



Well Services  
E - L I N E

RADIAL CEMENT BOND  
GAMMA RAY  
CCL LOG

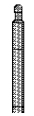
Company NOBLE ENERGY INC.		Company NOBLE ENERGY INC.					
Well MOSSBERG J 30-23		Well MOSSBERG J 30-23					
Field WATTENBERG		Field WATTENBERG					
County WELD		County WELD					
State CO		State CO					
Location: API # : 05-123-26554 SE/SE LAT. 40.366568 LONG. -104.816816		Other Services					
SEC 30 TWP 5N RGE 66W		Elevation					
Permanent Datum GL Log Measured From K.B. OF 14' Drilling Measured From KELLY BUSHING		K.B. 4,920' D.F. 4,919' G.L. 4,906'					
Date 9-20-2019							
Run Number ONE							
Depth Driller 7,535'							
Depth Logger 7,331'							
Bottom Logged Interval 7,327'							
Top Log Interval SURFACE							
Open Hole Size 7.875"							
Type Fluid WATER							
Density / Viscosity 1.0							
Max. Recorded Temp. 216.2 °F							
Estimated Cement Top 1,950'							
Time Well Ready ON ARRIVAL							
Time Logger on Bottom N/A							
Equipment Number 3813							
Location GREELEY, CO							
Recorded By J.KERR							
Witnessed By N.BREHMER							
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size		Wgt/Ft	Top	Bottom		
Surface String	8.625"		24#	SURFACE	898'		
Prot. String							
Production String	4.5"		11.6#	SURFACE	7,529'		
Liner							

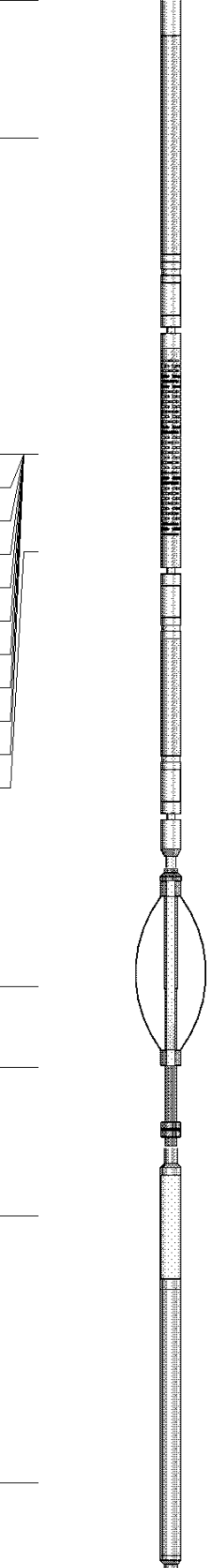
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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.

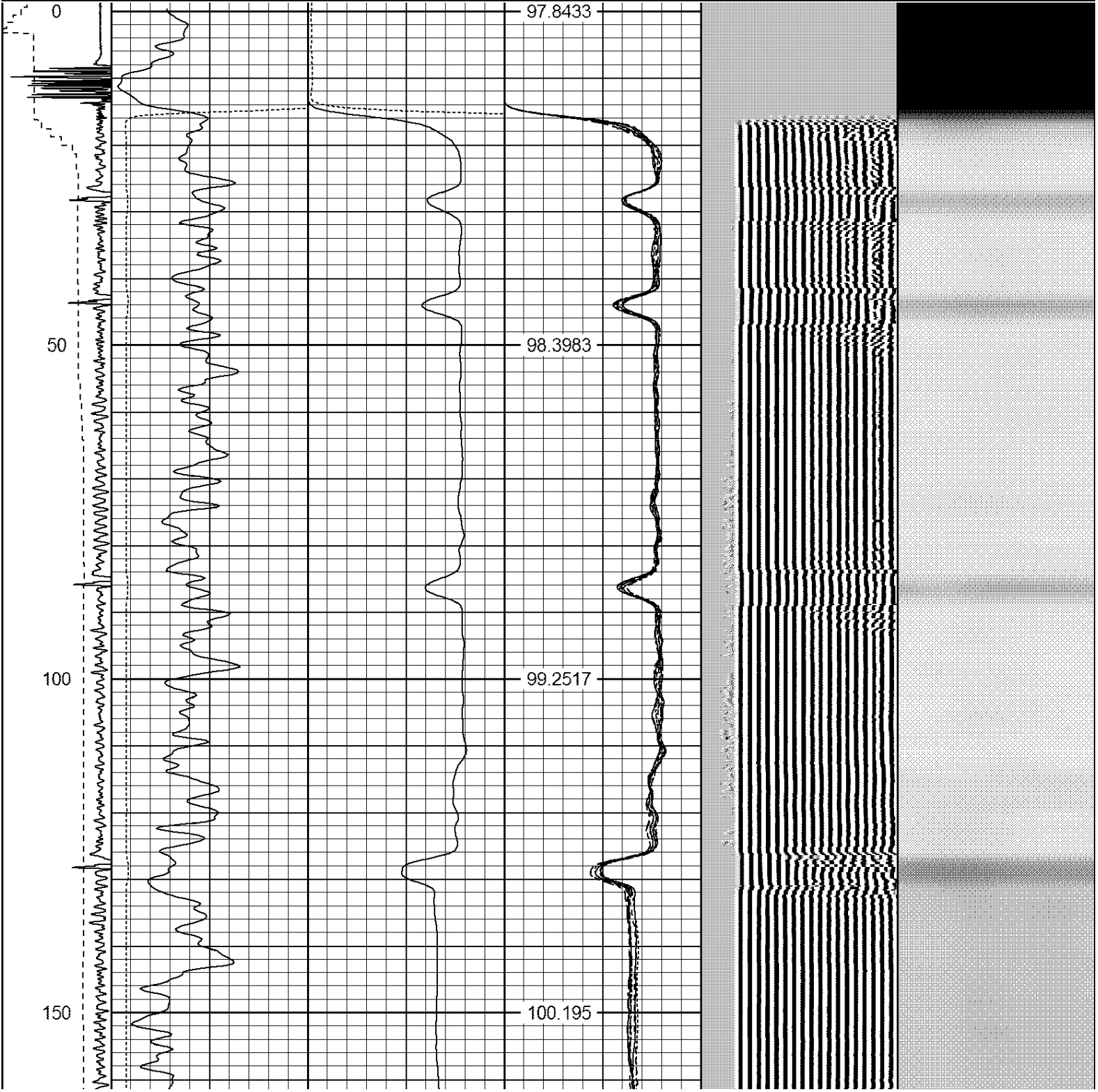
Comments

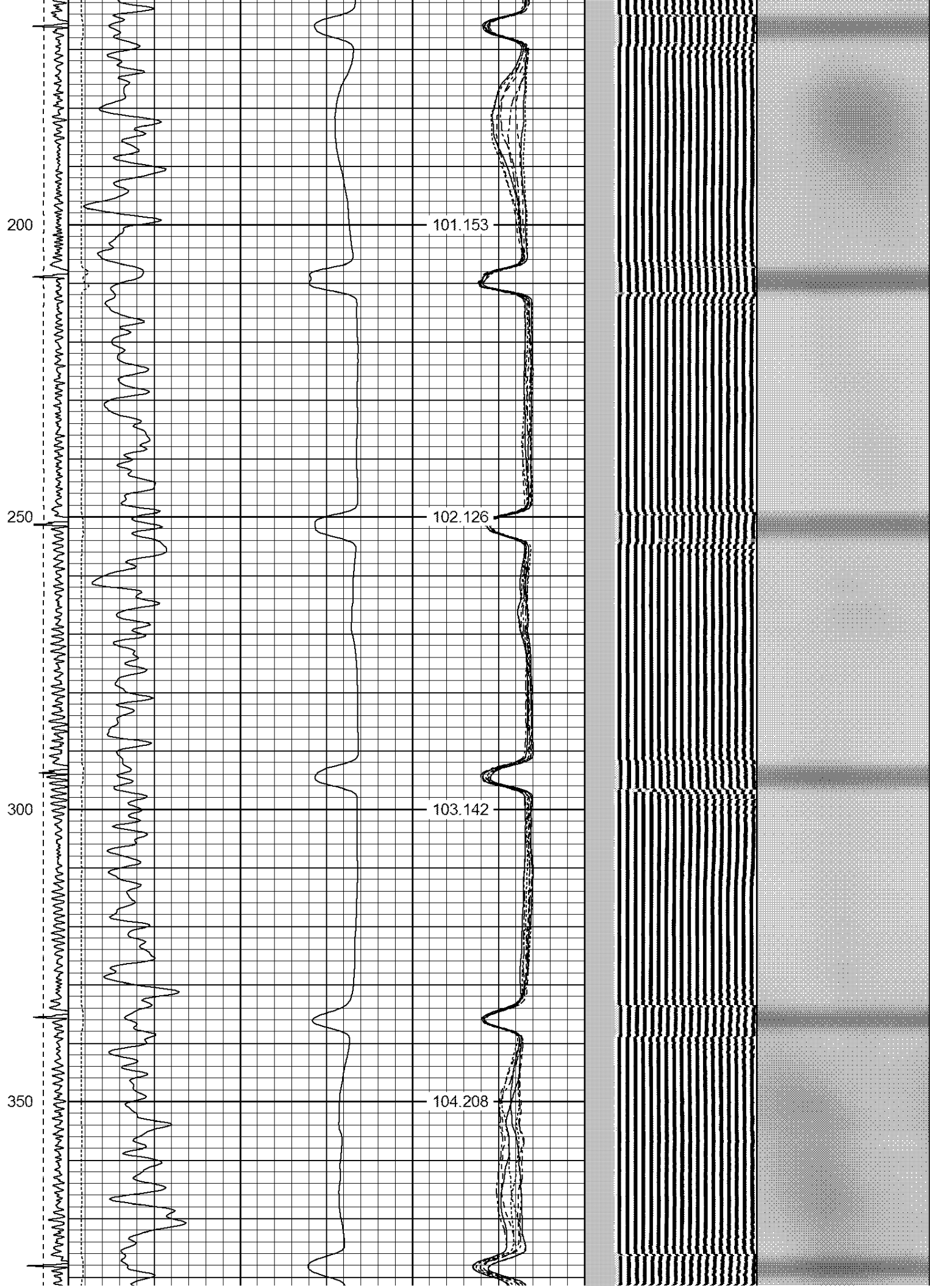
RAN CBL TO VERIFY CEMENT COVERAGE  
CORRELATED TO K.B. OF 14'

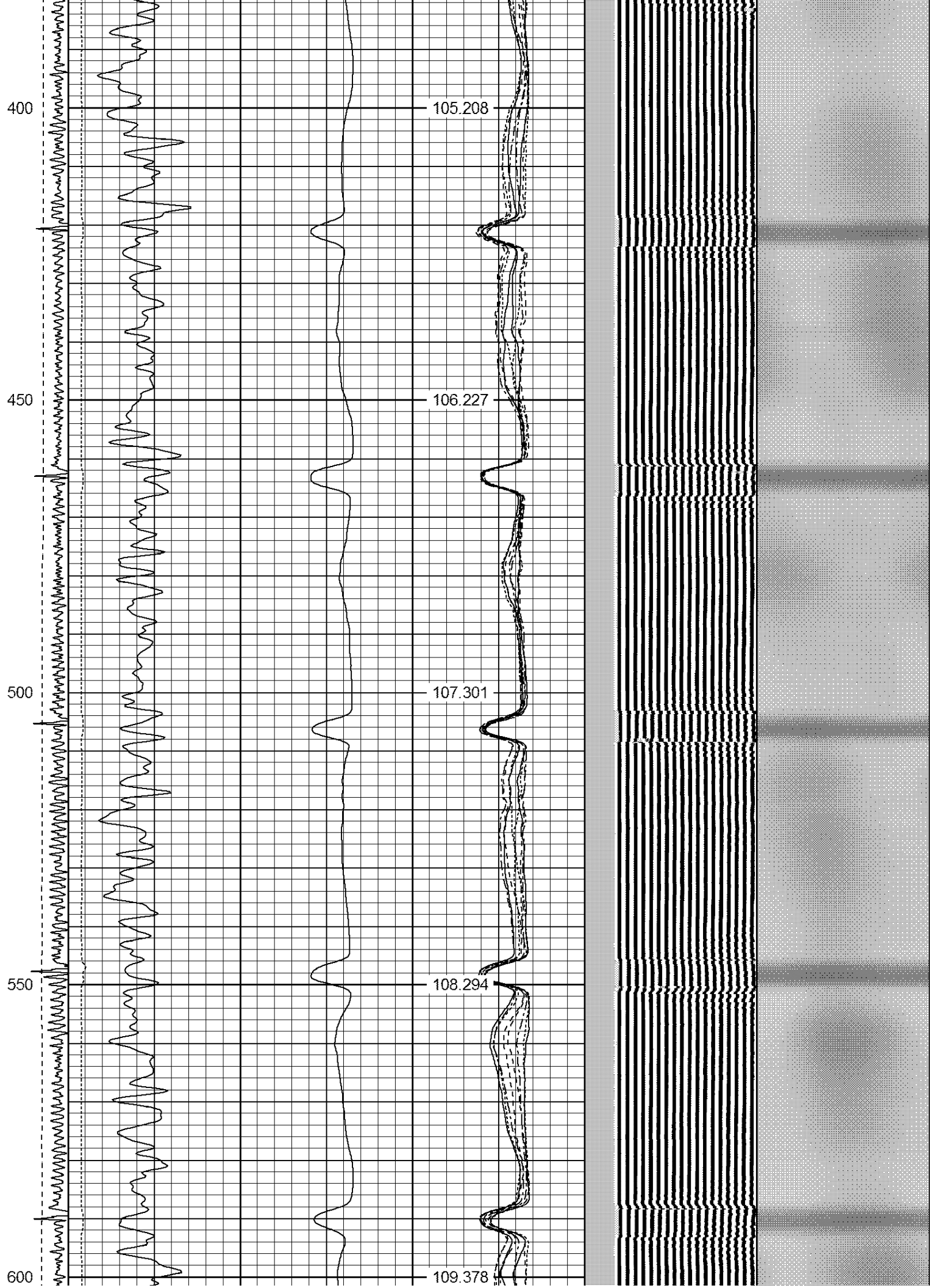
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HEAD/VOI	16.13		1_4	1.00	1.36	5.00

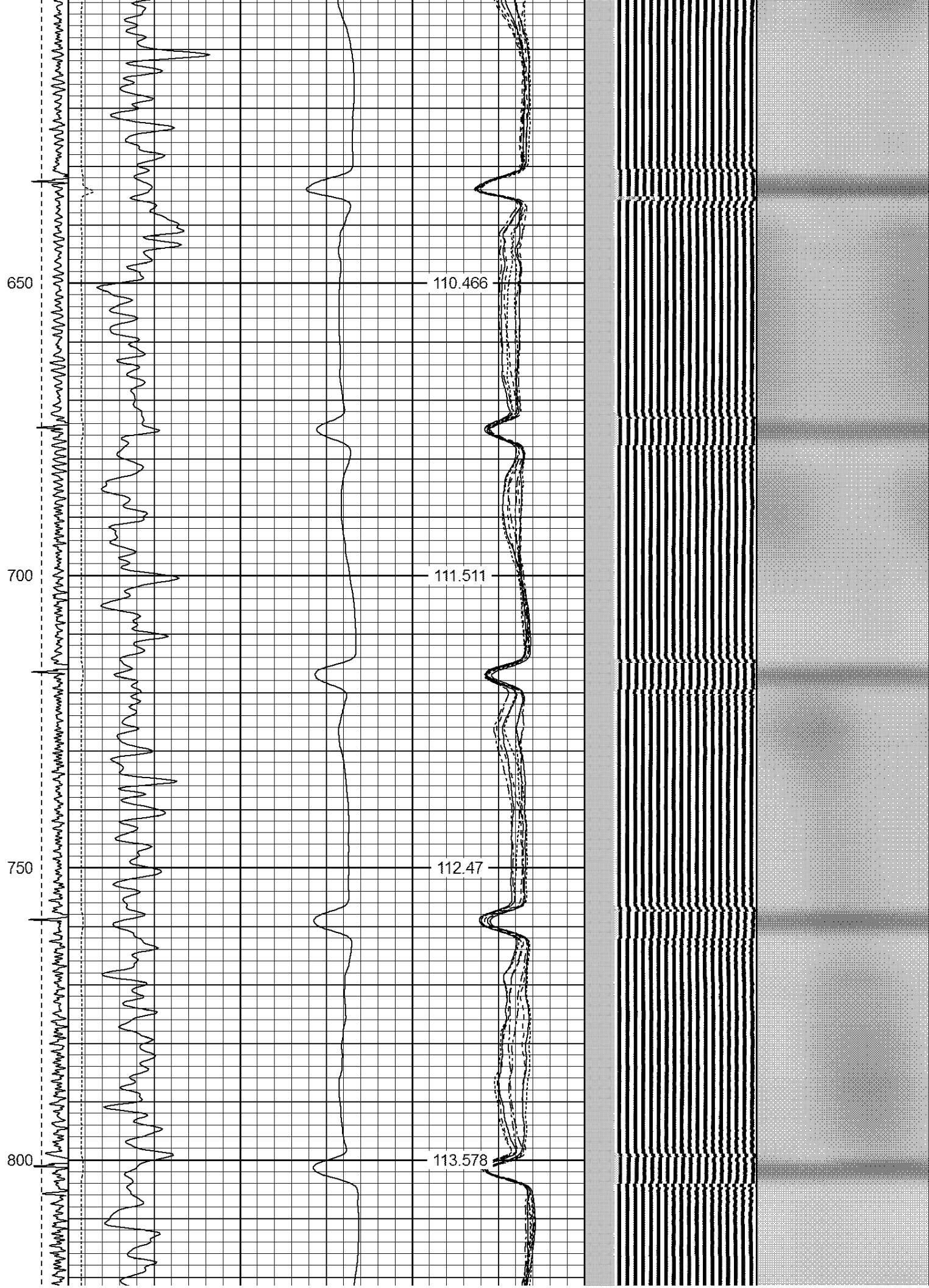
HEADVOLT	10.15					
IntTemp	14.71					
WVF3FT	11.46		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
WVFCAL	11.46					
WVFS1	11.46					
WVFS2	11.46					
WVFS3	11.46					
WVFS4	11.46					
WVFS5	11.46					
WVFS6	11.46					
WVFS7	11.46					
WVFS8	11.46					
WVF5FT	10.46					
CNLSC	6.00		CNT-Probe_B (275) 6 bow centralizer	2.88	2.75	40.00
CNSSC	5.17					
CCL	3.64					
GR	0.90		GR-Probe (275) Probe 2.75"	4.33	2.75	30.00
Dataset: mossberg j 30-23.db: field/well/run1/pass3 Total Length: 17.13 ft Total Weight: 165.00 lb O.D. 2.75 in						

-9	CCL	1	200	TT (usec)	1100	0	AMP (mV)	100	0	AMPS1	100	200	VDL	1200	1	Cement Map	8
LSPD			0	GR (GAPI)	200	0	AMPx5 (mV)	20	0	AMPS2	100				100		1
(ft/min)			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)							

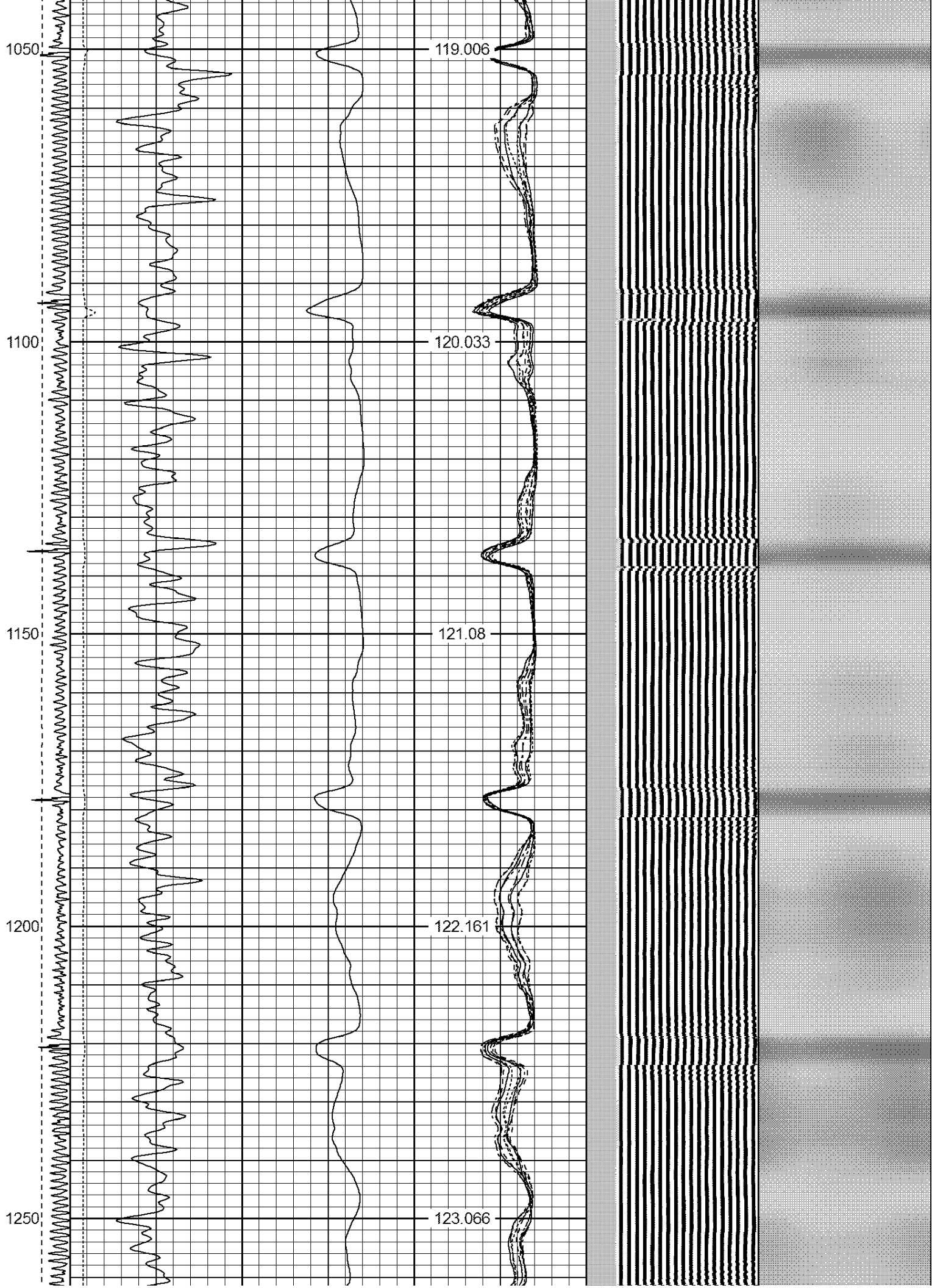


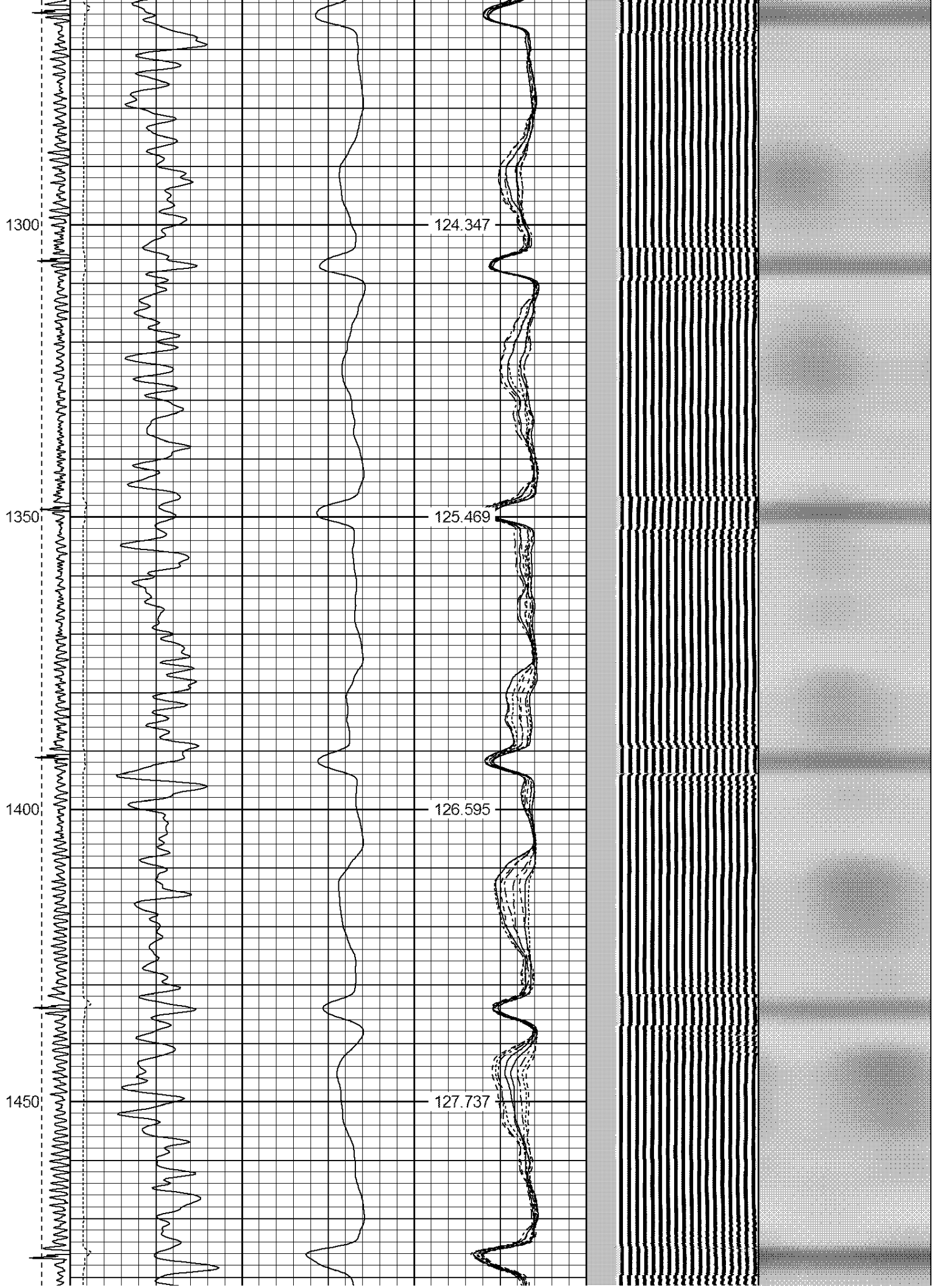












1500

128.751

1550

130.083

1600

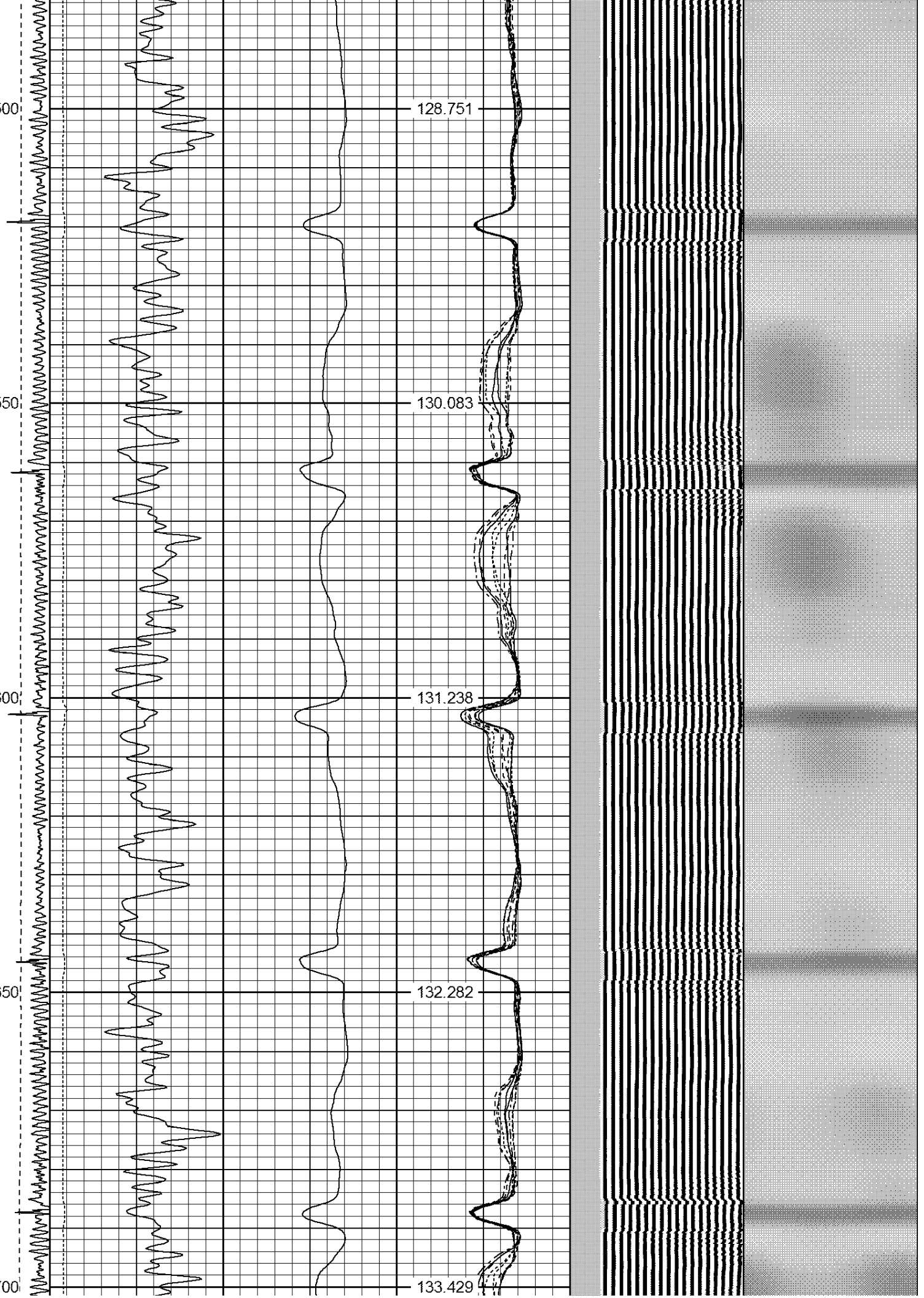
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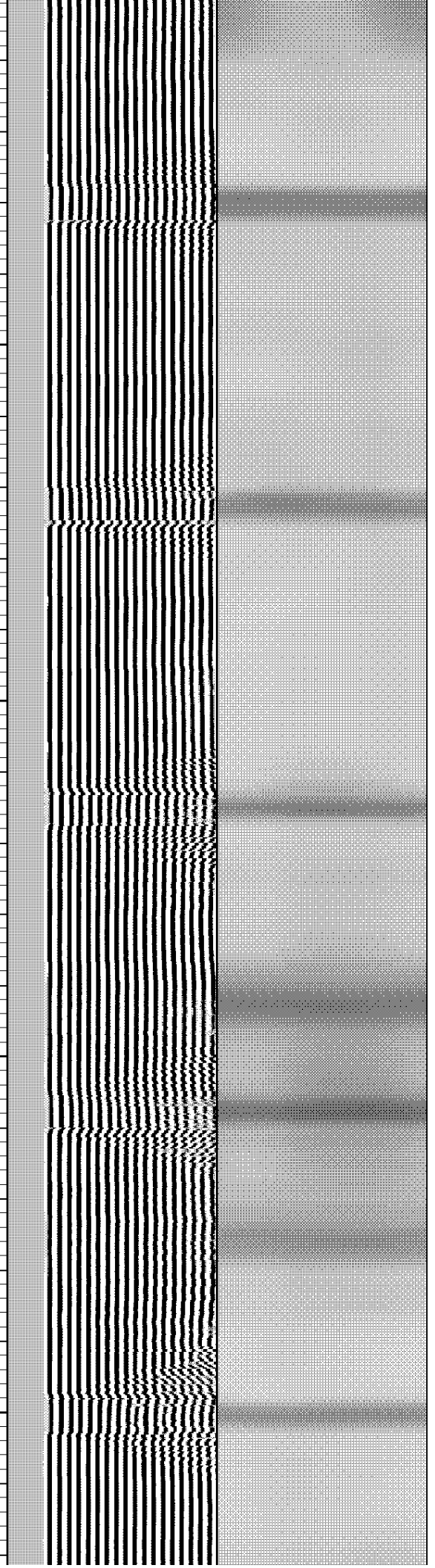
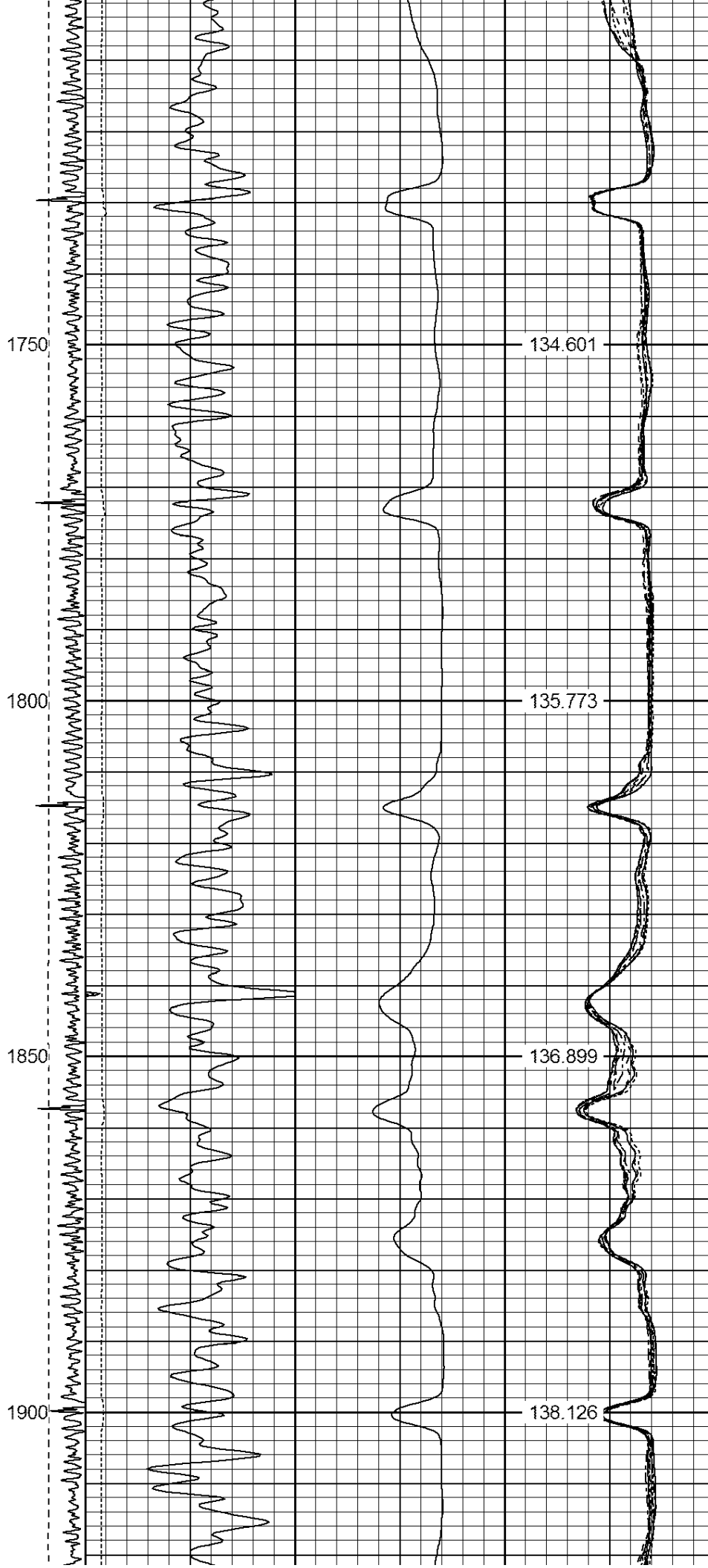
1650

132.282

1700

133.429





1950

Top of Cement:69

2000

140.419

2050

141.567

2100

142.675



2150

143.818

2200

144.943

2250

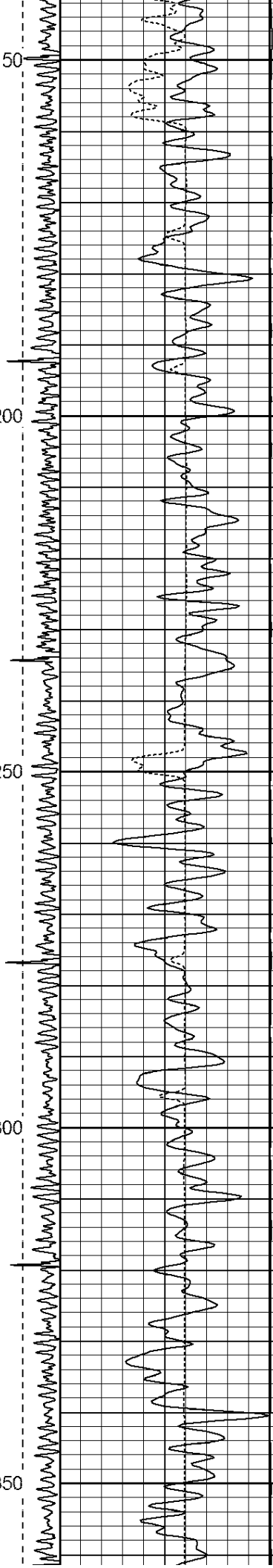
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2300

147.244

2350

148.27



2400

149.309

2450

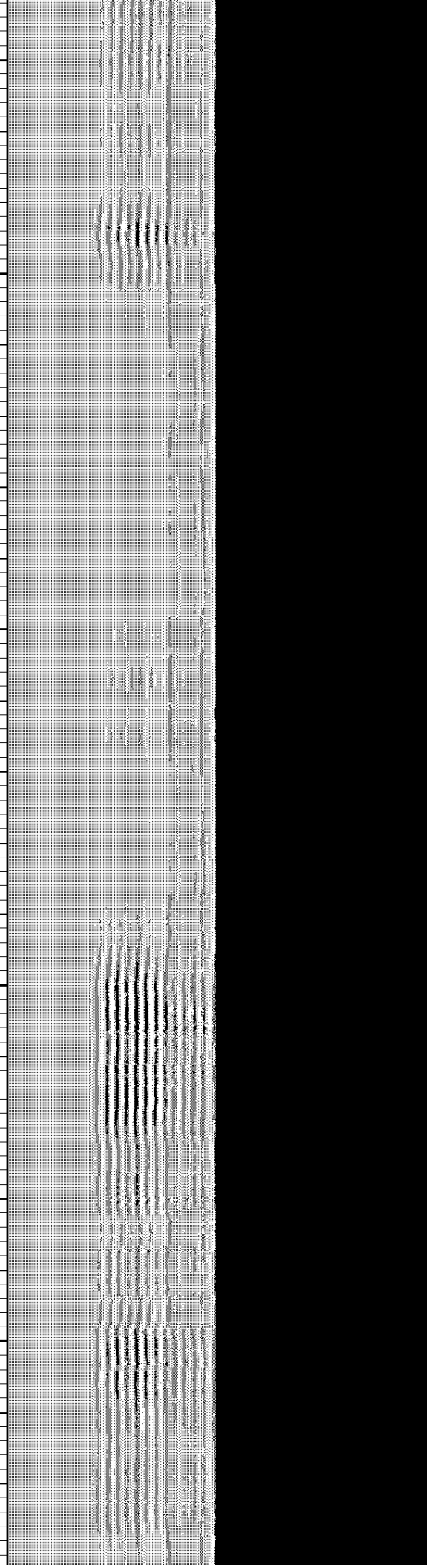
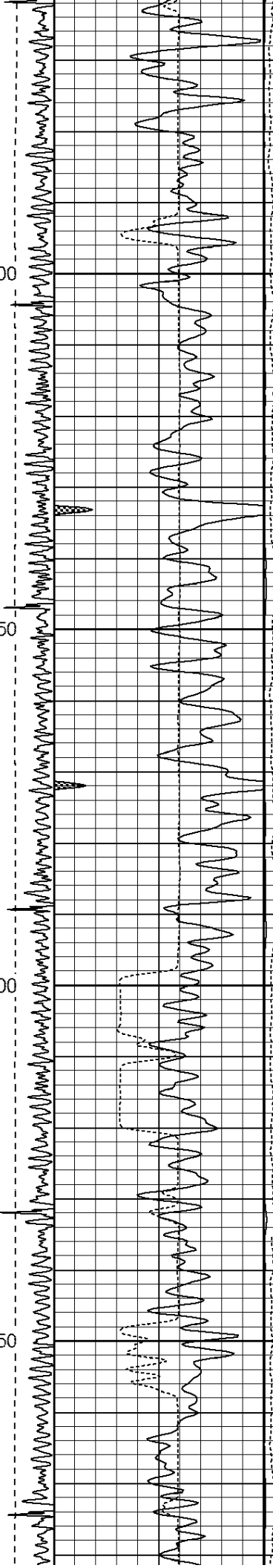
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2500

151.596

2550

152.572



2600

153.701

2650

154.738

2700

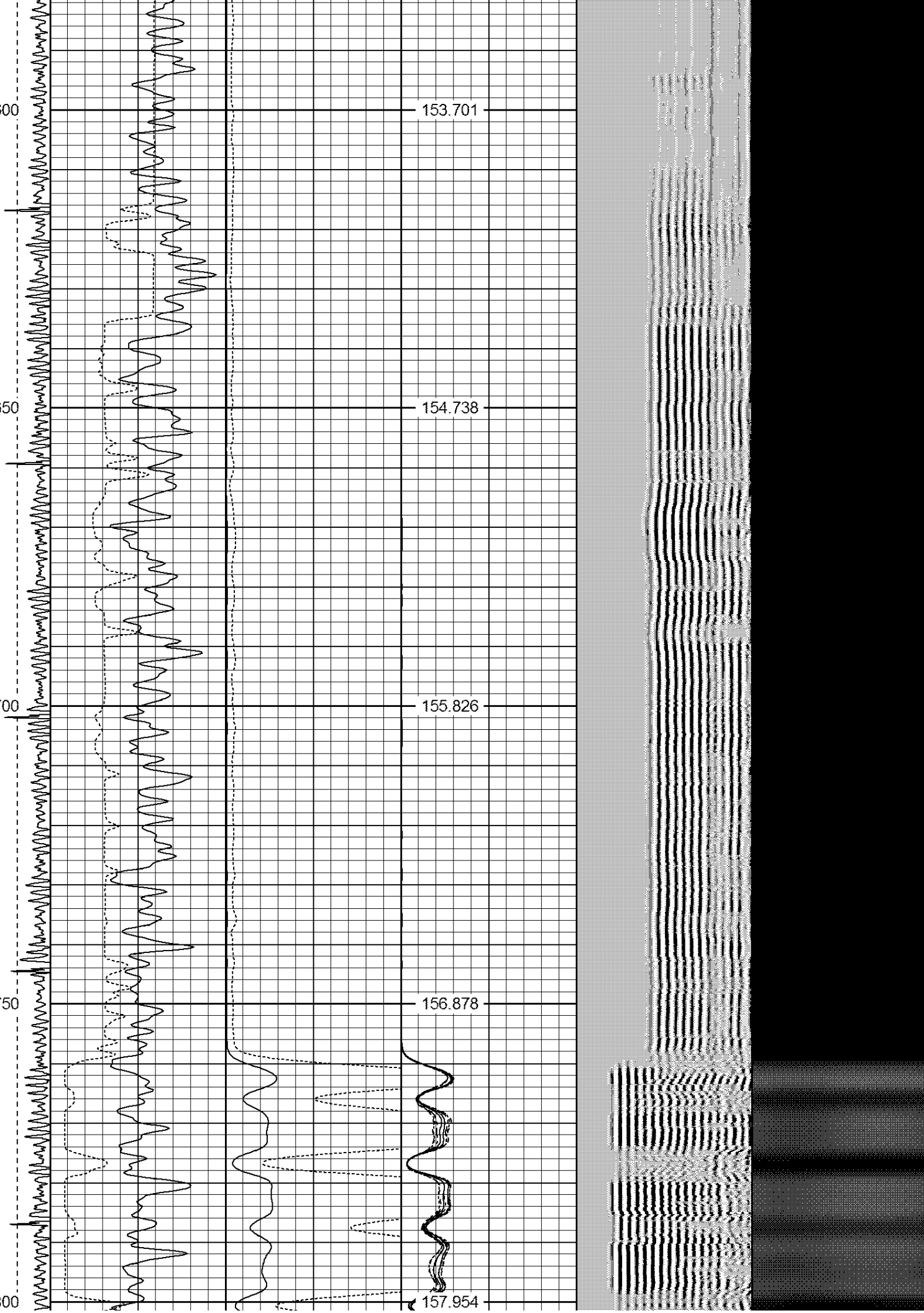
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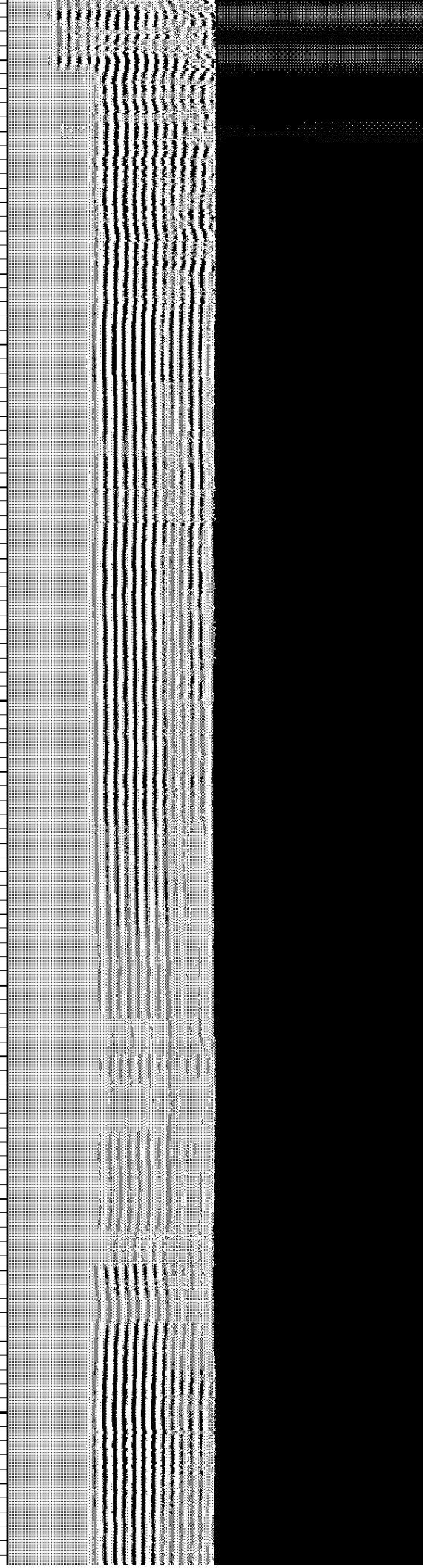
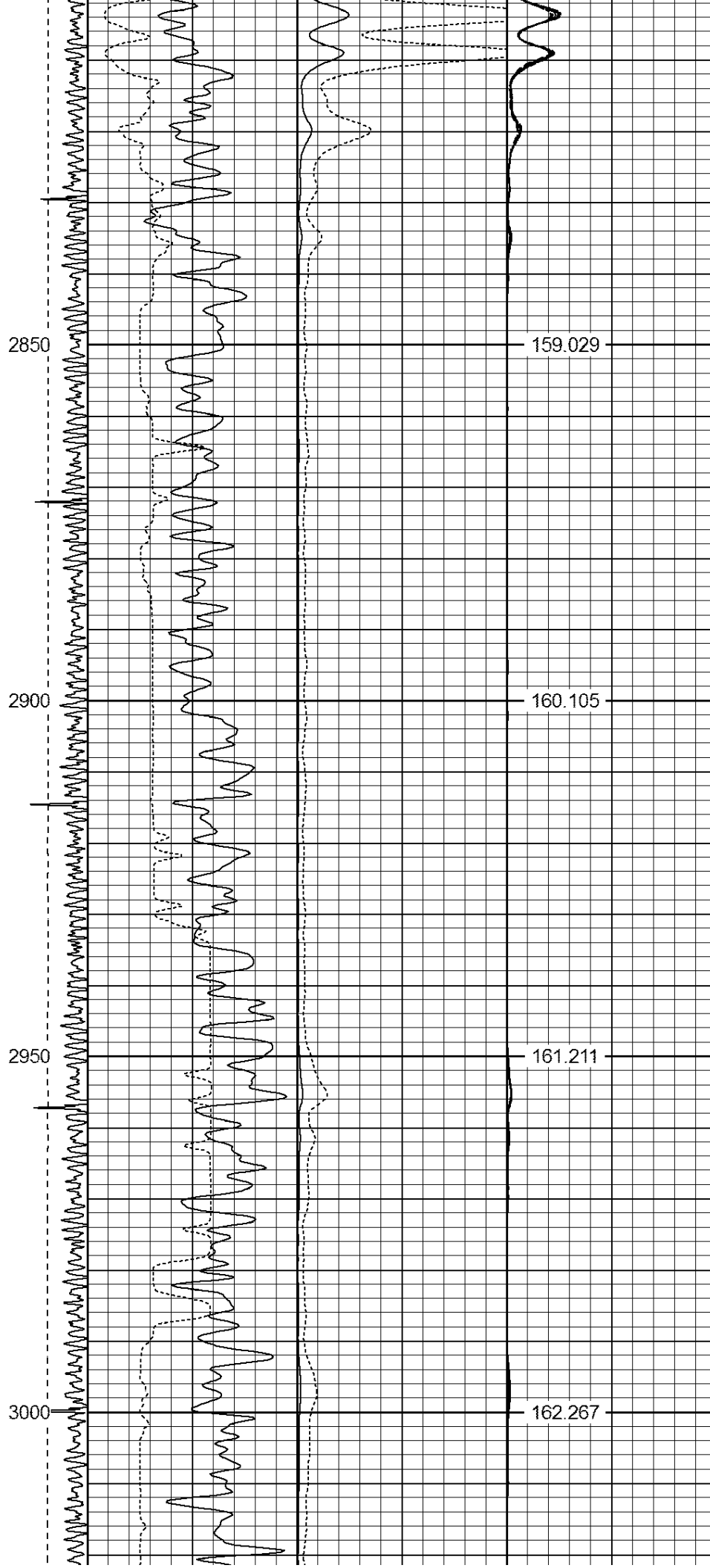
2750

156.878

2800

157.954





3050

163.278

3100

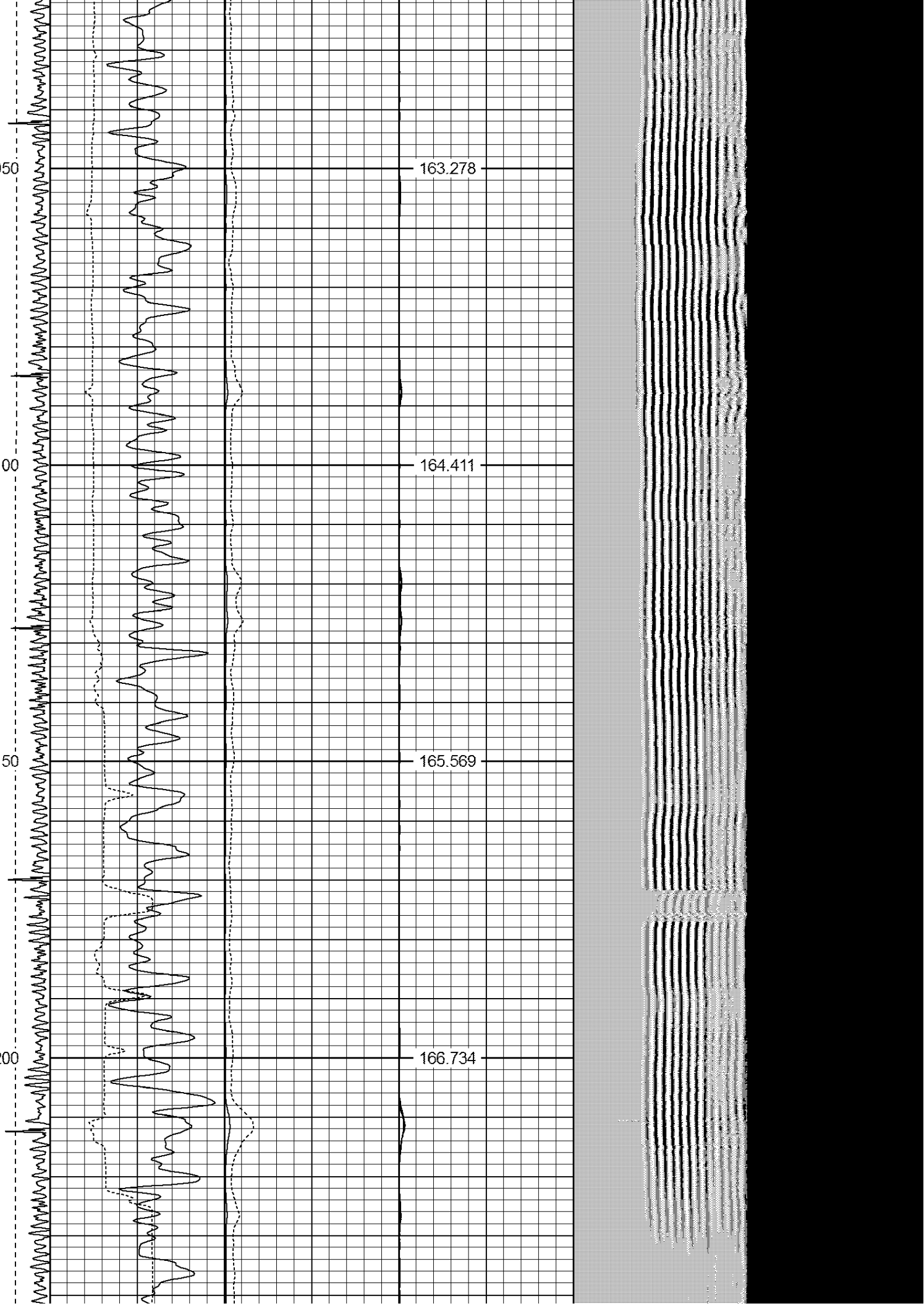
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3150

165.569

3200

166.734



3250

167.719

3300

168.845

3350

169.998

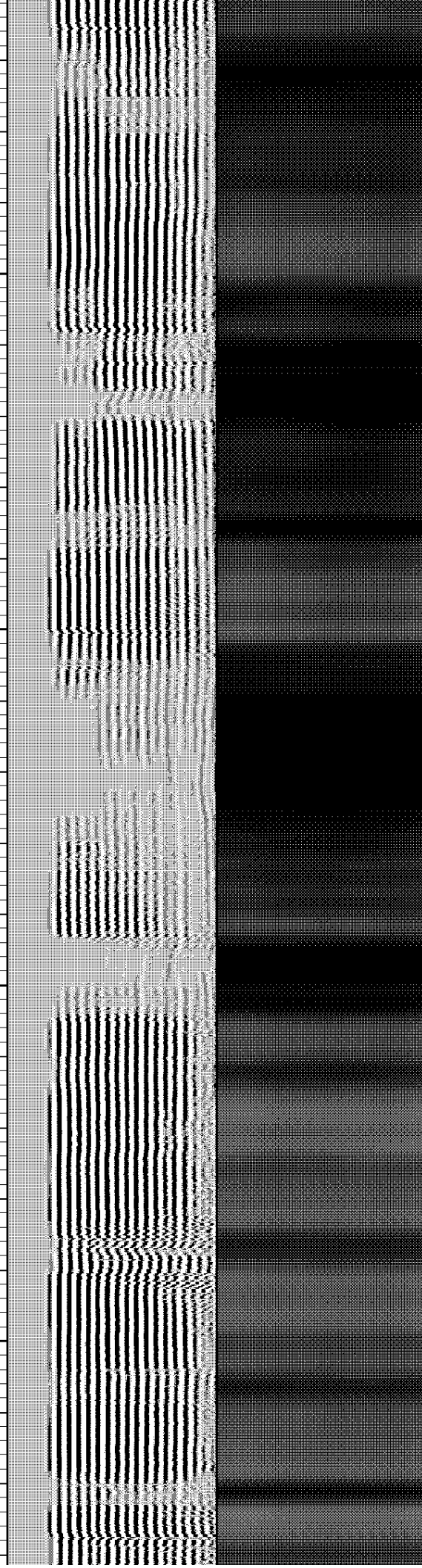
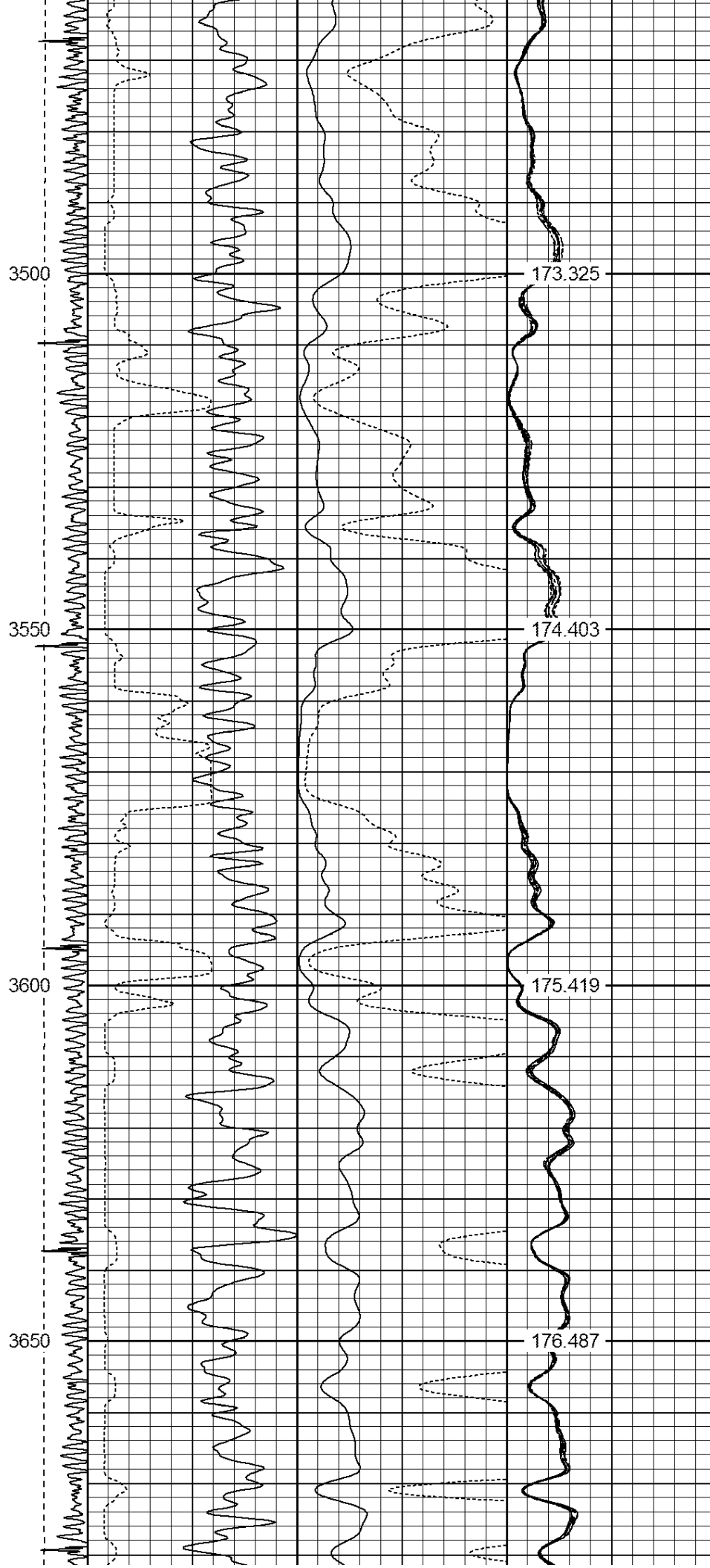
3400

171.108

3450

172.146





3700

177.609

3750

178.46

3800

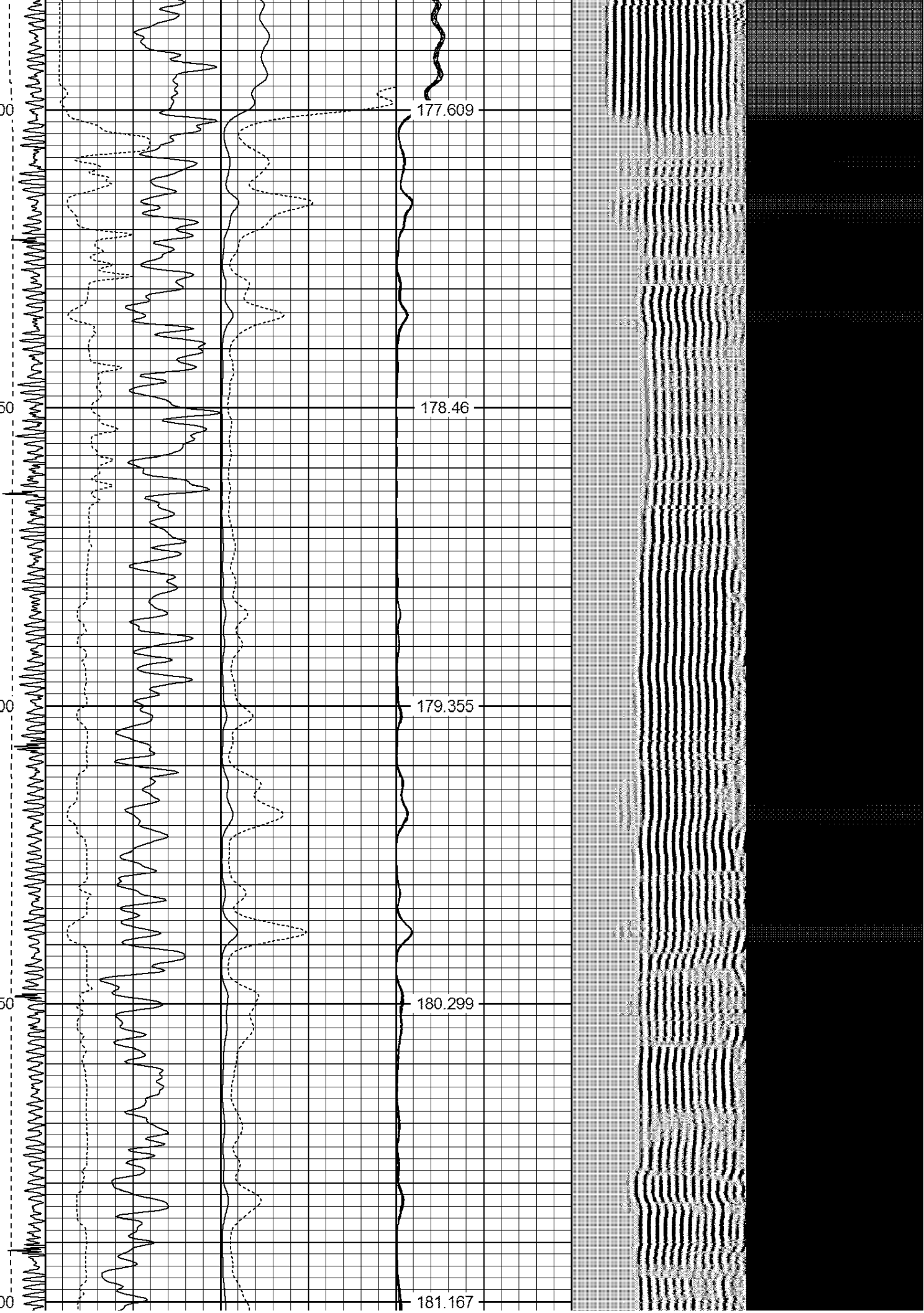
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3850

180.299

3900

181.167





4150

186.024

4200

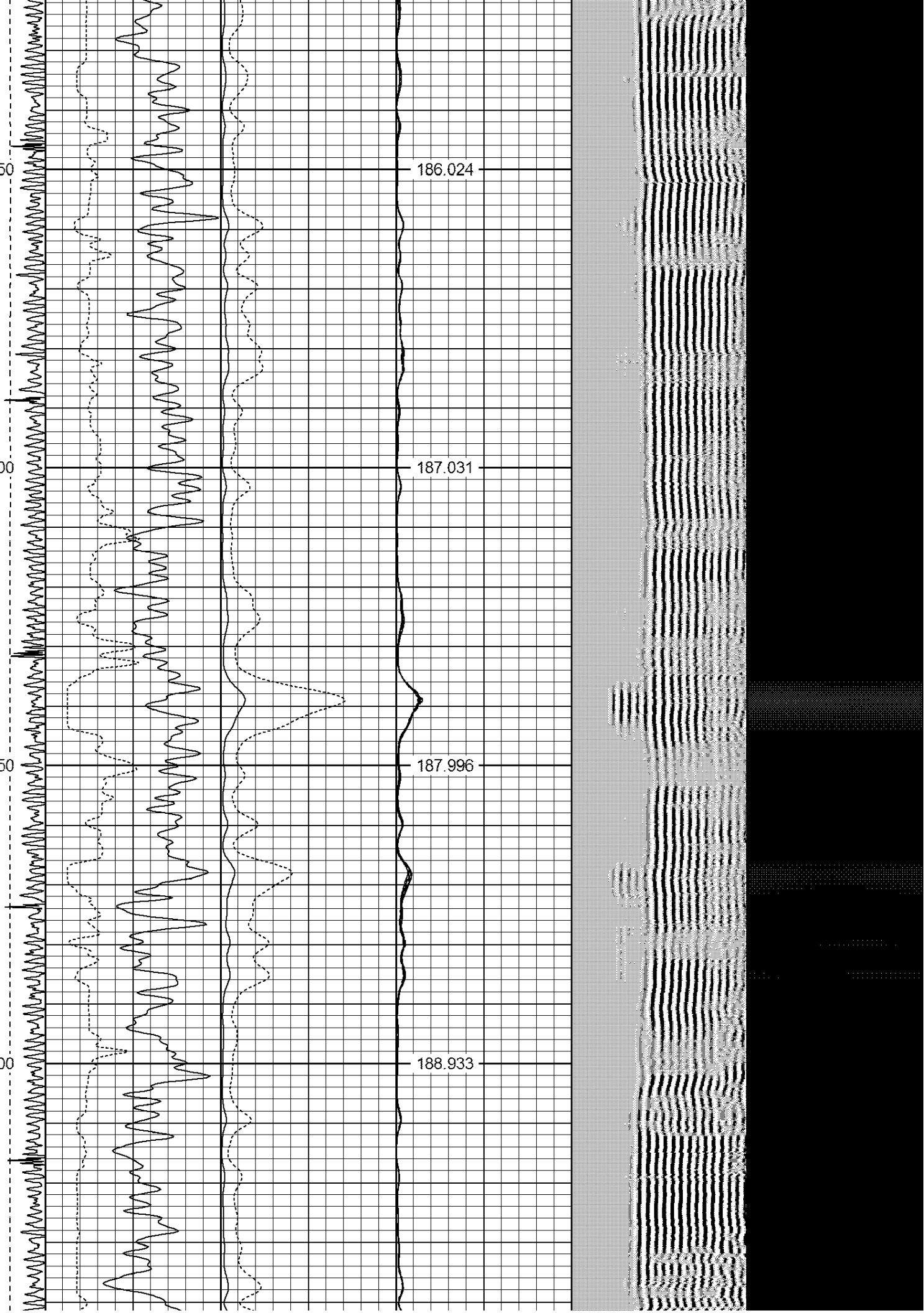
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187.996

4300

188.933



4350

189.903

4400

190.85

4450

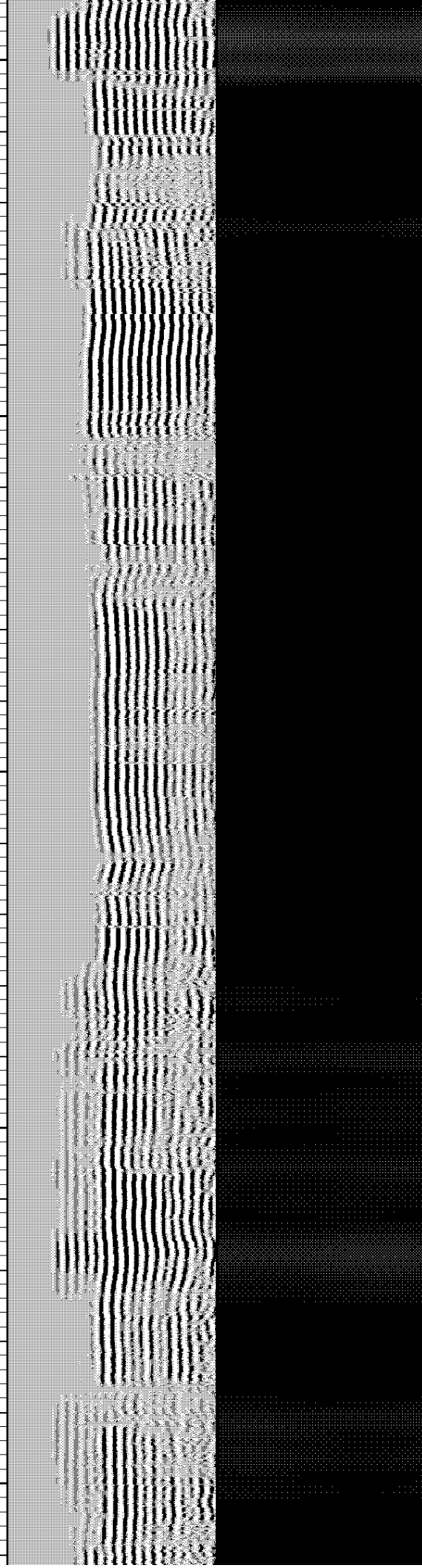
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4500

192.528

4550

193.375



4600

194.388

4650

195.23

4700

196.117

4750

196.912



4800

197.882

4850

198.692

4900

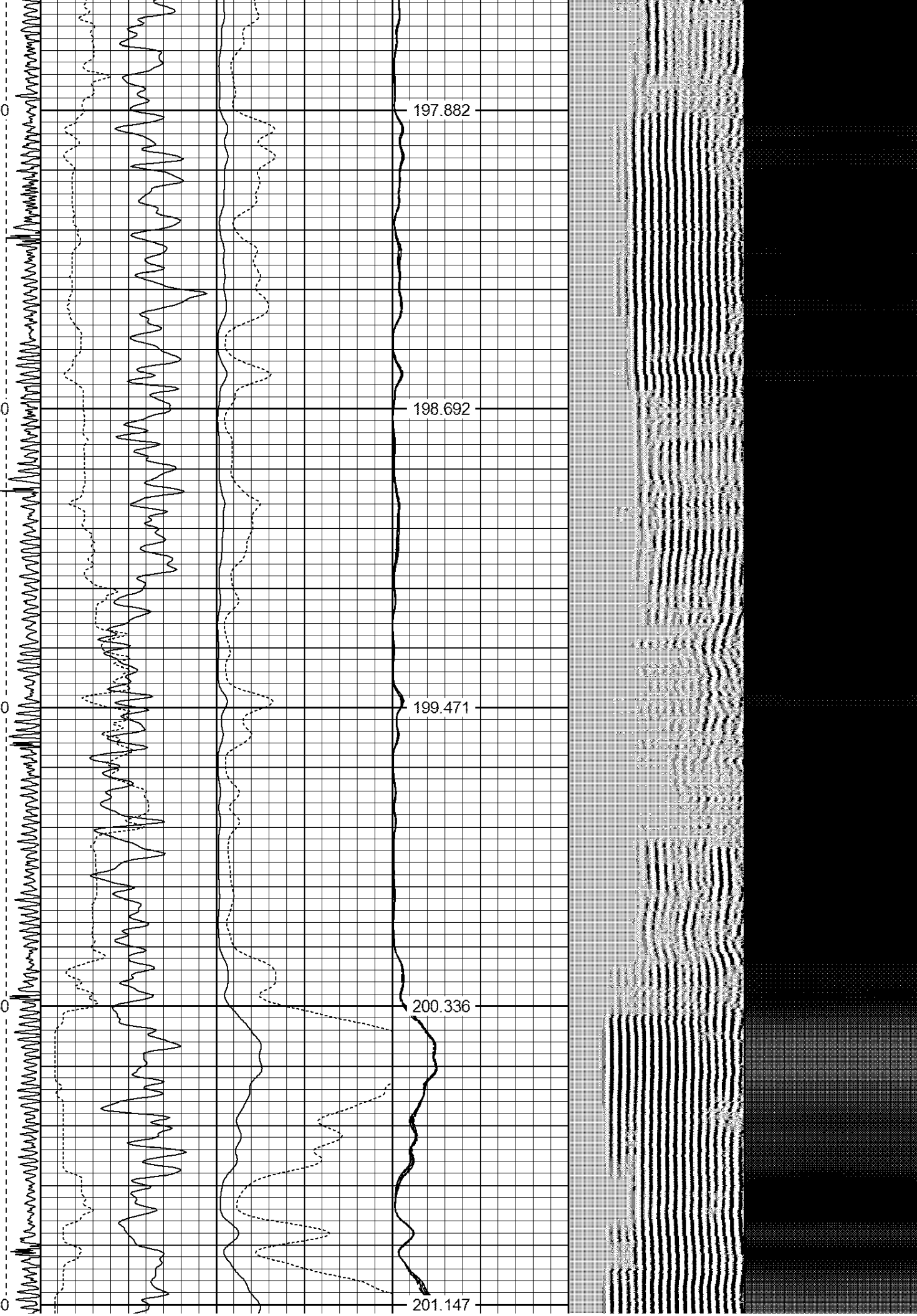
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4950

200.336

5000

201.147



5050

201.96

5100

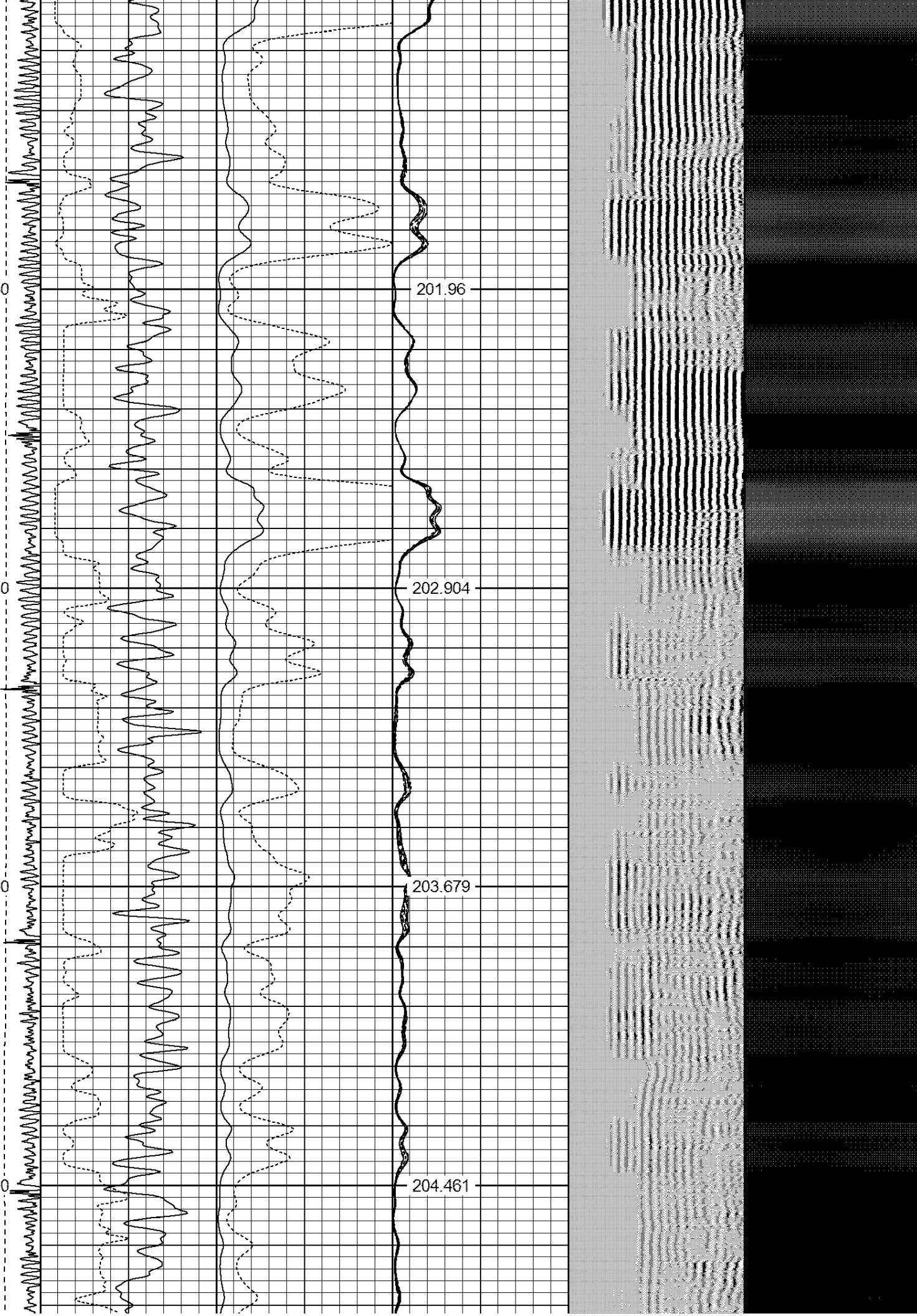
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5150

203.679

5200

204.461



5250

205.354

5300

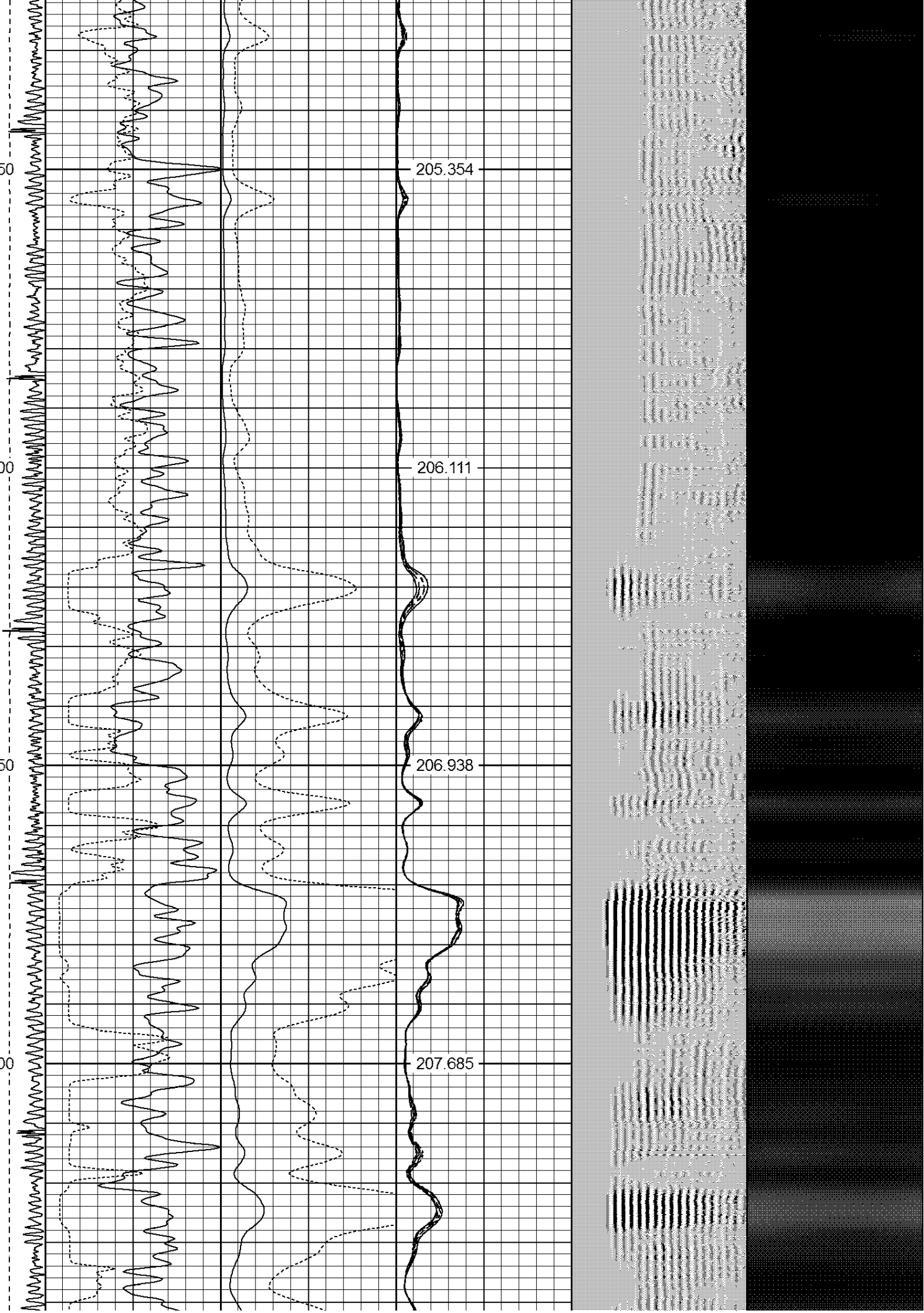
206.111

5350

206.938

5400

207.685



5450

208.479

5500

209.227

5550

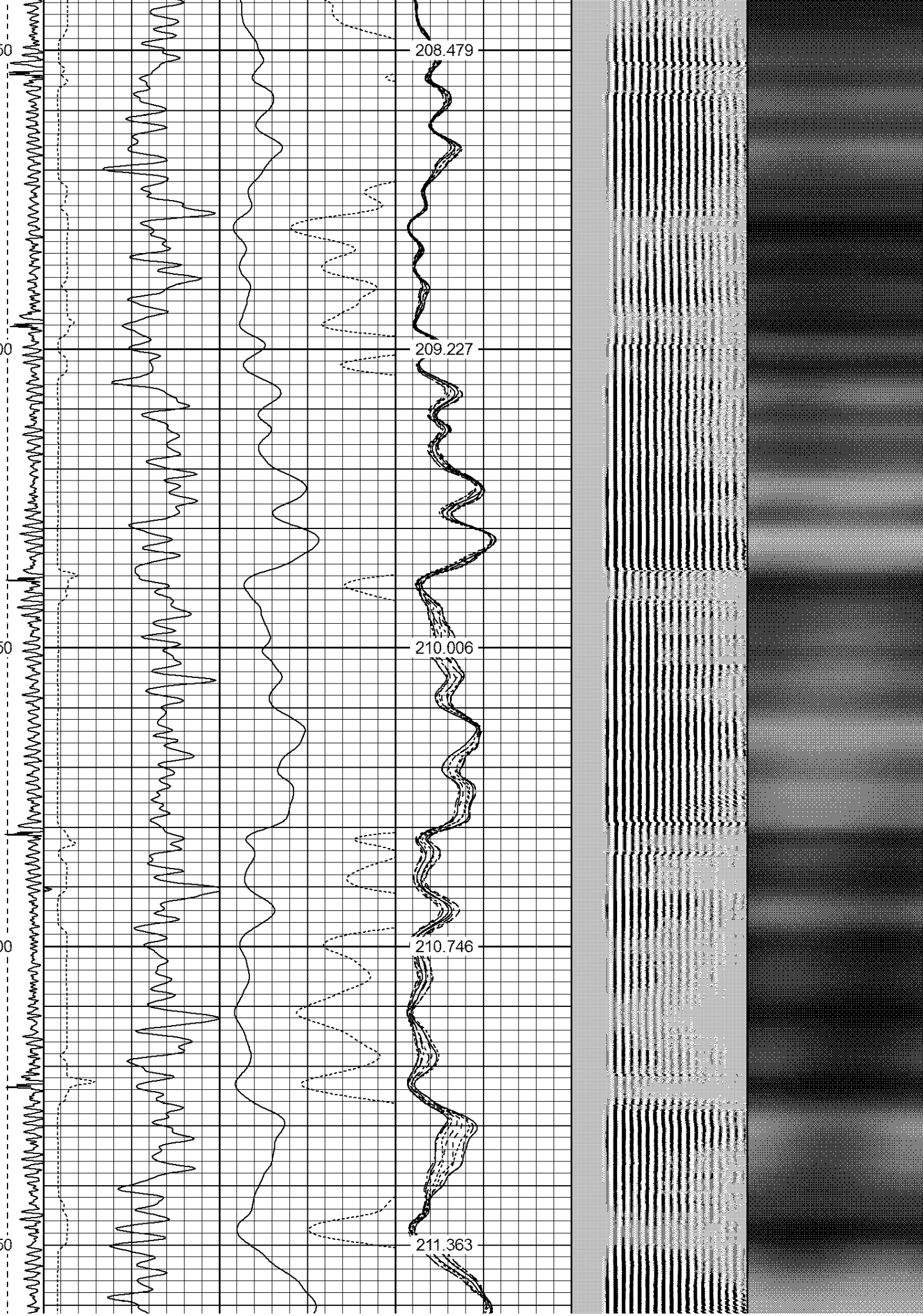
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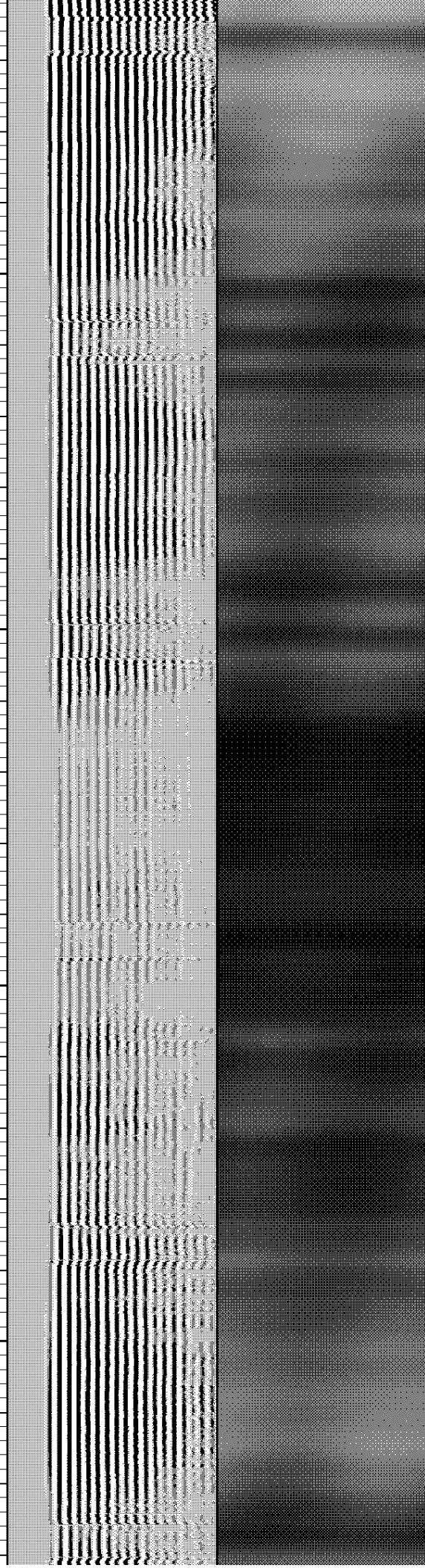
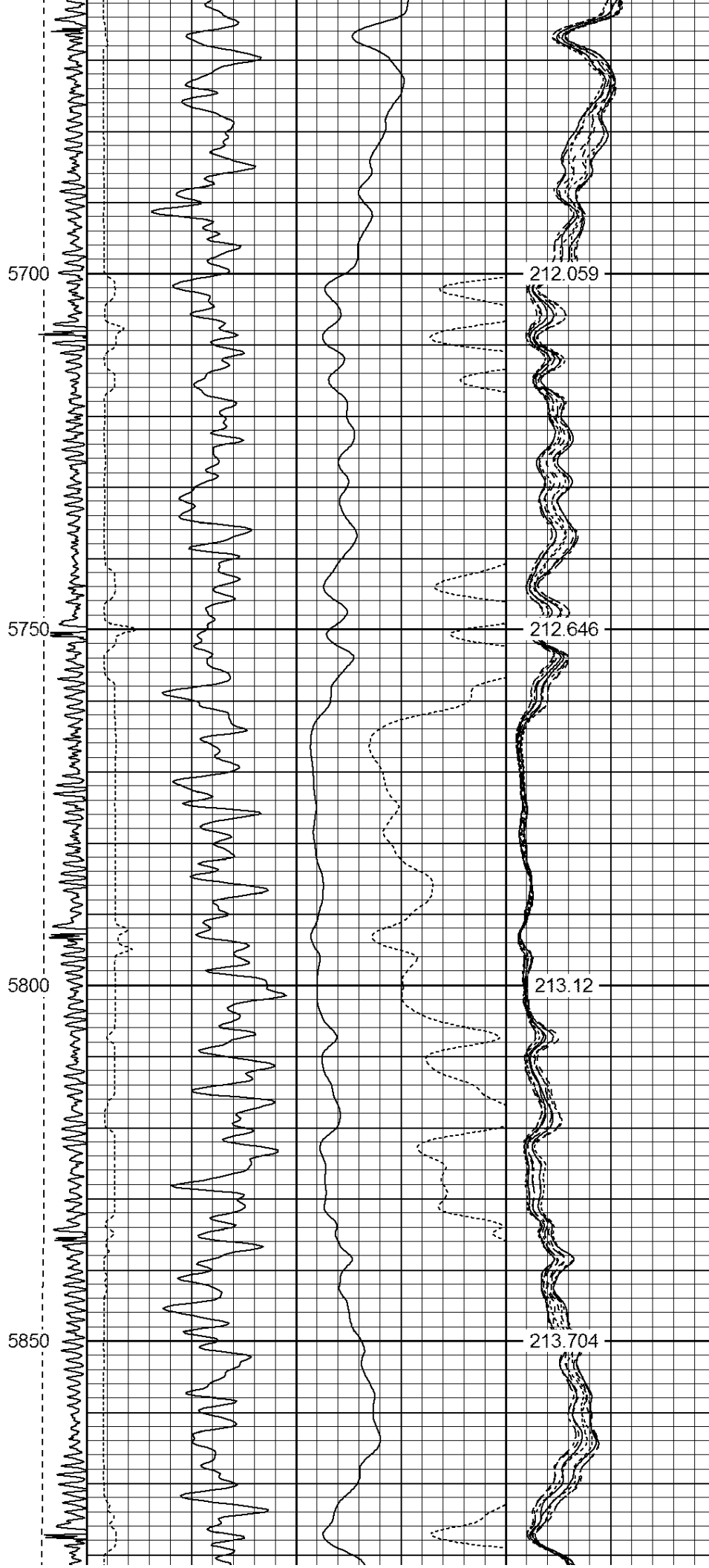
5600

210.746

5650

211.363





5900

214.25

5950

214.644

6000

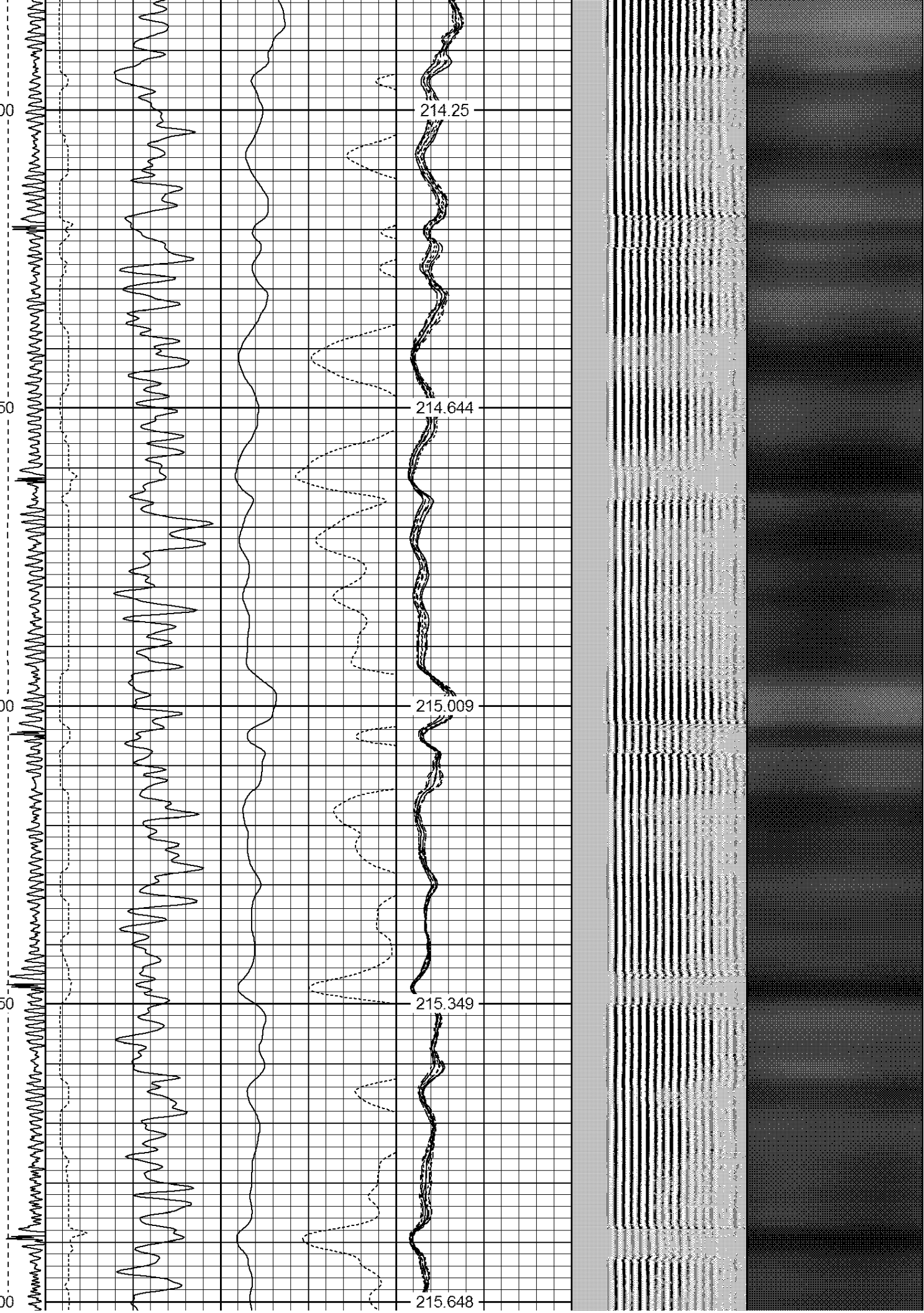
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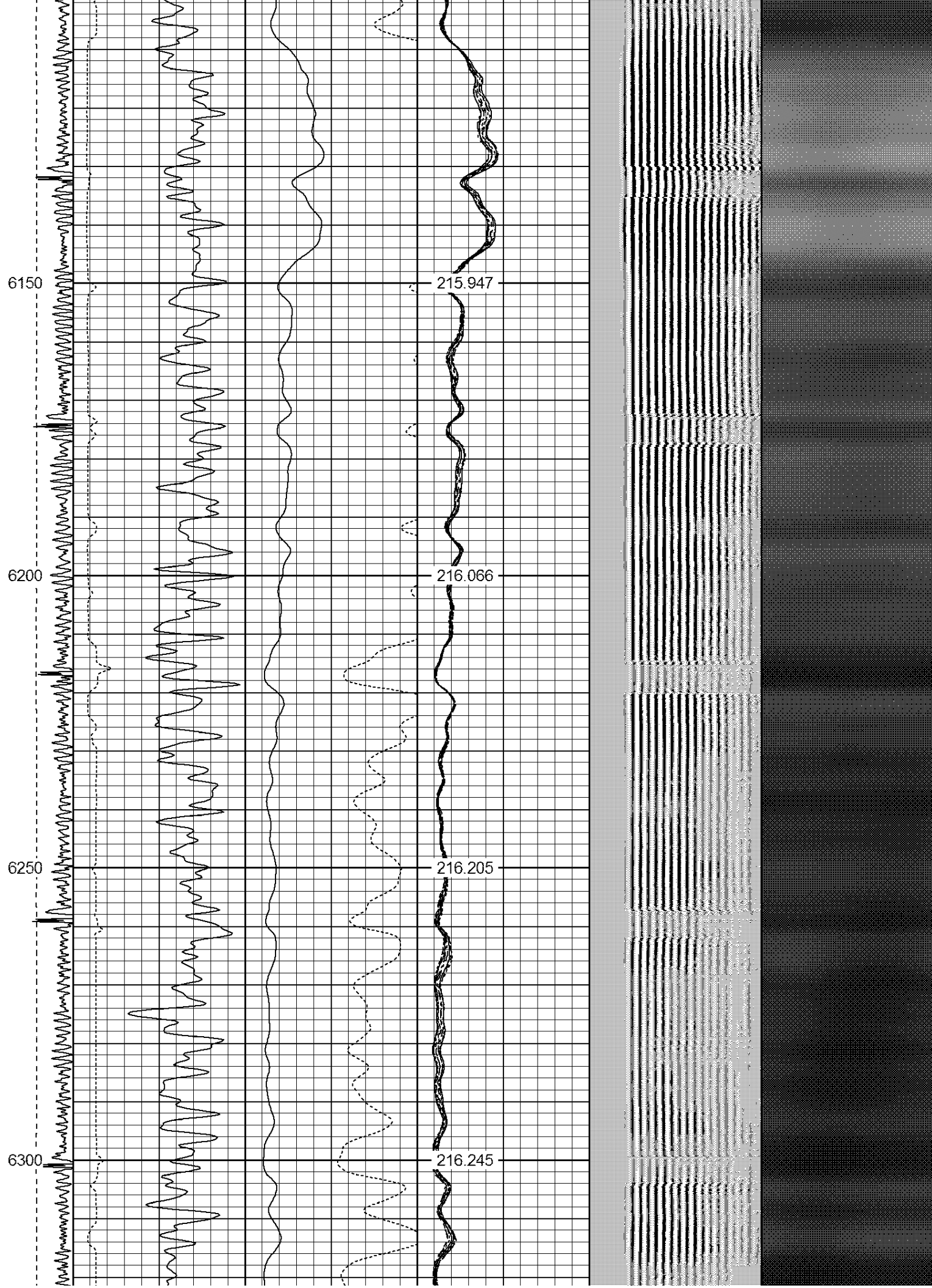
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215.349

6100

215.648





6350

216.153

6400

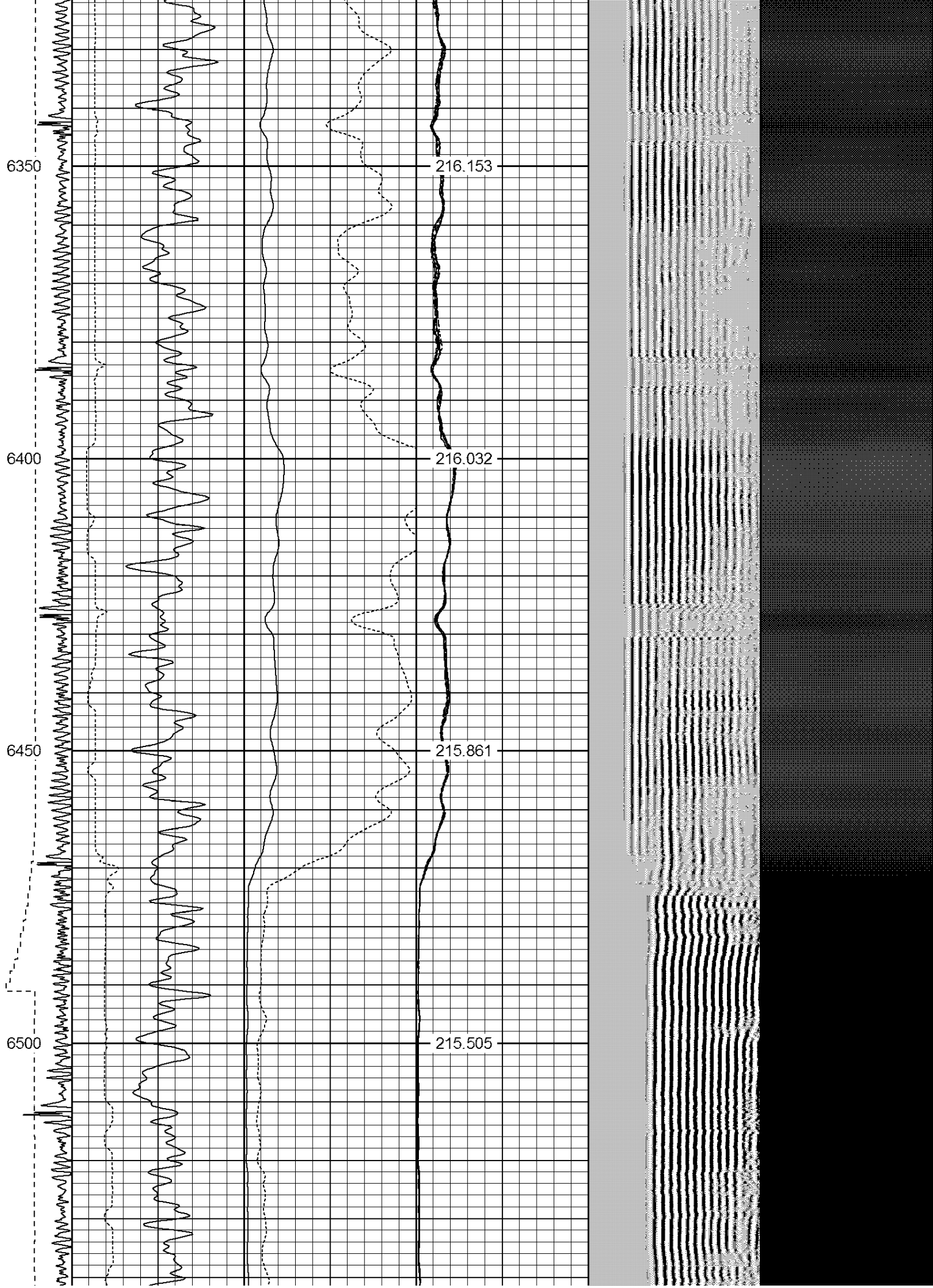
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6450

215.861

6500

215.505



6550

215.184

6600

214.836

6650

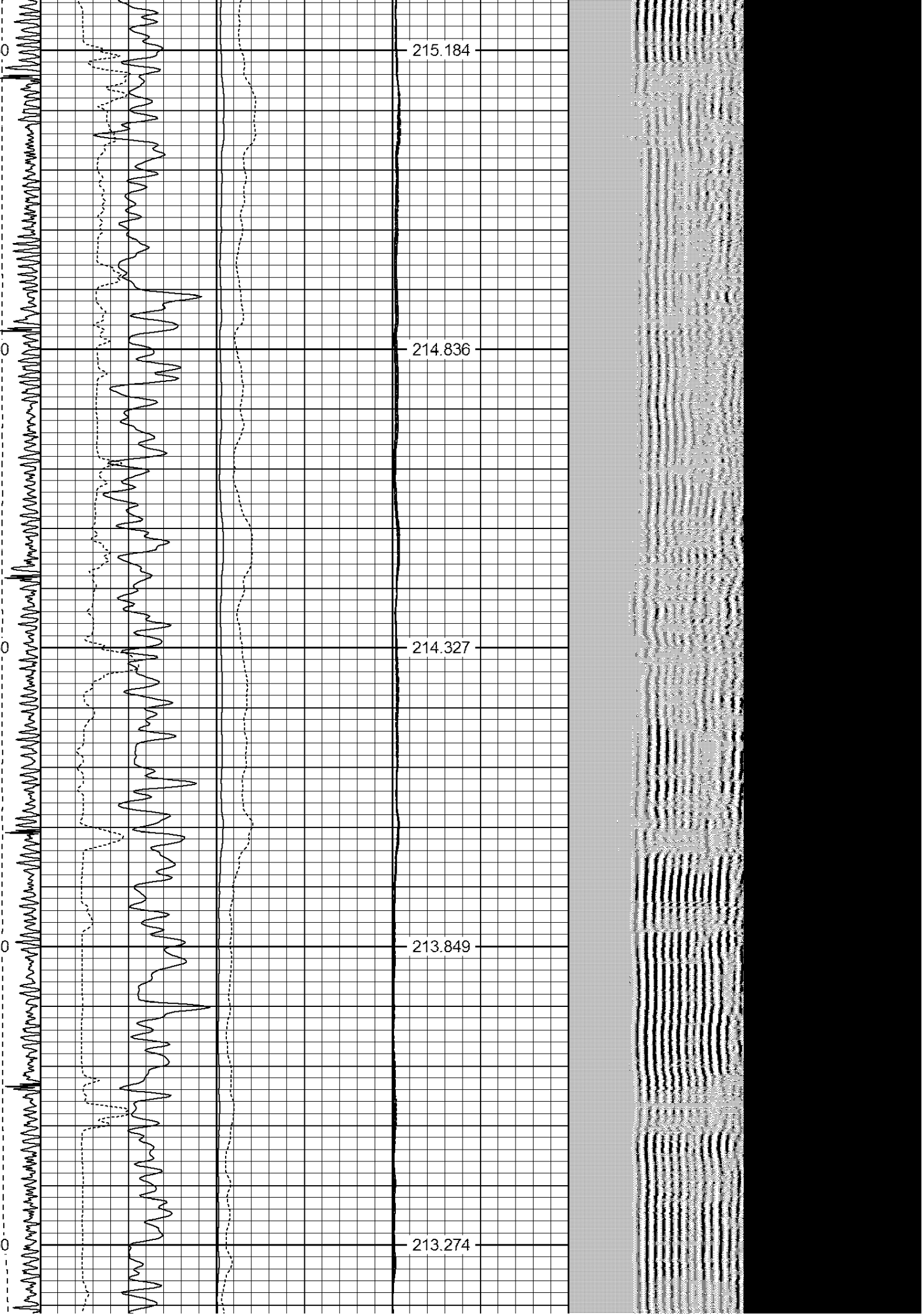
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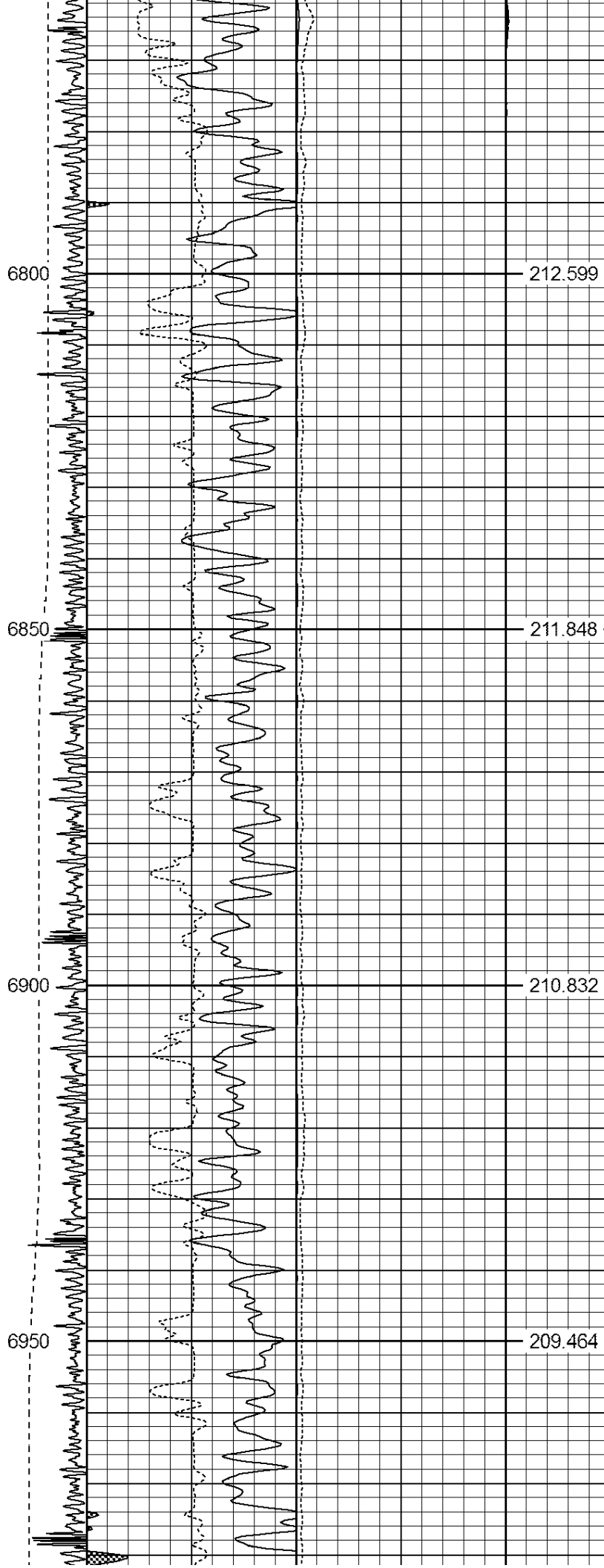
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213.849

6750

213.274





7000

207.816

7050

206.067

7100

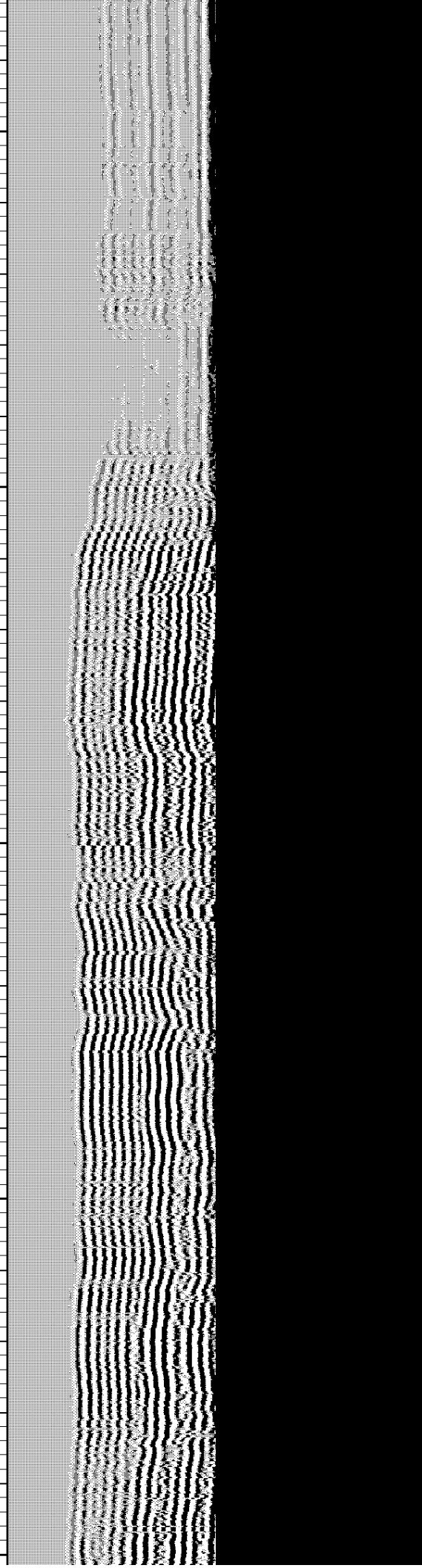
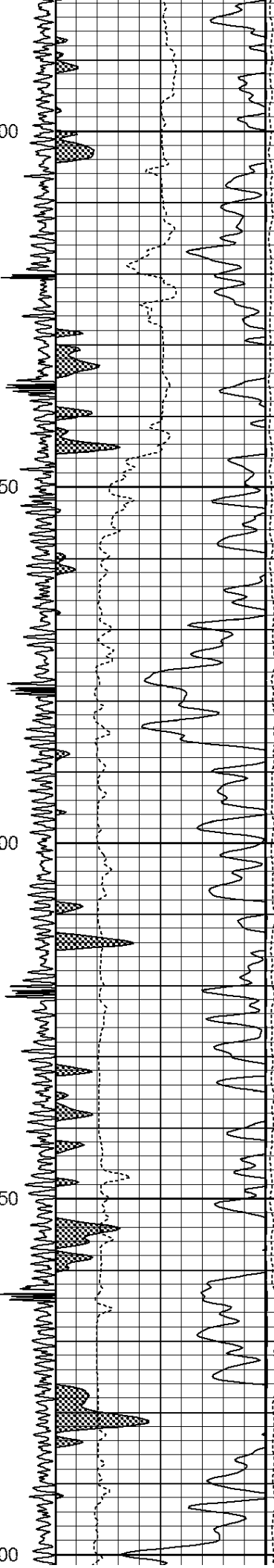
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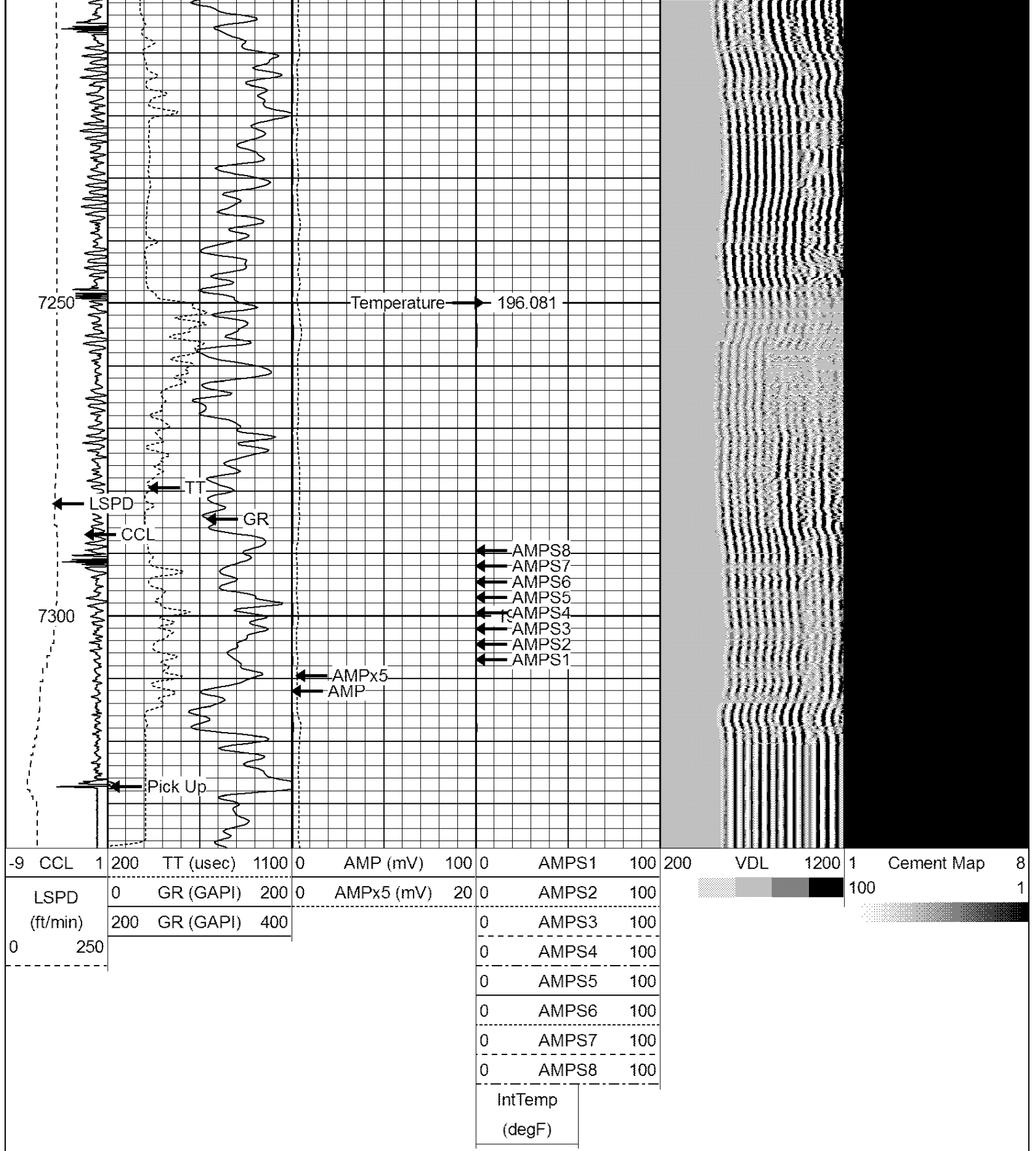
7150

201.677

7200

199.023





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

Company NOBLE ENERGY INC.

Well MOSSBERG J 30-23

Field WATTENBERG

County WELD

State CO