

Patterson

**COMPENSATED DENSITY
NEUTRON
LOG**

Company Pioneer Natural Resources		Company Pioneer Natural Resources
Well Zen 42-14 Tr		Well Zen 42-14 Tr
Field Purgatoire River		Field Purgatoire River
County Las Animas		County Las Animas
State Colorado		State Colorado
Location:	API # : 05 071 08605 00	Other Services
	298' FSL & 1223' FEL	sil
SEC 14 TWP 32S RGE 68W		
Permanent Datum	Ground Level	Elevation 8368'
Log Measured From	Kelly Bushing 4' Above G.L.	K.B. 8372'
Drilling Measured From	Kelly Bushing	D.F. -----
		G.L. 8368'
Date 11-09-05		
Run Number One		
Depth Driller 2395'		
Depth Logger 2395'		
Bottom Logged Interval 2379'		
Top Log Interval Surface		
Casing Driller 8 5/8" @ 757'		
Casing Logger 757'		
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 4:30 a.m.		
Time Logger on Bottom 6:30 a.m.		
Maximum Recorded Temperature 96		
Equipment Number T677		
Location Trinidad		
Recorded By L. Smith		
Witnessed By Mr. Neal Hawthorne	Mr. Paul Dein	

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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

Compensated Density Neutron Porosity Presented On Sandstone Matrix.
ABHV Calculated For 5 1/2" Casing.
Up Wet Canyon turn left @ Hicks School,
go thru crossroads and take next left.

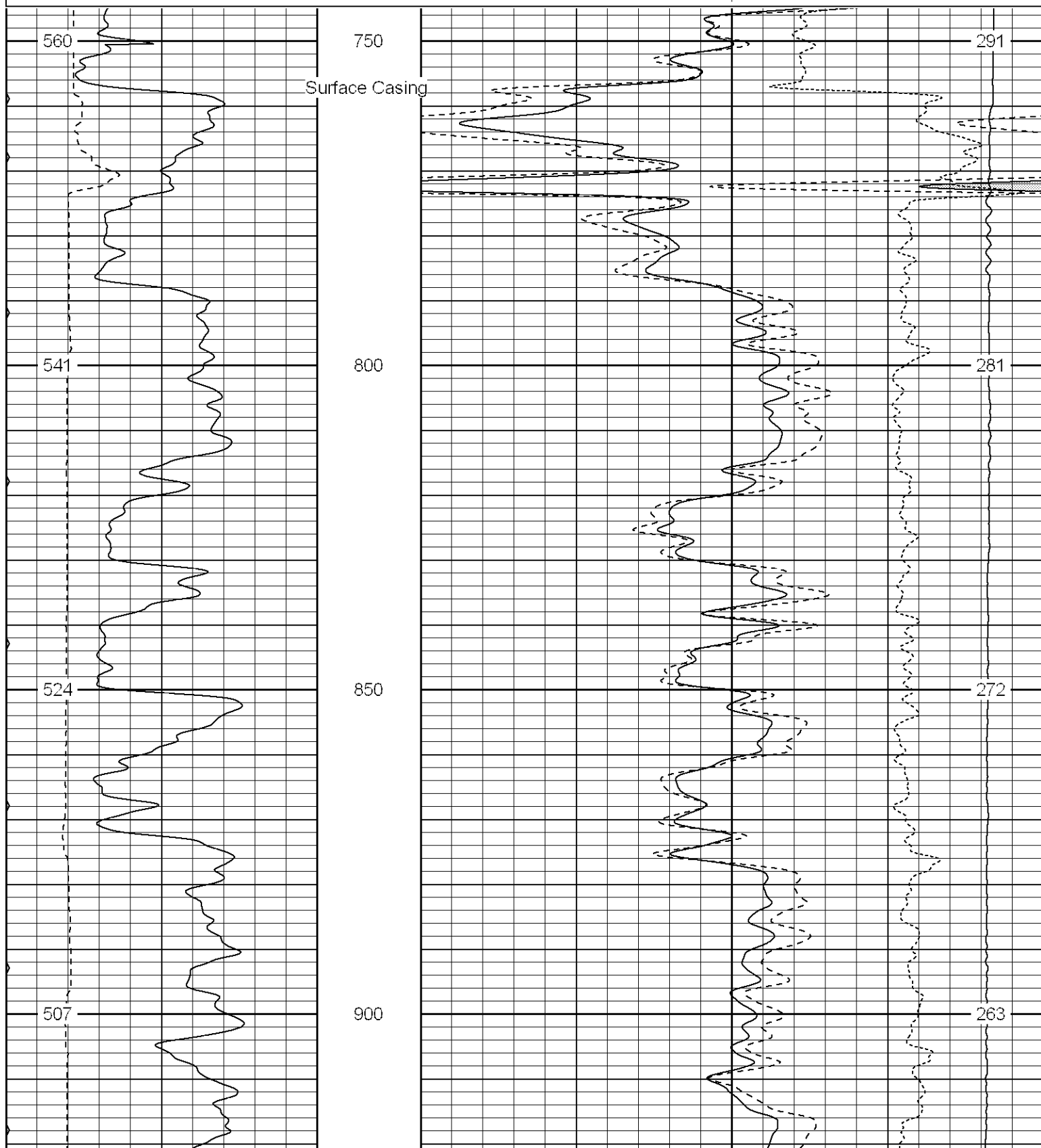
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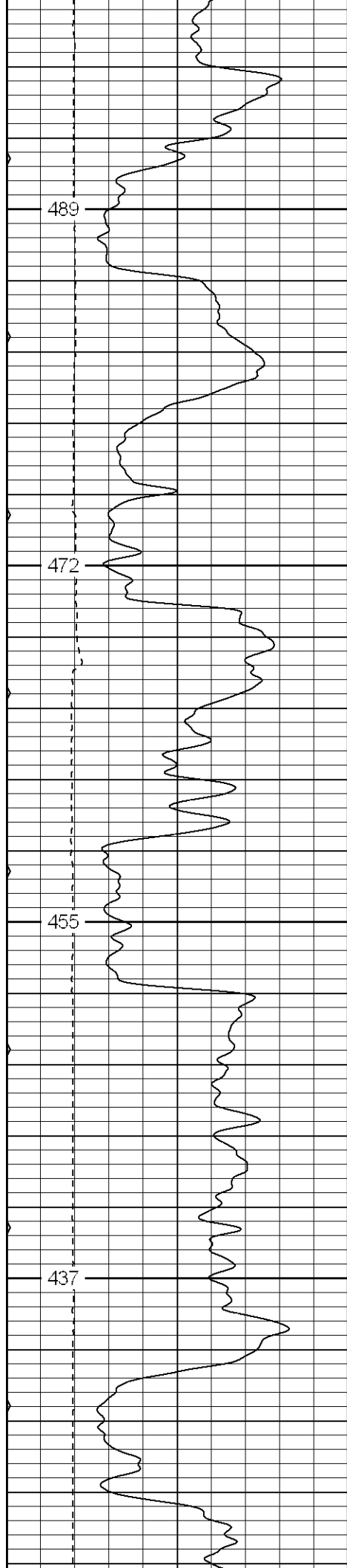
Main Pass

Database File: zentr.db
Dataset Pathname: pass2.2
Presentation Format: cdl
Dataset Creation: Wed Nov 09 08:35:06 2005 by Calc Warrior 7.0 STD Ope
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0



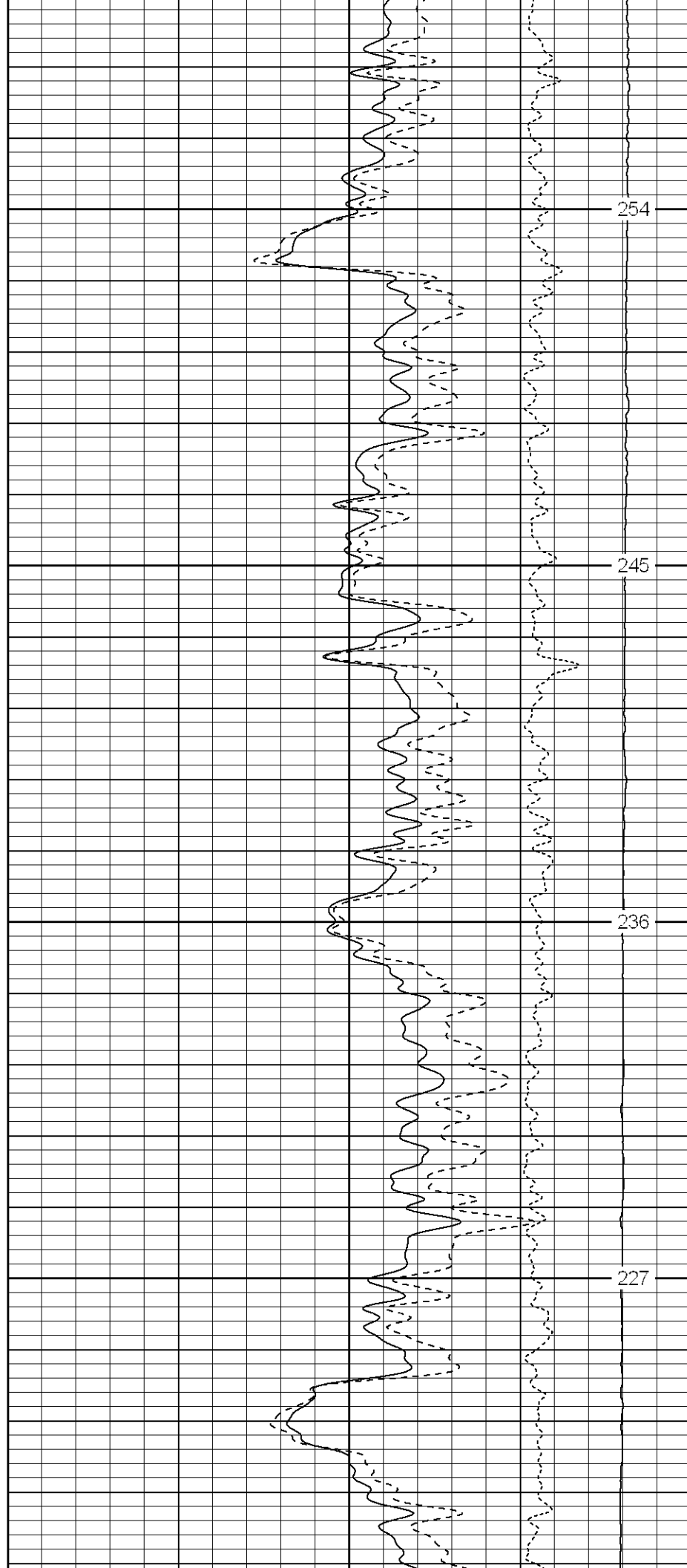


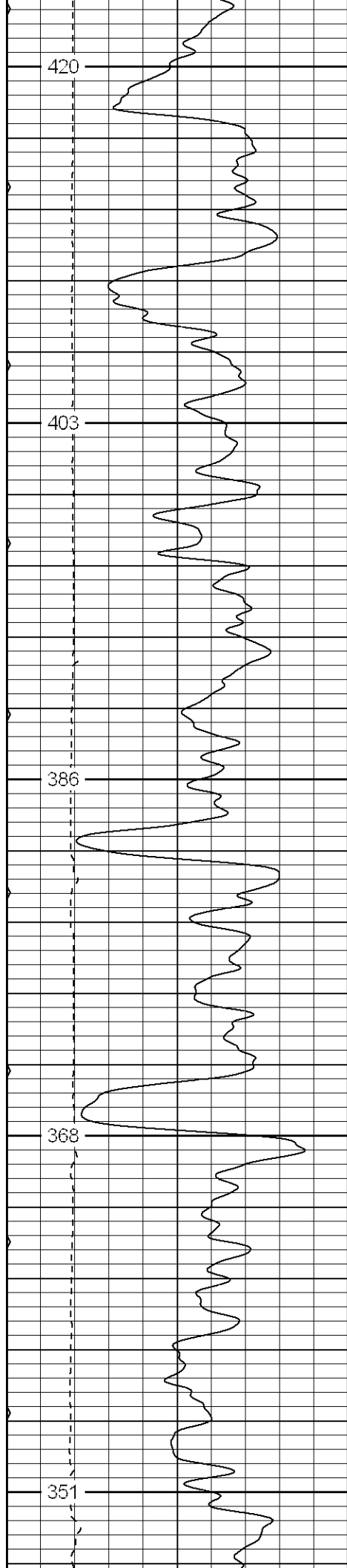
950

1000

1050

1100





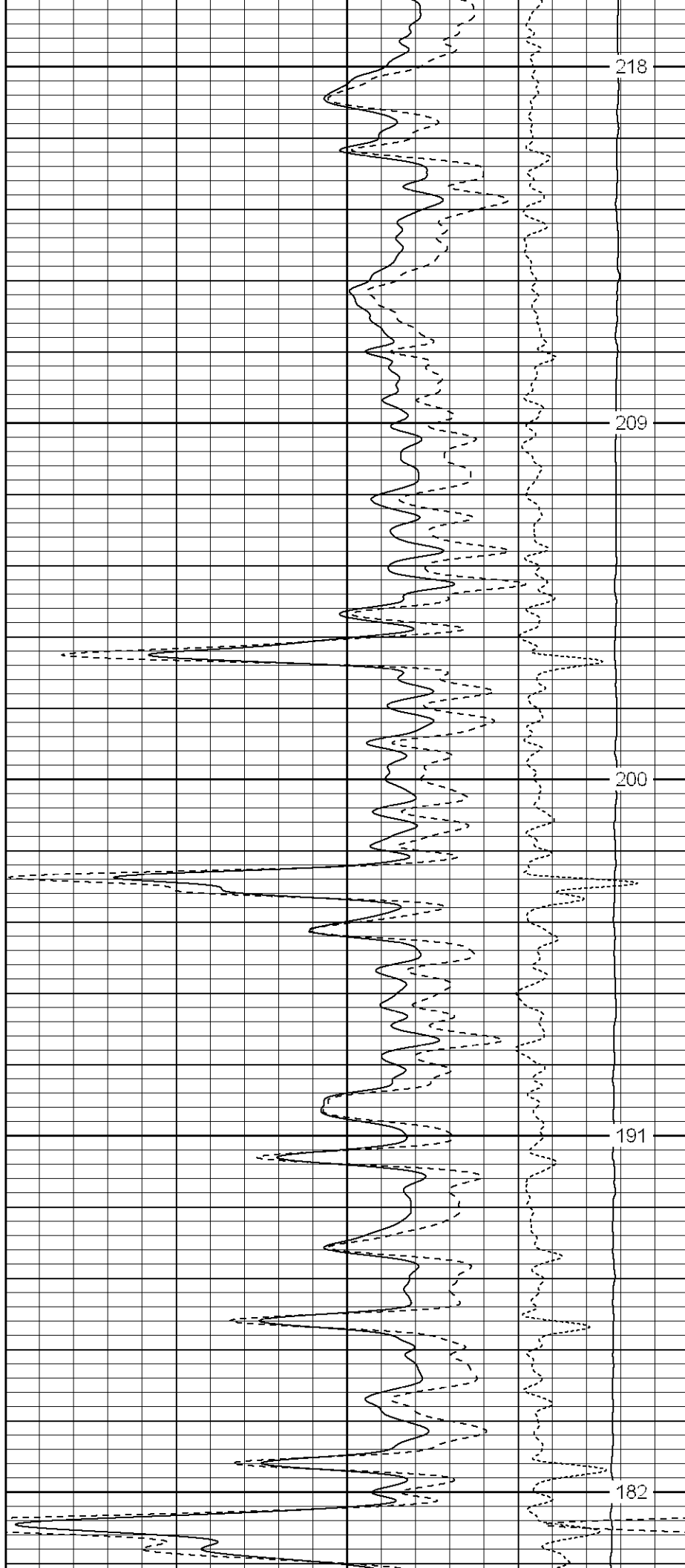
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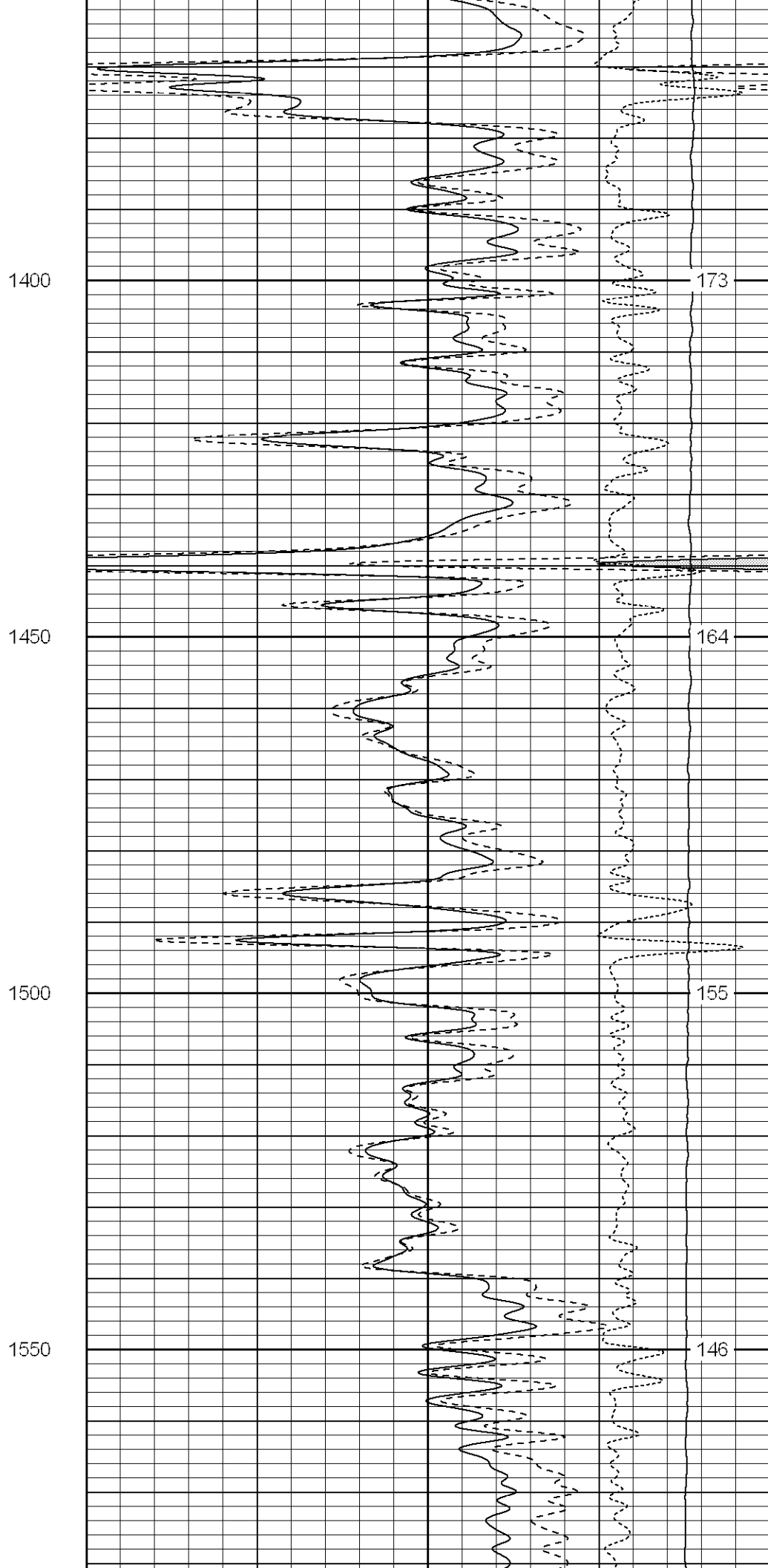
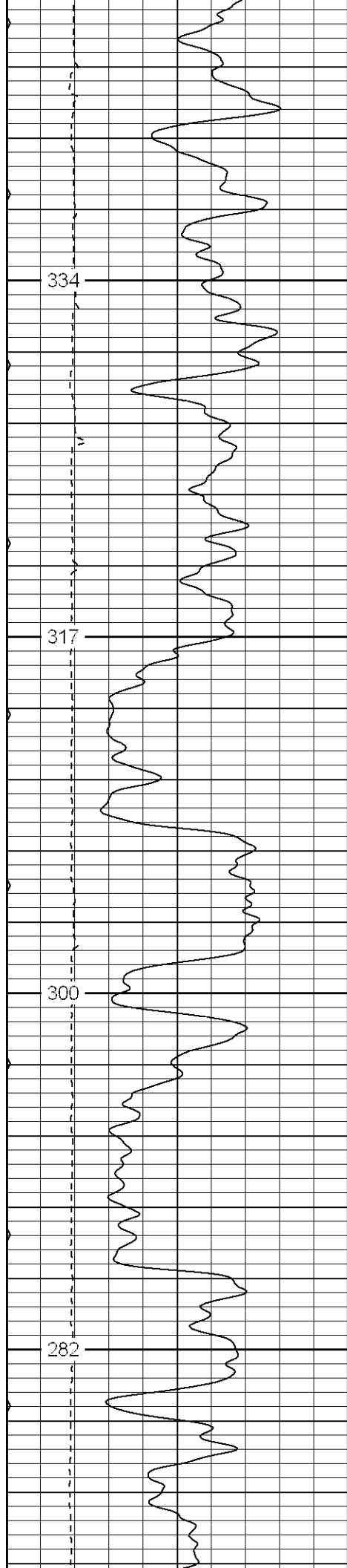
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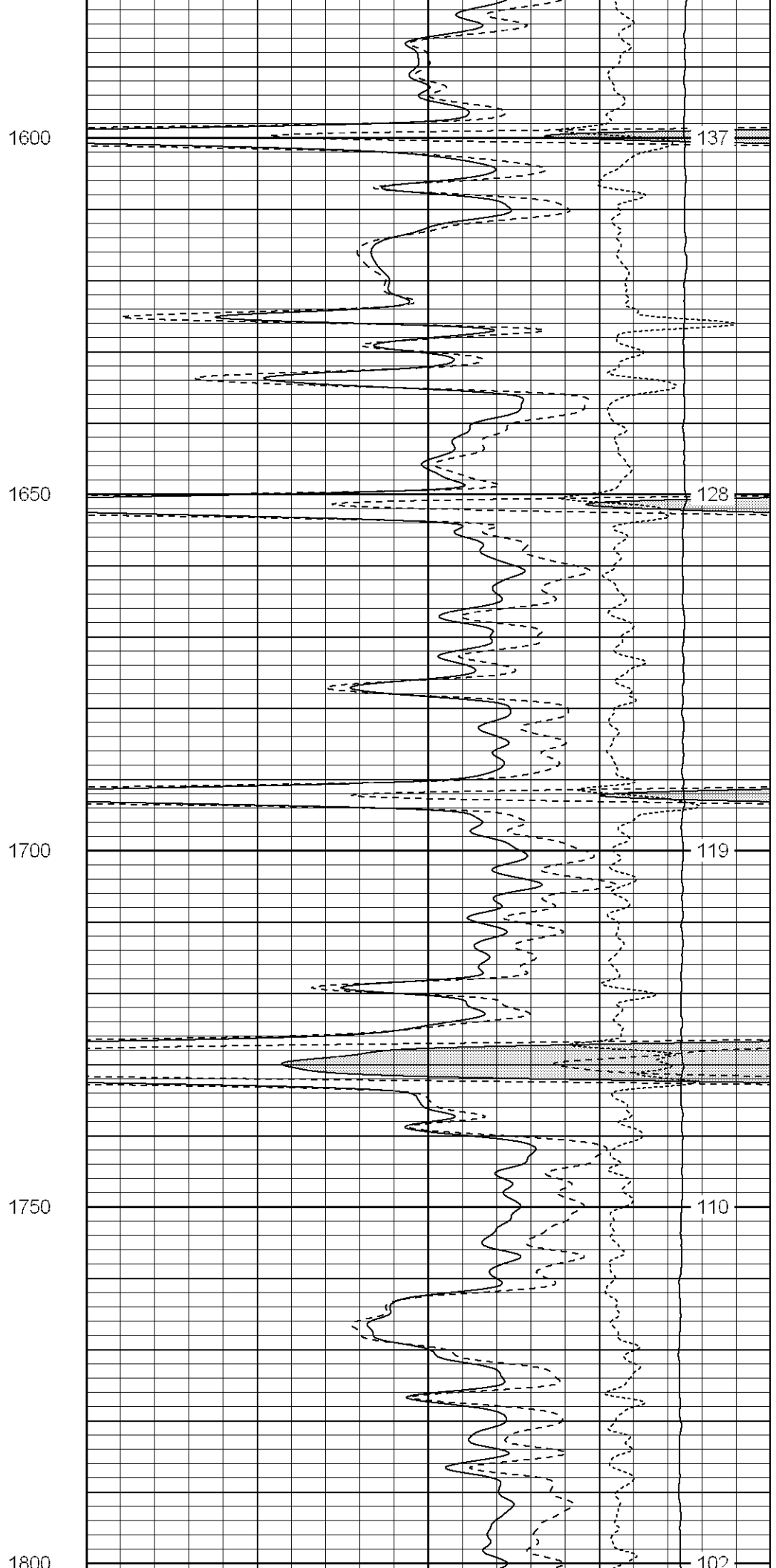
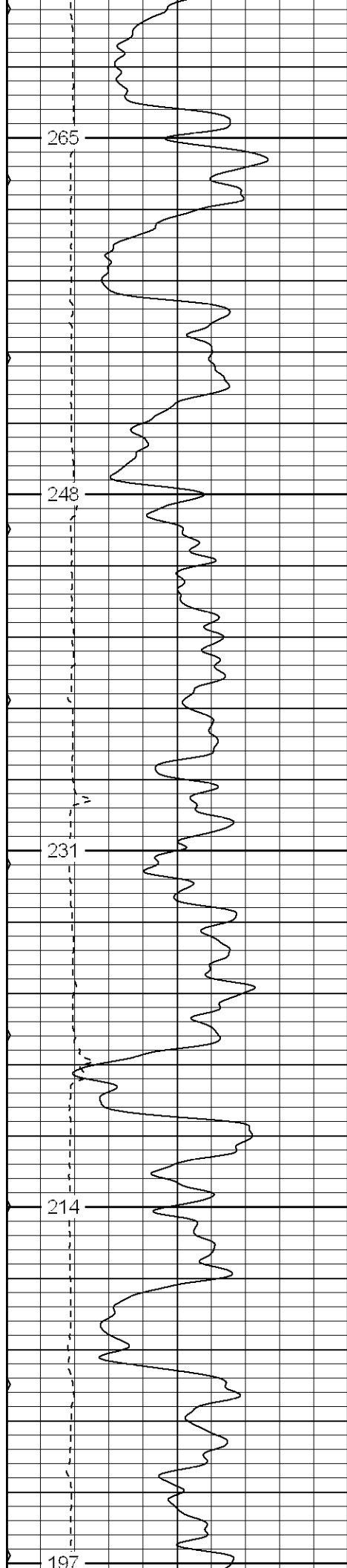
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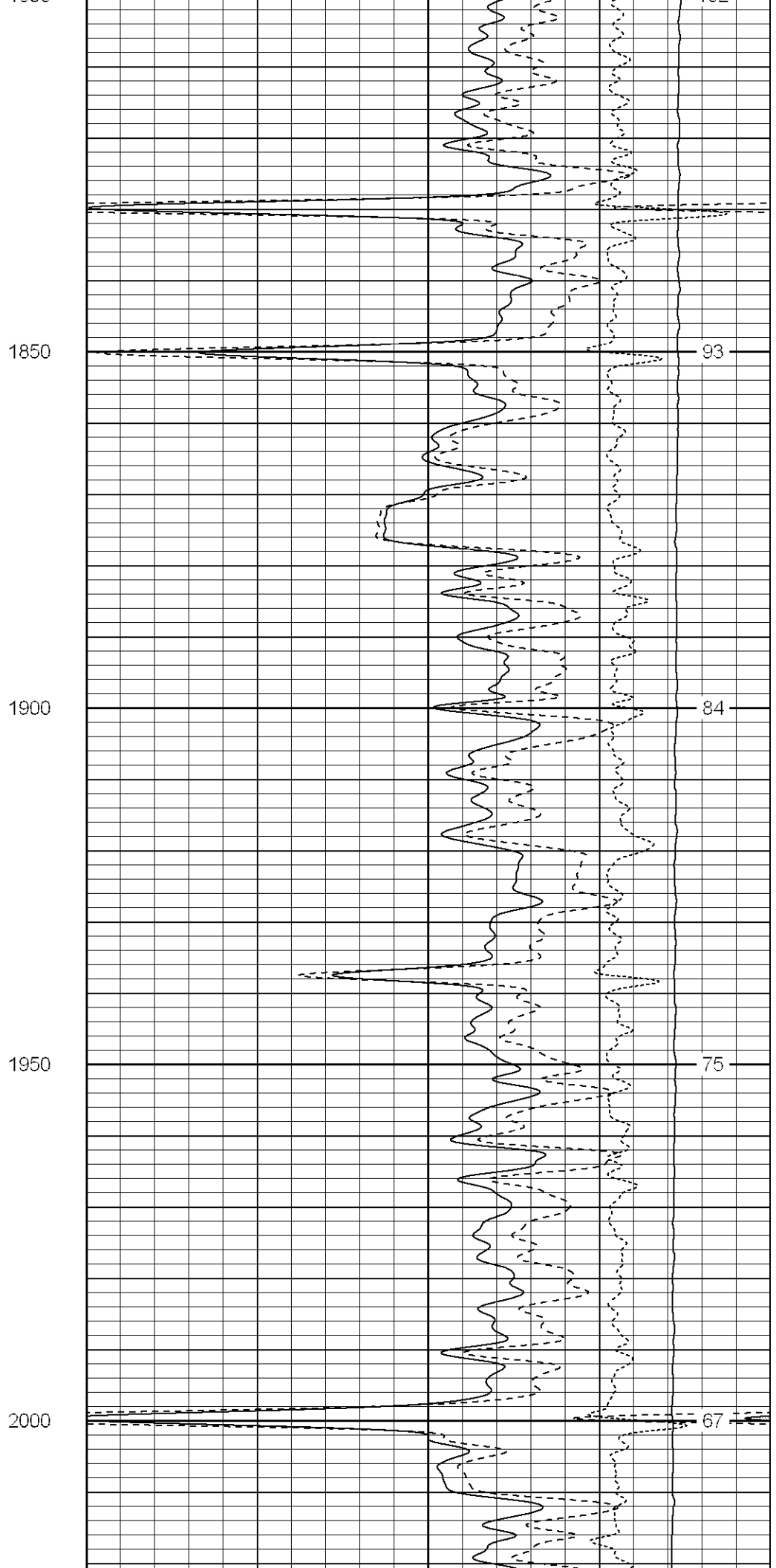
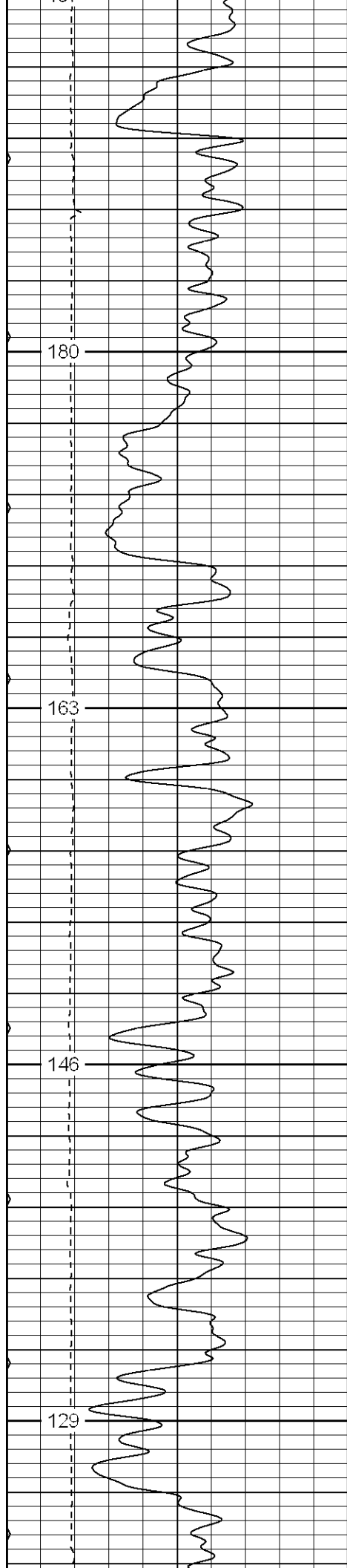
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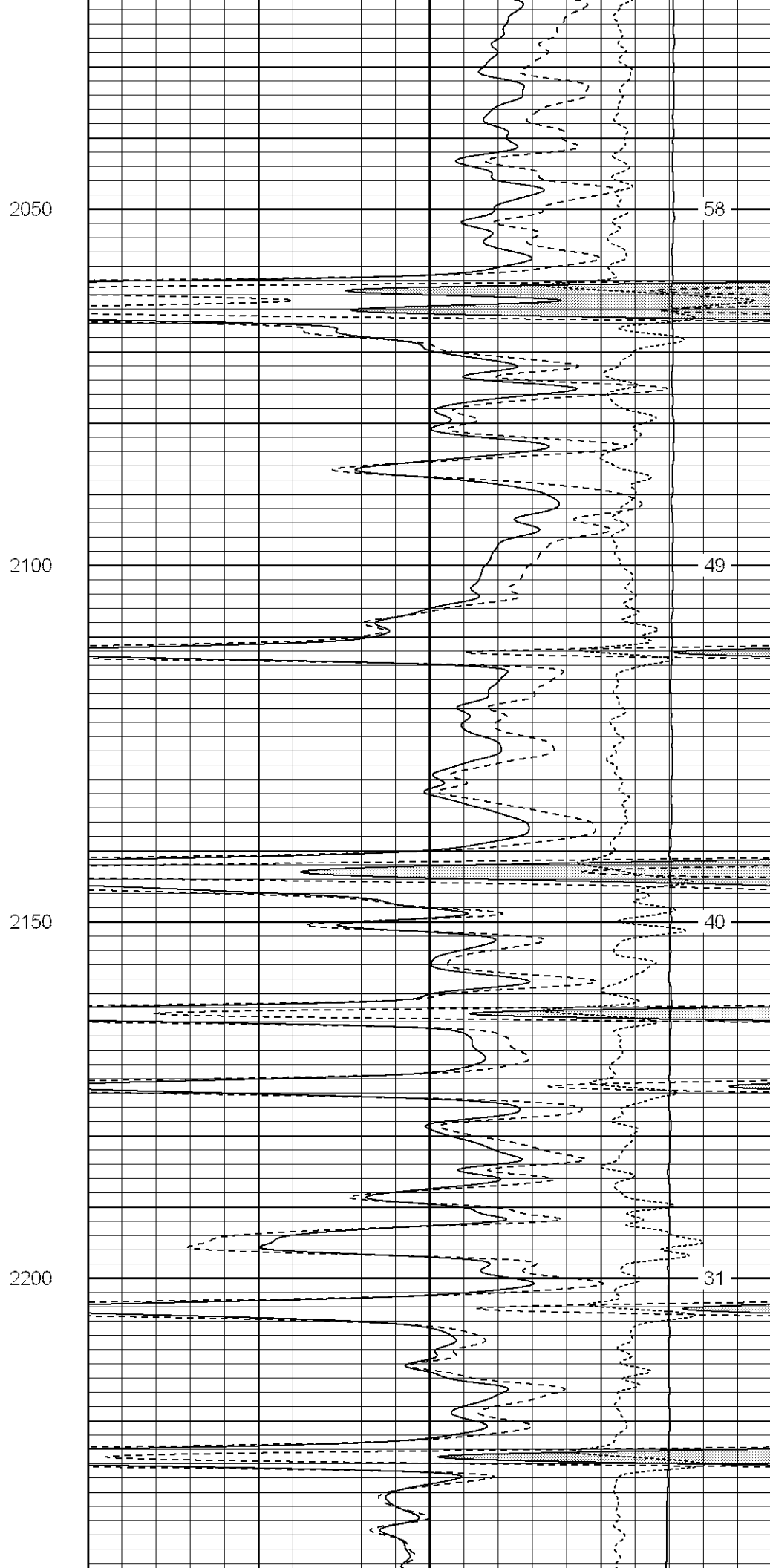
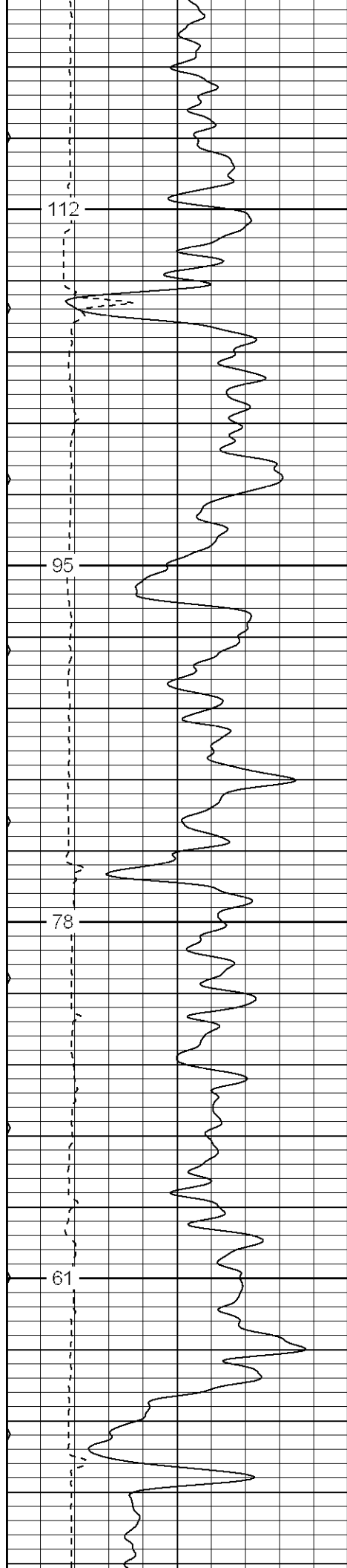
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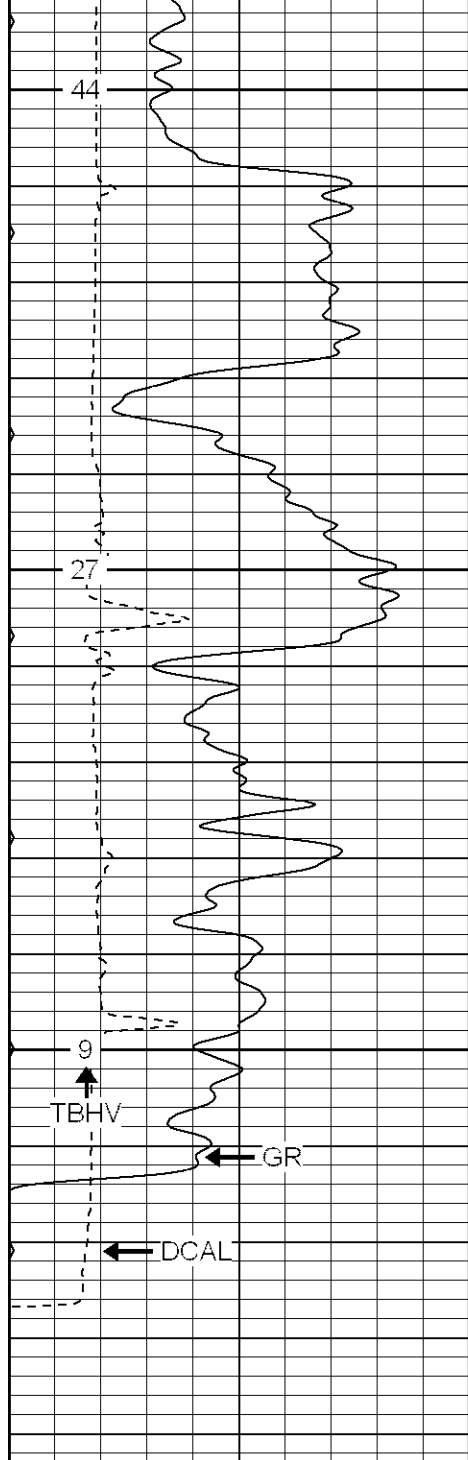




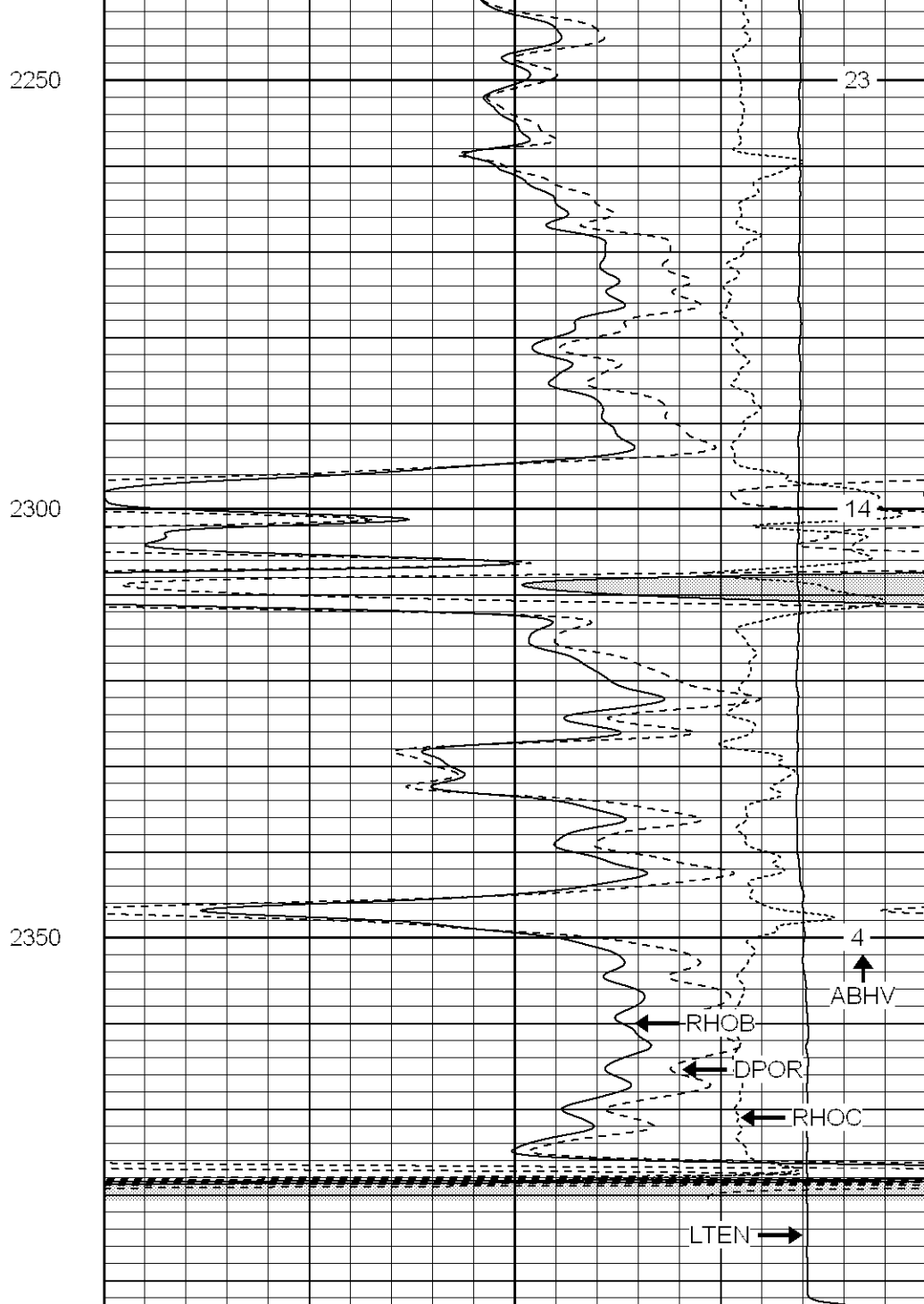








0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80



2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0

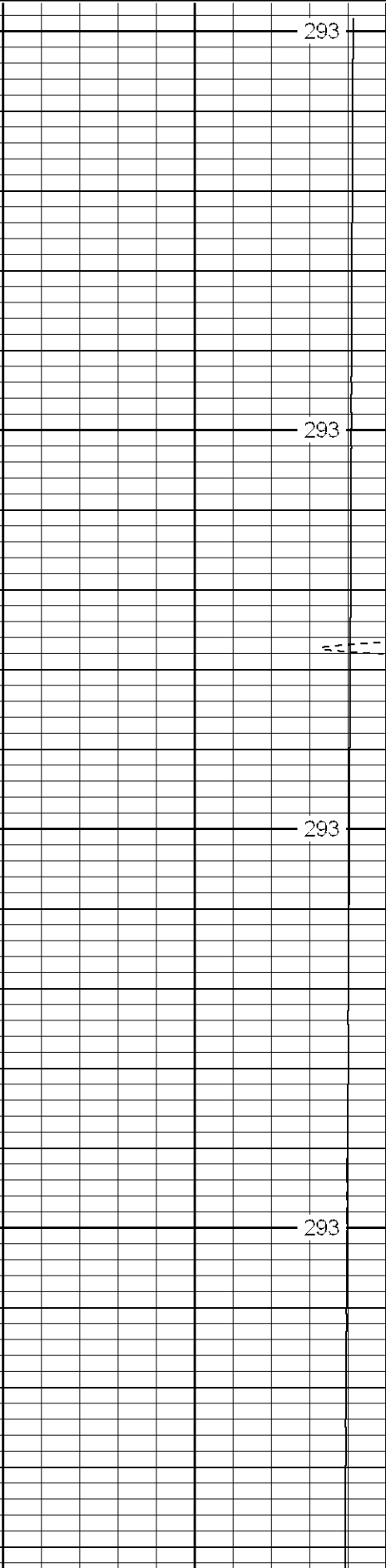
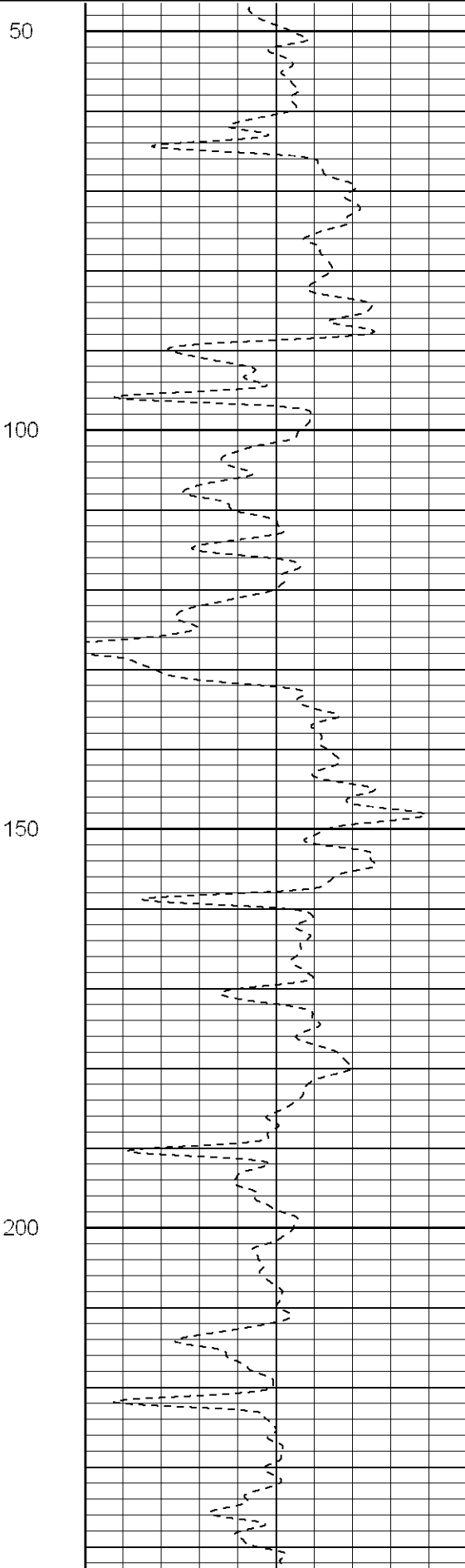
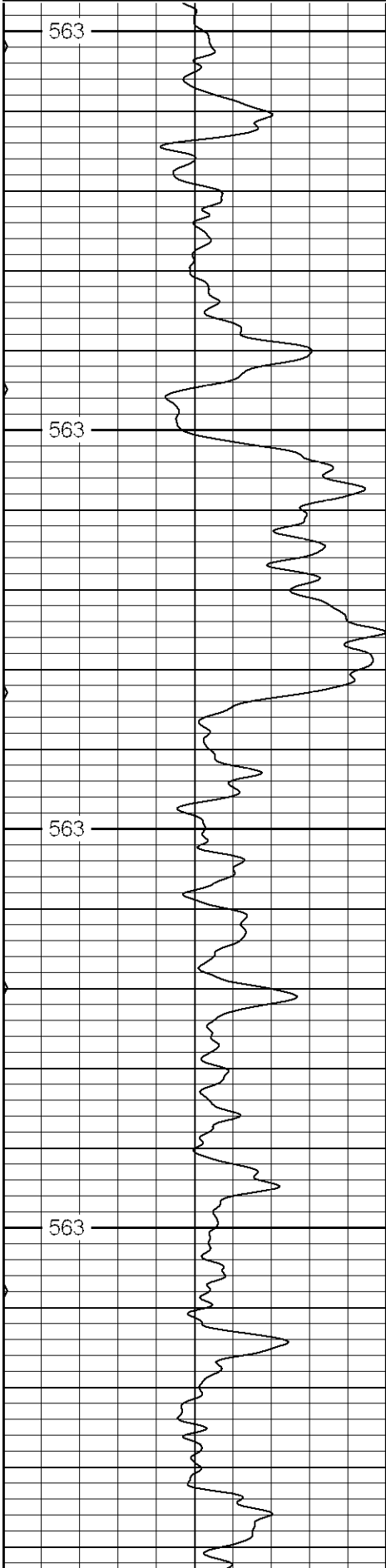
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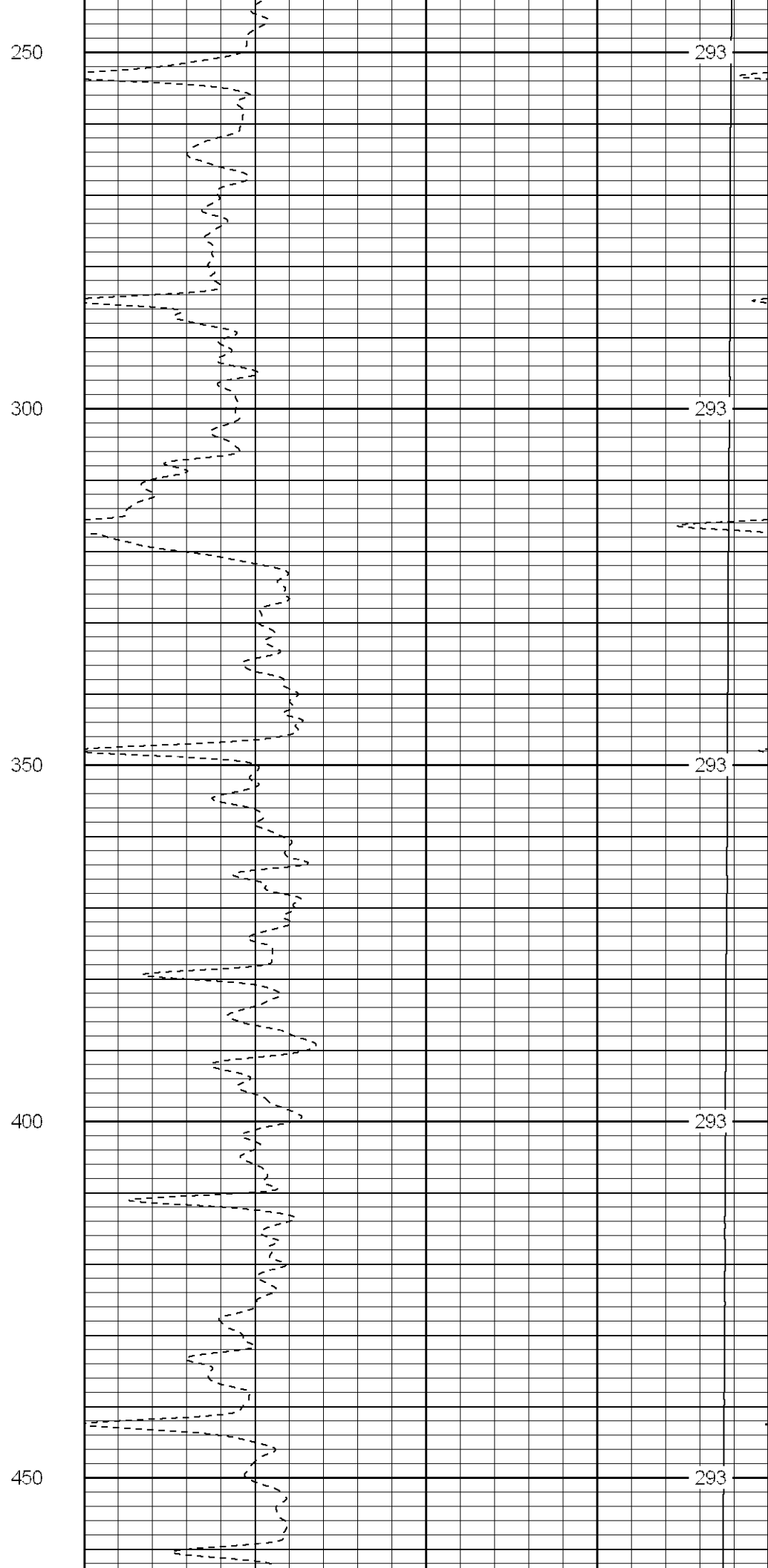
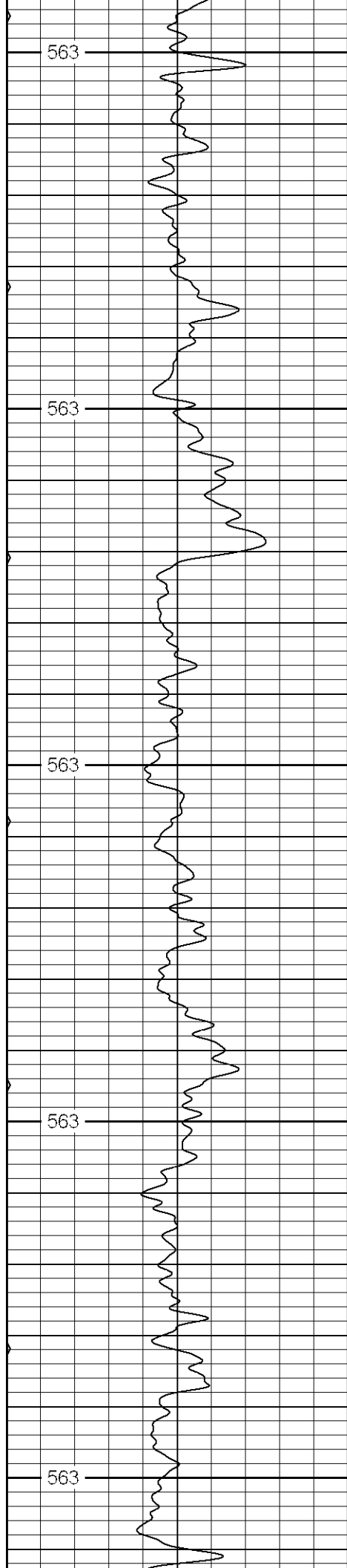
Main Pass

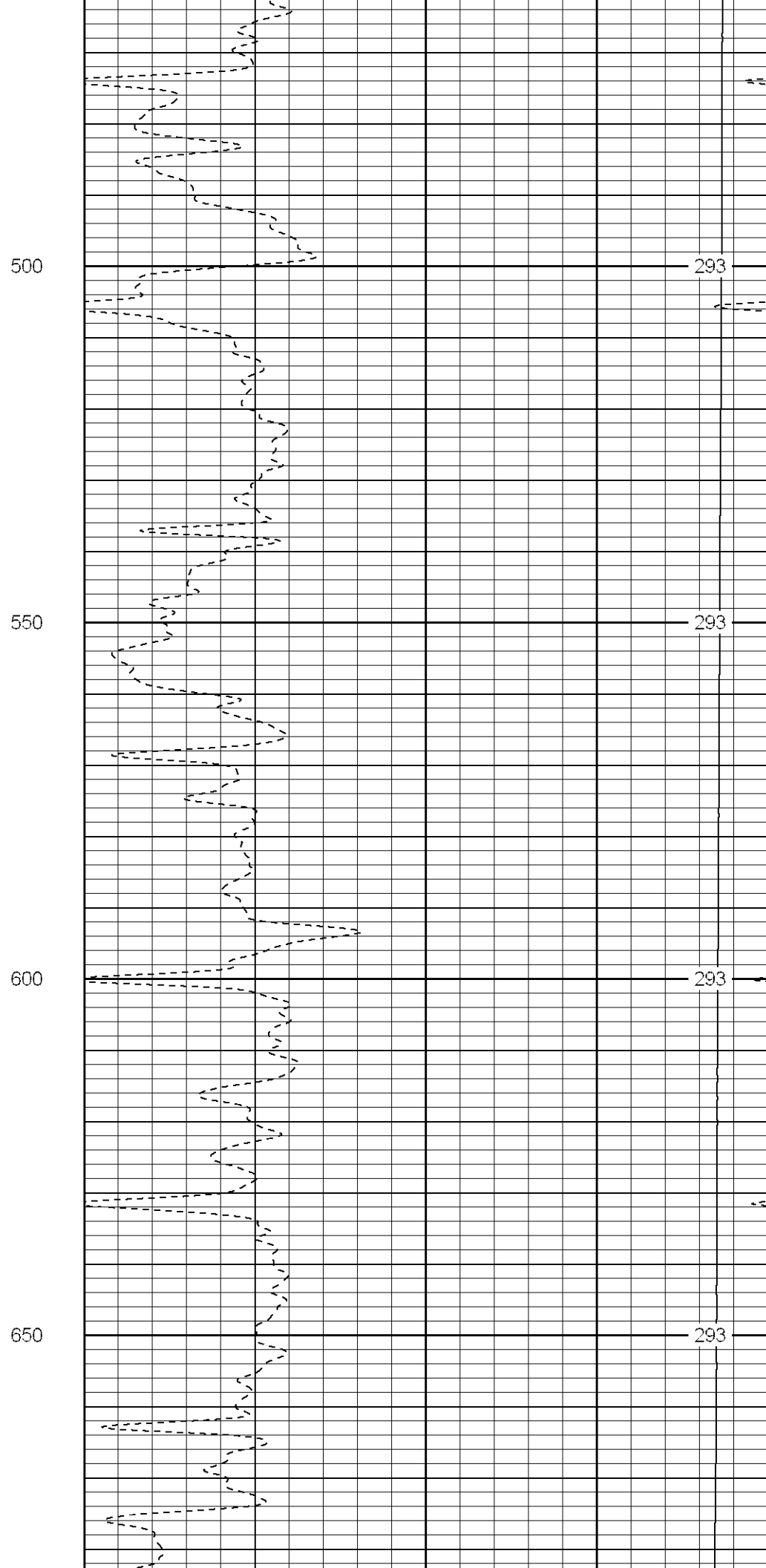
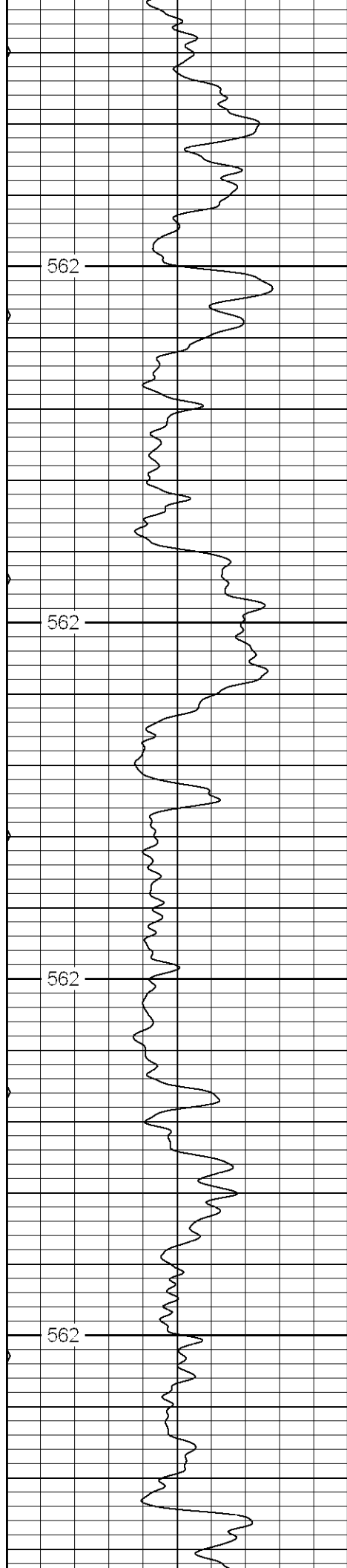
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 Presentation Format: cdnl
 Dataset Creation: Wed Nov 09 08:35:06 2005 by Calc Warrior 7.0 STD Ope
 Charted by: Depth in Feet scaled 1:240

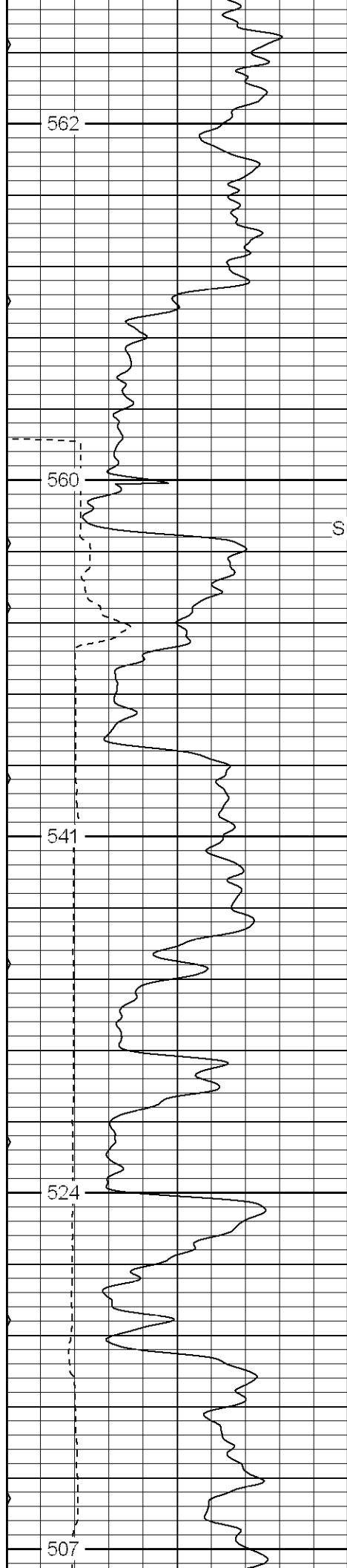
0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

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









700

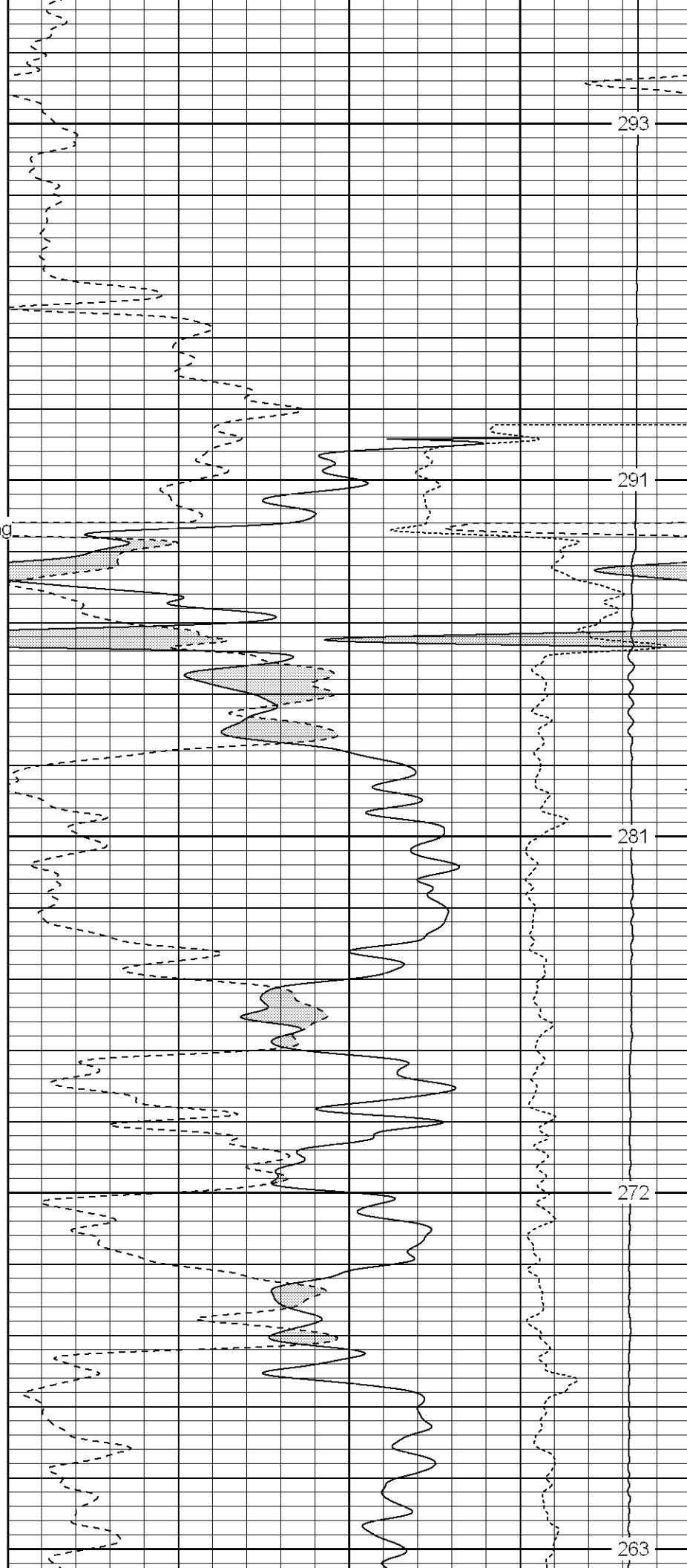
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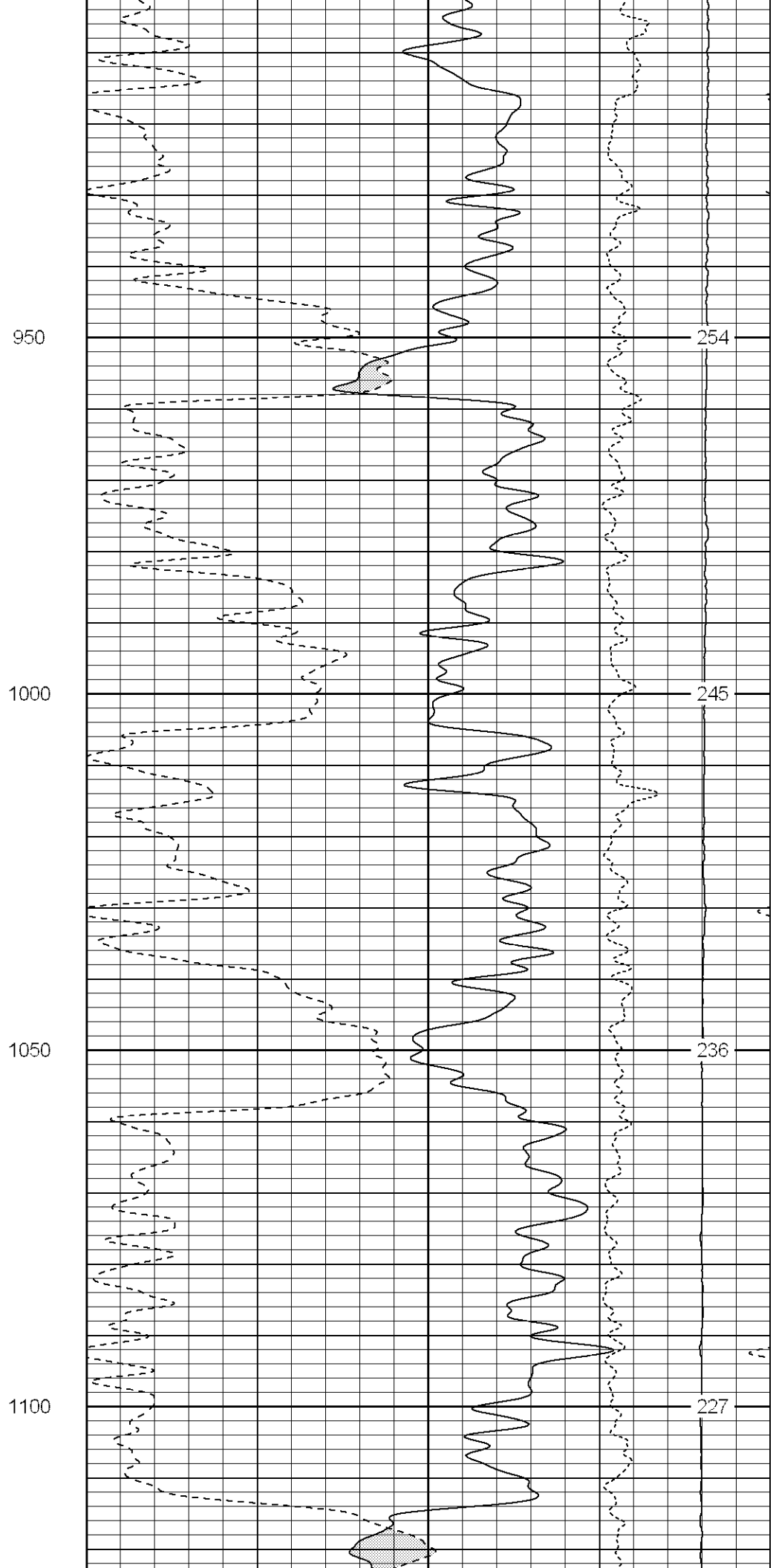
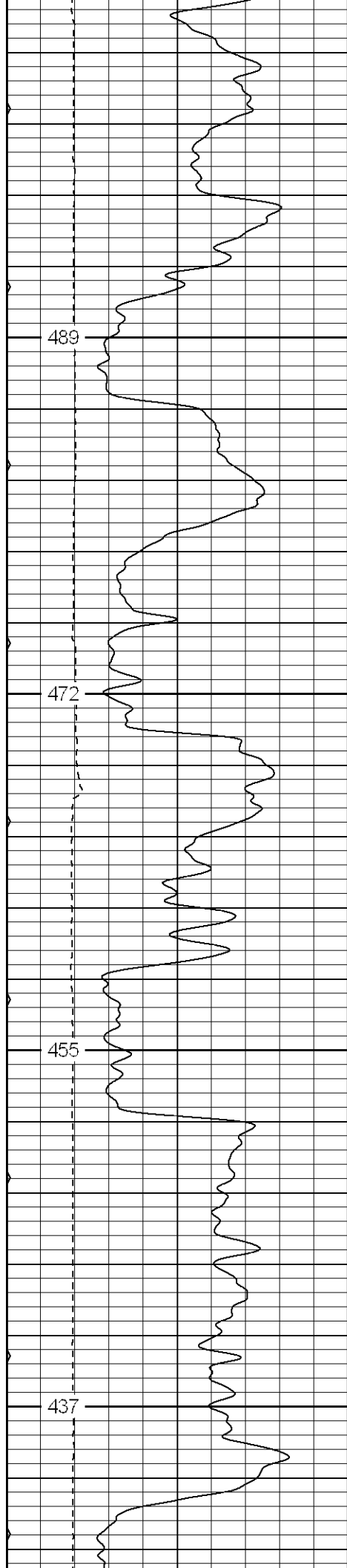
Surface Casing

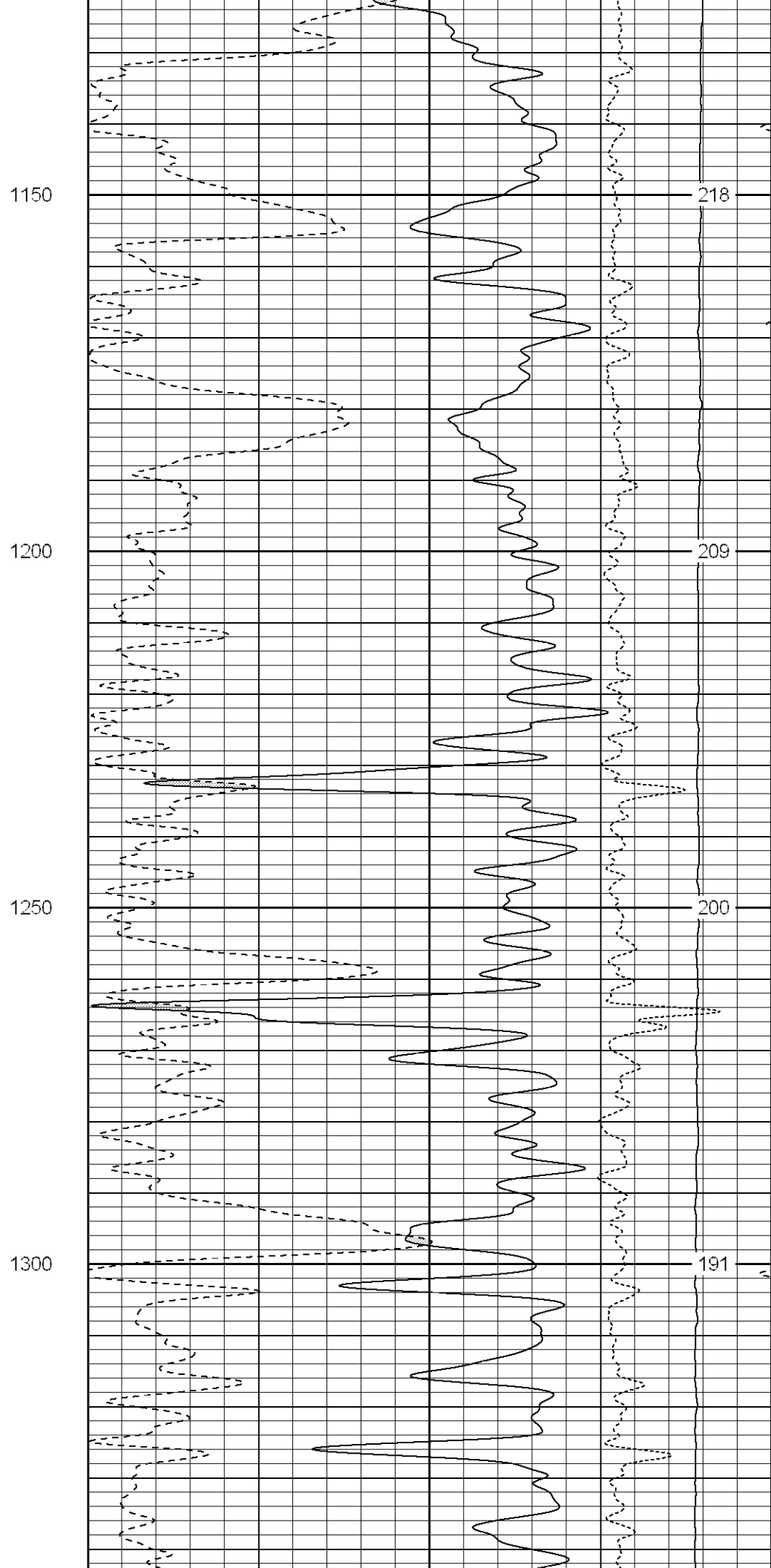
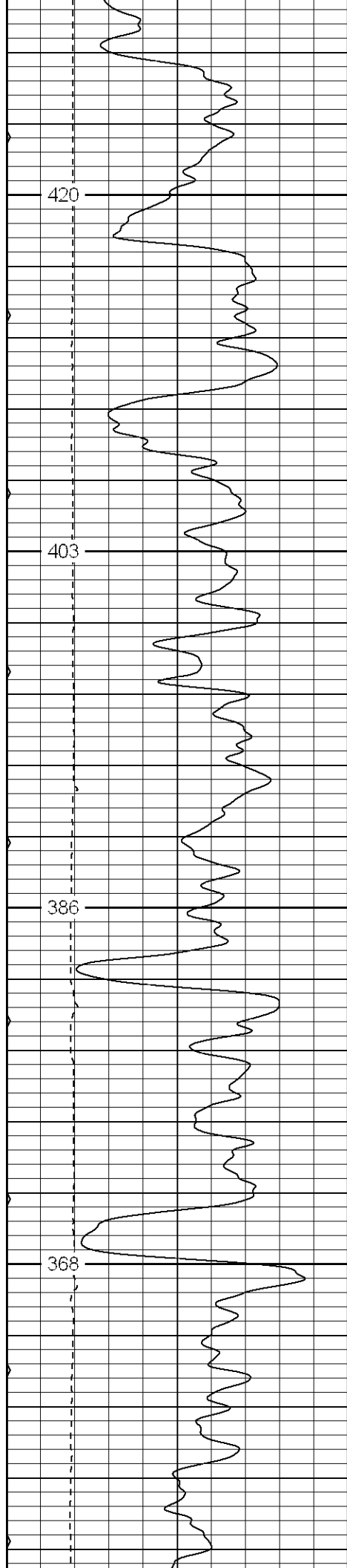
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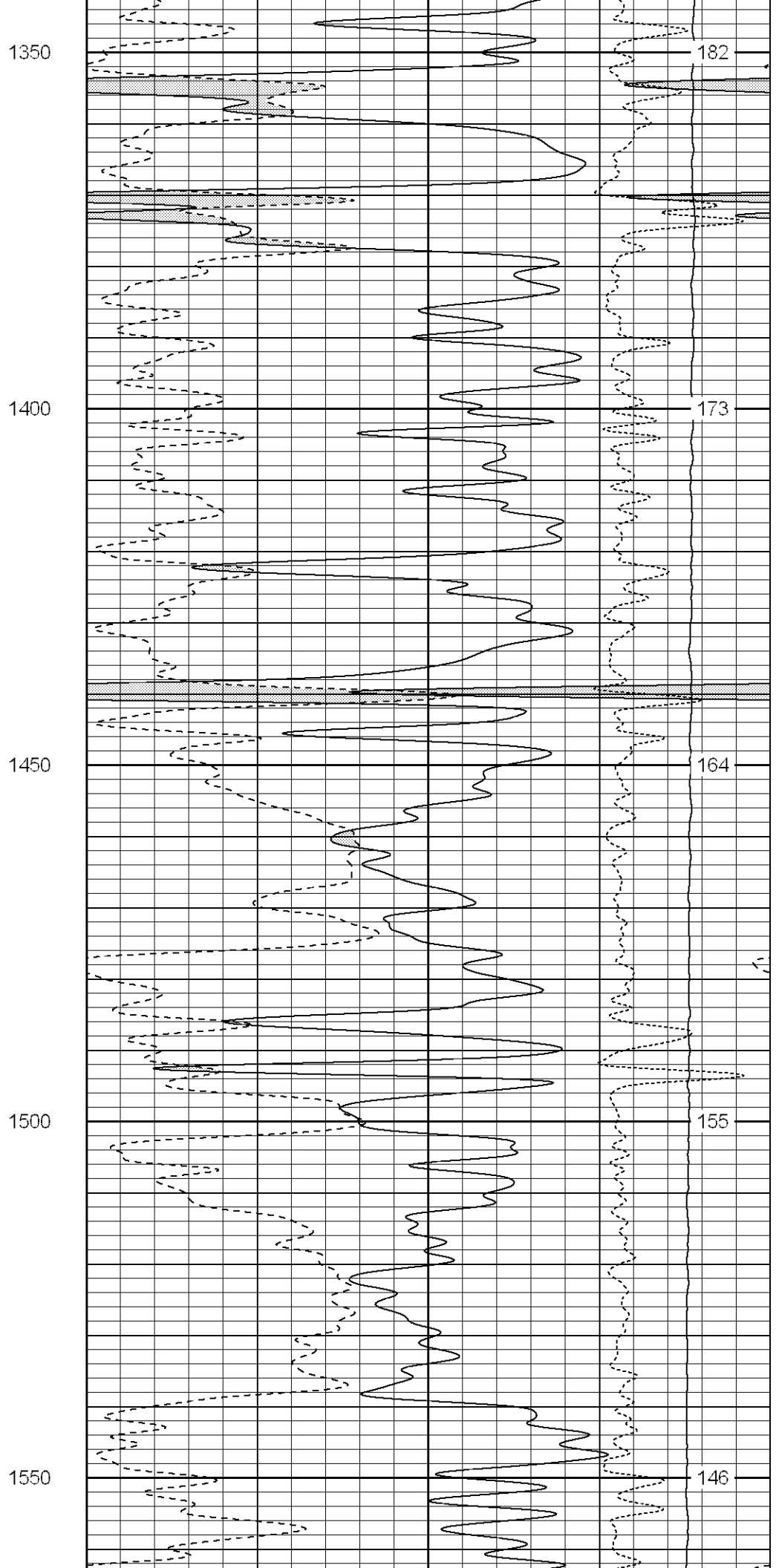
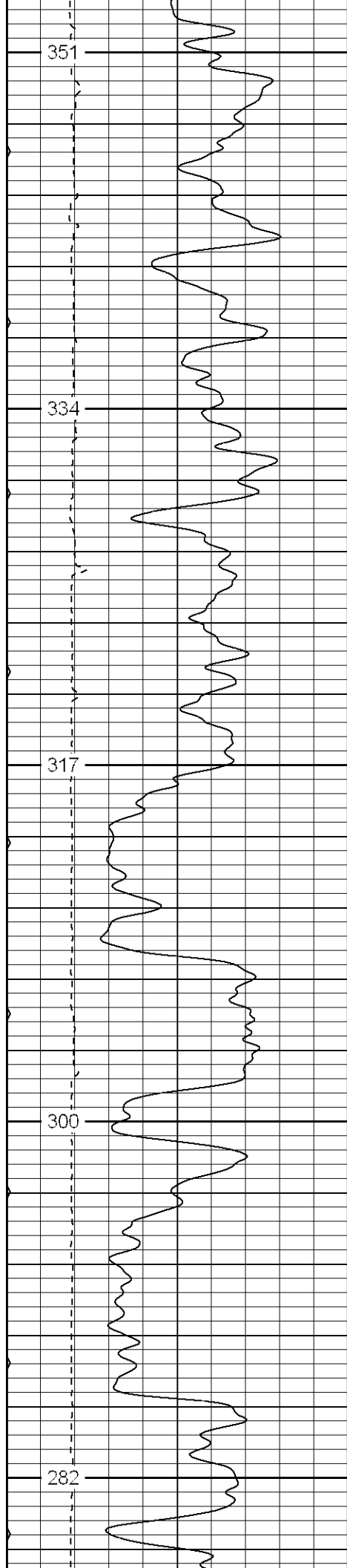
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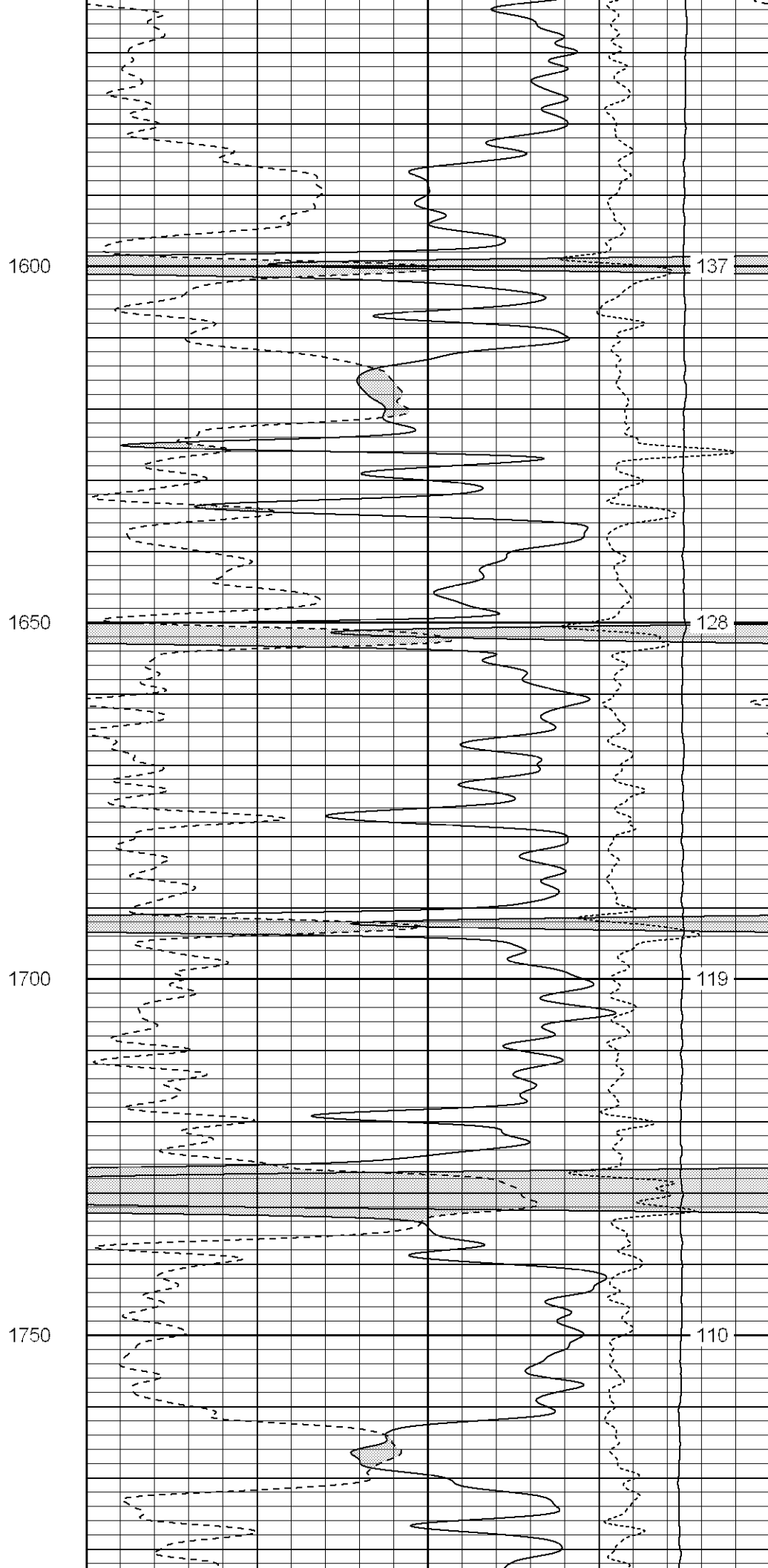
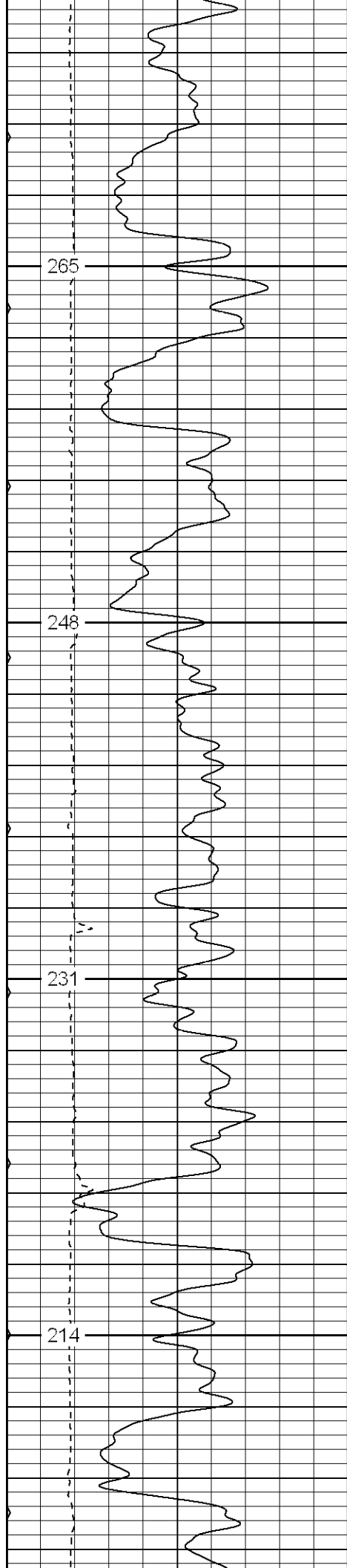
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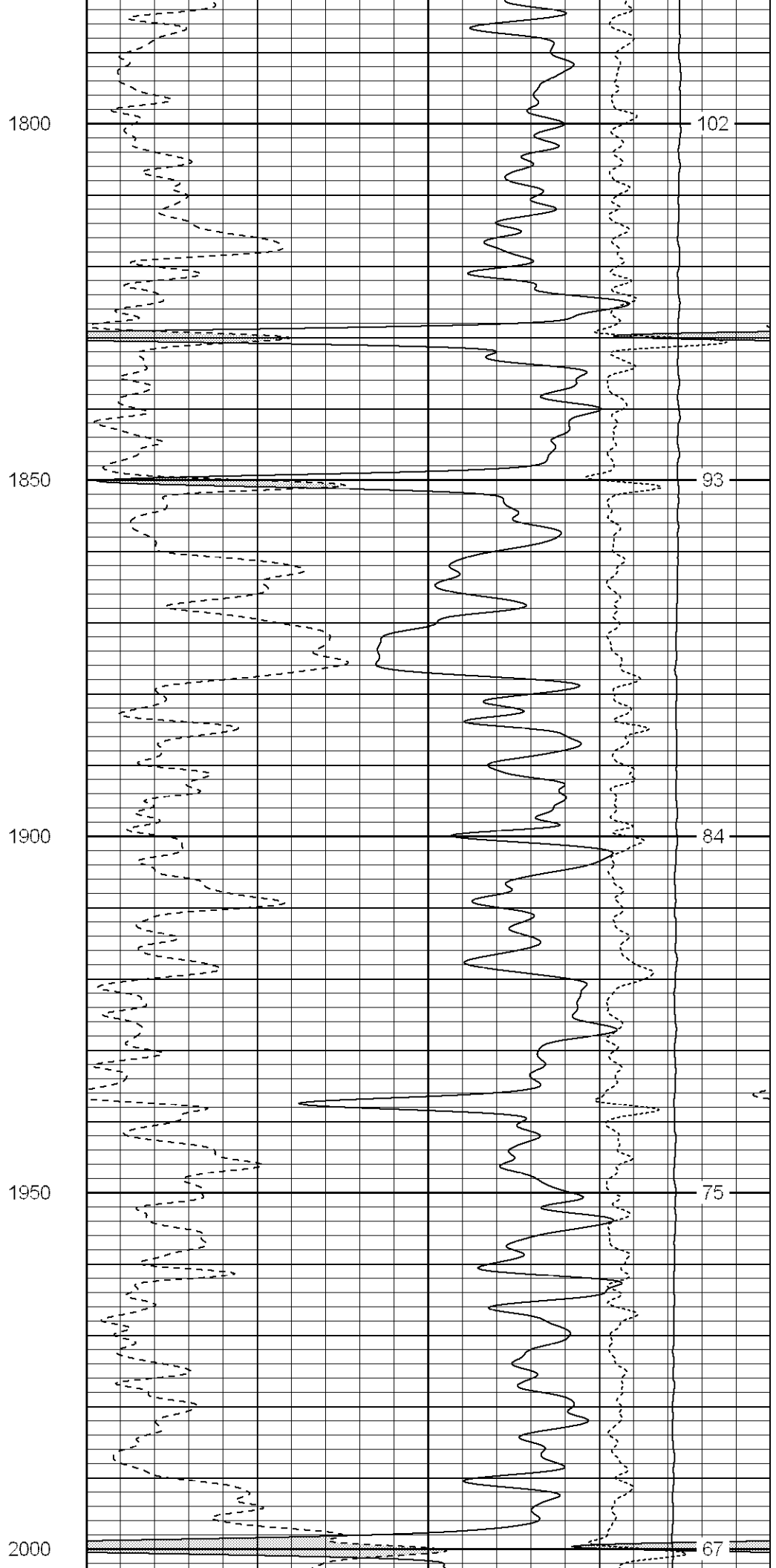
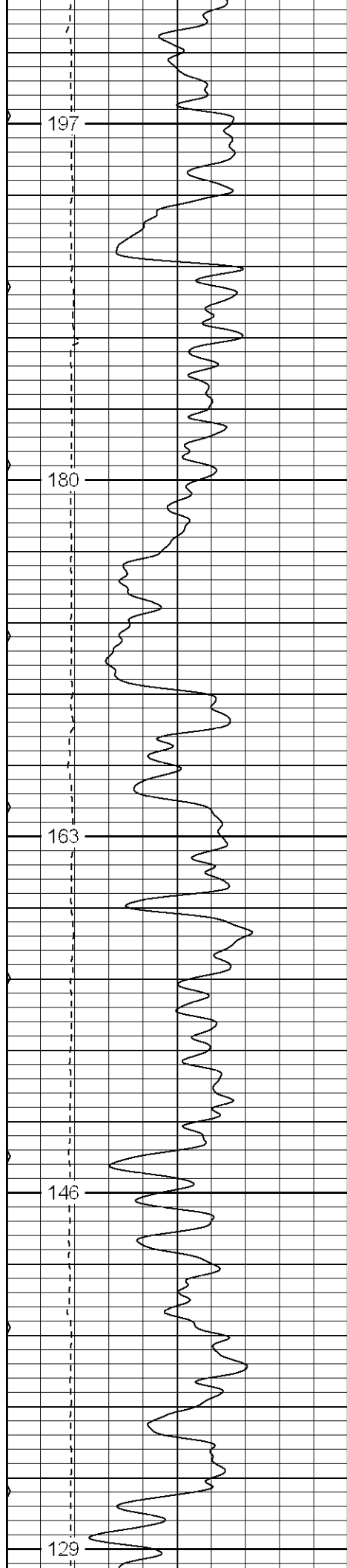


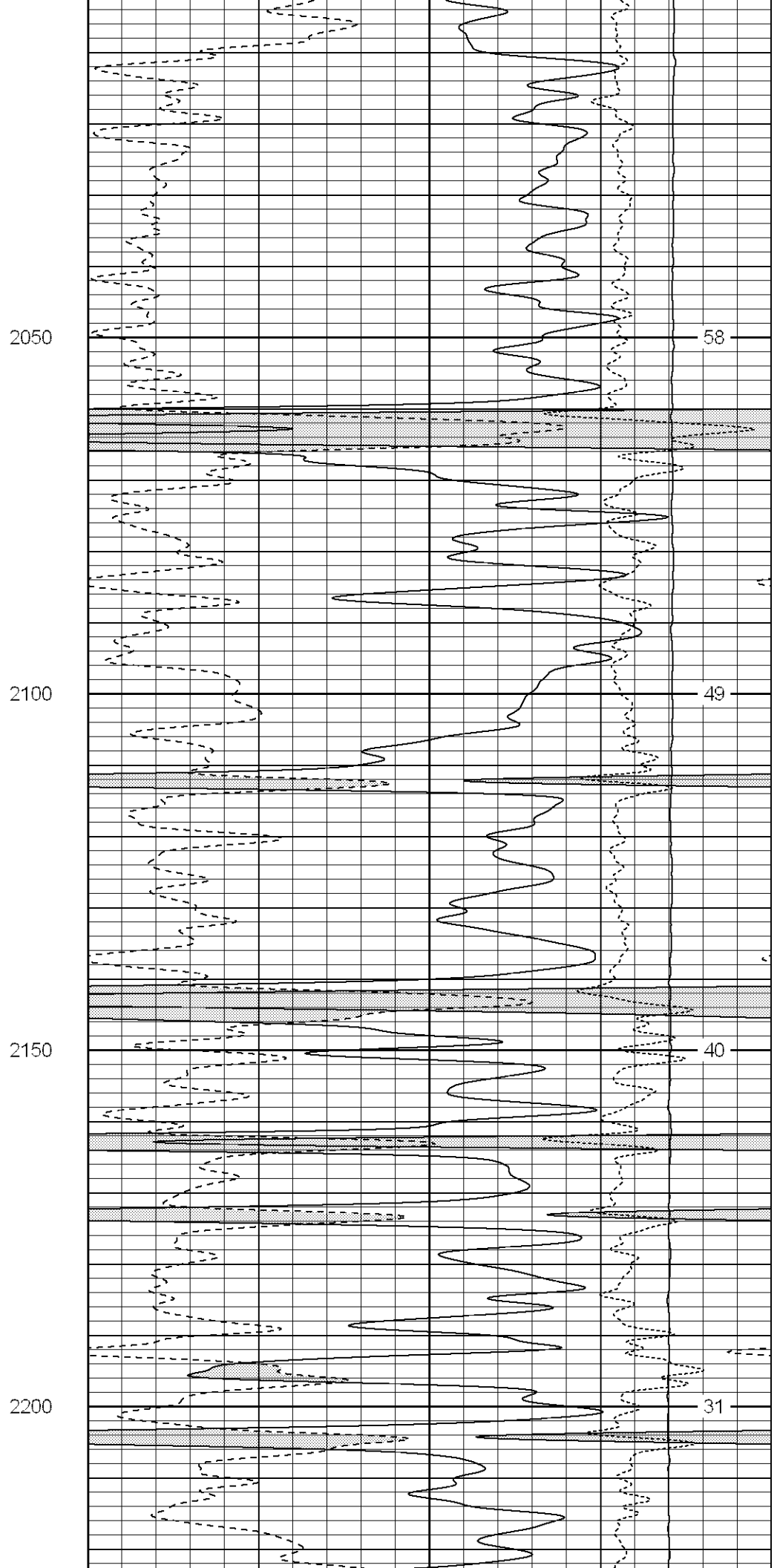
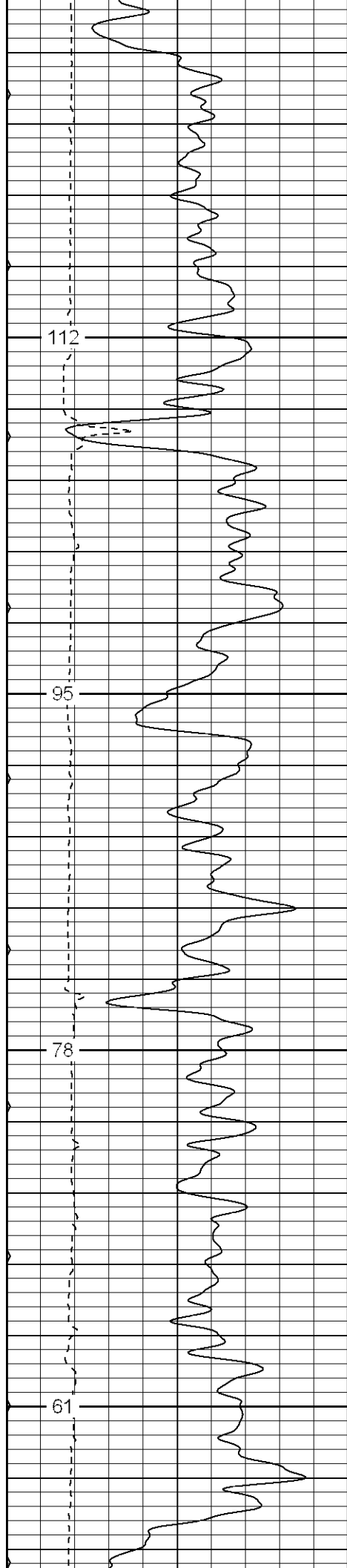


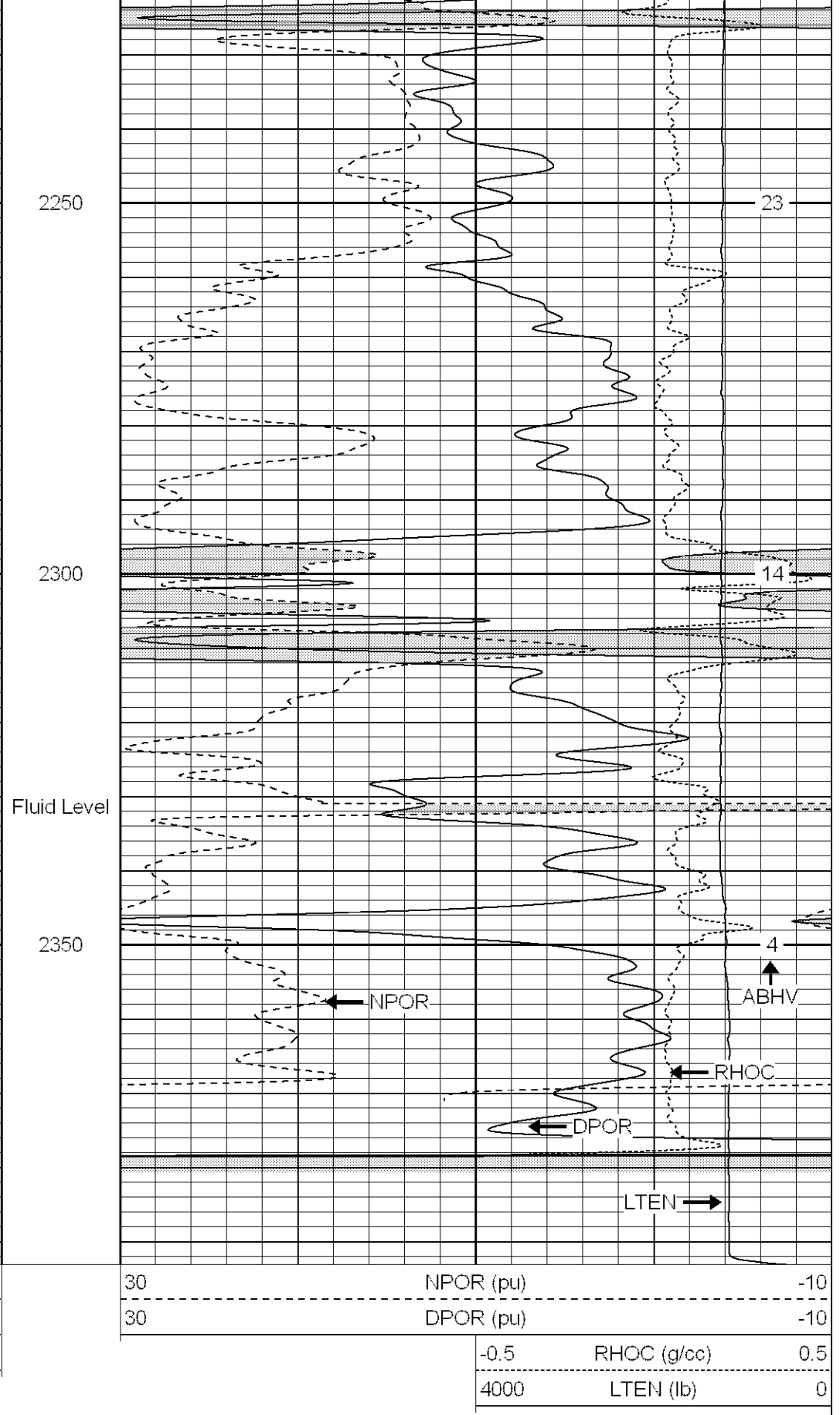
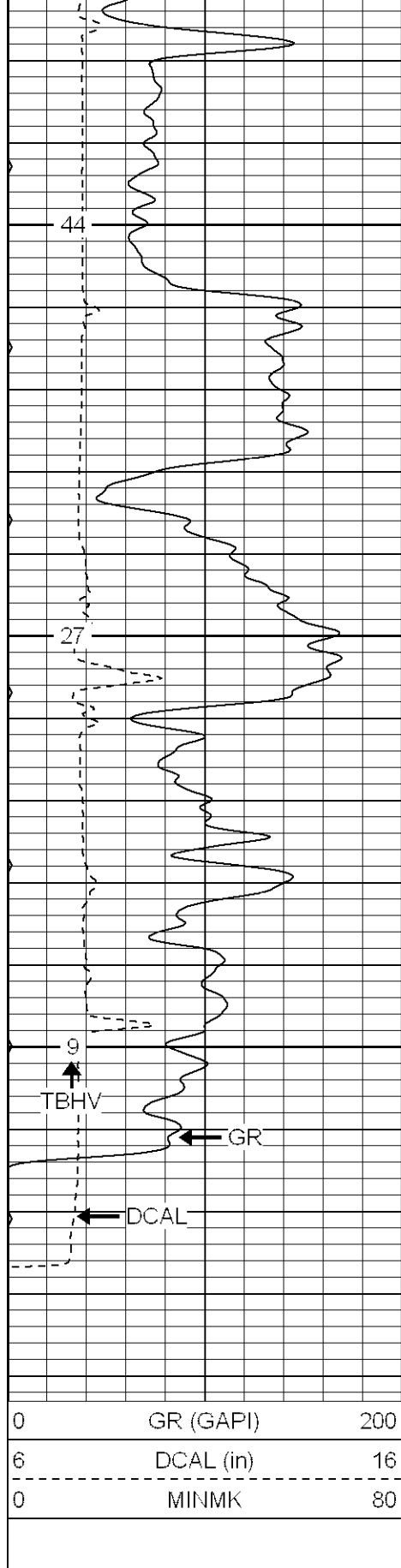












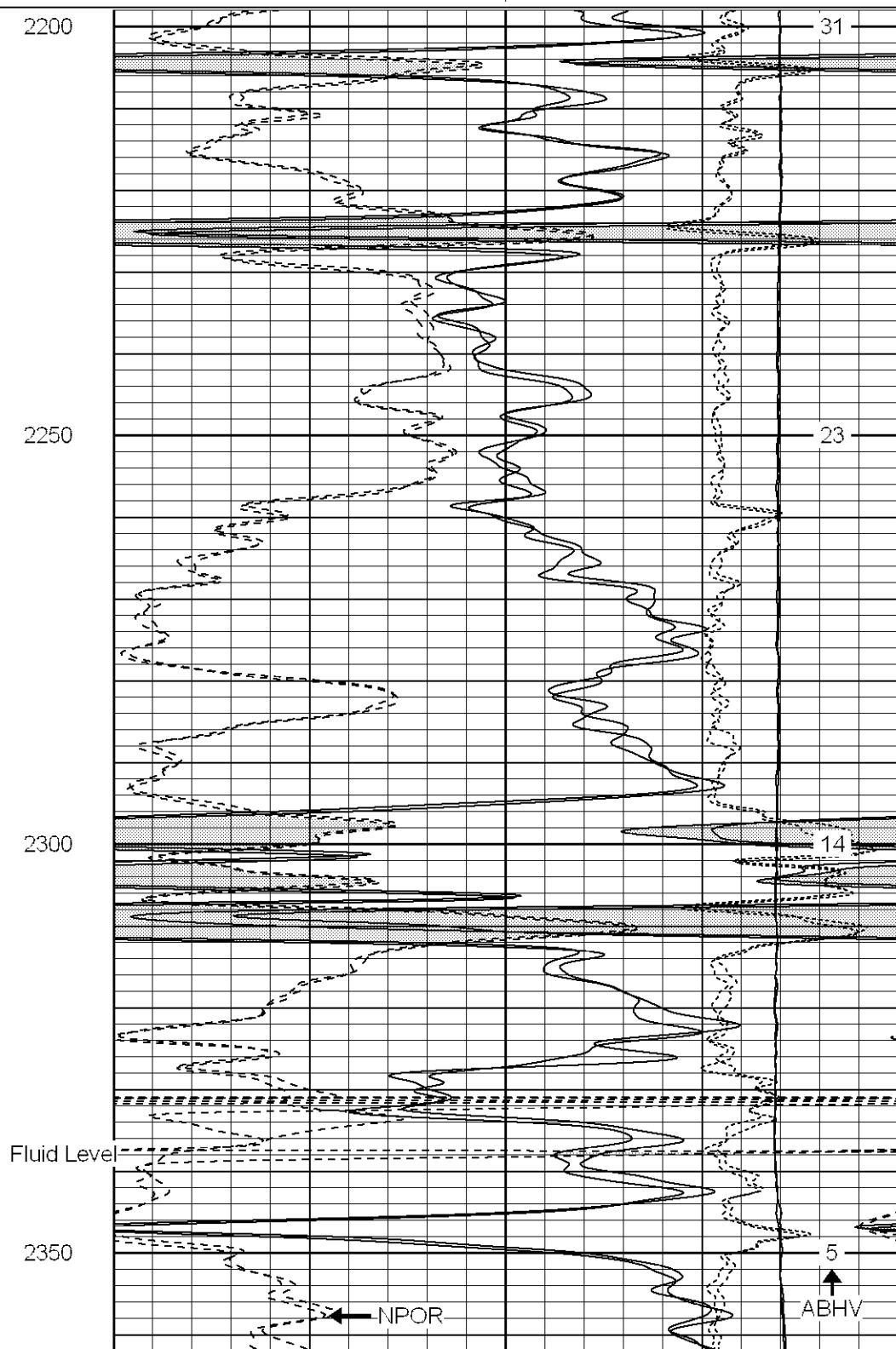
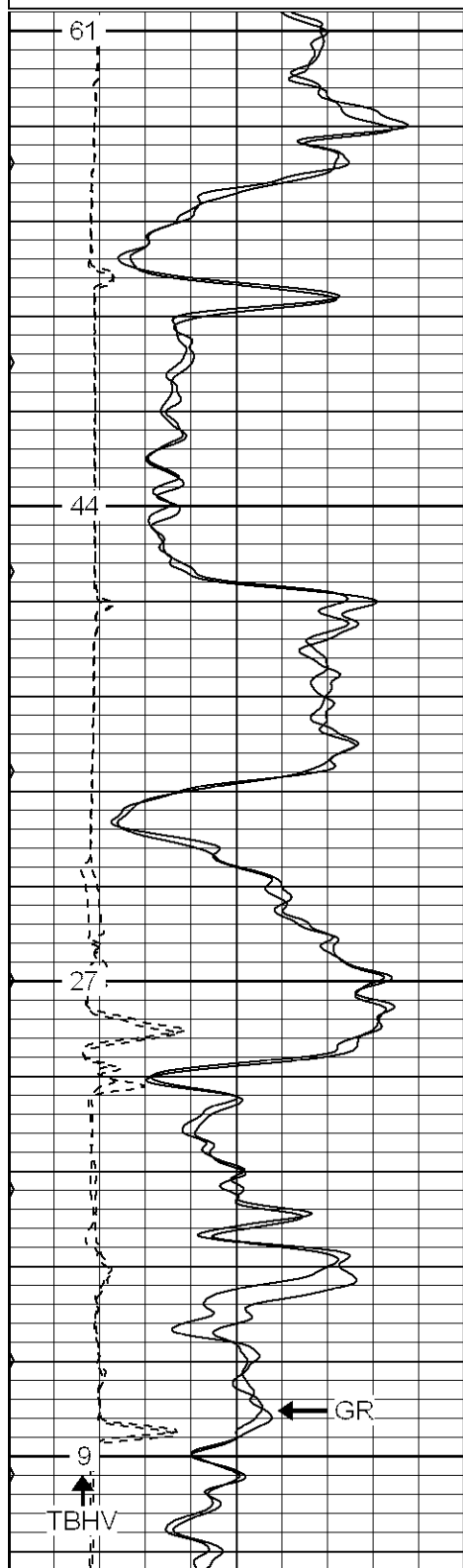
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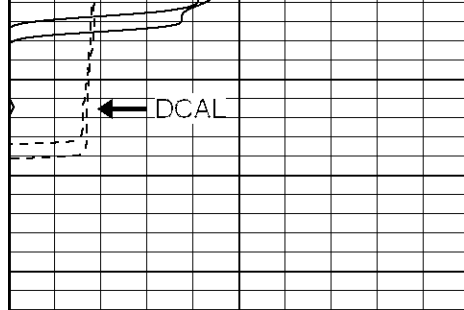
Repeat Pass

Dataset Pathname: pass1.1
 Presentation Format: odnl
 Dataset Creation: Wed Nov 09 07:21:55 2005 by Calc Warrior 7.0 STD Ope
 Charted by: Depth in Feet scaled 1:240

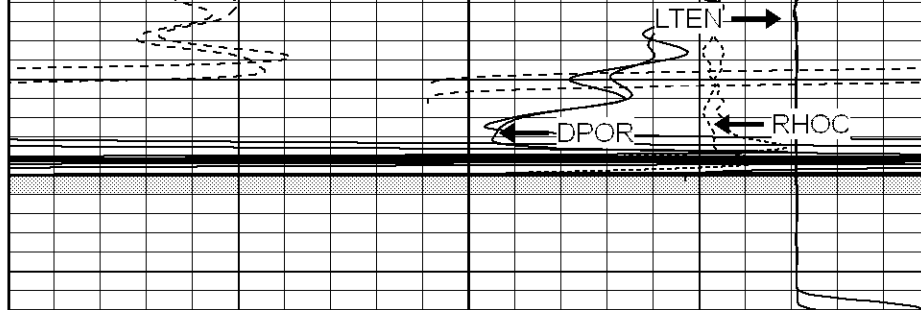
0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80
0	GR-repeat (GAPI)	200
6	DCAL-repeat (in)	16

30	NPOR (pu)	-10
30	DPOR (pu)	-10
30	NPOR-repeat (pu)	-10
30	DPOR-repeat (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5
4000	LTEN-repeat (lb)	0





0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80
0	GR-repeat (GAPI)	200
6	DCAL-repeat (in)	16



30	NPOR (pu)	-10
30	DPOR (pu)	-10
30	NPOR-repeat (pu)	-10
30	DPOR-repeat (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5
4000	LTEN-repeat (lb)	0

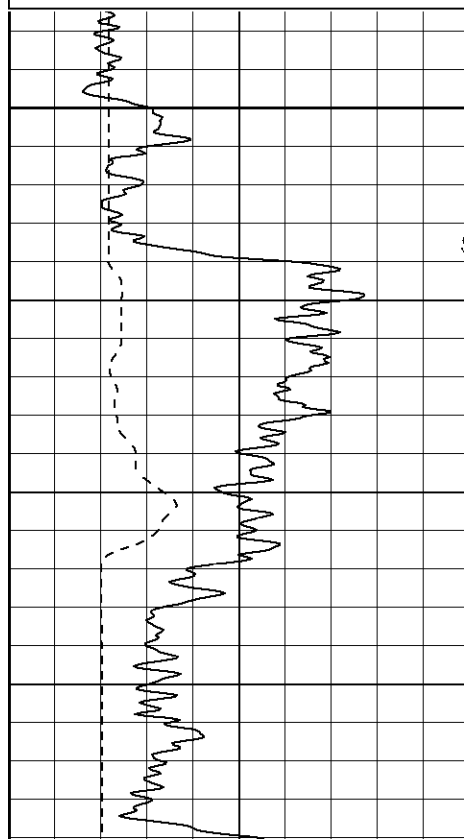
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High Resolution Pass

Database File: zentr.db
 Dataset Pathname: pass2.3
 Presentation Format: cdlhr
 Dataset Creation: Wed Nov 09 13:41:19 2005 by Calc Warrior 7.0 STD Ope
 Charted by: Depth in Feet scaled 1:120

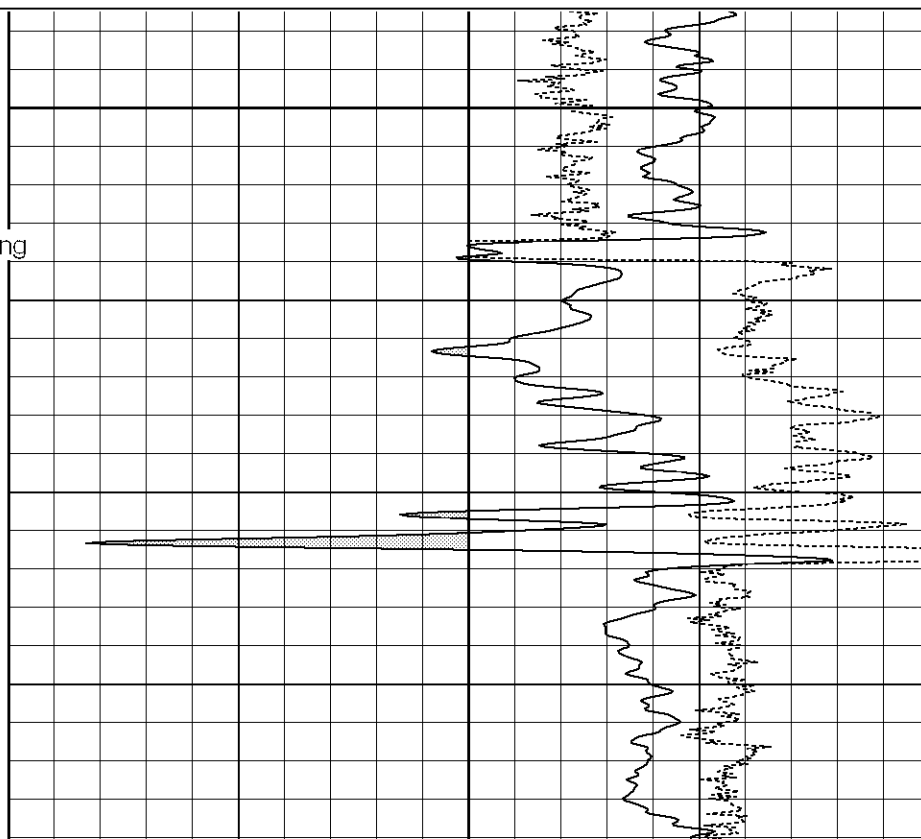
0	GR (GAPI)	200
6	DCAL (in)	16

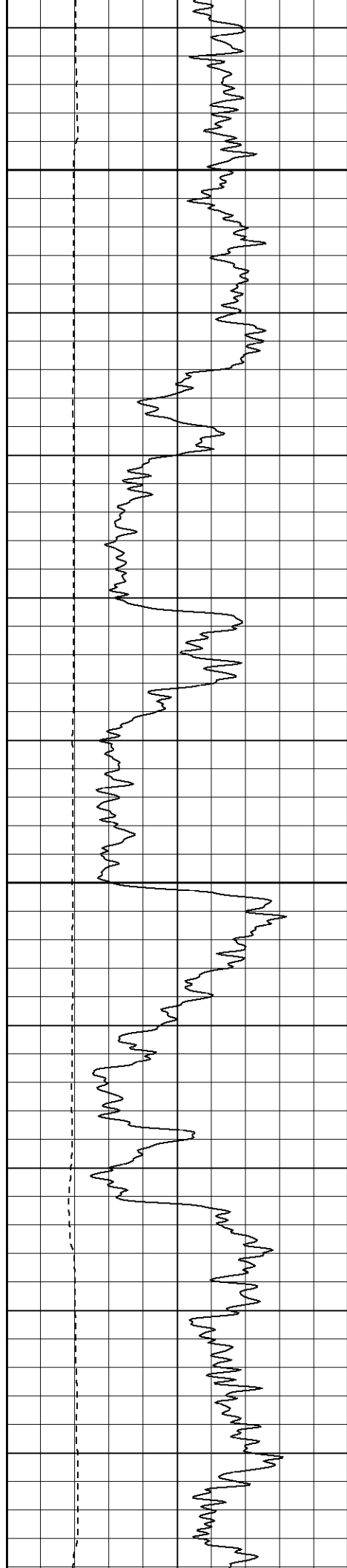
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



750

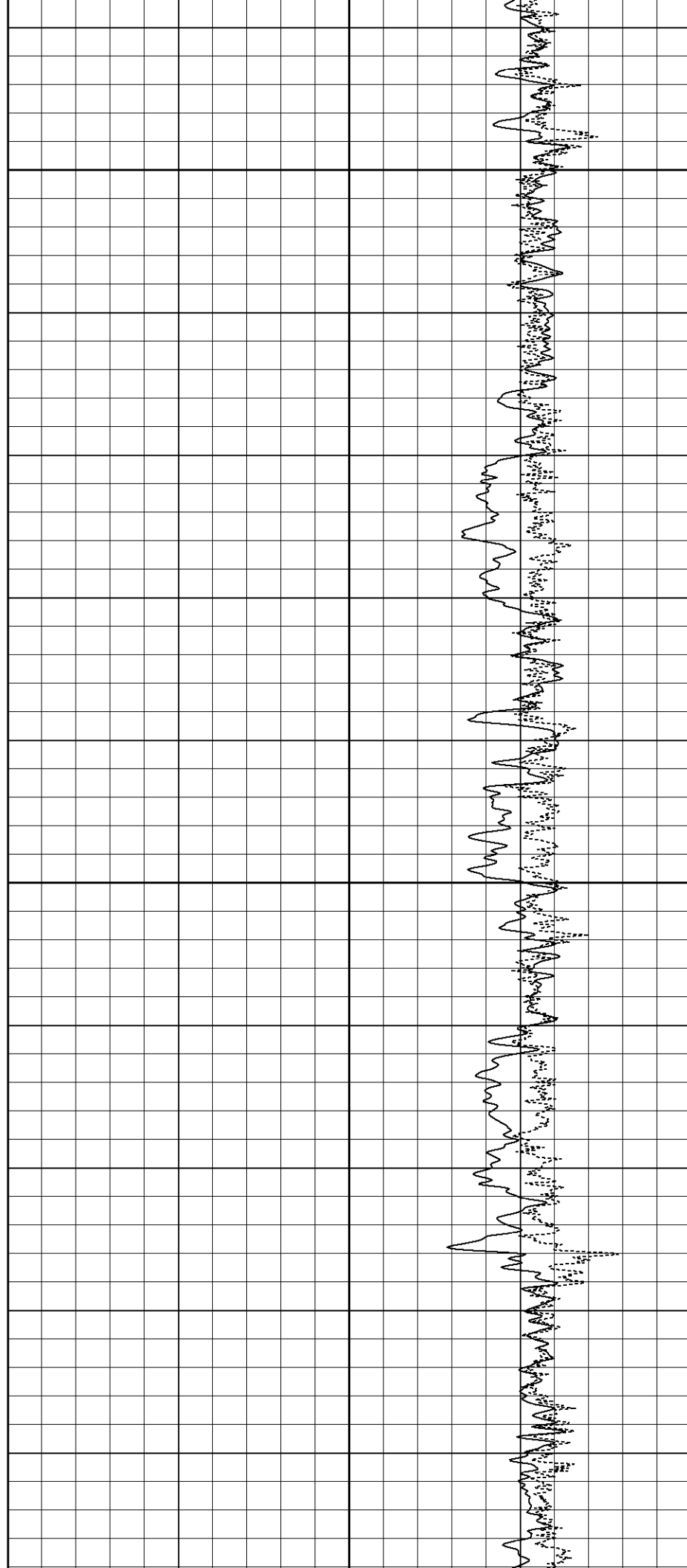
Surface Casing





800

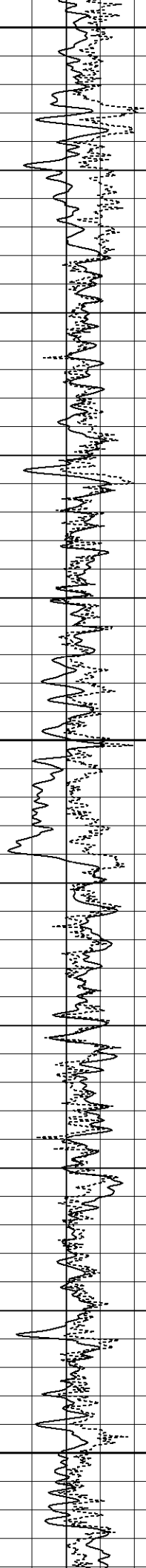
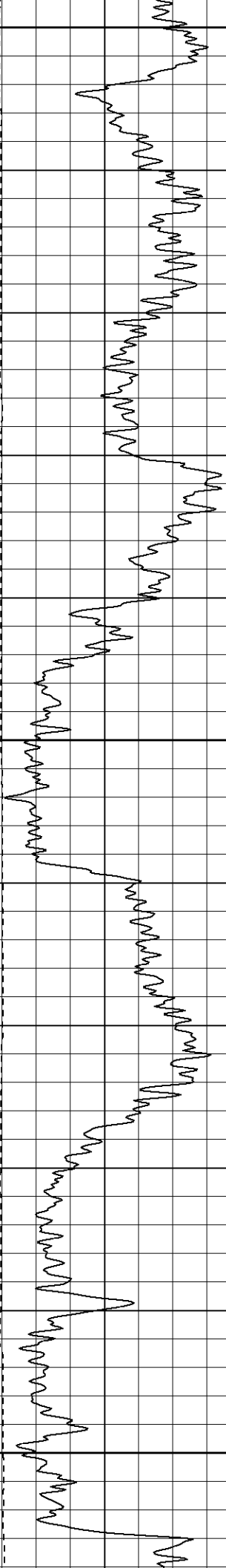
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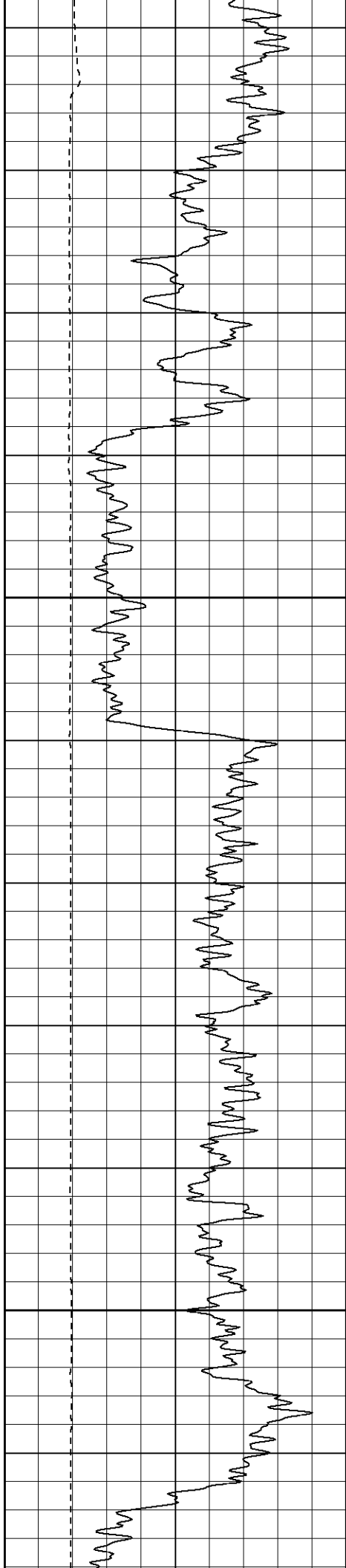


900

950

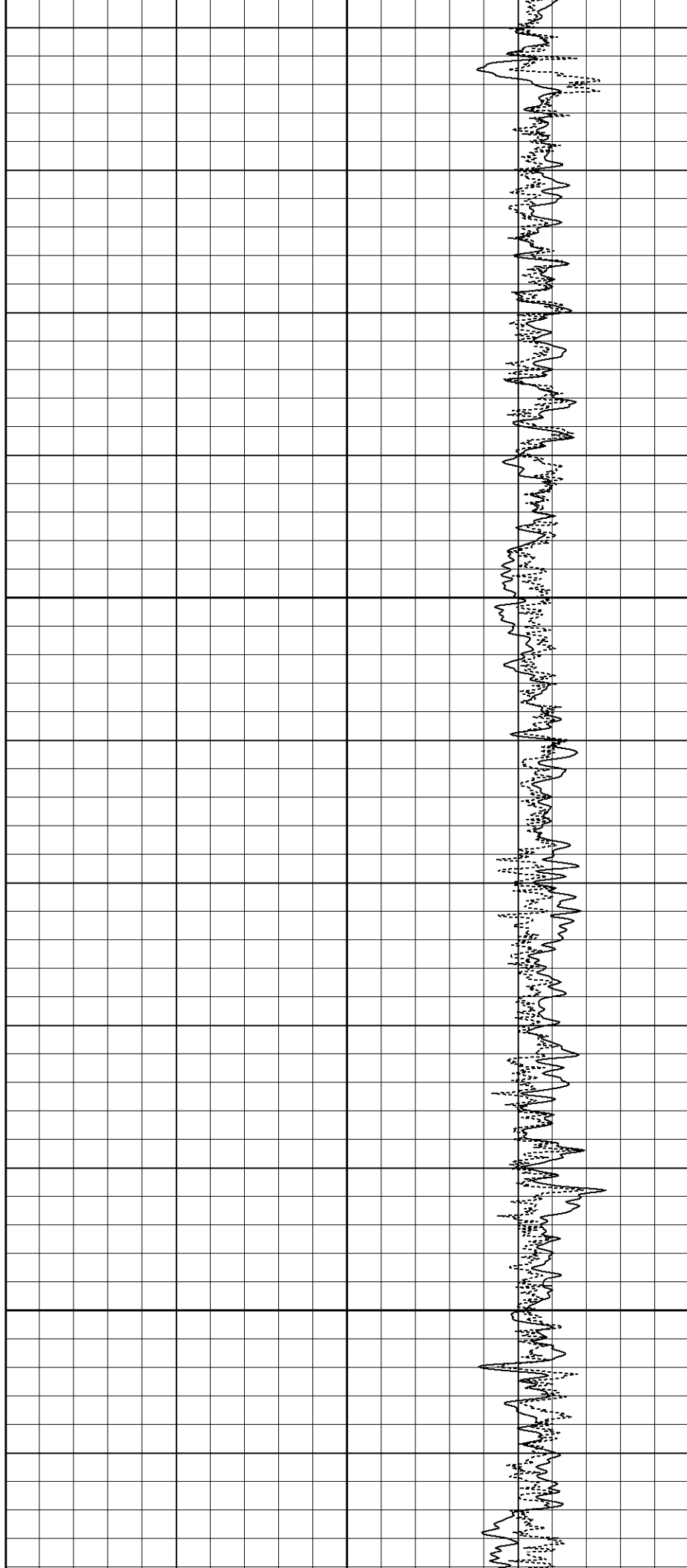
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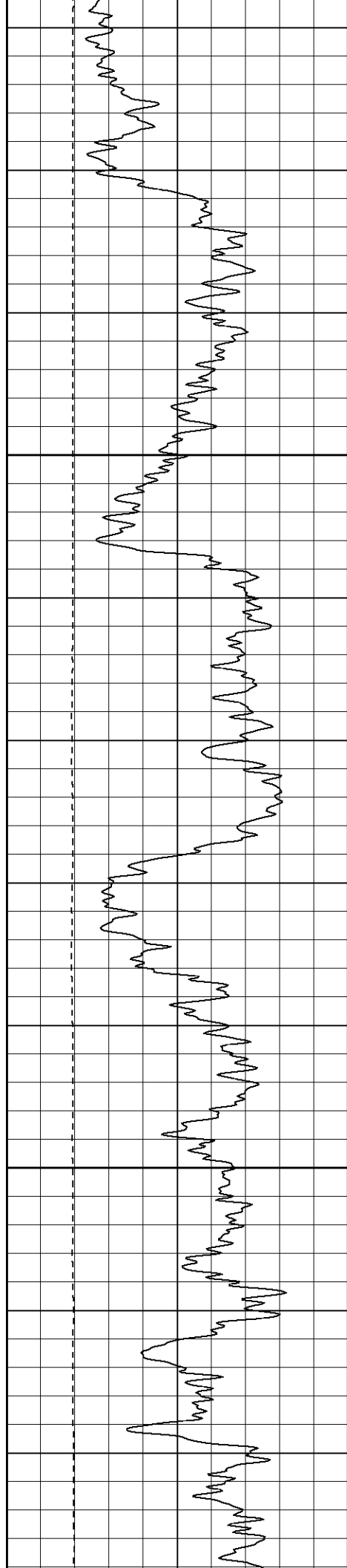




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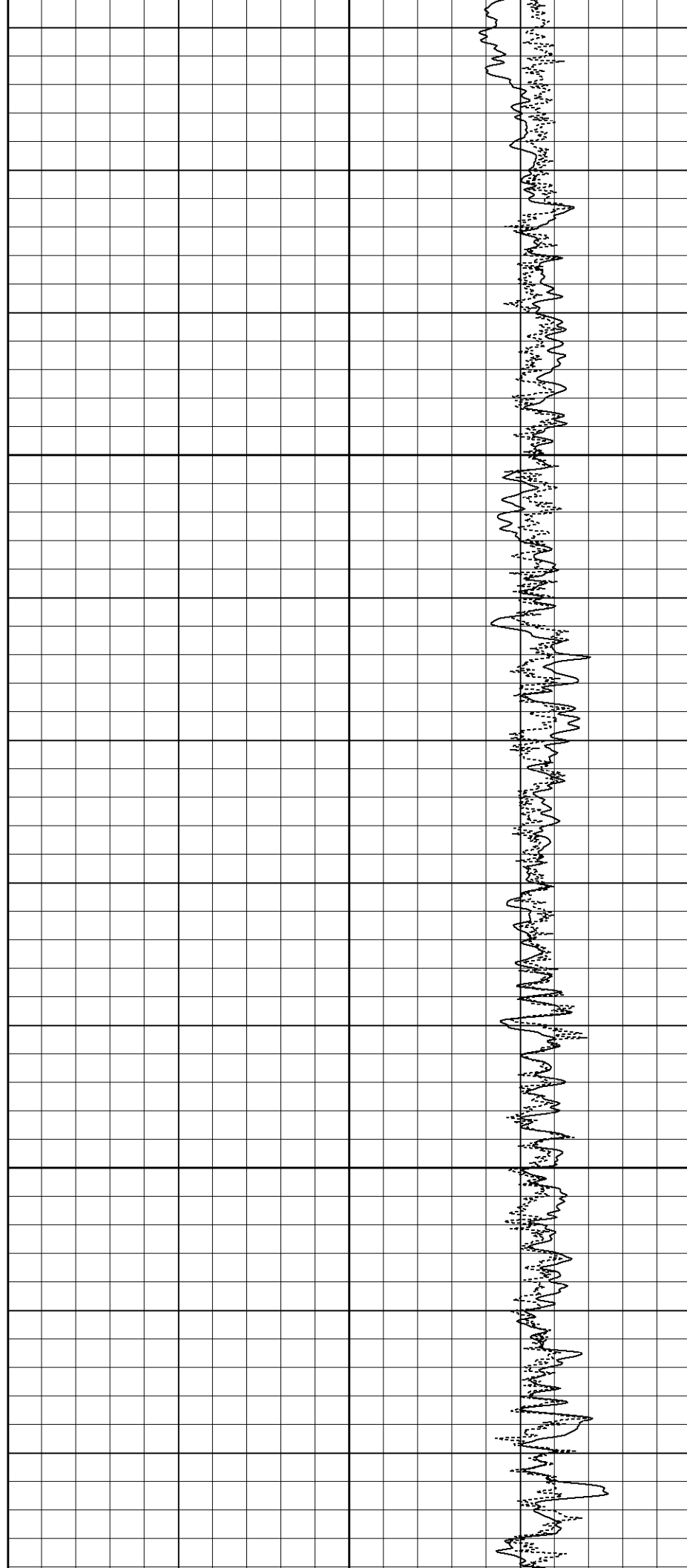
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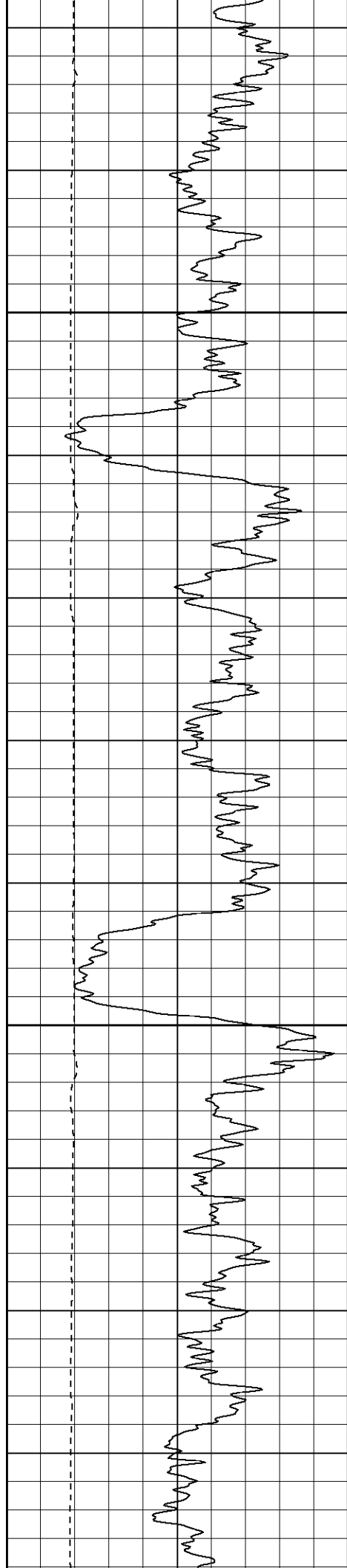




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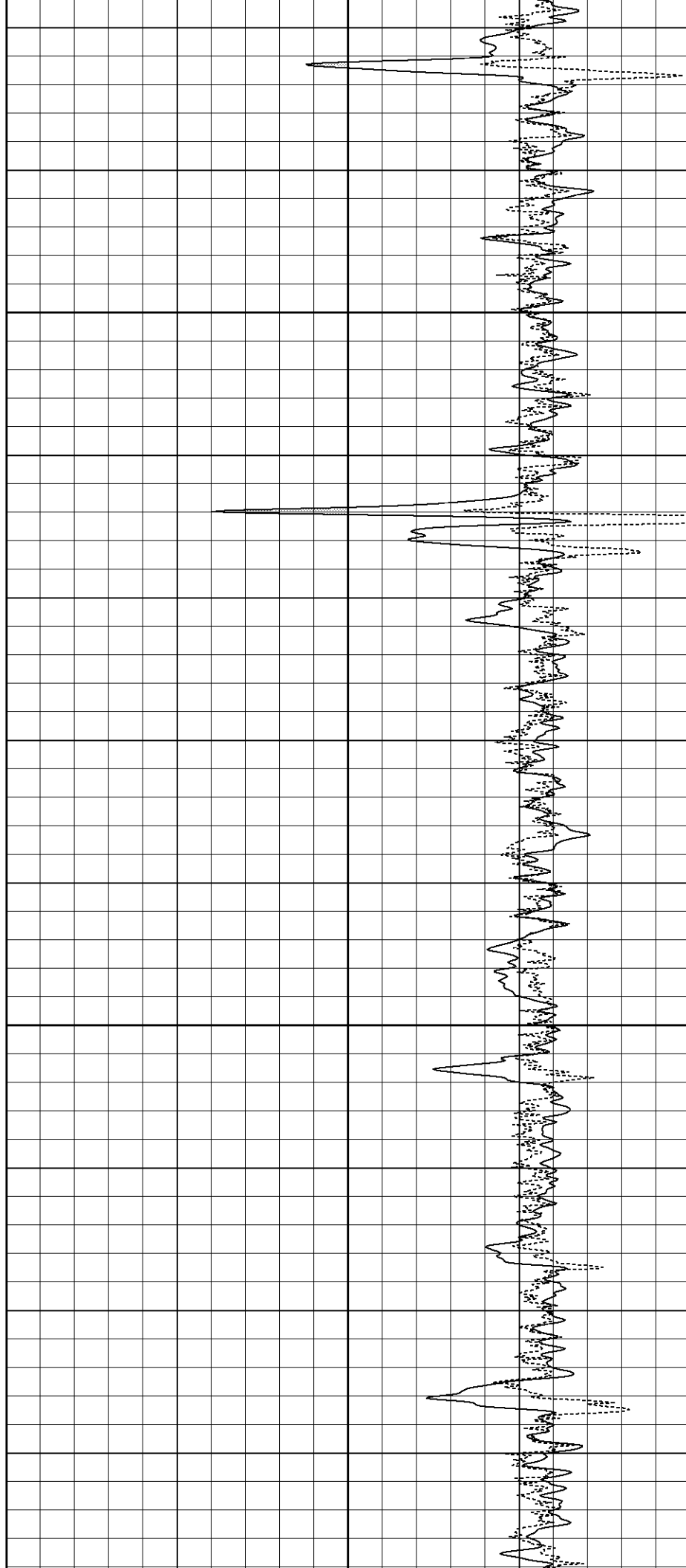
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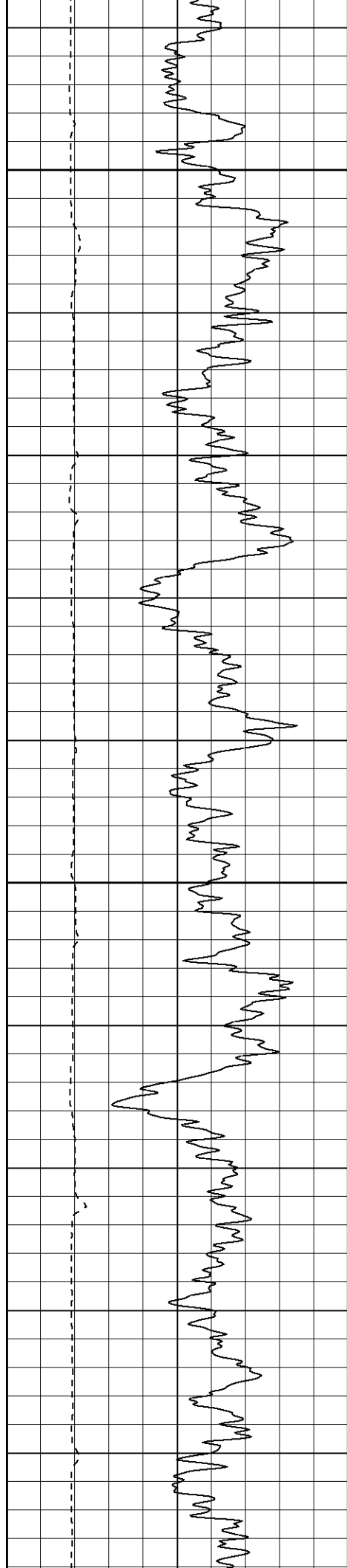




1250

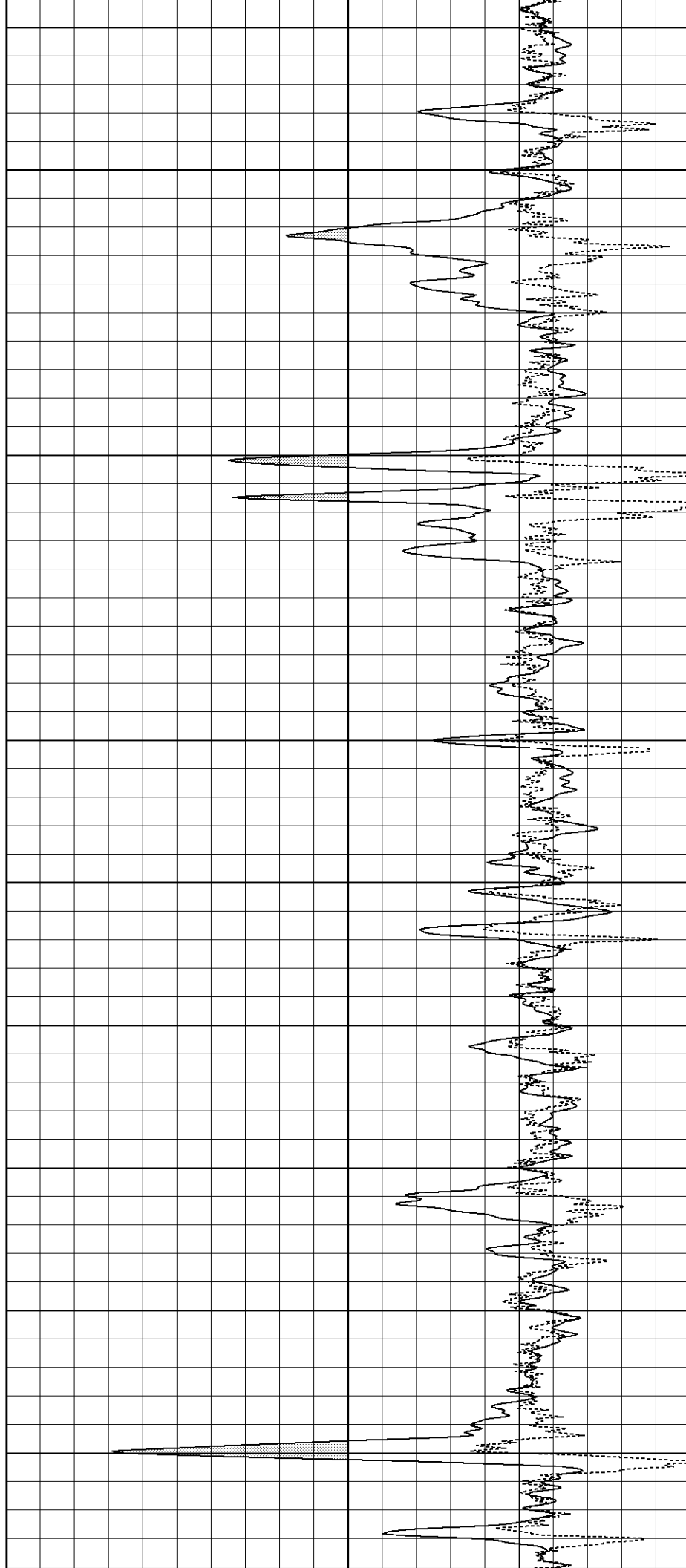
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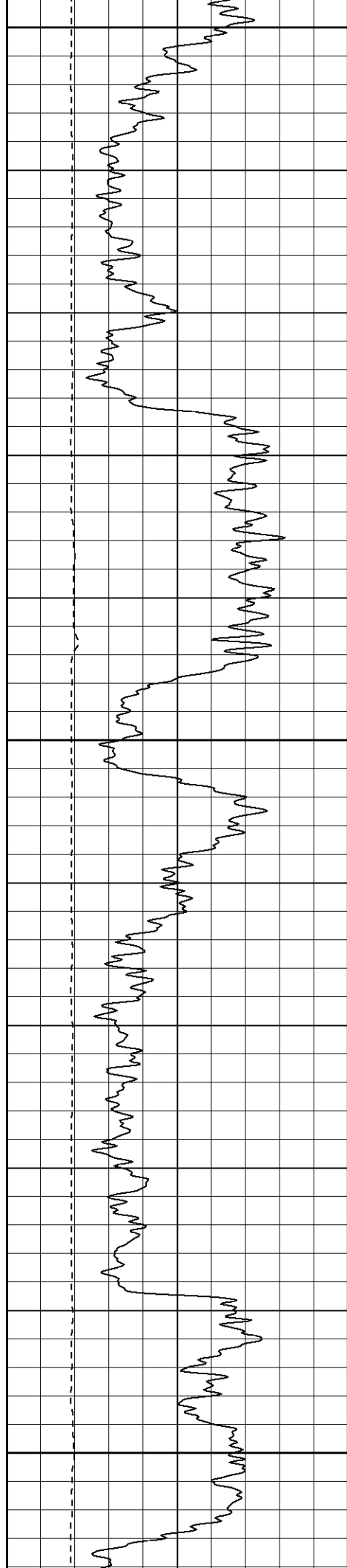




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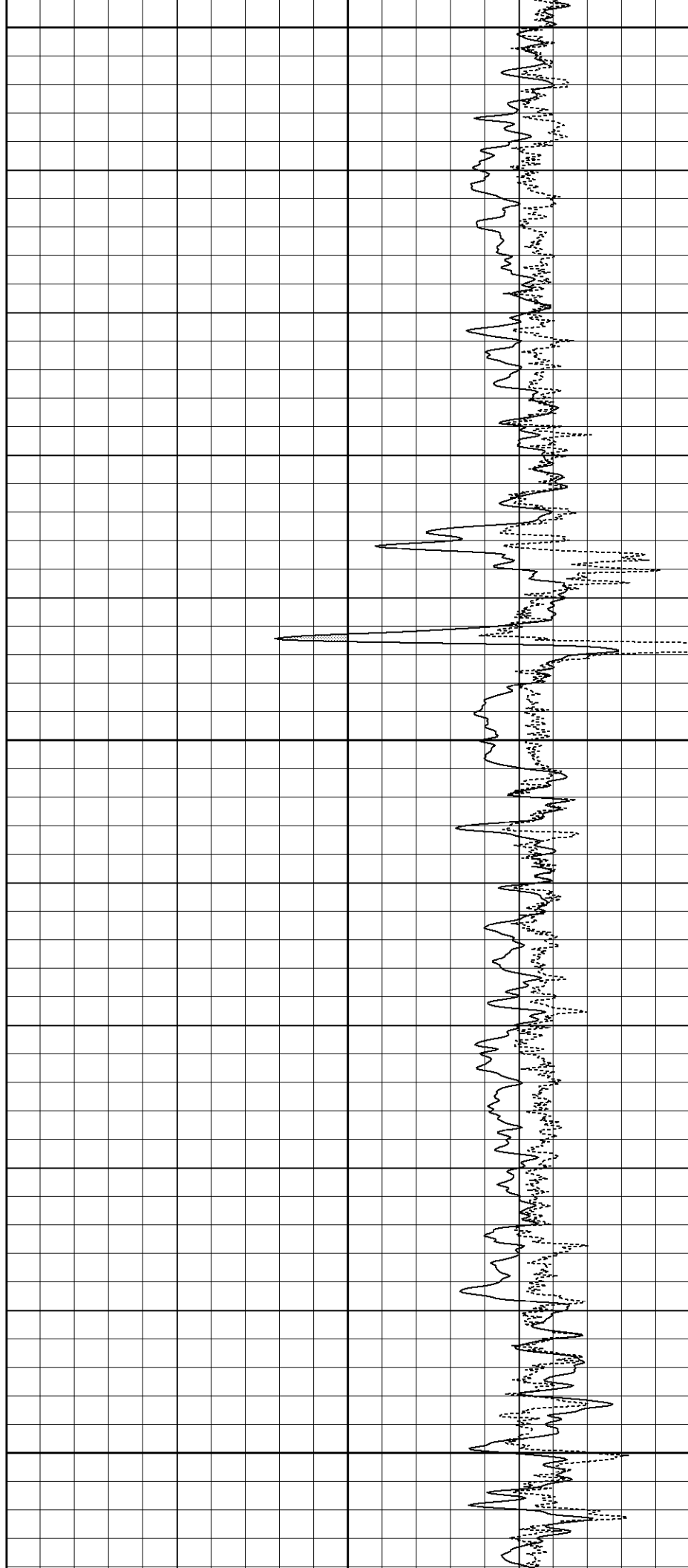


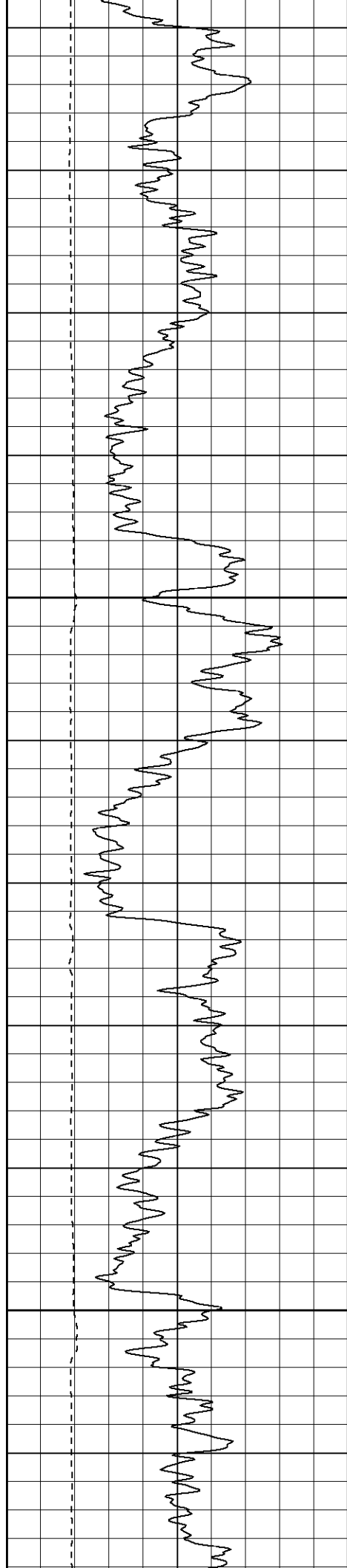


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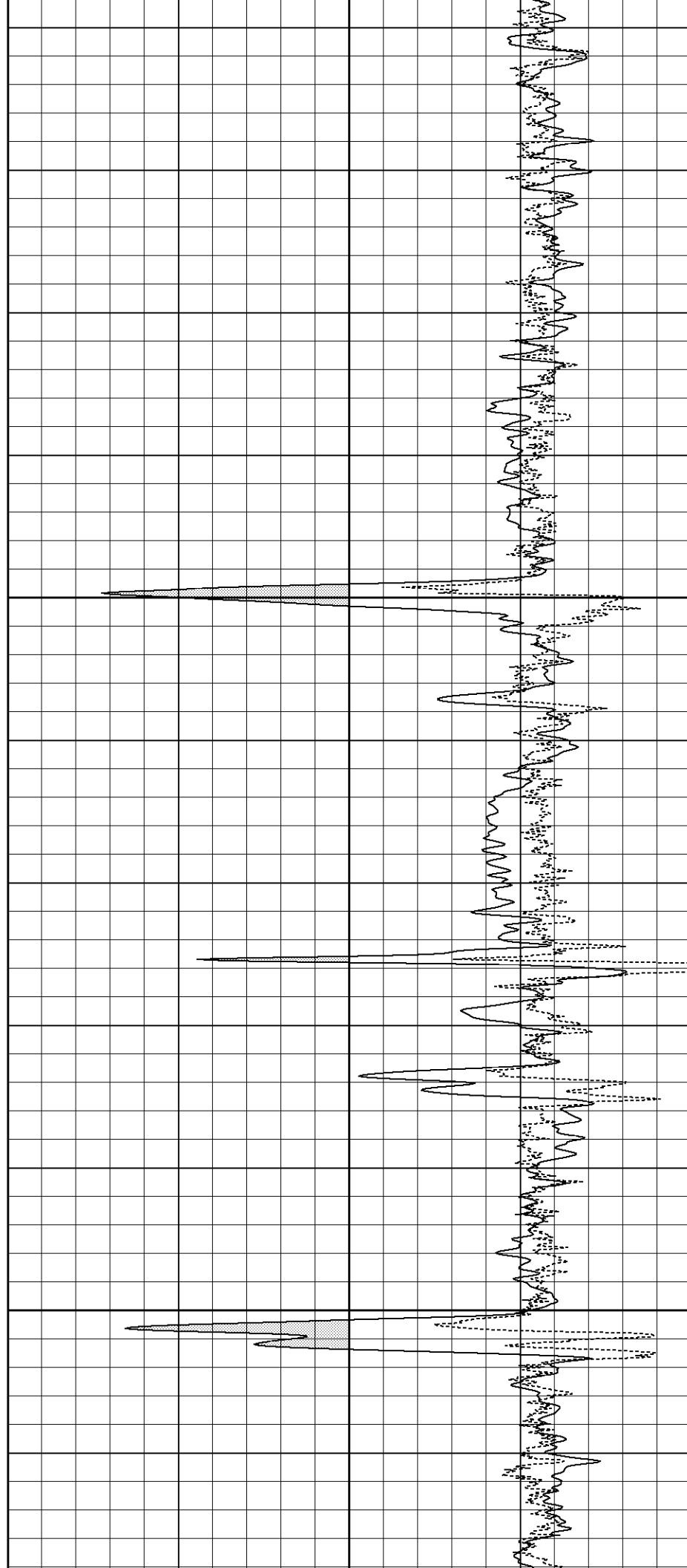
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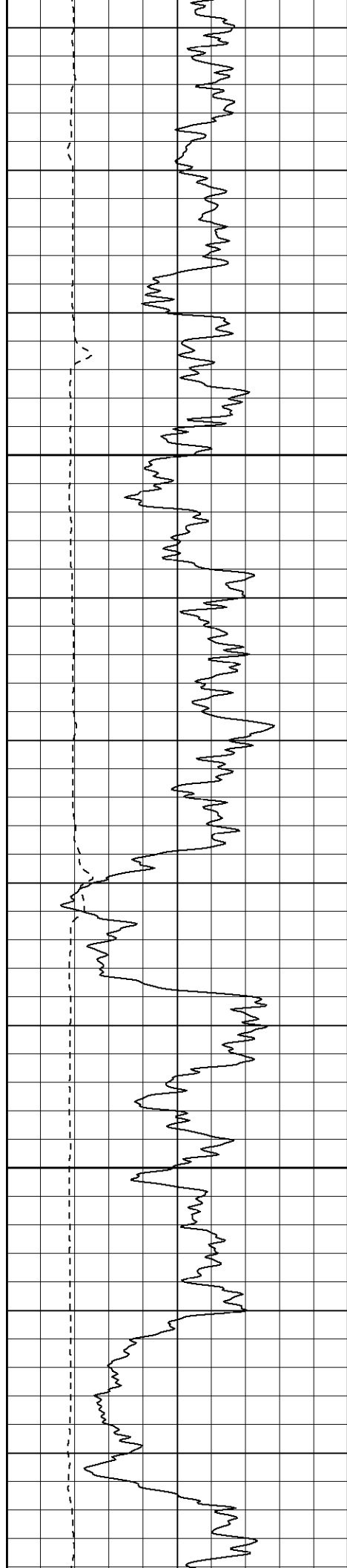




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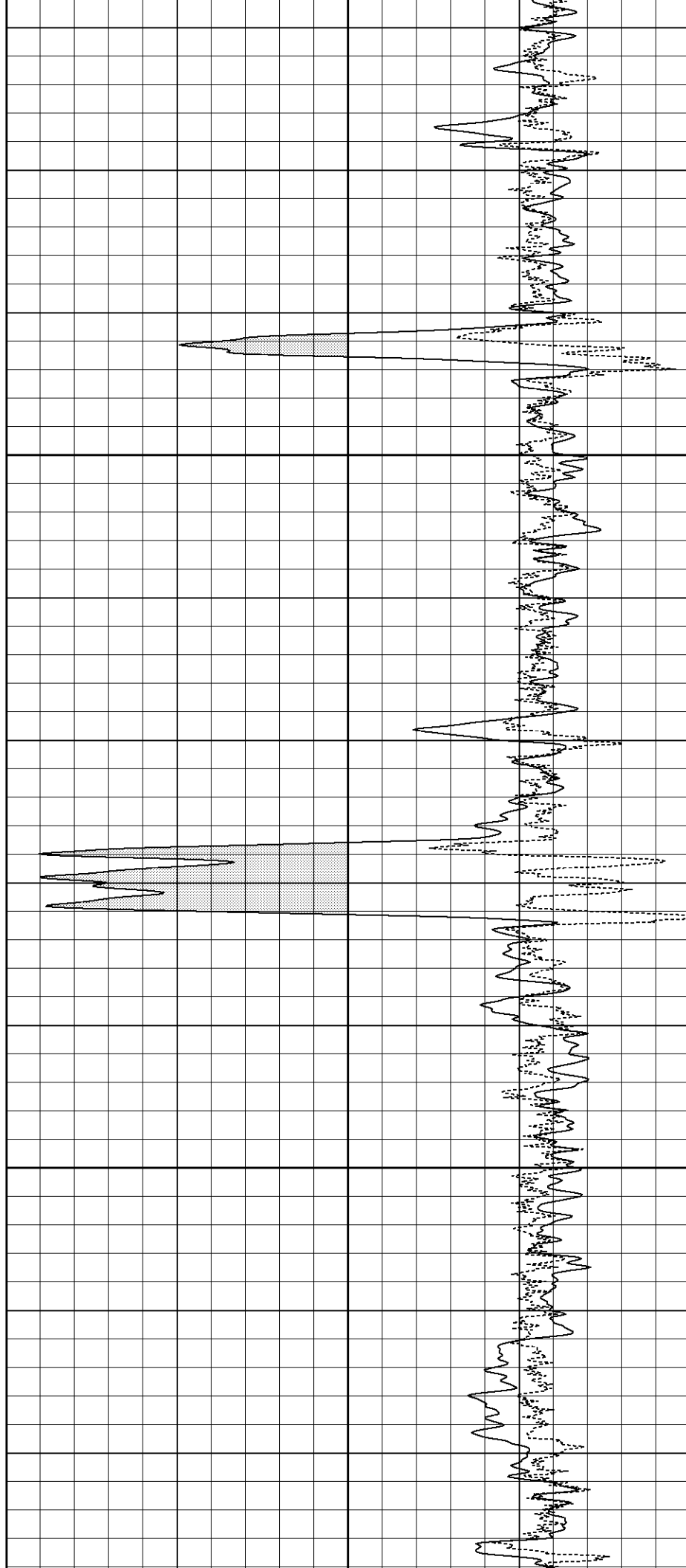
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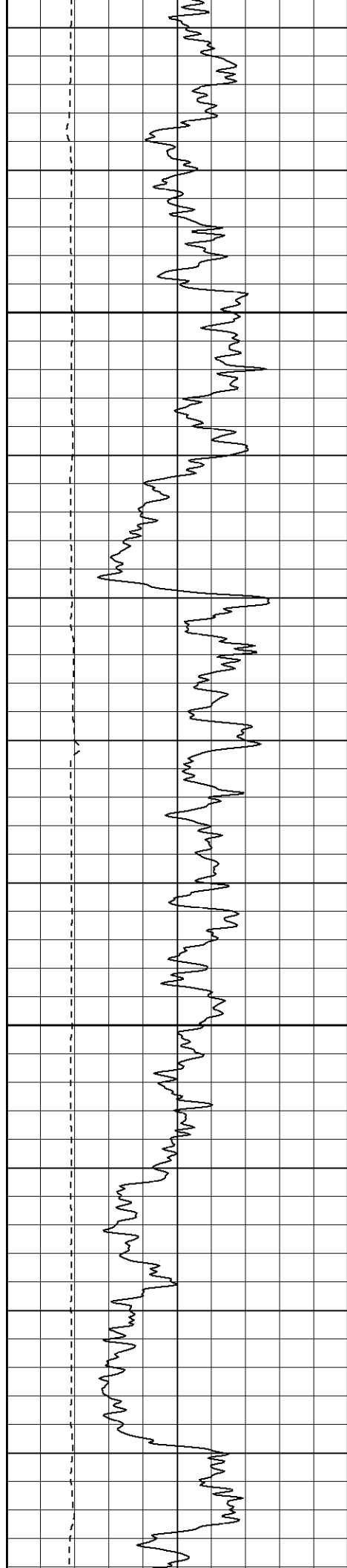




1700

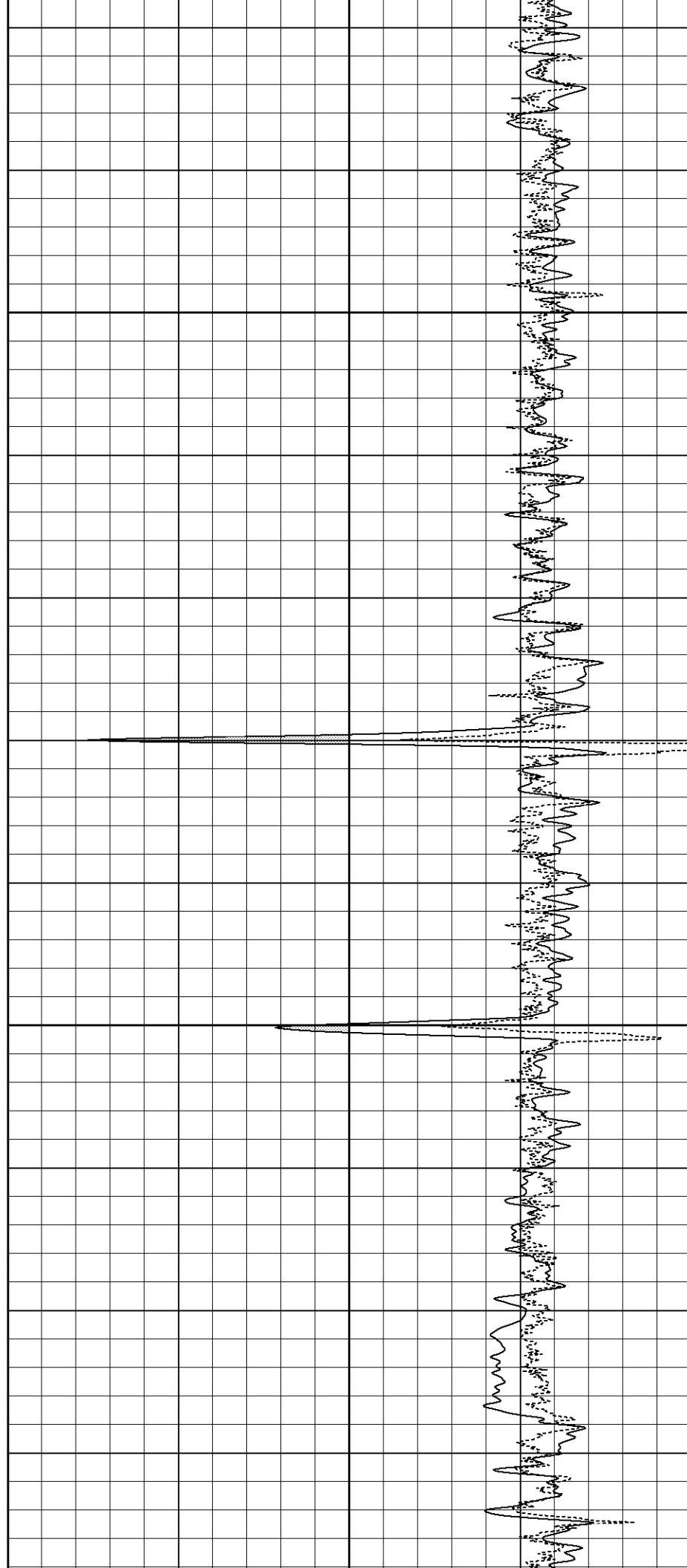
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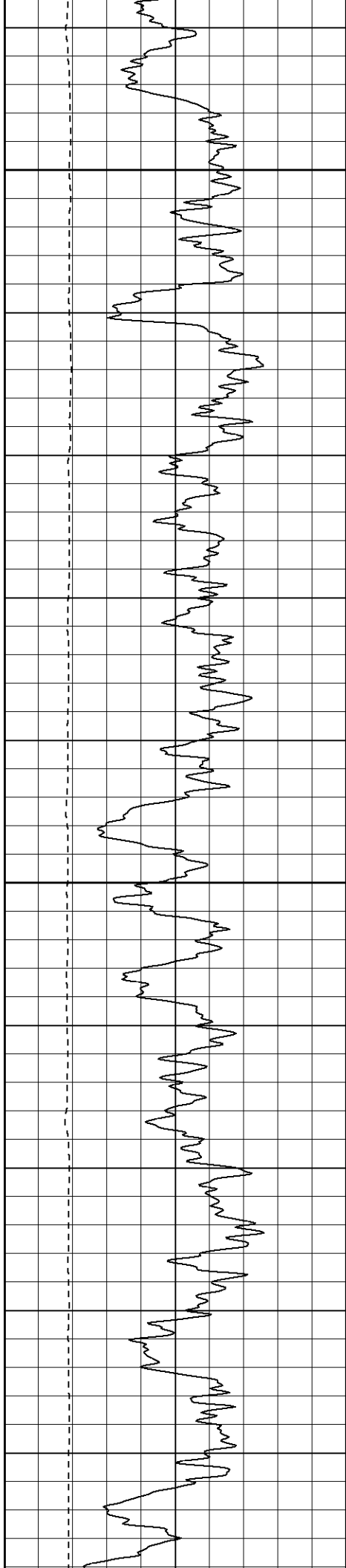




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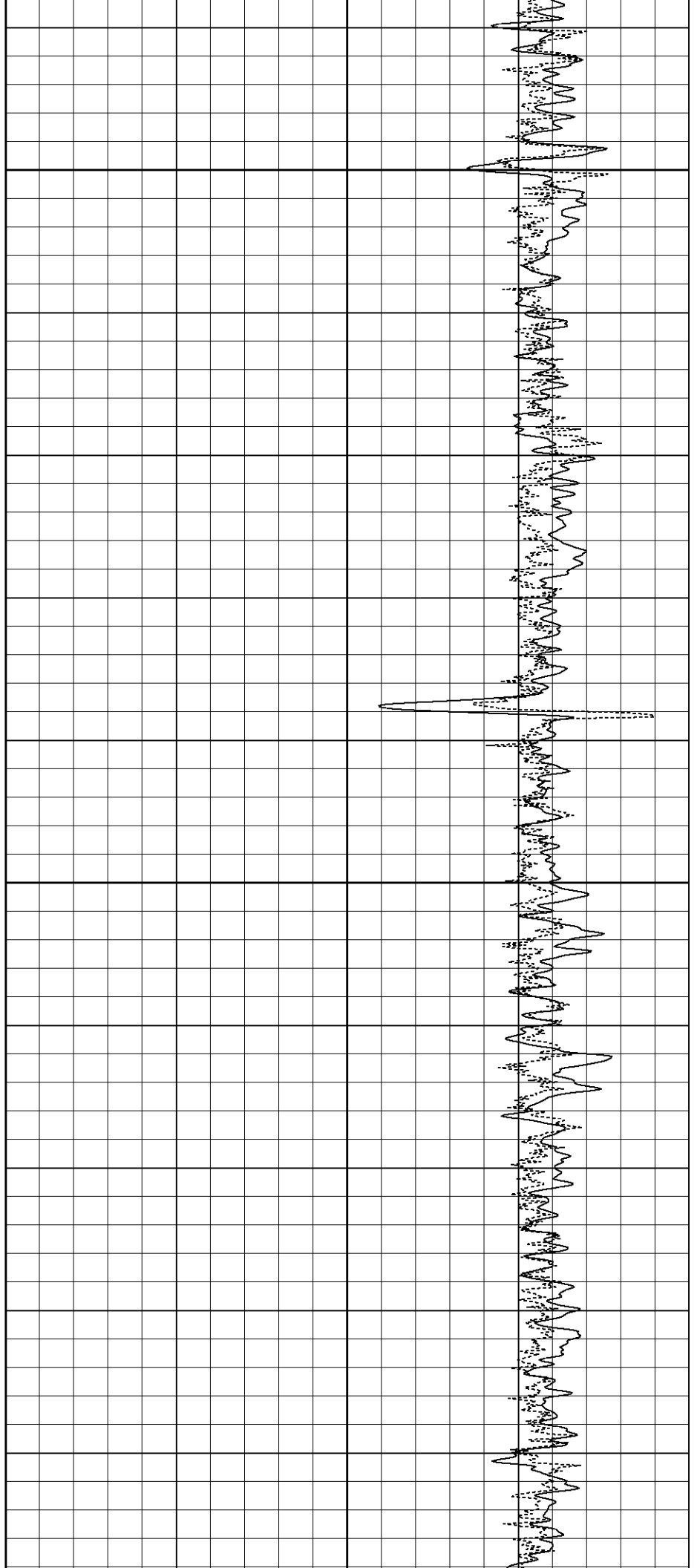
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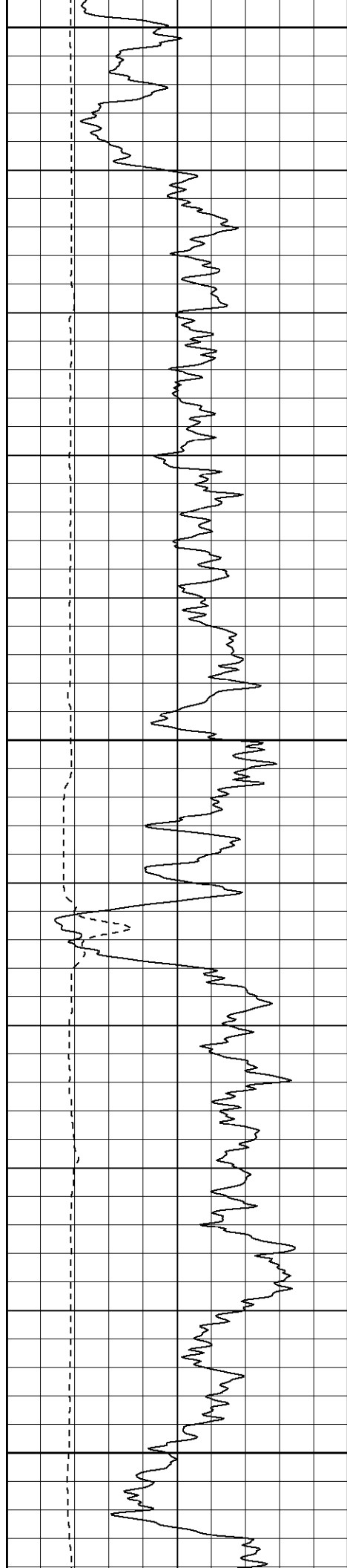




1900

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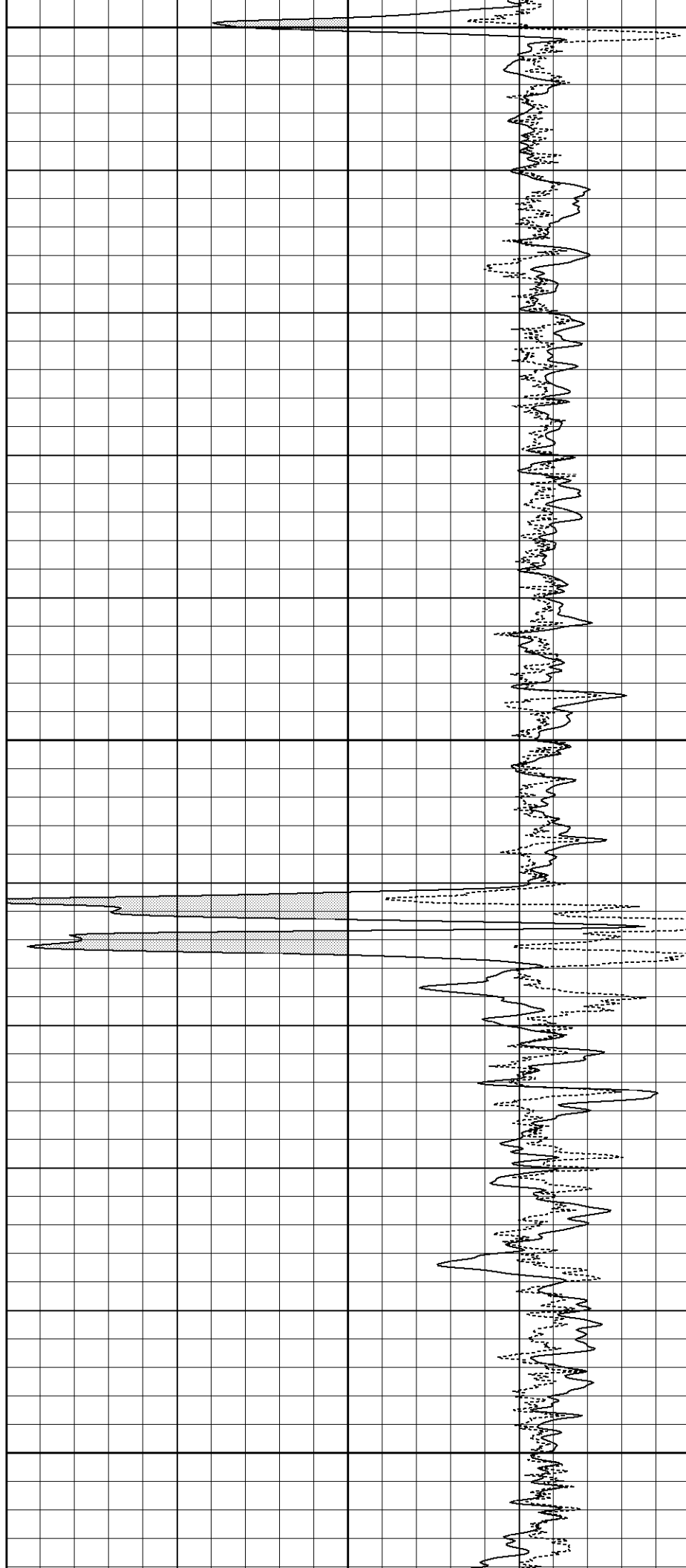


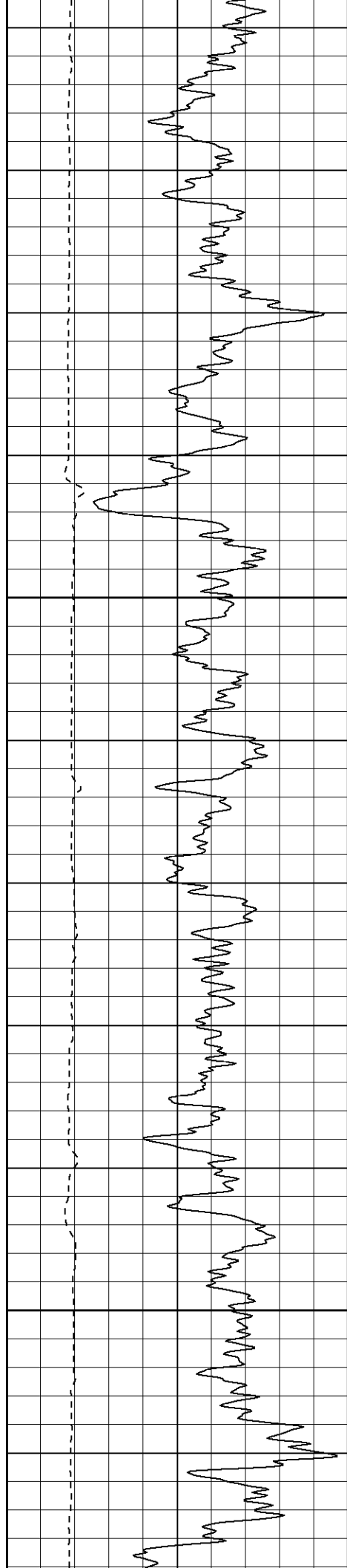


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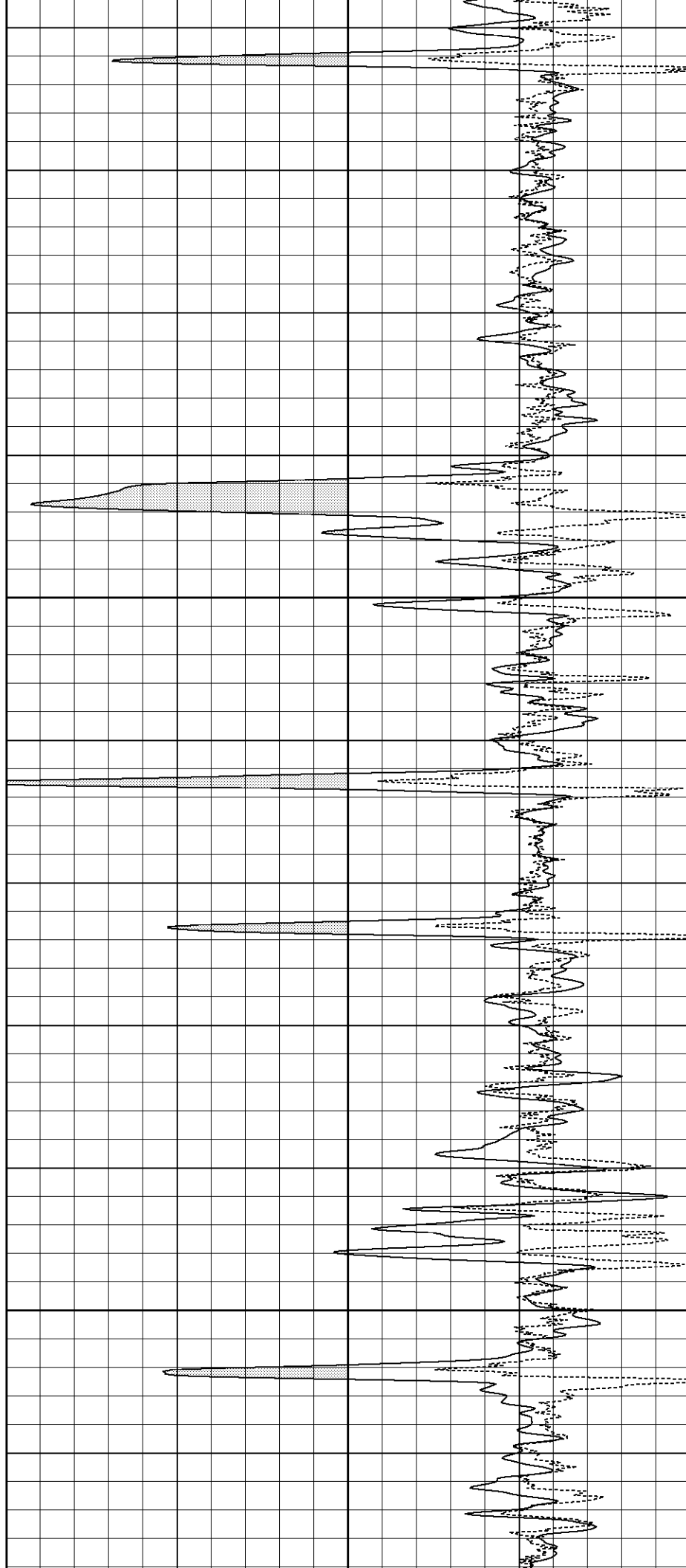
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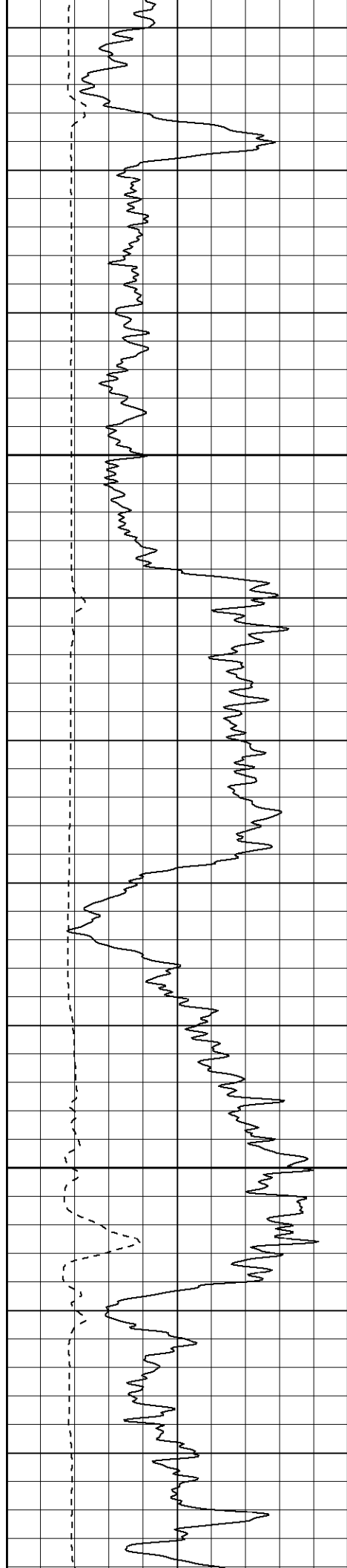




2150

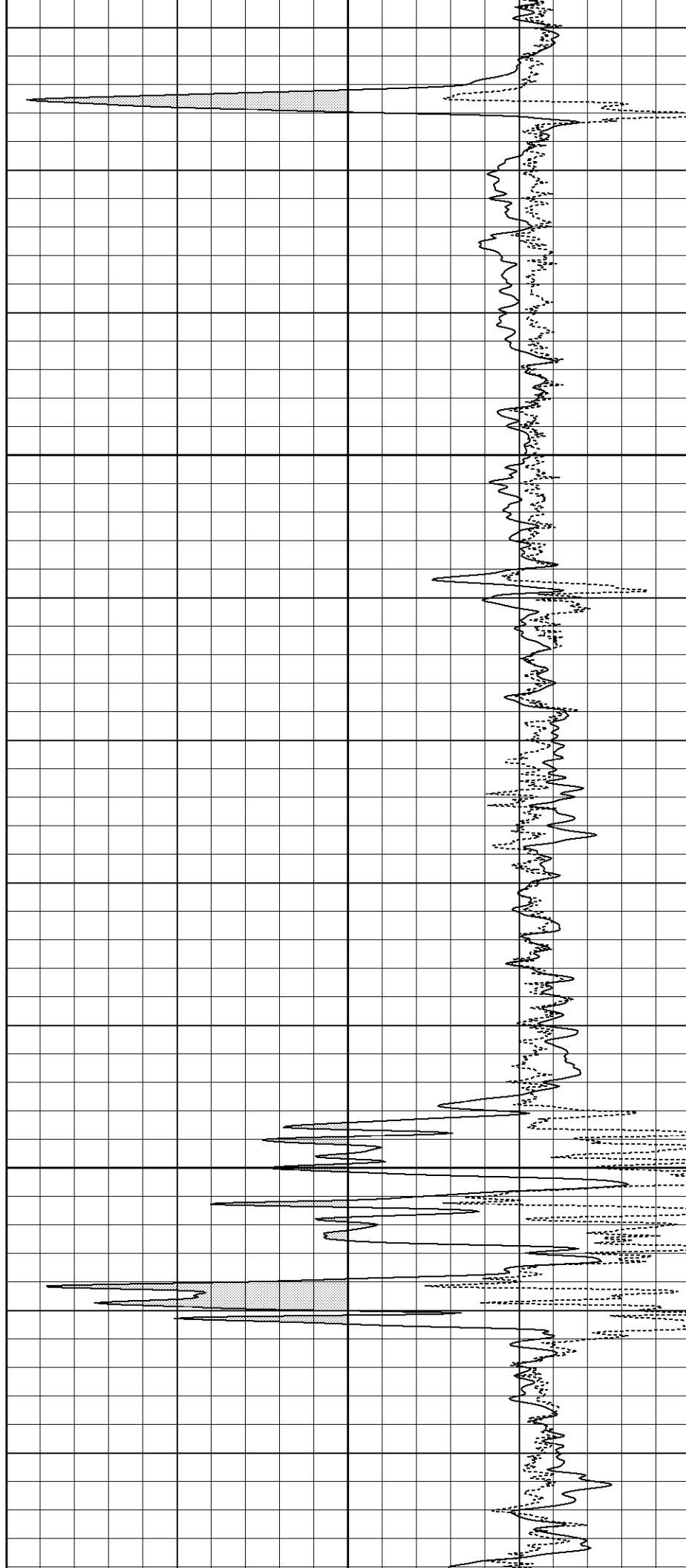
2200

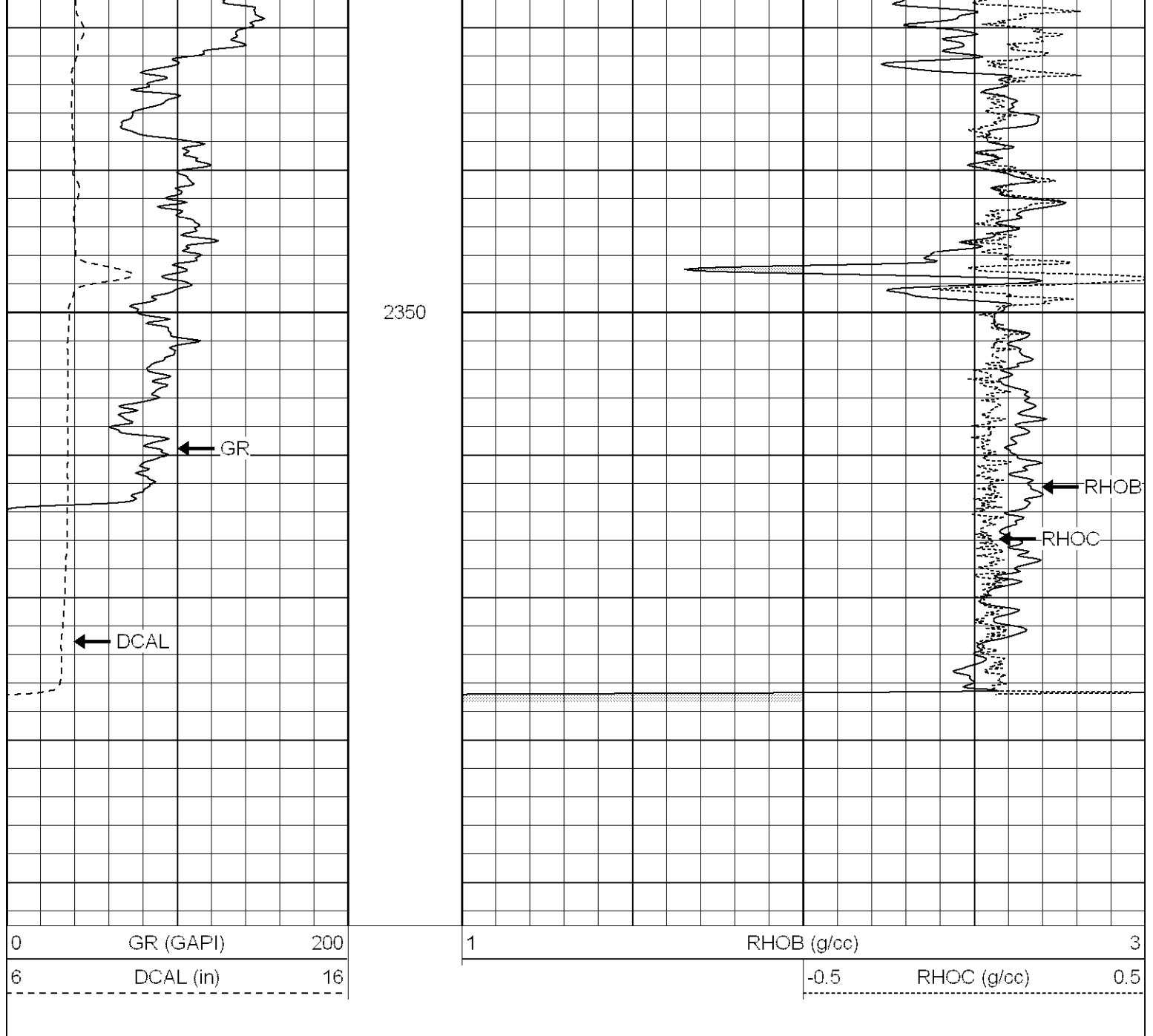




2250

2300





Induction Tool Calibration Report

Serial Number: 040903
 Tool Model: Probe
 Downhole Cal Performed: Thu Nov 03 05:30:40 2005
 Surface Cal Performed: Thu Nov 03 05:00:06 2005

Surface Calibration:	Air	Loop	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.013	0.648	V
Internal Reference:	Zero	Cal	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.013	0.648	V

Downhole Calibration:	Internal Zero	Internal Cal	
Conductivity Reference:	0.101	499.962	mmho
Conductivity Reading:	-0.029	500.197	V
Short Normal Reference:	0.000	20.000	Ohm-m
Short Normal Reading:	0.008	0.236	V

Results:	Gain	Offset
----------	------	--------

Loop Conductivity:	788.246	-10.522
Downhole Correction:	0.999	0.130
Short Normal Resistivity:	57.503	-2.000

Compensated Density Calibration Report

Serial-Model:	901-2.75POH
Source / Verifier:	/
Master Calibration Performed:	Fri Oct 28 10:55:46 2005

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1053.25	537.38	cps
Aluminum	2.570	g/cc	186.28	258.25	cps
Spine Angle = 67.07			Density/Spine Ratio = 0.457		
	Size		Reading		
Small Ring	8.10	in	1.92	V	
Large Ring	17.00	in	4.15	V	

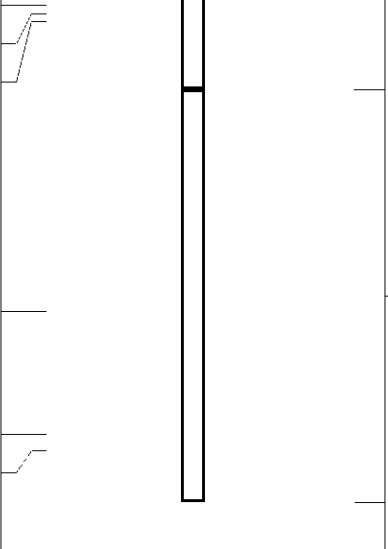
Neutron Calibration Report

Serial Number:	803	
Tool Model:	2.75POH	
Performed:	Fri Oct 28 09:26:12 2005	
Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

Gamma Ray Calibration Report

Serial Number:	801	
Tool Model:	2.75POH	
Performed:	Tue Oct 25 15:58:29 2005	
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	31.11		None	0.75	1.50	5.00
GR	29.38		GR-2.75POH (801) Probe	3.73	2.75	43.00
NEU	23.84		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00
CDL	12.84		CDL-2.75POH (901) Probe	8.43	2.75	106.00

LSD	16.21					
DCAL	15.94					
SSD	15.69					
DIC	6.24					
SP	2.25					
SN	1.71					
IEL-Probe (040903)						