NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	EDISON OPERATING COMPANY, LLC.
Well	CHARLES #1-25
Field	KISMET
County	SEWARD
State	KANSAS

Company EDISON OPERATING COMPANY, LLC.

Well CHARLES #1-25

Field KISMET

County SEWARD State KANSAS

Location: API # : 15-175-22202-0000

2310' FNL & 330' FWL

SW - SW - NW

SEC 25 TWP 33S RGE 31W

Permanent Datum GROUND LEVEL Elevation 2728

Log Measured From KELLY BUSHING 10' A.G.L.

Drilling Measured From KELLY BUSHING

Other Services: CDL/CNL/PE MEL

Elevation: K.B. 2738 D.F. 2736 G.L. 2728

Date	5/18/13		
Run Number	ONE		
Depth Driller	5913		
Depth Logger	5910		
Bottom Logged Interval	5908		
Top Log Interval	00		
Casing Driller	8 5/8"@1598'		
Casing Logger	1594		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,200 PPM	
Density / Viscosity	9.2/60		
pH / Fluid Loss	11.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.850@85F		
Rmf @ Meas. Temp	.638@85F		
Rmc @ Meas. Temp	1.02@85F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.543@133F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	10:30 P.M.		
Maximum Recorded Temperature	133F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PAUL GERLACH		

<<< Fold Here >>>

Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395

DIRECTIONS

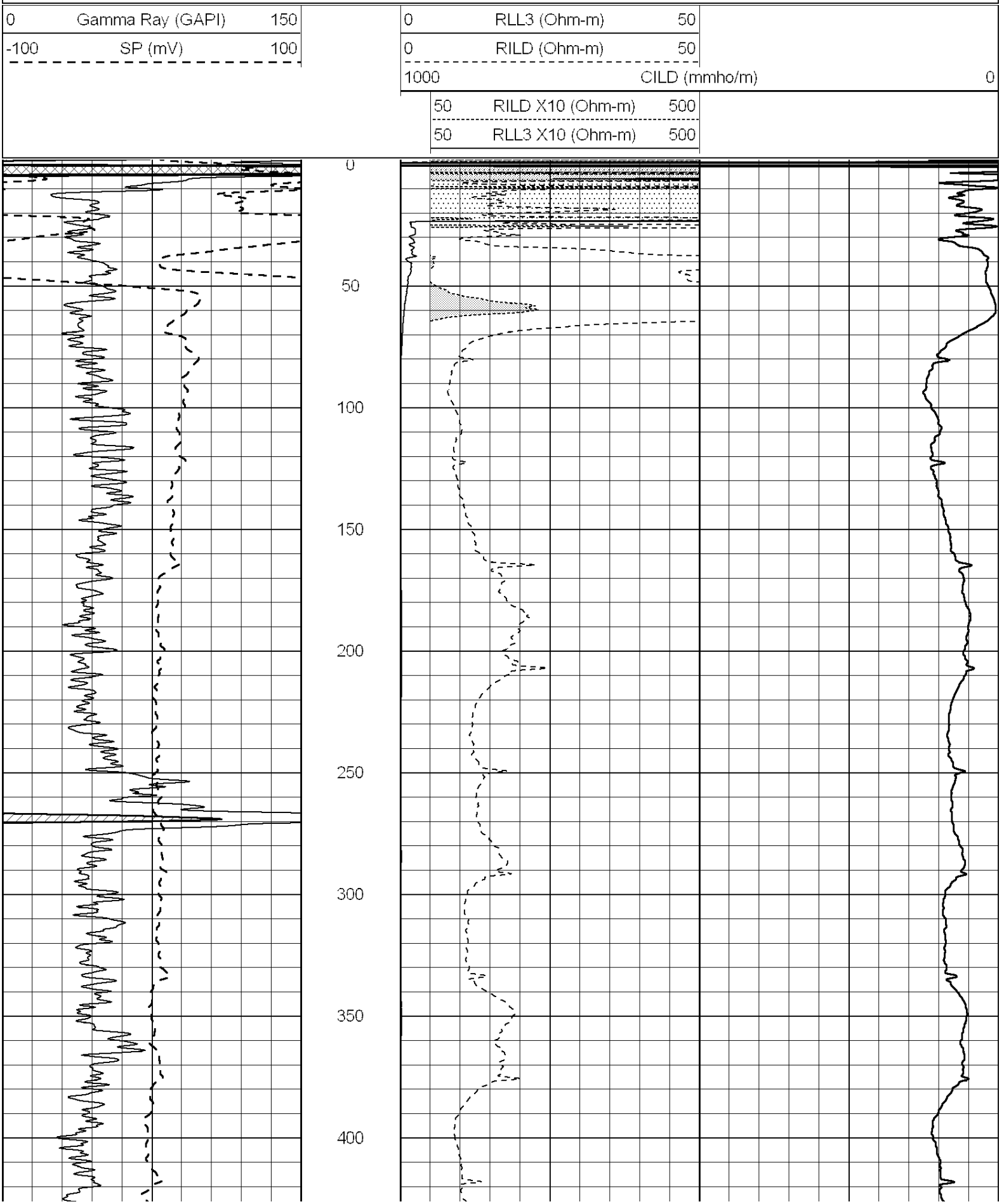
KISMET, KS. 3S. ON BLKTOP TO "RD. 13", 1 1/2E., 1S., 2E., N. INTO

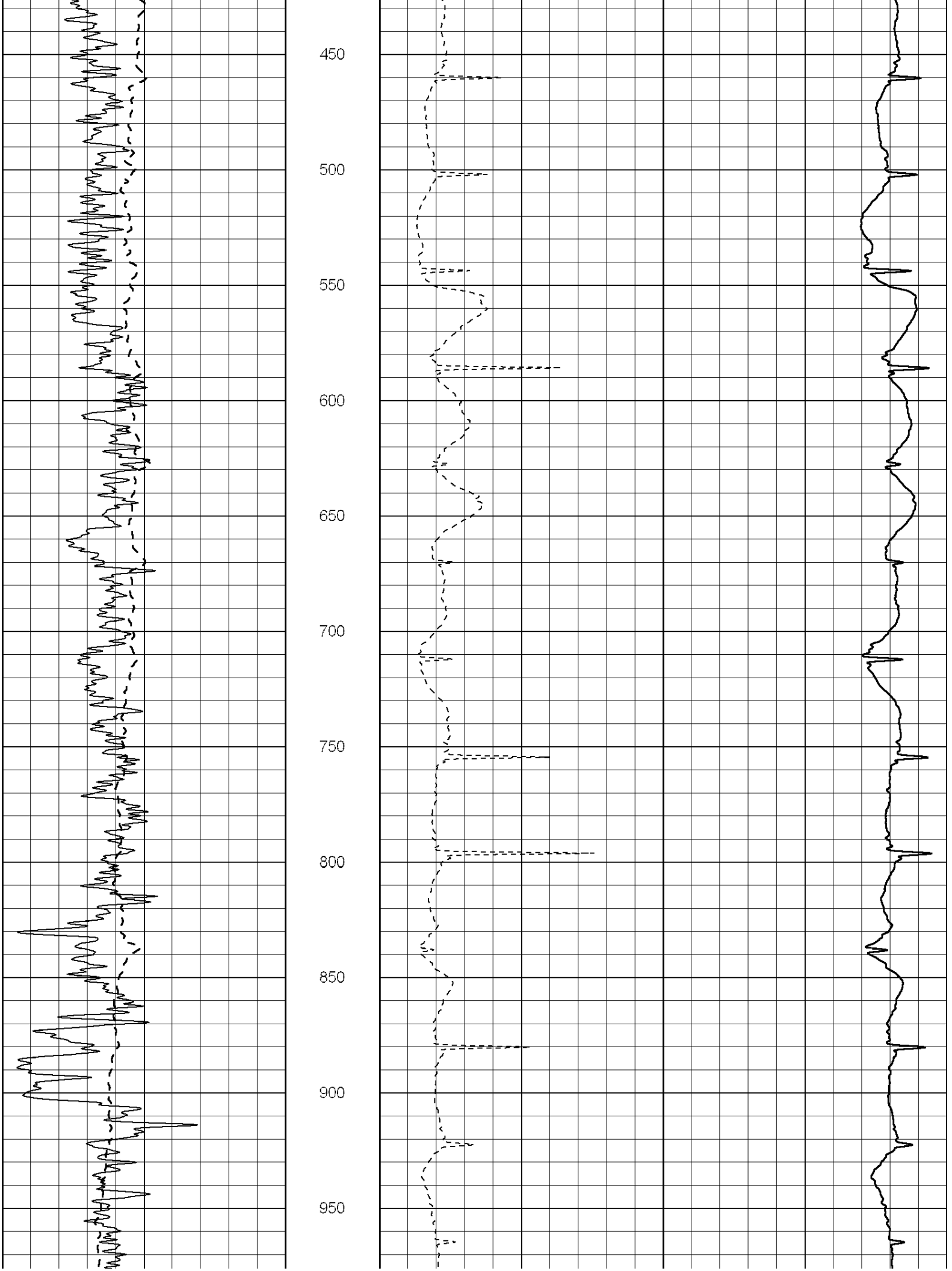
NABORS COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

SERVICES CO.

Database File: 010908pe.db
Dataset Pathname: pass3.6
Presentation Format: dil2
Dataset Creation: Sat May 18 01:14:28 2013 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:600

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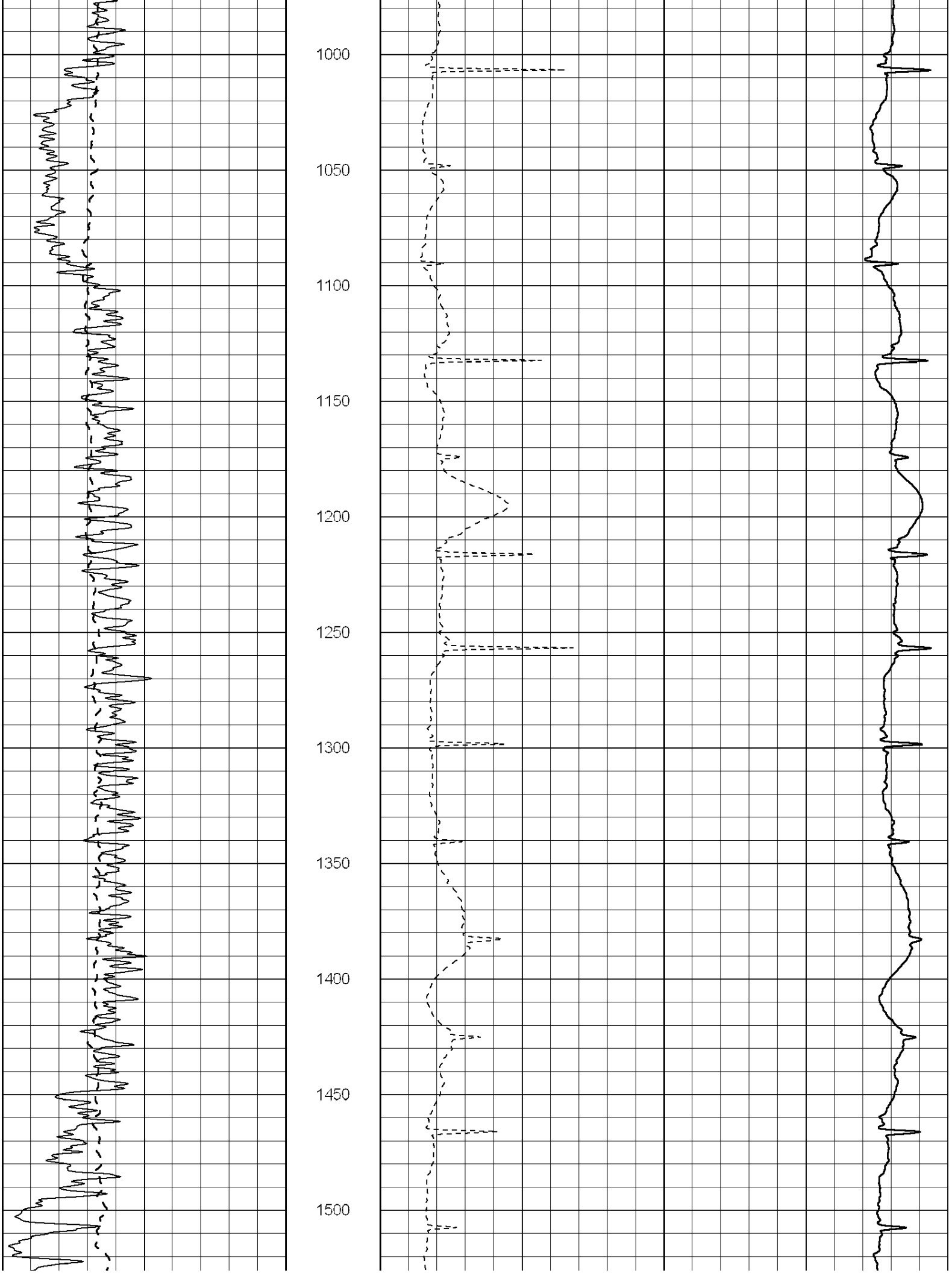
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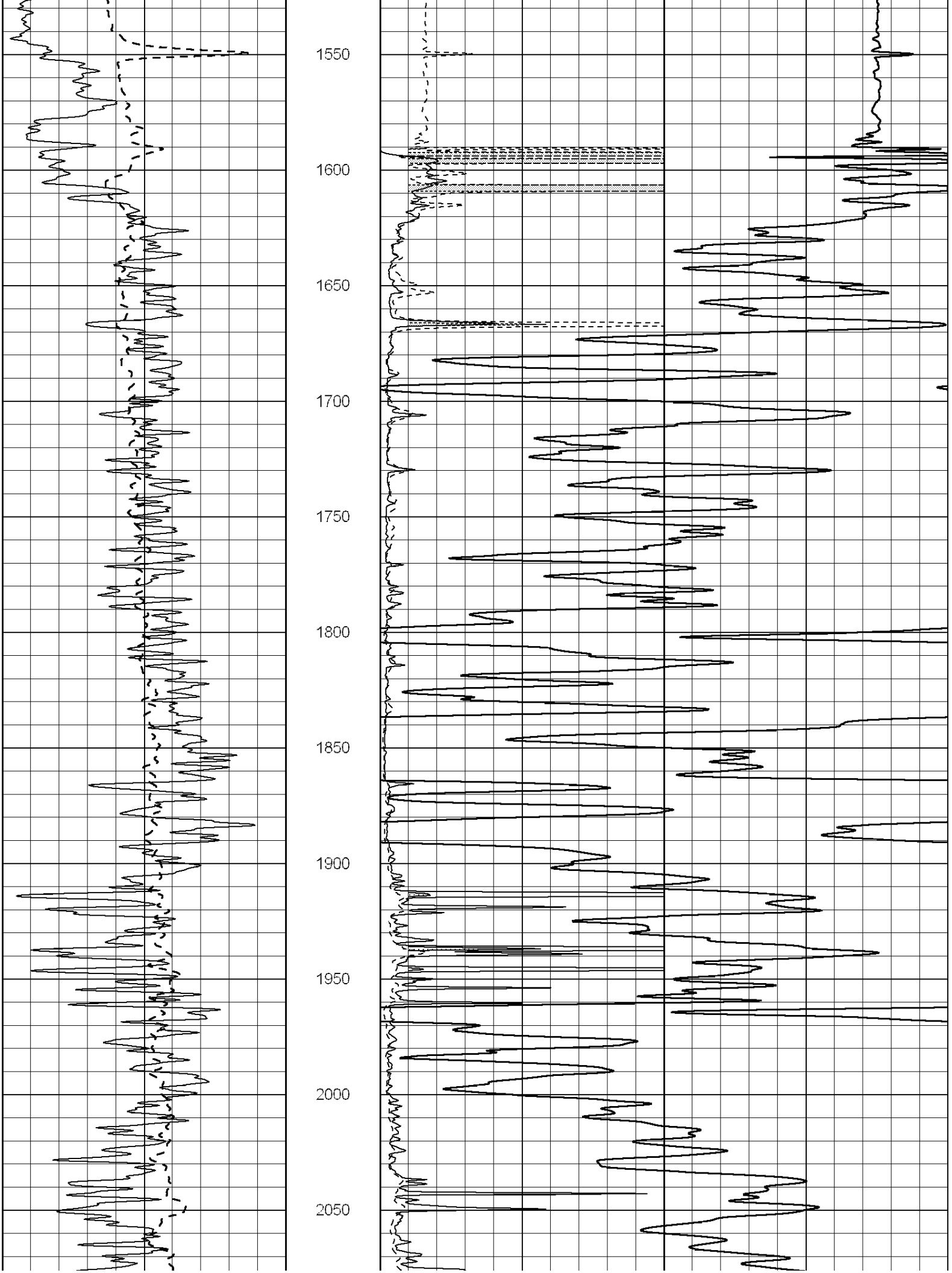
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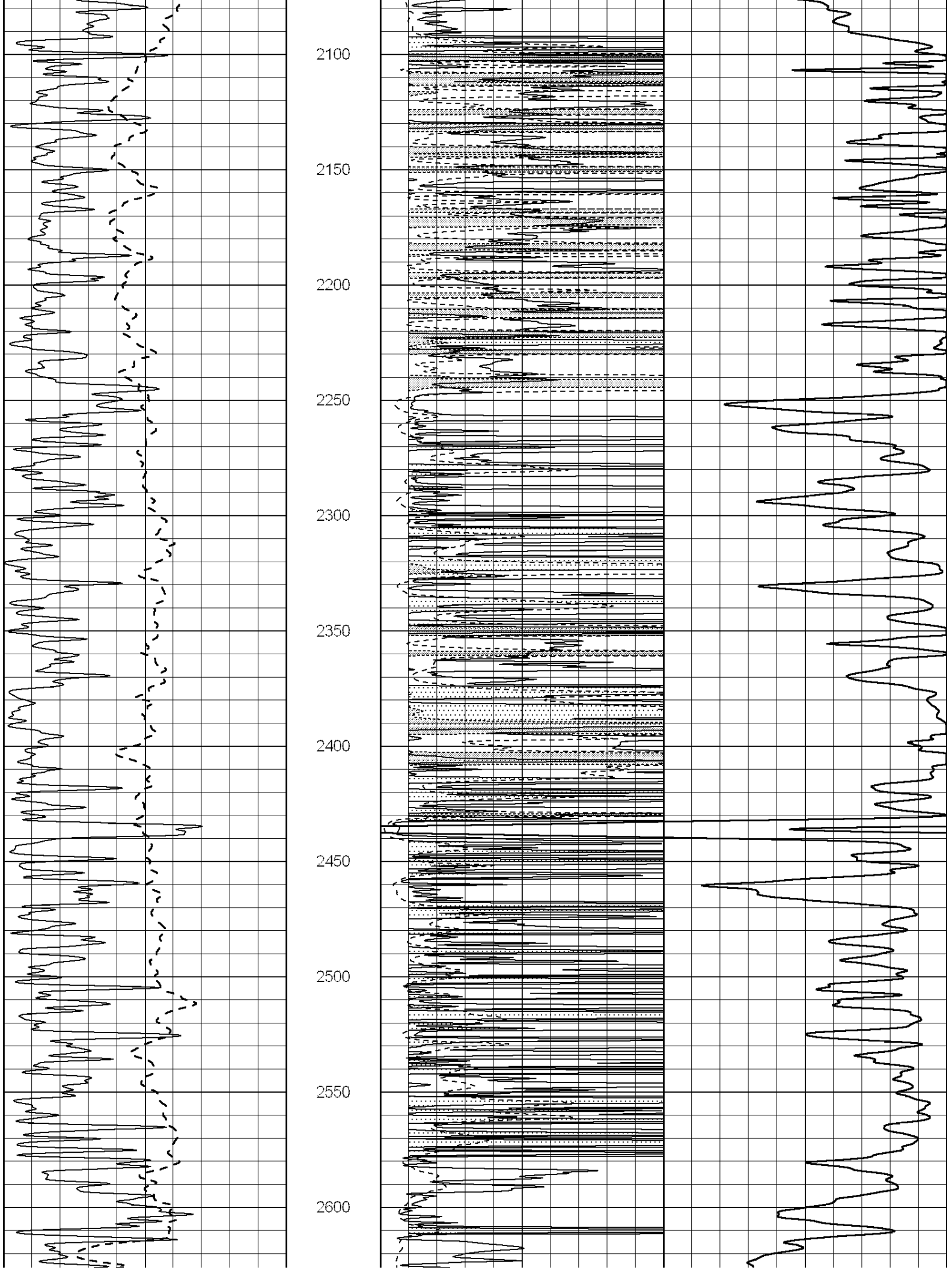
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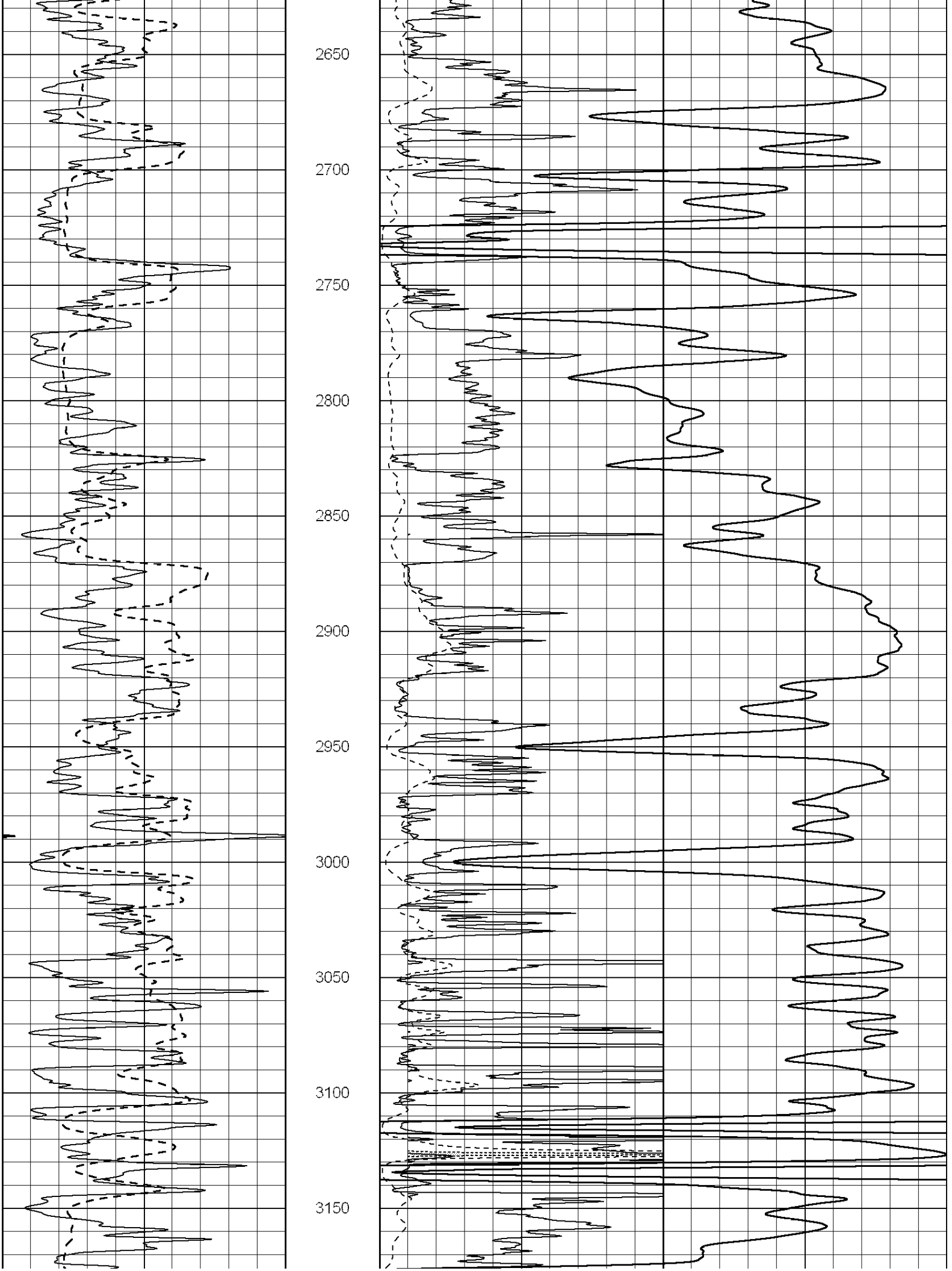
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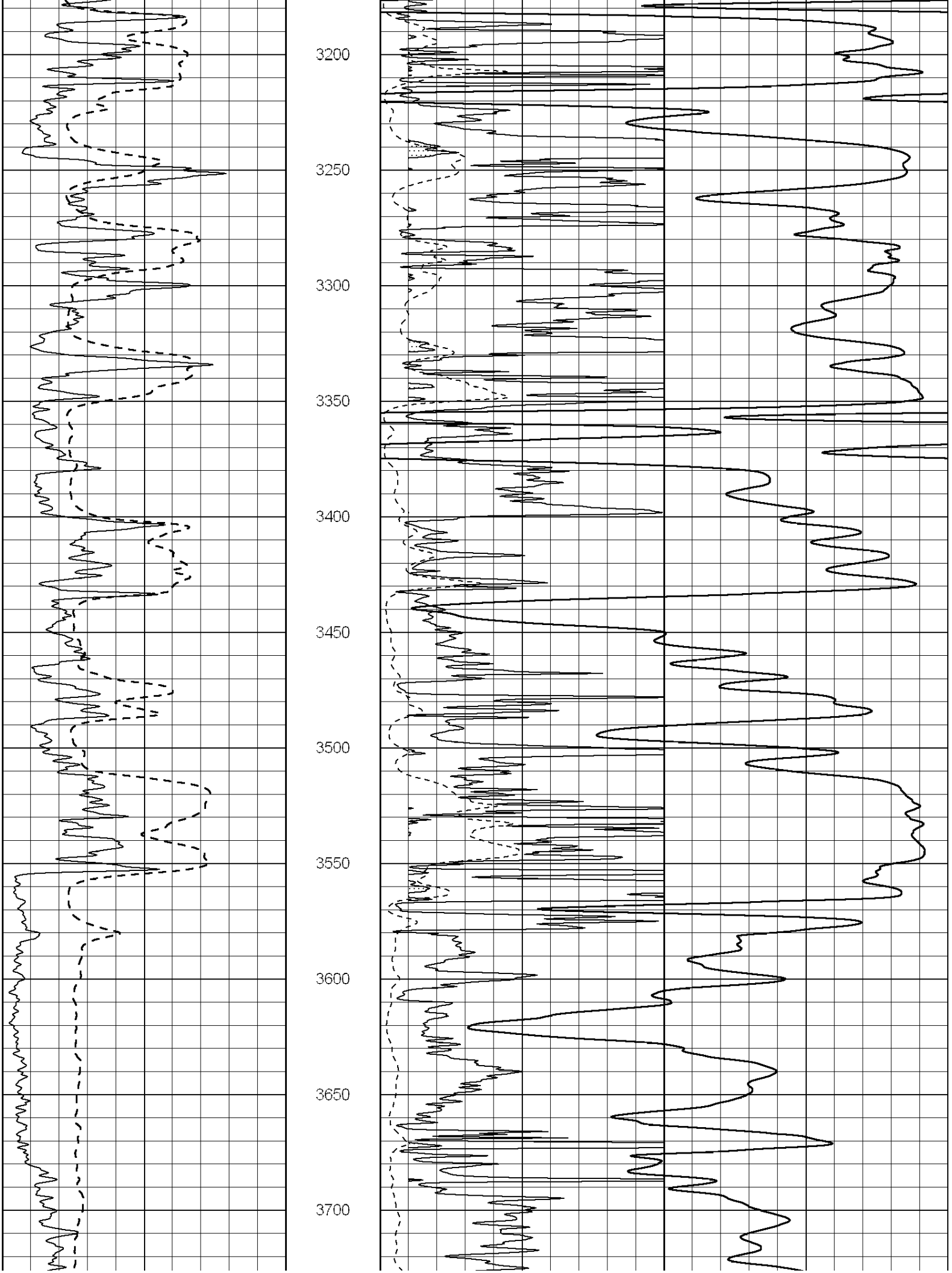
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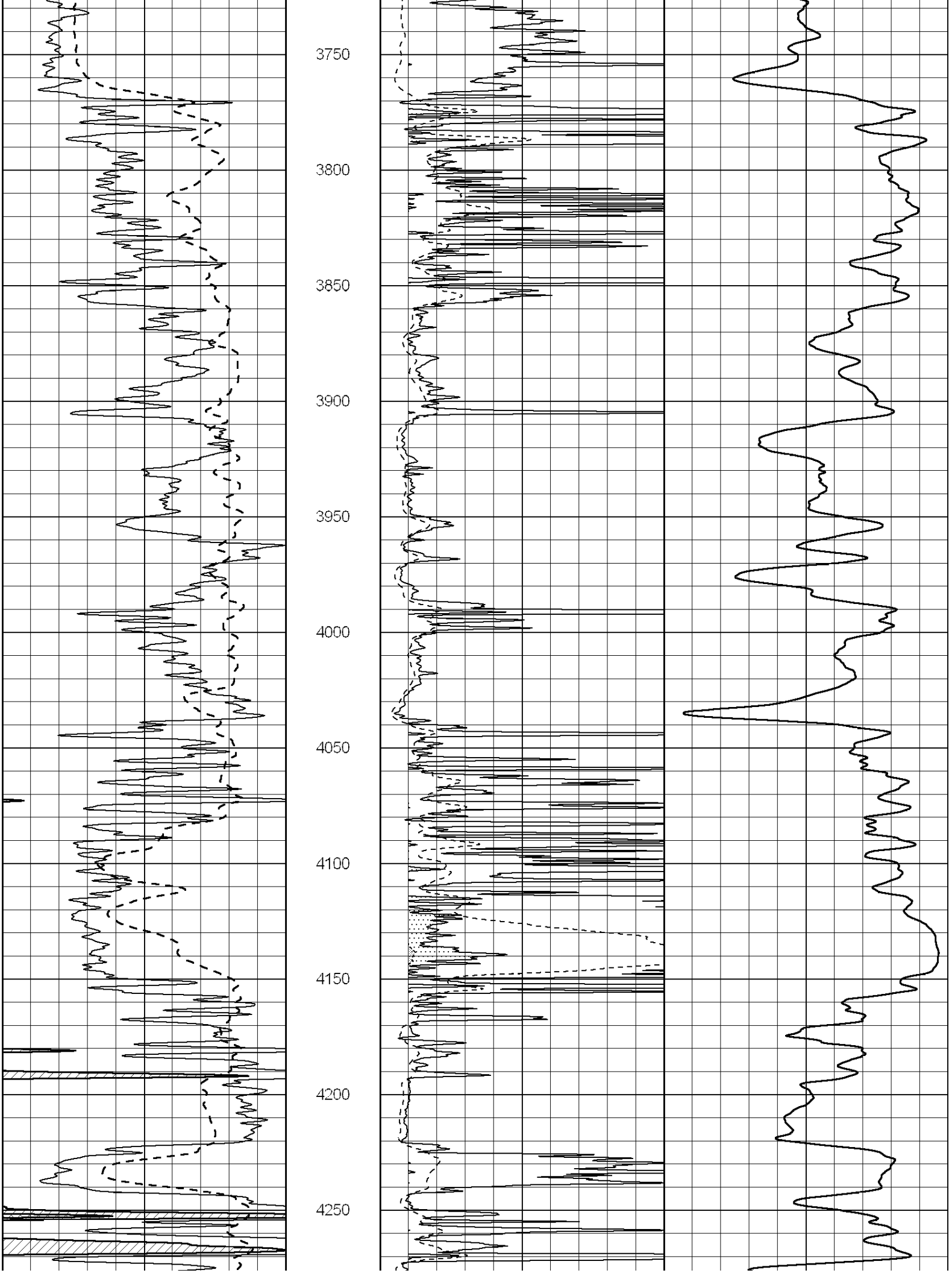
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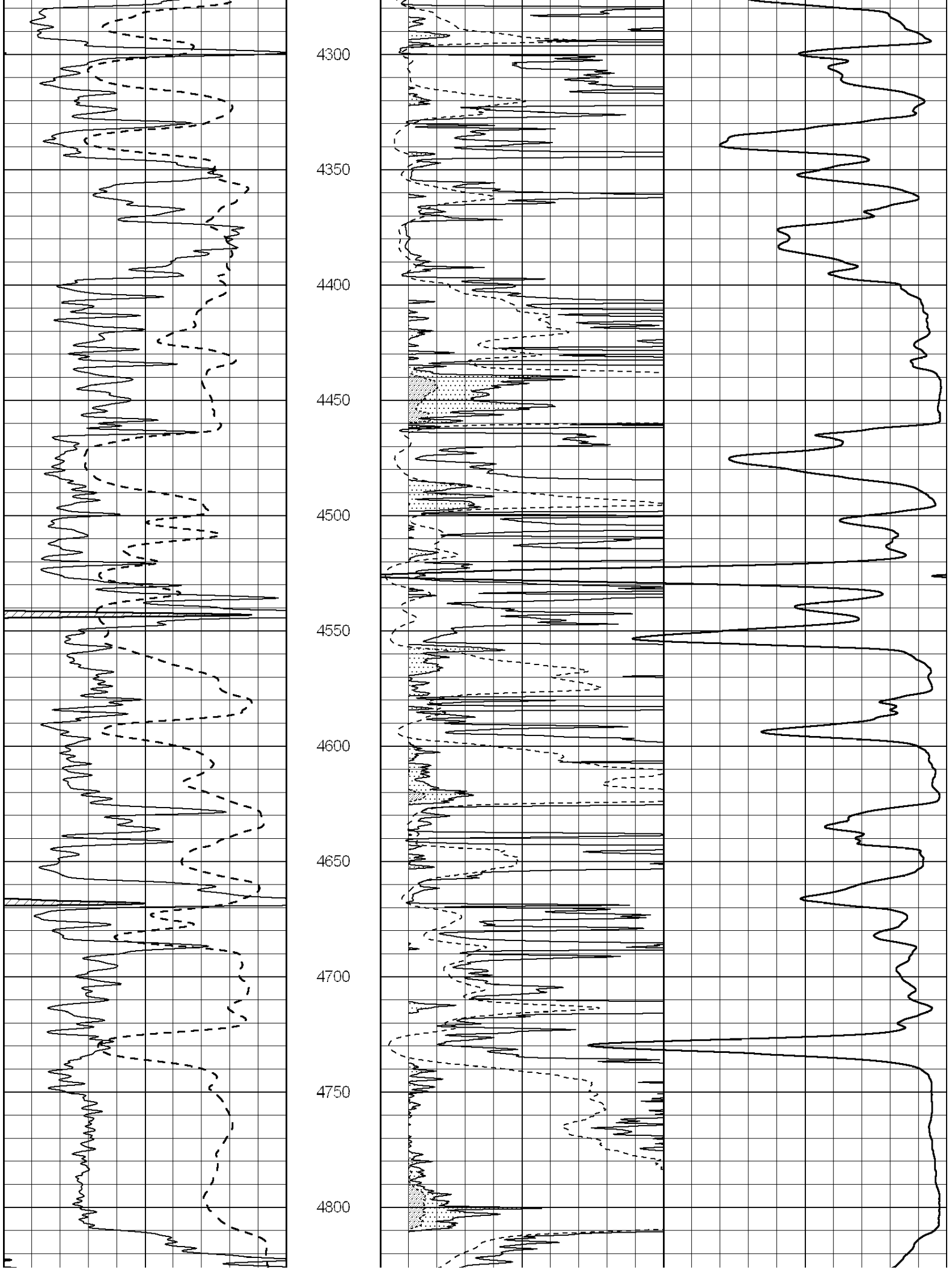
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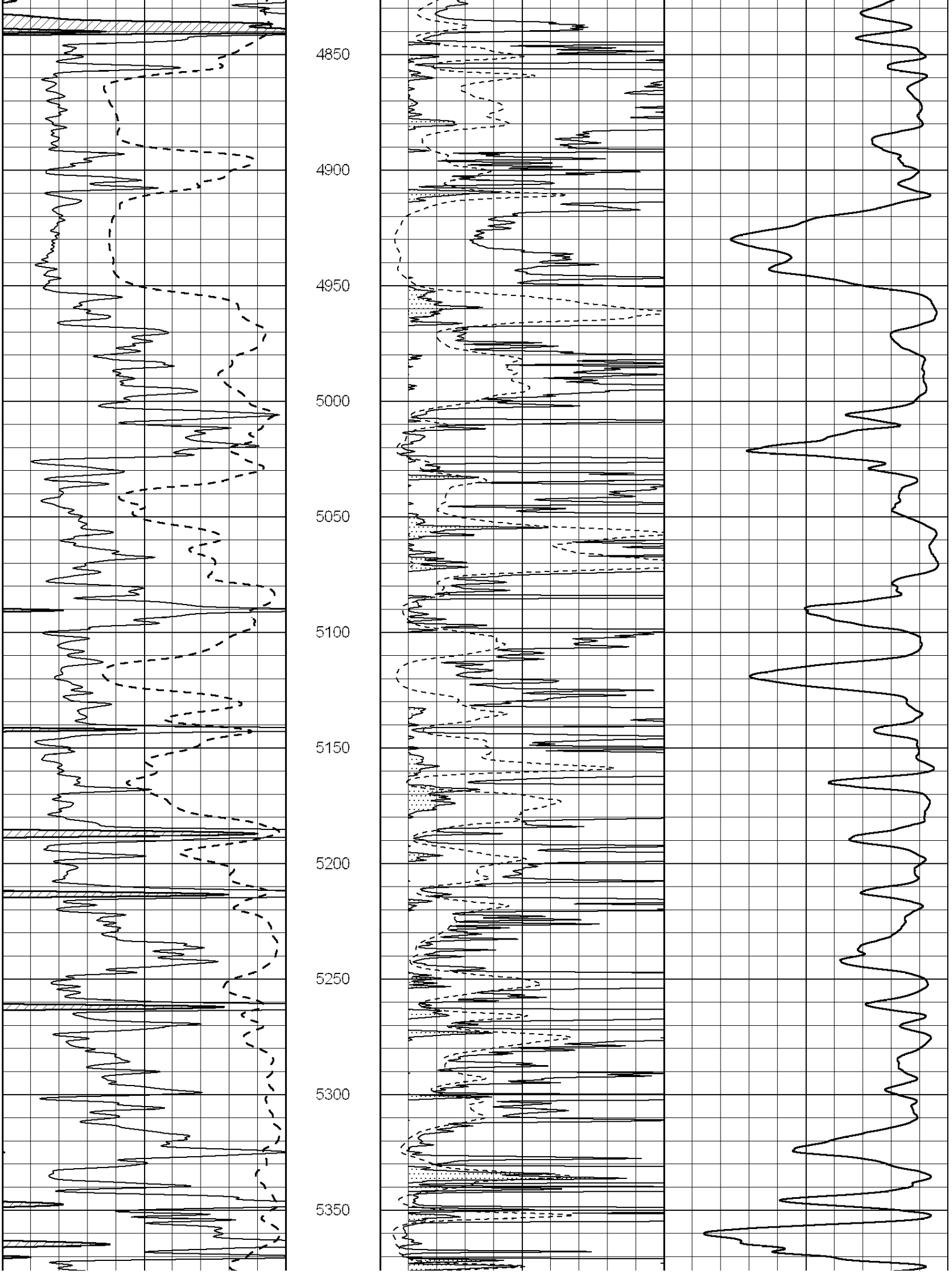
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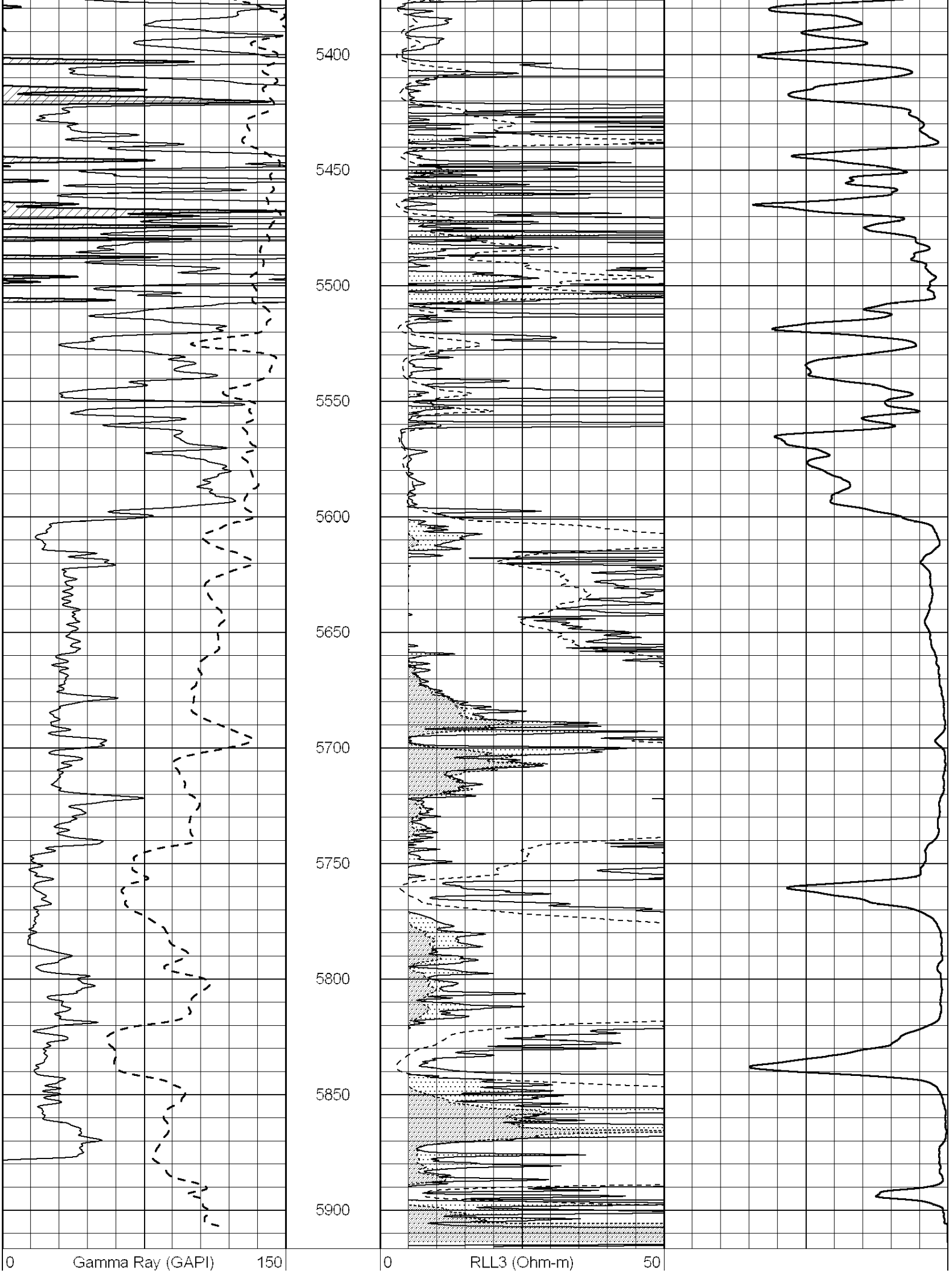
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5750
5800
5850
5900
0
Gamma Ray (GAPI)
150
0
RLL3 (Ohm-m)
50

-100	SP (mV)	100

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

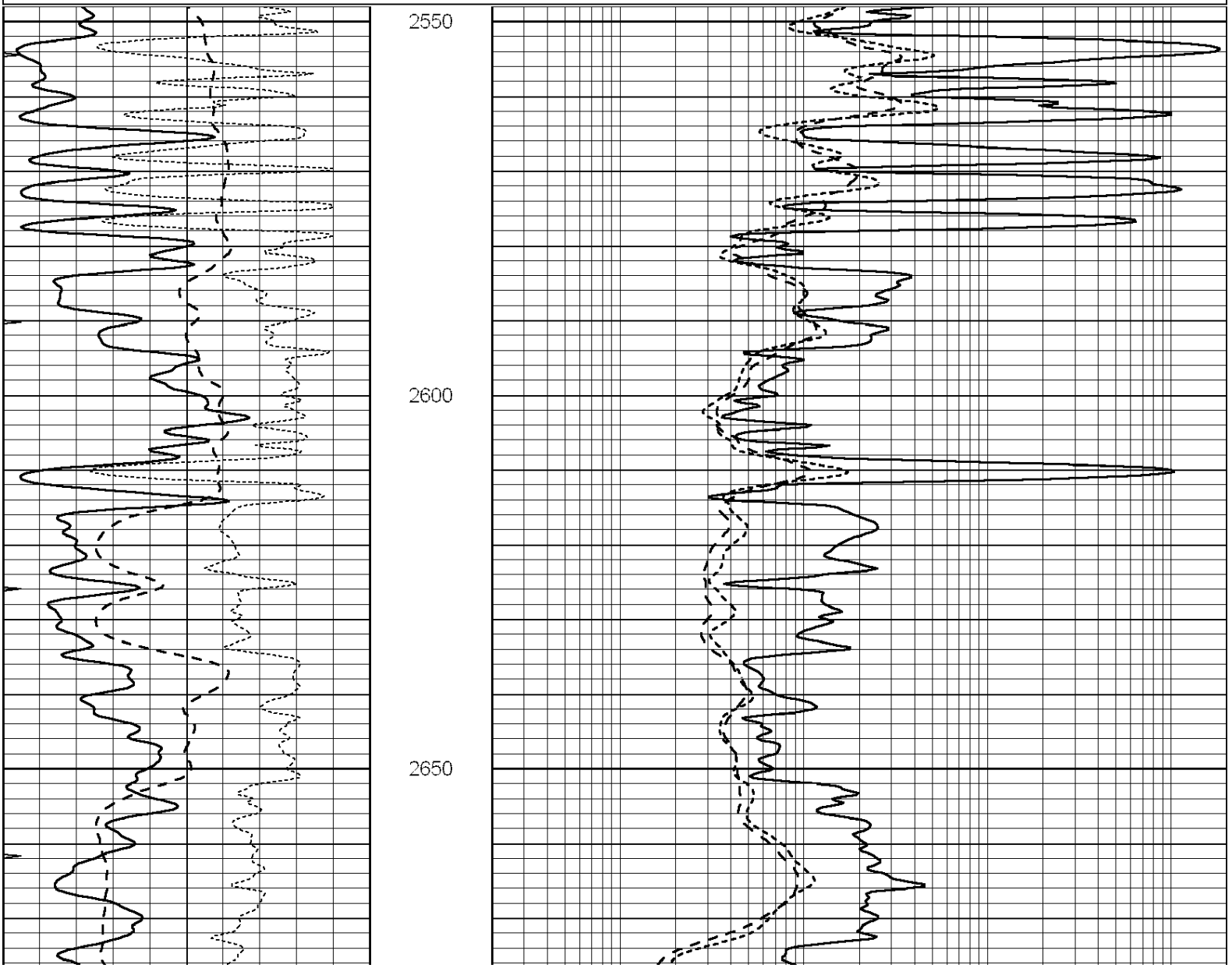
NABORS
COMPLETION & PRODUCTION SERVICES CO.

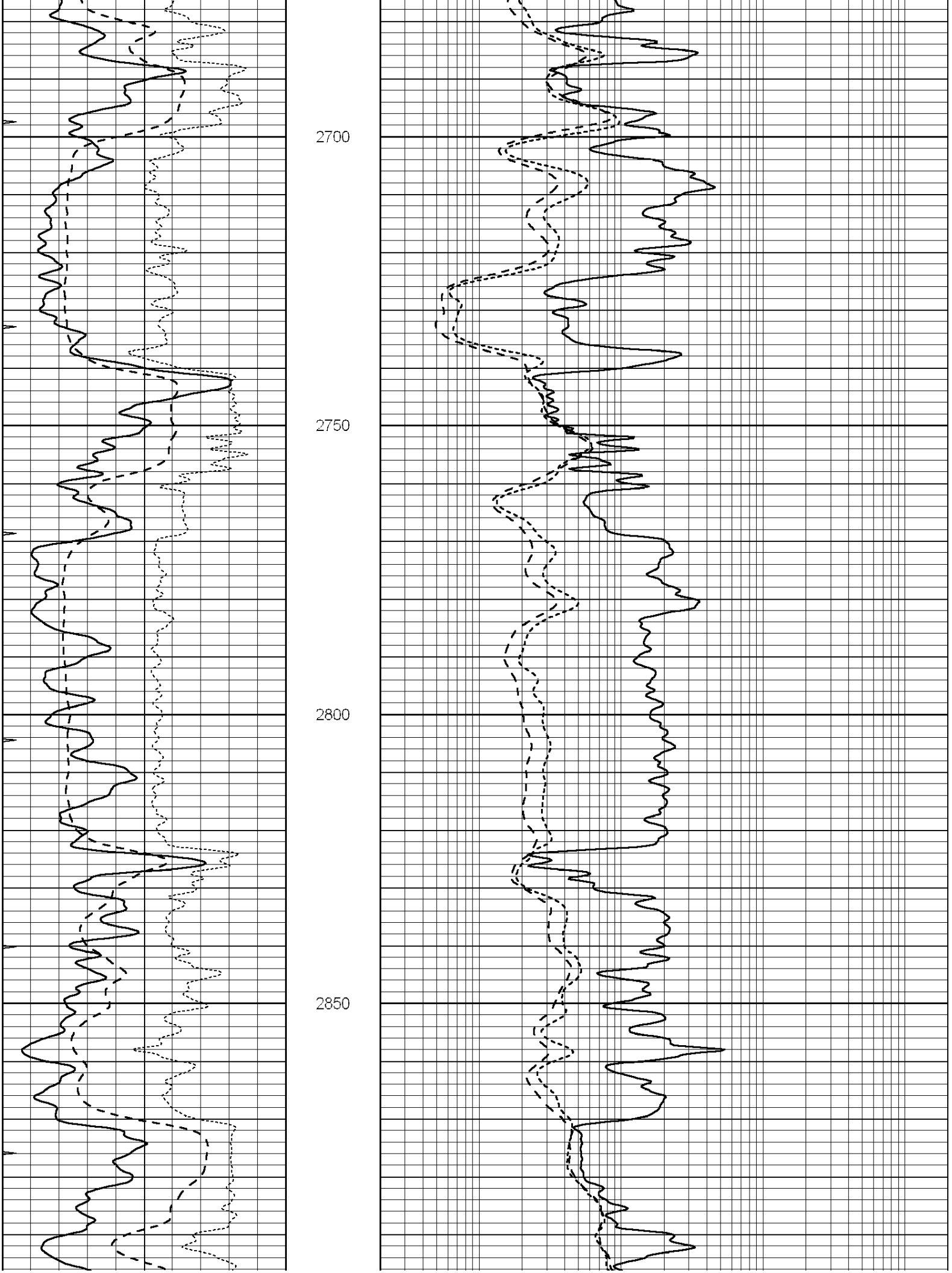
MAIN SECTION

Database File:	010908pe.db
Dataset Pathname:	pass3.6
Presentation Format:	dil
Dataset Creation:	Sat May 18 01:14:28 2013 by Calc SOC 120430
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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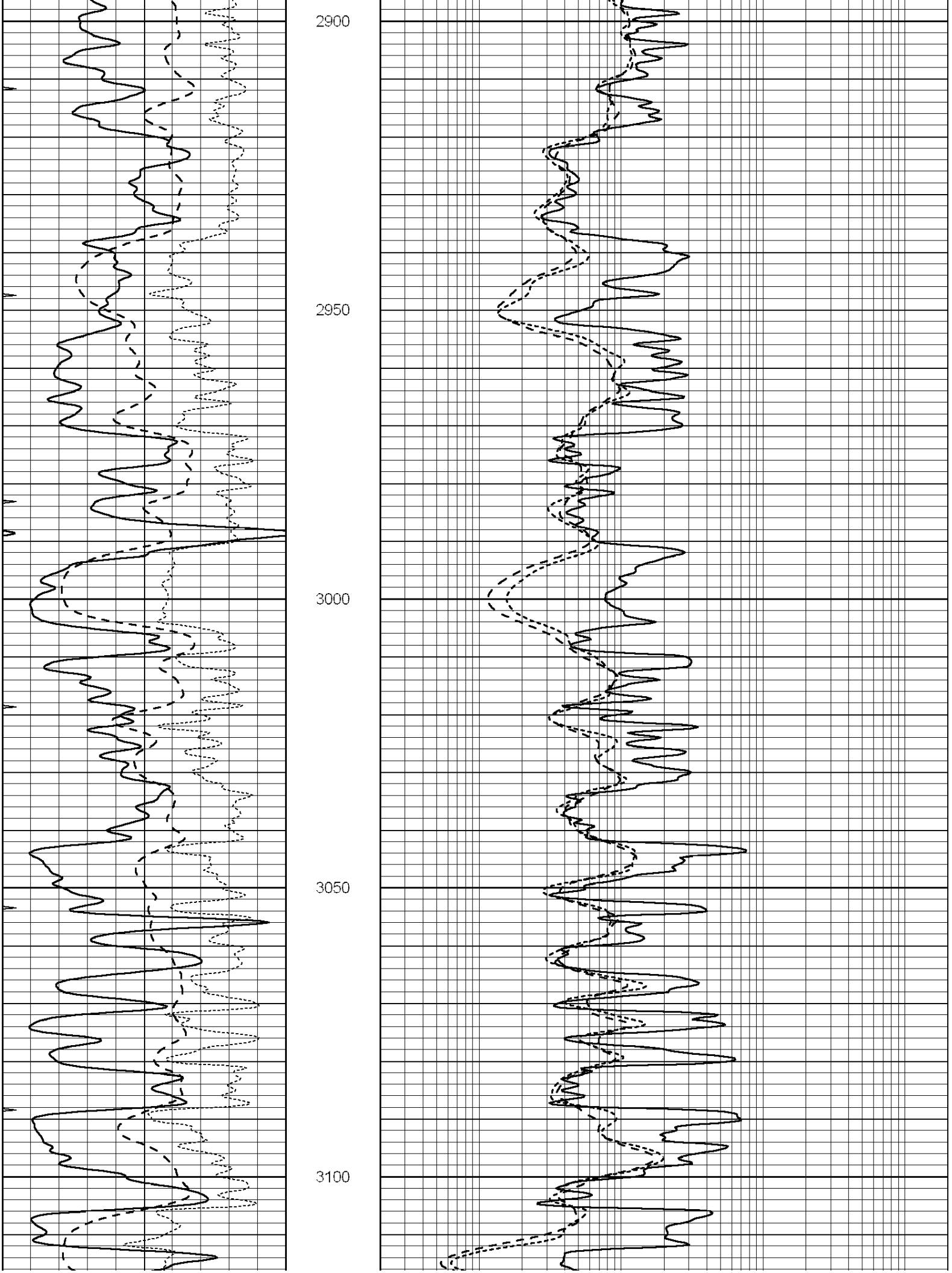
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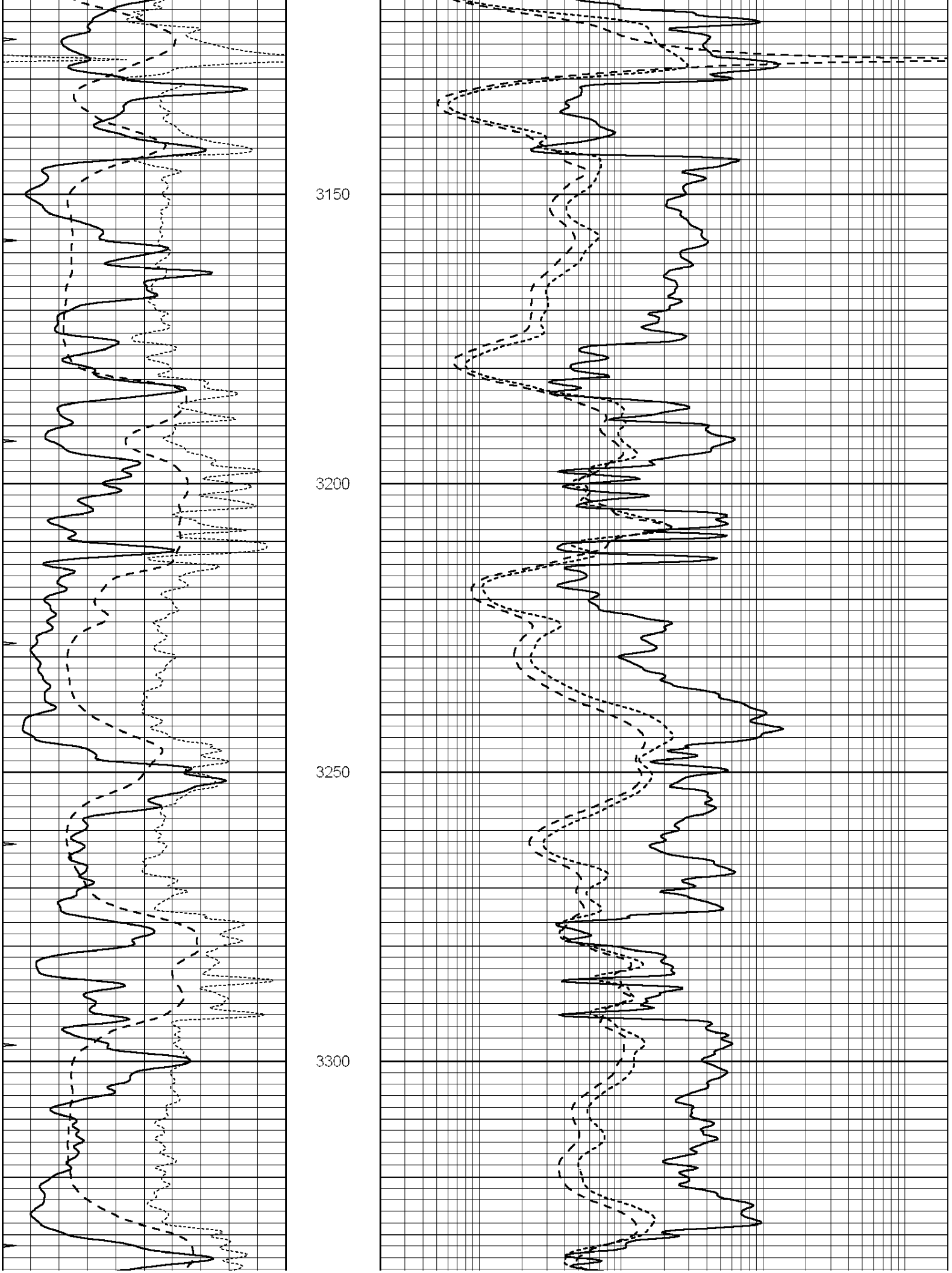
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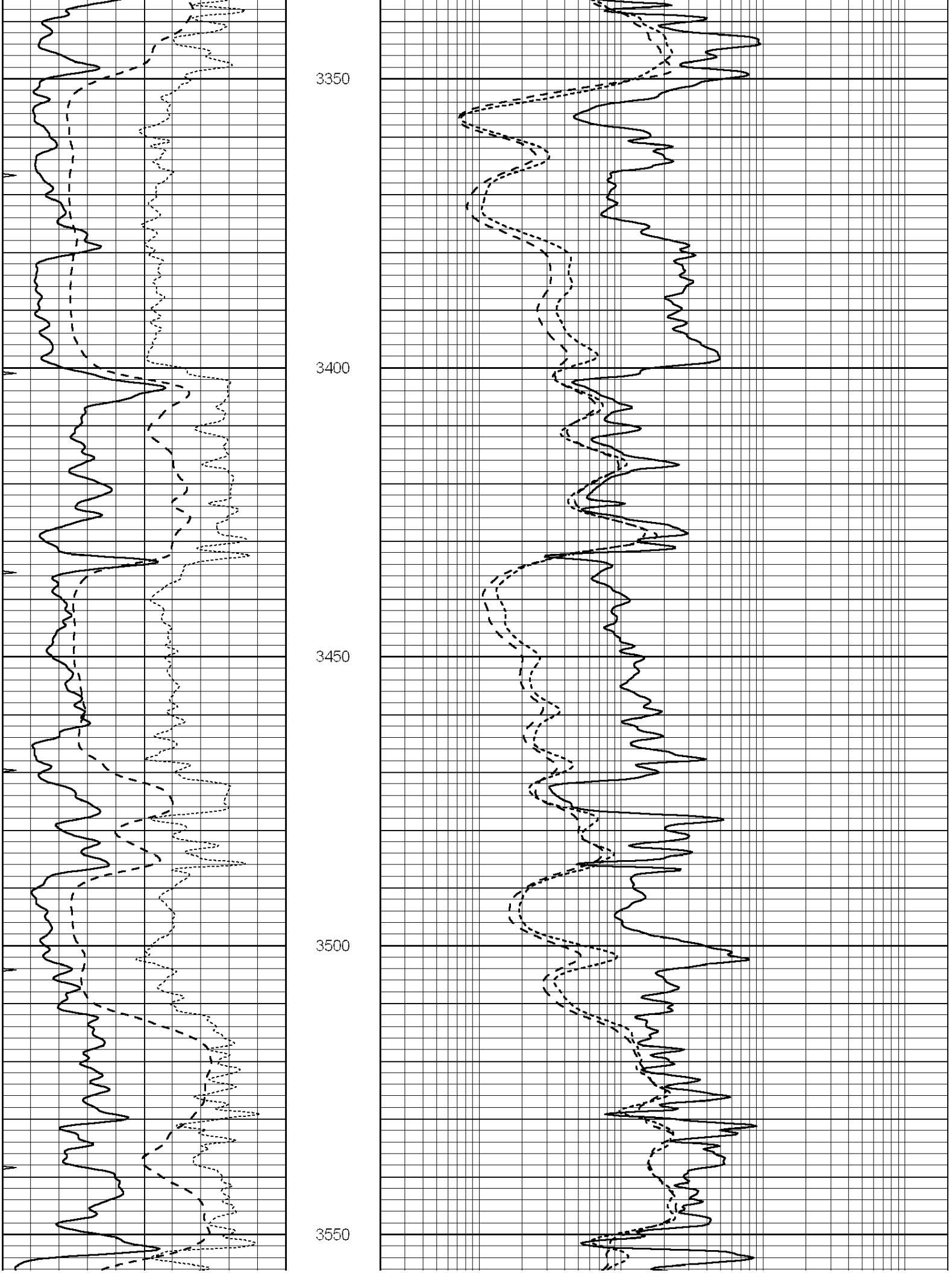
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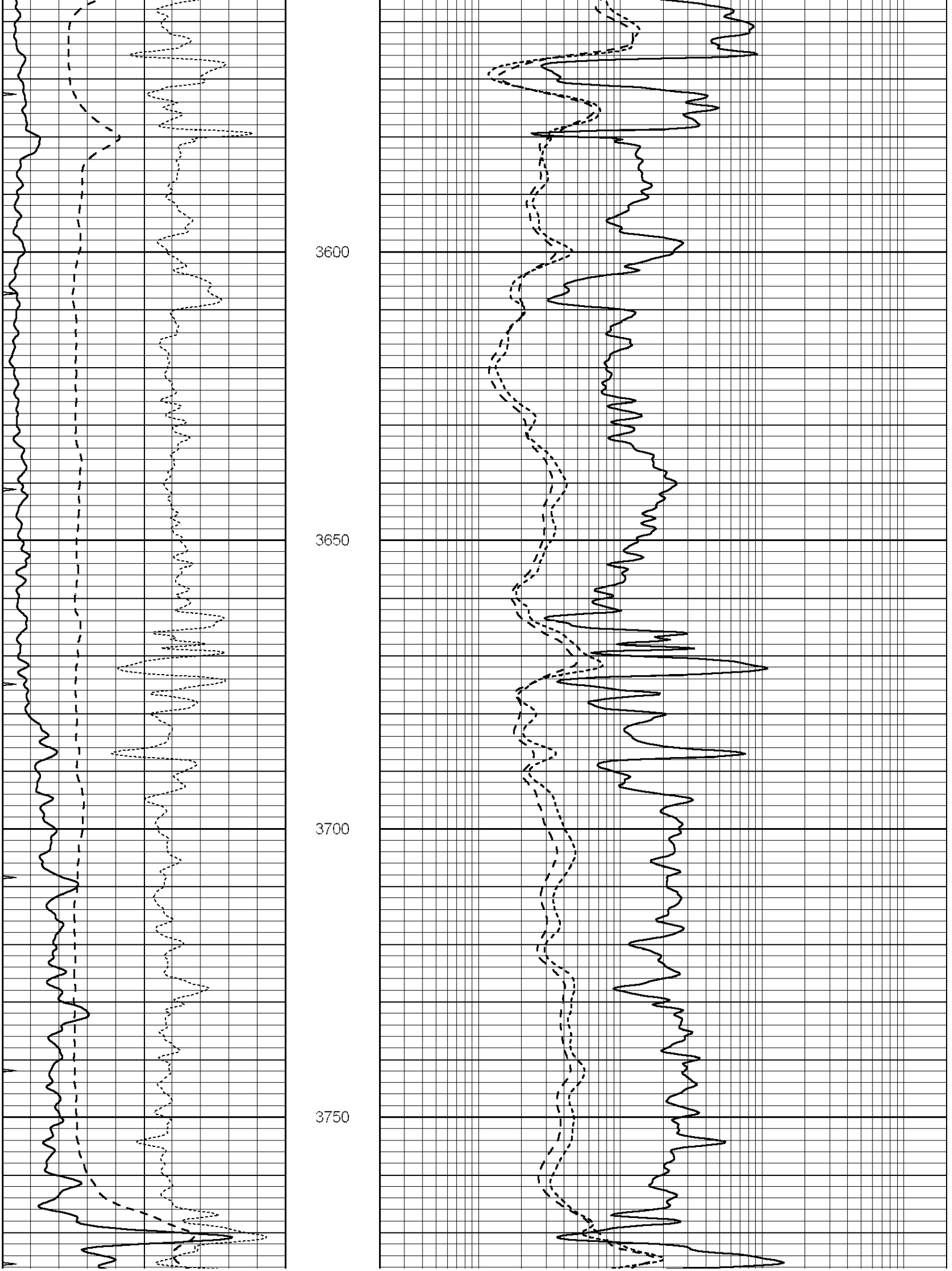
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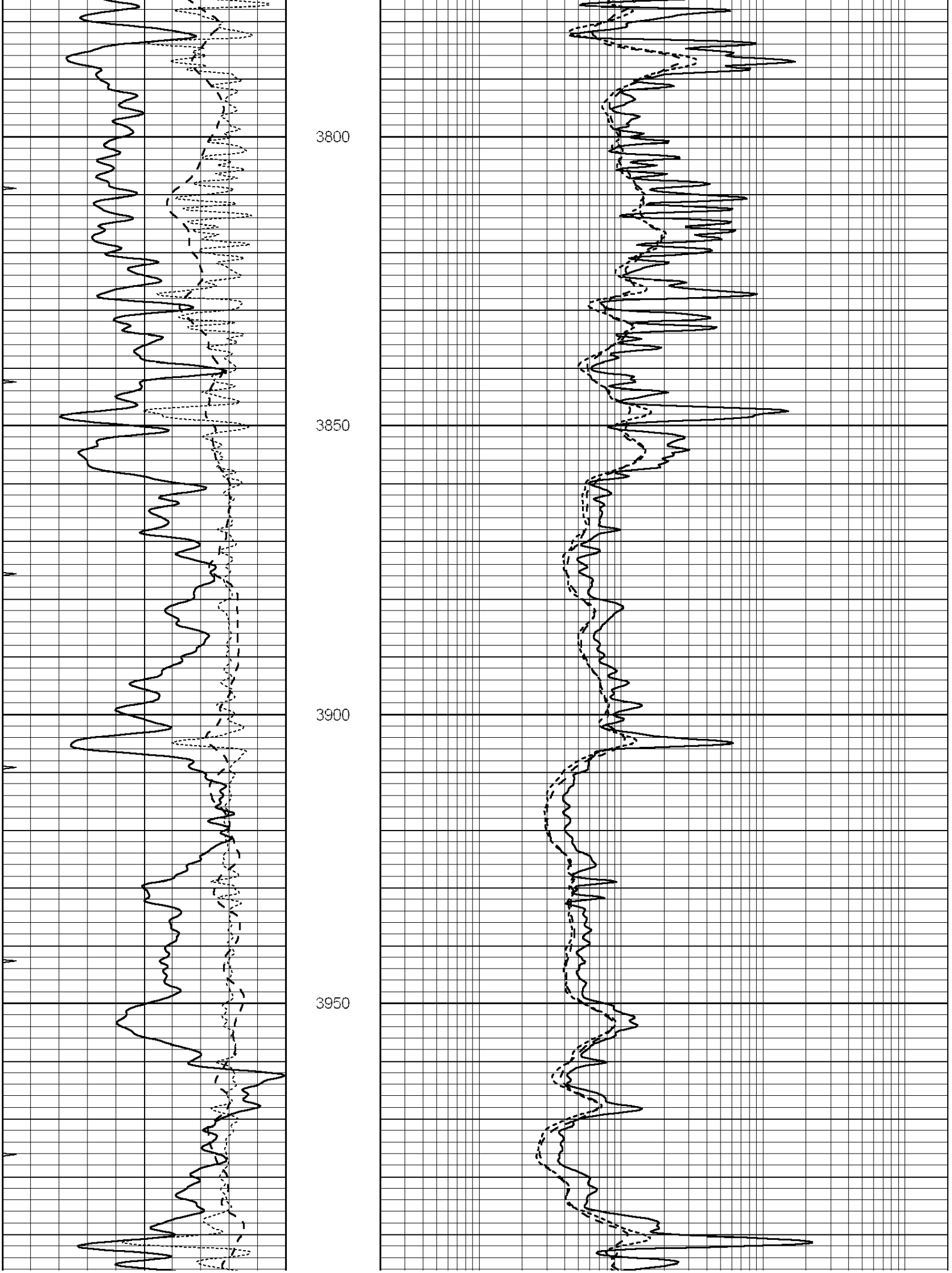
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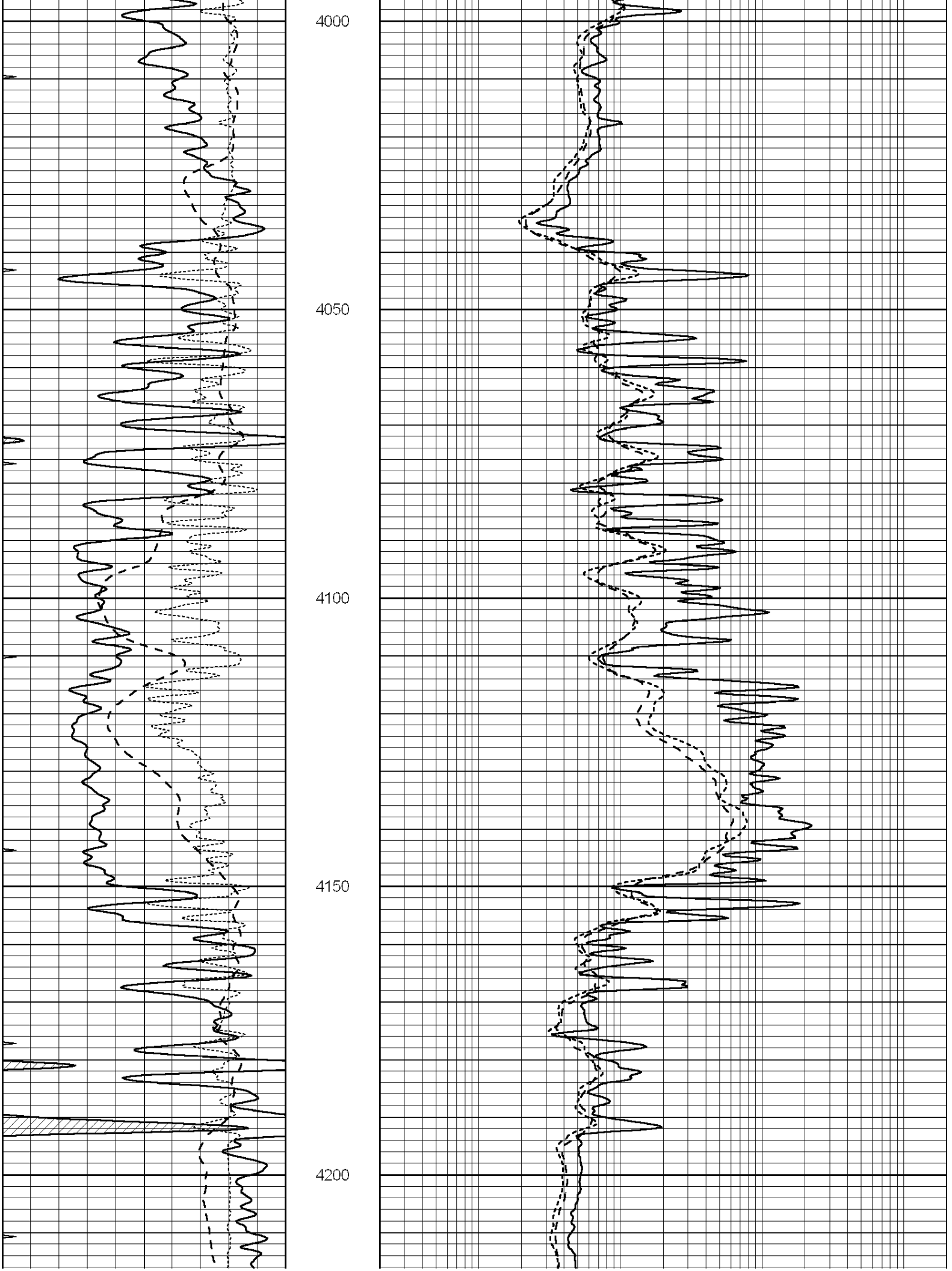
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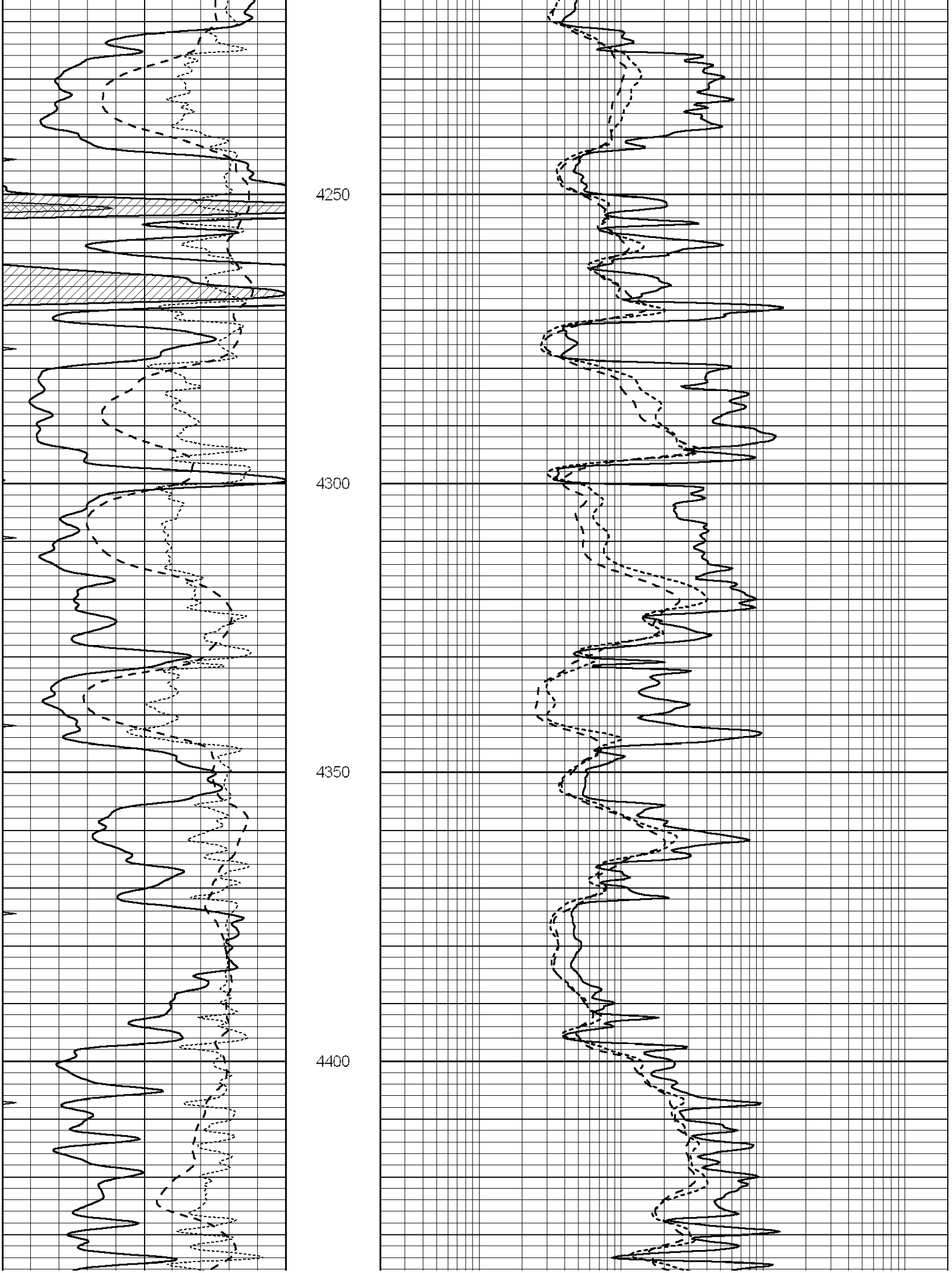
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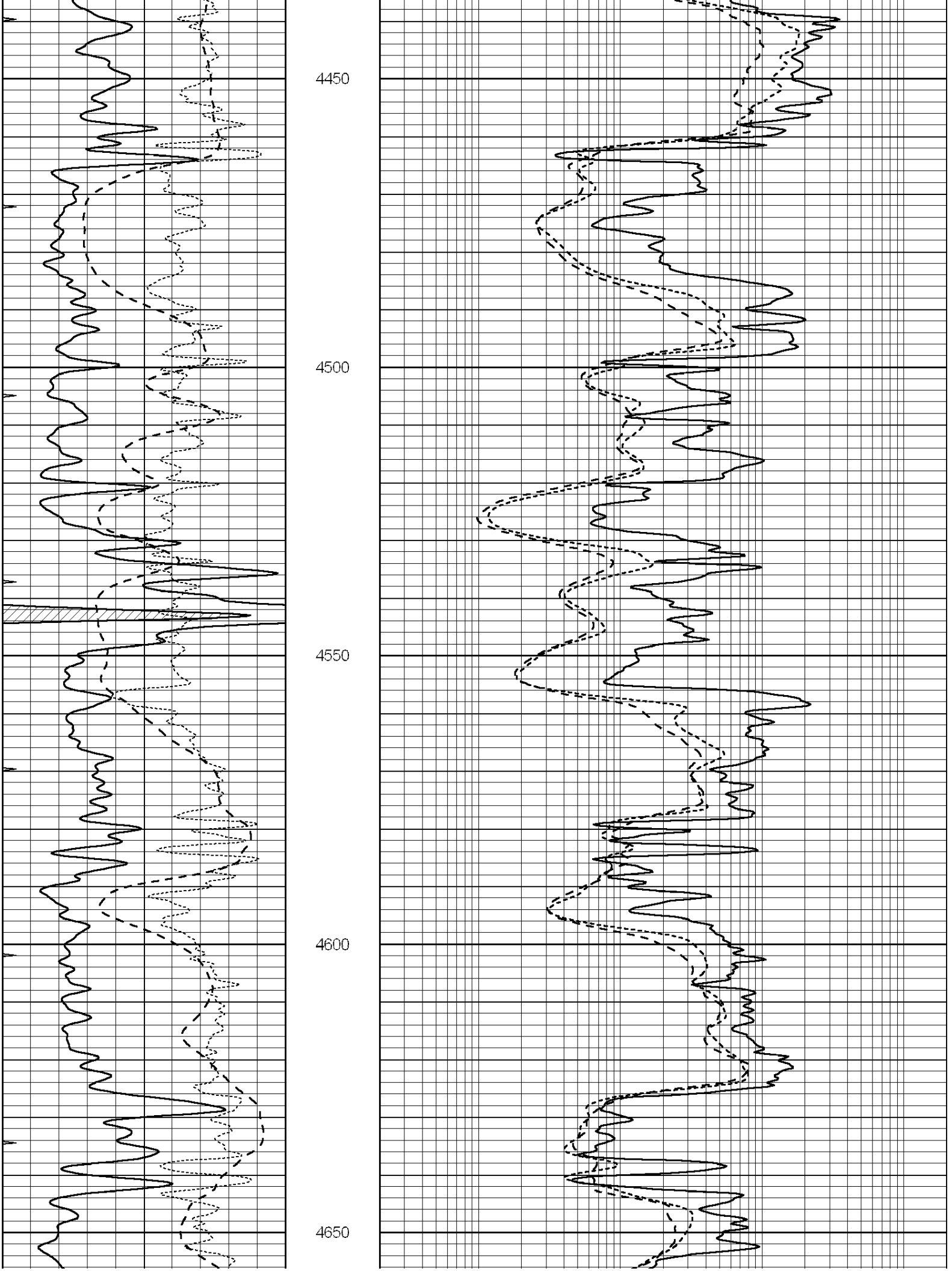
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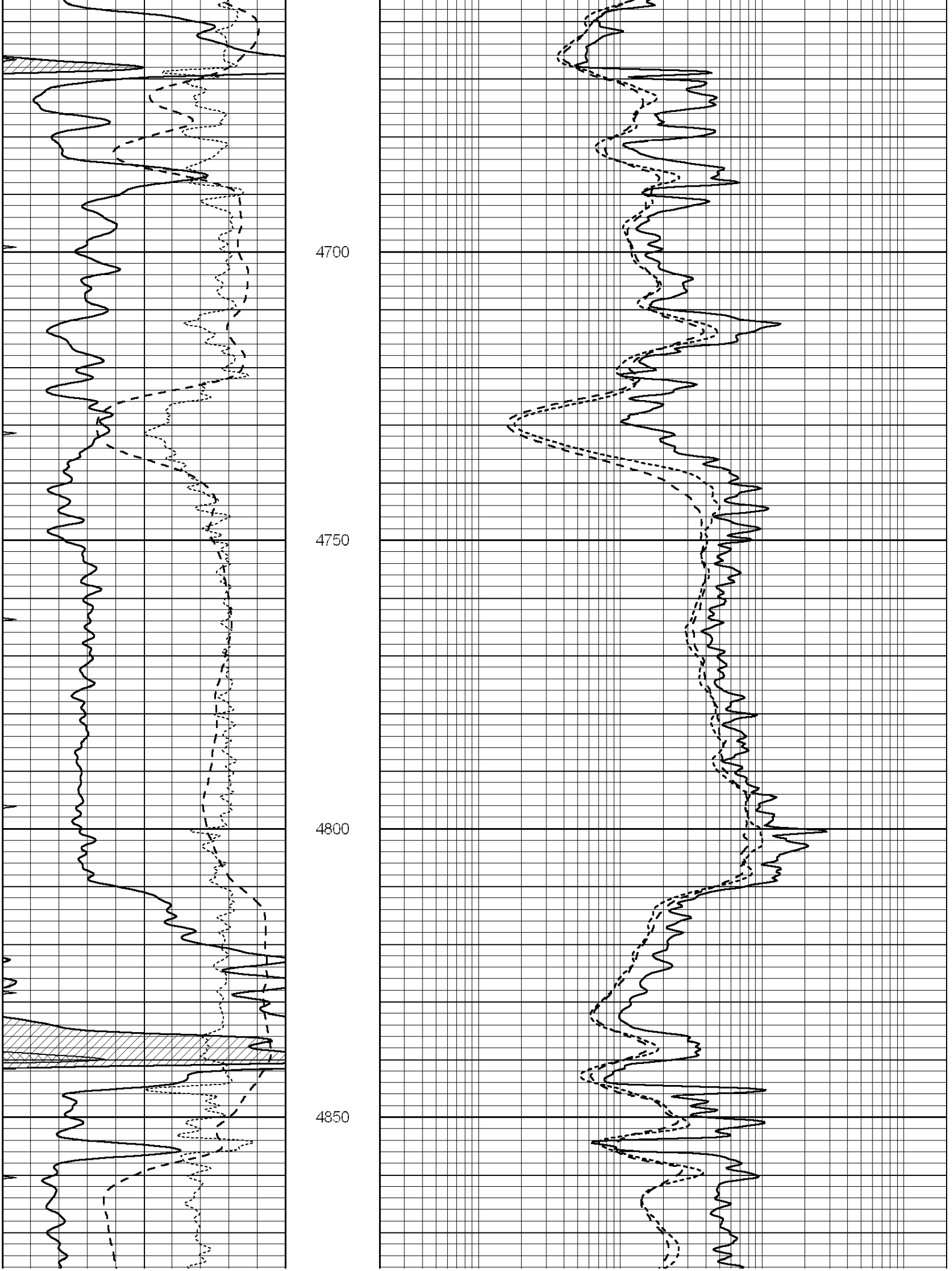
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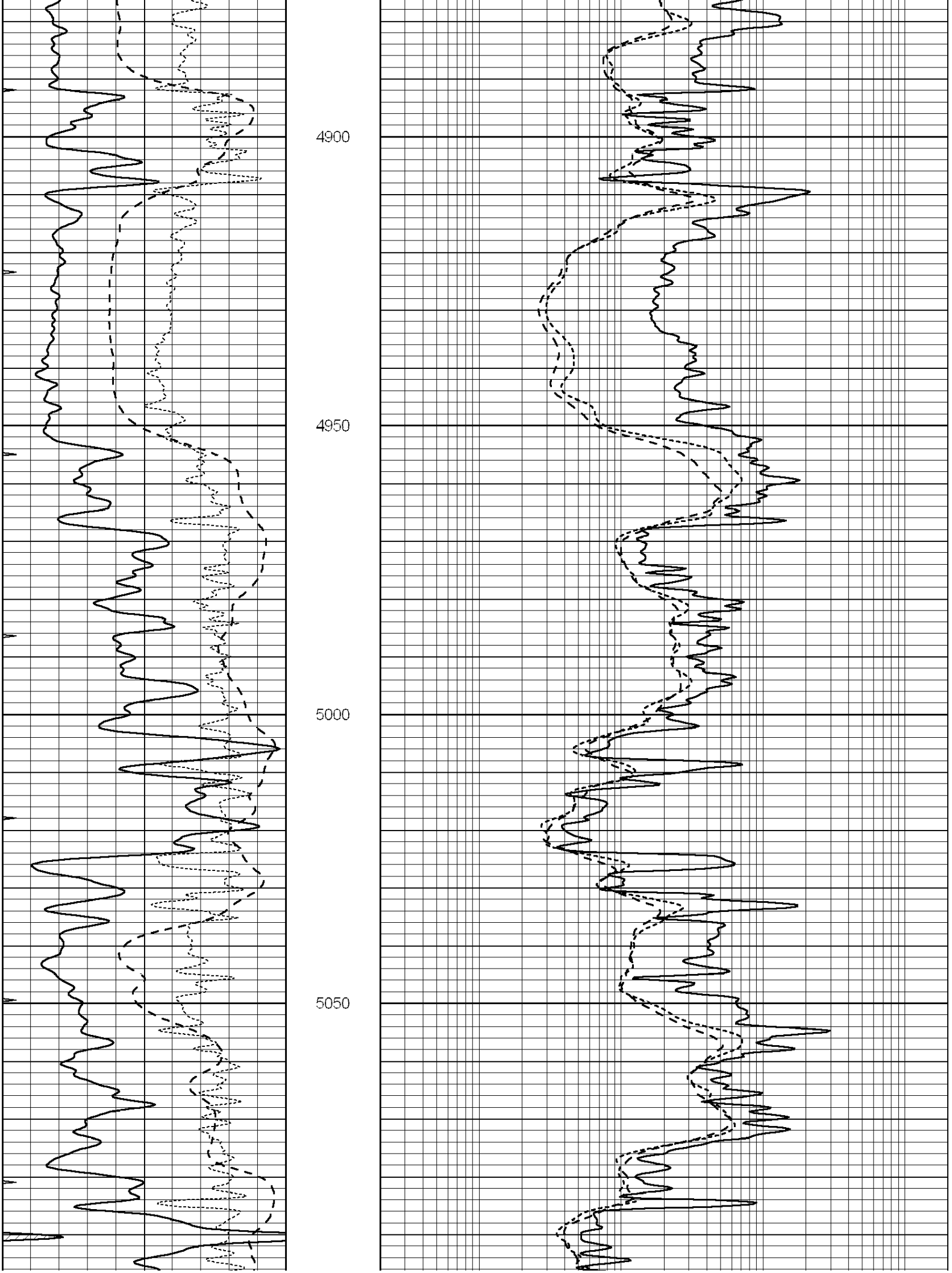
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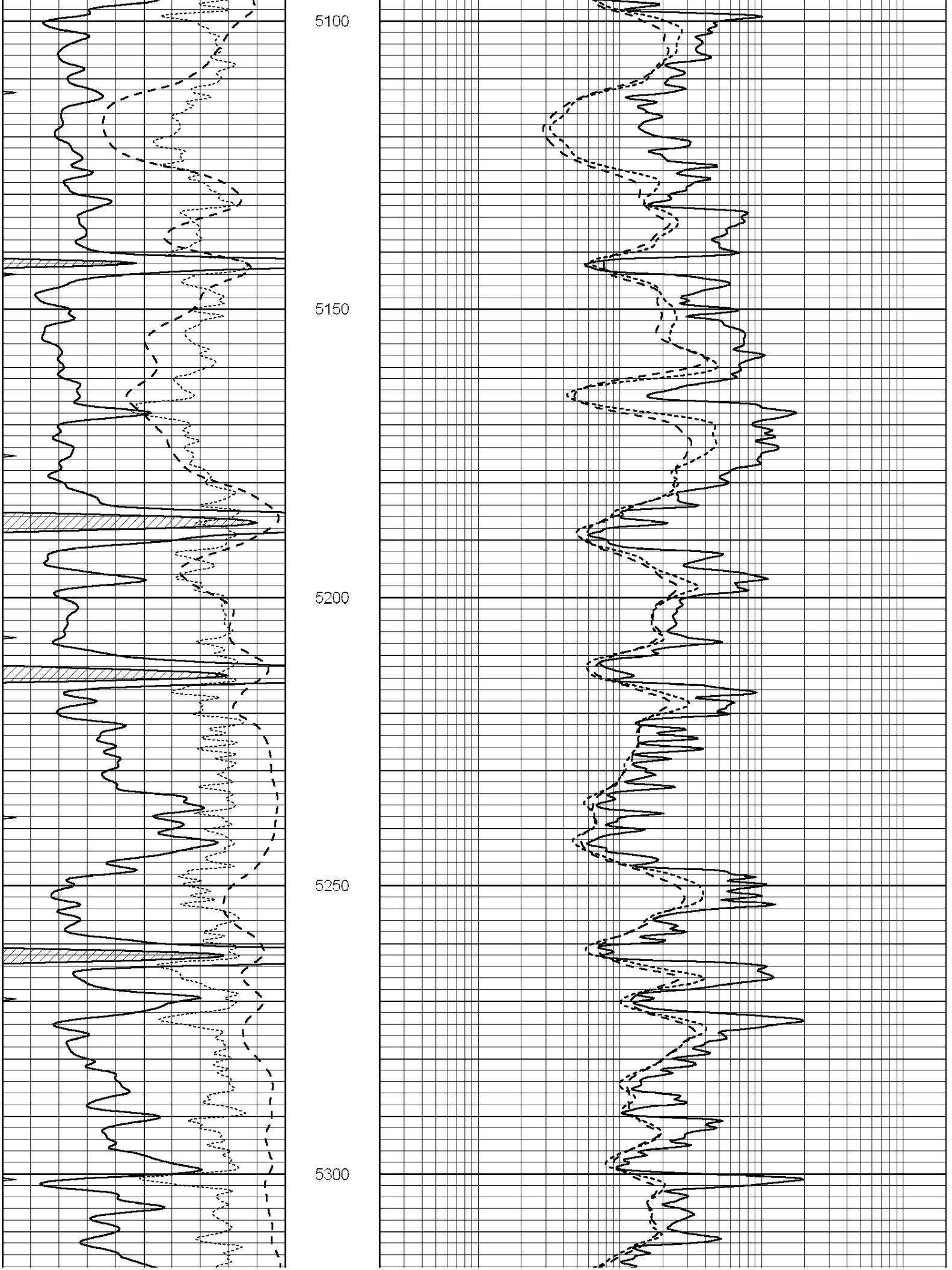
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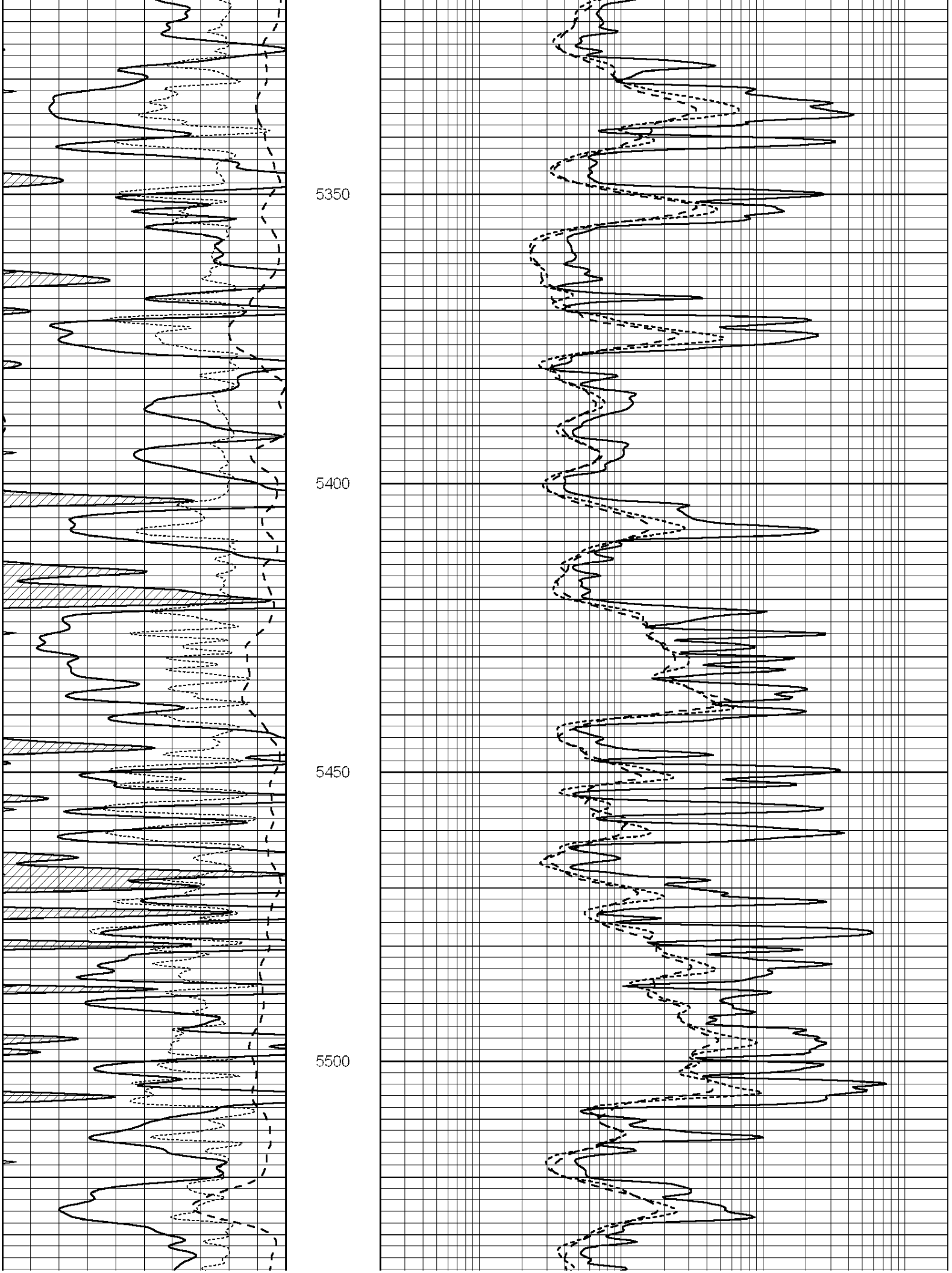
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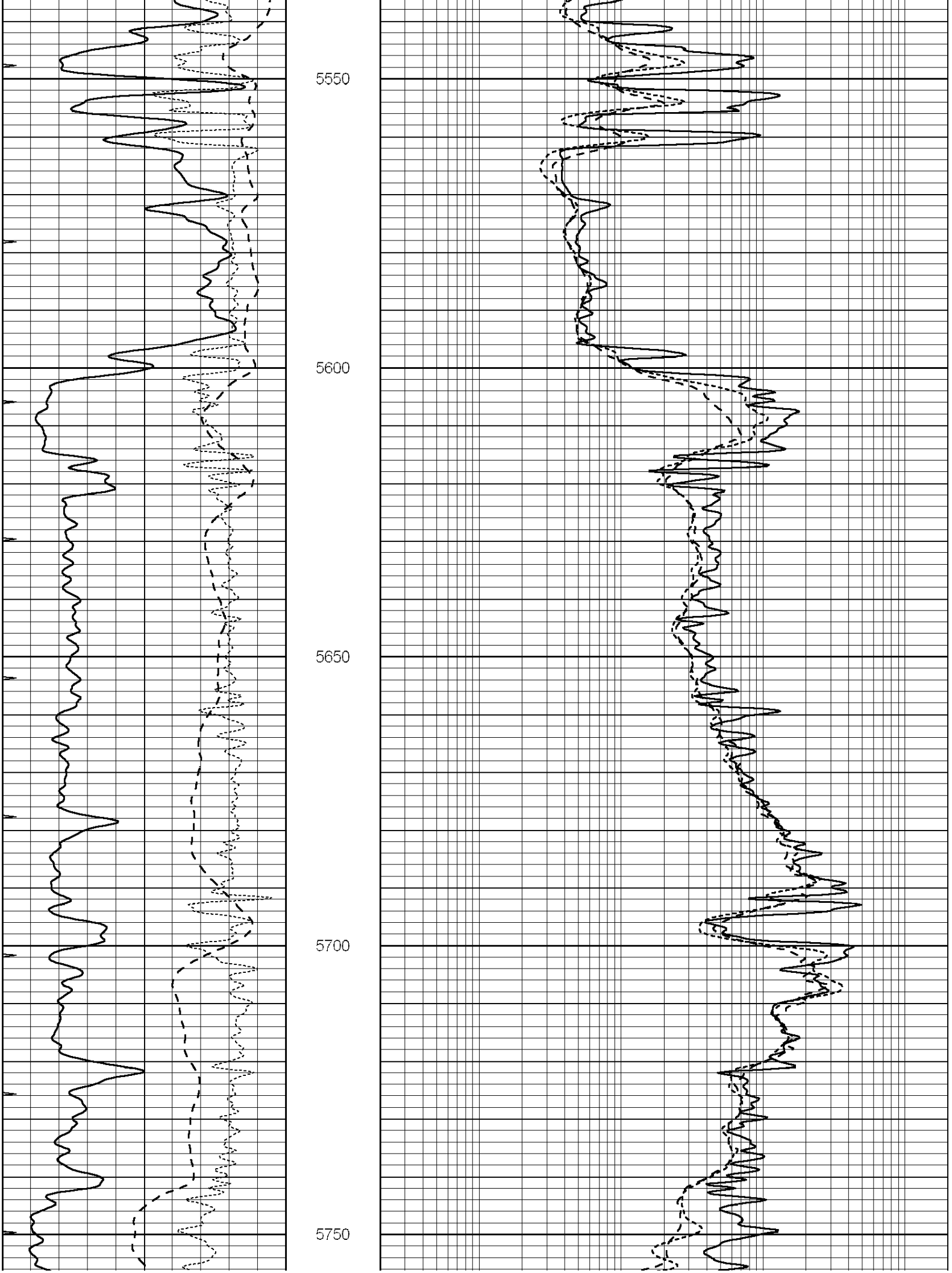
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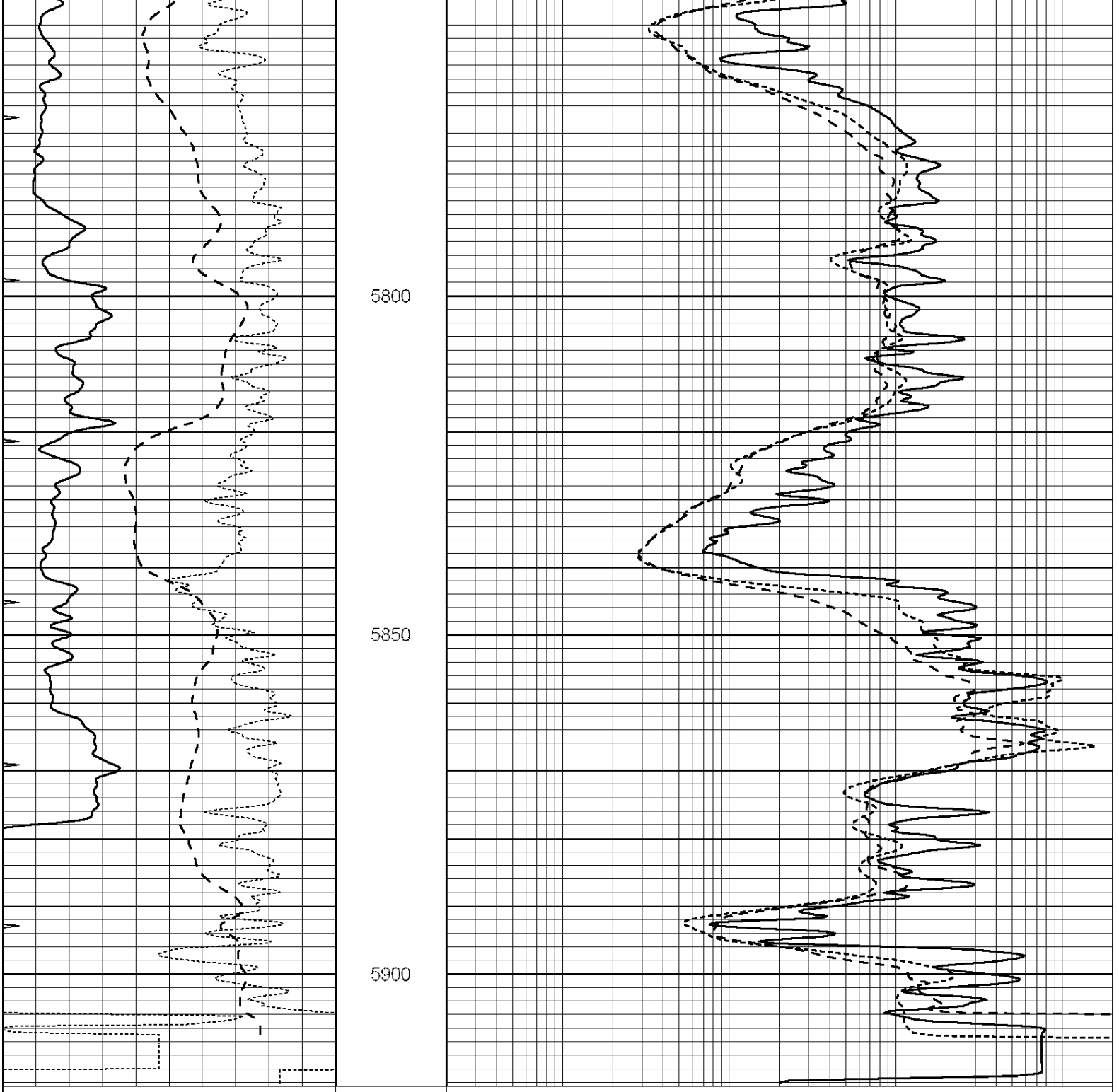


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

NABORS
COMPLETION & PRODUCTION SERVICES CO.

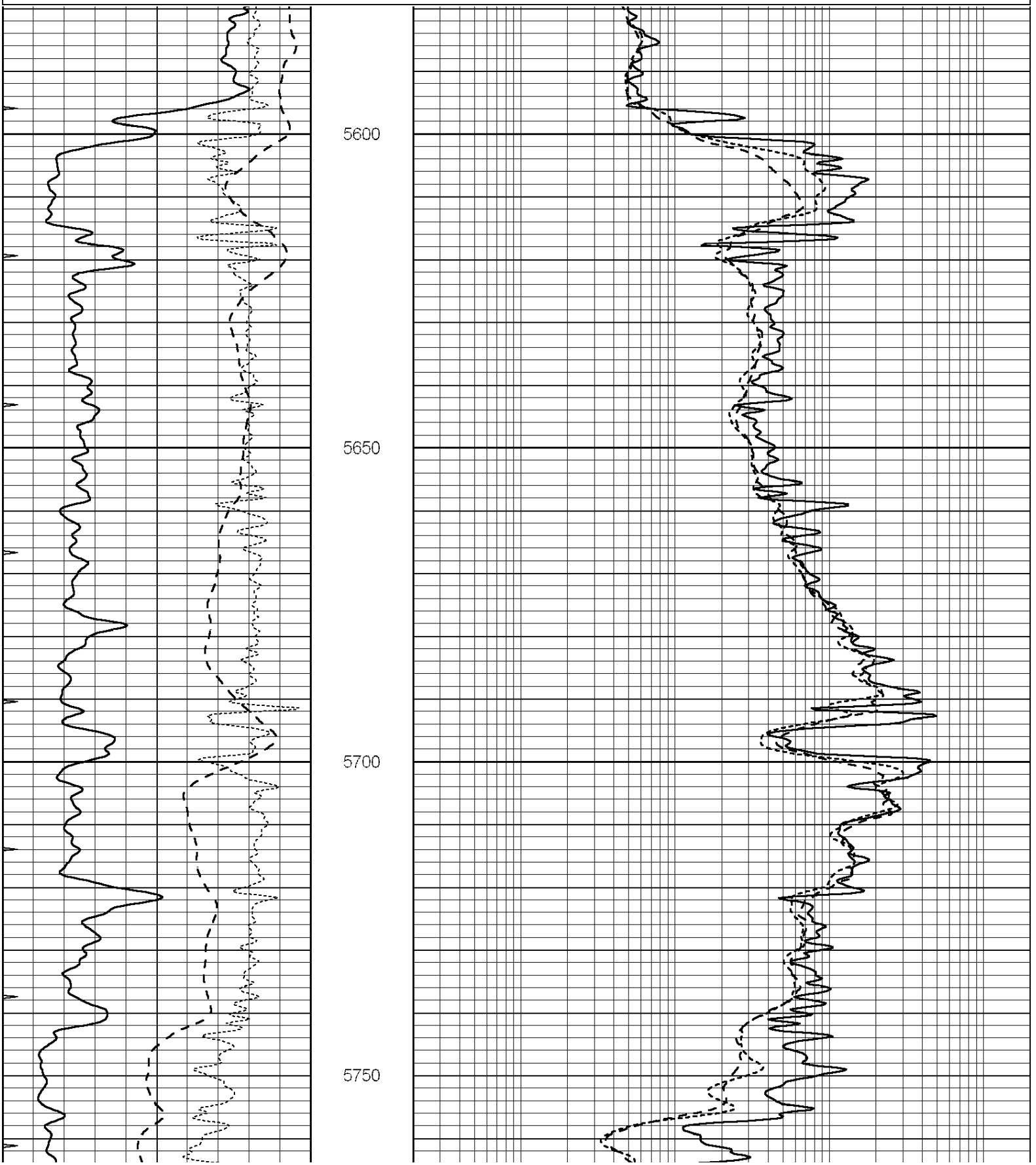
REPEAT SECTION

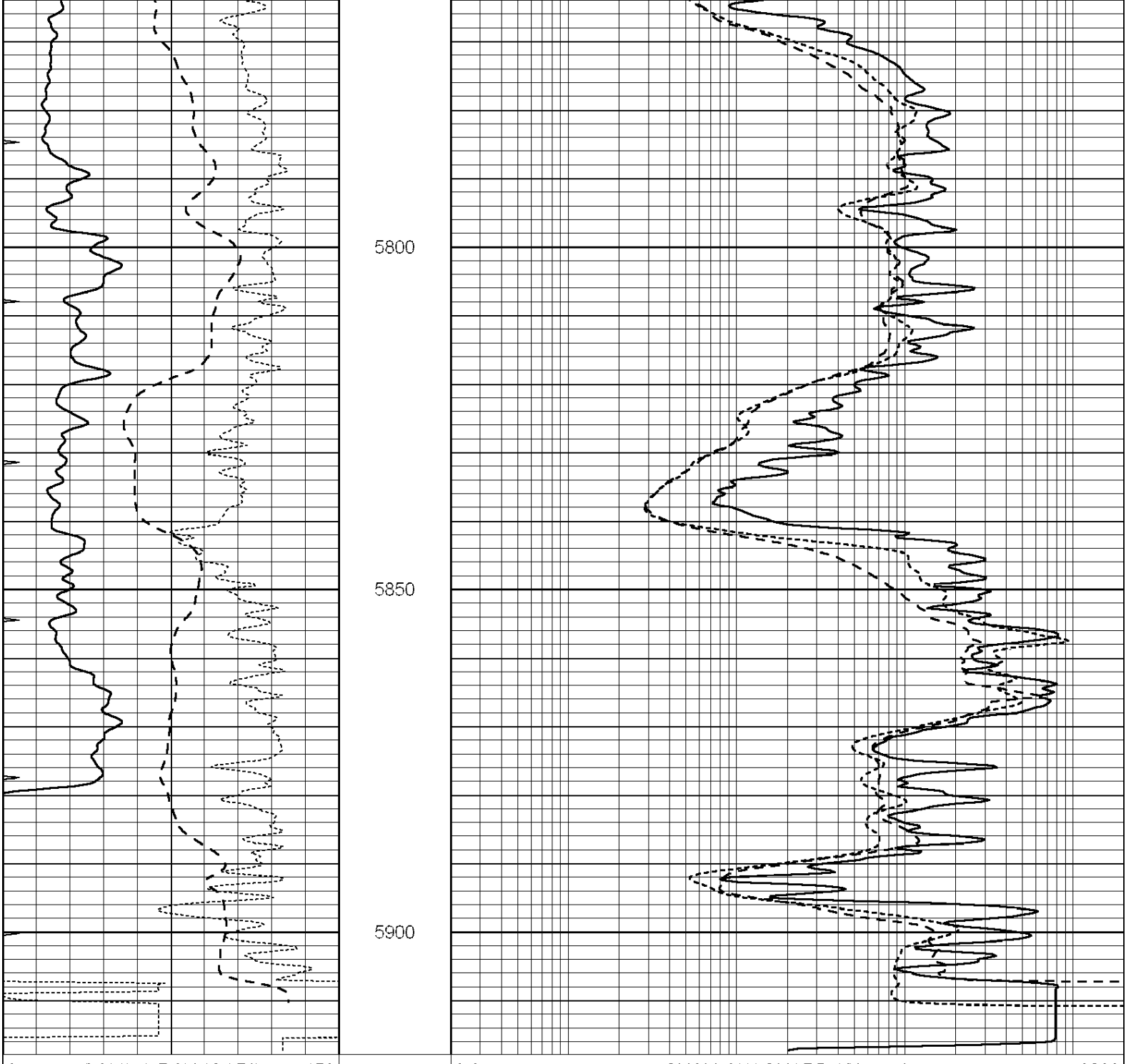
Database File: 010908pe.db
Dataset Pathname: pass2.4

Presentation Format:	dil
Dataset Creation:	Fri May 17 22:56:38 2013 by Calc SOC 120430
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





Calibration Report

Database File:	010908pe.db
Dataset Pathname:	pass3.6
Dataset Creation:	Sat May 18 01:14:28 2013 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Fri May 17 21:33:58 2013
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

After Survey Verification Performed: Mon Jul 26 12:02:00 2010

Surface Calibration

Loop:	Readings Air	Readings Loop		References Air	References Loop		Results m	Results b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	-9.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-13.000
Internal:	**Zero**	**Cal**		**Zero**	**Cal**		**m**	**b**
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings Zero	Readings Cal		References Zero	References Cal		Results m'	Results b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

	Readings Zero	Readings Cal		Targets Zero	Targets Cal		Results m'	Results 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 Sun Aug 15 09:48:41 2010

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

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: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070559
Tool Model: OPEN_GR
Performed: Mon Apr 15 10:30:52 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3500 GAPI/cps