SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	NOBLE PETROLEUM, INC.
Well	HARTMAN #1
Field	PERTH
County	SUMNER
State	KANSAS

Company NOBLE PETROLEUM, INC.

Well HARTMAN #1

Field PERTH

County SUMNER State KANSAS

Location: API # : 15-191-22582-0000

500' FNL & 1650' FEL

SEC 11 TWP 33S RGE 2W

Permanent Datum	GROUND LEVEL	Elevation 1225	Other Services: CDL/CNL, SONIC
Log Measured From	KELLY BUSHING 9' A.G.L.		Elevation: K.B. 1234, D.F. 1232, G.L. 1225
Drilling Measured From	KELLY BUSHING		

Date	10/6/10		
Run Number	ONE		
Depth Driller	4274		
Depth Logger	4274		
Bottom Logged Interval	4272		
Top Log Interval	00		
Casing Driller	8 5/8"@264'		
Casing Logger	262		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 10,000PPM	
Density / Viscosity	9.2/42		
pH / Fluid Loss	10.5/11.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.520@84F		
Rmf @ Meas. Temp	.390@84F		
Rmc @ Meas. Temp	.624@84F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.367@119F		
Time Circulation Stopped	8 HOURS		
Time Logger on Bottom	7:45 A.M.		
Maximum Recorded Temperature	119F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KENT CRISLER		

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Comments

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

DIRECTIONS

WELLINGTON, KS. 3 1/2W. ON HWY 160 TO "DRURY RD." 5S. TO "RD. 60", 1 1/2W., S. INTO

SUPERIOR WELL SERVICES

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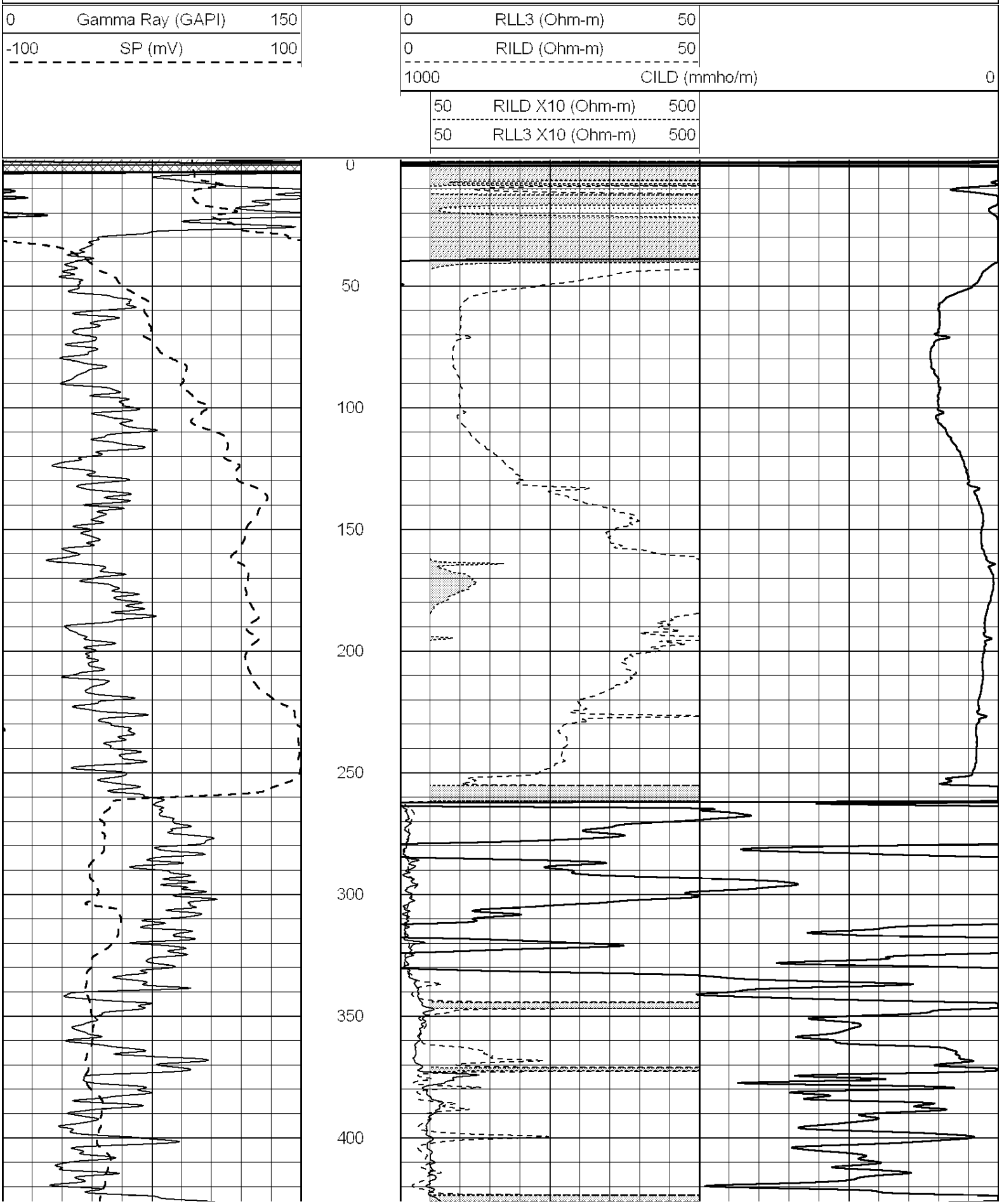
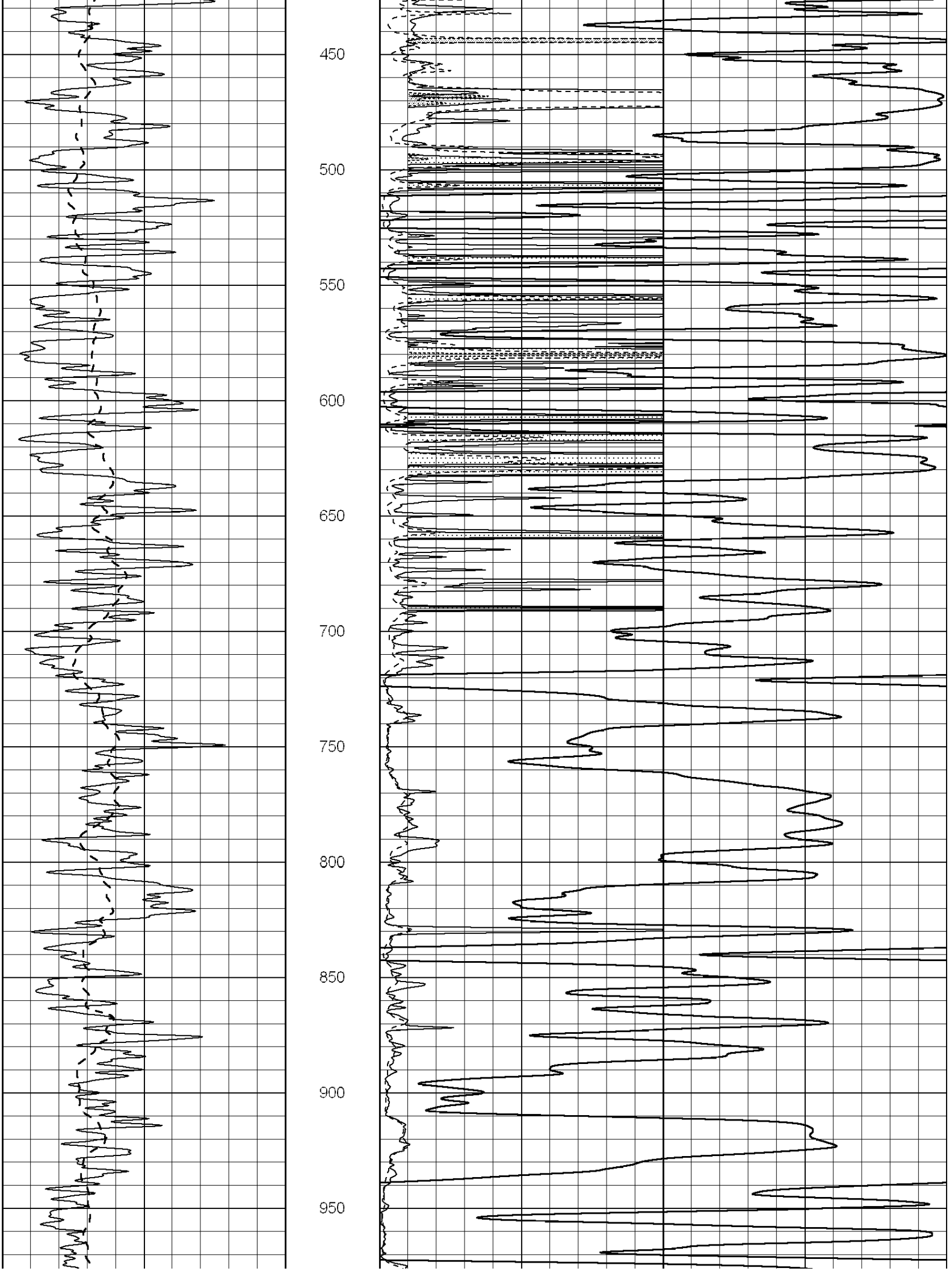
MAIN SECTION

Database File:	005989ddn.db
Dataset Pathname:	pass3.7
Presentation Format:	dil2
Dataset Creation:	Wed Oct 06 09:46:05 2010
Charted by:	Depth in Feet scaled 1:600

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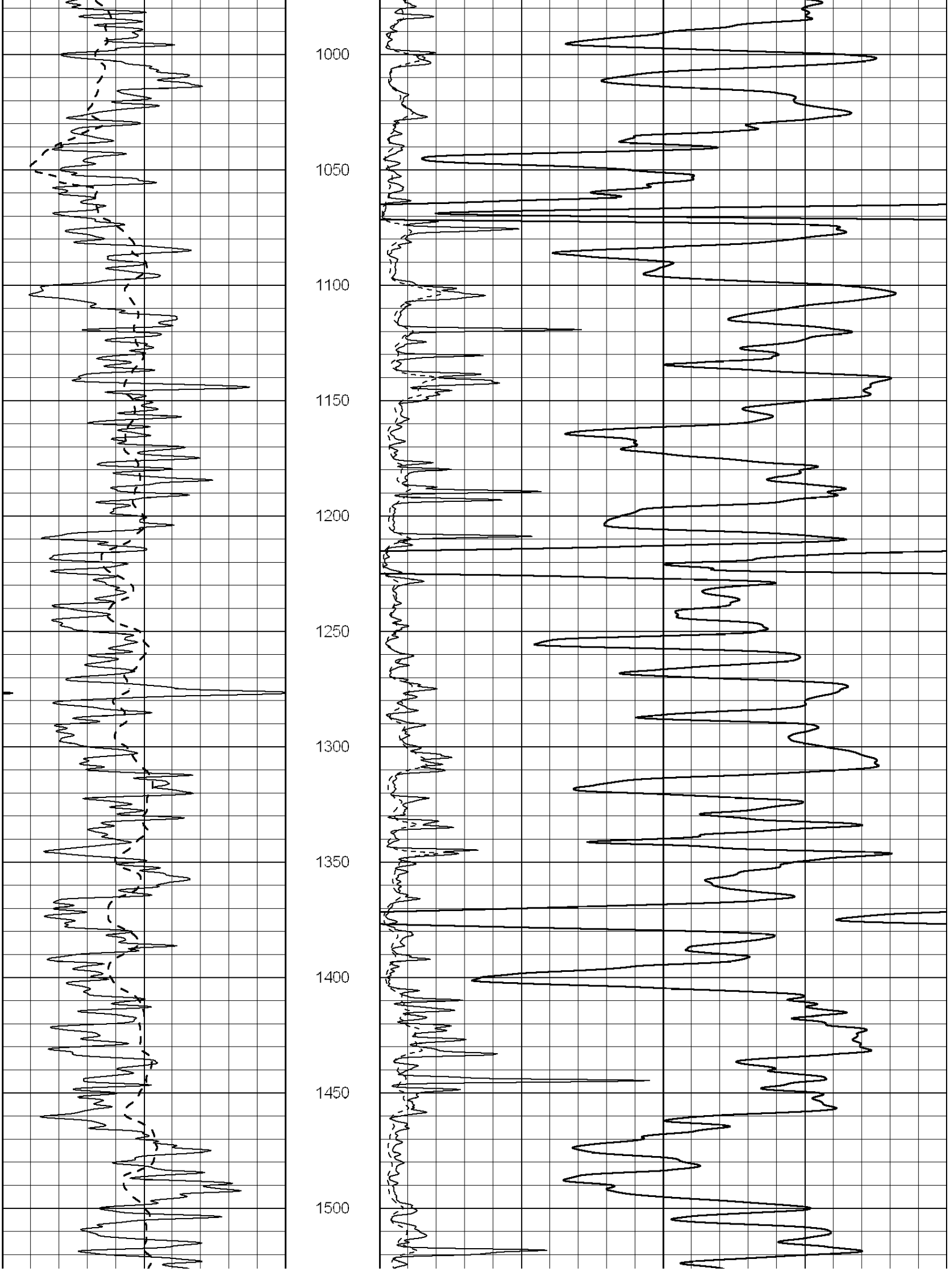
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1450
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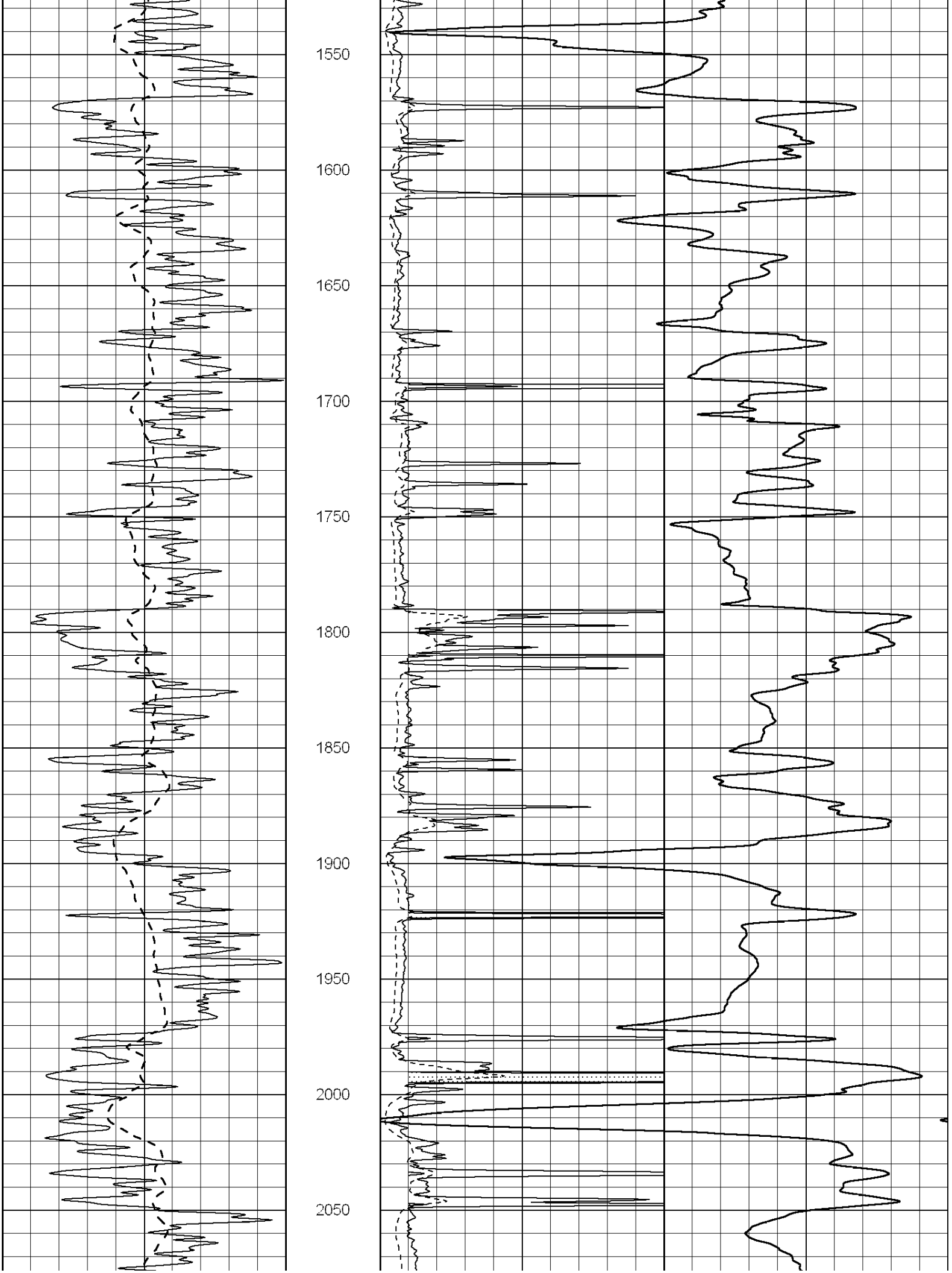
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1800
1850
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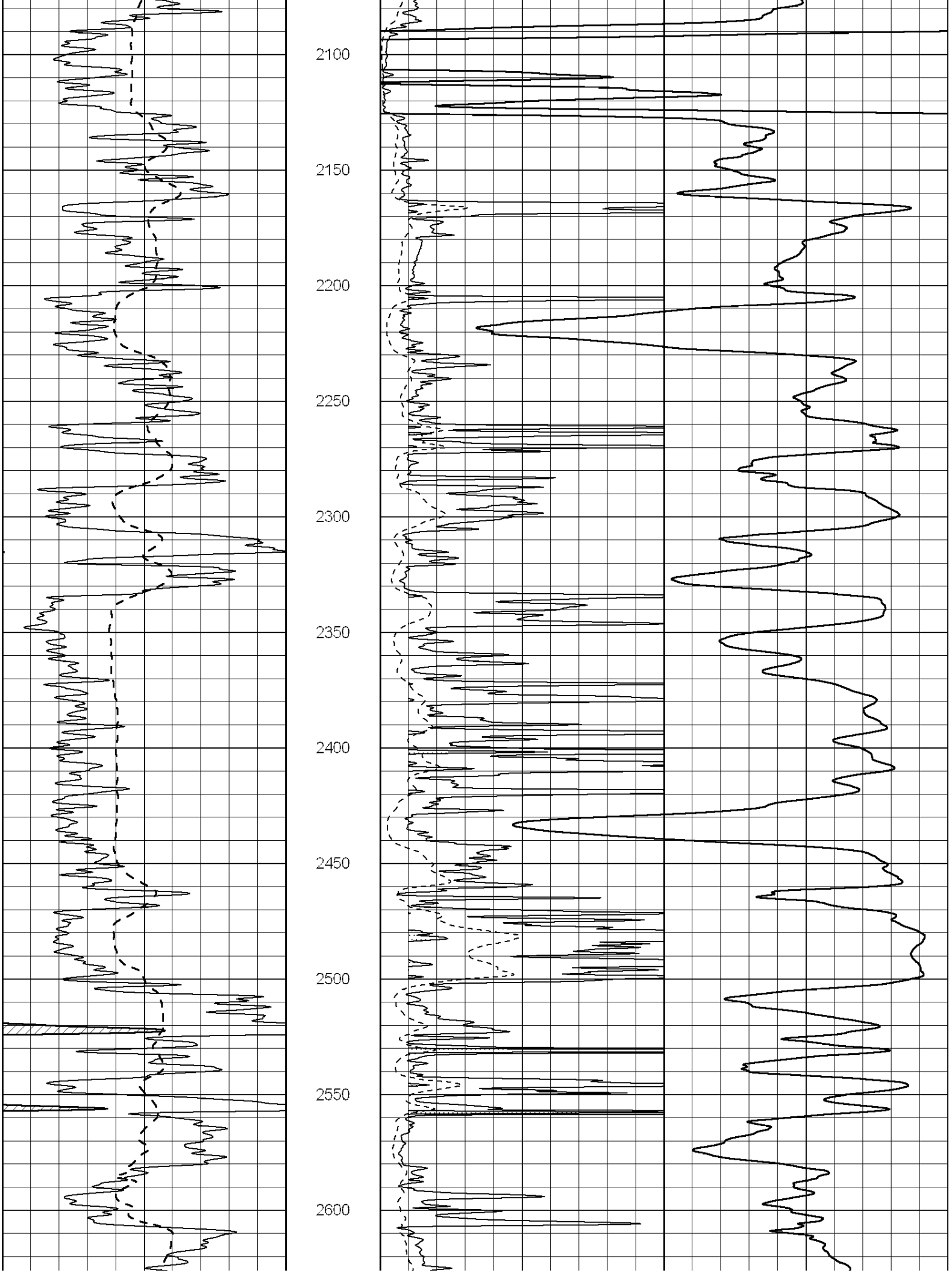
2000
2050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2400
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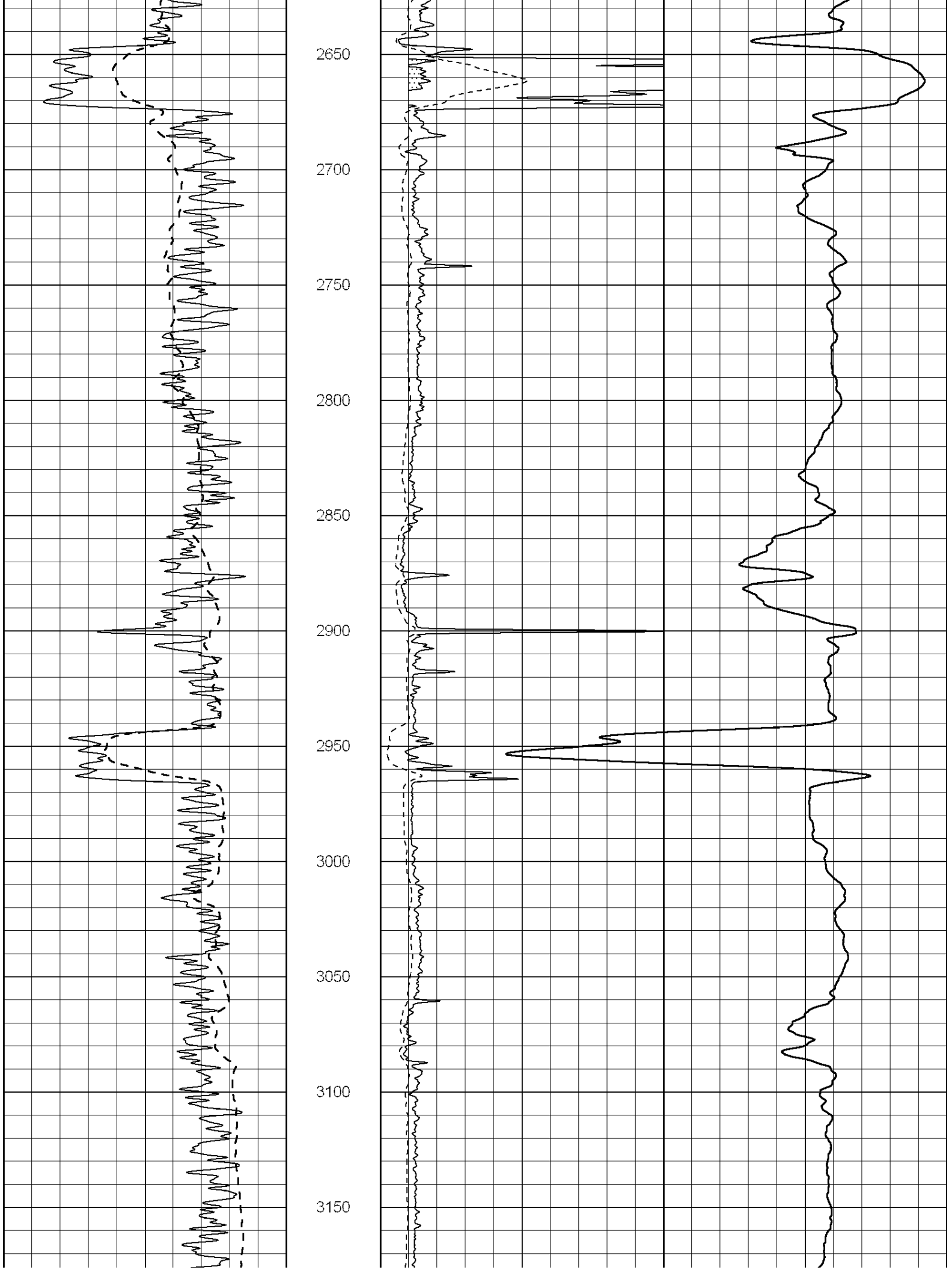
2500
2550
2600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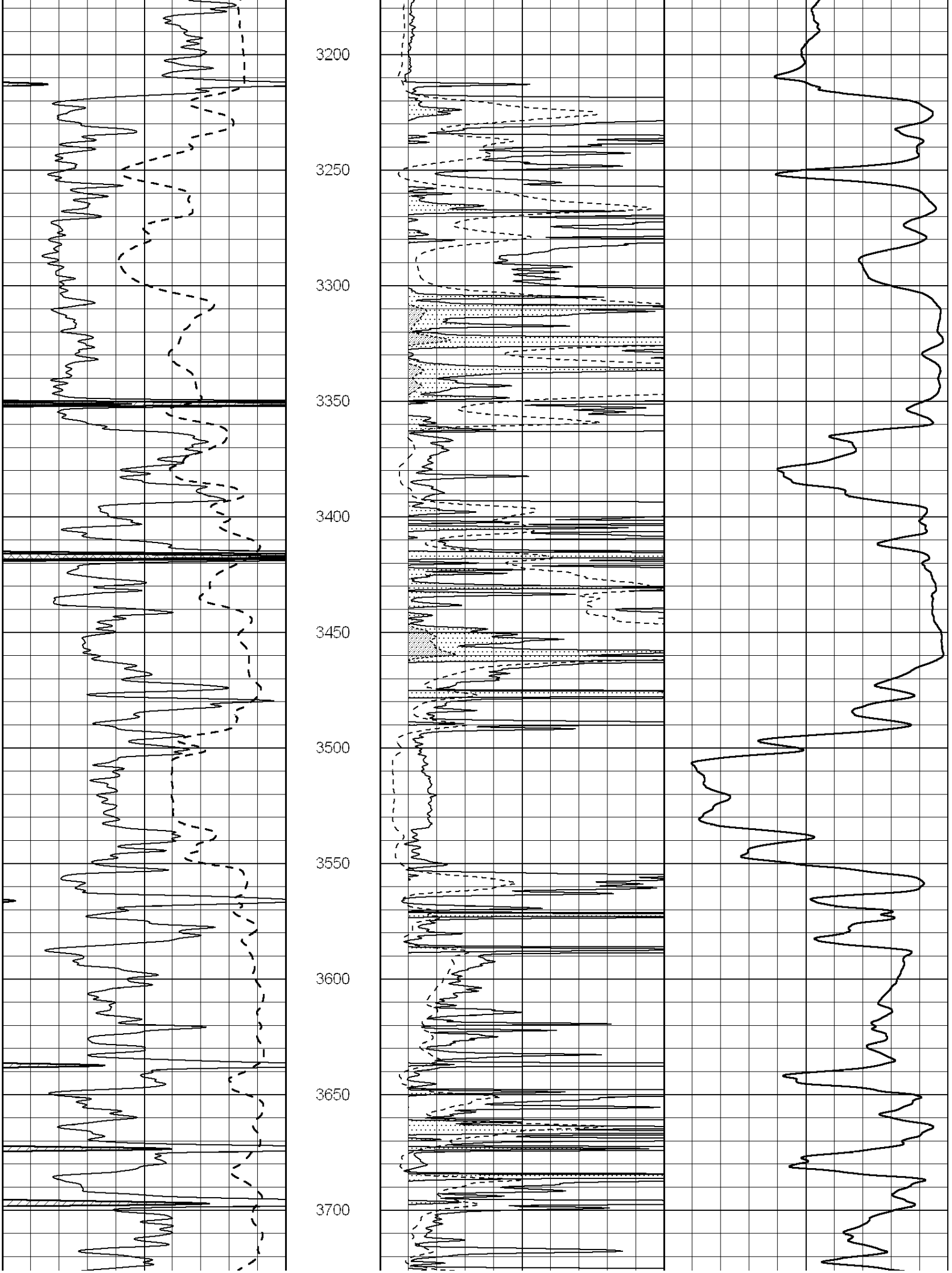
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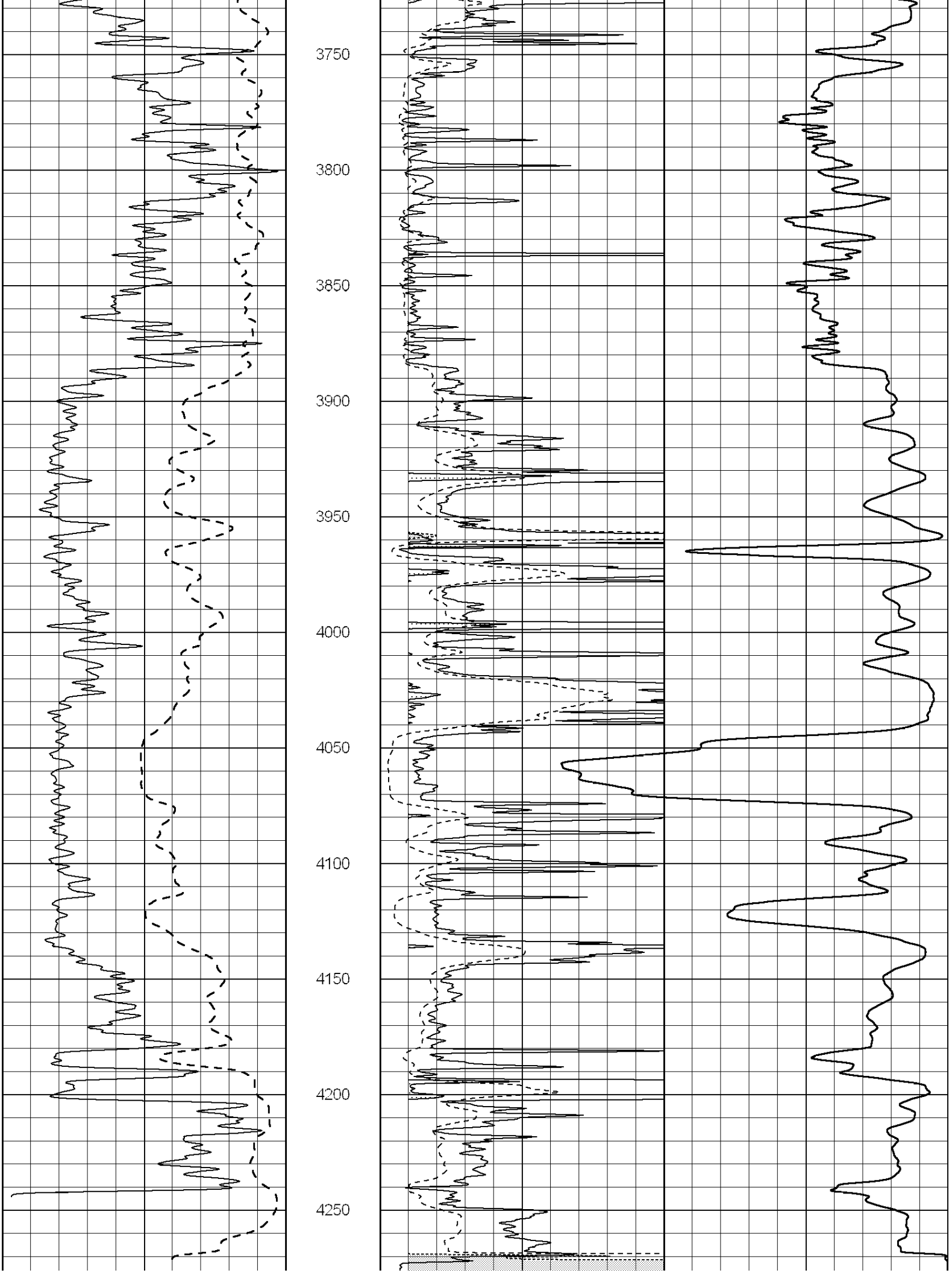
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3800
3850
3900
3950
4000
4050
4100
4150
4200
4250

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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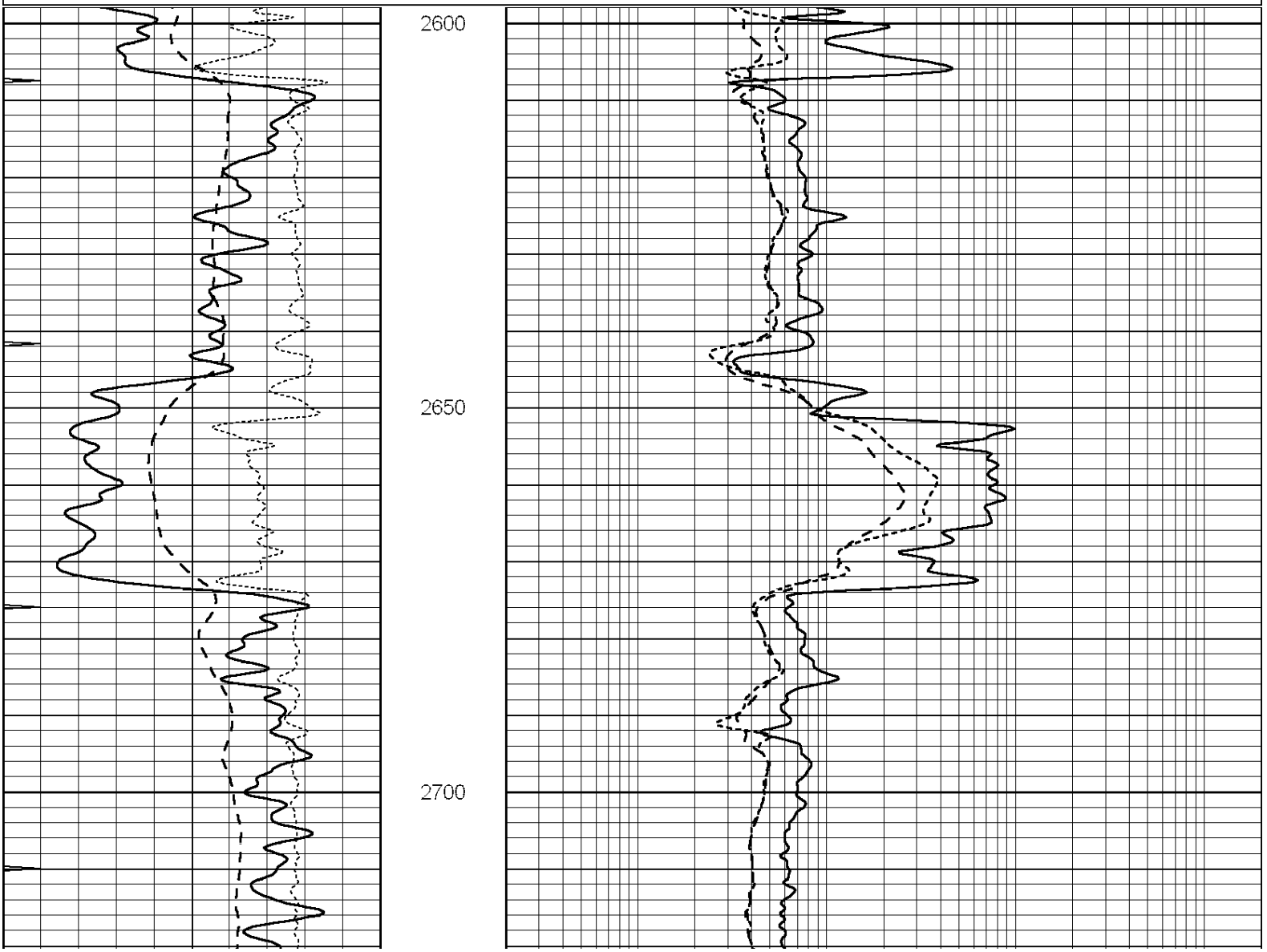
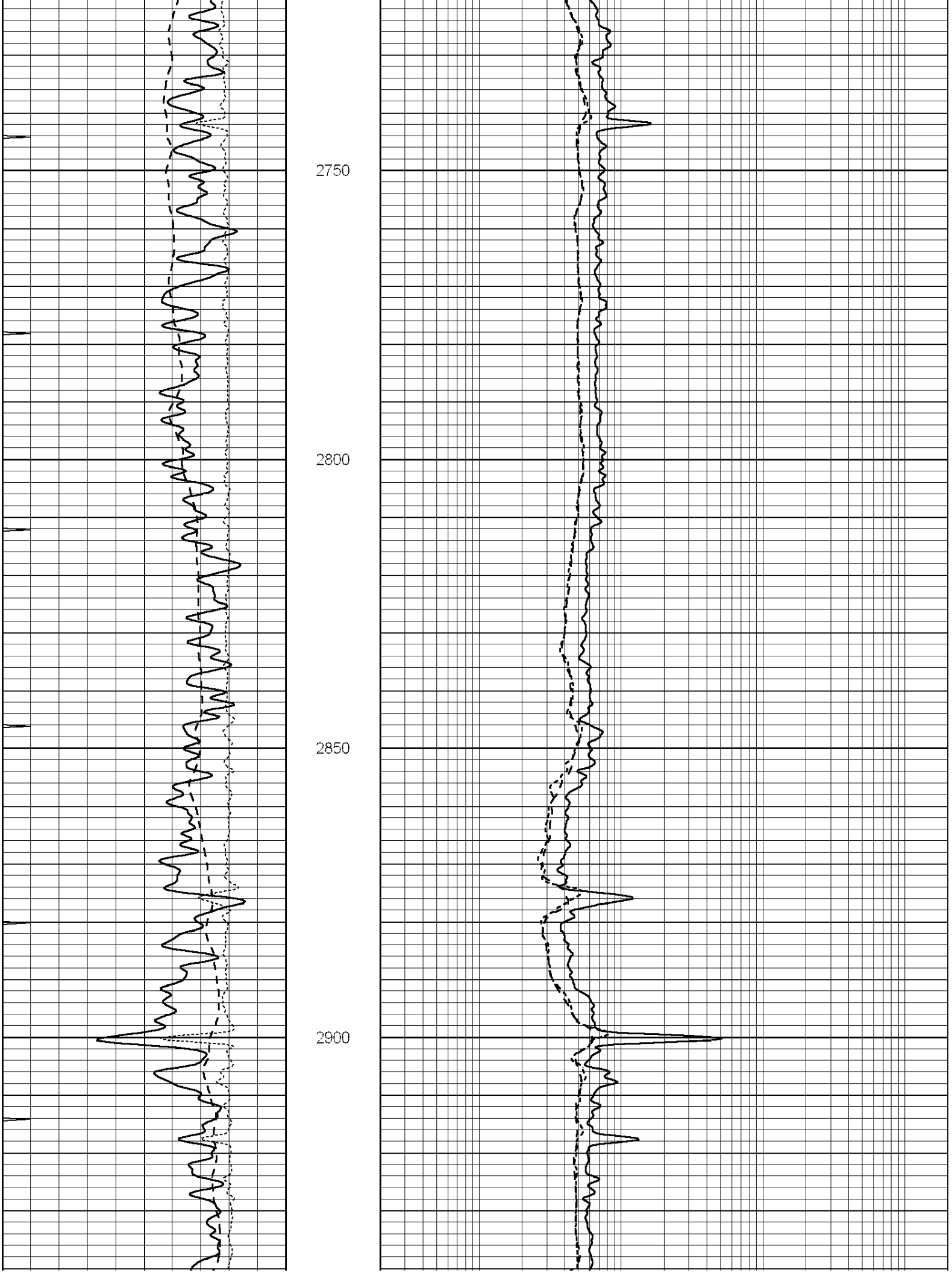
MAIN SECTION

Database File:	005989ddn.db
Dataset Pathname:	pass3.7
Presentation Format:	dil
Dataset Creation:	Wed Oct 06 09:46:05 2010
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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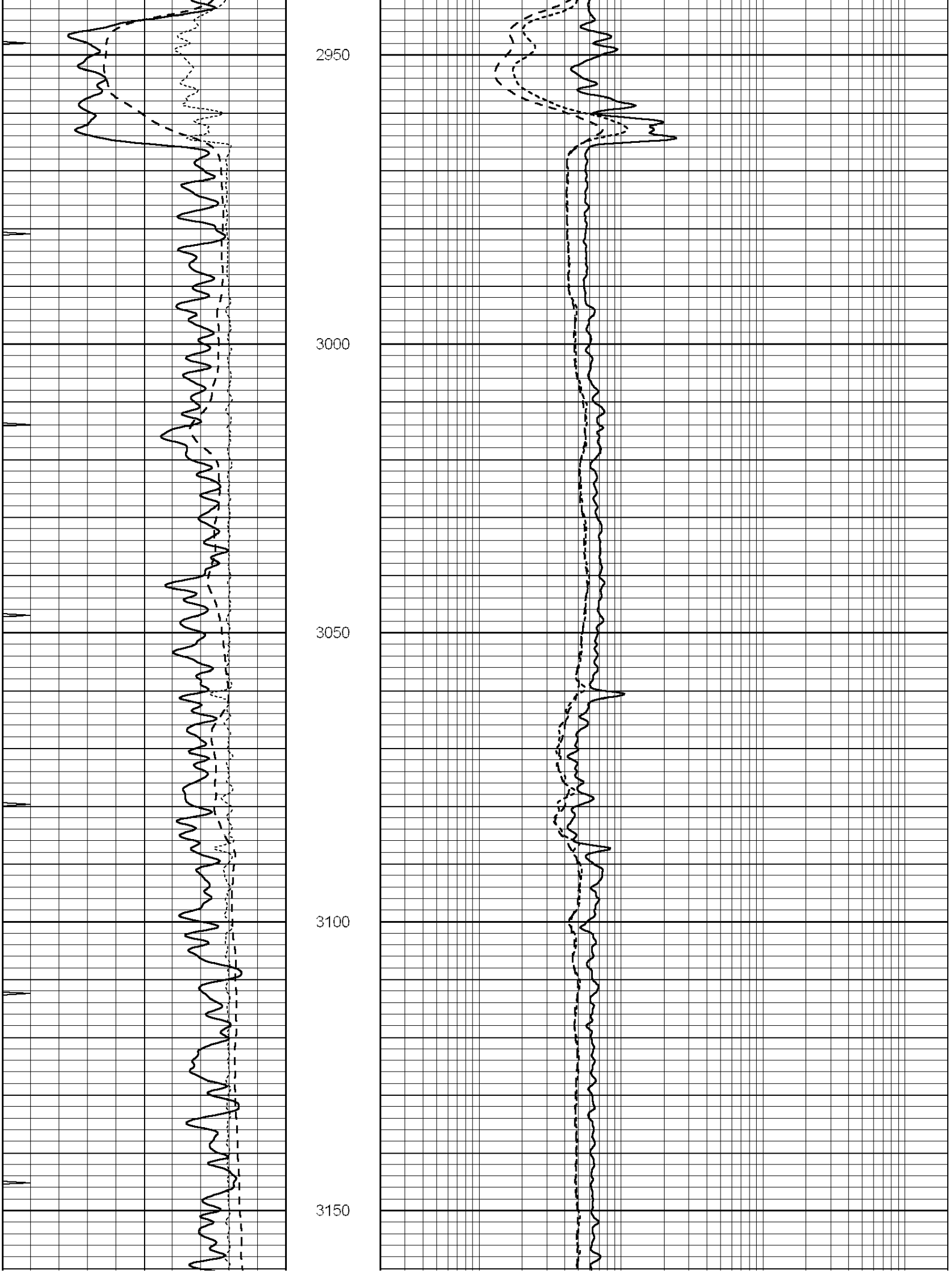
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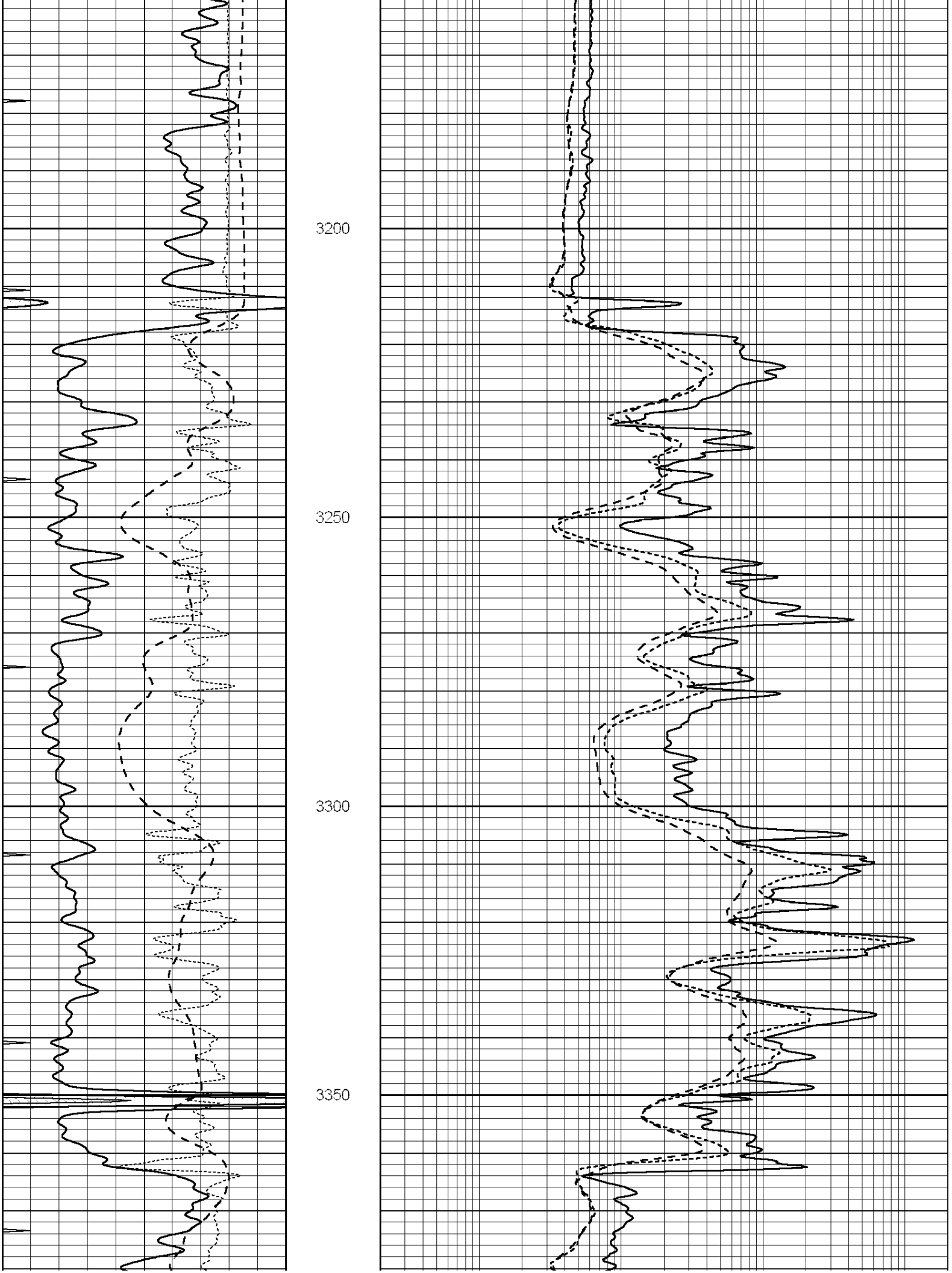
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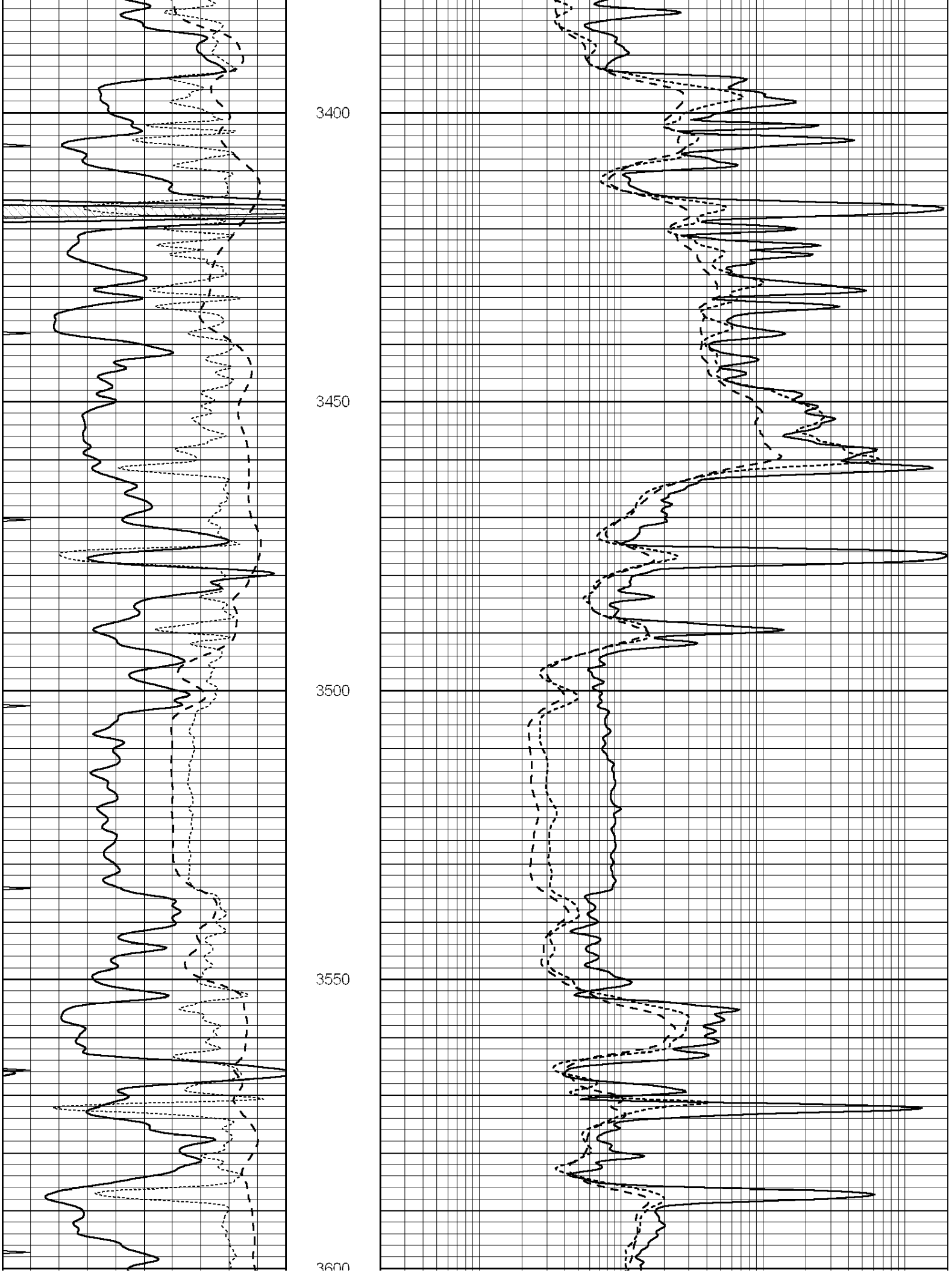
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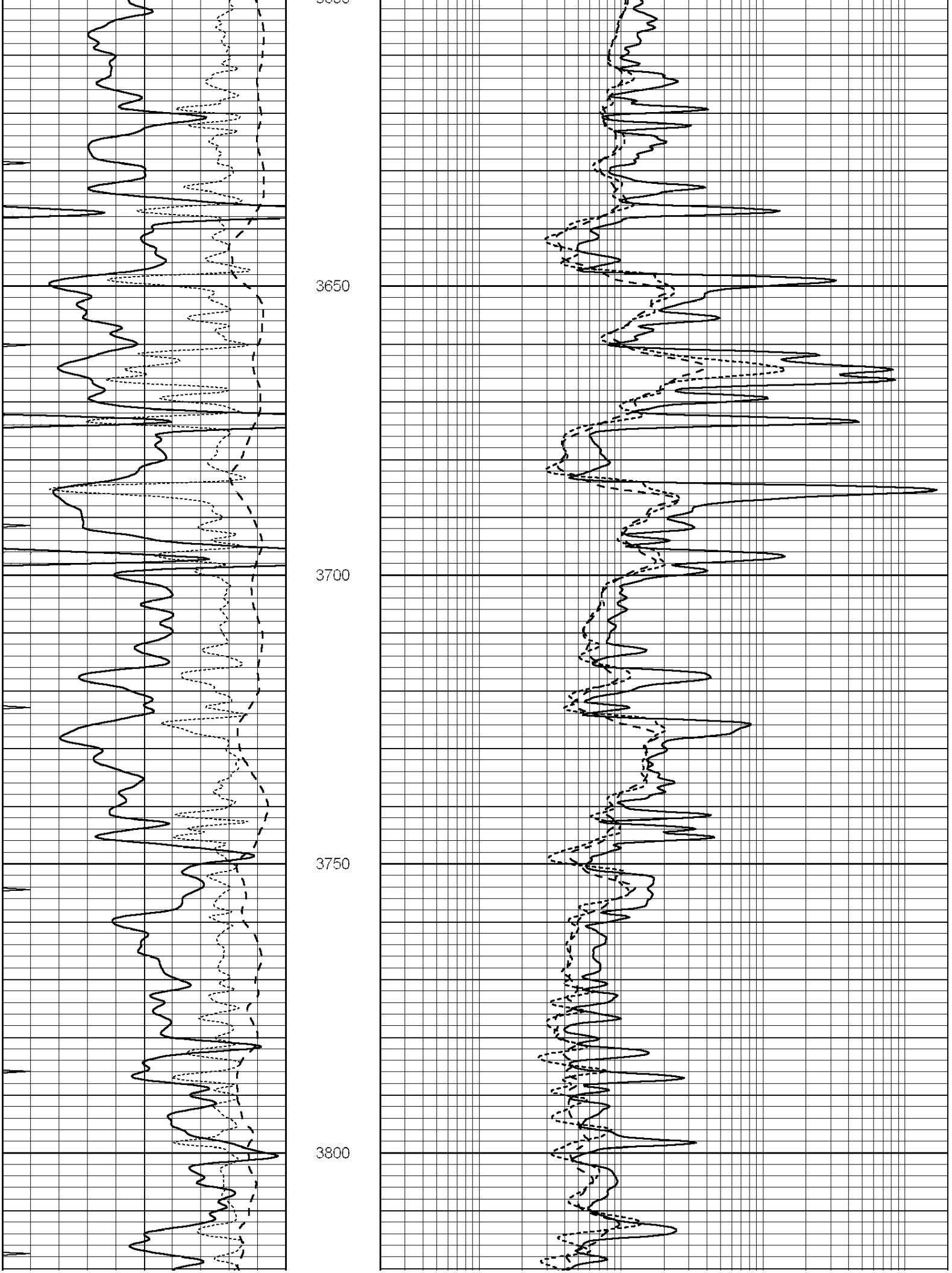
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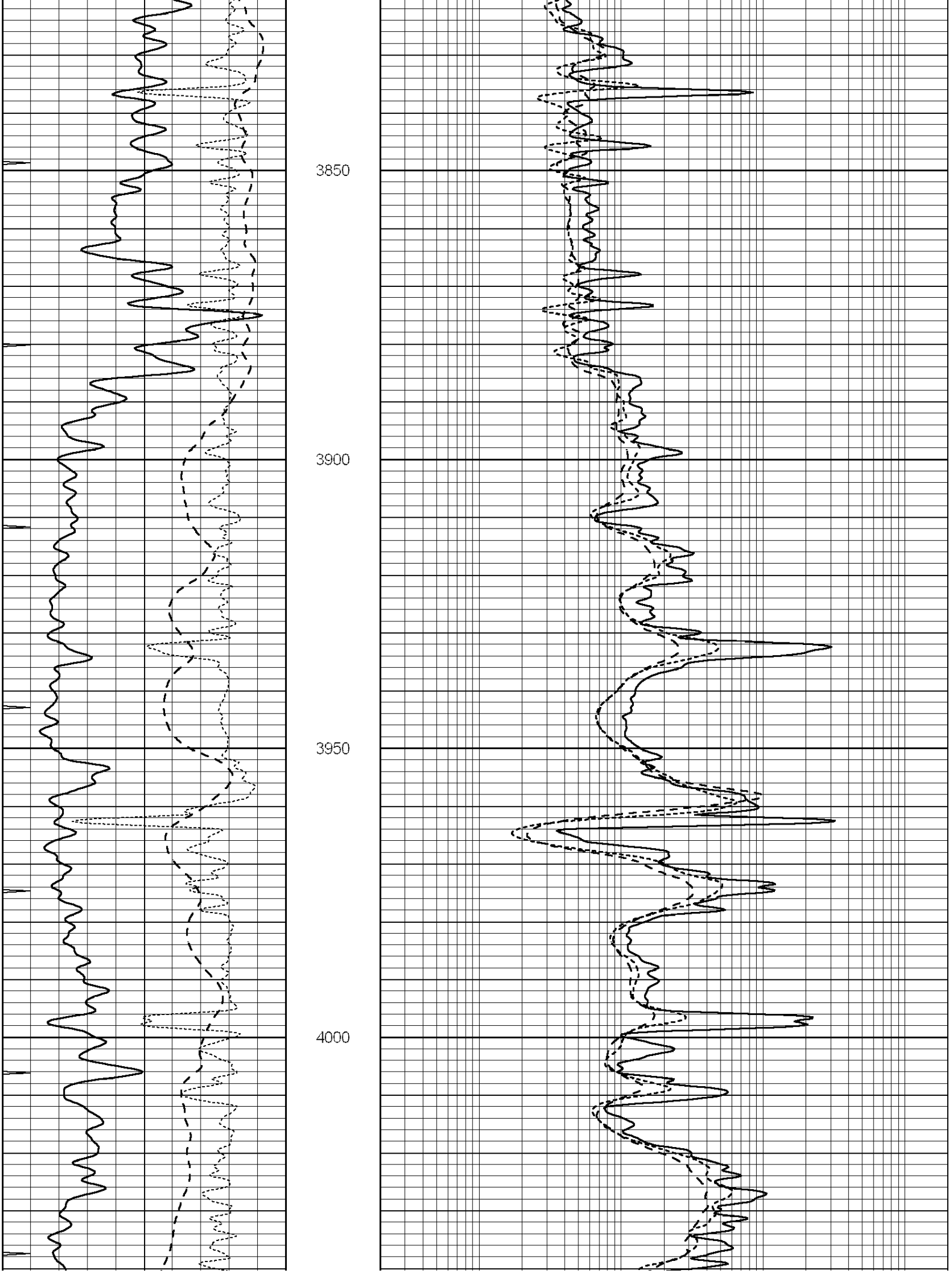
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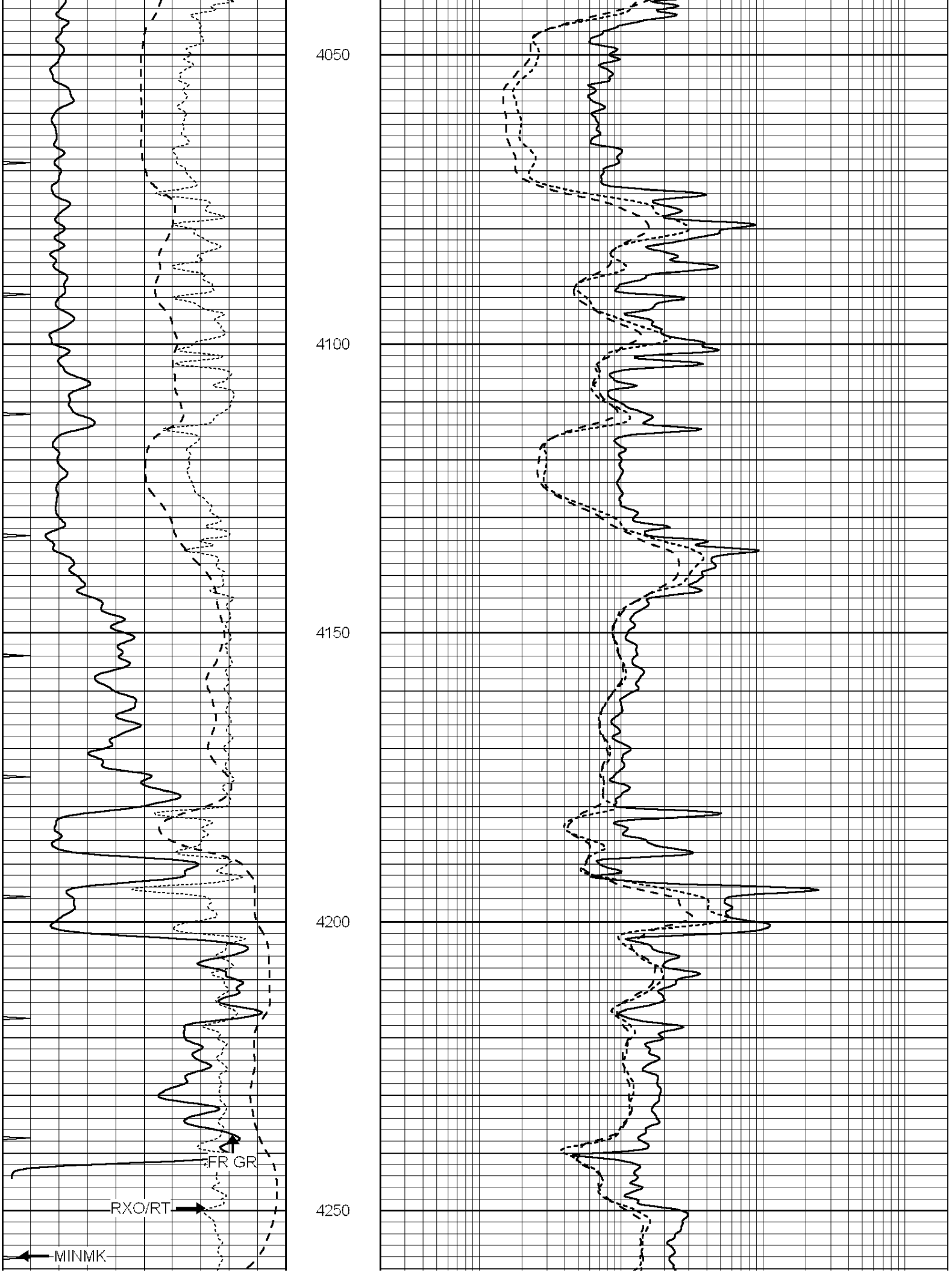
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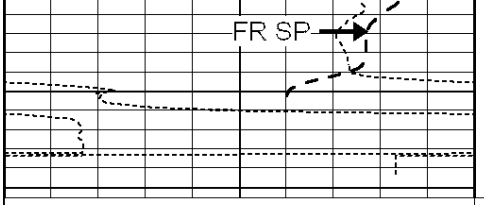
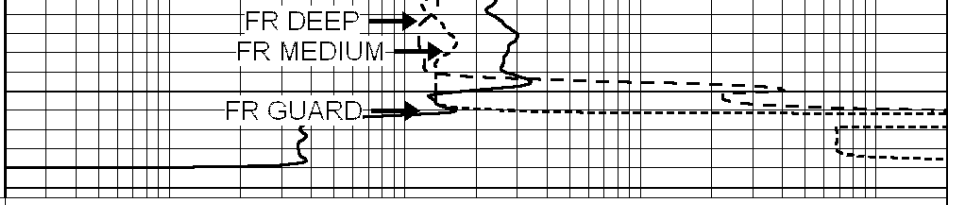
4100
4150
4200
4250
FR GR
RXO/RT
MINMK



LTD 4274



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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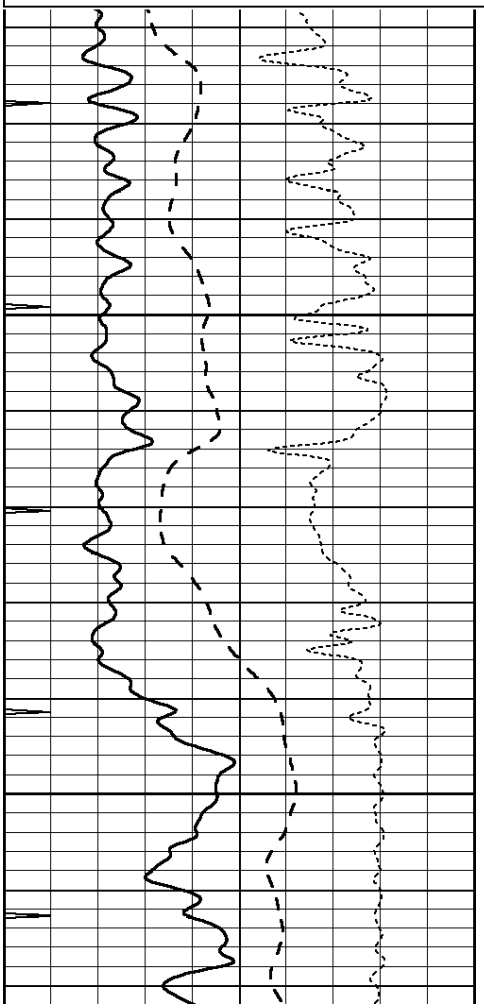
REPEAT SECTION

Database File: 005989ddn.db
Dataset Pathname: pass2.5
Presentation Format: dil
Dataset Creation: Wed Oct 06 09:38:04 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

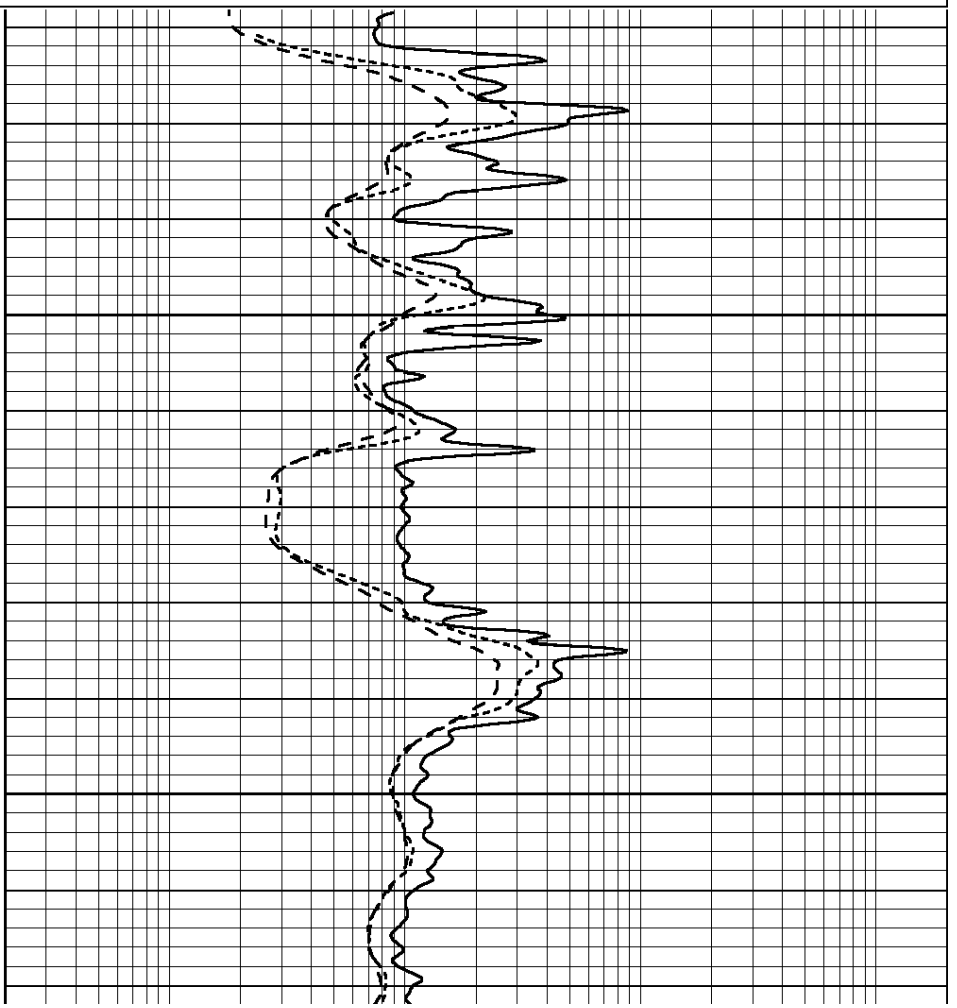
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

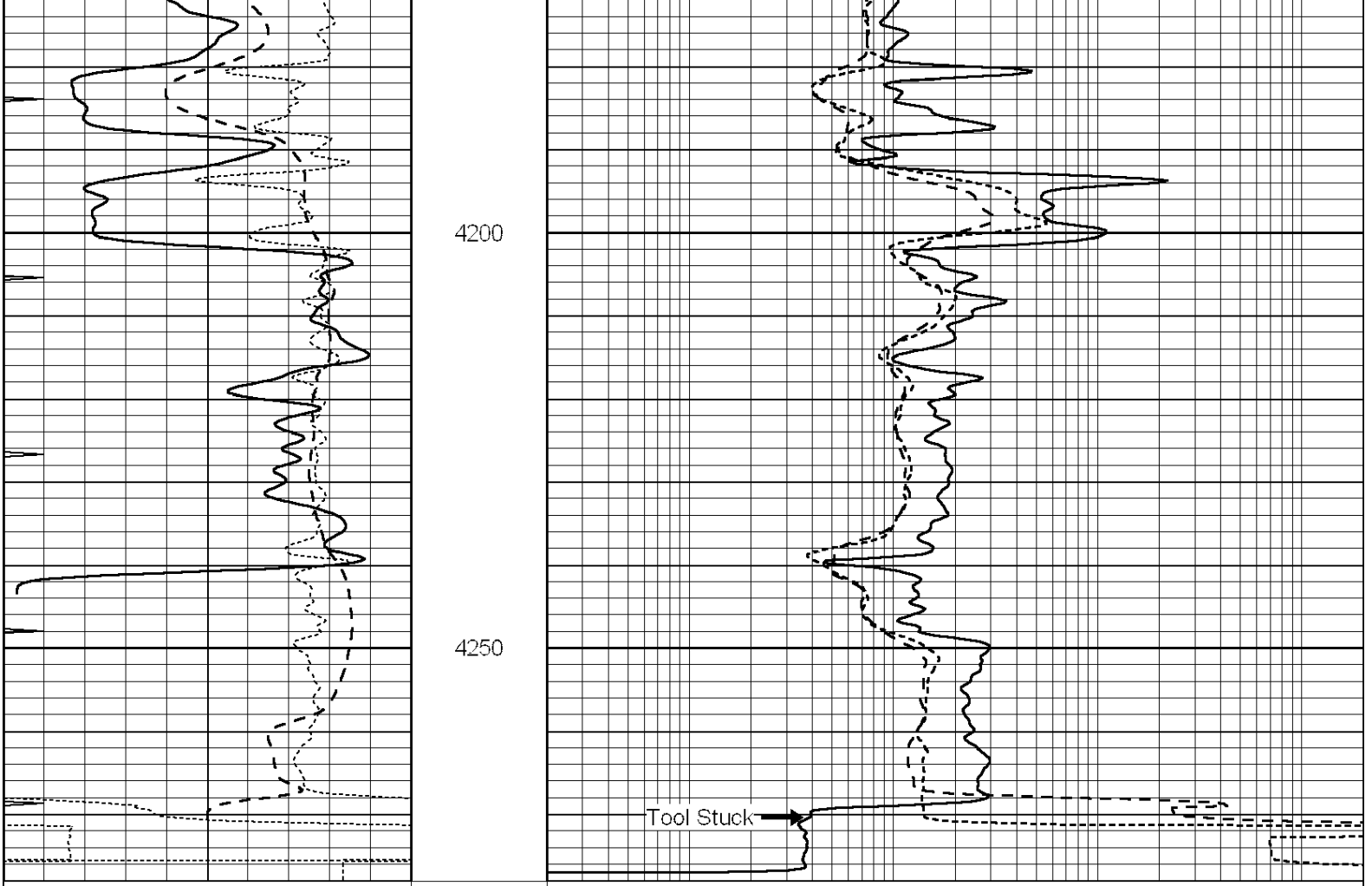
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



4100

4150





Calibration Report

Database File: 005989ddn.db
Dataset Pathname: pass3.7
Dataset Creation: Wed Oct 06 09:46:05 2010

Dual Induction Calibration Report

Serial-Model: DIL6-GEAR
Performed: Wed Oct 06 07:31:54 2010

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.001	0.644	V	0.000	400.000	mmho/m	660.000	-2.000
Medium	0.020	0.738	V	0.000	462.500	mmho/m	740.000	-22.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	V	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	V	0.000	1.000	mmho/m	1.000	0.000

Litho Density Calibration Report

Serial: 004N Model: PRB
Performed Tue Sep 08 13:49:55 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1535.8	11161.3	3721.6	12498.8	cps
Window 2	1402.6	9435.7	3219.7	10417.7	cps
Window 3	1077.6	4422.0	1779.2	4753.4	cps
Window 4	337.3	342.8	337.4	343.7	cps
Long Space	0.0	8033.1	1817.0	9015.1	cps
Short Space	1.2	1671.8	1138.1	1813.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 45.5	Rib Slope	: 1.017	Density/Spine Ratio	: 0.573
Spine Angle	: 75.5	Spine Slope	: 3.865	Spine Intercept	: -19.7

Caliper

	Readings	Reference
Low Ref	1.2	7.0
High Ref	3.2	14.0
	Gain: 3.5	Offset: 2.7

Compensated Neutron Calibration Report

Serial Number: NEU_4I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	996.00	cps	1000.00	cps	1.0000
Long Space	977.00	cps	1000.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR3
Tool Model: OPEN
Performed: Wed Oct 06 07:31:44 2010

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps
Calibrator Reading: 186.0 cps

Sensitivity: 1.7000 GAPI/cps