SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company ATLAS OPERATING, LLC.
Well HOBBSIEFKIN #2-11
Field FALL CREEK
County SUMNER State KANSAS
Location: API # : 15-191-22651-0000
2270' FSL & 1315' FWL
SE - NE - NW - SW
SEC 3 TWP 35S RGE 3W
Permanent Datum GROUND LEVEL Elevation 1139
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL
PE/MEL

Elevation
K.B. 1149
D.F. 1147
G.L. 1139

Date	5/29/12					
Run Number	ONE					
Depth Driller	4990					
Depth Logger	4990					
Bottom Logged Interval	4988					
Top Log Interval	0					
Casing Driller	8 5/8" @ 393					
Casing Logger	393					
Bit Size	7 7/8					
Type Fluid in Hole	CHEMICAL MUD					
Density / Viscosity	9.6/58	CHLORIDES 12,000 PPM				
pH / Fluid Loss	9.0/20.0					
Source of Sample	FLOWLINE					
Rm @ Meas. Temp	0.32 @ 100F					
Rmf @ Meas. Temp	0.24 @ 100F					
Rmc @ Meas. Temp	0.38 @ 100F					
Source of Rmf / Rmc	MEASURED					
Rm @ BHT	0.26 @ 125F					
Time Circulation Stopped	2 HOURS					
Time Logger on Bottom						
Maximum Recorded Temperature	125F					
Equipment Number	680					
Location	HAYS, KS.					
Recorded By	JEFF GRONEWEG					
Witnessed By	SAMAN SHARIFAIE	PAT DEENIHAN				

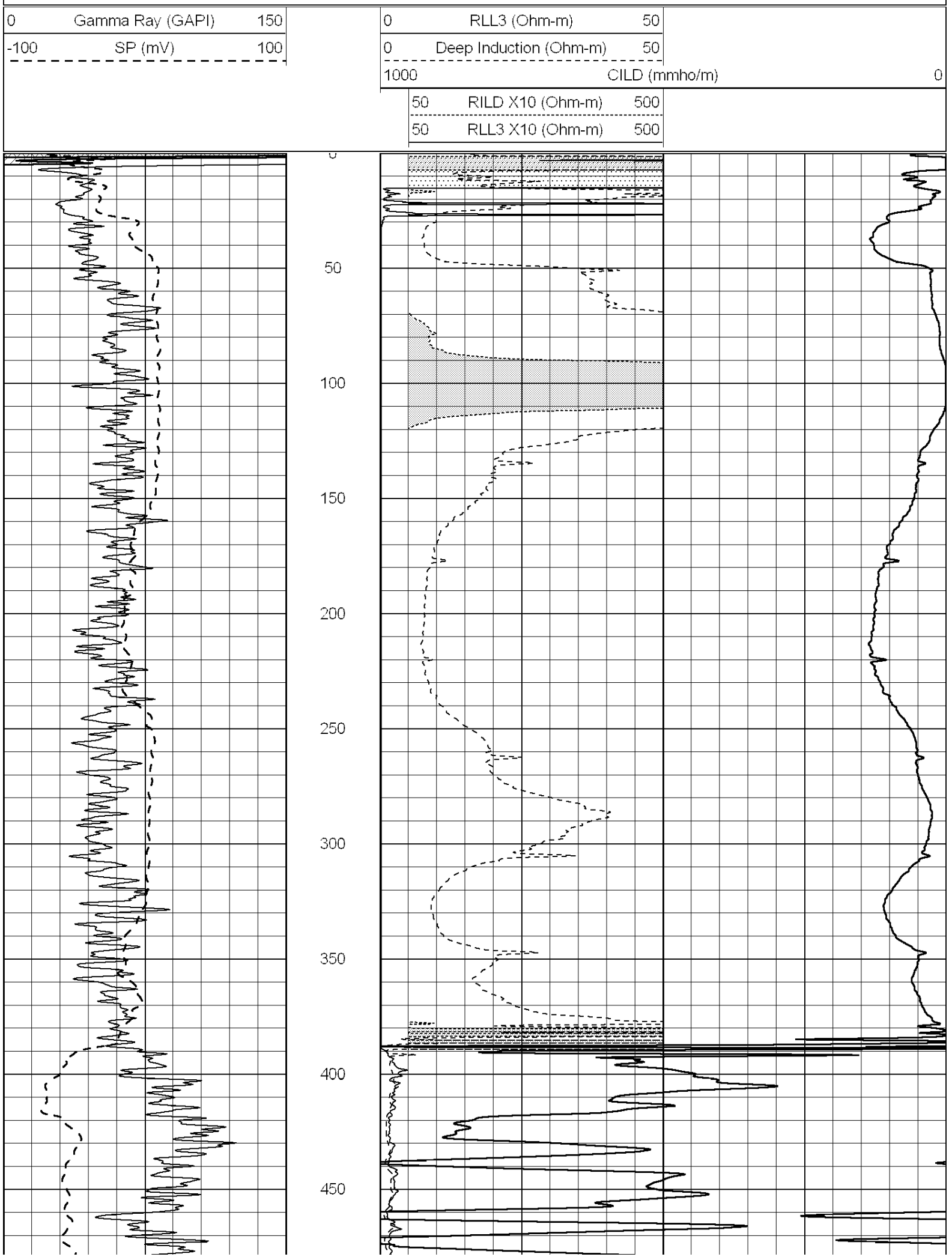
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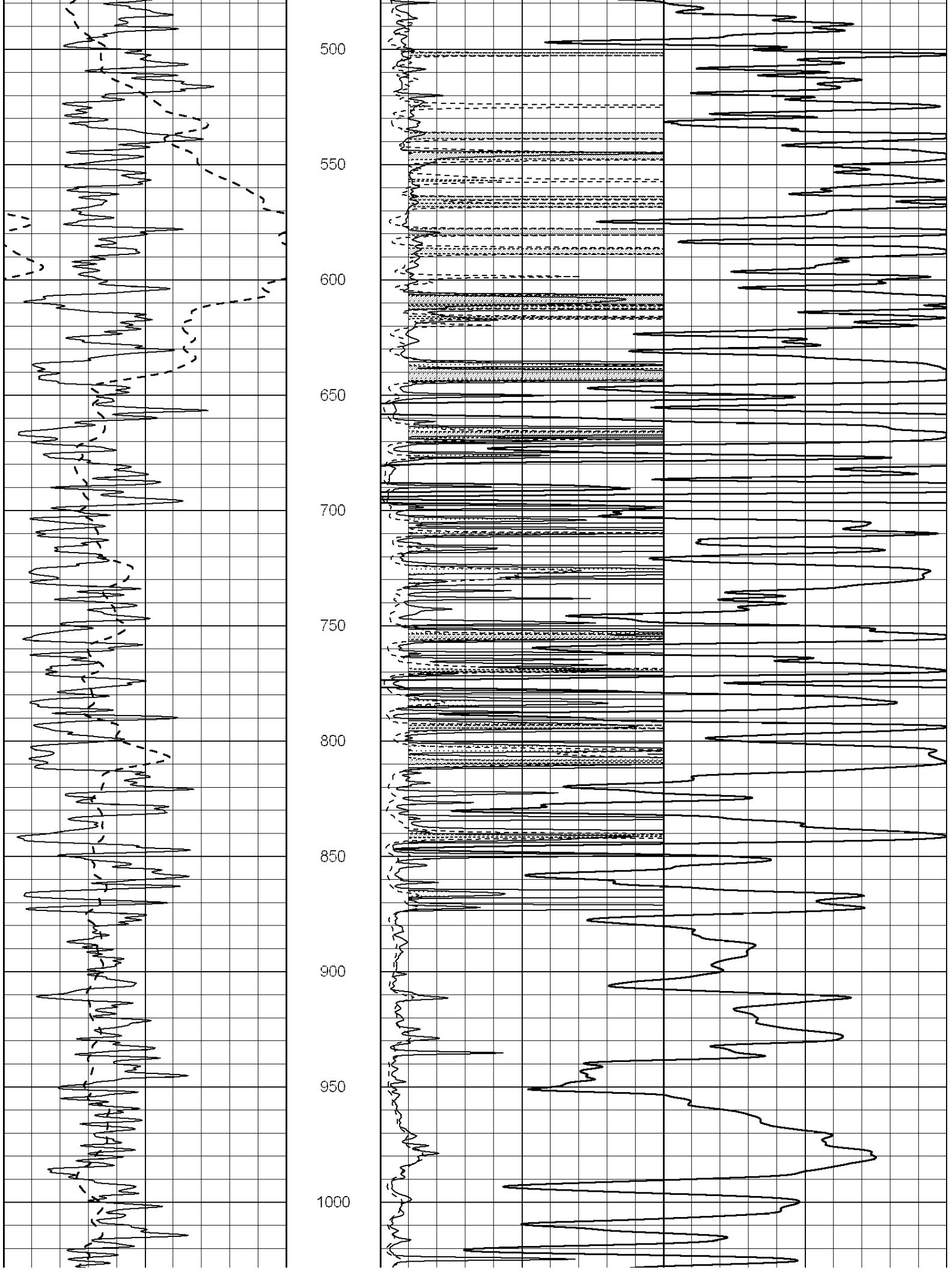
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

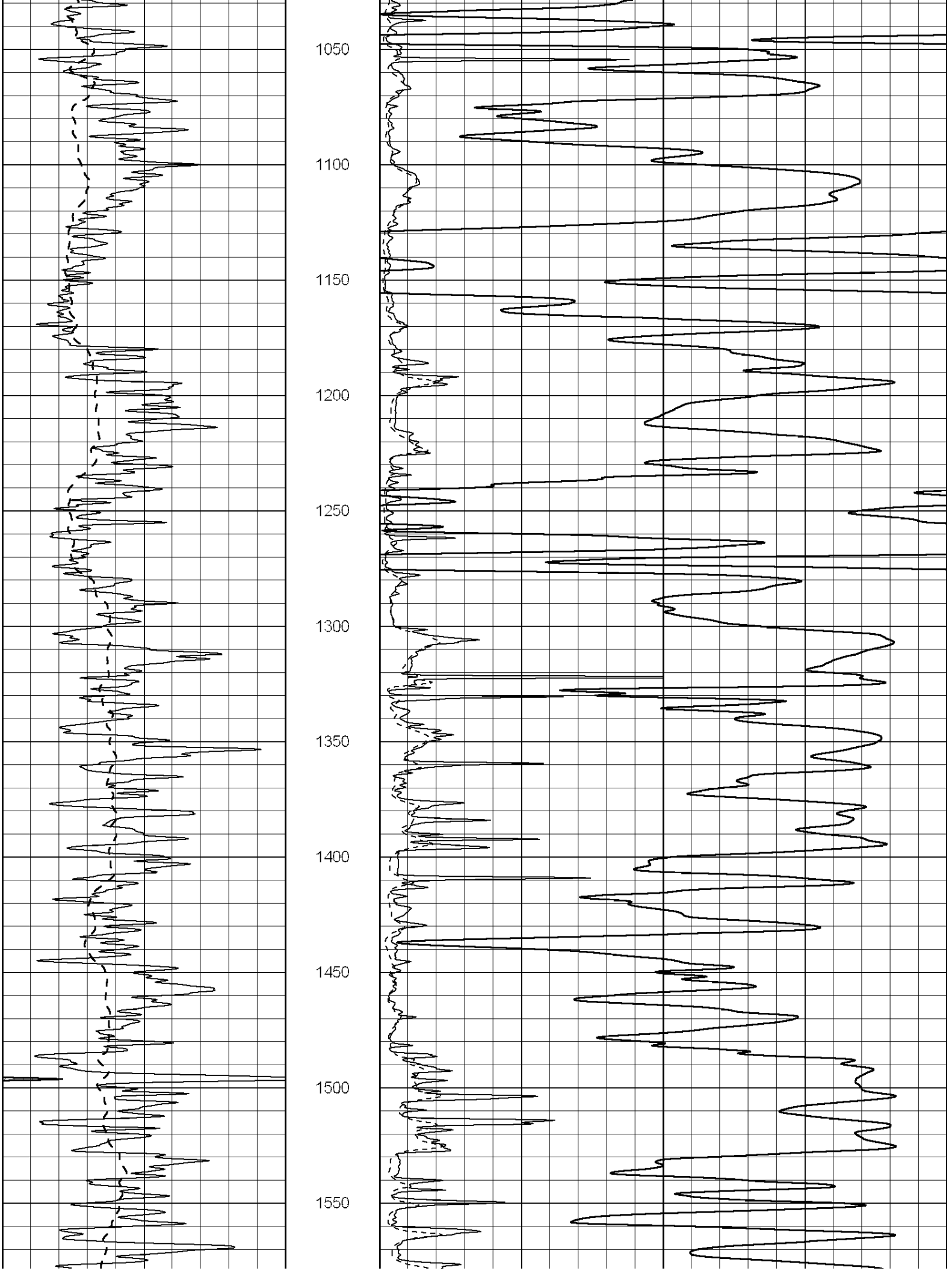
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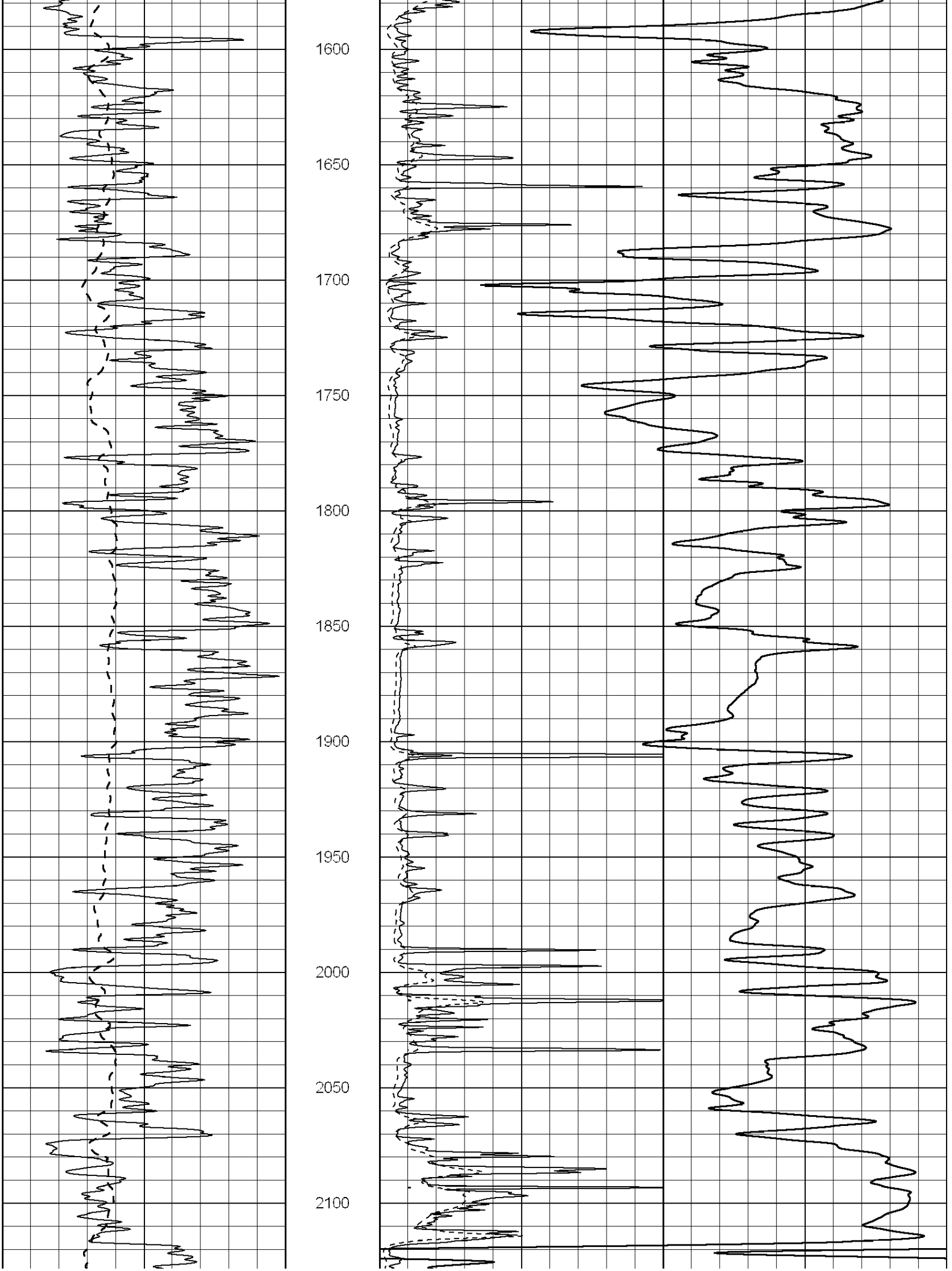
THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
CALDWELL, KS INTERESCTION HWY 49 & 81 - 4 BLOCKS NORTH TO AVE E
1 MILE WEST FROM WEST EDGE OF TOWN - SOUTH INTO

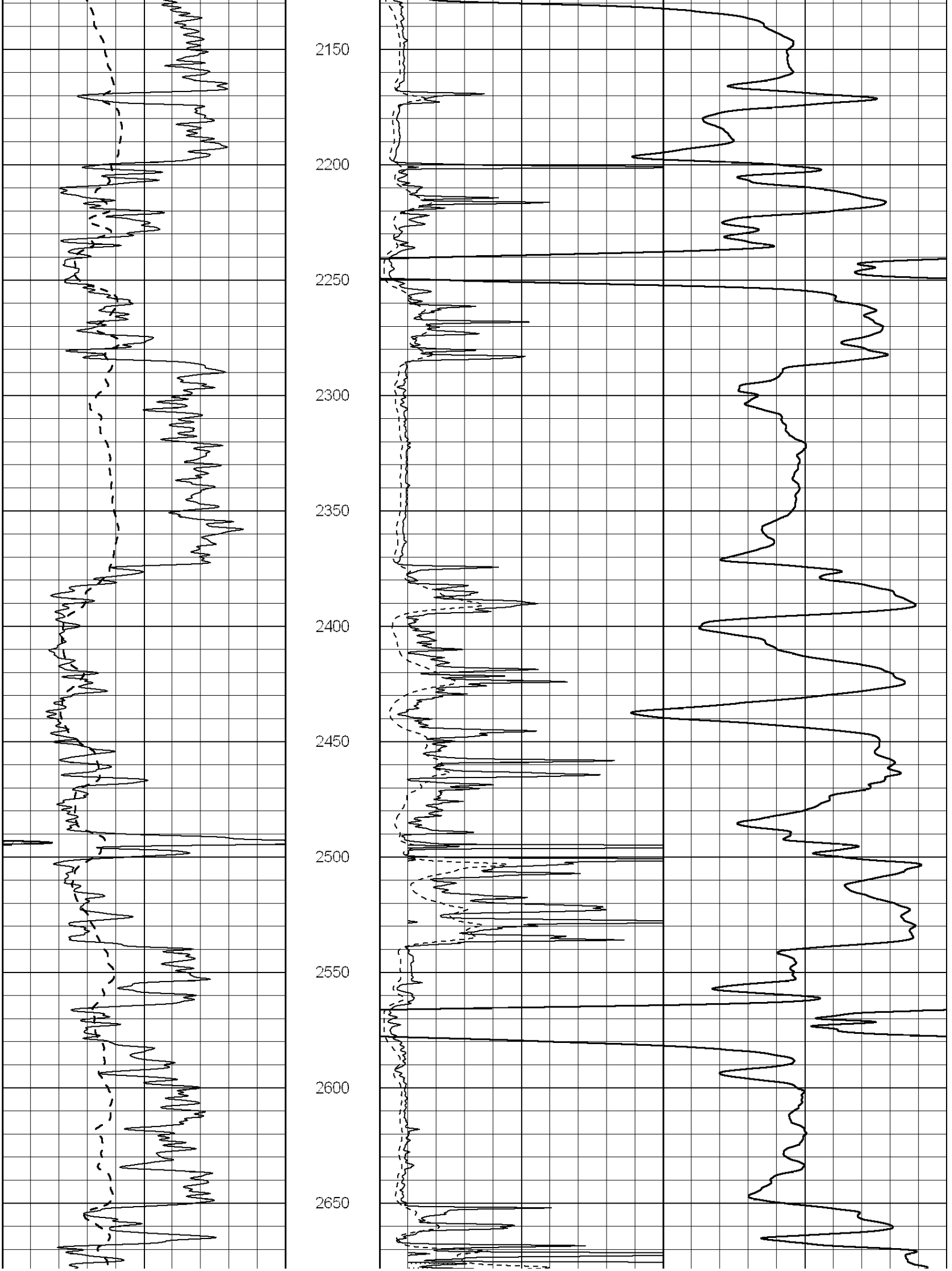
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Charted by: Depth in Feet scaled 1:600

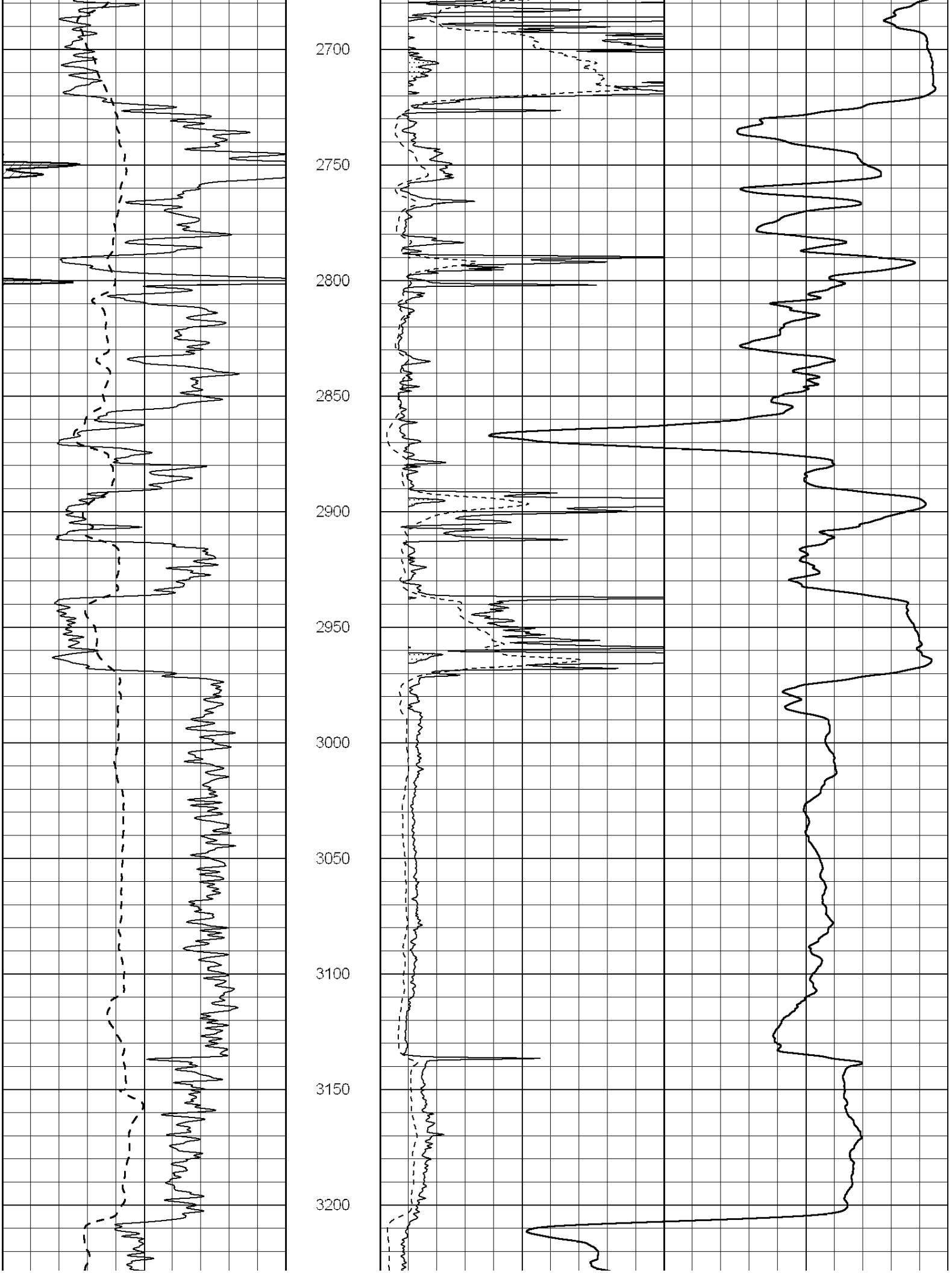

0 Gamma Ray (GAPI) 150
-100 SP (mV) 100
0 RLL3 (Ohm-m) 50
0 Deep Induction (Ohm-m) 50
1000 CILD (mmho/m) 0
50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500
0
50
100
150
200
250
300
350
400
450

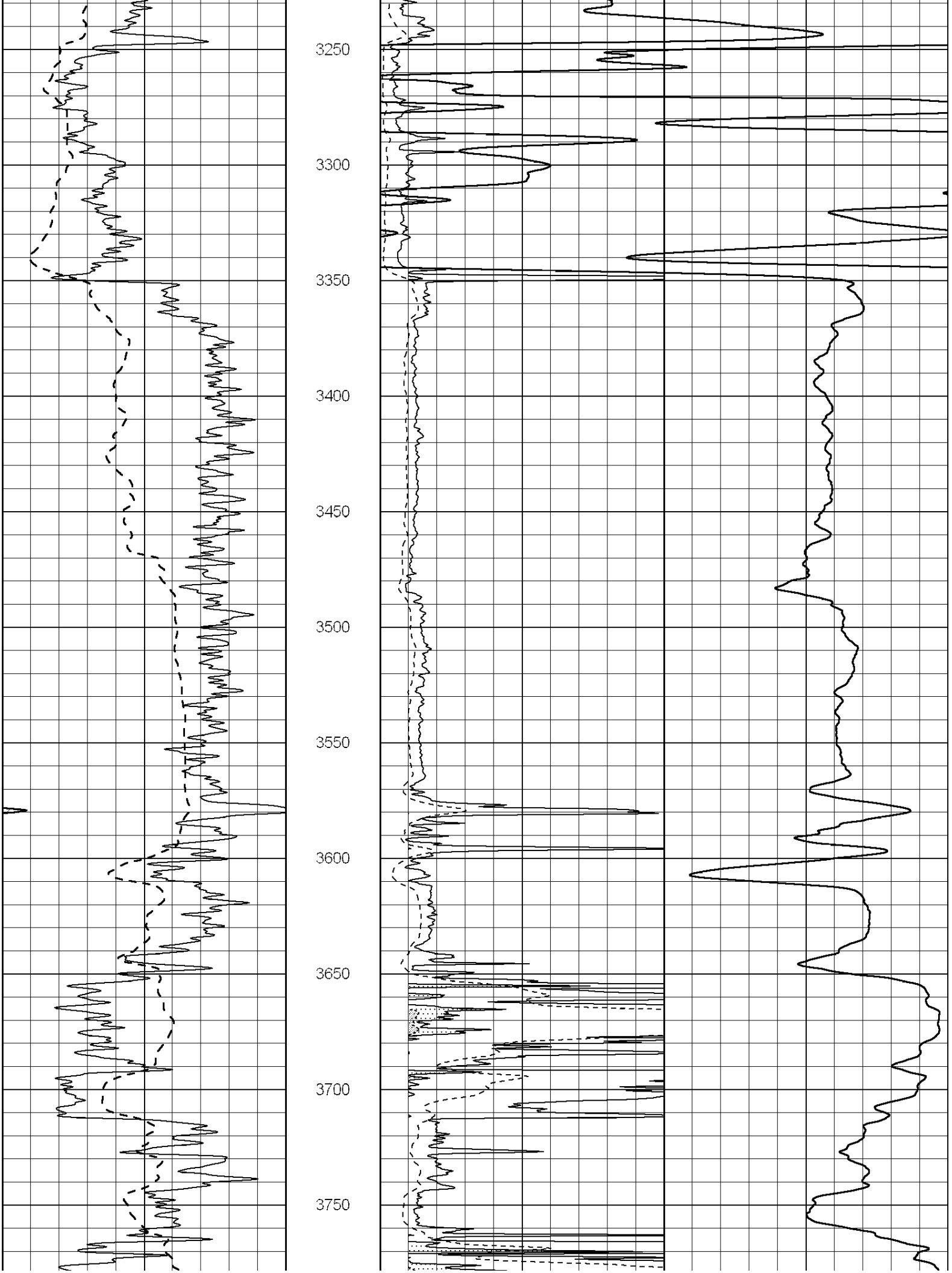

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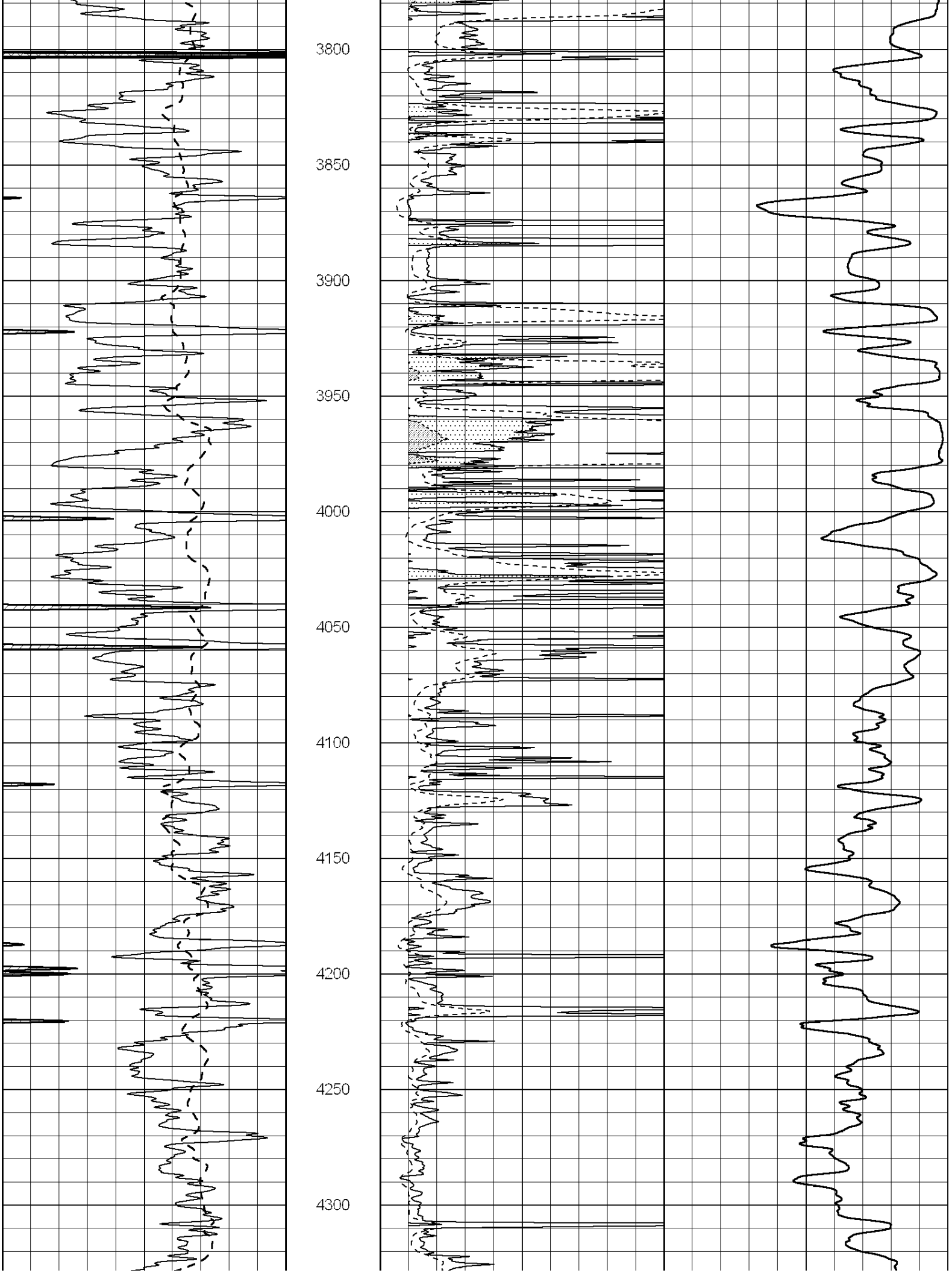

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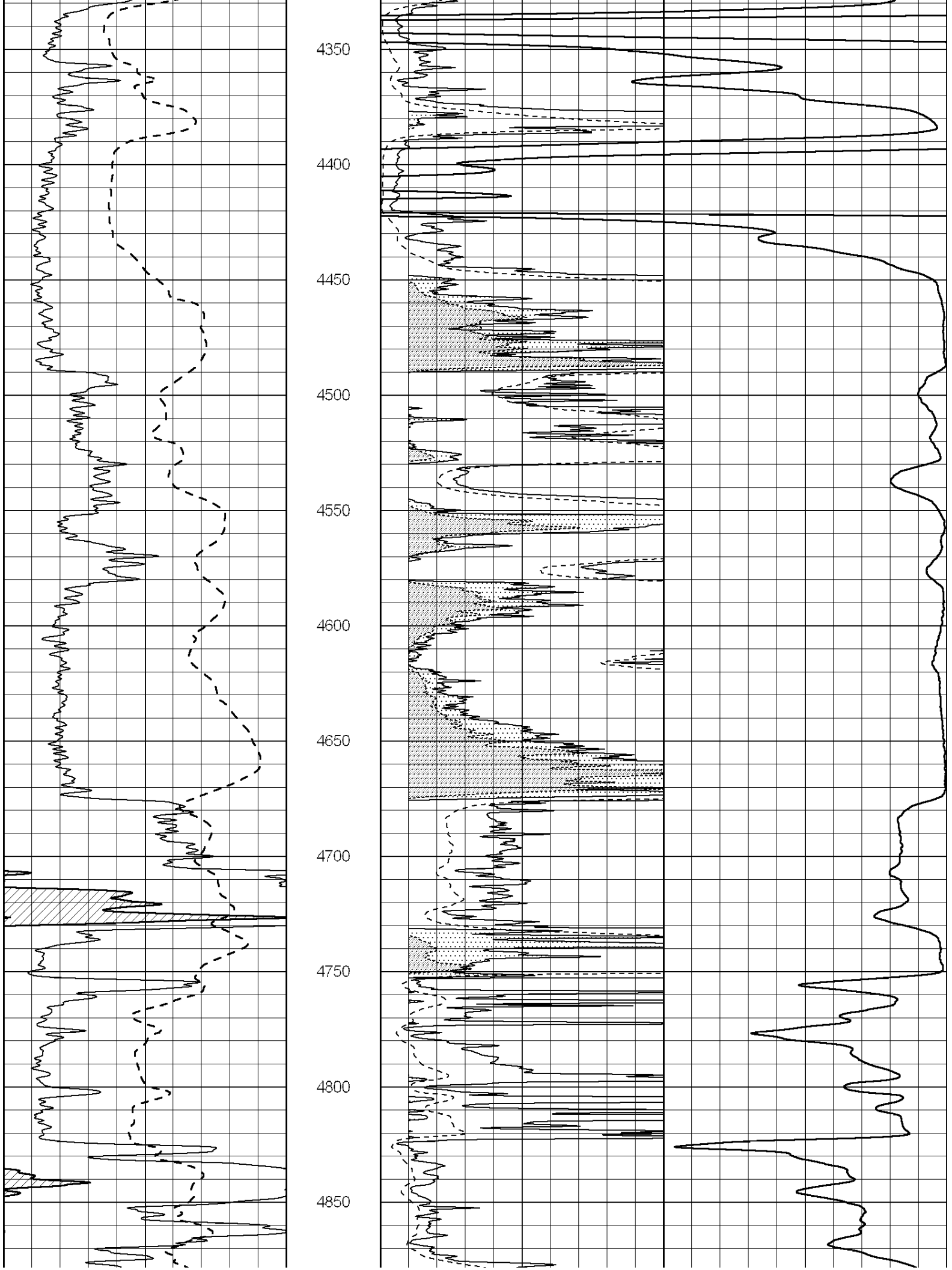

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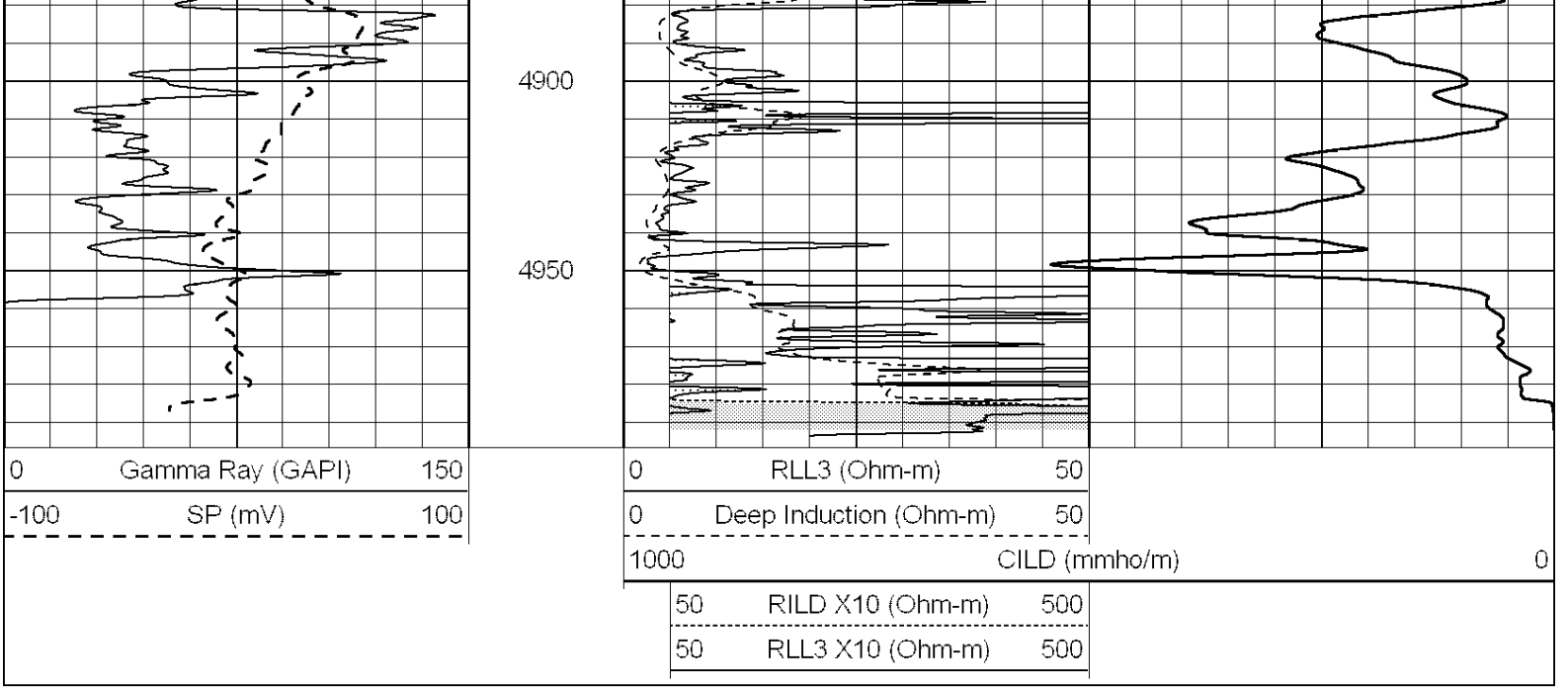

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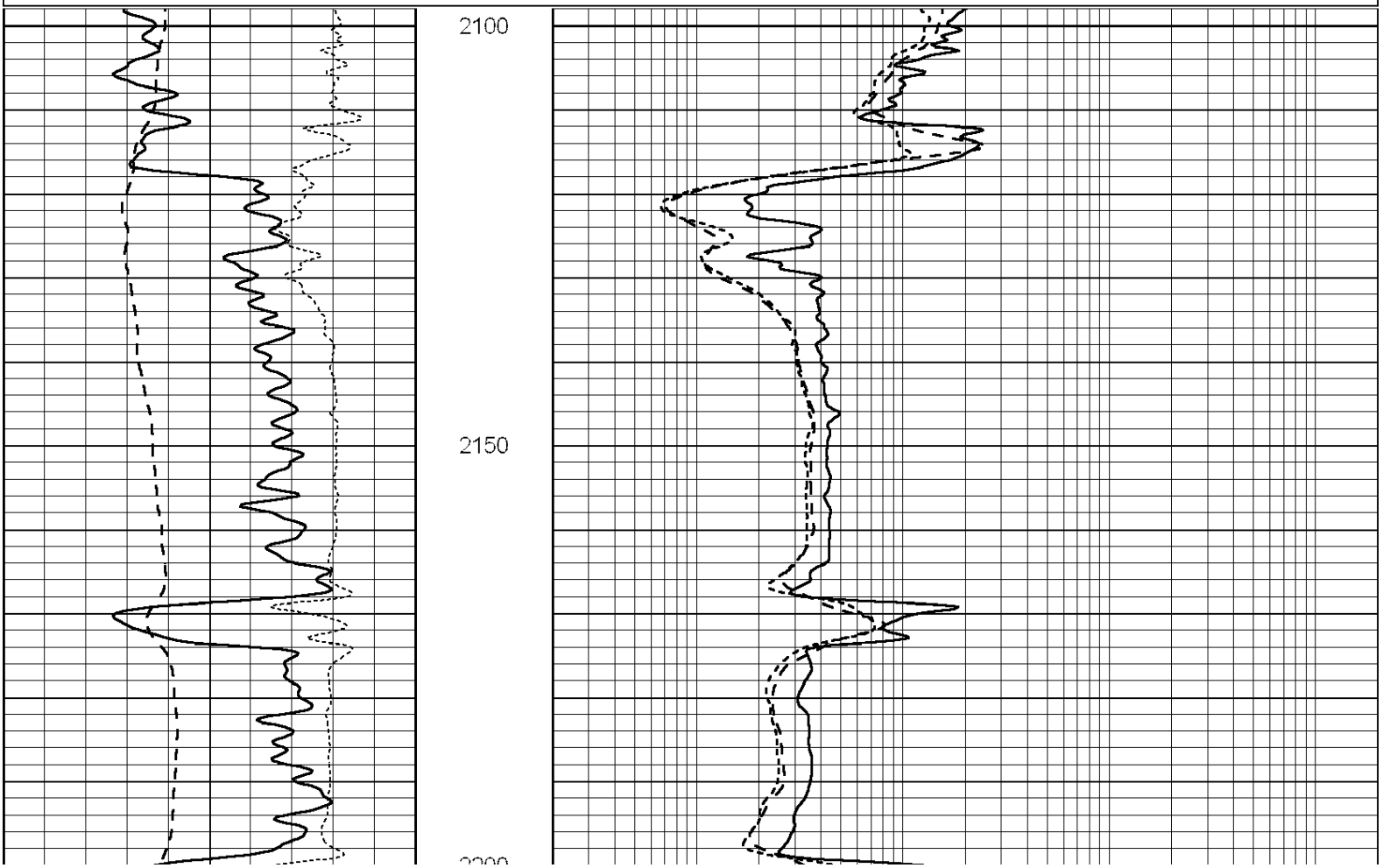

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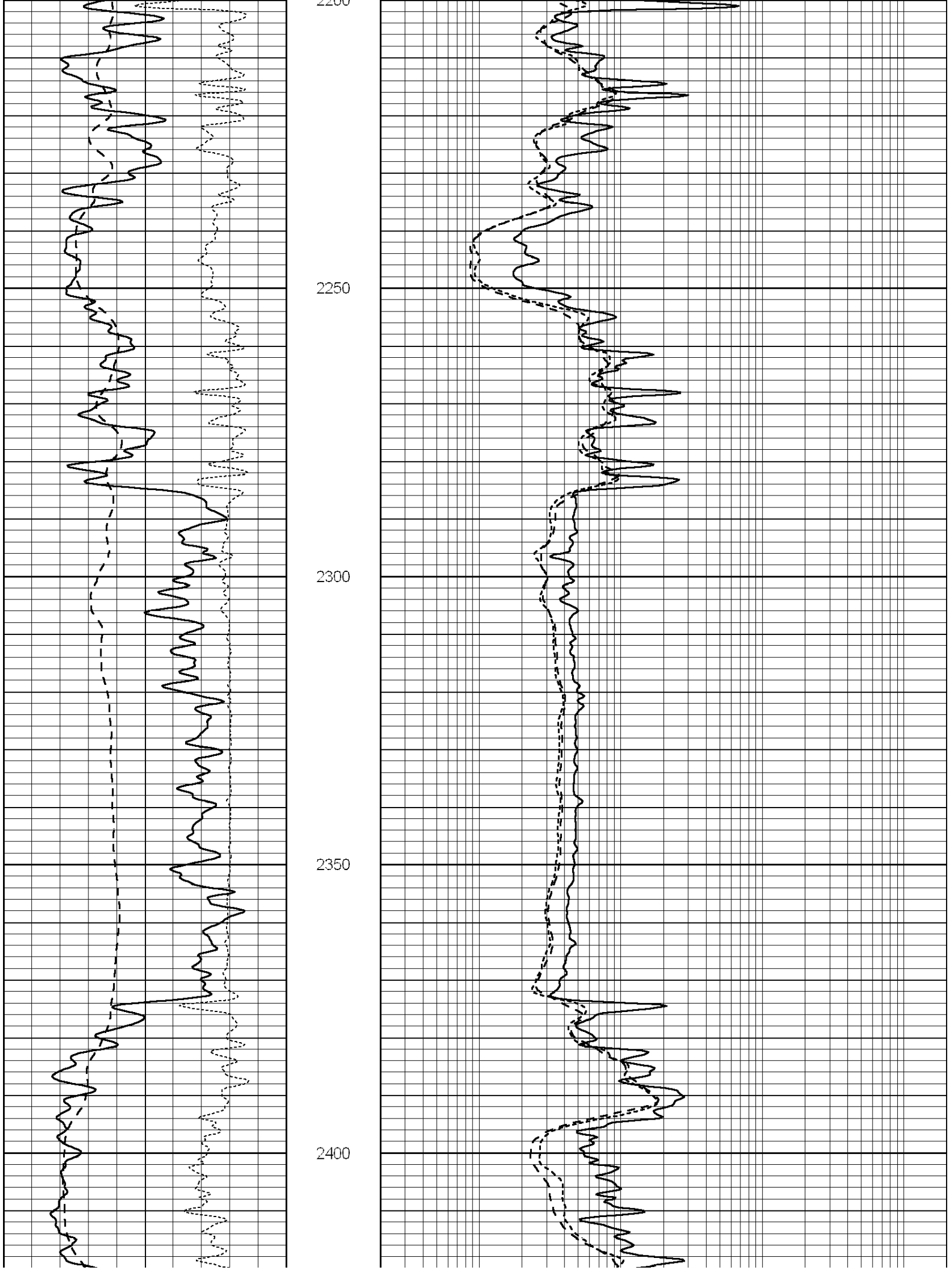

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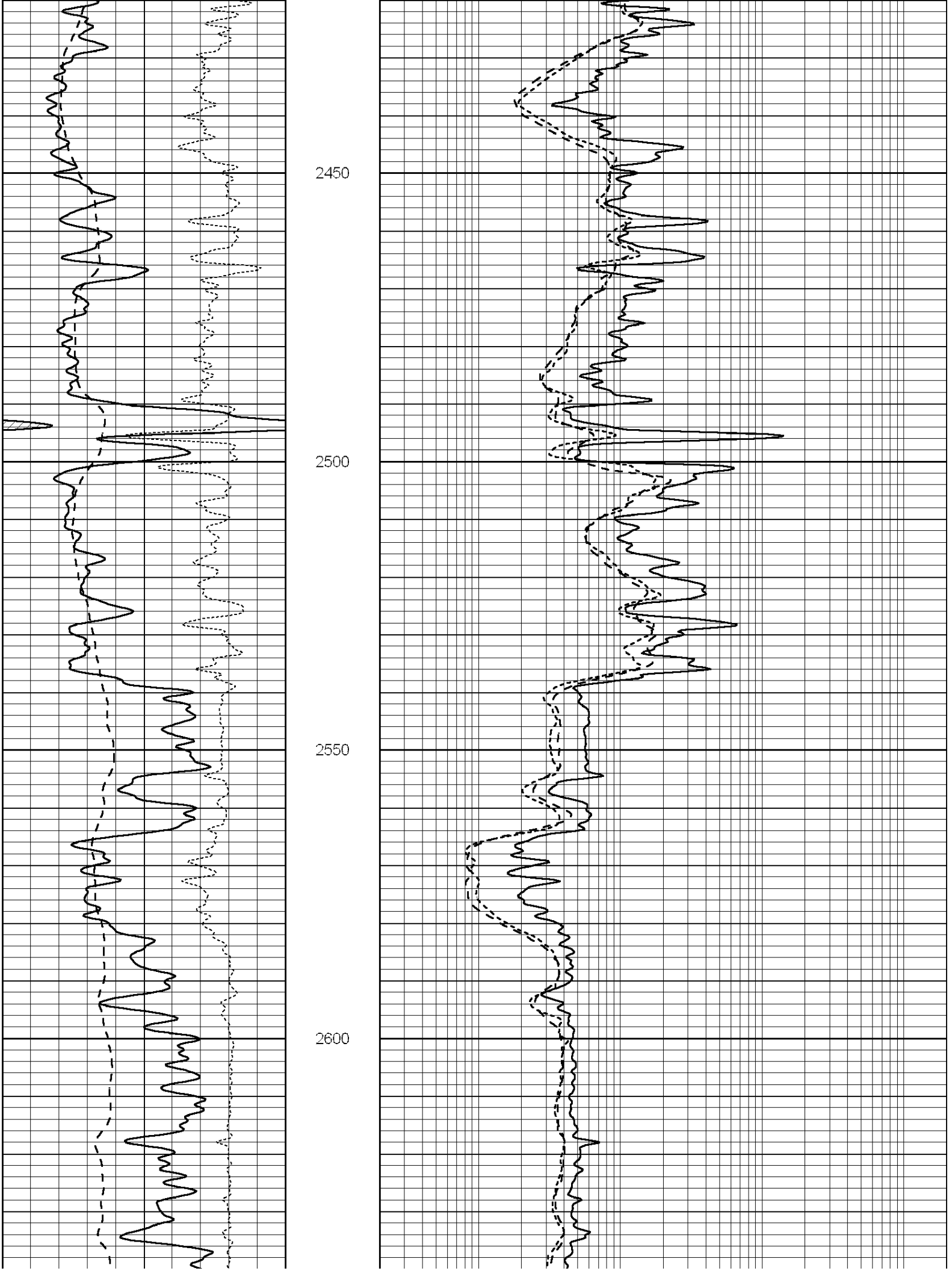

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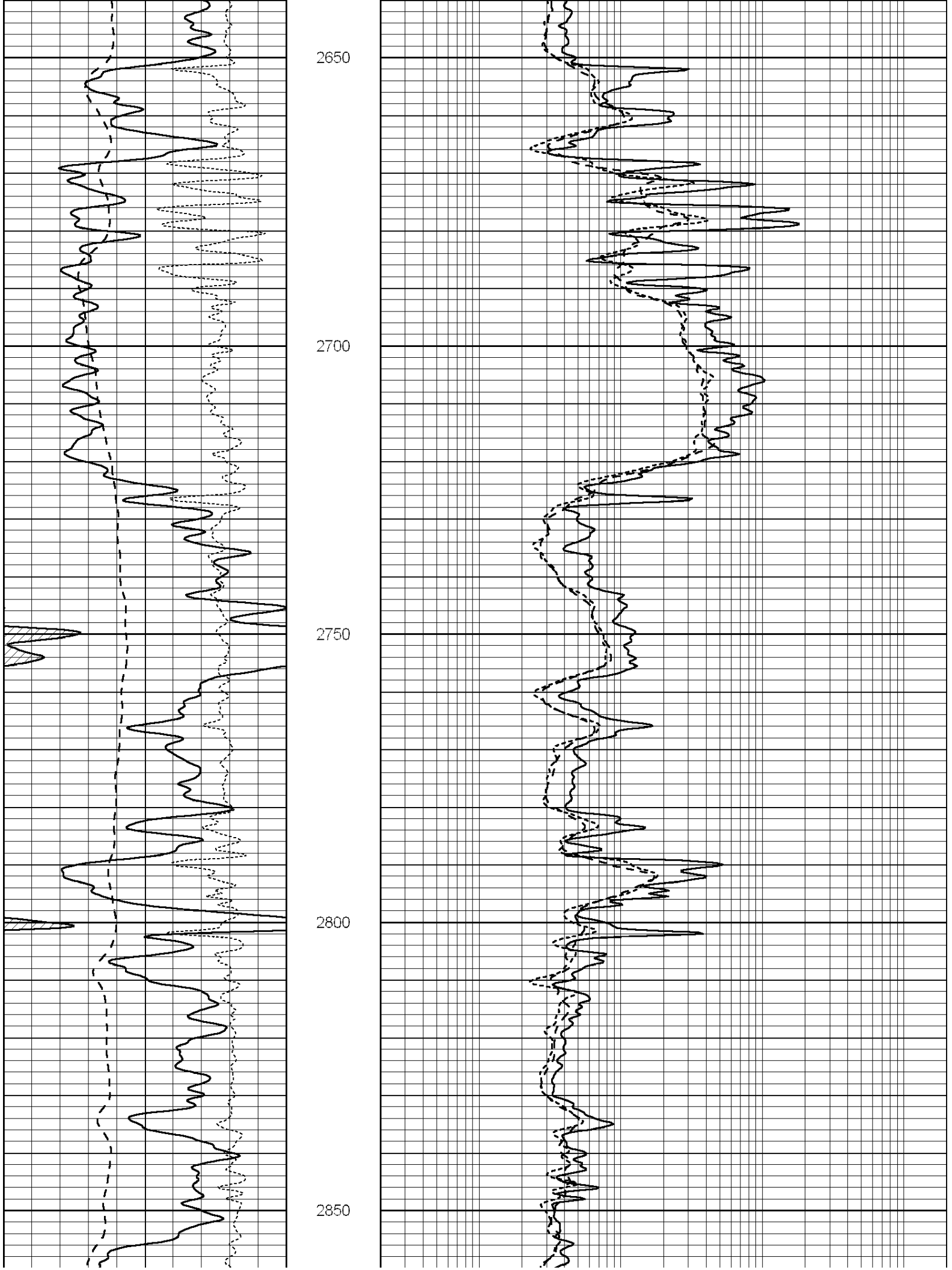


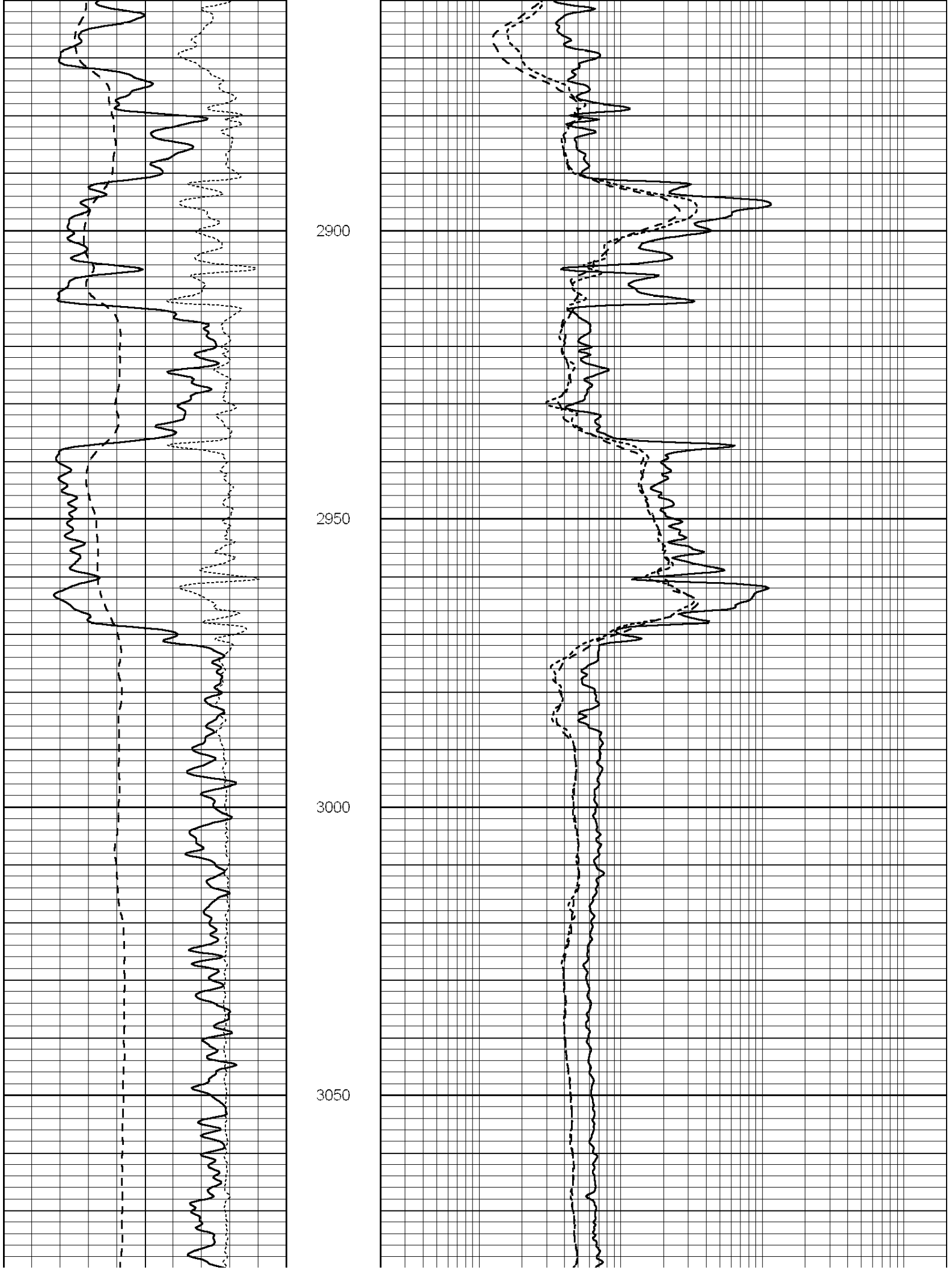
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Charted by: Depth in Feet scaled 1:240

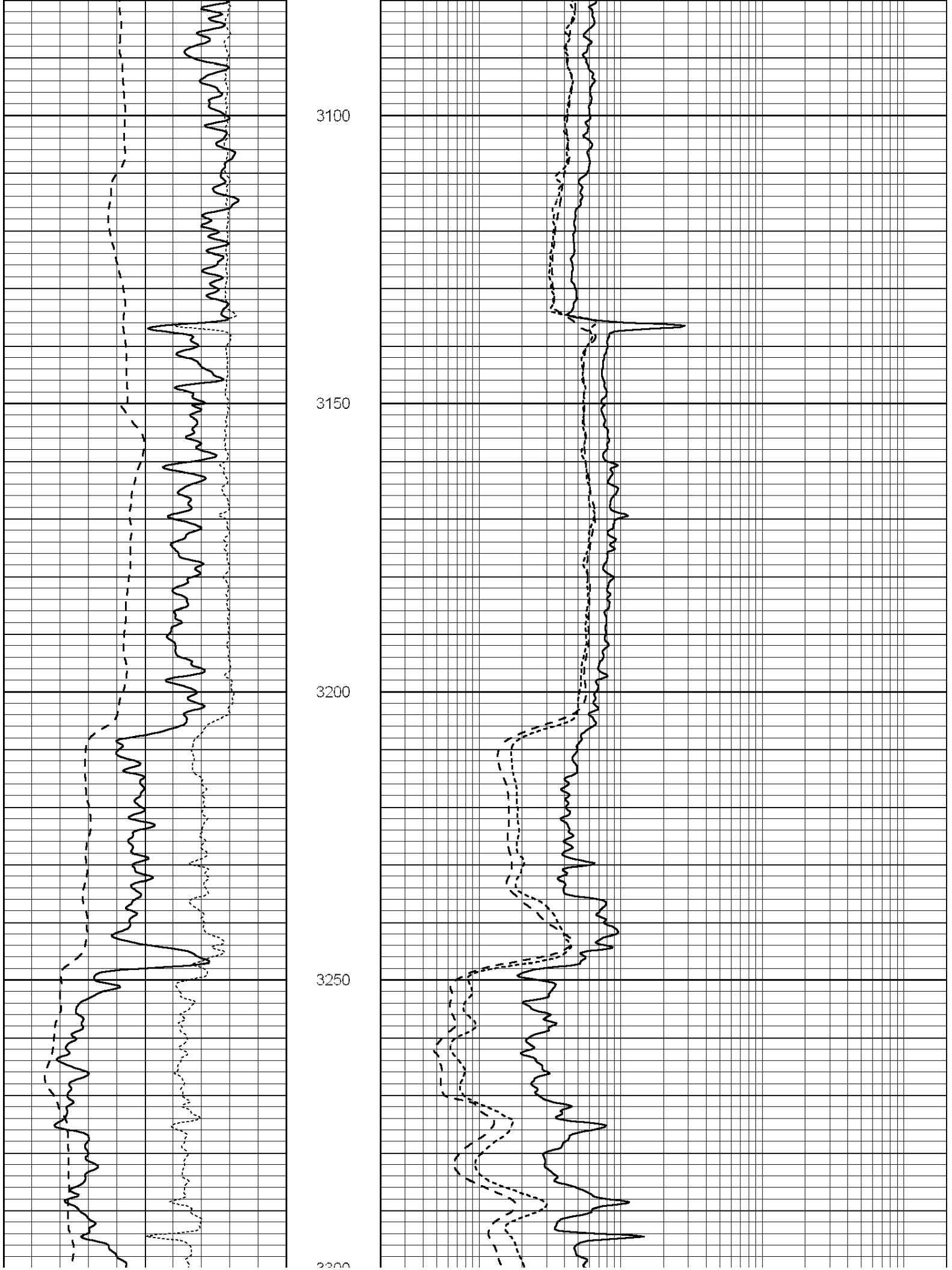


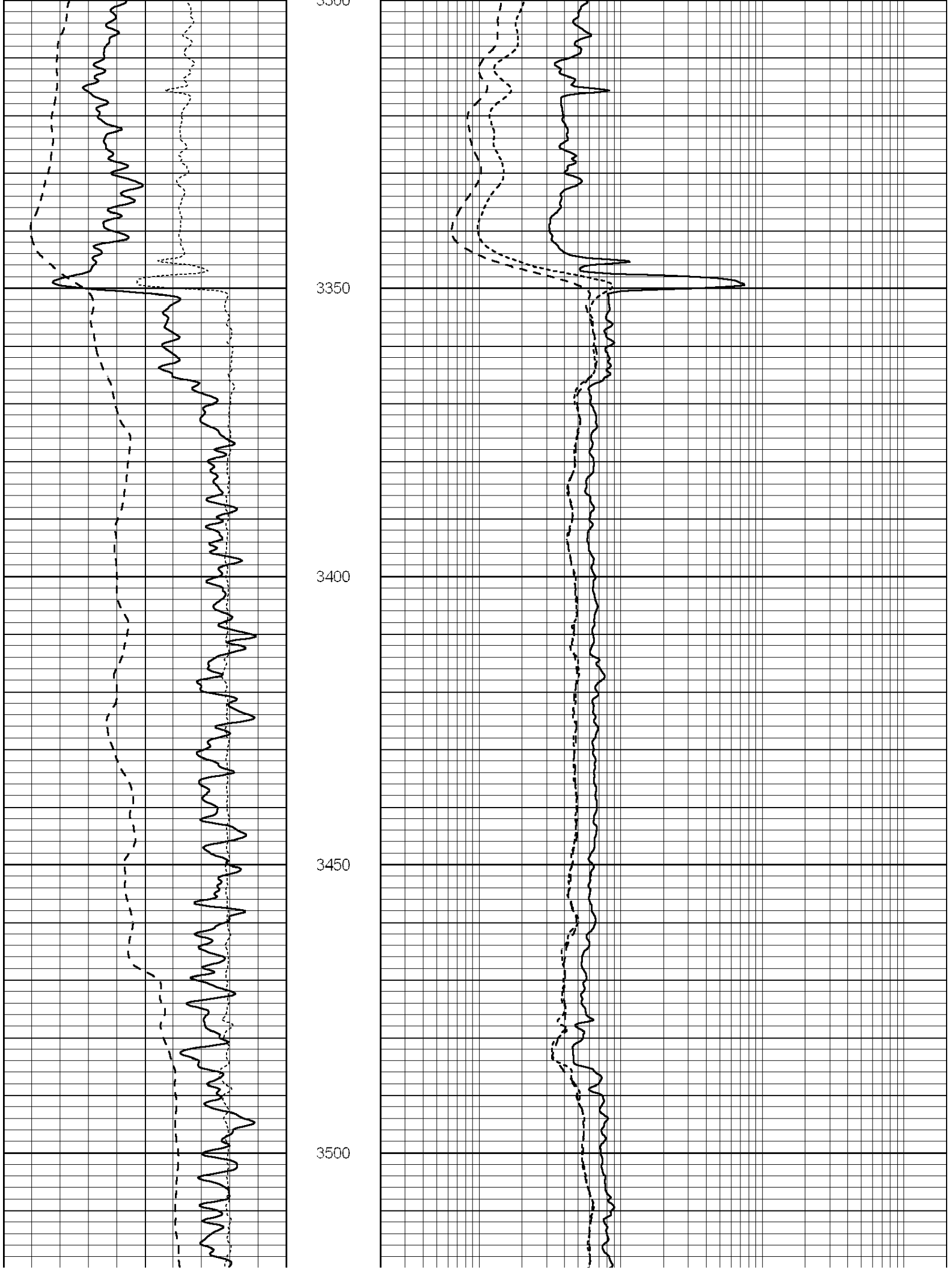

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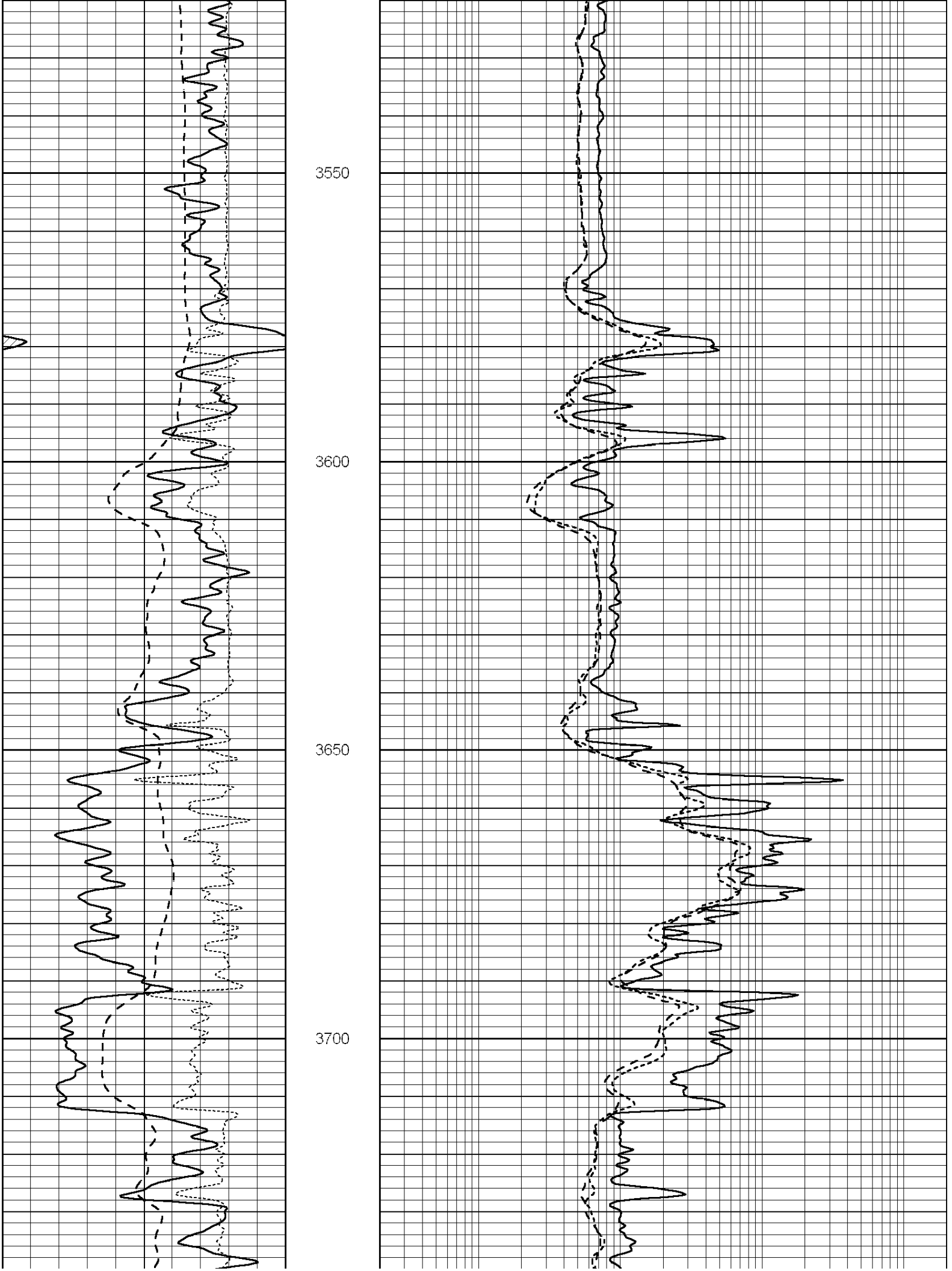

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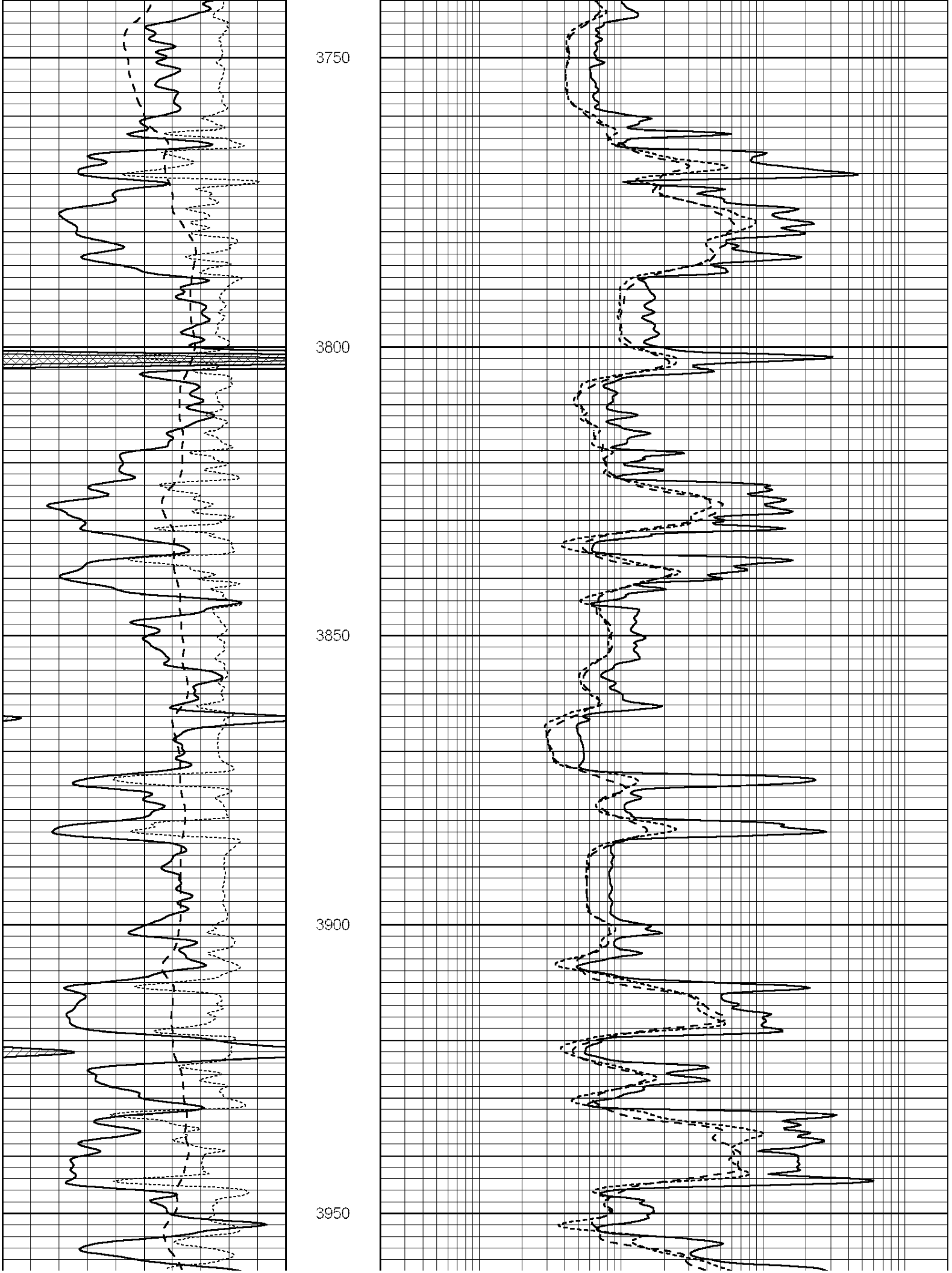

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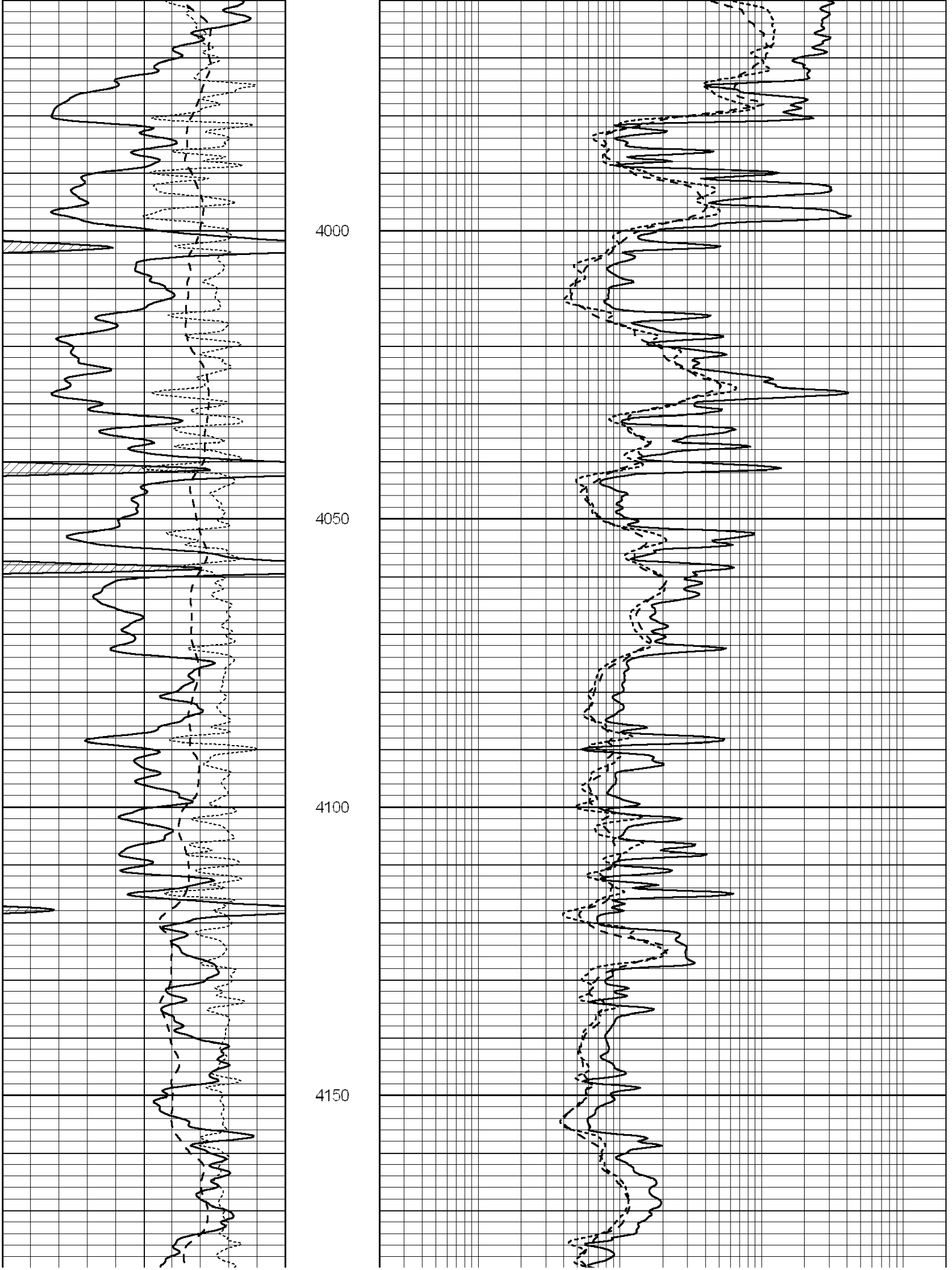

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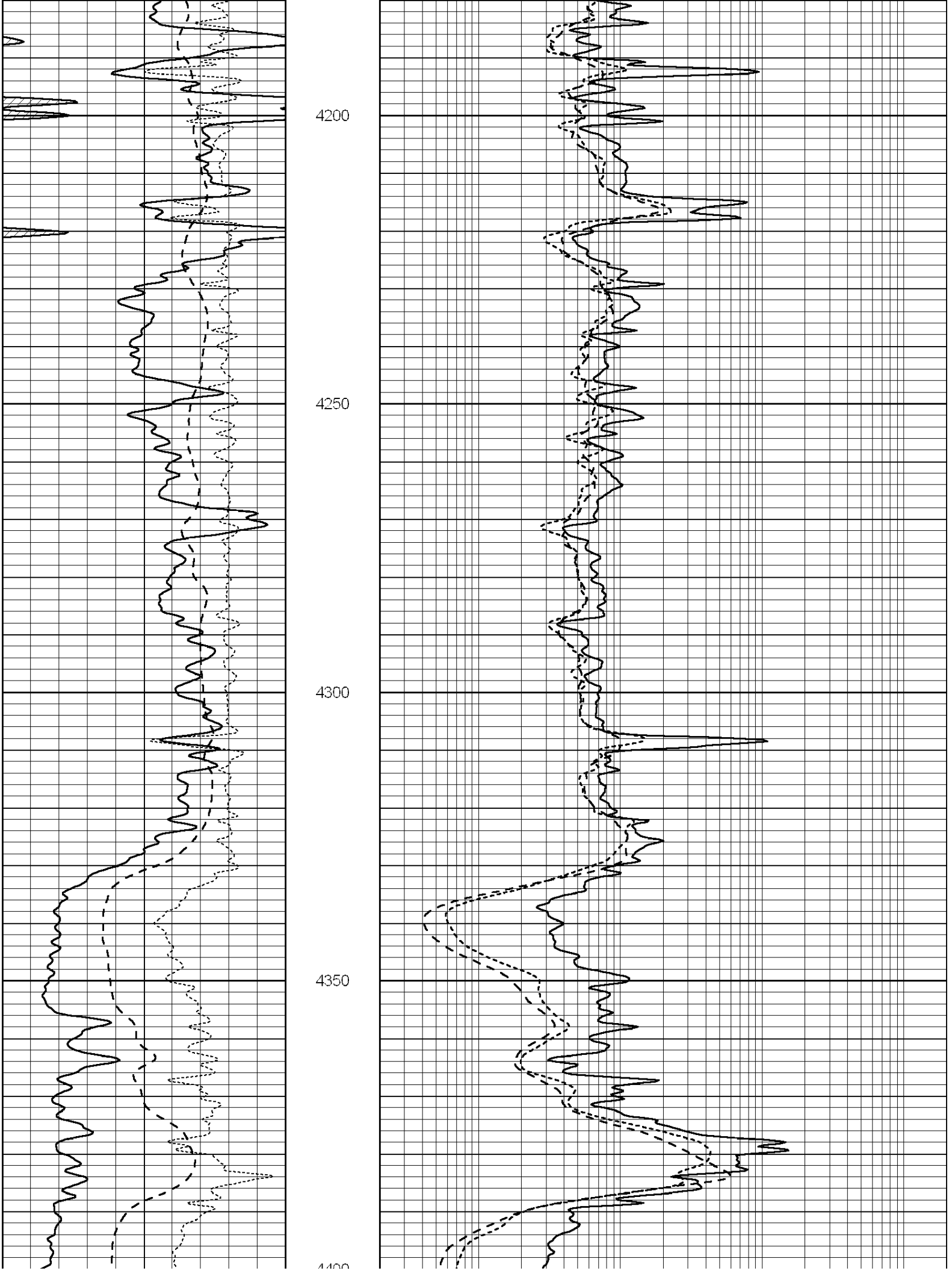

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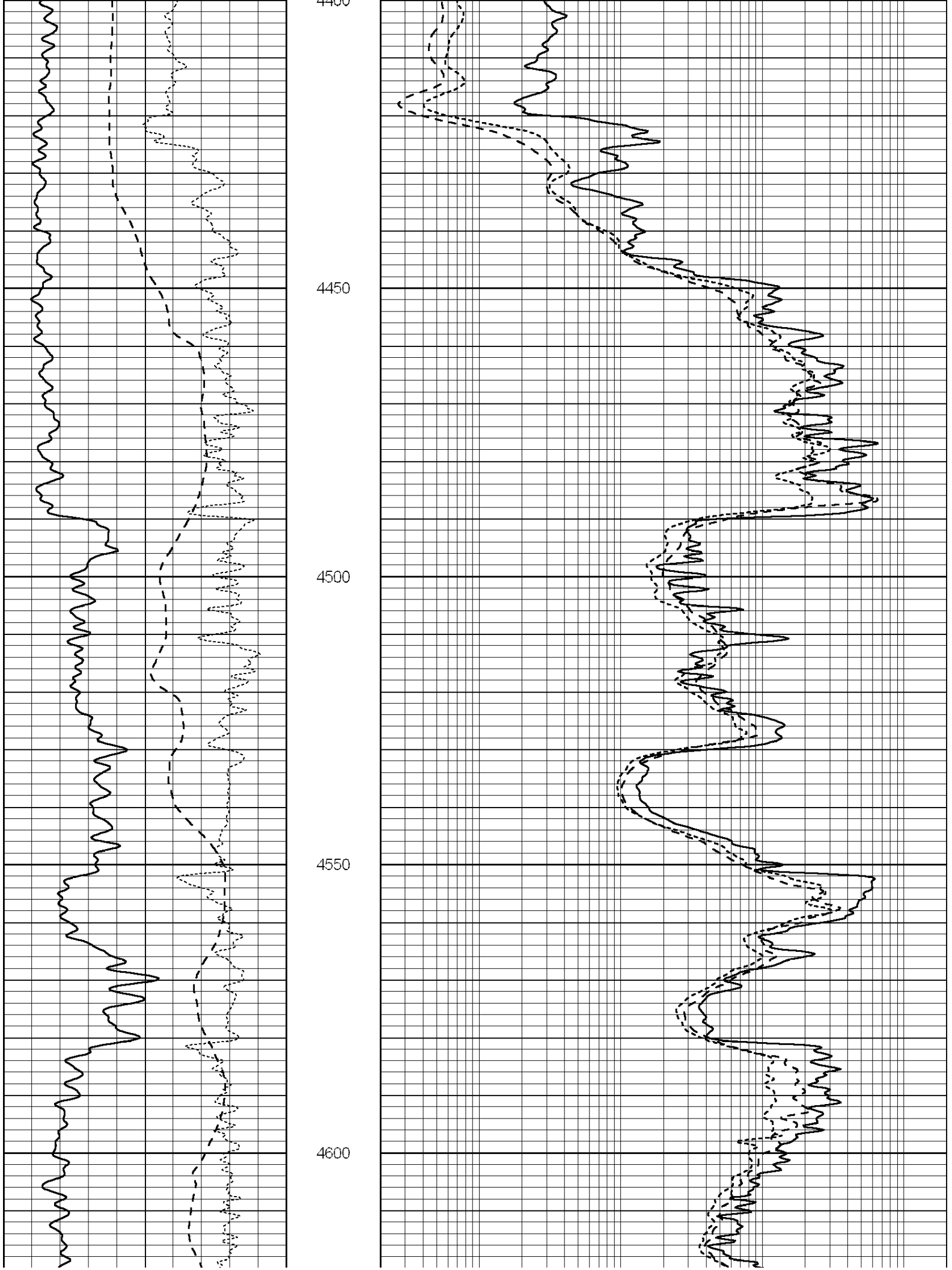

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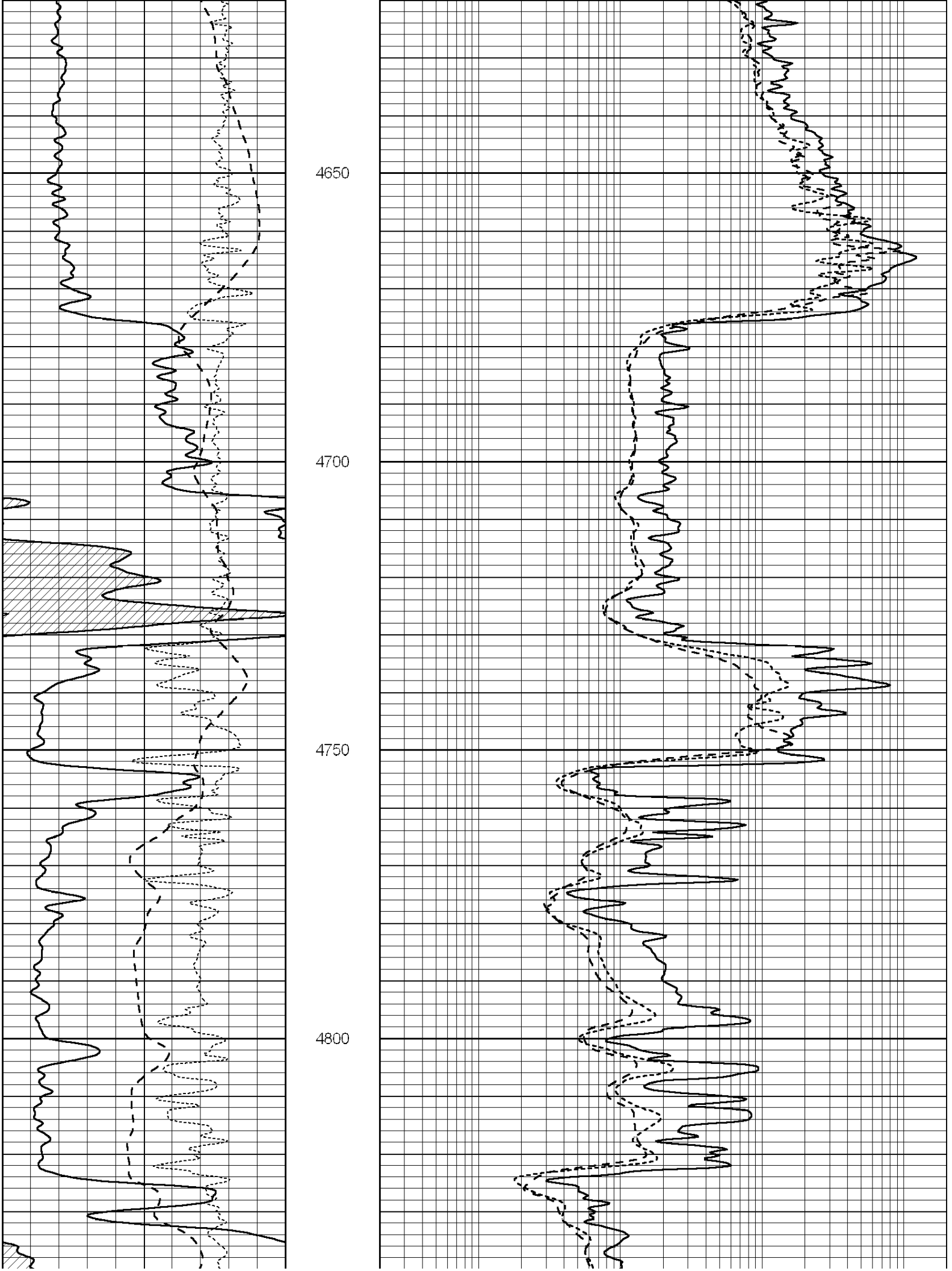

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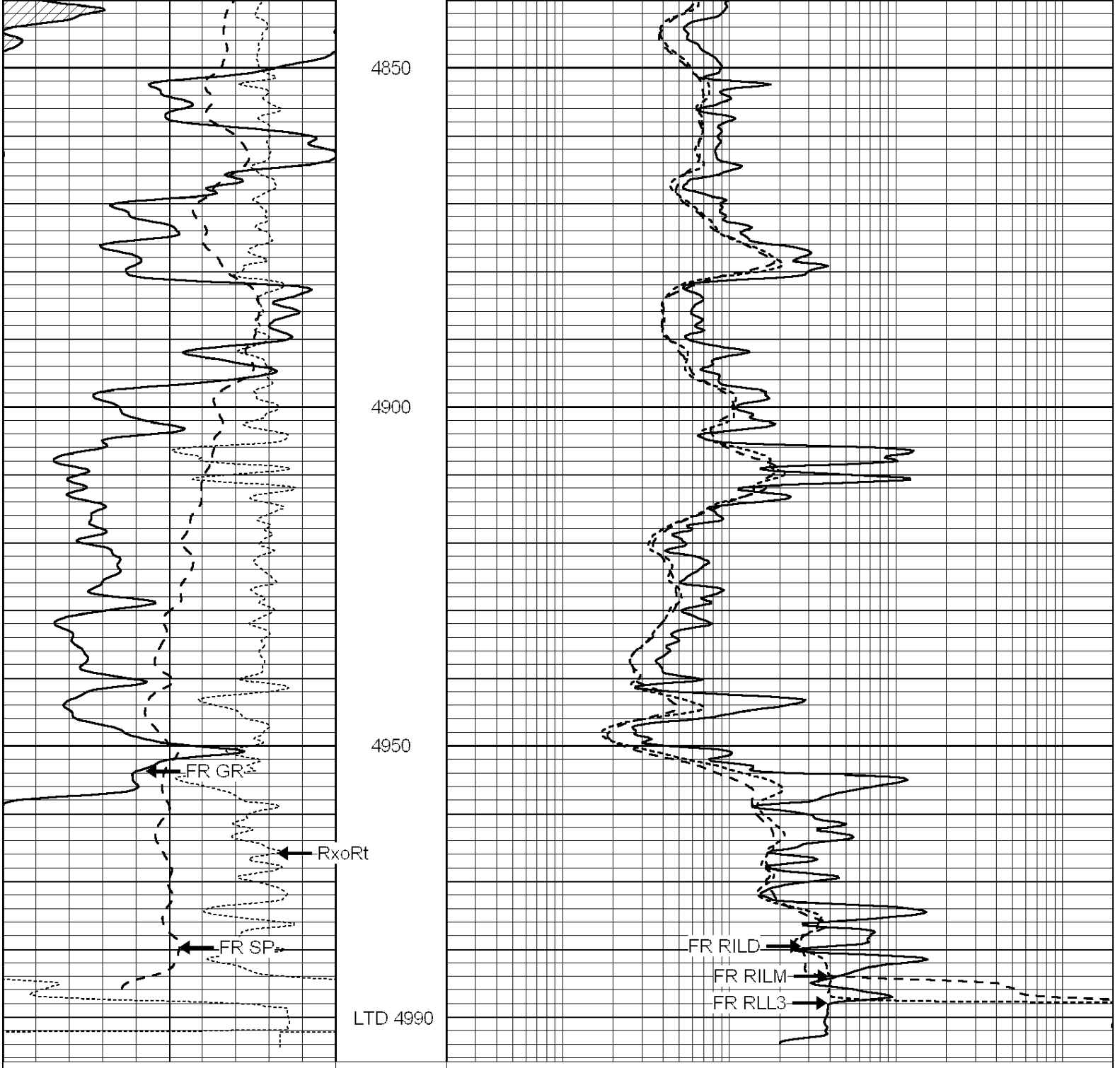

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SUPERIOR WELL SERVICES

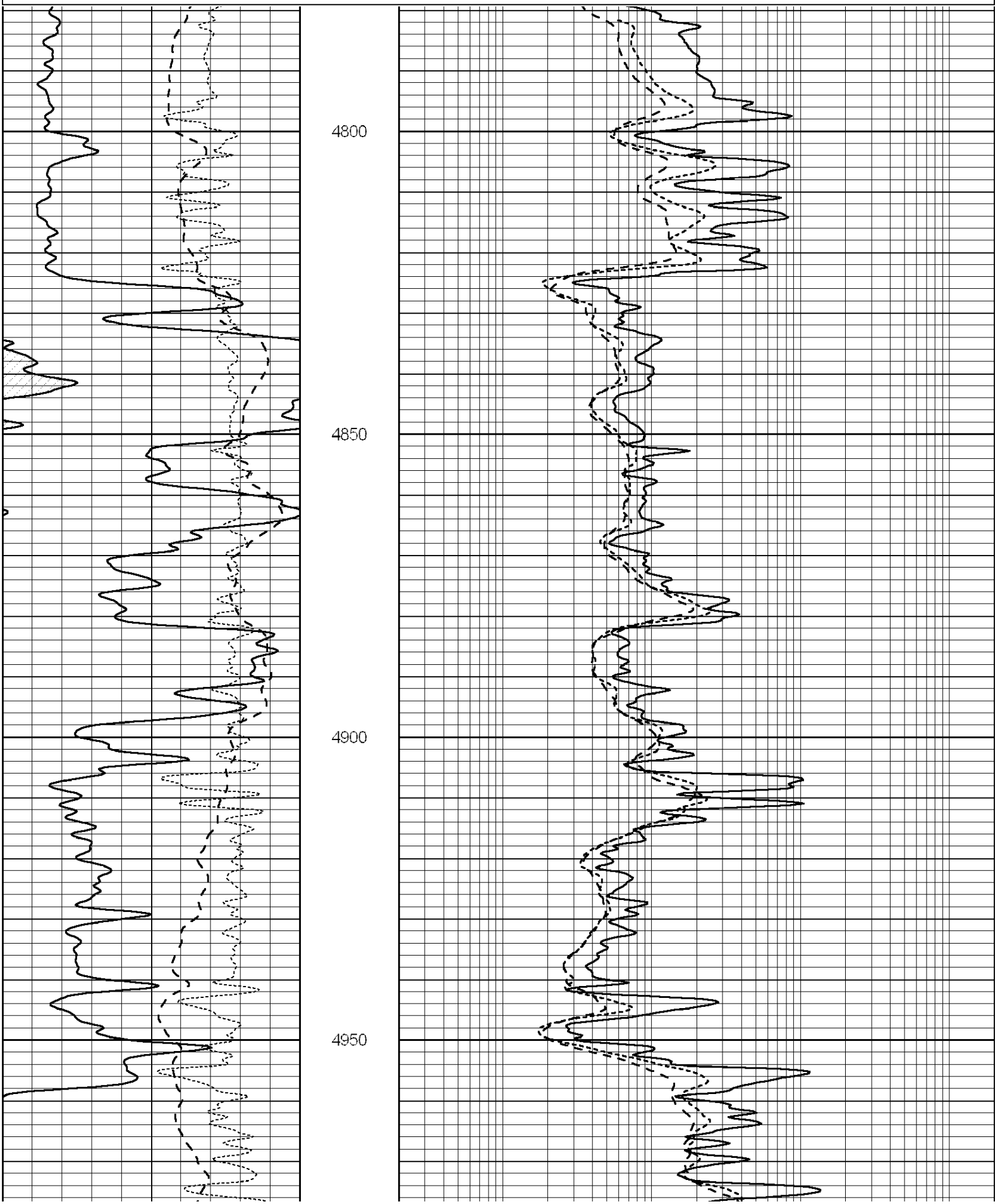
SUPERIOR
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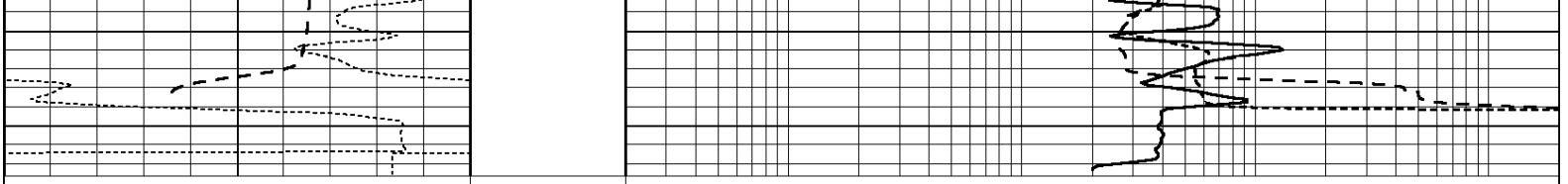
REPEAT SECTION

Database File:	009209pe.db
Dataset Pathname:	pass2.2
Presentation Format:	_dil
Dataset Creation:	Tue May 29 19:40:50 2012 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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





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: 009209pe.db
Dataset Pathname: pass4.3
Dataset Creation: Tue May 29 22:24:31 2012

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: 001 Model: PRB
Performed Thu Sep 17 09:57:21 2009

Litho Density Calibration

Background	Magnesium	Aluminum	Sandstone

Window 1	2056.0	9796.8	3673.1	10821.3	cps
Window 2	1920.0	8541.1	3303.5	9307.2	cps
Window 3	1563.1	4735.7	2212.8	5017.5	cps
Window 4	466.0	466.1	465.6	471.5	cps
Long Space	0.0	6621.1	1383.5	7387.2	cps
Short Space	2.5	2361.7	1523.2	2534.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio	: 0.541
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept	: -18.9

Caliper

	Readings	Reference
Low Ref	3.1	8.4
High Ref	4.3	14.3
	Gain: 4.6	Offset: -7.7

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

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