



RADIAL CEMENT BOND LOG
GAMMA RAY
CCL

Company KERR MCGEE OIL AND GAS ONSHORE
Well HSR-FEDERAL 15-36
Field WATTENBERG
County WELD
State COLORADO

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Location: API # : 05-123-14432
SHL 660' FSL 1980' FEL
SW/SE
SEC 36 TWP 3N RGE 66W
Permanent Datum G.L. Elevation 4993'
Log Measured From KB 10'
Drilling Measured From K.B
Other Services
Elevation
K.B. 4993'
D.F. 4992'
G.L. 5003'

Date 8/6/14
Run Number ONE
Depth Driller 8000'
Depth Logger 2014'
Bottom Logged Interval 2014'
Top Log Interval SURFACE
Open Hole Size 7.88
Type Fluid WATER
Density / Viscosity 1.0
Max. Recorded Temp. 102 DEG F
Estimated Cement Top 502'
Time Well Ready NA
Time Logger on Bottom NA
Equipment Number 4740
Location GREELEY, CO
Recorded By C. SHARP
Witnessed By M. KOCH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE							
TWO							
THREE							
Casing Record		Size		Wgt/Ft		Top	Bottom
Surface String		8.63		24#		10	763
Prot. String							
Production String		4.5		11.6#		10	7517
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

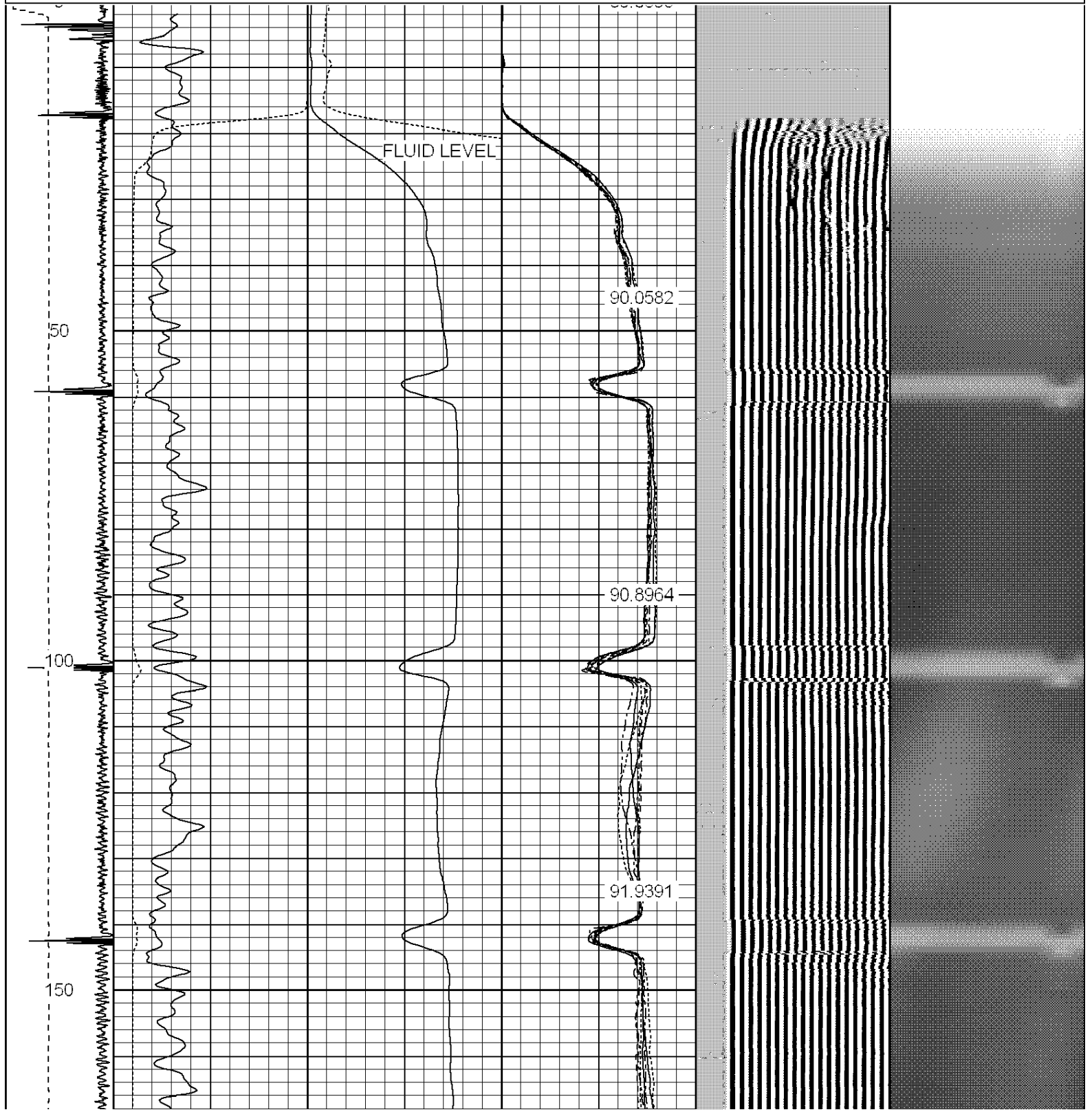
NOT CORRELATED
RAN CBL TO VERIFY CEMENT COVERAGE

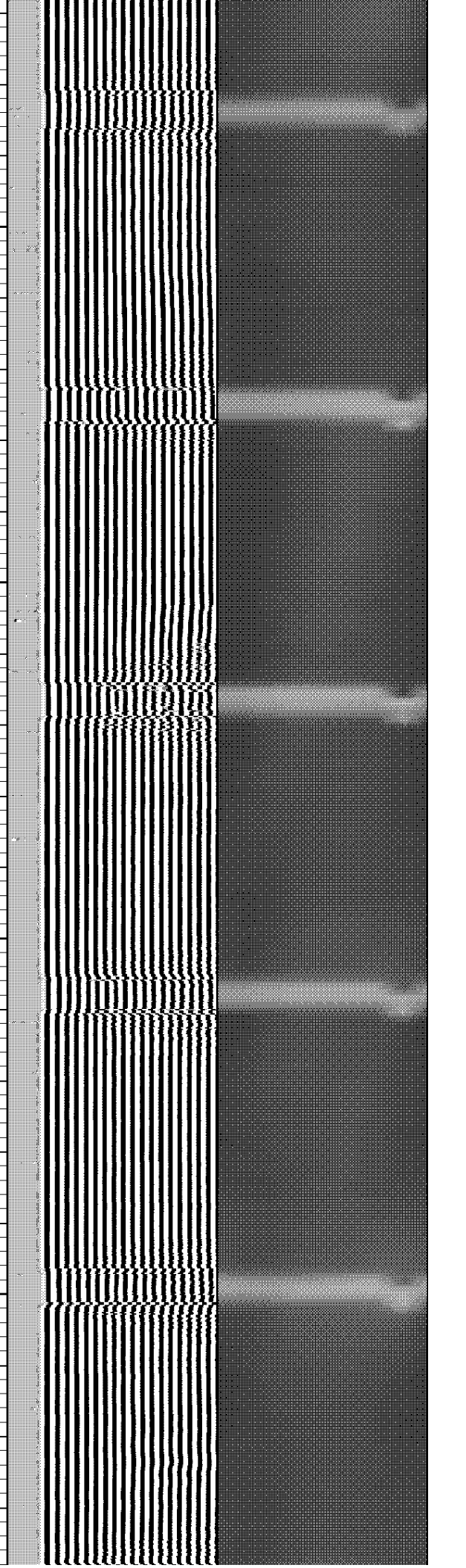
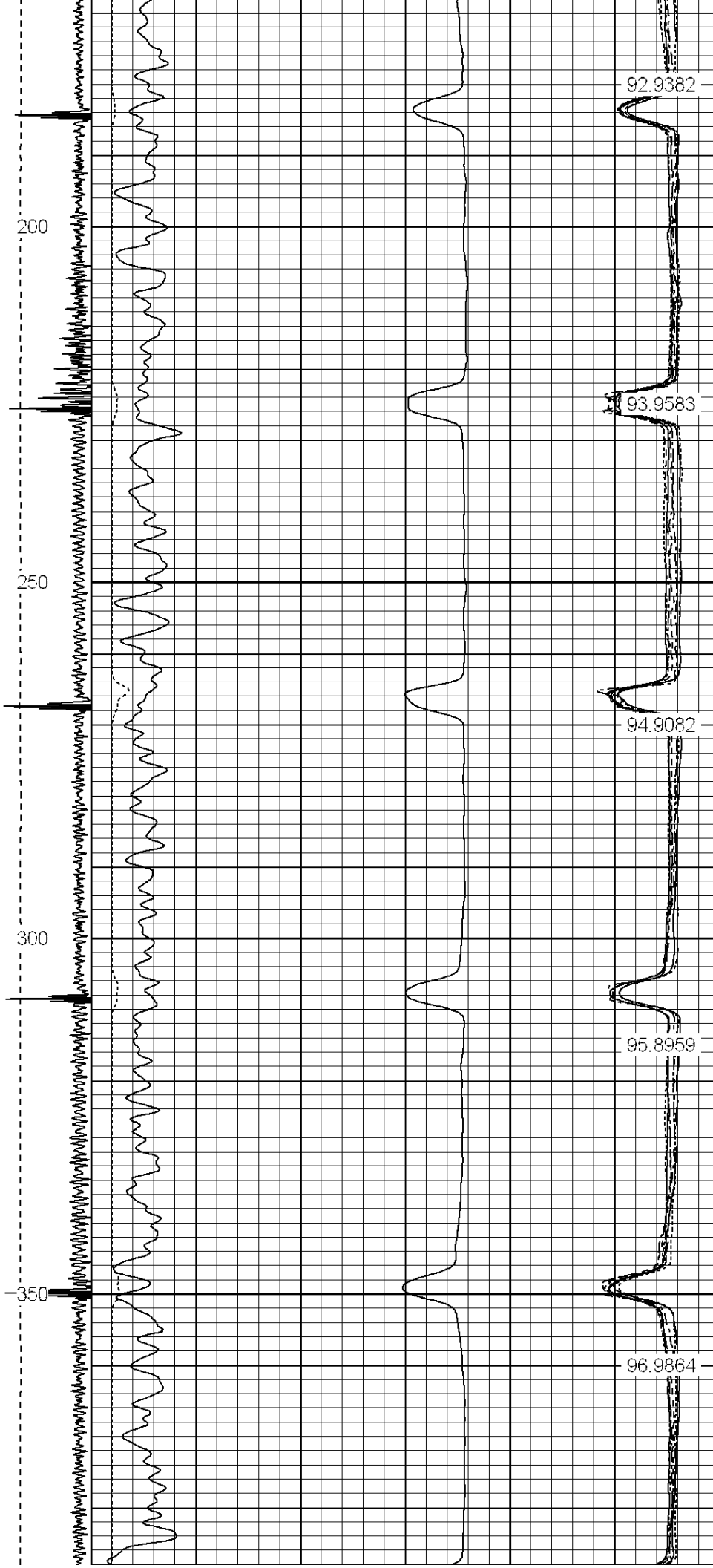
THANK YOU FOR USING WARRIOR ENERGY SERVICES!!!

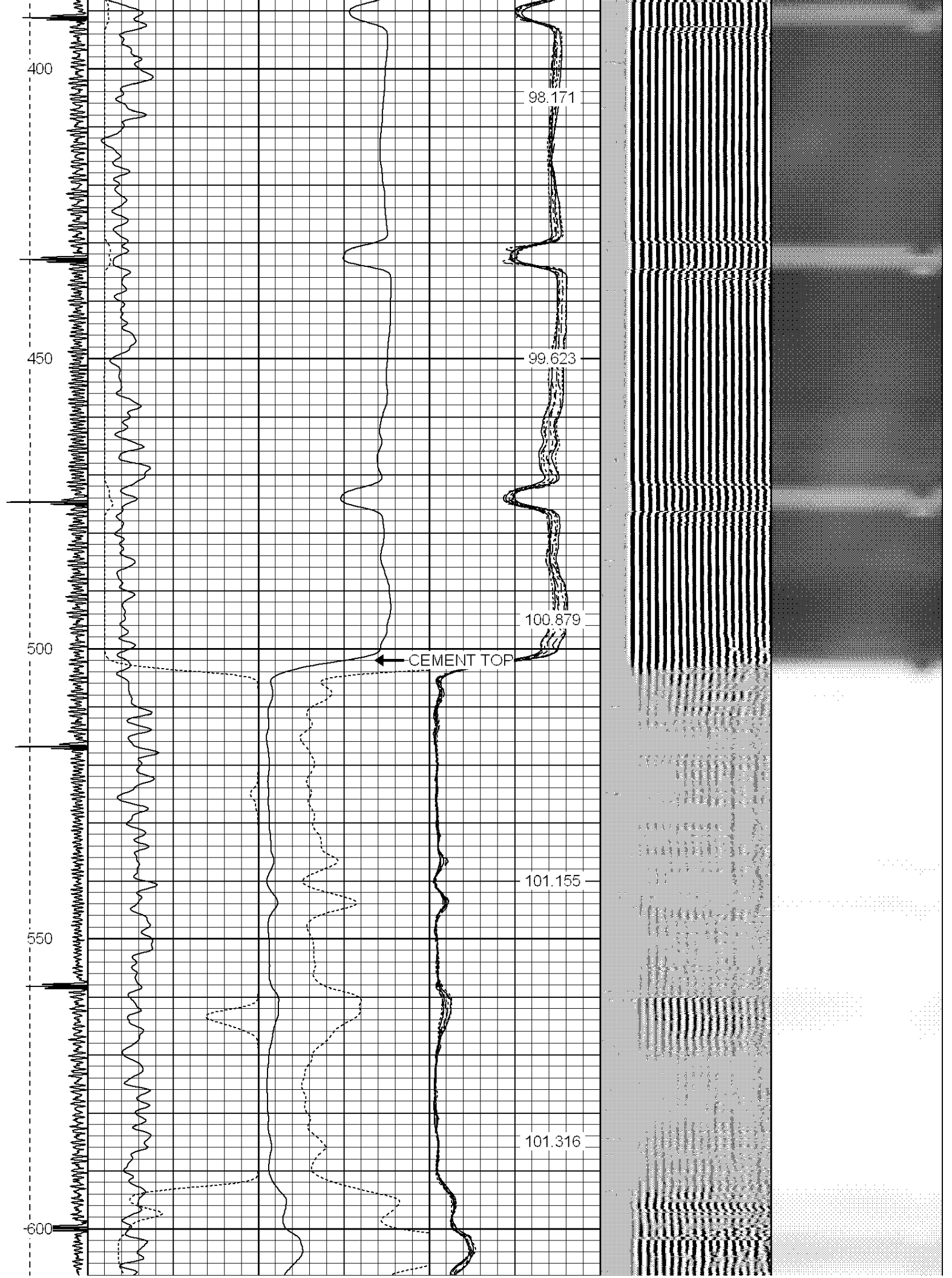
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)

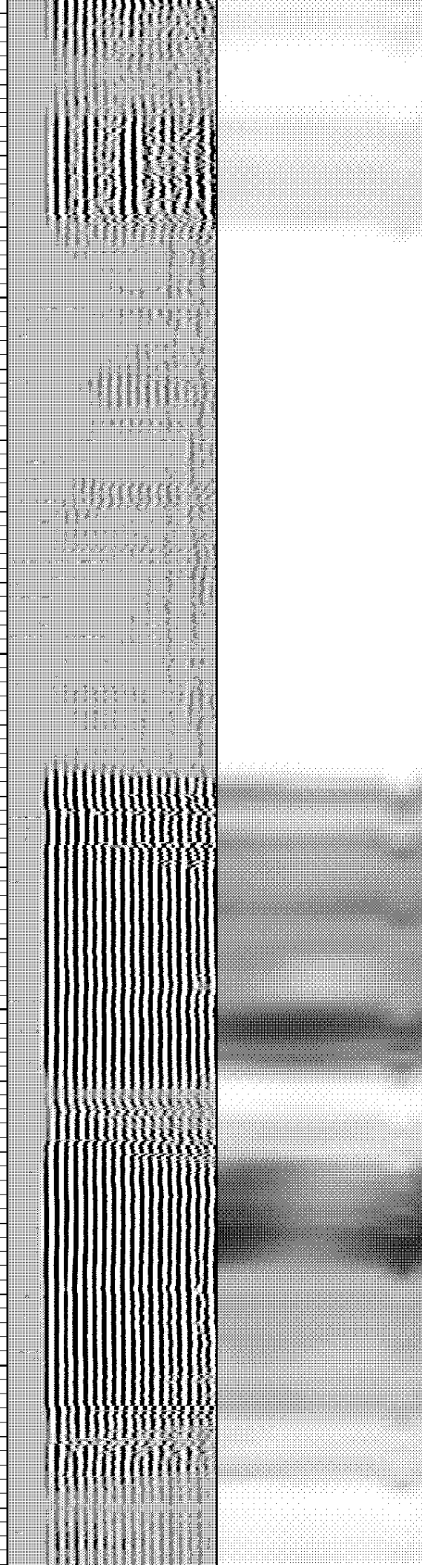
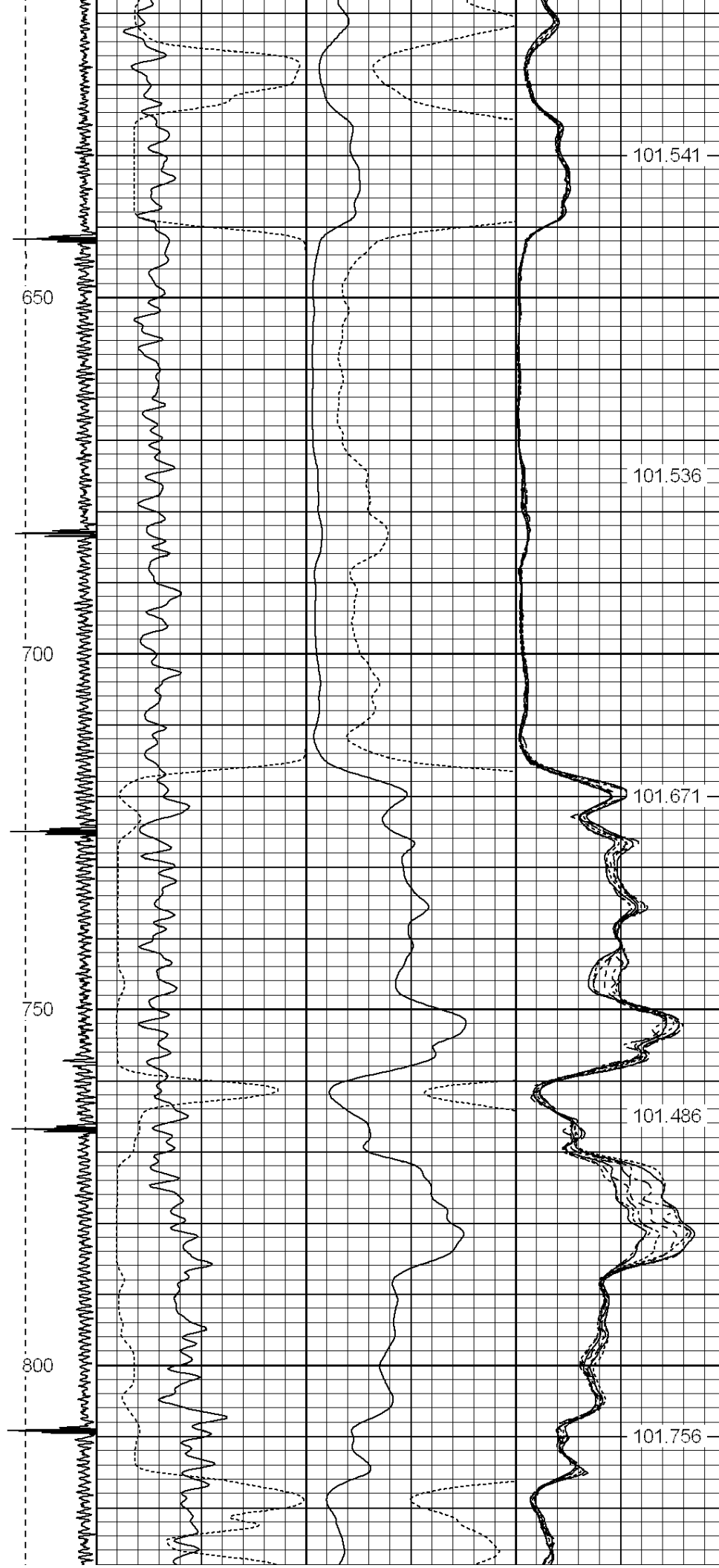
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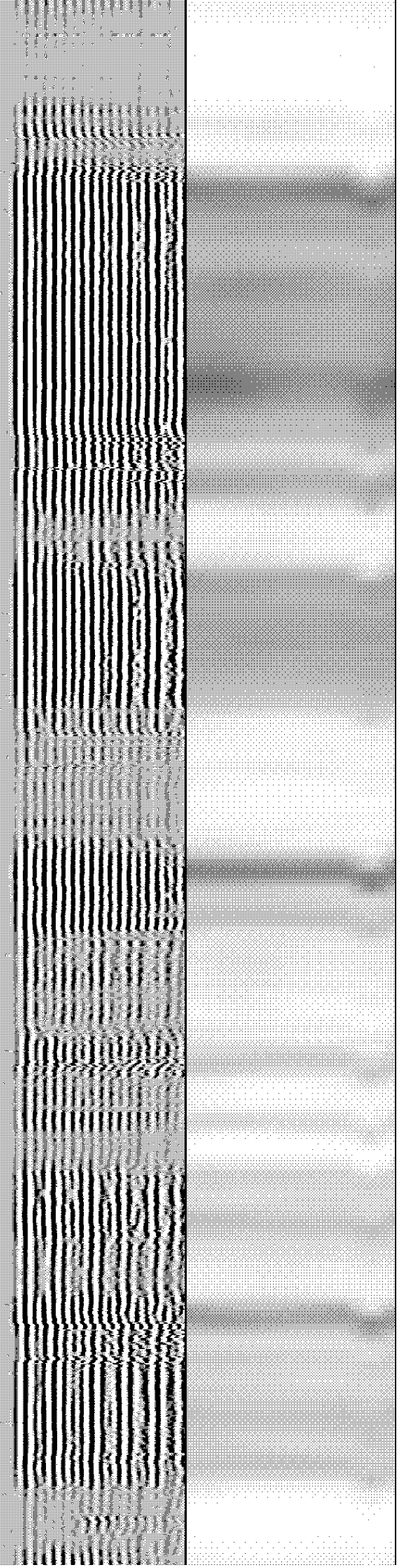
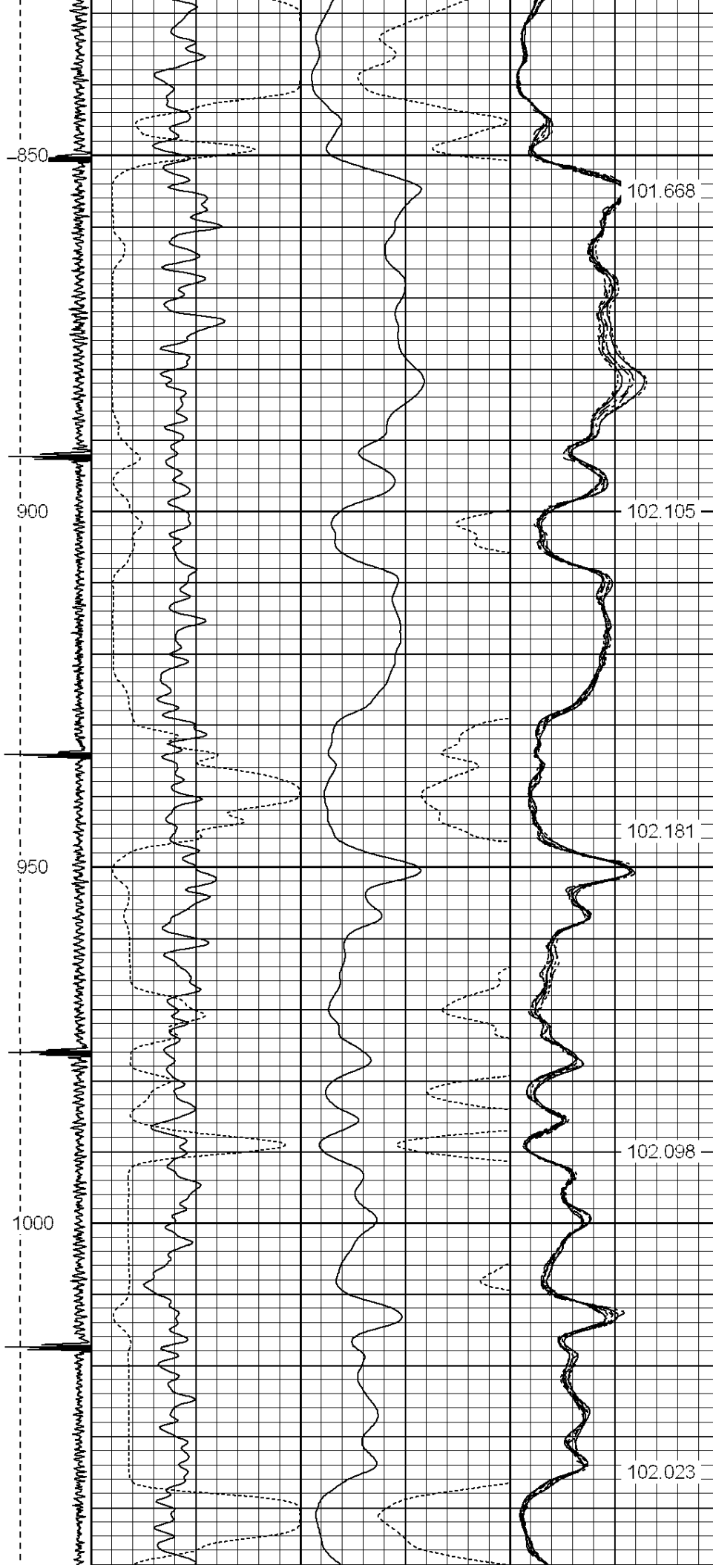
-9	CCL	1	200	TT (usec)	800	0	AMP (mV)	100	0	AMPS1	100	200	VDL	1200	1	Cement Map	8
LSPD			0	GR (GAPI)	200	0	AMPx5 (mV)	20	0	AMPS2	100				1		100
(ft/min)			200	GR (GAPI)	400				0	AMPS4	100						
0		250							0	AMPS5	100						
									0	AMPS6	100						
									0	AMPS7	100						
									0	AMPS8	100		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

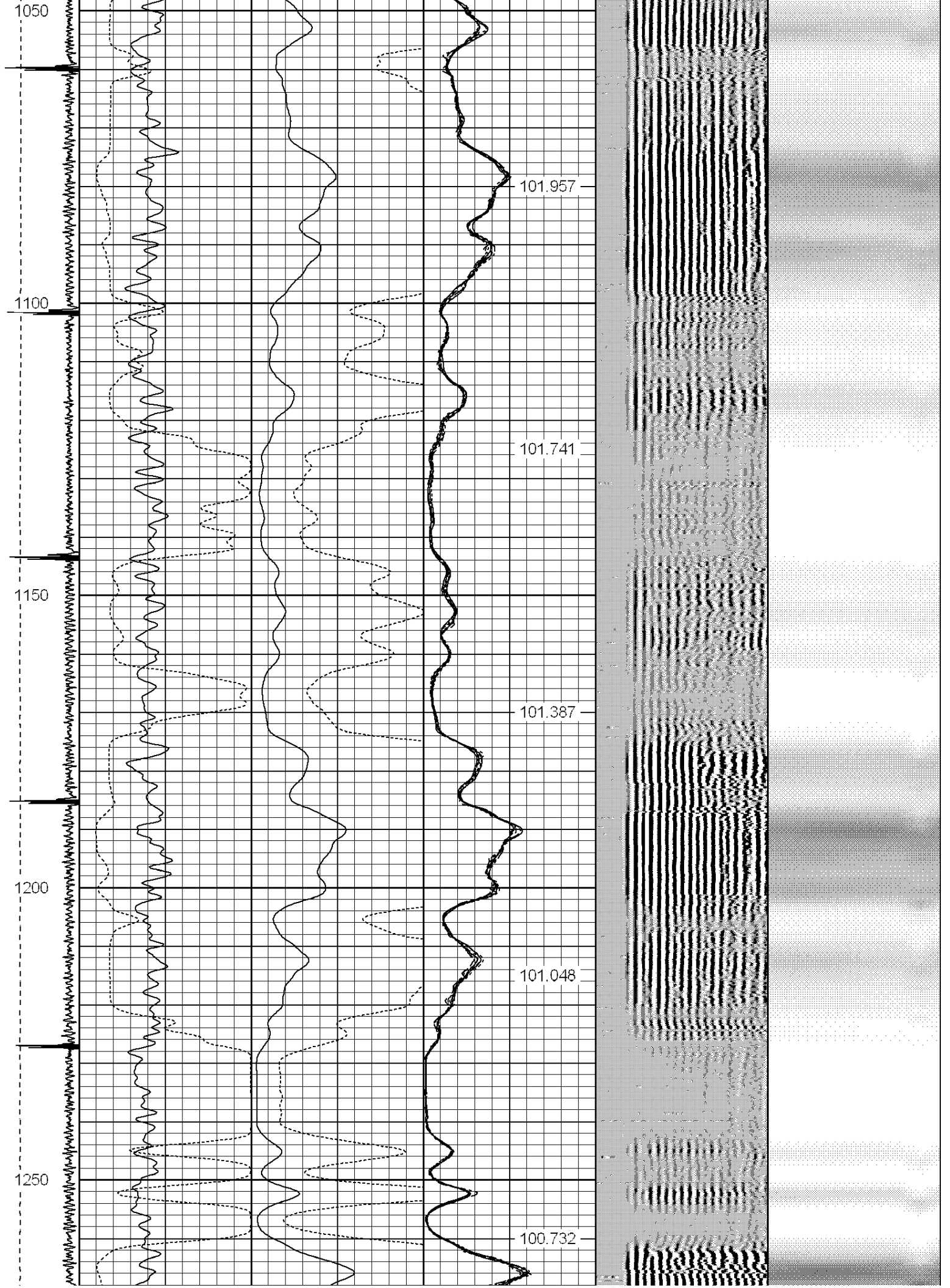


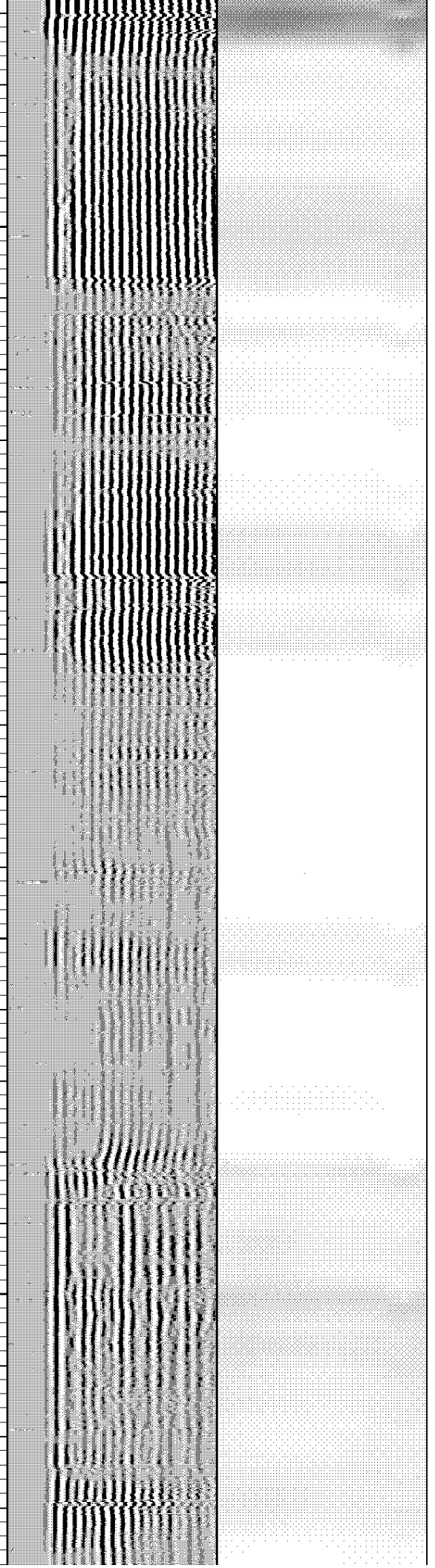
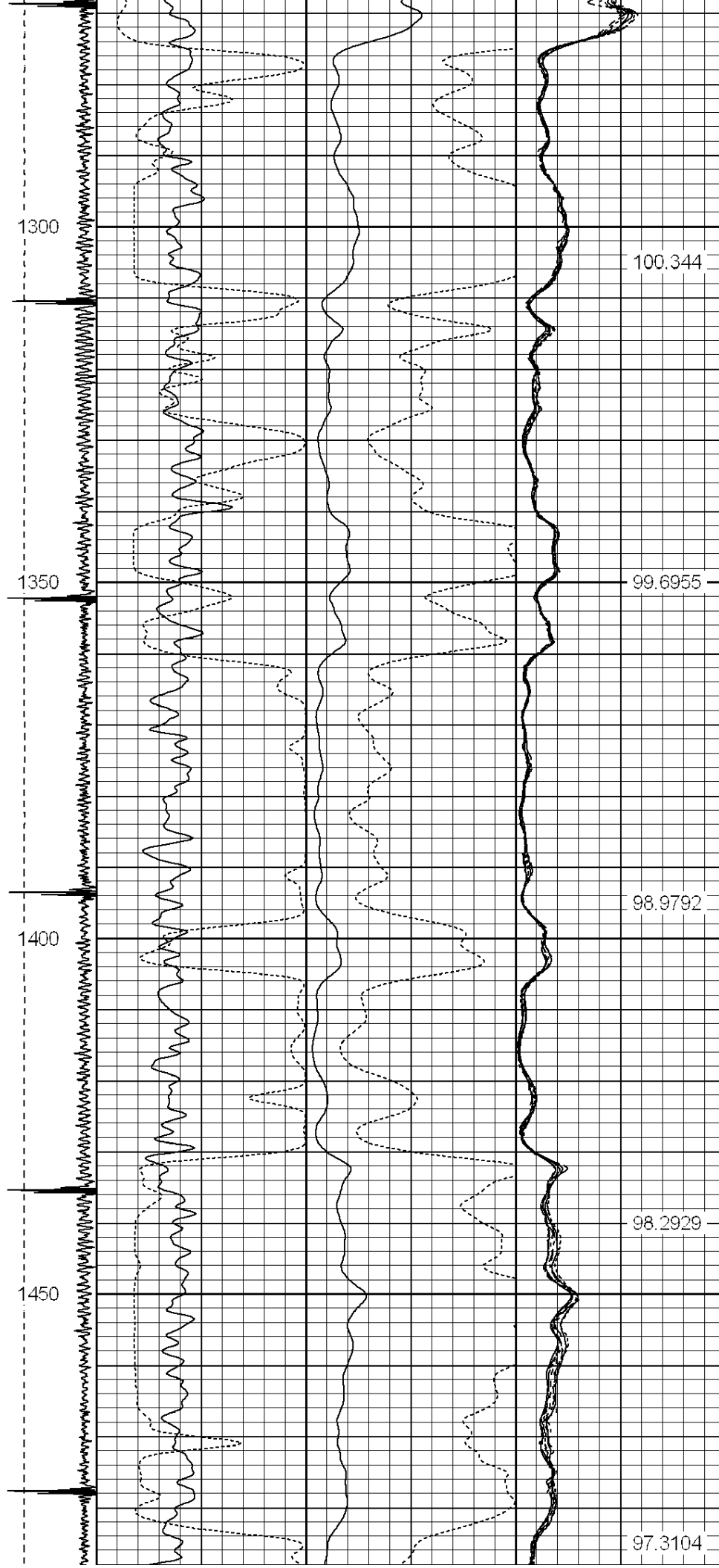


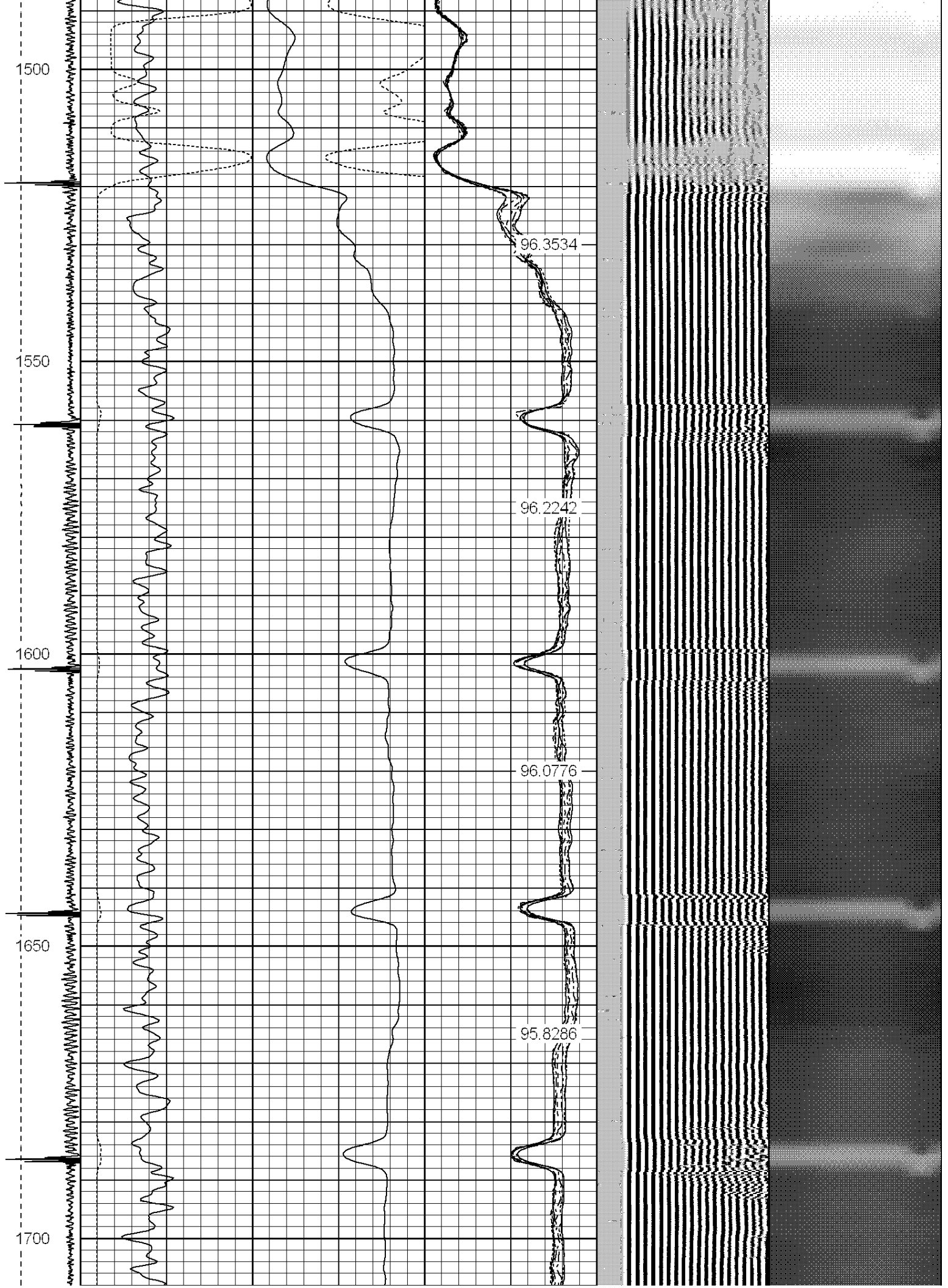


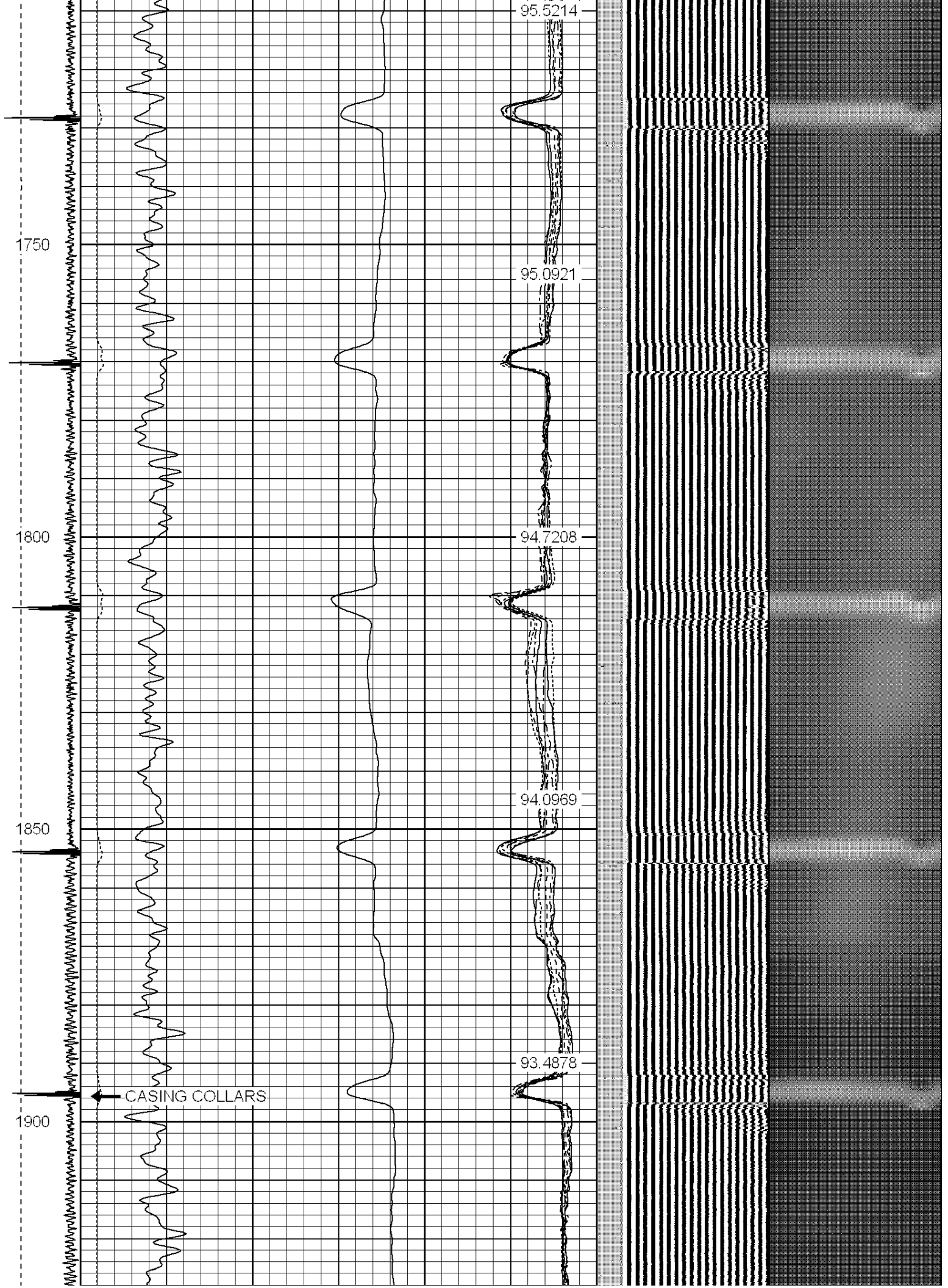


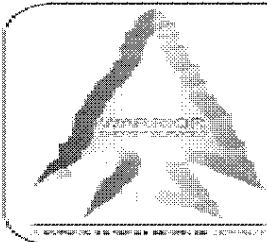
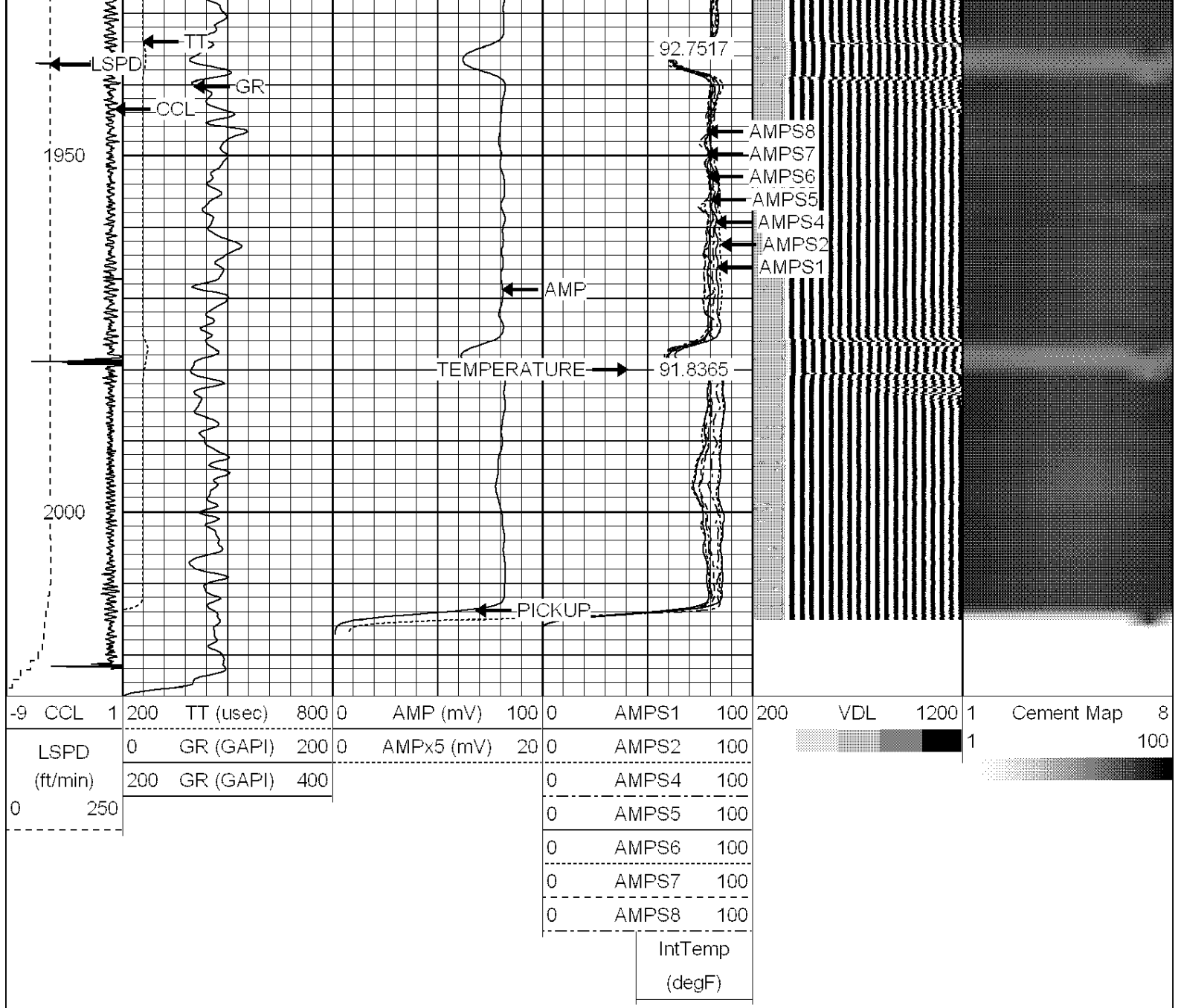












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