NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	RITCHIE EXPLORATION INC.
Well	KMB OTTLEY 12C #1
Field	WILDCAT
County	GOVE
State	KANSAS

Company RITCHIE EXPLORATION INC.
Well KMB OTTLEY 12C #1
Field WILDCAT
County GOVE State KANSAS

Location: API # : 15-063-22051-00-00

1930' FSL & 2025' FWL

SEC 12 TWP 13S RGE 31W

Other Services: CDL/CNL

Permanent Datum	GROUND LEVEL	Elevation	2912
Log Measured From	KELLY BUSHING 8' A.G.L.		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 2920
D.F. 2918
G.L. 2912

Date	11/1/12		
Run Number	ONE		
Depth Driller	4710		
Depth Logger	4710		
Bottom Logged Interval	4708		
Top Log Interval	3500		
Casing Driller	8 5/8"@213'		
Casing Logger	212		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3000 PPM	
Density / Viscosity	9.3/56		
pH / Fluid Loss	9.5/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.40@68F		
Rmf @ Meas. Temp	1.05@68F		
Rmc @ Meas. Temp	1.68@68F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	0.78@122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	IAN MABB	JEFF GRONEWEG	
Witnessed By	MIKE ENGELBRECHT		

<<< Fold Here >>>

Comments

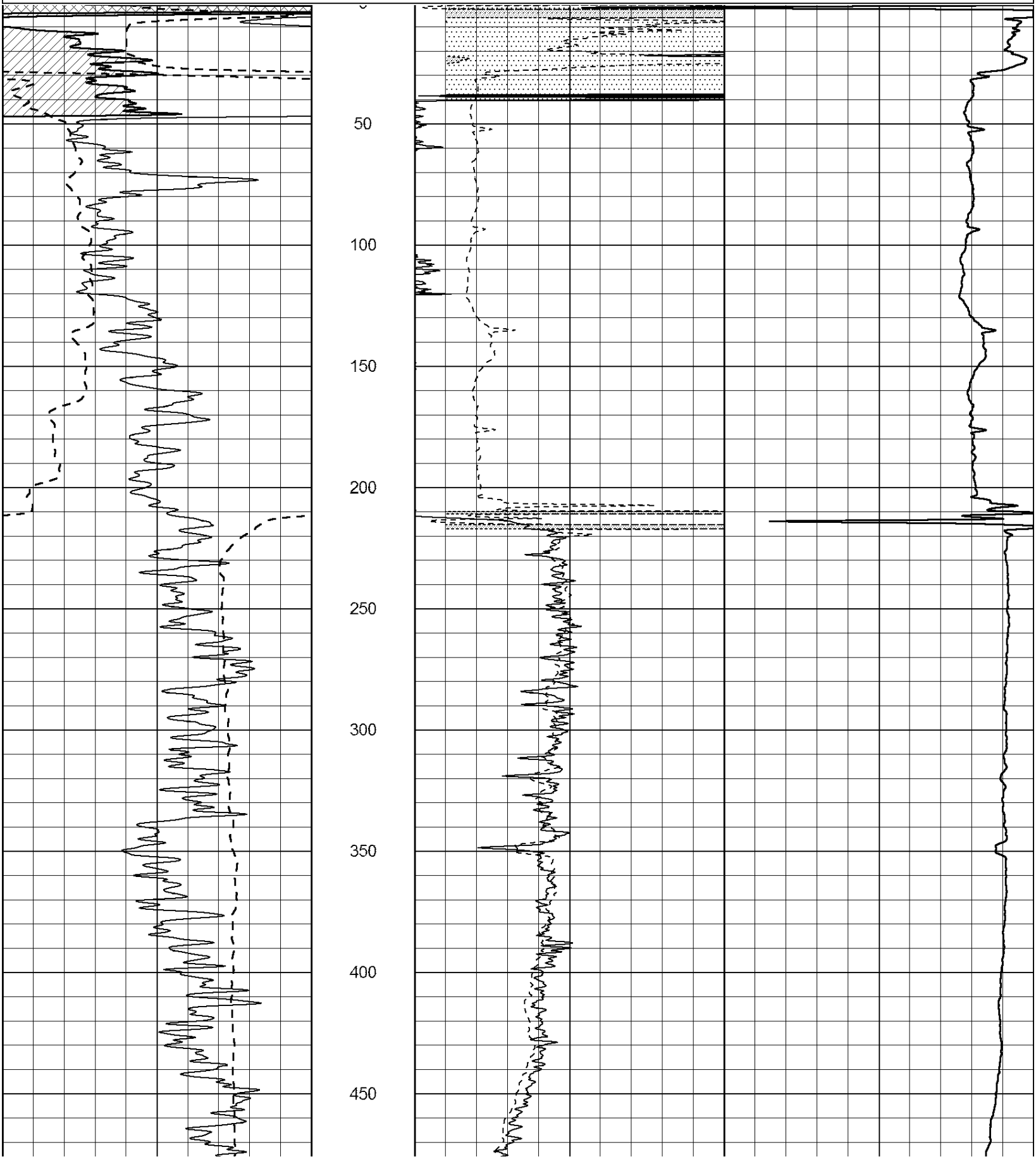
THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
OAKLEY,KS. - 11 MILES SOUTH TO GOVE RD. - 5 EAST TO RD 16 - SOUTH 3 MILES TO RD P - 1 1/2 MILES EAST NORTH INTO ON THE EAST SIDE OF TANK BATTERIES

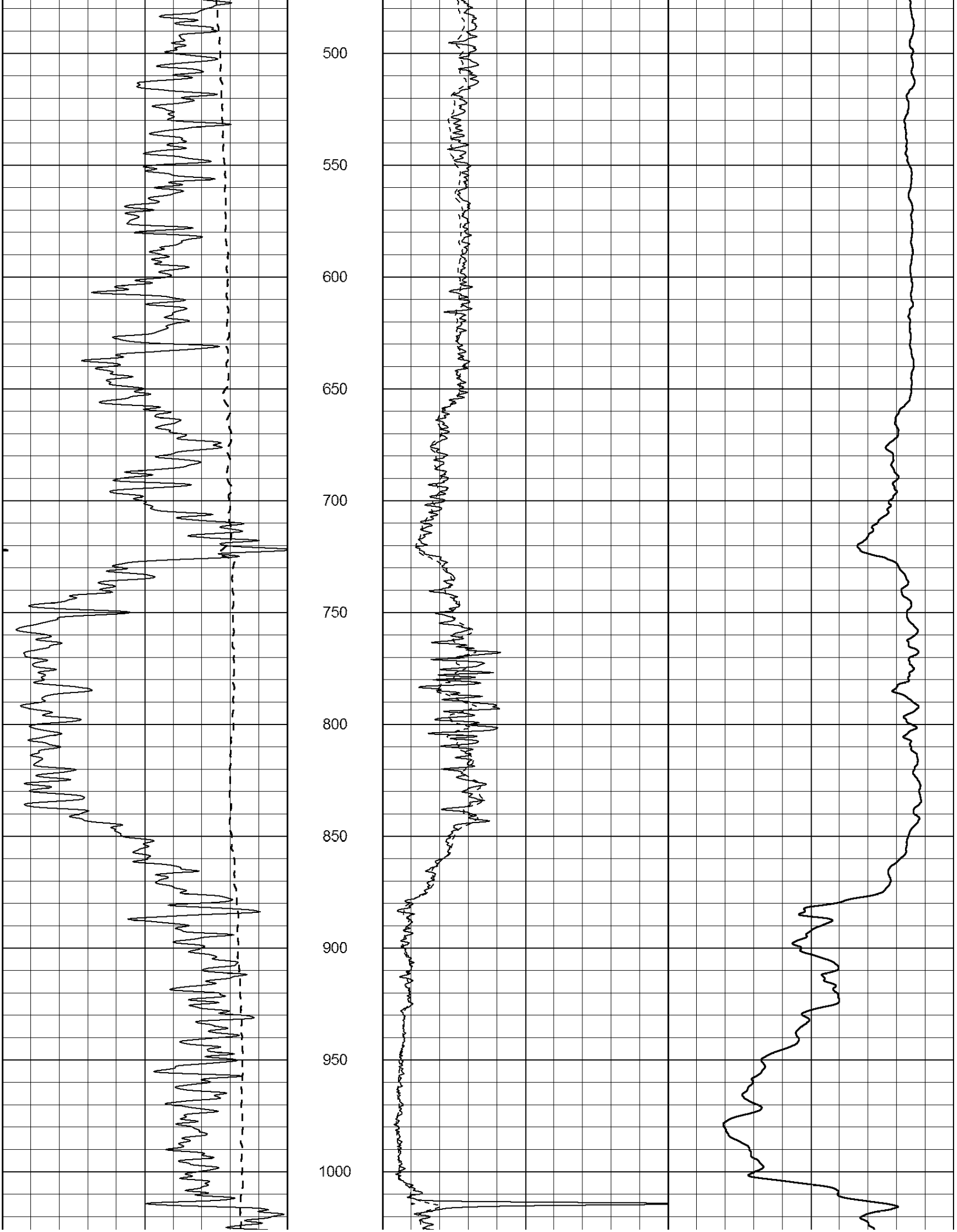
Database File:	409780ddn.db
Dataset Pathname:	pass5.5
Presentation Format:	_dil2
Dataset Creation:	Thu Nov 01 18:15:09 2012 by Calc Open-Cased 090629

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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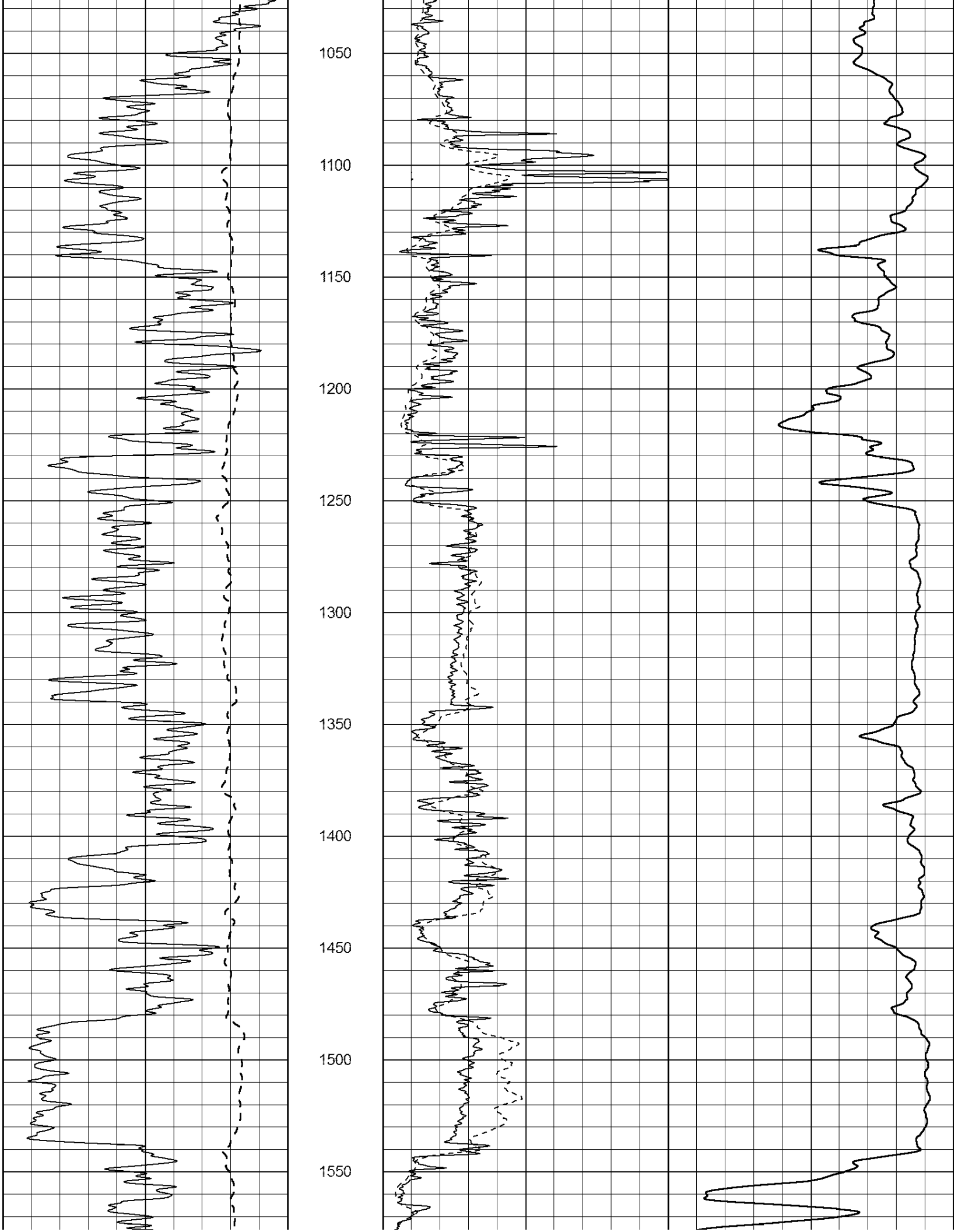
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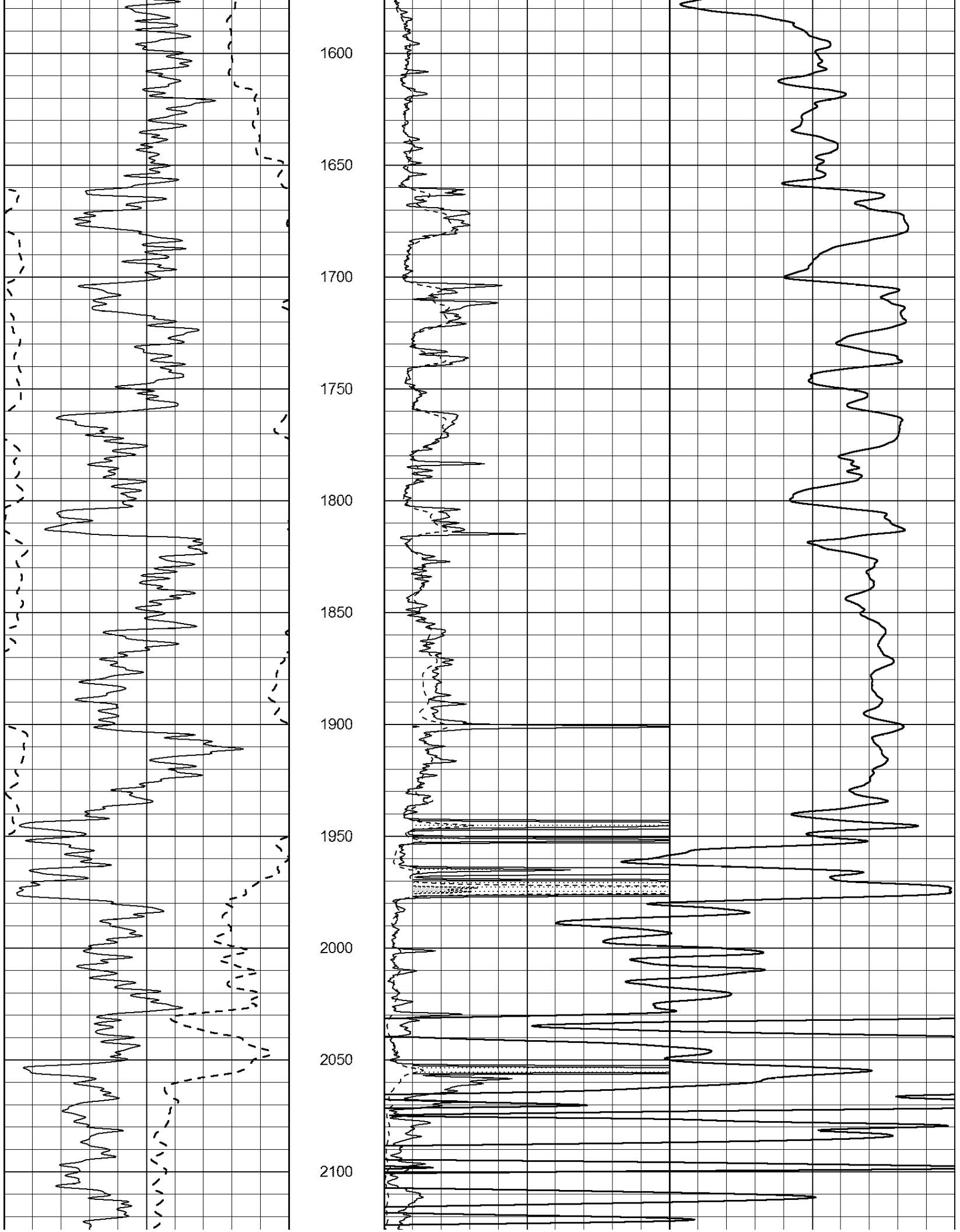
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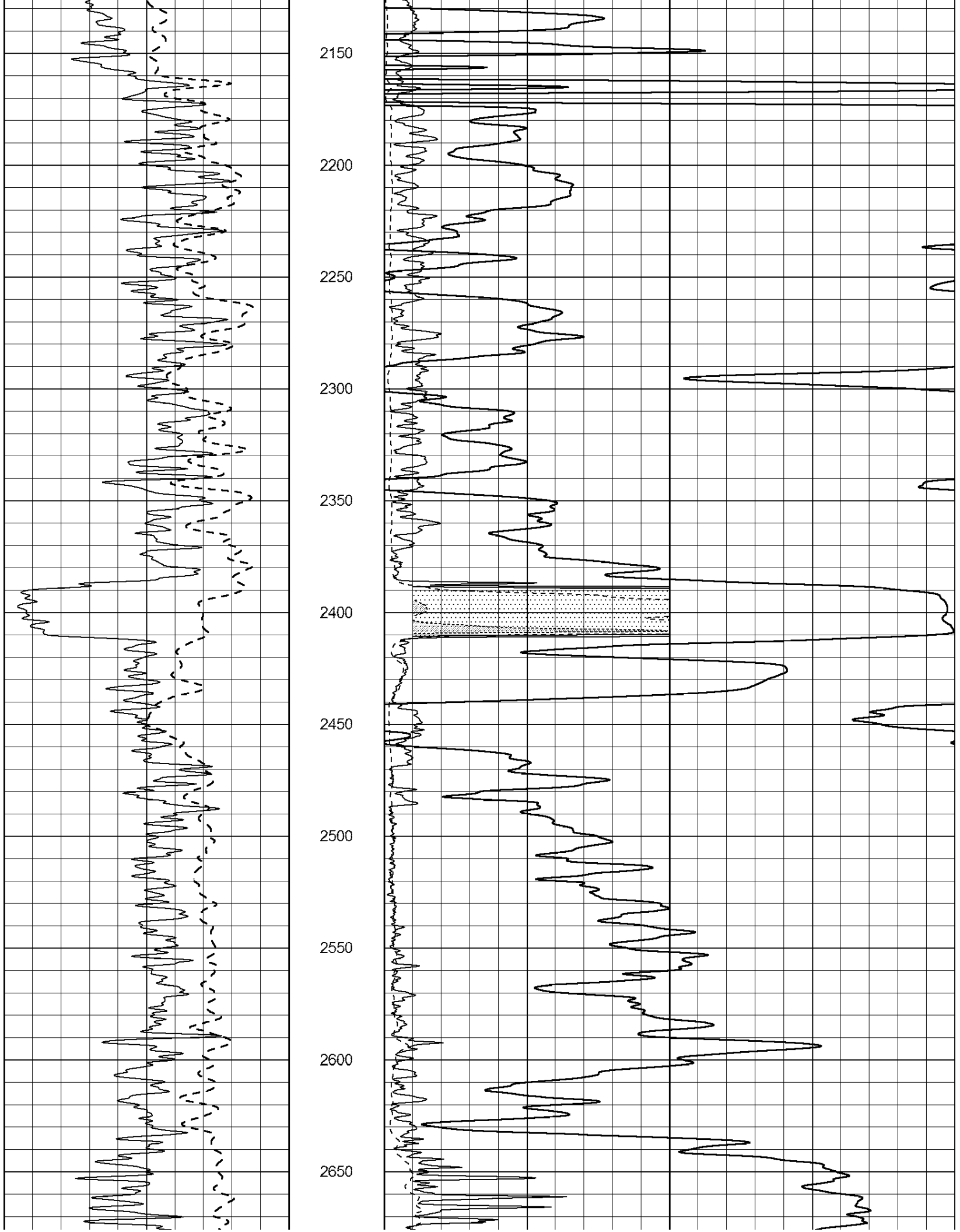
2050
2100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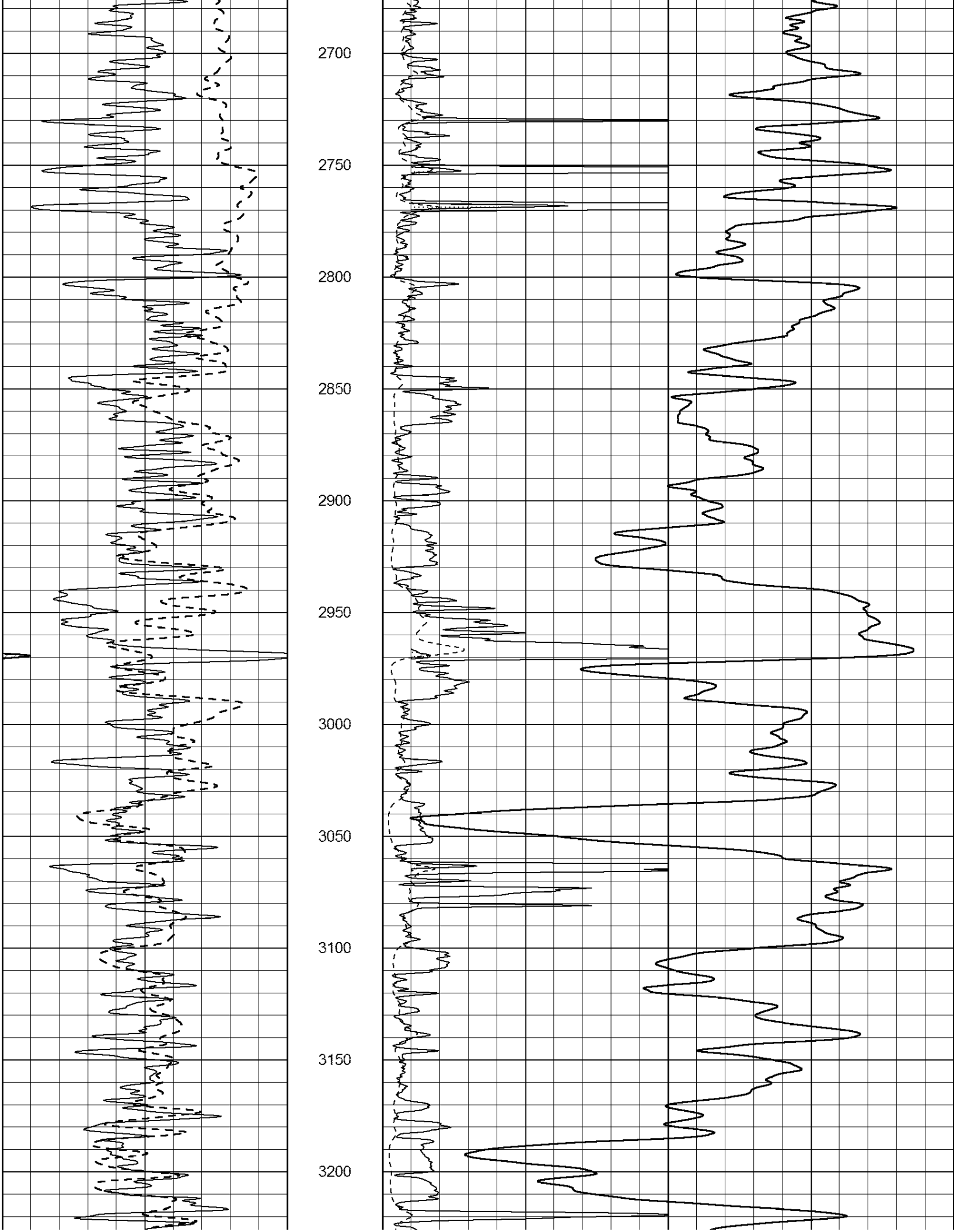
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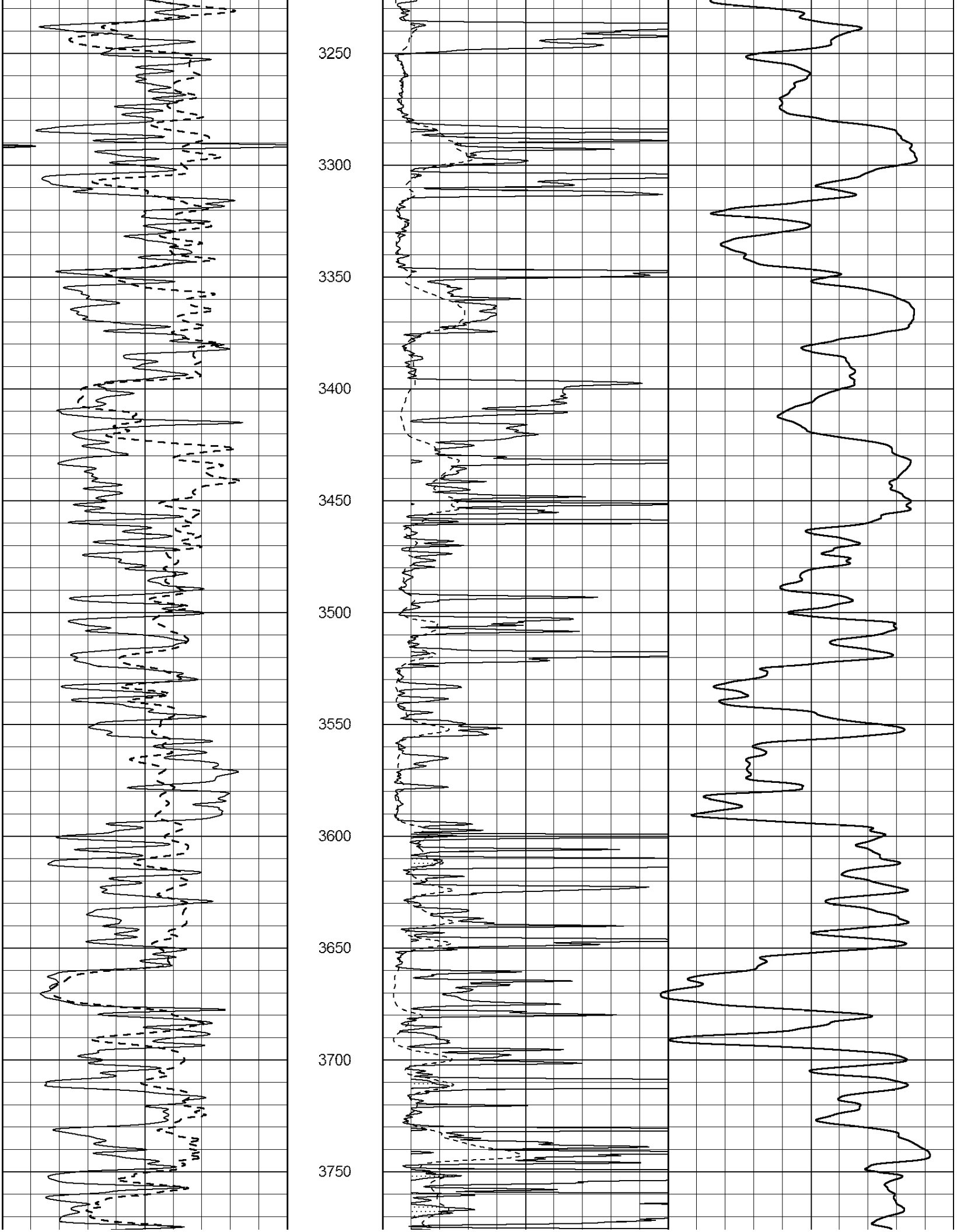
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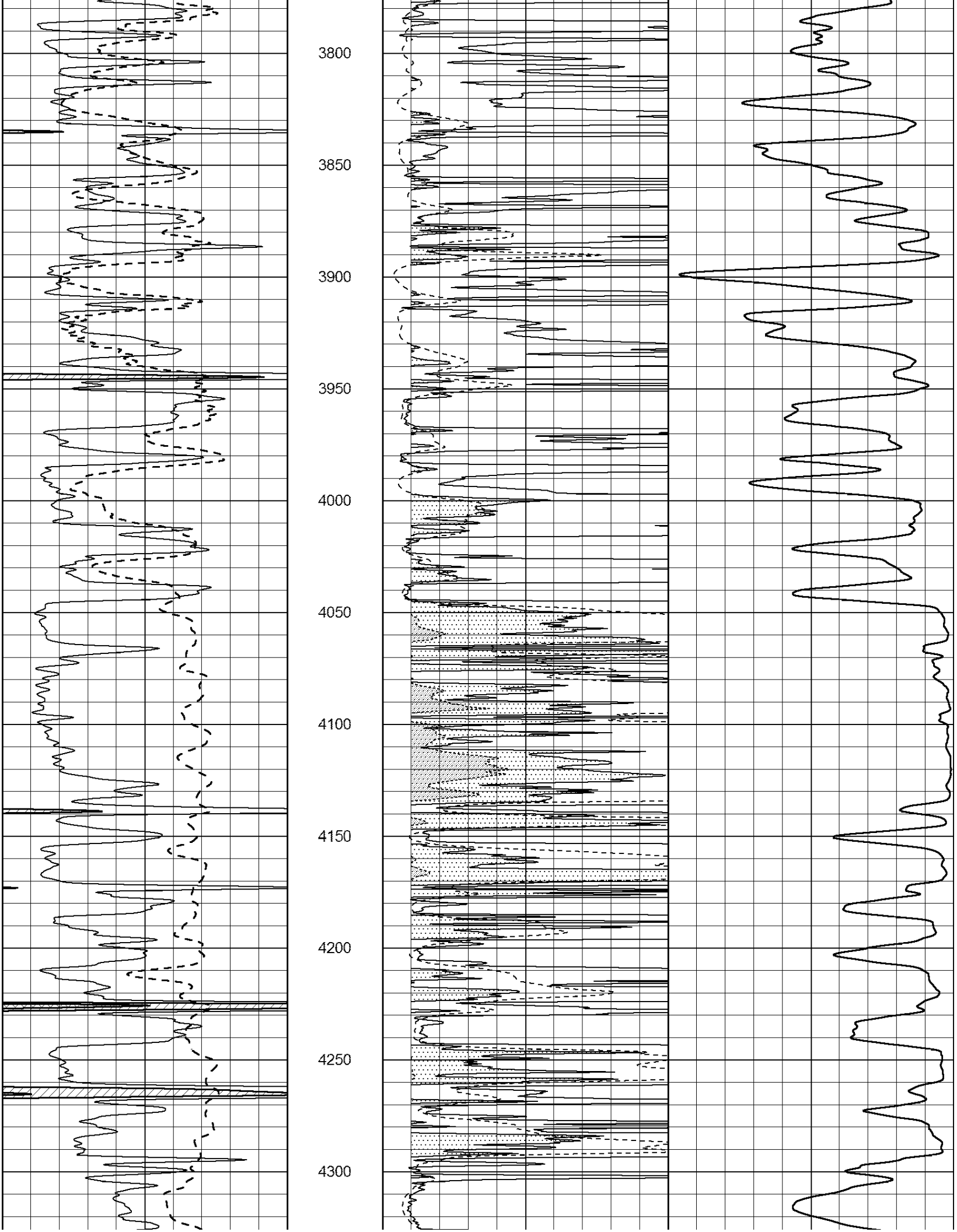
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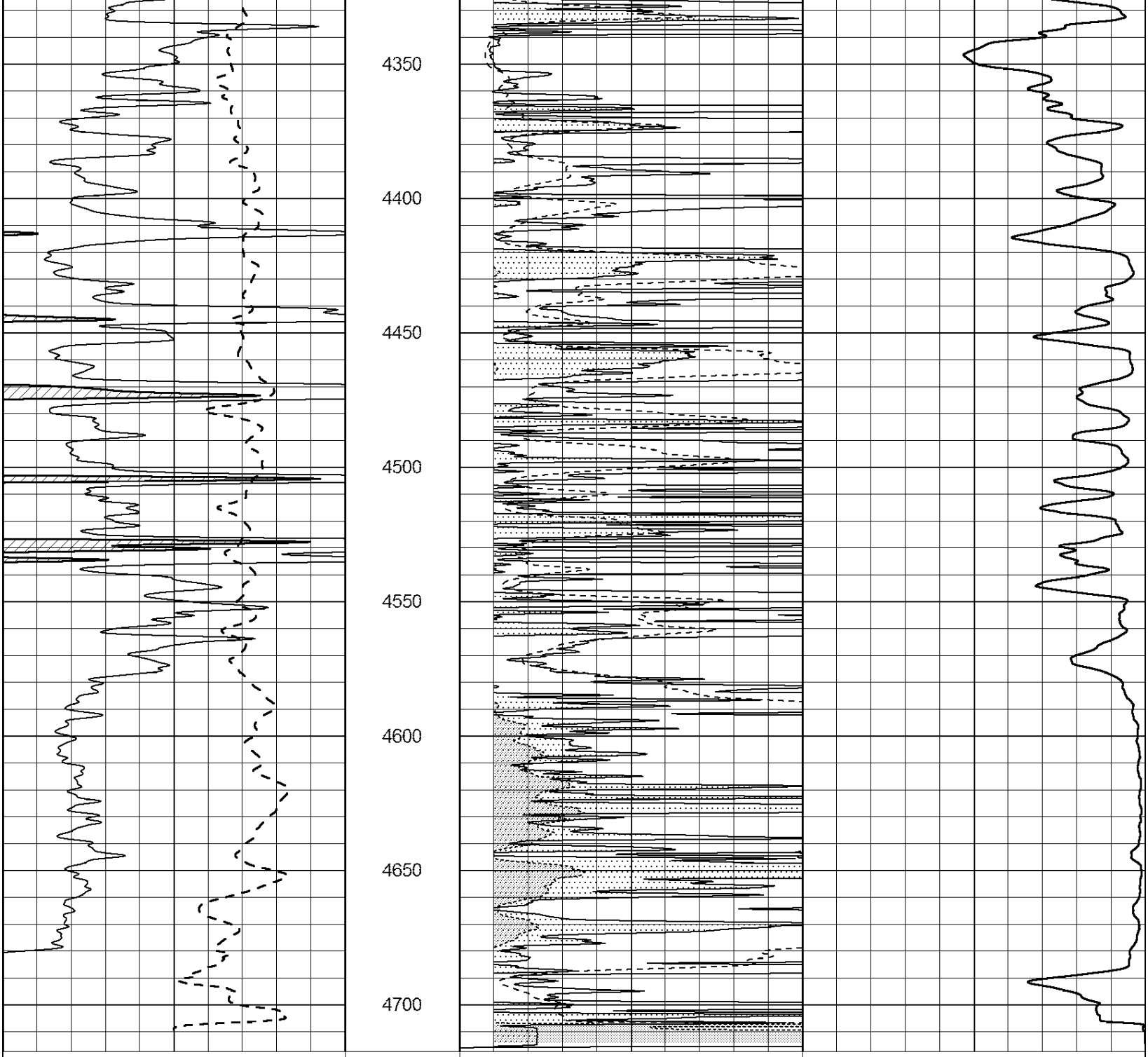
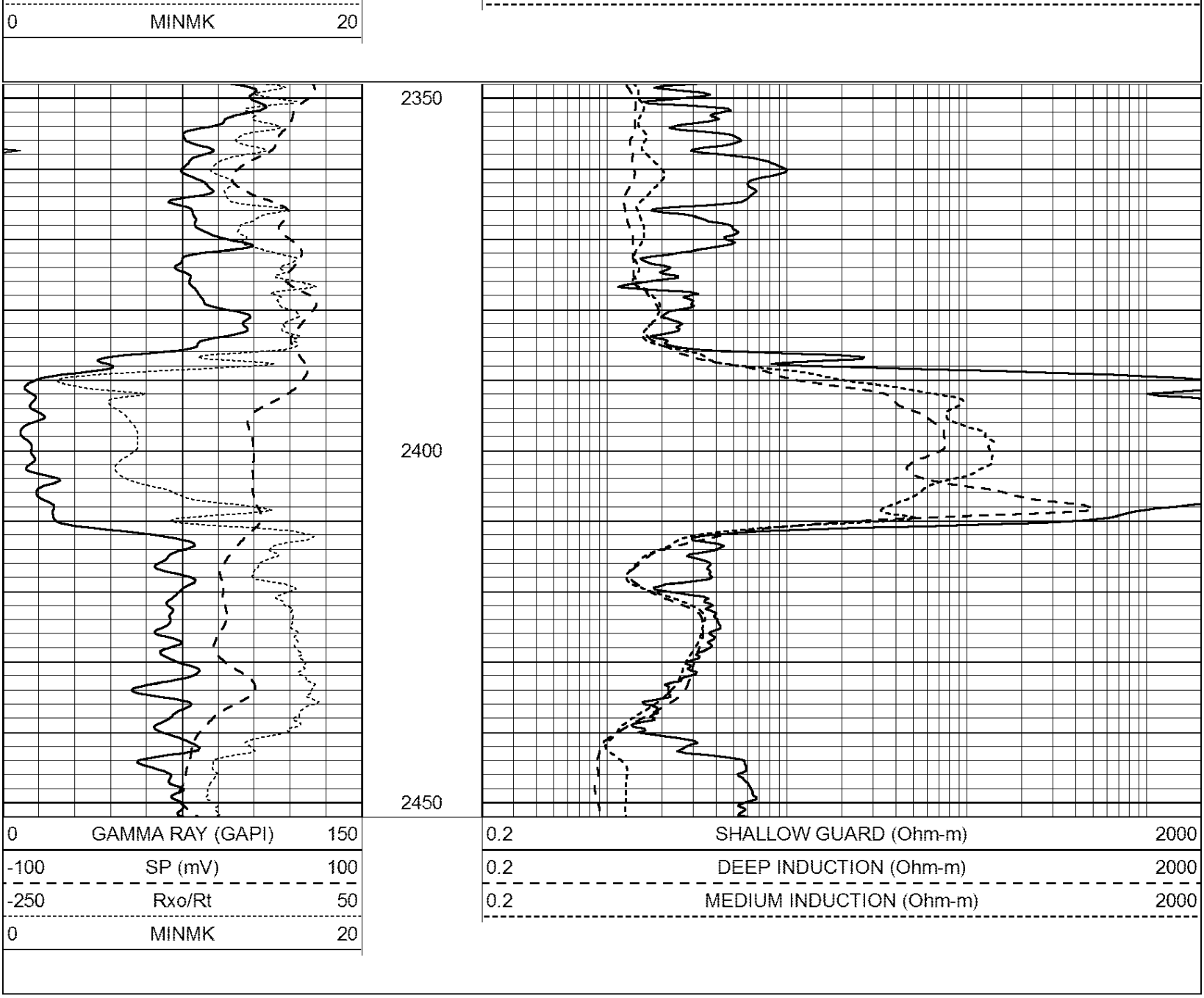


Database File:	409780ddn.db
Dataset Pathname:	pass5.5
Presentation Format:	_dil
Dataset Creation:	Thu Nov 01 18:15:09 2012 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

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

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



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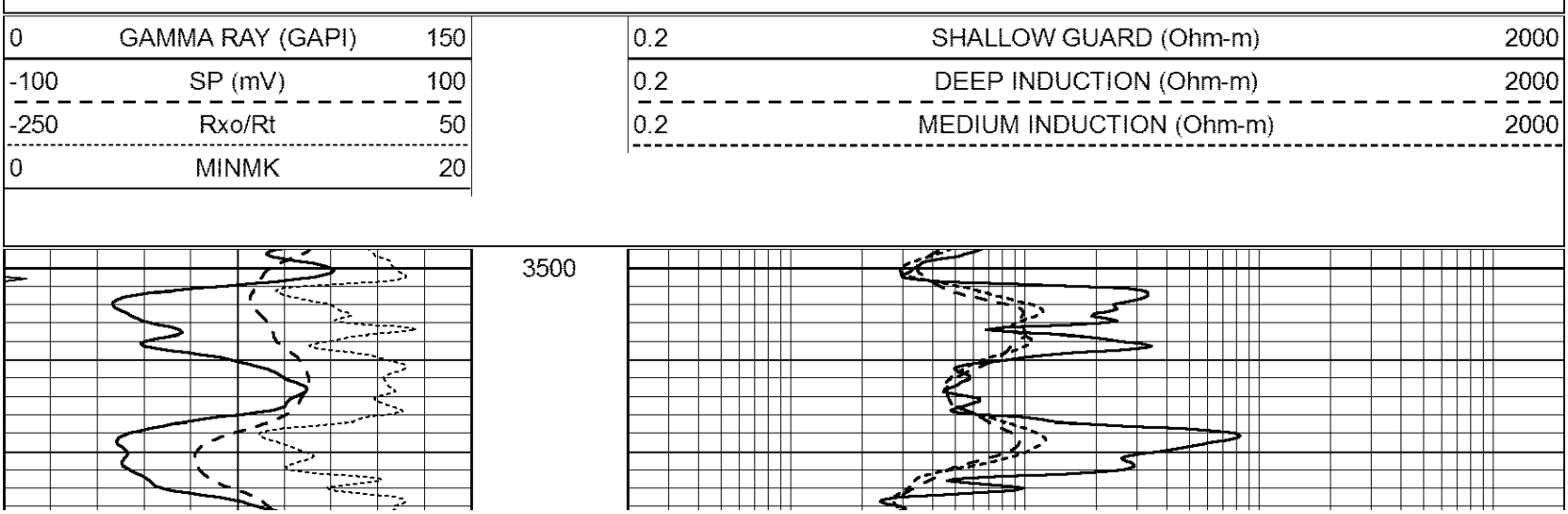
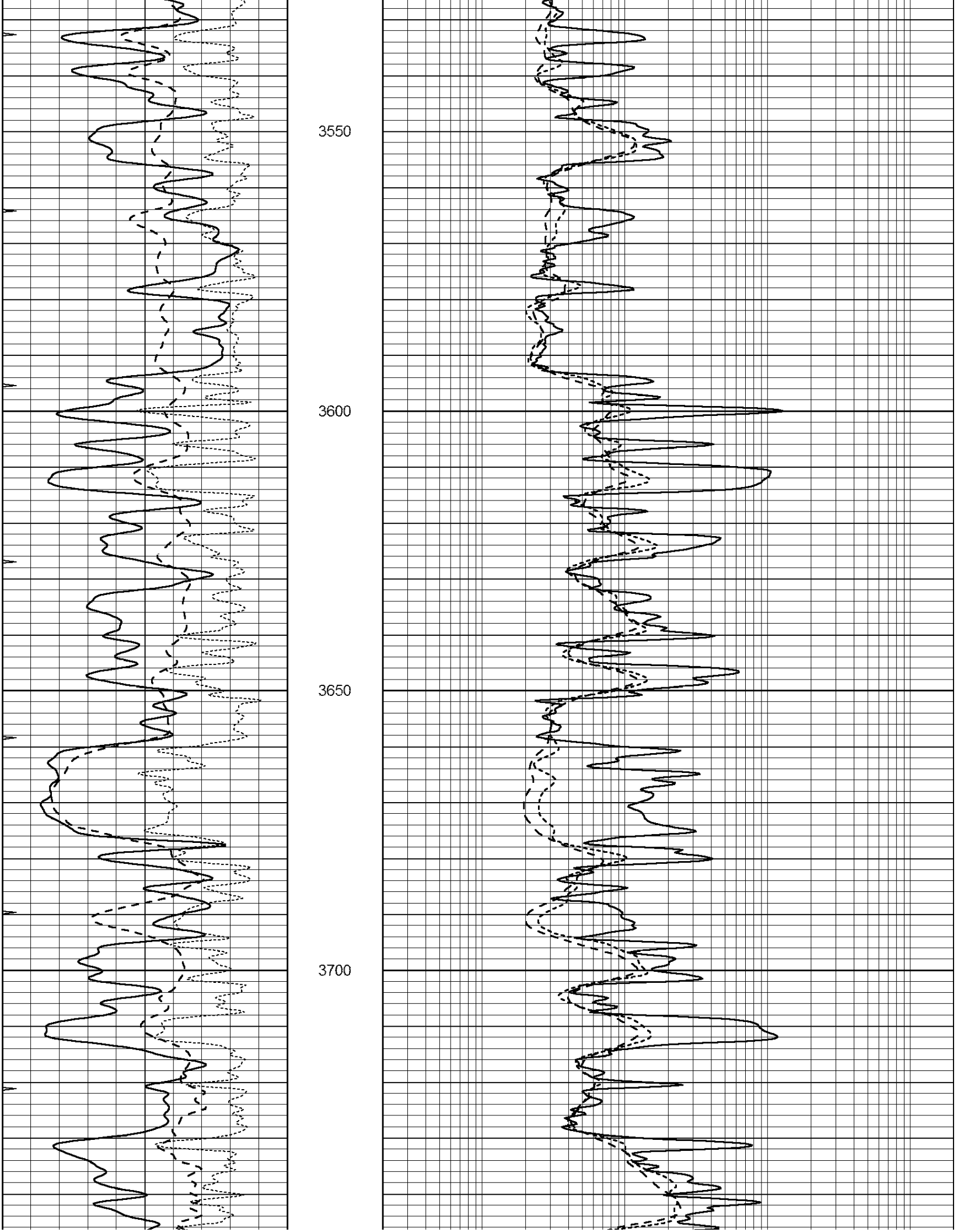
Dataset Pathname: pass5.4
Presentation Format: _dil
Dataset Creation: Thu Nov 01 17:48:27 2012 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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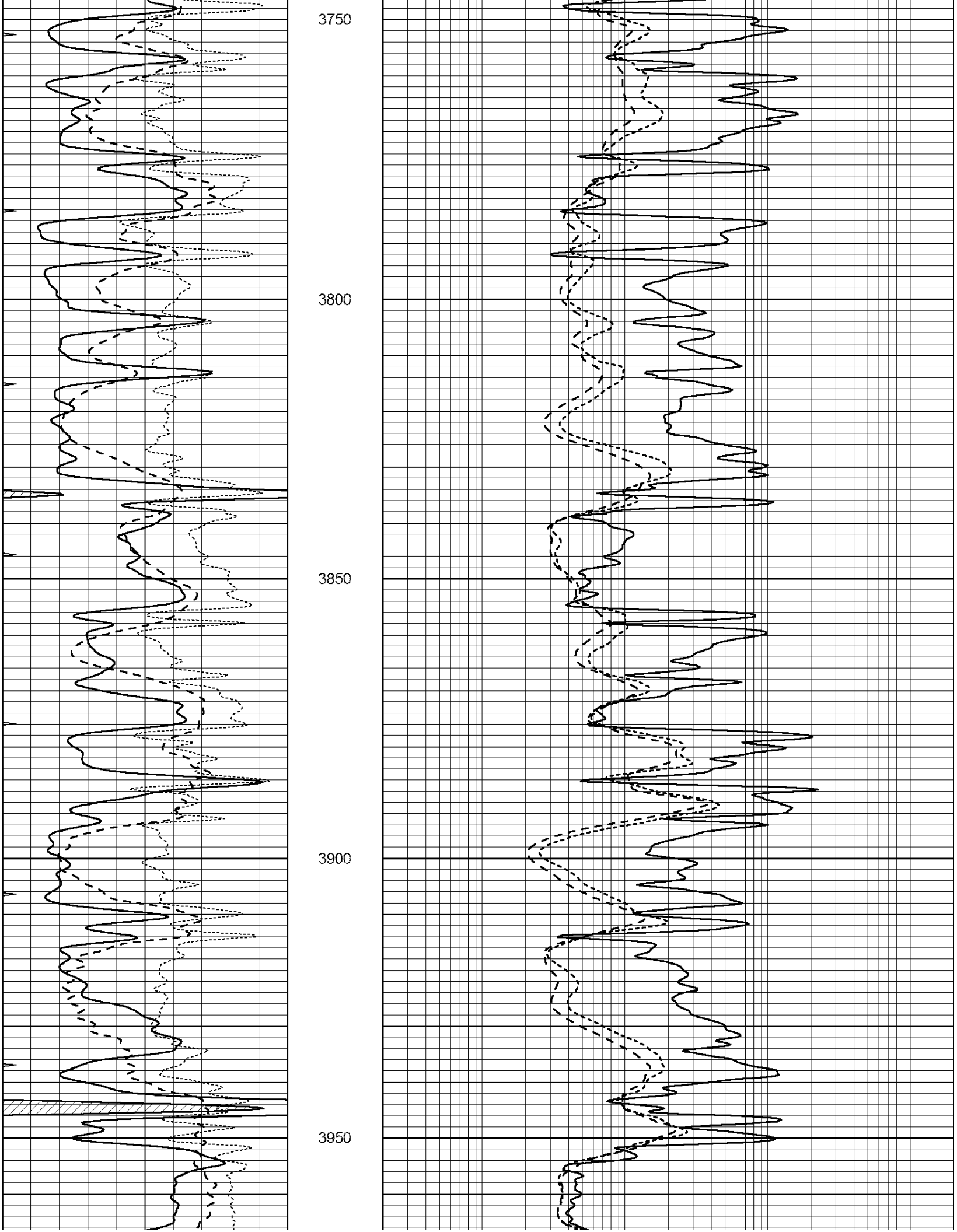
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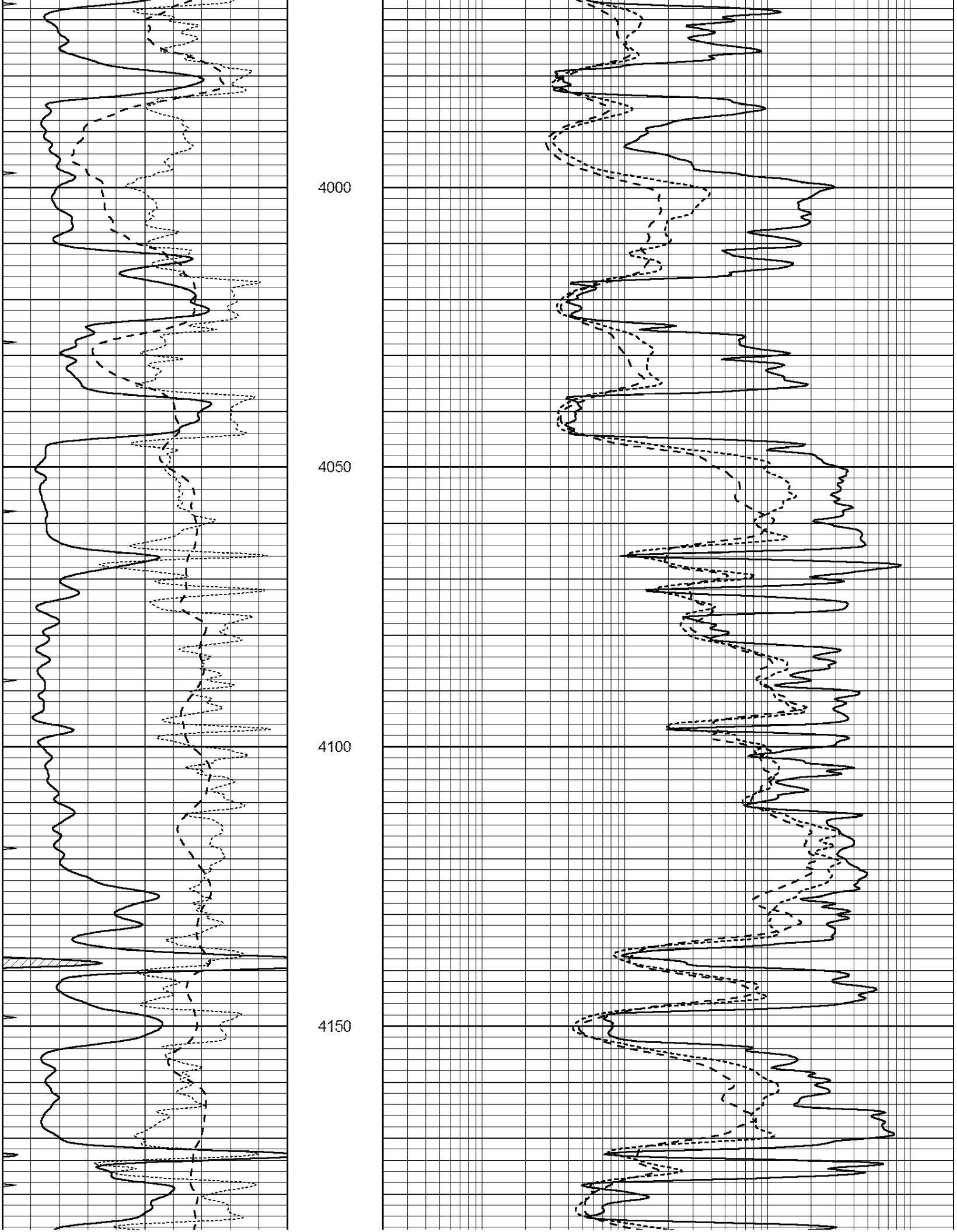
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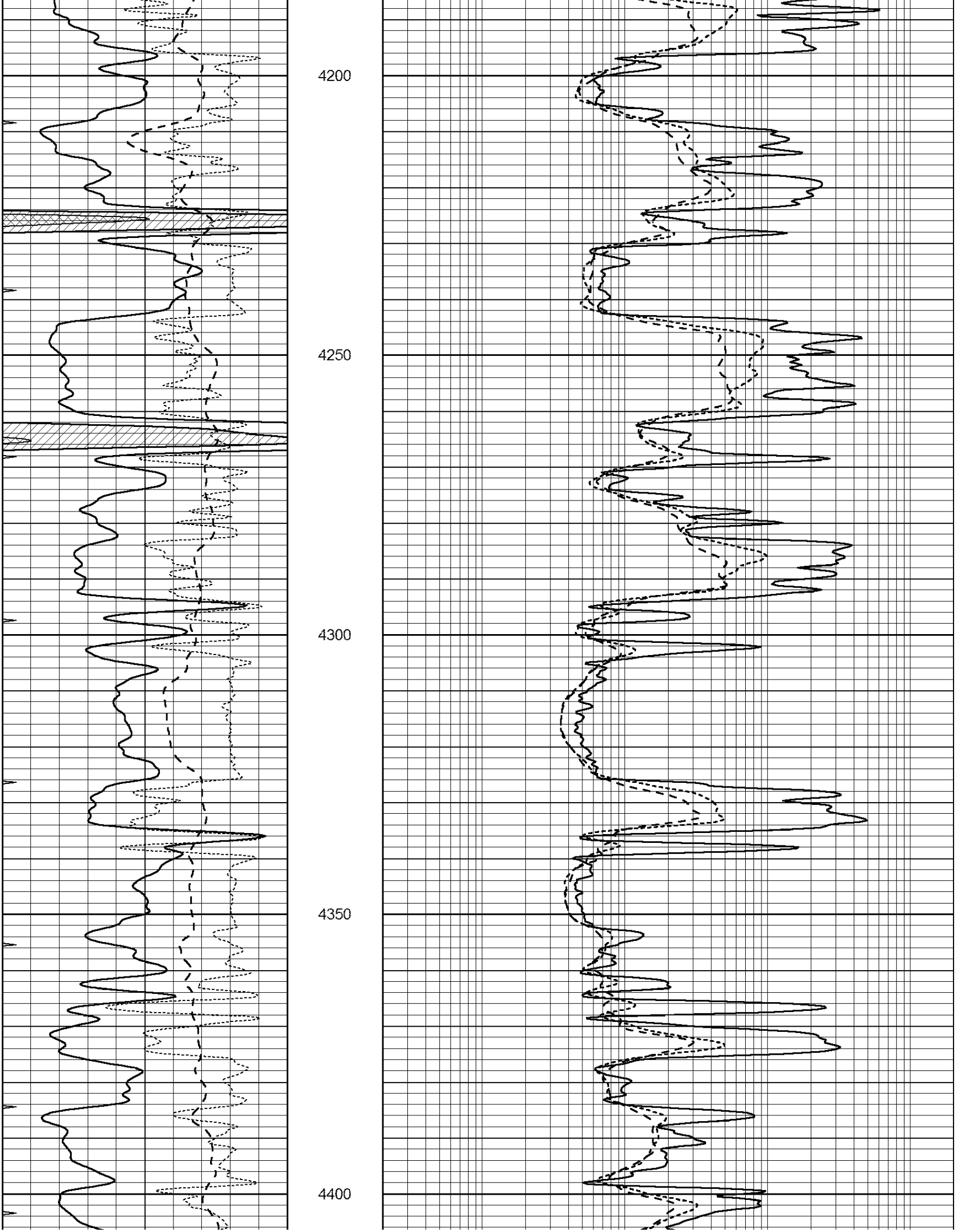
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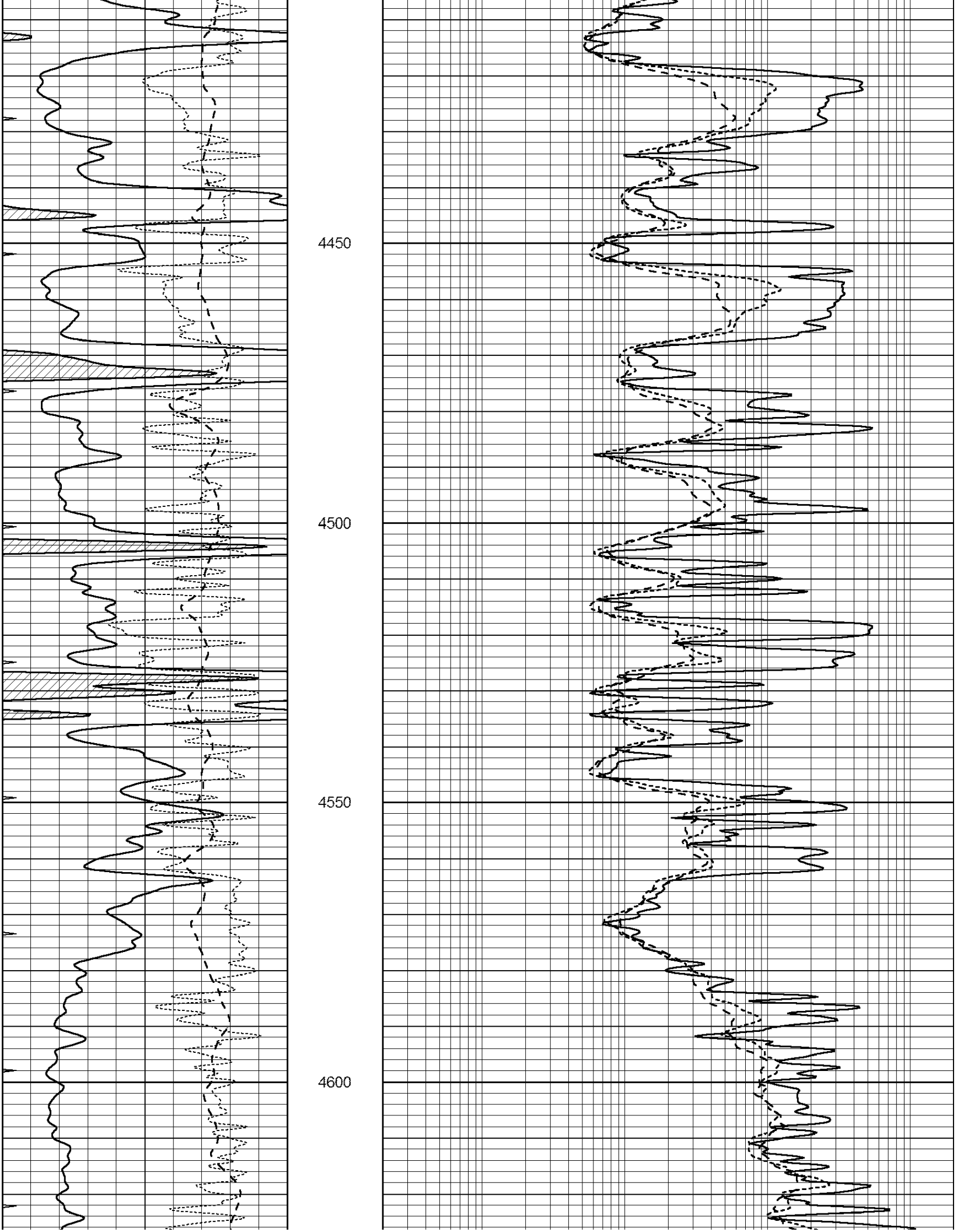
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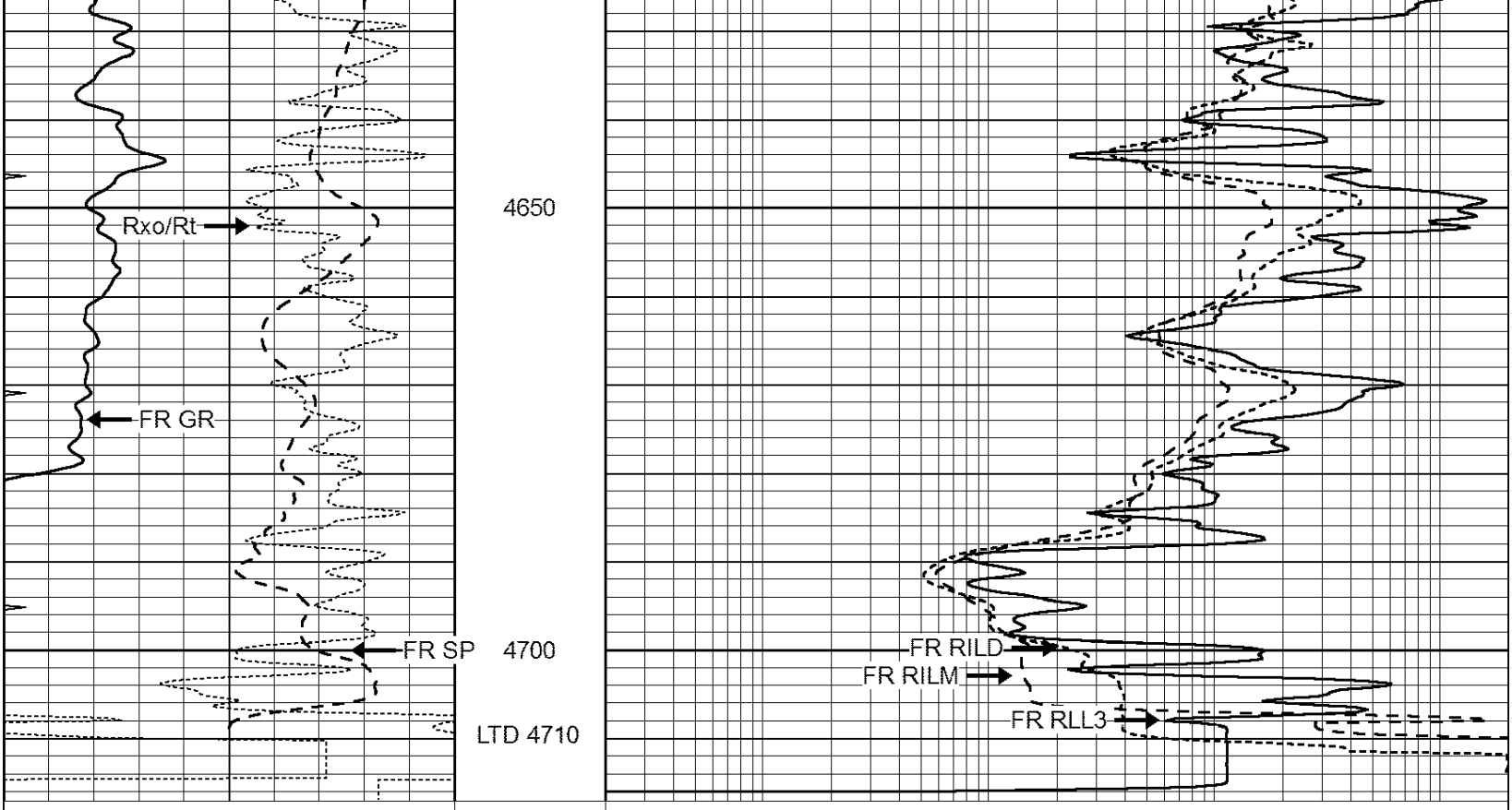

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

NABORS
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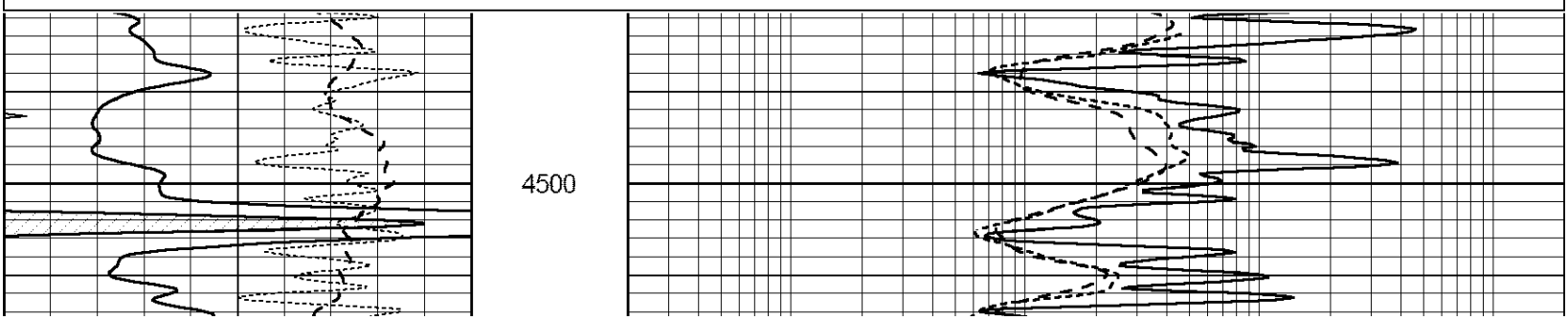
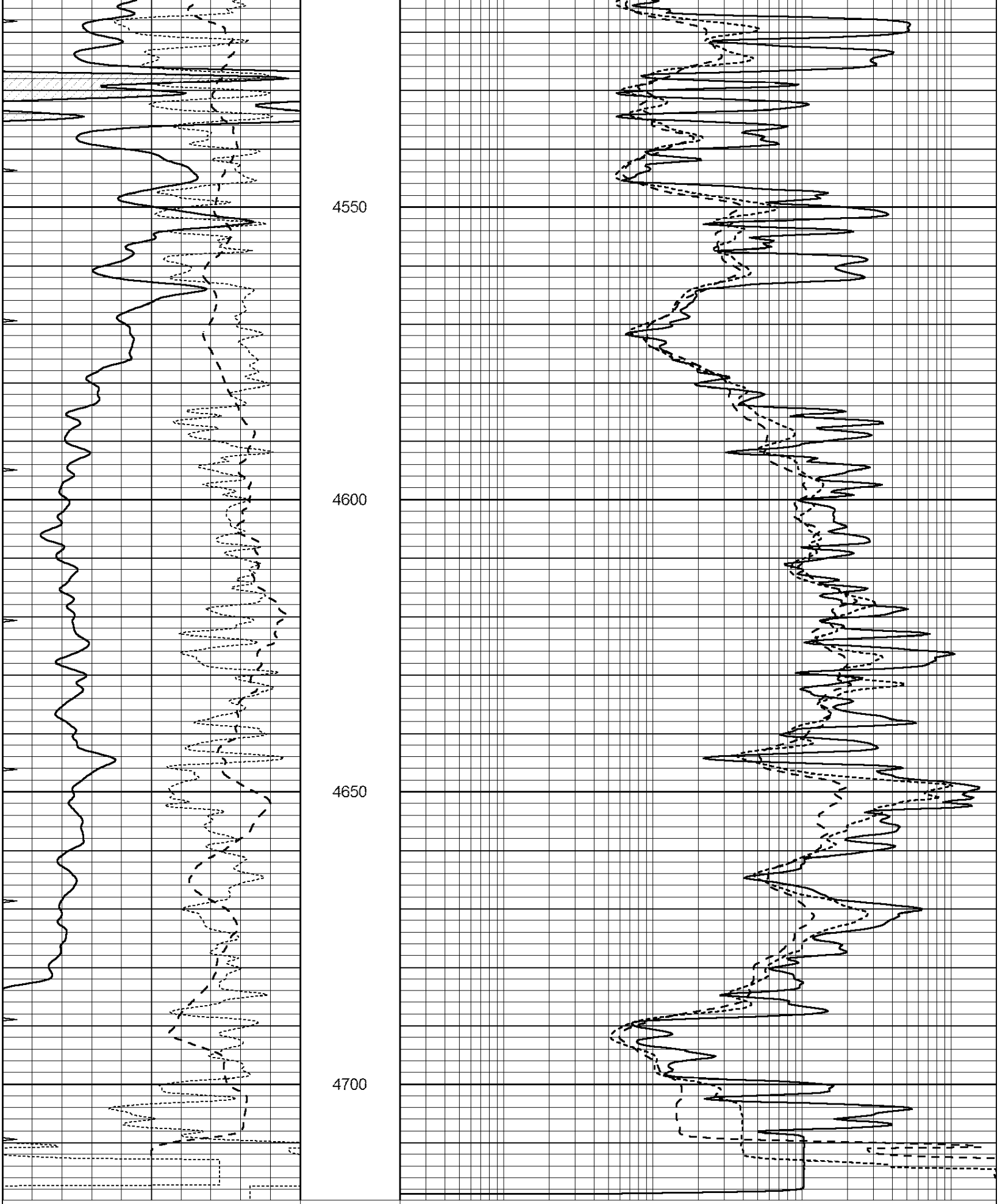
REPEAT SECTION

Database File: 409780ddn.db
Dataset Pathname: pass4.8
Presentation Format: _dil
Dataset Creation: Thu Nov 01 17:05:11 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	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

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

0	MINMK	20

Calibration Report

Database File: 409780ddn.db
Dataset Pathname: pass5.5
Dataset Creation: Thu Nov 01 18:15:09 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
Performed: Tue Oct 30 10:36:47 2012

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	470.000	-13.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	500.000	-8.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Tue Oct 30 08:31:02 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.67	613.10	cps
Aluminum	2.590	g/cc	277.64	430.46	cps

Spine Angle = 76.46 Density/Spine Ratio = 0.583

	Size		Reading	
Small Ring	9.40	in	4.69	V
Large Ring	14.00	in	6.52	V

Compensated Neutron Calibration Report

Serial Number: NUE_2I
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: GR5
Tool Model: OPEN
Performed: Tue Oct 30 11:39:23 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity:	0.7200	GAPI/cps