



**Well Services**  
E - L I N E

**RADIAL BOND TOOL**  
**GAMMA RAY**  
**CCL**

Company NOBLE ENERGY		Company NOBLE ENERGY					
Well STROMAUER PC G 05-28D		Well STROMAUER PC G 05-28D					
Field WATTENBERG		Field WATTENBERG					
County WELD		County WELD					
State COLORADO		State COLORADO					
Location: SHL: 523 FNL & 694' FEL NE/NE		API # : 05-123-34769					
Permanent Datum SEC 32 TWP 5N RGE 65W		Other Services					
Log Measured From KB 13'		Elevation 4675'					
Drilling Measured From KB		K.B. 4688' D.F. 4687' G.L. 4675'					
Date 7-23-2019	Run Number ONE						
Depth Driller 7652'	Depth Logger 7000'						
Bottom Logged Interval 7000'	SURFACE						
Top Log Interval	NA						
Open Hole Size	WATER						
Type Fluid	NA						
Density / Viscosity	190						
Max. Recorded Temp.	1411'						
Estimated Cement Top	NA						
Time Well Ready	NA						
Time Logger on Bottom	7770						
Equipment Number	MILLIKEN CO						
Location	A.STEERMAN						
Recorded By	D.RUSSEL						
Witnessed By							
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String	8 5/8"	24#	SURFACE	681'			
Prot. String							
Production String	4.5"	11.6#	SURFACE	7642'			
Liner							

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.



Comments

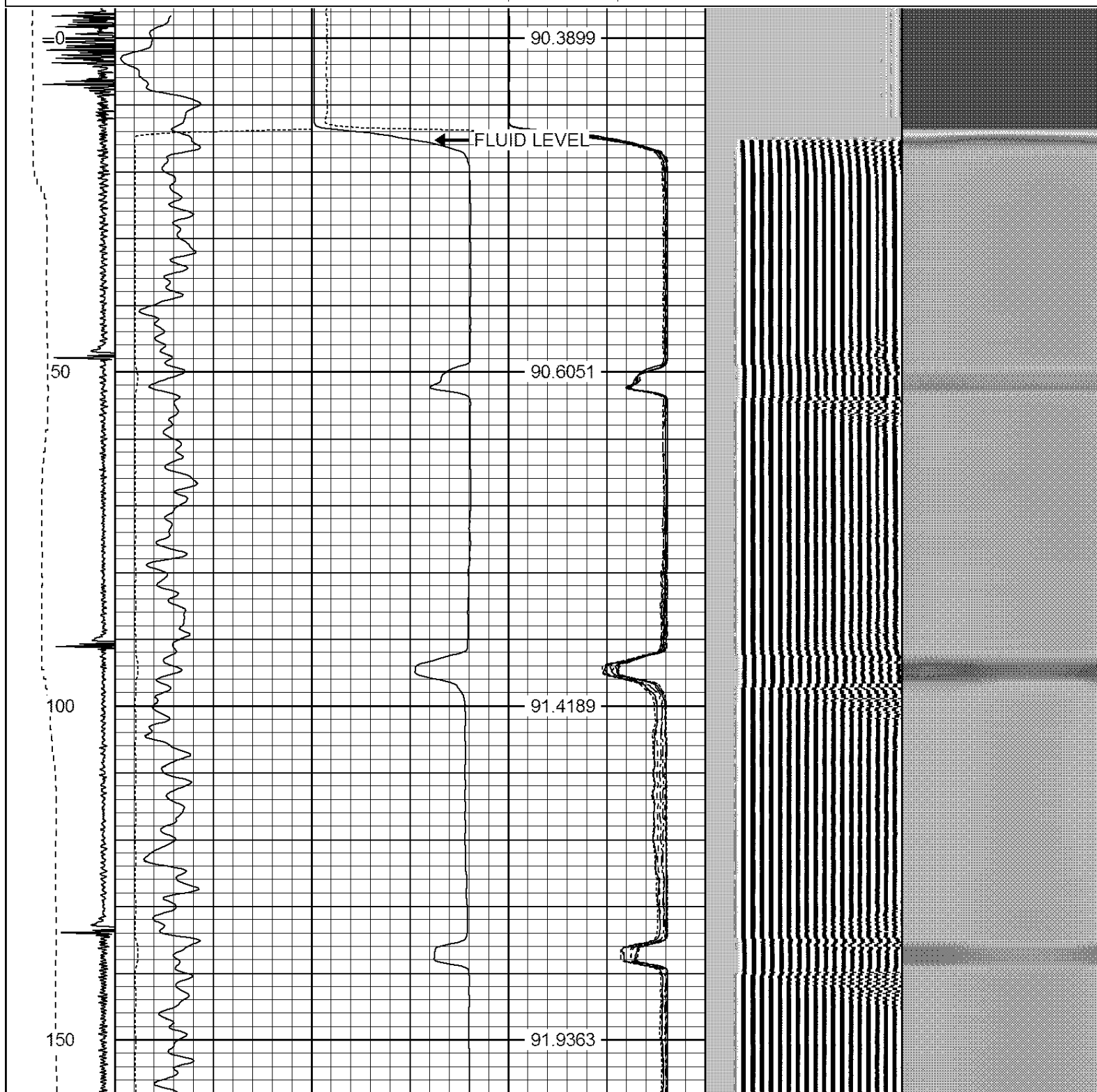
RAN CBL TO VERIFY CEMENT BOND  
CORRELATED TO J-W LOG FROM 2-27-2012

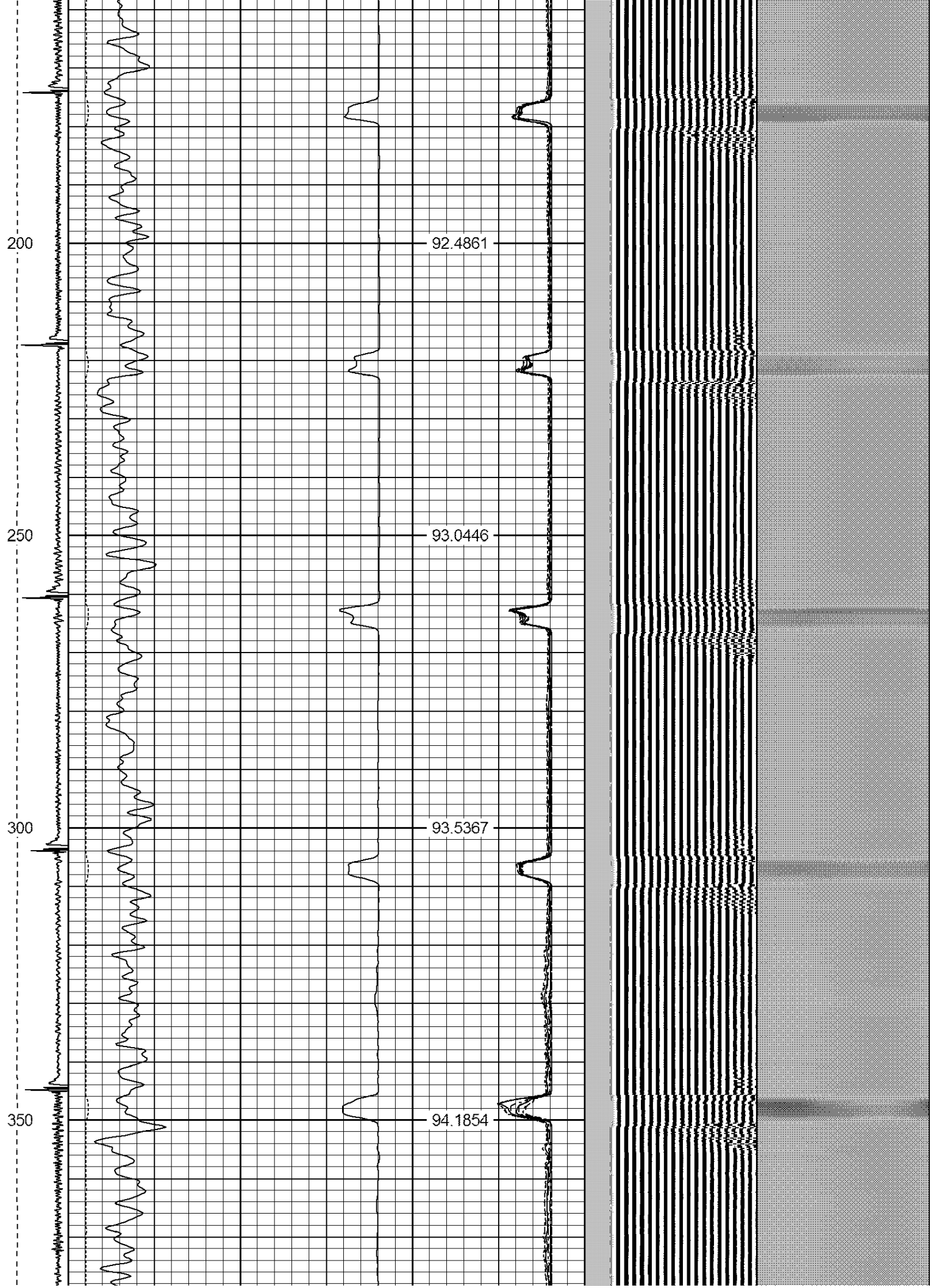
THANK YOU FOR USING SPN WELL SERVICES!!

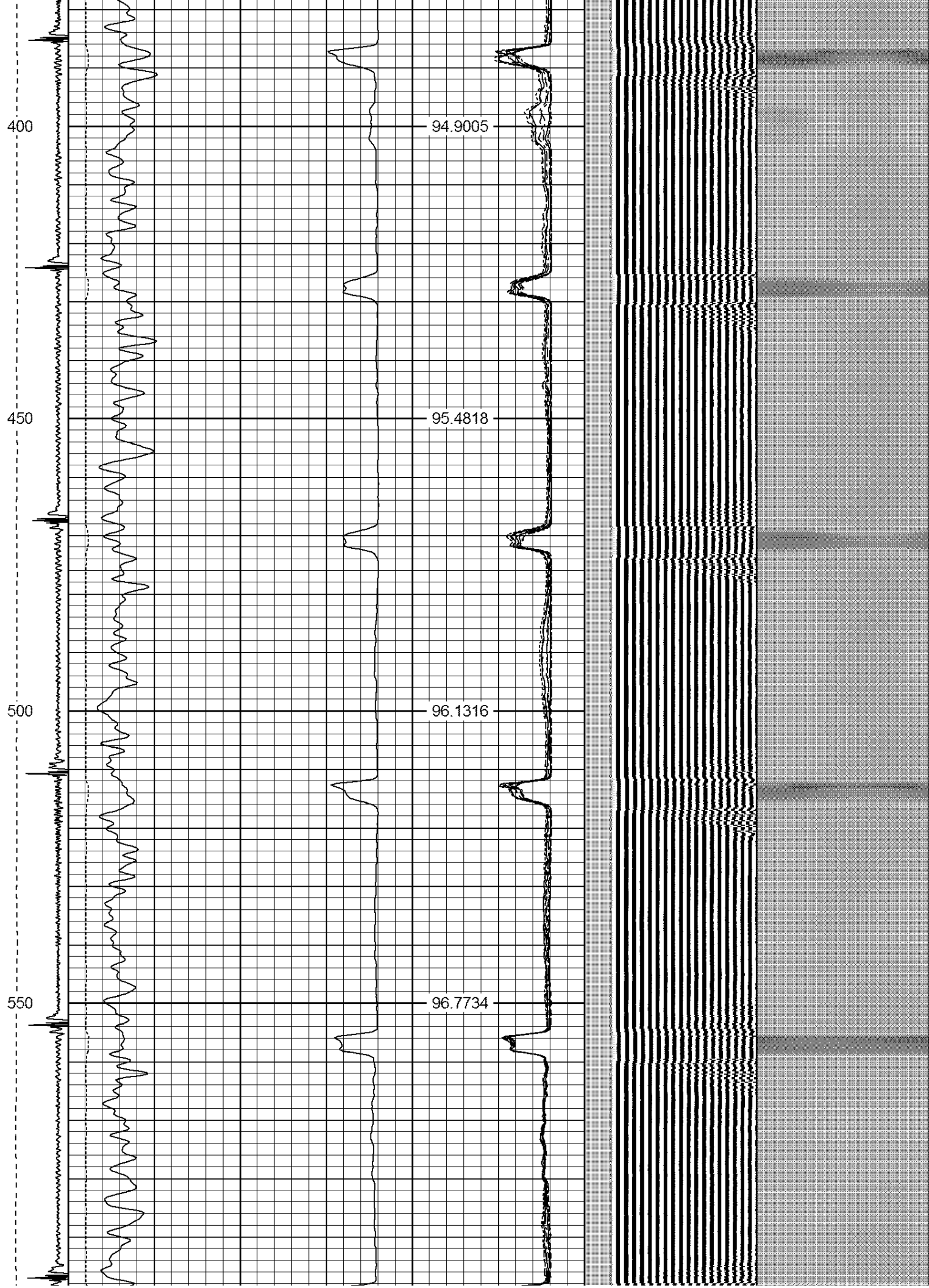
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HEADVOLT	13.25					

Tool Name	Start Depth (ft)	End Depth (ft)	Length (ft)	Weight (lb)	O.D. (in)
IntTemp	11.83				
WVFS1	8.58				
WVFS2	8.58				
WVFS3	8.58				
WVFS4	8.58				
WVFS5	8.58				
WVFS6	8.58				
WVFS7	8.58				
WVFS8	8.58				
WVFCAL	8.58				
WVF3FT	8.58				
WVF5FT	7.58				
CCL	3.64				
GR	0.90				
RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry					
GR-Probe (275) Probe 2.75"					
Dataset: strohauer pc g 05-28d.db: field/well/run1/pass3 Total Length: 13.25 ft Total Weight: 120.00 lb O.D.: 2.75 in					

-9	CCL	1	200	TT (usec)	800	0	AMP (mV)	100	0	AMPS1	100	200	VDL	1200	1	Cement Map	8
LSPD (ft/min)	0		0	GR (GAPI)	200	0	AMPx5 (mV)	20	0	AMPS2	100			1			
	200		200	GR (GAPI)	400				0	AMPS3	100						
0	250								0	AMPS4	100						
									0	AMPS5	100						
									0	AMPS6	100						
									0	AMPS7	100						
									0	AMPS8	100						
											IntTemp (degF)						



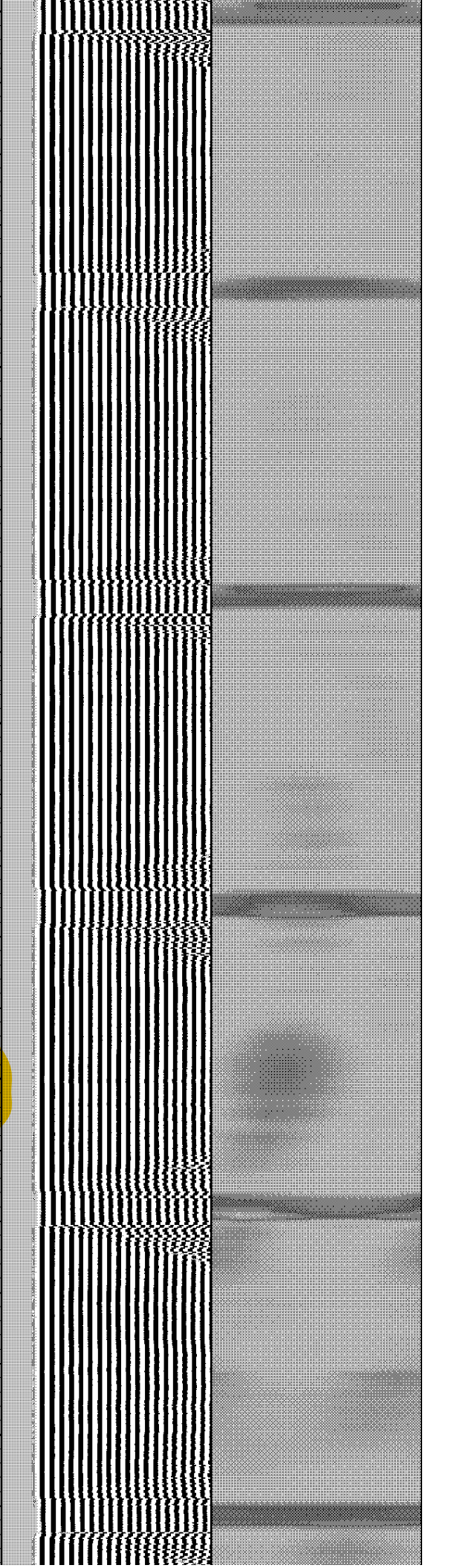


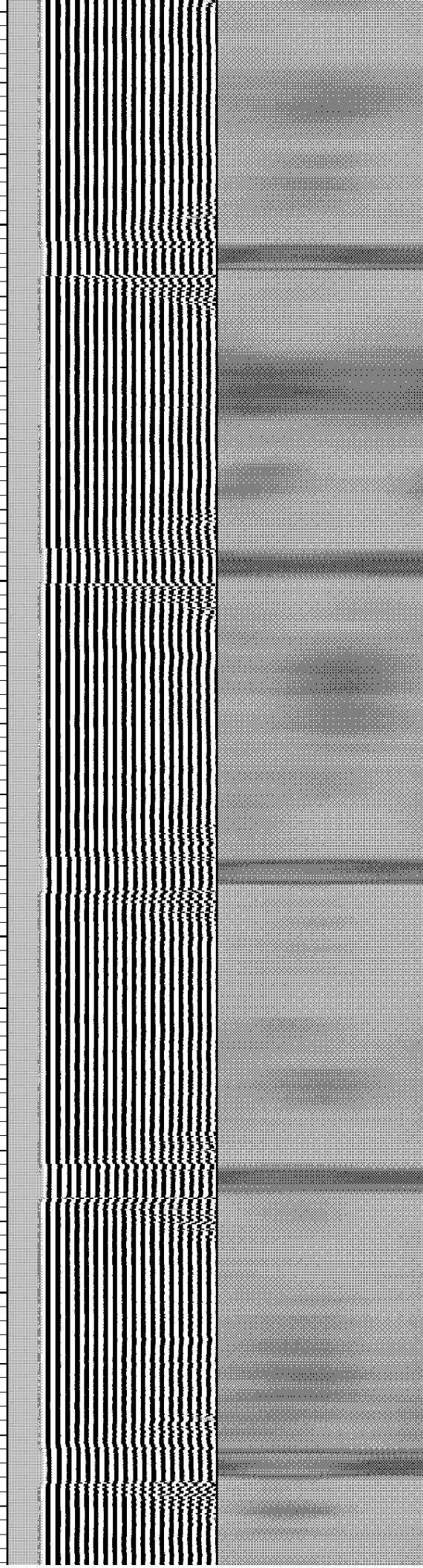
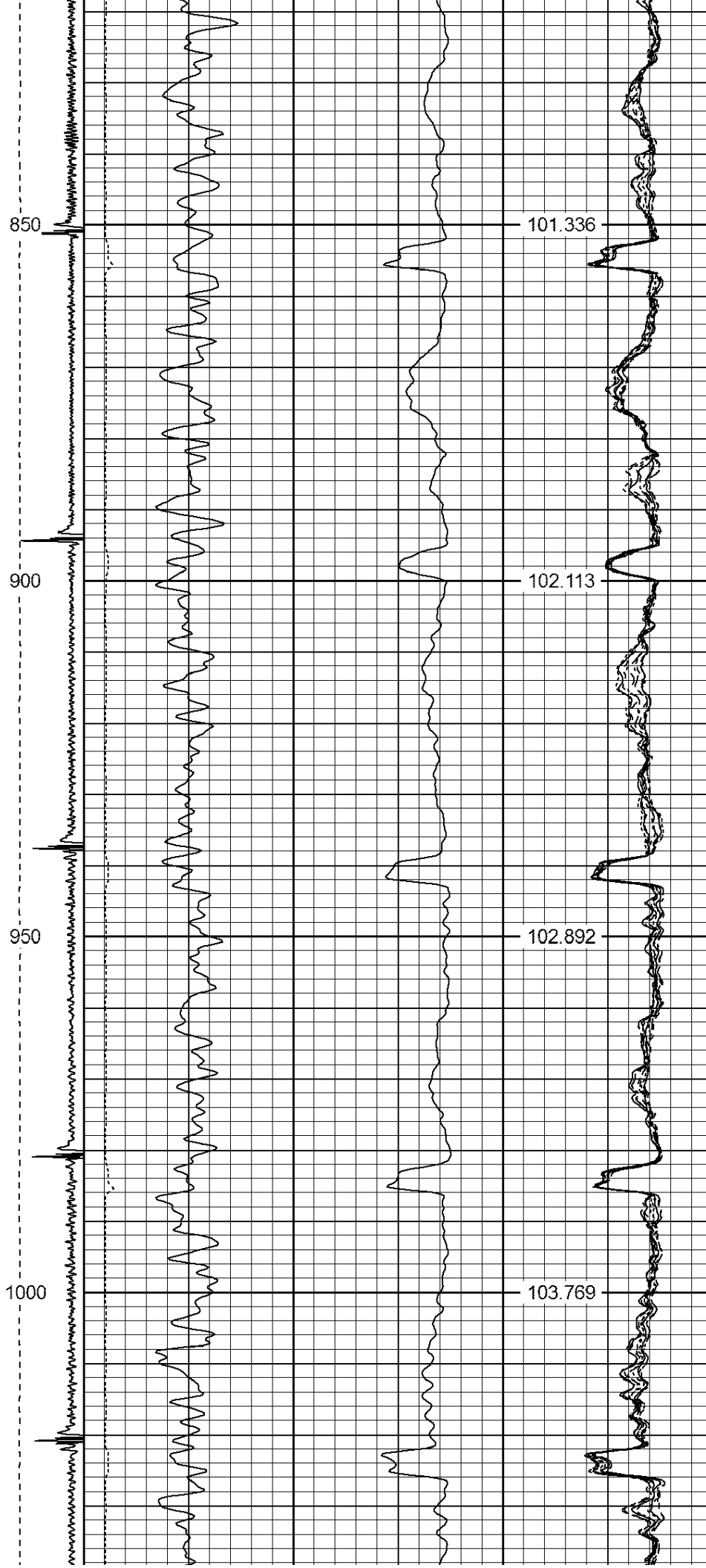




600  
650  
700  
750  
800

97.5847  
98.2241  
99.0447  
99.8247  
100.523







1050

104.569

1100

105.296

1150

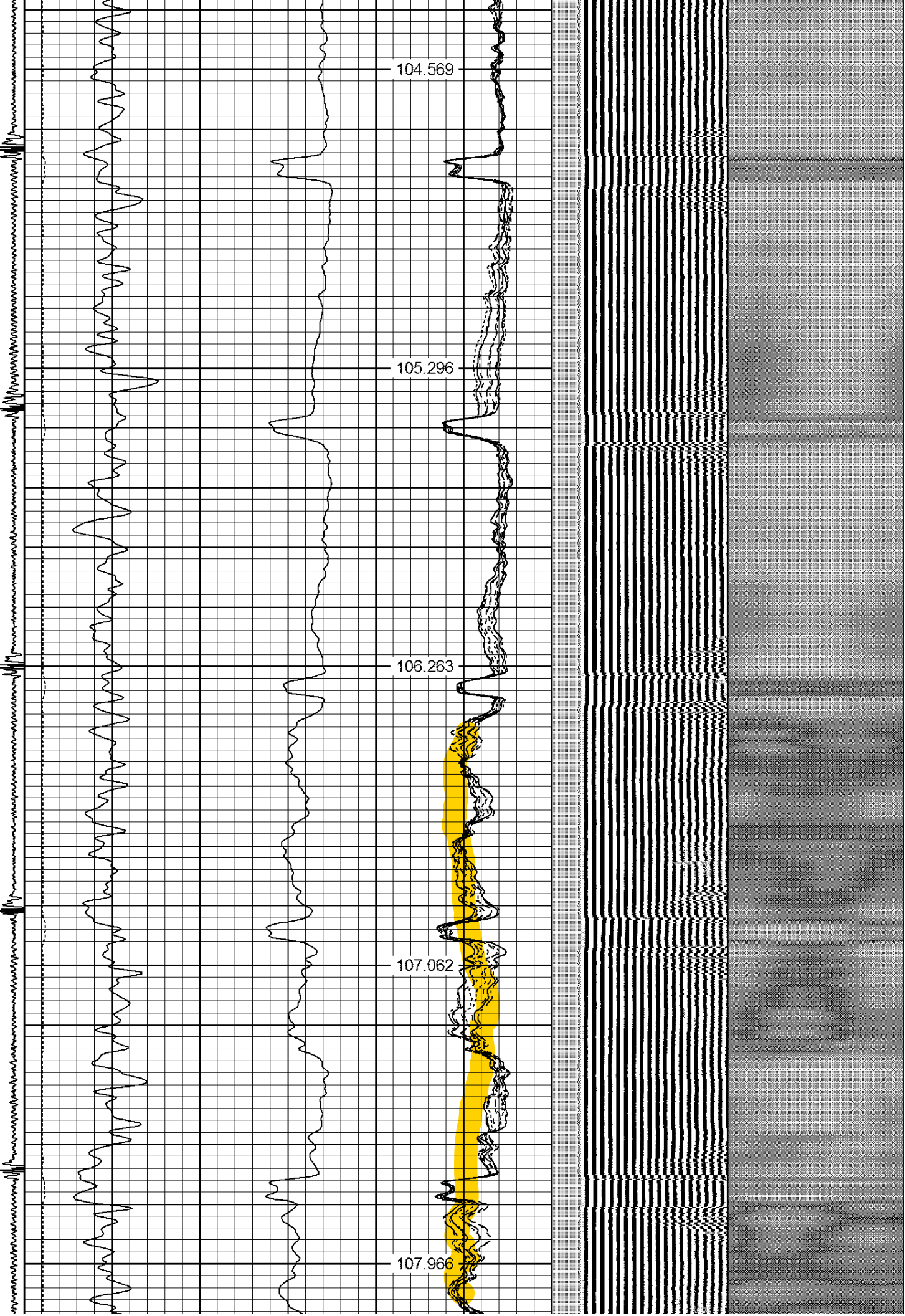
106.263

1200

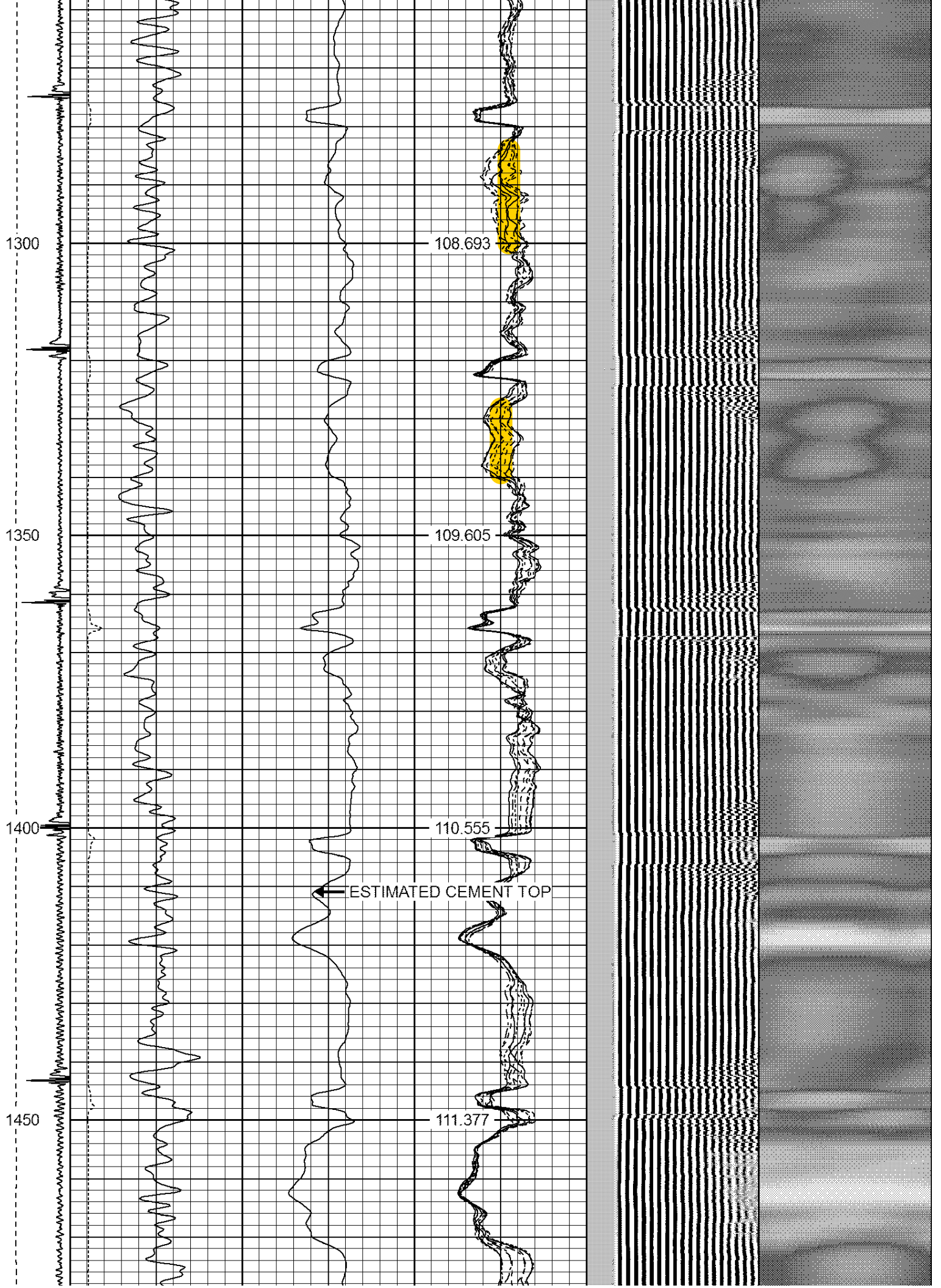
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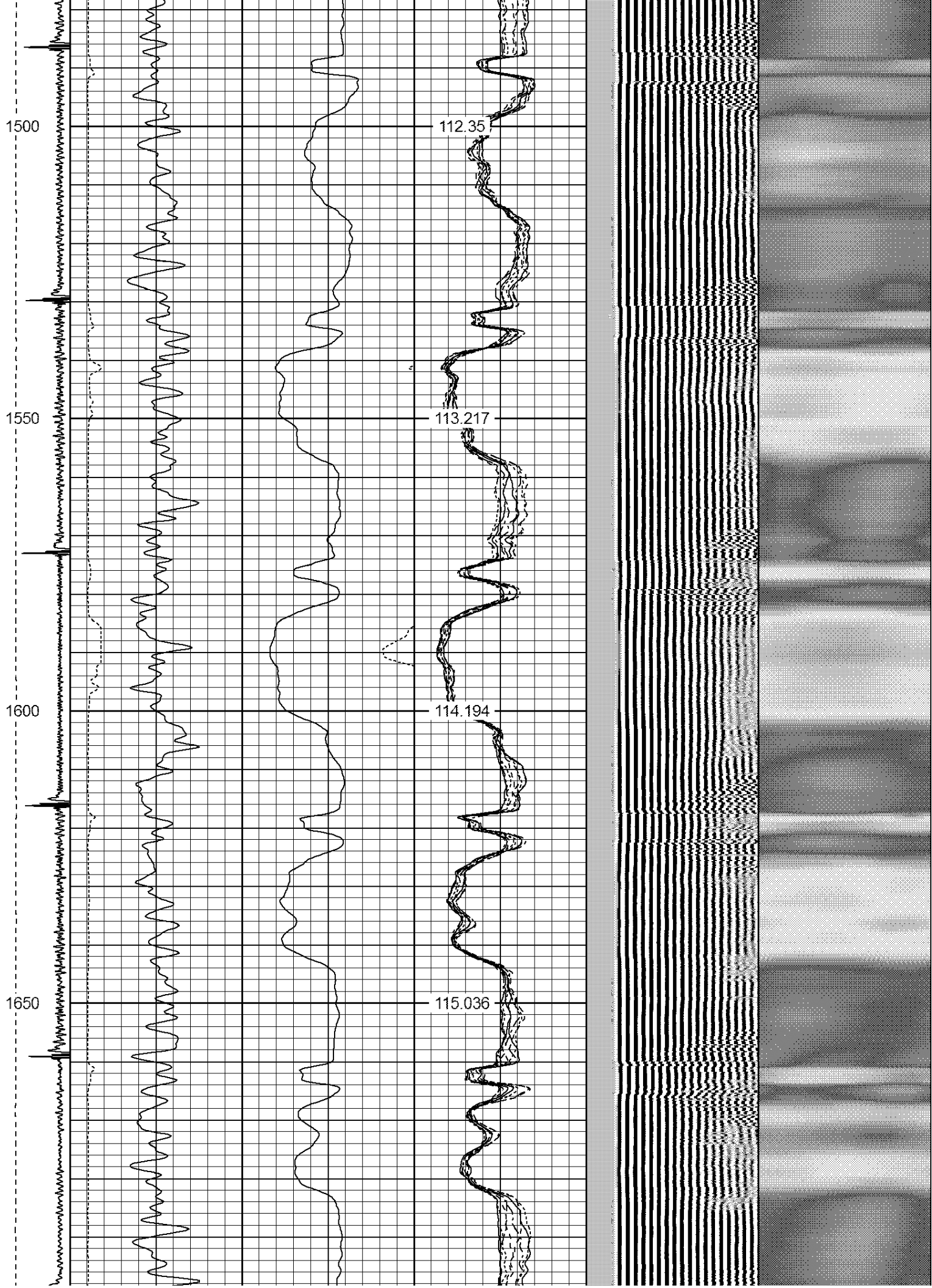
1250

107.966



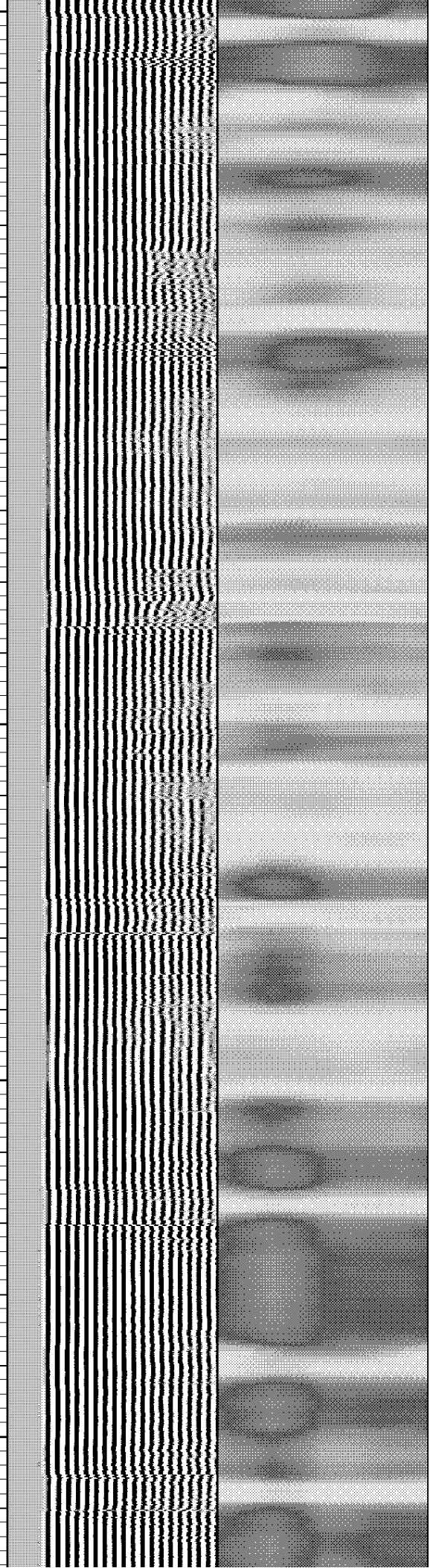
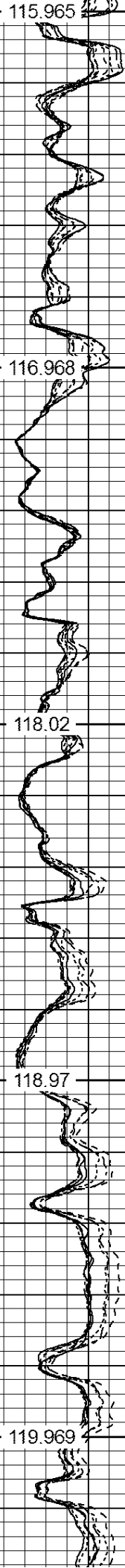
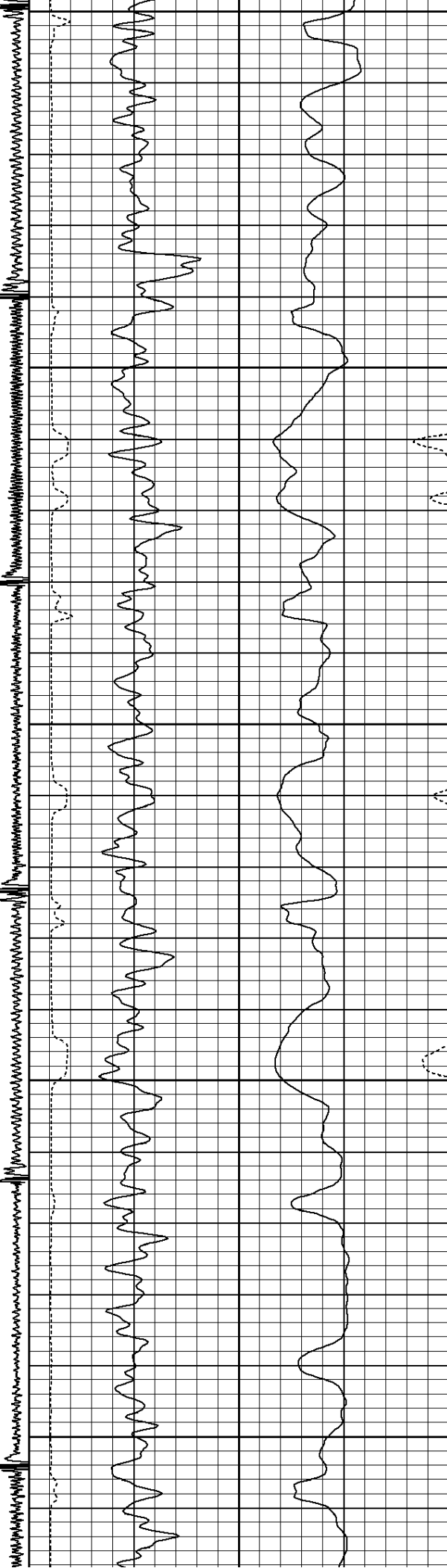




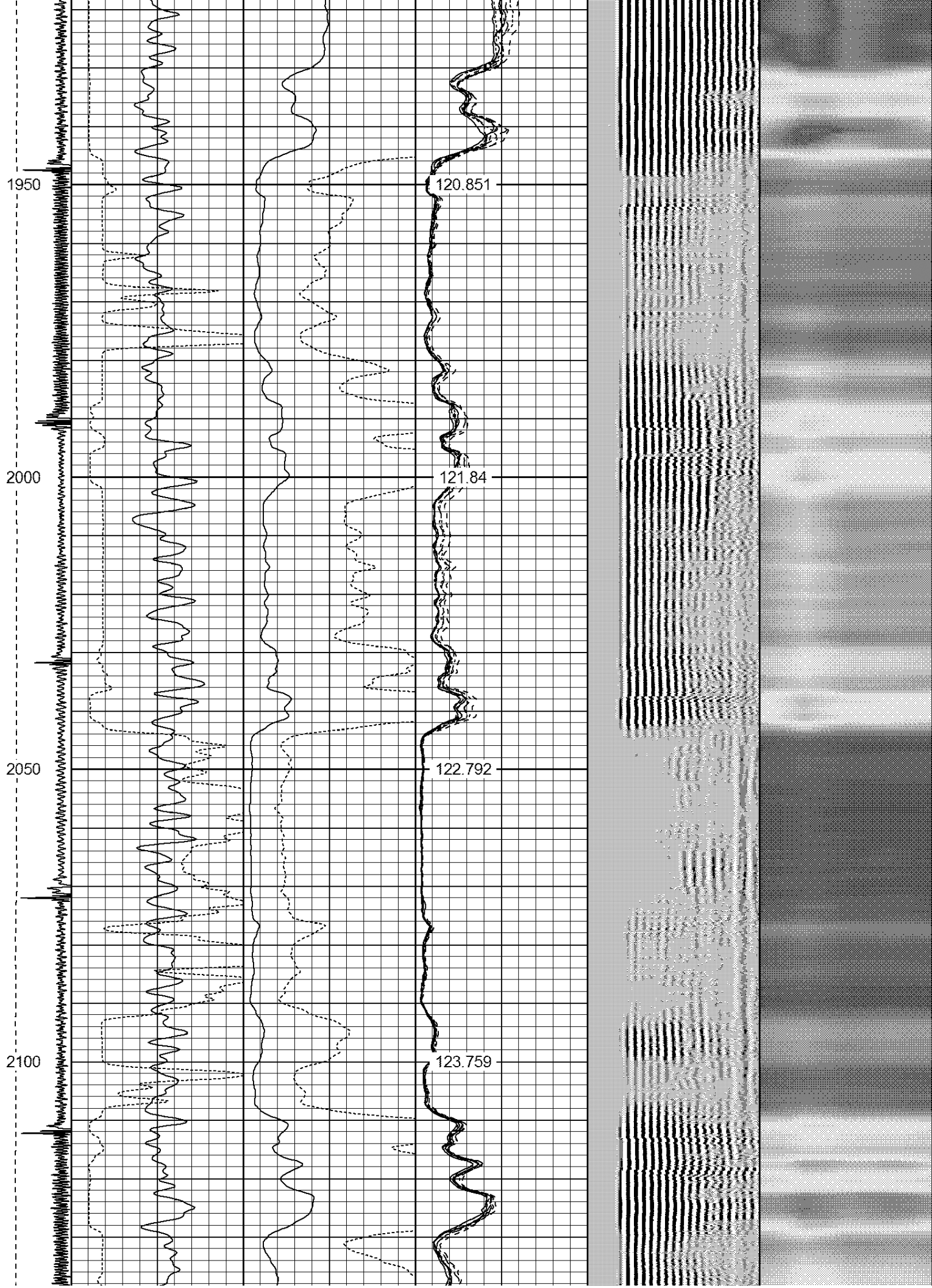


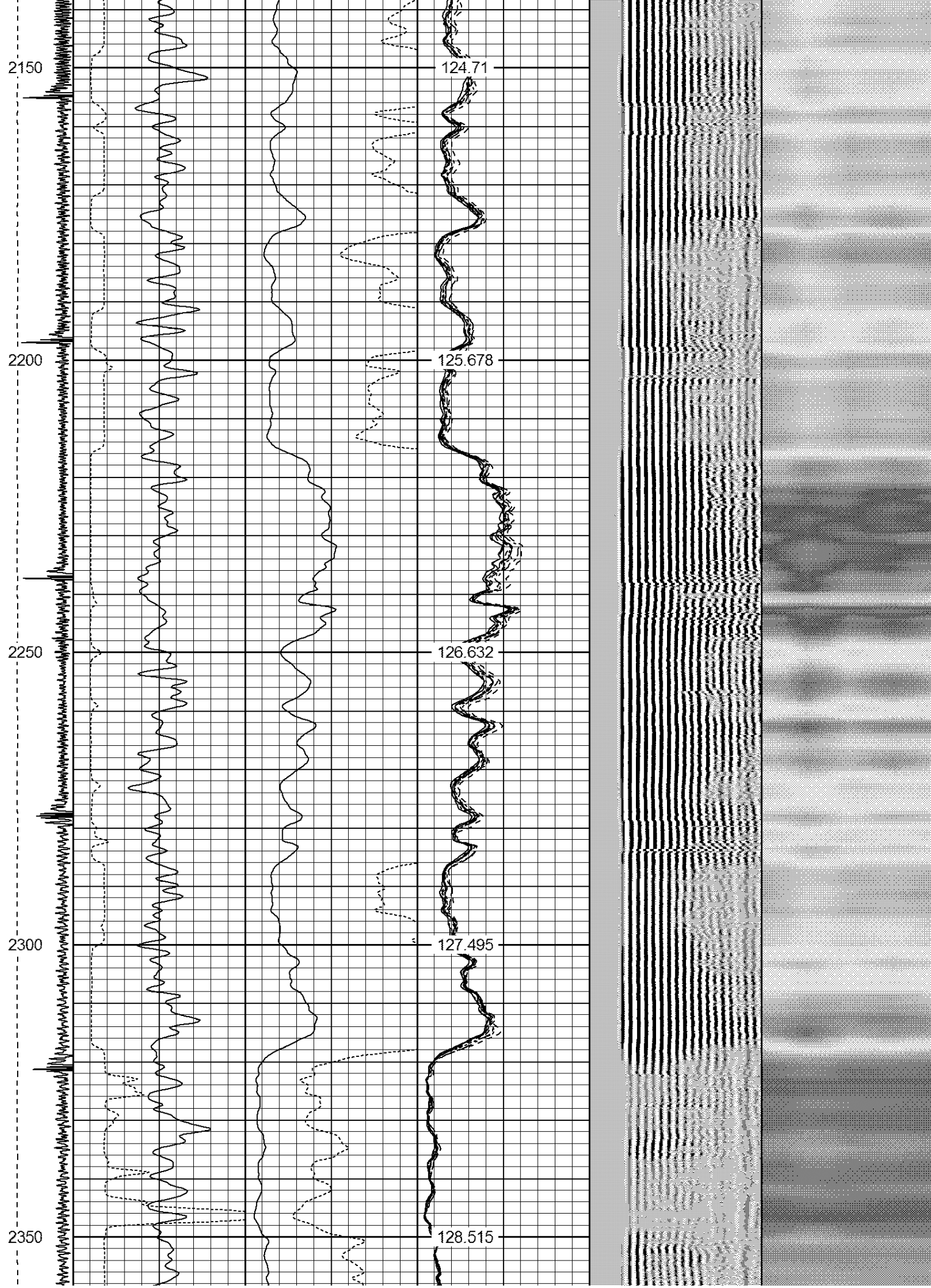


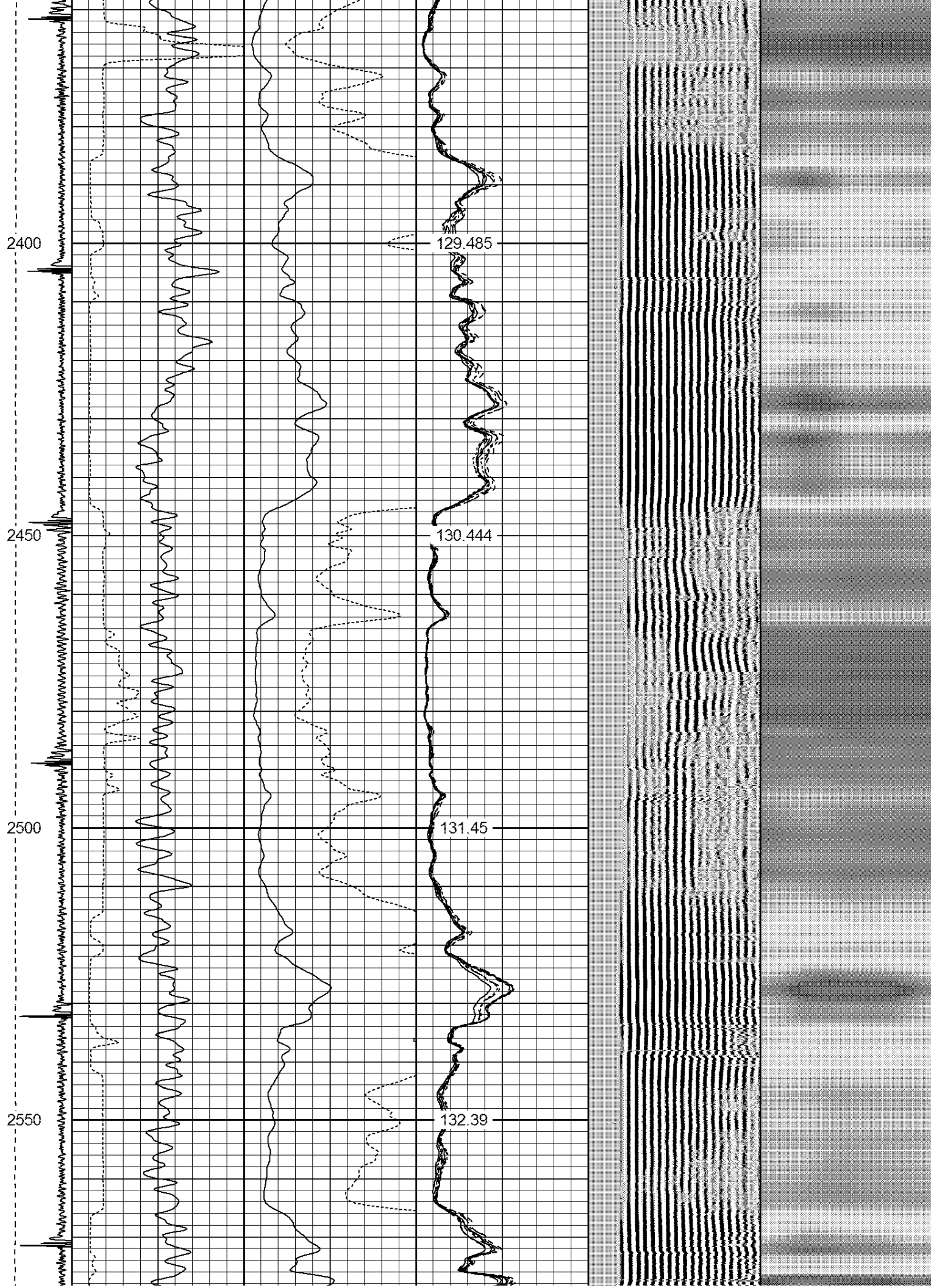
1700  
1750  
1800  
1850  
1900



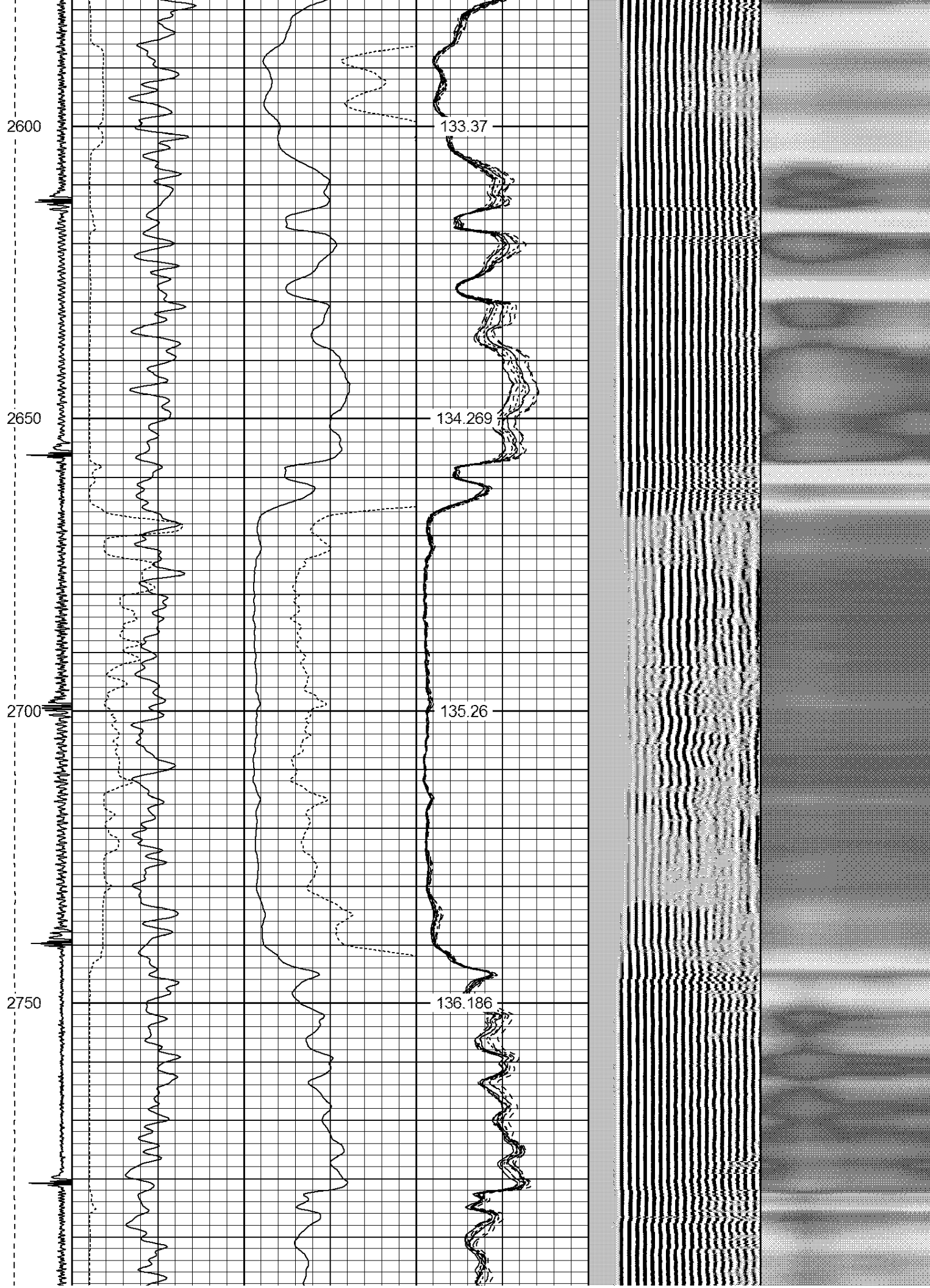




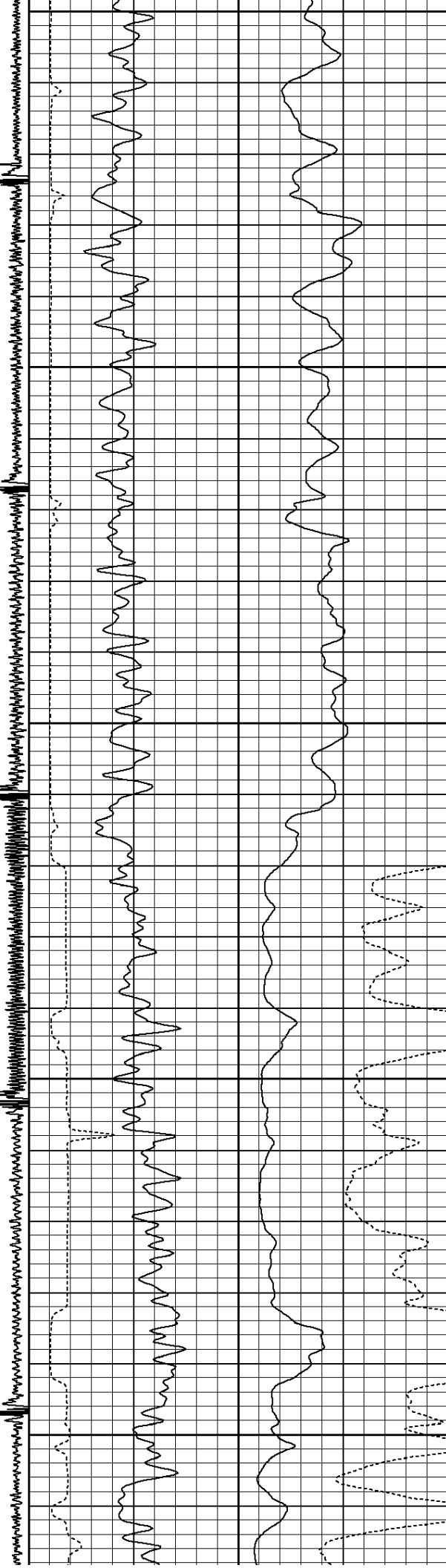




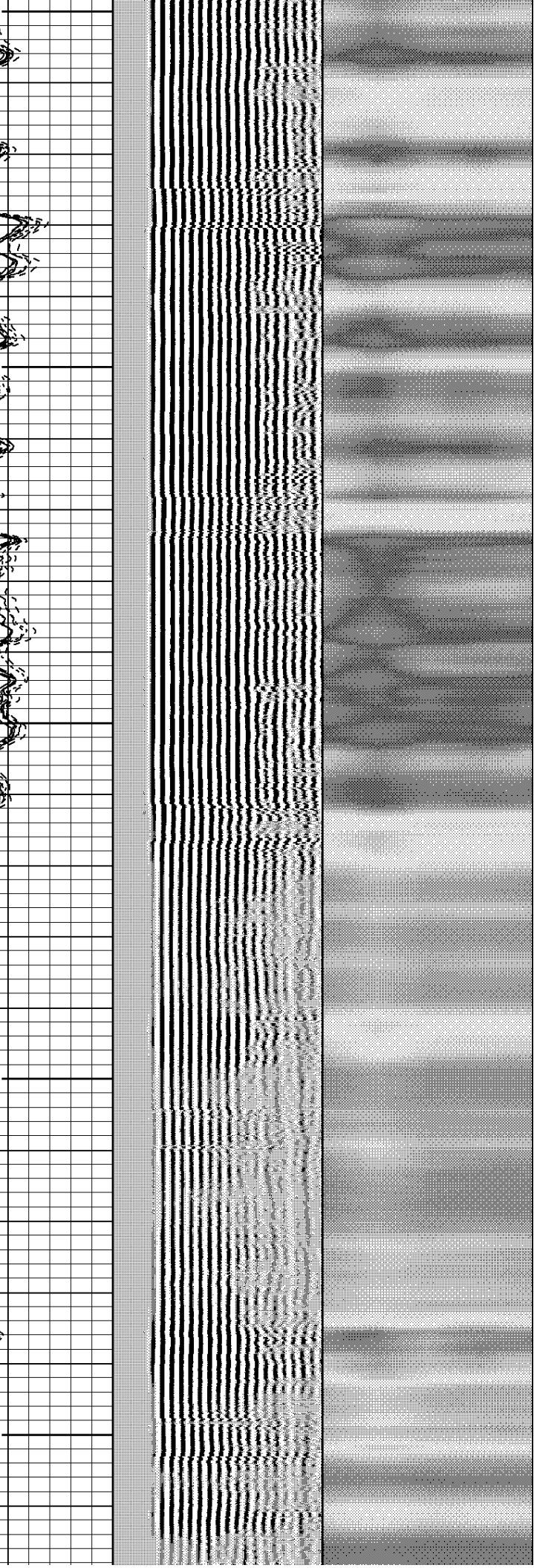




2800  
2850  
2900  
2950  
3000



137.159  
138.687  
139.53  
140.456  
141.375



3050

142.326

3100

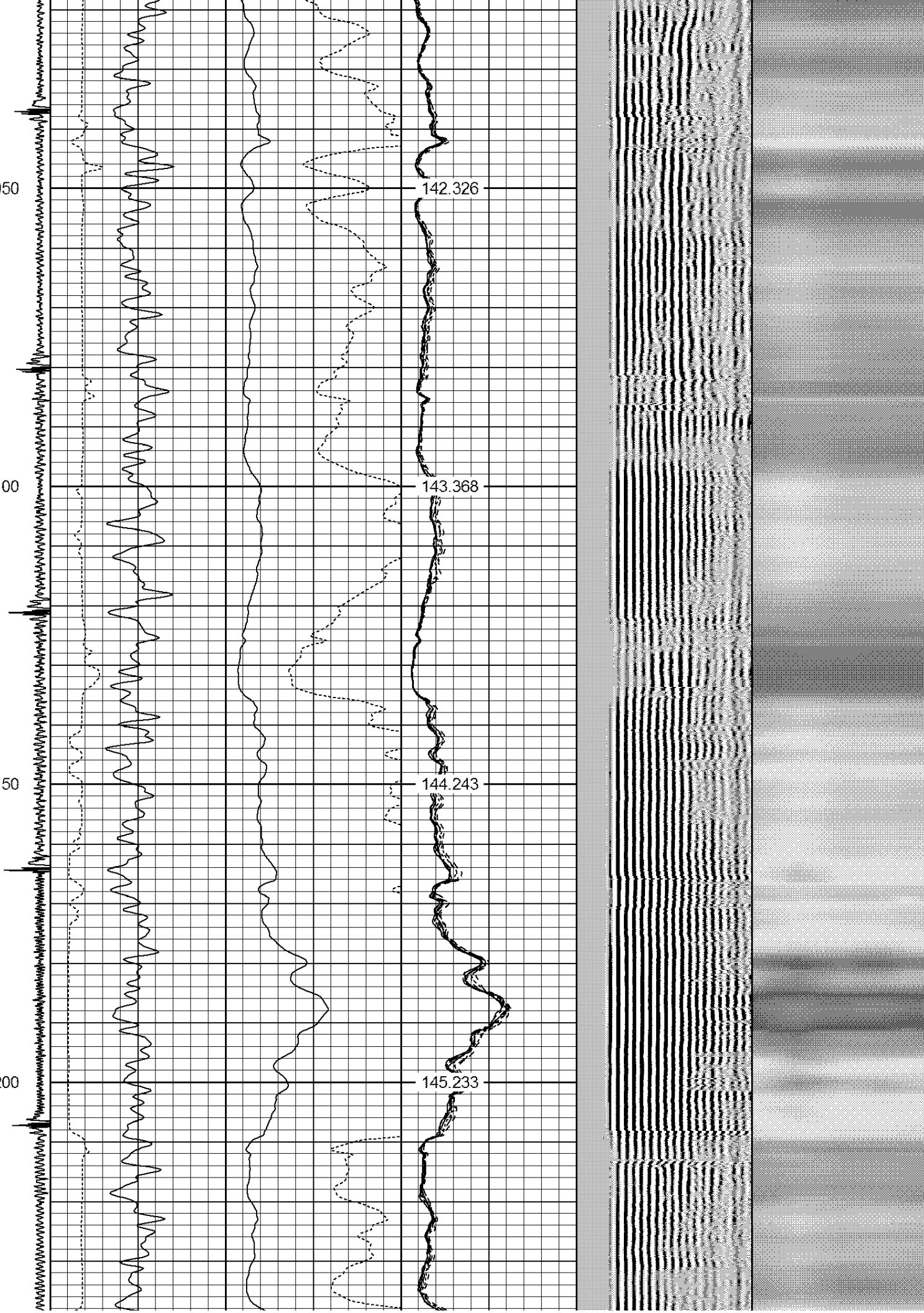
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3150

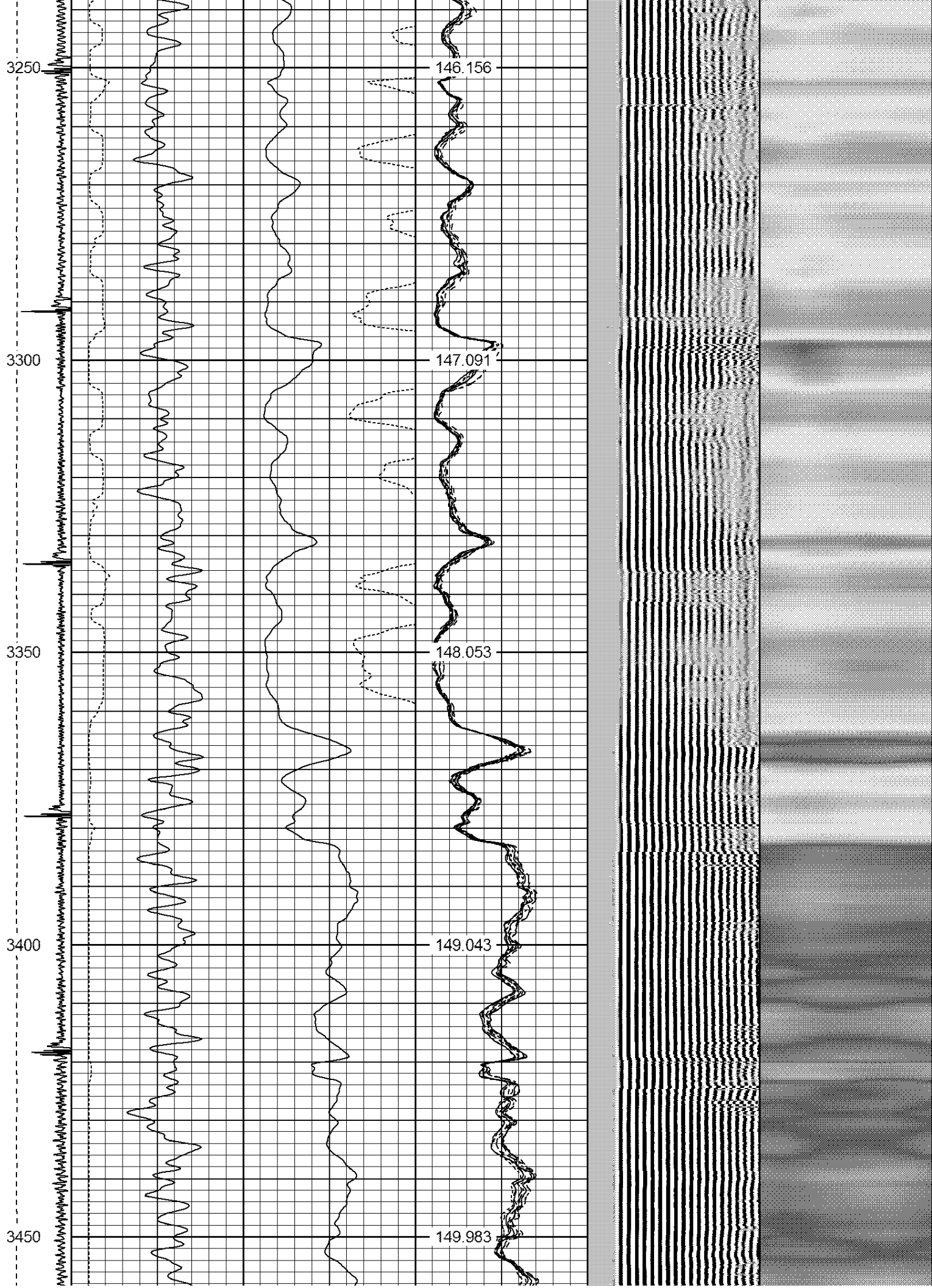
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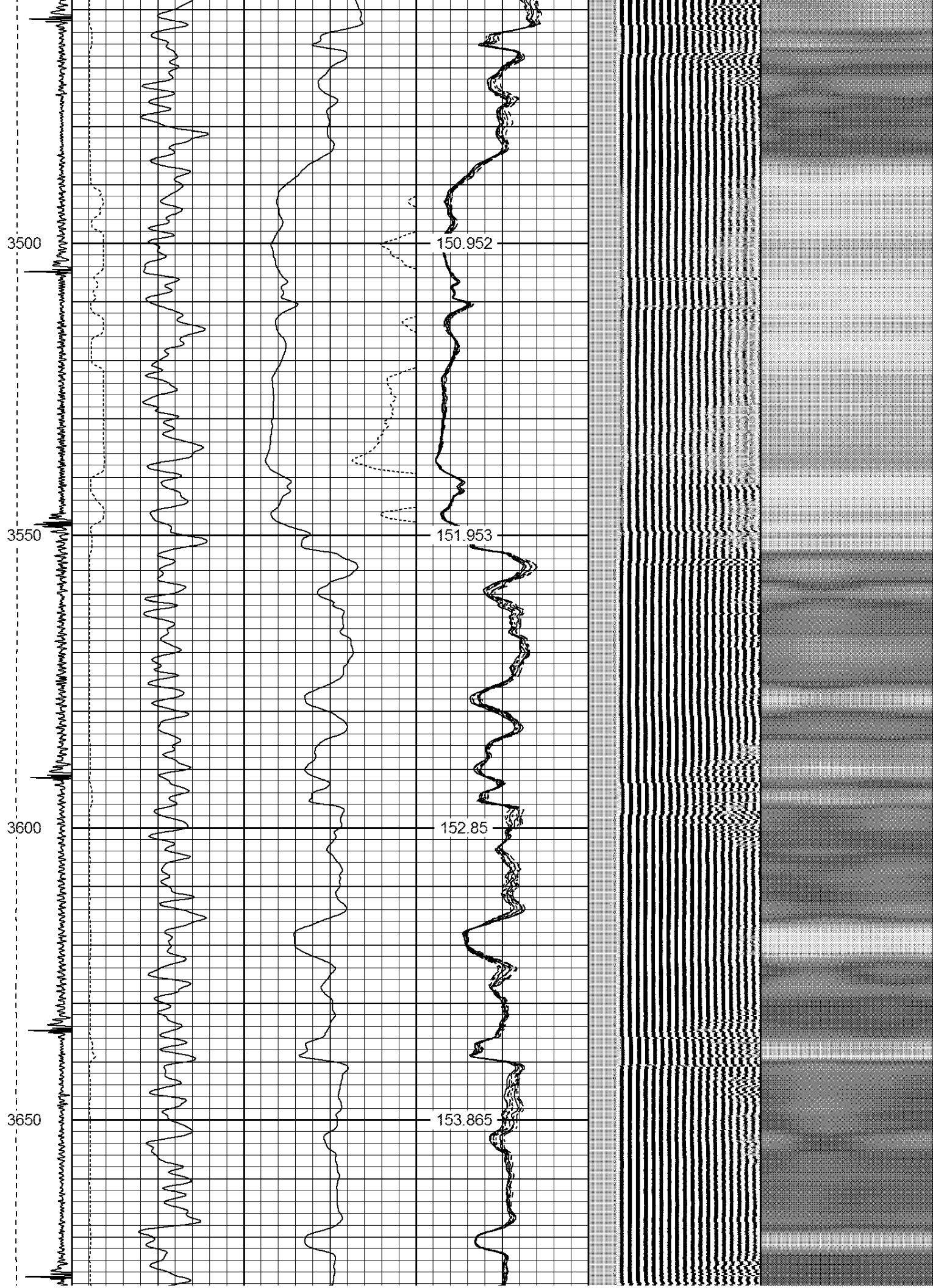
3200

145.233









3700

154.836

3750

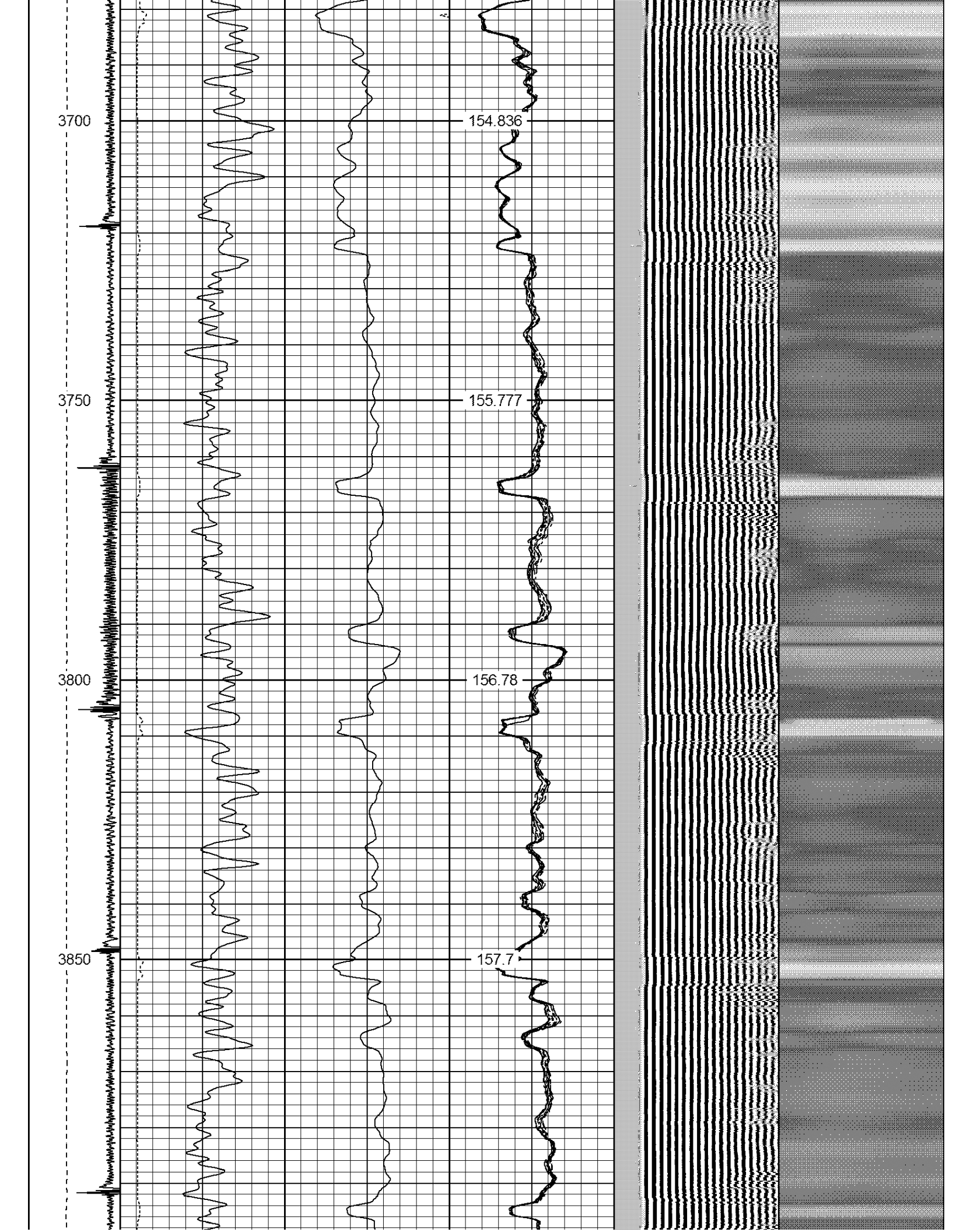
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3800

156.78

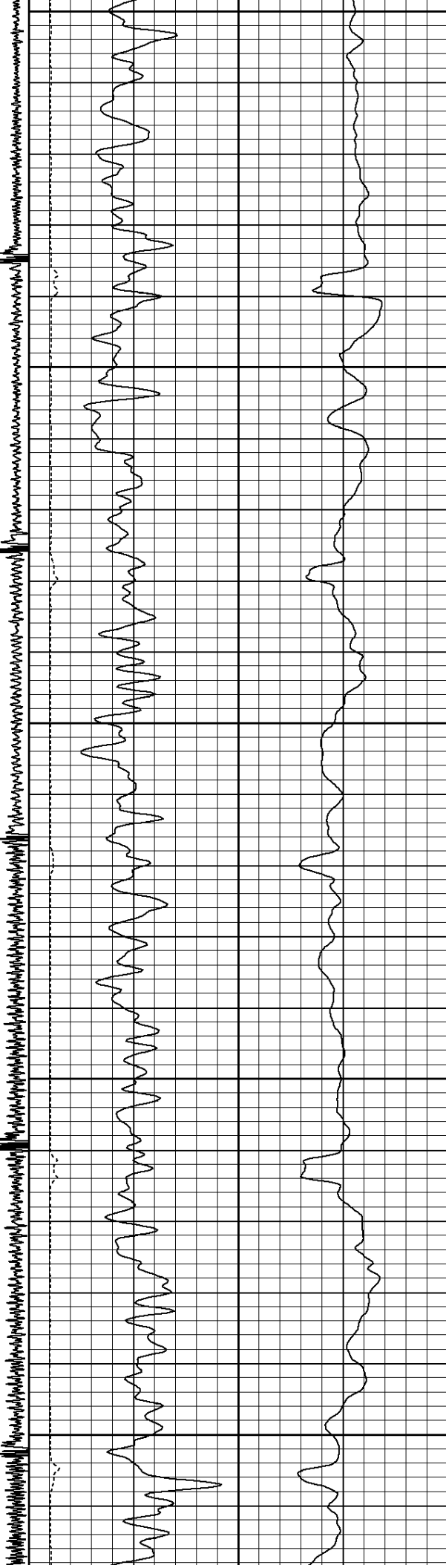
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157.7

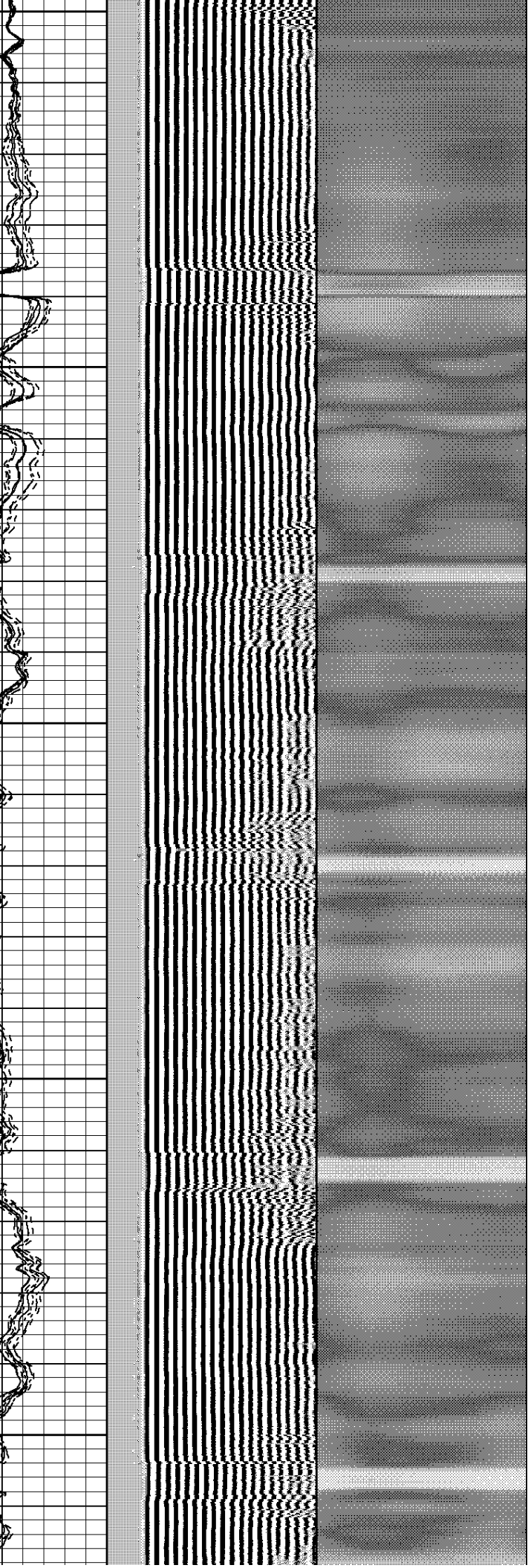


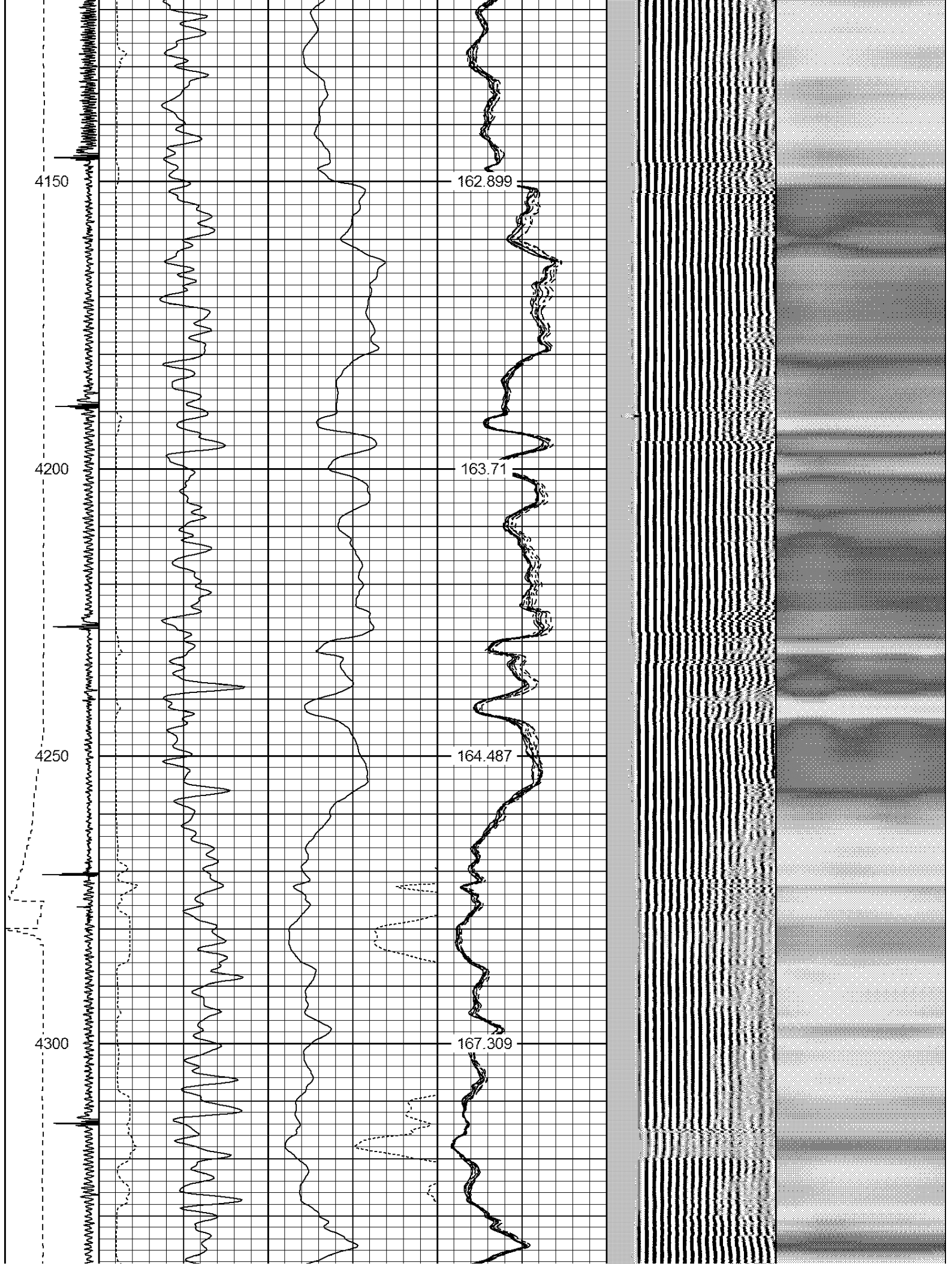


3900  
3950  
4000  
4050  
4100



158.635  
159.496  
160.354  
161.242  
162.024





4350

168.248

4400

169.183

4450

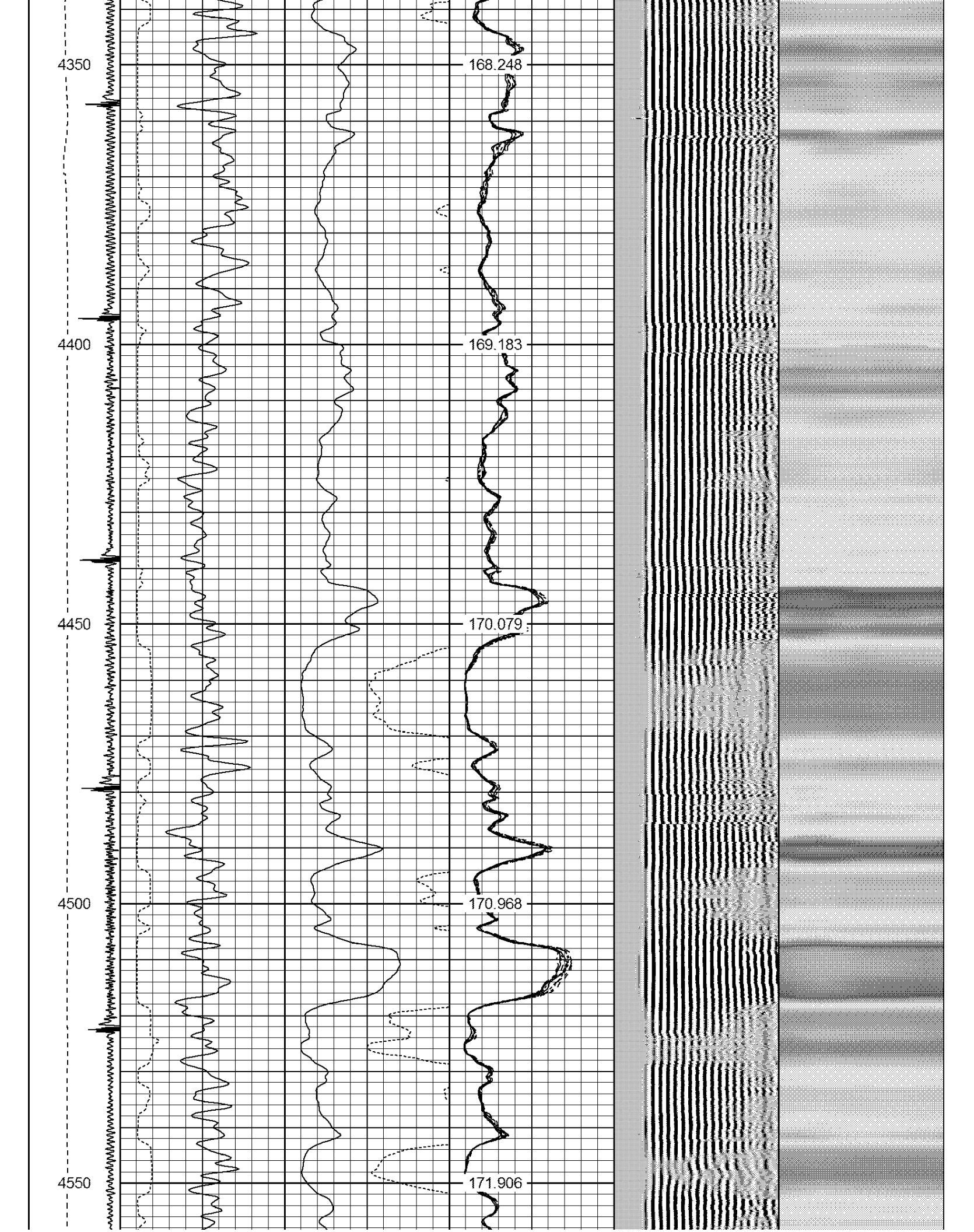
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4500

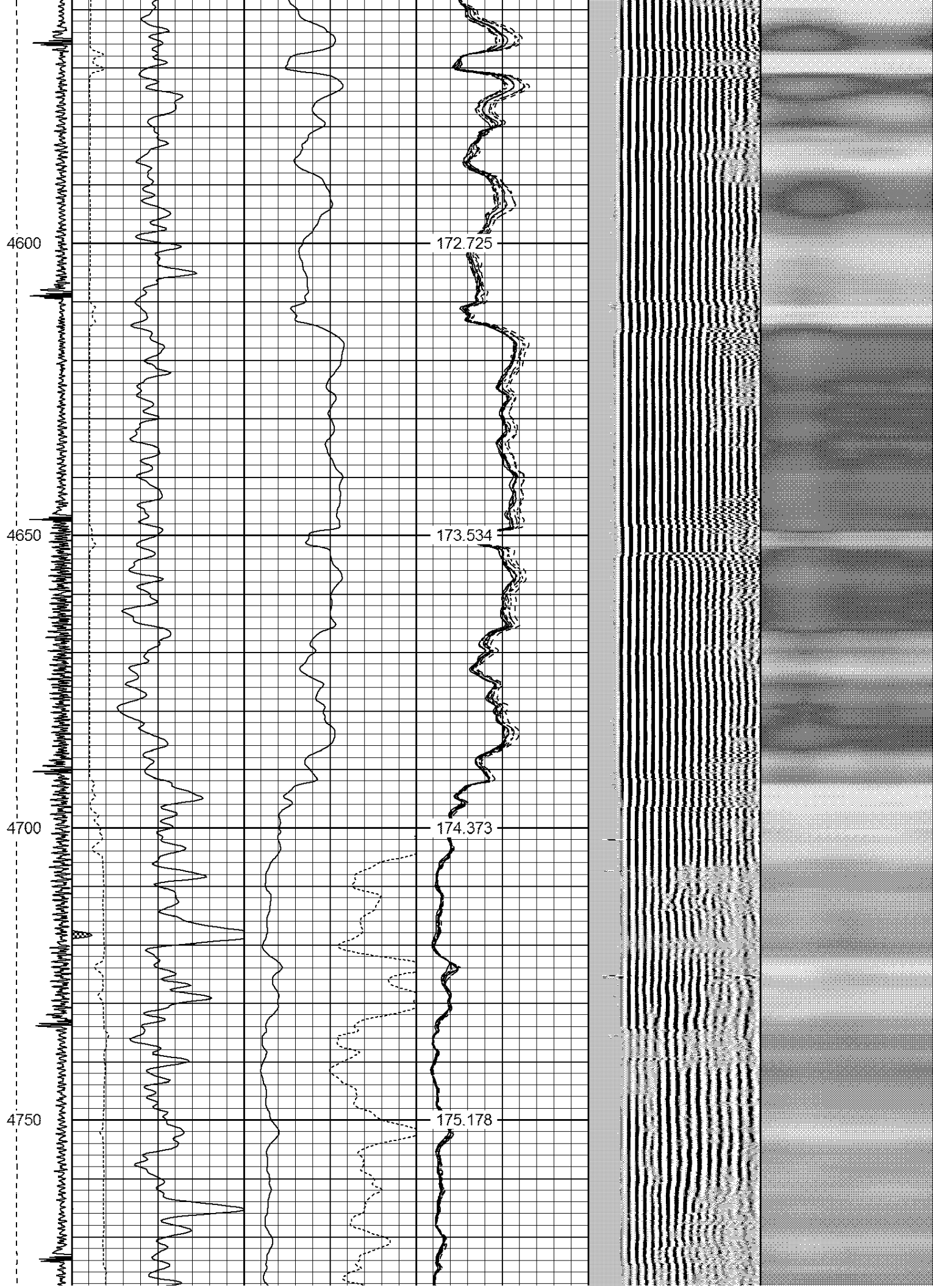
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4550

171.906







4800

176.056

4850

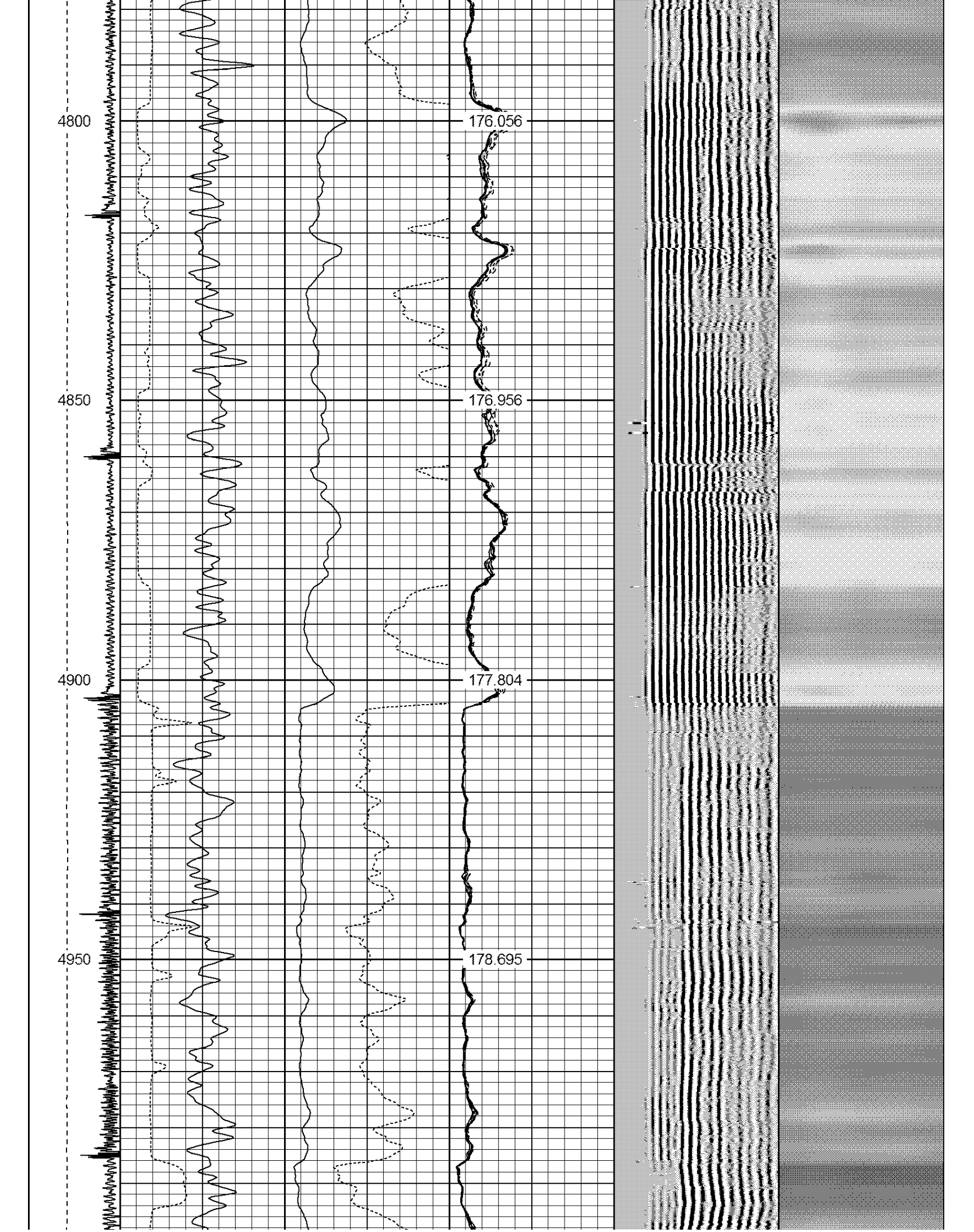
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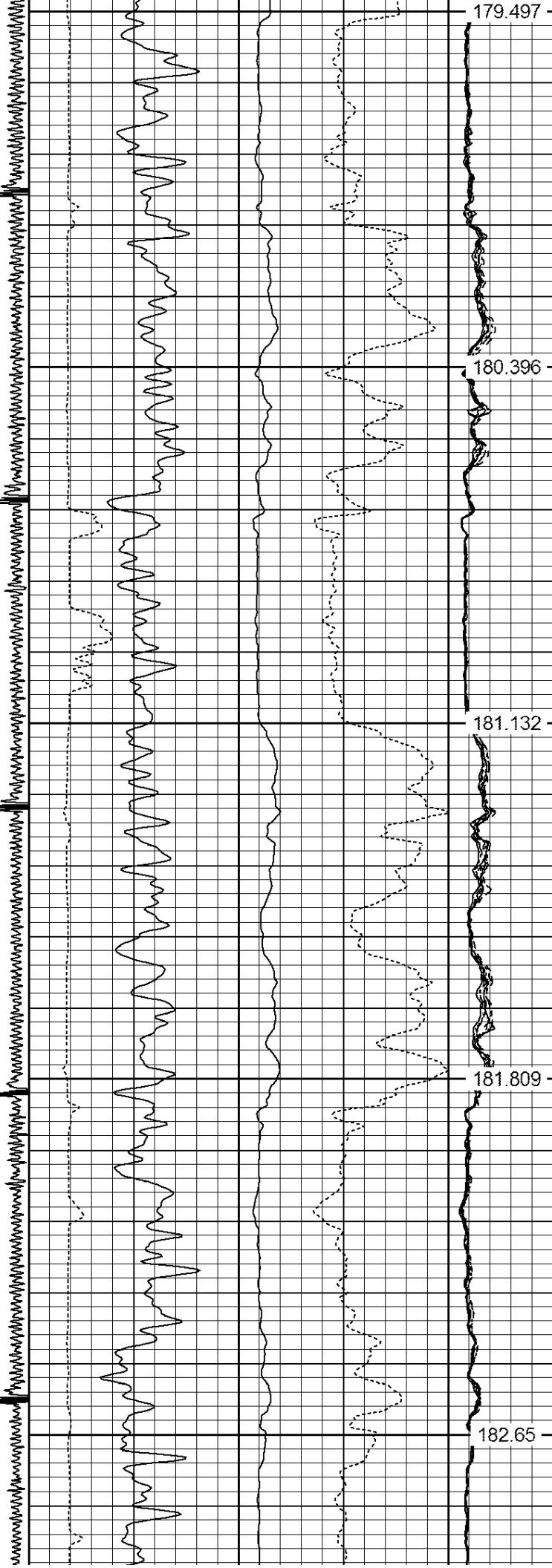
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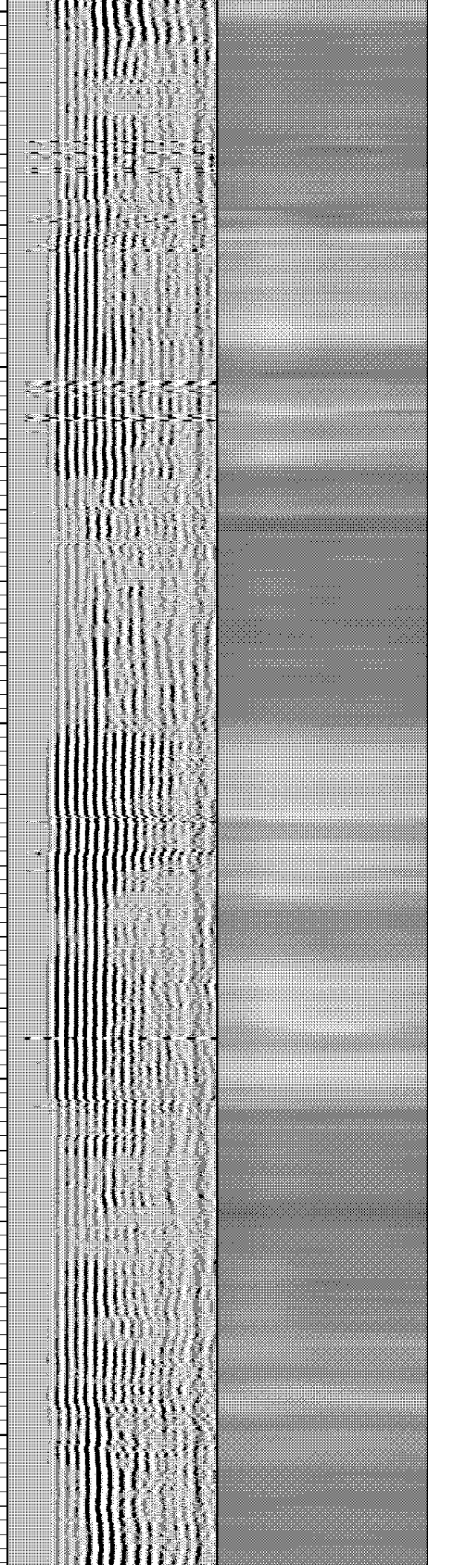
178.695



5000  
5050  
5100  
5150  
5200



179.497  
180.396  
181.132  
181.809  
182.65





5250

183.356

5300

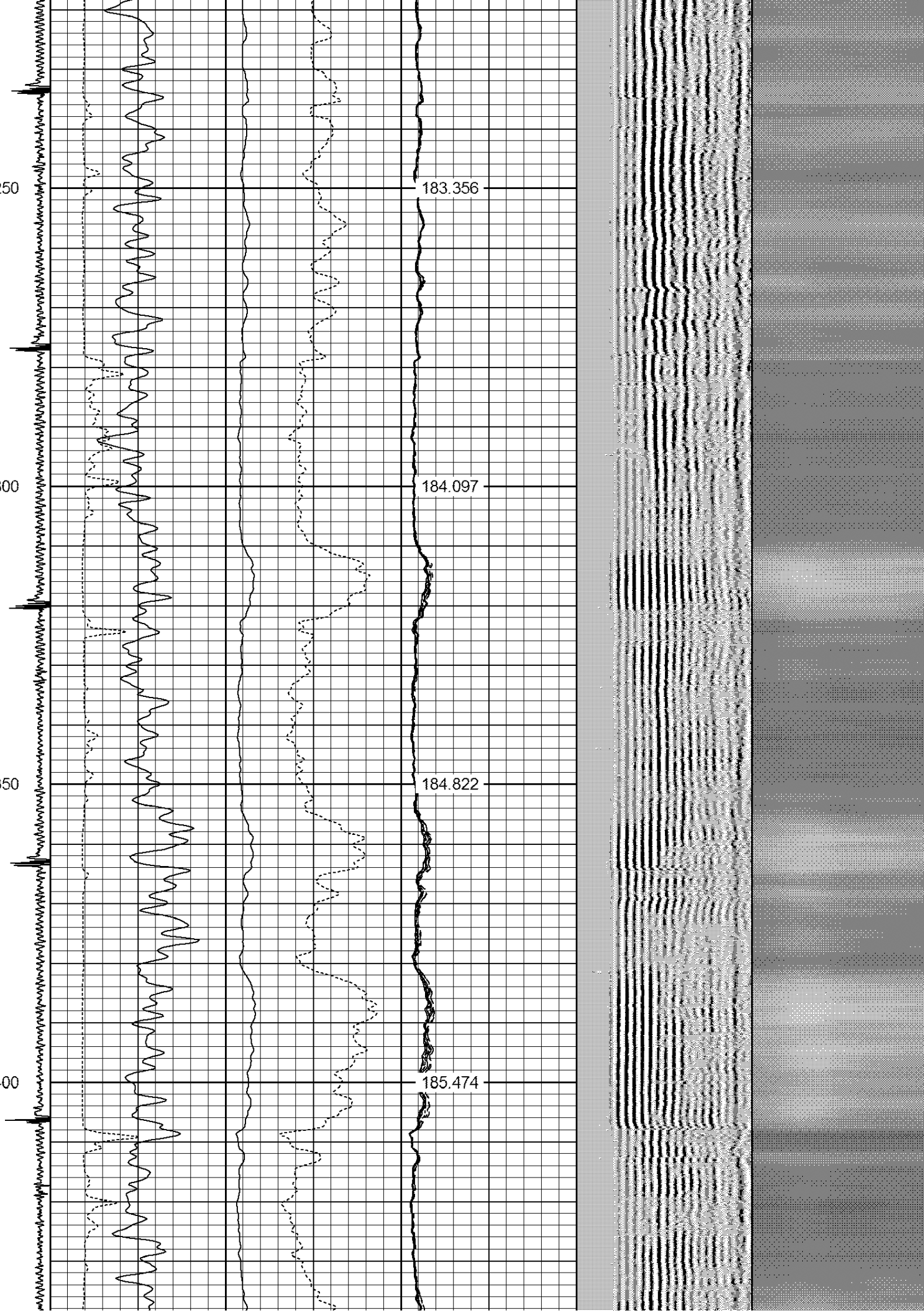
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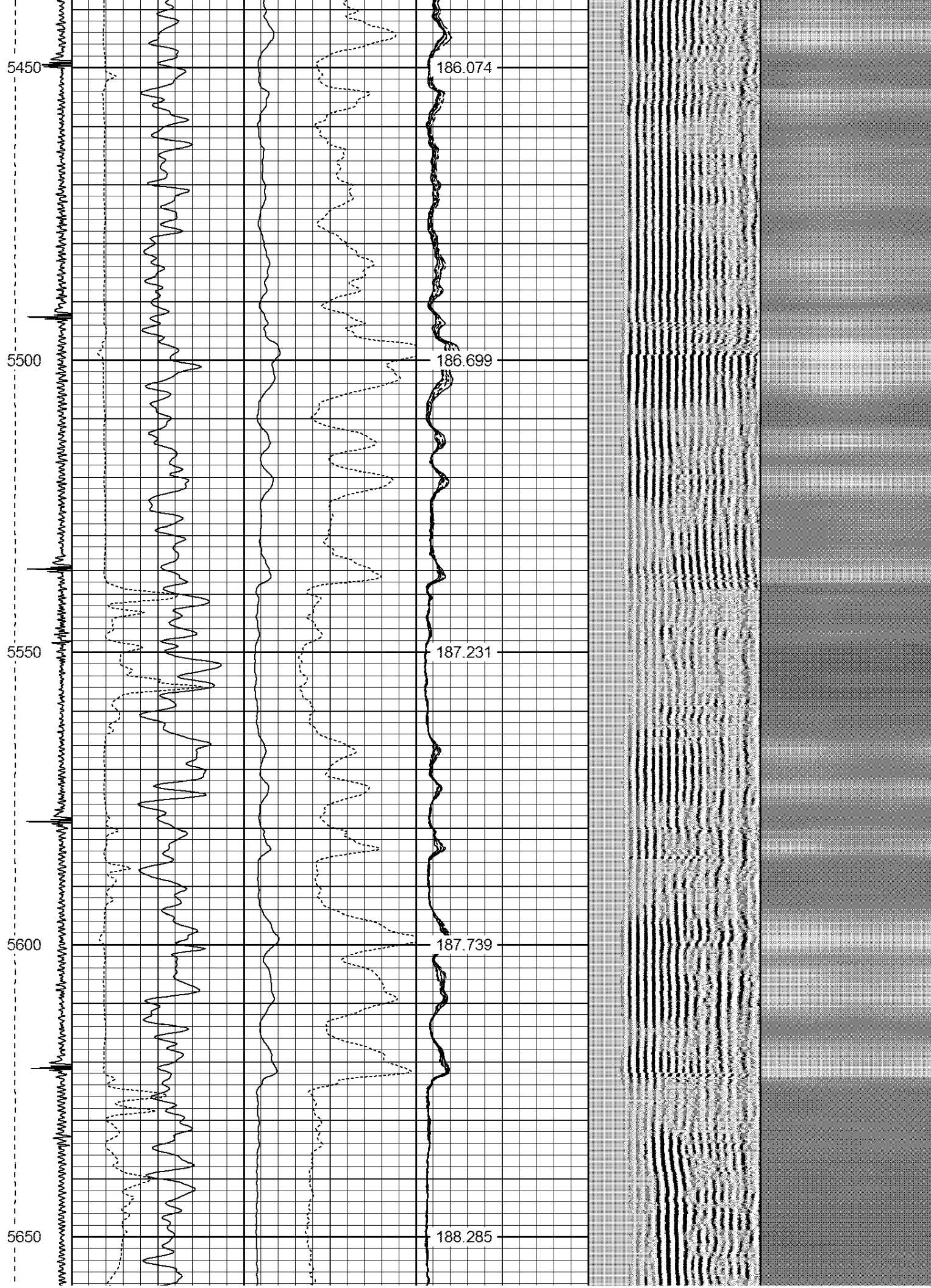
5350

184.822

5400

185.474





5700

188.757

5750

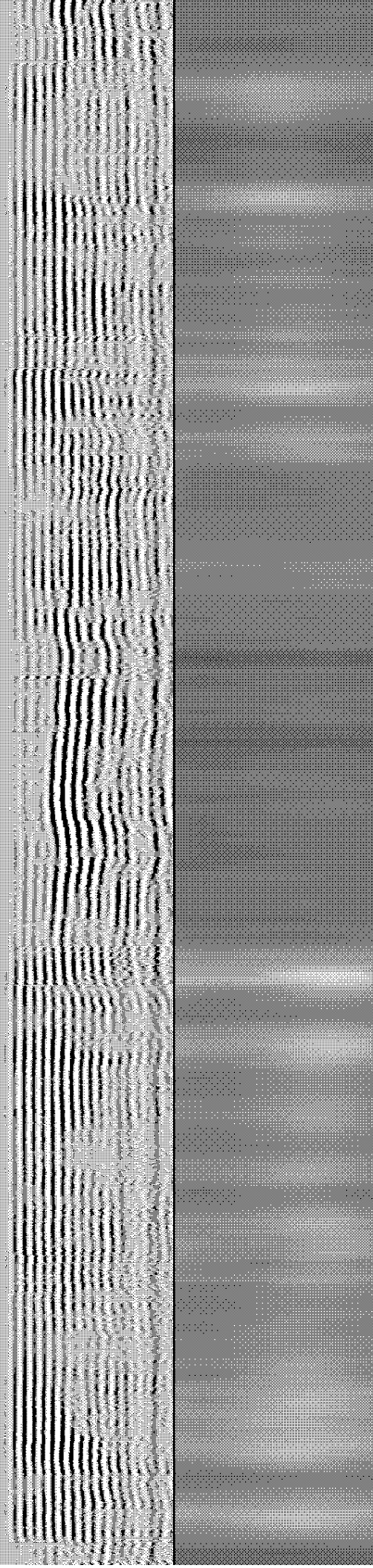
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5800

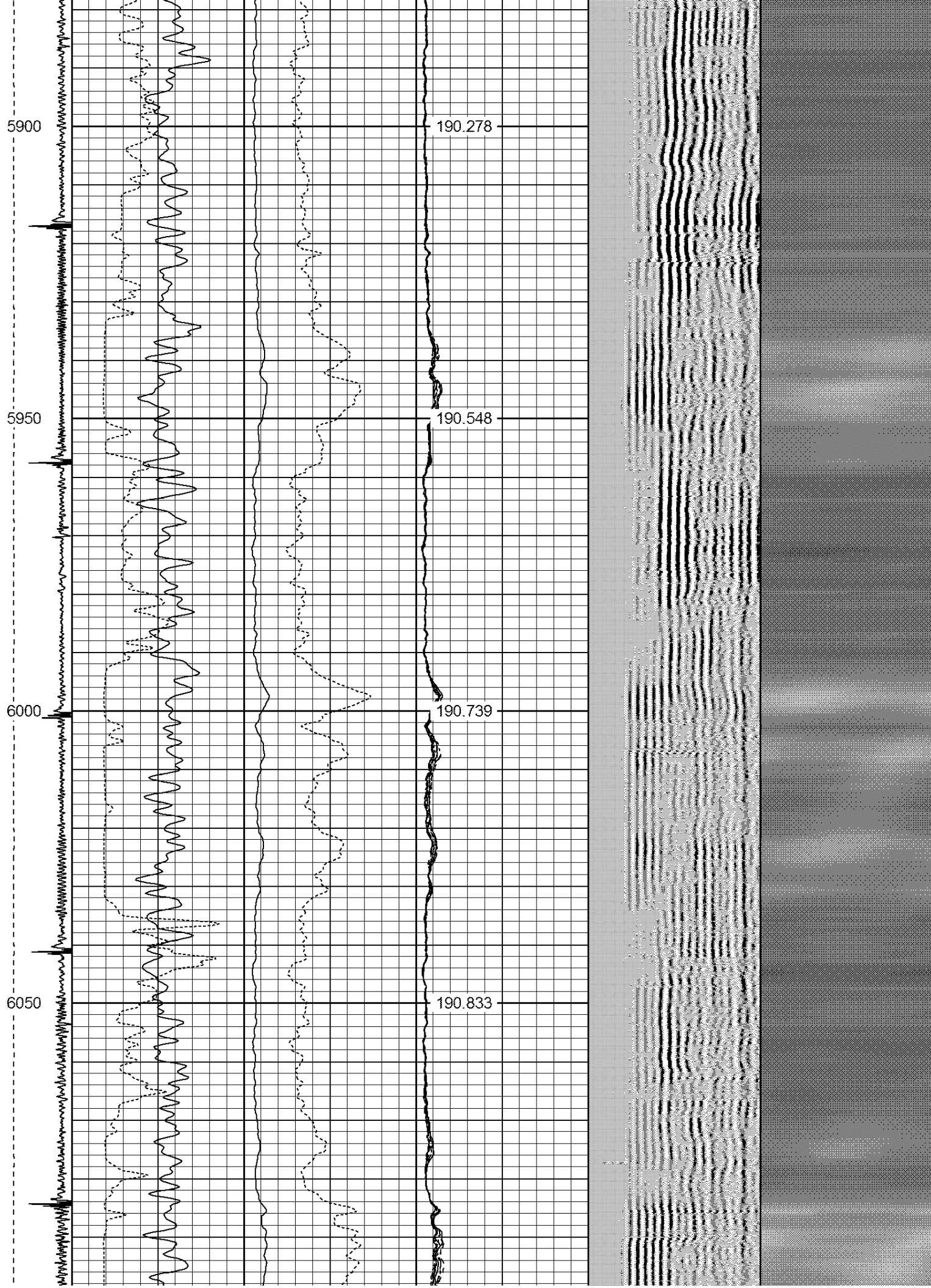
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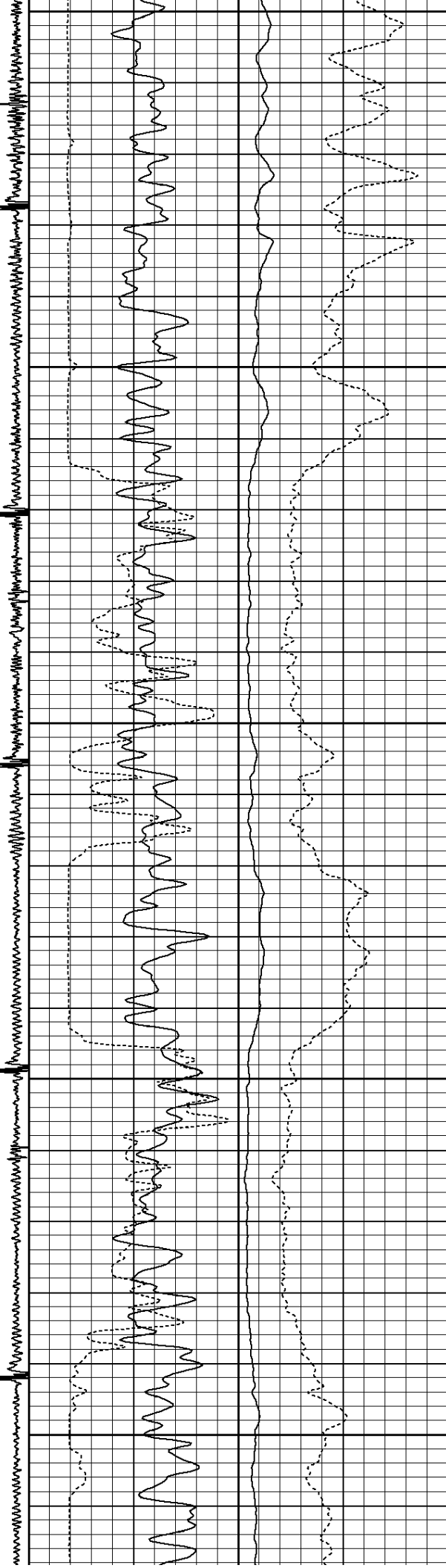
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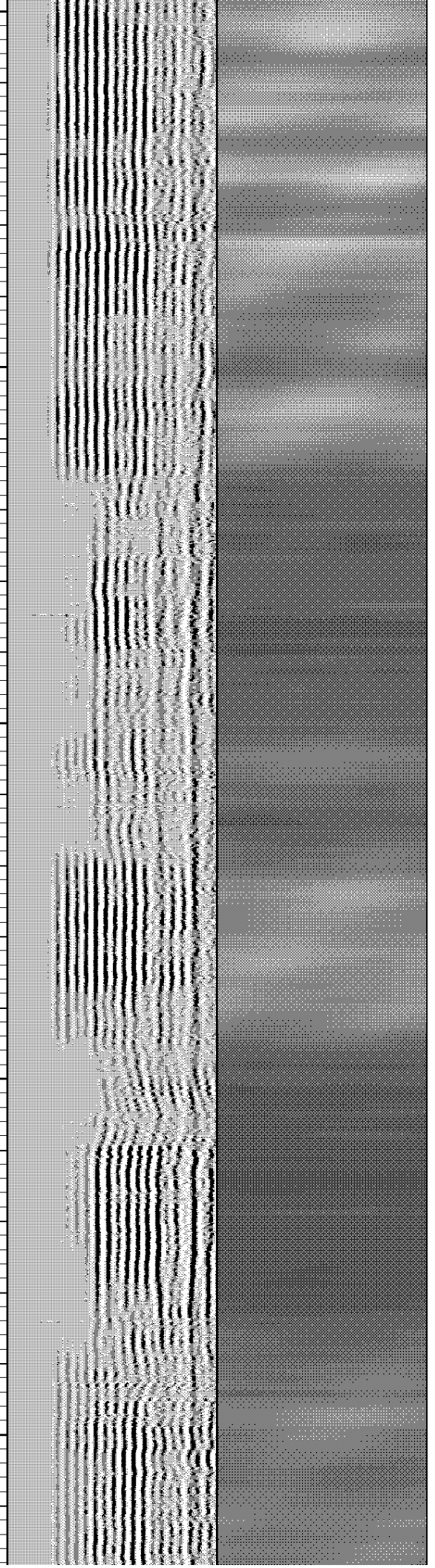


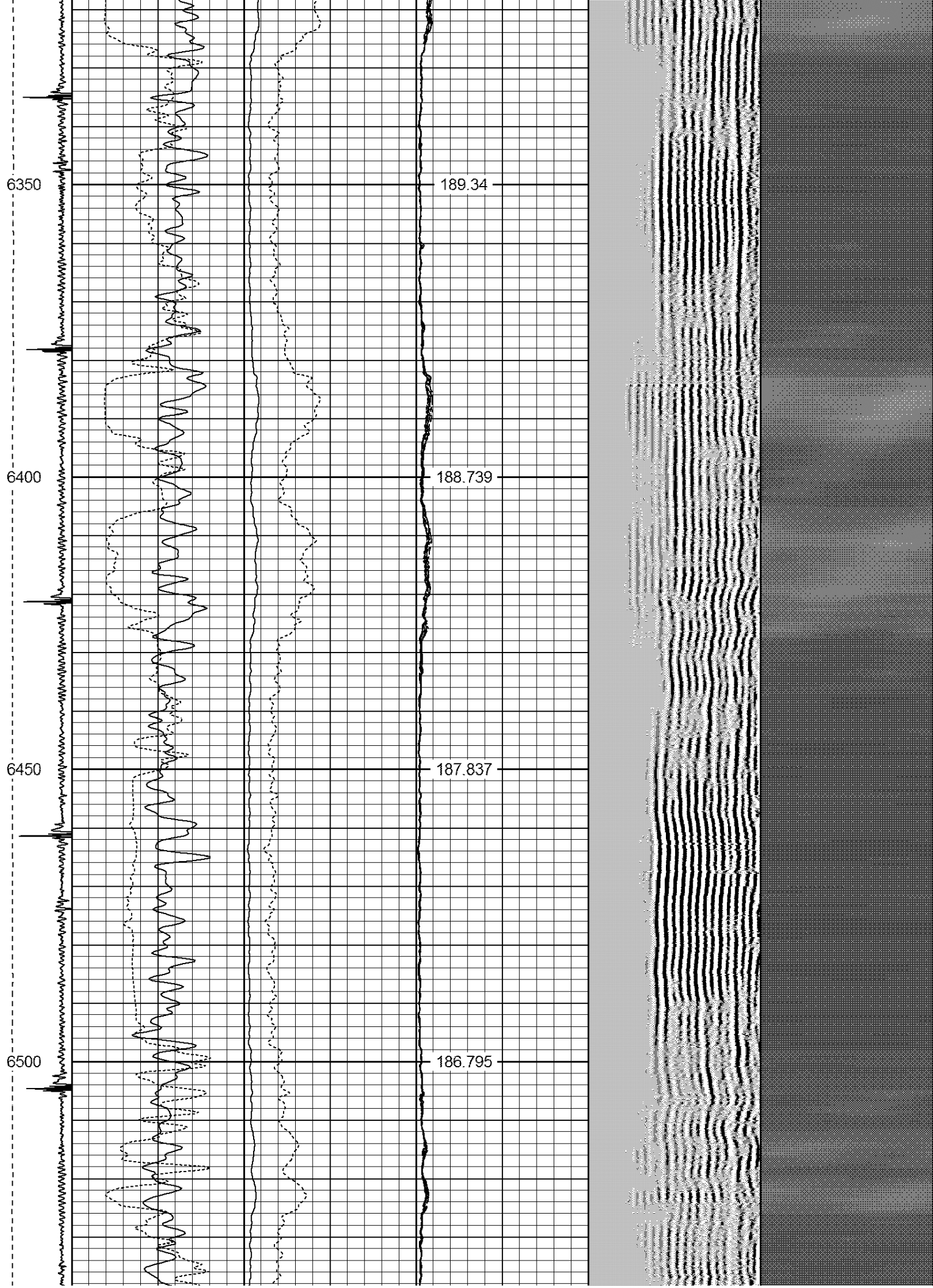


6100  
6150  
6200  
6250  
6300

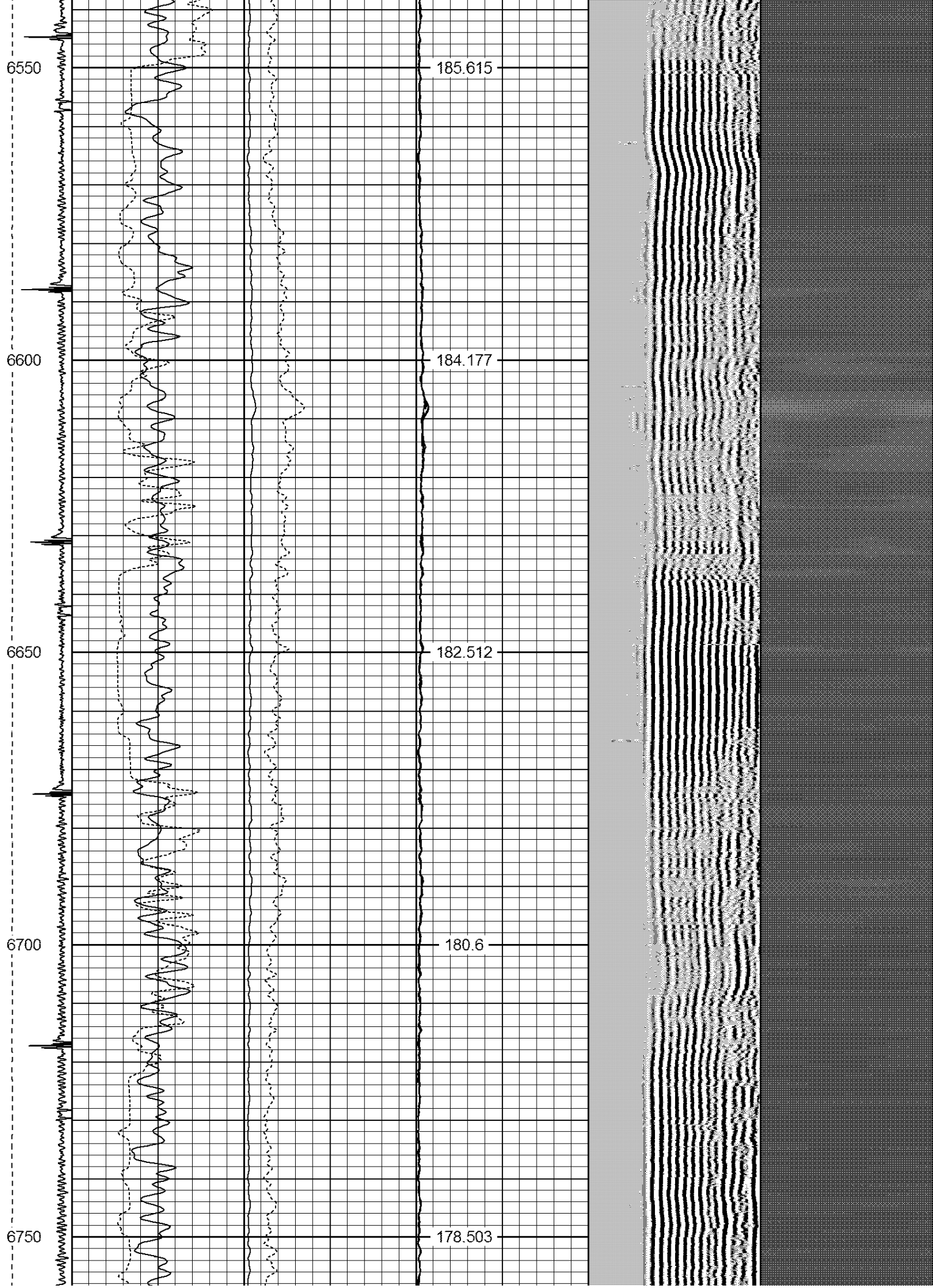


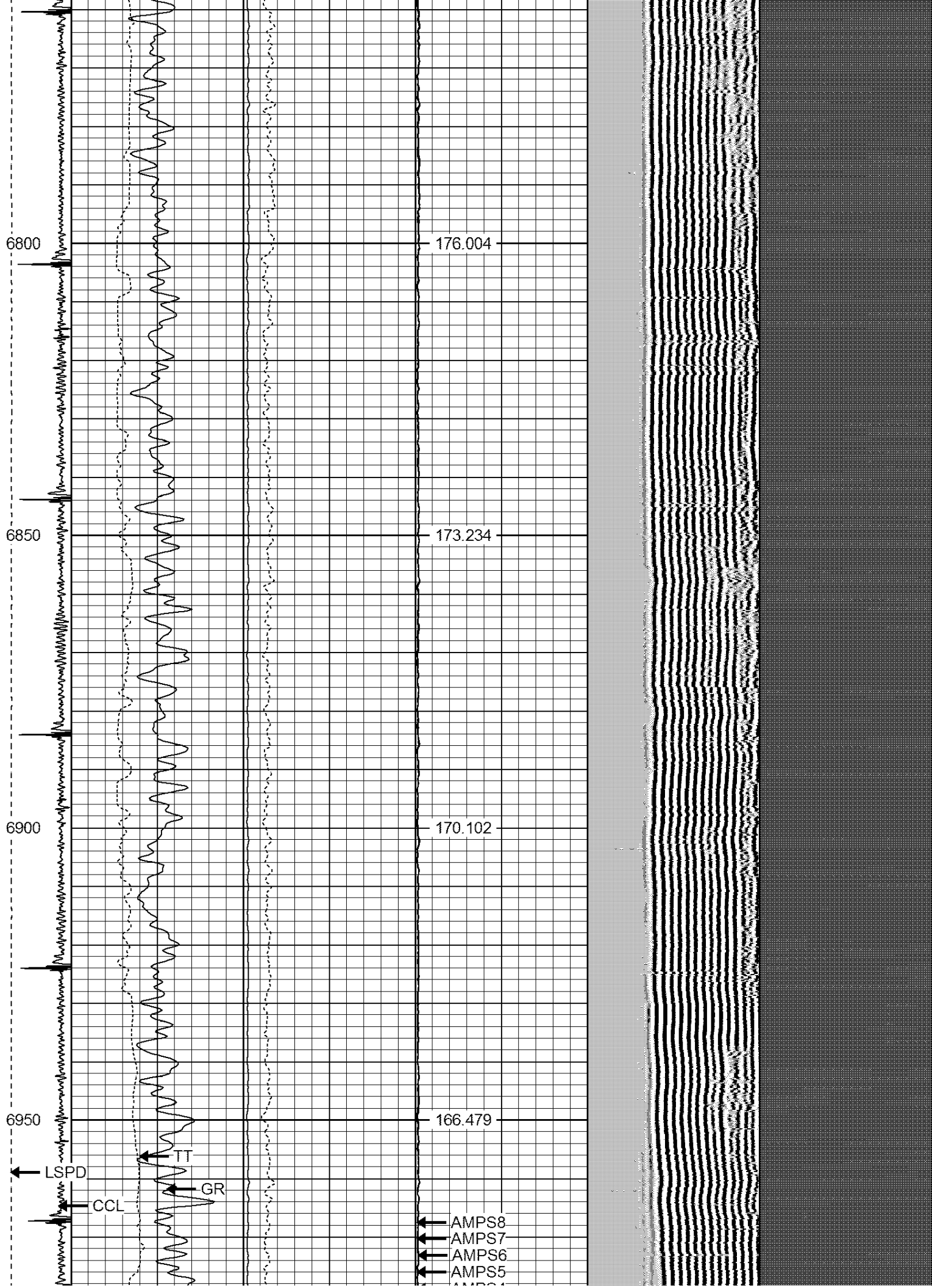
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190.679  
190.534  
190.27  
189.901

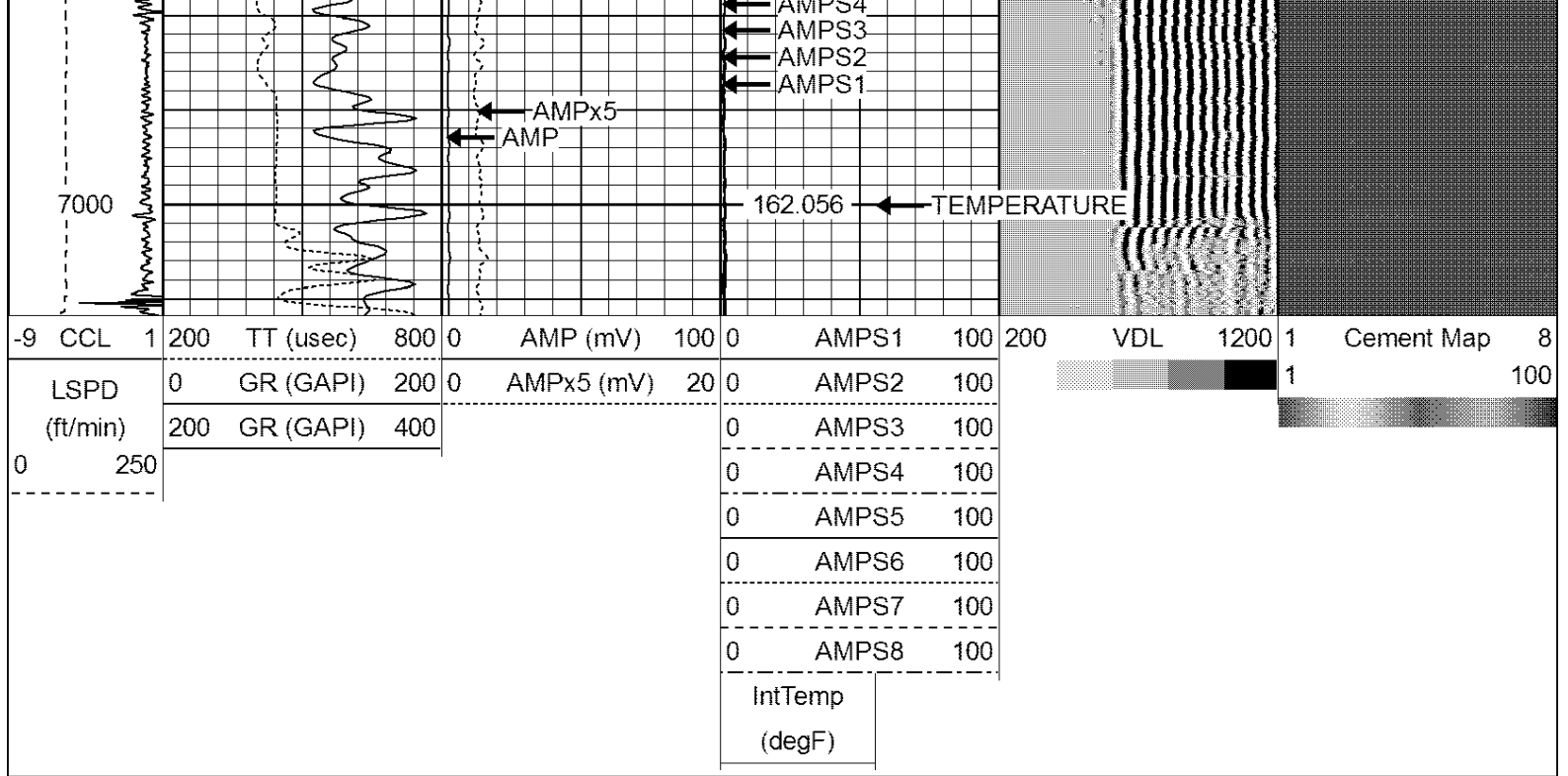












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