



PIONEER

Pioneer Energy Services

**RADIAL BOND LOG
WITH GAMMA RAY**

Company **VERDAD RESOURCES**
Well **KBL 1930-09H**
Field **WATTENBERG**
County **WELD** State **CO**

Location: API #: 05-123-50882
1806FSL 2081FEL
SEC 19 TWP 2N RGE 63W
Permanent Datum GL Elevation 4863'
Log Measured From KB 21' Above Perm. Datum
Drilling Measured From KB
CCL
TEMP
Elevation
K.B. 4884'
D.F. N/A
G.L. 4863'

Date of Service	8-18-2021		
Run Number	ONE		
Depth Driller or P8TD	14617'		
Depth Logger	7423'		
Bottom Log Interval	7423'		
Top Log Interval	48'		
Open Hole Size	8.5"		
Type Fluid	FRESH WATER		
Fluid Level	SURFACE		
Fluid Density	N/A		
Max. Recorded Temperature	193 DEG F		
Max. Wellhead Pressure	ZERO PSI		
Wellhead Connection	N/A		
Estimated Cement Top	268'		
Unit Number	P-132		
Wireline Size	9/32"		
Location	FORT MORGAN		
Recorded By	AJ SPILLMAN		
Witnessed By	JASON TURNER		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	9.625"	36#	SURFACE 1803'
Production Casing	5.5"	17#	SURFACE 14602'
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 TO MARKER JOINT 6221'

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: A.SPILLMAN Operator: M.BATREZ Operator: O.ESTUPINAN Operator:		

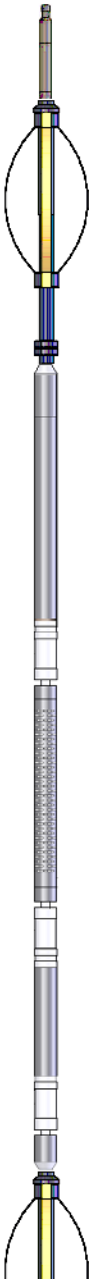
Top - Bottom


BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL
TEMP	in 7.875	degF 100	in 5.5	in 0	lb/ft 17	mV 0
MINAMPL	MINATTN	PERFS	PPT	SRFTEMP	TDEPTH	
mV 1	db/ft 0.08	No	usec 0	degF 0	ft 0	



Variable Description

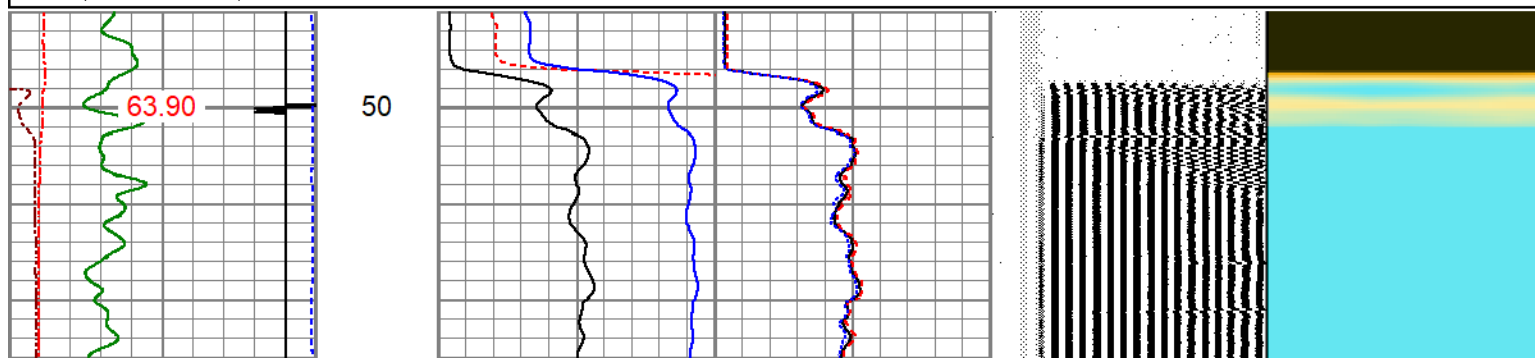
BHTEMP_Src : BHTEMP Input Source Selector
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude

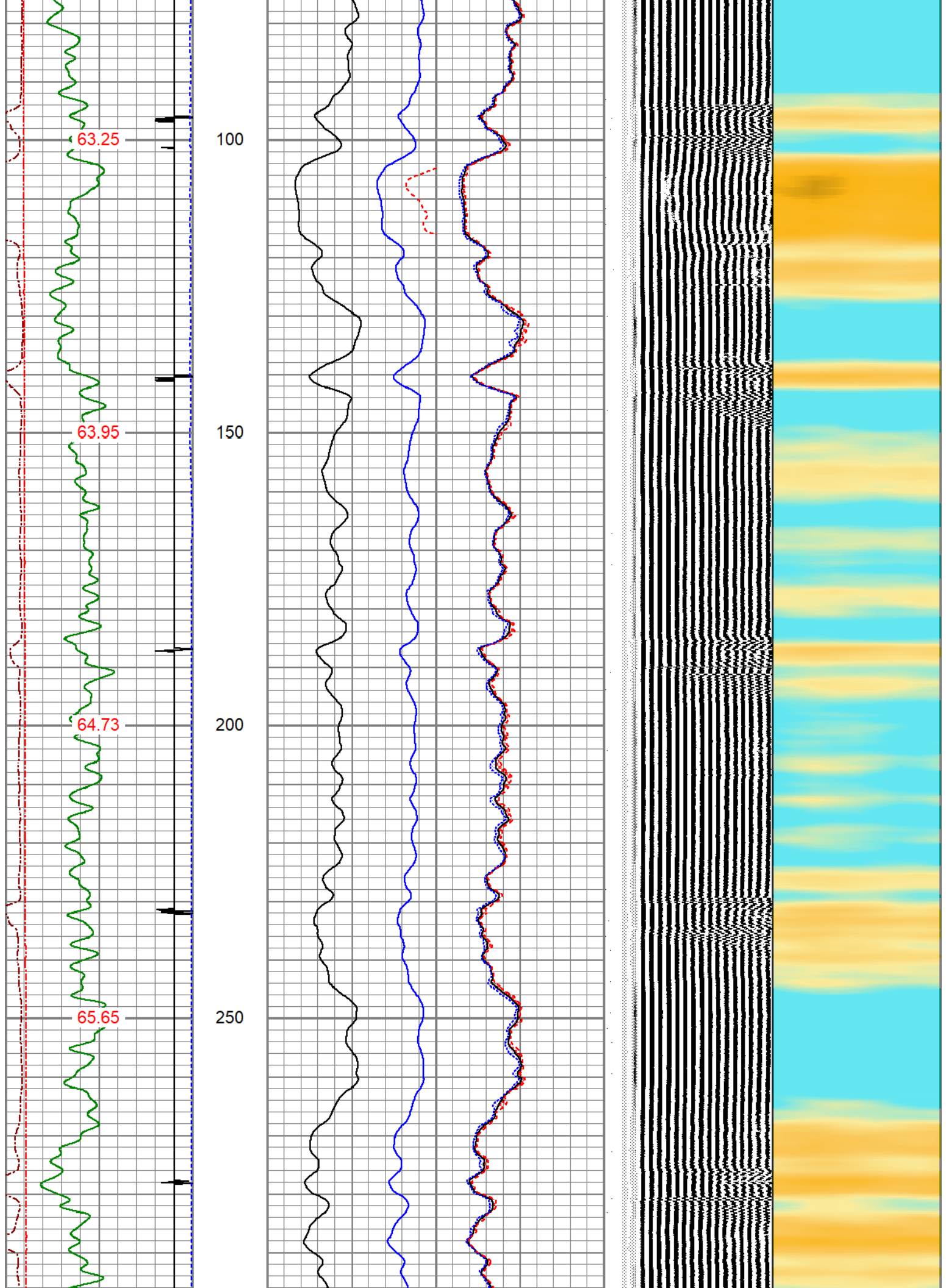
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

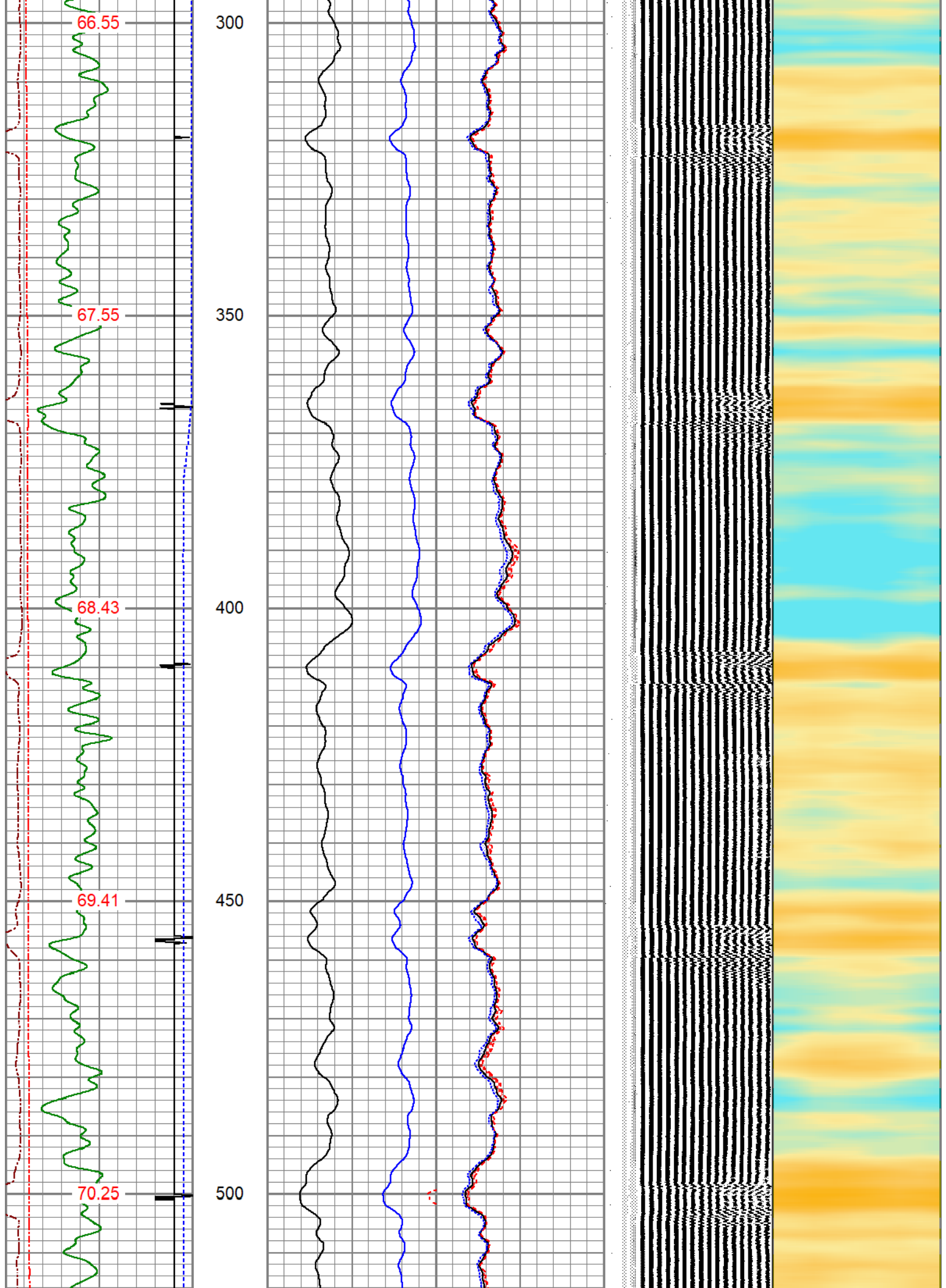
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
			PROBE-RBT-DIGITAL-RBL-DC (FW 1304-33) Probe 2 3/4" Radii Bond-Corrosion Package	8.75	2.75	100.00
WVFS8	12.09					
WVFS7	12.09					
WVFS6	12.09					
WVFS5	12.09					
WVFS4	12.09					
WVFS3	12.09					
WVFS2	12.09					
WVFS1	12.09					
WVFCAL	12.09					
WVF3FT	12.09					
WVF5FT	11.09					
HEADVOLT	7.90					

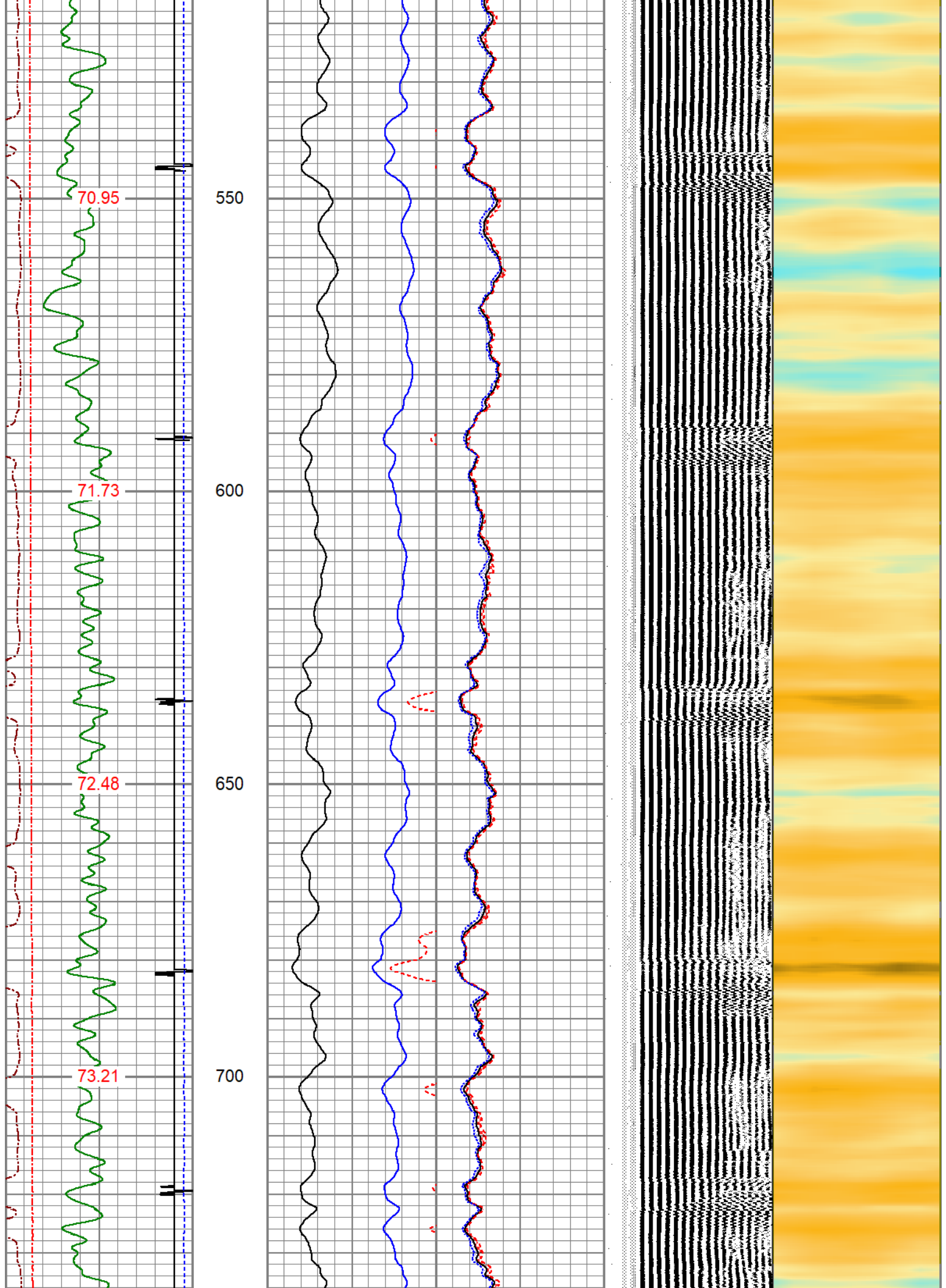
CCL GCT_TEMP GR	4.20		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
	3.41		PROBE-GR/CCL-DIGITAL-275 Probe GCT (140181) Probe 2 3/4" Gamma Ray/Temp/CCL	4.69	2.75	60.00
	2.83		Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.38	1.00
Dataset: verdad resources_kbl 1930-09h_0512350882_20210818_scbl.db: field/well/run1/pass4 Total length: 20.56 ft Total weight: 193.00 lb O.D.: 2.75 in						

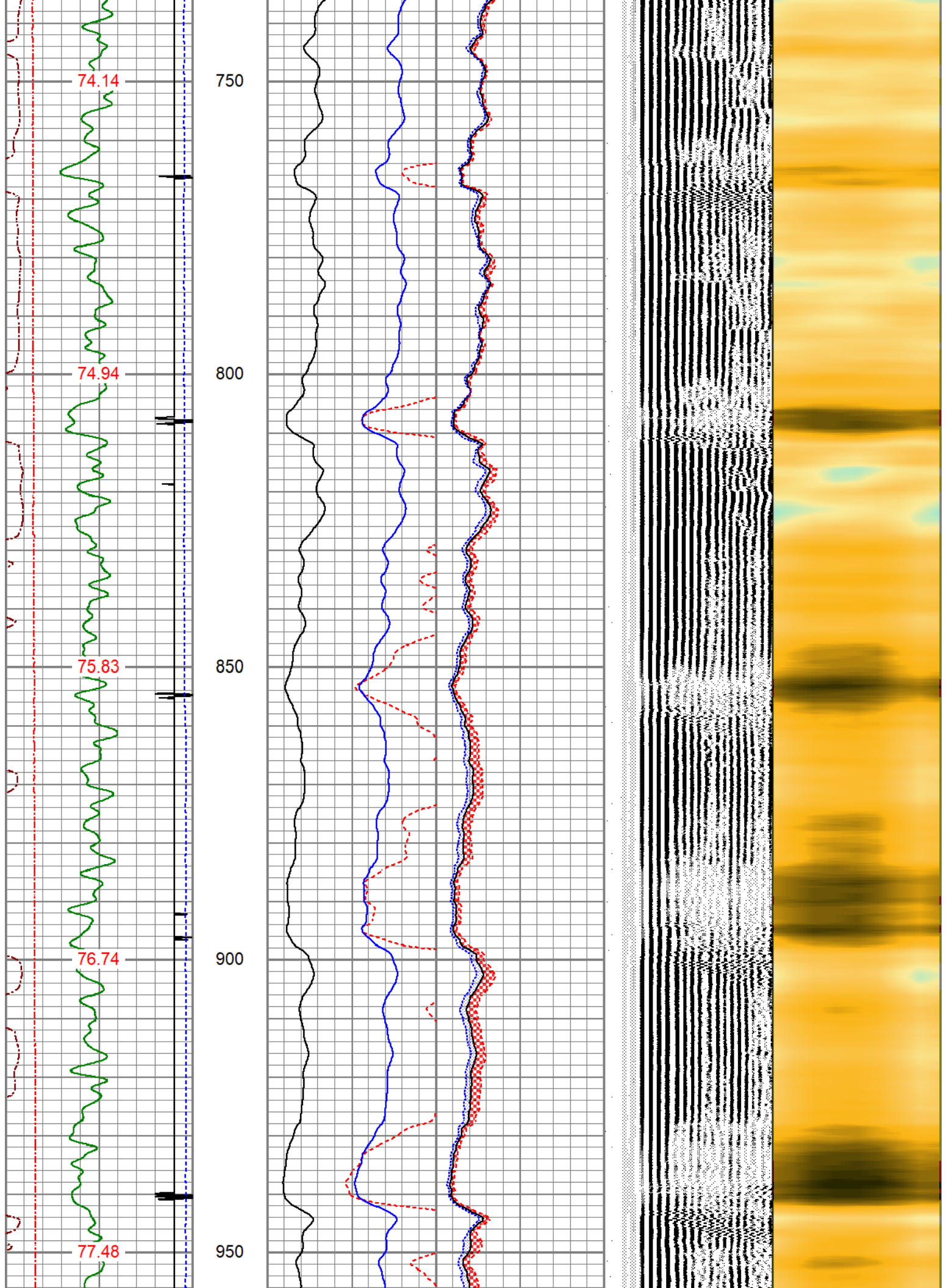
		MAIN LOG ZERO PSI APPLIED AT SURFACE			
Database File: verdad resources_kbl 1930-09h_0512350882_20210818_scbl.db Dataset Pathname: pass4 Presentation Format: pinr_scbl Dataset Creation: Wed Aug 18 17:10:39 2021 Charted by: Depth in Feet scaled 1:240					
3Ft Travel Time	3' Amplitude	Sector	VDL	1 Sector Map 8	
275 (usec) 175	0 (mV) 100	Amplitude Average	200 (usec) 1200		
-9 Collar Locator 1	3' Amplified Amplitude X 5	0 150			
Gamma Ray	0 (mV) 20	Sector Amplitude Maximum			
0 (GAPI) 150	1 BONDIX 0	0 150			
LineTension		Sector Amplitude Minimum			
0 (lb) 2000		0 150			
Line Speed					
-100 (ft/min) 100					
TEMP (degF)					

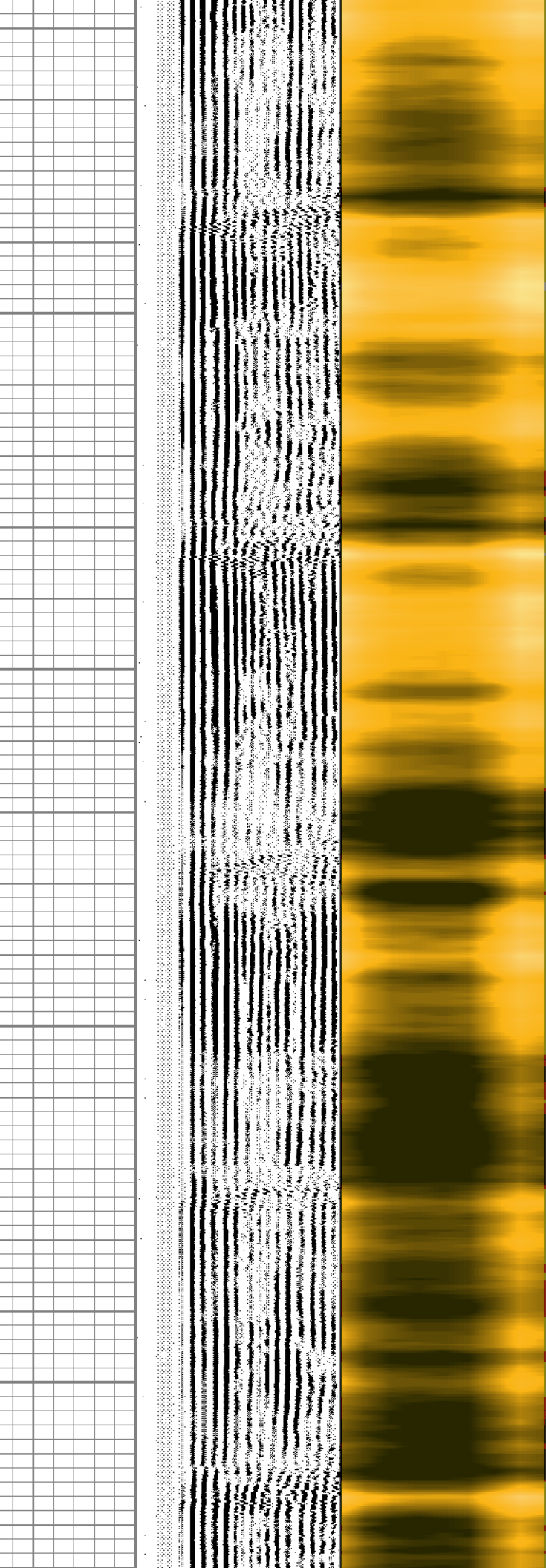
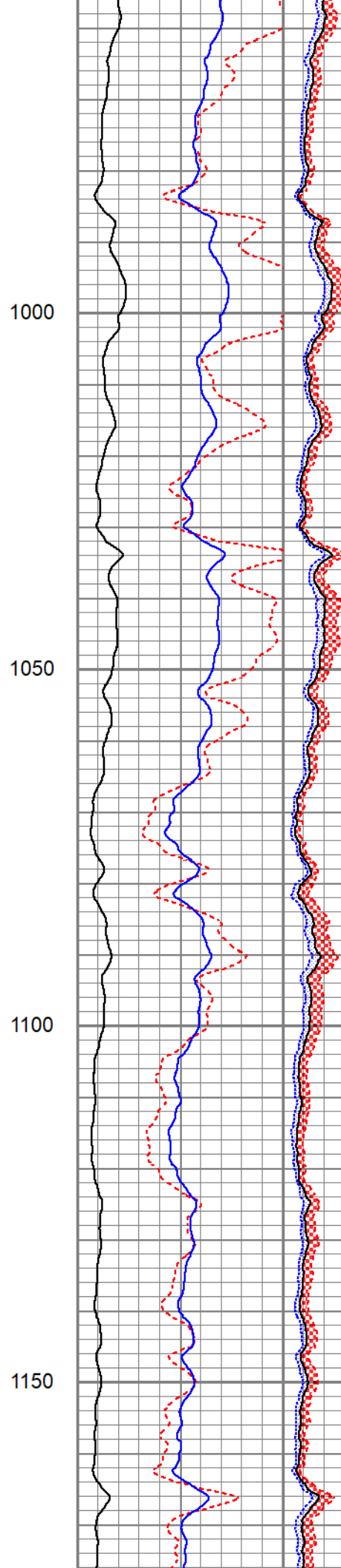
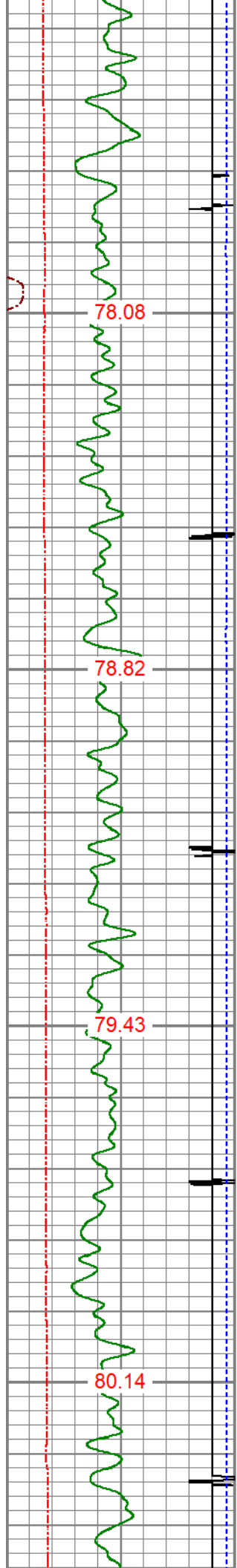












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78.82

79.43

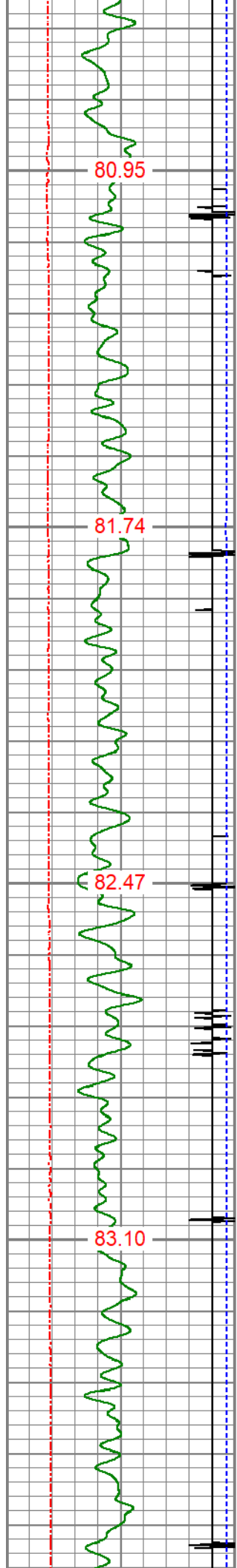
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1000

1050

1100

1150

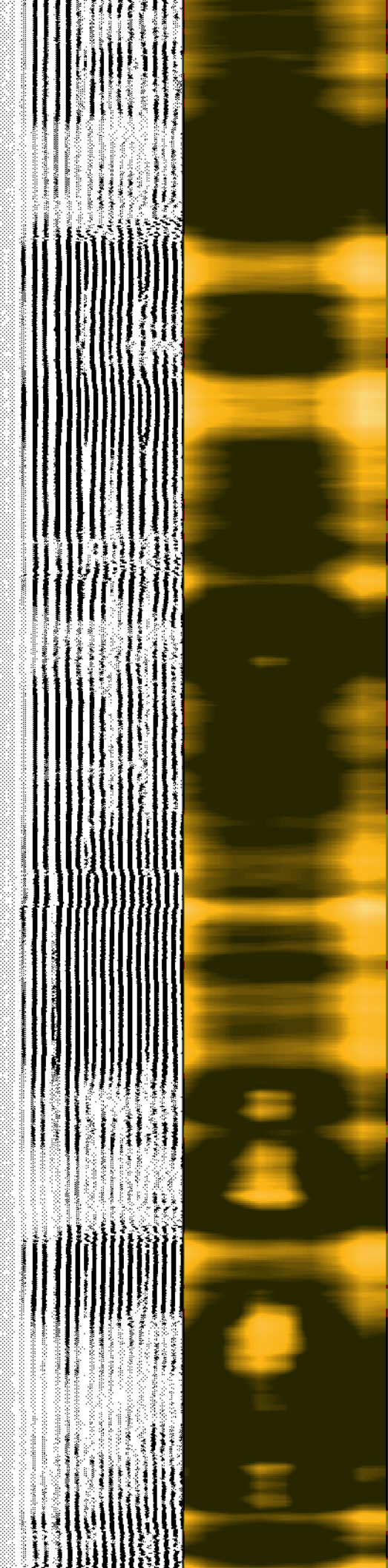
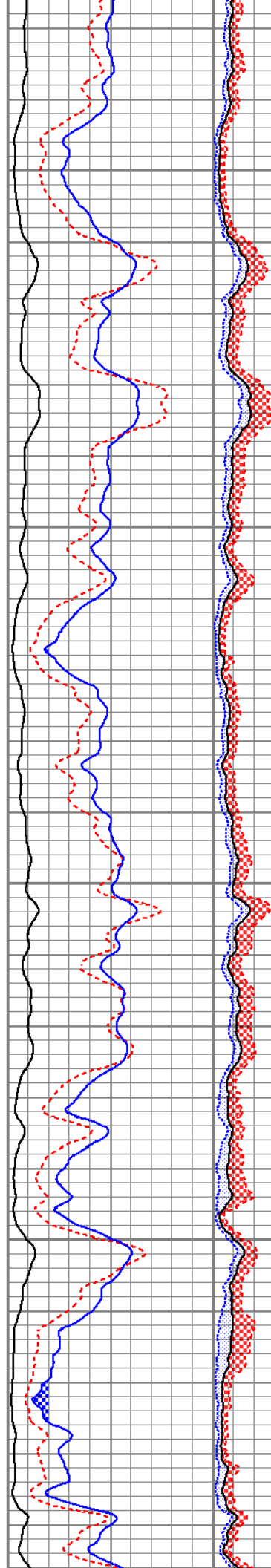


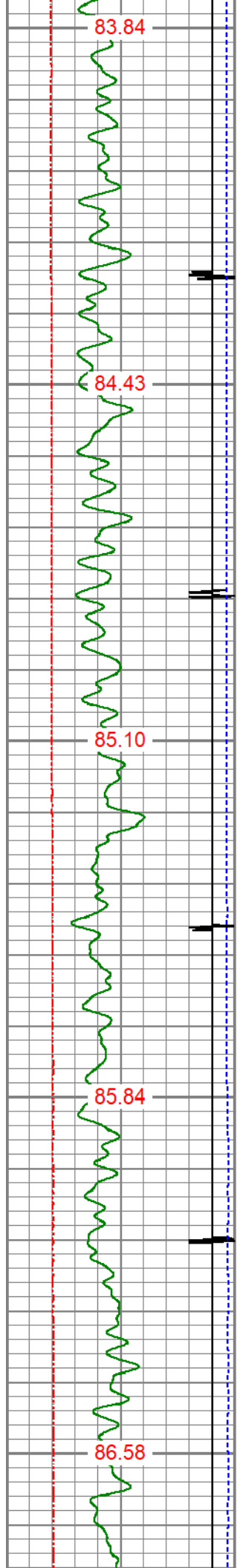
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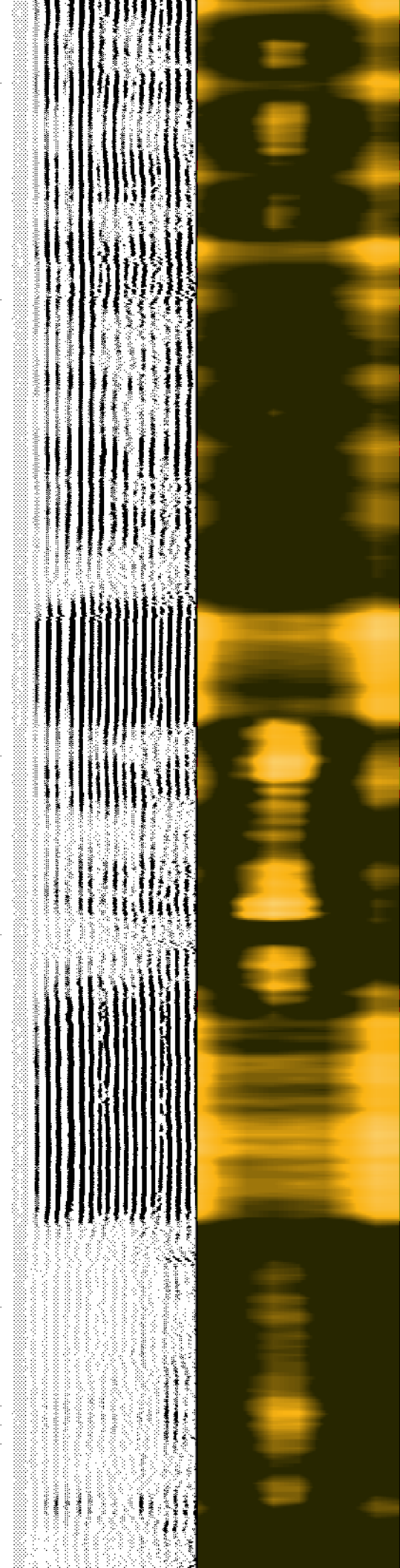
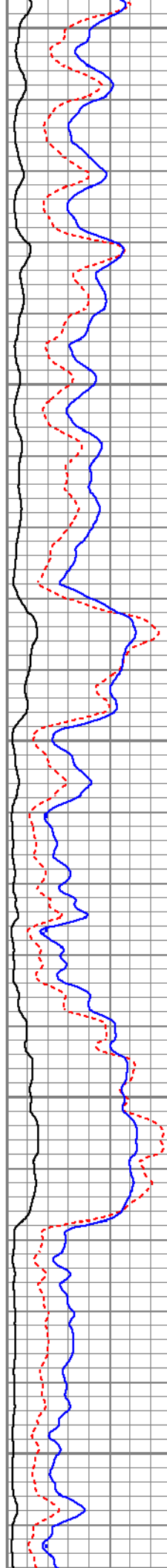
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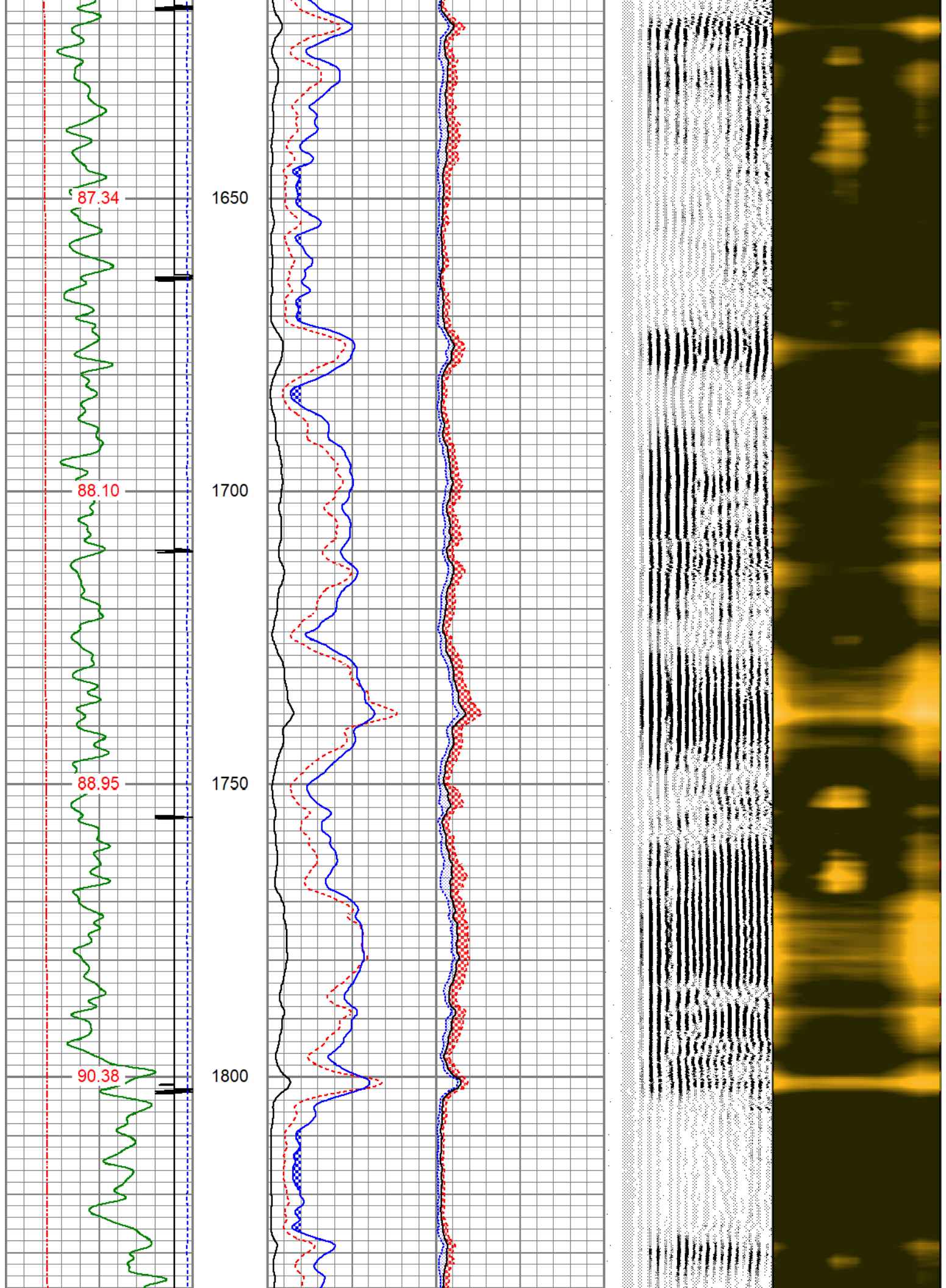
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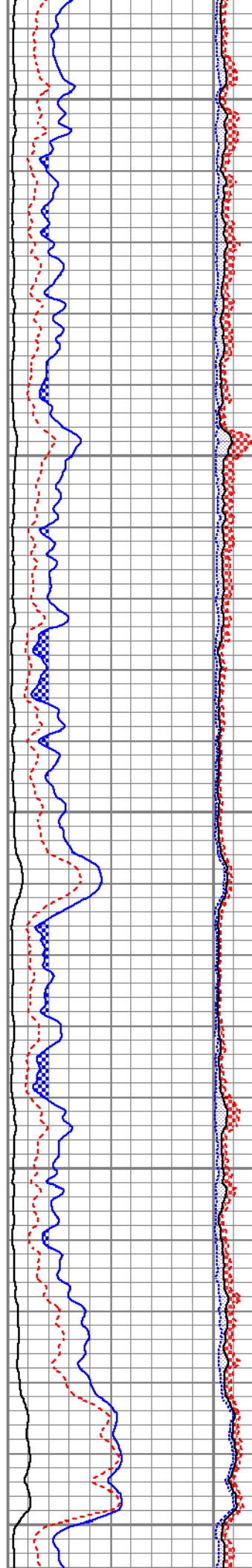
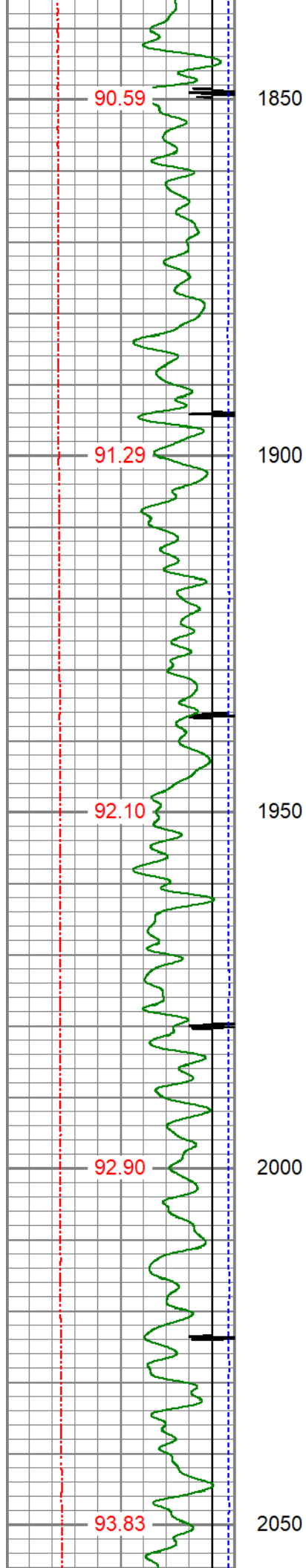


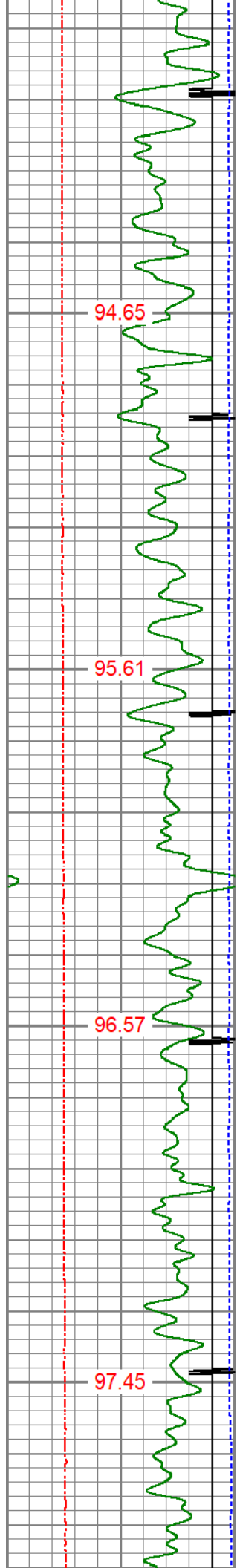


1400
1450
1500
1550
1600







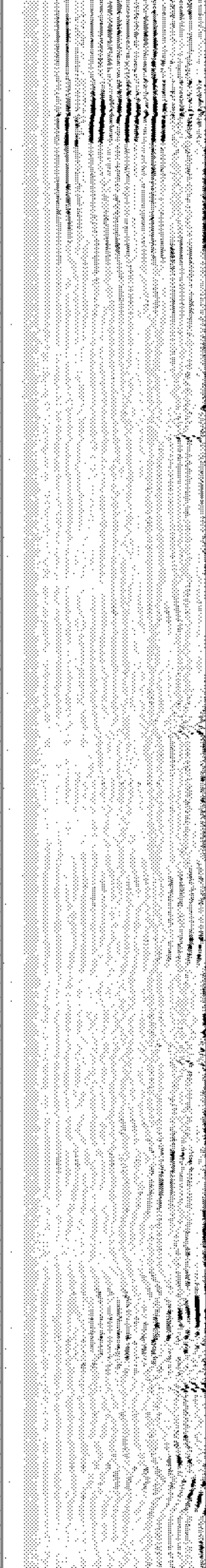
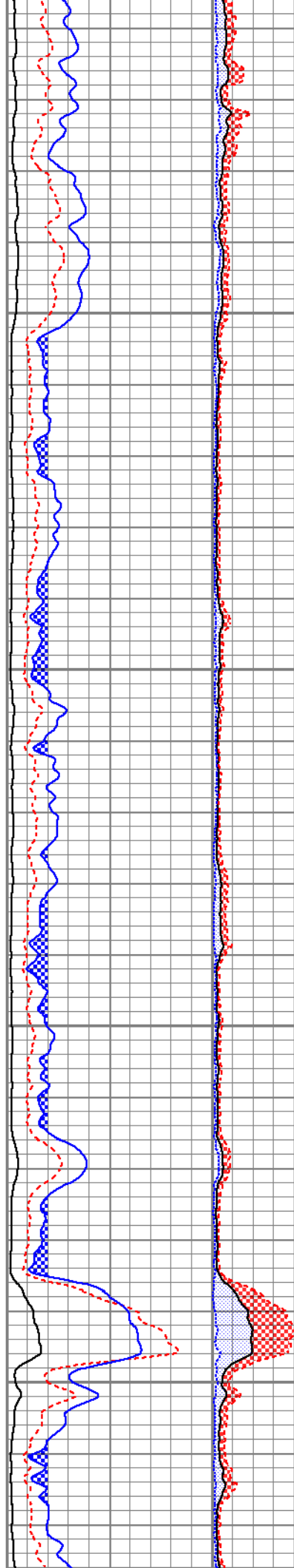


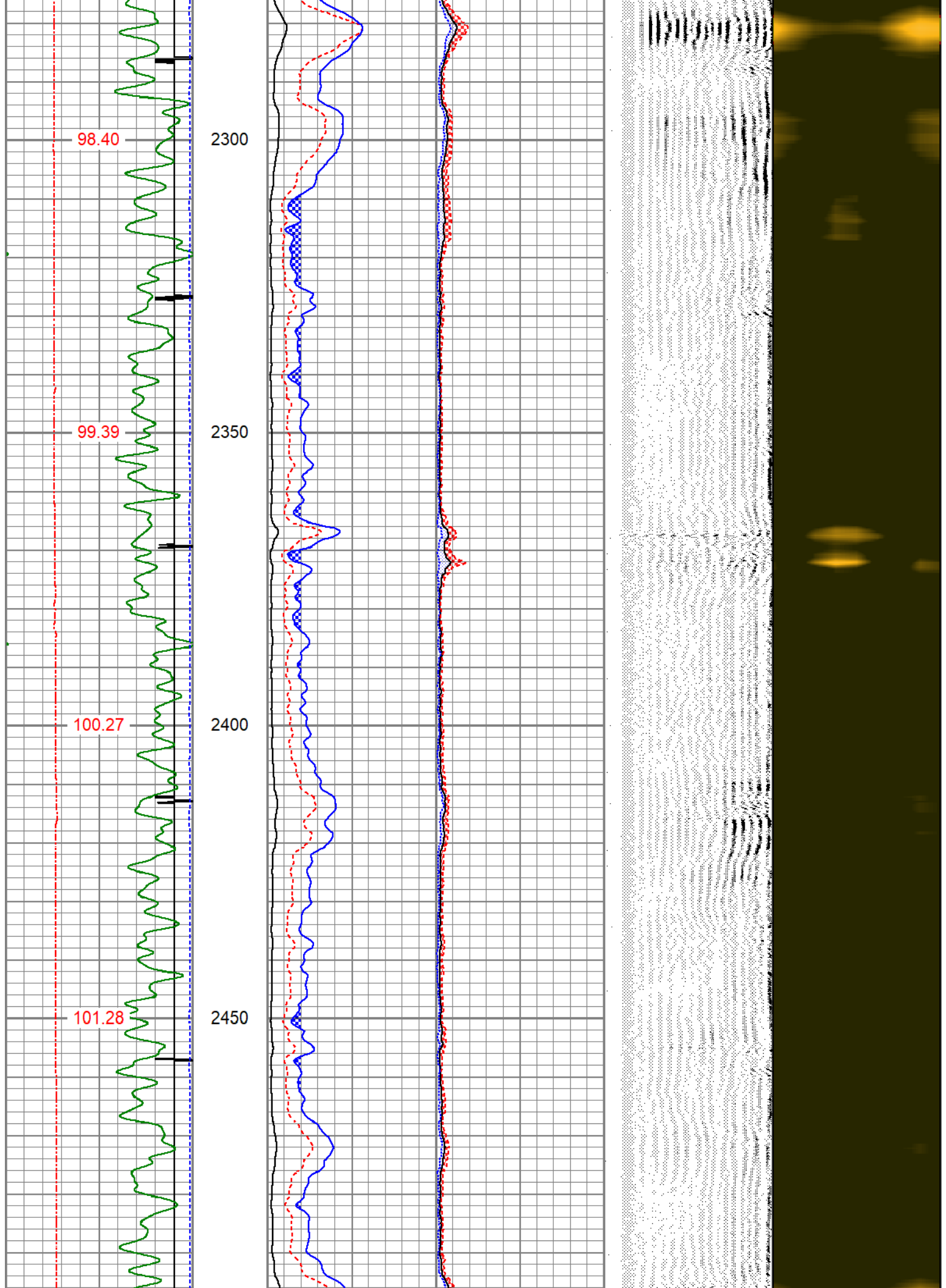
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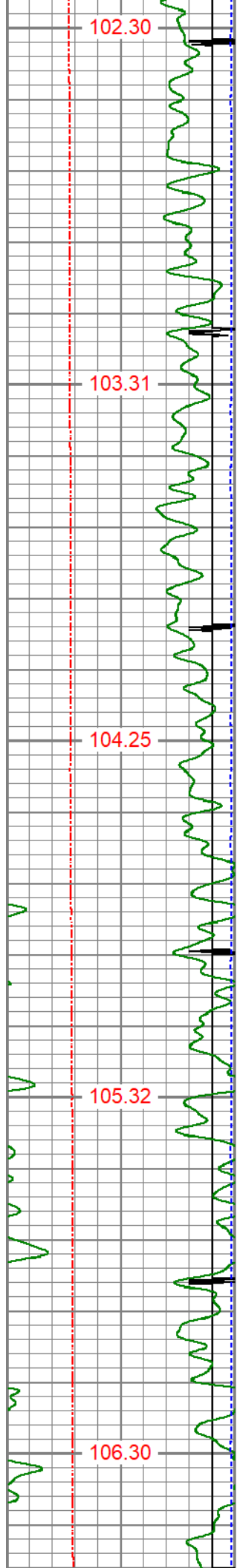
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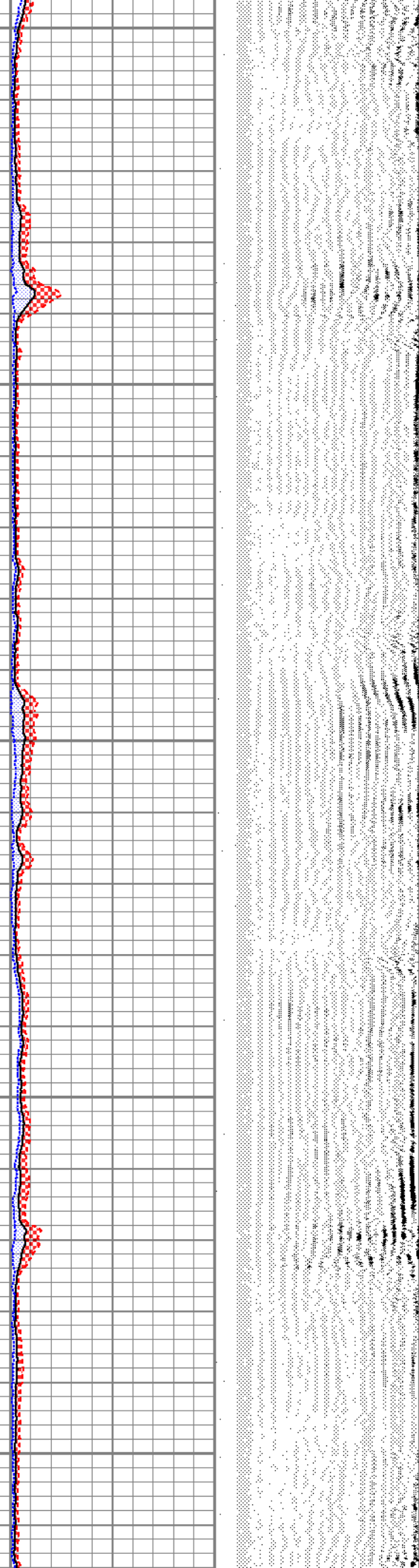
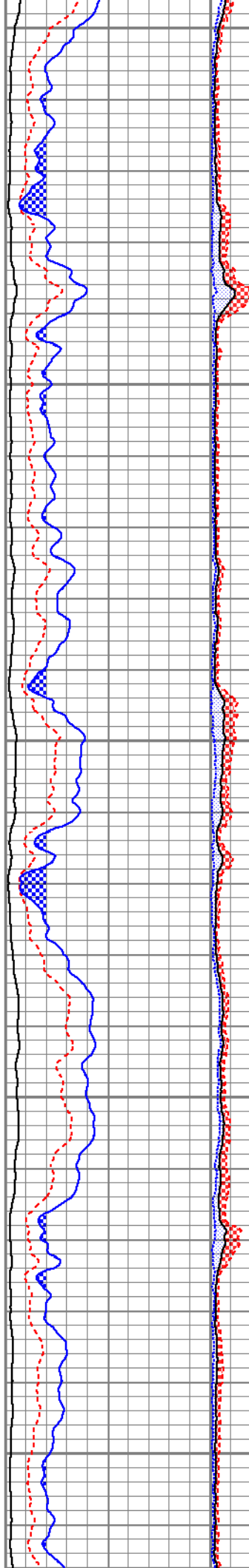
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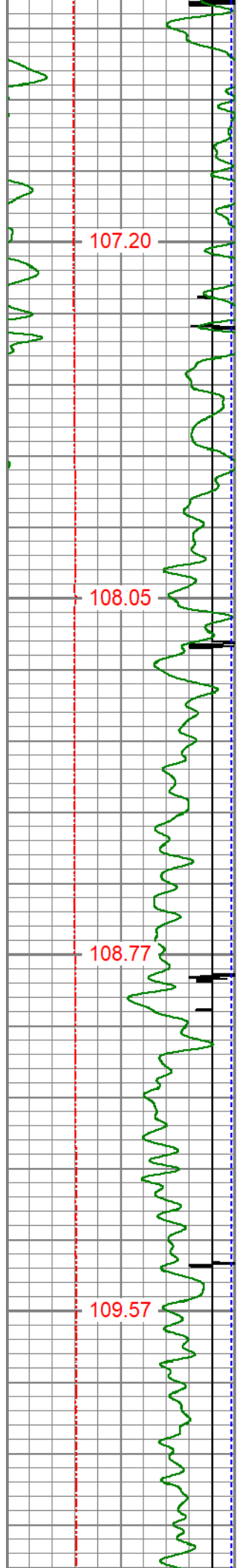






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103.31
2550
104.25
2600
105.32
2650
106.30
2700





107.20

108.05

108.77

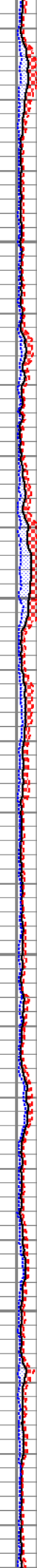
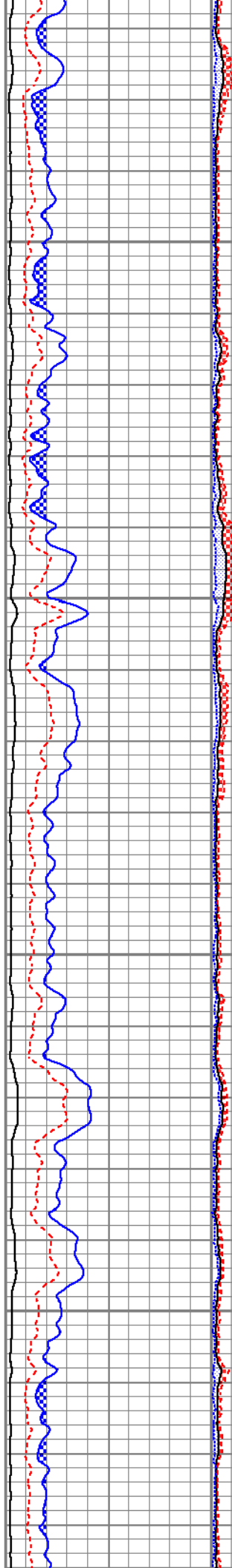
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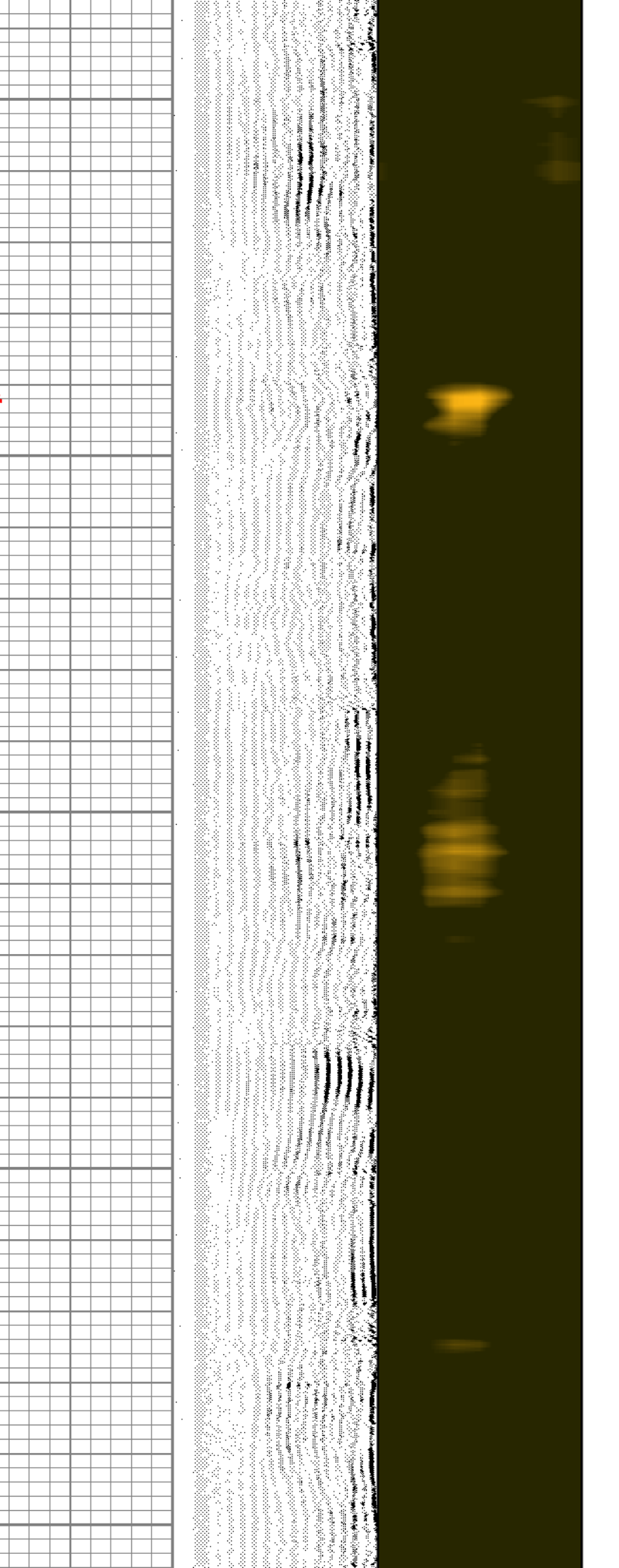
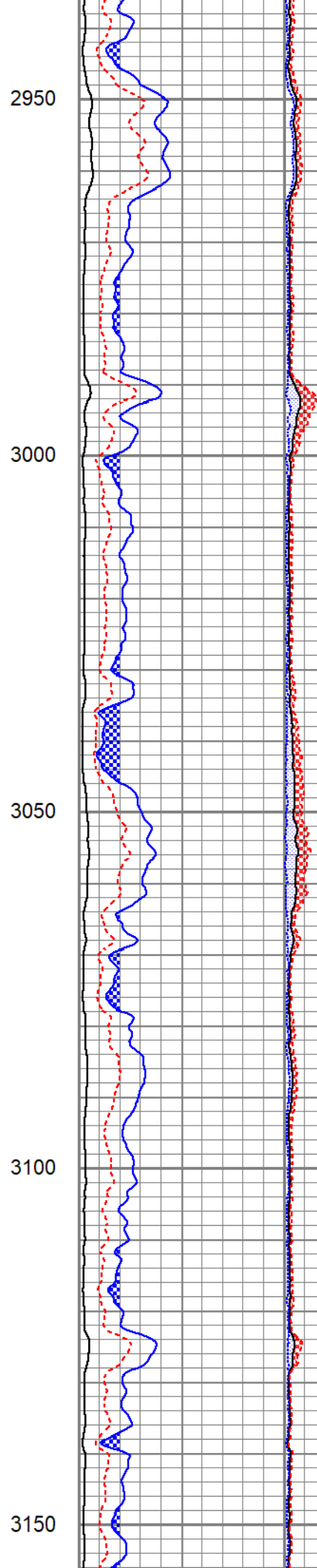
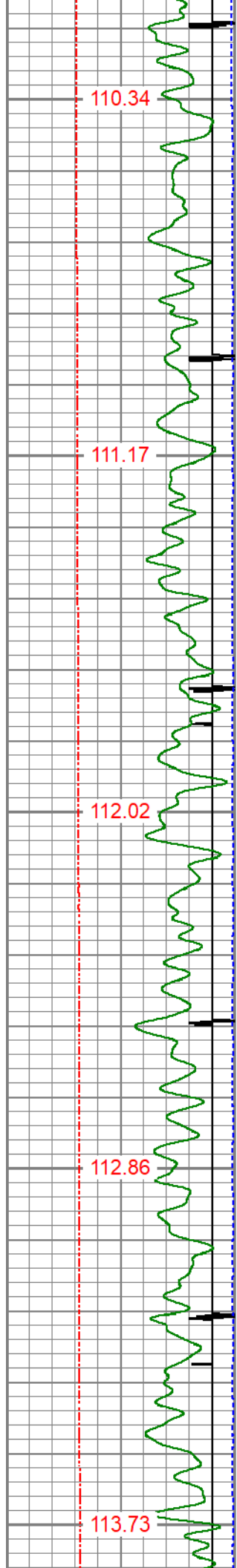
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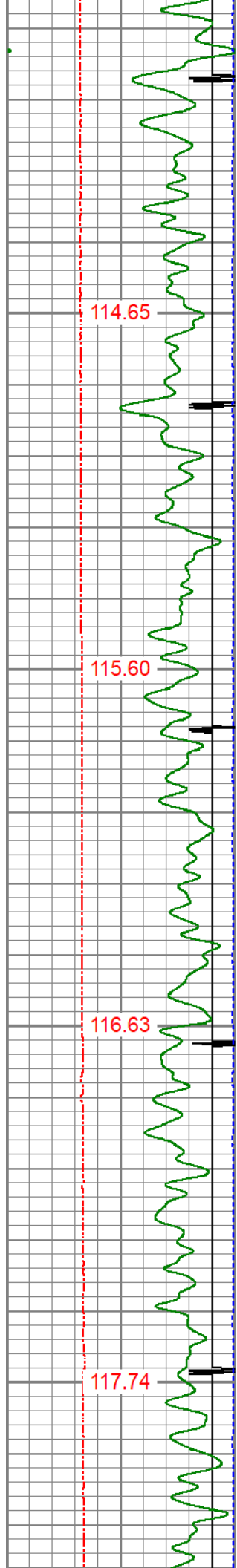
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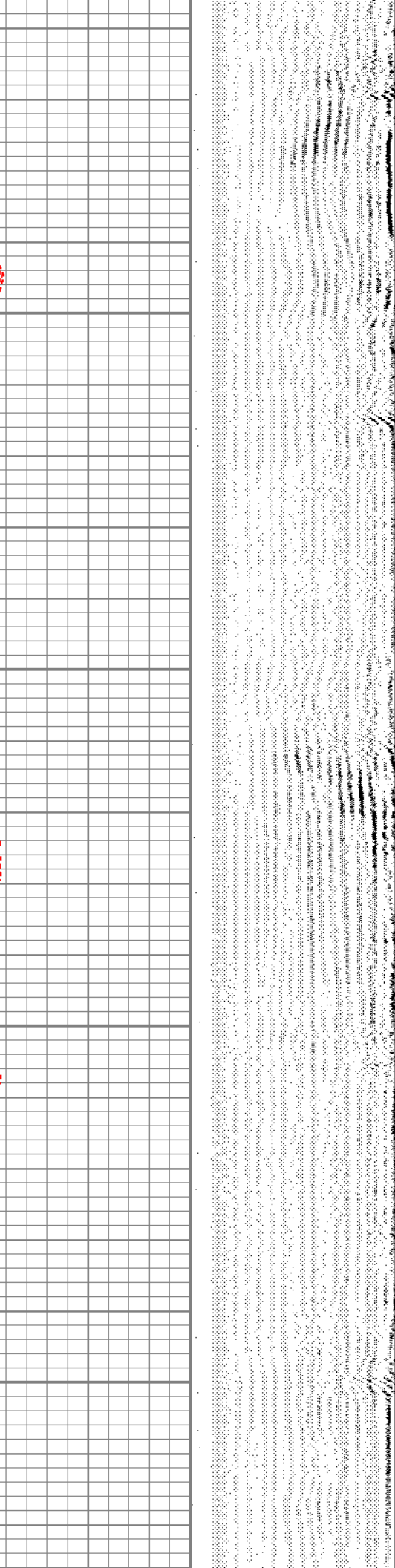
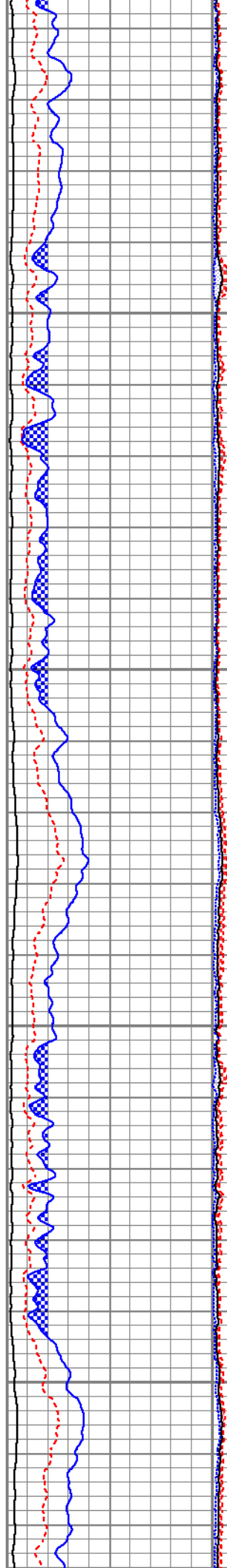


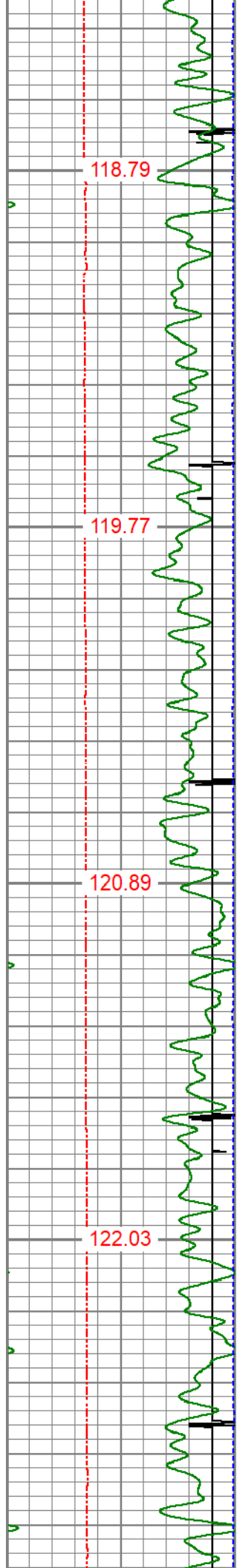
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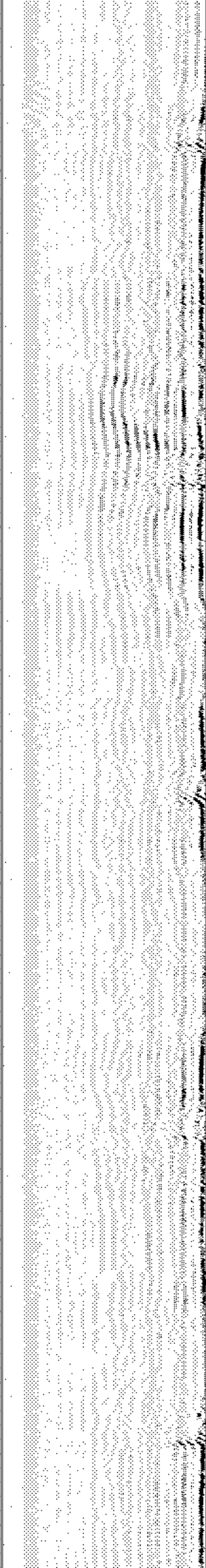
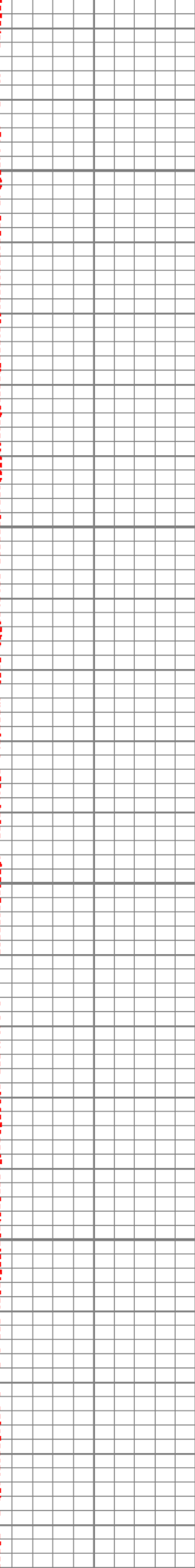
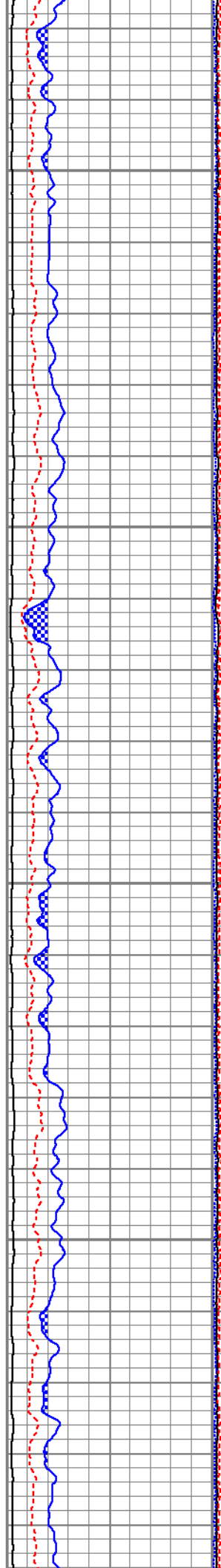


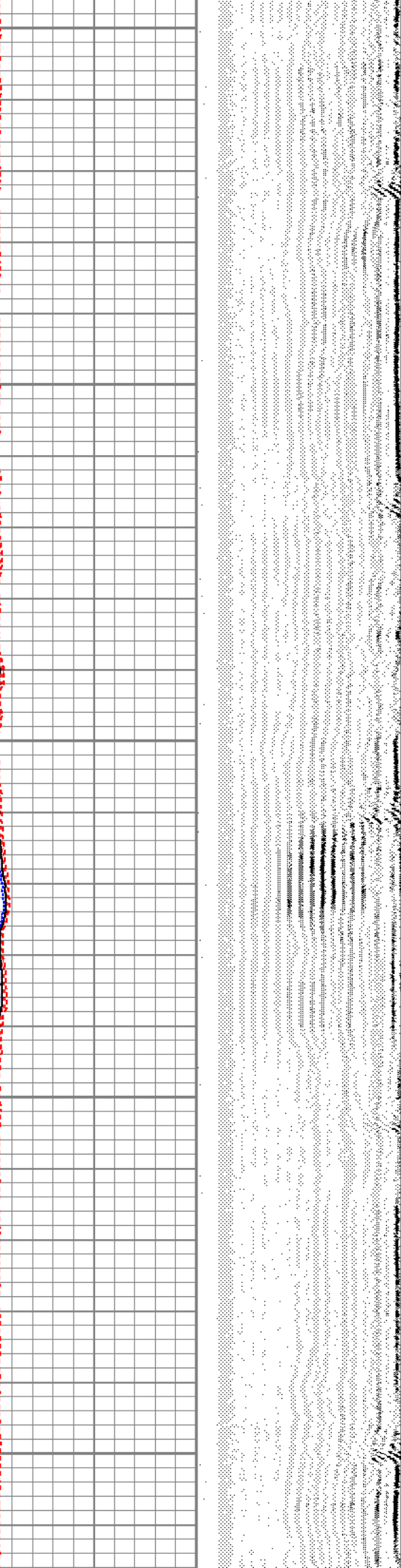
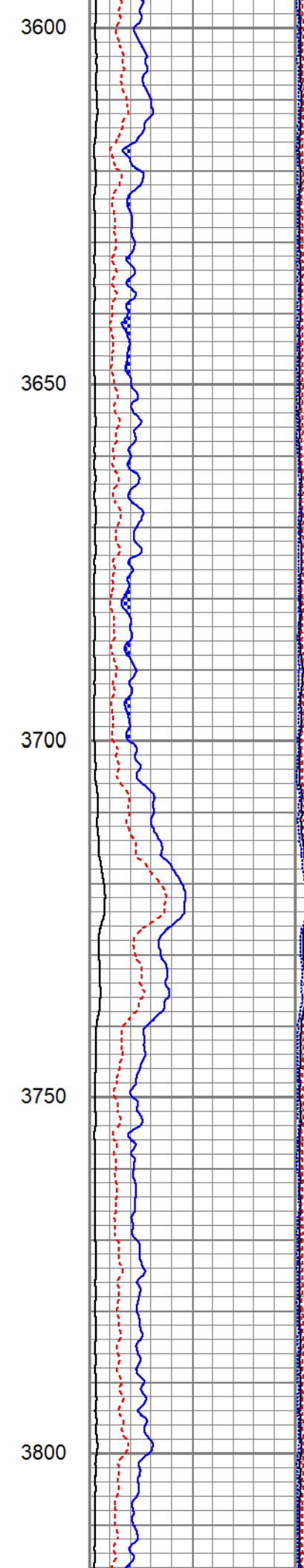
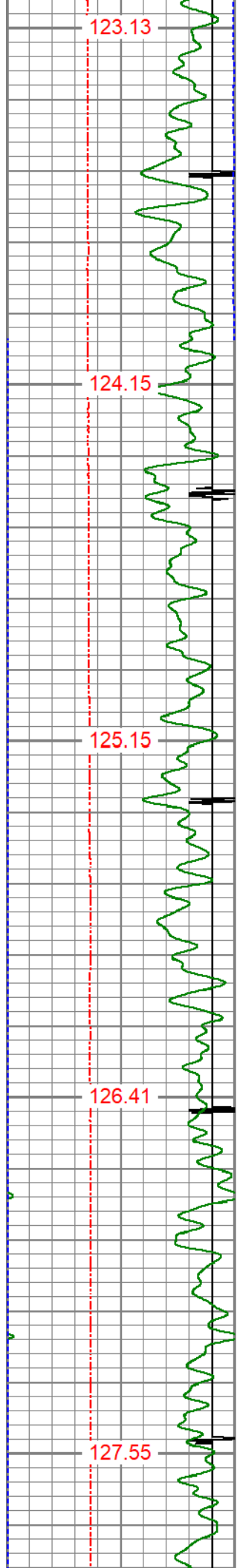
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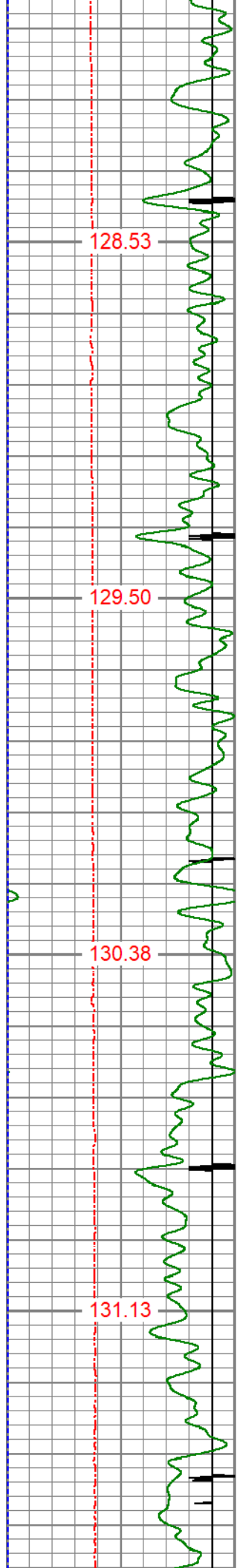
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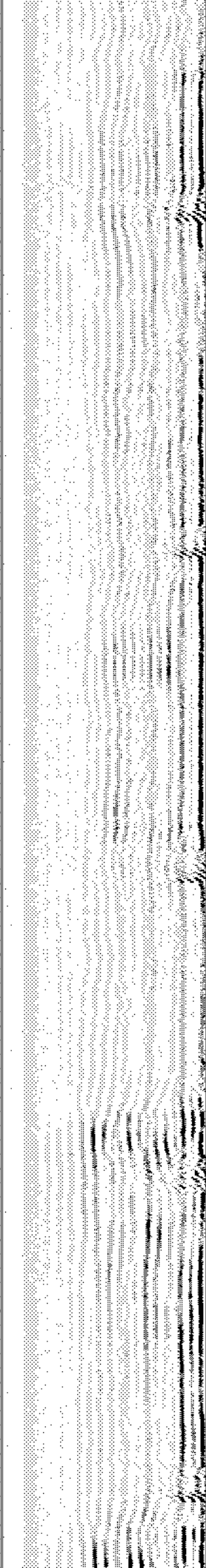
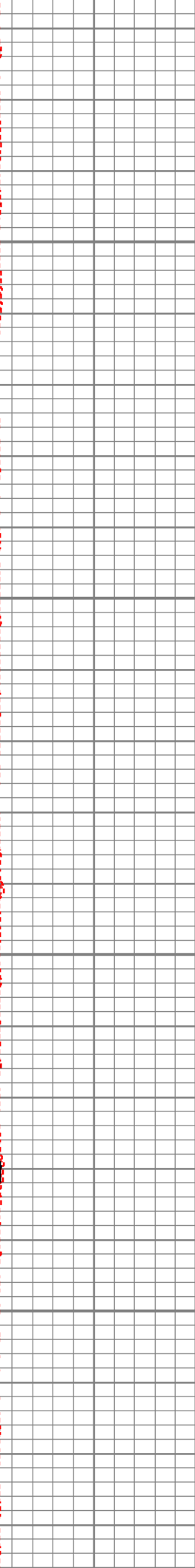
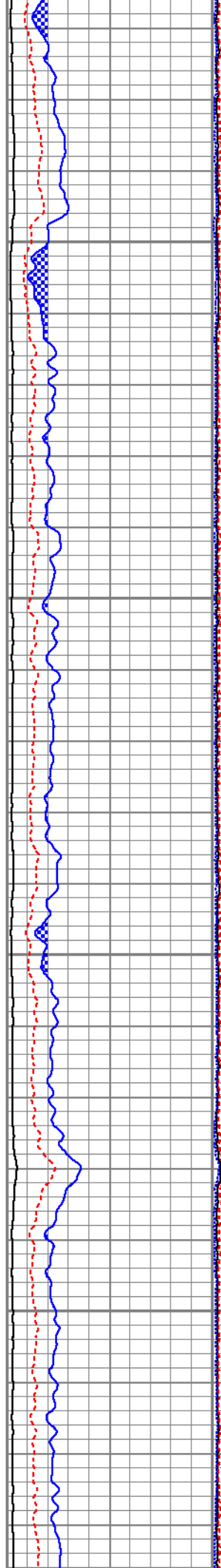


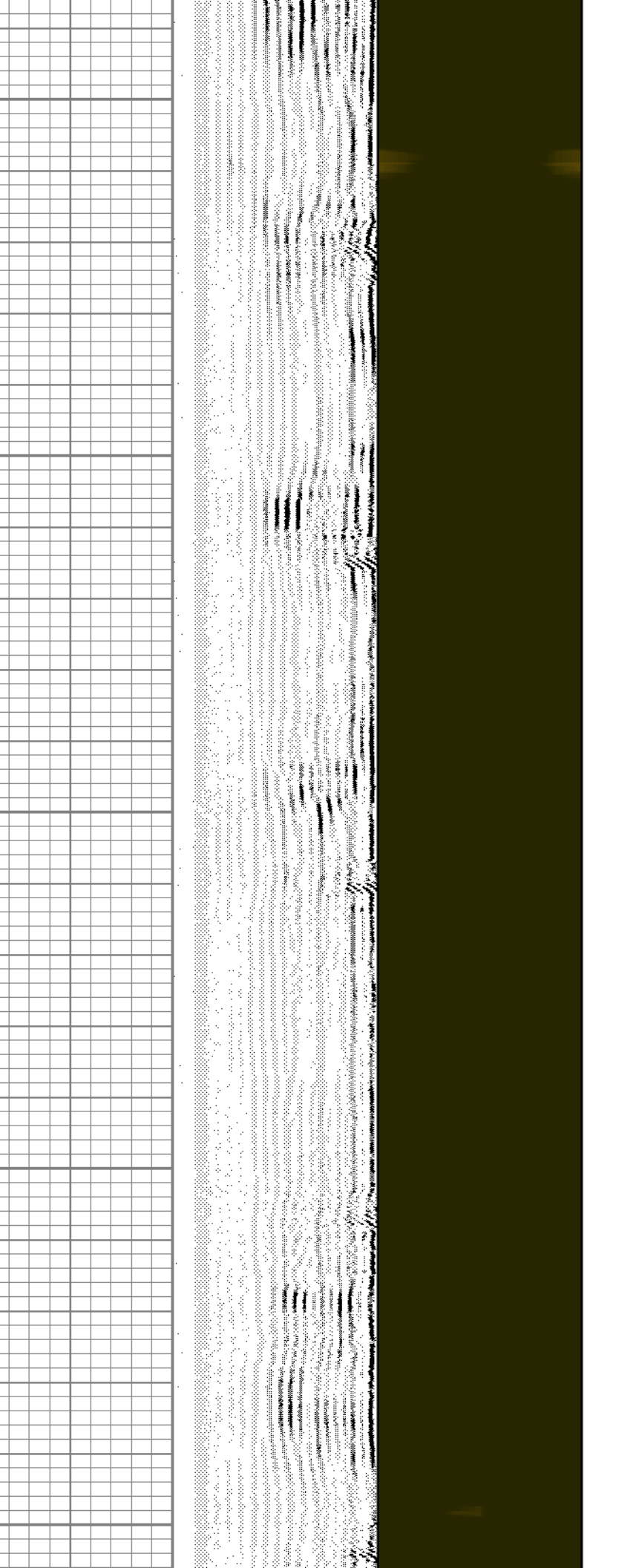
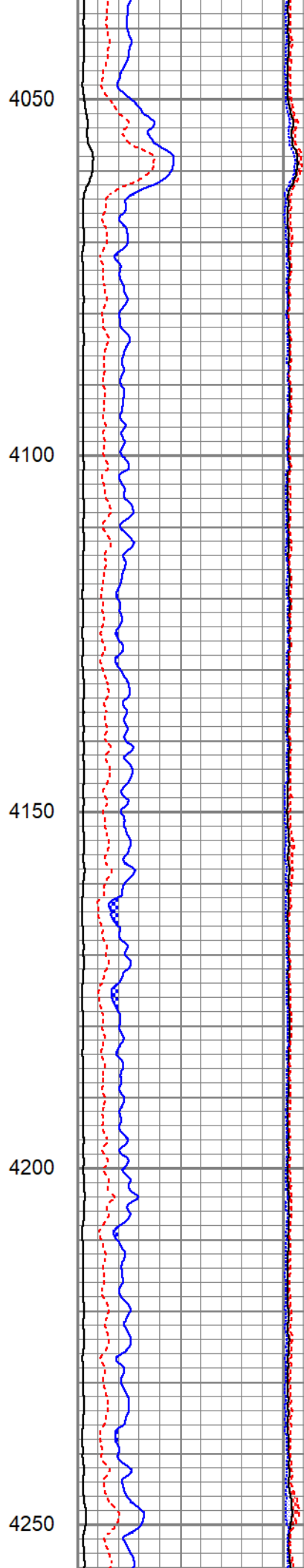
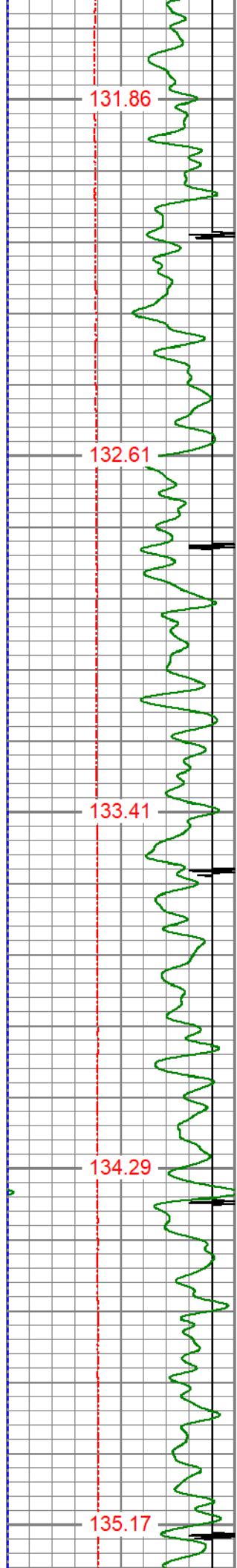
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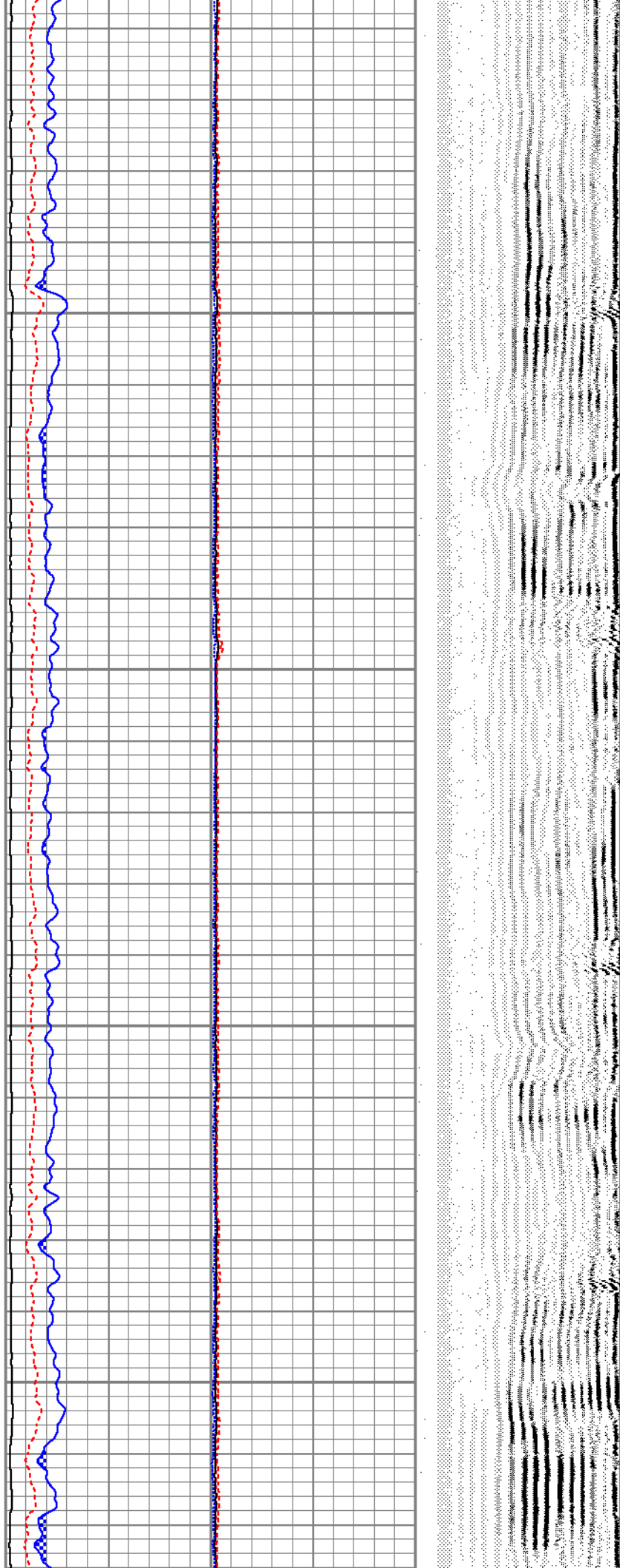
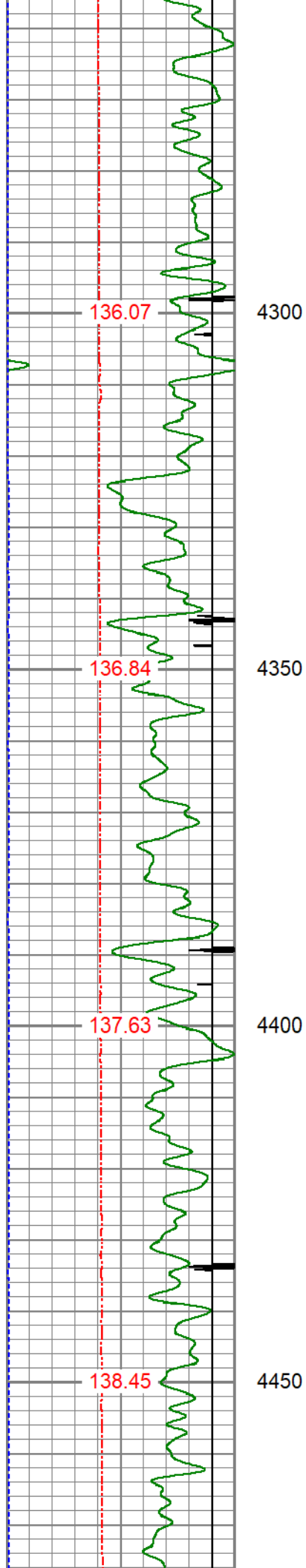
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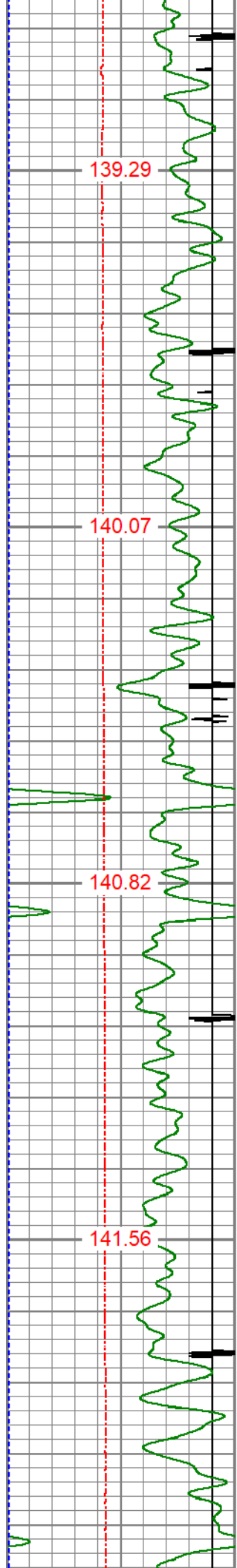
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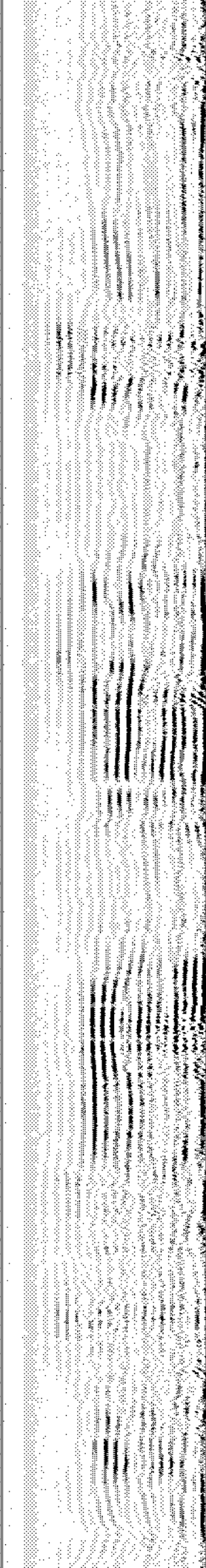
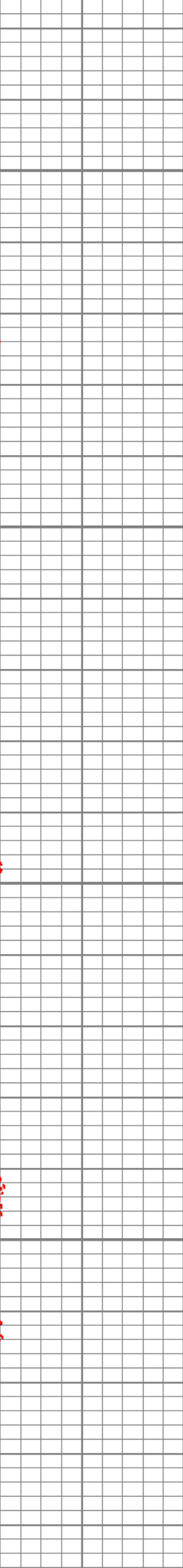
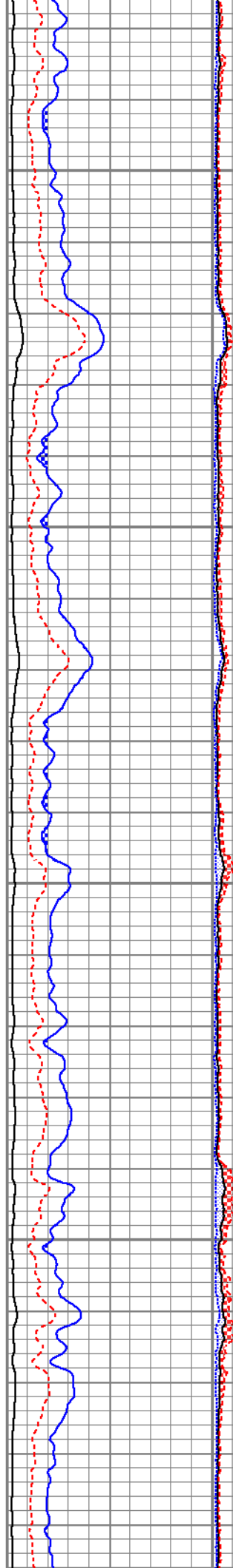
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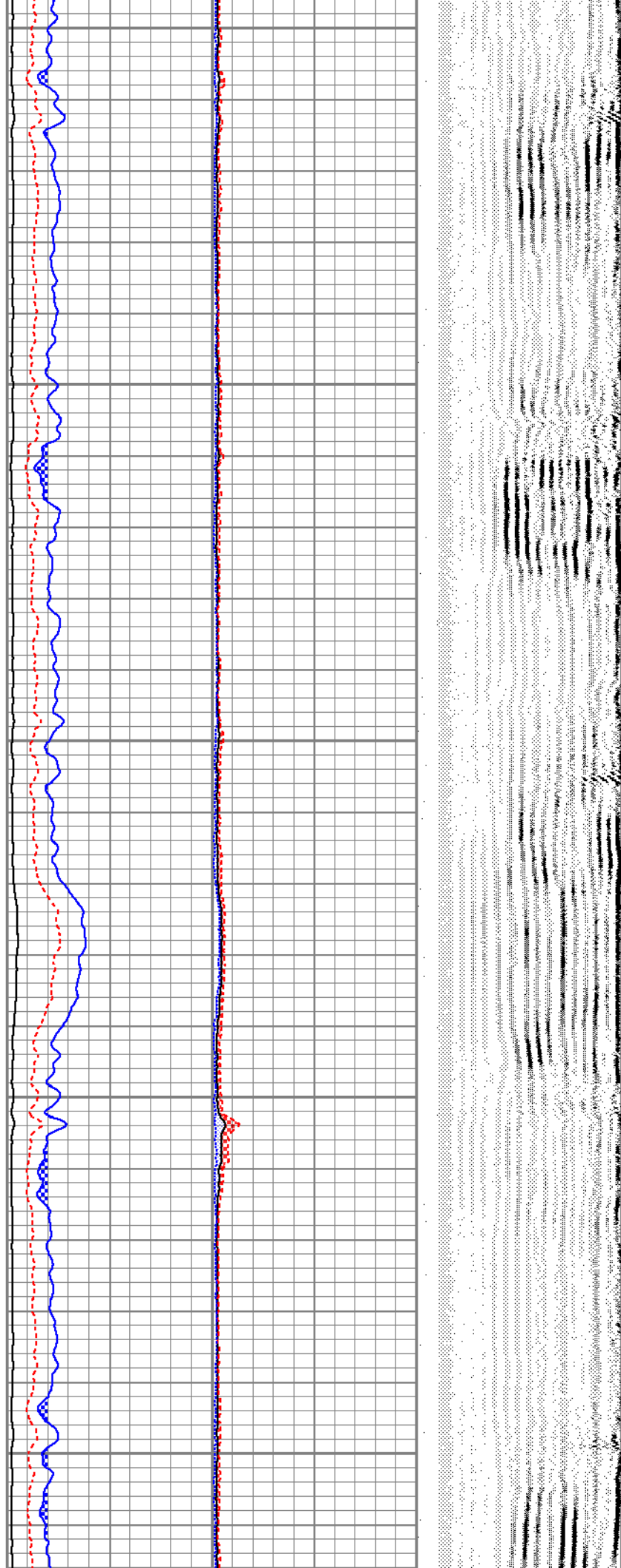
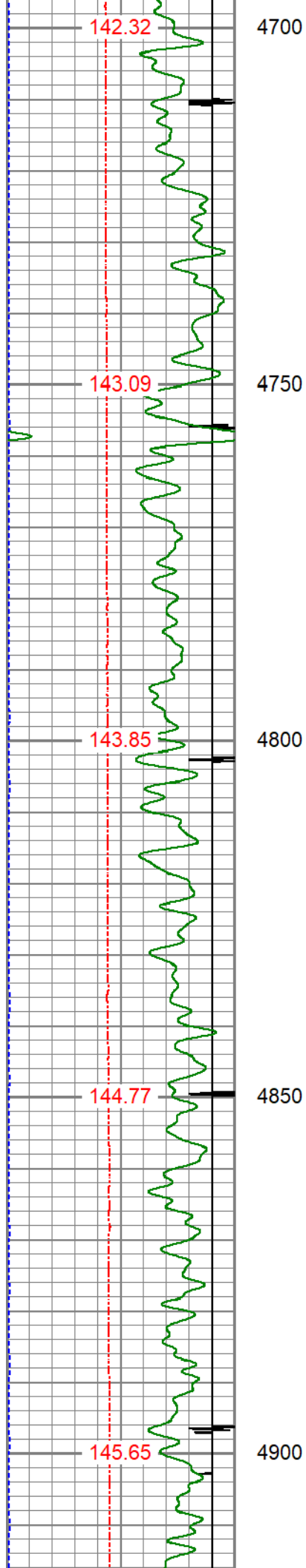
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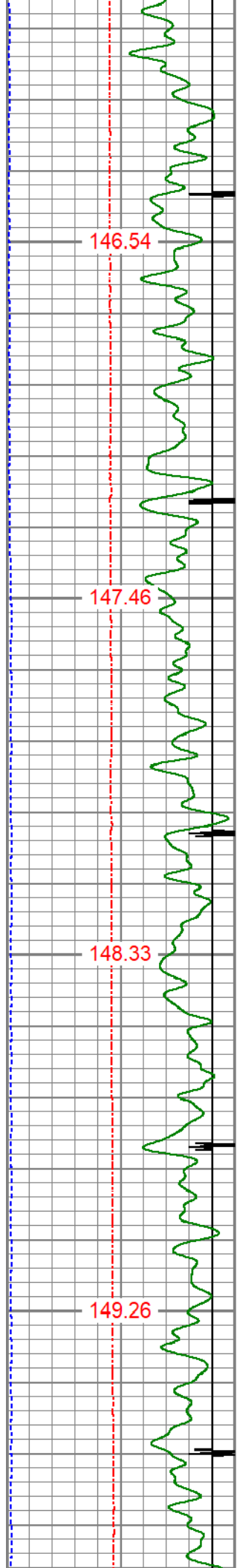
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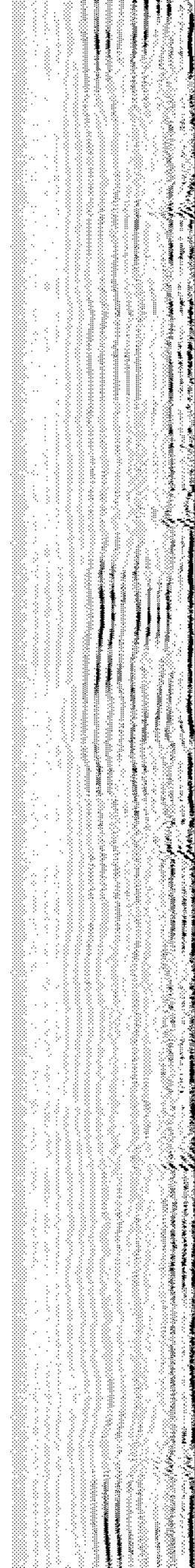
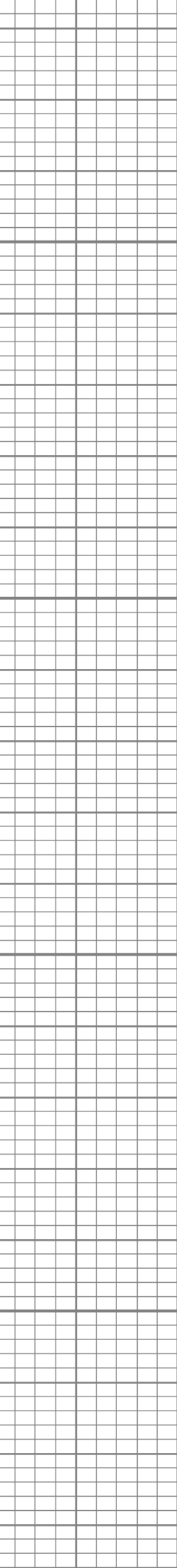
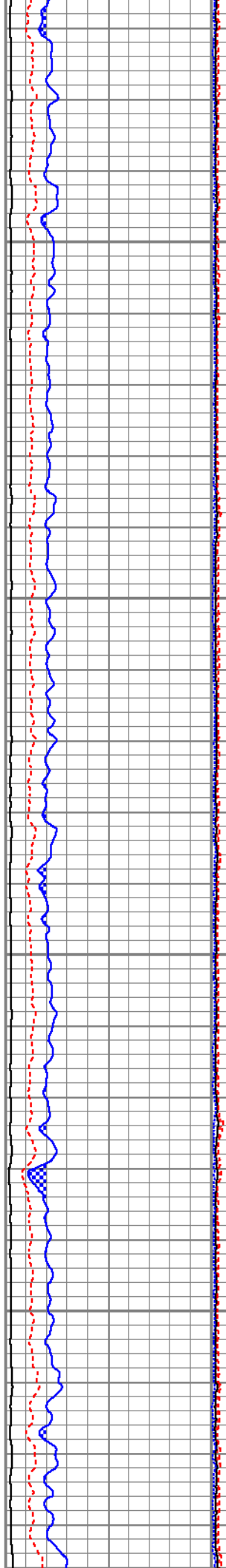
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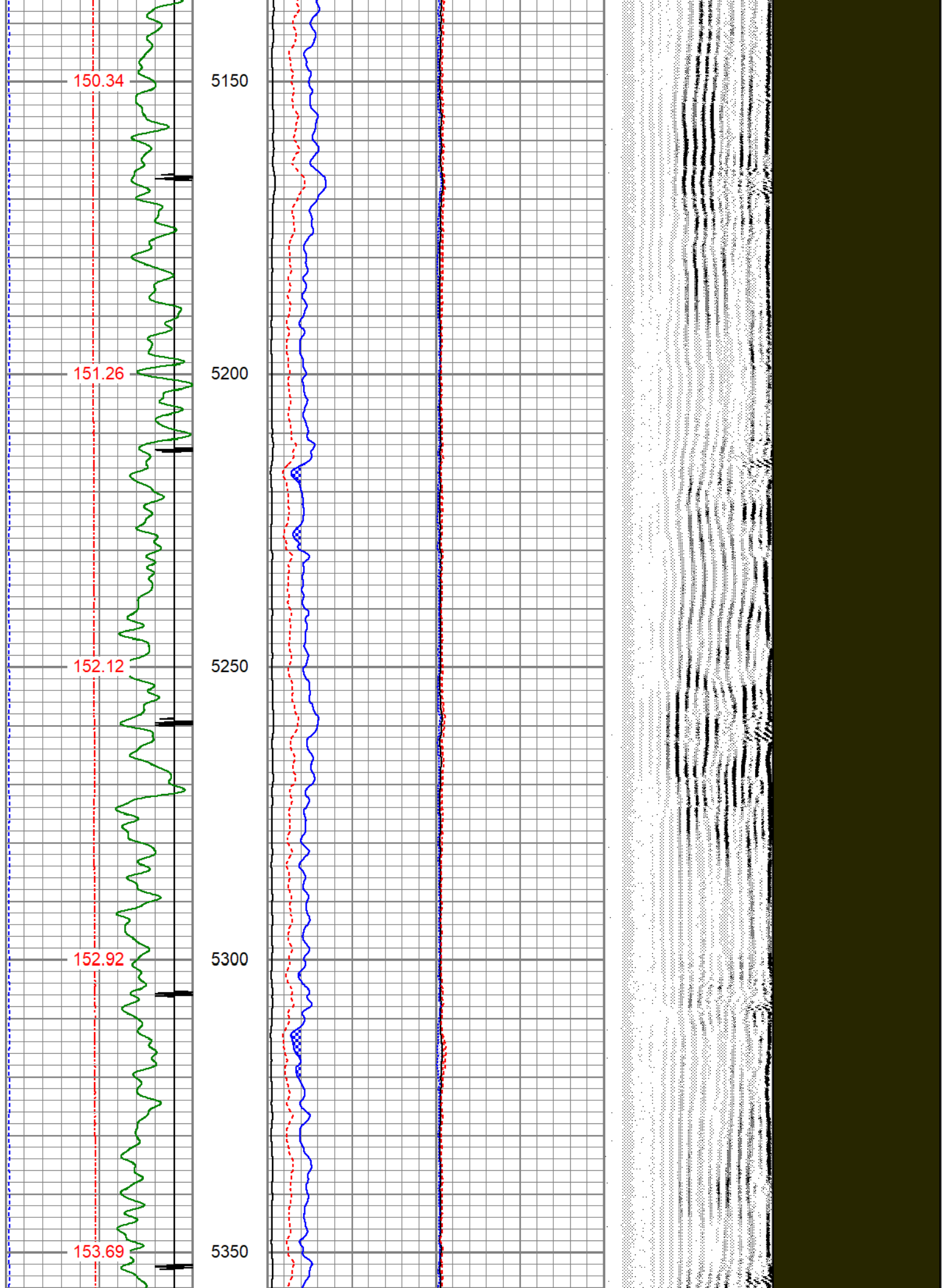
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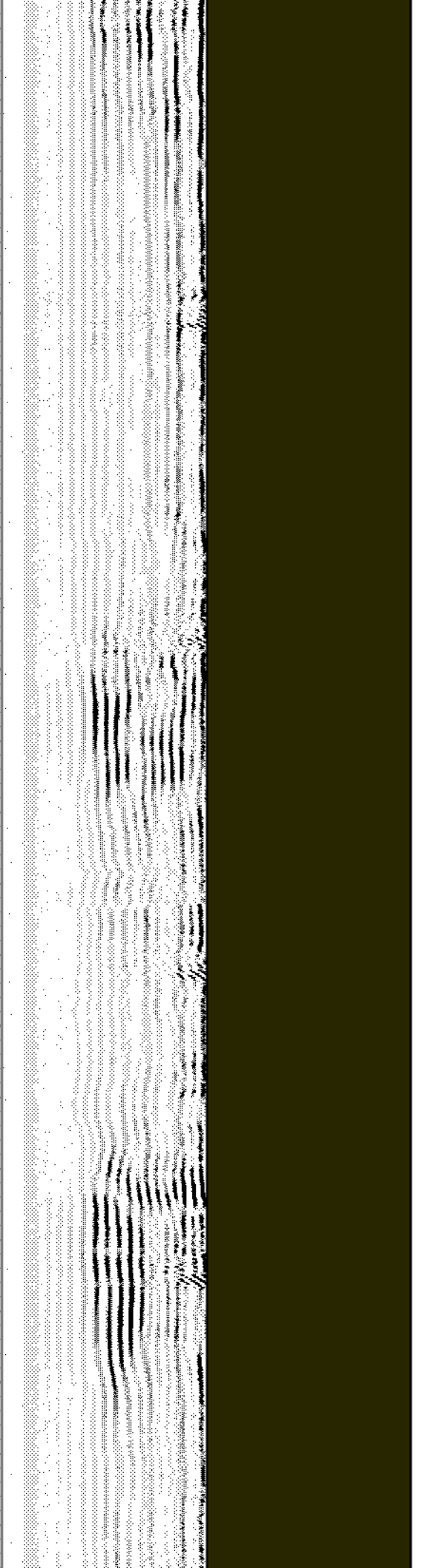
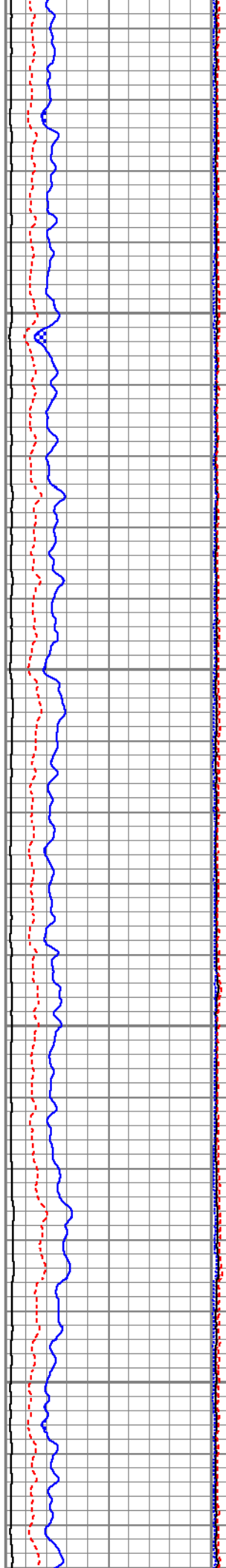
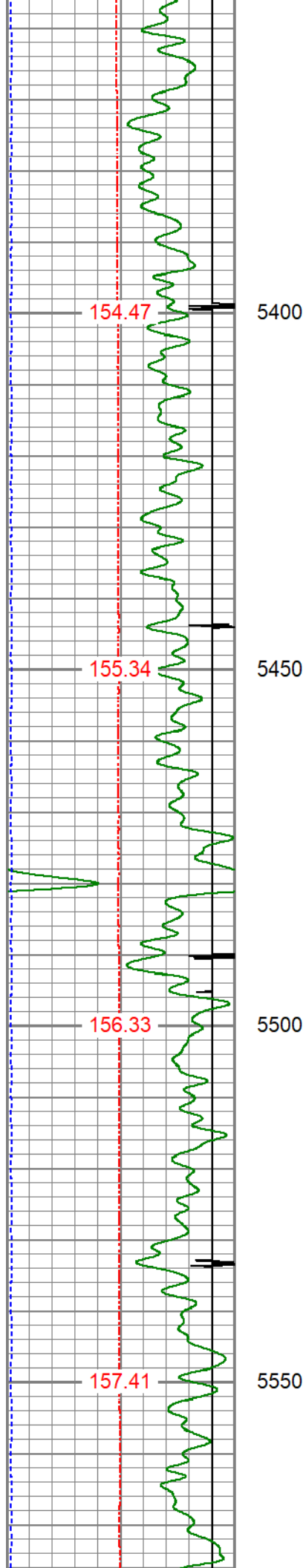
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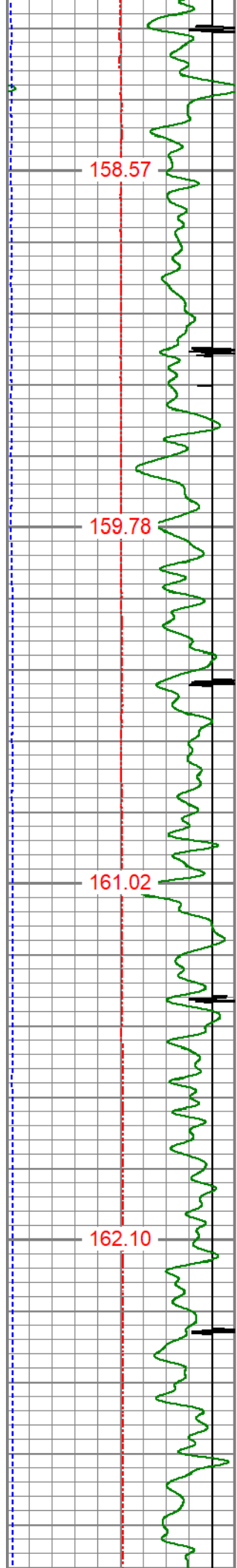
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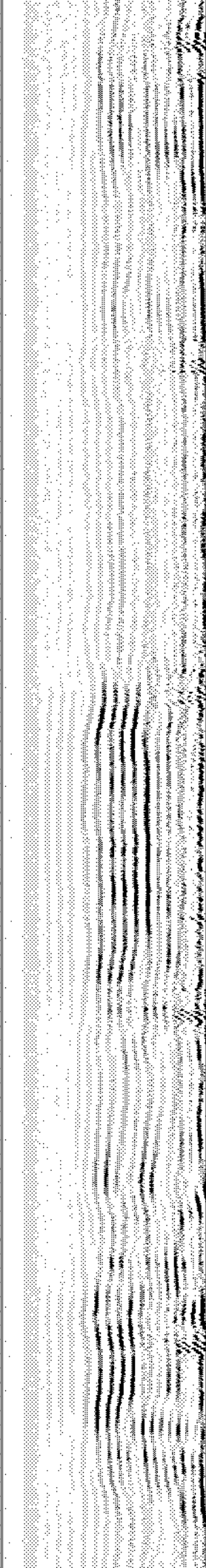
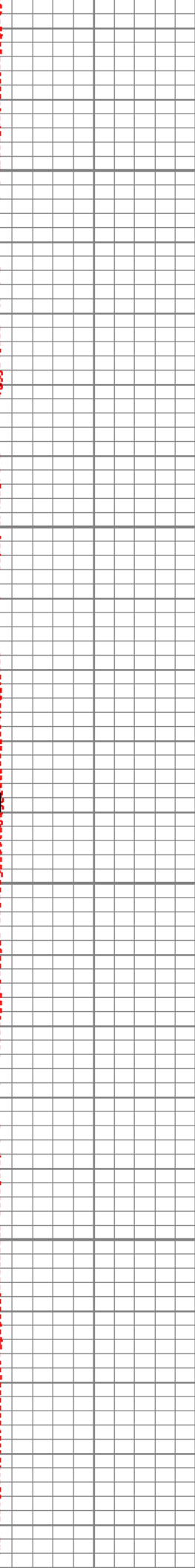
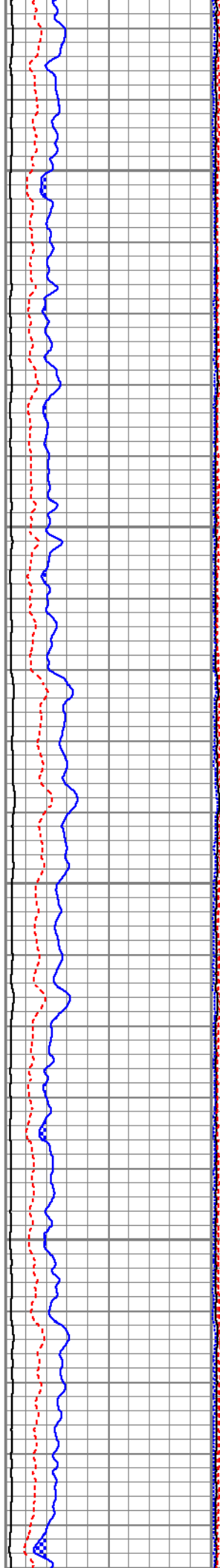
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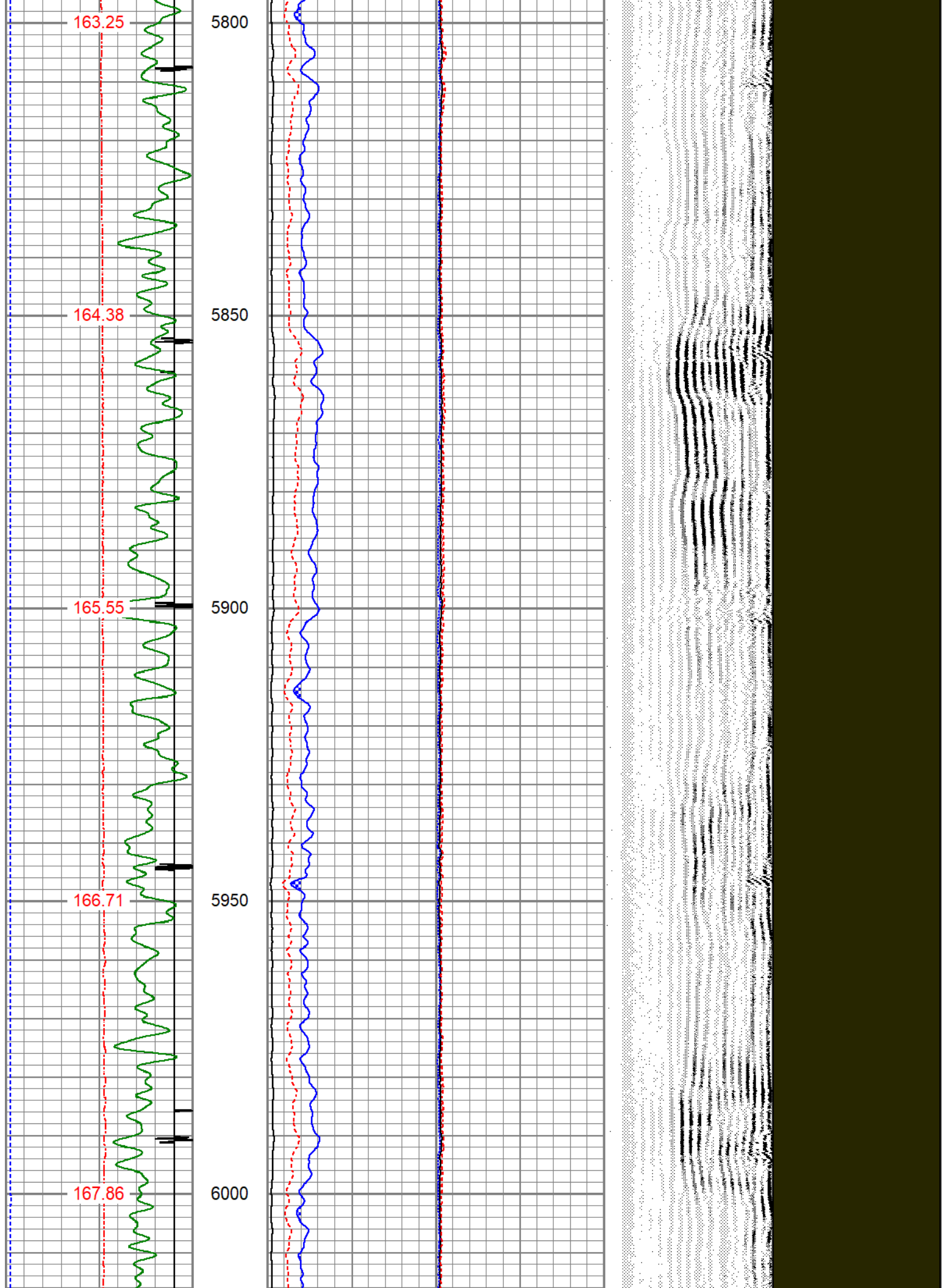
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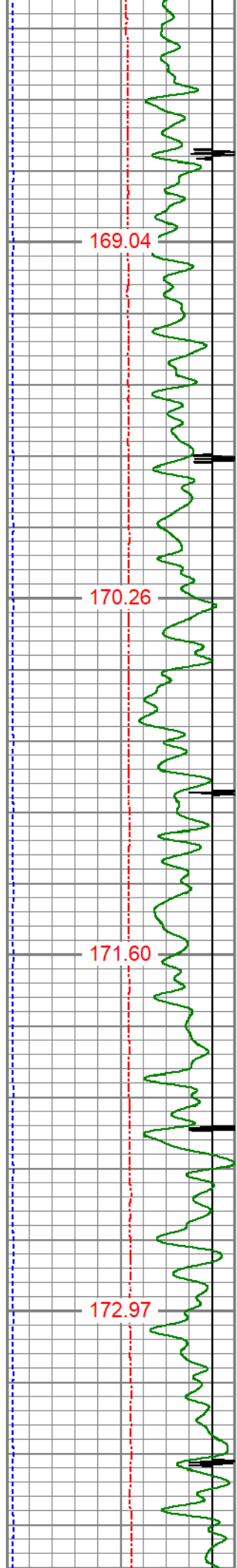
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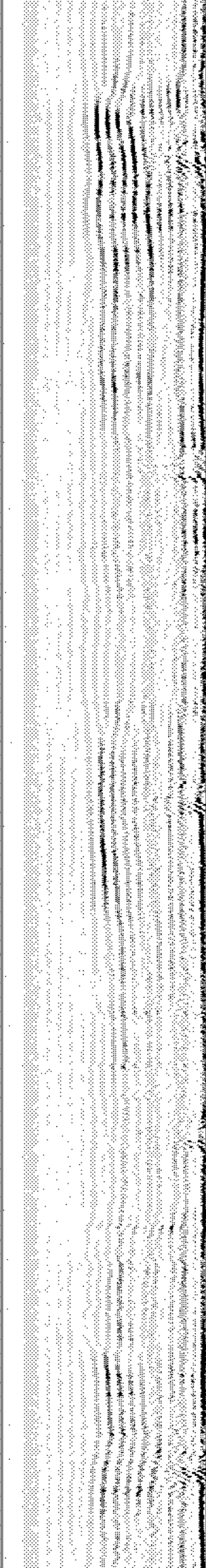
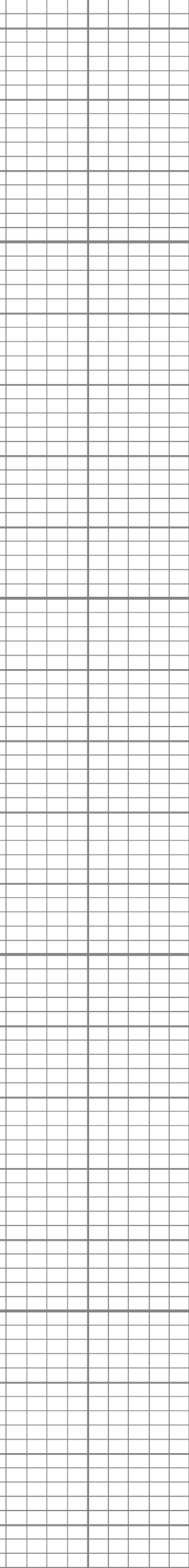


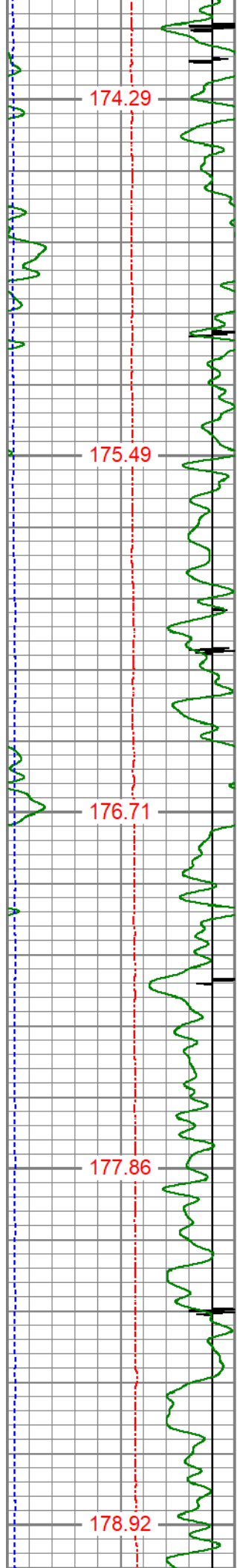
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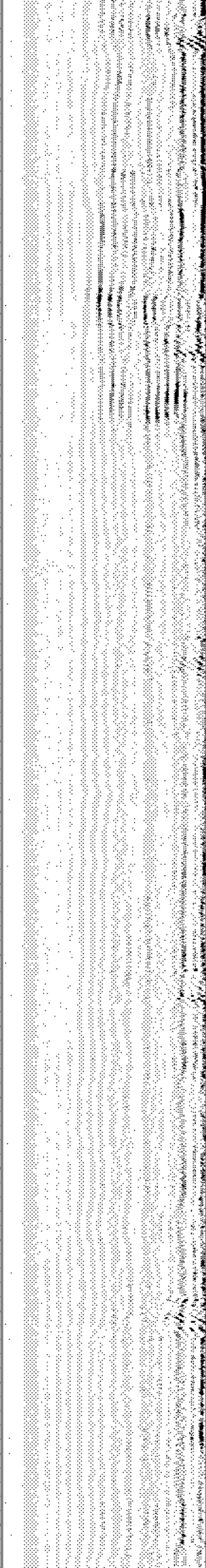
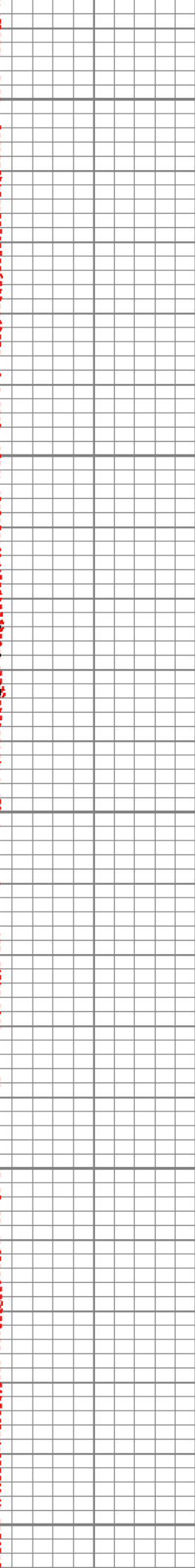
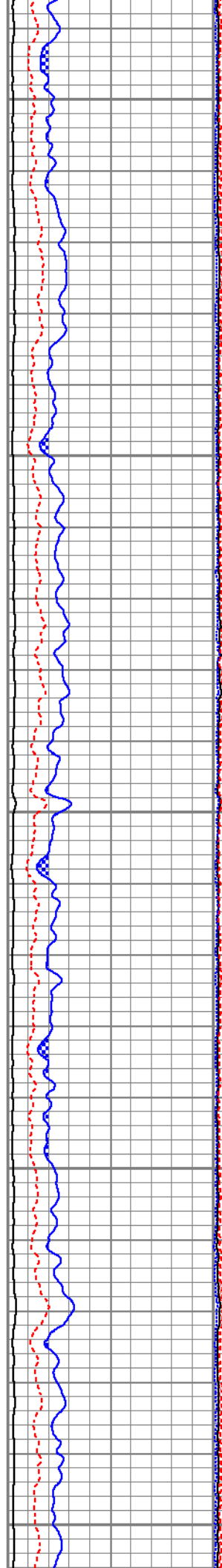
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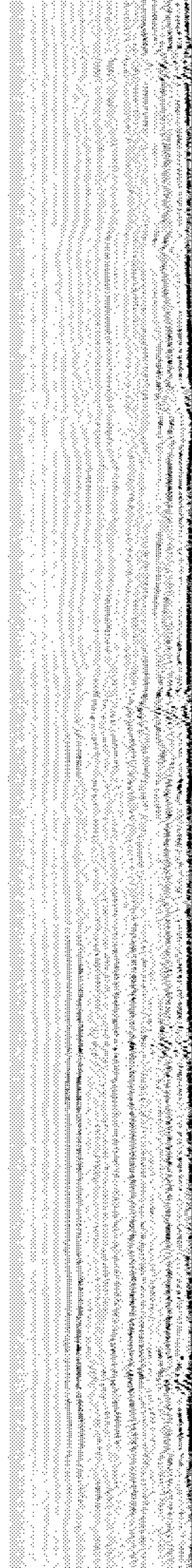
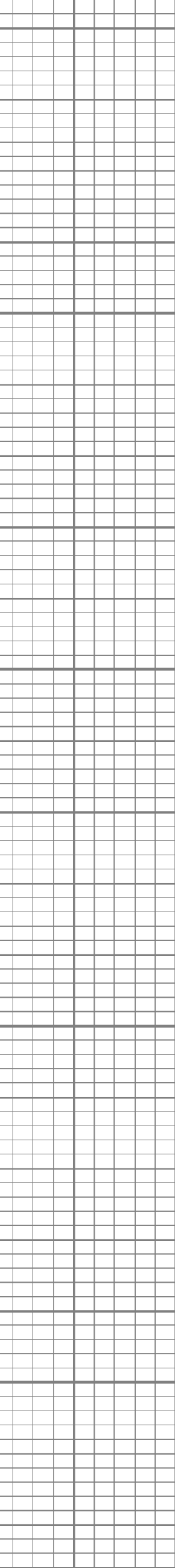
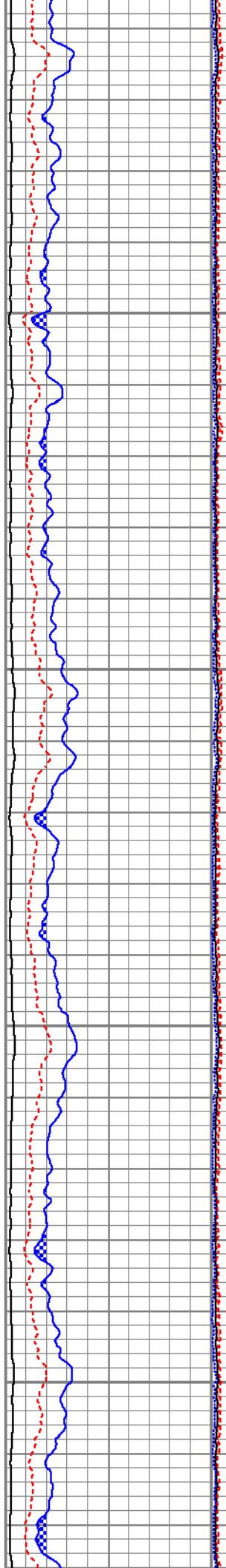
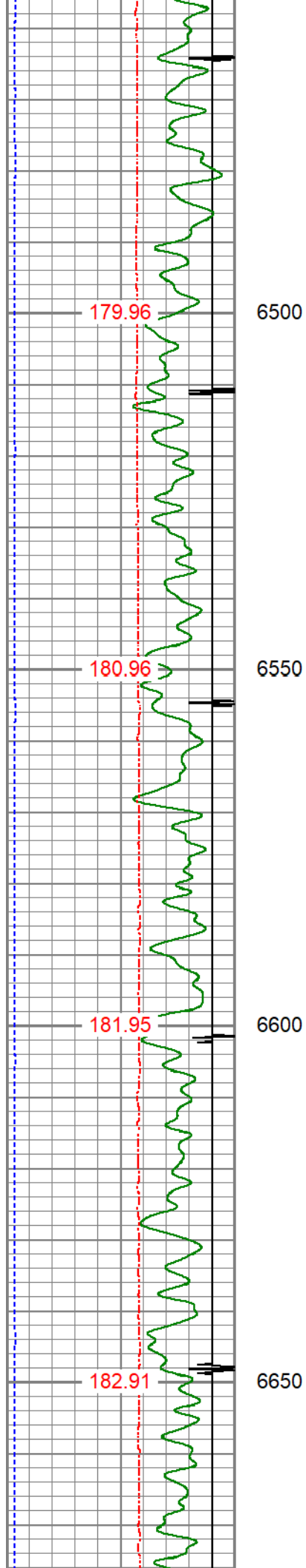
6300

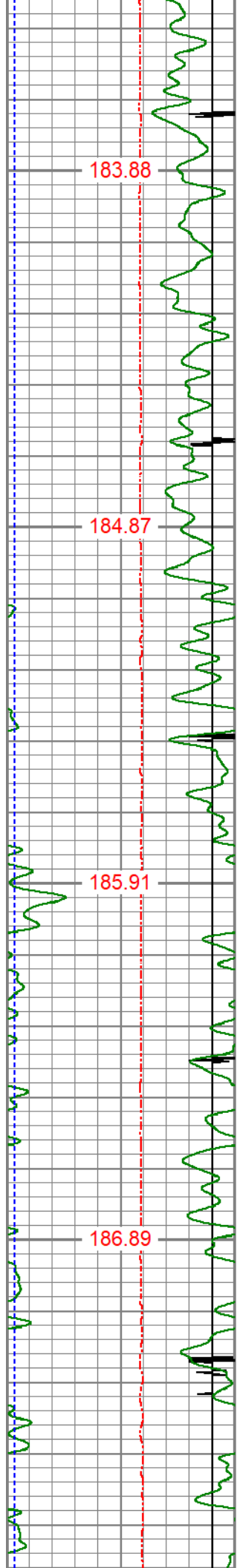
6350

6400

6450







183.88

184.87

185.91

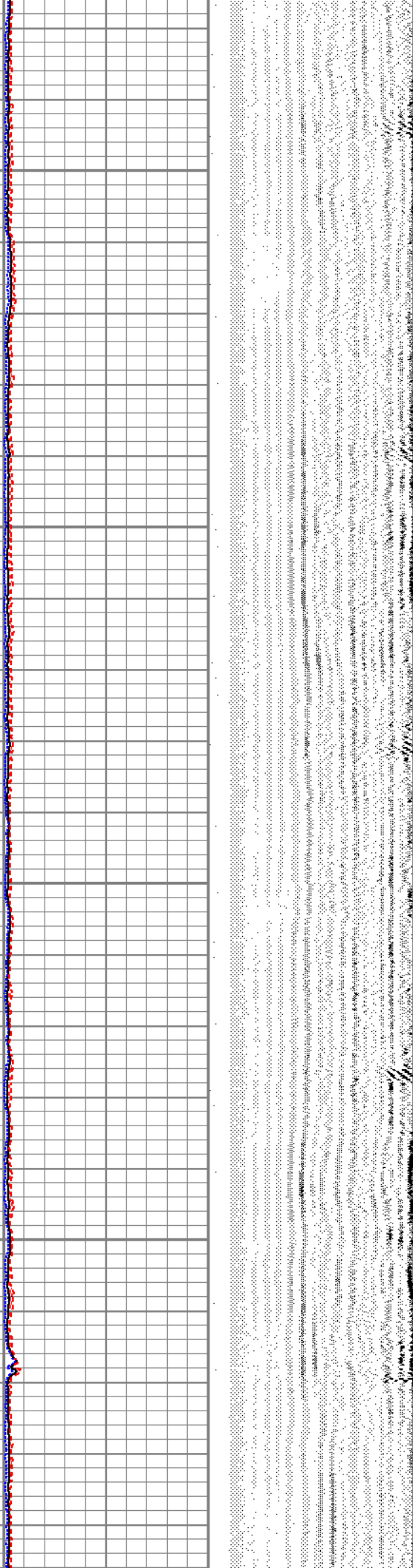
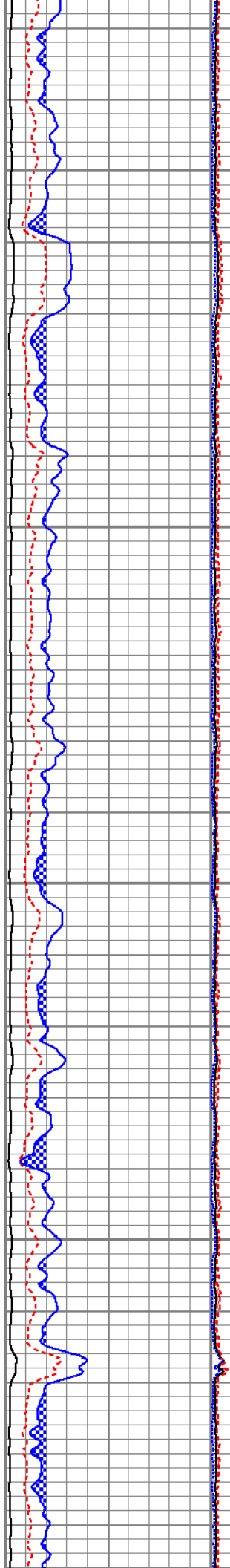
186.89

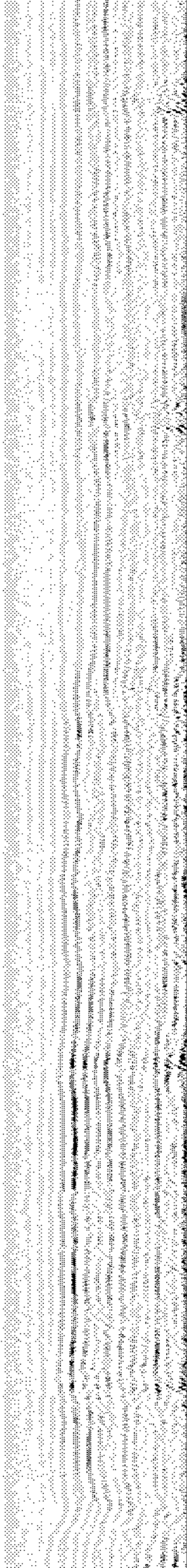
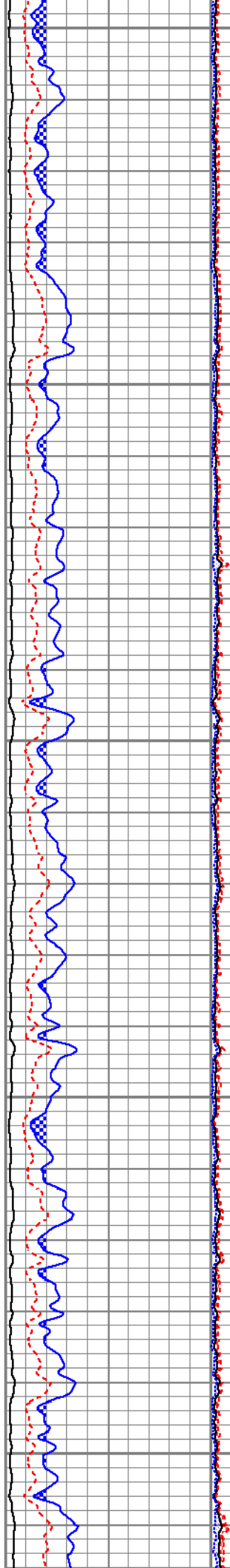
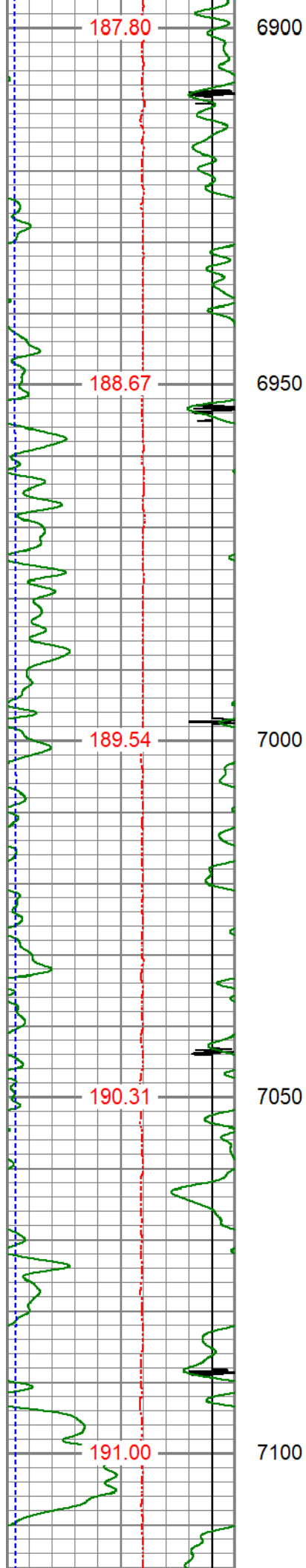
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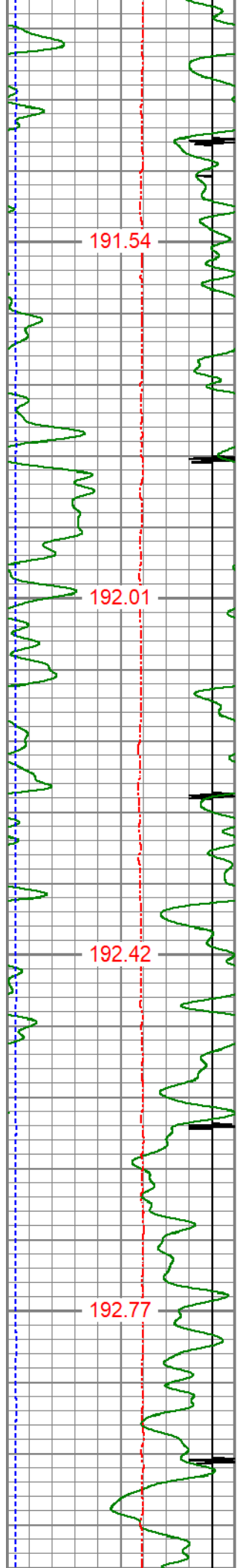
6750

6800

6850





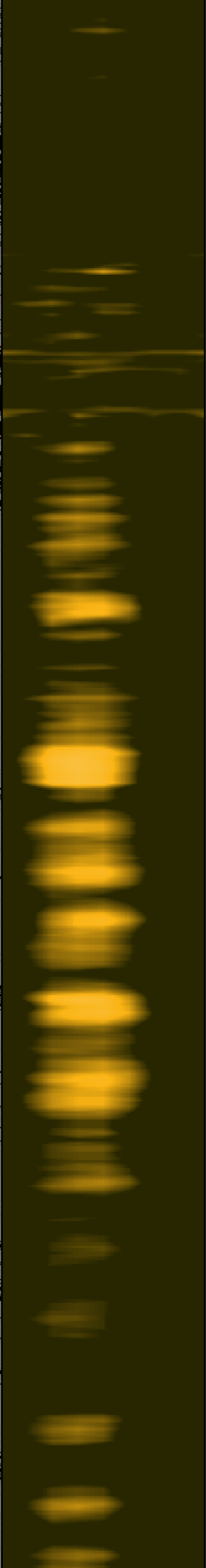
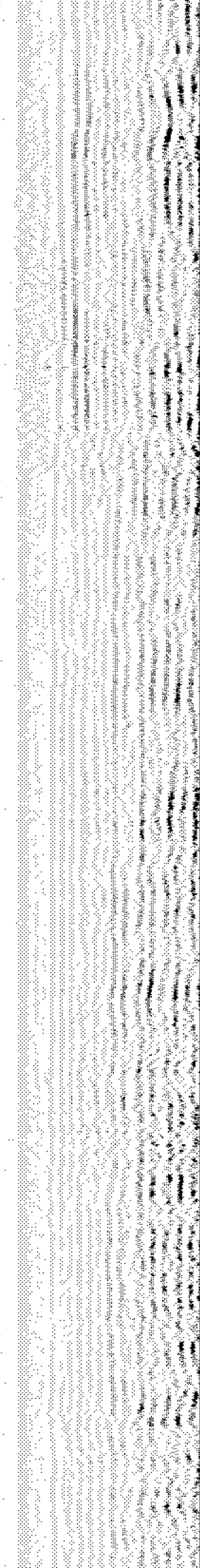
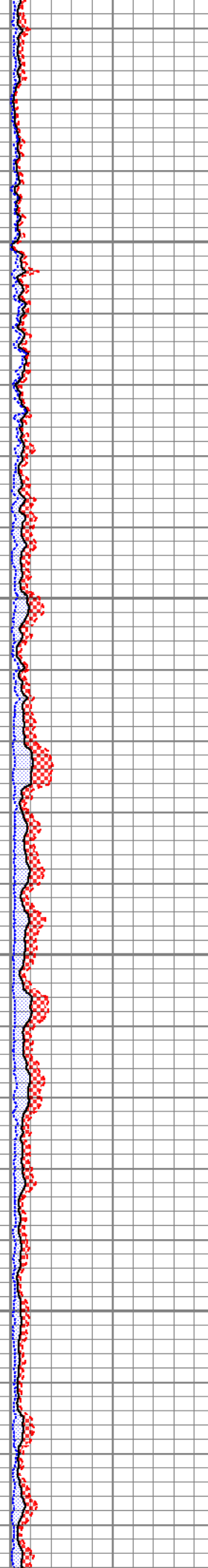
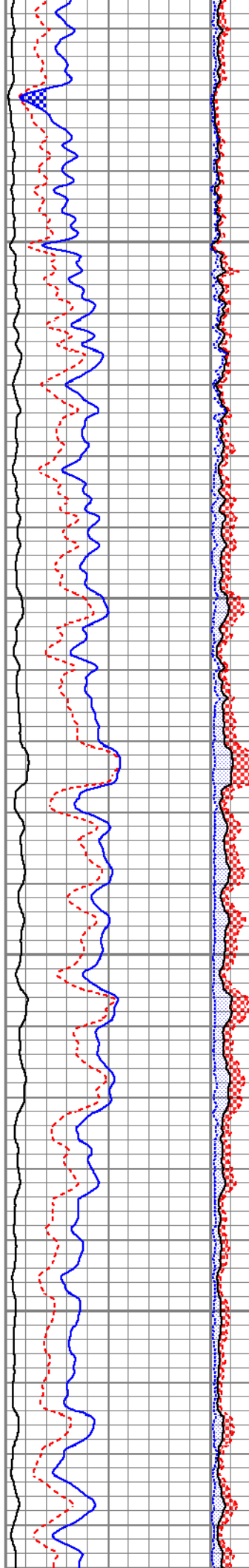


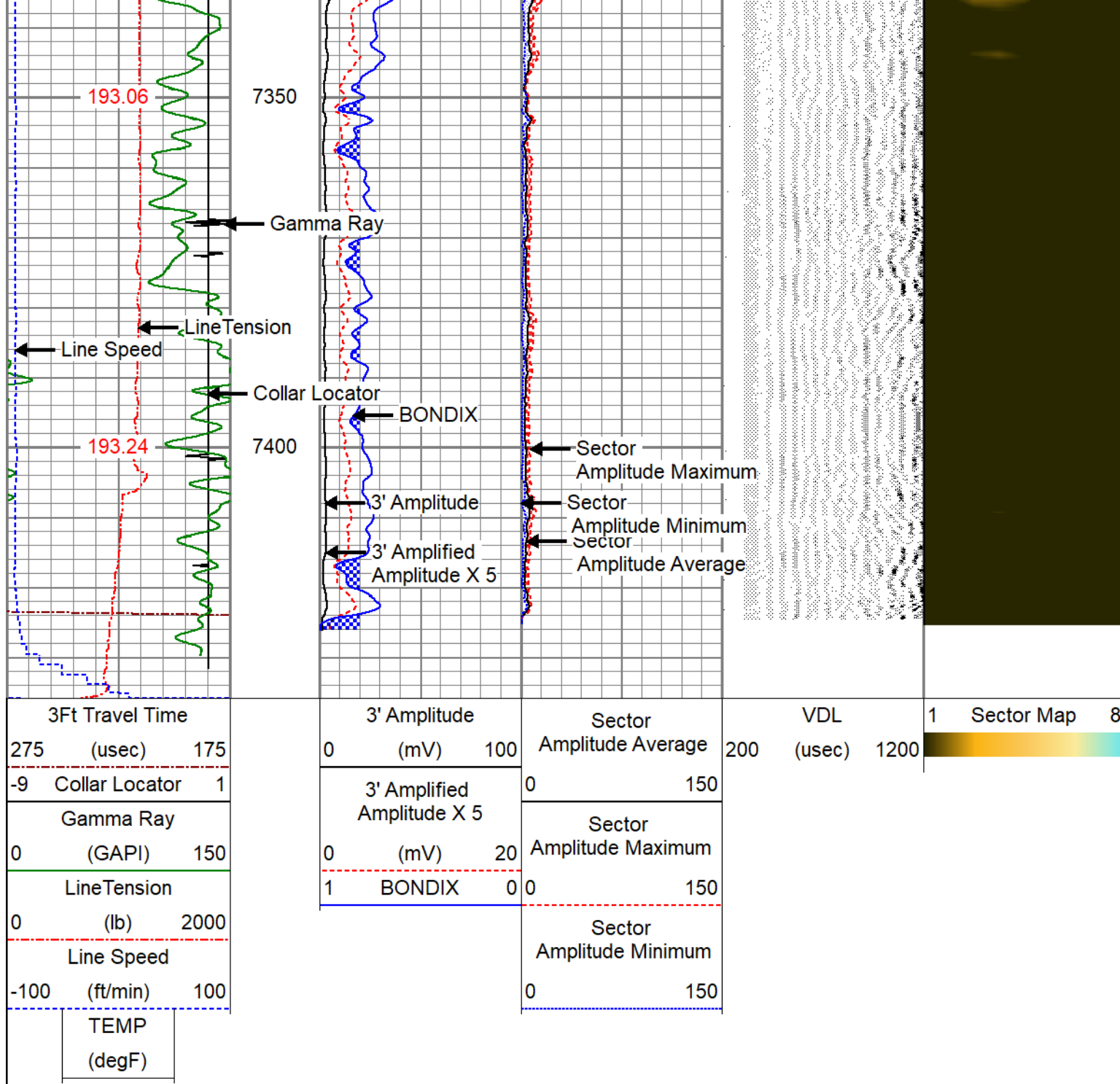
7150


7200

7250

7300





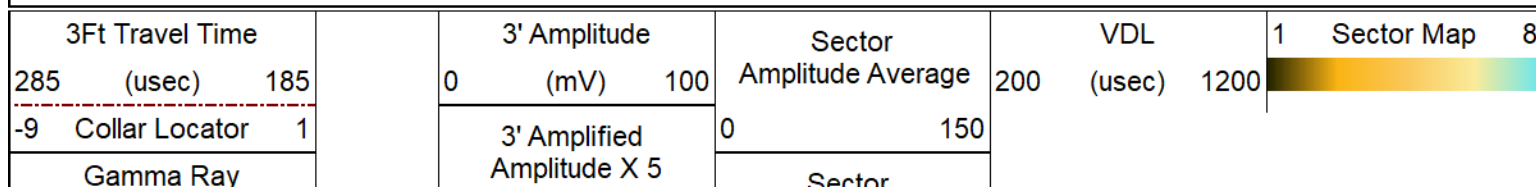


PIONEER
Pioneer Energy Services

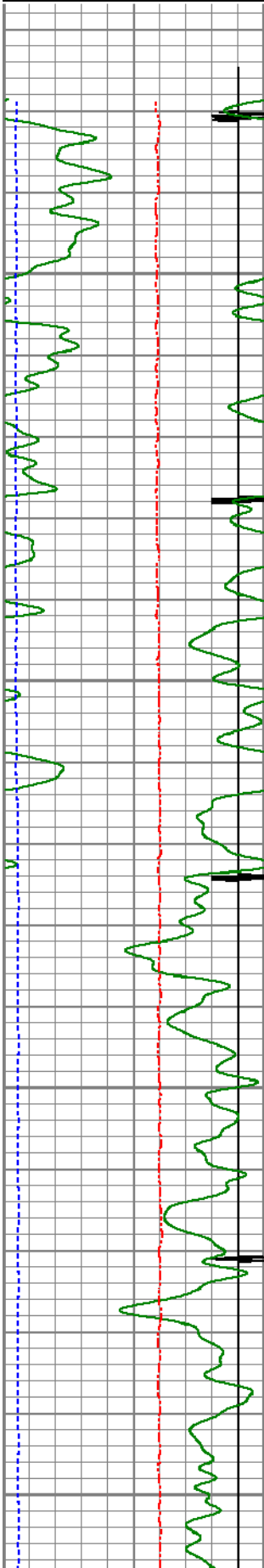
REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

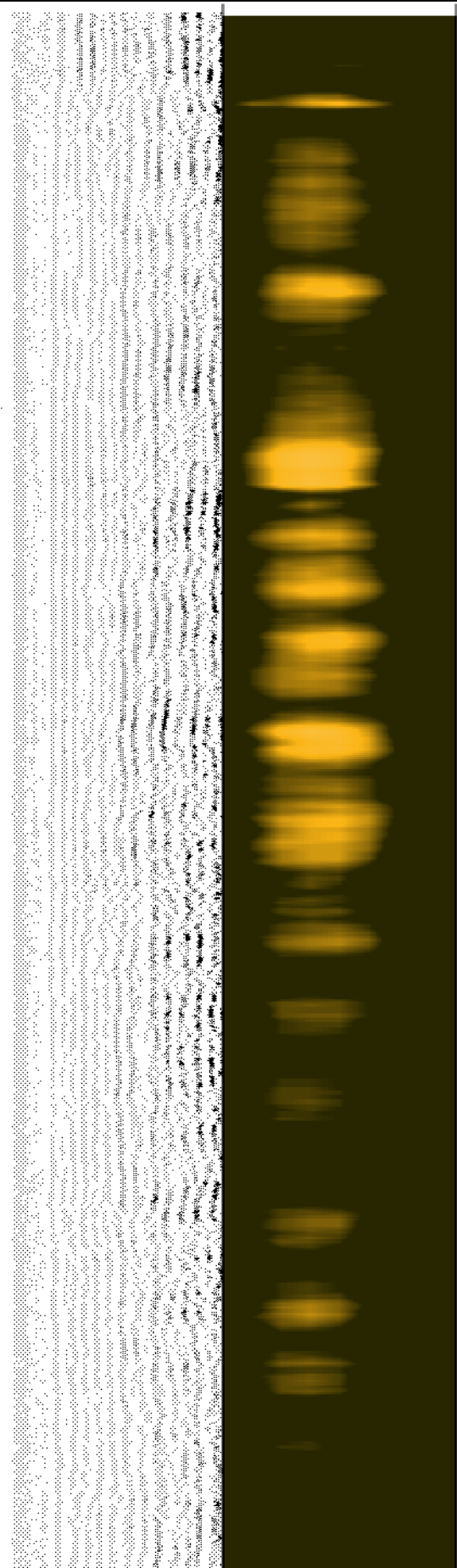
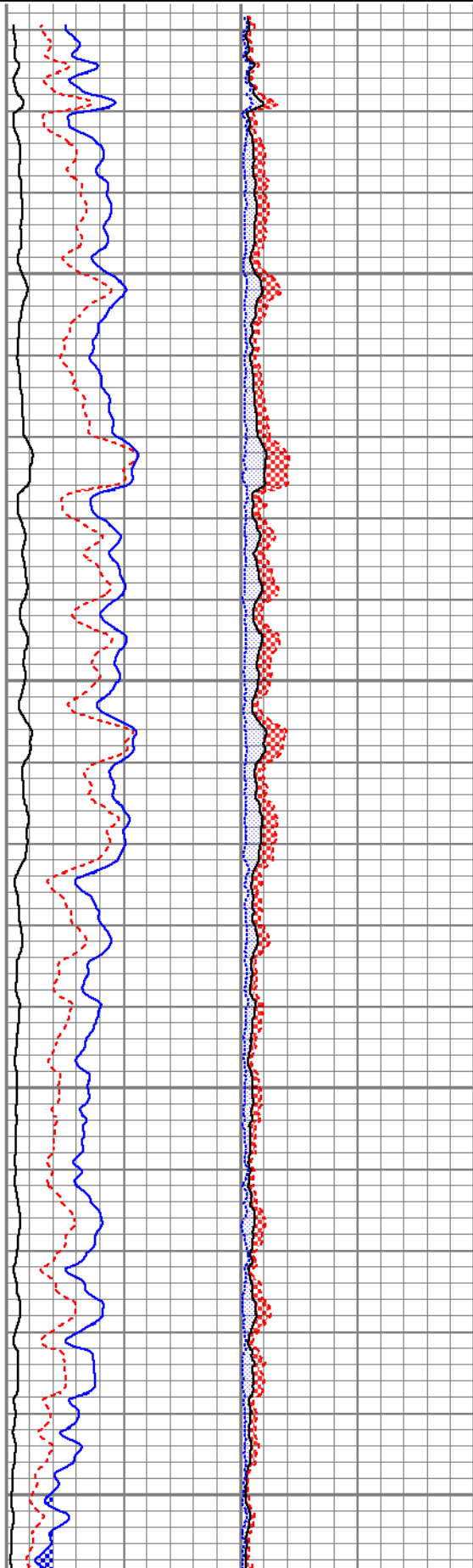
Database File	verdad resources_kbl 1930-09h_0512350882_20210818_scbl.db
Dataset Pathname	pass2
Presentation Format	pinr_scbl
Dataset Creation	Wed Aug 18 17:06:19 2021
Charted by	Depth in Feet scaled 1:240

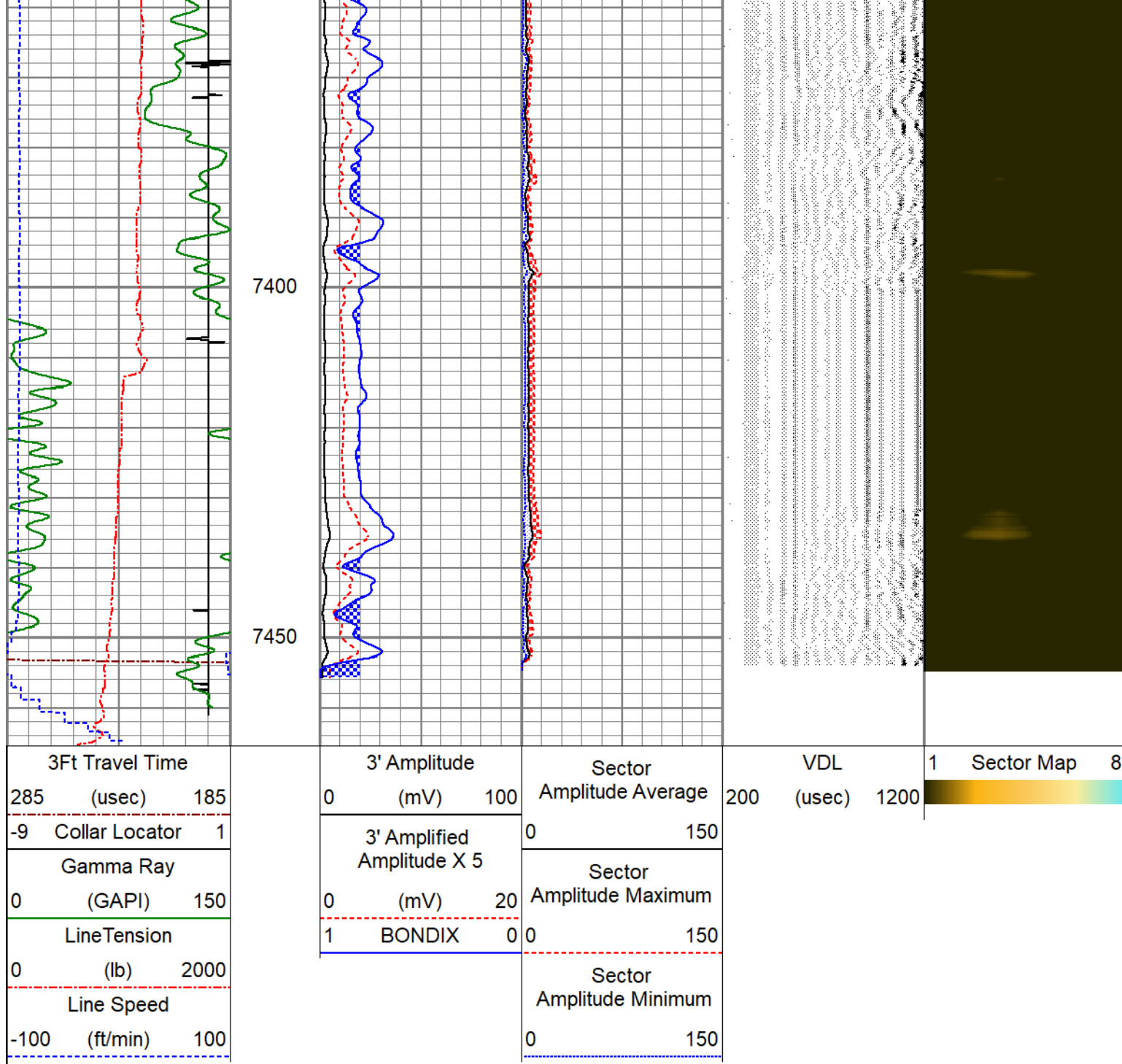


0	(GAPI)	150
LineTension		
0	(lb)	2000
Line Speed		
-100	(ft/min)	100



0	(mV)	20	Amplitude Maximum
1	BONDIX	0	150
Sector			
Amplitude Minimum			
0			150





Calibration Report		
Database File	verdad resources_kbl 1930-09h_0512350882_20210818_scbl.db	
Dataset Pathname	pass4	
Dataset Creation	Wed Aug 18 17:10:39 2021	
Gamma Ray Calibration Report		
Serial Number:	140181	
Tool Model:	275 Probe GCT	
Performed:	Wed Aug 18 11:00:13 2021	
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: FW 1304-33
 Tool Model: RBL-DC
 Calibration Casing Diameter: 5.500 in
 Calibration Depth: -440.380 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.278	1.000	71.921	55.477	1.000
CAL	0.000	1.225				
5'	0.000	1.211	1.000	71.921	58.542	1.000
SUM						
S1	0.000	1.189	0.000	100.000	84.081	-0.001
S2	-0.006	1.249	0.000	100.000	79.697	0.449
S3	0.000	1.250	0.000	100.000	79.973	-0.000
S4	0.000	1.279	0.000	100.000	78.159	-0.000
S5	-0.003	1.297	0.000	100.000	76.918	0.219
S6	0.000	1.290	0.000	100.000	77.530	-0.001
S7	0.000	1.282	0.000	100.000	78.007	-0.001
S8	0.000	1.255	0.000	100.000	79.653	-0.001

Air Zero Calibration, performed Wed Aug 18 10:56:40 2021:

	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	



Company VERDAD RESOURCES
 Well KBL 1930-09H
 Field WATTENBERG
 County WELD
 State CO