



SECTOR CEMENT BOND
GAMMA RAY
CCL LOG

Comp.	OCCIDENTAL PETROLEUM CORP.			
Well	HSR-COGBURN 2-29A			
Field	WATTENBERG			
Co.	WELD			
State	COLORADO			
Company	OCCIDENTAL PETROLEUM CORP.			
Well	HSR-COGBURN 2-29A			
Field	WATTENBERG			
County	WELD		State	COLORADO
Location:	API # : 05-123-19181		Other Services	
1919' FNL & 2030' FEL				NONE
Permanent Datum	GL	Elevation	4779'	Elevation
Log Measured From	GL	0'	Above Perm. Datum	K.B. N/A
Drilling Measured From	N/A			D.F. N/A
				G.L. 4779'

Date of Service	16-NOV-2022				
Run Number	ONE				
Depth Driller or PBTID	10,000'				
Depth Logger	6510'				
Bottom Log Interval	6500'				
Top Log Interval	SURFACE				
Open Hole Size	7-7/8"				
Type Fluid	H2O				
Fluid Level	SURFACE				
Fluid Density	N/A				
Max. Recorded Temperature	223 DEG. F.				
Max. Wellhead Pressure	ZERO				
Wellhead Connection	7-1/16" 5K				
Estimated Cement Top	SEE LOG				
Unit Number	1007				
Wireline Size	9/32"				
Location	BRIGHTON				
Recorded By	J. KOTT				
Witnessed By	MR. FIDEL GONZALES				
	Size	Wd/Ft	Top	Bottom	
Surface Casing	8-5/8"	24#	SURFACE	590'	
Production Casing	4-1/2"	11.6#	SURFACE	7563'	
Liner Casing					
Tubing Record					

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All interpretations are opinions based on inferences from electrical or other measurements and Ranger Energy Services cannot and does not guarantee the accuracy or correctness of any interpretation, and Ranger Energy Services 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.
LOG CORRELATED TO GL

THANK YOU FOR USING RANGER ENERGY SERVICES! FIELD TICKET #007-491160

Your Ranger Energy Services Crew	Tool Data - Services	Serial Number
Engineer: J. KOTT Operator: B. HECHT Operator: C. PROPST Operator:		

Quantity	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\1007-491160_oxy_hsr-cogburn 2-29a_0512319181_20221
Dataset field/well/run1/pass4/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 8.75	BOTTEMP degF 223	CASEOD in 4.5	CASETHCK in 0.408	CASEWGHT lb/ft 11.6	MAXAMPL mV 81.2	MINAMPL mV 0.7
MINATTN db/ft 0.8	PERFS No	PPT usec 210.8	SRFTEMP degF 25	TDEPTH ft 6500			

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

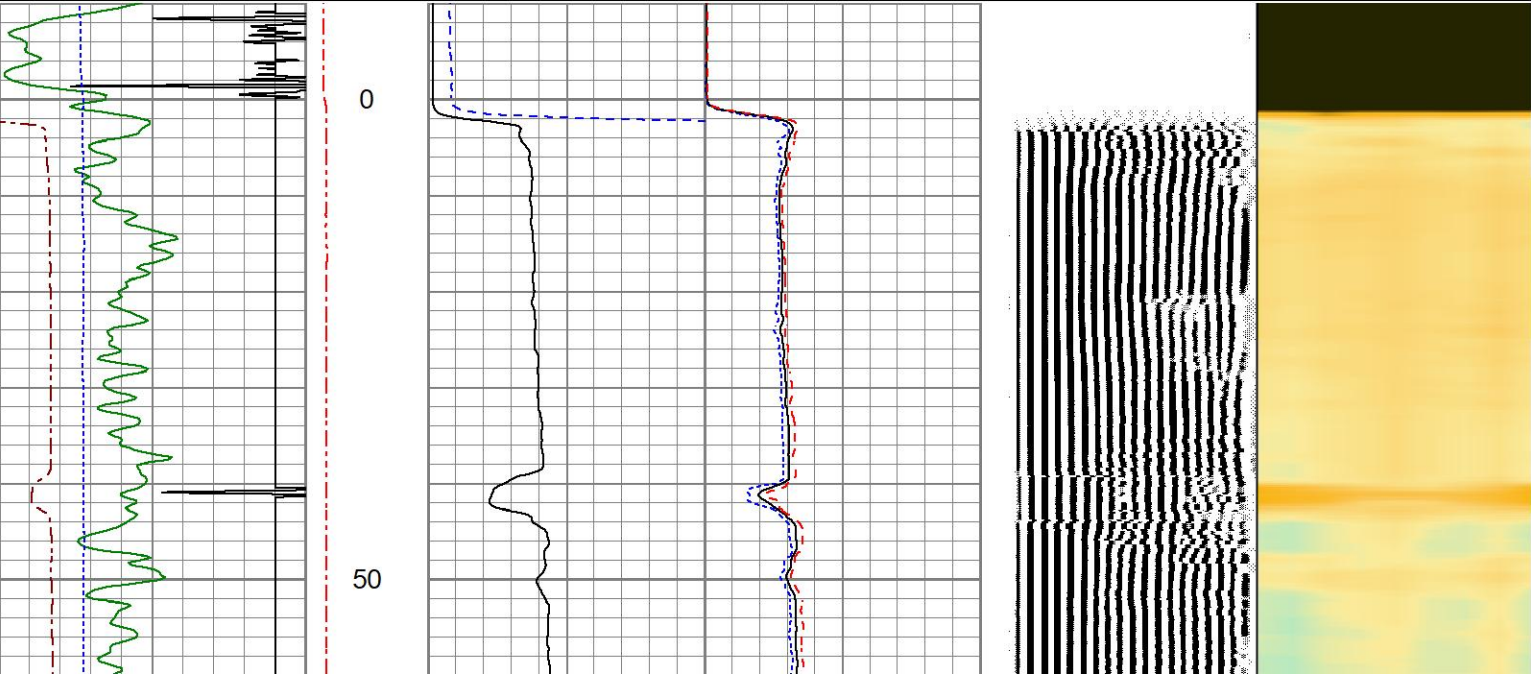


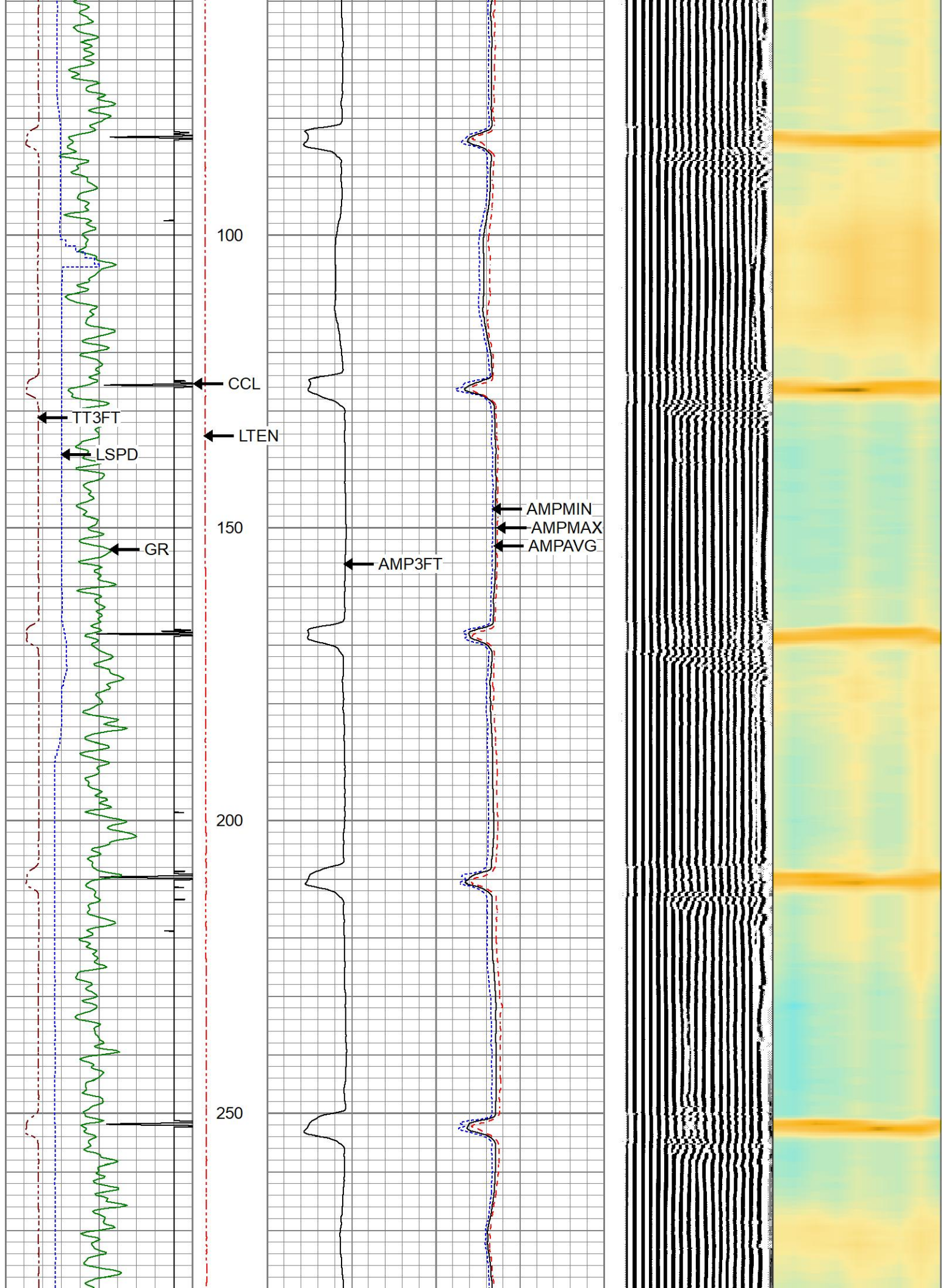
MAIN PASS

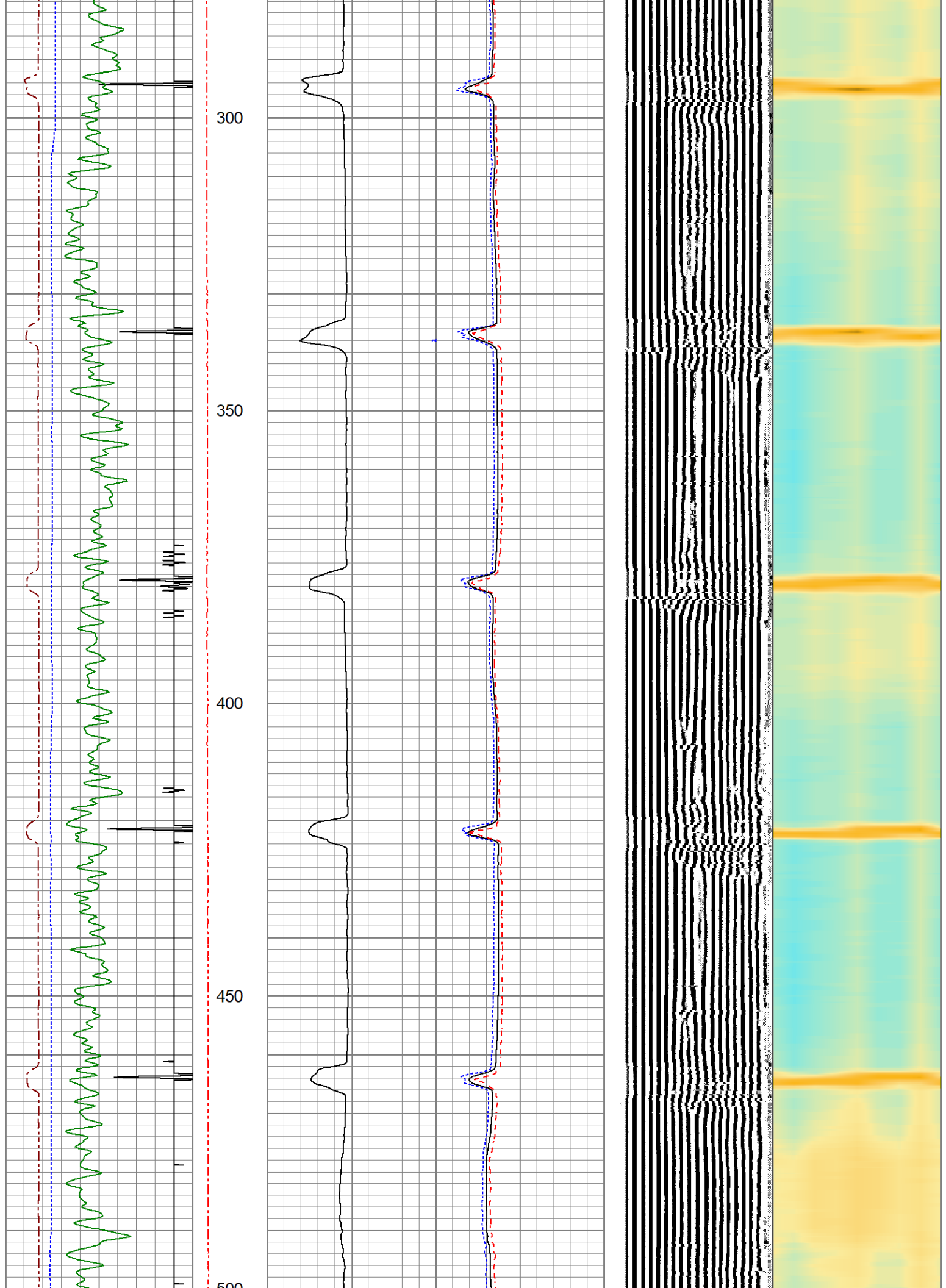
ZERO PSI APPLIED AT SURFACE

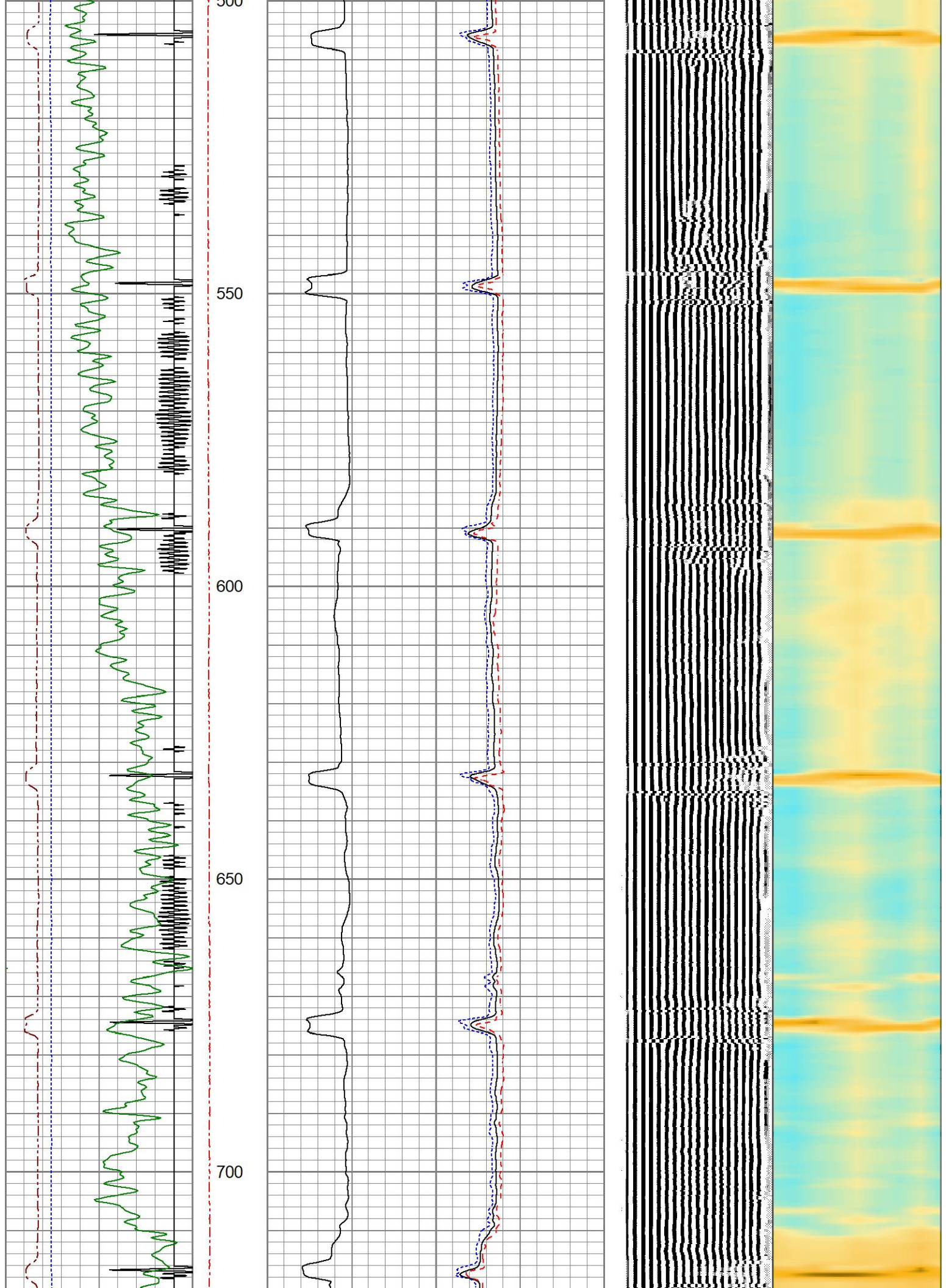
Database File 1007-491160_oxy_hsr-cogburn 2-29a_0512319181_20221116_scbl-gr-ccl.db
Dataset Pathname pass4
Presentation Format res_scbl 8sec-gr-ccl
Dataset Creation Wed Nov 16 08:27:55 2022
Charted by Depth in Feet scaled 1:240

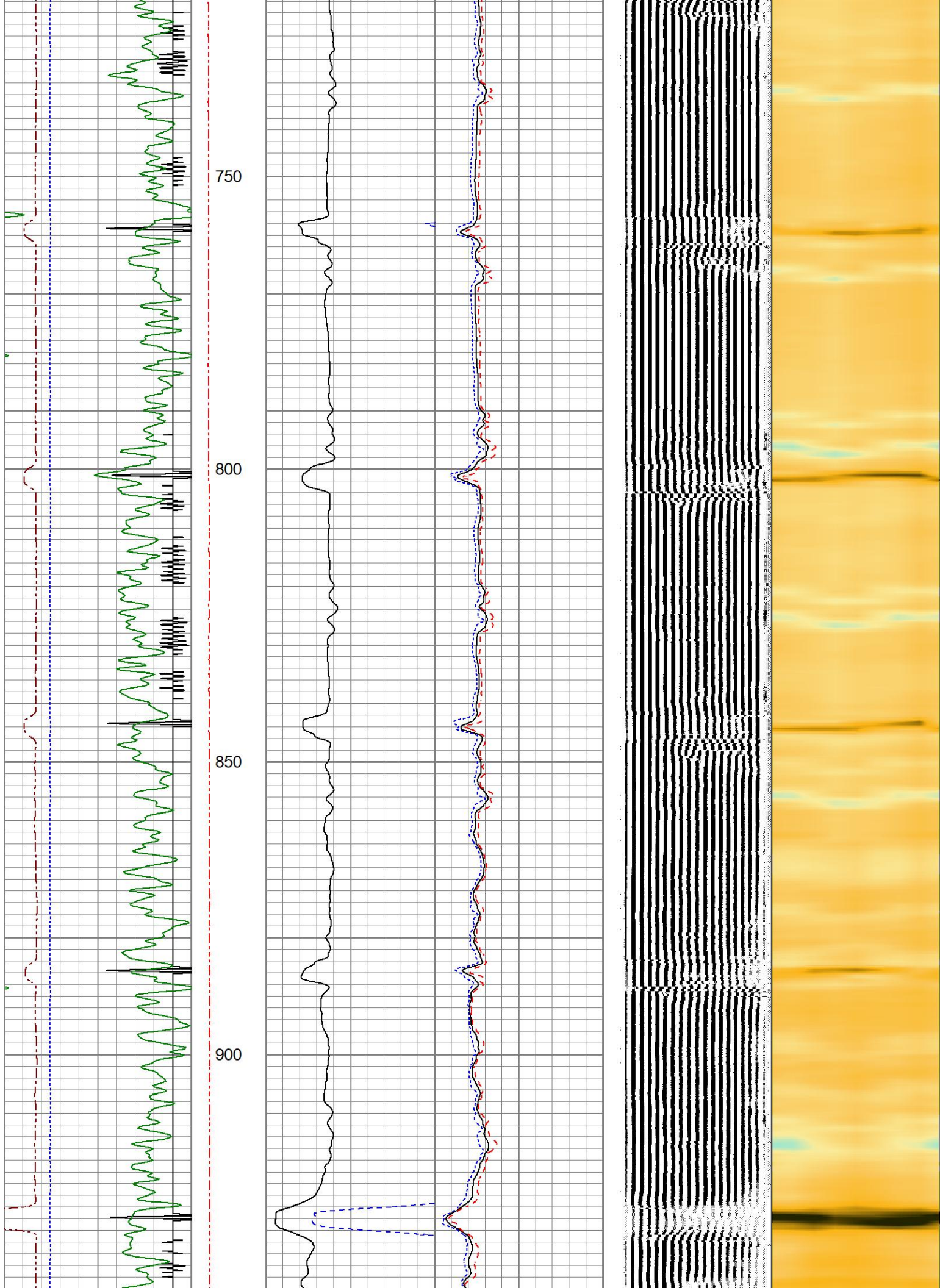
230 3FT TT (usec) 130	LTEN	3' Amplitude	0 Sector Min Amp150	200 VDL (usec) 1200	1 Sector Map 8
-9 CCL 1	(lb)	(mV) 100	Sector Avg Amp		
0 GR 150	0 2000	3' Amplified Amplitude X 5	0 150		
-150 LSPD (ft/min) 150		(mV) 20	Sector Max Amp		
		0 150			

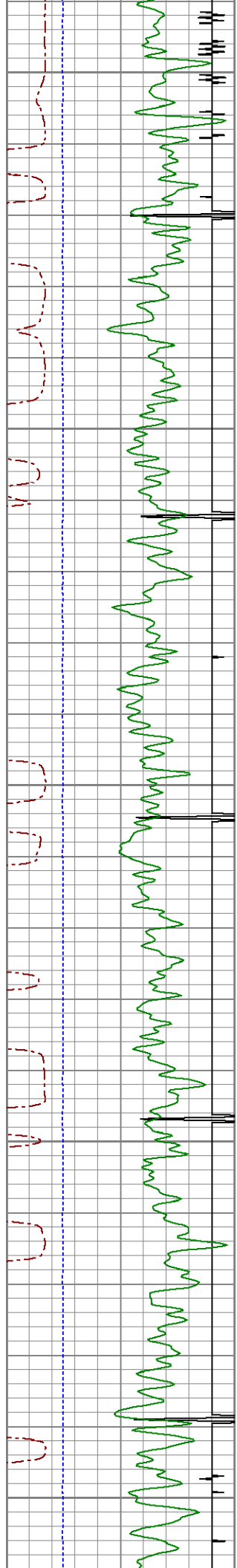












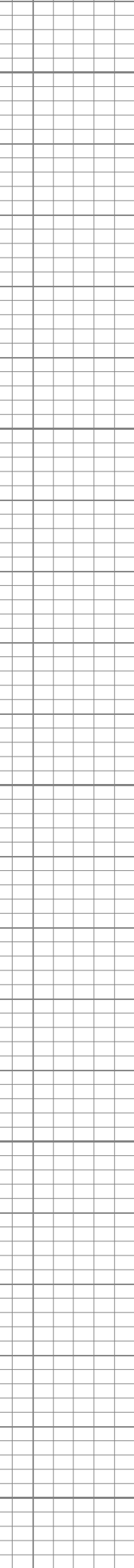
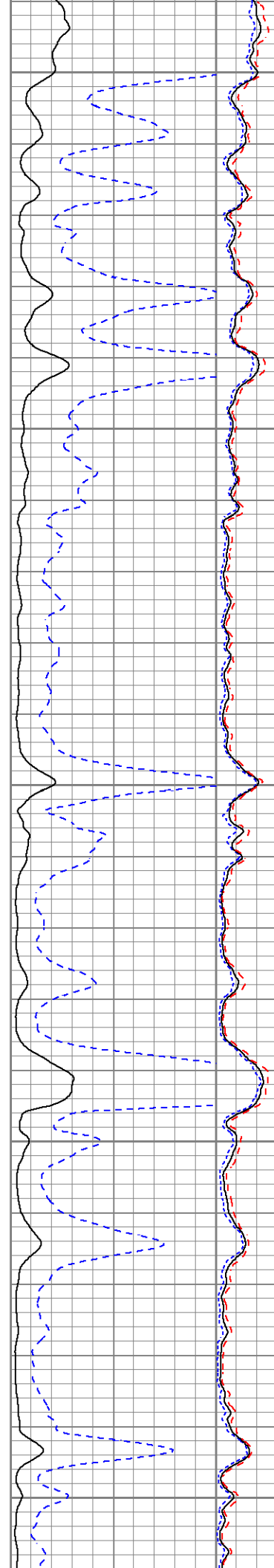
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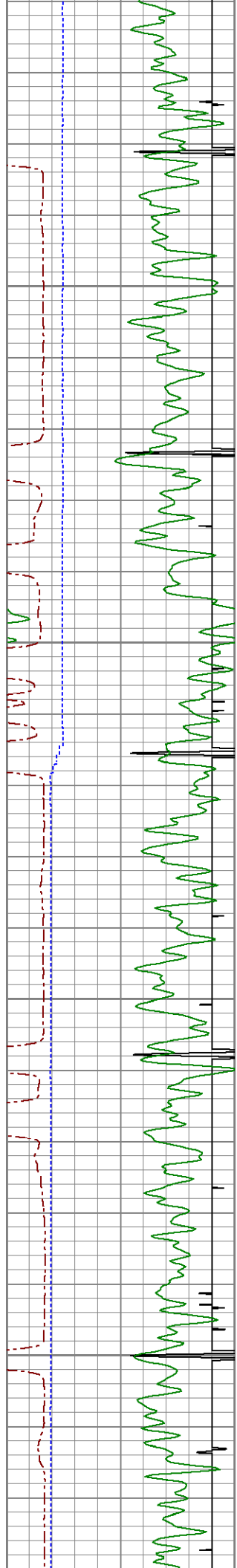
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1050

1100

1150



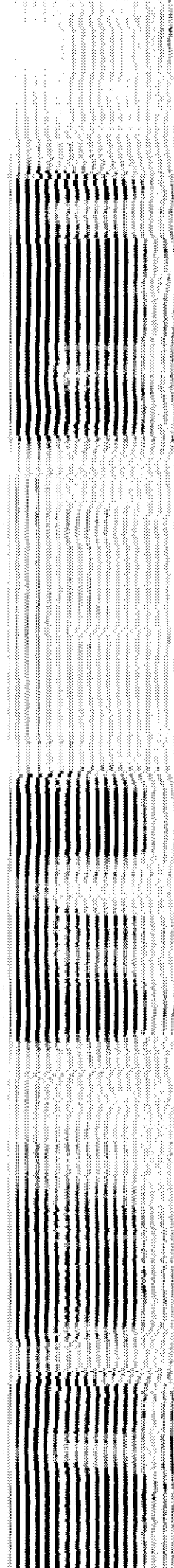
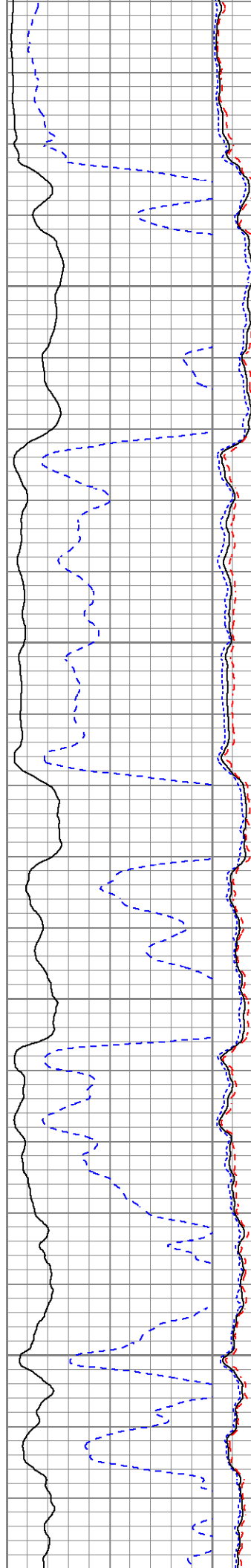


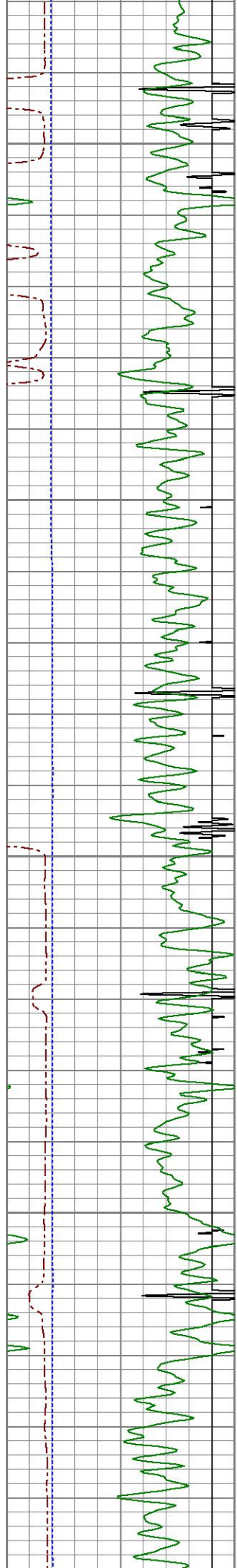
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1250

1300

1350





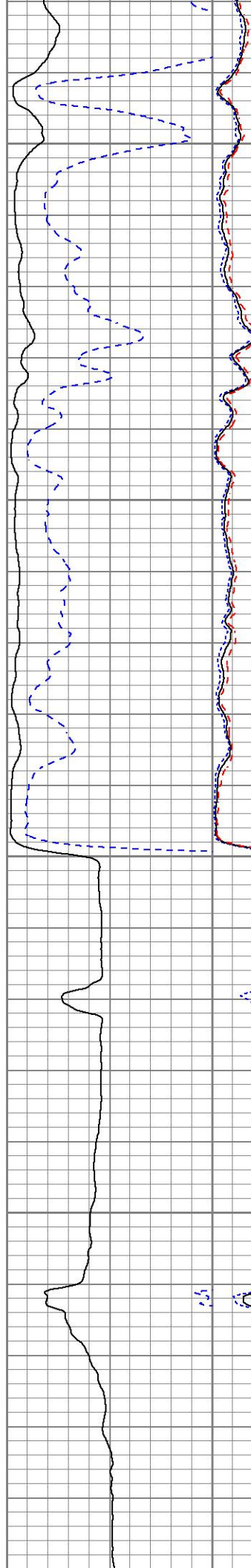
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1450

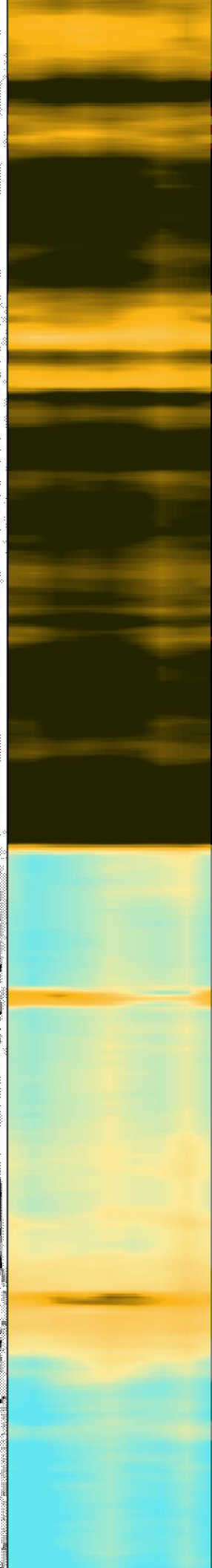
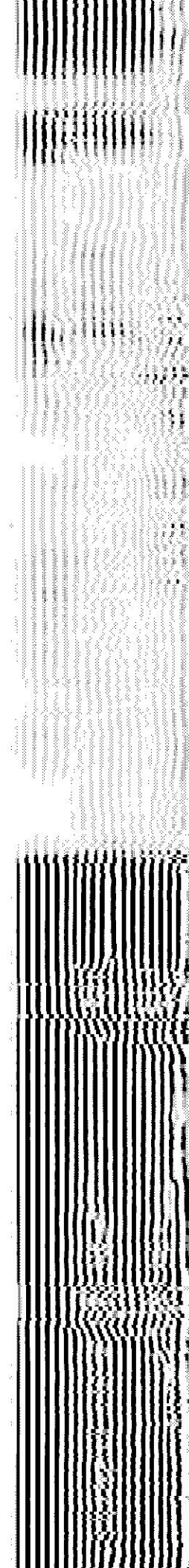
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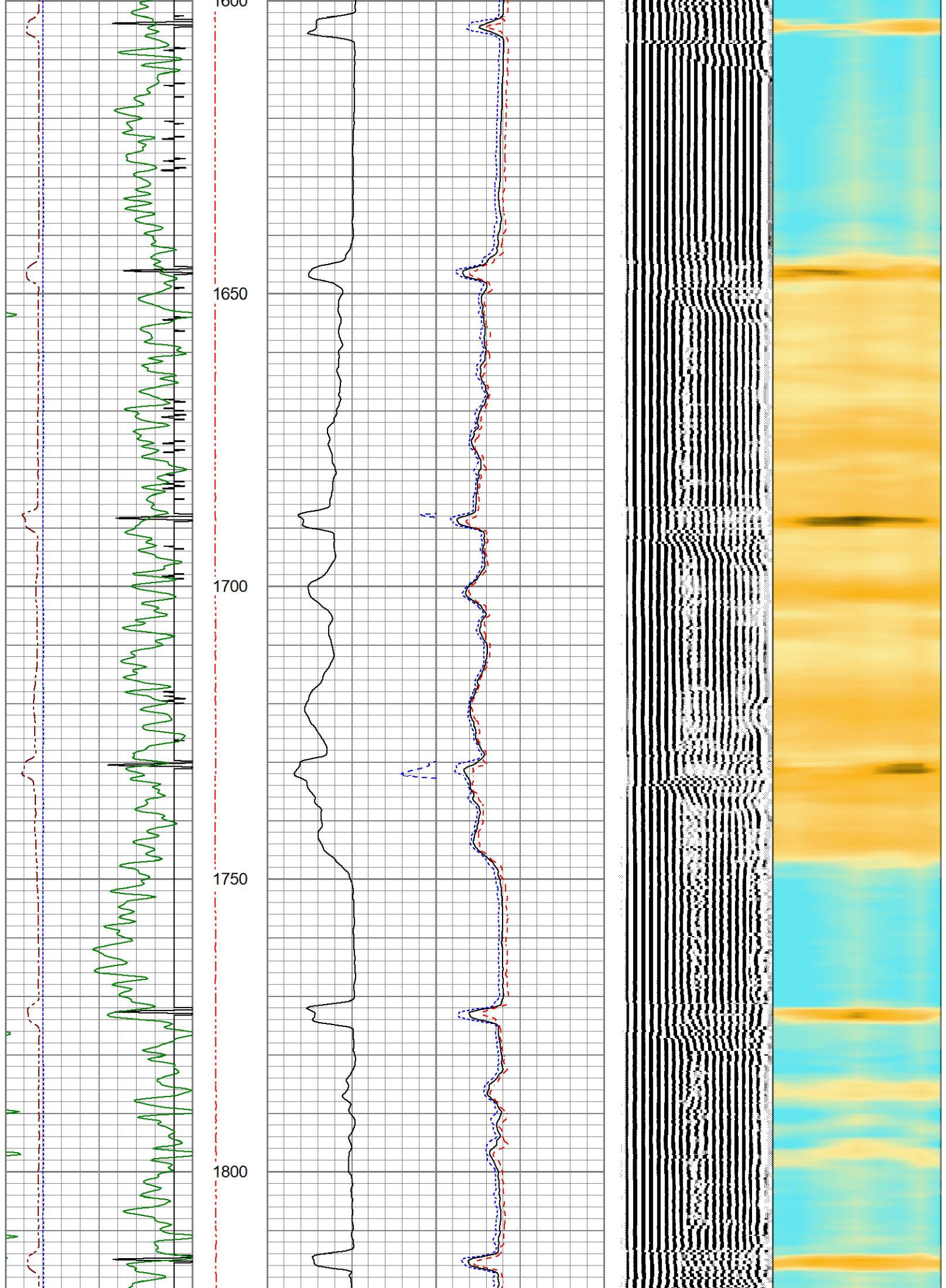
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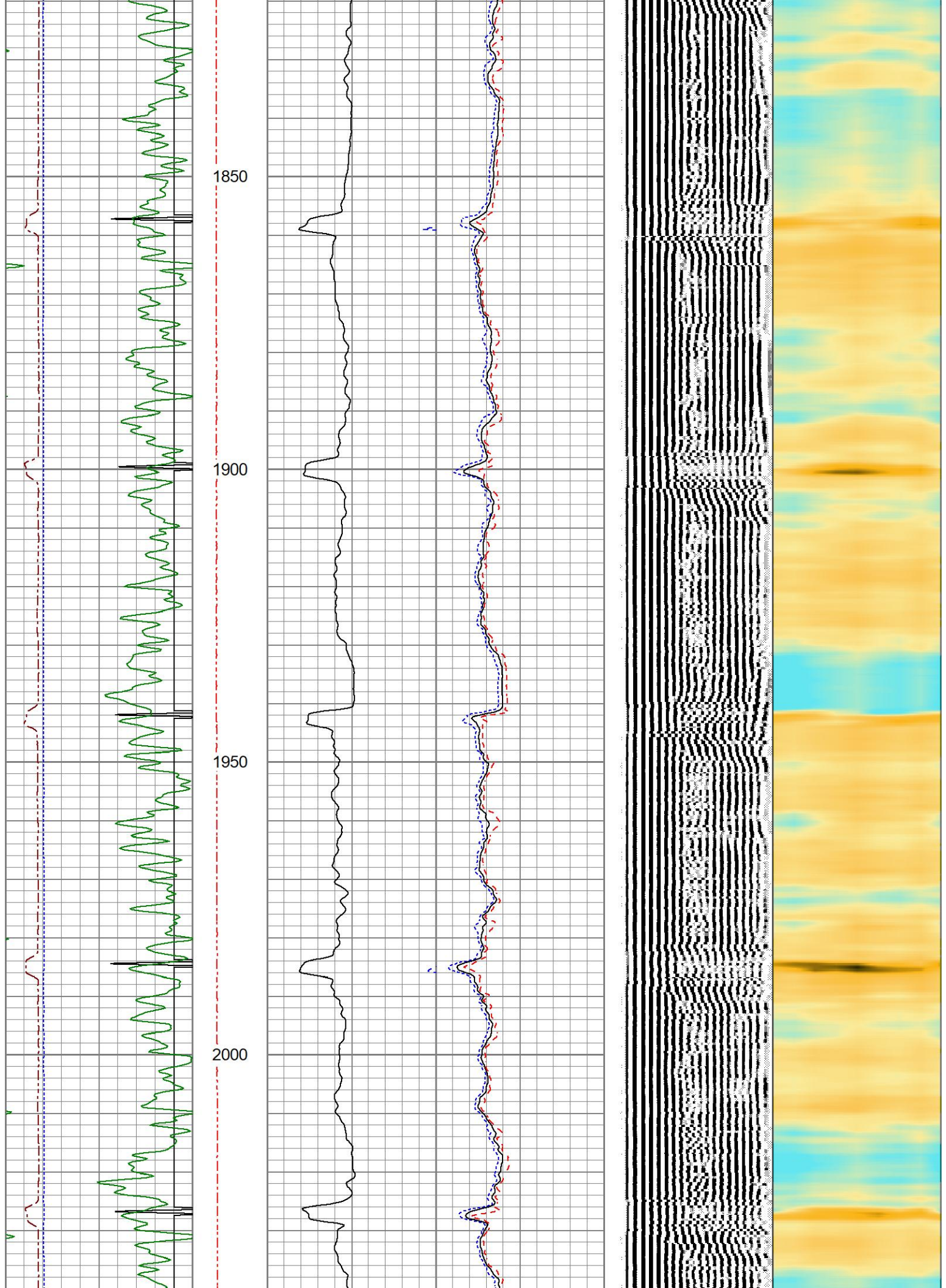
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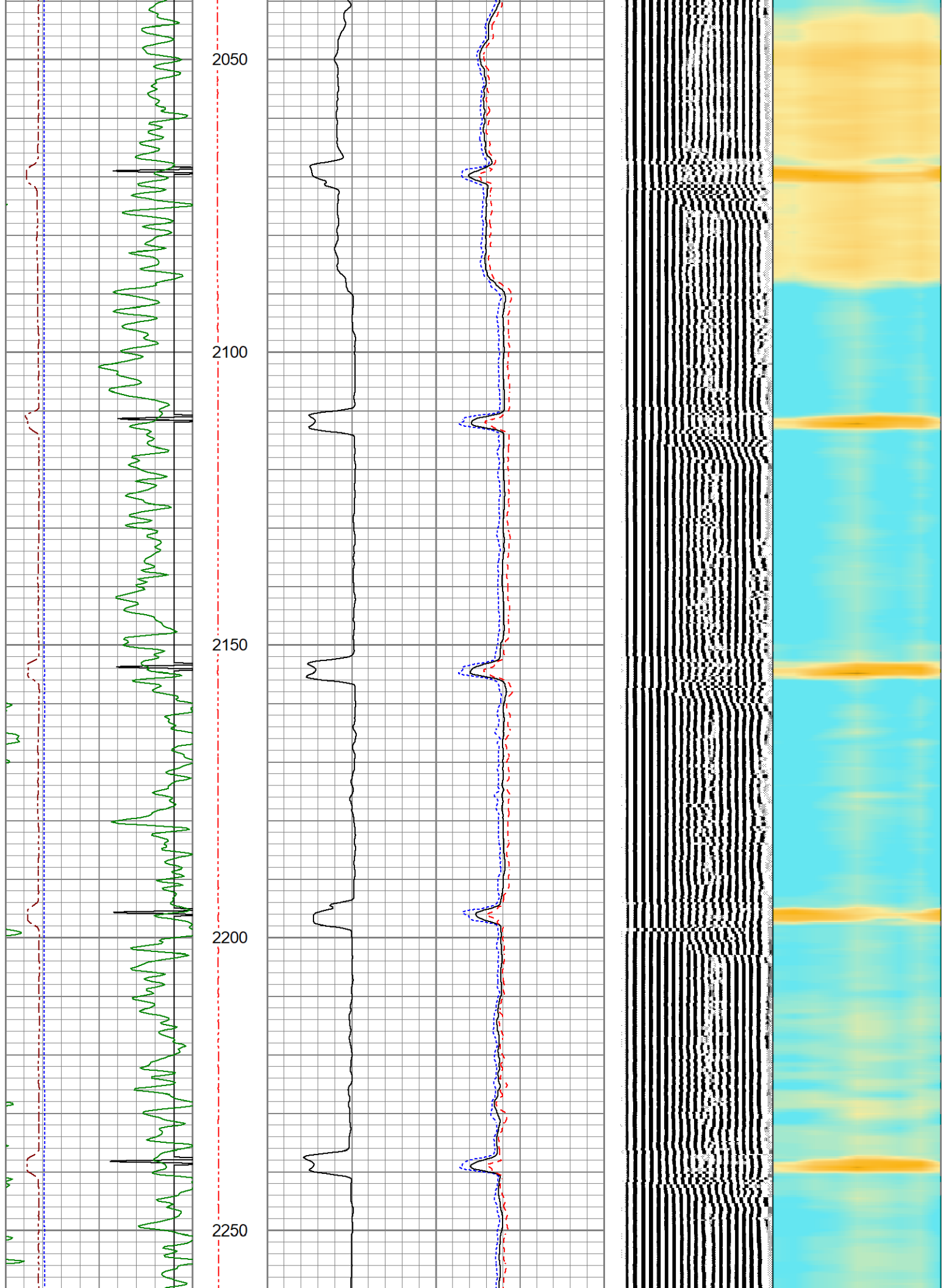


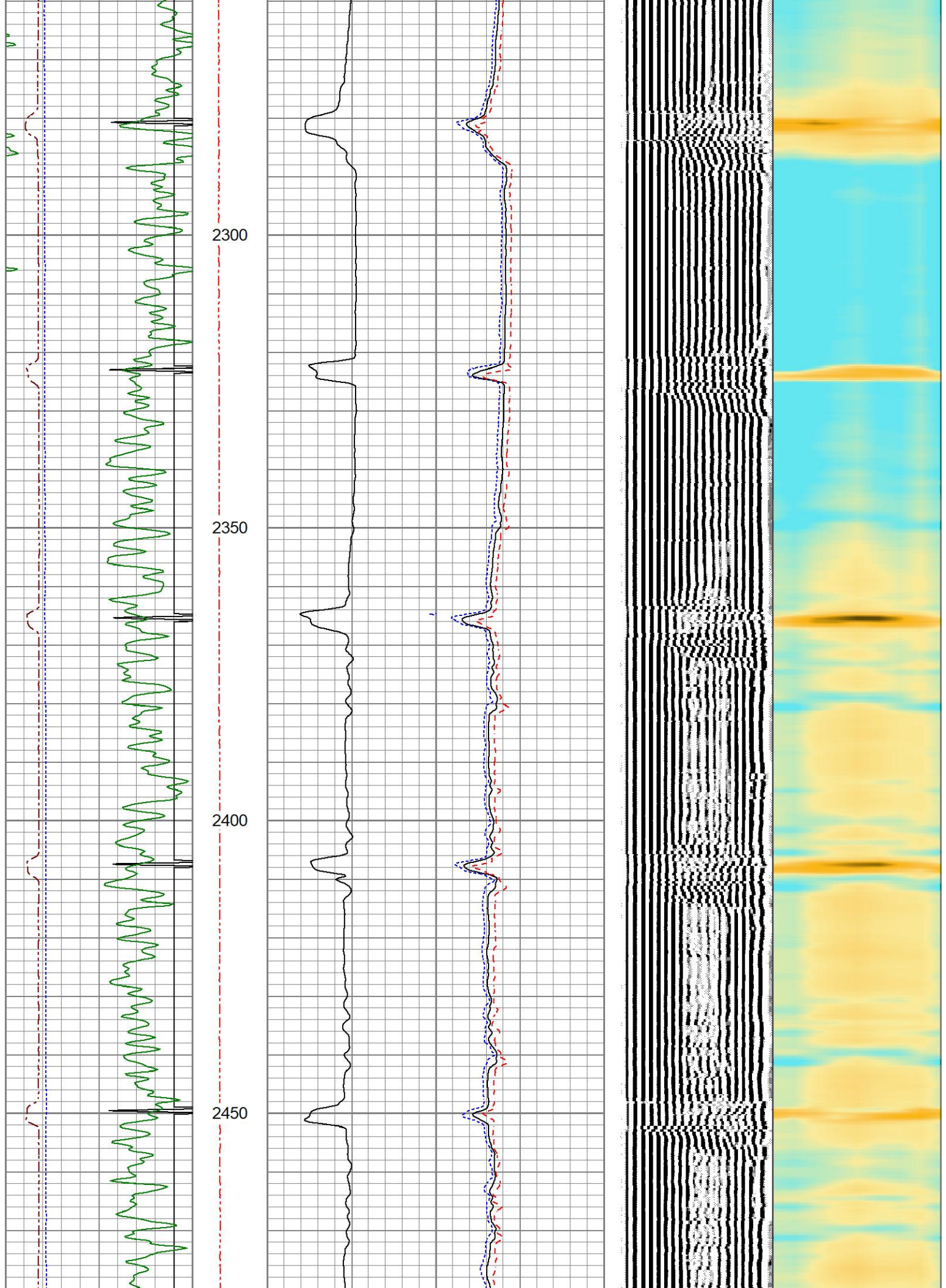
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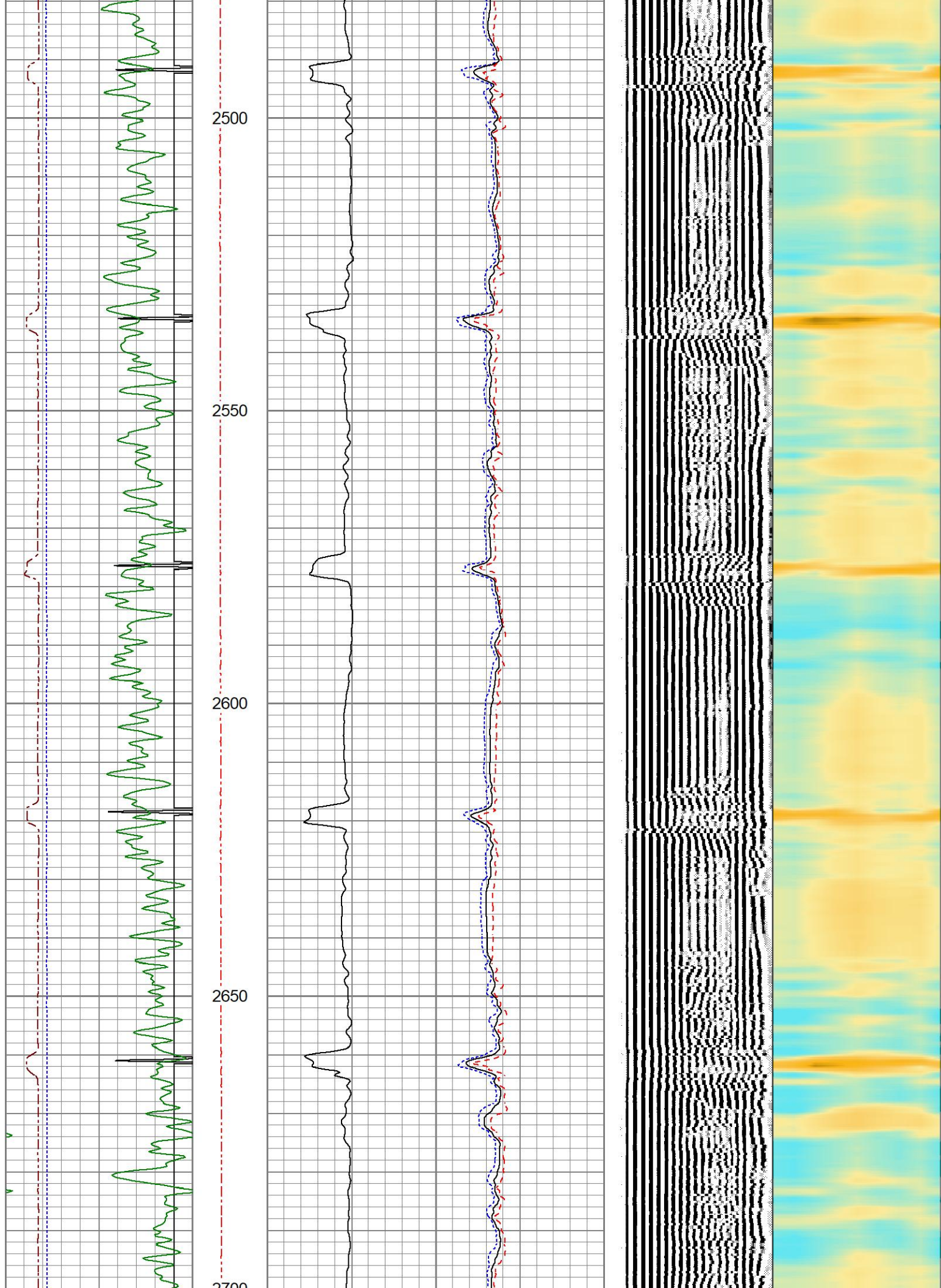


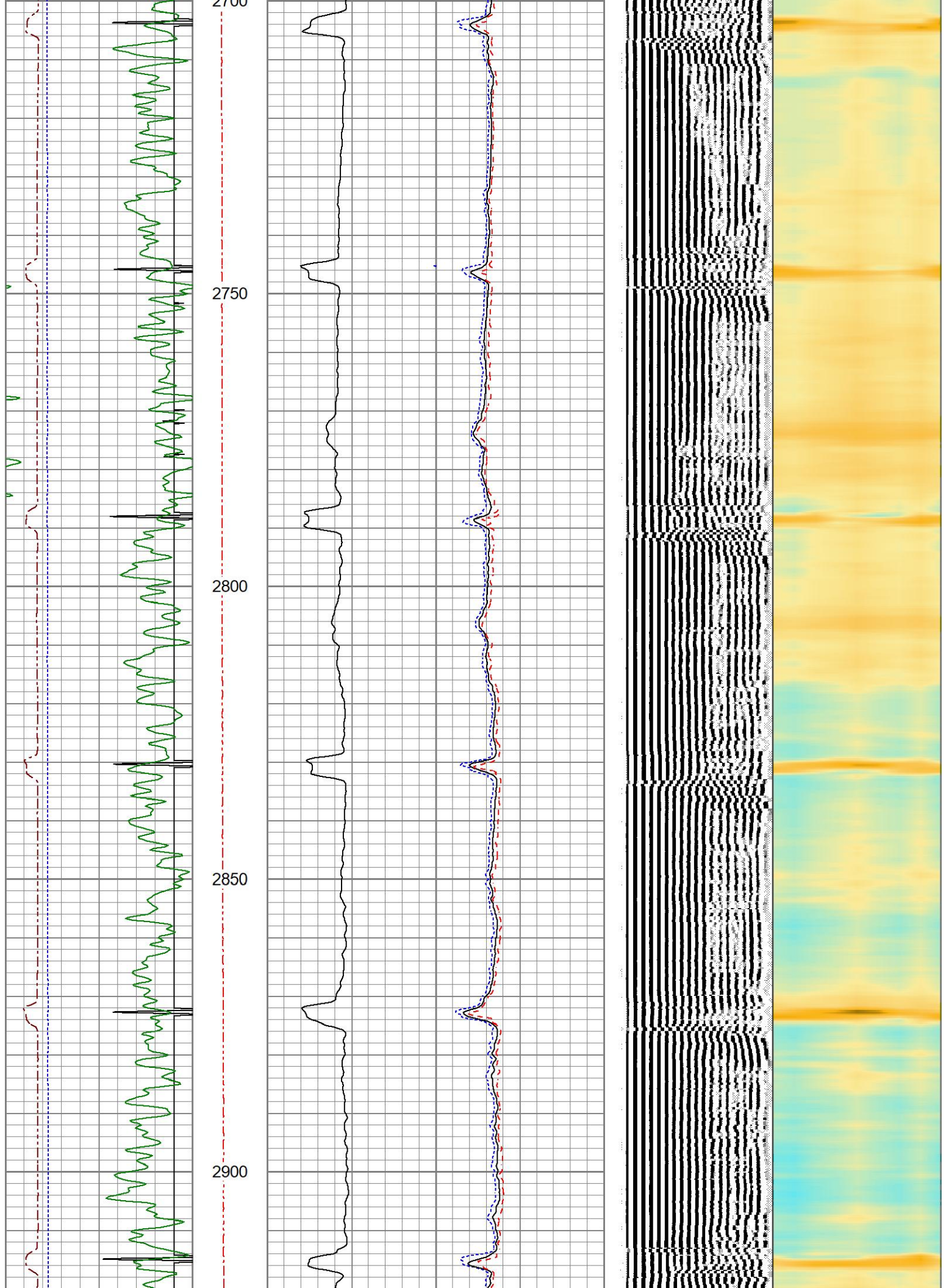


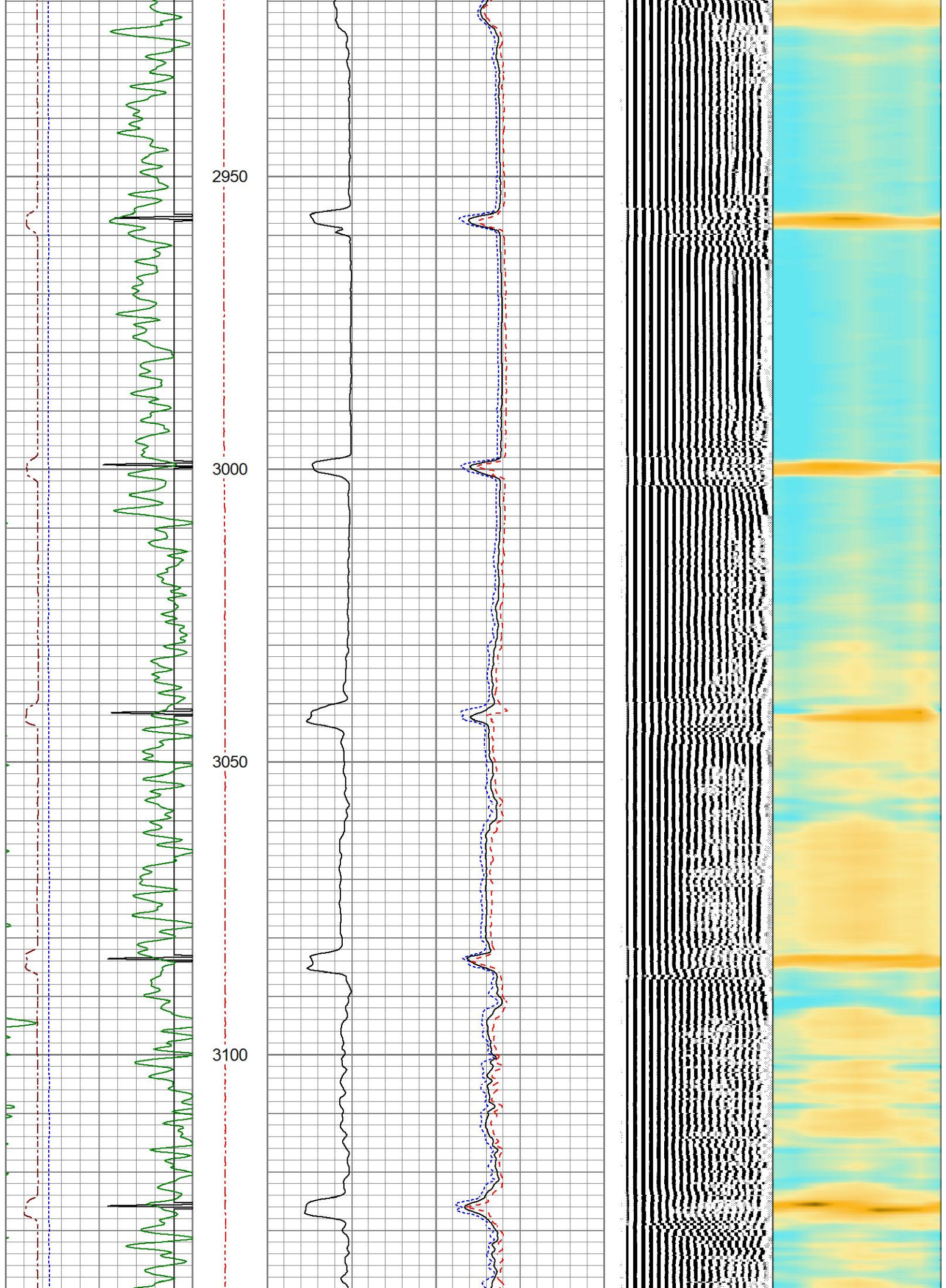


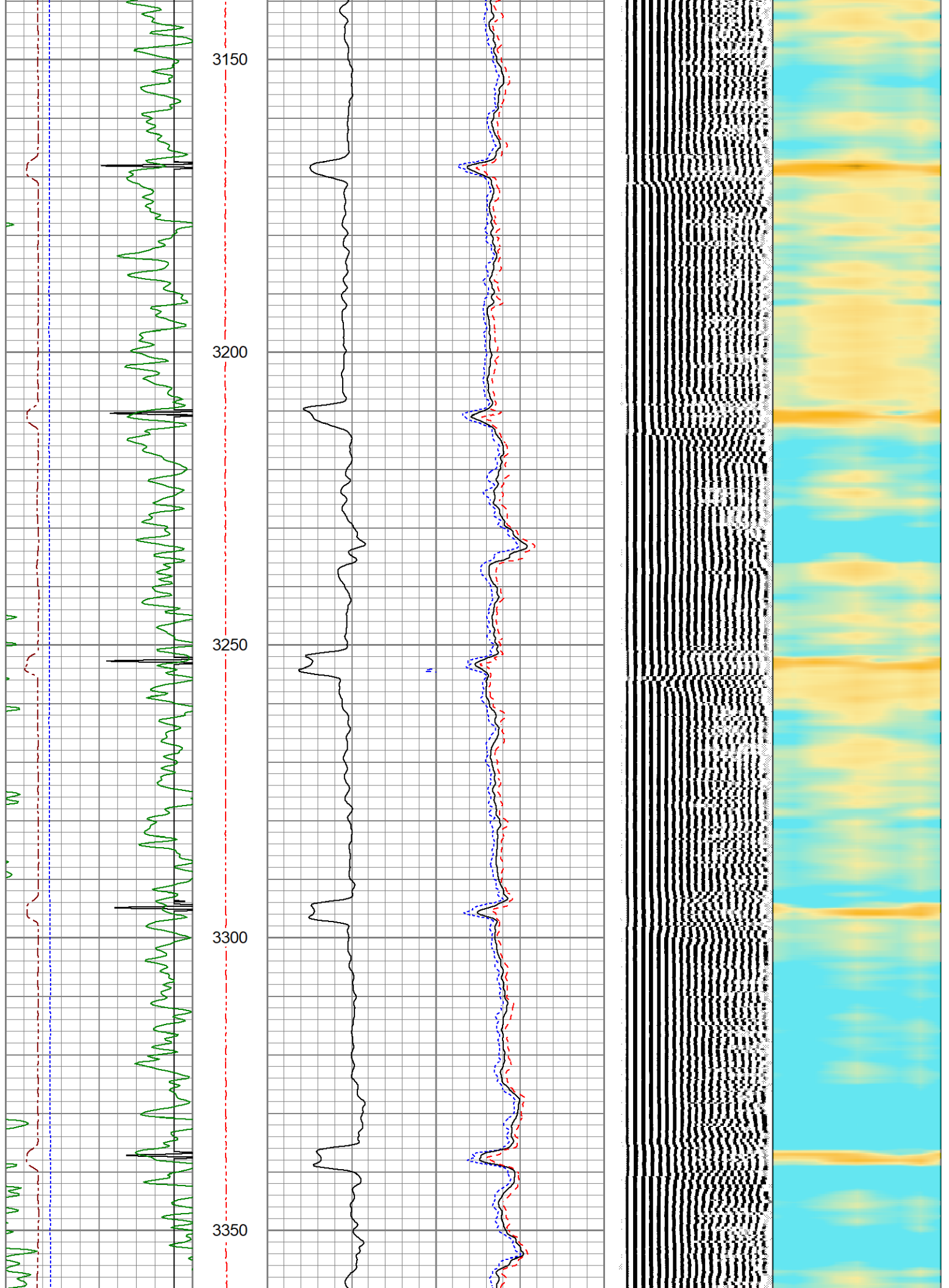


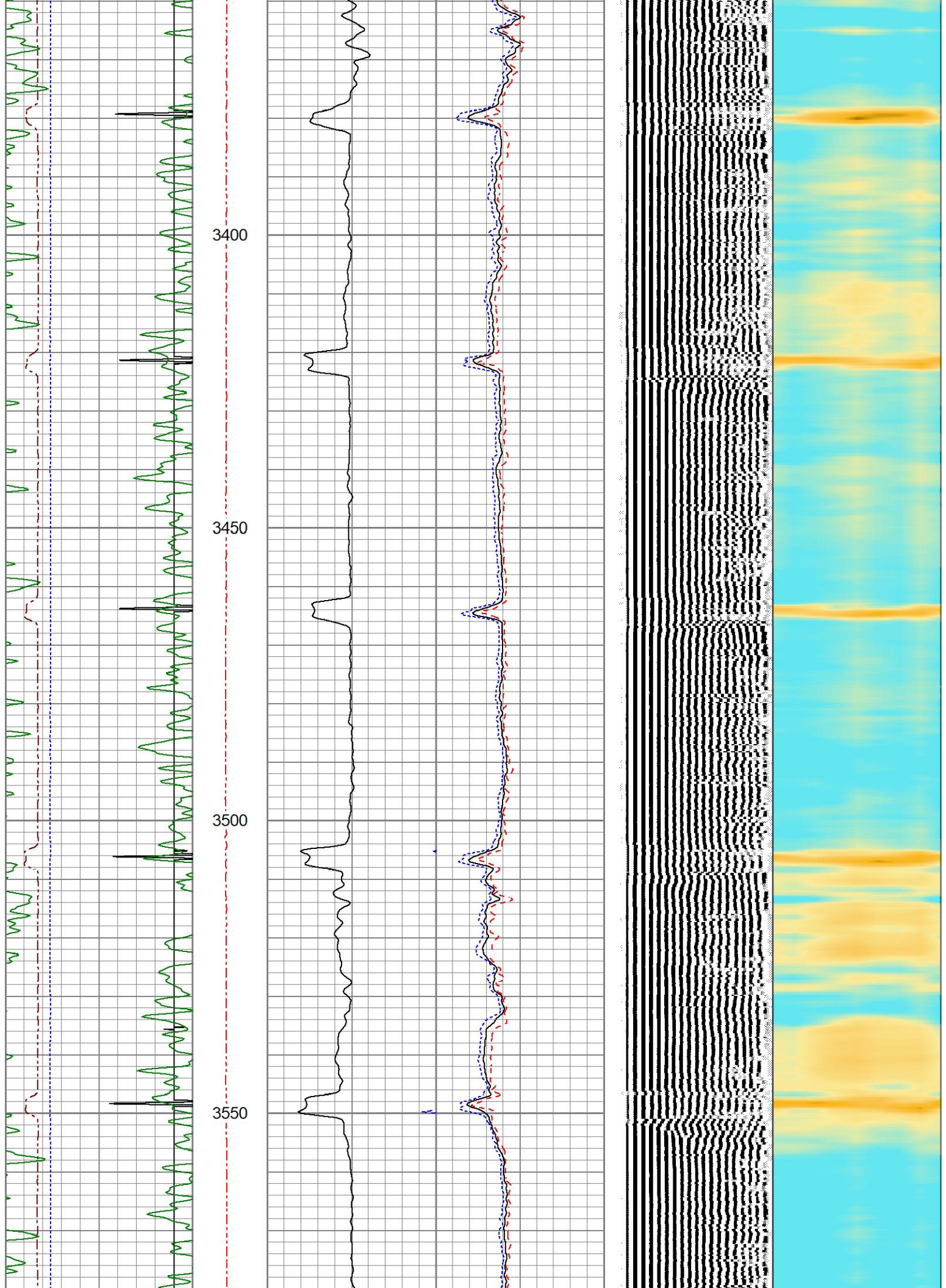


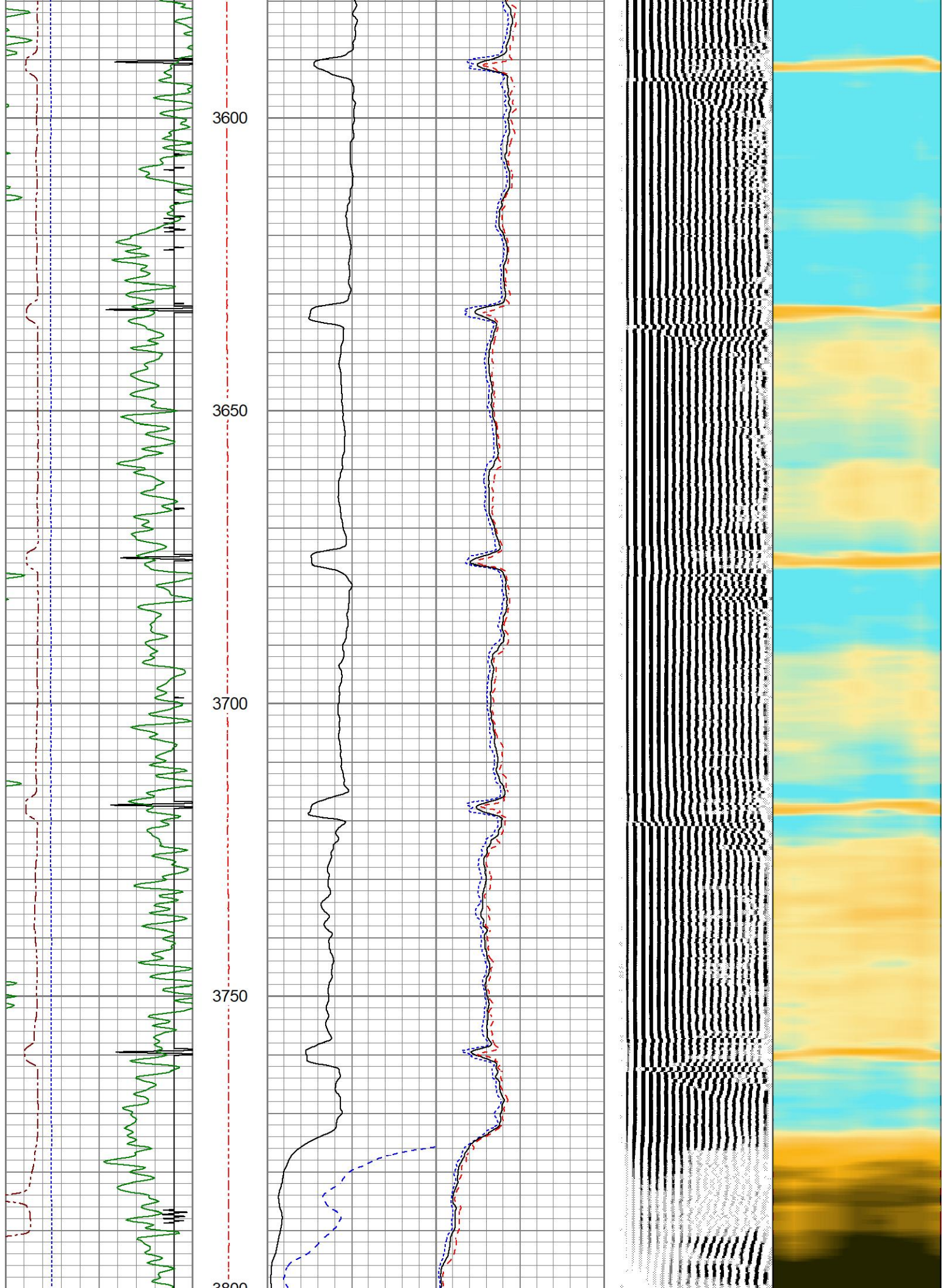


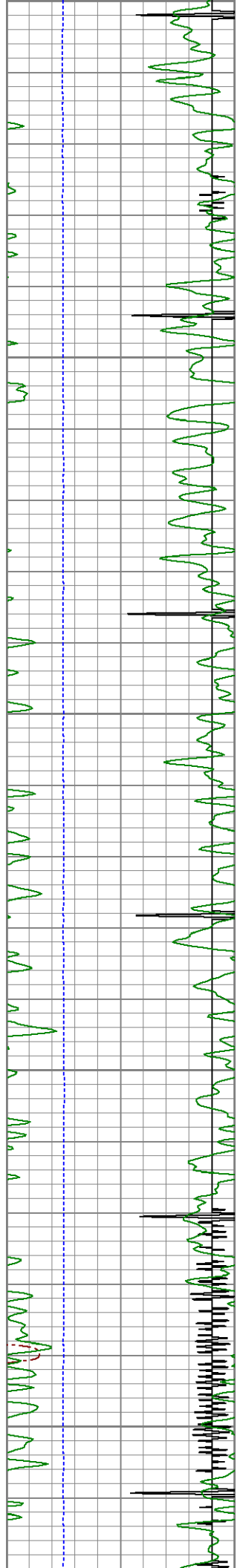




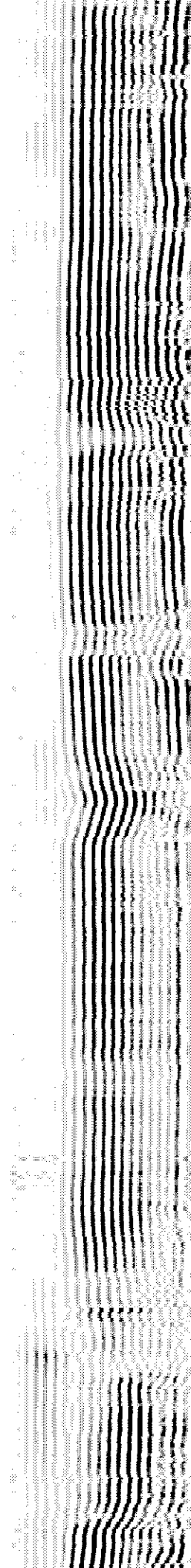
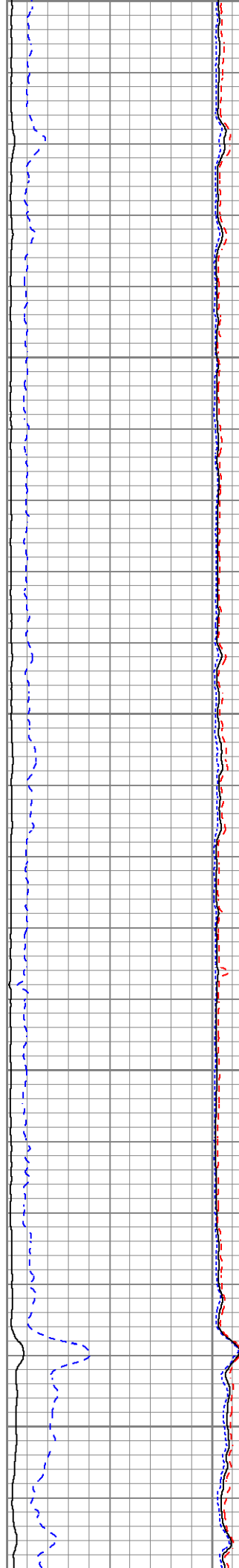


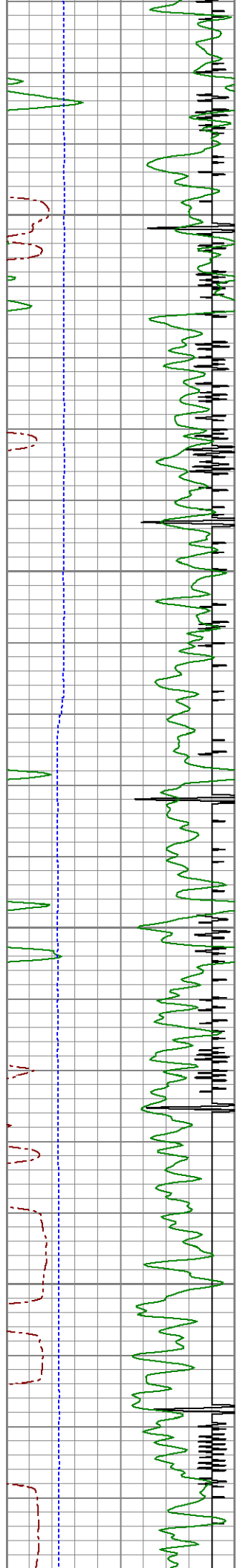






3800
3850
3900
3950
4000



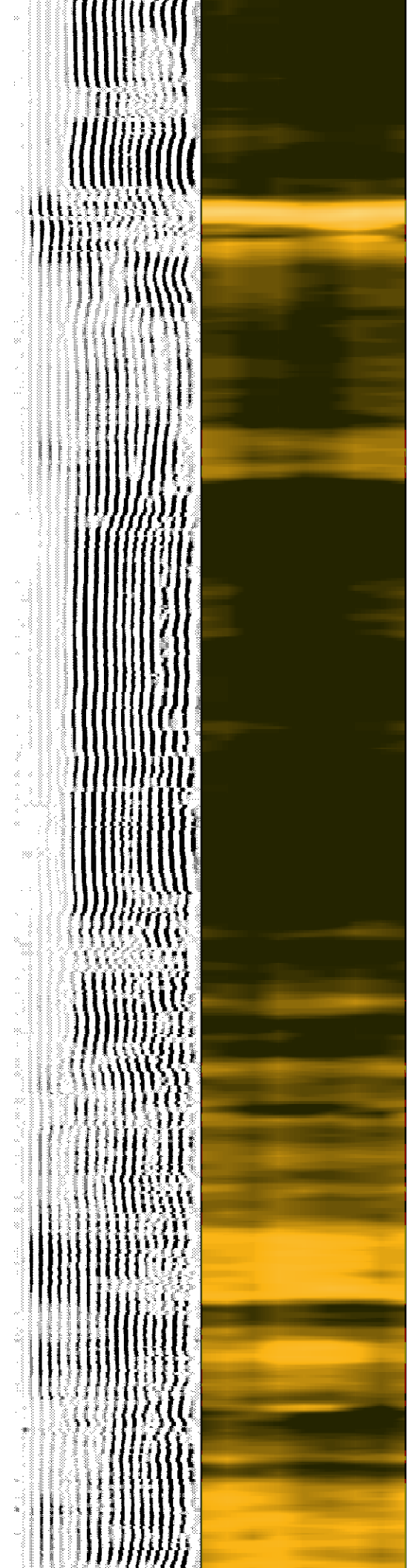
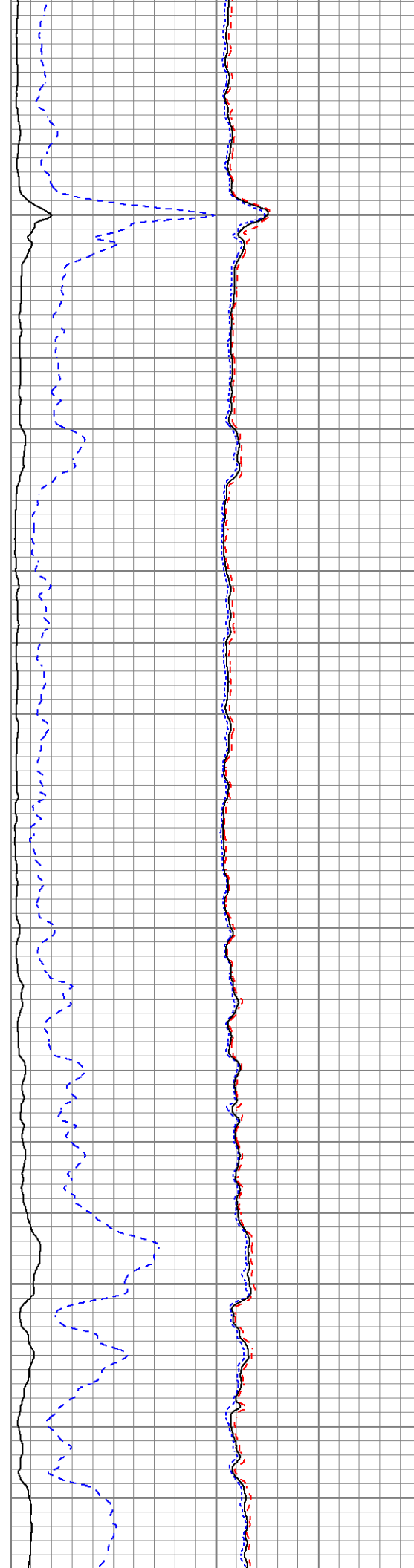


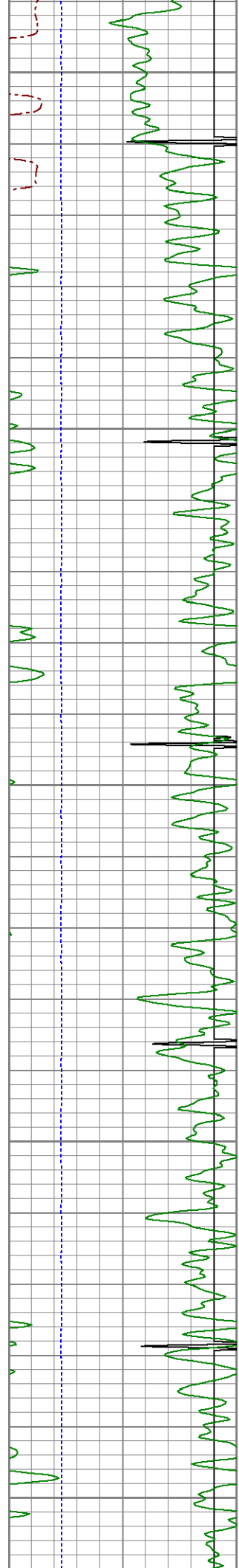
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4100

4150

4200





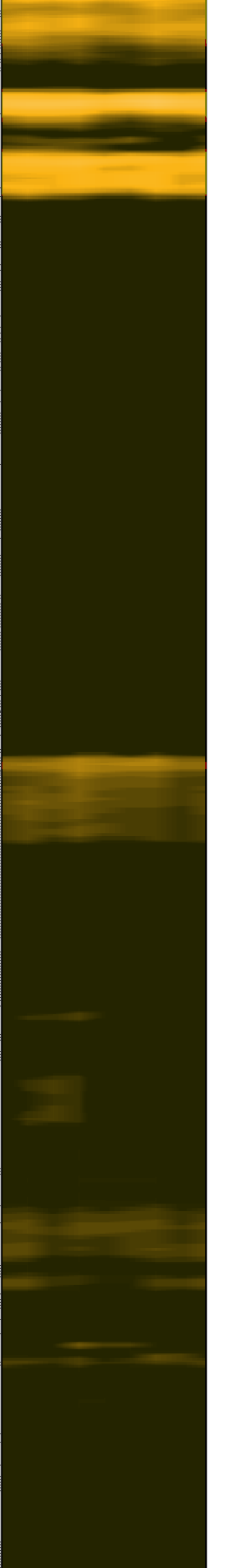
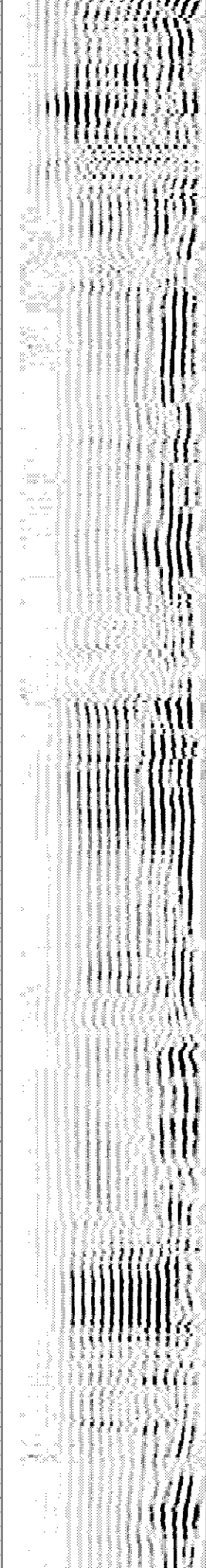
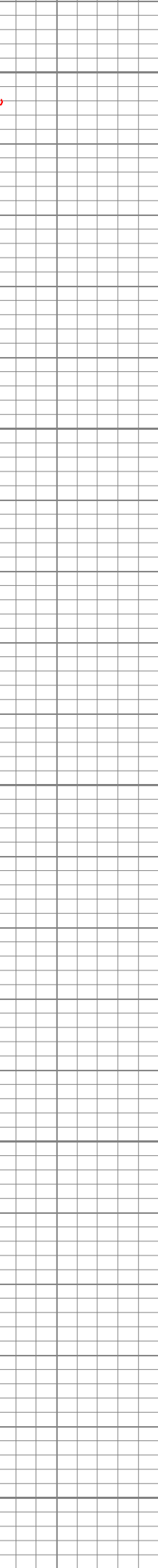
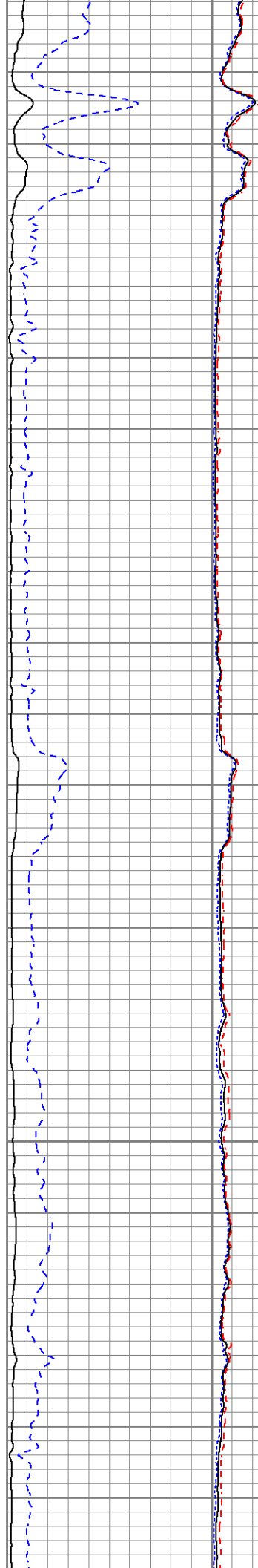
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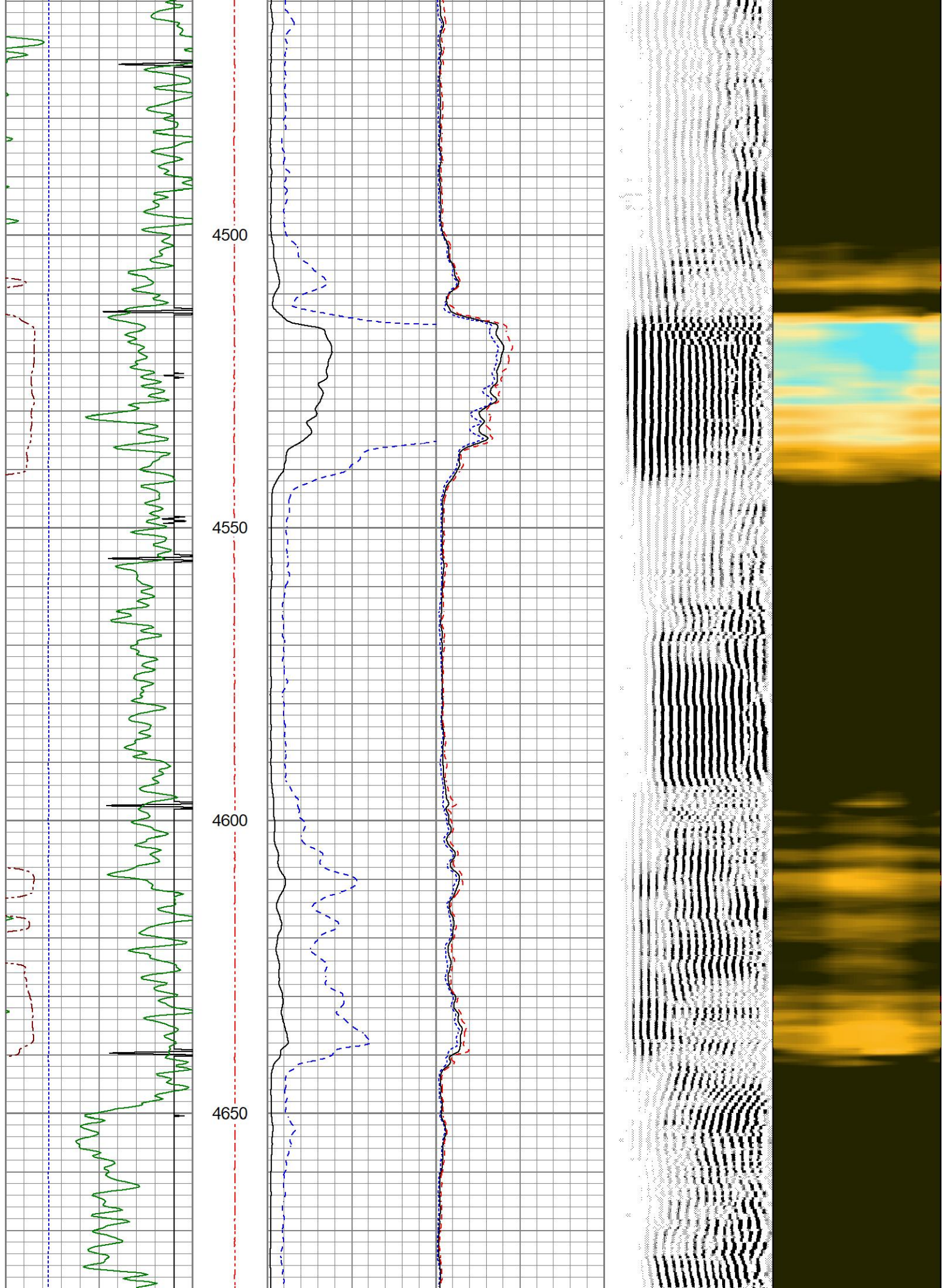
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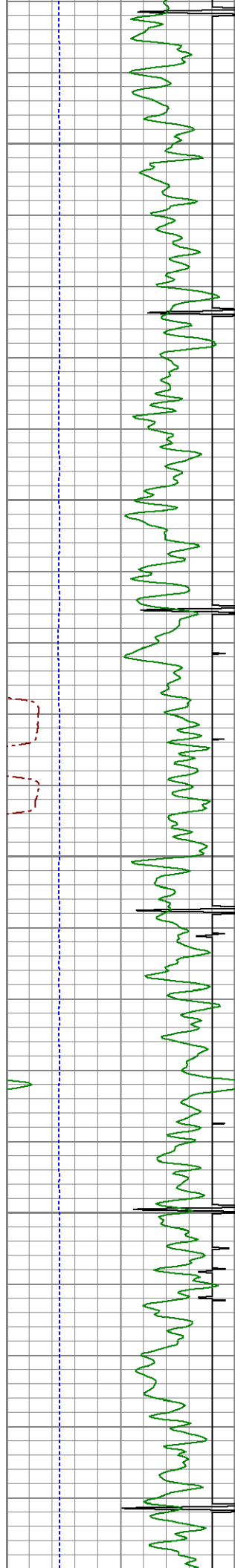
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4400

4450







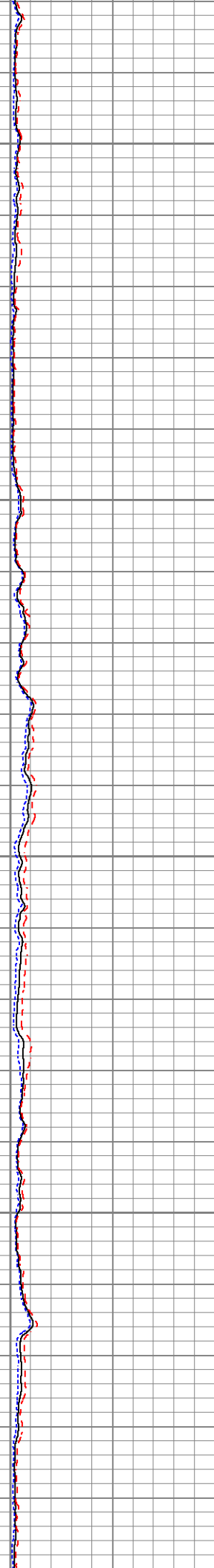
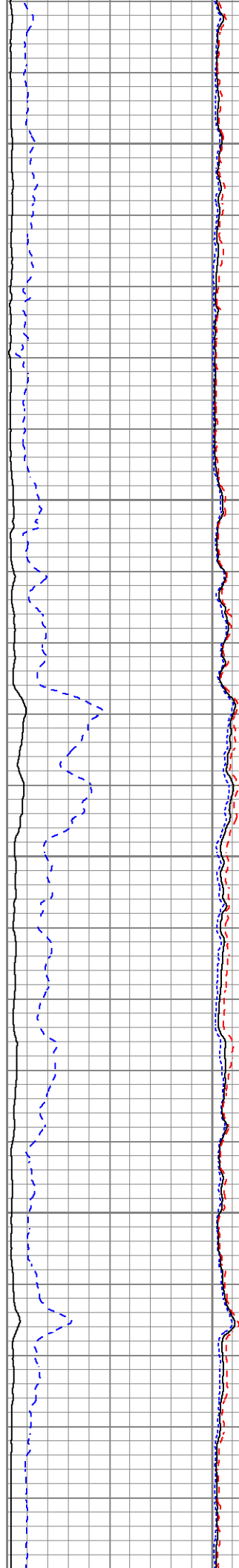
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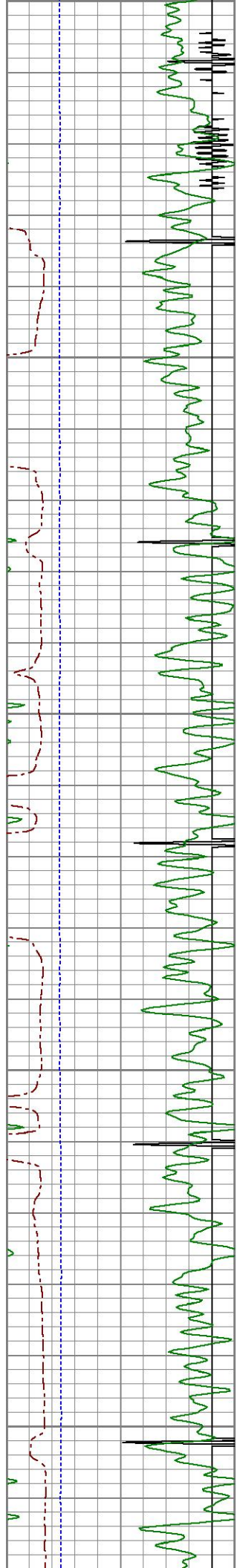
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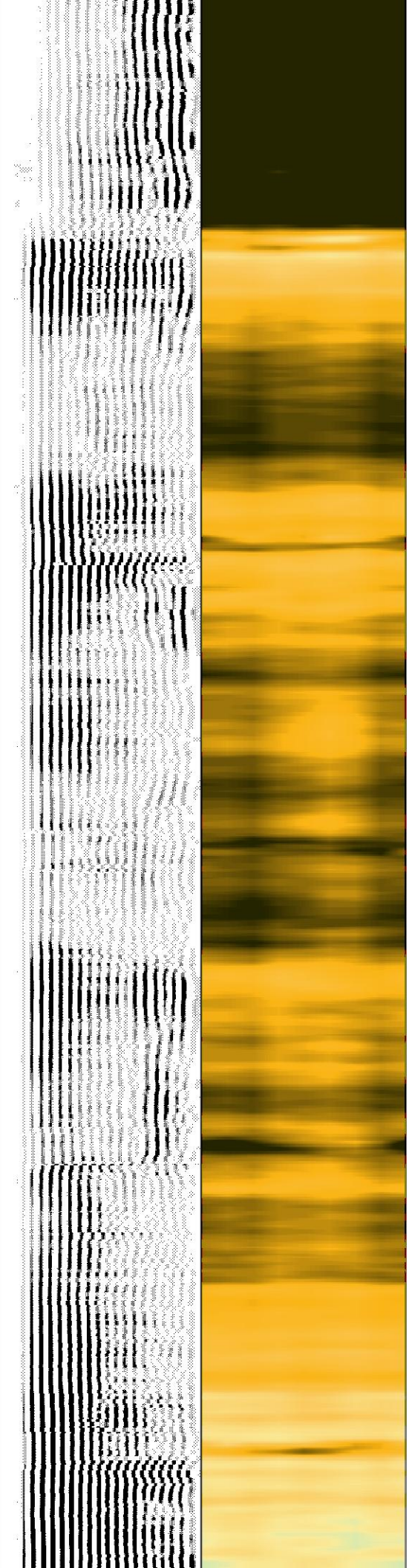
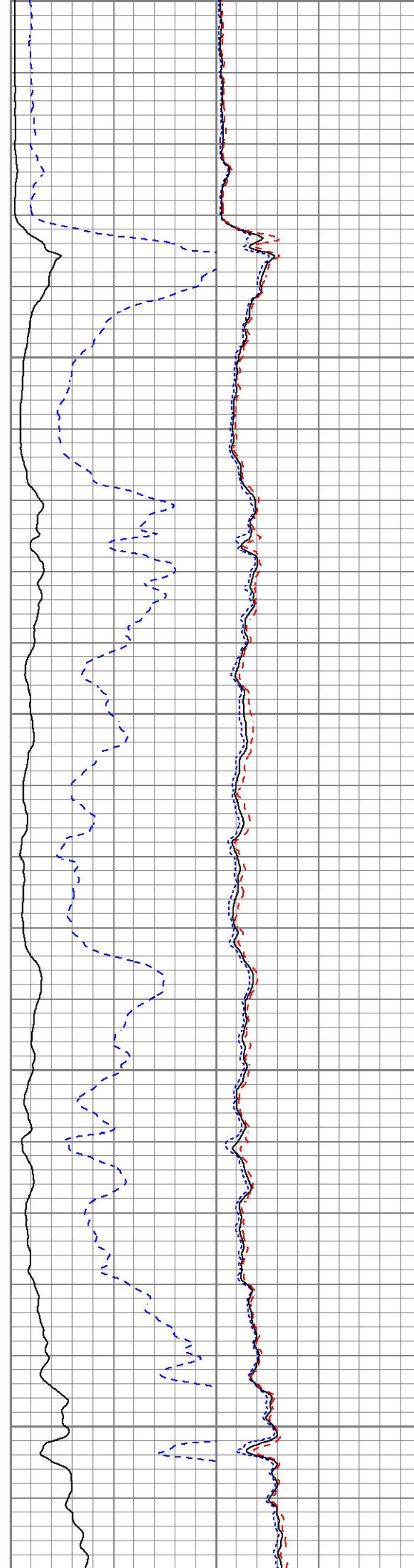
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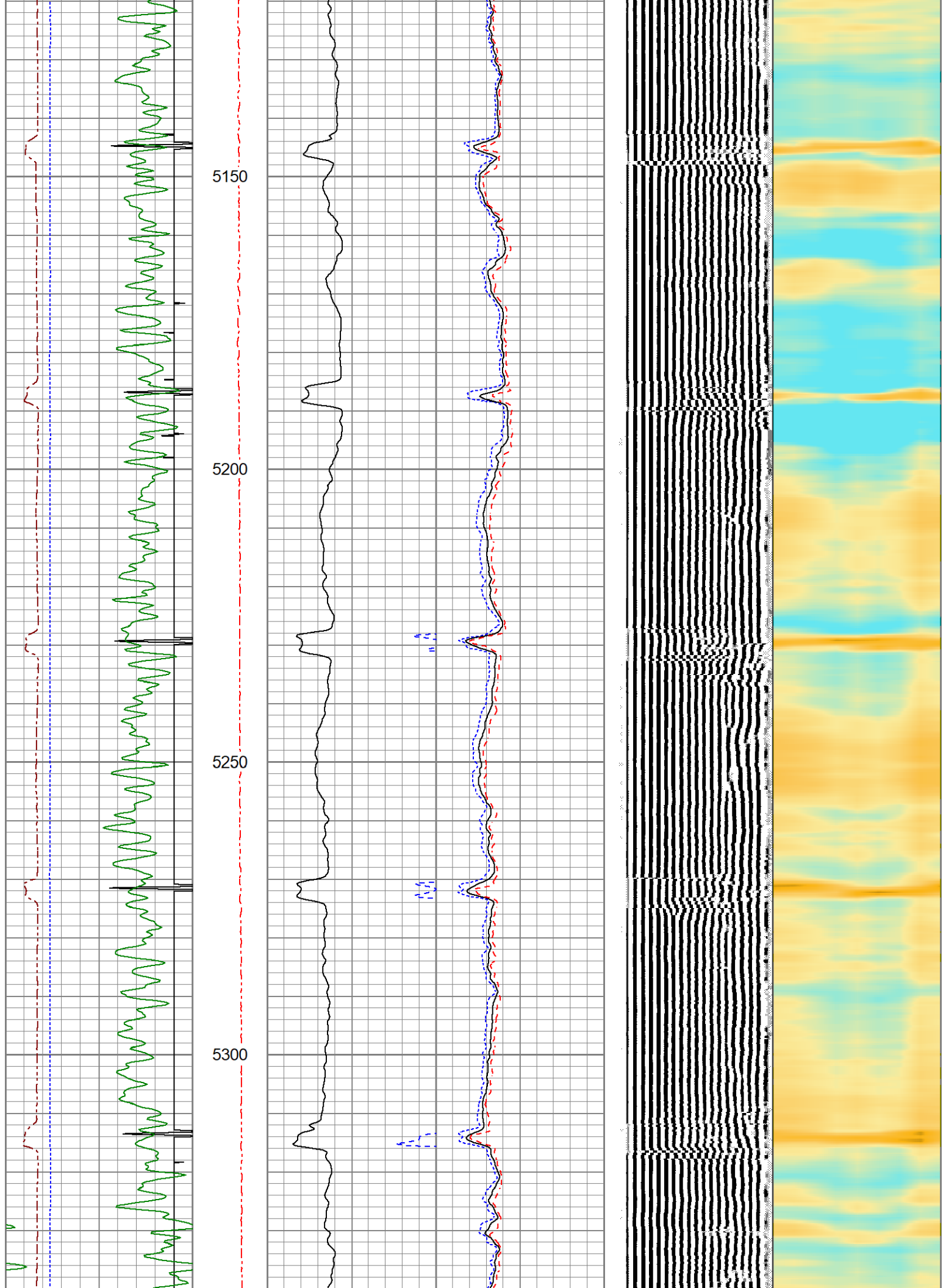
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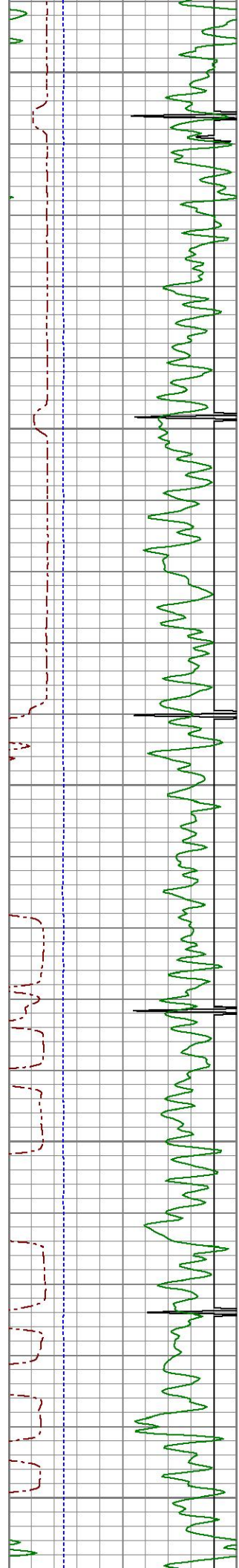




4900
4950
5000
5050
5100







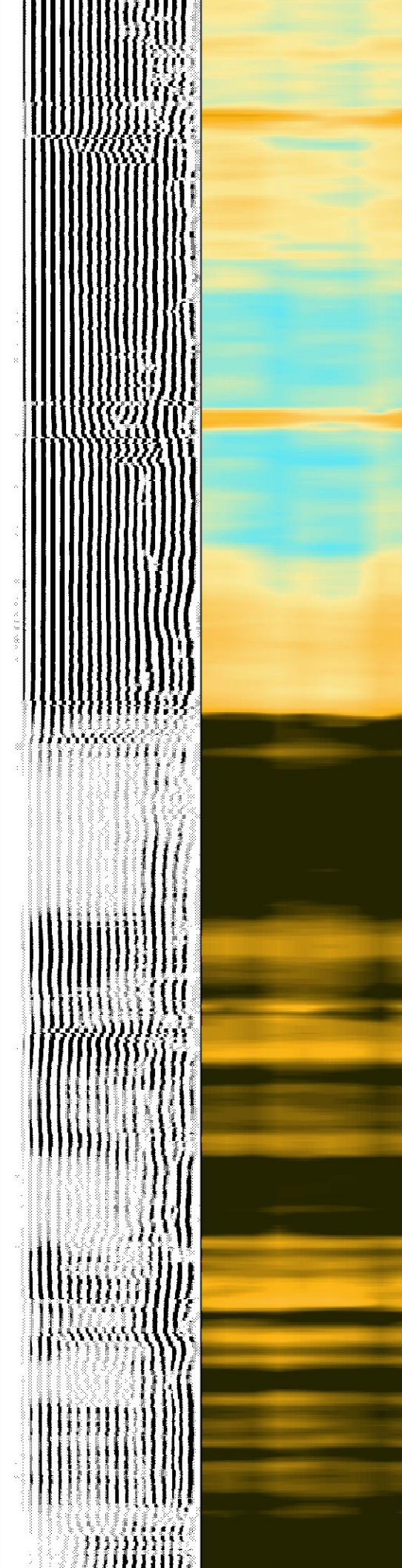
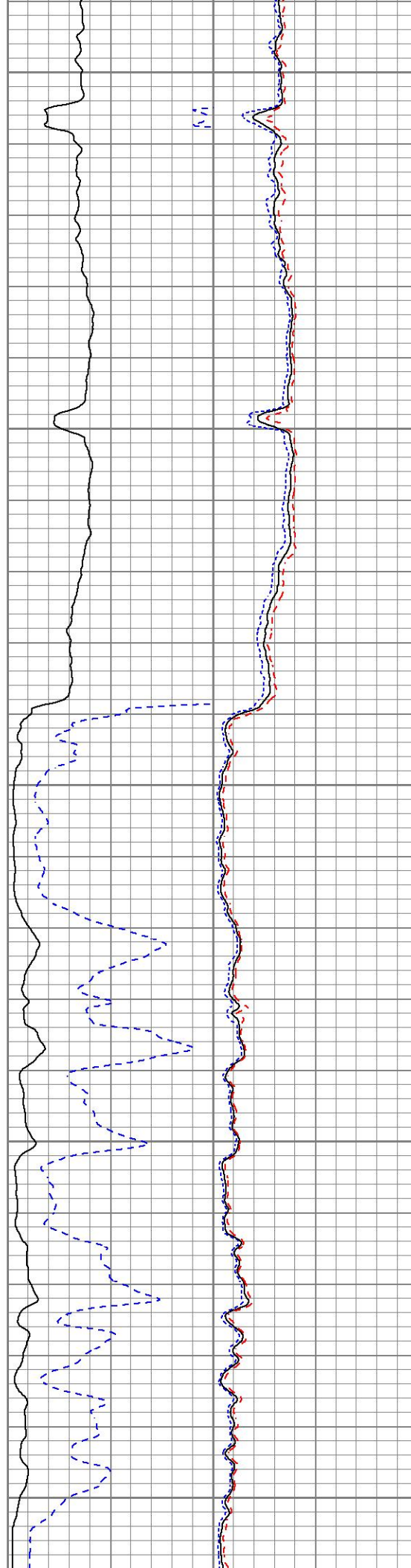
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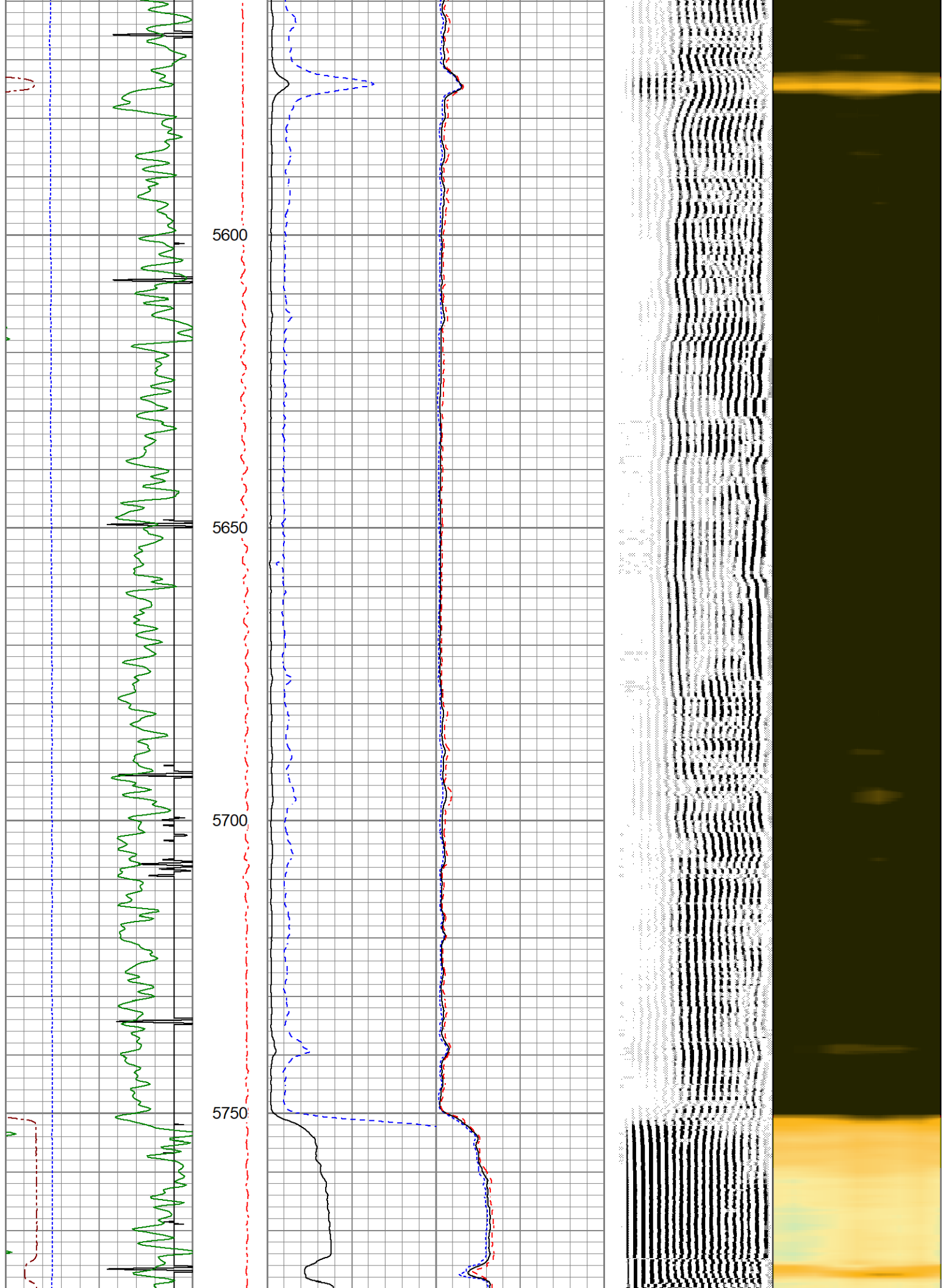
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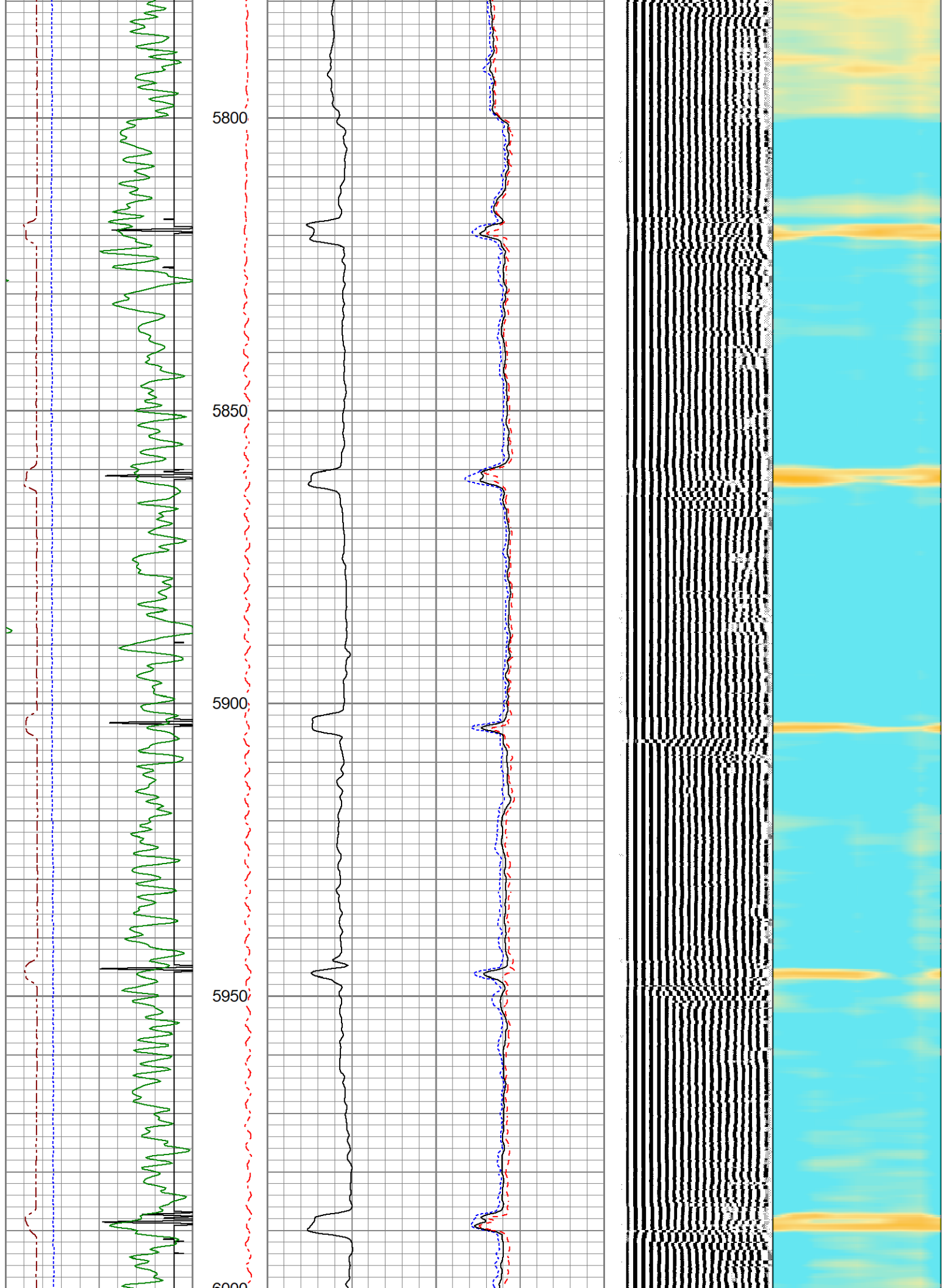
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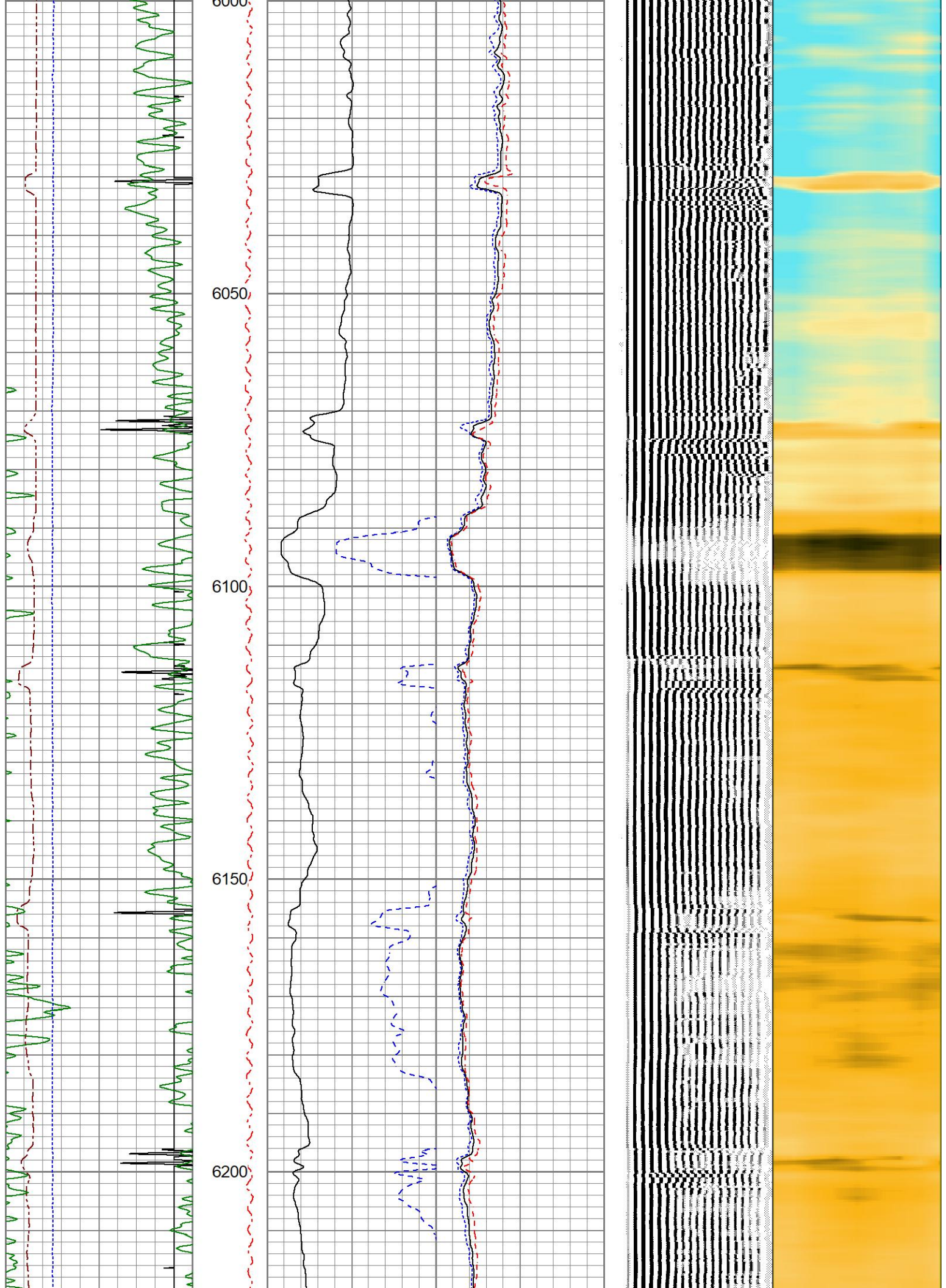
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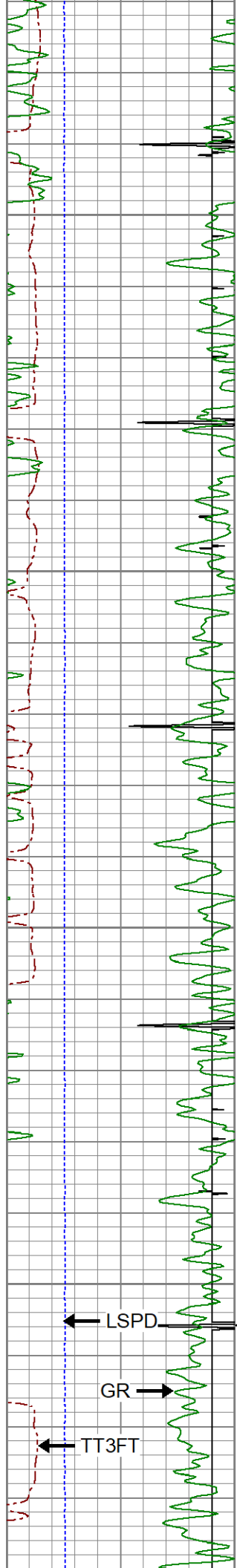
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6350

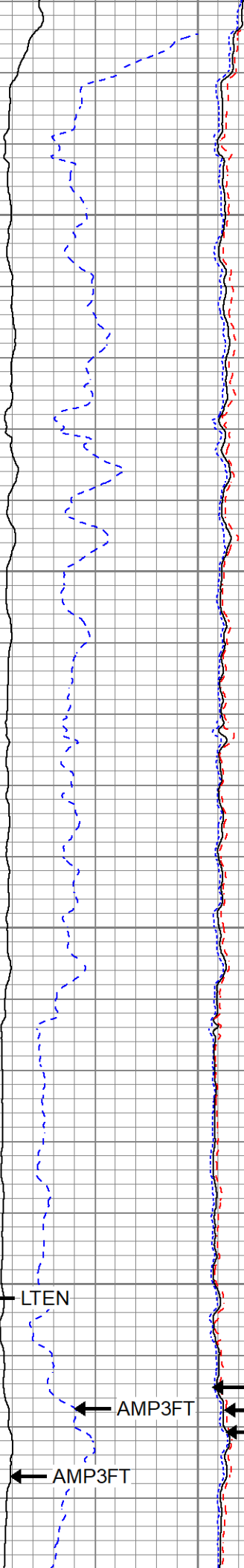
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GR

TT3FT

LSPD

CCL



LTEN

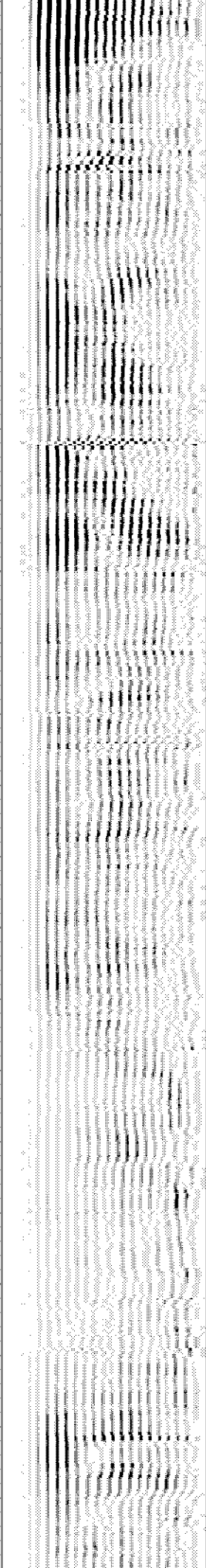
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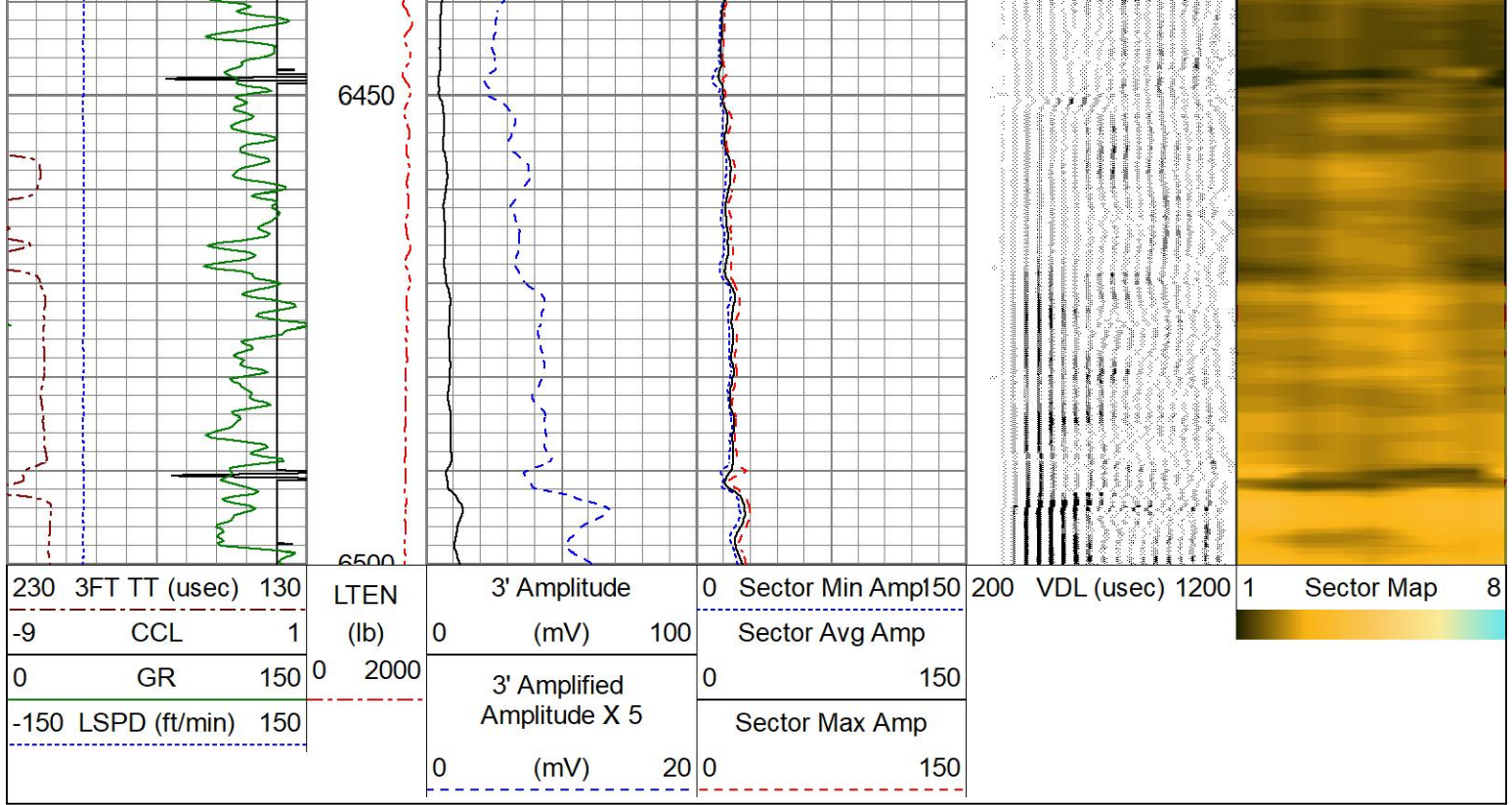
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AMPMIN

AMPMAX

AMPAVG

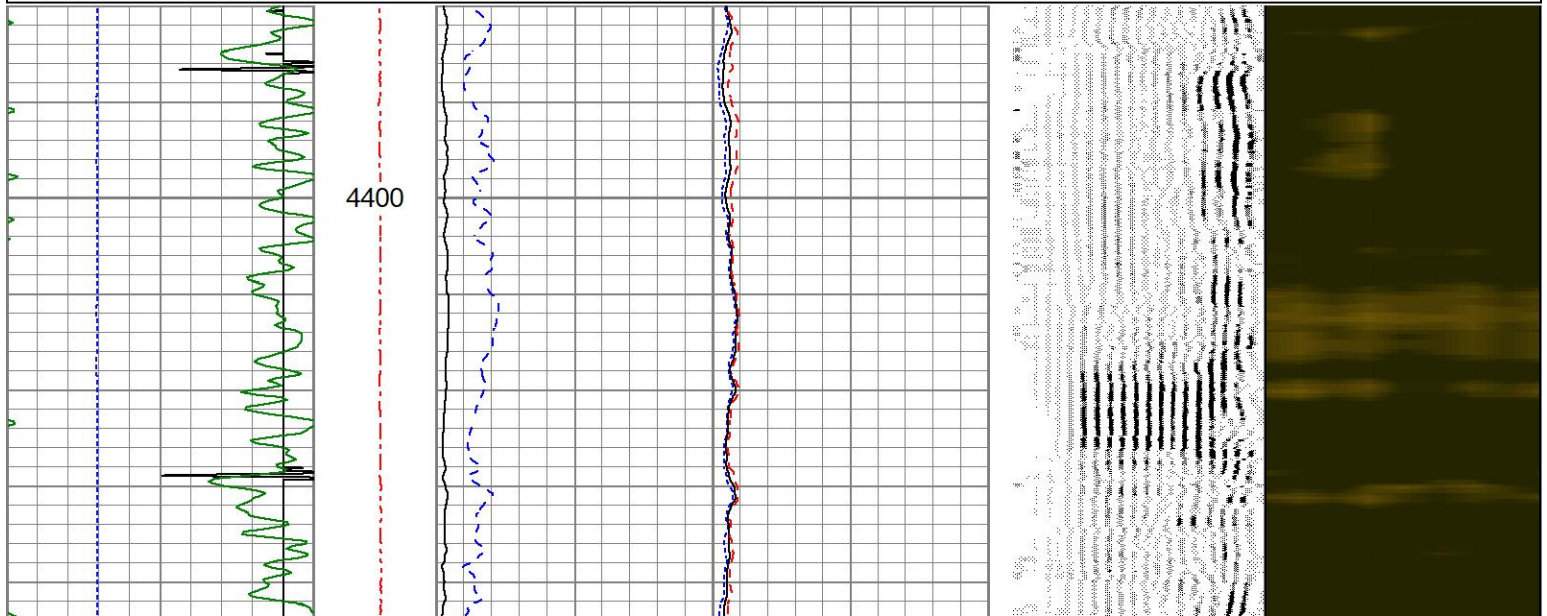
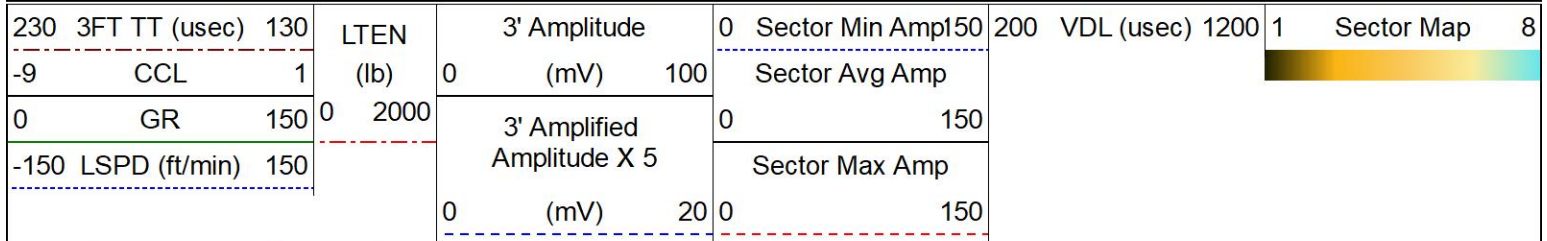


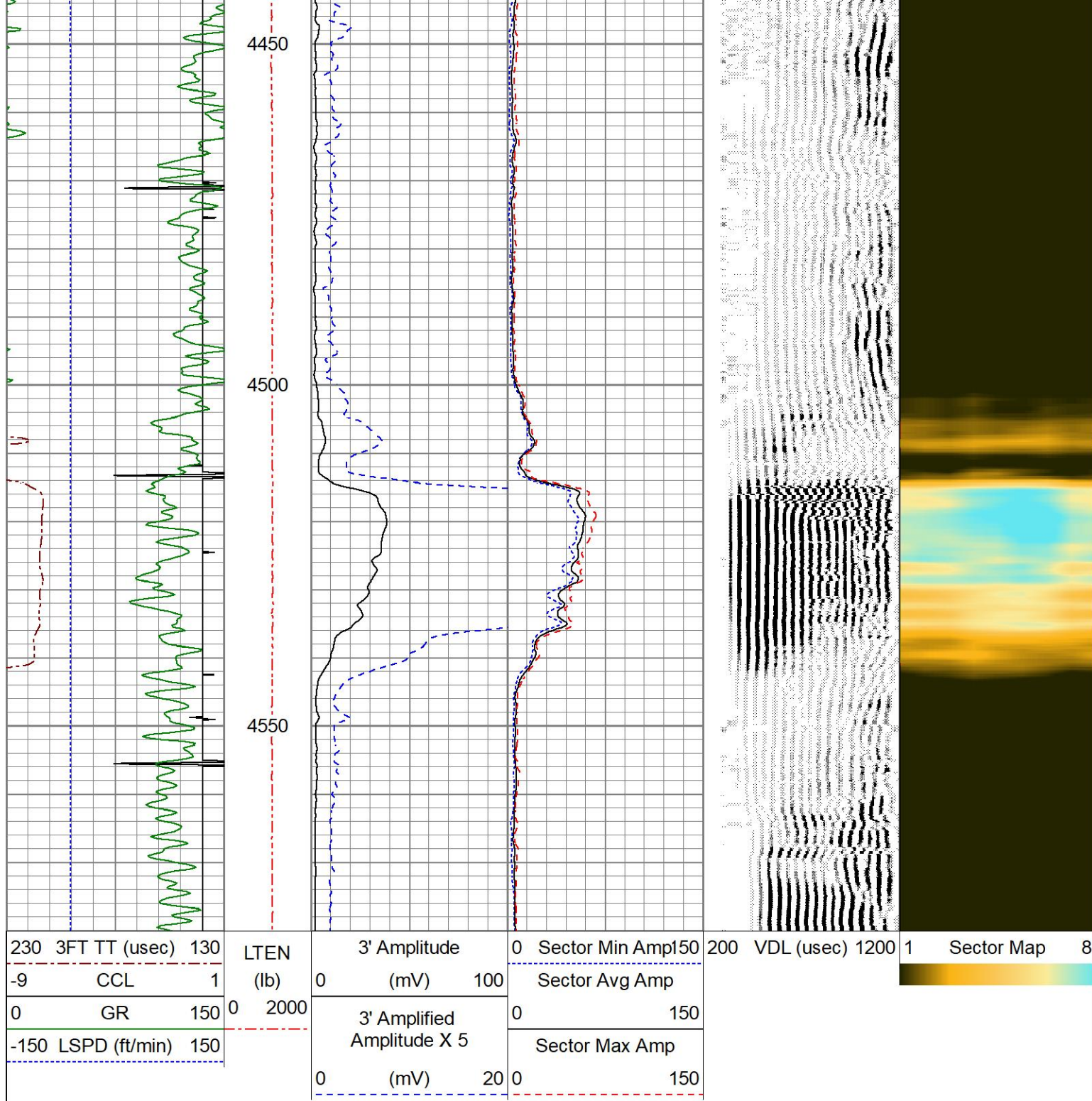


REPEAT PASS

ZERO PSI APPLIED AT SURFACE

Database File 1007-491160_oxy_hsr-cogburn 2-29a_0512319181_20221116_scbl-gr-ccl.db
 Dataset Pathname pass2
 Presentation Format res_scbl 8sec-gr-ccl
 Dataset Creation Wed Nov 16 08:13:47 2022
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File 1007-491160_oxy_hsr-cogburn 2-29a_0512319181_20221116_scbl-gr-ccl.db
 Dataset Pathname pass4
 Dataset Creation Wed Nov 16 08:27:55 2022

Gamma Ray Calibration Report

Serial Number: 234GR4-267
 Tool Model: Tek-Co 2 3/4
 Performed: Tue Sep 20 06:28:28 2022

Calibrator Value: 1.0

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 /cps

Segmented Cement Bond Log Calibration Report

Serial Number: 234RIBT-2096
Tool Model: 275 Temp JS

Calibration Casing Diameter: 4.500 in
Calibration Depth: 3547.025 ft

Master Calibration, performed Tue Nov 15 10:44:43 2022:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.015	2.305	0.700	81.196	34.688	1.235
CAL	0.000	0.788				
5'	0.000	2.500	0.700	81.196	32.204	0.700
SUM						
S1	0.000	2.484	0.000	100.000	40.255	-0.000
S2	0.000	2.476	0.000	100.000	40.384	-0.000
S3	0.000	2.452	0.000	100.000	40.776	-0.000
S4	0.000	2.344	0.000	100.000	42.655	-0.000
S5	0.000	2.205	0.000	100.000	45.352	-0.000
S6	0.000	2.188	0.000	100.000	45.695	-0.000
S7	0.000	2.375	0.000	100.000	42.111	-0.000
S8	0.000	2.299	0.000	100.000	43.496	-0.000

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.788	1.000	0.000

Air Zero Calibration, performed Mon May 9 07:31:51 2022:

	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	

Temperature Calibration Report

Serial Number: 234RIBT-2096
Tool Model: 275 Temp JS
Performed: (Not Performed)

	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec

Gain:	1.00
Offset:	0.00
Delta Spacing	1

Company	OCCIDENTAL PETROLEUM CORP.
Well	HSR-COGBURN 2-29A
Field	WATTENBERG
County	WELD
State	COLORADO

