



CEMENT BOND LOG WITH GAMMA RAY

MIDWEST WIRELINE

Comp. **Patterson Operationsm, LLC**
 Well **Browning 36**
 Field
 Co. **Greenwood**
 State **Kansas**

Company **Patterson Operationsm, LLC**
 Well **Browning 36**
 Field
 County **Greenwood** State **Kansas**

Location: **API # : 15-073-24255-0000**
2640 FNL & 990 FEL
 SEC 13 TWP 33S RGE 5E
 Permanent Datum **Ground Level Elevation 1413**
 Log Measured From **KB 7' Above Perm. Datum**
 Drilling Measured From **Kelly Bushing**
 Other Services
Mast Trailer NEU Perforate
 Elevation
 K.B. 1420
 D.F.
 G.L. 1413

Date of Service	12/18/2025		
Run Number	One		
Depth Driller or PBTID	2319		
Depth Logger	2310		
Bottom Log Interval	2310		
Top Log Interval	800		
Open Hole Size	7.875		
Type Fluid	Water		
Fluid Level	Full		
Fluid Density			
Max. Recorded Temperature			
Max. Wellhead Pressure	00 PSI		
Wellhead Connection	Open		
Estimated Cement Top	1010		
Unit Number	P-111		
Wireline Size	5/16		
Location	Hays, KS		
Recorded By	M. Hiss		
Witnessed By	Garr Patterson		
Tubing Record	Size	WFt	Bottom
Surface Casing			
Production Casing	5.5"	15.5	TD
Liner Record			

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 Madison Ks,
 West on Rd 365 to Rd T, S to Rd 360, W to Rd L,
 1/2 South, East into

THANK YOU FOR USING MIDWEST WIRELINE LLC!

Your Midwest Wireline Crew	Tool Data - Services	Serial Number
Engineer: M. Hiss Operator: Operator: Operator:		

Operator	Offset (ft)	Substrate	Description	Length (ft)	O.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00	
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
			PROBE-RBT-DIGITAL-RBL-D (PR-015) Probe 2 3/4" Radii Bond-Digital	8.75	2.75	100.00	
WWFS8	16.44						
WWFS7	16.44						
WWFS6	16.44						
WWFS5	16.44						
WWFS4	16.44						
WWFS3	16.44						
WWFS2	16.44						
WWFS1	16.44						
WWFCAL	16.44						
WWF3FT	16.44						
WWF5FT	15.44						
		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00		
CCL	8.47						
GR	7.14		GR_CCL-2 3/4" Probe (060802)	4.54	2.75	50.00	
			NEU-PRNEU (ProbeNEU1)	4.83	1.69		
NEU	1.08						

Dataset: patterson_operations_browning_#36_cbl_grneu.db: field/well/run1/pass3.1
 Total length: 24.91 ft
 Total weight: 182.00 lb
 O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\patterson_operations_browning_#36_cbl_grneu.db
 Dataset field/well/run1/pass3.1/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 100	CASEOD in 5.5	CASETHCK in 0.275	CASEWGHT lb/ft 15.5	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
NPORSEL Limestone	NPORSHIFT 0	PERFS No	PPT usec 0	SRFTEMP degF 50	TDEPTH ft 2310		

Variable Description

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 CASEWGHT : Casing Weight
 MAXAMPL : Maximum Amplitude
 MINAMPL : Minimum Amplitude

MINATTN : Minimum Attenuation
 NPORSEL : Neutron Porosity Curve Select
 NPORSHIFT : NPORSHIFT
 PERFS : Perforation Flag
 PPT : Predicted Pipe Time
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

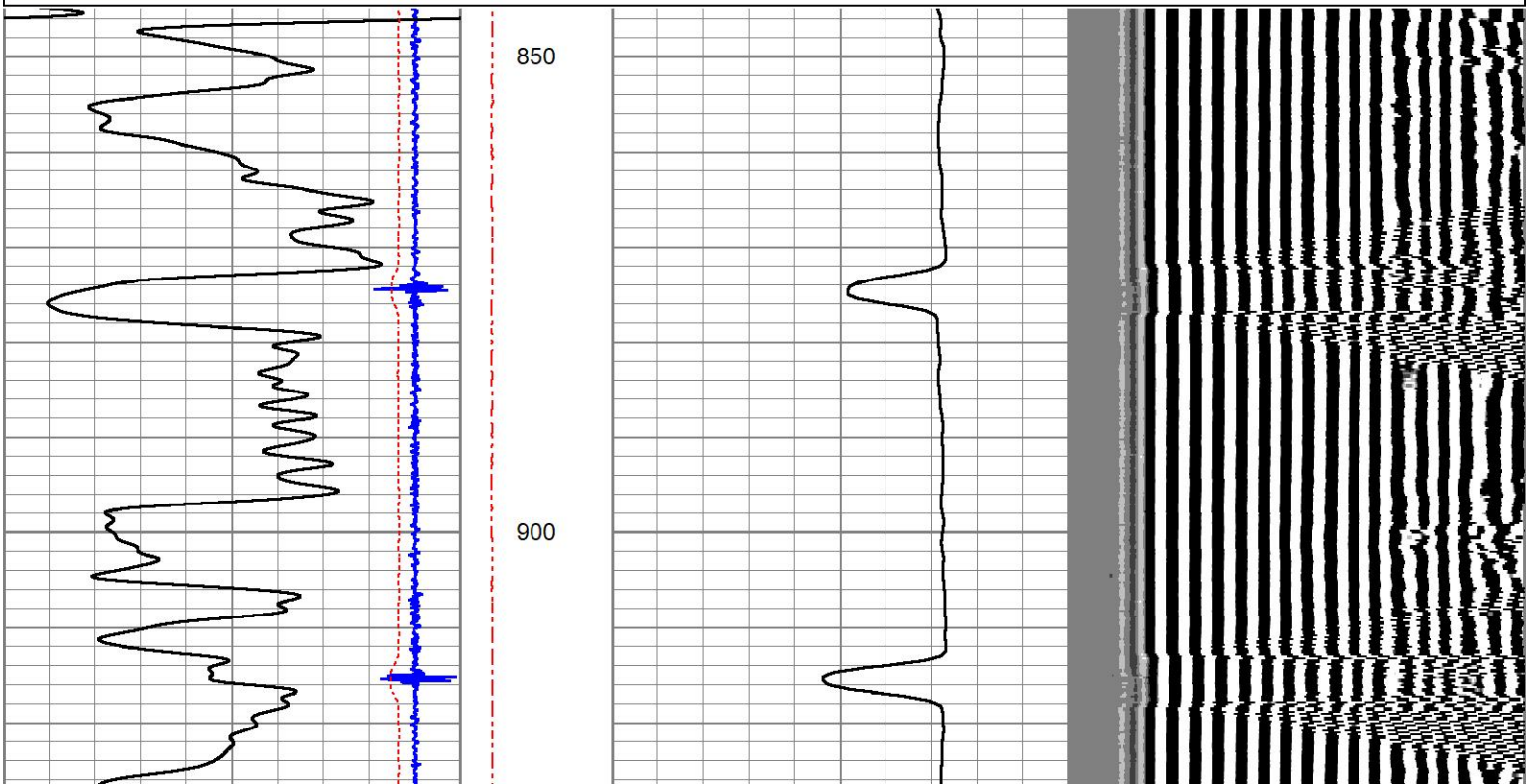


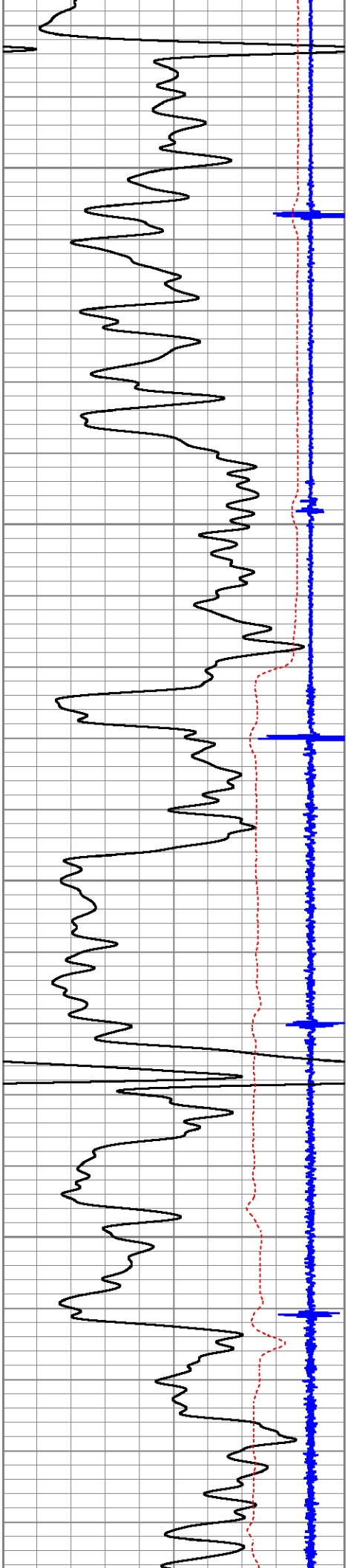
MAIN LOG

ZERO PSI APPLIED AT SURFACE

Database File patterson_operations_browning_#36_cbl_grneu.db
 Dataset Pathname pass3.1
 Presentation Format \$PINR_~1
 Dataset Creation Thu Dec 18 09:42:11 2025
 Charted by Depth in Feet scaled 1:240

-9	Collar Locator	1	Line Tension	0	3' Amplitude (mV)	100	200	WVF5FT (usec)	1200
0	Gamma Ray	150	(lb)2000						
600	3' Travel Time (usec)	200							



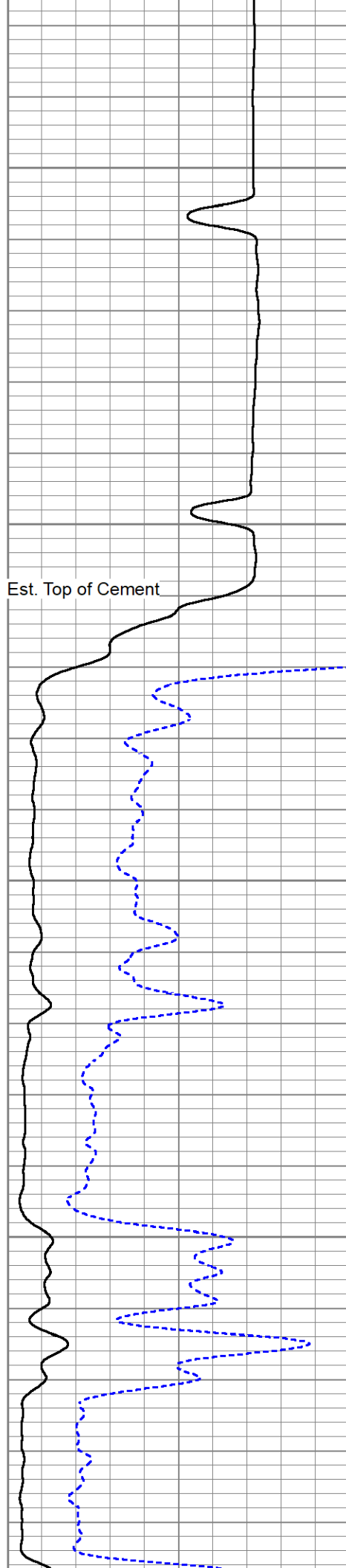


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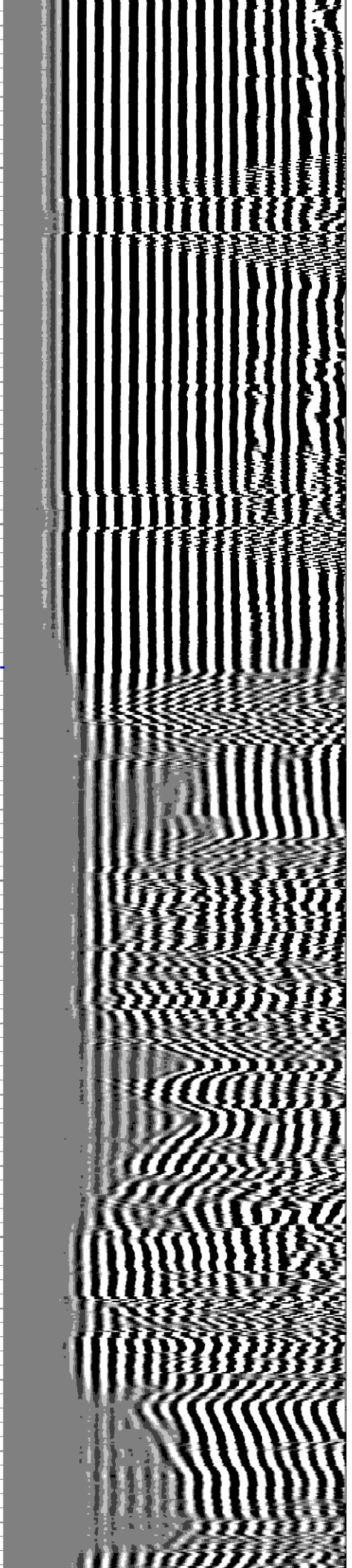
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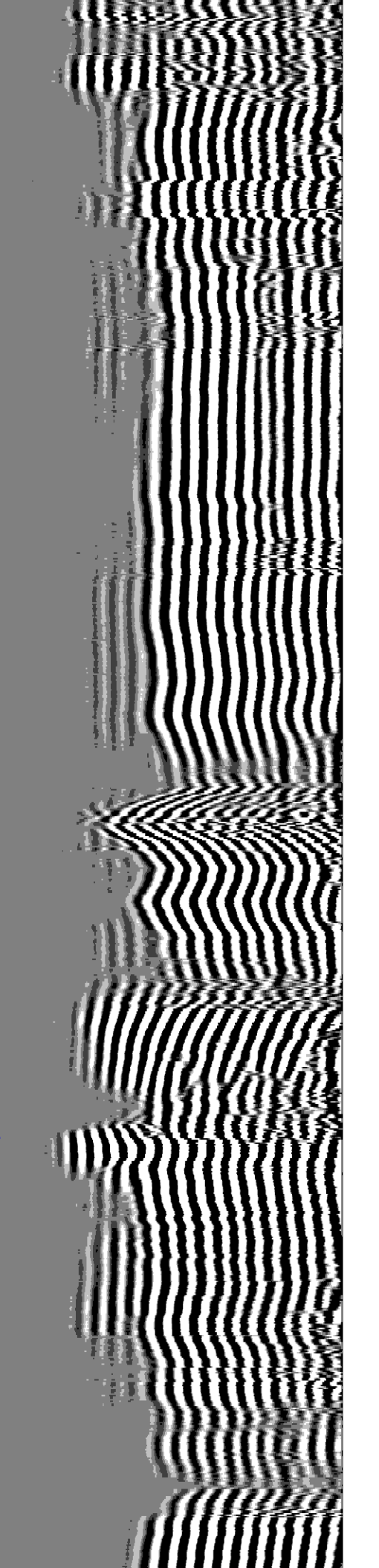
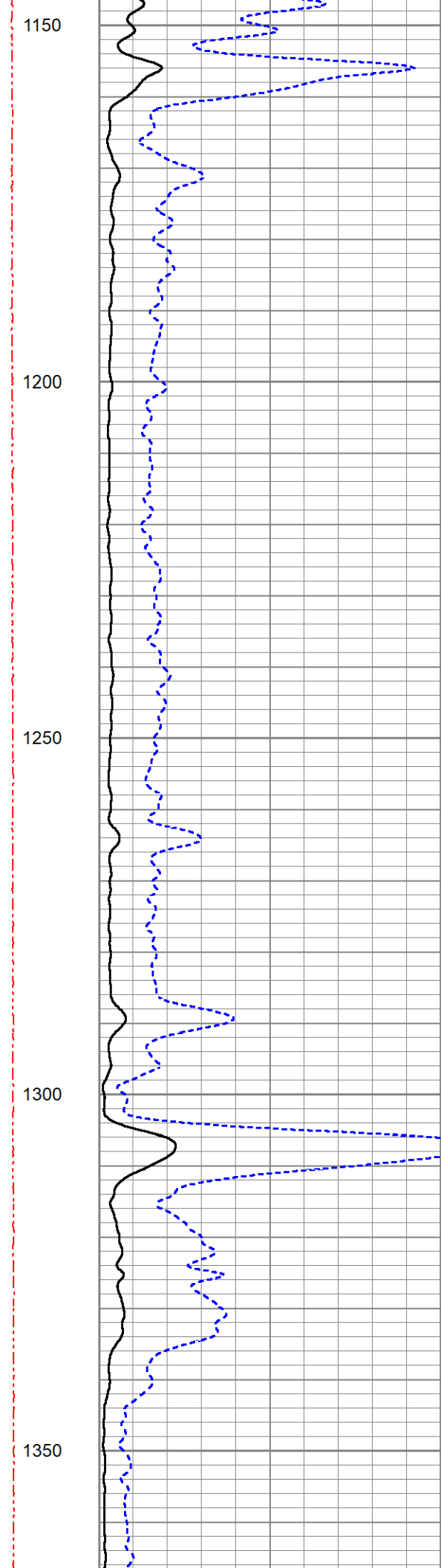
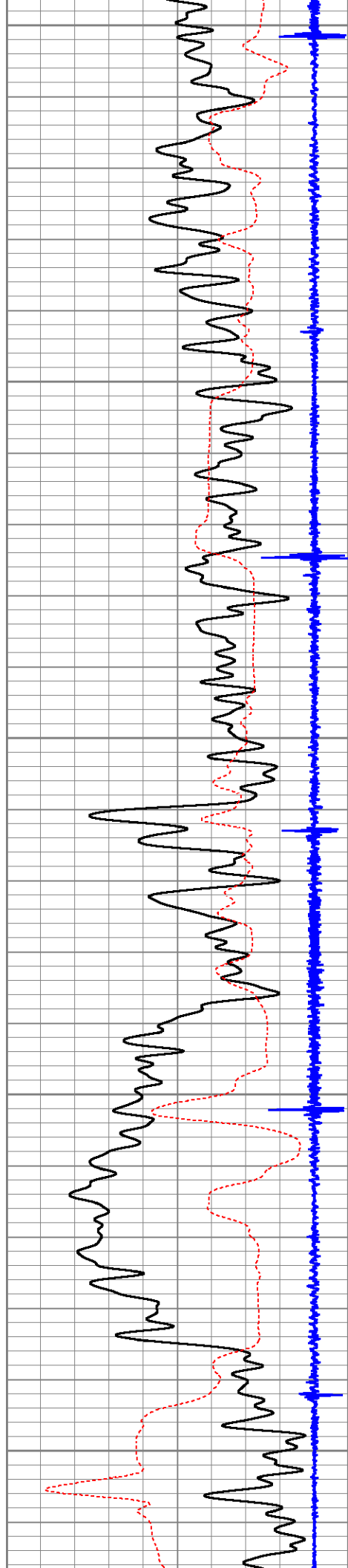
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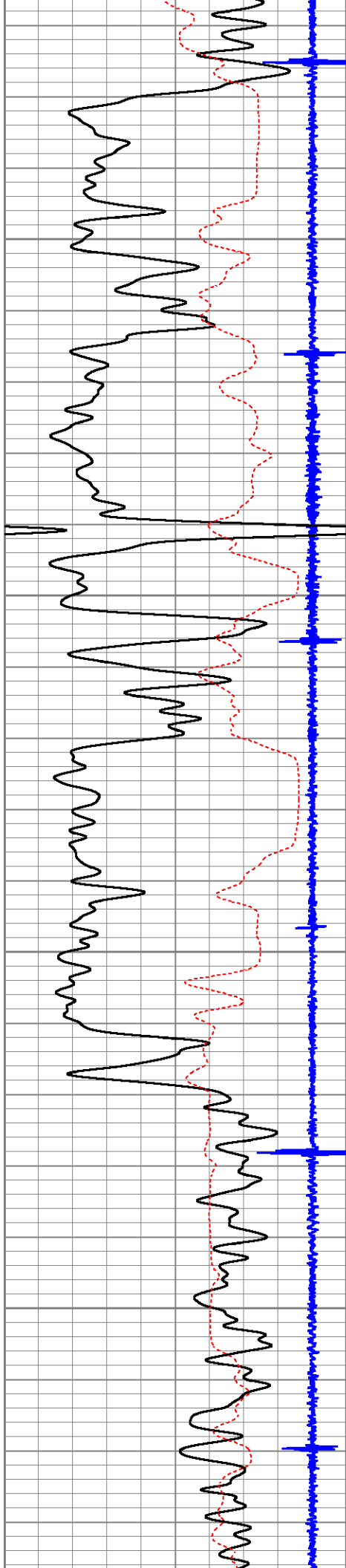
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Est. Top of Cement





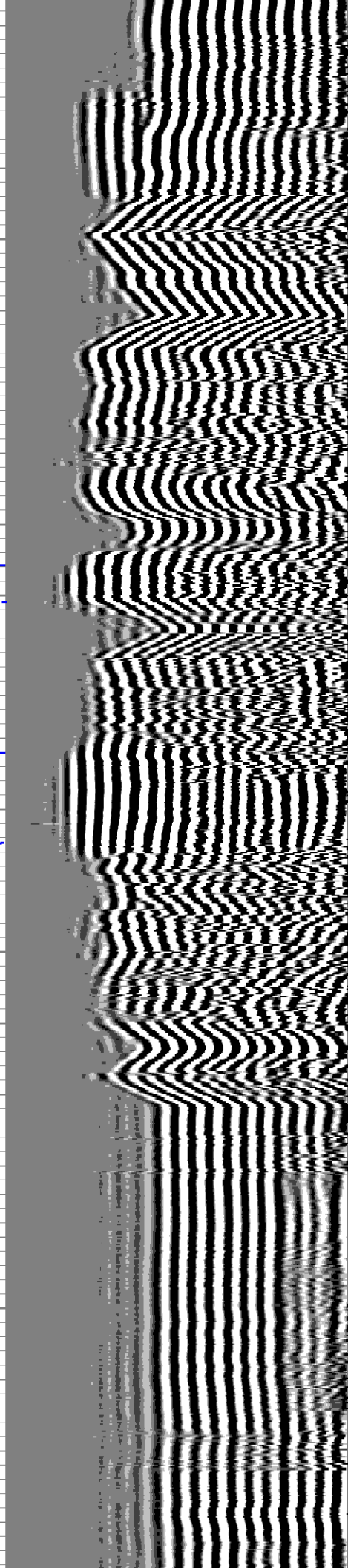
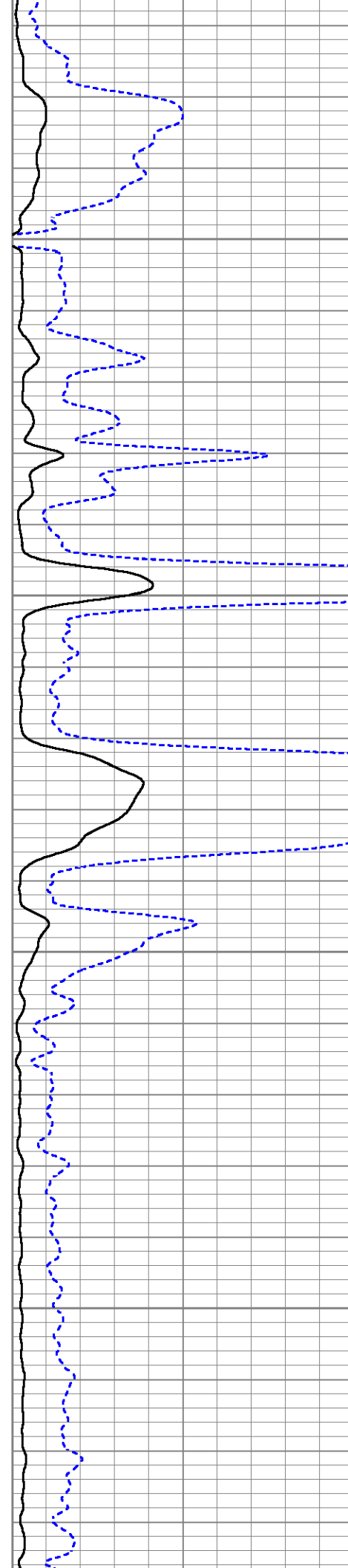


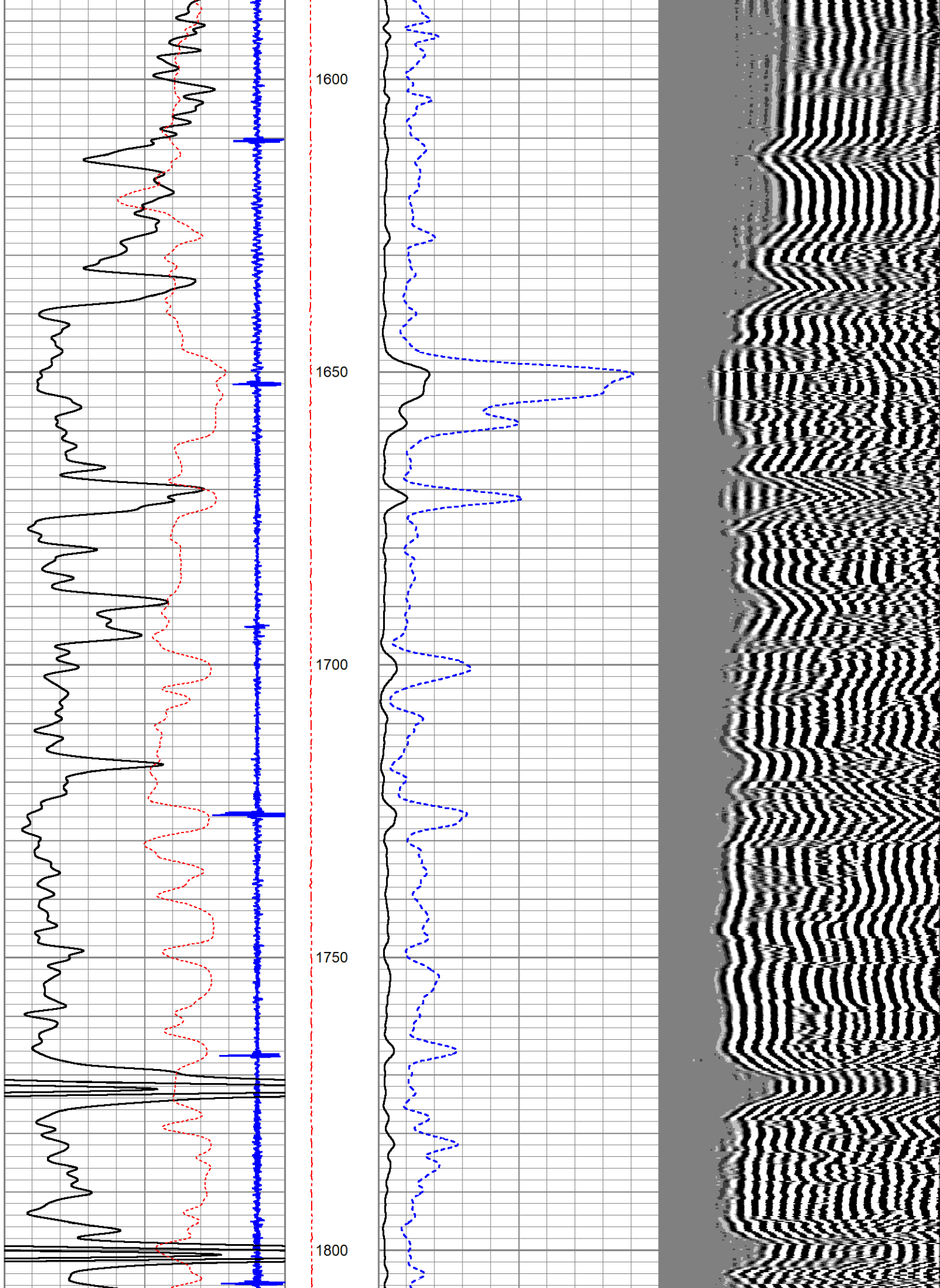
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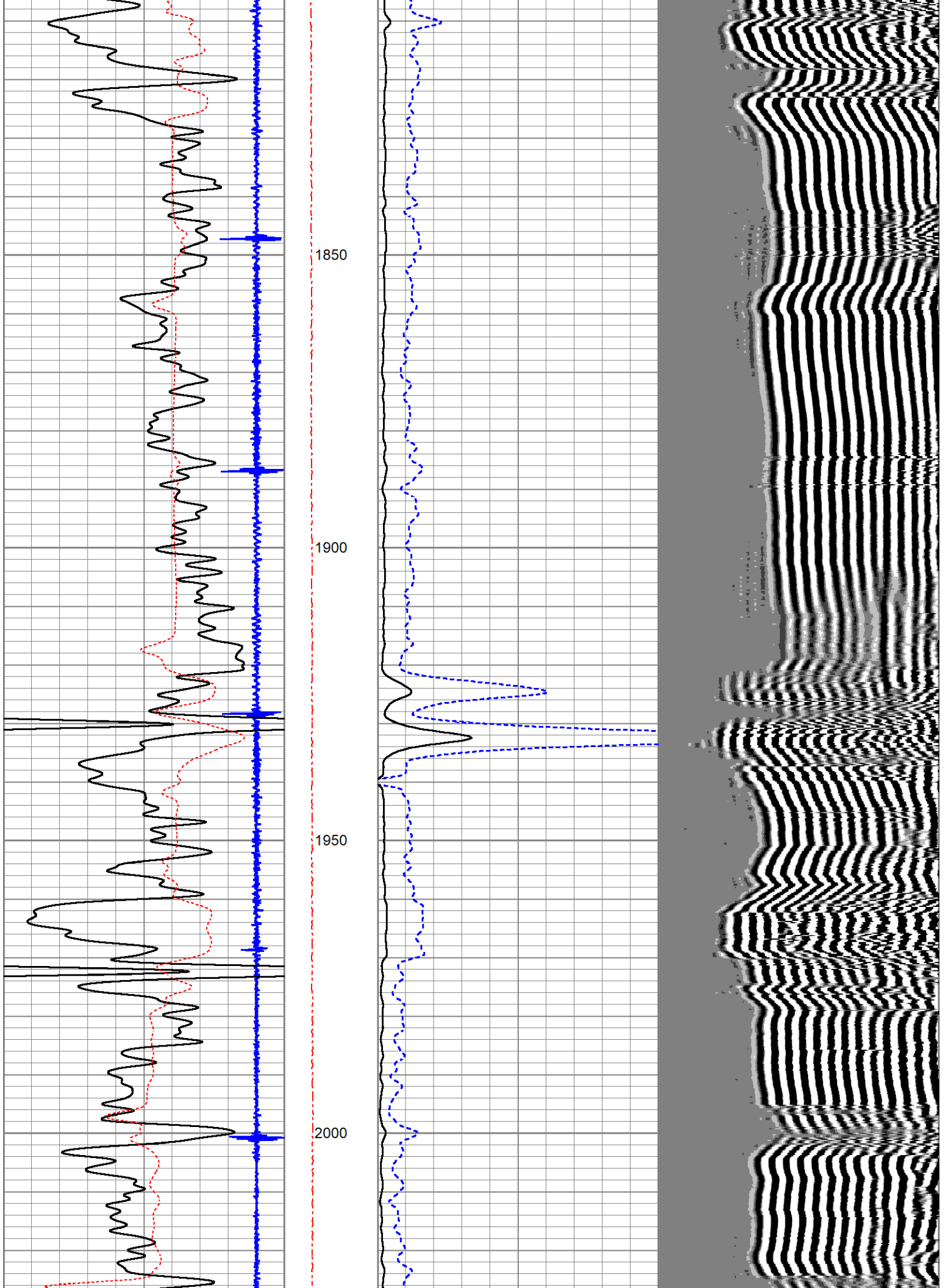
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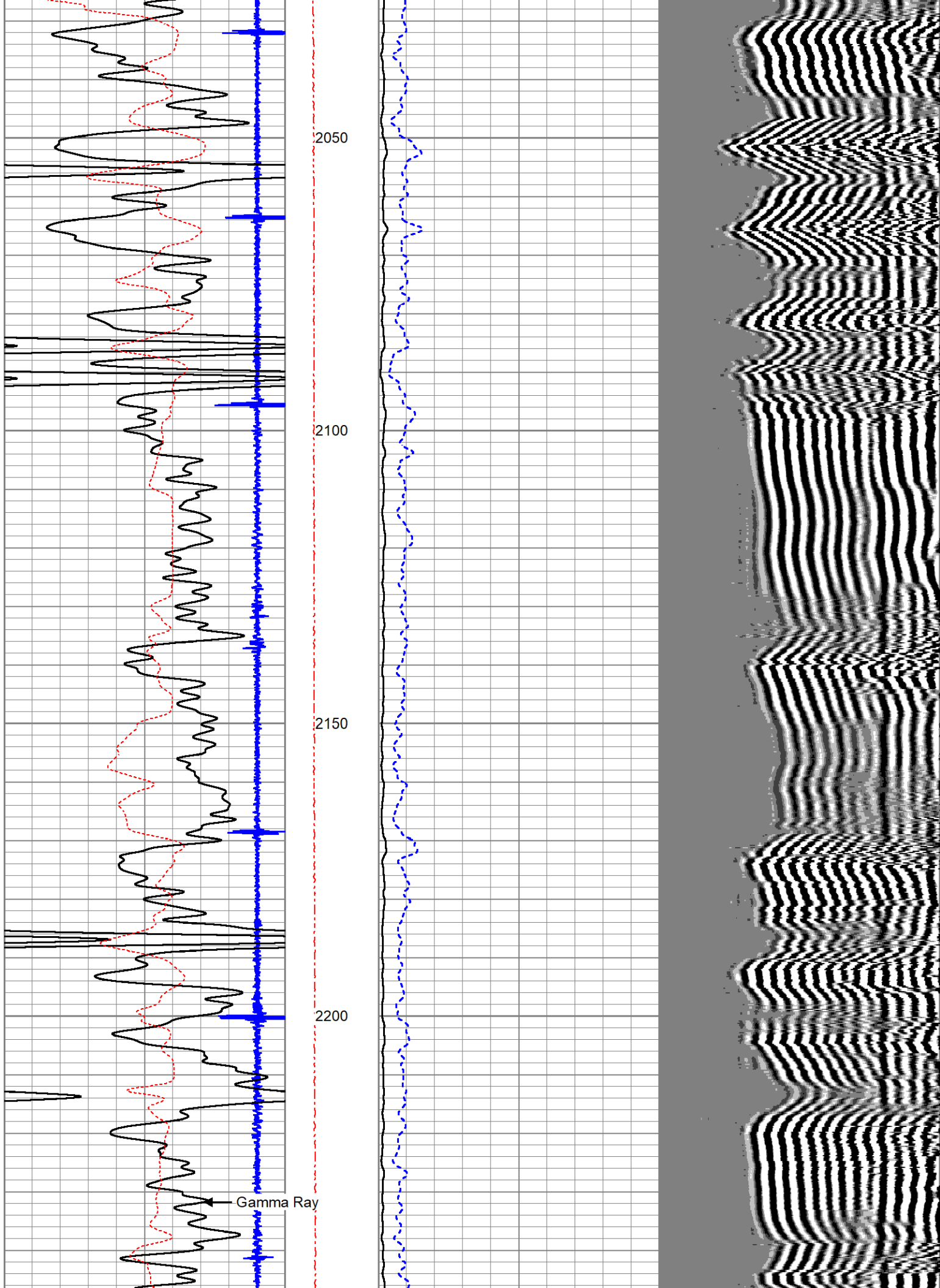
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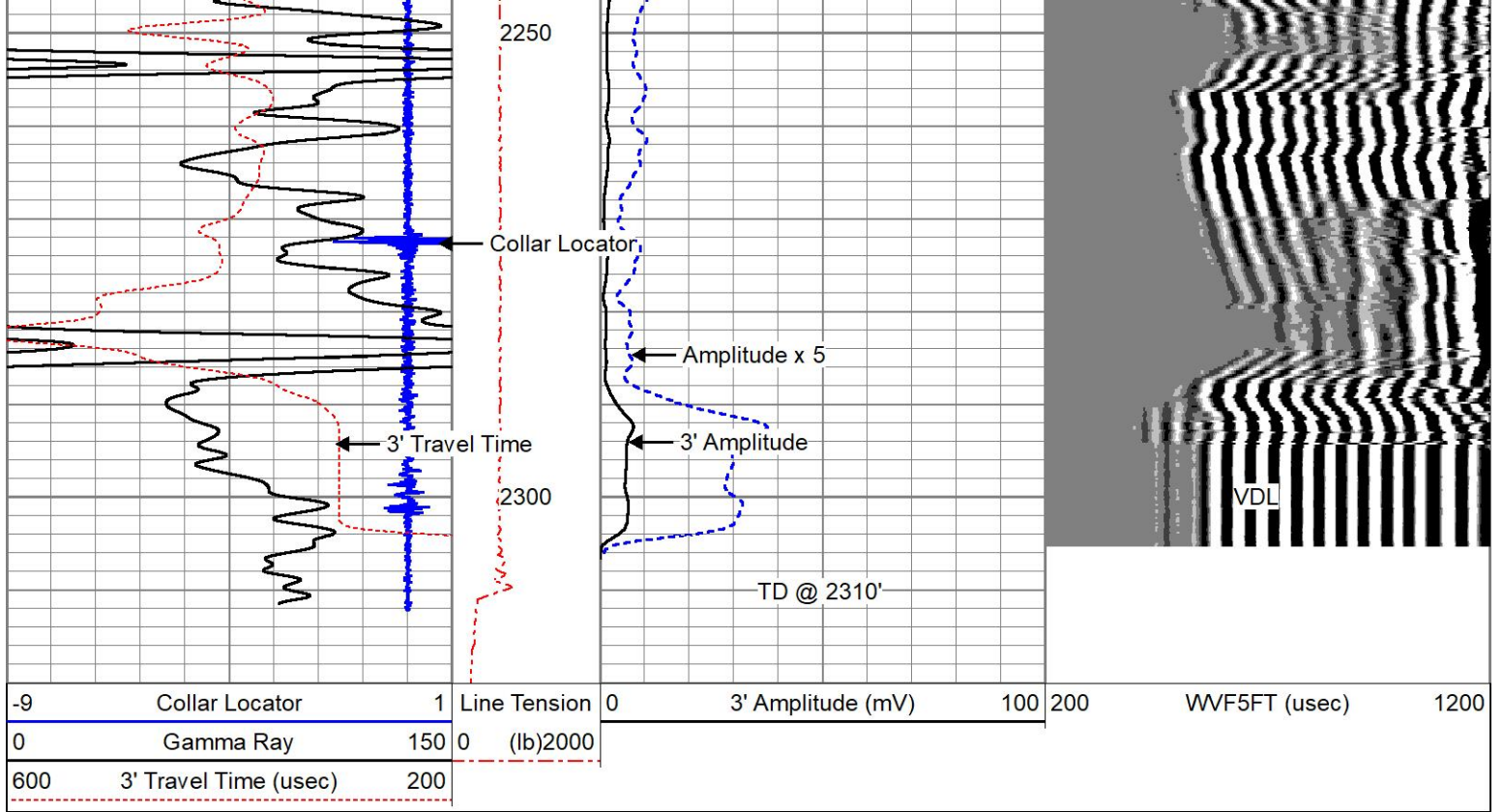
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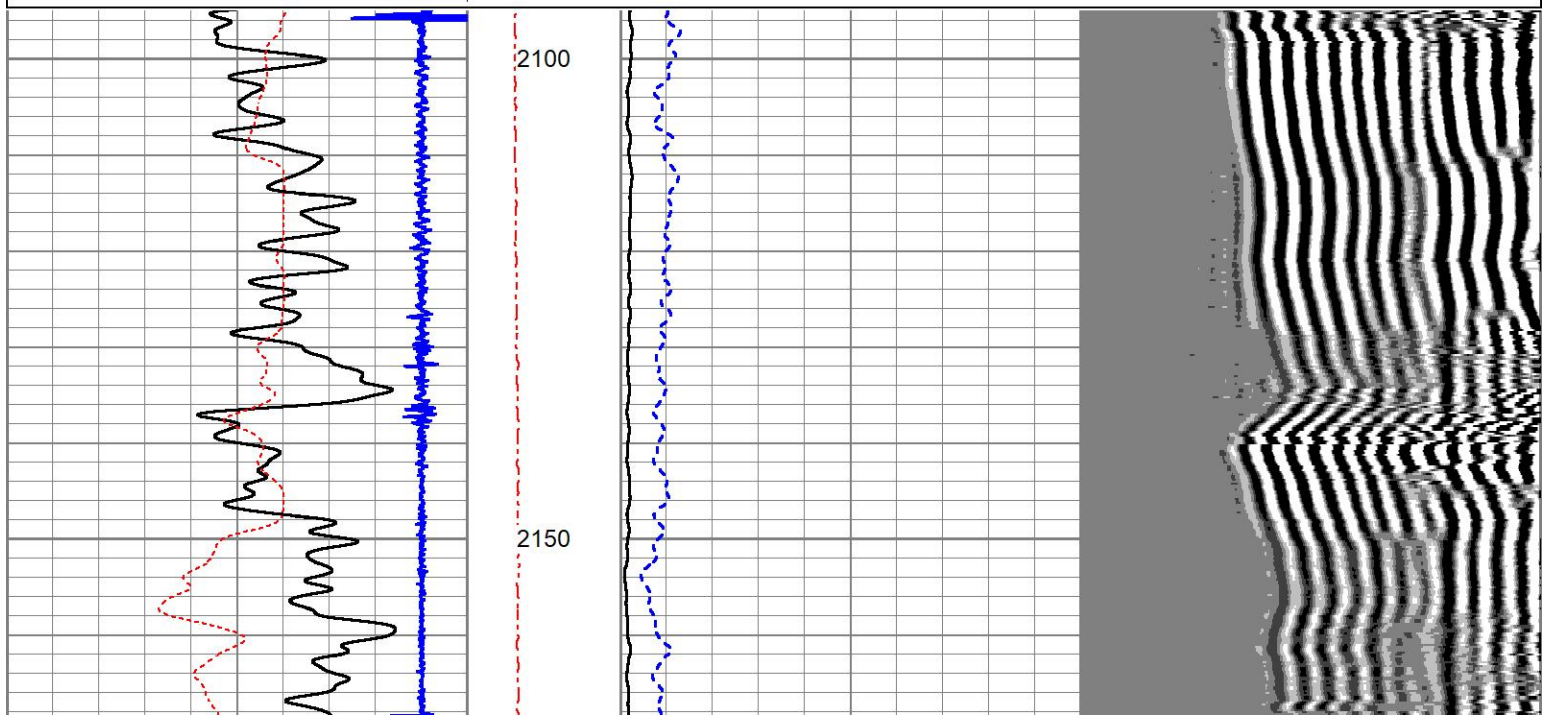
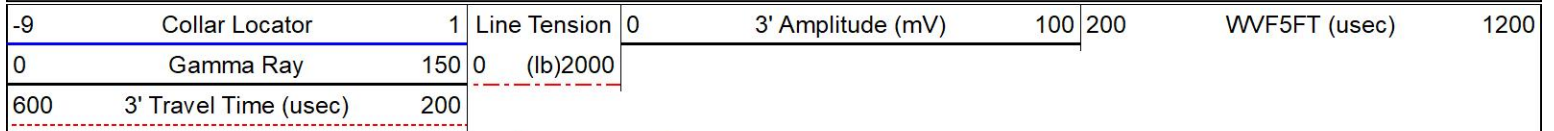


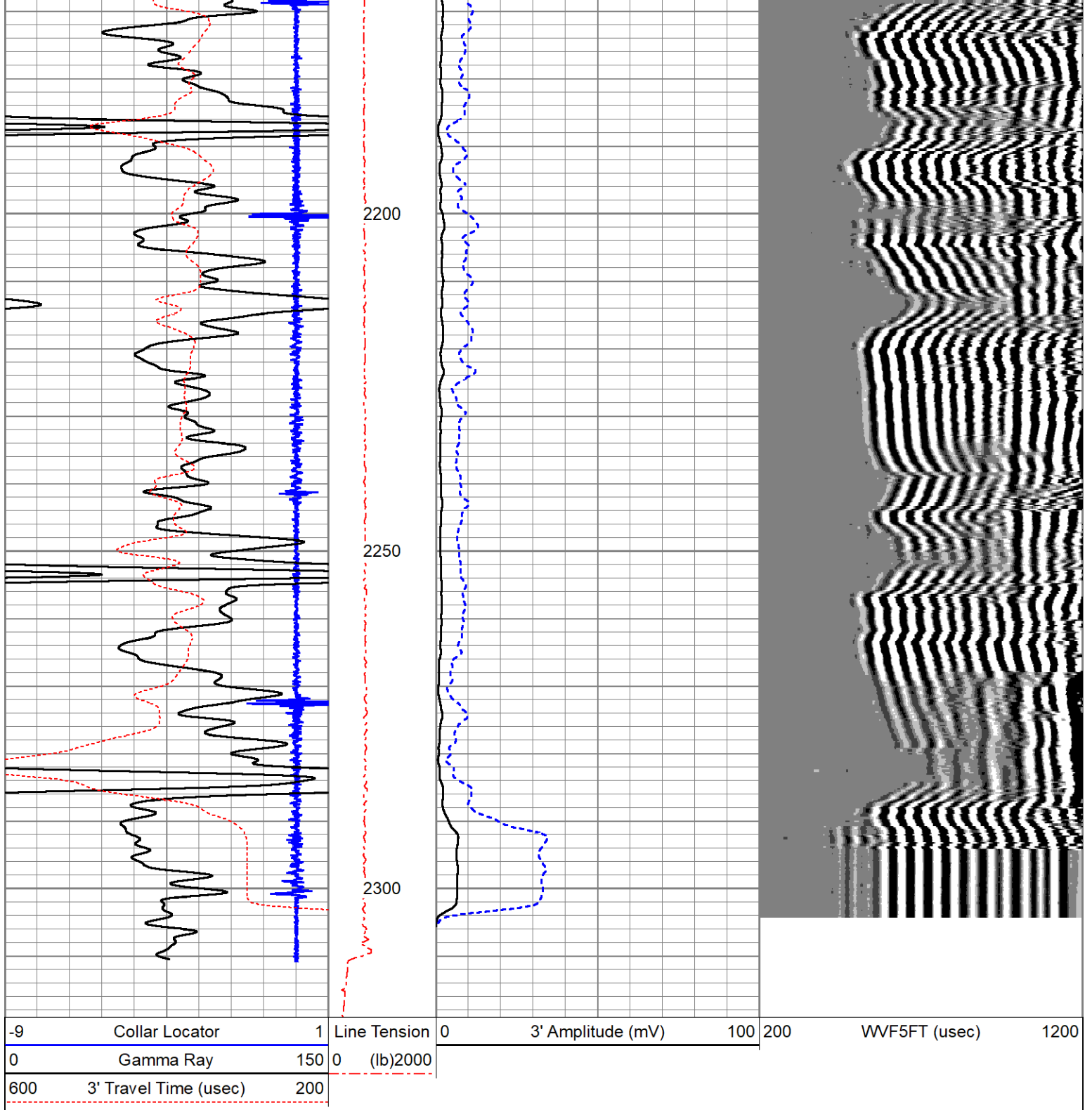


REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File patterson_operations_browning_#36_cbl_grneu.db
 Dataset Pathname pass2.1
 Presentation Format \$PINR_~1
 Dataset Creation Thu Dec 18 09:43:01 2025
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File patterson_operations_browning_#36_cbl_grneu.db
 Dataset Pathname pass3.1
 Dataset Creation Thu Dec 18 09:42:11 2025

Neutron Calibration Report

Serial Number: ProbeNEU1
 Tool Model: PRNEU
 Performed: (Not Performed)

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Gamma Ray Calibration Report

Serial Number: 060802
 Tool Model: 2 3/4" Probe
 Performed: Wed Jan 10 10:37:39 2024

Calibrator Value: 1.0

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 1.5000 /cps

Segmented Cement Bond Log Calibration Report

Serial Number: PR-015
 Tool Model: RBL-D

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 3549.348 ft

Master Calibration, performed Thu Oct 16 11:35:58 2025:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.014	2.106	0.700	71.921	33.000	0.400
CAL	0.011	1.628				
5'	0.011	2.133	0.700	71.921	33.562	0.334
SUM						
S1	0.091	2.090	0.000	100.000	50.042	-4.575
S2	0.016	2.048	0.000	100.000	49.206	-0.770
S3	0.021	2.020	0.000	100.000	50.044	-1.075
S4	0.014	2.100	0.000	100.000	47.945	-0.694
S5	0.015	2.134	0.000	100.000	47.193	-0.690
S6	0.014	2.191	0.000	100.000	45.932	-0.650
S7	0.017	2.209	0.000	100.000	45.619	-0.760
S8	0.022	2.178	0.000	100.000	46.371	-1.018

Air Zero Calibration, performed Wed Nov 26 09:30:11 2025:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.021		0.000			-0.007
5'	0.034		0.000			-0.023
SUM						
S1	0.020		0.000			0.072
S2	0.024		0.000			-0.008
S3	0.021		0.000			0.001
S4	0.026		0.000			-0.012
S5	0.026		0.000			-0.011
S6	0.028		0.000			-0.014
S7	0.024		0.000			-0.007
S8	0.022		0.000			-0.000



Company Patterson Operationsm, LLC
 Well Browning 36
 Field



County	Greenwood
State	Kansas