DUAL INDUCTION LOG

Company DIXON OPERATING COMPANY
Well #6 KIRKBRIDE OWWO
Field MEDICINE LODGE NORTH
County BARBER State KANSAS
Location: API # : 15-007-20571-0000
500' FSL & 660' FEL
SEC 20 TWP 32S RGE 12W

Permanent Datum	GROUND LEVEL	Elevation 1603	Other Services CDL/CNL/PE MEL/SON
Log Measured From	KELLY BUSHING 11' A.G.L.		Elevation K.B. 1614
Drilling Measured From	KELLY BUSHING		D.F. 1612 G.L. 1603

Date	4/22/18			
Run Number	ONE			
Depth Driller	4818			
Depth Logger	4818			
Bottom Logged Interval	4816			
Top Log Interval	00			
Casing Driller	8 5/8"@247'			
Casing Logger	248			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 42000 PPM		
Density / Viscosity	9.7/52			
pH / Fluid Loss	7.0/NC			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.20 @ 55F			
Rmf @ Meas. Temp	.15 @ 55F			
Rmc @ Meas. Temp	.24 @ 55F			
Source of Rmf / Rmc	MEASUREMENT			
Rm @ BHT	.08 @ 123F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	123F			
Equipment Number	922339			
Location	HAYS, KANSAS			
Recorded By	JASON CAPPELLUCCI			
Witnessed By	BRUCE REED			

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Comments

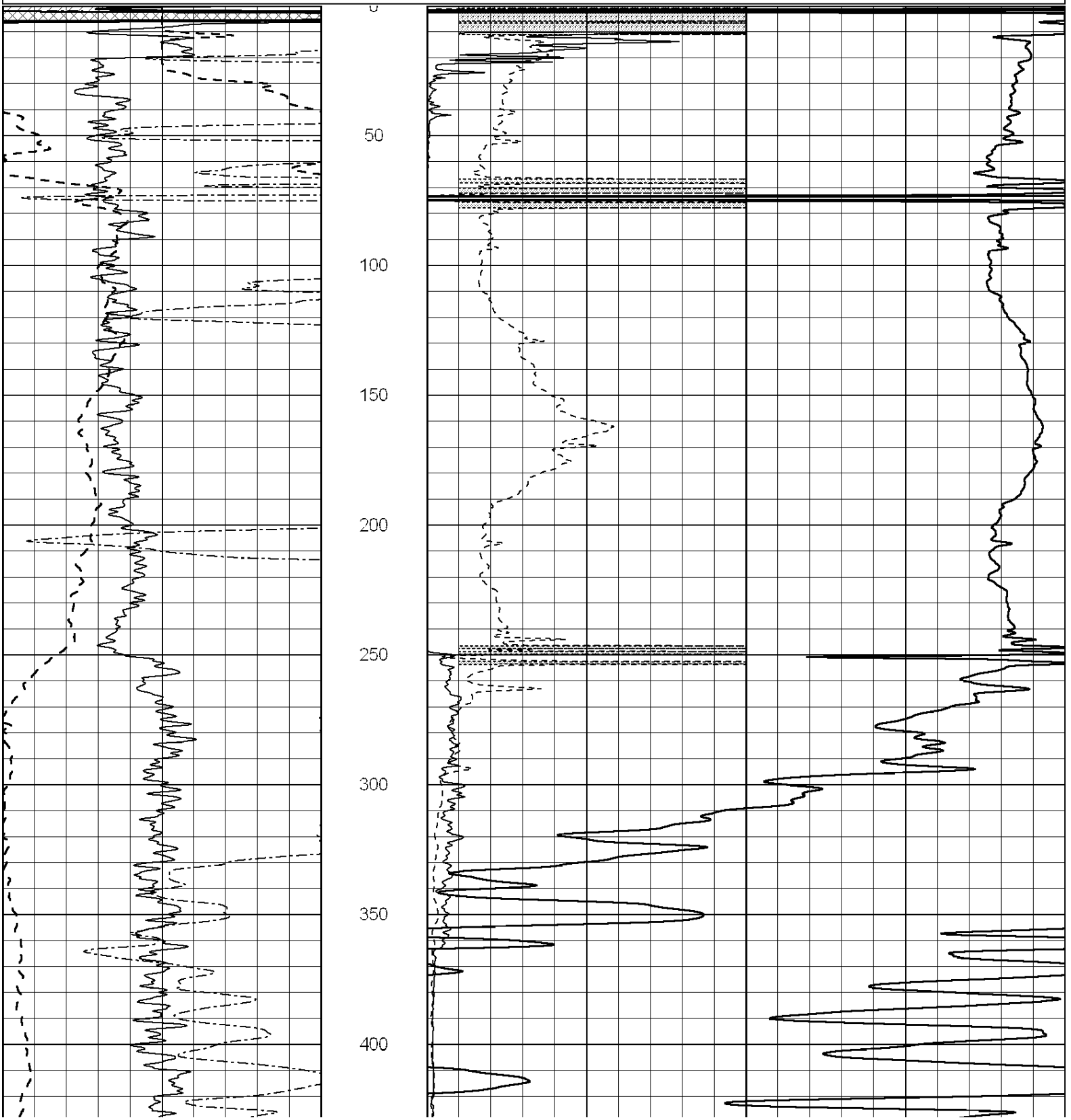
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
MEDICINE LODGE, KS. - 3 WEST TO GYP HILL RD. - 2 SOUTH TO RED ROCK RD. - 1/2 EAST
SOUTH BEFORE THE CATTLE GUARD - FOLLOW ROAD SOUTH & WEST INTO

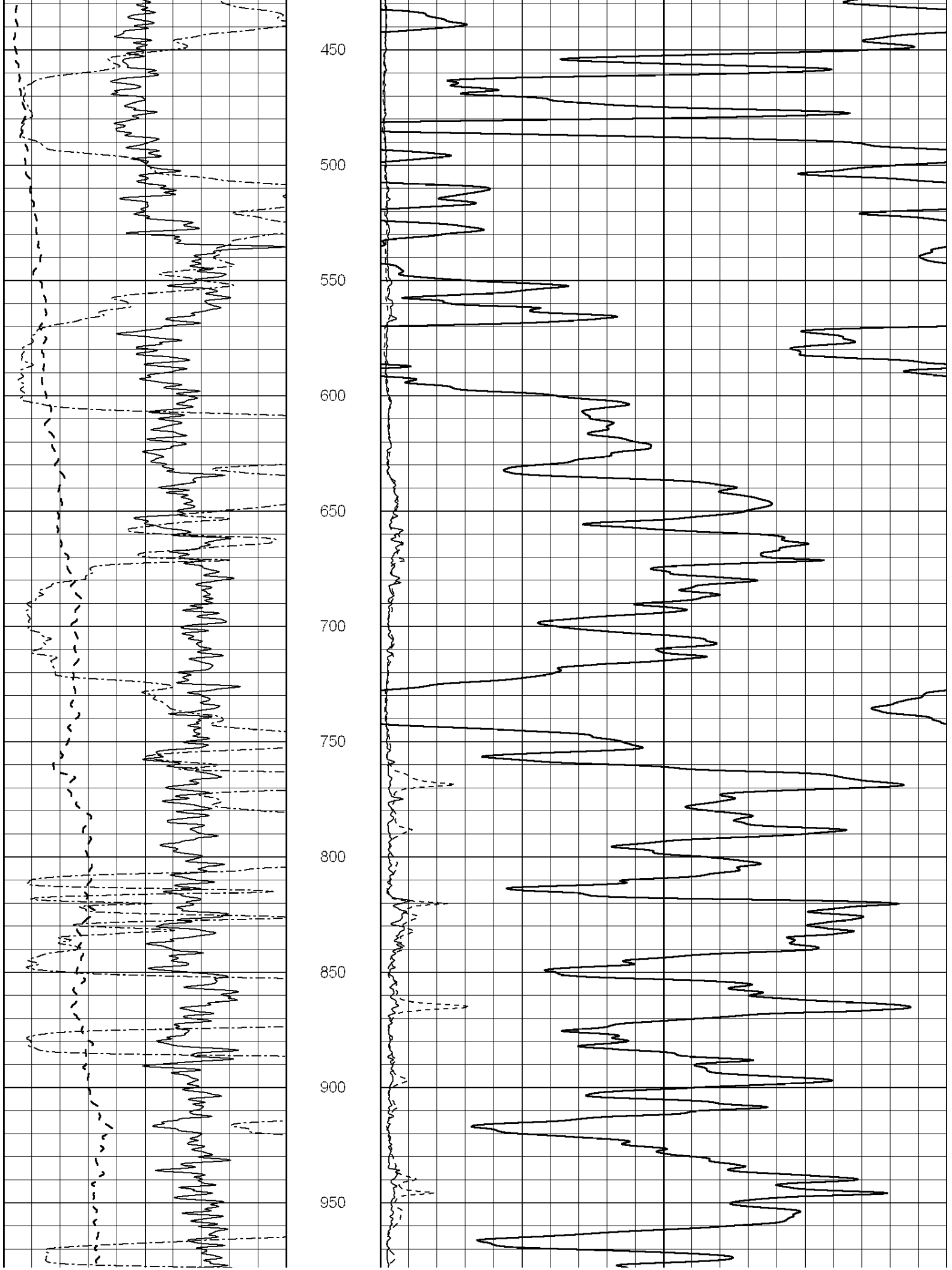
REPEAT SECTION

Database File: 2484pe.db
Dataset Pathname: pass4.2
Presentation Format: _dil2
Dataset Creation: Sun Apr 22 22:11:42 2018 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

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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650
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750
800
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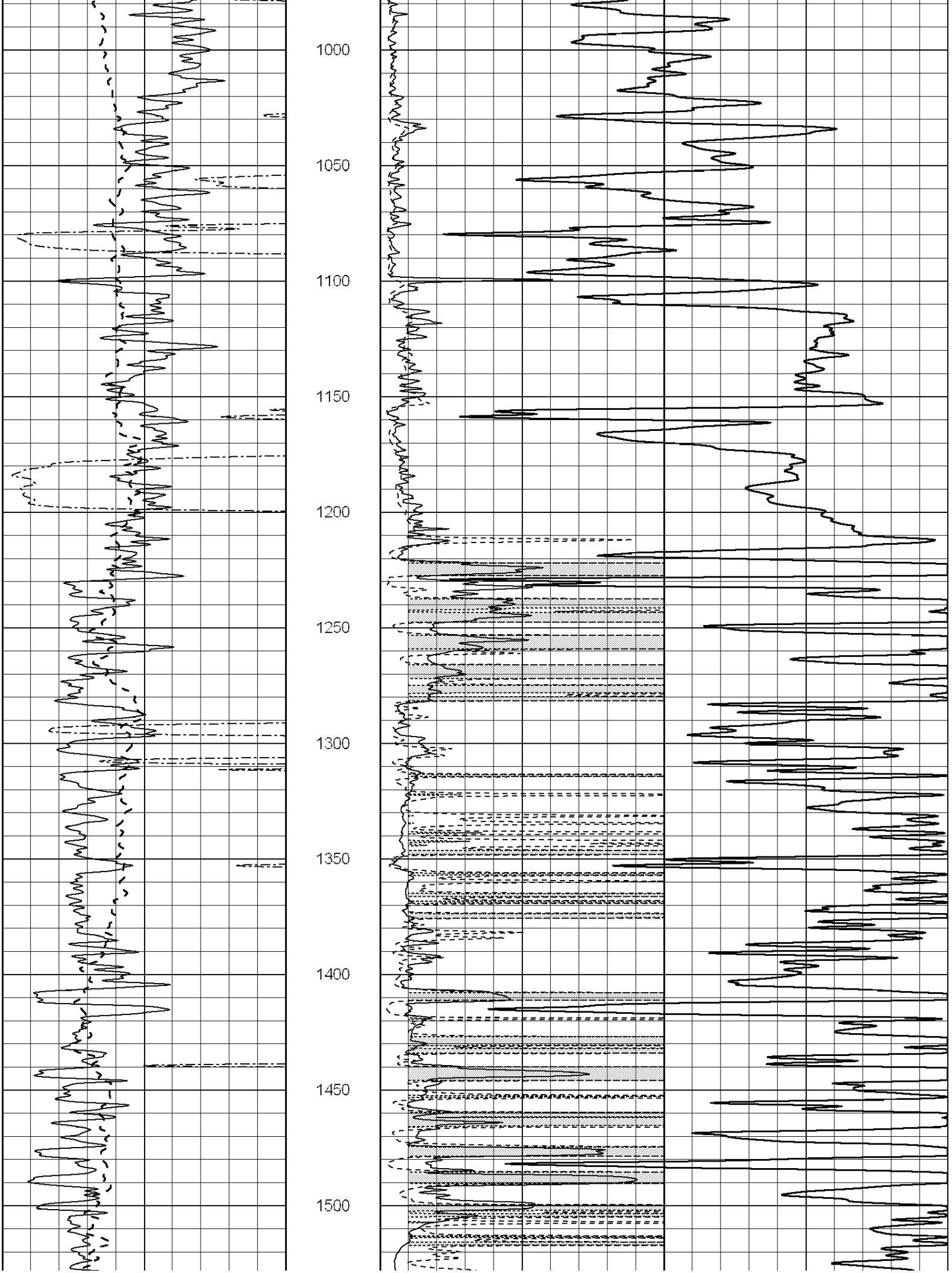
900
950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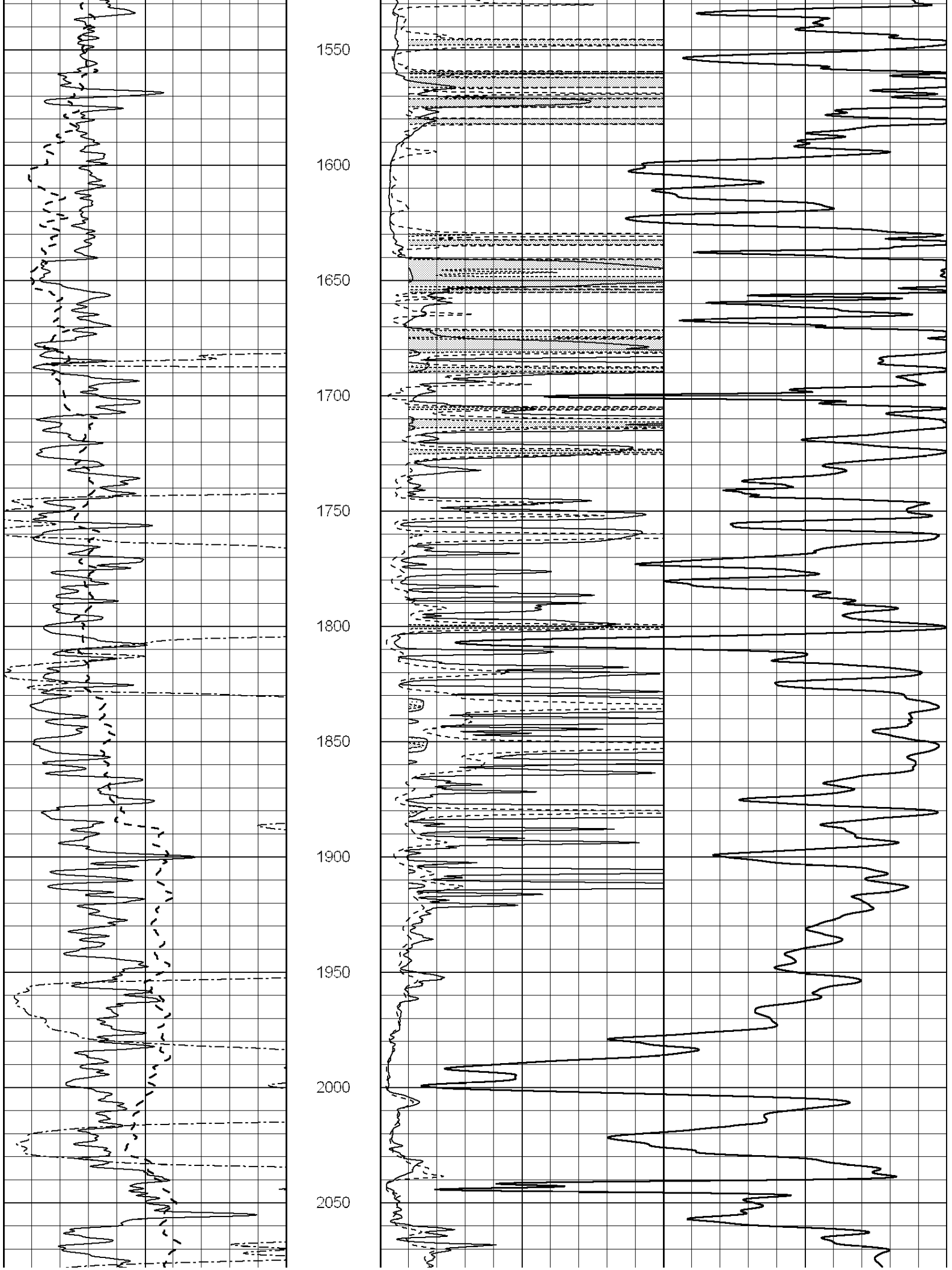
1100
1150
1200
1250
1300
1350
1400
1450
1500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1850
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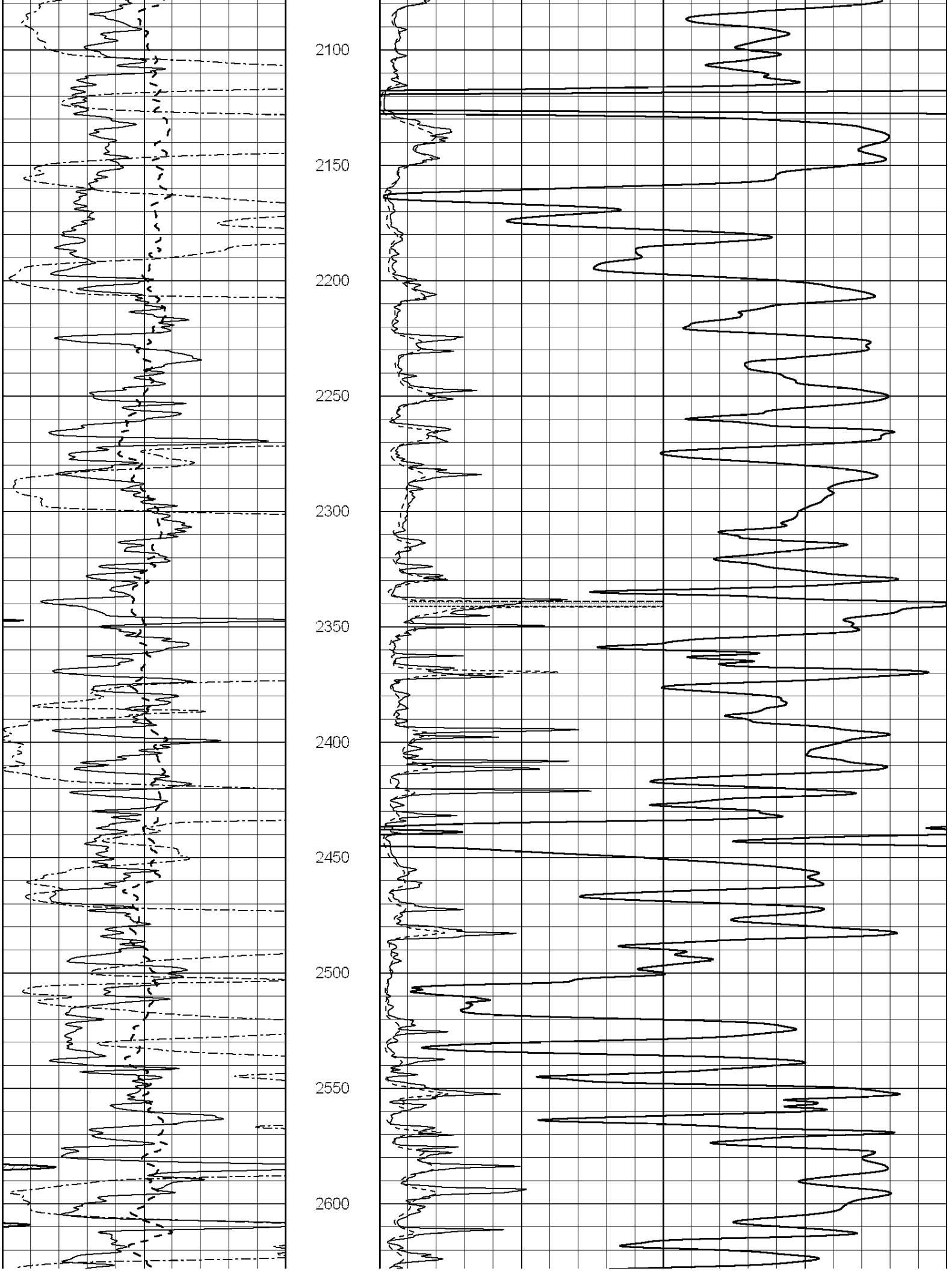
1950
2000
2050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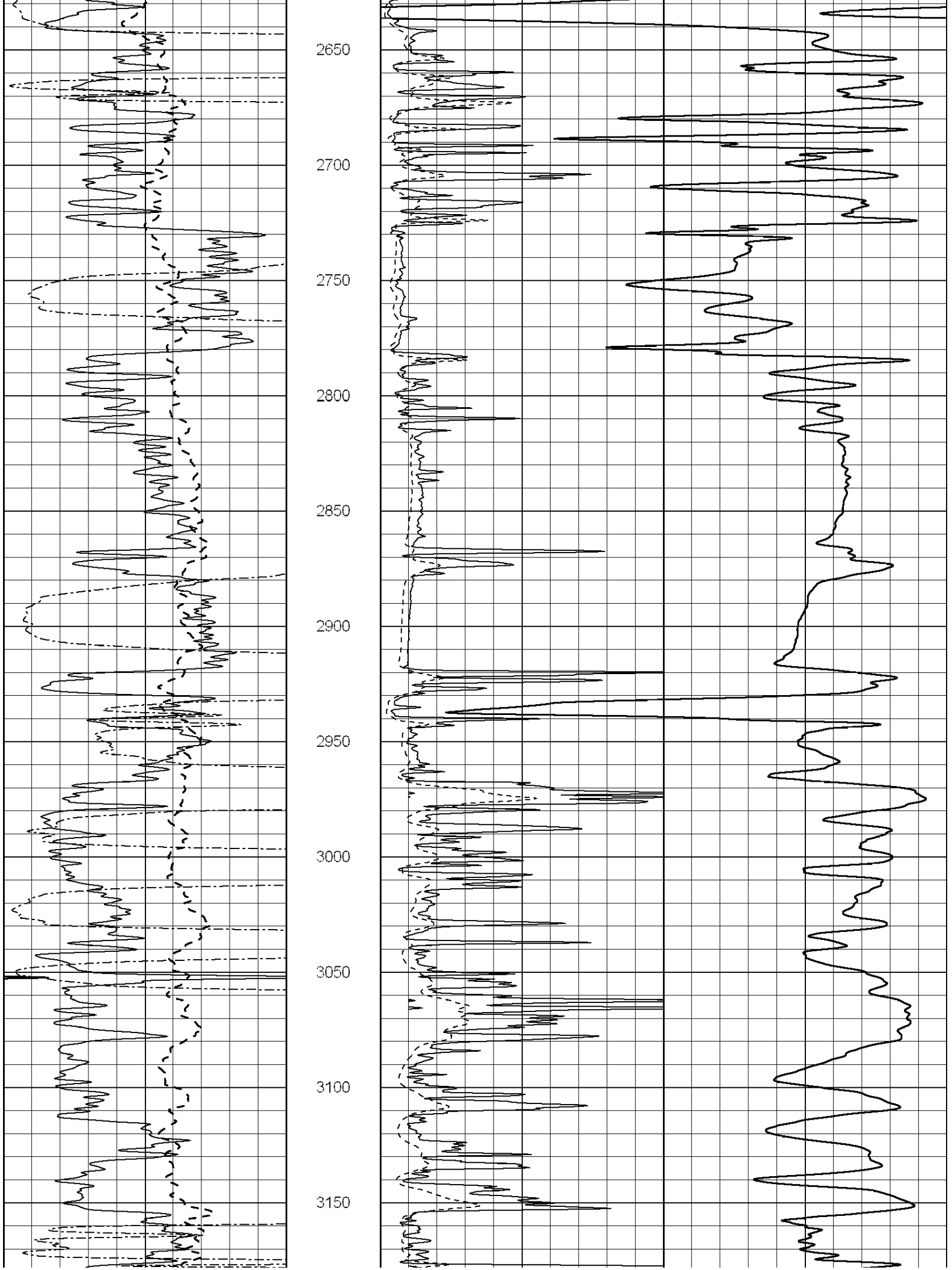
2600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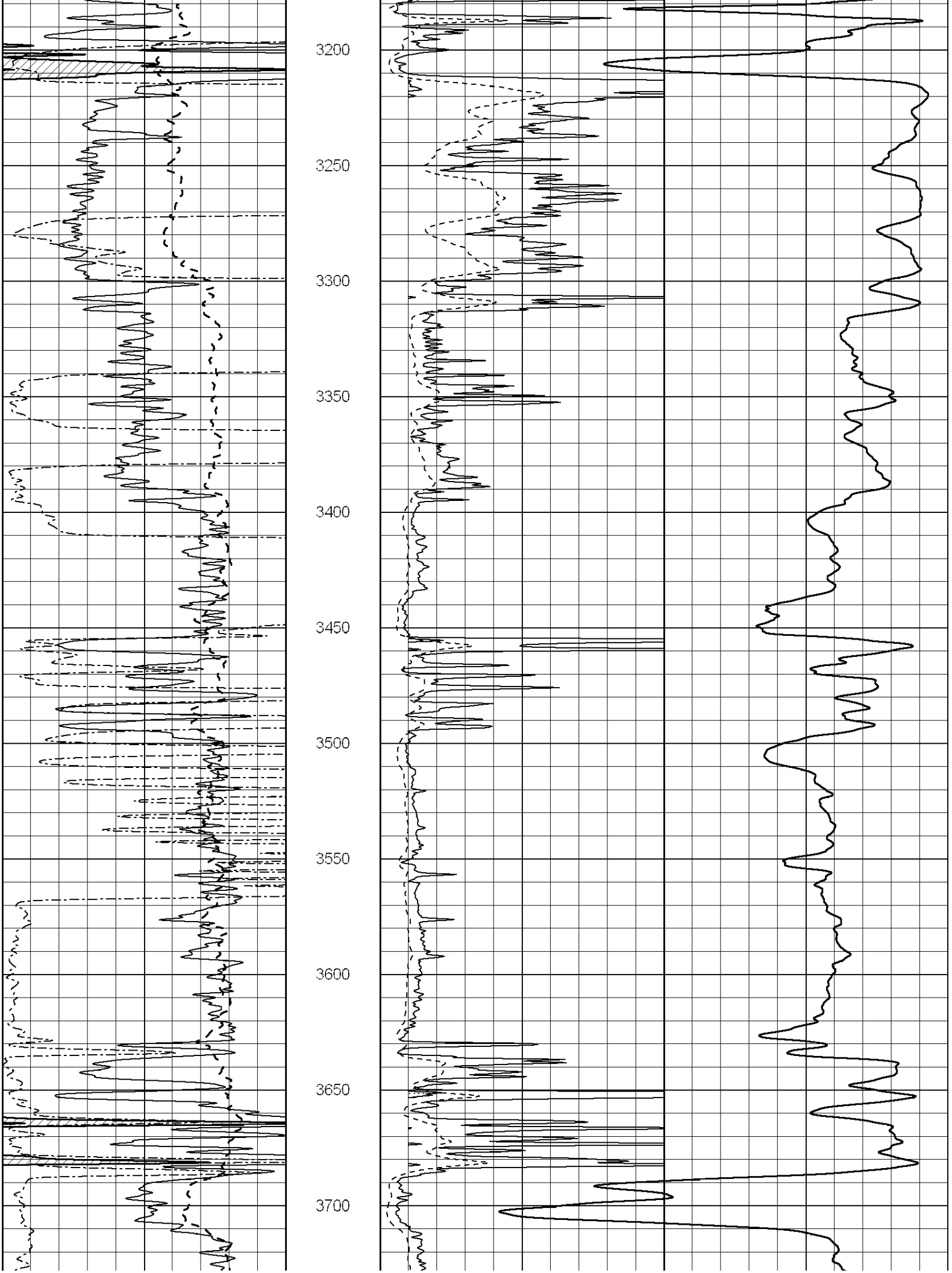
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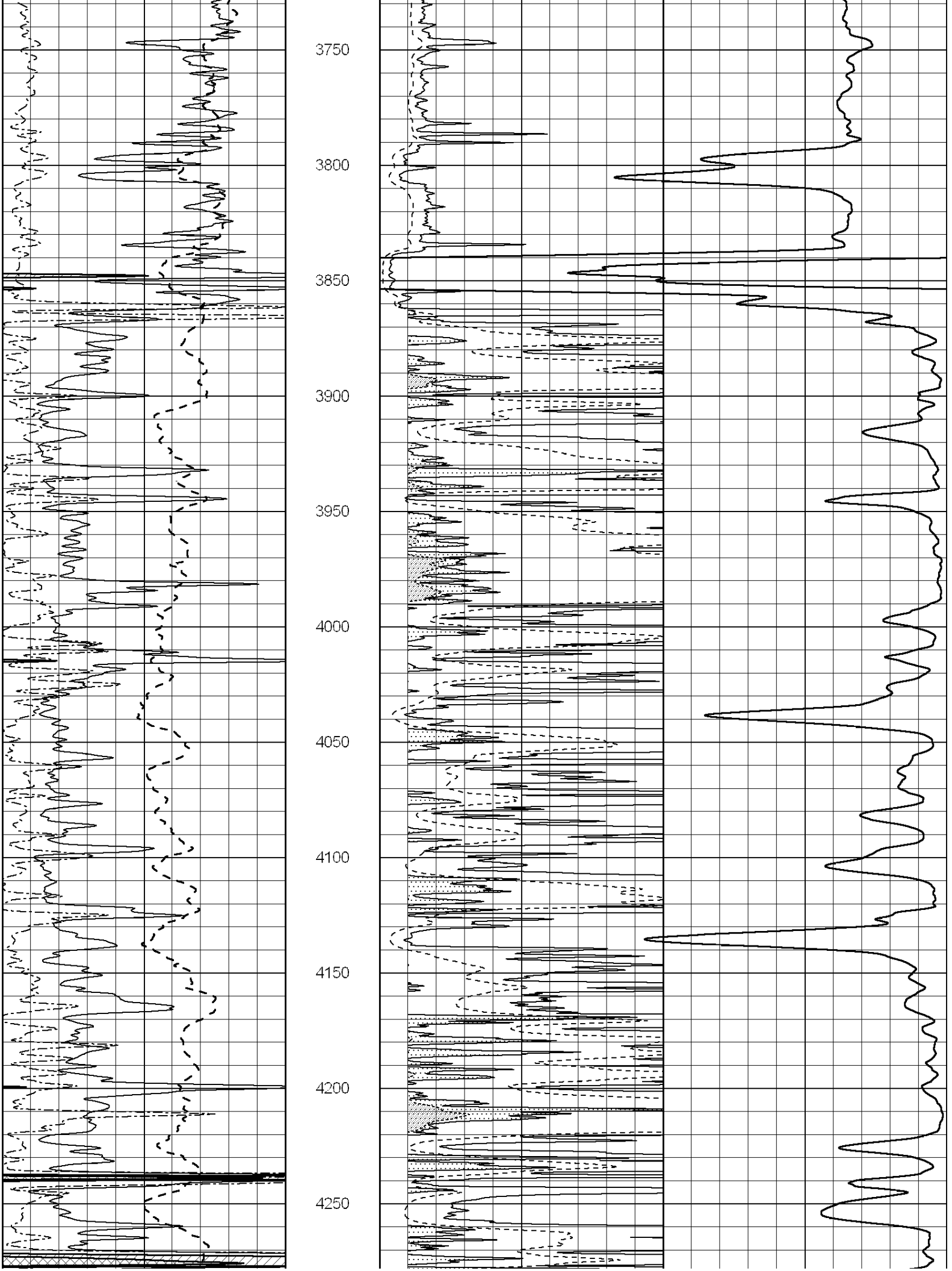
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4050
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4150
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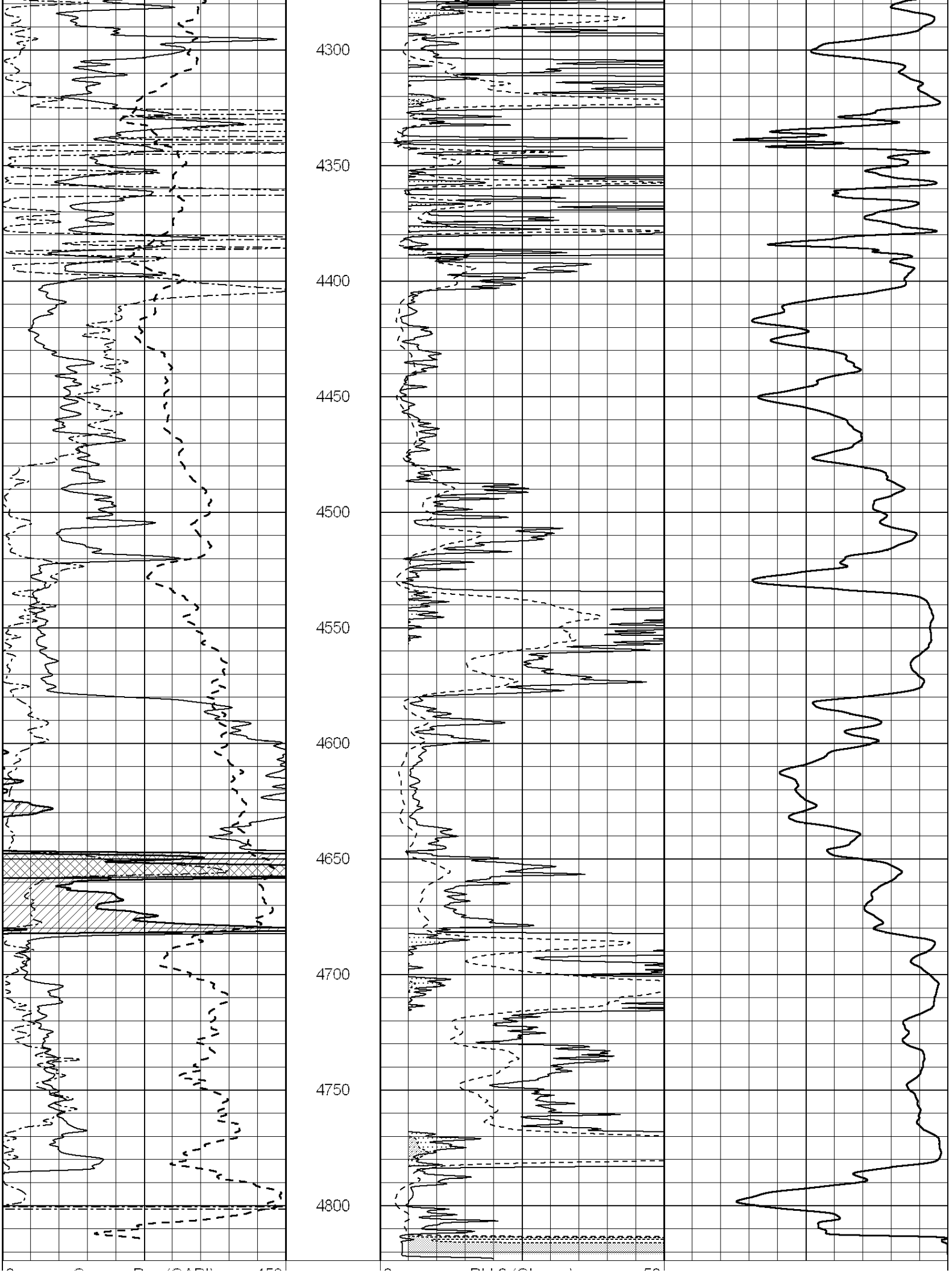
4250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4450
4500
4550
4600
4650
4700
4750
4800

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

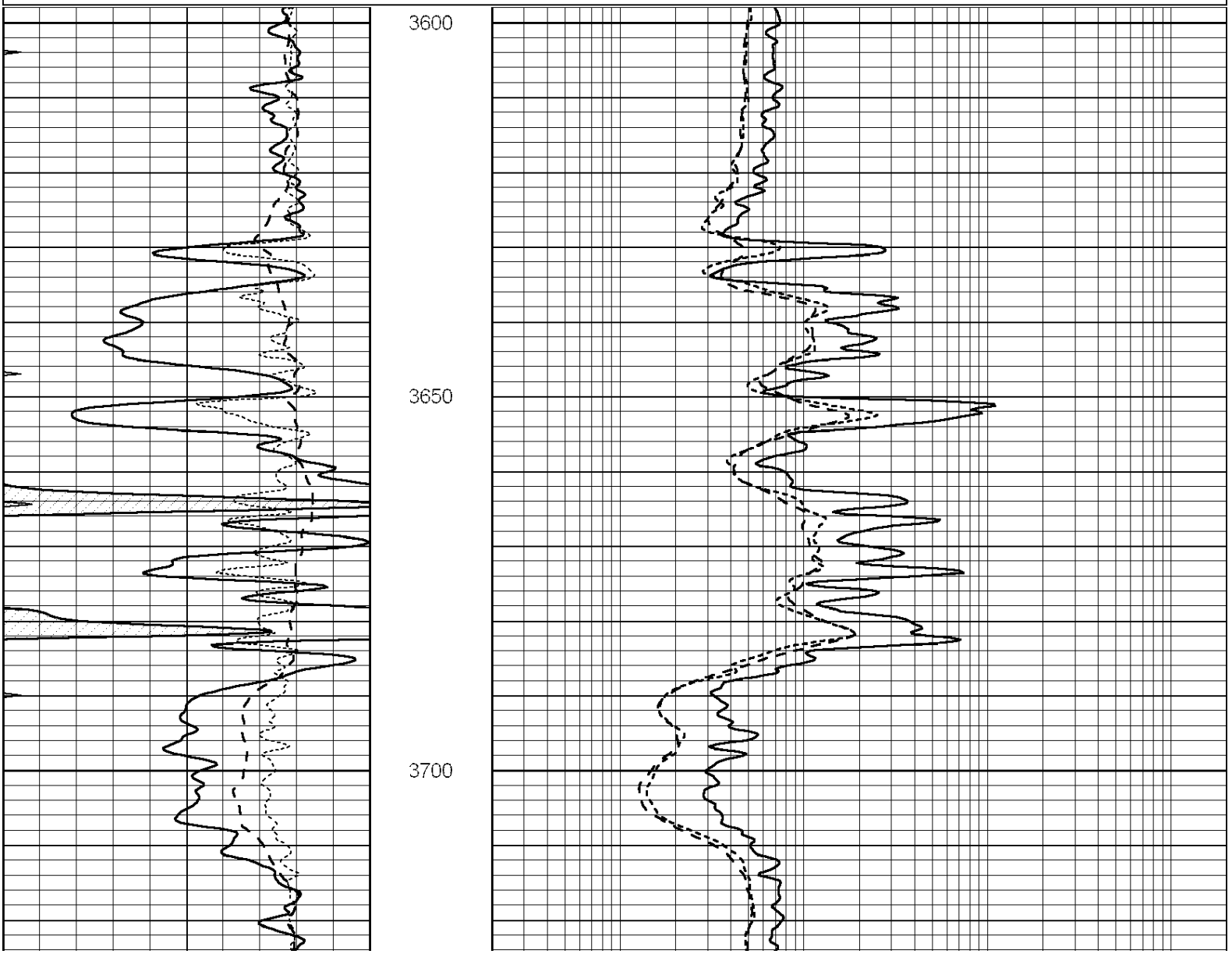
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

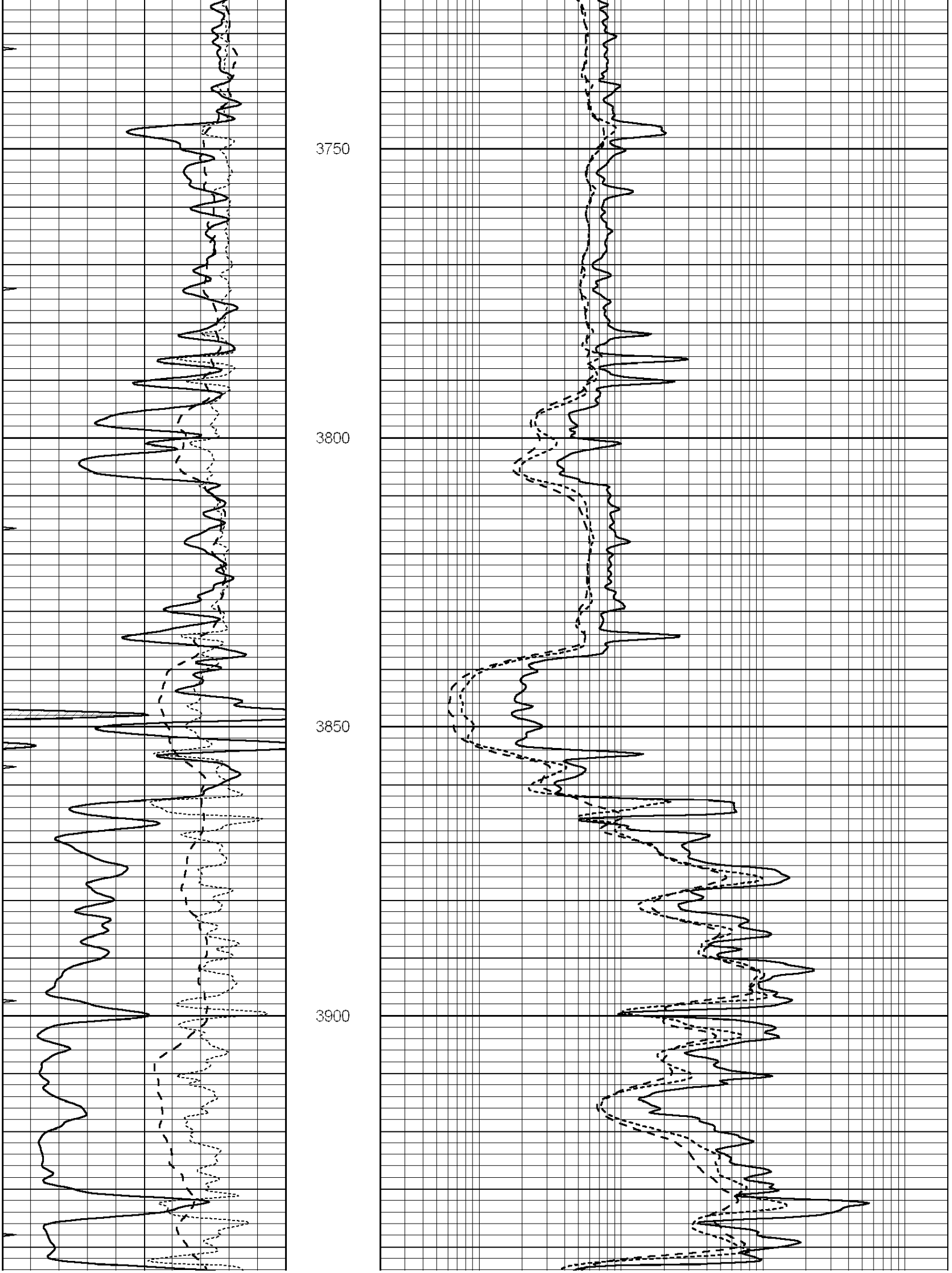
MAIN SECTION

Database File: 2484pe.db
Dataset Pathname: pass4.1
Presentation Format: _dil
Dataset Creation: Sun Apr 22 20:32:18 2018 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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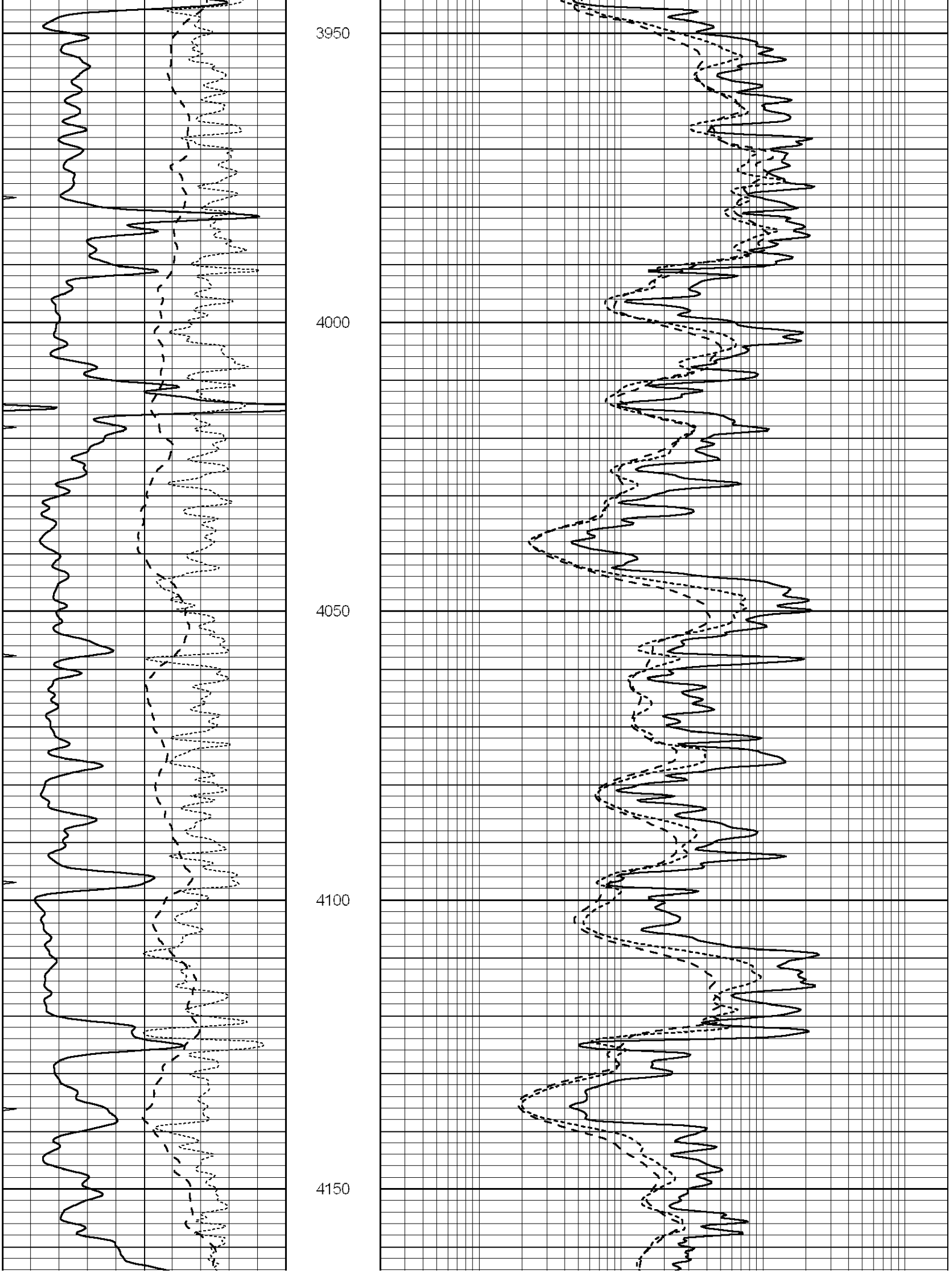
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4000
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4100
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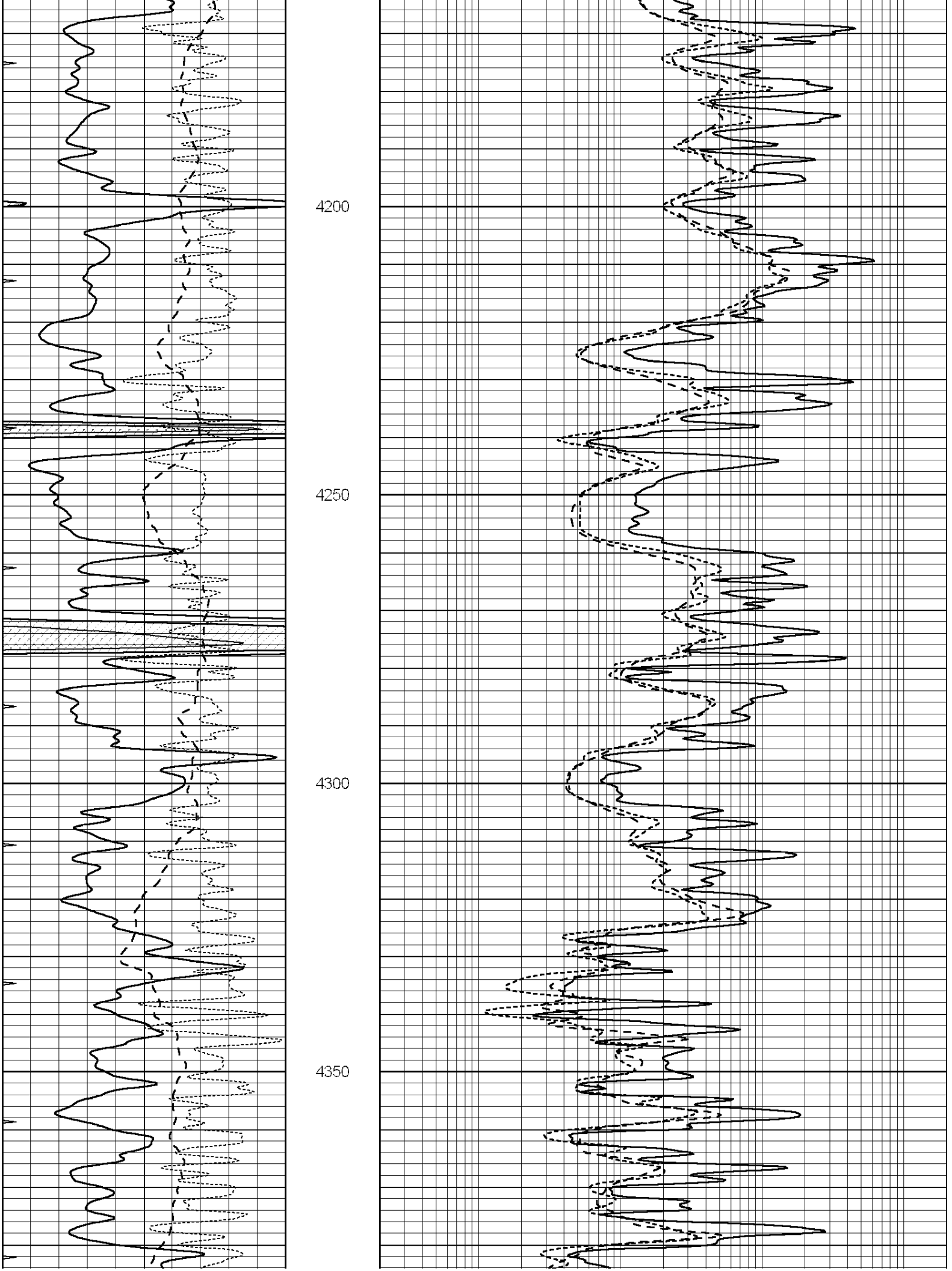
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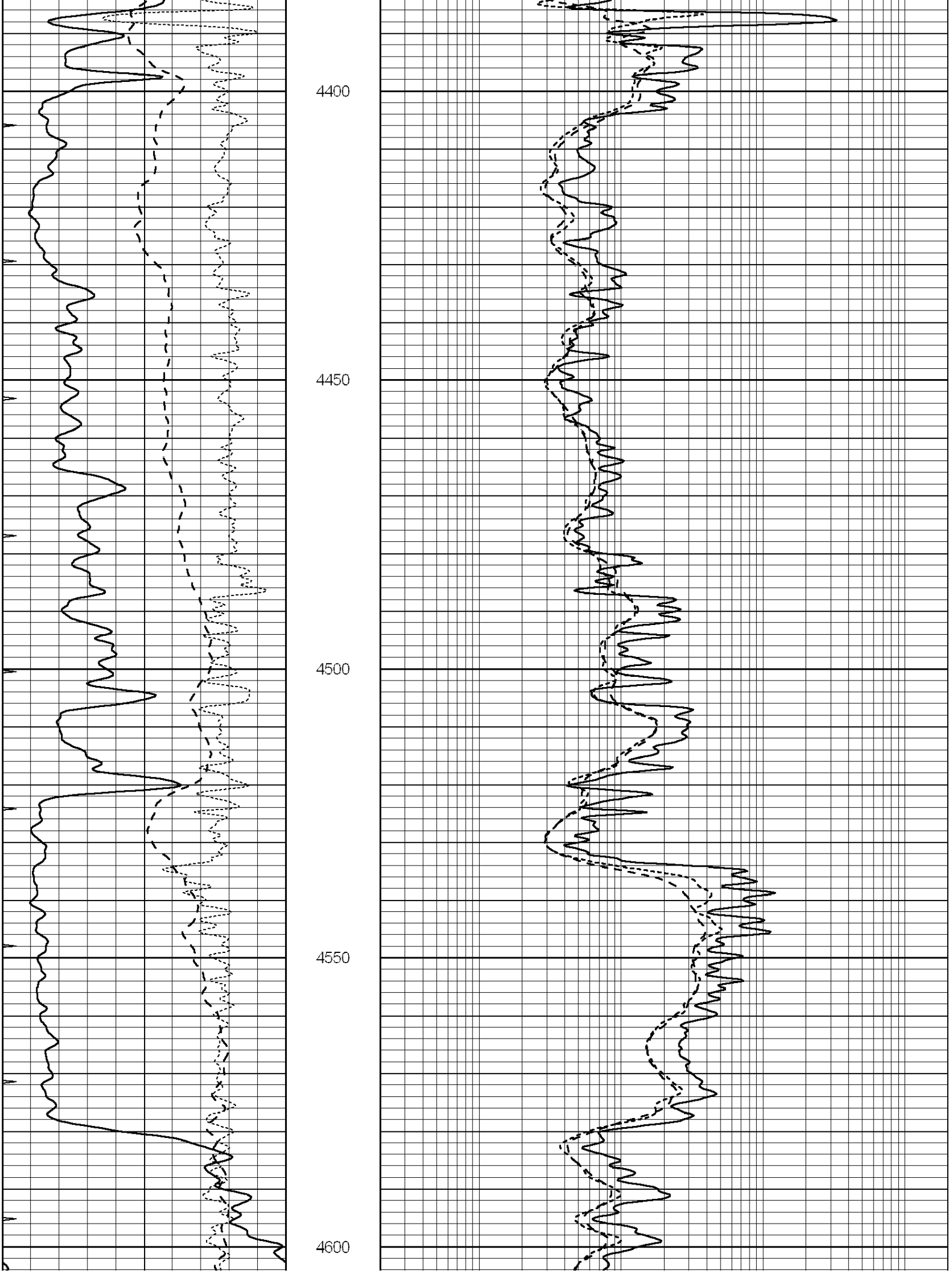
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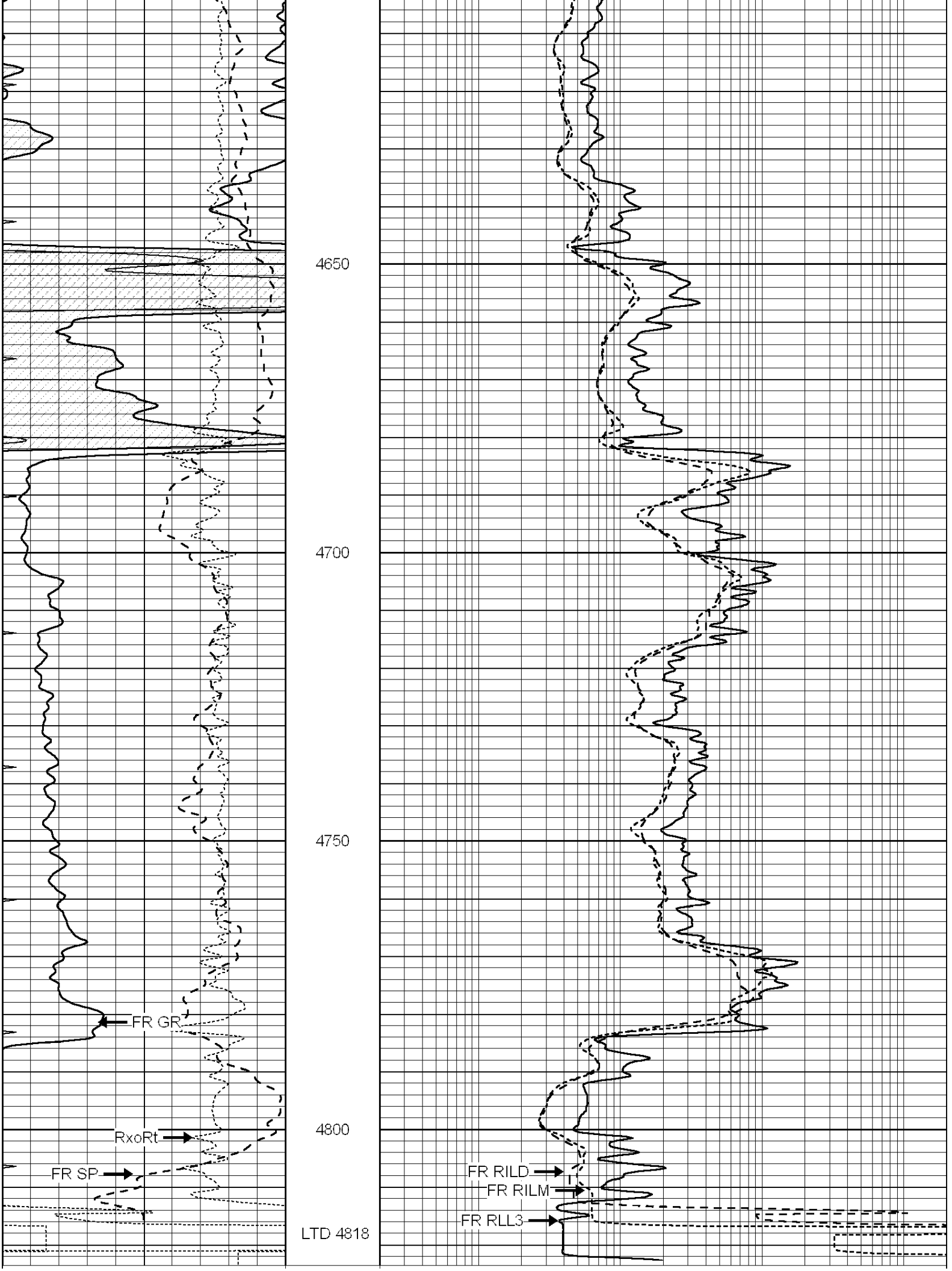
4650
4700
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4800
FR GR
RxoRt
FR SP
LTD 4818
FR RILD
FR RILM
FR RLL3

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

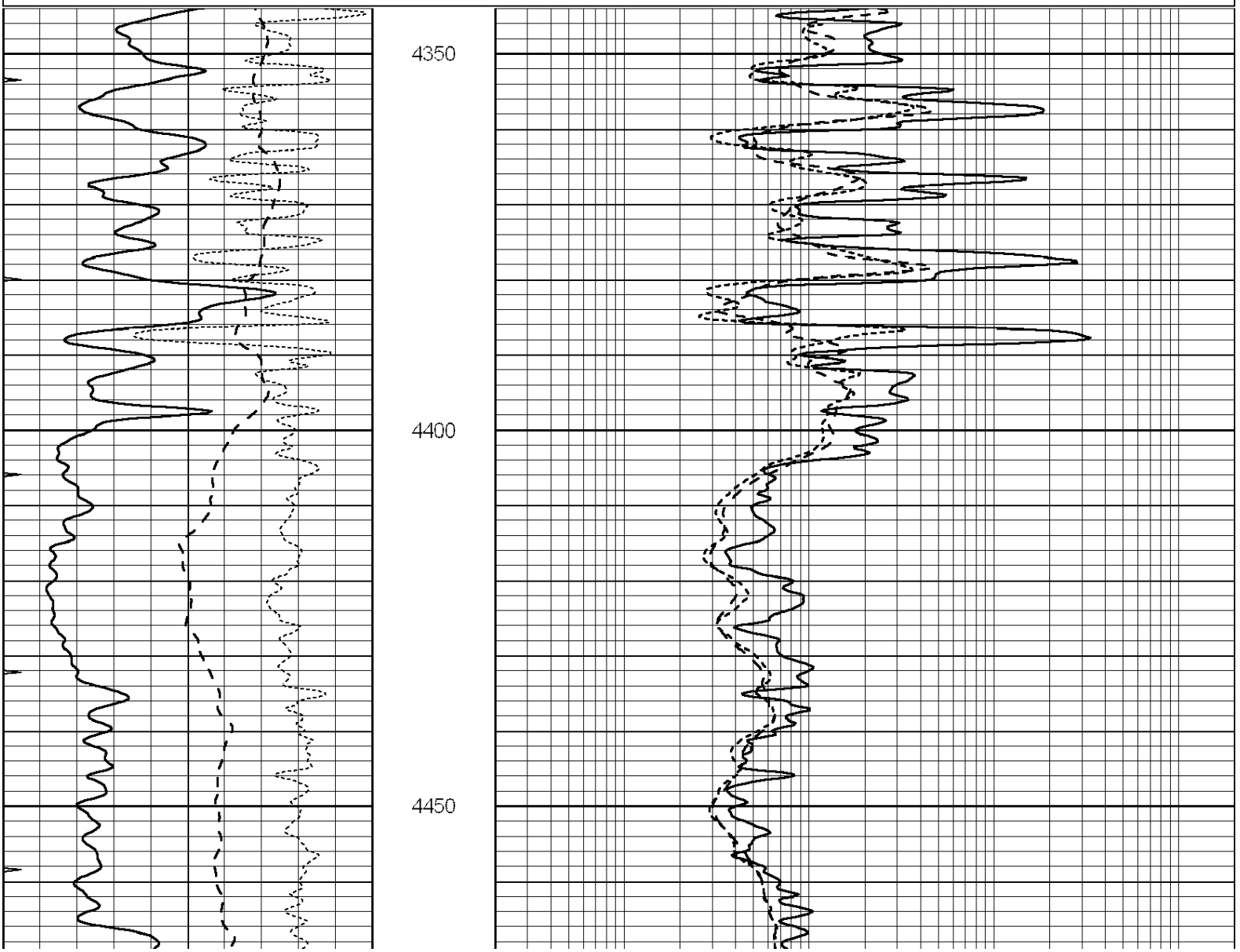
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

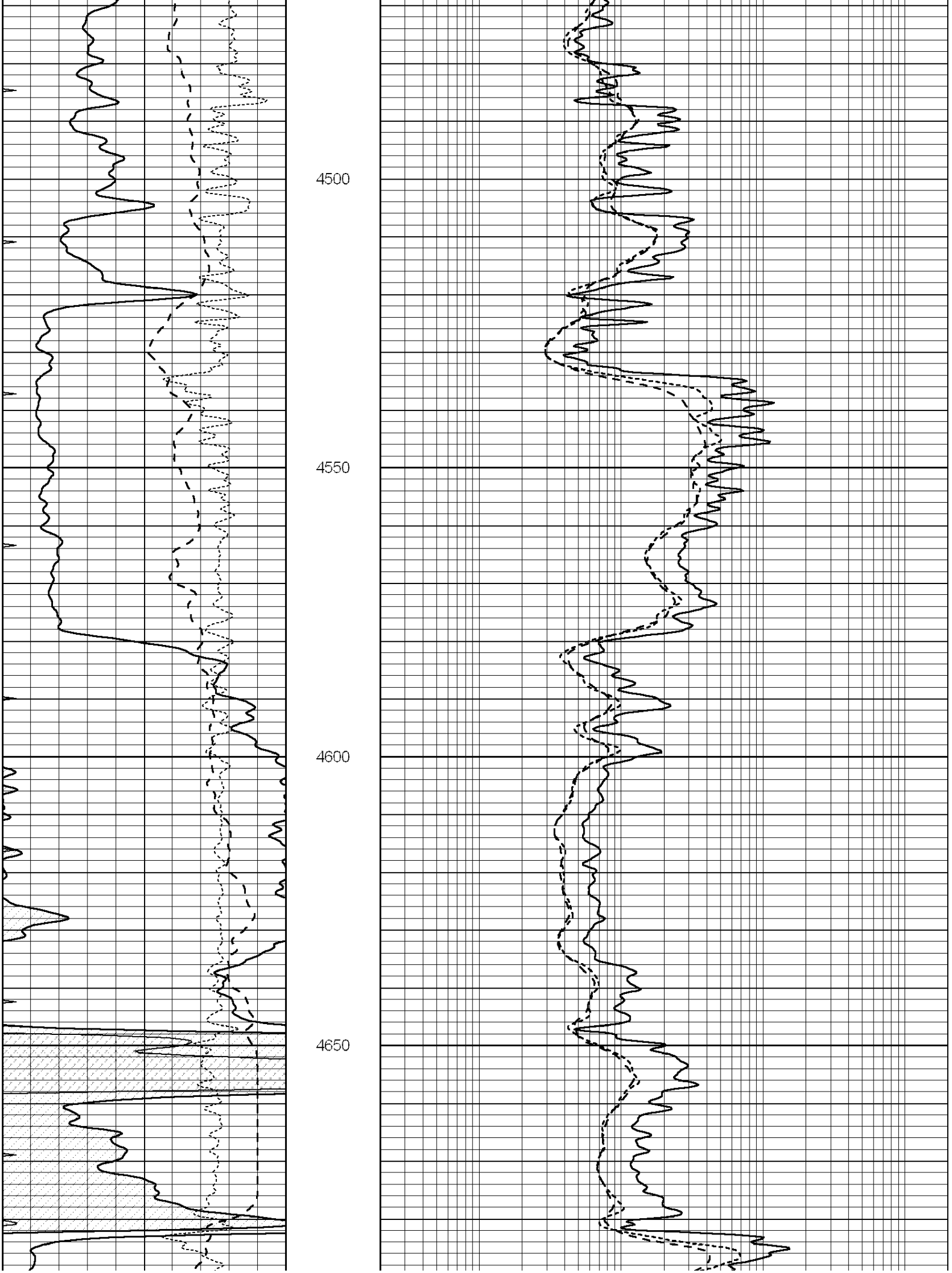
REPEAT SECTION

Database File: 2484pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Sun Apr 22 20:23:16 2018 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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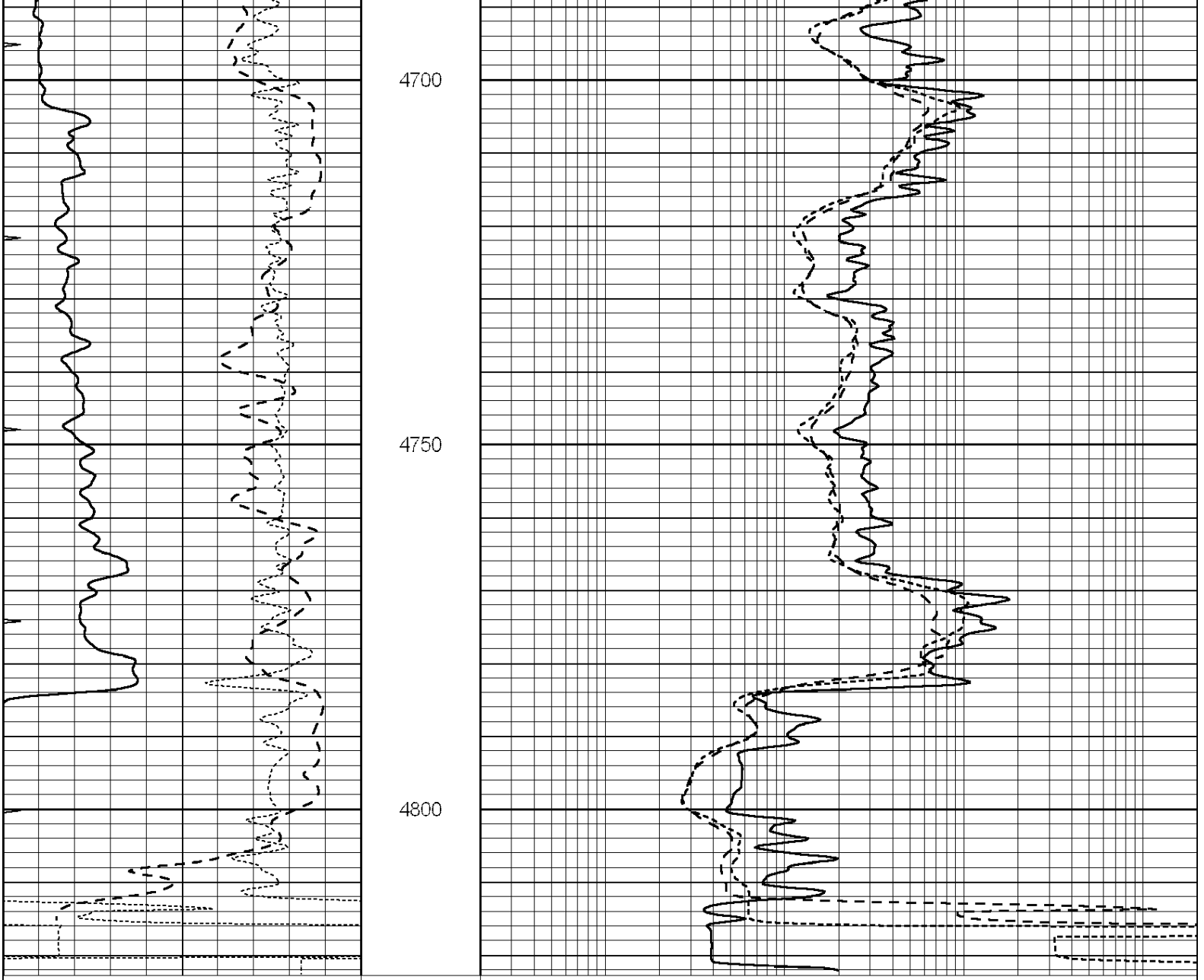

Calibration Report

Database File: 2484pe.db
Dataset Pathname: pass3.1
Dataset Creation: Sun Apr 22 20:23:16 2018 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Tue Apr 03 21:52:19 2018
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration

	Readings		References		Results	
Loop:	Air	Loop	Air	Loop	m	b

Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	-10.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-55.000

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			References			Results	
	Zero	Cal		Zero	Cal		m'	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			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: 004N Model: PRB

Master Calibration — Performed Fri May 30 11:01:00 2014

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1378.8	10804.6	3492.0	12453.4	cps
Window 2	1262.4	9313.5	3076.7	10594.7	cps
Window 3	1077.6	5668.7	2076.0	6314.8	cps
Window 4	306.4	313.0	306.4	315.6	cps
Long Space	0.0	8051.0	1814.3	9332.3	cps
Short Space	1.9	1706.1	1146.0	1707.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 45.0	Rib Slope	: 1.002	Density/Spine Ratio	: 0.571
Spine Angle	: 75.0	Spine Slope	: 3.745	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: 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: 070558
Tool Model: OPEN_GR
Performed: Fri Dec 22 13:36:24 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps