DUAL INDUCTION LOG

Company JASPAR CO.
Well LARRY #1
Field UNNAMED
County ROOKS
State KANSAS

Company	JASPAR CO.
Well	LARRY #1
Field	UNNAMED
County	ROOKS
State	KANSAS

Location: API # : 15-163-24347-00-00
330' FSL & 2290' FWL
SEC 20 TWP 9S RGE 19W

Other Services
CDL/CNL/MEL
SONIC

Permanent Datum	GROUND LEVEL	Elevation	2141'
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 2146'
D.F. 2144
G.L. 2141

Date	11/19/17		
Run Number	ONE		
Depth Driller	3595		
Depth Logger	3599		
Bottom Logged Interval	3597		
Top Log Interval	00		
Casing Driller	8 5/8" @ 218		
Casing Logger	218		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.1/48		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.95@50		
Rmf @ Meas. Temp	.71@50		
Rmc @ Meas. Temp	1.14@50		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.42@112		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	JEFF LAWLER		

<<< Fold Here >>>

Comments

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

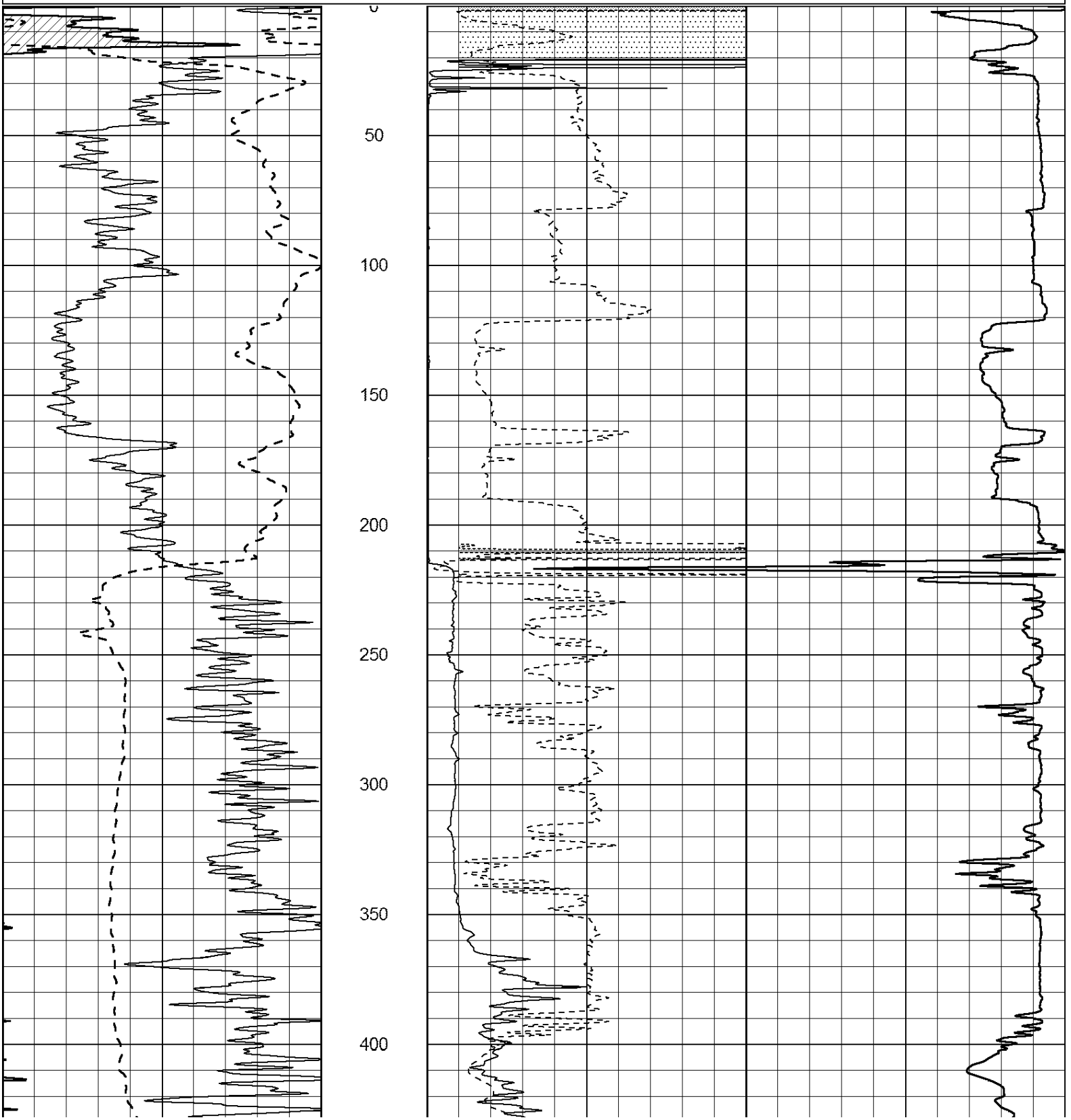
DIRECTIONS
ZURICH WEST 1 MILE, NORTH 1,
3/4 WEST, NORTH INTO.

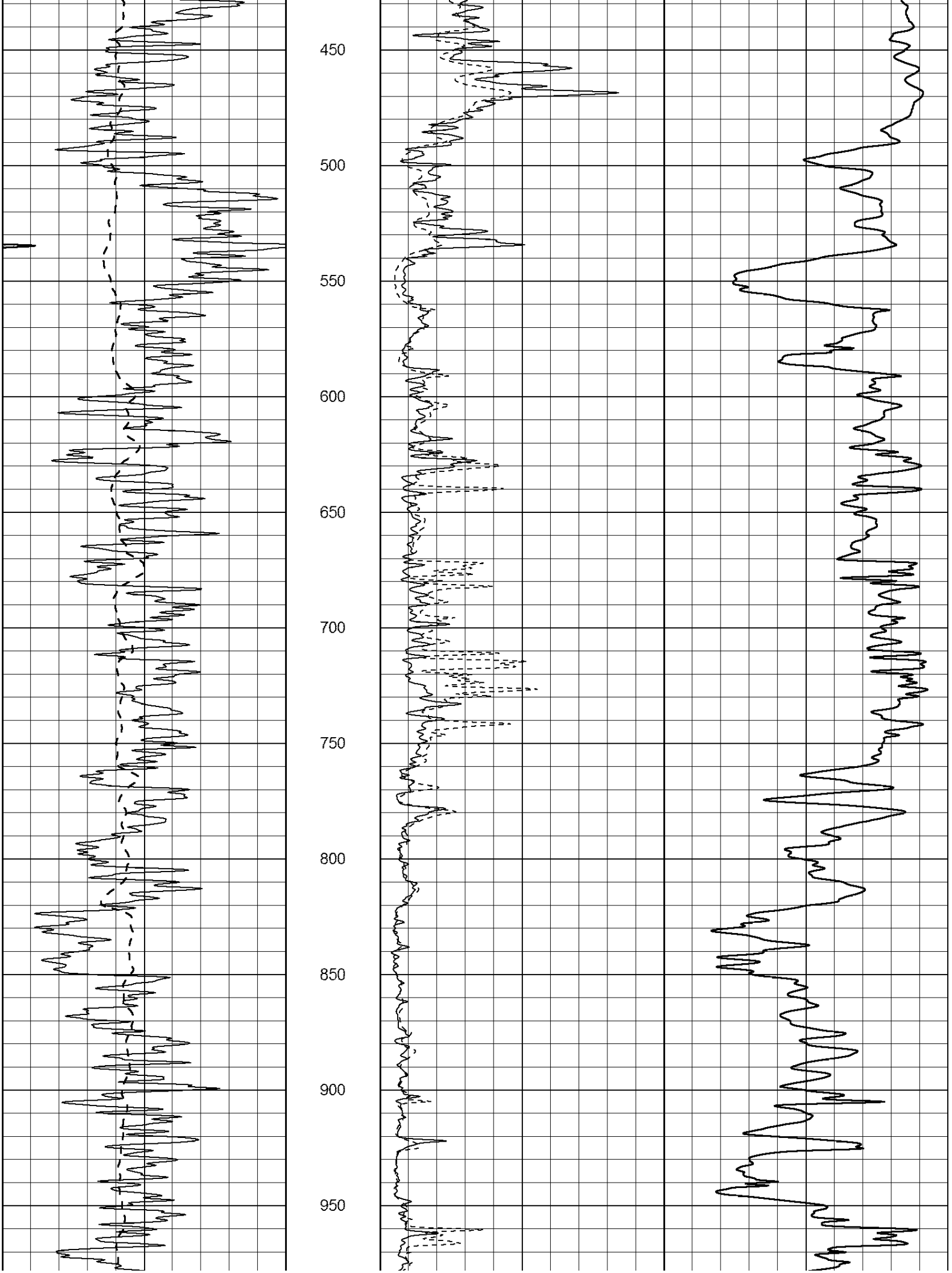
MAIN PASS

Database File: 2110ddn.db
Dataset Pathname: pass3.1
Presentation Format: _dil2
Dataset Creation: Sun Nov 19 07:33:17 2017
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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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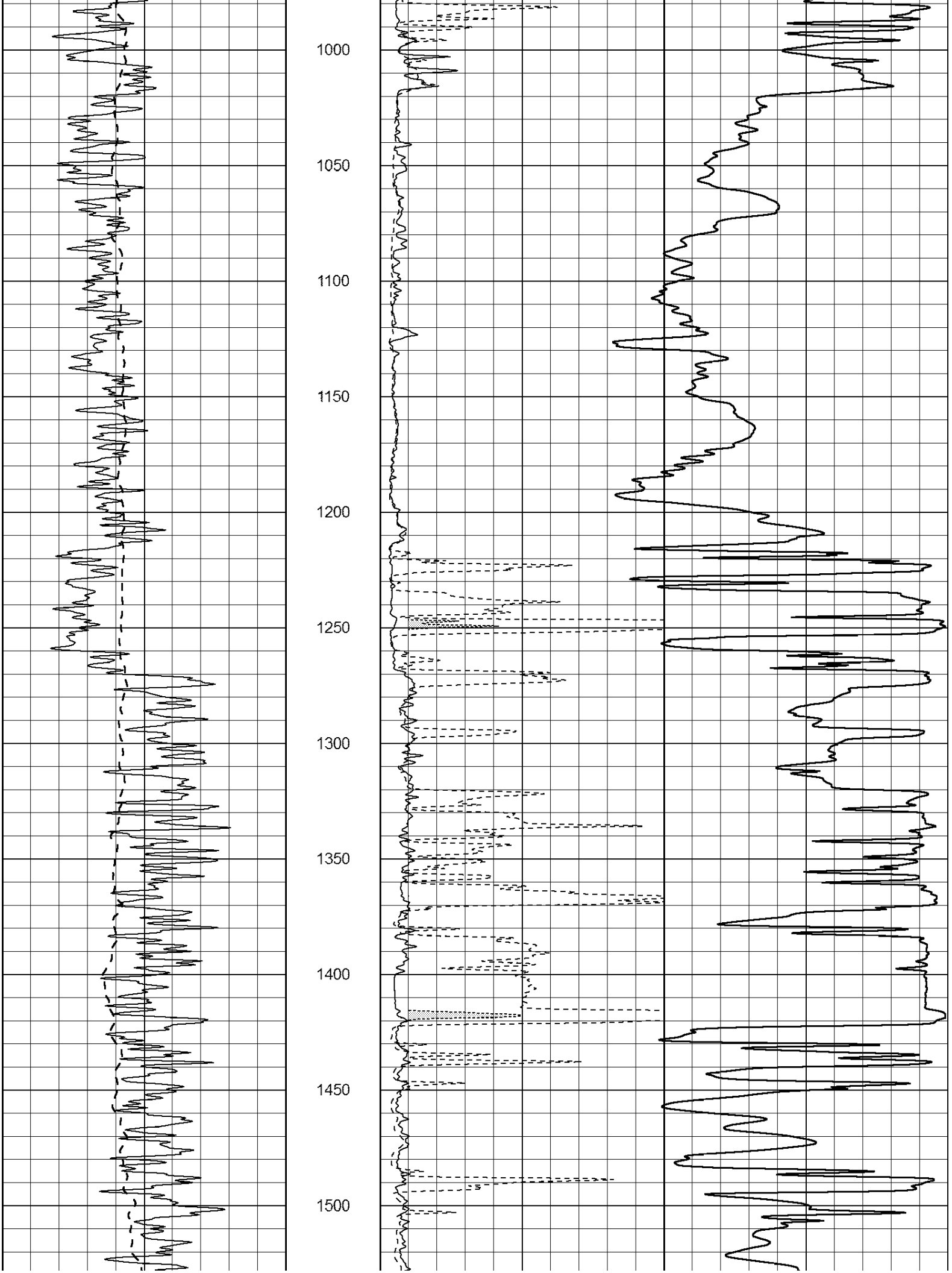
650
700
750
800
850
900
950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1100
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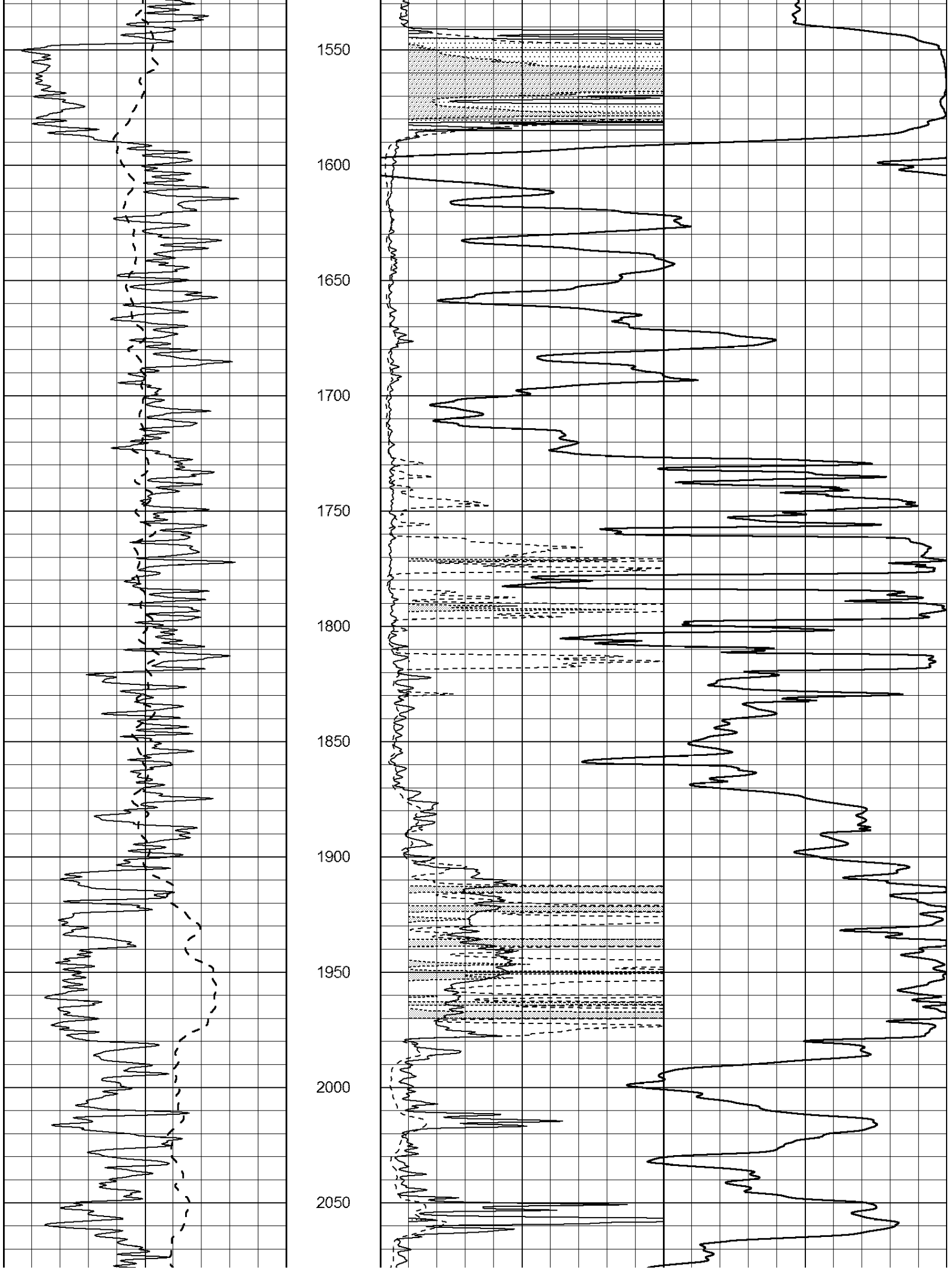
1200
1250
1300
1350
1400
1450
1500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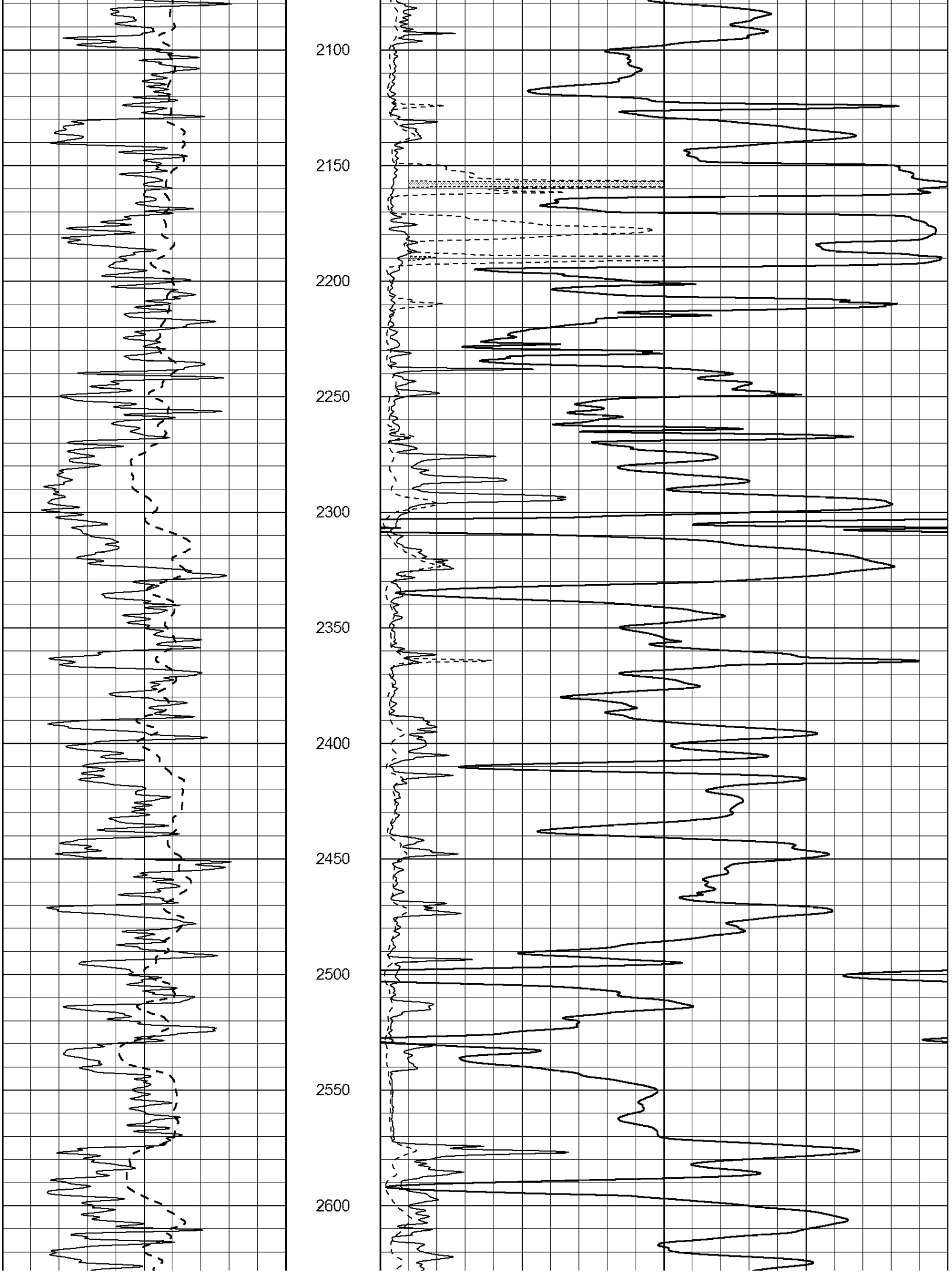
1700
1750
1800
1850
1900
1950
2000
2050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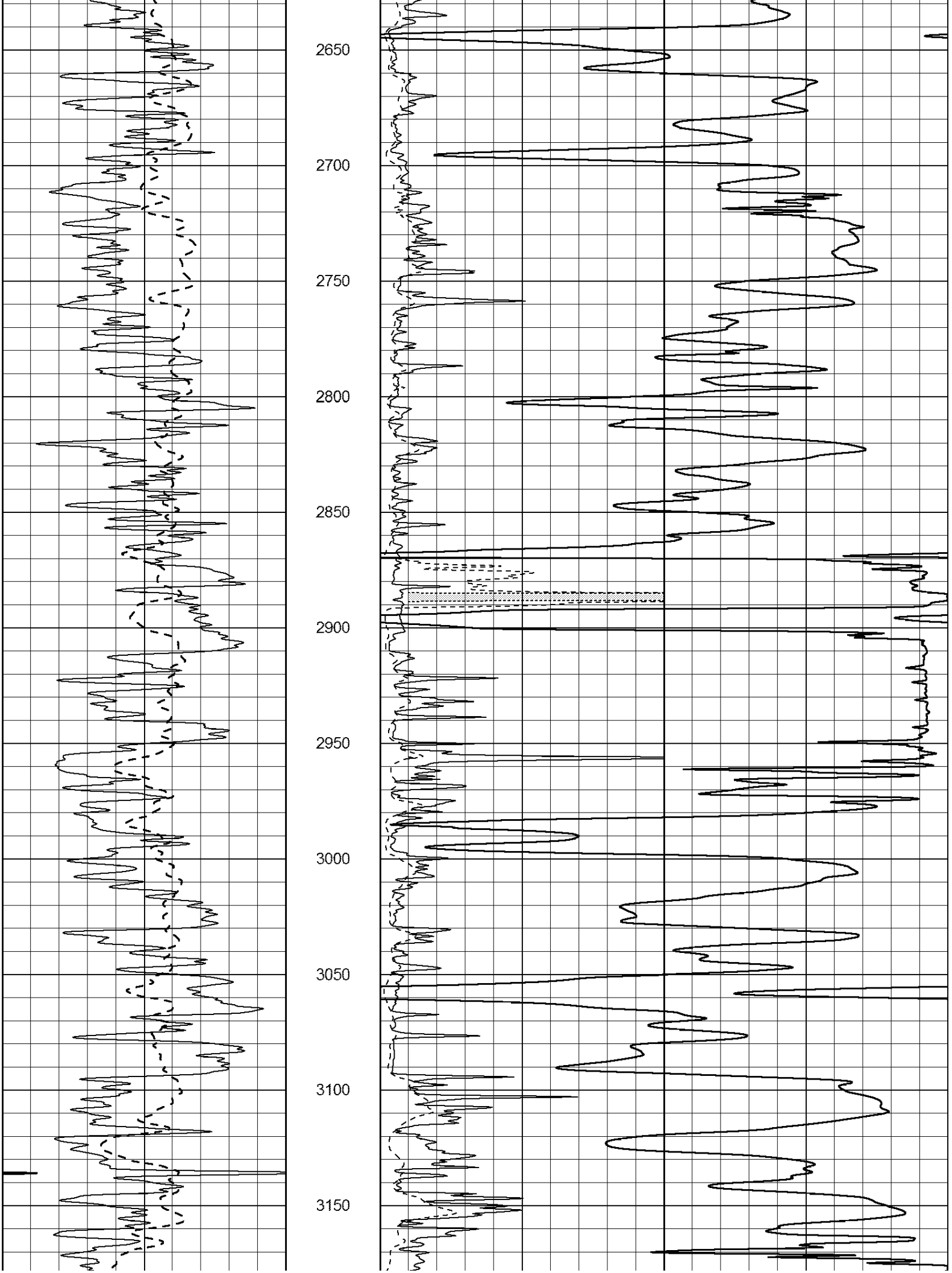
2300
2350
2400
2450
2500
2550
2600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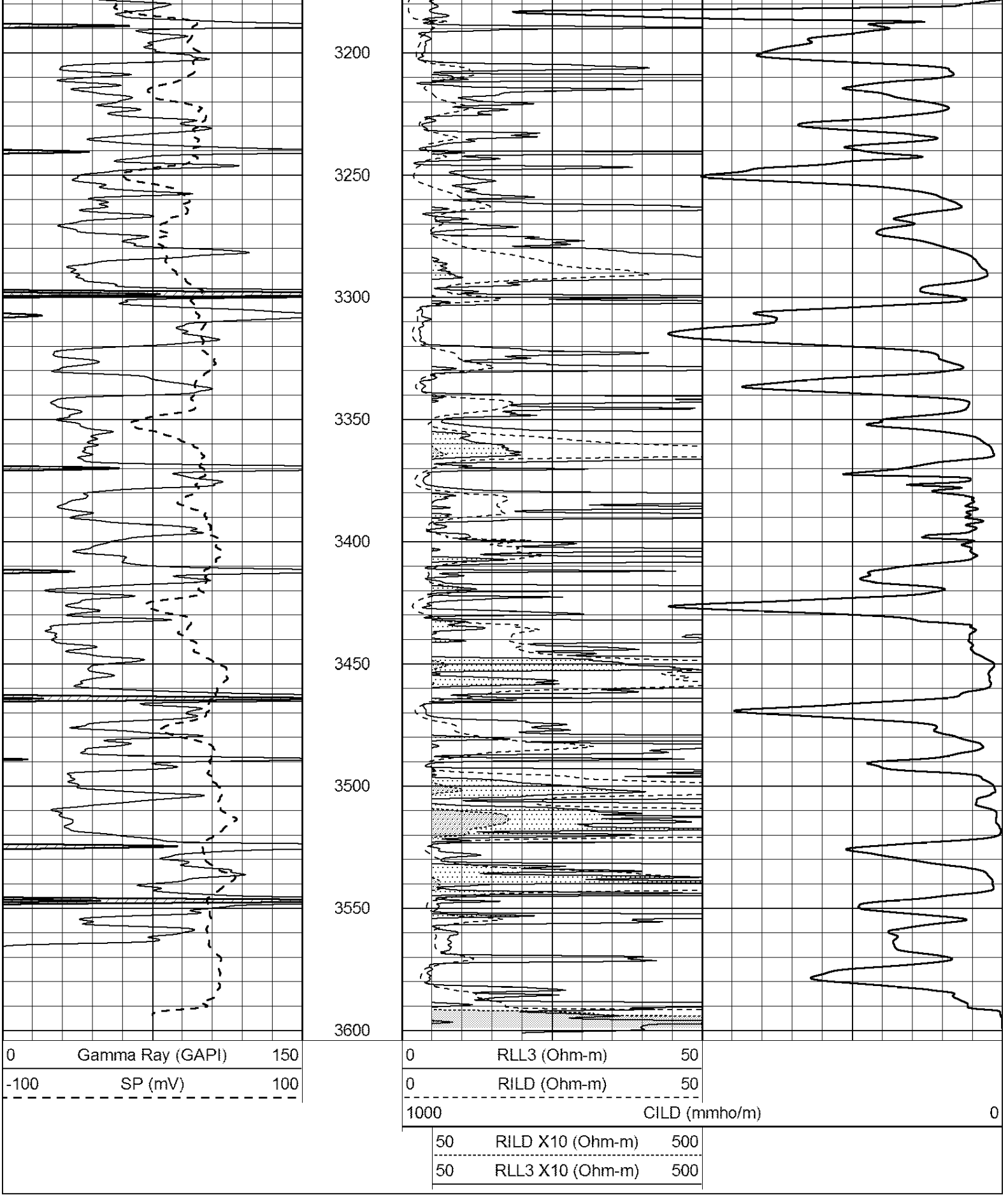
2750
2800
2850
2900
2950
3000
3050
3100
3150

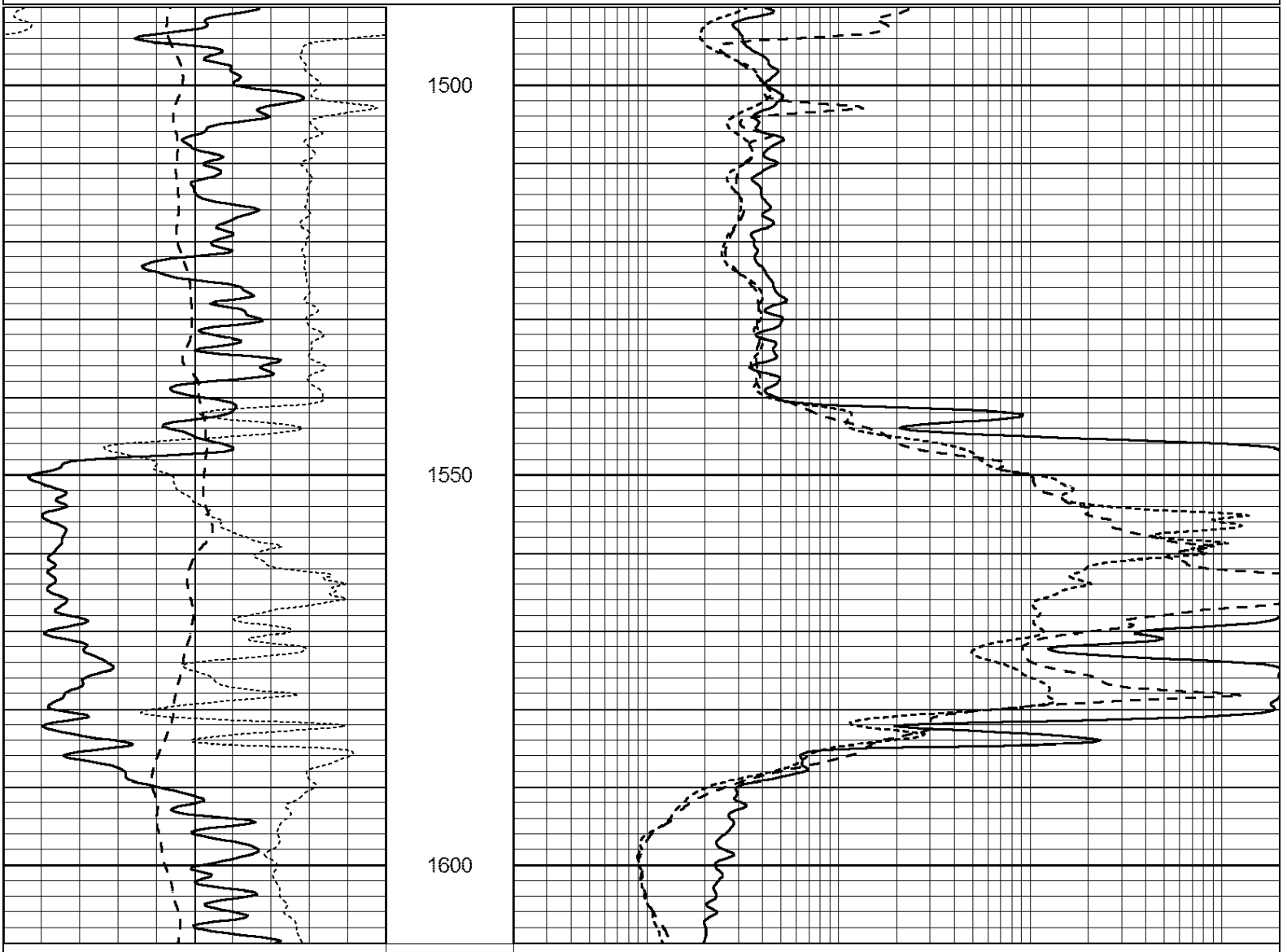

3200
3250
3300
3350
3400
3450
3500
3550
3600
0 Gamma Ray (GAPI) 150
-100 SP (mV) 100
0 RLL3 (Ohm-m) 50
0 RILD (Ohm-m) 50
1000 CILD (mmho/m) 0
50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500

MAIN PASS

Database File: 2110ddn.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Sun Nov 19 07:33:17 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



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

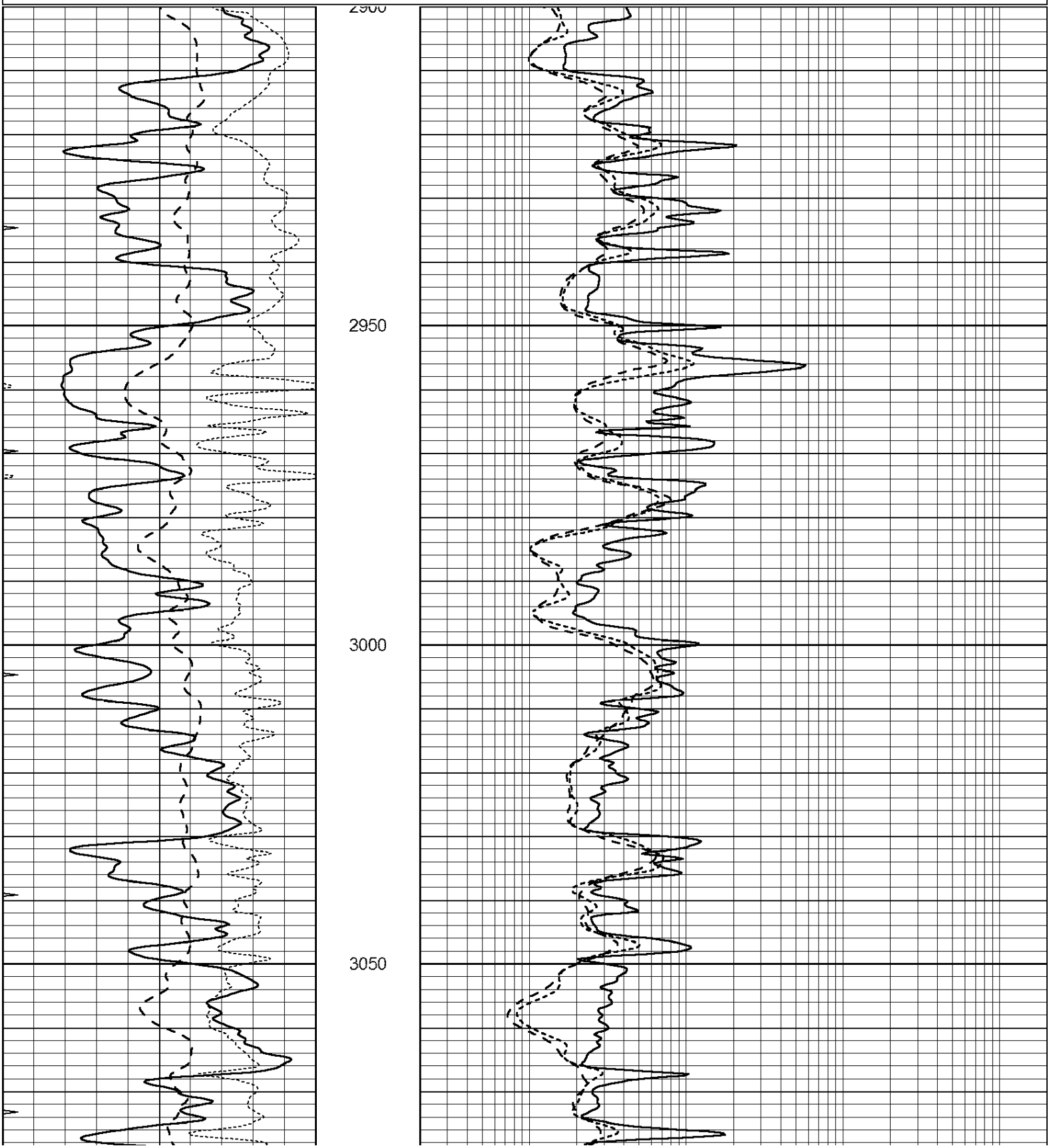
MAIN PASS

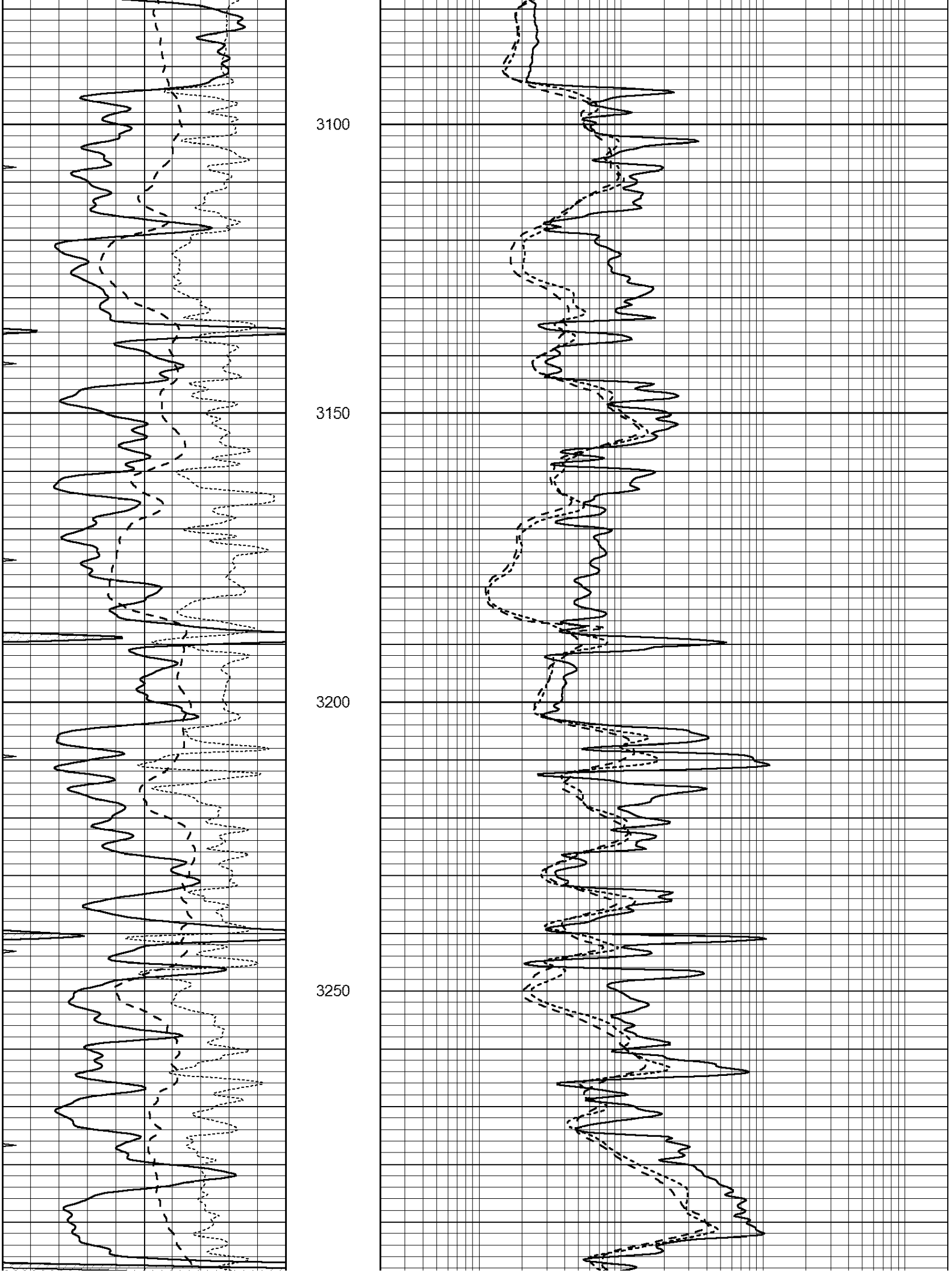
Database File: 2110ddn.db

Database File:	21fodih.db
Dataset Pathname:	pass3.1
Presentation Format:	_dil
Dataset Creation:	Sun Nov 19 07:33:17 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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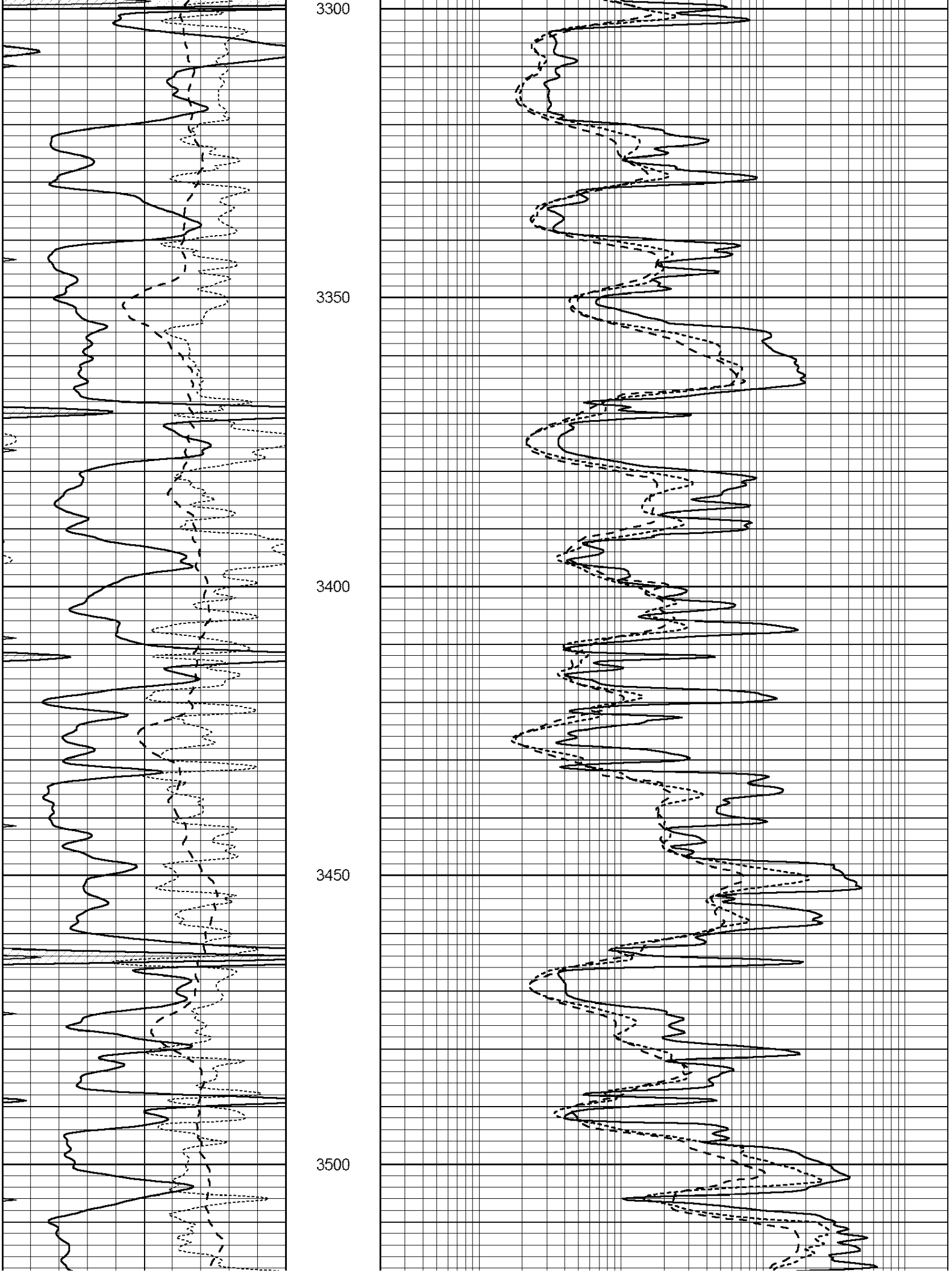
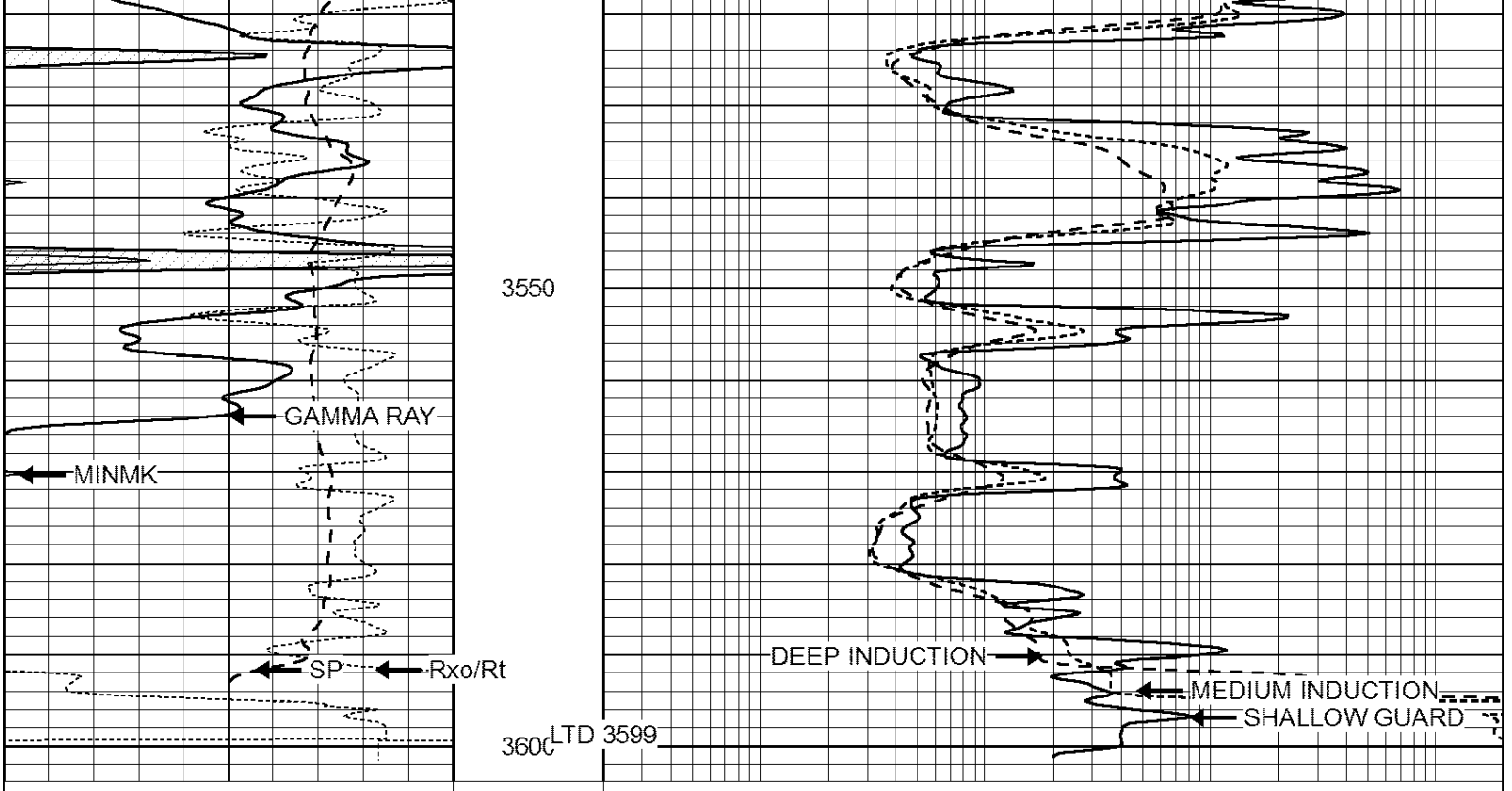
3150
3200
3250


3300
3350
3400
3450
3500



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

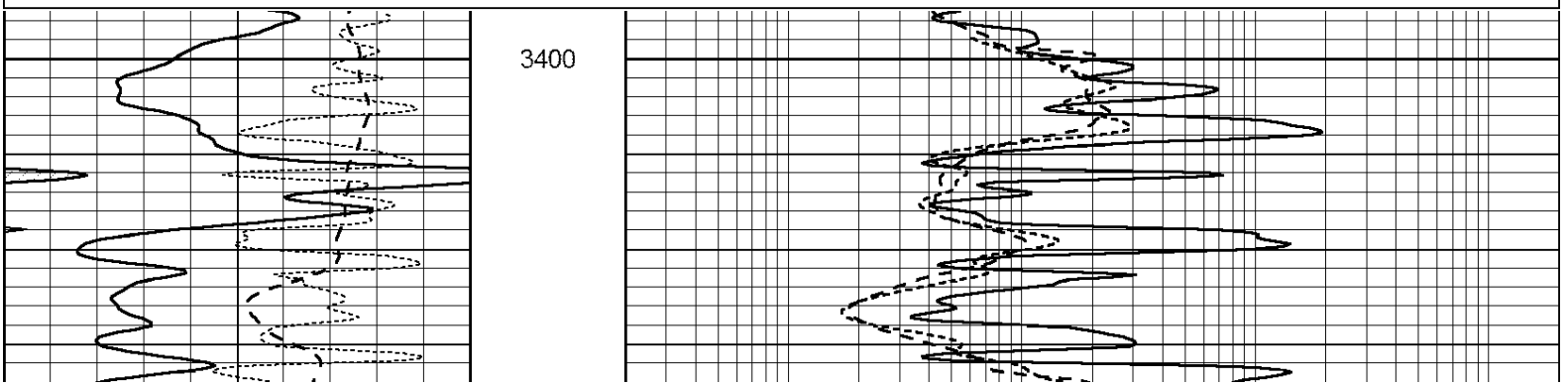
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

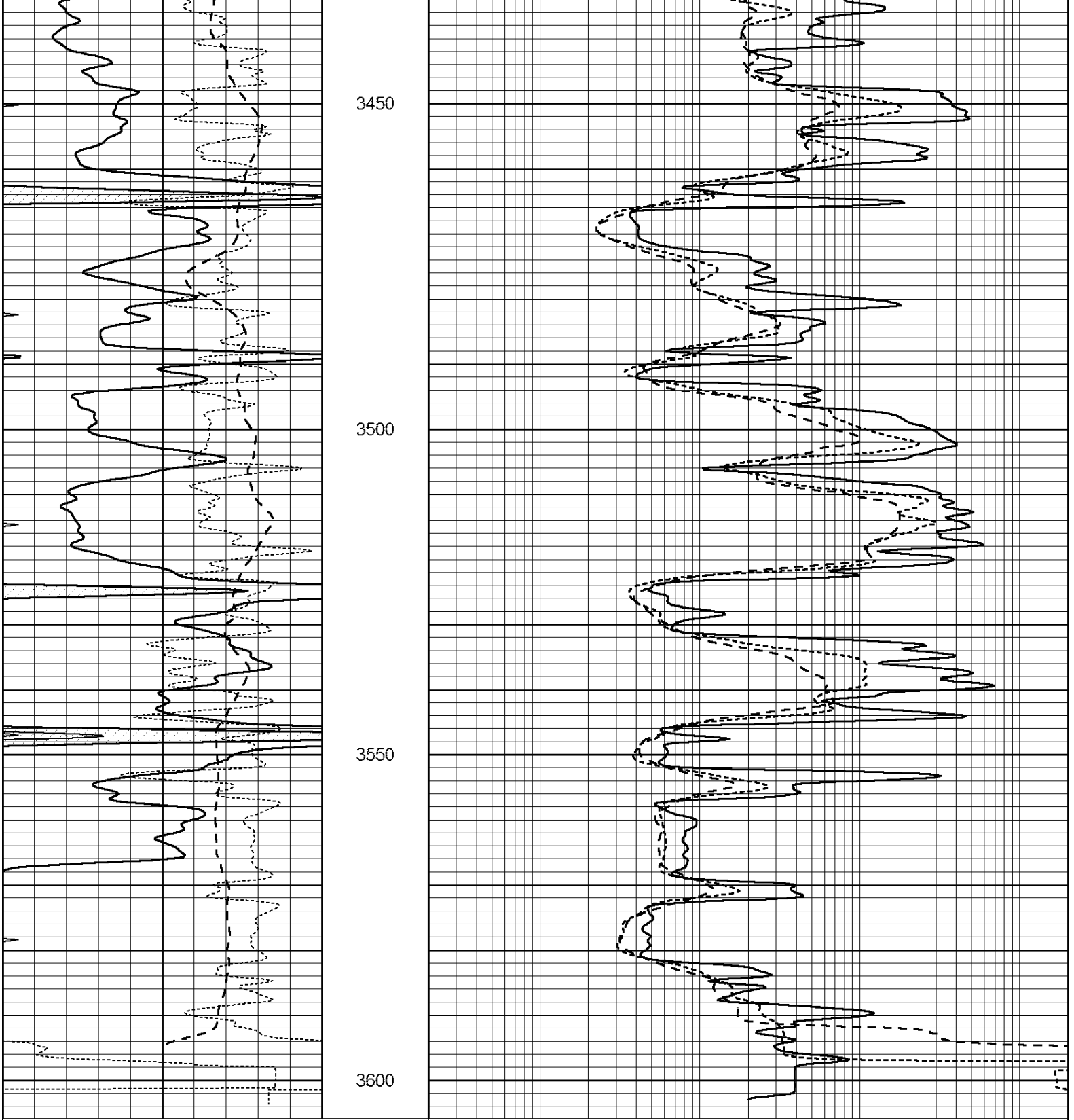
REPEAT SECTION

Database File: 2110ddn.db
Dataset Pathname: pass2RP
Presentation Format: _dil
Dataset Creation: Sun Nov 19 07:18:57 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





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: pe2.db
Dataset Pathname: pass2
Dataset Creation: Mon Aug 21 11:58:02 2017 by Log Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Mon Aug 21 11:58:18 2017
Downhole Cal Performed:	Mon Aug 21 11:58:21 2017
After Survey Verification Performed:	Mon Aug 21 11:58:23 2017

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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: 002 Model: PRB

Master Calibration

Performed Mon Aug 21 11:56:41 2017

	Background	Magnesium	Aluminum	Sandstone	
Window 1	833.6	7394.2	2287.3	8111.8	cps
Window 2	768.9	6322.3	1995.6	6800.0	cps
Window 3	621.5	3261.9	1186.4	3380.9	cps
Window 4	184.2	185.7	184.9	184.8	cps
Long Space	0.0	5553.4	1226.6	6031.1	cps
Short Space	1.2	1307.5	903.9	1387.7	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 46.3	Rib Slope	: 1.045	Density/Spine Ratio	: 0.566
Spine Angle	: 76.3	Spine Slope	: 4.090	Spine Intercept	: -20.7

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: 6I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		
3)	Short Space		cps				
	Long Space		cps		pu		

POST-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		pu
3)	Short Space		cps				
	Long Space		cps		pu		pu

Gamma Ray Calibration Report

Serial Number: GR6
Tool Model: OPEN
Performed: Mon Aug 21 11:59:01 2017

Calibrator Value: 150.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5500	GAPI/cps