

Patterson

**COMPENSATED DENSITY
NEUTRON
LOG**

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Hill Climb 22-2	Well	Hill Climb 22-2
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API # : 05 071 08175 00 1820 FNL & 2193 FWL	Other Services	Sil
Permanent Datum	SEC 2 TWP 33S RGE 67W	Elevation	
Log Measured From	Ground Level	K.B. 7522'	
Drilling Measured From	Kelly Bushing 4' Above G.L. Kelly Bushing	D.F. -----	
		G.L. 7518'	
Date	10-18-04		
Run Number	Two		
Depth Driller	2475'		
Depth Logger	718'		
Bottom Logged Interval	716'		
Top Log Interval	Surface		
Casing Driller	8 5/8" @ 522'		
Casing Logger	522'		
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	4:00 P.M.		
Time Logger on Bottom	6:15 P.M.		
Maximum Recorded Temperature	///		
Equipment Number	T720		
Location	Trinidad		
Recorded By	L. Smith		
Witnessed By	Mr. Bill Grande		

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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

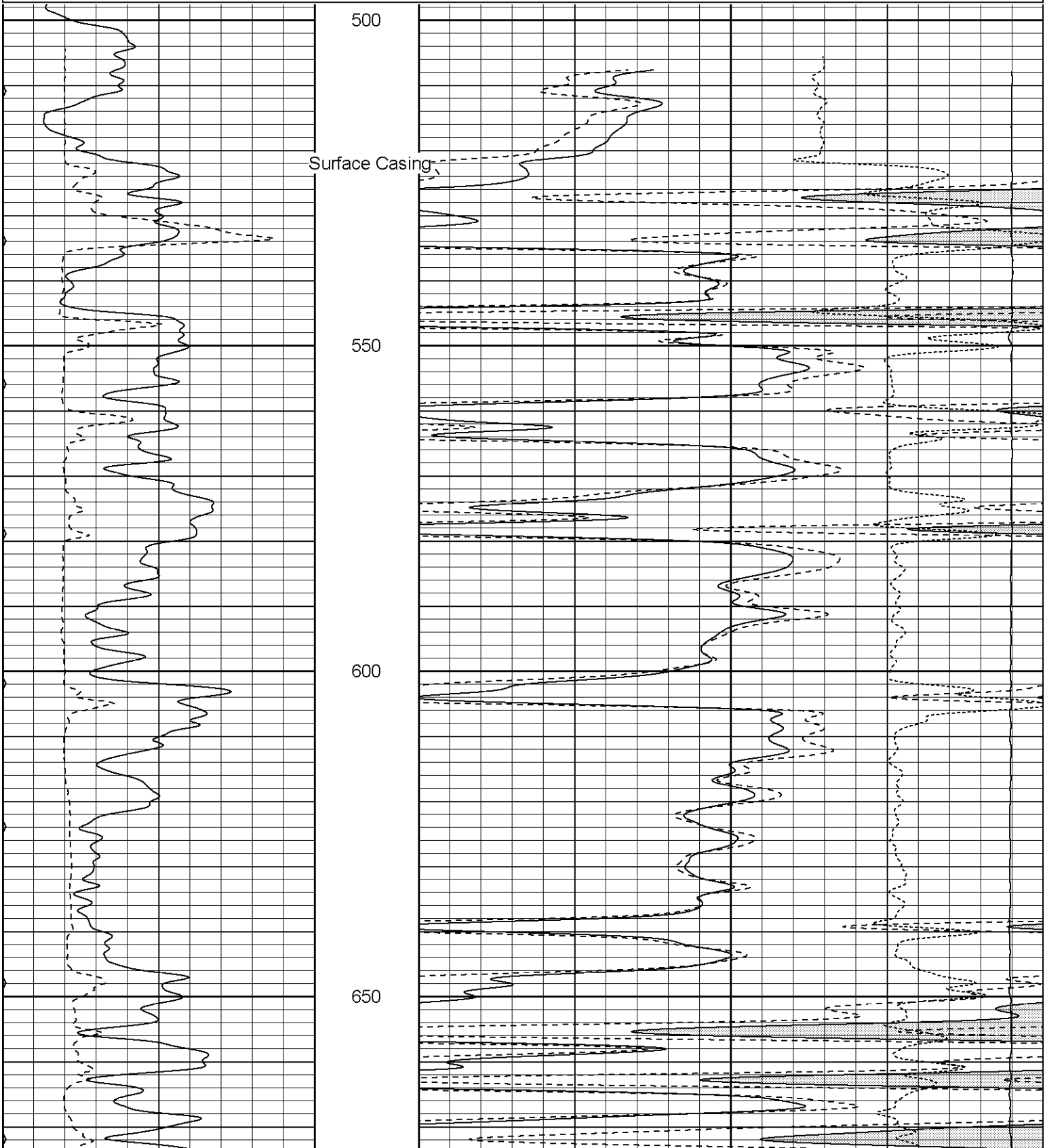
Neutron Density Porosity Presented On Sandstone Matrix.
ABHV Calculated For 5 1/2" Casing.
Neutron Porosity Affected By Water And Gas Flow From 972' To Surface.
Surface Casing Not Logged Due To Flowing Conditions.
Pass Two TD 718'.
Pass Four, Tool Would Not Go Through Insert In 5.5" Casing.
Pass Six Below 5.5" Casing @ 774' TD 971'.
Pass Eight Below 5.5" Casing @ 1035' TD 1252'.
Pass Ten Below 5.5" Casing @ 1294' TD 1581'.
Pass Fourteen Below 5.5" Casing @ 2026' TD
Sarcillo Canyon Past W. McDonalds House To T.
Turn Left Take First Left Then Stay On Main Road To Vermejo Well,
Take Sharp Left Up Hill Then First Left To Location.

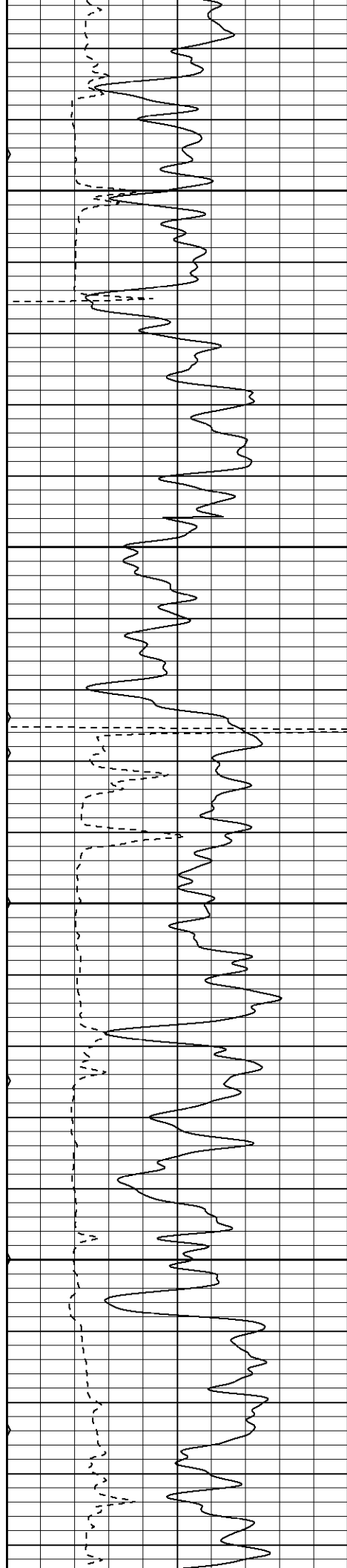
Patterson

Main Merged Pass

Database File: hillclimb.db
Dataset Pathname: merge4
Presentation Format: cdl
Dataset Creation: Wed Oct 20 09:10:15 2004
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200	2	RHOB (g/cc)	3
6	DCAL (in)	16	1	RHOB (g/cc)	2
			30	DPOR (pu)	-10
			-0.5	RHOC (g/cc)	0.5
			5000	LTEN (lb)	0



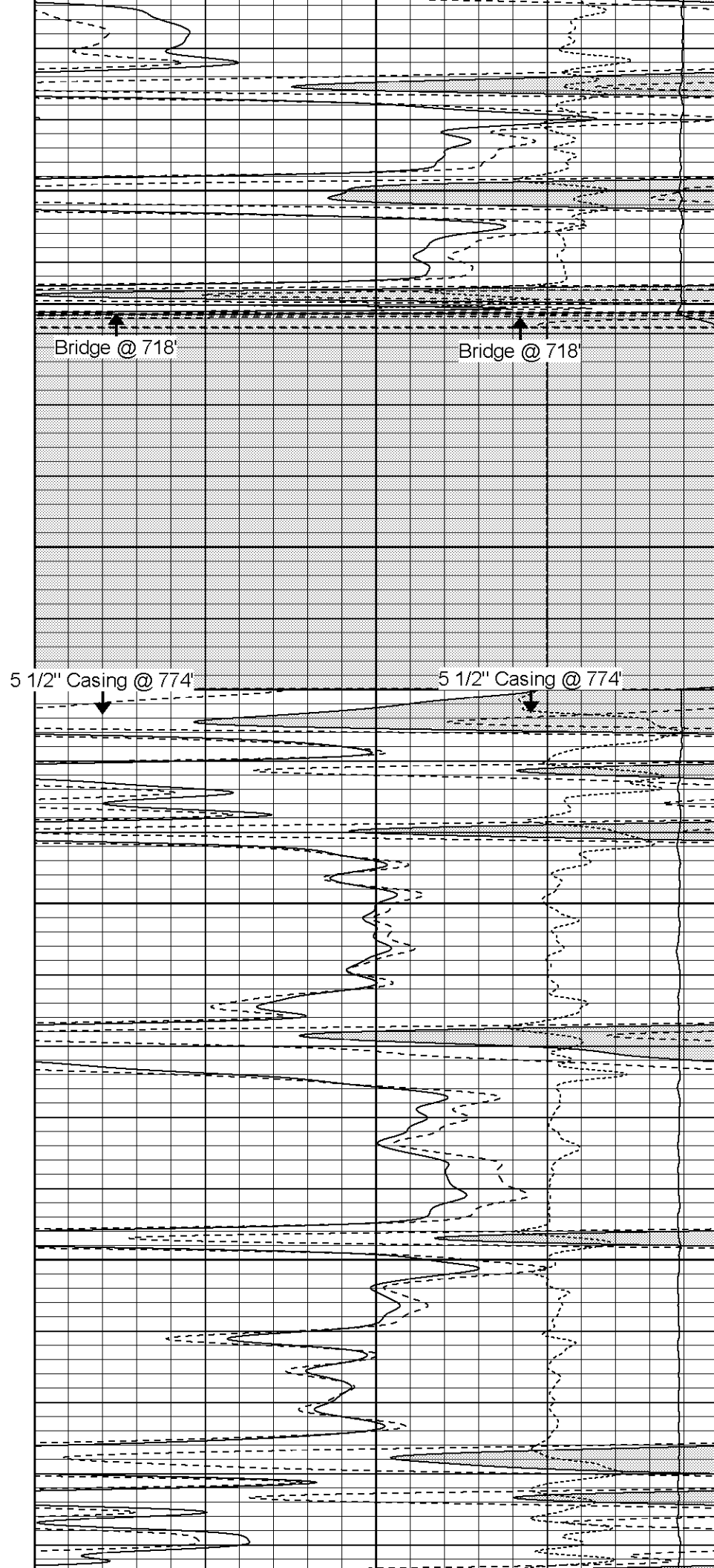


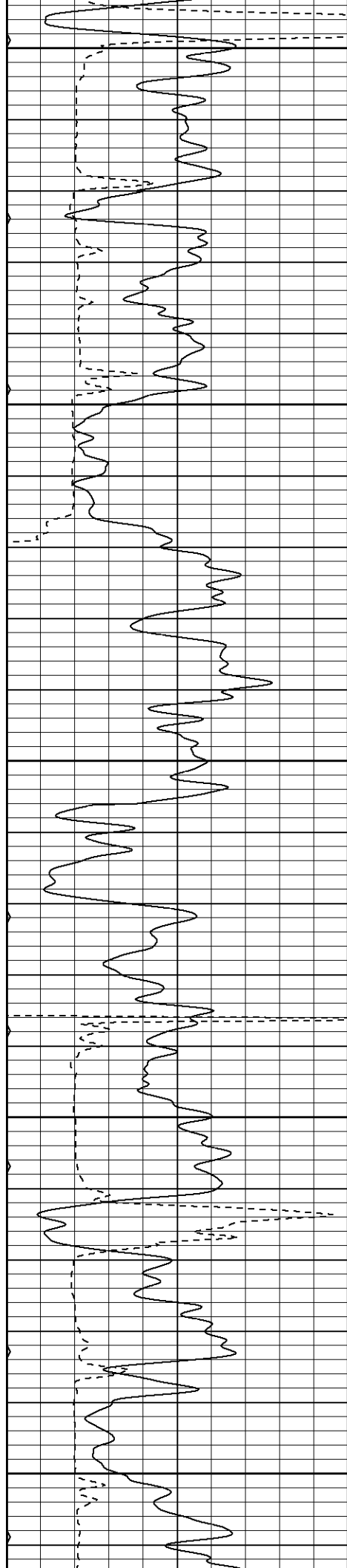
700

750

800

850





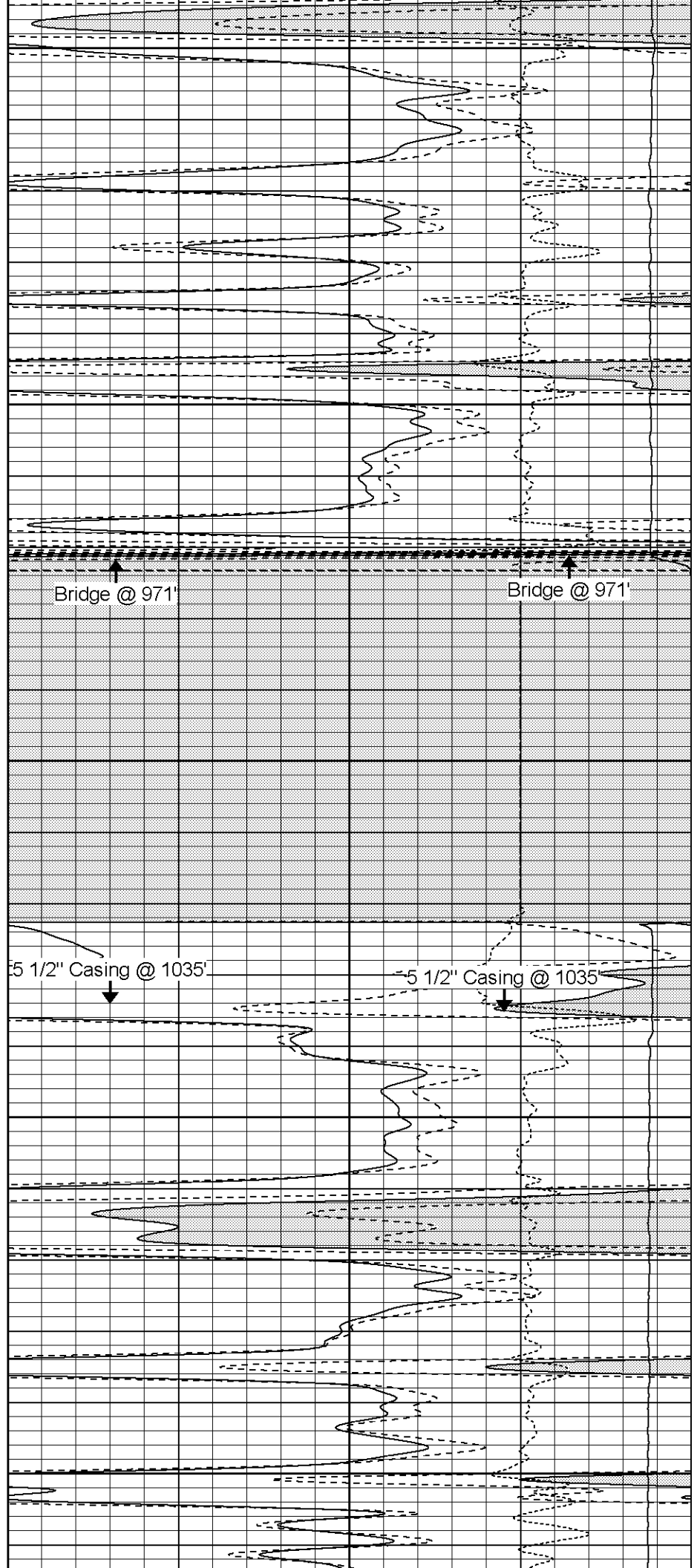
900

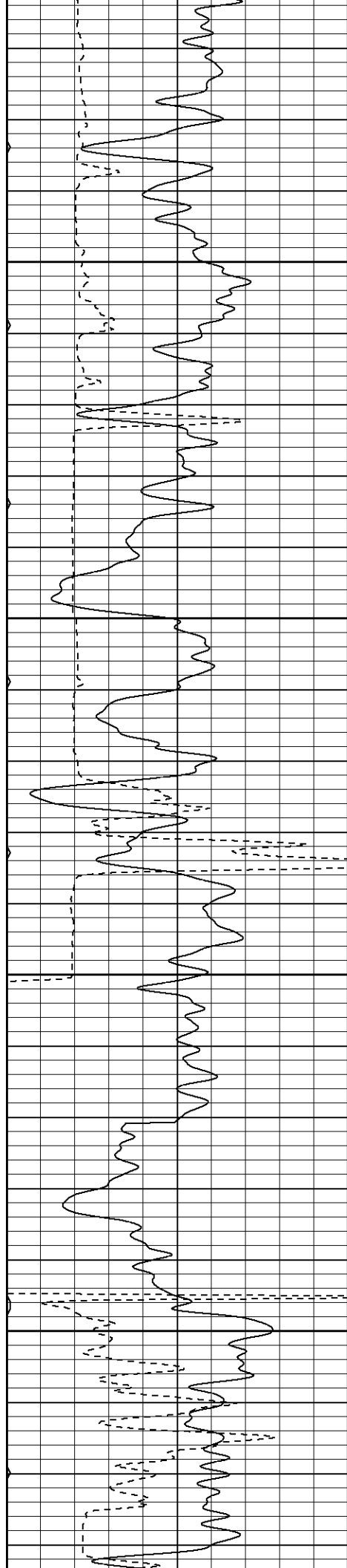
950

1000

1050

1100



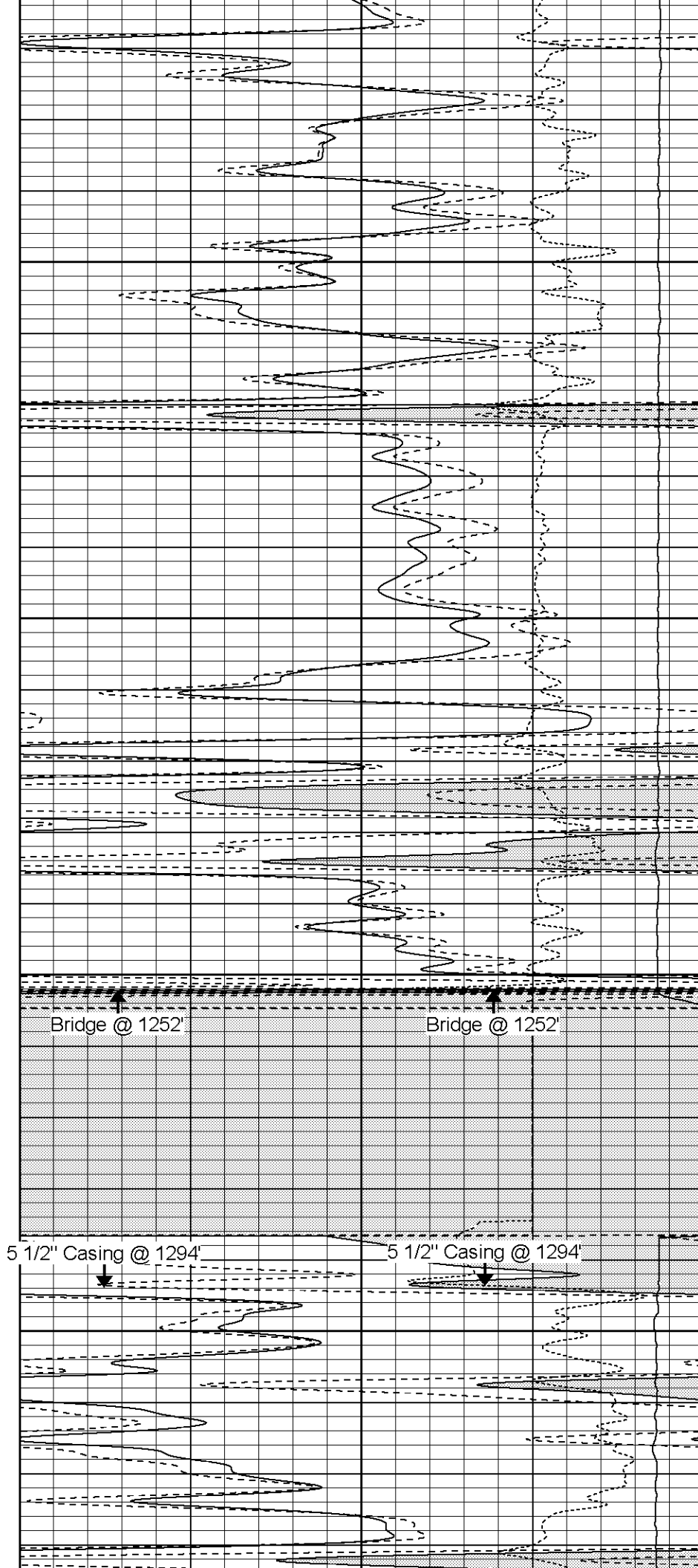


1150

1200

1250

1300

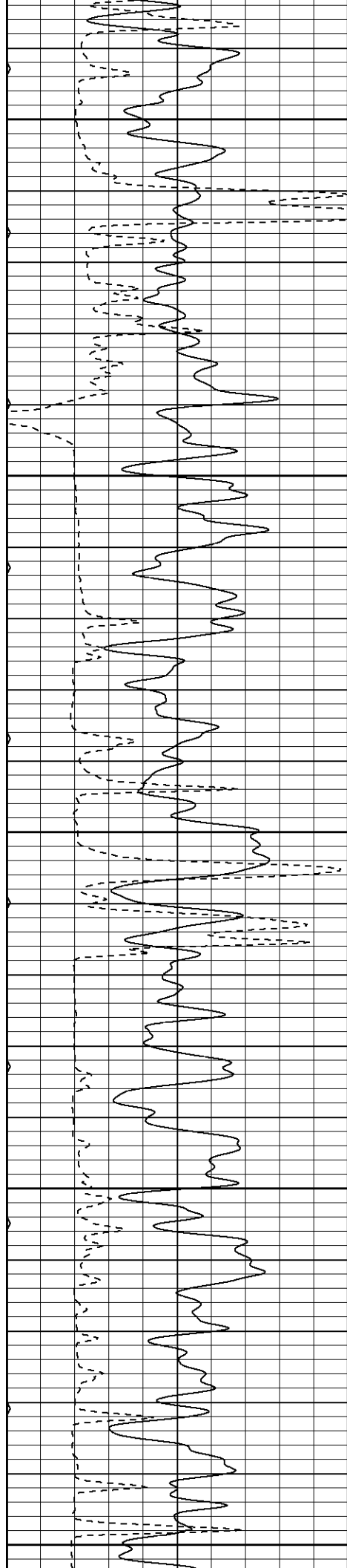


Bridge @ 1252'

Bridge @ 1252'

5 1/2" Casing @ 1294'

5 1/2" Casing @ 1294'



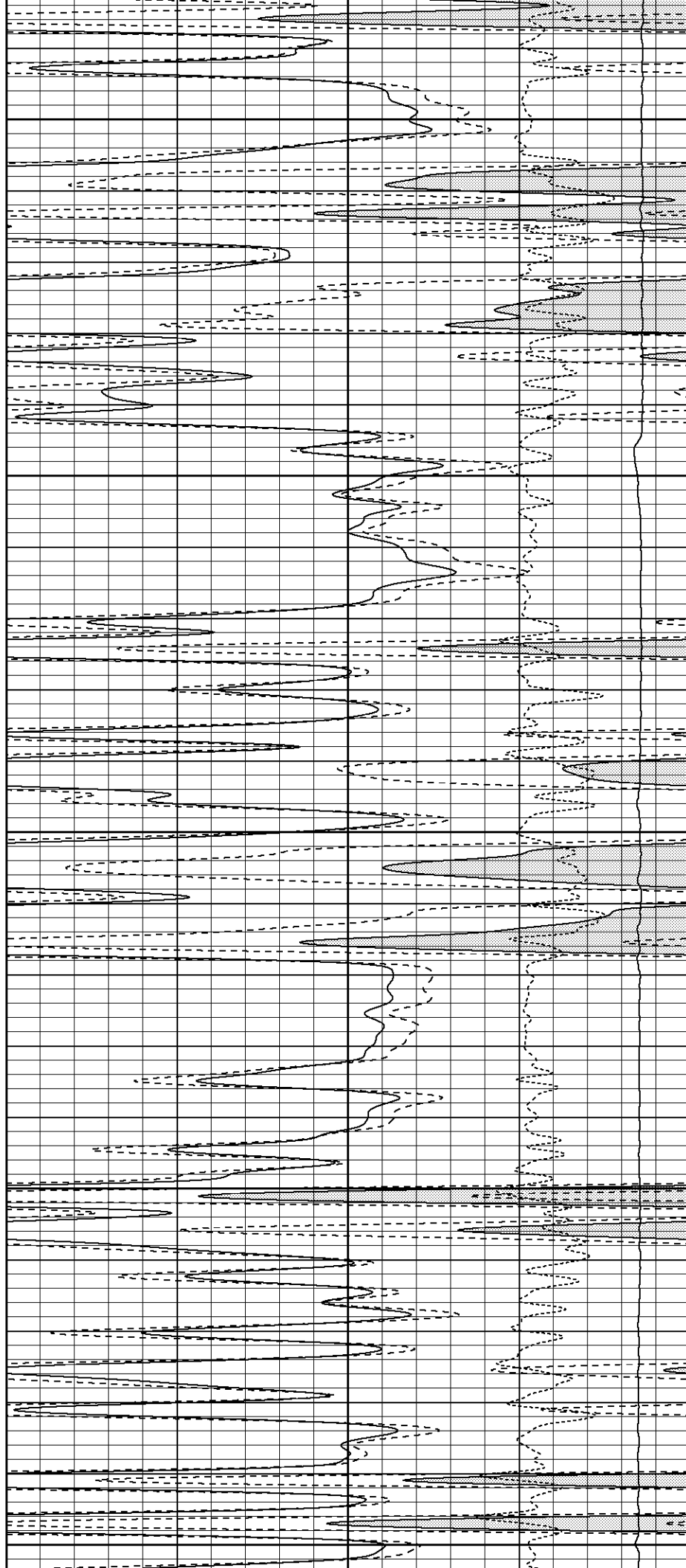
1350

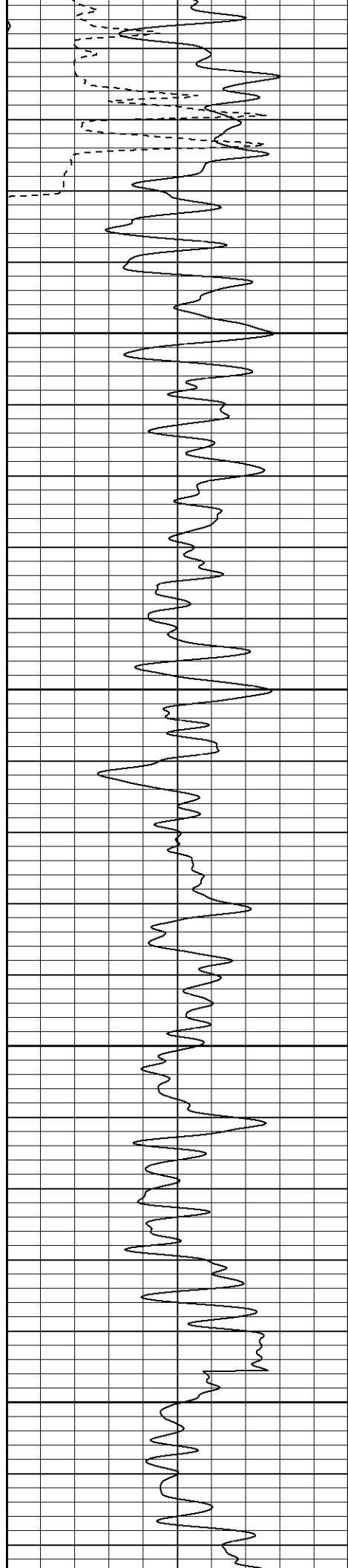
1400

1450

1500

1550



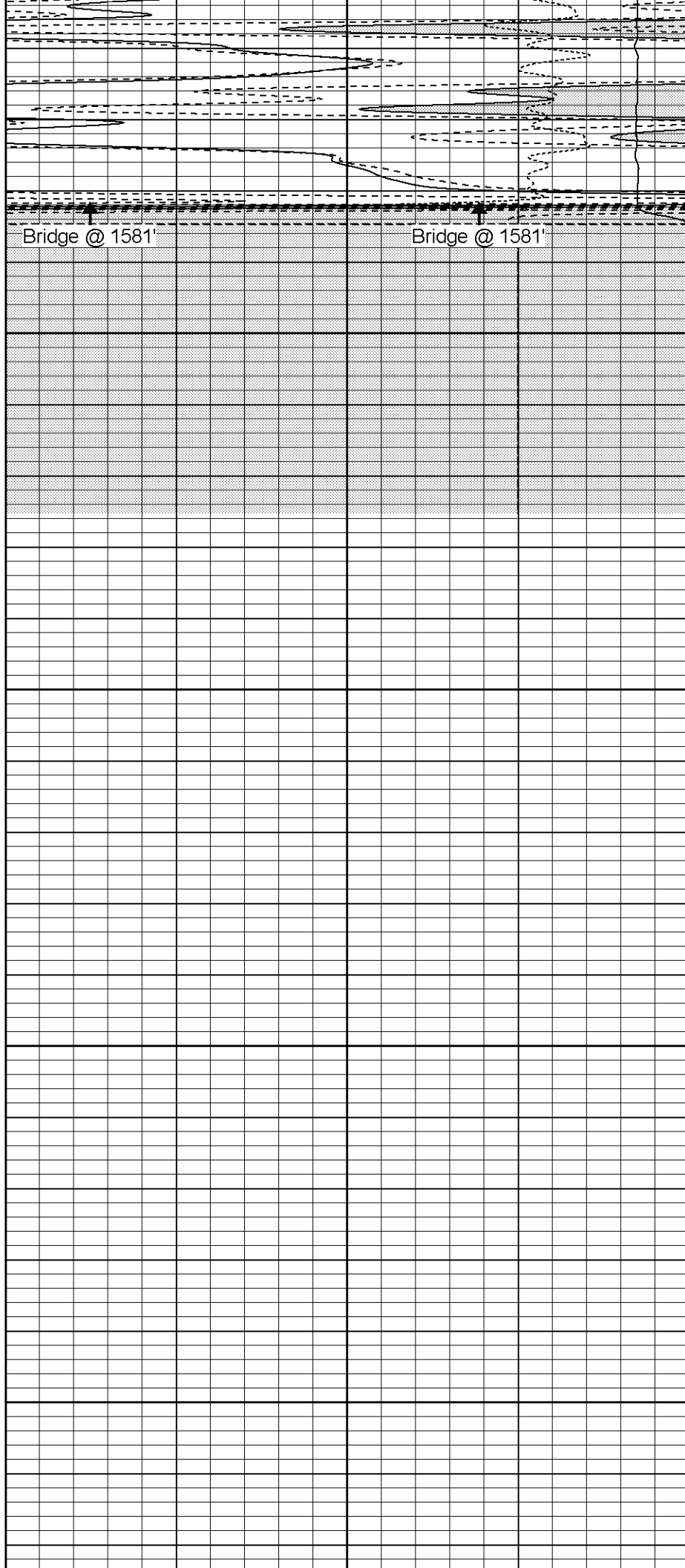


1600

1650

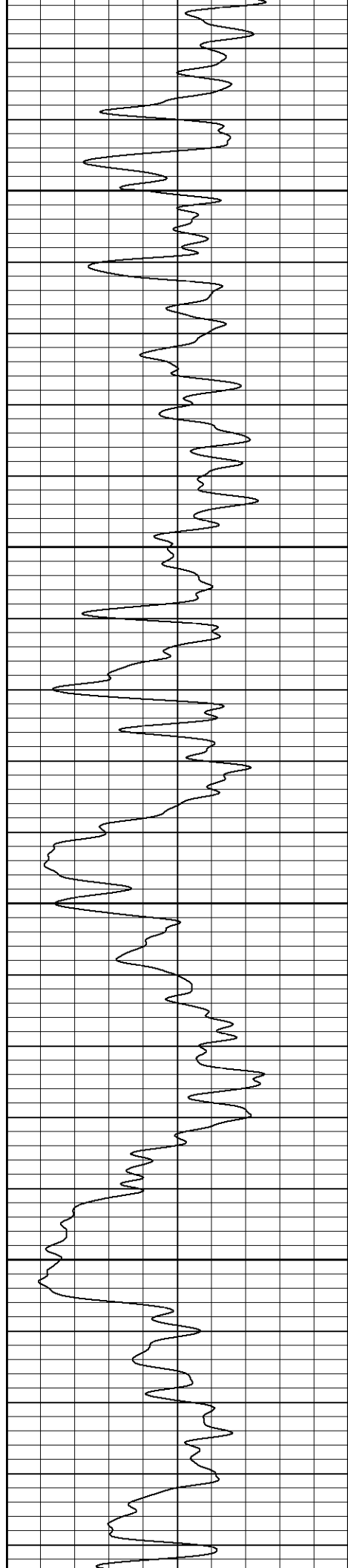
1700

1750



Bridge @ 1581'

Bridge @ 1581'

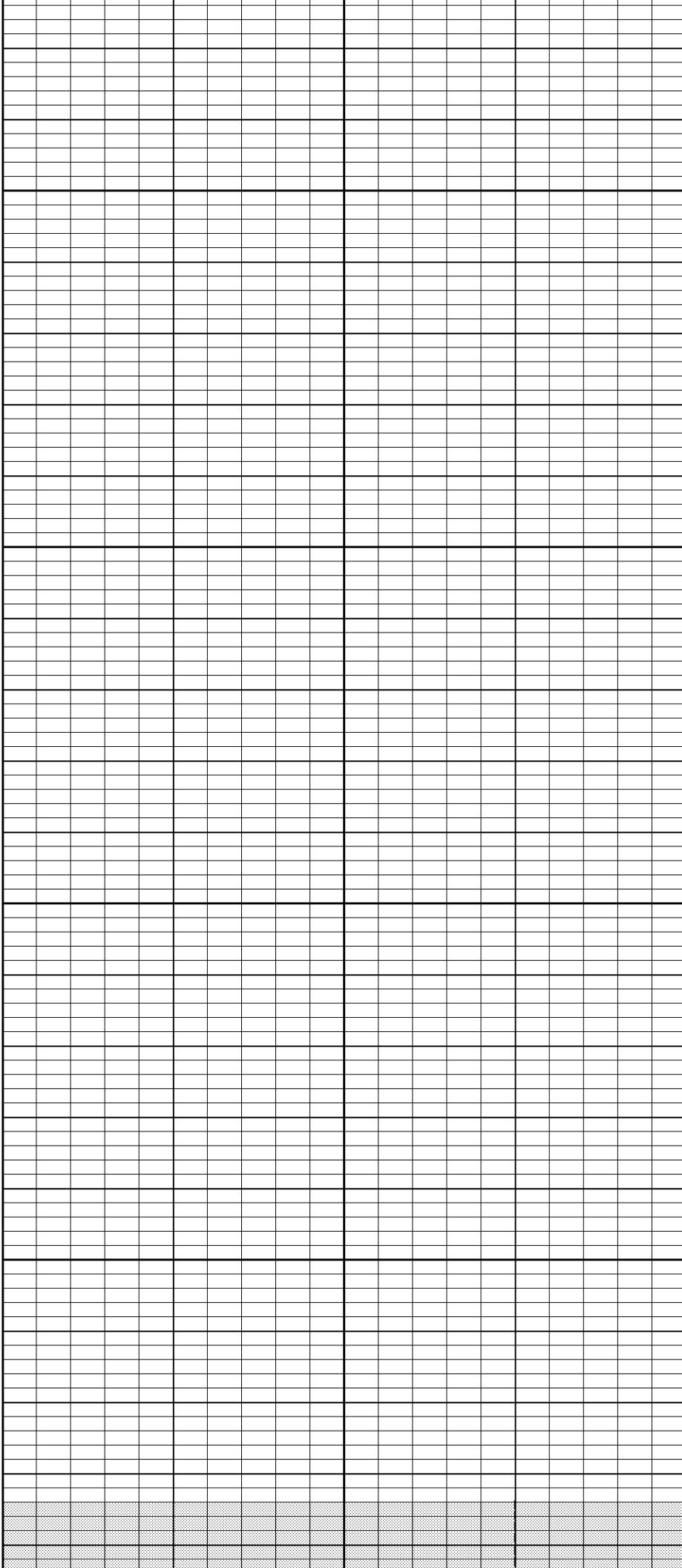


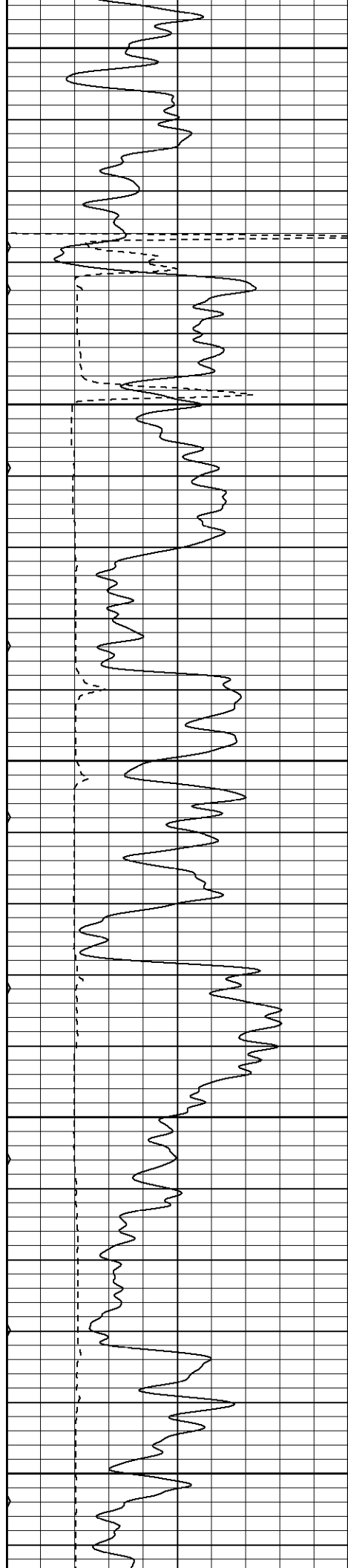
1800

1850

1900

1950





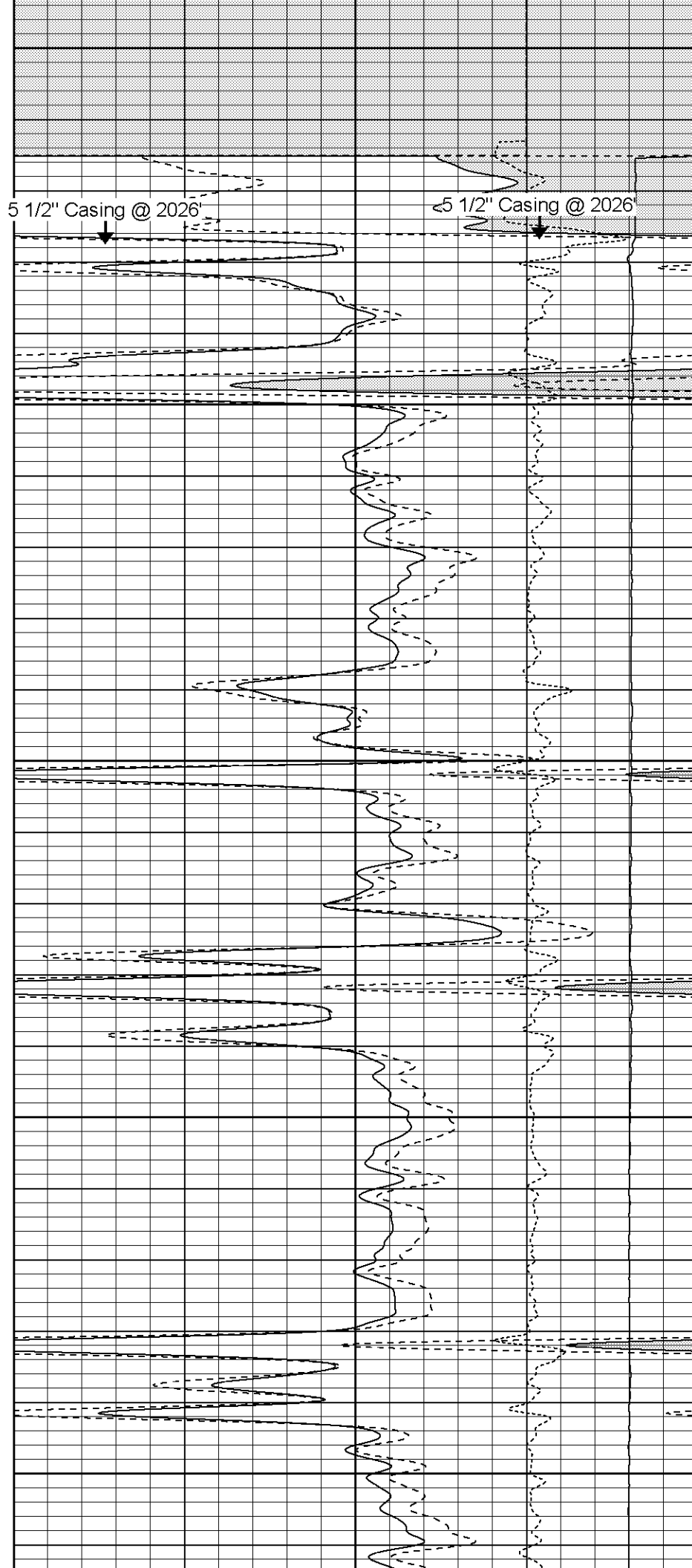
2000

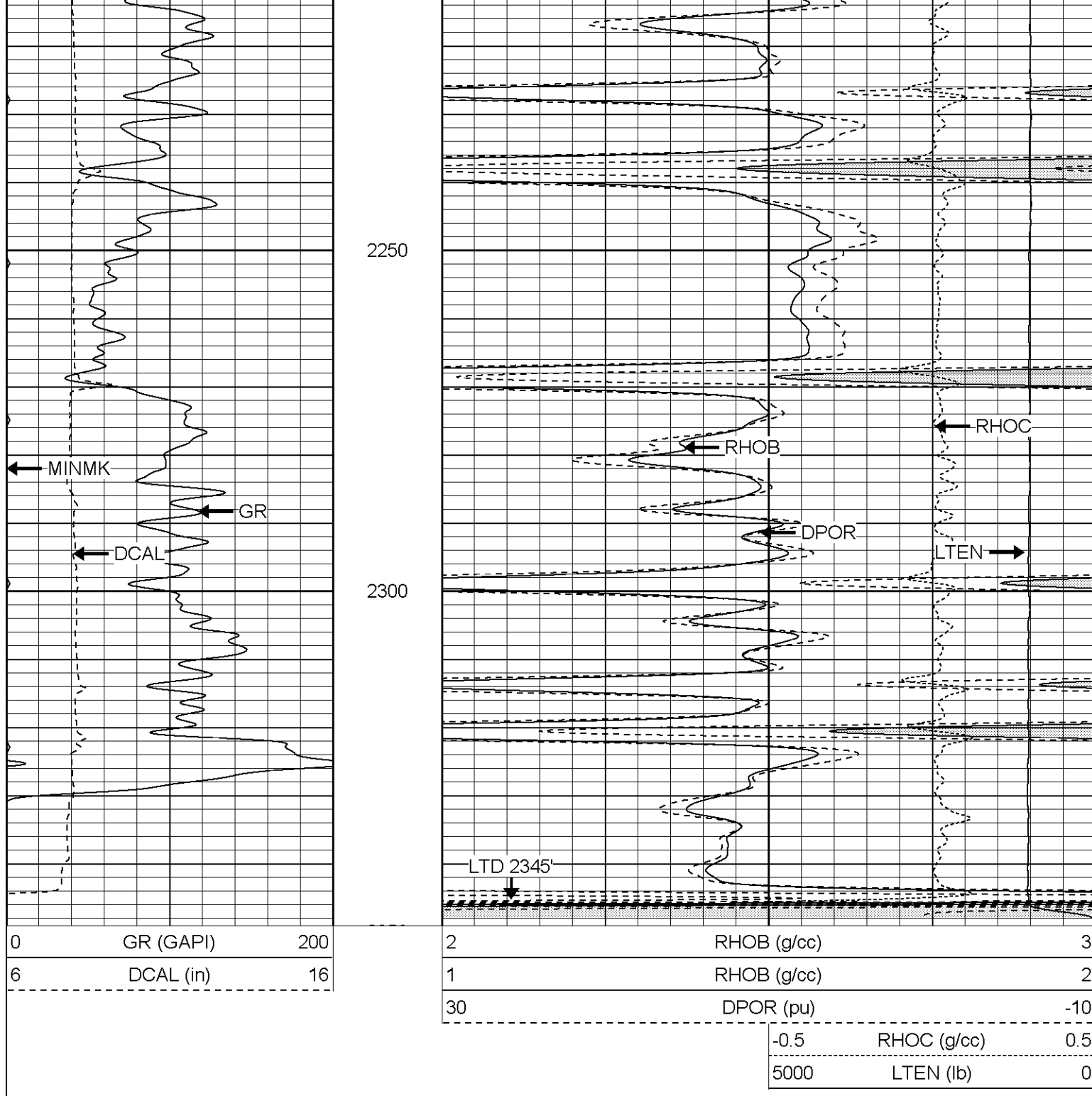
2050

2100

2150

2200





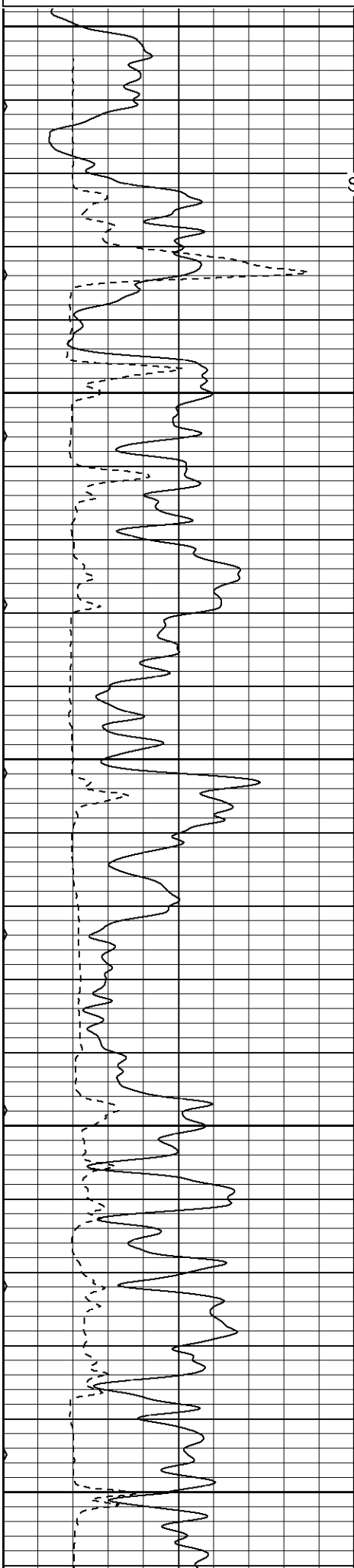
Patterson

Main Merged Pass

Database File: hillclimb.db
Dataset Pathname: merge4
Presentation Format: cdnl
Dataset Creation: Wed Oct 20 09:10:15 2004
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16

30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5



500

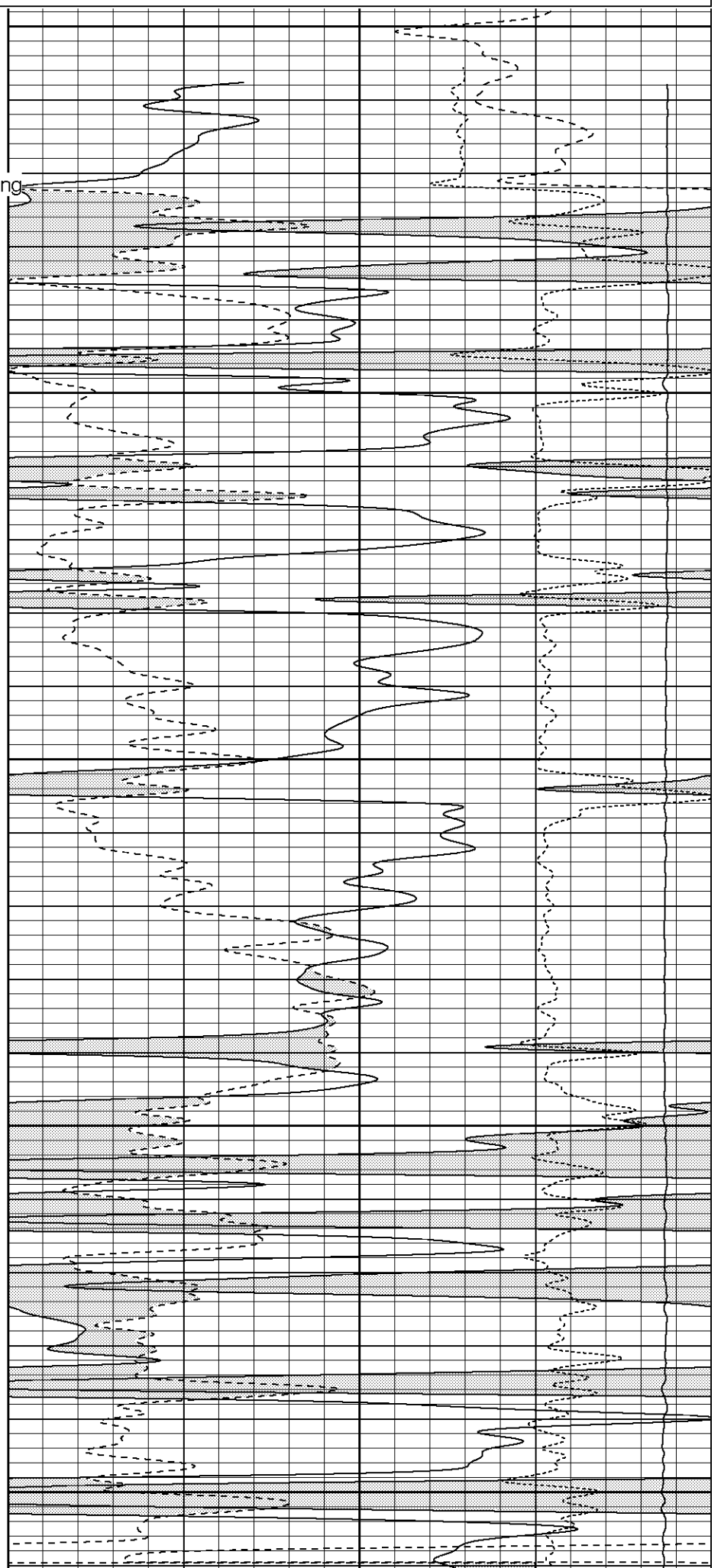
Surface Casing

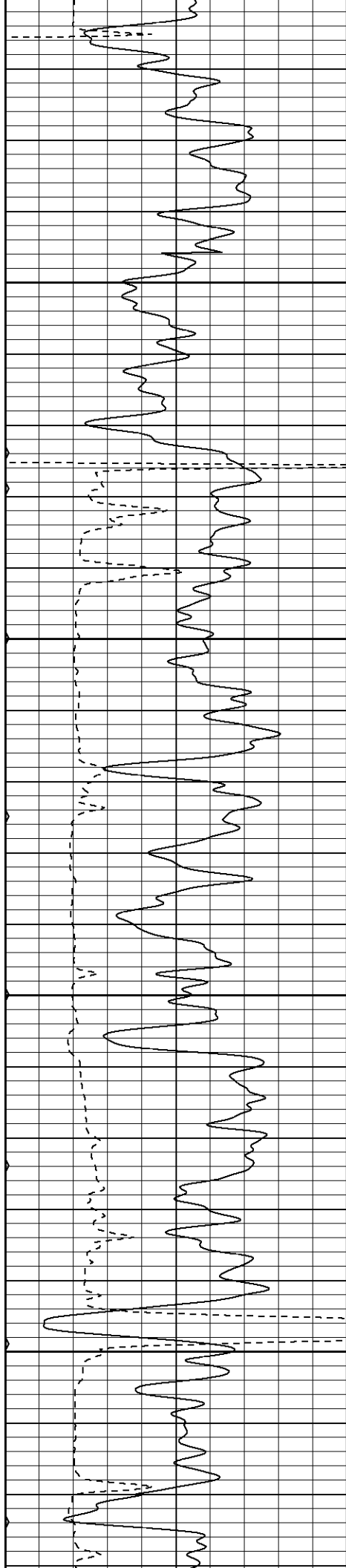
550

600

650

700



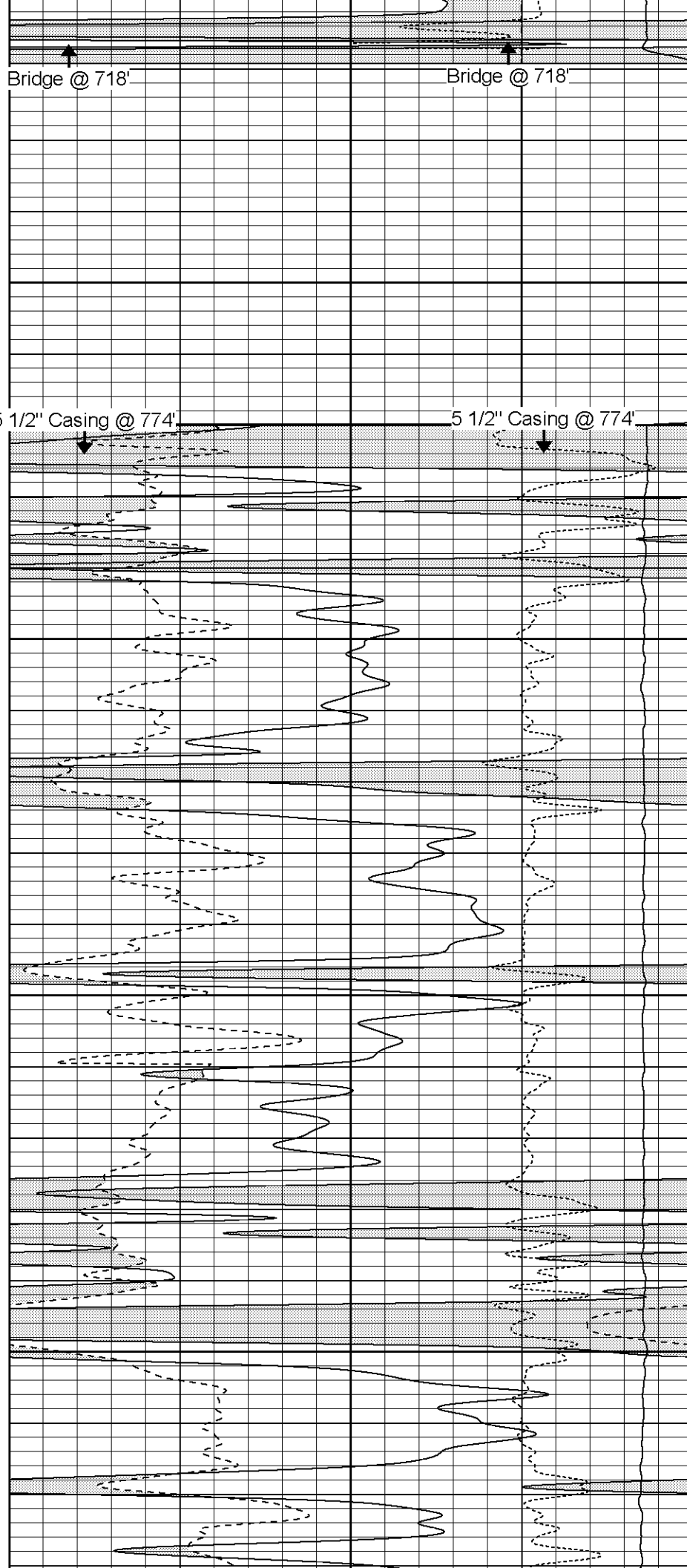


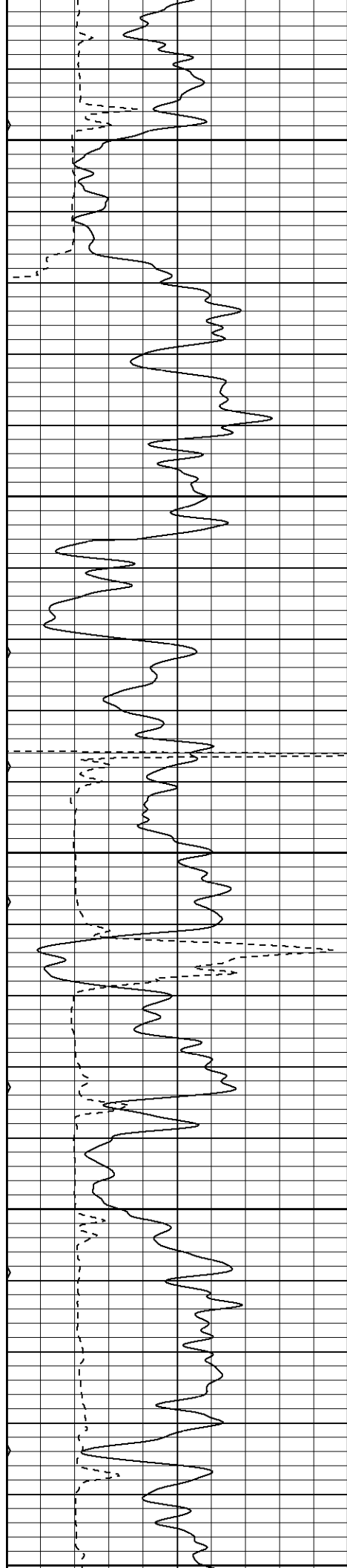
750

800

850

900





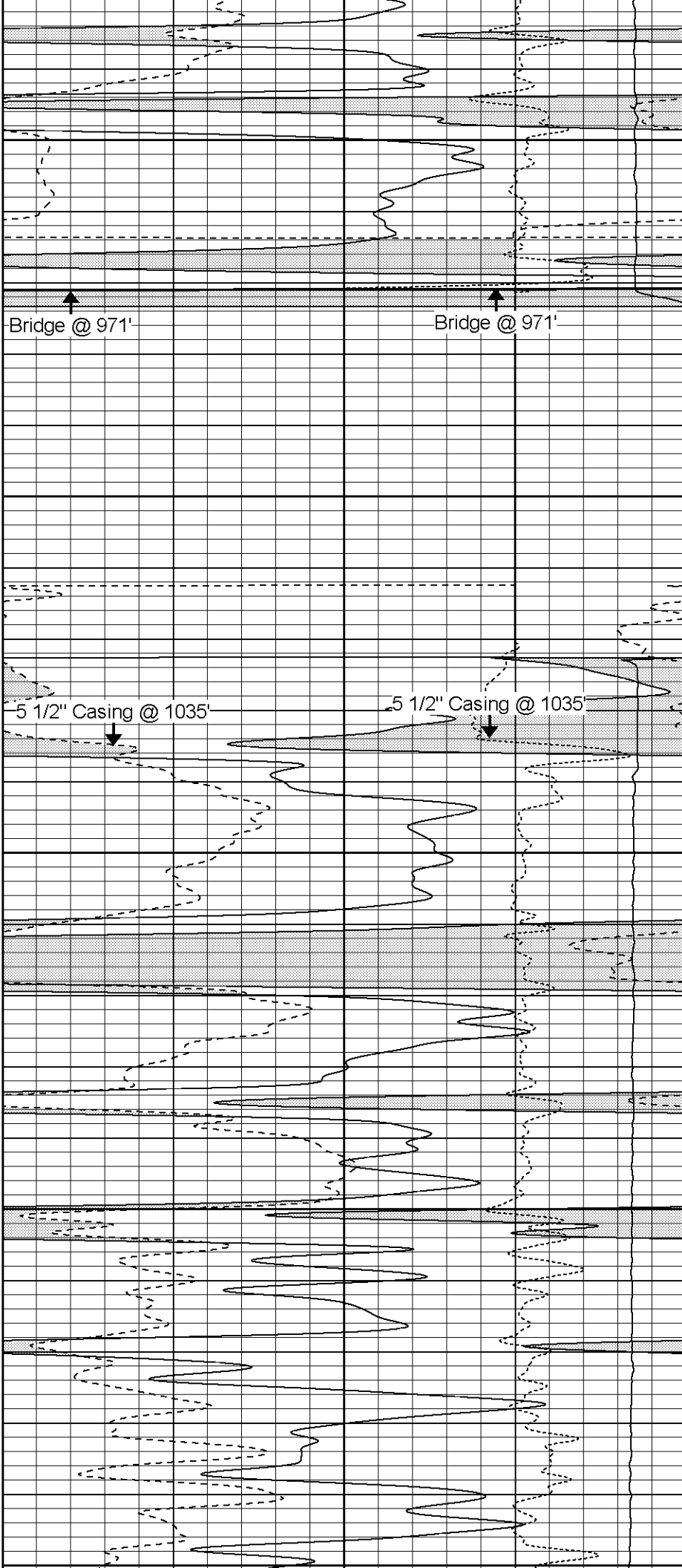
950

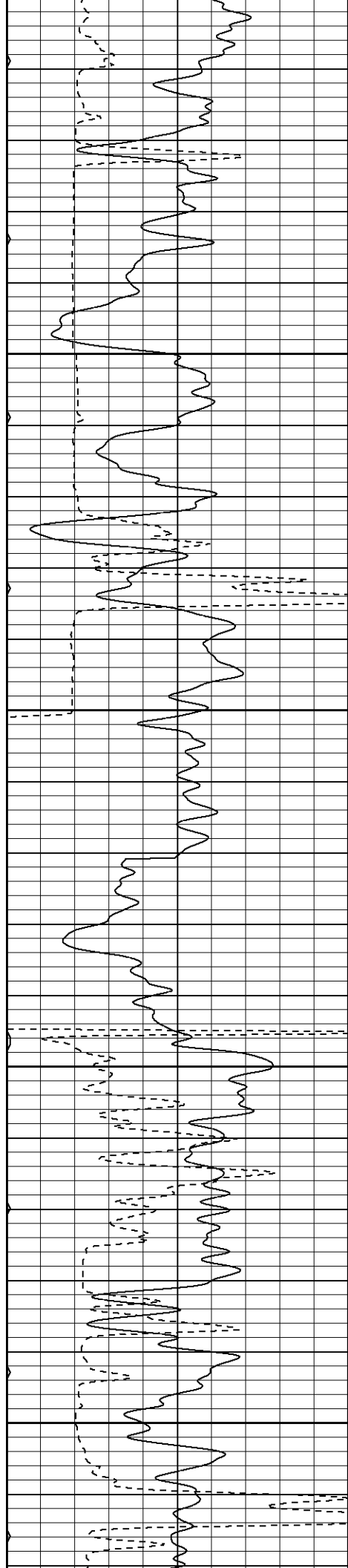
1000

1050

1100

1150





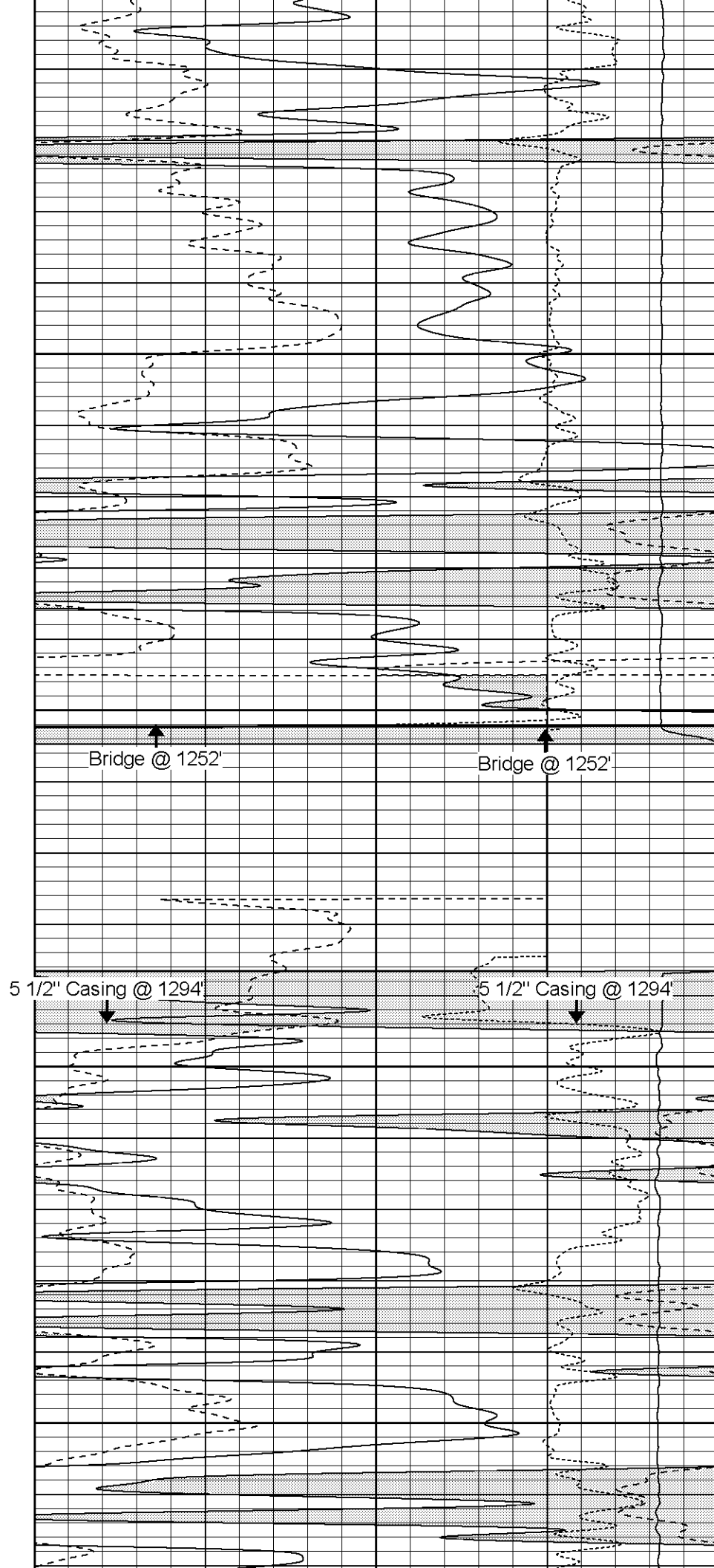
1150

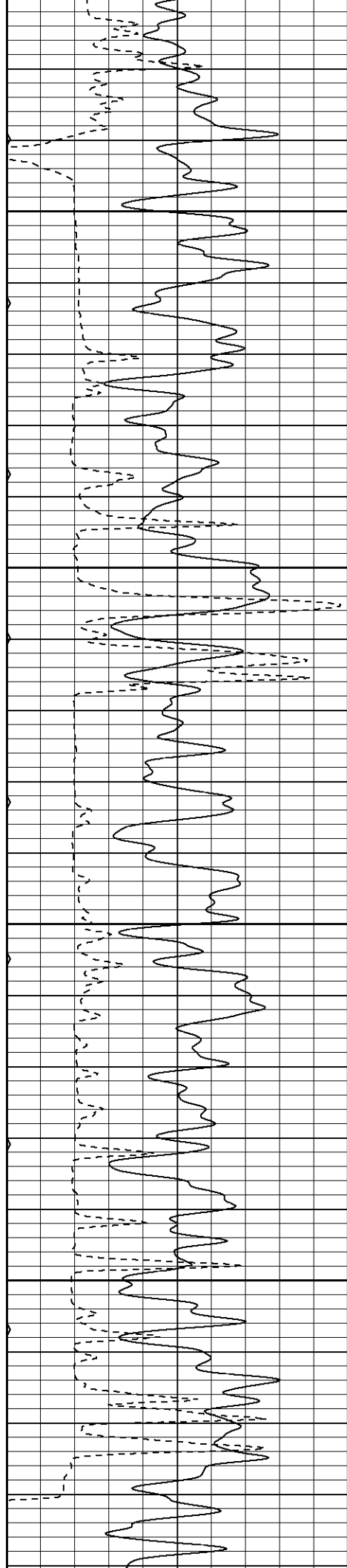
1200

1250

1300

1350



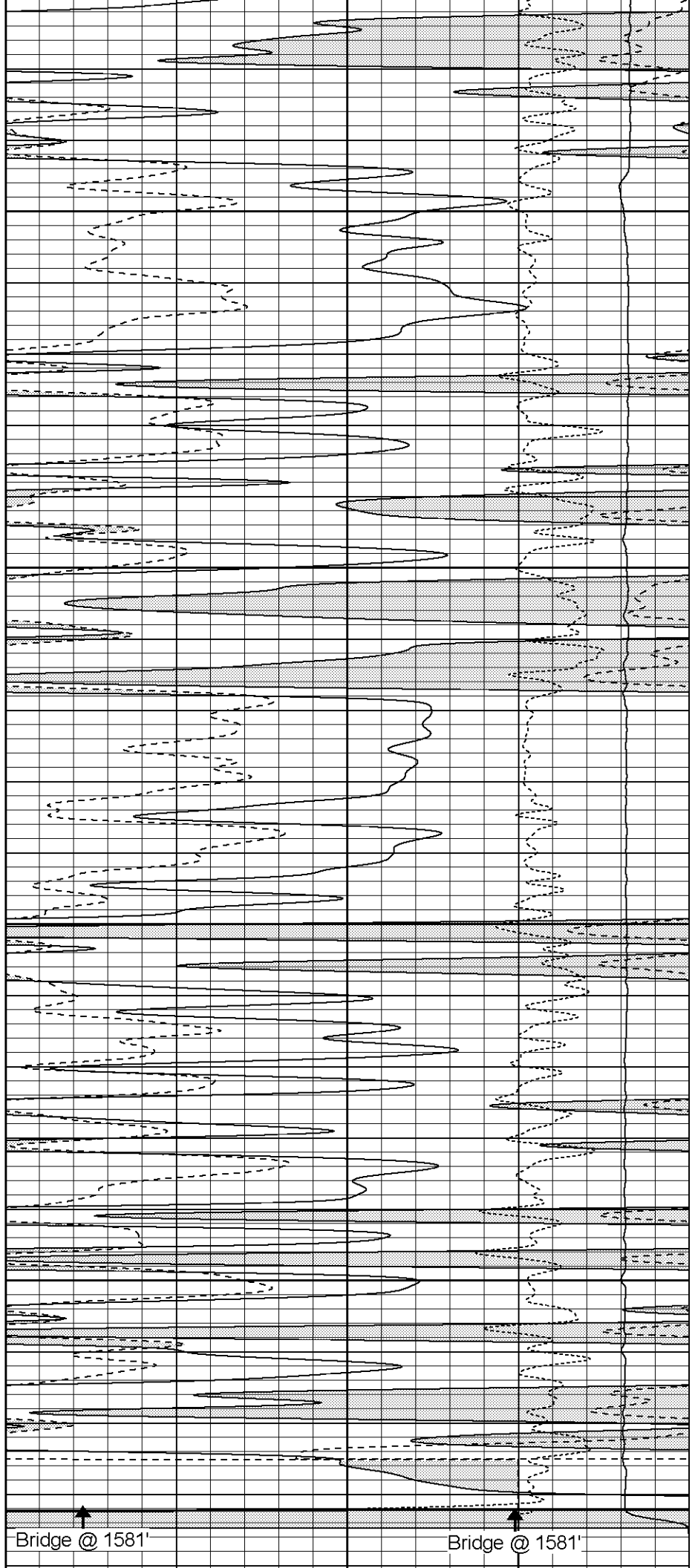


1400

1450

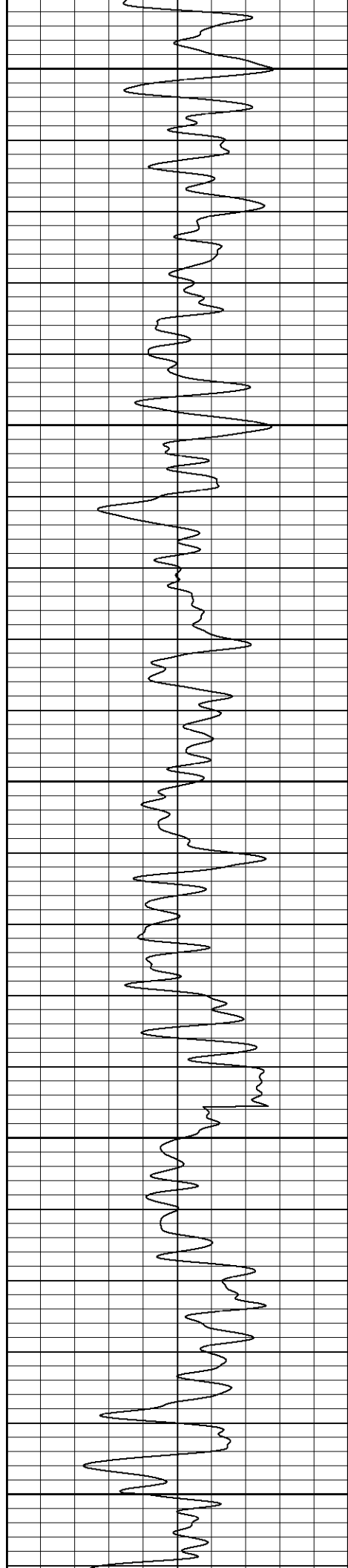
1500

1550



Bridge @ 1581'

Bridge @ 1581'



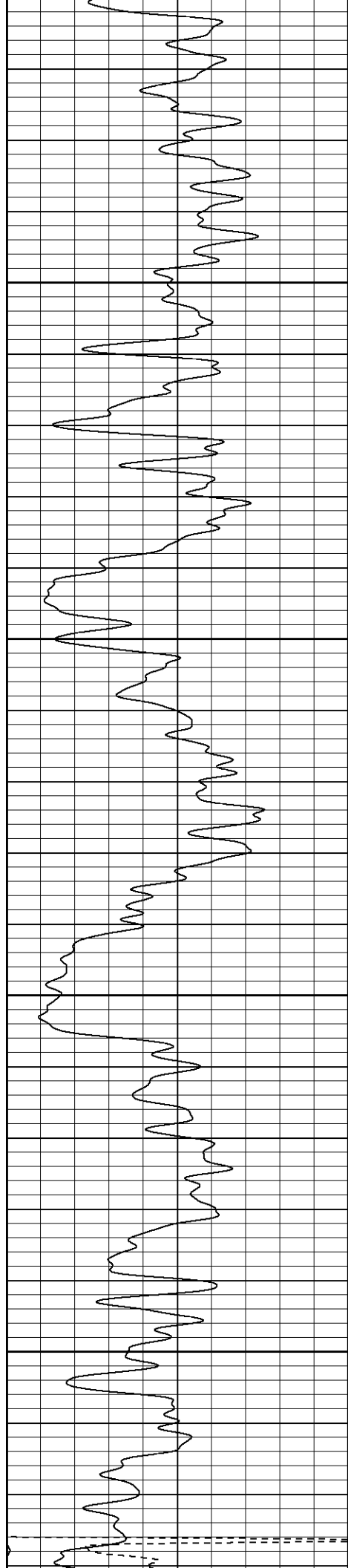
1600

1650

1700

1750

1800



1850

1900

1950

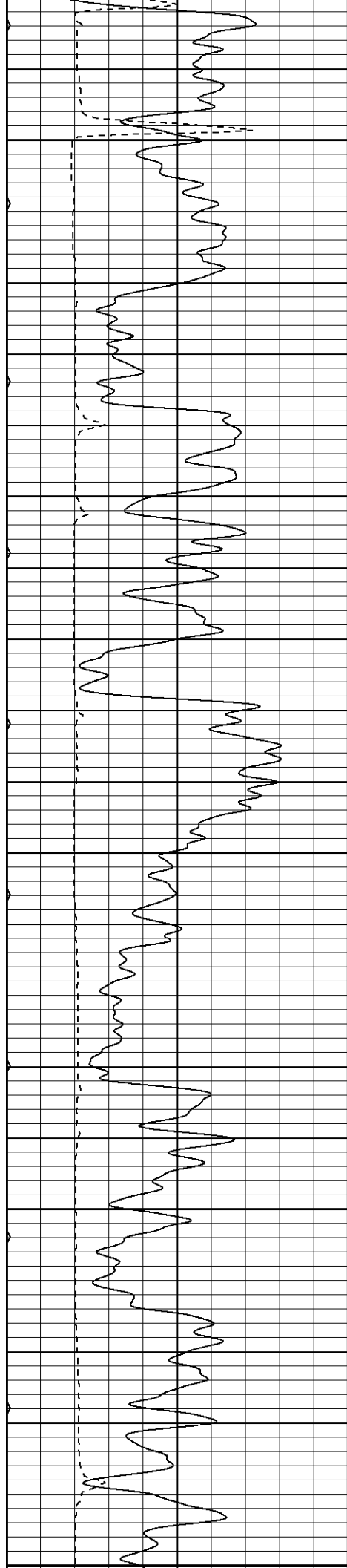
2000

5 1/2" Casing @ 2026'



5 1/2" Casing @ 2026'





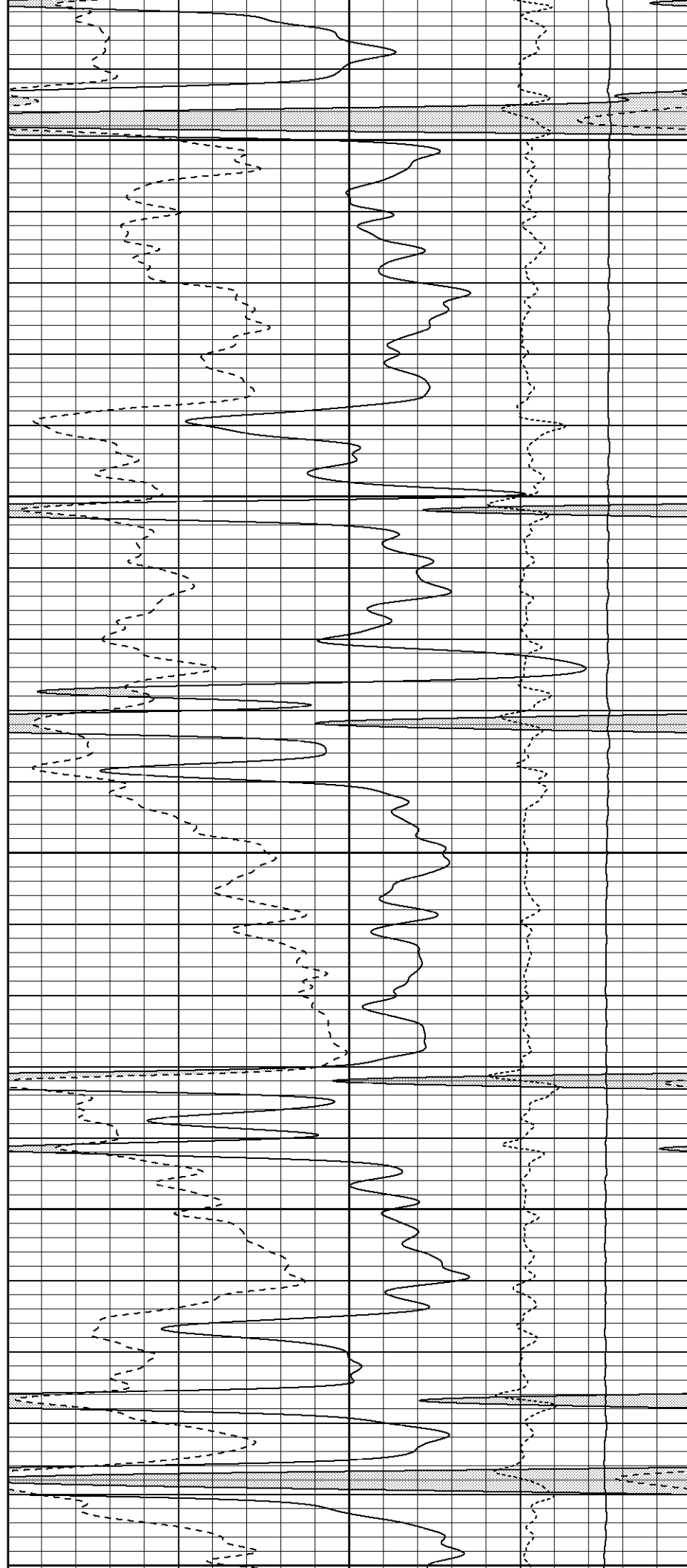
2050

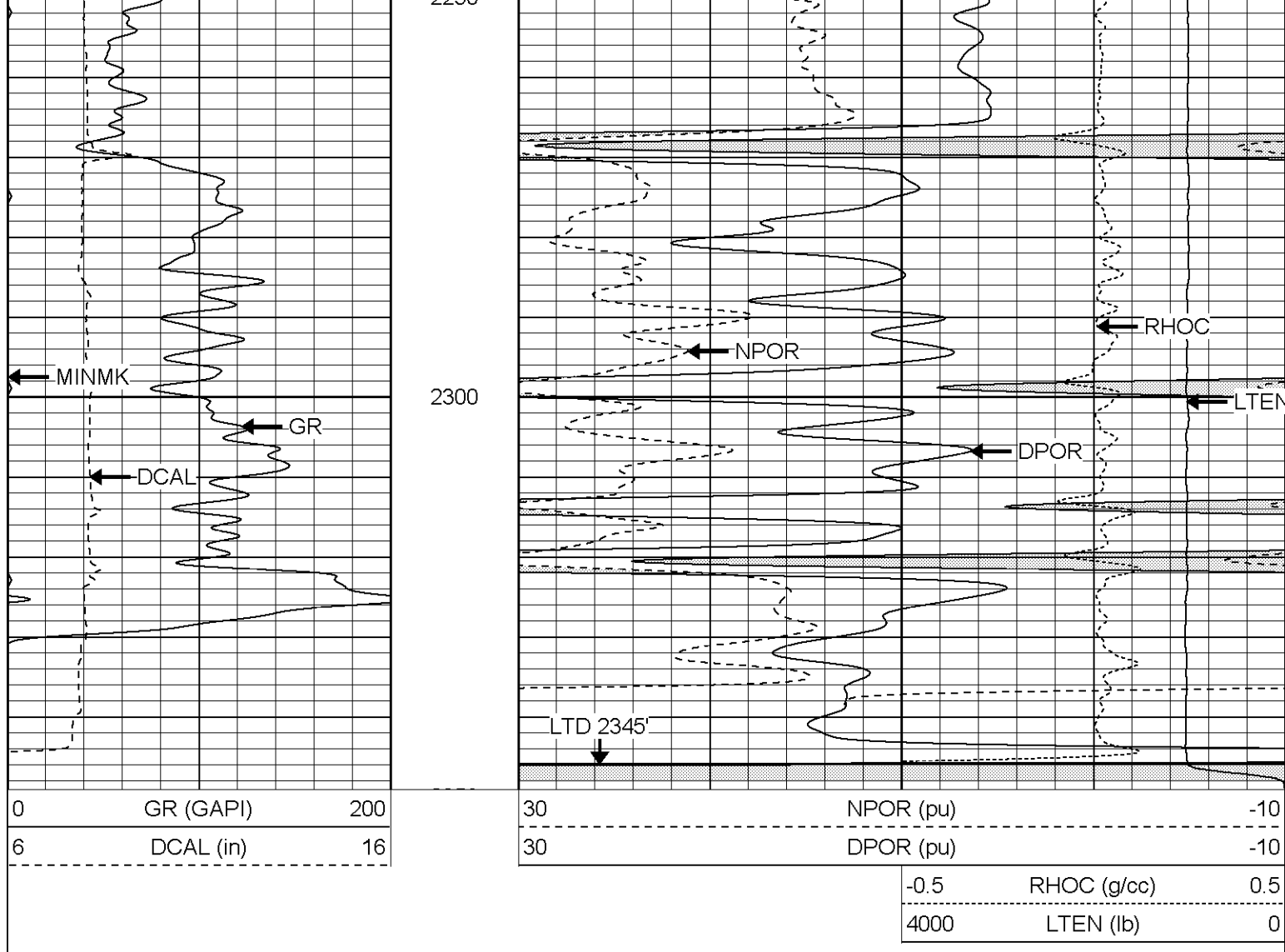
2100

2150

2200

2250



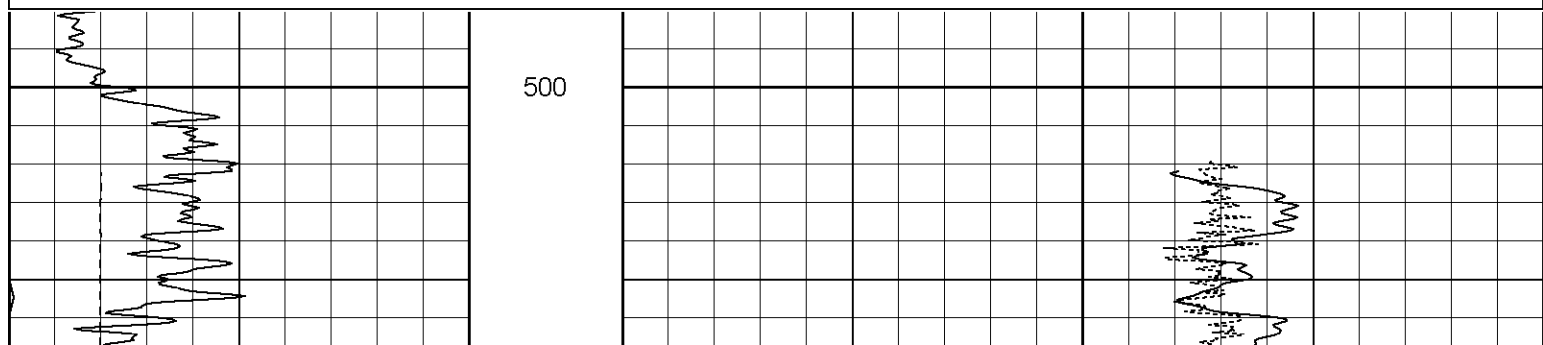


Patterson

High Resolution Pass

Database File: hillclimb.db
 Dataset Pathname: merge5
 Presentation Format: cdlhr
 Dataset Creation: Wed Oct 20 09:25:25 2004
 Charted by: Depth in Feet scaled 1:120

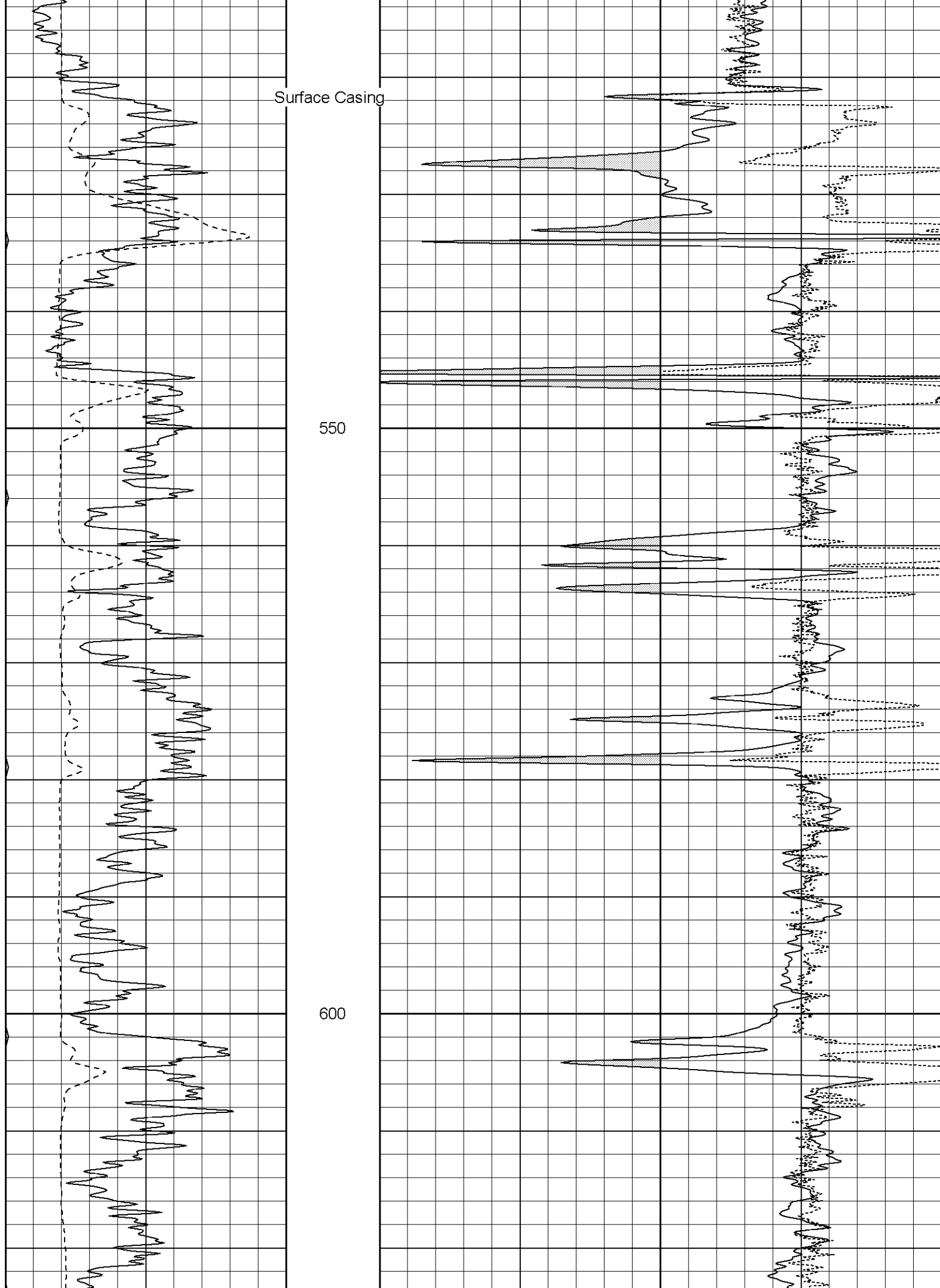
0	GR (GAPI)	200	1	RHOB (g/cc)	3
0	MINMK	80	-0.5	RHOC (g/cc)	0.5
6	DCAL (in)	16			

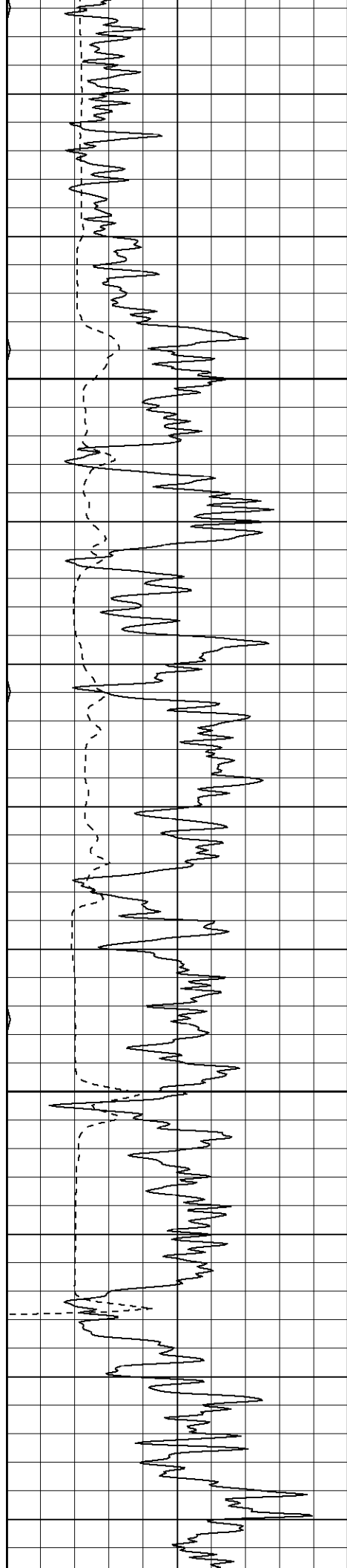


Surface Casing

550

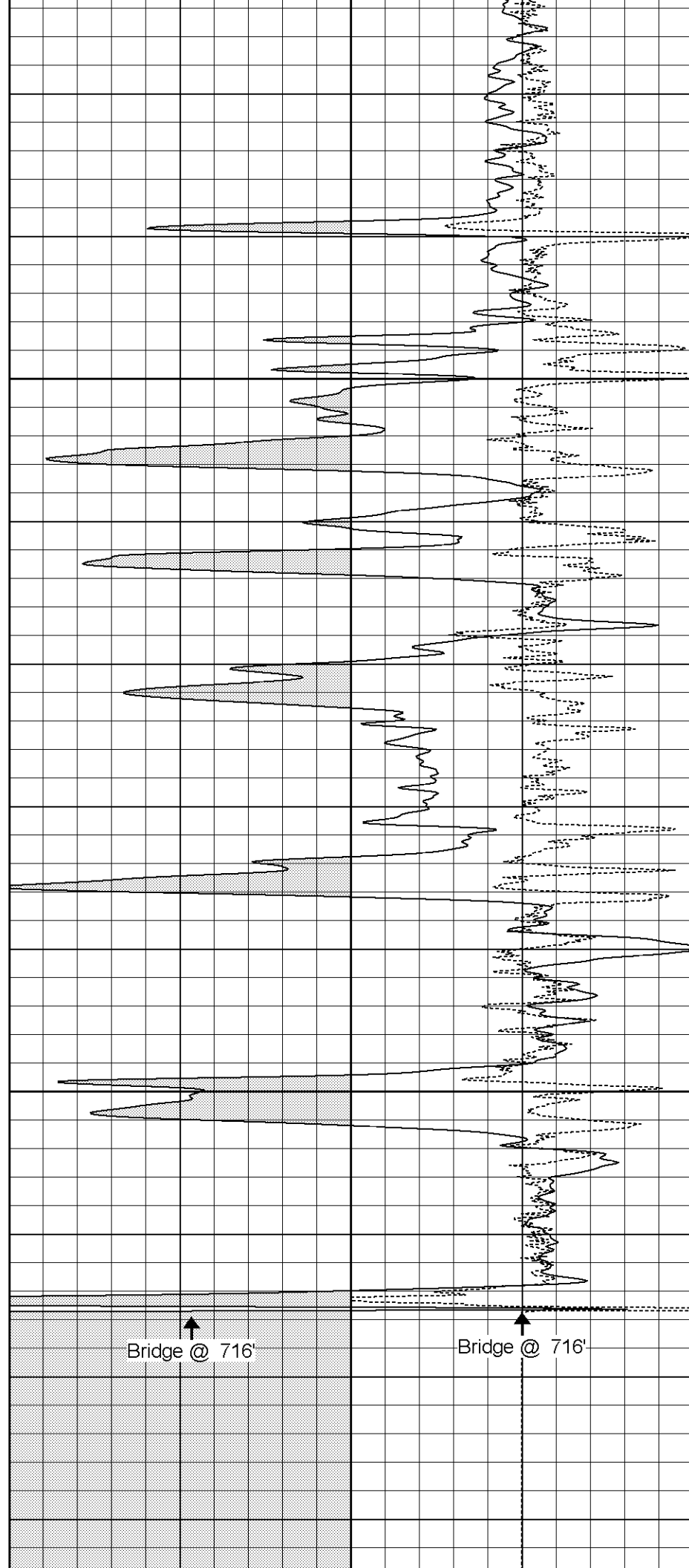
600





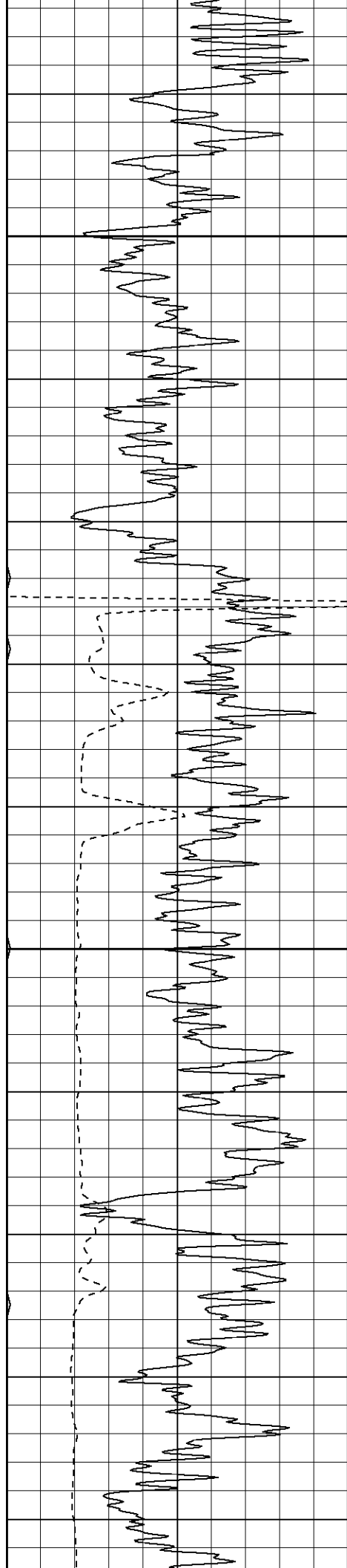
650

700



Bridge @ 716'

Bridge @ 716'



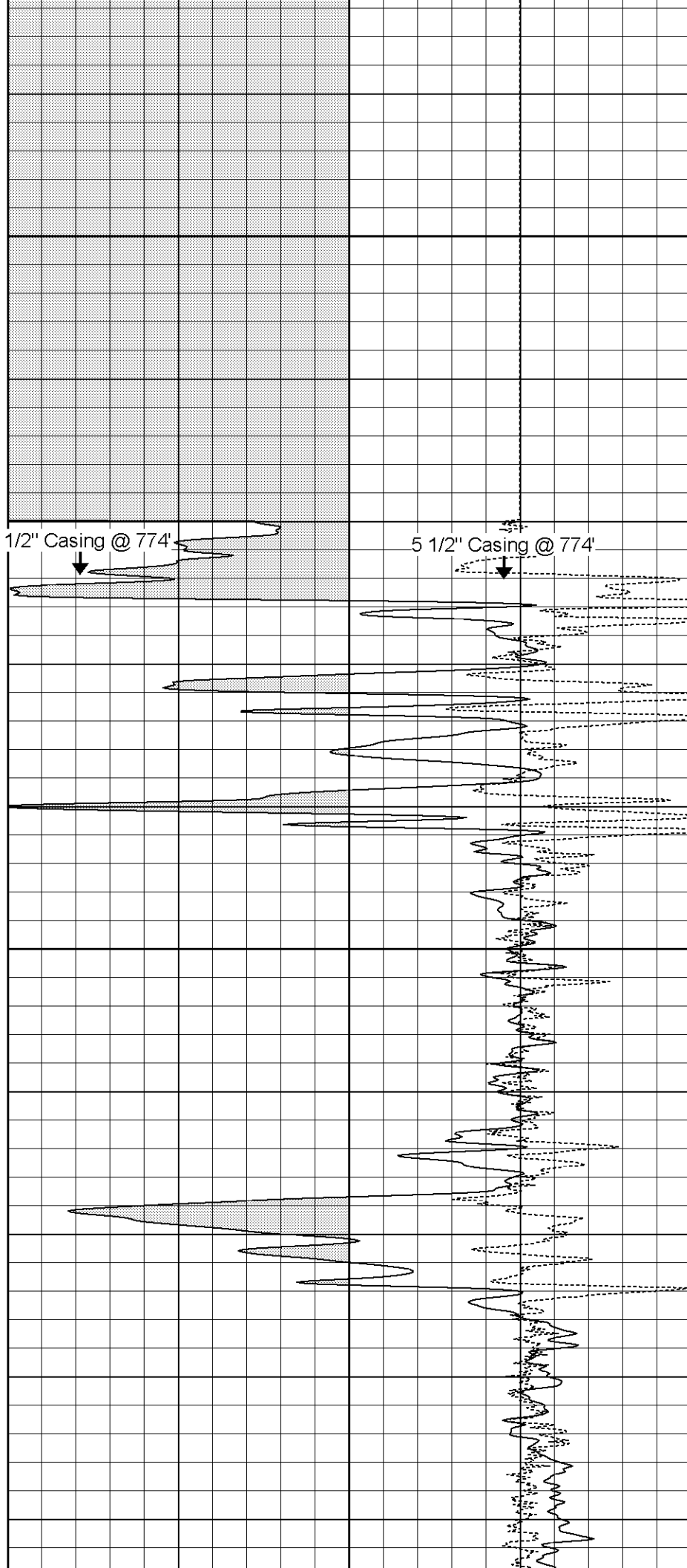
750

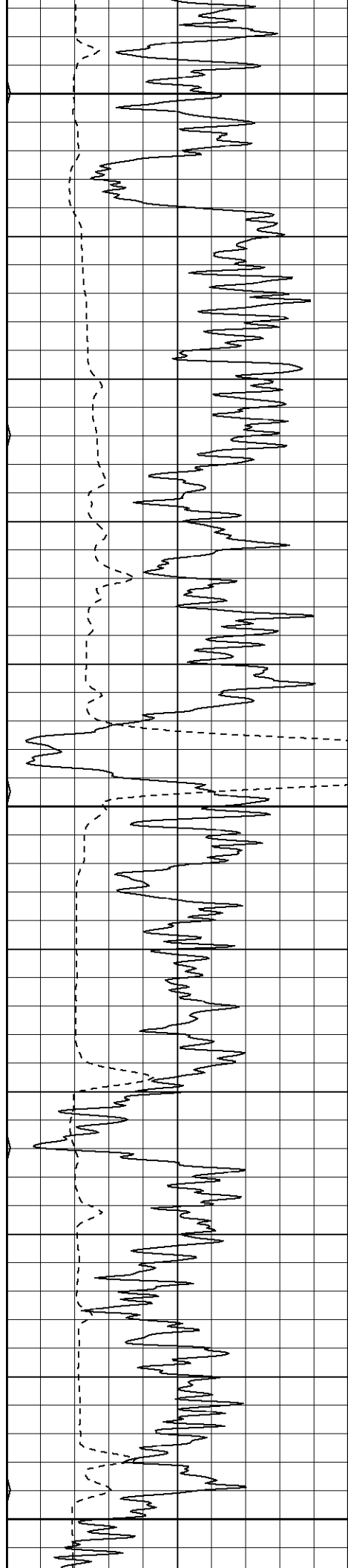
800

5 1/2" Casing @ 774'



5 1/2" Casing @ 774'

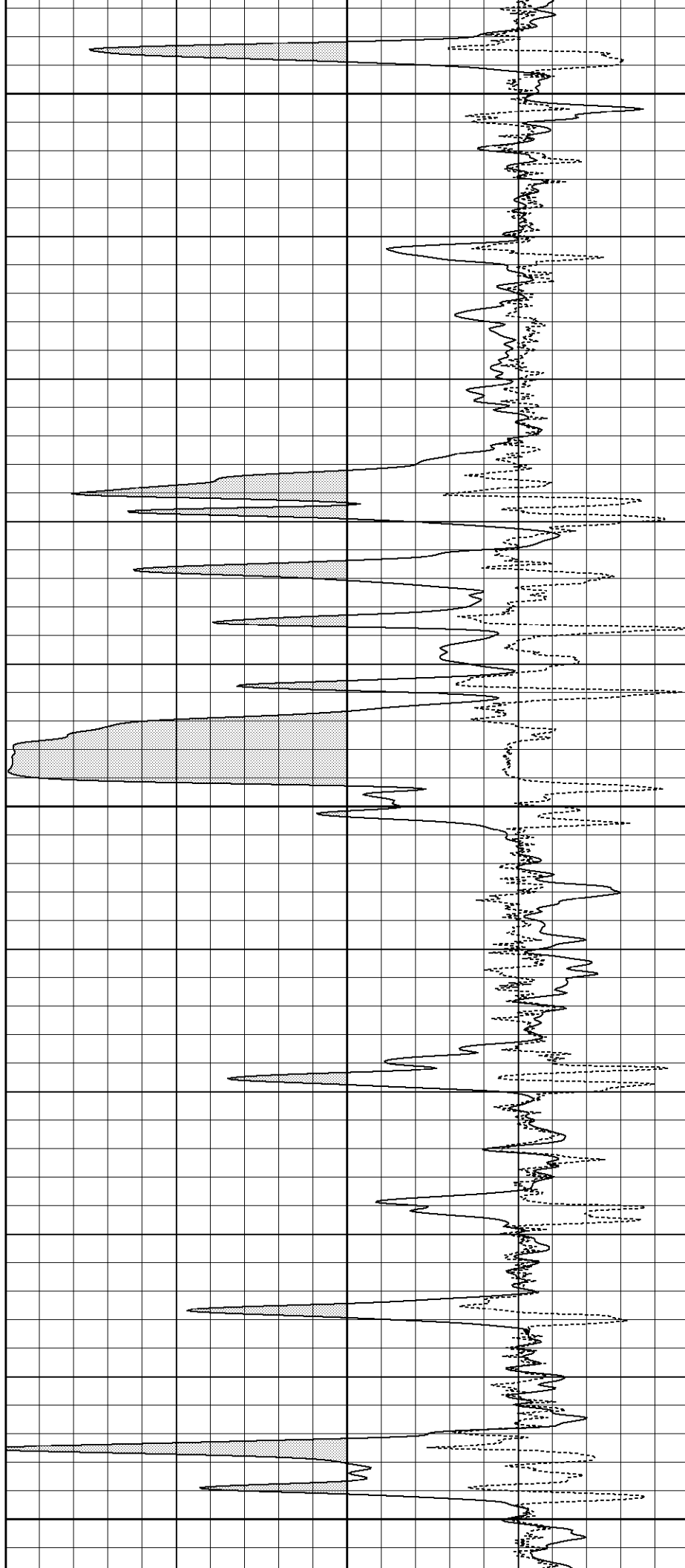


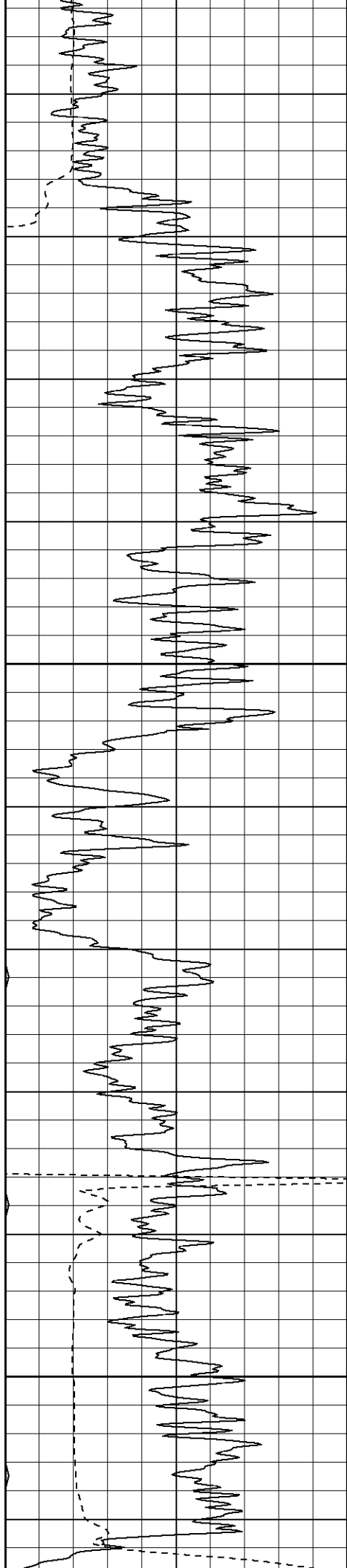


850

900

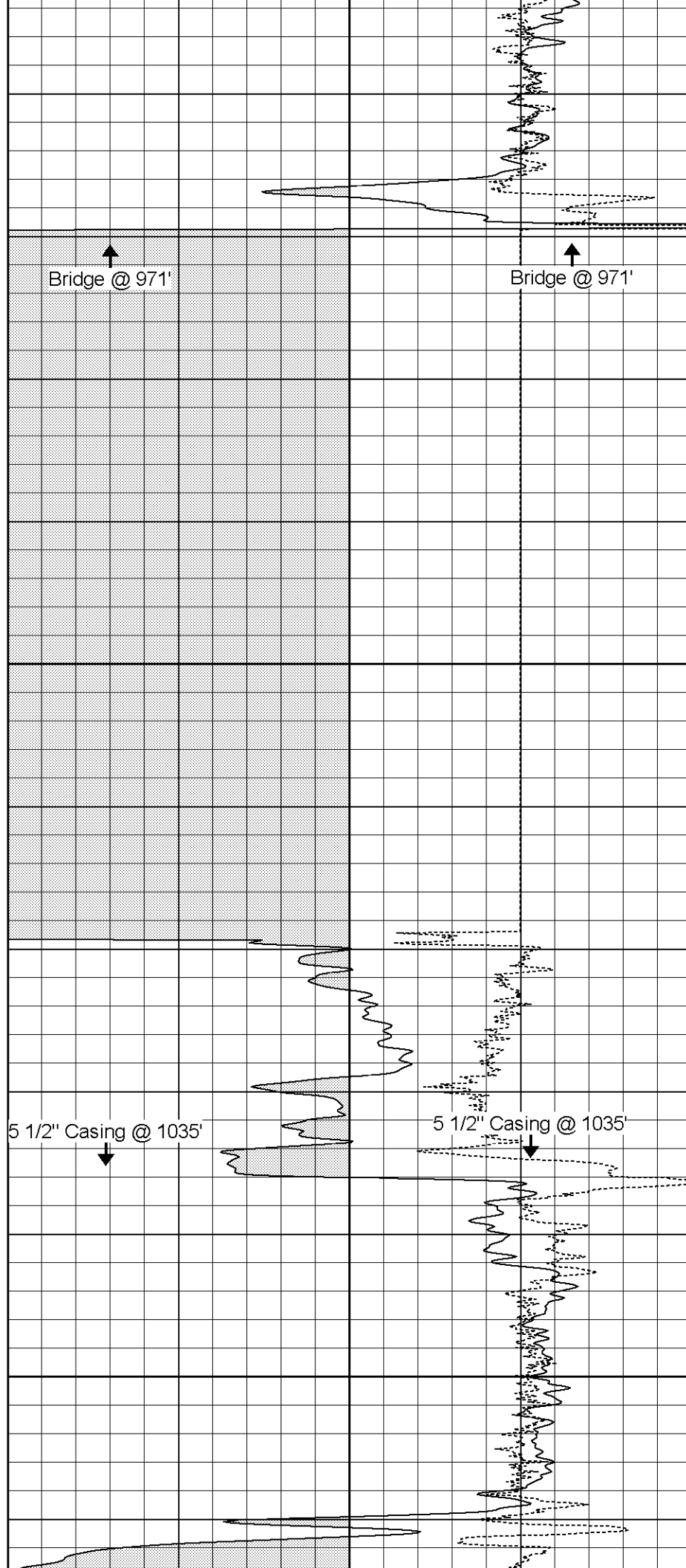
950

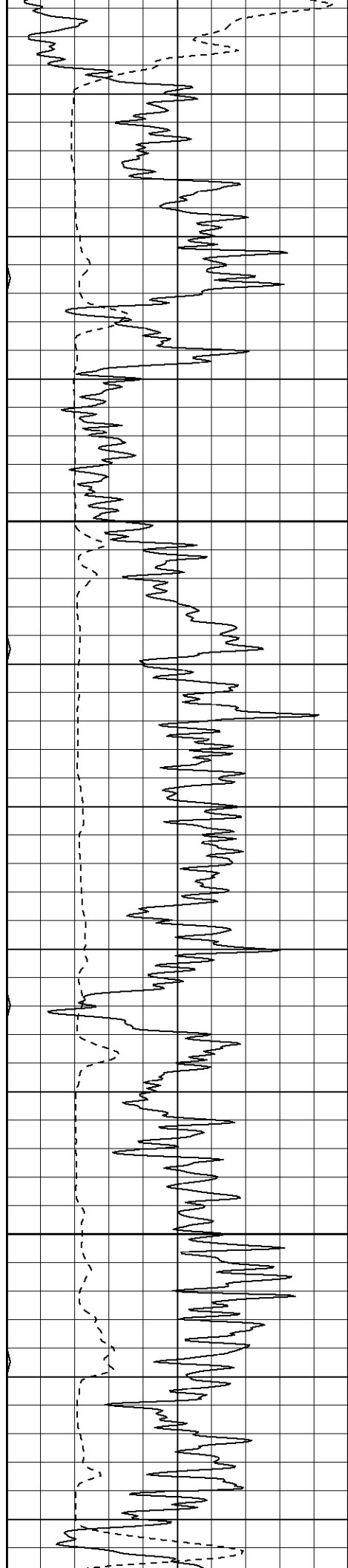




1000

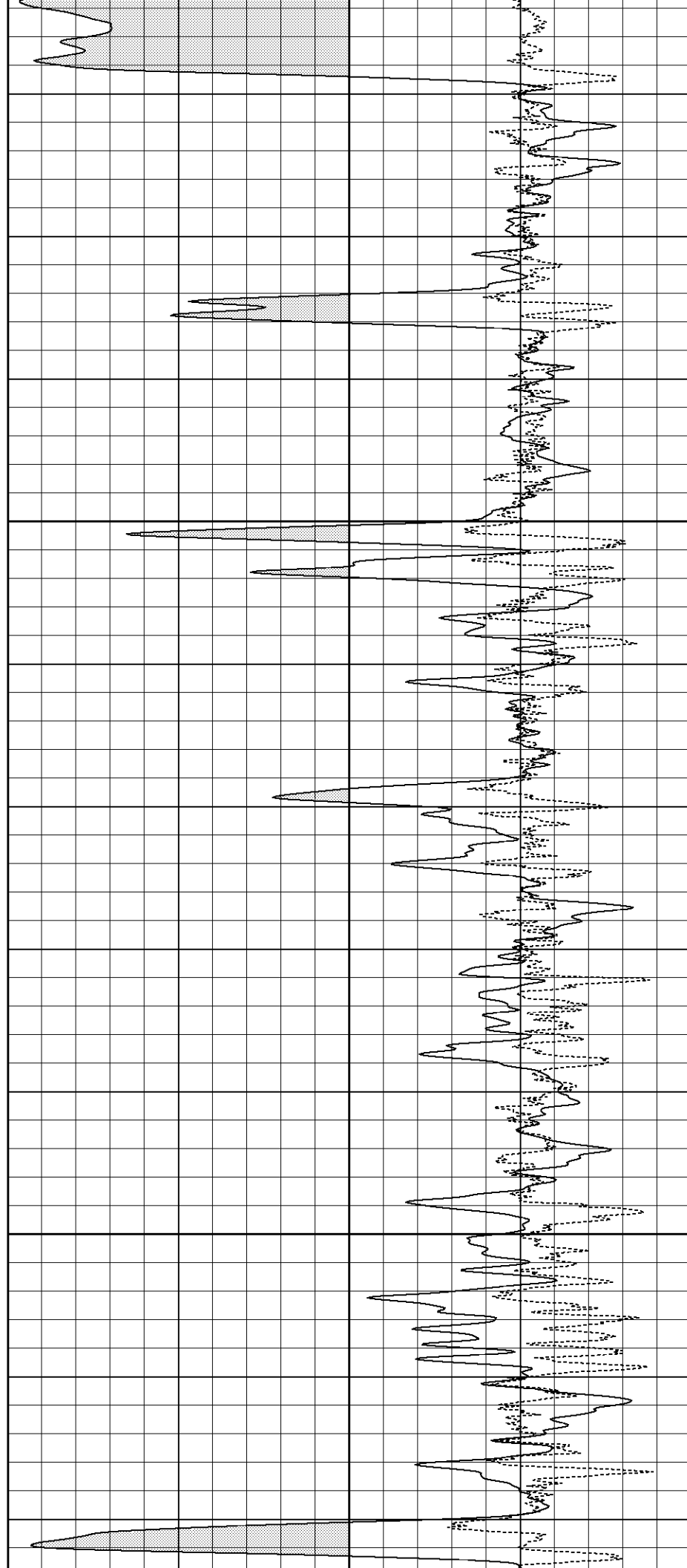
1050

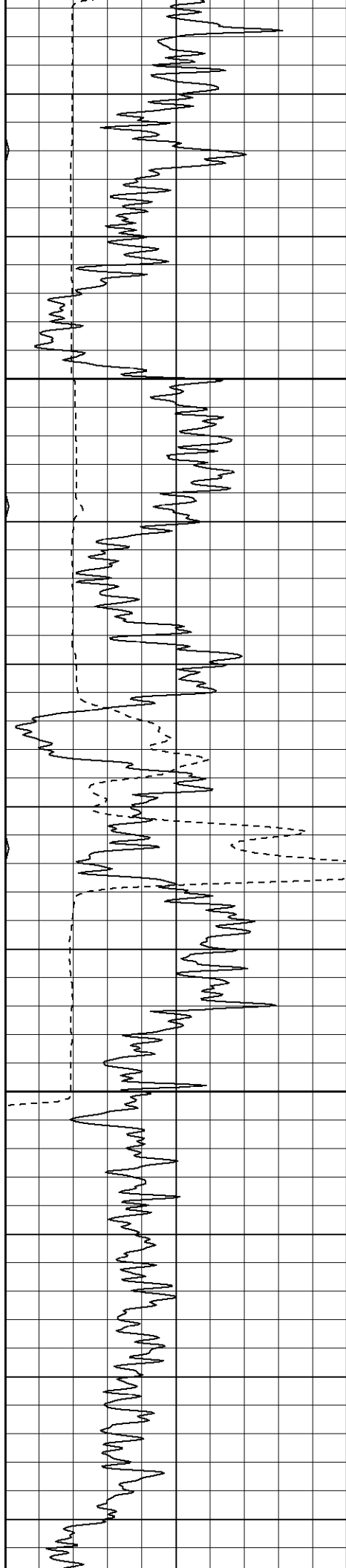




1100

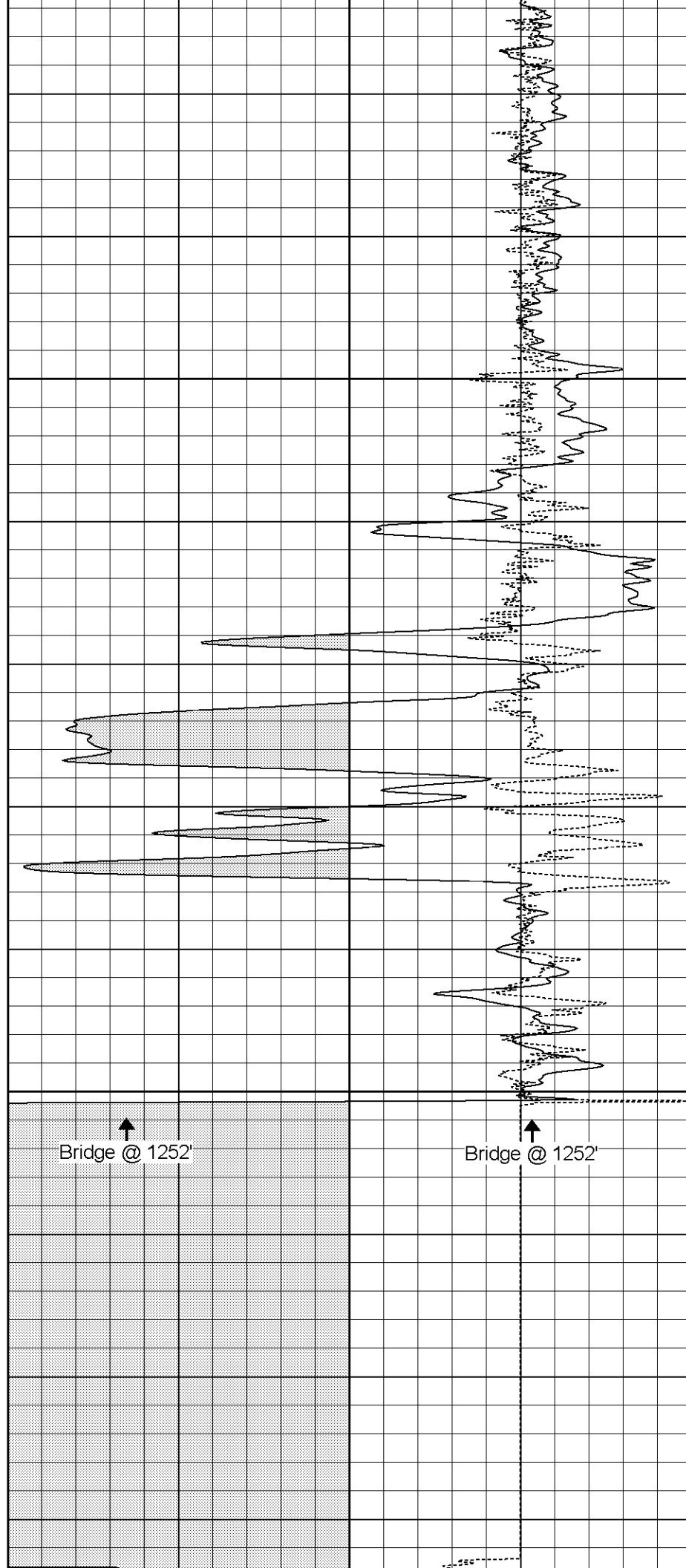
1150





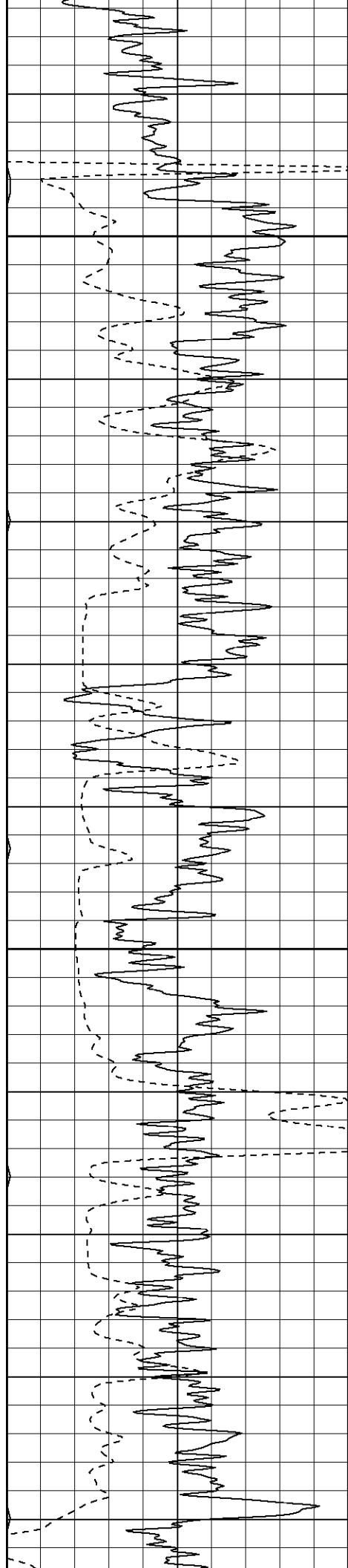
1200

1250



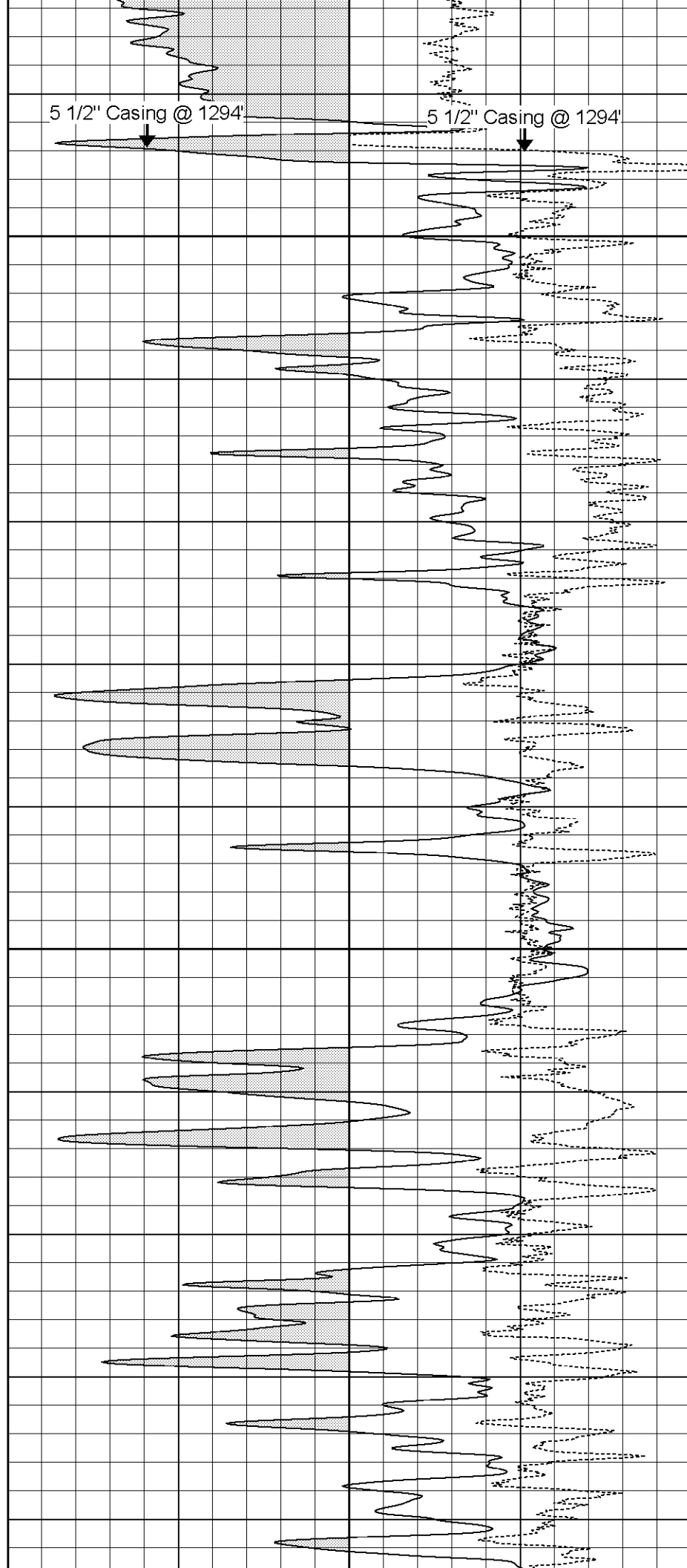
Bridge @ 1252'

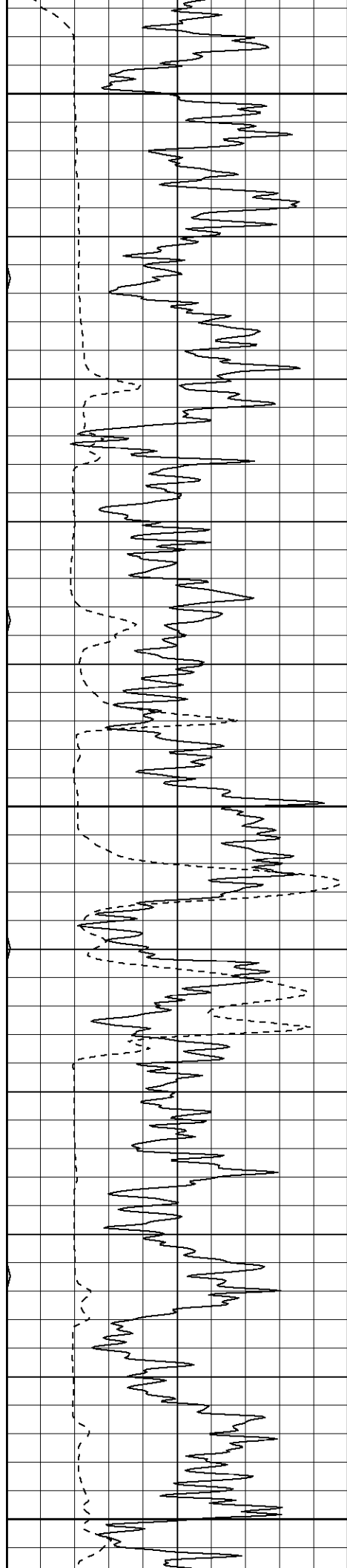
Bridge @ 1252'



1300

1350

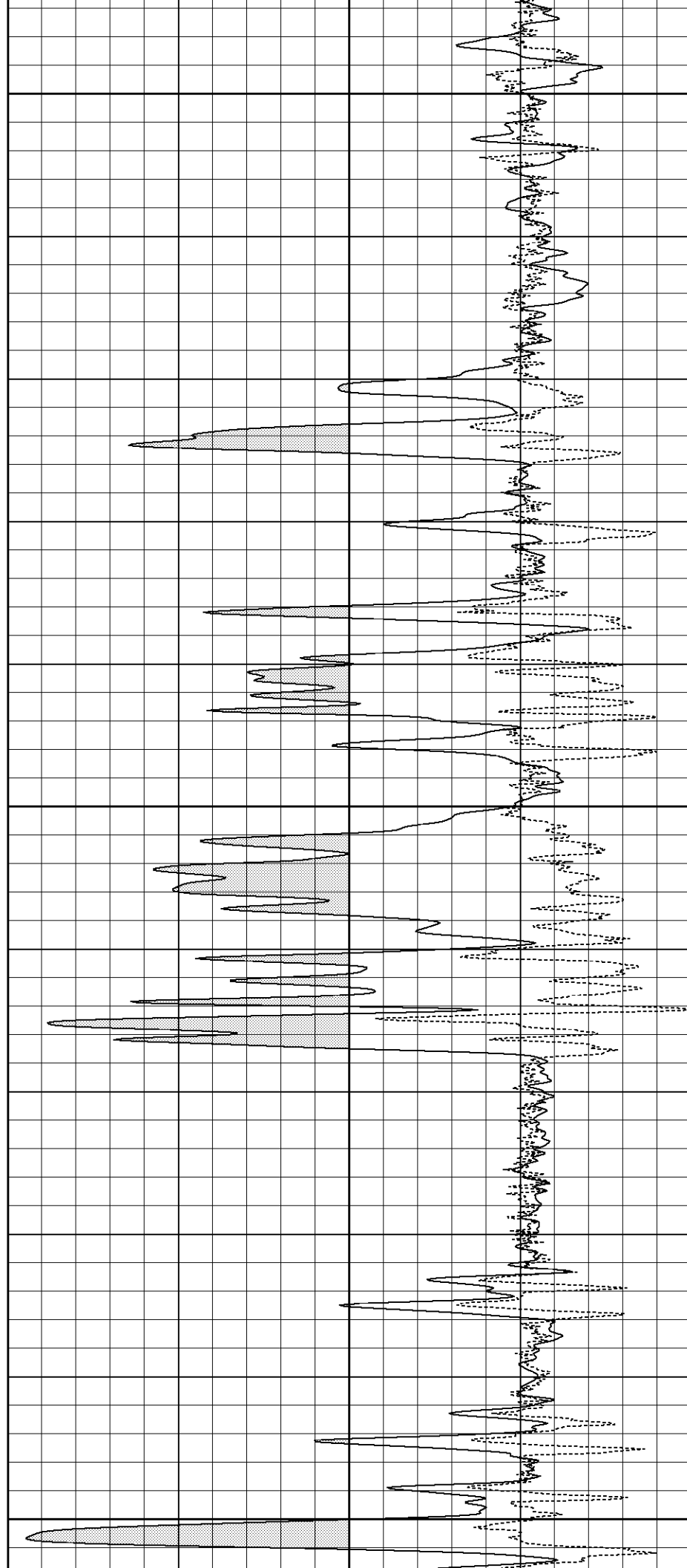


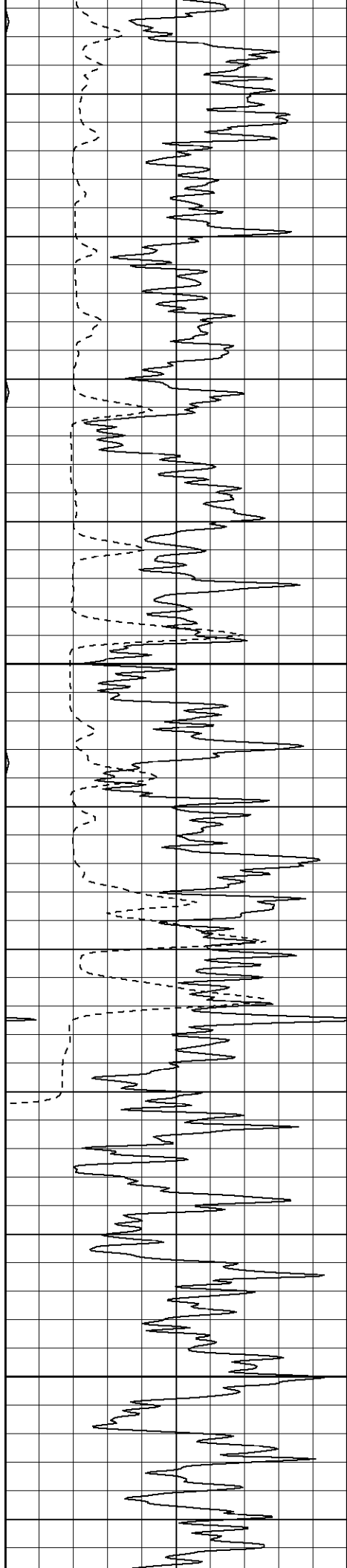


1400

1450

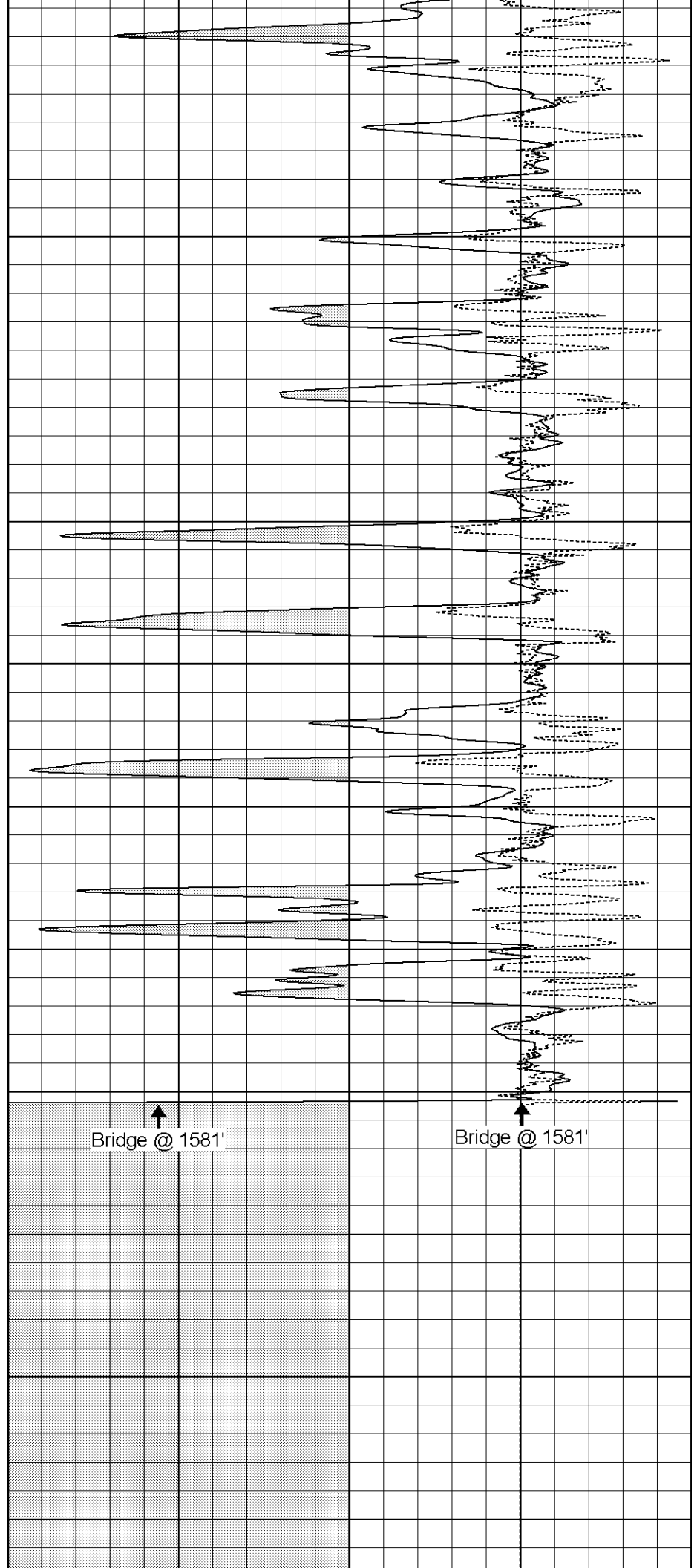
1500





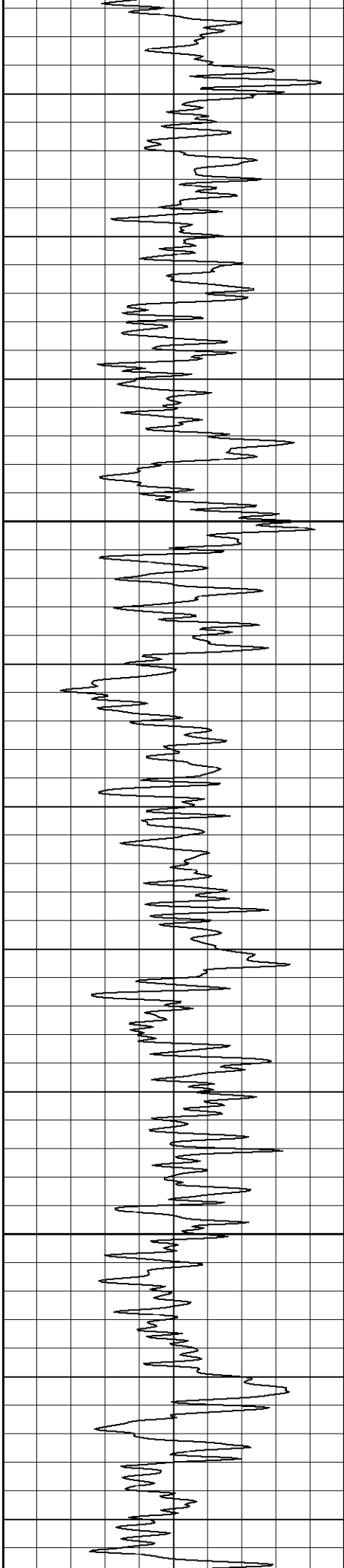
1550

1600



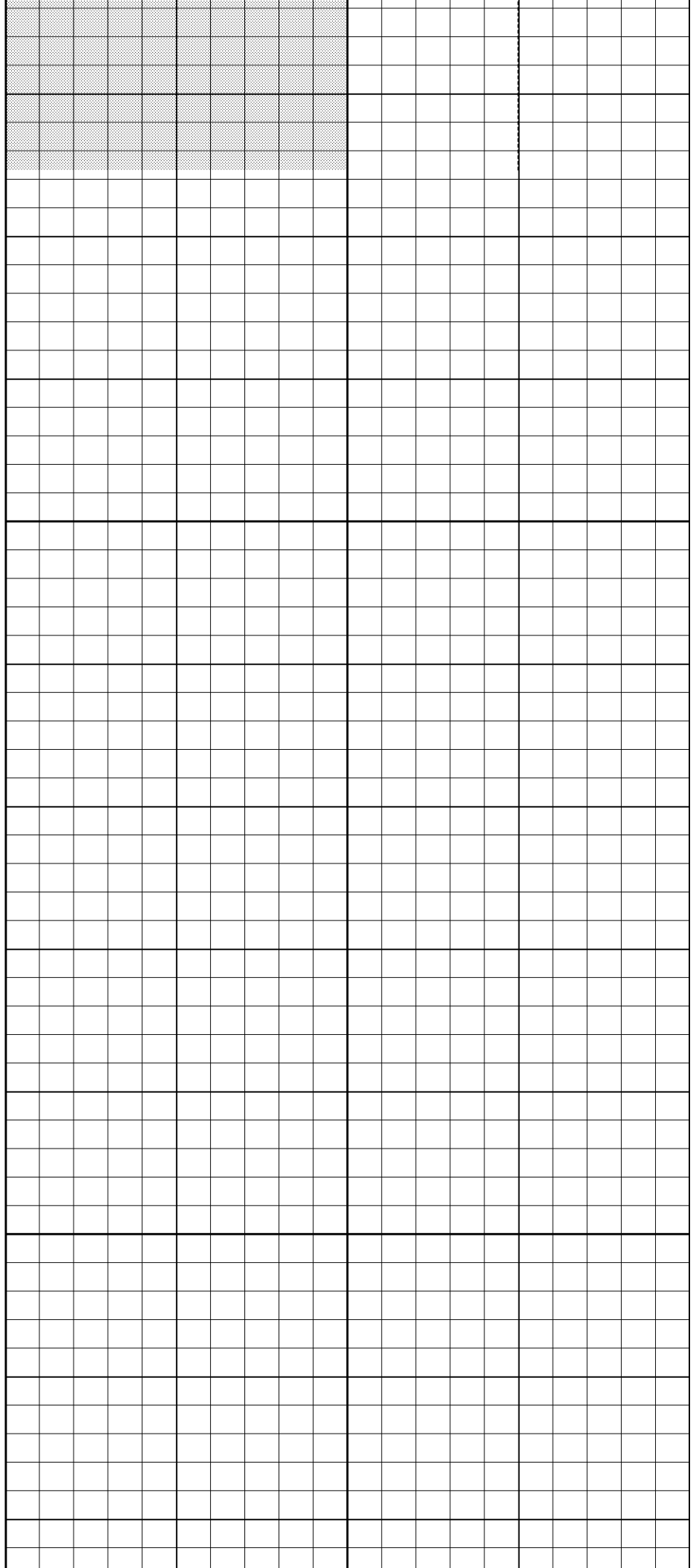
Bridge @ 1581'

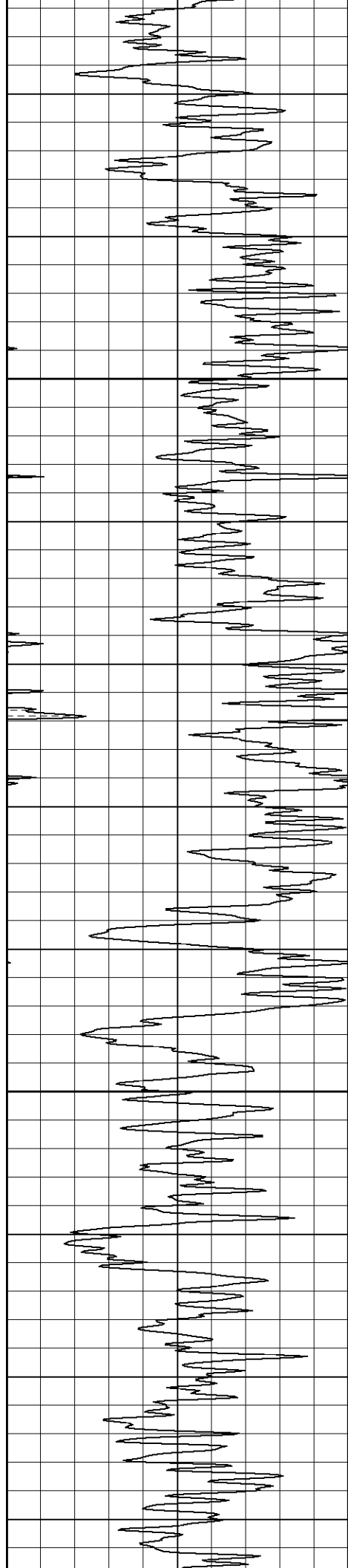
Bridge @ 1581'



1650

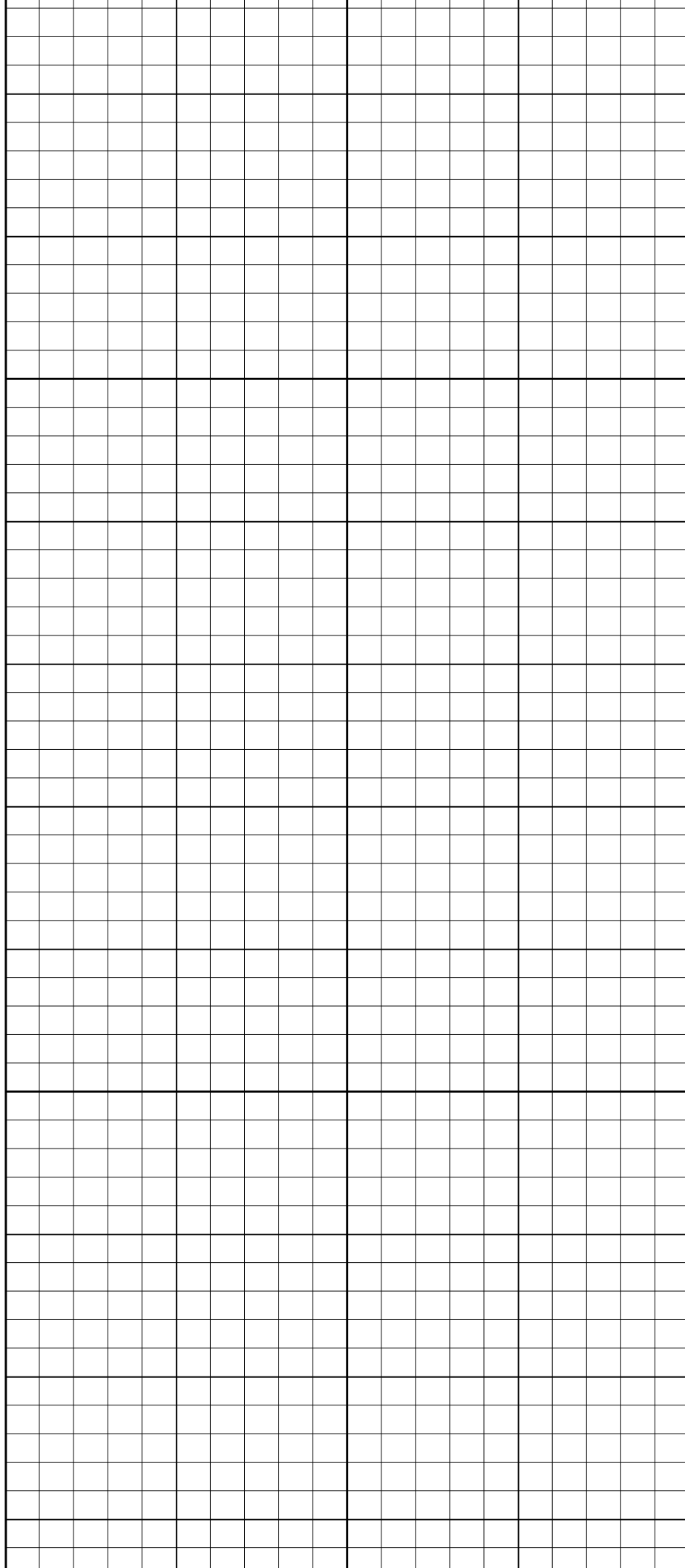
1700

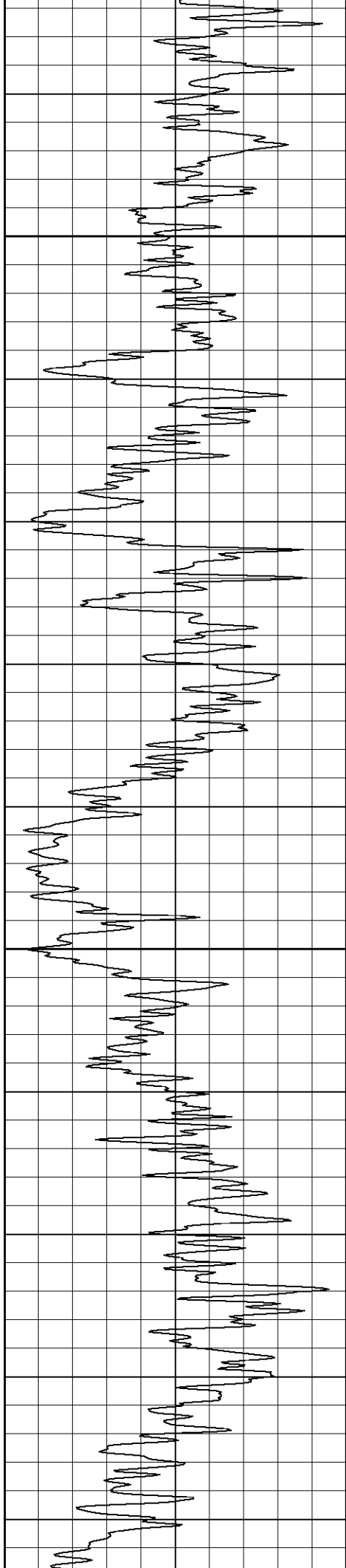




1750

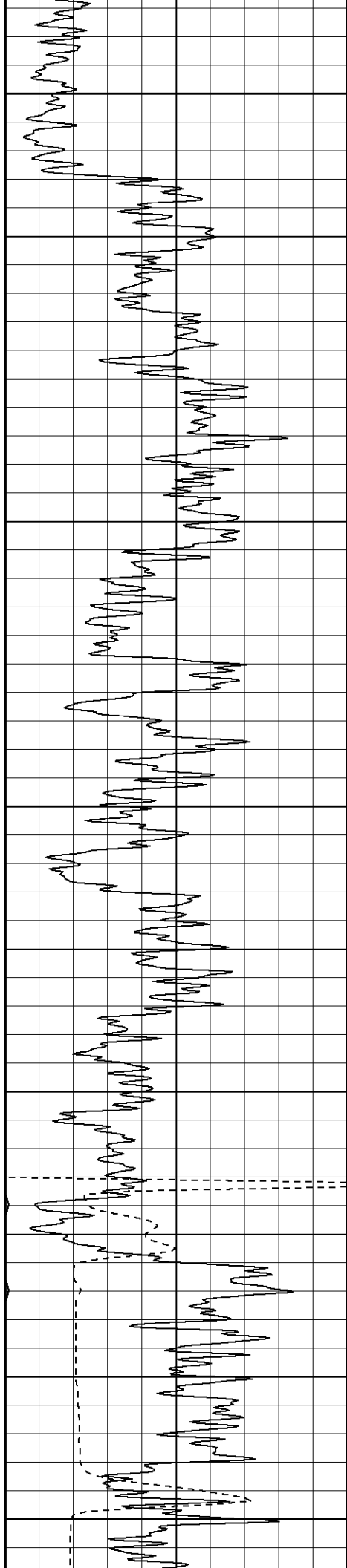
1800





1850

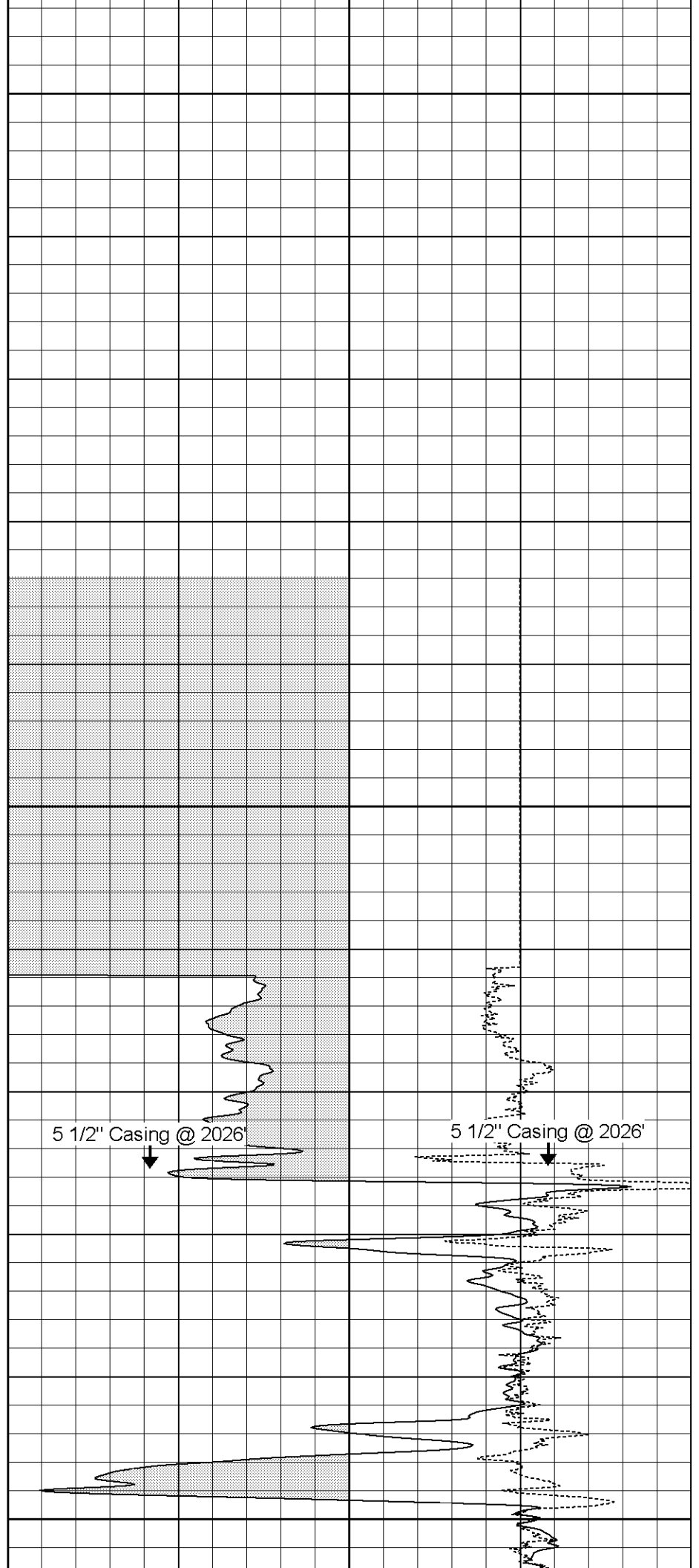
1900

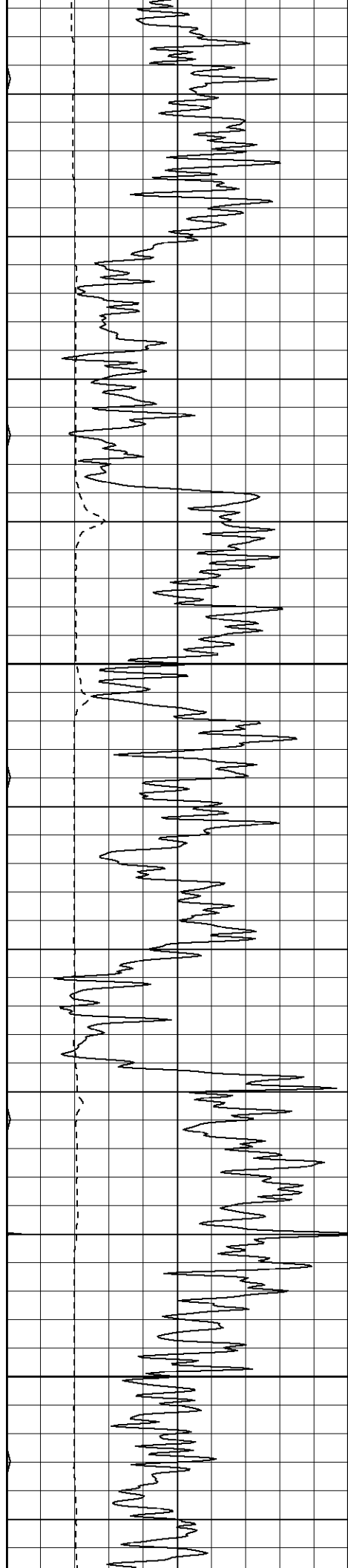


1950

2000

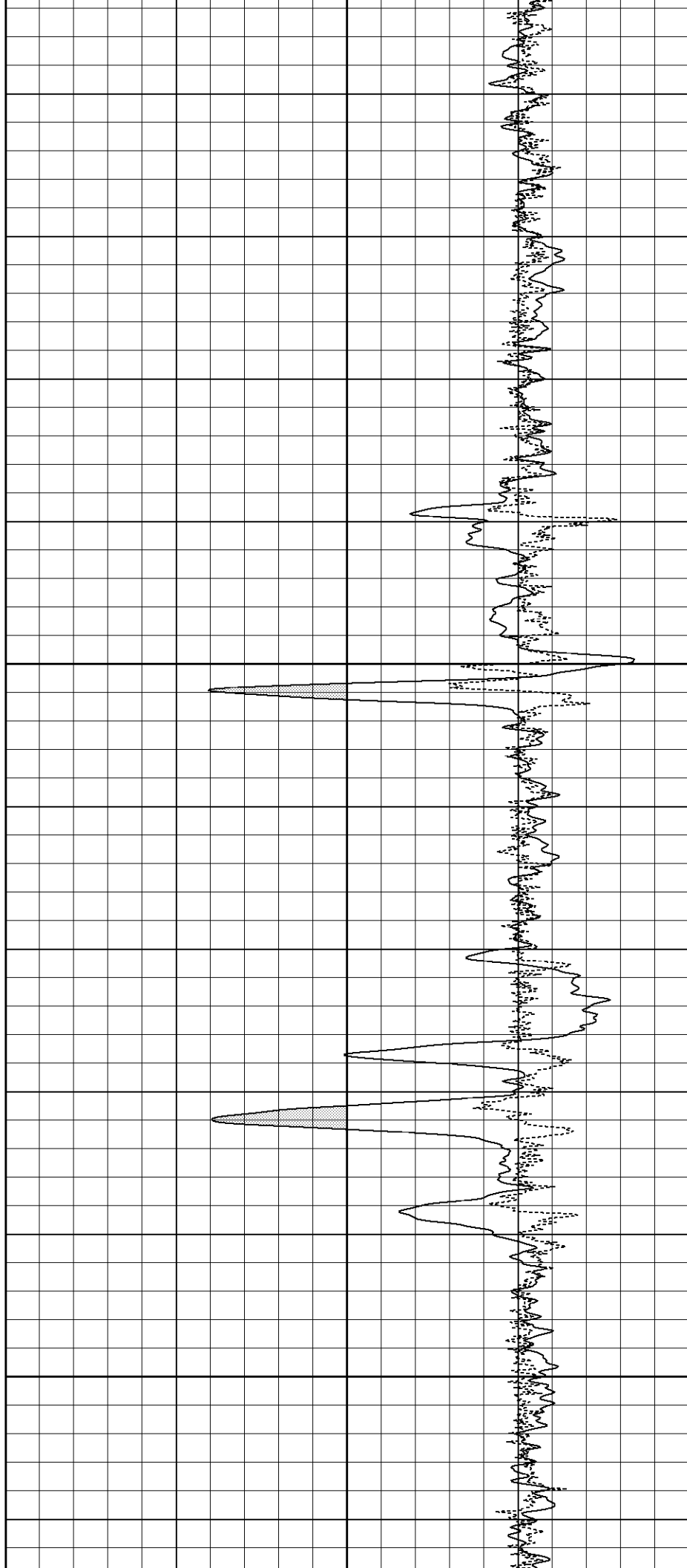
2050

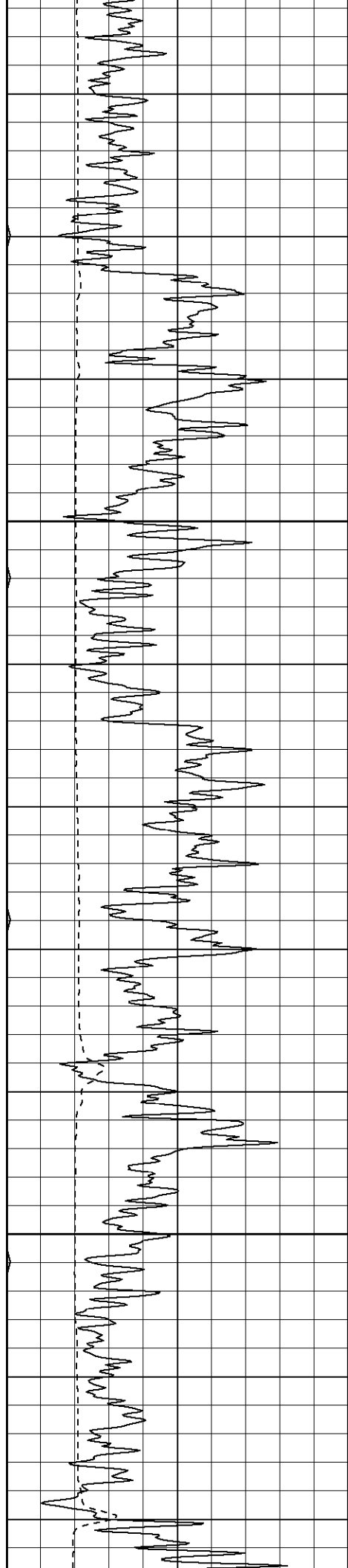




2100

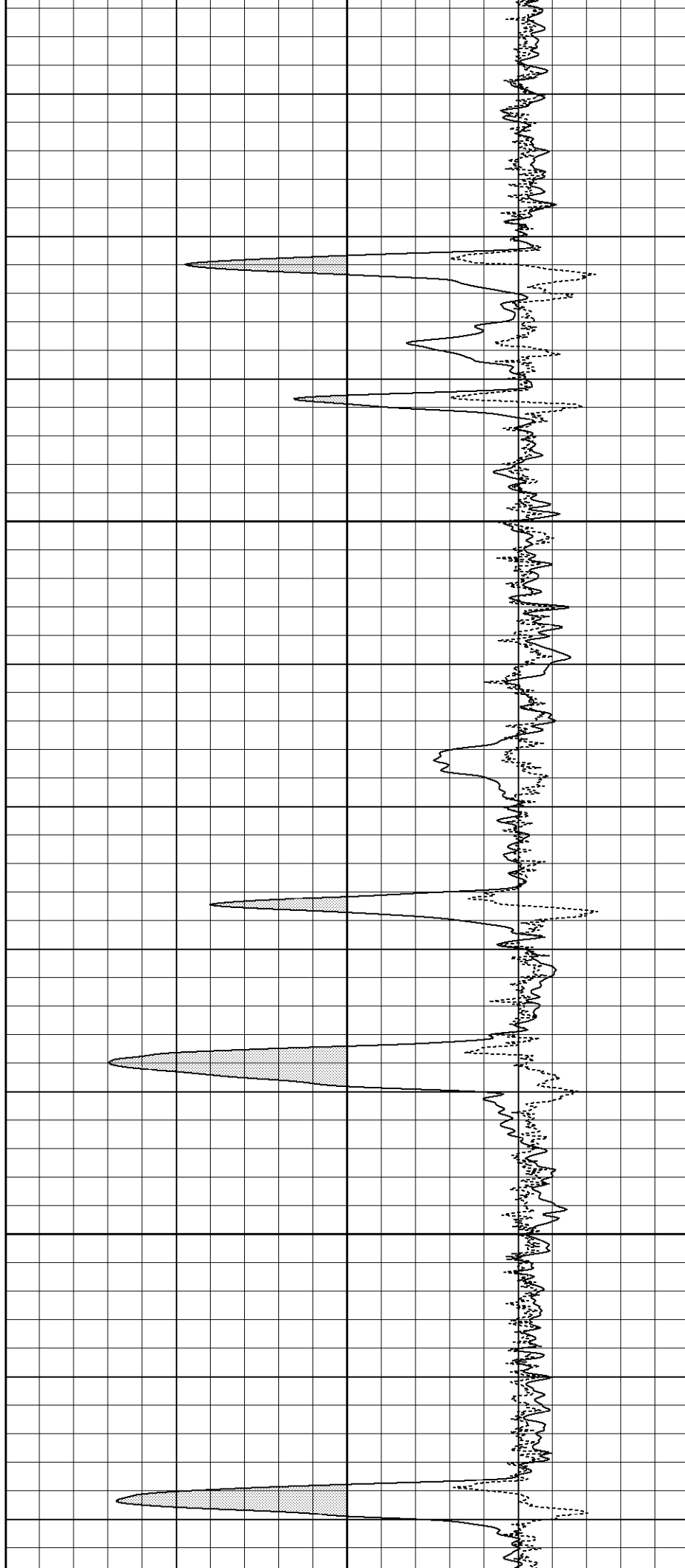
2150

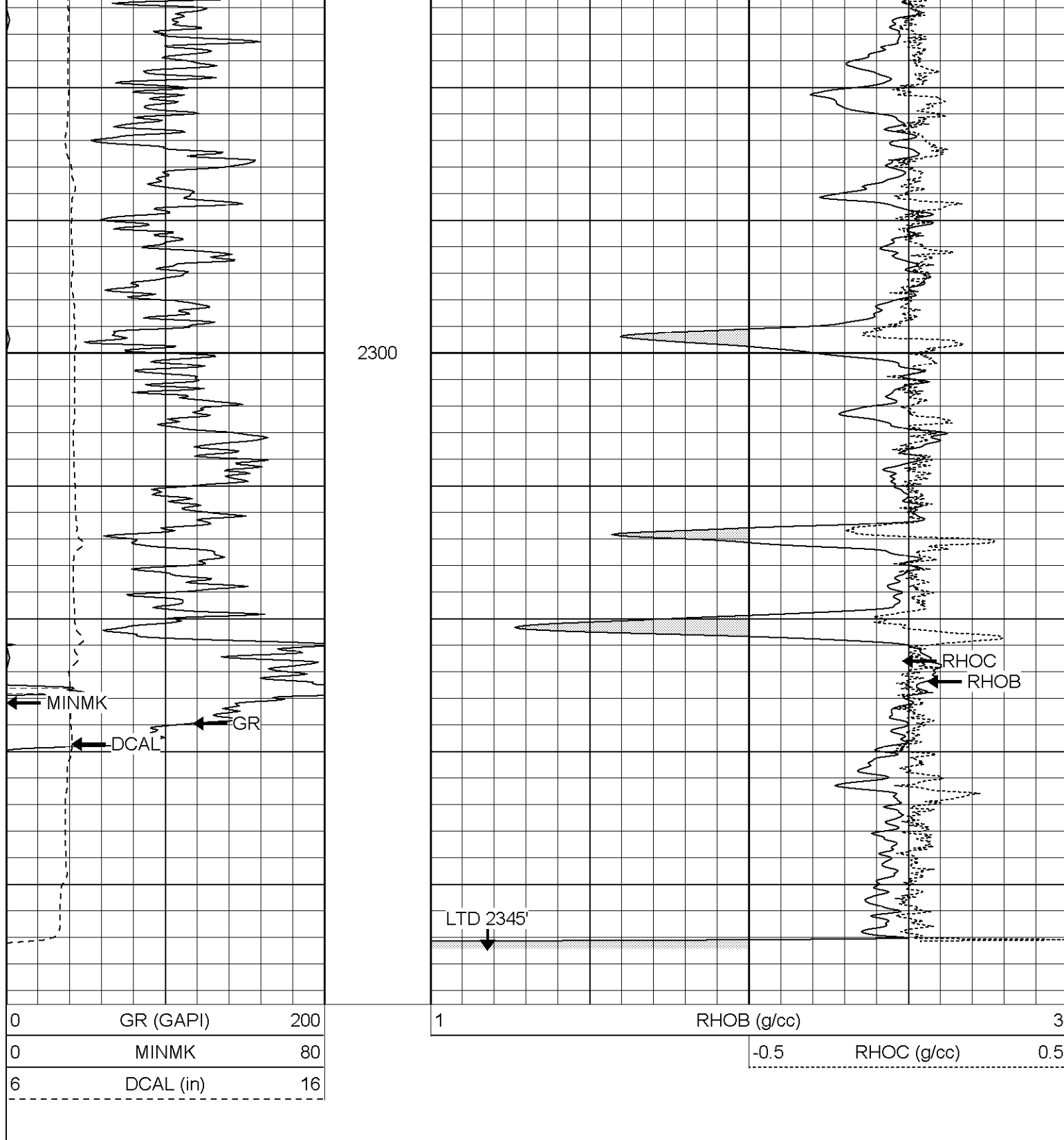




2200

2250





Compensated Density Calibration Report

Serial-Model: 901-2.75POH
 Source / Verifier: /
 Master Calibration Performed: Mon Oct 18 10:58:28 2004

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	894.24	471.89	cps
Aluminum	2.620	g/cc	161.21	229.40	cps

Spine Angle = 67.17

Density/Spine Ratio = 0.490

	Size		Reading	
Small Ring	7.60	in	1.56	V
Large Ring	16.50	in	3.83	V

Neutron Calibration Report

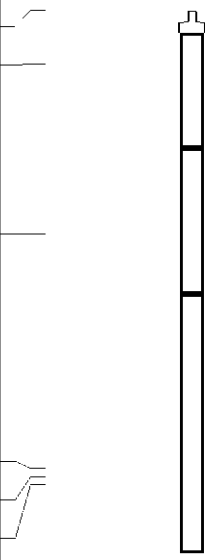
Serial Number: 802
 Tool Model: 2.75POH
 Performed: Mon Oct 18 10:58:16 2004

 Calibrator Value: 1 NAPI
 Calibrator Reading: 1 cps
 Sensitivity: 1 NAPI/cps

Gamma Ray Calibration Report

Serial Number: 801
 Tool Model: 2.75POH
 Performed: Thu Oct 07 18:43:13 2004

 Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 0.4000 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CHD	17.66		None	0.75	1.50	5.00
GR	15.93		GR-2.75POH (801) Probe	3.73	2.75	43.00
NEU	10.38		NEU-2.75POH (802) Probe Epithermal	4.75	2.75	58.00
LSD	2.75		CDL-2.75POH (901) Probe	8.43	2.75	106.00
DCAL	2.48					
SSD	2.23					
Dataset: /field/well/run1/_plots/_jobs/_d Total Length: 17.66 ft Total Weight: 212.00 lb O.D. 2.75 in						