DUAL INDUCTION LOG

Company	EDISON OPERATING COMPANY, LLC.
Well	DOHRMAN #1-26
Field	ORTH
County	RICE
State	KANSAS

Company EDISON OPERATING COMPANY, LLC.

Well DOHRMAN #1-26

Field ORTH

County RICE State KANSAS

Location: API # : 15-159-22840-0000

946' FSL & 1980' FEL

SEC 26 TWP 18S RGE 10W

Permanent Datum	GROUND LEVEL	Elevation 1743	Other Services CDL/CNL/PE MEL/SONIC
Log Measured From	KELLY BUSHING 8' A.G.L.		Elevation K.B. 1751
Drilling Measured From	KELLY BUSHING		D.F. 1749 G.L. 1743

Date	5/31/17			
Run Number	ONE			
Depth Driller	3289			
Depth Logger	3290			
Bottom Logged Interval	3288			
Top Log Interval	00			
Casing Driller	8 5/8"@388'			
Casing Logger	388			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,600 PPM		
Density / Viscosity	9.3/58			
pH / Fluid Loss	11.0/8.8			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.700@82F			
Rmf @ Meas. Temp	.525@82F			
Rmc @ Meas. Temp	.840@82F			
Source of Rmf / Rmc	MEASUREMENT			
Rm @ BHT	.522@110F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom	12:45 A.M.			
Maximum Recorded Temperature	110F			
Equipment Number	922339			
Location	HAYS, KANSAS			
Recorded By	JEFF LUEBBERS			
Witnessed By	DEREK PATTERSON			

<<< Fold Here >>>

Comments

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395

DIRECTIONS

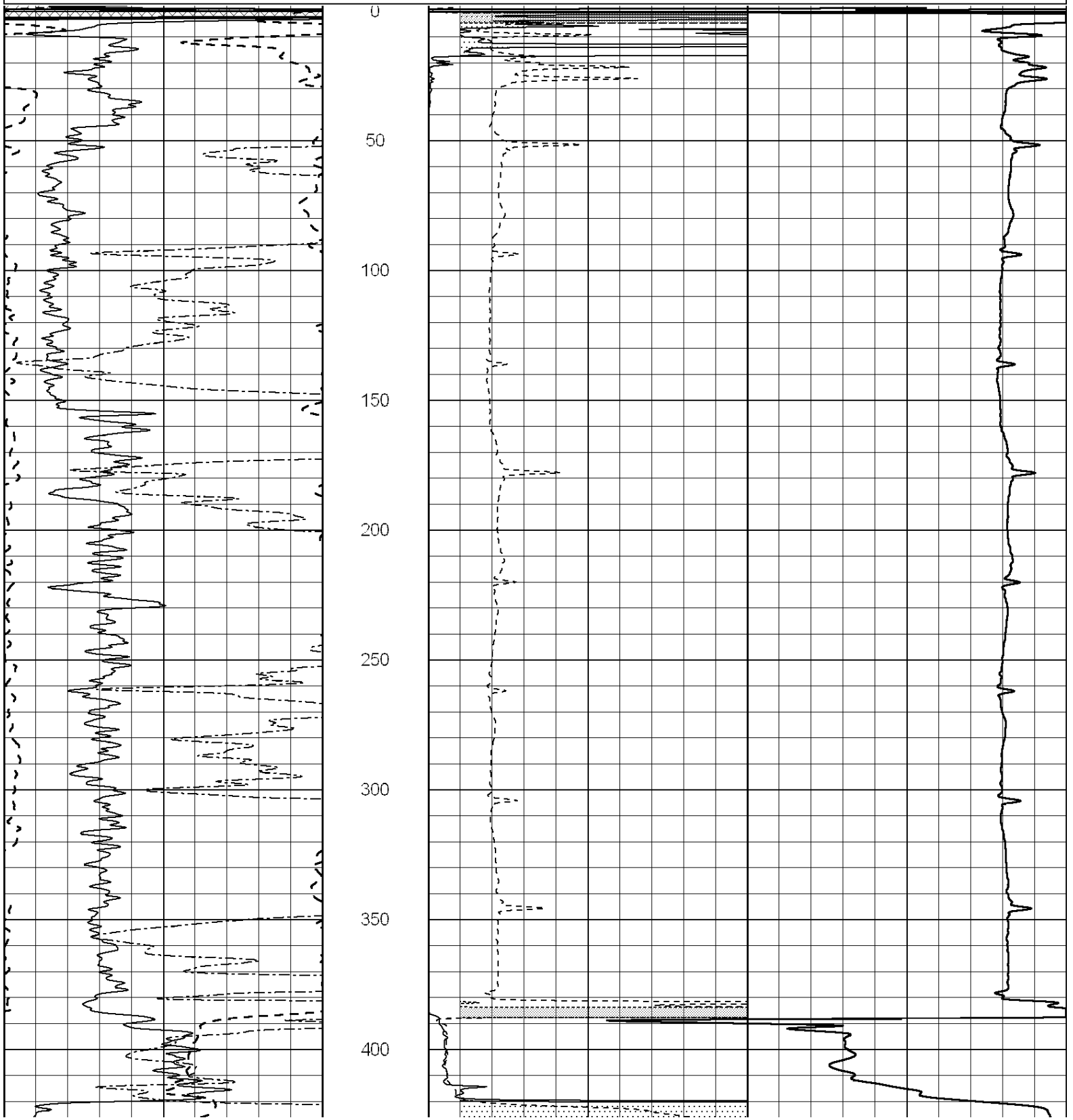
BUSHTON, KS.,(HWY 4 & 5TH RD.) 5S. TO "AVE. F",1/2E., N. INTO

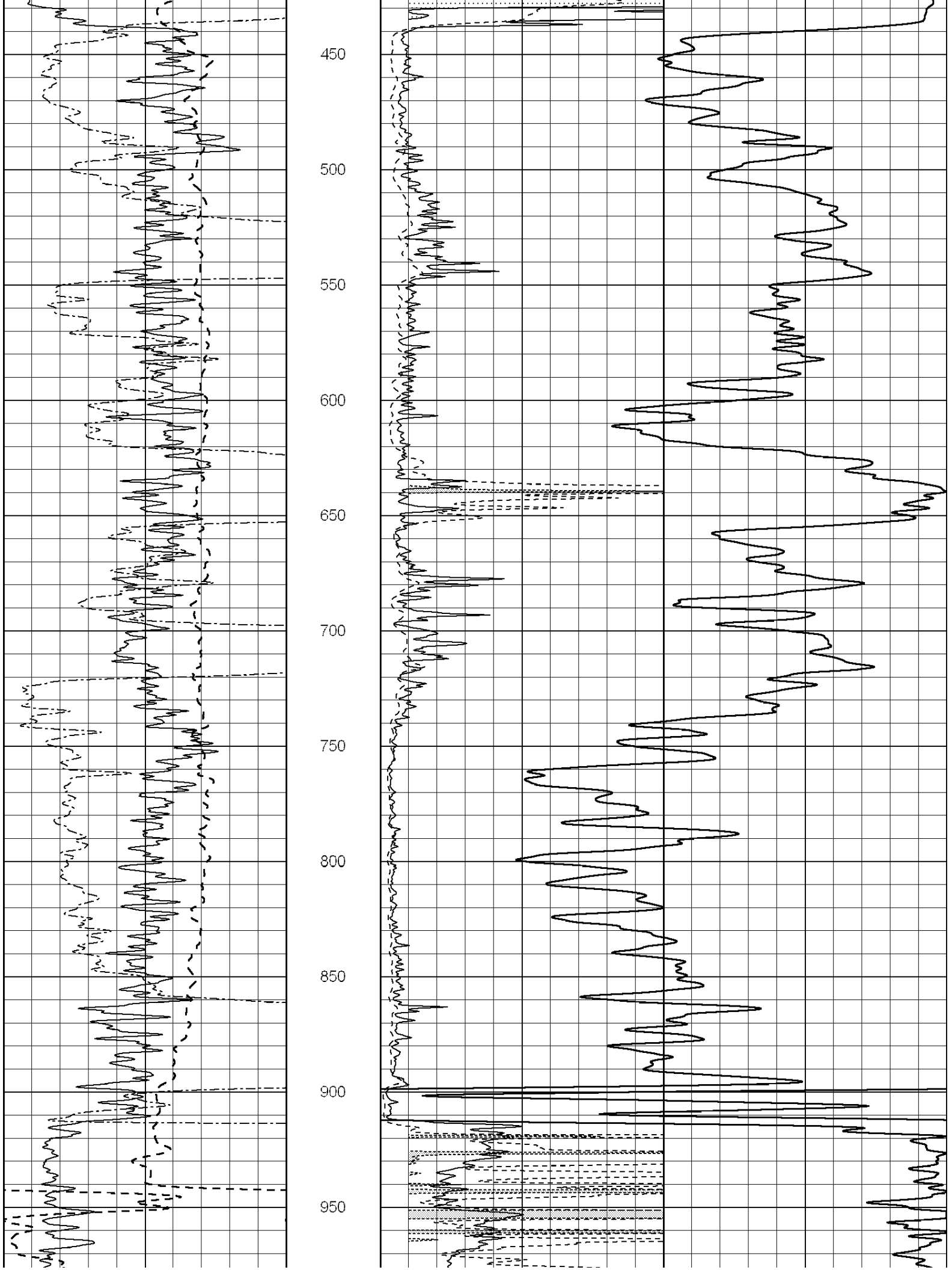
MAIN SECTION

Database File: 1425pe.db
Dataset Pathname: pass3.6
Presentation Format: dil2
Dataset Creation: Wed May 31 02:06:14 2017
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

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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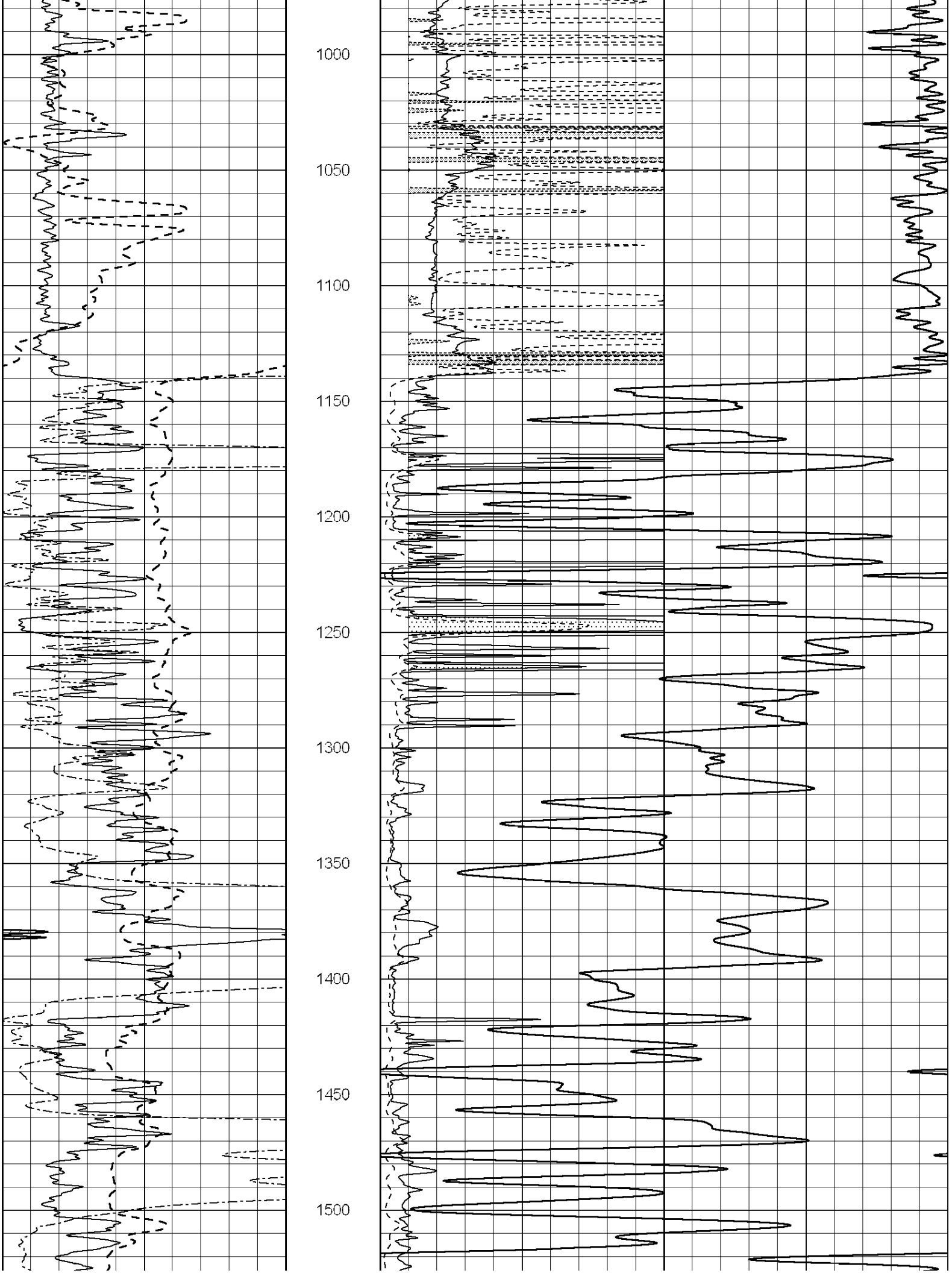
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1300
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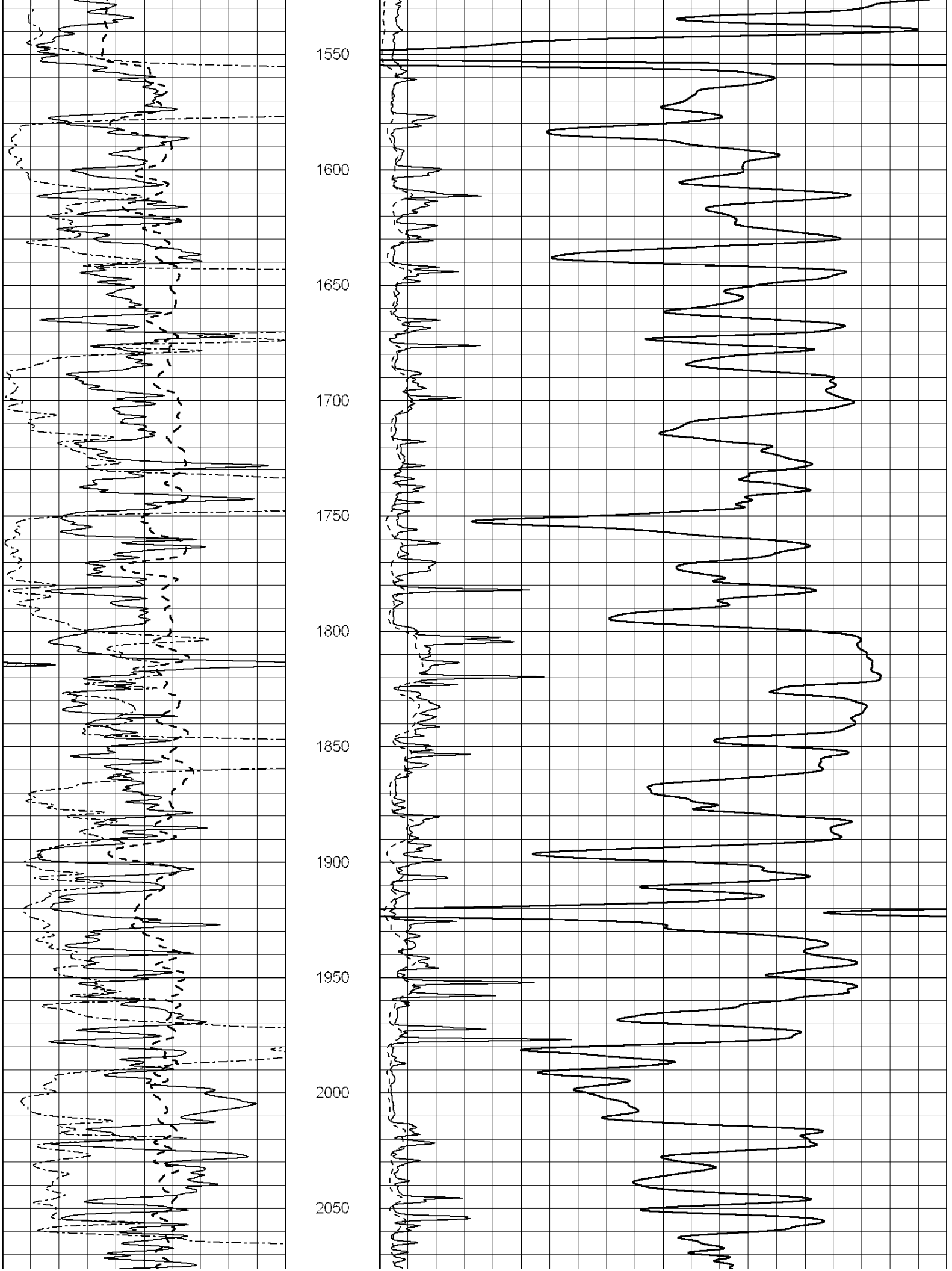
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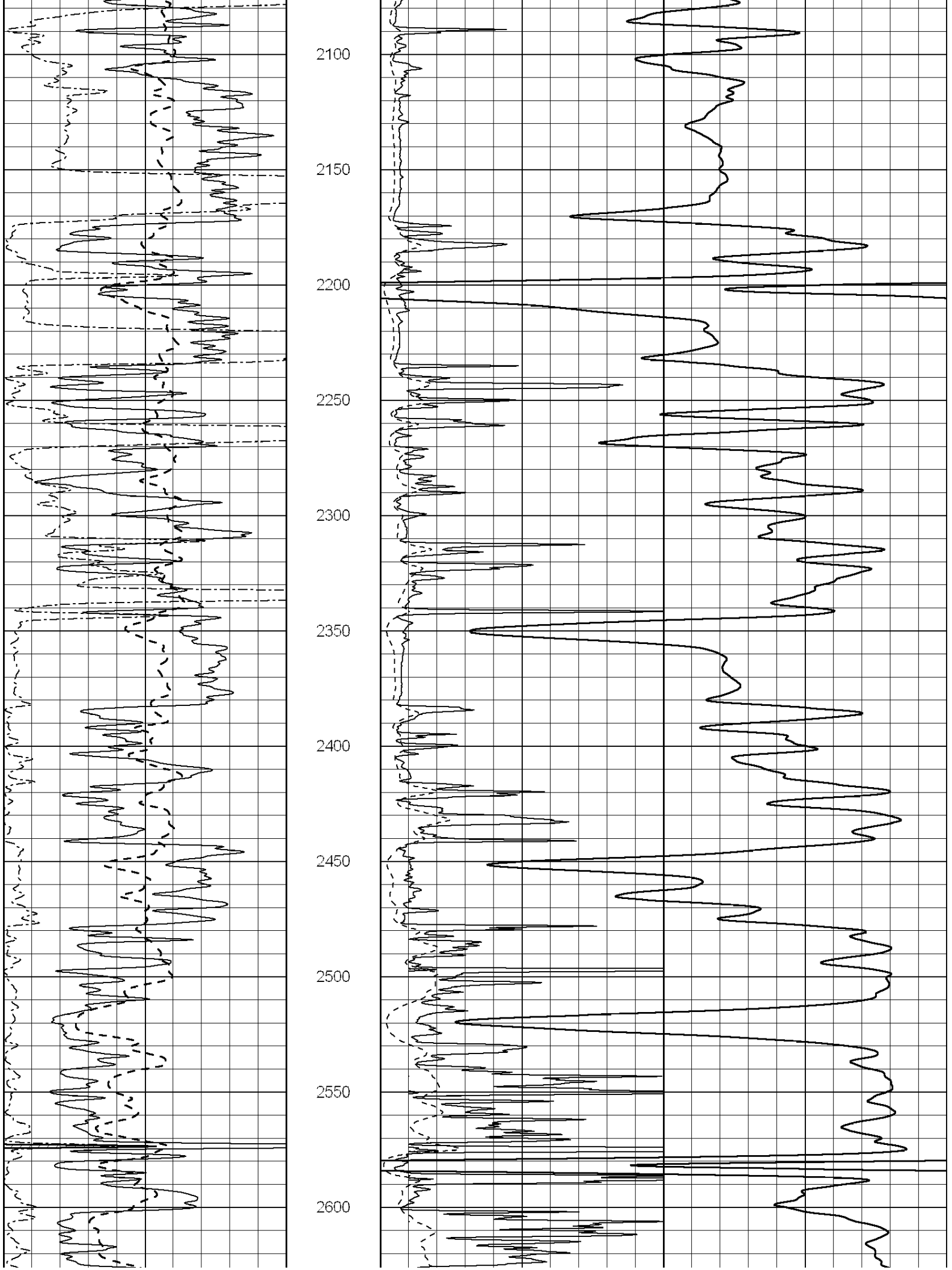
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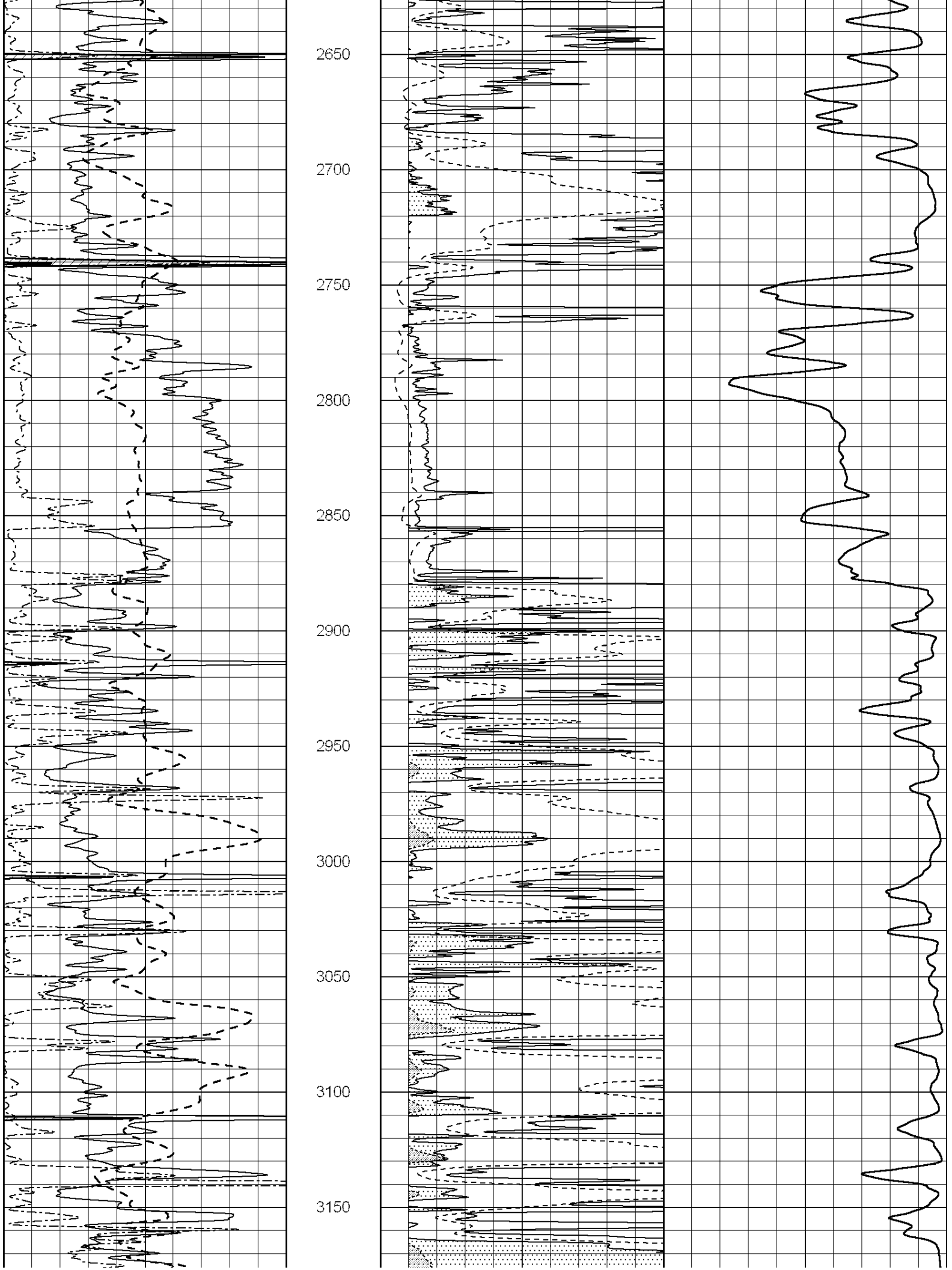
2600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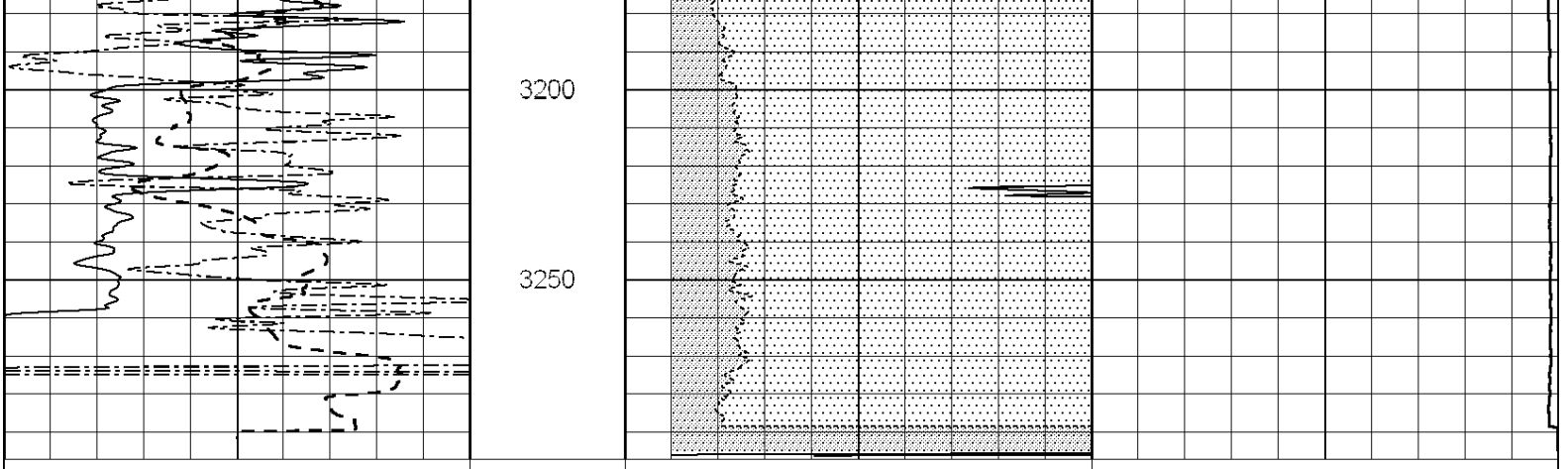


0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

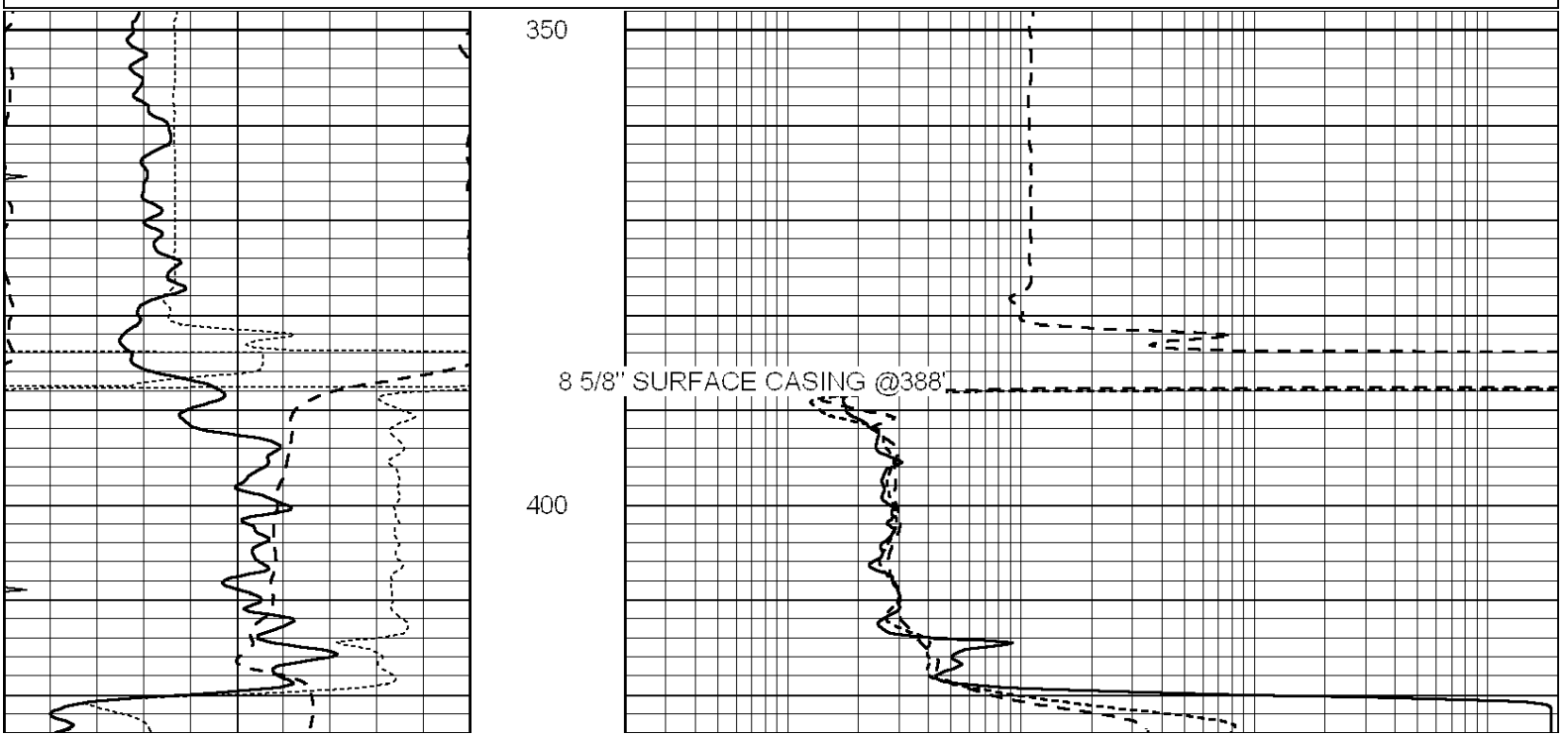
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

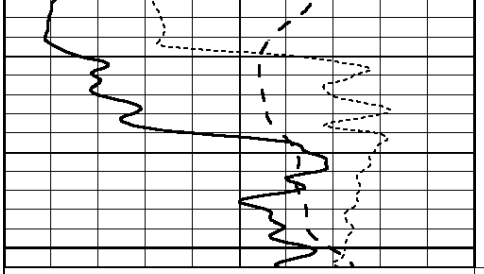
ANHYDRITE

Database File:	1425pe.db
Dataset Pathname:	pass3.7
Presentation Format:	_dil
Dataset Creation:	Wed May 31 02:07:33 2017
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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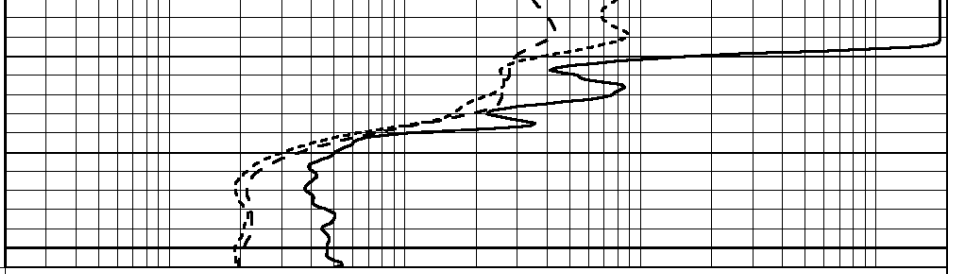


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

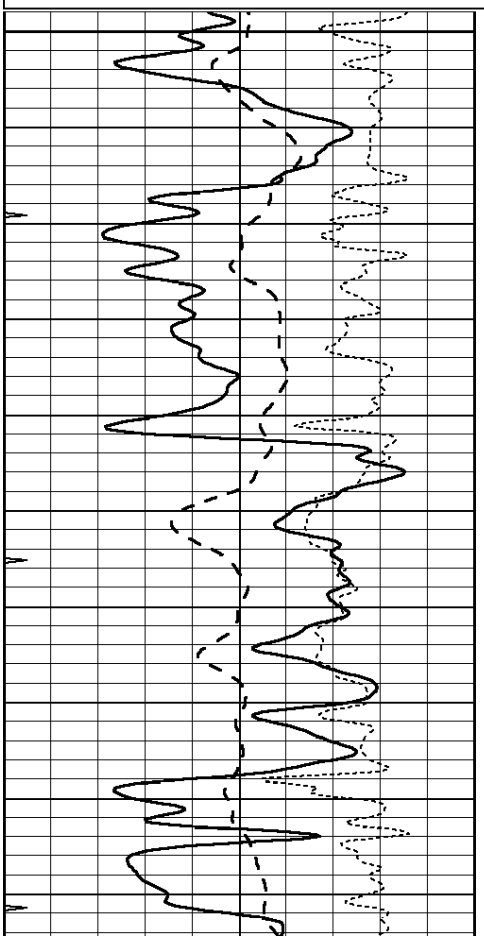
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

MAIN SECTION

Database File:	1425pe.db
Dataset Pathname:	pass3.6
Presentation Format:	_dil
Dataset Creation:	Wed May 31 02:06:14 2017
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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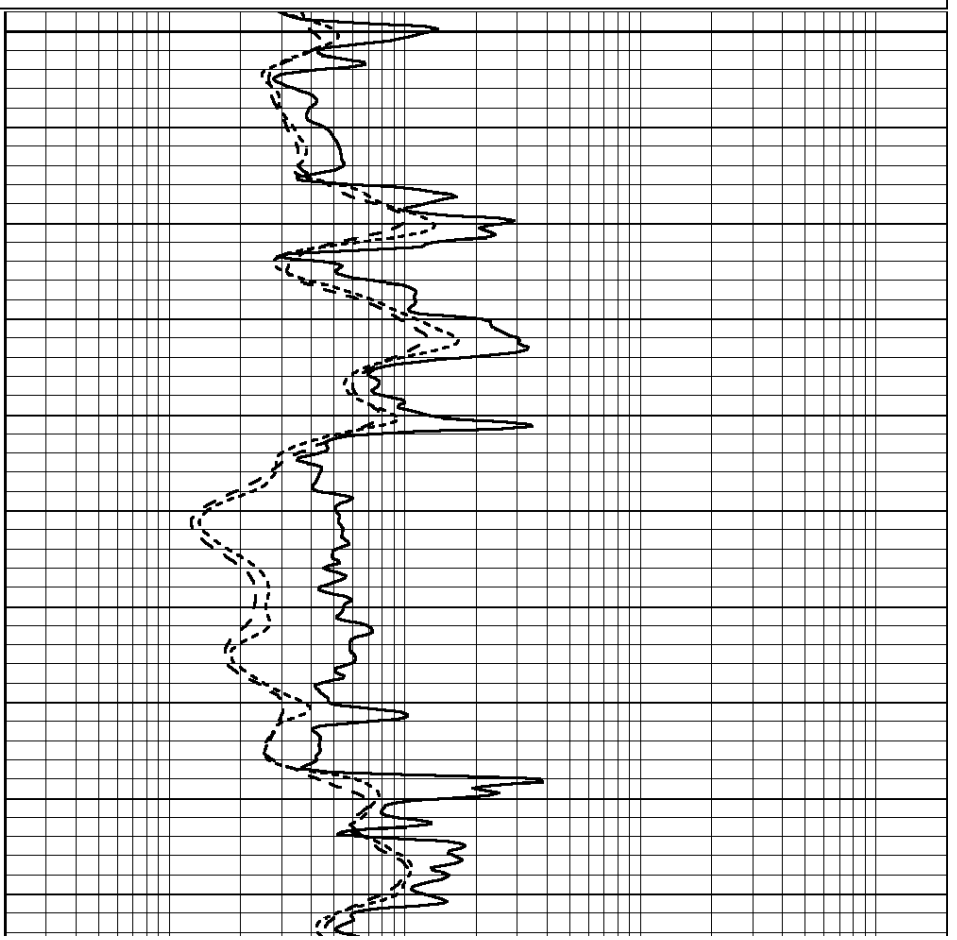

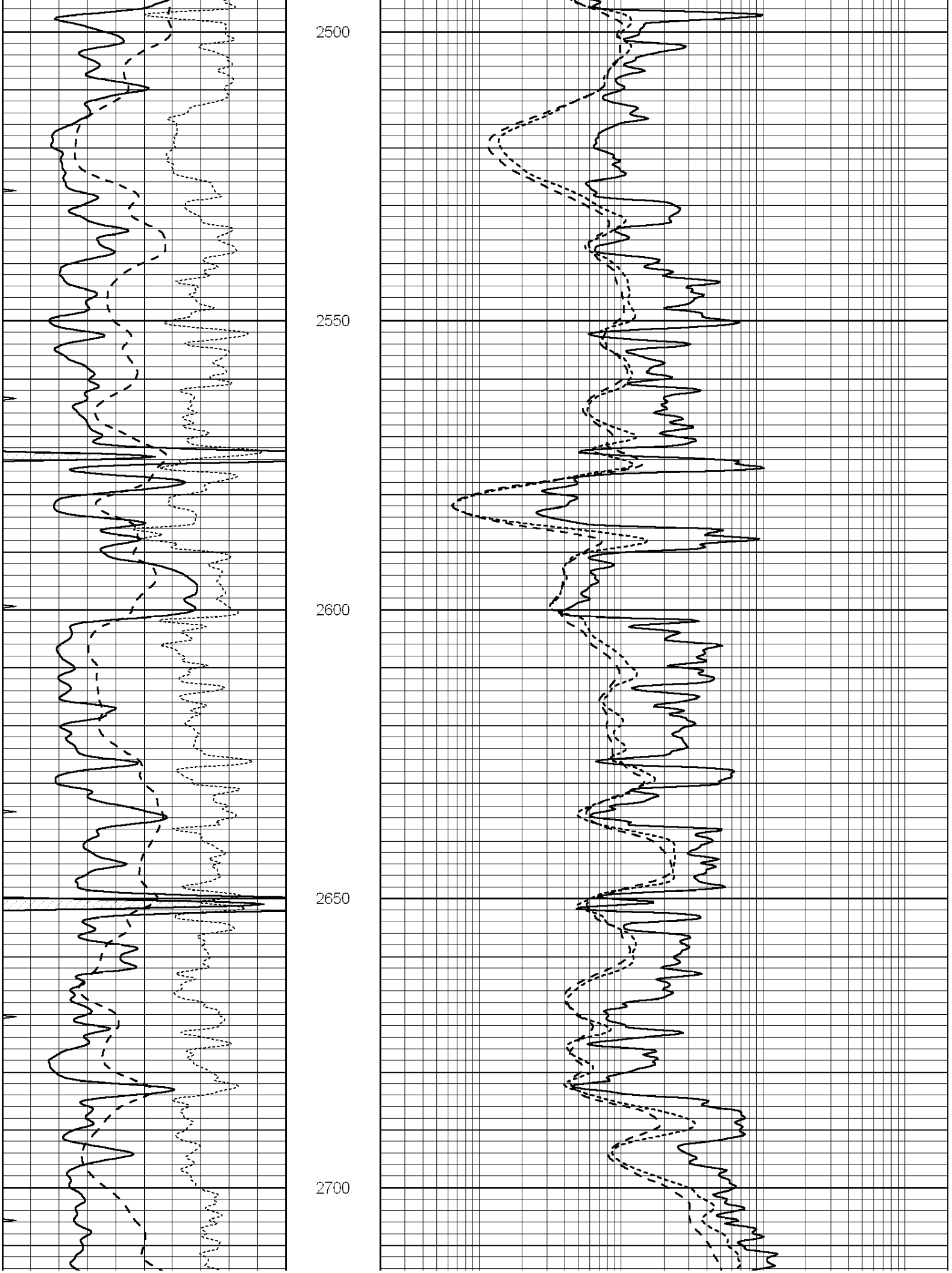
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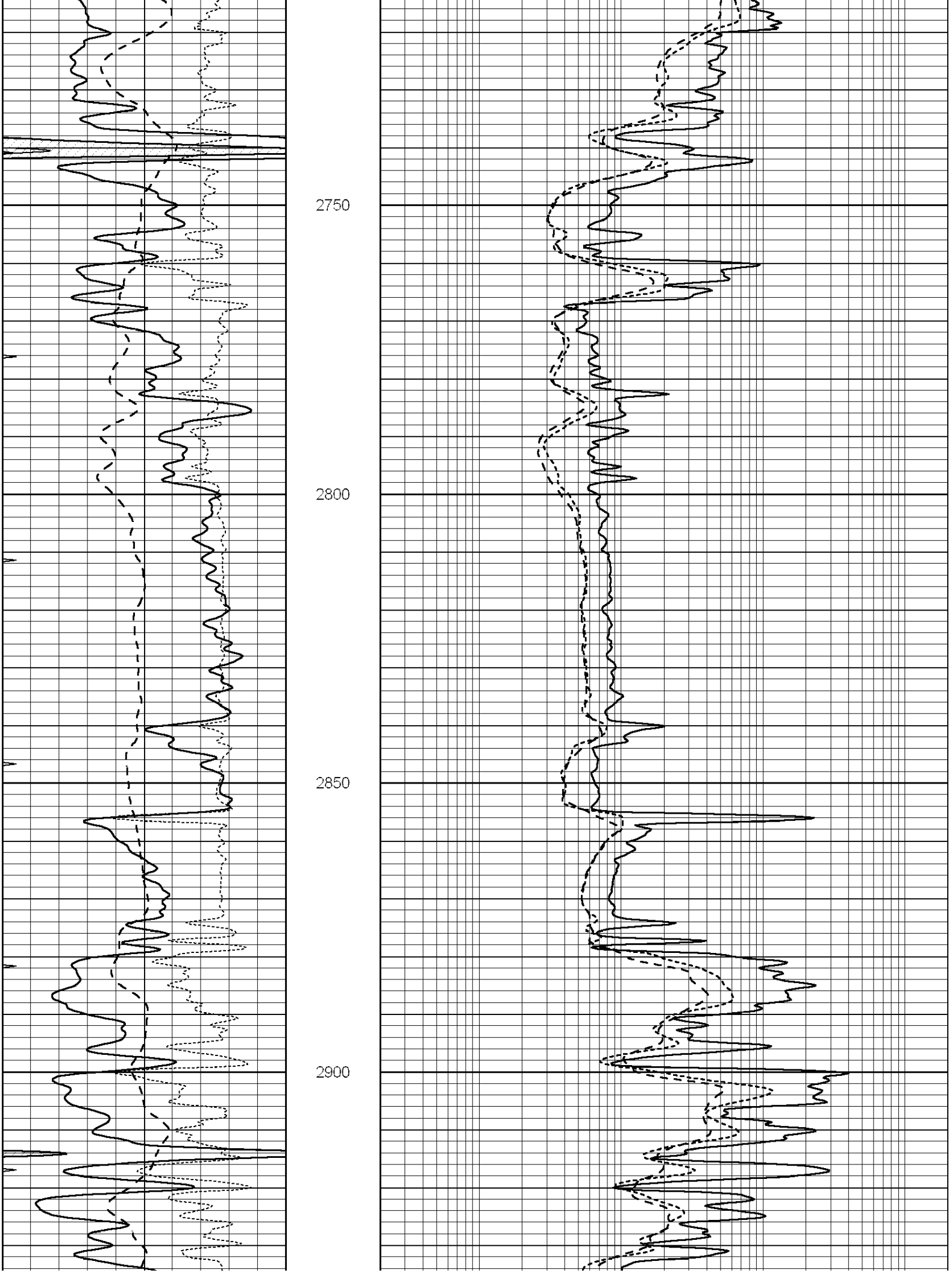
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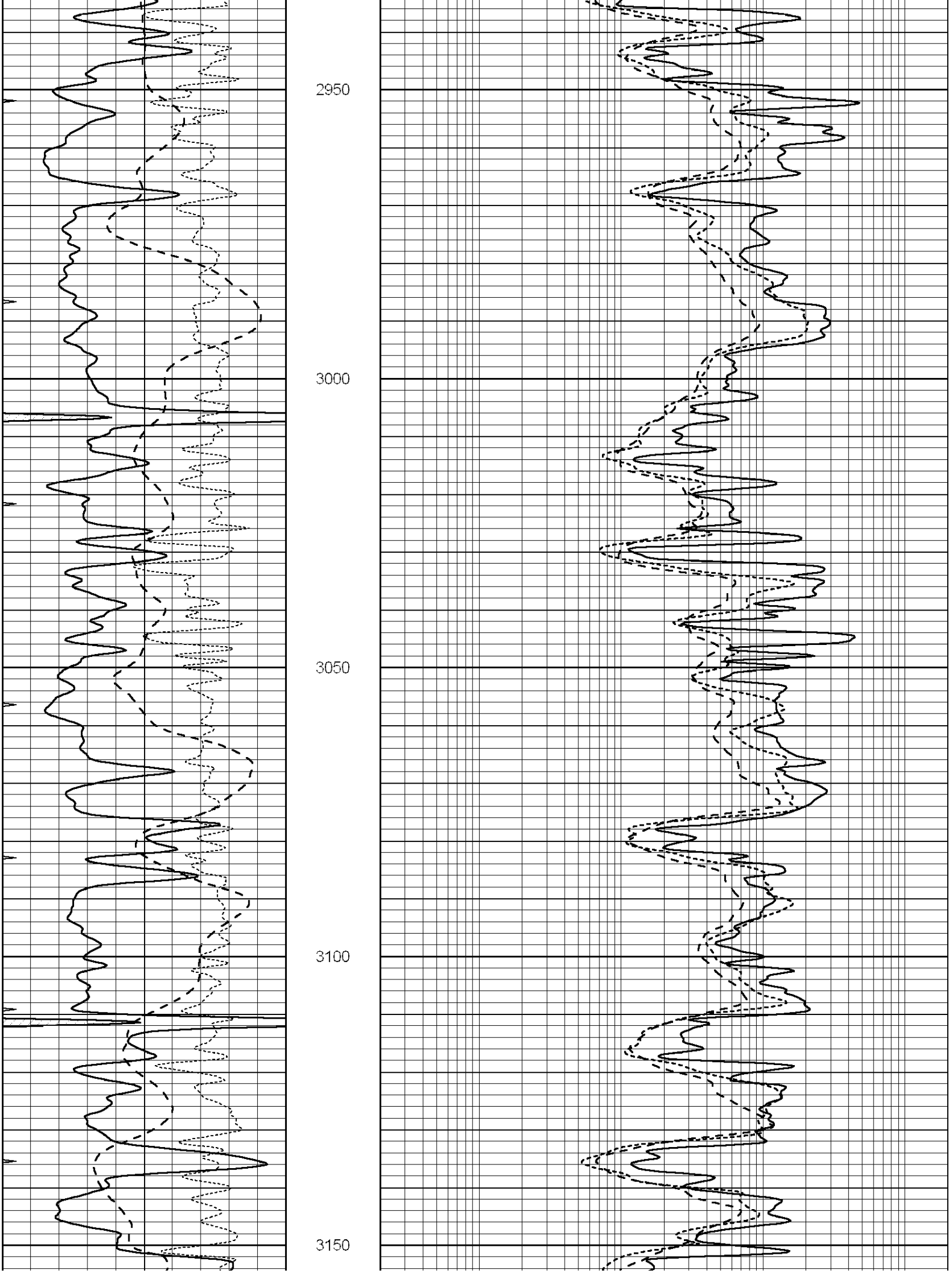
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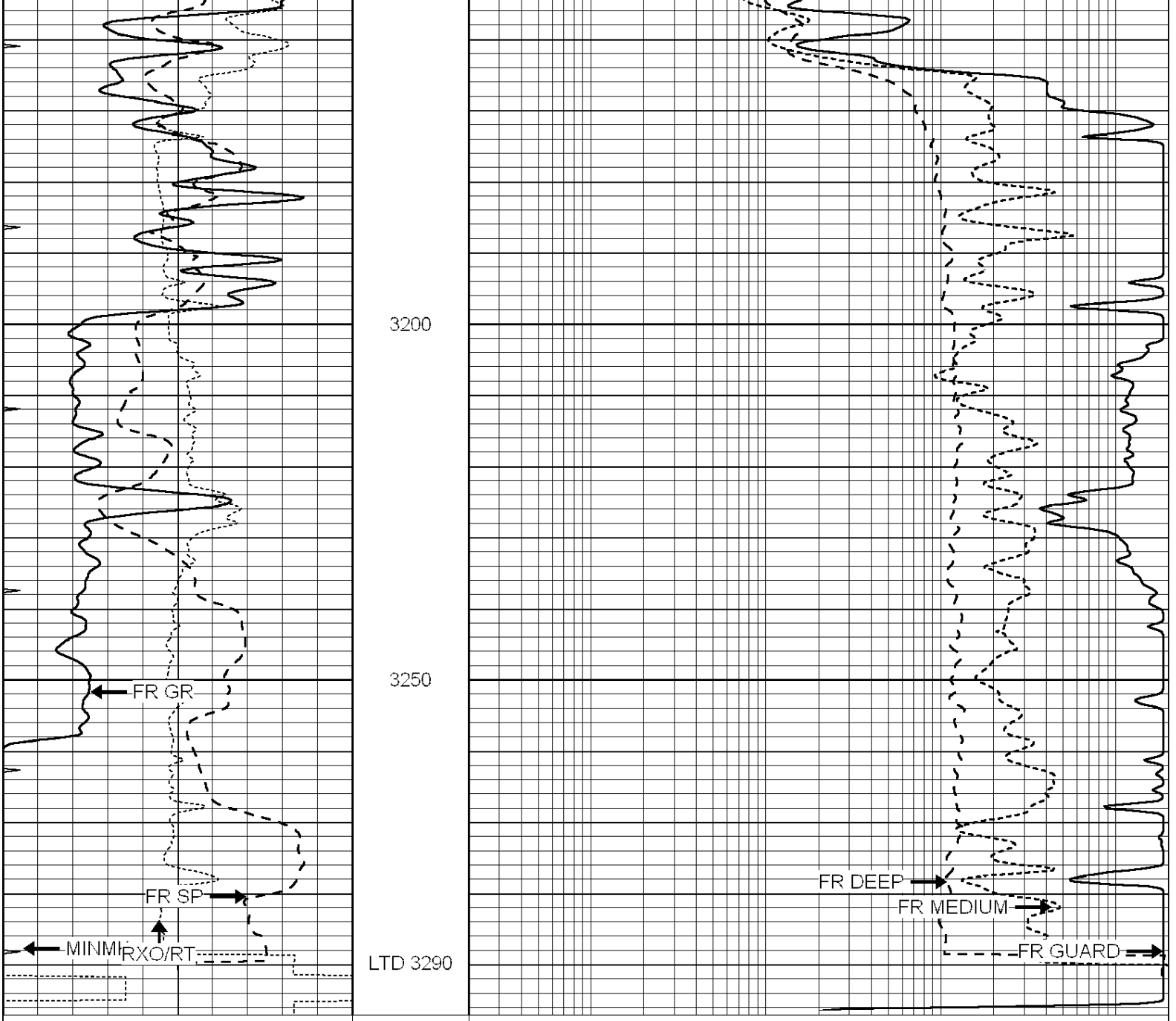


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

REPEAT SECTION

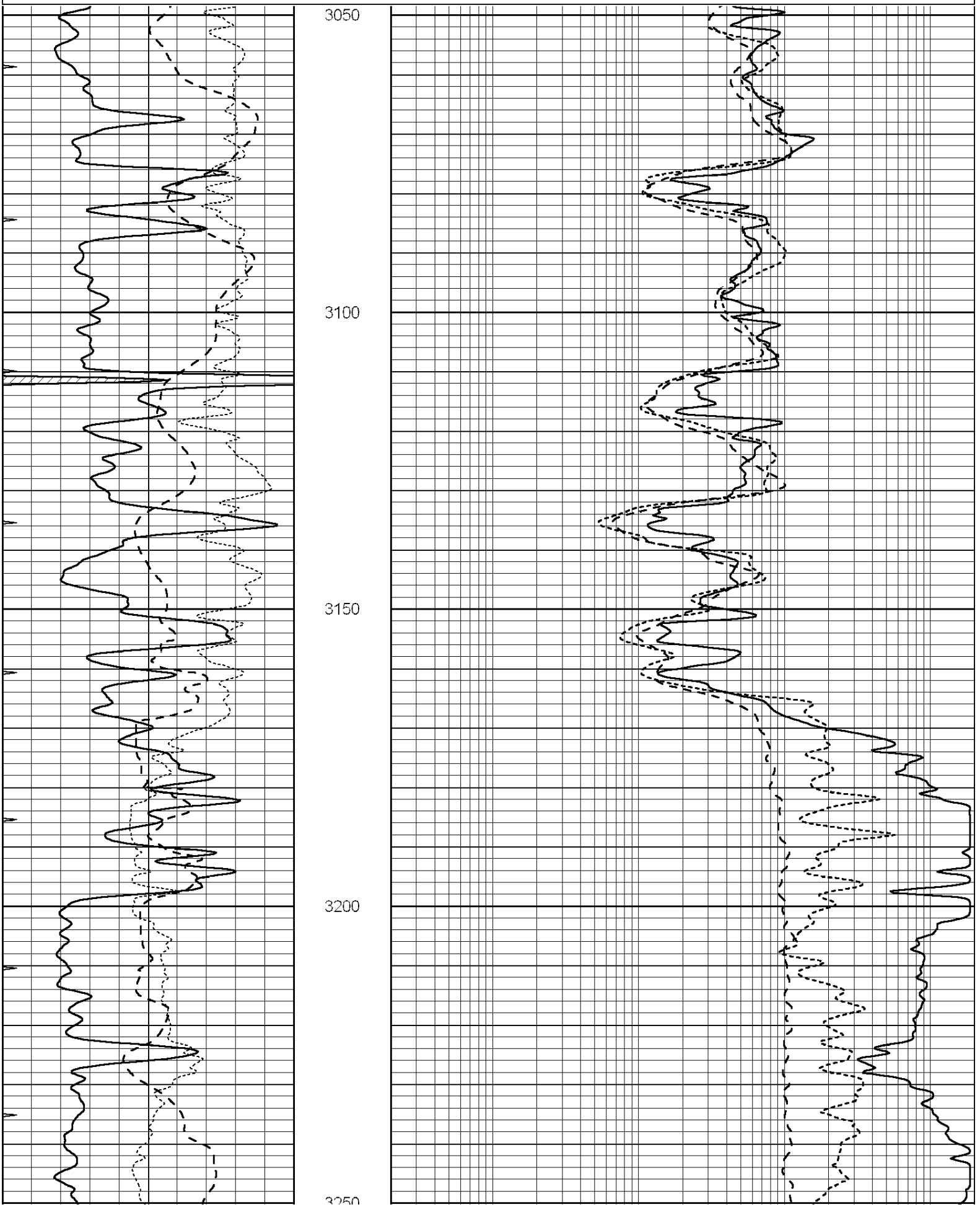
Database File:	1425pe.db
Dataset Pathname:	pass2.8
Presentation Format:	_dil
Dataset Creation:	Wed May 31 01:25:12 2017
Charted by:	Depth in Feet scaled 1:240

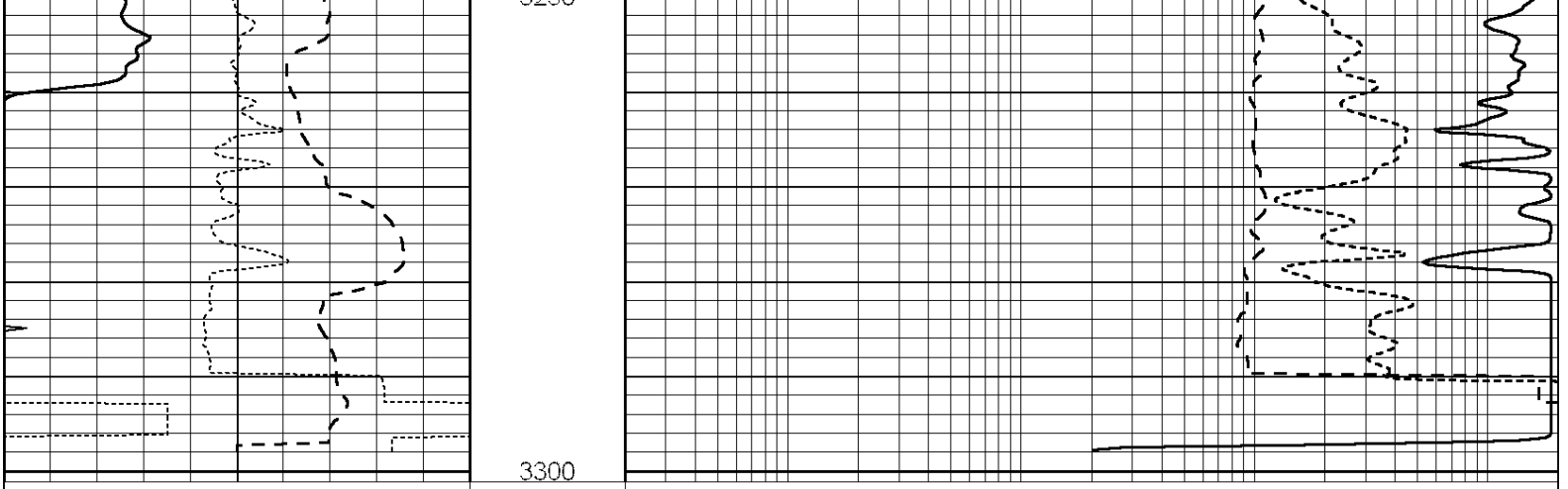
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100

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

-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

Calibration Report

Database File: 1425pe.db
Dataset Pathname: pass3.6
Dataset Creation: Wed May 31 02:06:14 2017

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Mon May 15 11:30:04 2017
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	620.000	9.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-38.000
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: 003N Model: PRB

Master Calibration — Performed Mon Mar 14 08:48:13 2016

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1751.3	11741.0	3857.3	12907.8	cps
Window 2	1589.4	9536.2	3267.6	10282.0	cps
Window 3	1413.4	6466.1	2463.2	6828.7	cps
Window 4	399.5	407.1	405.1	406.5	cps
Long Space	0.0	7946.7	1678.1	8692.6	cps
Short Space	2.2	3366.2	2134.1	3410.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 43.7	Rib Slope	: 0.954	Density/Spine Ratio	: 0.543
Spine Angle	: 73.7	Spine Slope	: 3.412	Spine Intercept	: -18.7

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:	070558	
Tool Model:	OPEN_GR	
Performed:	Wed May 31 00:09:32 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps