NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	WOOLSEY OPERATING COMPANY, LLC
Well	KIRKBRIDE A-1
Field	MEDICINE LODGE NORTH
County	BARBER
State	KANSAS

Company WOOLSEY OPERATING COMPANY, LLC

Well KIRKBRIDE A-1

Field MEDICINE LODGE NORTH

County BARBER State KANSAS

Location: API # : 15-007-24121-0000 Other Services

330' FNL & 582' FWL CDL/CNL/PE

SEC 21 TWP 32S RGE 12W

Permanent Datum GROUND LEVEL Elevation 1579 Elevation

Log Measured From KELLY BUSHING 12' A.G.L. K.B. 1591

Drilling Measured From KELLY BUSHING D.F. 1589

G.L. 1579

Date	1/16/14		
Run Number	ONE		
Depth Driller	4840		
Depth Logger	4840		
Bottom Logged Interval	4838		
Top Log Interval	00		
Casing Driller	13 3/8" @ 221		
Casing Logger	221		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.0/55		
pH / Fluid Loss	10.5/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 64F		
Rmf @ Meas. Temp	.60 @ 64F		
Rmc @ Meas. Temp	.96 @ 64F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.41 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	BILL KLAVER		

<<< Fold Here >>>

Comments

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

DIRECTIONS:

MEDICINE LODGE, KS. - 4 WEST ON HWY 160 TO GYP HILL RD. - 1 1/2 SOUTH TO RED ROCK RD. - EAST TO Y IN THE RD. - STAY RIGHT INTO

NABORS COMPLETION & PRODUCTION SERVICES CO.

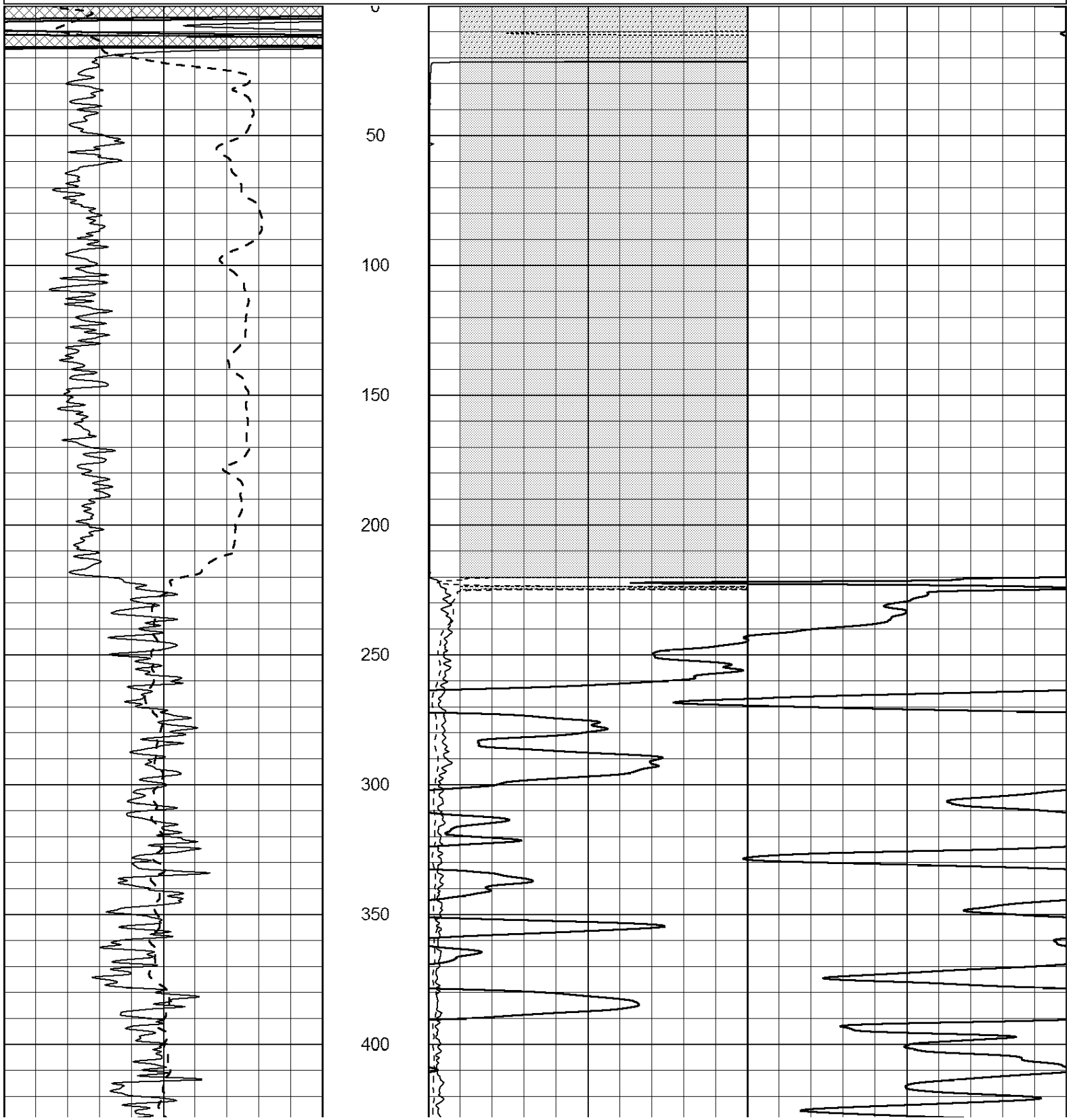
MAIN SECTION

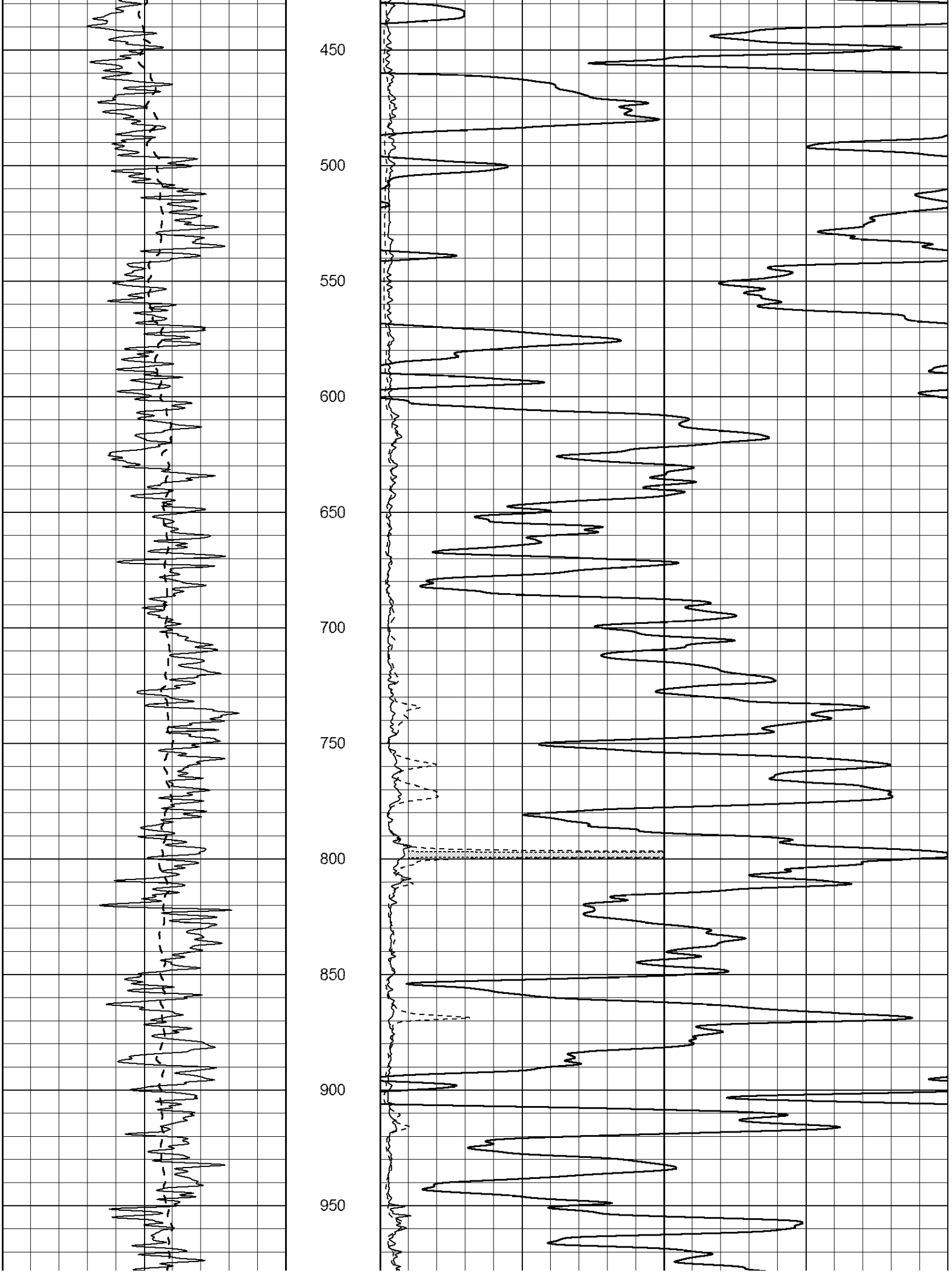
SERVICES CO.

Database File: 23876pe.db
Dataset Pathname: pass3.2
Presentation Format: _dil2
Dataset Creation: Fri Jan 17 00:44:06 2014 by Calc Open-Cased 090629
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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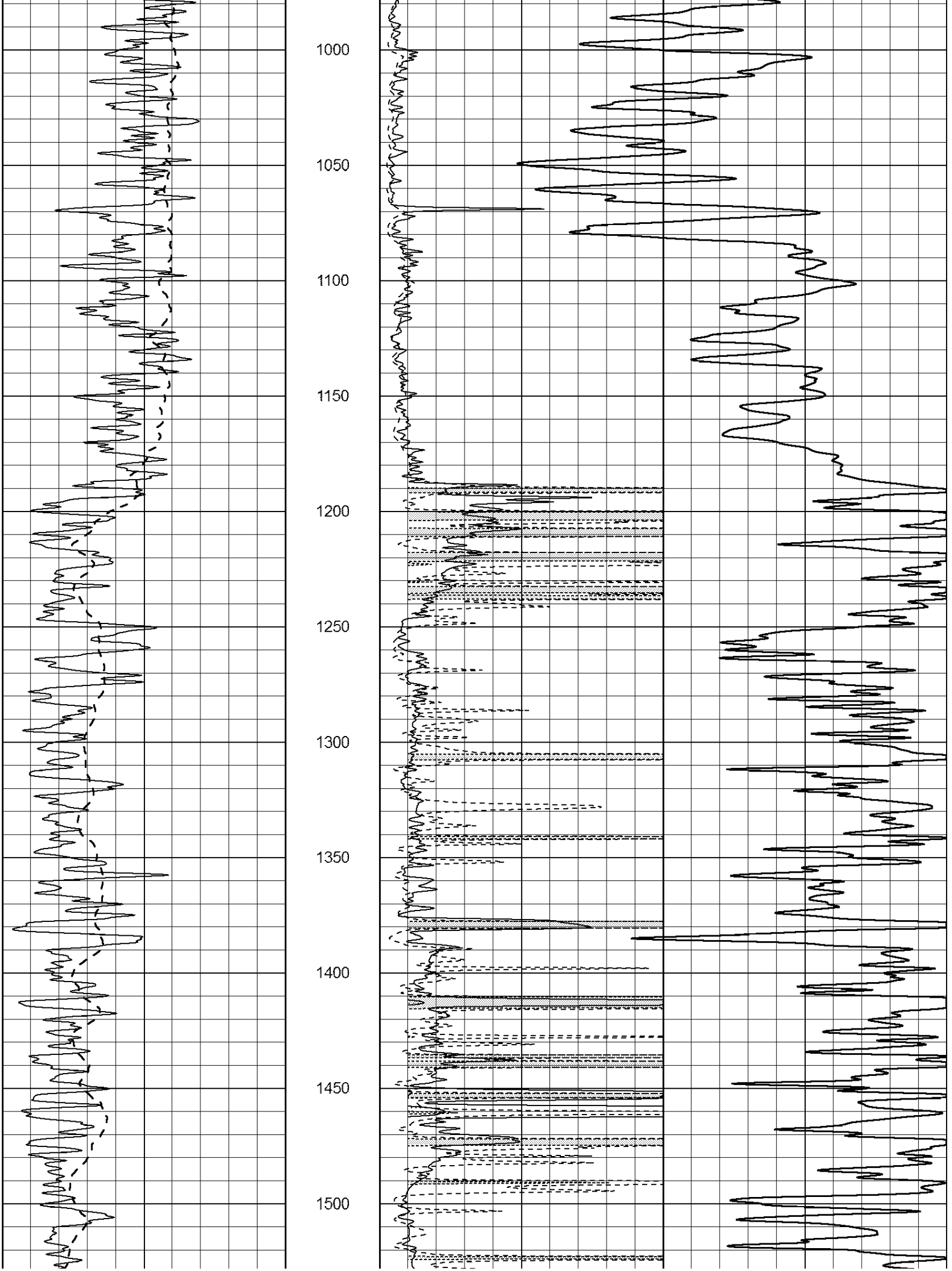
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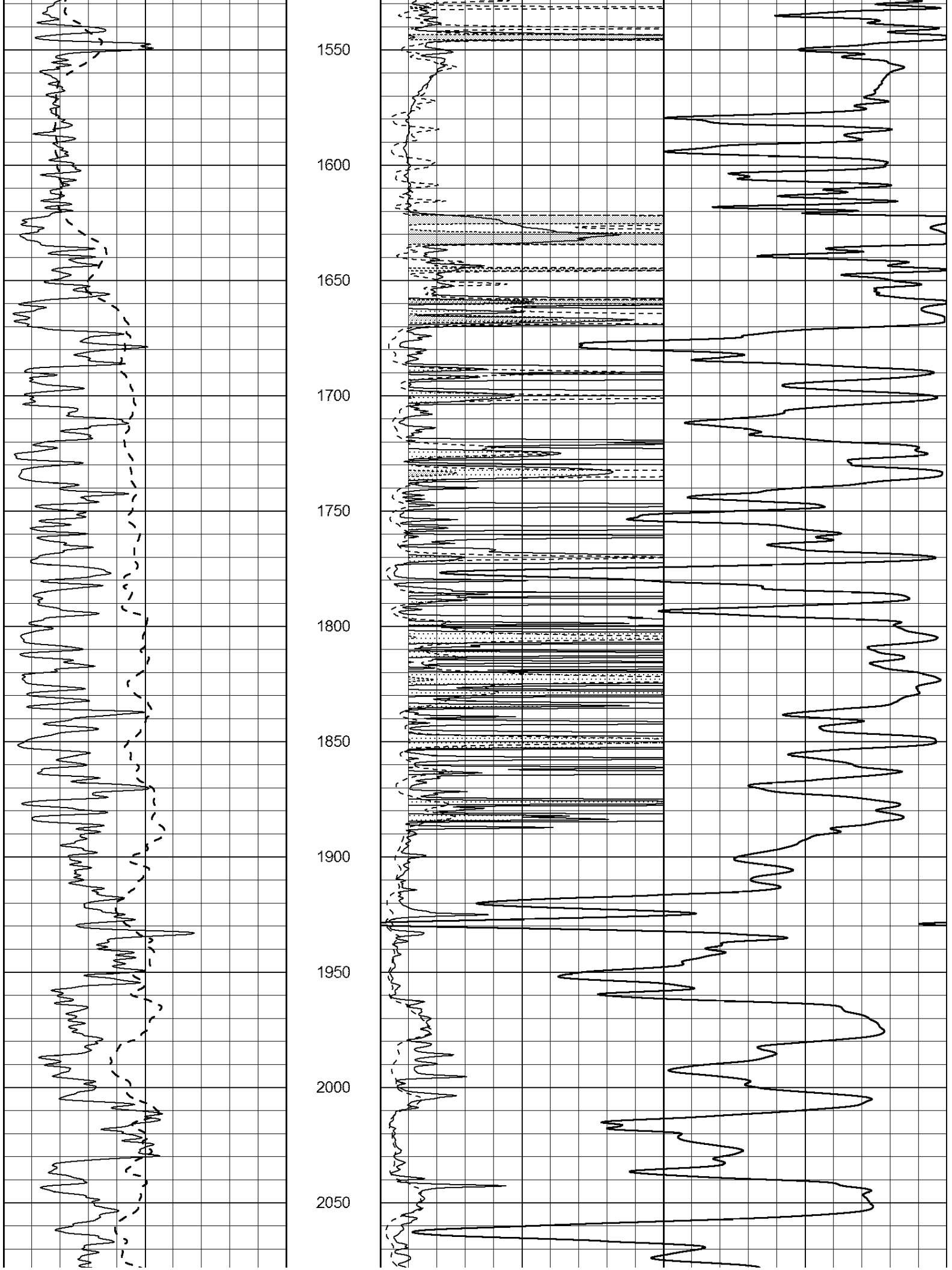
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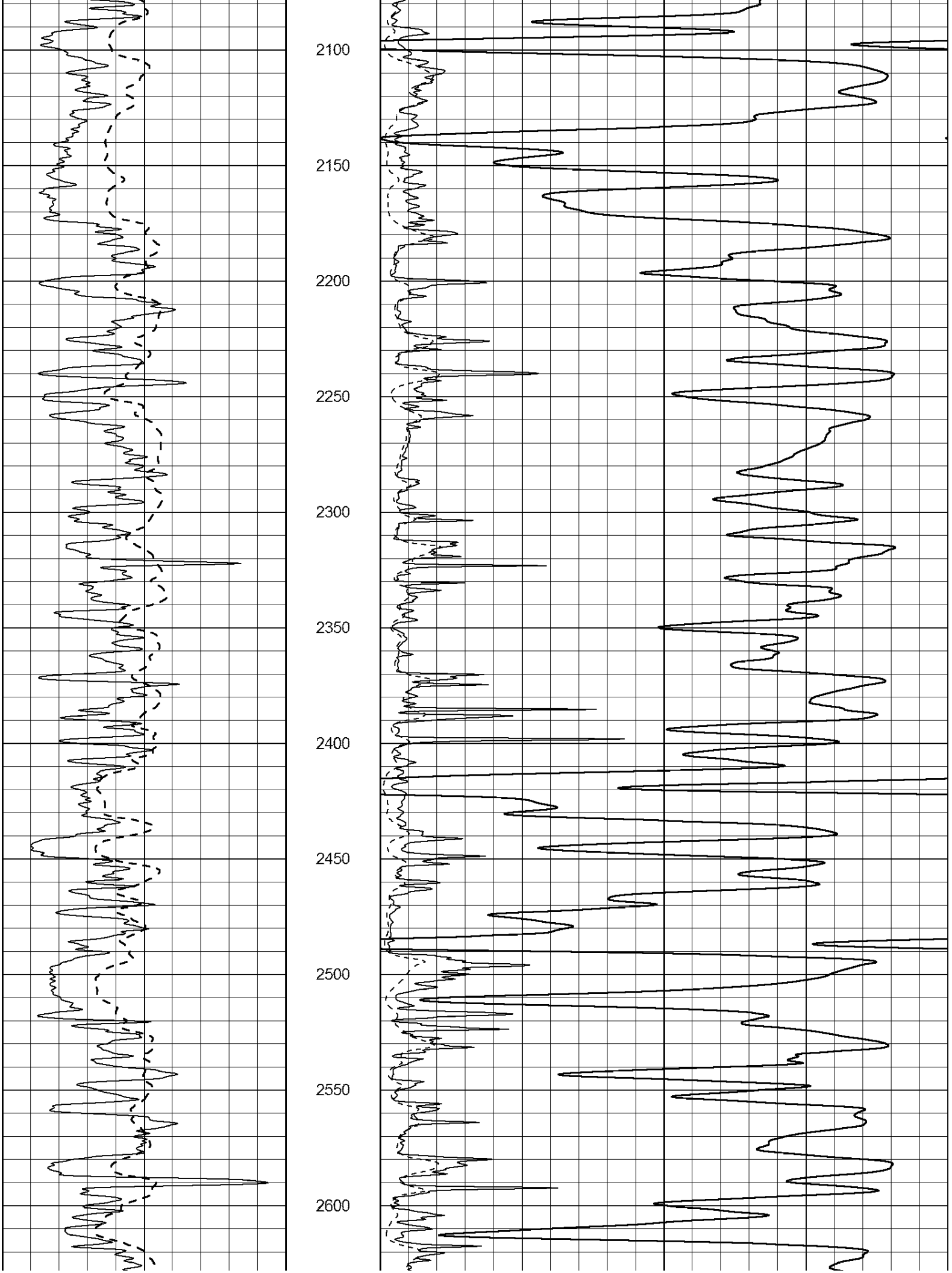
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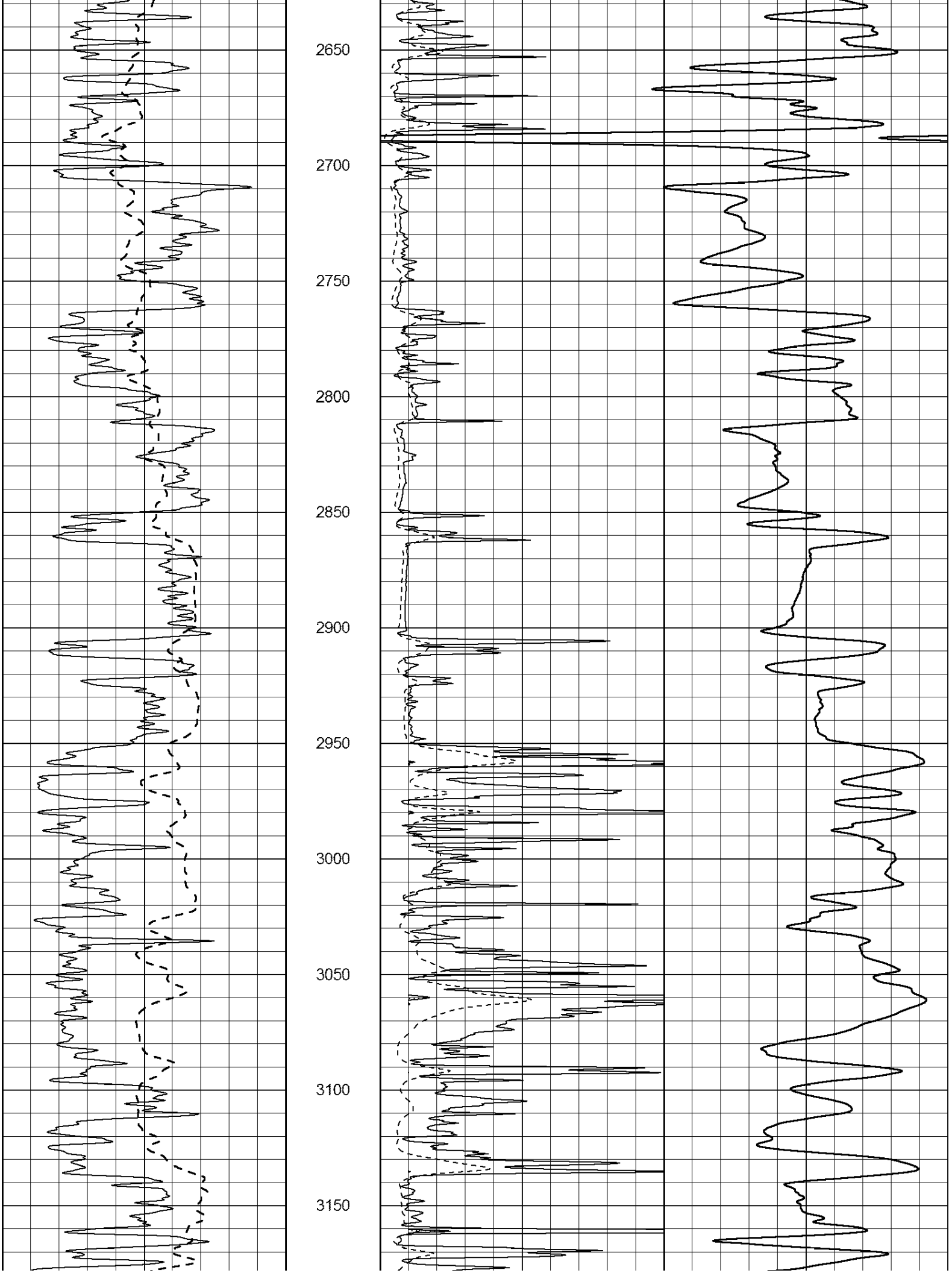
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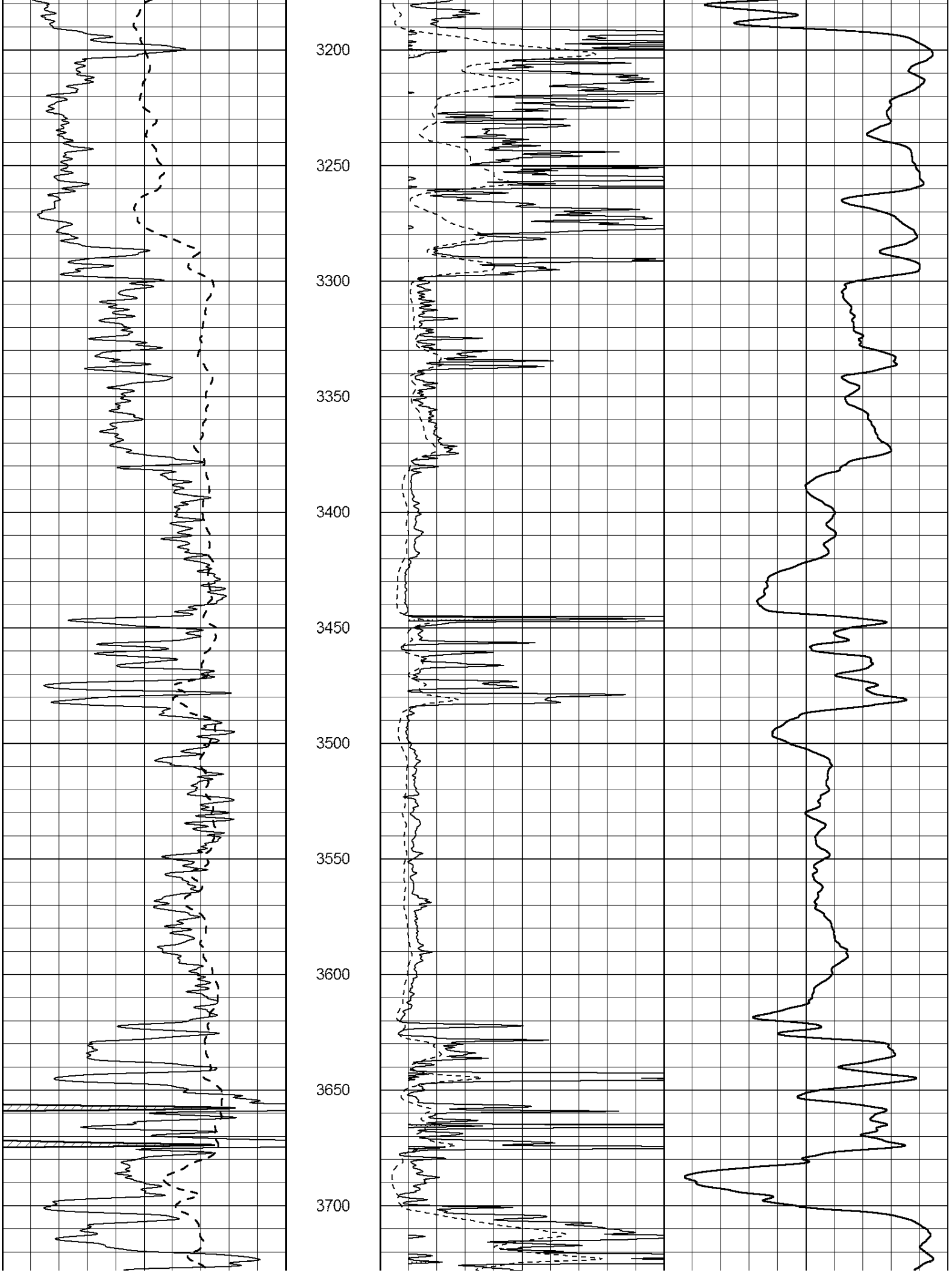
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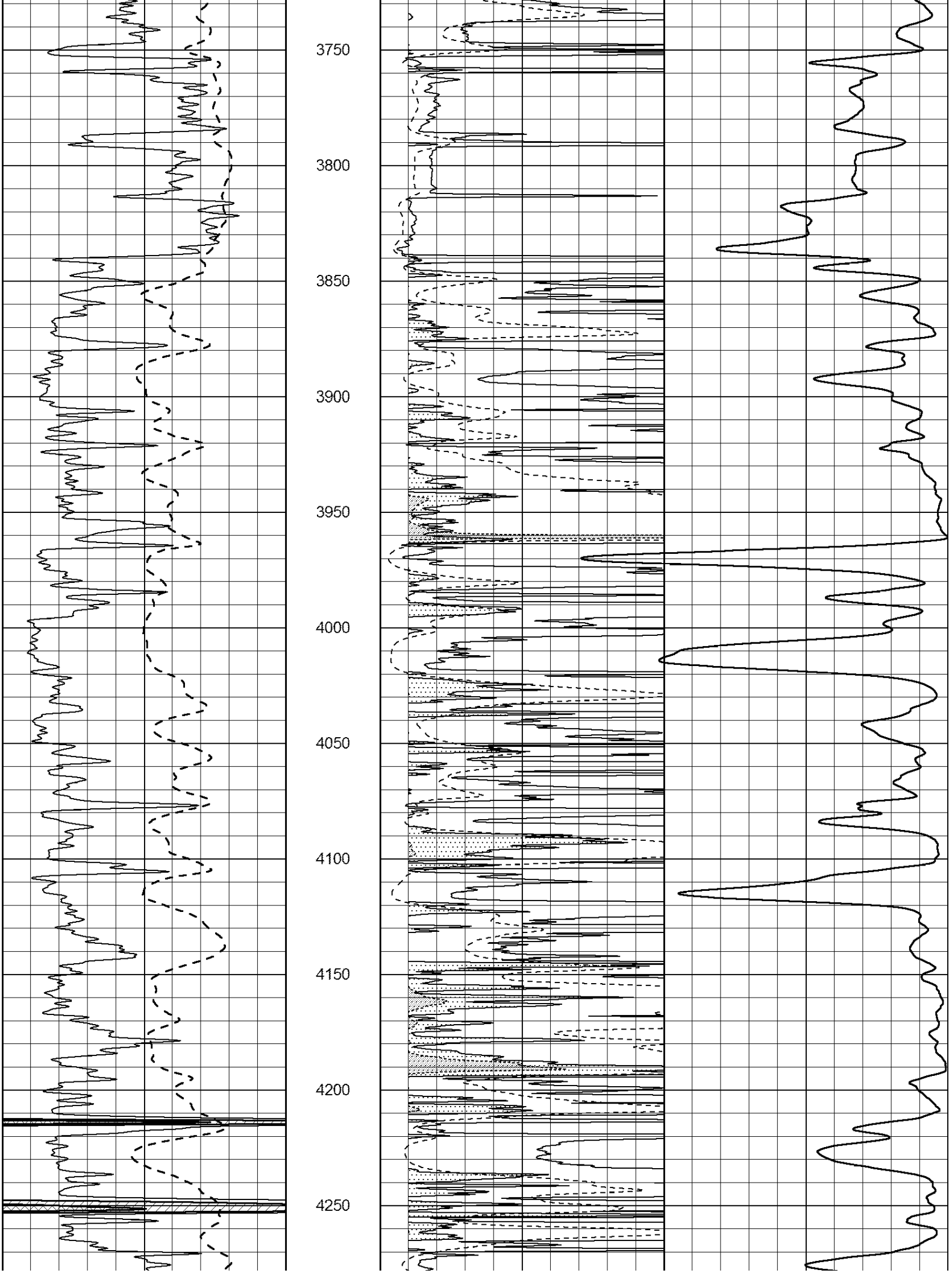
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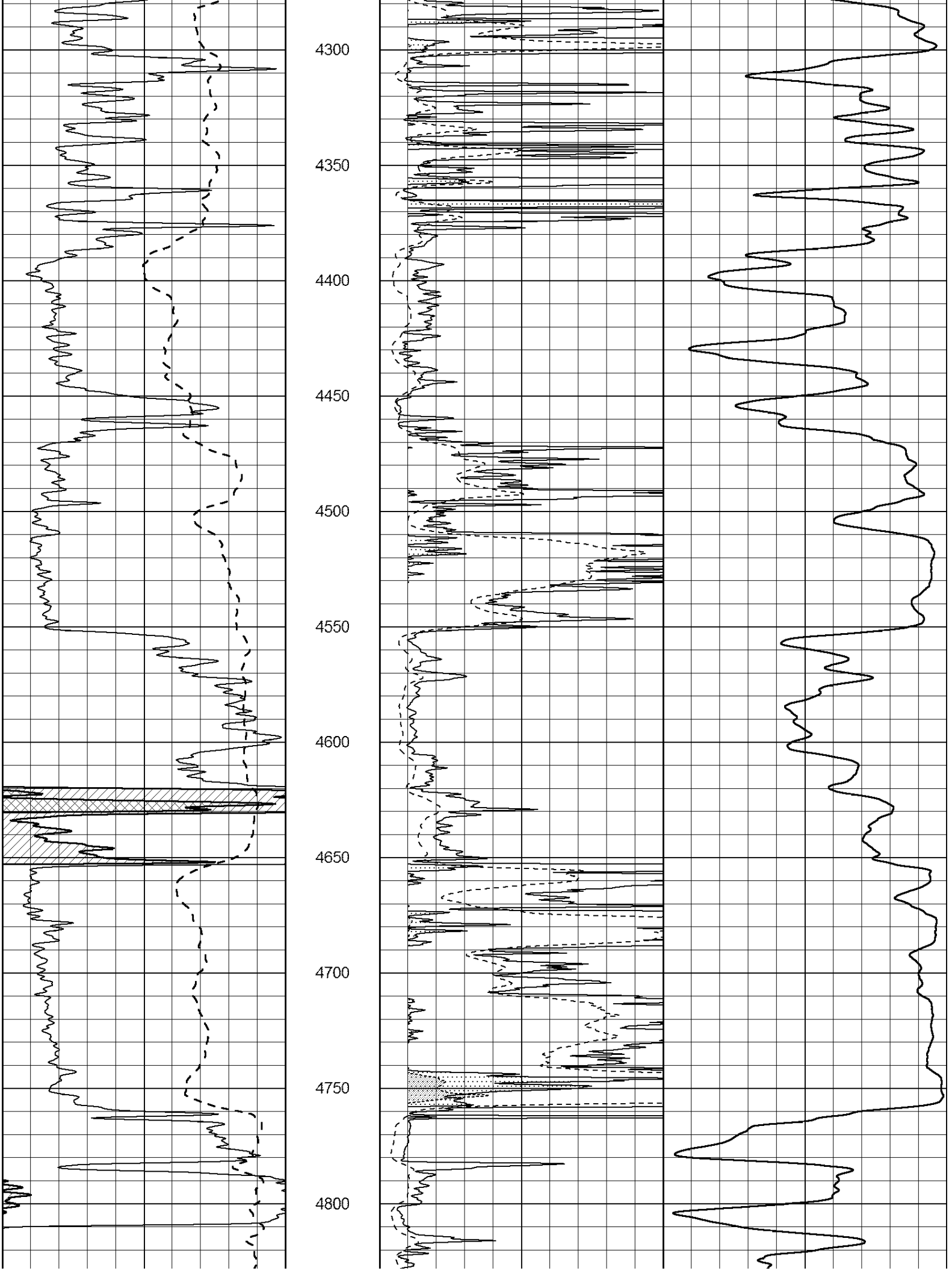
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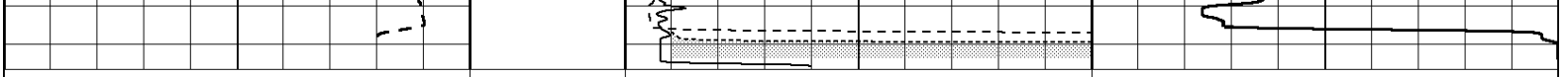


0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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

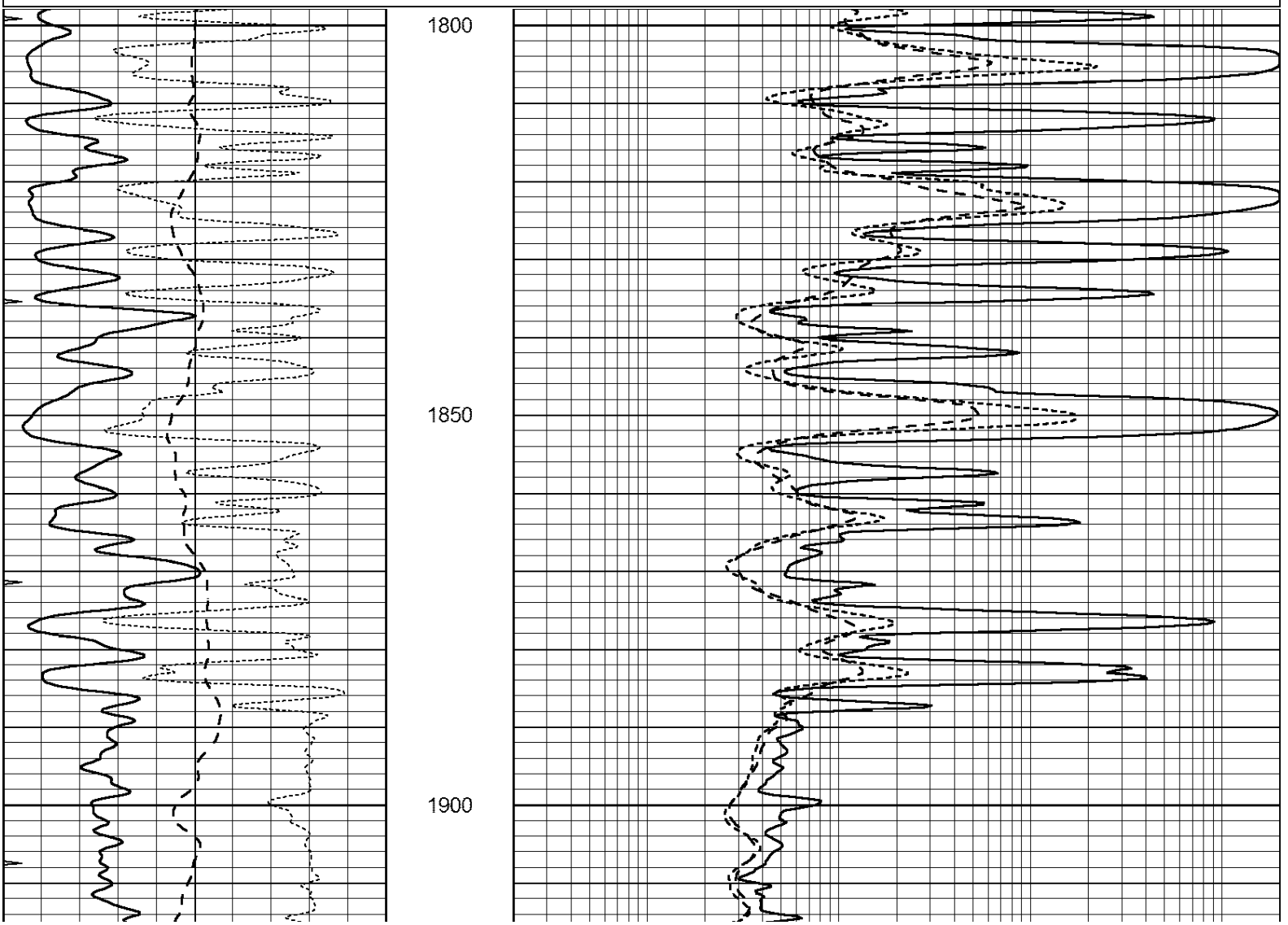
NABORS
COMPLETION & PRODUCTION SERVICES CO.

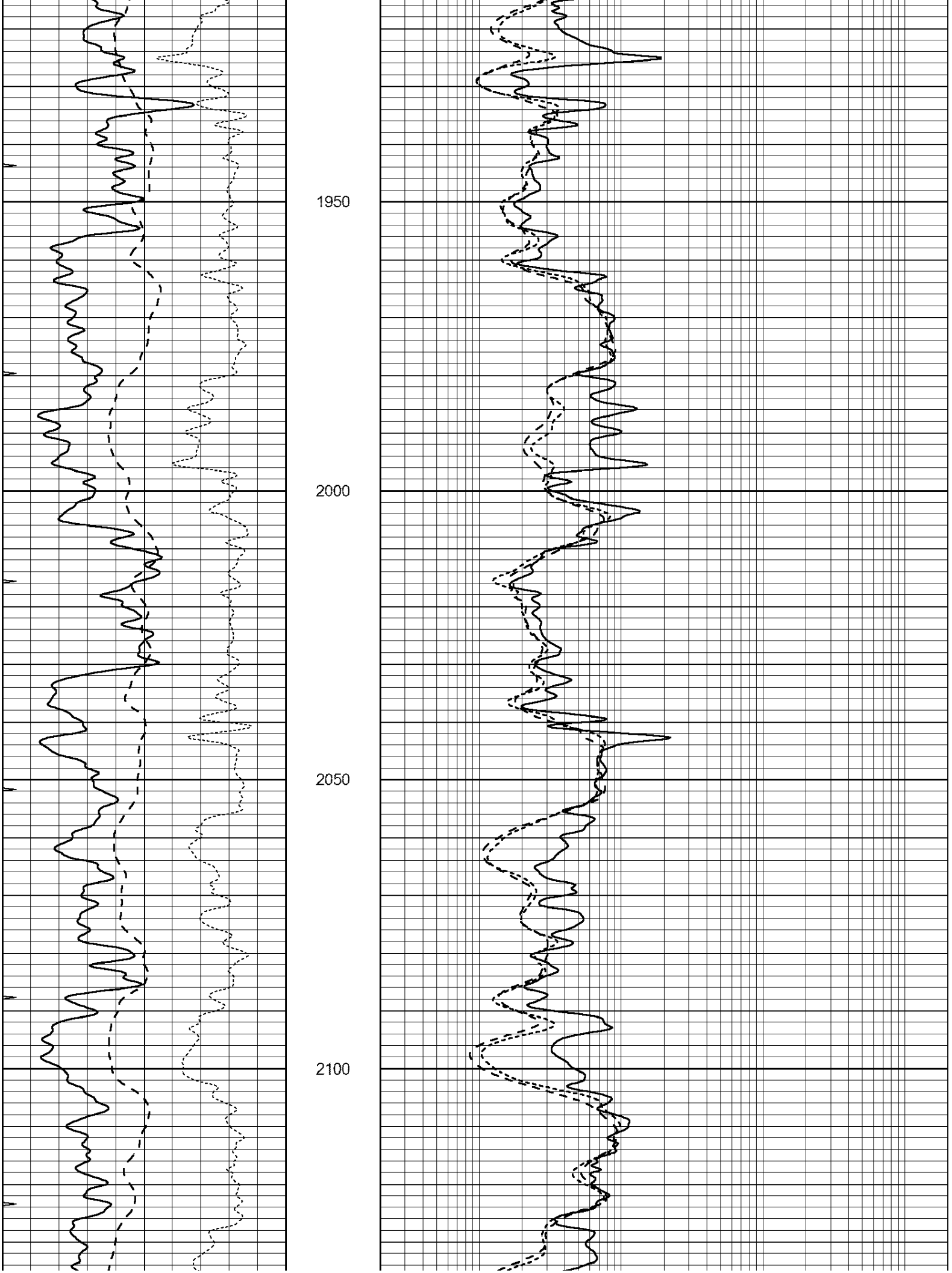
MAIN SECTION

Database File: 23876pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Fri Jan 17 00:24:40 2014 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	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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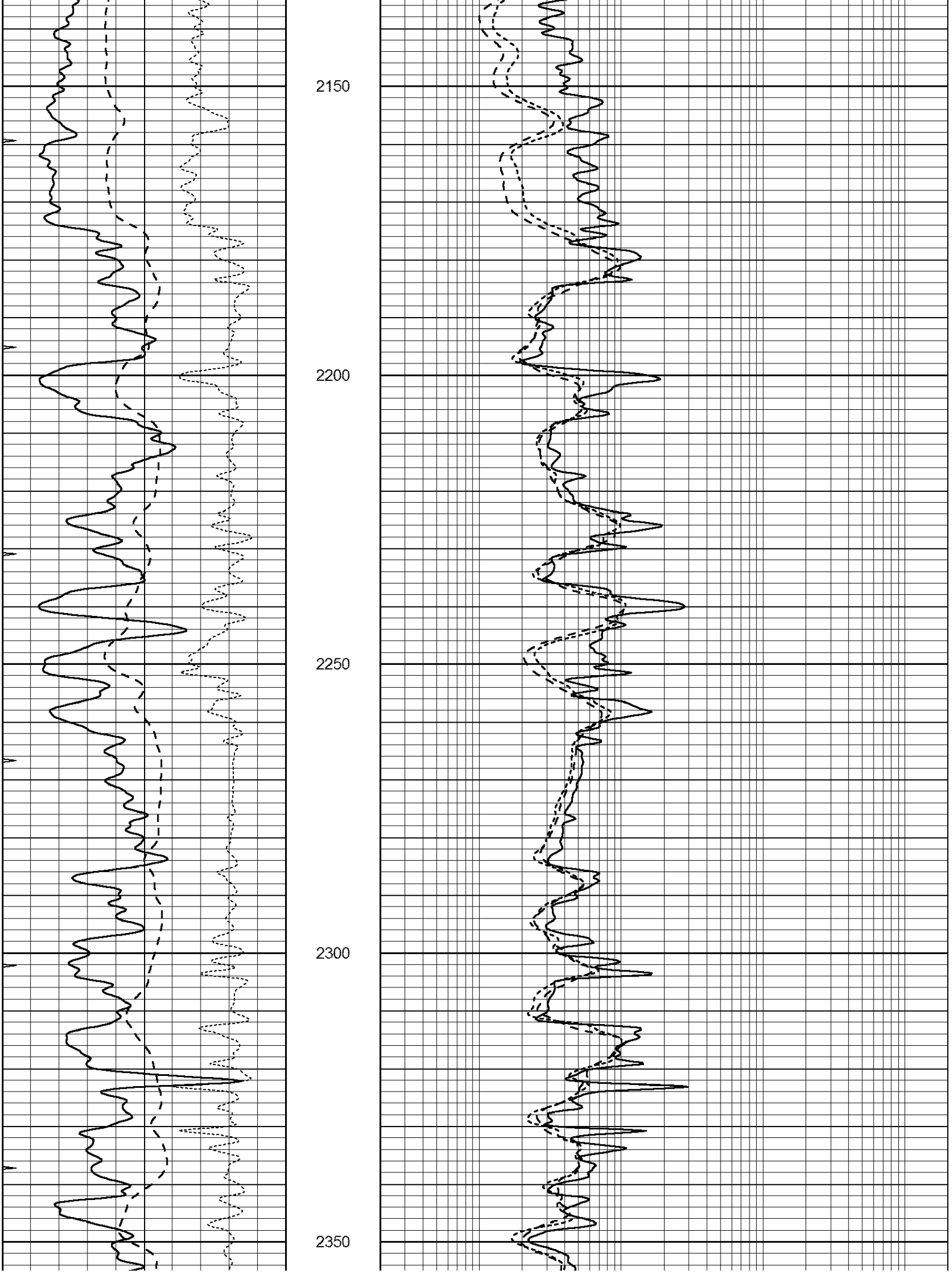
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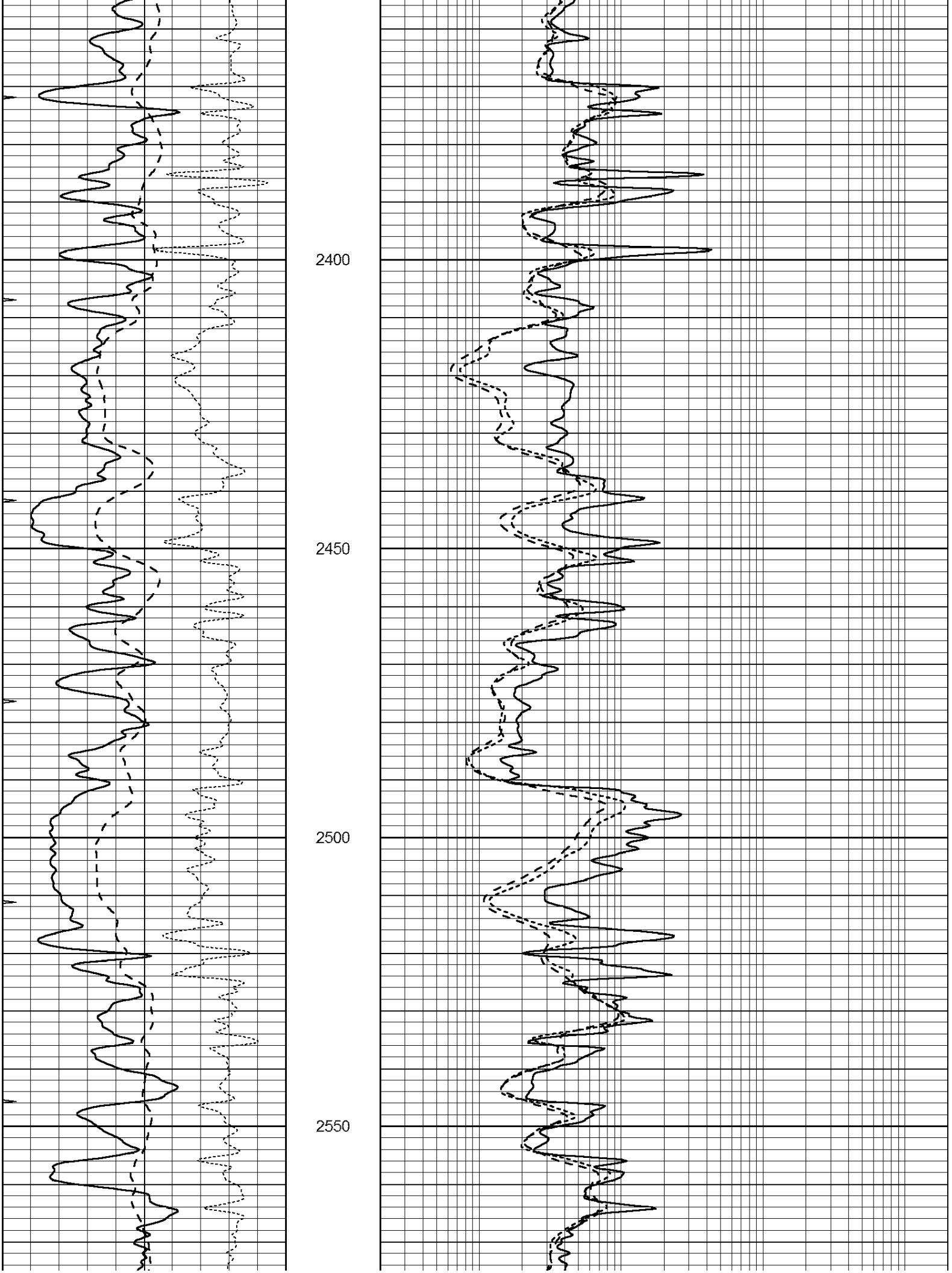
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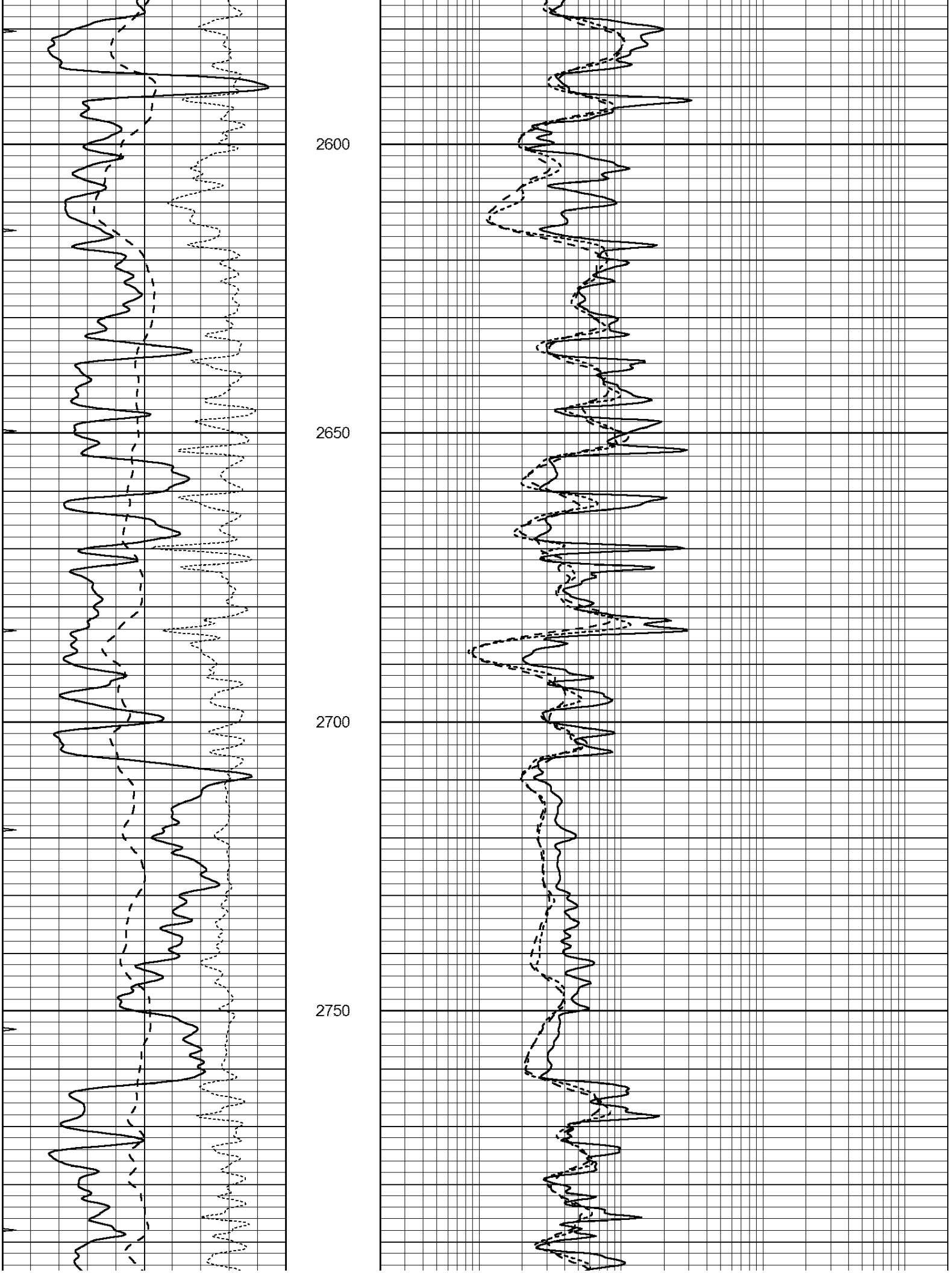
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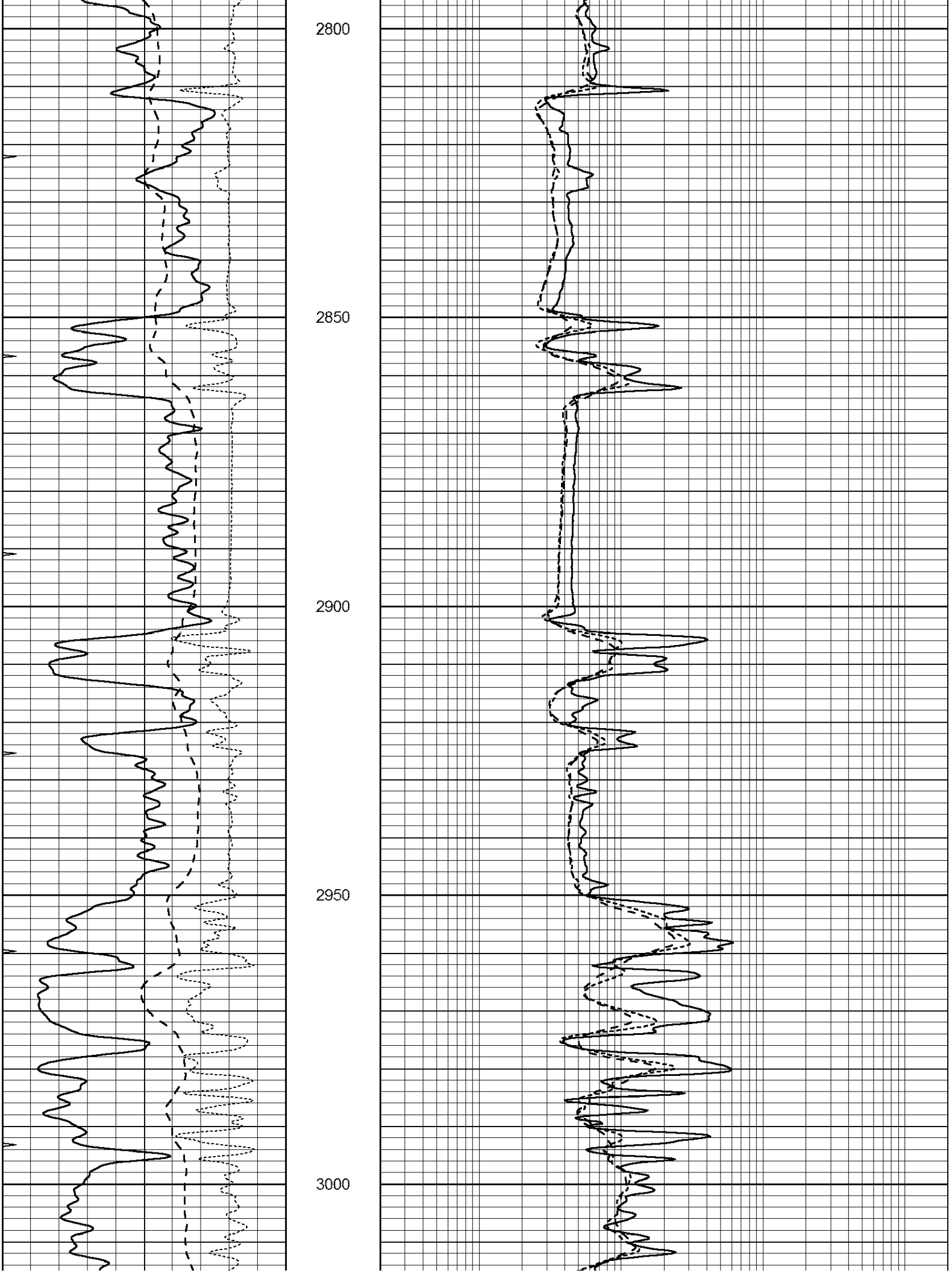
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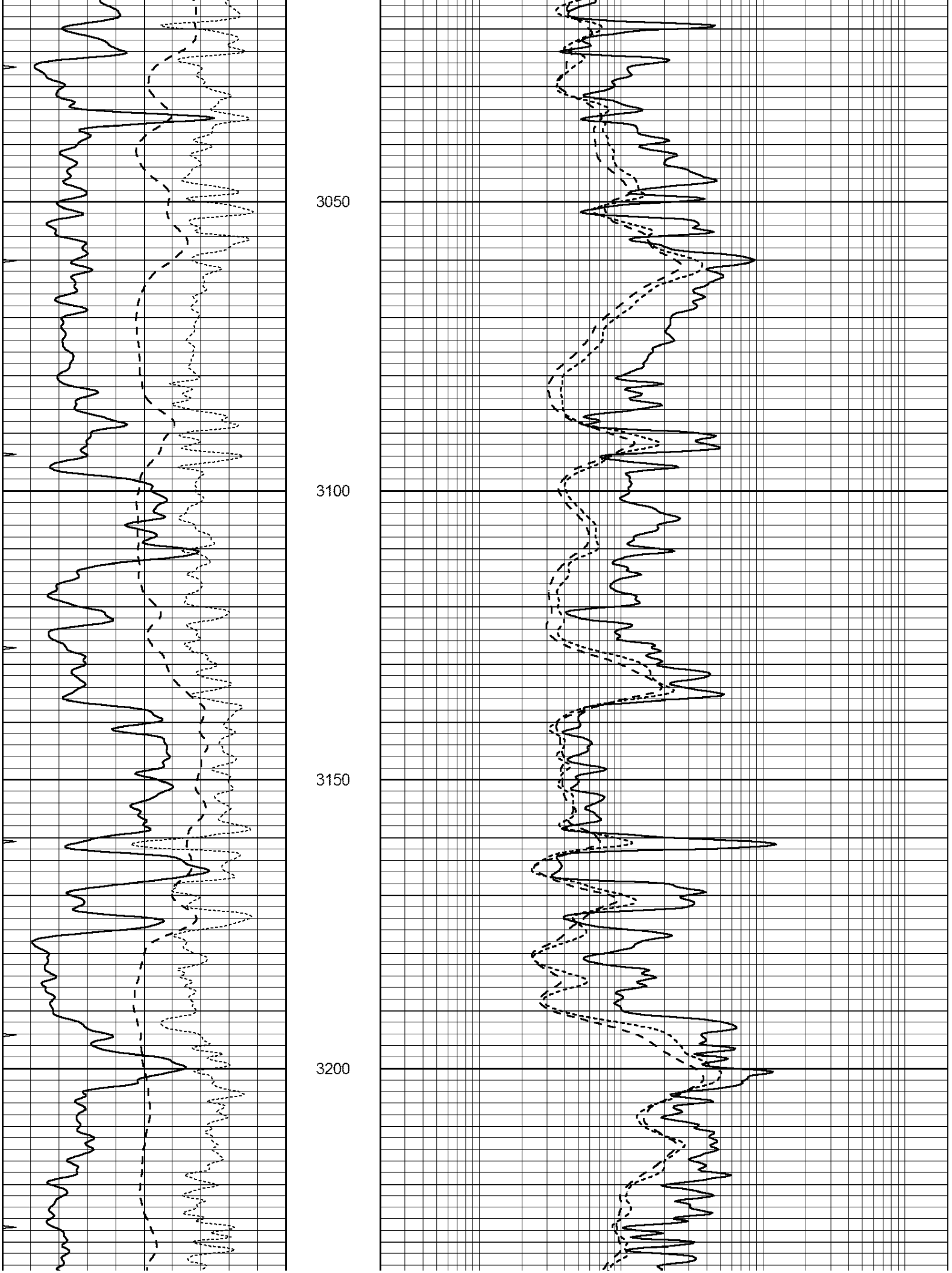
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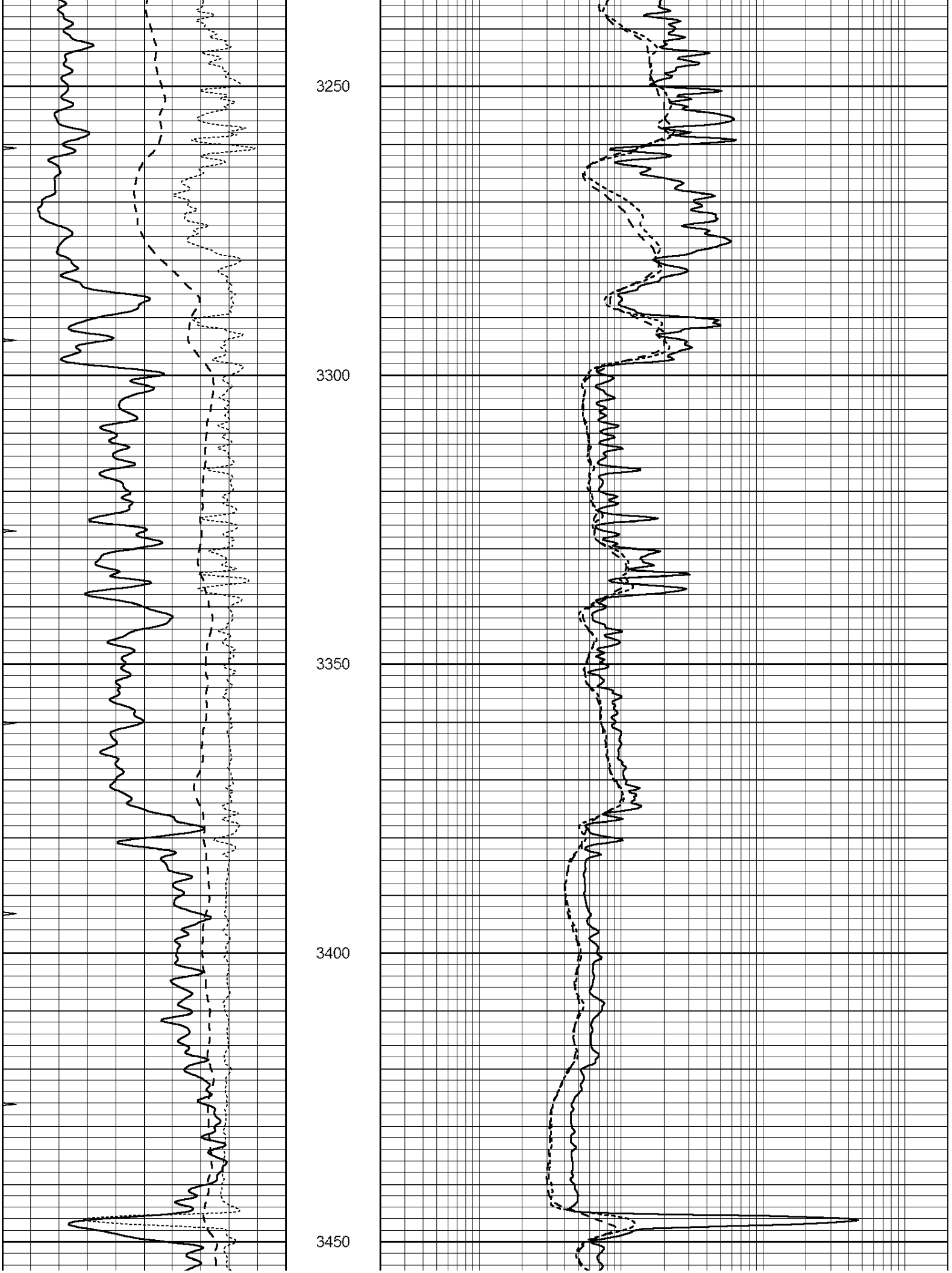
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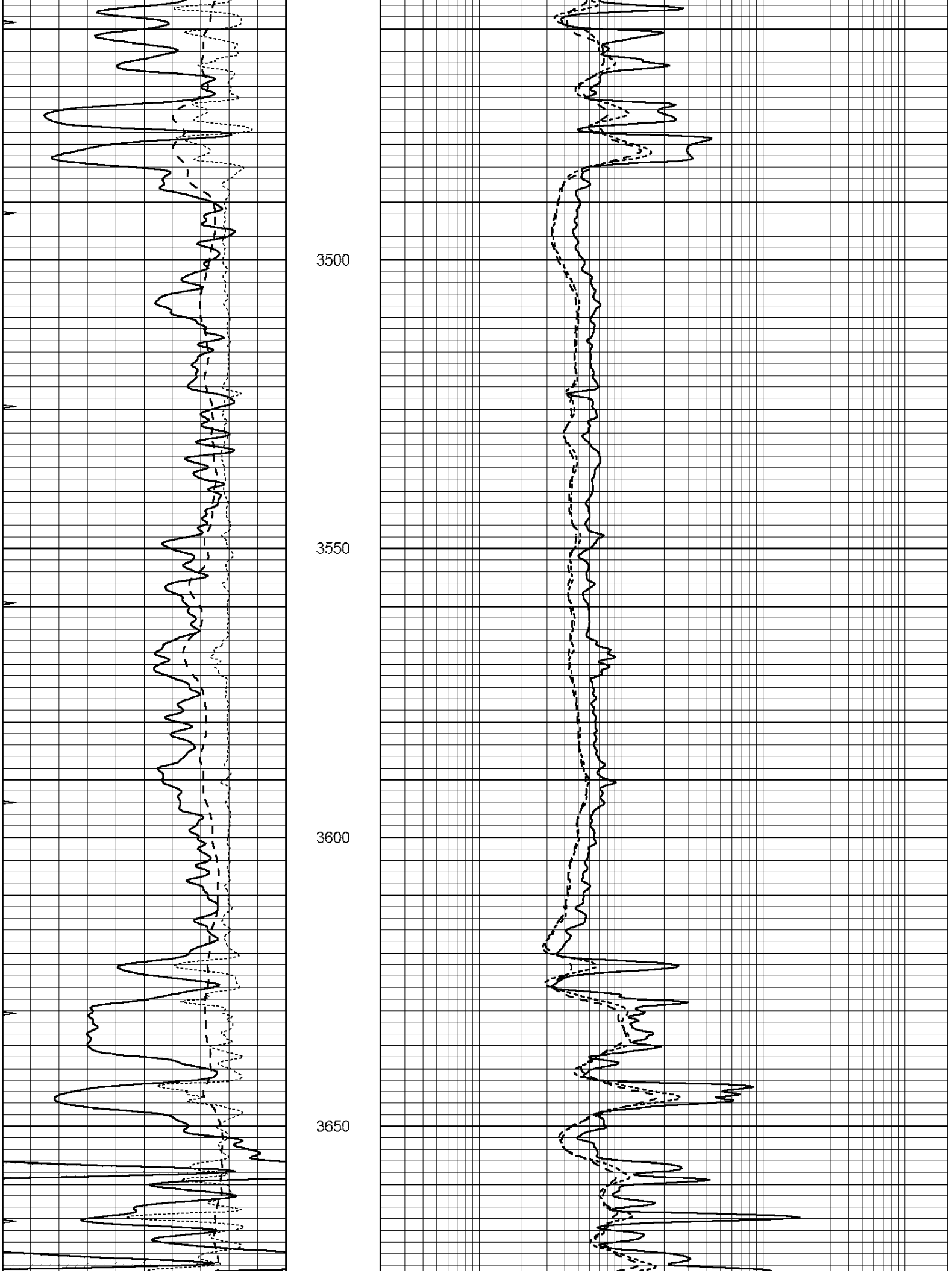
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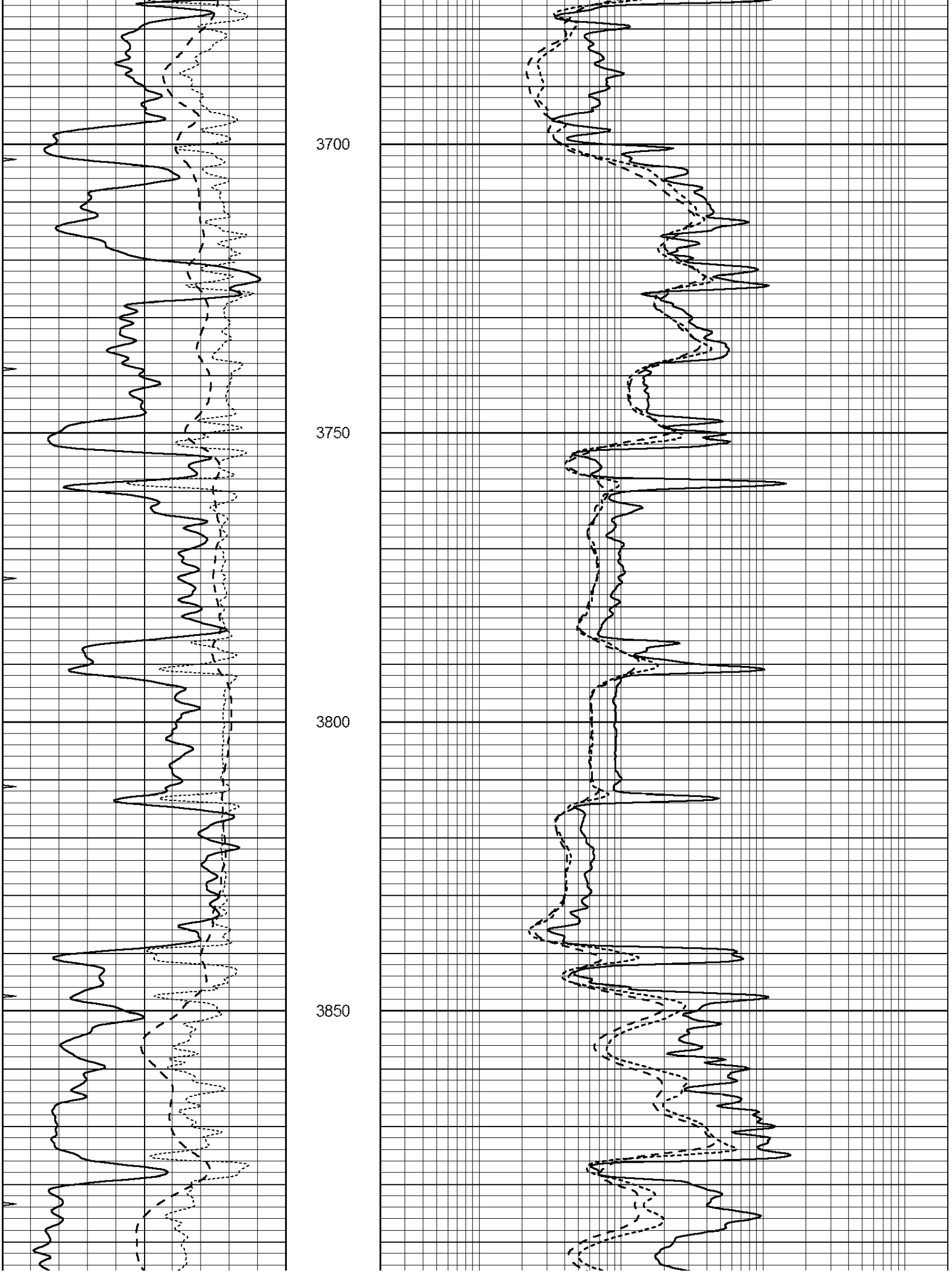
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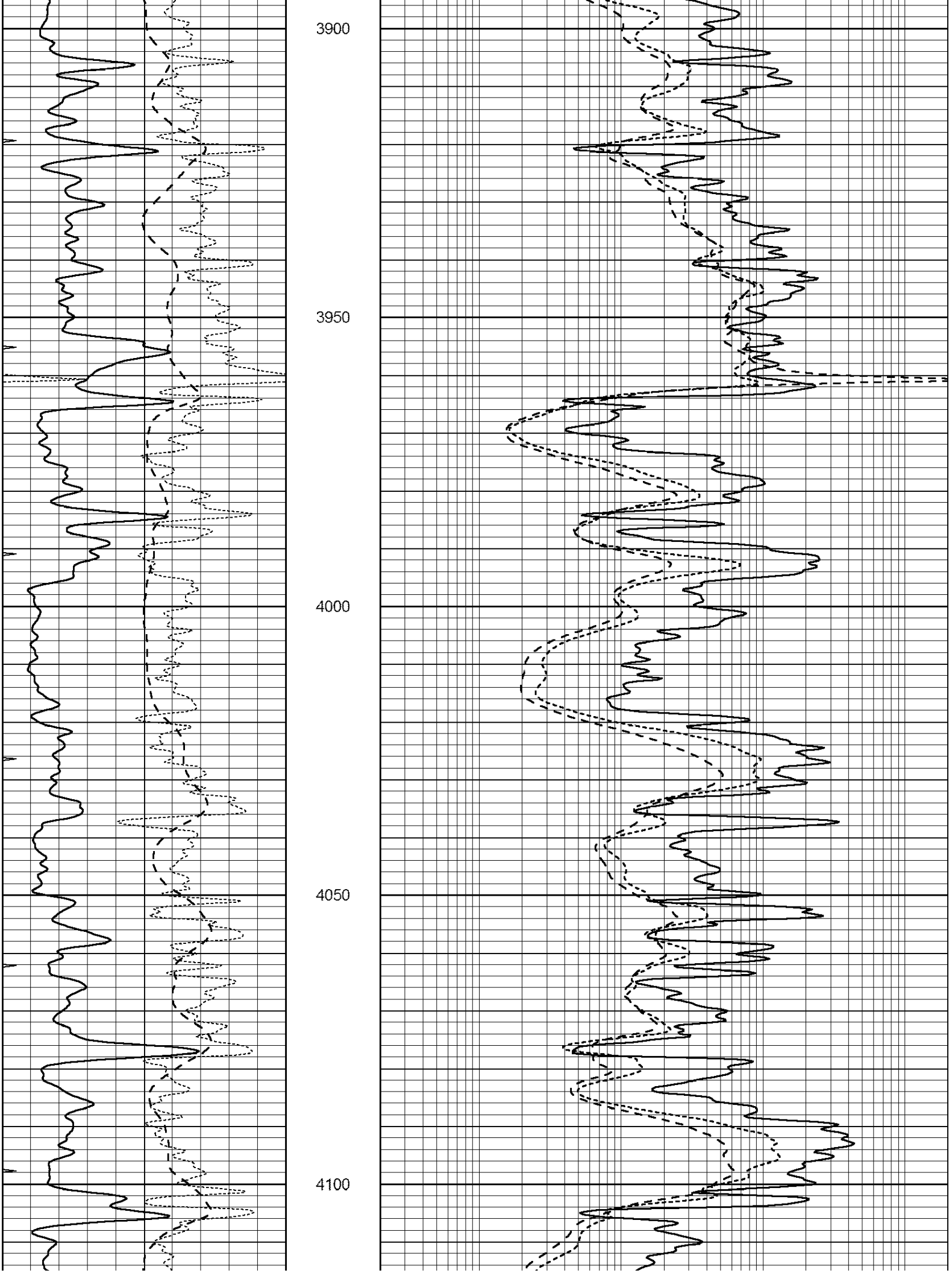
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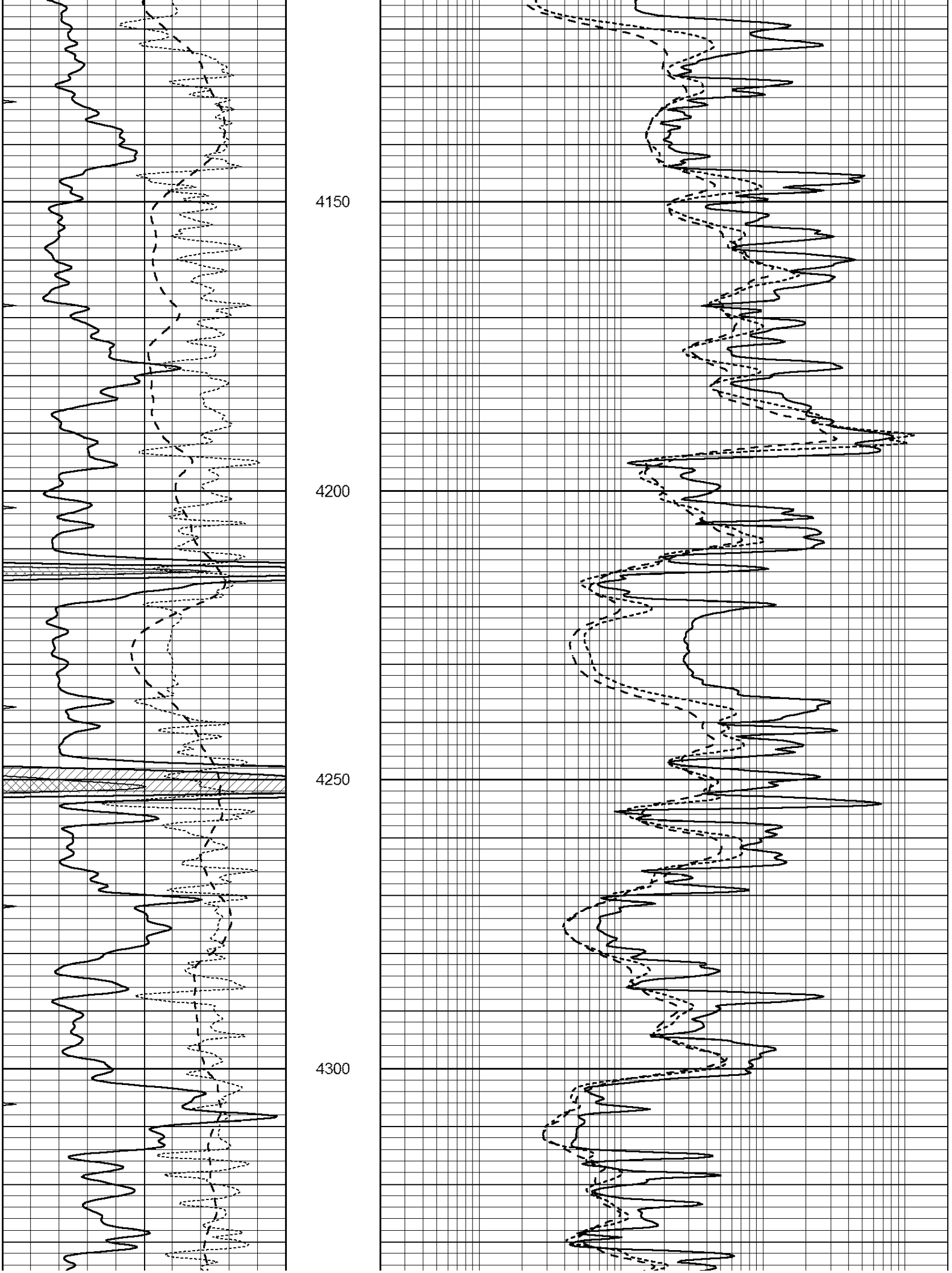
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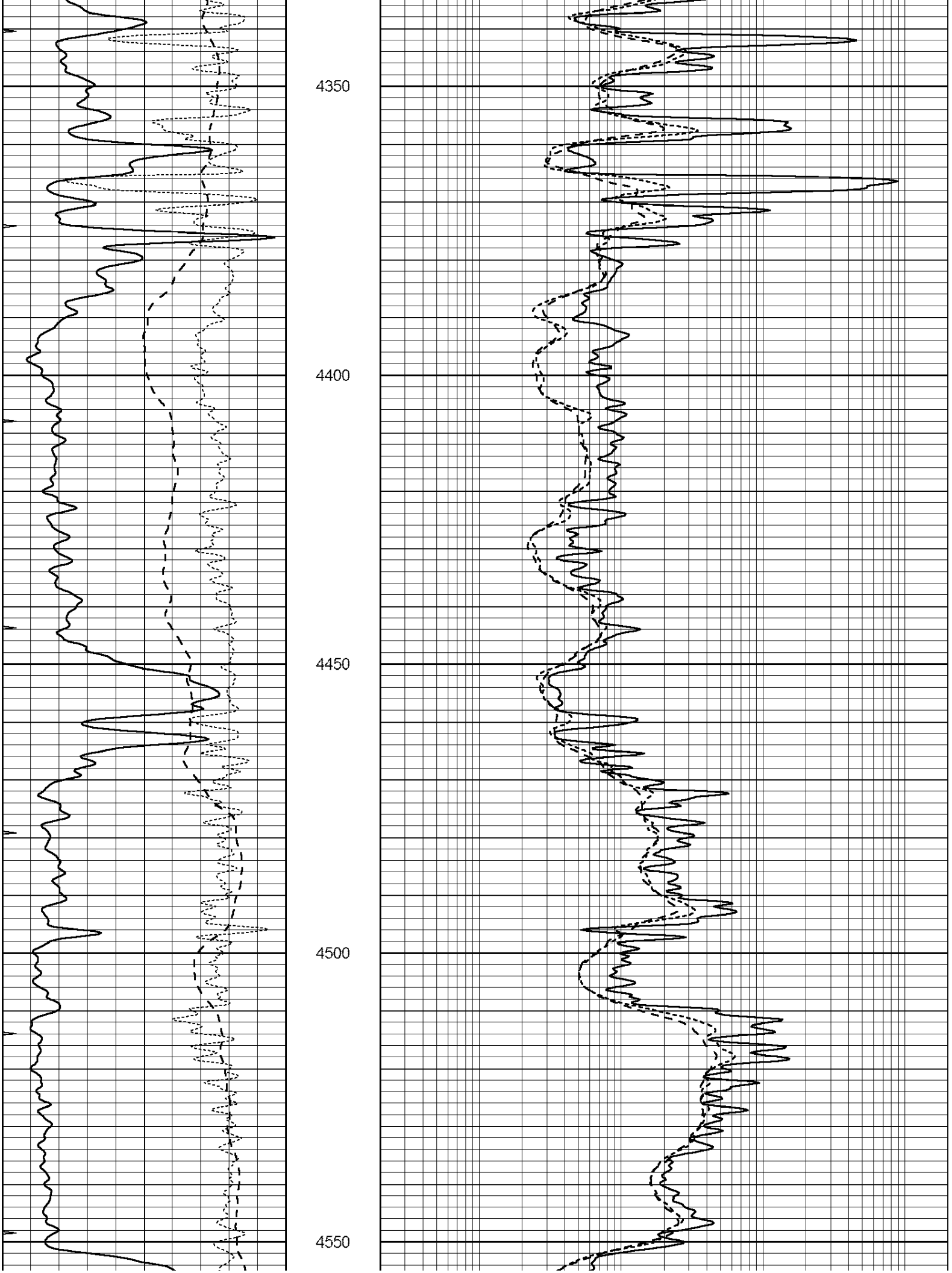
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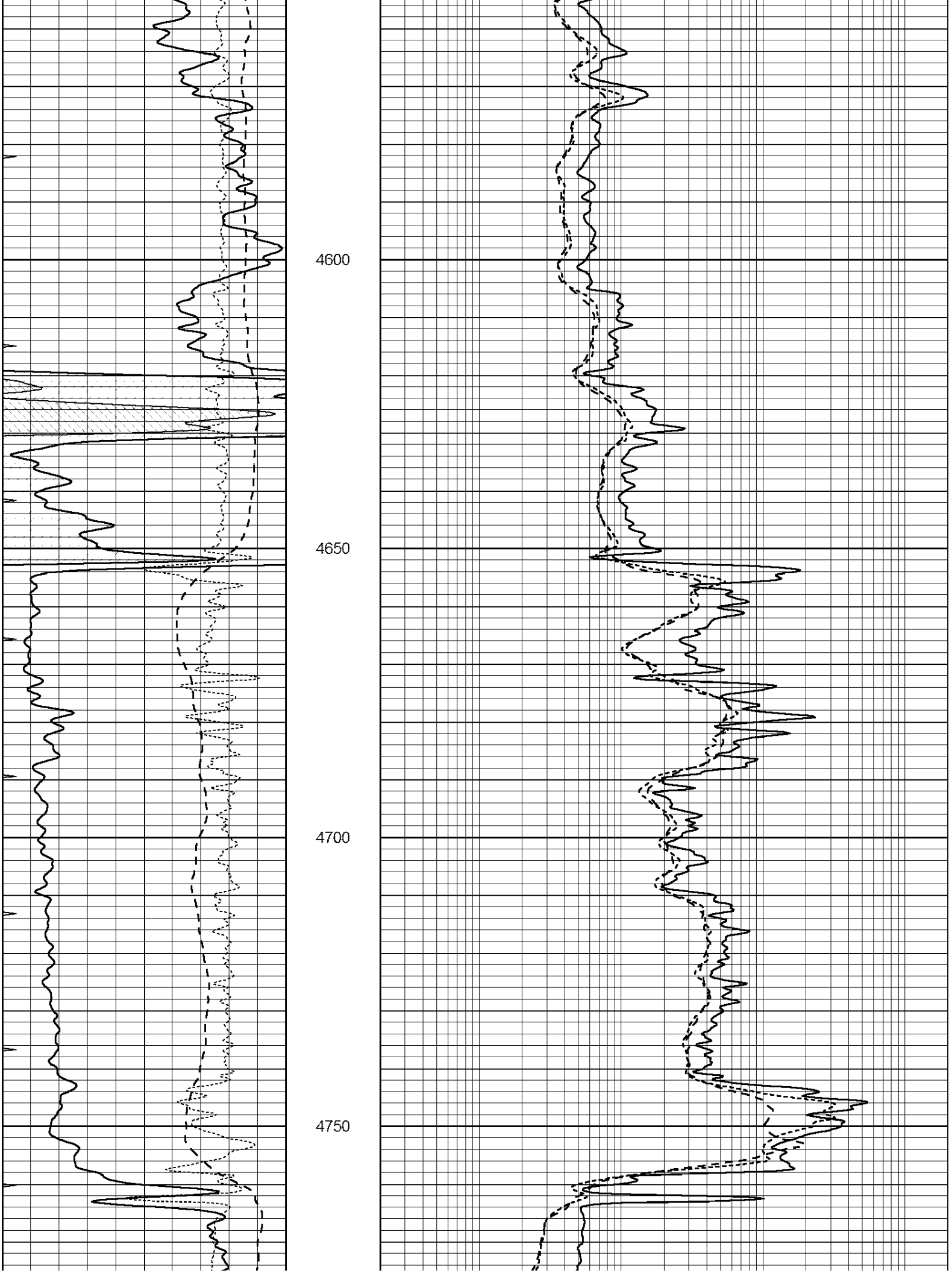
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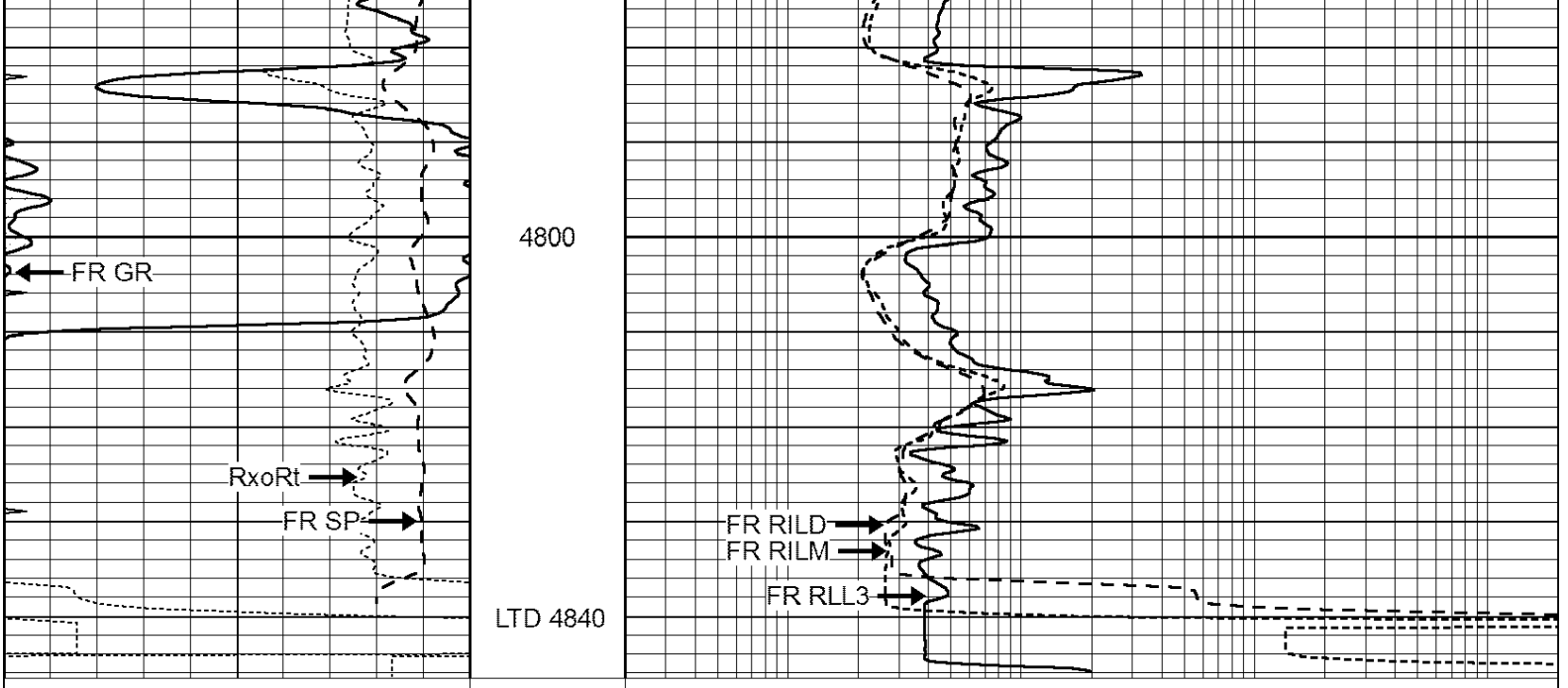


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

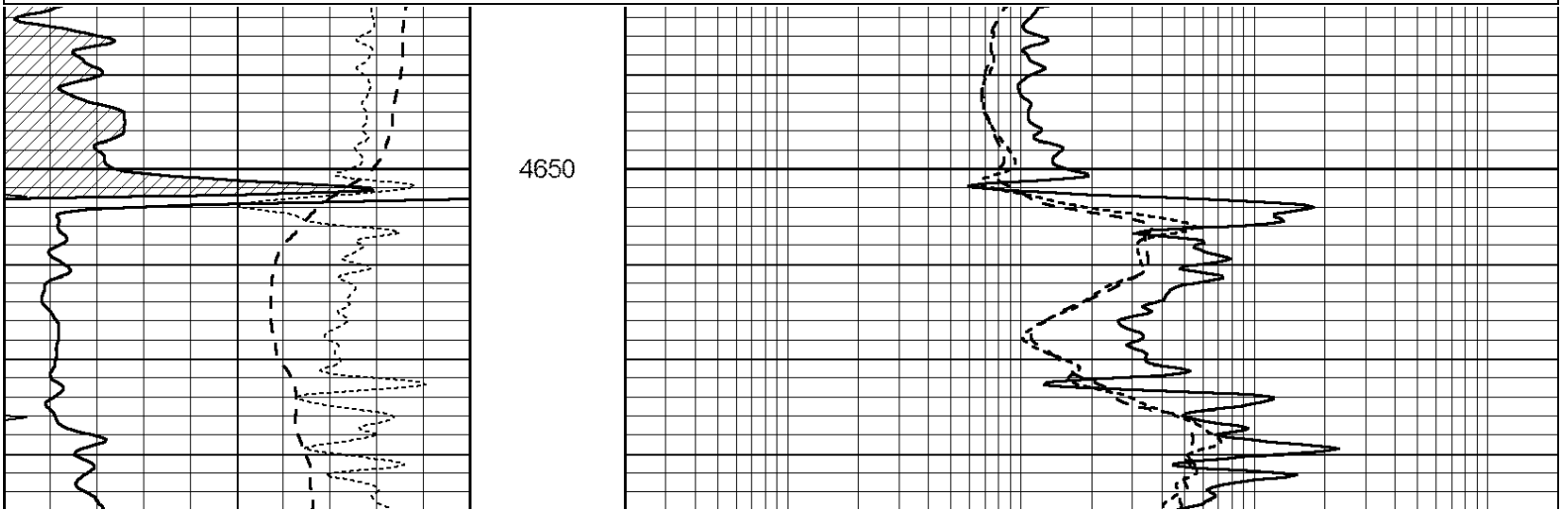
NABORS
COMPLETION & PRODUCTION SERVICES CO.

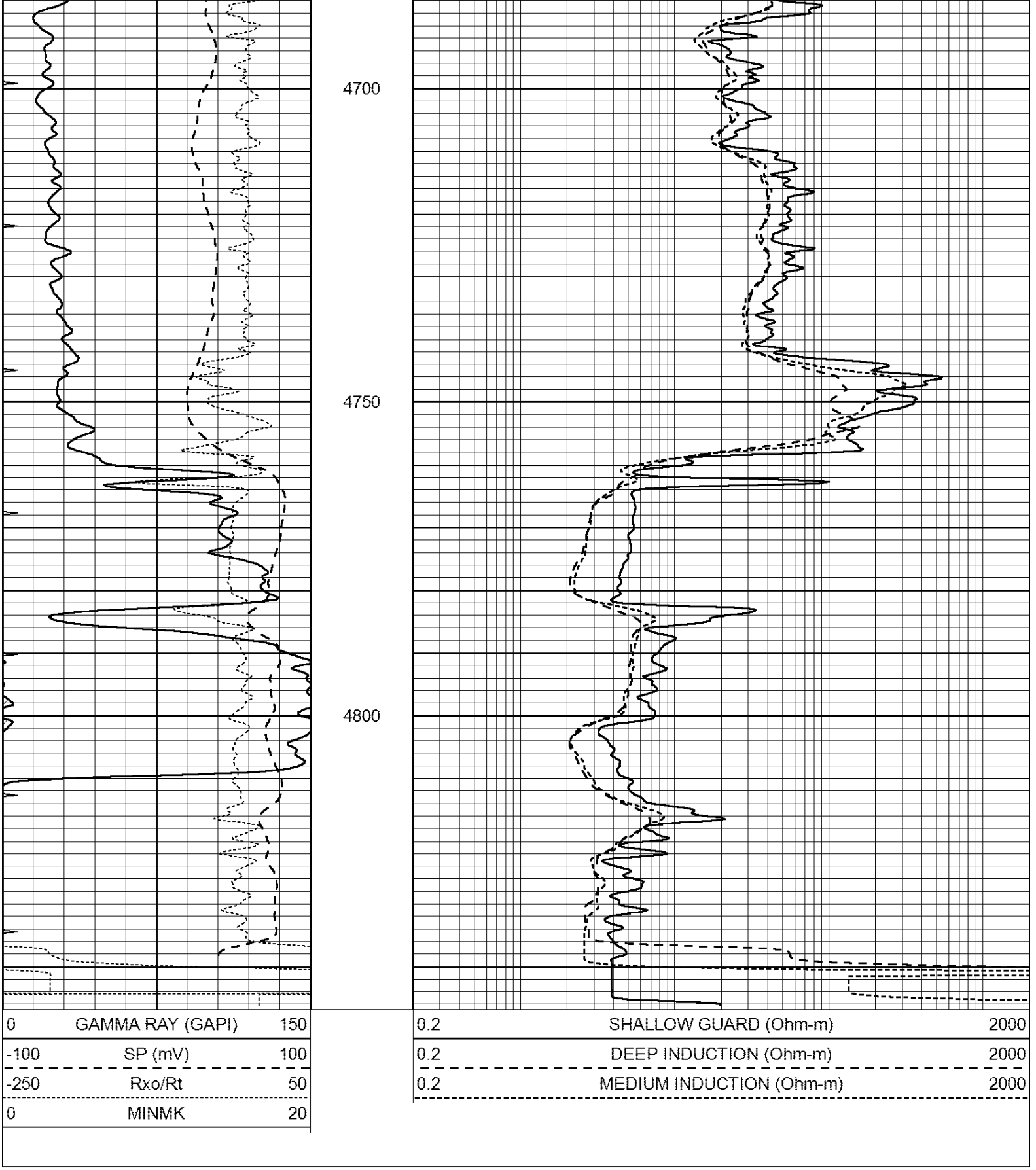
REPEAT SECTION

Database File: 23876pe.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Thu Jan 16 23:55:26 2014 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	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: 23876pe.db
Dataset Pathname: pass2.2
Dataset Creation: Thu Jan 16 23:55:26 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG

Surface Cal Performed: Fri Aug 01 08:53:19 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

Master Calibration

Performed Thu Sep 17 09:57:21 2009

	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		0.0000	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

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: Fri Nov 29 08:34:37 2013

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.6035 GAPI/cps