DUAL INDUCTION LOG

Company BEAR PETROLEUM
Well BRYANT #1
Field BURDETT
County PAWNEE
State KANSAS

Location: API # : 15-145-21841-00-00
330 FSL & 810 FEL
SEC 9 TWP 22S RGE 20W

Other Services
CDL/CNL/MEL

Permanent Datum GROUND LEVEL Elevation 2176
Log Measured From KELLY BUSHING 6' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2182
D.F. 2180
G.L. 2176

Date	01/01/19		
Run Number	ONE		
Depth Driller	4650		
Depth Logger	4651		
Bottom Logged Interval	4649		
Top Log Interval	50		
Casing Driller	8 5/8" @ 1278		
Casing Logger	1278		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2800 PPM	
Density / Viscosity	9.2/60		
pH / Fluid Loss	9.0/9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.60@66		
Rmf @ Meas. Temp	.45@66		
Rmc @ Meas. Temp	.72@66		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.32@121		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	121F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	ROD ANDERSON		

<<< Fold Here >>>

Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

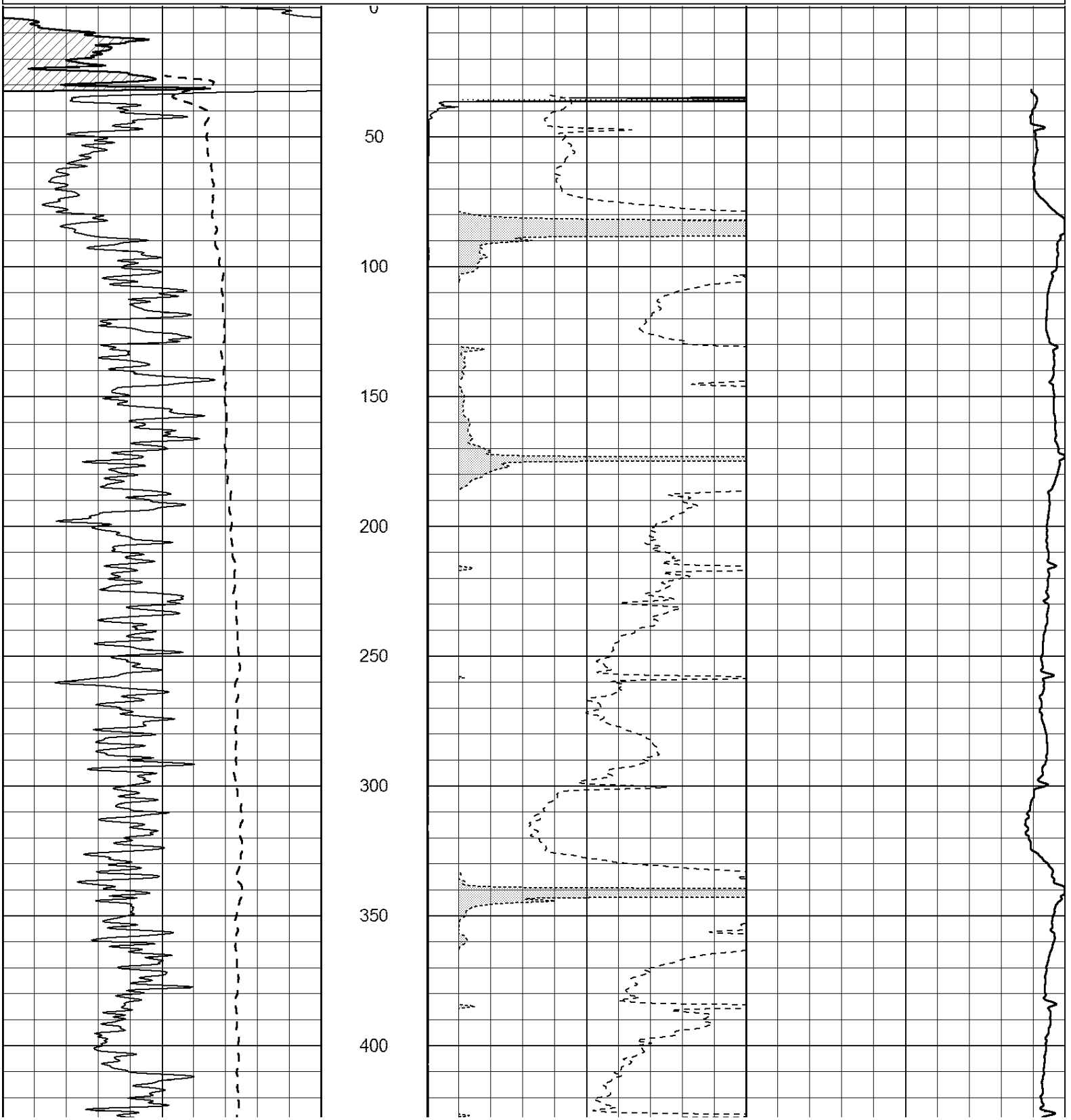
DIRECTIONS
BURDETT EAST TO 340 SOUTH TO N RD.
WEST INTO.

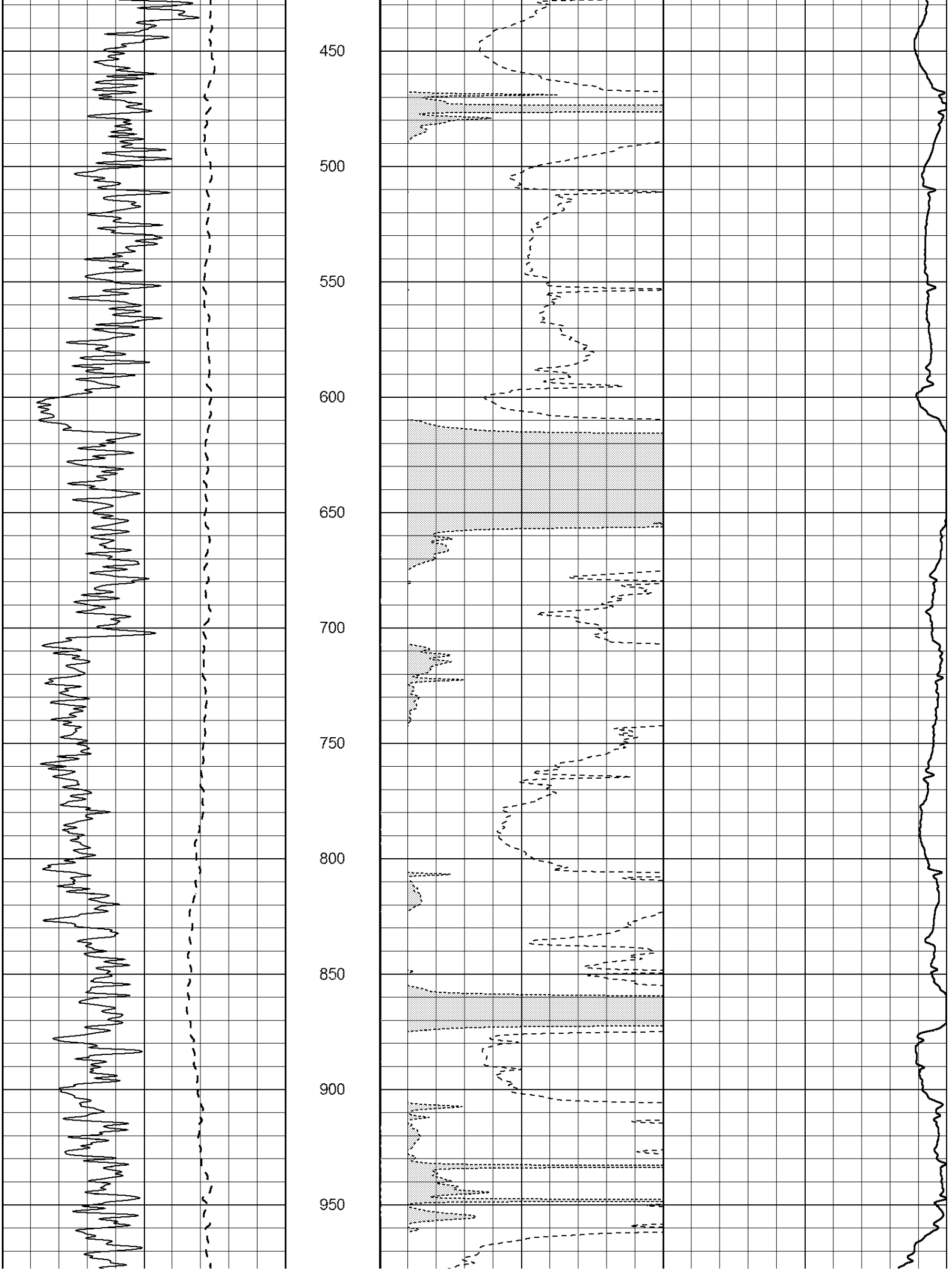
MAIN PASS

Database File: 3171ddn.db
Dataset Pathname: pass3.1
Presentation Format: _dil2
Dataset Creation: Tue Jan 01 05:27:03 2019
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

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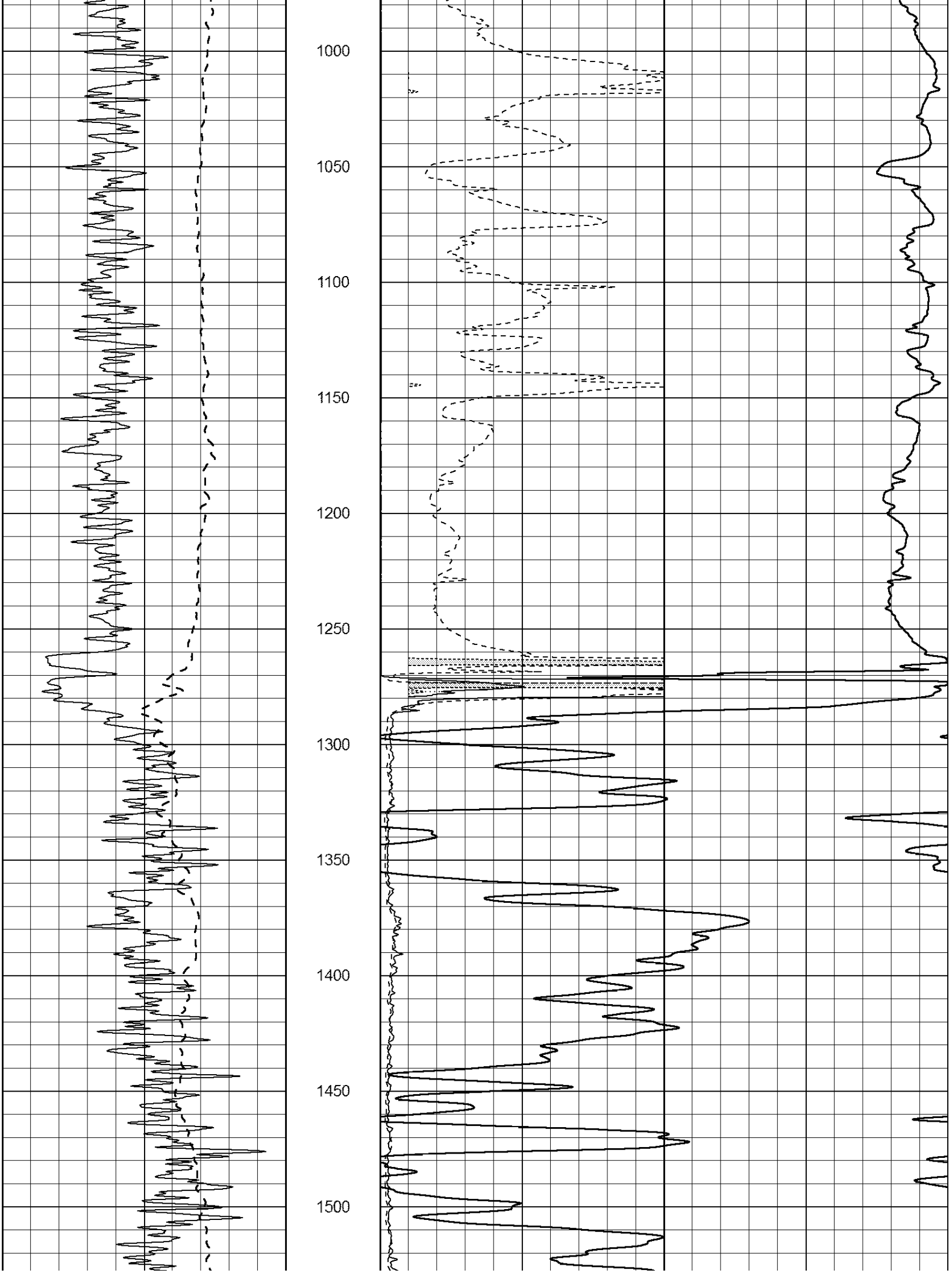
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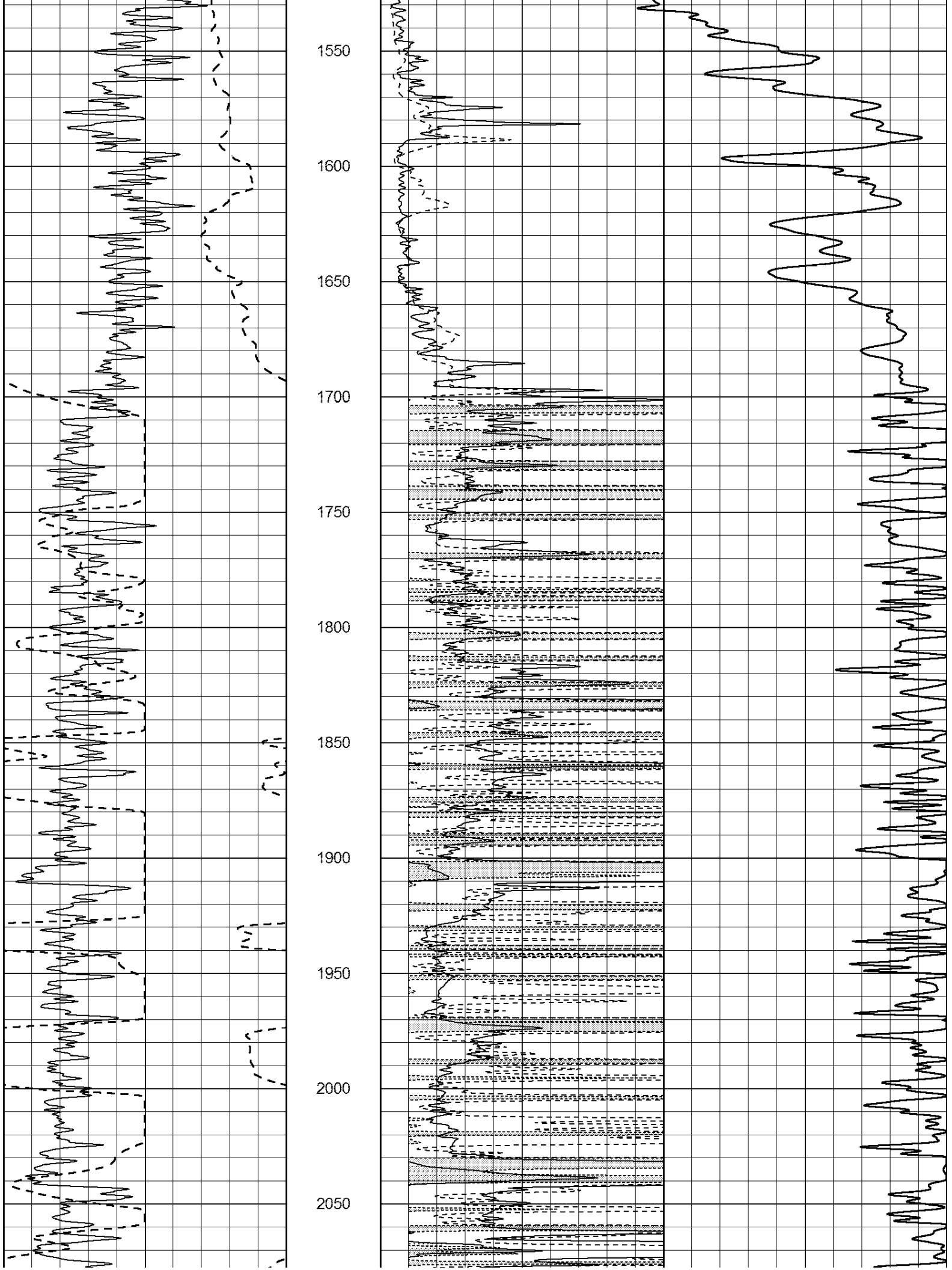
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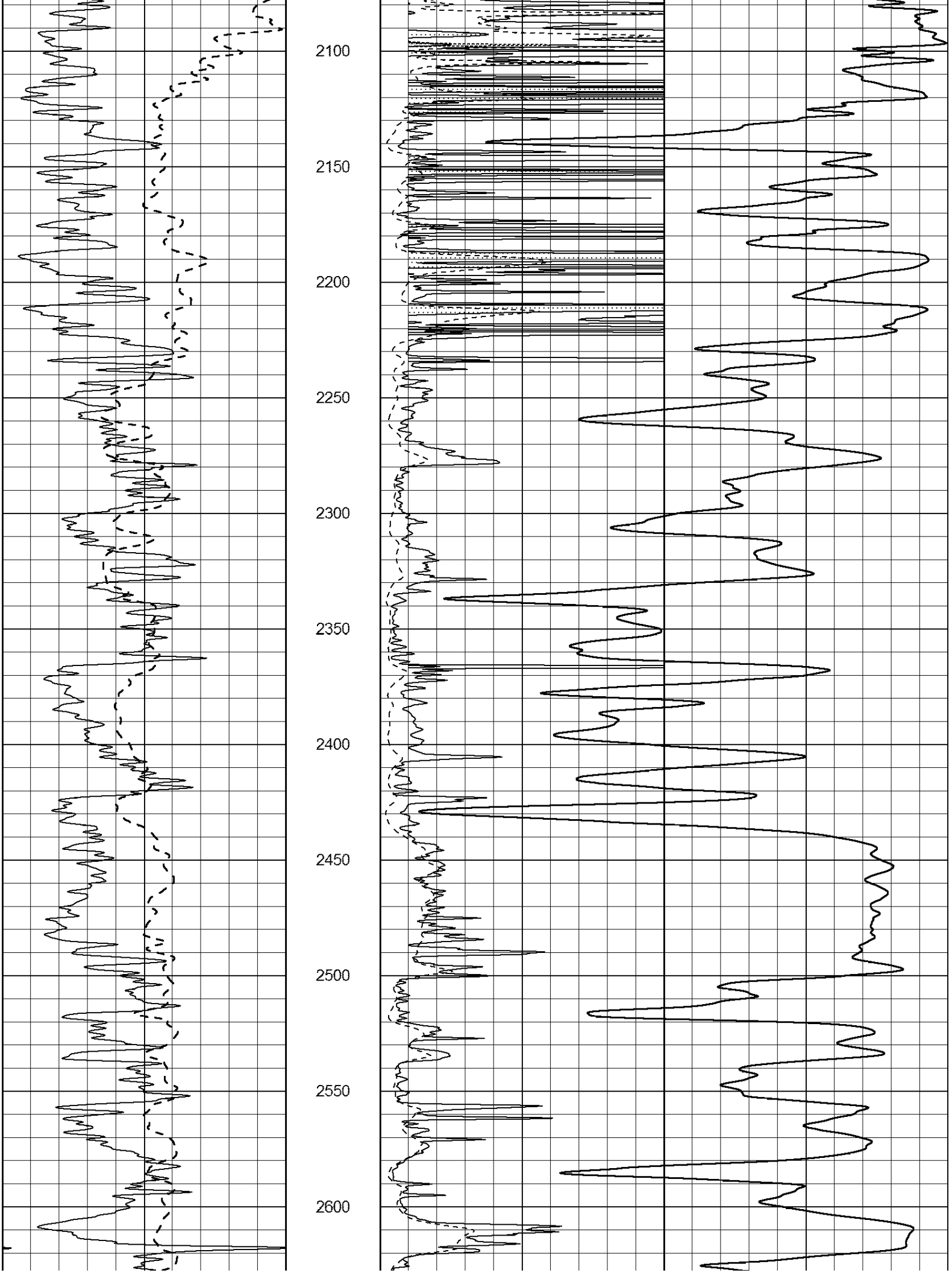
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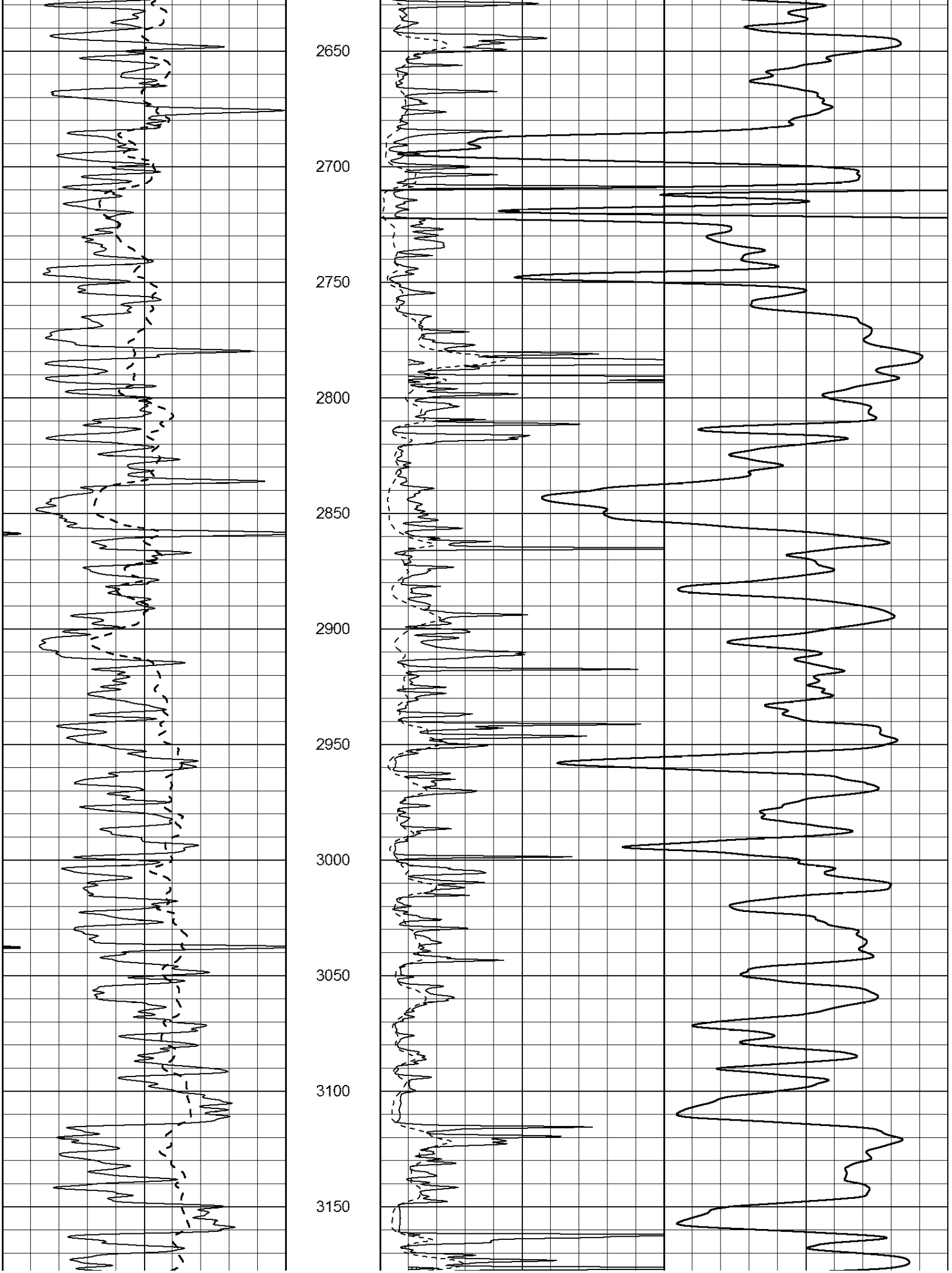
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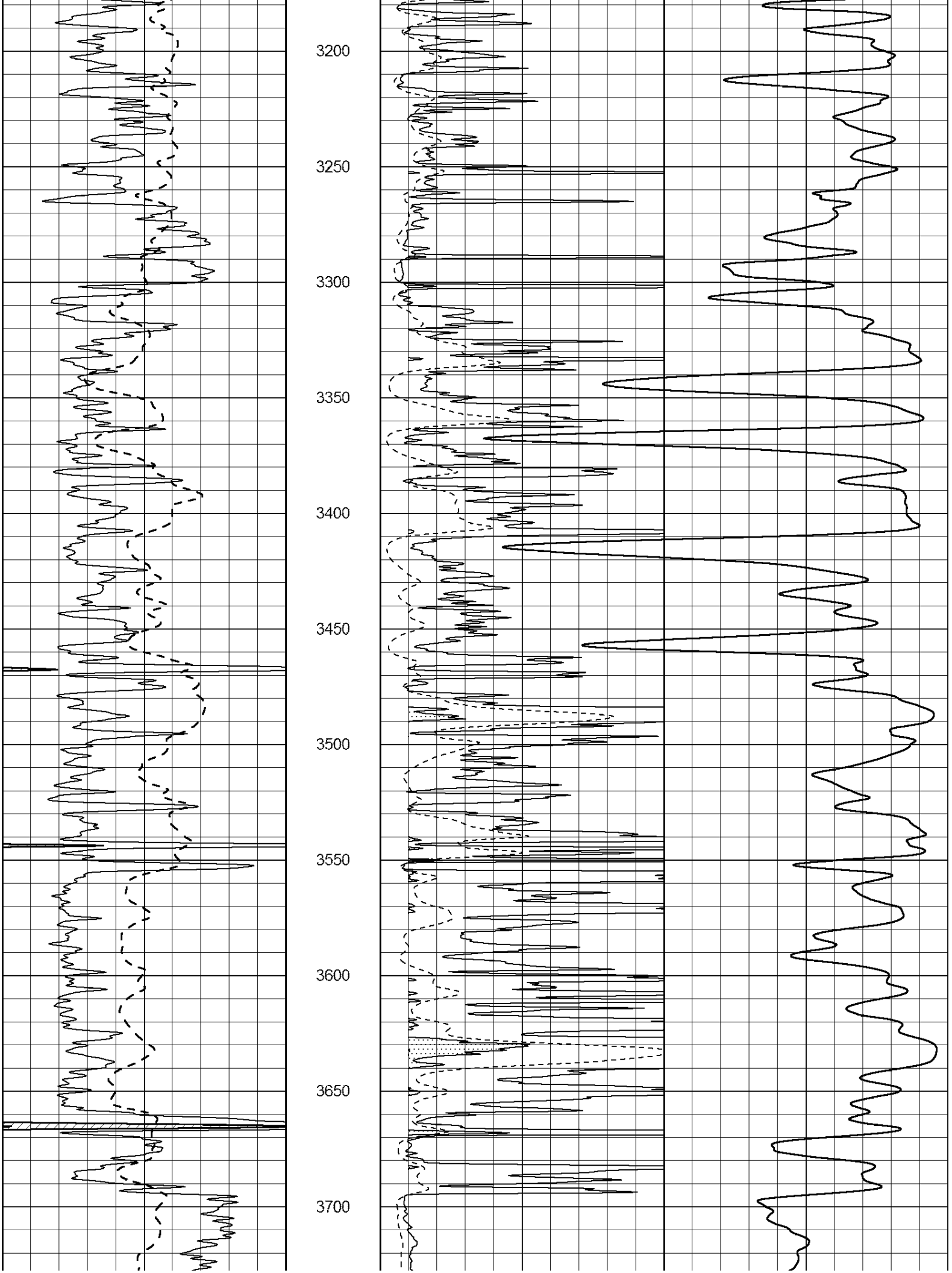
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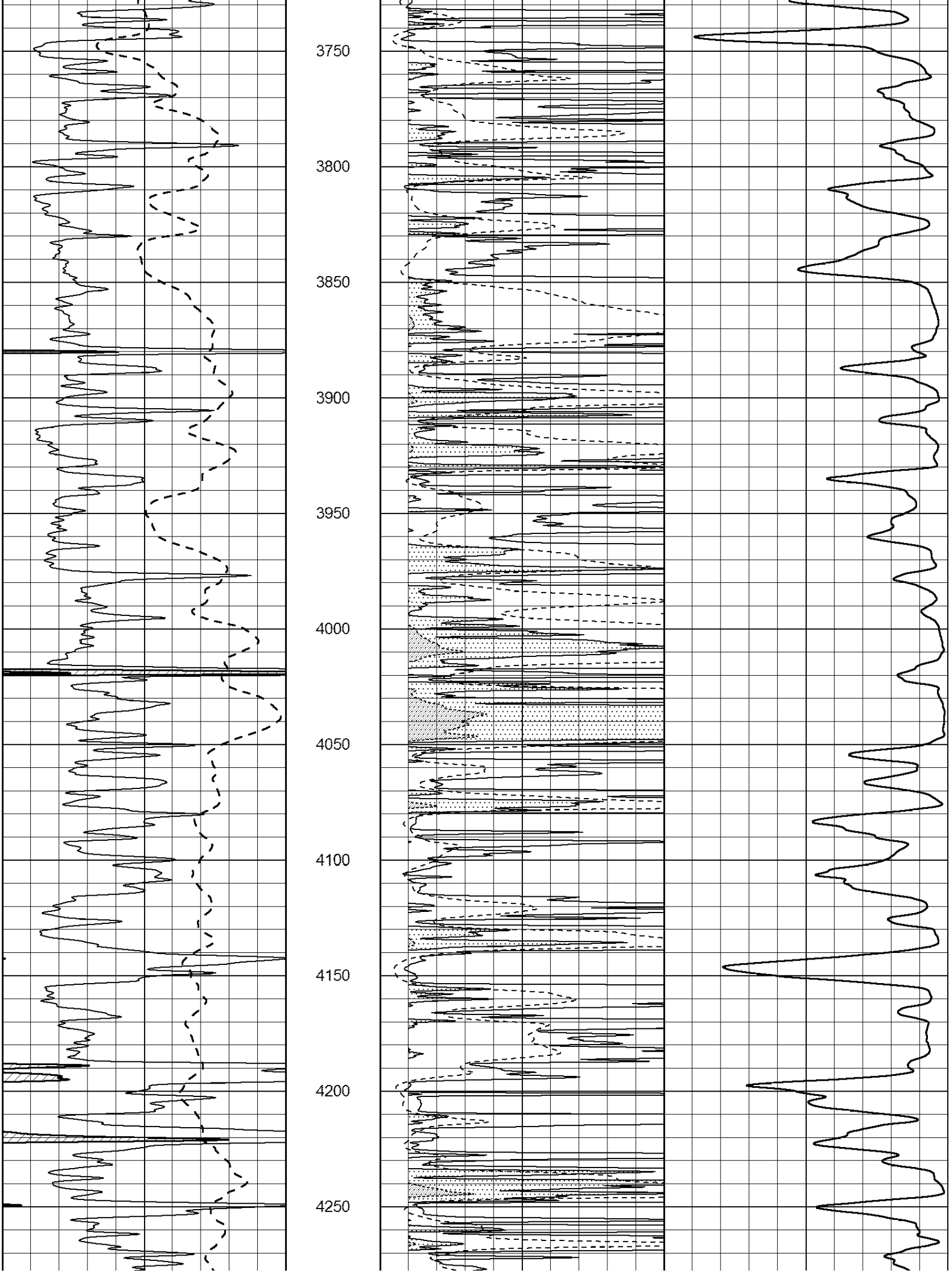
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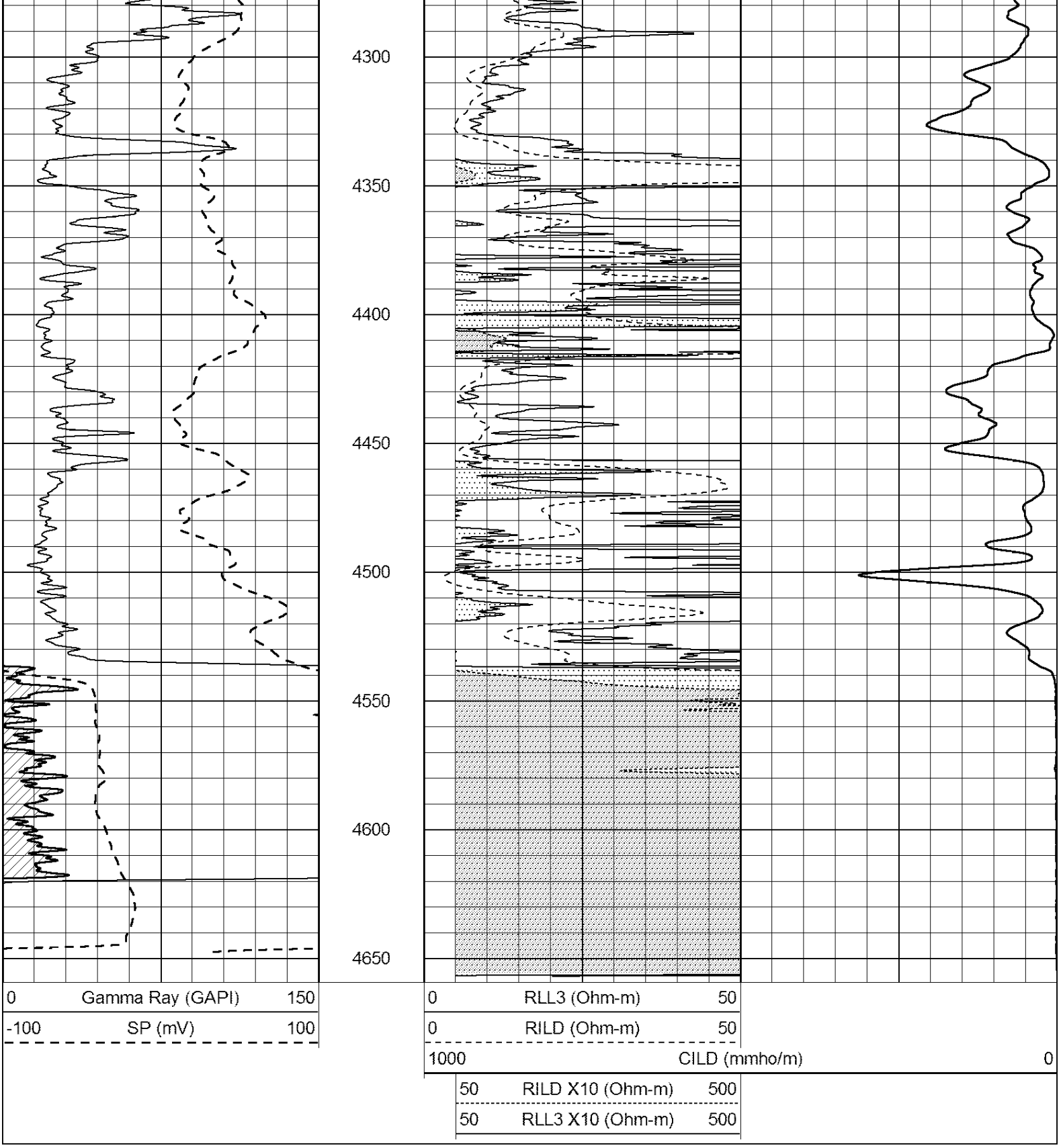
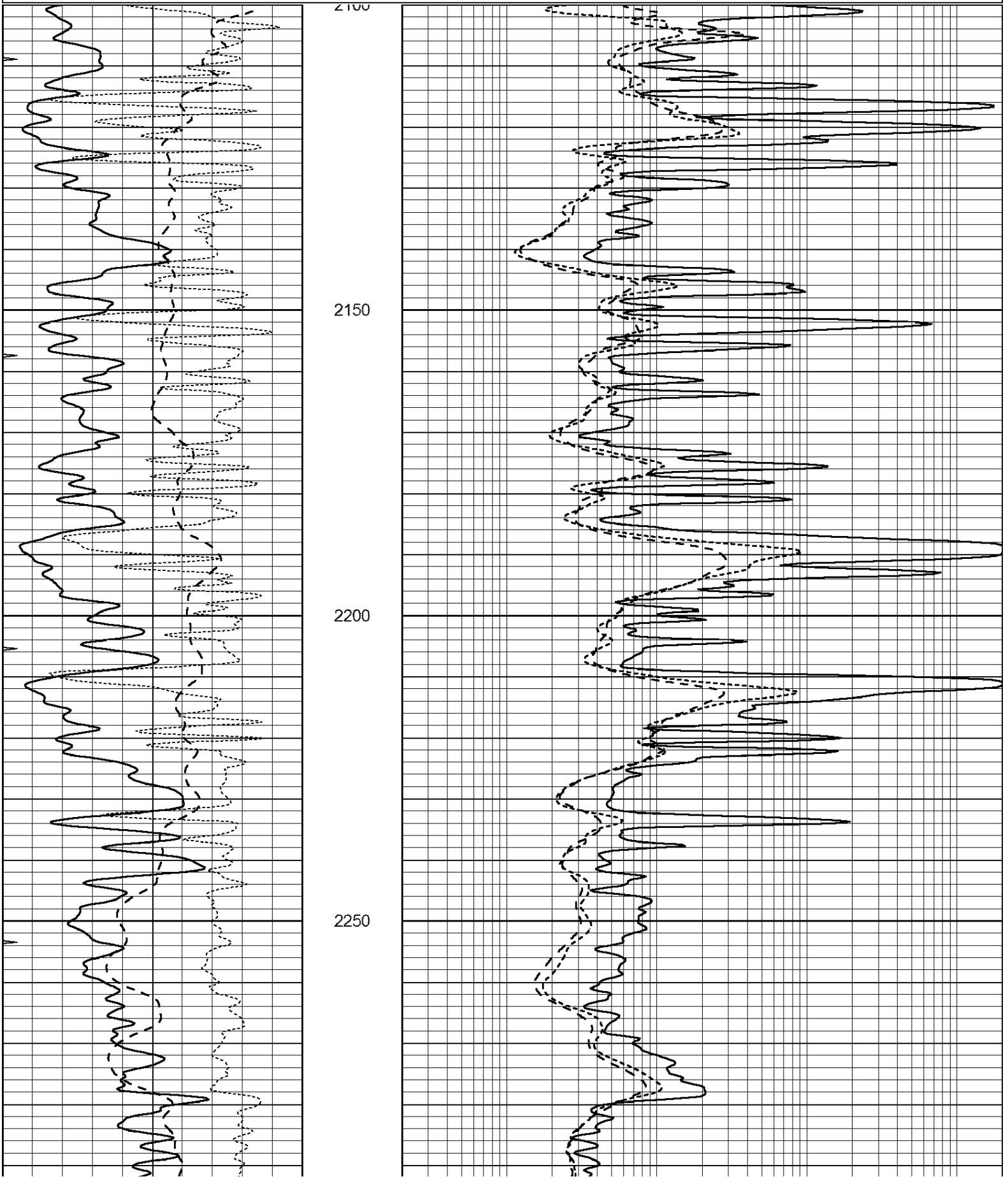


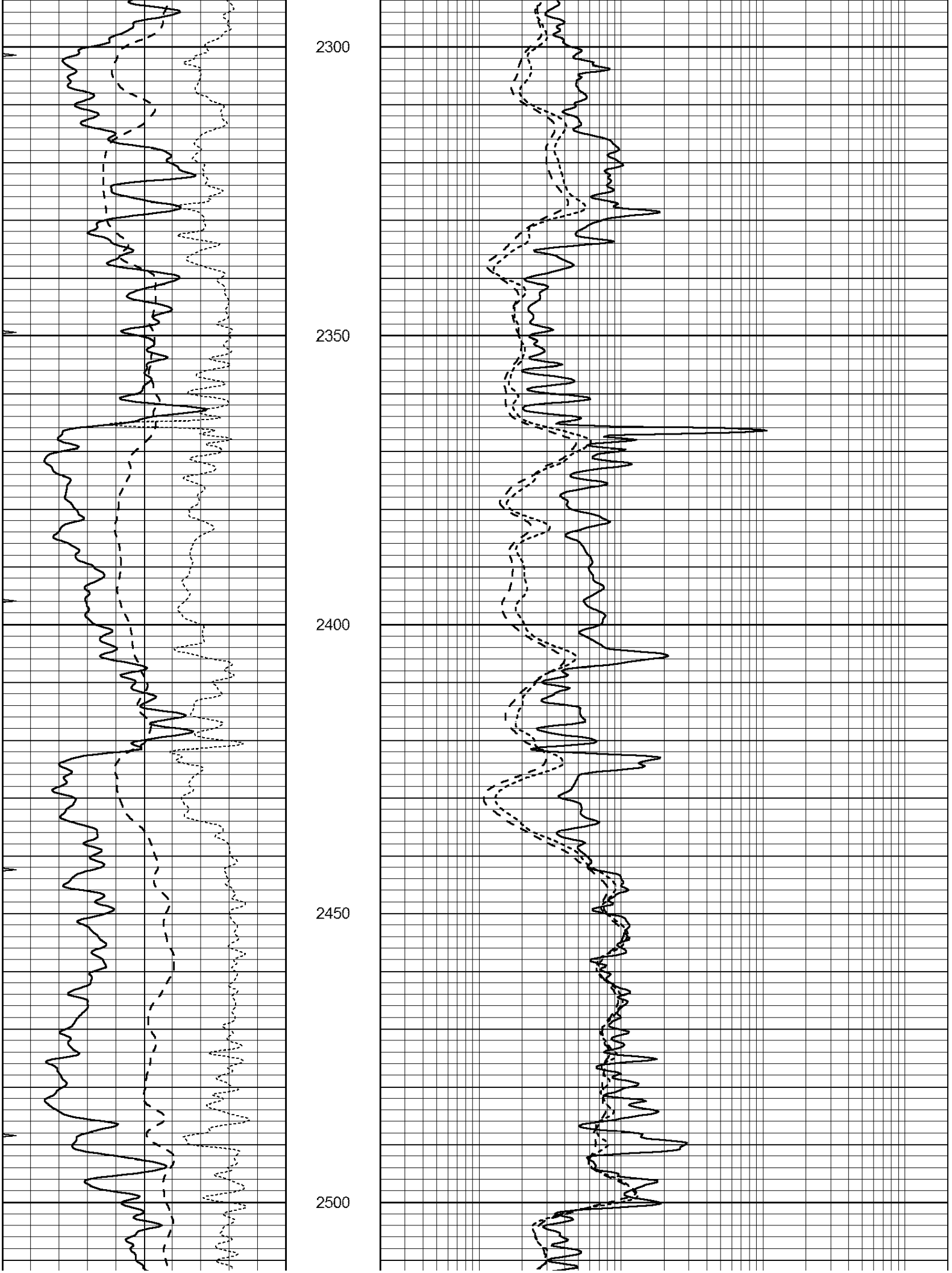
MAIN PASS

Database File:	3171ddn.db
Dataset Pathname:	pass3.1
Presentation Format:	_dil
Dataset Creation:	Tue Jan 01 05:27:03 2019
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

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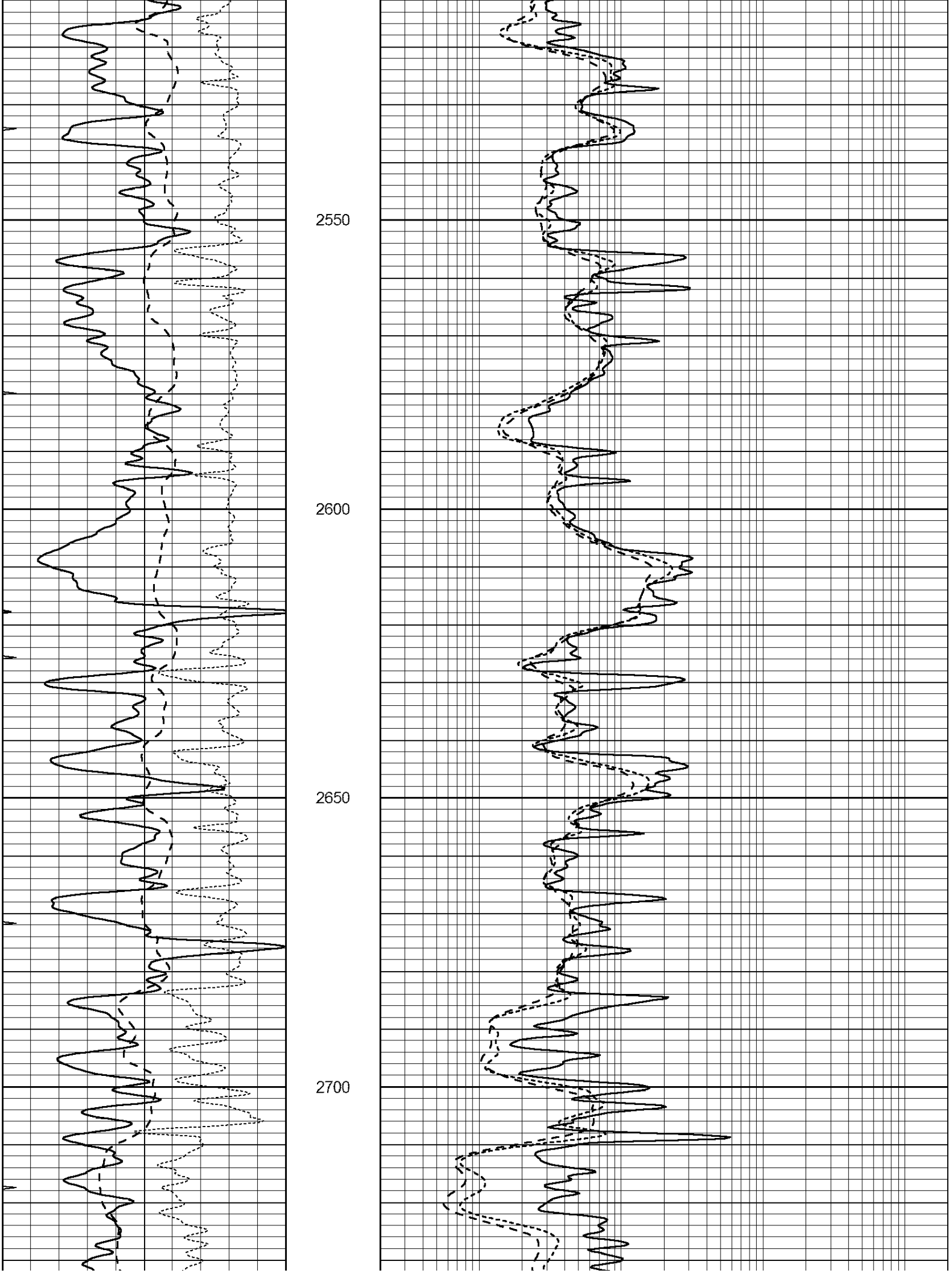
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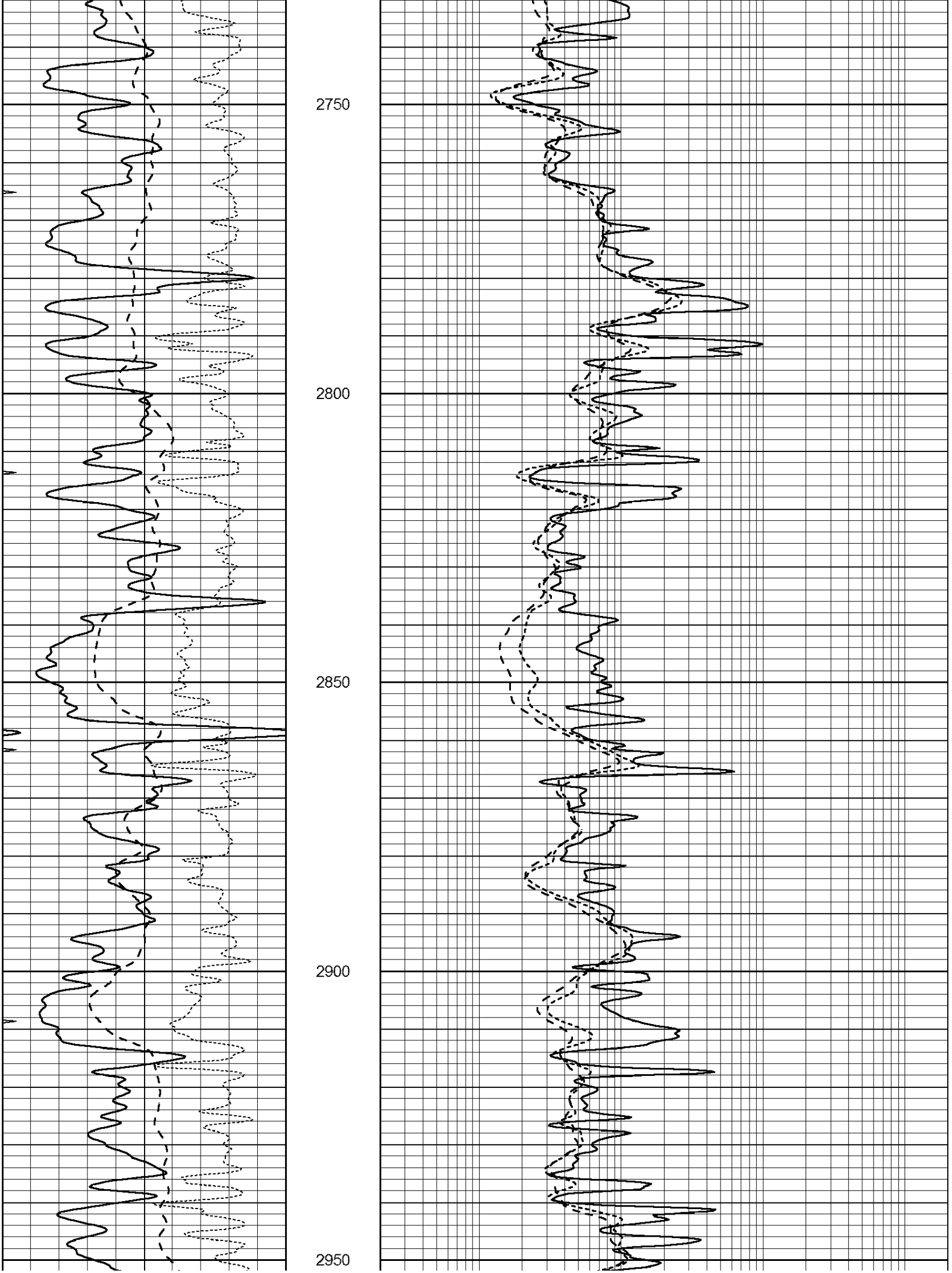
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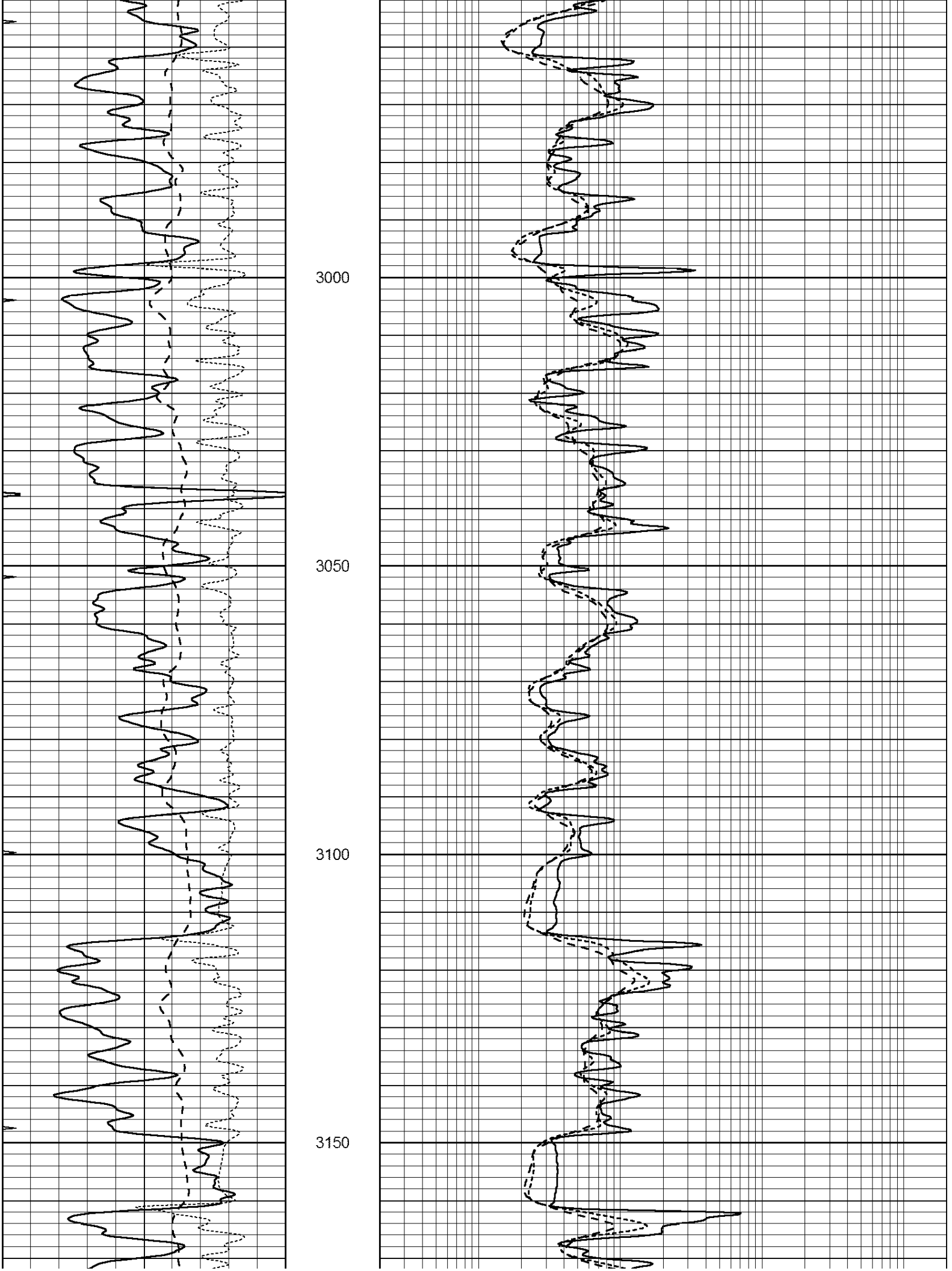
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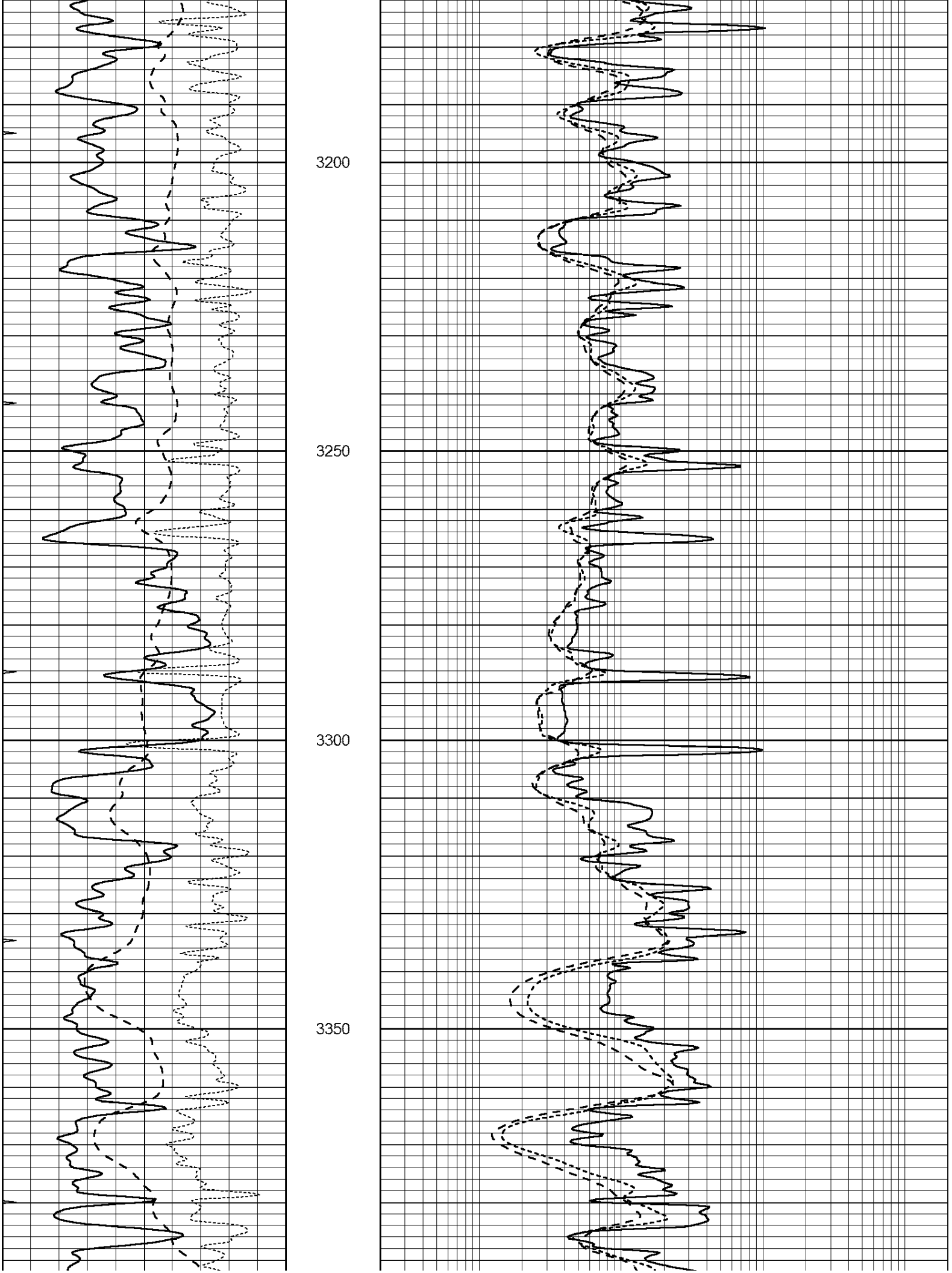
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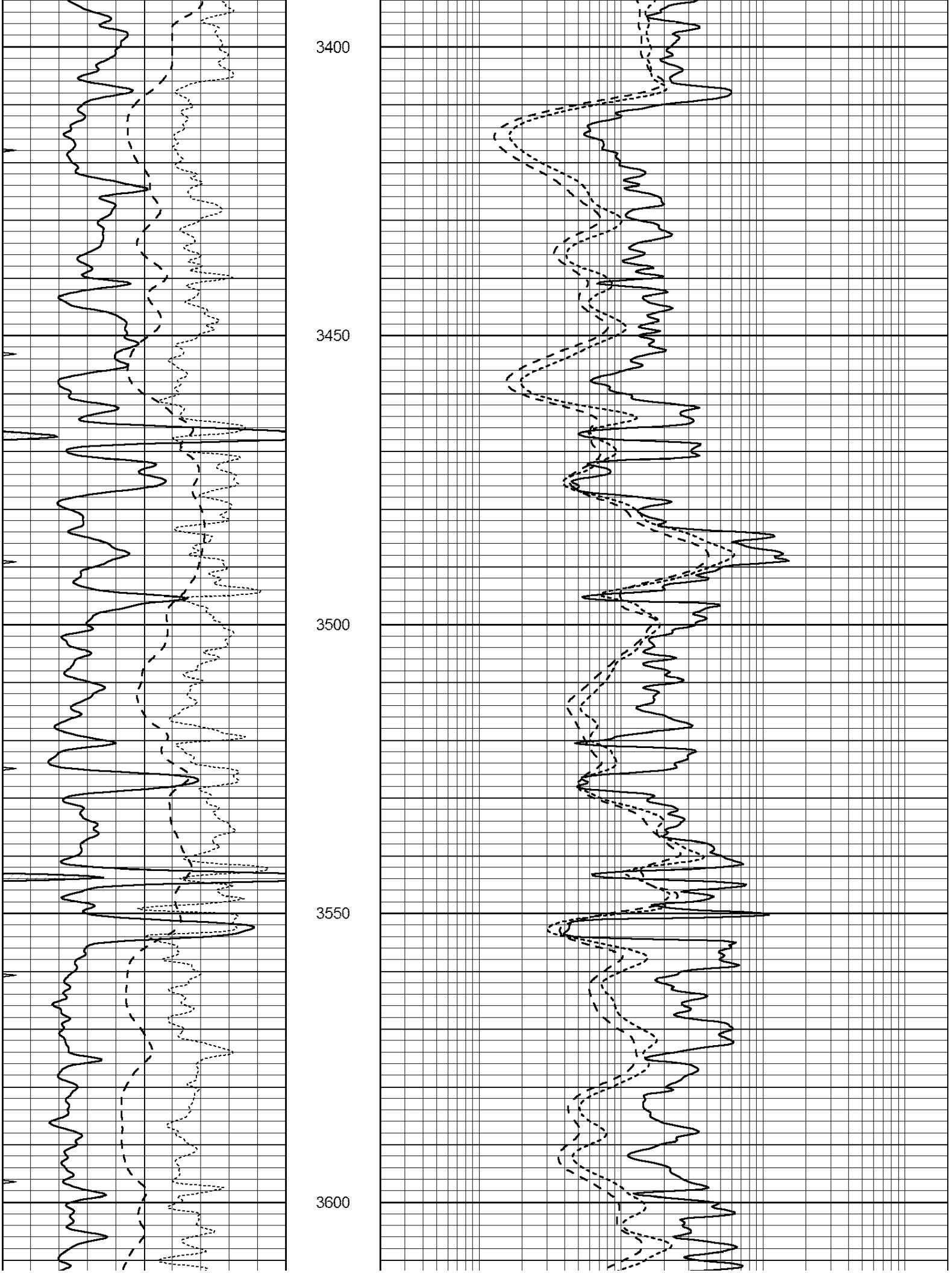
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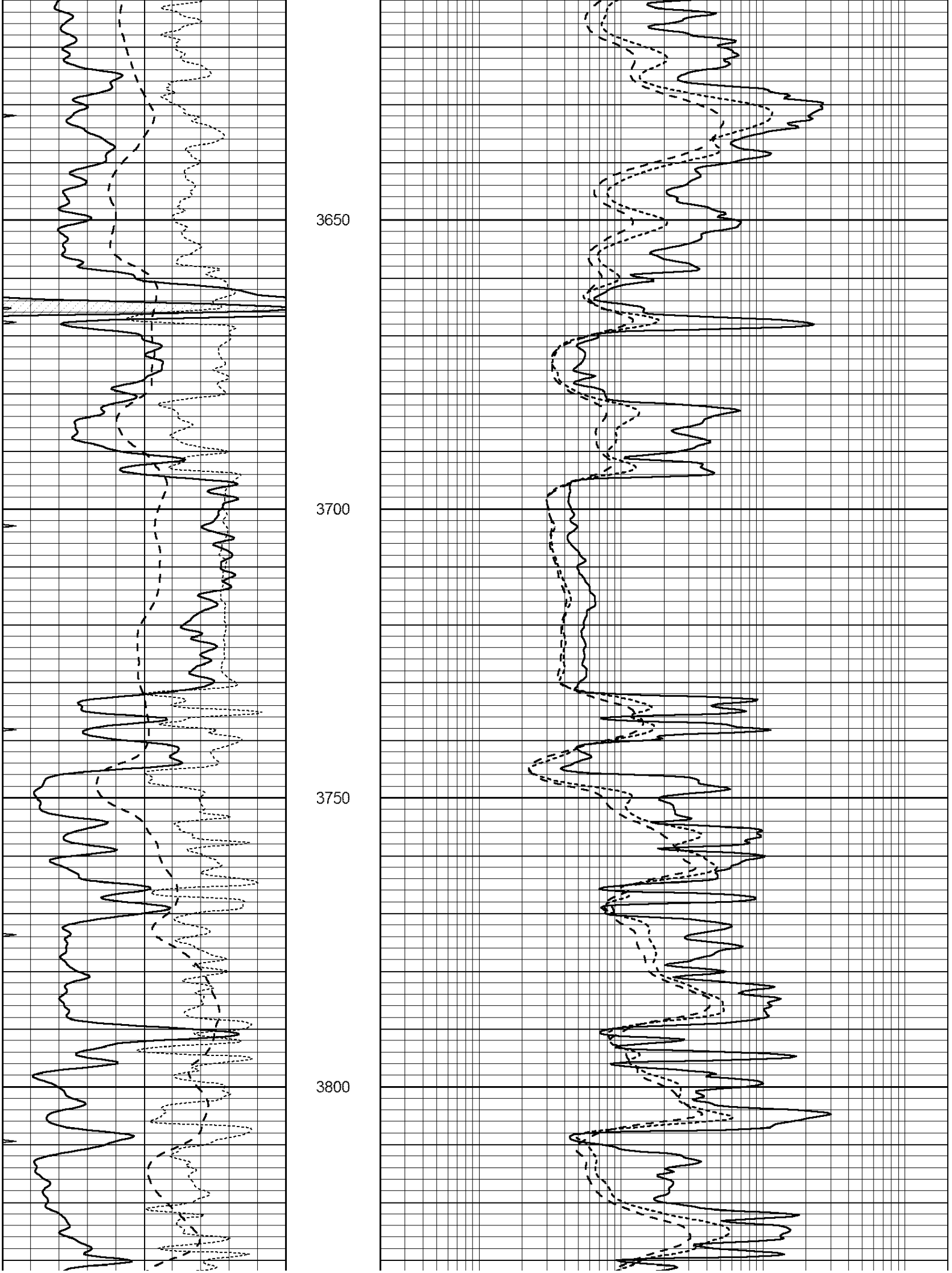
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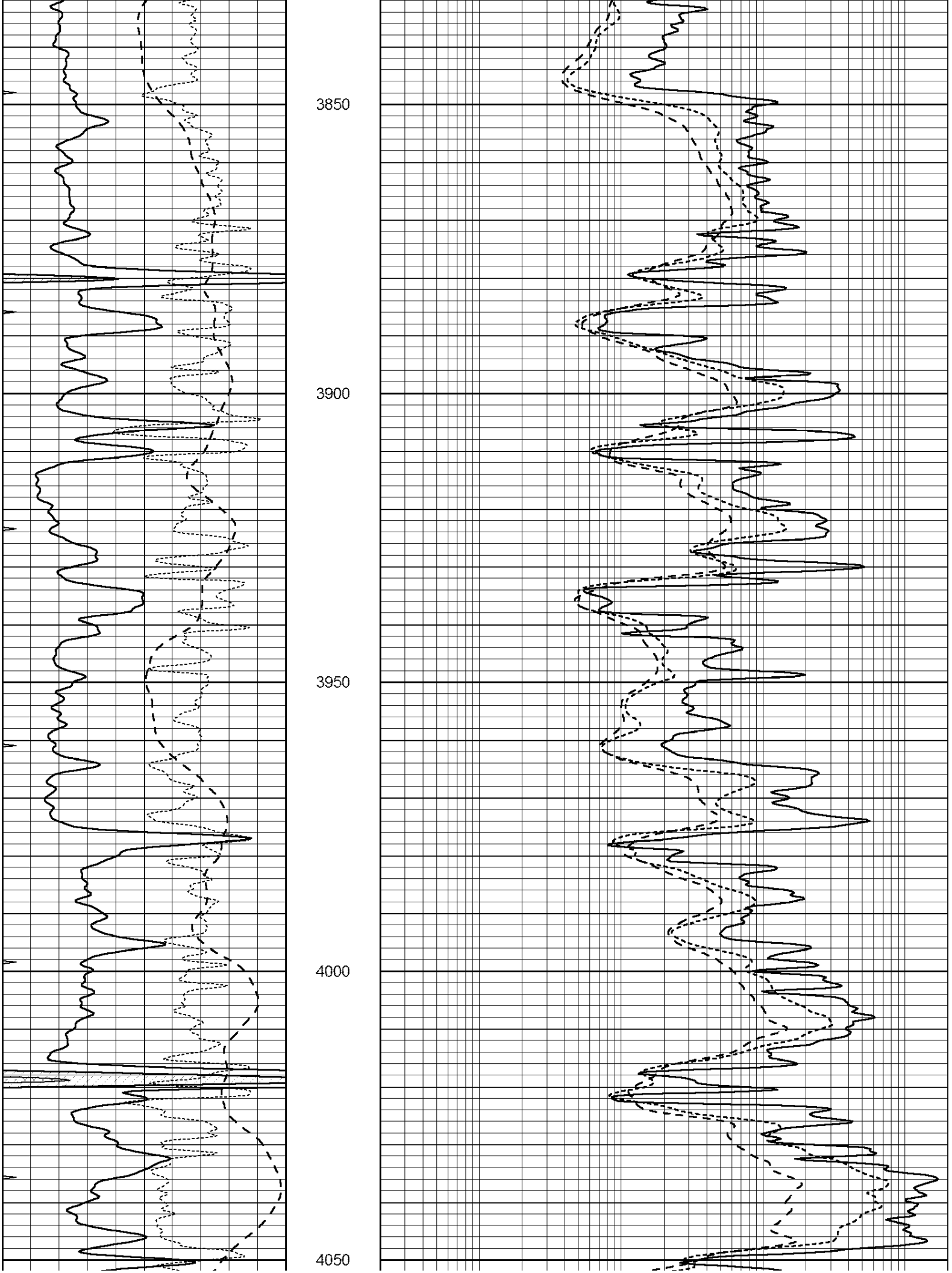
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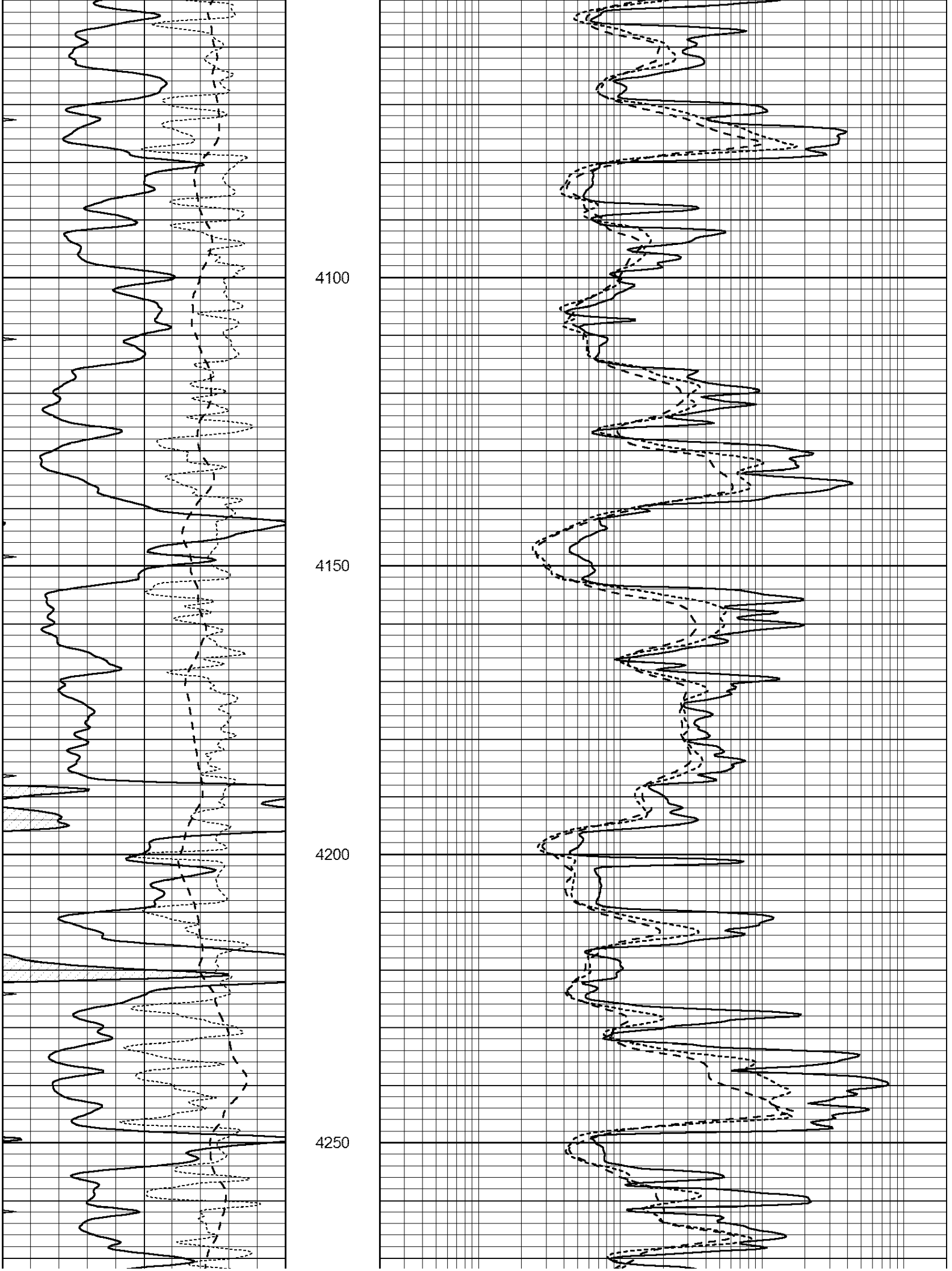
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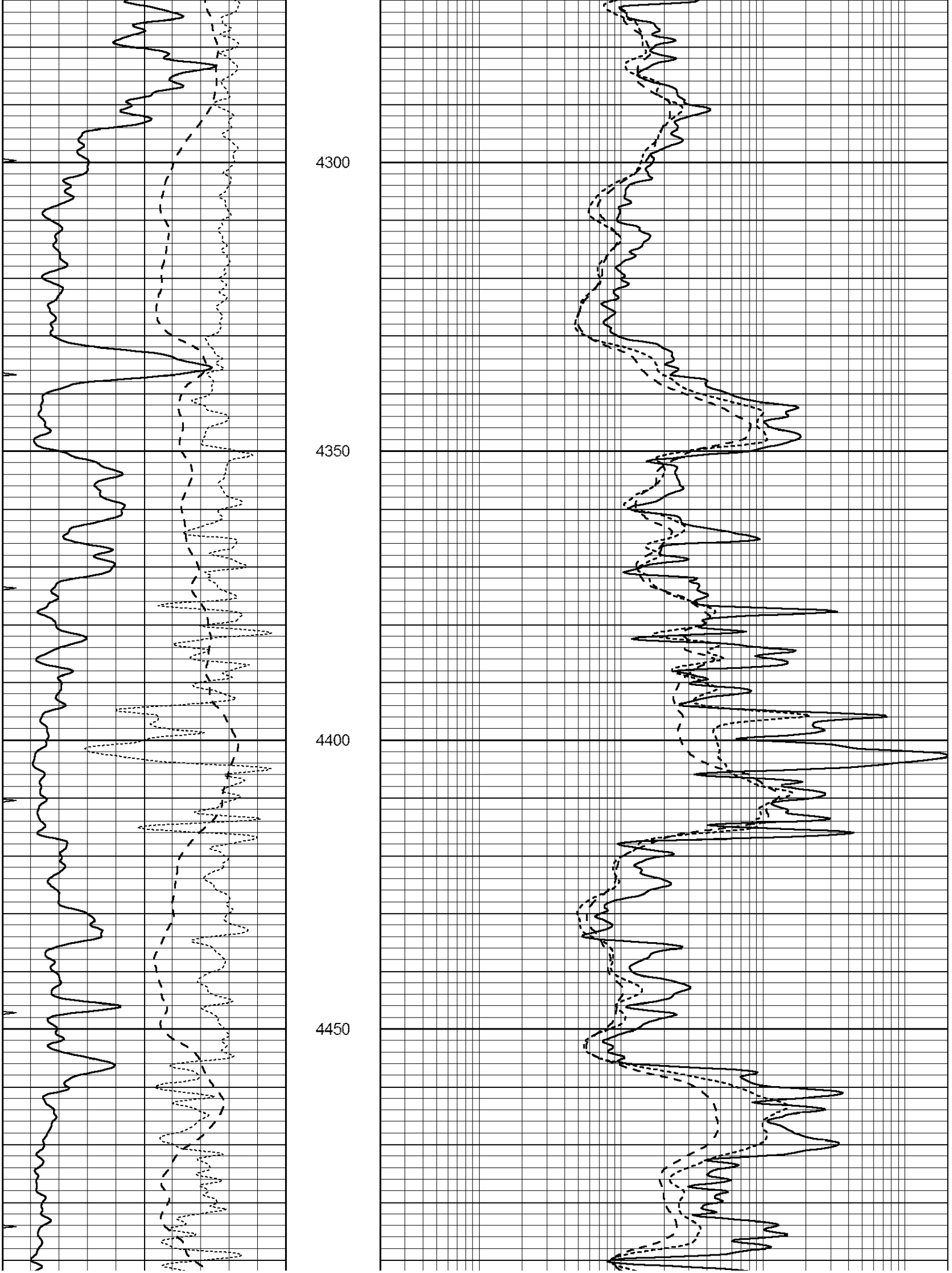
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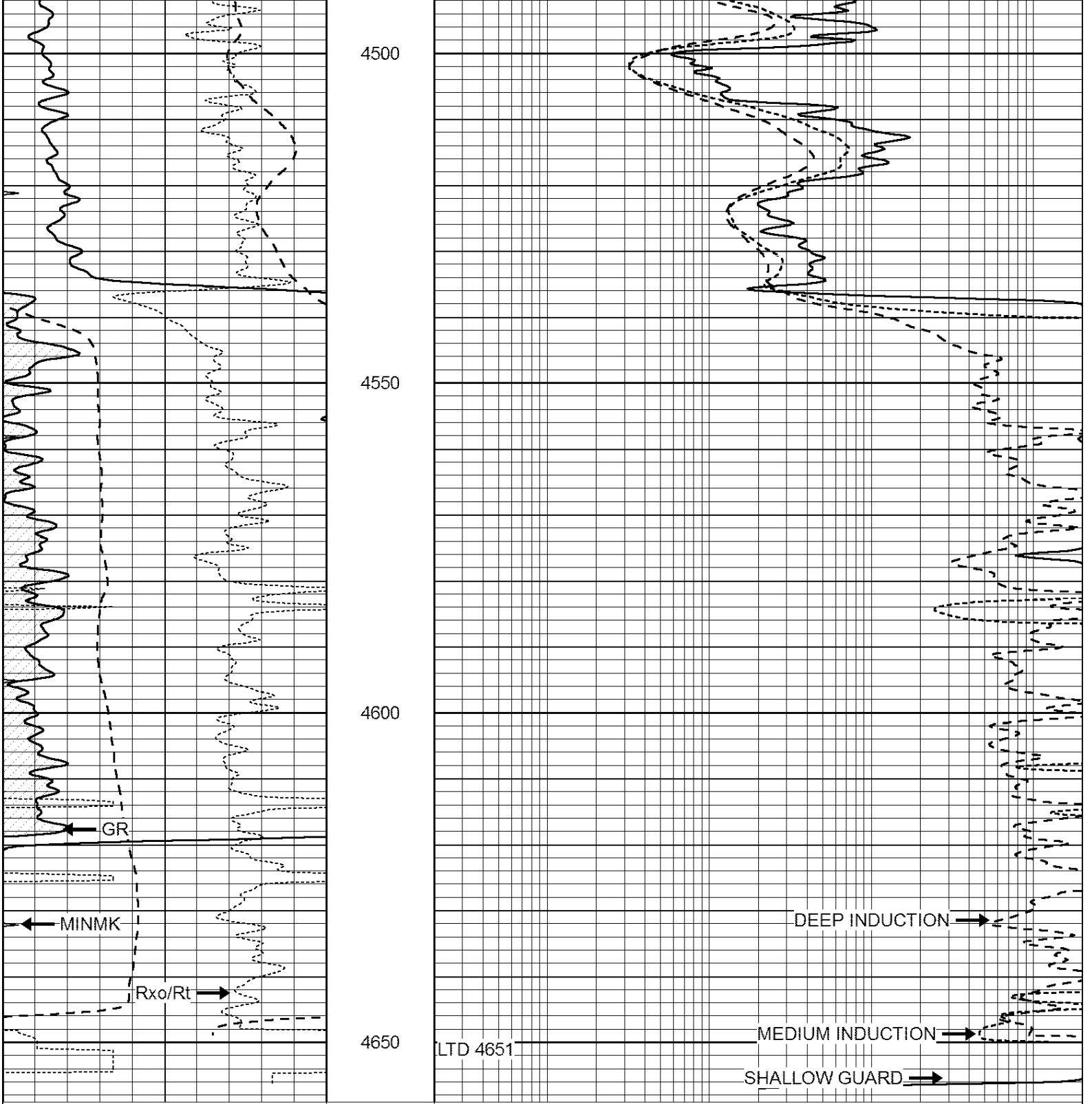


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

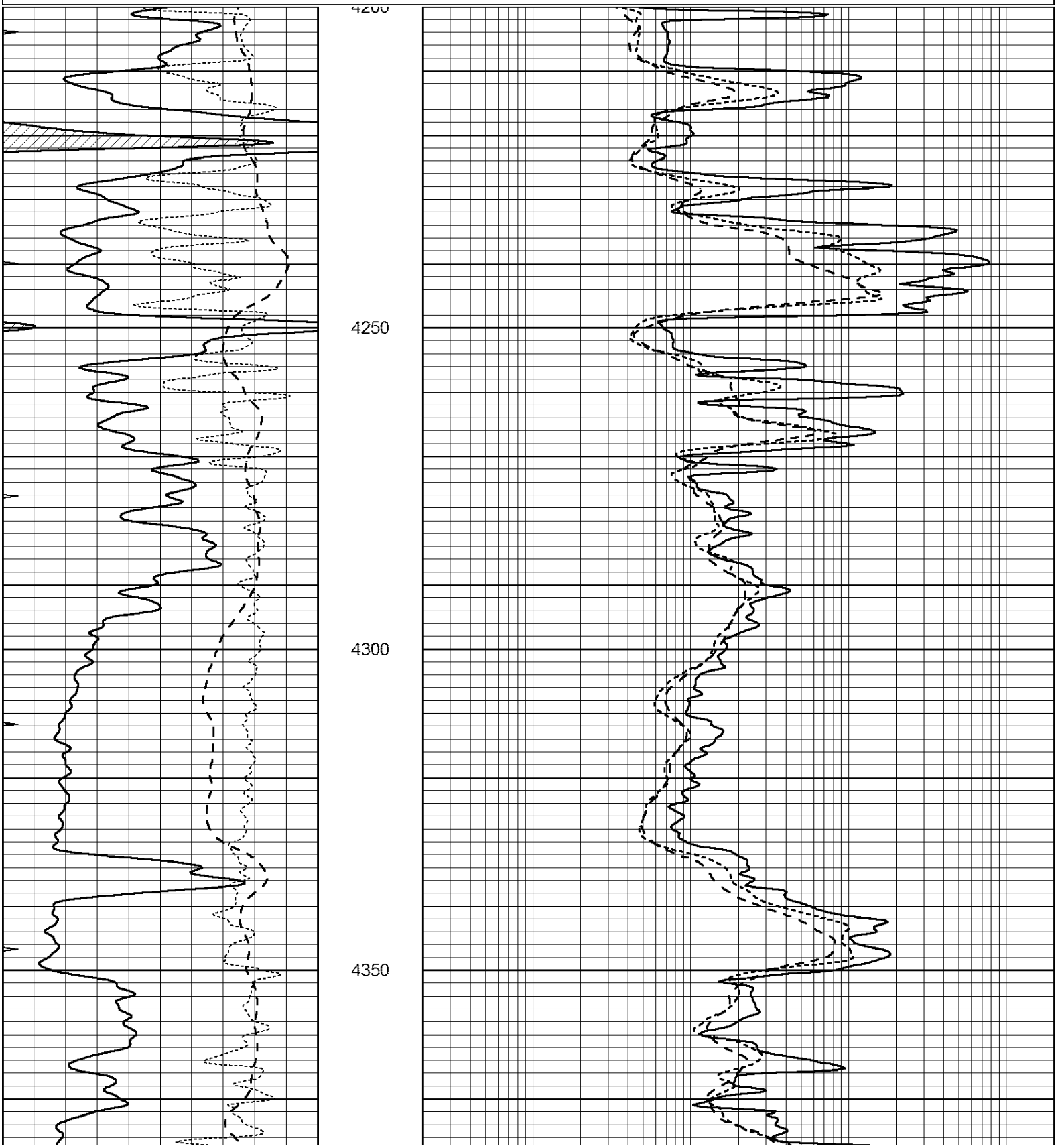
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

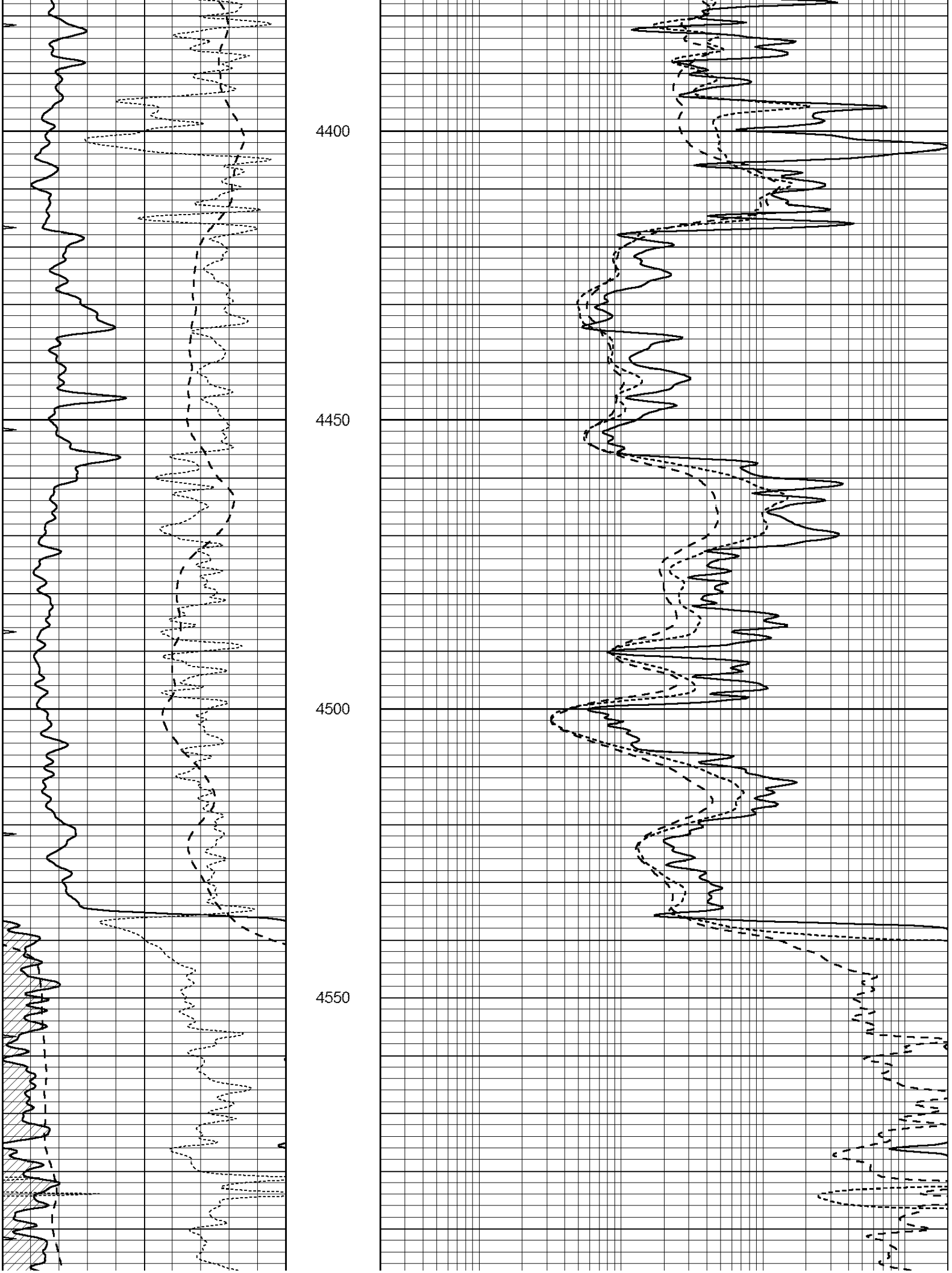
REPEAT SECTION

Database File:	3171ddn.db
Dataset Pathname:	pass2.1
Presentation Format:	_dil
Dataset Creation:	Tue Jan 01 05:34:11 2019
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

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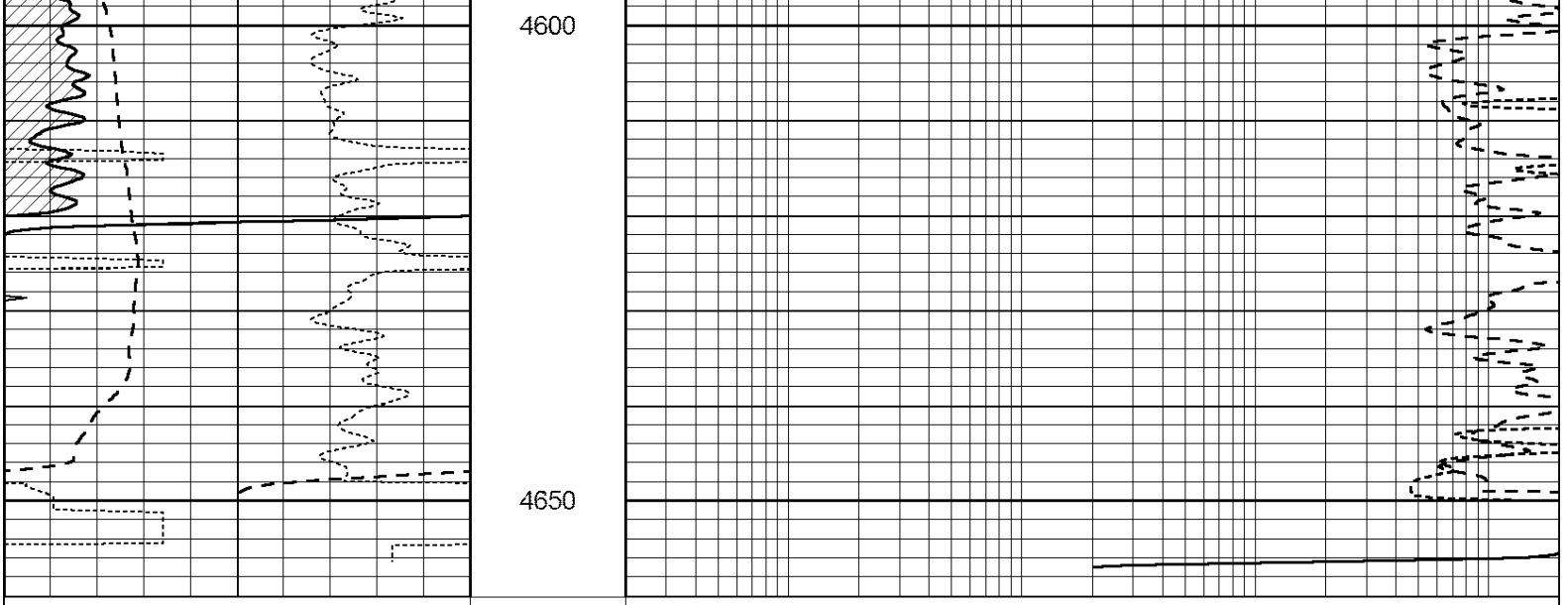

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

Calibration Report

Database File: 3171ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Tue Jan 01 05:34:11 2019

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Mon Sep 10 14:28:35 2018
Downhole Cal Performed:	Mon Sep 10 14:28:38 2018
After Survey Verification Performed:	Mon Sep 10 14:28:40 2018

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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'

	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: 006 Model: PRB

Master Calibration — Performed Thu Sep 27 12:07:11 2018

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1185.6	7077.4	2520.9	8182.4	cps
Window 2	1116.8	5910.1	2163.2	6739.4	cps
Window 3	880.1	3145.8	1325.0	3461.2	cps
Window 4	289.5	295.8	290.8	295.3	cps
Long Space	0.0	4793.3	1046.5	5622.7	cps
Short Space	2.9	1608.0	1038.9	1622.7	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 44.0	Rib Slope	: 0.965	Density/Spine Ratio	: 0.560
Spine Angle	: 74.0	Spine Slope	: 3.484	Spine Intercept	: -17.2

Before Survey Verification — Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification — Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 6I
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

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Mon Sep 10 14:29:23 2018	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5500	GAPI/cps