

**Patterson**

**COMPENSATED DENSITY  
NEUTRON  
LOG**

Company	XTO Energy, Inc.		
Well	Hill Ranch 35-15		
Field	Purgatorie River		
County	Las Animas	State	Colorado
Location:	API # : 05-071-08794-00		Other Services
	778' FSL & 2586' FEL		DIL
Permanent Datum	SEC 35	TWP 34S	RGE 67W
Log Measured From	Ground Level	Elevation	7960'
Drilling Measured From	Ground Level	Elevation	K.B. ----- D.F. ----- G.L. 7960'
Date	9-10-06		
Run Number	Two		
Depth Driller	2545'		
Depth Logger	2531'		
Bottom Logged Interval	2529'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 410'		
Casing Logger	410'		
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	6:00 A.M.		
Time Logger on Bottom	10:35 A.M.		
Maximum Recorded Temperature	112 DEG F		
Equipment Number	T096		
Location	Trinidad		
Recorded By	S. Allen		
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**

Density/Neutron Porosity Presented on Sandstone Matrix.

ABHV Calculated for 5 1/2" Casing.

Neutron Porosity Invalid from 1199'-1422' Due to Foam in Hole.

Well Directions:

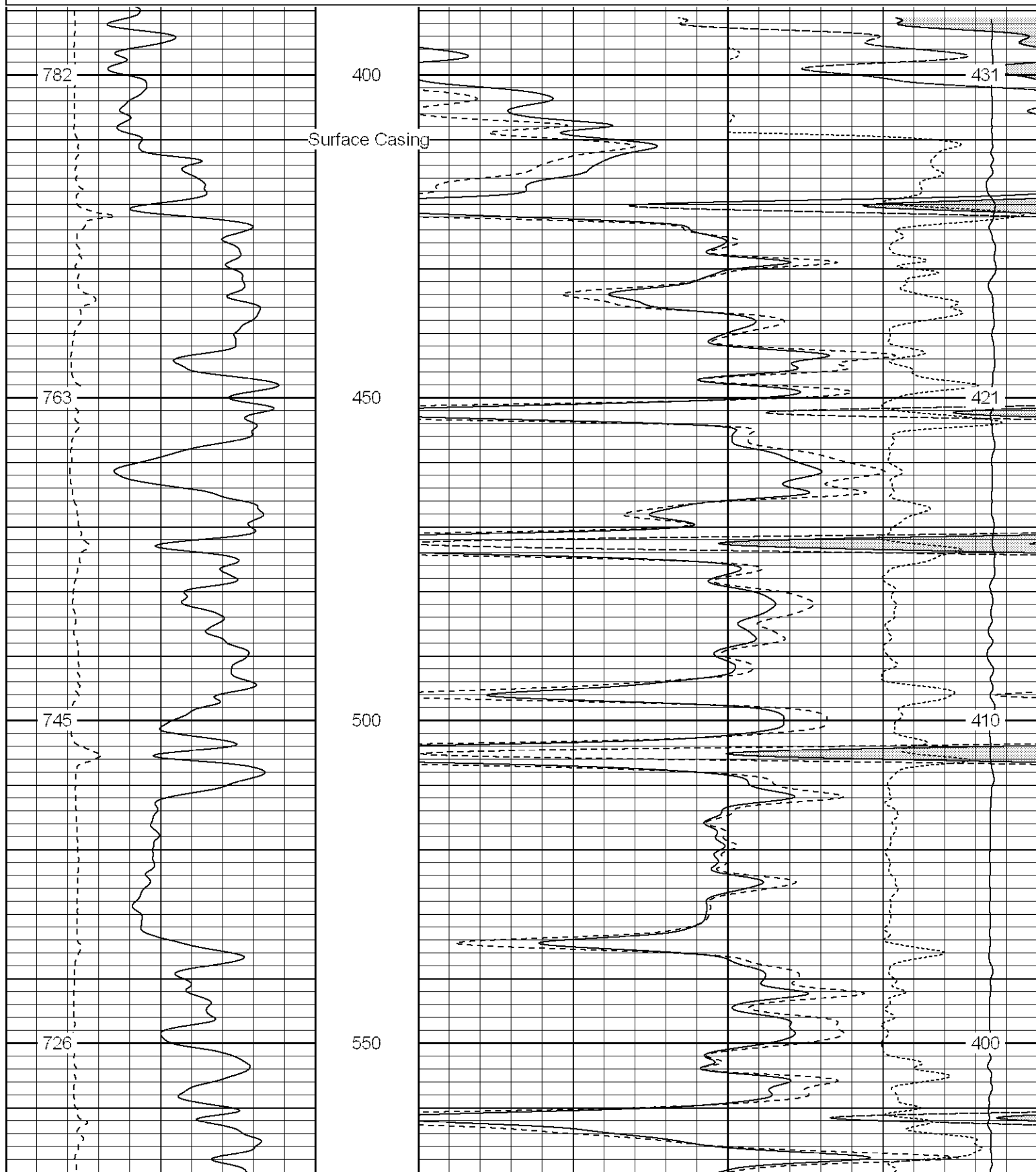
Lorencito Canyon-Drive to XTO Hill-Drive to Top of Hill-Stay on Main Road-  
Drive Past Location on Left-1st Location on Right.

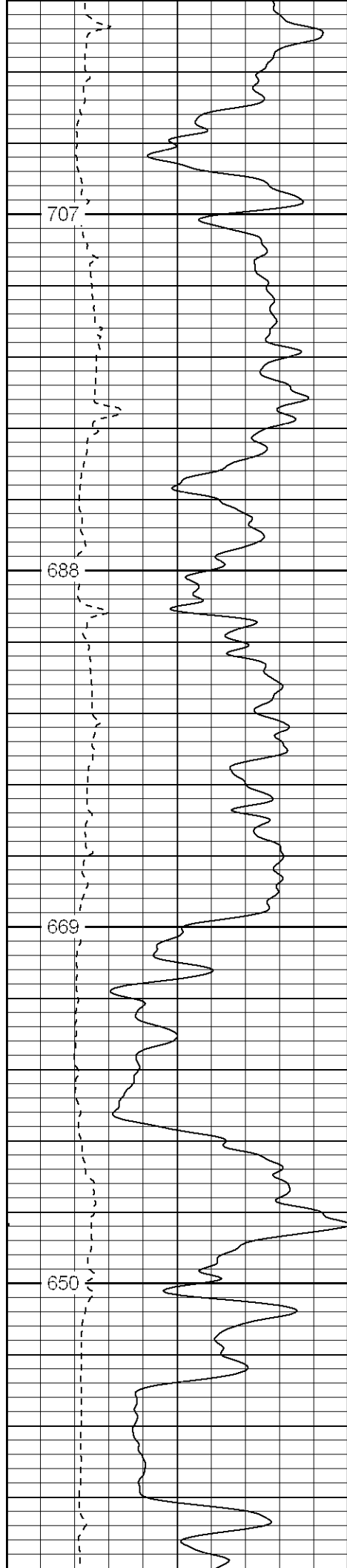
**Patterson**

**Main Pass**

Database File: hr3515.db  
Dataset Pathname: pass5.2  
Presentation Format: cdl  
Dataset Creation: Sun Sep 10 12:18:46 2006 by Calc Warrior 7.0 STD Ope  
Charted by: Depth in Feet scaled 1:240

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



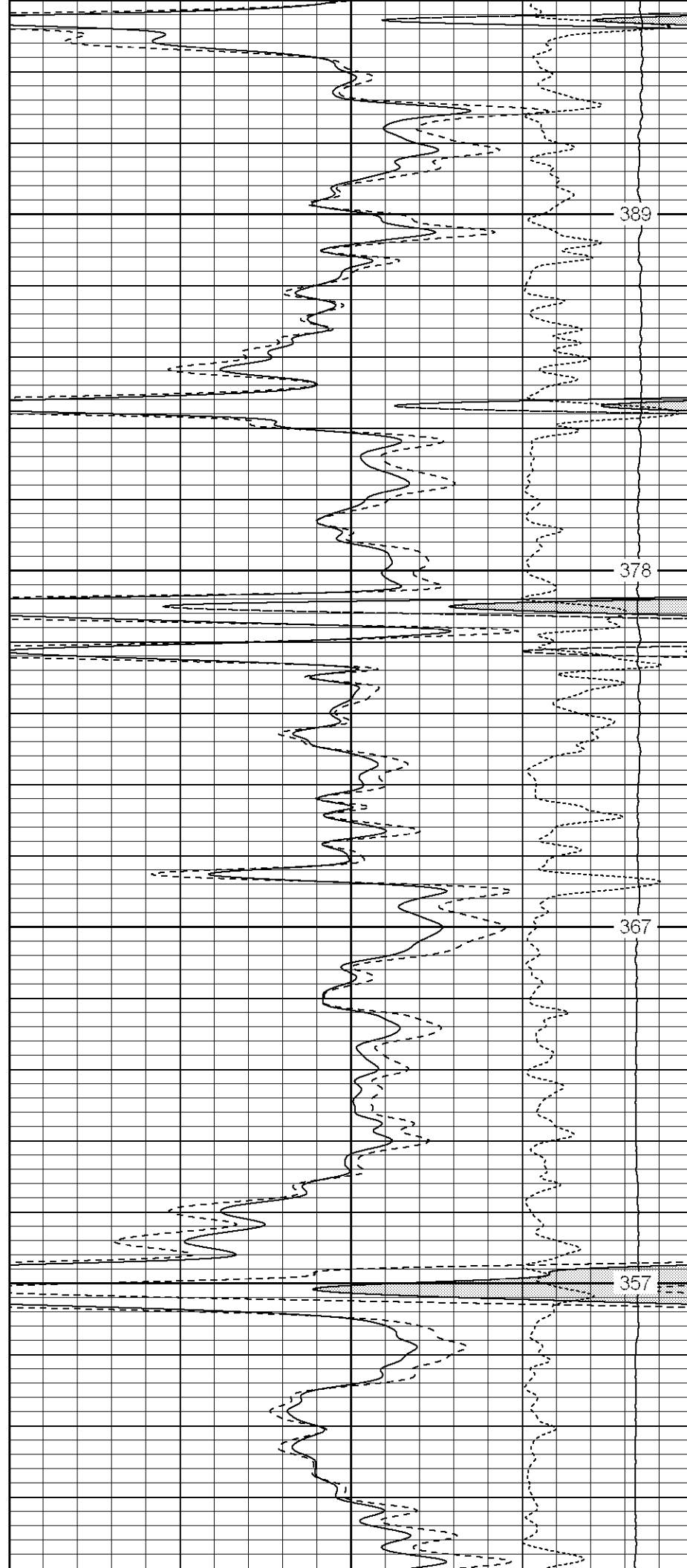


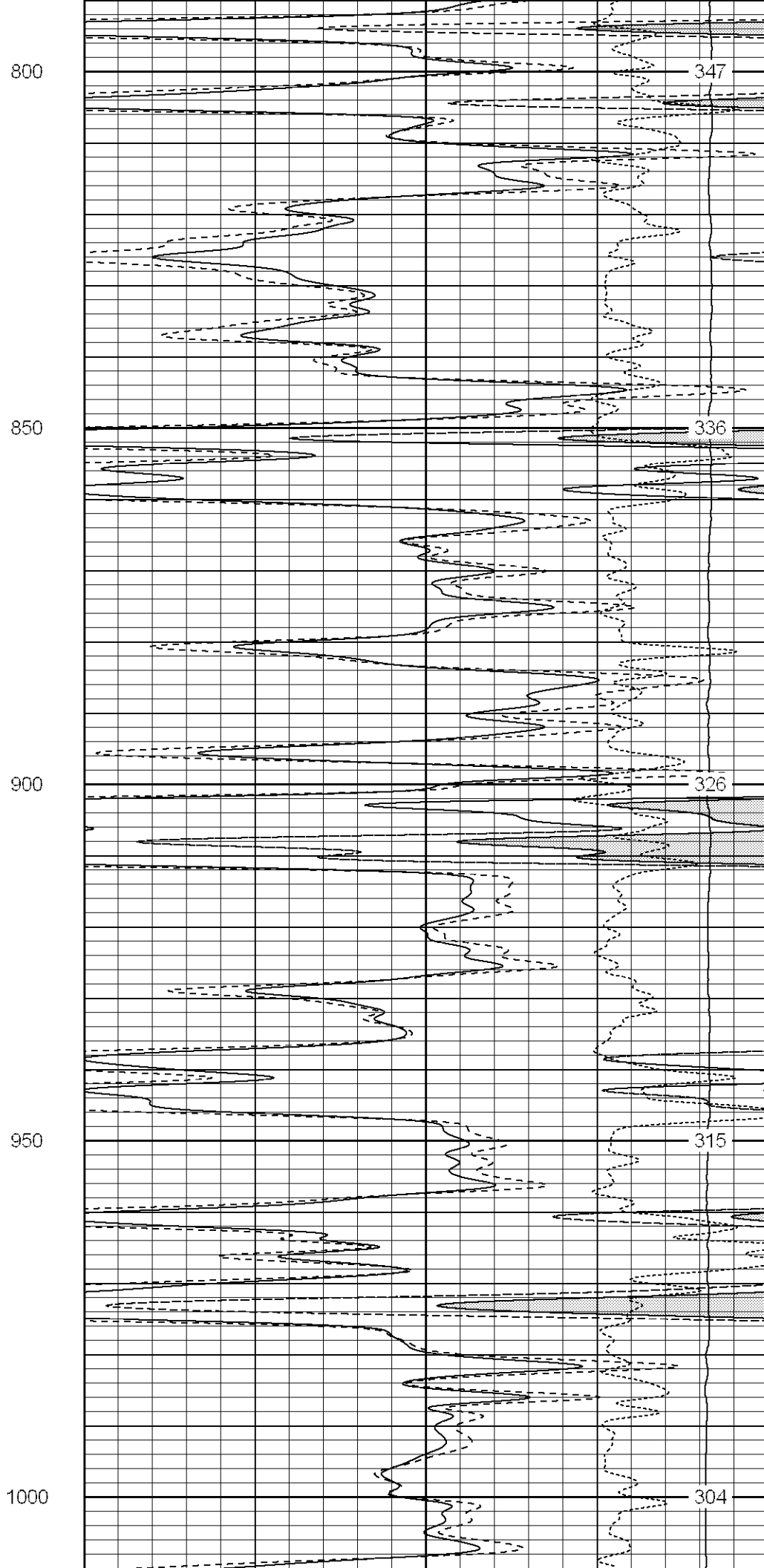
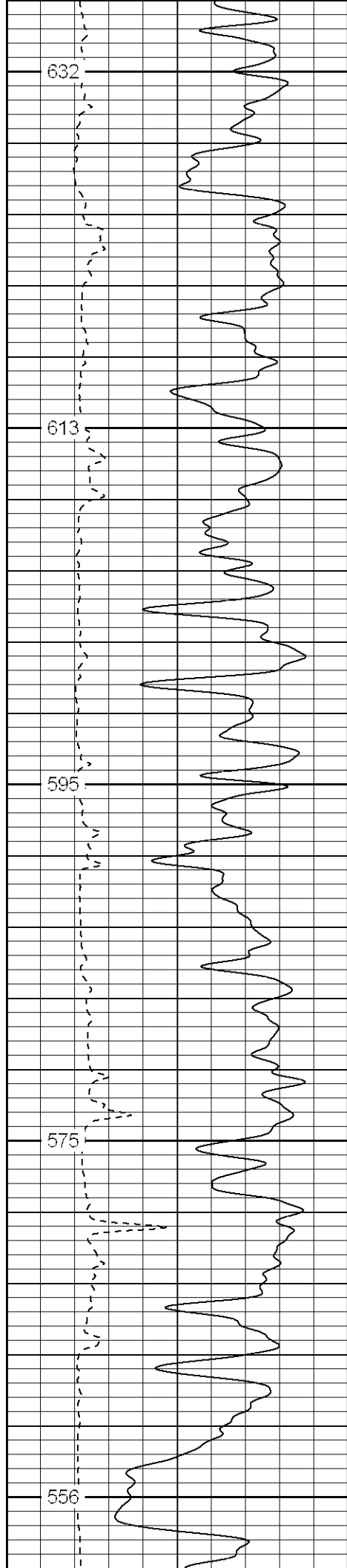
600

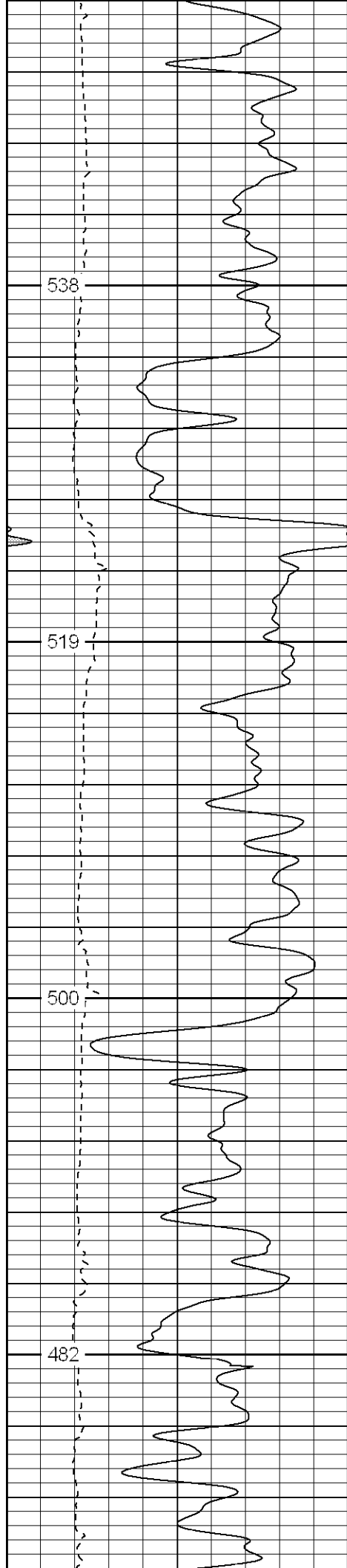
650

700

750





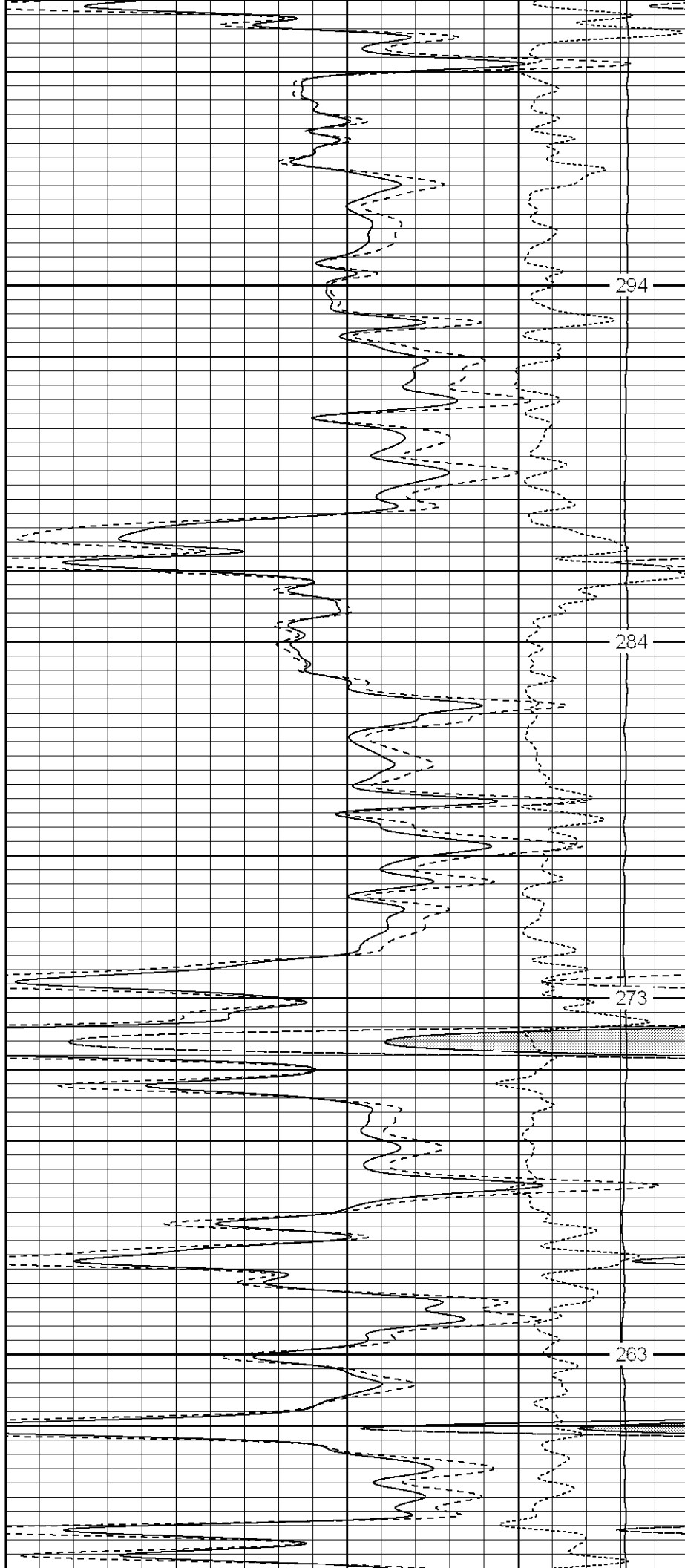


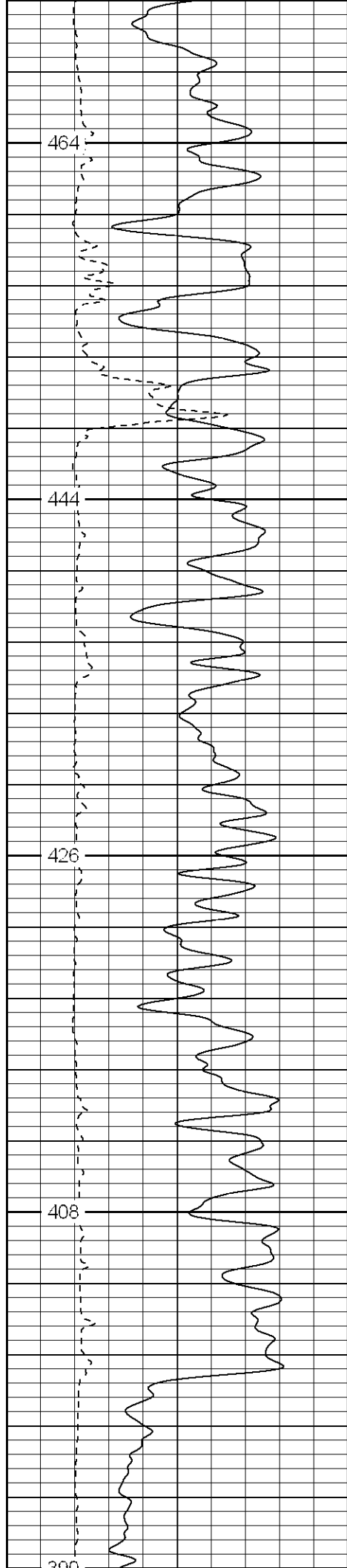
1050

1100

1150

1200





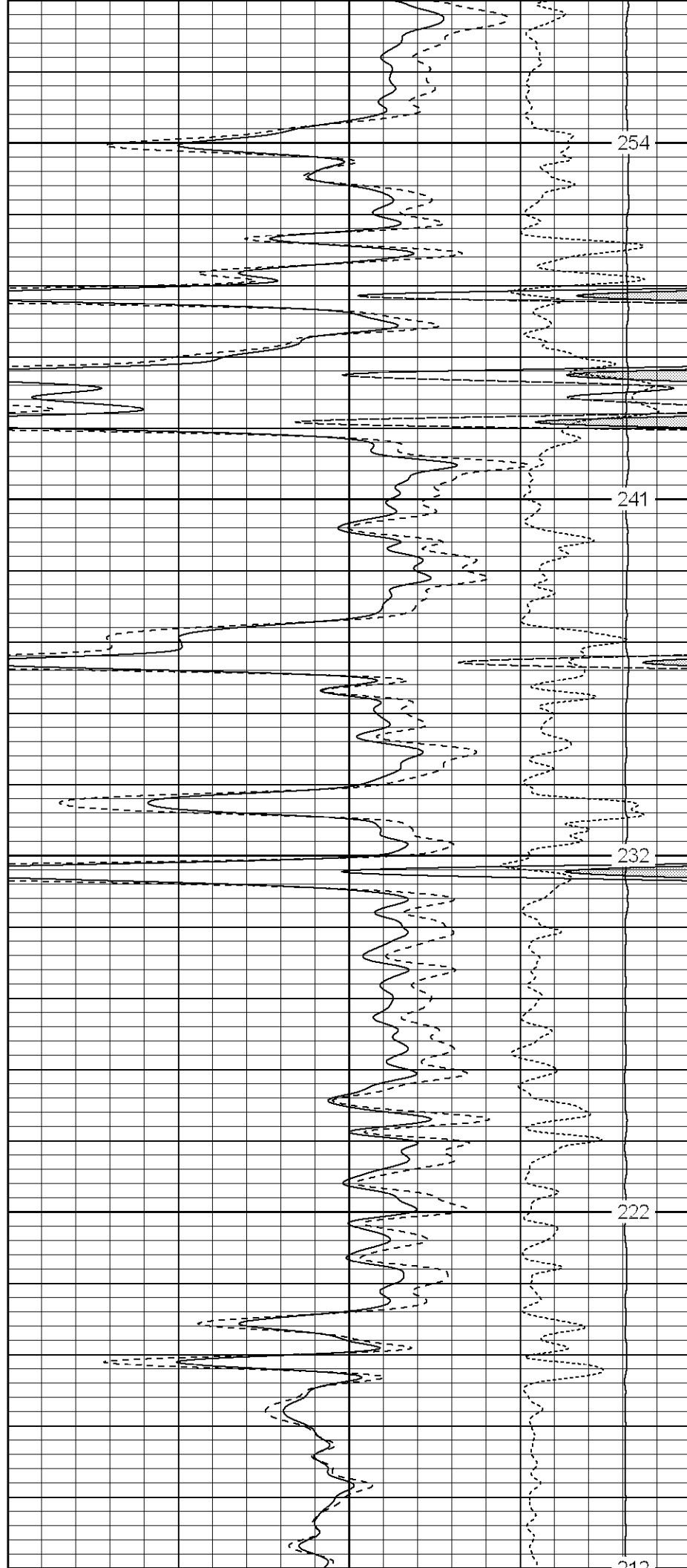
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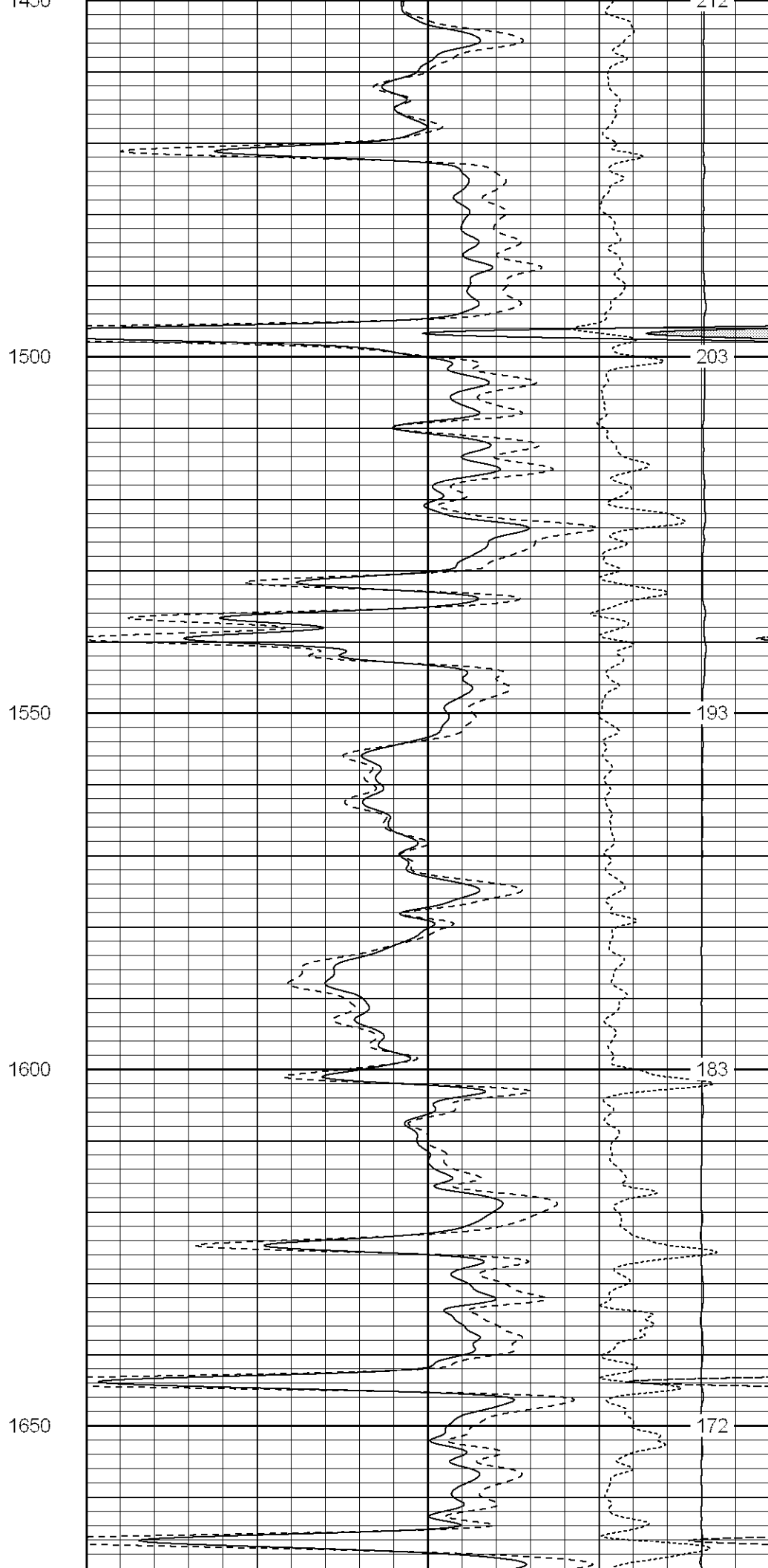
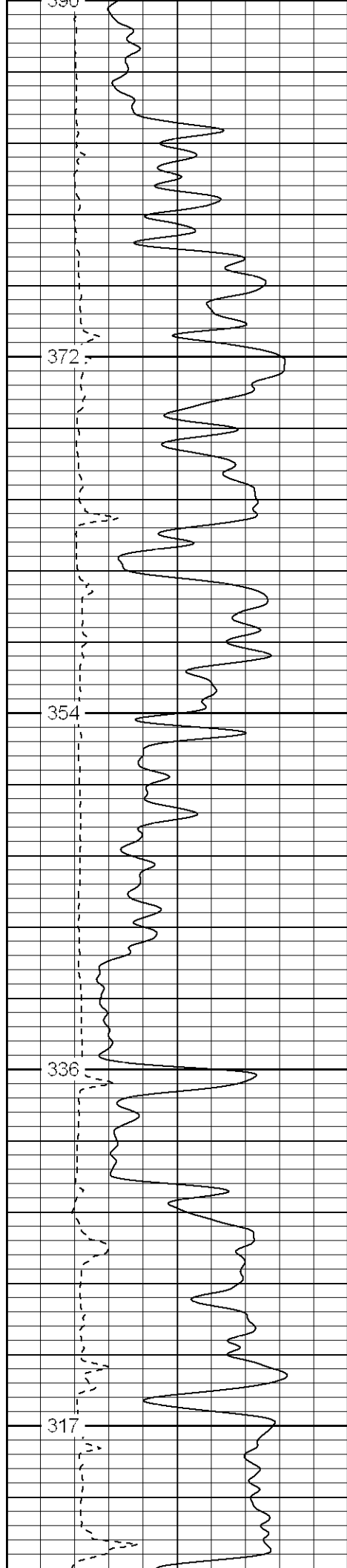
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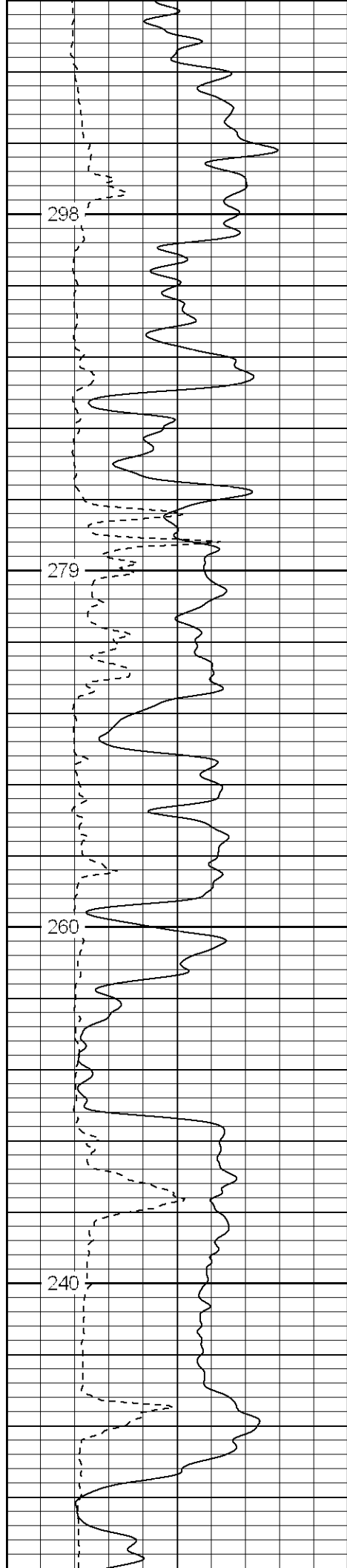
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1450





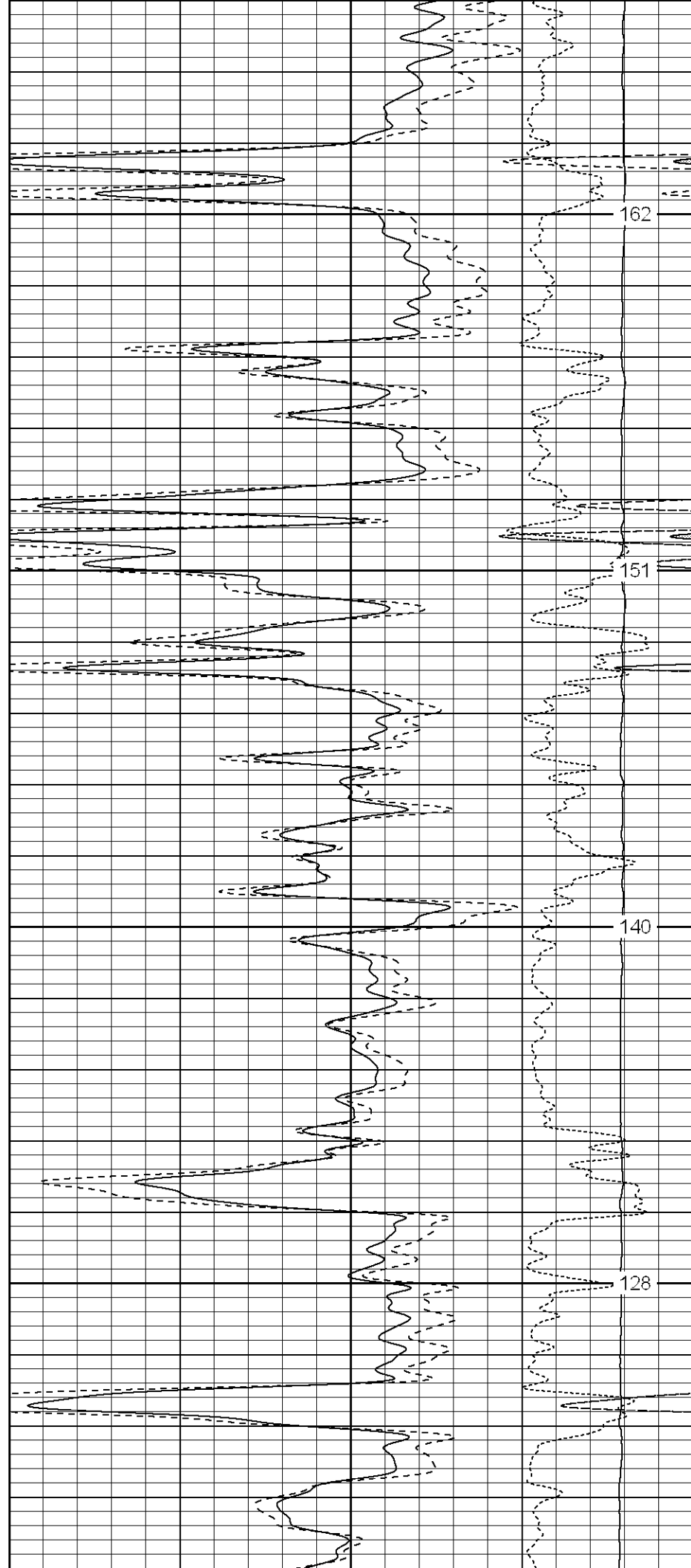


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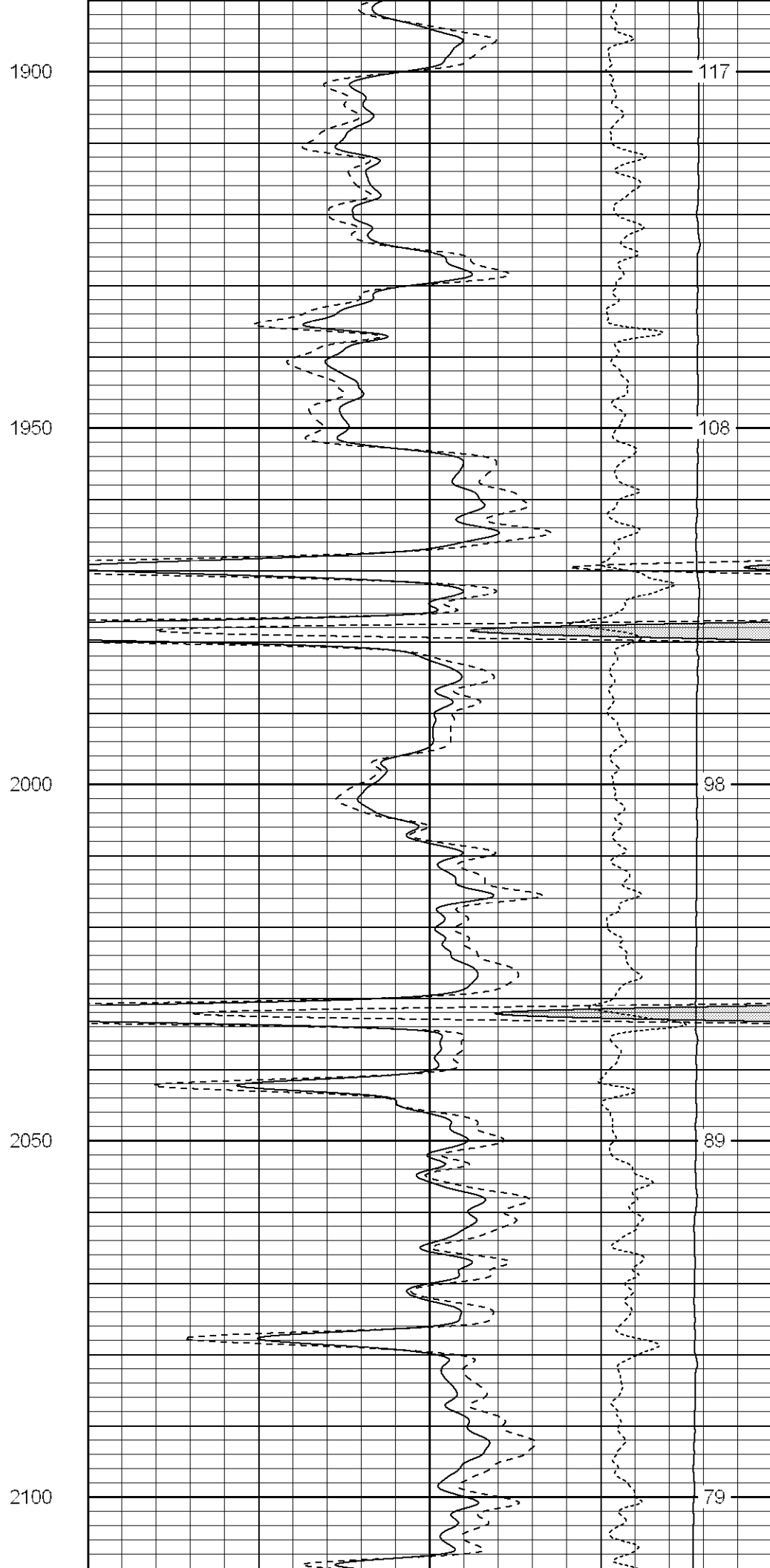
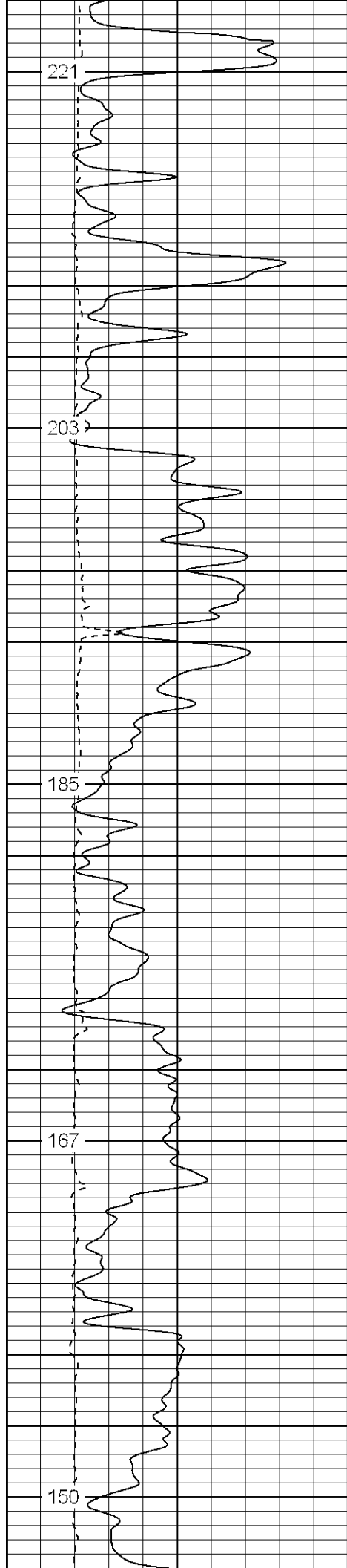
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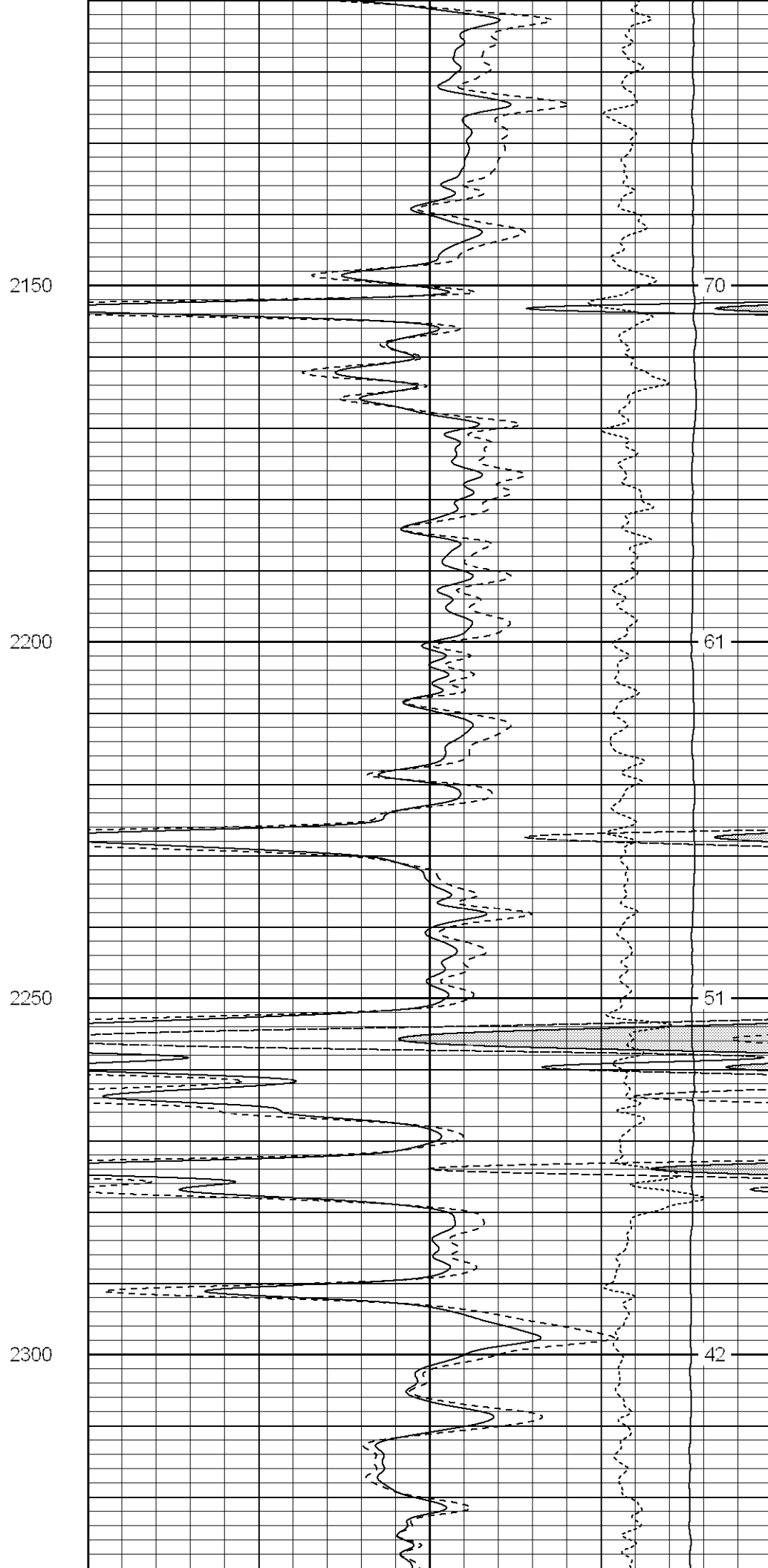
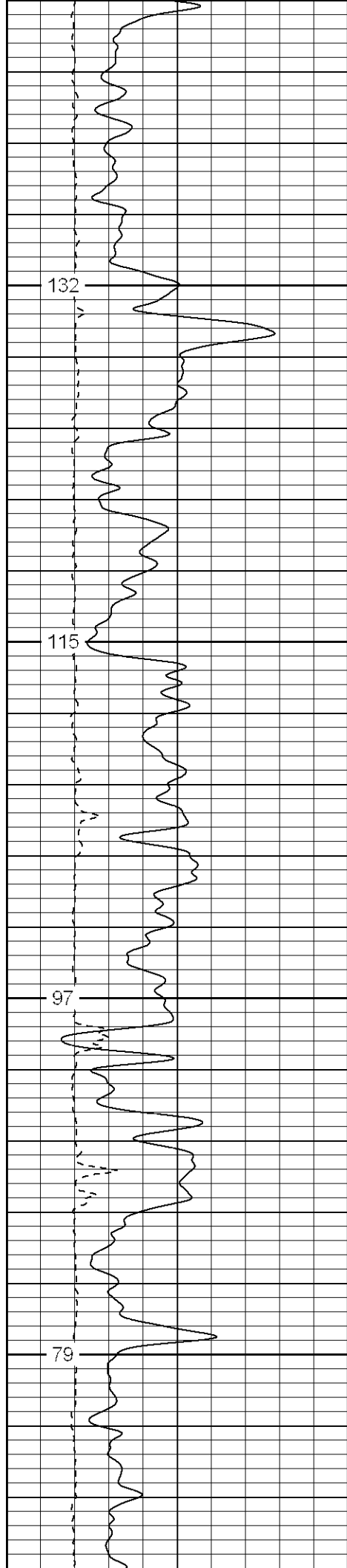
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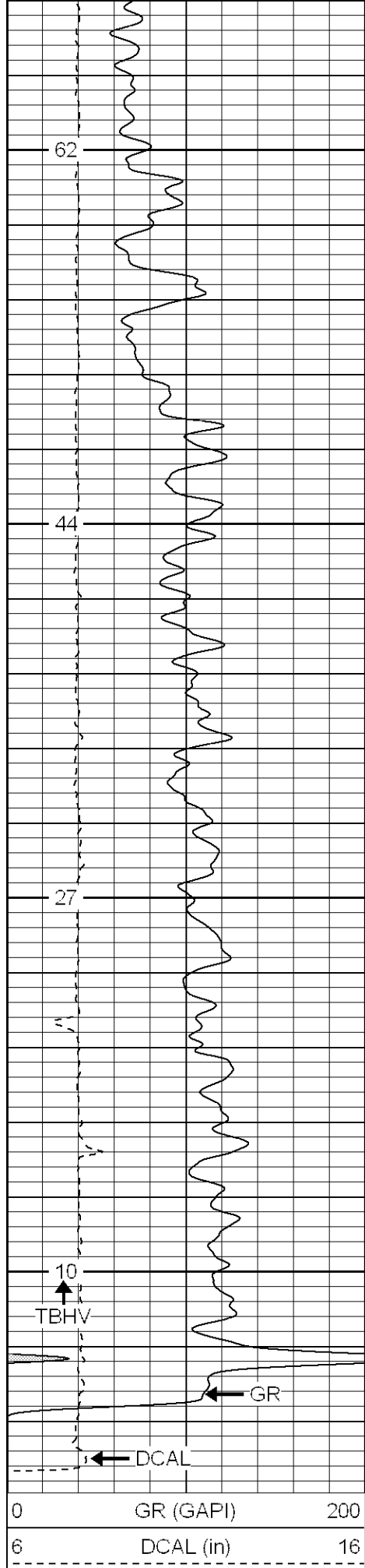
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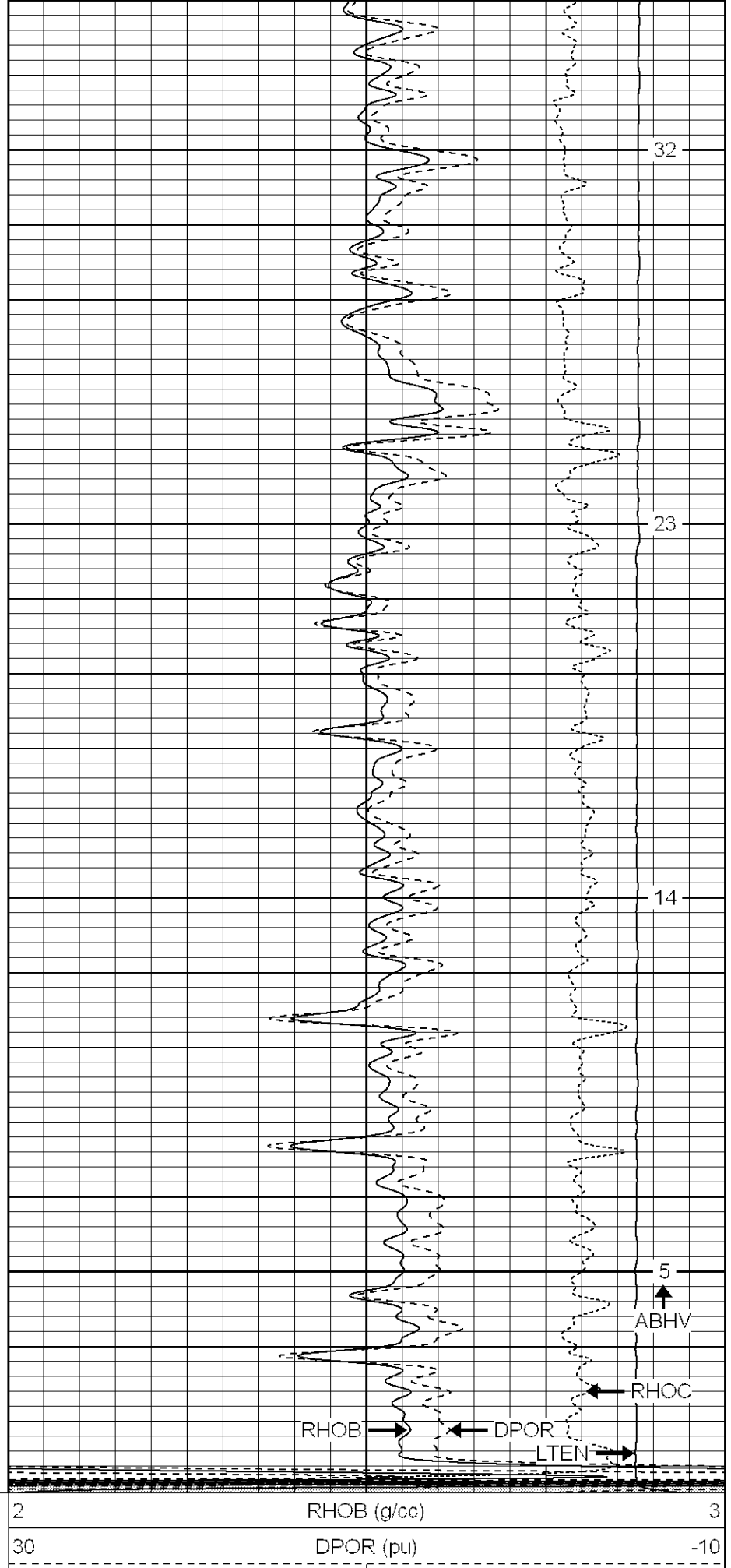


2350

2400

2450

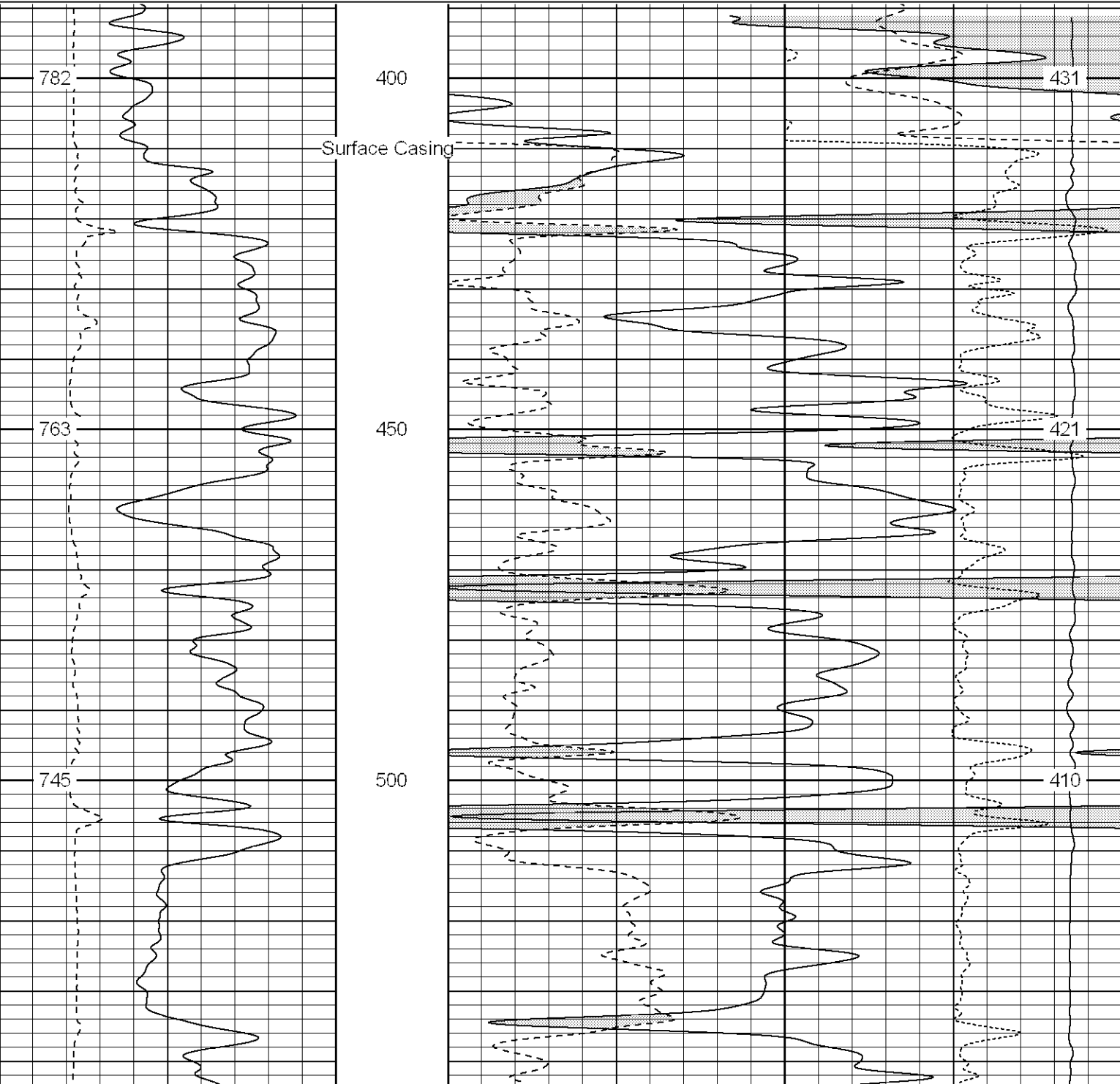
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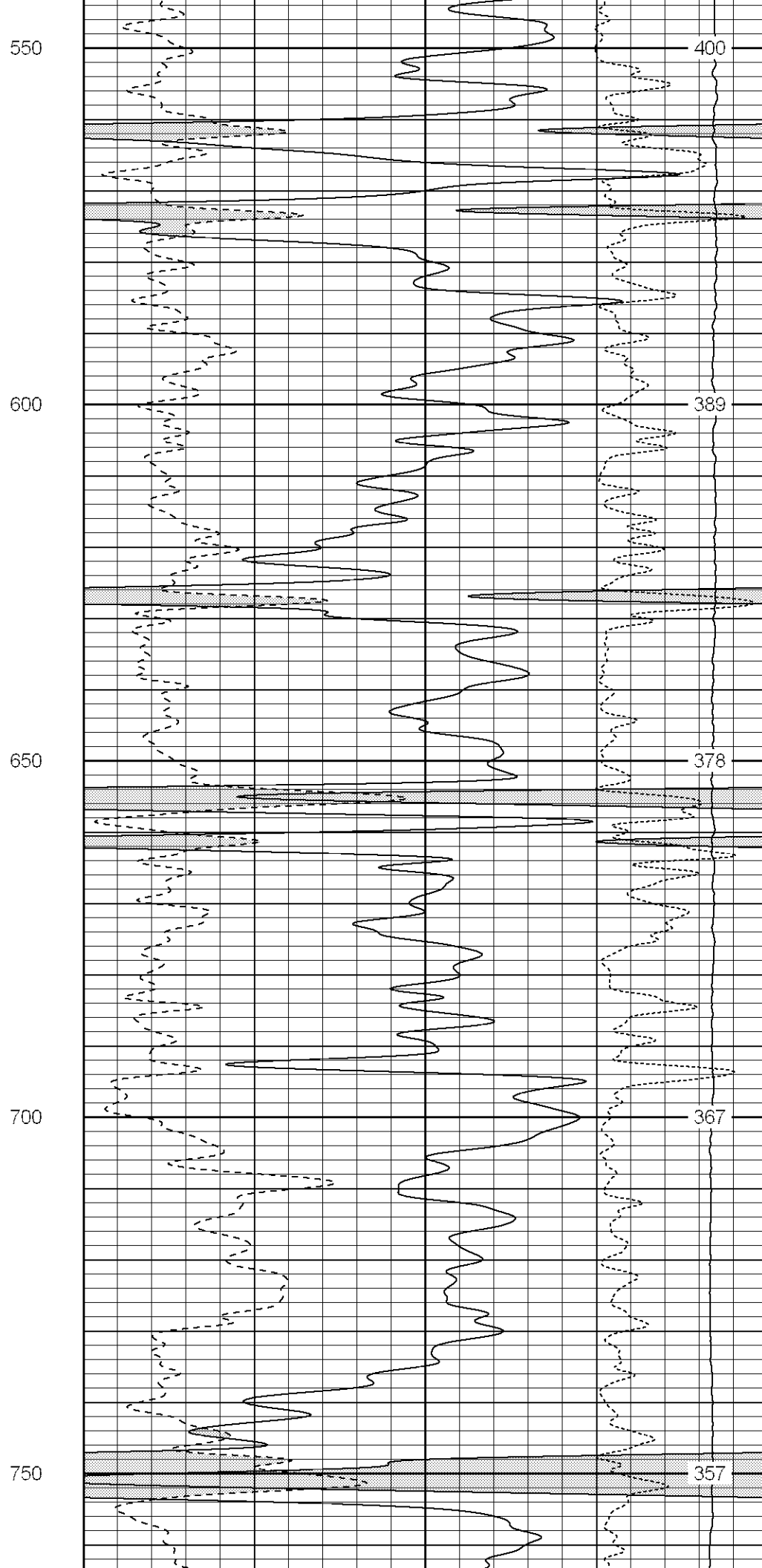
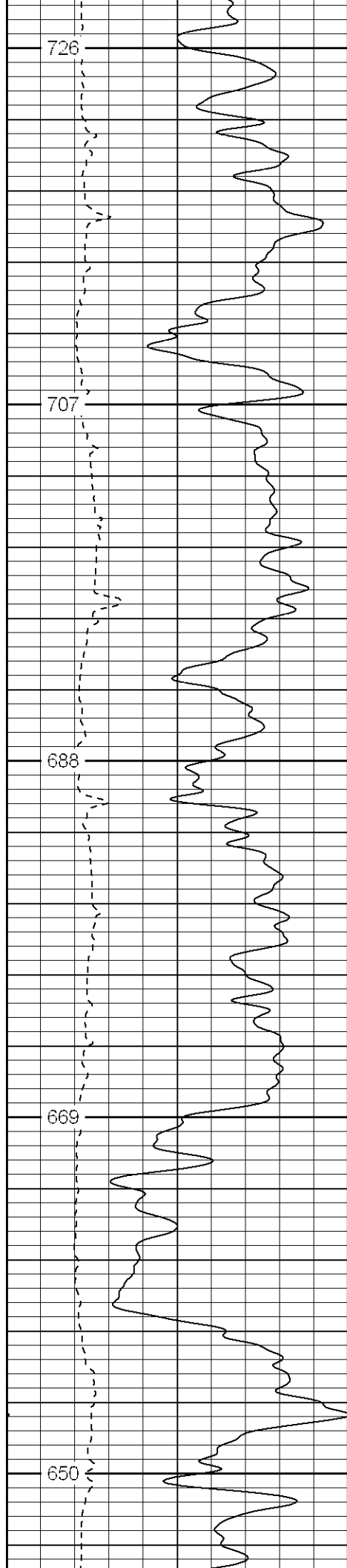


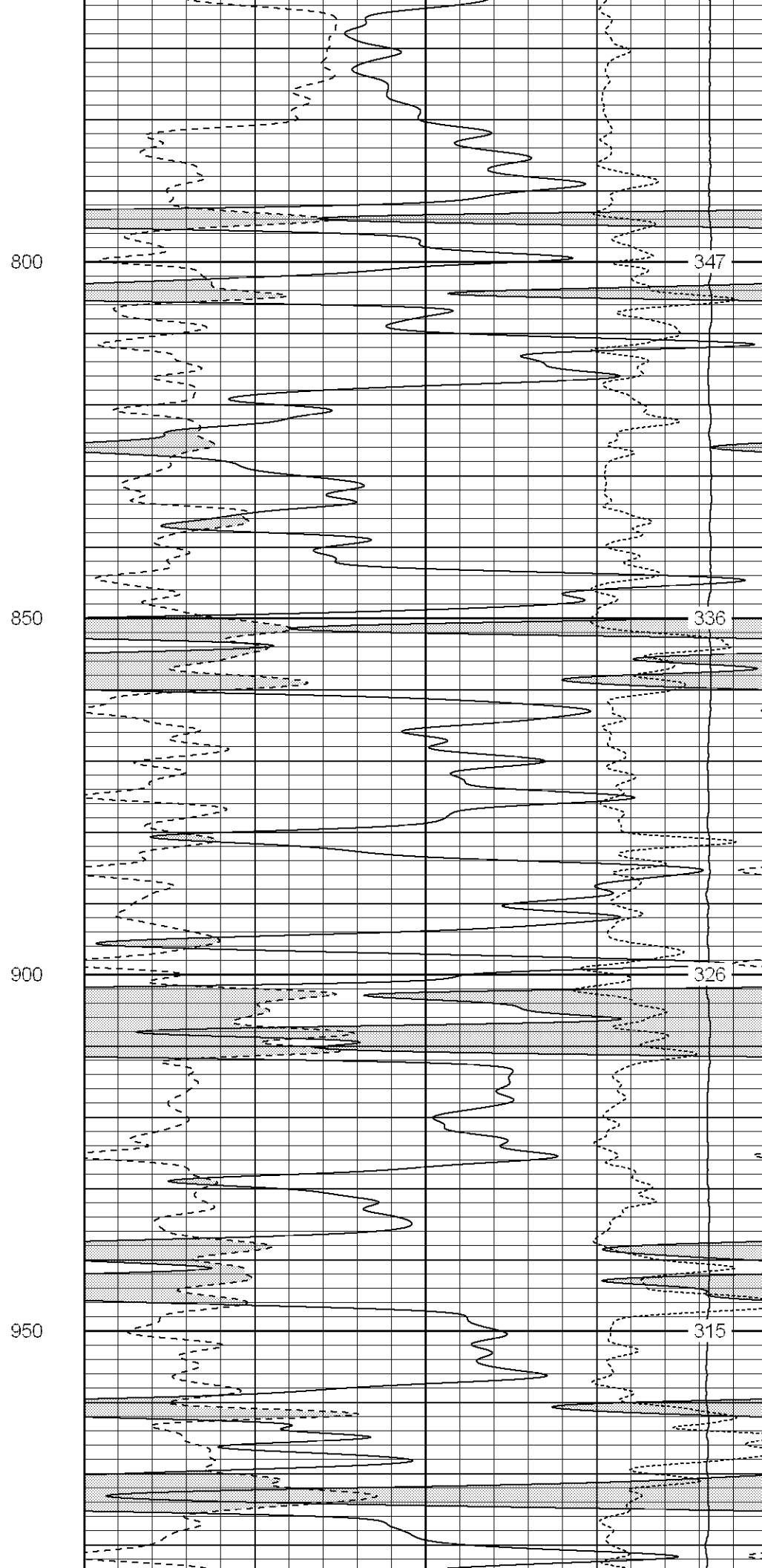
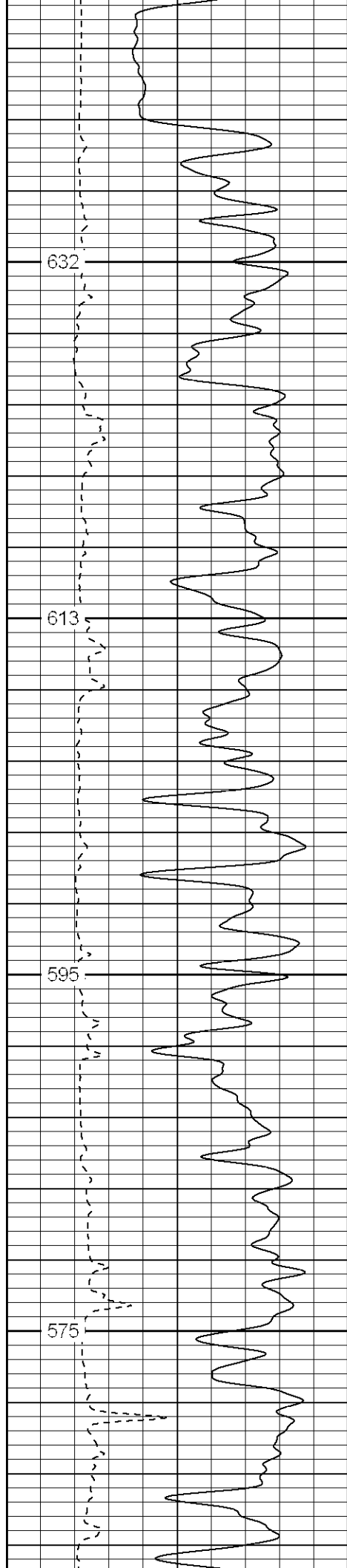
-0.5	RHOC (g/cc)	0.5
5000	LTEN (lb)	0

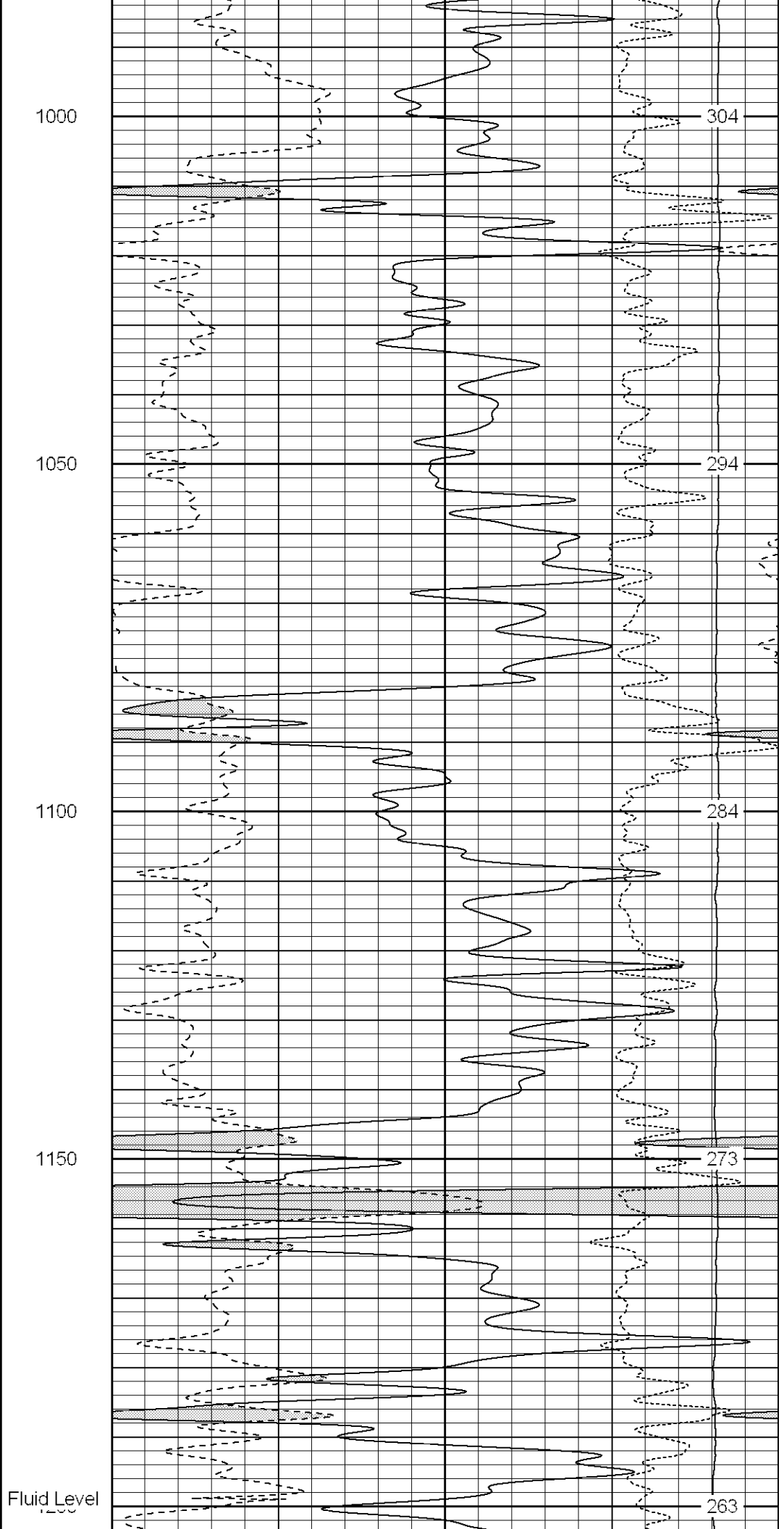
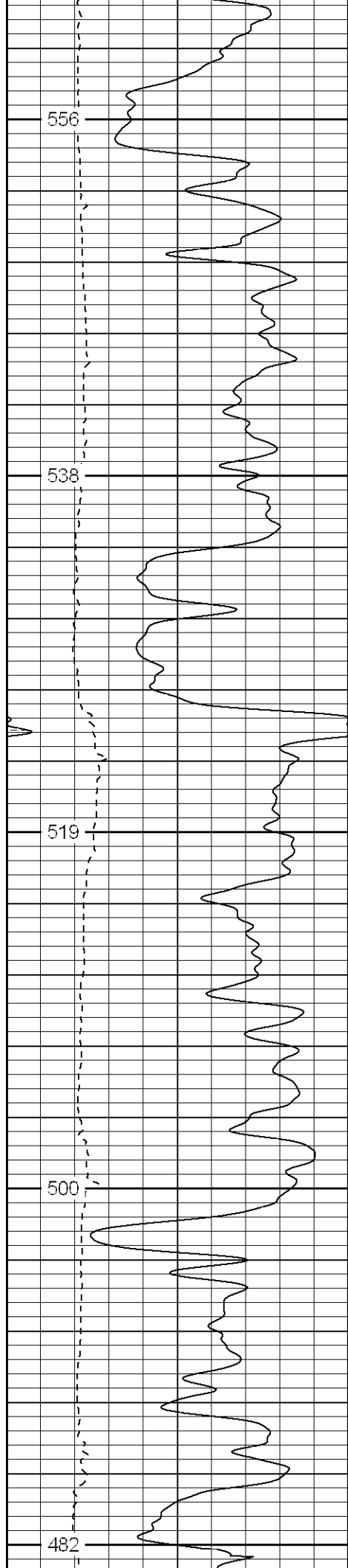
Database File: hr3515.db  
Dataset Pathname: pass5.2  
Presentation Format: cdnl  
Dataset Creation: Sun Sep 10 12:18:46 2006 by Calc Warrior 7.0 STD Ope  
Charted by: Depth in Feet scaled 1:240

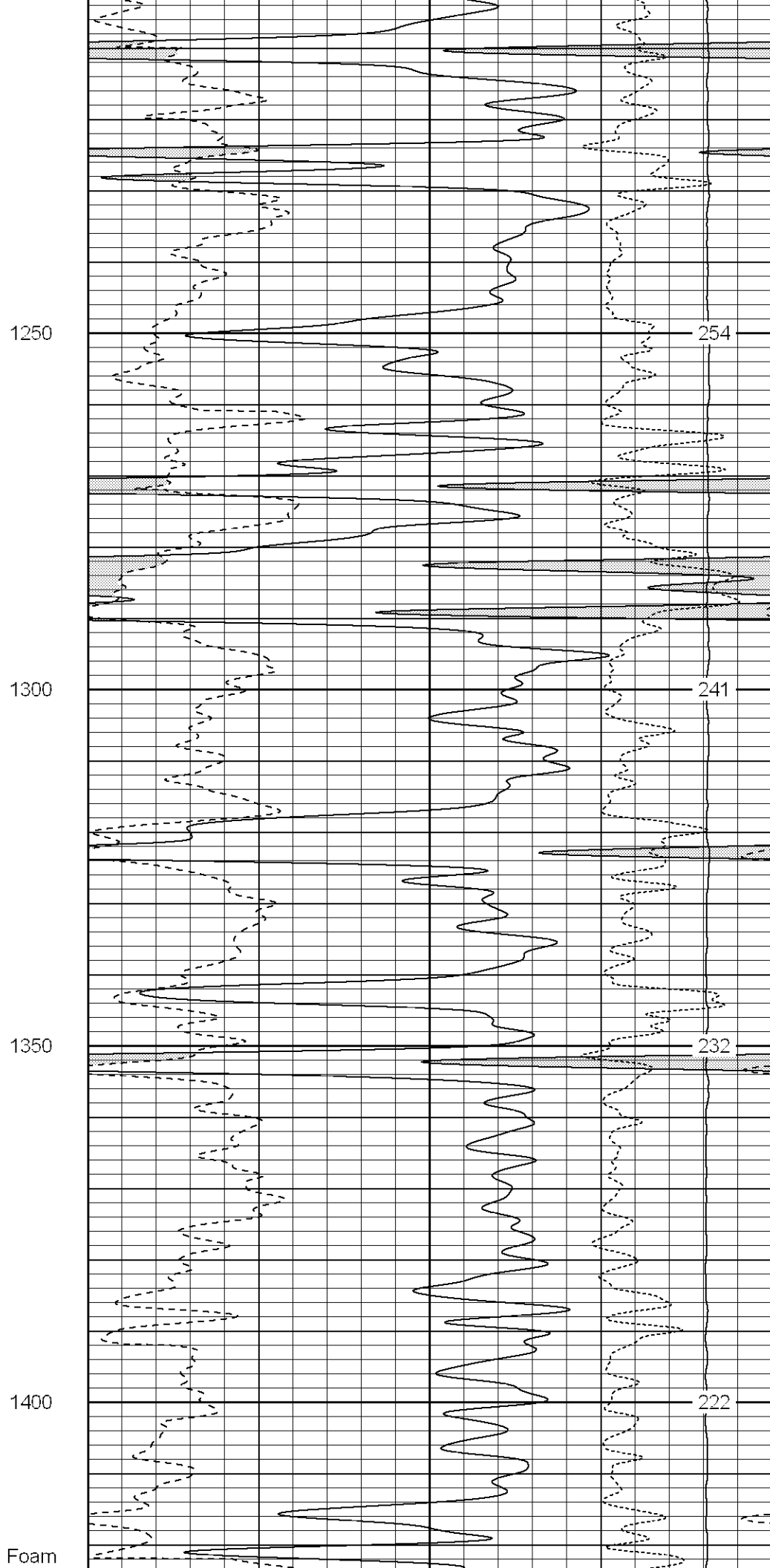
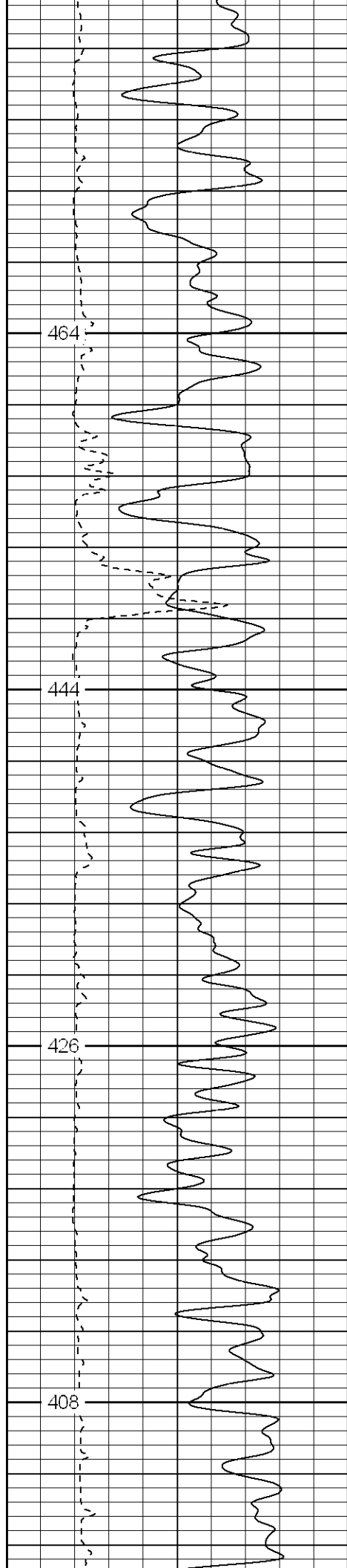
6	DCAL (in)	16	30	NPOR (pu)	-10
0	GR (GAPI)	200	30	DPOR (pu)	-10
			-0.5	RHOC (g/cc)	0.5
			5000	LTEN (lb)	0



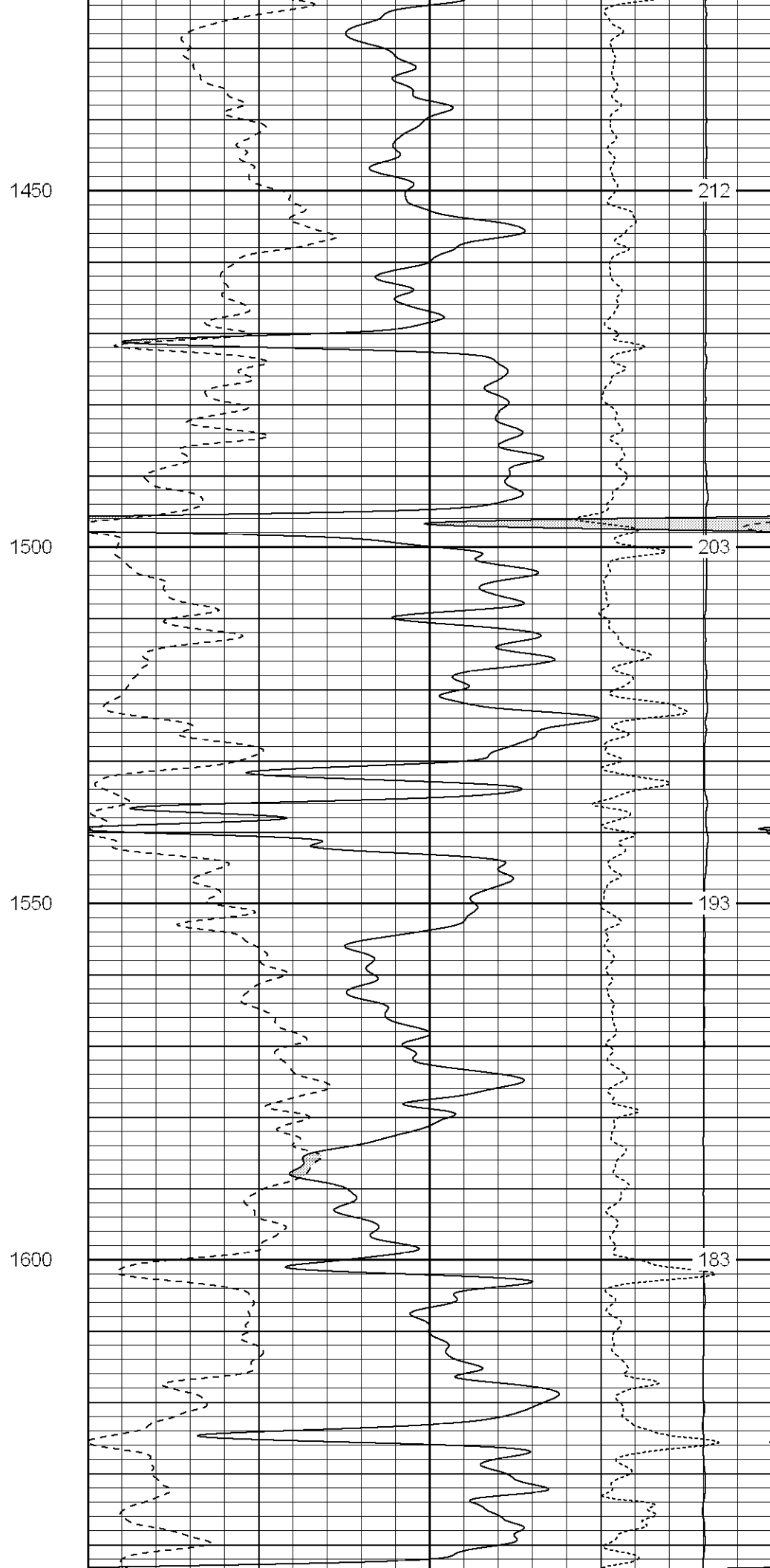
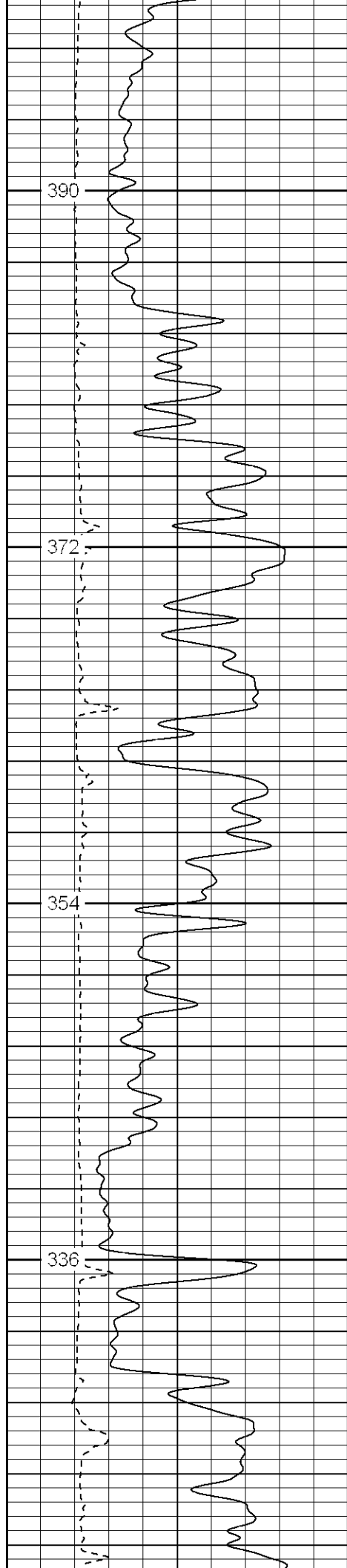


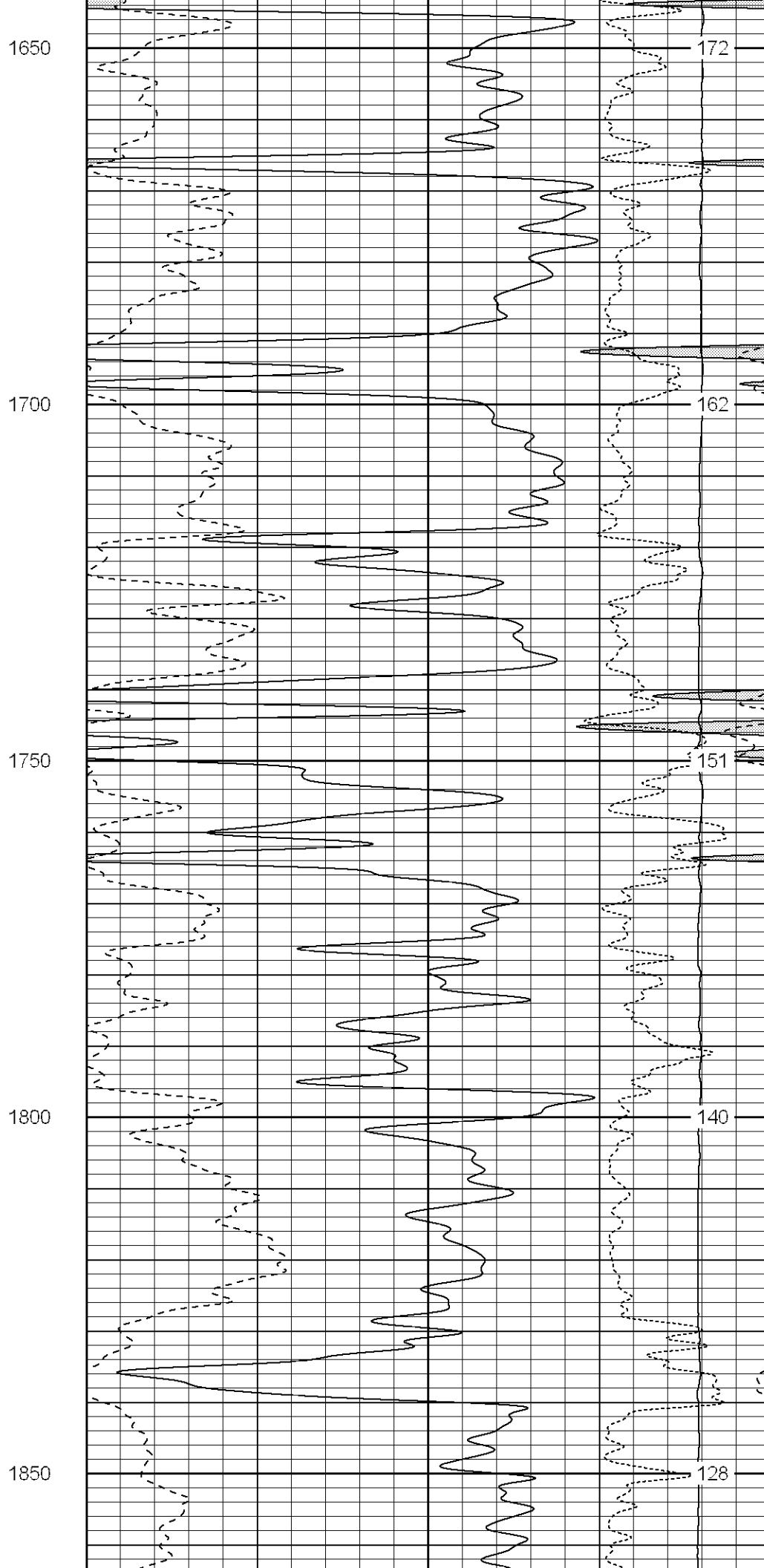
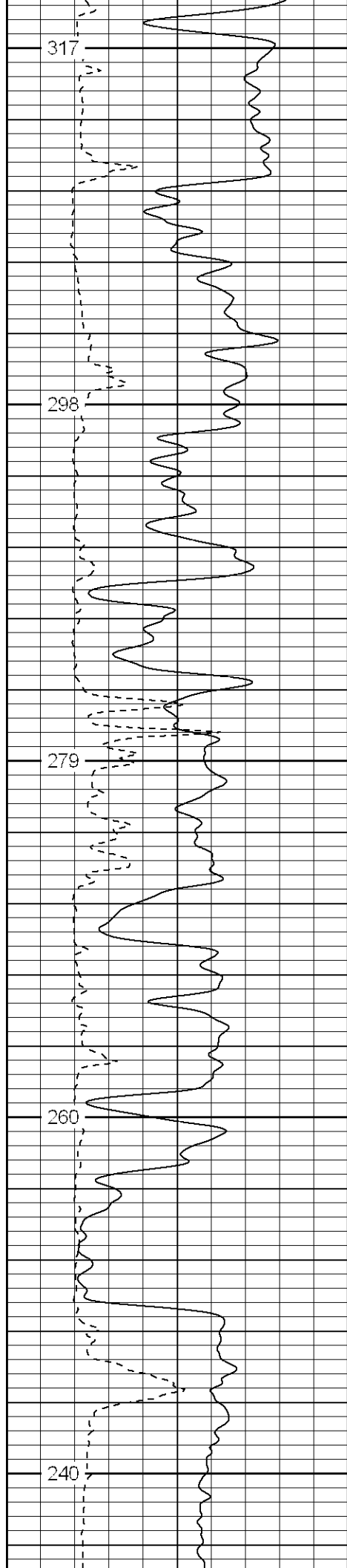


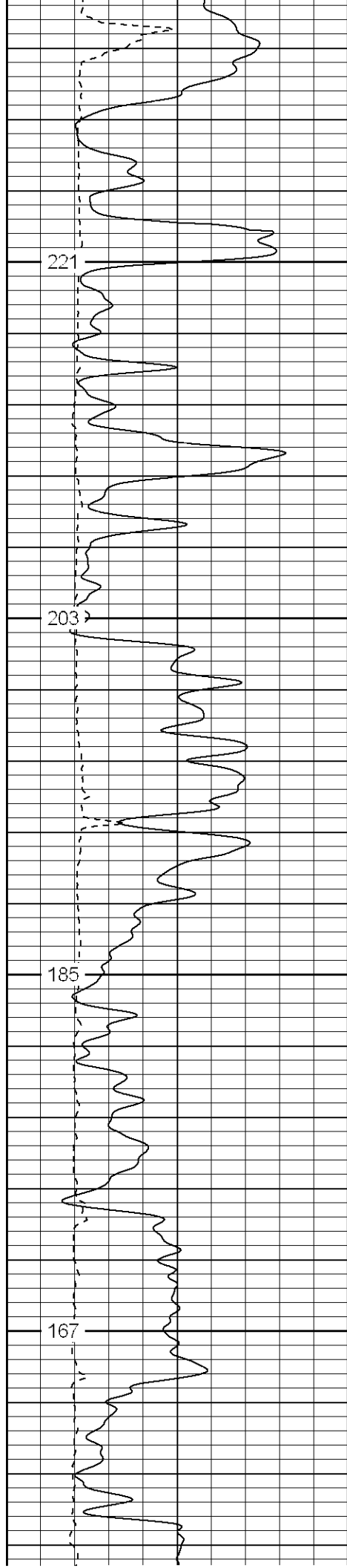










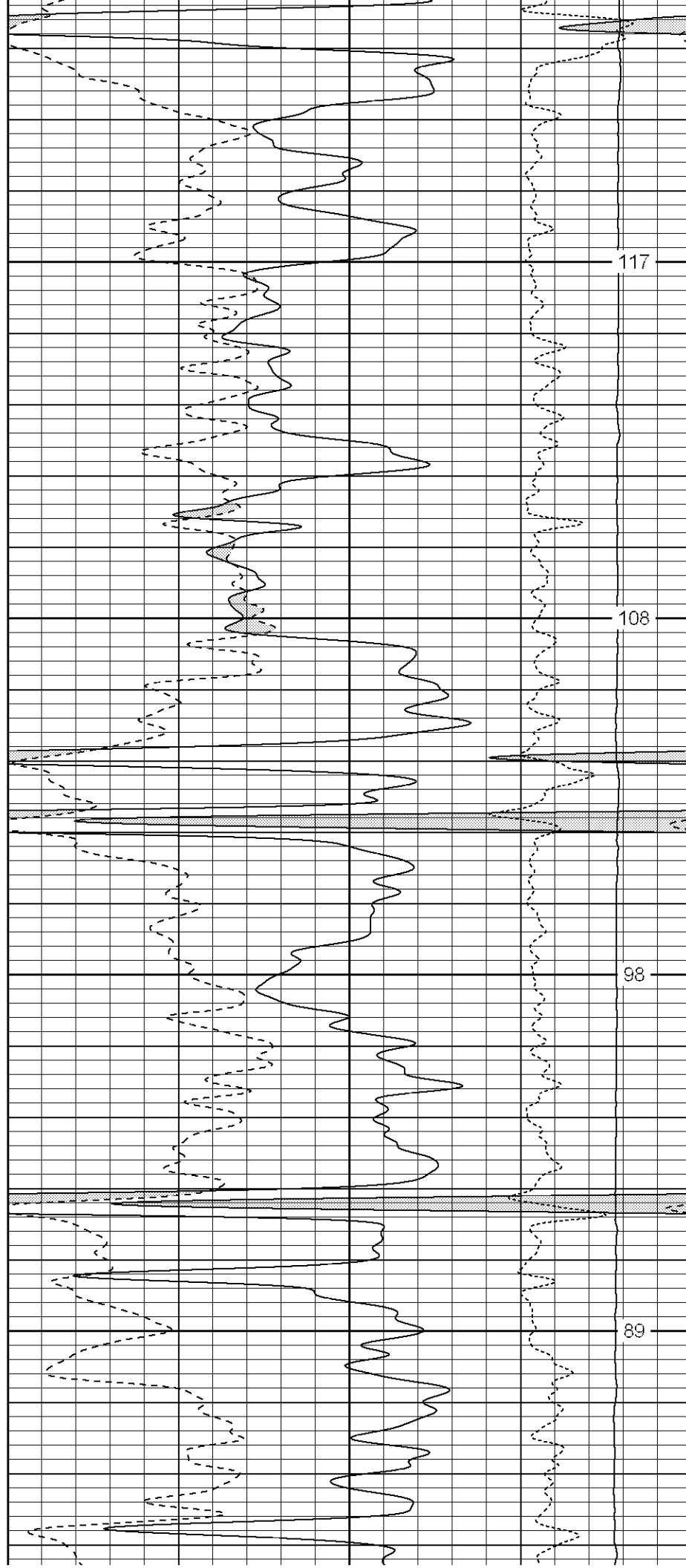


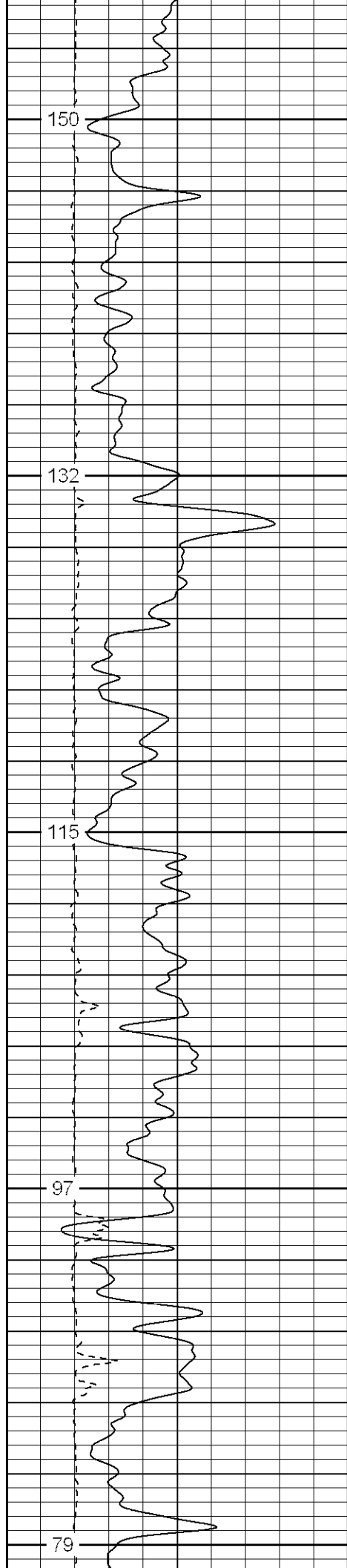
1900

1950

2000

2050





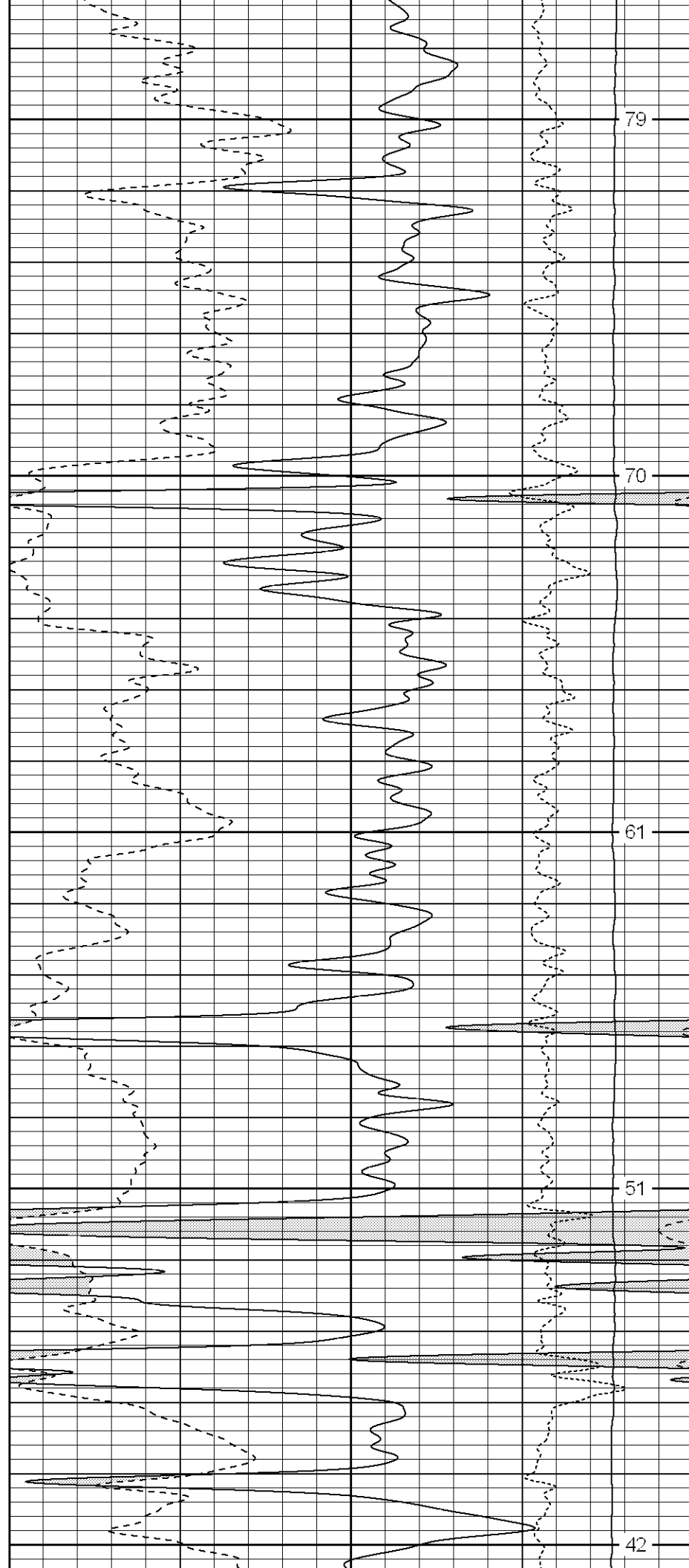
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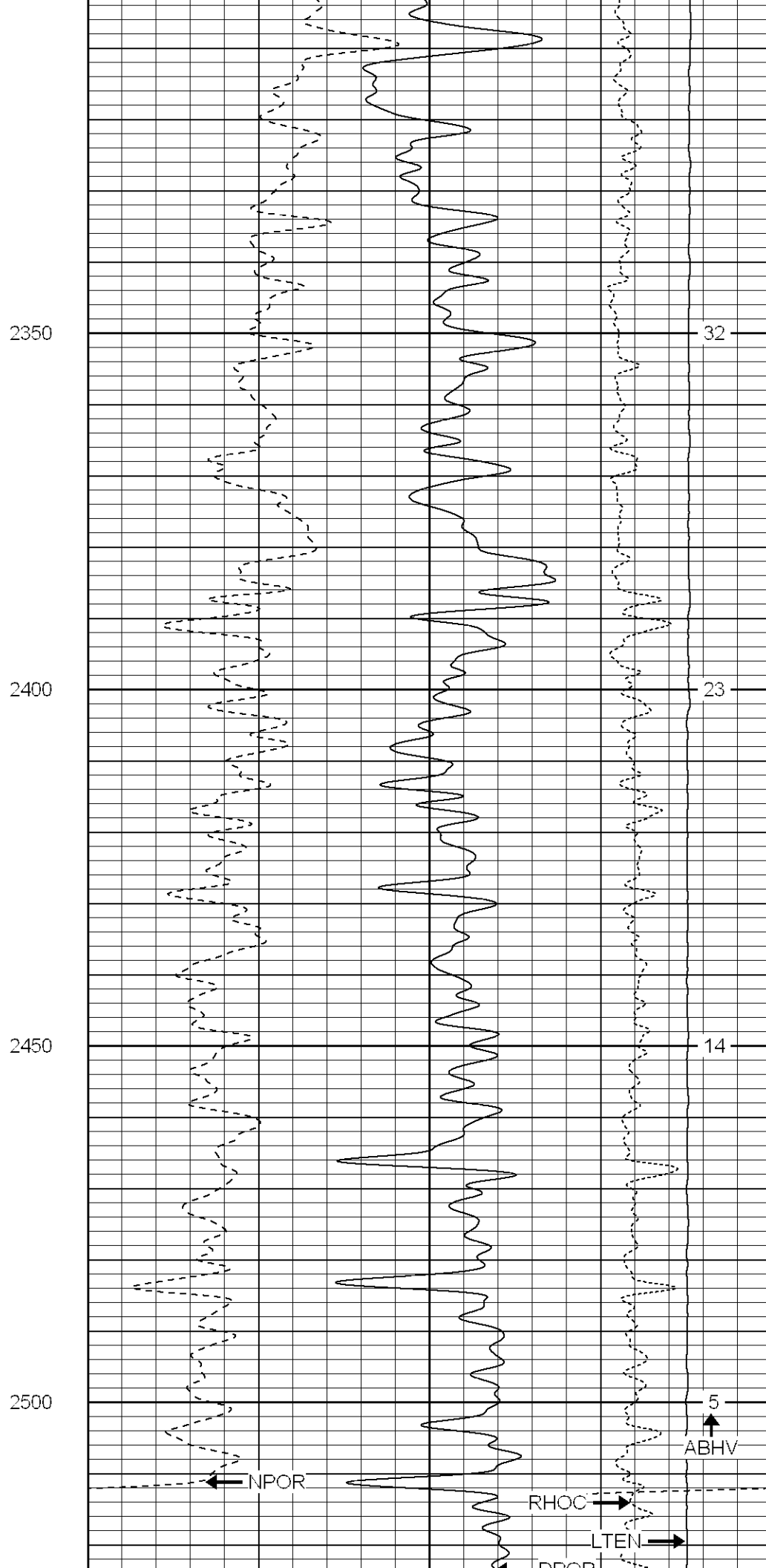
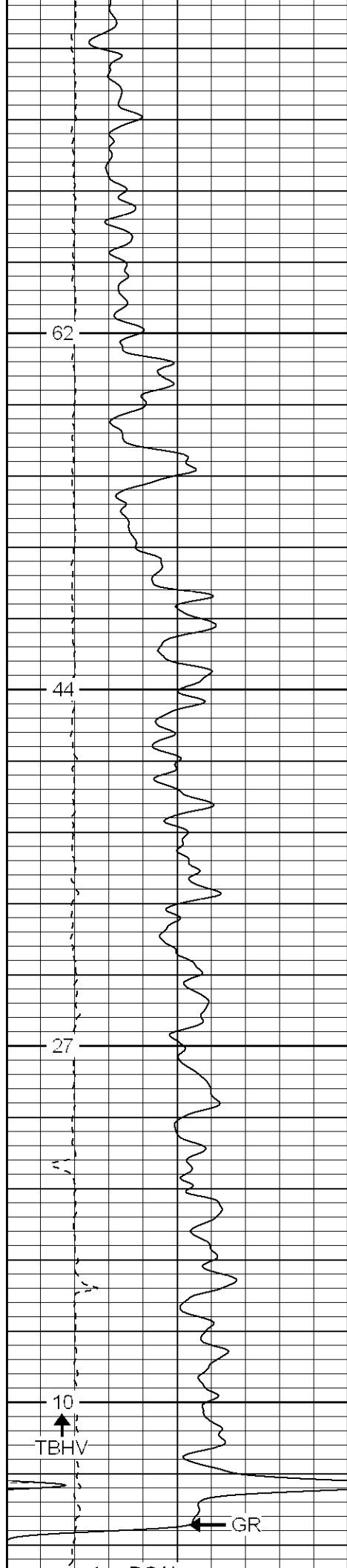
2150

2200

2250

2300





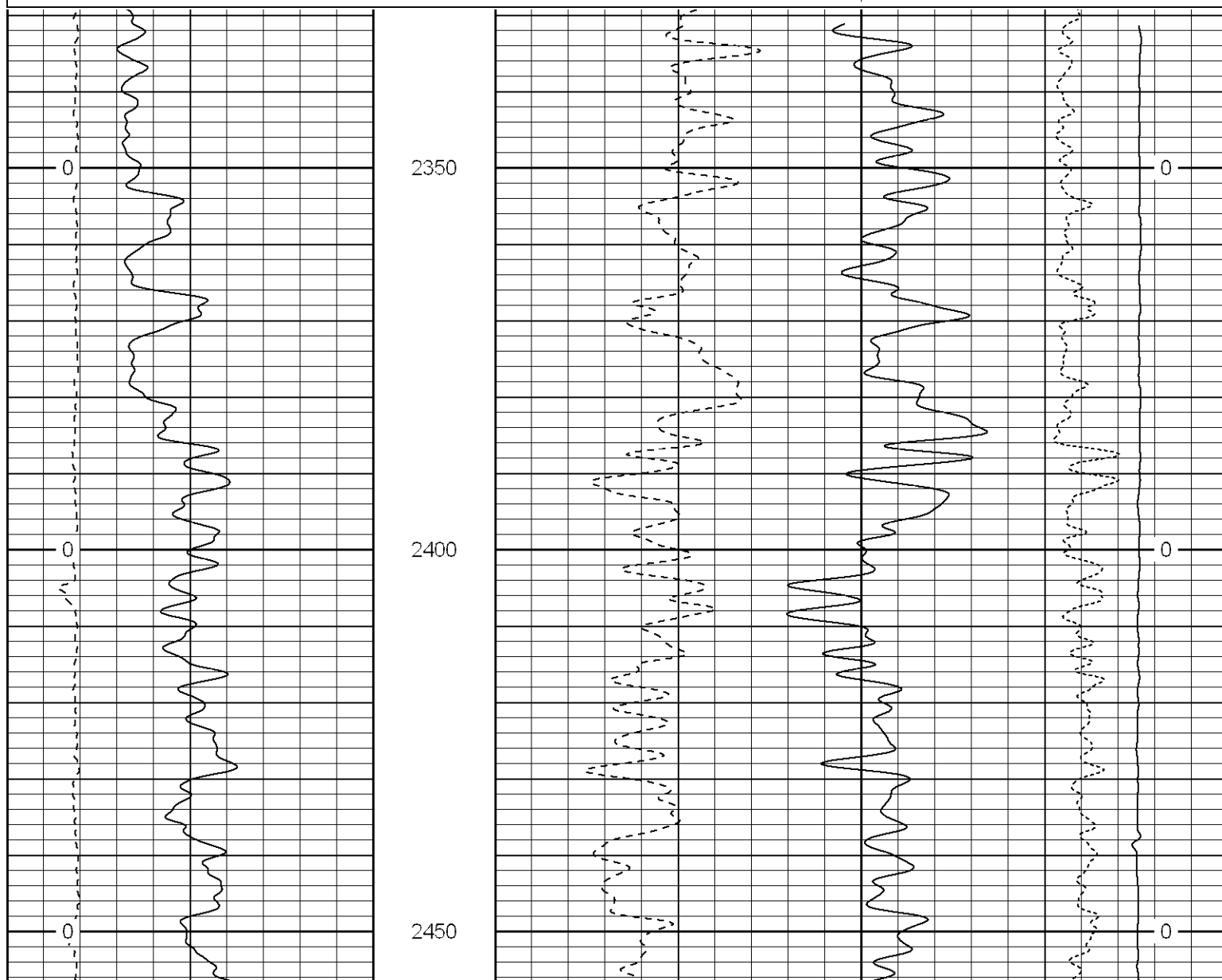
<div> <div>DCAL</div> <div>6</div> <div>16</div> </div>			<div> <div>DPOR</div> <div>30</div> <div>-10</div> </div>		
<div> <div>GR (GAPI)</div> <div>0</div> <div>200</div> </div>			<div> <div>DPOR (pu)</div> <div>30</div> <div>-10</div> </div>		
			<div> <div>RHOC (g/cc)</div> <div>-0.5</div> <div>0.5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

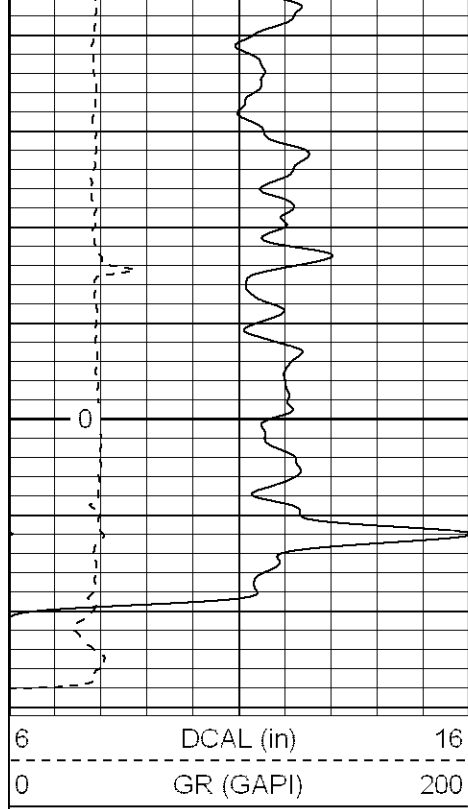
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# Repeat Section

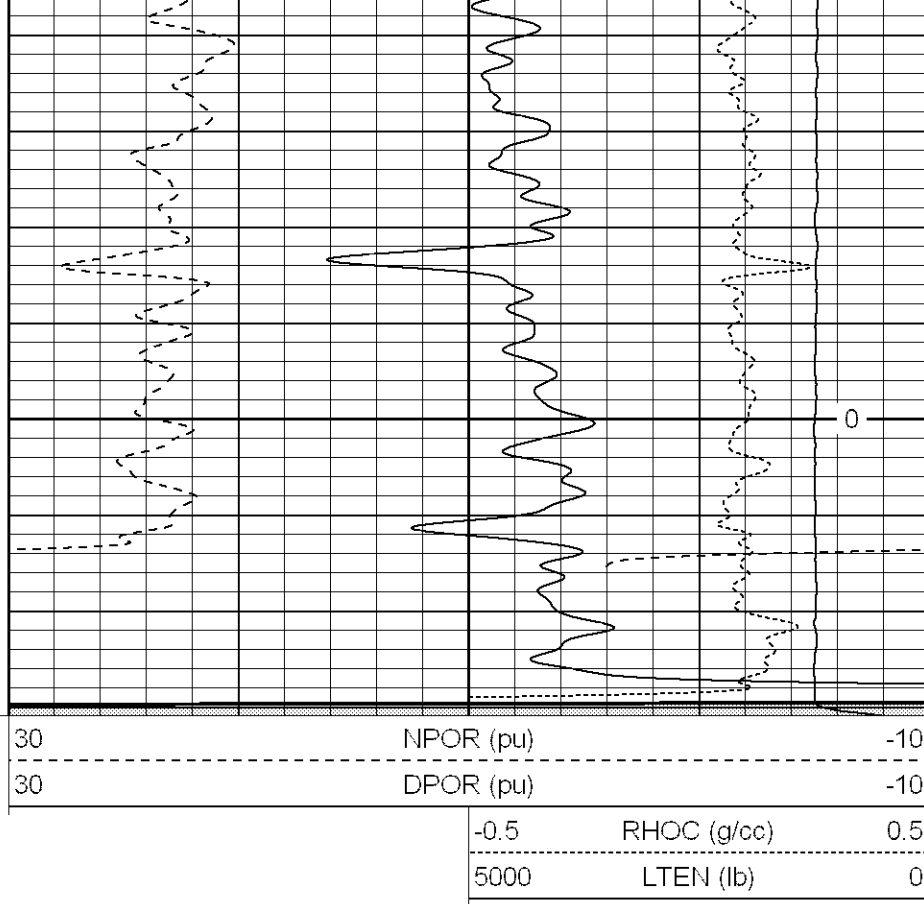
Database File: hr3515.db  
 Dataset Pathname: pass4  
 Presentation Format: cdnl  
 Dataset Creation: Sun Sep 10 10:37:23 2006 by Log Warrior 7.0 STD Ope  
 Charted by: Depth in Feet scaled 1:240

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





2500



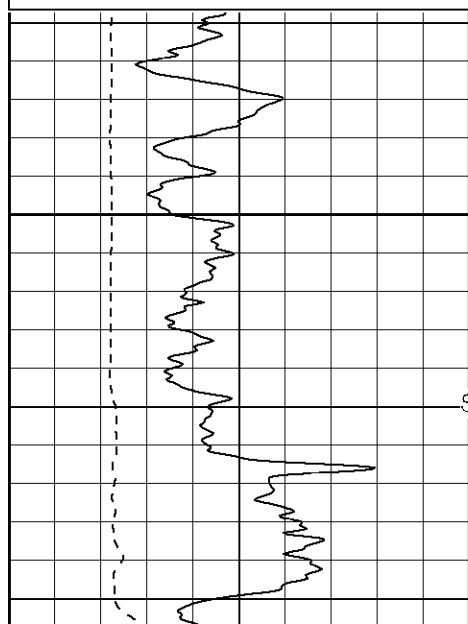
**Patterson**

# High Resolution Pass

Database File: hr3515.db  
 Dataset Pathname: pass6  
 Presentation Format: cdlhr  
 Dataset Creation: Mon Sep 11 07:53:03 2006 by Calc Warrior 7.0 STD Ope  
 Charted by: Depth in Feet scaled 1:120

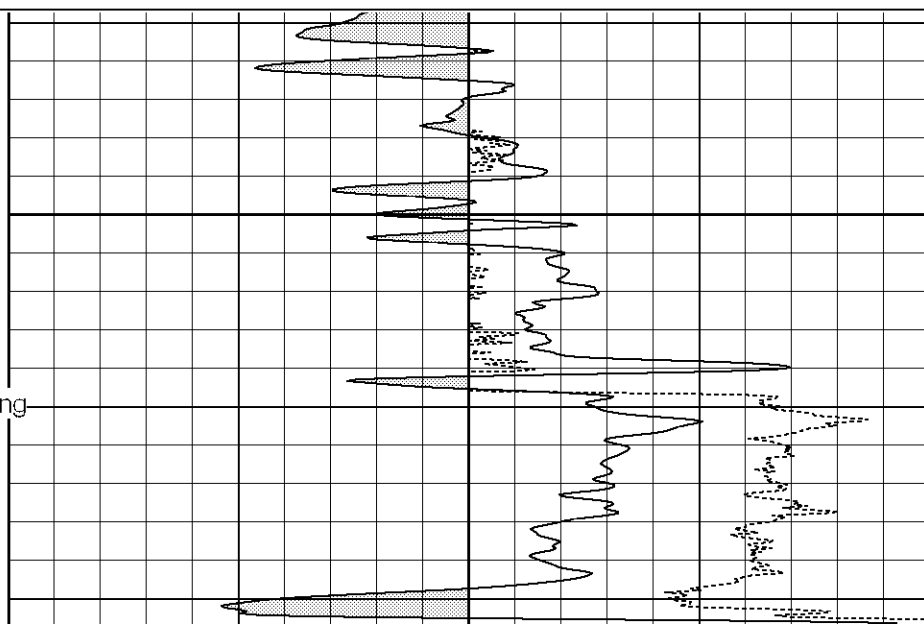
0	GR (GAPI)	200
6	DCAL (in)	16

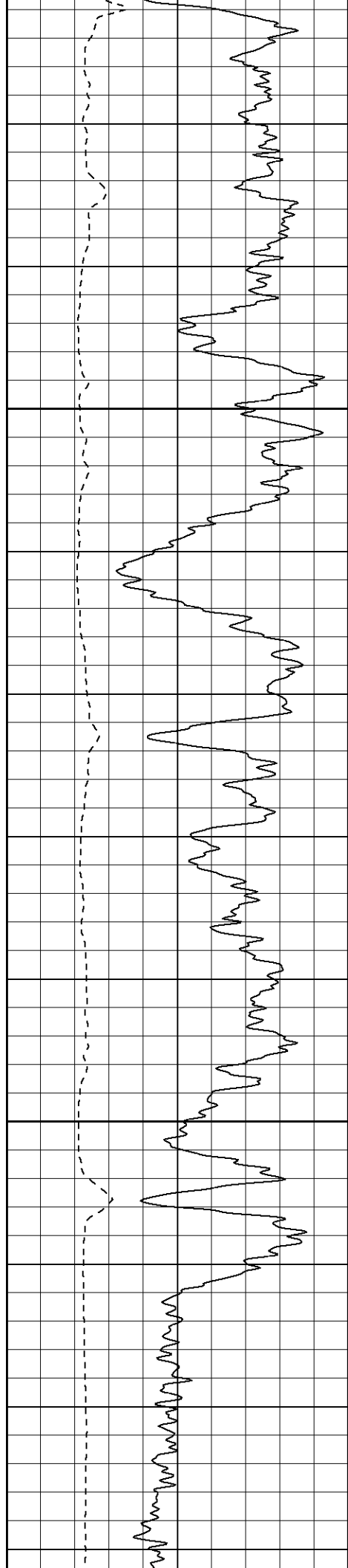
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



400

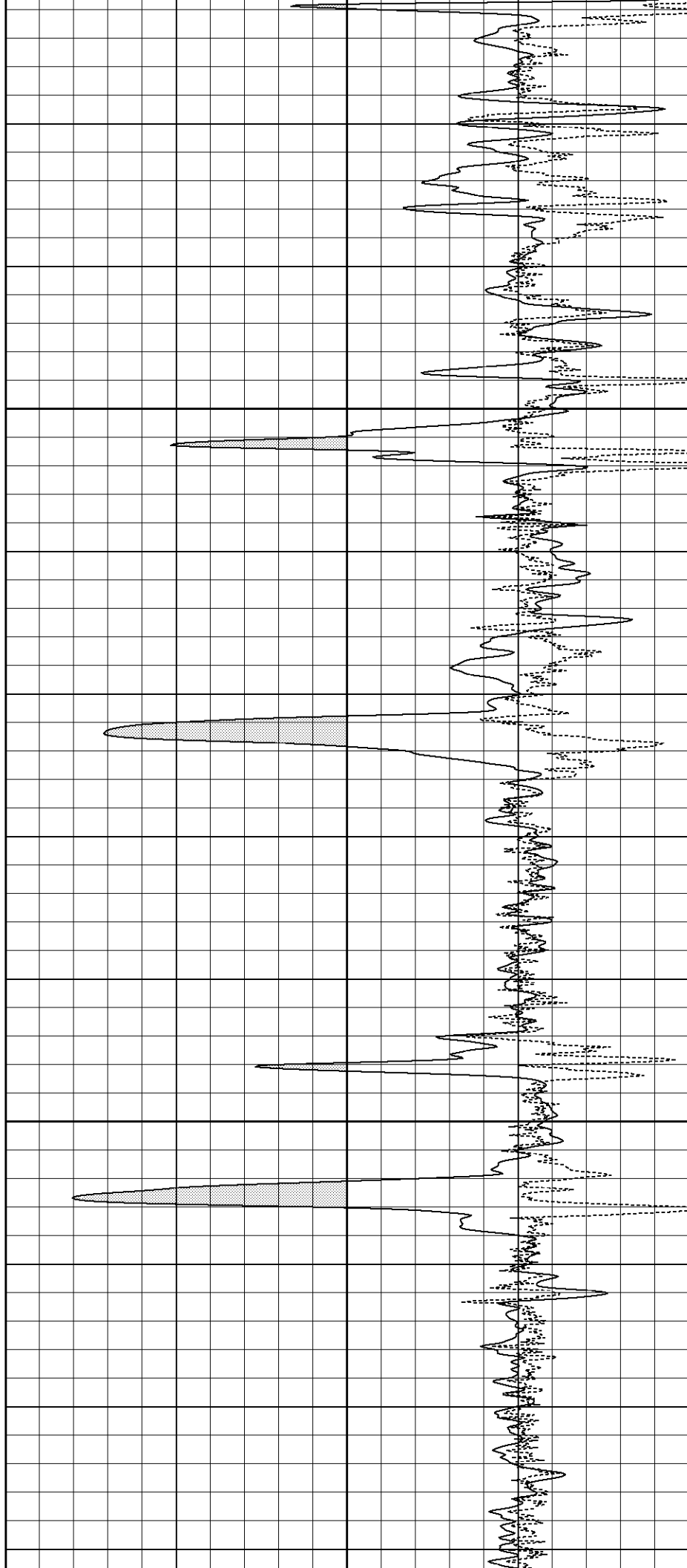
Surface Casing



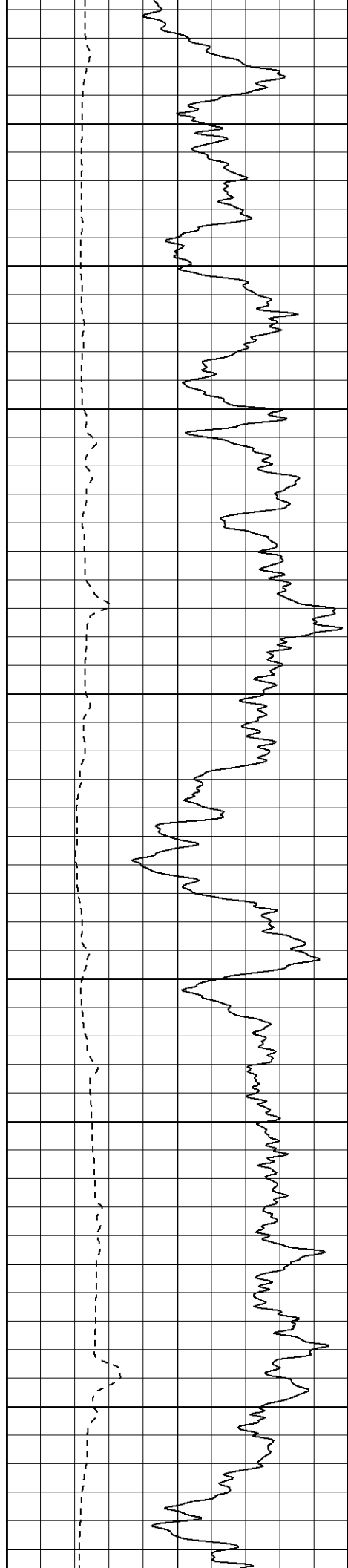


450

500

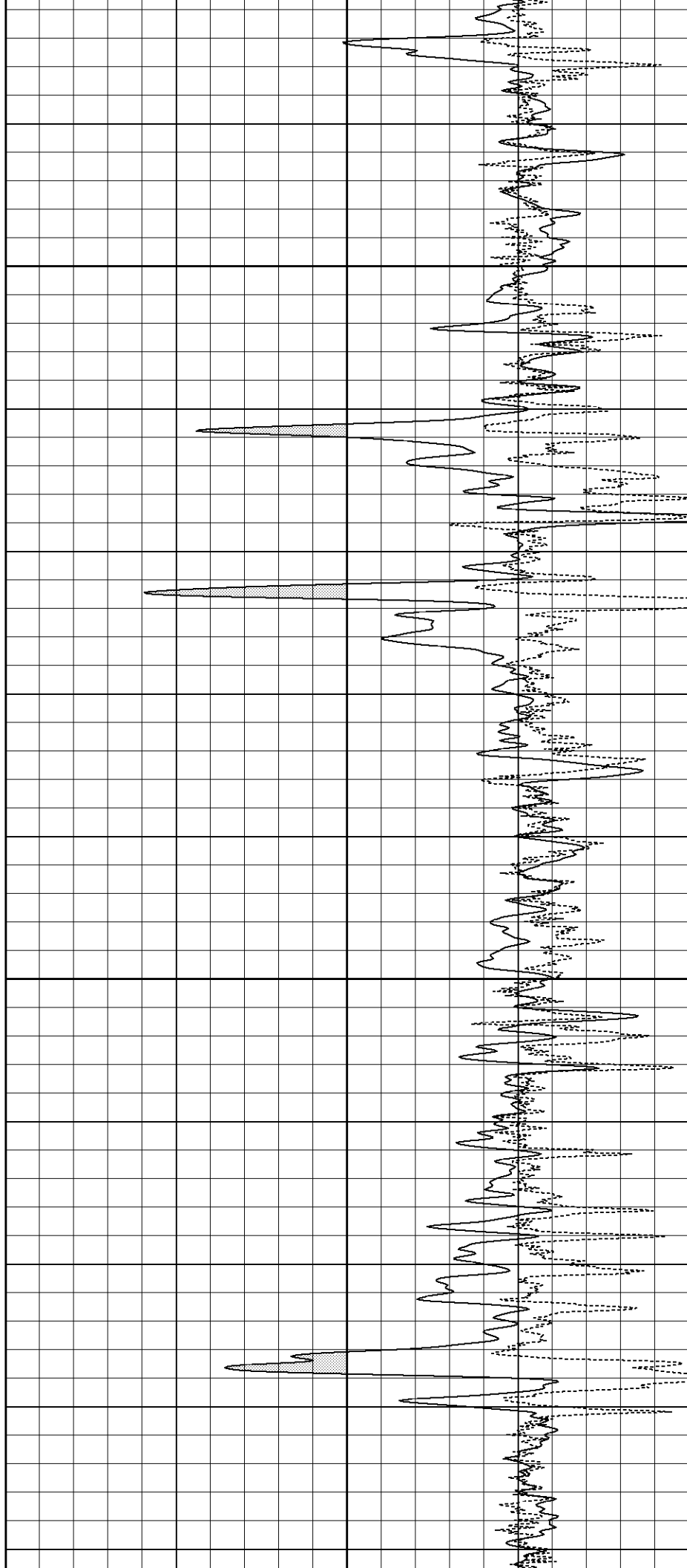


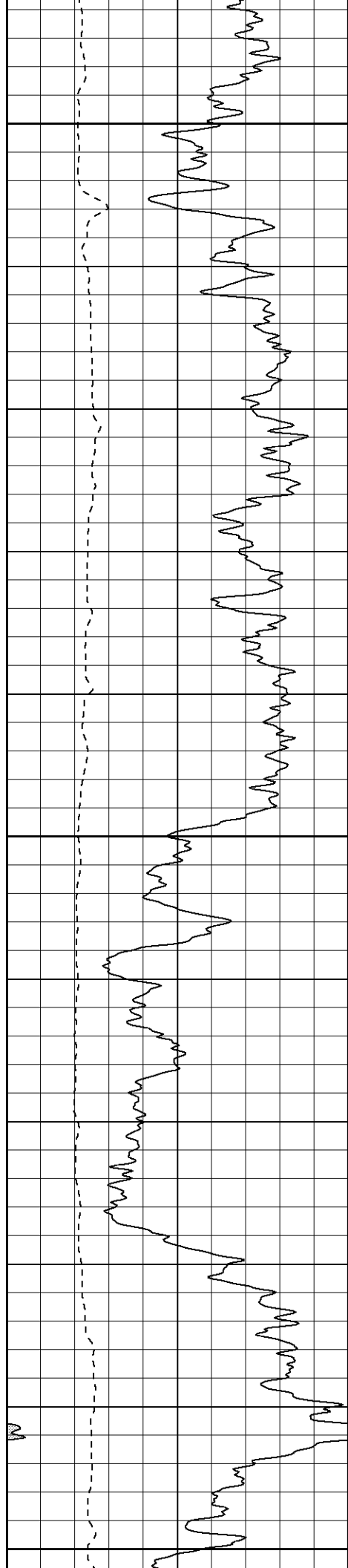




550

600

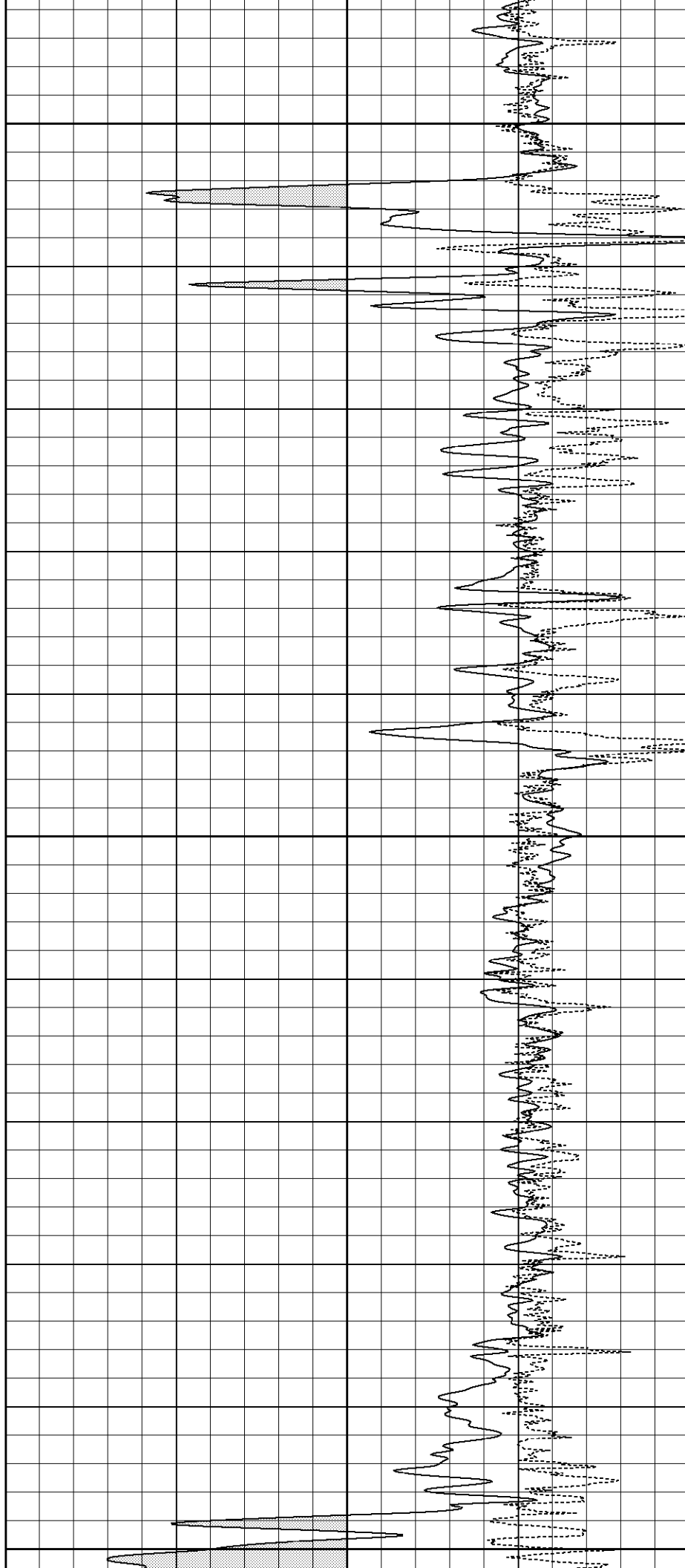


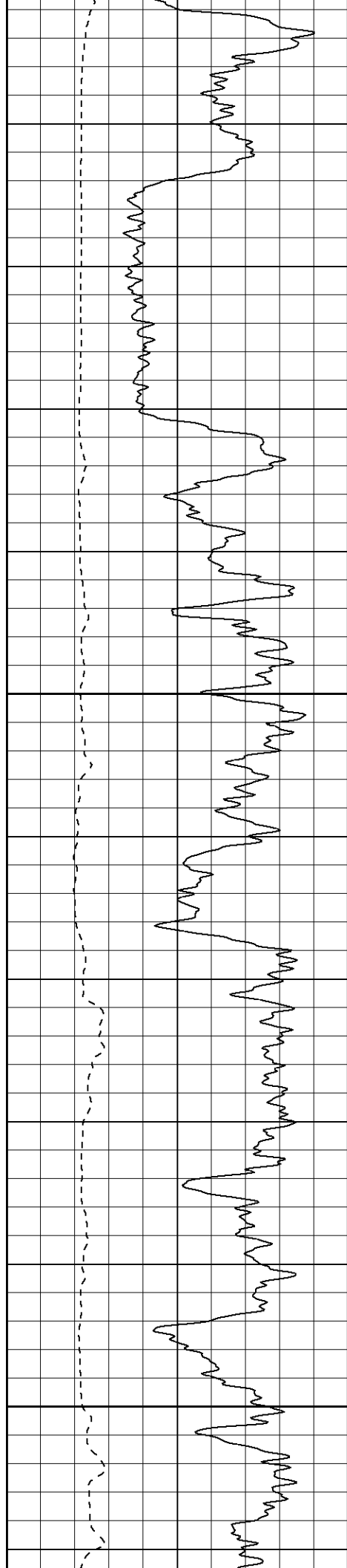


650

700

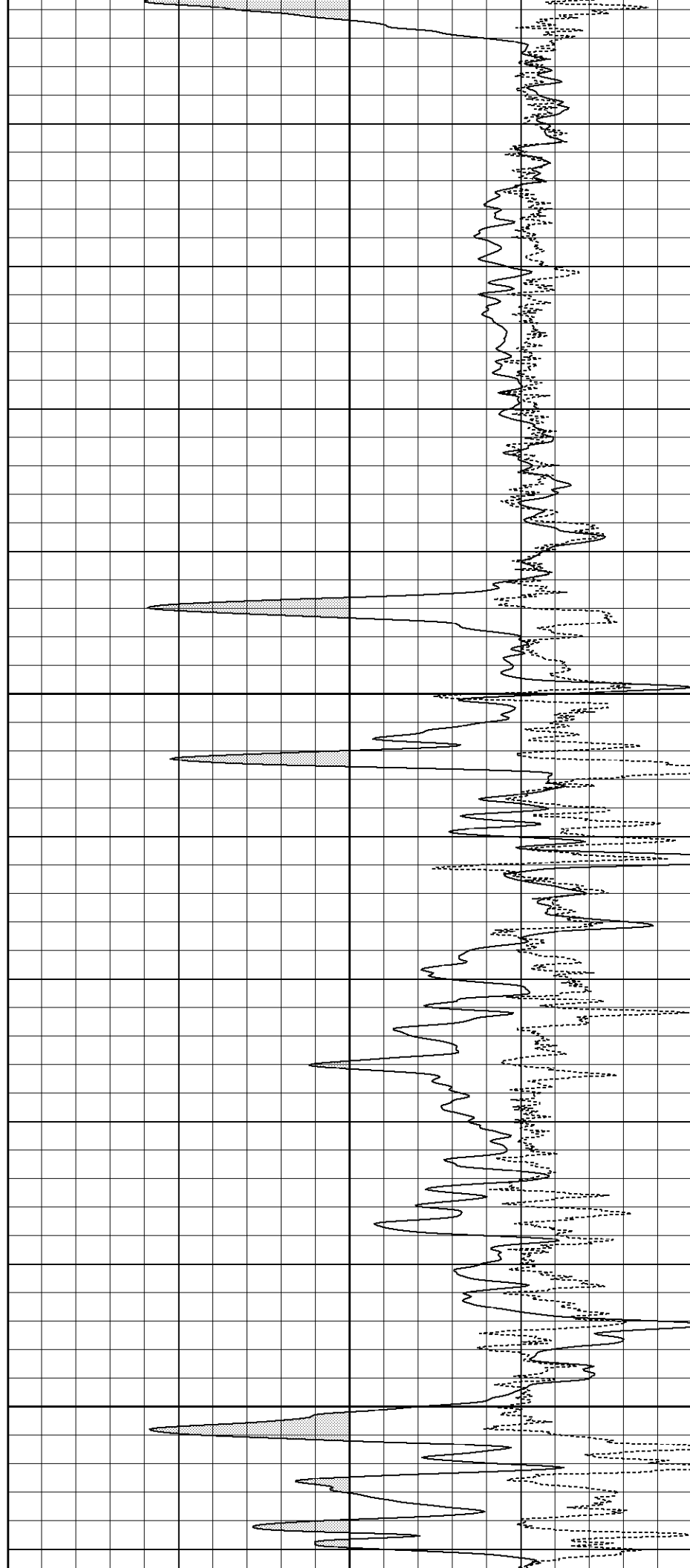
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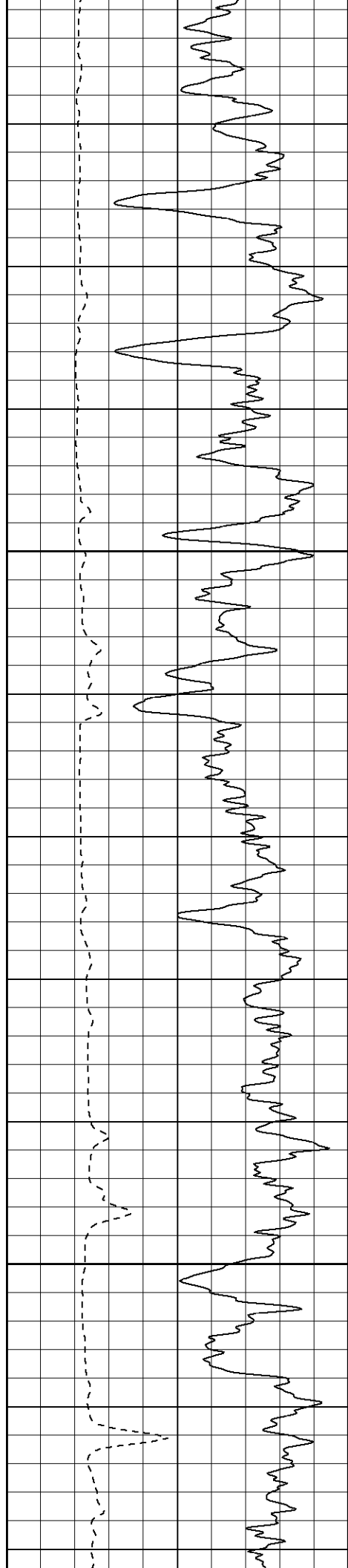




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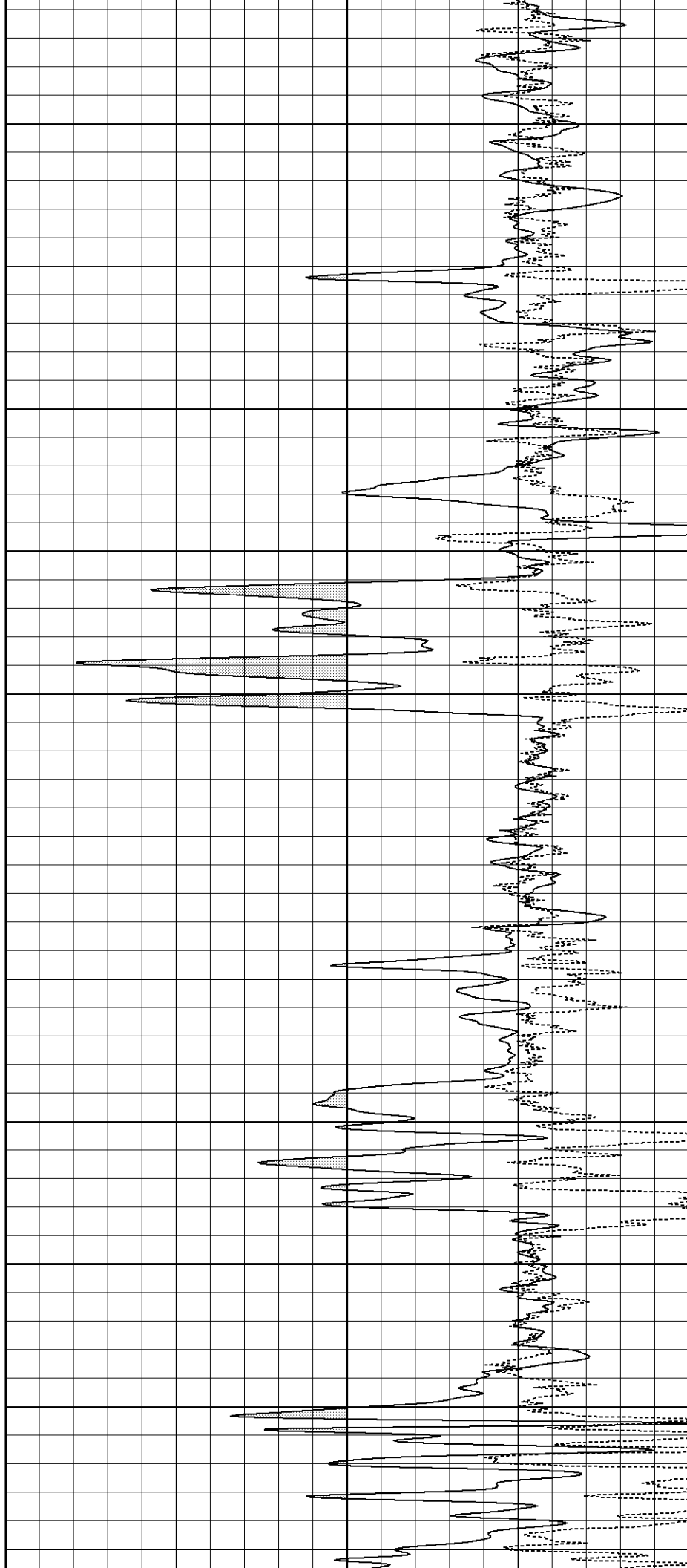
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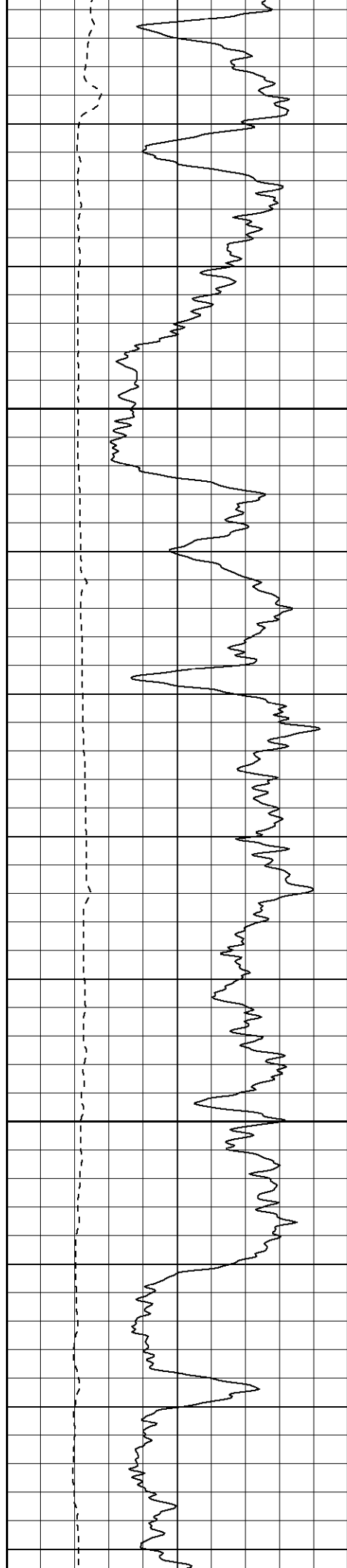




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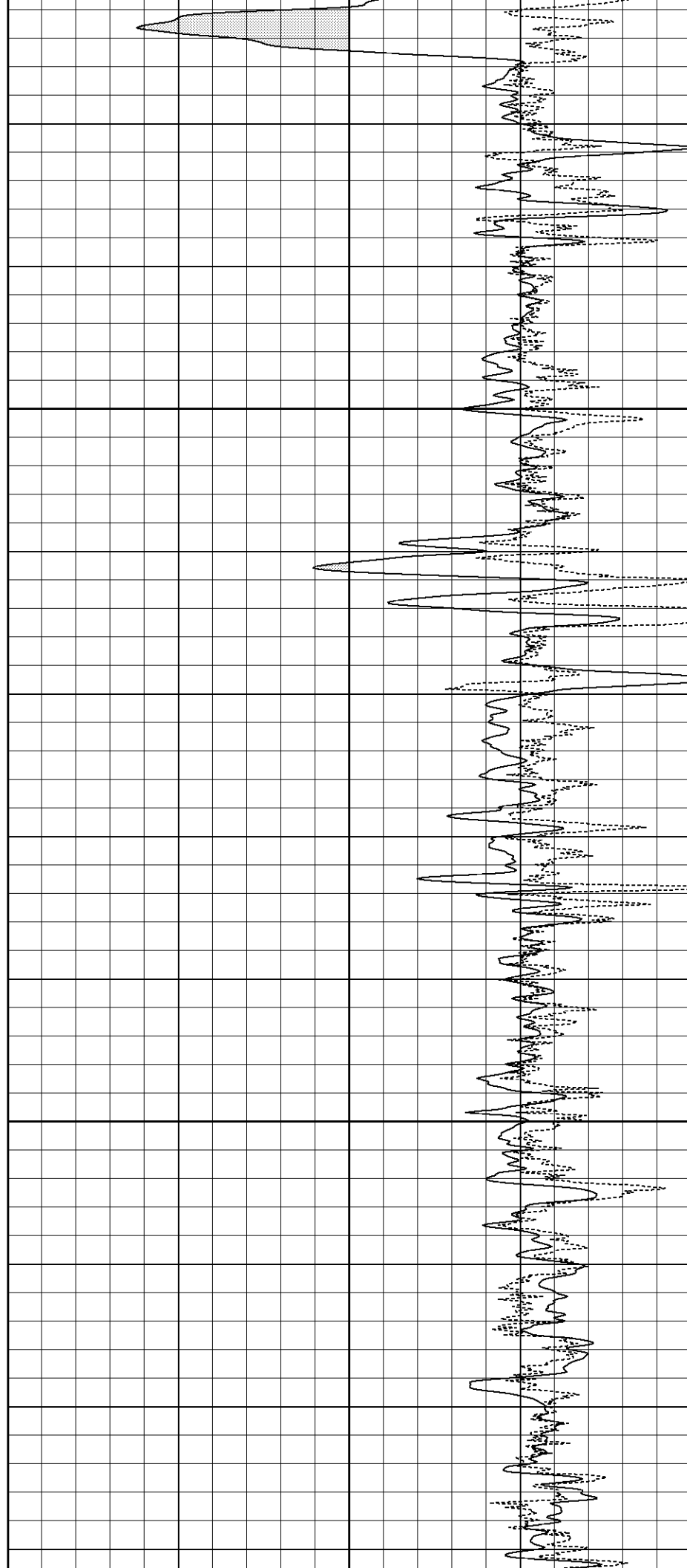
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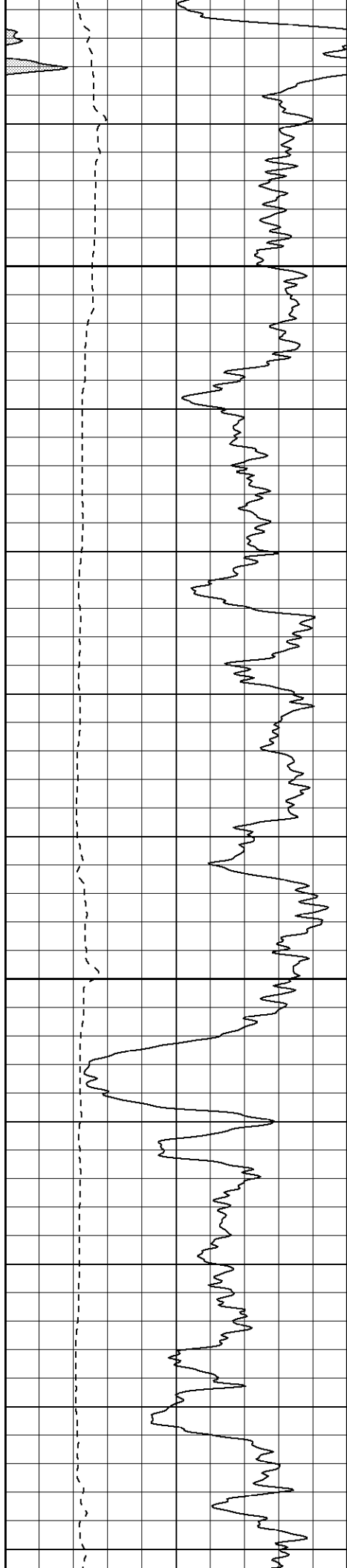




1000

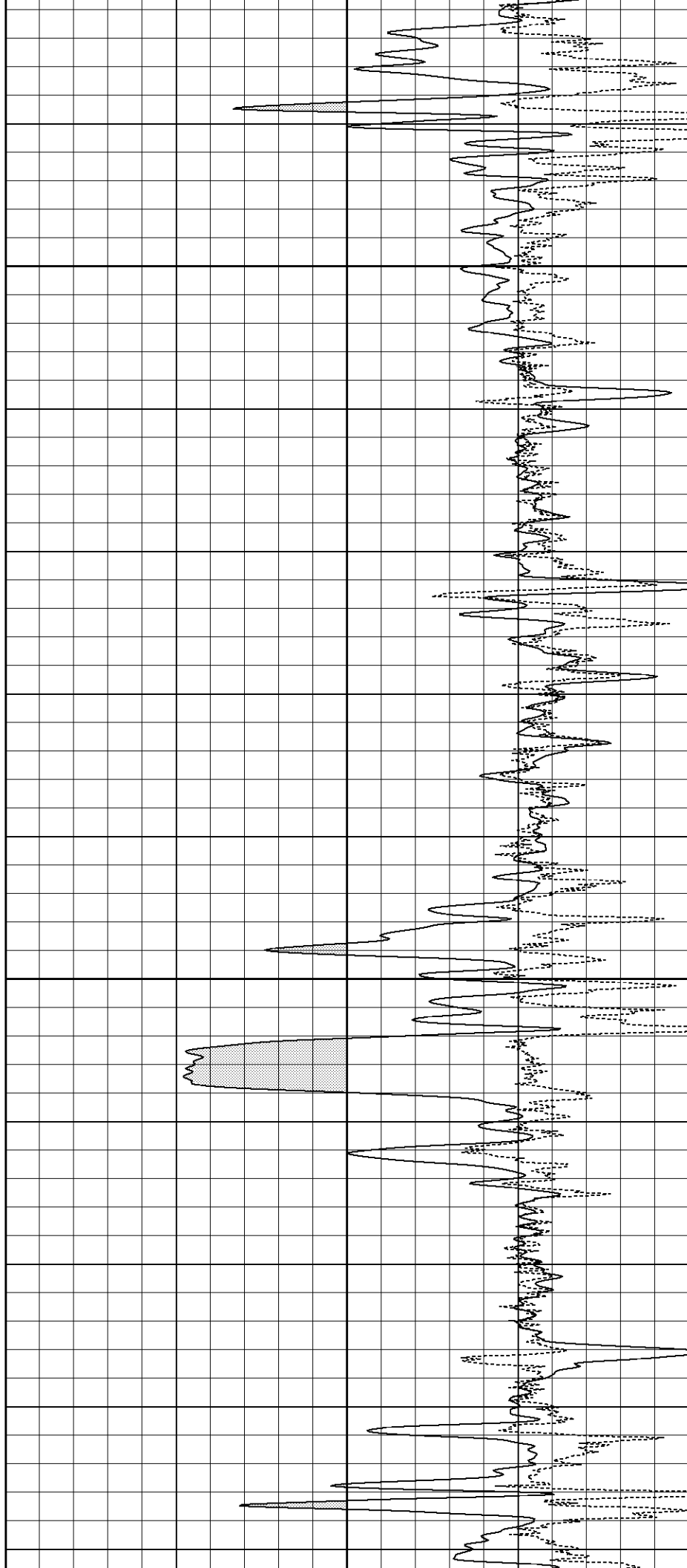
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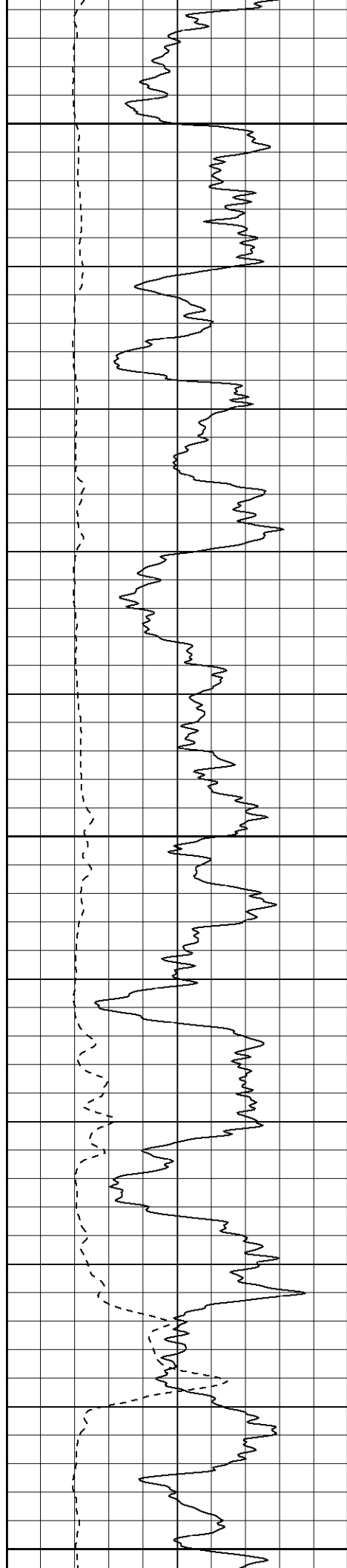




1100

1150

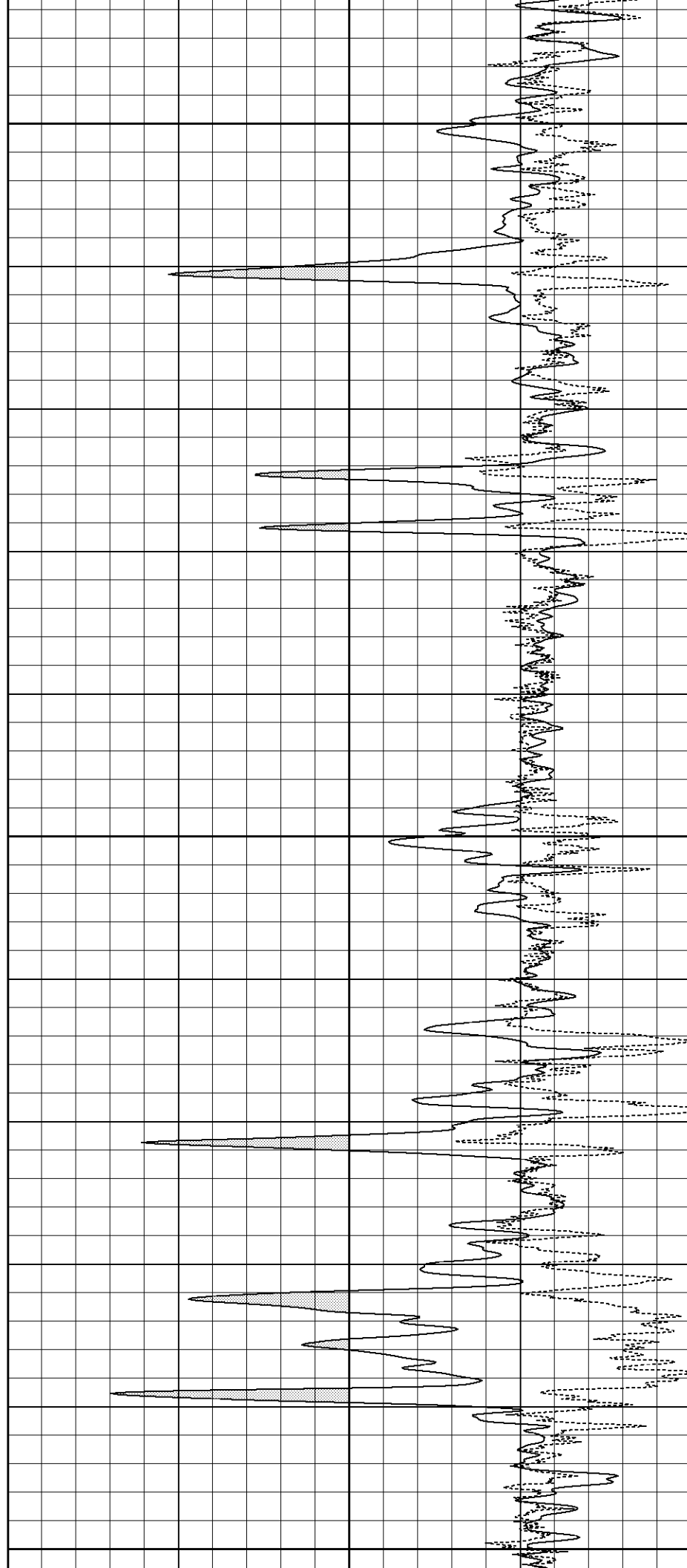


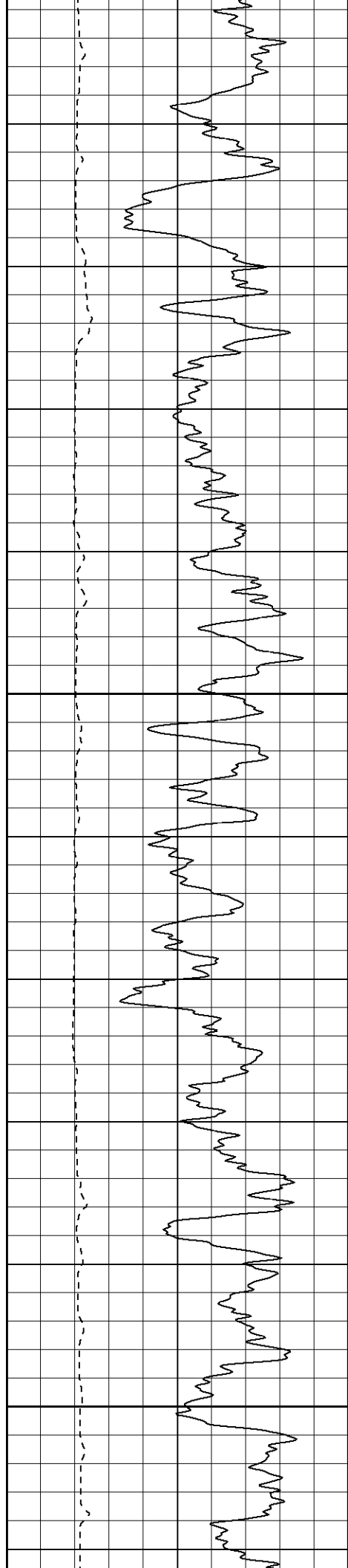


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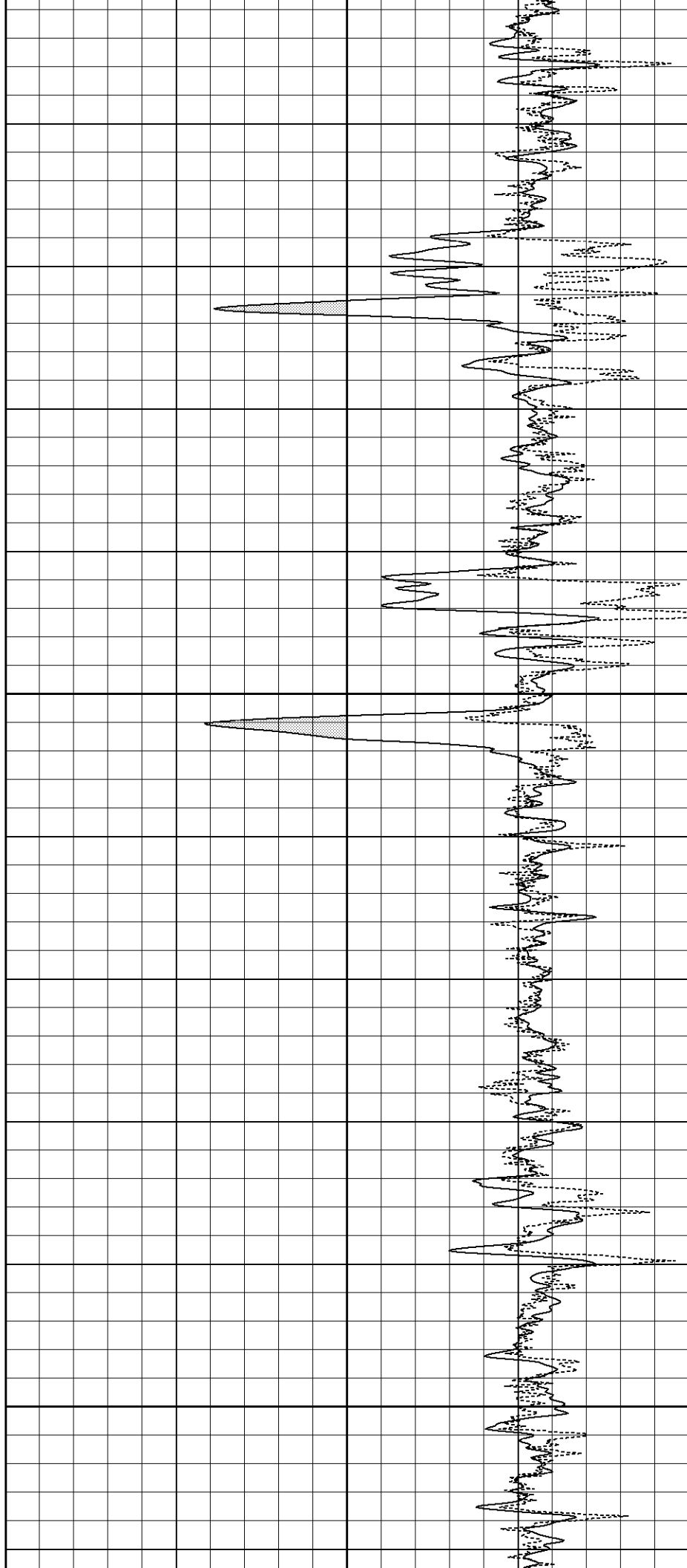
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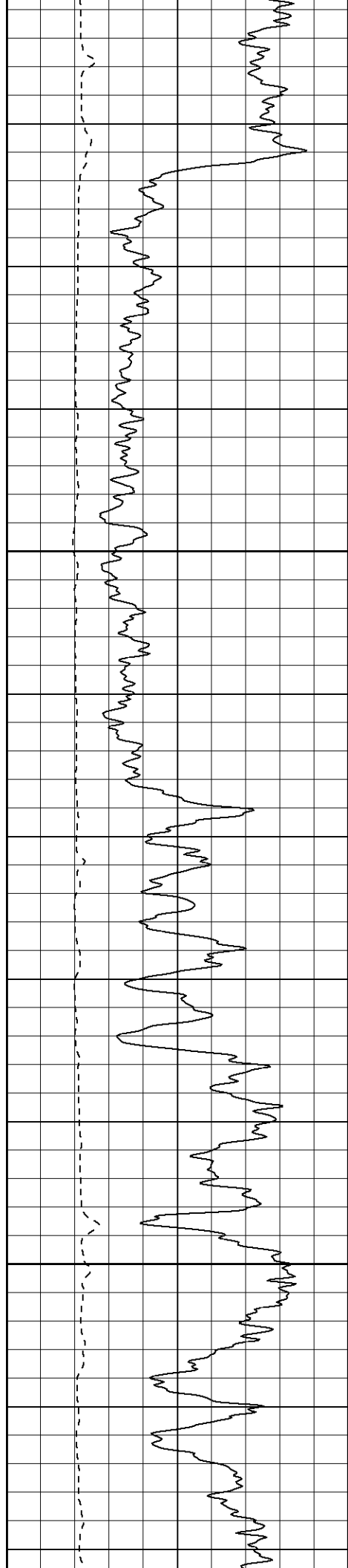


1350

1400

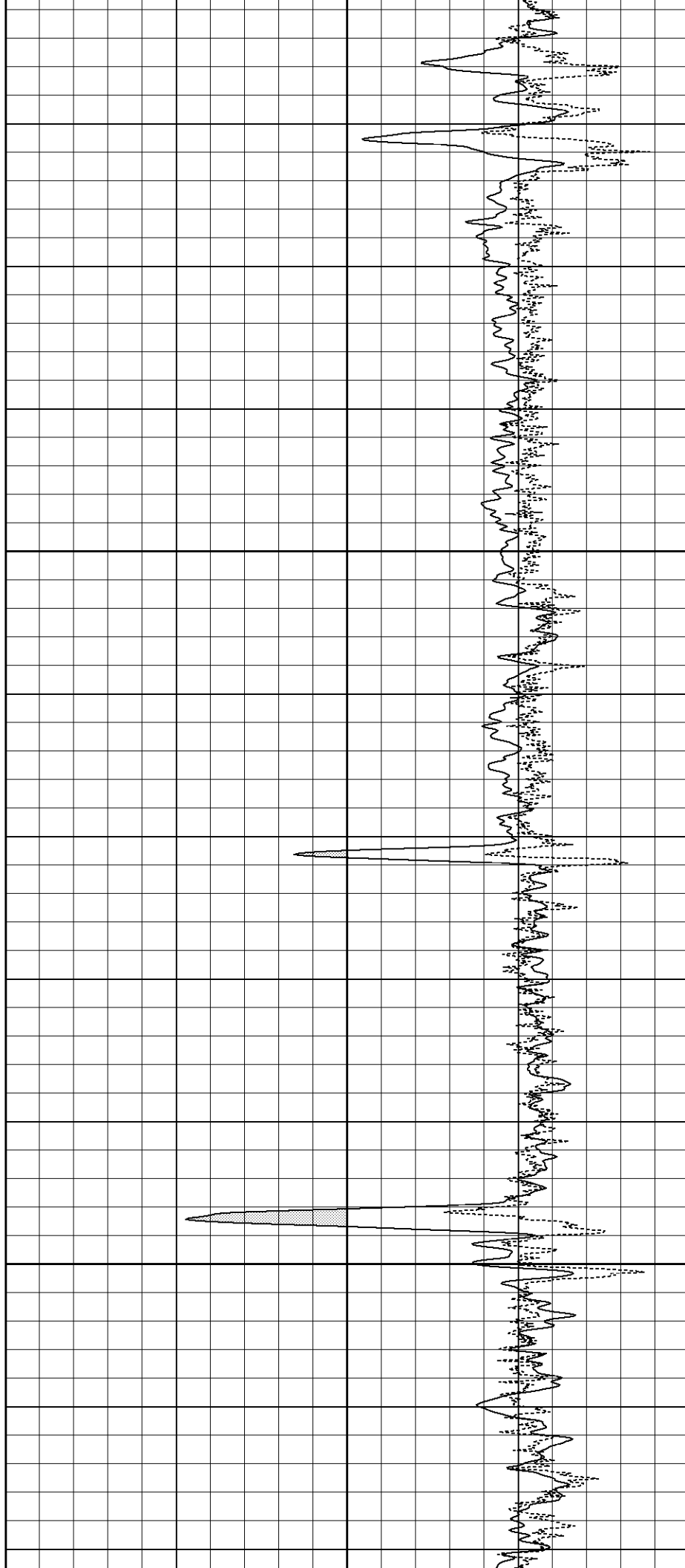


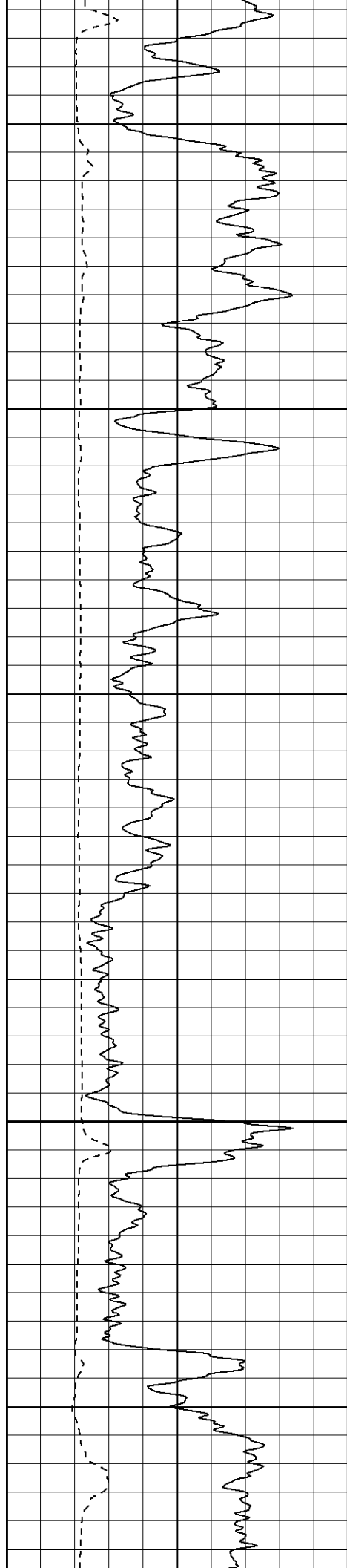




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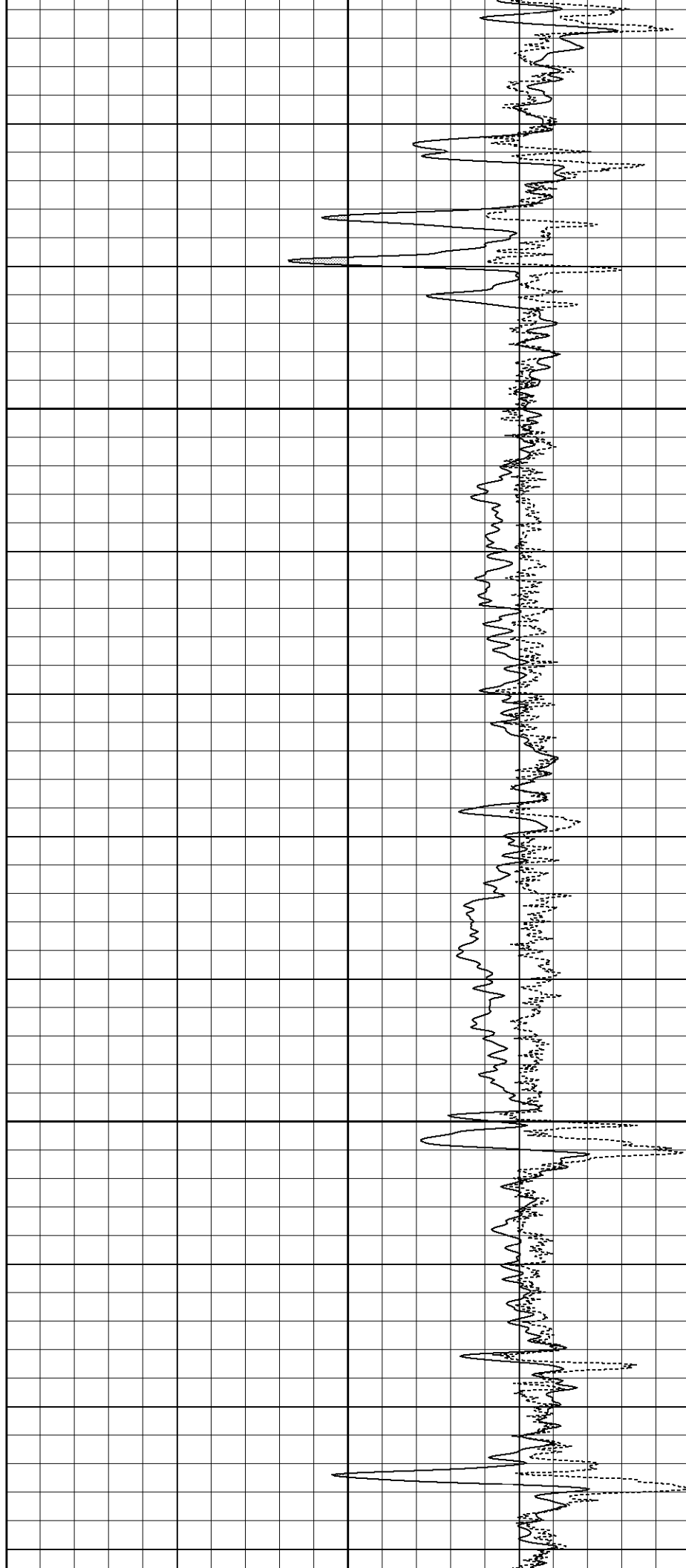
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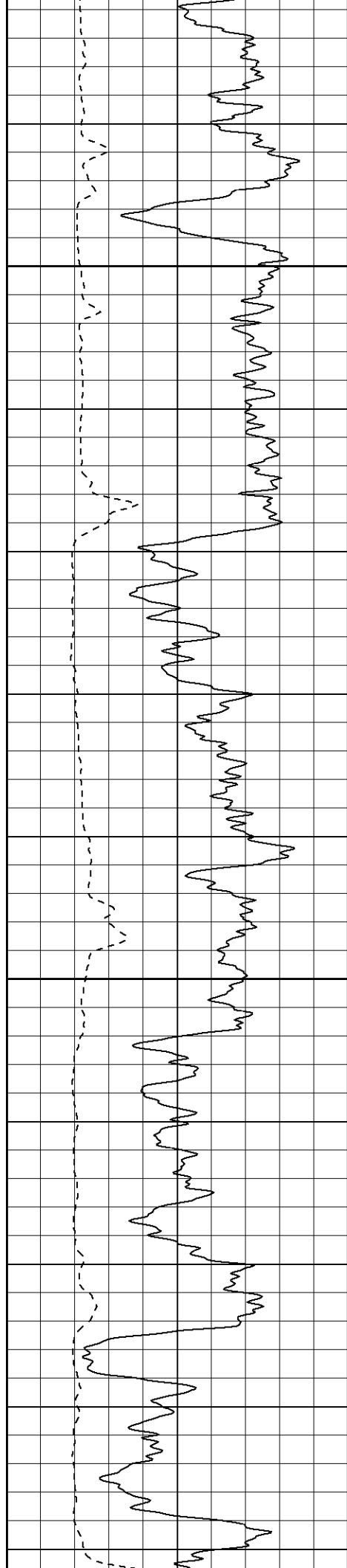




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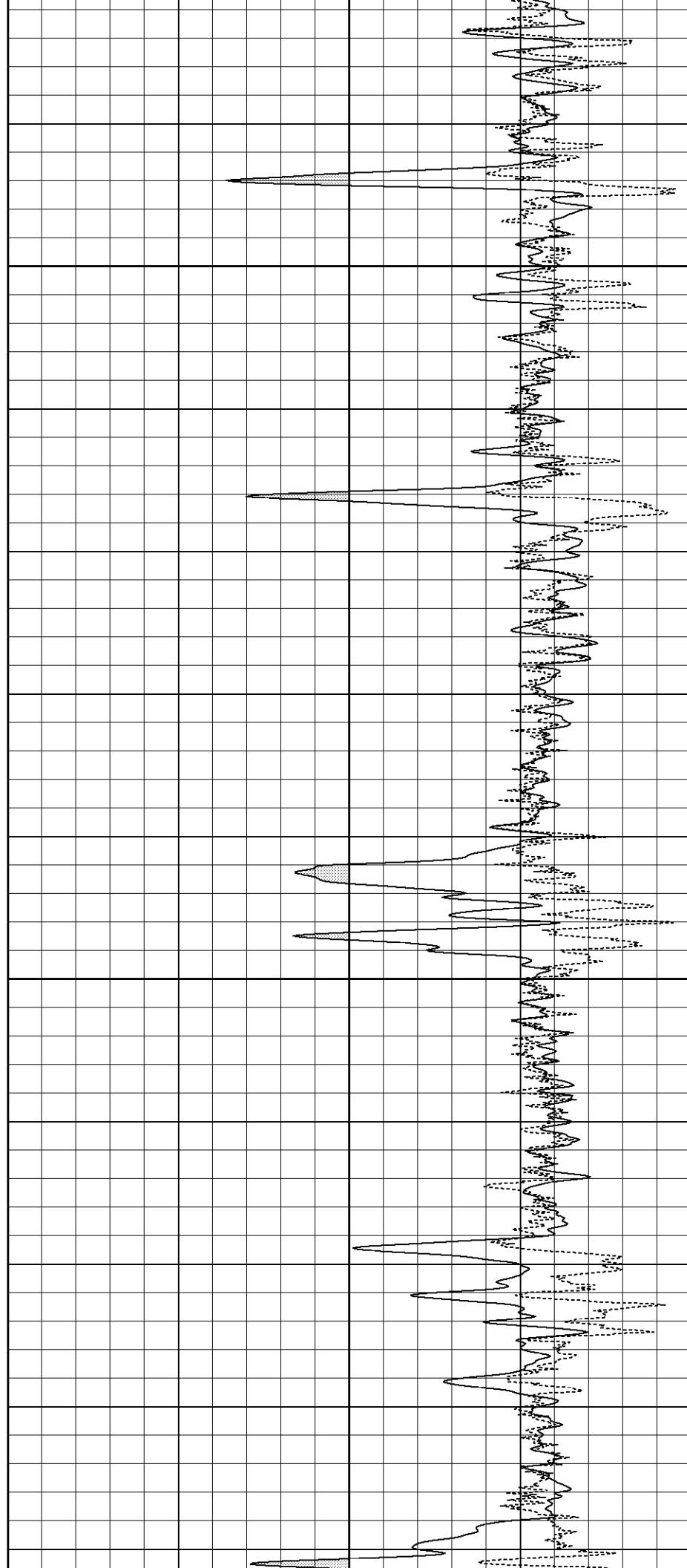
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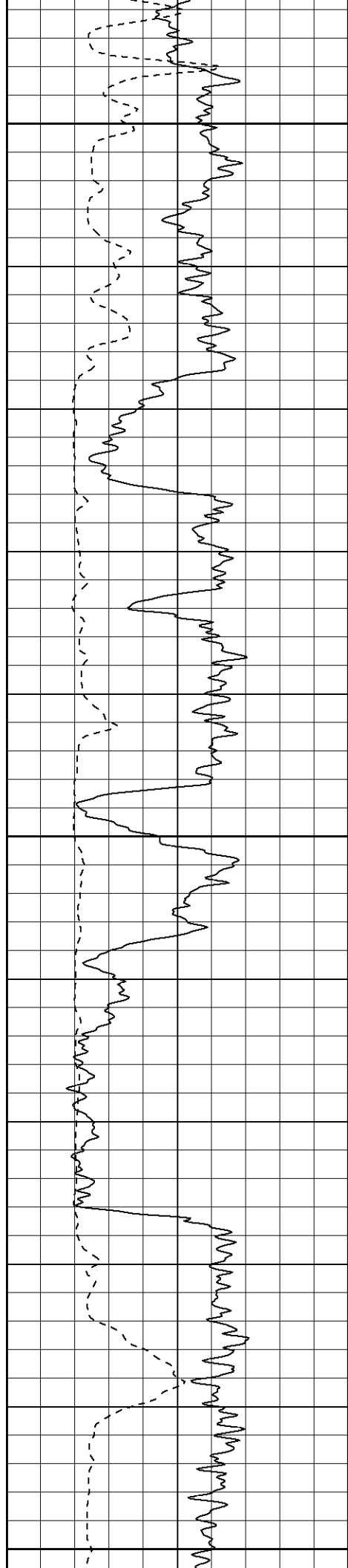




1650

1700

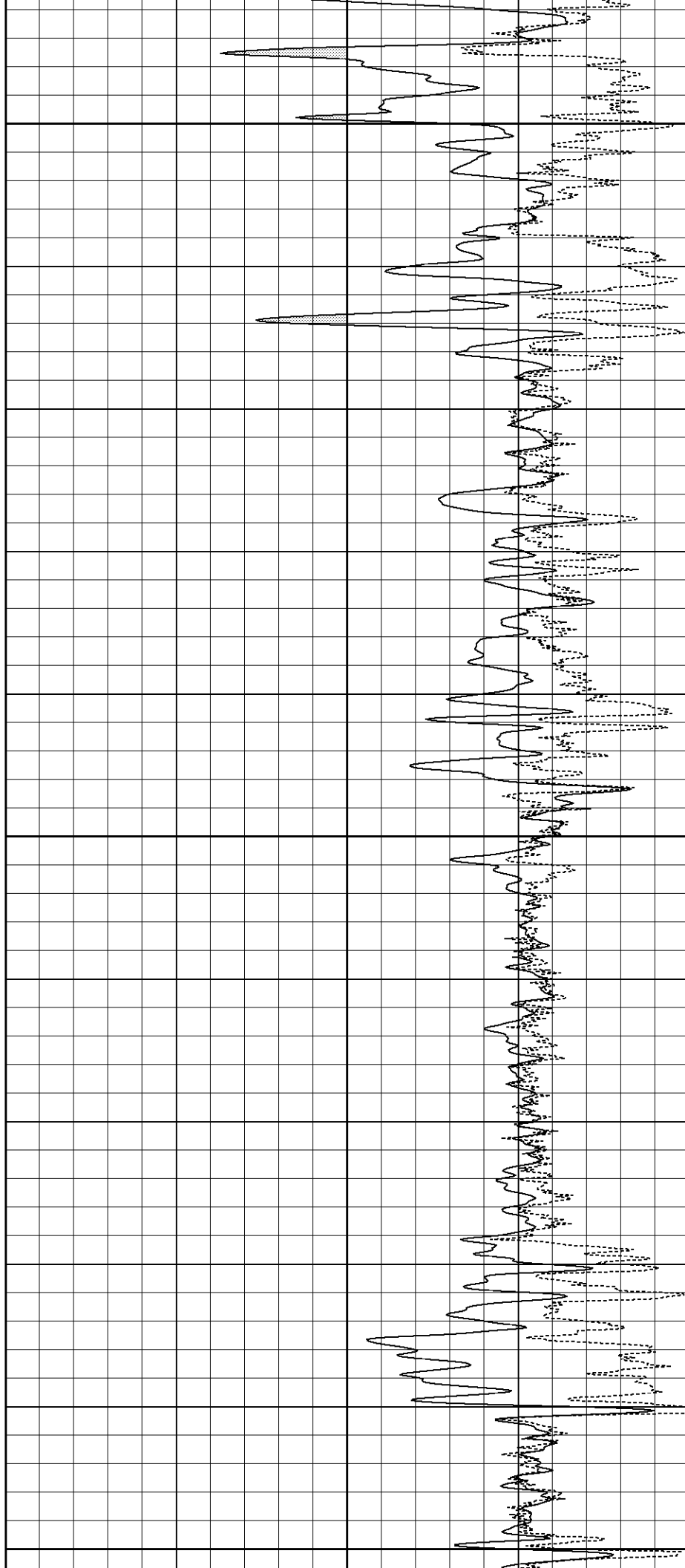


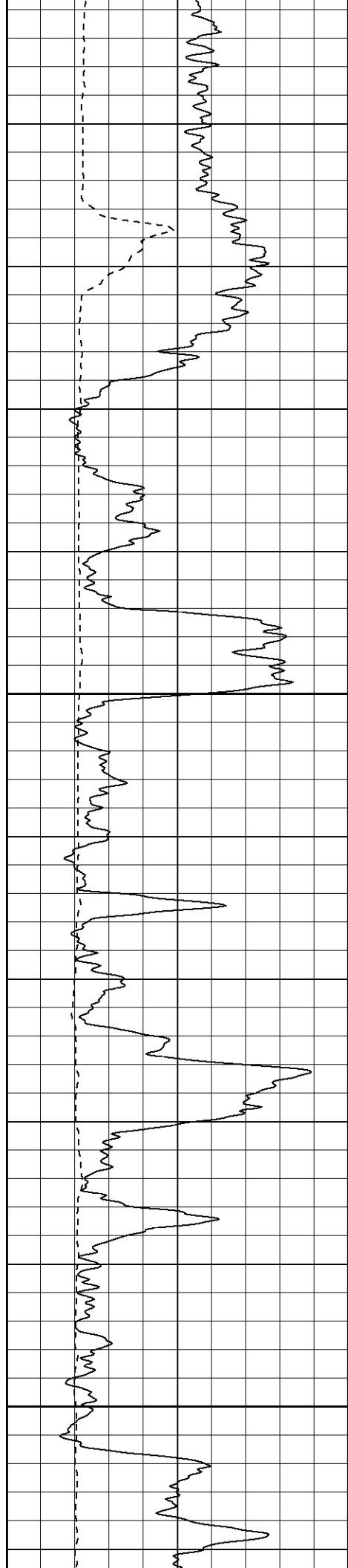


1750

1800

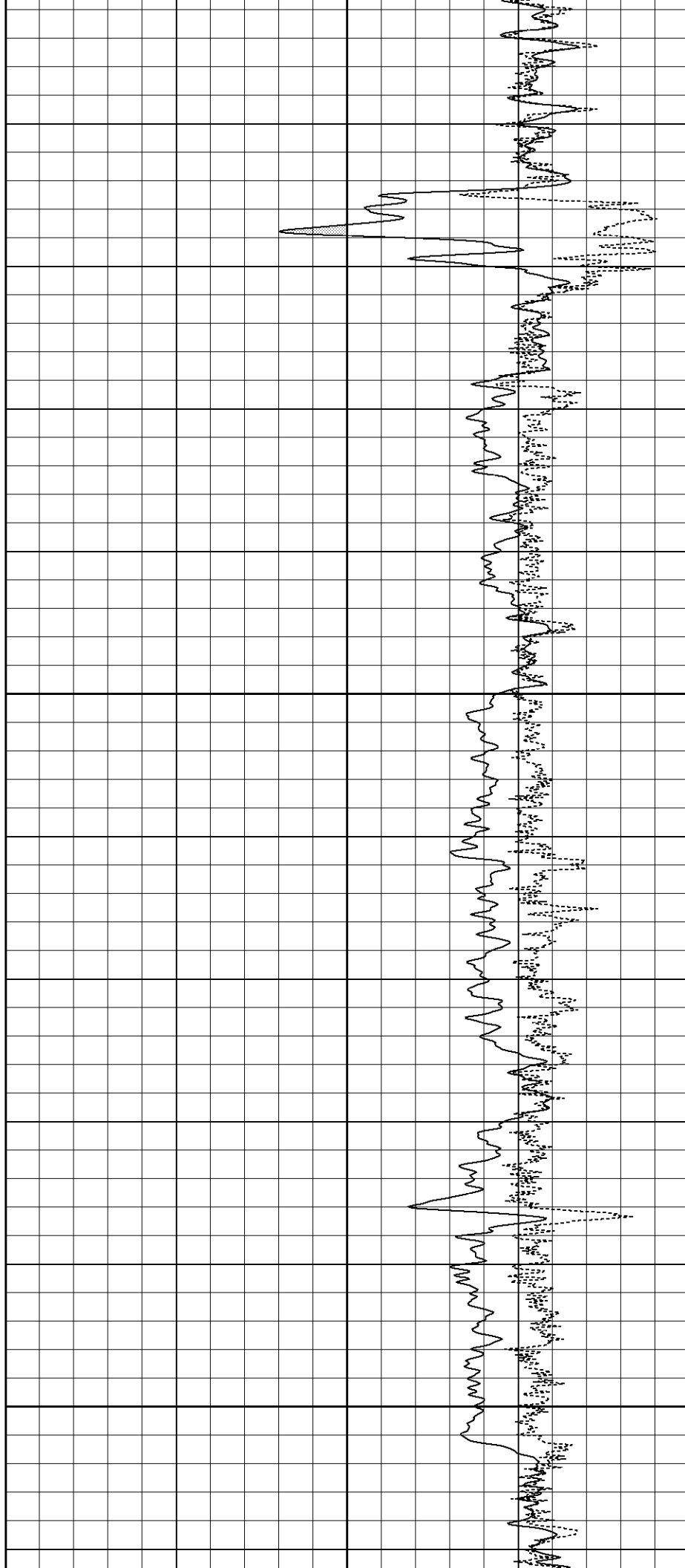
1850

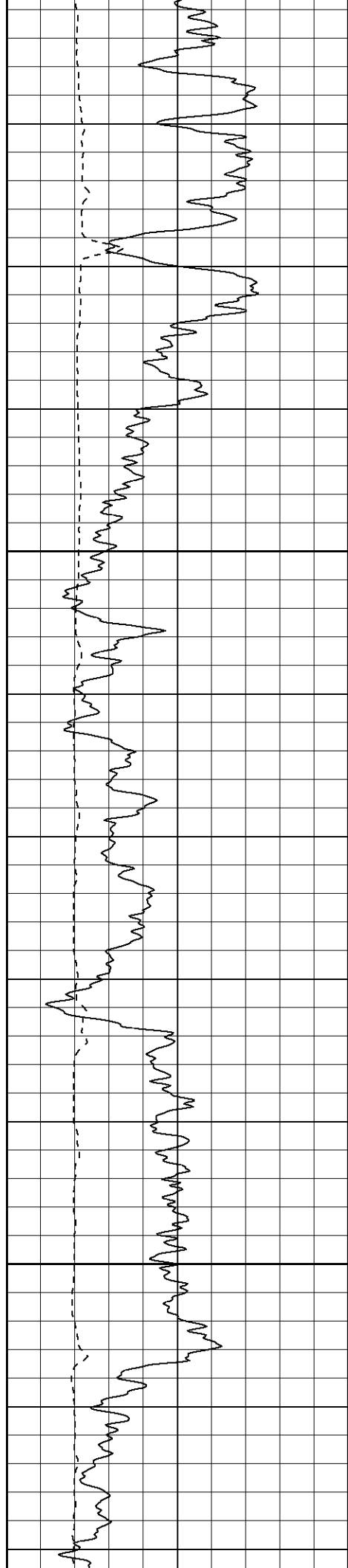




1900

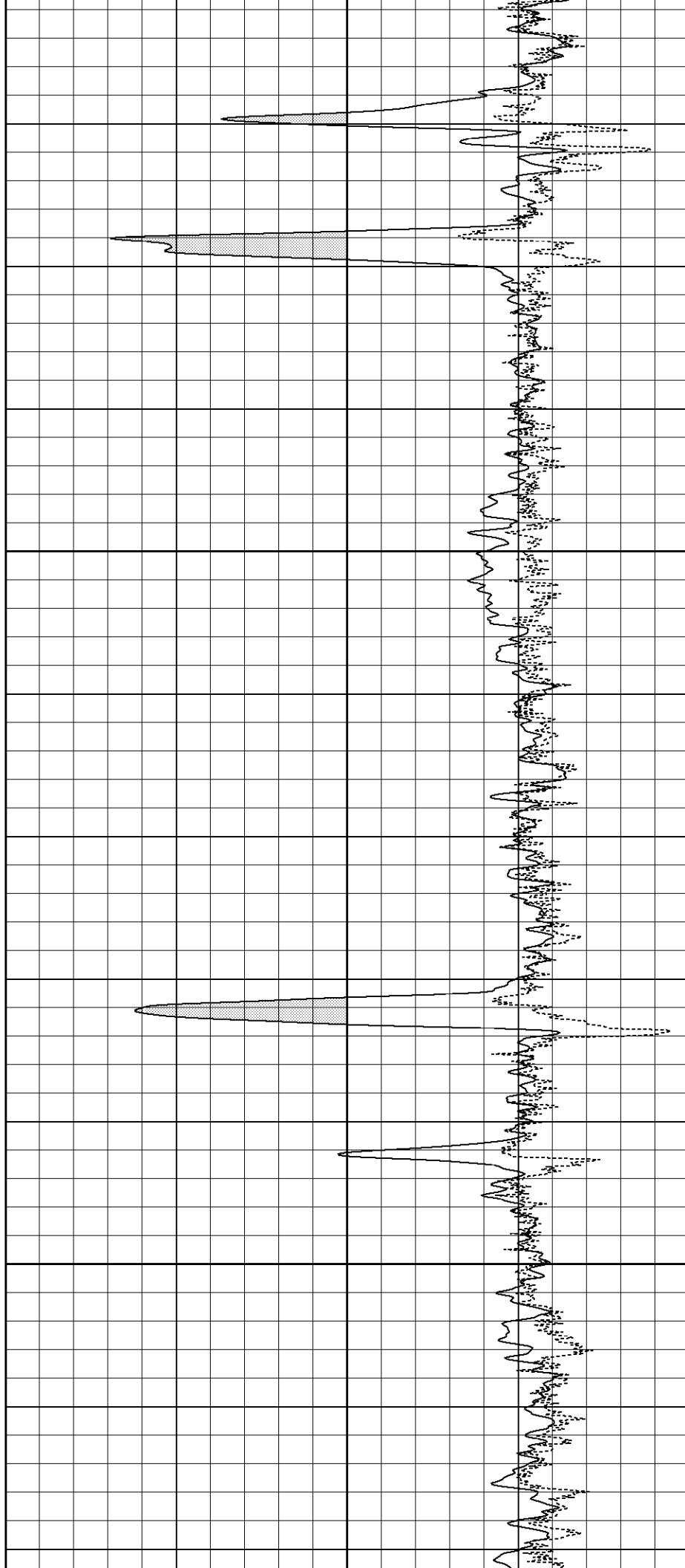
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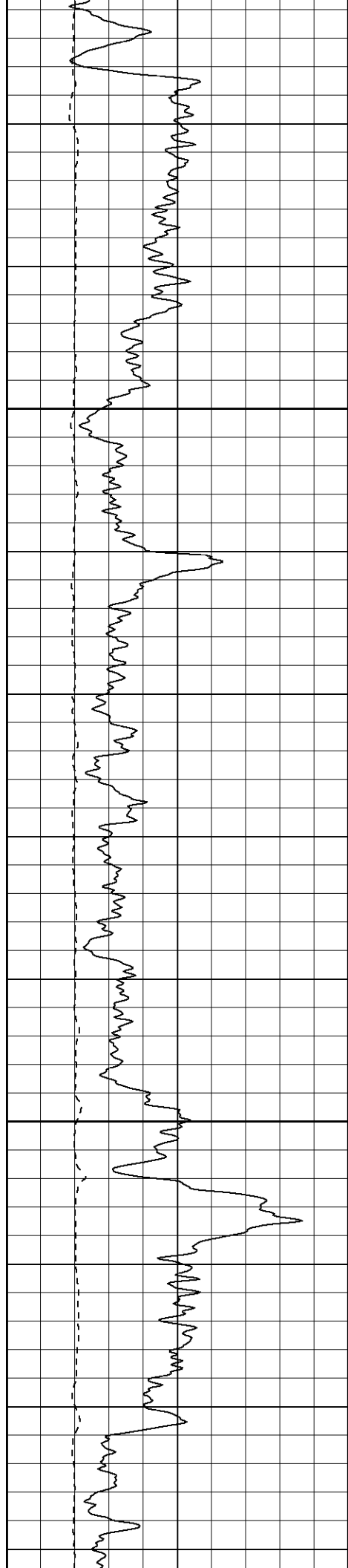




2000

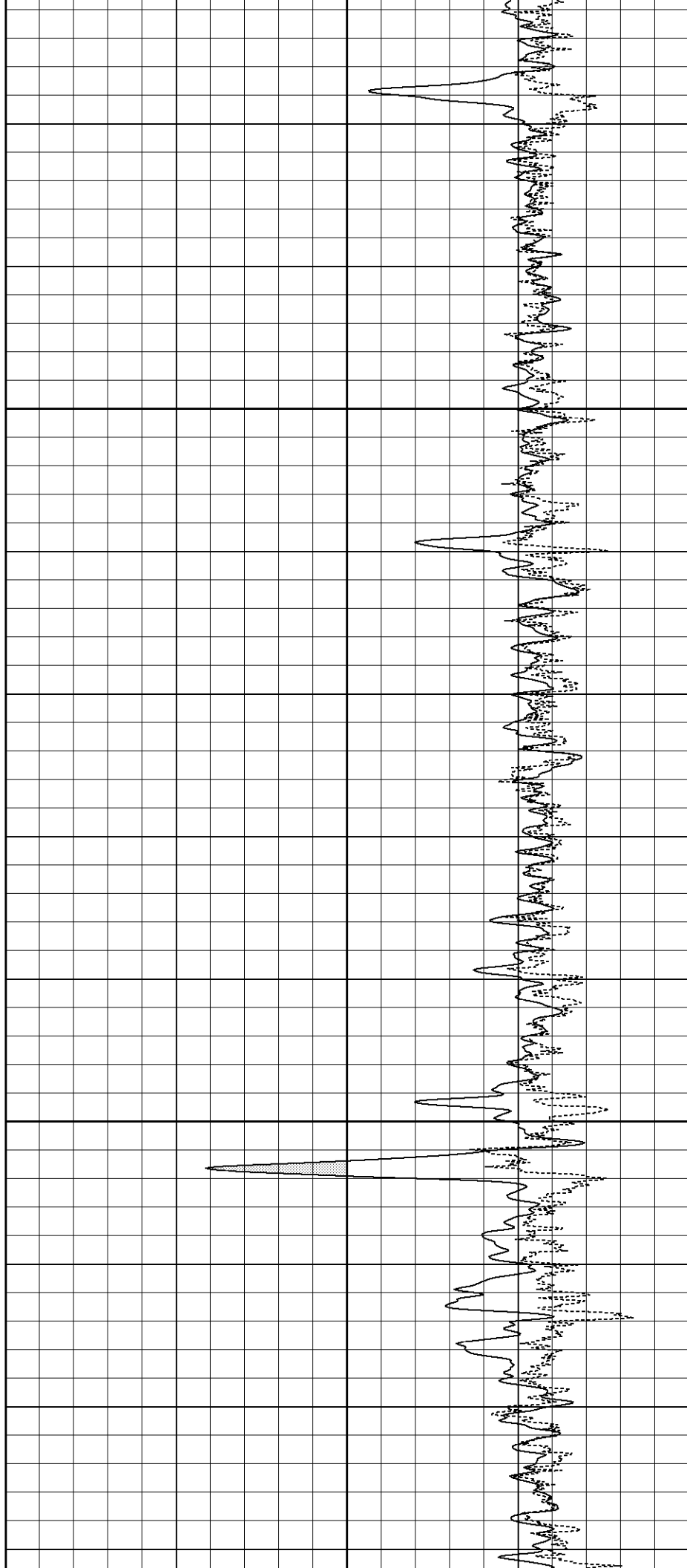
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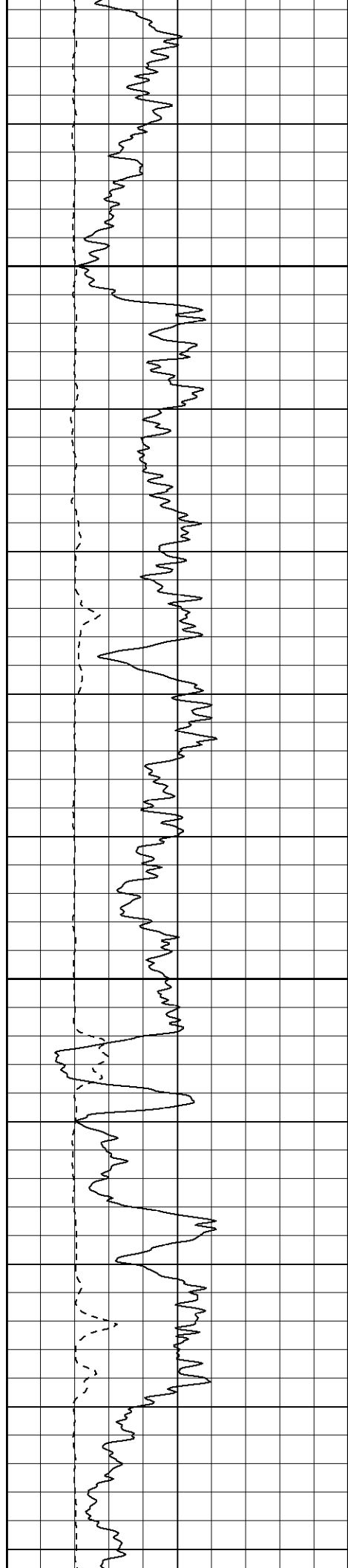




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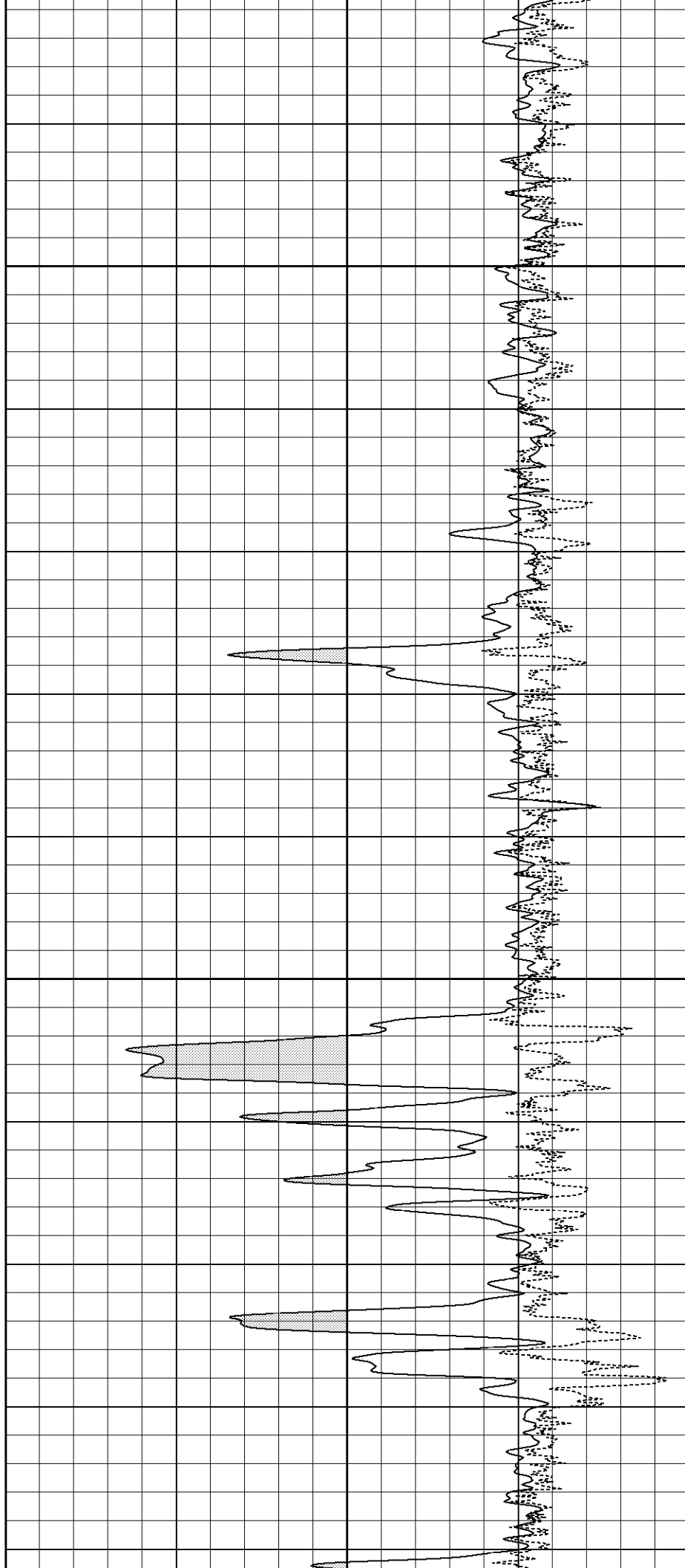
2150



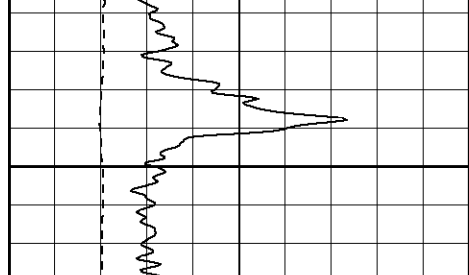


2200

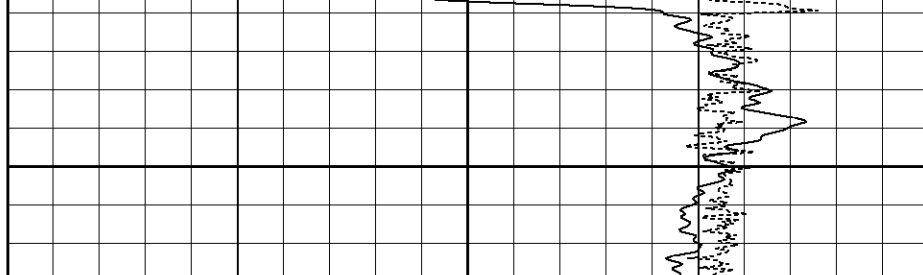
2250

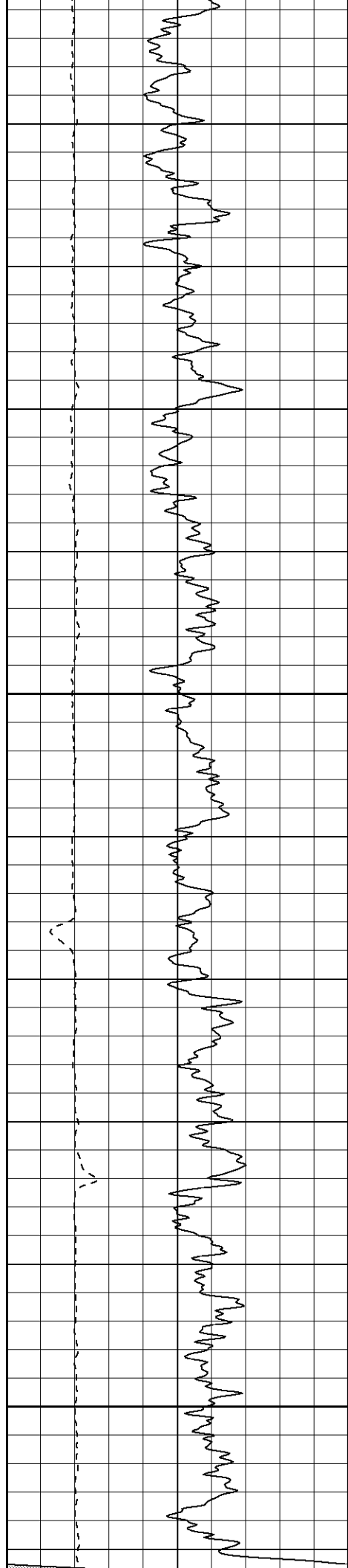






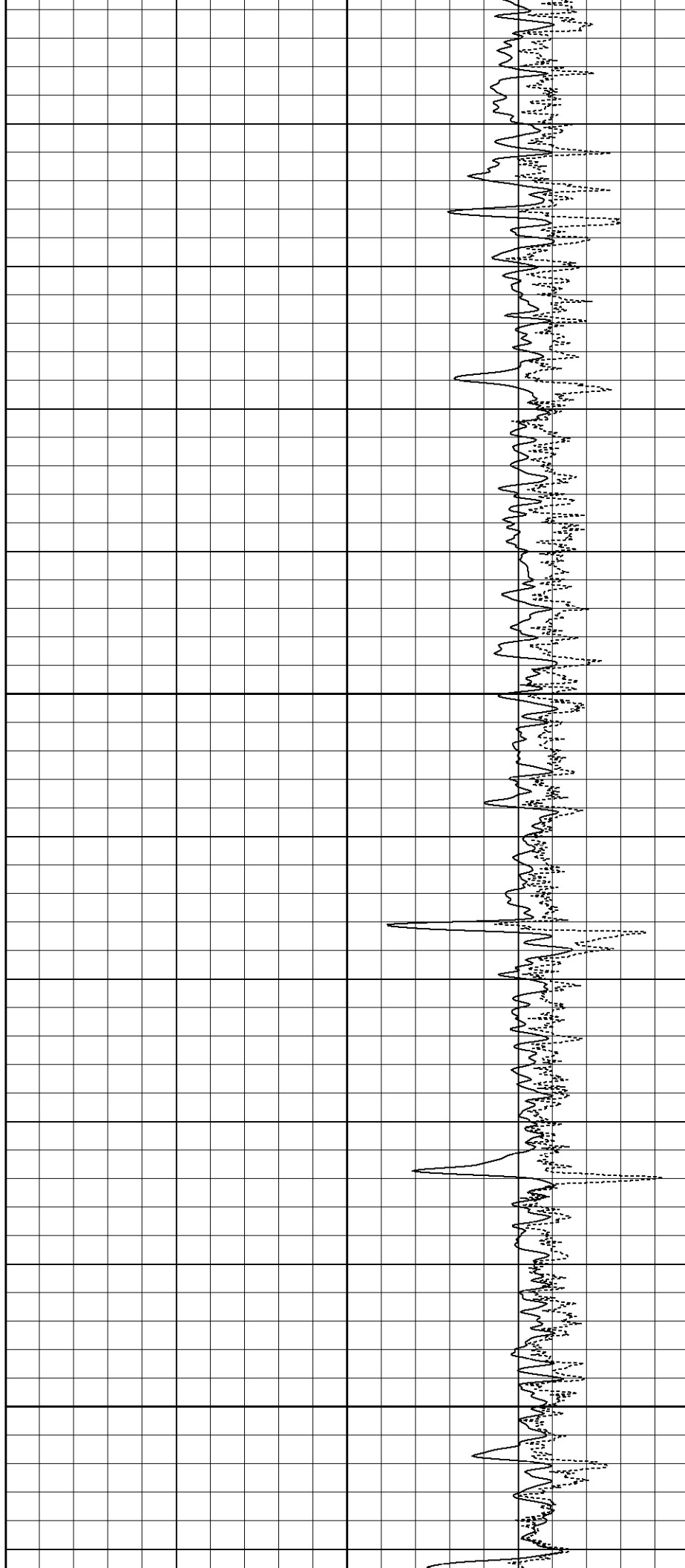
2300

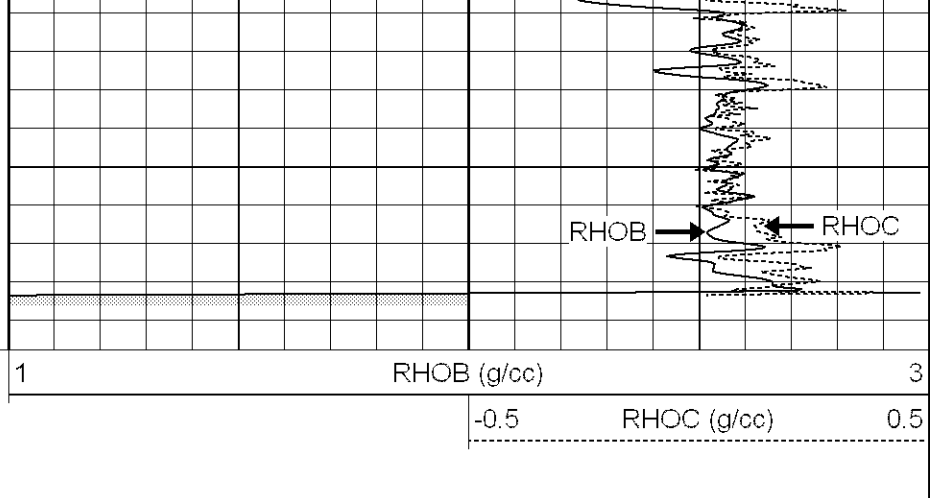
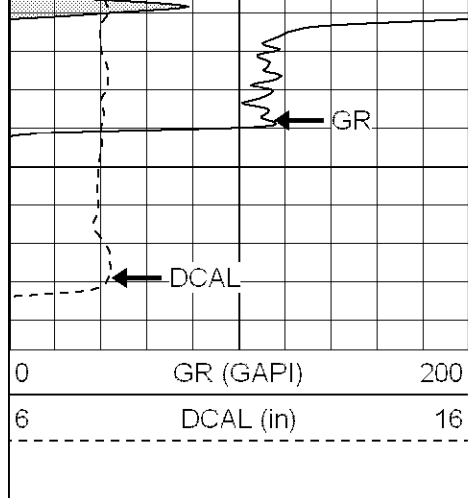




2450

2500





### Temperature Calibration Report

Serial Number: 2542T  
 Tool Model: CDLP  
 Performed: Fri Sep 08 10:50:47 2006

	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-G  
 Source / Verifier: csv-n20 / blks  
 Master Calibration Performed: Fri Sep 08 10:00:30 2006

#### Master Calibration

	Density	Far Detector	Near Detector
Magnesium	1.710 g/cc	1029.77	479.96 cps
Aluminum	2.590 g/cc	233.81	341.34 cps
Spine Angle = 77.05		Density/Spine Ratio = 0.578	
	Size	Reading	
Small Ring	8.00 in	1.28 V	
Large Ring	14.00 in	2.71 V	

### Gamma Ray Calibration Report


Serial Number: 2000  
 Tool Model: P2000  
 Performed: Fri Sep 08 08:55:34 2006

Calibrator Value: 200.0 GAPI

Background Reading: 54.0 cps  
 Calibrator Reading: 219.0 cps

Sensitivity: 0.2500 GAPI/cps

Neutron Calibration Report		
Serial Number:	5108	
Tool Model:	P	
Performed:	Fri Sep 08 09:25:15 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	16.97		NEU-P (5108)	4.92	3.63	85.00
GR	11.30		GR-P2000 (2000)	3.50	3.25	40.00
LSD	2.84		CDL-G (2542)	9.29	4.00	201.00
DCAL	2.51					
SSD	2.26					
TEMP	1.08		TEMP-CDLP (2542T)	0.01	4.00	1.00
Dataset: /field/well/run/_plots/_jobs_/dup Total Length: 17.72 ft Total Weight: 327.00 lb O.D. 4.00 in						