



**SUPERIOR**  
Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

## DUAL INDUCTION LOG

Company XTO Energy Inc.  
Well Apache Canyon 32-12  
Field Purgatoire River  
County Las Animas State Colorado

Location: API # : 05 071 09128 00

2159' FSL & 342' FWL

SEC 32 TWP 33S RGE 67W

Permanent Datum Ground Level Elevation 8084'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Other Services  
CDL  
NEUTRON  
Elevation  
K.B. -----  
D.F. -----  
G.L. 8084'

Date 6-17-07

Run Number One

Depth Driller 2700'

Depth Logger 2685'

Bottom Logged Interval 2683'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 496'

Casing Logger 496'

Bit Size 7 7/8"

Type Fluid in Hole Water

Density / Viscosity ///

pH / Fluid Loss ///

Source of Sample ///

Rm @ Meas. Temp ///

Rmf @ Meas. Temp ///

Rmc @ Meas. Temp ///

Source of Rmf / Rmc ///

Rm @ BHT ///

Time Circulation Stopped 12:30 P.M.

Time Logger on Bottom 5:15 P.M.

Maximum Recorded Temperature 113 DEG F

Equipment Number T697

Location Trinidad

Recorded By M. Norton

Witnessed By Mr. Don Johnson

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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

#### Well Directions:

First Bosque entrance just before Weston, first right at Cherry Canyon, stay left at Y, stay on main road approx. four and half miles, location on right hand side of road.

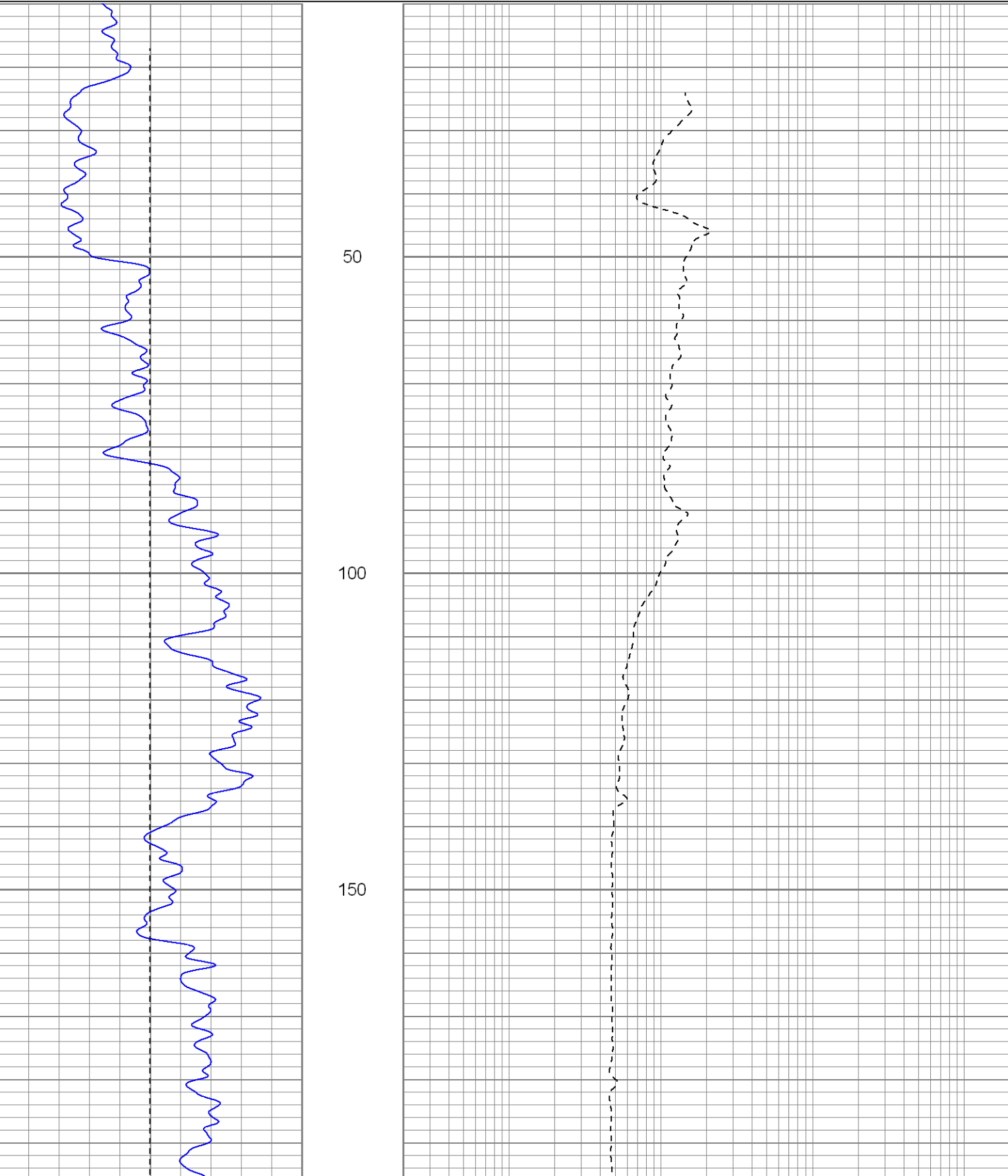


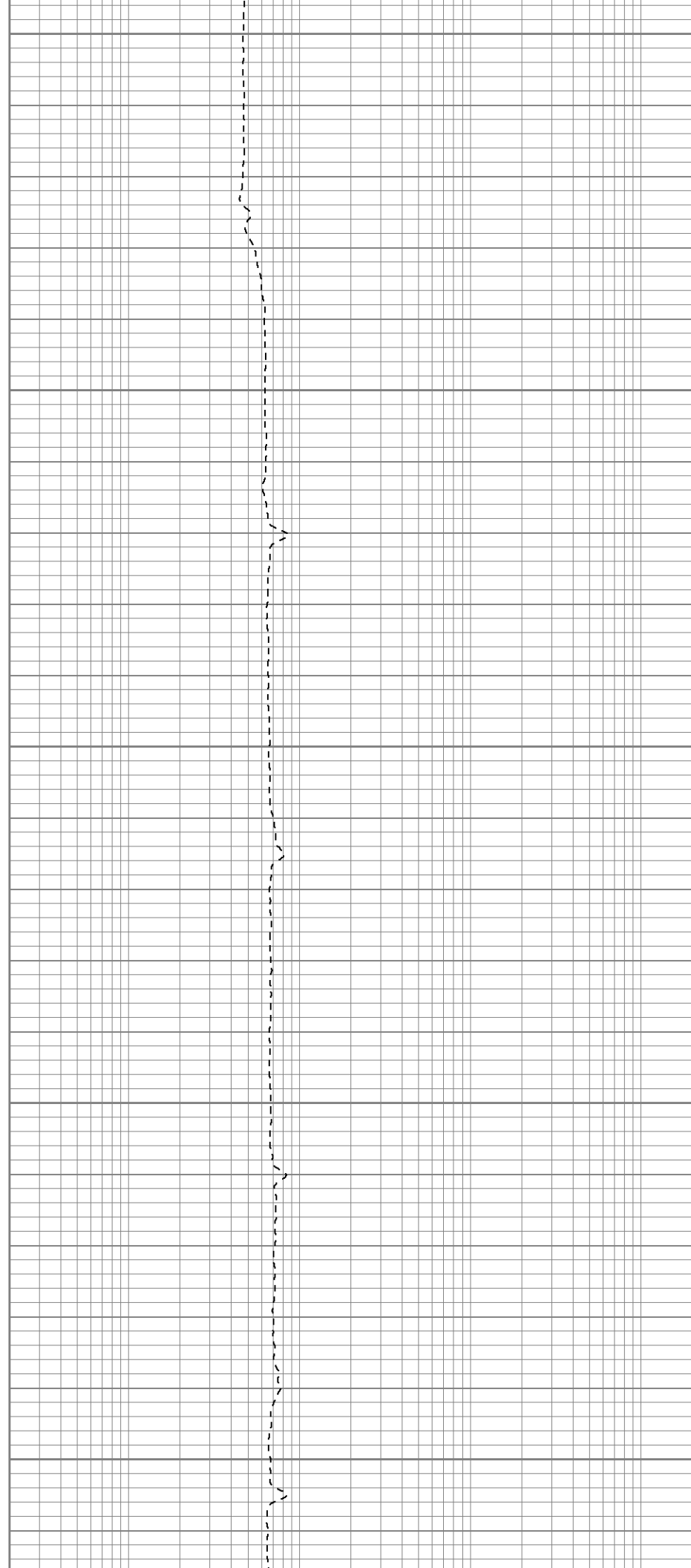
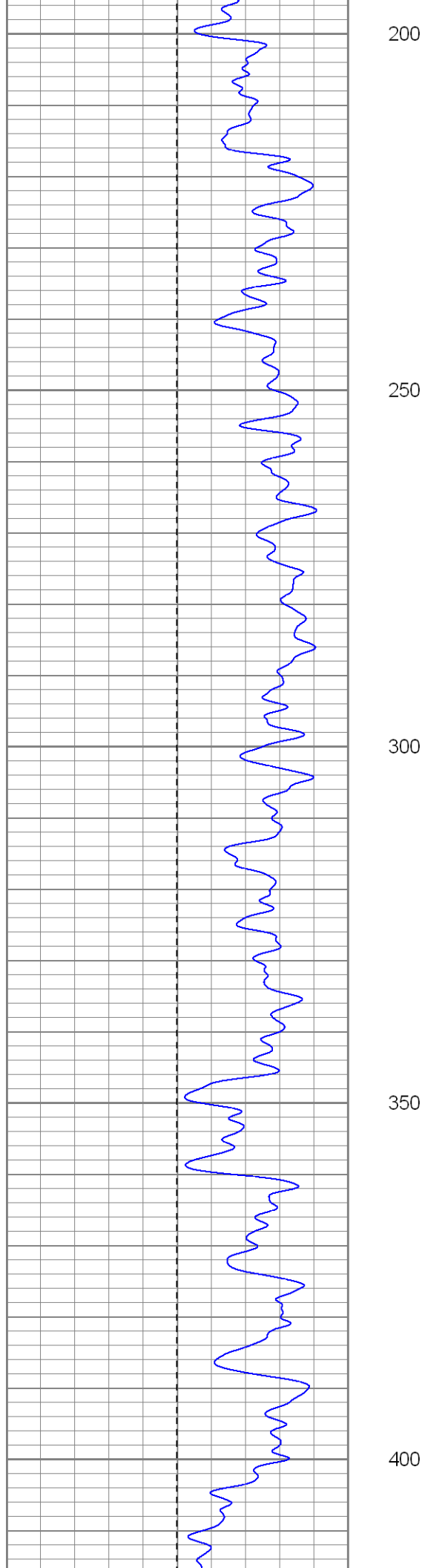
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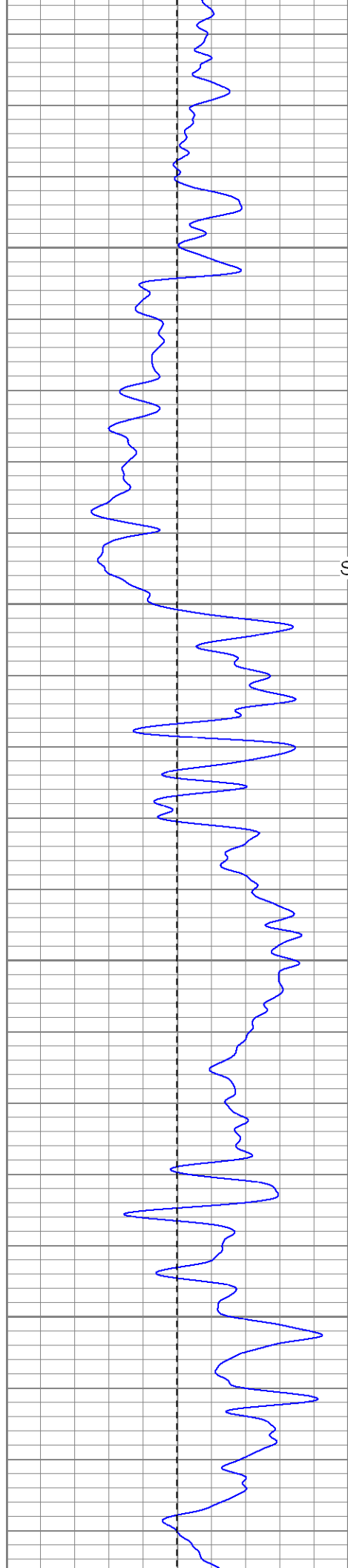
# Main Pass

Database File: xtoac3212.db  
Dataset Pathname: pass2.1  
Presentation Format: dil  
Dataset Creation: Sun Jun 17 19:04:34 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200	0.2	RILM (Ohm-m)	2000
-100	SP (mV)	100	0.2	RILD (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000







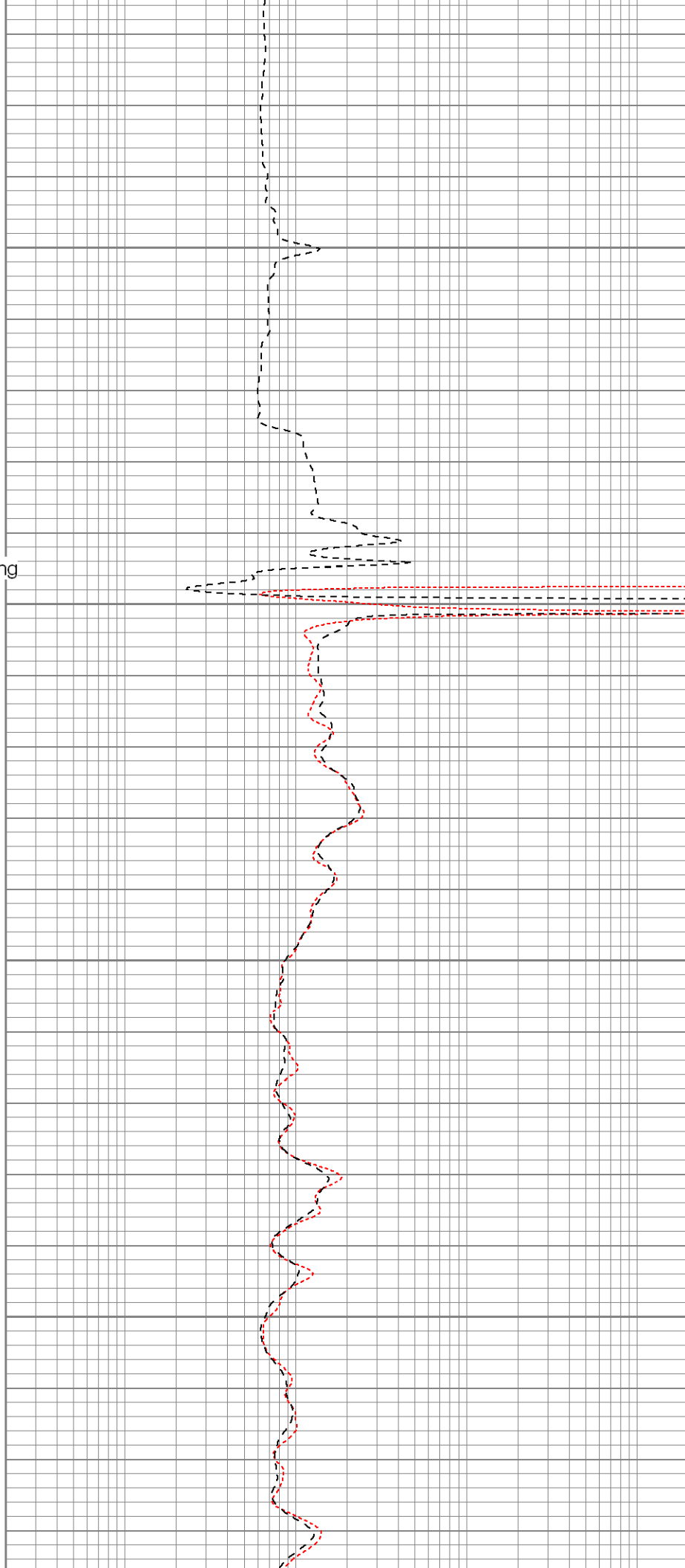
450

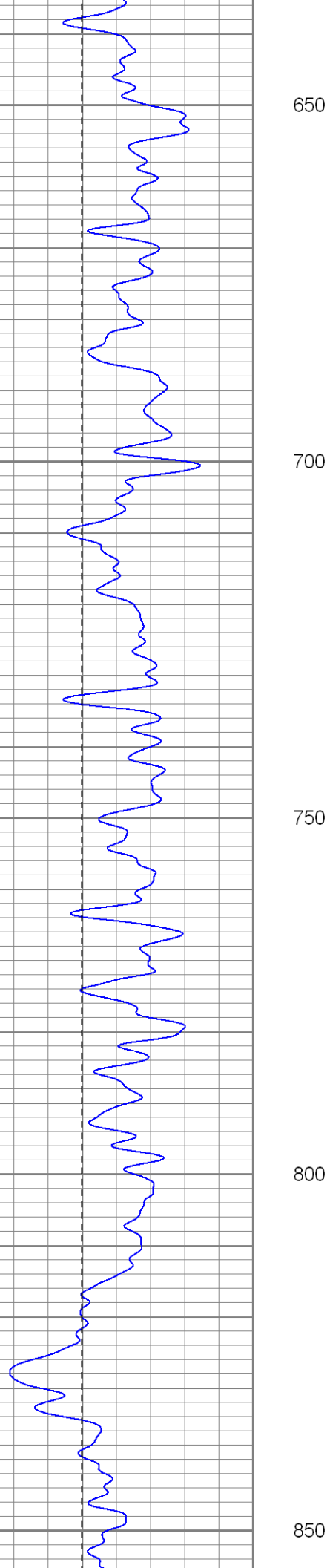
Surface Casing

500

550

600





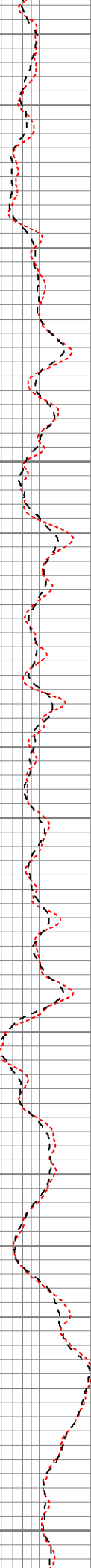
650

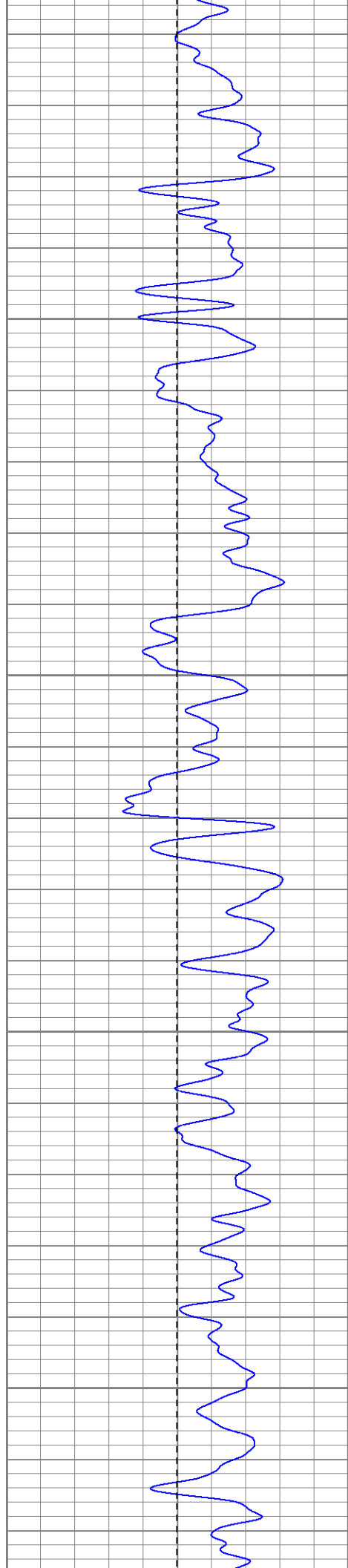
700

750

800

850



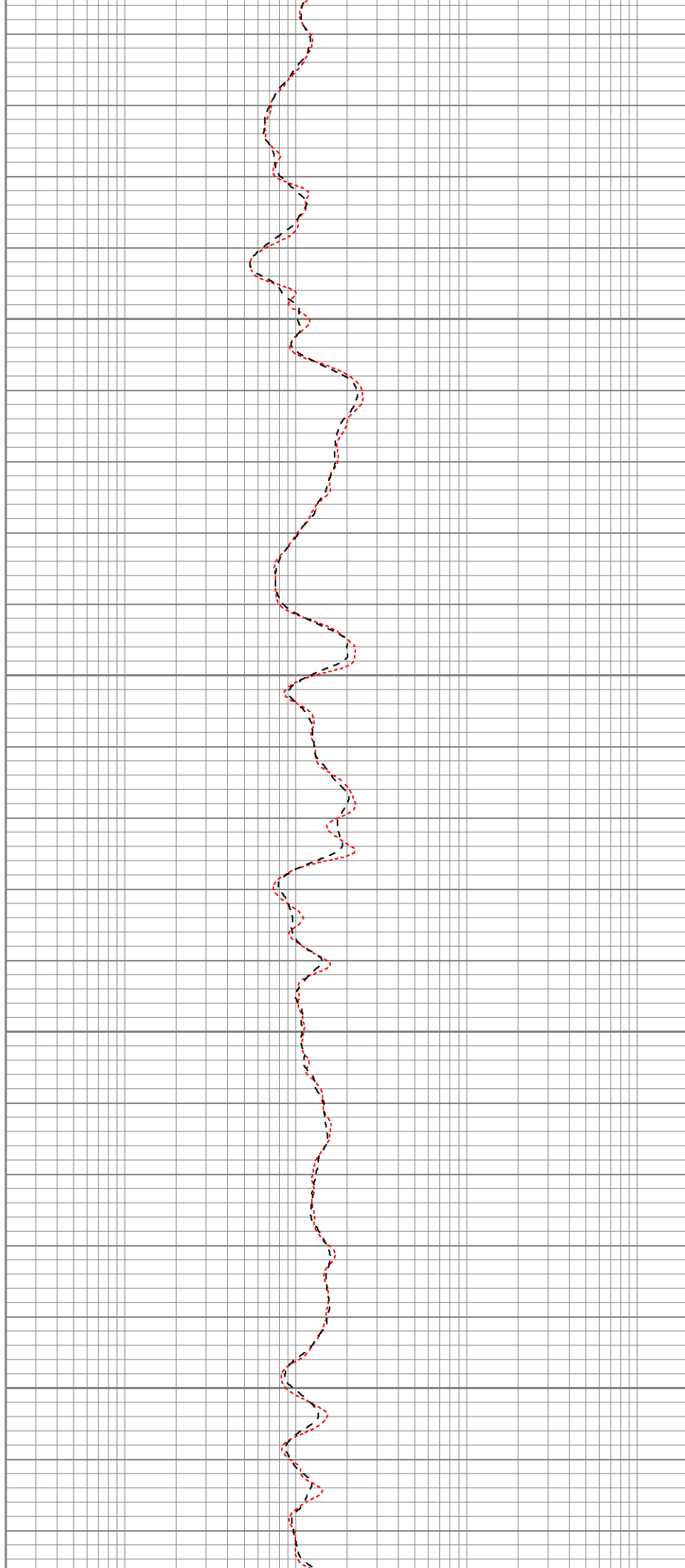


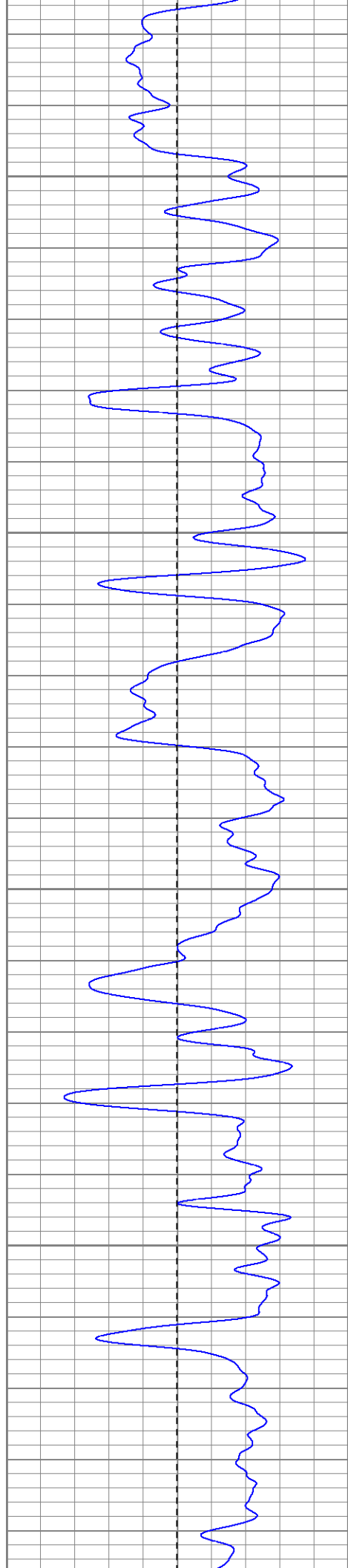
900

950

1000

1050



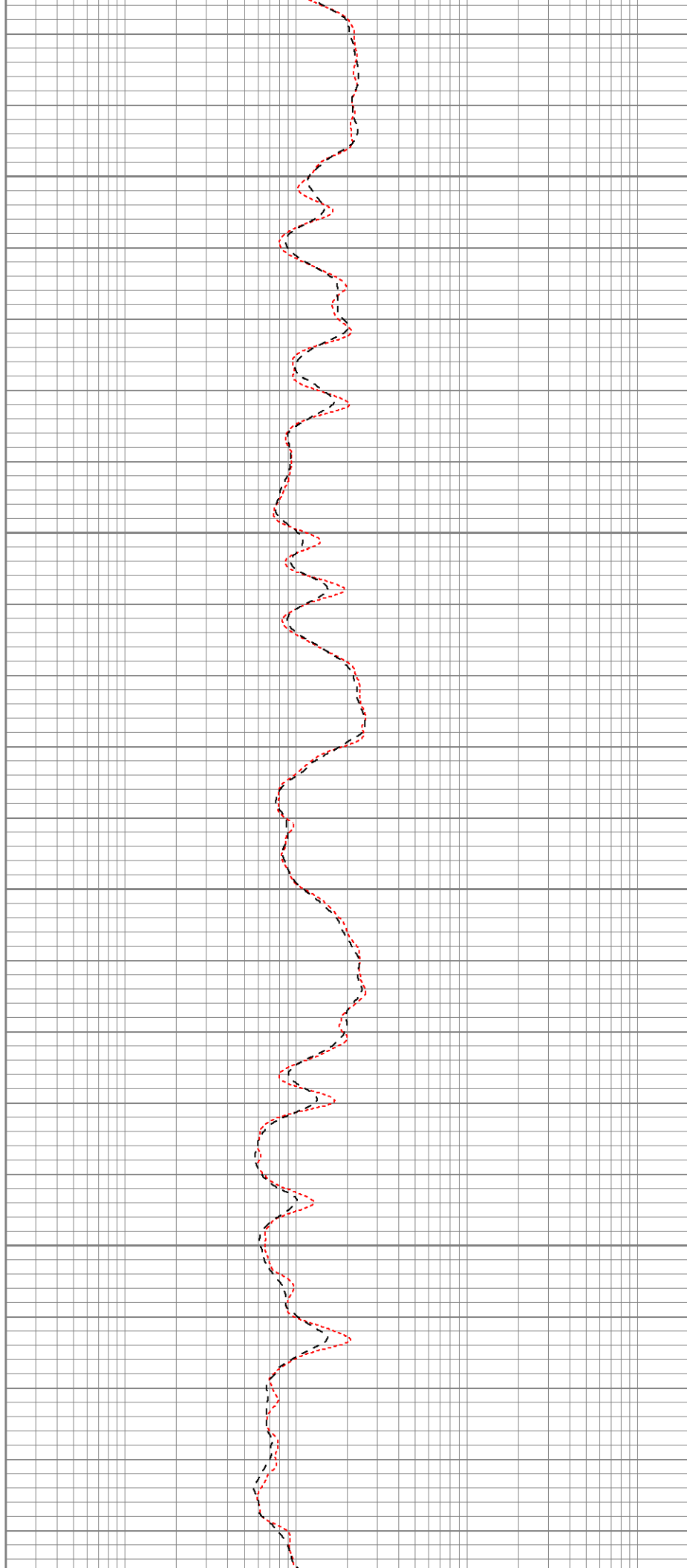


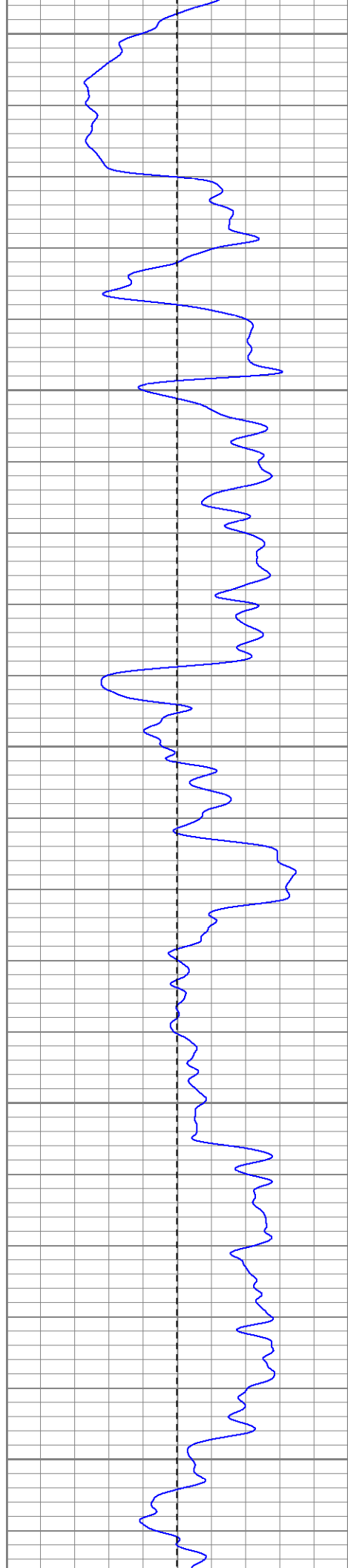
1100

1150

1200

1250





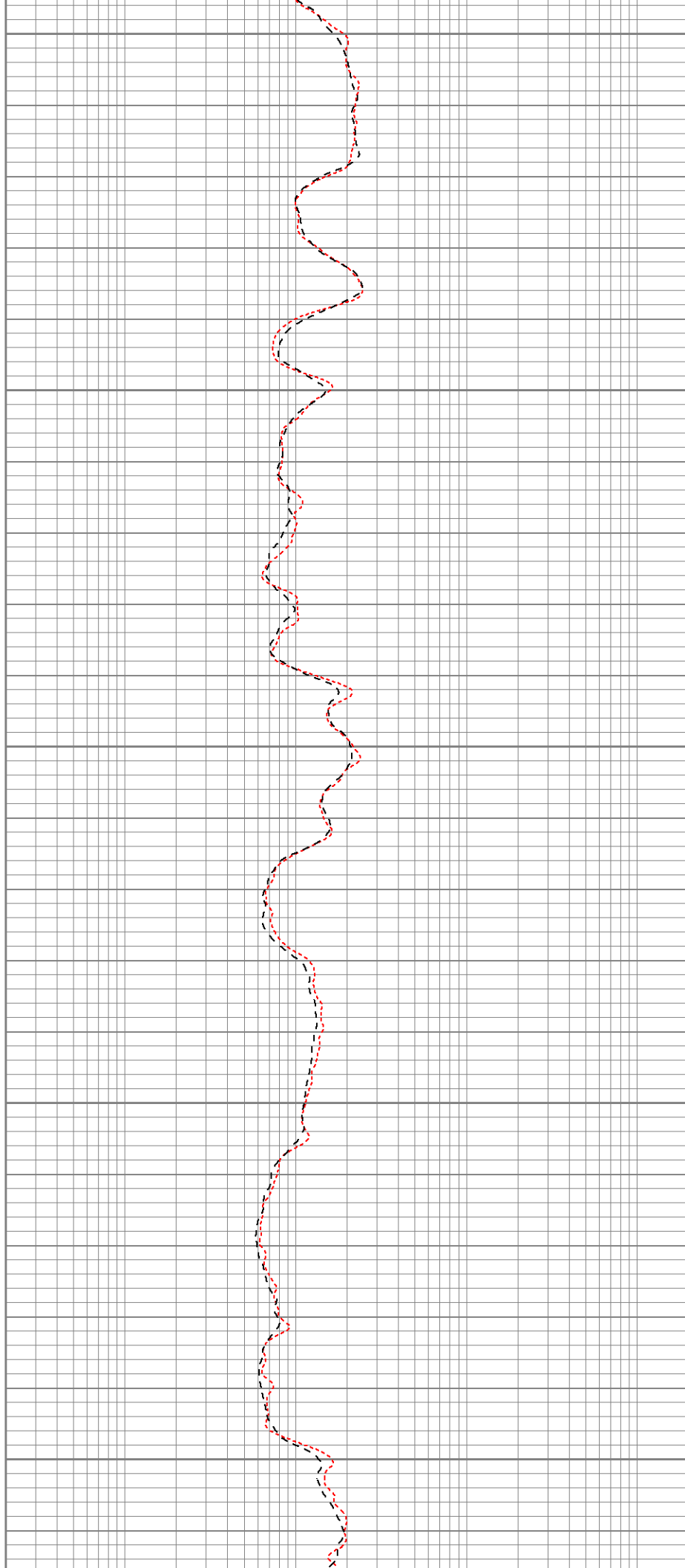
1300

1350

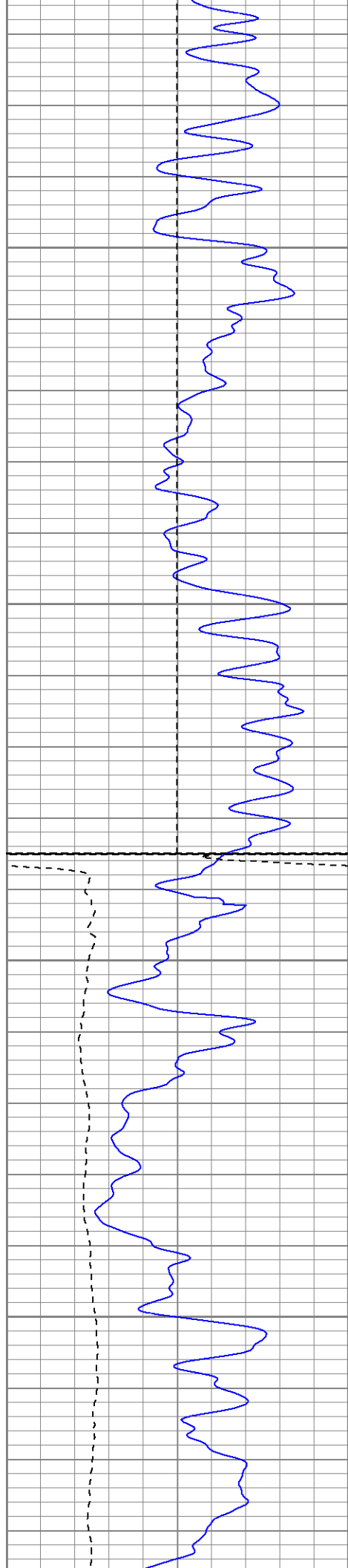
1400

1450

1500







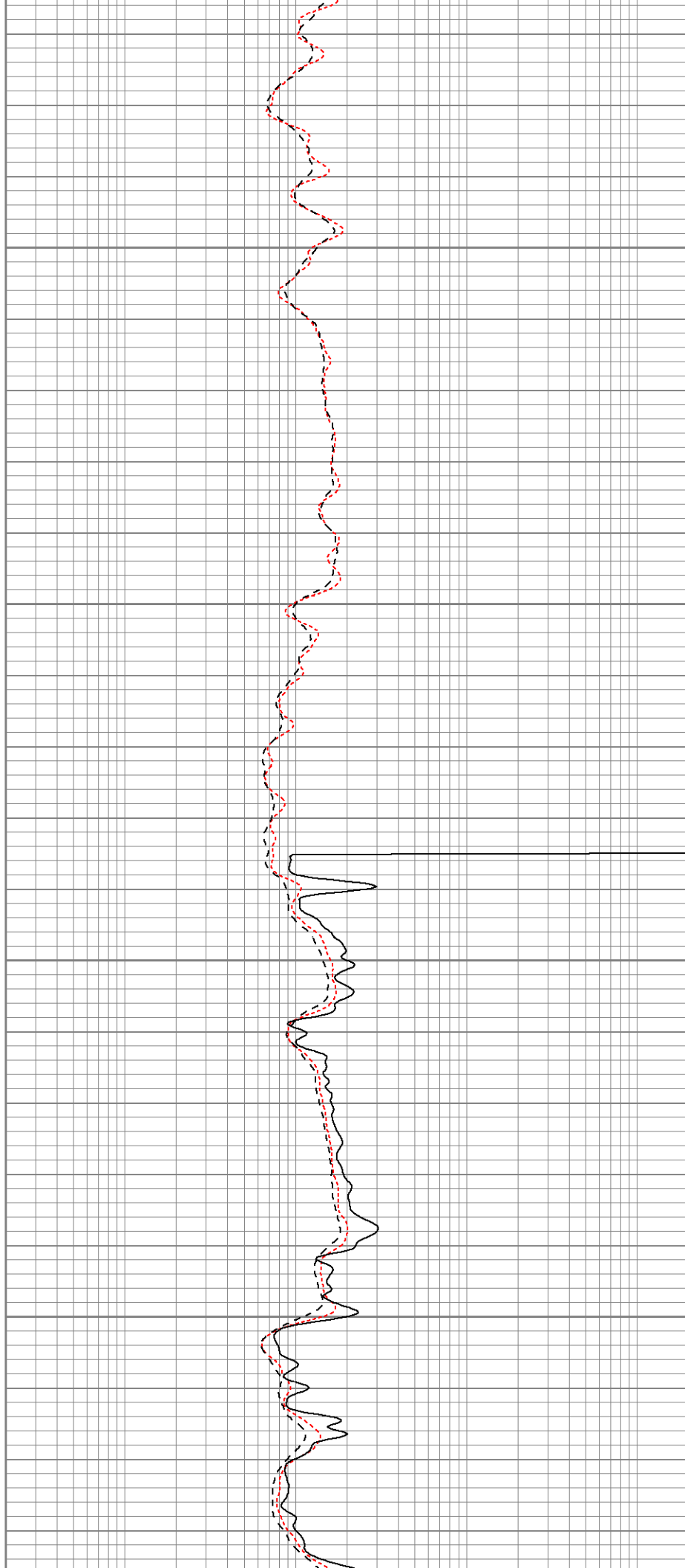
1550

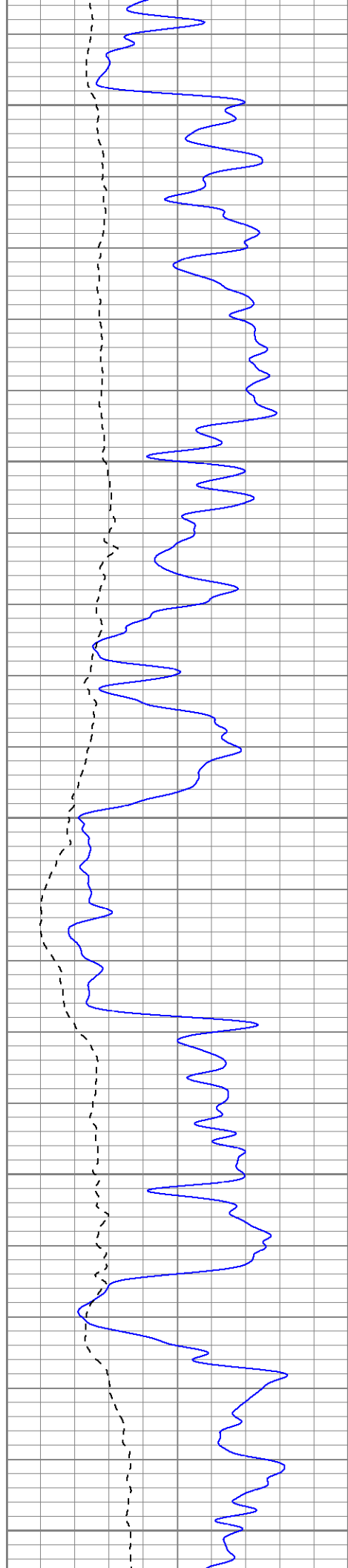
1600

Fluid Level

1650

1700





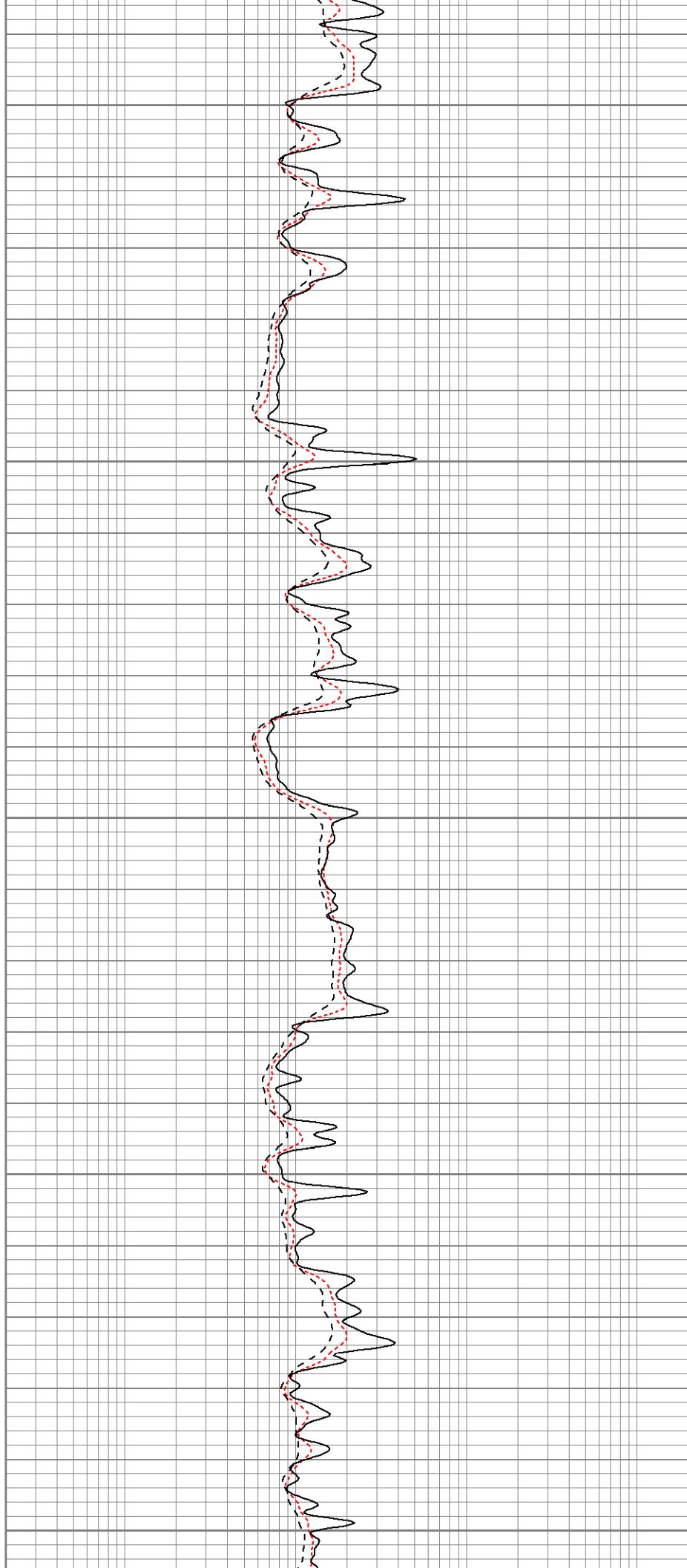
1750

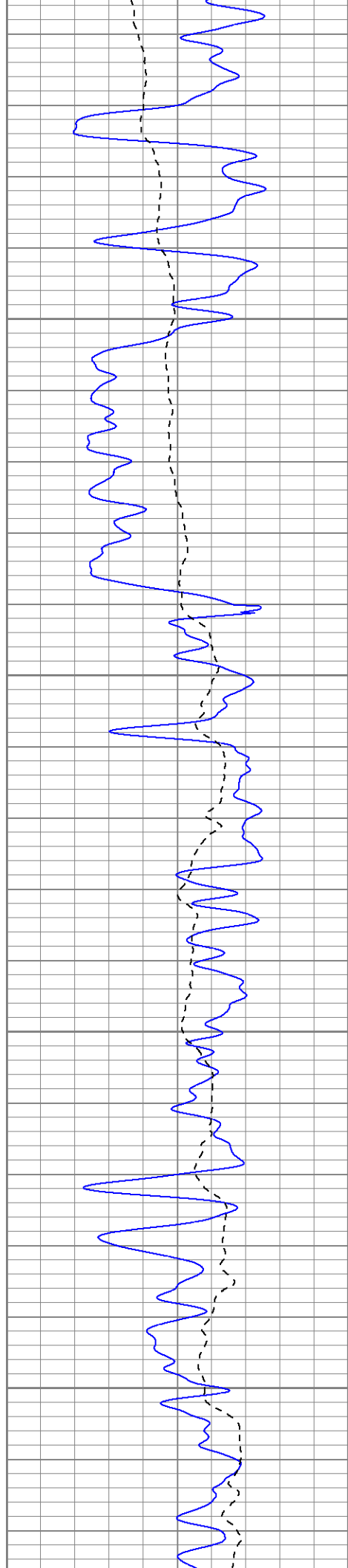
1800

1850

1900

1950



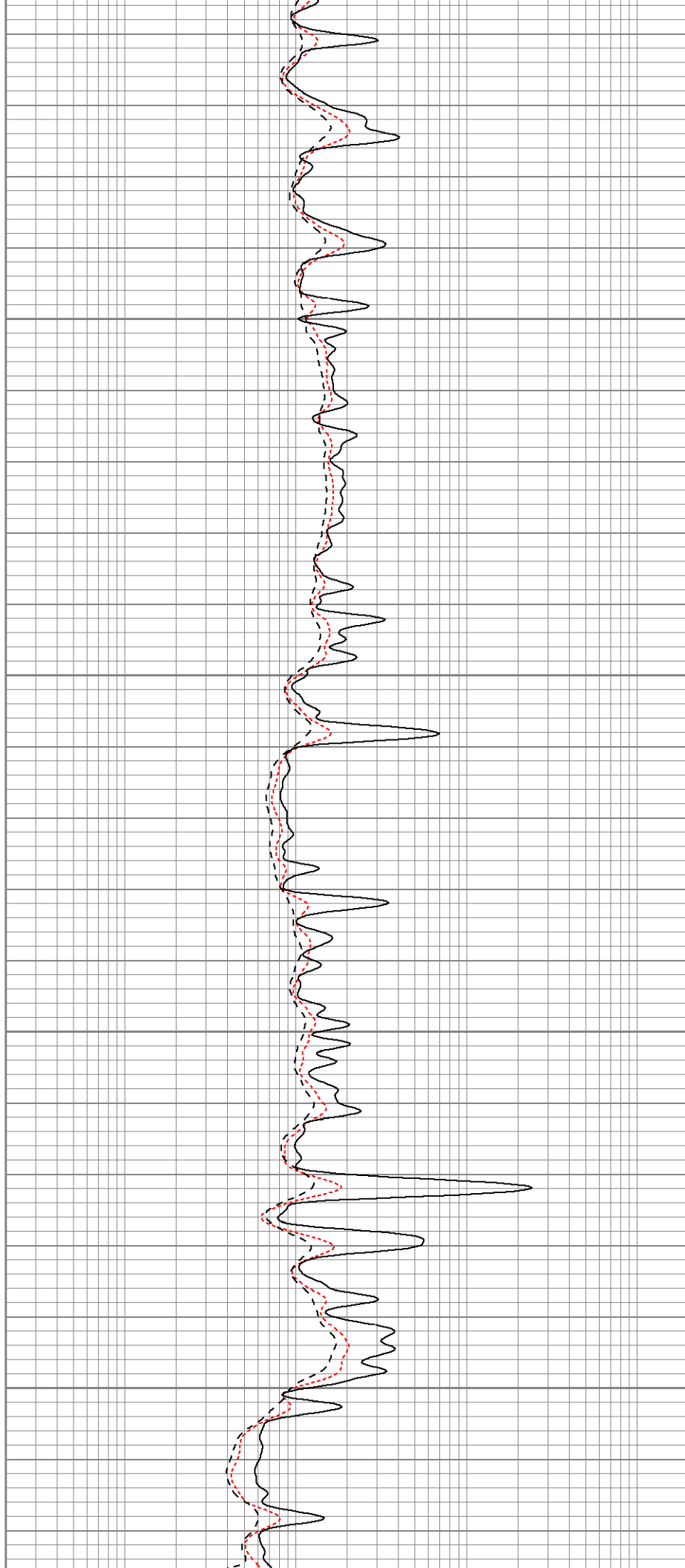


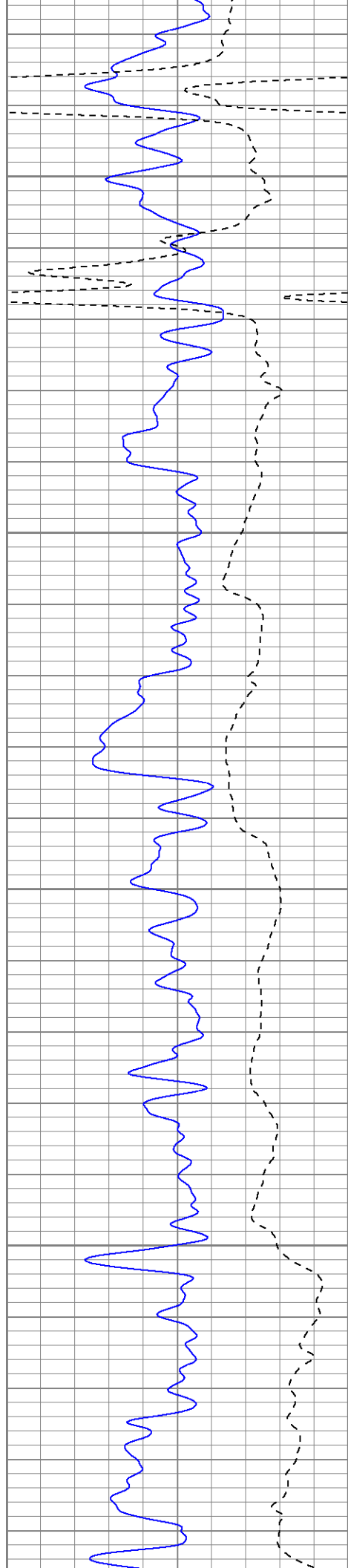
2000

2050

2100

2150



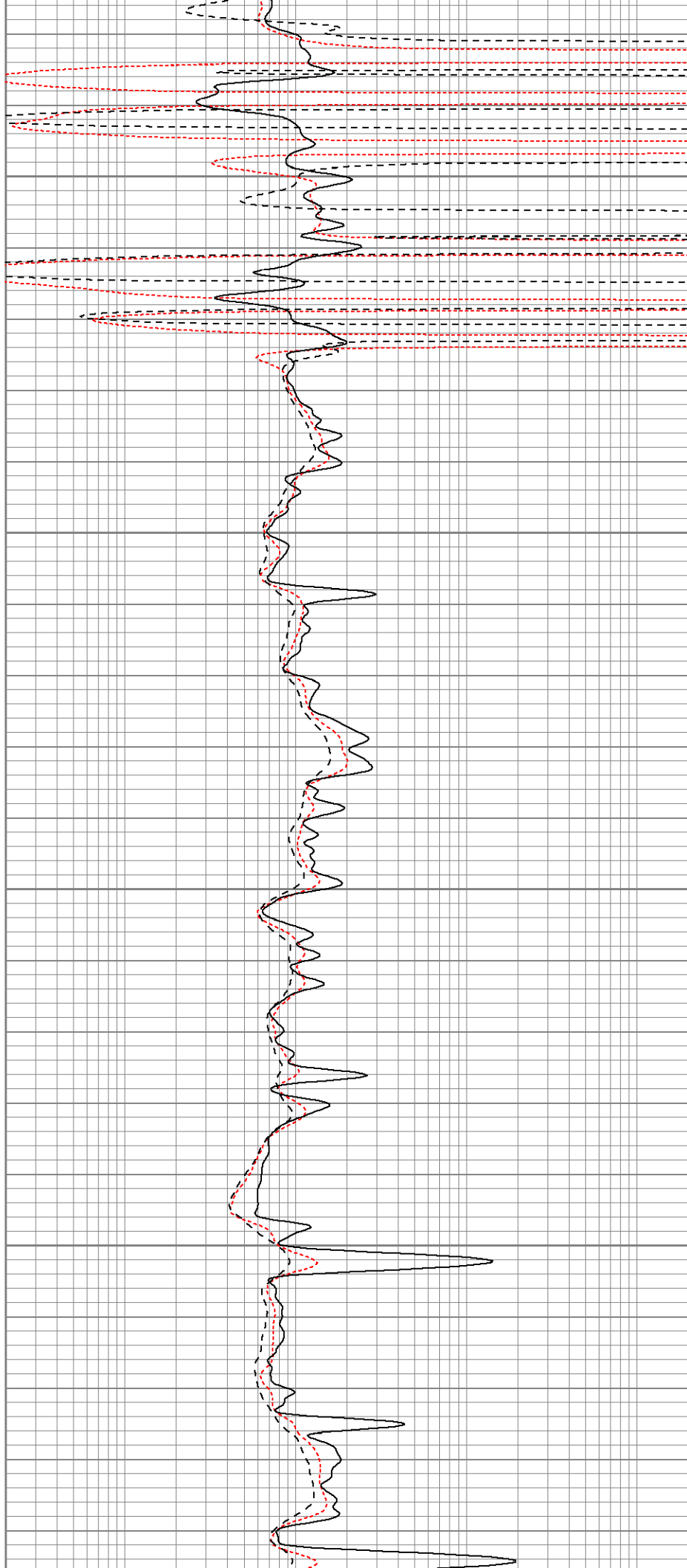


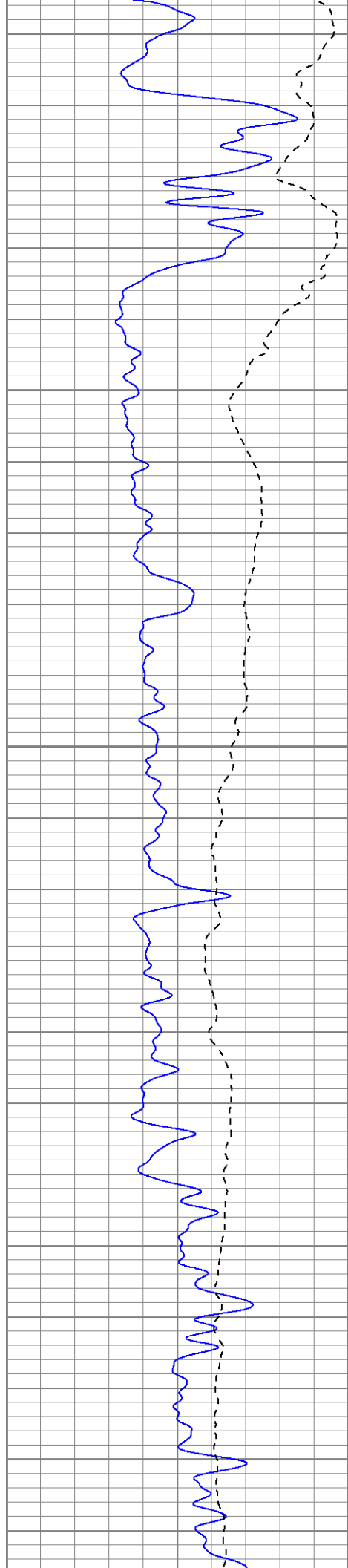
2200

2250

2300

2350





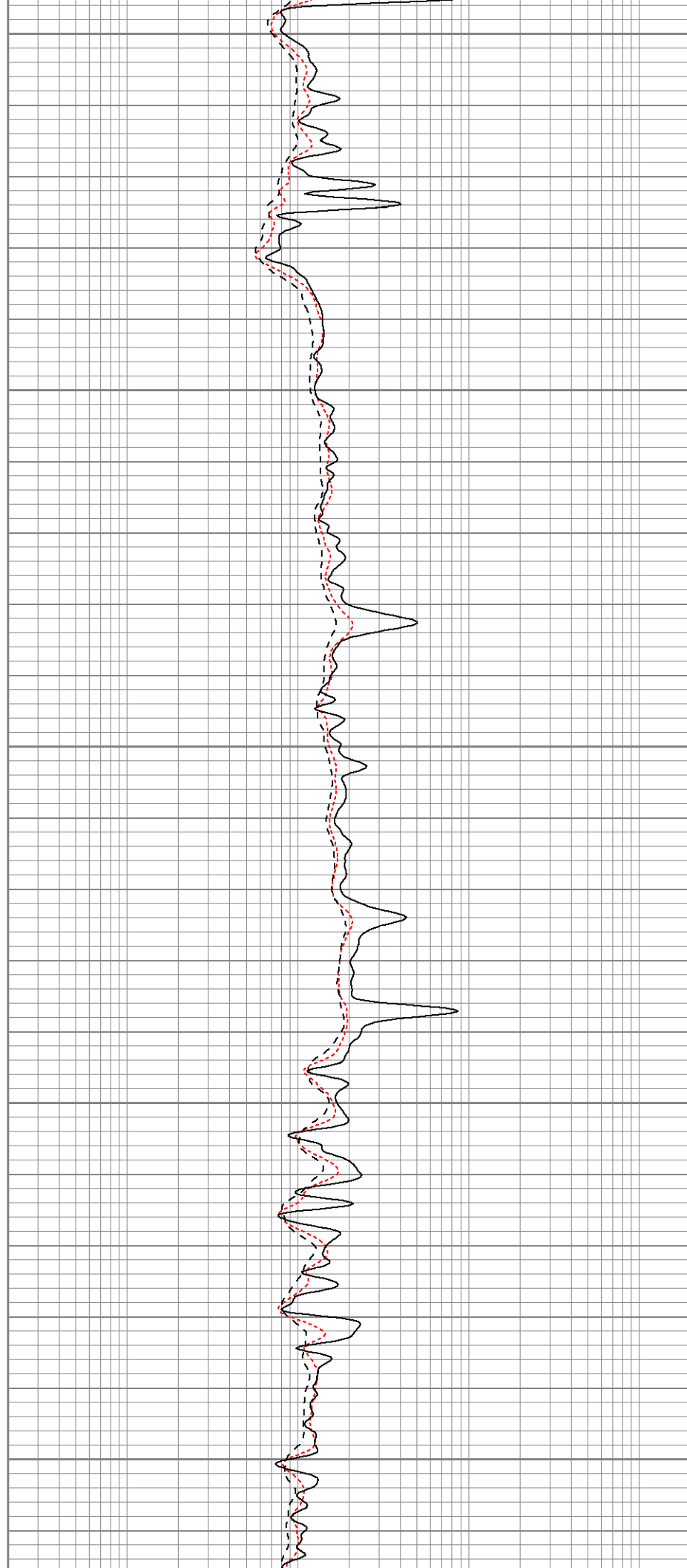
2400

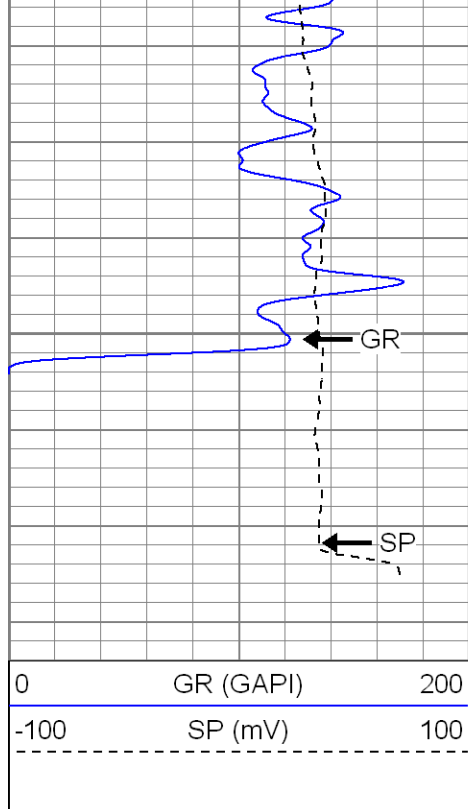
2450

2500

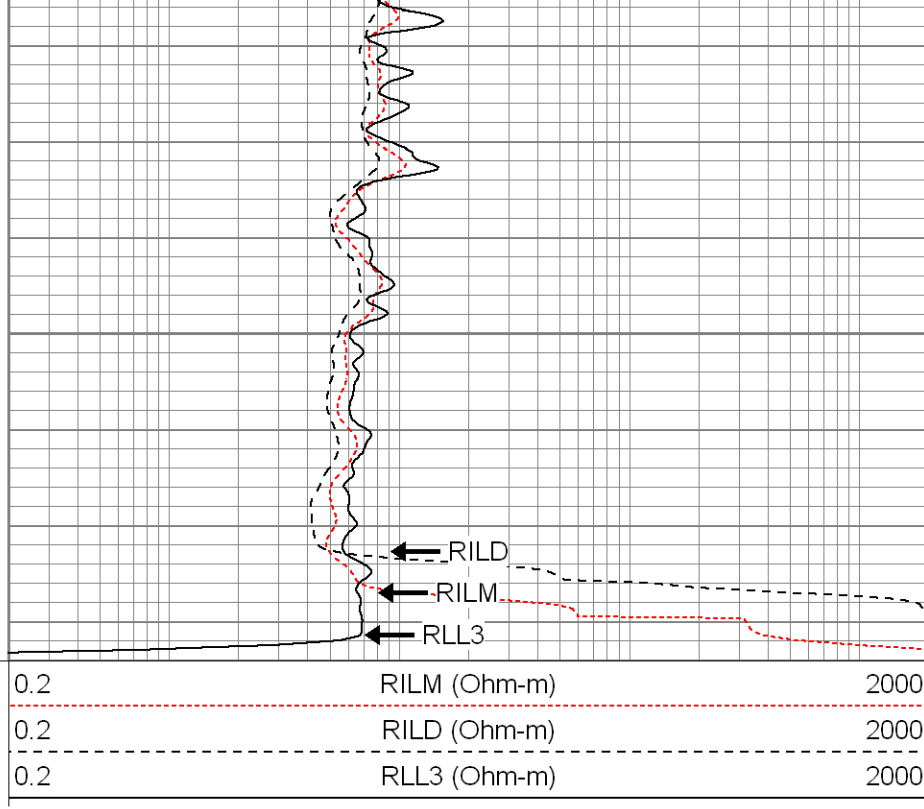
2550

2600





2650

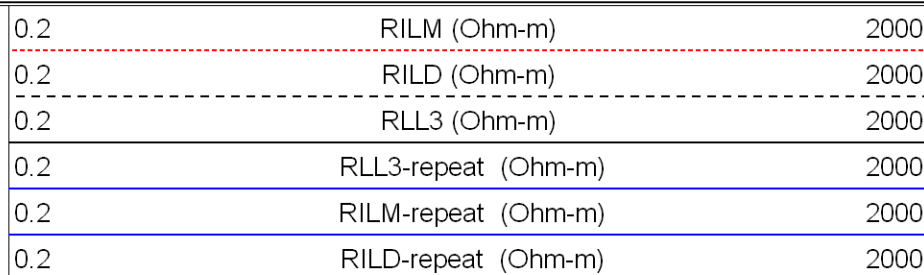
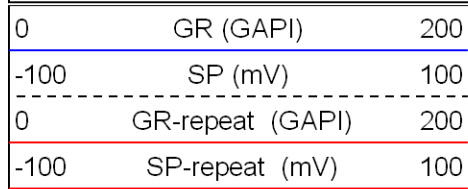


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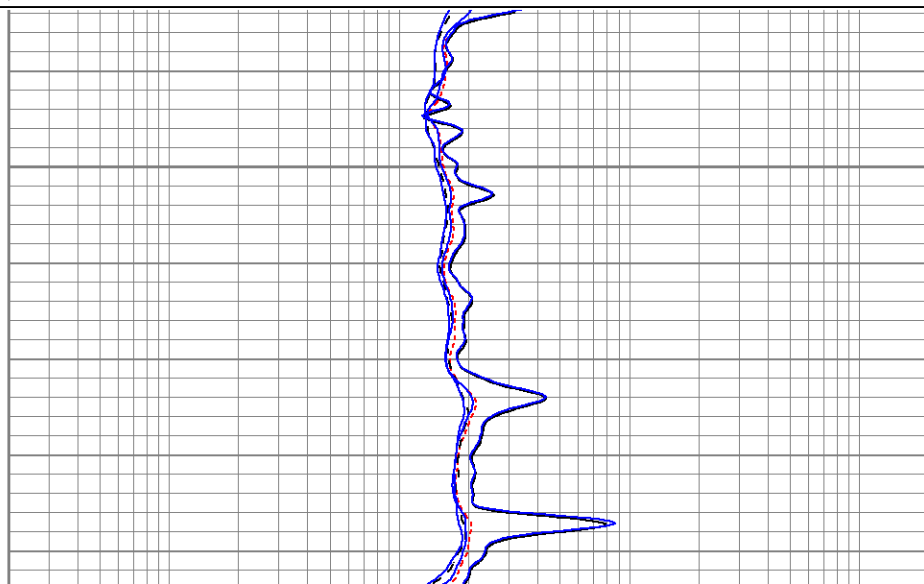
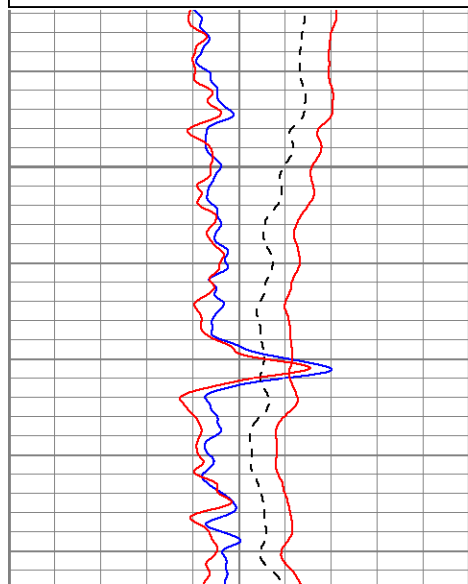
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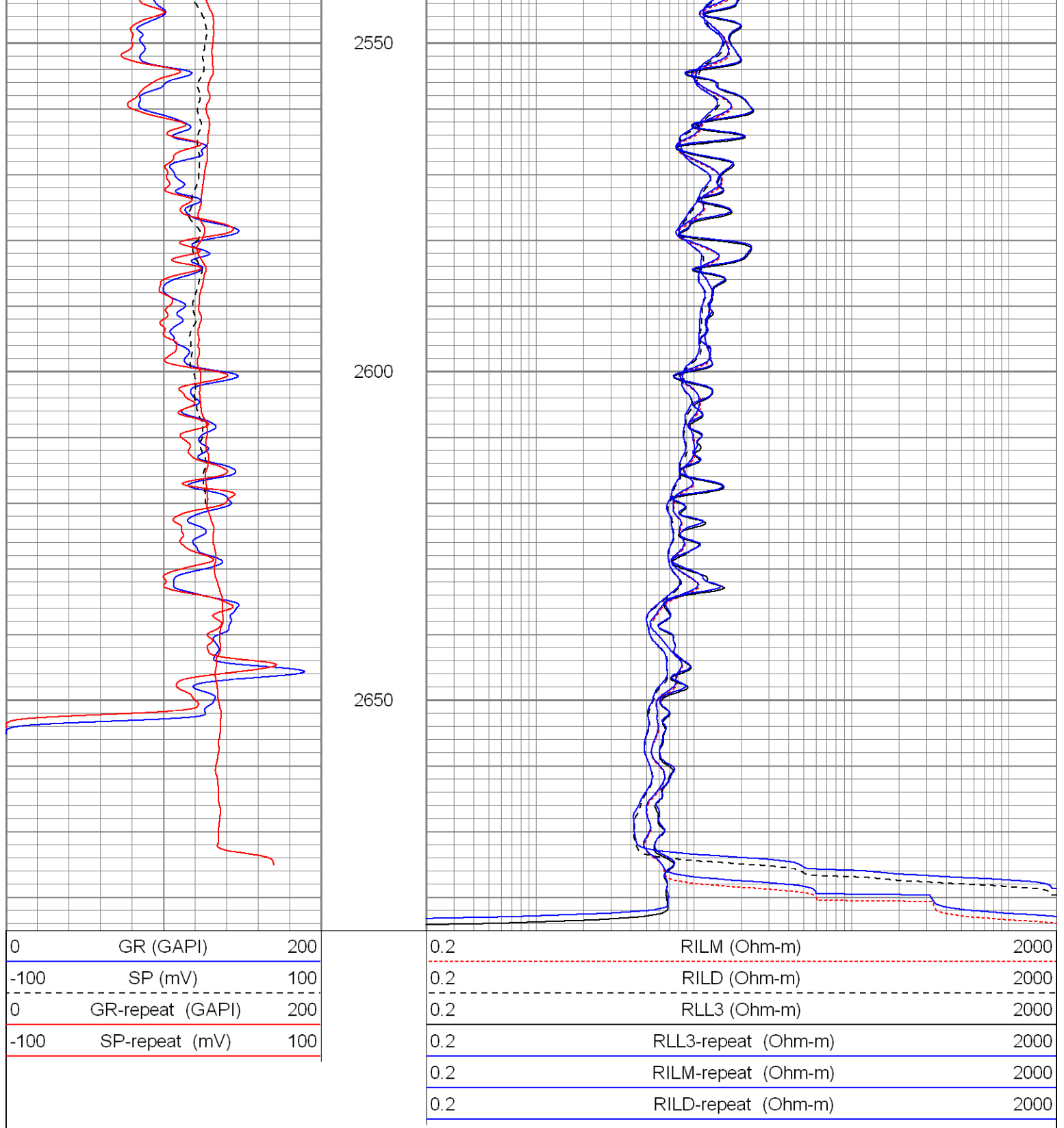
# Repeat Section

Database File: xtoac3212.db  
Dataset Pathname: pass1.1  
Presentation Format: dil  
Dataset Creation: Sun Jun 17 18:49:54 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240



2500





### Calibration Report

Database File: xtoac3212.db  
Dataset Pathname: pass2  
Dataset Creation: Sun Jun 17 17:32:47 2007 by Log Open-Cased 061129

### Dual Induction Calibration Report

Serial-Model: 5375-G  
Surface Cal Performed: Thu Apr 26 17:31:10 2007  
Downhole Cal Performed: Thu Apr 26 17:31:26 2007

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.001	0.620	V	0.000	500.000	mmho-m	807.659	-1.119
Medium	0.005	0.743	V	0.000	550.000	mmho-m	744.727	-3.505
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.620	V	0.000	500.000	mmho-m	807.698	-1.159
Medium	0.005	0.743	V	0.000	550.000	mmho-m	744.801	-3.569

Downhole Calibration								
Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.123	499.901	mmho-m	0.039	500.015	mmho-m	1.000	-0.084
Medium	0.245	549.982	mmho-m	0.064	550.009	mmho-m	1.000	-0.182
Shallow	2.506	0.009	V	500.000	2.000	Ohm-m	85.000	0.000

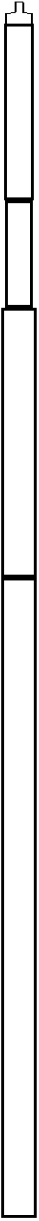
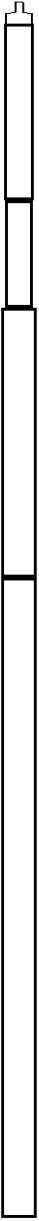
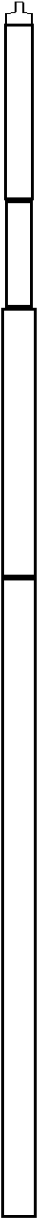
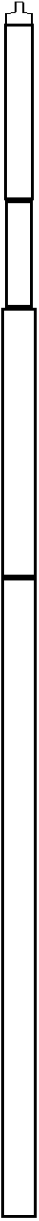
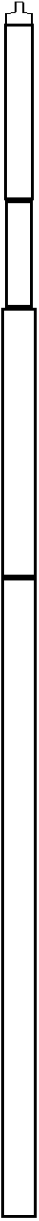
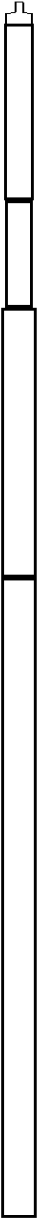
Compensated Density Calibration Report								
Serial-Model:				2118-poilex				
Source / Verifier:				/				
Master Calibration Performed:				Mon May 14 16:51:32 2007				

Master Calibration								
Density				Far Detector		Near Detector		
Magnesium	1.710	g/cc		665.94		685.05	cps	
Aluminum	2.590	g/cc		149.68		463.33	cps	
Spine Angle = 75.32				Density/Spine Ratio = 0.570				
Size				Reading				
Small Ring	7.85	in		4.20	V			
Large Ring	14.00	in		9.25	V			

Gamma Ray Calibration Report								
Serial Number:			2001					
Tool Model:			OH					
Performed:			Tue May 29 19:51:06 2007					
Calibrator Value:			1.0	GAPI				
Background Reading:			0.0	cps				
Calibrator Reading:			1.0	cps				
Sensitivity:			0.1700	GAPI/cps				

Neutron Calibration Report								
Serial Number:			5145					
Tool Model:			G					
Performed:			Mon Apr 23 18:30:25 2007					
Calibrator Value:			1200	NAPI				
Calibrator Reading:			1700	cps				
Sensitivity:			1	NAPI/cps				



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	37.19		None	0.75	1.50	5.00
			NEU-G (5145) Gearhart Epithermal	5.75	3.50	85.00
GR	31.62		GR-OH (2001) SIE	3.50	3.25	40.00
LSD	23.45		CDL-poilex (2118)	8.79	4.00	275.00
DCAL	23.04					
SSD	22.91					
CILD	10.60		DIL-G (5375) Gearhart	20.83	4.00	345.00
SP	10.60					
CILM	6.89					
RLL3	1.70					
Dataset: xtoac3212.db: field/well/run1/pass2 Total Length: 39.62 ft Total Weight: 750.00 lb O.D. 4.00 in						