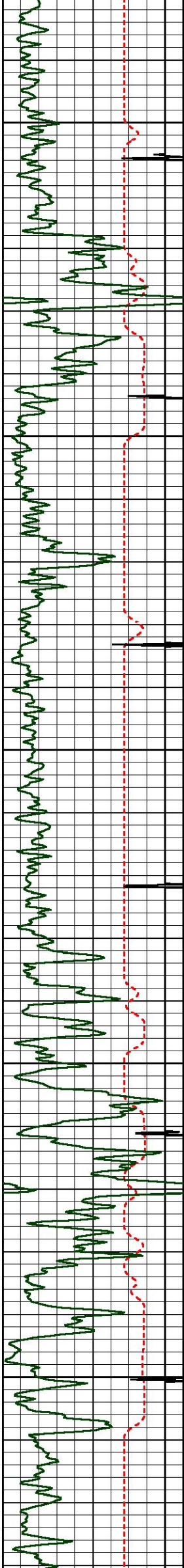






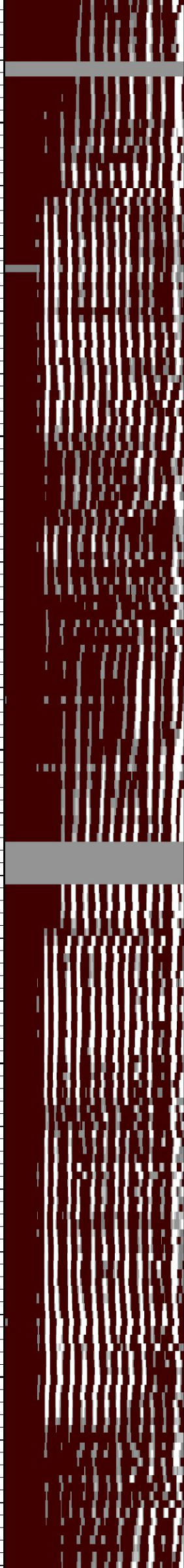




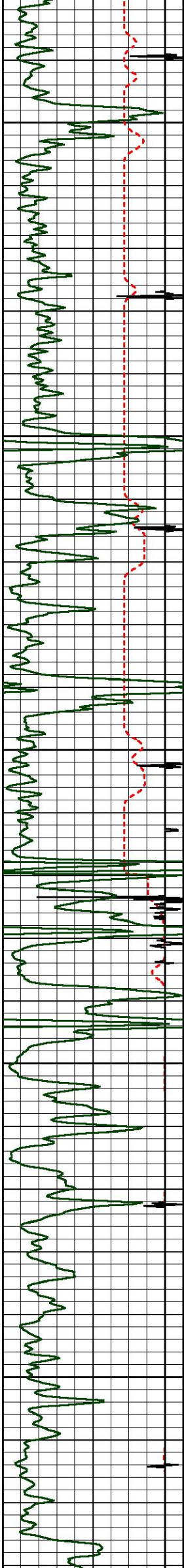


7700

7800



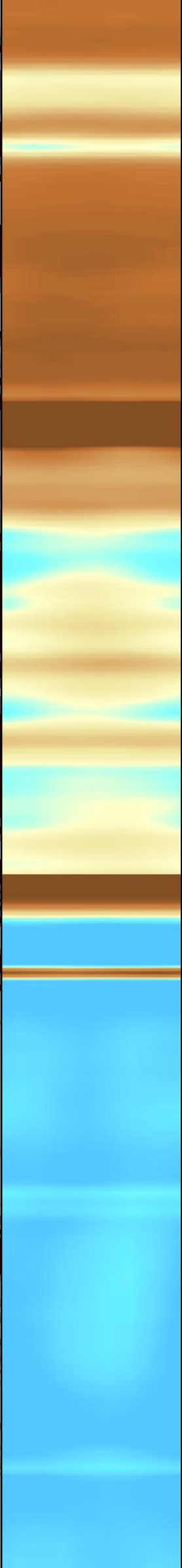
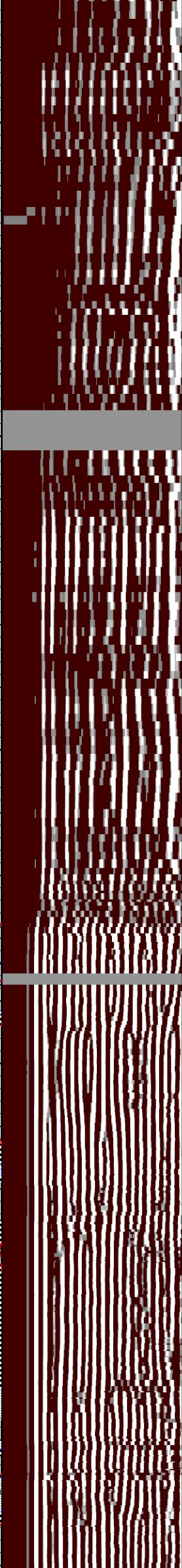
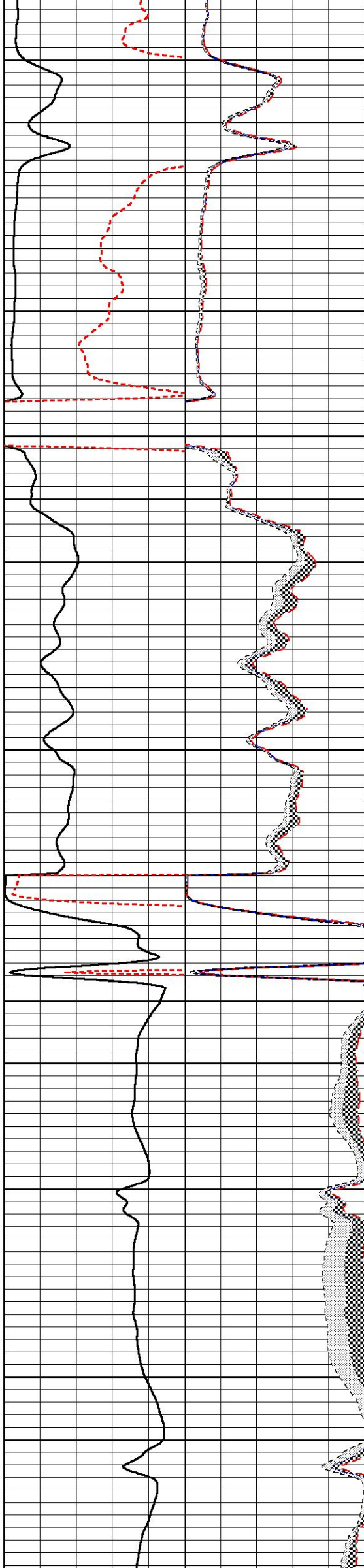


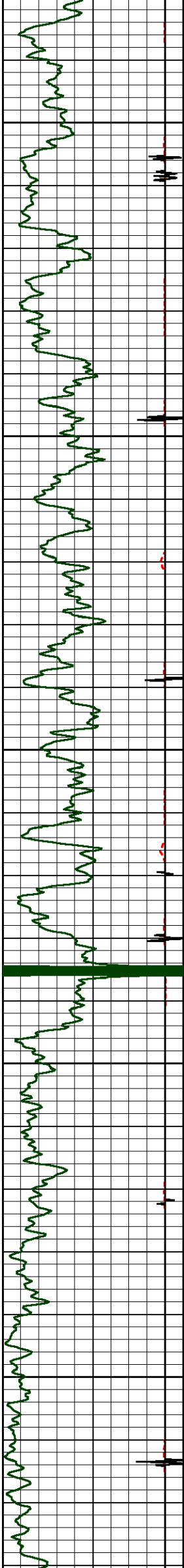


7900

8000

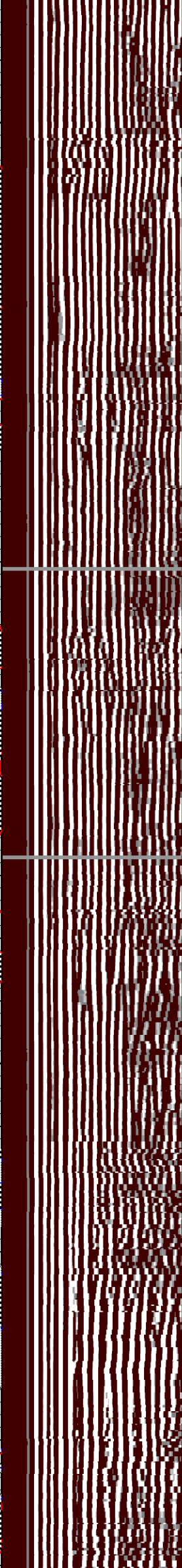
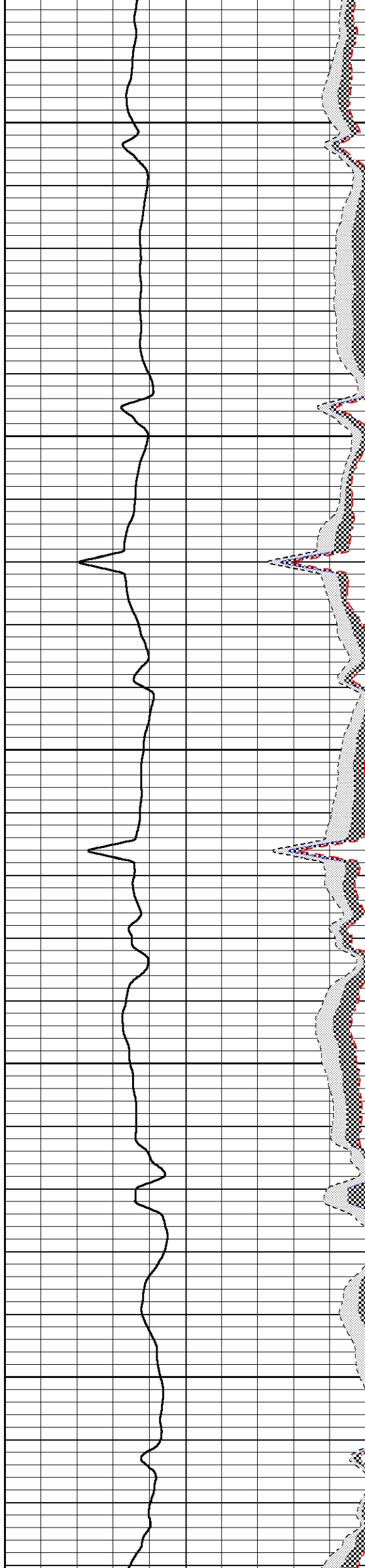
8100



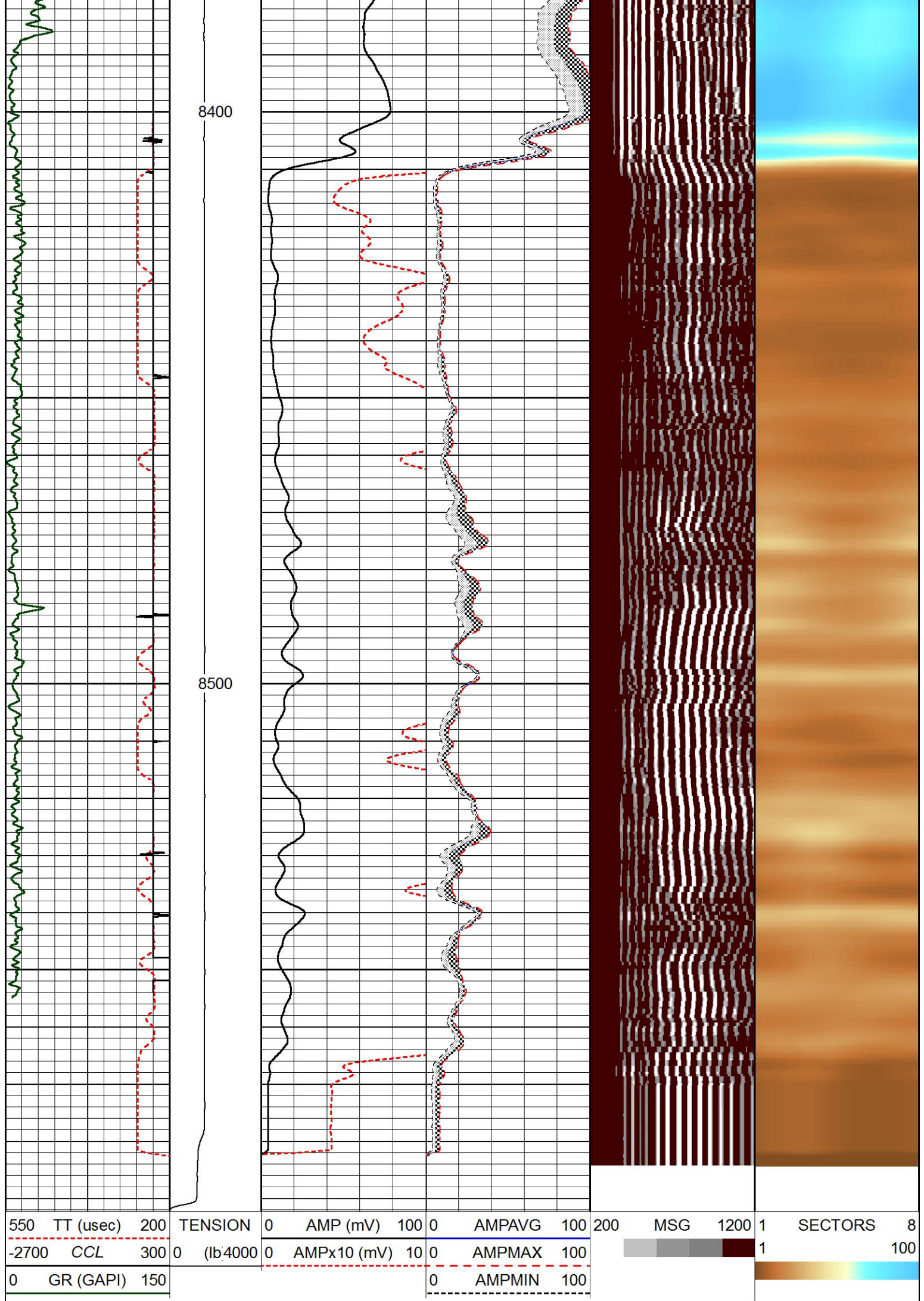


8200

8300







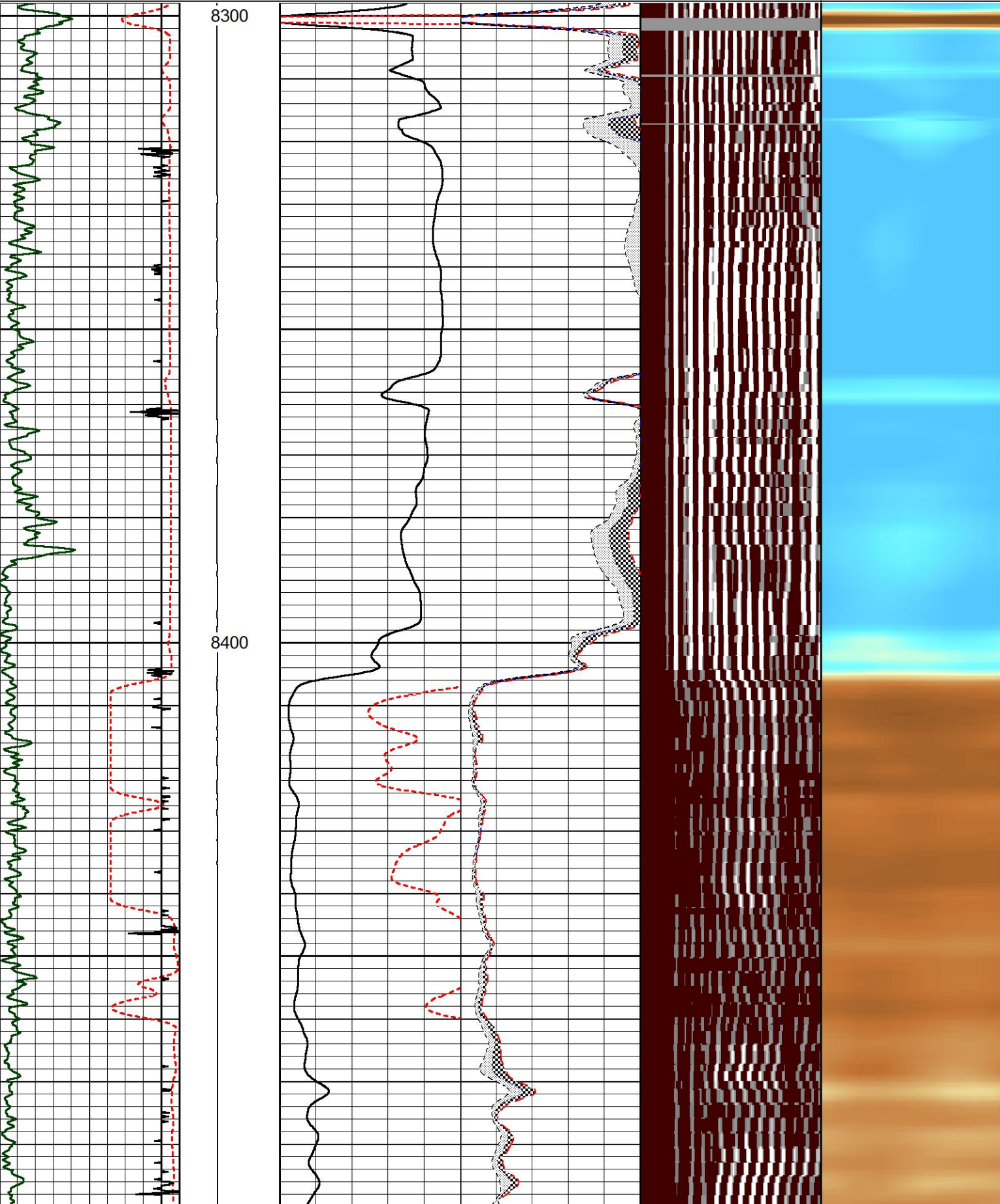
MAIN LOG SECTION

HALLIBURTON

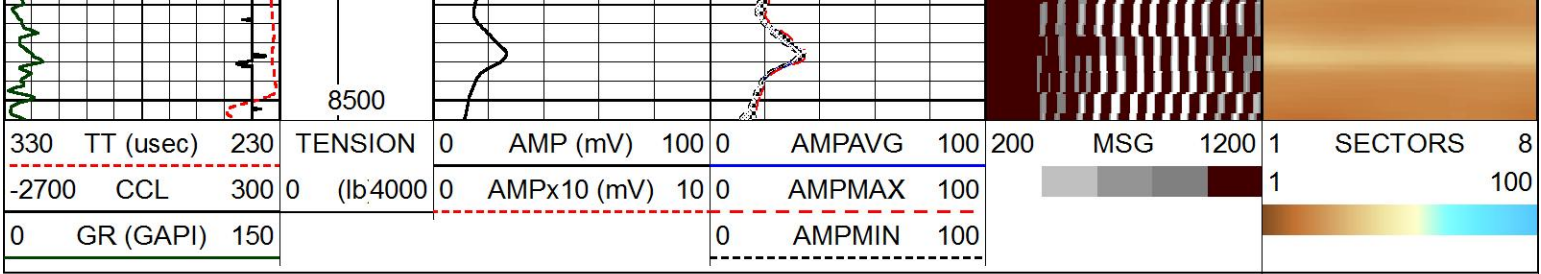
5" = 100'

Database File km cd 4.db  
Dataset Pathname 1-23-15/RBT/REPEAT2  
Presentation Format radial  
Dataset Creation Fri Jan 23 13:46:27 2015  
Charted by Depth in Feet scaled 1:240

330	TT (usec)	230	TENSION	0	AMP (mV)	100	0	AMPAVG	100	200	MSG	1200	1	SECTORS	8
-2700	CCL	300	0 (lb4000)	0	AMPx10 (mV)	10	0	AMPMAX	100				1		100
0	GR (GAPI)	150					0	AMPMIN	100						







REPEAT LOG SECTION

HALLIBURTON

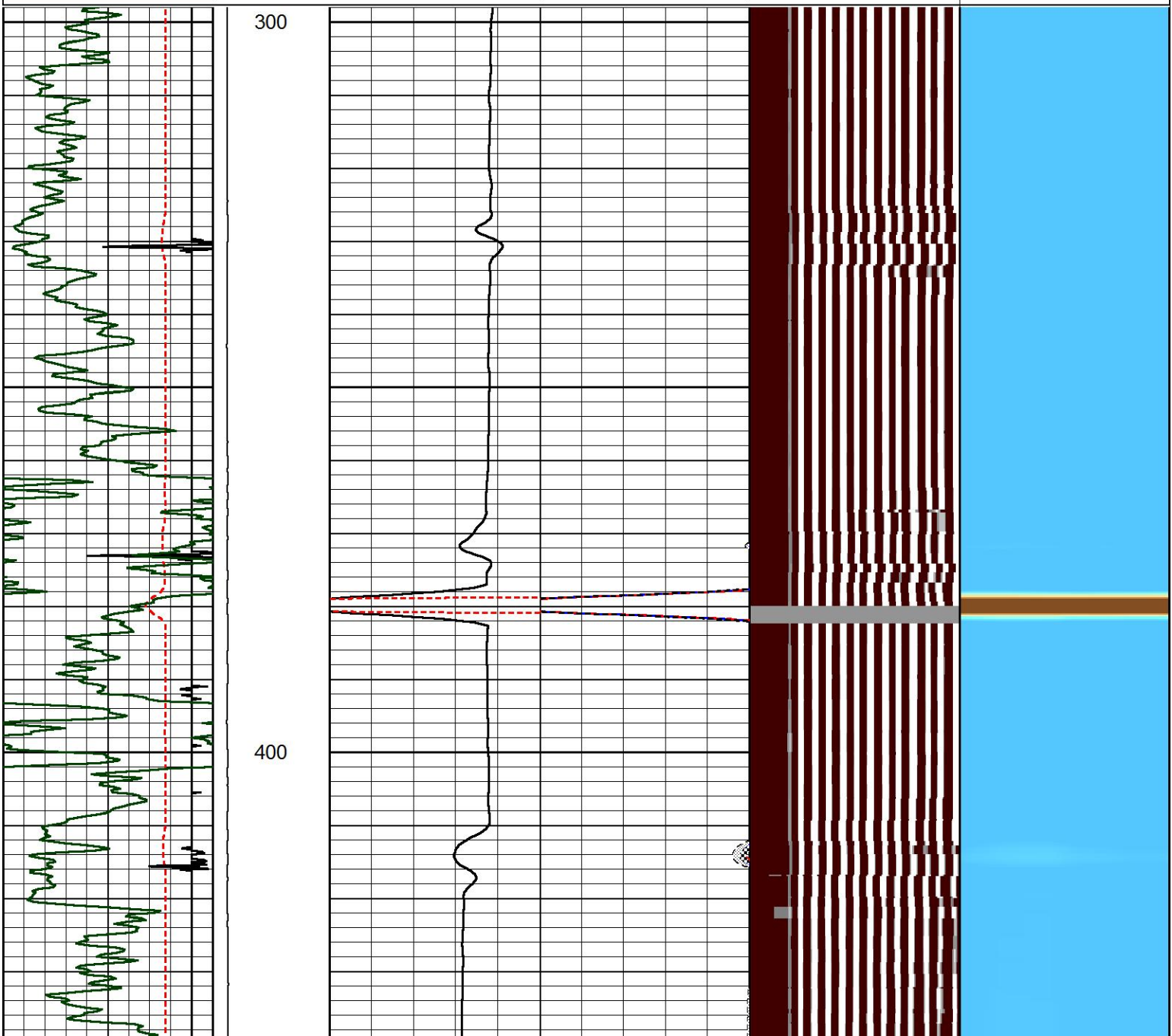
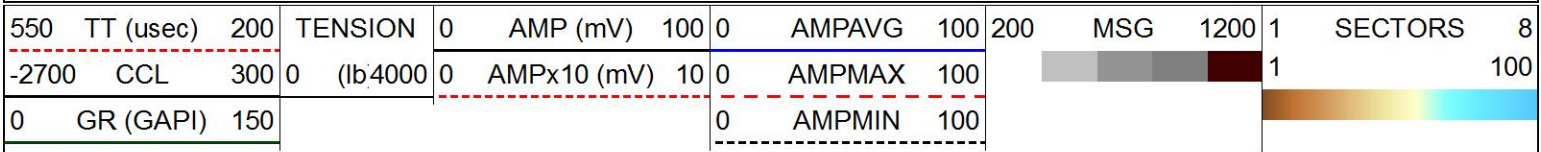
5" = 100'

FREE PIPE LOG SECTION

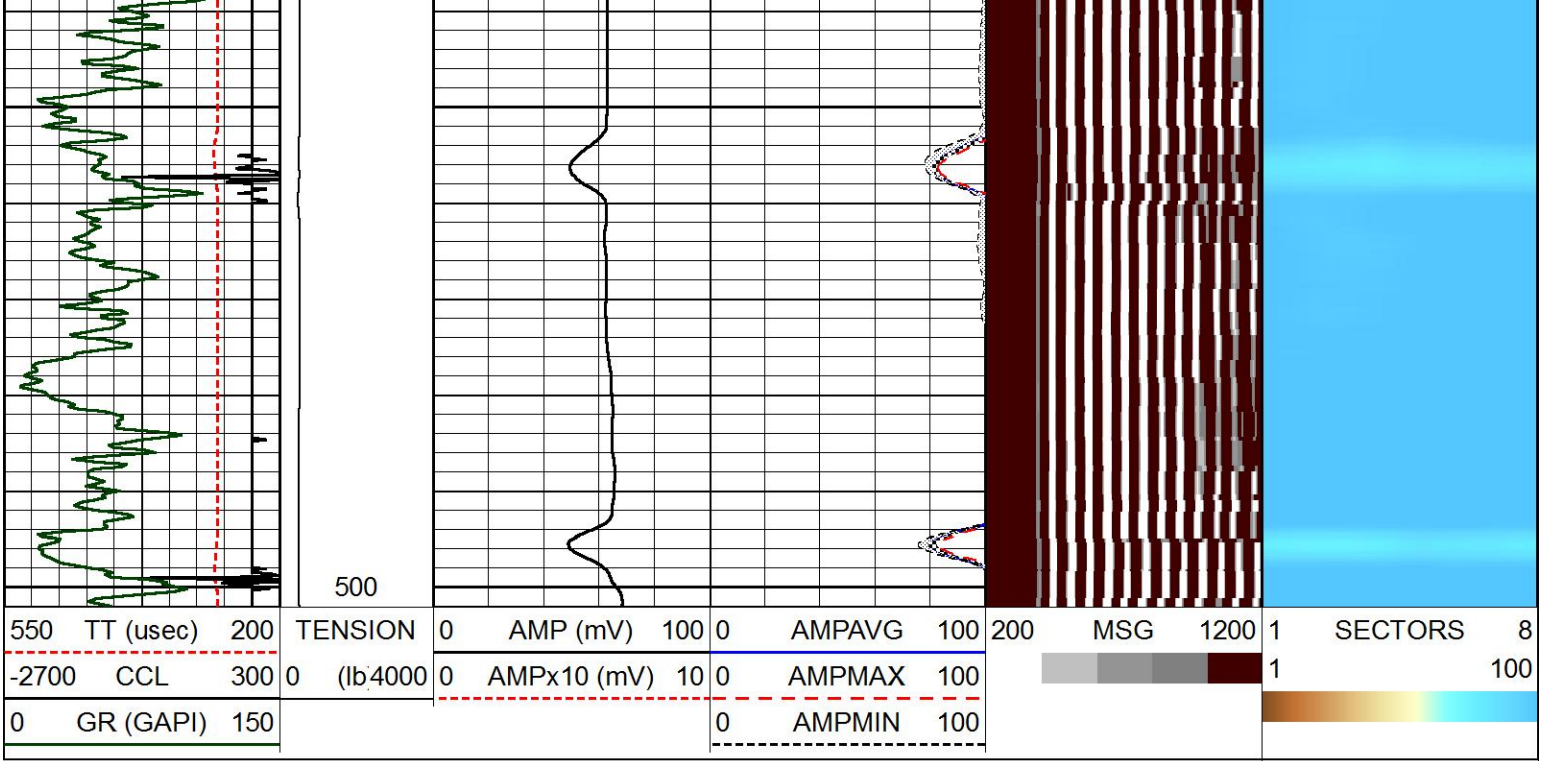
HALLIBURTON

5" = 100'

Database File	km cd 4.db
Dataset Pathname	1-23-15/RBT_7/FREEPIPE1
Presentation Format	radial
Dataset Creation	Fri Jan 23 22:07:52 2015
Charted by	Depth in Feet scaled 1:240







FREE PIPE LOG SECTION

HALLIBURTON

5" = 100'

Log Variables

Databased:\Warrior\_data\km cd 4.db

Dataset field/1-23-15/RMT-RBT/MAIN1/\_vars\_

Top - 0.00 ft

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHOCF
ITEMPX	0	1	0	1	Limestone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED? Yes	PPT usec 0	CASEWGHT lb/ft 29	MAXAMPL mV 62	MINAMPL mV 1.5	MINATTN db/ft 0.8
SRFTEMP degF 30	MudWgt lb/gal 8.33	CASETHCK in 0.816	CASEOD in 7	PERFS 0	TDEPTH ft 0	BOTTEMP degF 30	BITSIZE in 8.75

0.00 ft - 10.00 ft

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHOCF
ITEMPX	0	1	0	1	Limestone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED? Yes	PPT usec 0	CASEWGHT lb/ft 29	MAXAMPL mV 62	MINAMPL mV 1.5	MINATTN db/ft 0.8
SRFTEMP degF 30	MudWgt lb/gal 8.33	CASETHCK in 0.816	CASEOD in 7	PERFS 0	<b>TDEPTH</b> ft <b>10</b>	<b>BOTTEMP</b> degF <b>180</b>	BITSIZE in 8.75

10.00 ft - 6096.00 ft

--	--	--	--	--	--	--	--

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHOFC
ITEMPX	0	1	0	1	Limestone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED?  Yes	PPT usec 0	CASEWGHT lb/ft 29	MAXAMPL mV 62	MINAMPL mV 1.5	MINATTN db/ft 0.8
SRFTEMP degF 30	MudWgt lb/gal 8.33	CASETHCK in 0.816	CASEOD in 7	PERFS  0	<b>TDEPTH</b> <b>ft</b> <b>6096</b>	BOTTEMP degF 180	BITSIZE in 8.75

6096.00 ft - 8032.00 ft

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHOFC
ITEMPX	0	1	0	1	Limestone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED?  Yes	PPT usec 0	<b>CASEWGHT</b> <b>lb/ft</b> <b>32</b>	MAXAMPL mV 62	MINAMPL mV 1.5	MINATTN db/ft 0.8
SRFTEMP degF 30	MudWgt lb/gal 8.33	CASETHCK in 0.816	CASEOD in 7	PERFS  0	<b>TDEPTH</b> <b>ft</b> <b>8032</b>	BOTTEMP degF 180	BITSIZE in 8.75

8032.00 ft - Bottom

BHTEMP_Src	BHSAL2	BHSAL1	POROS2	POROS1	LTH	UHSGC	RHOFC
ITEMPX	0	1	0	1	Limestone	NONE	0.25
SO in 0	BORSAL kppm 150	CASED?  Yes	PPT usec 0	<b>CASEWGHT</b> <b>lb/ft</b> <b>12.6</b>	<b>MAXAMPL</b> <b>mV</b> <b>81</b>	MINAMPL mV 1.5	MINATTN db/ft 0.8
SRFTEMP degF 30	MudWgt lb/gal 8.33	<b>CASETHCK</b> <b>in</b> <b>0.542</b>	<b>CASEOD</b> <b>in</b> <b>4.5</b>	PERFS  0	<b>TDEPTH</b> <b>ft</b> <b>8580</b>	BOTTEMP degF 180	<b>BITSIZE</b> <b>in</b> <b>6</b>

Calibration Report

Database File

km cd 4.db

Dataset Pathname

1-23-15/RBT\_7/MAIN5

Dataset Creation

Fri Jan 23 23:32:45 2015

Segmented Cement Bond Log Calibration Report

Serial Number:

11333931

Tool Model:

004

Calibration Casing Diameter:

7.000 in

Calibration Depth:

1458.083 ft

Master Calibration, performed Fri Jan 23 22:20:26 2015:

Row (s)

Calibrated (ms)

Results

	Raw (V)		Calibrated (mV)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.238	0.773	0.000	62.165	116.102	-27.637
5FT	0.250	1.259	0.000	62.165	61.616	-15.399
S1	0.238	0.737	0.000	100.000	200.421	-47.708
S2	0.237	0.745	0.000	100.000	196.664	-46.587
S3	0.238	0.780	0.000	100.000	184.613	-43.974
S4	0.237	0.807	0.000	100.000	175.339	-41.523
S5	0.238	0.811	0.000	100.000	174.610	-41.555
S6	0.237	0.794	0.000	100.000	179.736	-42.674
S7	0.237	0.771	0.000	100.000	187.456	-44.454
S8	0.236	0.733	0.000	100.000	201.407	-47.534


Calibration Report						
			Serial Number:	11333931		
			Tool Model:	004		
			Performed:			
			Reference (degF)	Reading ( )		
Low:			0.000	0.000		
High:			1.000	1.000		
			Gain = 1.000	Offset = 0.000		

Reservoir Monitor Tool I Calibration Report						
Serial-Model:			12095949-A			
Shop Calibration Performed:			Sat Jan 10 12:20:30 2015			

Carbon/Oxygen Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	79.00	80.00	-1.00	+/-15.00	V
ITCR2	3278	3250	28	+/-250	cps
Near Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0273	5.29	<6.00
Fe	207	206 +/-2	0.0959	-----	-----
NGAIN = 0.994	NZOFF = 0.6				
Far Detector					
	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0360	5.73	<6.50
Fe	210	208 +/-2	0.0904	-----	-----
FGAIN = 0.990	FZOFF = 0.5				
Flask Temperature	64.8 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.65	1.64	0.01	+/-0.05	
TCCR2	5072	5000	72	+/-1000	cps
ITCR2	3247	3200	47	+/-250	cps

Sigma Mode						
Stabilization						
Result	Logged	Expected Value	Diff.	Tol.	Units	
GENV	79.00	80.00	-1.00	+/-15.00	V	

FCAP	10192	10000	192	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.91	0.95	-0.04		
N/F Inel Norm	0.59	0.61	-0.02		
RNF	1.10	1.07	0.03	+/-0.12	
RINC	1.70	1.64	0.06	+/-0.18	
SGFN	24.10	24.00	0.10	+/-0.50	cu
SGFF	22.95	22.85	0.10	+/-0.50	cu
FSIN	24378	24000	378	+/-2000	cps
FCAP	10276	10000	276	+/-1000	cps
NFTR	0.83			<5.00	
FFTR	0.91			<5.00	
NBKG	199			<500	cps
FBKG	95			<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	2013.11.14.0				
RMTI Module	2014.8.28.1				
Log Data Acquisition Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.8.28.1				
Gamma Ray Calibration Report					
Type / Serial:		002 / 11224503			
SHOP CALIBRATION		Fri Jan 23 08:54:47 2015			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	35.4				cps
Calibrator	284.8				cps
		1.7366			GAPI/cps
PRIMARY VERIFICATION					
Background	62.7				cps
Calibrator	488.3				cps
Difference				425.6	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	36.80		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	34.54		TTTCU-002 (11224503) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00

				XHU-003 (10004394) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtTFGT RmtTNGT	23.89 23.39			RMTI-A (12095949) Halliburton RMTI Tool	14.00	2.13	77.00
RmtFP5V RmtCommFWa	15.64 15.64			X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
				AUH-001 (10003731) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
				CENT-Probe_275 Probe 2 3/4 Centralizer	2.58	2.75	20.00
CBLTEMP	8.02			RBT-004 (11333931) Radial Bond Tool (UW 3 1/8) 20K Rated	9.48	3.13	140.00
				CENT-Probe_275 Probe 2 3/4 Centralizer	2.58	2.75	20.00
LLMTEN	0.00			BUL-001 (000001) Bullnose	0.30	1.69	1.50
Dataset: km cd 4.db: field/1-23-15/RBT_7/MAIN5 Total length: 40.37 ft Total weight: 370.50 lb O.D.: 3.13 in							

Company	KINDER MORGAN CO2 CO LP			
Well	CD 4			
Field	MCELMO			
County	MNTZMA	State	CO	
HALLIBURTON	RADIAL BOND TOOL			