



**RADIAL BOND LOG
WITH GAMMA RAY**

Pioneer Energy Services

Company **ANADARKO PETROLEUM CORP.**
 Well **UPRC 33-1M**
 Field **WATTENBERG**
 County **WELD** State **CO**

Location: **NE NE 1,096' FNL & 1,278' FEL**
SEC 33 TWP 68W RGE
 API #: 0512316103
 Other Services
 Permanent Datum **G.L.** Elevation **5015'**
 Log Measured From **K.B.** Above Perm. Datum
 Drilling Measured From **K.B.**
 Elevation **5026'**
D.F. N/A
G.L. 5015'

Date of Service	FEBRUARY 13, 2019		
Run Number	ONE		
Depth Driller or P8TD	8446'		
Depth Logger	7900'		
Bottom Log Interval	7900'		
Top Log Interval	SURFACE		
Open Hole Size	7 7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	N/A		
Max. Recorded Temperature	N/A		
Max. Wellhead Pressure	ZERO		
Wellhead Connection	OPEN		
Estimated Cement Top	7430'		
Unit Number	P-135		
Wireline Size	9/32"		
Location	FT. MORGAN		
Recorded By	D.MCGEE		
Witnessed By	E.CHAVEZ		
	Size	WVt	Bottom
Tubing Record			
Surface Casing	8-5/8"	24#	529'
Production Casing	4-1/2"	11.6#	8401'
Liner Record			

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 CORRELATED OFF PROVIDED ATLAS WIRELINE CBL.
 TANK CAL PERFORMED ON 01-02-2019

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew Engineer: D.MCGEE Operator: J.MICK Operator: B.DAS Operator:	Tool Data - Services Serial Number
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00	
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
			PROBE-RBT-DIGITAL-RBL-D (070132-T) Probe 2 3/4" Radii Bond-Digital	8.75	2.75	100.00	
WVFS8	12.59						
WVFS7	12.59						
WVFS6	12.59						
WVFS5	12.59						
WVFS4	12.59						
WVFS3	12.59						
WVFS2	12.59						
WVFS1	12.59						
WVFCAL	12.59						
WVF3FT	12.59						
WVF5FT	11.59						
HEADVOLT	8.41						
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
CCL	4.38		CCL_Logging-275 TekCo_2 (TekCo-275) 2 3/4"	1.83	2.75	15.00	
			GR-275 Probe (080630) Probe 2.75" Gamma Ray	3.36	2.75	40.00	
GR	1.15						
			Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.38	1.00	

Dataset: anadarko.db: field/well/run1/pass10
 Total length: 21.07 ft
 Total weight: 188.00 lb
 O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\anadarko.db
Dataset field/well/run1/pass10/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0	CASEWGHT lb/ft 11.6	MAXAMPL mV 1
MINAMPL mV 1	MINATTN db/ft 0.08	PERFS 0	PPT usec 0	SRFTEMP degF 0	TDEPTH ft 0	

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude

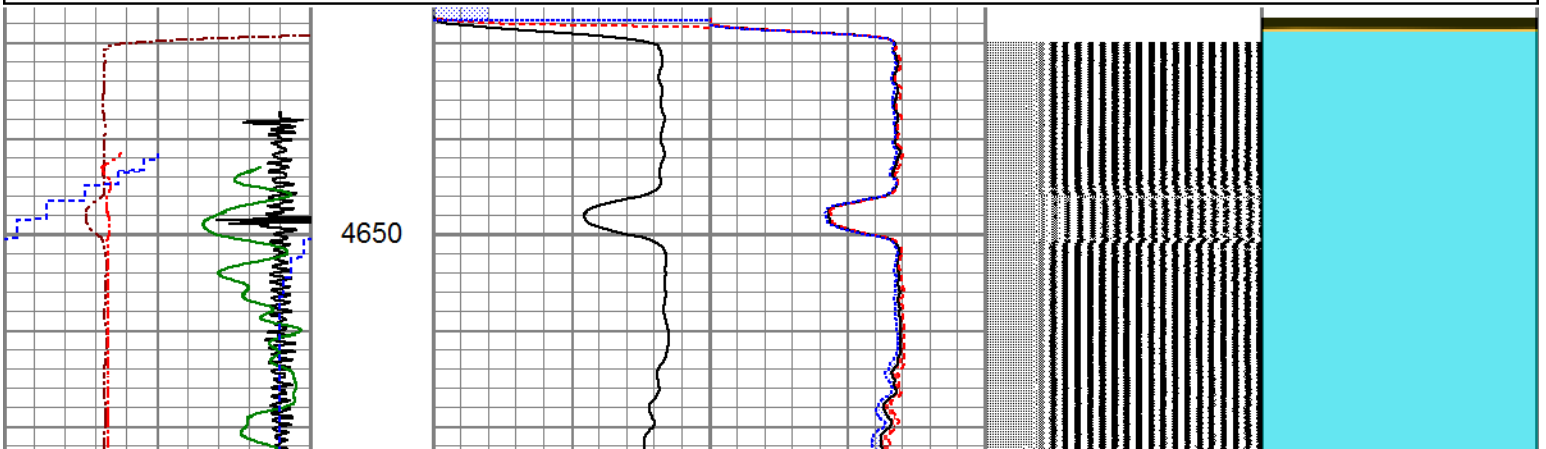
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

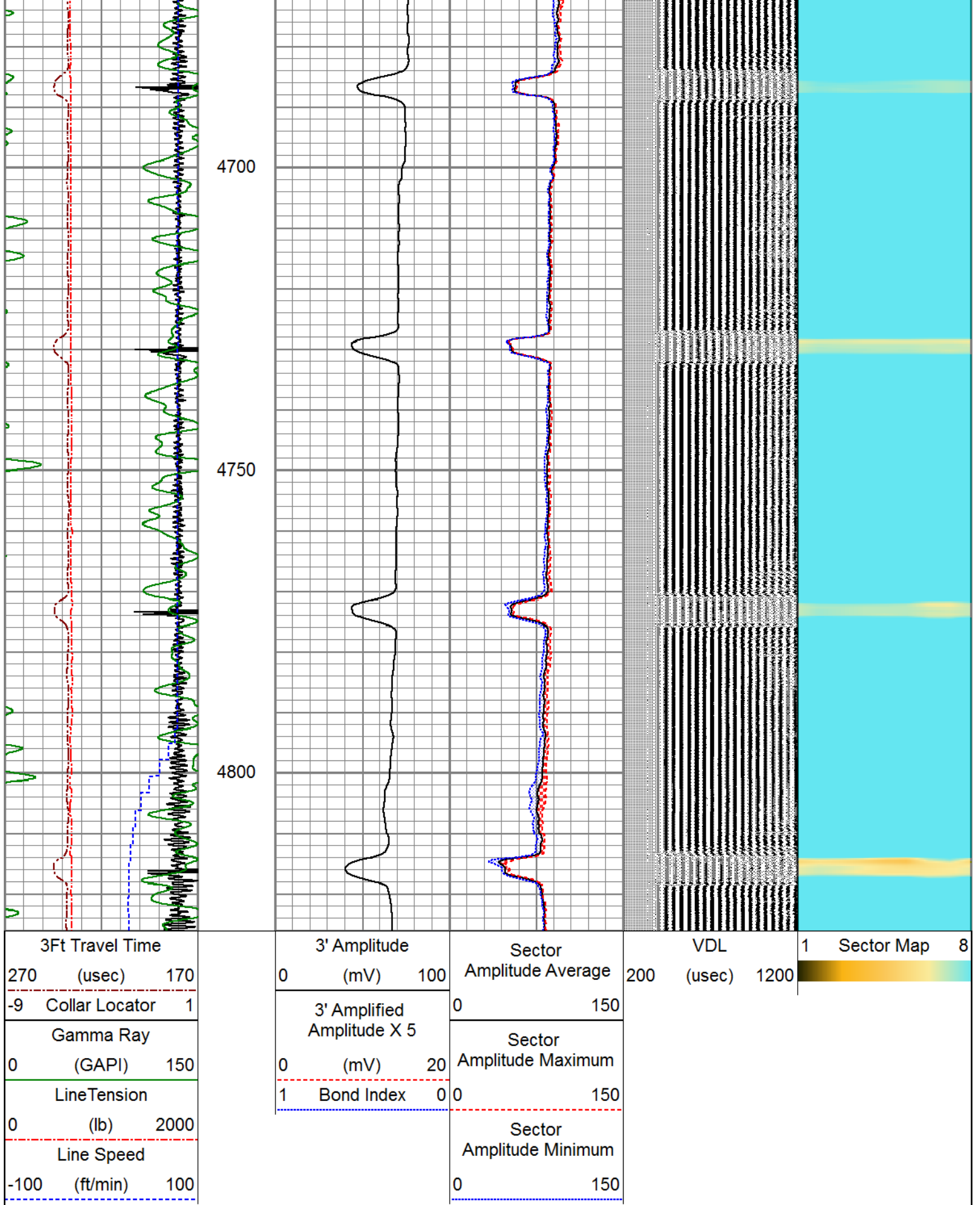


FREE PIPE SECTION

Database File anadarko.db
Dataset Pathname pass8
Presentation Format pinr_scbl
Dataset Creation Wed Feb 13 08:44:42 2019
Charted by Depth in Feet scaled 1:240

3Ft Travel Time 270 (usec) 170	3' Amplitude 0 (mV) 100	Sector Amplitude Average	200	VDL (usec) 1200	1 Sector Map 8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150		
Gamma Ray 0 (GAPI) 150		0 (mV) 20	Sector Amplitude Maximum	0 150	
LineTension 0 (lb) 2000		1 Bond Index 0	Sector Amplitude Minimum	0 150	
Line Speed -100 (ft/min) 100					

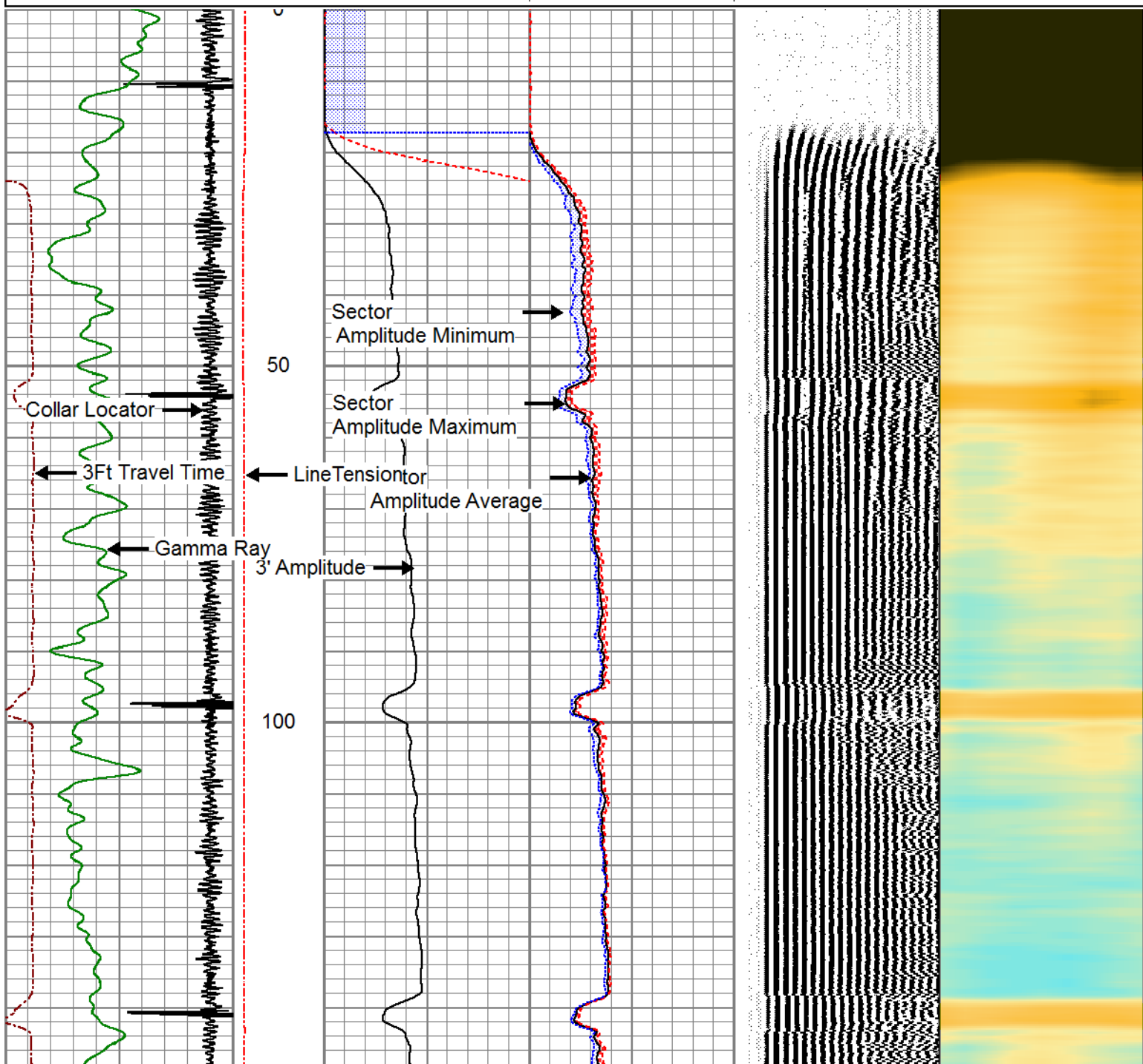




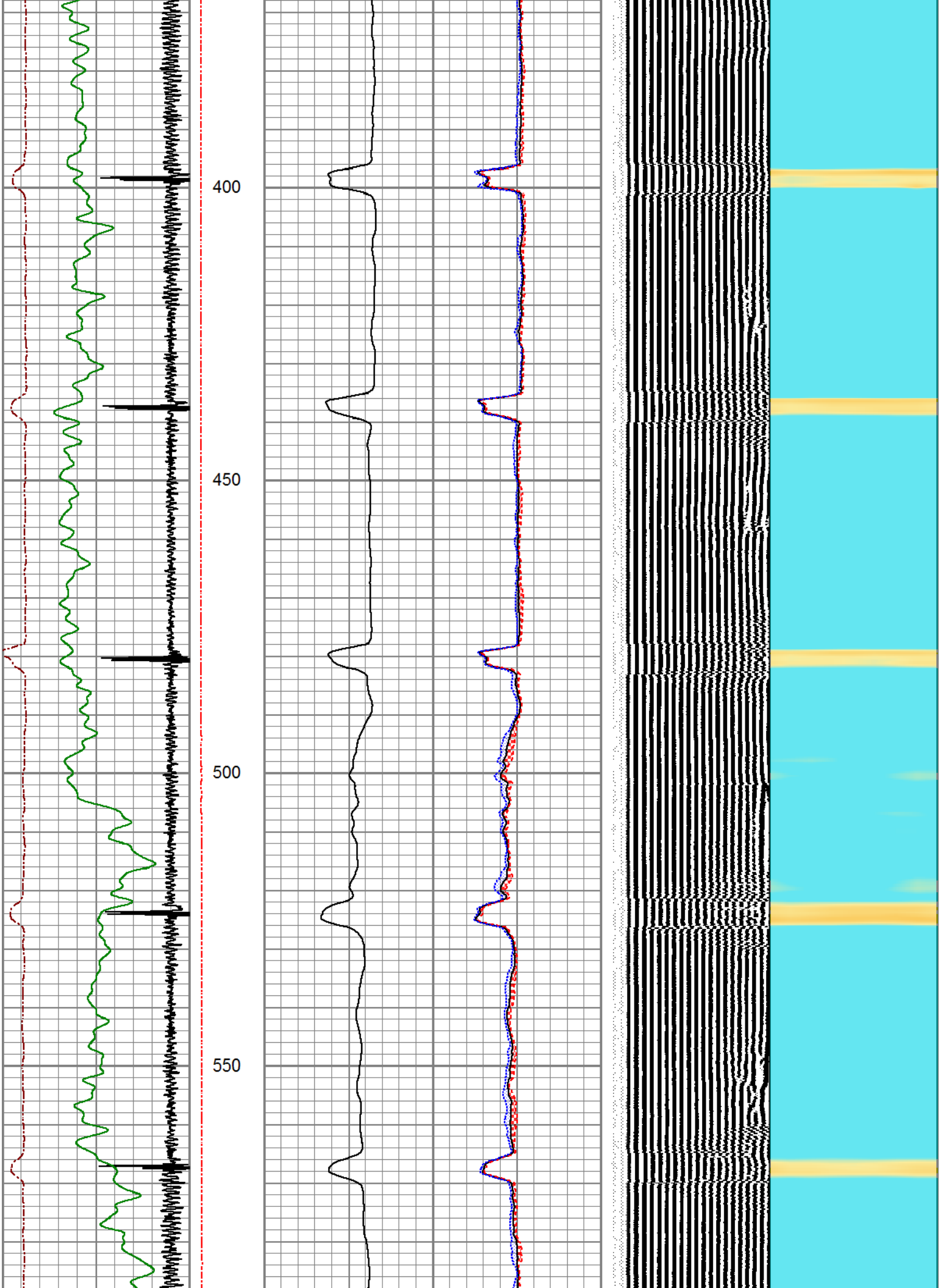
MAIN LOG

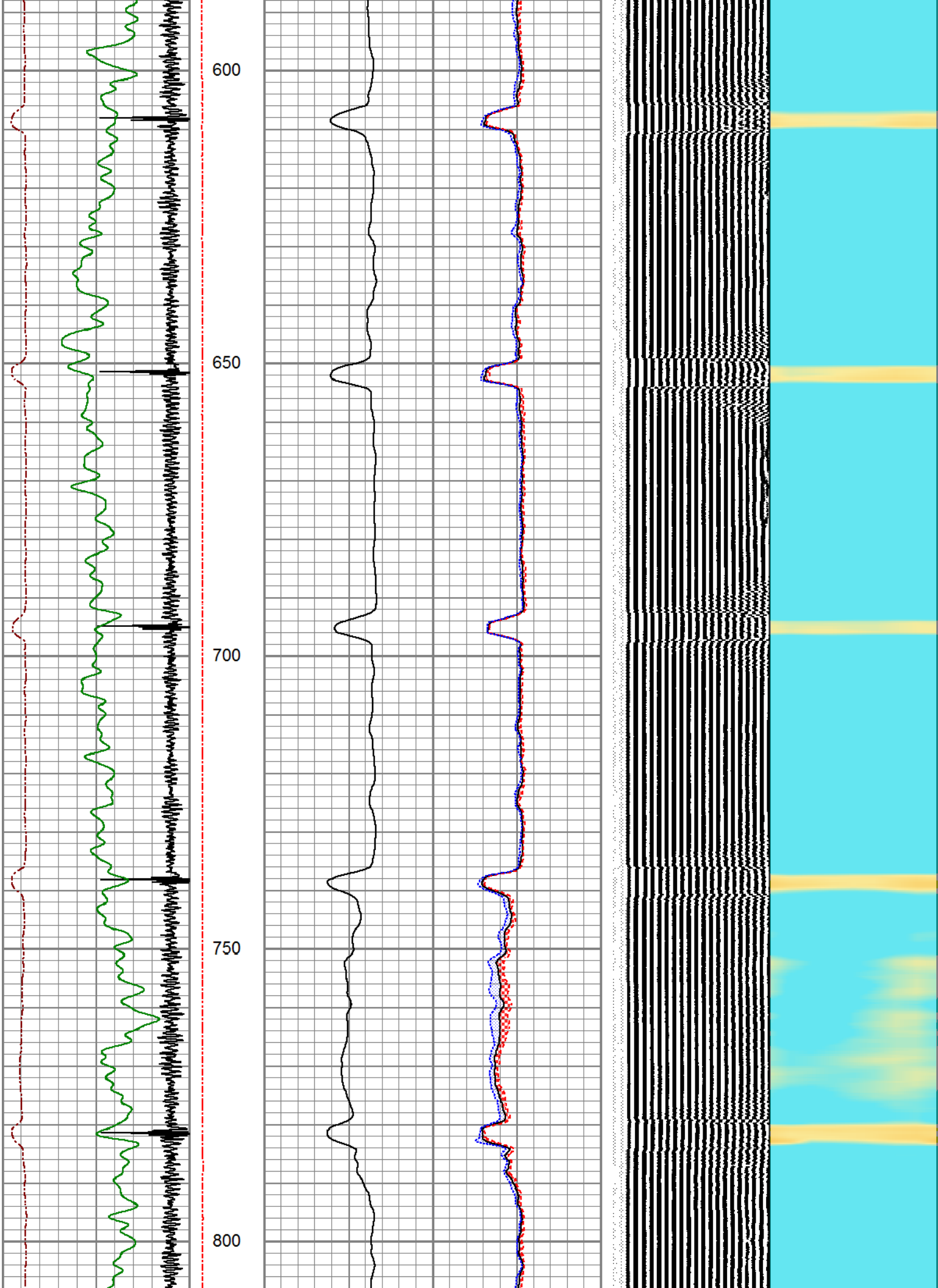
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 Dataset Pathname pass10
 Presentation Format pinr_scbl
 Dataset Creation Wed Feb 13 09:13:41 2019
 Charted by Depth in Feet scaled 1:240

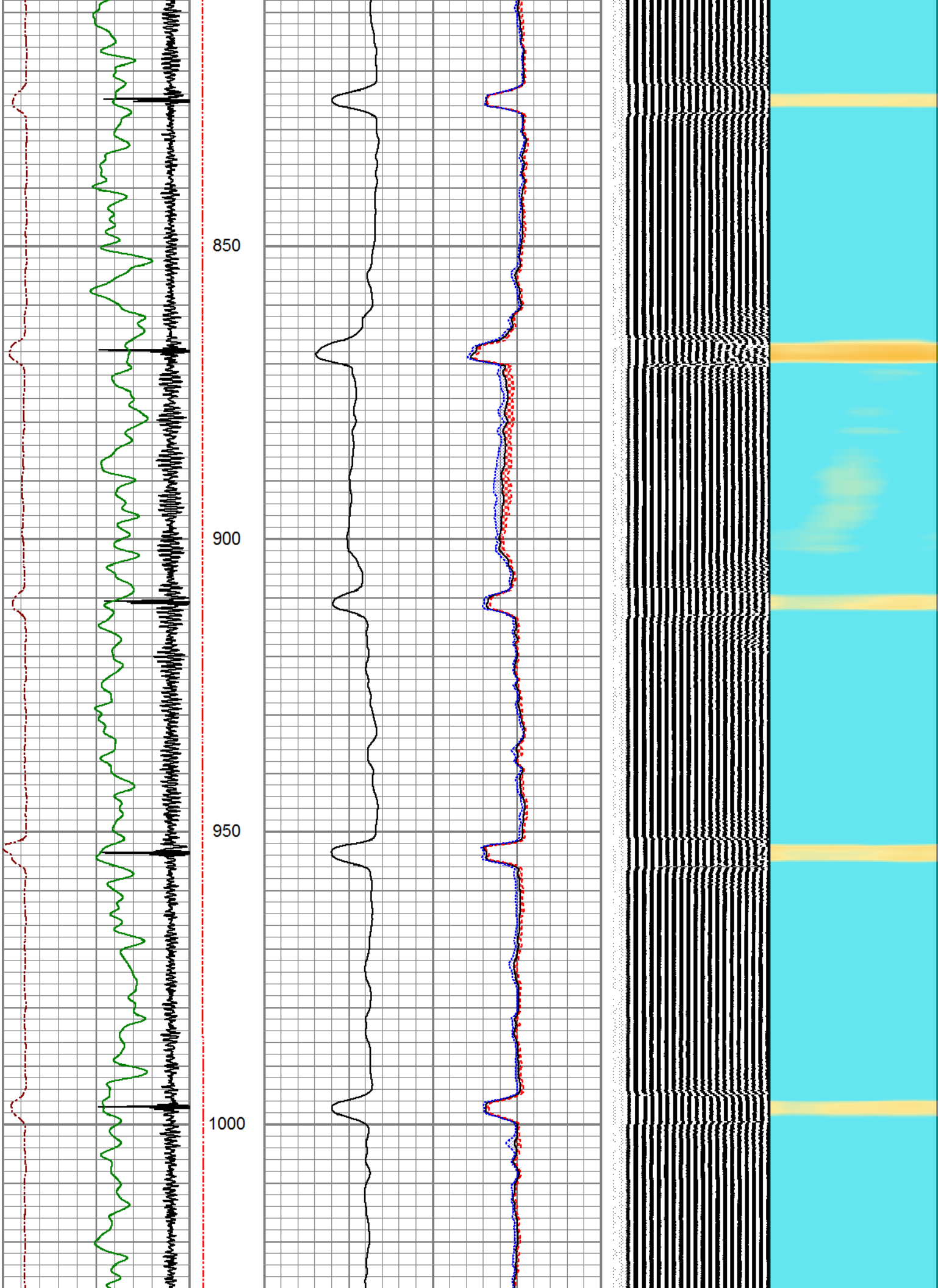
3Ft Travel Time 250 (usec) 150	ineTensio (lb) 0 2000	3' Amplitude (mV) 100	Sector Amplitude Average	VDL (usec) 1200	1 Sector Map 8
-9 Collar Locator 1		3' Amplified Amplitude X 5 (mV) 20	0 150		
Gamma Ray (GAPI) 200	0	1 Bond Index 0	Sector Amplitude Maximum	0	0
			Sector Amplitude Minimum		

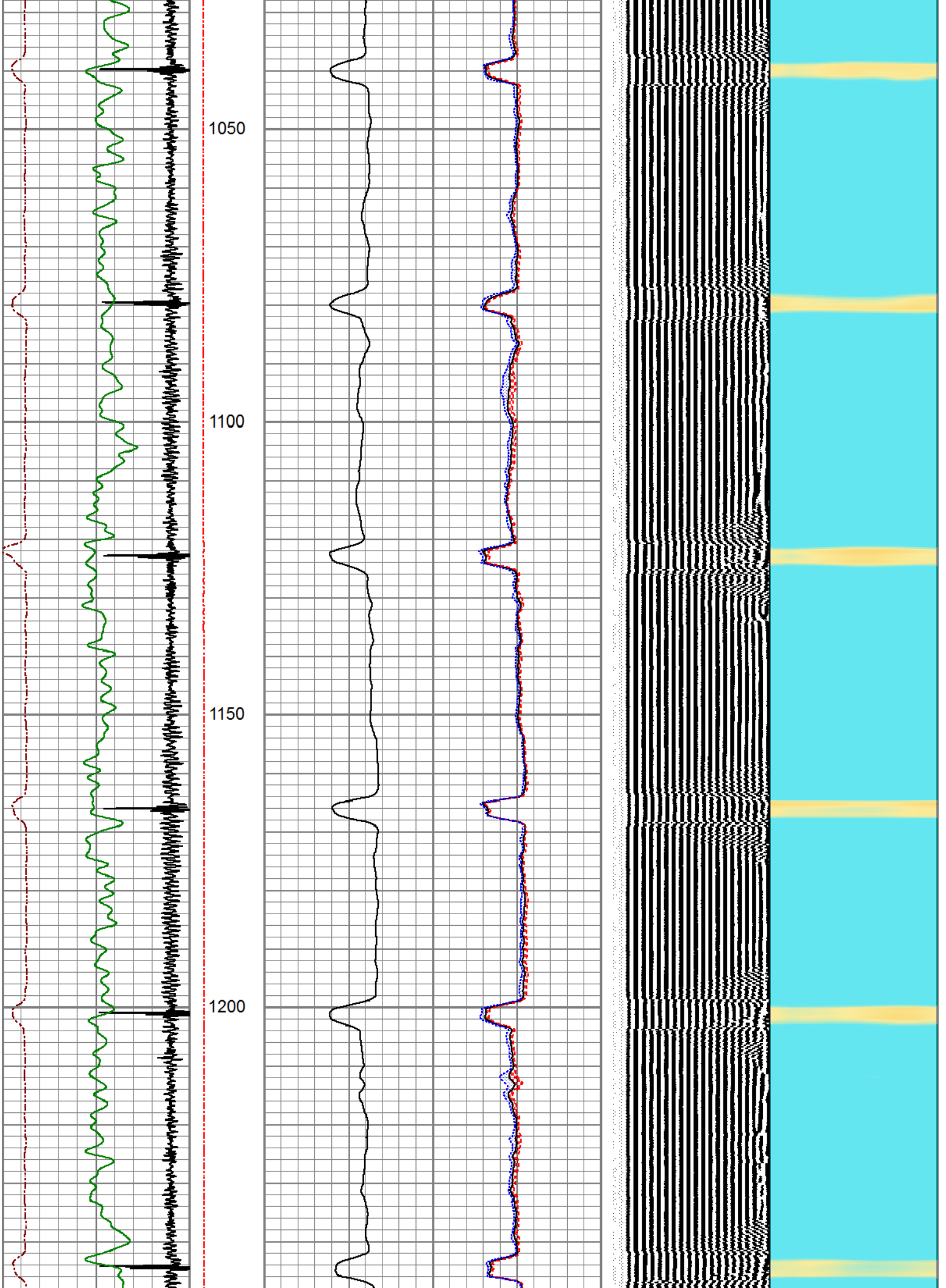


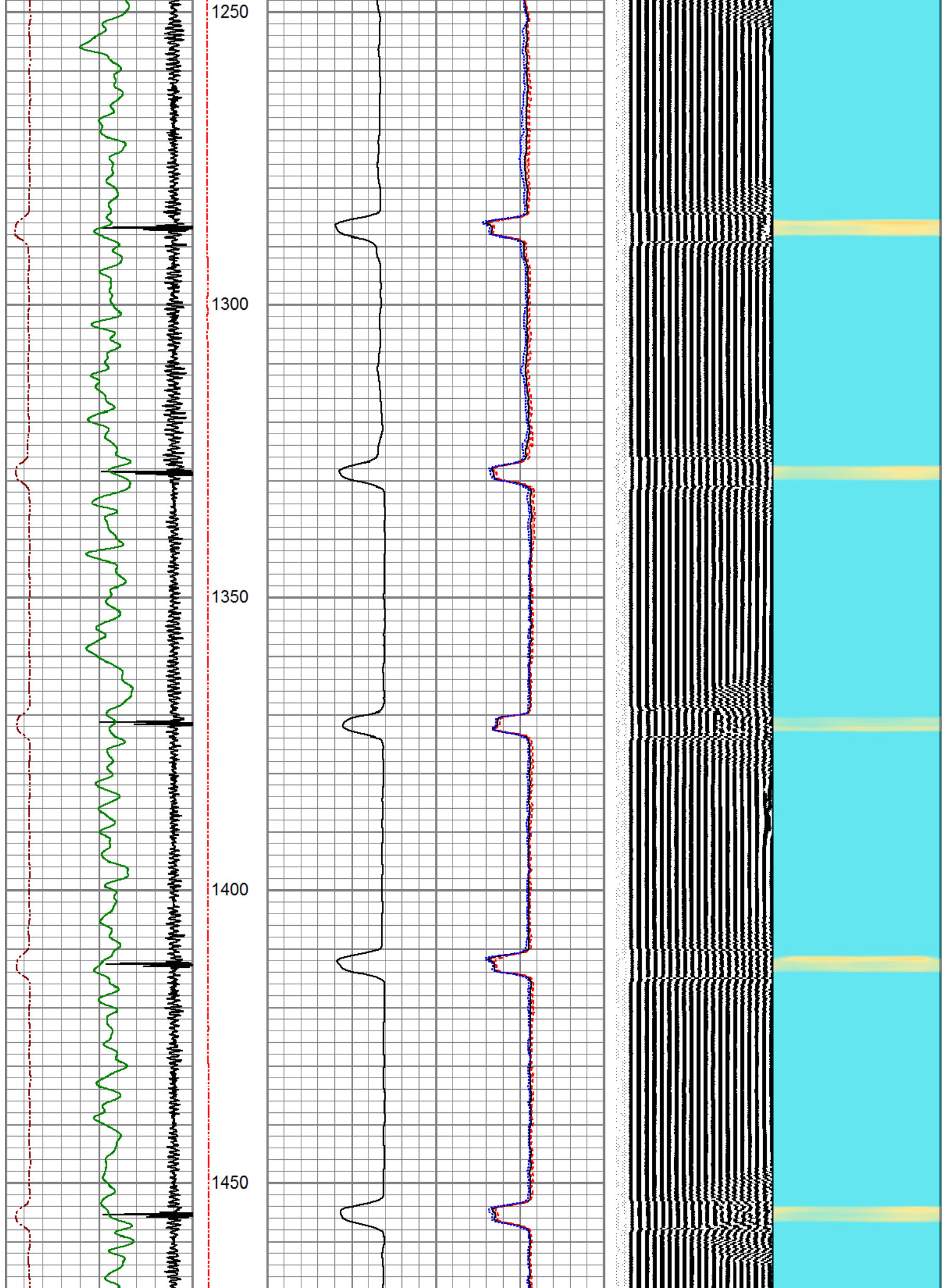


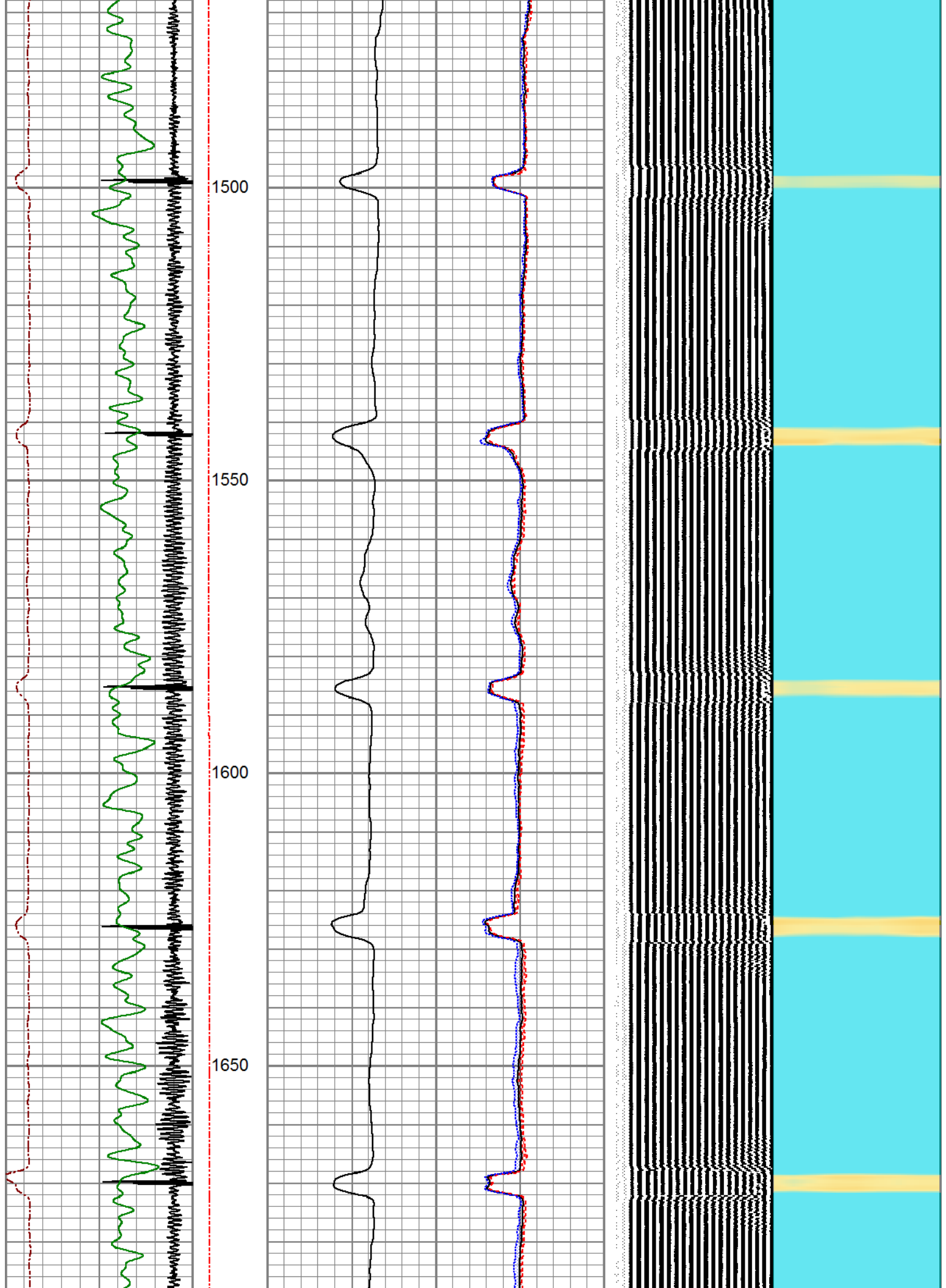


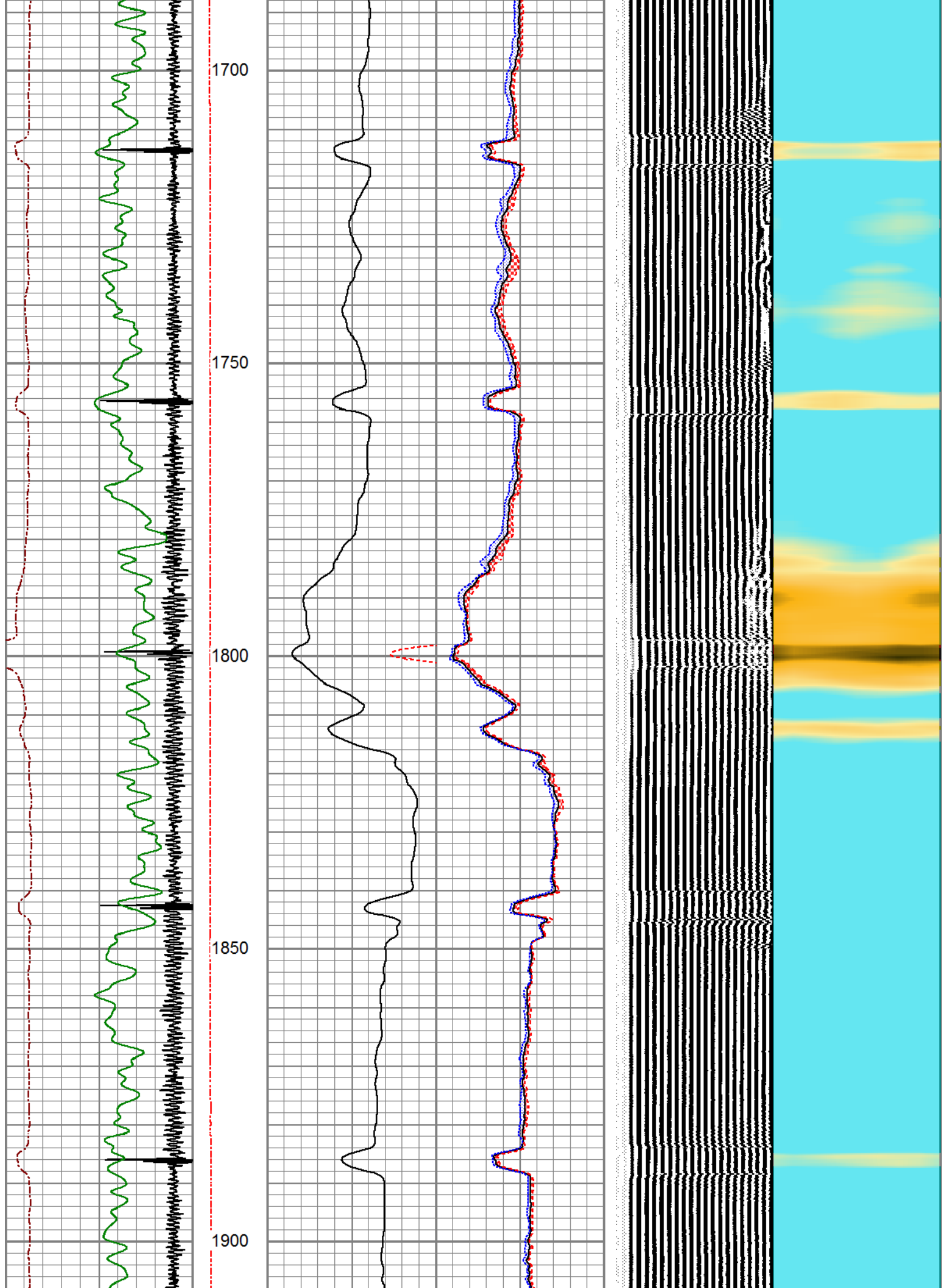


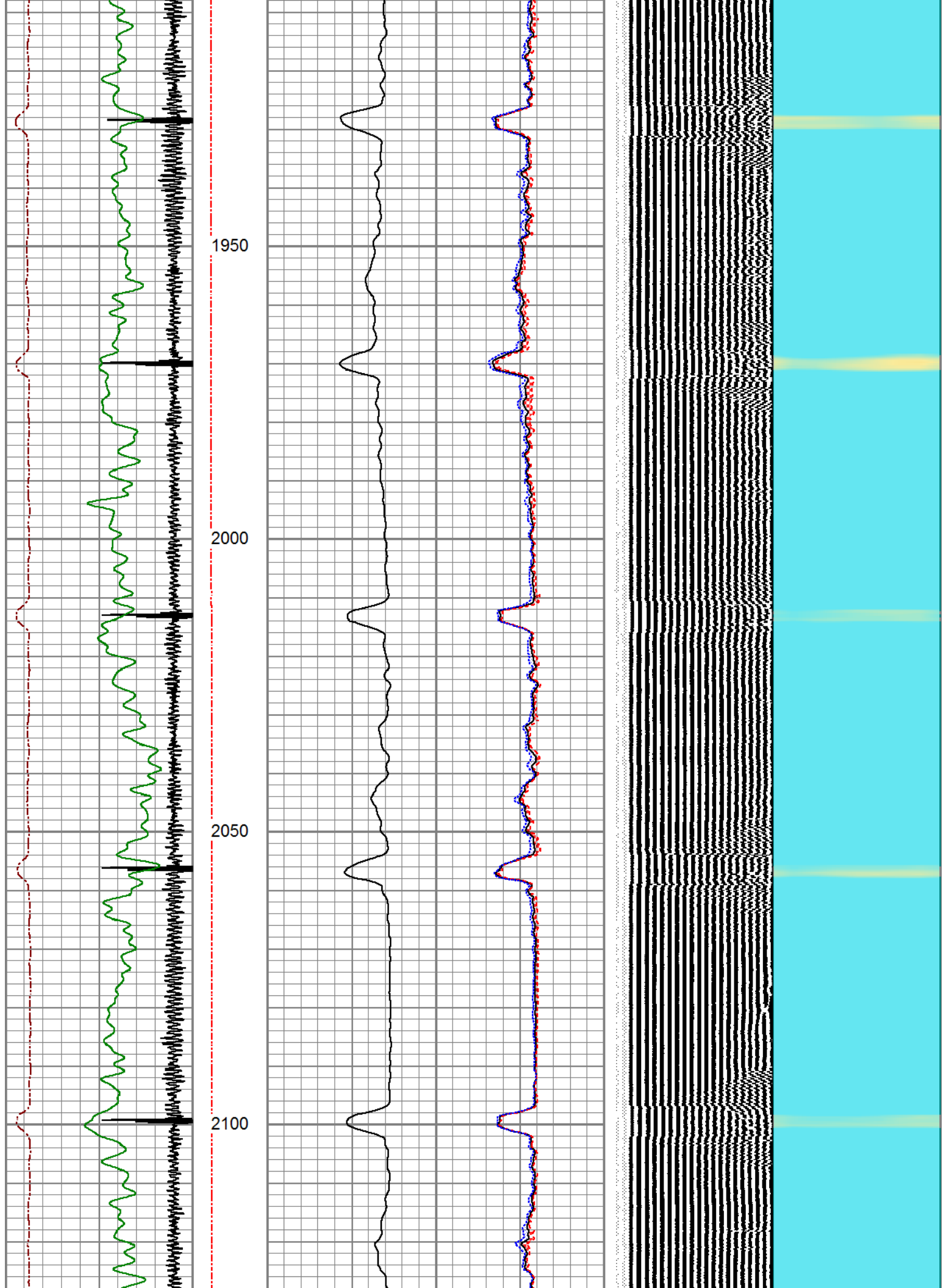


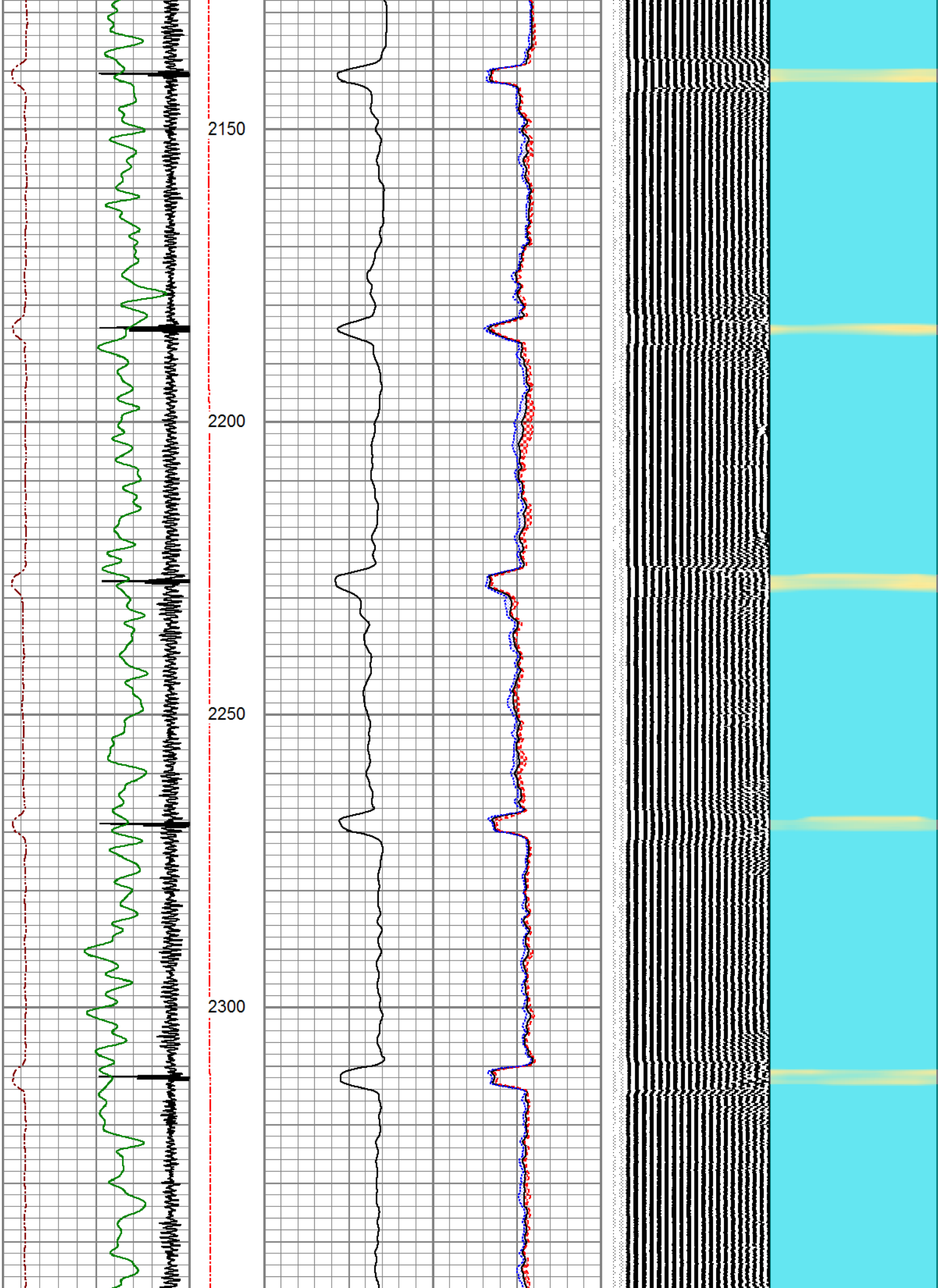


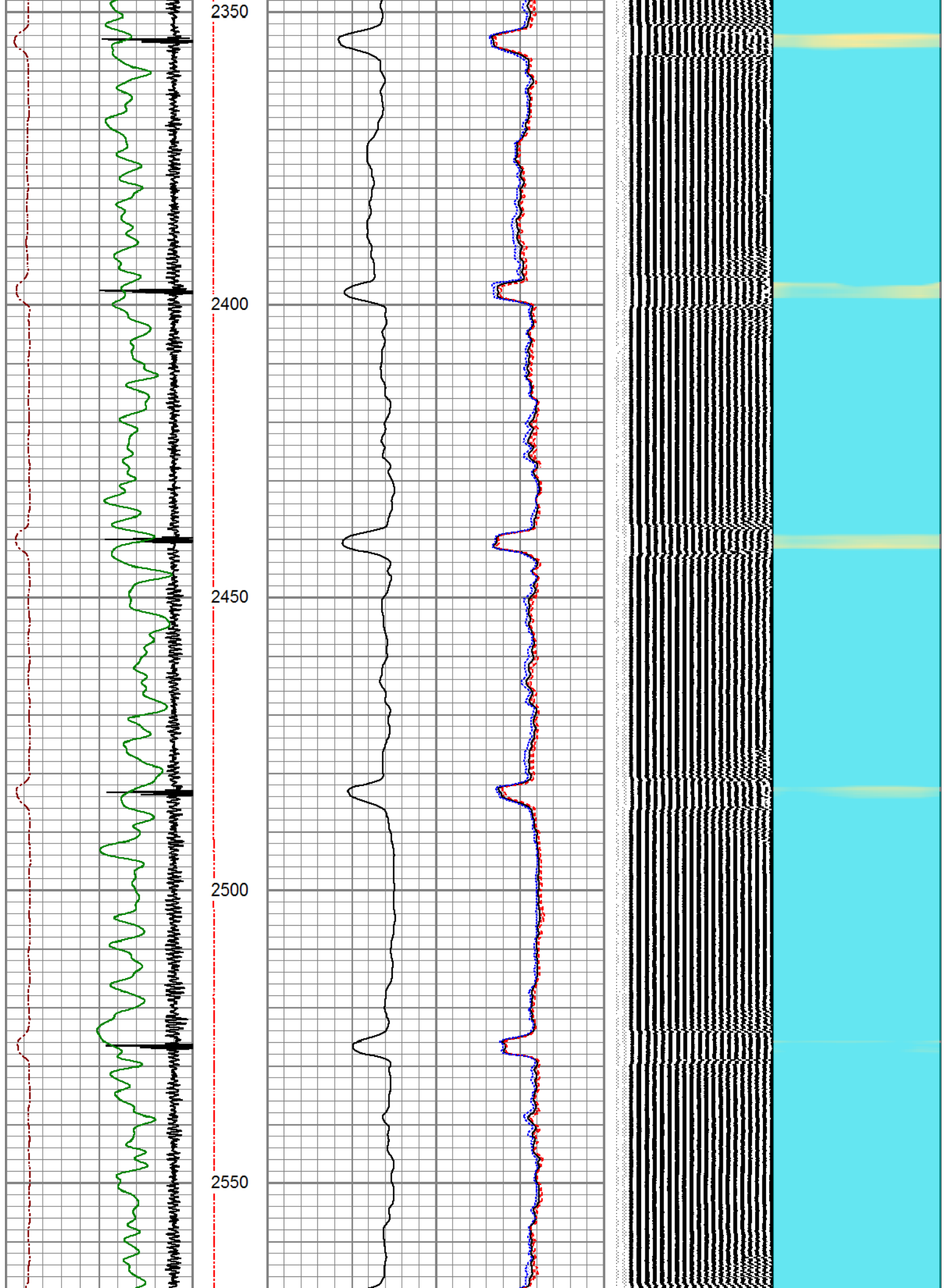


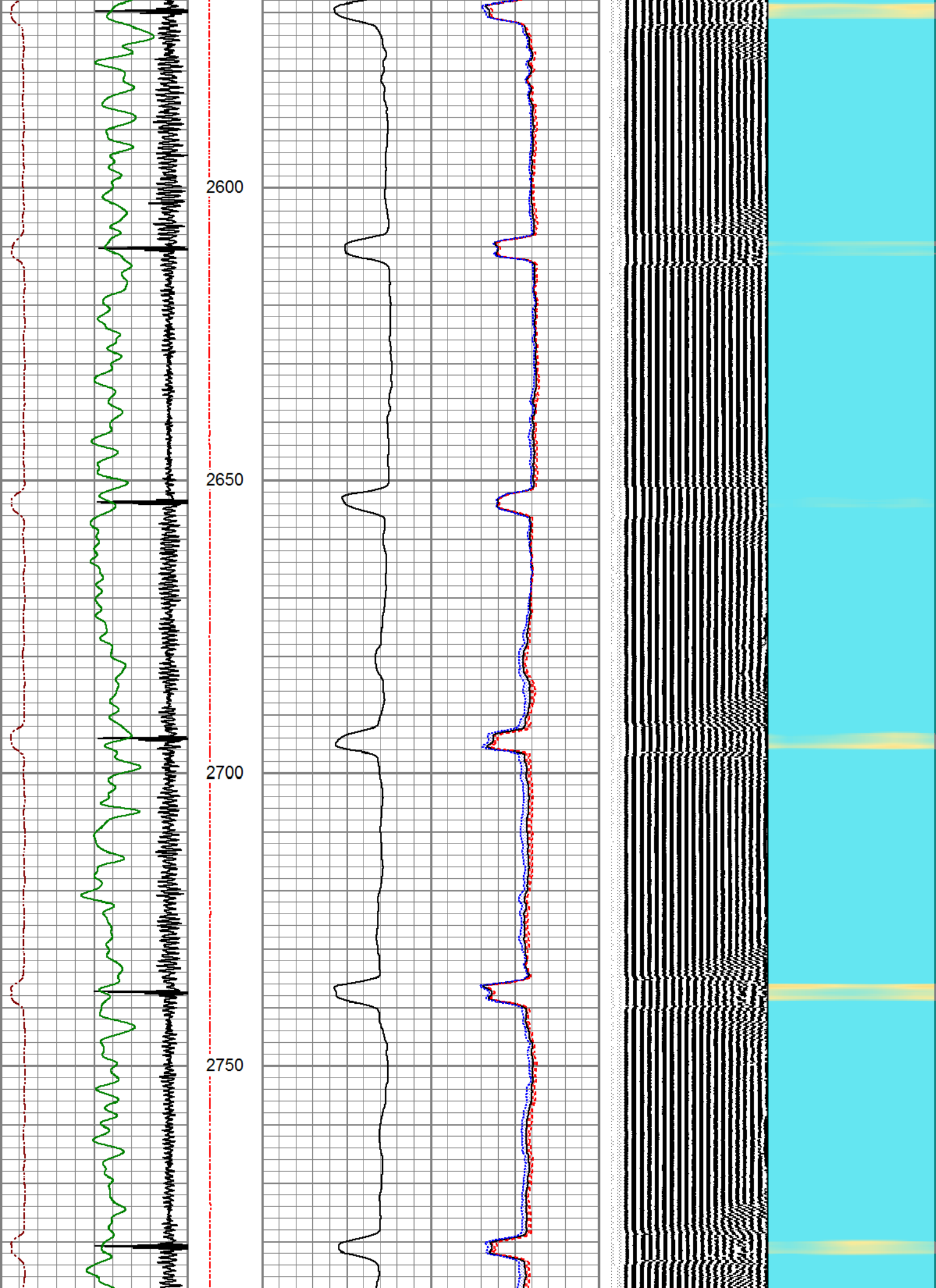


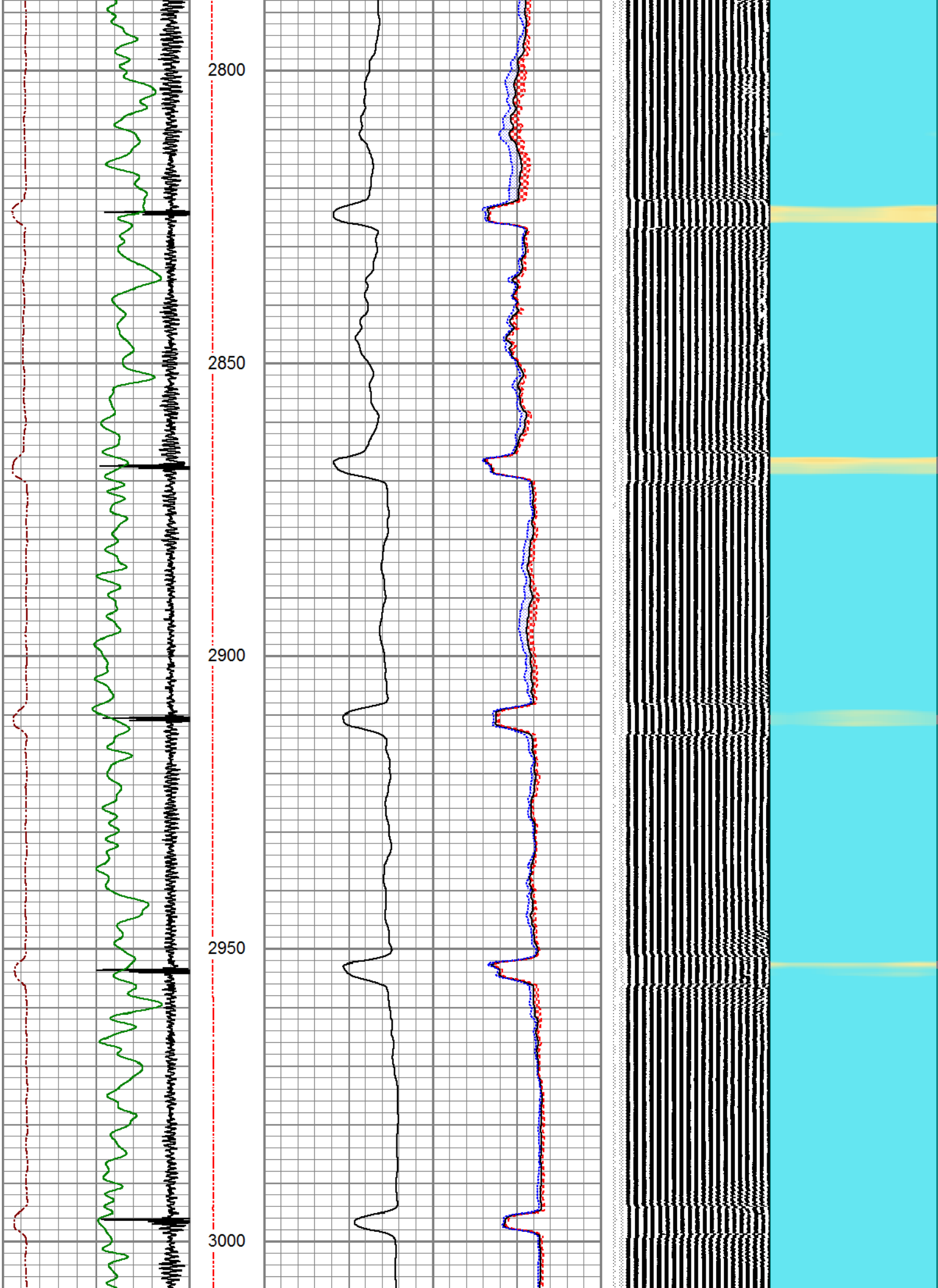


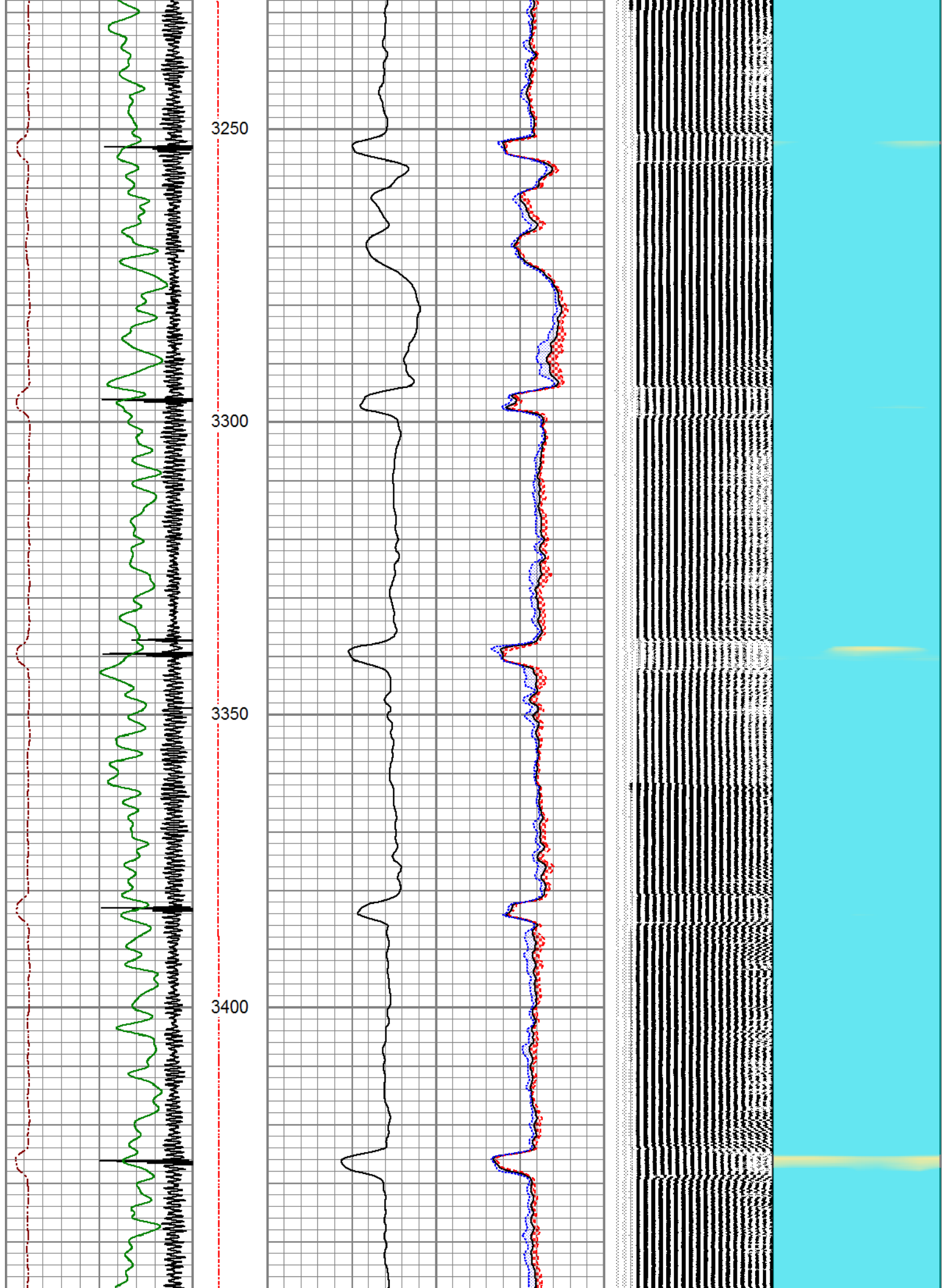


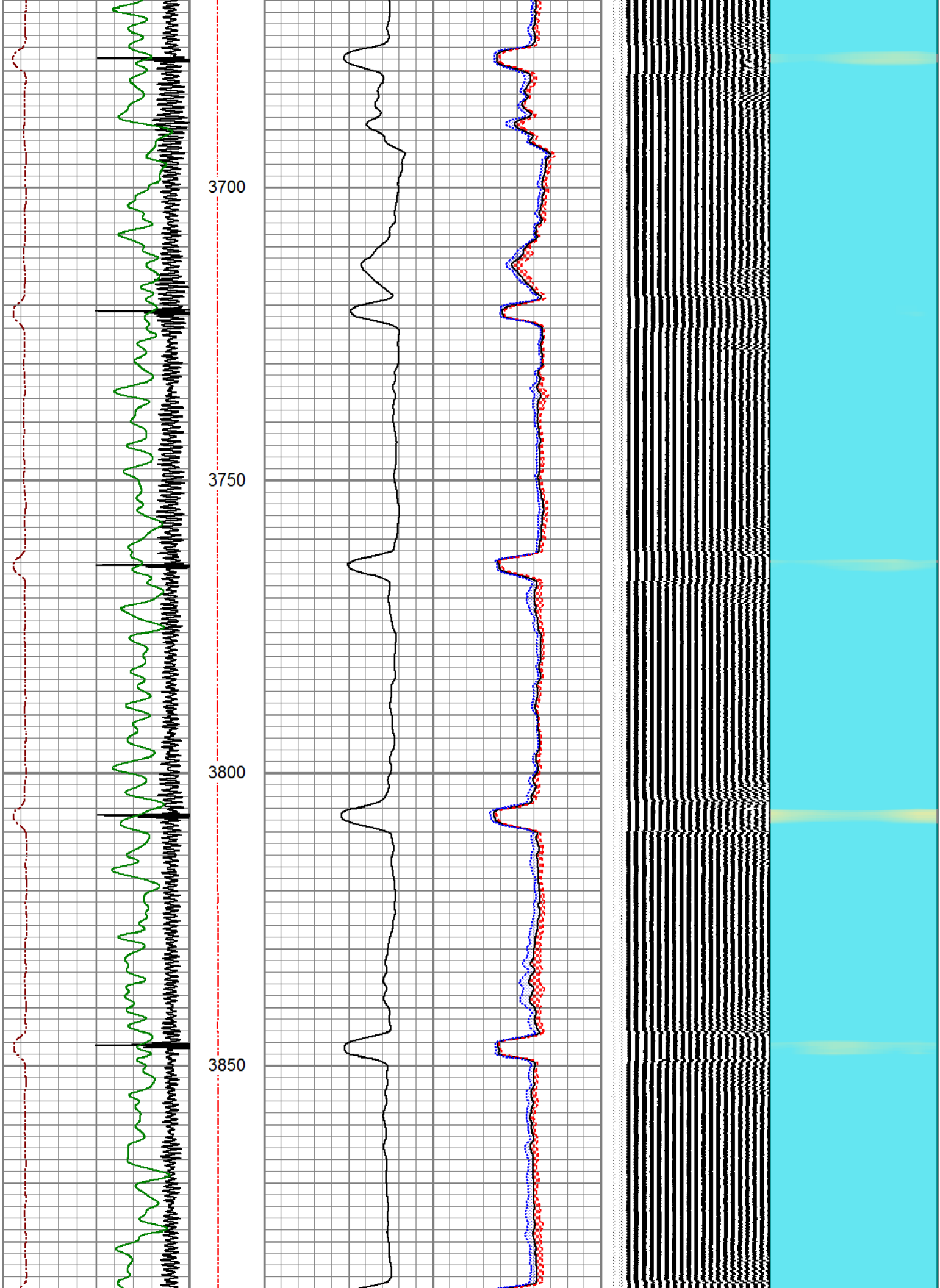


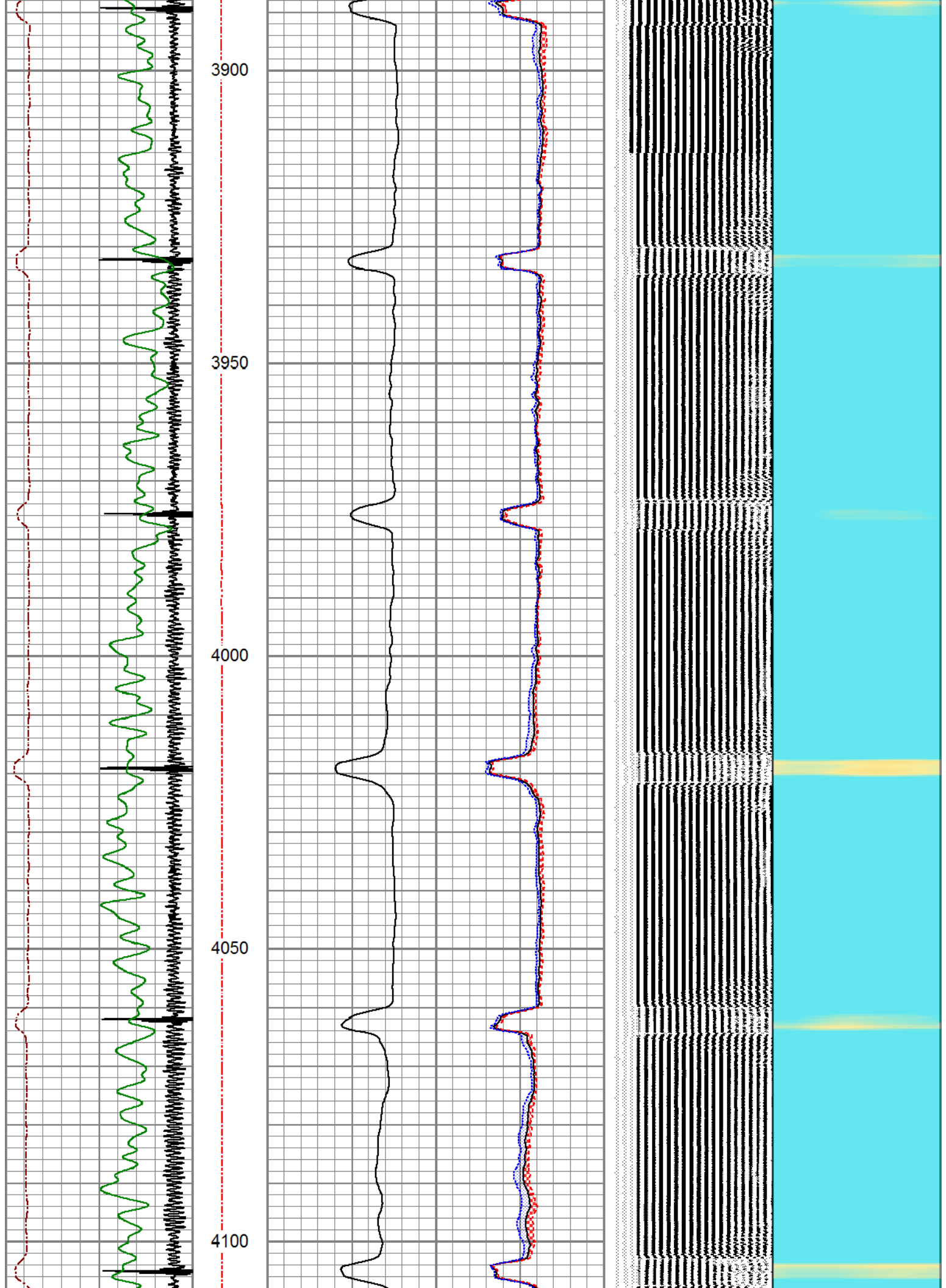


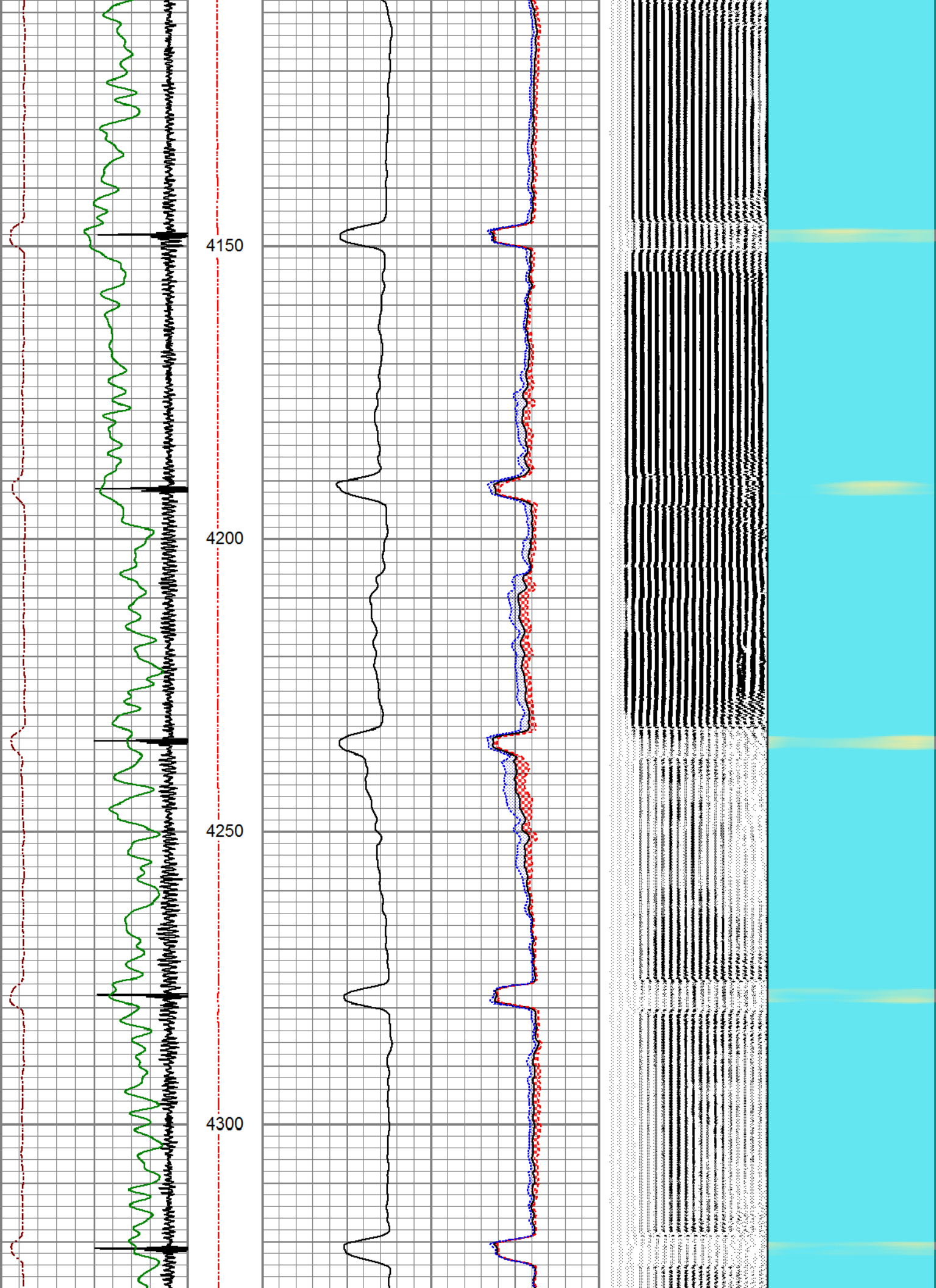


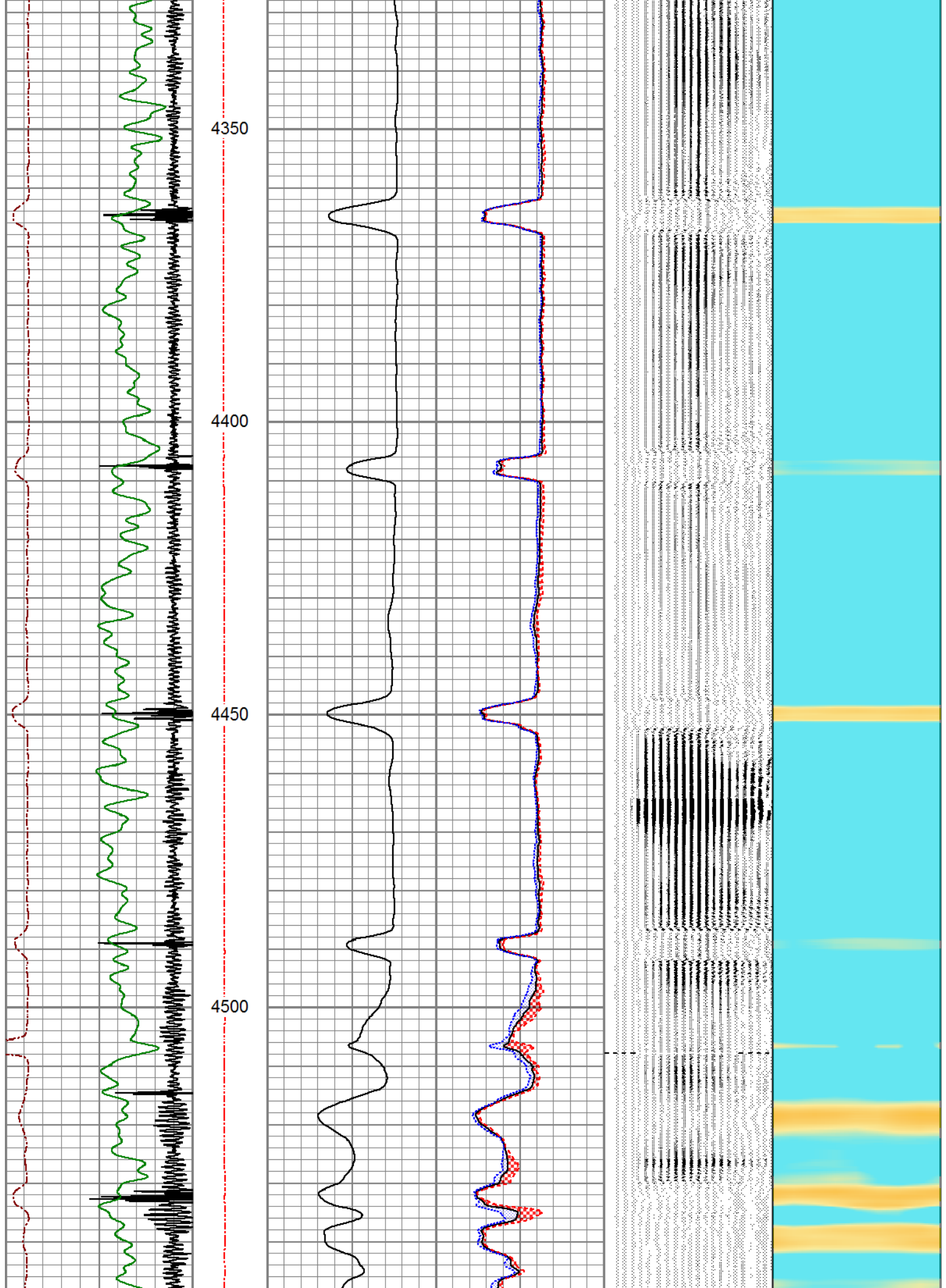


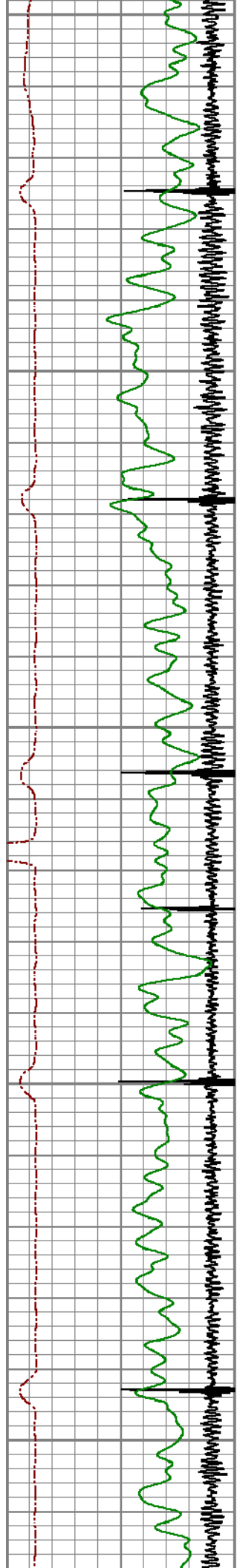




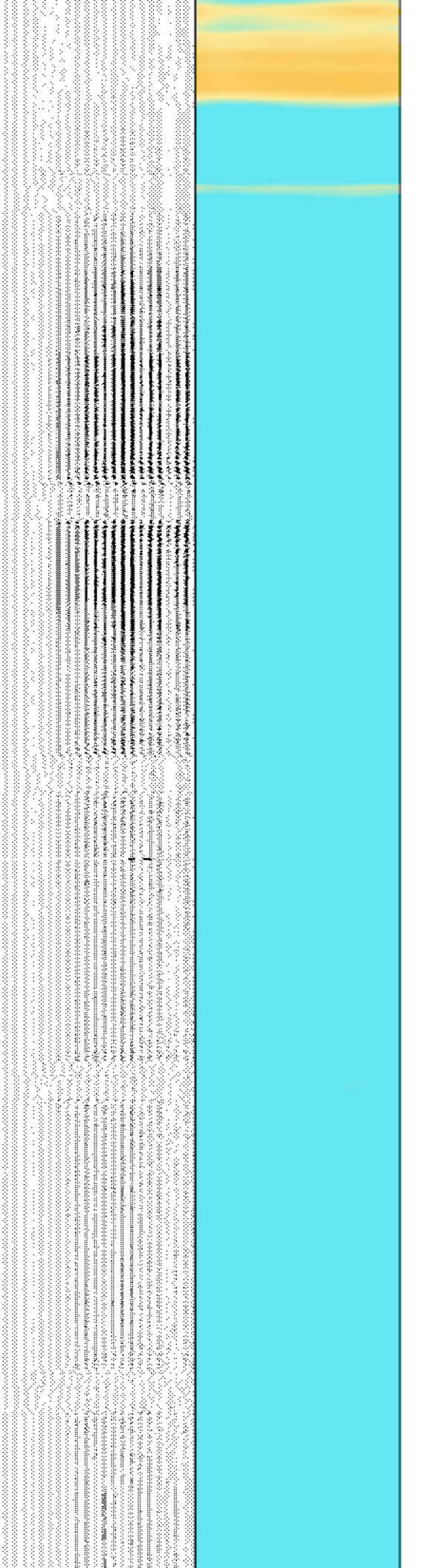


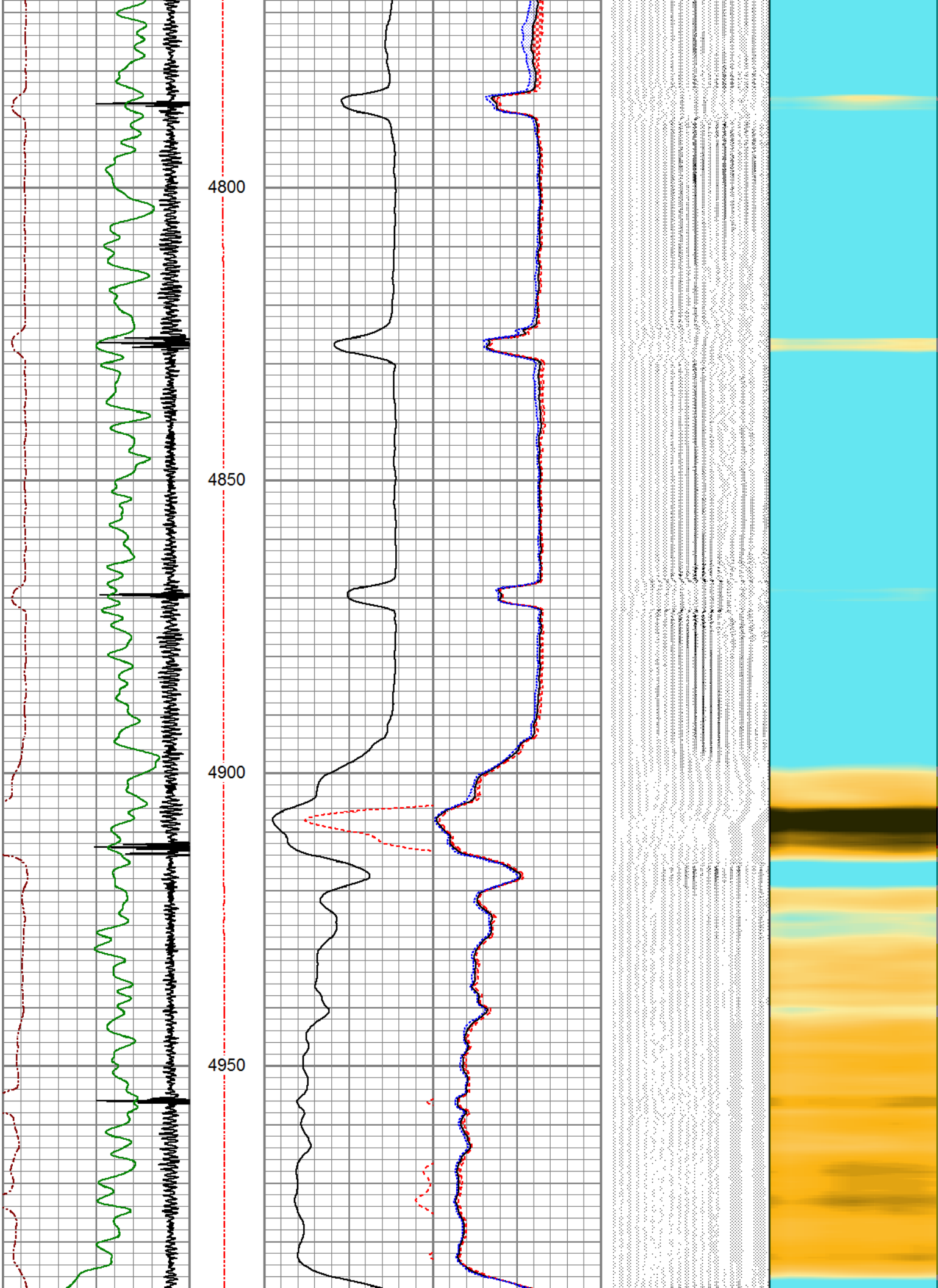


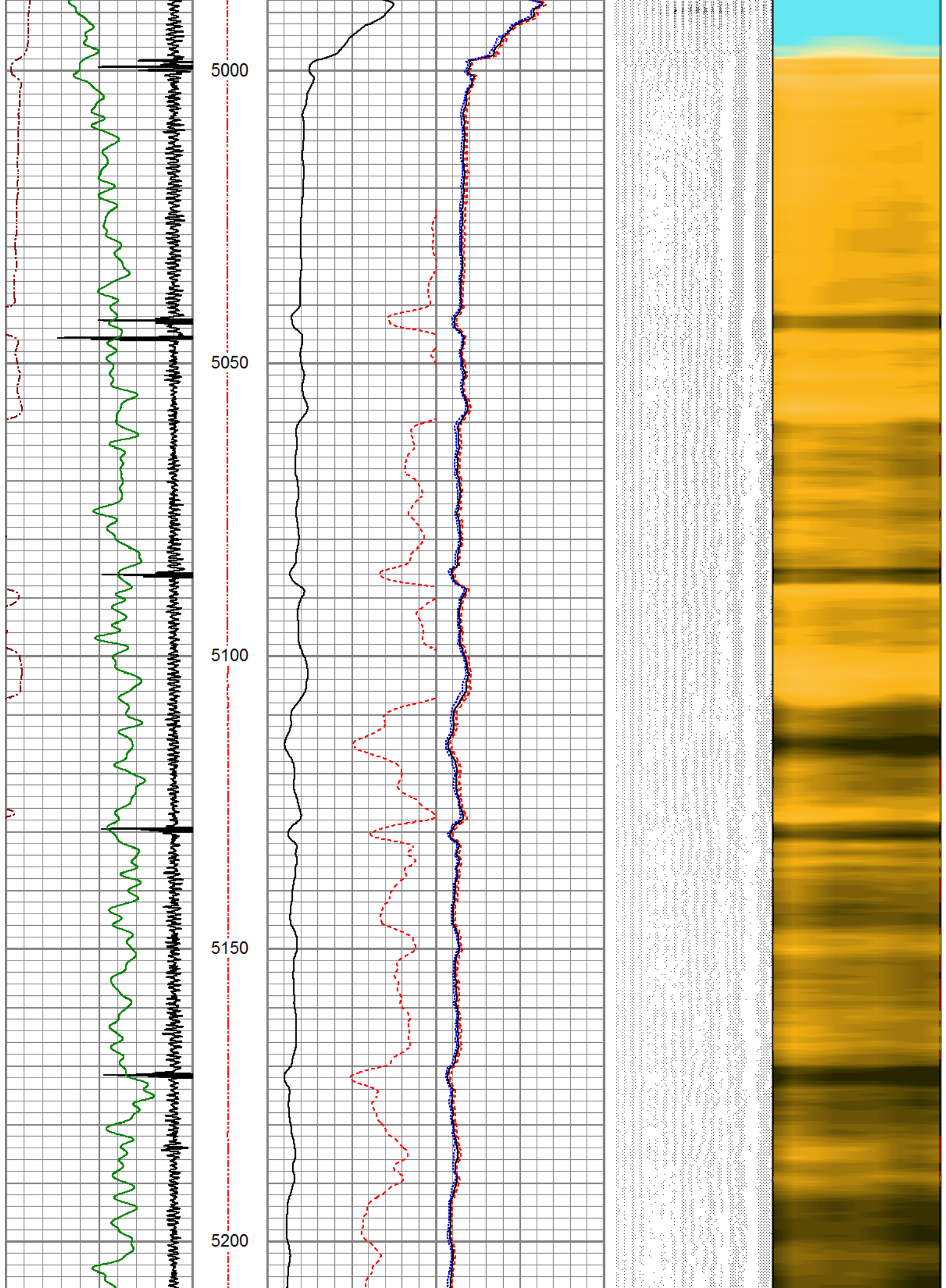


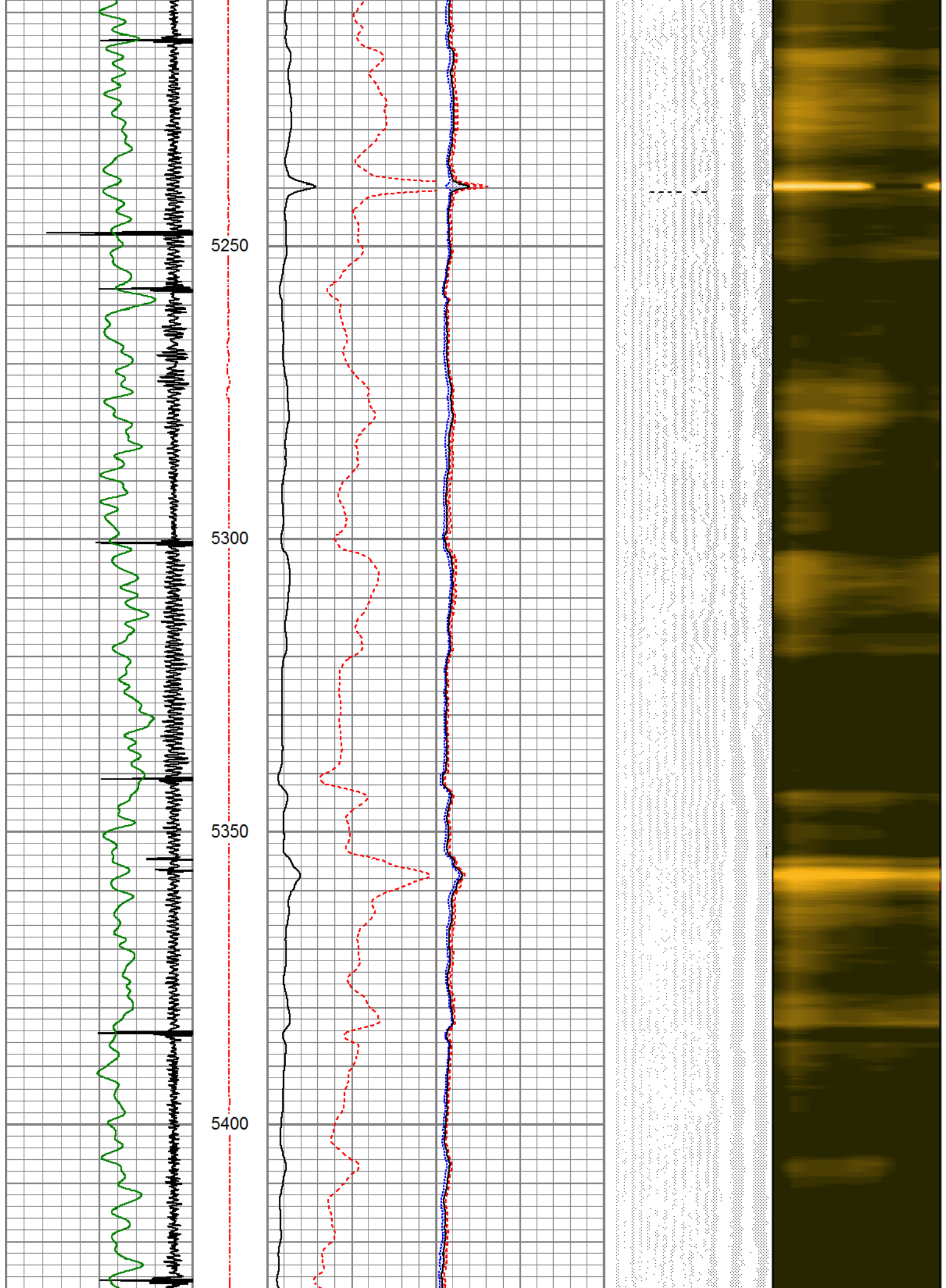


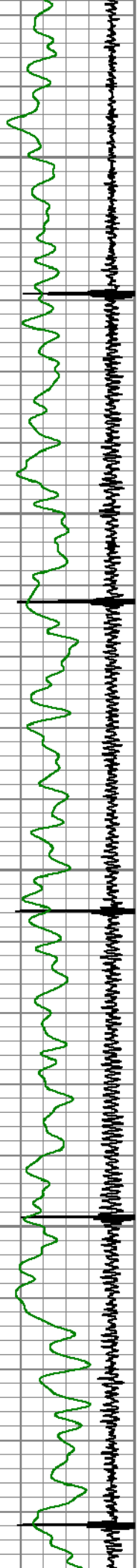
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4600
4650
4700
4750









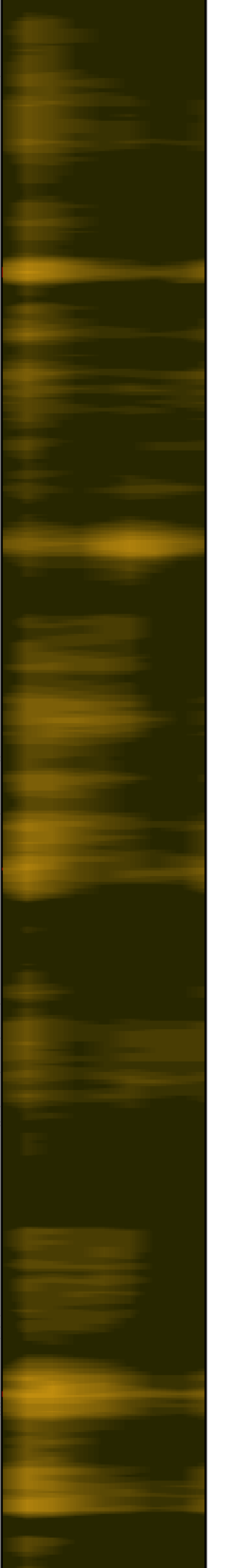
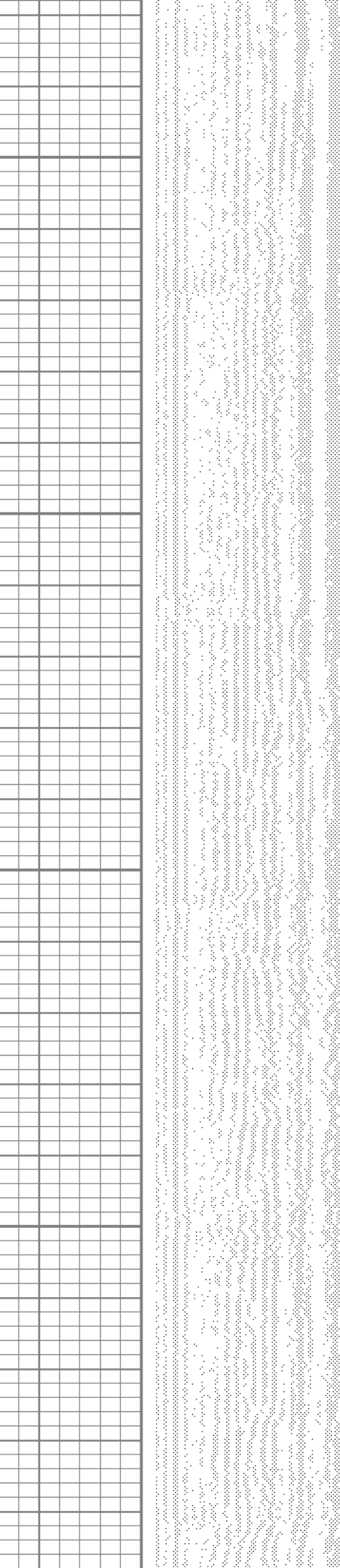
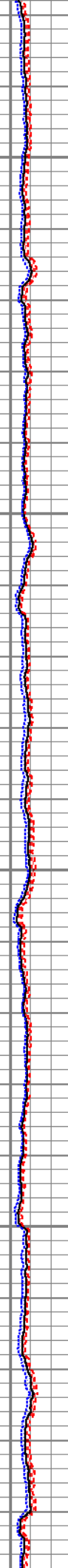
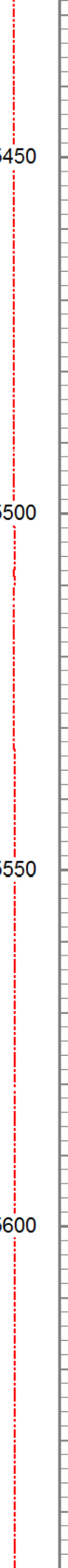


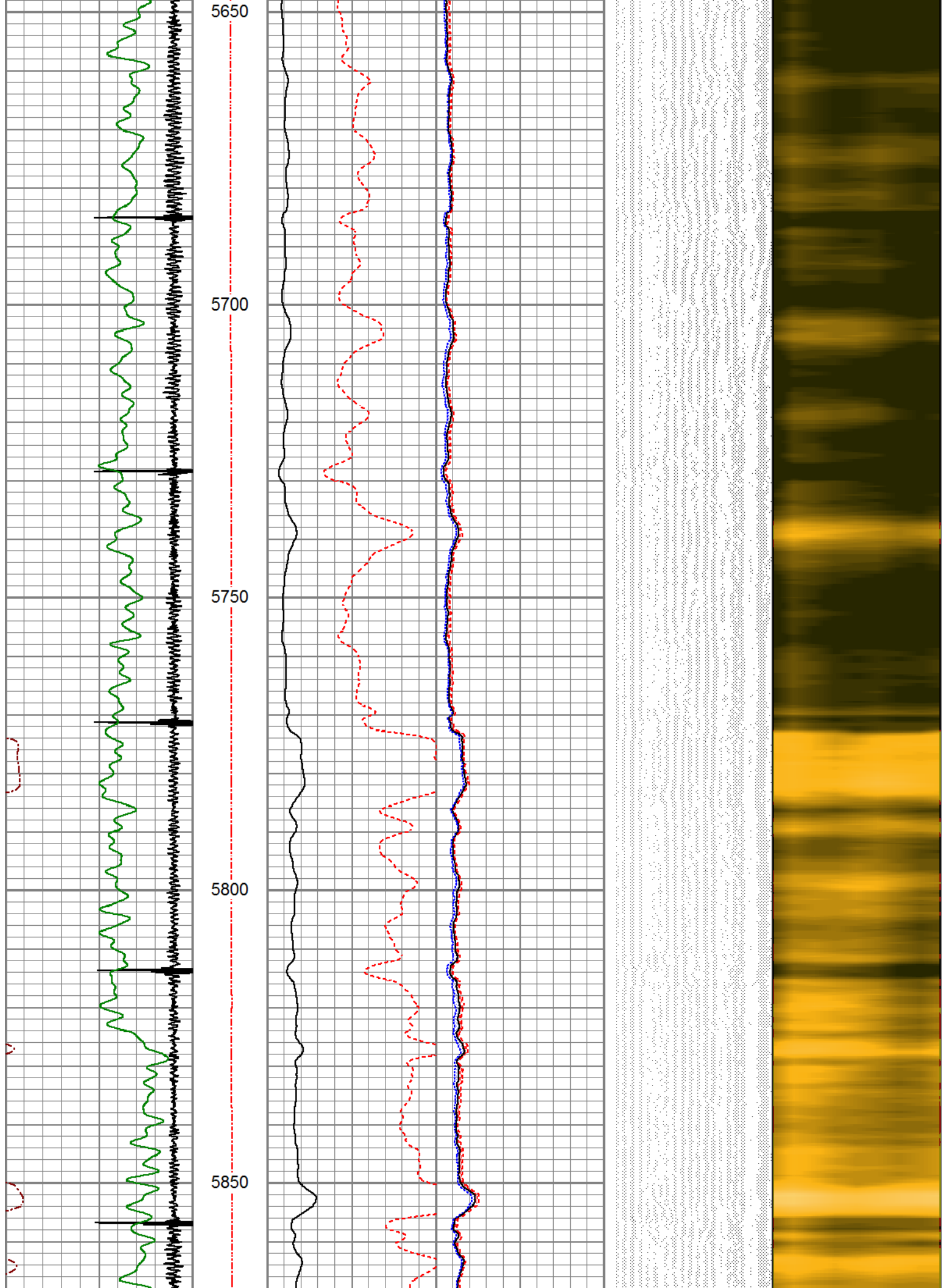
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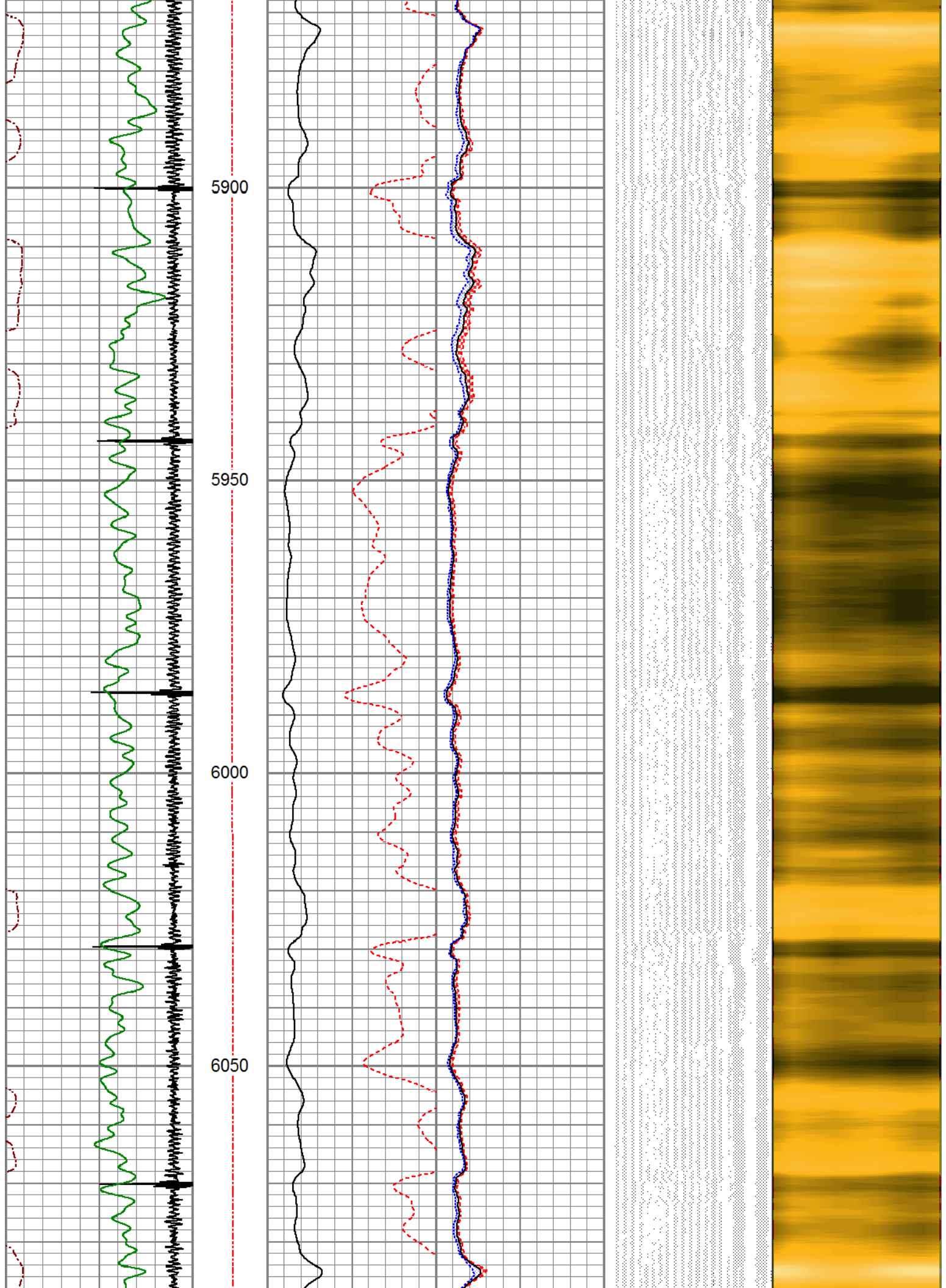
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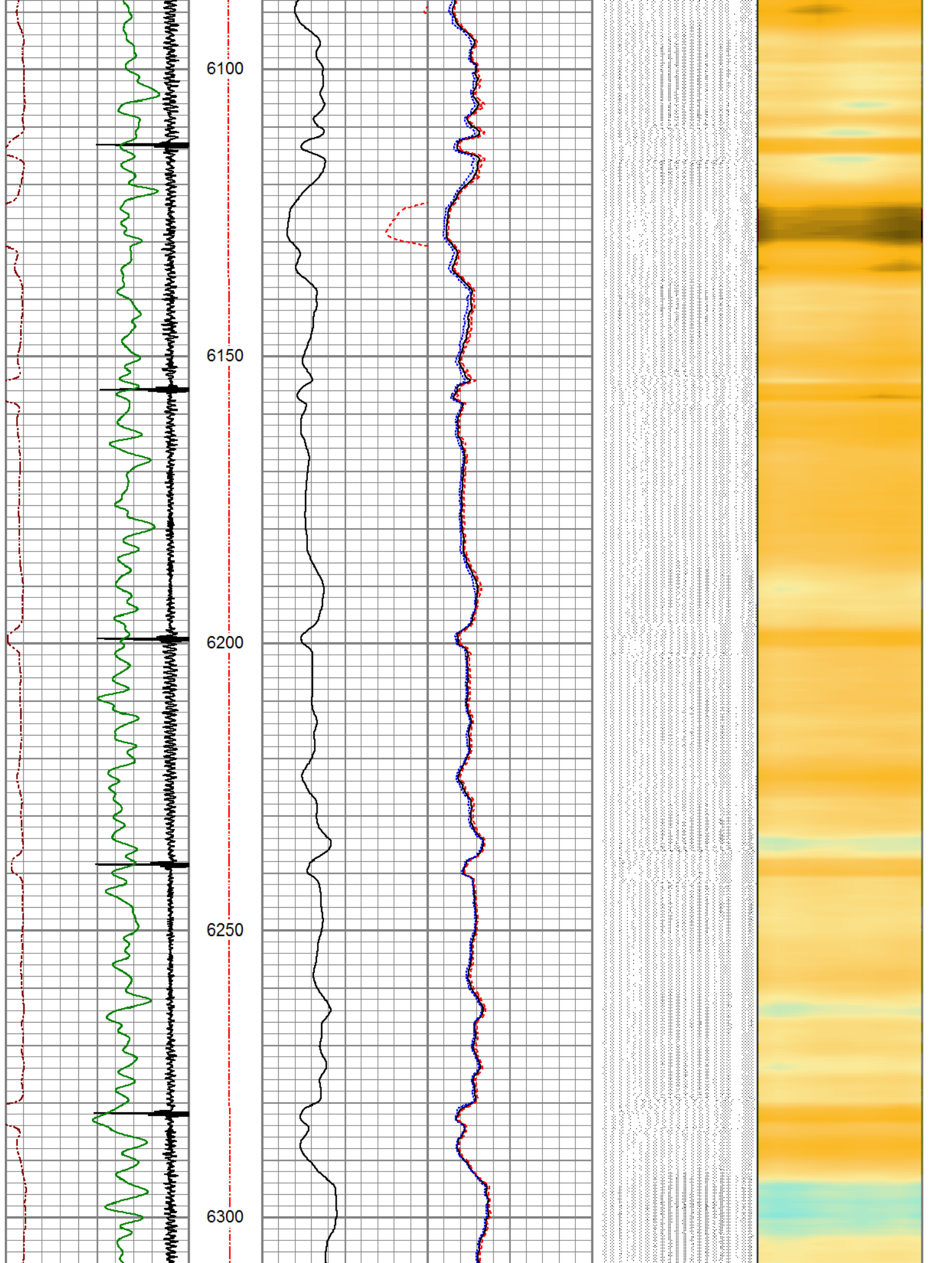
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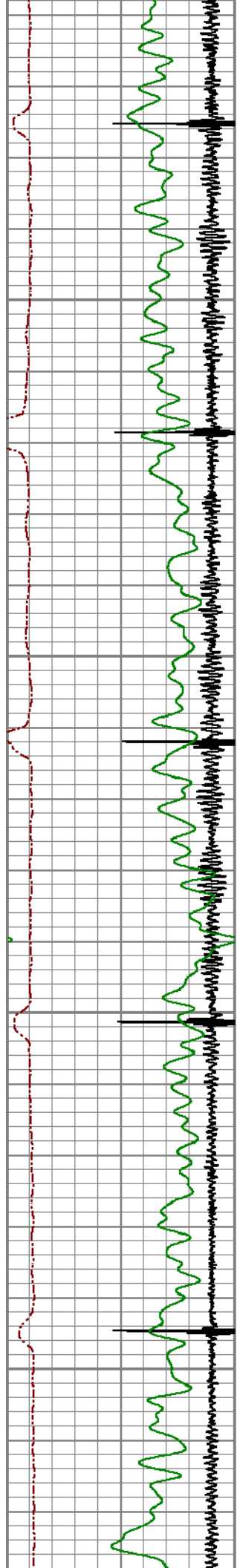
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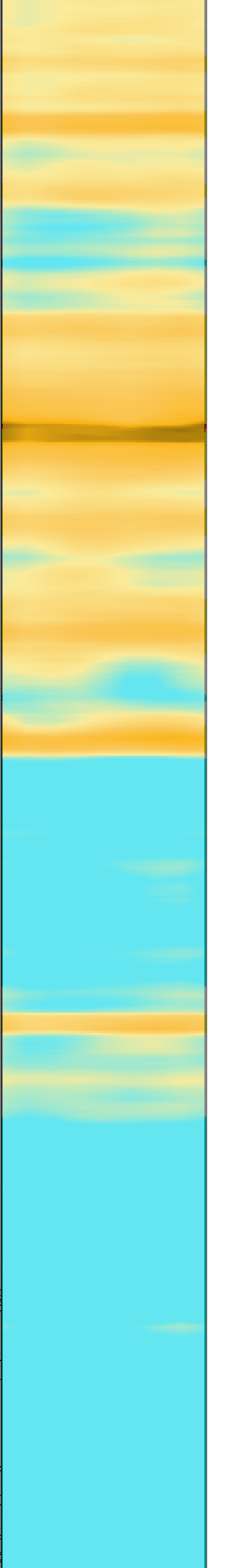
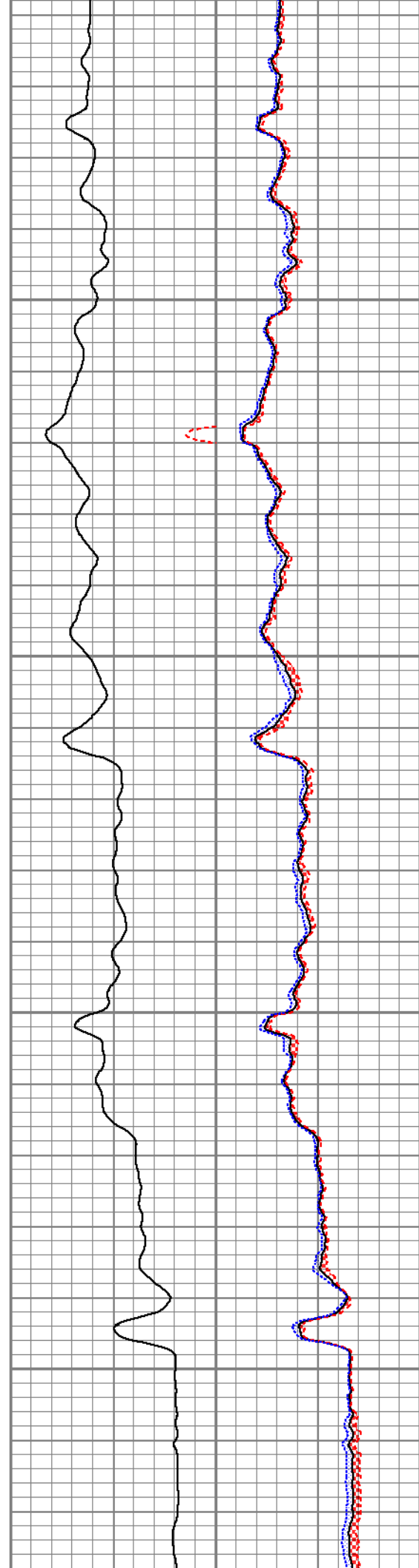


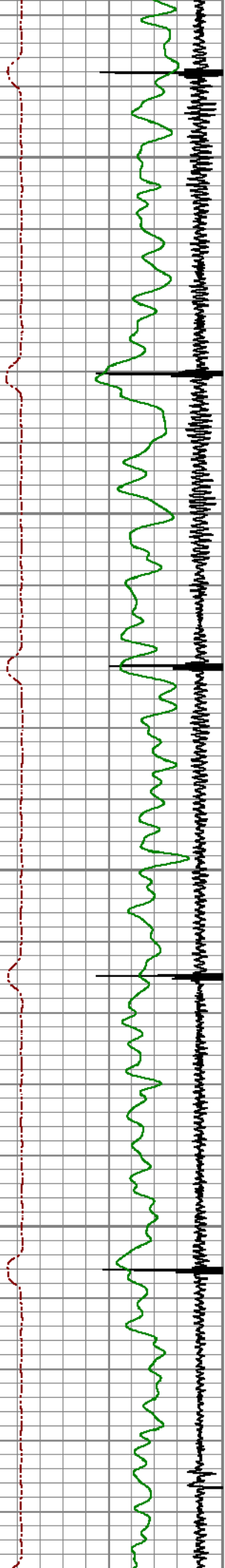
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6400

6450

6500



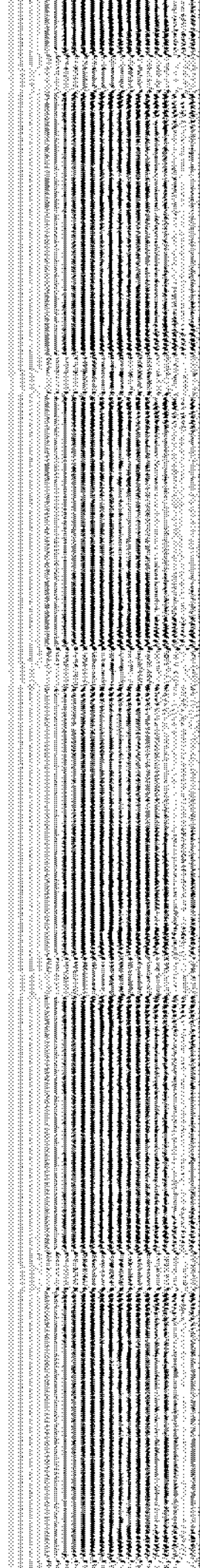
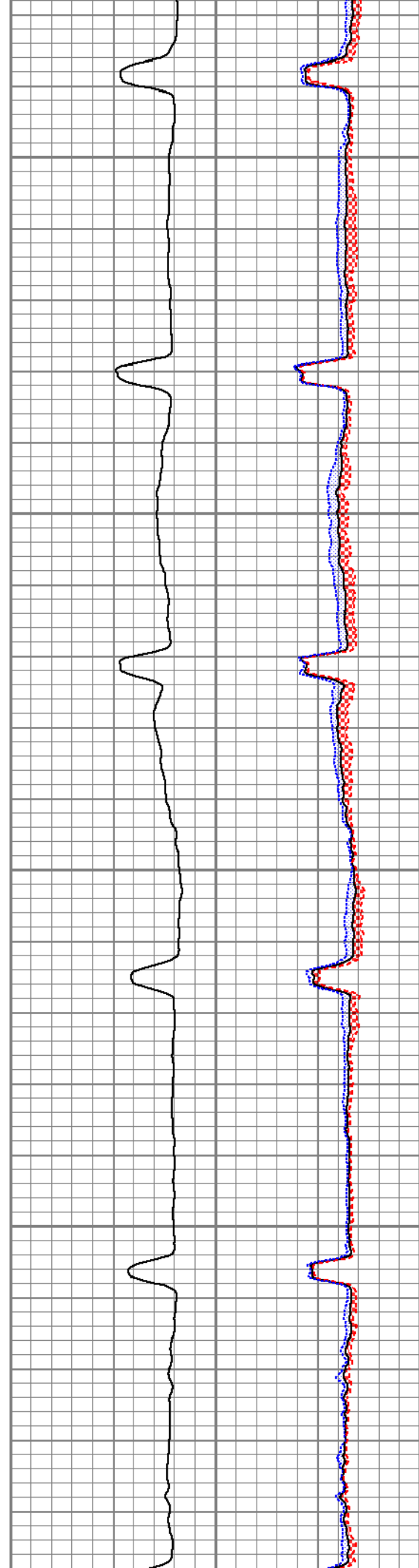


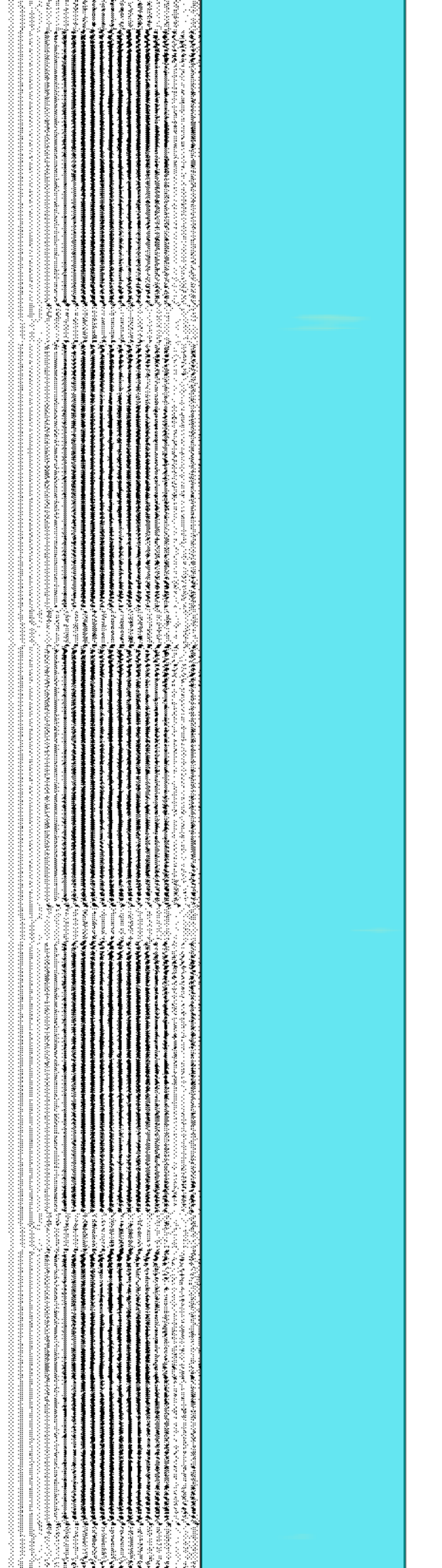
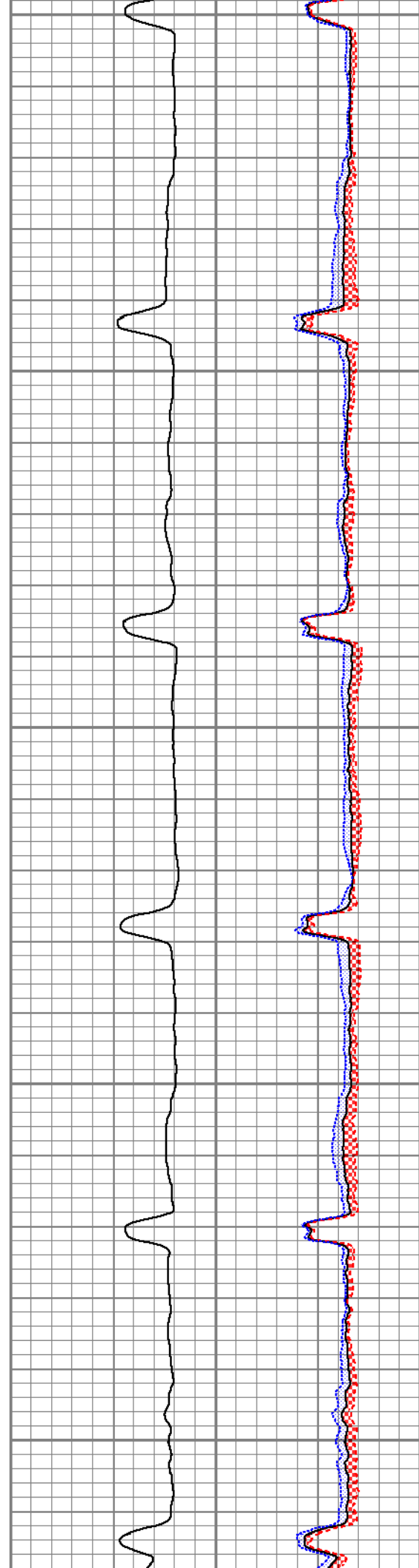
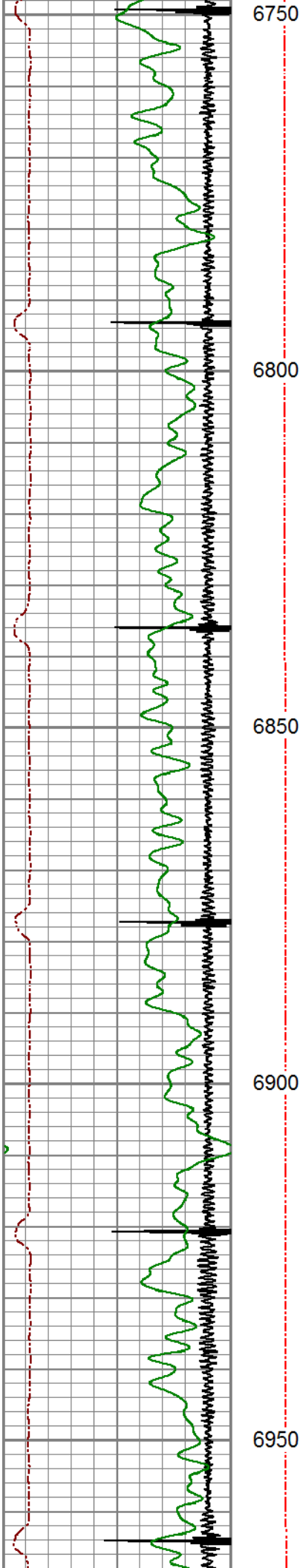
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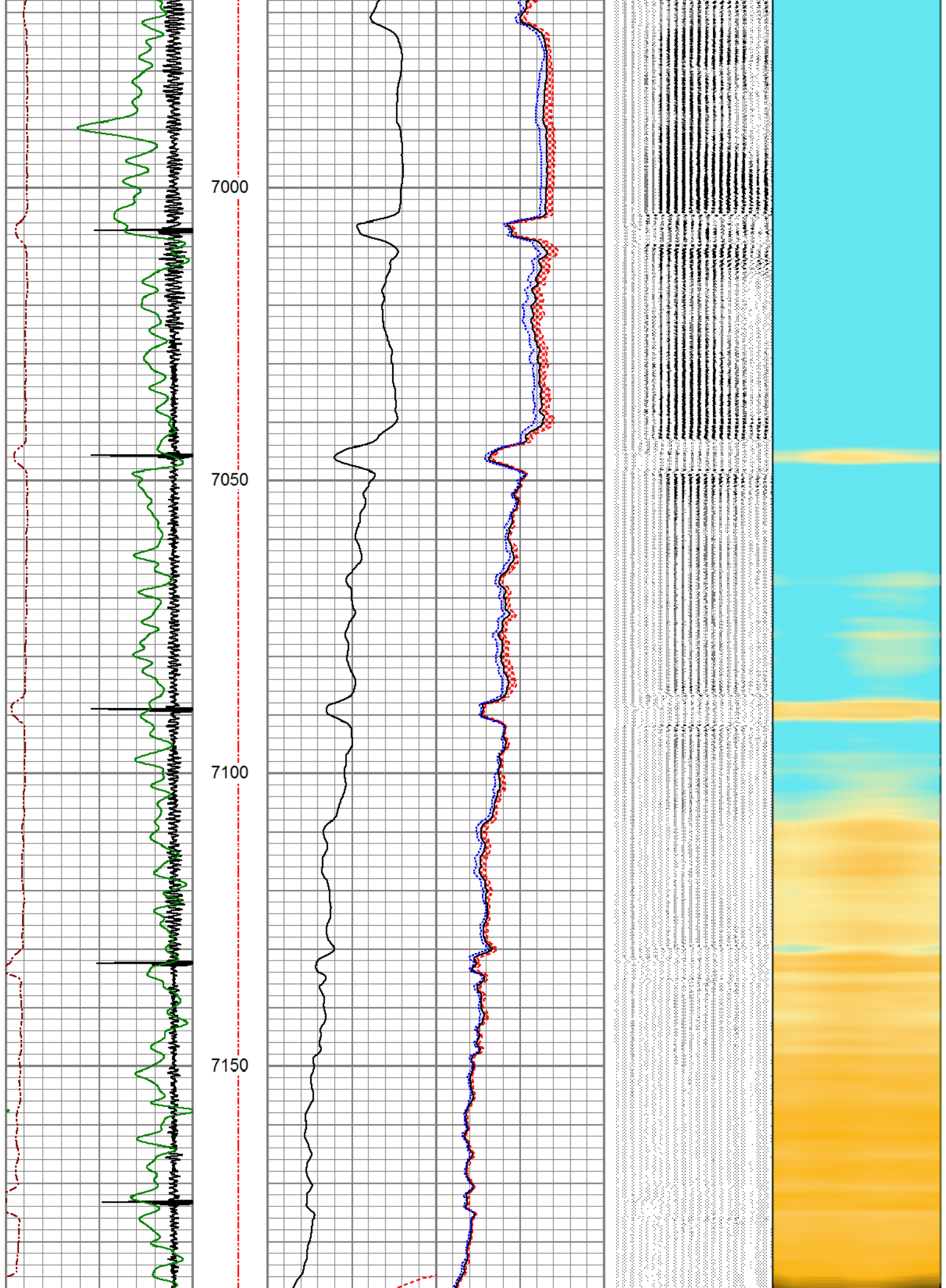
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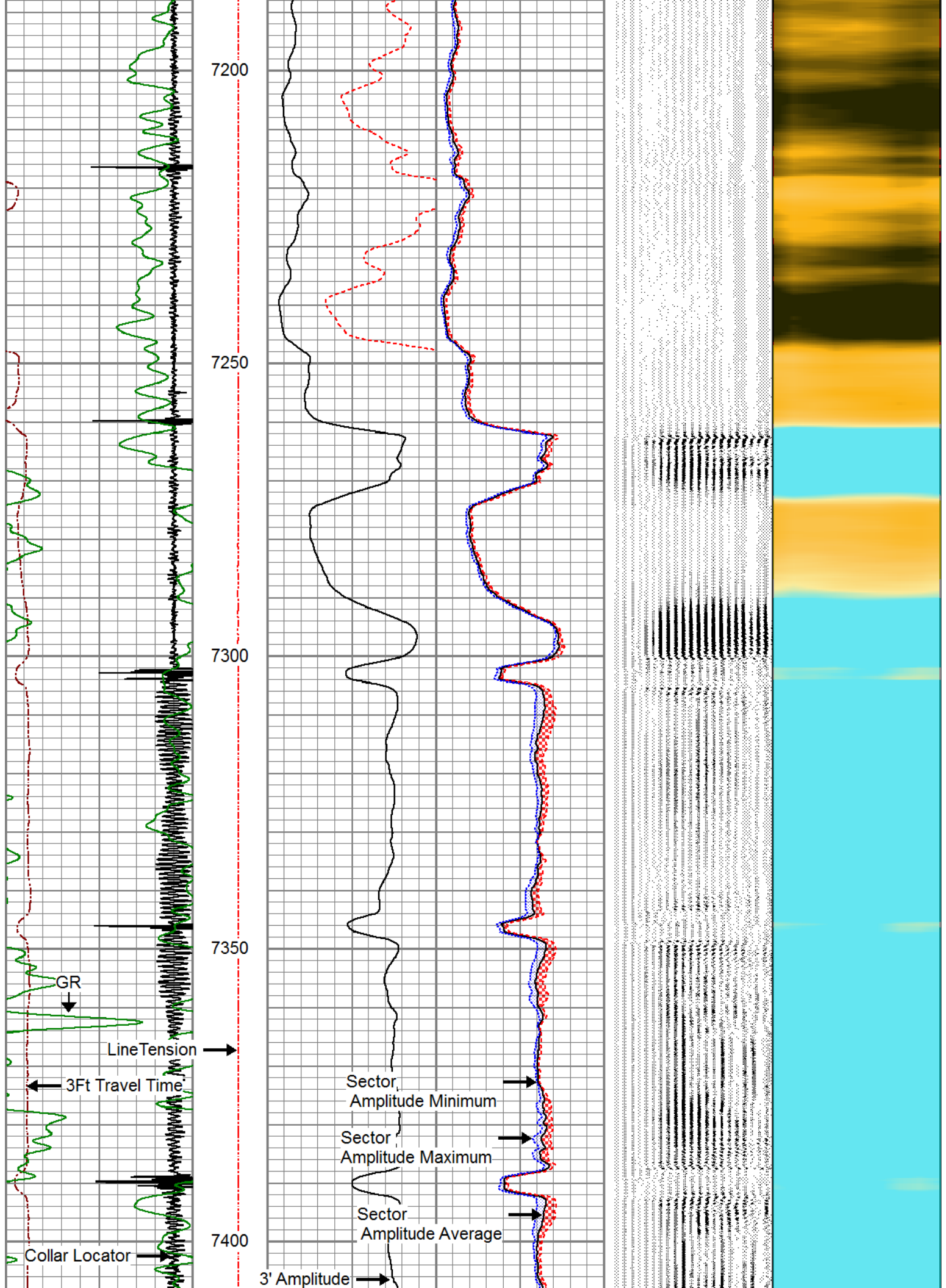
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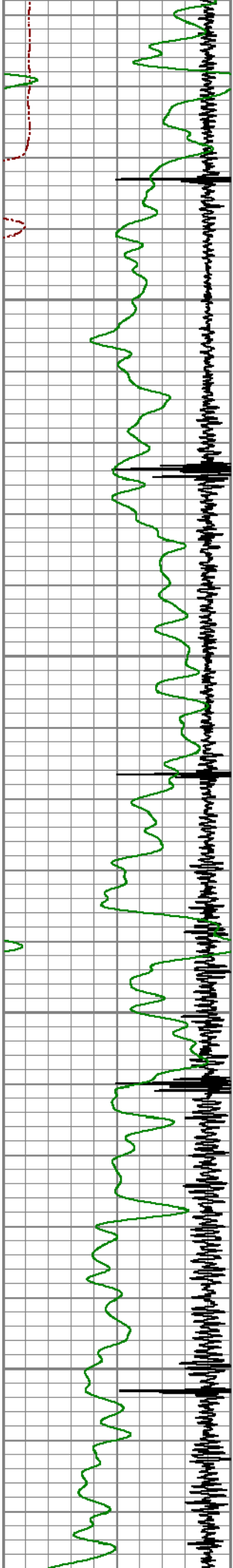
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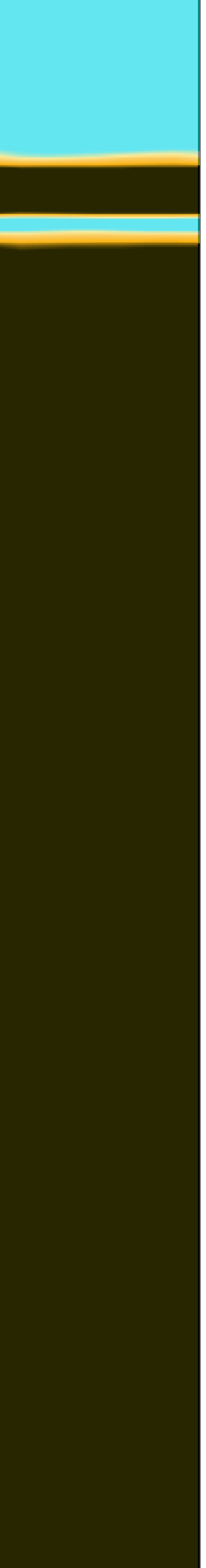
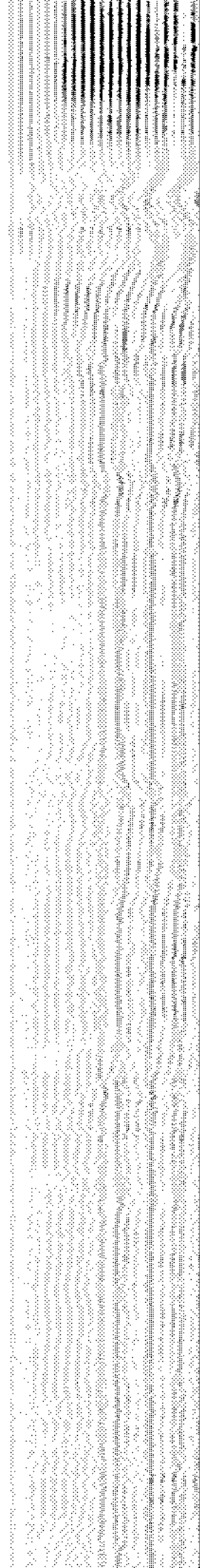
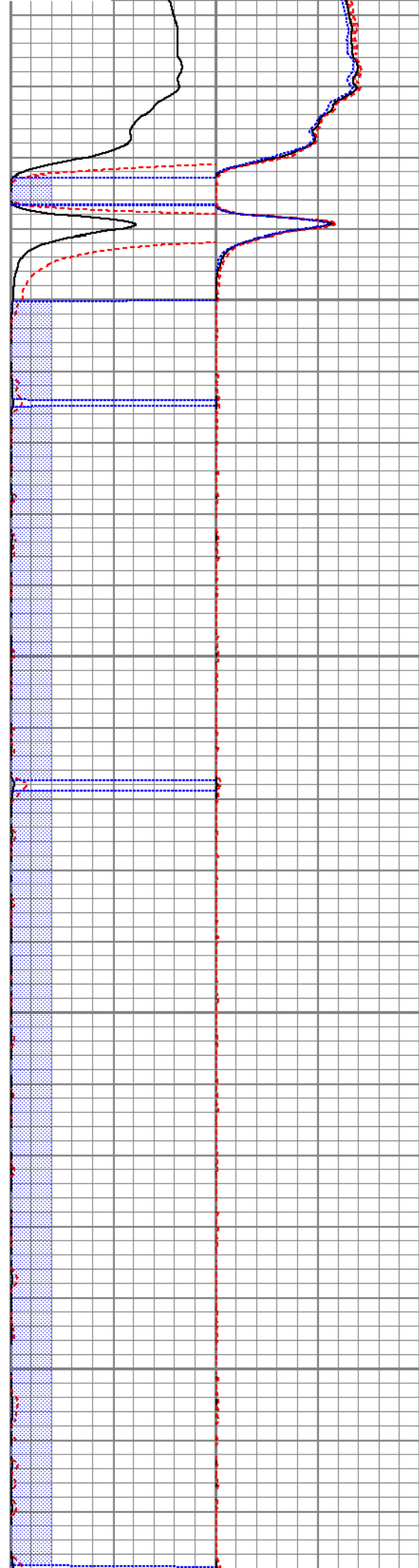


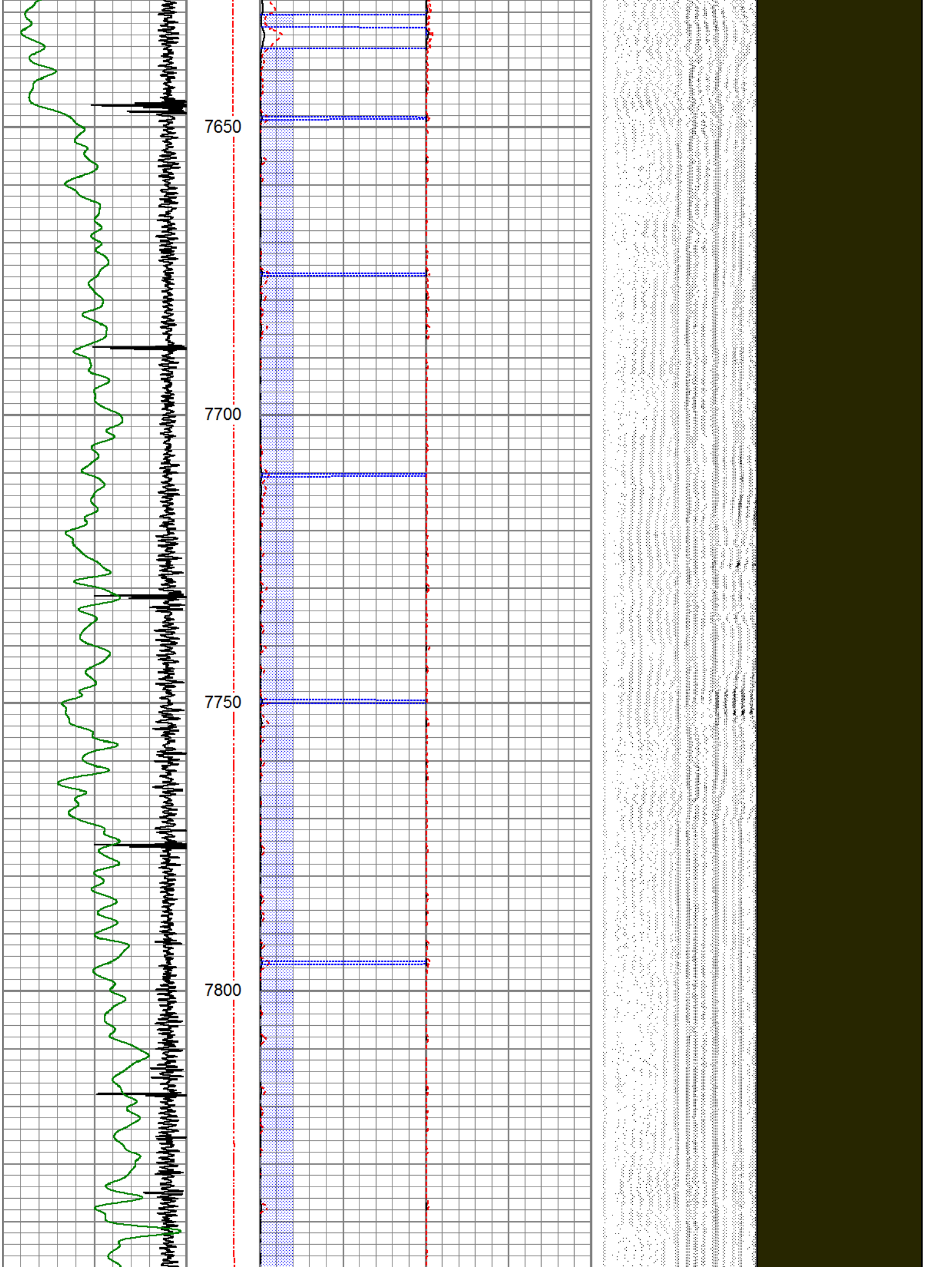
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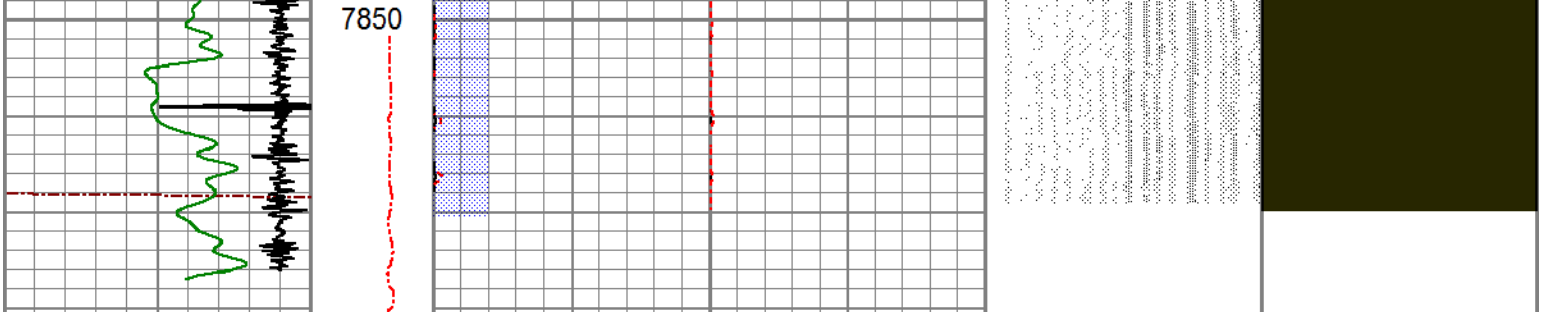
7500

7550

7600







3Ft Travel Time 250 (usec) 150	Line Tension (lb) 0 2000	3' Amplitude (mV) 100	Sector Amplitude Average	200 (usec) 1200	1 Sector Map 8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150		
Gamma Ray (GAPI) 200		0 (mV) 20	Sector Amplitude Maximum		
		1 Bond Index 0	0 150		
			Sector Amplitude Minimum		
			0 150		



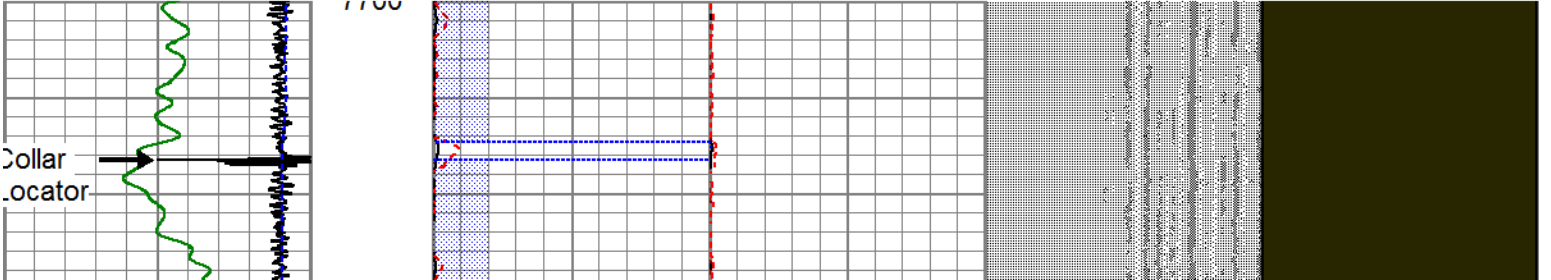
MAIN LOG

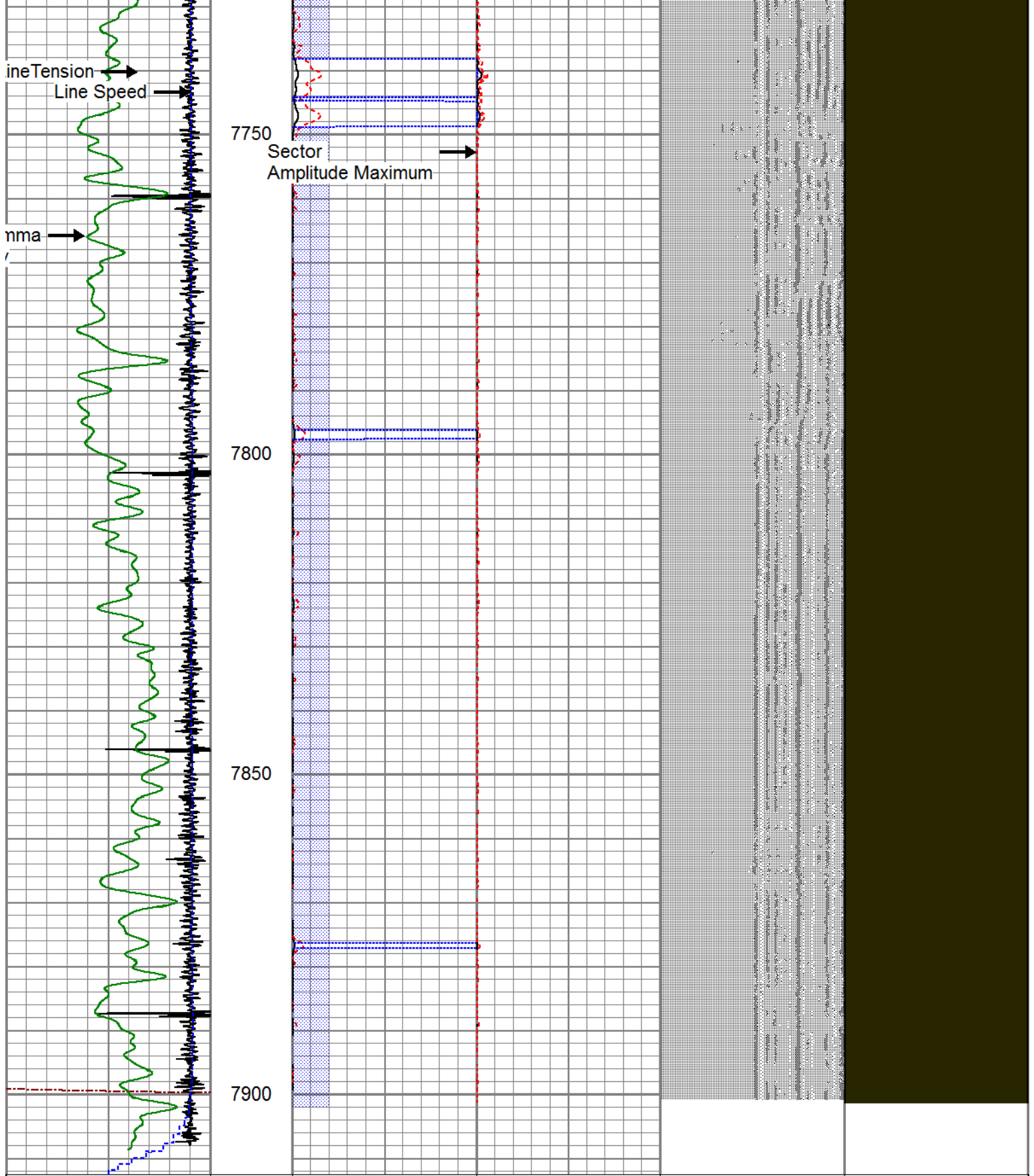


REPEAT SECTION

Database File: anadarko.db
 Dataset Pathname: pass9
 Presentation Format: pinr_scbl
 Dataset Creation: Wed Feb 13 09:01:41 2019
 Charted by: Depth in Feet scaled 1:240

3Ft Travel Time 330 (usec) 230		3' Amplitude (mV) 100	Sector Amplitude Average	200 (usec) 1200	1 Sector Map 8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150		
Gamma Ray (GAPI) 200		0 (mV) 20	Sector Amplitude Maximum		
Line Speed (ft/min) 100		1 Bond Index 0	0 150		
			Sector Amplitude Minimum		
			0 150		



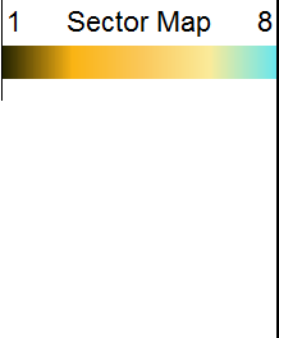


3Ft Travel Time	330 (usec)	230
Collar Locator	-9	1
Gamma Ray	0 (GAPI)	200
Line Speed	-100 (ft/min)	100

3' Amplitude (mV)	0	100
3' Amplified Amplitude X 5 (mV)	0	20
Bond Index	1	0

Sector Amplitude Average	0	150
Sector Amplitude Maximum	0	150
Sector Amplitude Minimum	0	150

VDL (usec)	200	1200
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Calibration Report

Database File anadarko.db
 Dataset Pathname pass10
 Dataset Creation Wed Feb 13 09:13:41 2019

Gamma Ray Calibration Report

Serial Number: 080630
 Tool Model: 275 Probe
 Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 070132-T
 Tool Model: RBL-D

Calibration Casing Diameter: 4.500 in
 Calibration Depth: 4641.600 ft

Master Calibration, performed Wed Feb 13 08:44:35 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.036	1.901	0.700	81.196	43.145	-0.834
CAL	0.009	1.484				
5'	0.039	0.048	0.700	81.196	9842.095	-387.961
SUM						
S1	0.063	1.706	0.000	100.000	60.852	-3.814
S2	0.007	1.737	0.000	100.000	57.780	-0.392
S3	0.026	1.832	0.000	100.000	55.364	-1.423
S4	0.048	1.970	0.000	100.000	52.039	-2.515
S5	0.055	2.083	0.000	100.000	49.301	-2.693
S6	0.062	2.112	0.000	100.000	48.760	-3.004
S7	0.083	2.027	0.000	100.000	51.438	-4.250
S8	0.080	1.821	0.000	100.000	57.424	-4.575

Air Zero Calibration, performed Thu Nov 29 18:12:15 2018:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	

S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000



PIONEER

Pioneer Energy Services

Company	ANADARKO PETROLEUM CORP.	
Well	UPRC 33-1M	
Field	WATTENBERG	
County	WELD	
State	CO	Country