

RADIAL CEMENT BOND
GAMMA RAY
CCL

Company ANADARKO PETROLEUM CORPORATION		Company ANADARKO PETROLEUM CORPORATION					
Well SHULTZ 17-16	Well SHULTZ 17-16	Well SHULTZ 17-16					
Field WATTENBERG	Field WATTENBERG	Field WATTENBERG					
County WELD	County WELD	County WELD					
State CO	State CO	State CO					
Location: SHL: 1472' FNL & 1268' FEL SE/NE LAT: 40.31580 & LONG: -104.89100		Other Services					
SEC 16 TWP 4N RGE 67W		Elevation					
Permanent Datum	GL	Elevation	KB. 4862'				
Log Measured From	KB 12'		D.F. 4861'				
Drilling Measured From	KB		G.L. 4850'				
Date	3-8-2016						
Run Number	ONE						
Depth Driller	7390'						
Depth Logger	2770'						
Bottom Logged Interval	276-1'						
Top Log Interval	SURFACE						
Open Hole Size	7.875						
Type Fluid	WATER						
Density / Viscosity	1.0						
Max. Recorded Temp.	98 DEG F						
Estimated Cement Top	2615' & 344'						
Time Well Ready	N/A						
Time Logger on Bottom	N/A						
Equipment Number	4310						
Location	GREELEY						
Recorded By	N. BREHMER						
Witnessed By	N. LANG						
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	622'			
Prot. String							
Production String	4.5	11.6#	SURFACE	7382'			
Liner							

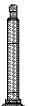
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on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

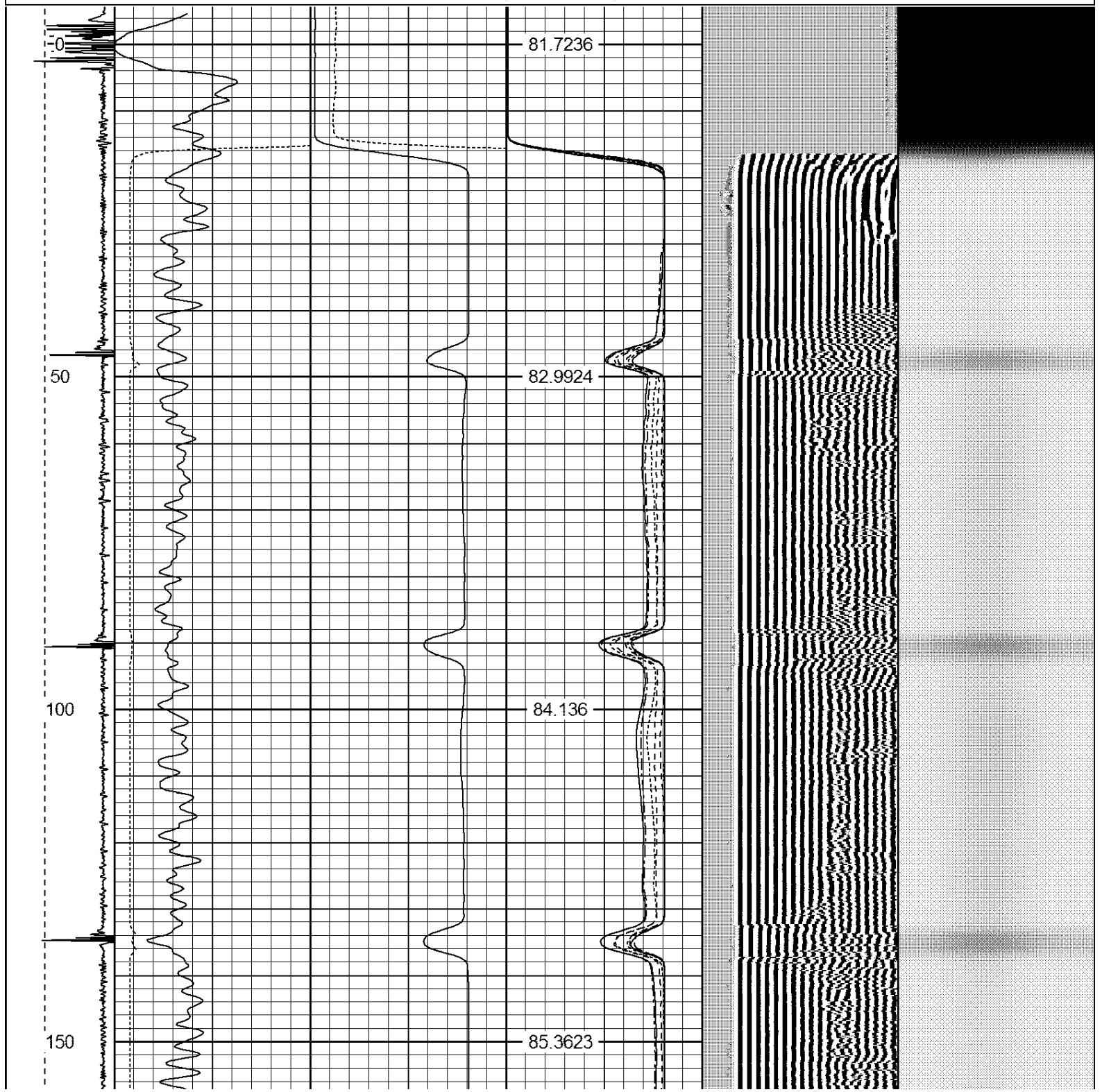
RAN CBL TO VERIFY CEMENT BOND
HOLE WAS LOADED THE NIGHT BEFORE LOGGING
CORRELATED TO HALIBURTON CBL 12-30-08
CALIBRATED FREE PIPE @1585', 81mA IN 4.5"

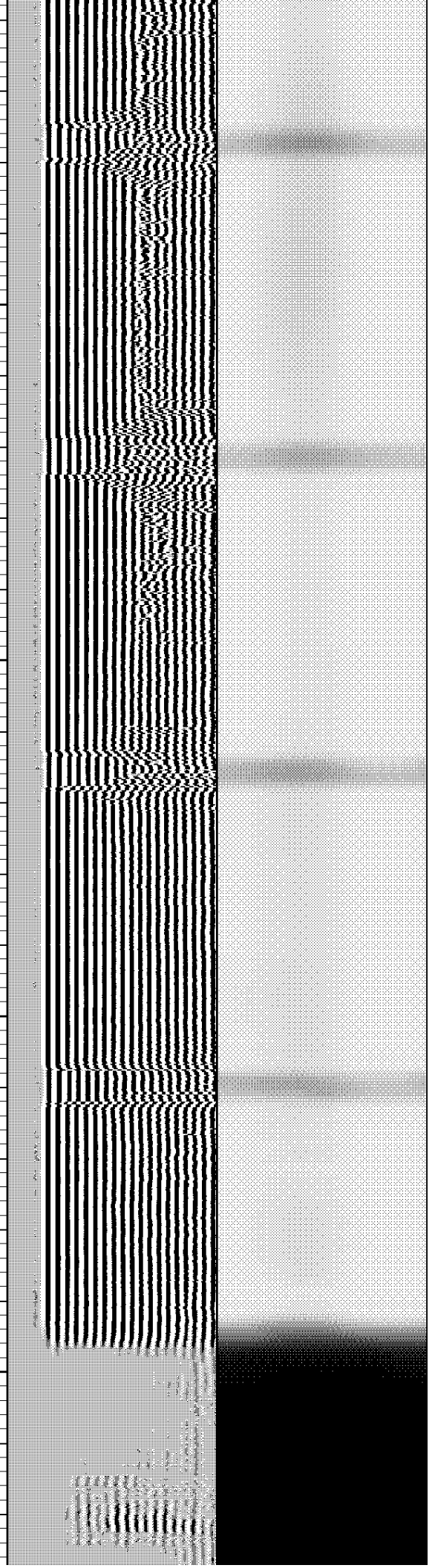
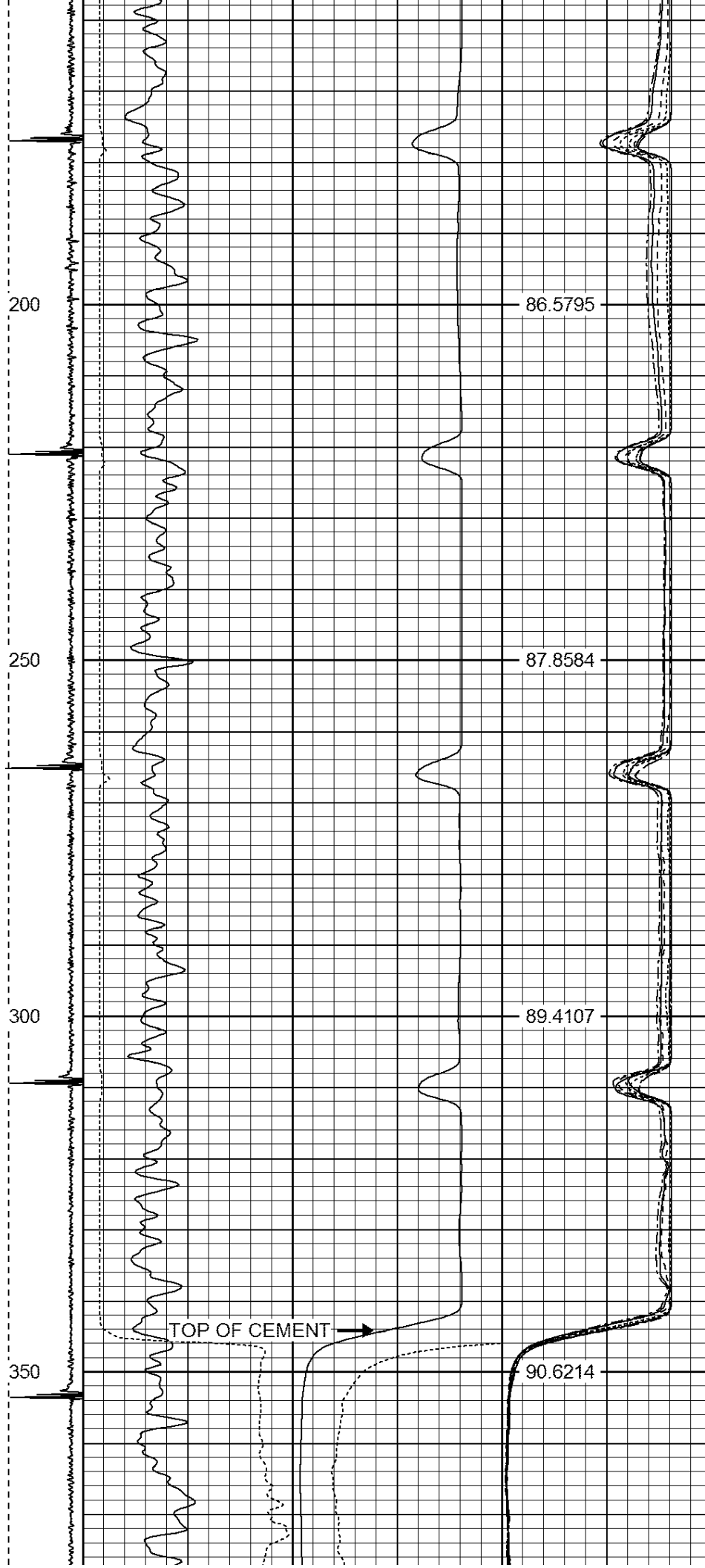
THANK YOU FOR USING IPS !!!!!!!

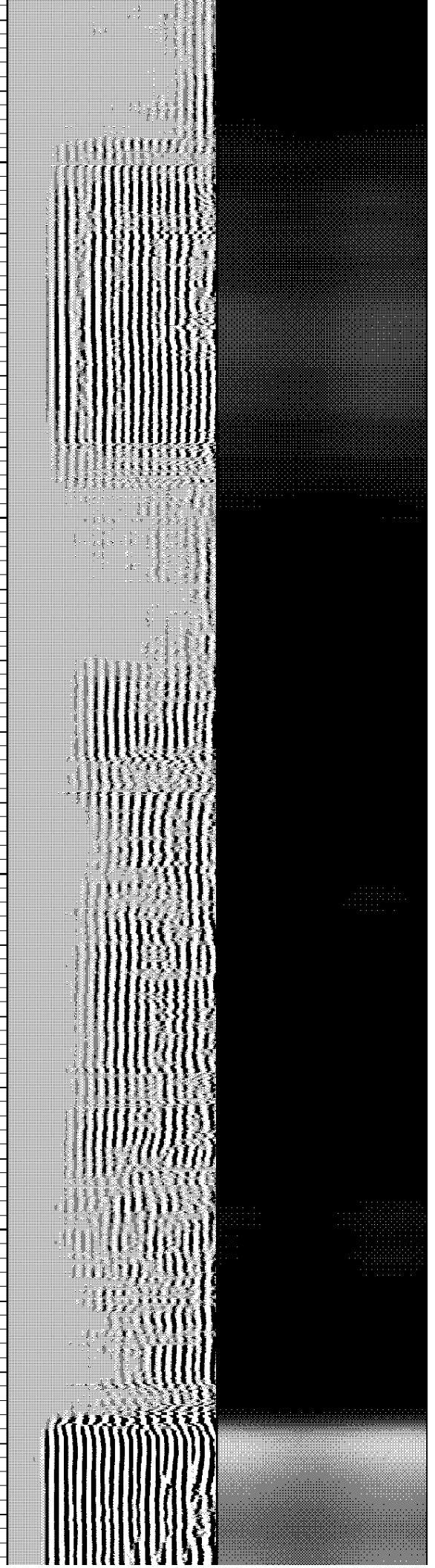
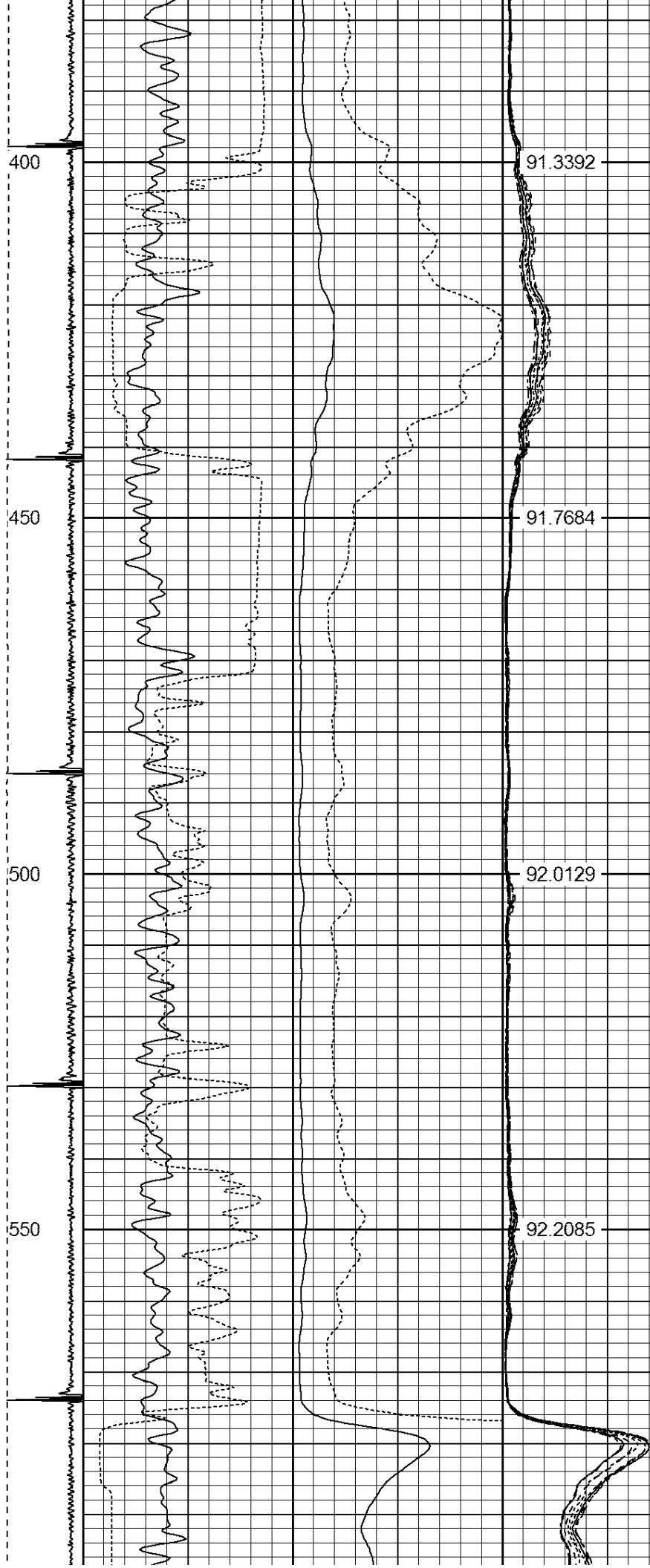
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			1_4	1.00	1.36	5.00

			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: shultz 17-16.db: field/well/run1/pass2 Total Length: 19.96 ft Total Weight: 165.00 lb O.D. 2.75 in						

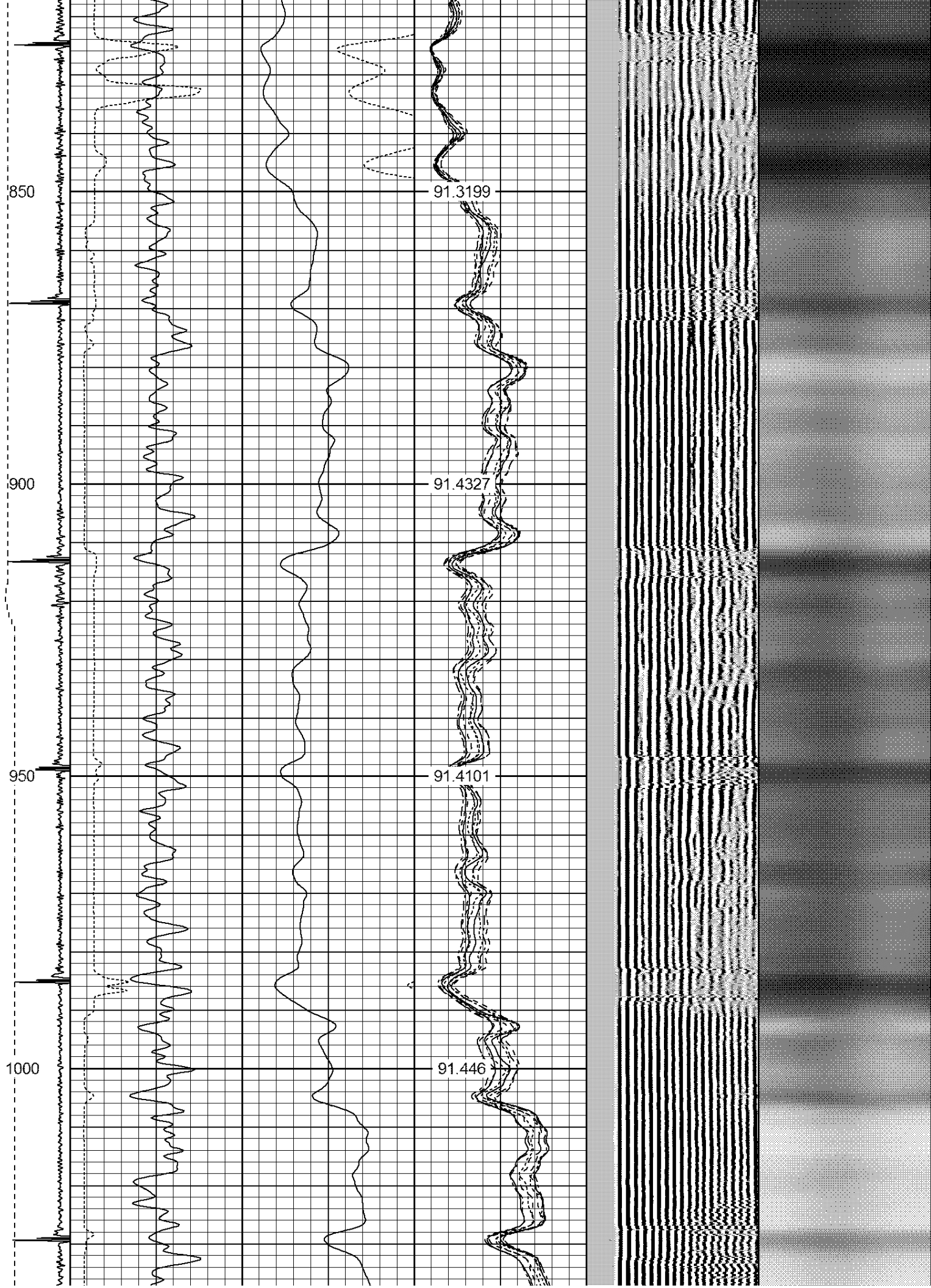
-9	CCL	1	200	TT (usec)	1000	0	AMP (mV)	100	0	AMPS1	100	200	VDL	1200	1	Cement Map	8
LSPD			0	GR (GAPI)	200	0	AMPx5 (mV)	20	0	AMPS2	100				100		1
(ft/min)			200	GR (GAPI)	400				0	AMPS3	100						
0		250							0	AMPS4	100						
									0	AMPS5	100						
									0	AMPS6	100						
									0	AMPS7	100	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

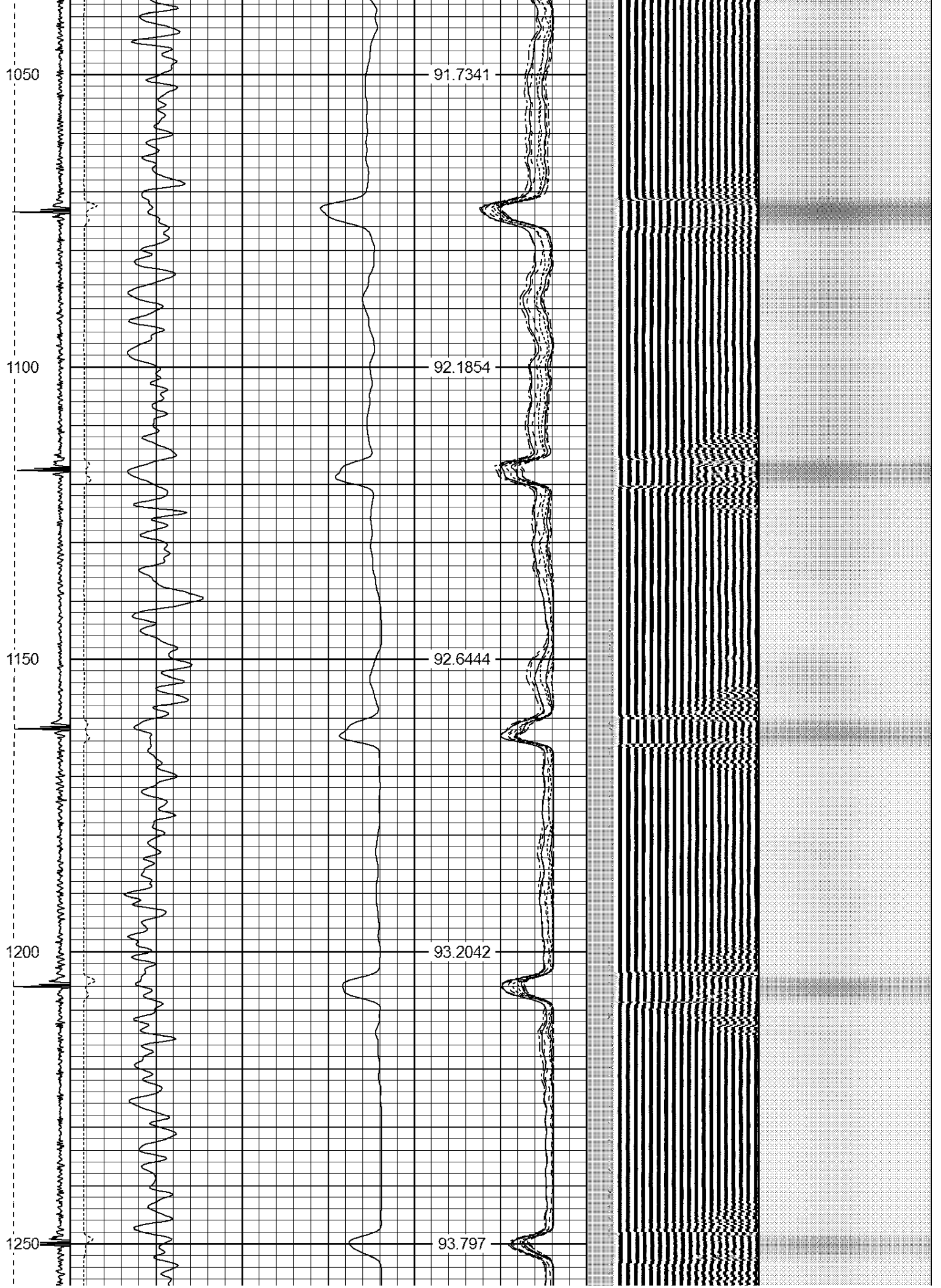


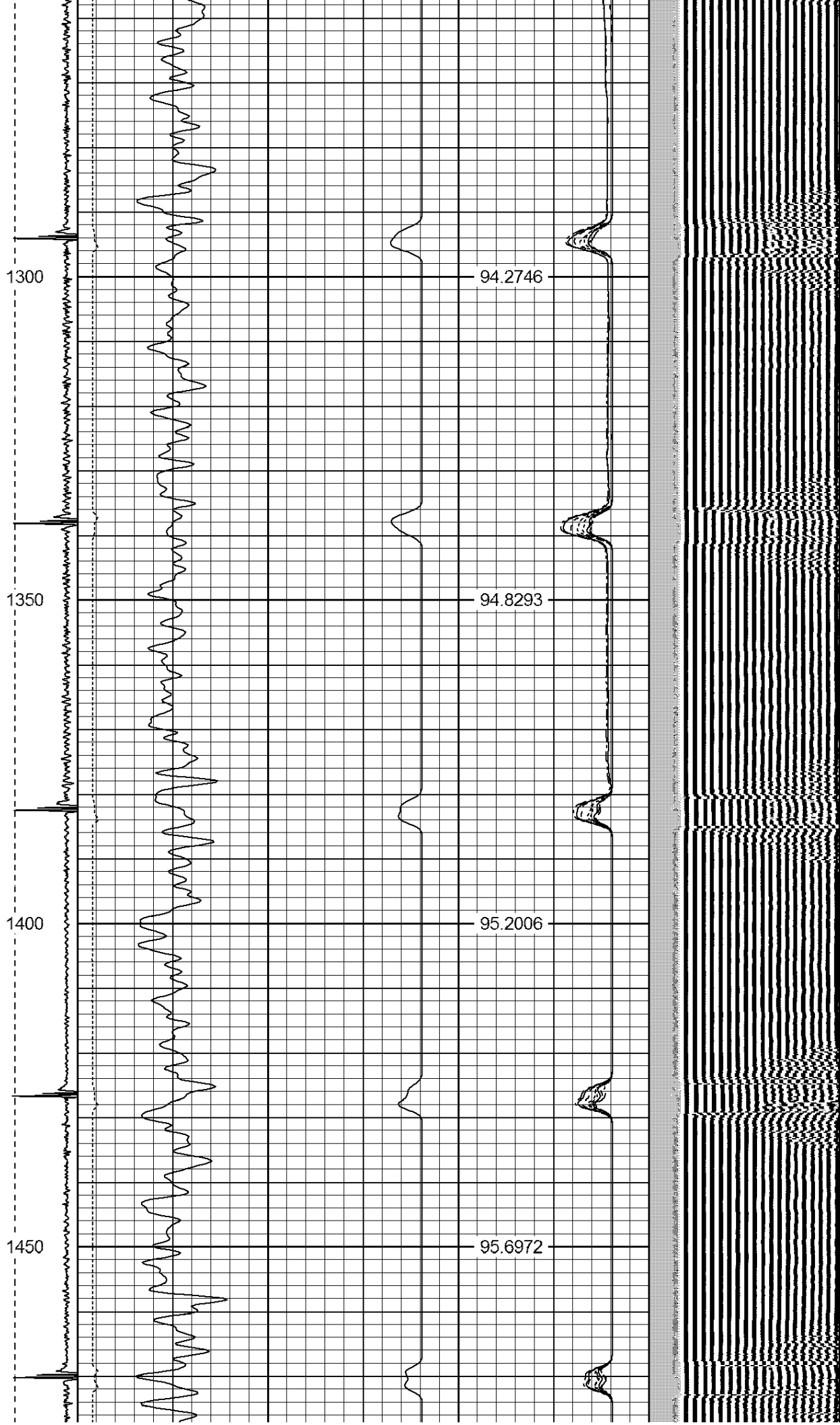












1500

96.1445

1550

96.5568

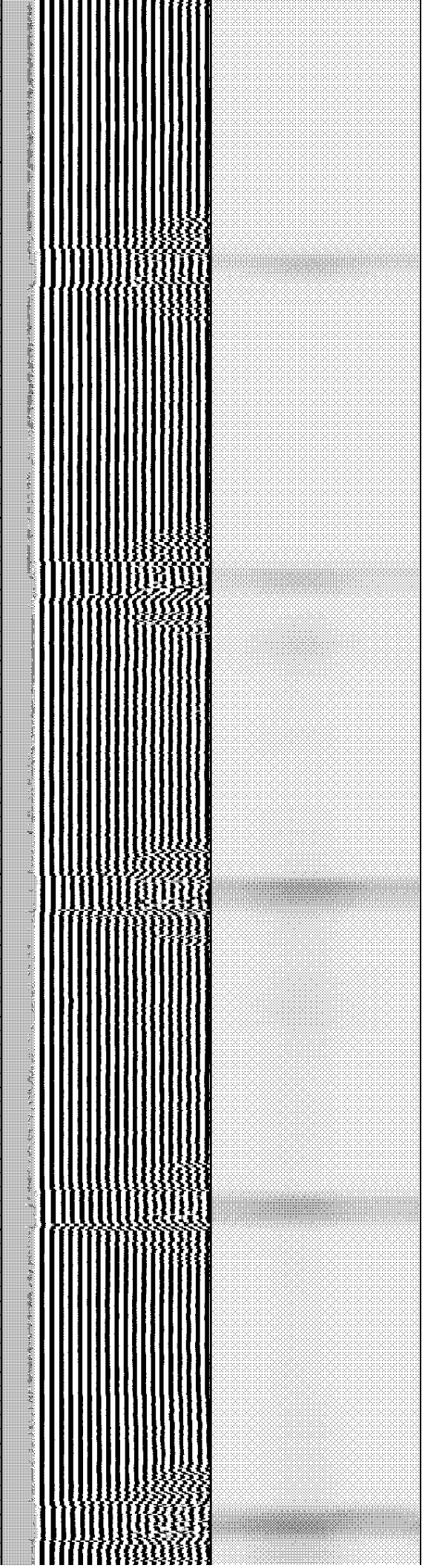
FREE PIPE CALIBRATION →
81mA IN 4.5"

1600

97.0349

1650

97.5534



1700

97.7134

1750

97.8575

1800

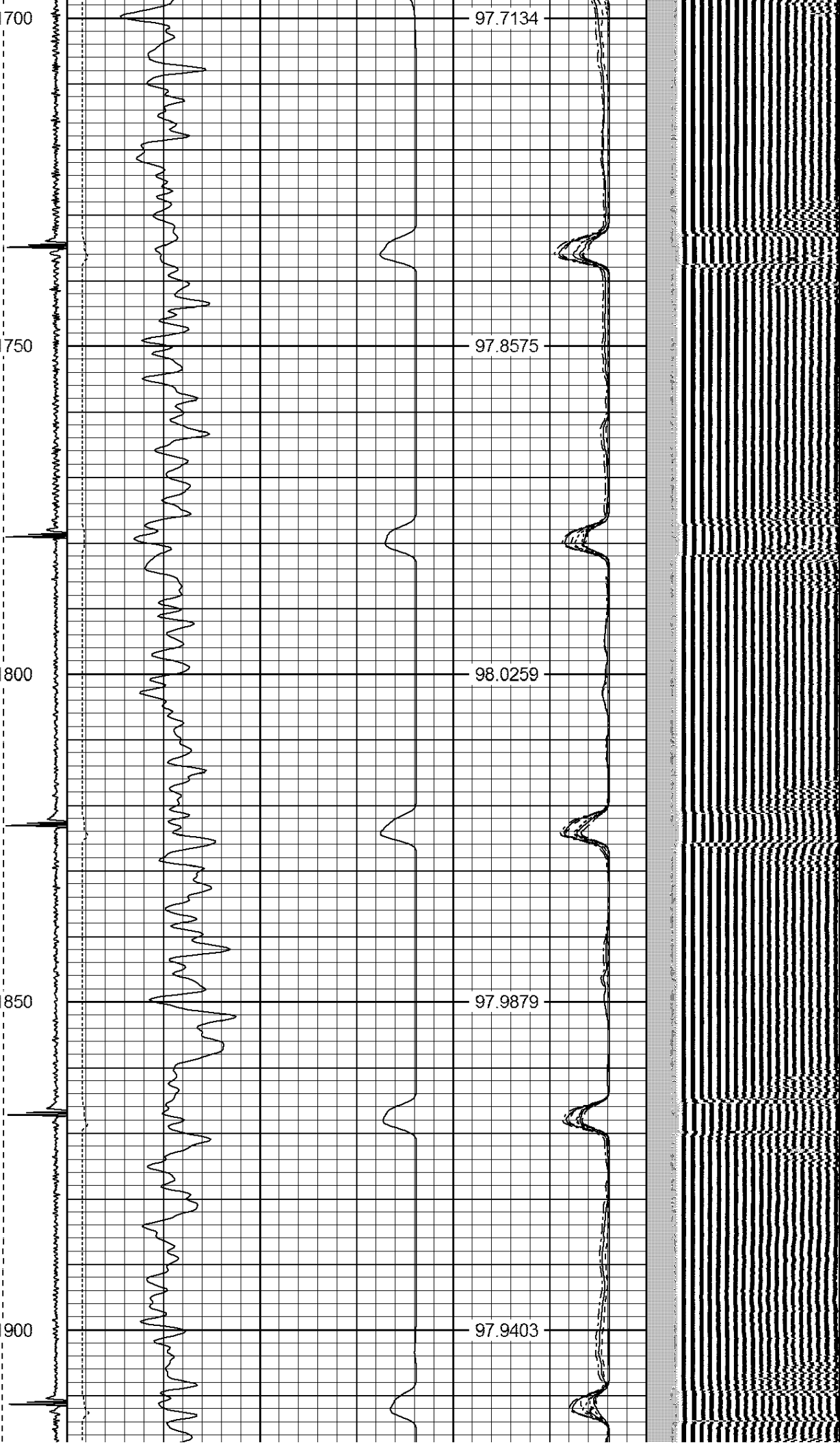
98.0259

1850

97.9879

1900

97.9403



1950

97.7397

2000

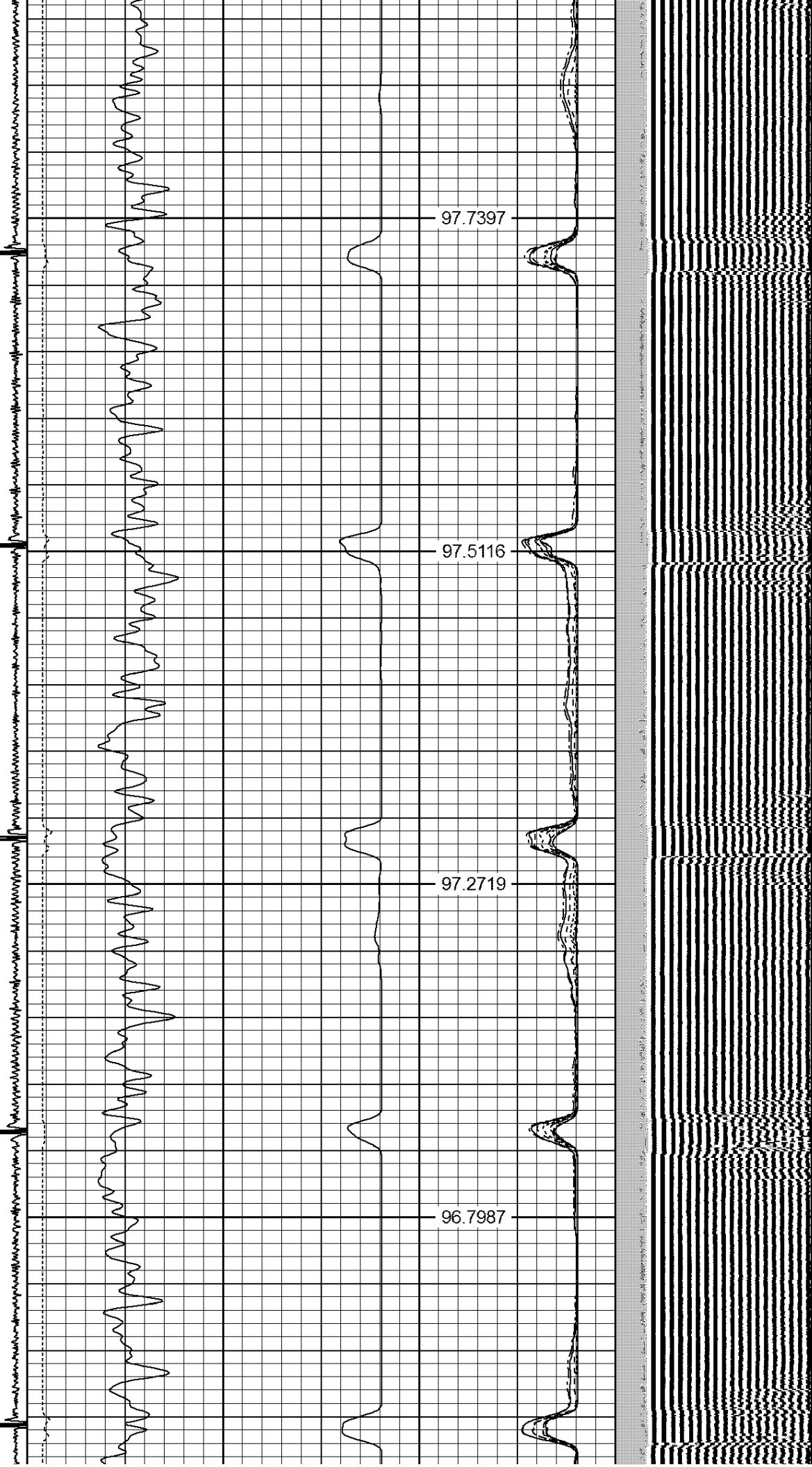
97.5116

2050

97.2719

2100

96.7987



2150

96.2338

2200

95.6718

2250

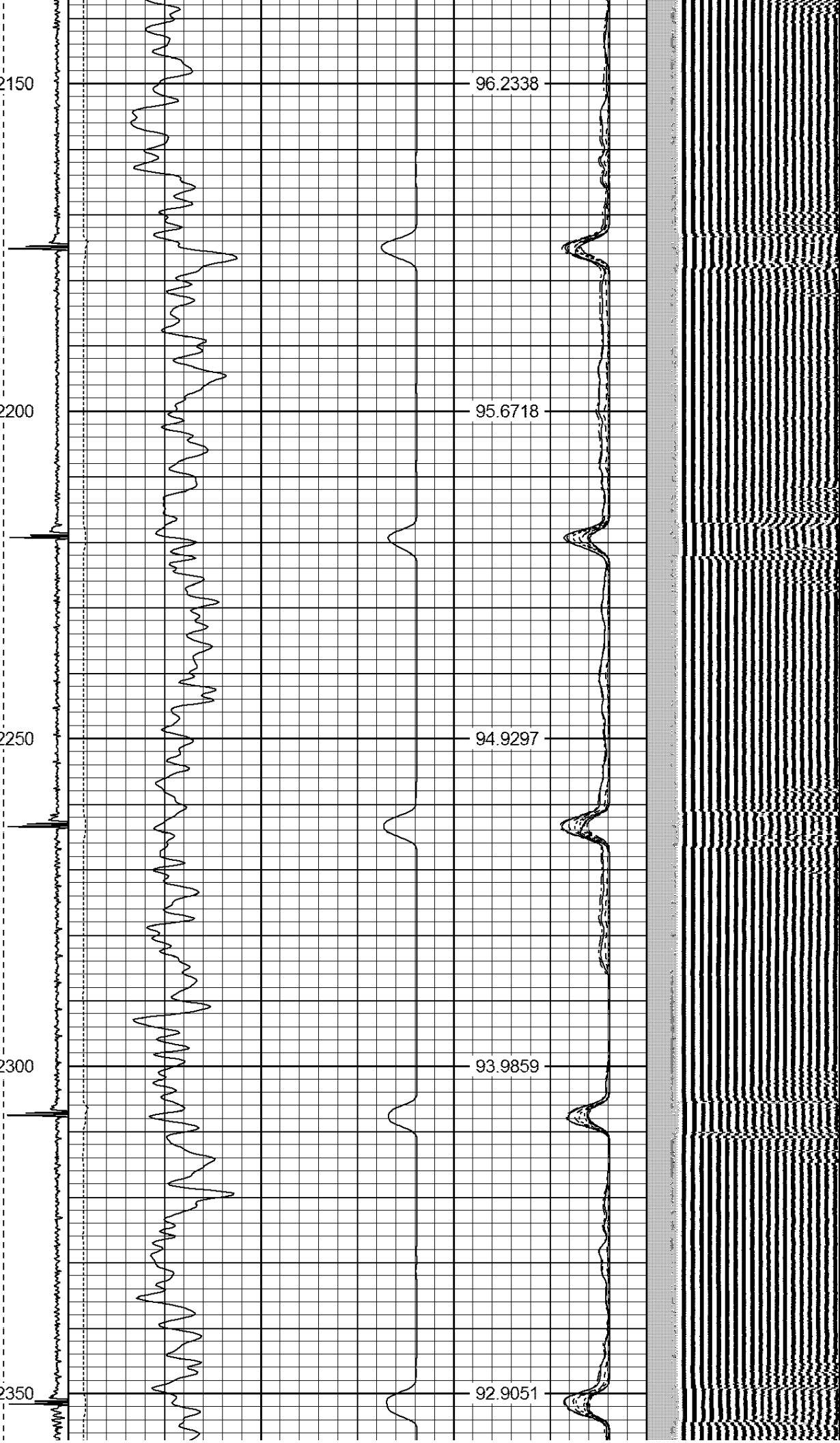
94.9297

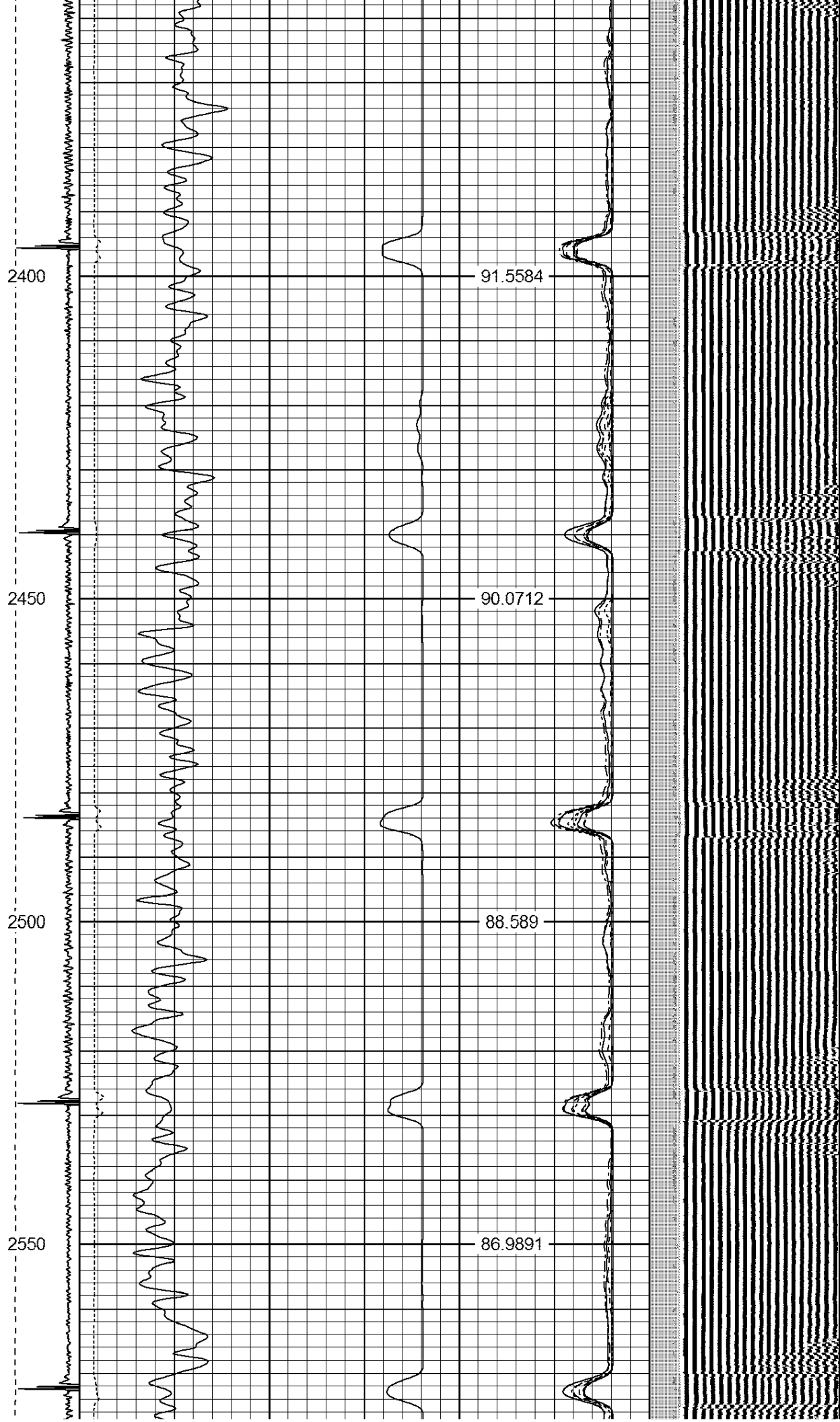
2300

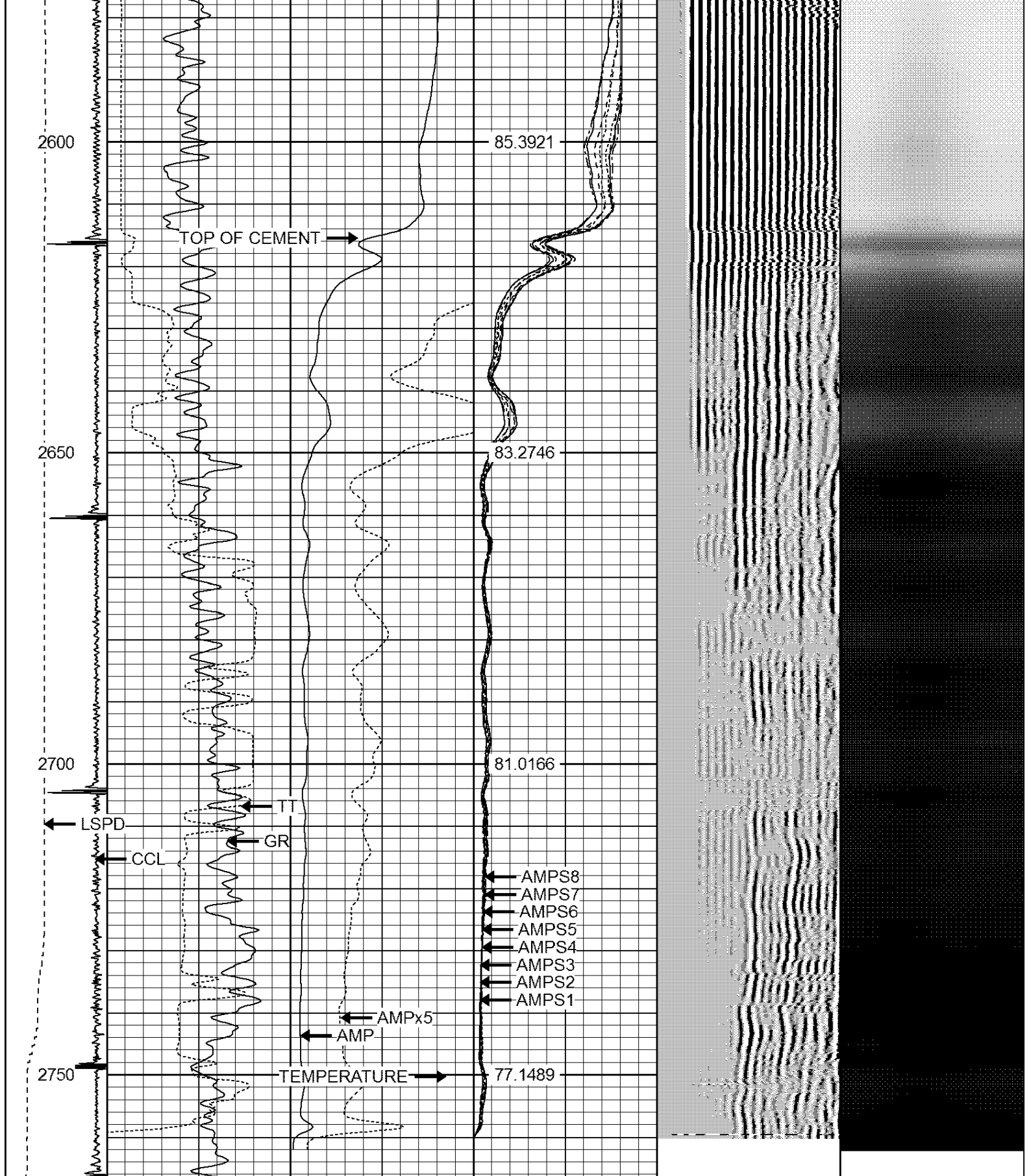
93.9859

2350

92.9051







-9	CCL	1	200	TT (usec)	1000	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							

0	AMPS7	100
0	AMPS8	100
IntTemp		
(degF)		

Calibration Report

Database File: shultz 17-16.db
Dataset Pathname: pass2
Dataset Creation: Tue Mar 08 20:12:15 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

Compensated Neutron Calibration Report

Serial Number: 275
Tool Model: 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 Casing Diameter: 4.500 in
Calibration Depth: 195.617 ft

Master Calibration, performed Tue Mar 08 20:07:23 2016:

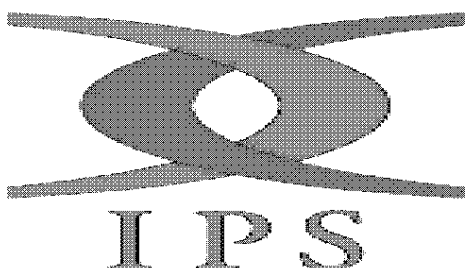
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	2.500	2.000	81.196	31.713	1.915
CAL	1.454	2.500				
5'	0.003	2.500	2.000	81.196	31.712	1.916
SUM						
S1	0.005	2.500	0.500	81.000	32.269	0.328
S2	0.004	2.500	0.500	81.000	32.246	0.385
S3	0.005	2.500	0.500	81.000	32.258	0.354
S4	0.004	2.500	0.500	81.000	32.251	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 Tue Mar 08 19:56:01 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 SHULTZ 17-16
Field WATTENBERG
County WELD
State CO