



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

## DUAL INDUCTION LOG

Company	XTO Energy Inc.		
Well	Apache Canyon 04-01		
Field	Purgatoire River		
County	Las Animas	State	Colorado
Location:	API # : 05 071 09633 00		Other Services NEUTRON
386' FNL & 1279' FEL			
Permanent Datum	SEC 04 TWP 34S RGE 67W	Ground Level	Elevation 7591'
Log Measured From		Ground Level	
Drilling Measured From		Ground Level	
Date	8-4-08		
Run Number	One		
Depth Driller	2250'		
Depth Logger	2251'		
Bottom Logged Interval	2249'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 499'		
Casing Logger	500'		
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	3:30 P.M.		
Time Logger on Bottom	6:08 P.M.		
Maximum Recorded Temperature	114 DEG F		
Equipment Number	T697		
Location	Trinidad		
Recorded By	J. Cappellucci		
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 to Cherry Canyon, past Compressor station 5, stay on main road, at the hard switchback stay left, at fork stay right, drive thru the GE 33-15, dead end on location.



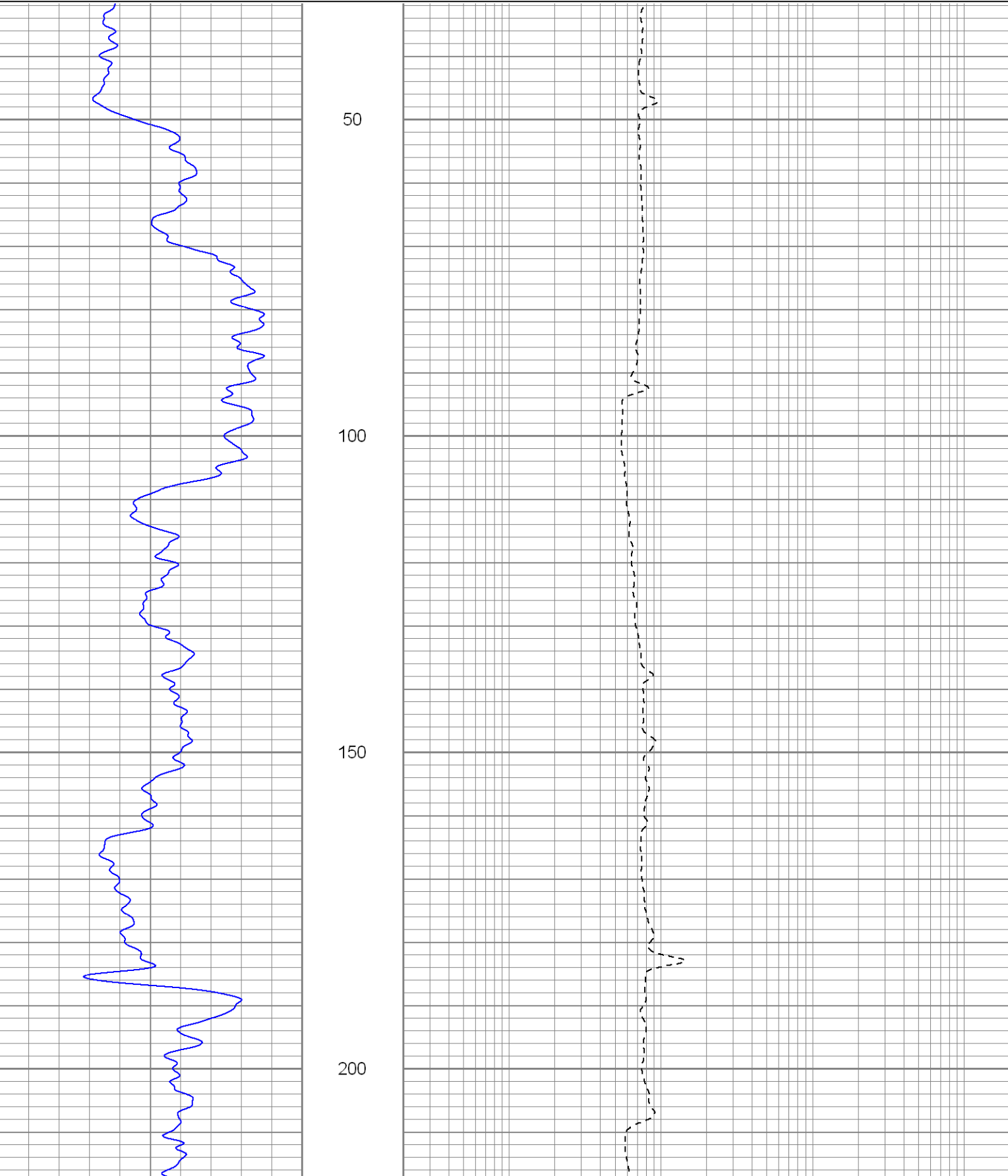
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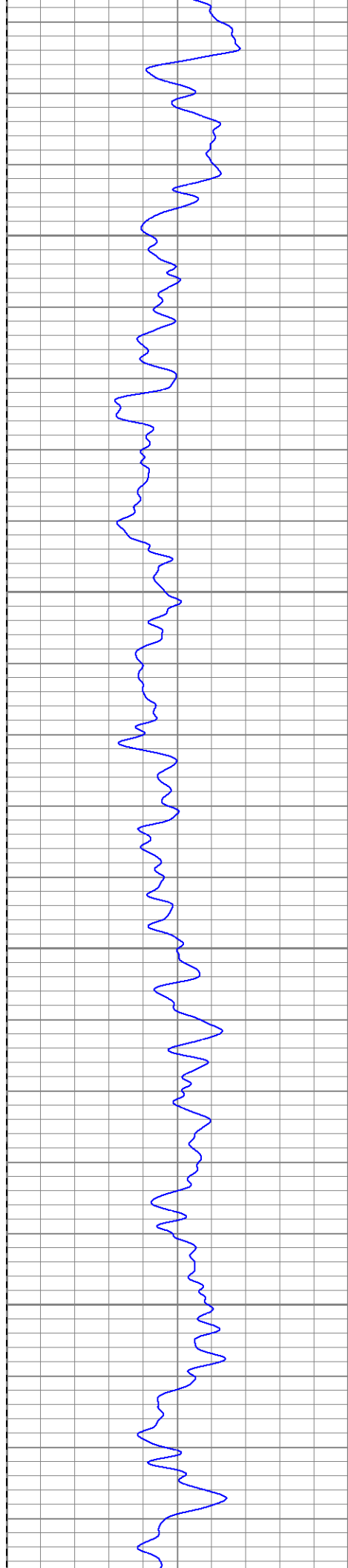
# Main Pass

Database File: xtoac0401.db  
Dataset Pathname: pass2.1  
Presentation Format: dil  
Dataset Creation: Mon Aug 04 19:42:01 2008 by Calc Open-Cased 071220  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
-200	SP (mV)	0

0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000



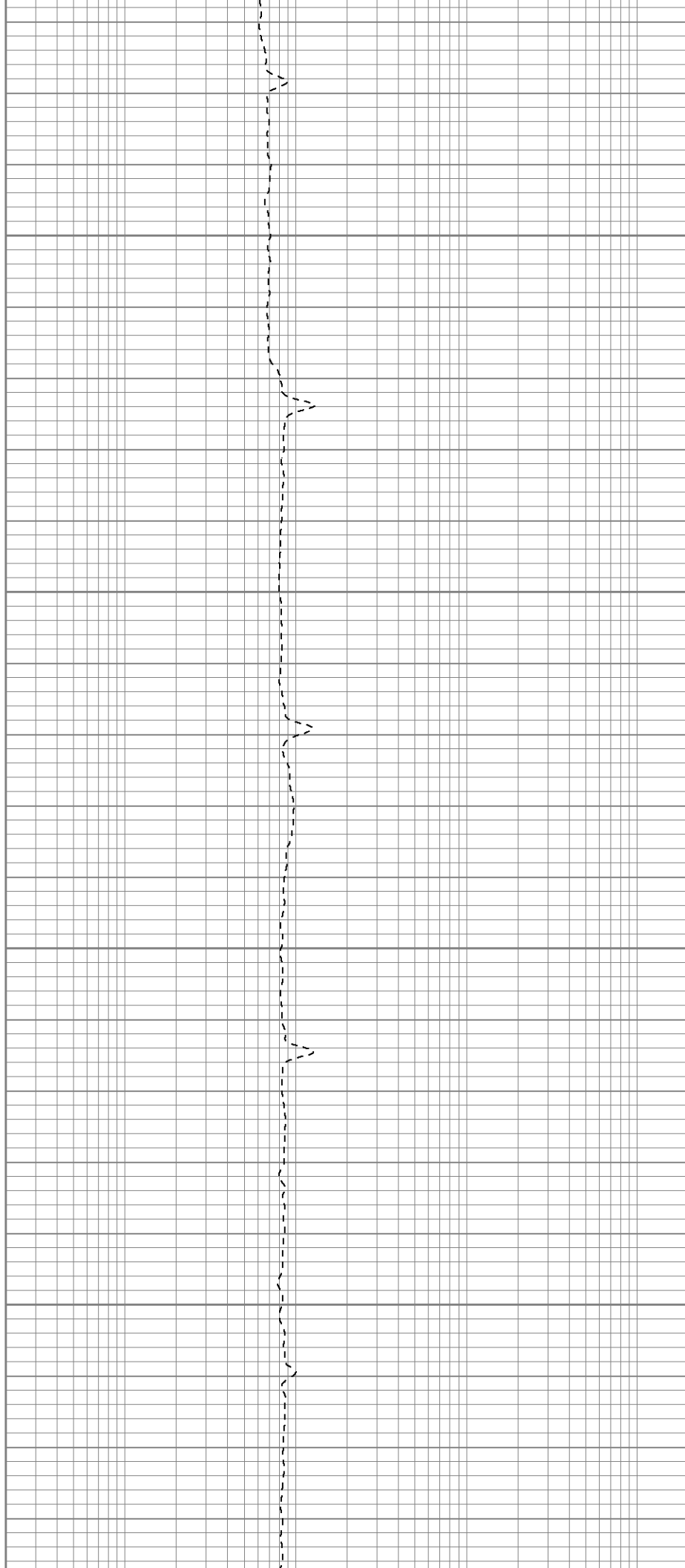


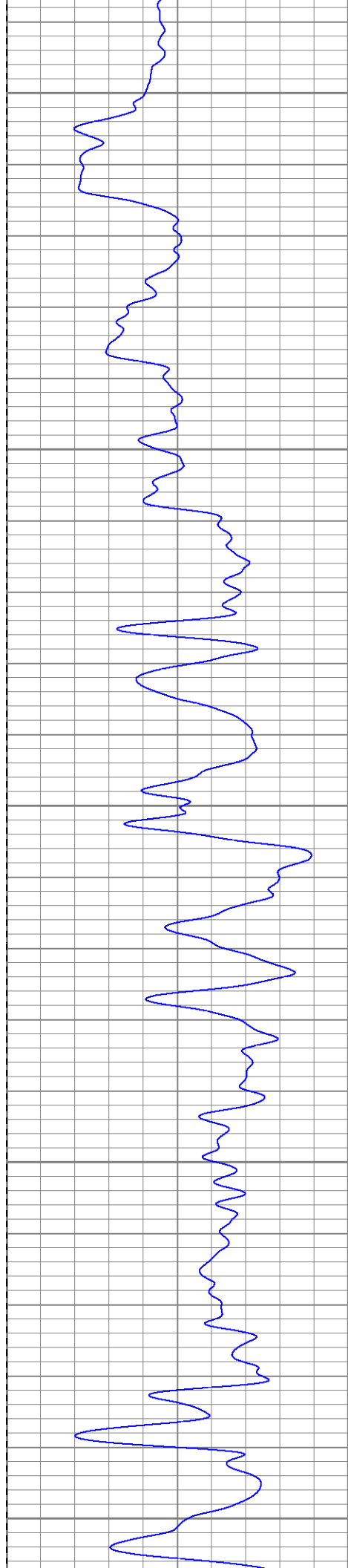
250

300

350

400





450

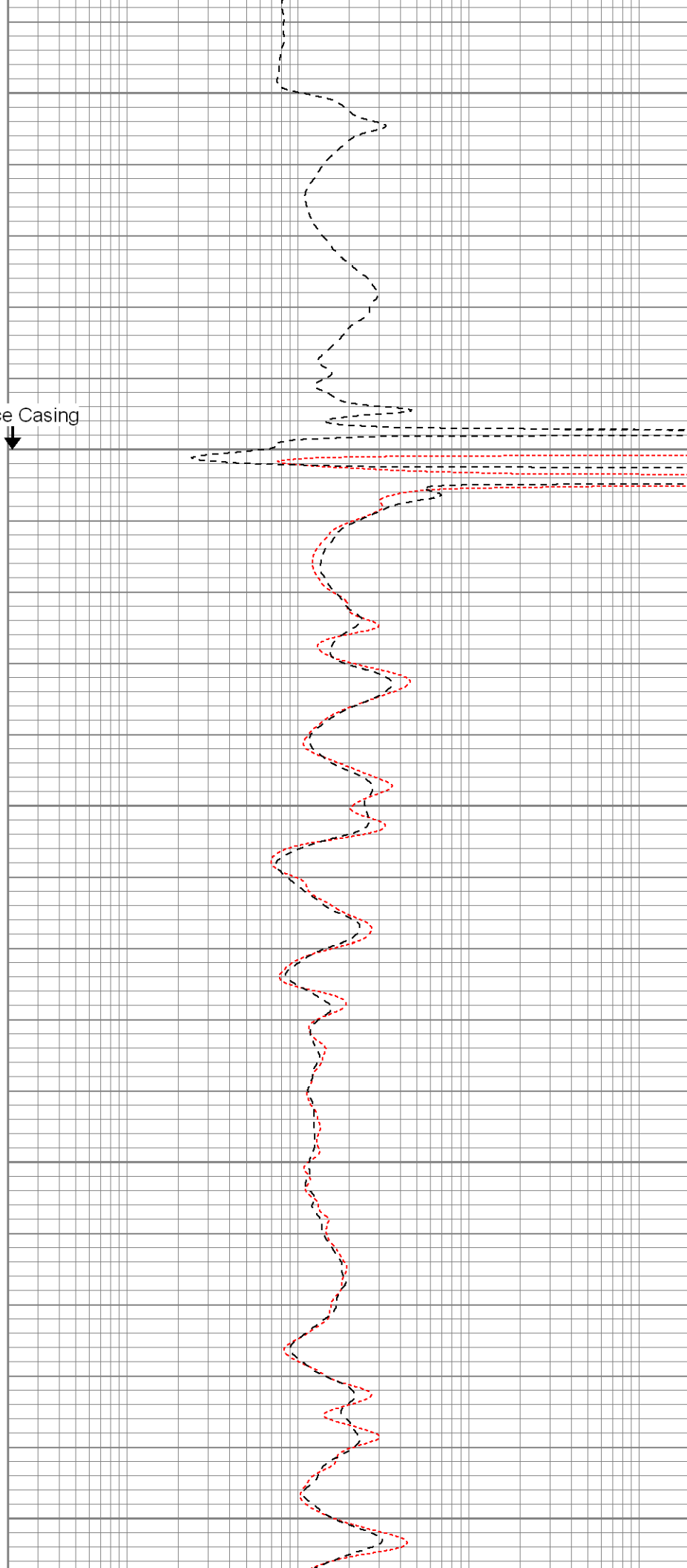
Surface Casing

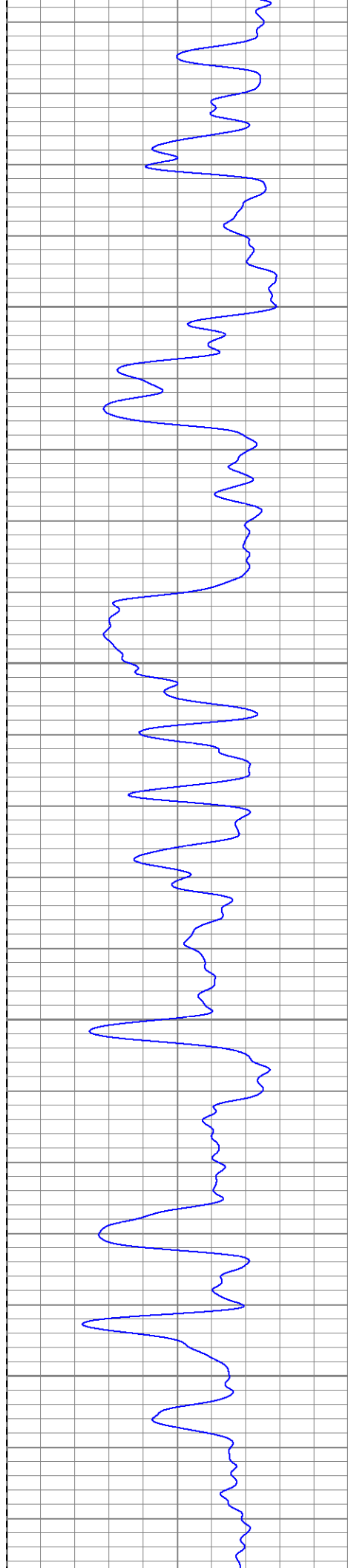
500

550

600

650



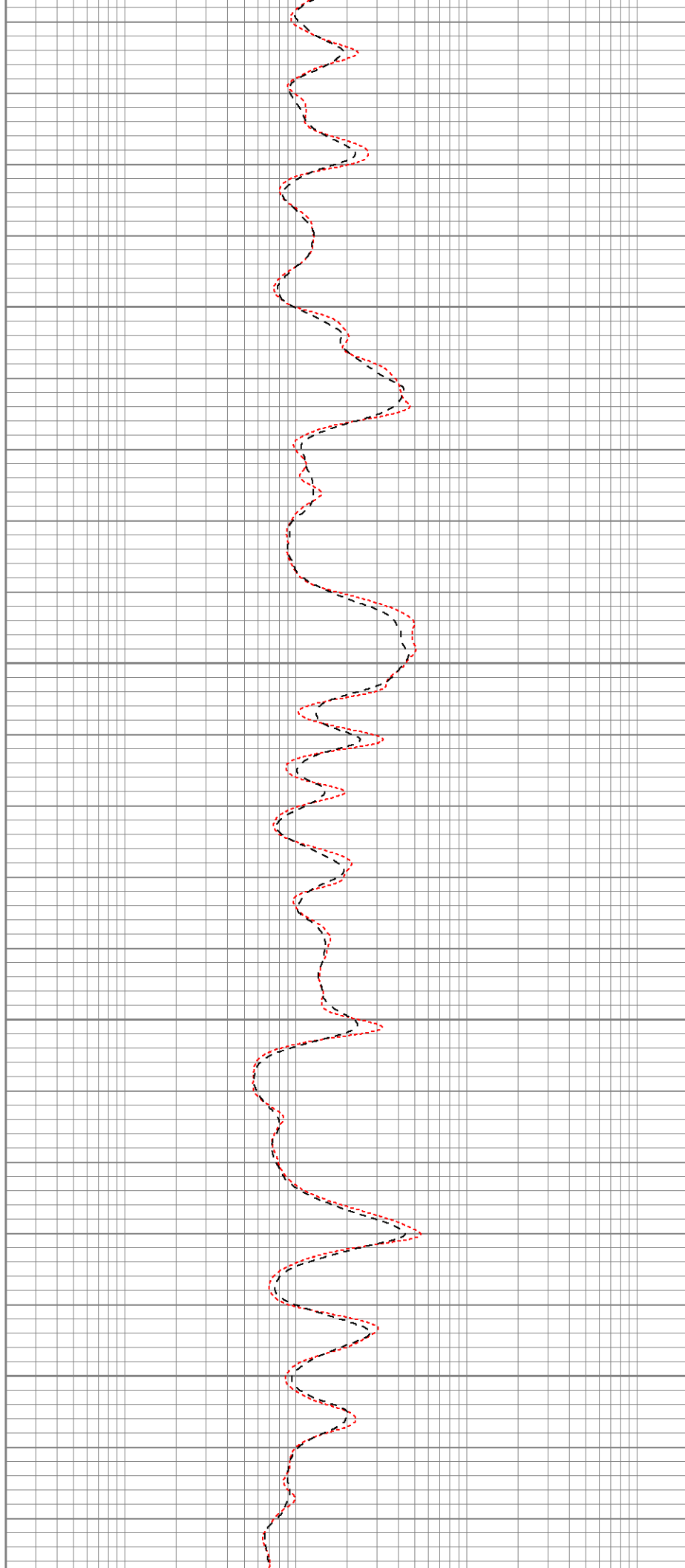


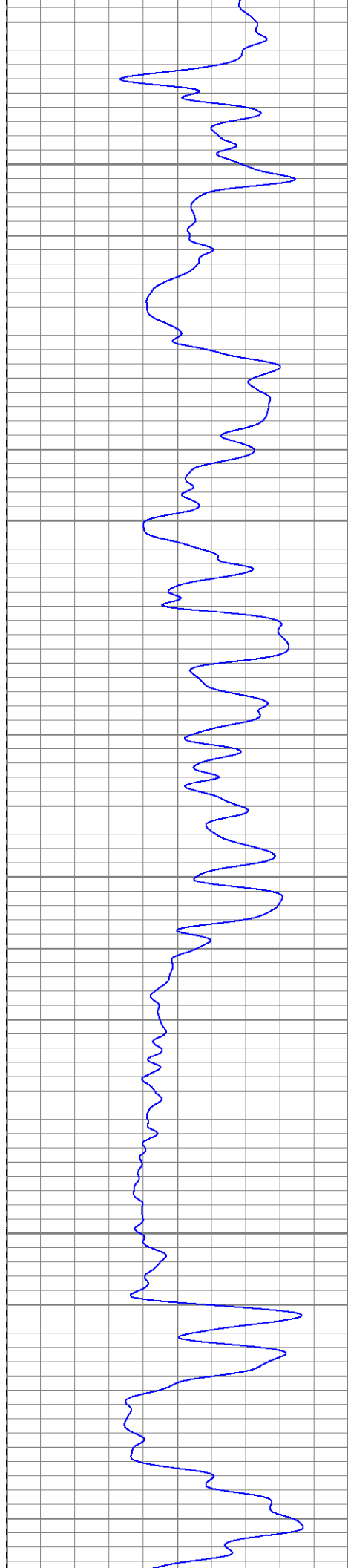
700

750

800

850



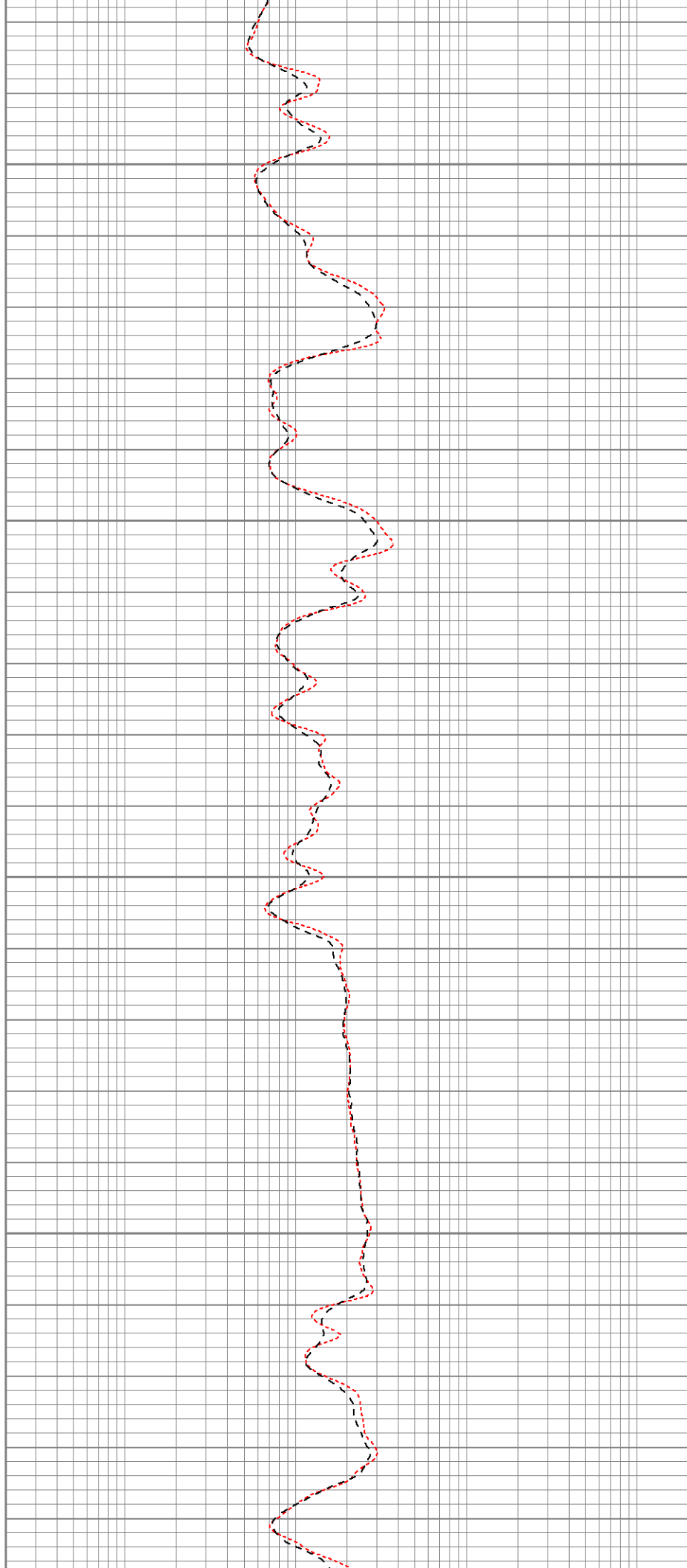


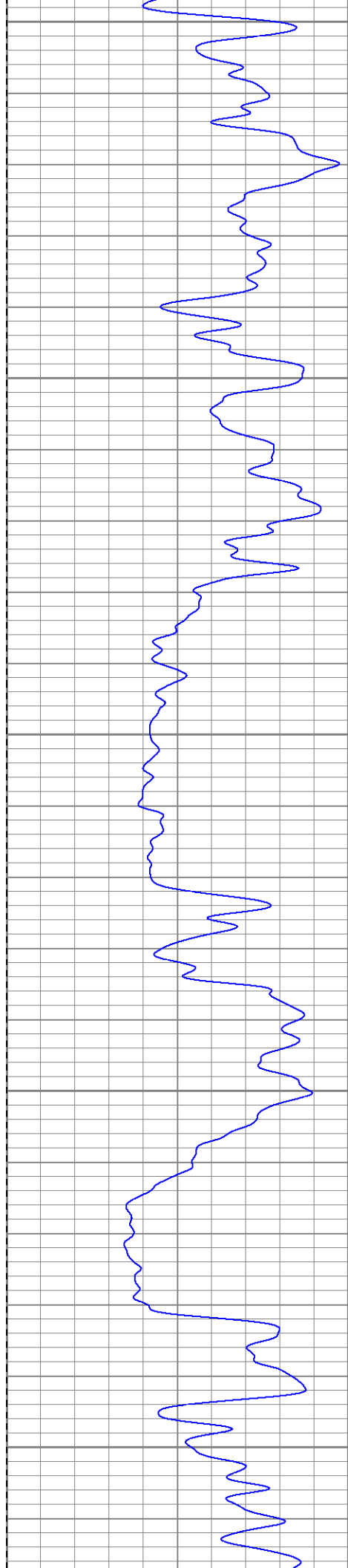
900

950

1000

1050





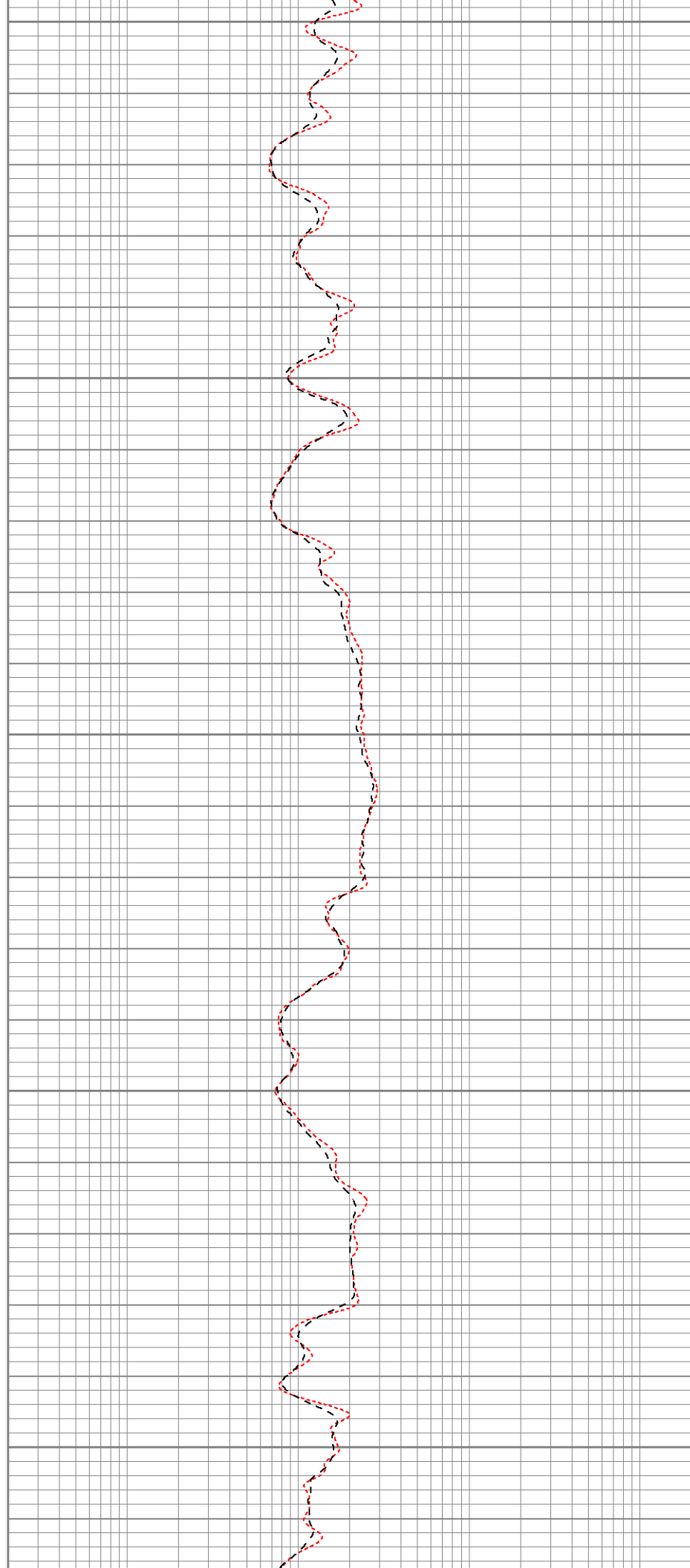
1100

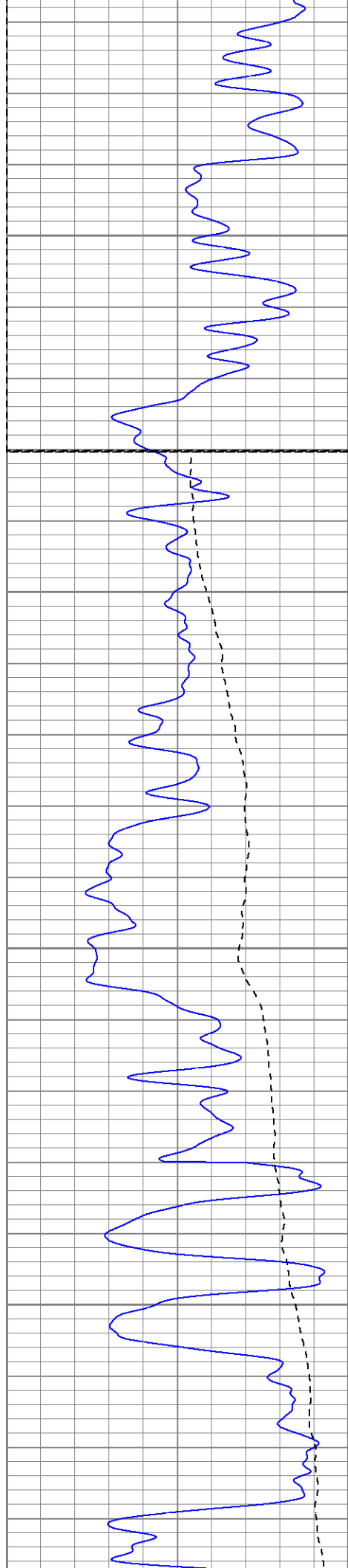
1150

1200

1250

1300





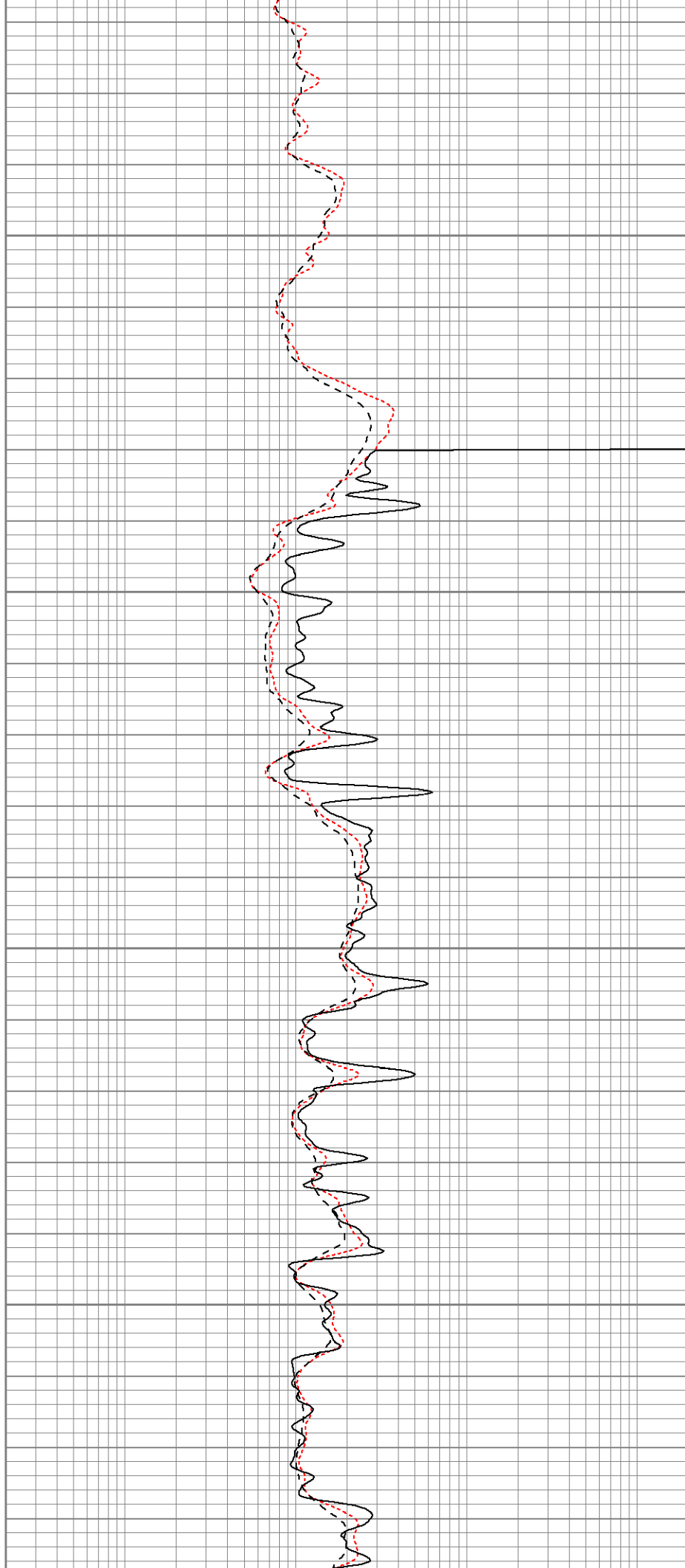
1350

Air

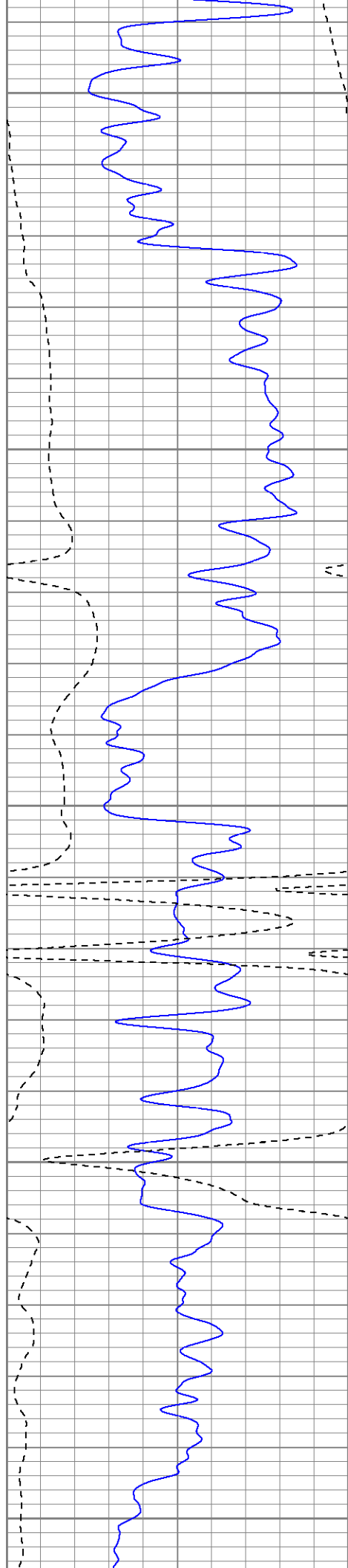
1400

1450

1500







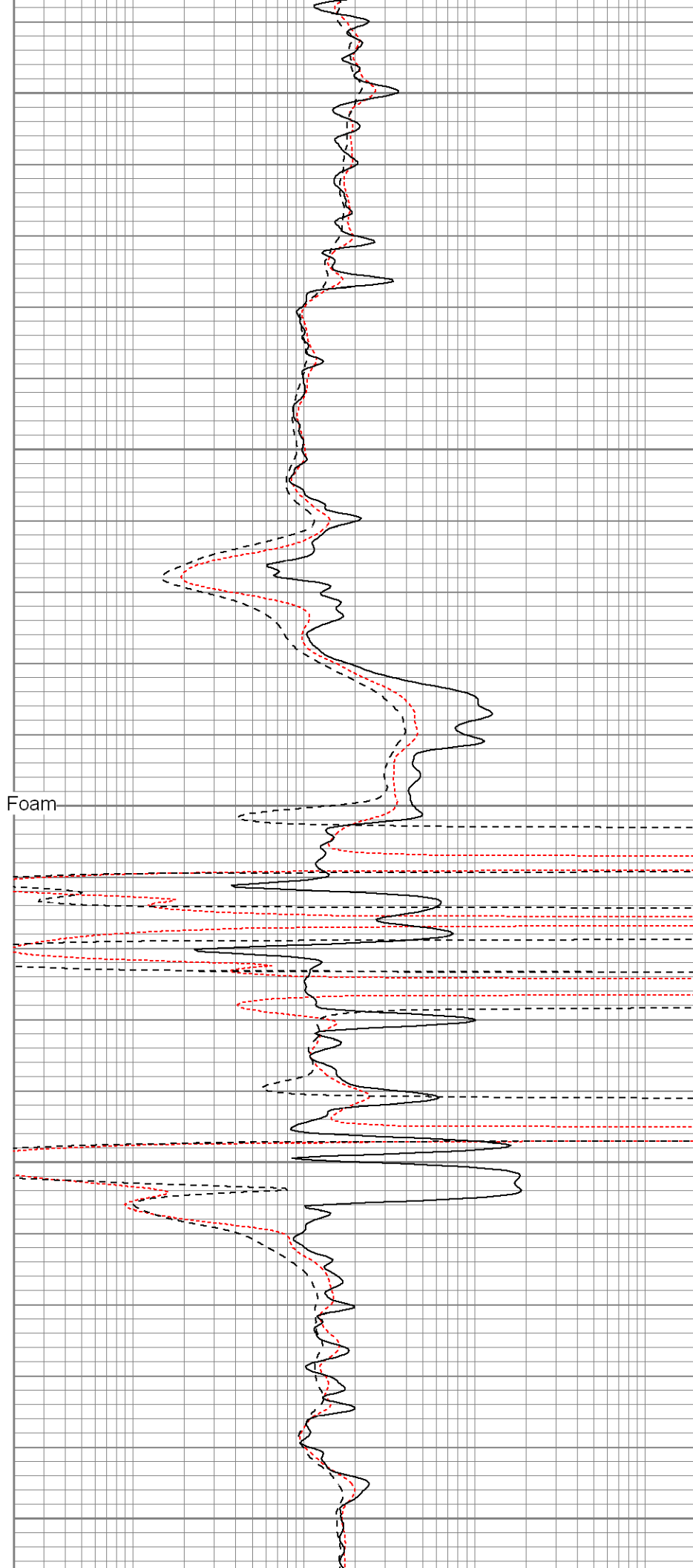
1550

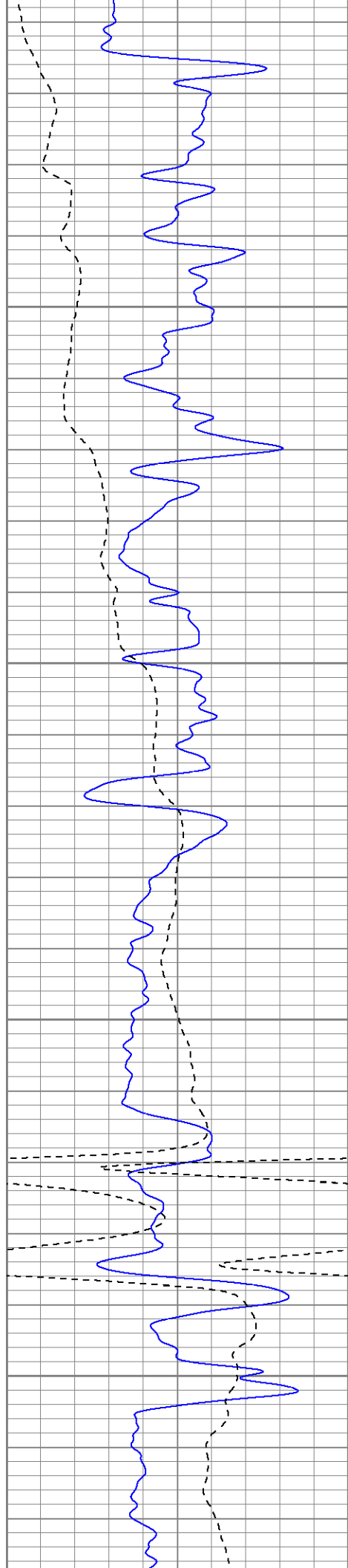
1600

1650

1700

1750



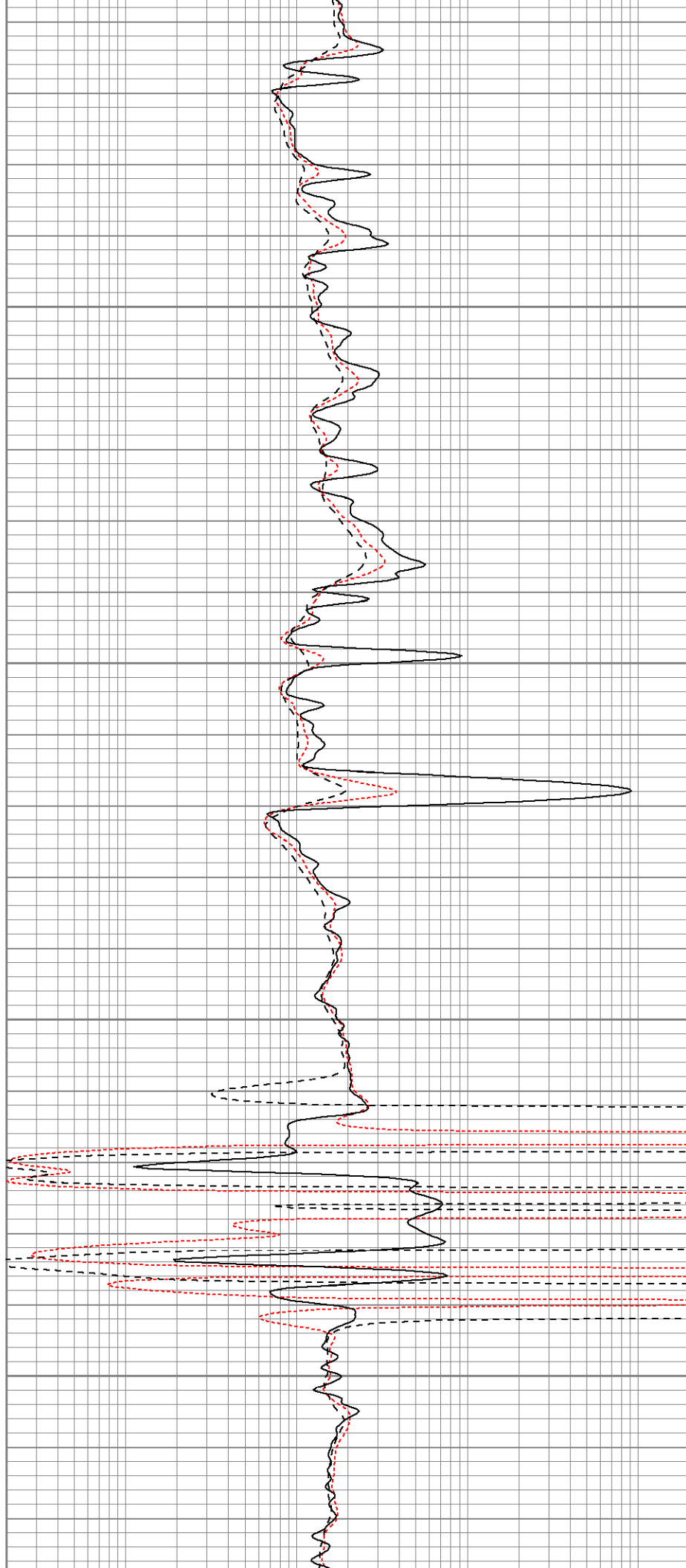


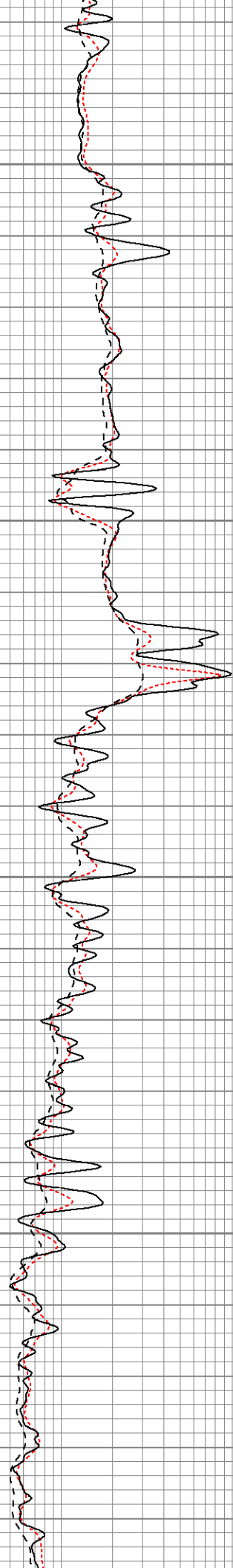
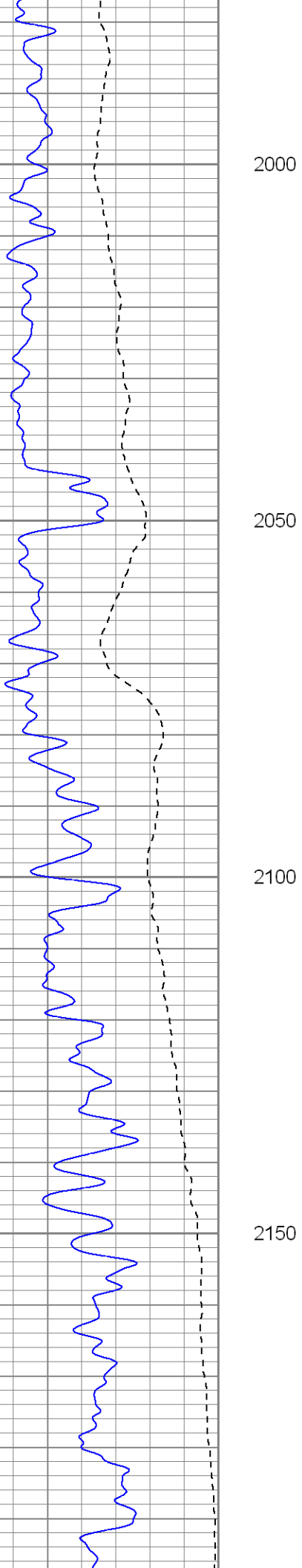
1800

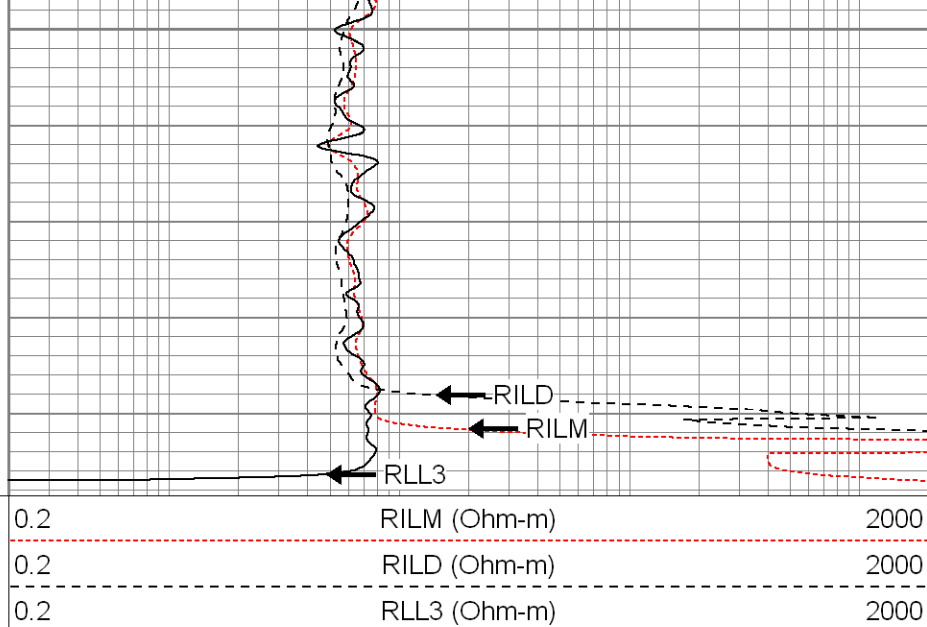
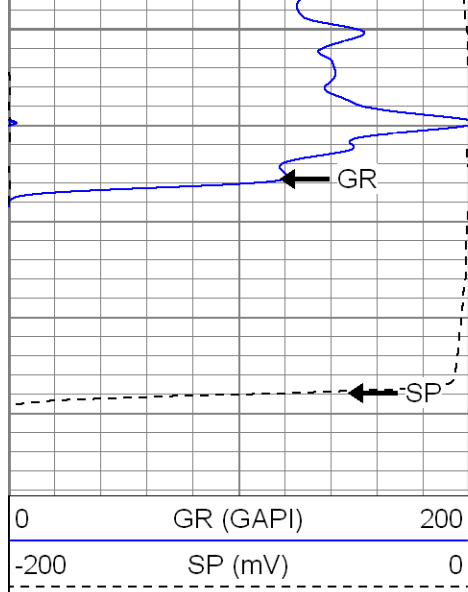
1850

1900

1950







**SUPERIOR**

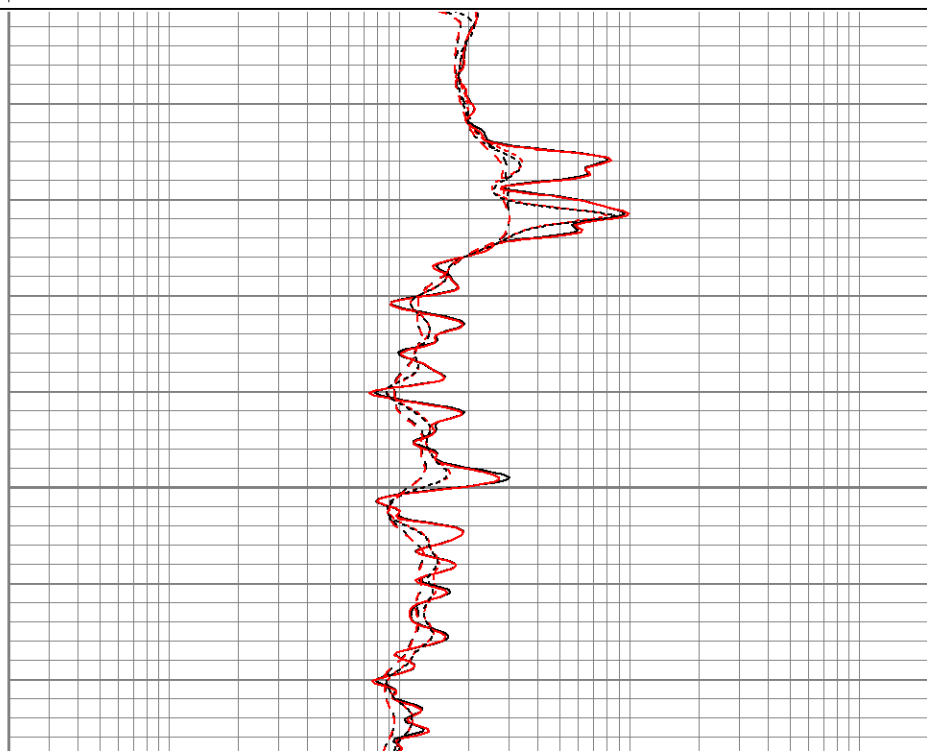
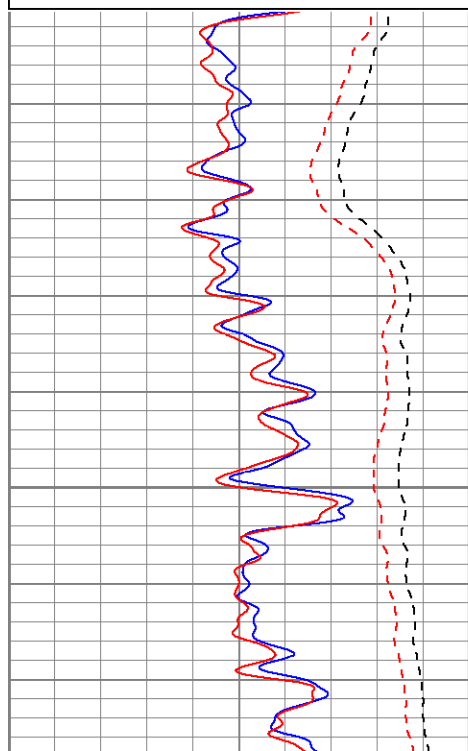
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# Repeat Pass

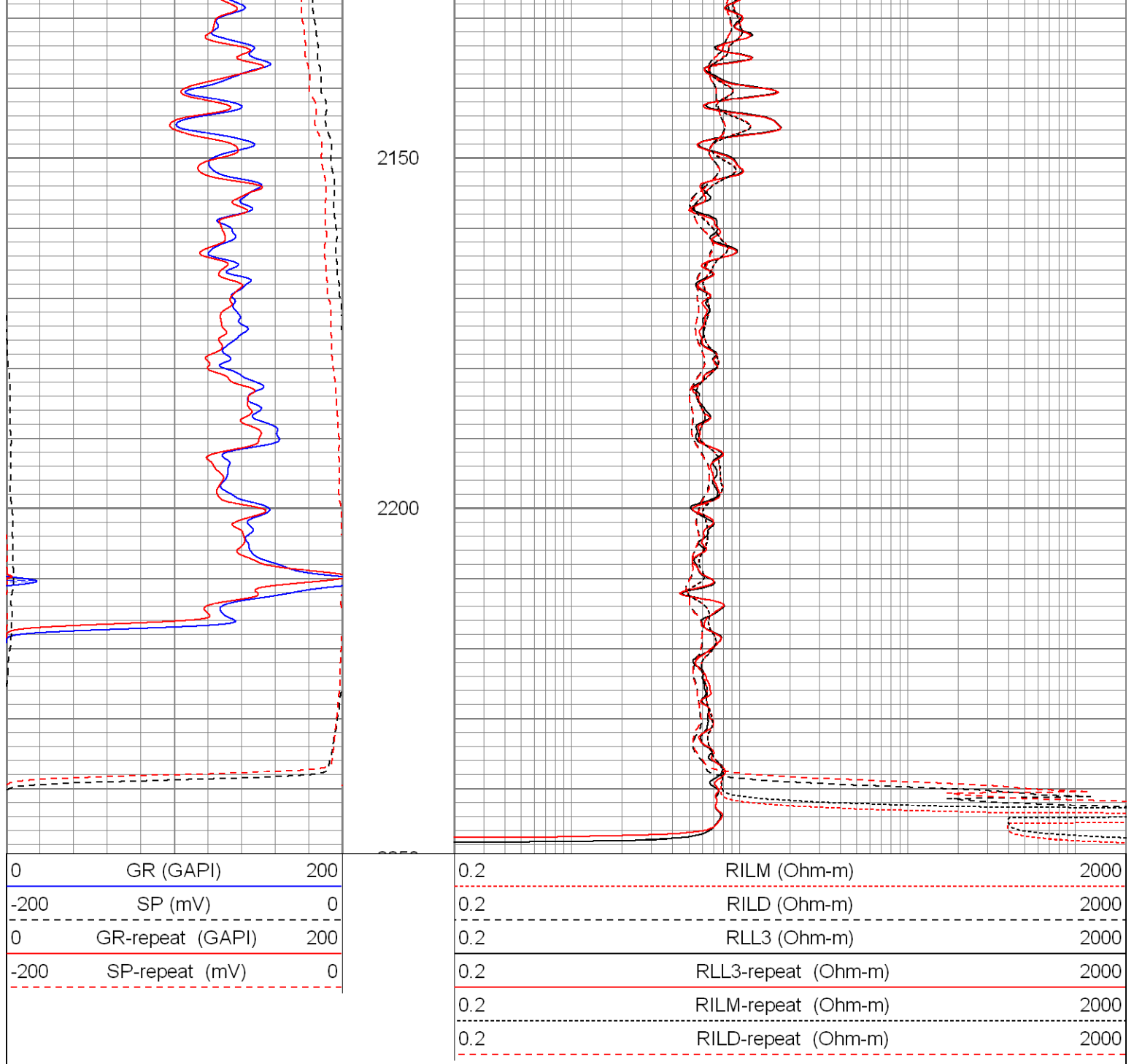
Database File: xtoac0401.db  
Dataset Pathname: pass1.1  
Presentation Format: dil  
Dataset Creation: Mon Aug 04 18:34:30 2008 by Calc Open-Cased 071220  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
-200	SP (mV)	0
0	GR-repeat (GAPI)	200
-200	SP-repeat (mV)	0

0.2	RILM (Ohm-m)	2000
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RLL3-repeat (Ohm-m)	2000
0.2	RILM-repeat (Ohm-m)	2000
0.2	RILD-repeat (Ohm-m)	2000



2100



### Calibration Report

Database File: xtoac0401.db  
 Dataset Pathname: pass1  
 Dataset Creation: Mon Aug 04 18:08:24 2008 by Log Open-Cased 071220

### Dual Induction Calibration Report


Serial-Model: 5375-G  
 Surface Cal Performed: Wed Jul 23 11:29:18 2008  
 Downhole Cal Performed: Wed Jul 23 11:29:47 2008

### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.026	0.645	V	0.000	500.000	mmho-m	808.472	-21.376
Medium	0.030	0.770	V	0.000	550.000	mmho-m	743.584	-22.316

Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.027	0.645	V	0.000	500.000	mmho-m	808.639	-21.534
Medium	0.030	0.770	V	0.000	550.000	mmho-m	743.302	-22.248
Downhole Calibration								
	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.271	500.262	mmho-m	0.153	500.049	mmho-m	0.999	0.424
Medium	-0.141	550.313	mmho-m	-0.059	550.150	mmho-m	1.000	0.082
Shallow	2.528	0.036	V	500.000	2.000	Ohm-m	124.000	-3.000
Temperature Calibration Report								
Serial Number:			2542T					
Tool Model:			CDLP					
Performed:			Mon Jul 14 13:40:29 2008					
			Reference		Reading			
Low Reference:			55.00	degF	3.11	V		
High Reference:			160.00	degF	5.35	V		
Gain:			46.88					
Offset:			-90.78					
Delta Spacing			1					
Compensated Density Calibration Report								
Serial-Model:			2542-T2					
Source / Verifier:			/					
Master Calibration Performed:			Mon Jul 28 13:42:24 2008					
Master Calibration								
	Density			Far Detector		Near Detector		
Magnesium	1.710	g/cc		752.30		348.71		cps
Aluminum	2.590	g/cc		169.53		241.91		cps
Spine Angle = 76.21			Density/Spine Ratio = 0.574					
	Size			Reading				
Small Ring	8.20	in		1.33		V		
Large Ring	14.00	in		2.67		V		
Gamma Ray Calibration Report								
Serial Number:			2001					
Tool Model:			OH					
Performed:			Thu Jul 24 15:21:22 2008					
Calibrator Value:			1.0	GAPI				
Background Reading:			0.0	cps				
Calibrator Reading:			1.0	cps				
Sensitivity:			0.2500	GAPI/cps				
Neutron Calibration Report								
Serial Number:			5100					

Serial Number:	5108	
Tool Model:	PROBE	
Performed:	Mon Jul 14 13:33:34 2008	
Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	37.47		None	0.75	1.50	5.00
			NEU-PROBE (5108) Probe Epithermal	4.92	3.63	85.00
GR	31.94		GR-OH (2001) 2001	3.56	3.25	40.00
			CDL-T2 (2542) Gearhart	9.29	4.00	201.00
LSD DCAL SSD TEMP	23.19 22.98 22.73 22.55		TEMP-CDLP (2542T) Probe Density/Temp	0.01	1.00	1.00
CILD SP	10.60 10.60		DIL-G (5375) Gearhart	21.47	4.00	345.00
CILM	6.89					
RLL3	1.70					
Dataset: xtoac0401.db: field/well/run1/pass1 Total Length: 40.00 ft Total Weight: 677.00 lb O.D.: 4.00 in						