

**Patterson**

**COMPENSATED DENSITY  
NEUTRON  
LOG**

Company		XTO Energy Inc.	
Well	Apache Canyon 23-16		
Field	Purgatoire River		
County	Las Animas		
State	Colorado		
Location:	API # : 05 071 08686 00		Other Services DIL
	563' FSL & 519' FEL		
SEC 23 TWP 34S RGE 68W			
Permanent Datum	Ground Level	Elevation	7704'
Log Measured From	Ground Level		
Drilling Measured From	Ground Level		
Date		3-06-06	
Run Number	Two		
Depth Driller	1738'		
Depth Logger	1735'		
Bottom Logged Interval	1733'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 226'		
Casing Logger	228'		
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	2:00 P.M.		
Time Logger on Bottom	4:30 P.M.		
Maximum Recorded Temperature	87 DEG F		
Equipment Number	T720		
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**

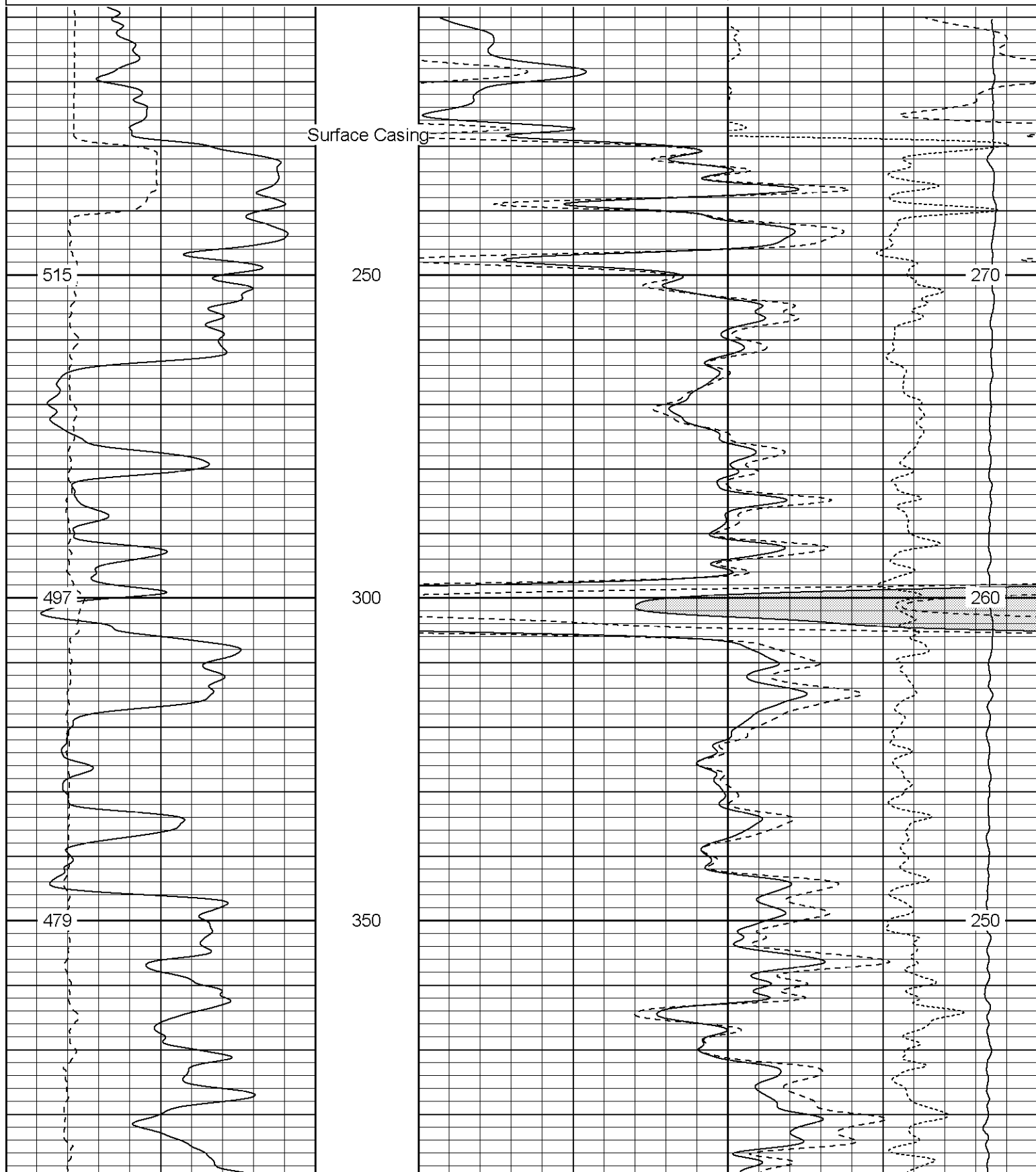
Neutron Density Porosity Presented On Sandstone Matrix.  
ABHV Calculated For 5 1/2" Casing.  
Well Directions:  
First Bosque Entrance, Stay On Main Road Thru Green Gate,  
Second Left, To Y Stay Right Drive Thru Location, Dead End On Location.

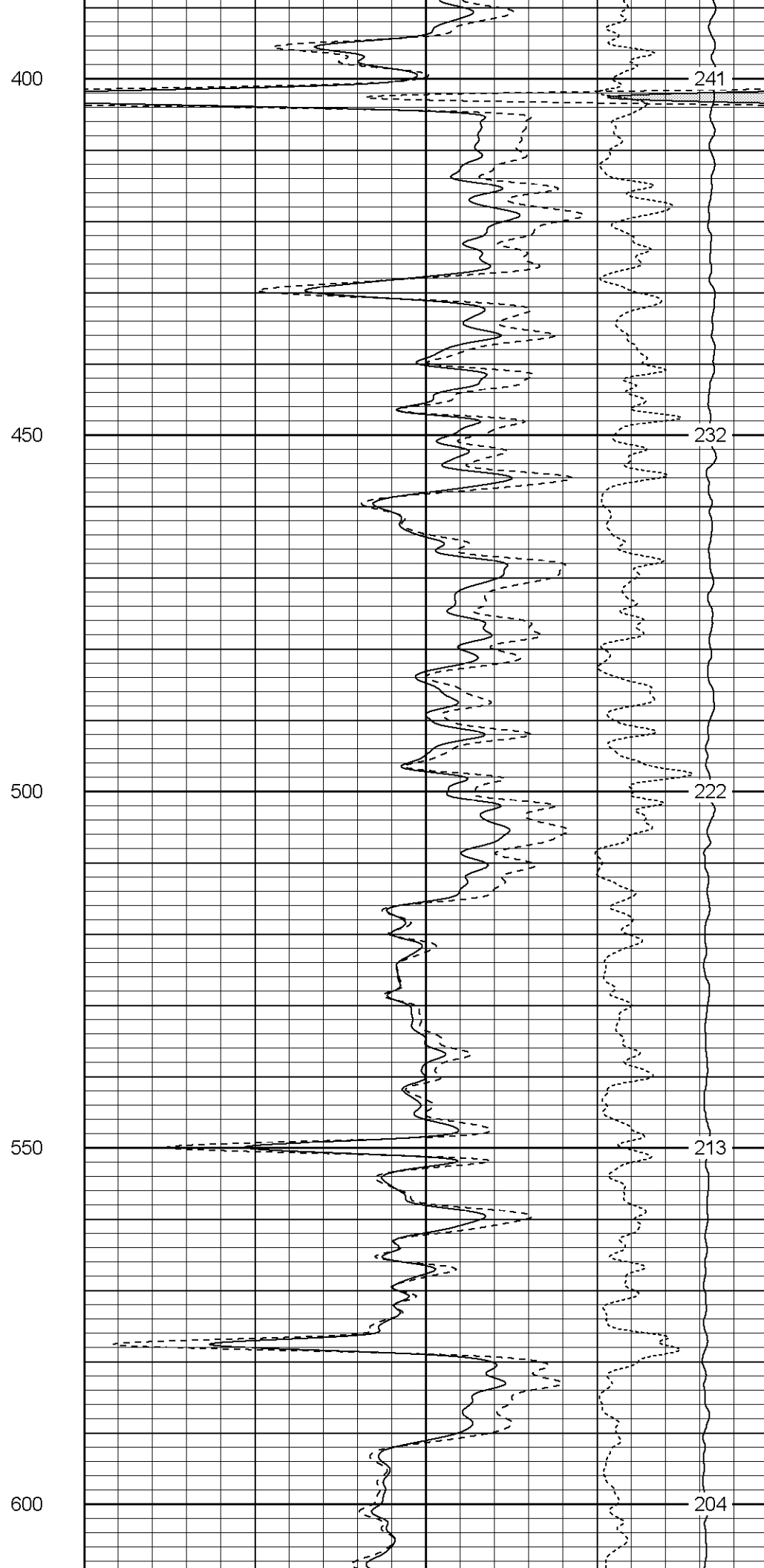
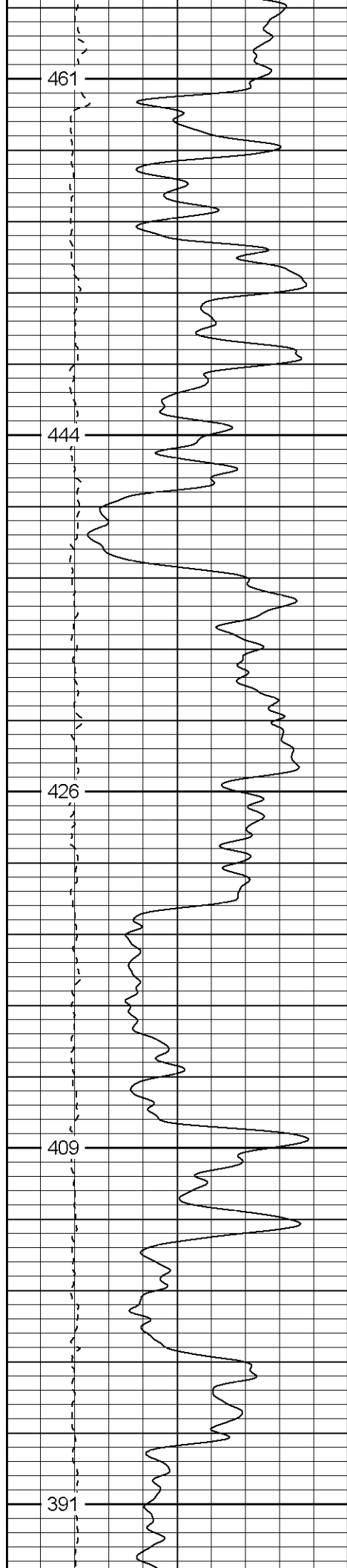
**Patterson**

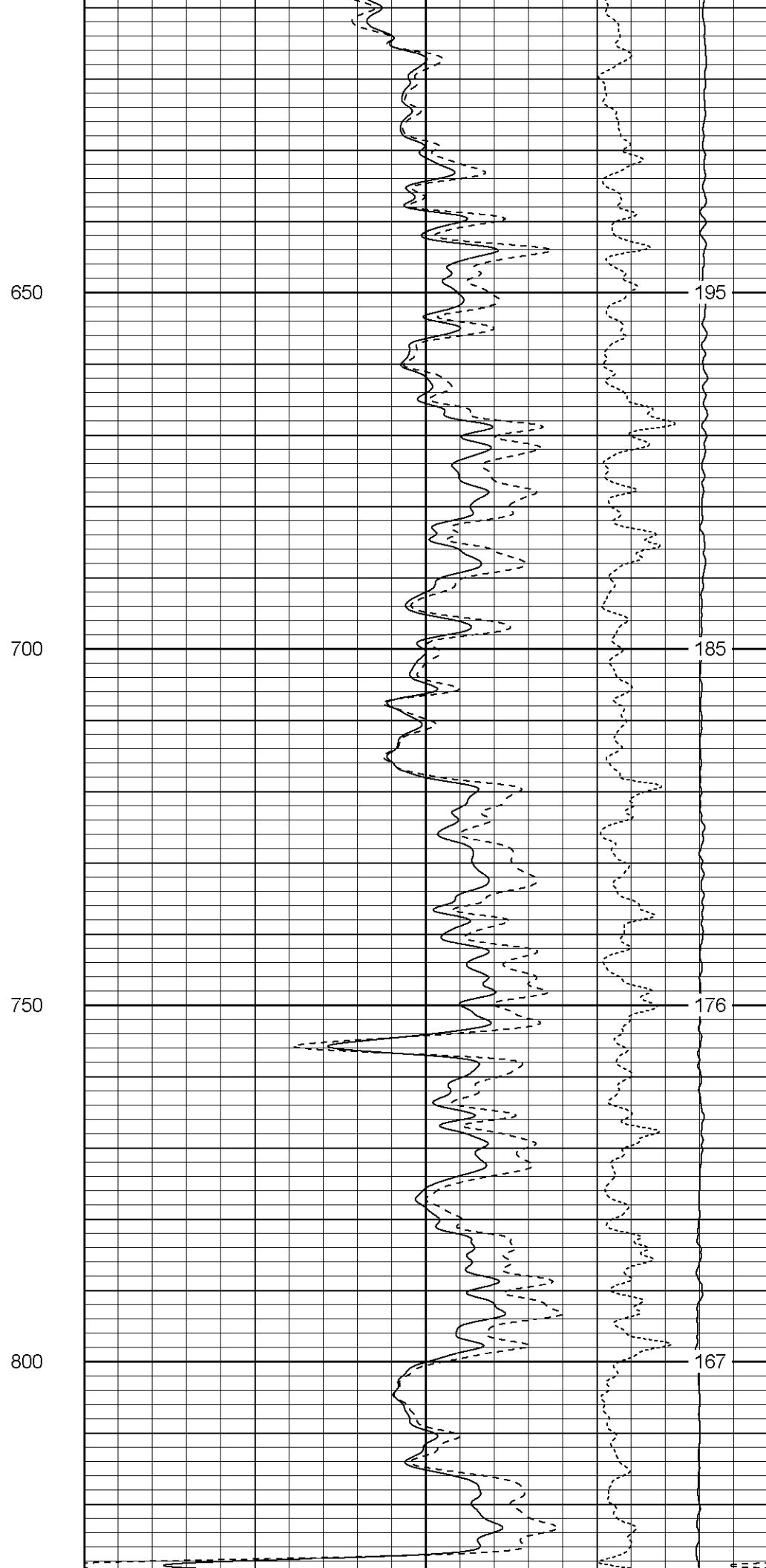
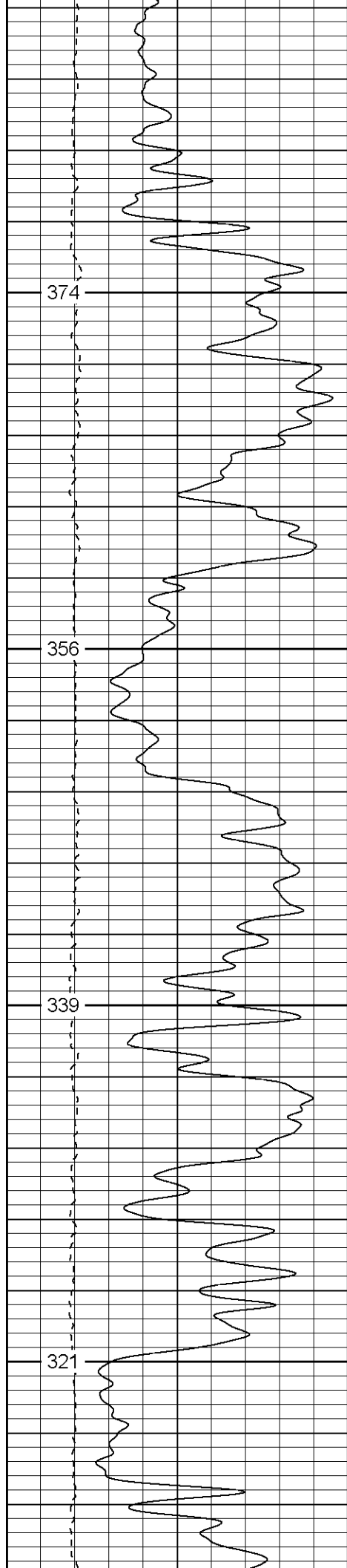
**Main Pass**

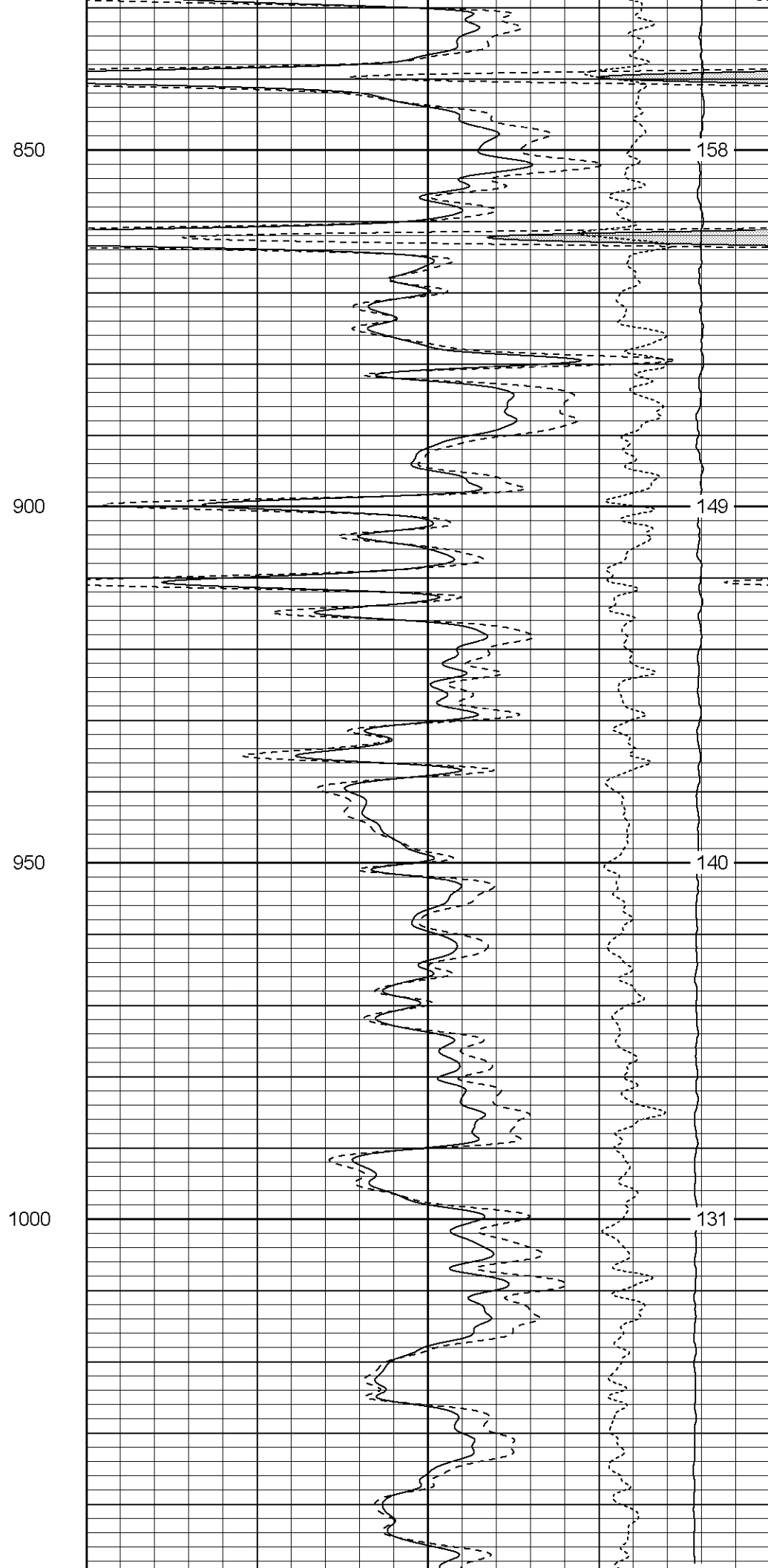
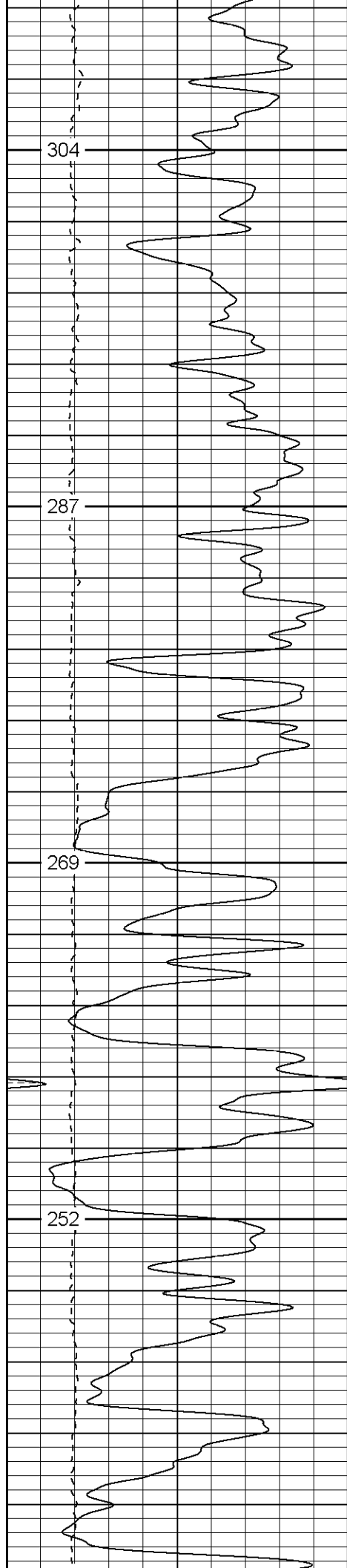
Database File: xtoac2316.db  
Dataset Pathname: pass4.1  
Presentation Format: cdl  
Dataset Creation: Mon Mar 06 17:52:57 2006 by Calc Warrior 7.0 STD Ope  
Charted by: Depth in Feet scaled 1:240

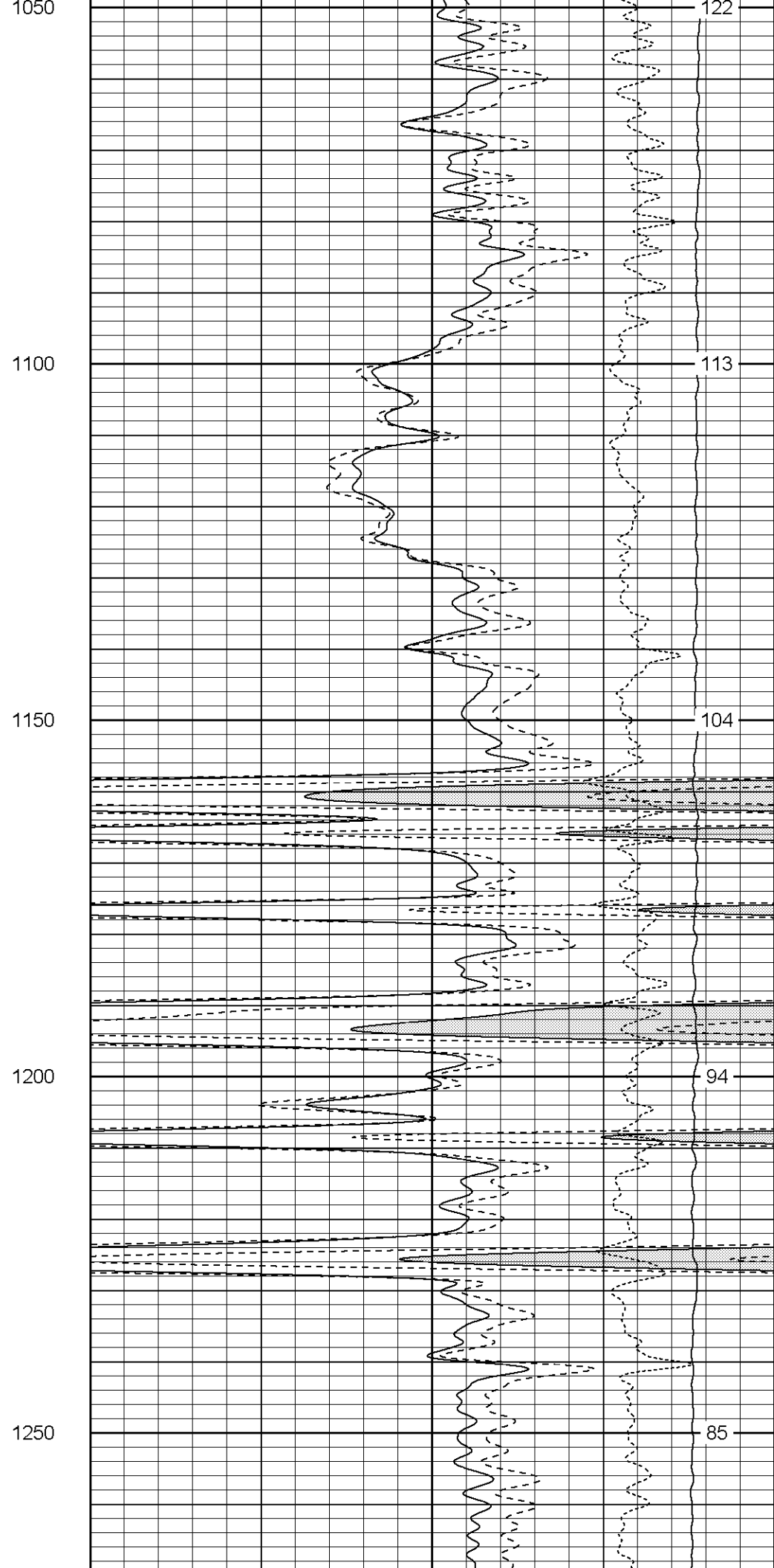
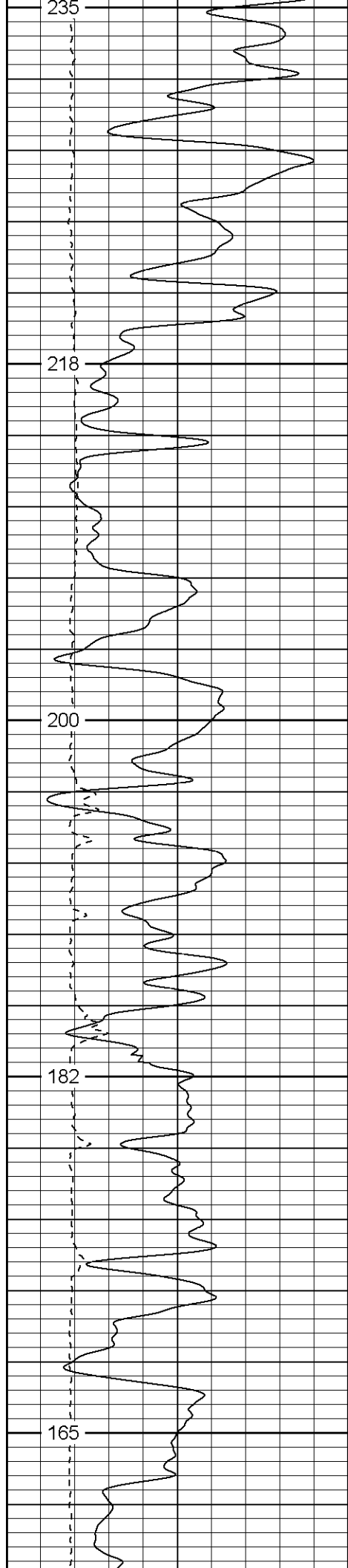
0	GR (GAPI)	200	1	RHOB (g/cc)	2
6	DCAL (in)	16	30	DPOR (pu)	-10
			-0.5	RHOC (g/cc)	0.5
			4000	LTEN (lb)	0

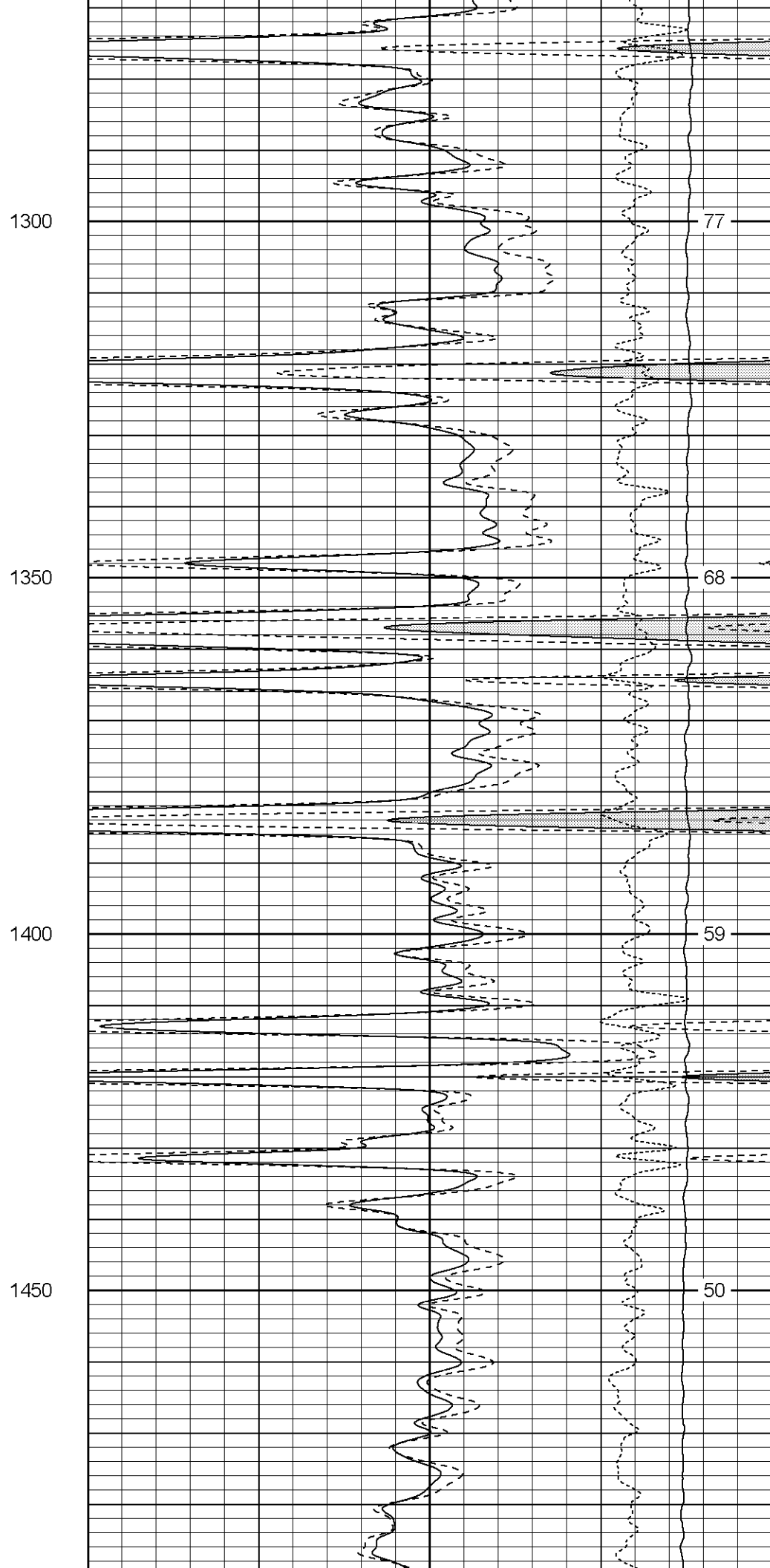
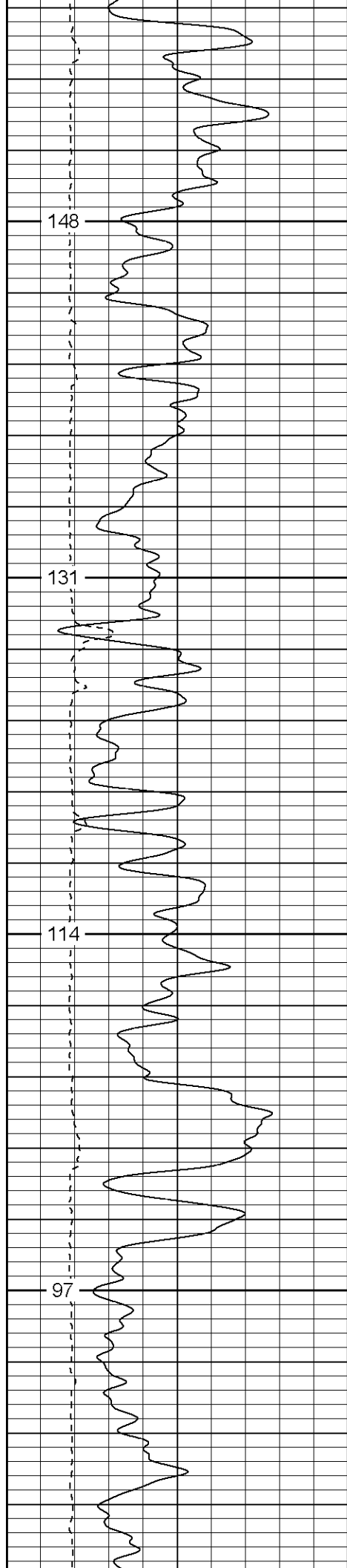


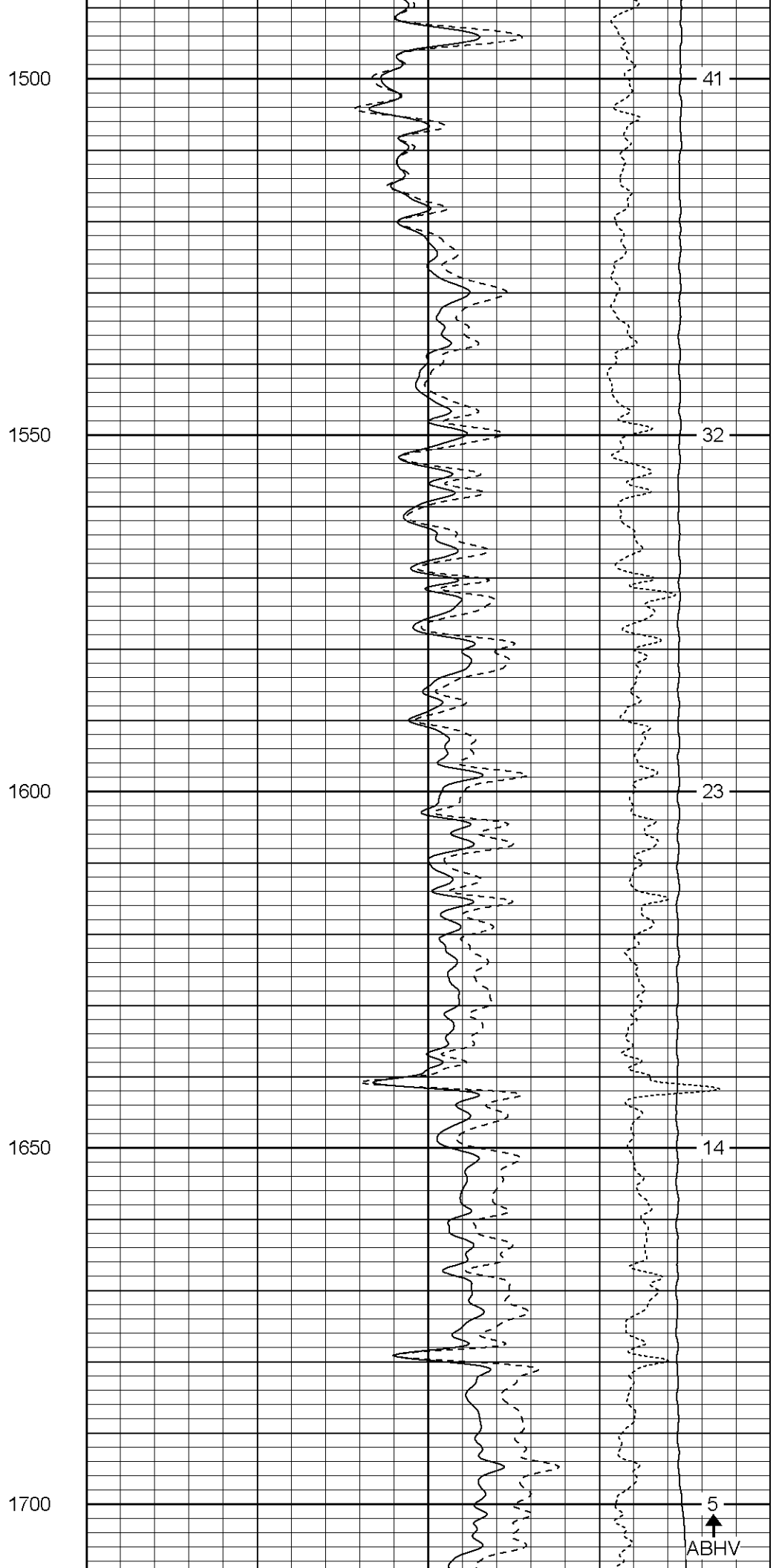
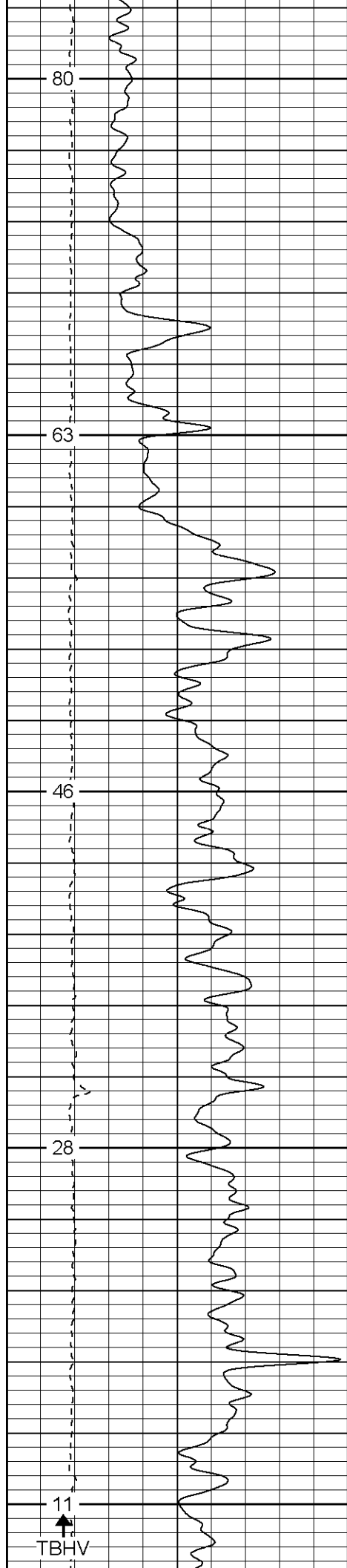




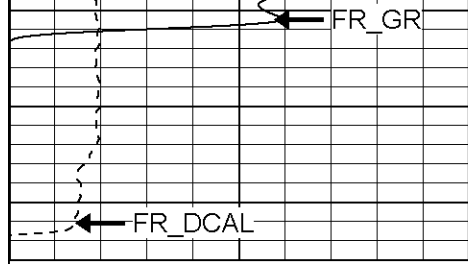




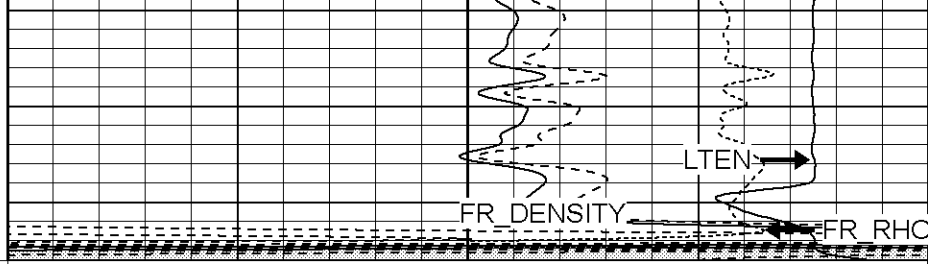








0	GR (GAPI)	200
6	DCAL (in)	16



1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0

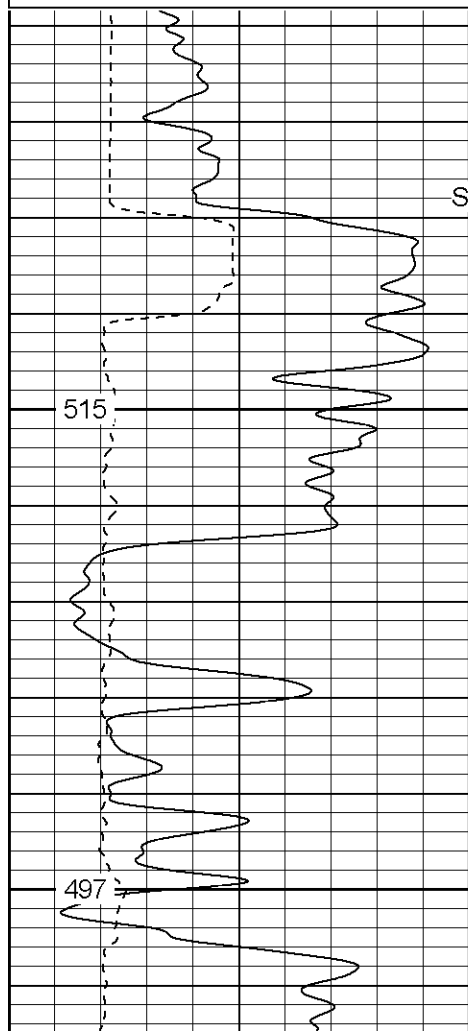
**Patterson**

## Main Pass

Database File: xtoac2316.db  
 Dataset Pathname: pass4.1  
 Presentation Format: cdnl  
 Dataset Creation: Mon Mar 06 17:52:57 2006 by Calc Warrior 7.0 STD Ope  
 Charted by: Depth in Feet scaled 1:240

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

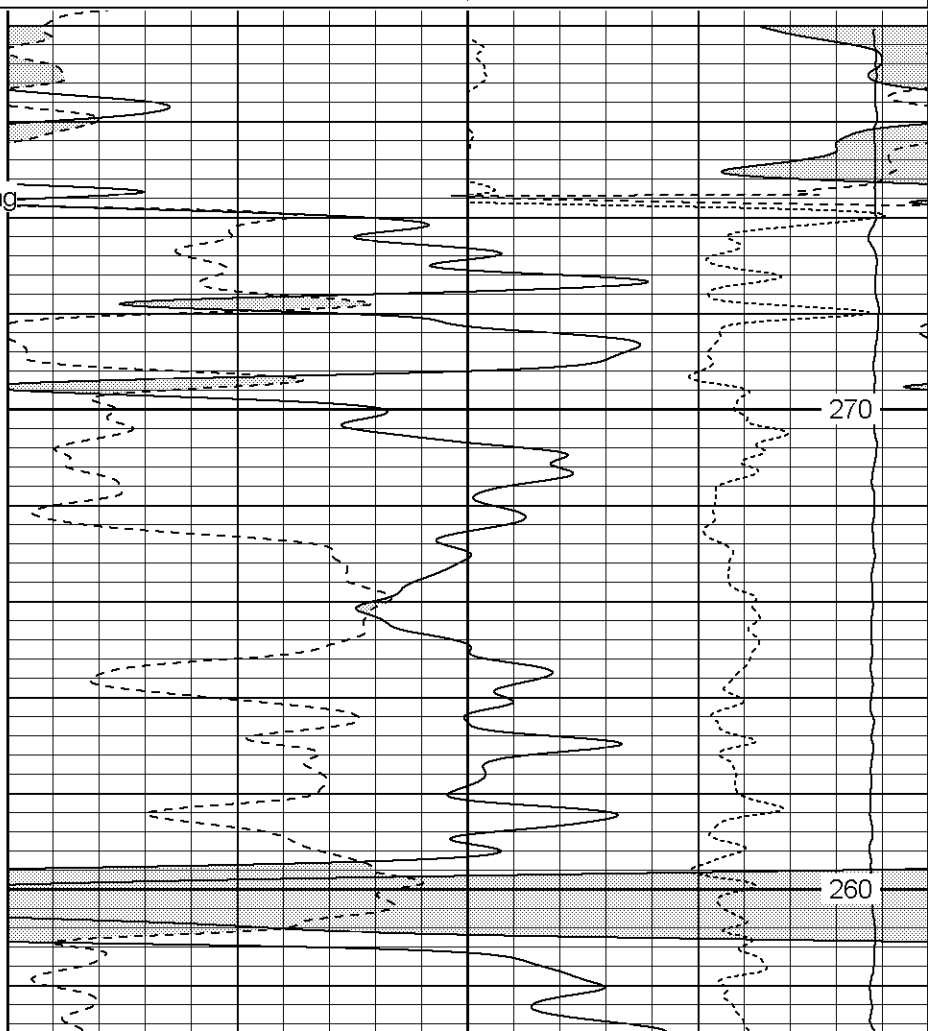
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
5000	LTEN (lb)	0



Surface Casing

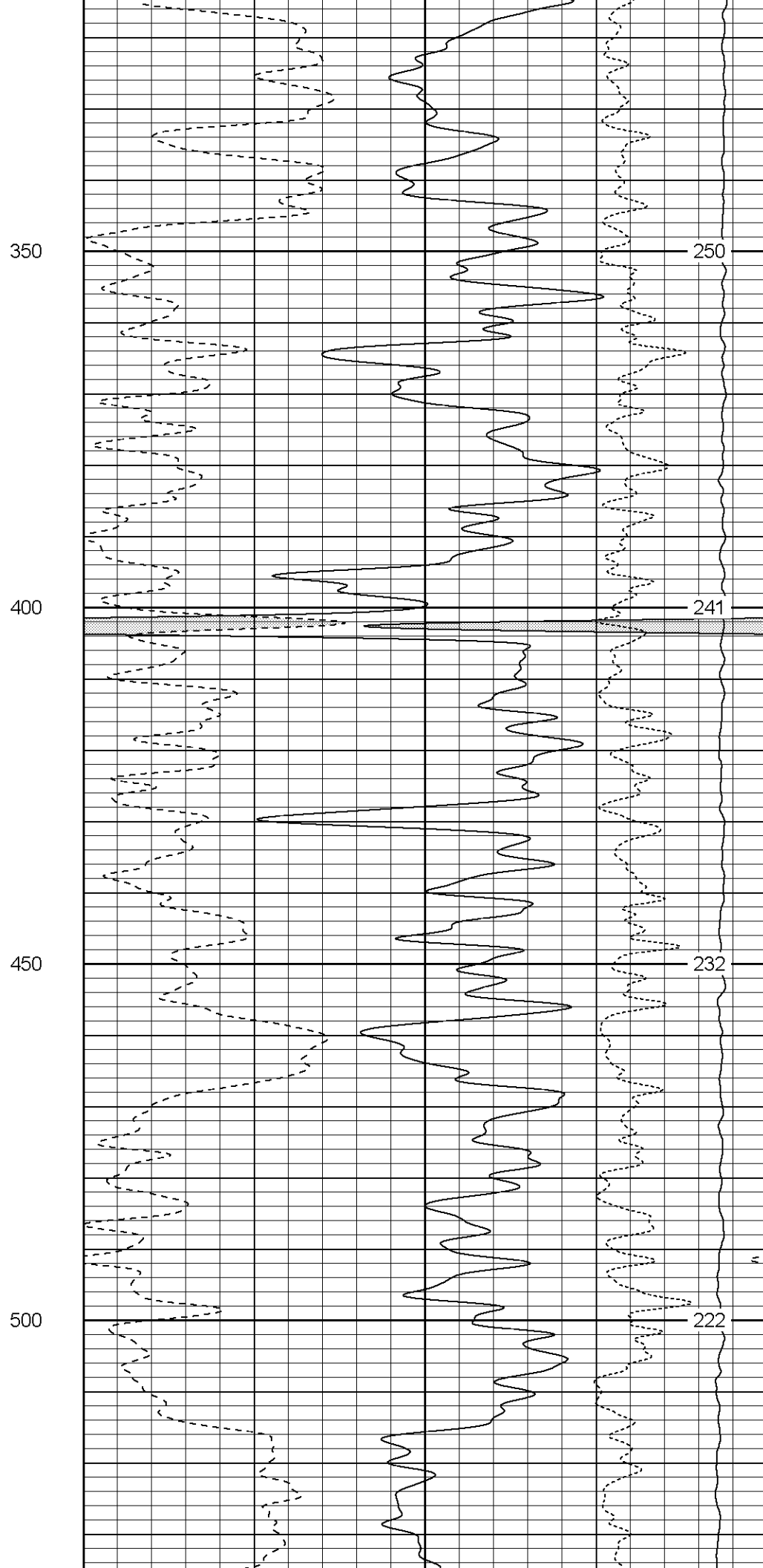
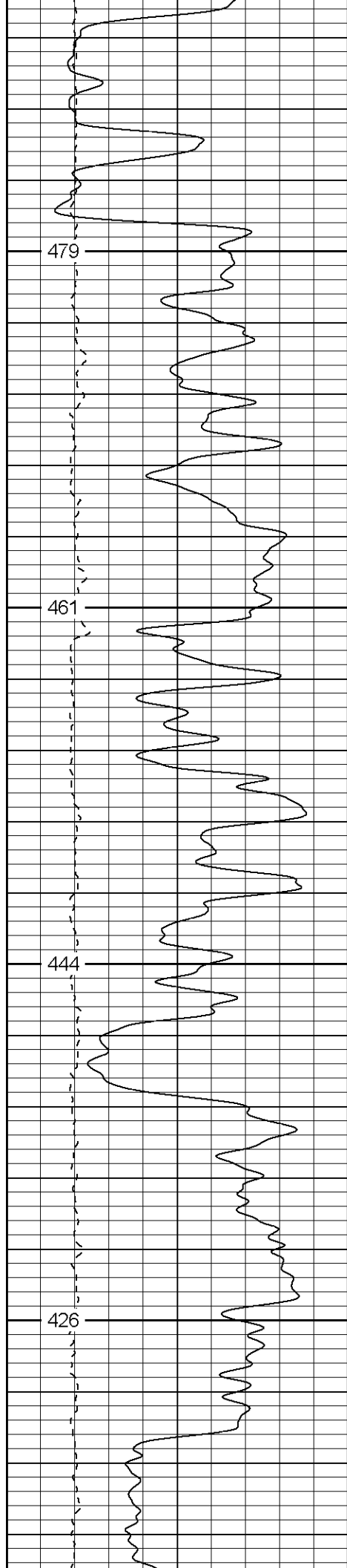
250

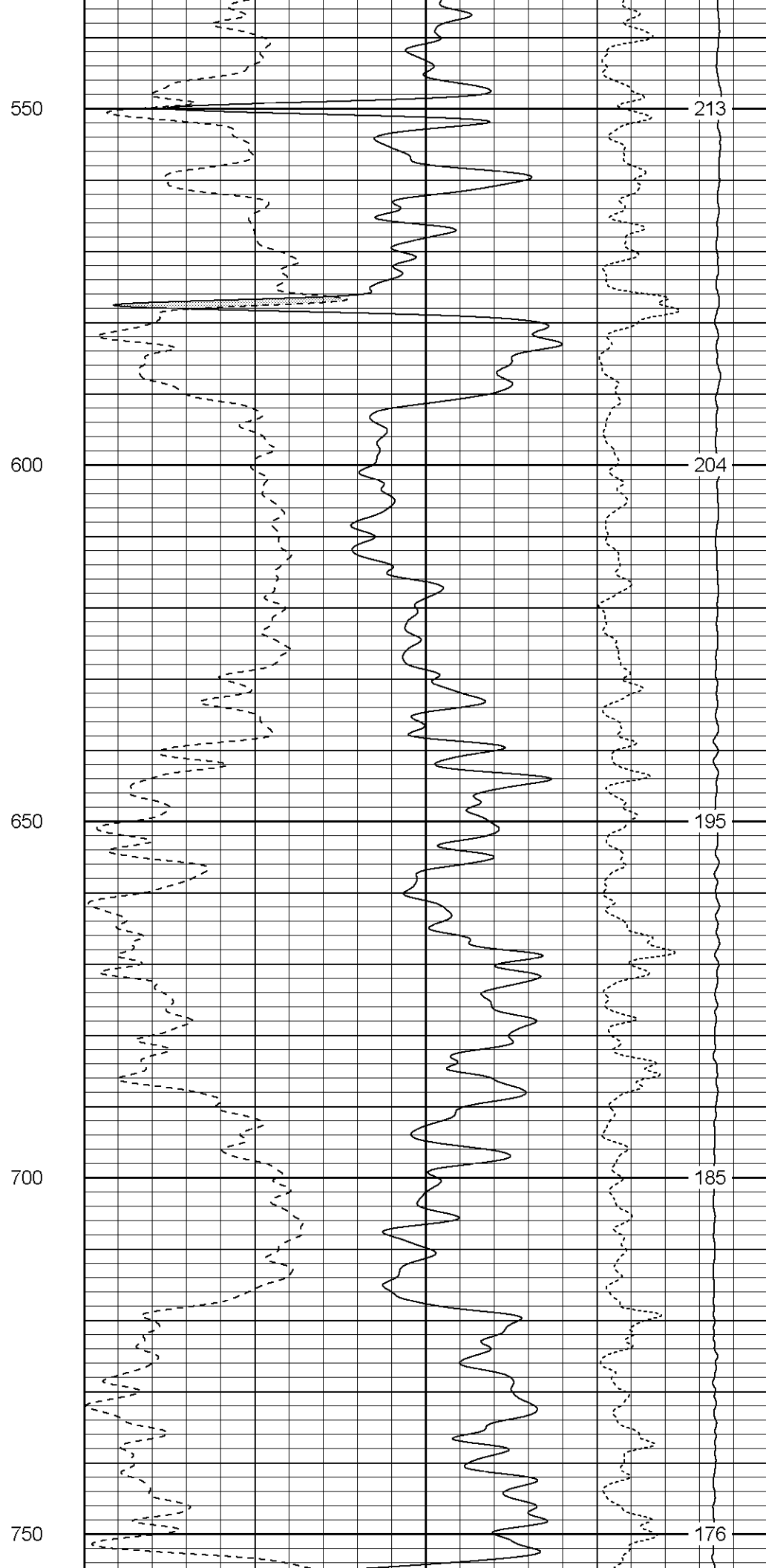
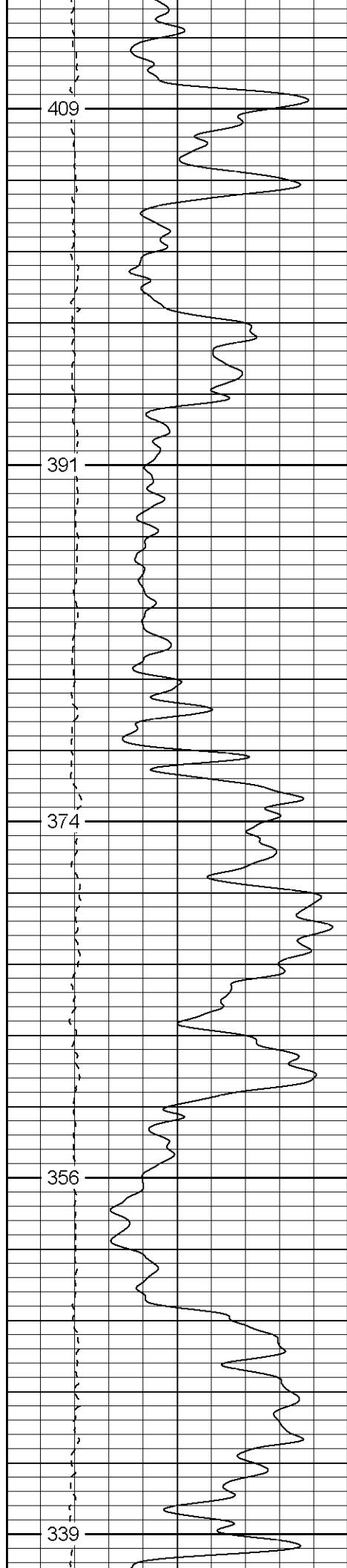
300

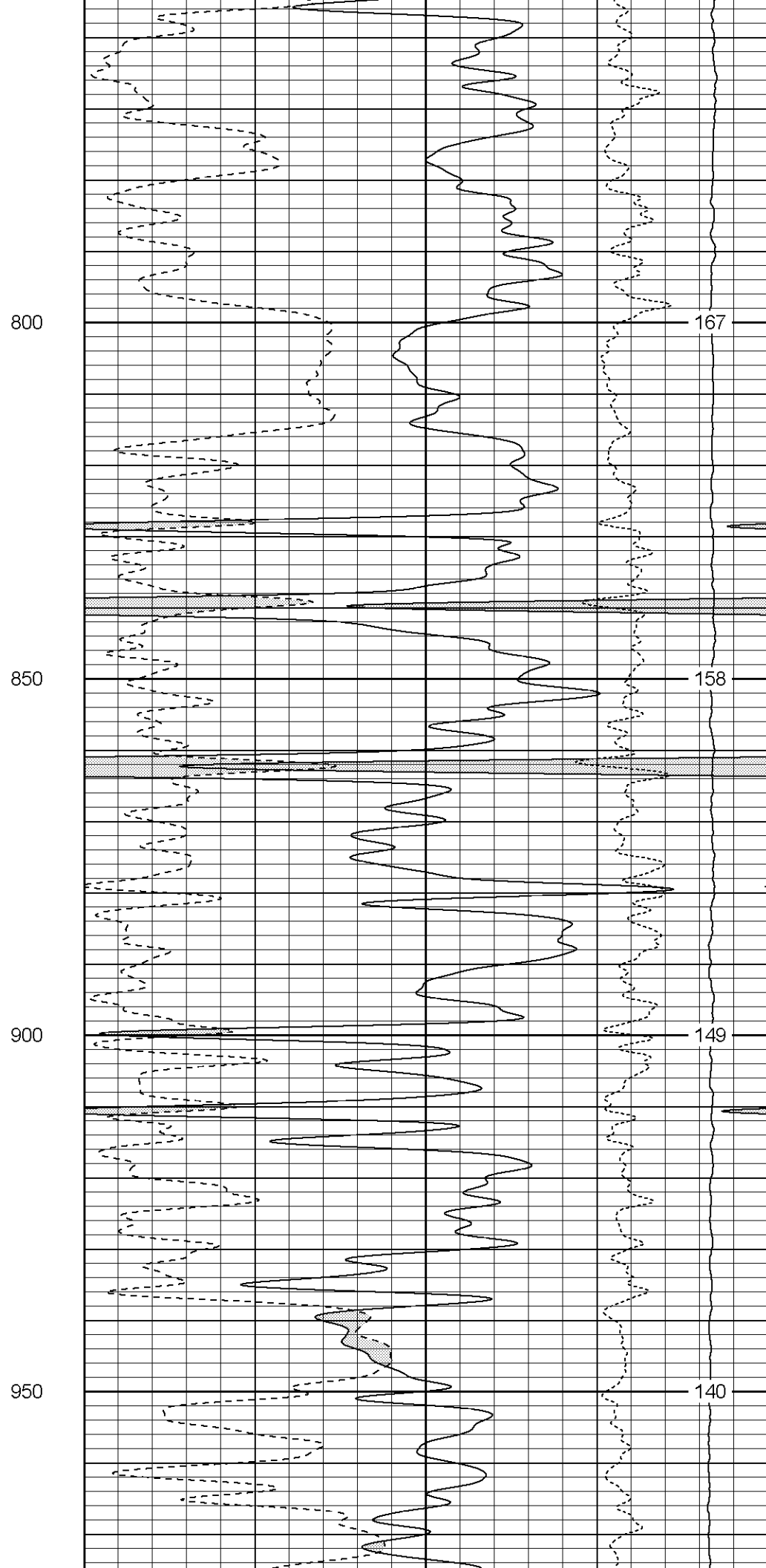
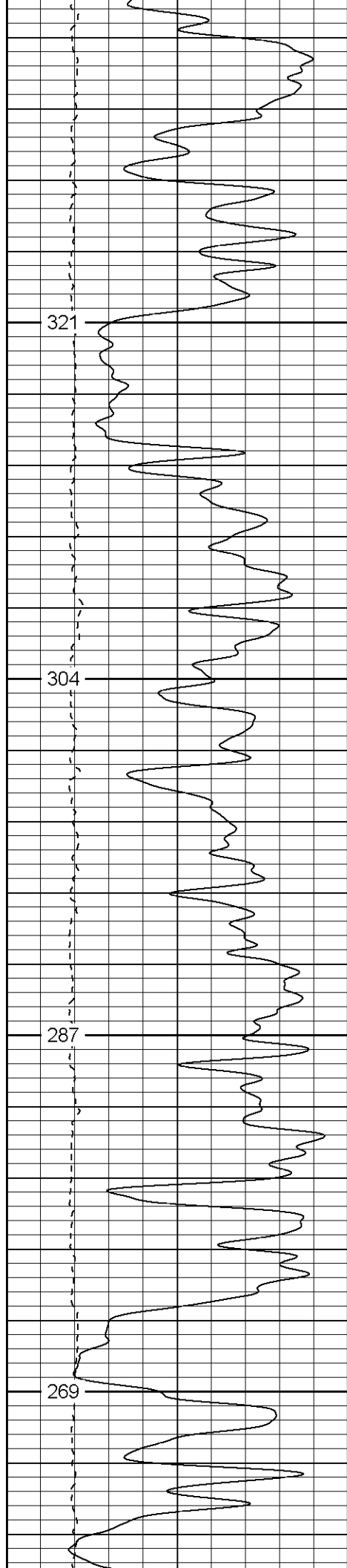


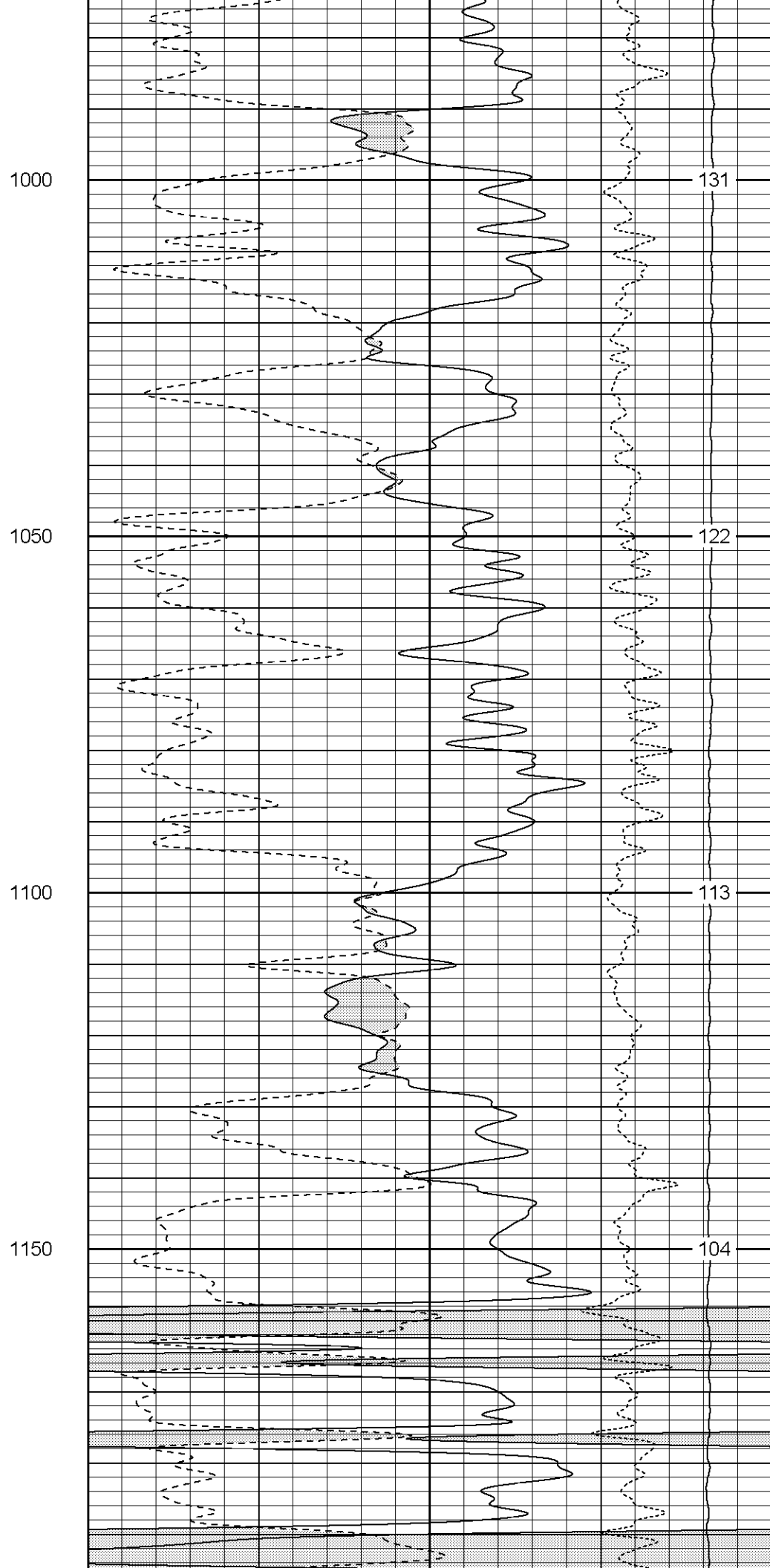
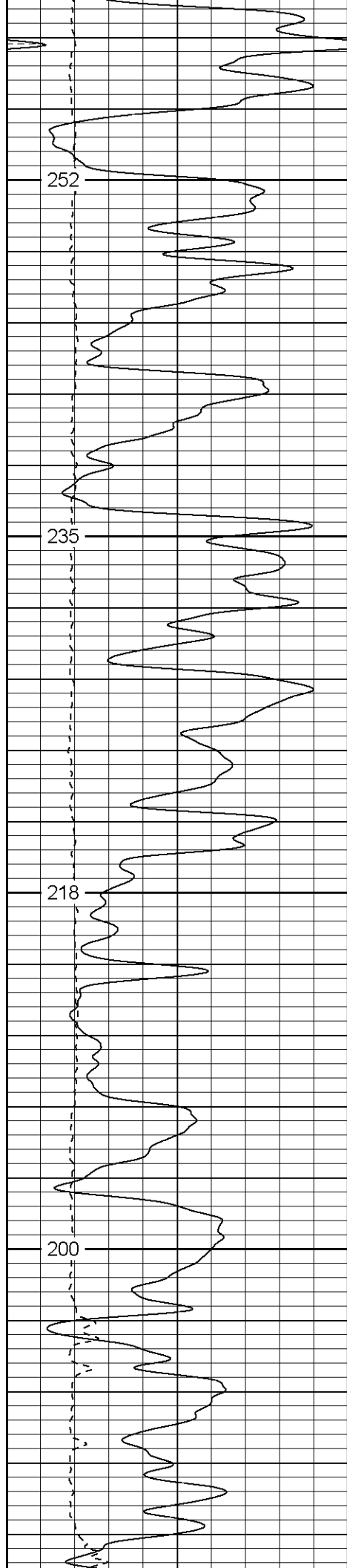
270

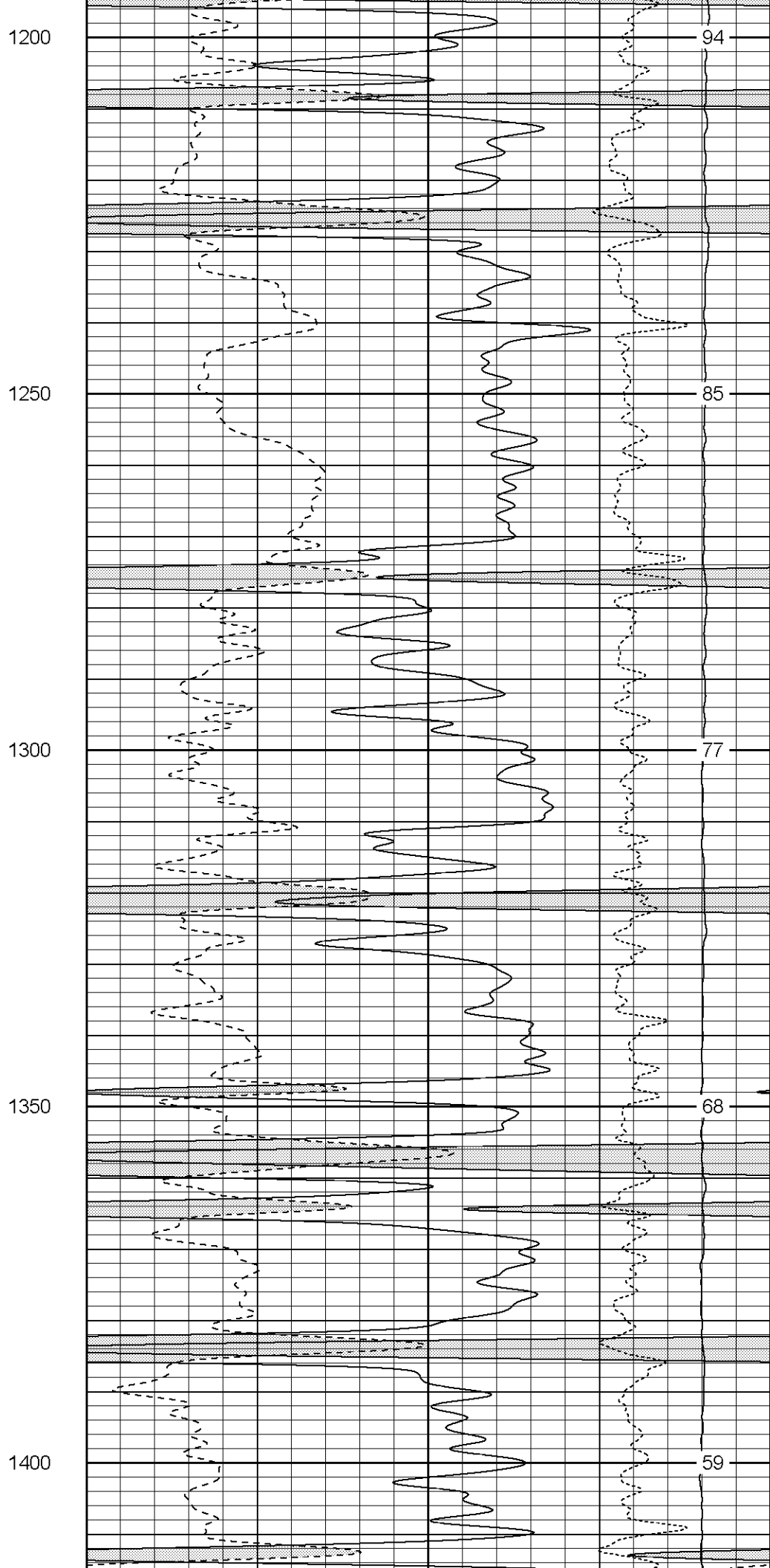
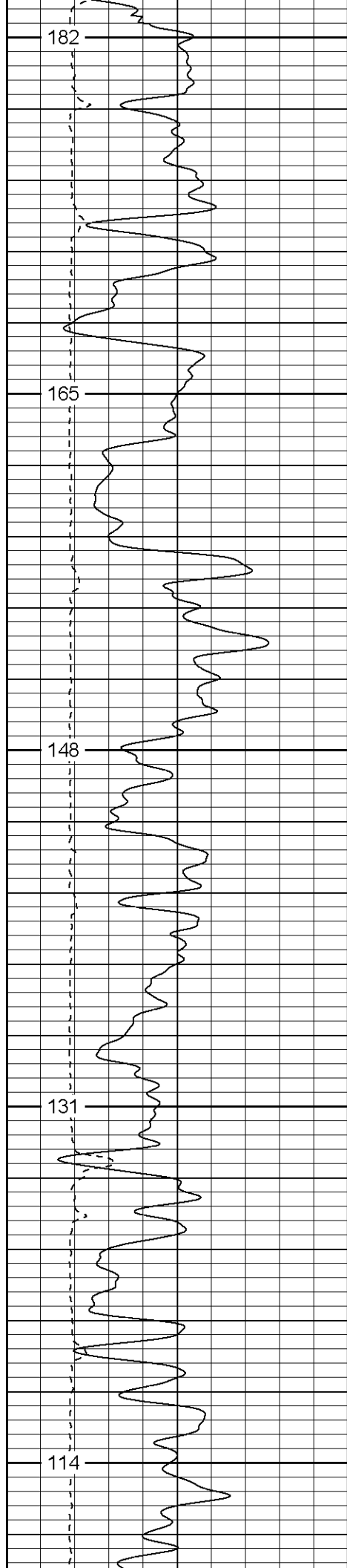
260

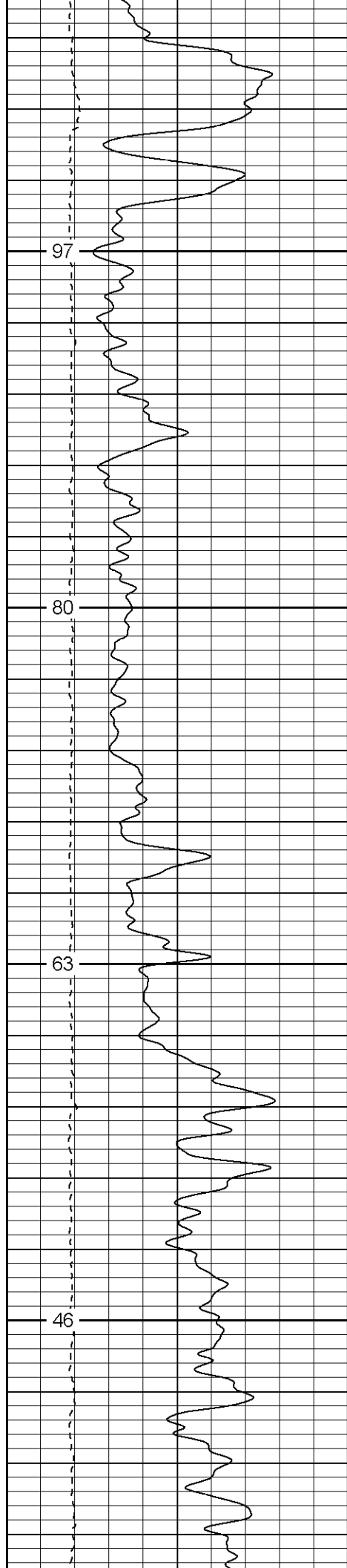










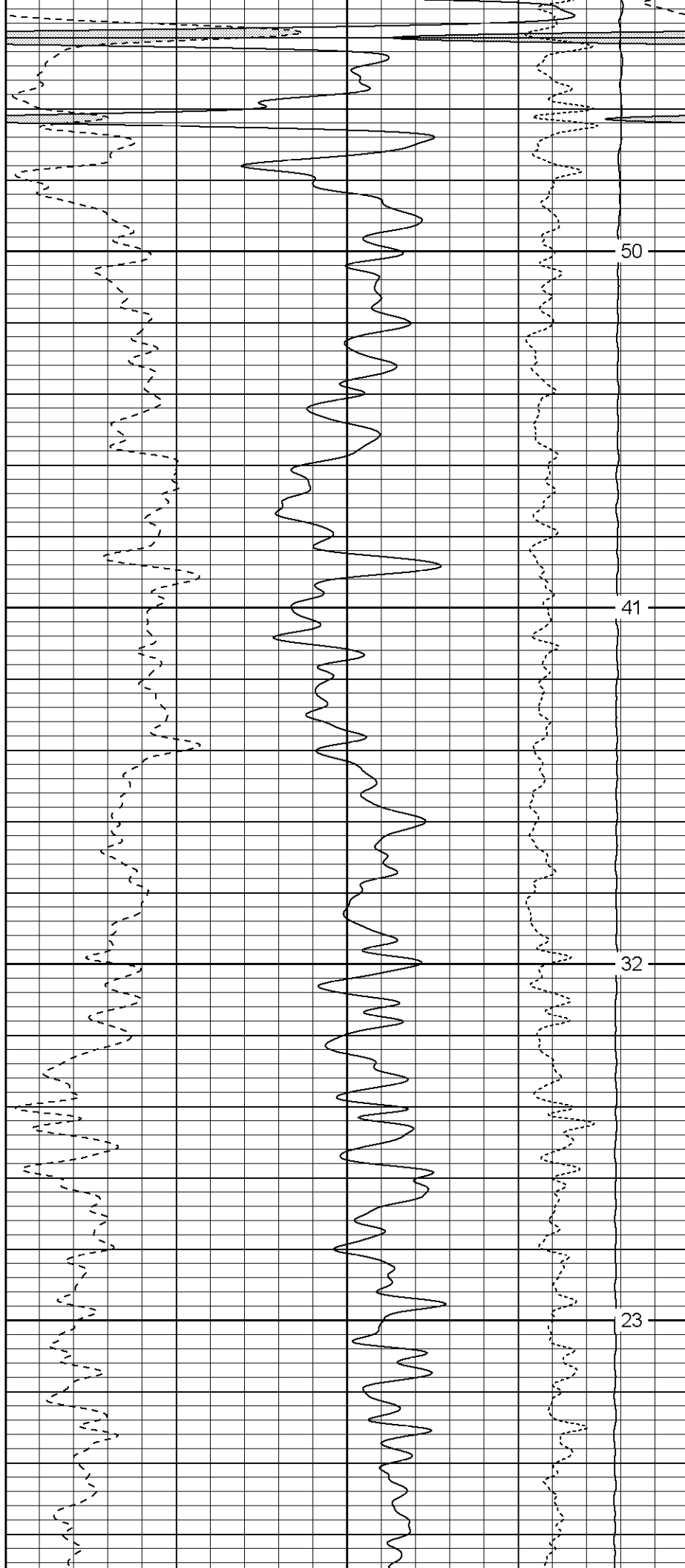


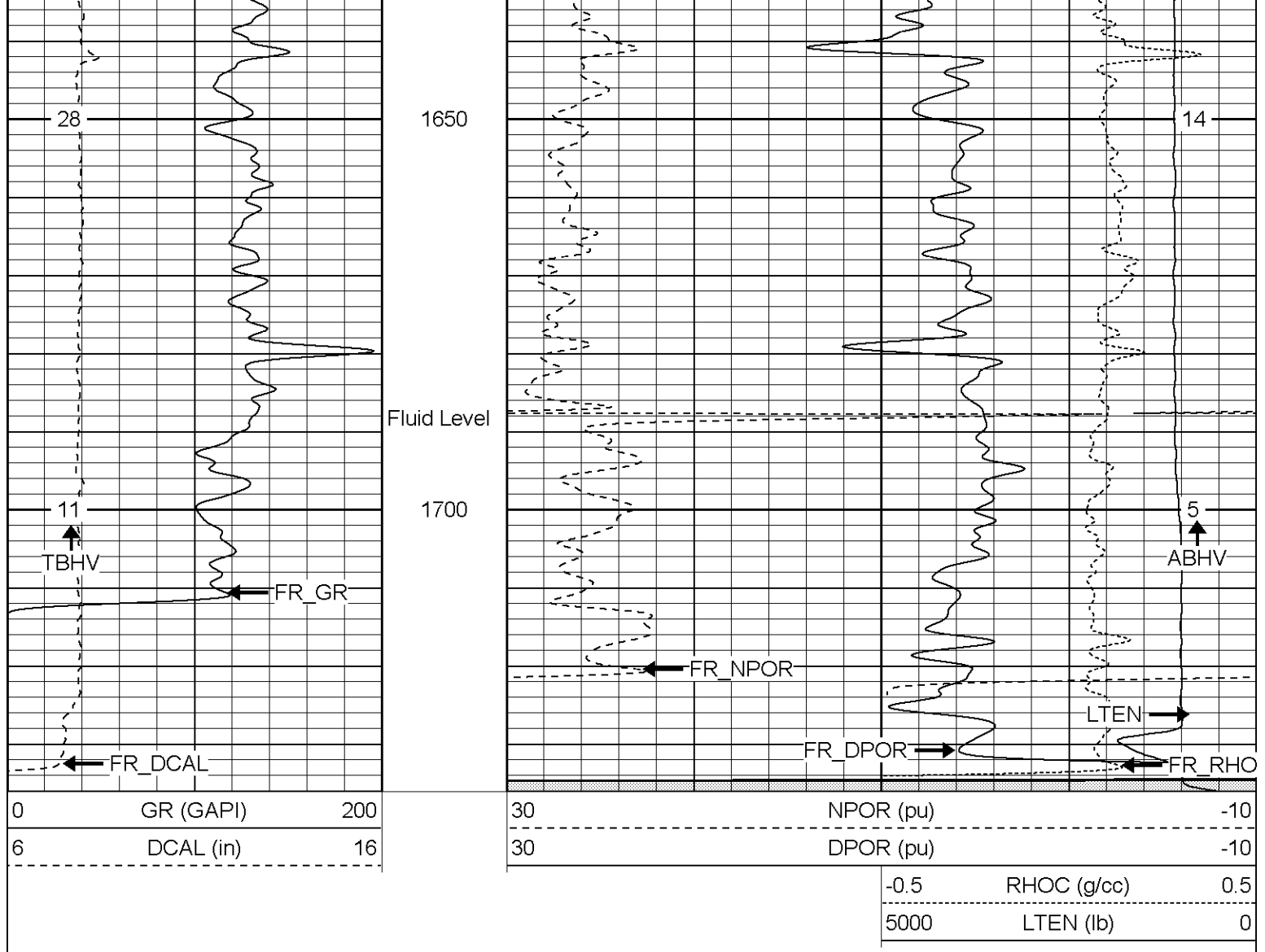
1450

1500

1550

1600



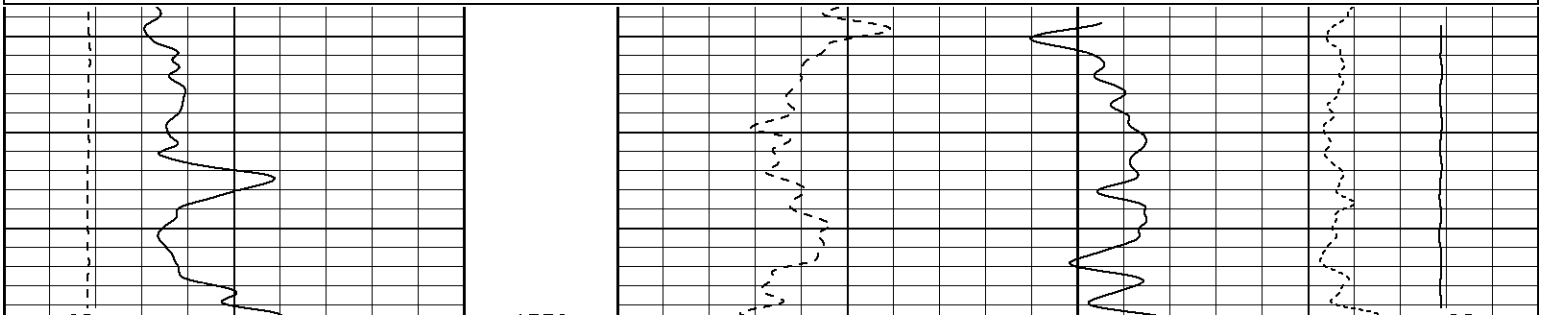


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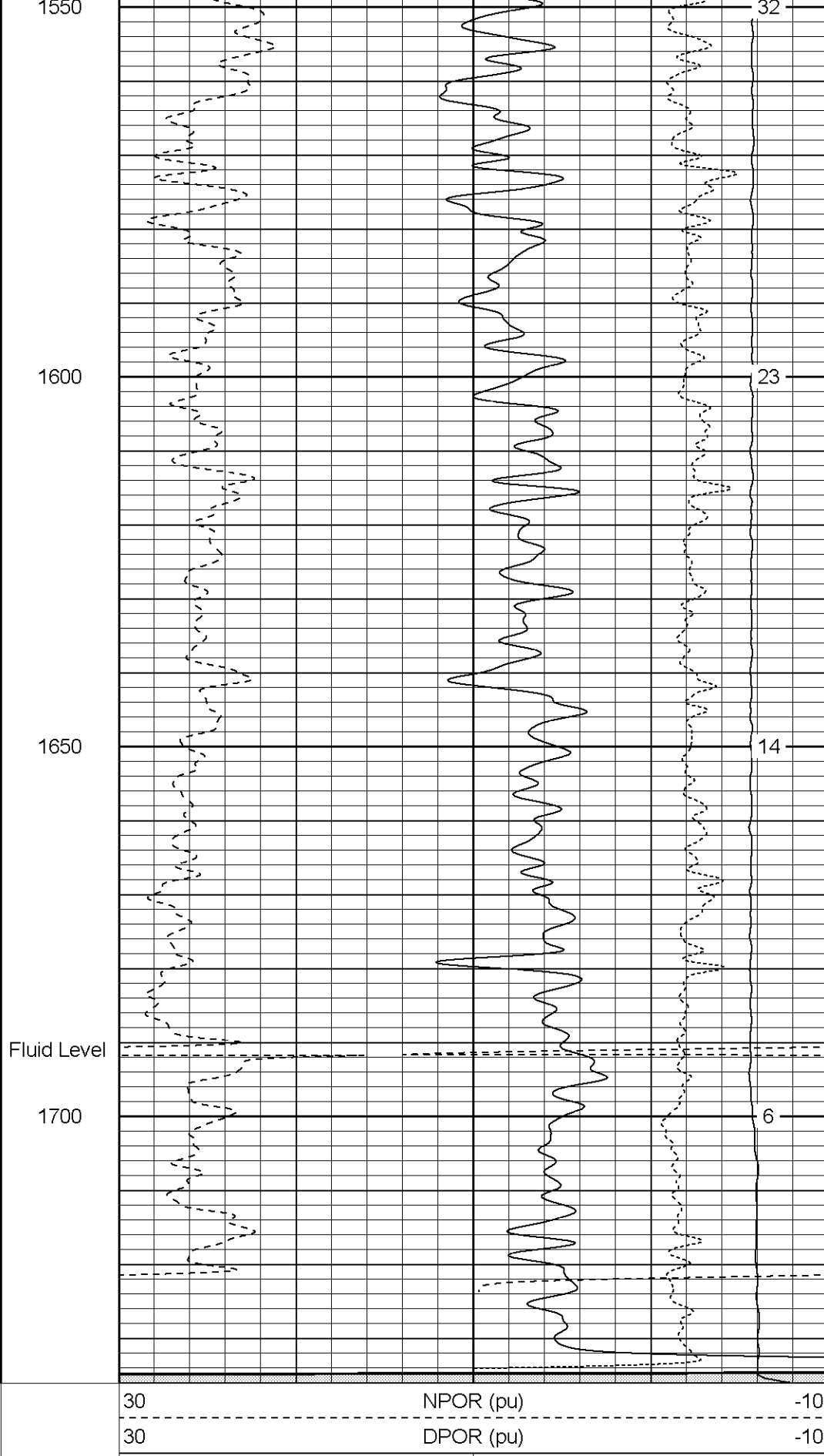
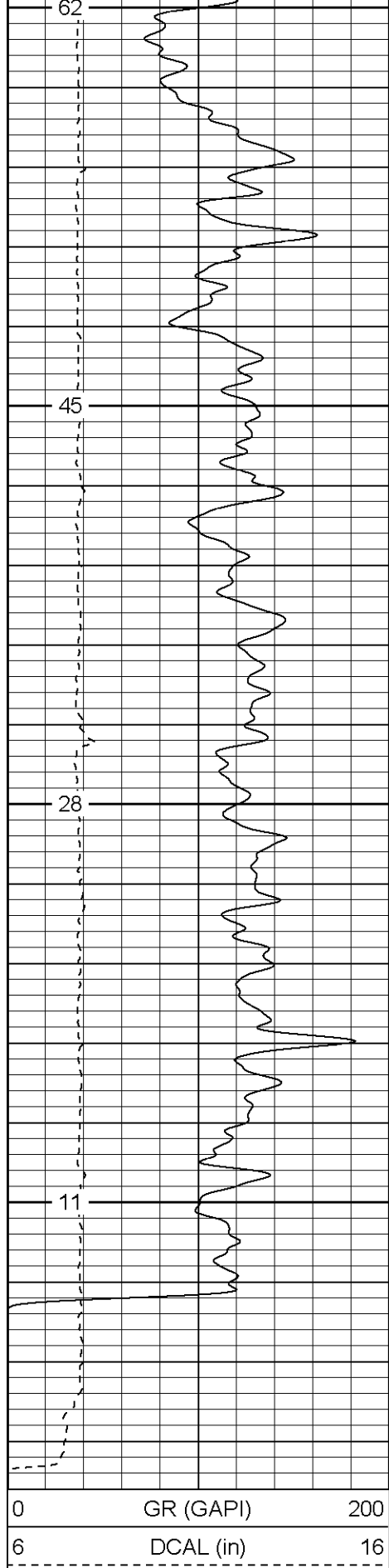
## Repeat Section

Database File: xtoac2316.db  
 Dataset Pathname: pass3.1  
 Presentation Format: cdnl  
 Dataset Creation: Mon Mar 06 17:47:50 2006 by Calc Warrior 7.0 STD Ope  
 Charted by: Depth in Feet scaled 1:240

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



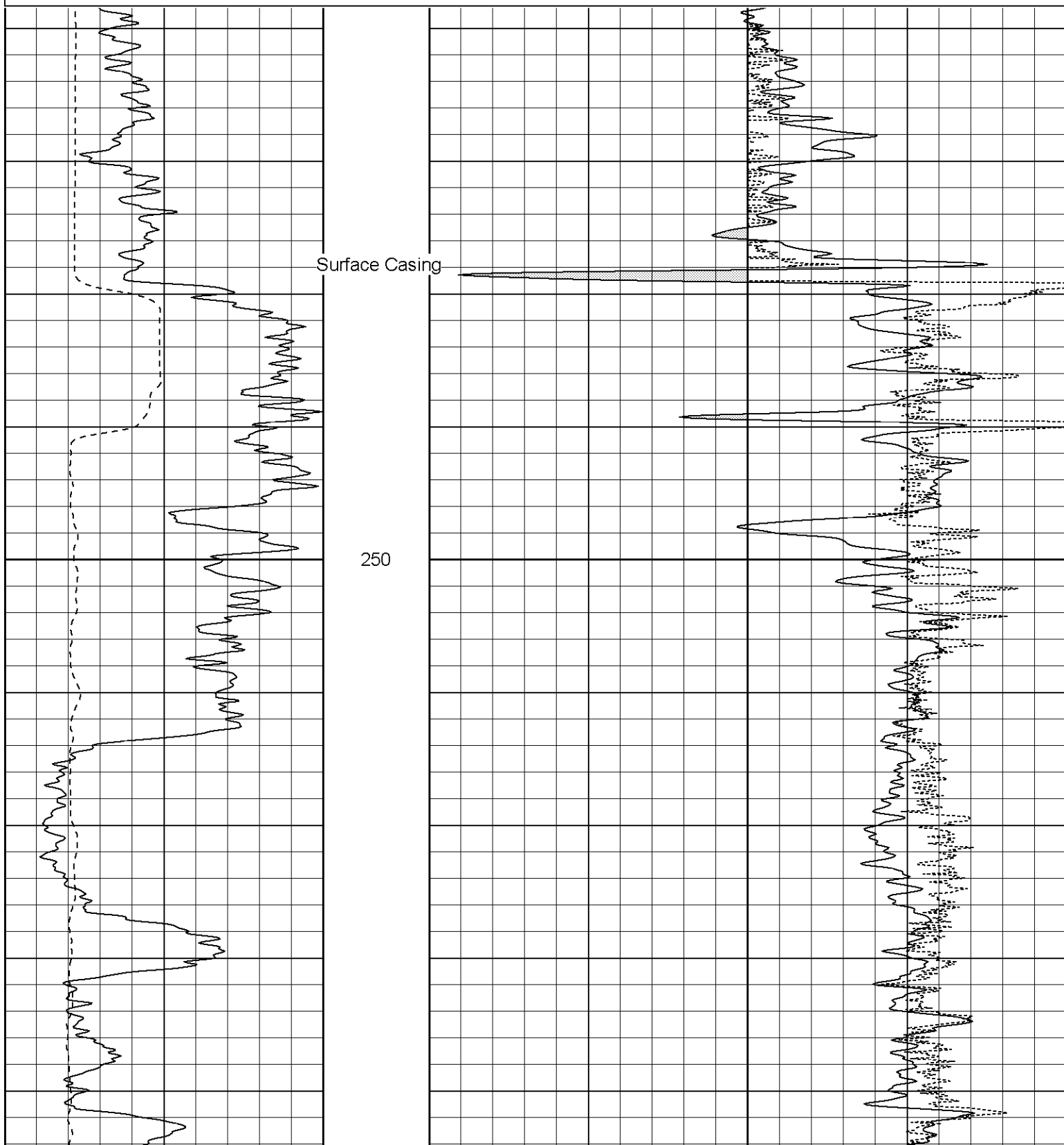


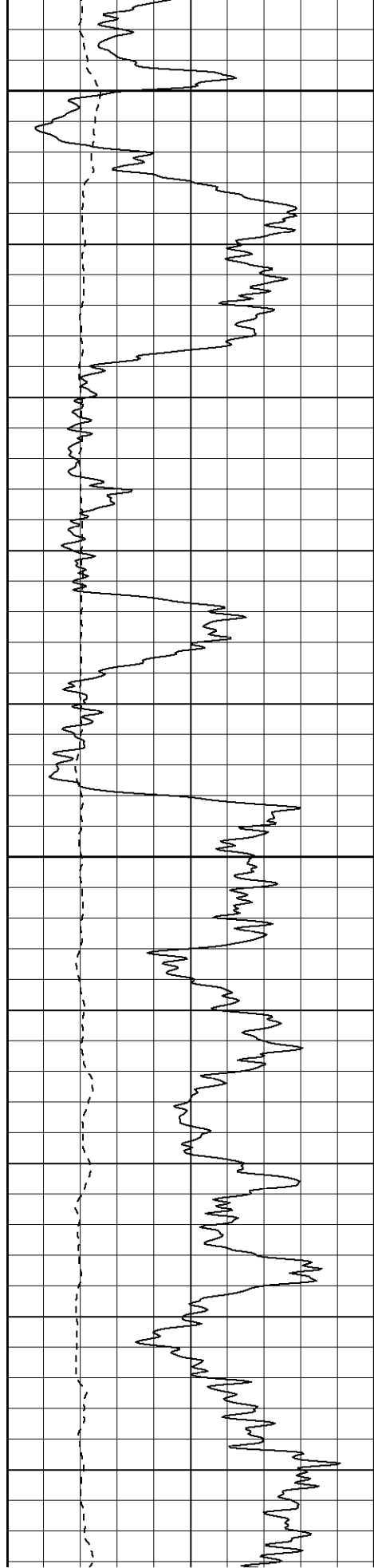


Database File: xtoac2316.db  
 Dataset Pathname: pass4.2  
 Presentation Format: cdlhr  
 Dataset Creation: Tue Mar 07 07:07:15 2006 by Calc Warrior 7.0 STD Ope  
 Charted by: Depth in Feet scaled 1:120

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

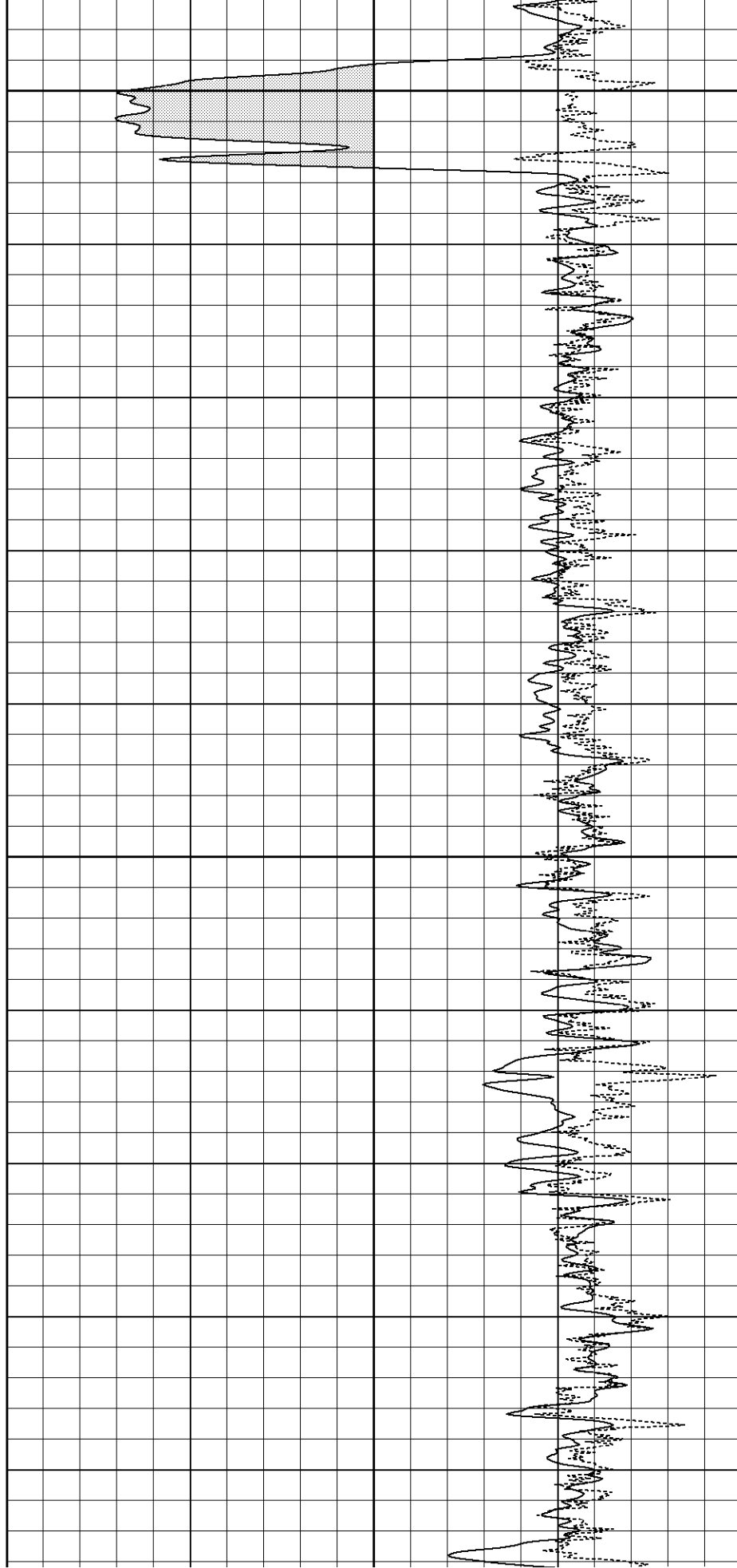
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5

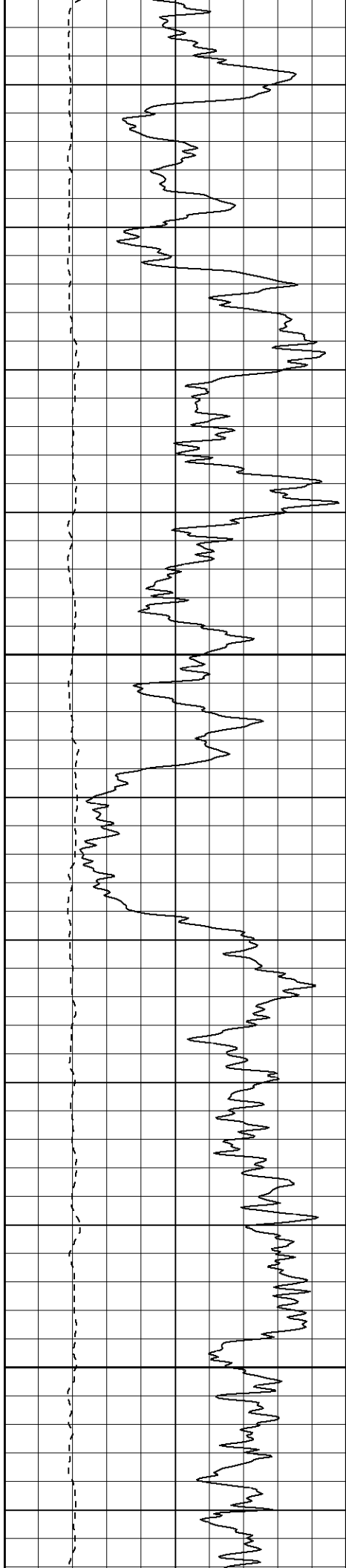




300

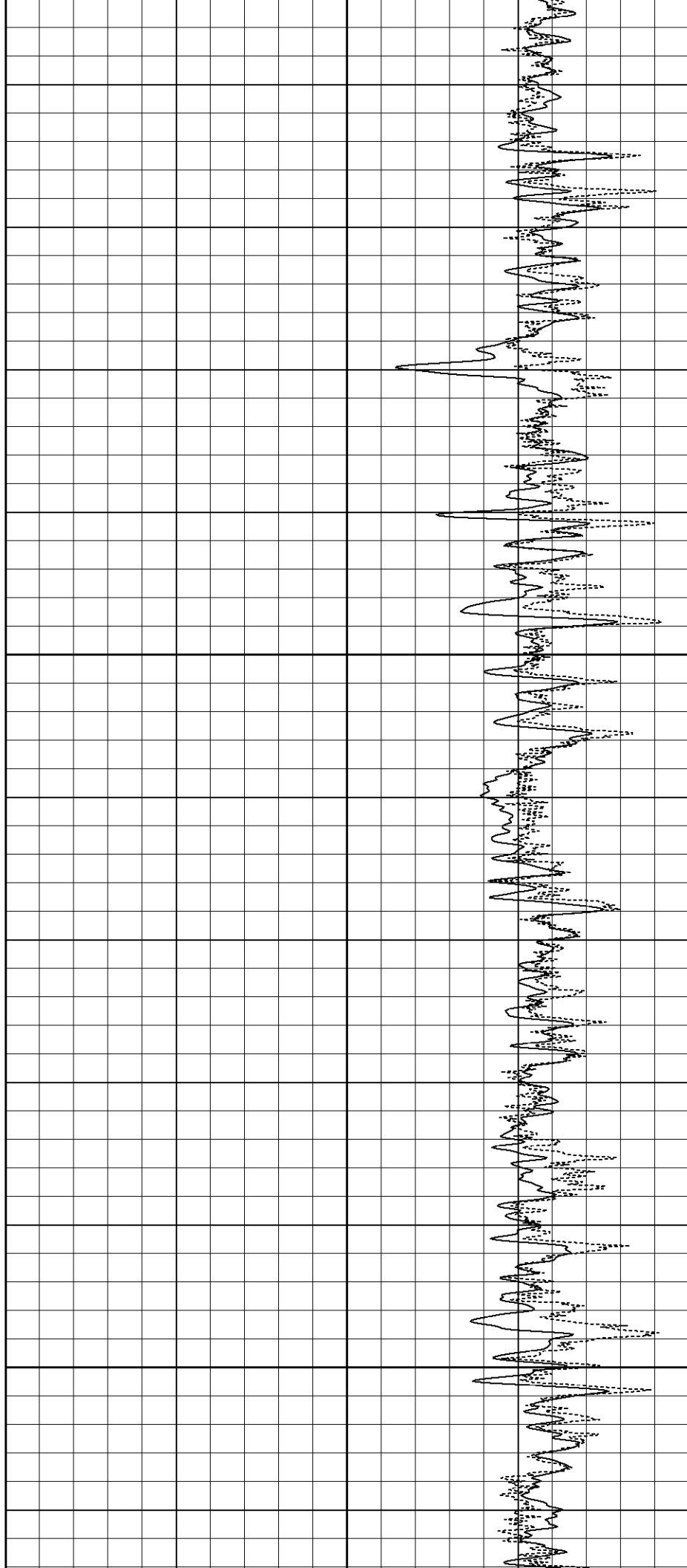
350

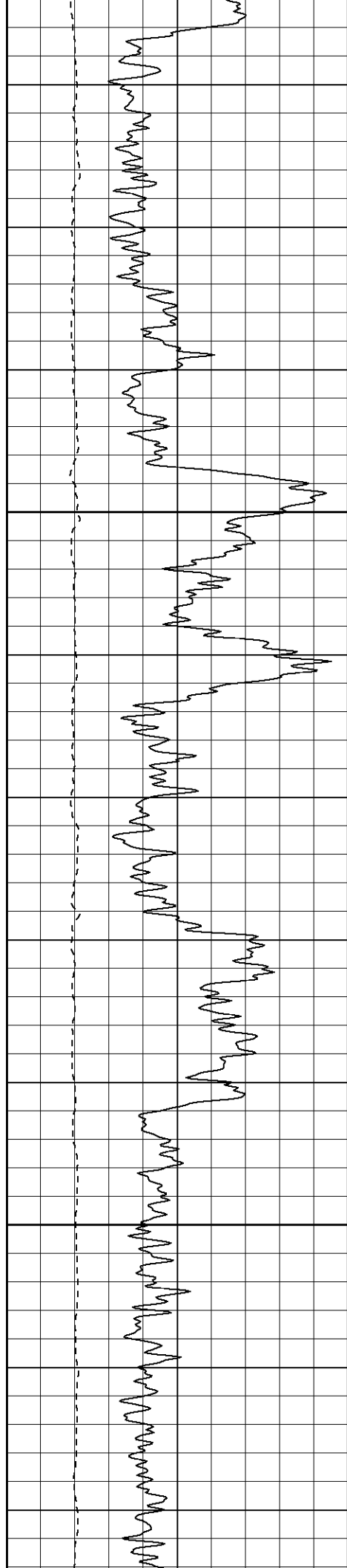




450

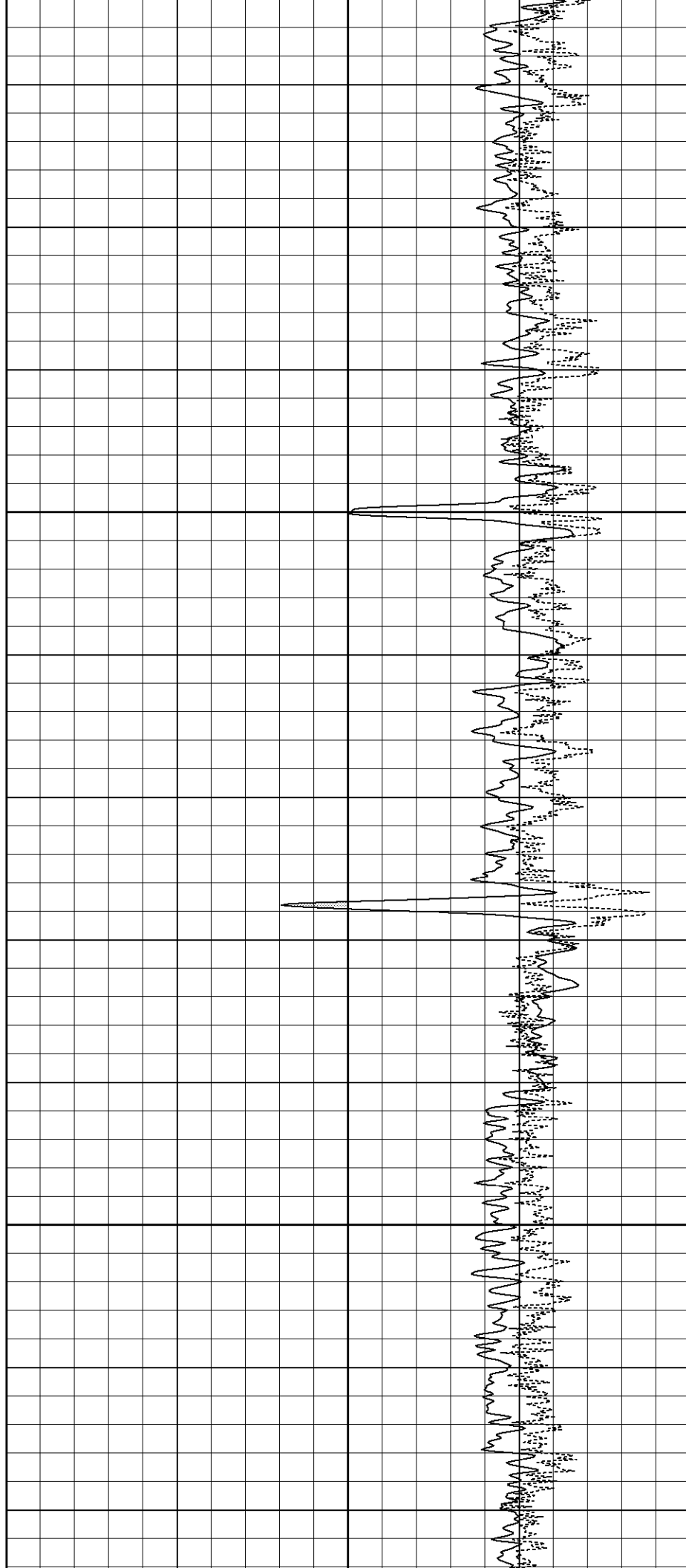
500

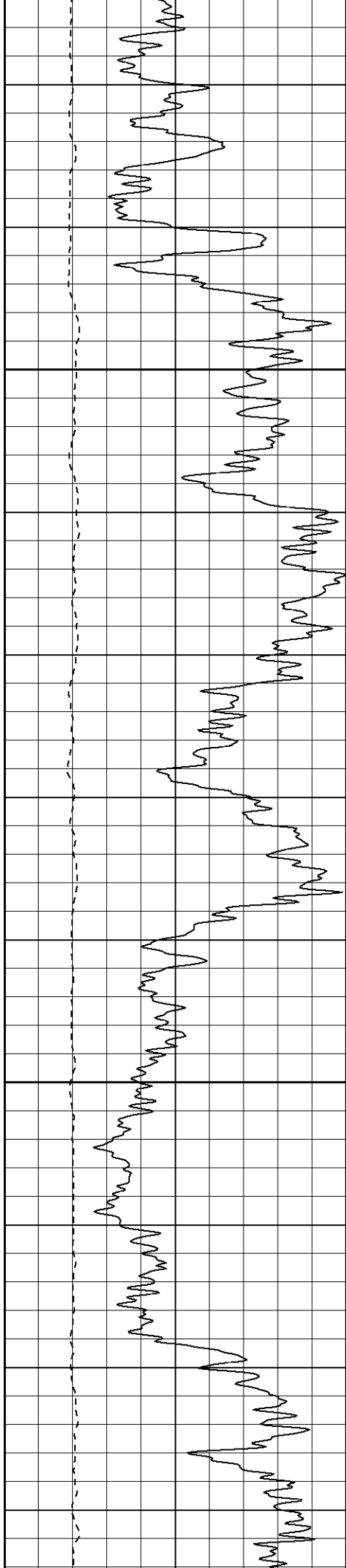




550

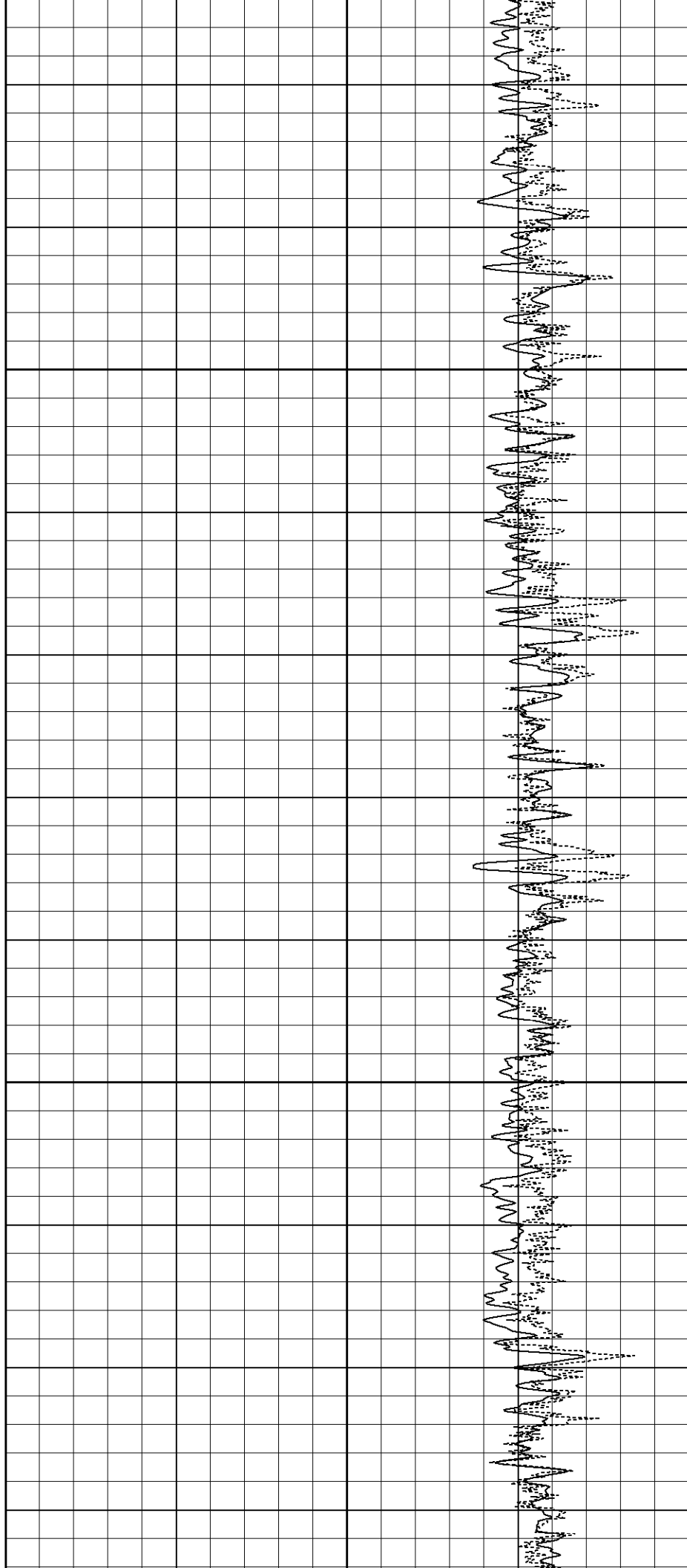
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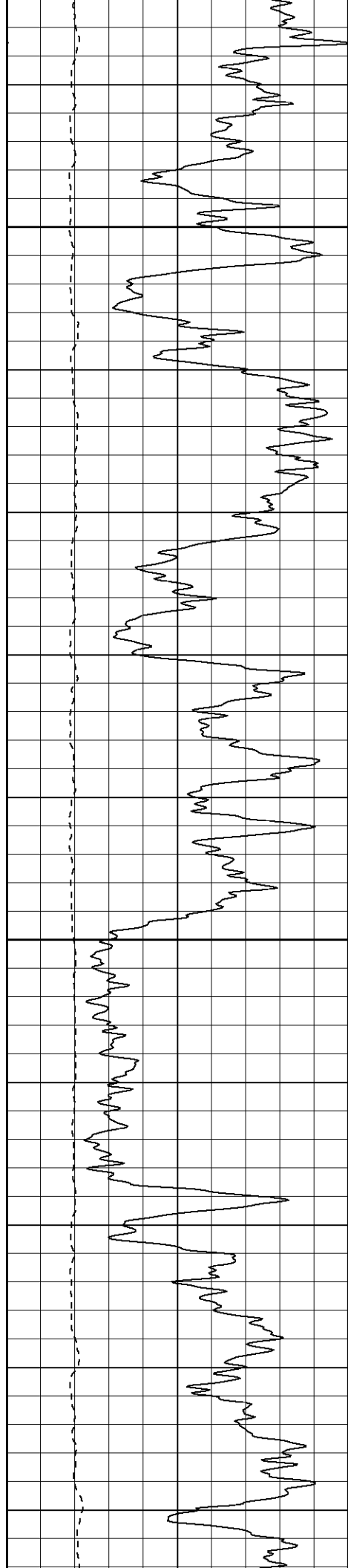




650

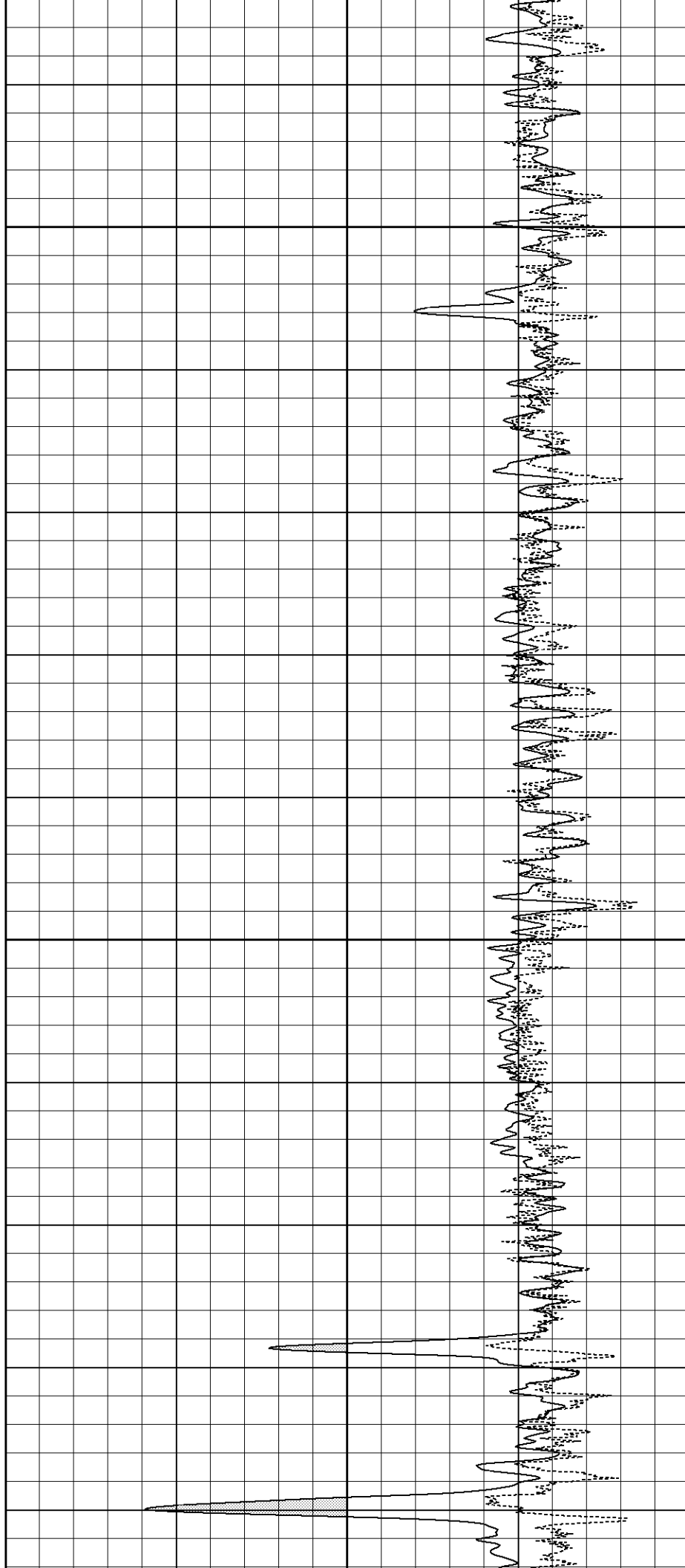
700

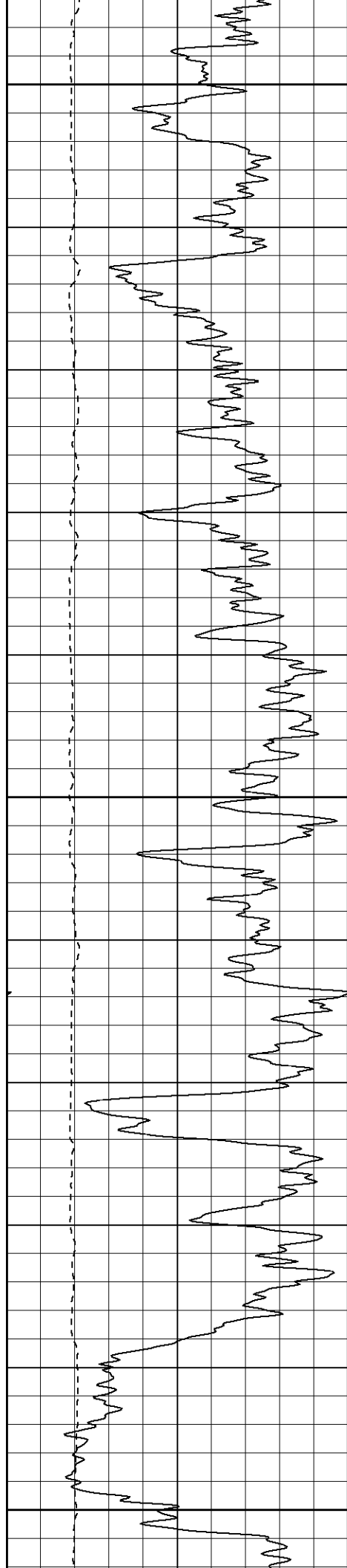




750

800

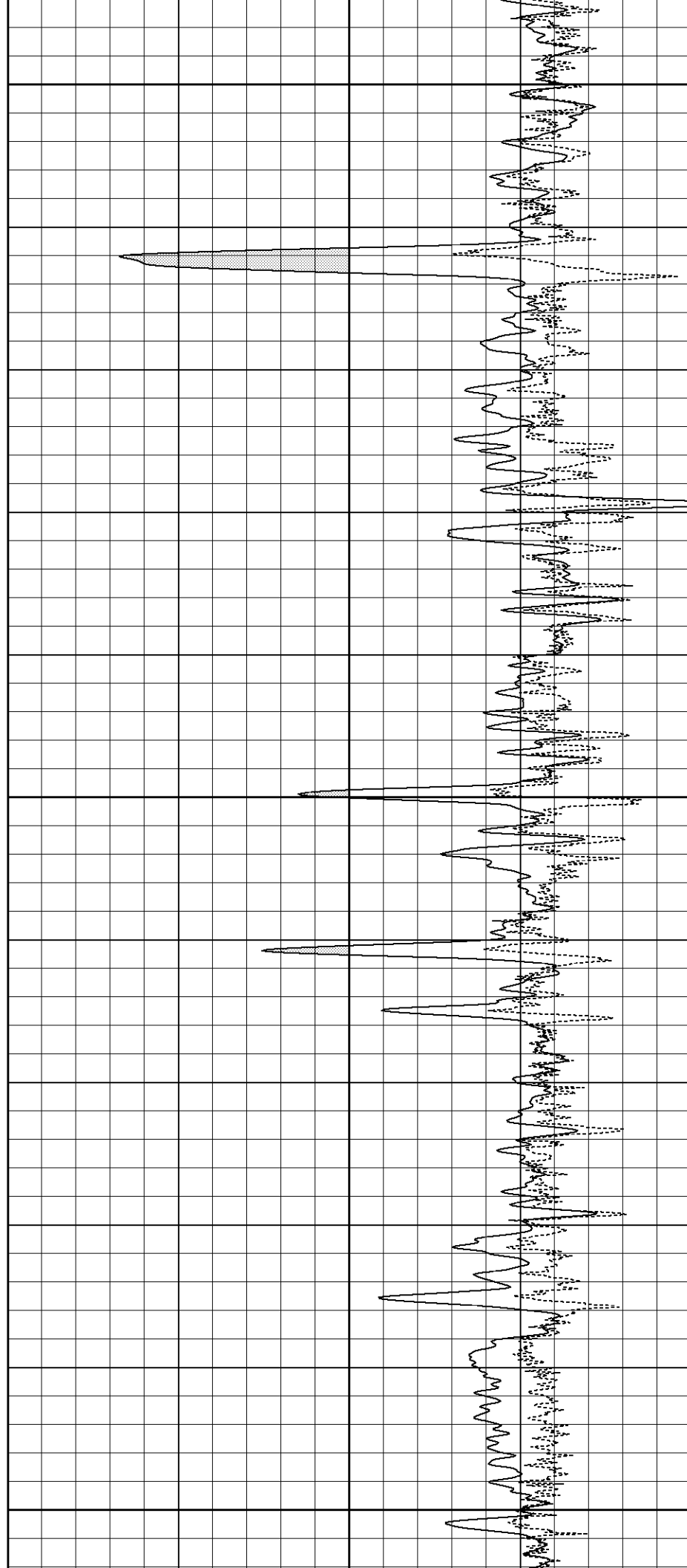




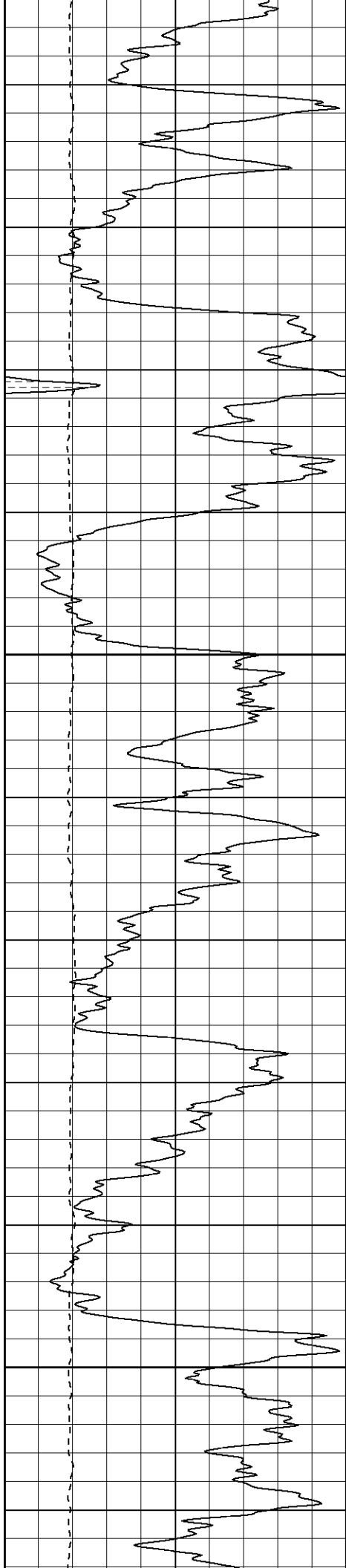
850

900

950

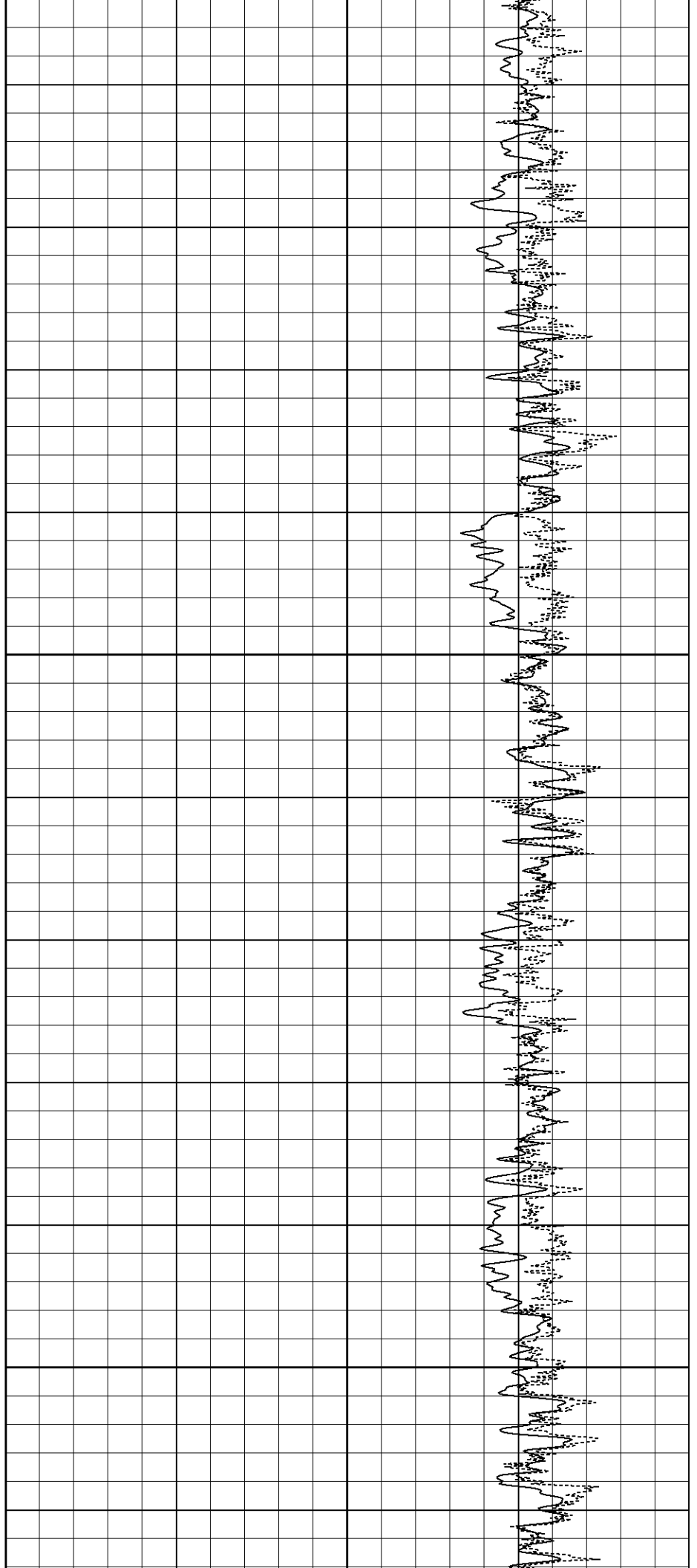


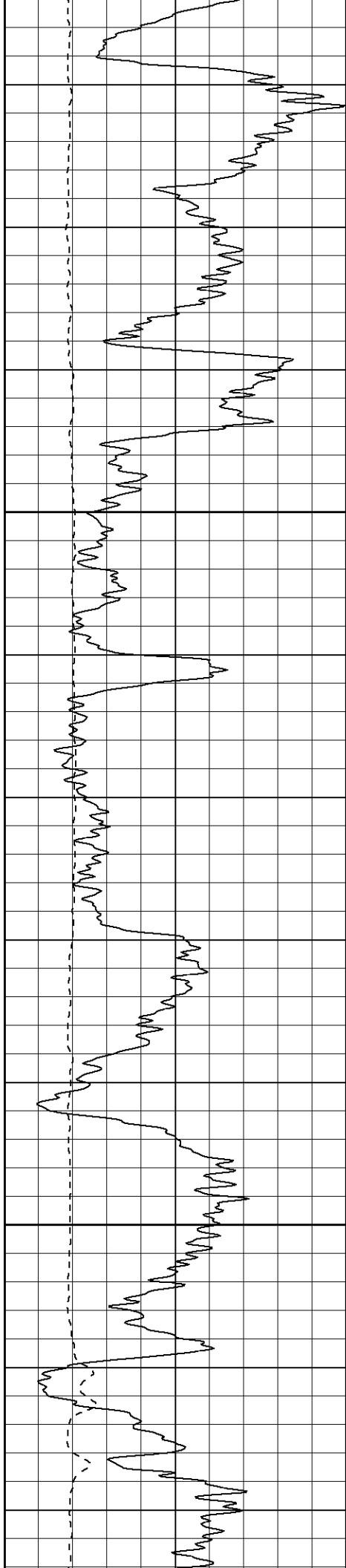




1000

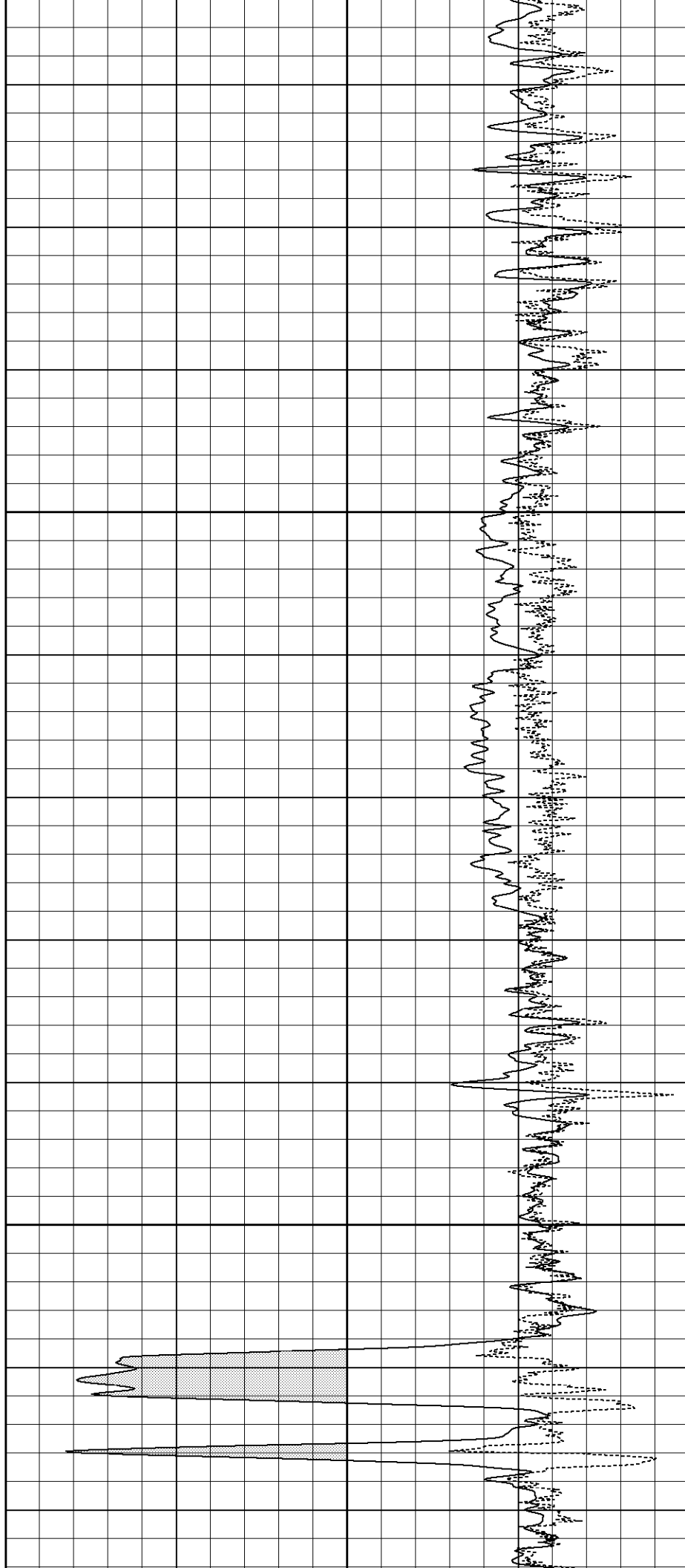
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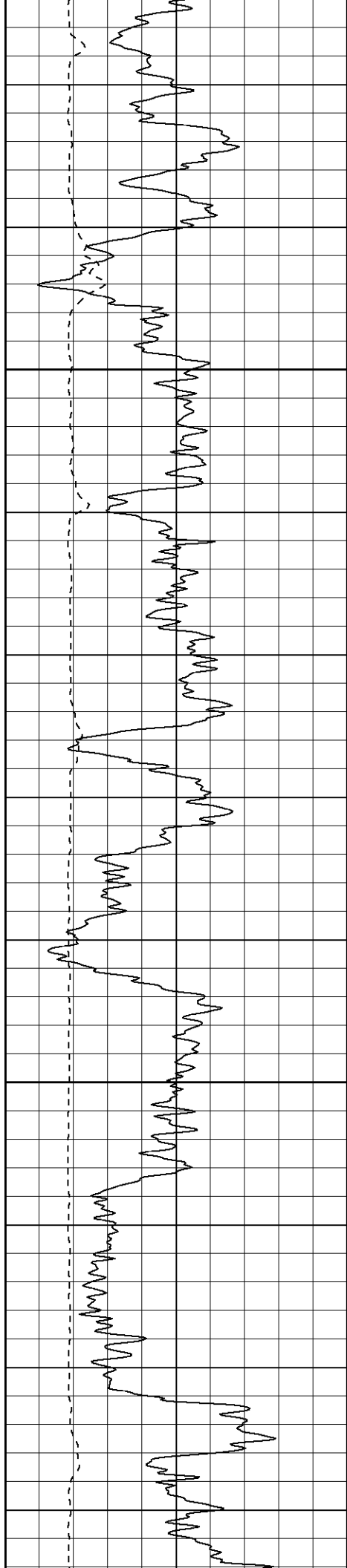




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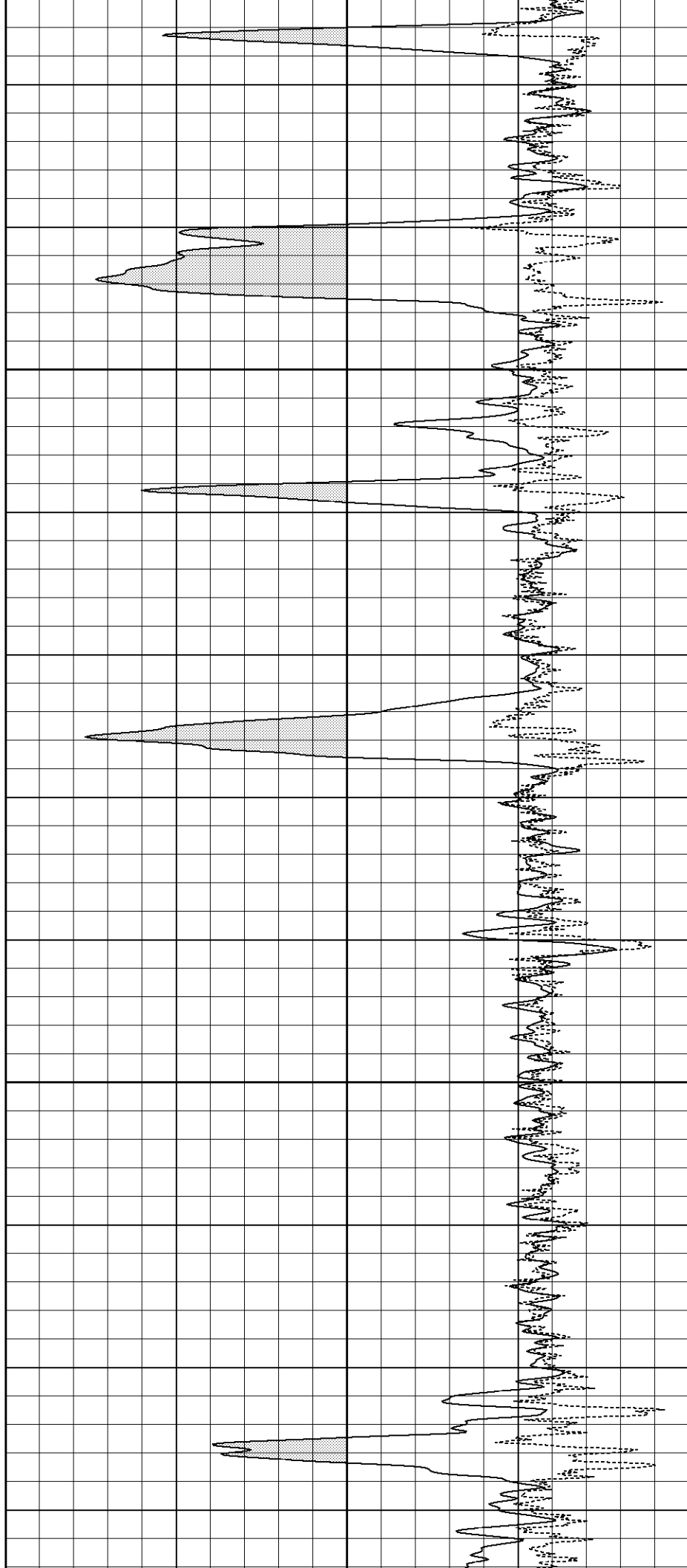
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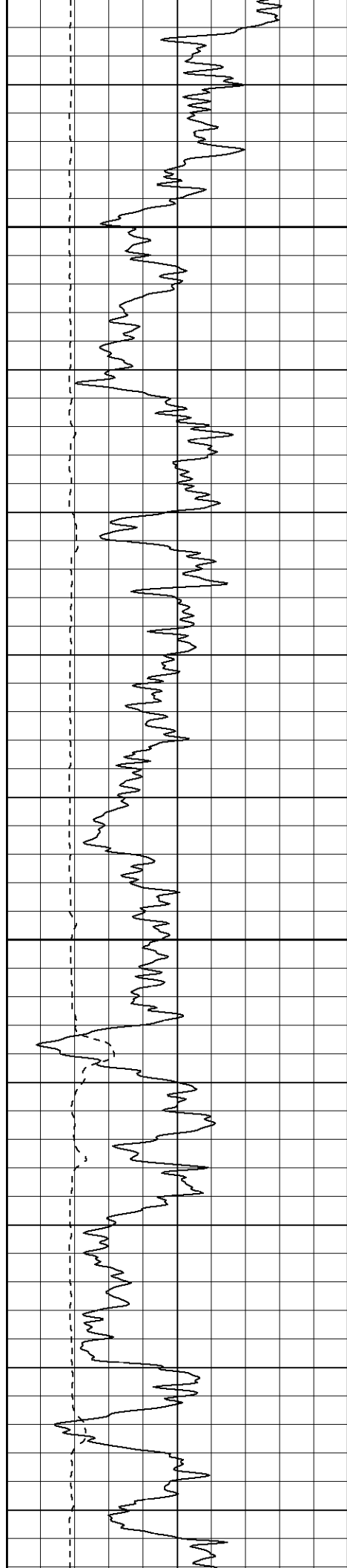




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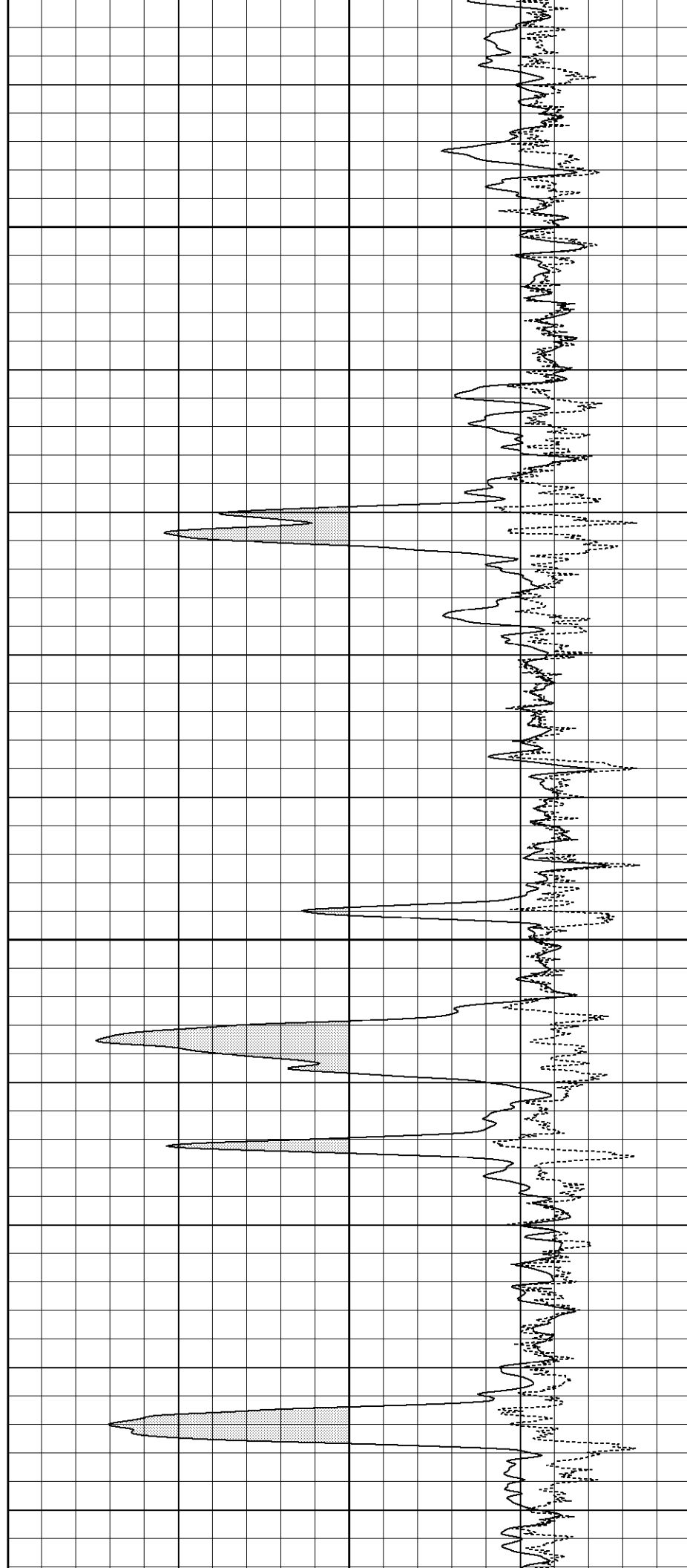
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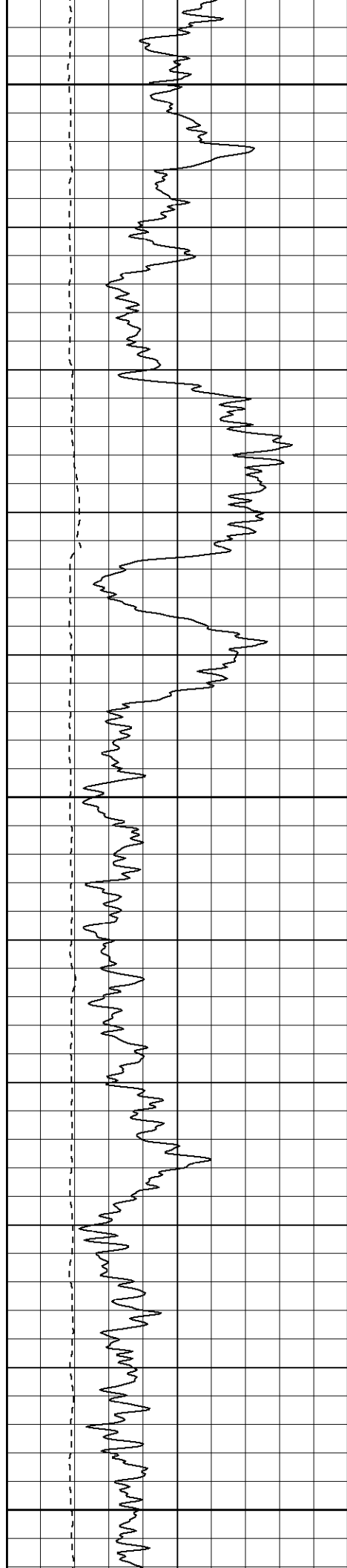




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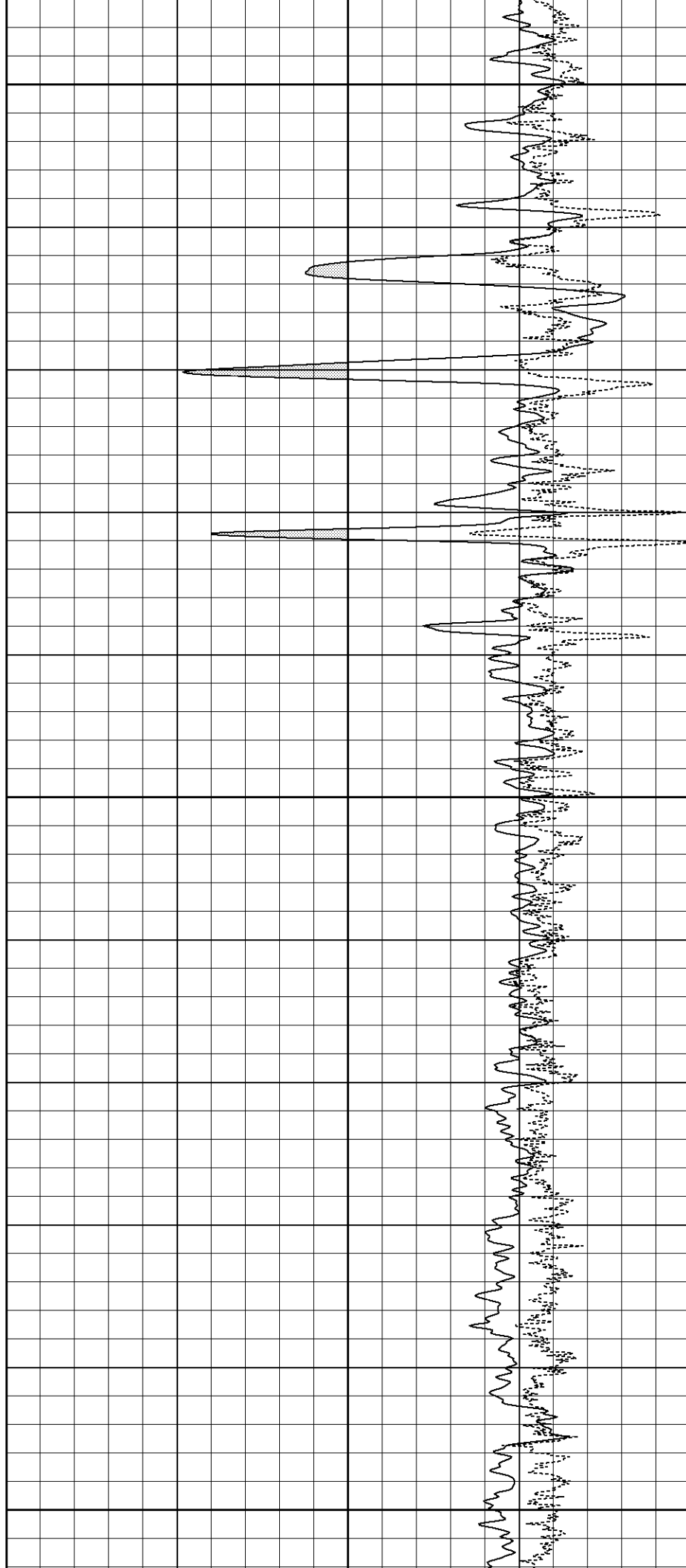


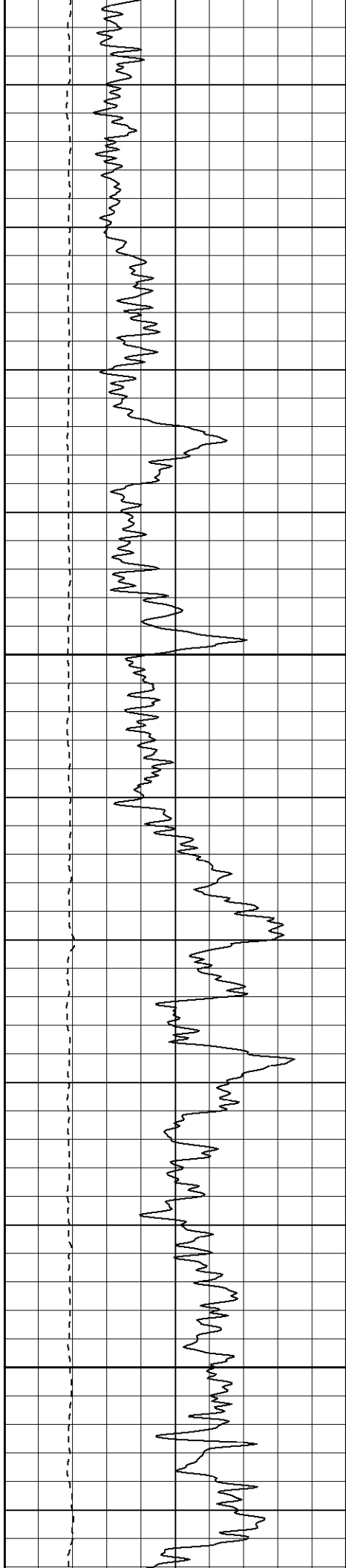


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1450

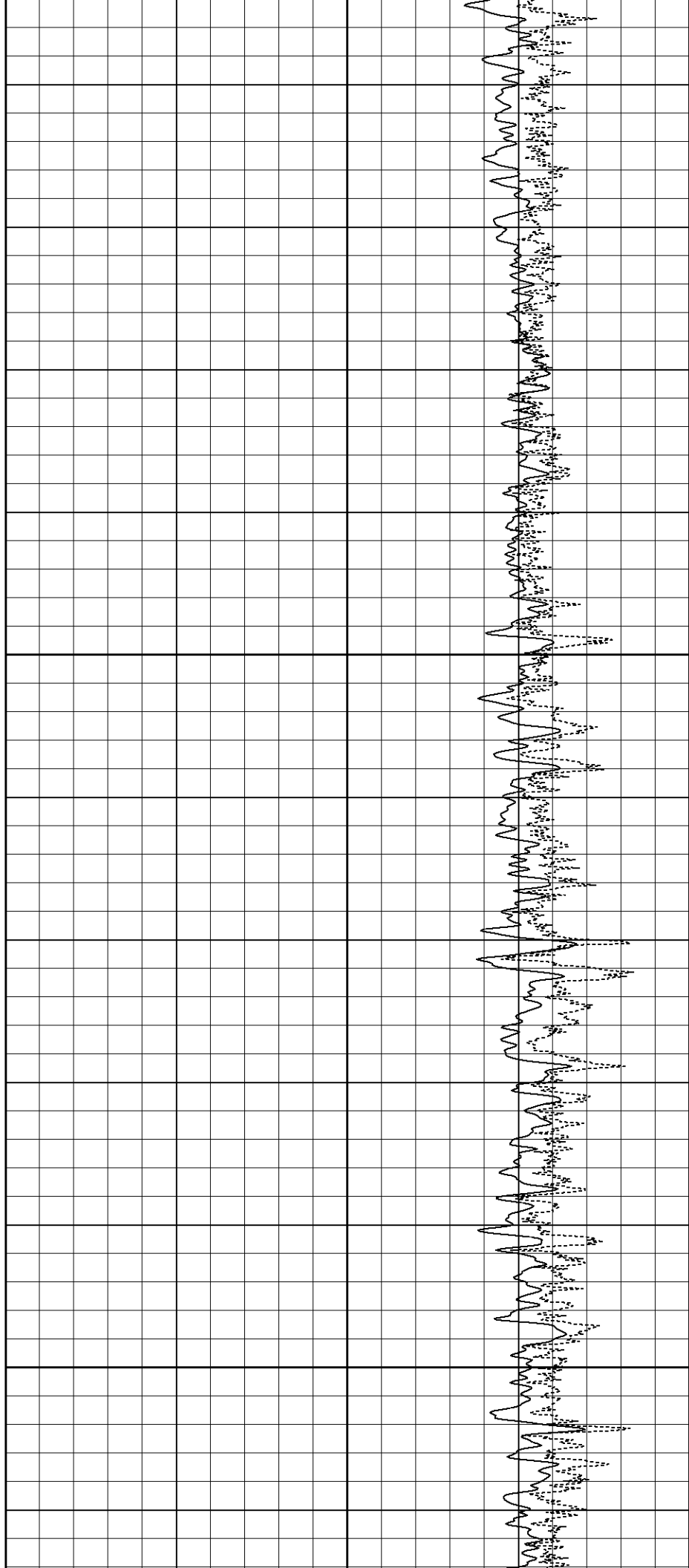
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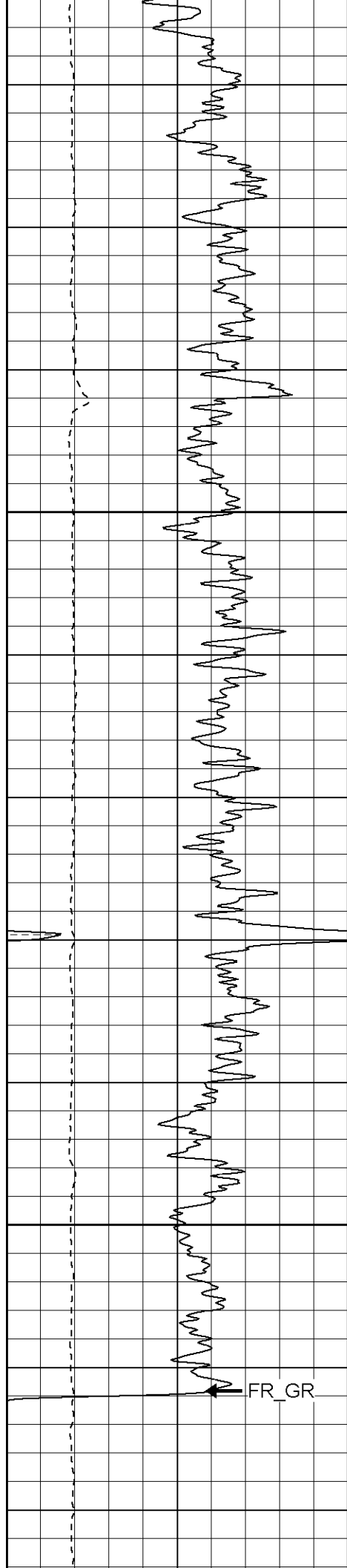




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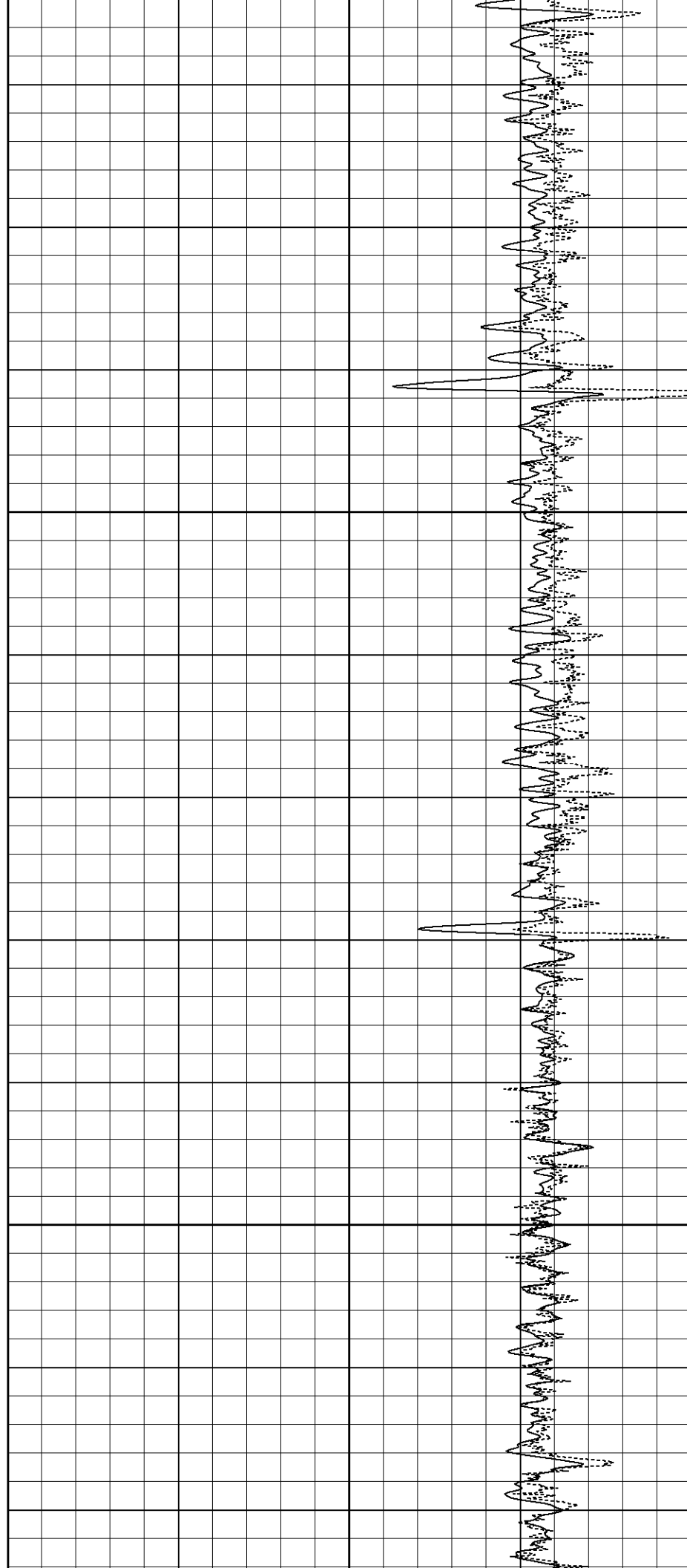
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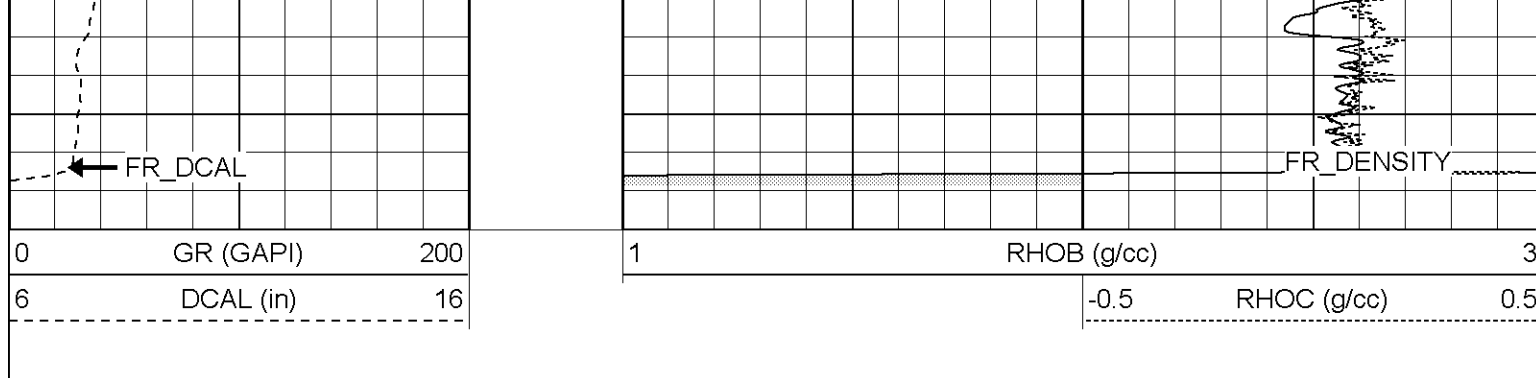




1650

1700





# Compensated Density Calibration Report

Serial-Model: 2487-G  
Source / Verifier: csv-n20 / blks  
Master Calibration Performed: Mon Mar 06 10:06:48 2006

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	729.92	384.20	cps
Aluminum	2.590	g/cc	167.06	264.69	cps
Spine Angle = 75.82			Density/Spine Ratio = 0.579		
	Size		Reading		
Small Ring	7.85	in	1.93	V	
Large Ring	14.00	in	5.27	V	

# Gamma Ray Calibration Report

Serial Number: 2487OH  
Tool Model: D  
Performed: Sun Jan 29 15:39:20 2006

Calibrator Value: 170.0 GAPI

Background Reading: 42.6 cps  
Calibrator Reading: 139.0 cps

Sensitivity: 1.6000 GAPI/cps

# Neutron Calibration Report

Serial Number: 5138  
Tool Model: G  
Performed: Mon Feb 13 15:26:50 2006

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	14.12		NEU-G (5138) Gearhart Epithermal	5.75	3.50	85.00



GR	8.92		GR-D (2487OH) Gearhart	2.50	3.63	74.00
LSD	2.83		CDL-G (2487) Gearhart	6.92	4.00	201.00
DCAL	2.50					
SSD	2.25					
Dataset: /field/well/run1/_plots/_/jobs/_cdl Total Length: 15.17 ft Total Weight: 360.00 lb O.D. 4.00 in						