



PIONEER

Pioneer Energy Services

**RADIAL BOND LOG
WITH GAMMA RAY**

Comp. VERDAD RESOURCES				Company VERDAD RESOURCES			
Well PEGGY 2501 01H				Well PEGGY 2501 01H			
Field WATTENBERG				Field WATTENBERG			
Co. WELD				County WELD			
State COLORADO				State COLORADO			
Date of Service		08 MAY 2019		Location: API #: 05-123-49840		Other Services	
Run Number		ONE		300' FSL & 2412' FWL SE SW		NONE	
Depth Driller or PBTD		11787'		SEC 25 TWP 9N RGE 60W			
Depth Logger		6940'					
Bottom Log Interval		6940'					
Top Log Interval		SURFACE					
Open Hole Size		N/A					
Type Fluid		WATER					
Fluid Level		FULL					
Fluid Density		N/A					
Max. Recorded Temperature		198 F					
Max. Wellhead Pressure		ZERO					
Wellhead Connection		5.125" 10K					
Estimated Cement Top		N/A					
Unit Number		P-81					
Wireline Size		9/32"					
Location		FORT MORGAN					
Recorded By		SCHOENROGGE					
Witnessed By		MR. SMITH					
Tubing Record		Size		Wt/Ft		Top	
Surface Casing		9.625"		36#		SURFACE	
Production Casing		5.5"		20#		SURFACE	
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.
DEPTHS ARE WIRELINE

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew		Tool Data - Services	Serial Number
Engineer: SCHOENROGGE Operator: MARCH Operator: ELATOV Operator:		SEE DIAGRAM	

Top - Bottom

BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL
TEMP	in 8.5	degF 220	in 5.5	in 0.361	lb/ft 20	mV 71.9
MINAMPL	MINATTN	PERFS	PPT	SRFTEMP	TDEPTH	
mV 2.2	db/ft 0.8	0	usec 261	degF 50	ft 7000	

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31
TEMP	11.56					
			PROBE-RBT-DIGITAL-RBL-DCT (FW1411-9.21) Probe 2 3/4" Radii Bond with Temp-Corrosion Package	11-9.21	2.75	105.00
WVFS8	9.27					
WVFS7	9.27					
WVFS6	9.27					
WVFS5	9.27					
WVFS4	9.27					
WVFS3	9.27					
WVFS2	9.27					
WVFS1	9.27					
WVFCAL	9.27					
WV3FT	9.27					
WV5FT	8.27					
HEADVOLT	5.08					

CCL	4.20					
GCT_TEMP	3.41					
GR	2.83					
			PROBE-GR/CCL-DIGITAL-275 Probe GCT 4.75608) Probe 2 3/4" Gamma Ray/Temp/CCL	2.75	60.00	
			Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.38	
				1.00		
Dataset: verdad_peggy 2501 01h_0512349840_20190508_scbl.db: field/well/run1/pass5						
Total length: 15.31 ft						
Total weight: 169.31 lb						
O.D.: 2.75 in						


PIONEER

Pioneer Energy Services

FREE PIPE SECTION

ZERO PSI APPLIED AT SURFACE

Database File verdad_peggy 2501 01h_0512349840_20190508_scbl.db
Dataset Pathname pass2
Presentation Format pinr_scbl
Dataset Creation Wed May 08 10:02:04 2019
Charted by Depth in Feet scaled 1:240

3Ft Travel Time

270 (usec) 170

-9 Collar Locator 1

Gamma Ray

0 (GAPI) 200

TEMP

(degF)

3' Amplitude

0 (mV) 100

3' Amplified
Amplitude X 5

0 (mV) 20

1 Bond Index 0

Sector

Amplitude Average

0 150

Sector

Amplitude Maximum

0 150

Sector

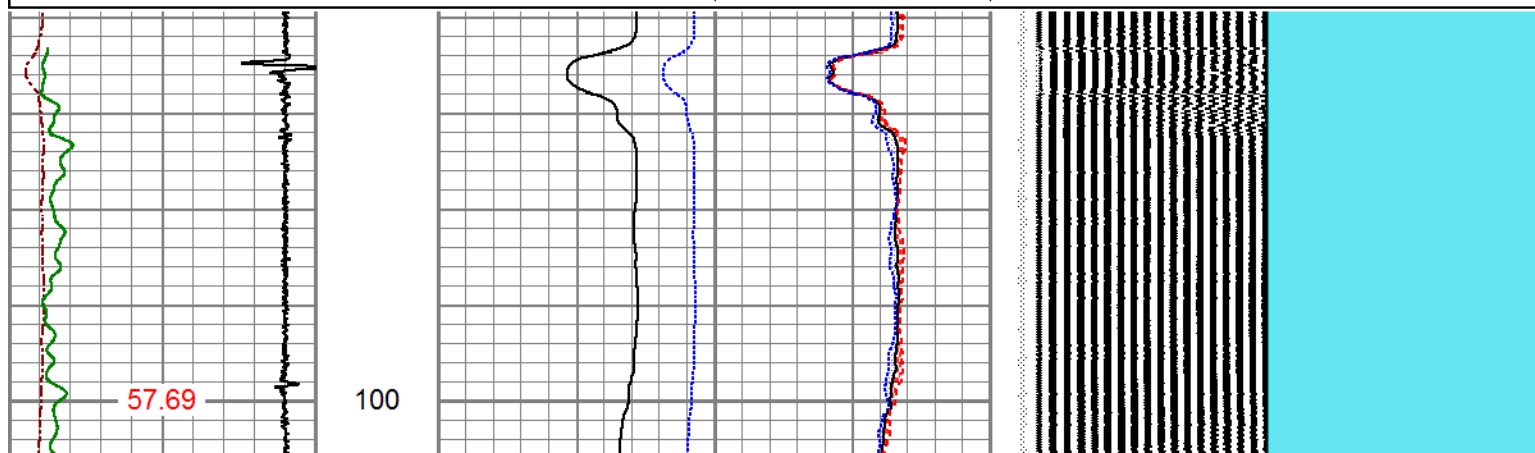
Amplitude Minimum

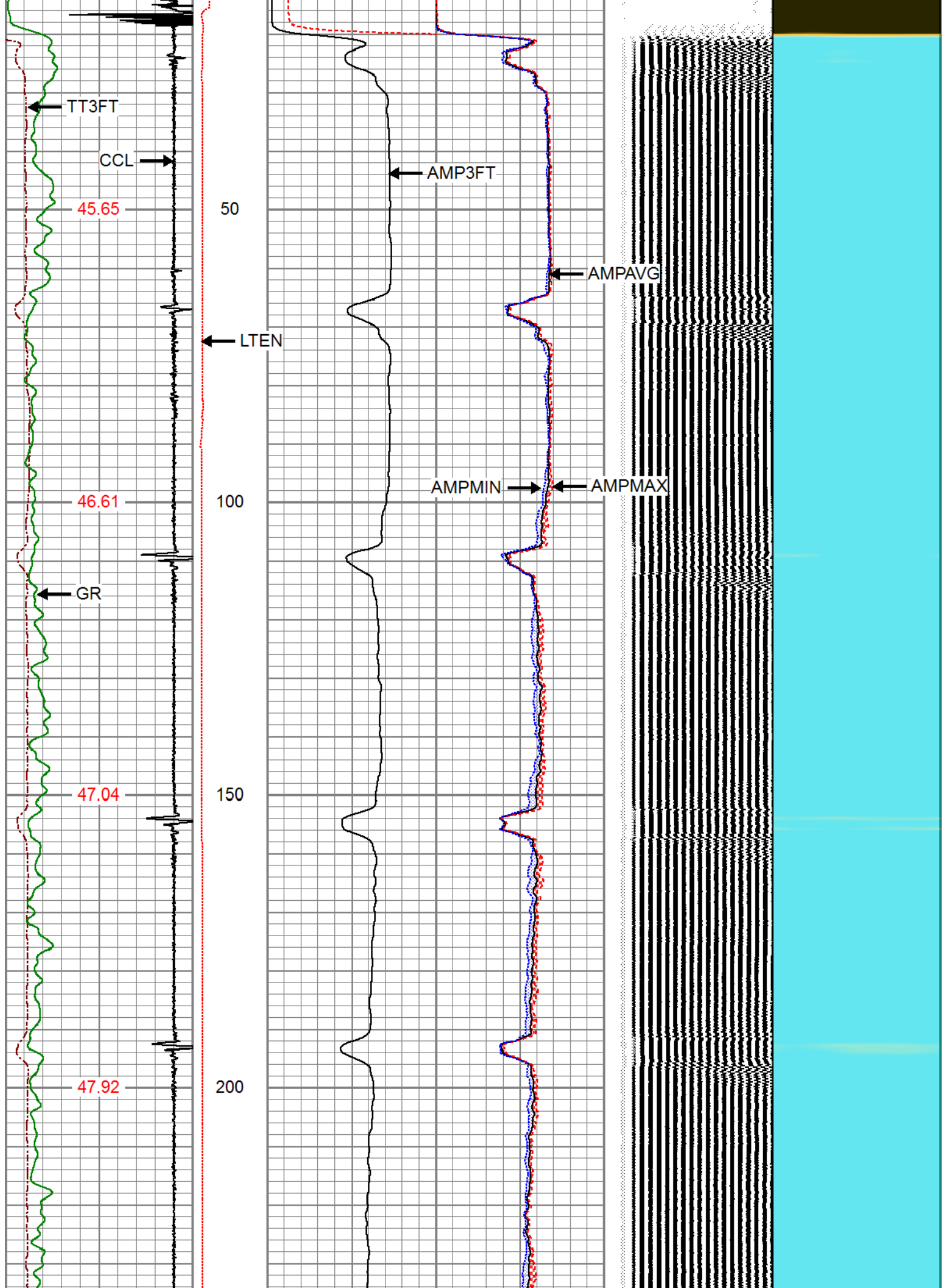
0 150

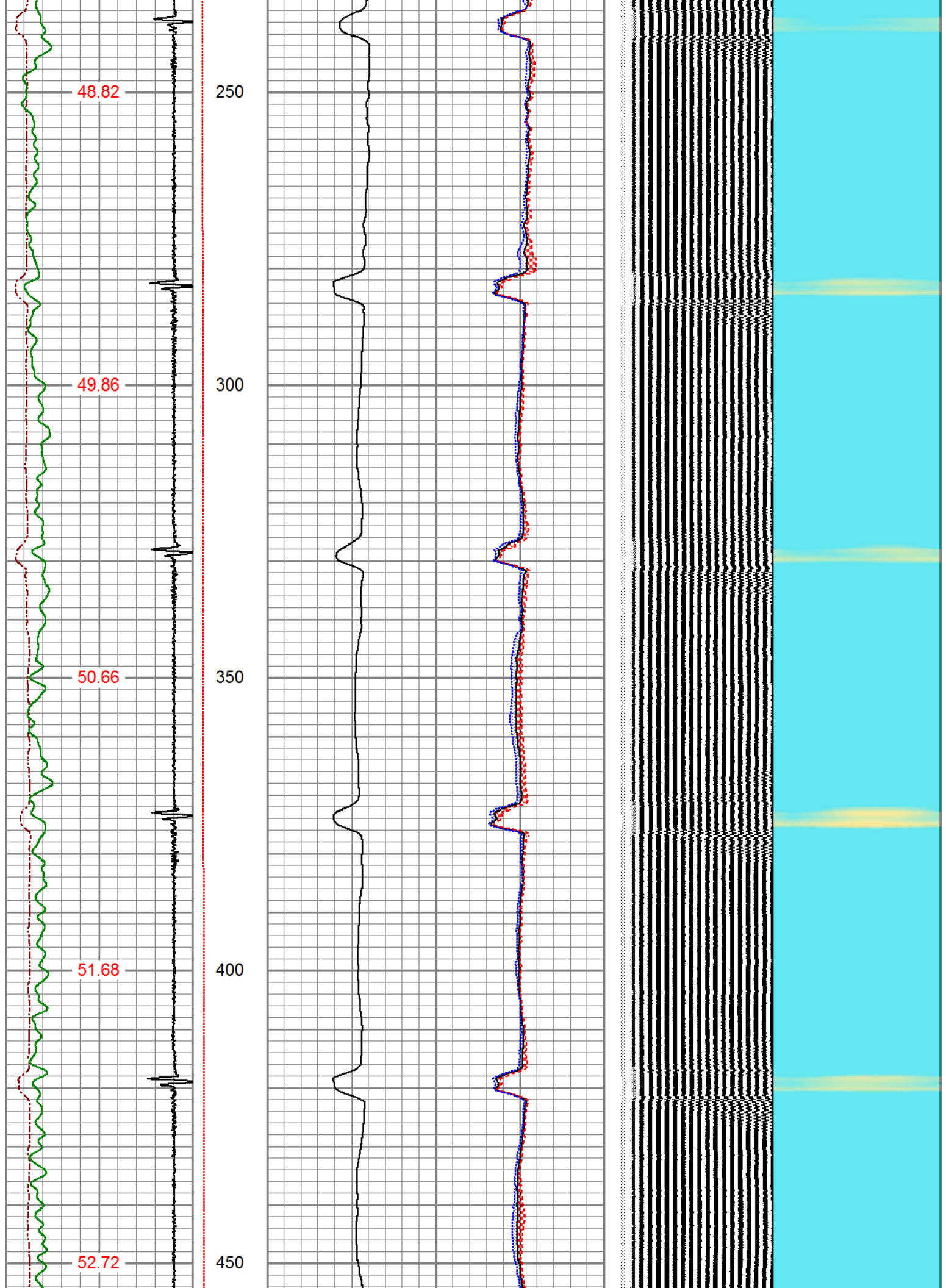
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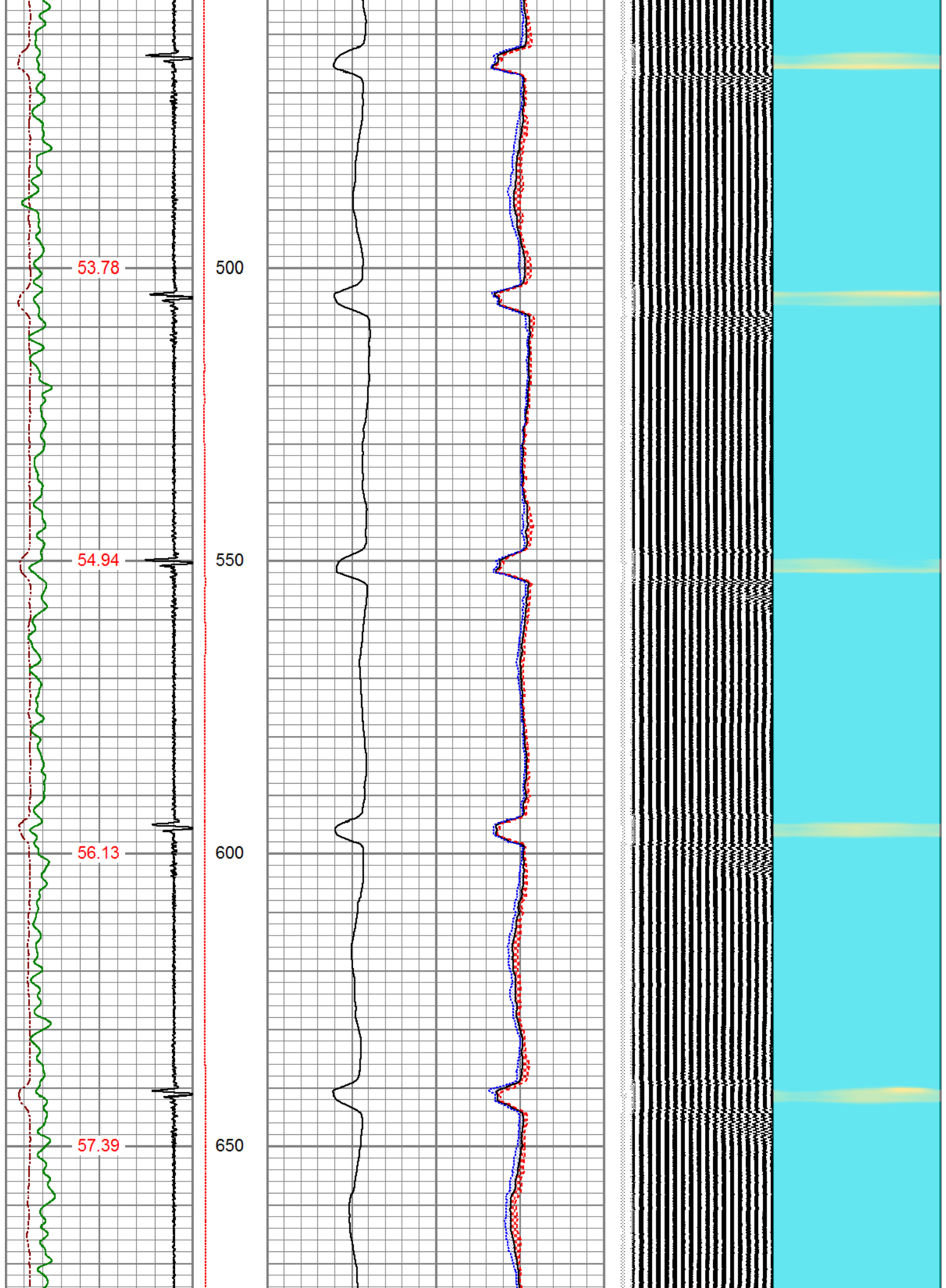
200 (usec) 1200

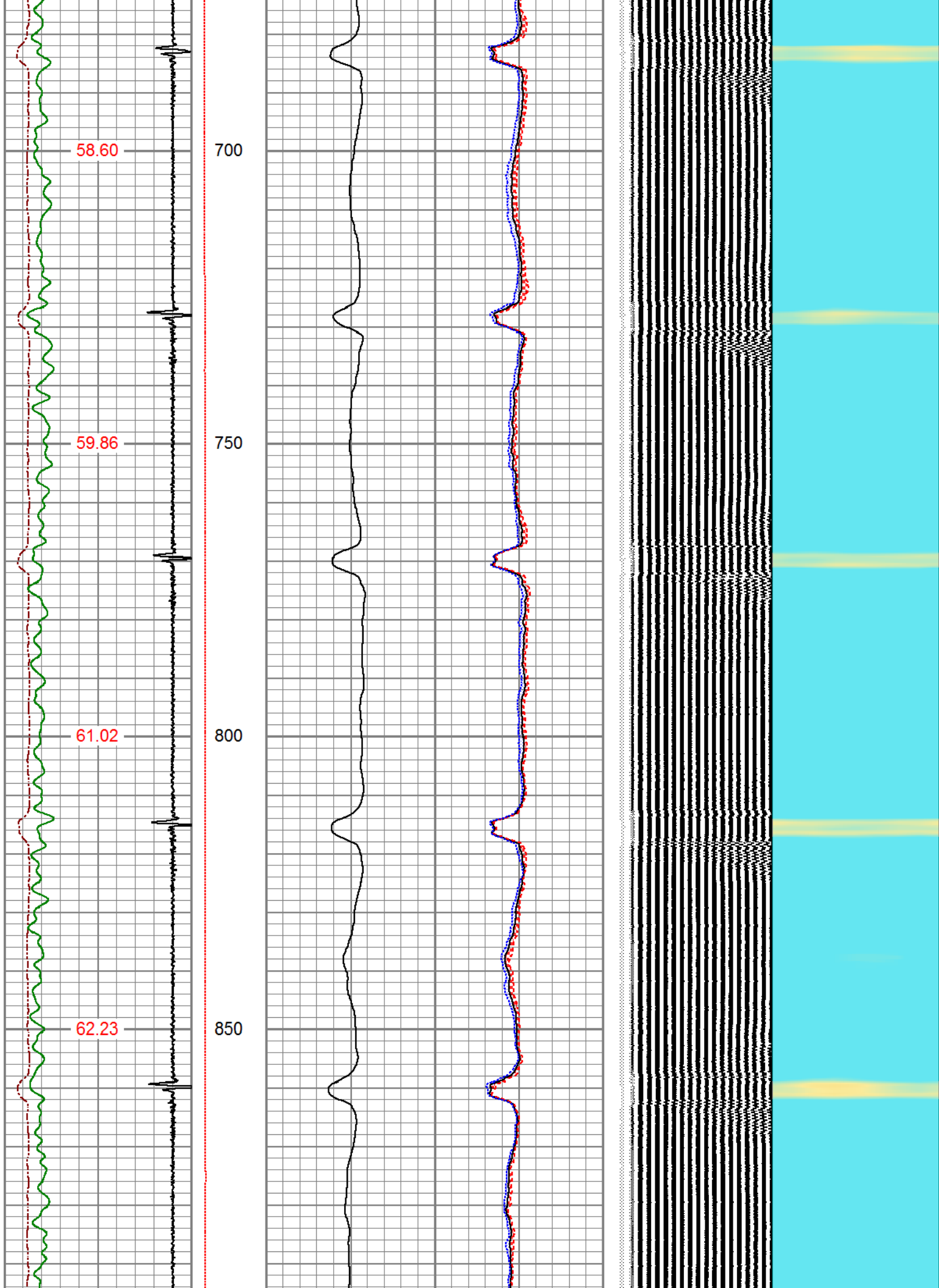
1 Sector Map 8

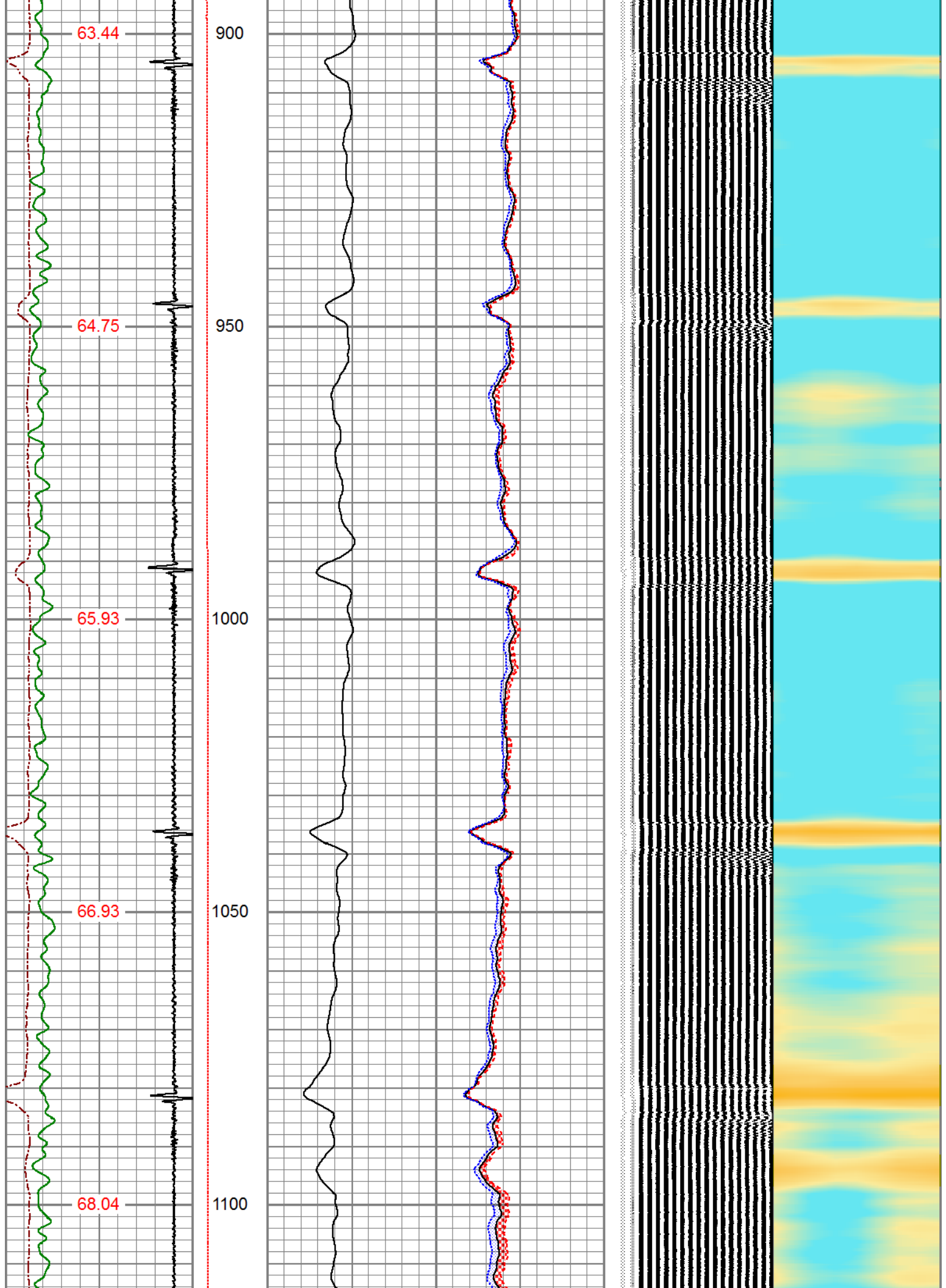


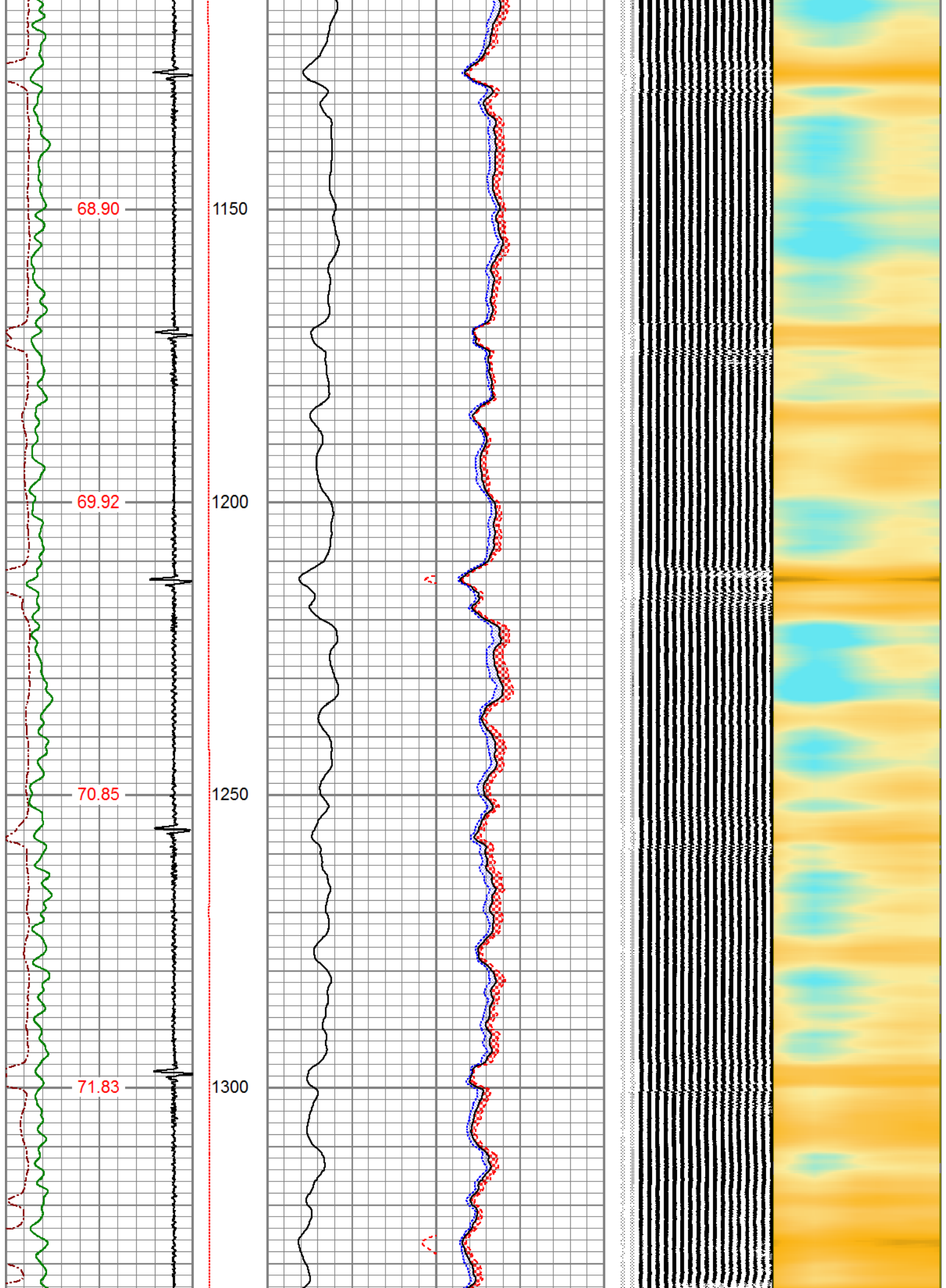


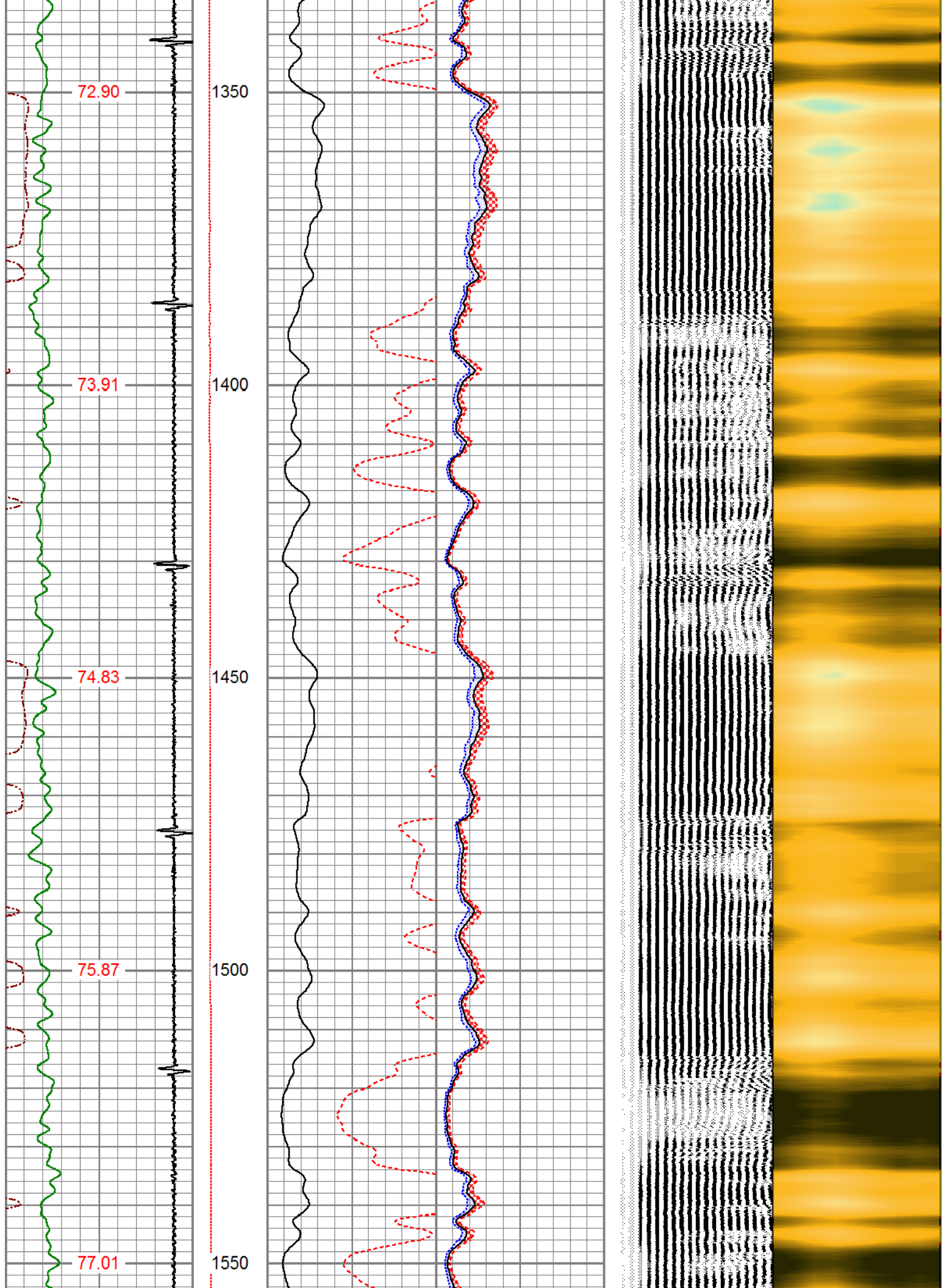


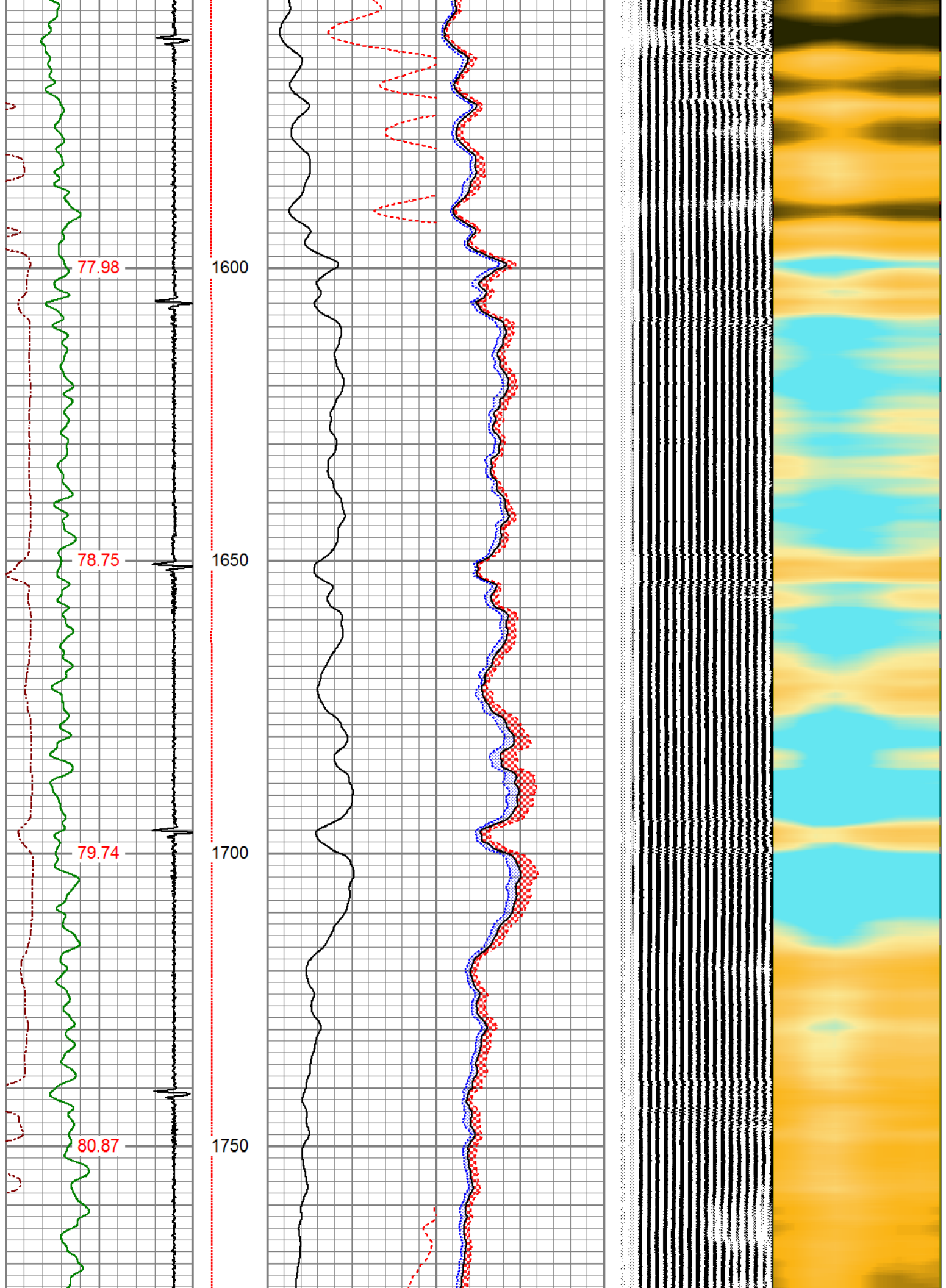


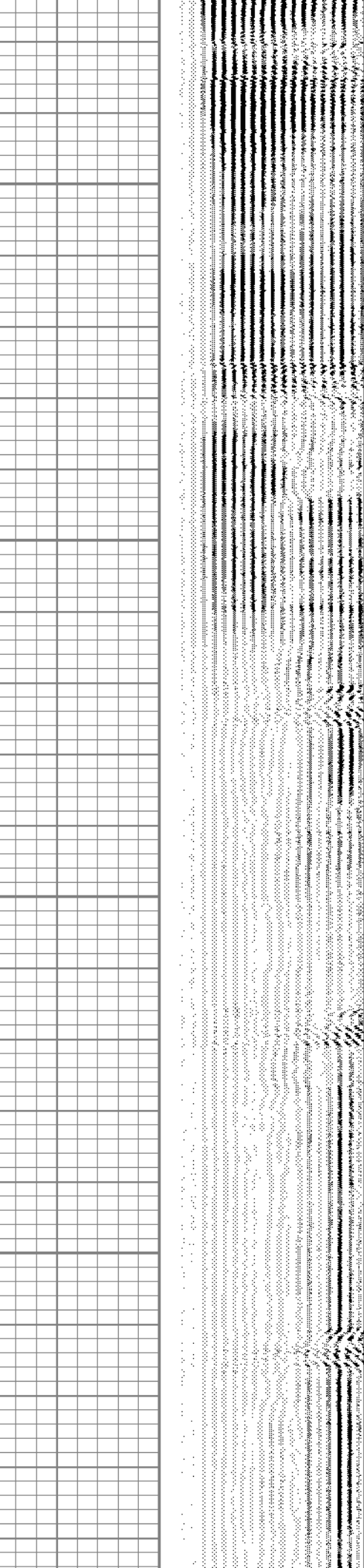
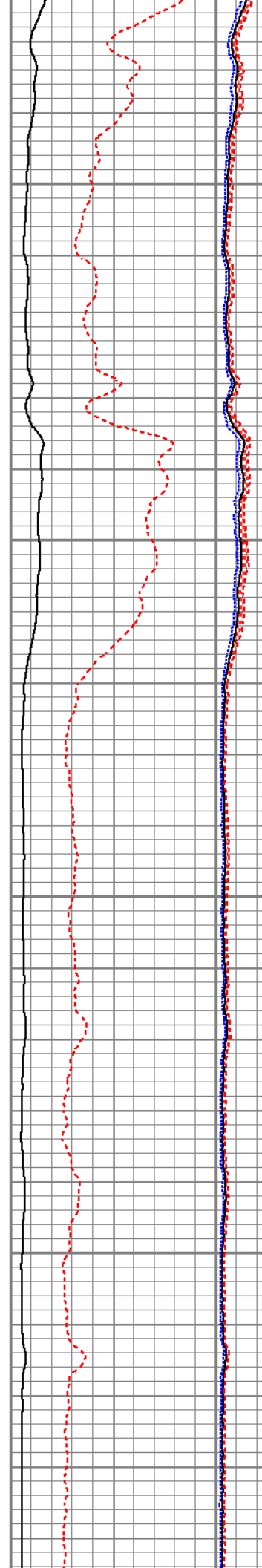
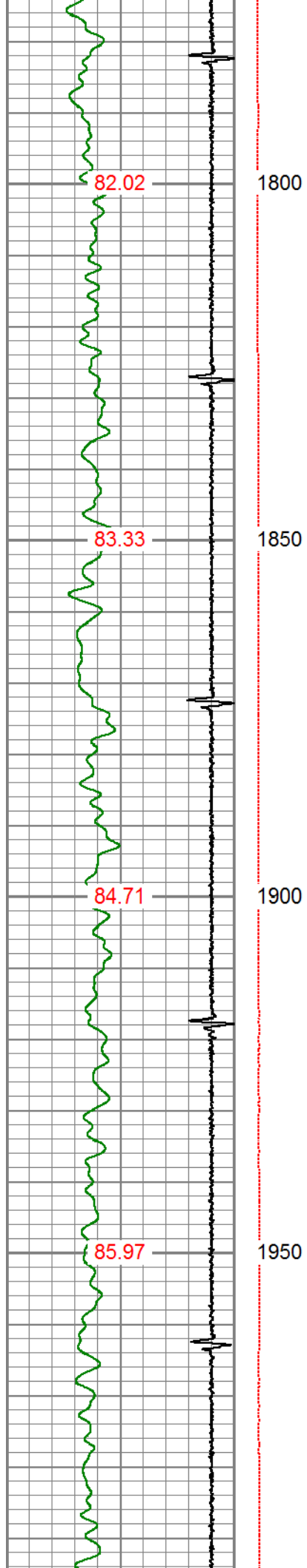


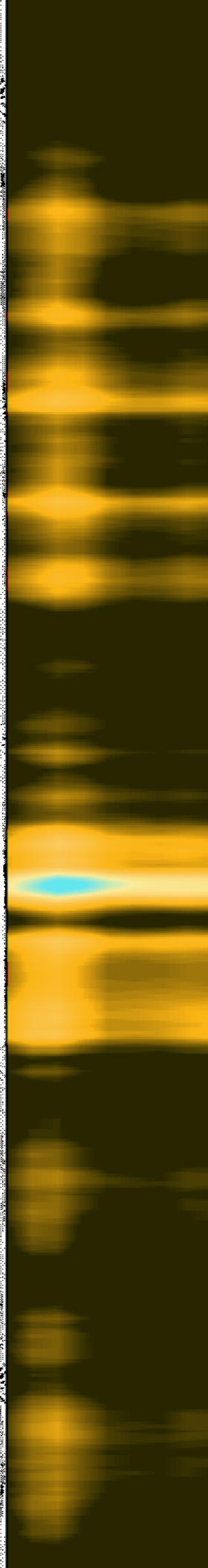
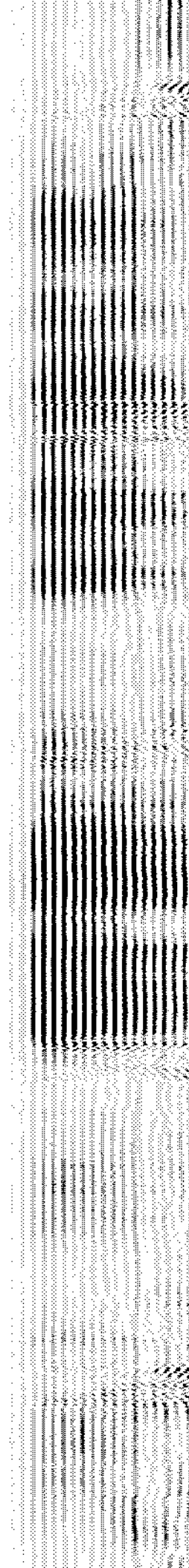
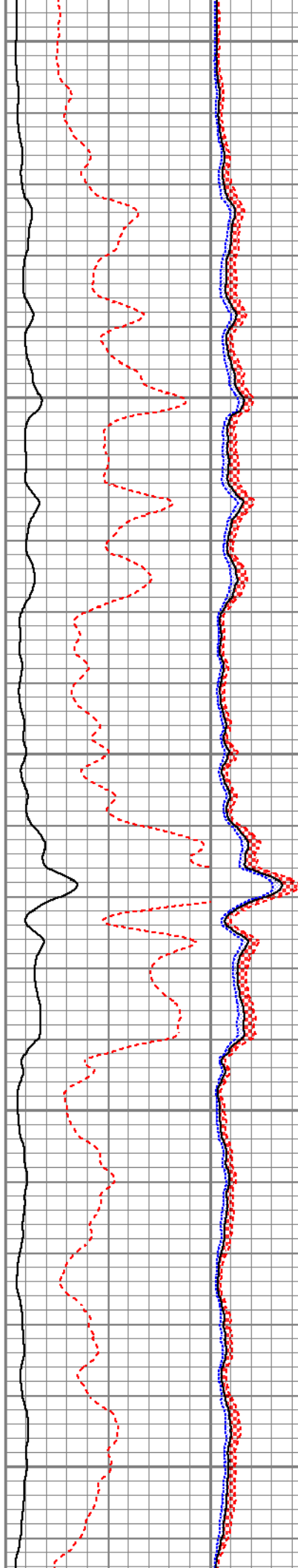
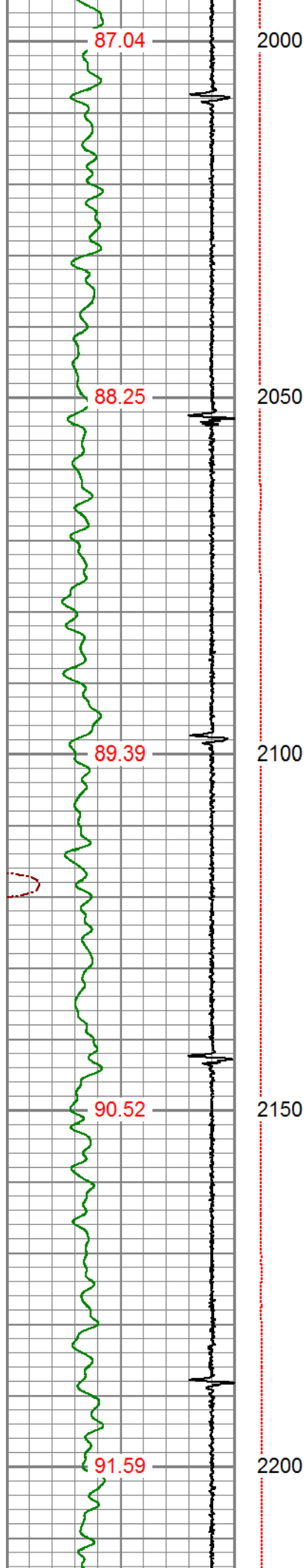


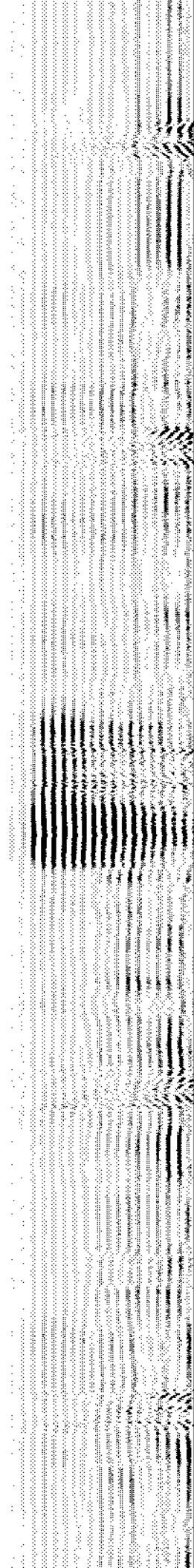
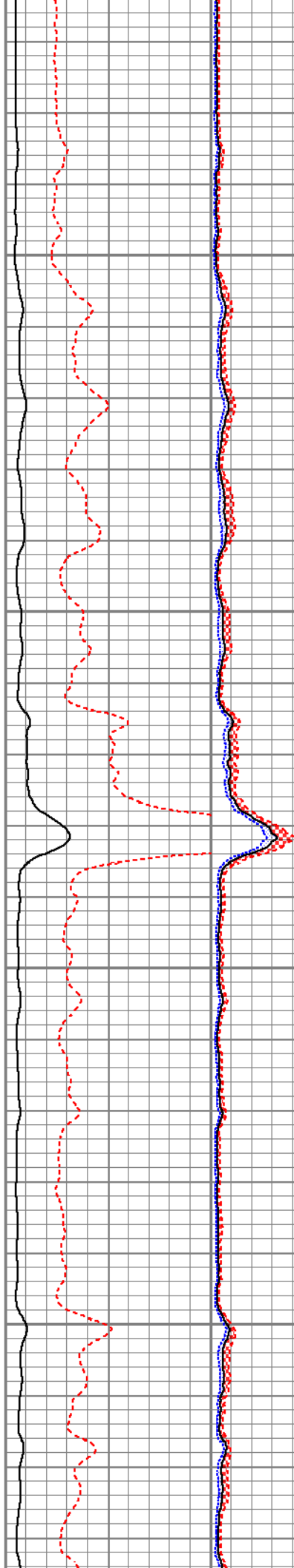
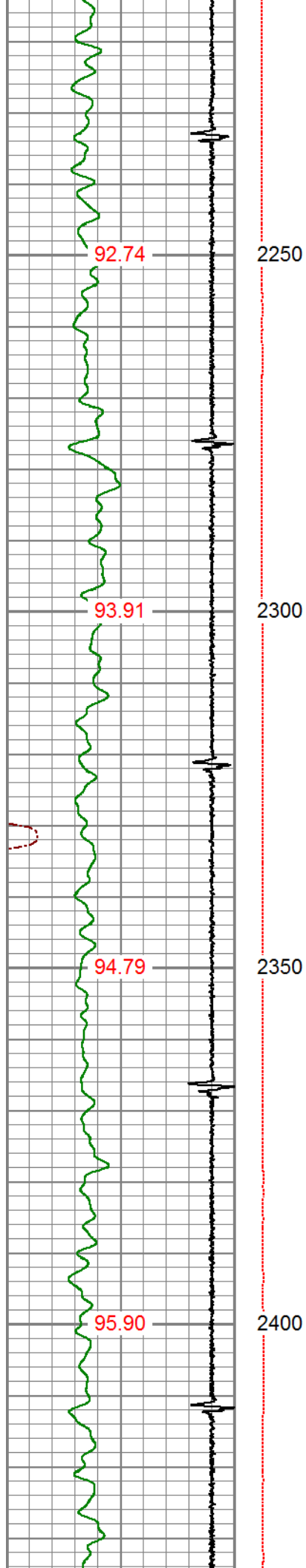


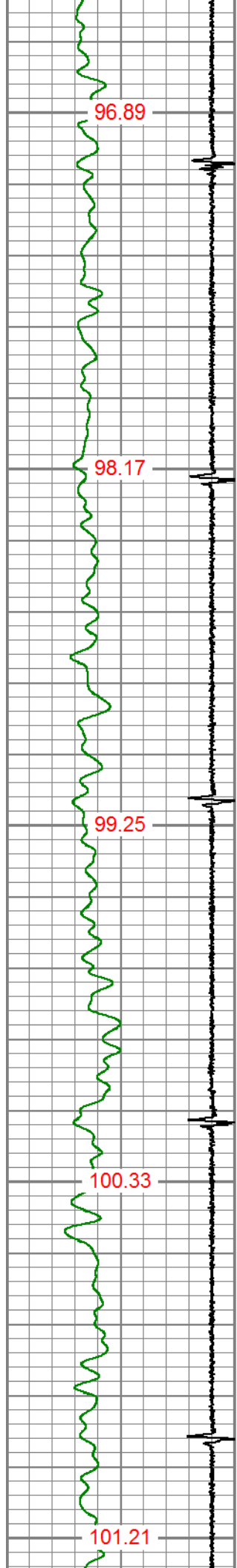












96.89

98.17

99.25

100.33

101.21



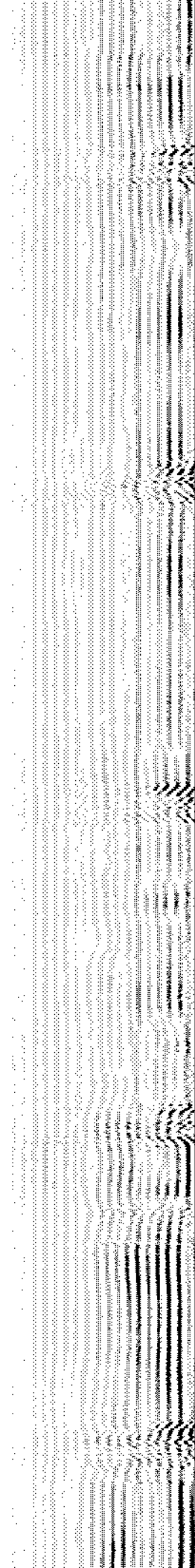
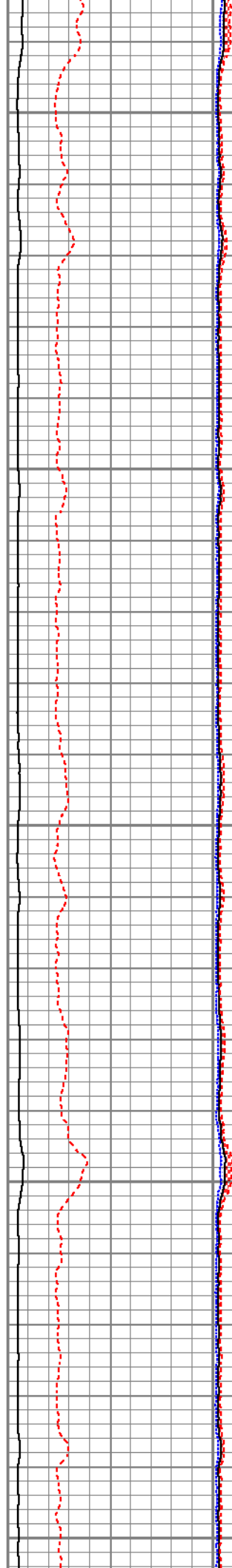
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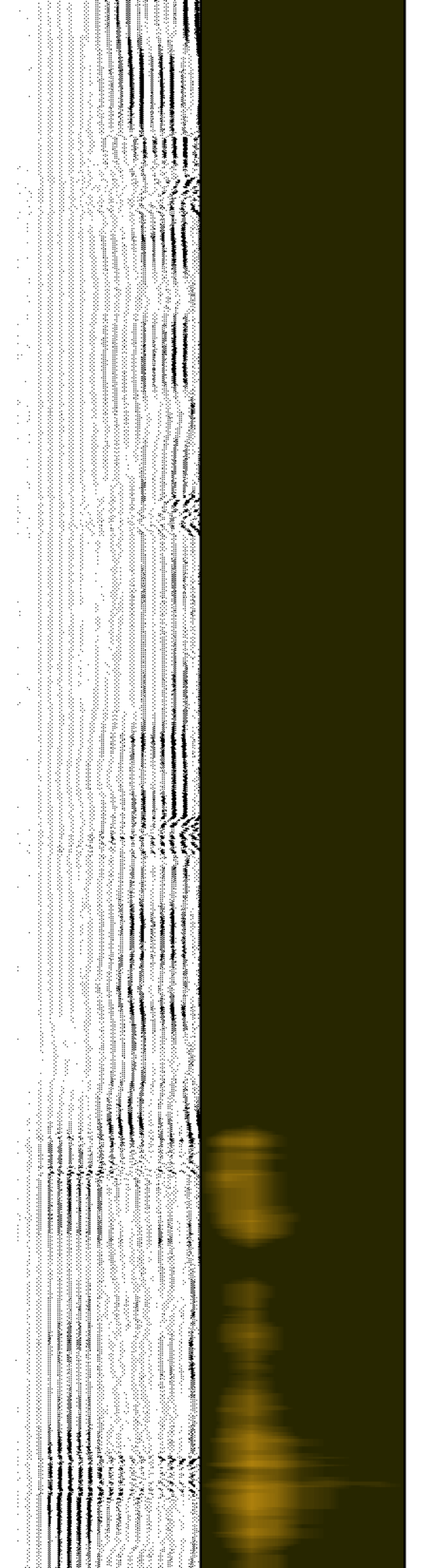
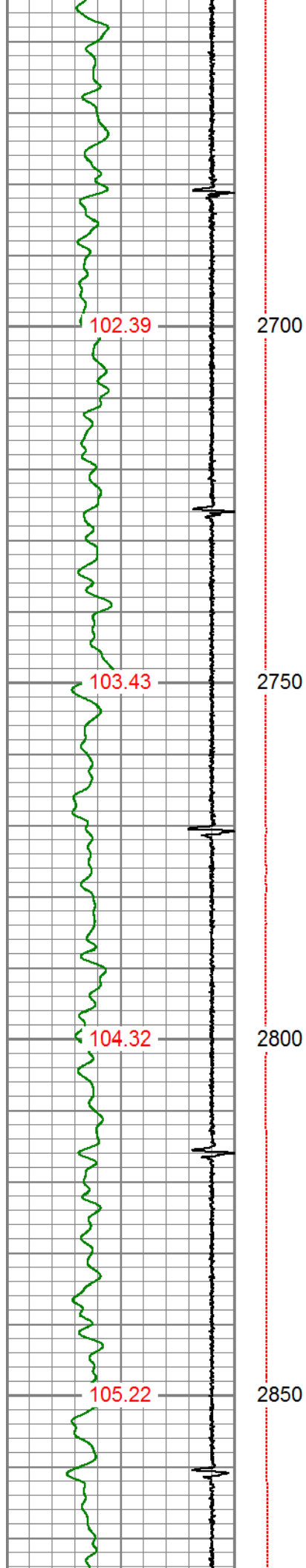
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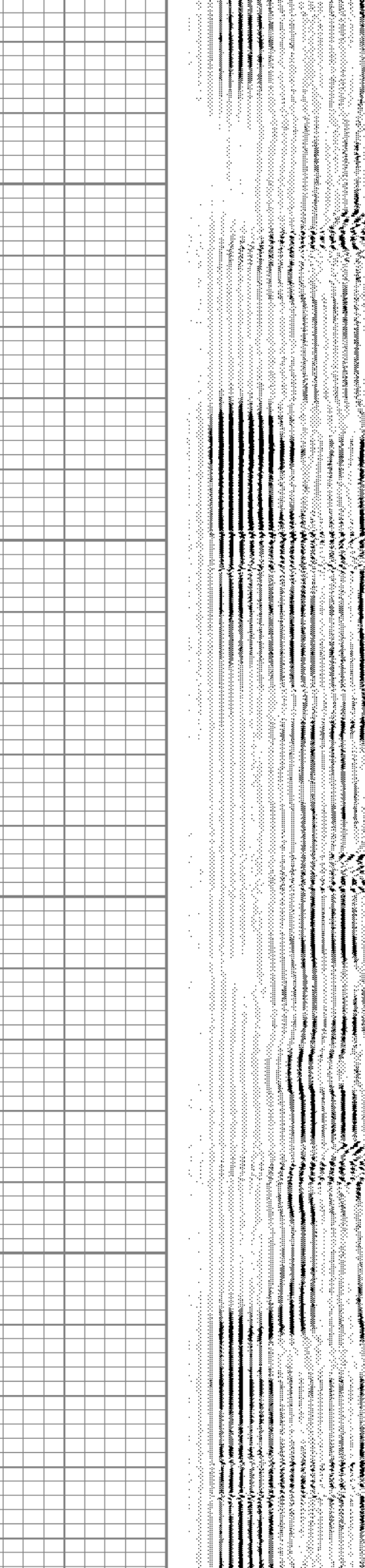
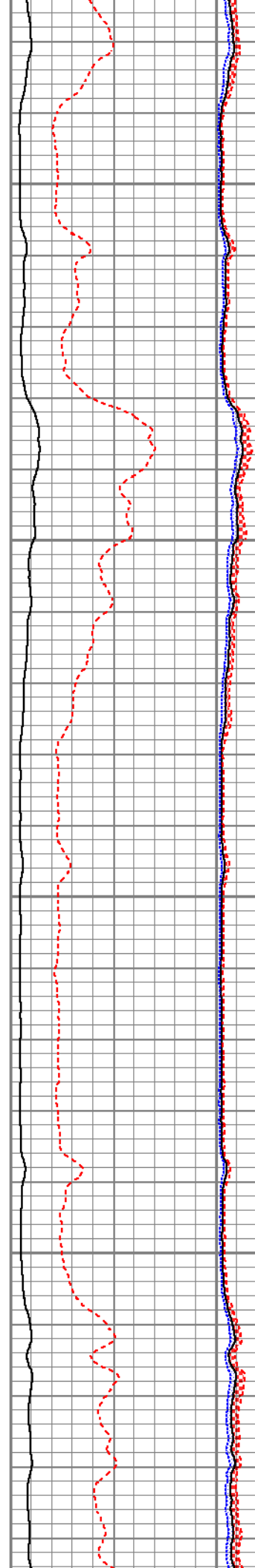
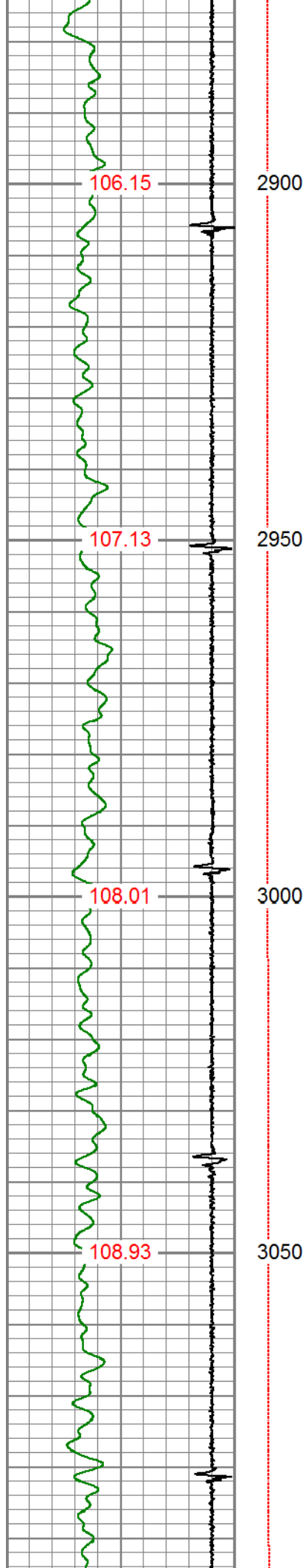
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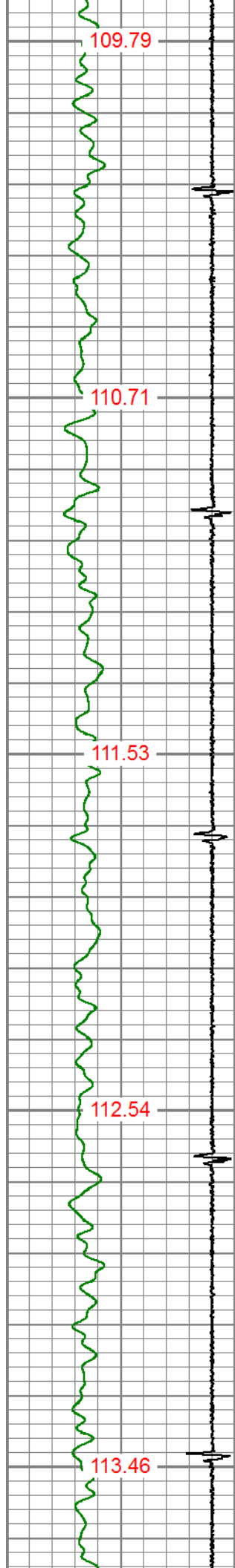
2600

2650









109.79

110.71

111.53

112.54

113.46

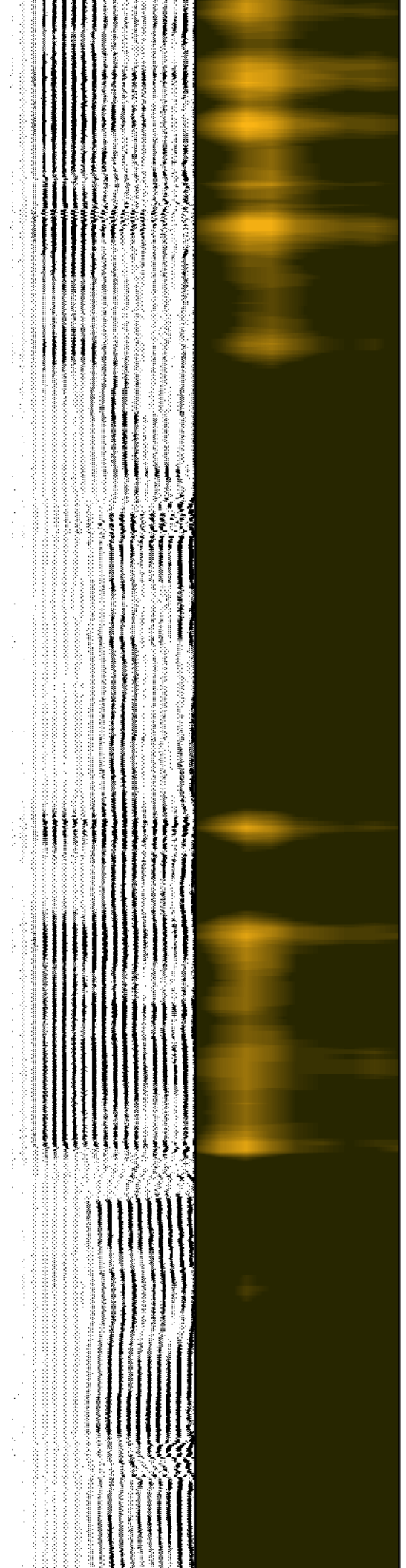
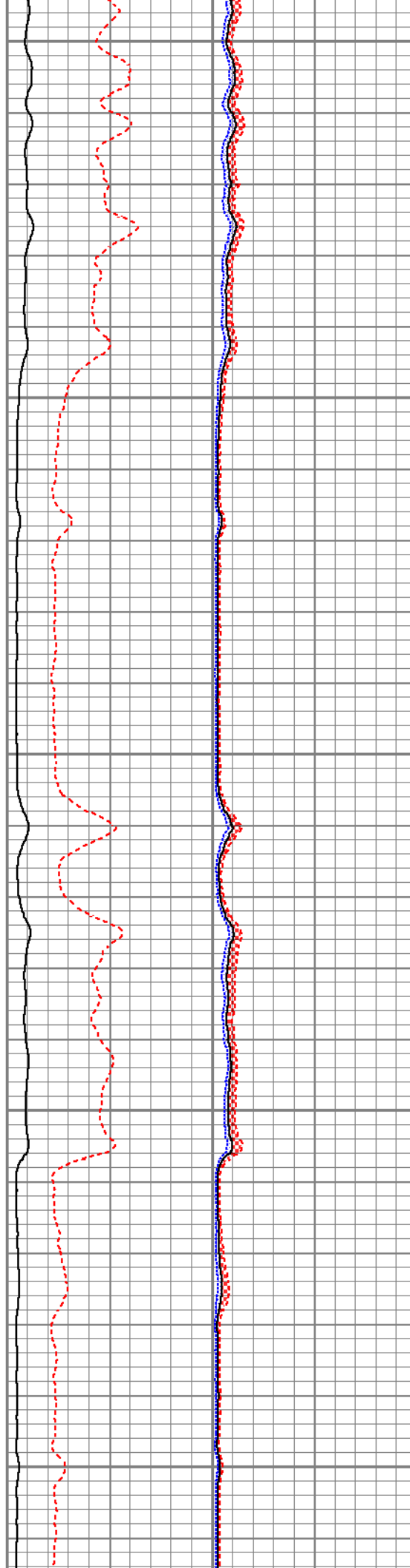
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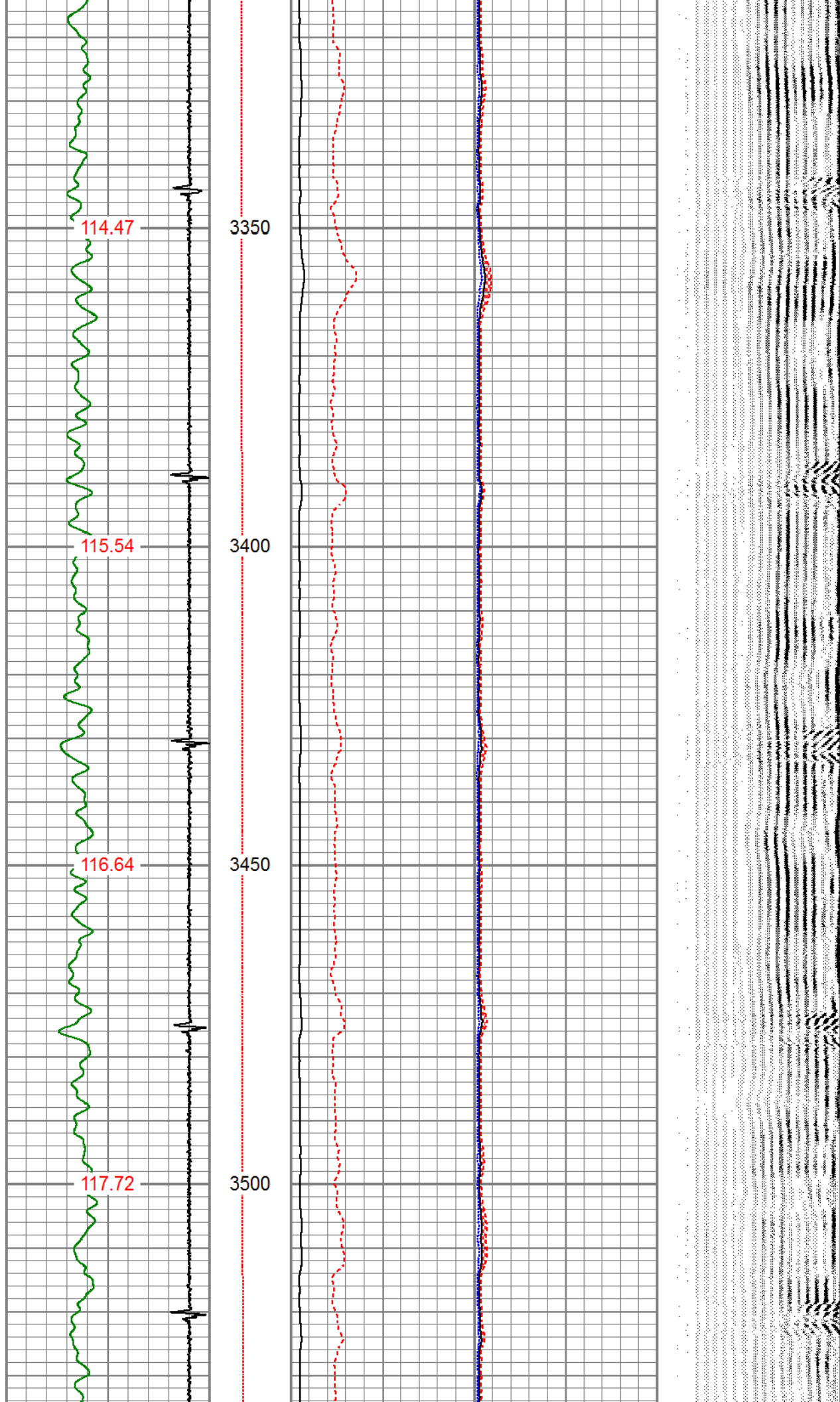
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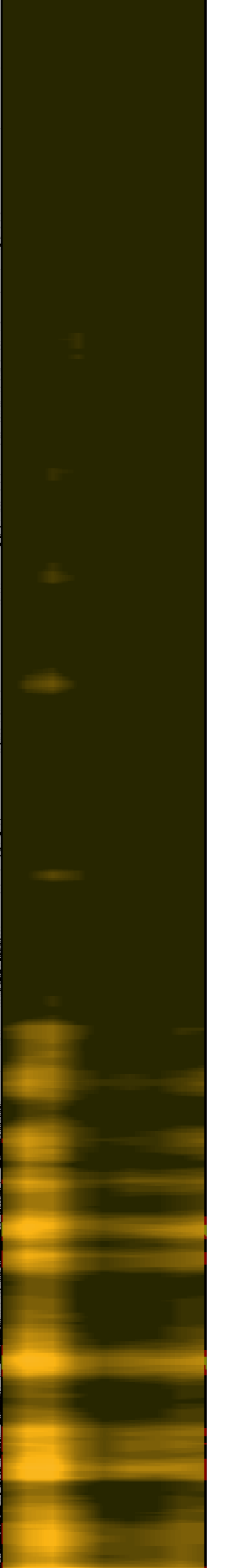
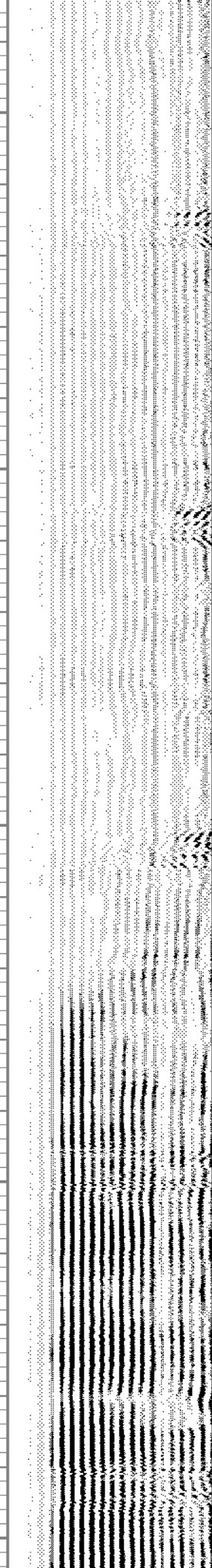
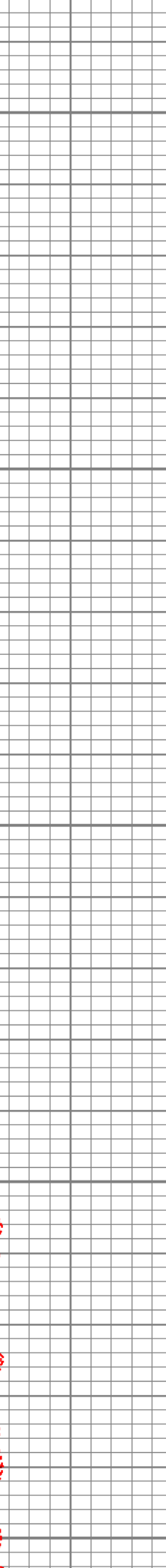
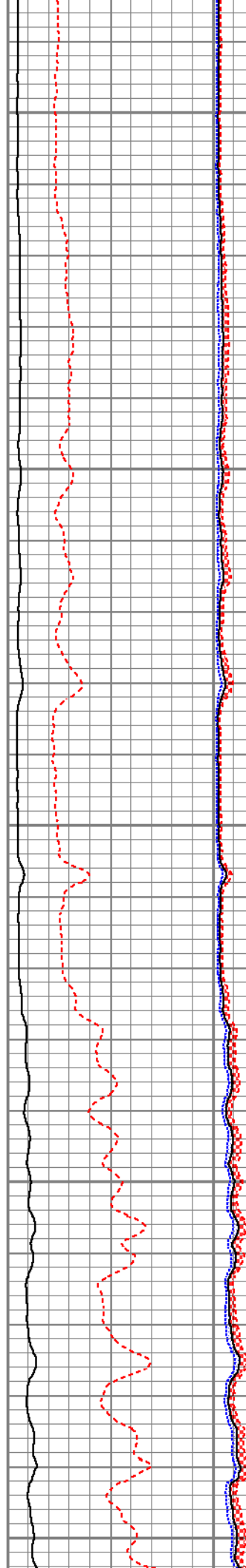
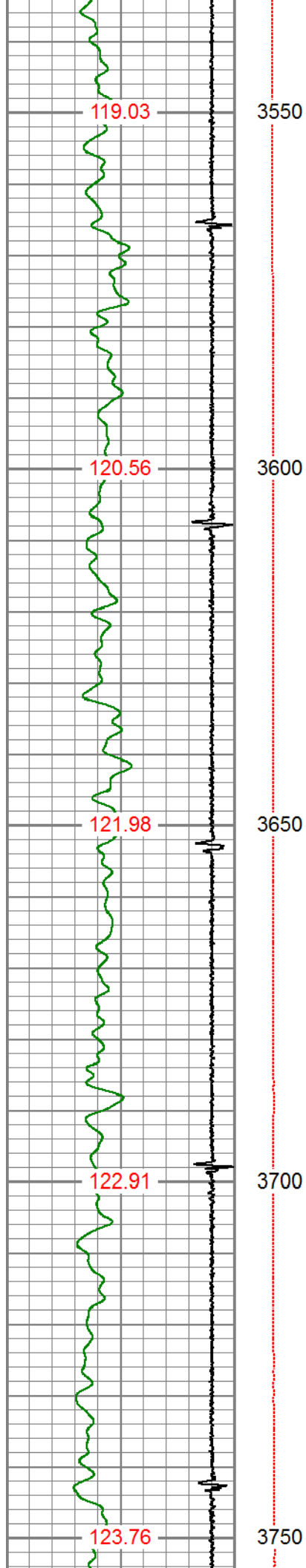
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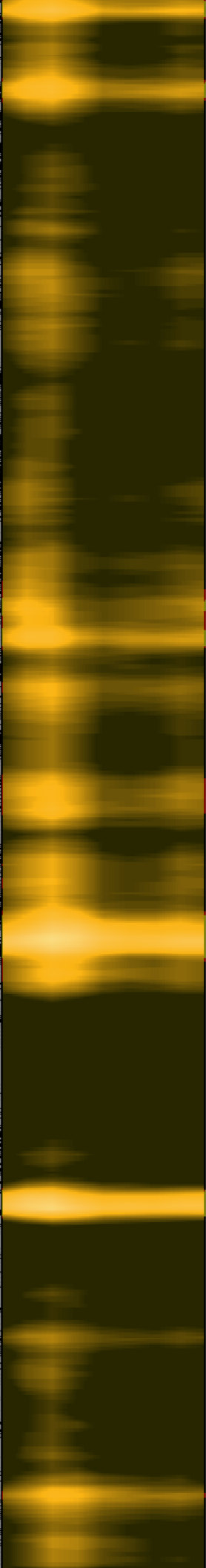
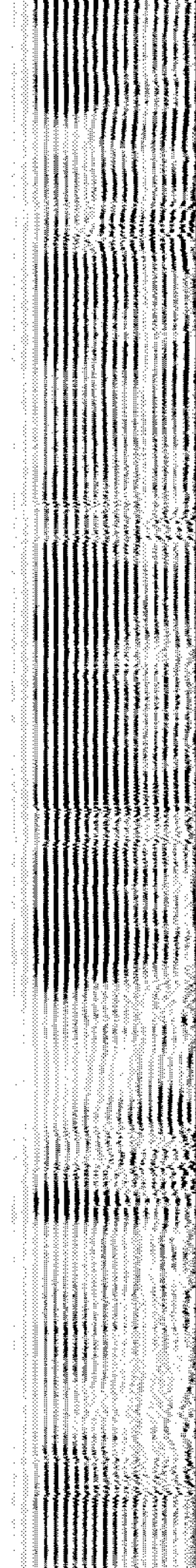
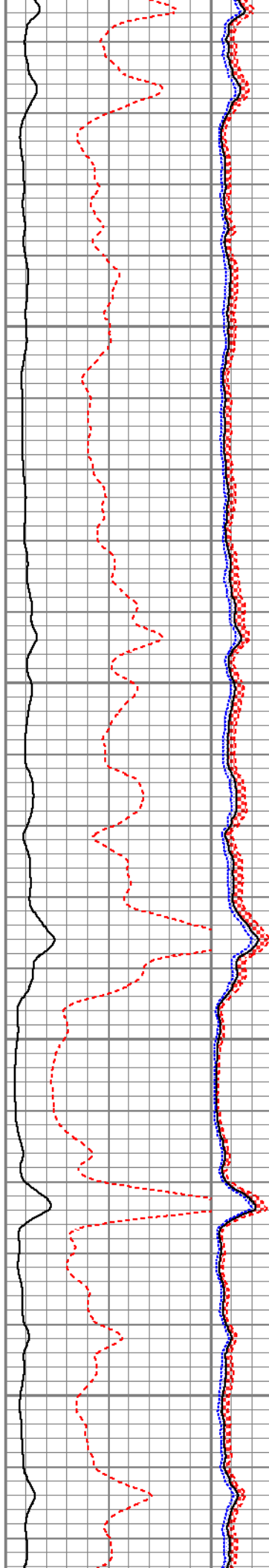
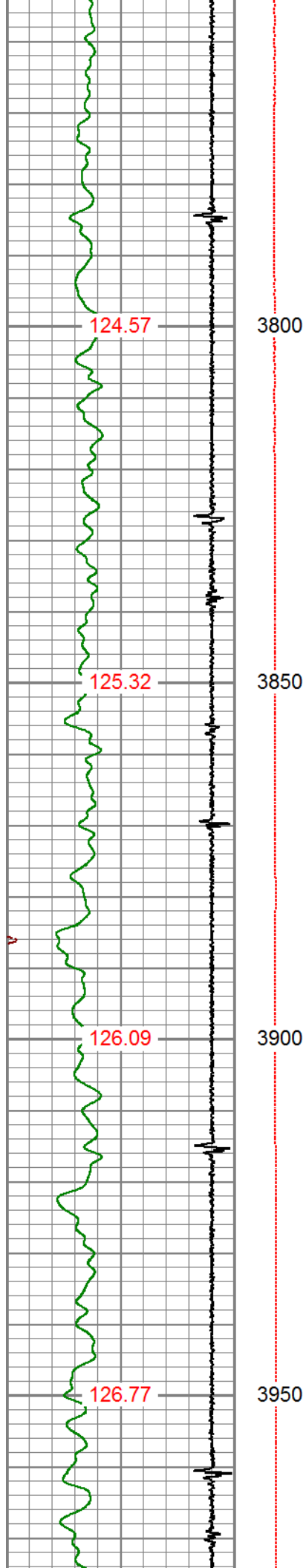
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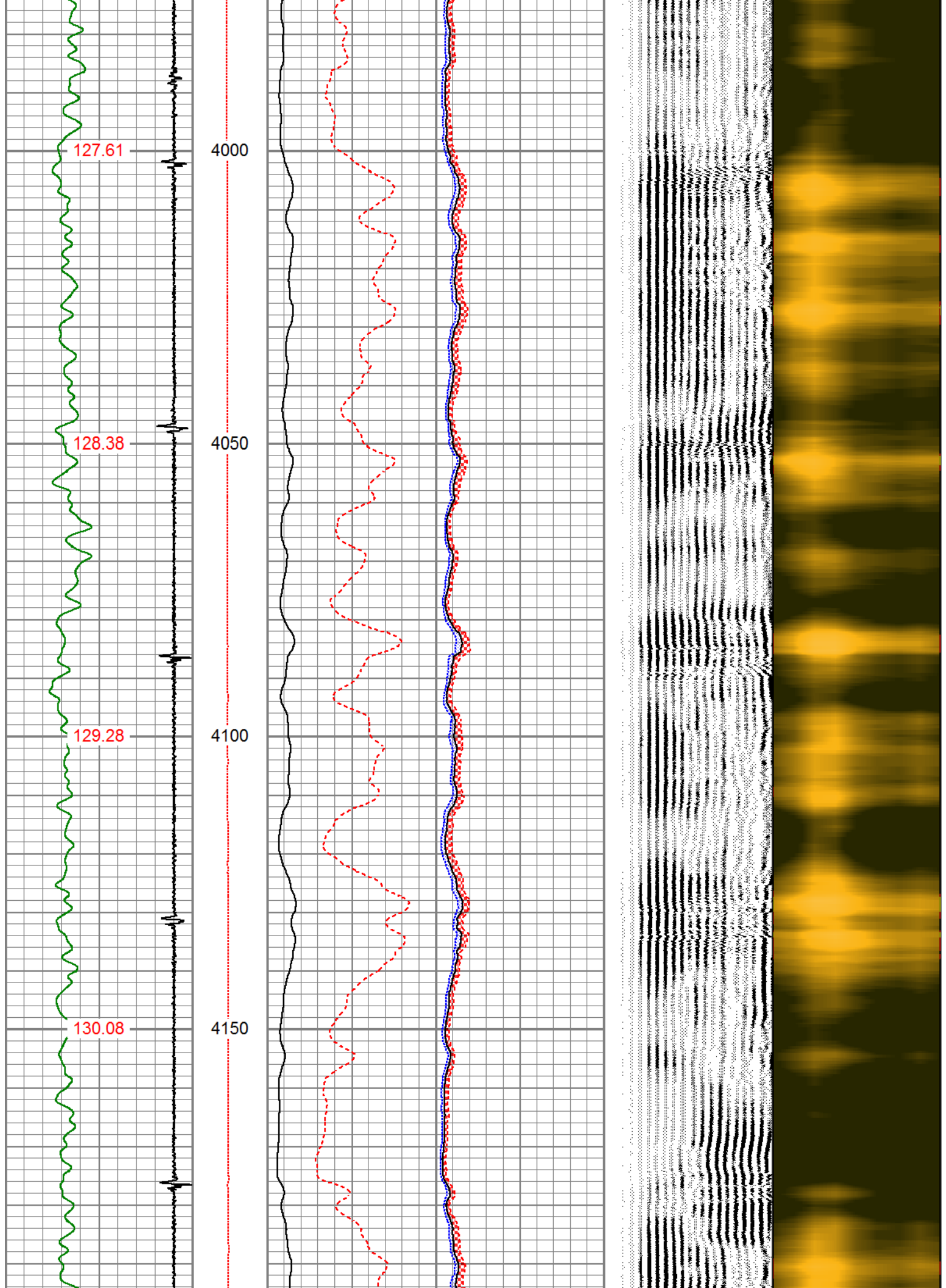
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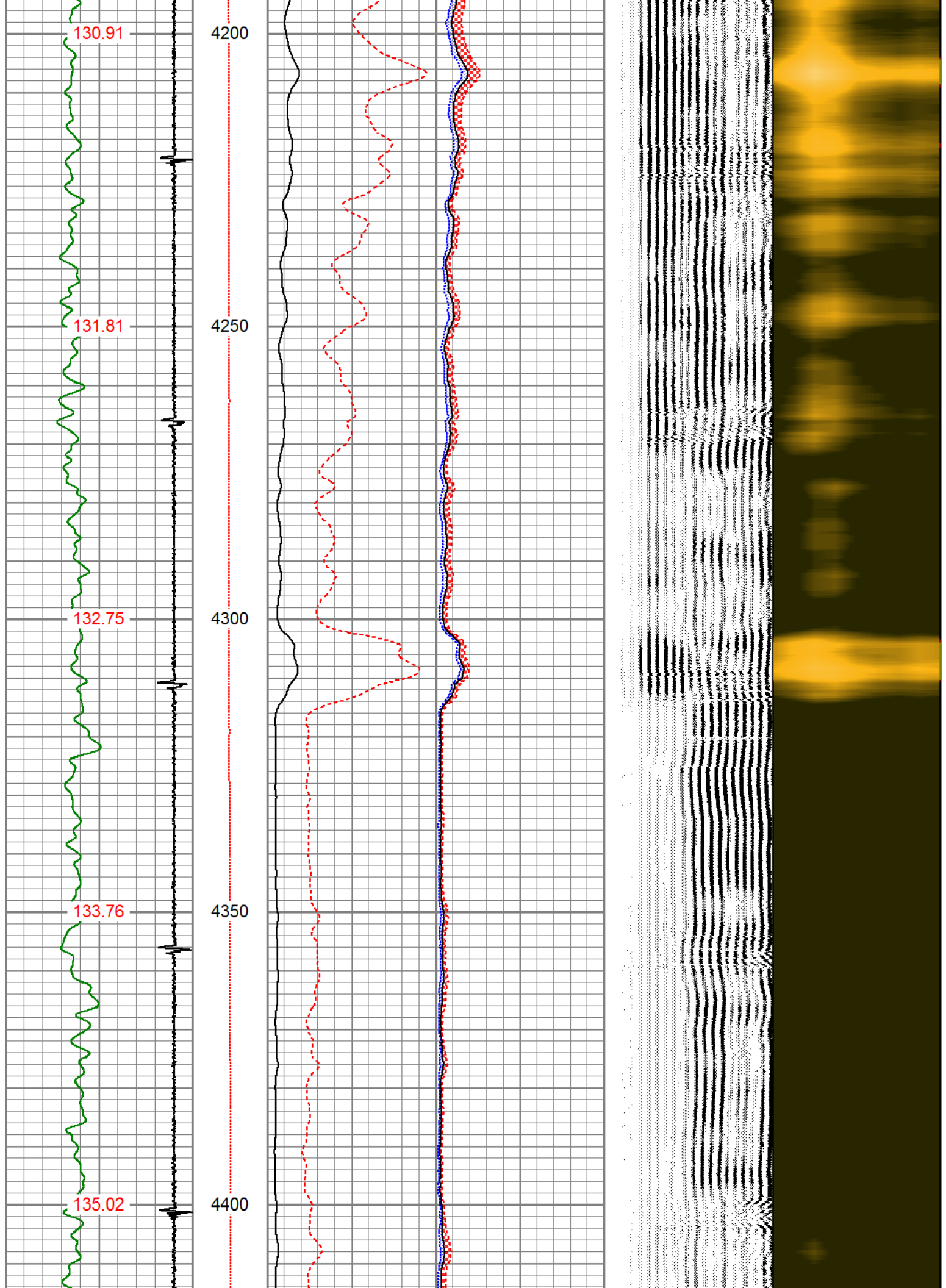


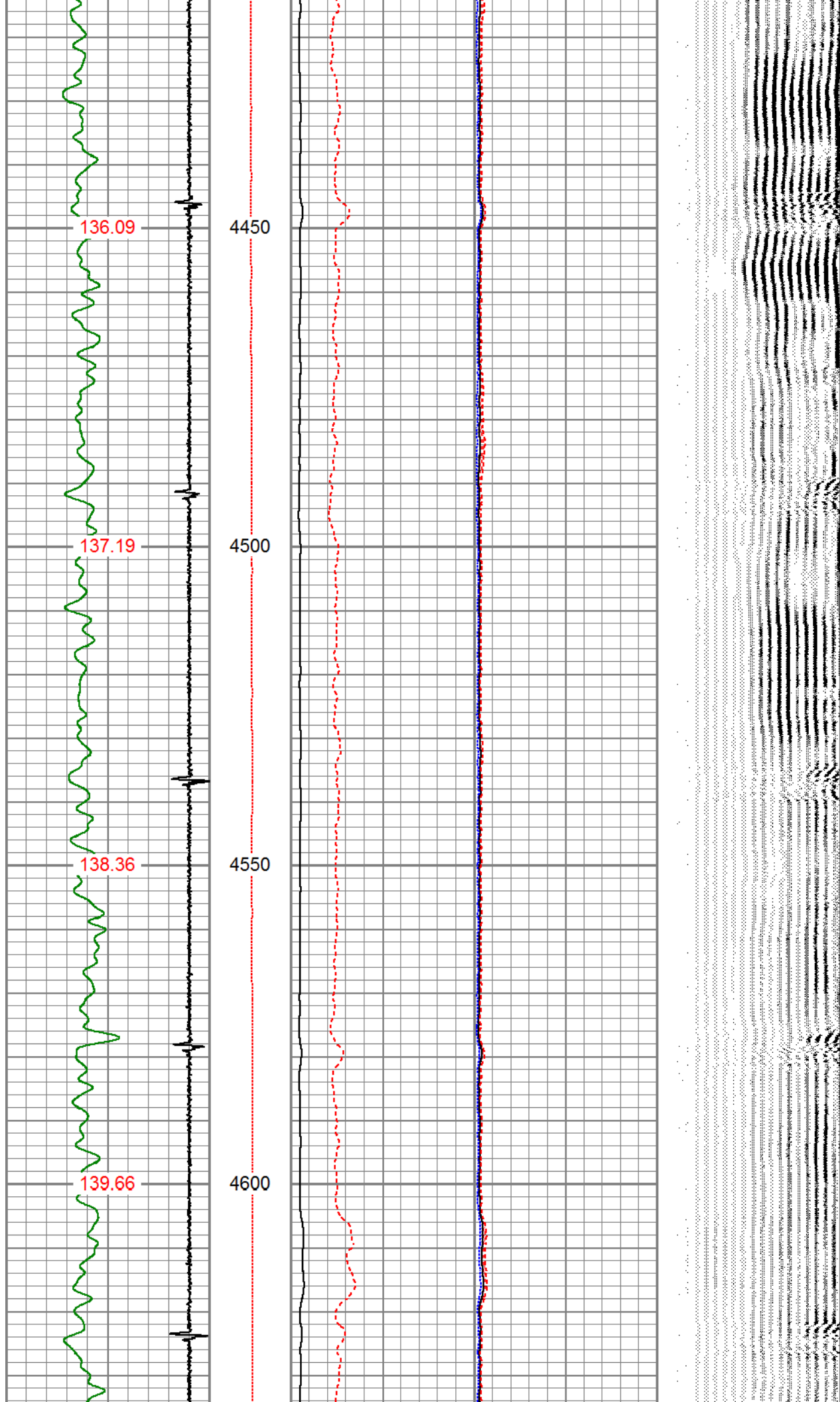


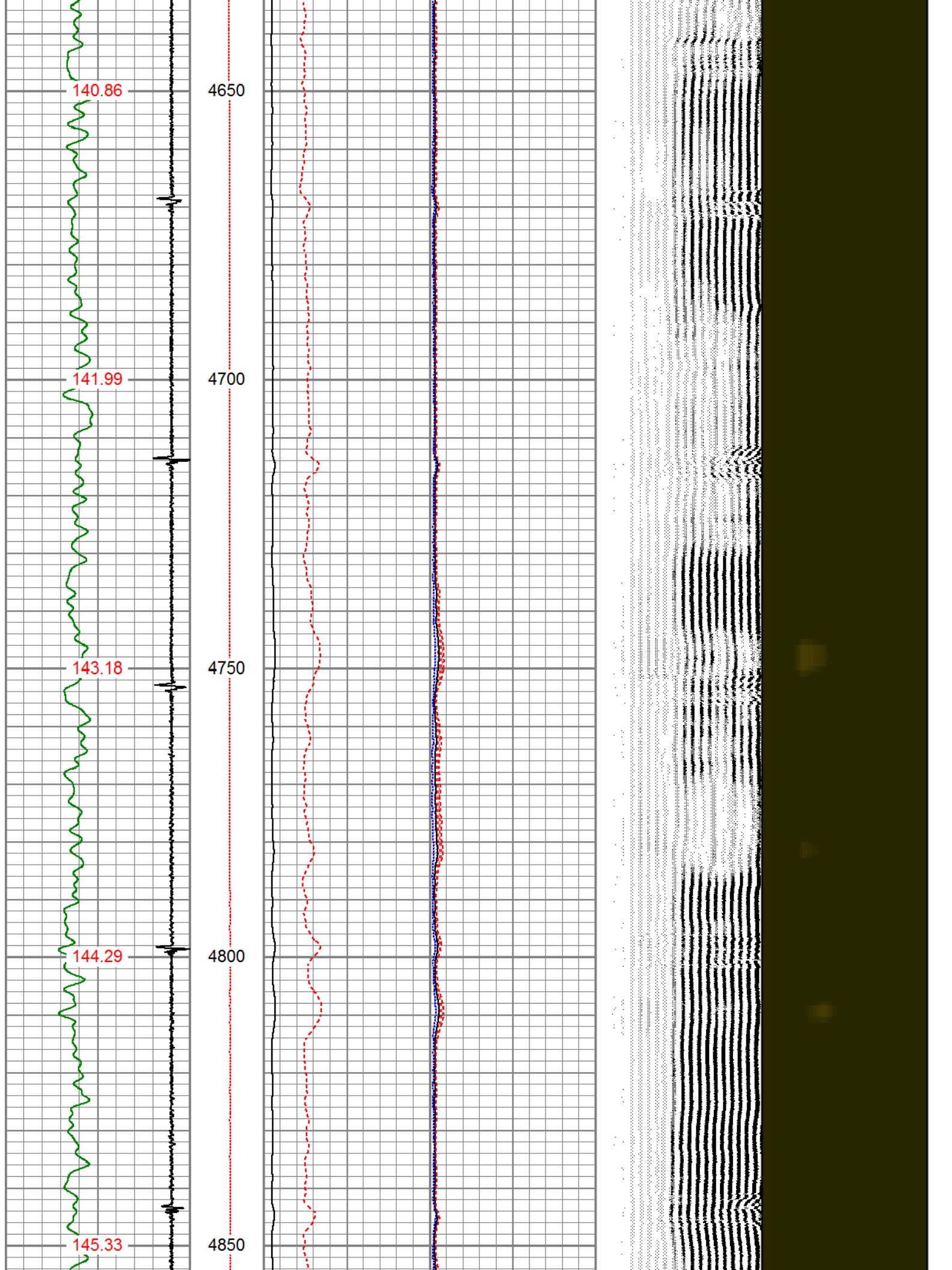


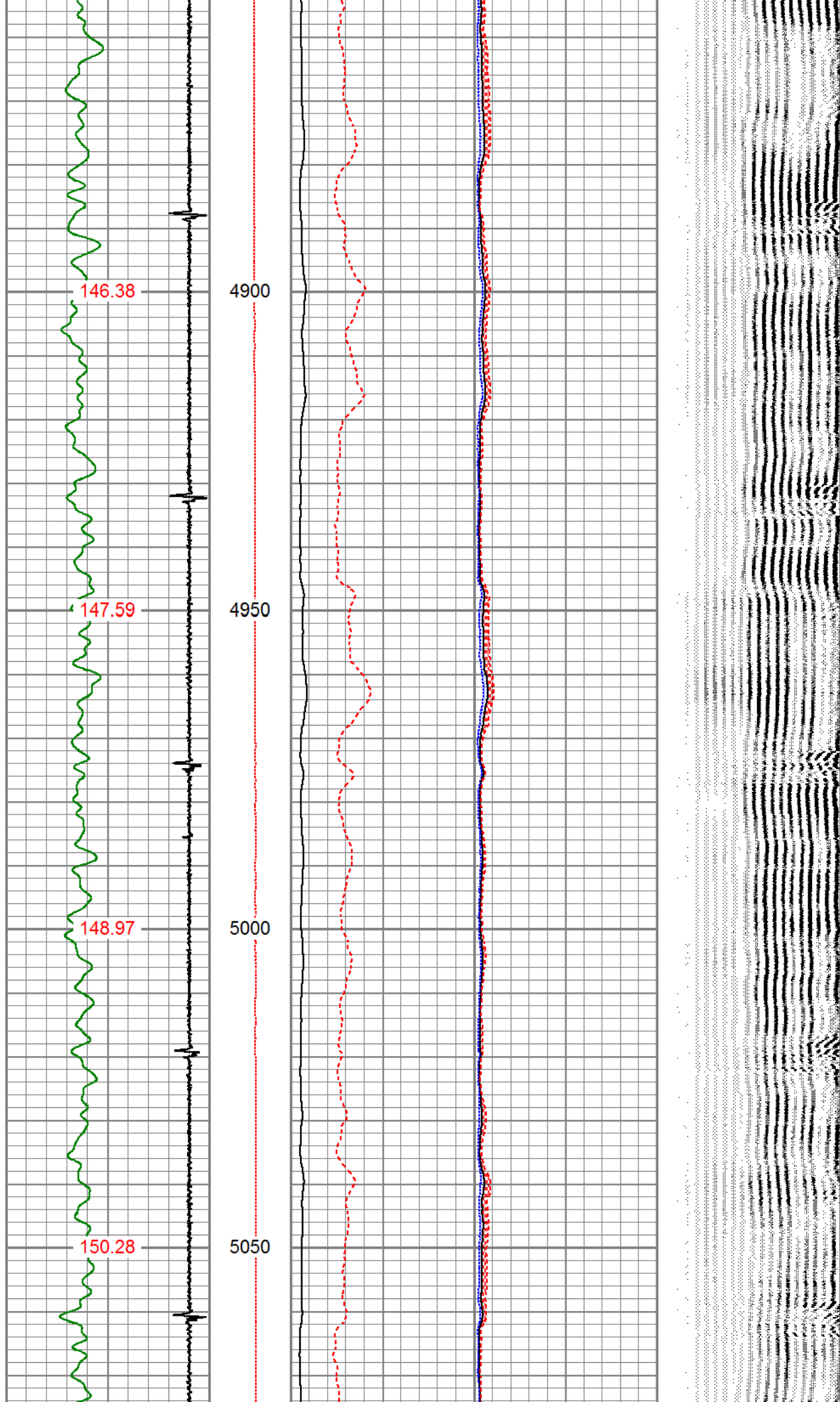


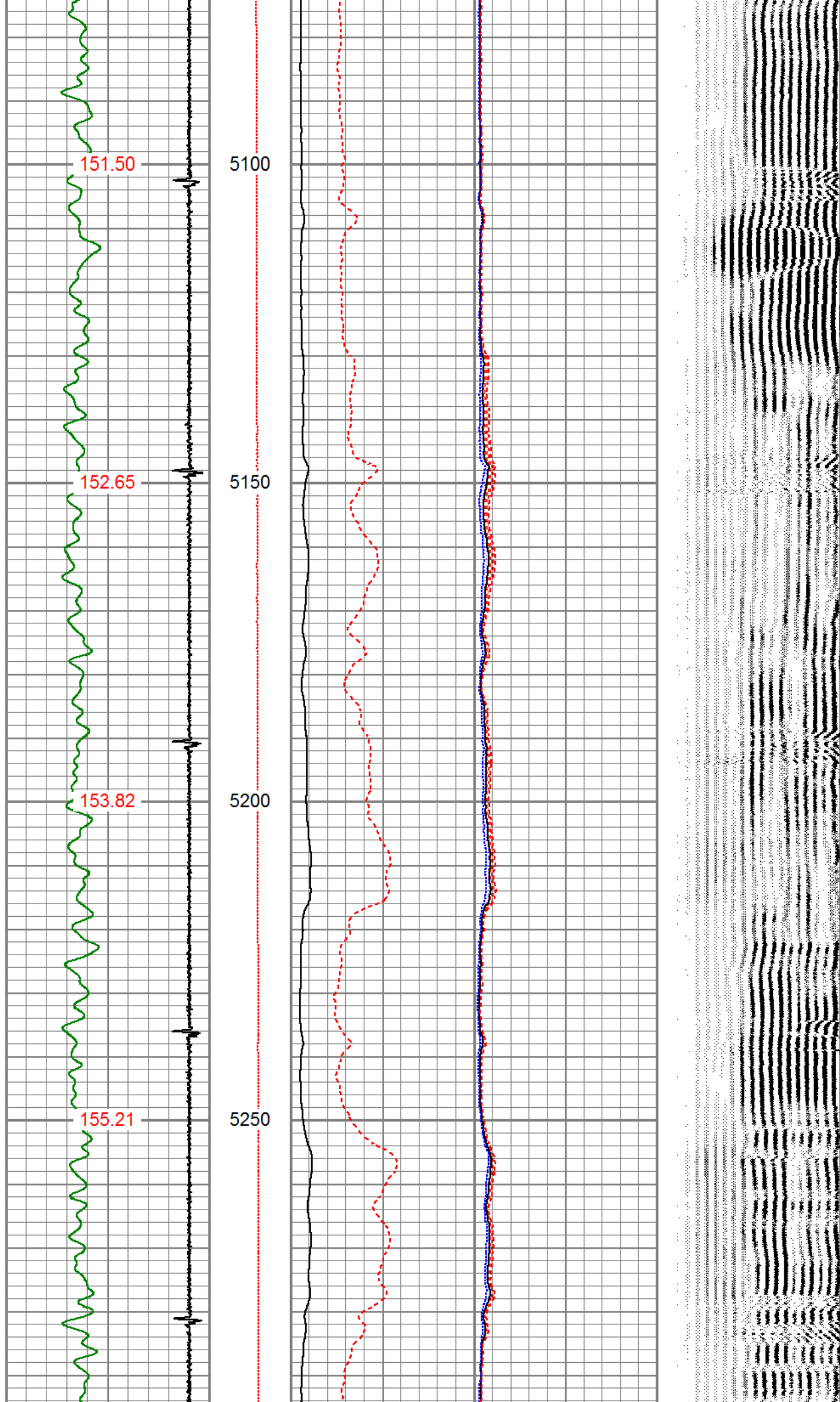


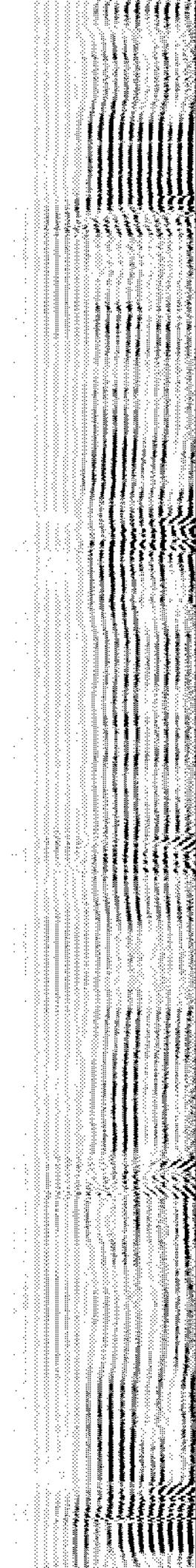
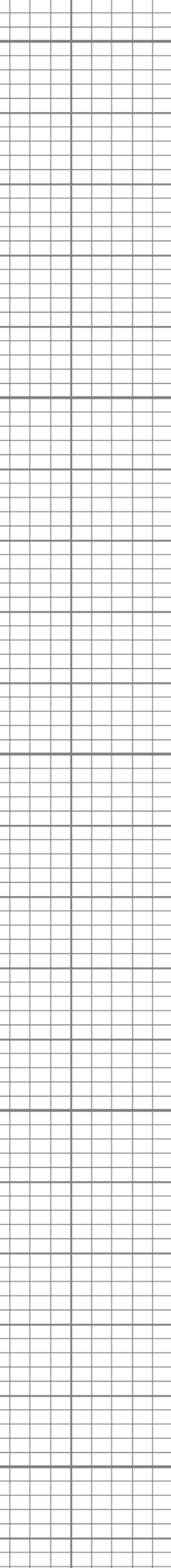
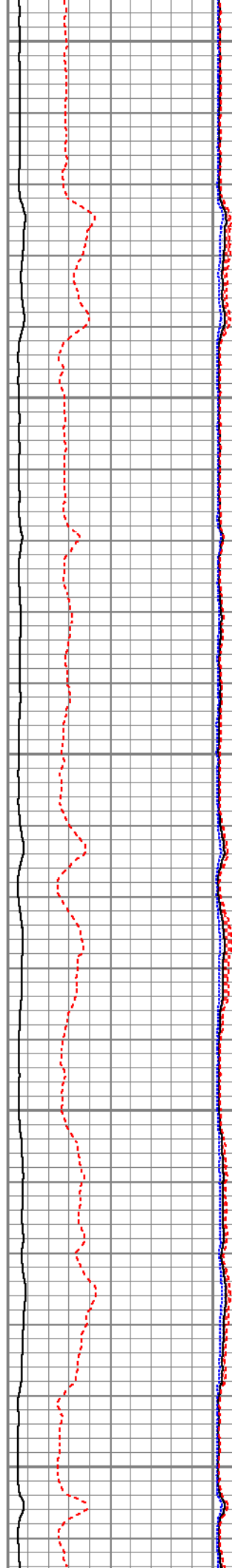
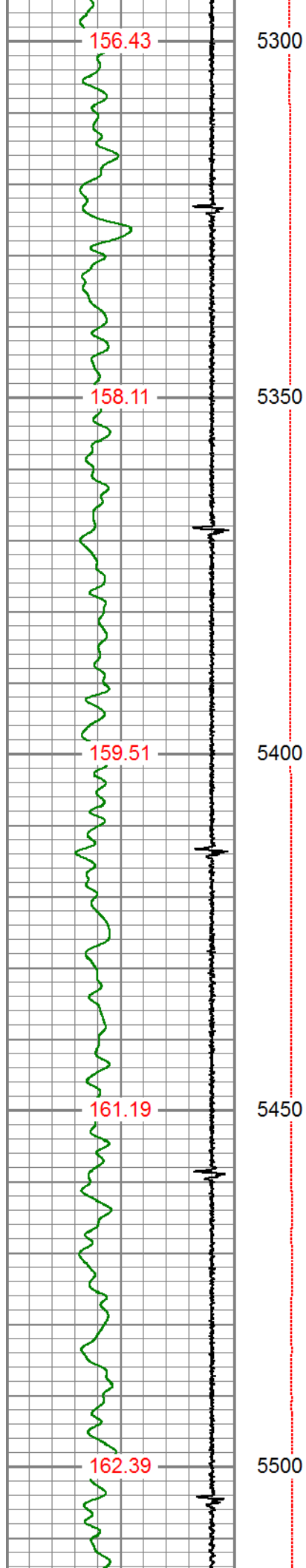


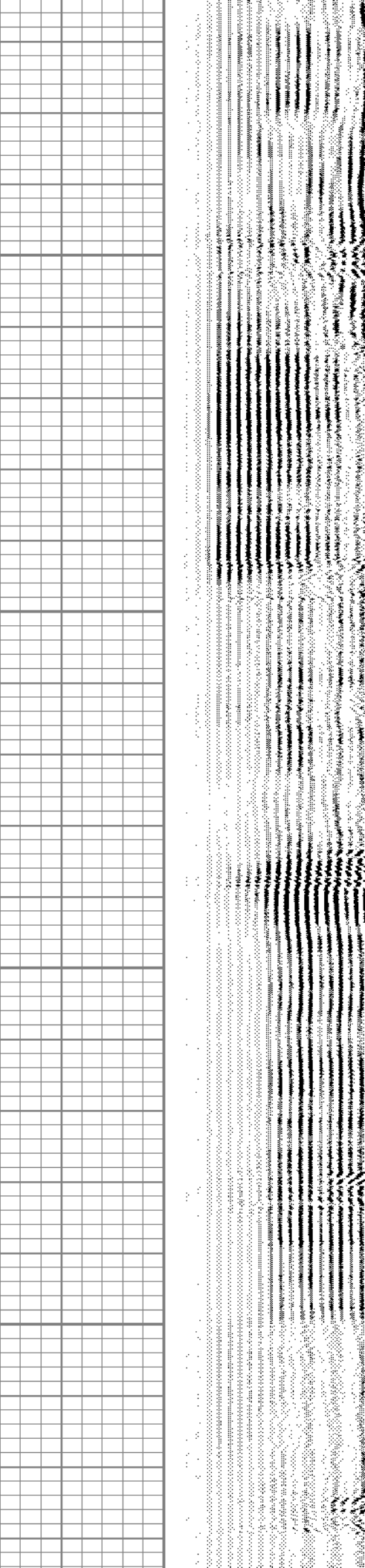
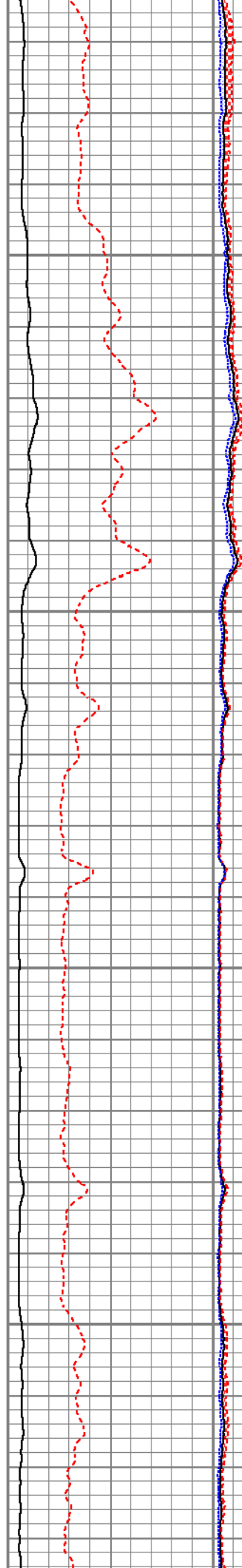
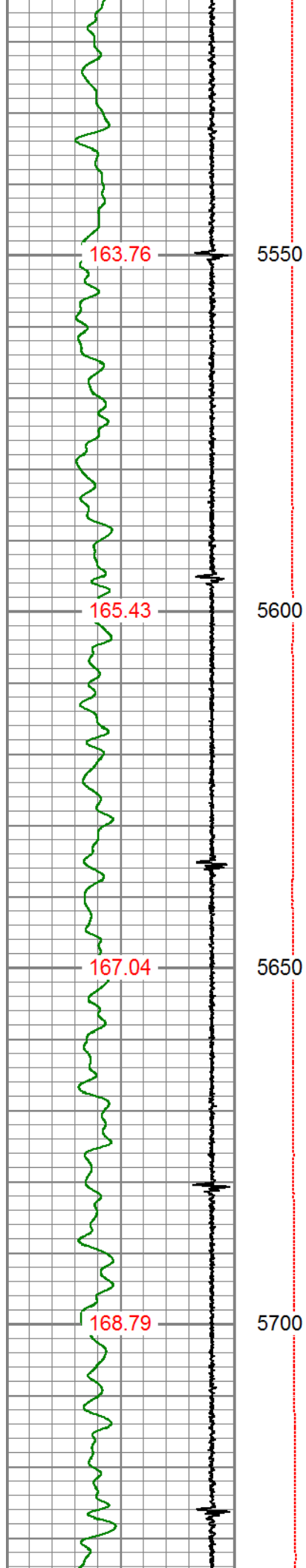


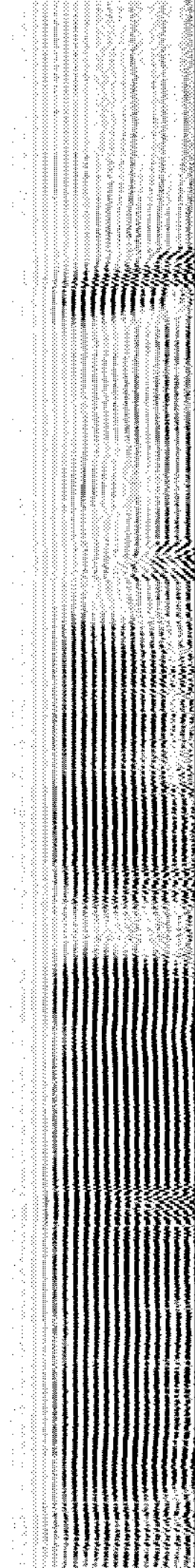
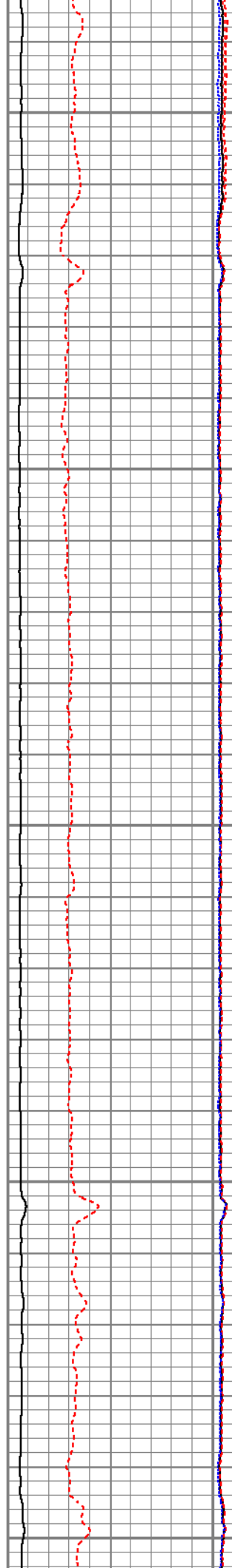
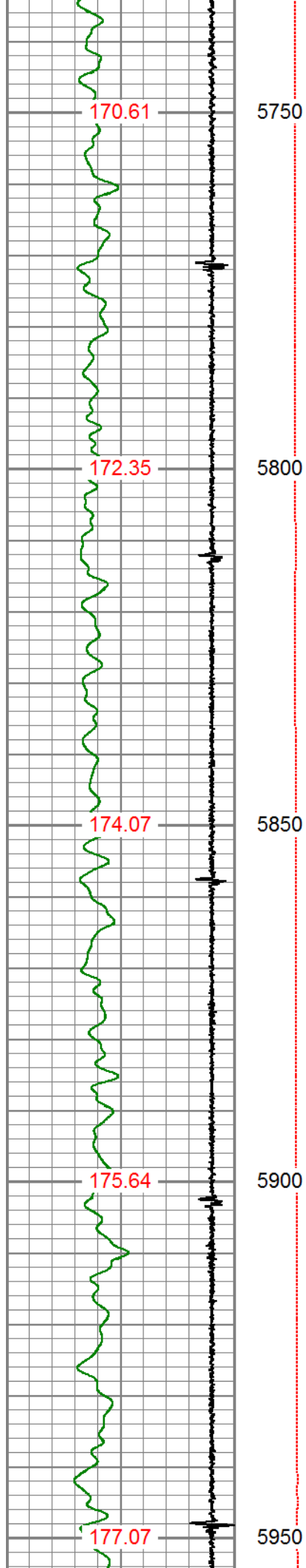


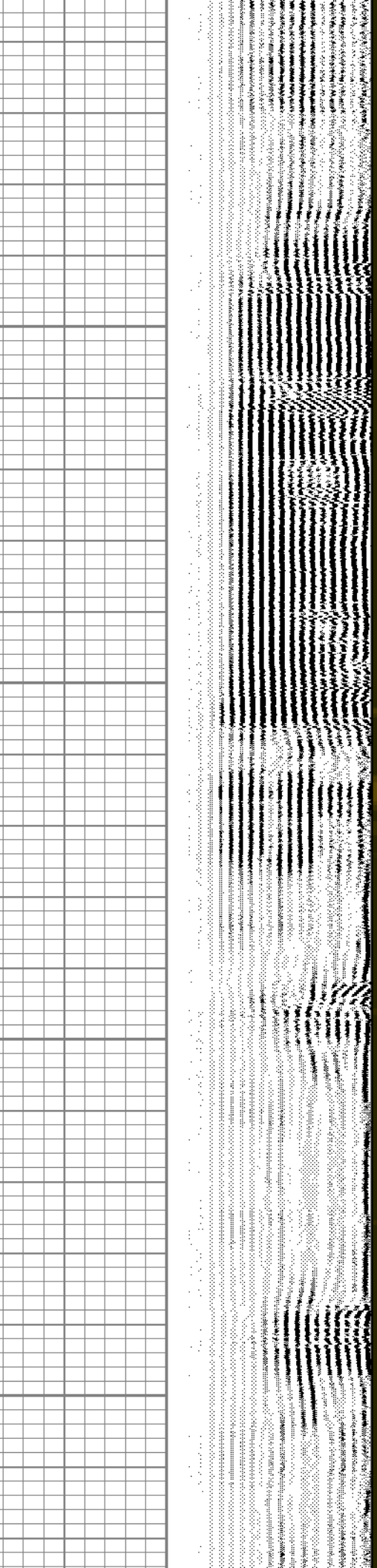
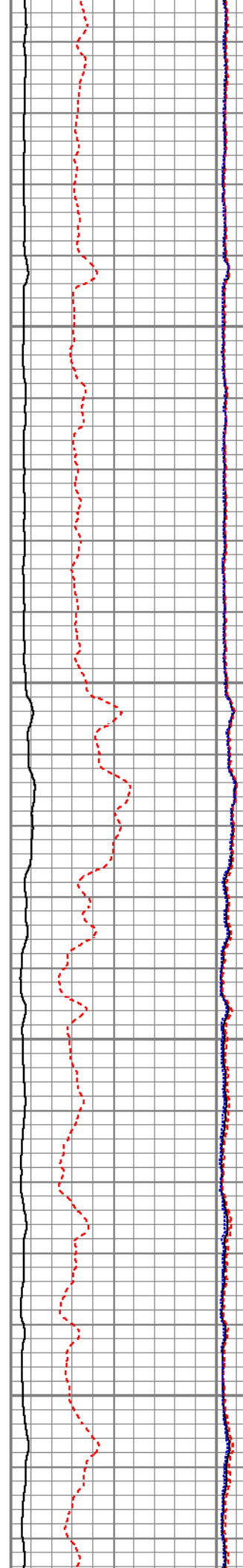
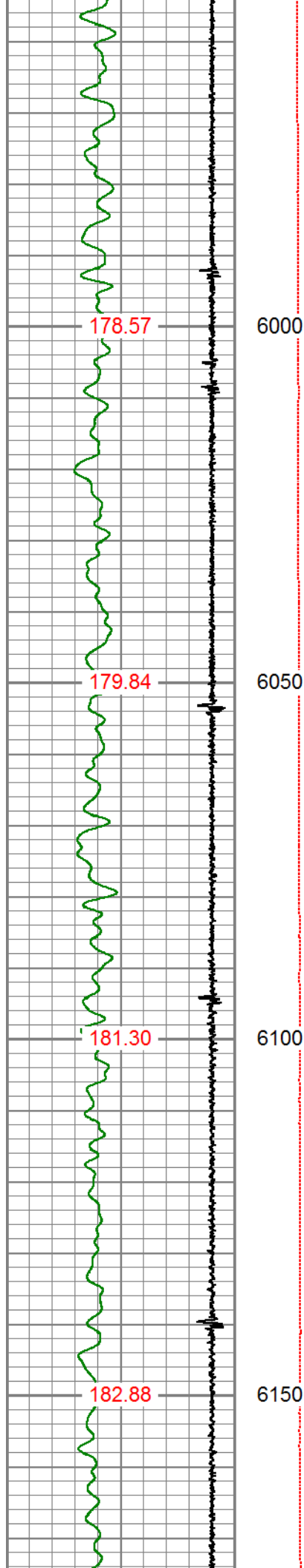


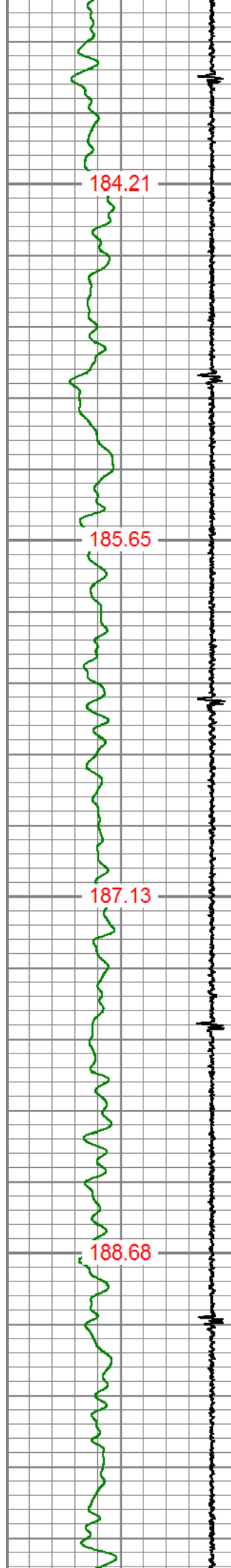










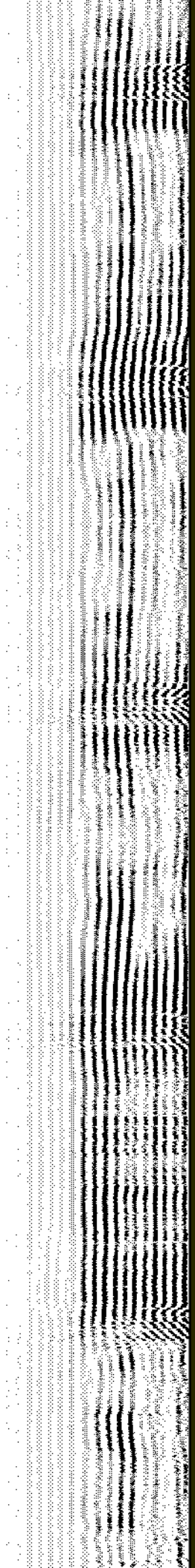
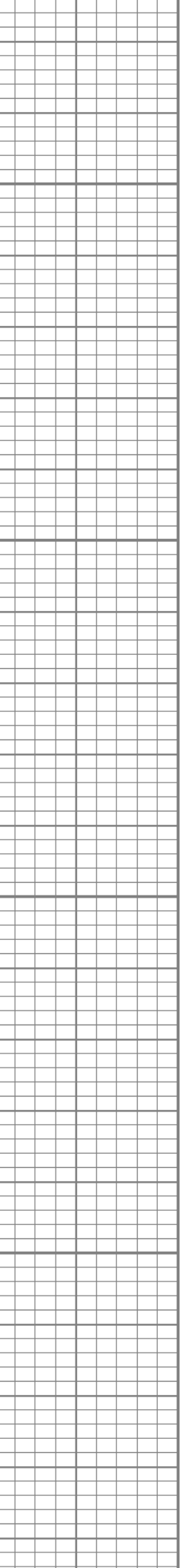
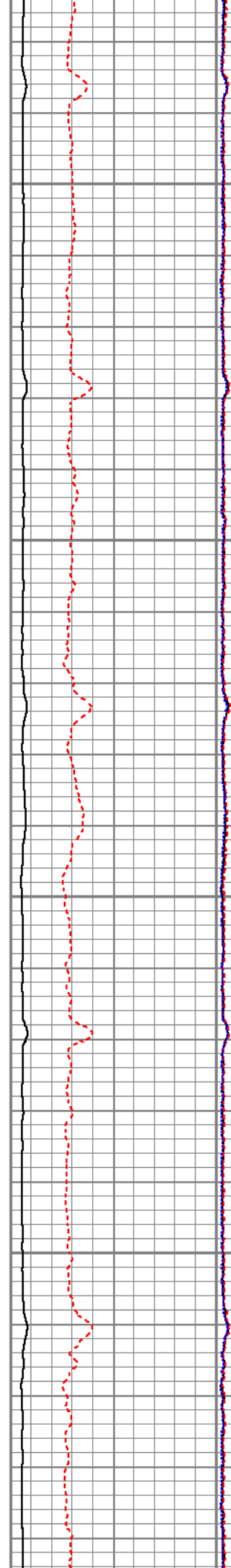


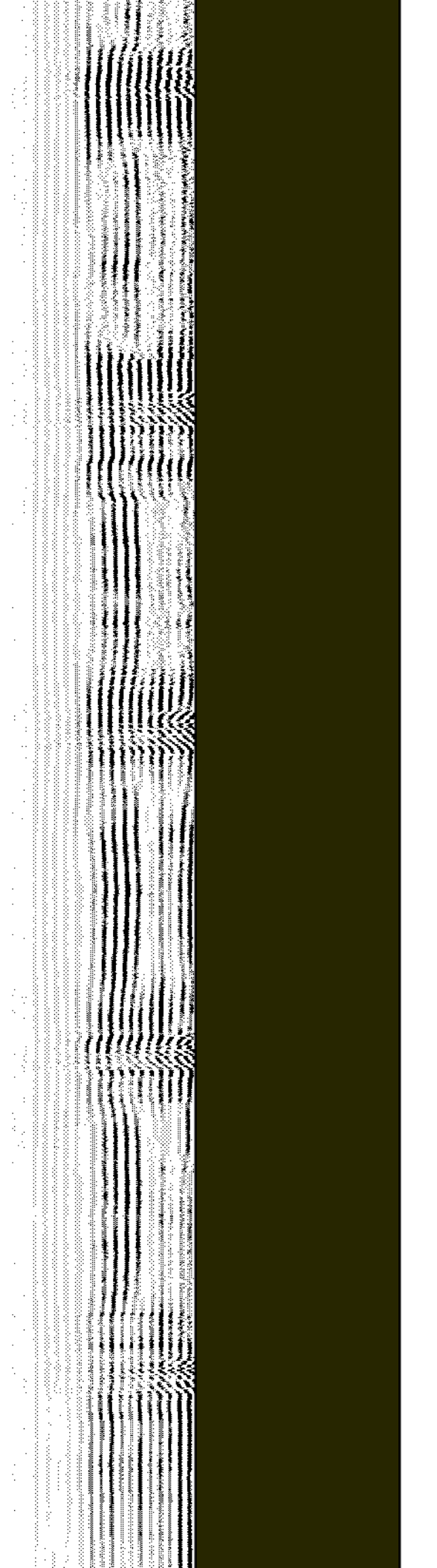
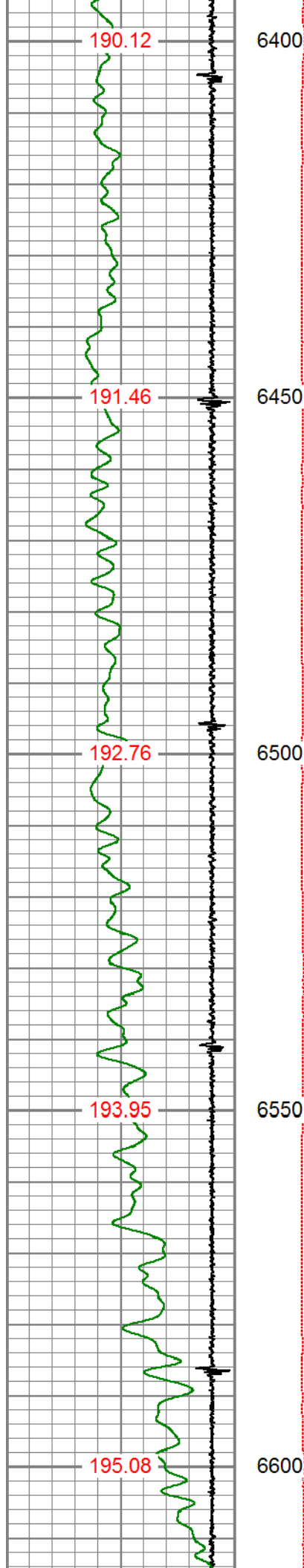
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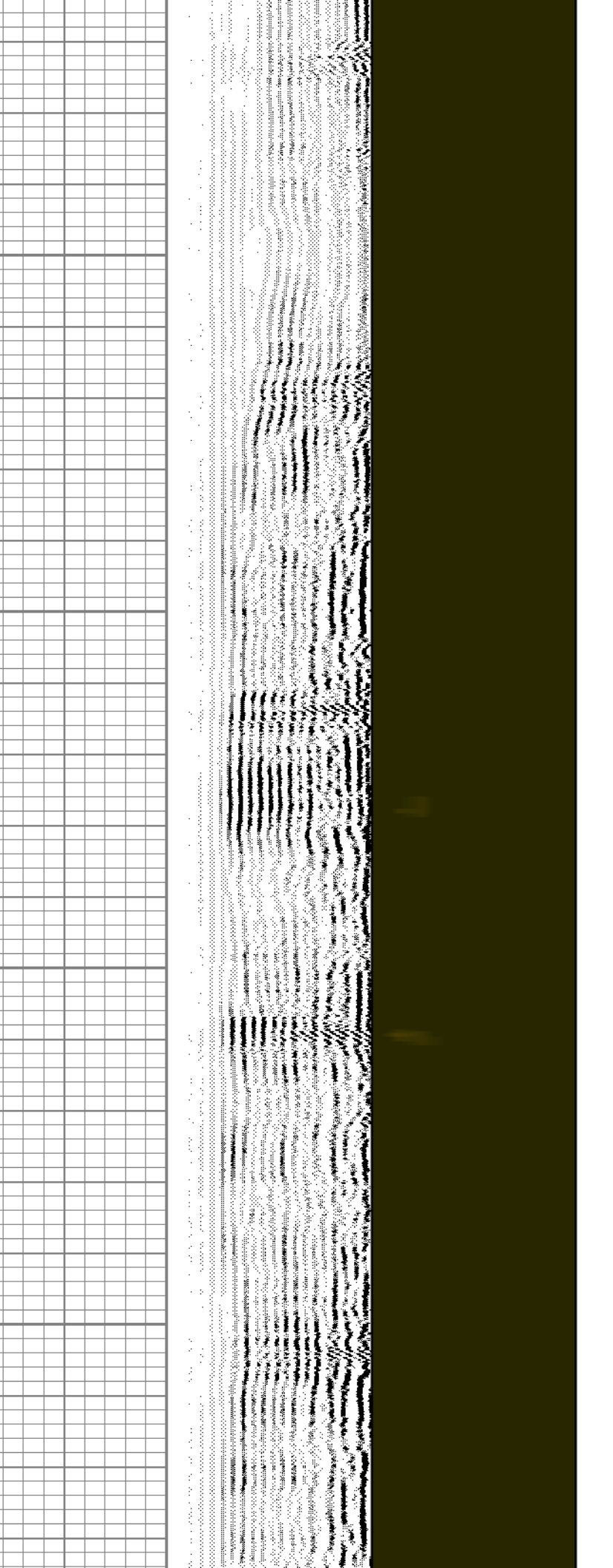
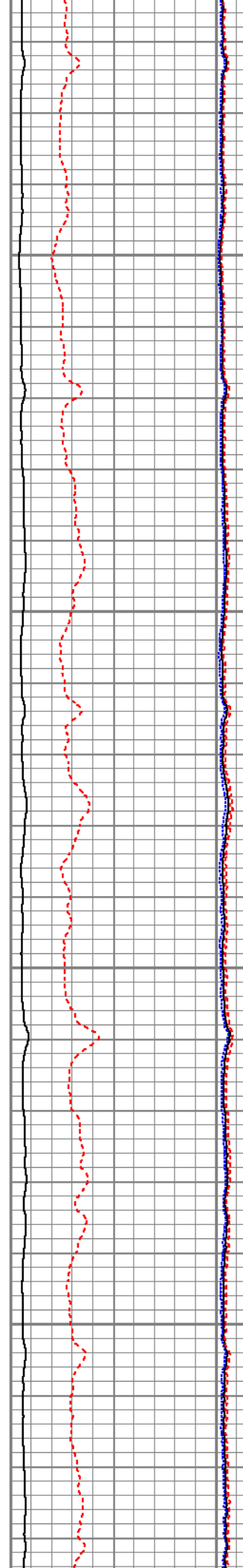
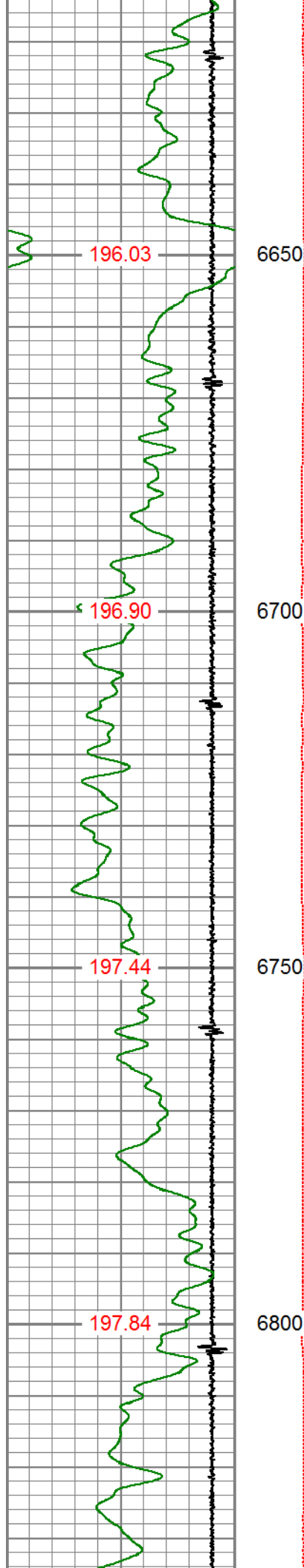
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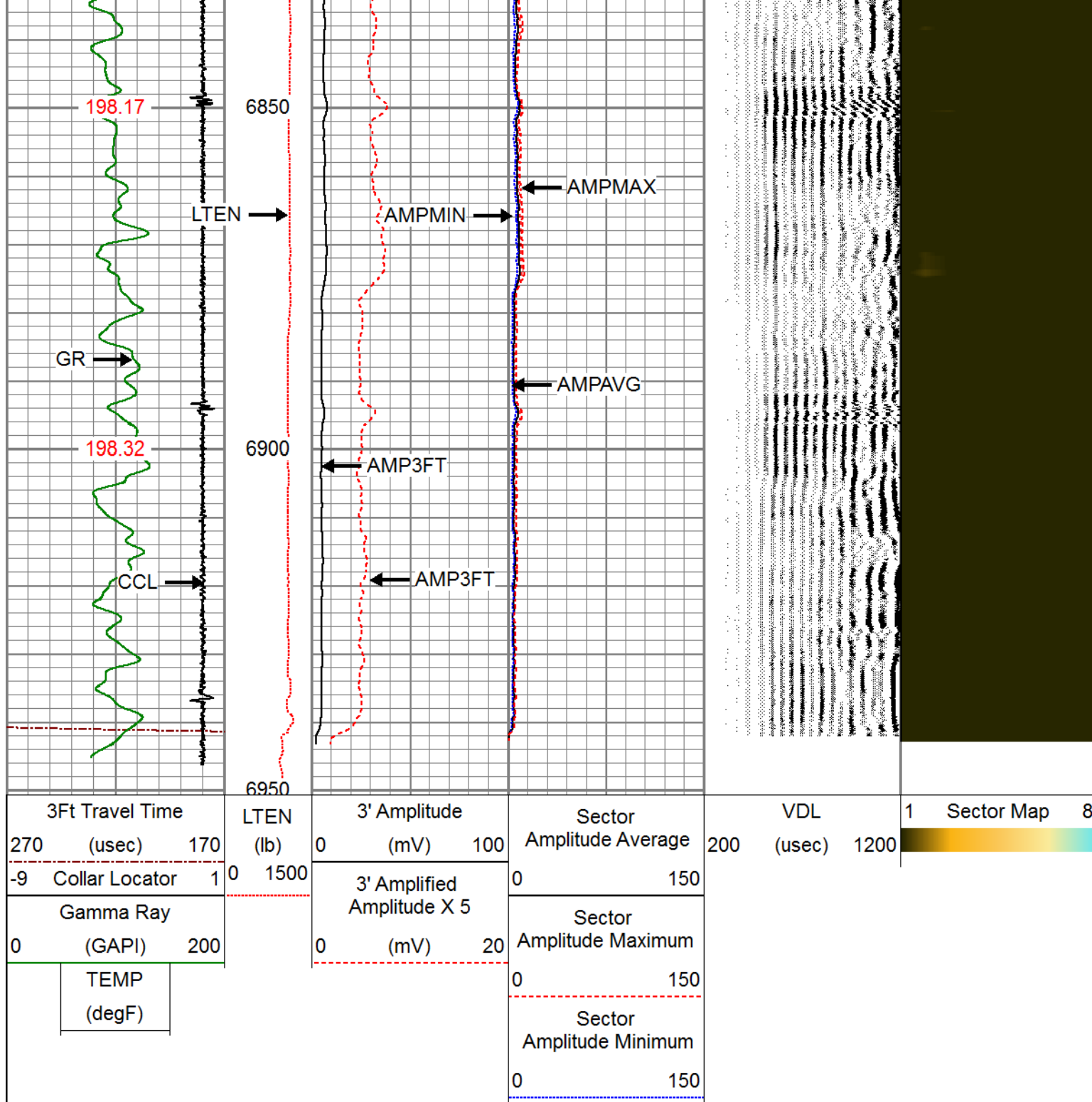
6300


6350












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MAIN LOG

ZERO PSI APPLIED AT SURFACE



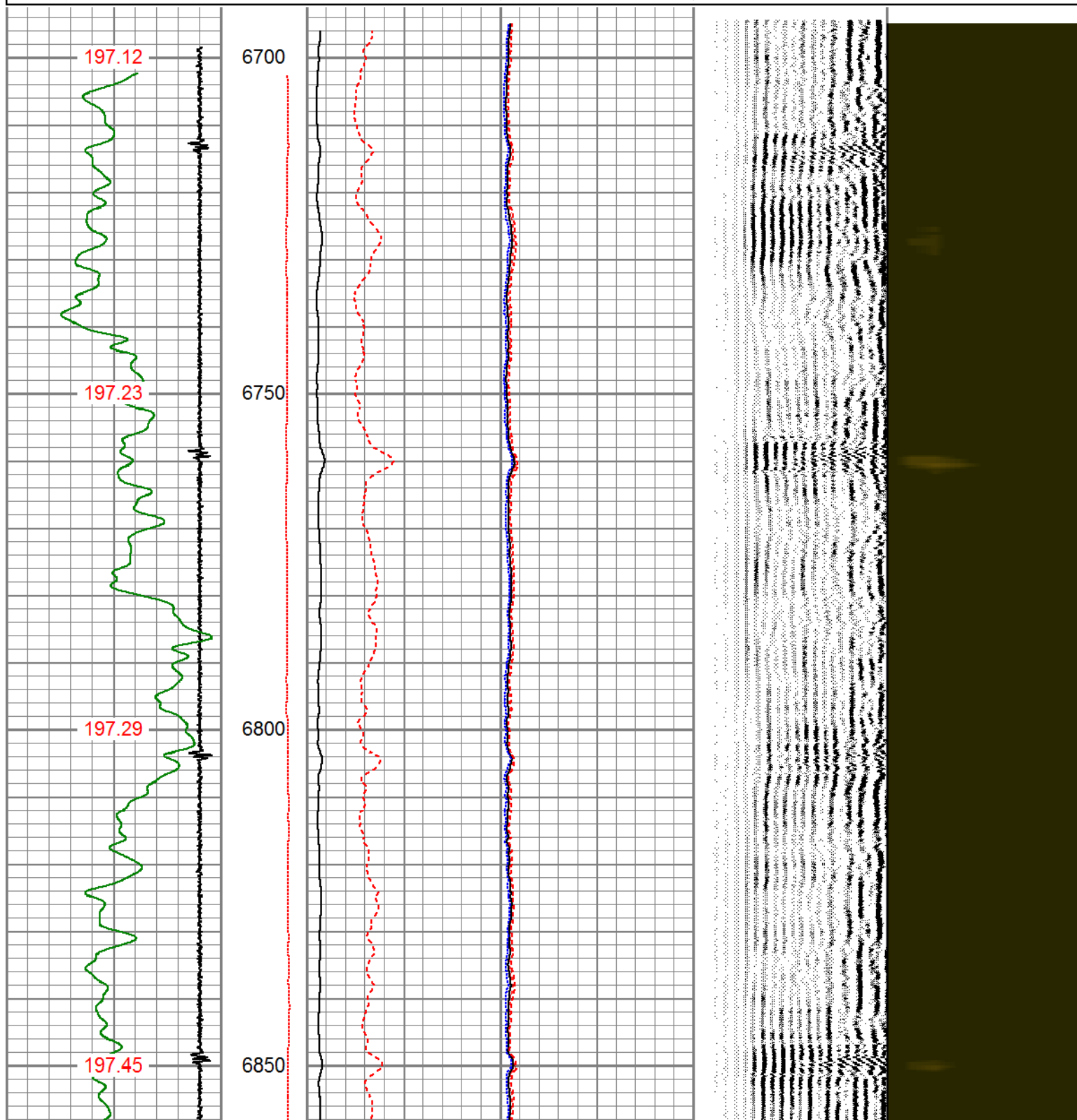
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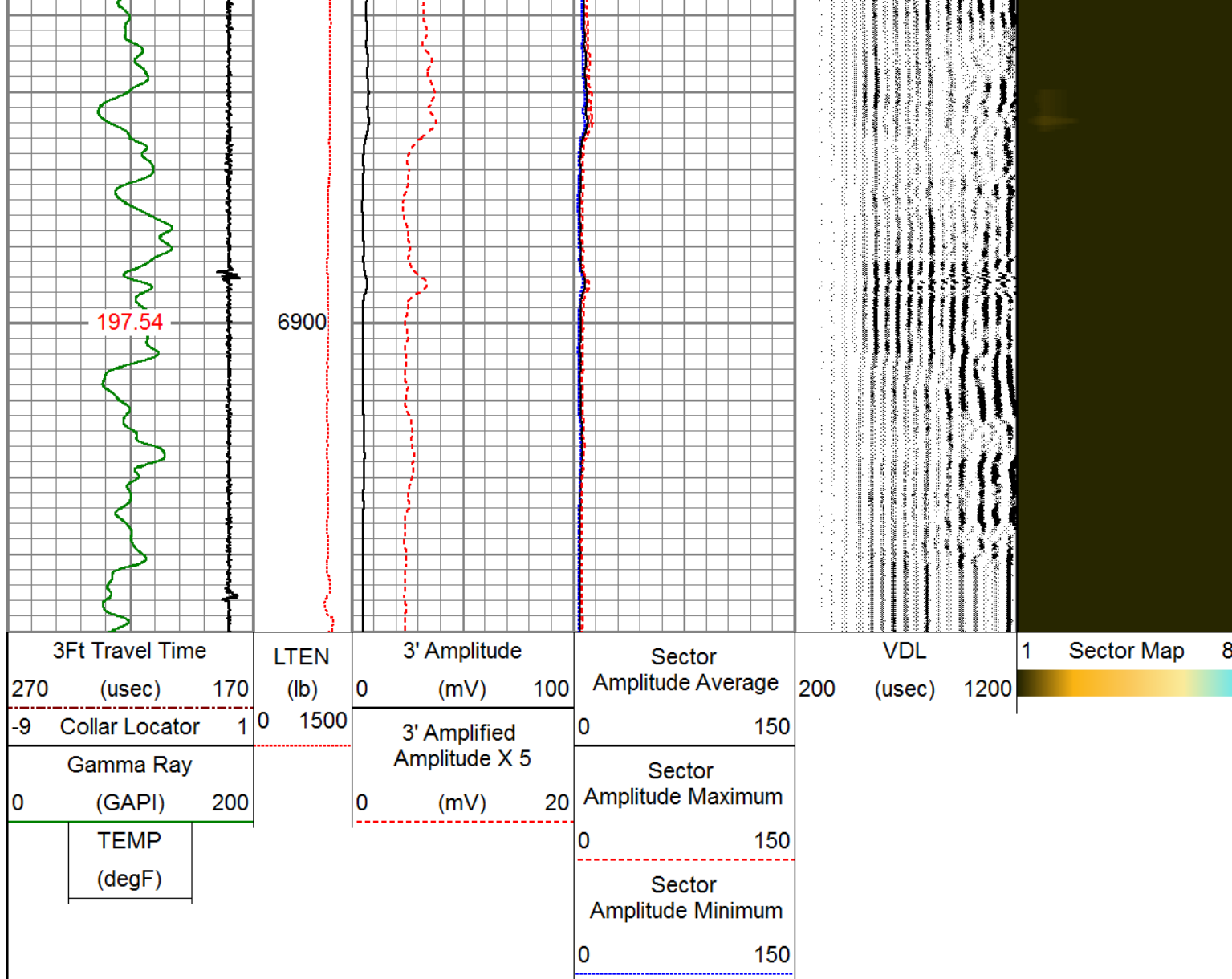
REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File: verdad_peggy 2501 01h_0512349840_20190508_scbl.db
Dataset Pathname: pass4
Presentation Format: pinr_scbl
Work Date: 00-10-27-10-2010

3Ft Travel Time			LTEN (lb)	3' Amplitude		Sector		VDL		1	Sector Map	8	
270	(usec)	170		0	(mV)	100	Amplitude Average	200	(usec)				1200
-9	Collar Locator	1		3' Amplified Amplitude X 5		0	150						
Gamma Ray						Sector							
0	(GAPI)	200	0 (mV) 20		Amplitude Maximum								
<div>TEMP</div> <div>(degF)</div>					0 150								
					Sector								
					Amplitude Minimum								
					0 150								





Calibration Report		
Database File	verdad_peggy 2501 01h_0512349840_20190508_scbl.db	
Dataset Pathname	pass4	
Dataset Creation	Wed May 08 10:27:49 2019	

Gamma Ray Calibration Report		
Serial Number:	130608	
Tool Model:	275 Probe GCT	
Performed:	Wed May 08 09:42:11 2019	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.7000	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1411-67	
Tool Model:	RBL-DCT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	109.017	ft

Master Calibration, performed Wed May 08 10:01:13 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	1.211	2.200	71.921	57.872	1.863
CAL	0.015	1.507				
5'	0.006	1.220	2.200	71.921	57.409	1.870
SUM						
S1	0.017	1.197	0.000	100.000	84.719	-1.428
S2	0.008	1.253	0.000	100.000	80.329	-0.626
S3	0.007	1.254	0.000	100.000	80.232	-0.592
S4	0.006	1.277	0.000	100.000	78.671	-0.472
S5	0.006	1.281	0.000	100.000	78.424	-0.484
S6	0.005	1.237	0.000	100.000	81.161	-0.428
S7	0.005	1.216	0.000	100.000	82.586	-0.442
S8	0.005	1.194	0.000	100.000	84.146	-0.443

Air Zero Calibration, performed Sun Oct 21 21:23:32 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	

Temperature Calibration Report

Serial Number: FW1411-67
Tool Model: RBL-DCT
Performed: Wed May 08 10:03:54 2019

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

Gain: 0.80
Offset: 0.00
Delta Spacing: 1



Company: VERDAD RESOURCES
Well: PEGGY 2501 01H
Field: WELD COUNTY
County: WELD
State: COLORADO