



**SECTOR CEMENT BOND
GAMMA RAY
CCL LOG**

Comp. OCCIDENTAL PETROLEUM CORP.
Well HSR-RAFALOVICH 14-5
Field WATTENBERG
Co. WELD
State COLORADO

Company **OCCIDENTAL PETROLEUM CORP.**
Well **HSR-RAFALOVICH 14-5**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API #: 05-123-17306
821' FSL & 2095' FWL
SEC 5 TWP 3N RGE 65W
Permanent Datum GL Elevation 4900'
Log Measured From GL 0' Above Perm. Datum
Drilling Measured From KB
Other Services
NONE
Elevation
K.B. N/A
D.F. N/A
G.L. 4900'

Date of Service	09-MAY-2023
Run Number	ONE
Depth Driller or PBTD	N/A
Depth Logger	3900'
Bottom Log Interval	3900'
Top Log Interval	SURFACE
Open Hole Size	7-7/8"
Type Fluid	H2O
Fluid Level	SURFACE
Fluid Density	N/A
Max. Recorded Temperature	157 DEG. F.
Max. Wellhead Pressure	ZERO PSI
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. TRAVIS ROTHE
Surface Casing	Size 8-5/8" W/Ft 24# Top SURFACE Bottom 558'
Production Casing	Size 4-1/2" W/Ft 11.6# Top SURFACE Bottom 7400'
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 #007-548116

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

Operator	Offset (ft)	Substrate	Description	Length (ft)	O.D. (in)	Weight (lb)
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\1007-548116_oxy_hsr-rfalovich 14-5_0512317306_202305
Dataset field/well/run1/pass4/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 157	CASEOD in 4.5	CASETHCK in 0.25	CASEWGHT lb/ft 11.6	MAXAMPL mV 81.2	MINAMPL mV 0.7	MINATTN db/ft 0.8
PERFS No	PPT usec 249	SRFTEMP degF 77	TDEPTH ft 3900				

Variable Description

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

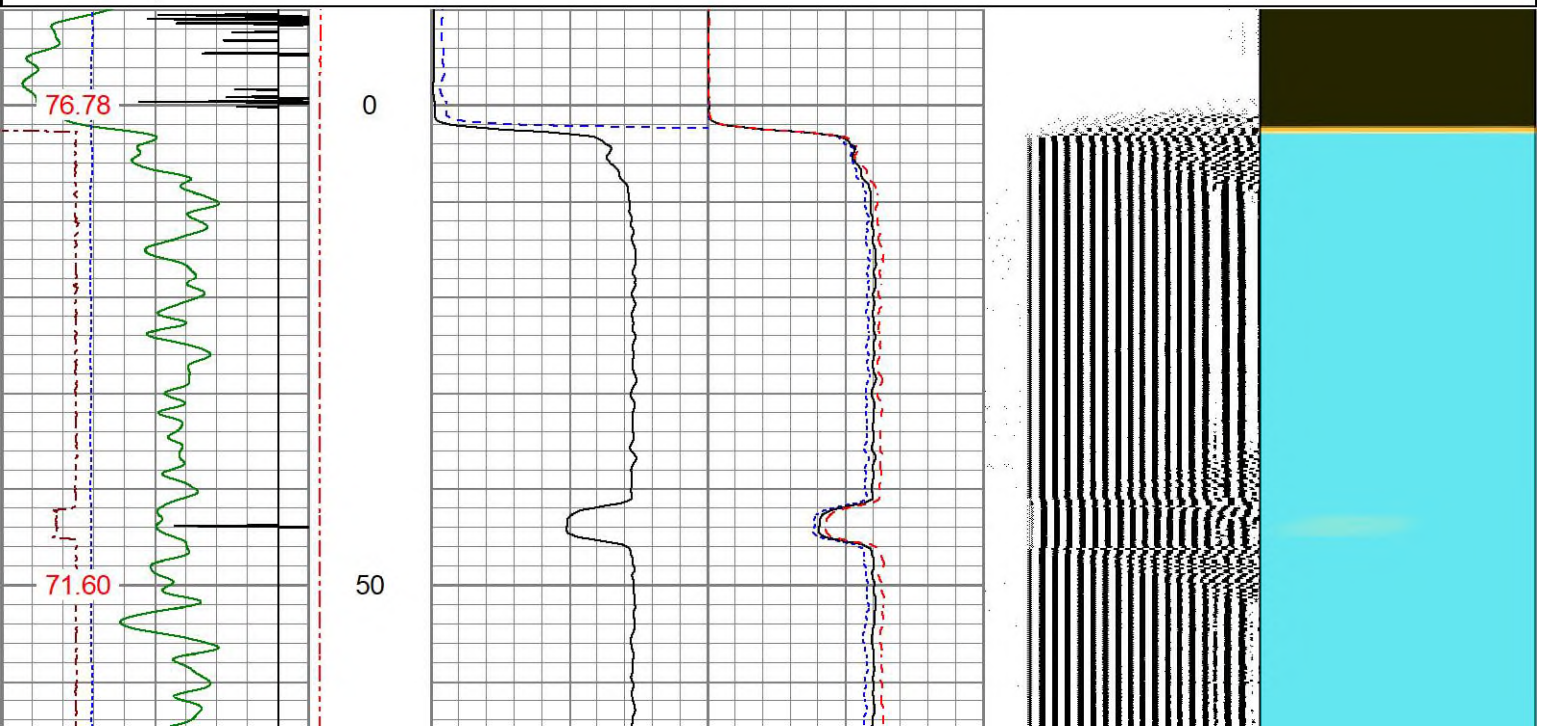


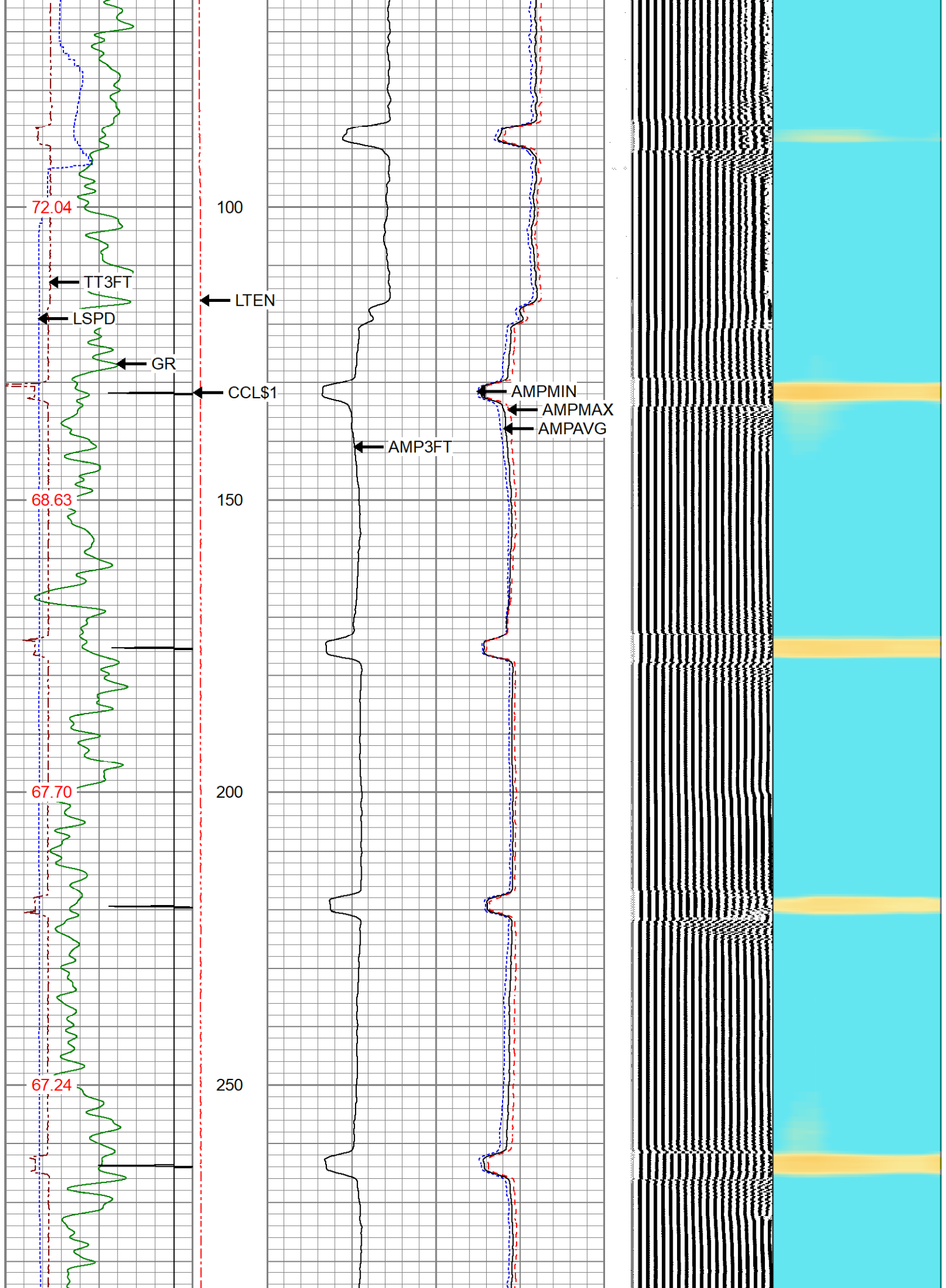
MAIN PASS

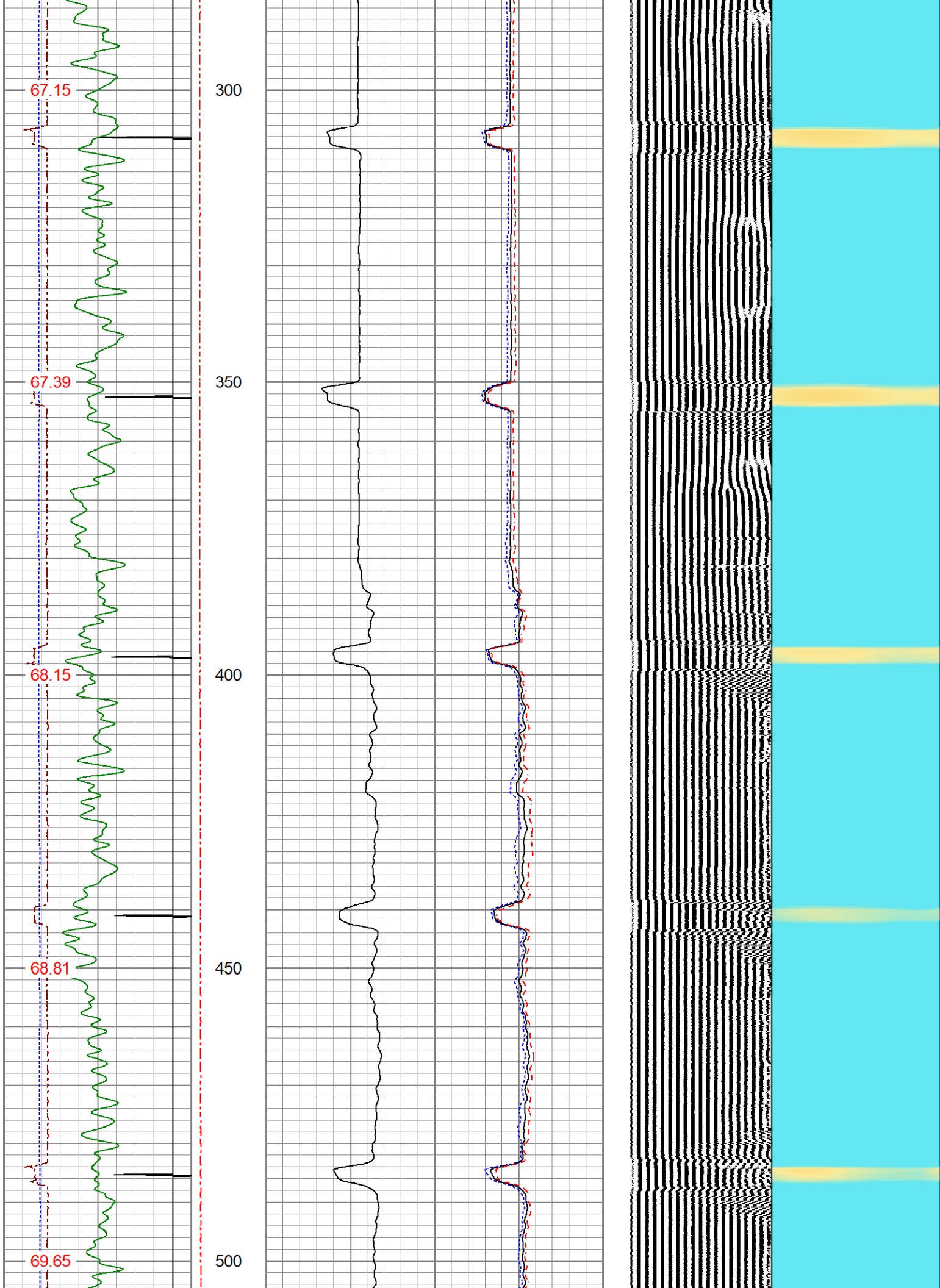
ZERO PSI APPLIED AT SURFACE

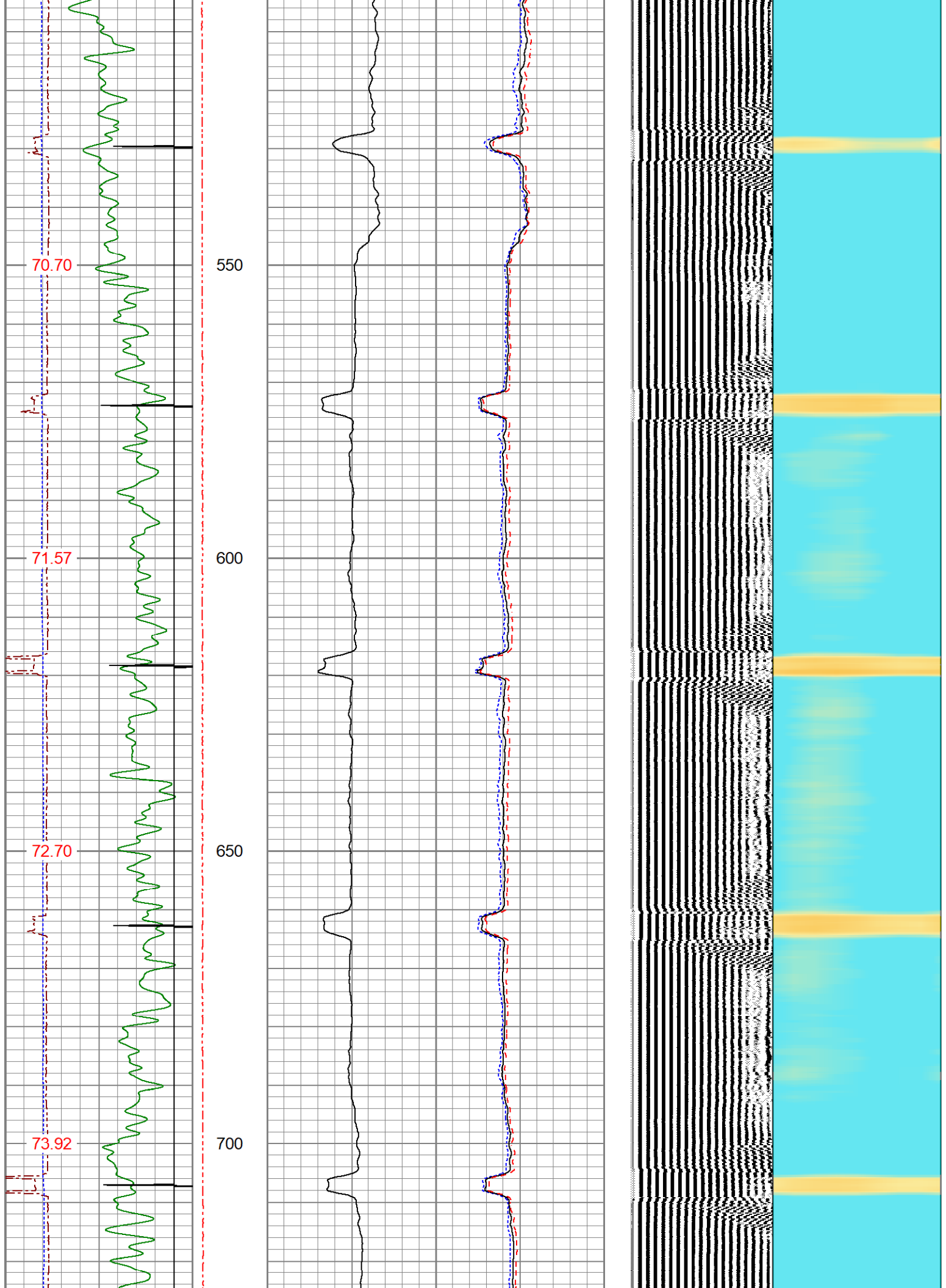
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Dataset Pathname pass4
Presentation Format res_scbl 8sec-gr-ccl
Dataset Creation Tue May 09 15:20:31 2023
Charted by Depth in Feet scaled 1:240

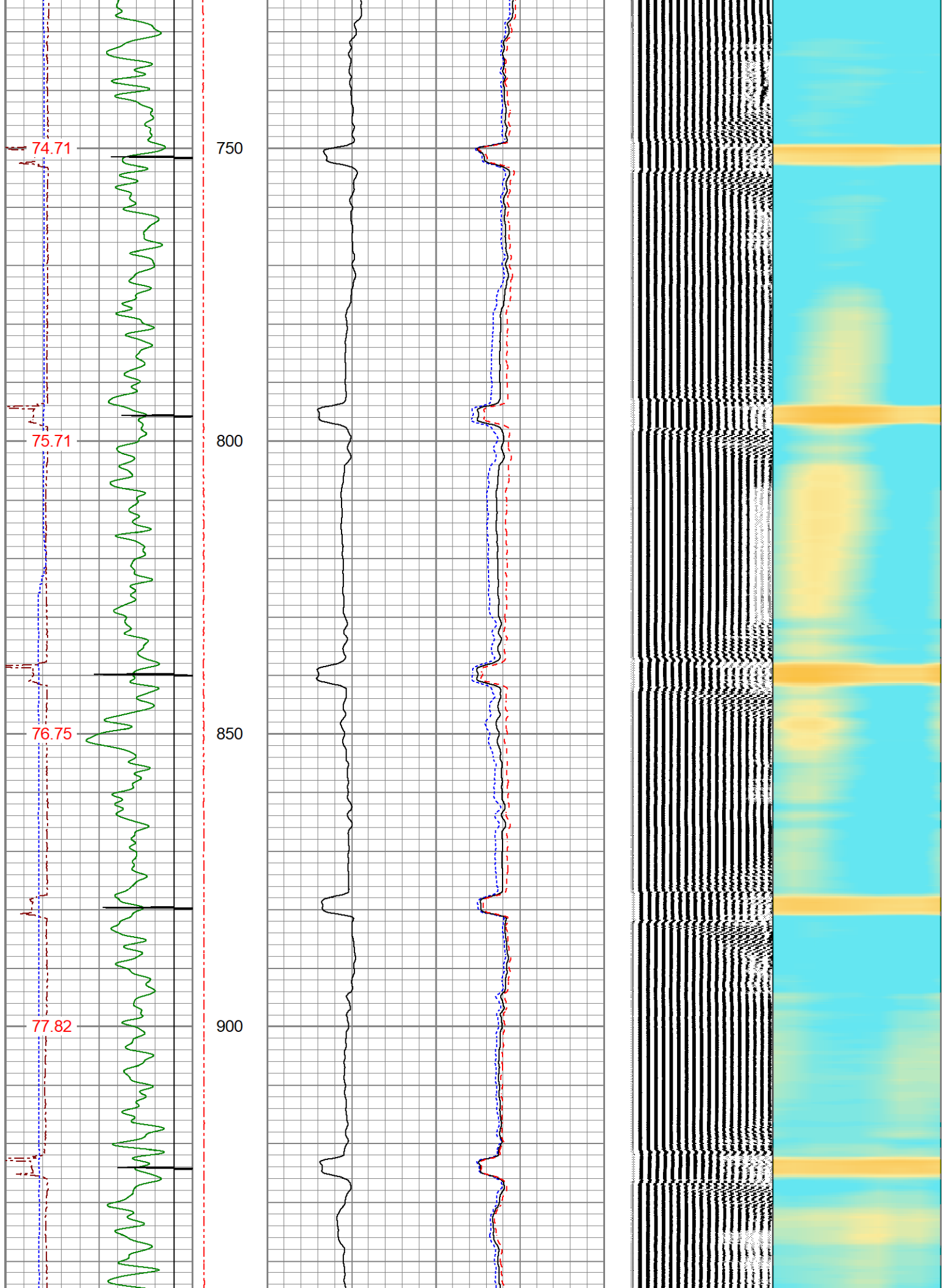
270 3FT TT (usec) 170	LTEN	3' Amplitude	0 Sector Min Amp150	200 VDL (usec) 1200	1 Sector Map 8
0 GR (GAPI) 150	(lb)	(mV) 100	Sector Avg Amp		
-150 LSPD (ft/min) 150	0 2000	3' Amplified	0 150		
-9 CCL\$1 1		Amplitude X 5	Sector Max Amp		
GCT_Temp		(mV) 20	0 150		
(degF)					

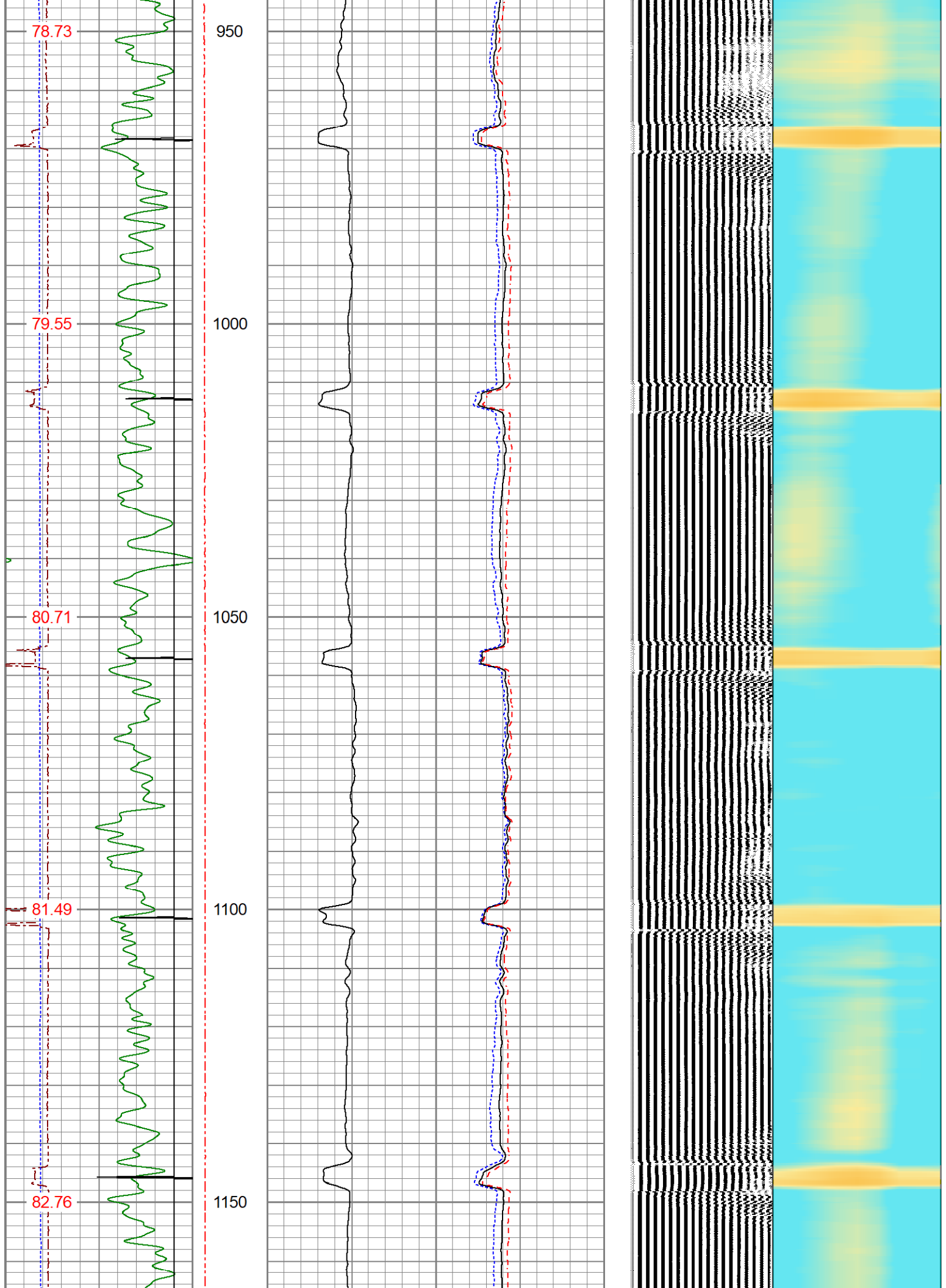


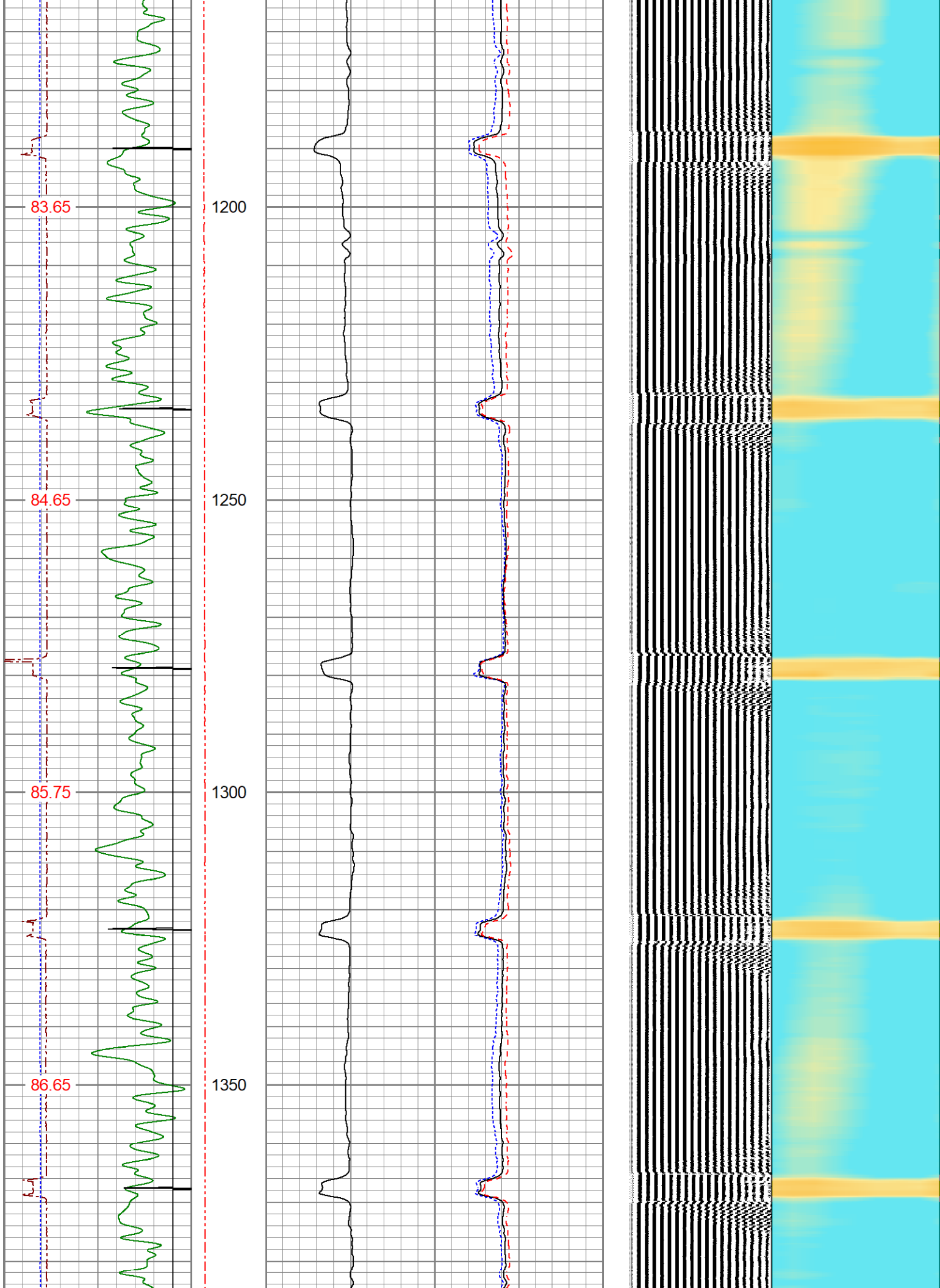


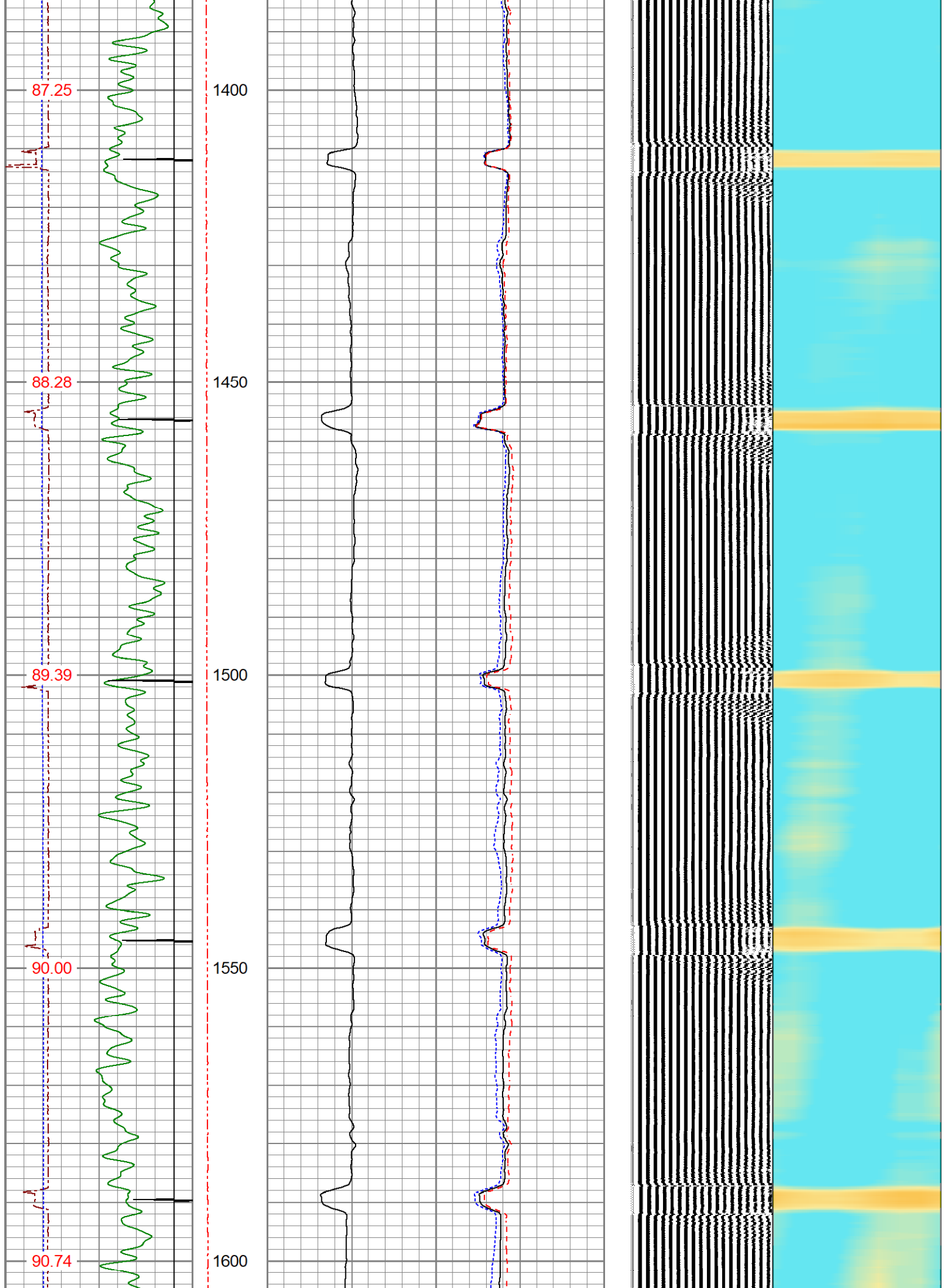


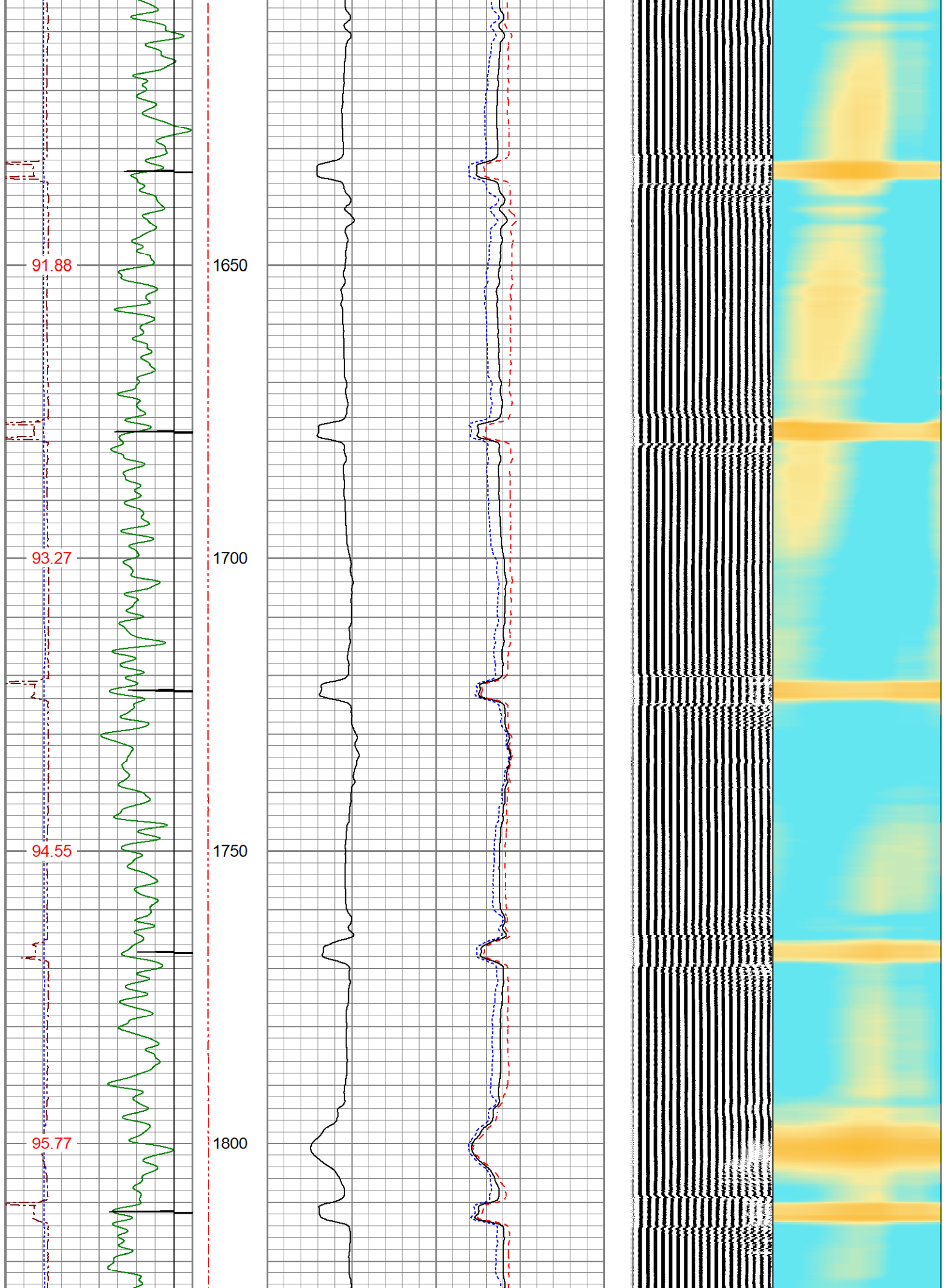


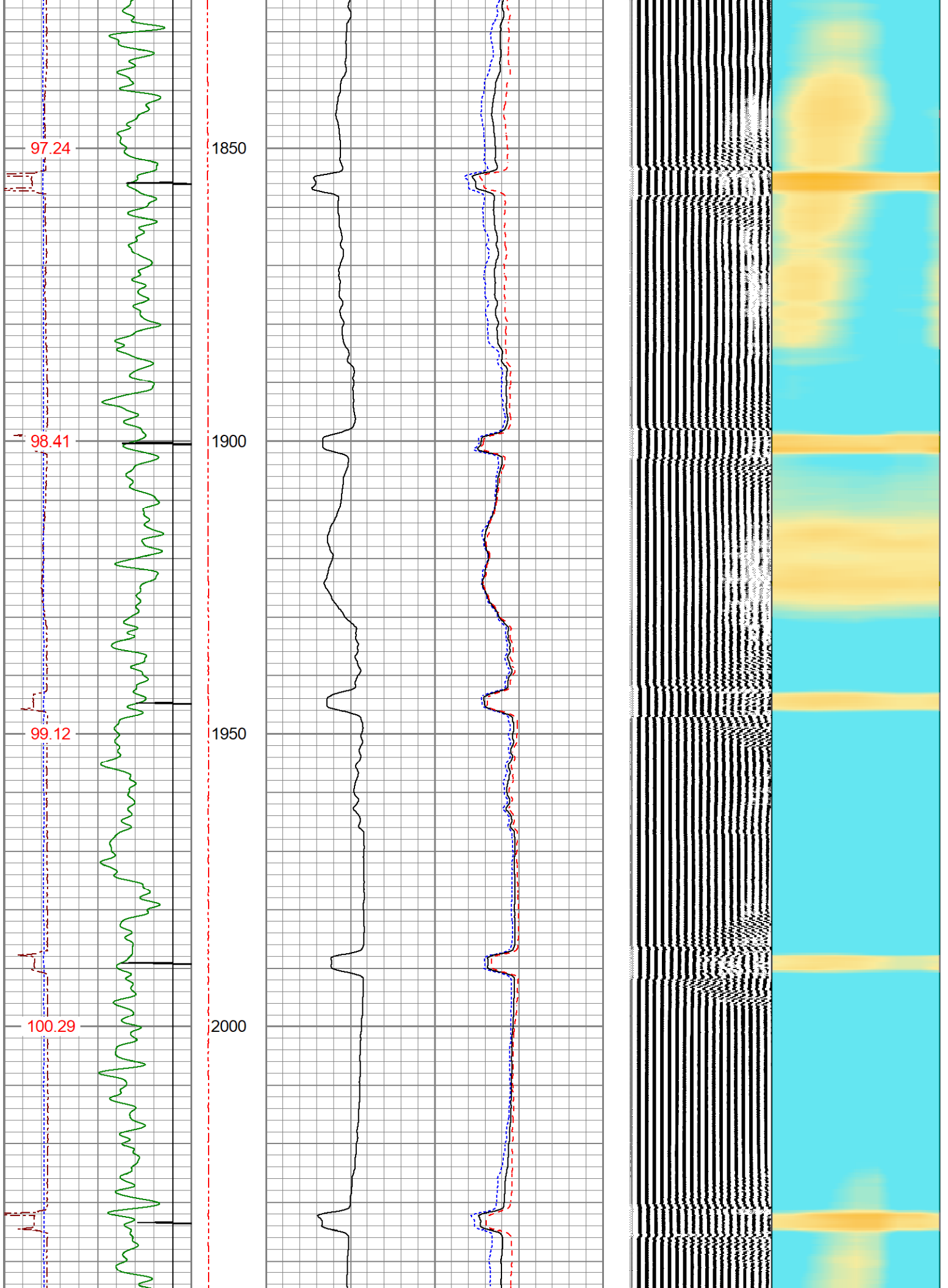


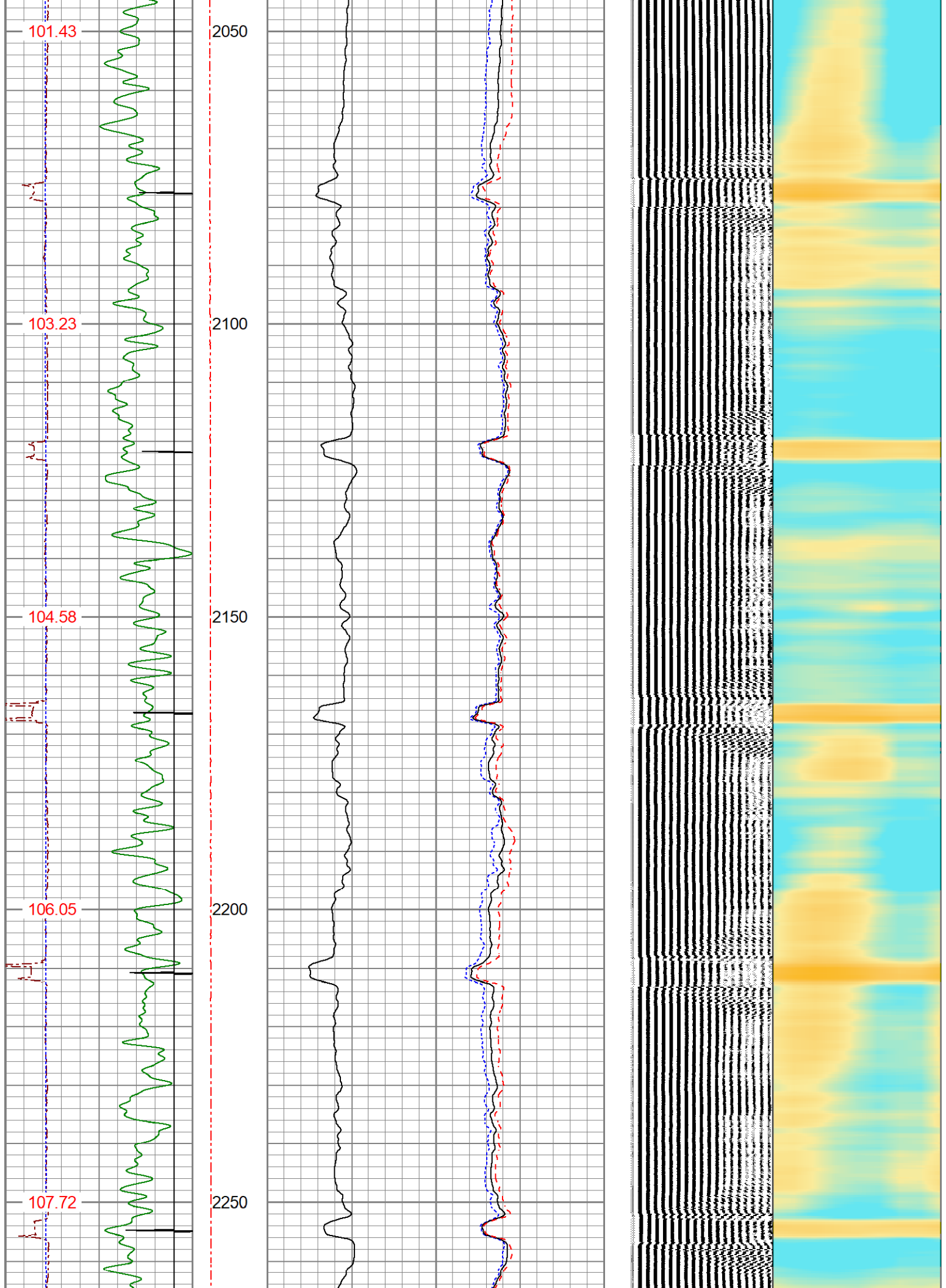


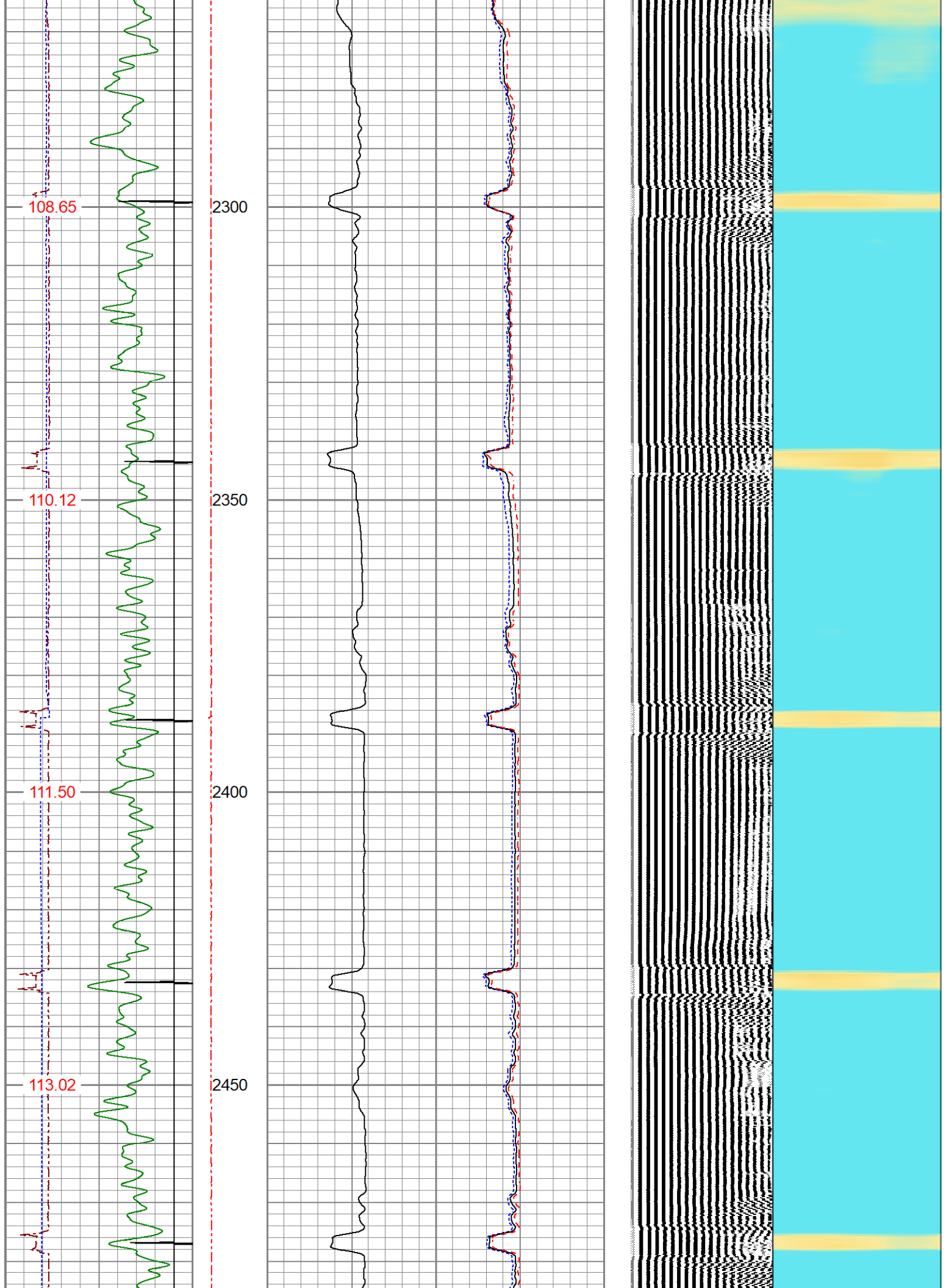


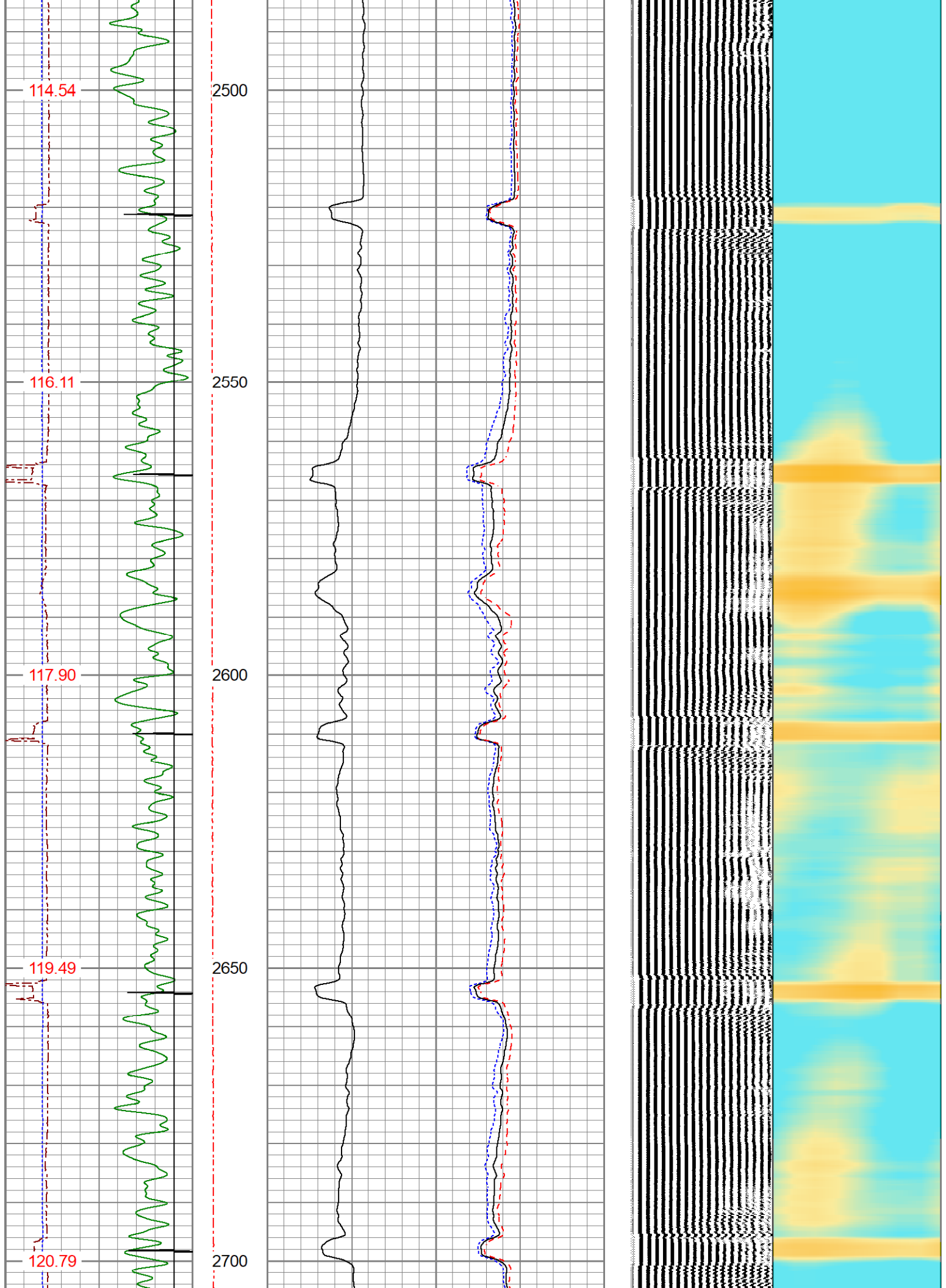


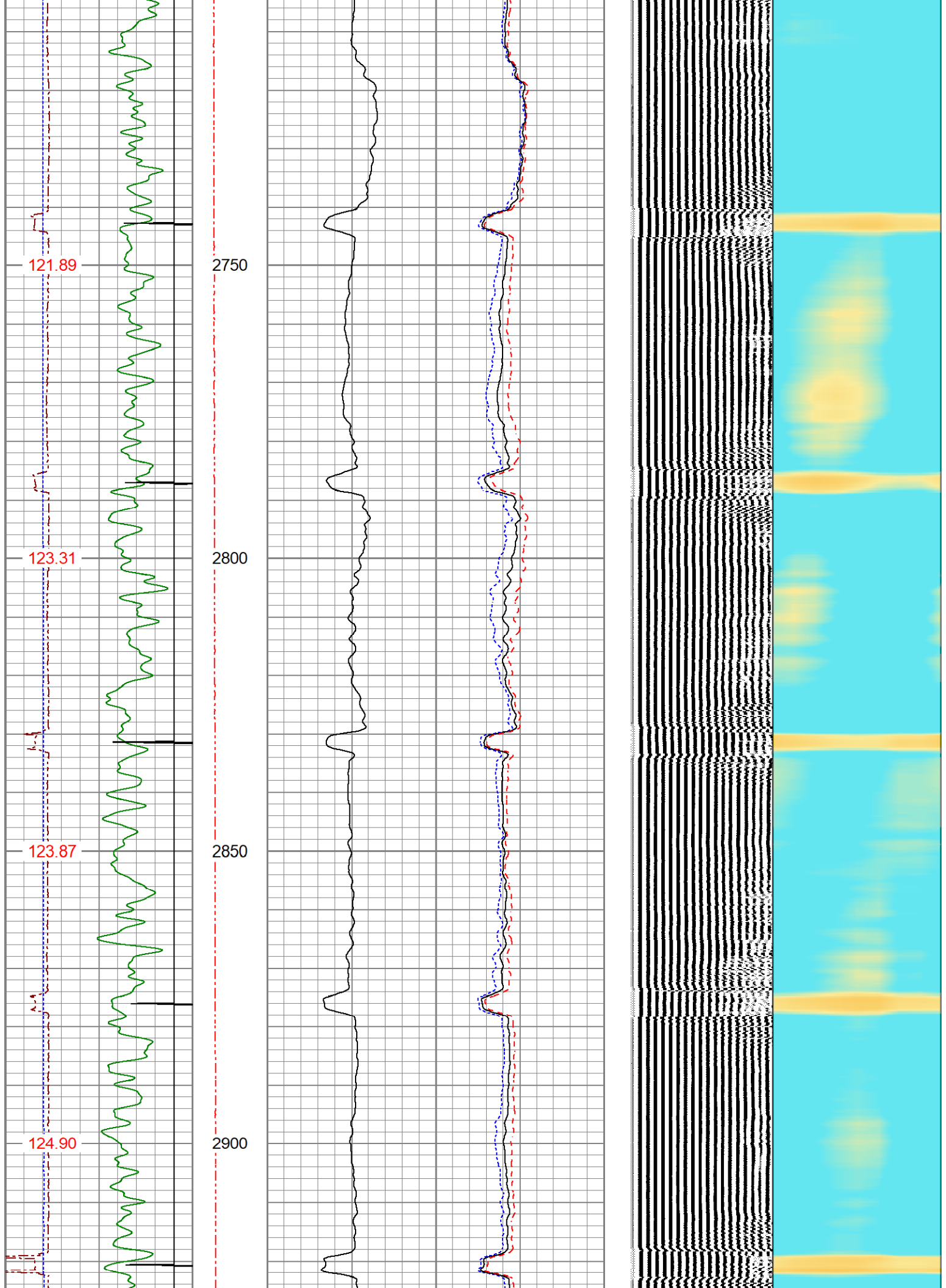


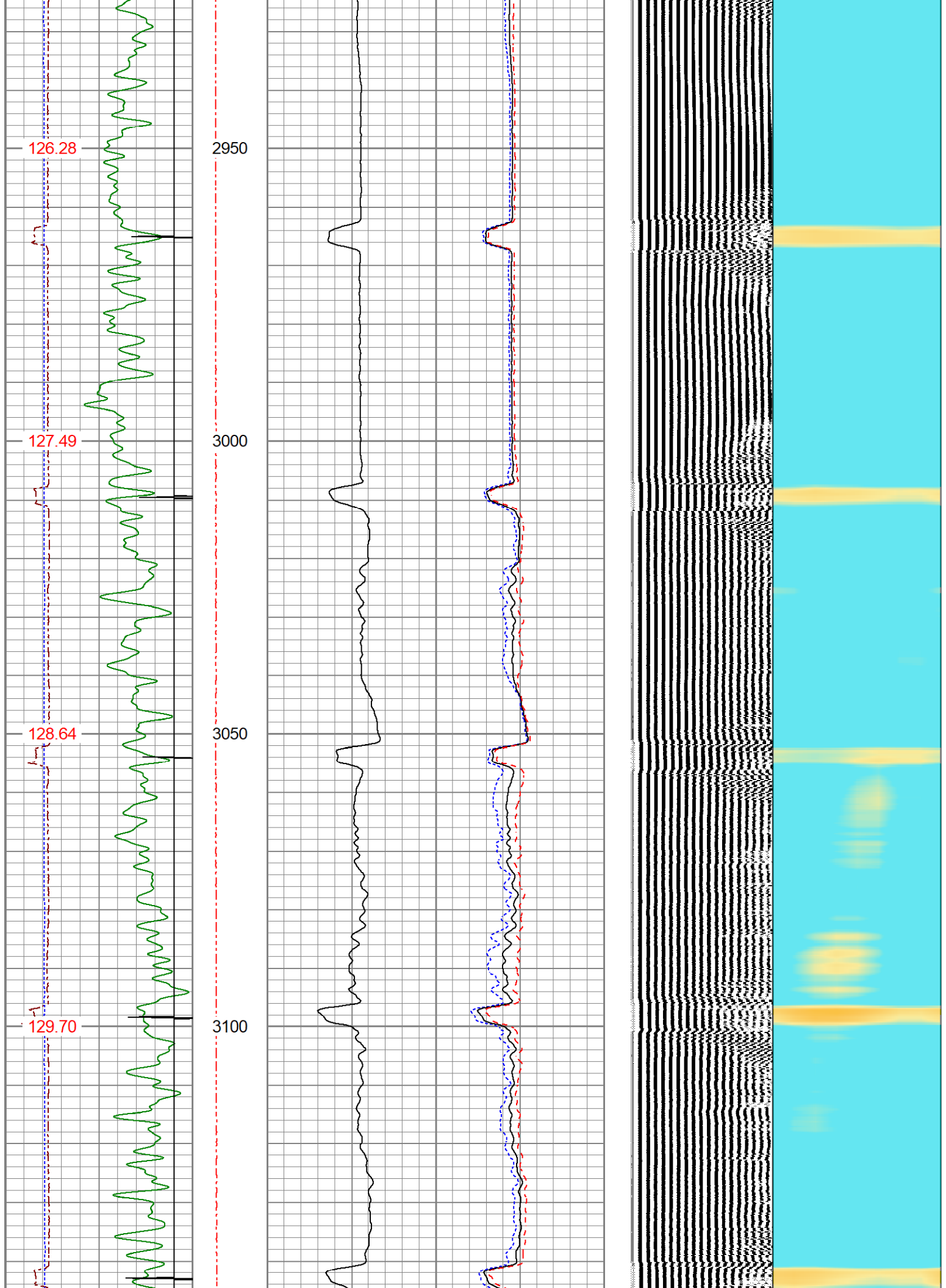


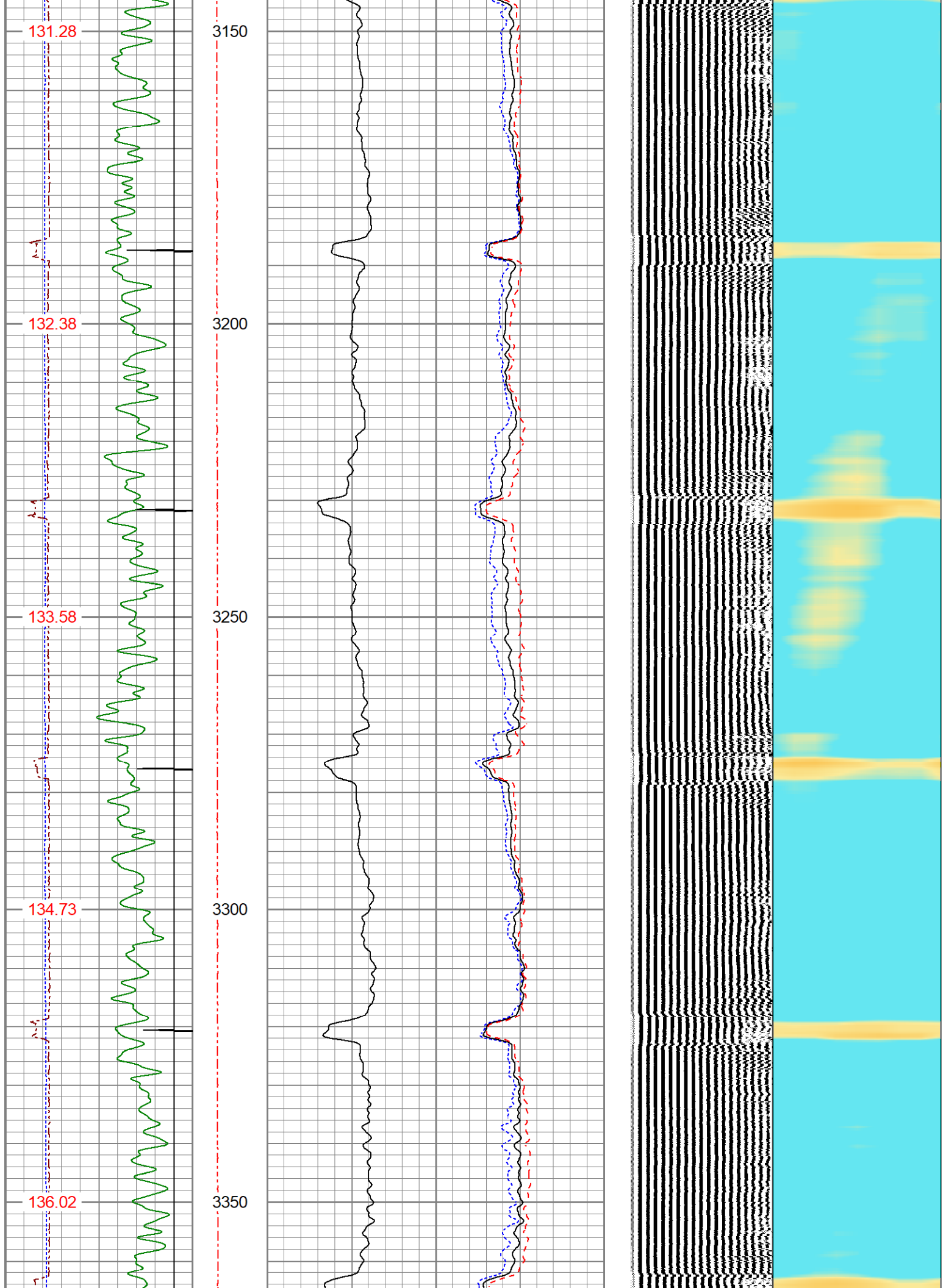


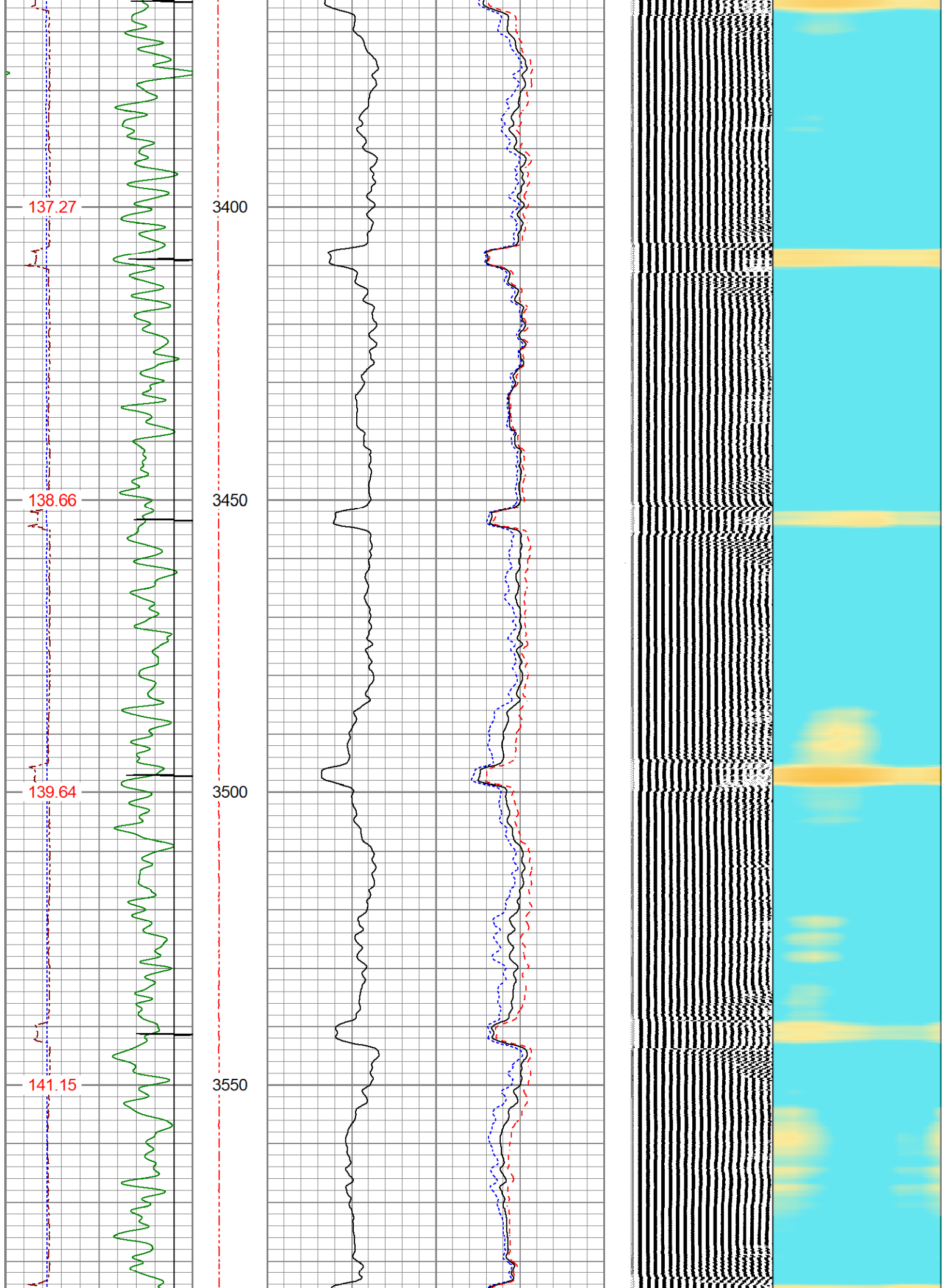


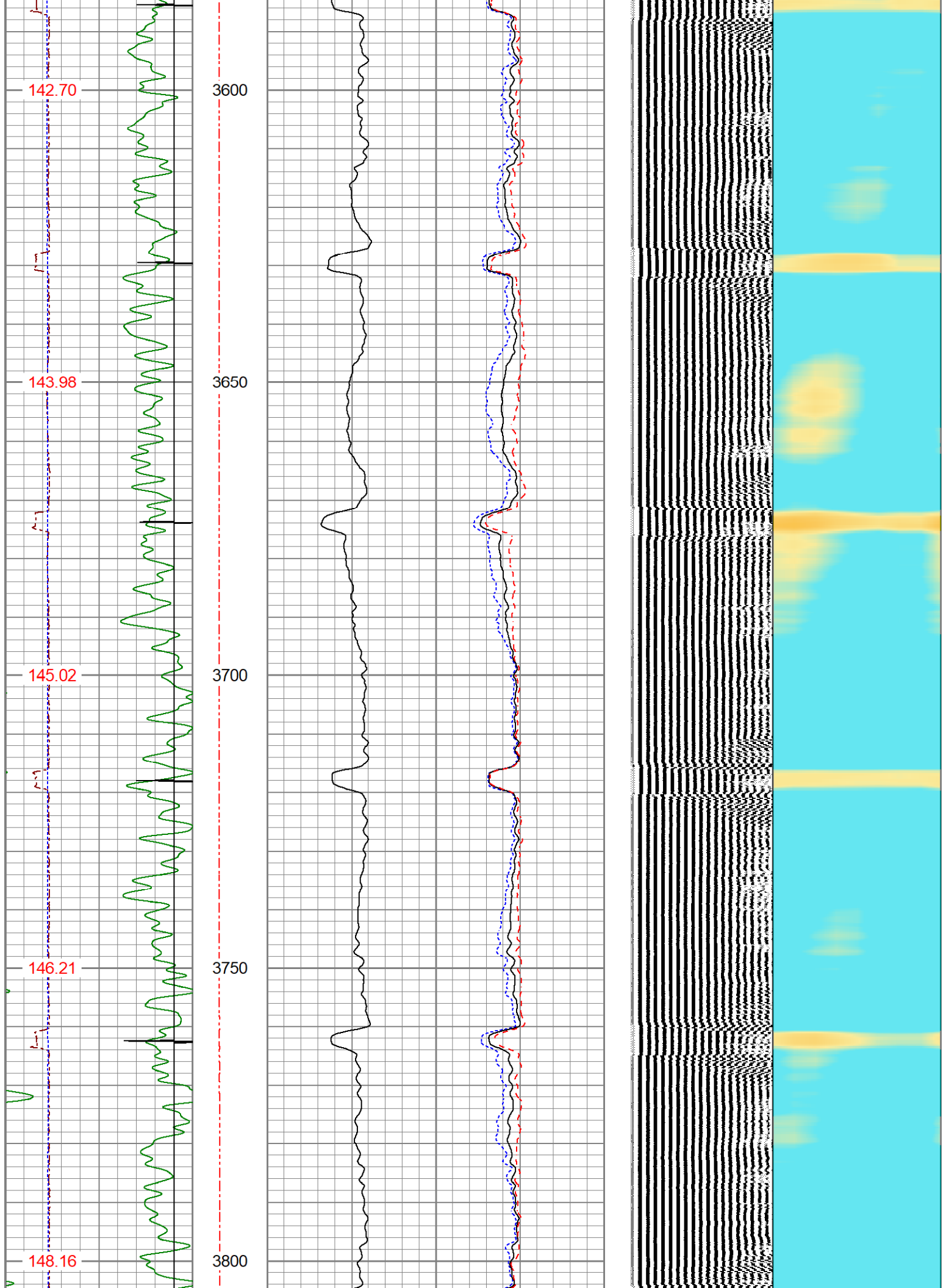


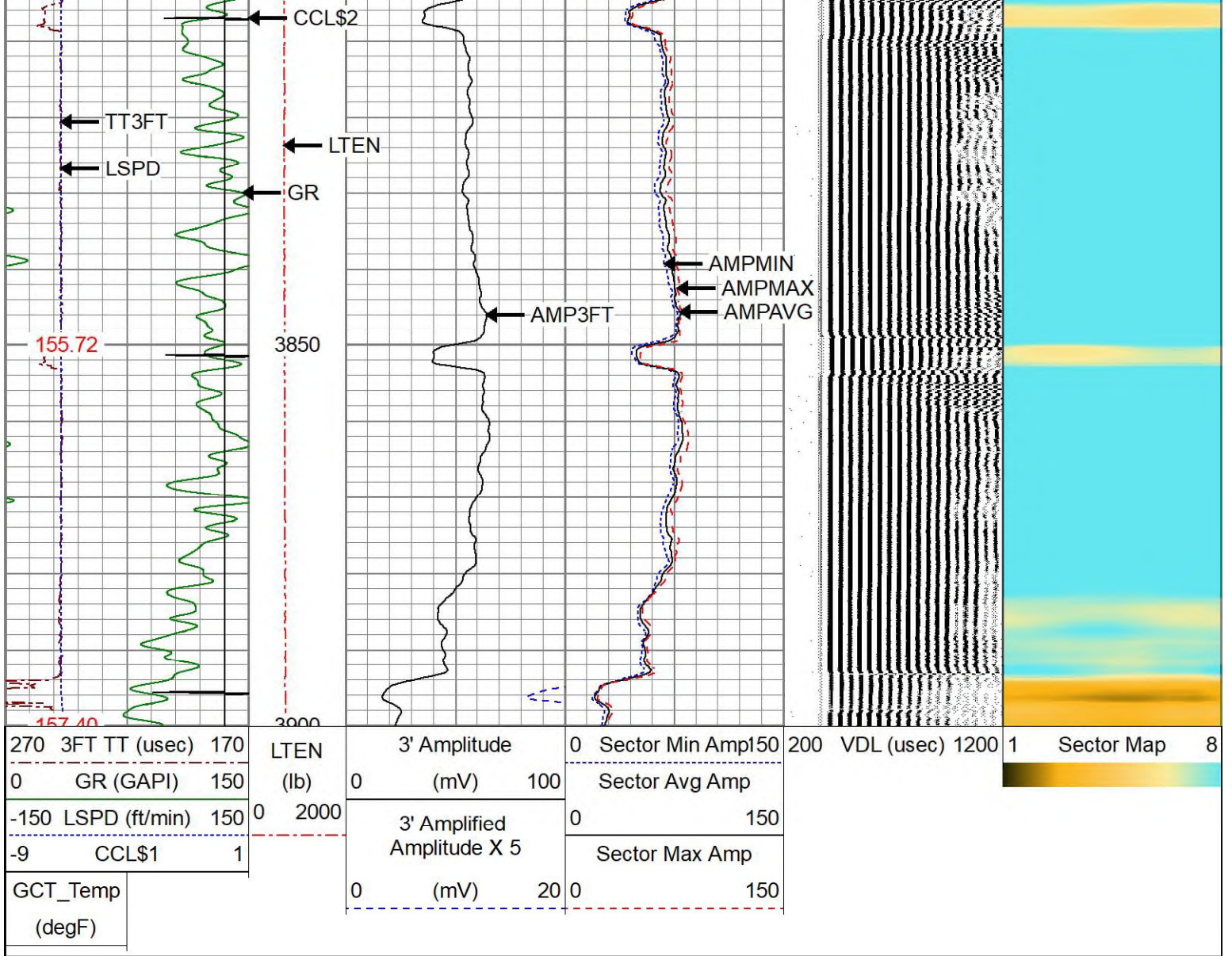








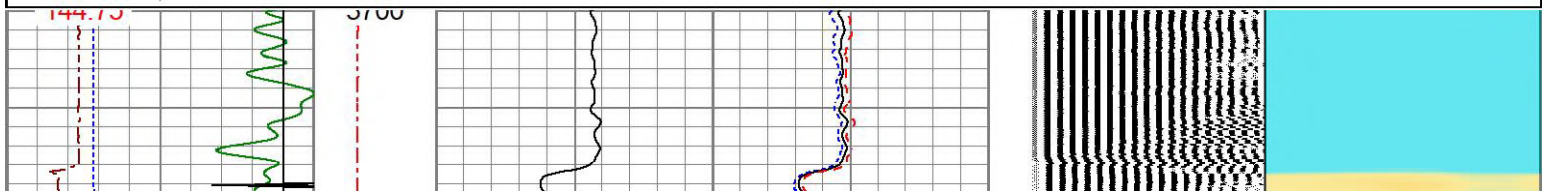
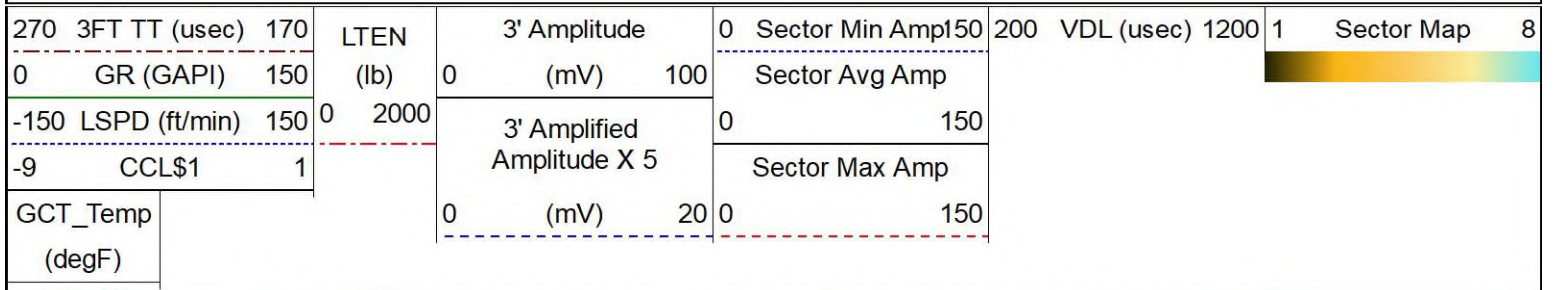


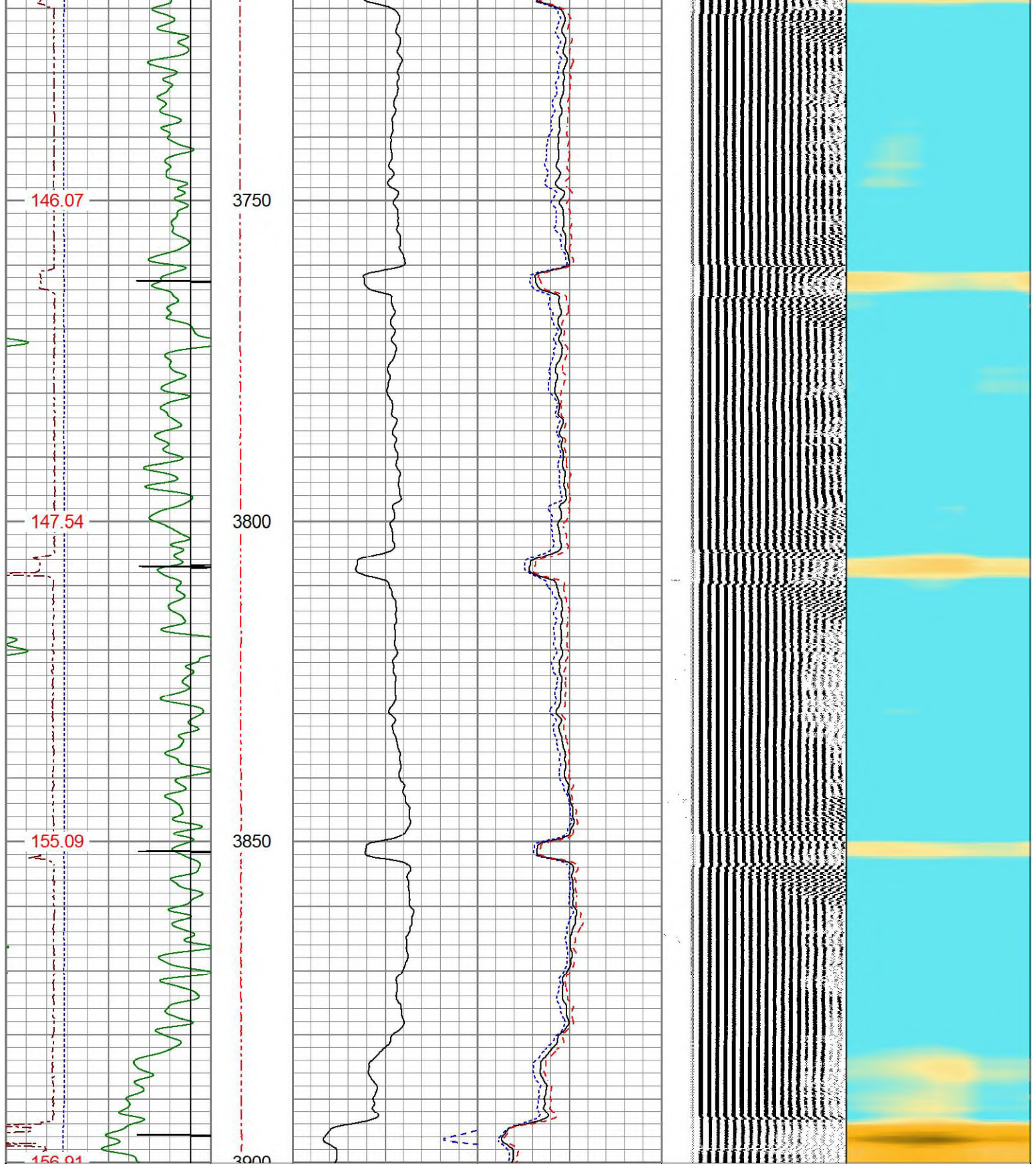


REPEAT PASS

ZERO PSI APPLIED AT SURFACE

Database File 1007-548116_oxy_hsr-rfalovich 14-5_0512317306_20230509_scbl-gr-ccl.db
 Dataset Pathname pass2
 Presentation Format res_scbl 8sec-gr-ccl
 Dataset Creation Tue May 09 15:15:51 2023
 Charted by Depth in Feet scaled 1:240





270	3FT TT (usec)	170	LTEN	3' Amplitude	0	Sector Min Amp	150	200	VDL (usec)	1200	1	Sector Map	8
0	GR (GAPI)	150	(lb)	(mV)	100	Sector Avg Amp							
-150	LSPD (ft/min)	150	0	2000	3' Amplified Amplitude X 5	0	150						
-9	CCL\$1	1			(mV)	20	0	150					
GCT_Temp (degF)													

Calibration Report

Database File 1007-548116_oxy_hsr-rfalovich 14-5_0512317306_20230509_scbl-gr-ccl.db
 Dataset Pathname pass4
 Dataset Creation Tue May 09 15:20:31 2023

Gamma Ray Calibration Report

Serial Number: GCT275-0BP0_base
 Tool Model: GCT275-0BP0
 Performed: Wed Apr 26 12:09:52 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Inclinometer Calibration Report

Performed: Mon Jan 9 07:52:31 2023

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-956.00	943.00	-1.00	1.00	gee
Y Accelerometer	-965.00	910.00	-1.00	1.00	gee
Z Accelerometer	19.11	-882.49	0.00	1.00	gee

Segmented Cement Bond Log Calibration Report

Serial Number: RBT275C_Base
 Tool Model: RADII-275C

Calibration Casing Diameter: 4.500 in
 Calibration Depth: 27.700 ft

Master Calibration, performed Wed Apr 26 12:08:10 2023:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.120	0.700	81.196	71.895	0.700
CAL	0.000	1.126				
5'	0.000	1.022	0.700	81.196	78.732	0.700
SUM						
S1	0.000	1.125	0.000	100.000	88.871	0.000
S2	0.000	1.123	0.000	100.000	89.014	0.000
S3	0.000	1.113	0.000	100.000	89.829	0.000
S4	0.000	1.096	0.000	100.000	91.217	0.000
S5	0.000	1.101	0.000	100.000	90.807	0.000
S6	0.000	1.104	0.000	100.000	90.587	0.000
S7	0.000	1.115	0.000	100.000	89.654	0.000
S8	0.000	1.121	0.000	100.000	89.214	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 1.126 1.000 0.000

Air Zero Calibration, performed Wed Apr 26 12:07:27 2023:

	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

Inclinometer Calibration Report

Performed:	Mon Jan 9 07:52:41 2023				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-918.00	908.00	-1.00	1.00	gee
Y Accelerometer	-941.00	887.00	-1.00	1.00	gee
Z Accelerometer	1.35	894.18	0.00	1.00	gee



Company **OCCIDENTAL PETROLEUM CORP.**
 Well **HSR-RAFALOVICH 14-5**
 Field **WATTENBERG**
 County **WELD**
 State **COLORADO**