NABORS COMPLETION & PRODUCTION SERVICES CO.

DUAL INDUCTION LOG

Company	RITCHIE EXPLORATION, INC.
Well	#1 JOSEPH - HESS
Field	ANTELOPE RIDGE
County	GOVE
State	KANSAS

Company RITCHIE EXPLORATION, INC.

Well #1 JOSEPH - HESS

Field ANTELOPE RIDGE

County GOVE State KANSAS

Location: API # : 15-063-22123-0000

1700' FSL & 175' FEL

SE - NE - SE

SEC 30 TWP 13S RGE 31W

Other Services: CDL/CNL

Permanent Datum	GROUND LEVEL	Elevation 2869	Elevation
Log Measured From	KELLY BUSHING 8' A.G.L.		K.B. 2877
Drilling Measured From	KELLY BUSHING		D.F. 2875
			G.L. 2869

Date	8/3/13		
Run Number	ONE		
Depth Driller	4650		
Depth Logger	4648		
Bottom Logged Interval	4646		
Top Log Interval	00		
Casing Driller	8 5/8"@235'		
Casing Logger	235		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,000 PPM	
Density / Viscosity	9.3/75		
pH / Fluid Loss	8.5/16.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.700@80F		
Rmf @ Meas. Temp	.525@80F		
Rmc @ Meas. Temp	.840@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.459@122F		
Time Circulation Stopped	4.5 HOURS		
Time Logger on Bottom	6:00 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ADAM ELDANI		

<<< Fold Here >>>

Comments

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

DIRECTIONS

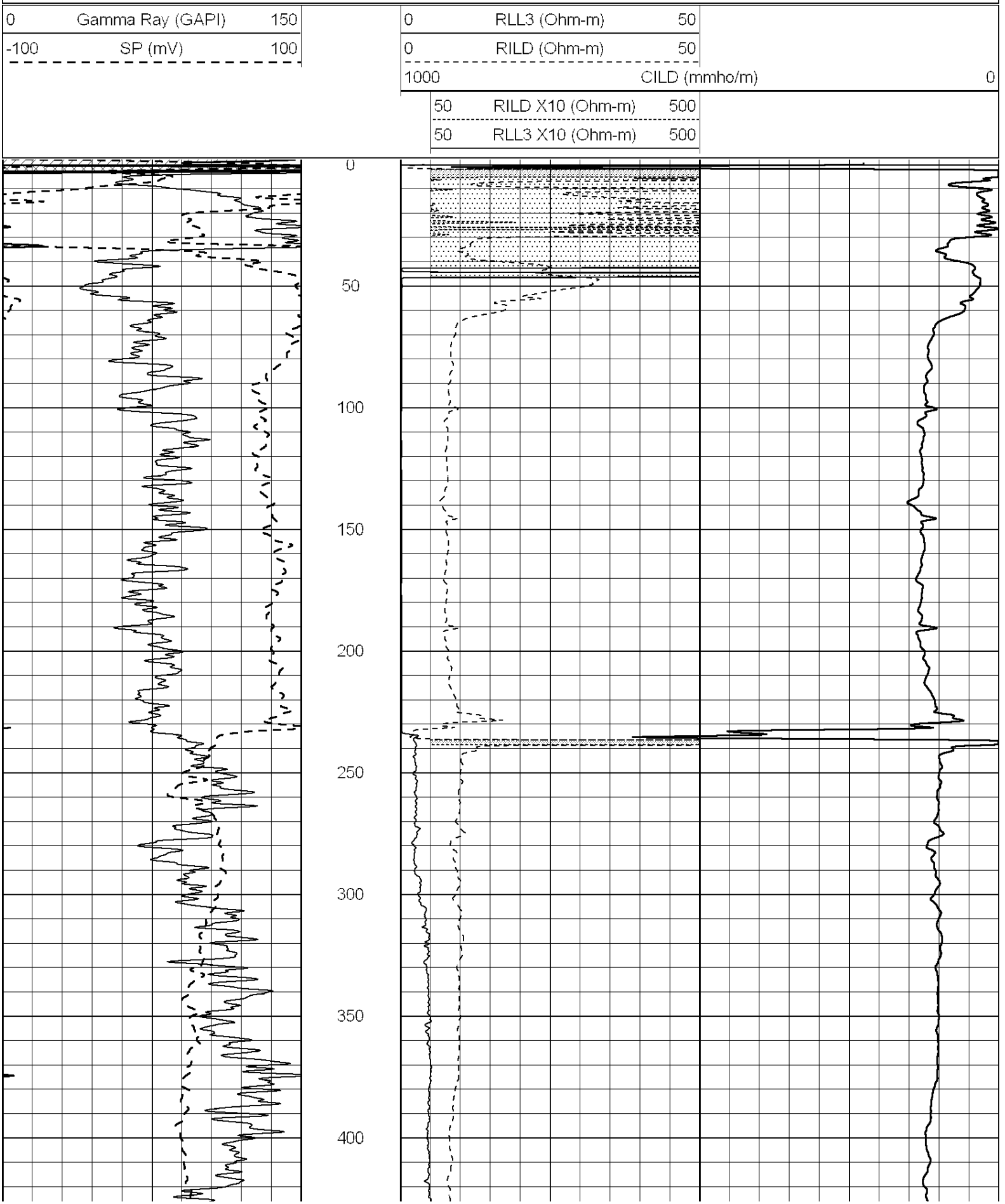
OAKLEY, KS. 16S. ON HWY 83 TO "NAVAJO RD.", 3E. PAST 2 CATTLE GUARDS, 3/4N., W. INTO

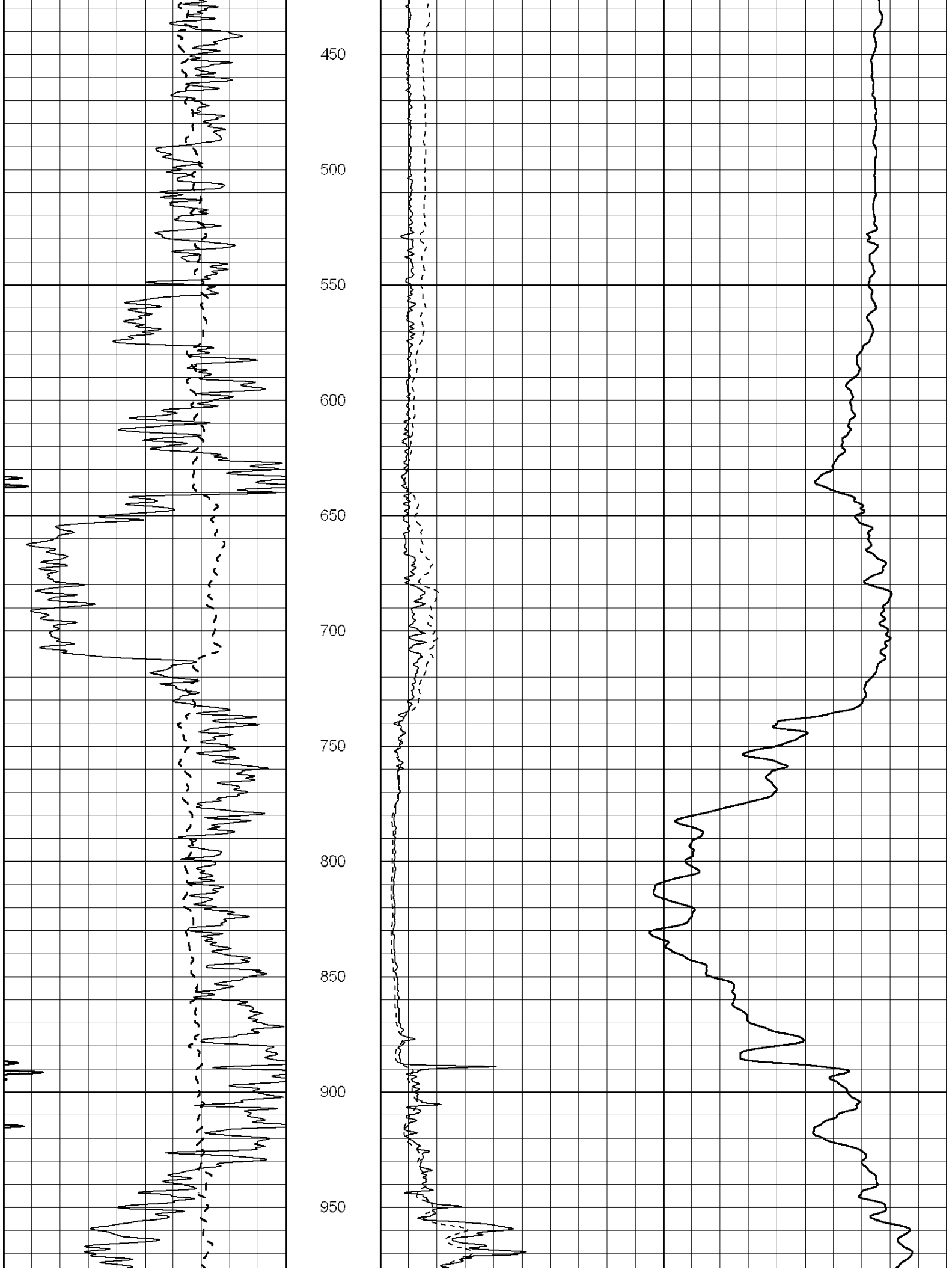
NABORS COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

SERVICES CO.

Database File: 011198ddn.db
Dataset Pathname: pass3.8
Presentation Format: dil2
Dataset Creation: Sun Aug 04 07:36:45 2013
Charted by: Depth in Feet scaled 1:600

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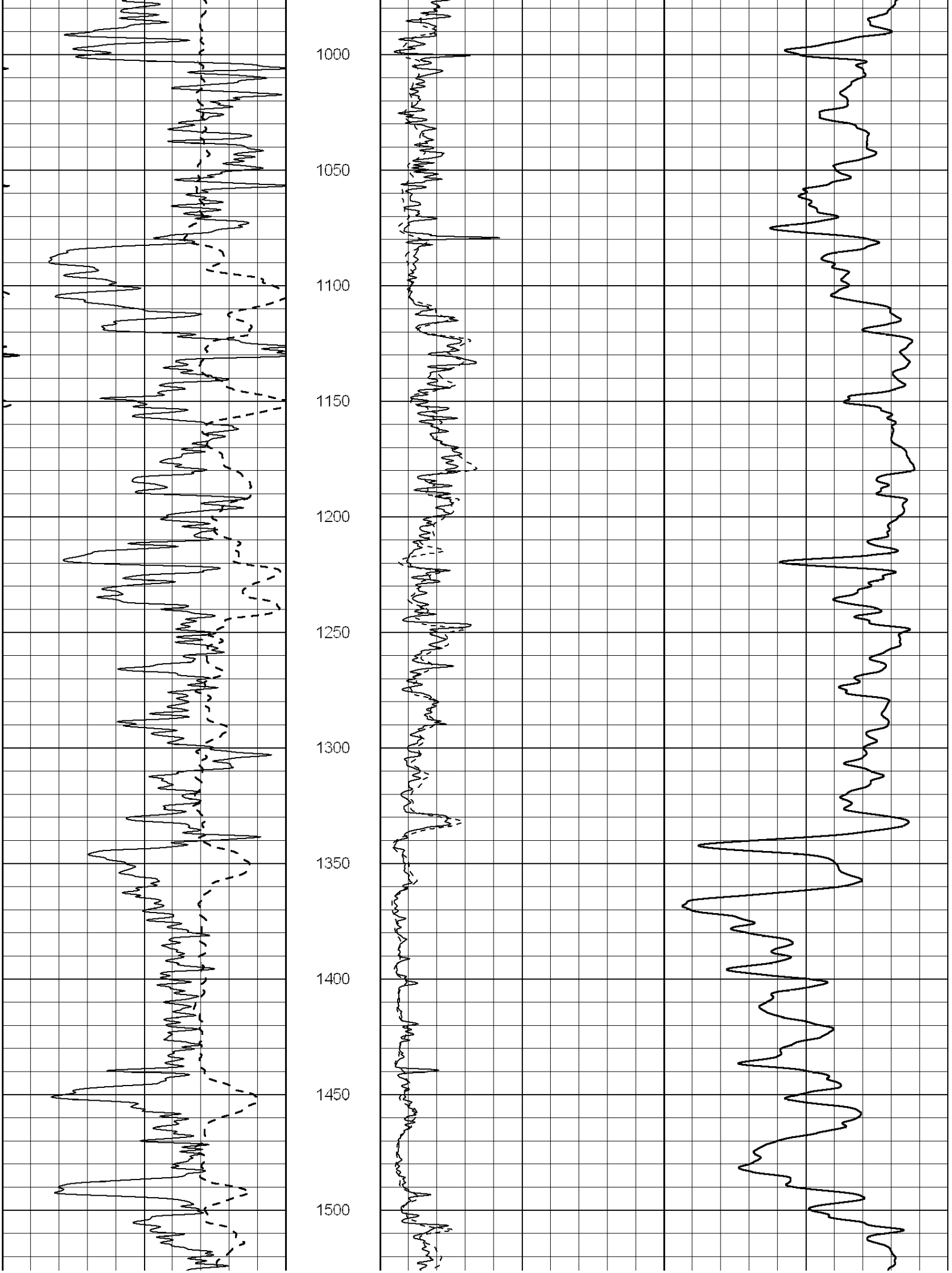
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1450
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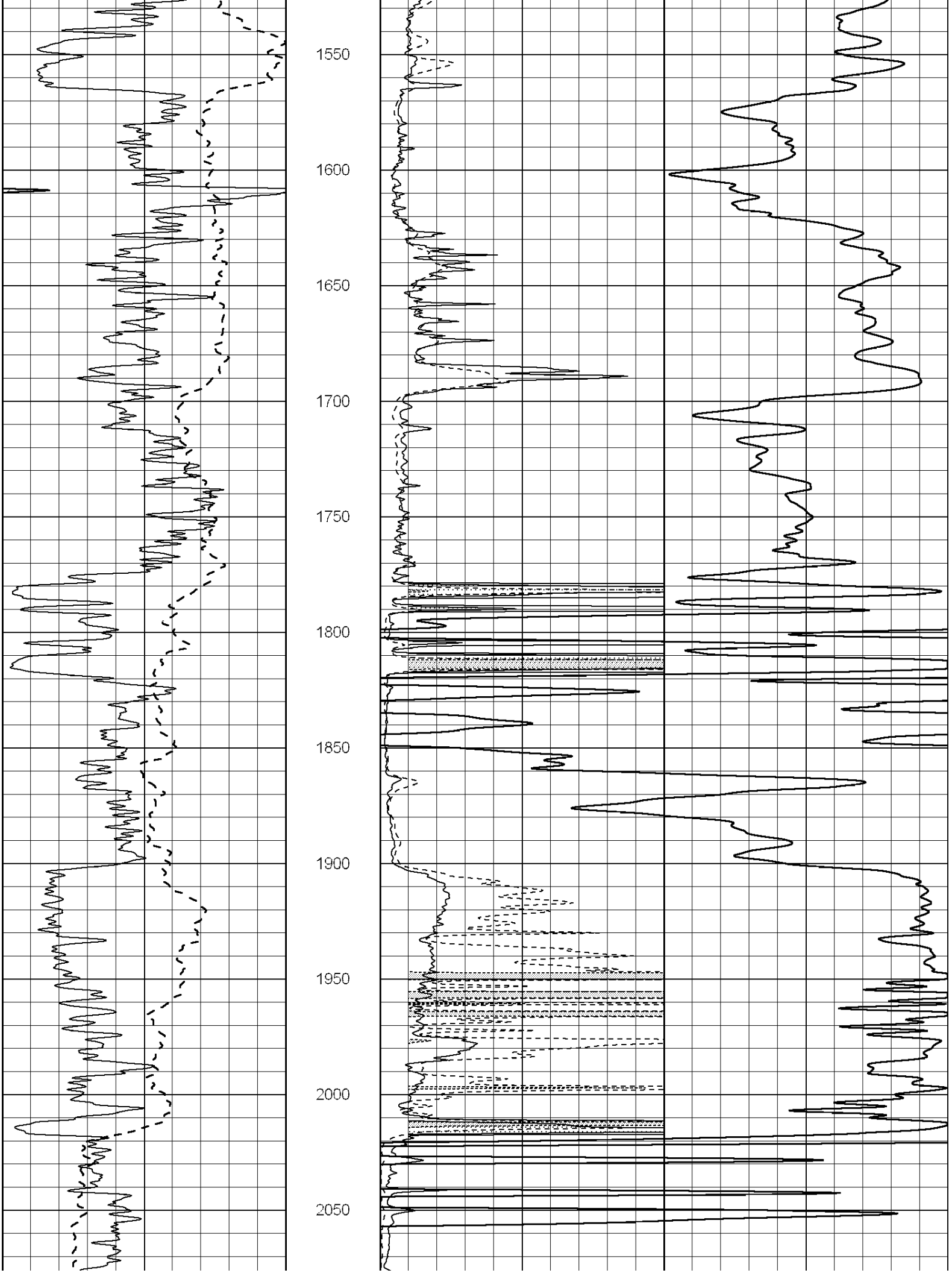
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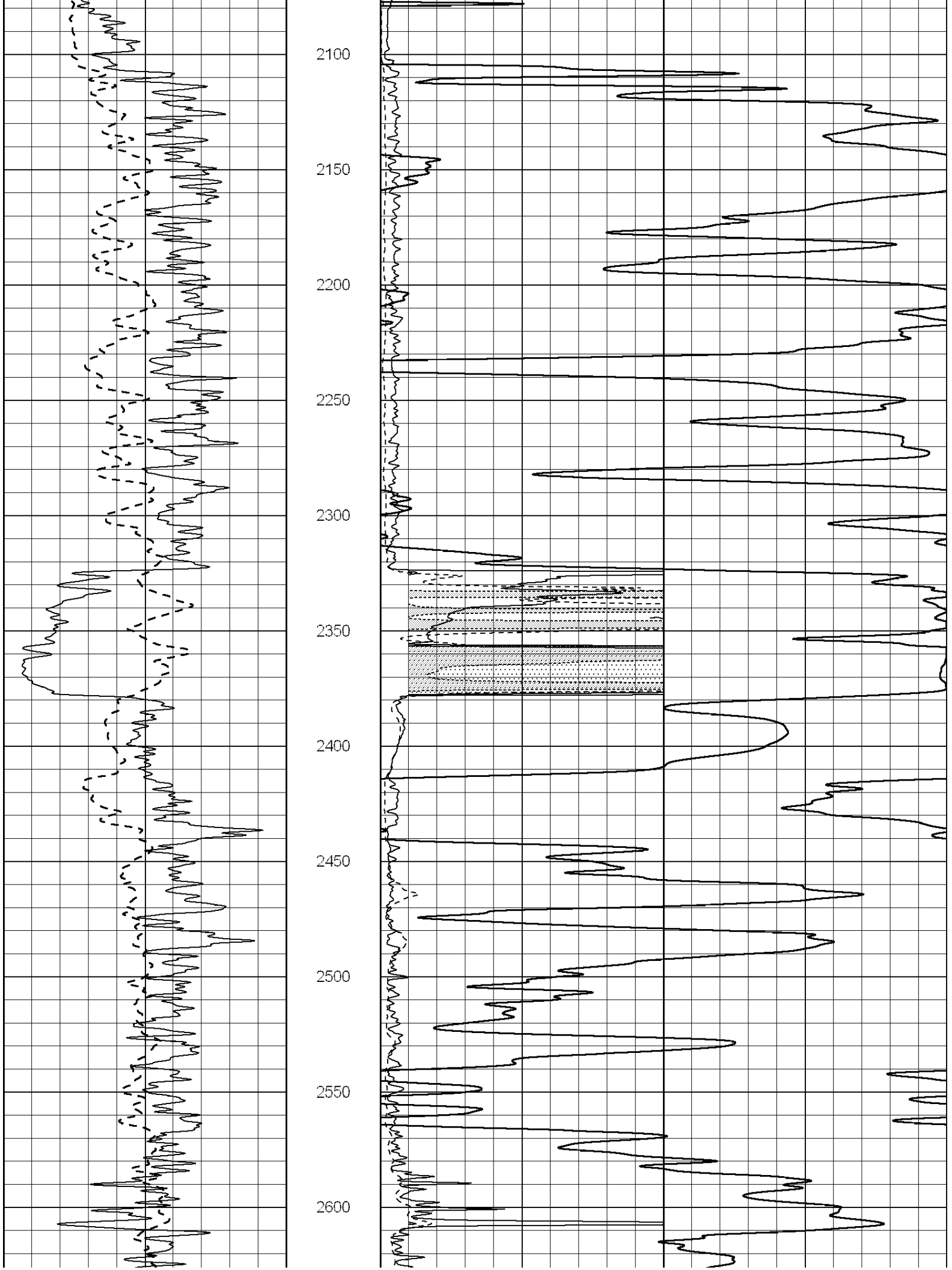
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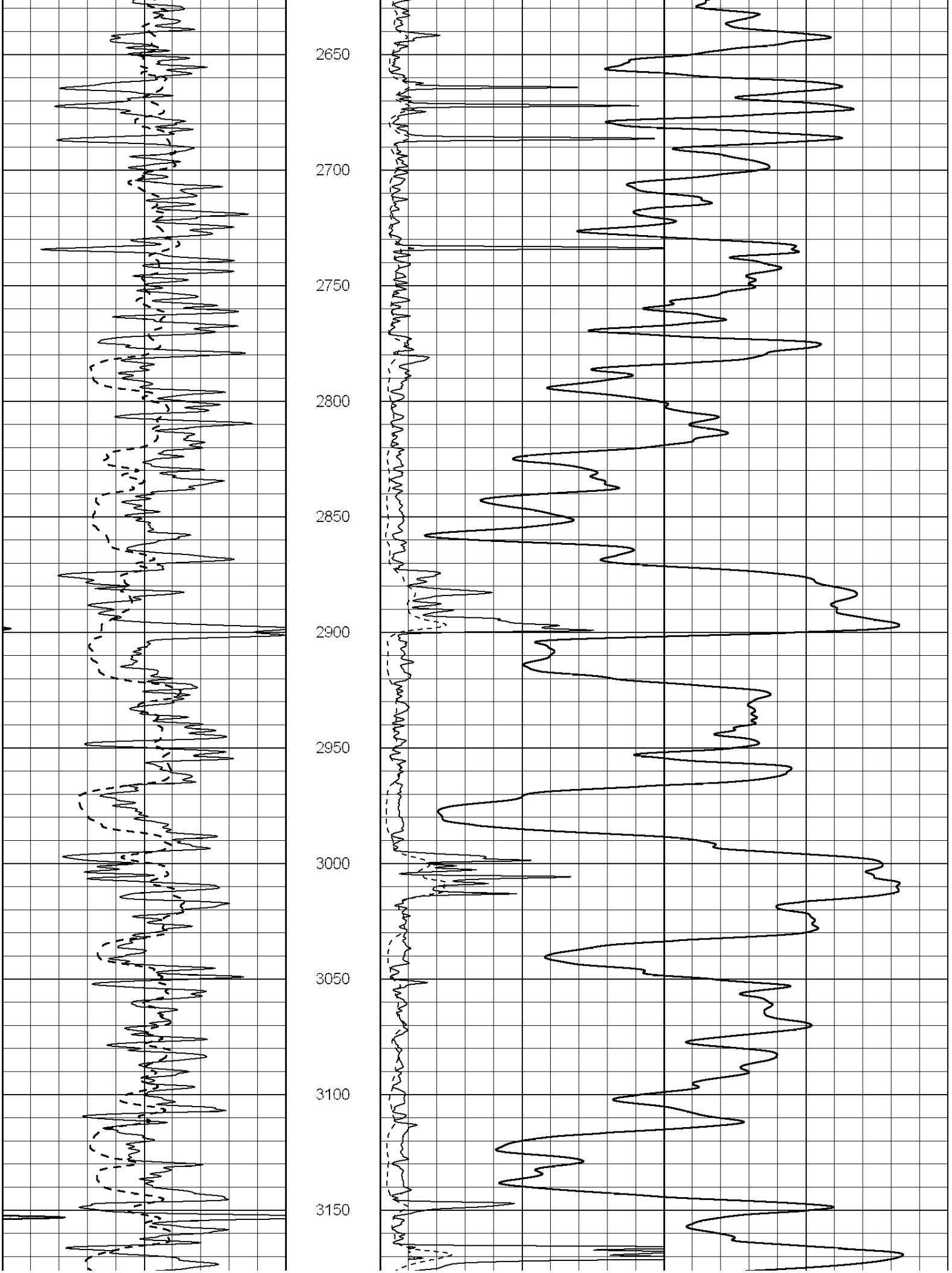
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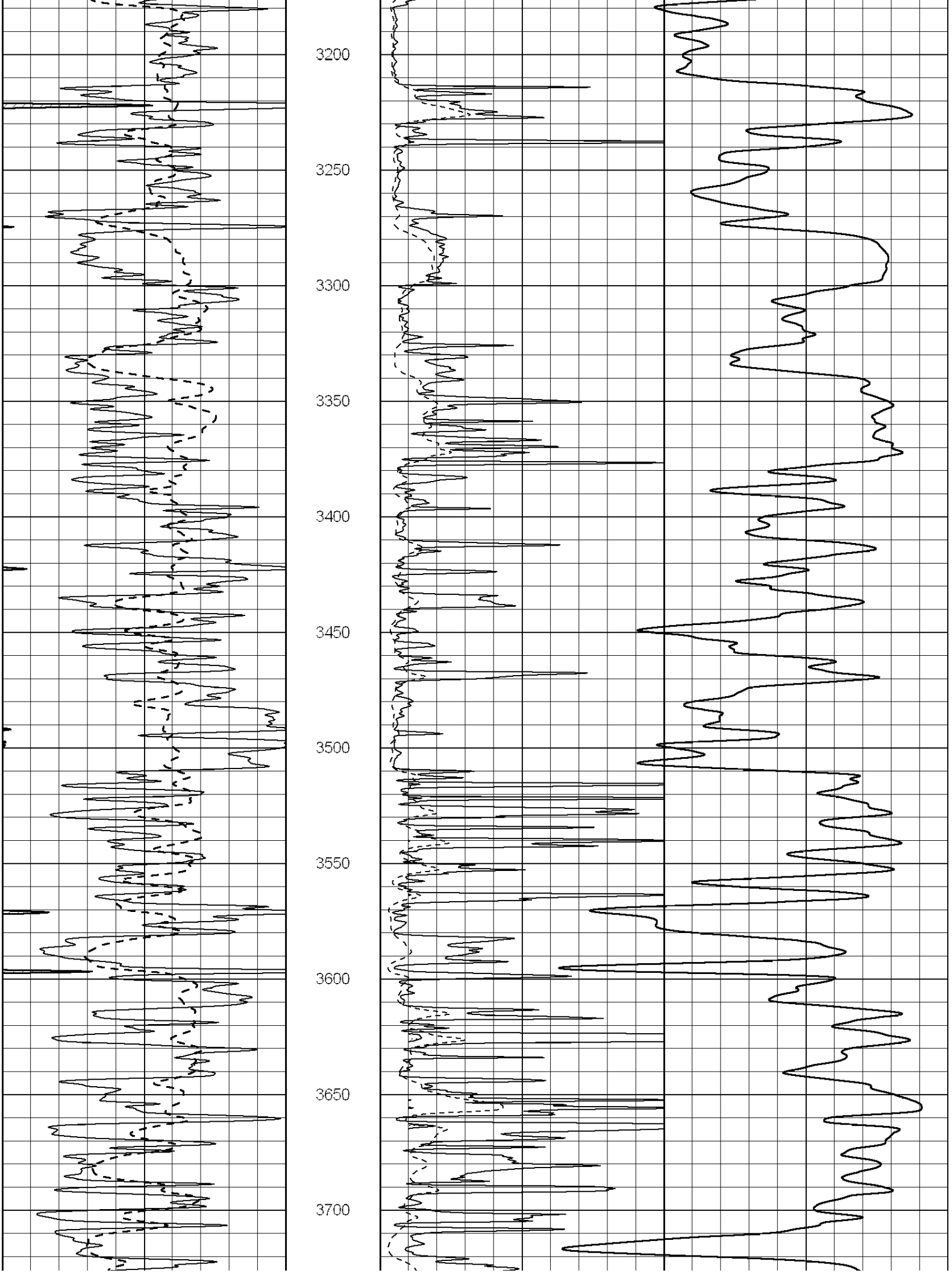
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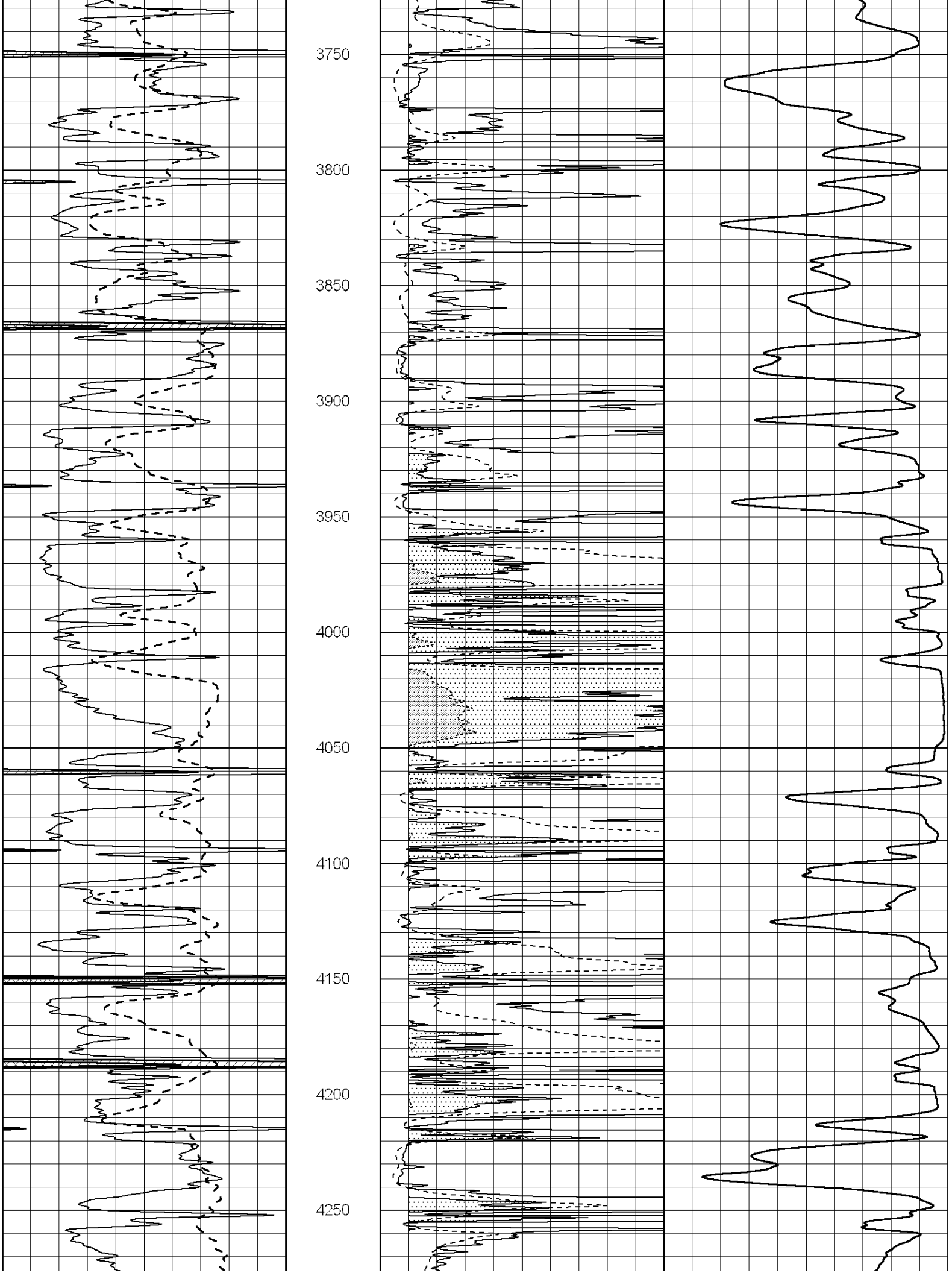
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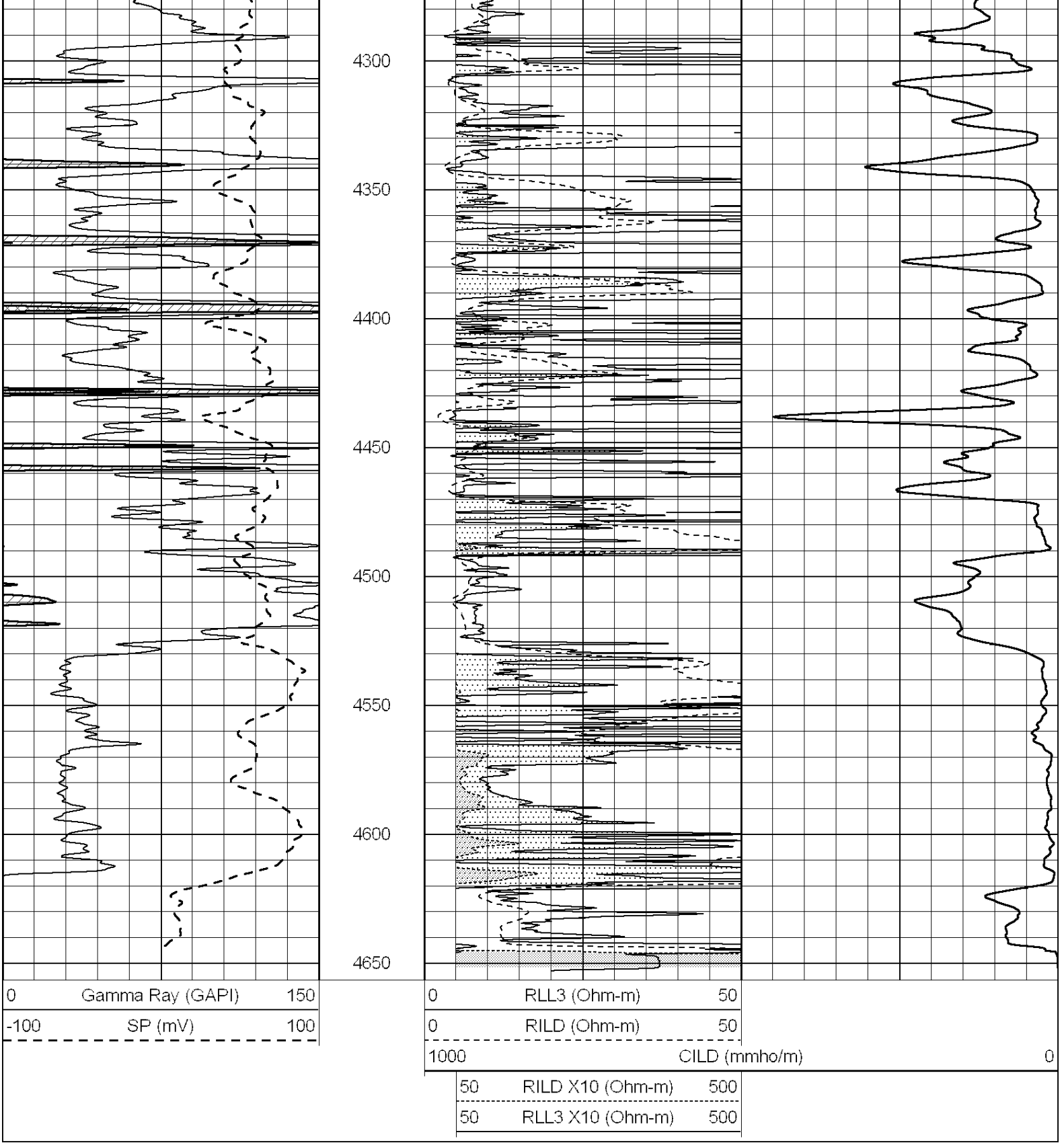


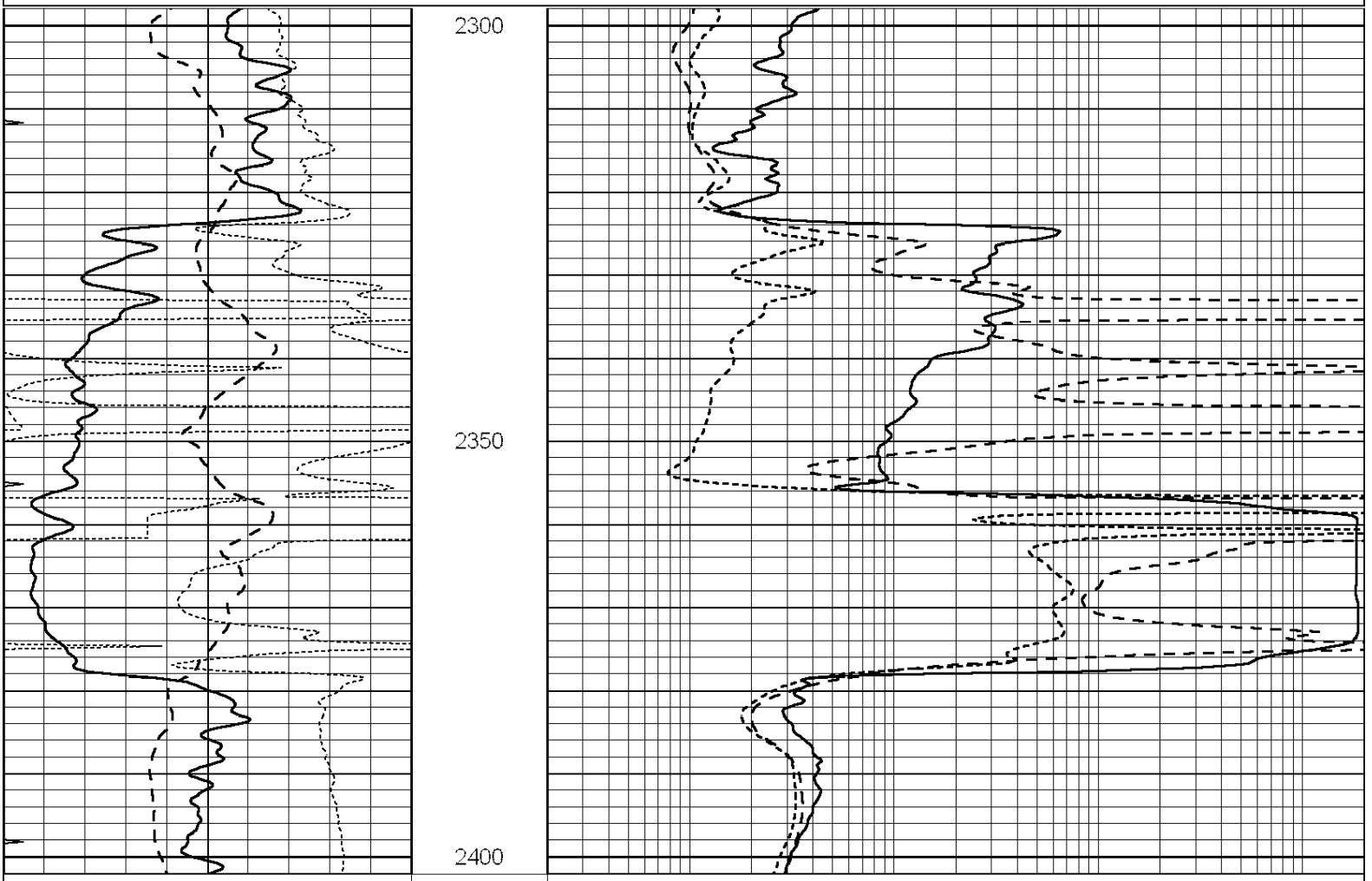
NABORS
COMPLETION & PRODUCTION SERVICES CO.

ANHYDRITE

Database File:	011198ddn.db
Dataset Pathname:	pass3.7
Presentation Format:	_dil
Dataset Creation:	Sun Aug 04 07:34:24 2013 by Calc SOC 120430
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	MINMK	20

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

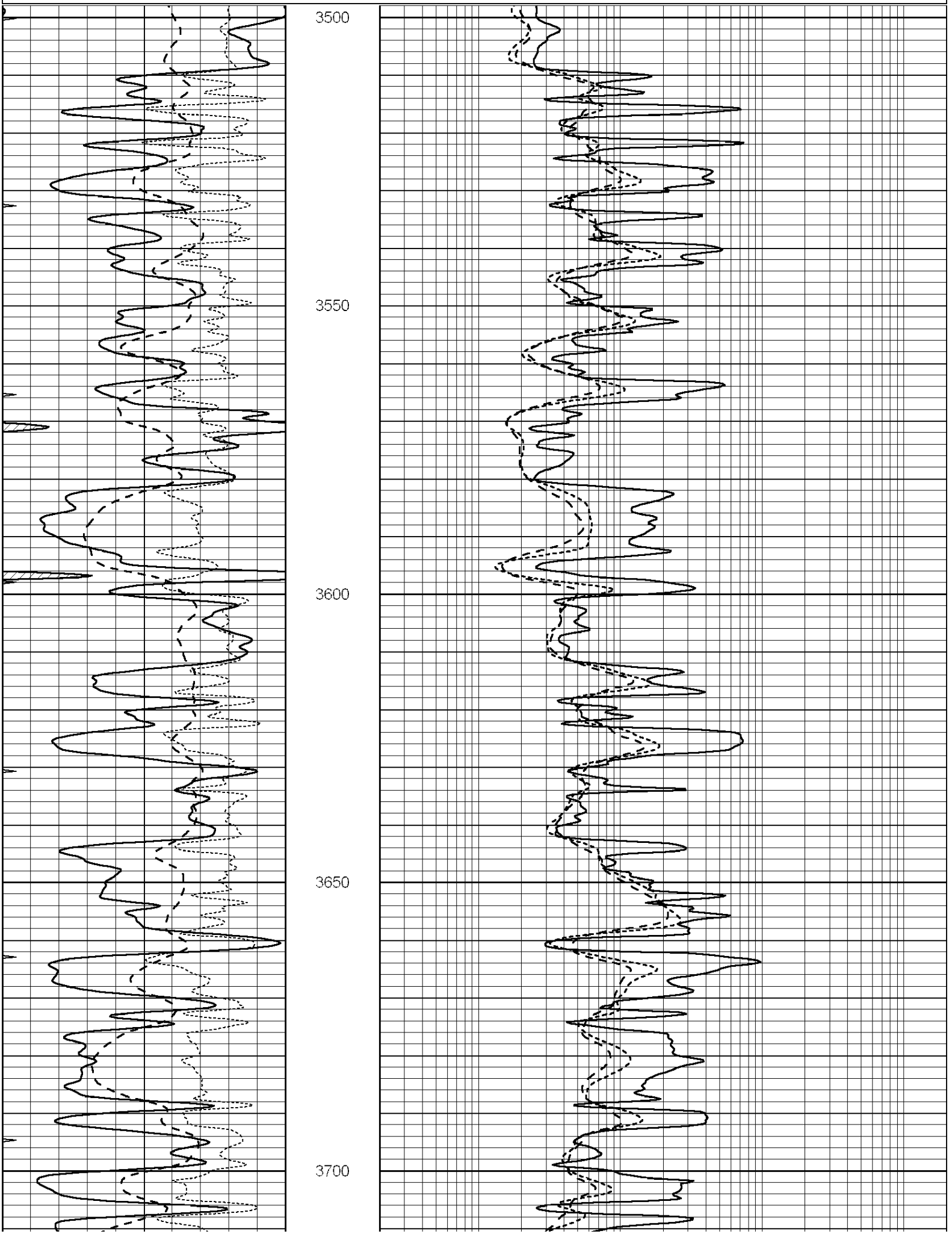
NABORS
COMPLETION & PRODUCTION SERVICES CO.

MAIN SECTION

Database File:	011198ddn.db
Dataset Pathname:	pass3.8
Presentation Format:	_dil
Dataset Creation:	Sun Aug 04 07:36:45 2013
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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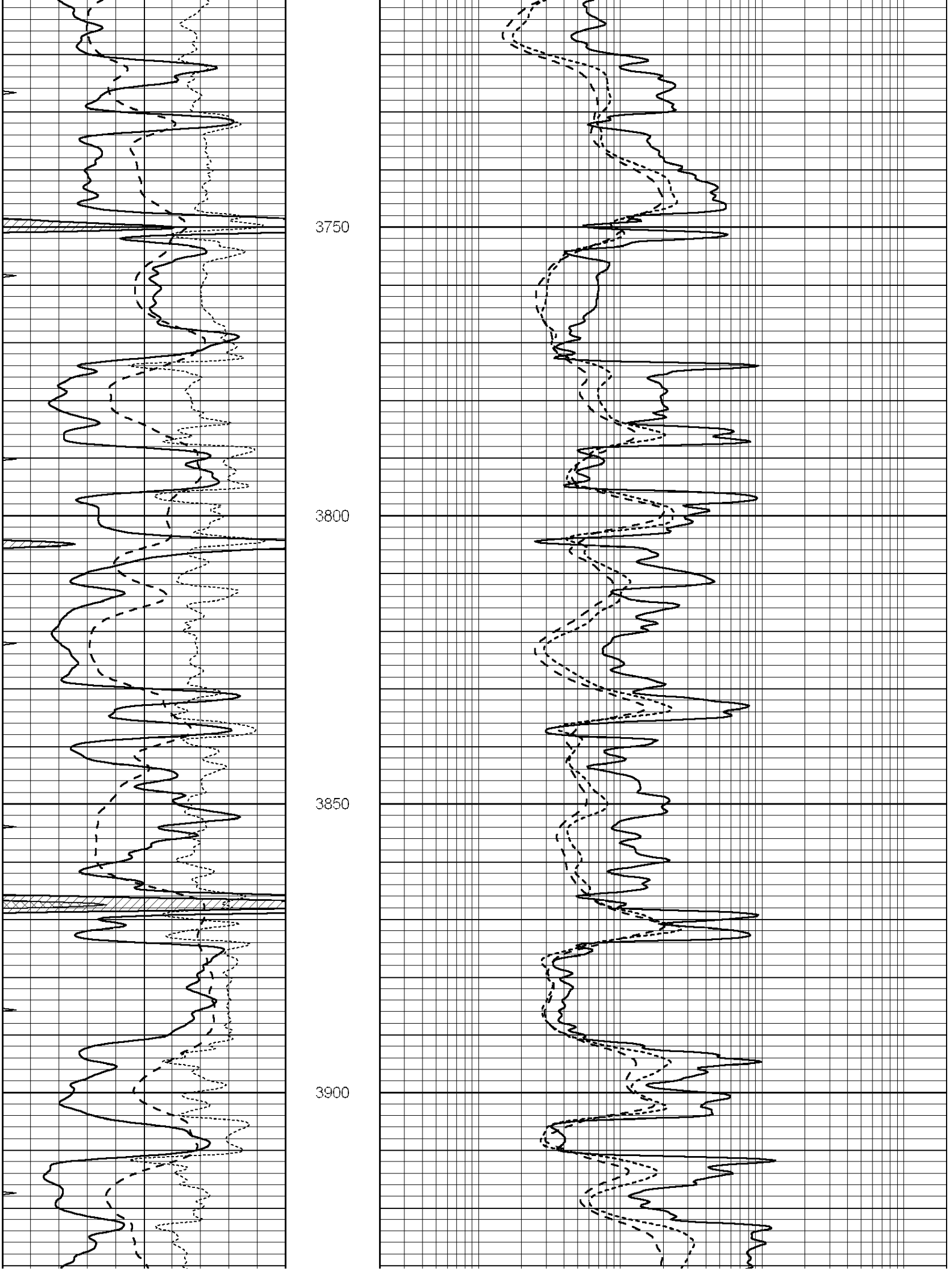
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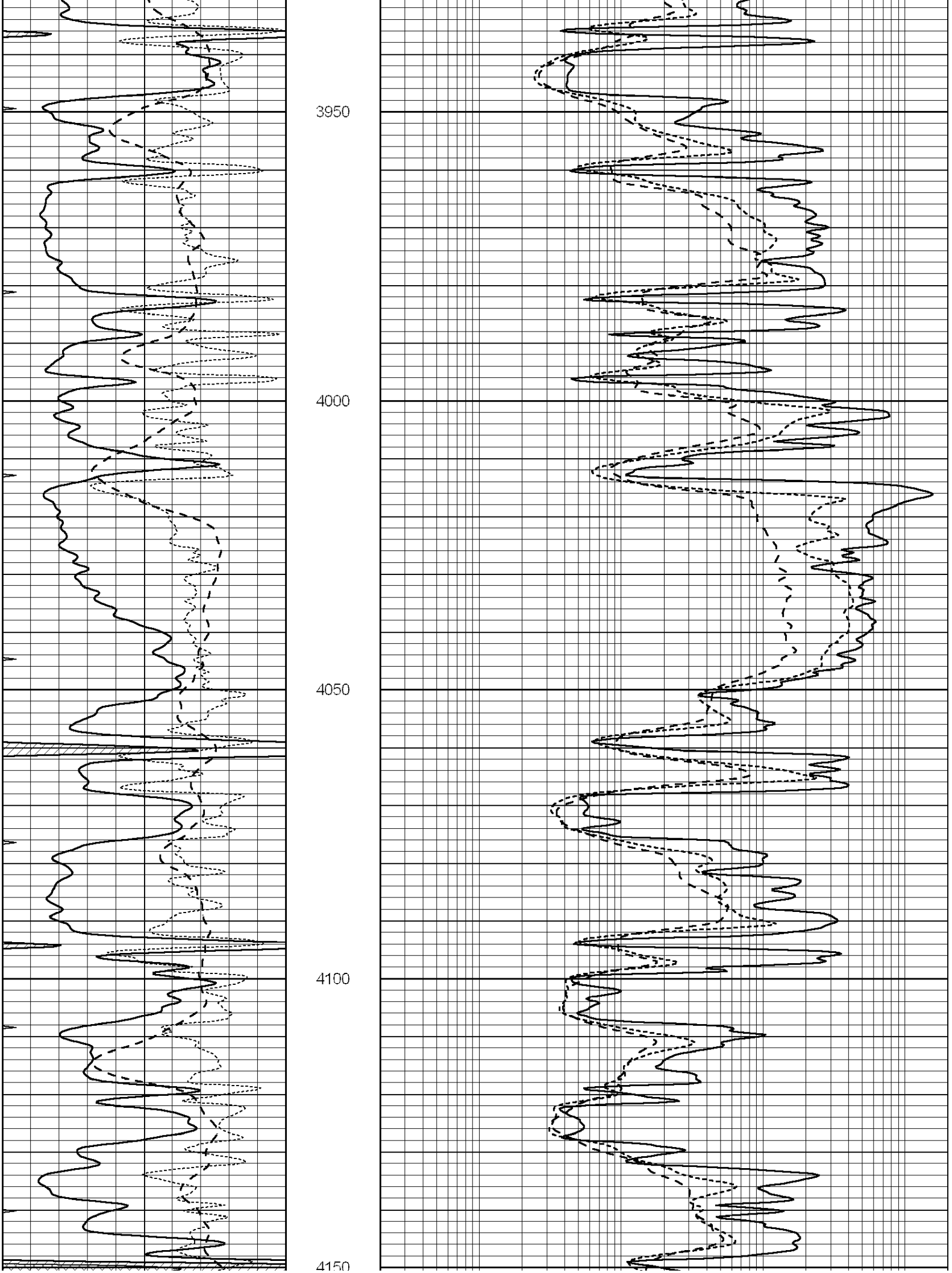
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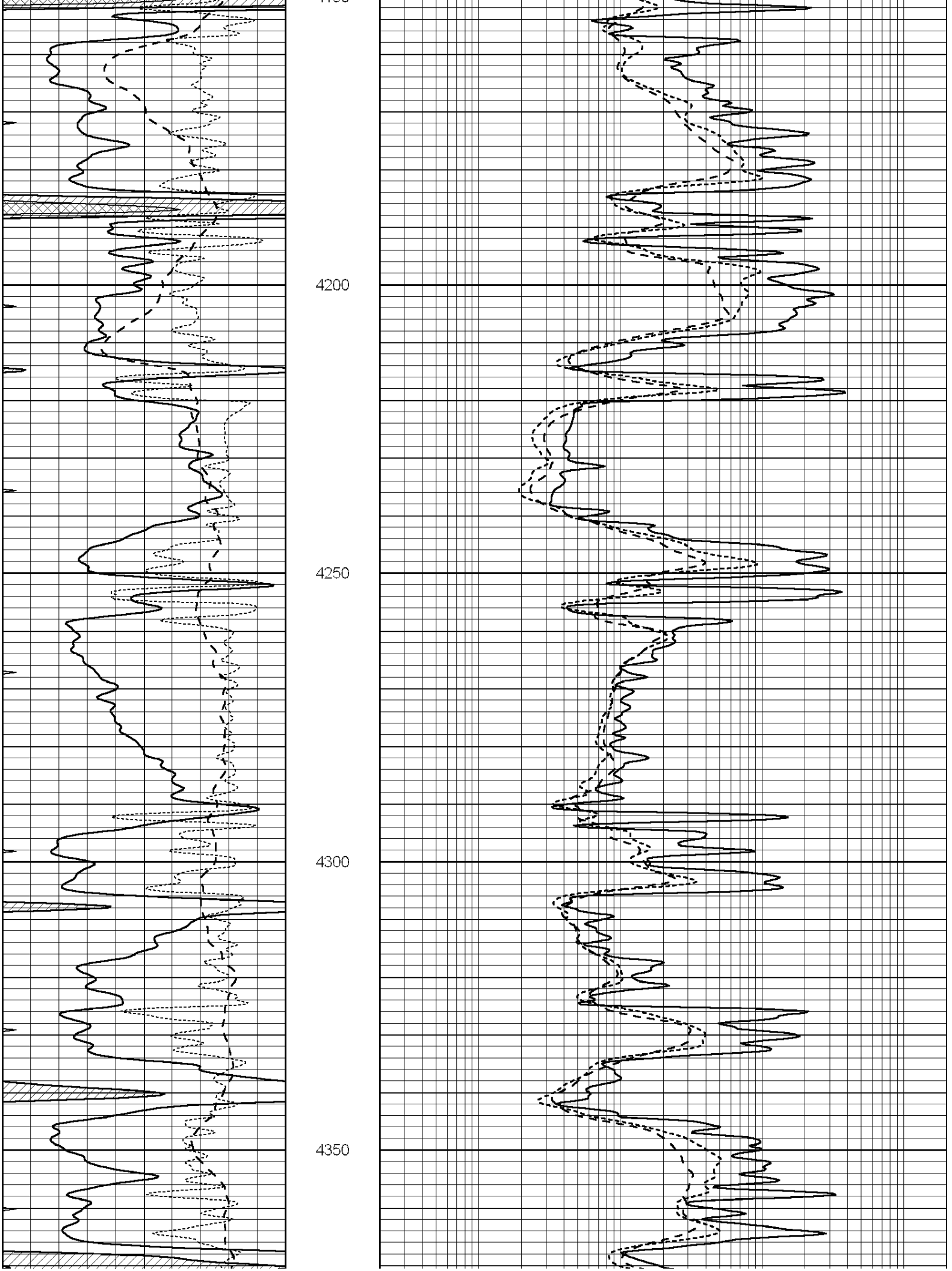
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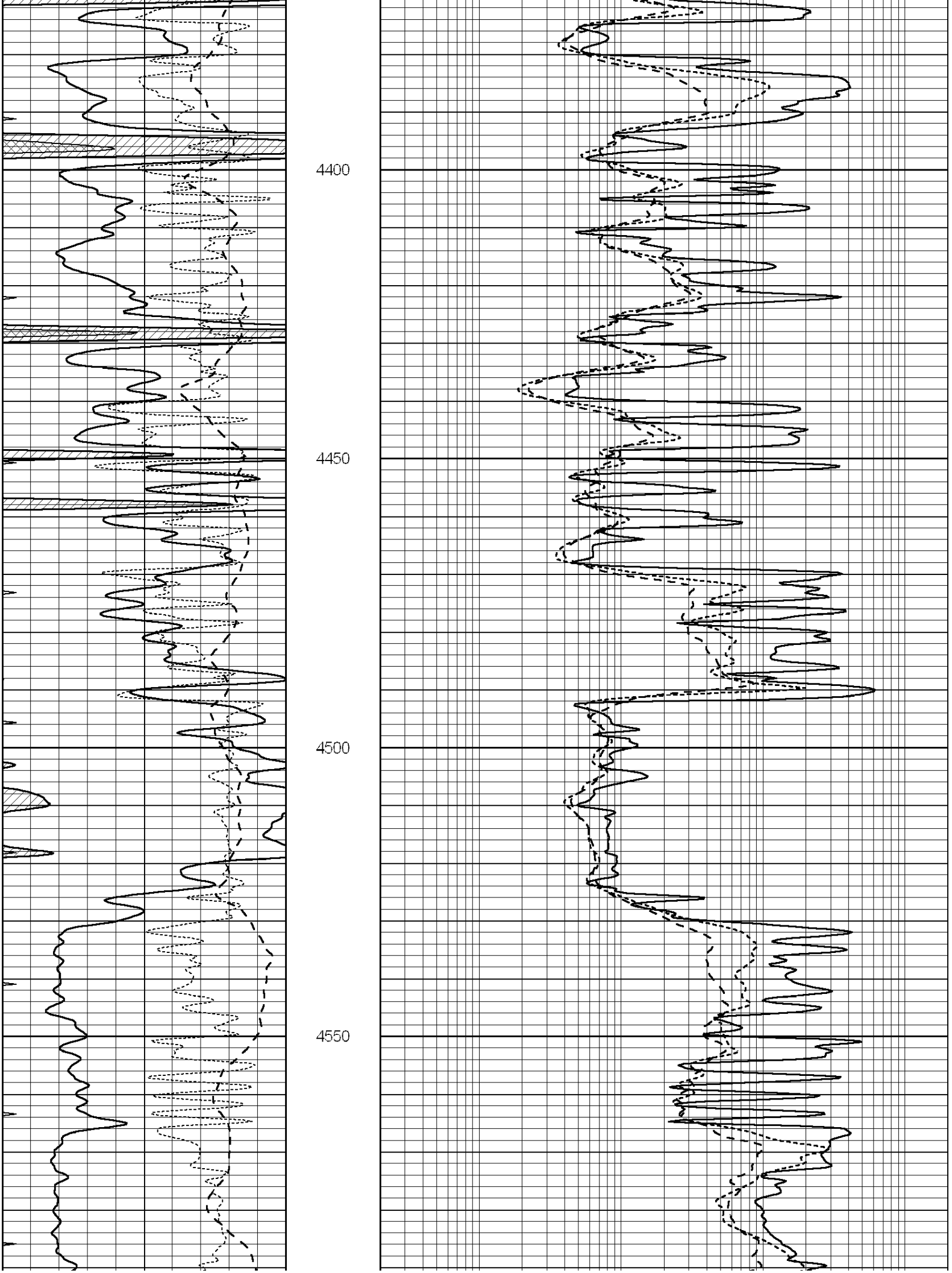
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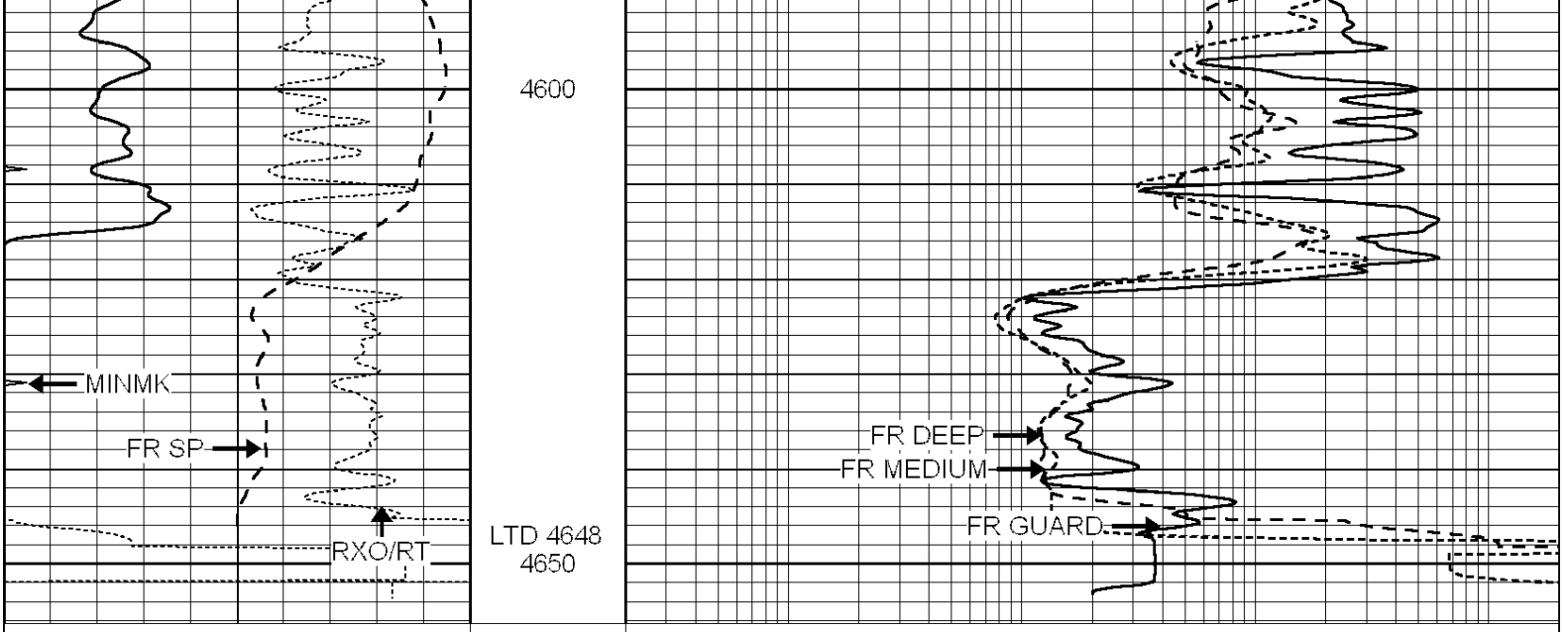


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

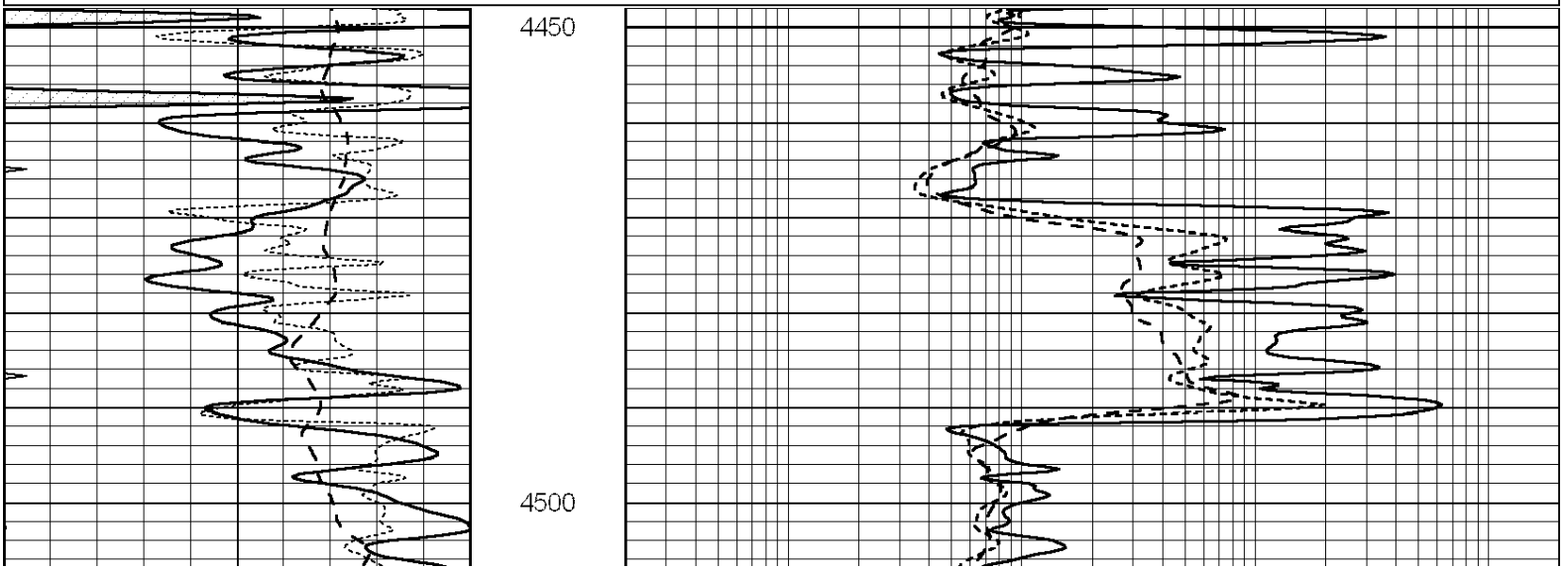
NABORS
COMPLETION & PRODUCTION SERVICES CO.

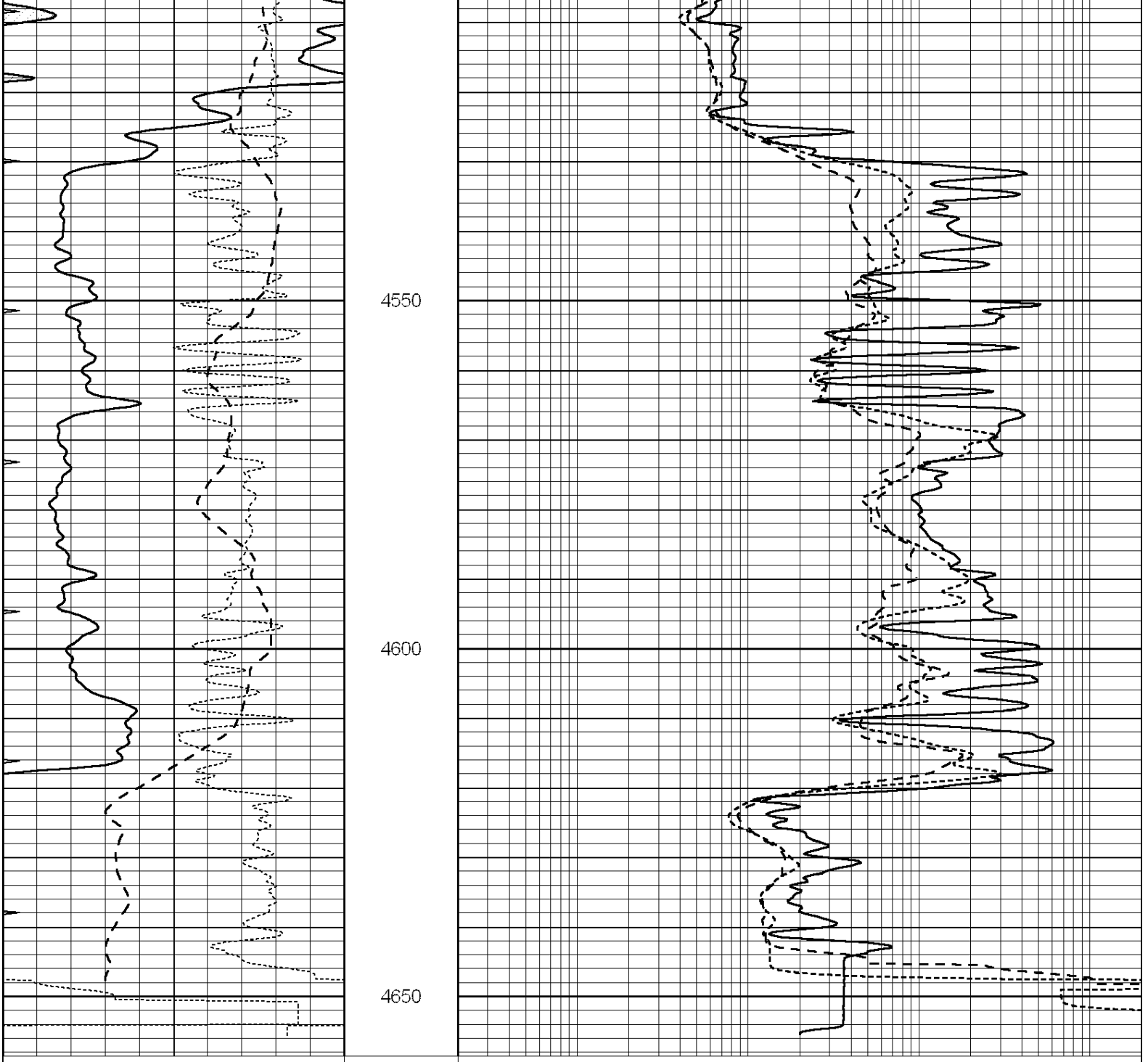
REPEAT SECTION

Database File: 011198ddn.db
Dataset Pathname: pass2.7
Presentation Format: _dil
Dataset Creation: Sun Aug 04 07:42:58 2013
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





Calibration Report

Database File:	011198ddn.db
Dataset Pathname:	pass3.8
Dataset Creation:	Sun Aug 04 07:36:45 2013

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Thu Jul 11 13:14:55 2013
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	-3.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-9.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration

Performed Mon Jun 03 09:36:56 2013

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1417.6	10391.4	3464.6	11537.5	cps
Window 2	1295.0	8959.7	3050.1	9816.4	cps
Window 3	1105.1	5464.2	2051.0	5838.8	cps
Window 4	315.0	317.7	312.9	319.8	cps
Long Space	0.0	7664.6	1755.0	8521.3	cps
Short Space	1.8	1582.4	1040.8	1699.4	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.574
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept	: -17.0

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 Jun 12 18:25:42 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3500 GAPI/cps