

Patterson

**CEMENT BOND
GAMMA RAY**

CompanyPioneer Natural Resources		Company Pioneer Natural Resources	
Well	Cowboy 14-5 Tr	Well	Cowboy 14-5 Tr
Field	Purgatorie River	Field	Purgatorie River
County	Las Animas	County	Las Animas
State	CO	State	CO
Location:		API # : 05 071 08551 00	
SEC 5 TWP 32S RGE 66W		Other Services DEVI. SURV./ TEMP.	
Permanent Datum	Ground Level	Elevation	7798'
Log Measured From	Kelly Bushing 4' Above G.L.	K.B. 7802'	
Drilling Measured From	Kelly Bushing	D.F. -----	
		G.L. 7798'	
Date	10/24/05		
Run Number	one		
Depth Driller	2100'		
Depth Logger	2078'		
Bottom Logged Interval	2074'		
Top Log Interval	Surf.		
Open Hole Size	7 7/8"		
Type Fluid	water		
Density / Viscosity	///		
Max. Recorded Temp.	111F		
Estimated Cement Top	Surf.		
Time Well Ready	ROA		
Time Logger on Bottom	3:15		
Equipment Number	T244		
Location	Trinidad		
Recorded By	Worley		
Witnessed By			
Borehole Record		Tubing Record	
Run Number	Bit	From	To
		Size	Weight
			From
			To
Casing Record	Size	Wgt/Ft	Top
Surface String	8 5/8"		00
Prot. String			
Production String	5 1/2"		00
Liner			NA

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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

Aguilar West To Gulnare, Left Thru Jarosa Gravel Pit,
At Four-Way Stay Right, Then First Right, Next Left To Location.

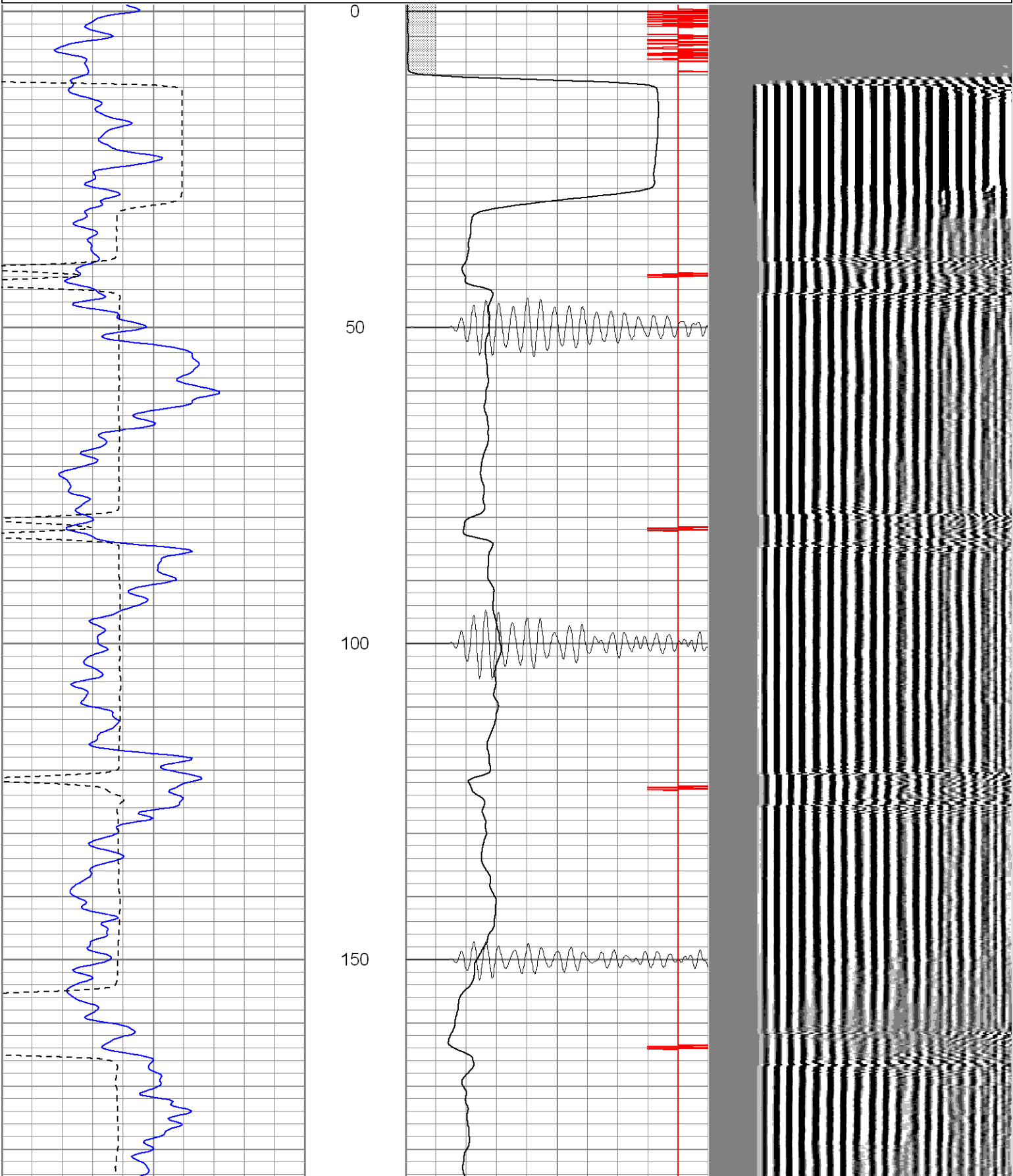
1.5 Degrees Of Deviation At T.D.

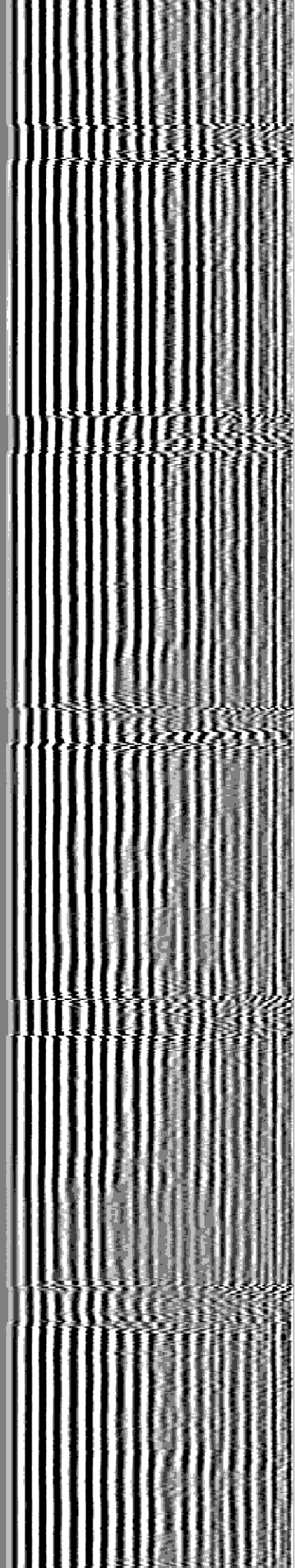
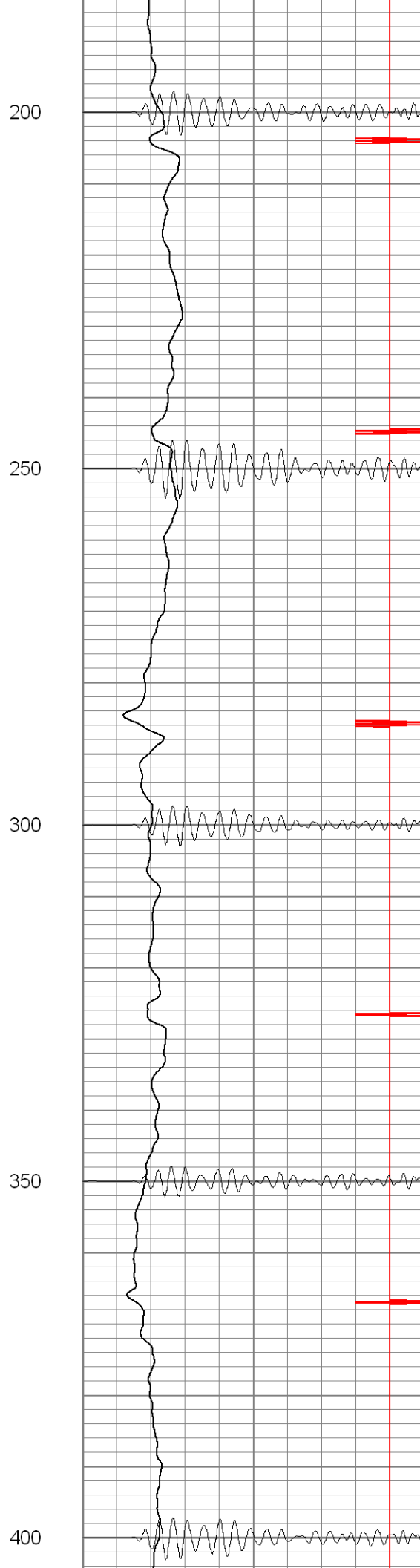
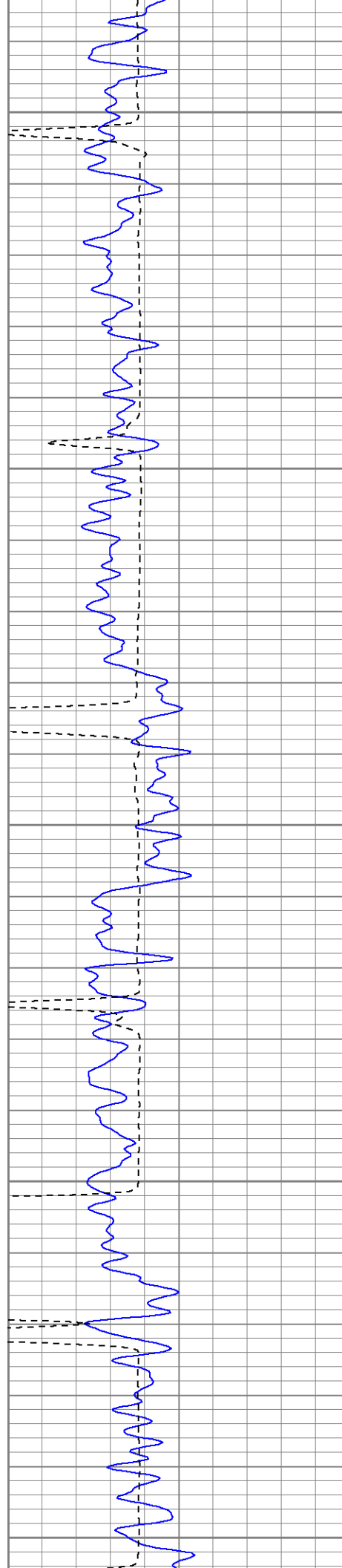
Patterson

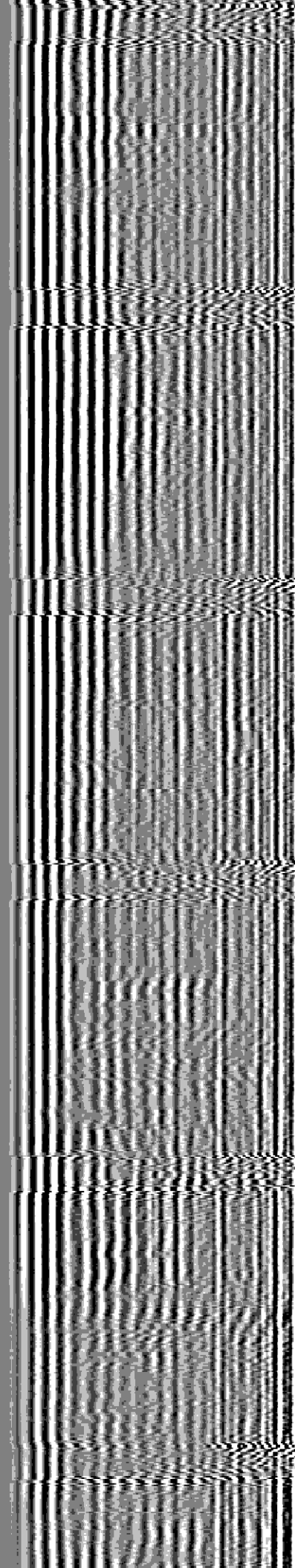
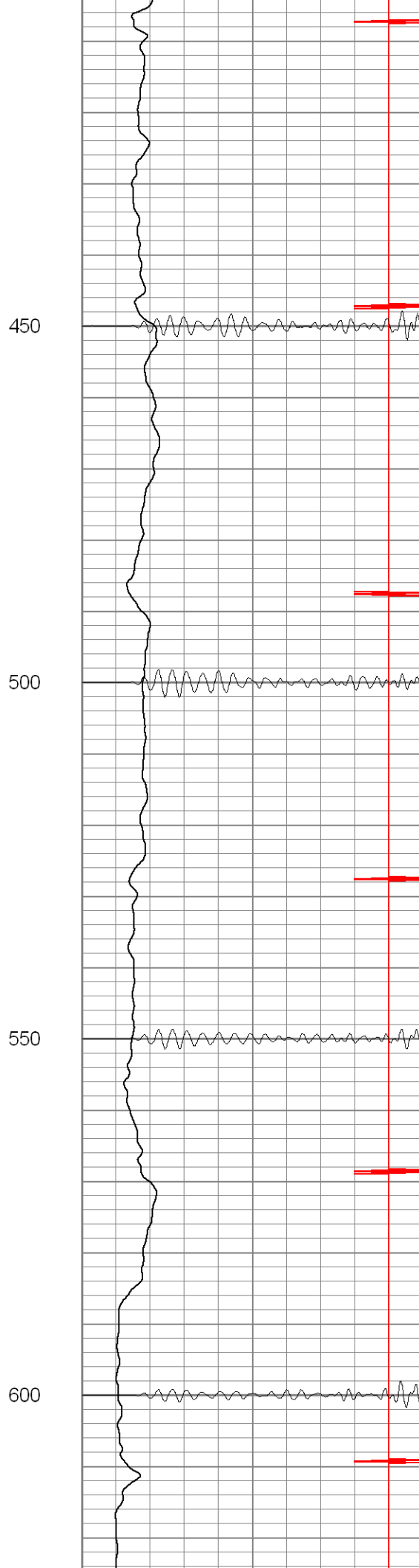
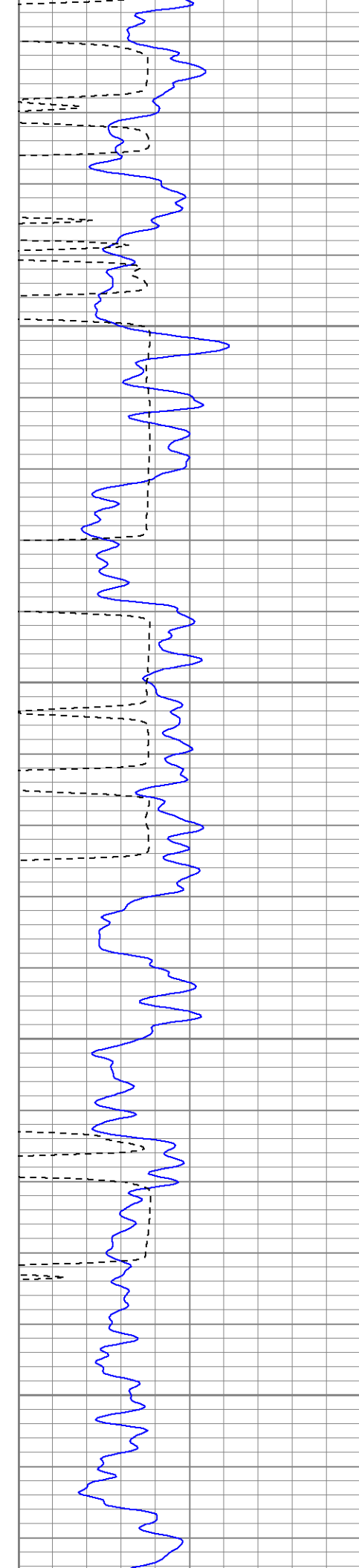
Main Pass

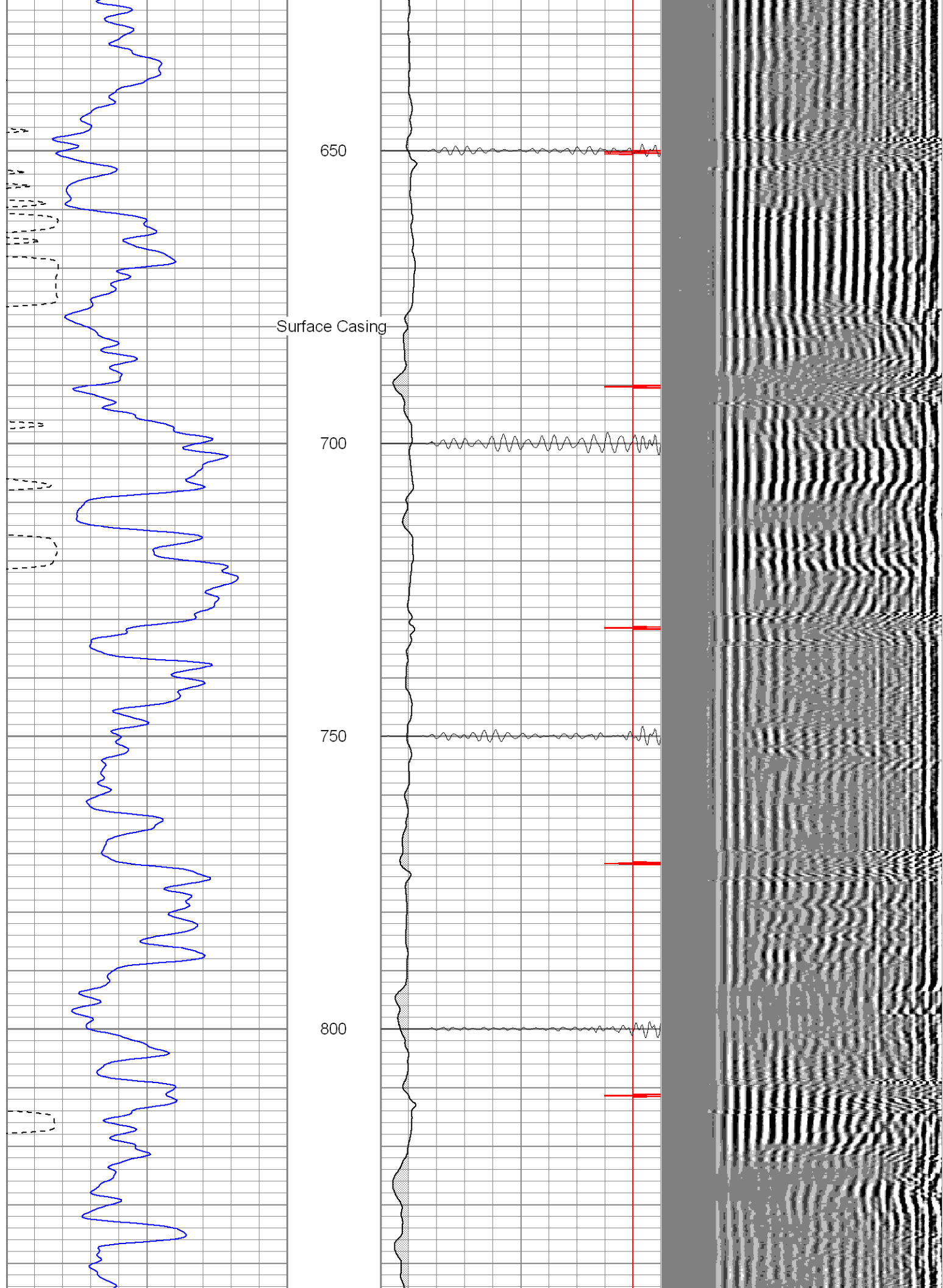
Database File: cowboytr102405b.db
Dataset Pathname: pass2
Presentation Format: cblrt
Dataset Creation: Mon Oct 24 15:23:01 2005 by Log Warrior 7.0 STD Cas
Charted by: Depth in Feet scaled 1:240

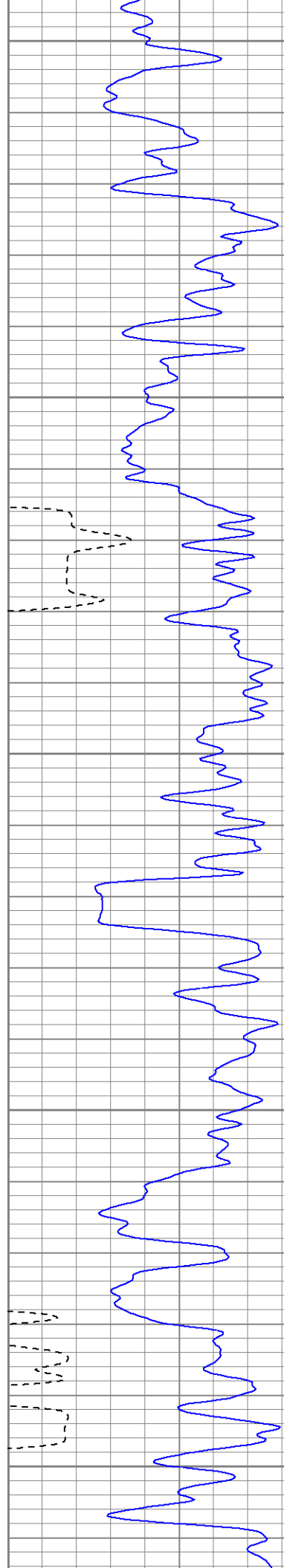
0	GR (GAPI)	200	0	AMP3 (mV)	100	200	Variable Density	1200
400	TT3 (usec)	200	18	CCL	-2			
			200	CBL5	1200			











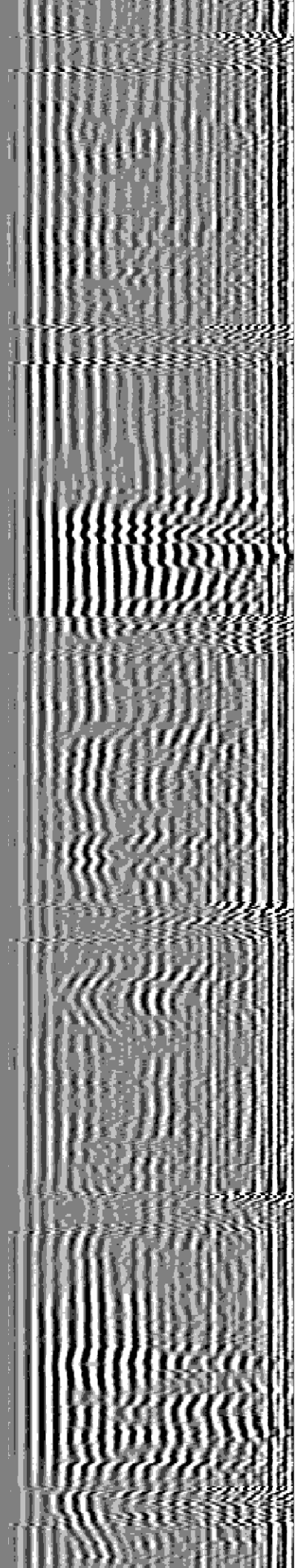
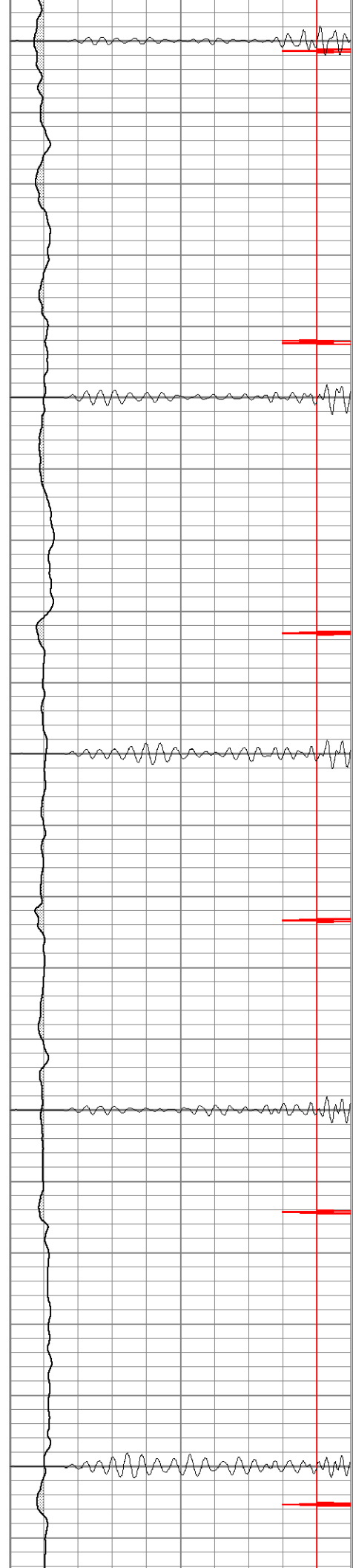
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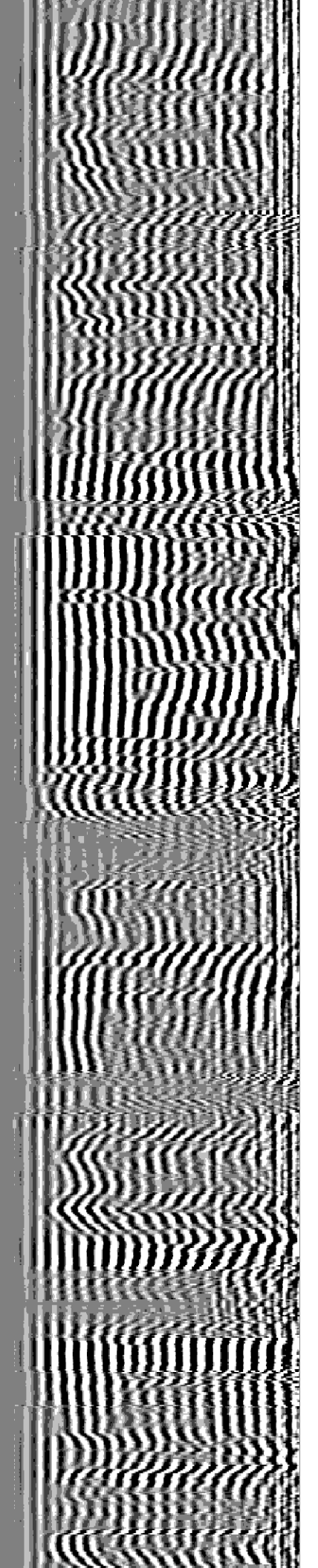
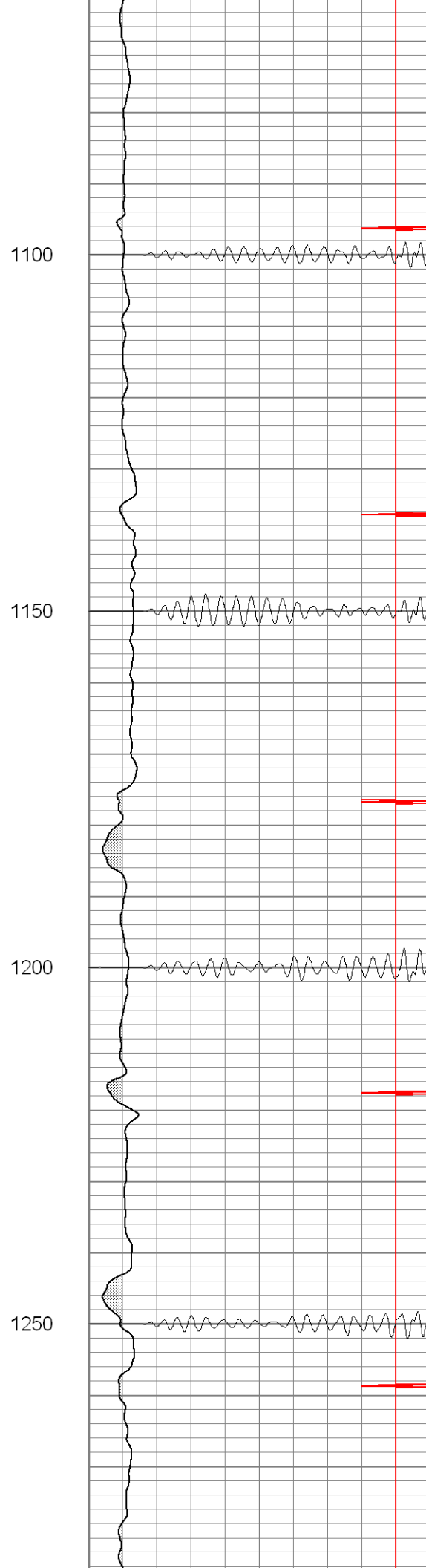
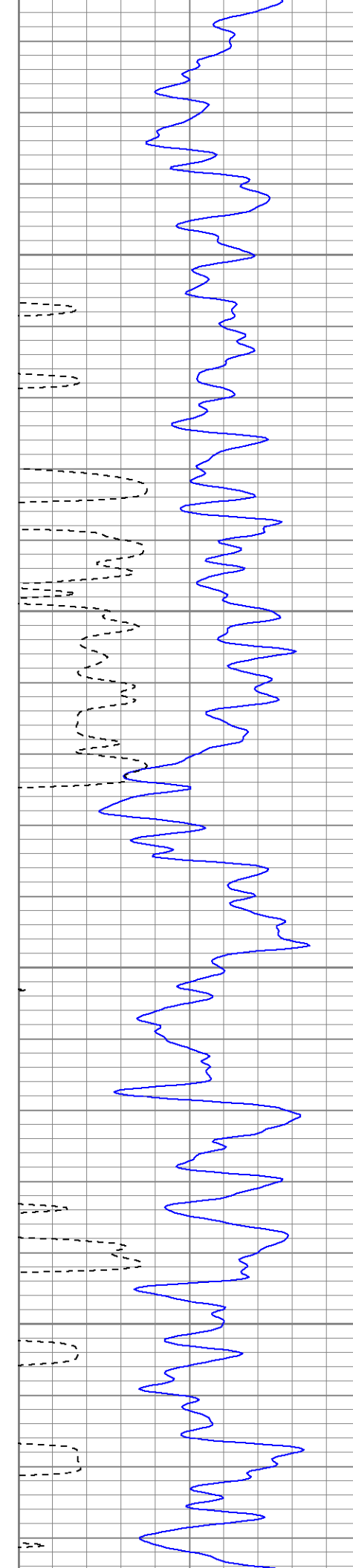
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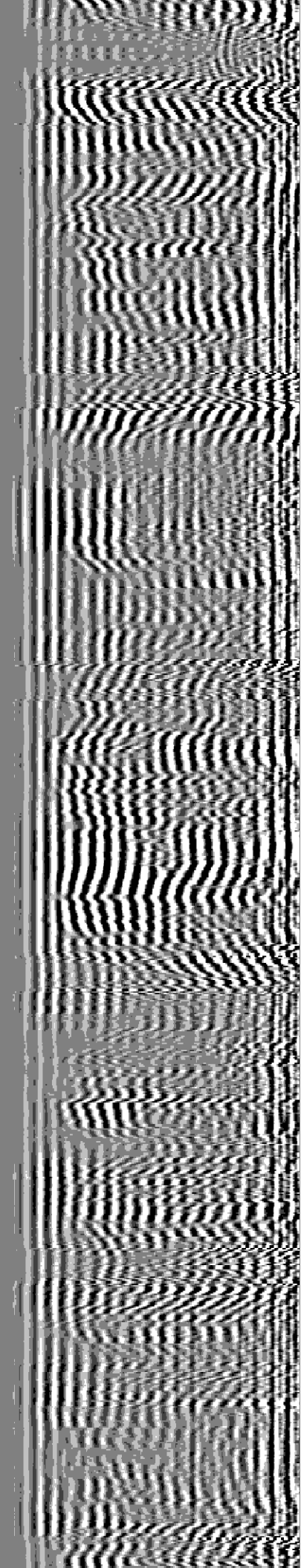
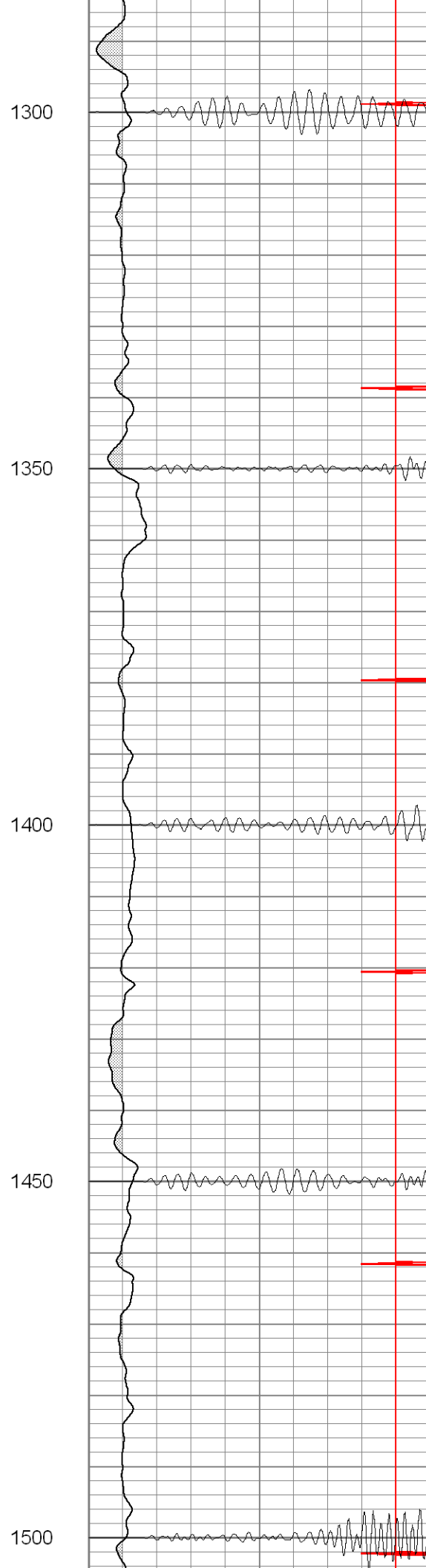
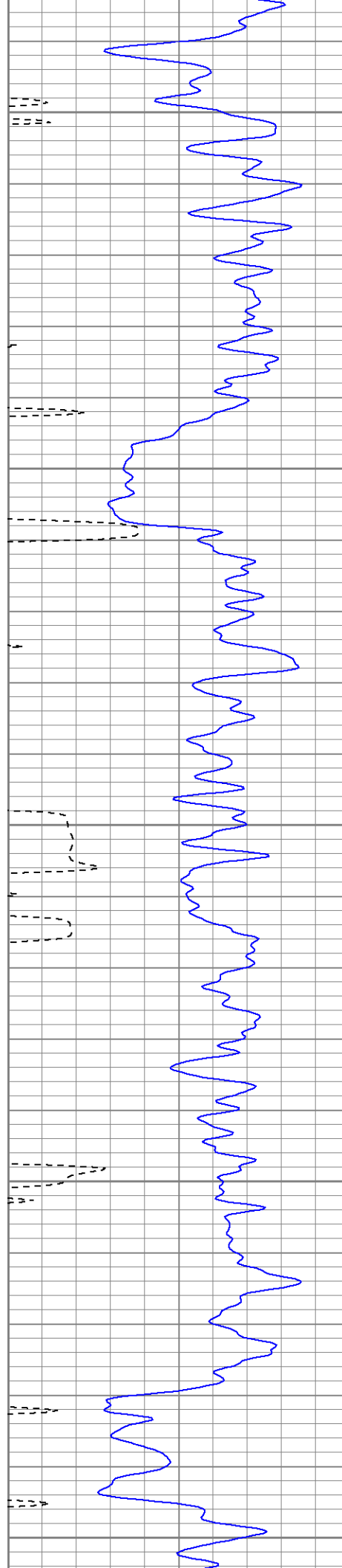
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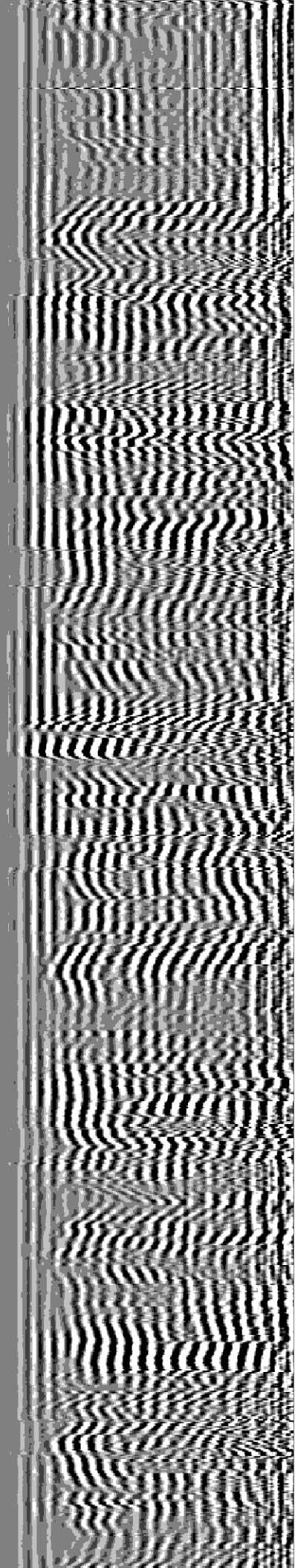
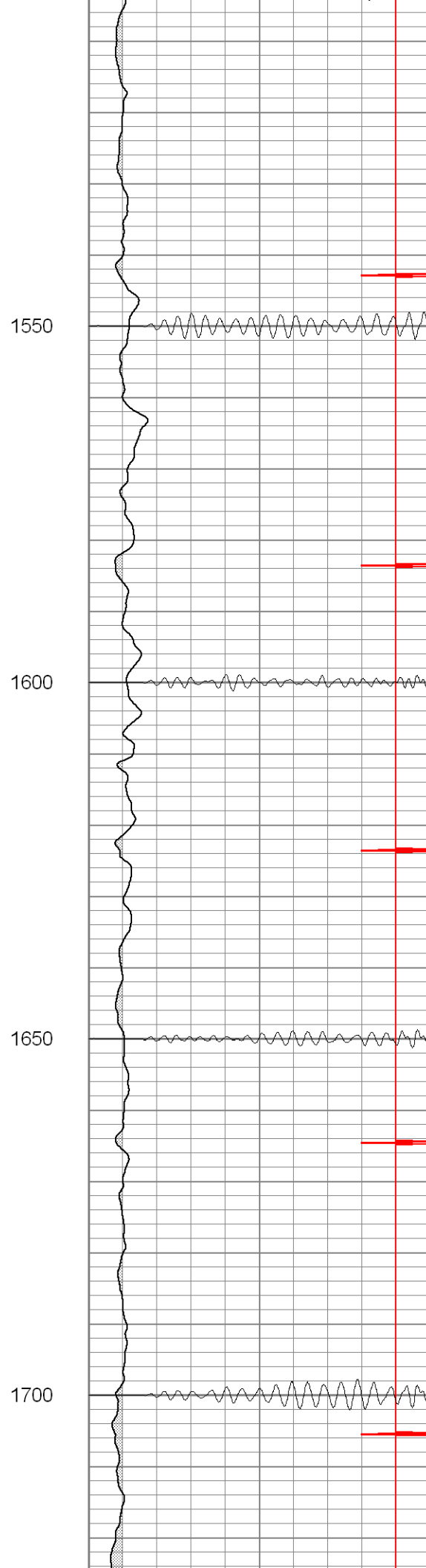
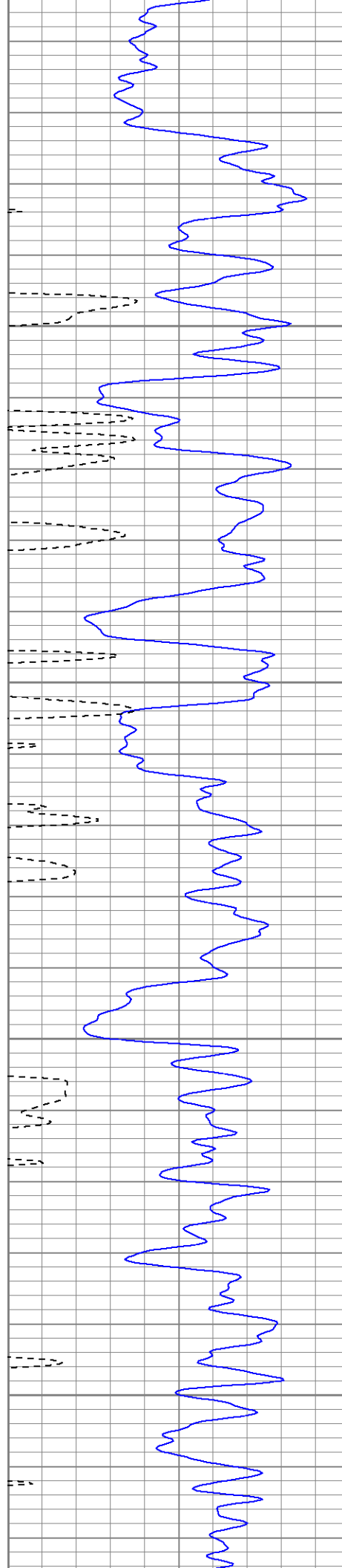
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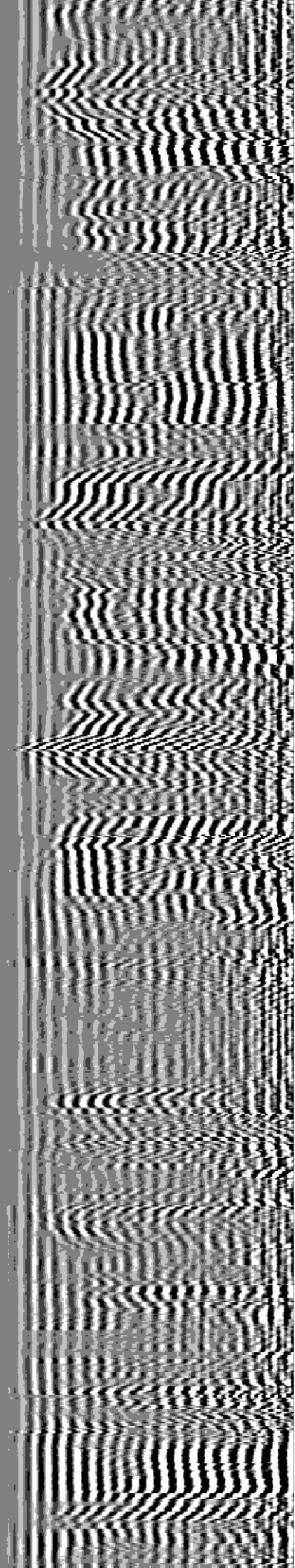
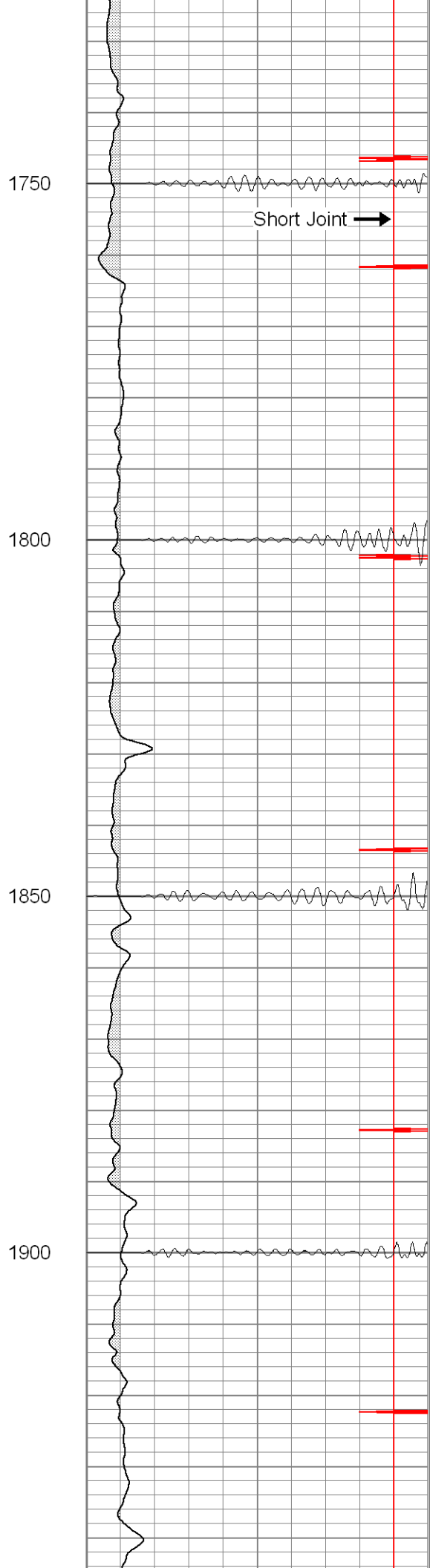
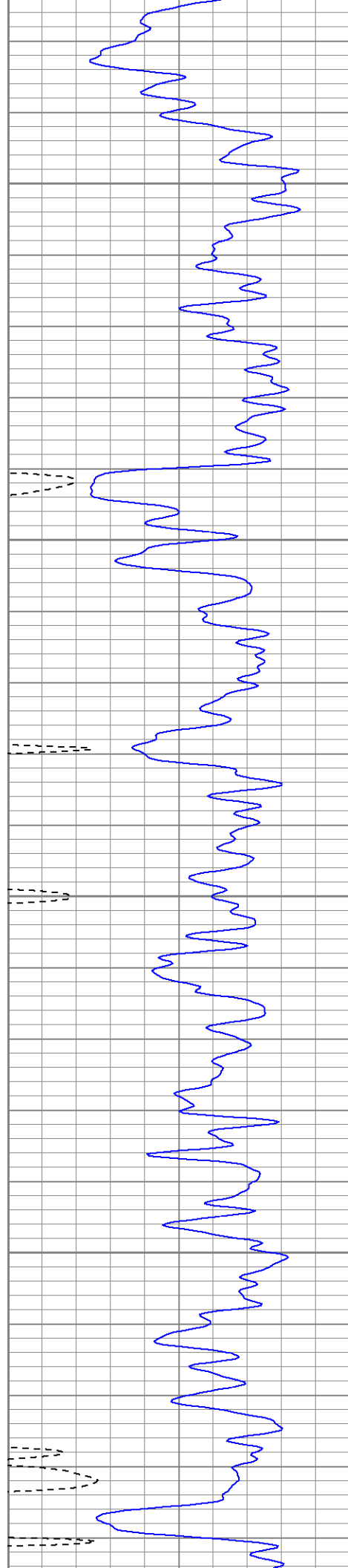
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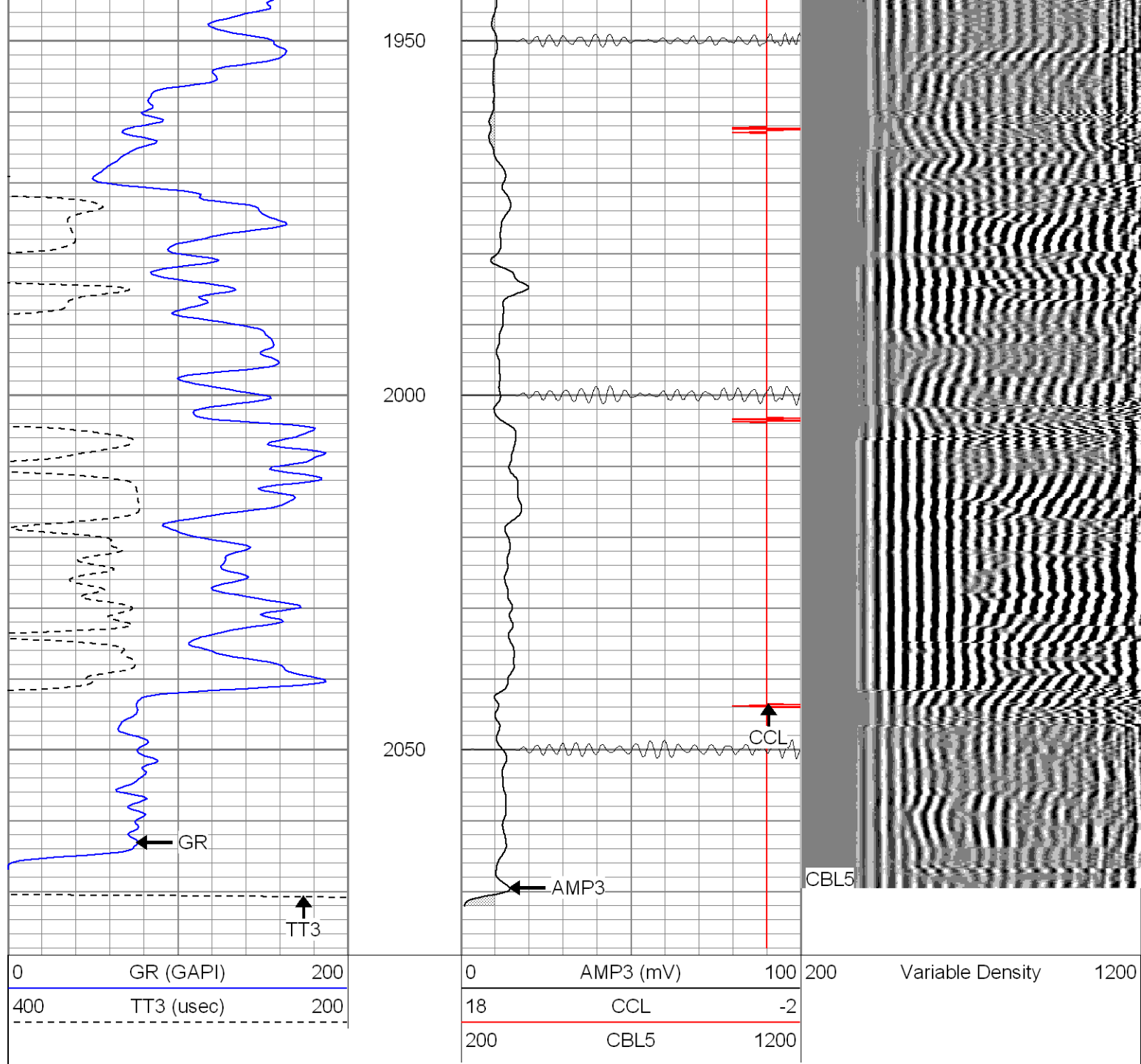


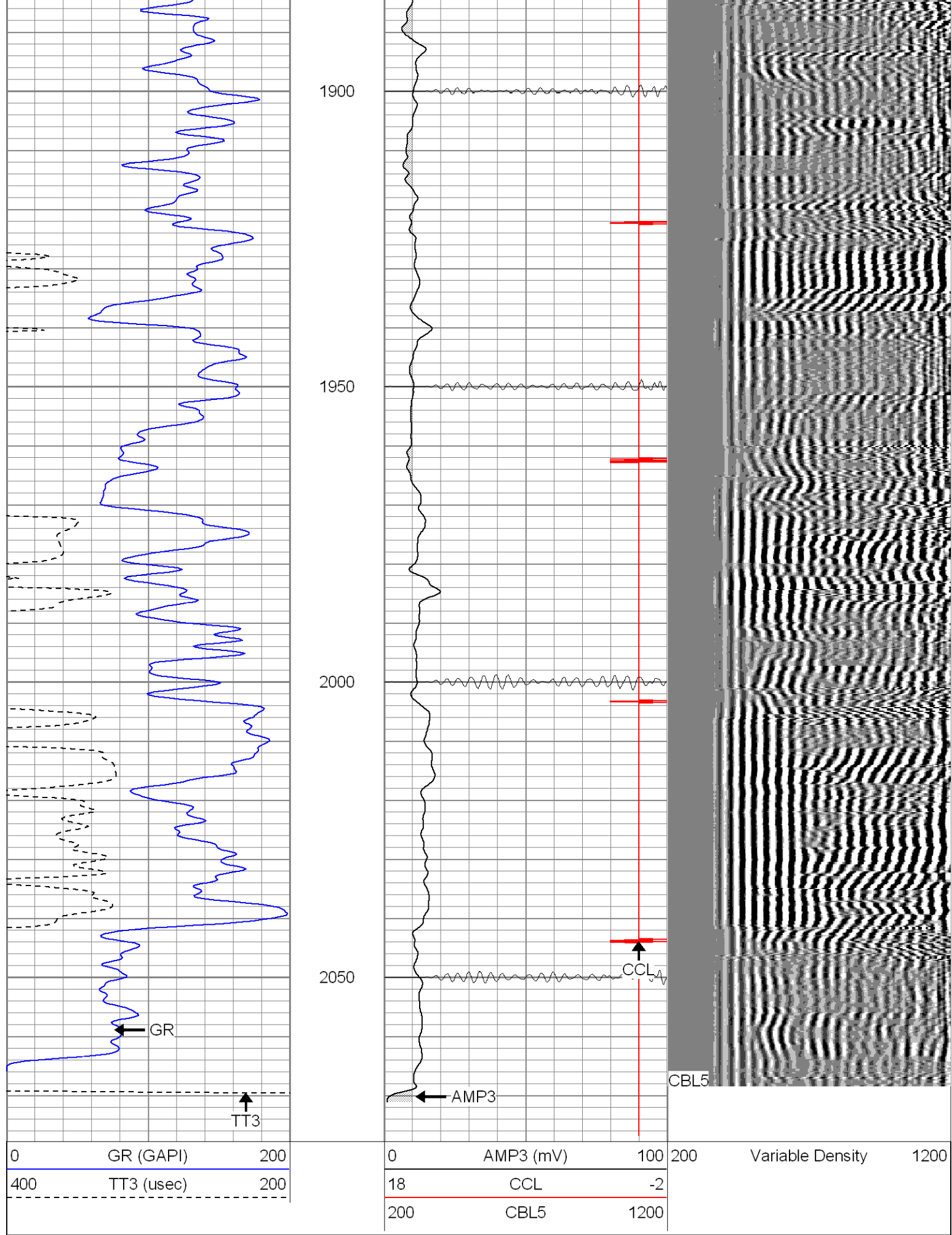












Serial Number: Titan5
Tool Model: 2
Performed: Mon Oct 24 11:45:45 2005

Depth: -47.6978 ft
Casing Diameter: 5.5 in

3' Spacing 5' Spacing

Signal Zero: 0 mV
Calibrated Amplitude: 85 71.921 mV
Reading at Signal Zero: -0.02 -0.0059082 V
Reading in Free Pipe: 1.4 1.86624 V

Gain: 59.8592 38.4164
Offset: 1.19718 0.226972

Gamma Ray Calibration Report

Serial Number: Titan5
Tool Model: T2
Performed: Mon Oct 24 11:42:12 2005

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.3000 GAPI/cps