

RADIAL CEMENT BOND
GAMMA RAY
CCL

Company ANADARKO PETROLEUM CORPORATION		Company ANADARKO PETROLEUM CORPORATION	
Well HENDERSON 41-04		Well HENDERSON 41-04	
Field WATTENBERG		Field WATTENBERG	
County WELD		County WELD	
State CO		State CO	
Location: API # : 05-123-07402 NE/NE LAT: 40.34590 & LONG: -104.89060		Other Services	
SEC 4 TWP 4N RGE 67W		Elevation	
Permanent Datum GL KB 10'		KB. 4782'	
Log Measured From KB		D.F. 4781'	
Drilling Measured From KB		G.L. 4772'	
Date 2-18-2016	Run Number ONE		
Depth Driller 7485'	Depth Logger 6205'		
Bottom Logged Interval 6196'	SURFACE		
Top Log Interval 7.875	WATER		
Open Hole Size 10			
Type Fluid 181 DEG F			
Density / Viscosity 3222' & 37'			
Max. Recorded Temp. N/A			
Estimated Cement Top N/A			
Time Well Ready N/A			
Time Logger on Bottom 4310			
Equipment Number GREELEY			
Location N BREHMER			
Recorded By B. SMITH			
Witnessed By			
Borehole Record		Tubing Record	
Run Number	Bit From To	Size	Weight From To
Casing Record	Size	Wgt/Ft	Top Bottom
Surface String	8.63	24#	SURFACE 205'
Prot. String			
Production String	4.5	11.6#	SURFACE 7484'
Liner			

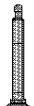
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on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

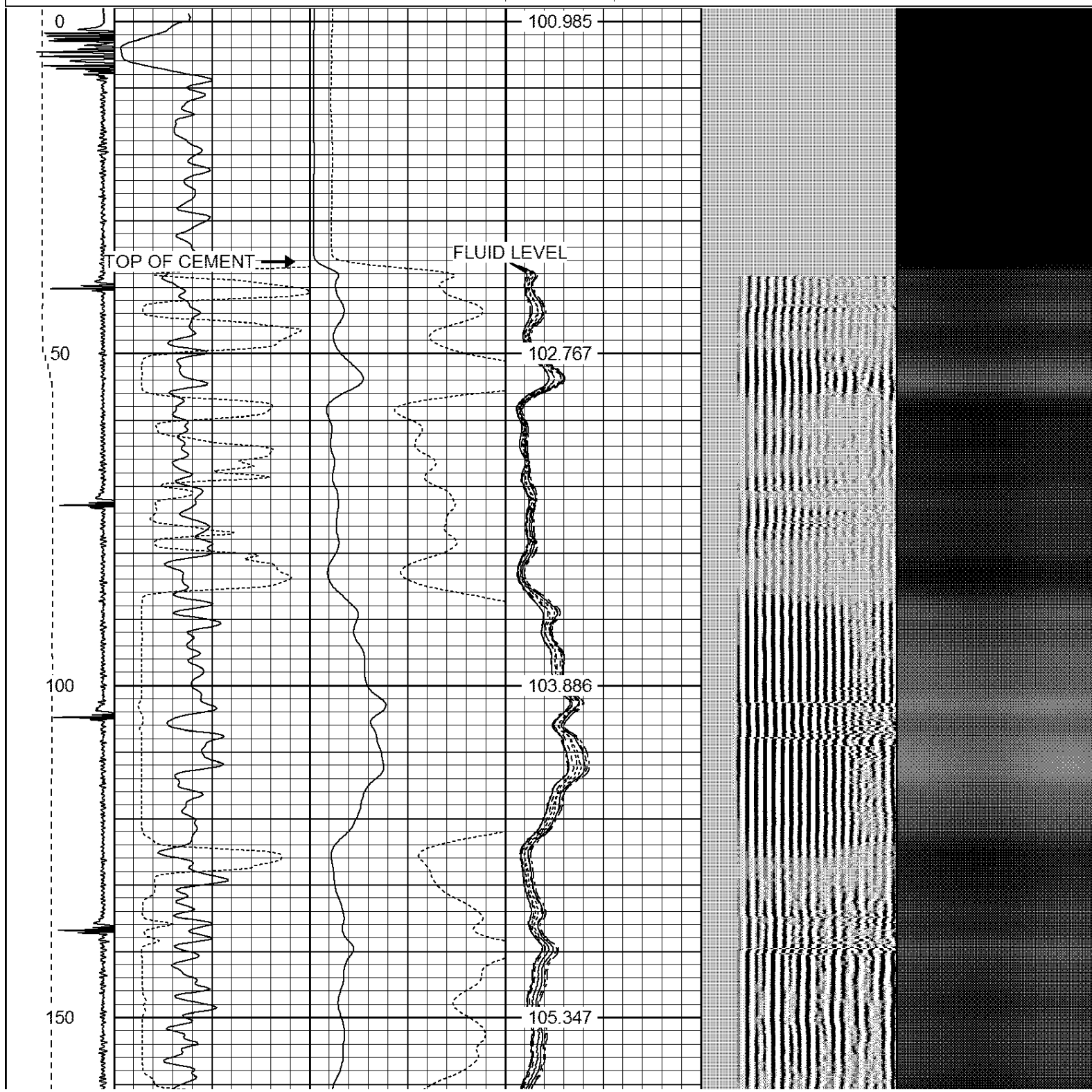
RAN CBL TO VERIFY CEMENT BOND
HOLE WAS LOADED THE NIGHT BEFORE LOGGING
RAN LOG OFF KB DEPTH 10'
CALIBRATED FREE PIPE @5810', 81mA IN 4.5"

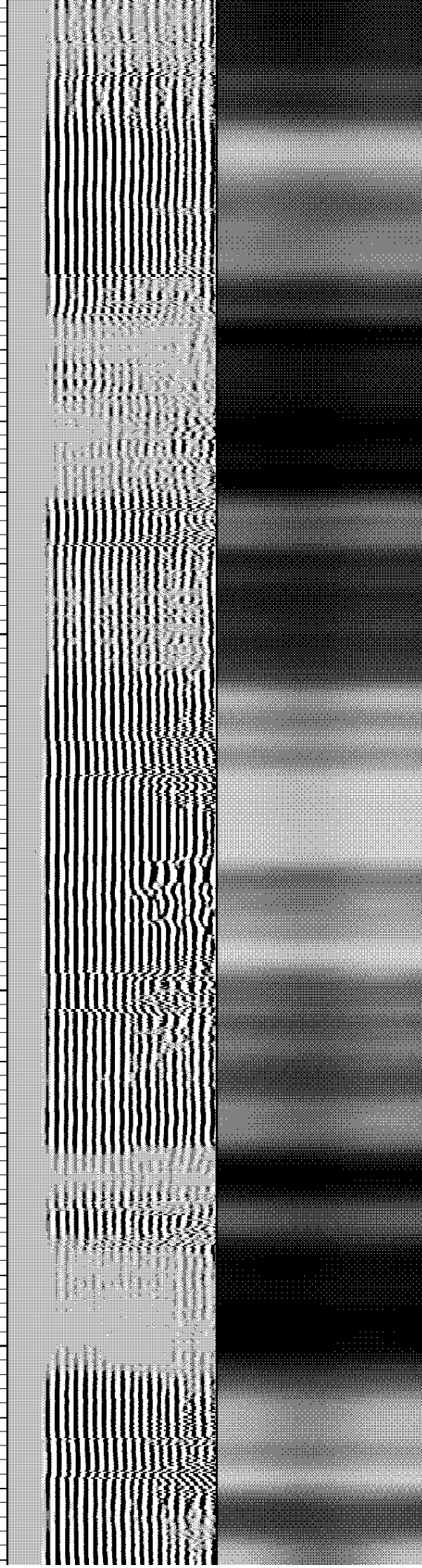
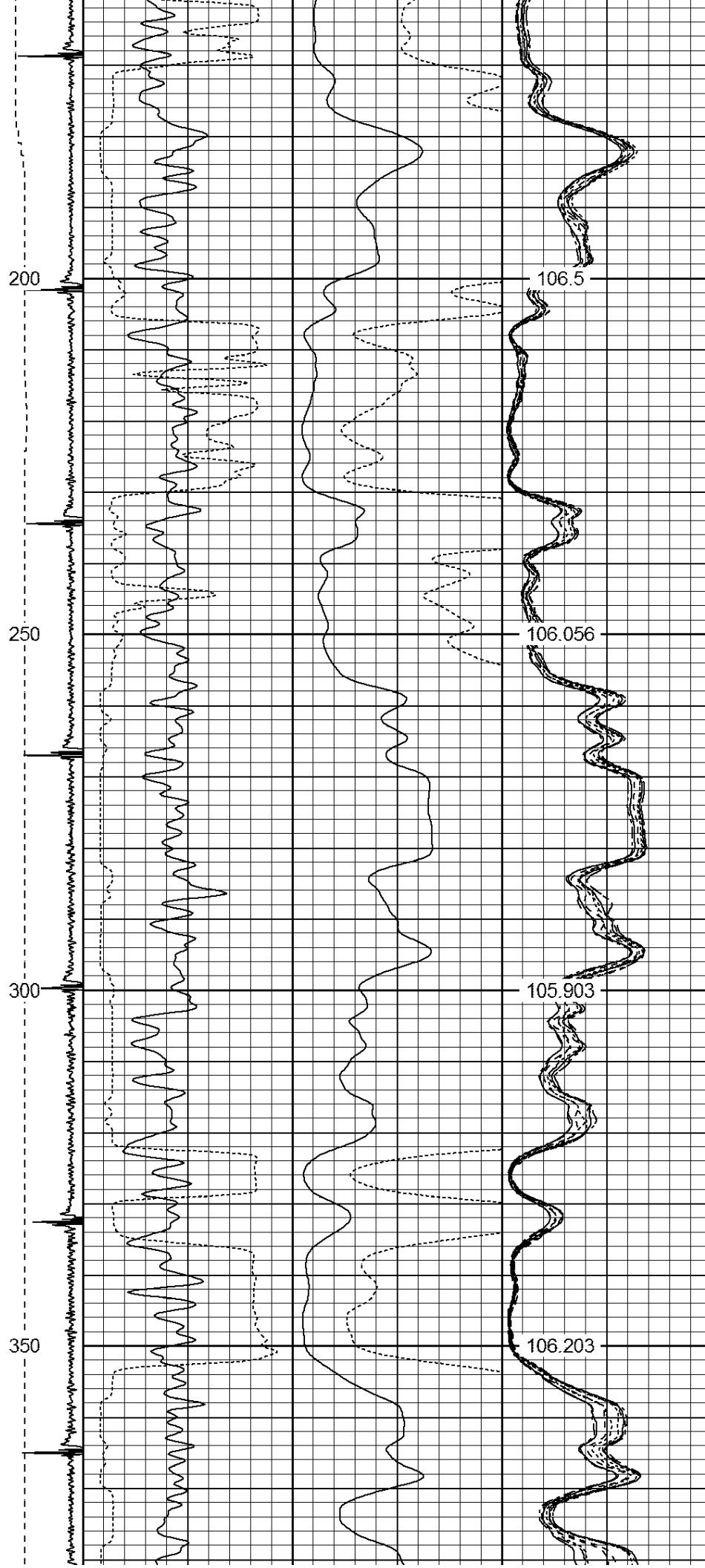
THANK YOU FOR USING IPS !!!!!!!

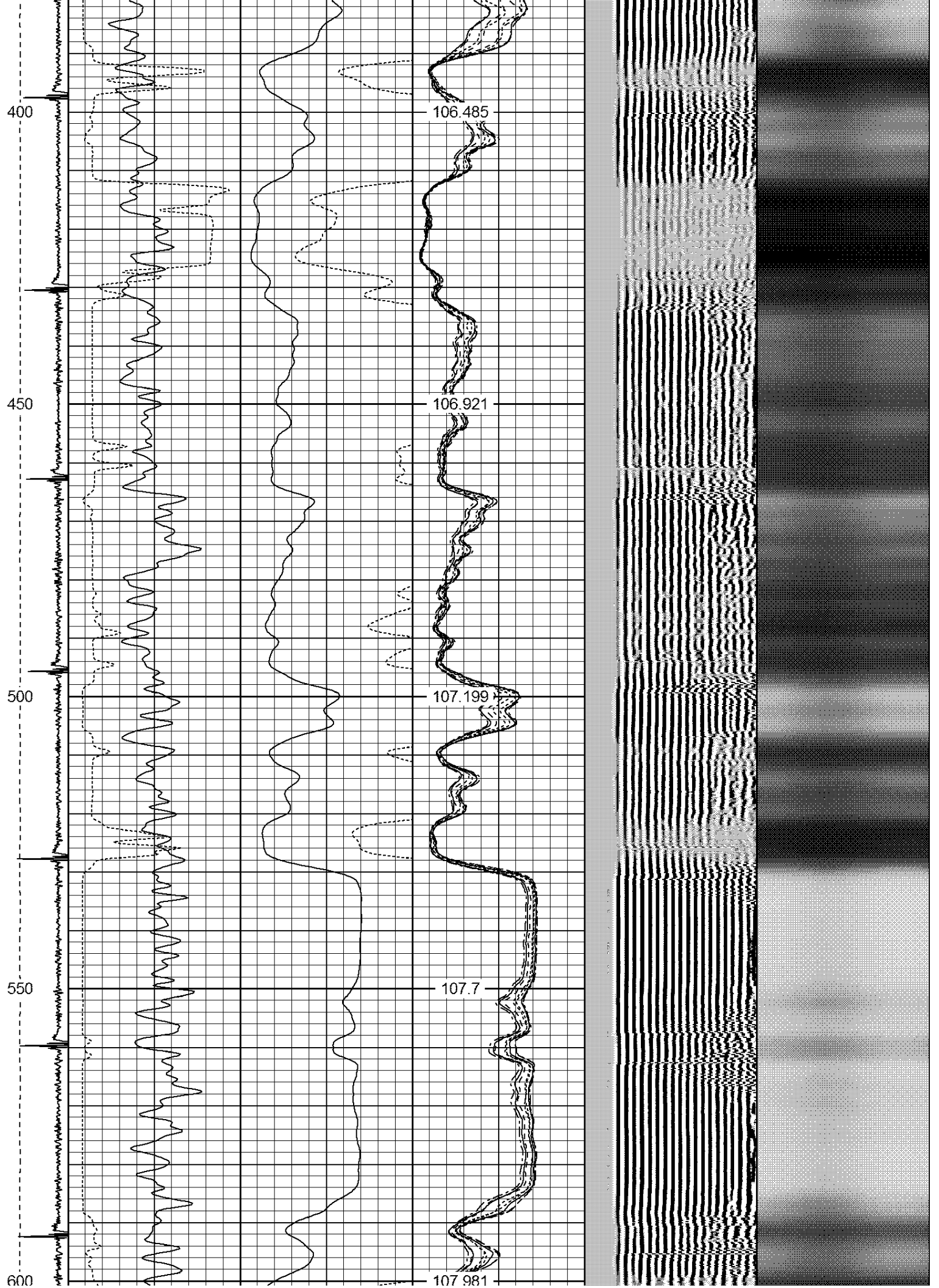
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			1_4	1.00	1.36	5.00

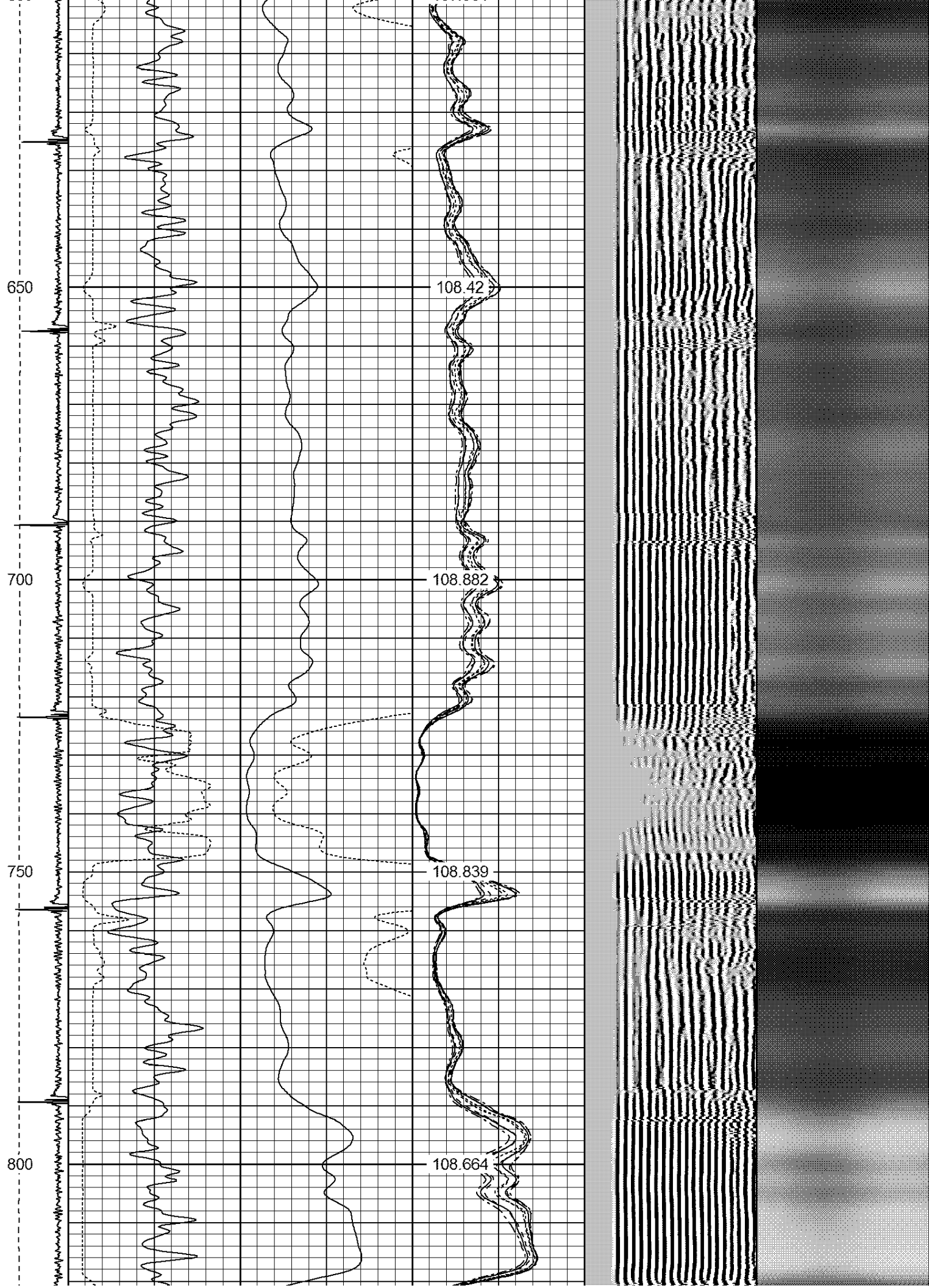
			PTS275	2.83	2.75	
HEADVOLT	16.13					
IntTemp	14.71					
WVF3FT	11.46		RBT-Probe (Base)	8.92	2.75	90.00
WVFCAL	11.46		Probe Radii Bond Tool with Digital Telemetry			
WVFS1	11.46					
WVFS2	11.46					
WVFS3	11.46					
WVFS4	11.46					
WVFS5	11.46					
WVFS6	11.46					
WVFS7	11.46					
WVFS8	11.46					
WVF5FT	10.46					
CNLSC	6.00		CNT-Probe_B (275)	2.88	2.75	40.00
CNSSC	5.17		6 bow centralizer			
CCL	3.64					
			GR-Probe (275)	4.33	2.75	30.00
			Probe 2.75"			
GR	0.90					
Dataset: herderson 41-04.db: field/well/run1/pass3 Total Length: 19.96 ft Total Weight: 165.00 lb O.D. 2.75 in						

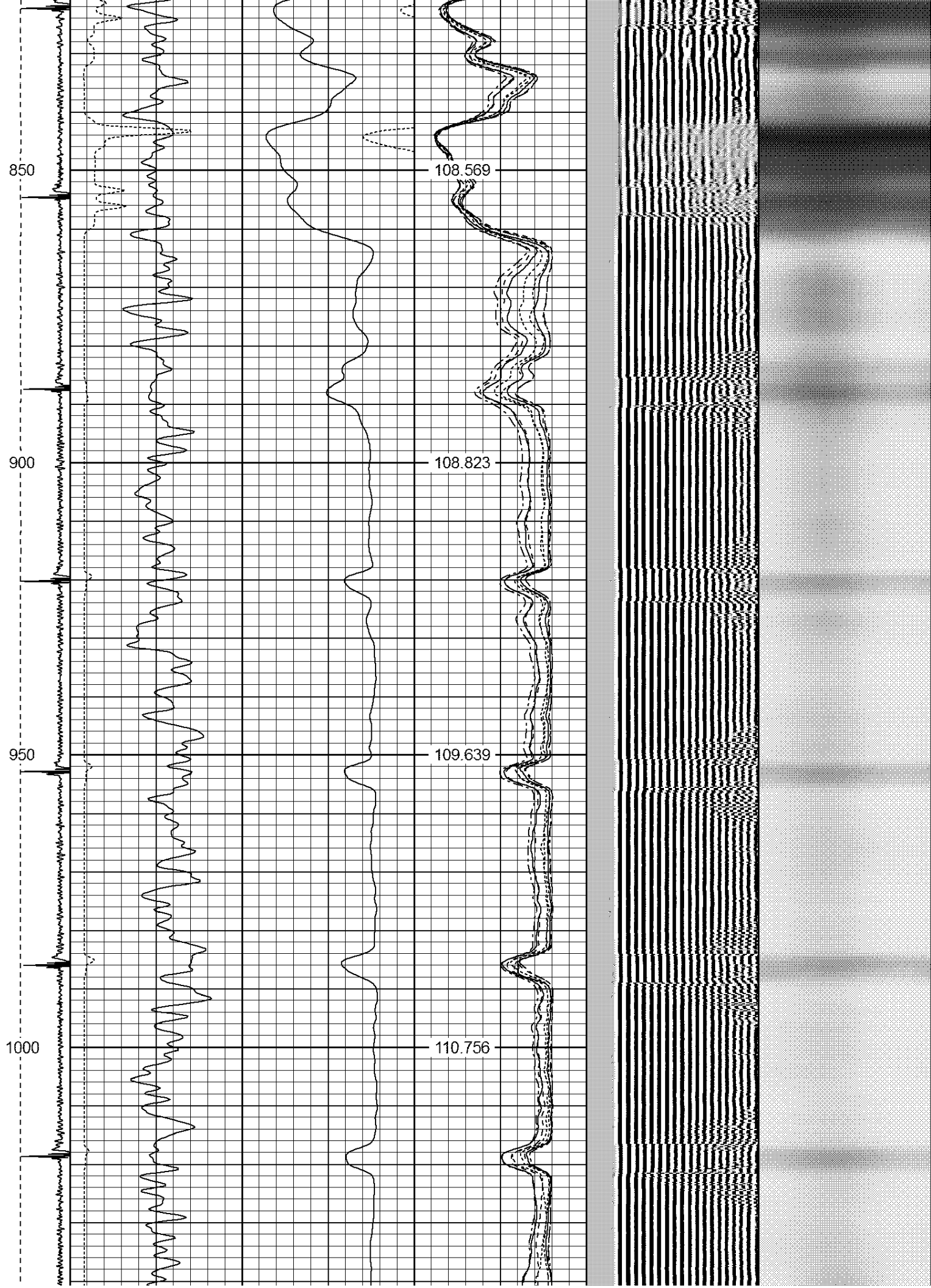
-9	CCL	1	200	TT (usec)	1000	0	AMP (mV)	100	0	AMPS1	100	200	VDL	1200	1	Cement Map	8	
LSPD (ft/min)			0	GR (GAPI)	200	0			AMPx5 (mV)	20	0	AMPS2	100				100	1
			200	GR (GAPI)	400				0	AMPS3	100							
0	250							0	AMPS4	100								
									0	AMPS5	100							
									0	AMPS6	100							
									0	AMPS7	100							
									0	AMPS8	100							
									IntTemp (degF)									

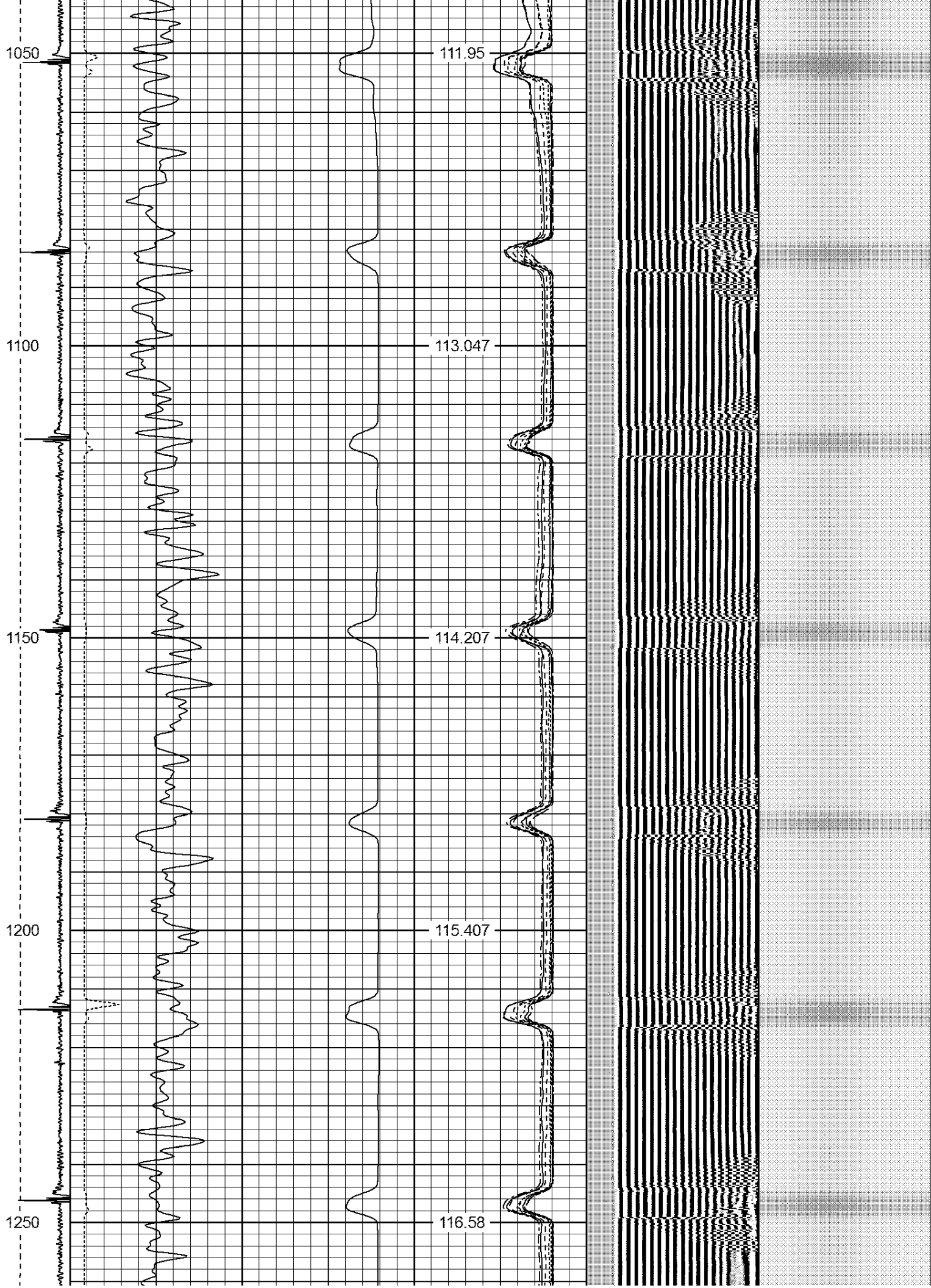


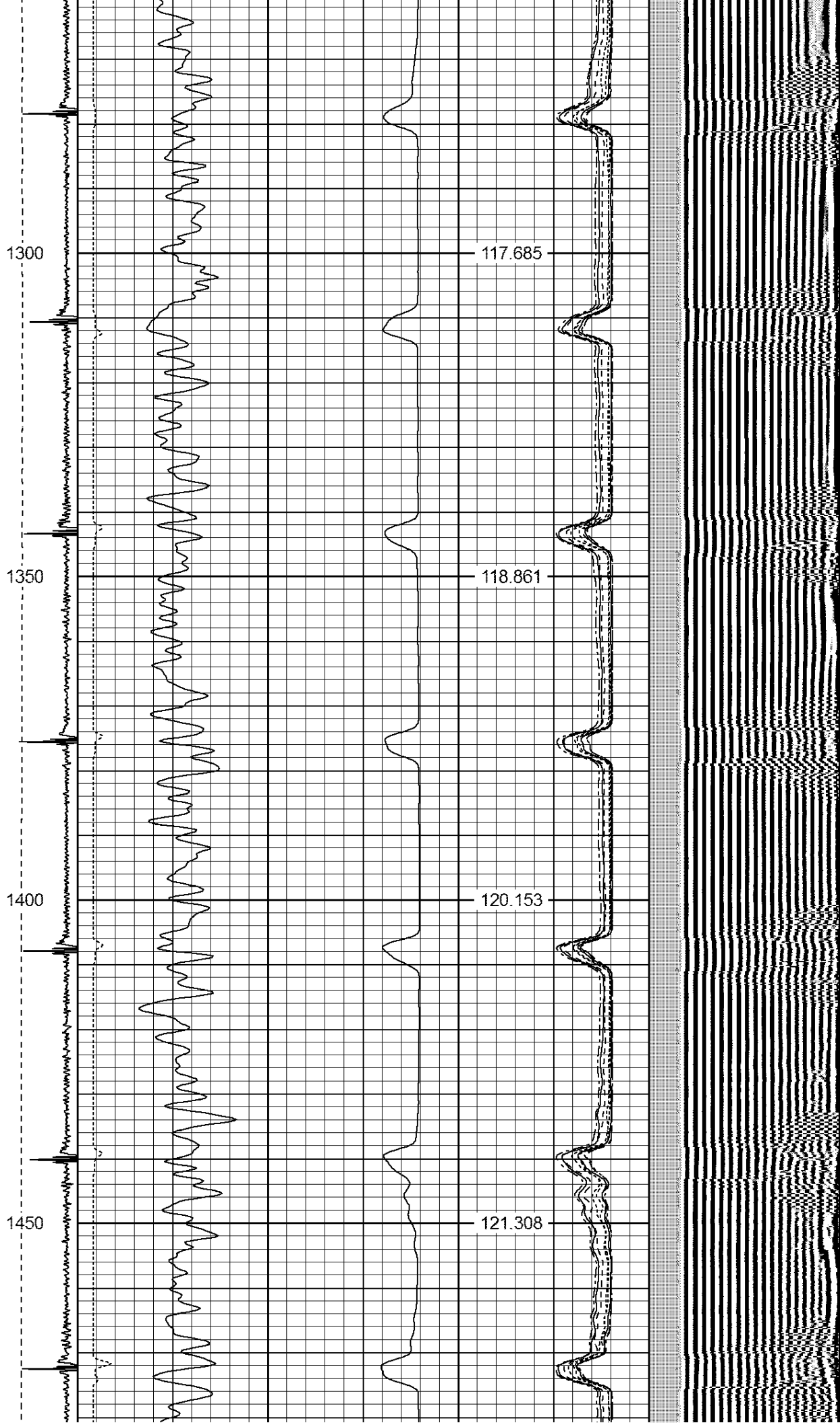


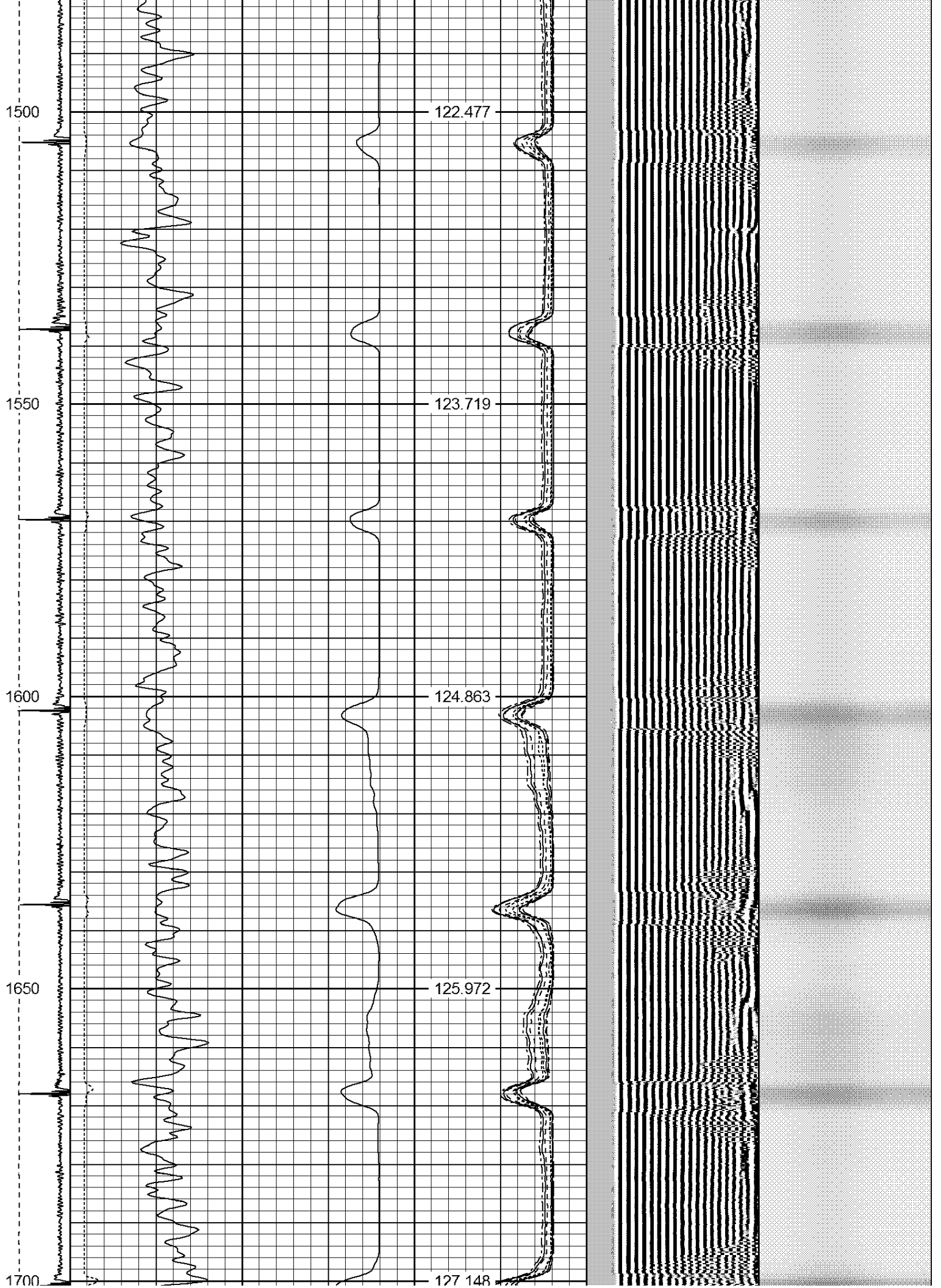


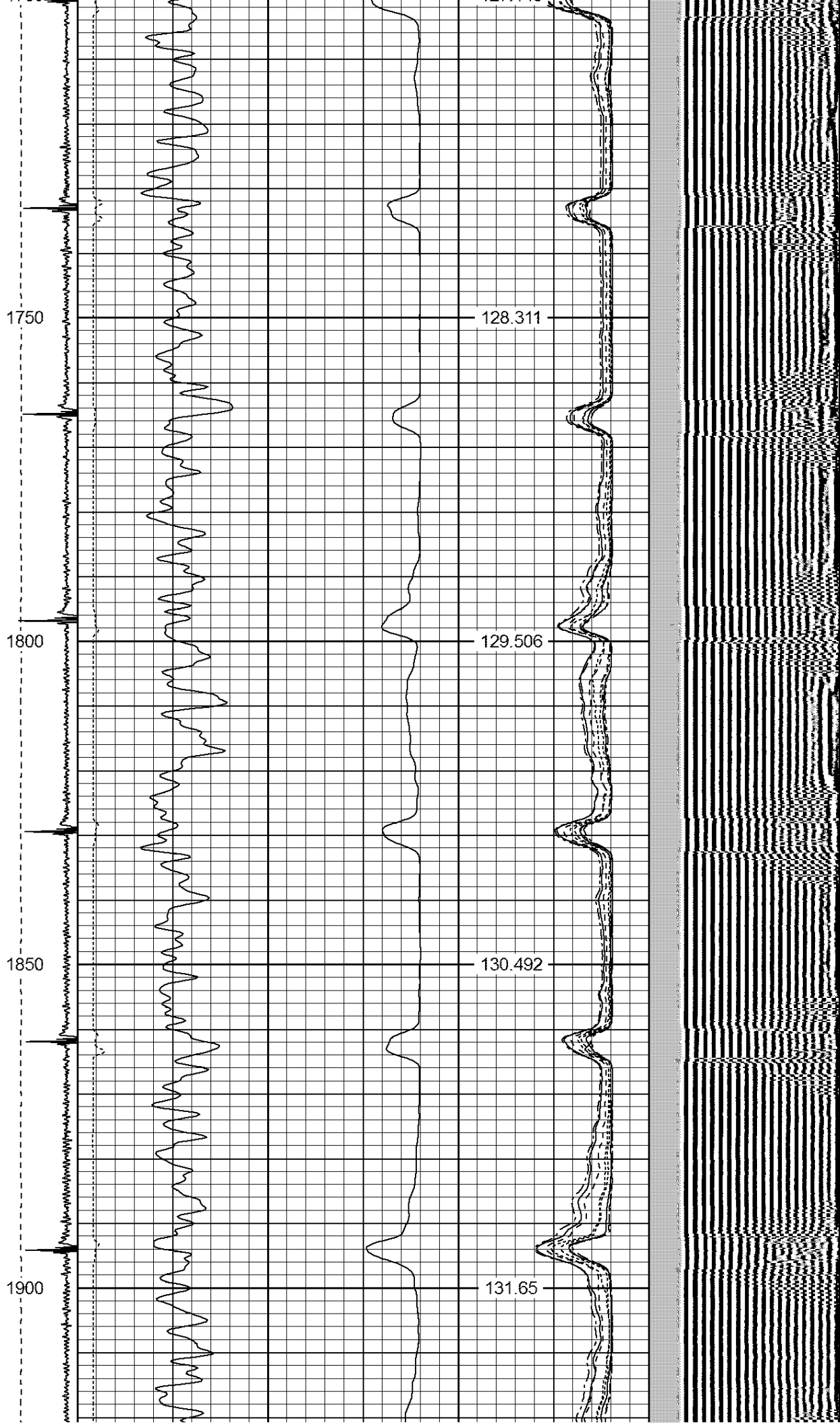


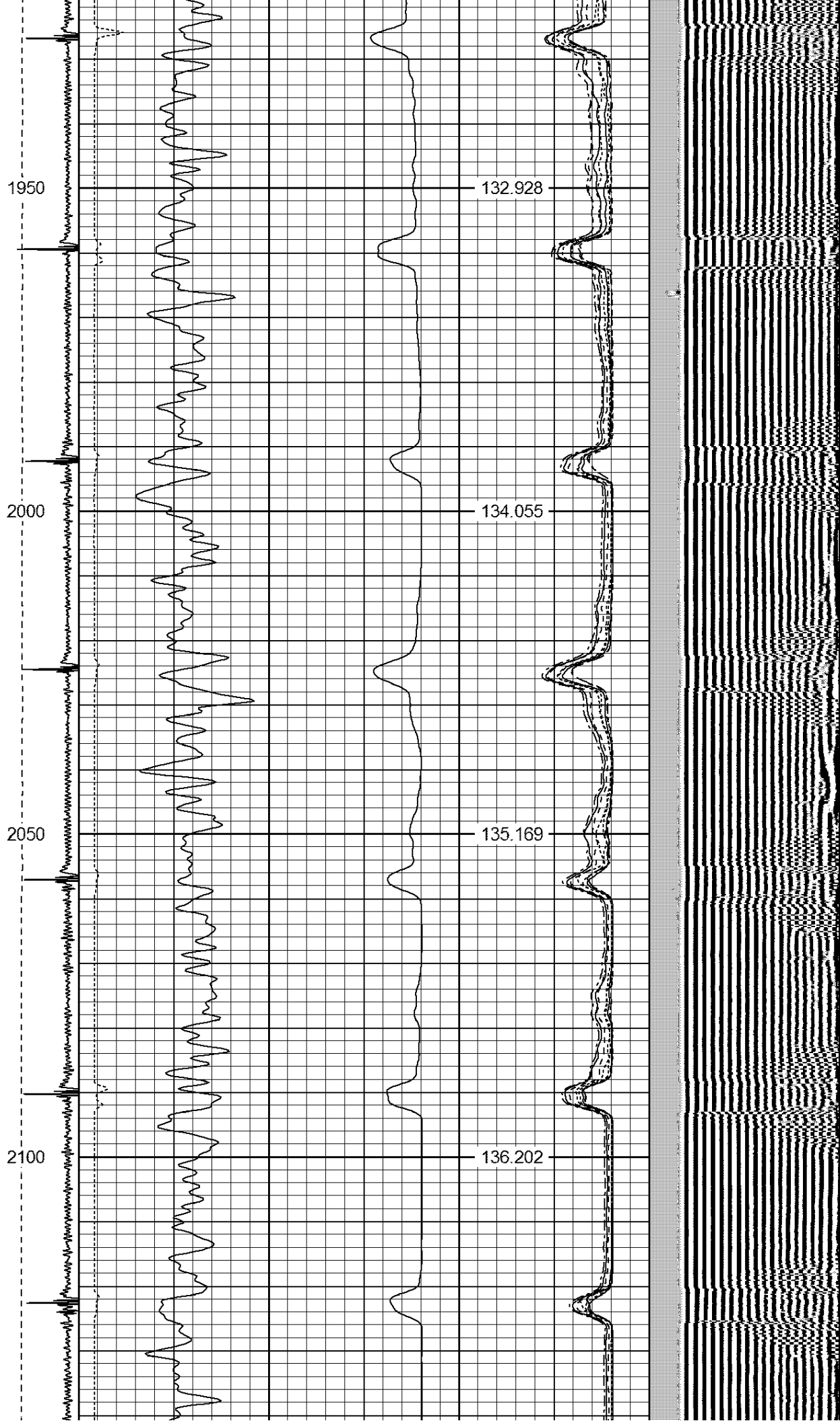












2150

137.292

2200

138.386

2250

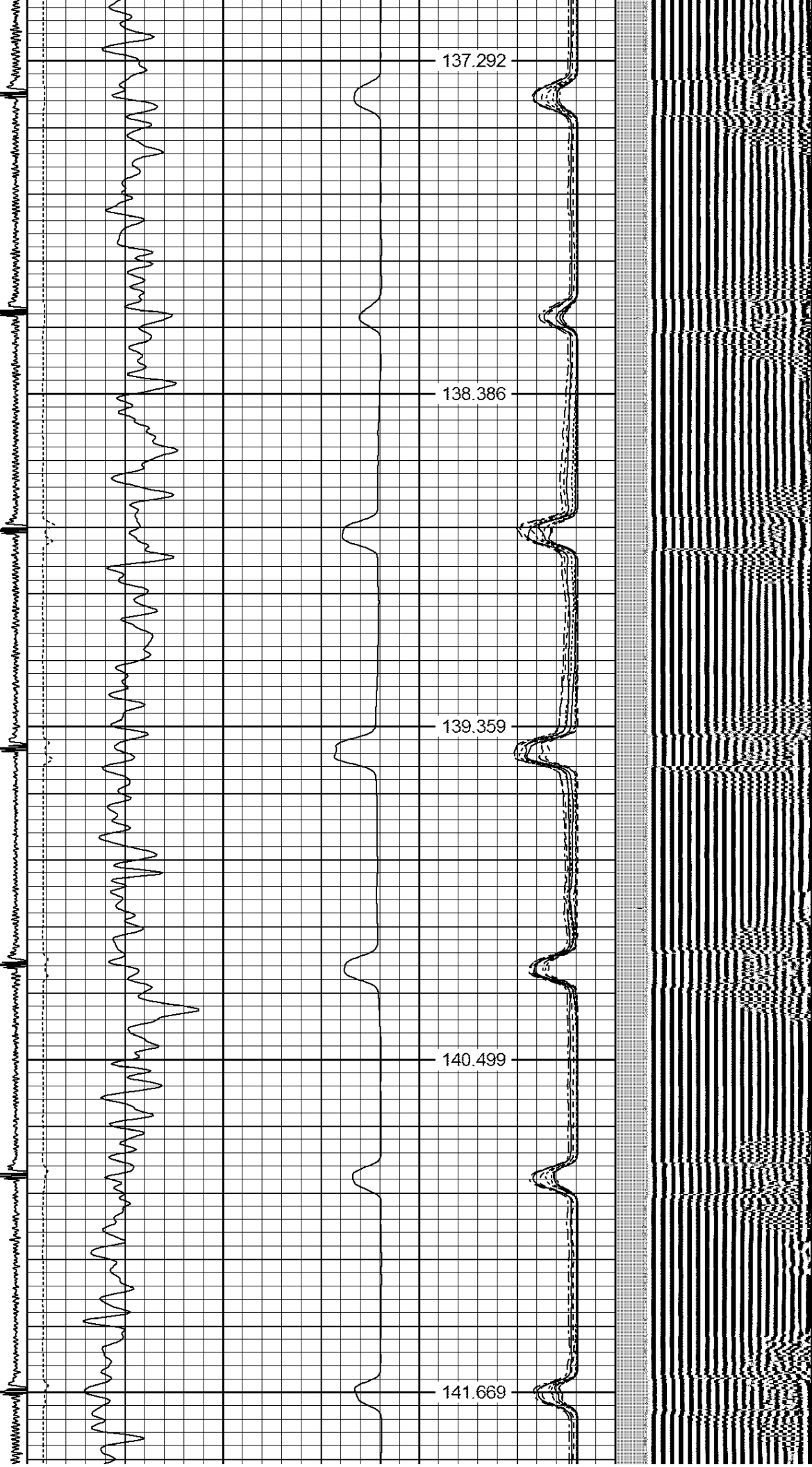
139.359

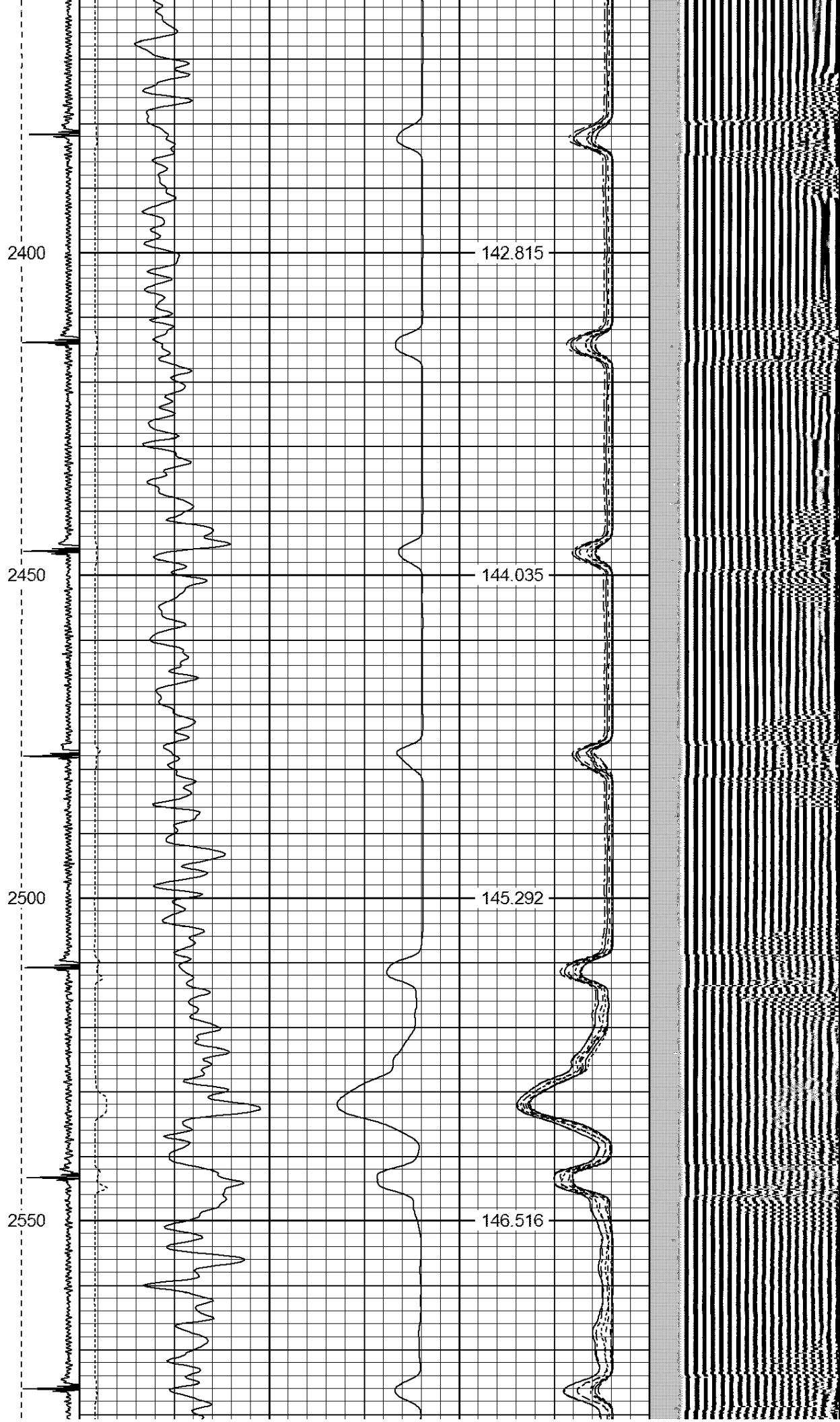
2300

140.499

2350

141.669





2600

147.736

2650

148.943

2700

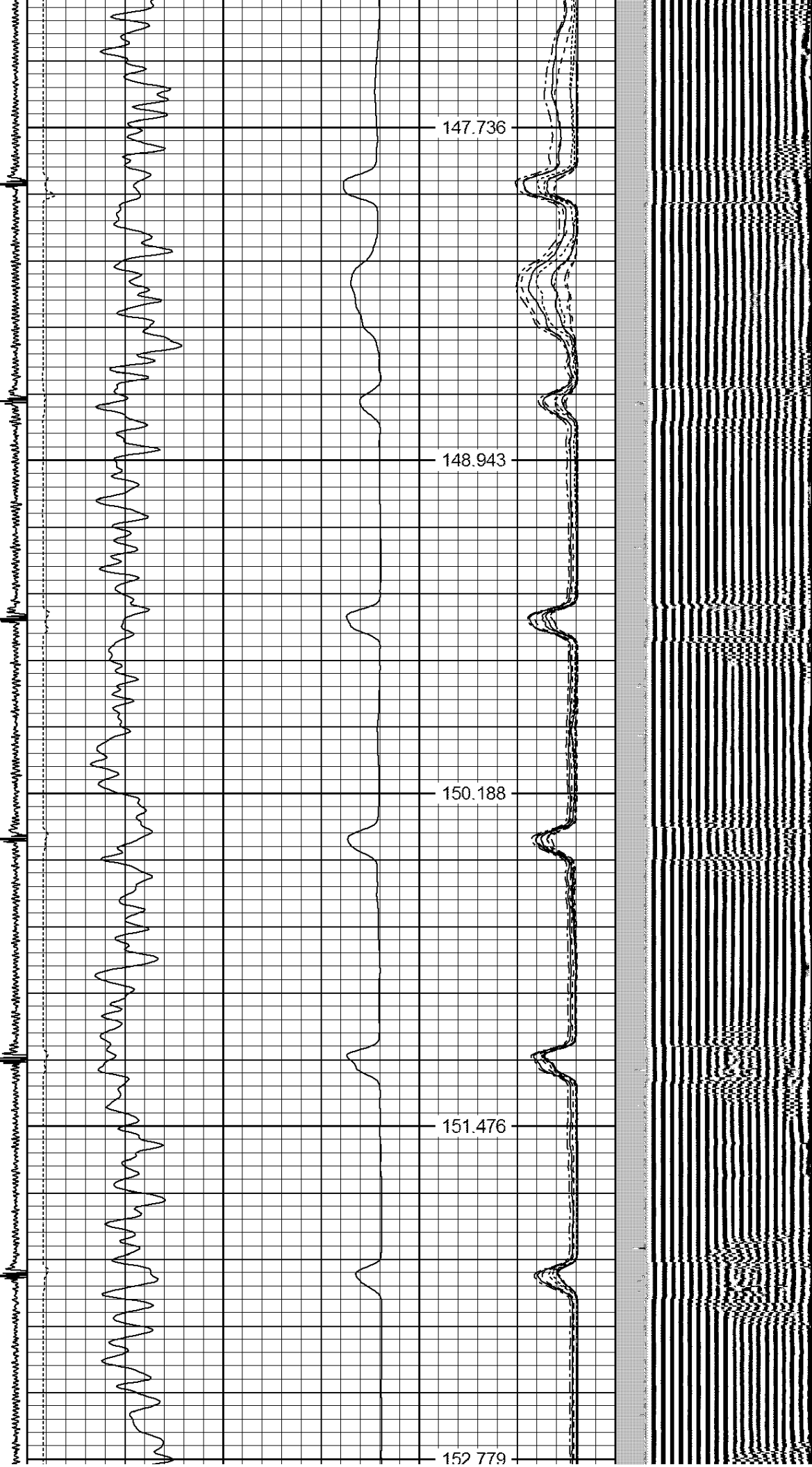
150.188

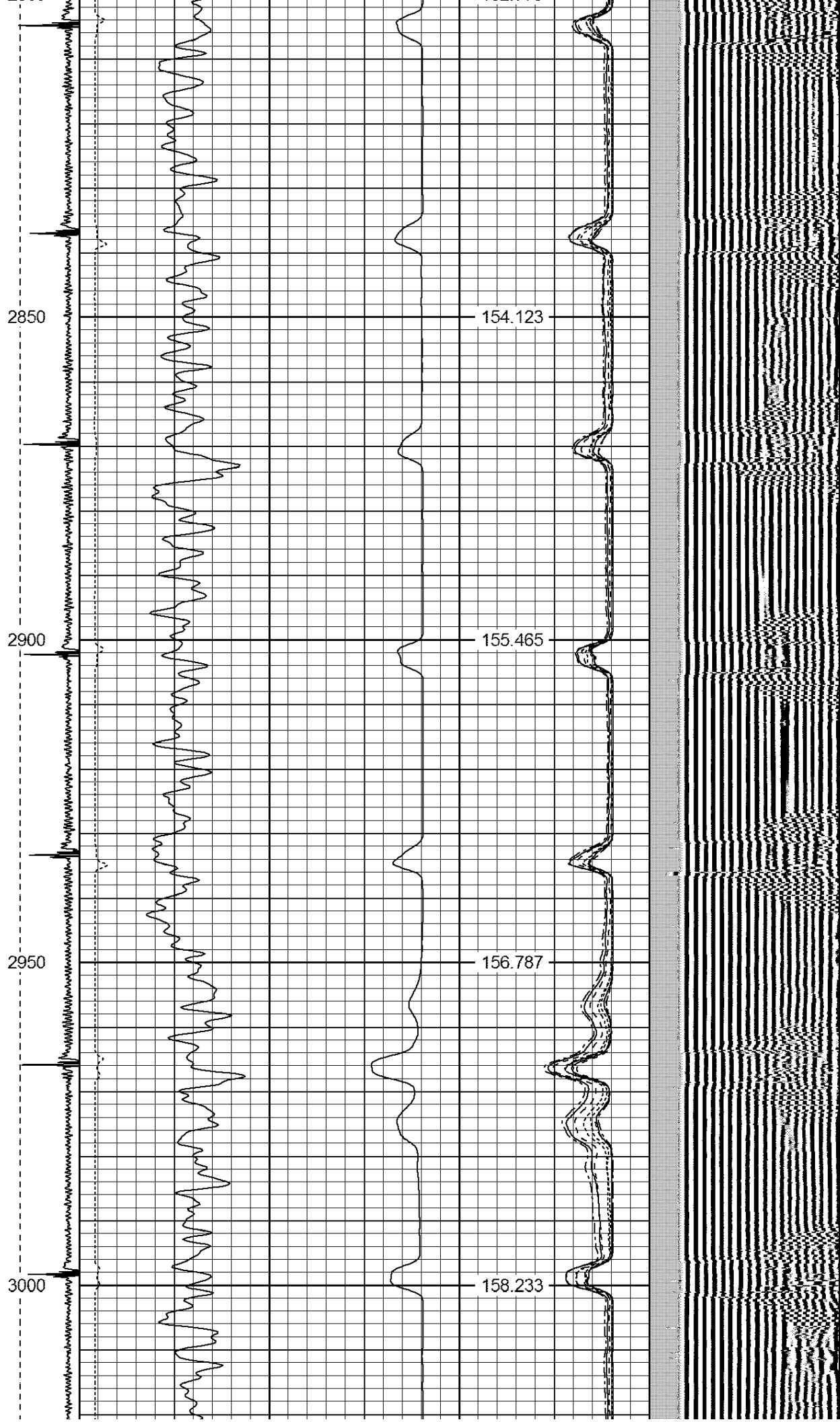
2750

151.476

2800

152.779





3050

159.704

3100

161.209

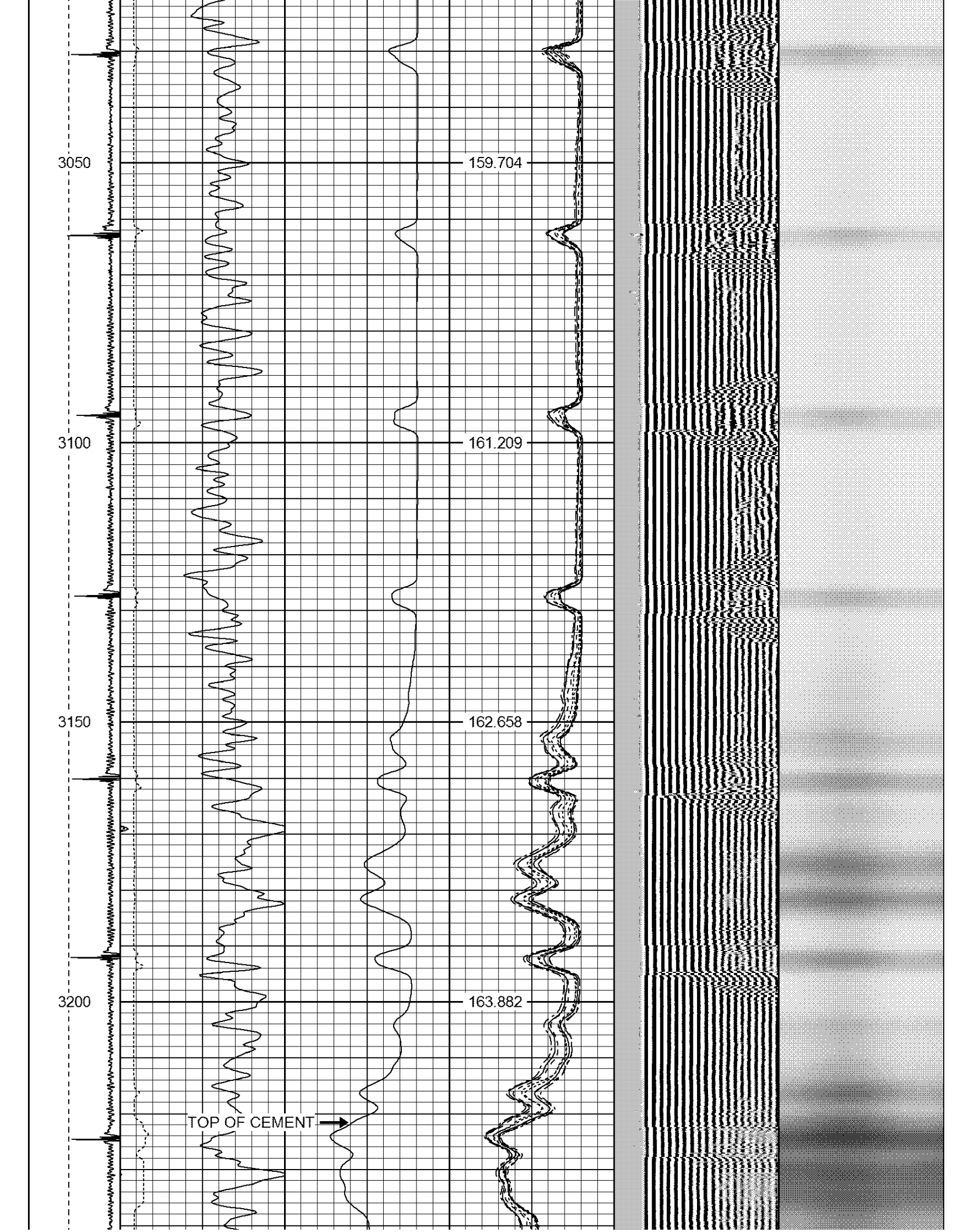
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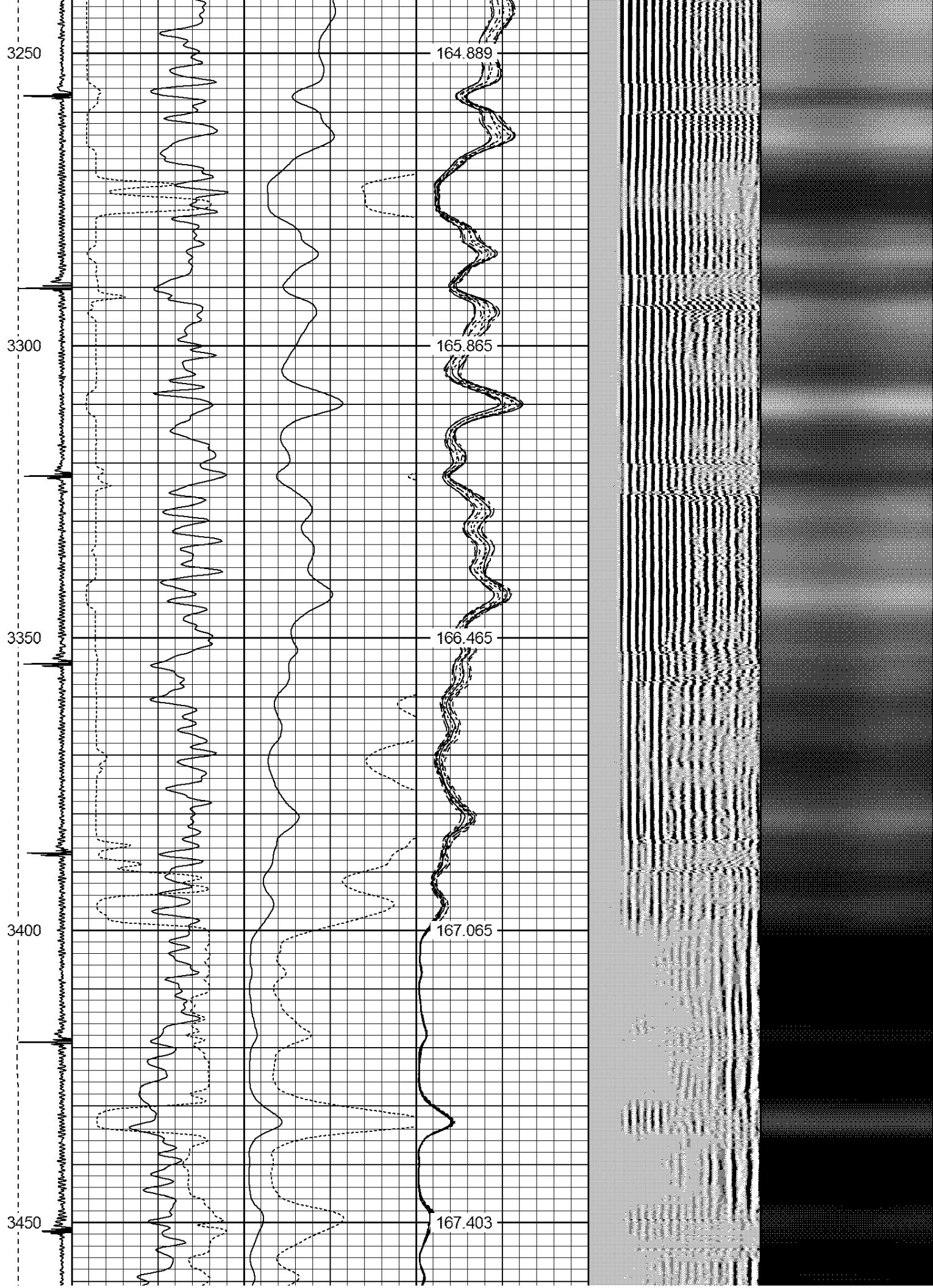
162.658

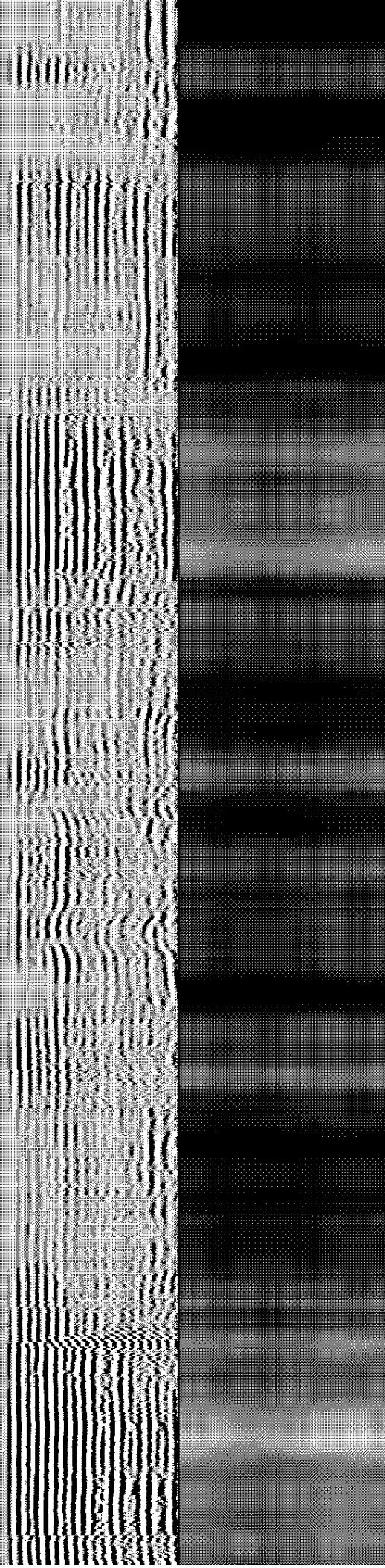
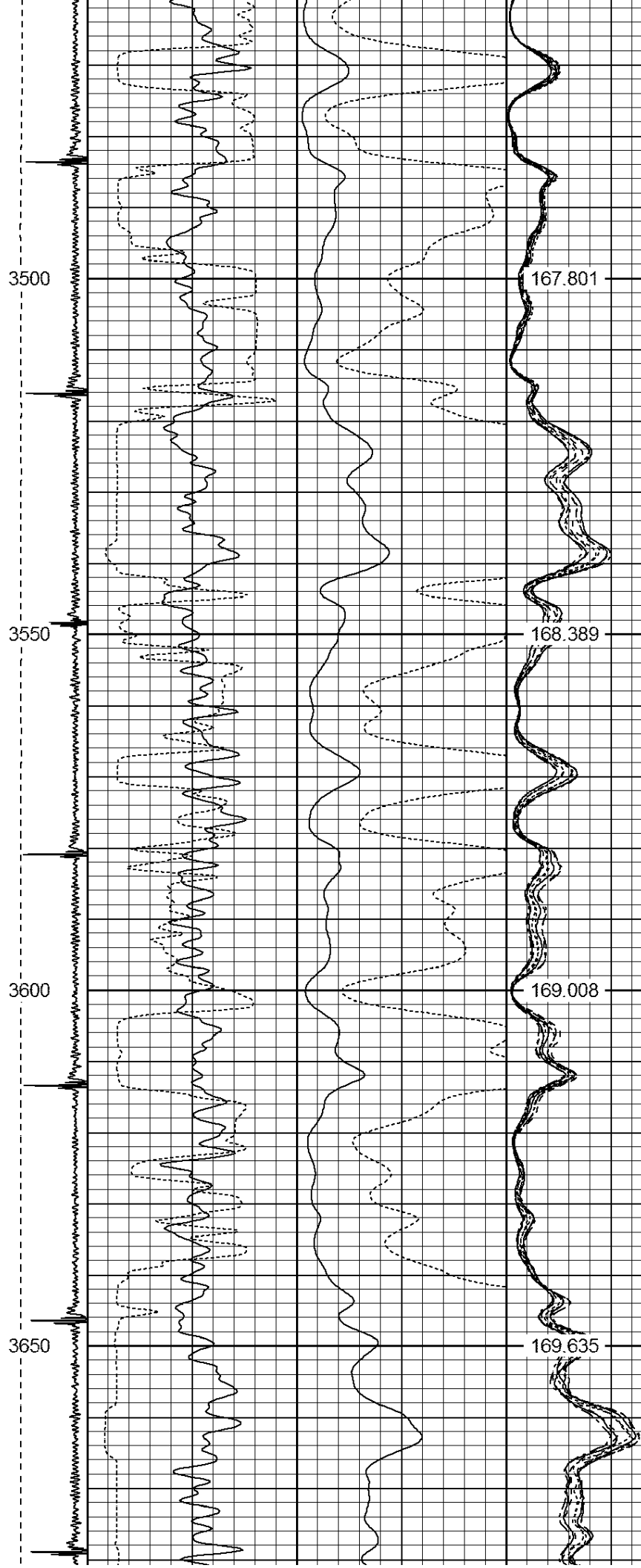
3200

163.882

TOP OF CEMENT







3700

170.215

3750

170.966

3800

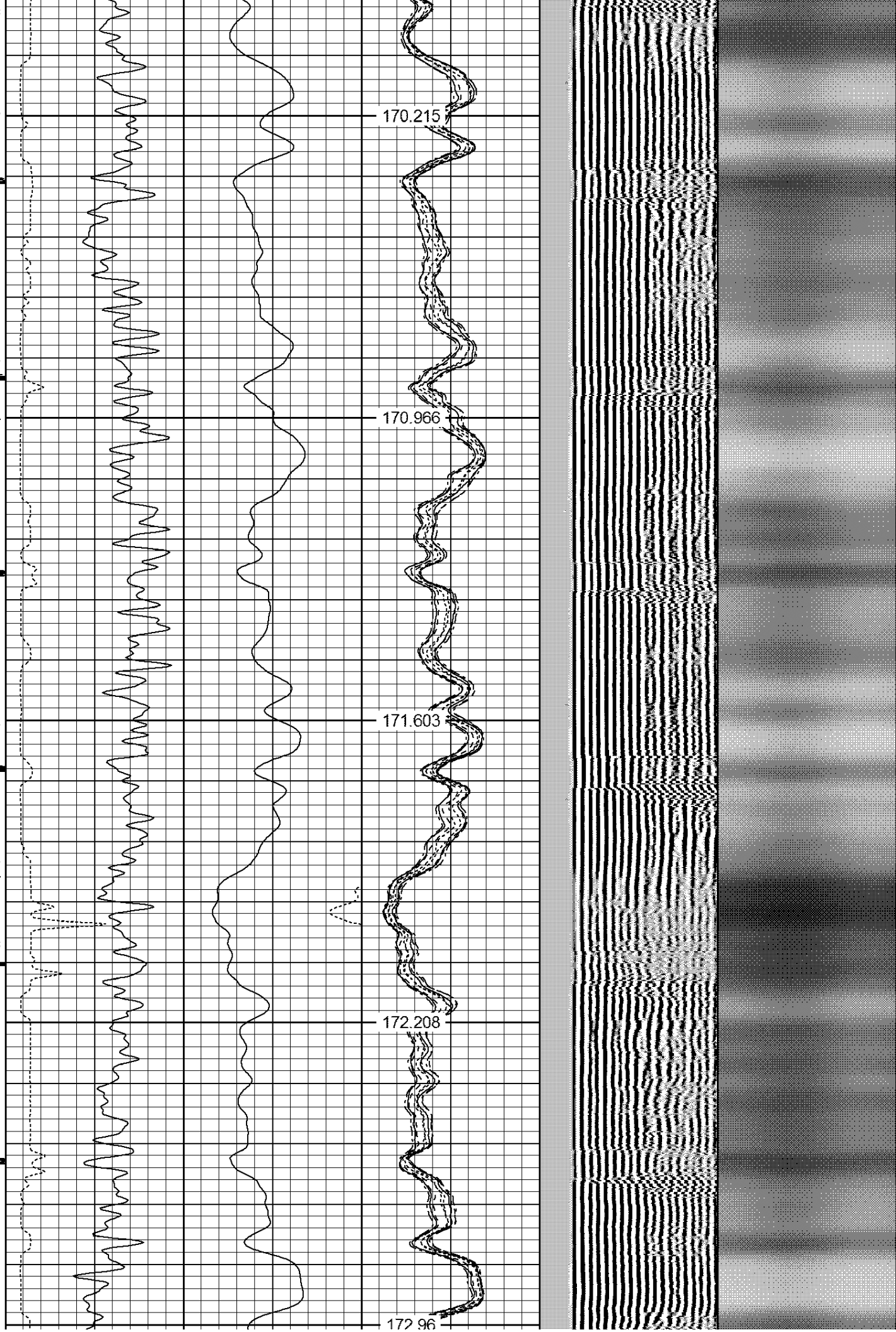
171.603

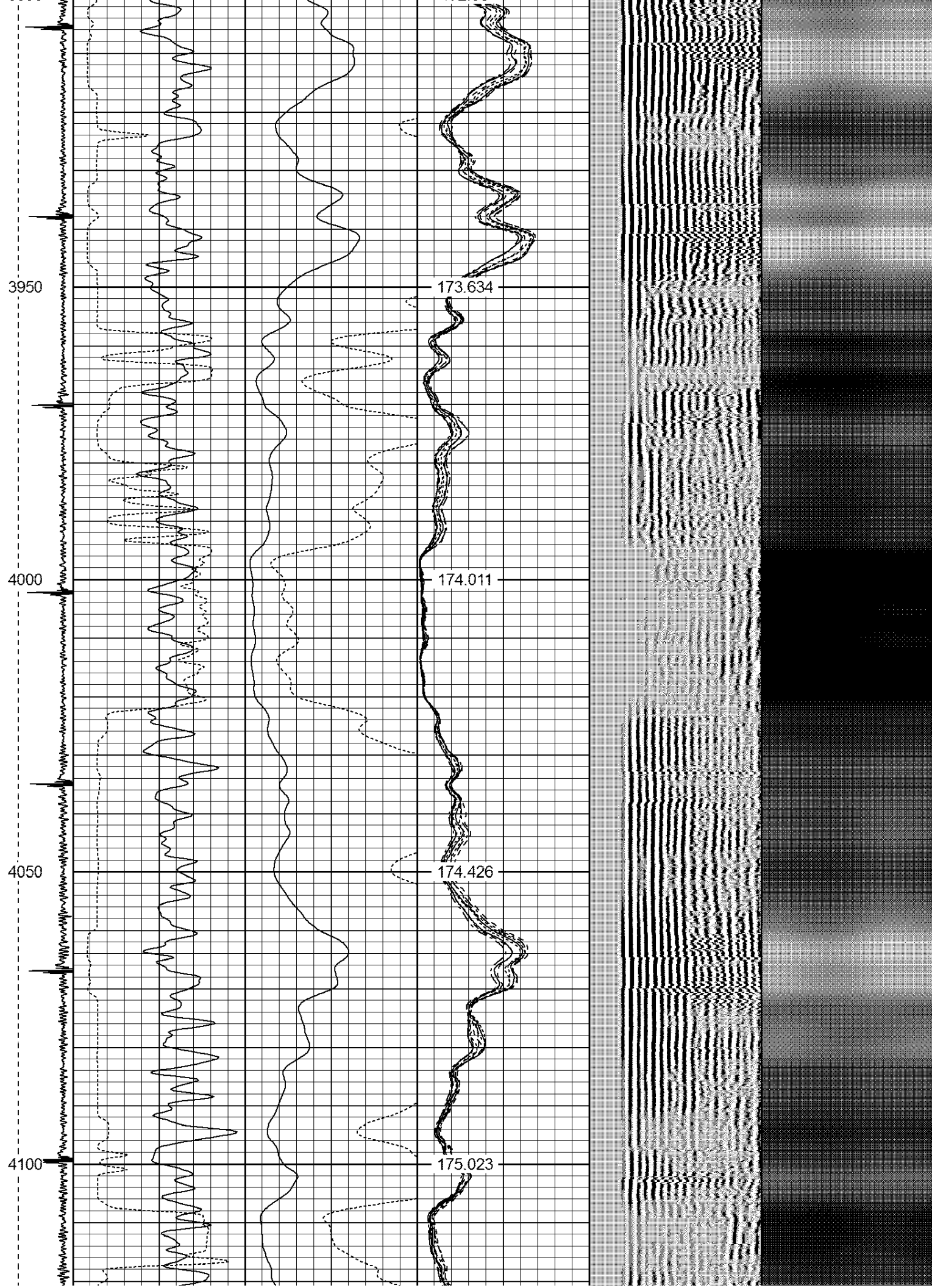
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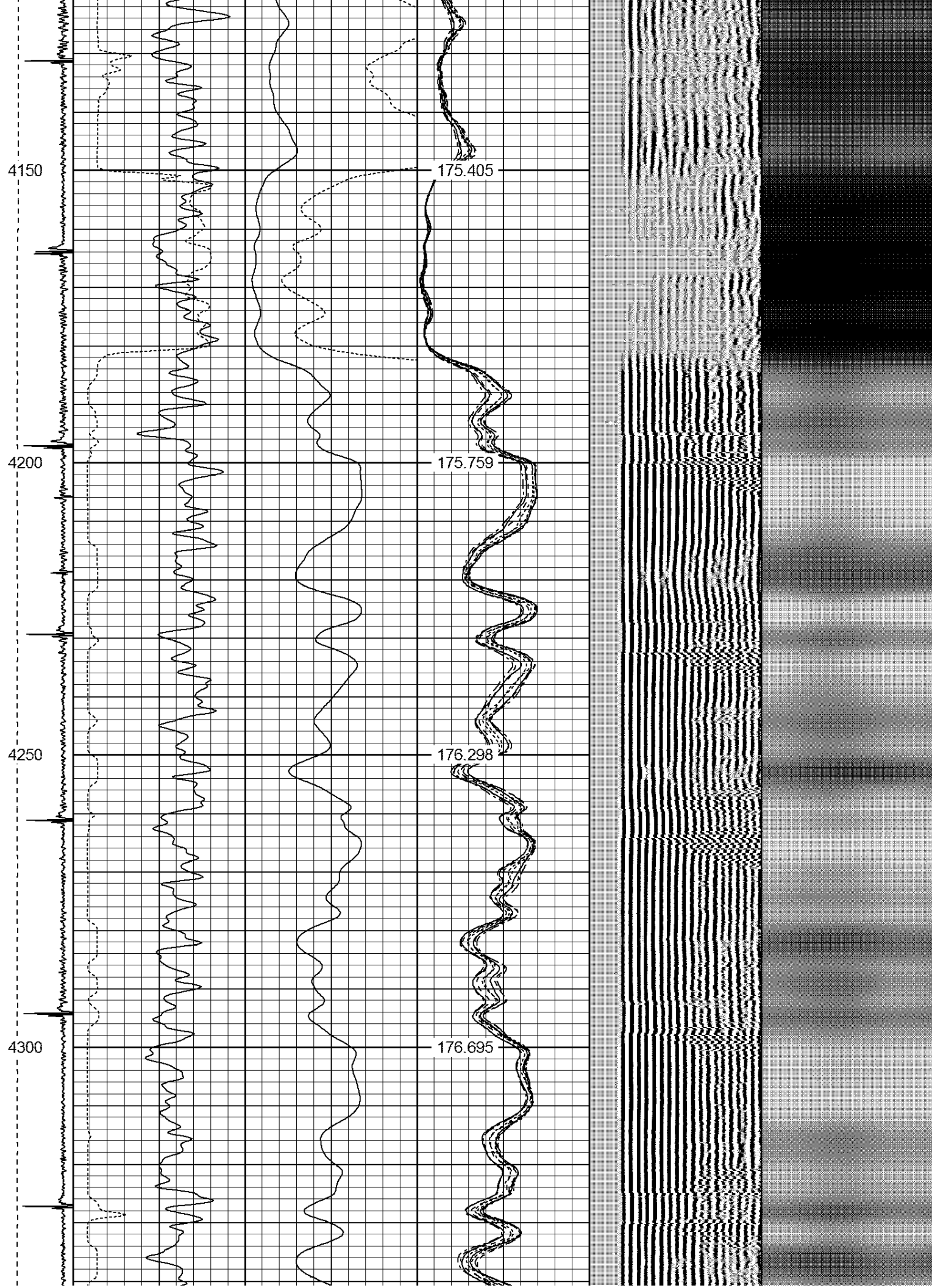
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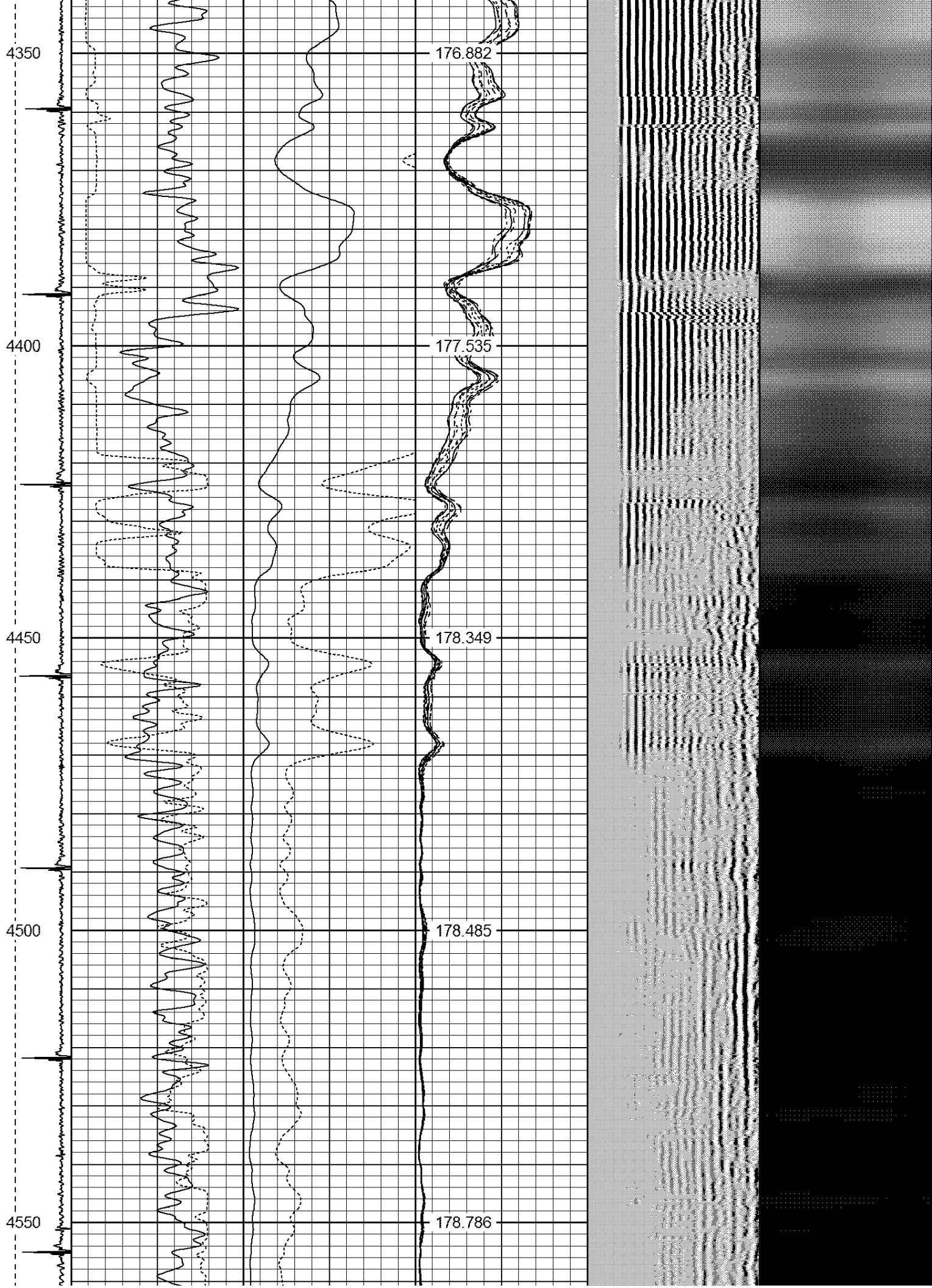
3900

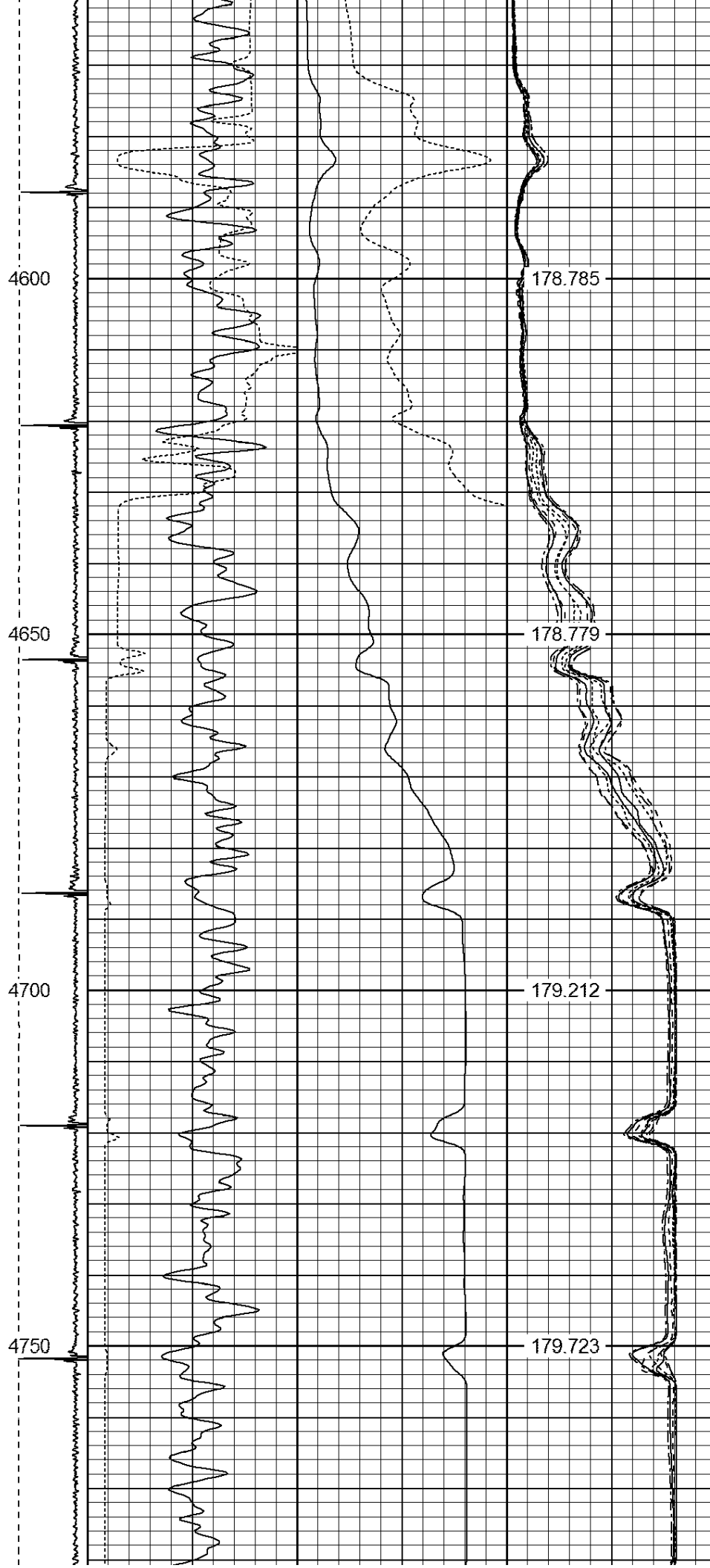
172.96

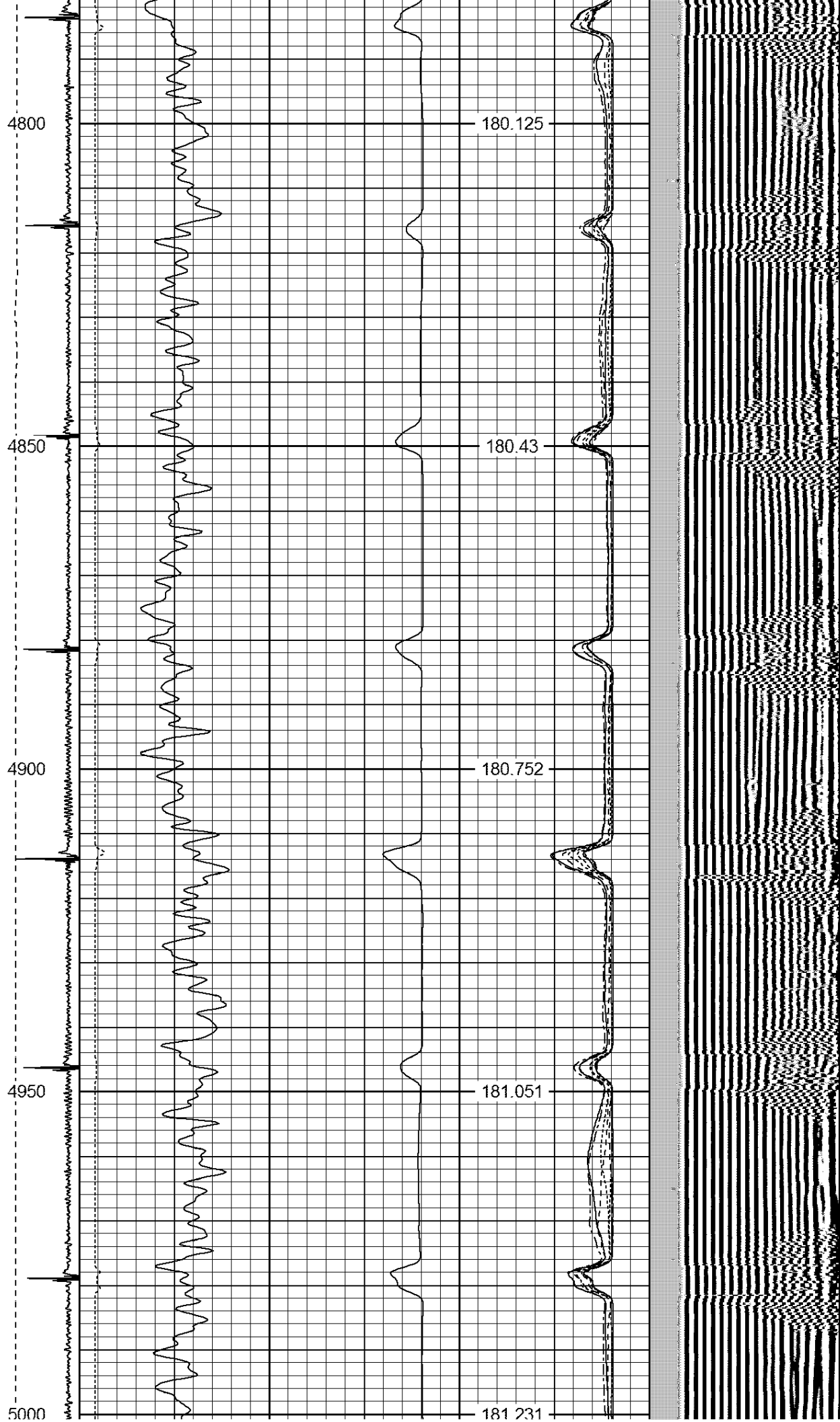


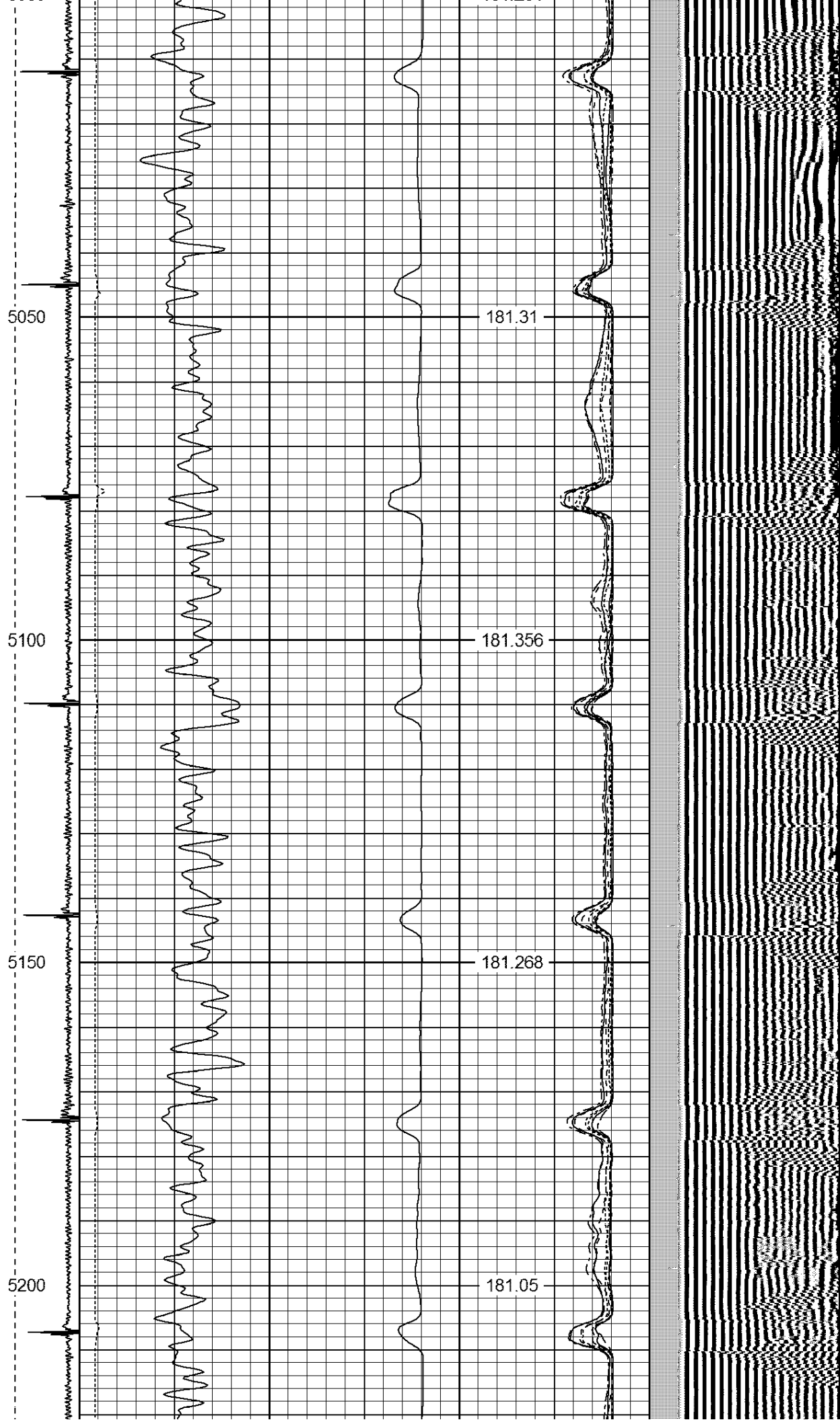


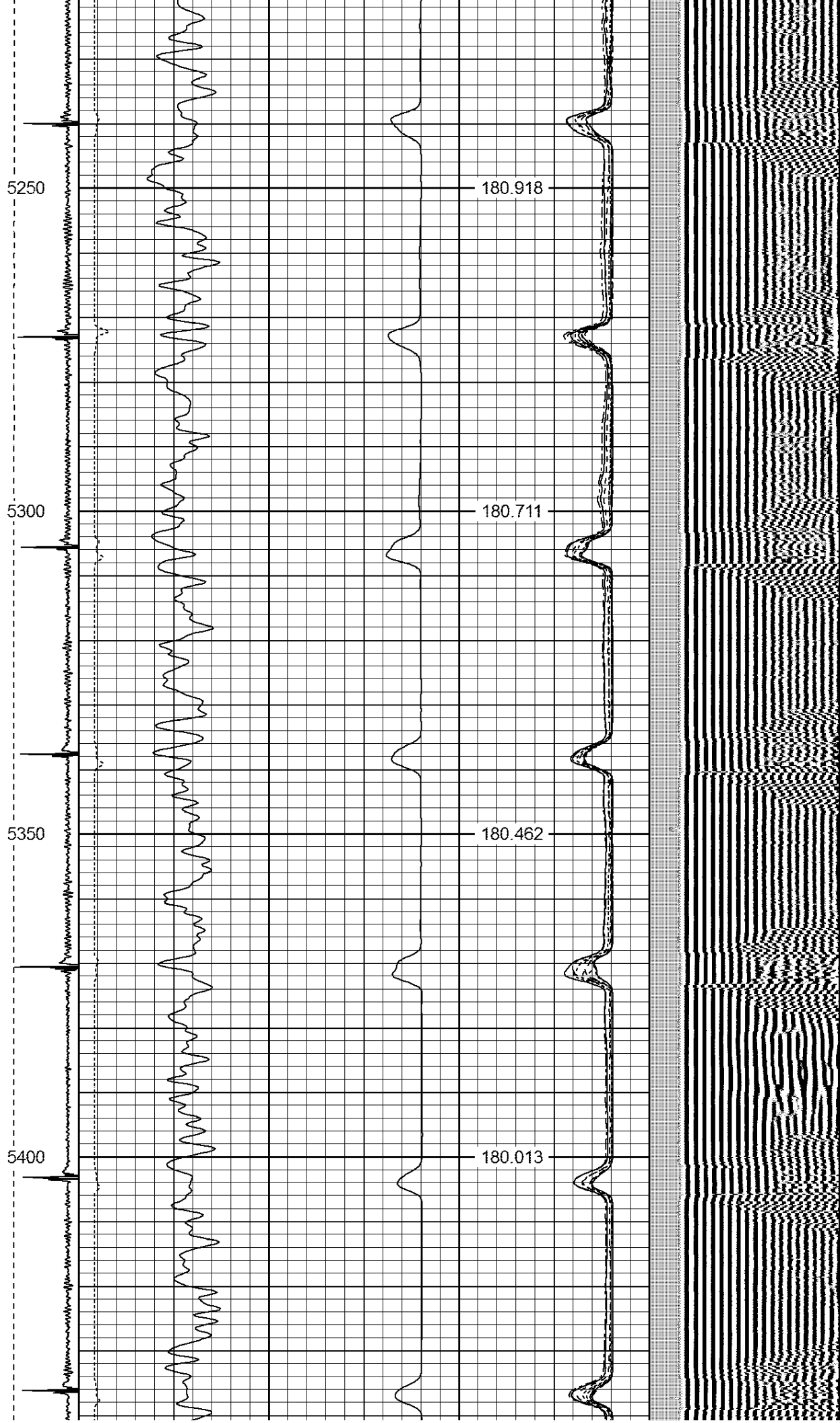












5450

179.478

5500

178.756

5550

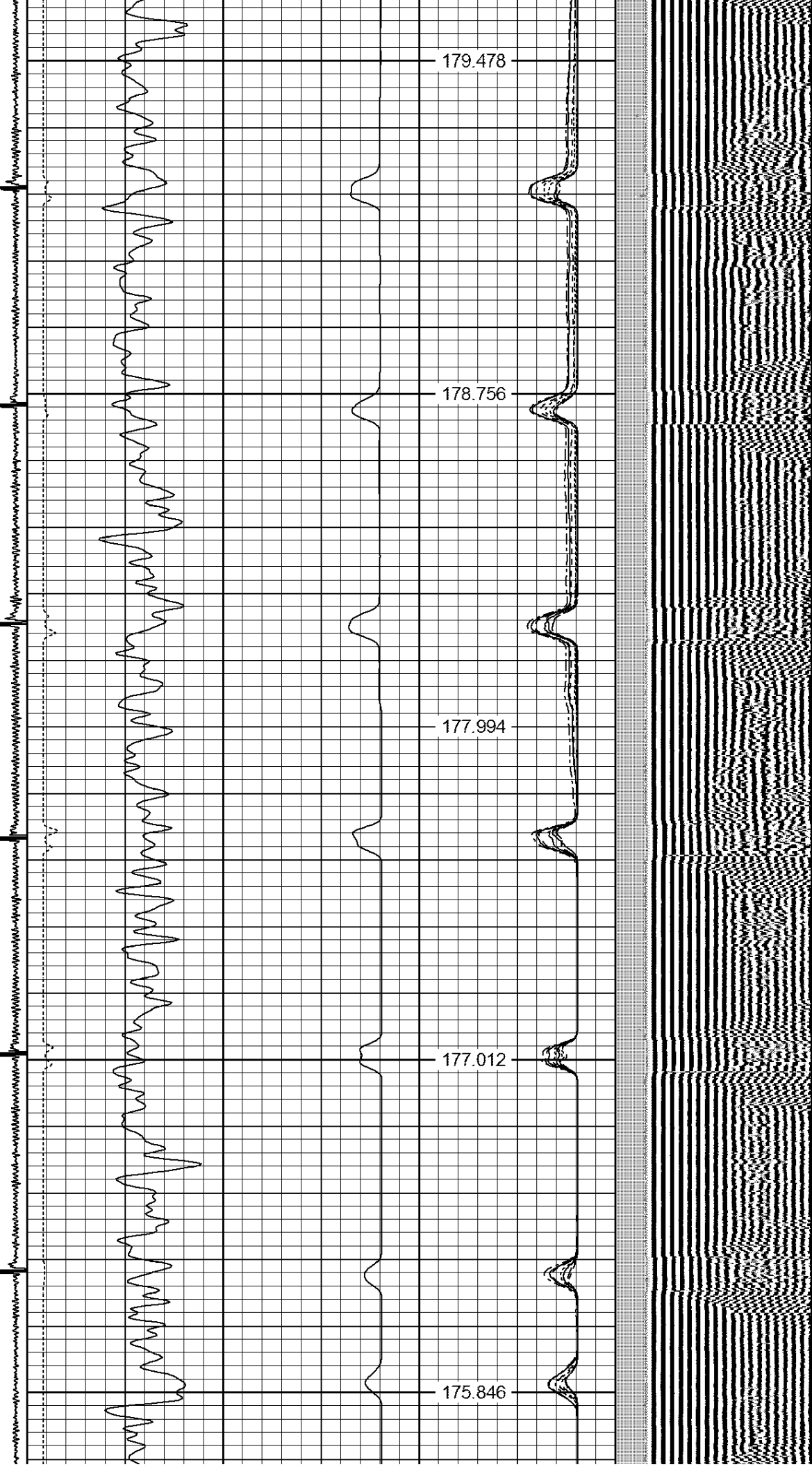
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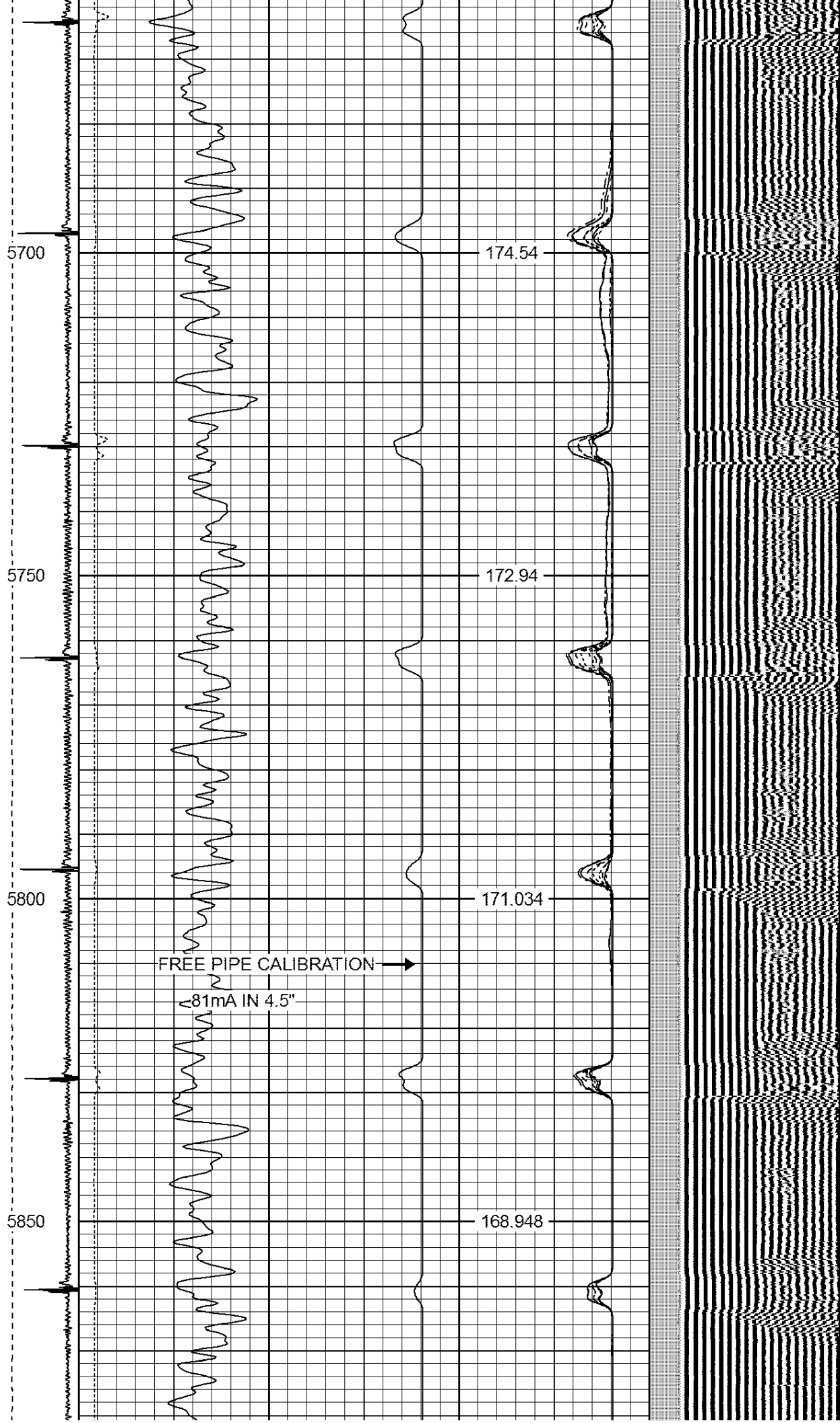
5600

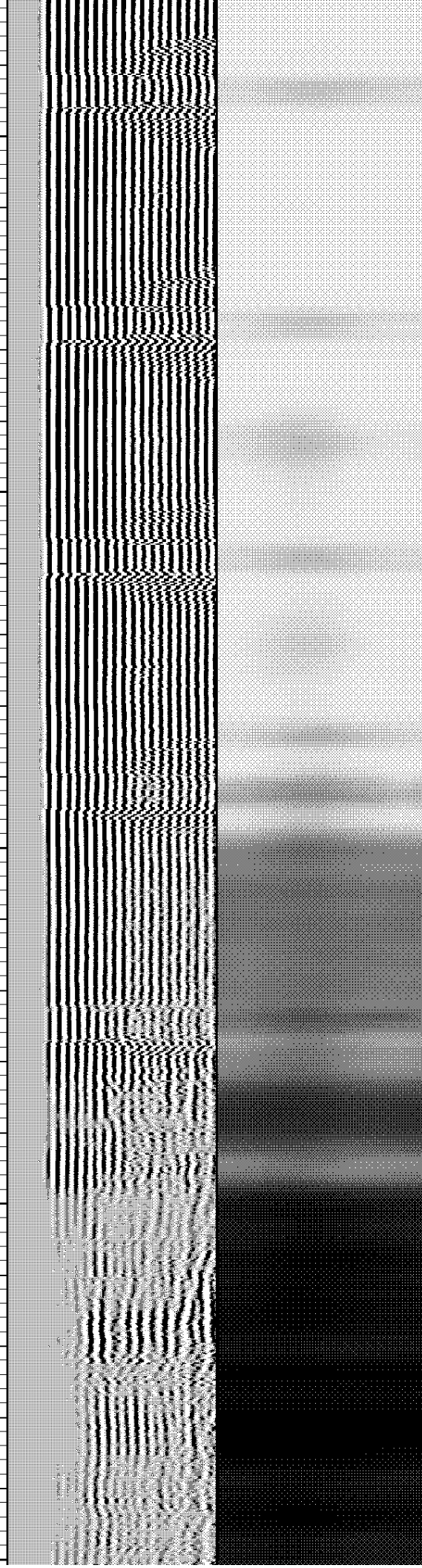
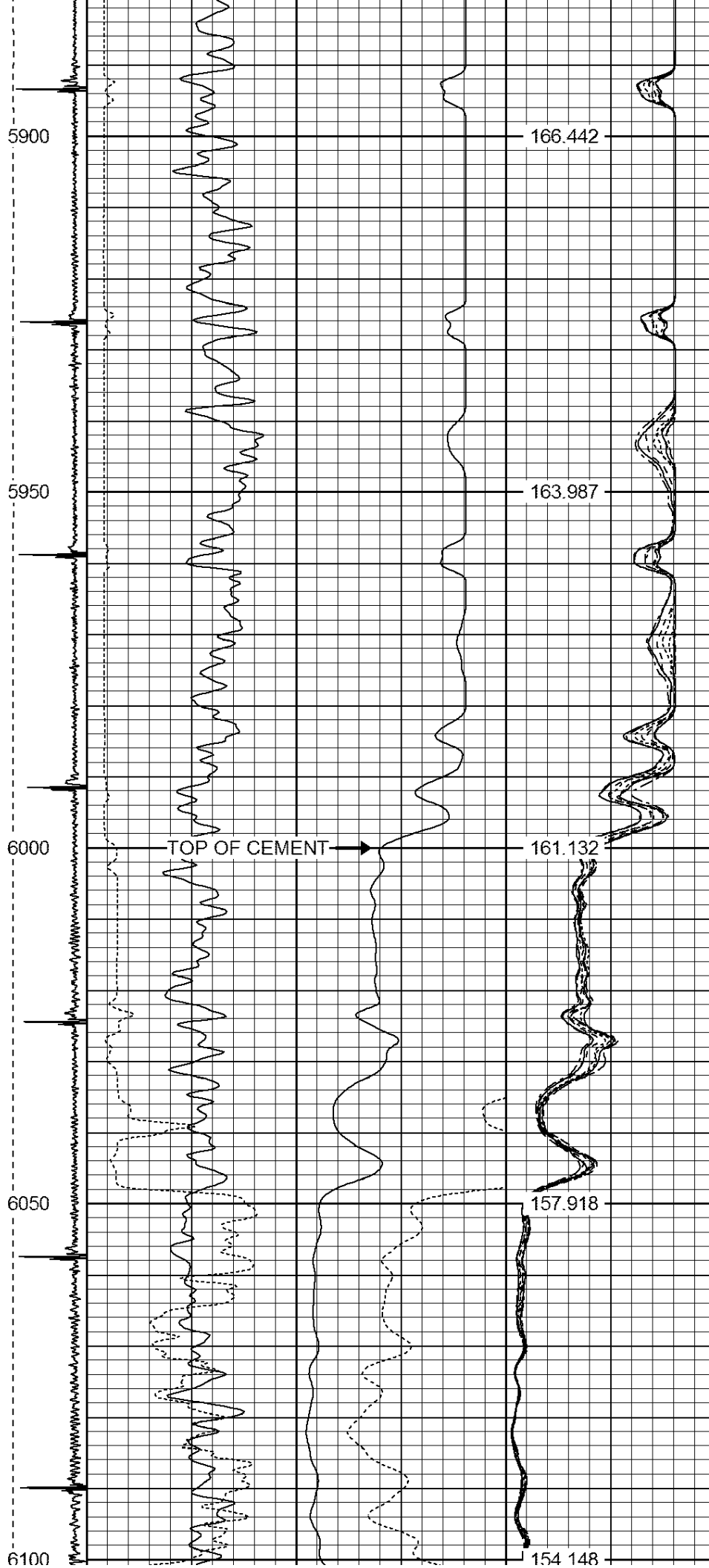
177.012

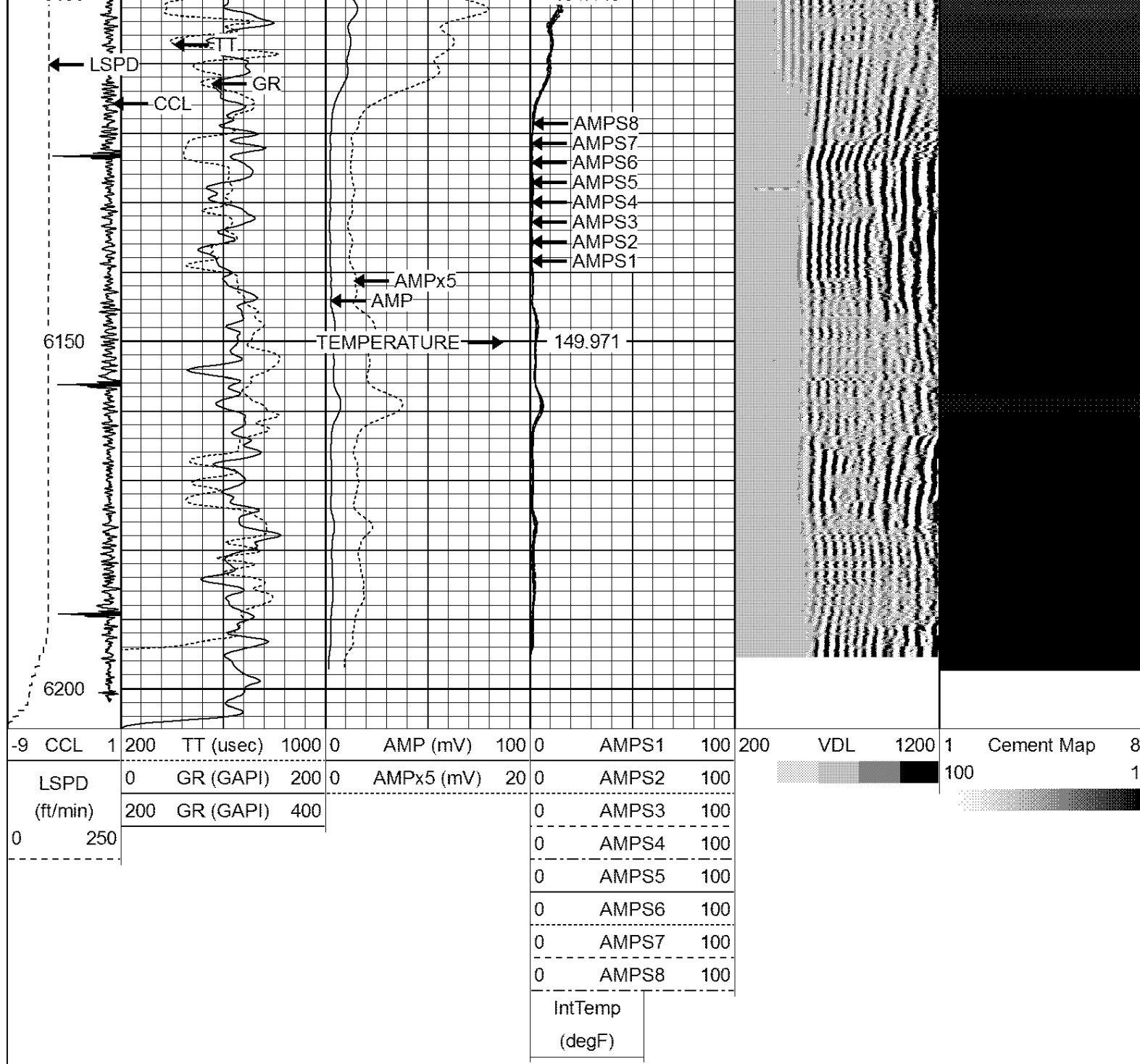
5650

175.846









Calibration Report

Database File: herderson 41-04.db
 Dataset Pathname: pass3
 Dataset Creation: Thu Feb 18 19:15:42 2016 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 275
 Tool Model: Probe
 Performed: Tue Sep 23 07:13:12 2014

Calibrator Value: 100.0 GAPI

Background Reading: 35.0 cps
 Calibrator Reading: 160.0 cps

Sensitivity: 1.0000 GAPI/cps

		Serial Number: Tool Model:		275 Probe_B		
CALIBRATION		Wed Jul 30 08:47:19 2008				
	Detector	Readings		Target		Normalization
	Short Space	5001.20	cps	0.00	cps	1.0000
	Long Space	1029.31	cps	0.00	cps	1.0000
PRE-SURVEY VERIFICATION						
	Detector	Readings		Measured		Target
1)	Short Space		cps			
	Long Space		cps	pu		pu
2)	Short Space		cps			
	Long Space		cps	pu		
3)	Short Space		cps			
	Long Space		cps	pu		
POST-SURVEY VERIFICATION						
	Detector	Readings		Measured		Target
1)	Short Space		cps			
	Long Space		cps	pu		pu
2)	Short Space		cps			
	Long Space		cps	pu		pu
3)	Short Space		cps			
	Long Space		cps	pu		pu

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	1121.700	ft

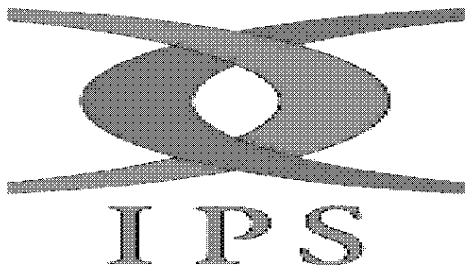
Master Calibration, performed Thu Feb 18 19:06:40 2016:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	2.500	2.000	81.196	31.713	1.915
CAL	1.454	2.500				
5'	0.003	2.500	2.000	81.196	31.712	1.916
SUM						
S1	0.005	2.500	0.500	81.000	32.269	0.328
S2	0.004	2.500	0.500	81.000	32.246	0.385
S3	0.005	2.500	0.500	81.000	32.258	0.354
S4	0.004	2.500	0.500	81.000	32.253	0.372
S5	0.003	2.500	0.500	81.000	32.235	0.412
S6	0.004	2.500	0.500	81.000	32.256	0.359
S7	0.007	2.500	0.500	81.000	32.285	0.286
S8	0.005	2.500	0.500	81.000	32.267	0.331

Internal Reference Calibration, performed Tue Jun 05 07:53:42 2012:		
	Raw (v)	Calibrated (v)
		Results

	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.454	2.500	1.000	0.000

Air Zero Calibration, performed Thu Feb 18 18:53:33 2016:

	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 ANADARKO PETROLEUM CORPORATION
Well HENDERSON 41-04
Field WATTENBERG
County WELD
State CO