Casedhole Solutions

DUAL INDUCTION LOG

Company	SHELBY RESOURCES, LLC
Well	FRANCIS #1-36
Field	SWEENEY SOUTHWEST
County	PAWNEE
State	KANSAS

Company SHELBY RESOURCES, LLC.
Well FRANCIS #1-36
Field SWEENEY SOUTHWEST
County PAWNEE State KANSAS

Location: API # : 15-145-21817-0000
2325' FNL & 2197' FWL
SEC 36 TWP 21S RGE 17W

Other Services: CDL/CNL/PE MEL/SONIC

Permanent Datum: GROUND LEVEL Elevation 1971
Log Measured From: KELLY BUSHING 11' A.G.L.
Drilling Measured From: KELLY BUSHING

Elevation: K.B. 1982, D.F. 1980, G.L. 1971

Date	3/23/16			
Run Number	ONE			
Depth Driller	4000			
Depth Logger	3998			
Bottom Logged Interval	3996			
Top Log Interval	00			
Casing Driller	8 5/8"@970'			
Casing Logger	968			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,700 PPM		
Density / Viscosity	9.4/63			
pH / Fluid Loss	10.5/7.2			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	.900@71F			
Rmf @ Meas. Temp	.675@71F			
Rmc @ Meas. Temp	1.08@71F			
Source of Rmf / Rmc	MEASUREMENT			
Rm @ BHT	.551@116F			
Time Circulation Stopped	2.5 HOURS			
Time Logger on Bottom	6:00 P.M.			
Maximum Recorded Temperature	116F			
Equipment Number	922339			
Location	HAYS, KANSAS			
Recorded By	JEFF LUEBBERS			
Witnessed By	KEITH REAVIS			

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Comments

THANK YOU FOR USING (C & J ENERY/ CASEDHOLE SOLUTIONS) HAYS, KANSAS (785) 628-6395
DIRECTIONS
LARNED, KS. & HWY 19, 3E. RD "80TH AVE.", 1 1/2N, AROUND CURVE, E. INTO AND FOLLOW TRAIL BACK NORTH

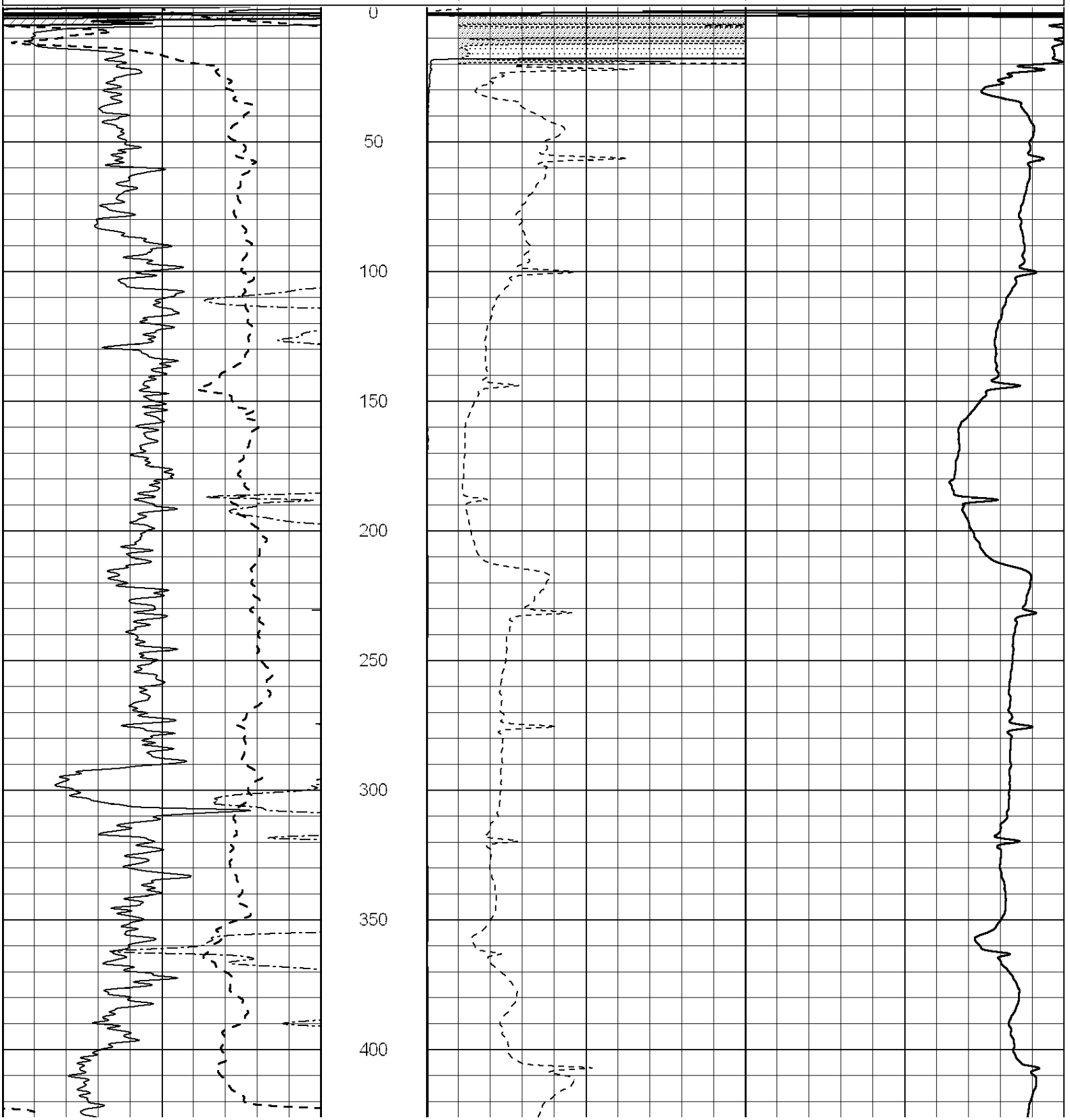
Casedhole Solutions

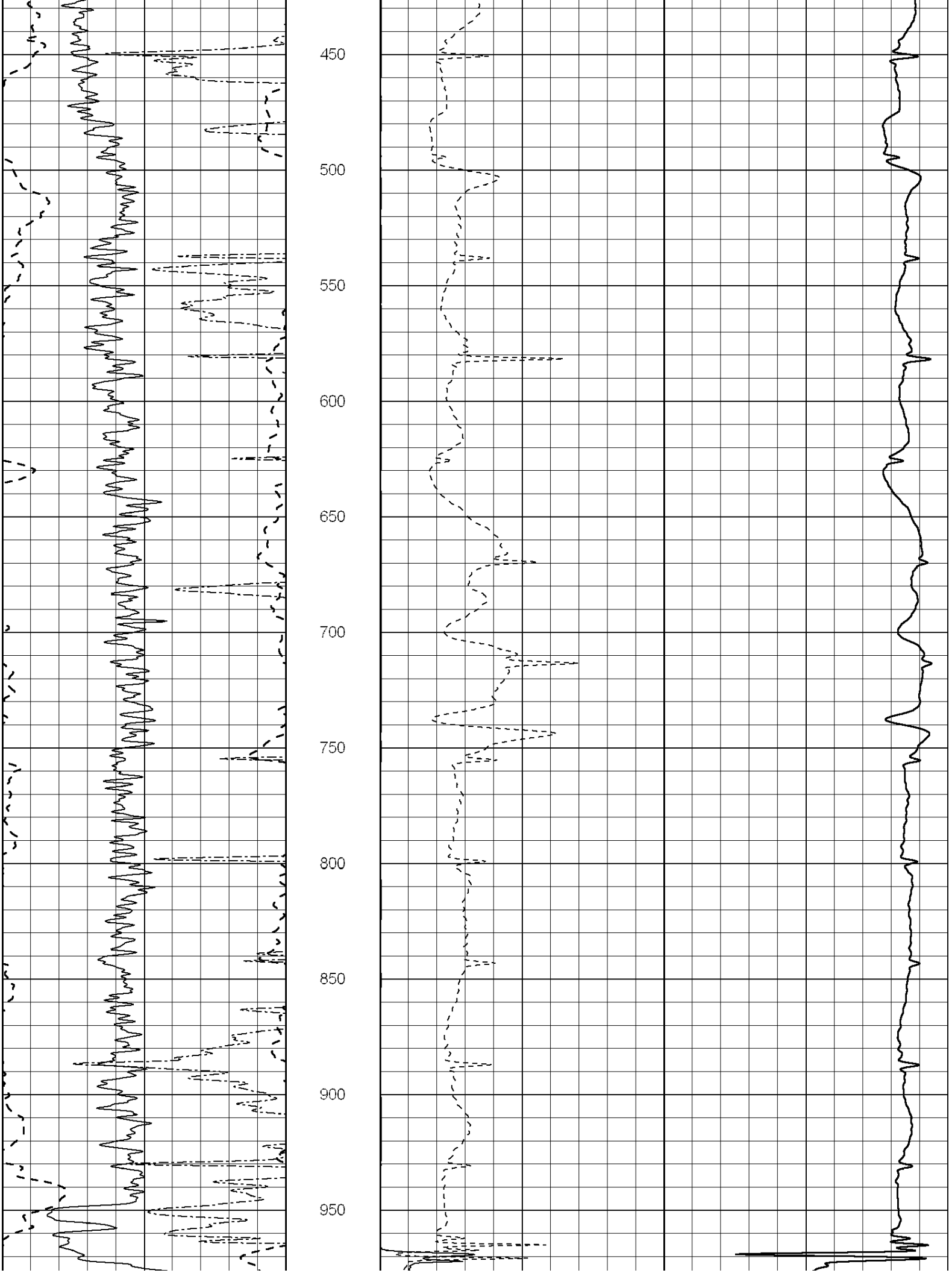
MAIN SECTION

Database File:	30691pe.db
Dataset Pathname:	pass3.4
Presentation Format:	dil2
Dataset Creation:	Wed Mar 23 09:37:31 2016 by Calc SOC 120430
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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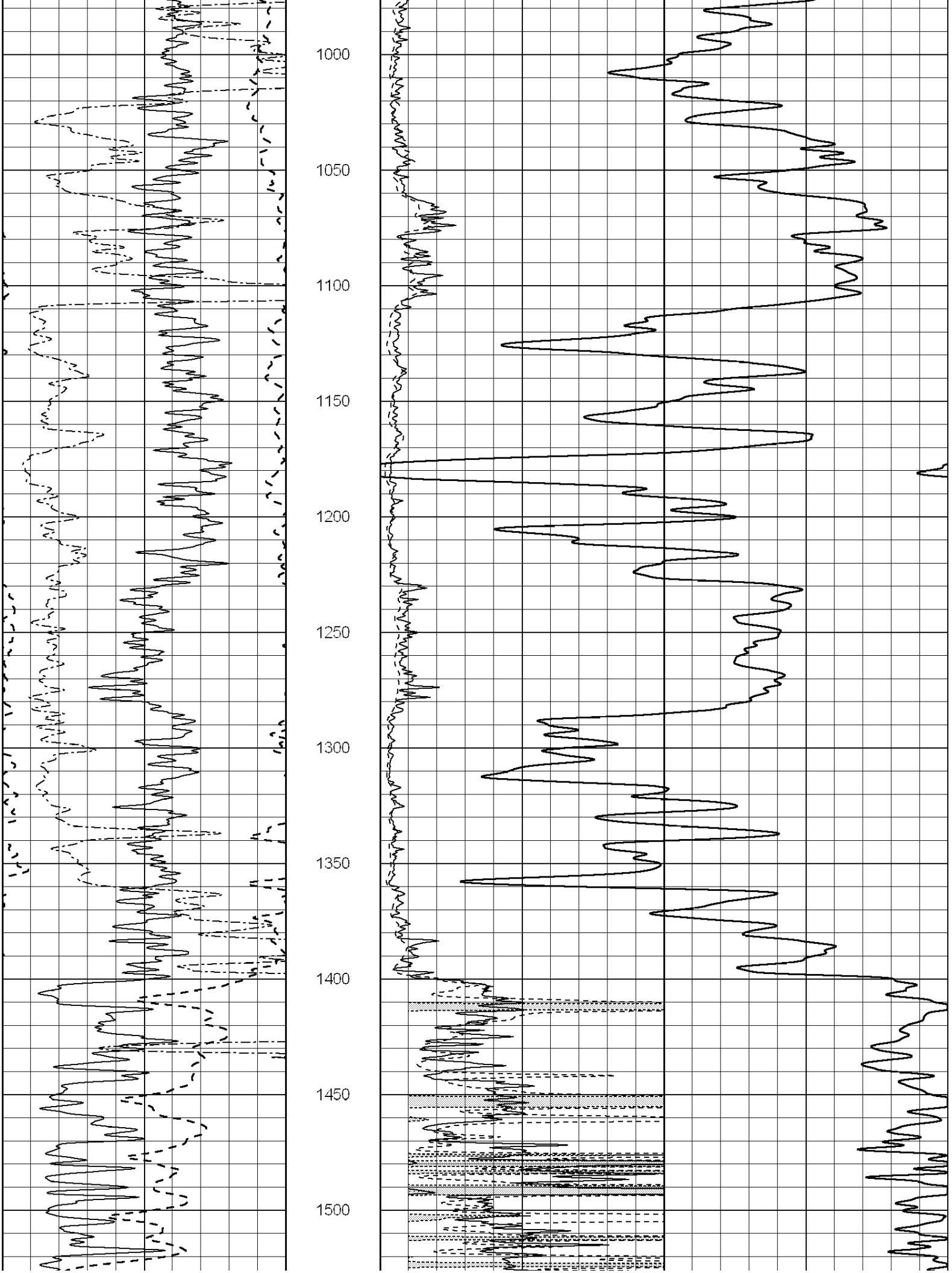
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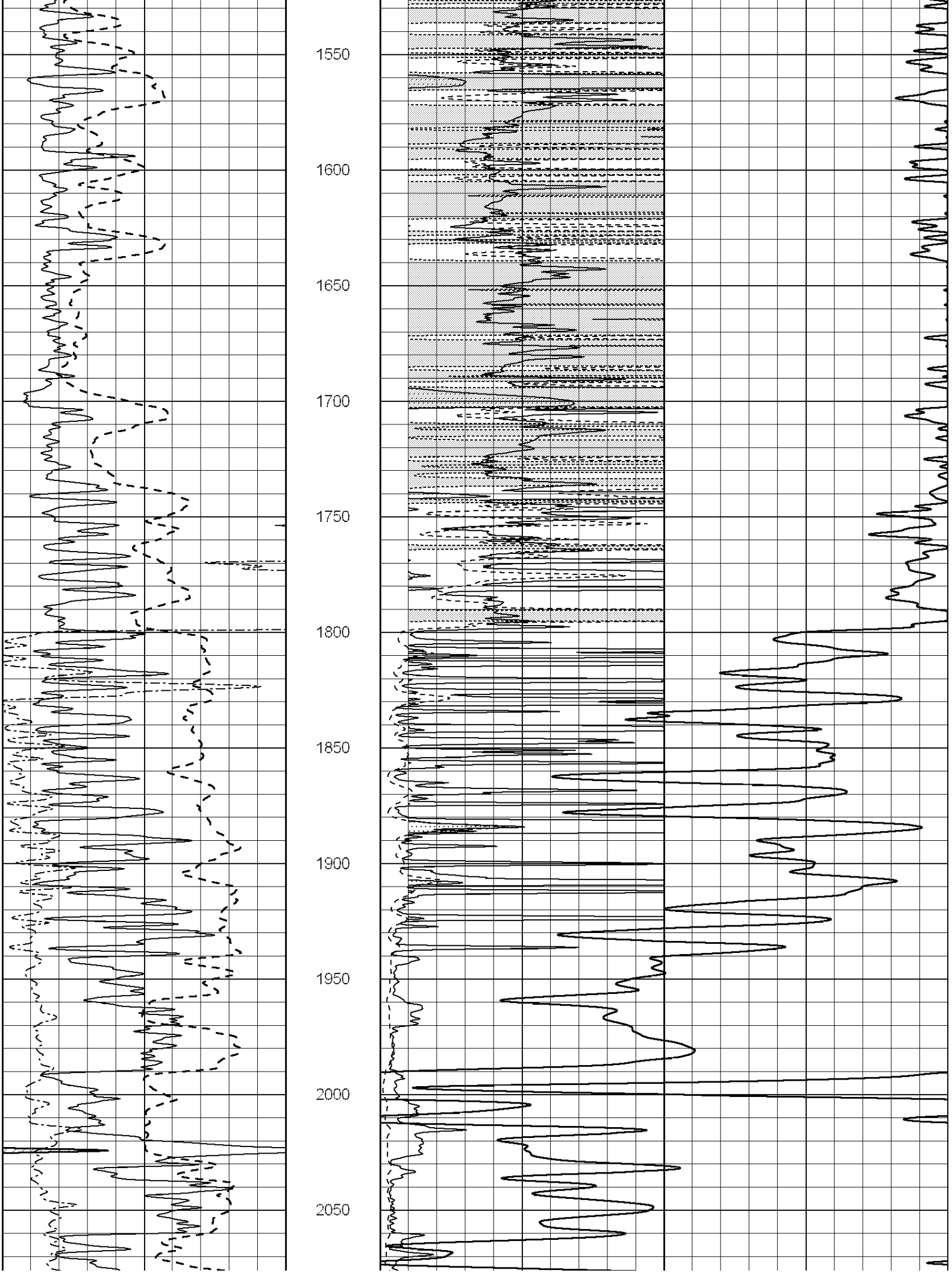
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2000
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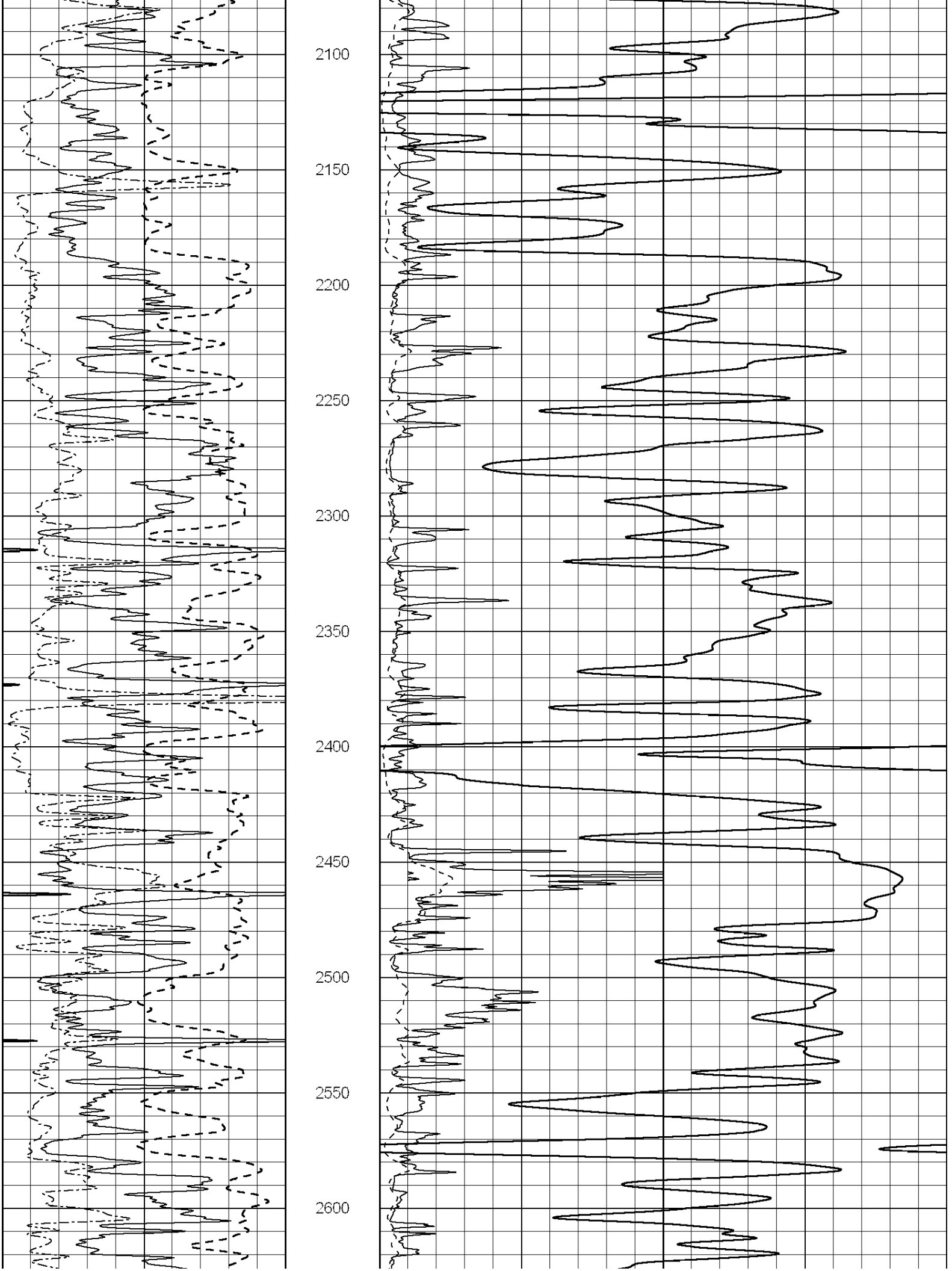
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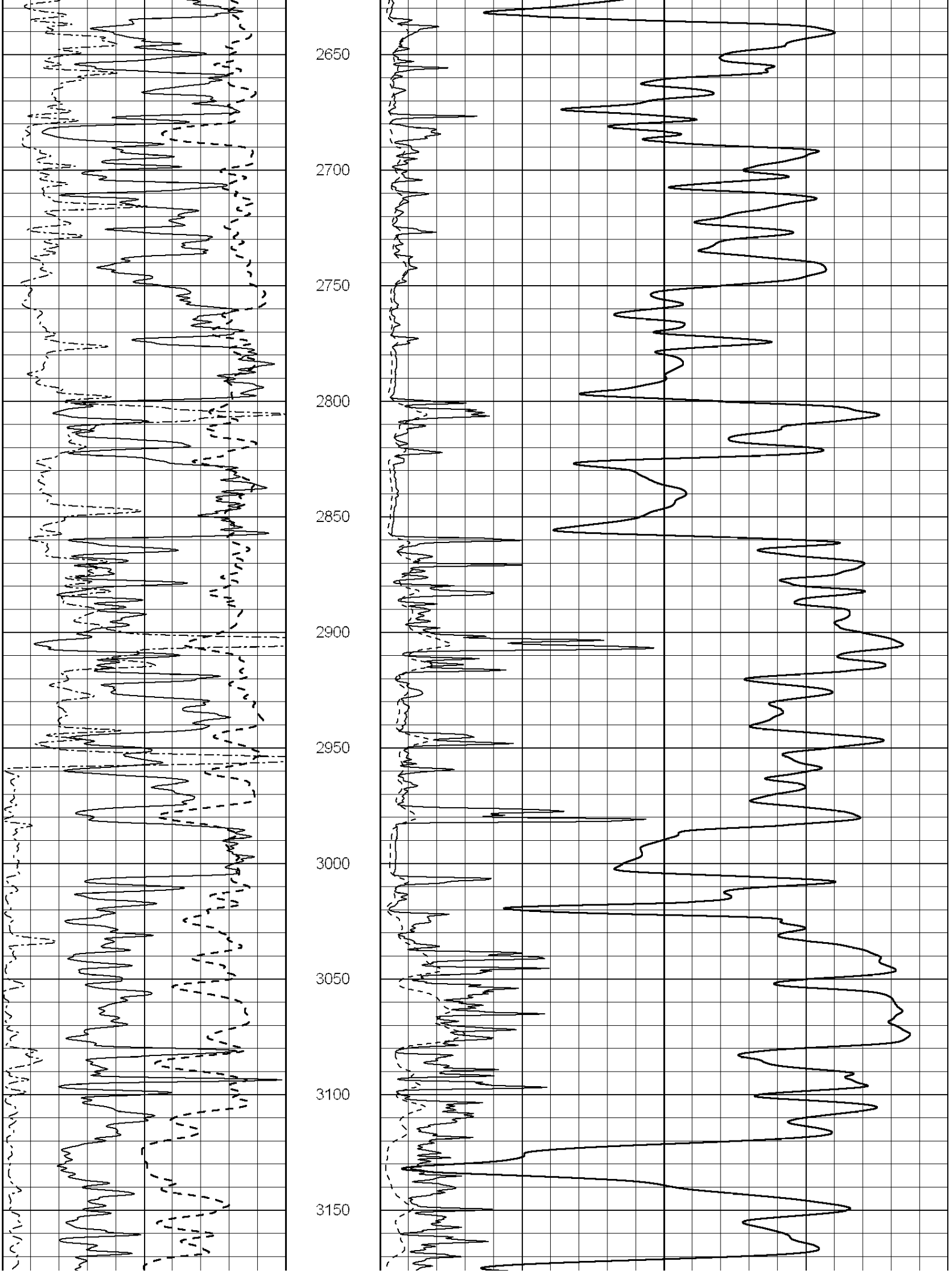
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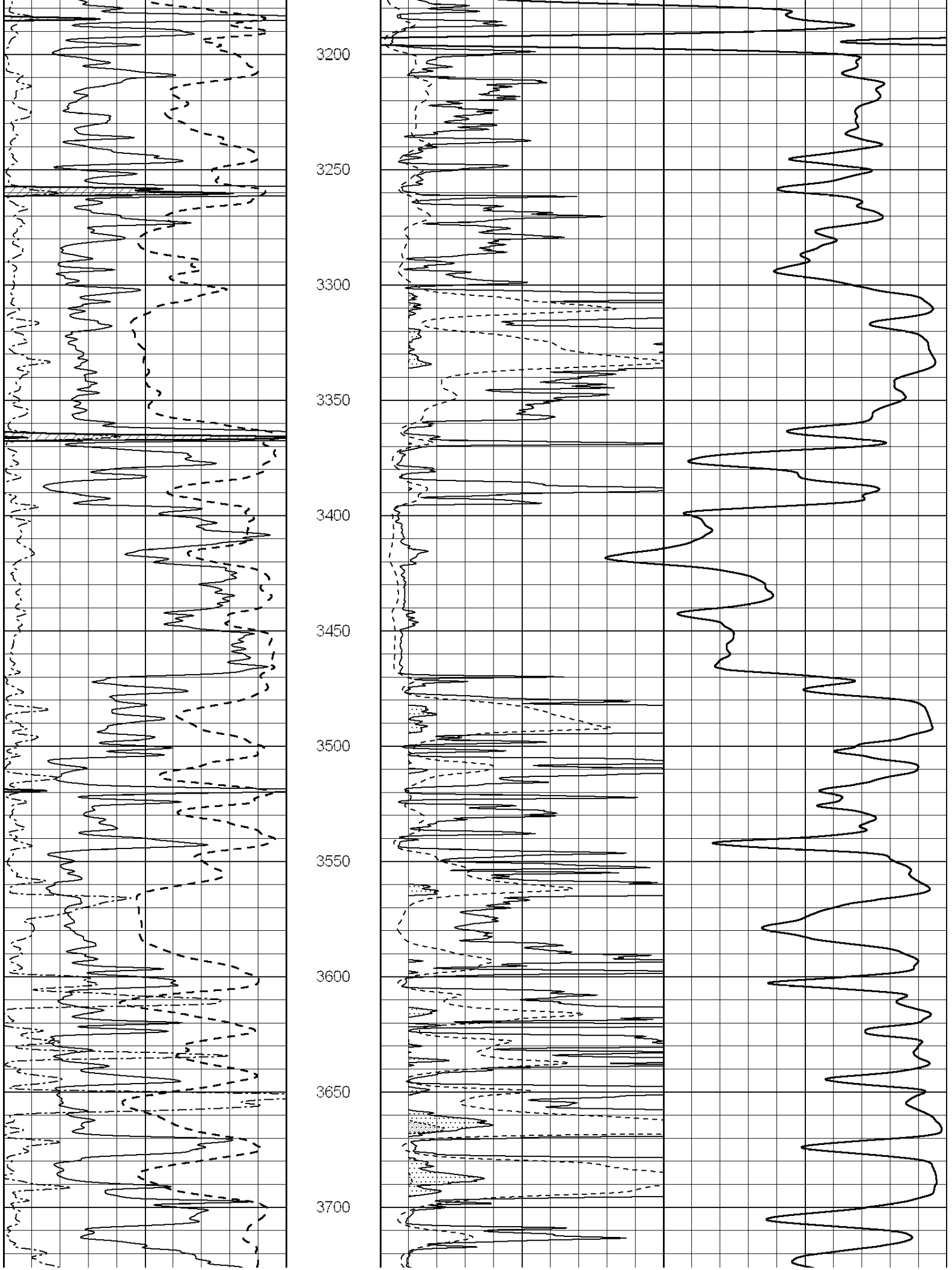
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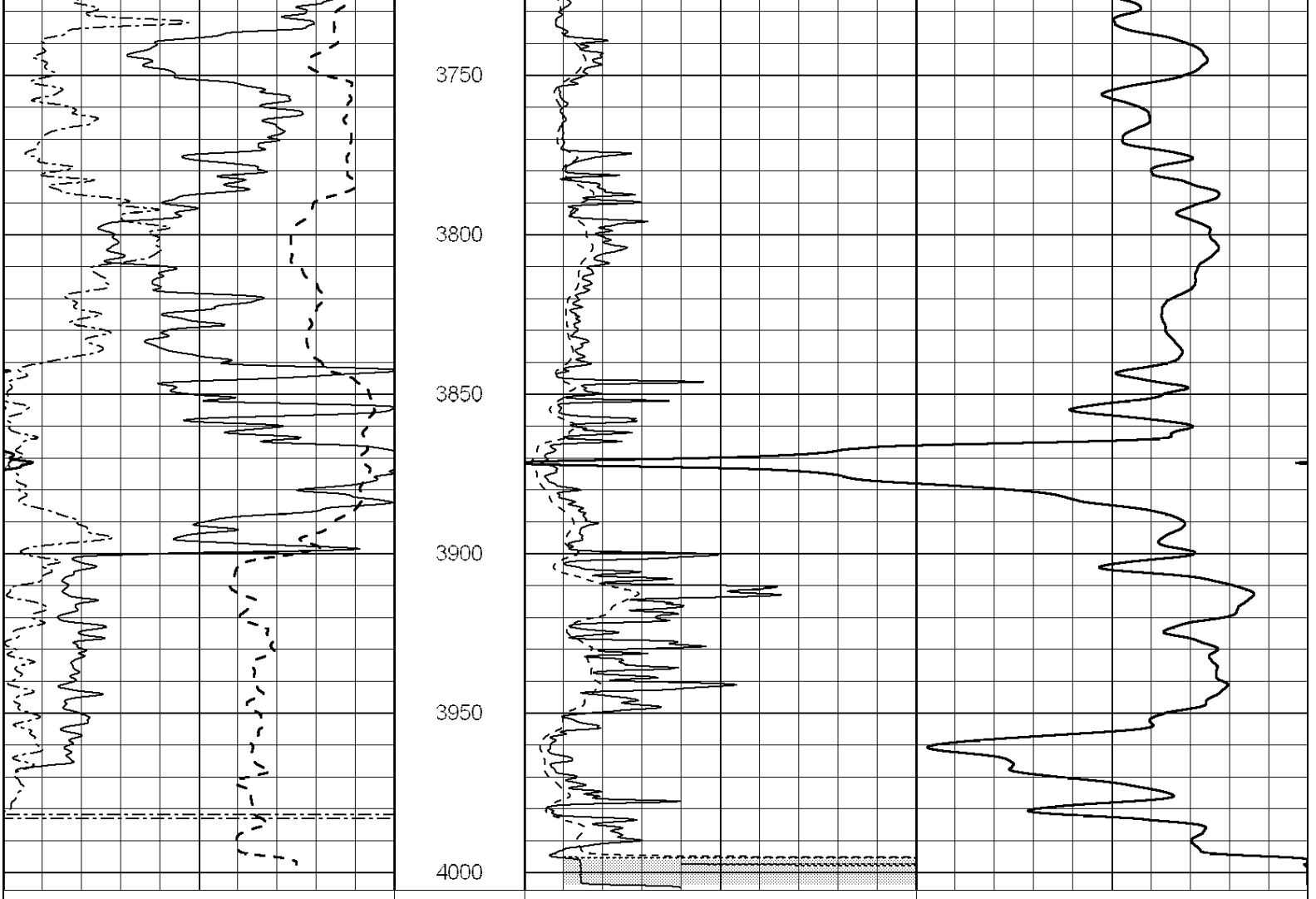

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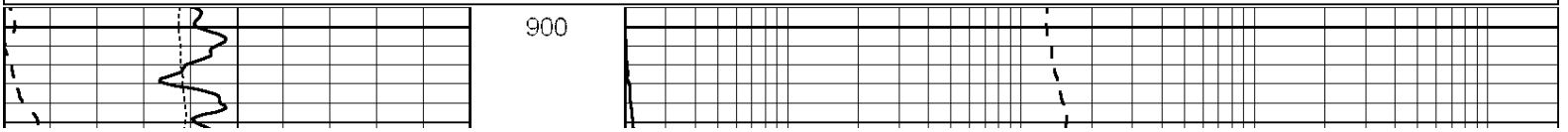
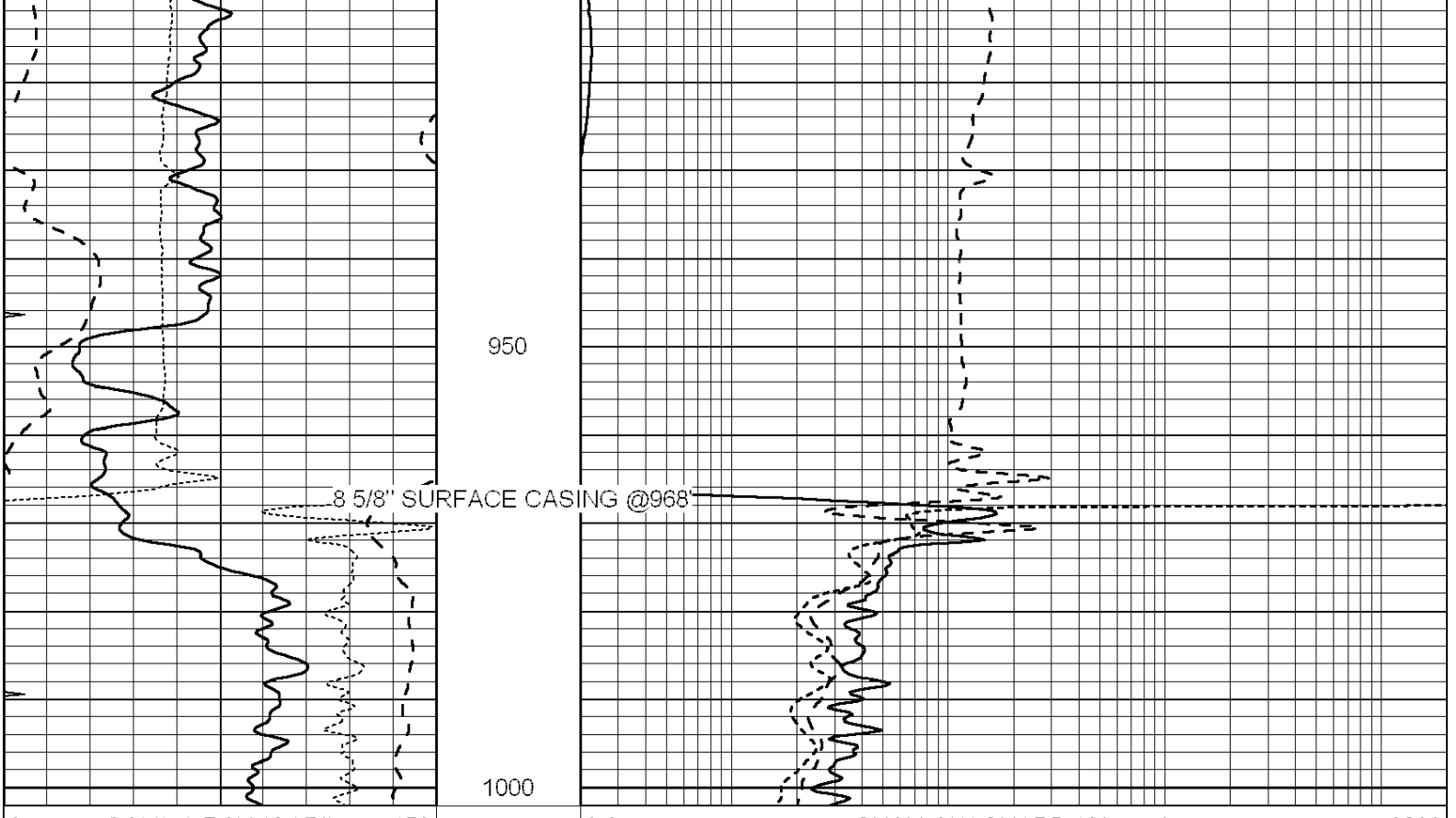
ANHYDRITE

Database File:	30691pe.db
Dataset Pathname:	pass3.5
Presentation Format:	_dil
Dataset Creation:	Wed Mar 23 09:39:15 2016 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

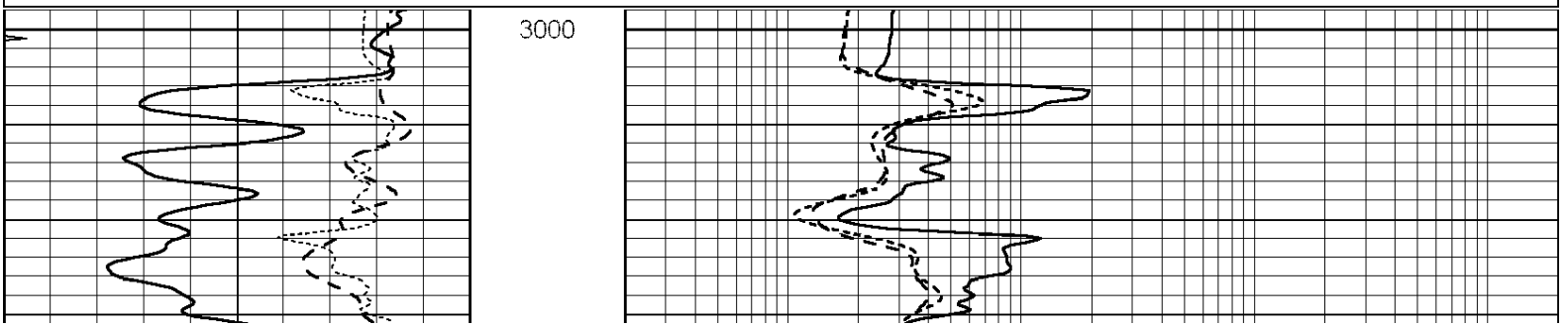
Casedhole Solutions

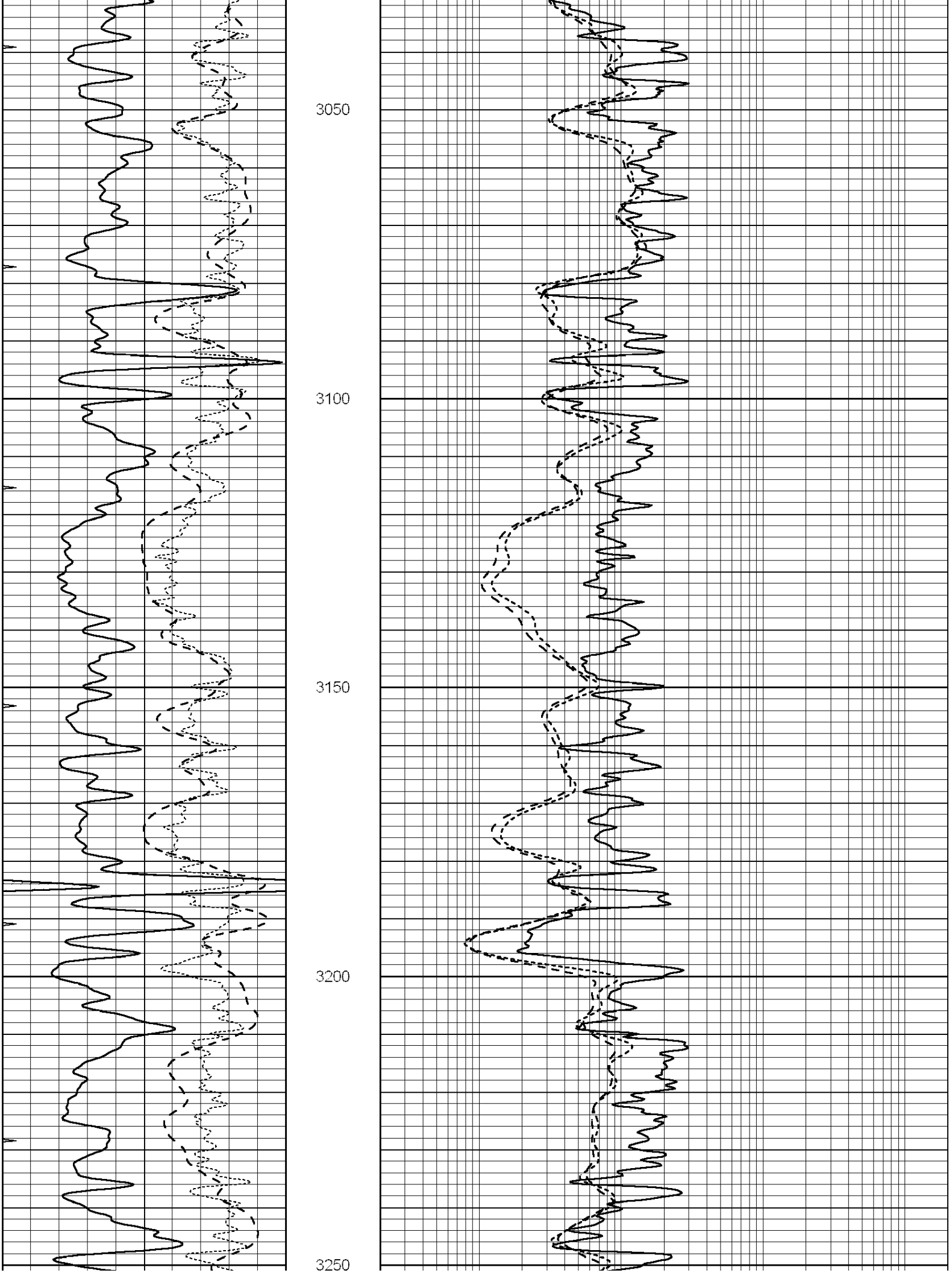
MAIN SECTION

Database File:	30691pe.db
Dataset Pathname:	pass3.4
Presentation Format:	_dil
Dataset Creation:	Wed Mar 23 09:37:31 2016 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

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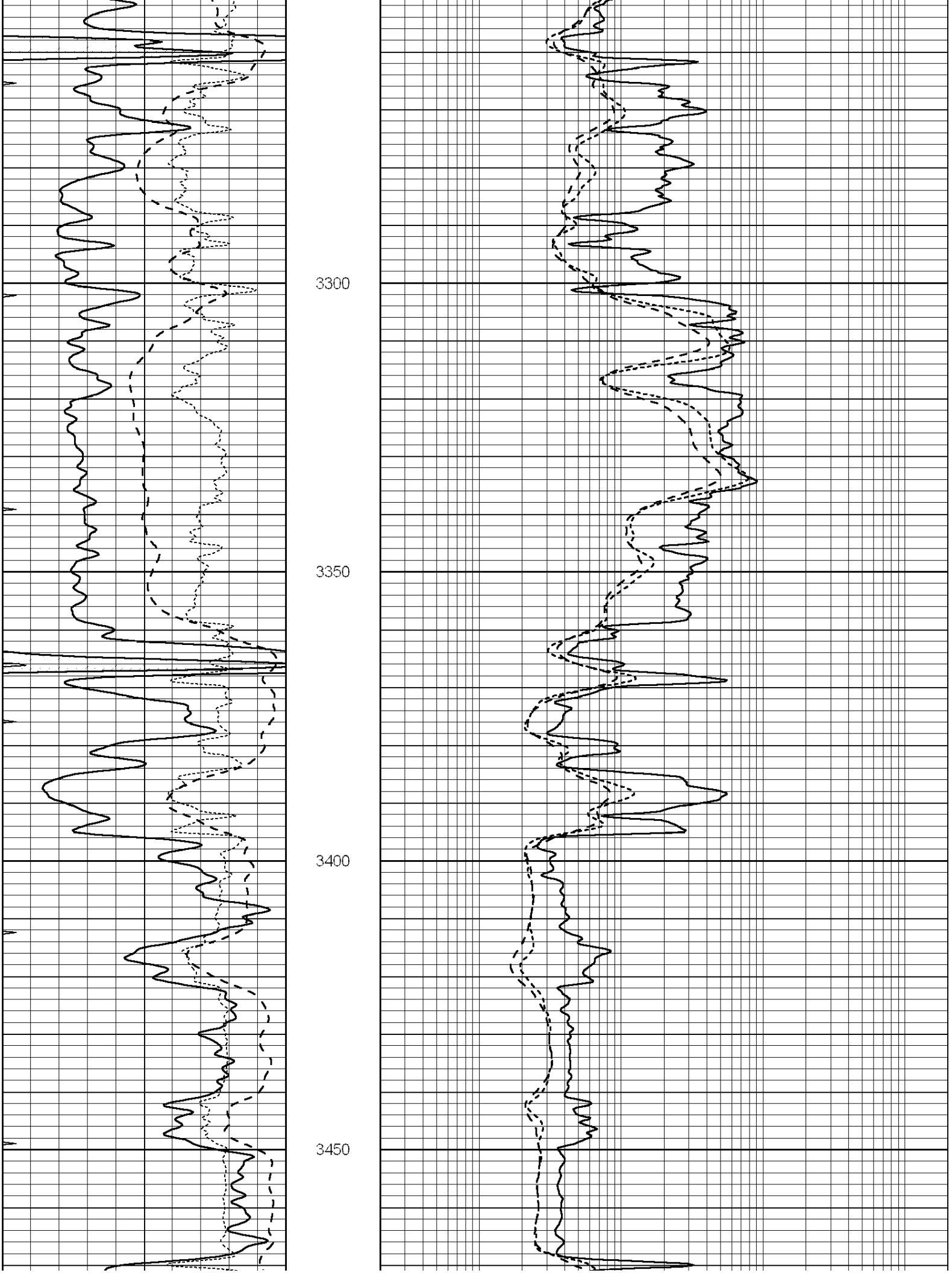
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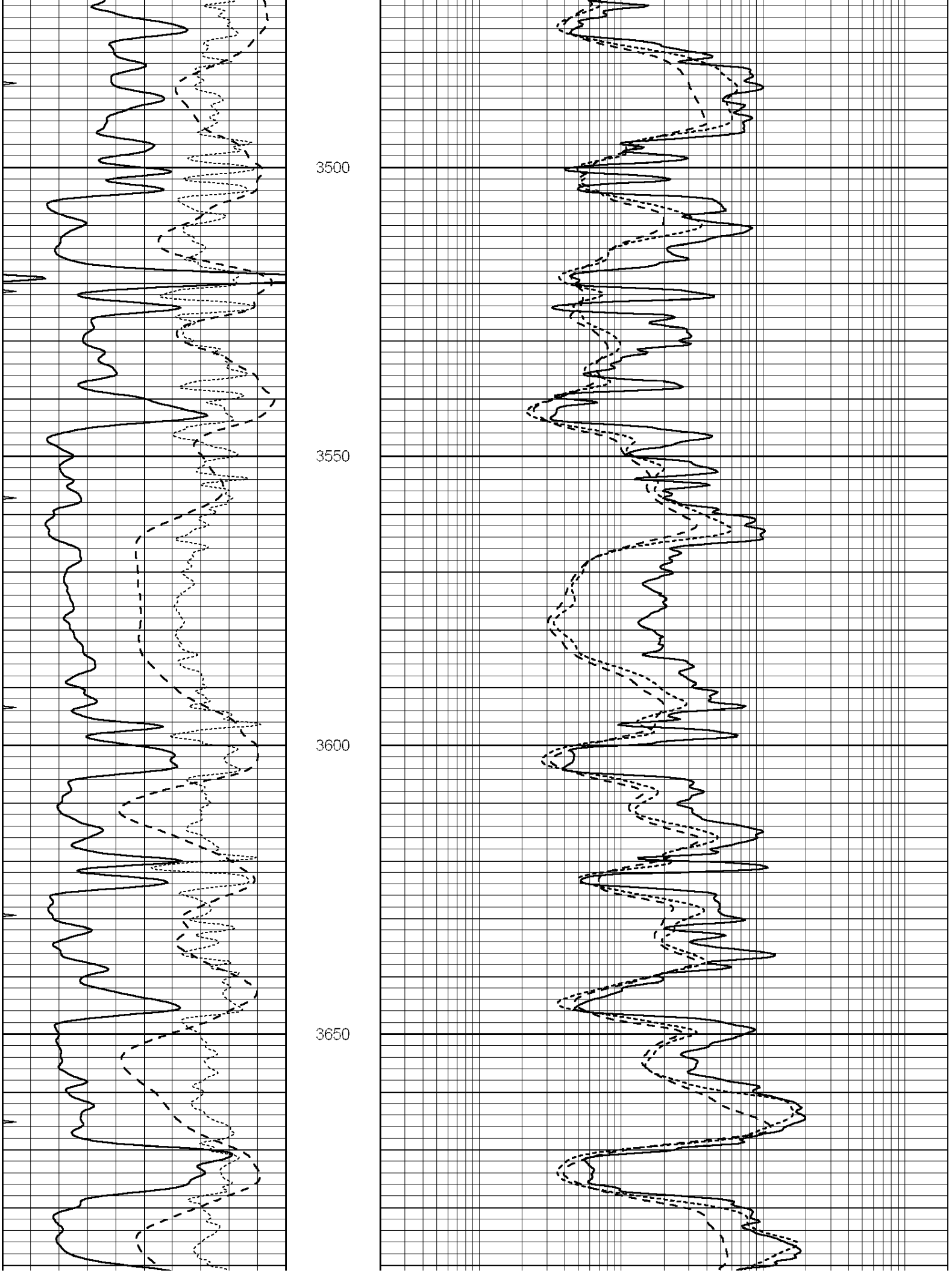
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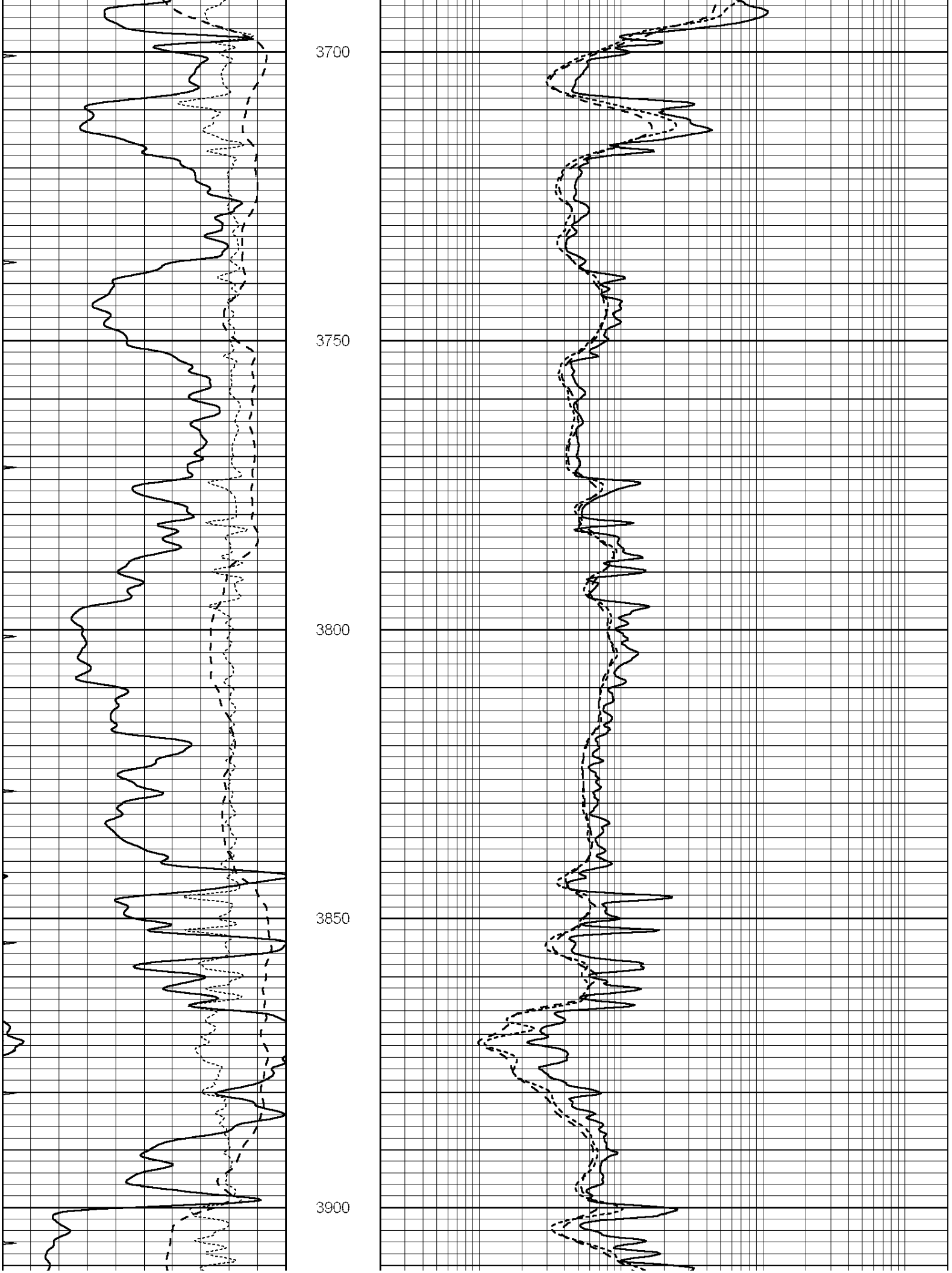
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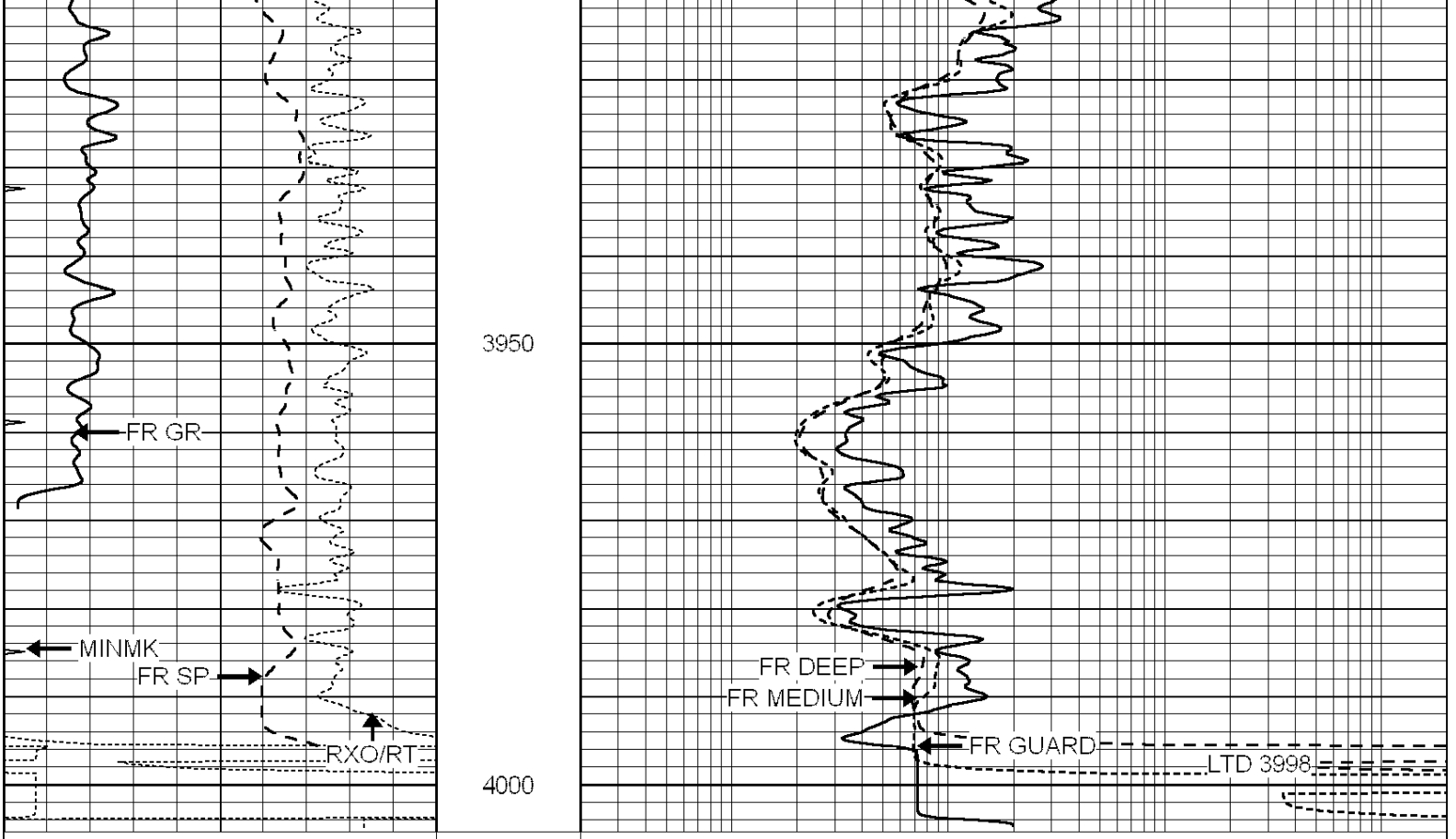

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

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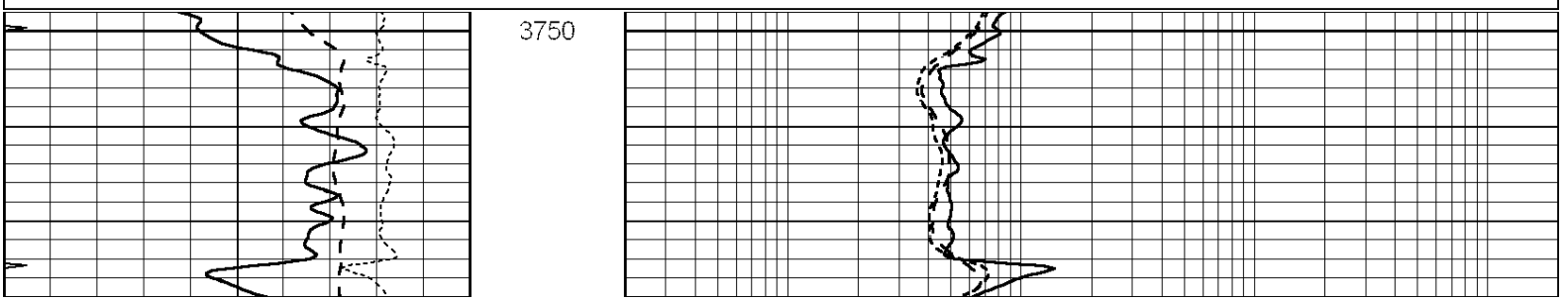
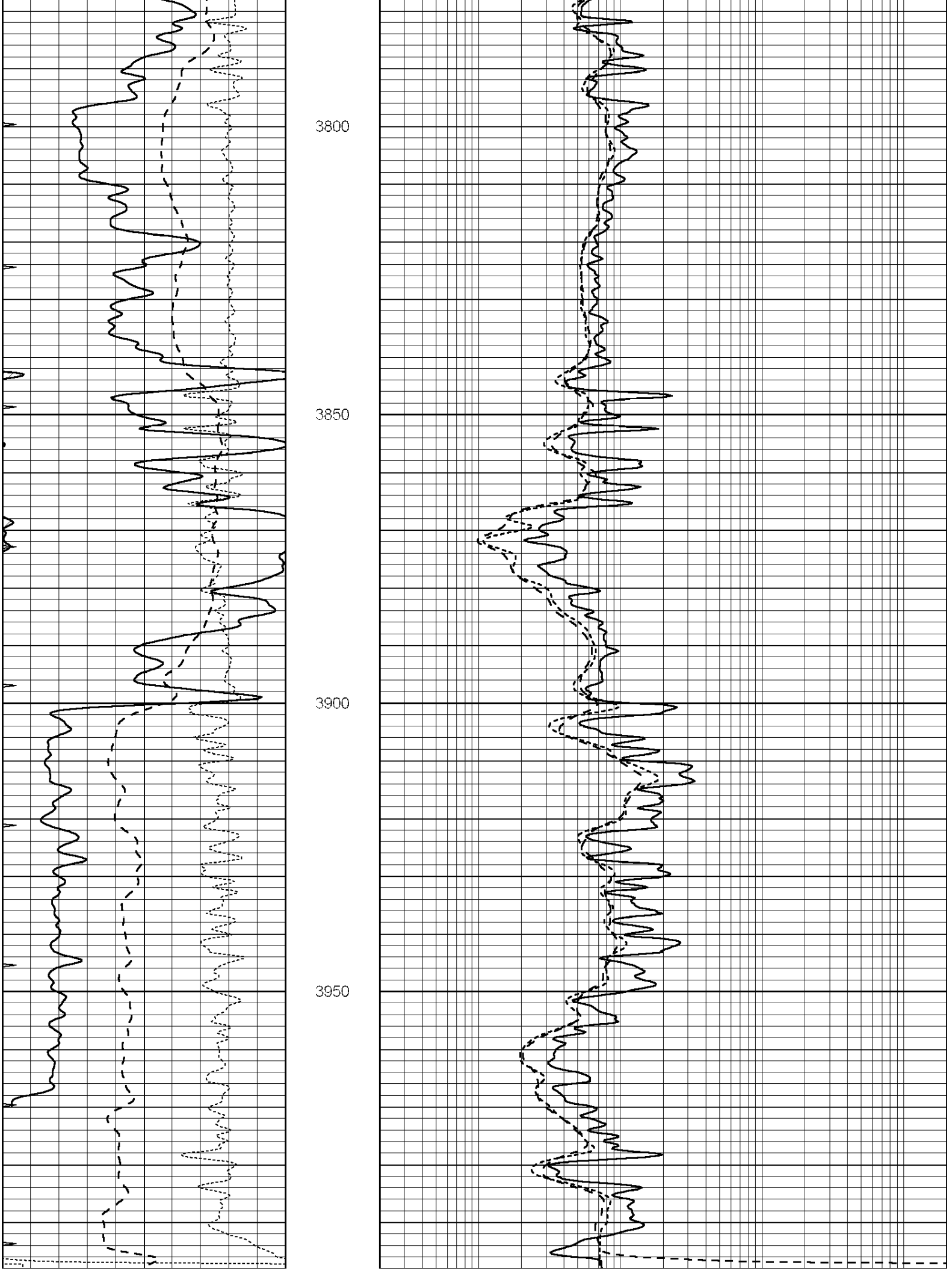
REPEAT SECTION

Database File:	30691pe.db
Dataset Pathname:	pass2.8
Presentation Format:	_dil
Dataset Creation:	Wed Mar 23 09:56:24 2016 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

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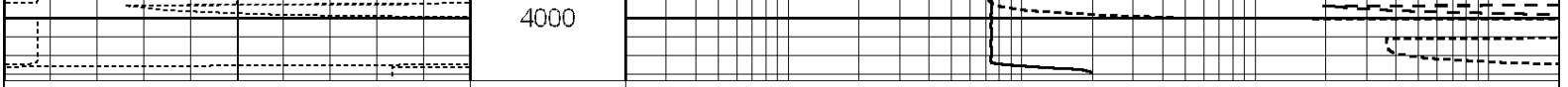

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

Calibration Report

Database File: 30691pe.db
Dataset Pathname: pass3.4
Dataset Creation: Wed Mar 23 09:37:31 2016 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
Surface Cal Performed: Sat Mar 12 18:49:27 2016
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	670.000	-18.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	685.000	-32.000
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: Sat Mar 12 18:34:02 2016

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps