SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company LOTUS OPERATING COMPANY, LLC.
Well #2 KOPPITZ
Field STRANATHAN
County BARBER State KANSAS

Location: API # : 15-007-23619-0000
2385' FNL & 360' FEL
SEC 2 TWP 35S RGE 12W

Other Services
CDL/CNL/PE
MEL/SONIC

Elevation
K.B. 1417
D.F. 1415
G.L. 1408

Permanent Datum GROUND LEVEL Elevation 1408
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING

Company LOTUS OPERATING CO. LLC.
Well #2 KOPPITZ
Field STRANATHAN
County BARBER
State KANSAS

Date	11/24/10		
Run Number	ONE		
Depth Driller	5270		
Depth Logger	5275		
Bottom Logged Interval	5273		
Top Log Interval	00		
Casing Driller	10 3/4"@283'		
Casing Logger	283		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,000 PPM	
Density / Viscosity	9.6/44		
pH / Fluid Loss	10.0/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.40@64F		
Rmf @ Meas. Temp	1.05@64F		
Rmc @ Meas. Temp	1.68@64F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.706@127F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	8:30 A.M.		
Maximum Recorded Temperature	127F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	TIM HELLMAN		

<<< Fold Here >>>

Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395

DIRECTIONS

MEDICINE LODGE, KS. (HWY 160 & 281 JUNCTION) 17S. ON HWY 281 TO MM #7, 1W. ON "DRIFTWOOD RD." TO "T", 1/2S., W. INTO

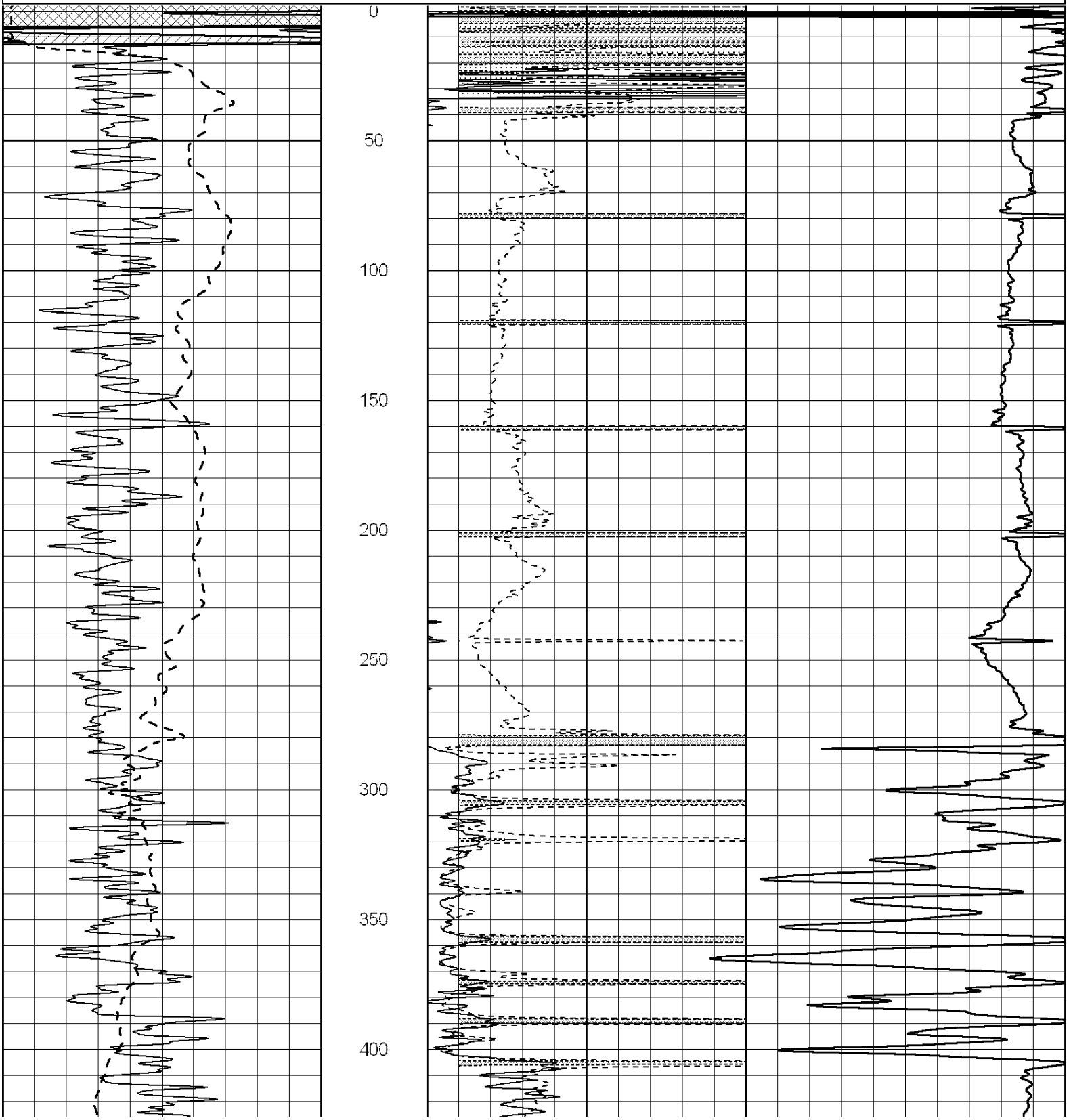
MAIN SECTION

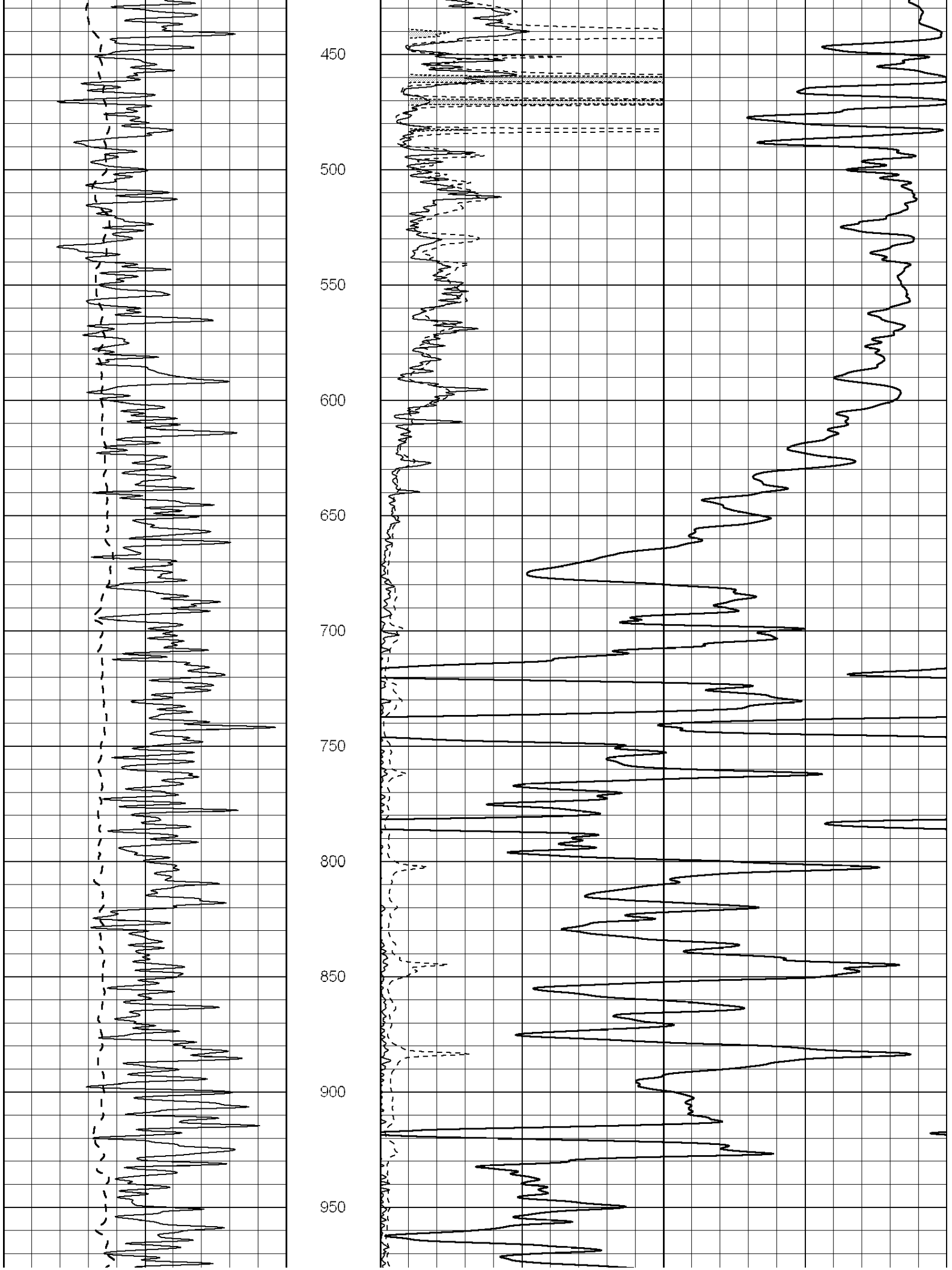
SUPERIOR
Hays,
Kansas

Database File:	005817pe.db
Dataset Pathname:	pass3.5
Presentation Format:	dil2
Dataset Creation:	Wed Nov 24 10:11:29 2010 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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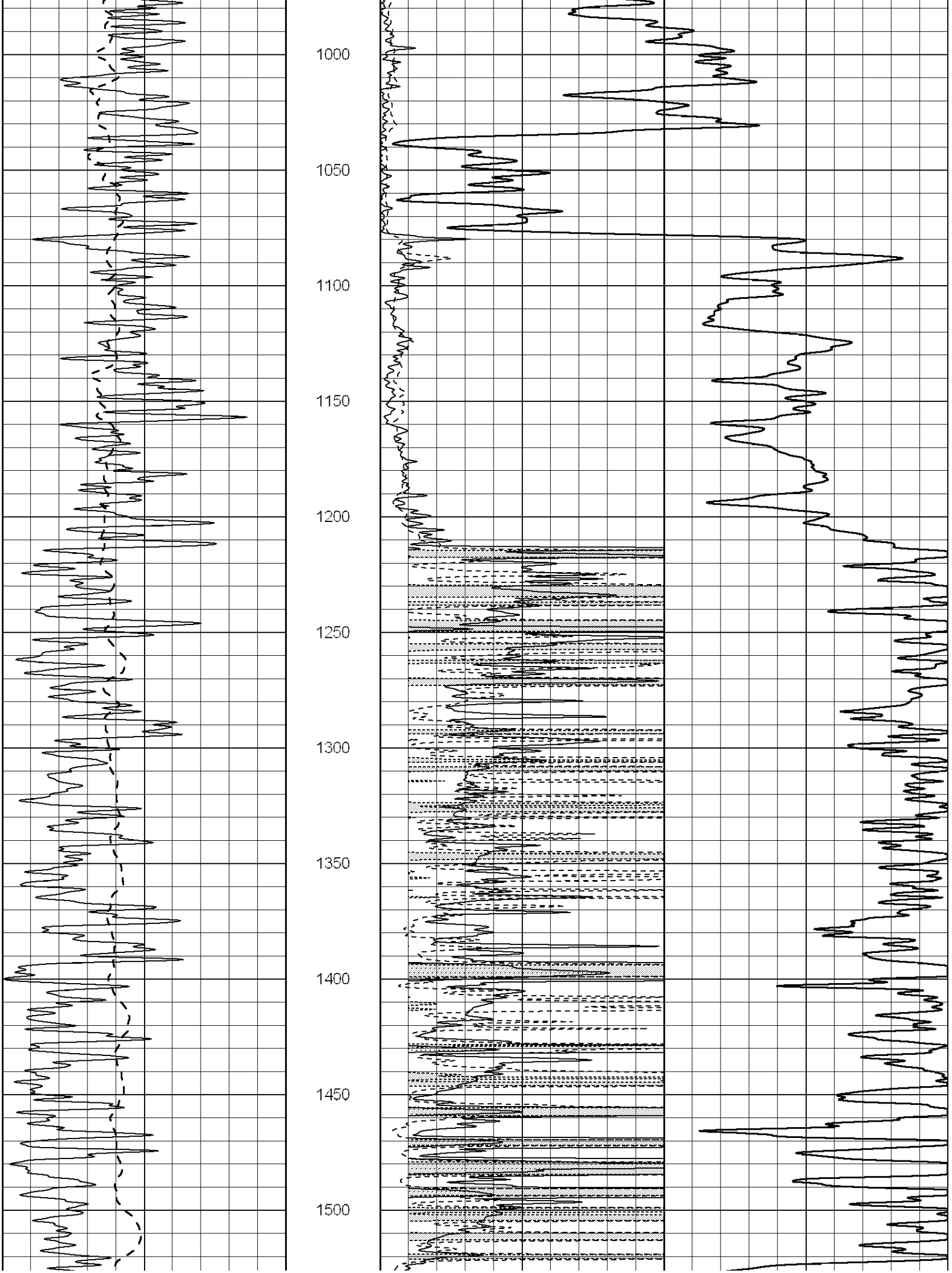
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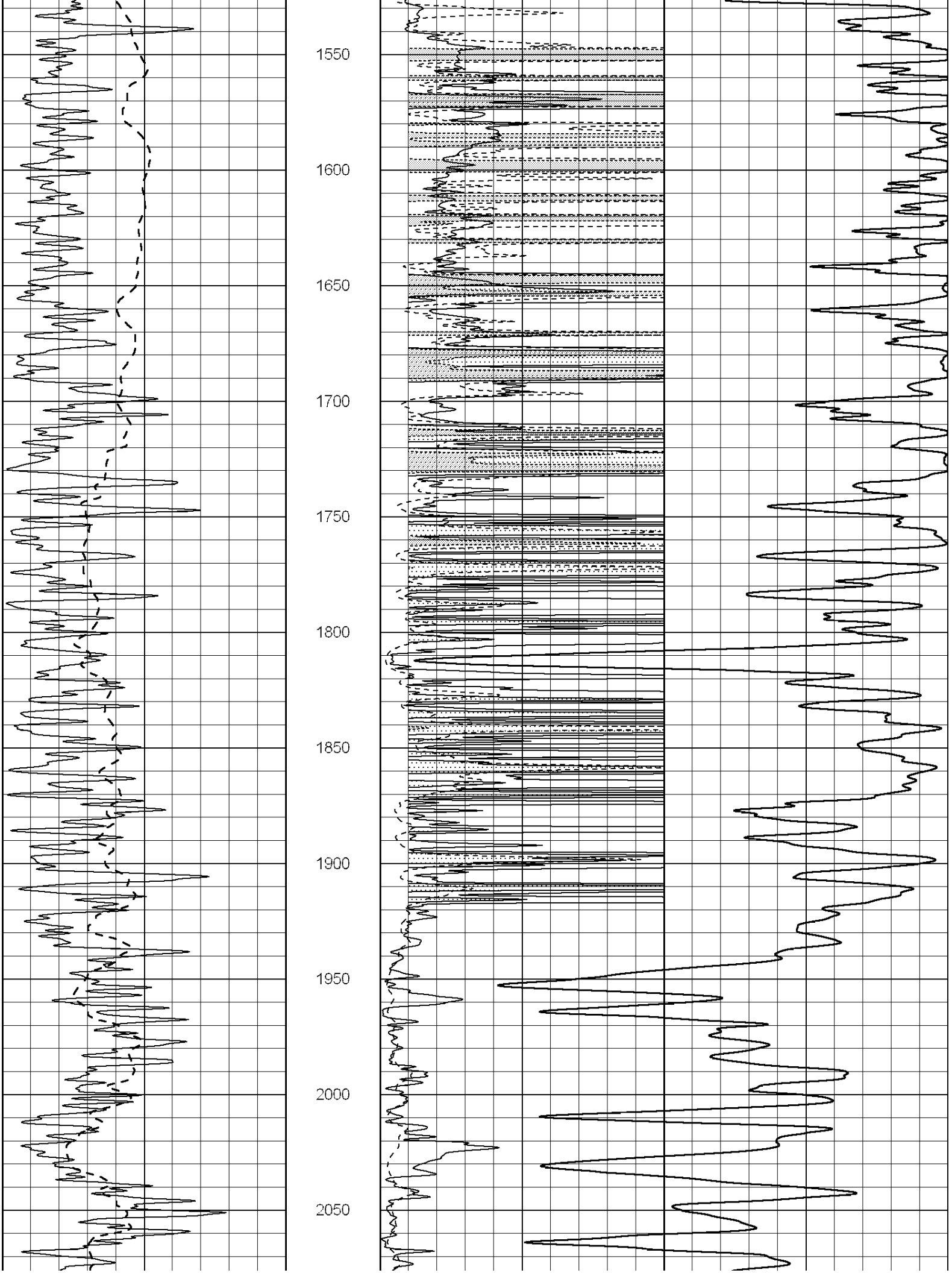
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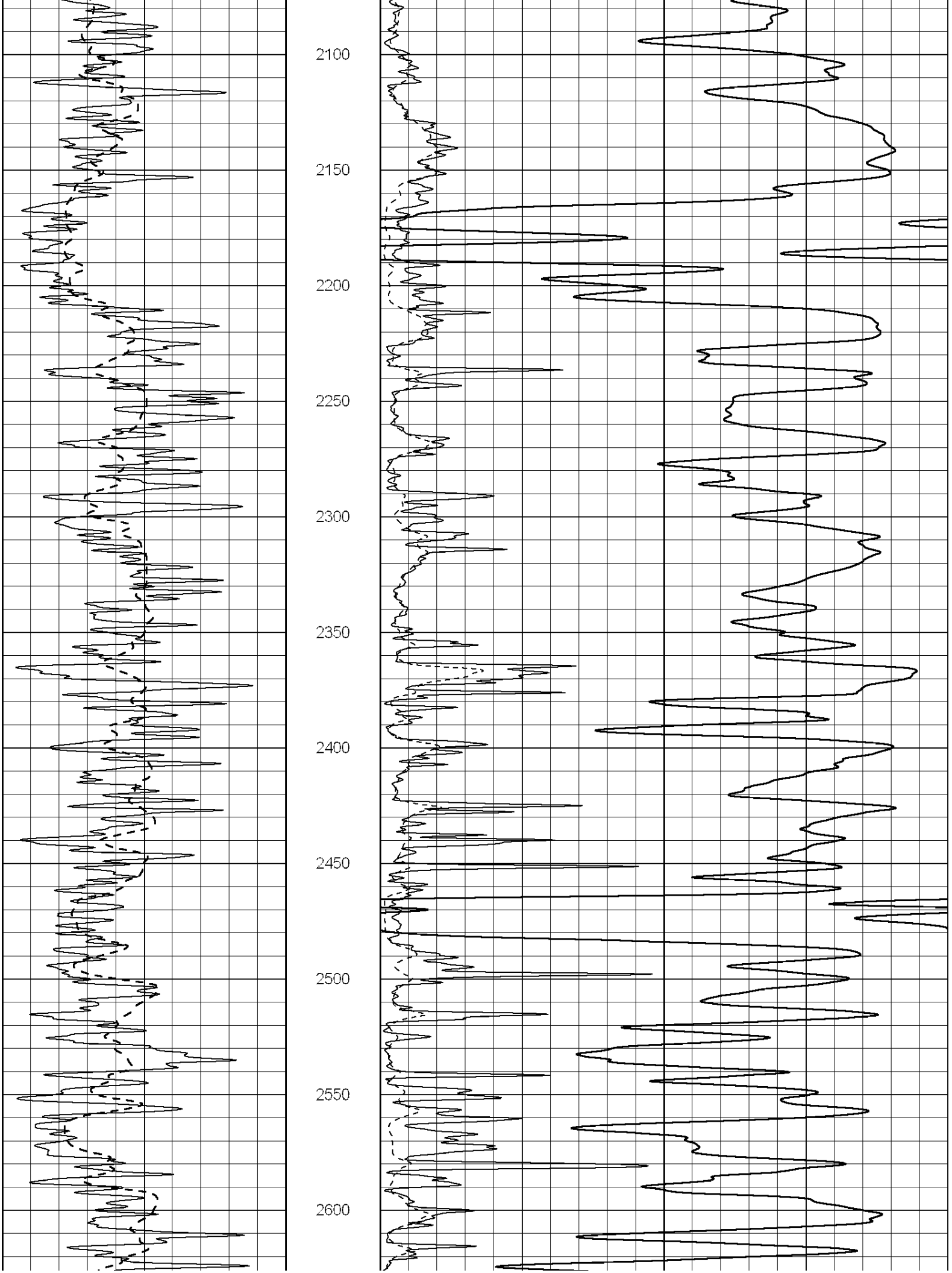
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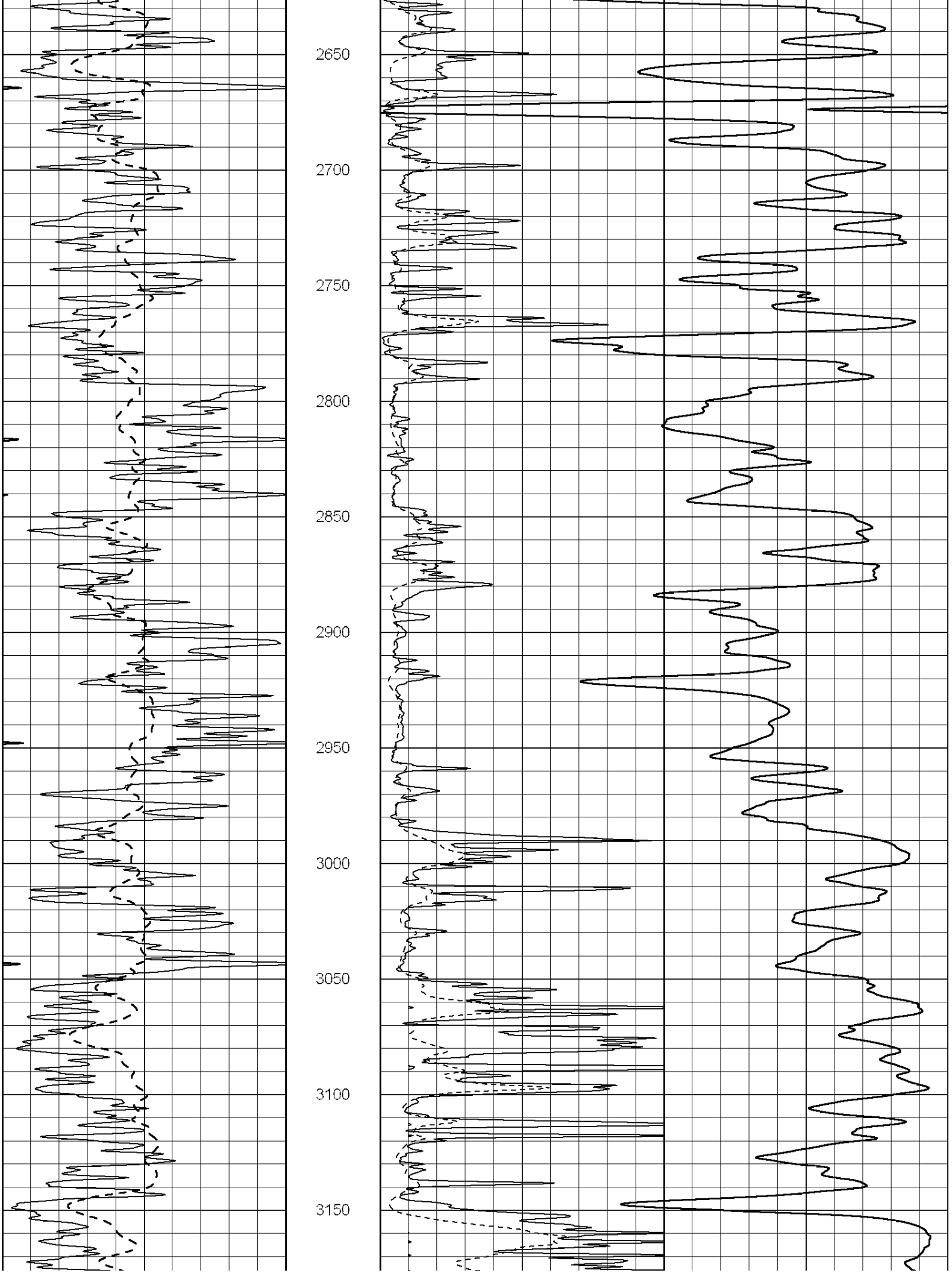
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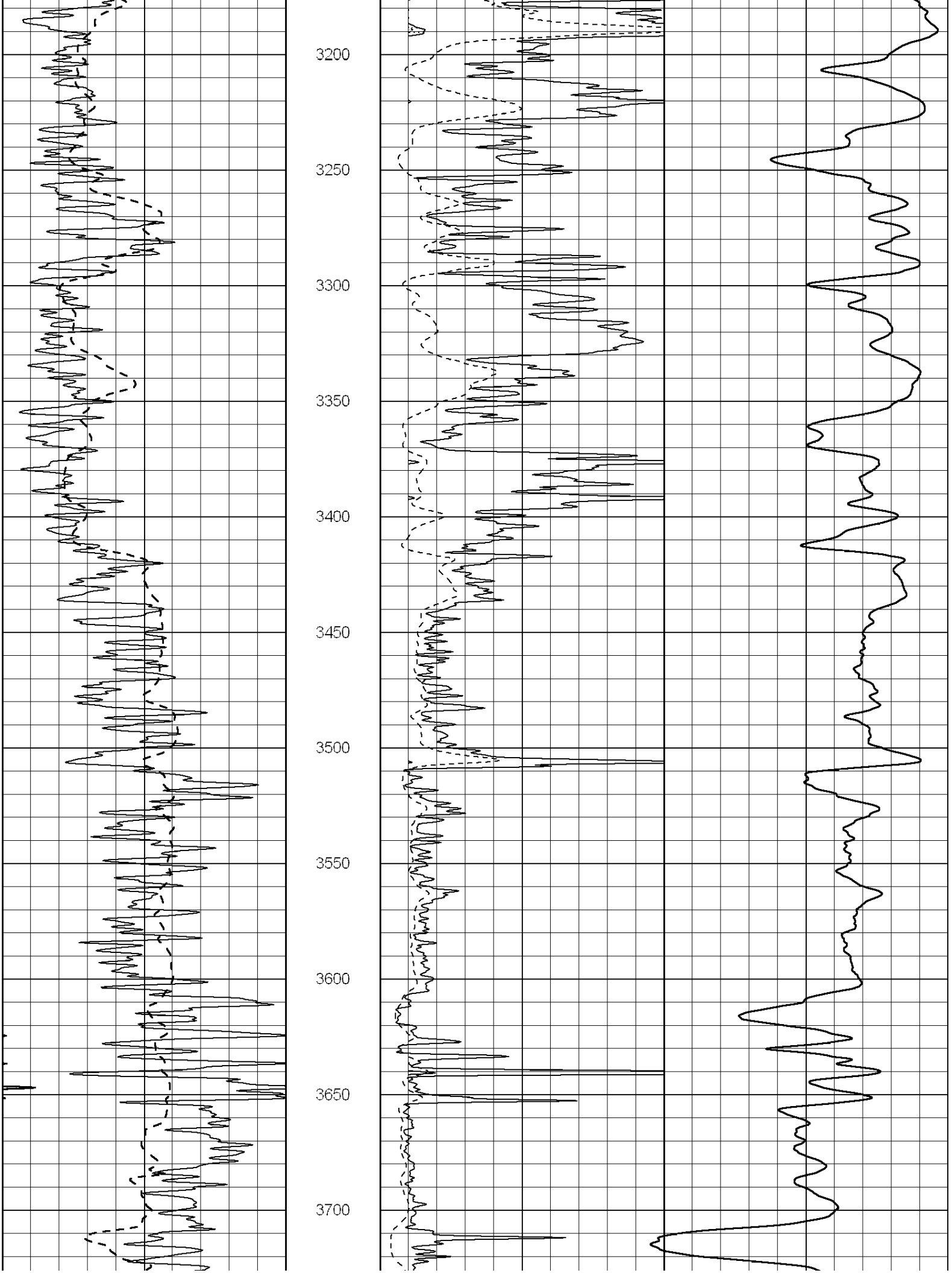
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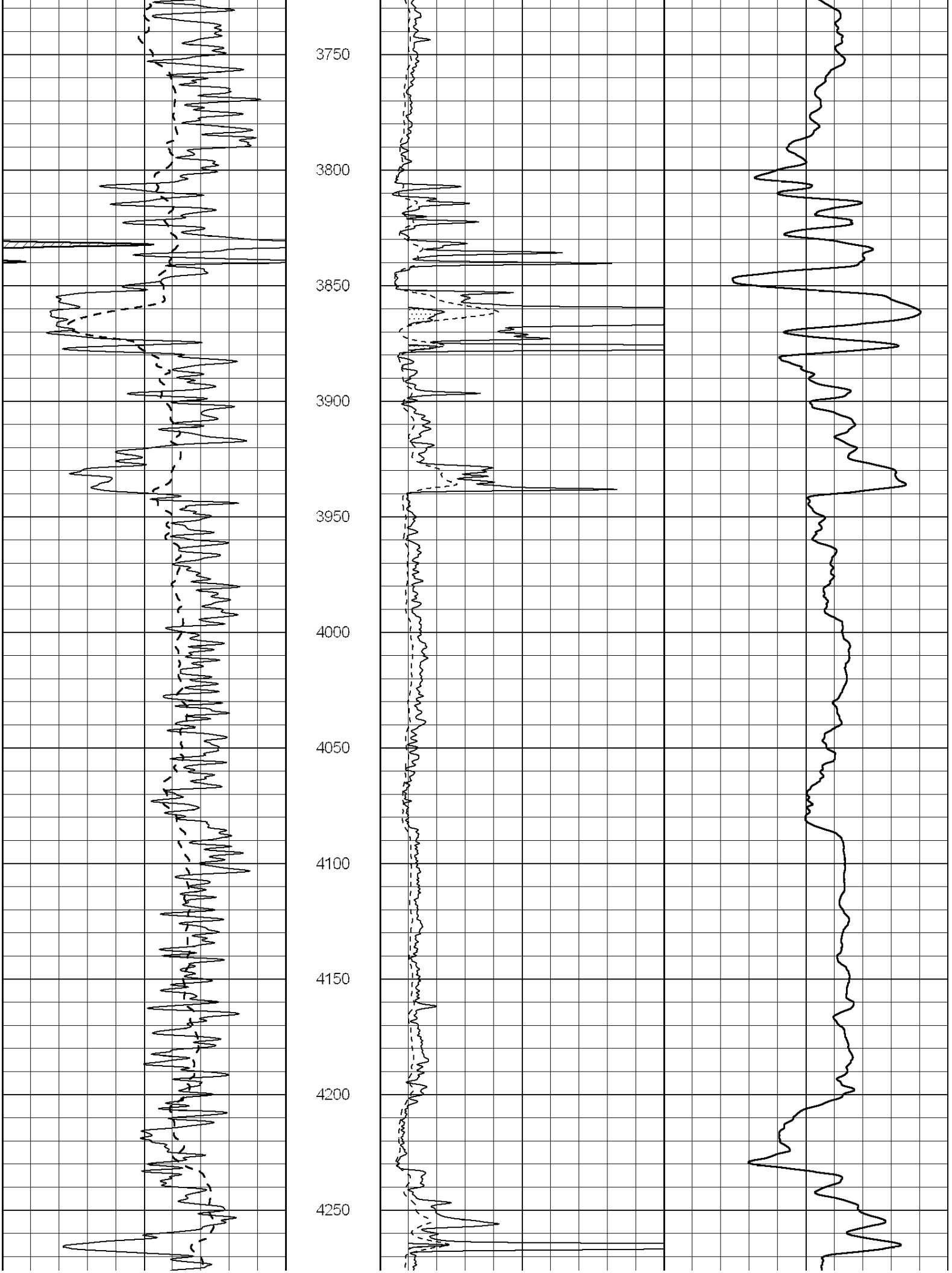
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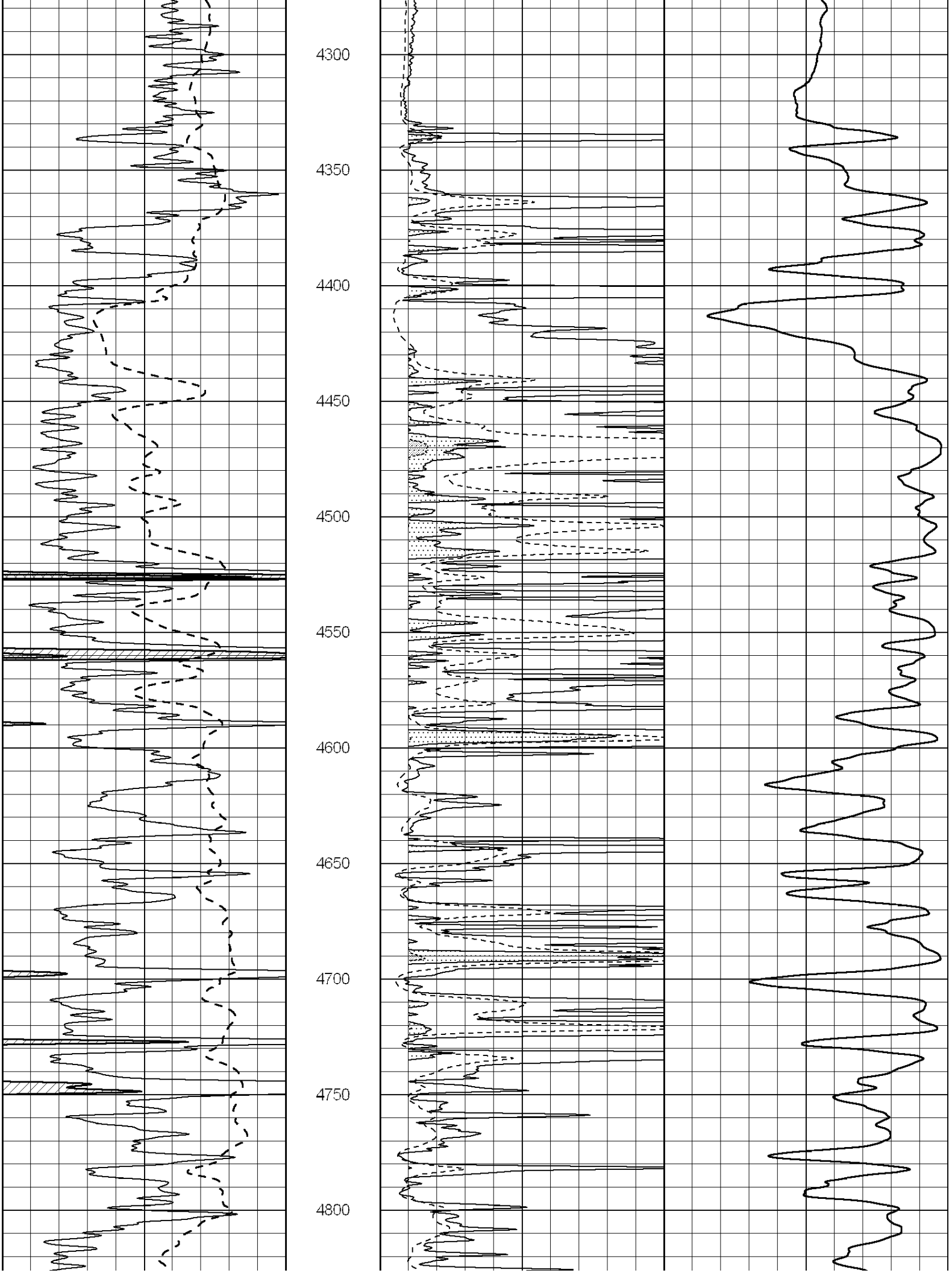
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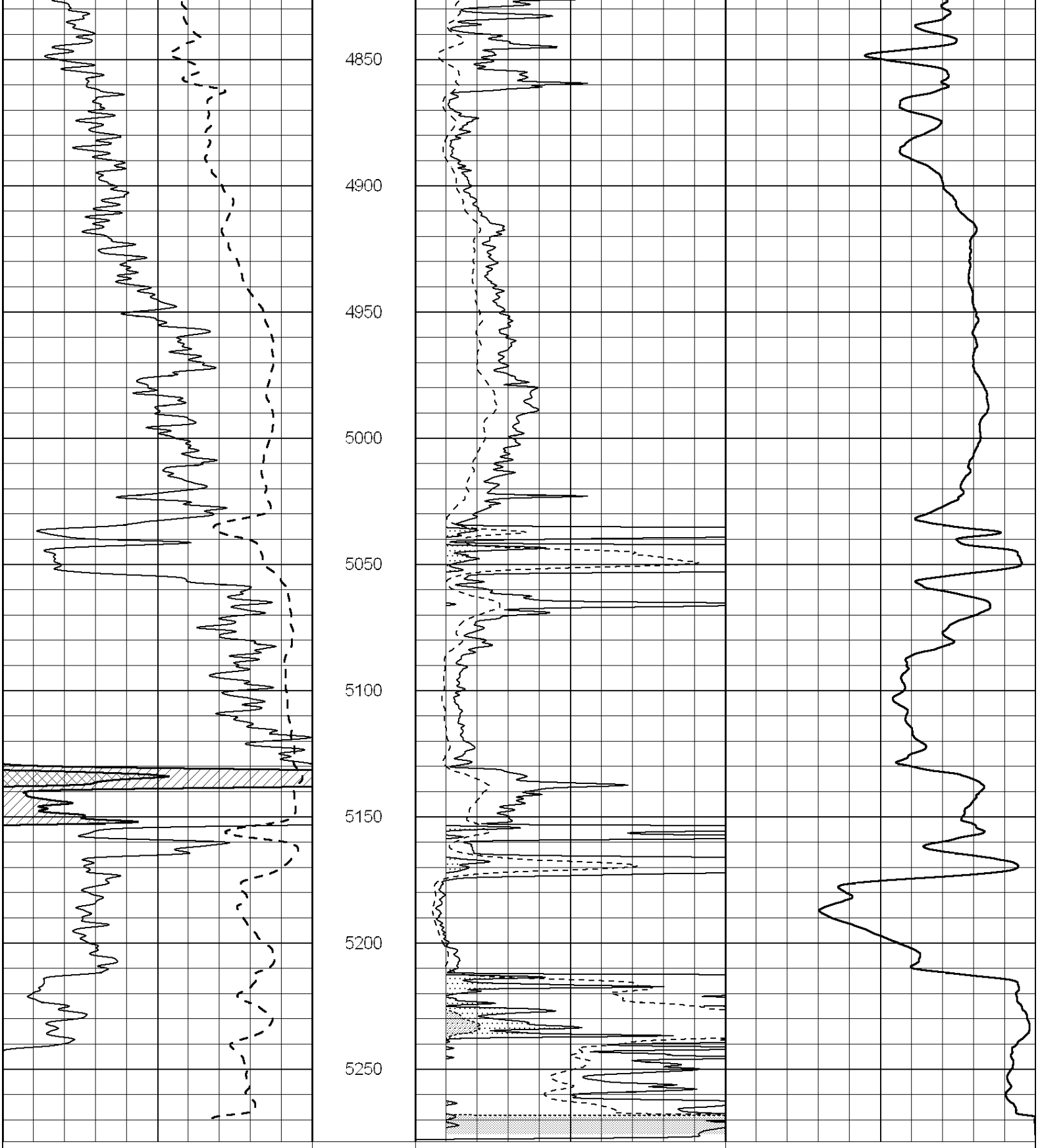


SUPERIOR

MAIN SECTION

SUPERIOR WELL SERVICES

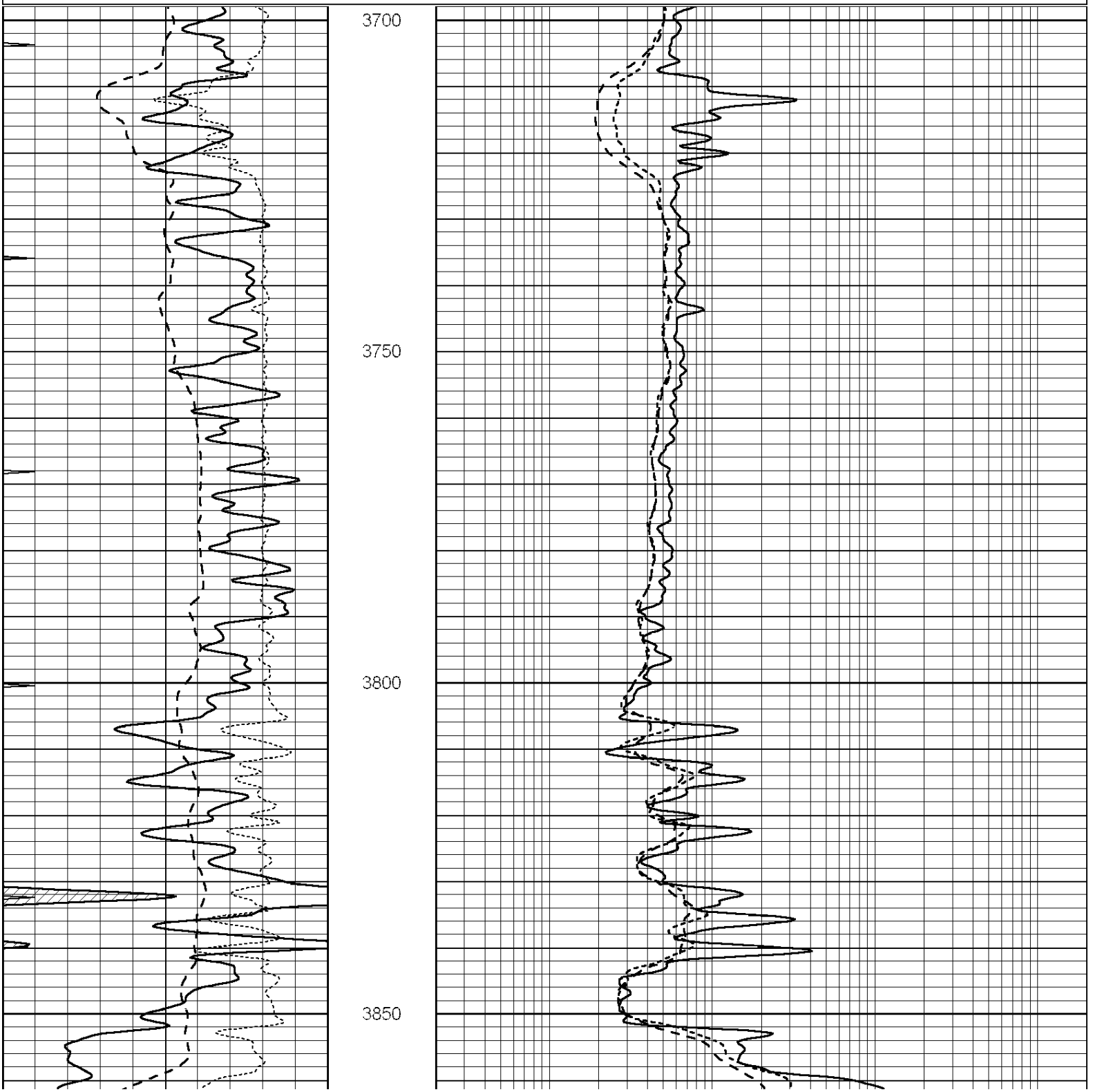
Hays, Kansas

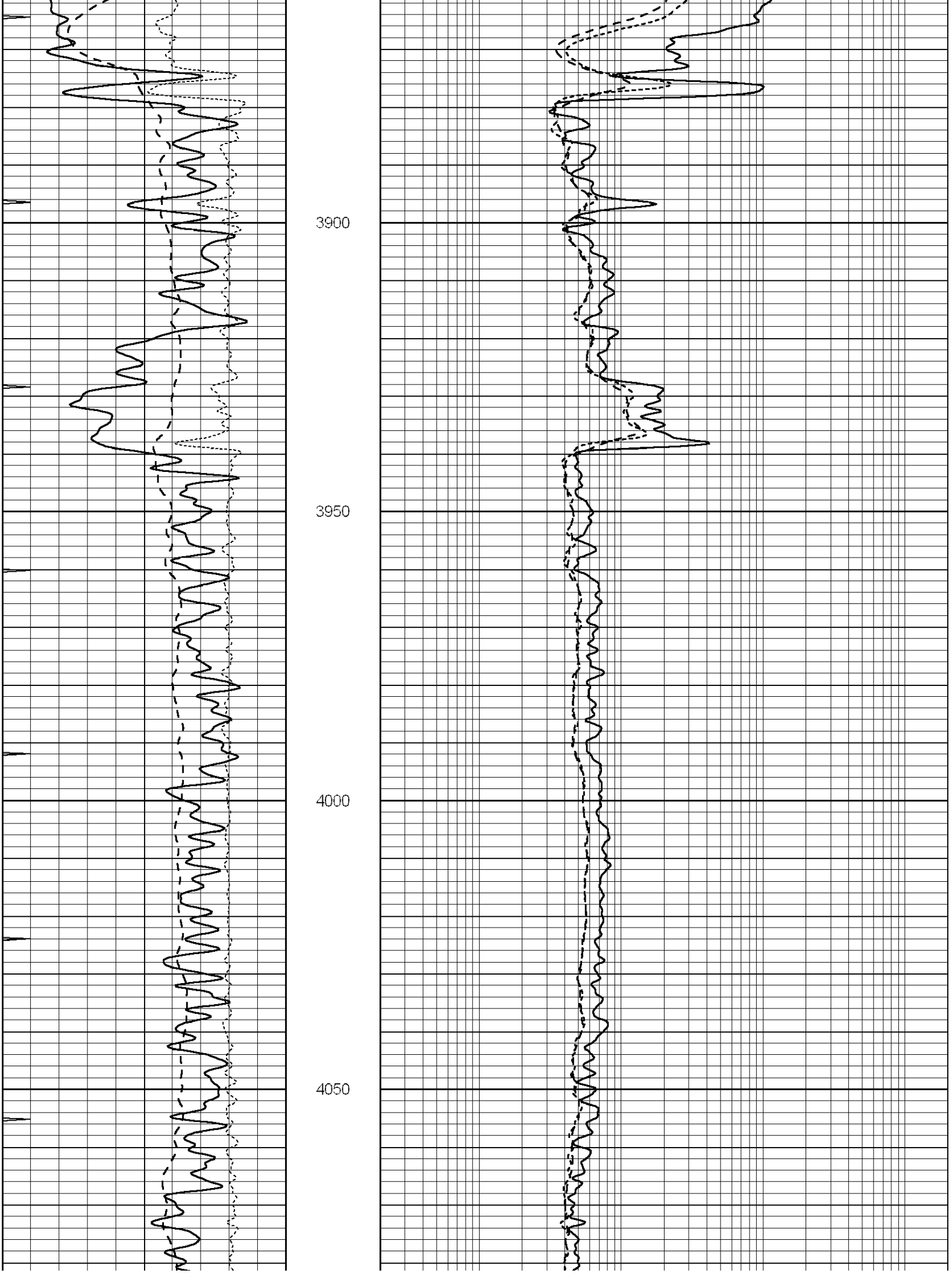
MAIN SECTION

Database File:	005817pe.db
Dataset Pathname:	pass3.5
Presentation Format:	dil
Dataset Creation:	Wed Nov 24 10:11:29 2010 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	10

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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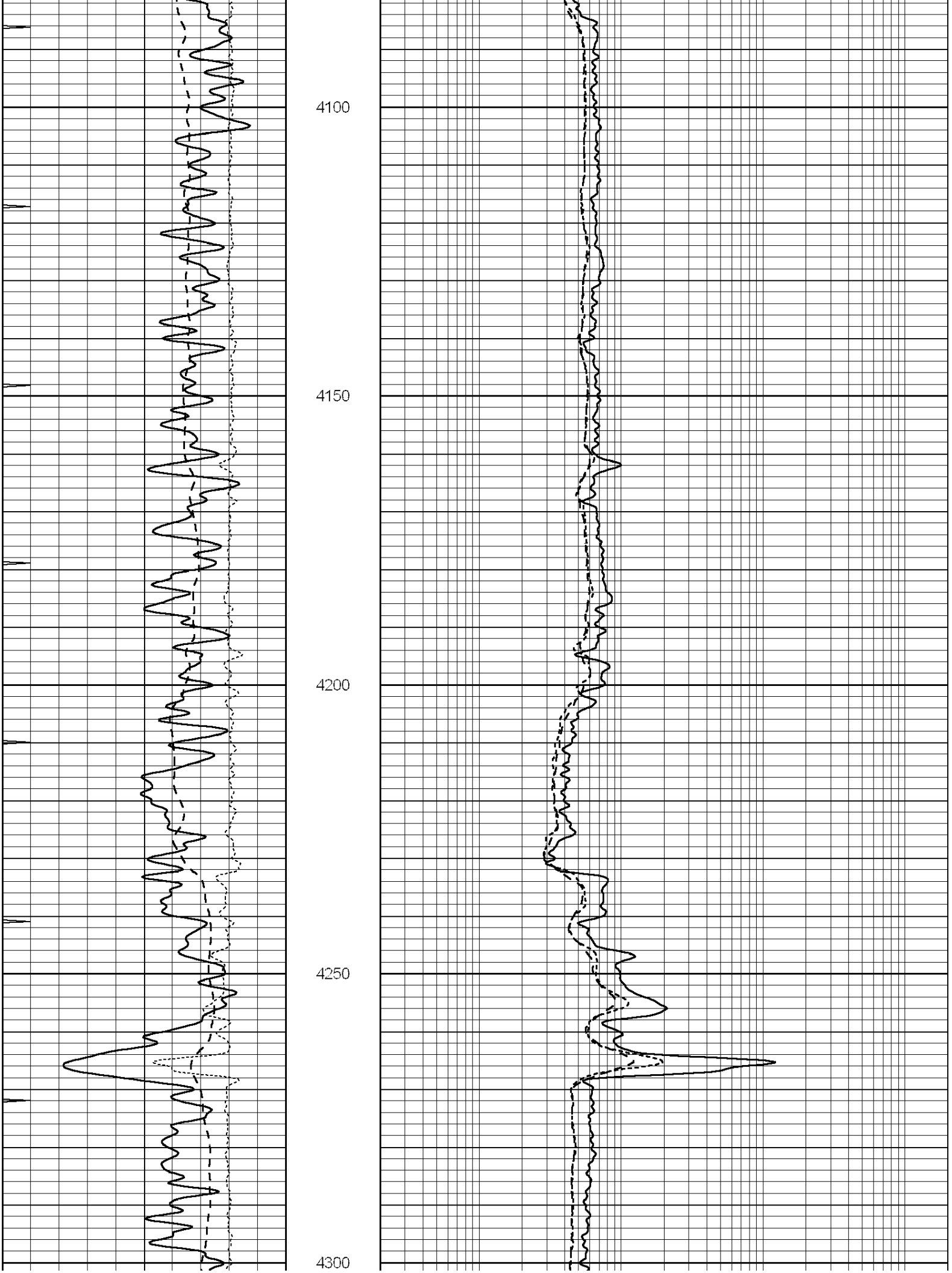
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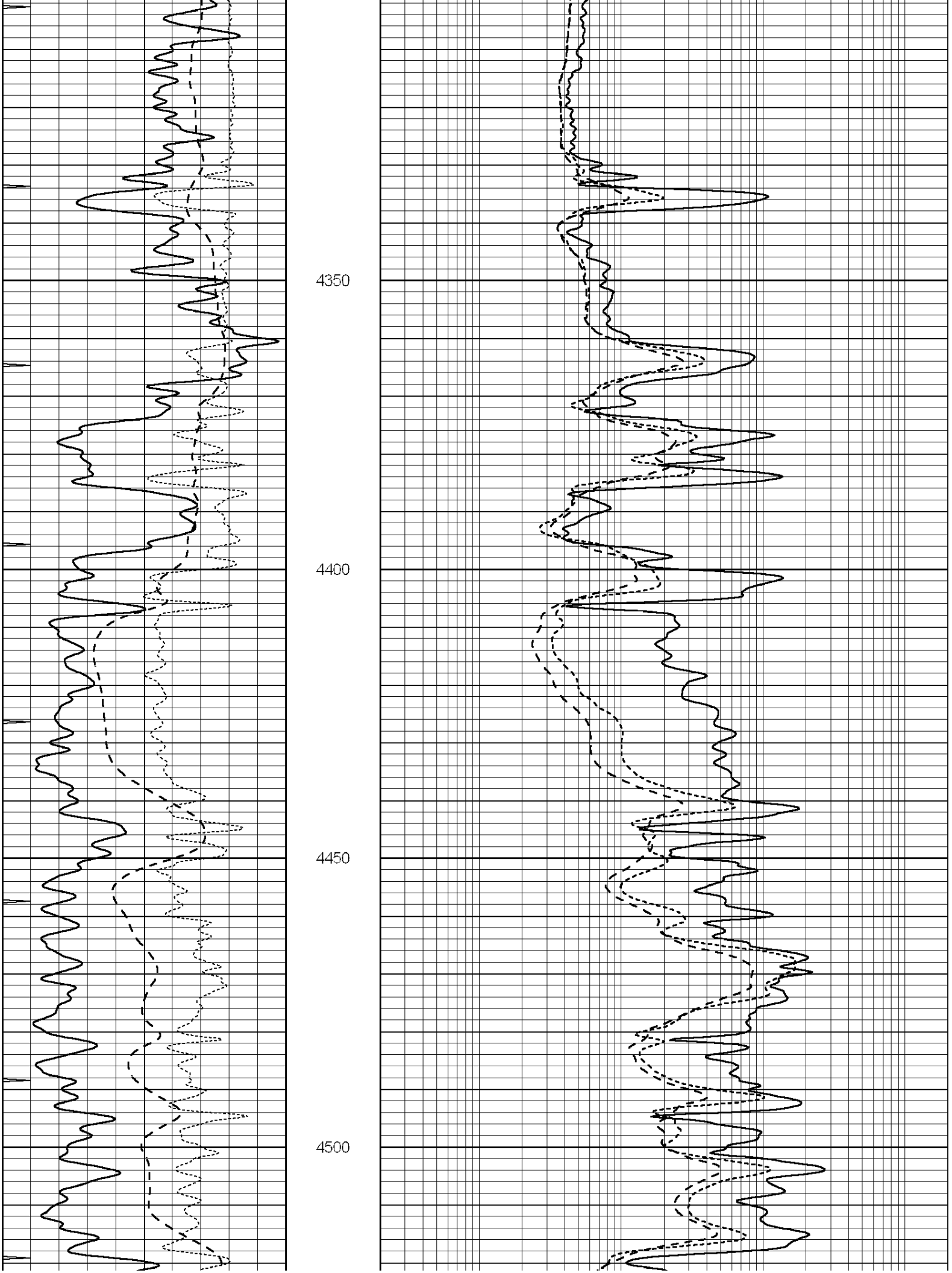
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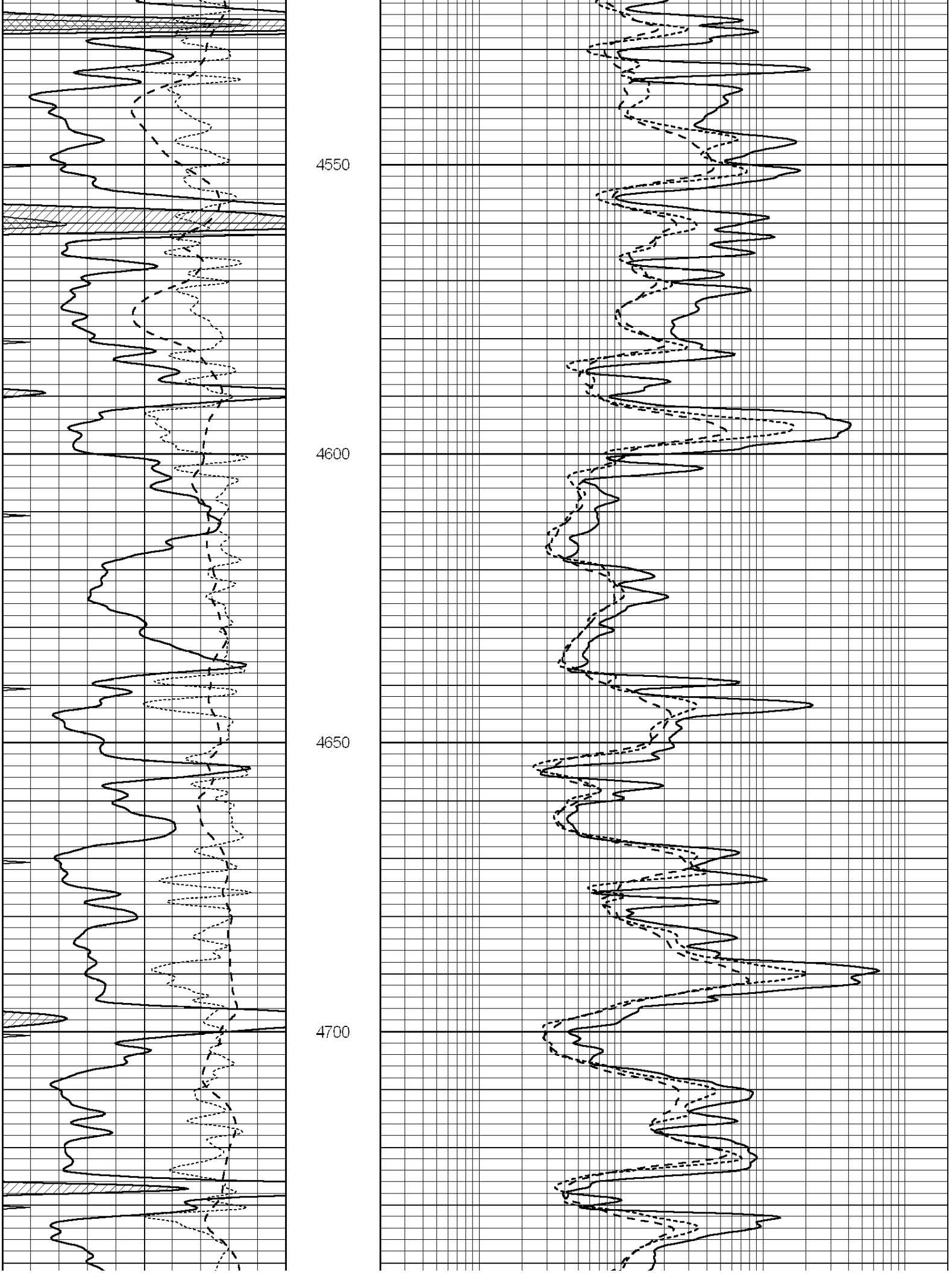
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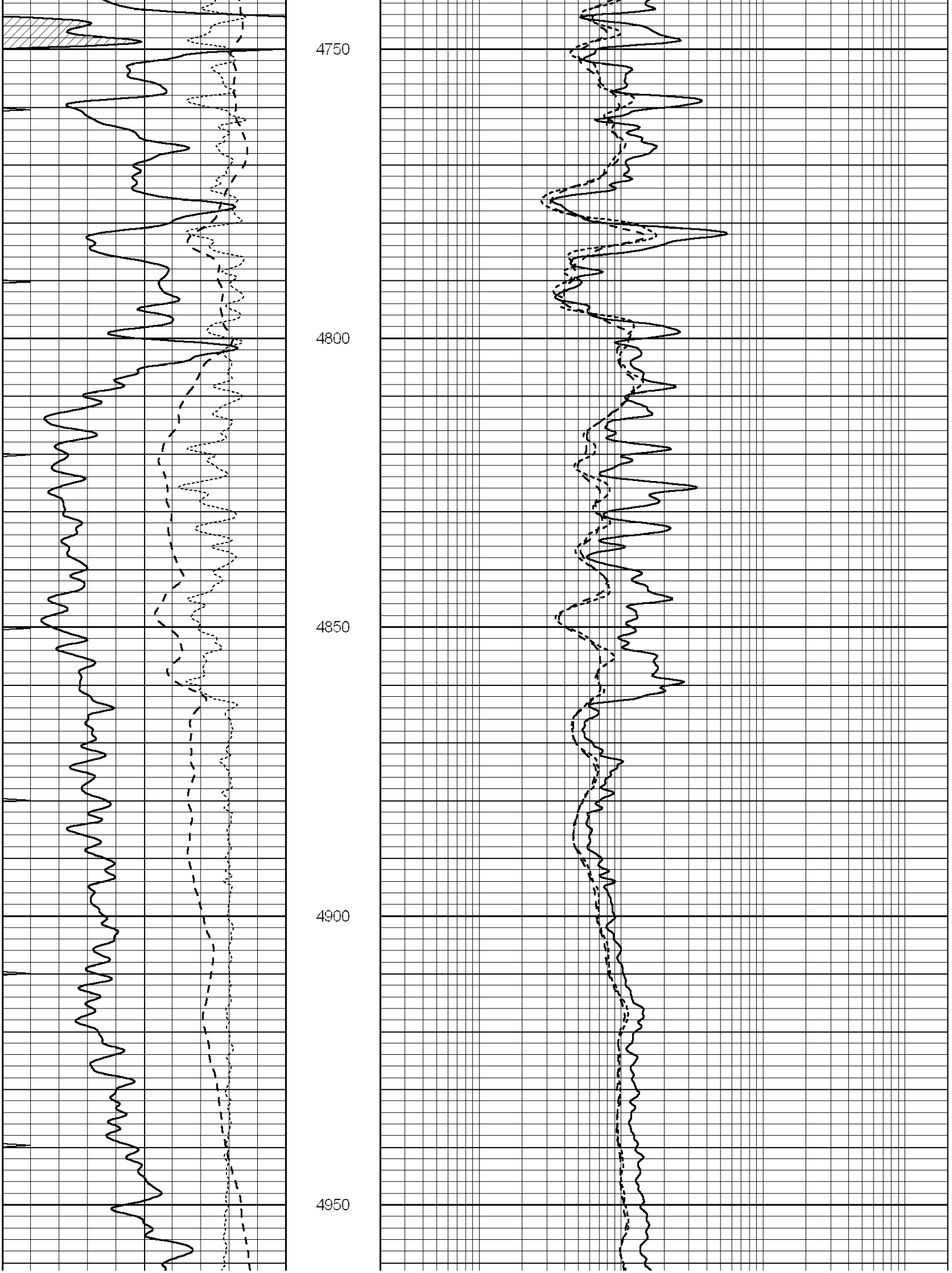
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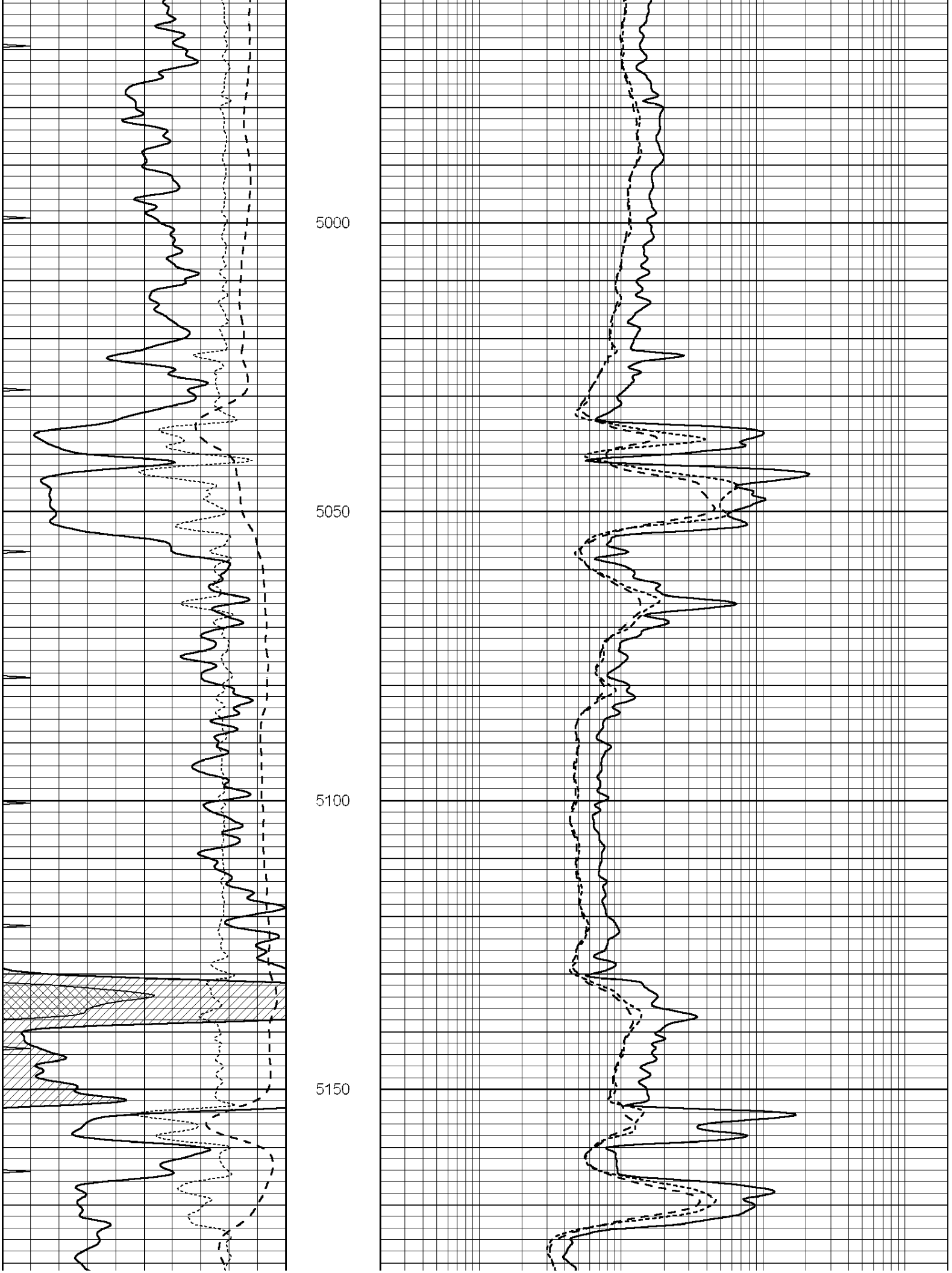
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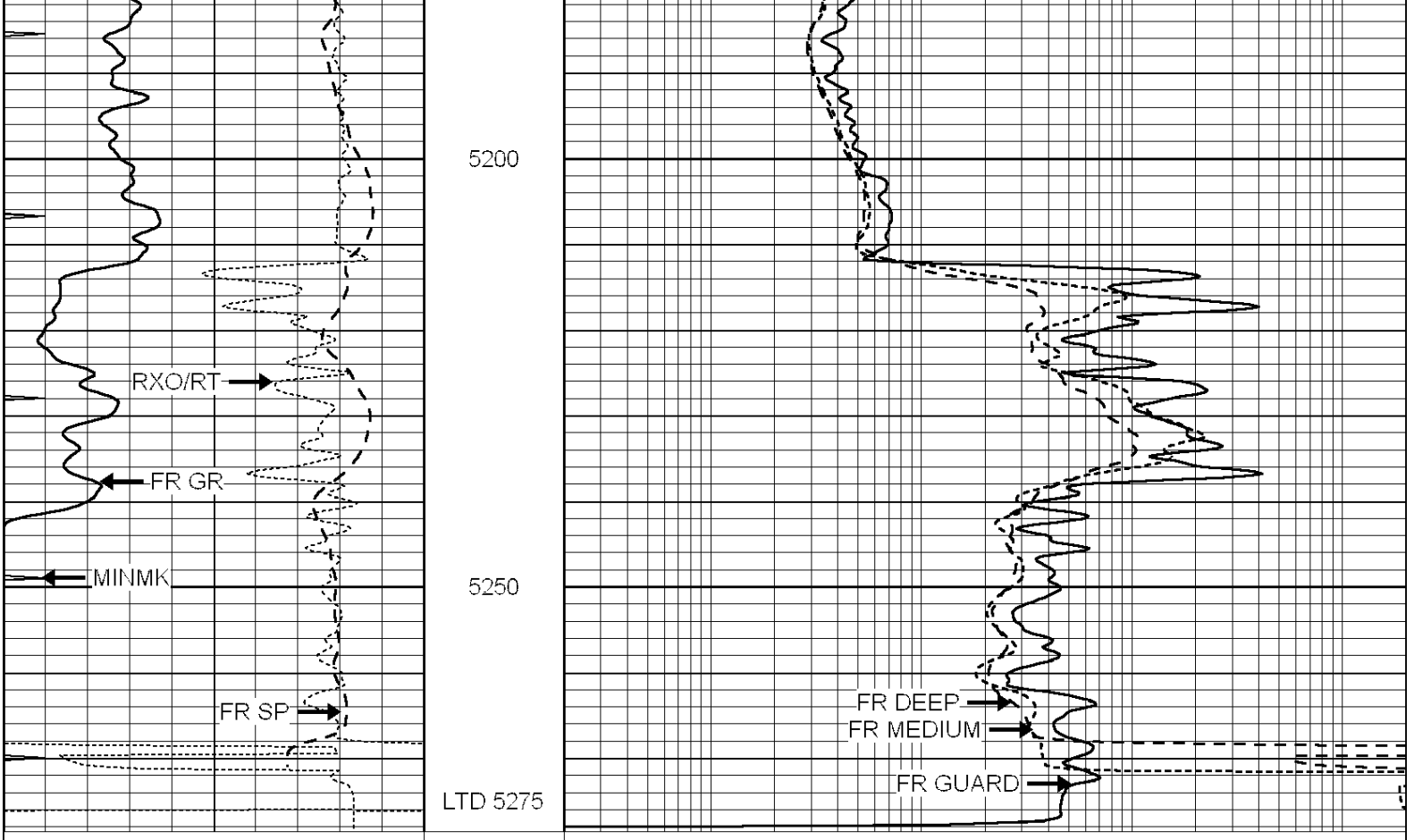


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

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

SUPERIOR WELL SERVICES

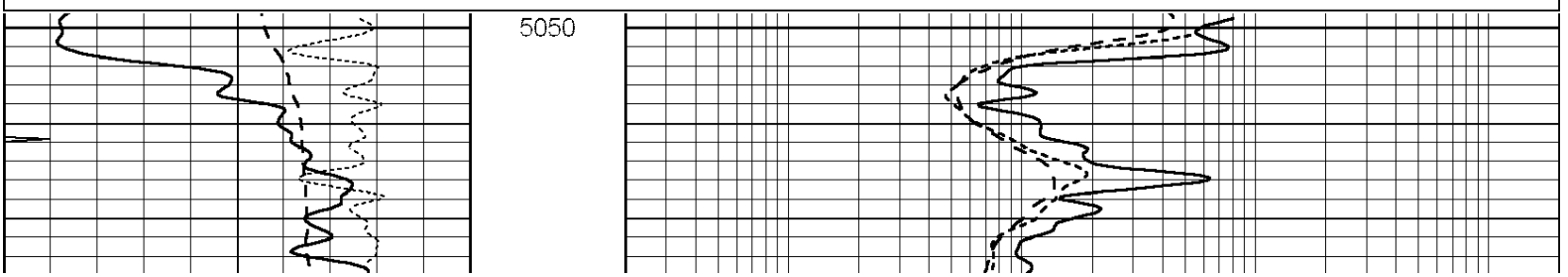
SUPERIOR
Hays,
Kansas

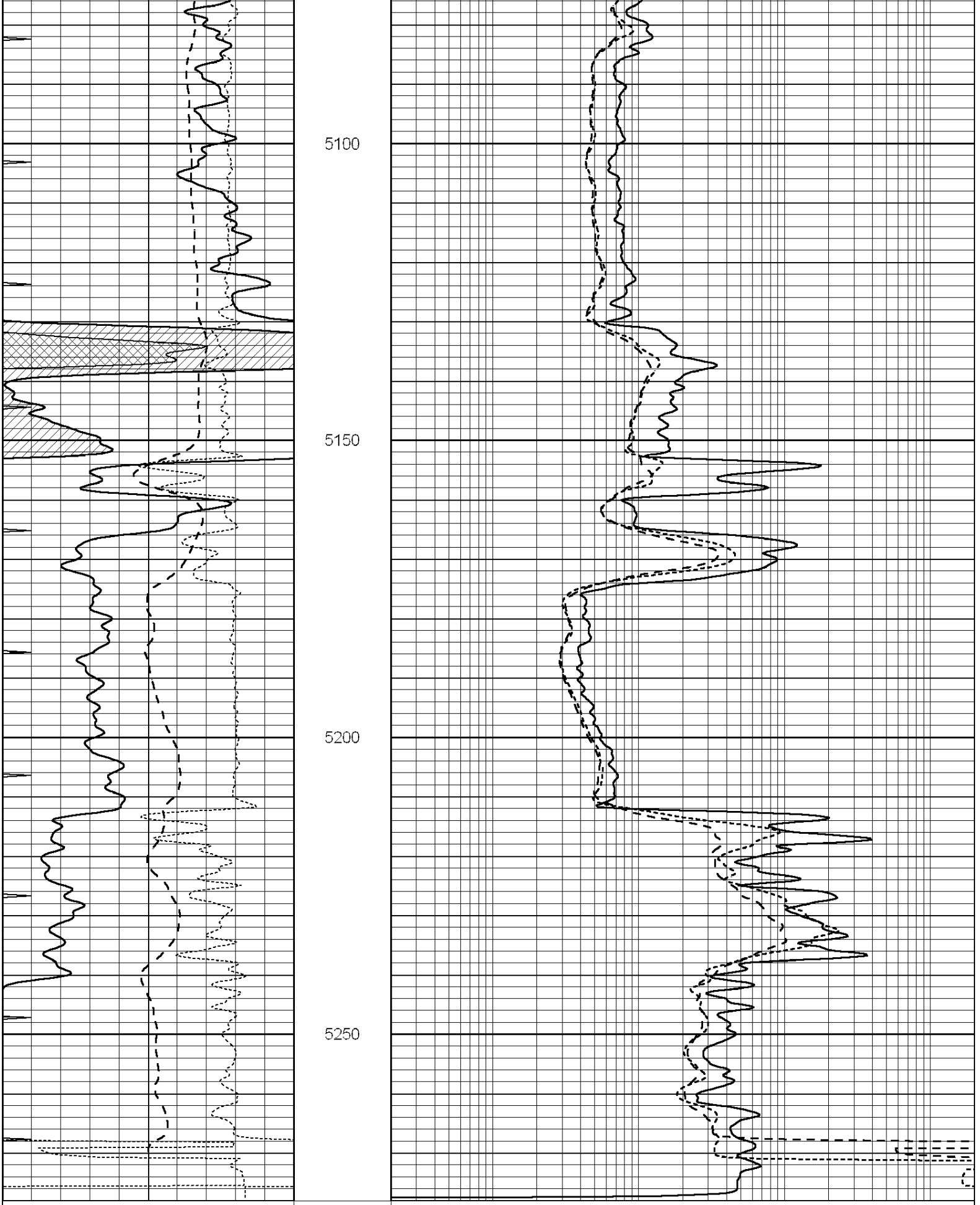
REPEAT SECTION

Database File:	005817pe.db
Dataset Pathname:	pass2.6
Presentation Format:	dil
Dataset Creation:	Wed Nov 24 10:08:03 2010 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	10

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	MINMK	10

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: 005817pe.db
Dataset Pathname: pass3.5
Dataset Creation: Wed Nov 24 10:11:29 2010 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Wed Nov 24 06:45:02 2010

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	-6.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-18.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 006 Model: PRB
Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	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			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

Caliper

	Readings	Reference
Low Ref	3.2	6.5
High Ref	6.2	14.0

Gain: 2.4 Offset: -1.3

Compensated Neutron Calibration Report

Serial Number: NEU_3I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	997.00	cps	1000.00	cps	1.0000
Long Space	986.00	cps	1000.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR4
Tool Model: OPEN

Performed:	Wed Nov 24 08:39:58 2010	
Calibrator Value:	200.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	189.0	cps
Sensitivity:	1.0000	GAPI/cps