NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	MULL DRILLING COMPANY, INC.
Well	#1-15 SARGENT
Field	WILDCAT
County	NESS
State	KANSAS

Company MULL DRILLING COMPANY, INC.

Well #1-15 SARGENT

Field WILDCAT

County NESS State KANSAS

Location: API # : 15-135-25524-0000

2235' FSL & 335' FWL

SEC 15 TWP 17S RGE 23W

Other Services: CDL/CNL/PE, MEL/SONIC

Permanent Datum	GROUND LEVEL	Elevation 2439	Elevation: K.B. 2444
Log Measured From	KELLY BUSHING 5' A.G.L.		D.F. 2442
Drilling Measured From	KELLY BUSHING		G.L. 2439

Date	1/17/13		
Run Number	ONE		
Depth Driller	4550		
Depth Logger	4552		
Bottom Logged Interval	4550		
Top Log Interval	00		
Casing Driller	8 5/8"@223'		
Casing Logger	223		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,600 PPM	
Density / Viscosity	9.0/50		
pH / Fluid Loss	10.5/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.750@80F		
Rmf @ Meas. Temp	.563@80F		
Rmc @ Meas. Temp	.900@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.496@121F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	4:45 A.M.		
Maximum Recorded Temperature	121F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEVIN KESSLER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395

DIRECTIONS

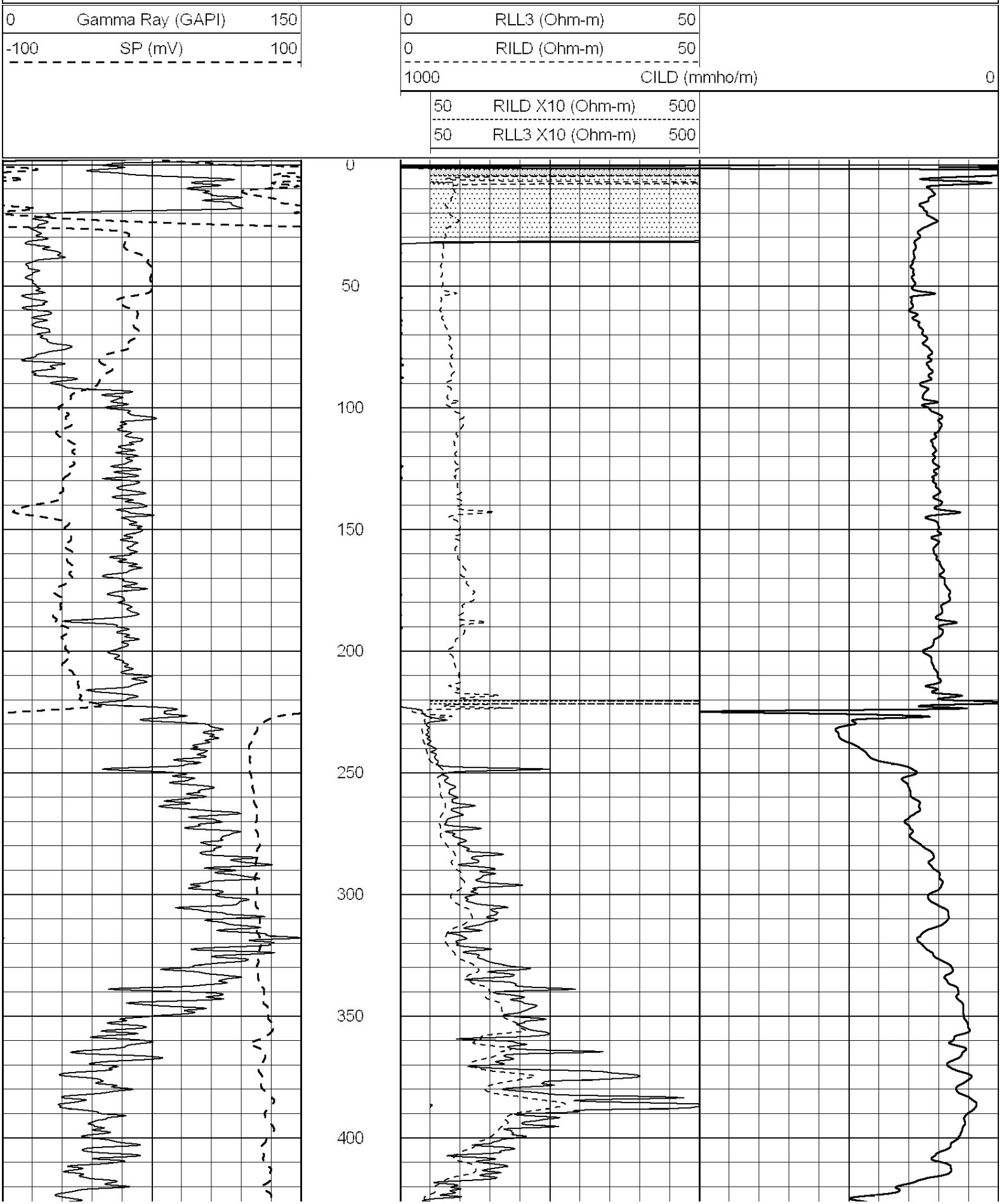
RANSOM, KS. (HWY 4 & 283) 5S. TO "RD. 210", 2E. TO CURVE, 1/2N., E. INTO

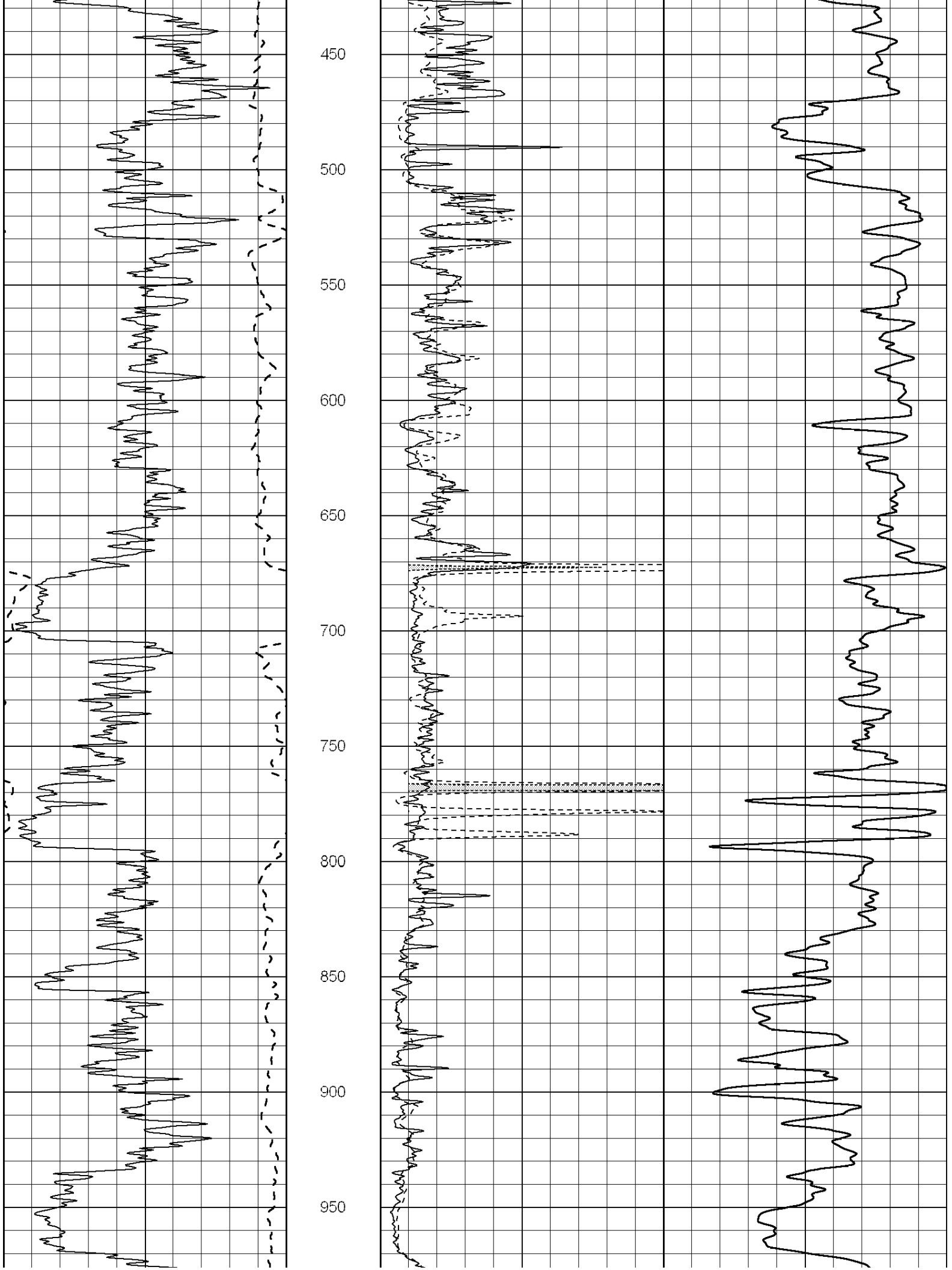
NABORS COMPLETION & PRODUCTION

MAIN SECTION

SERVICES CO.

Database File: 010047pe.db
Dataset Pathname: pass4.9
Presentation Format: _dil2
Dataset Creation: Thu Jan 17 08:02:09 2013
Charted by: Depth in Feet scaled 1:600

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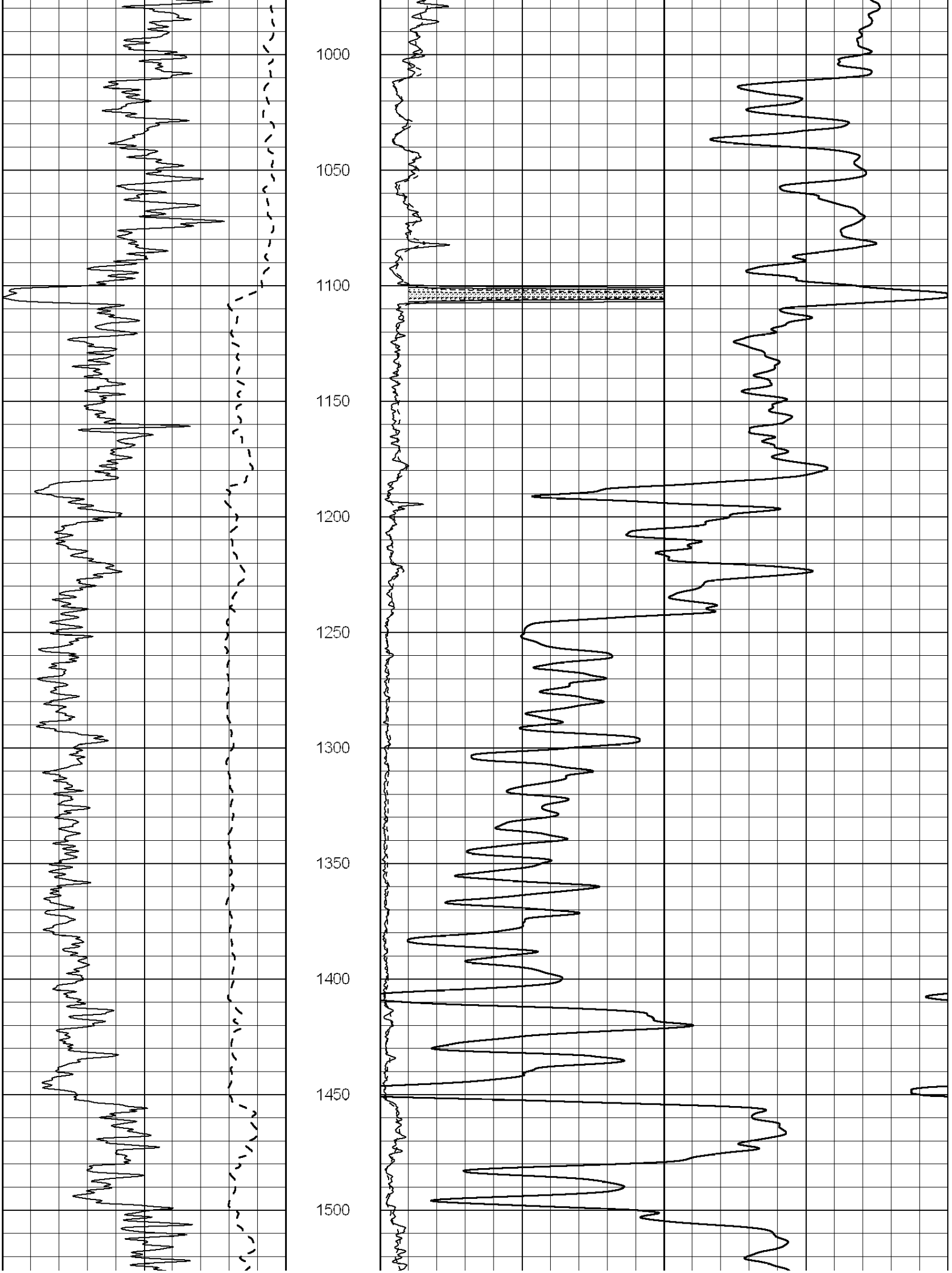
900
950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1300
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1450
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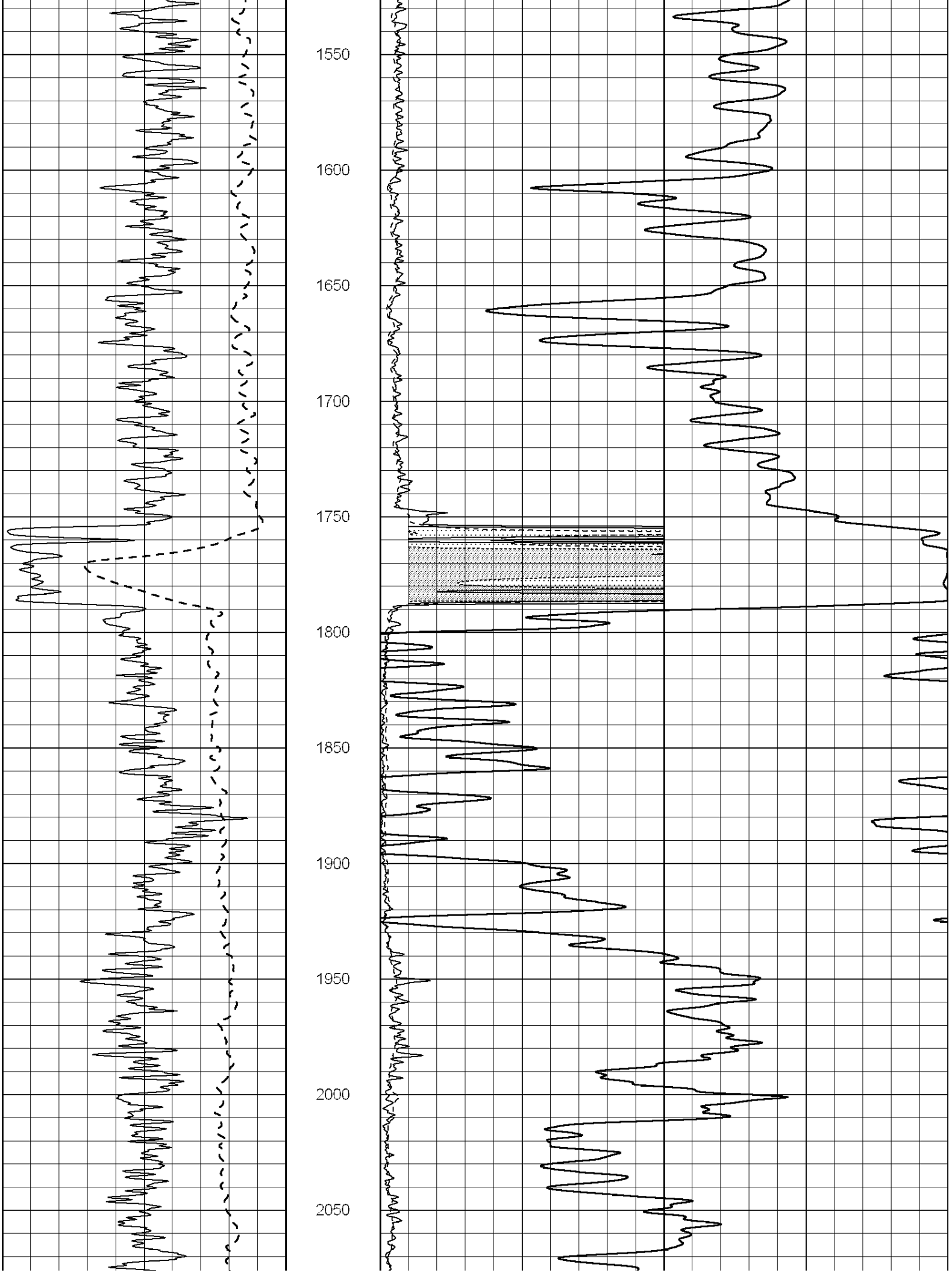
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1850
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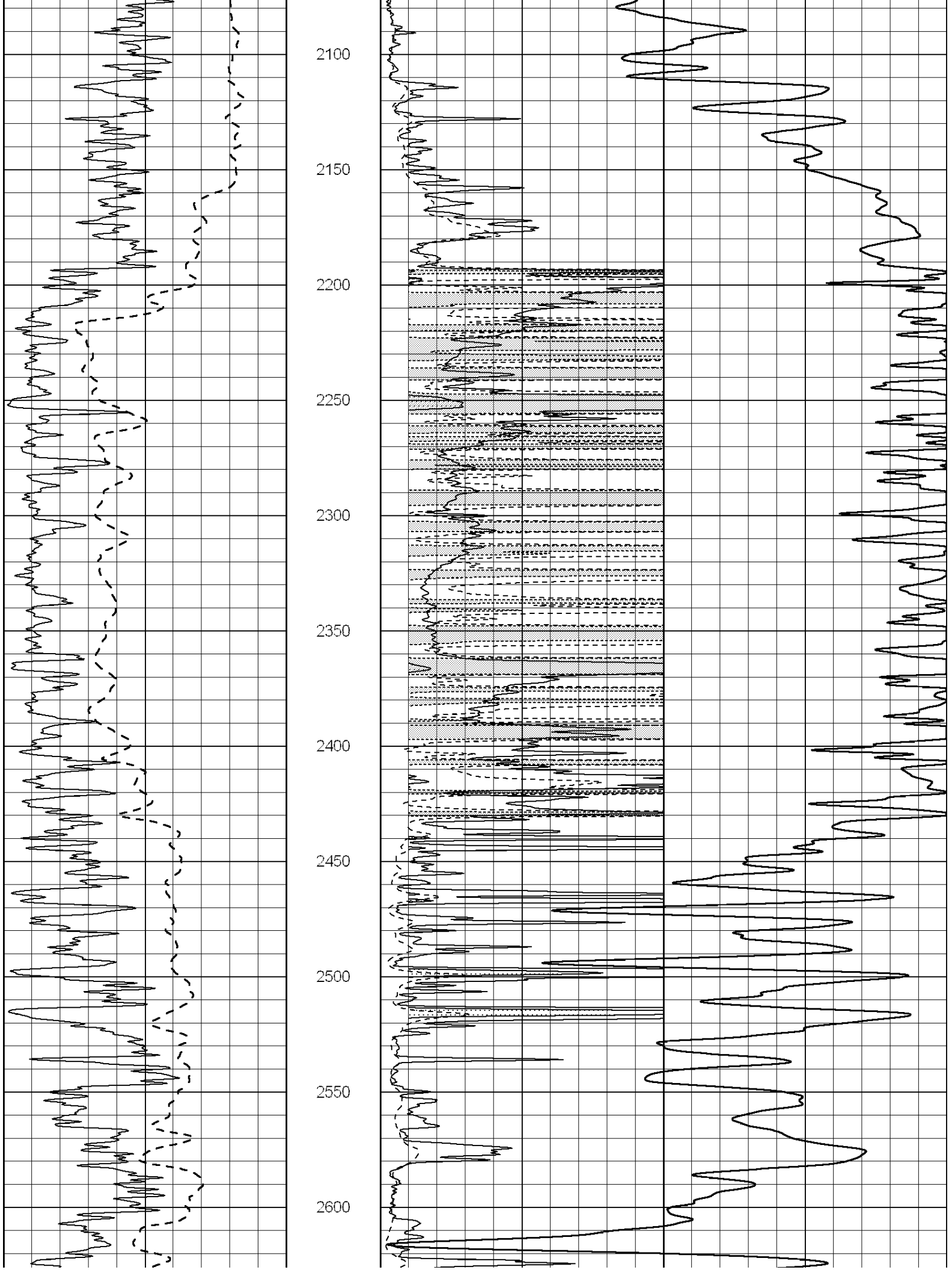
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2400
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2550
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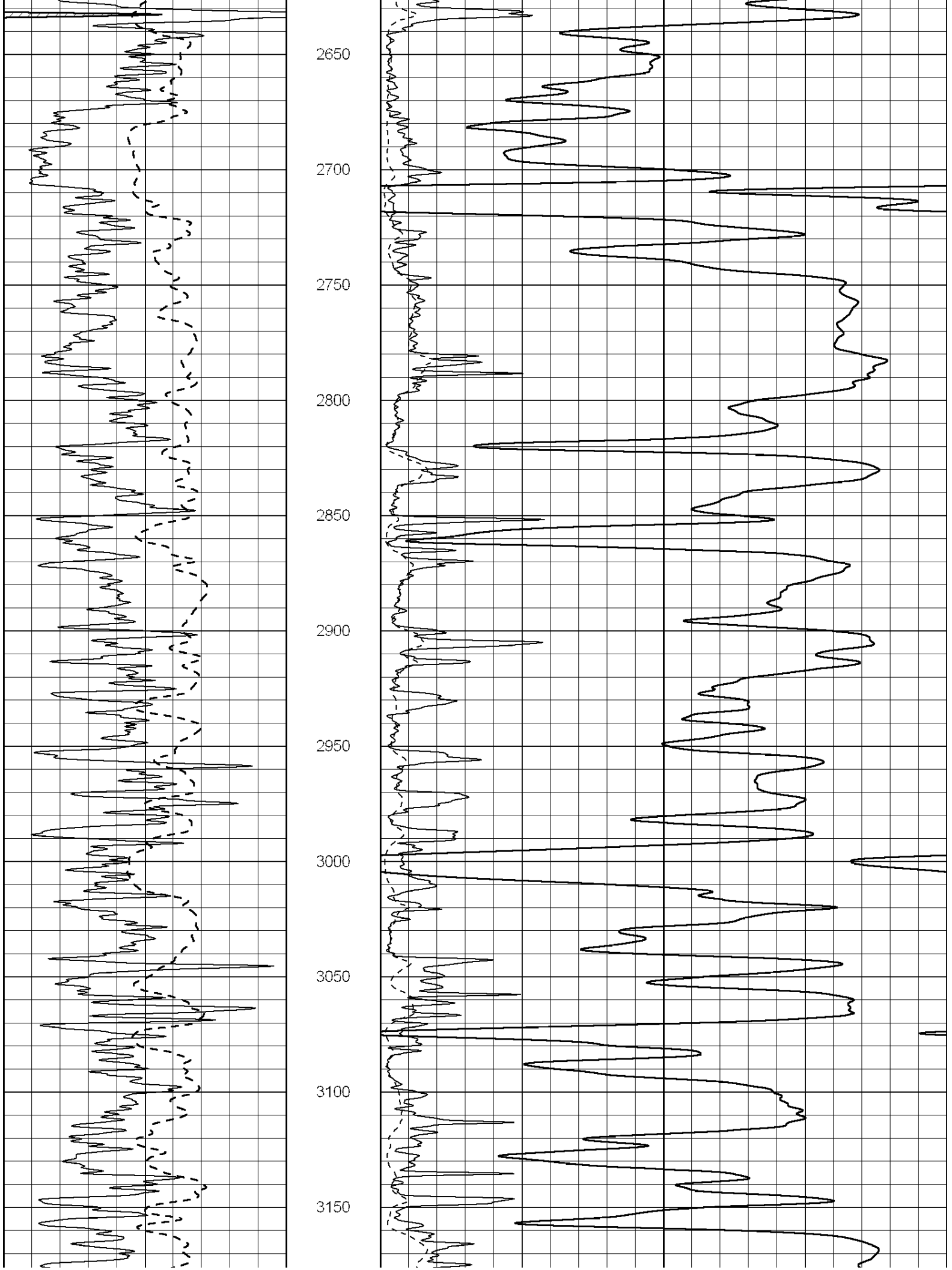
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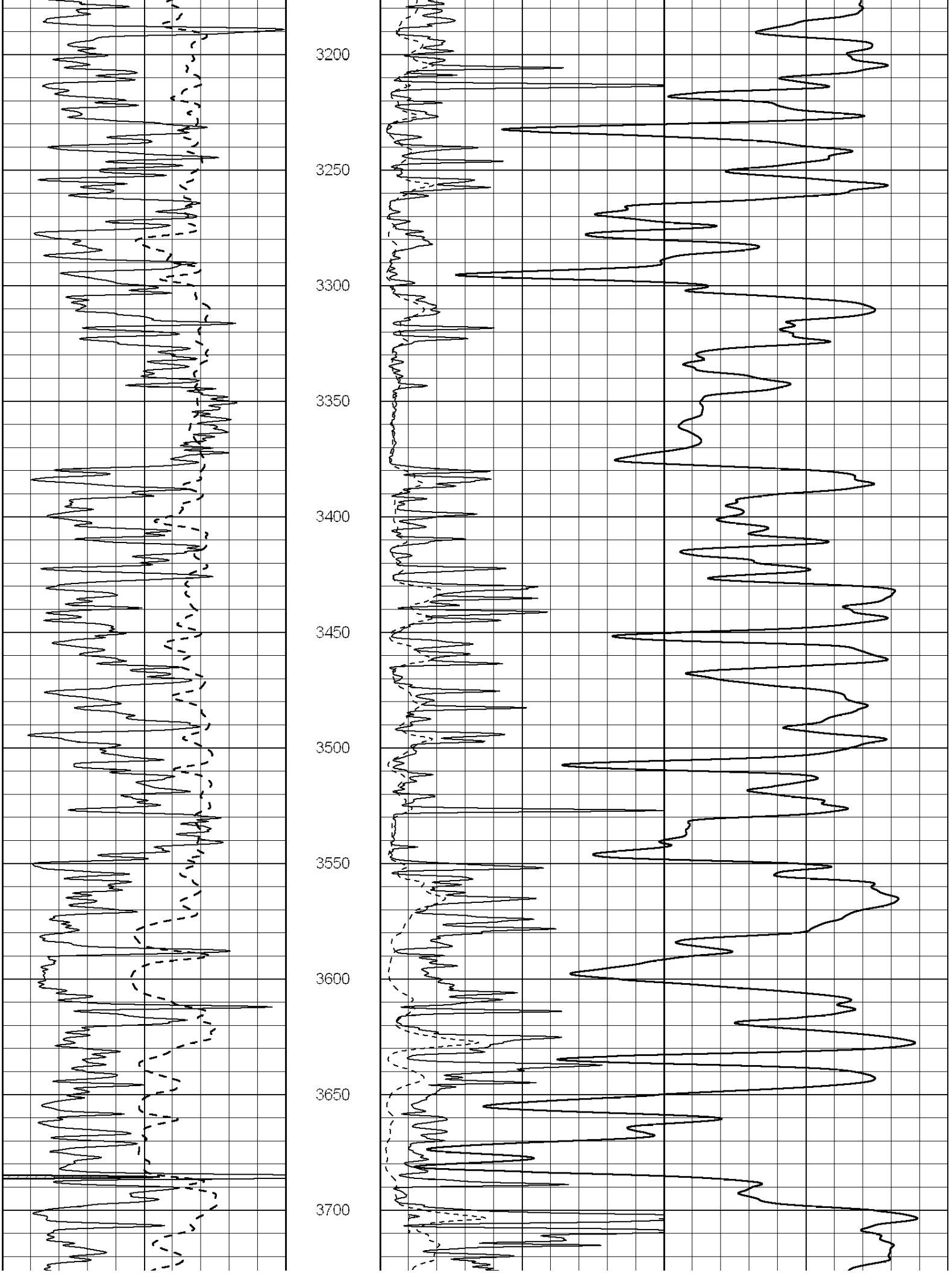
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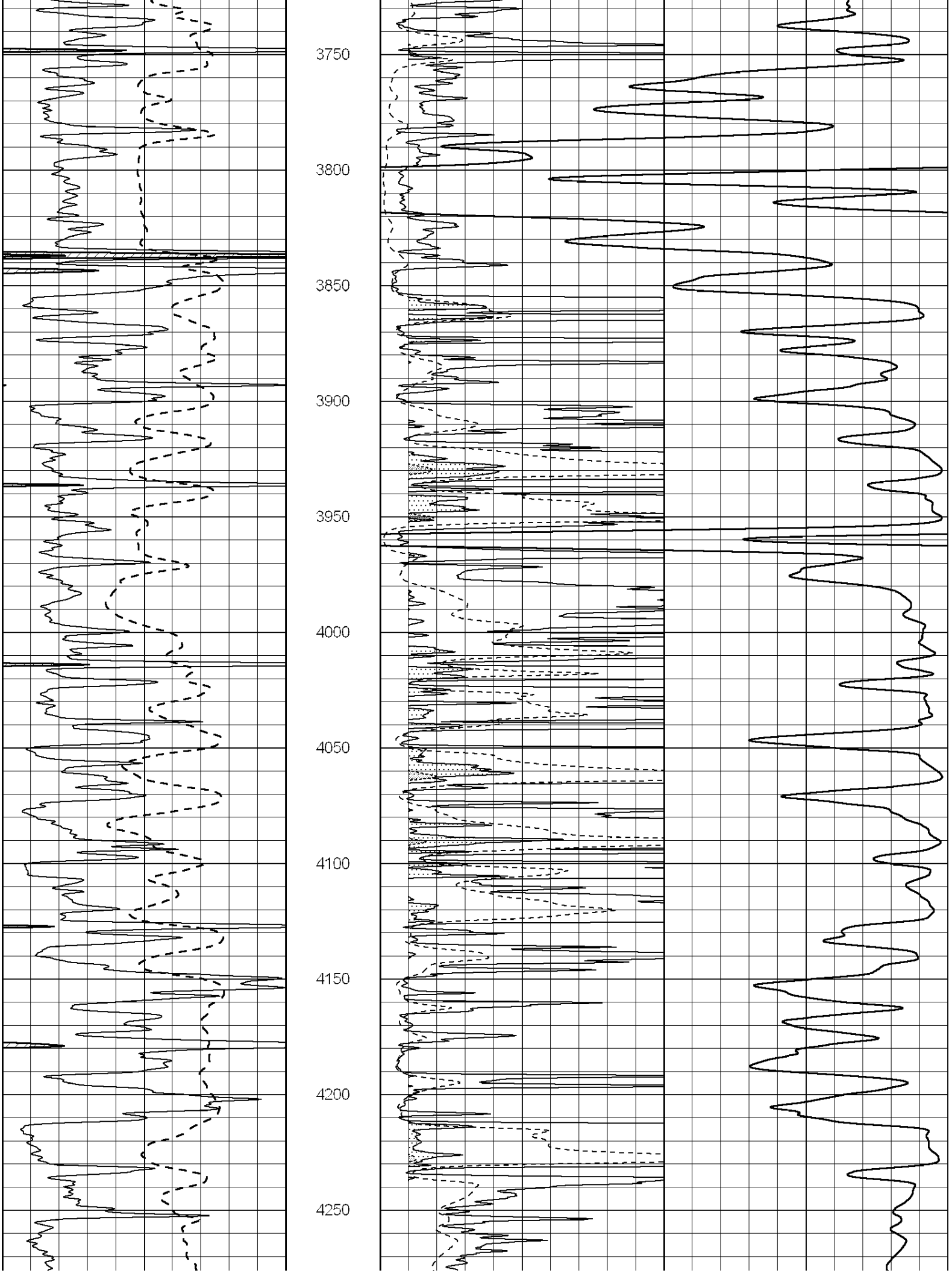
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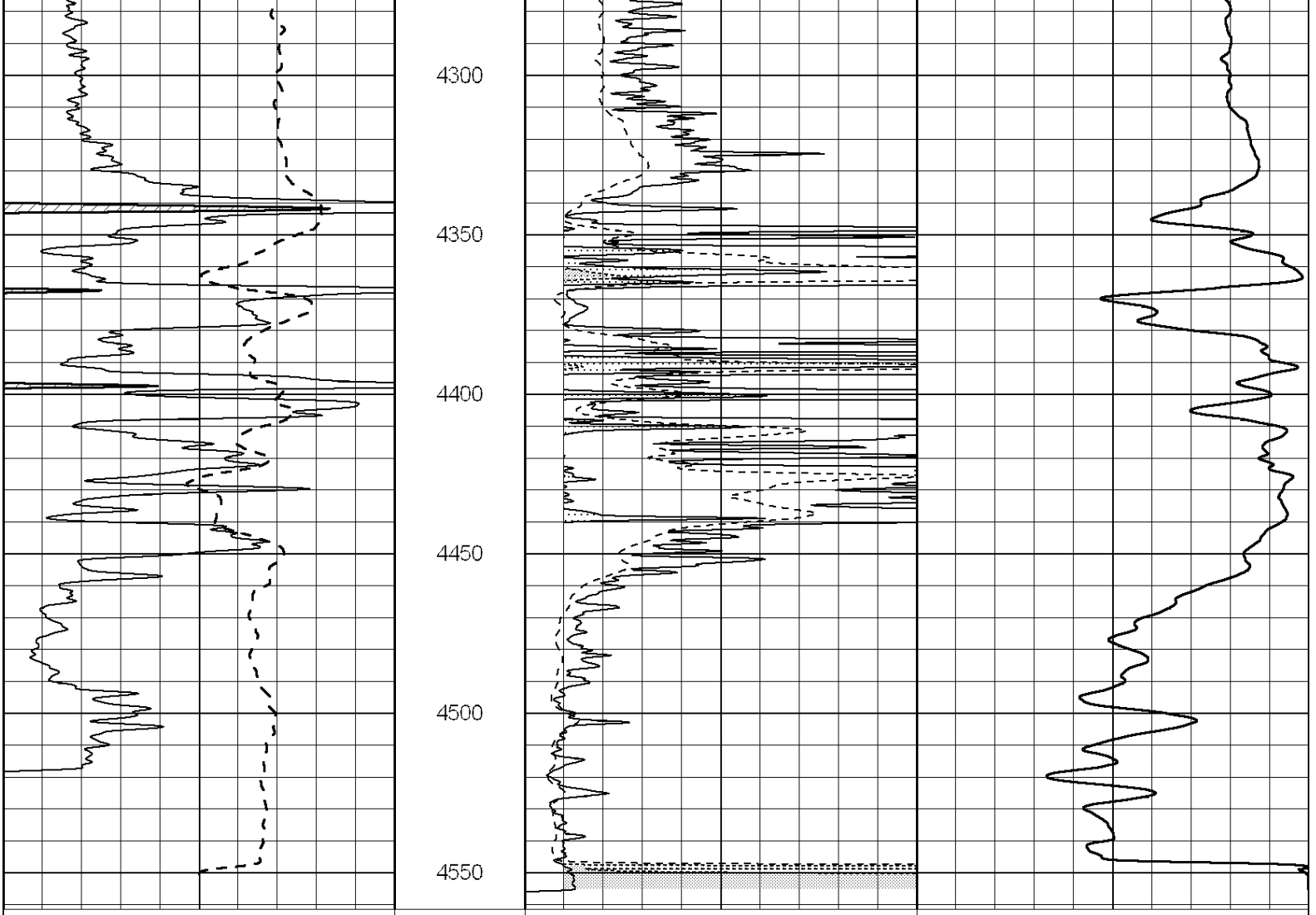


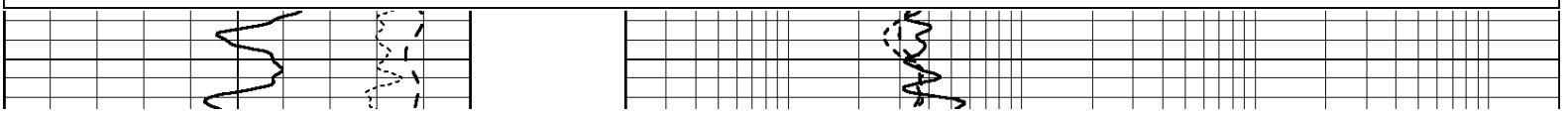
NABORS
COMPLETION & PRODUCTION SERVICES CO.

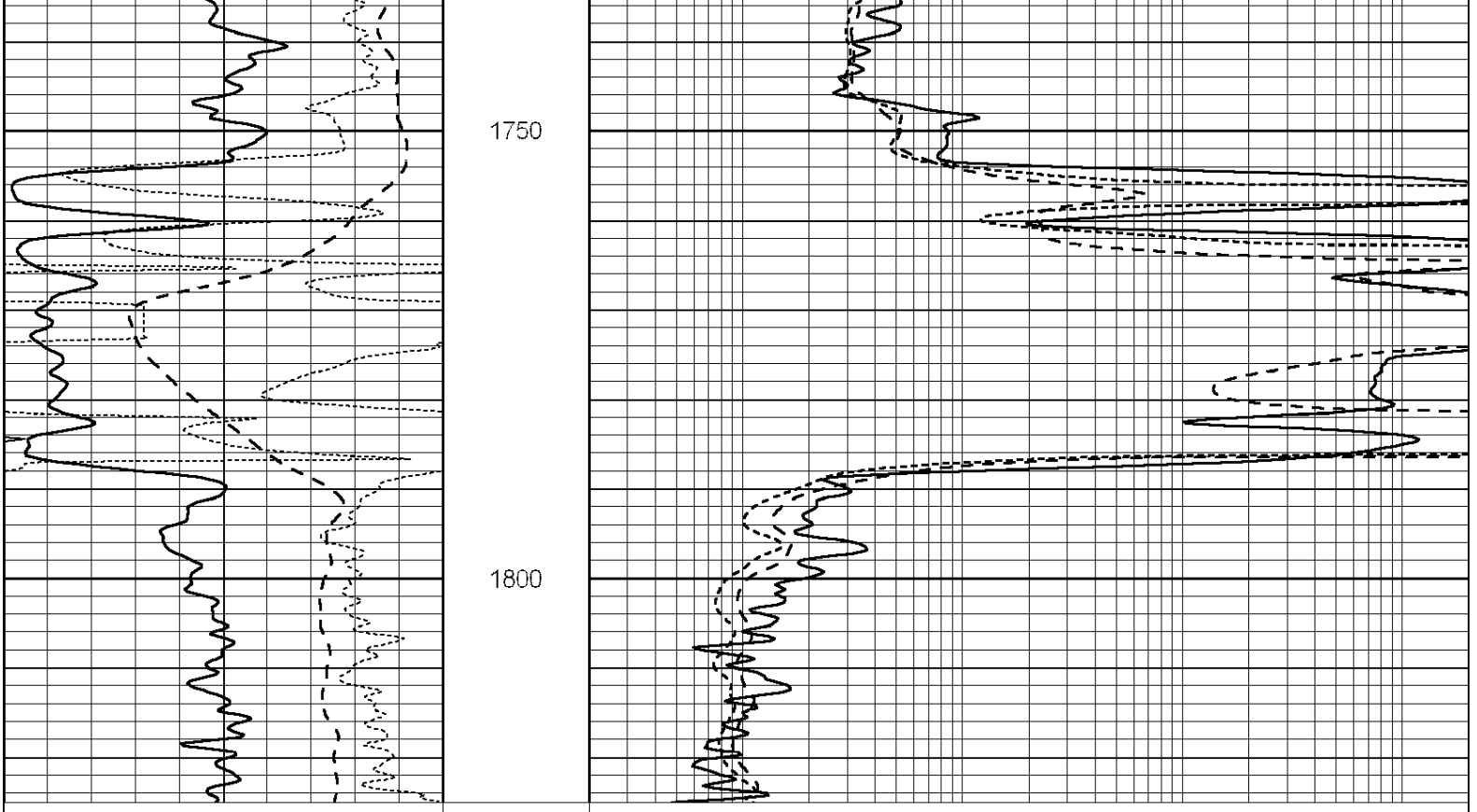
ANHYDRITE

Database File: 010047pe.db
Dataset Pathname: pass4.10
Presentation Format: _dil
Dataset Creation: Thu Jan 17 08:07:09 2013
Charted by: Depth in Feet scaled 1:240

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

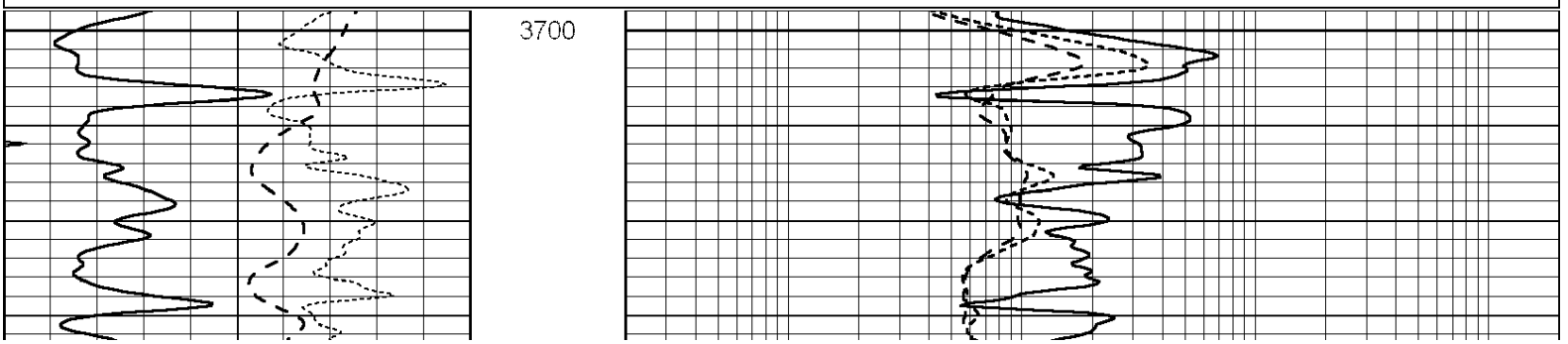
NABORS
COMPLETION & PRODUCTION SERVICES CO.

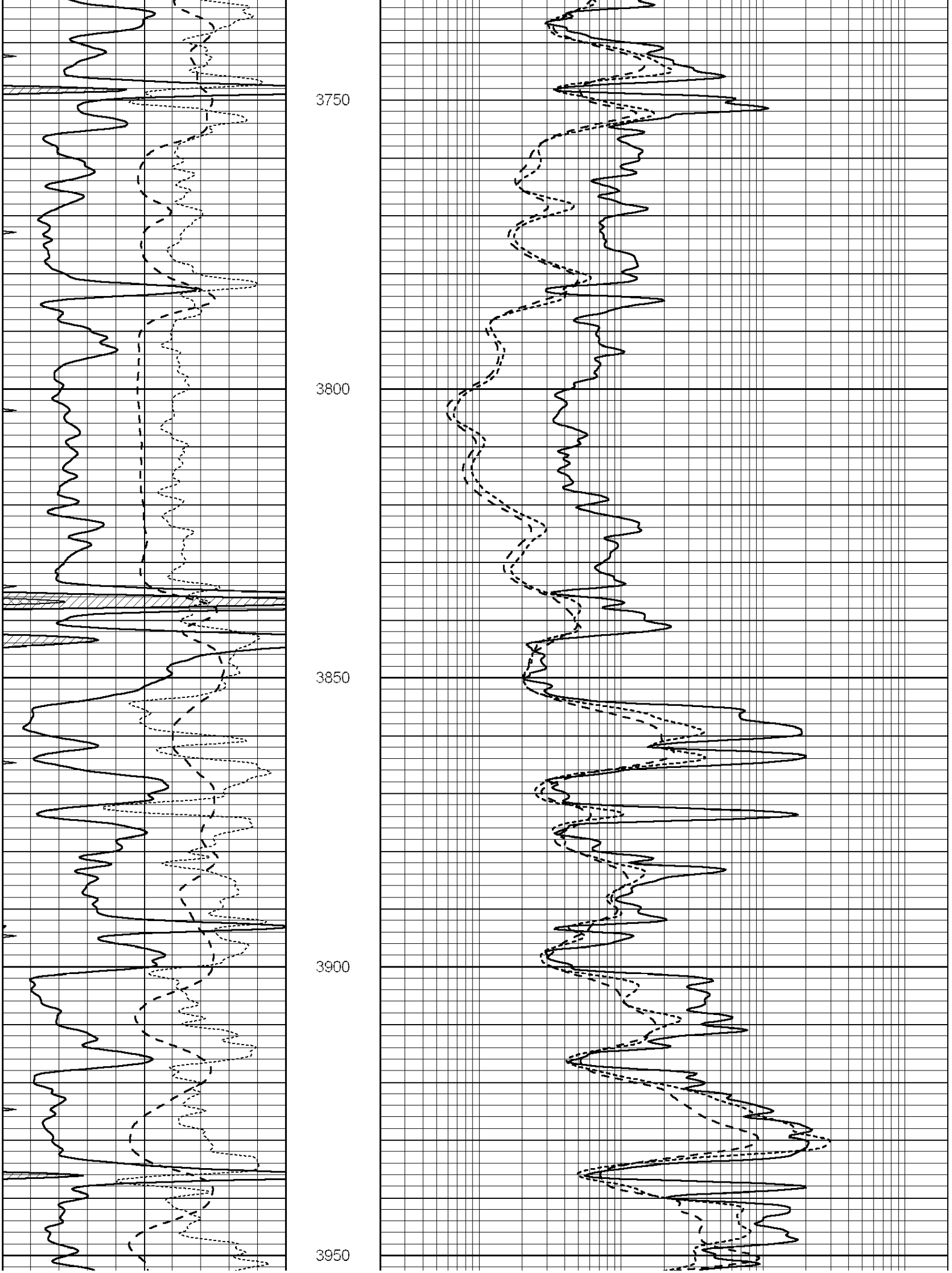
MAIN SECTION

Database File:	010047pe.db
Dataset Pathname:	pass4.9
Presentation Format:	_dil
Dataset Creation:	Thu Jan 17 08:02:09 2013
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
0	MINMK	20
-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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3900
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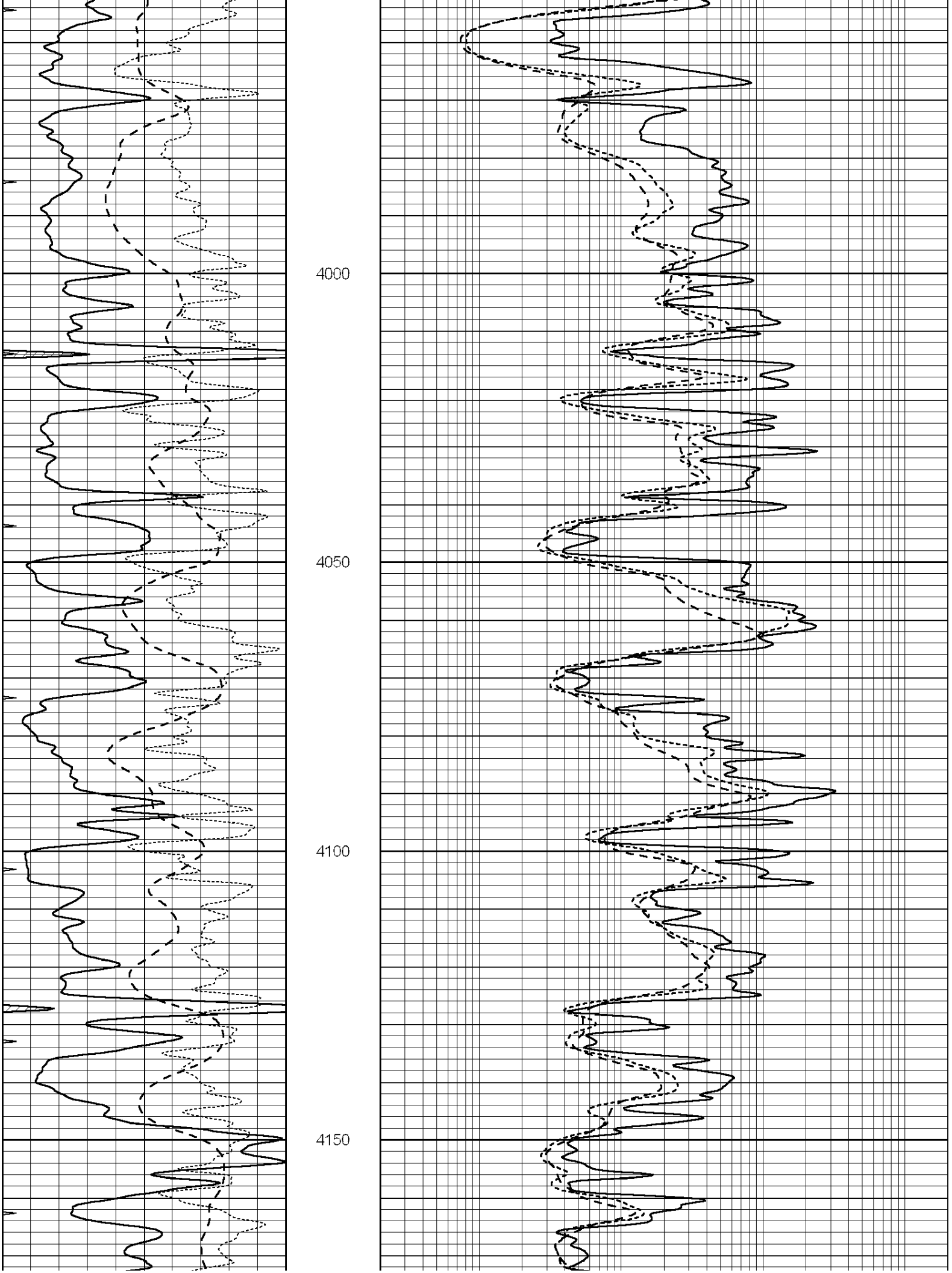
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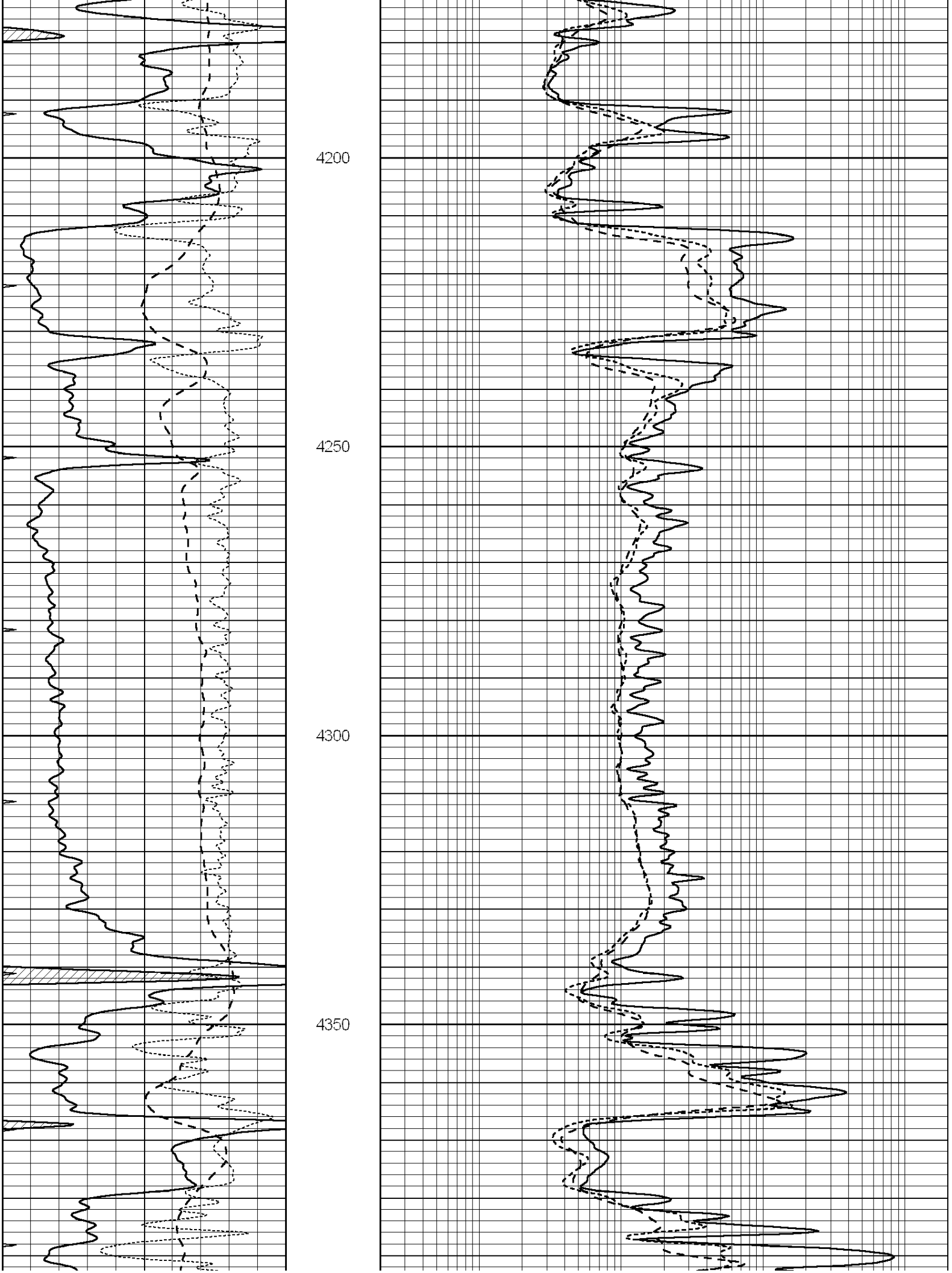
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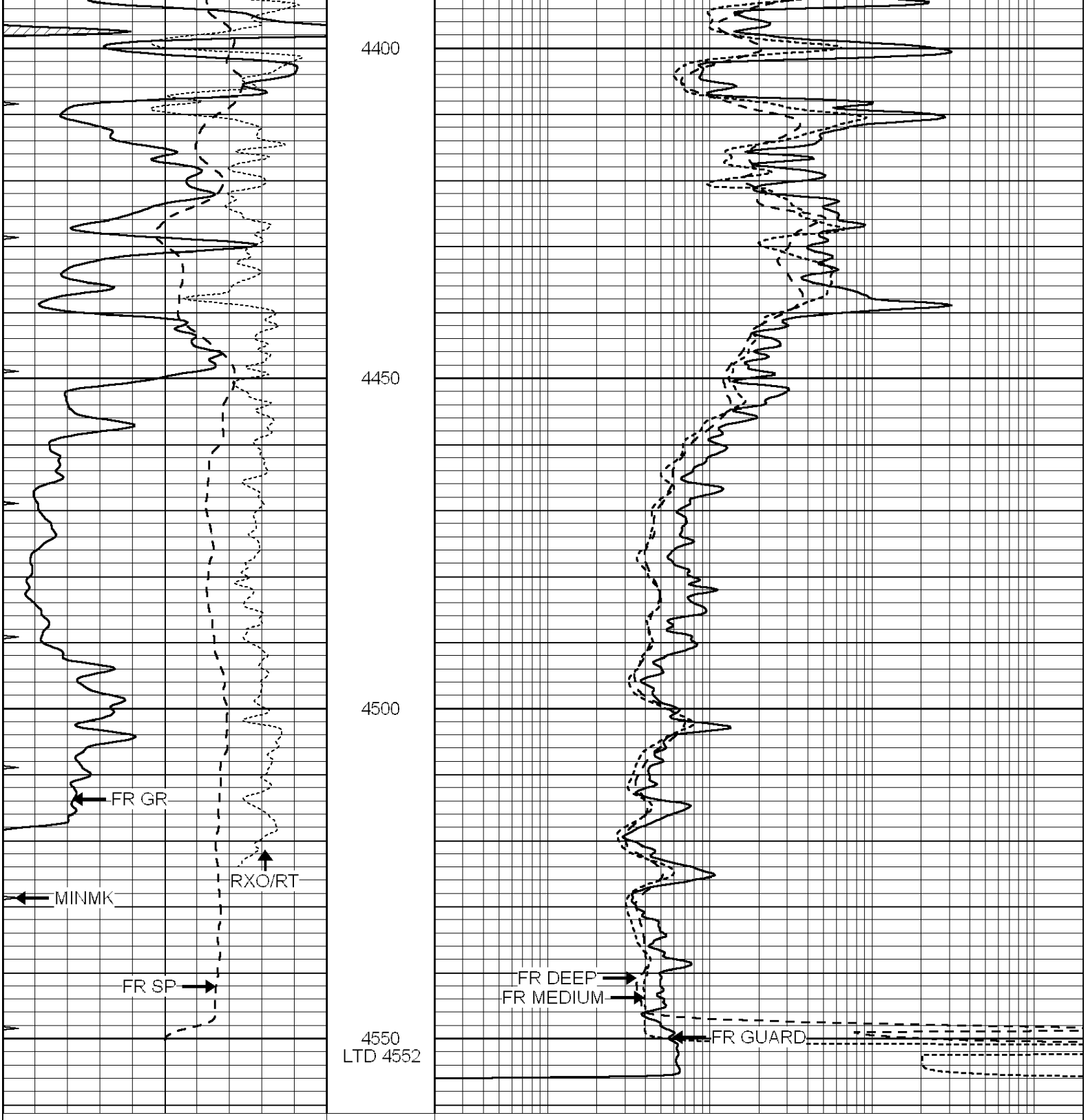


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
0	MINMK	20
-250	Rxo\Rt	50

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

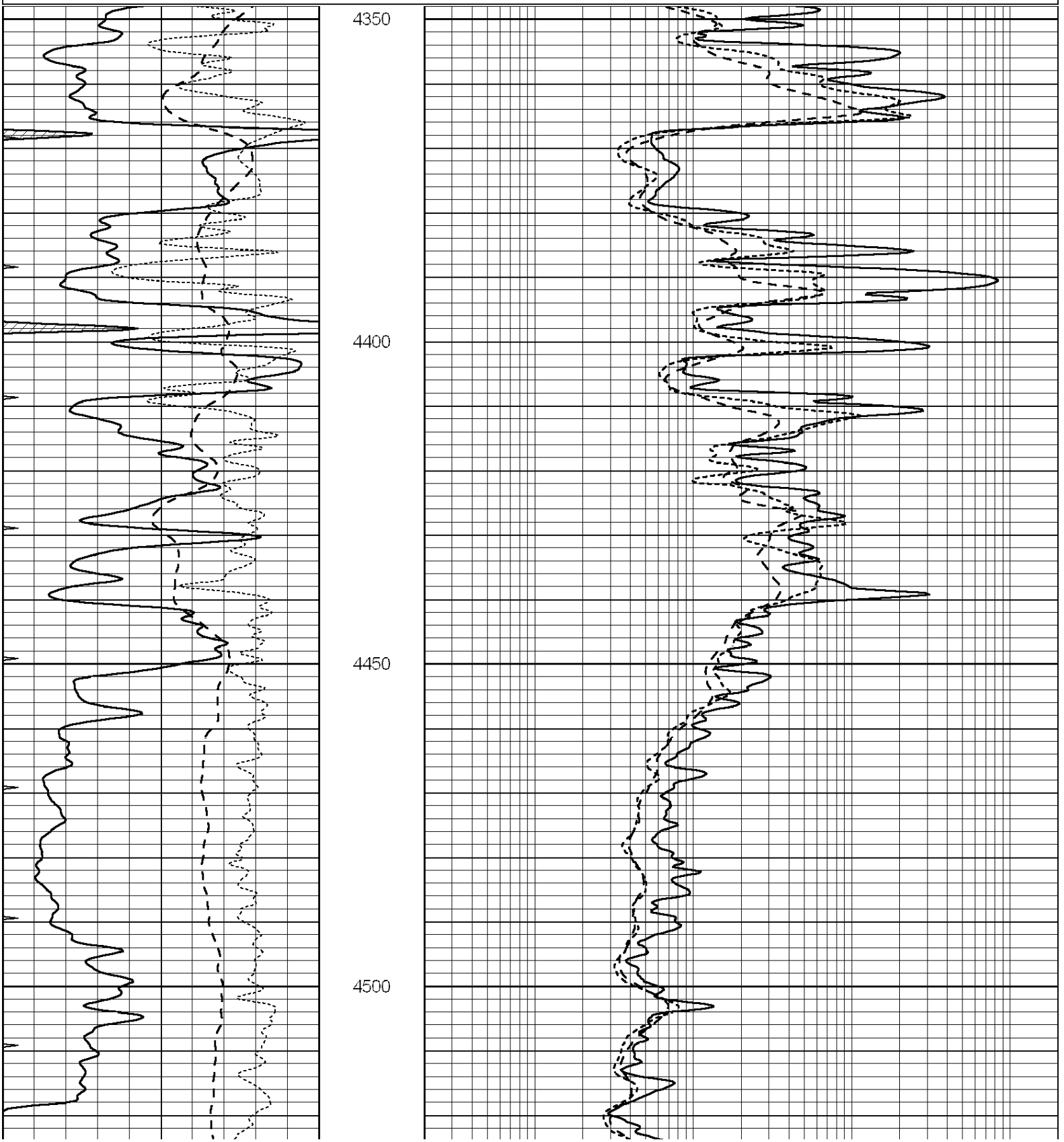
NABORS
COMPLETION & PRODUCTION SERVICES CO.

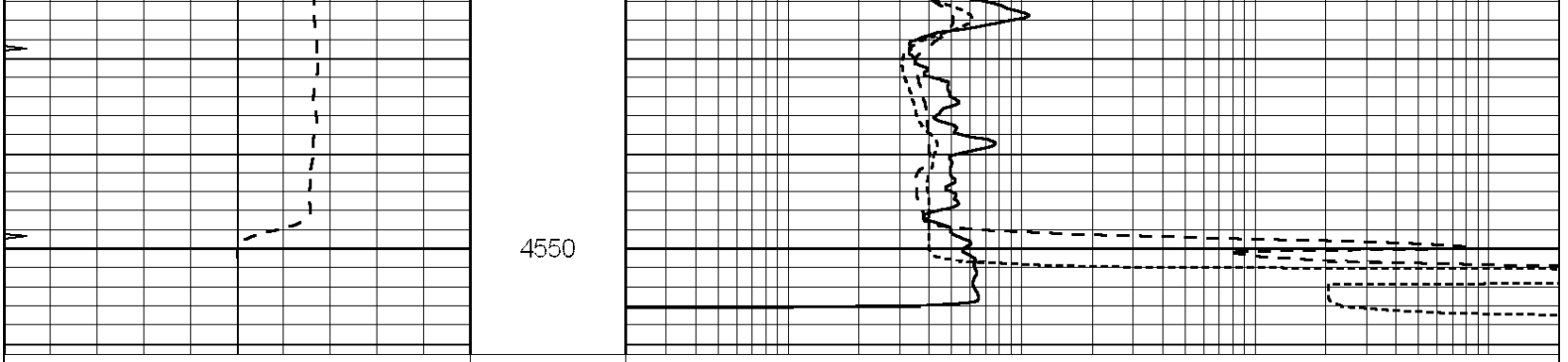
REPEAT SECTION

Database File:	010047pe.db
Dataset Pathname:	pass3.4
Presentation Format:	_dil
Dataset Creation:	Thu Jan 17 08:13:09 2013
Charted by:	Depth in Feet scaled 1:240

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

Calibration Report

Database File: 010047pe.db
Dataset Pathname: pass4.9
Dataset Creation: Thu Jan 17 08:02:09 2013

Dual Induction Calibration Report

Serial-Model:	DIL3-GEAR
Surface Cal Performed:	Thu Jan 17 03:51:31 2013
Downhole Cal Performed:	Fri Mar 21 02:34:00 2003
After Survey Verification Performed:	Tue Apr 13 17:49:23 2010

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	620.000	9.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	720.000	-4.000
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

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.503	0.050	V	500.000	2.000	Ohm-m	240.000	-3.500

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Litho Density Calibration Report

Serial: 006 Model: PBB

Serial: 000 Model: PRB

Master Calibration — Performed Sun Aug 15 09:48:41 2010

	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		0.0000	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

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:	070559	
Tool Model:	OPEN_GR	
Performed:	Wed Jan 09 12:24:50 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps