



Pioneer Energy Services

Sonic Cement  
Bond Log

15-147-20734-00-00

Company Darrah Oil Company, Inc.  
Well Ray B No. 5  
Field Ray  
County Phillips  
State Kansas

Location

990' FNL & 990' FWL

Other Services

GRN

Sec: 32 Twp: 5S Rge: 20W

Permanent Datum Ground Level Elevation 2194  
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum  
Drilling Measured From Kelly Bushing

Elevation  
K.B. 2199  
D.F.  
G.L. 2194

Run Number	One	
Date Survey	4/6/2014	
Date Cementing	3/19/2014	
Type Cementing Operation	Primary	
Depth Driller	3588	
Depth Logger	3593	
Logged Interval	3594 to 2150	to
Casing Driller	5.5 @ T.D.	@
Float Collar -- D.V. Tool	1727	
Squeeze Depth		
Amount & Type Cement		
Amount & Type Admix		
Type Fluid In Hole	Water	
Fluid Level	1610	
Salinity PPM CL		
Weight lb/gal -- Vis.		
Approx. Logged Cement Top	2320	
Calculated Cement Top		
Max. Hole Temperature	114	
Tool No.	D-1	
Spacing Recorded	3-5	
Equipment -- Location	72 Hays	
Recorded By	K. Ladrigan	
Witnessed By	Philipp Martin	

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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

Thank you for using Pioneer Energy Services, Inc. 785.625.3858

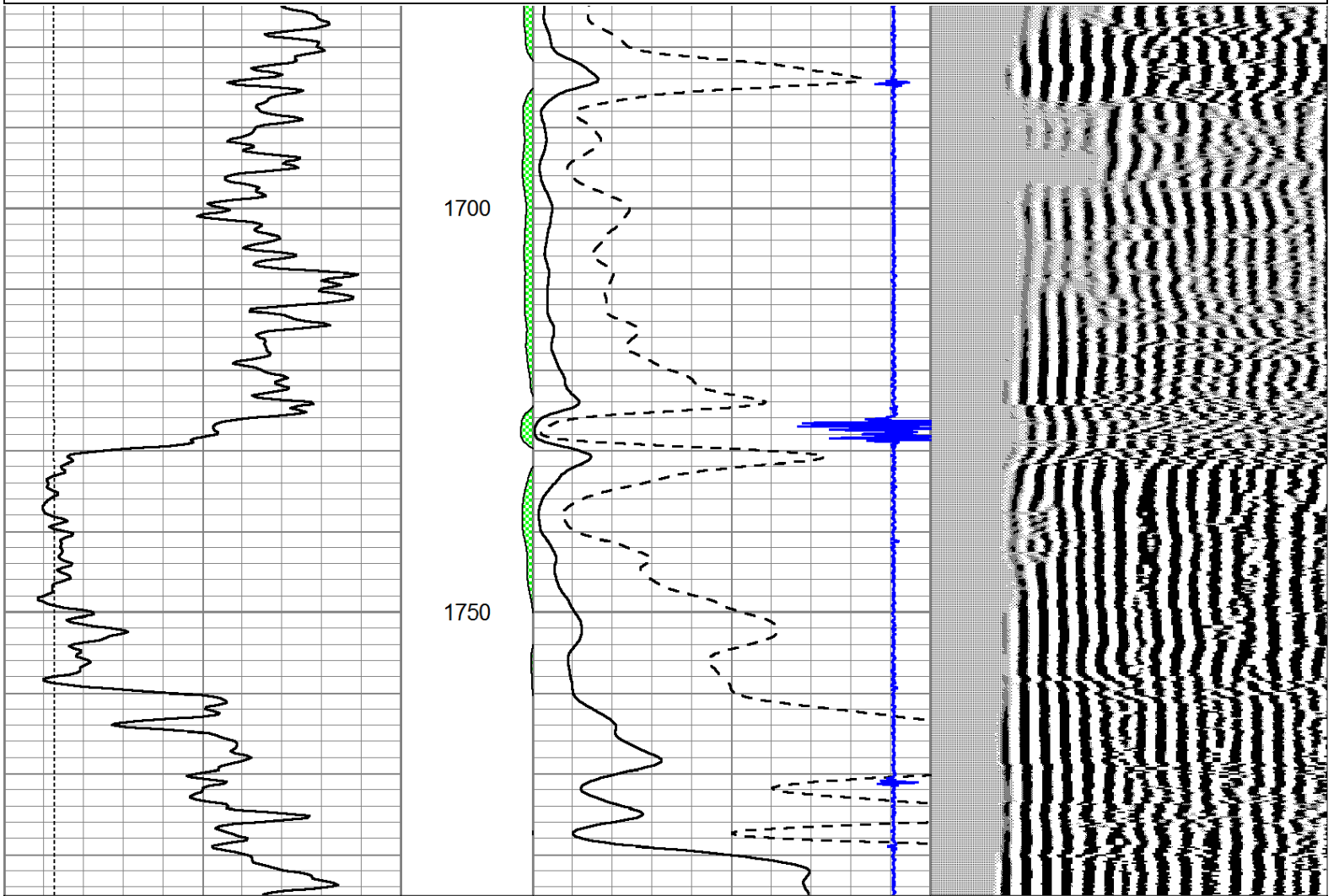
Logan, KS., South to DayDream Road (1 South of Radio Tower on Blacktop)  
2.25 West, South and West Into.



D.V. Tool @ 1727

Database File: grcblneu.db  
 Dataset Pathname: grcblneu/pass6  
 Presentation Format: cldig  
 Dataset Creation: Sun Apr 06 18:05:04 2014 by Log SCH 111116  
 Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	150	AMP3	0	Amplitude (mV)	100	200	Variable Density	1200
0	LTEN (lb)	5000	(mV)	0	Amplified Amplitude (mV)	20			
-----			-100	10	5	Collar Locator	-0.5		



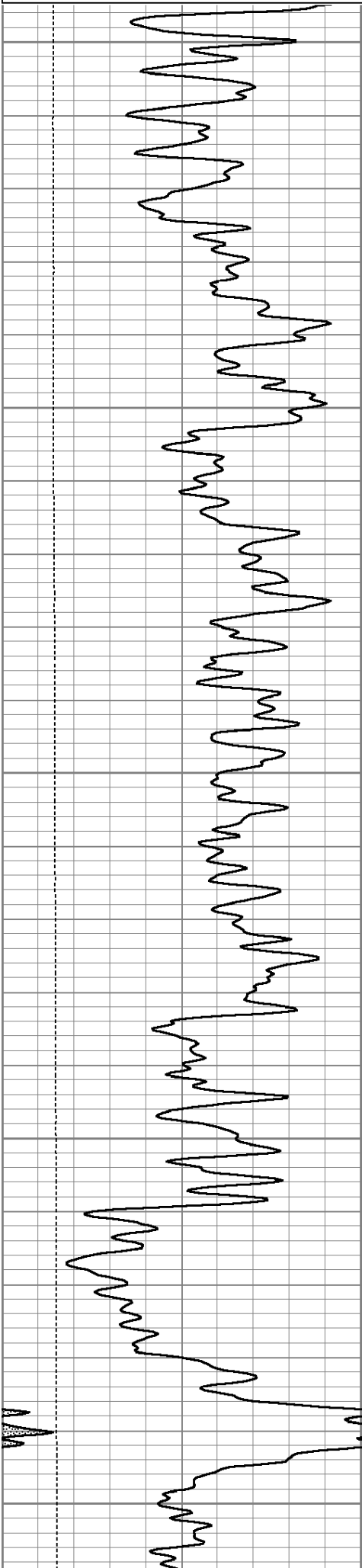
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0	LTEN (lb)	5000	(mV)	0	Amplified Amplitude (mV)	20			
-----			-100	10	5	Collar Locator	-0.5		



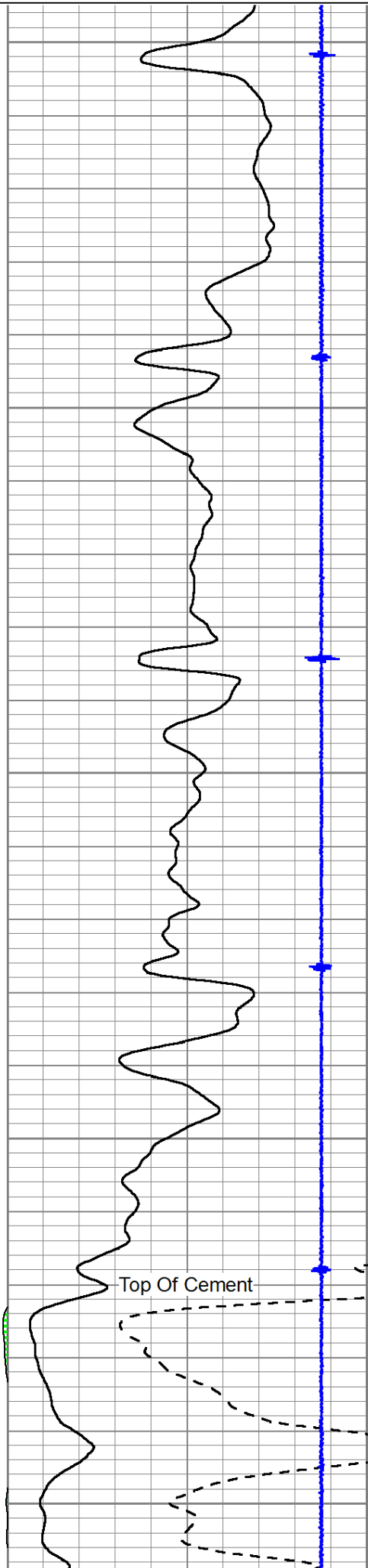
# Main Pass

Database File: grcblneu.db  
 Dataset Pathname: grcblneu/pass10  
 Presentation Format: cldig  
 Dataset Creation: Sun Apr 06 18:36:10 2014  
 Charted by: Depth in Feet scaled 1:240

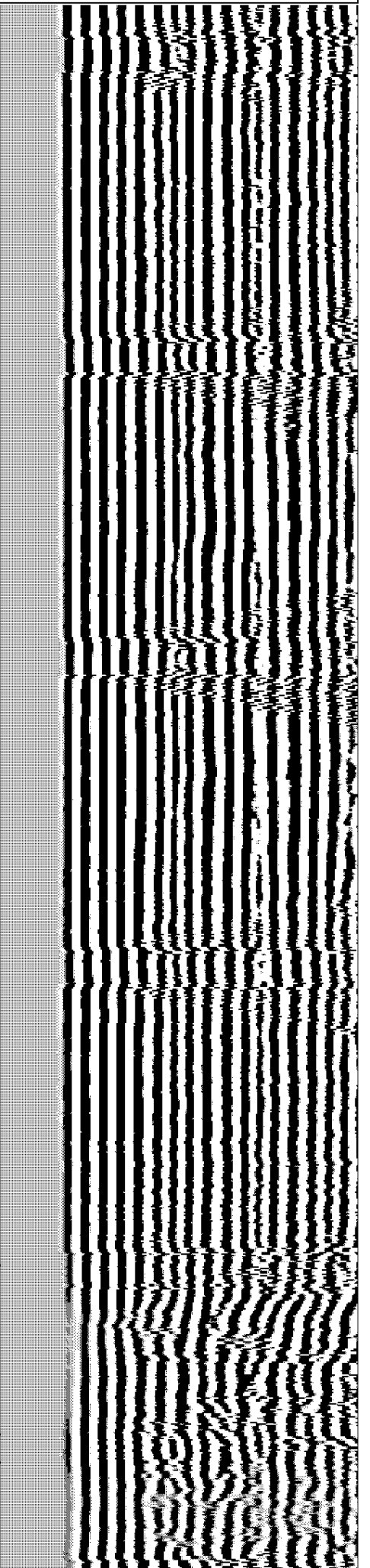
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0	LTEN (lb)	5000	(mV)	0	Amplified Amplitude (mV)	20			

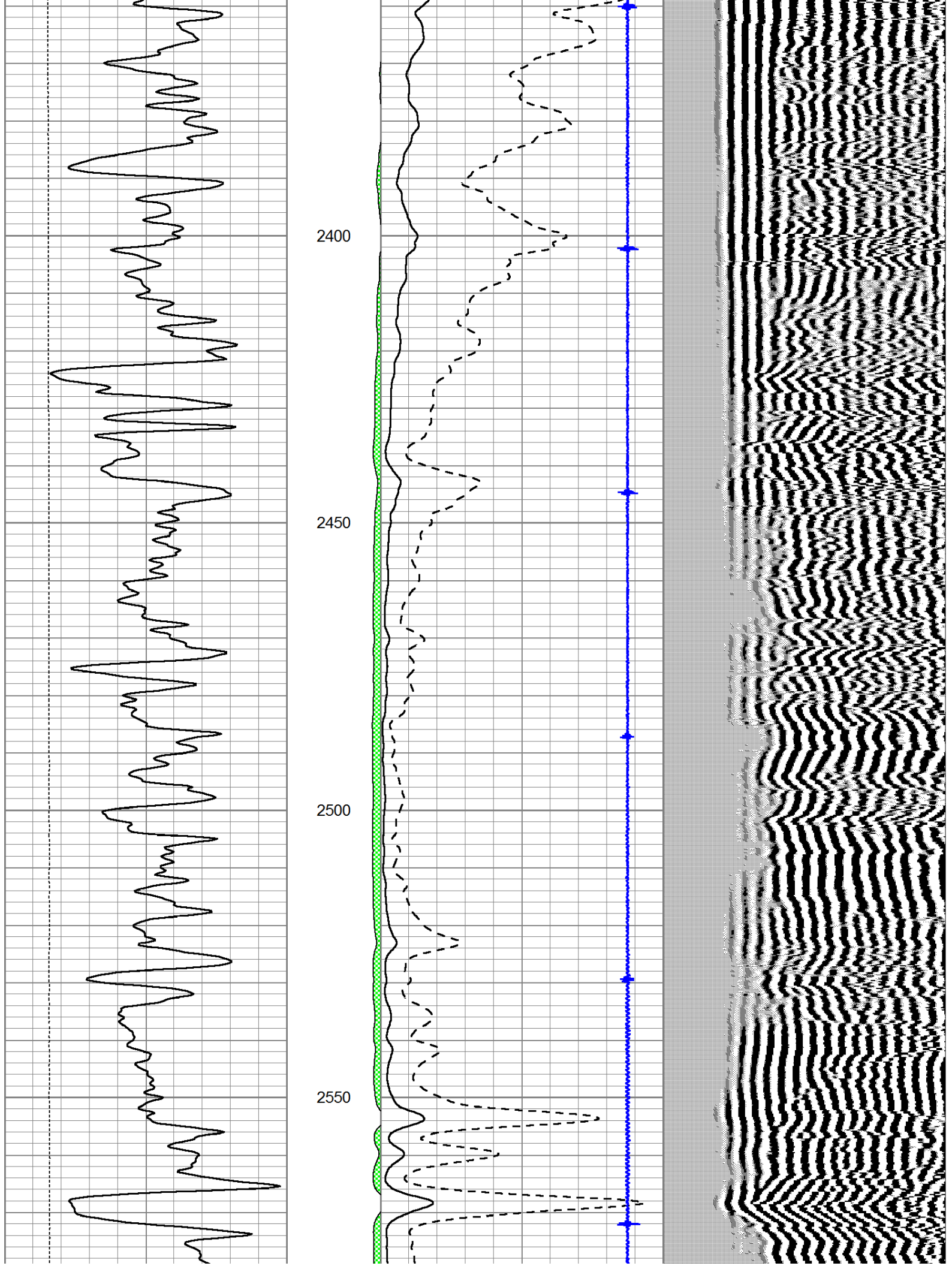


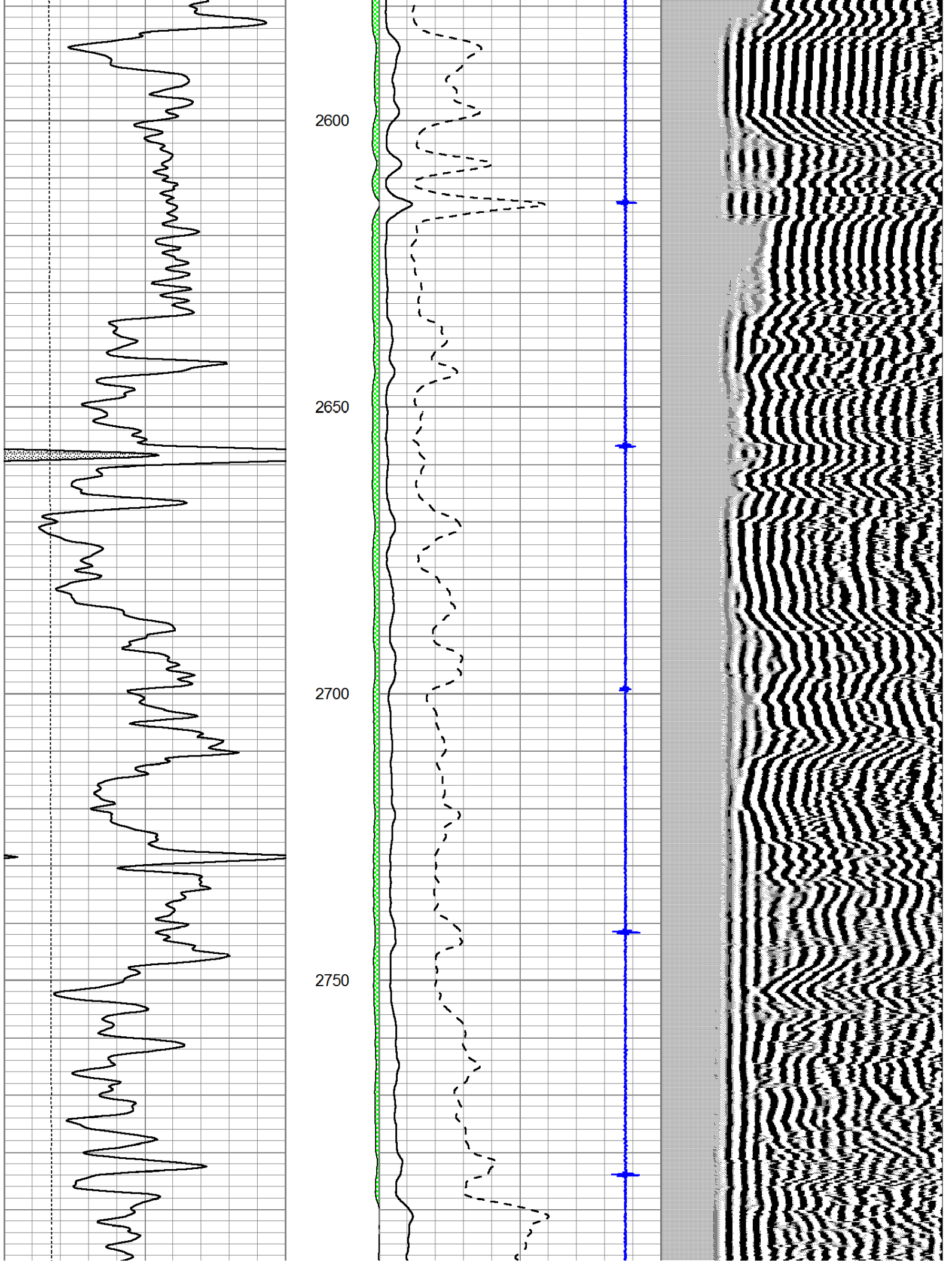
2150  
2200  
2250  
2300  
2350

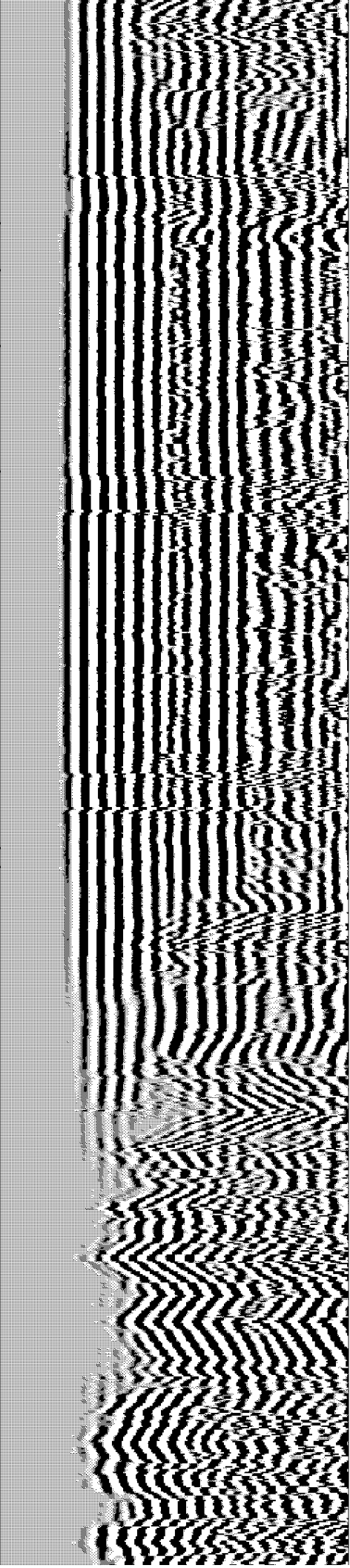
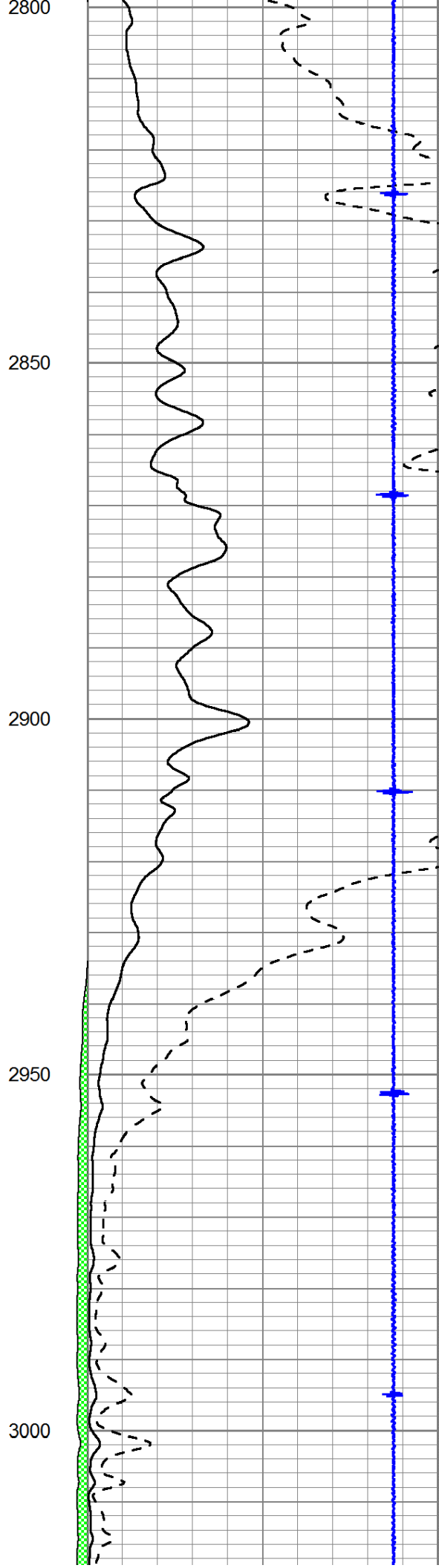
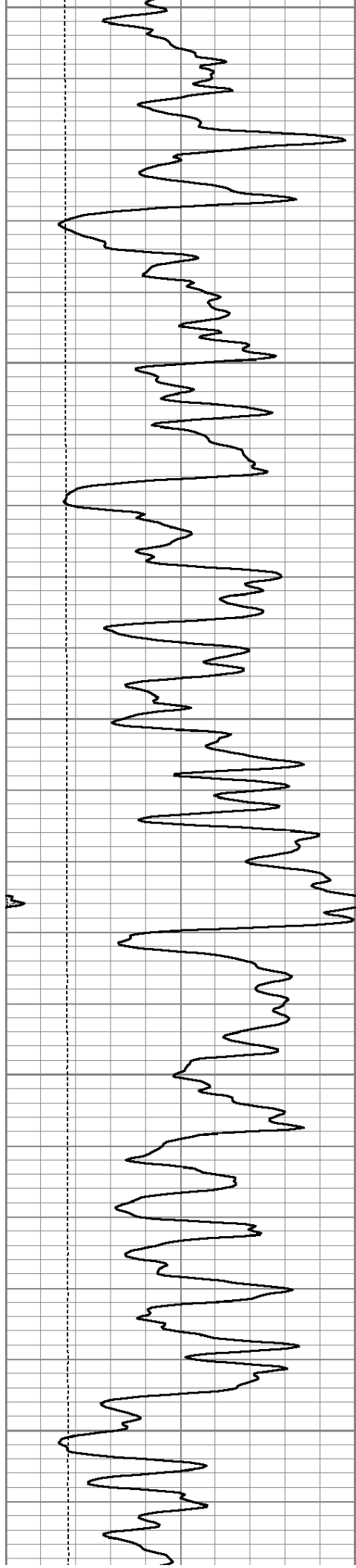


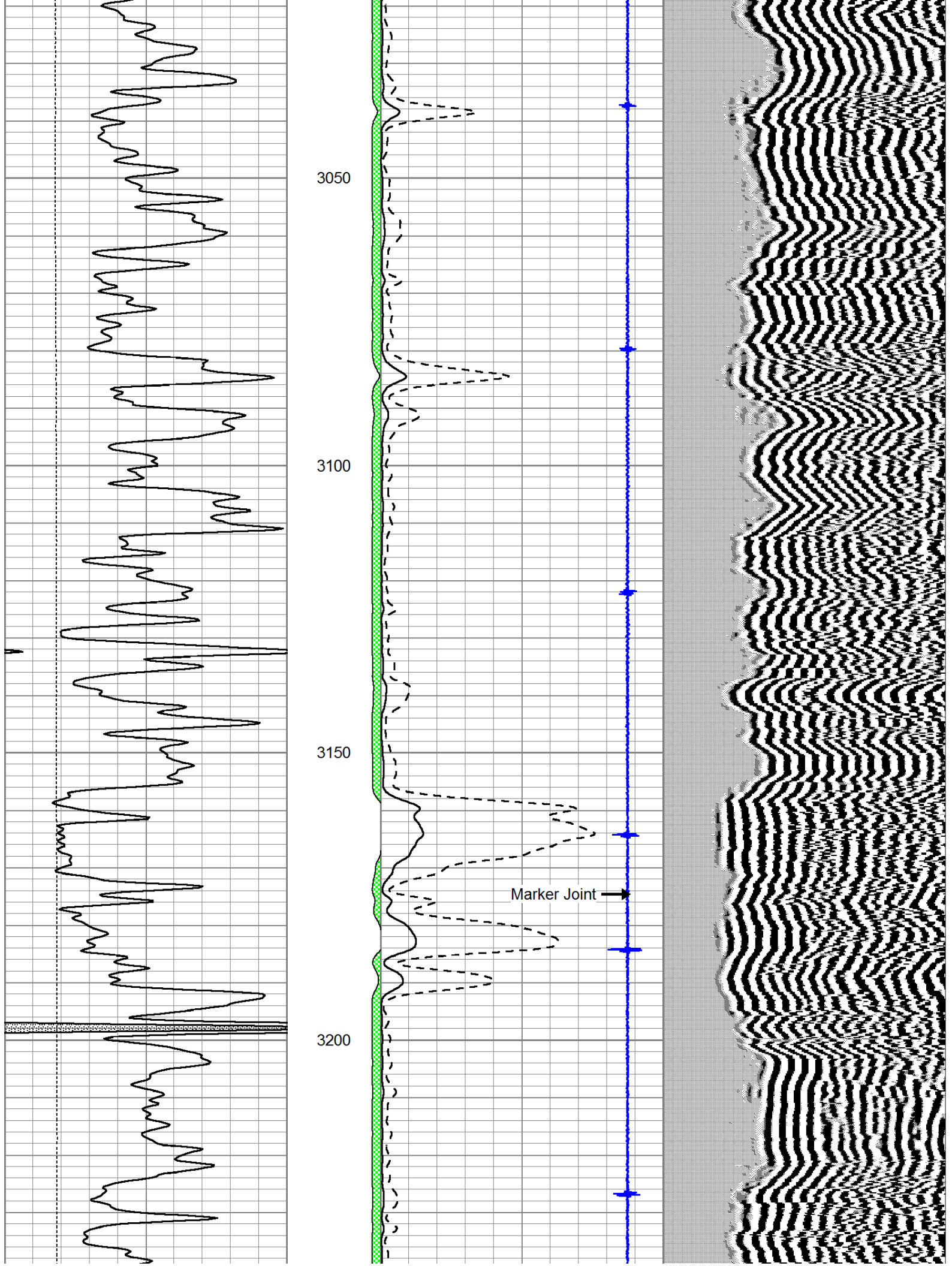
Top Of Cement

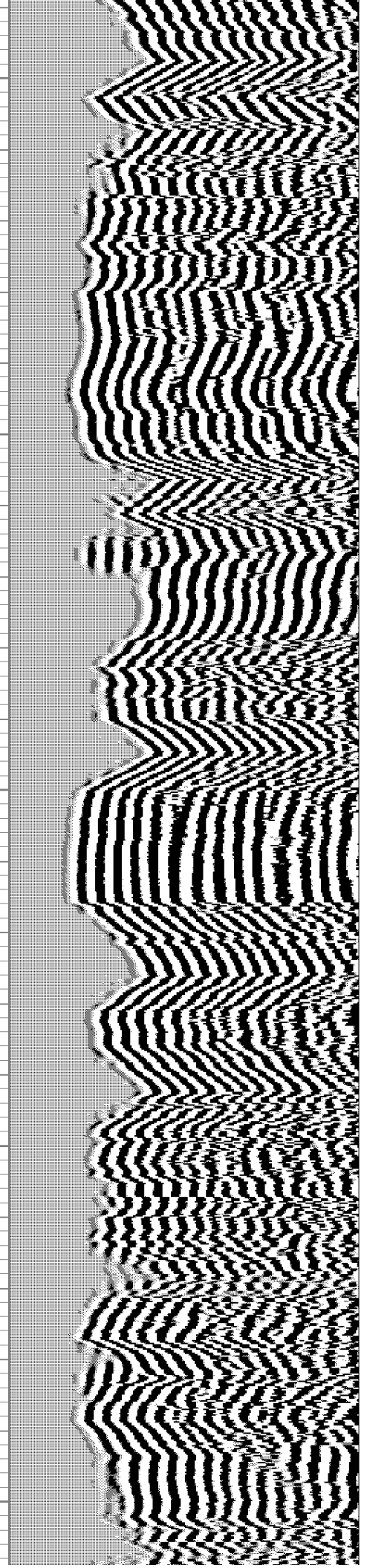
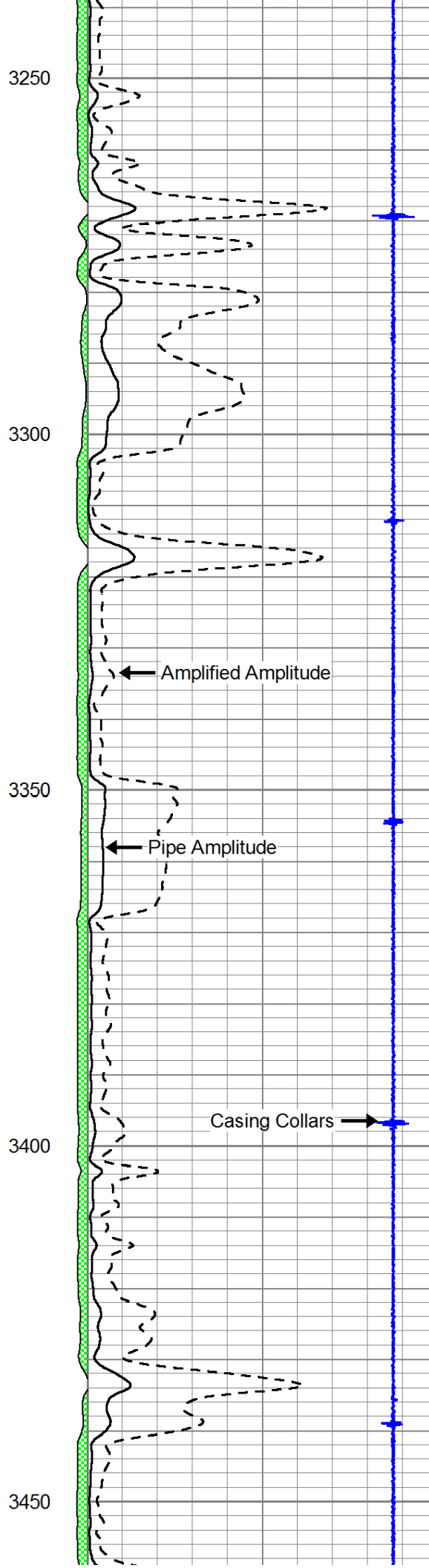
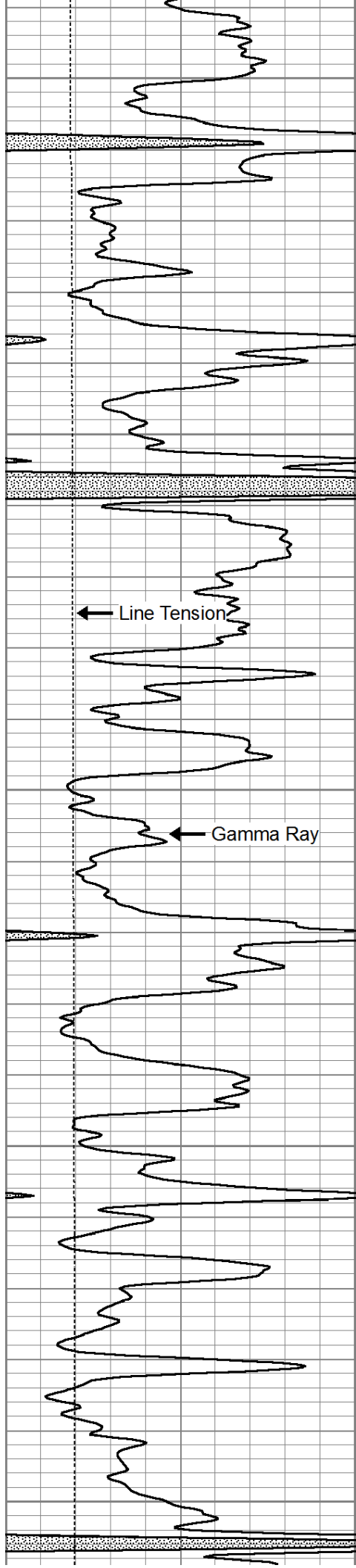


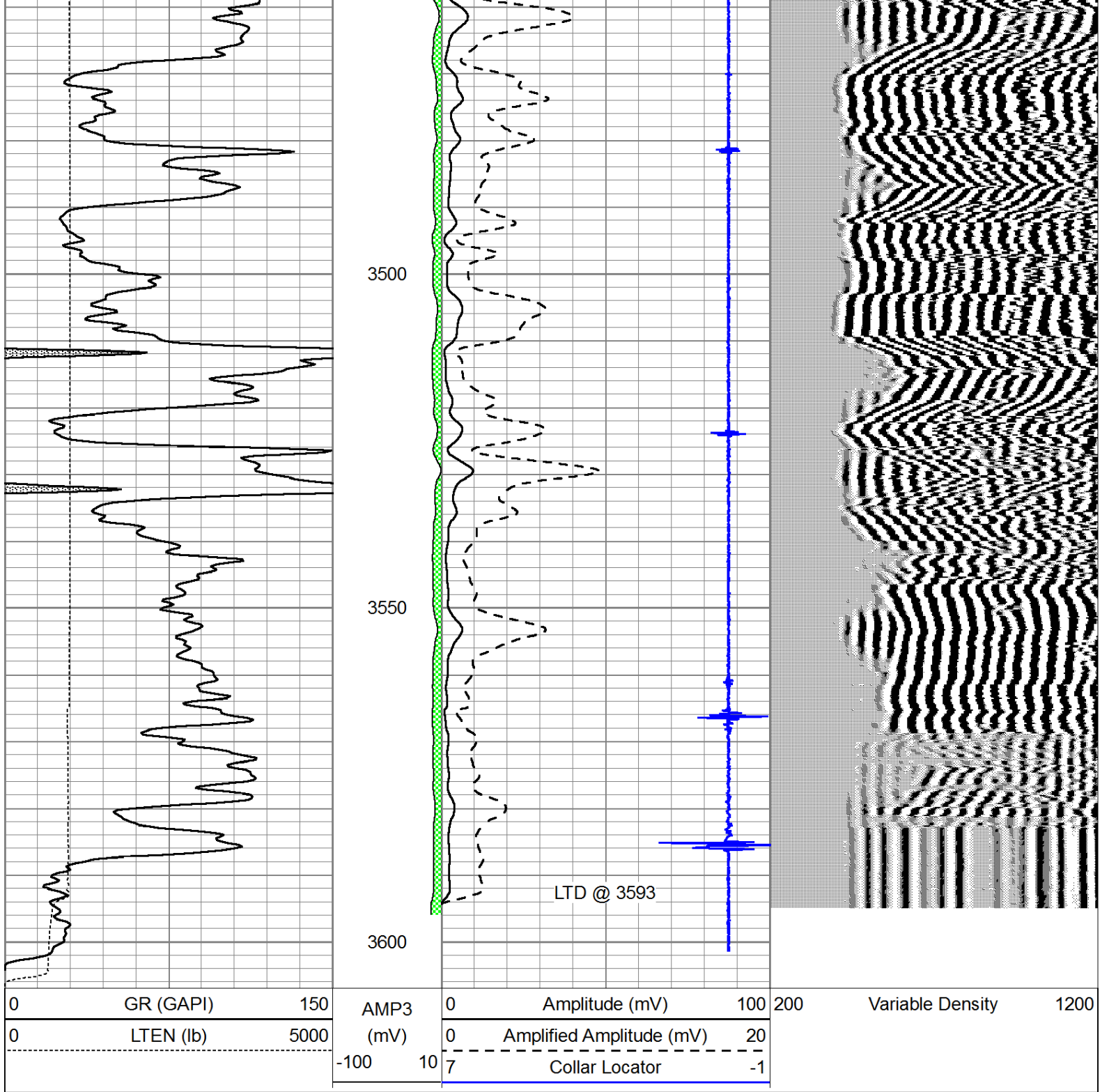








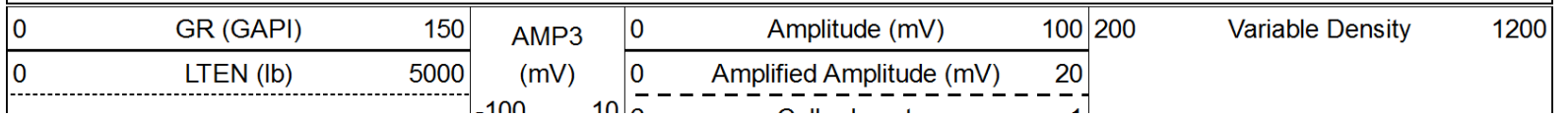


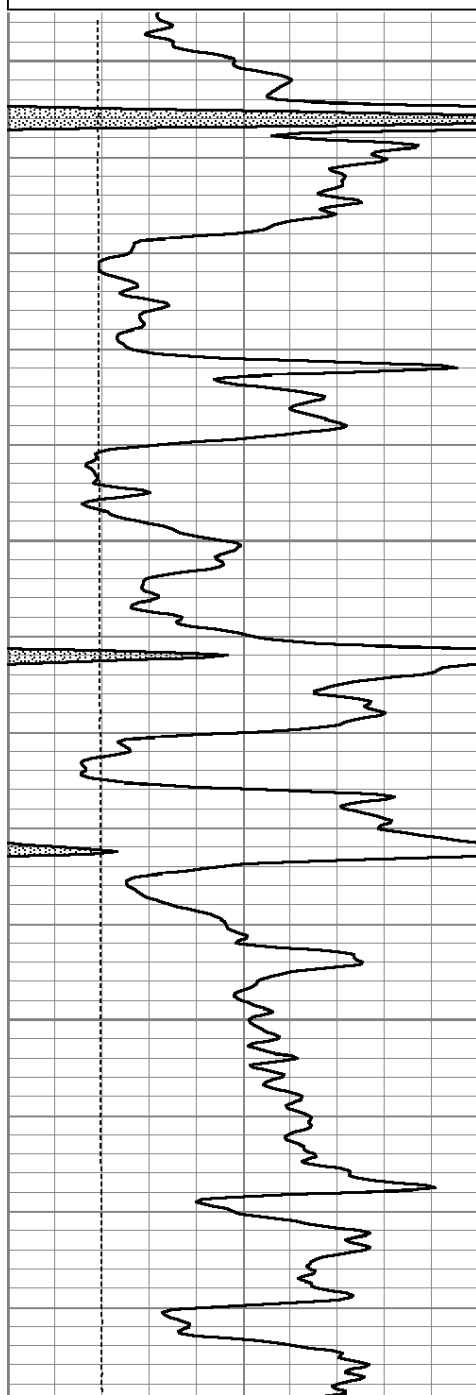


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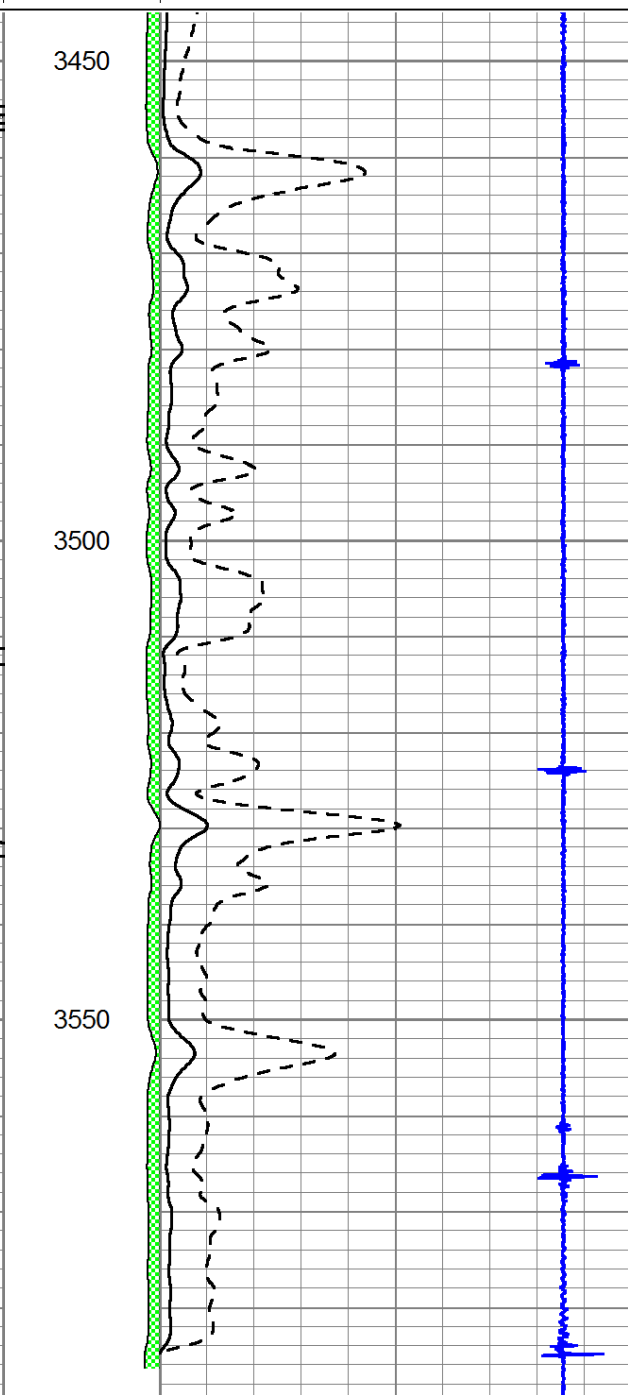
# Repeat Section

Database File: grcblneu.db  
 Dataset Pathname: grcblneu/pass3  
 Presentation Format: cbl dig  
 Dataset Creation: Sun Apr 06 17:13:34 2014 by Log SCH 111116  
 Charted by: Depth in Feet scaled 1:240

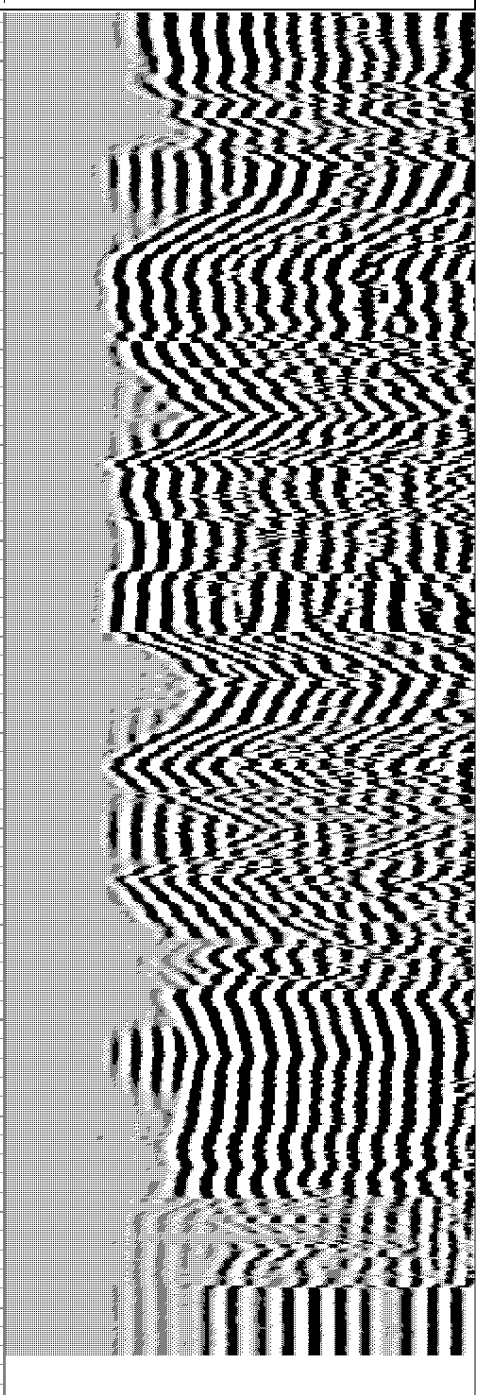




0	GR (GAPI)	150
0	LTEN (lb)	5000



AMP3 (mV)	0	Amplitude (mV)	100
	0	Amplified Amplitude (mV)	20
	-100	Collar Locator	-1



200	Variable Density	1200
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