NABORS
COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company RITCHIE EXPLORATION, INC.
Well MENDENHALL 7C #1
Field WILDCAT
County GOVE State KANSAS

Location: API # : 15-063-22193-00-00
1310' FSL & 1585' FWL
W2 - E2 - SW
SEC 7 TWP 13S RGE 28W

Other Services
CDL/CNL

Elevation
K.B. 2717
D.F. 2715
G.L. 2712

Permanent Datum GROUND LEVEL Elevation 2712
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING

Company RITCHIE EXPLORATION, INC.
Well MENDENHALL 7C #1
Field WILDCAT
County GOVE
State KANSAS

Date	4-6-14		
Run Number	ONE		
Depth Driller	4612		
Depth Logger	4614		
Bottom Logged Interval	4612		
Top Log Interval	00		
Casing Driller	8 5/8 @ 218'		
Casing Logger	217'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,200	
Density / Viscosity	9.4 / 54		
pH / Fluid Loss	10.0 / 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10 @ 85F		
Rmf @ Meas. Temp	0.83 @ 85F		
Rmc @ Meas. Temp	1.32 @ 85F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.77 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	122F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	MAX LOVELY		

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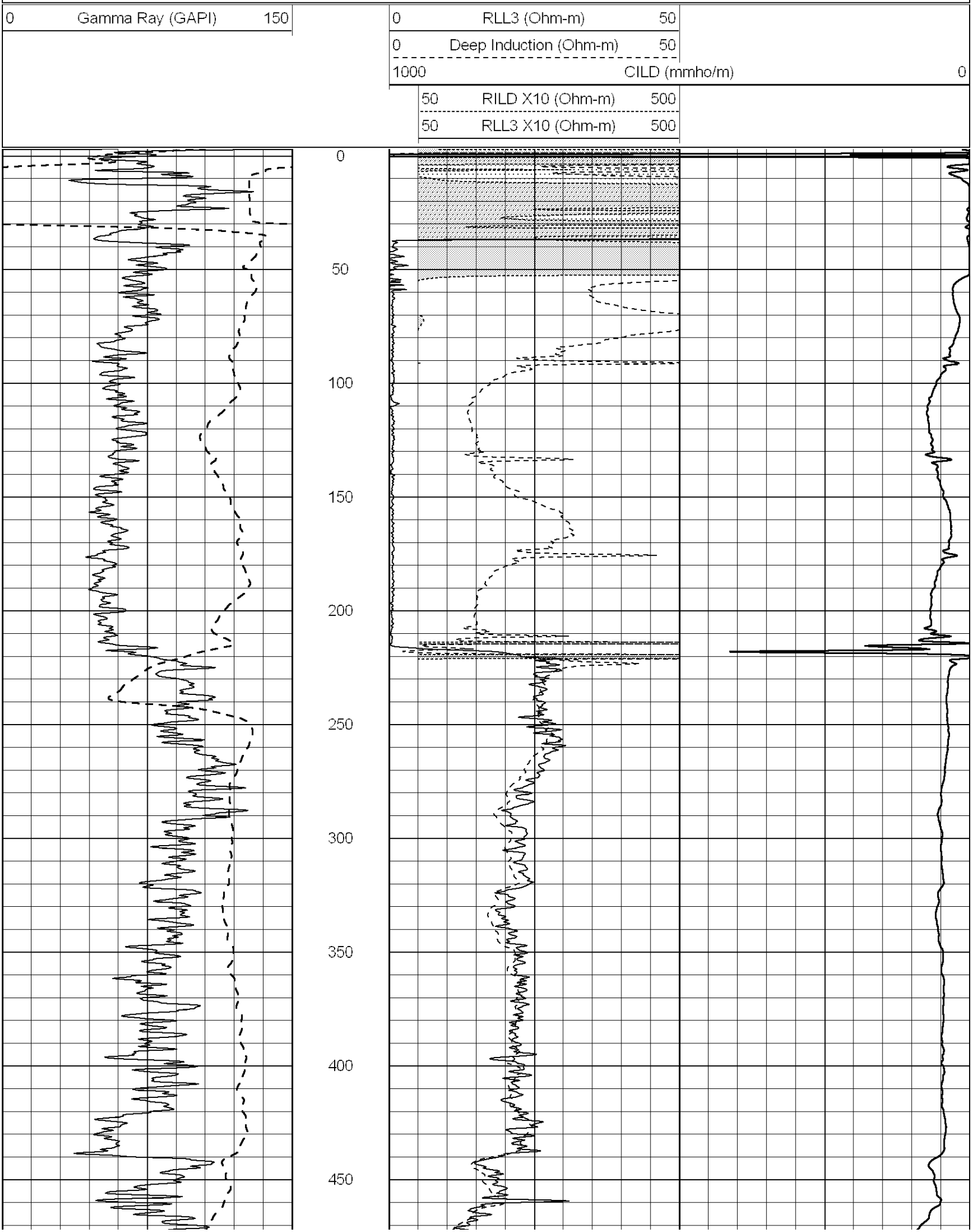
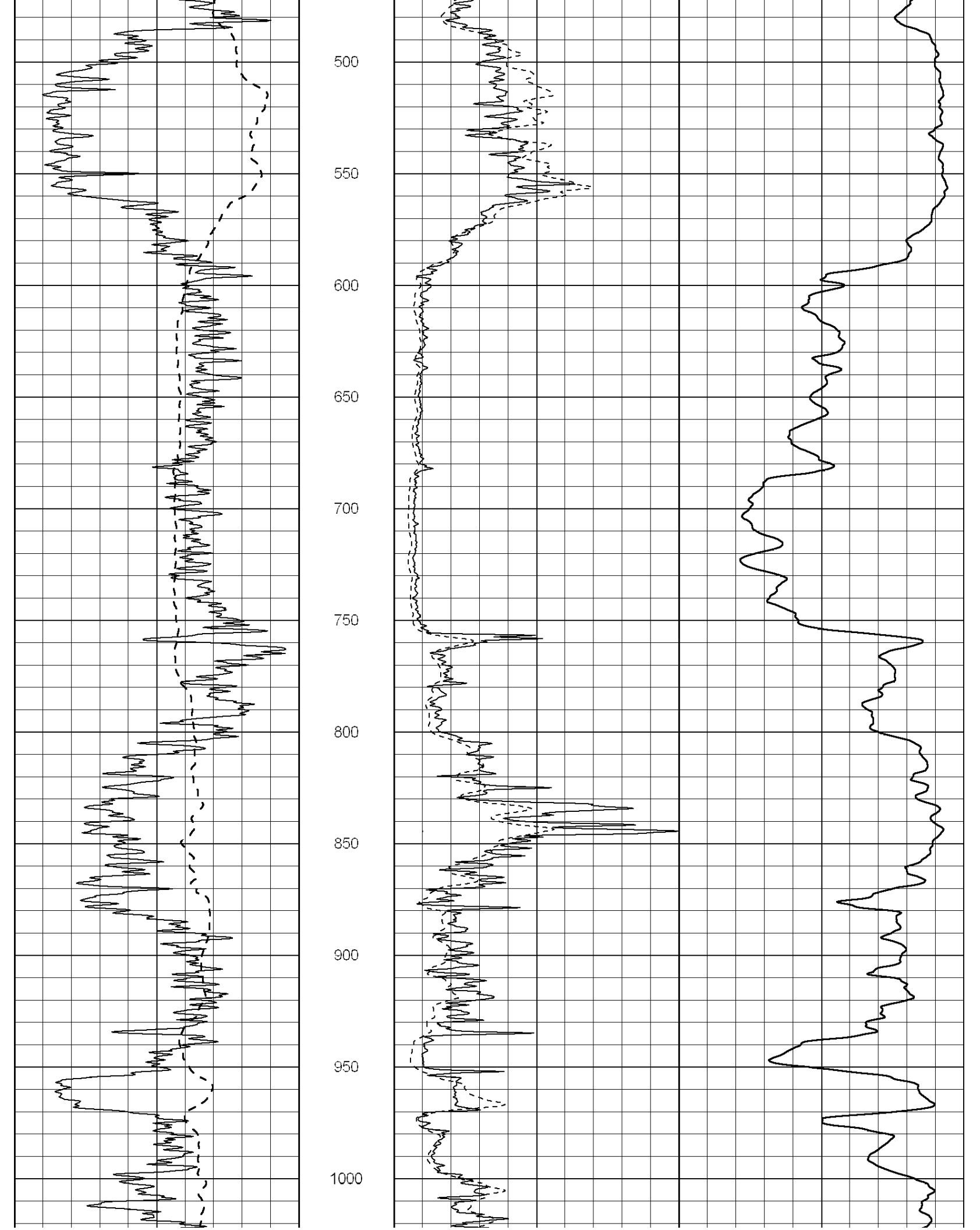
Comments

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: GOVE, KS. 1 MILES SOUTH TO RD. R - EAST 1/2 - SOUTH 3/4 - EAST INTO

Database File: 24132ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Sun Apr 06 12:19:50 2014 by Calc Open-Cased 090629

Charted by: Depth in Feet scaled 1:600

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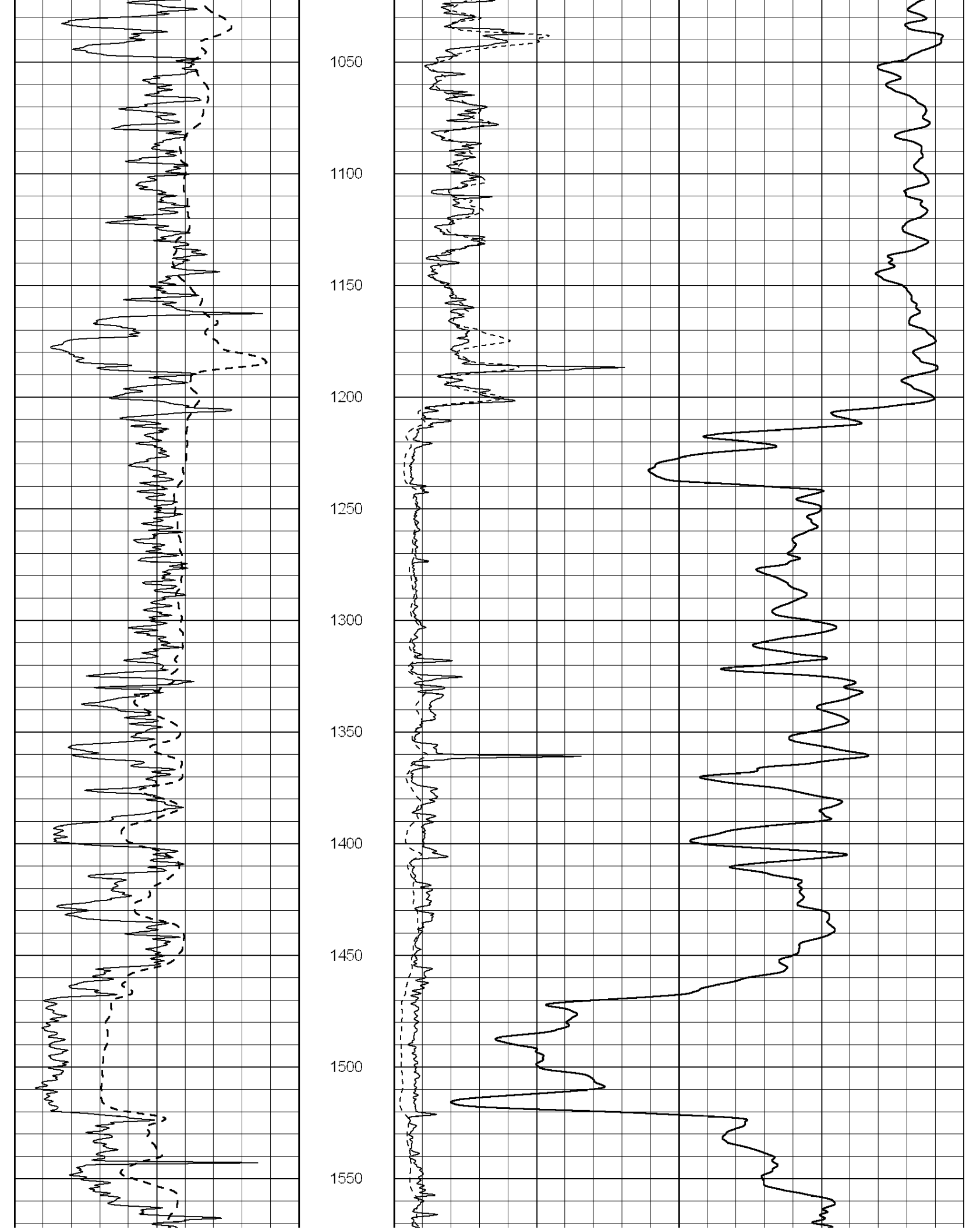
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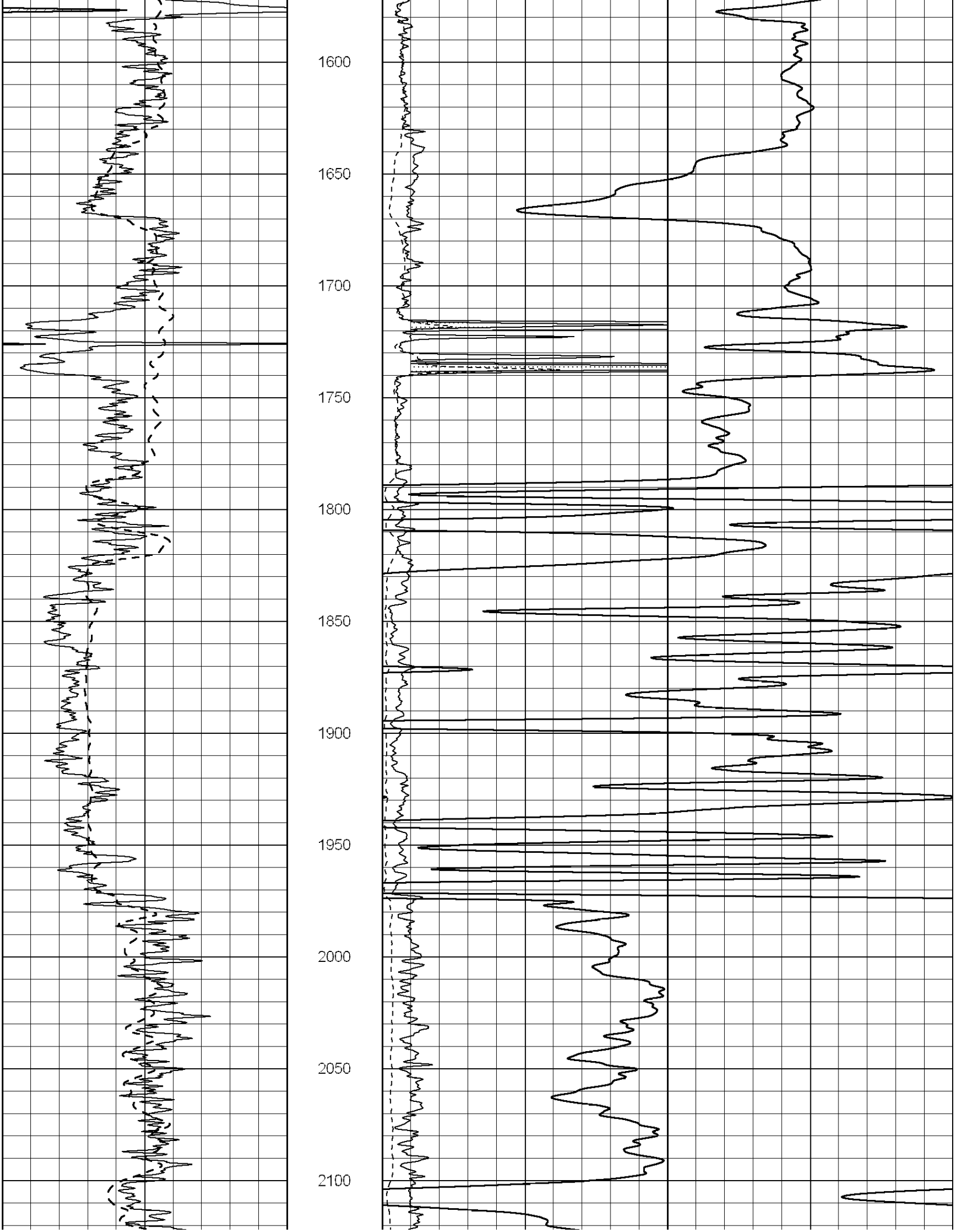
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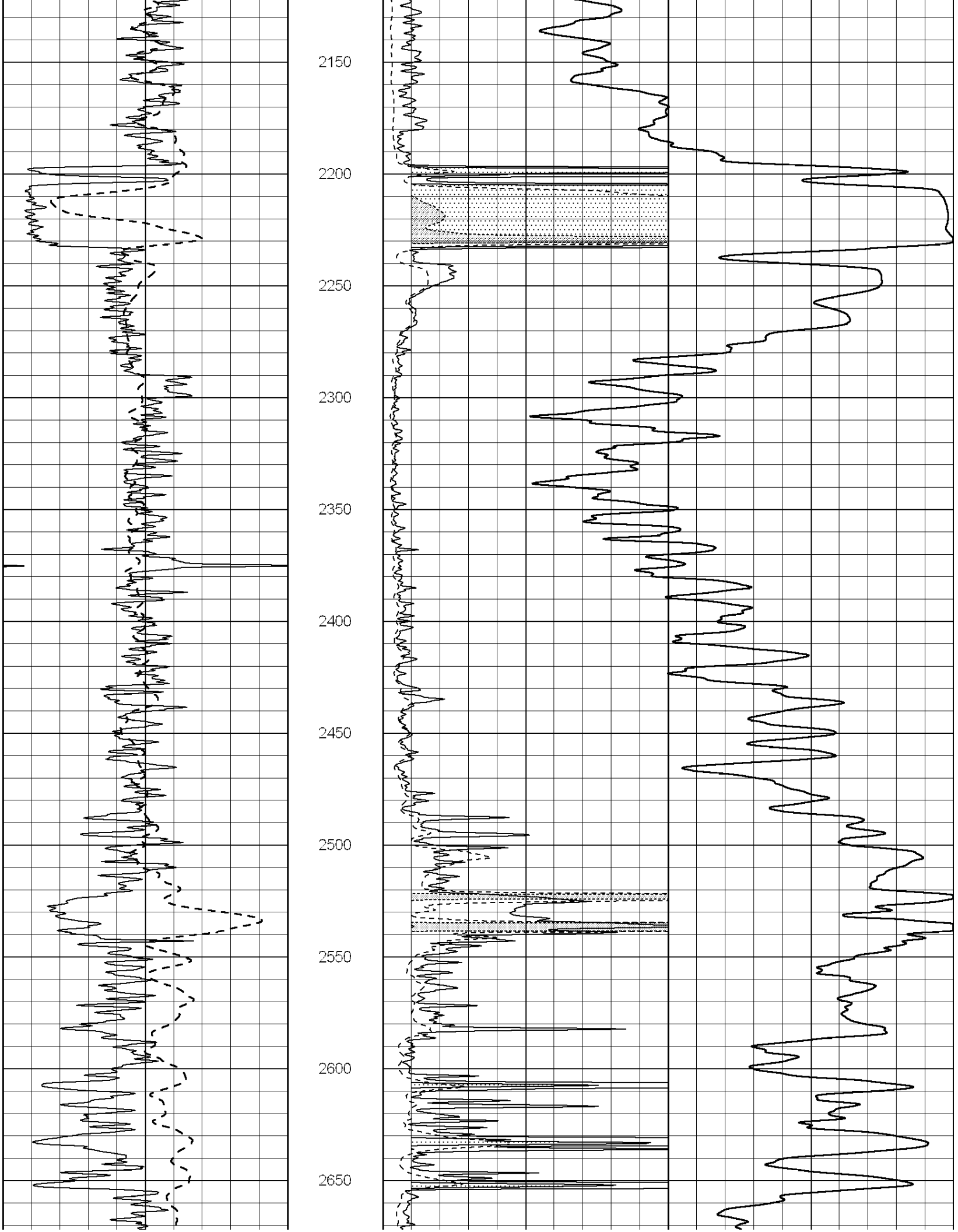
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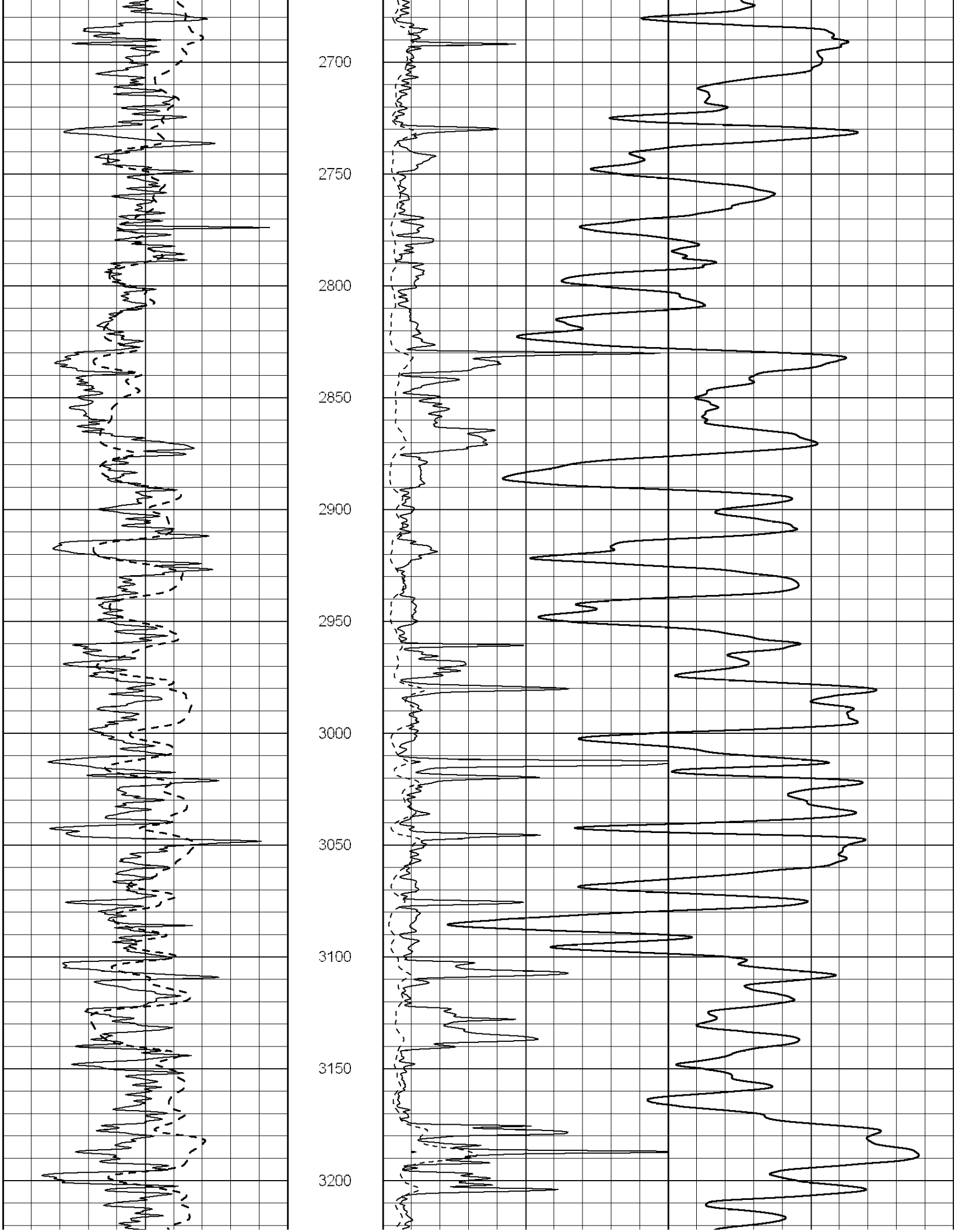
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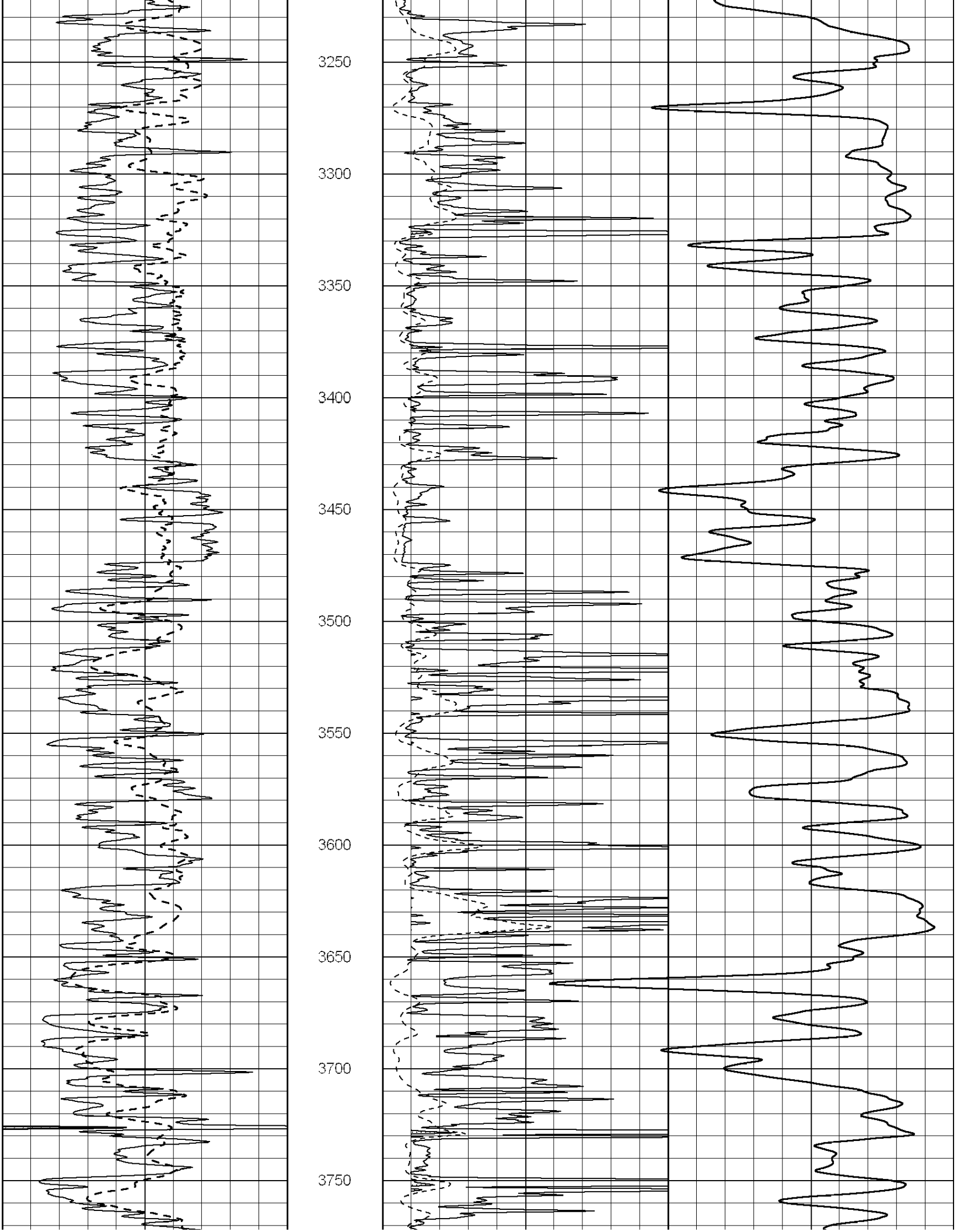
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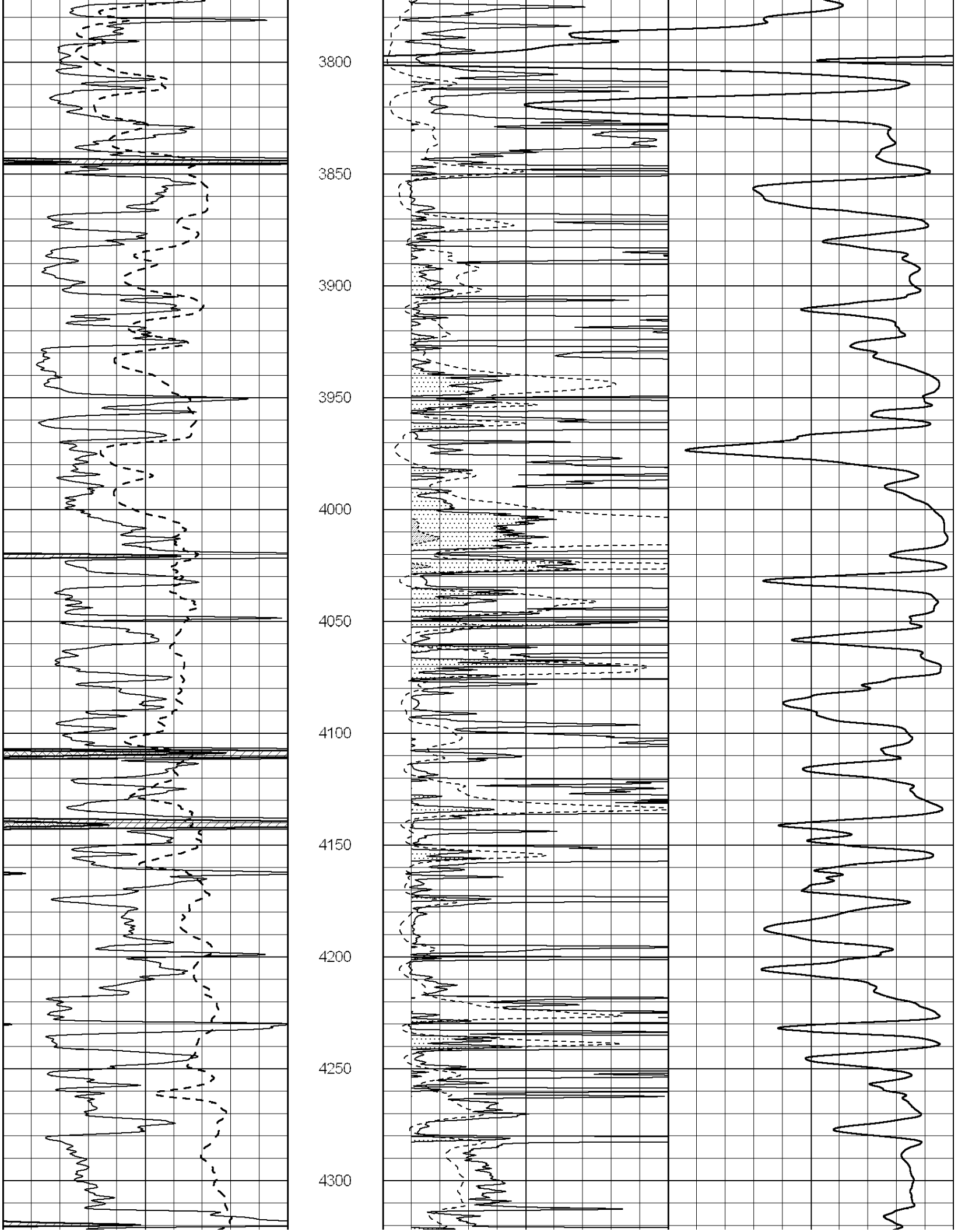
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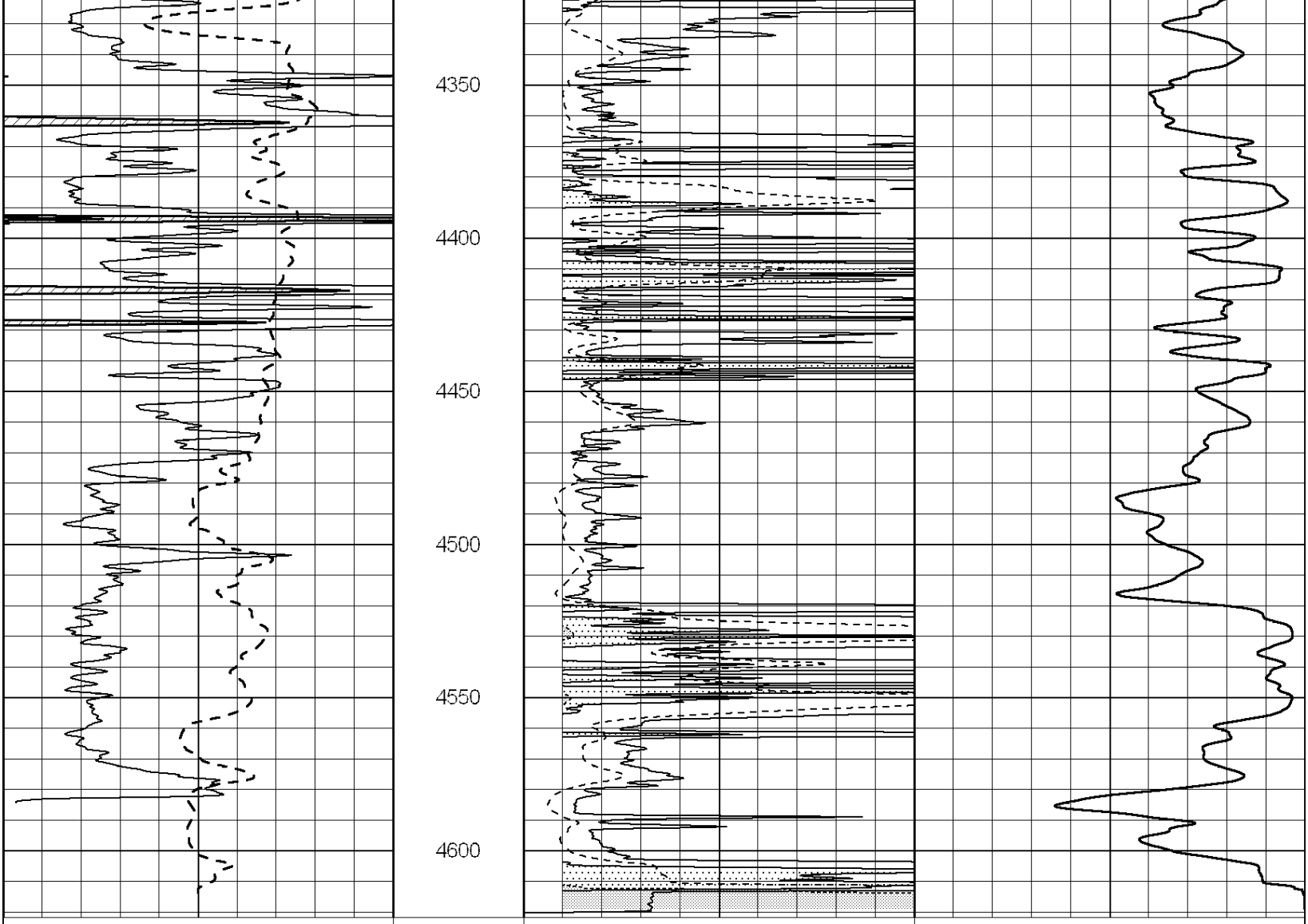
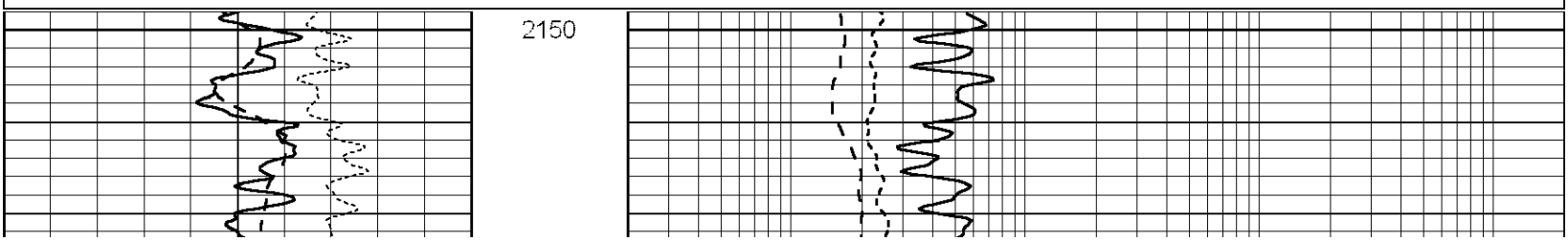
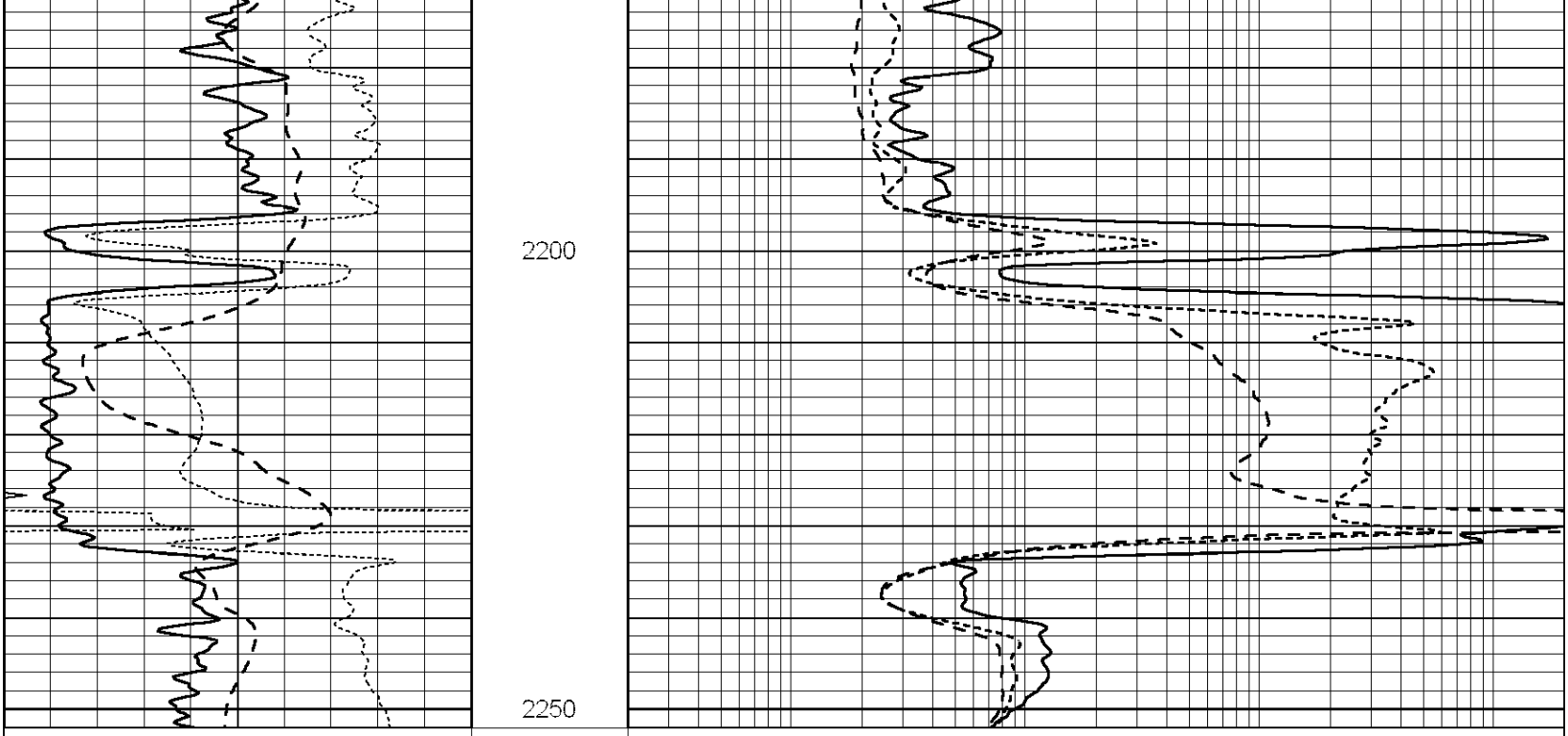


Database File: 24132ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil
Dataset Creation: Sun Apr 06 12:19:50 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





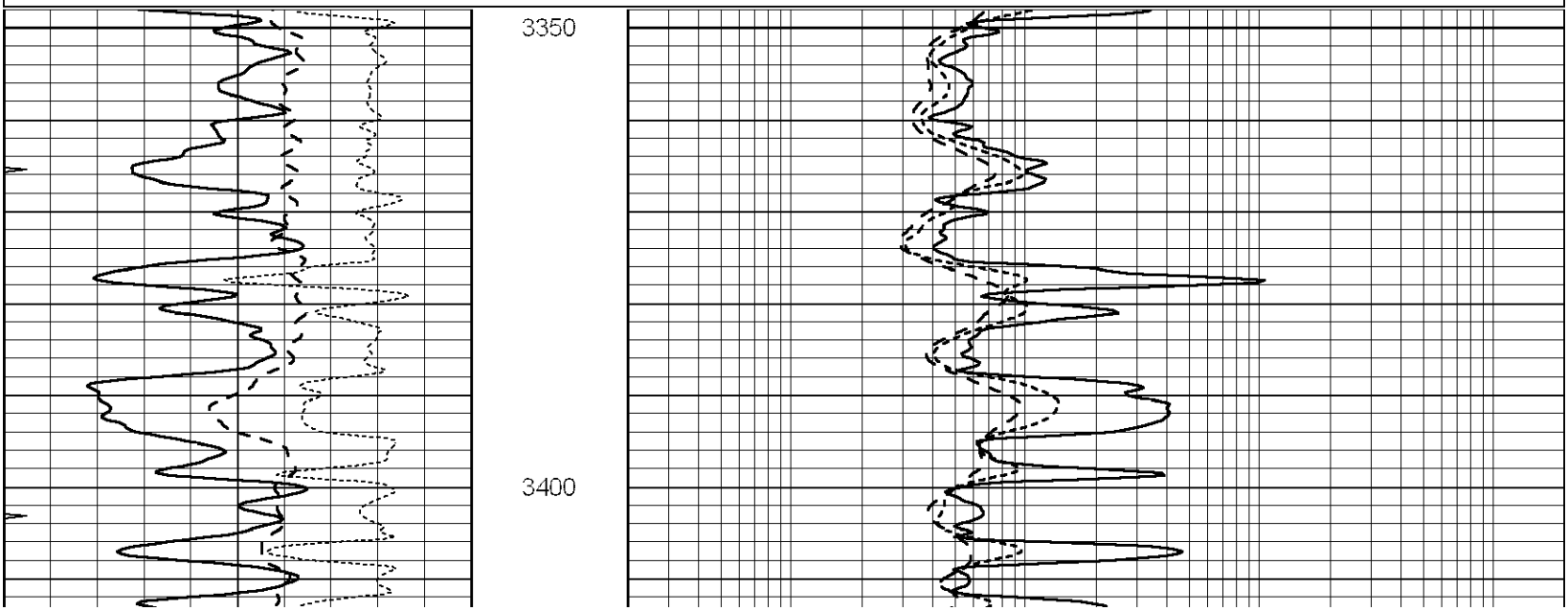
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

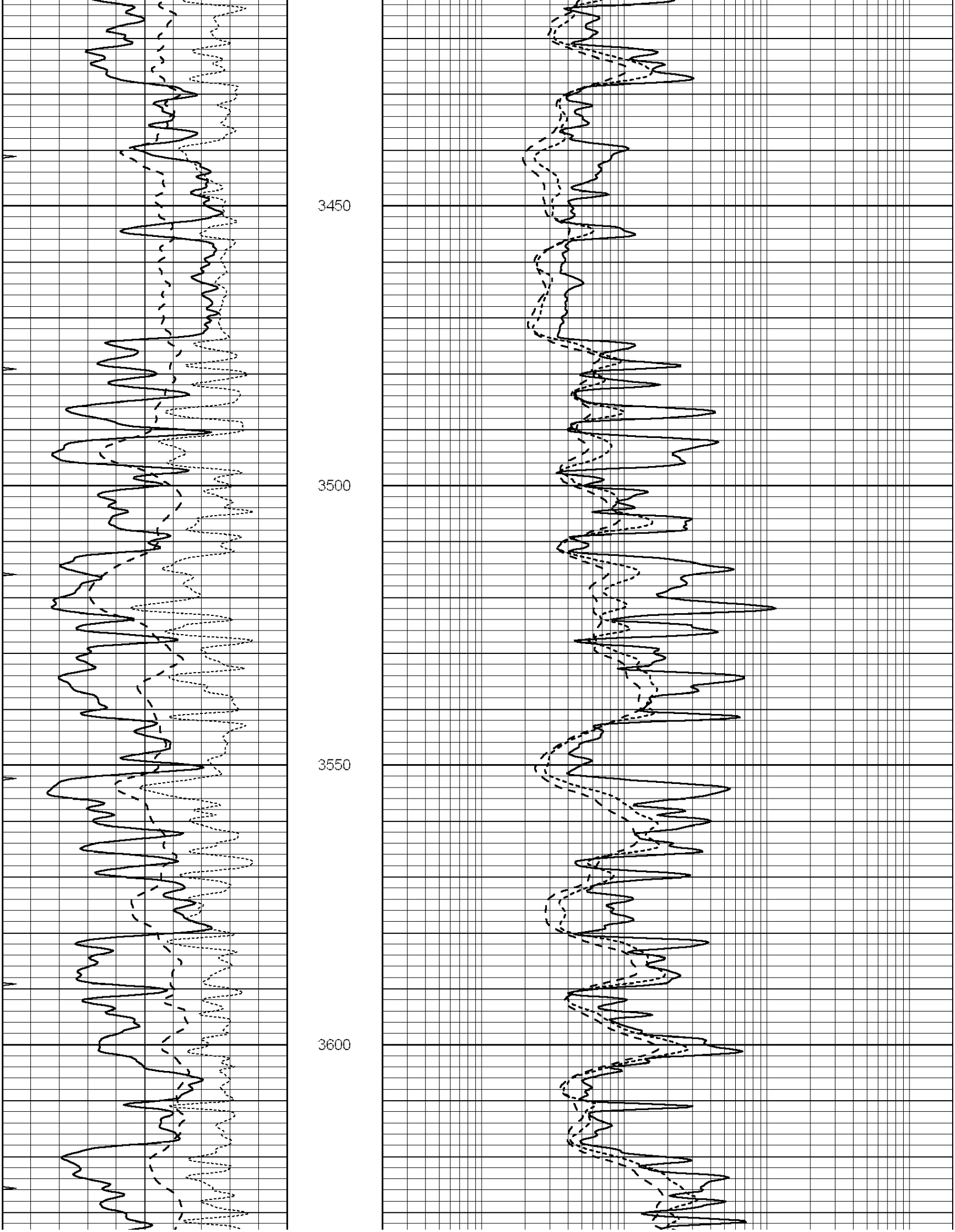
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Database File:	24132ddn.db
Dataset Pathname:	pass3.2
Presentation Format:	_dil
Dataset Creation:	Sun Apr 06 11:49:18 2014 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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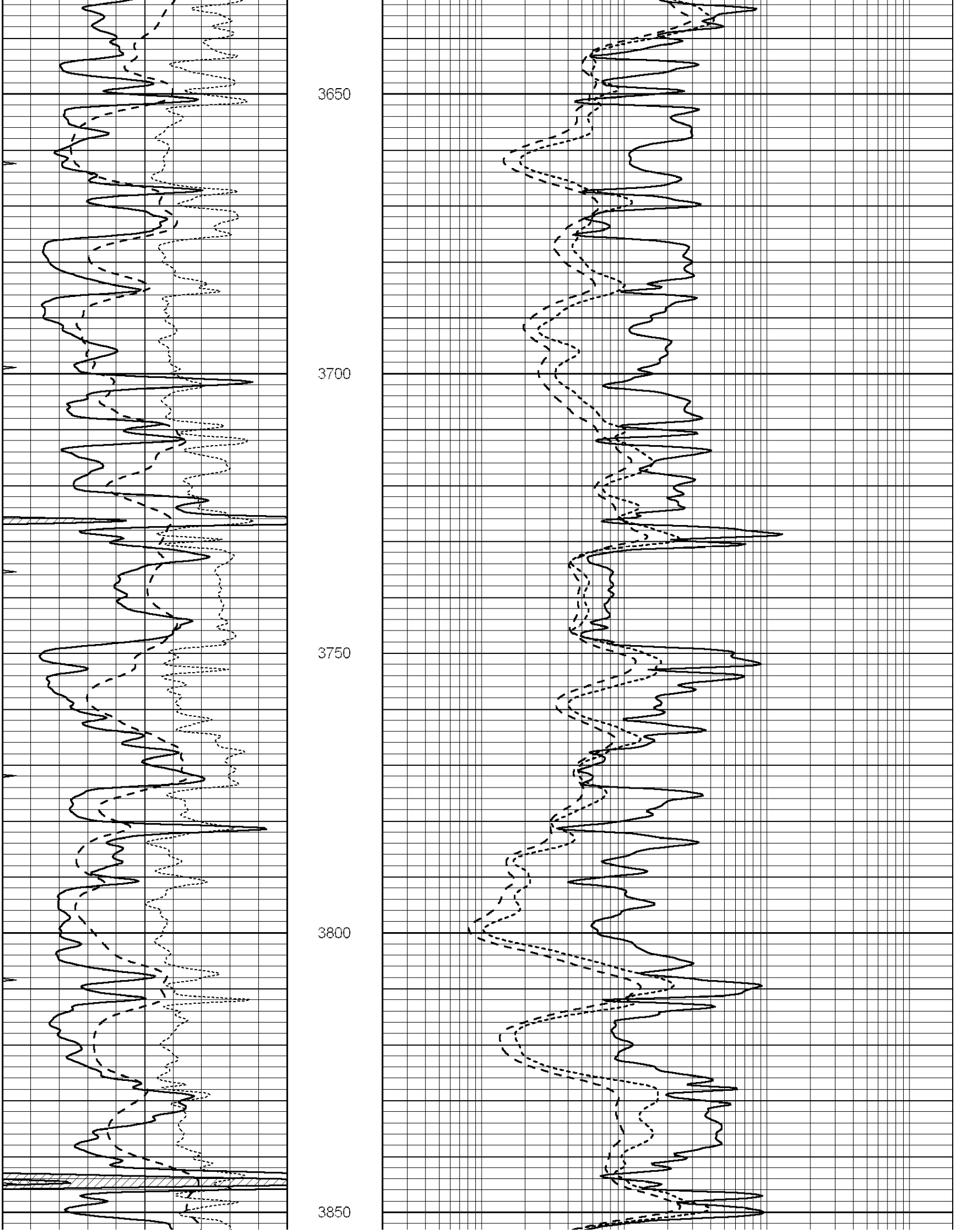
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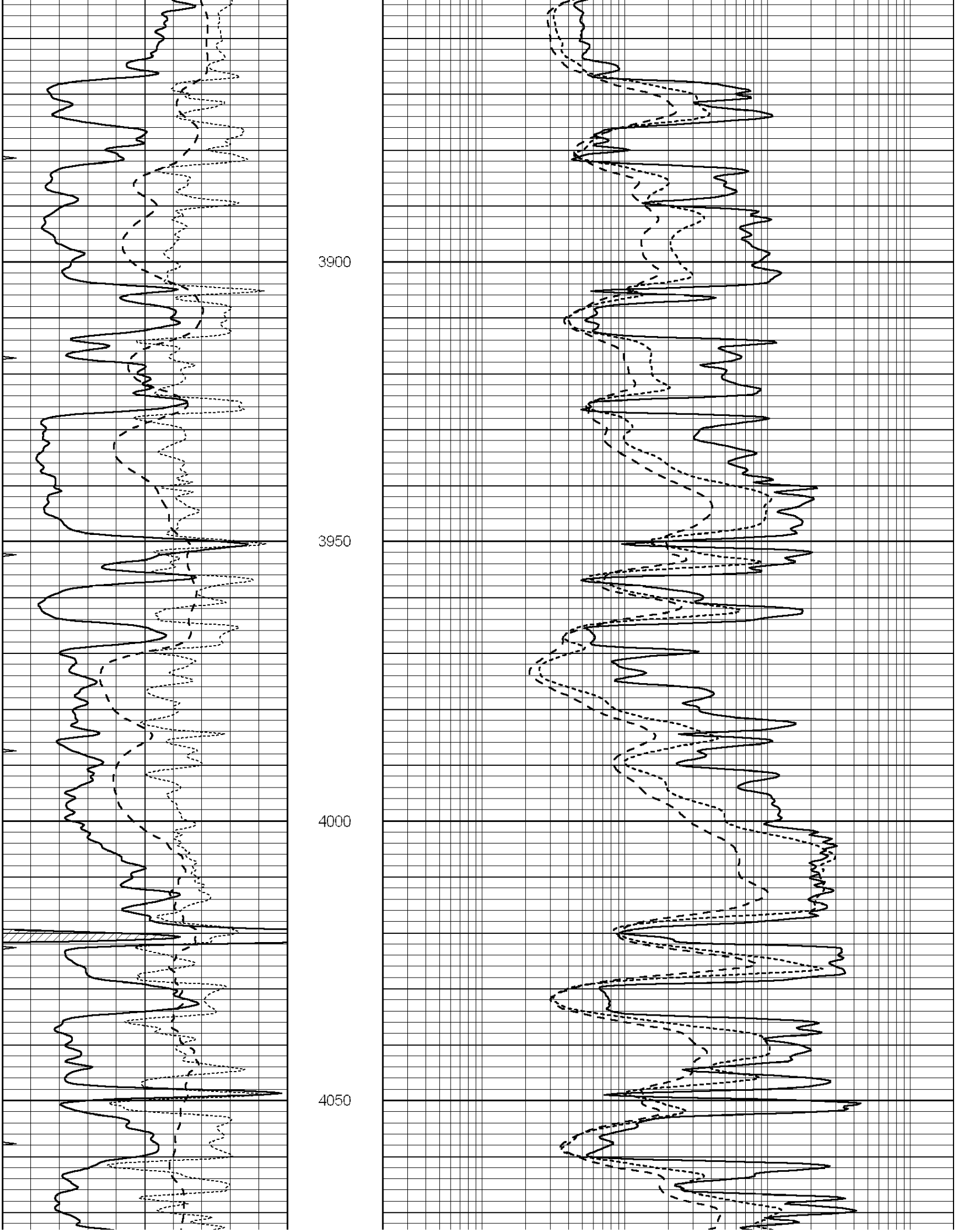
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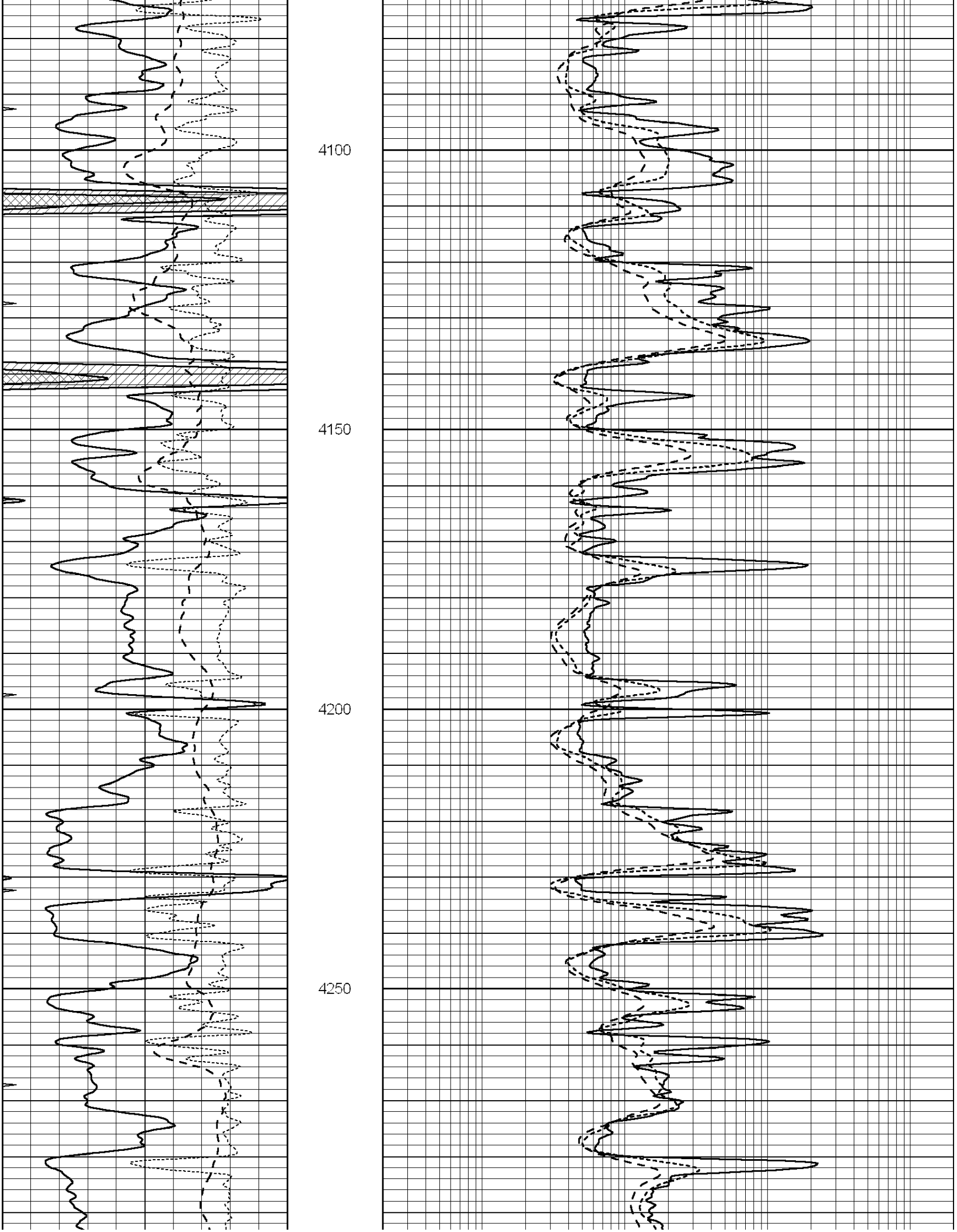
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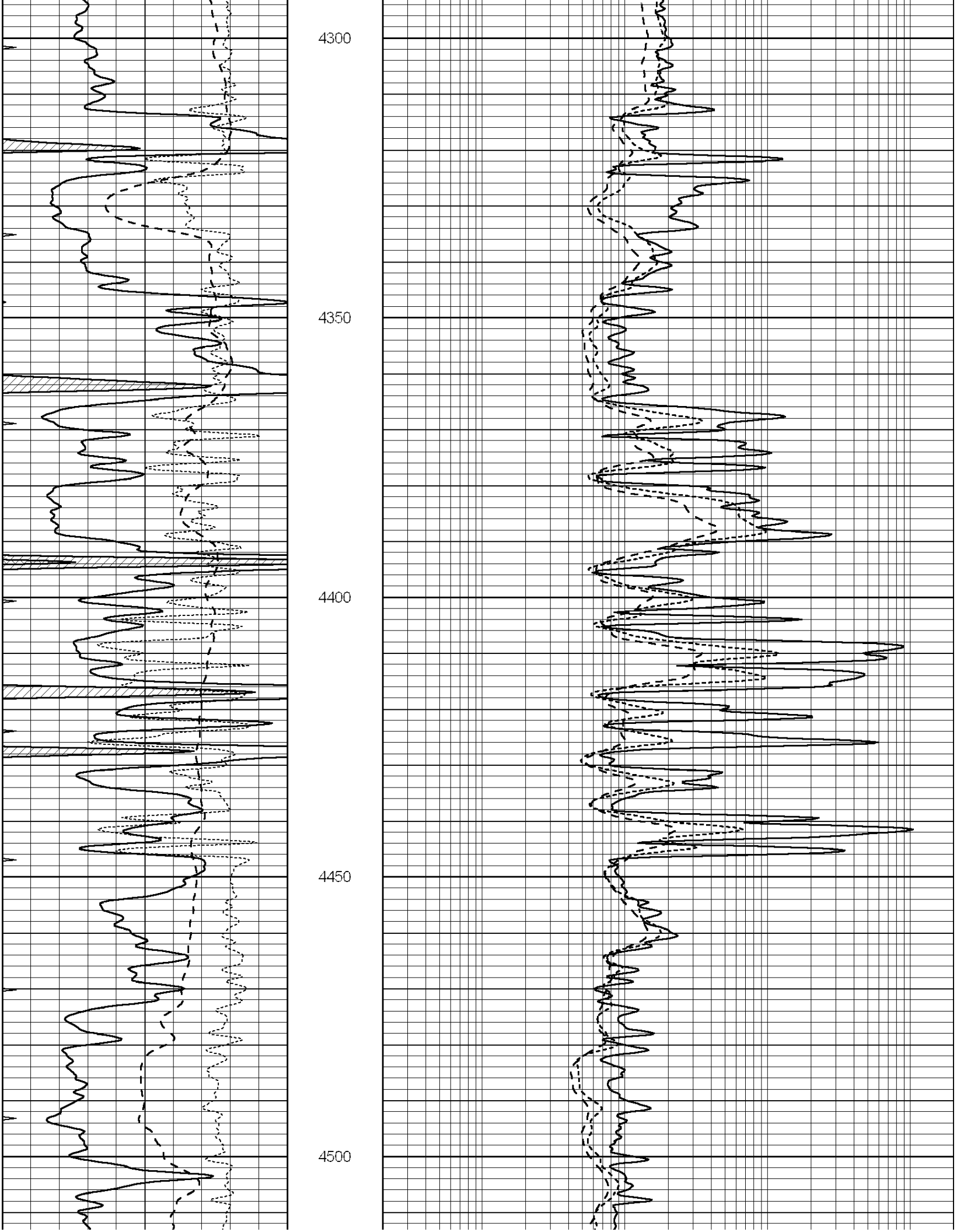
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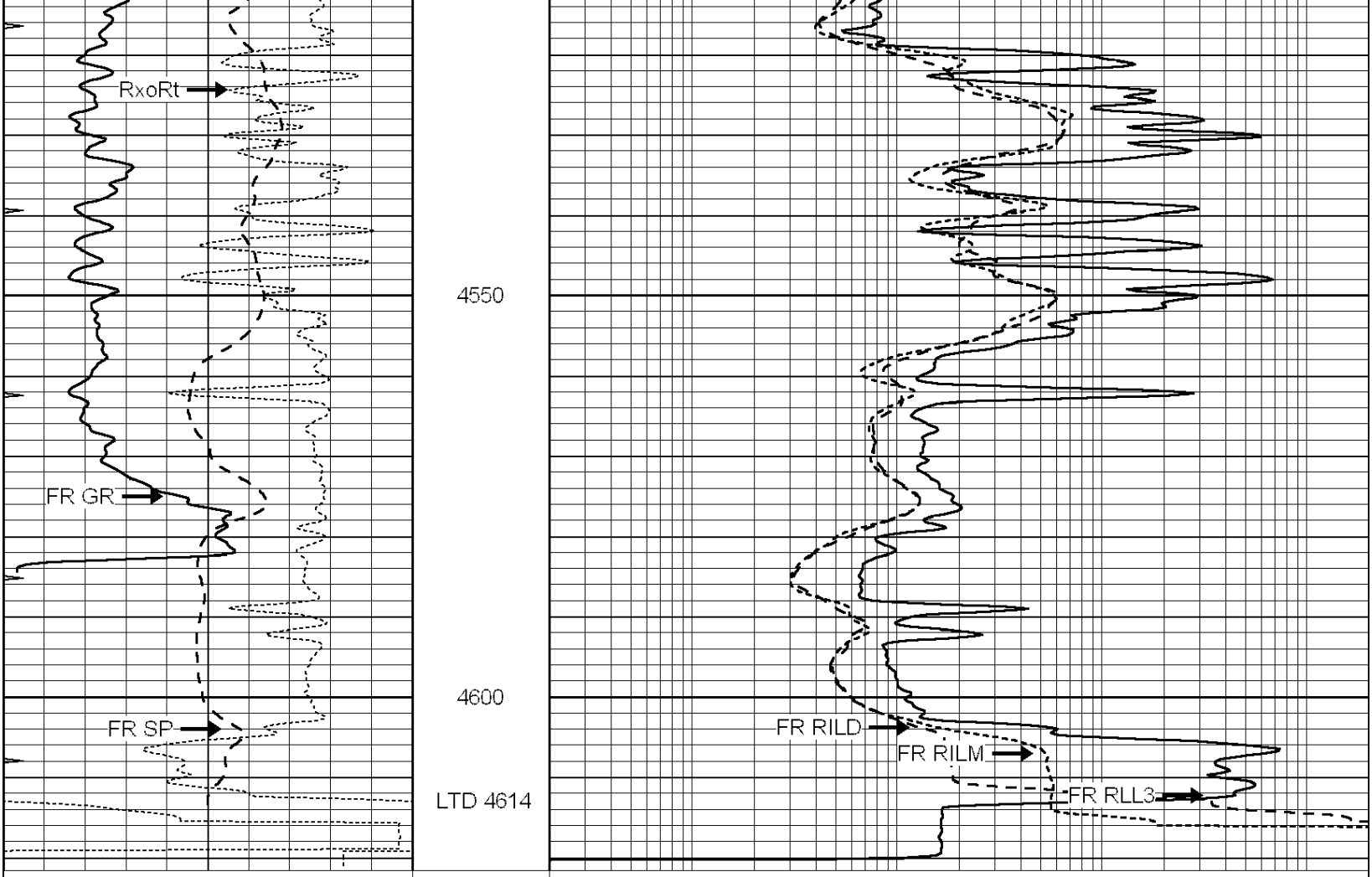

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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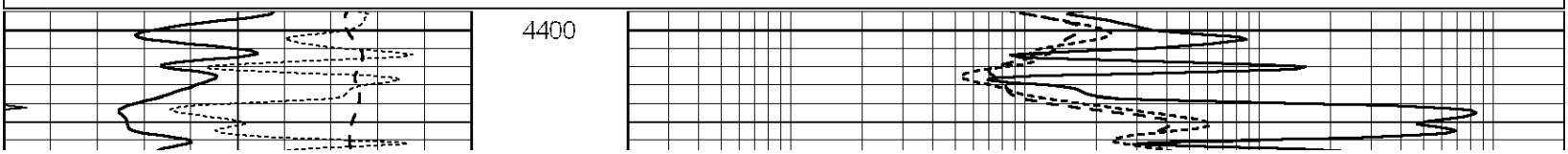
COMPLETION & PRODUCTION SERVICES CO.

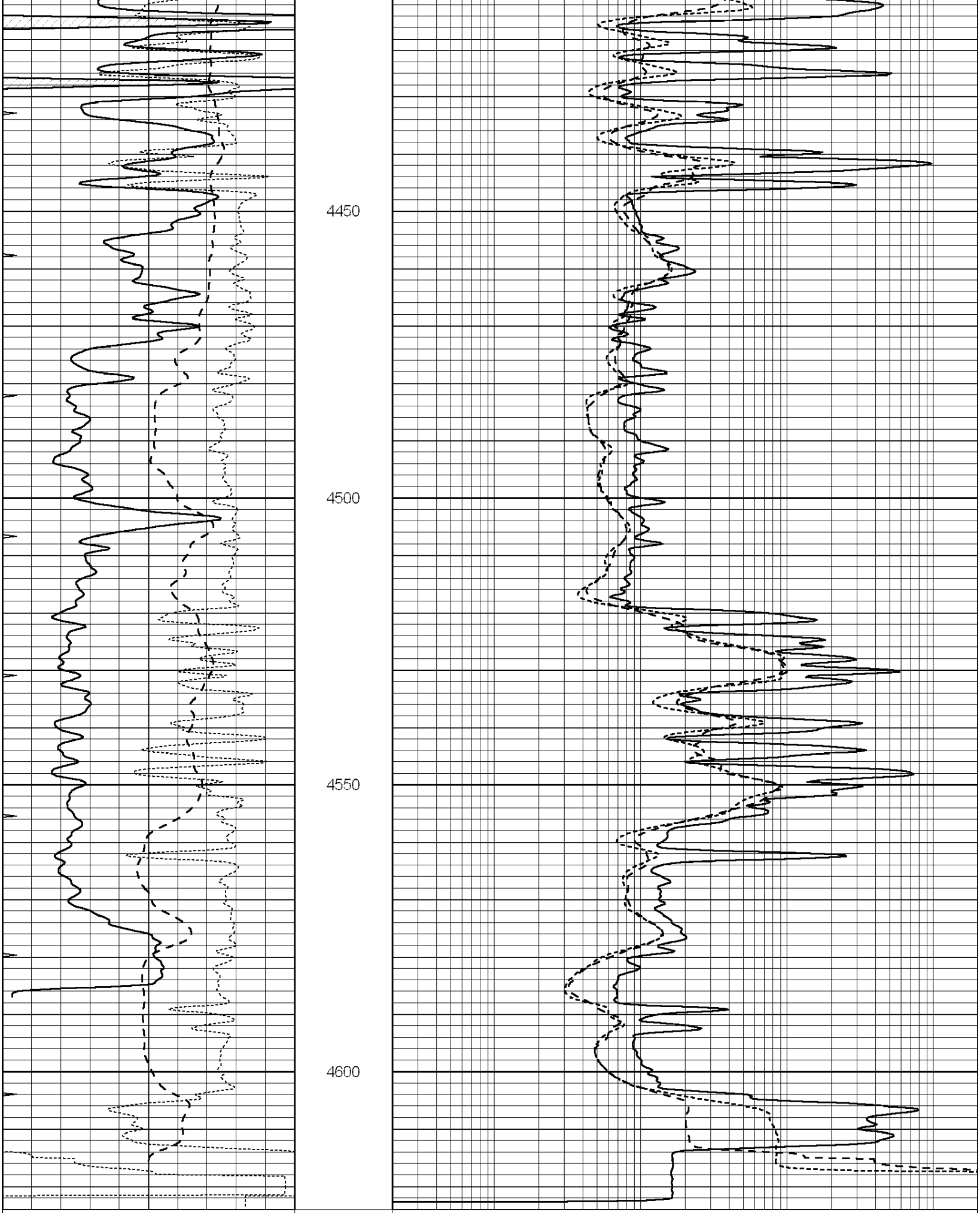
REPEAT SECTION

Database File: 24132ddn.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Sun Apr 06 11:05:34 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

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4500
4550
4600
0
GAMMA RAY (GAPI)
150
-100
SP (mV)
100
0.2
RLL3 (Ohm-m)
2000
0.2
DEEP INDUCTION (Ohm-m)
2000

-250	RxoRt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 24132ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Sun Apr 06 12:19:50 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Tue Apr 01 19:32:51 2014

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	-2.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Tue Apr 01 19:31:33 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1211.27	625.92	cps
Aluminum	2.590	g/cc	267.11	413.26	cps

Spine Angle = 74.64 Density/Spine Ratio = 0.561

	Size		Reading	
Small Ring	8.20	in	5.18	V
Large Ring	14.00	in	8.18	V

Compensated Neutron Calibration Report

Serial Number: 080620
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:	7	
Tool Model:	Probe1	
Performed:	Tue Apr 01 19:11:08 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4500	GAPI/cps