DUAL INDUCTION LOG

Company WOOLSEY OPERATING COMPANY, LLC.
Well KERSEY #1
Field WILDCAT
County KIOWA
State KANSAS

Location: API # : 15-097-21846-00-00
130' FSL & 2520' FEL
SEC 29 TWP 28S RGE 18W

Permanent Datum GROUND LEVEL Elevation 2270
Log Measured From KELLY BUSHING 12' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL
SONIC

Elevation
K.B. 2282
D.F. 2280
G.L. 2270

Date	01/12/19		
Run Number	ONE		
Depth Driller	5027		
Depth Logger	5030		
Bottom Logged Interval	5029		
Top Log Interval	500		
Casing Driller	8 5/8" @ 502		
Casing Logger	502		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3/70		
pH / Fluid Loss	9.0/10.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.6@62		
Rmf @ Meas. Temp	1.2@62		
Rmc @ Meas. Temp	1.92@62		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.80@125		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	125F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	BLAKE MILLER		

<<< Fold Here >>>

Comments

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

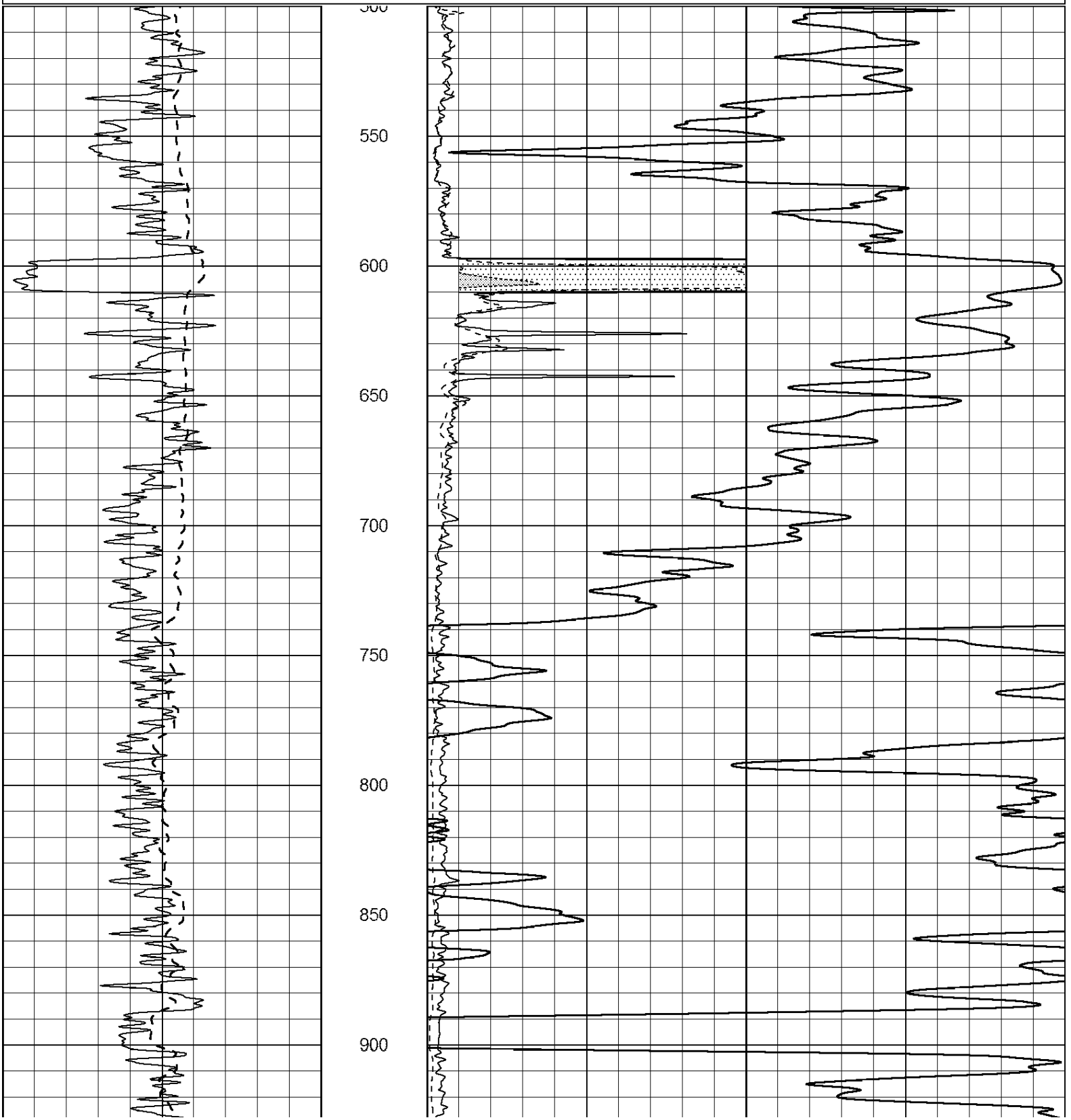
DIRECTIONS
HIGHWAY INTERSECTION WEST OF GREENSBURG
2 SOUTH, 3/4 EAST, NORTH INTO.

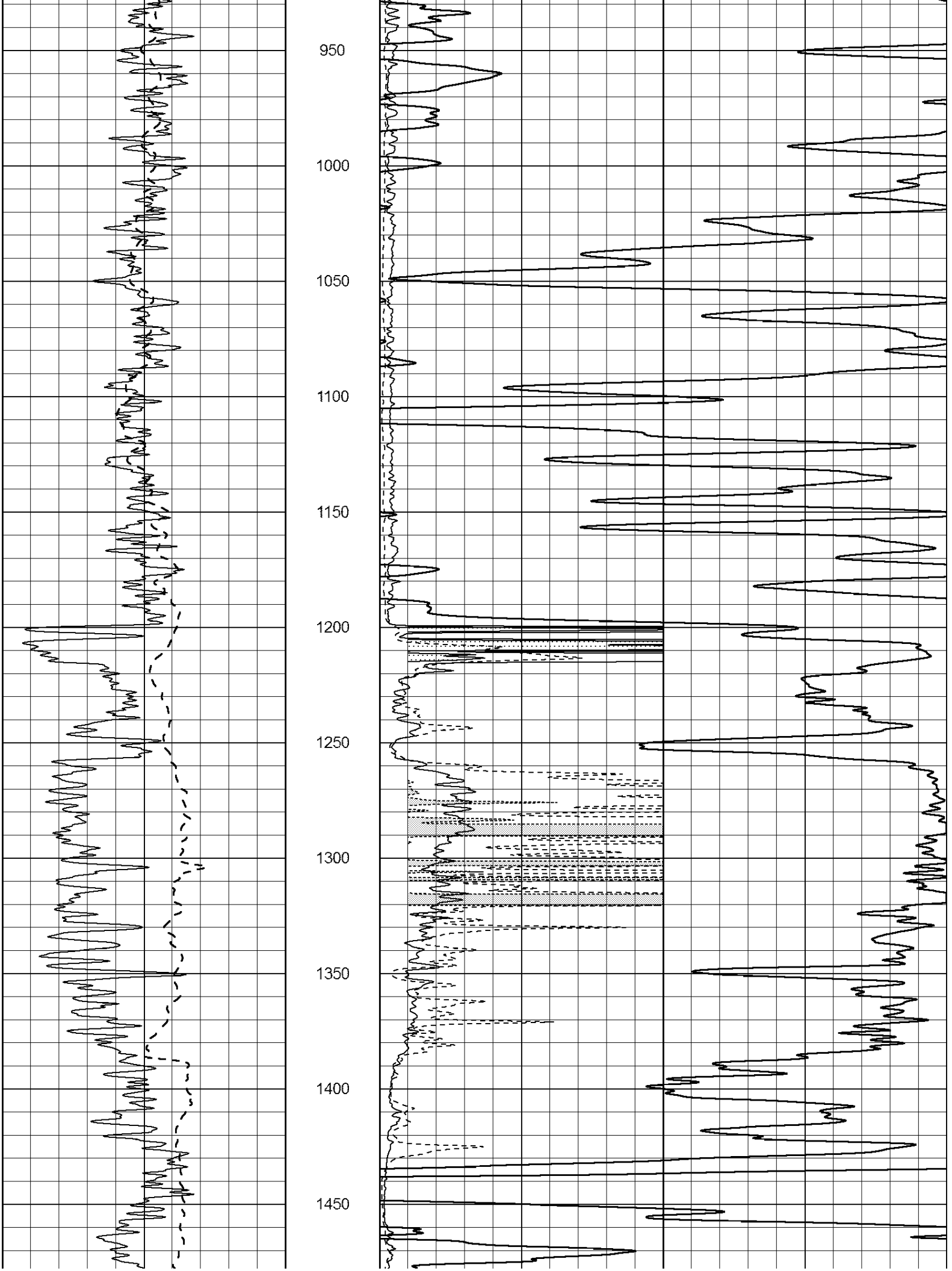
MAIN PASS

Database File: 3476pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil2
Dataset Creation: Sat Jan 12 09:05:56 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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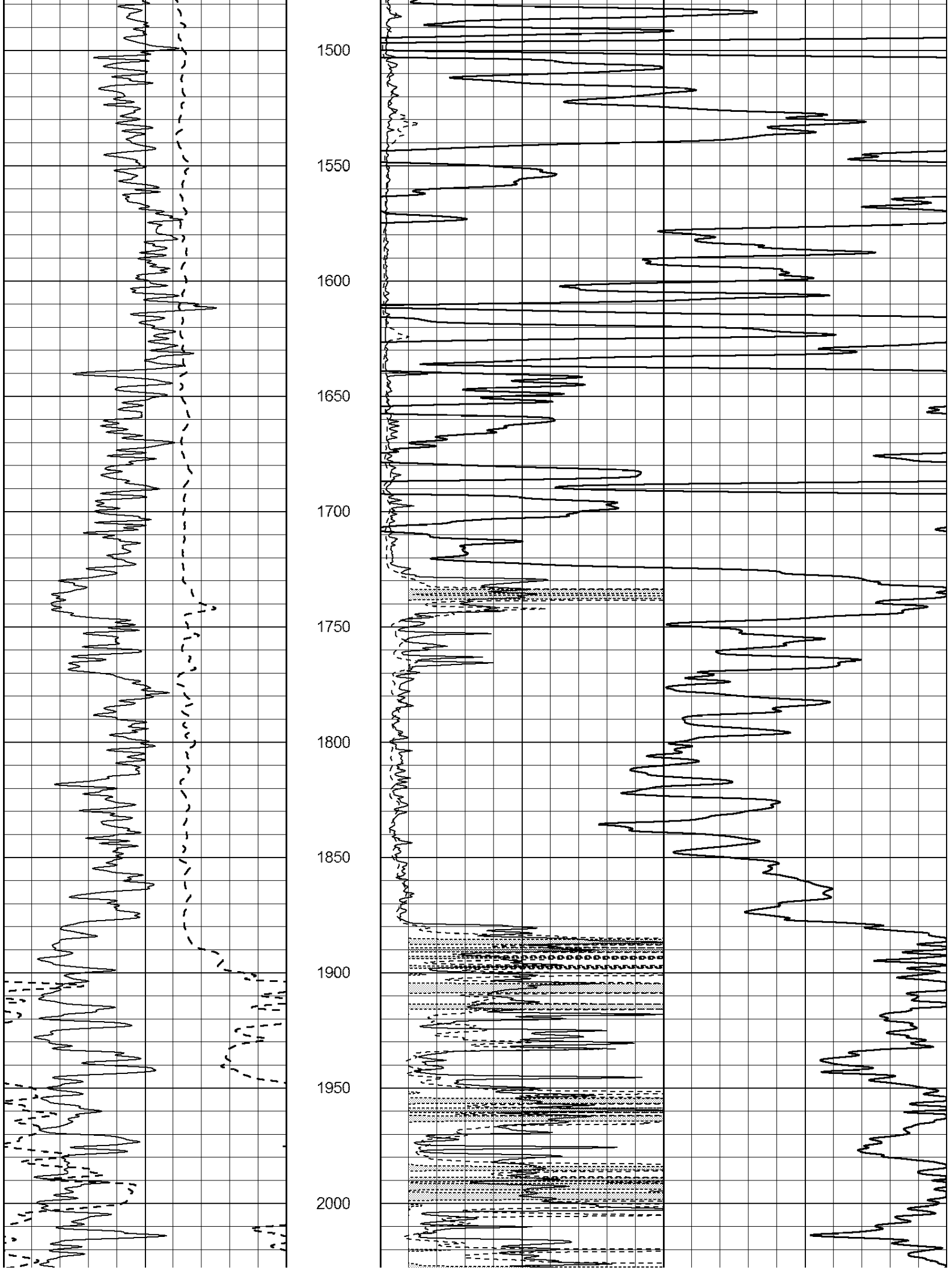
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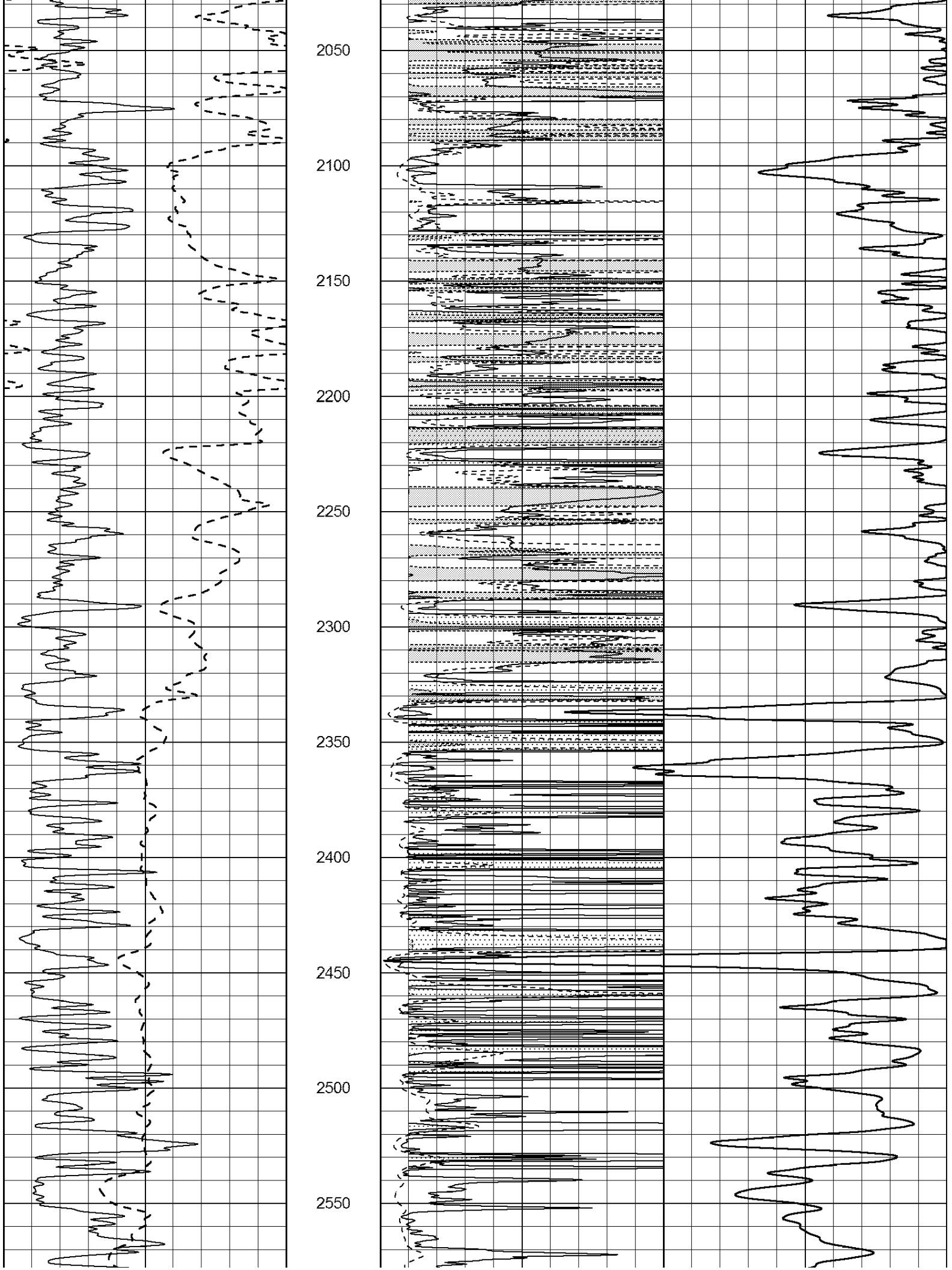
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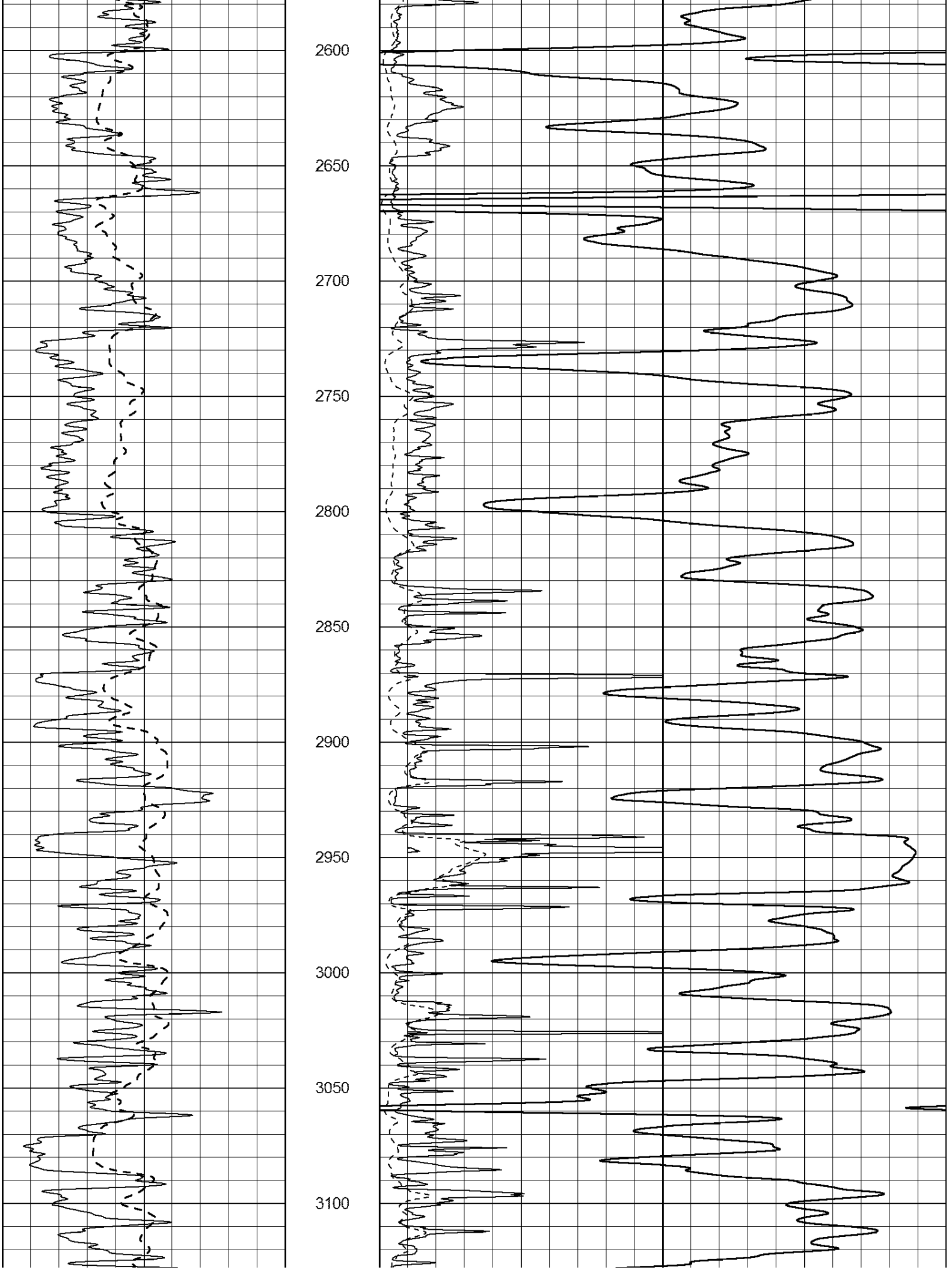
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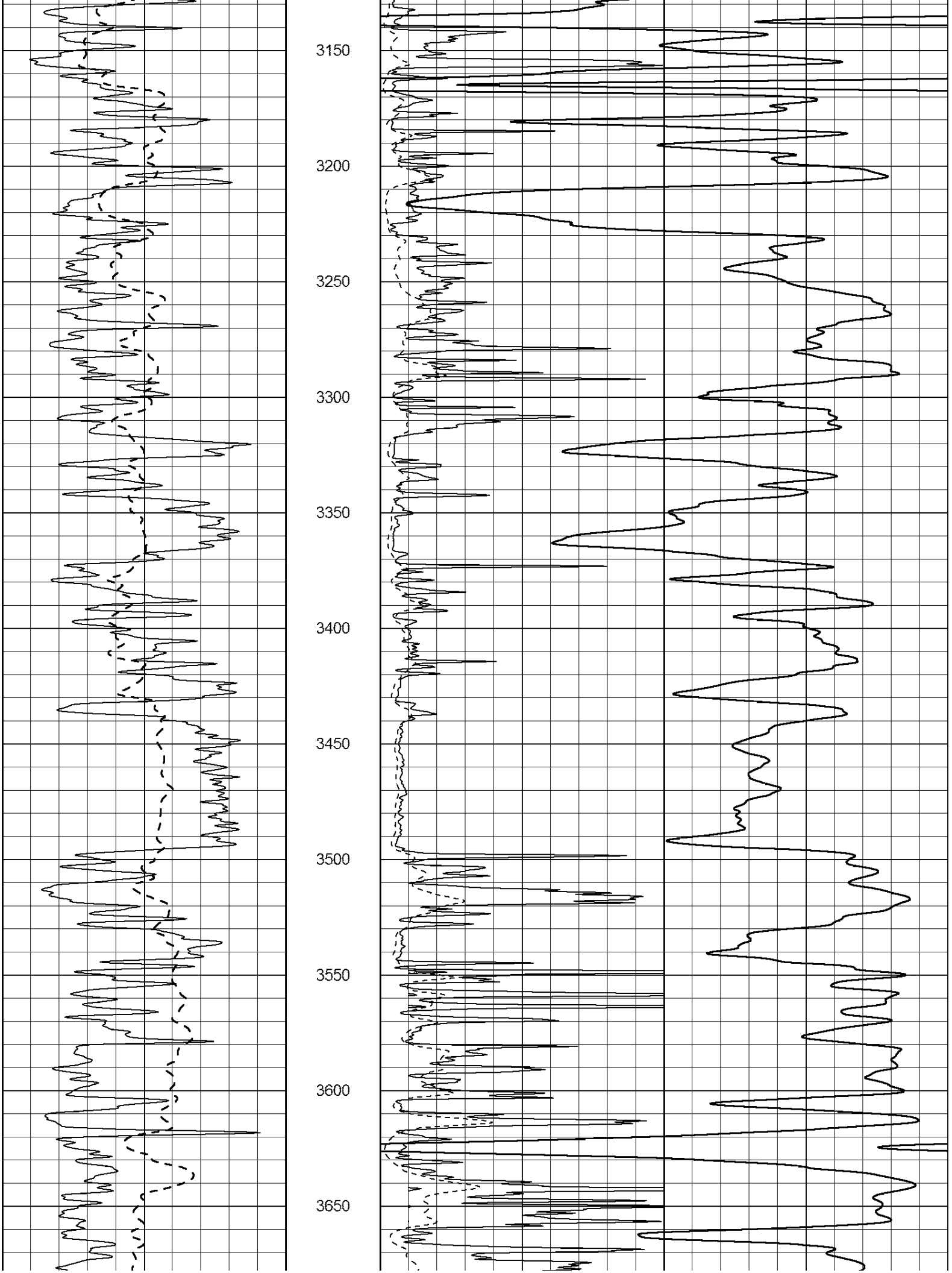
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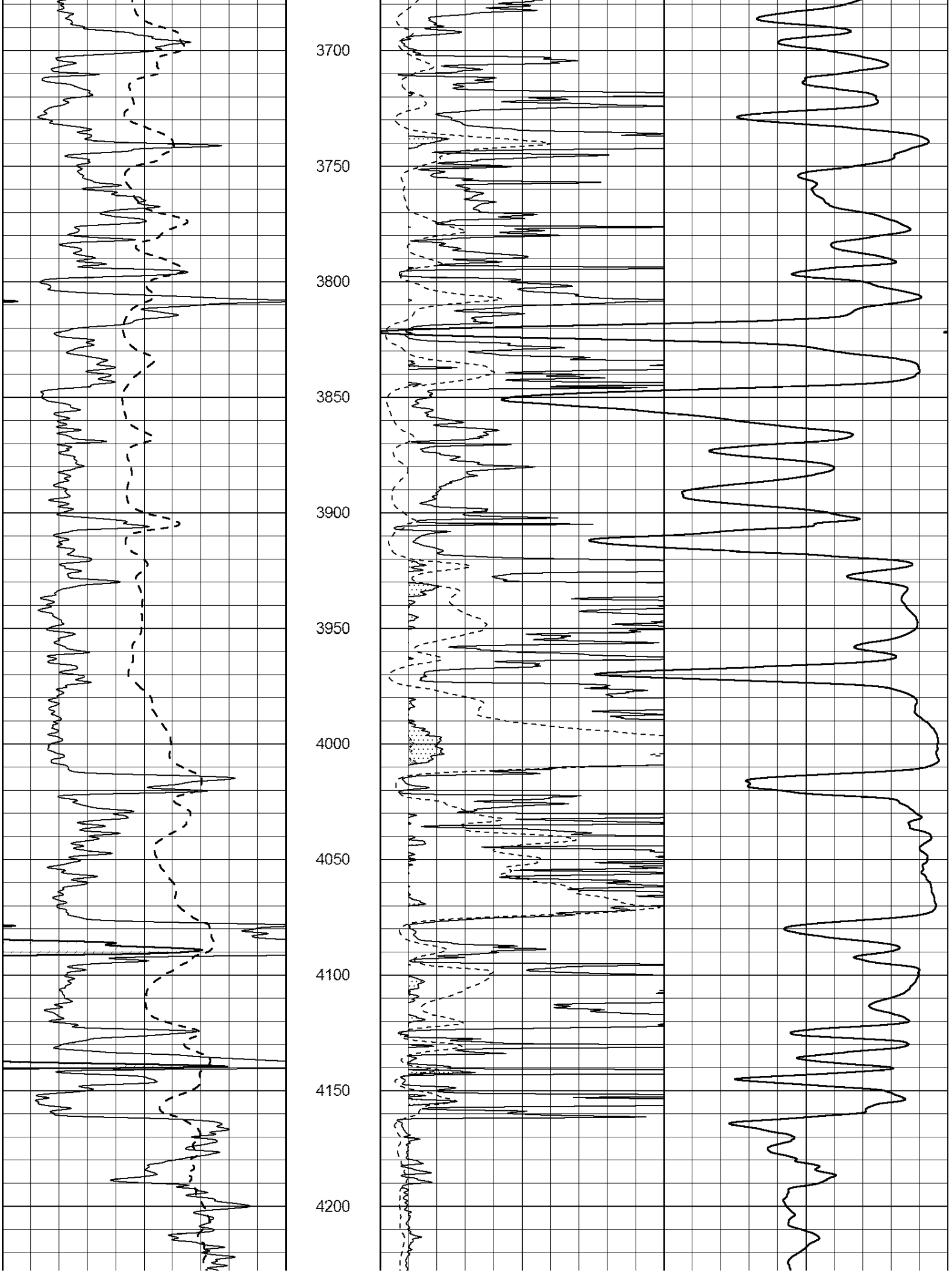
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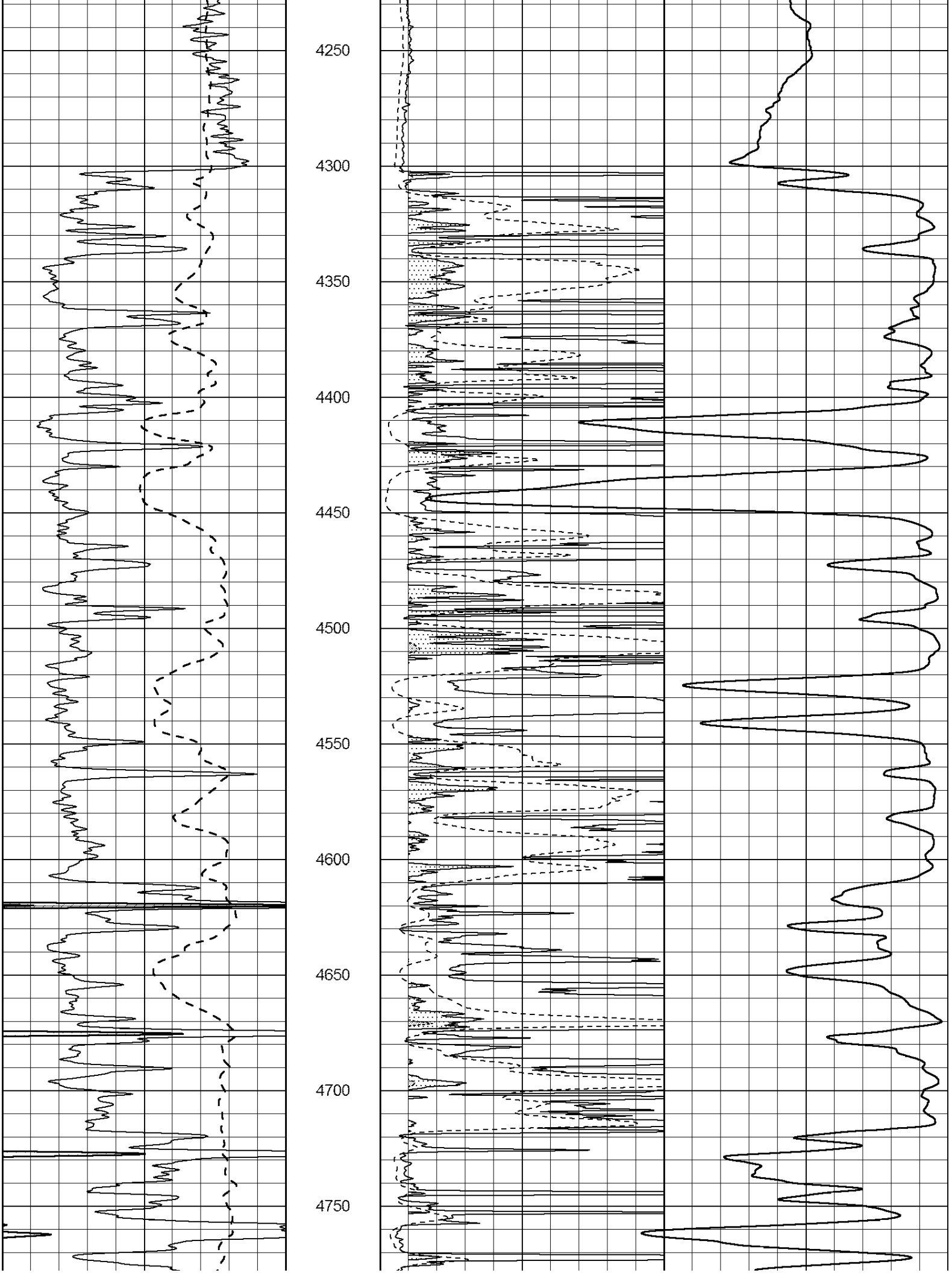
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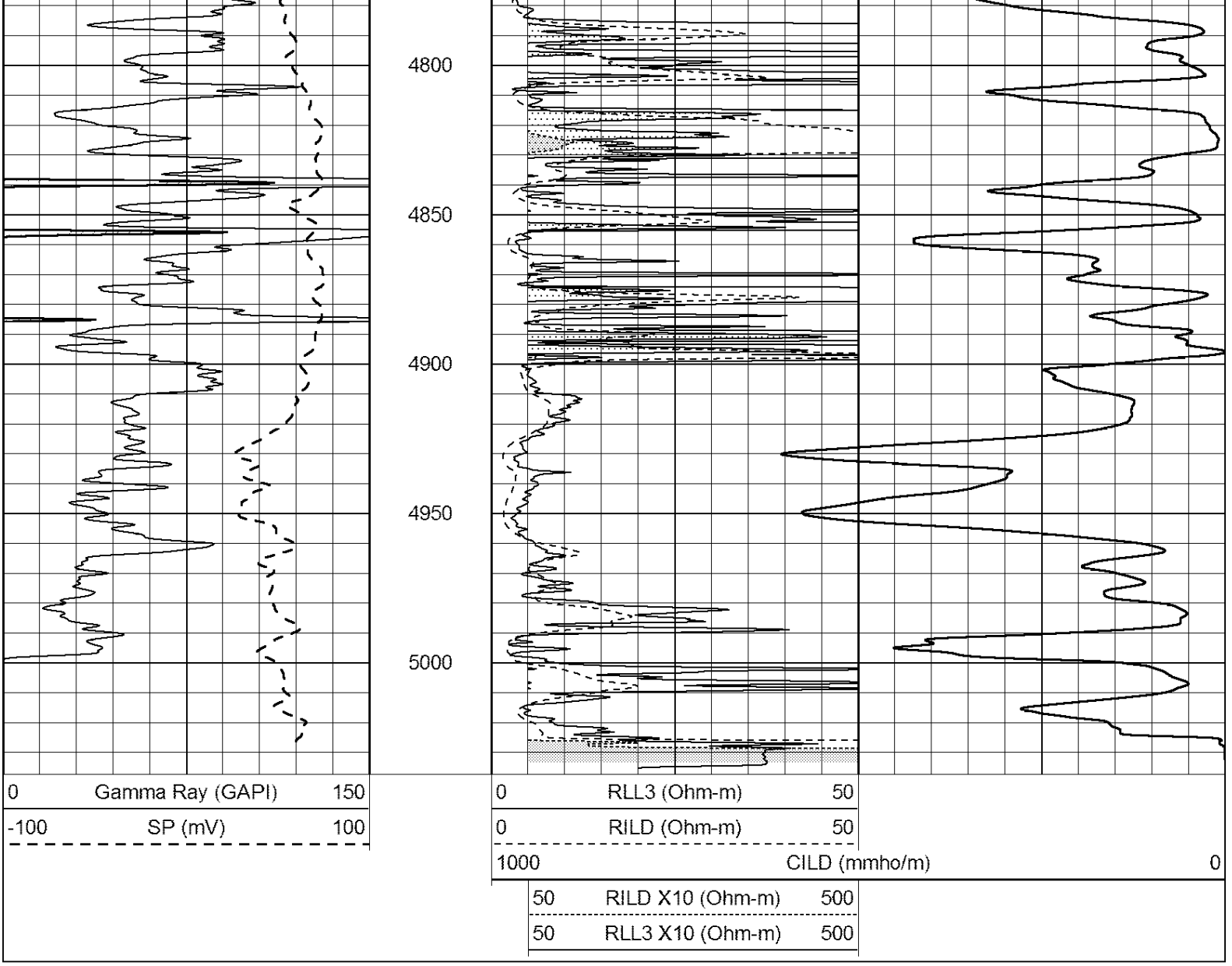
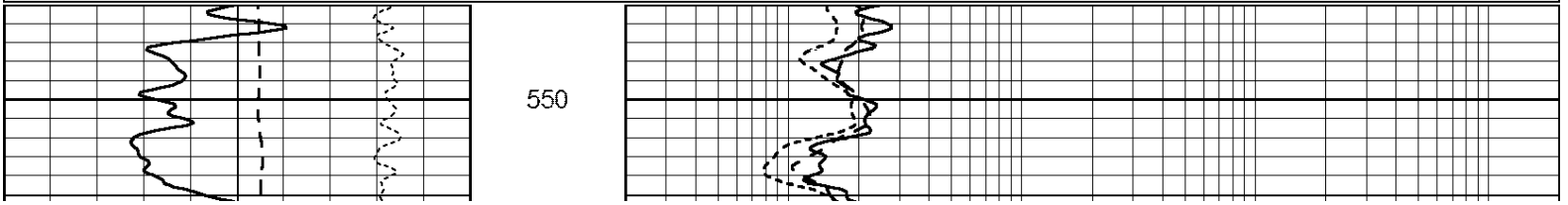


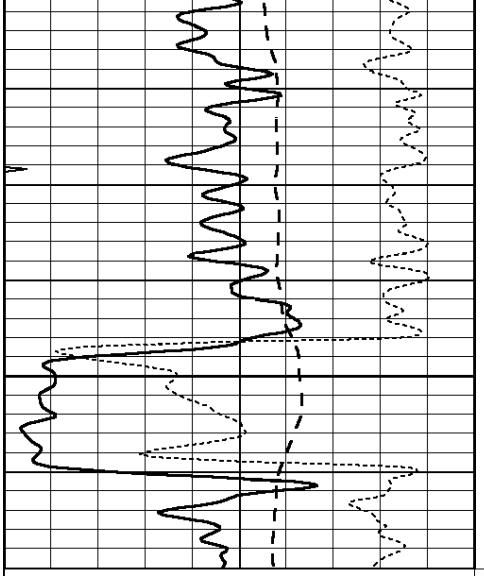
MAIN PASS

Database File: 3476pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Sat Jan 12 09:05:56 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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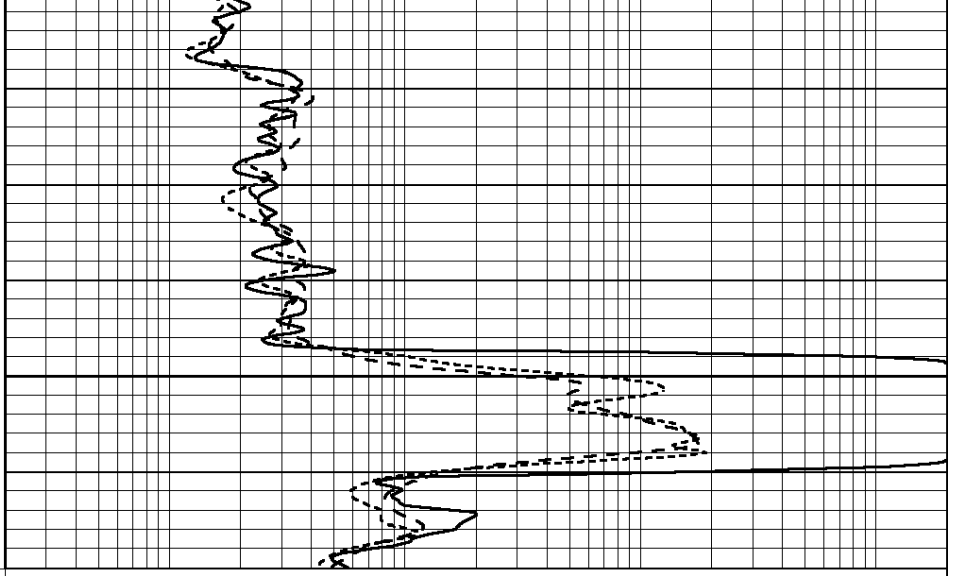

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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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MAIN PASS

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Presentation Format: _dil
Dataset Creation: Sat Jan 12 09:05:56 2019
Charted by: Depth in Feet scaled 1:240

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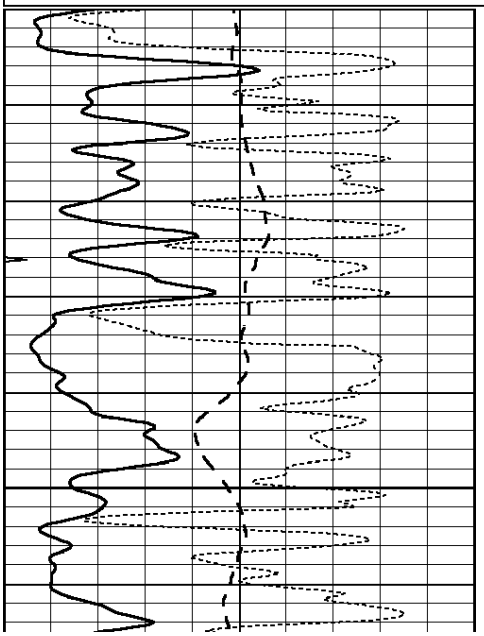
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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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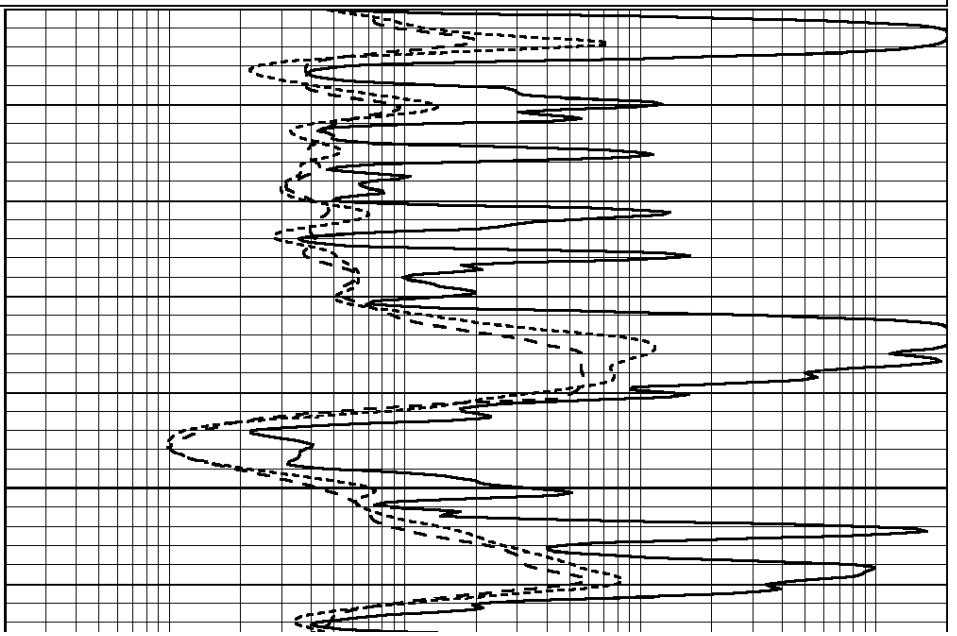

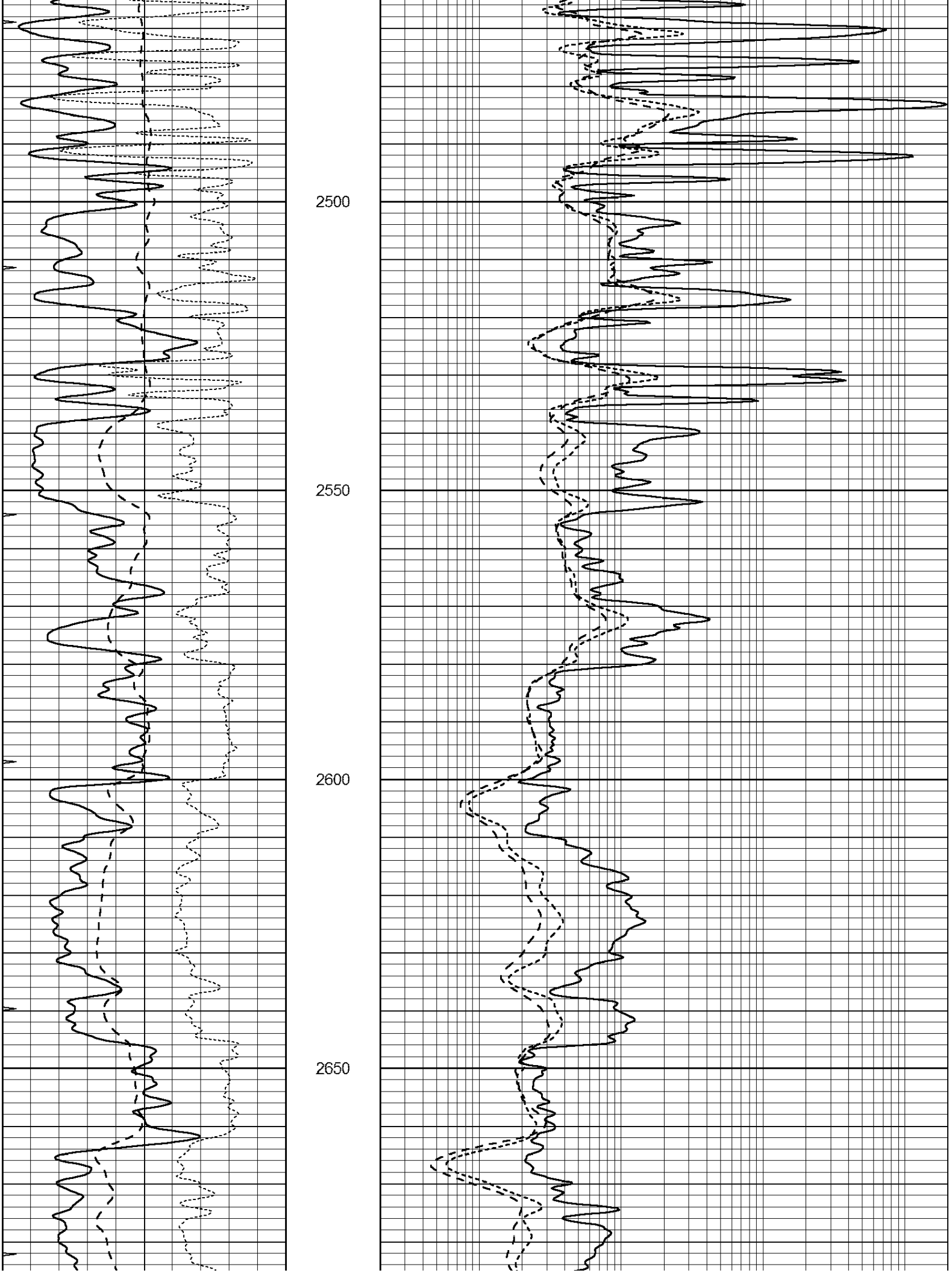
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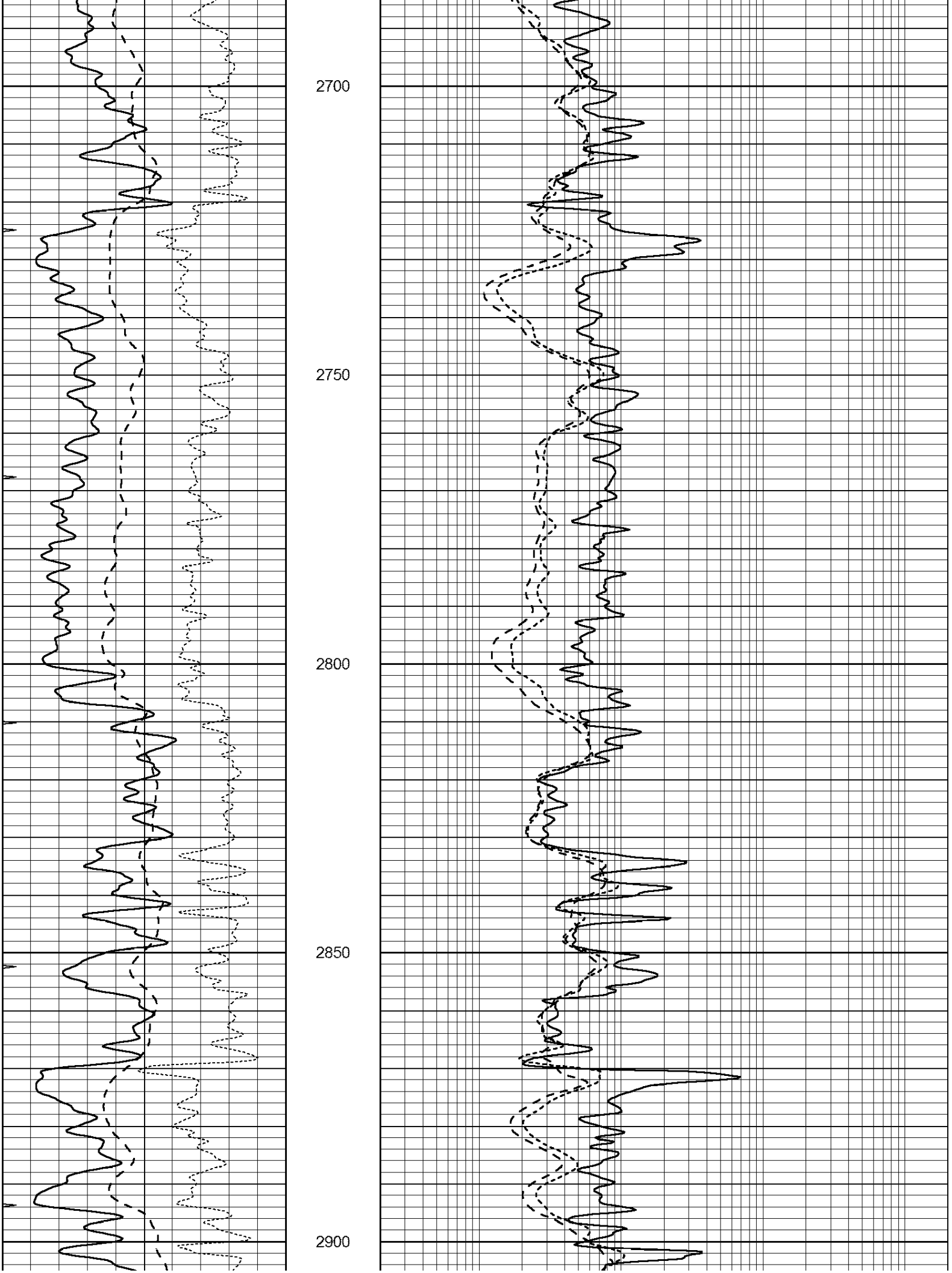
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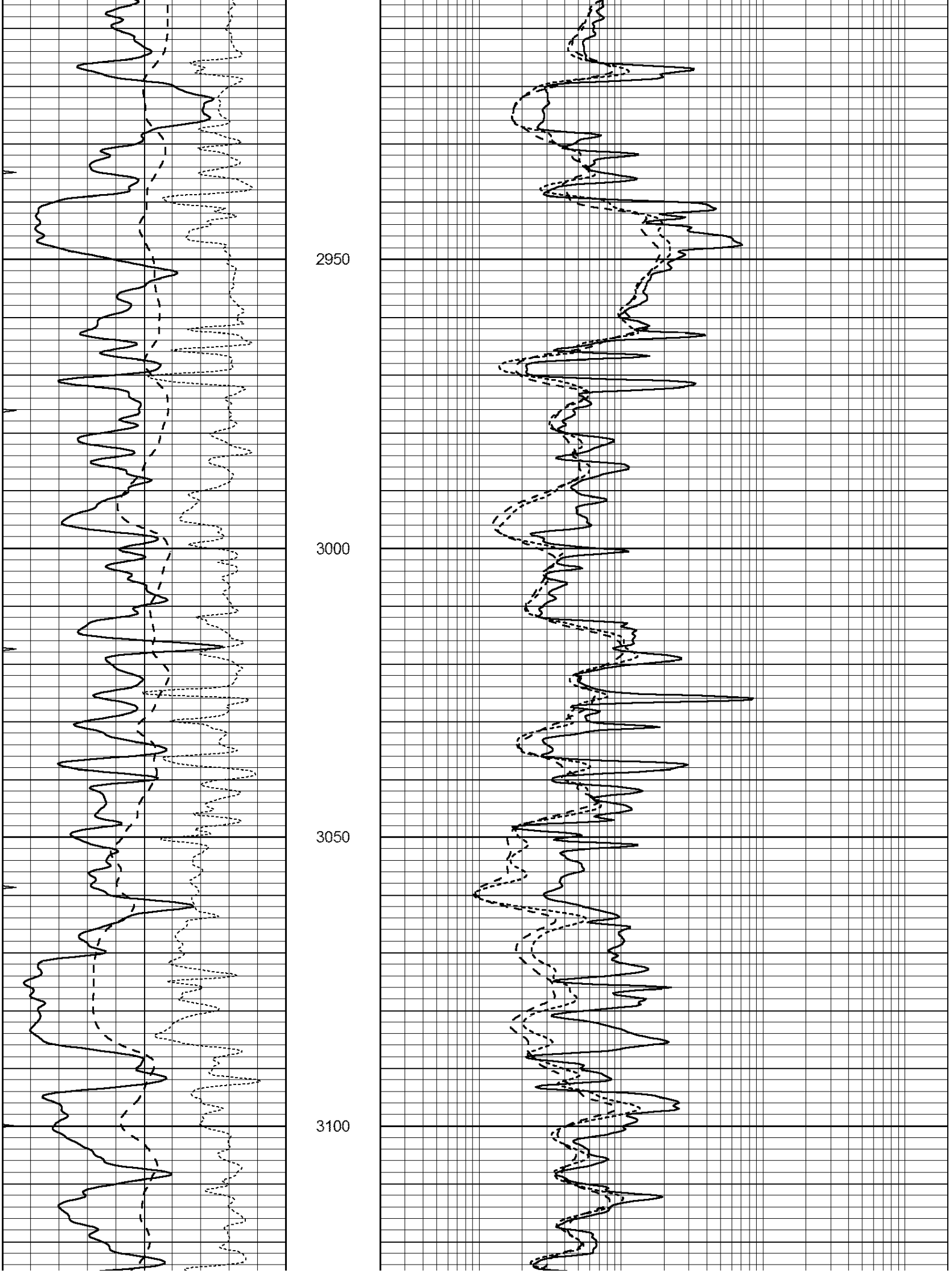
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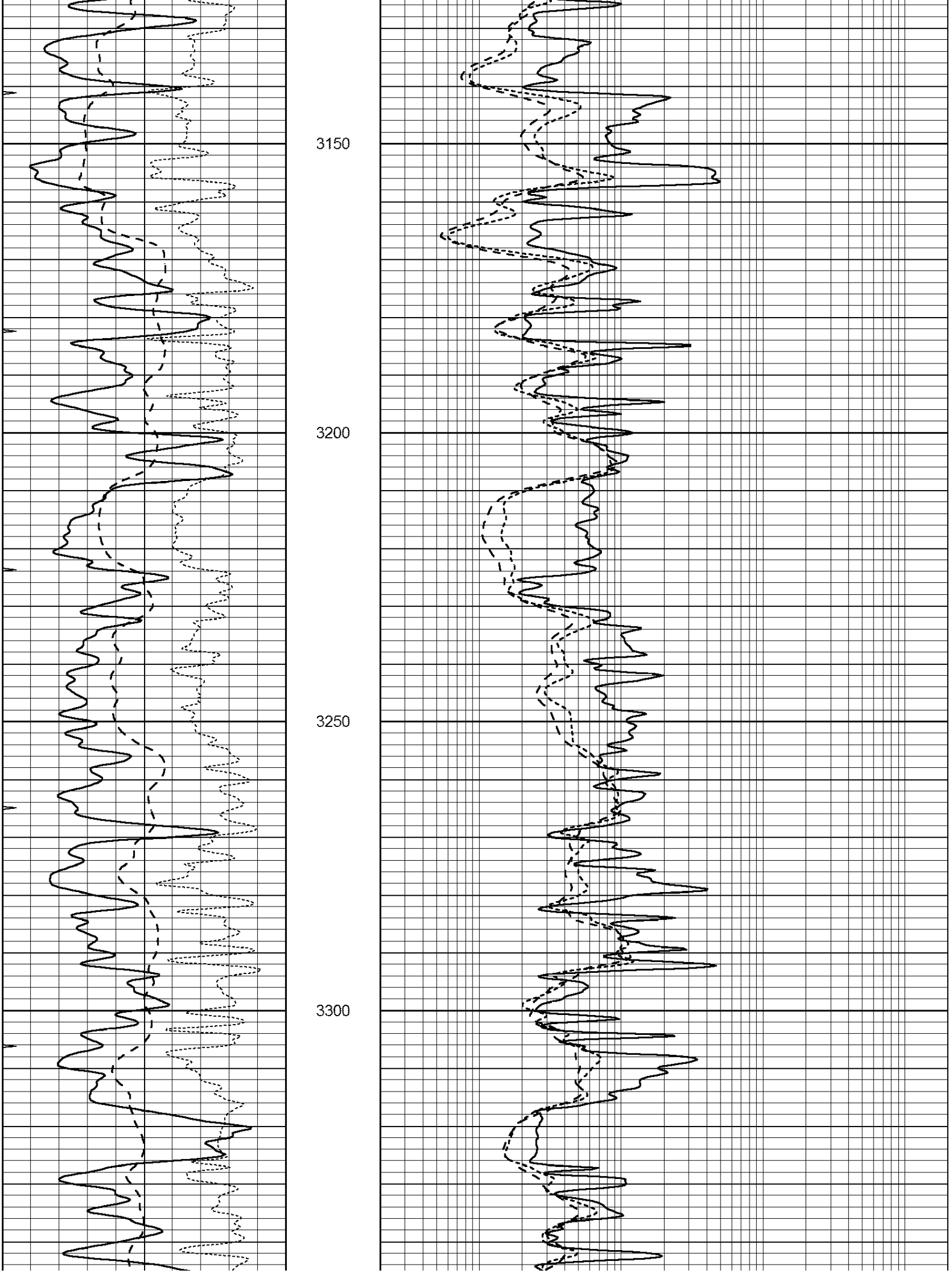
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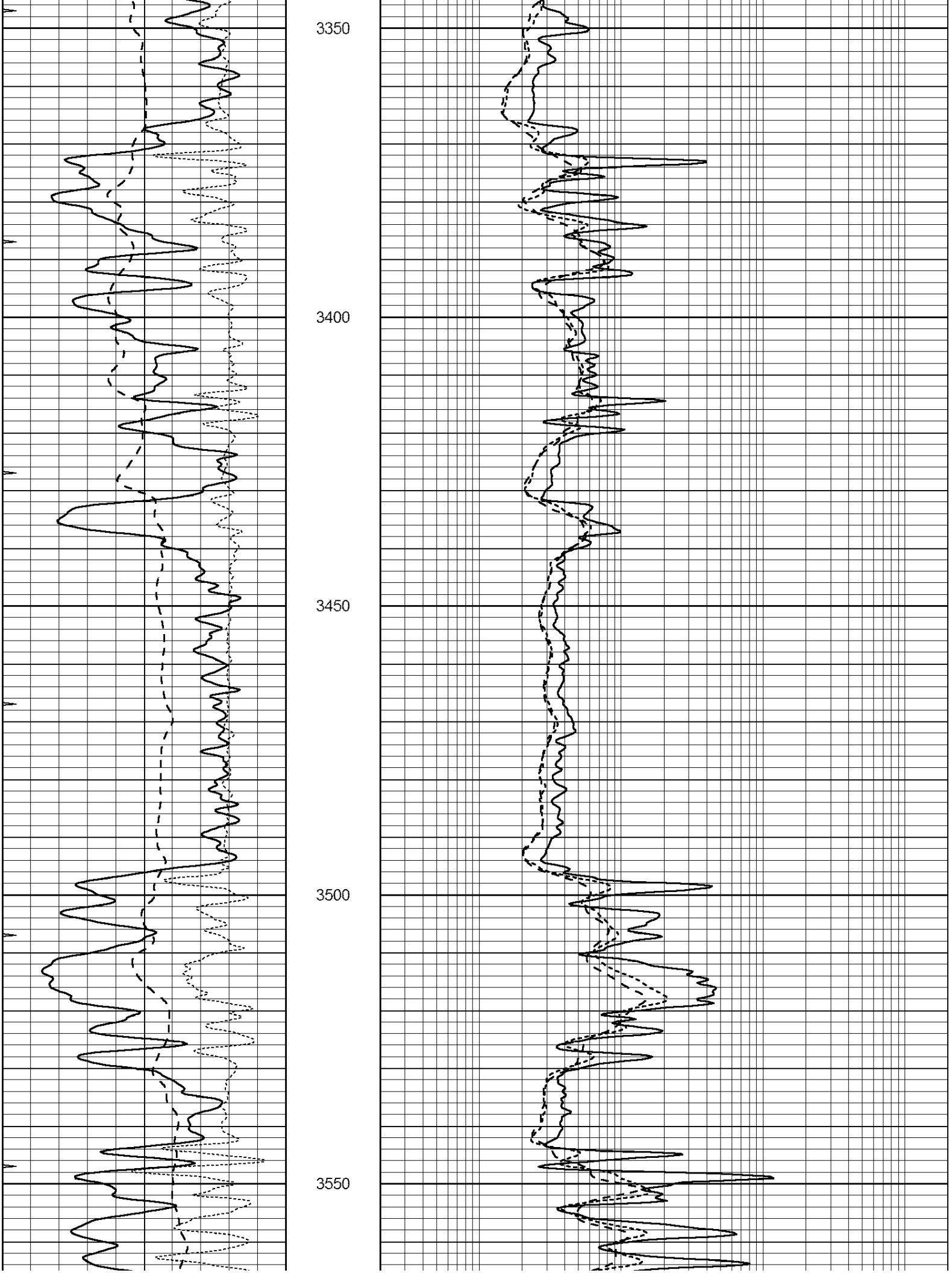
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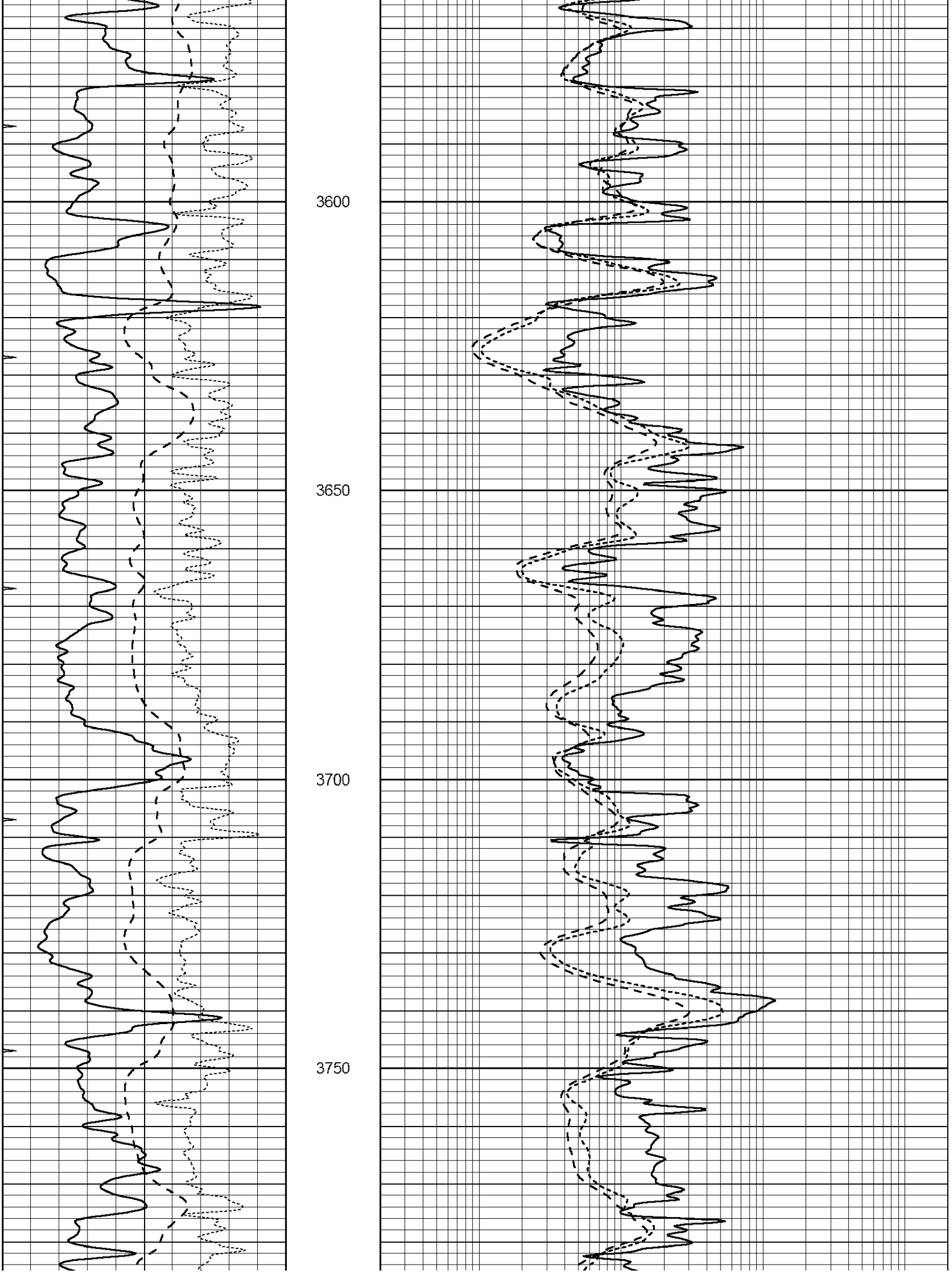
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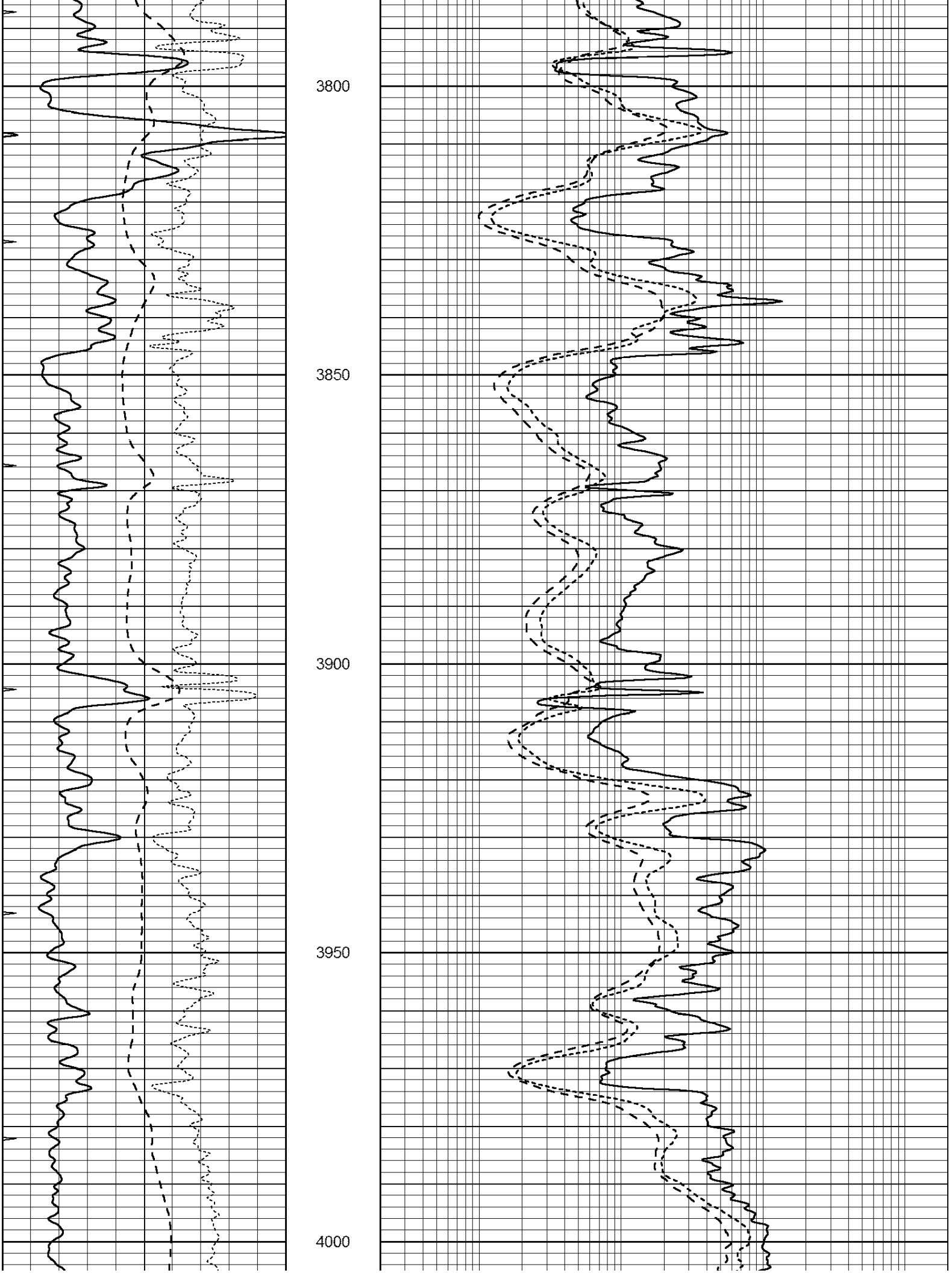
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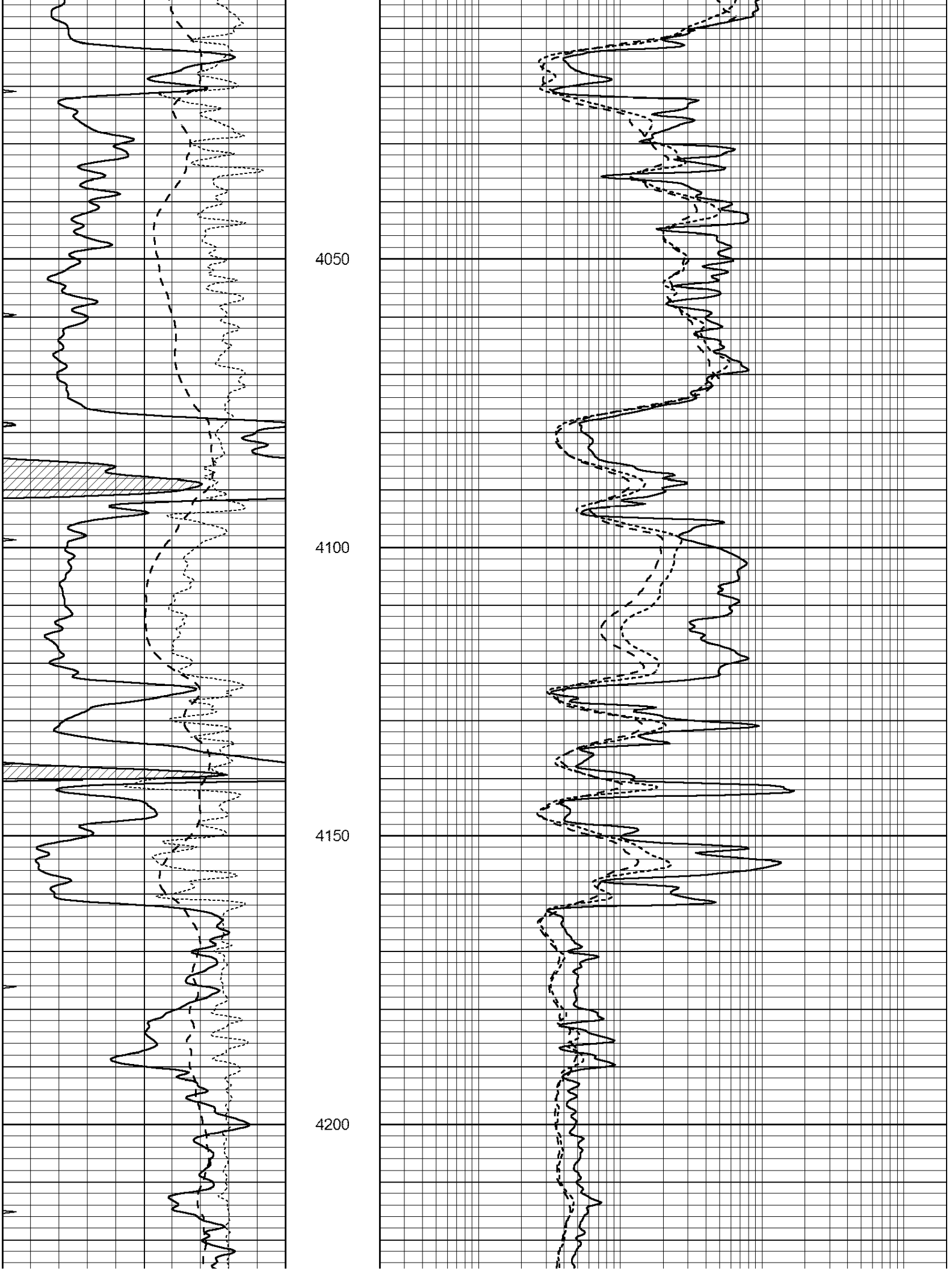
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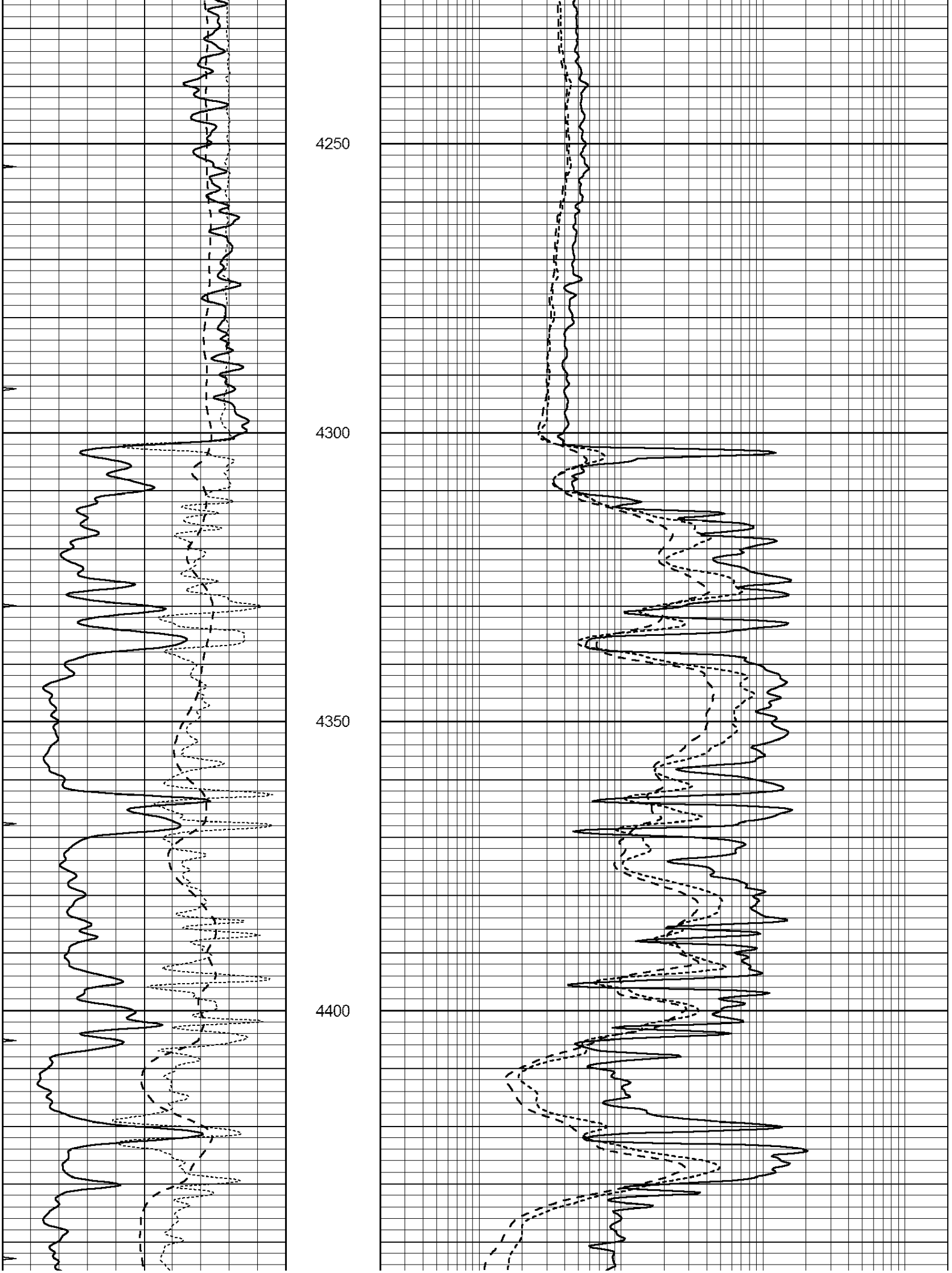
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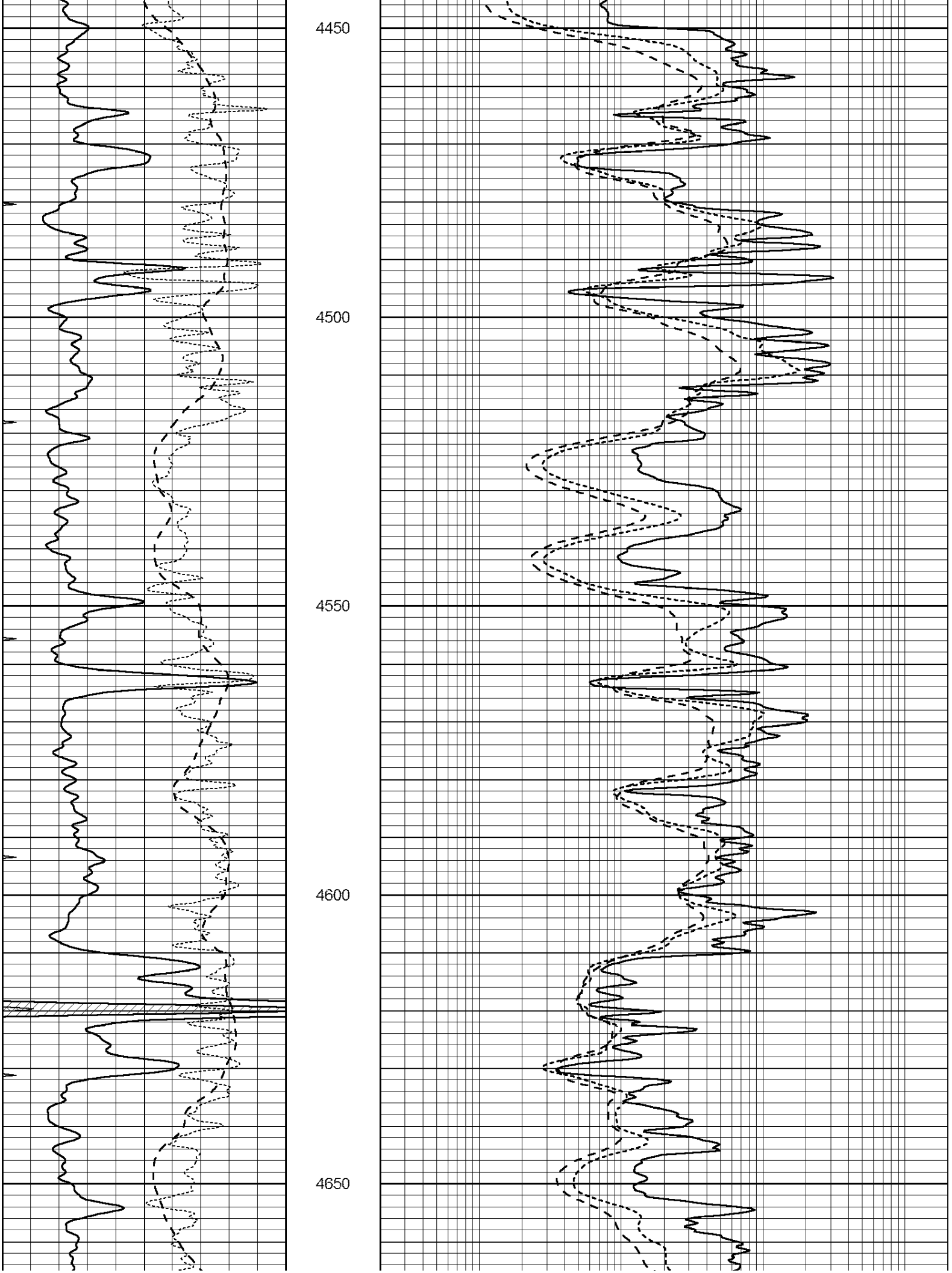
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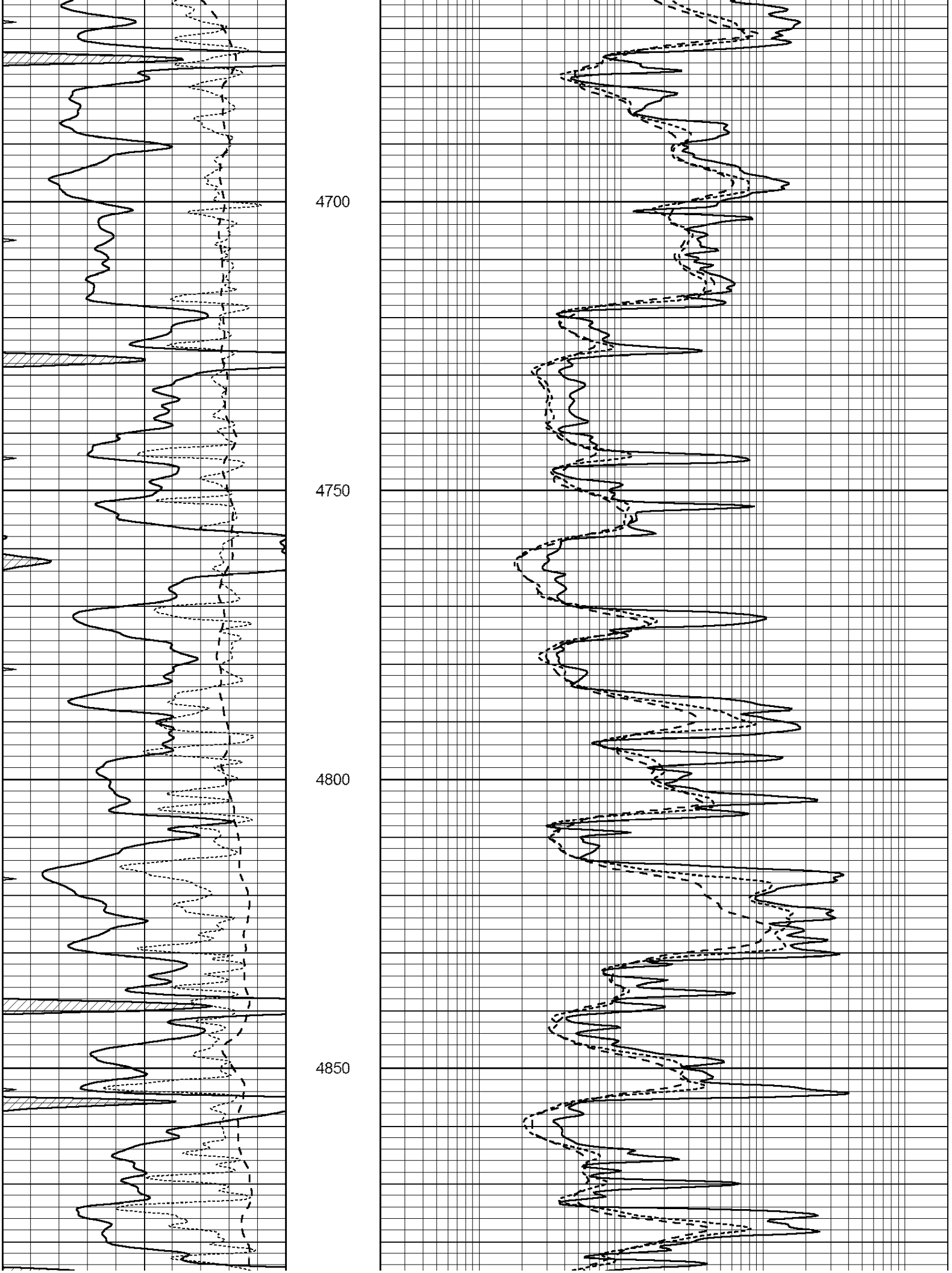
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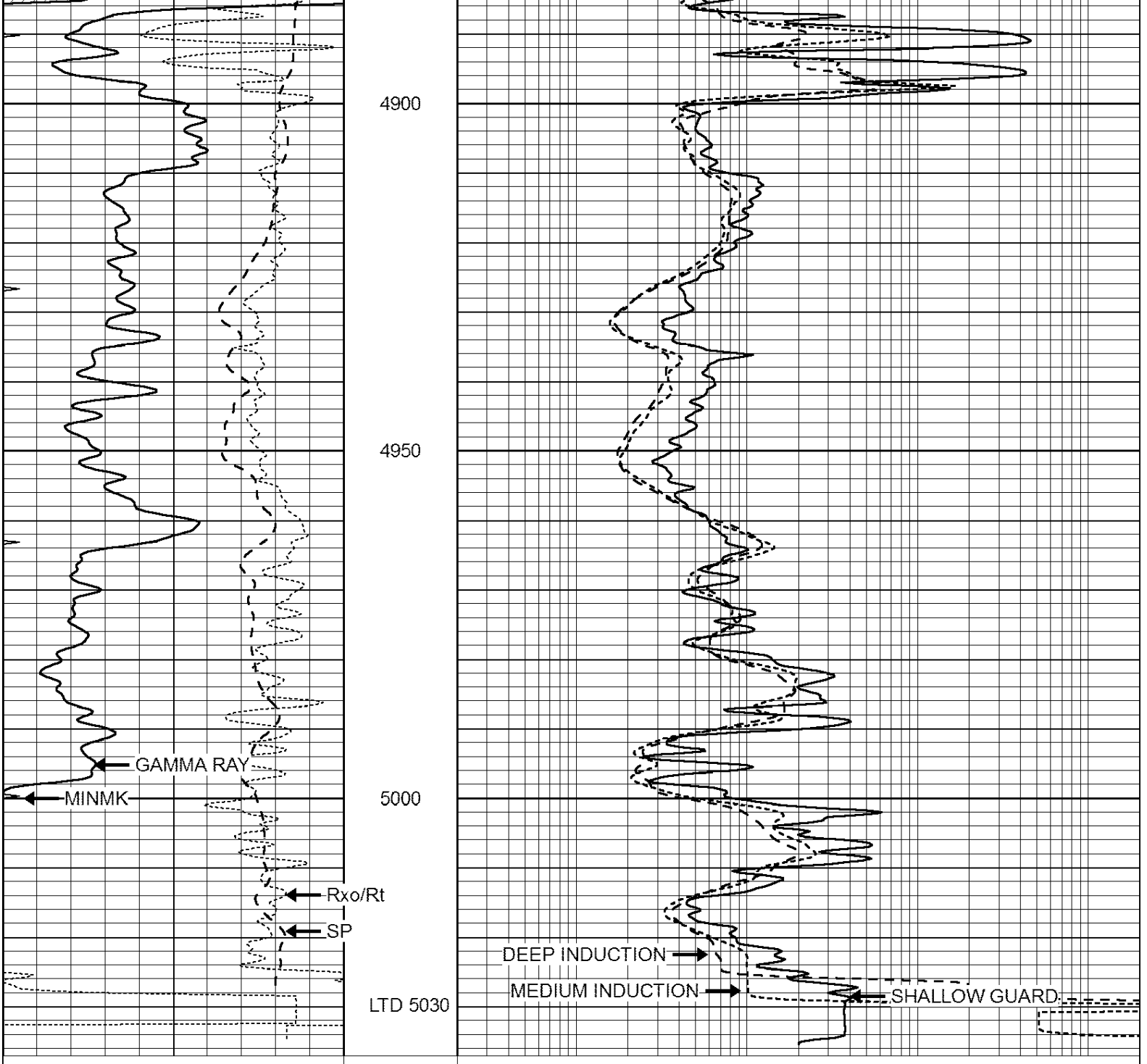
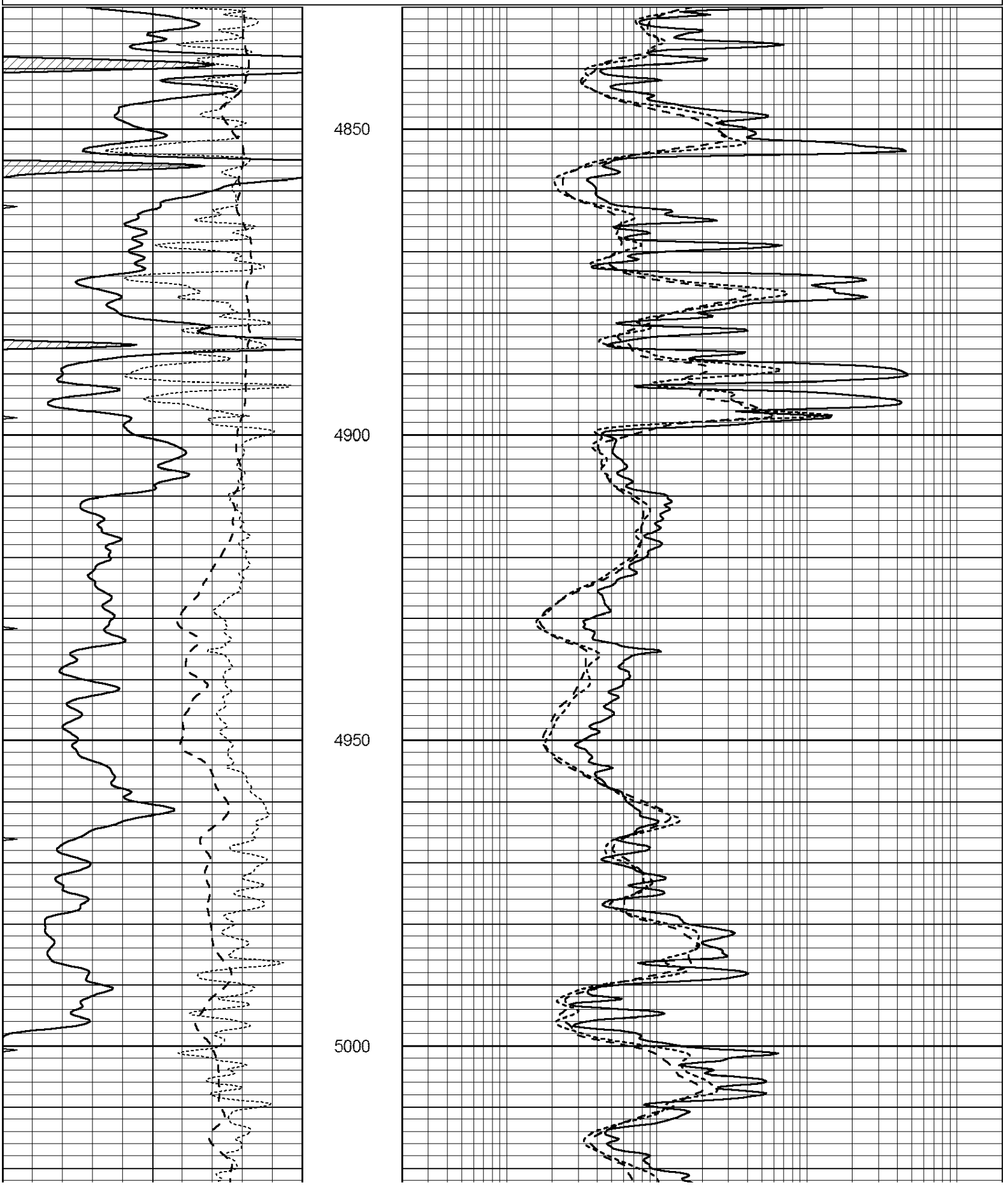


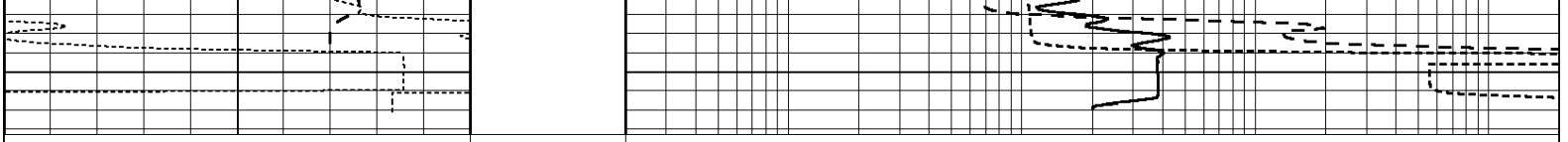
REPEAT SECTION

Database File:	3476pe.db
Dataset Pathname:	pass2.1
Presentation Format:	_dil
Dataset Creation:	Sat Jan 12 08:37:46 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





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: 3476pe.db
Dataset Pathname: pass2.1
Dataset Creation: Sat Jan 12 08:37:46 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'
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: 001N Model: PRB

Master Calibration — Performed Mon Nov 20 11:56:25 2017

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1693.3	8089.0	3078.3	8419.5	cps

Window 2	1575.1	7019.6	2756.4	7206.7	cps
Window 3	1275.0	3876.1	1831.0	3893.0	cps
Window 4	381.2	387.1	383.6	385.9	cps
Long Space	0.0	5444.5	1181.2	5631.5	cps
Short Space	2.9	1798.1	1211.5	1809.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 45.5	Rib Slope	: 1.018	Density/Spine Ratio	: 0.558
Spine Angle	: 75.5	Spine Slope	: 3.870	Spine Intercept	: -20.4

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