



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company	ATLAS OPERATING, LLC		
Well	SANDERS-SCHMISSEUR #6		
Field	SPIVY-GRABS-BASIL		
County	HARPER	State	KANSAS
Location:	API # : 15-077-21785-0000		Other Services CDL/CNL PE/MEL
	340 FNL & 1050 FEL SW - NW - NE - NE		
Permanent Datum	SEC 28	TWP 31S	RGE 8W
Log Measured From	GROUND LEVEL		Elevation 1567
Drilling Measured From	KELLY BUSHING 10' A.G.L.		Elevation K.B. 1577 D.F. 1575 G.L. 1567
Date	4/3/12		
Run Number	ONE		
Depth Driller	5020		
Depth Logger	5020		
Bottom Logged Interval	5018		
Top Log Interval	3500		
Casing Driller	8 5/8" @ 267		
Casing Logger	267		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4500 PPM	
Density / Viscosity	9.4/55		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.85 @ 94F		
Rmf @ Meas. Temp	.64 @ 94F		
Rmc @ Meas. Temp	1.02 @ 94F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	.64 @ 125F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	125F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
Witnessed By	PAT DEENIHAN		
	SAMAN SHARIFAIE		

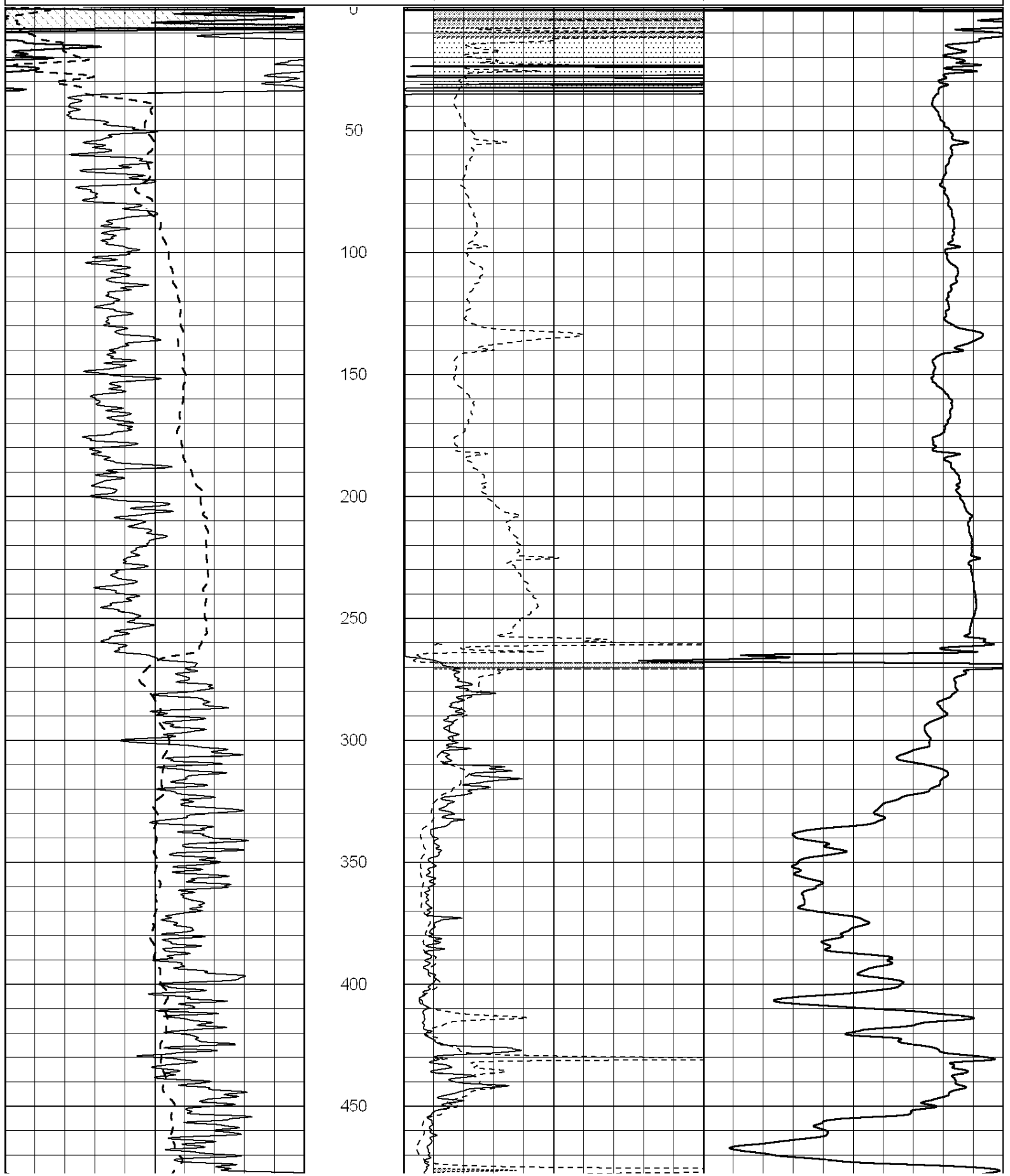
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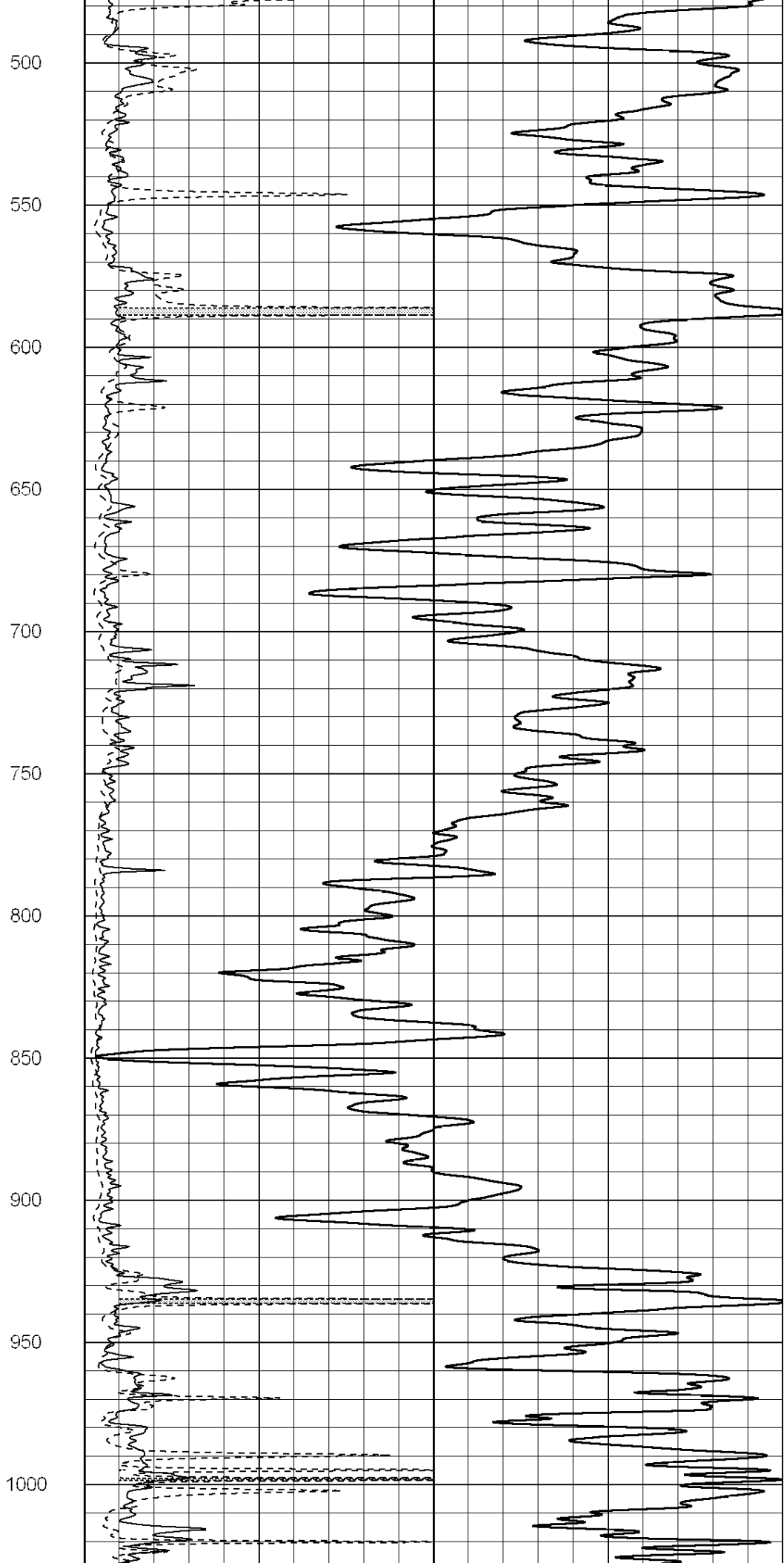
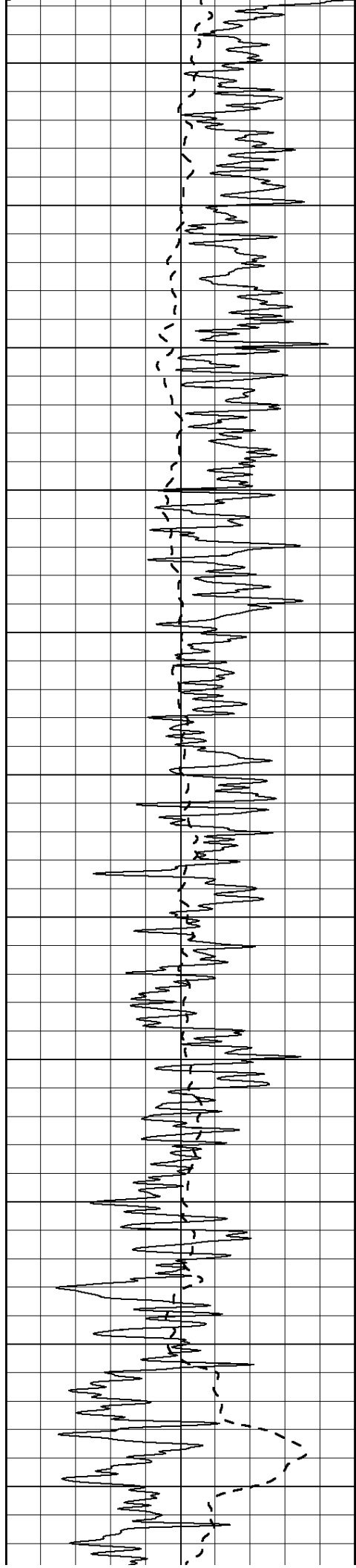
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

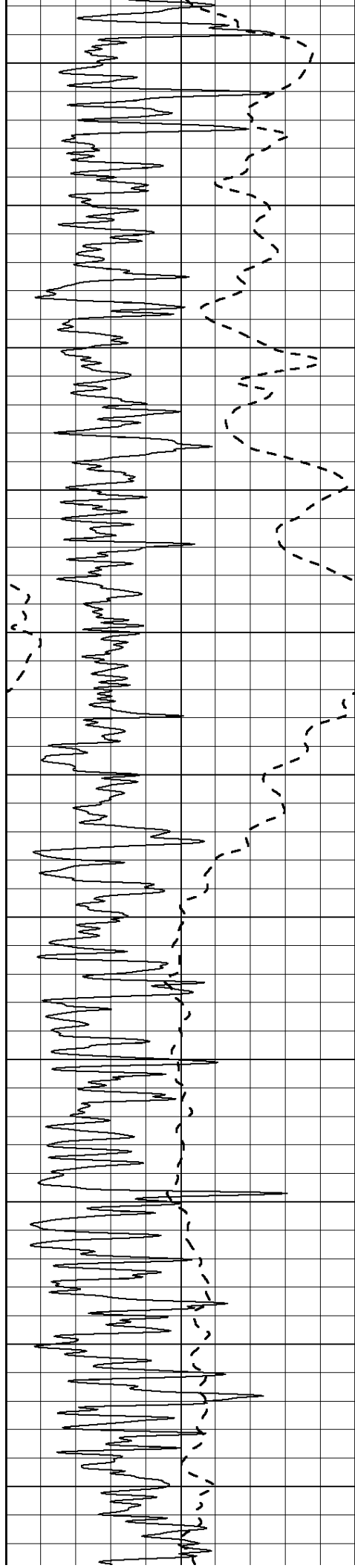
Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
ZENDA, KS - 4 MILES EAST TO RD 50 - SOUTH TO SPIVEY GAS PLANT
2 MILES SOUTH TO RD 130 - 2 MILES EAST TO RD 80
1/2 MILE SOUTH WEST INTO

Charted by: _____ Depth in Feet scaled 1:500					
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
-----			-----		
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500







1050

1100

1150

1200

1250

1300

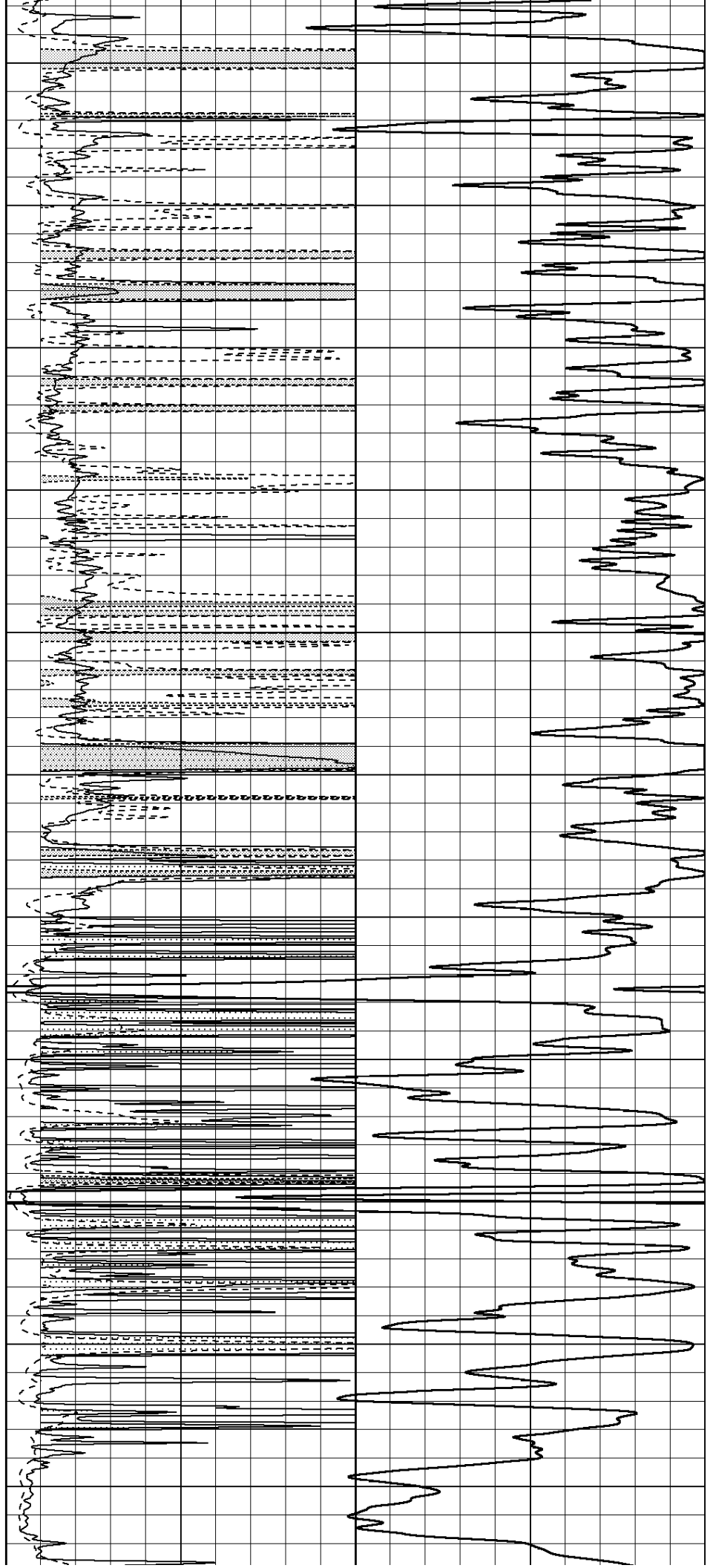
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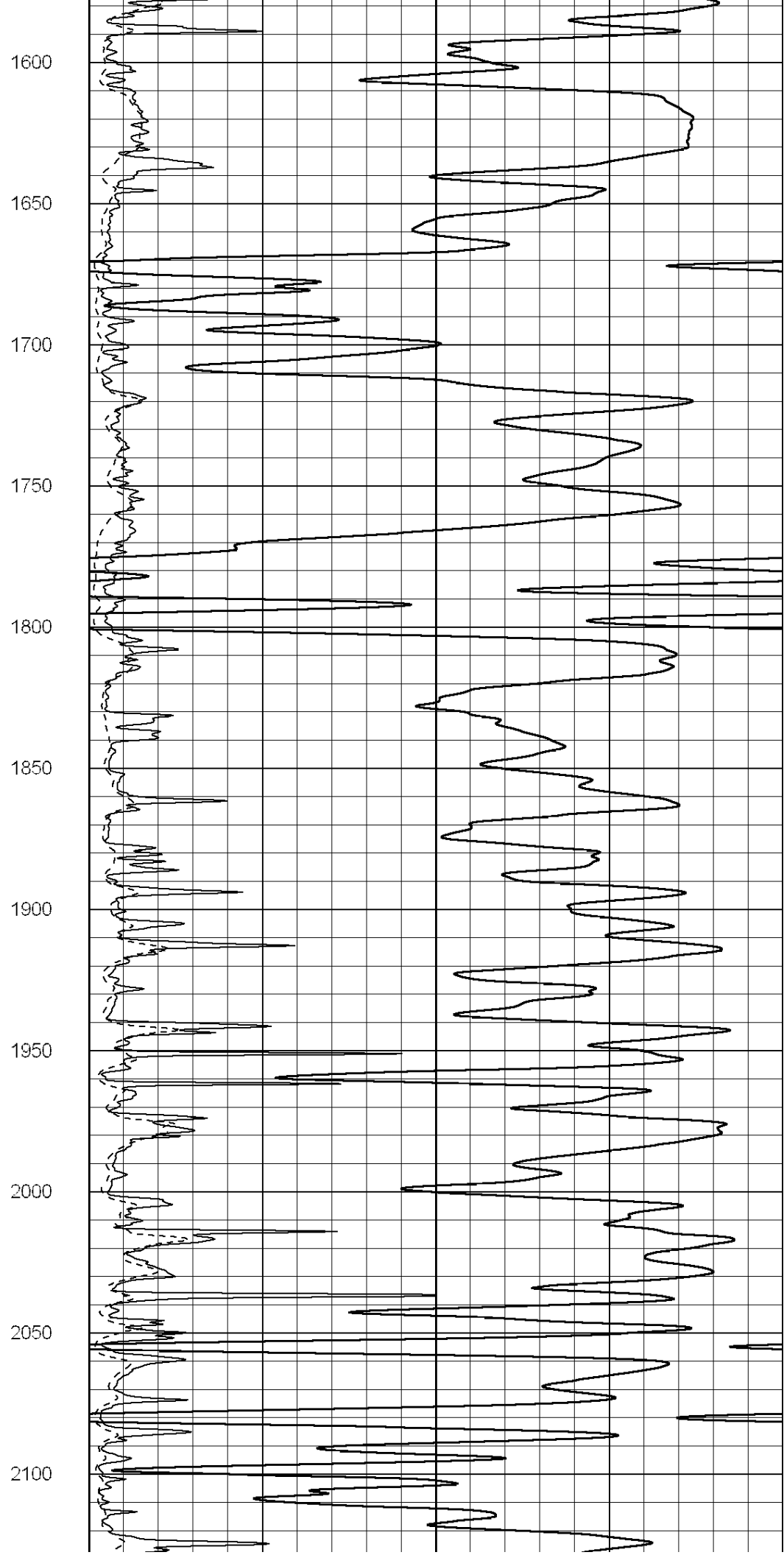
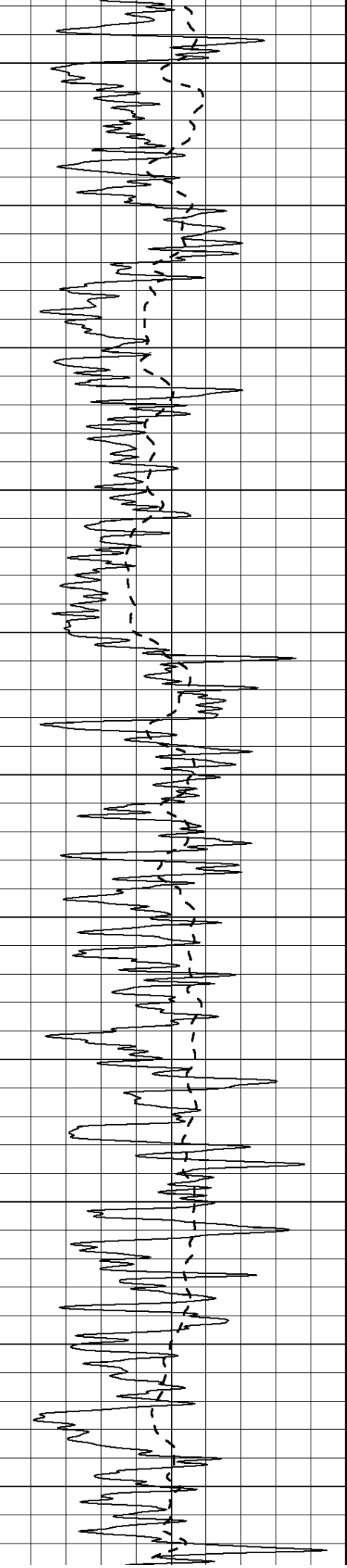
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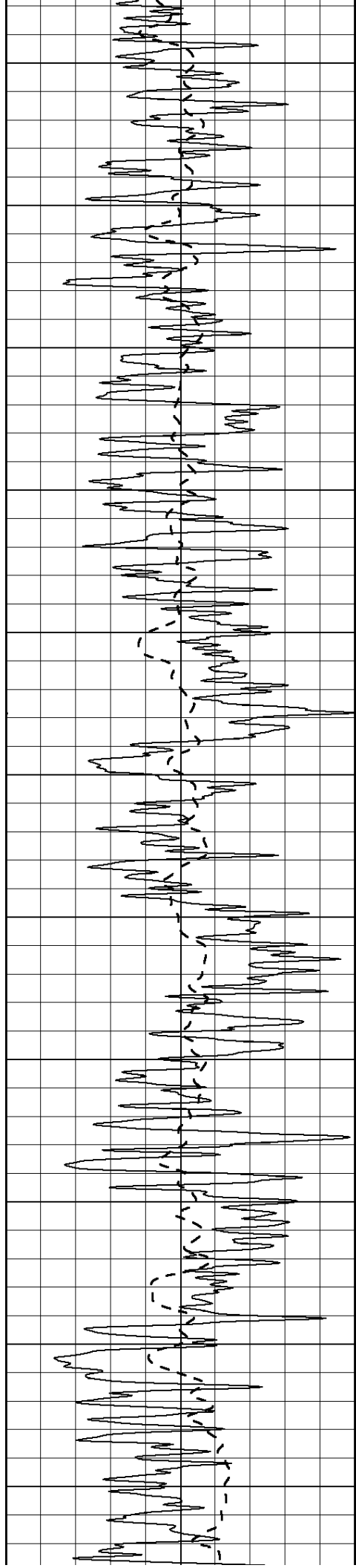
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1500

1550







2150

2200

2250

2300

2350

2400

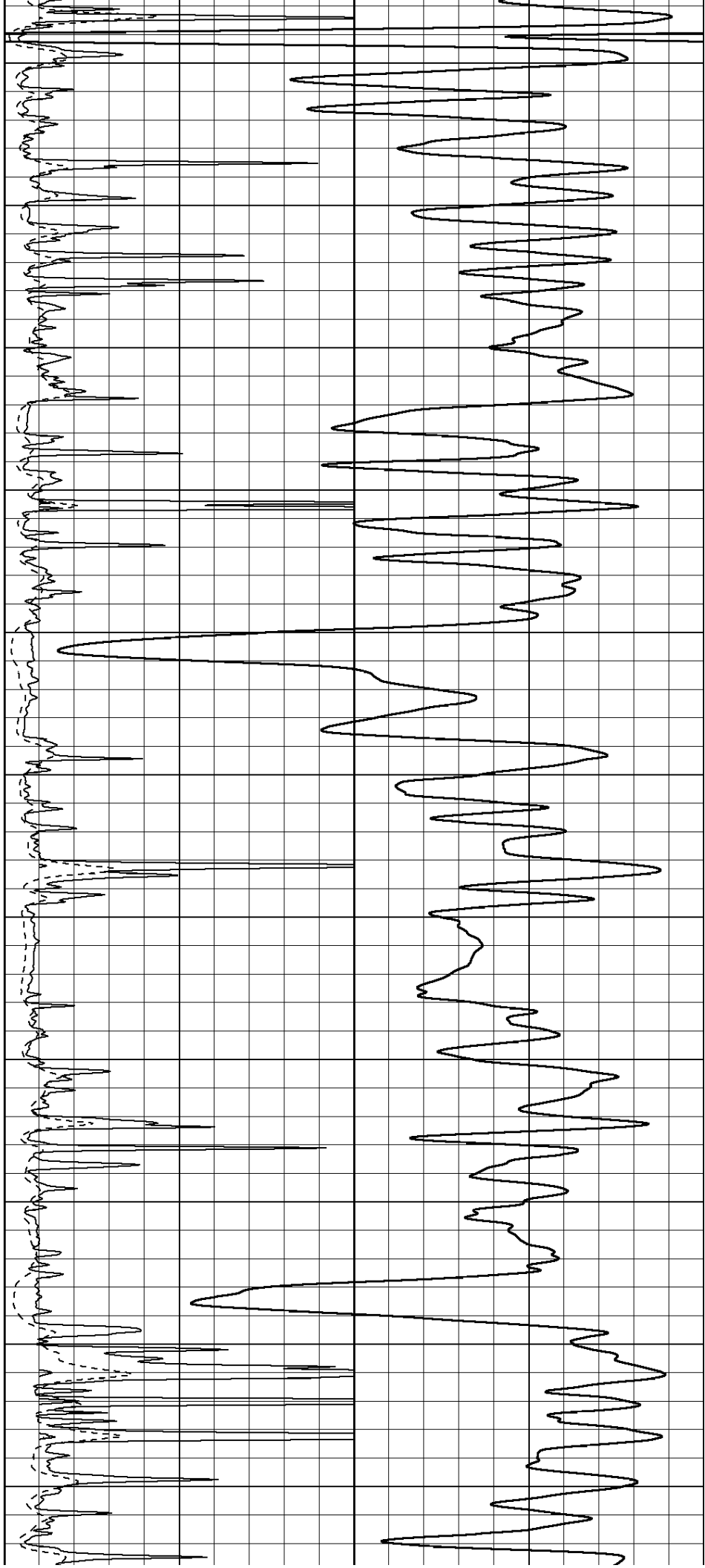
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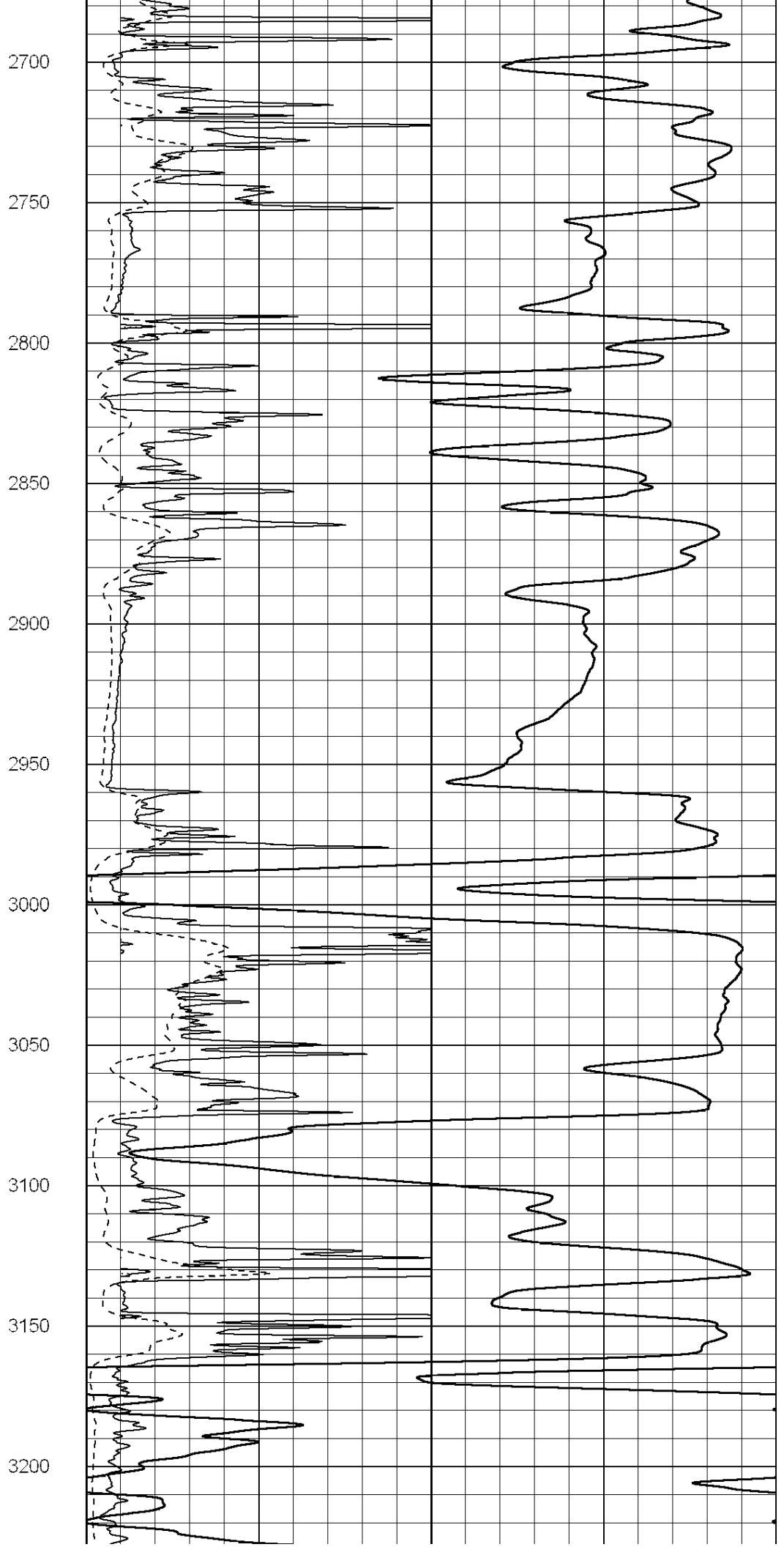
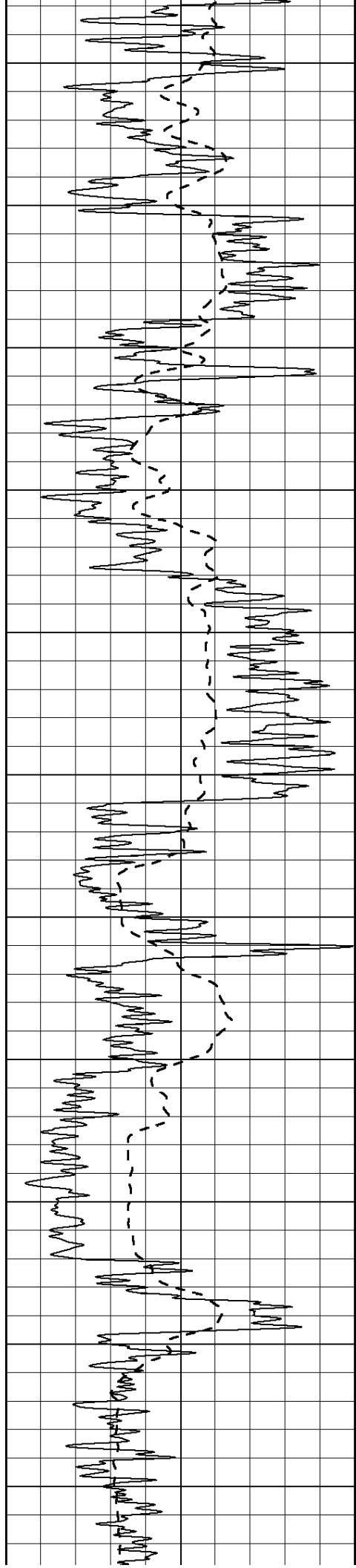
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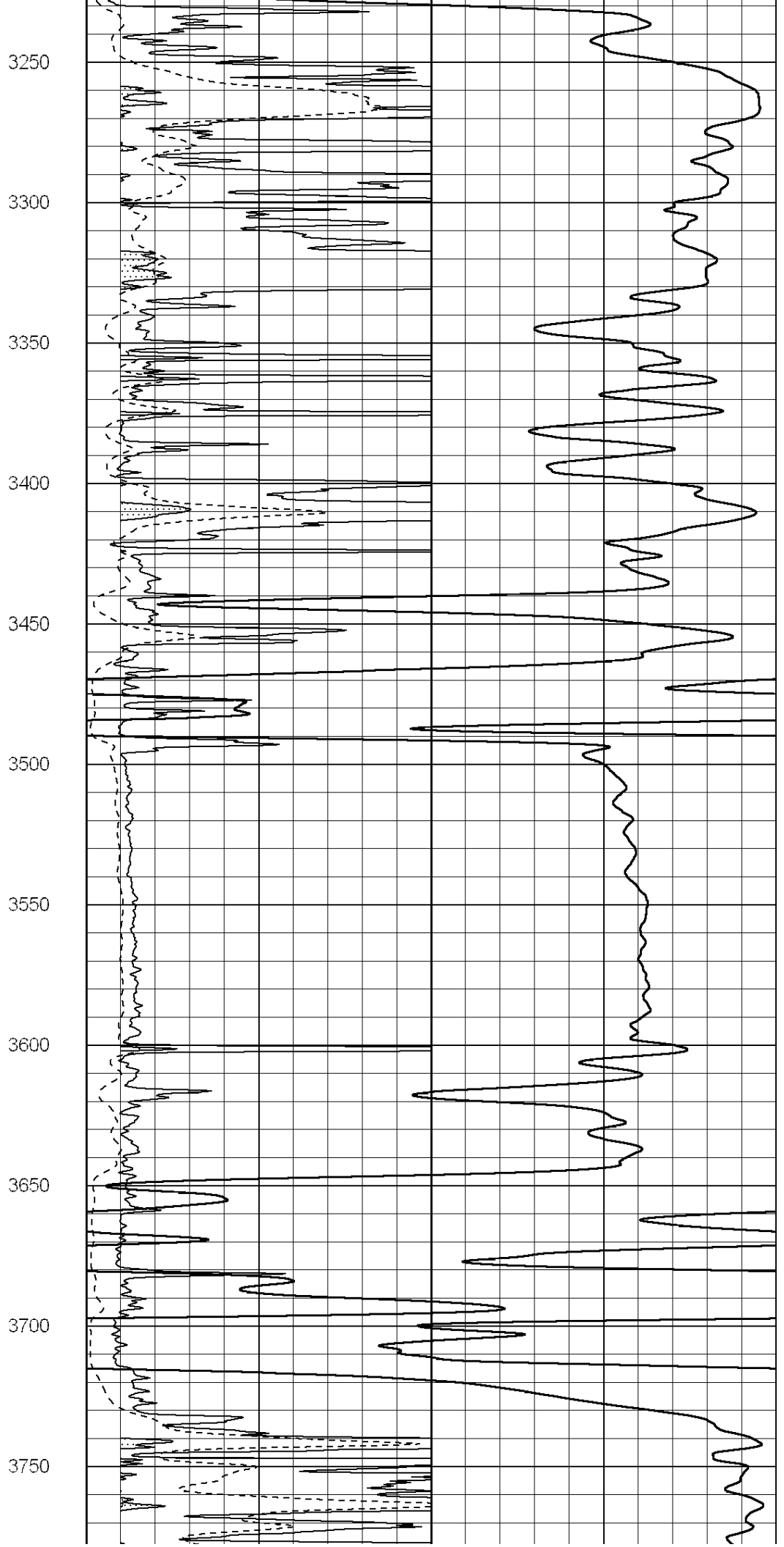
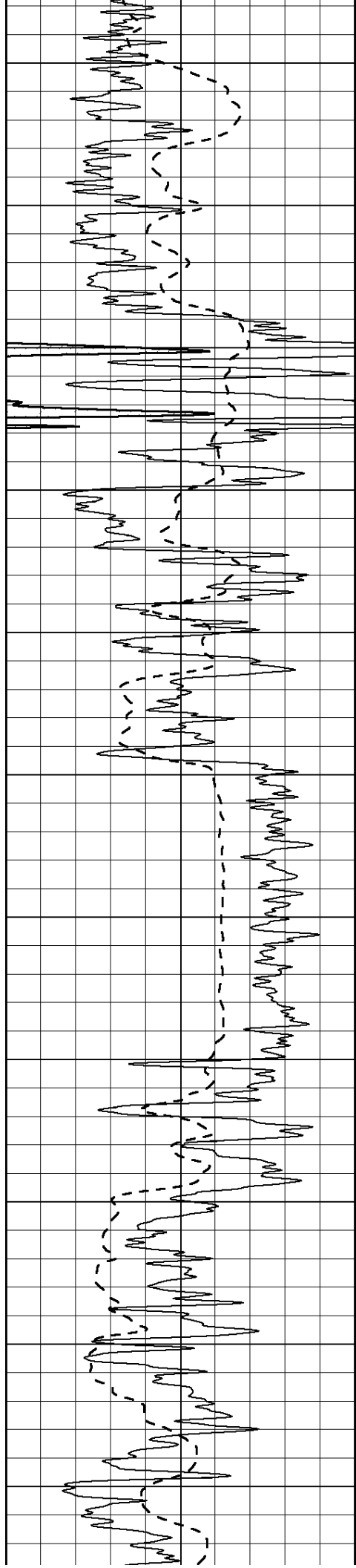
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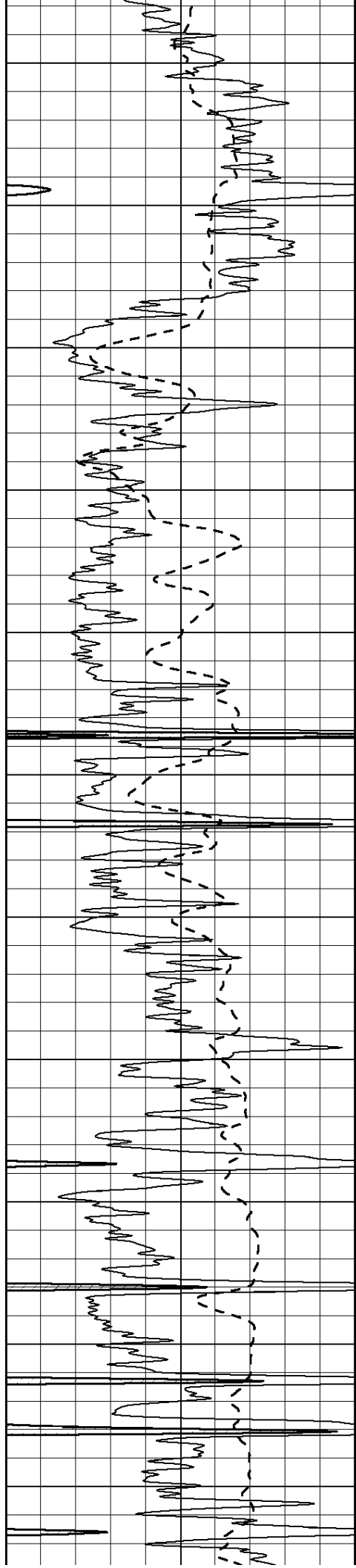
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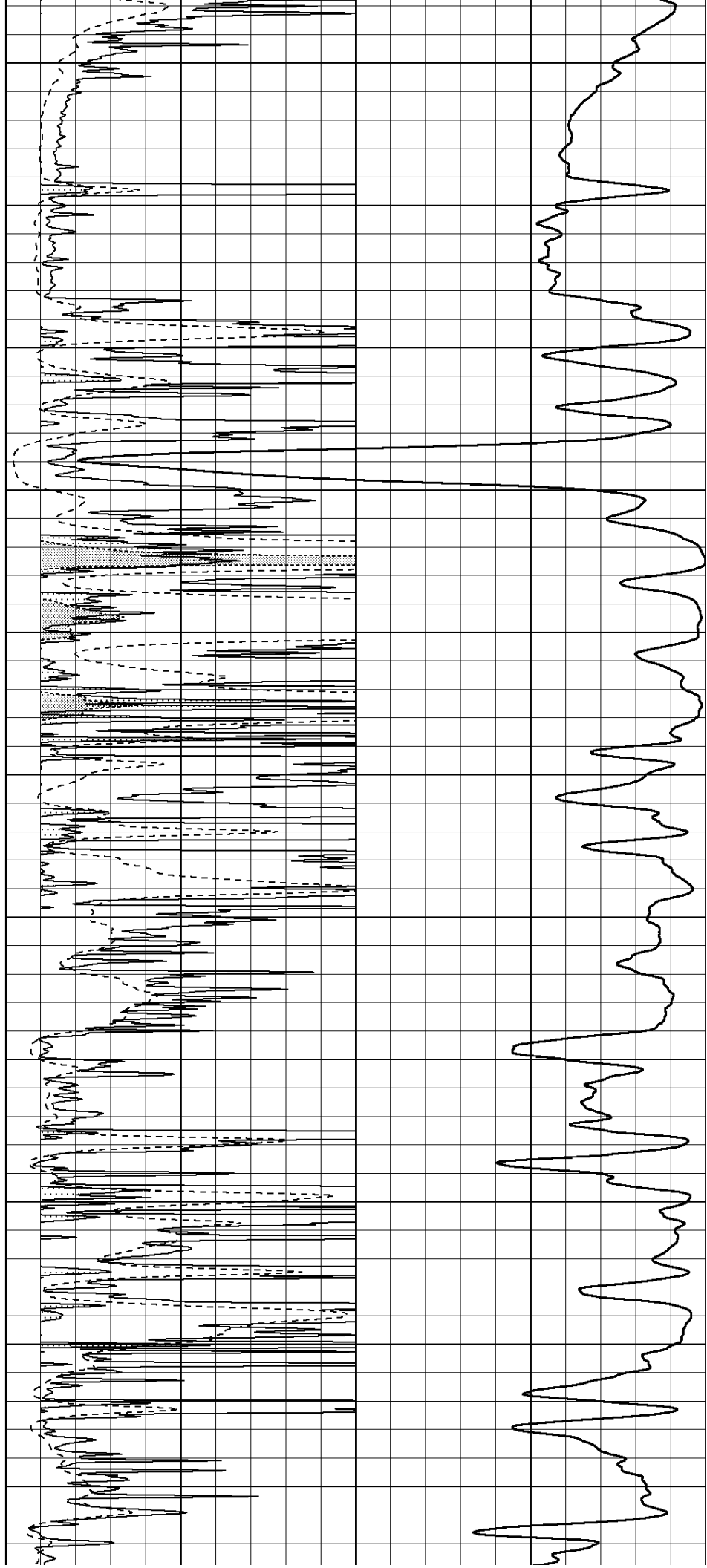


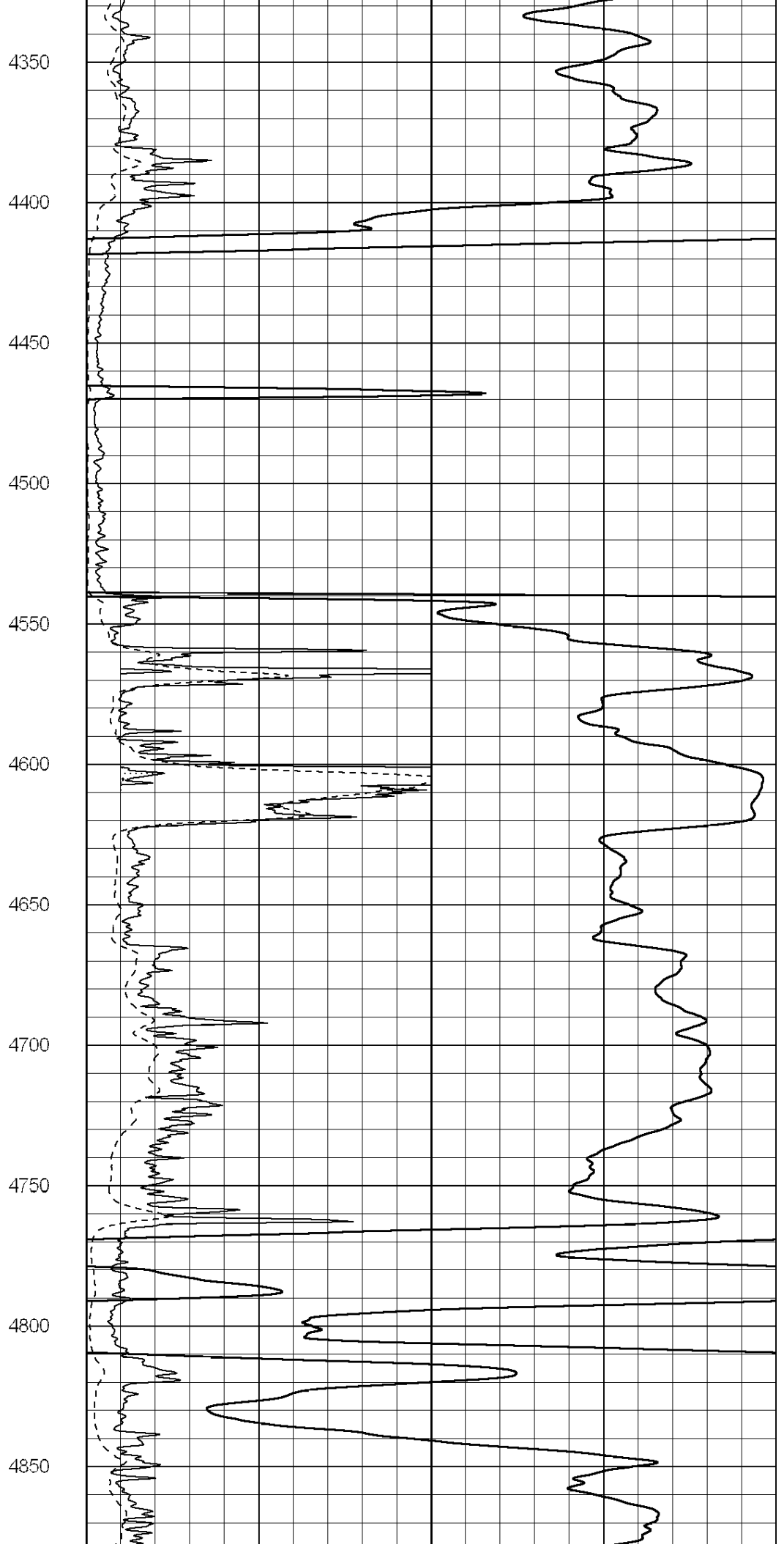
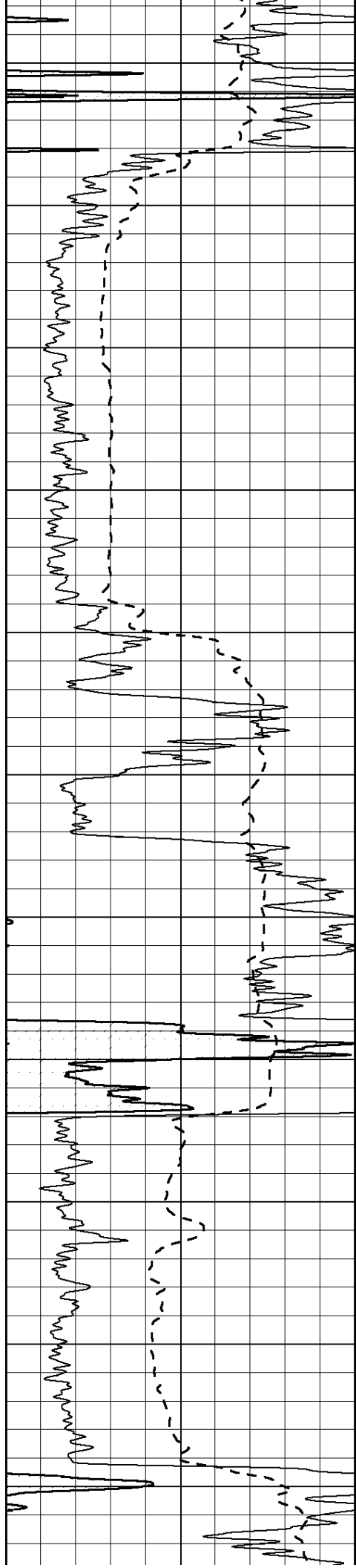


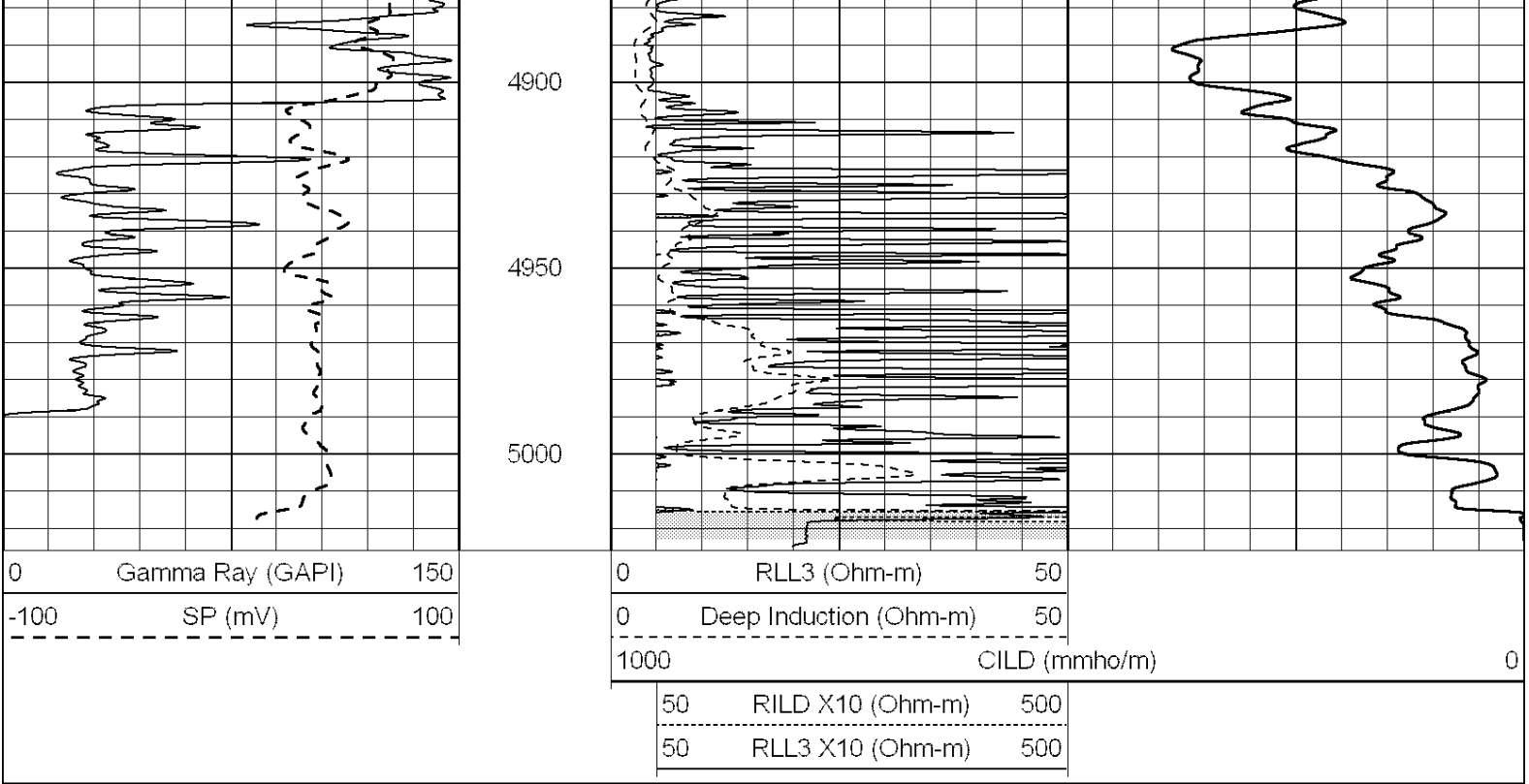




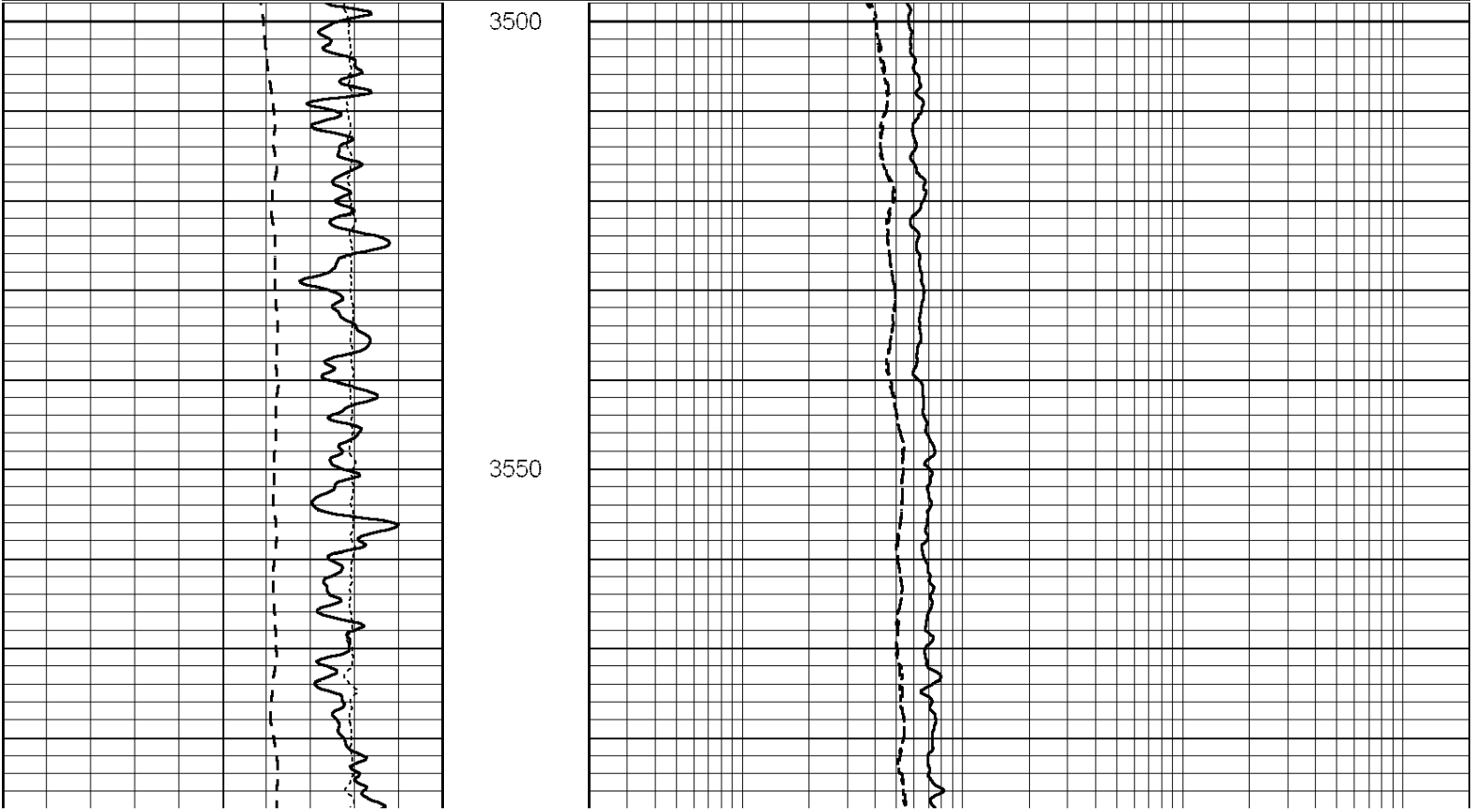
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3850
3900
3950
4000
4050
4100
4150
4200
4250
4300

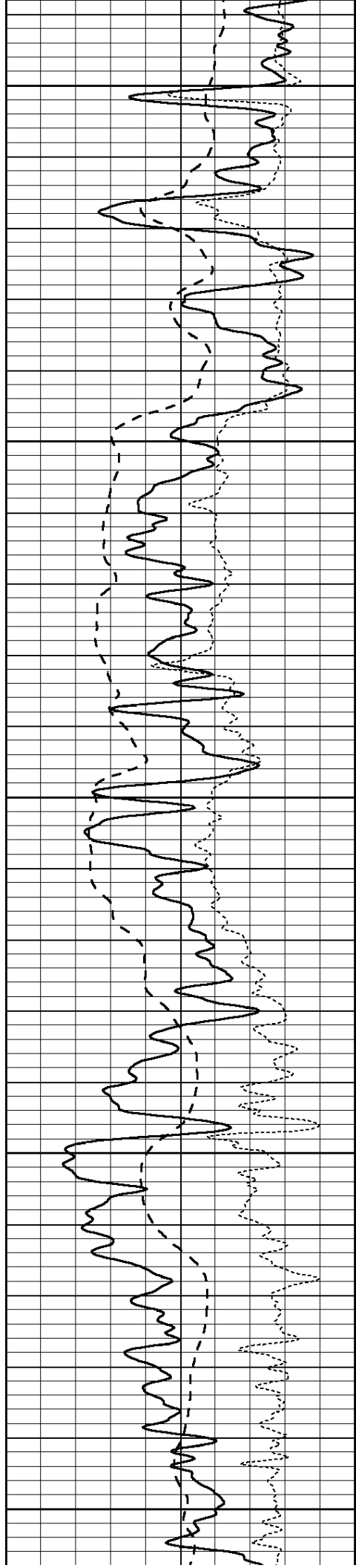






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Presentation Format: _dil					
Dataset Creation: Tue Apr 03 17:04:13 2012 by Calc Open-Cased 090629					
Charted by: Depth in Feet scaled 1:240					
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-100	SP (mV)		100	0.2	MEDIUM INDUCTION (Ohm-m) 2000
-250	Rxo/Rt		50	0.2	DEEP INDUCTION (Ohm-m) 2000





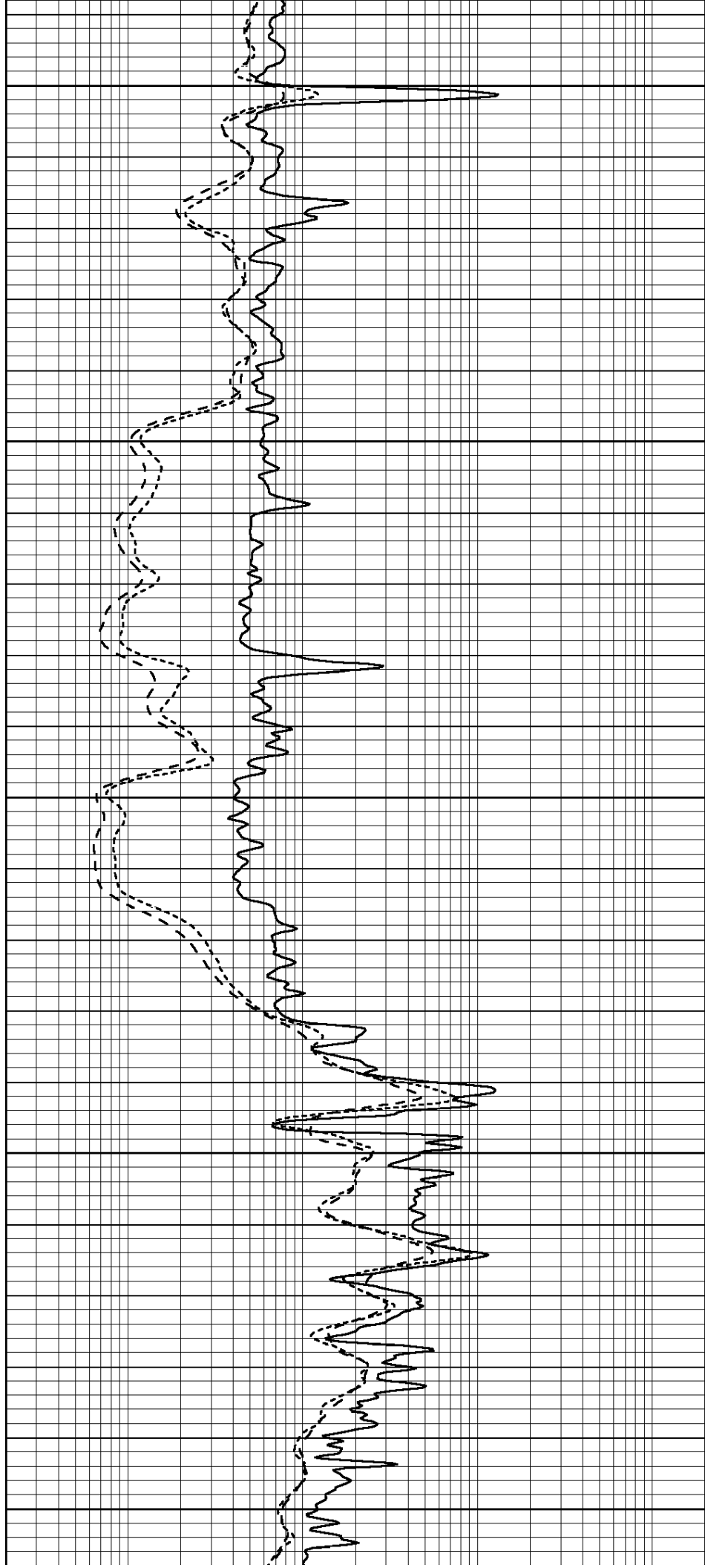
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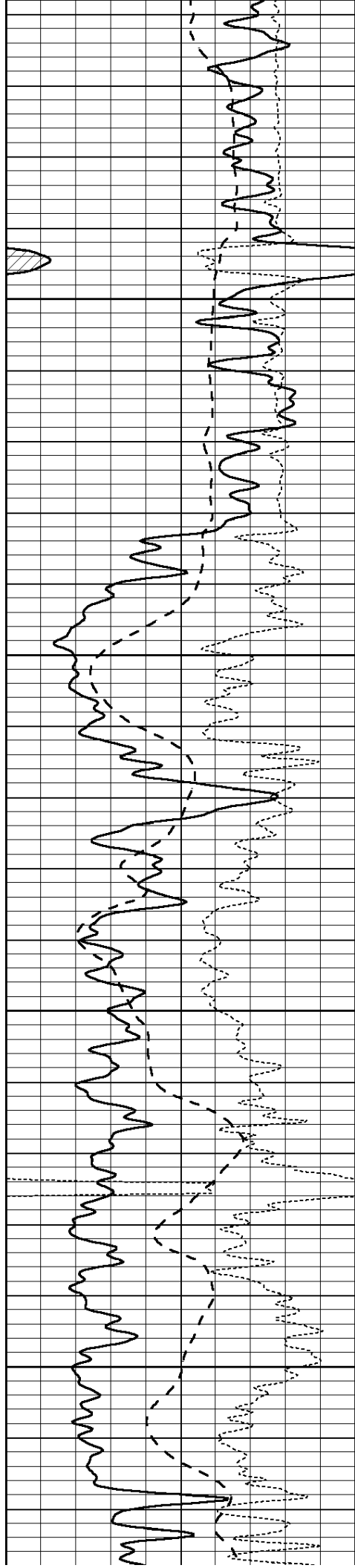
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3700

3750

3800



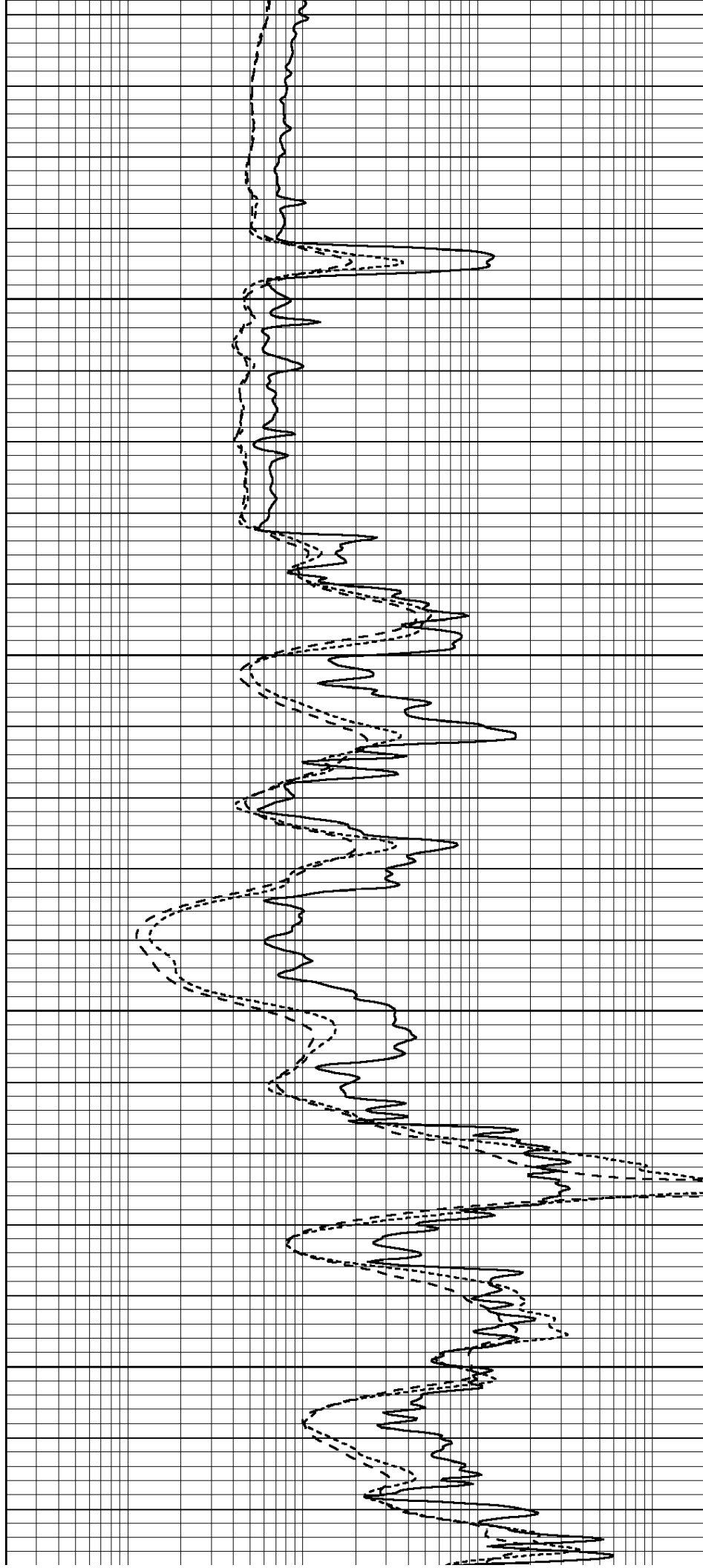


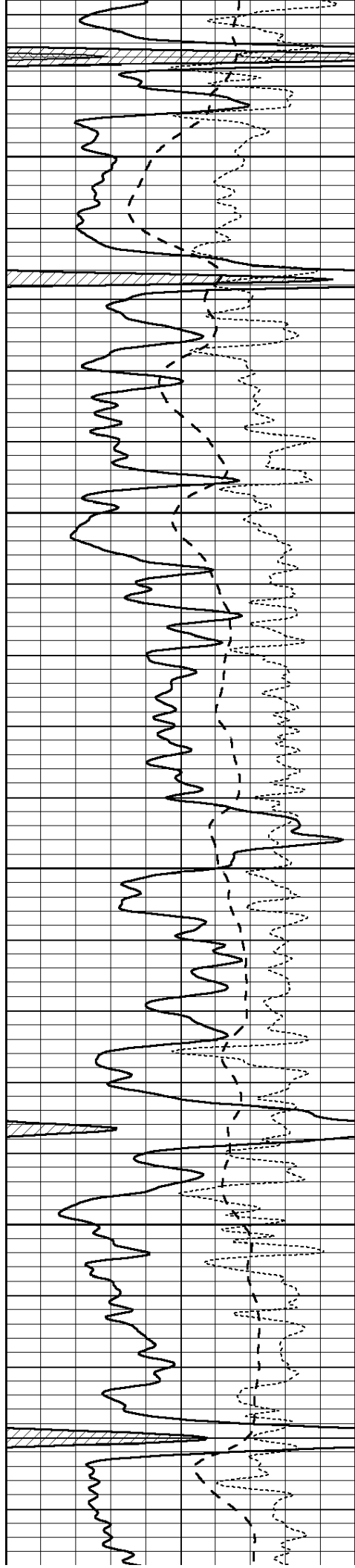
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3900

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4000



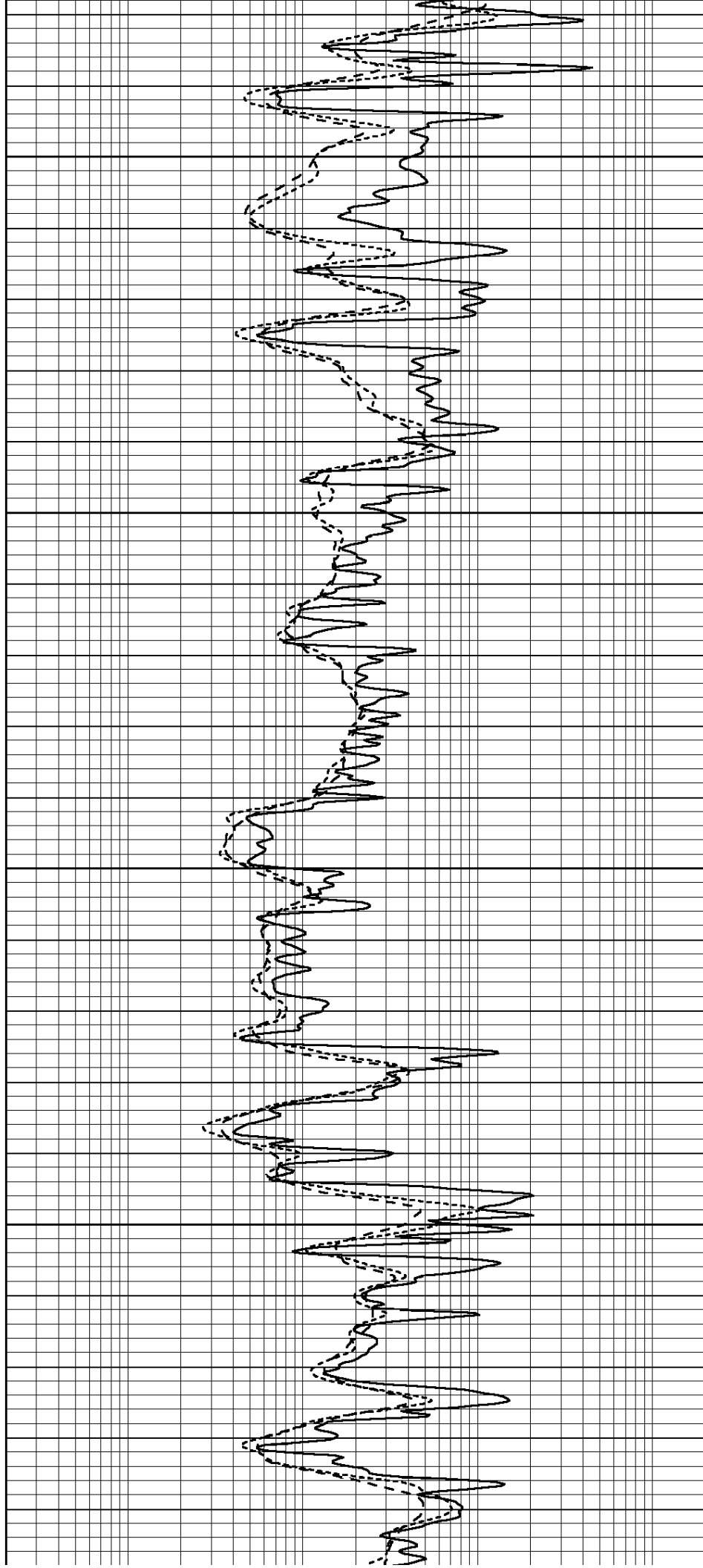


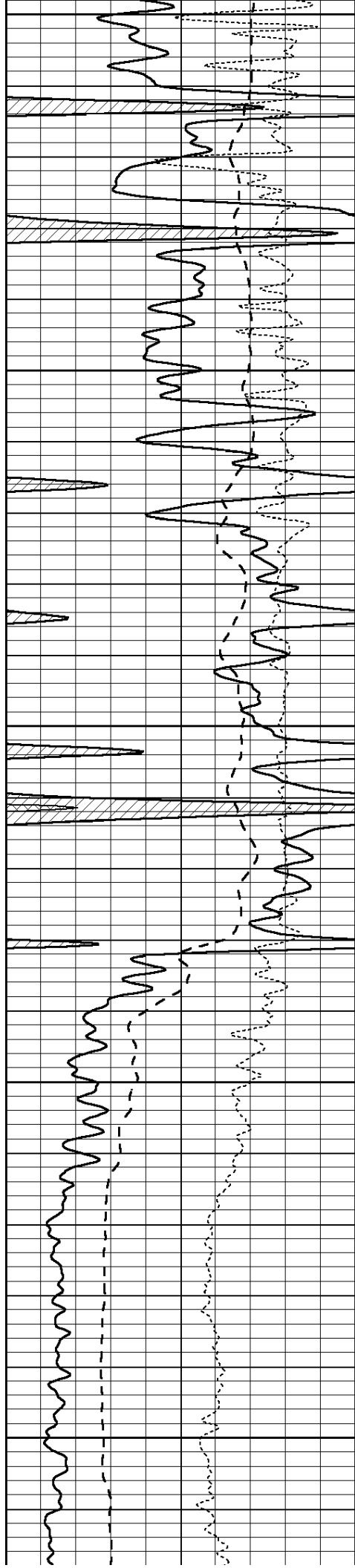
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4200





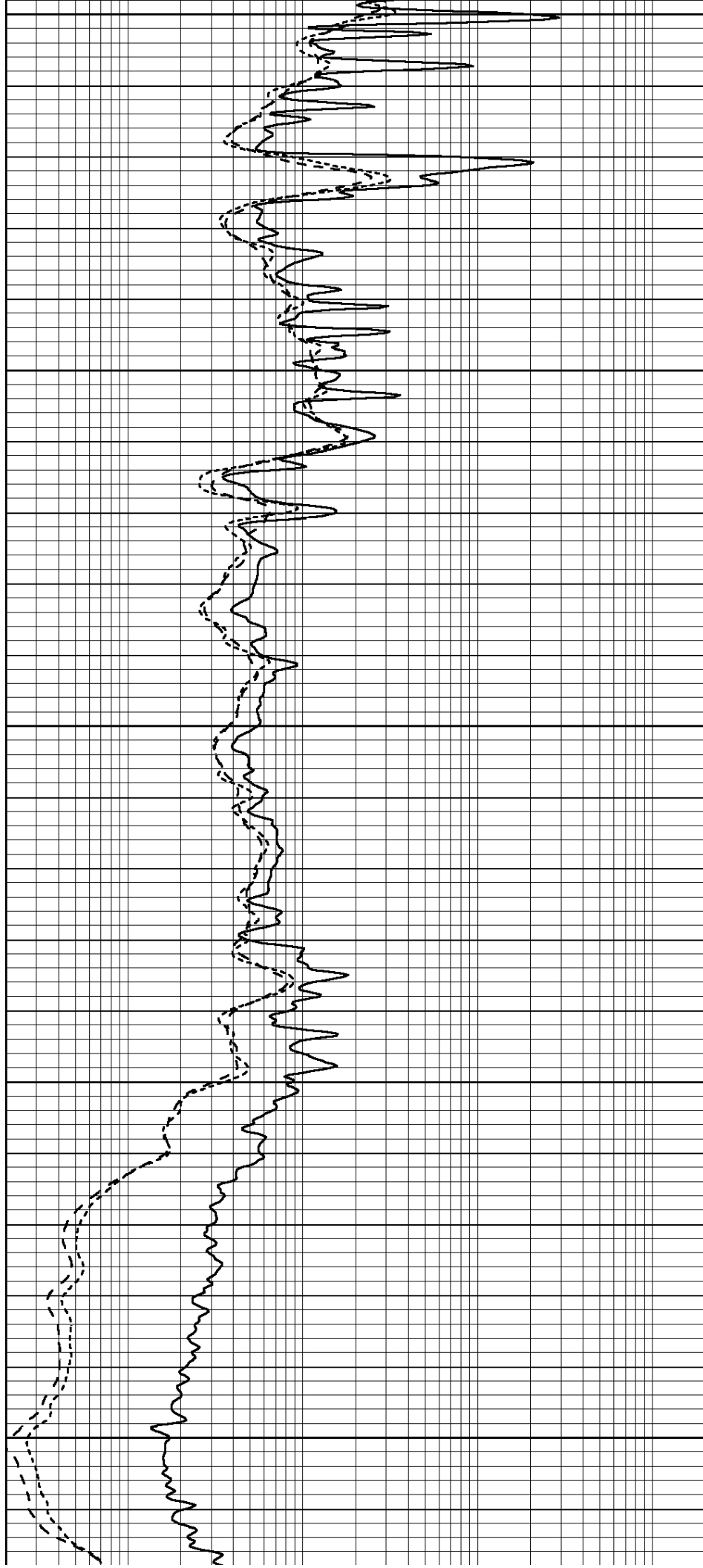
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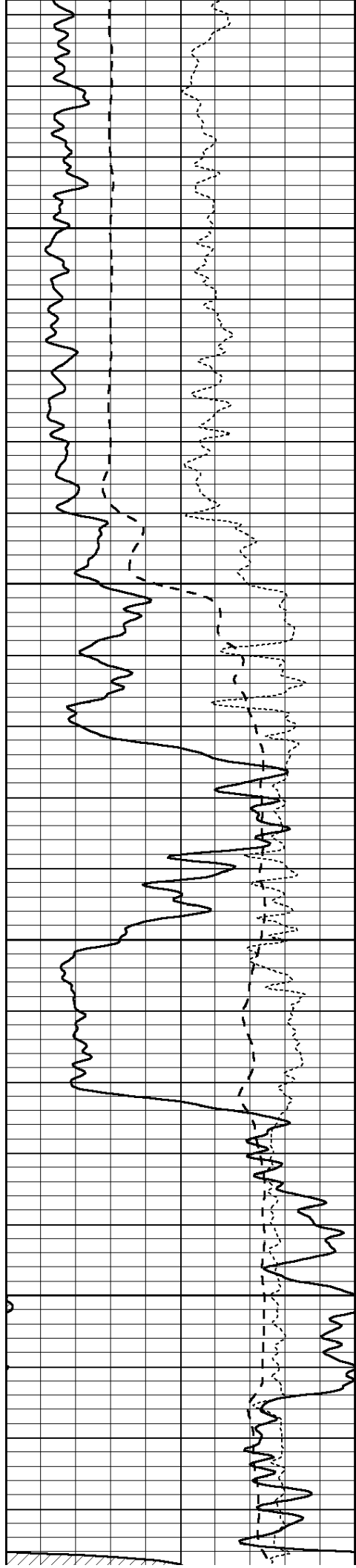
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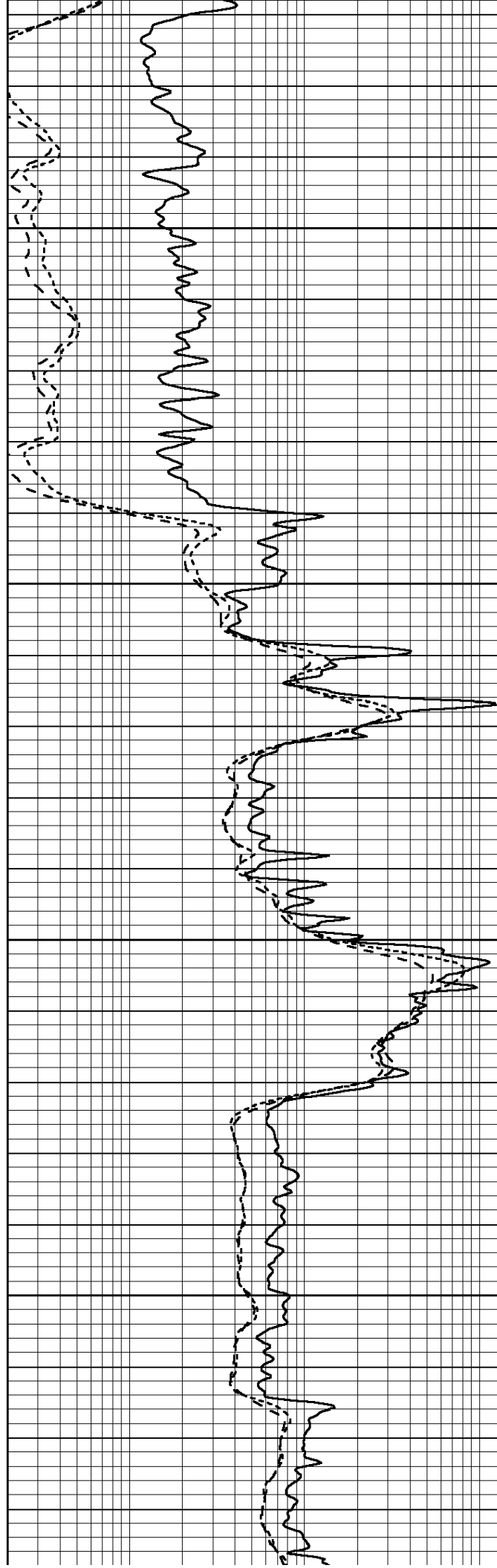


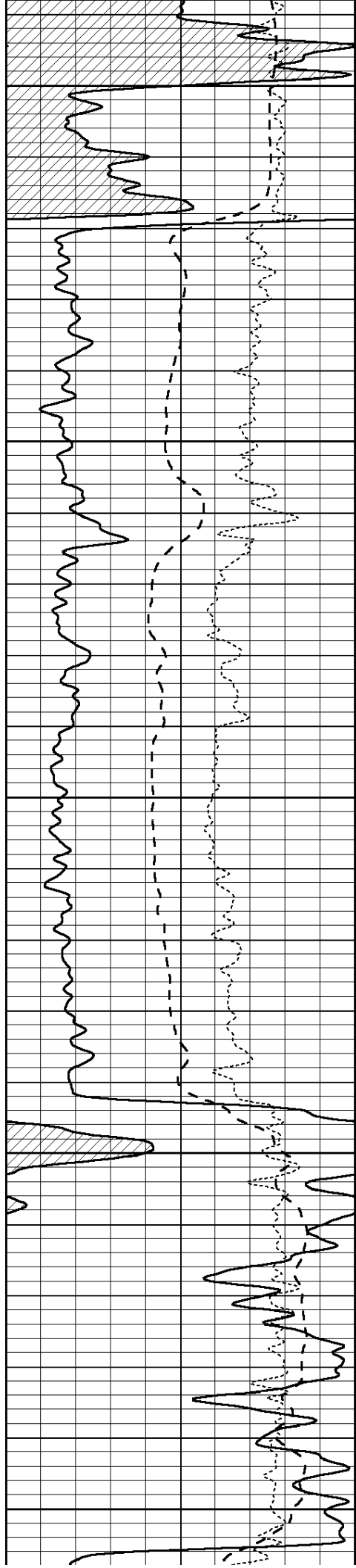
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4600

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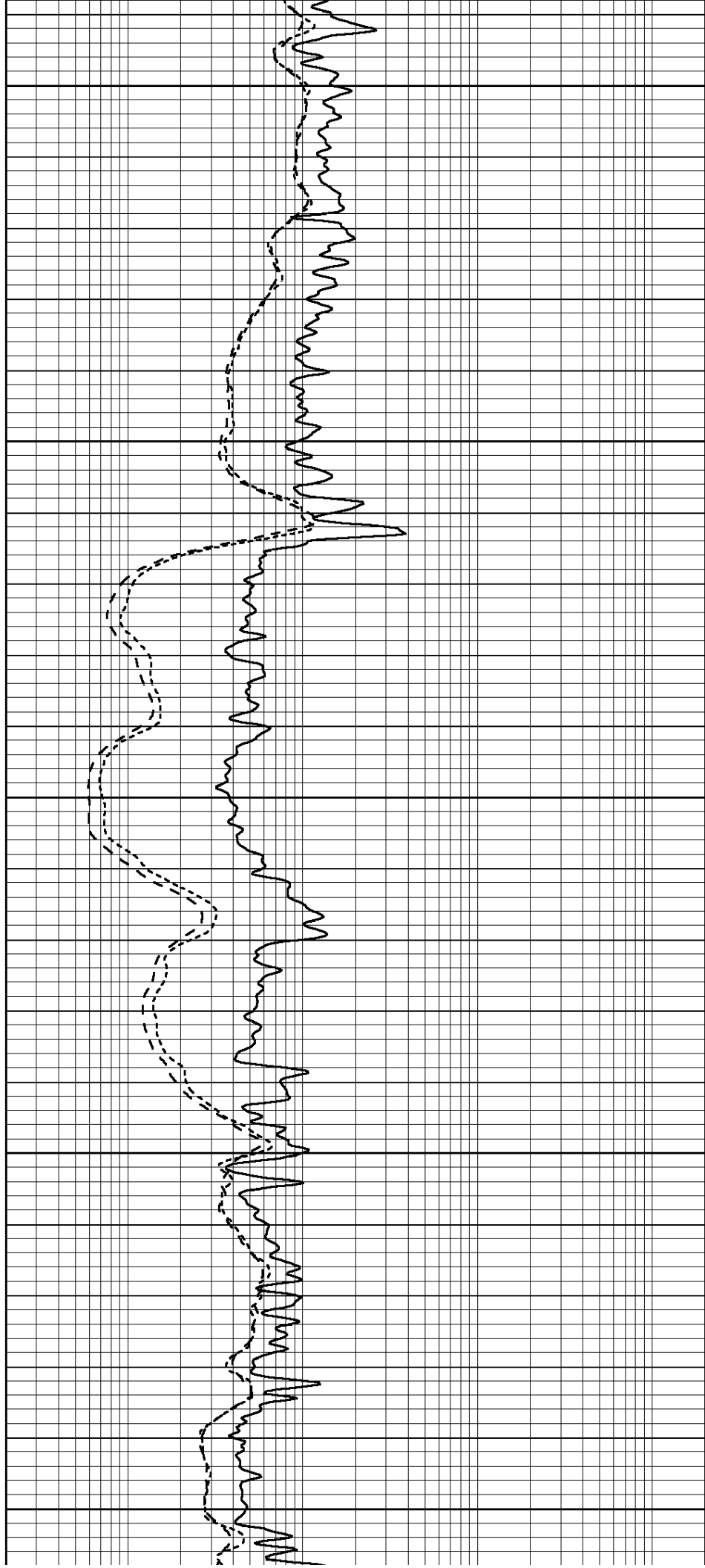
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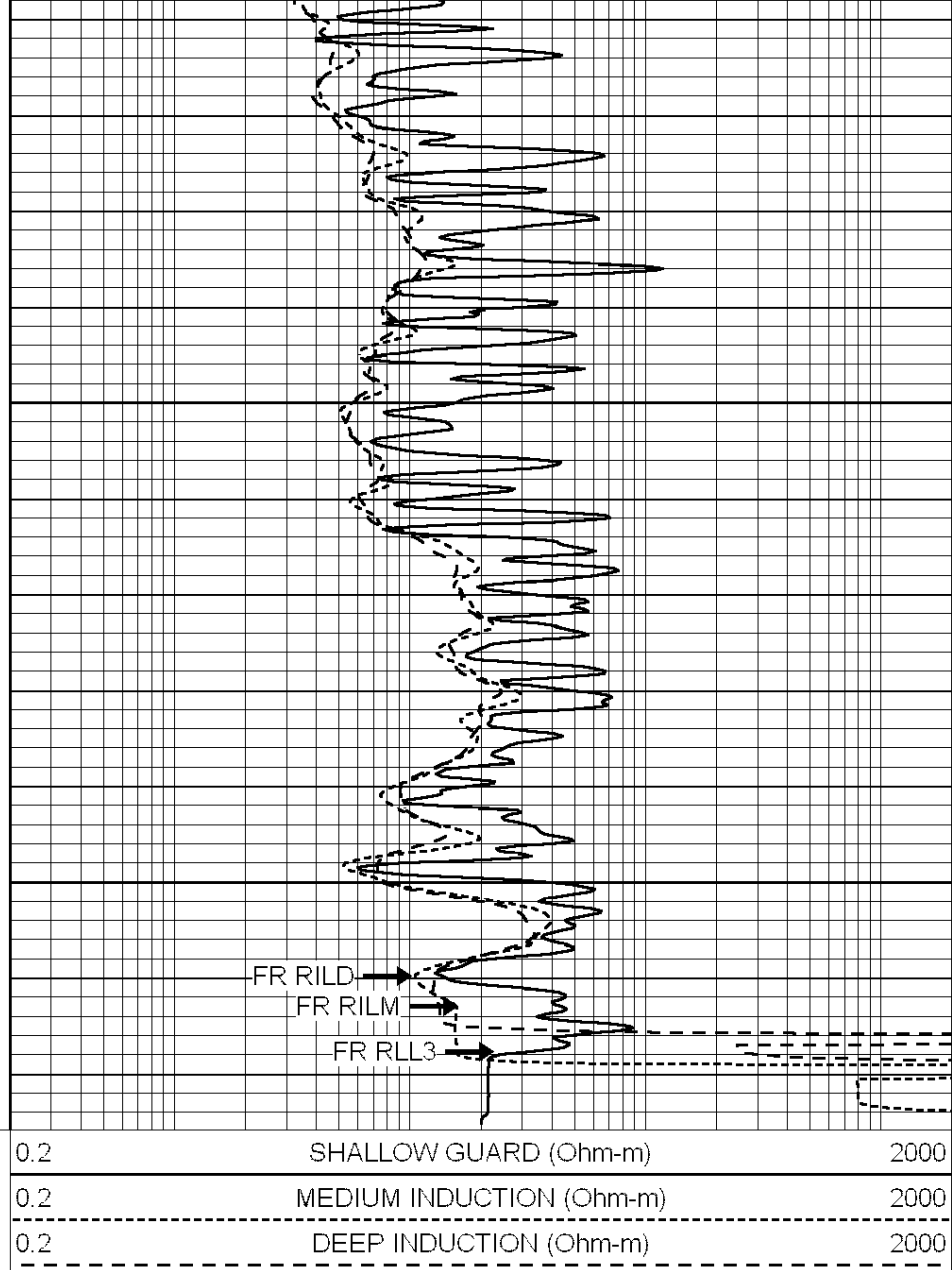
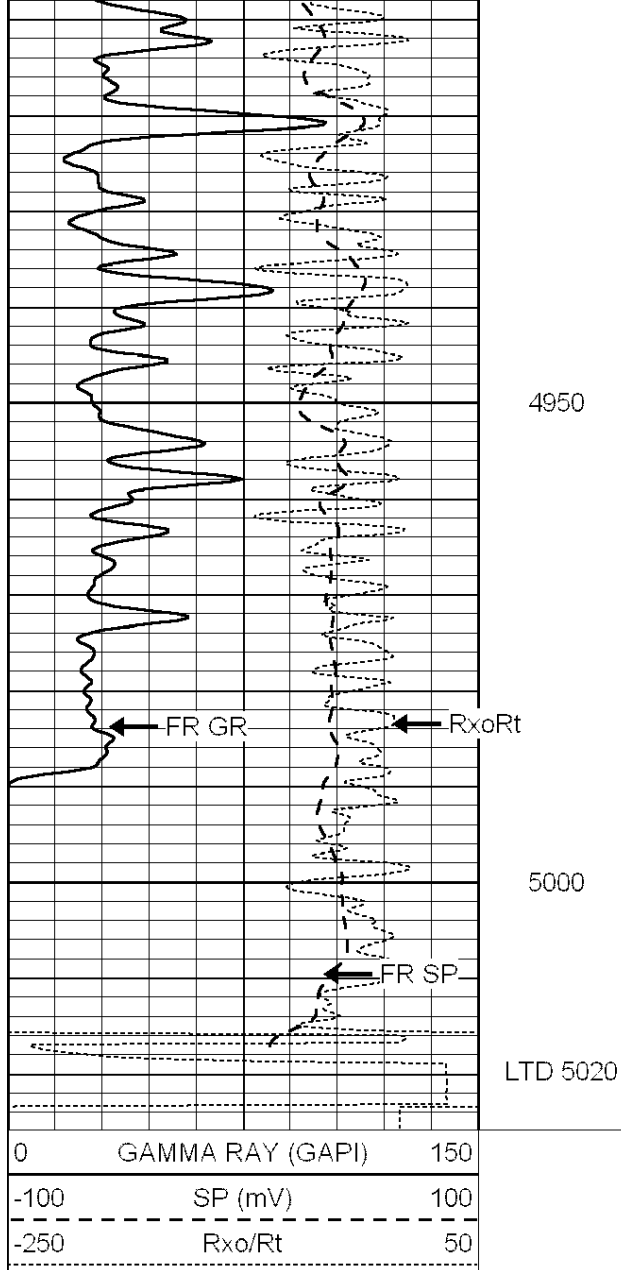
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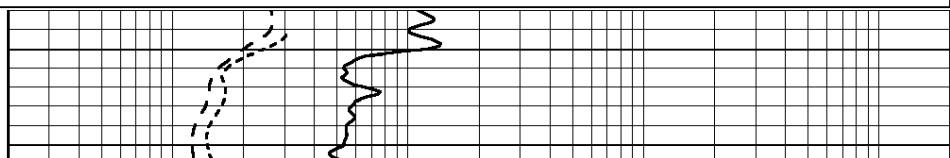
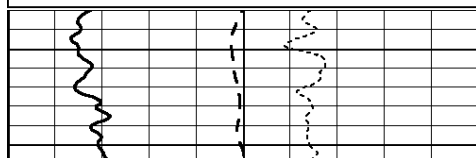
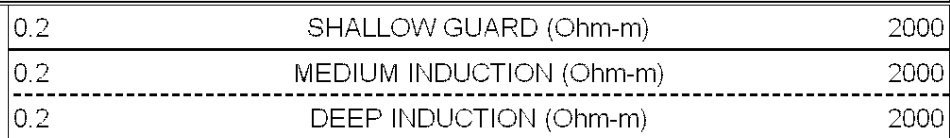
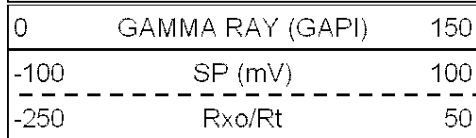


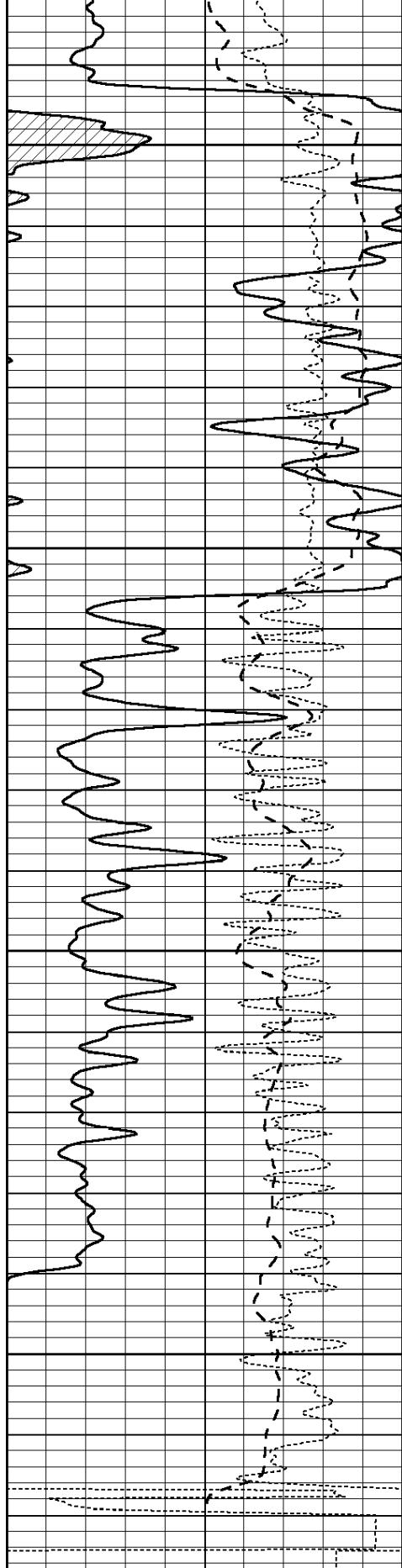


SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 008834pe.db
 Dataset Pathname: pass2.3
 Presentation Format: _dil
 Dataset Creation: Tue Apr 03 17:19:40 2012 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240





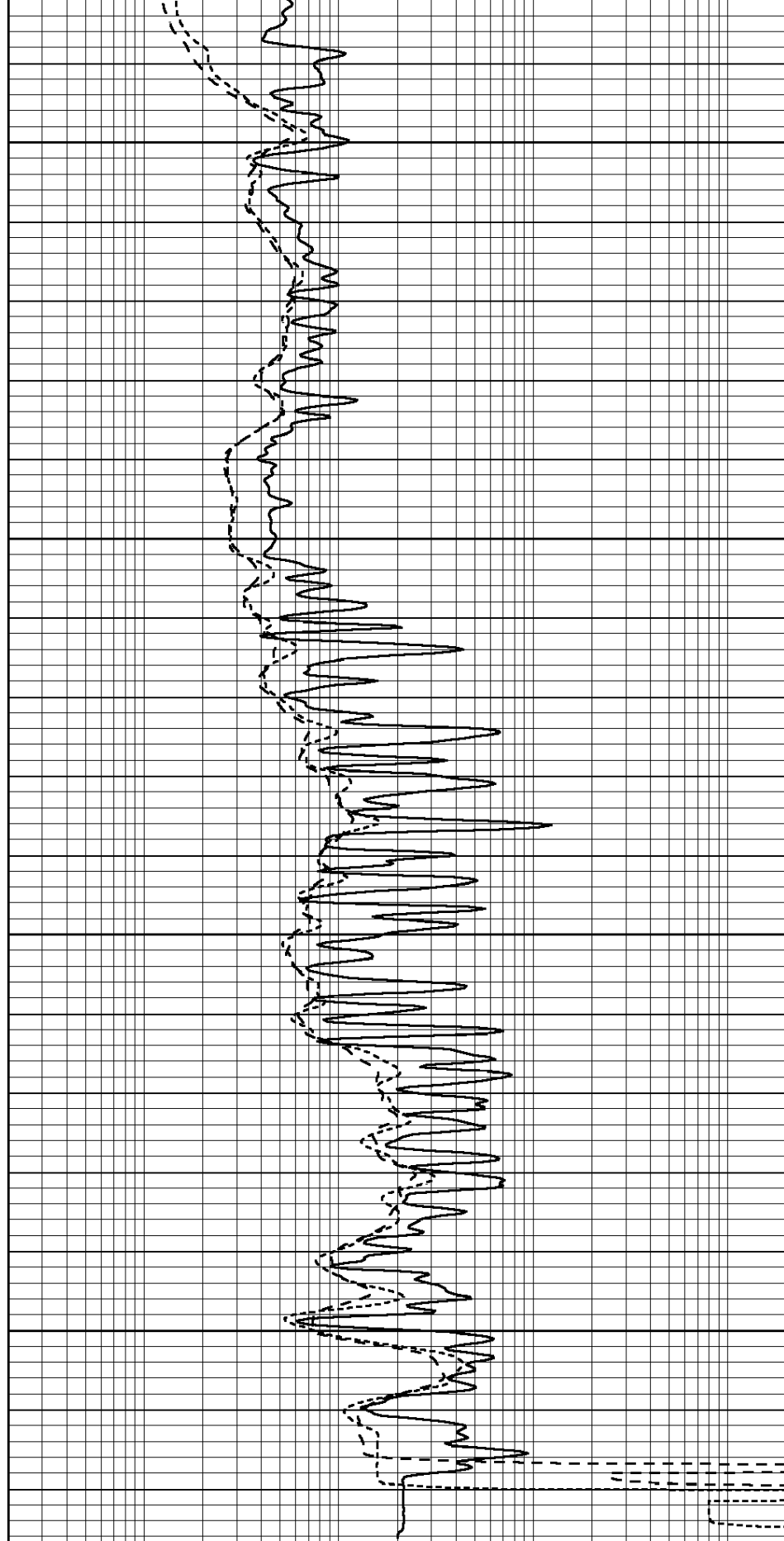
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4900

4950

5000

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 008834pe.db
 Dataset Pathname: pass3.4
 Dataset Creation: Tue Apr 03 18:21:45 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Fri Aug 01 06:33:19 2008
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

Readings			Targets			Results		
	Zero	Cal		Zero	Cal	m'	b'	
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 002 Model: PRB
 Performed Mon Apr 02 18:34:45 2012

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	870.3	7347.3	2308.1	8190.4	cps
Window 2	820.7	6010.4	1961.8	6596.5	cps
Window 3	670.4	3295.4	1229.9	3546.4	cps
Window 4	200.2	200.9	202.7	203.6	cps
Long Space	0.0	5189.7	1141.2	5775.9	cps
Short Space	1.1	1012.5	681.4	1078.9	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.3	Rib Slope	: 1.012	Density/Spine Ratio	: 0.562
Spine Angle	: 75.3	Spine Slope	: 3.825	Spine Intercept	: -17.9

	Readings	Reference	
Low Ref	3.7	8.0	
High Ref	6.1	14.0	
	Gain: 2.5		Offset: -1.1

Compensated Neutron Calibration Report

Serial Number:	6l
Tool Model:	G

CALIBRATION						
Detector		Readings		Target		Normalization
Short Space		1.00	cps	1.00	cps	1.0000
Long Space		1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	#8	
Tool Model:	OPEN	
Performed:	Mon Jun 13 16:56:43 2011	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	175.0	cps
Sensitivity:	0.8371	GAPI/cps