DUAL INDUCTION LOG

Company K & N PETROLEUM, INC.
Well SOEKEN #22-2
Field KRAFT-PRUSA
County BARTON State KANSAS

Location: API # : 15-009-26382-0000
1992' FSL & 1293' FWL
SE - NE - NW - SW
SEC 22 TWP 17S RGE 11W

Other Services
CDL/CNL
MEL

Permanent Datum GROUND LEVEL Elevation 1825
Log Measured From KELLY BUSHING 10' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1835
D.F. 1833
G.L. 1825

Date	2/25/23		
Run Number	ONE		
Depth Driller	3350		
Depth Logger	3351		
Bottom Logged Interval	3349		
Top Log Interval	00		
Casing Driller	8 5/8" @ 650		
Casing Logger	650		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,000 PPM	
Density / Viscosity	9.1/61		
pH / Fluid Loss	10/8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.30 @ 75F		
Rmf @ Meas. Temp	.975 @ 75F		
Rmc @ Meas. Temp	1.56 @ 75F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.886 @ 110F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	8:00 A.M.		
Maximum Recorded Temperature	110F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	COLE ROBBEN		
Witnessed By	JIM MUSGROVE	KYLE NEMNICH	

Company K & N PETROLEUM, INC.
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

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

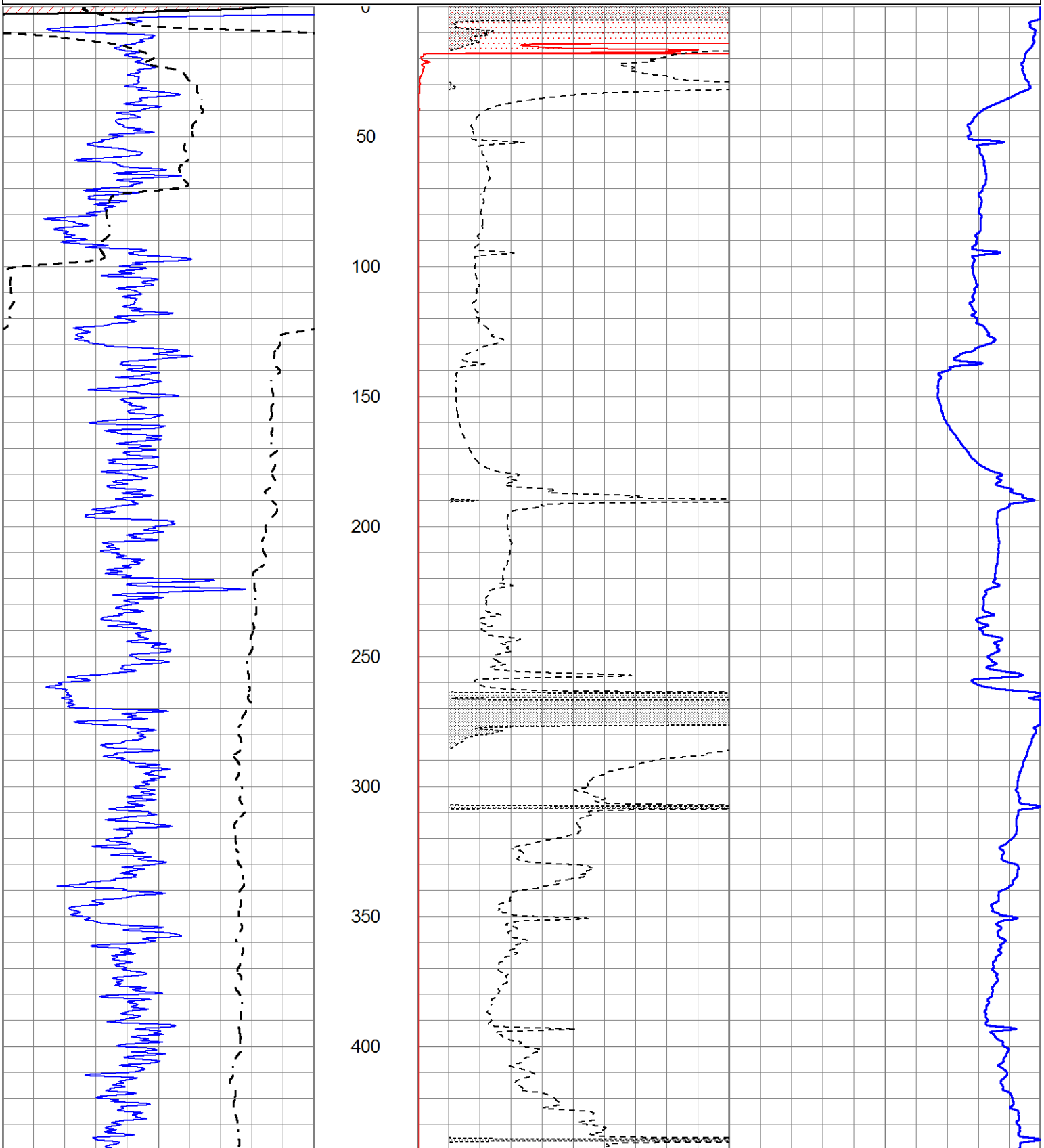
DIRECTIONS:
FROM CLAFLIN, KANSAS GO 2 MILES NORTH, 1/2 MILE EAST, NORTH INTO

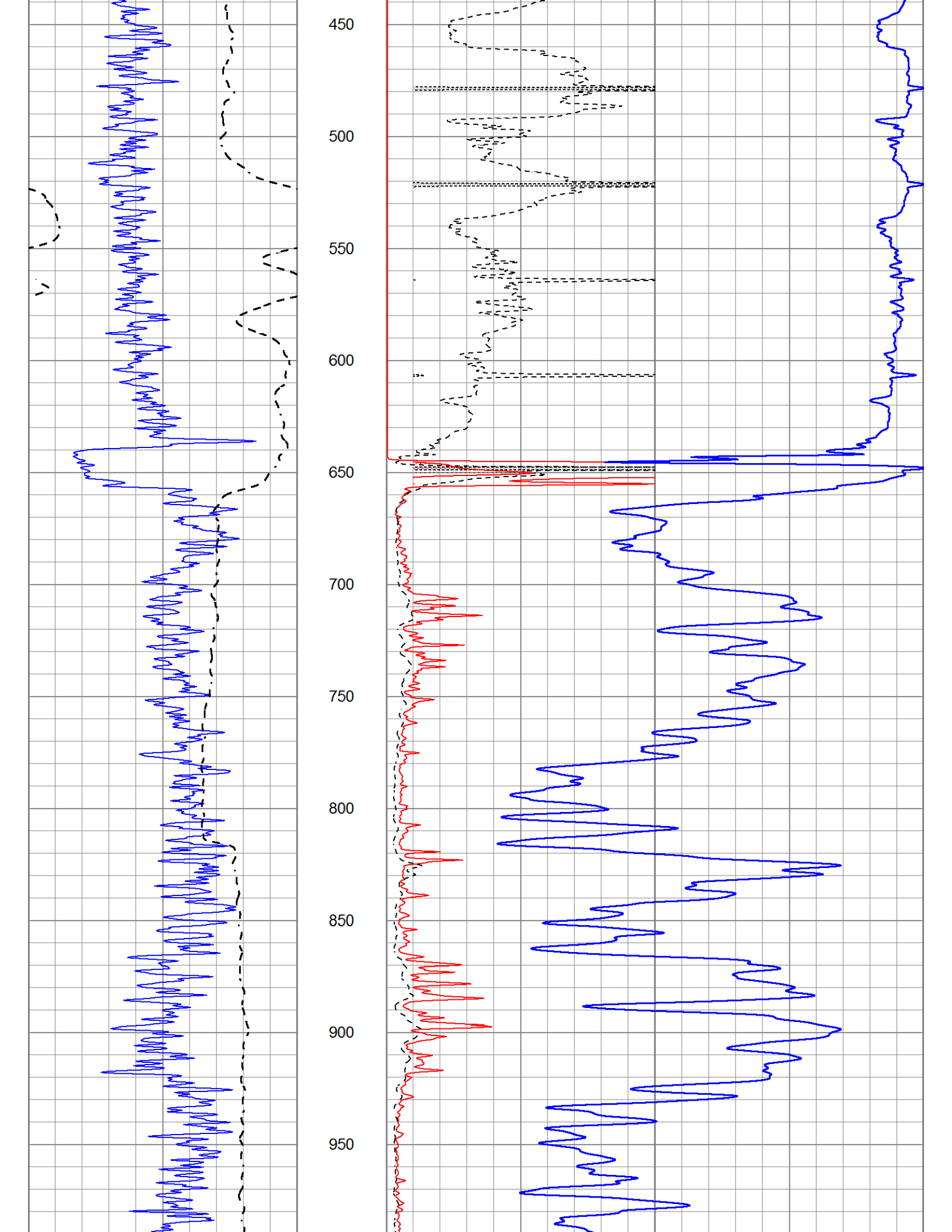
MAIN SECTION

Database File	7549ddn.db
Dataset Pathname	pass5MN1
Presentation Format	_dil2
Dataset Creation	Sat Feb 25 10:06:49 2023
Charted by	Depth in Feet scaled 1:600

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

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

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650
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750
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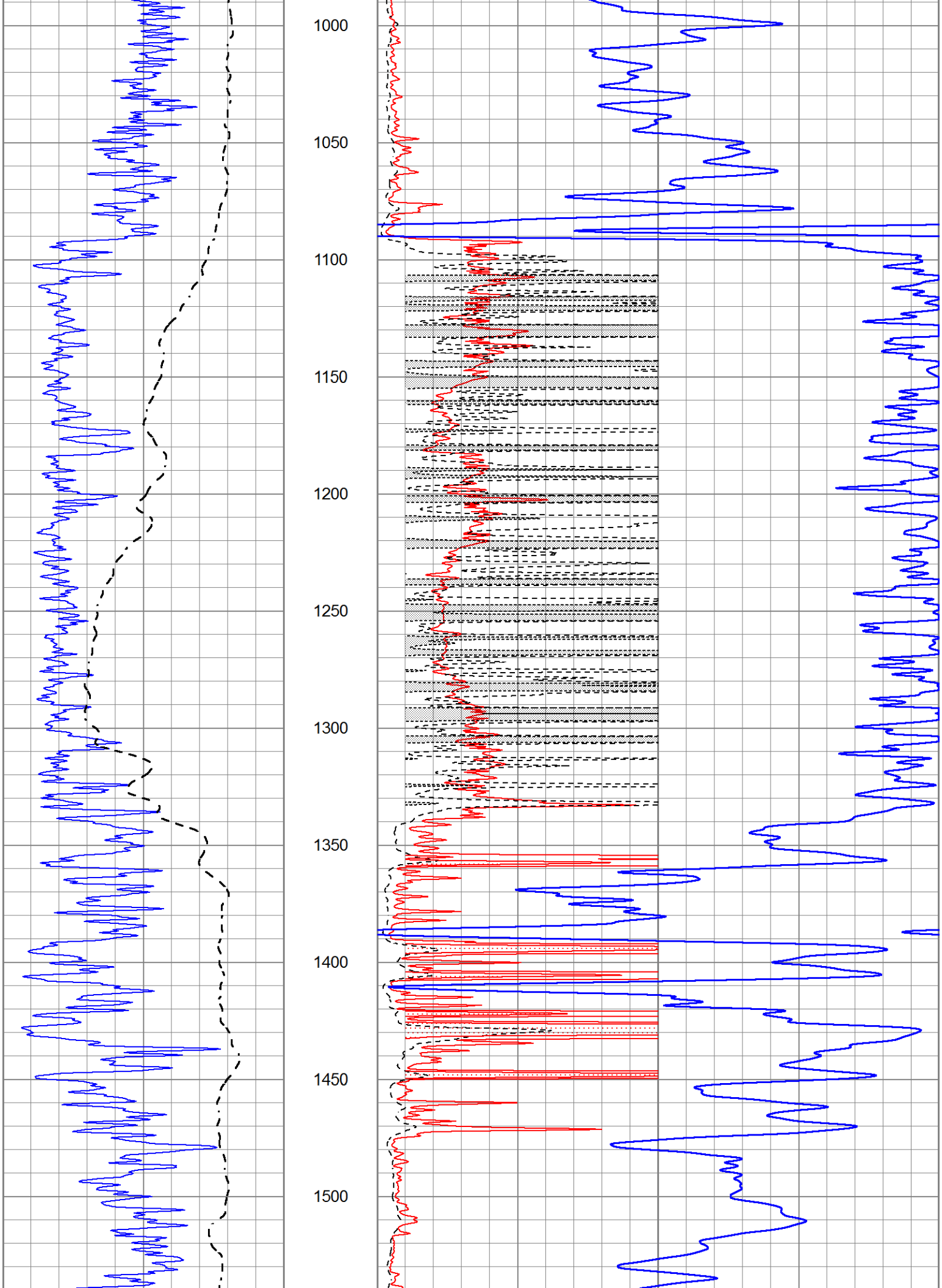
850
900
950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1100
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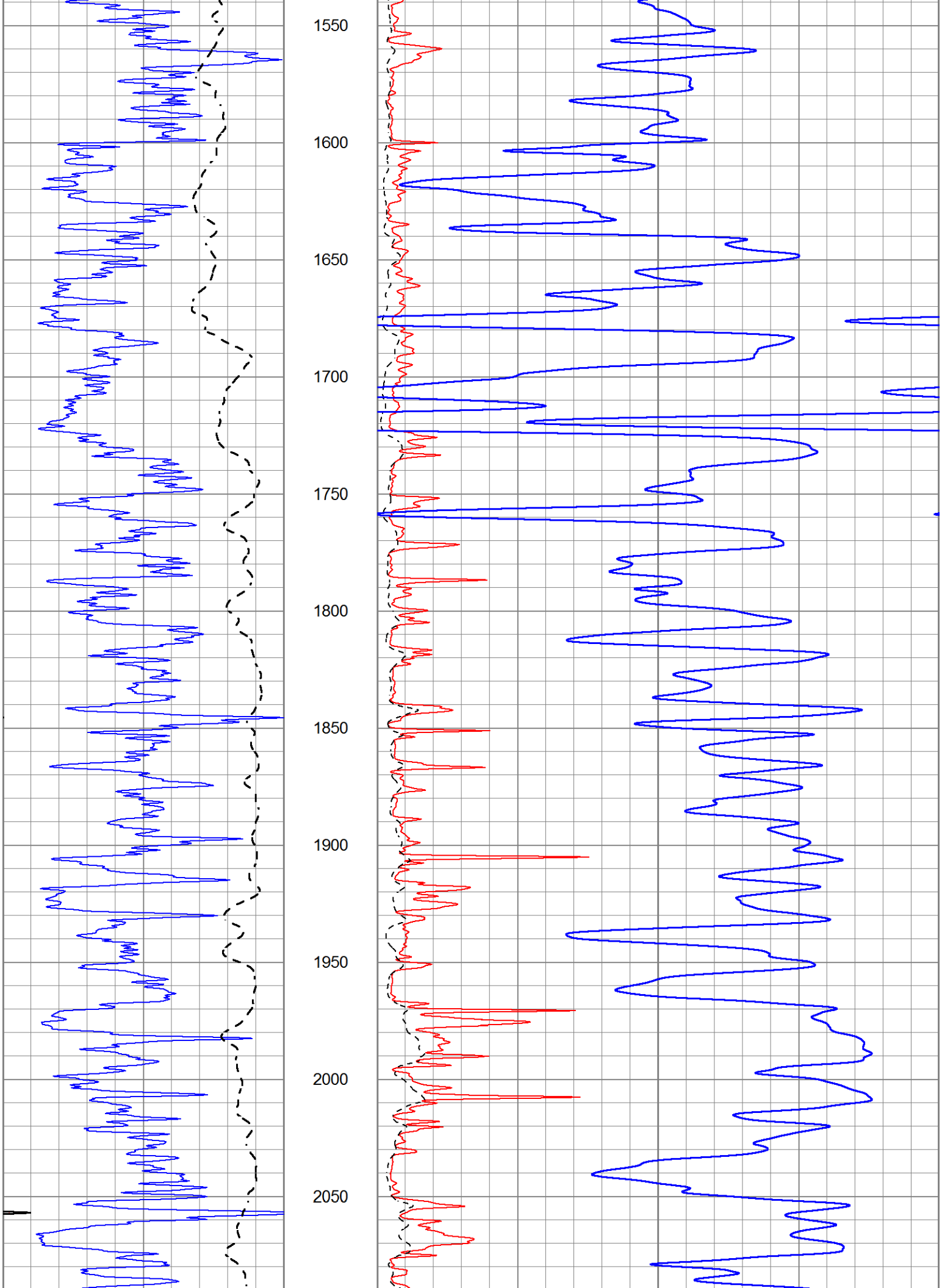
1200
1250
1300
1350
1400
1450
1500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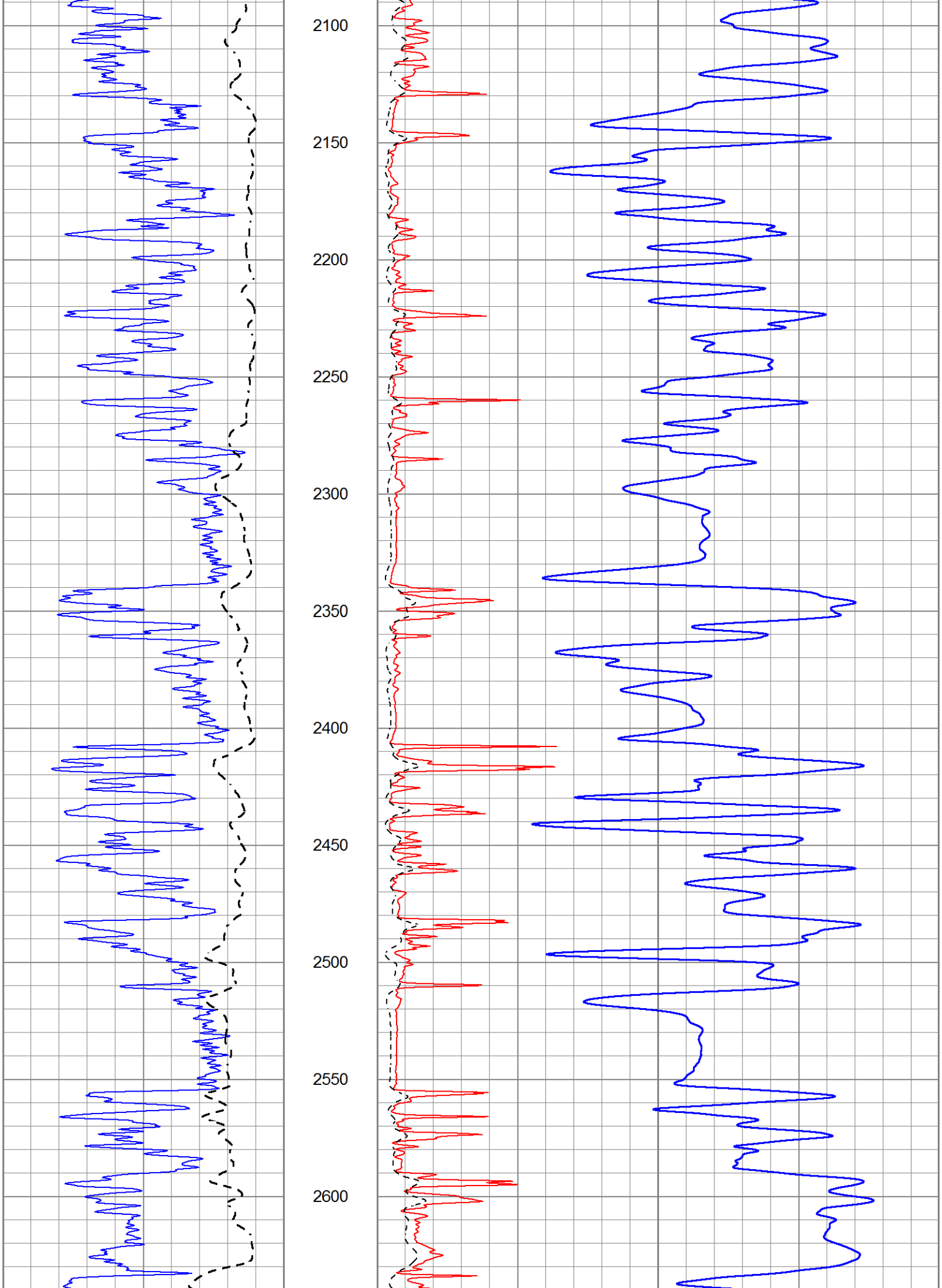
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050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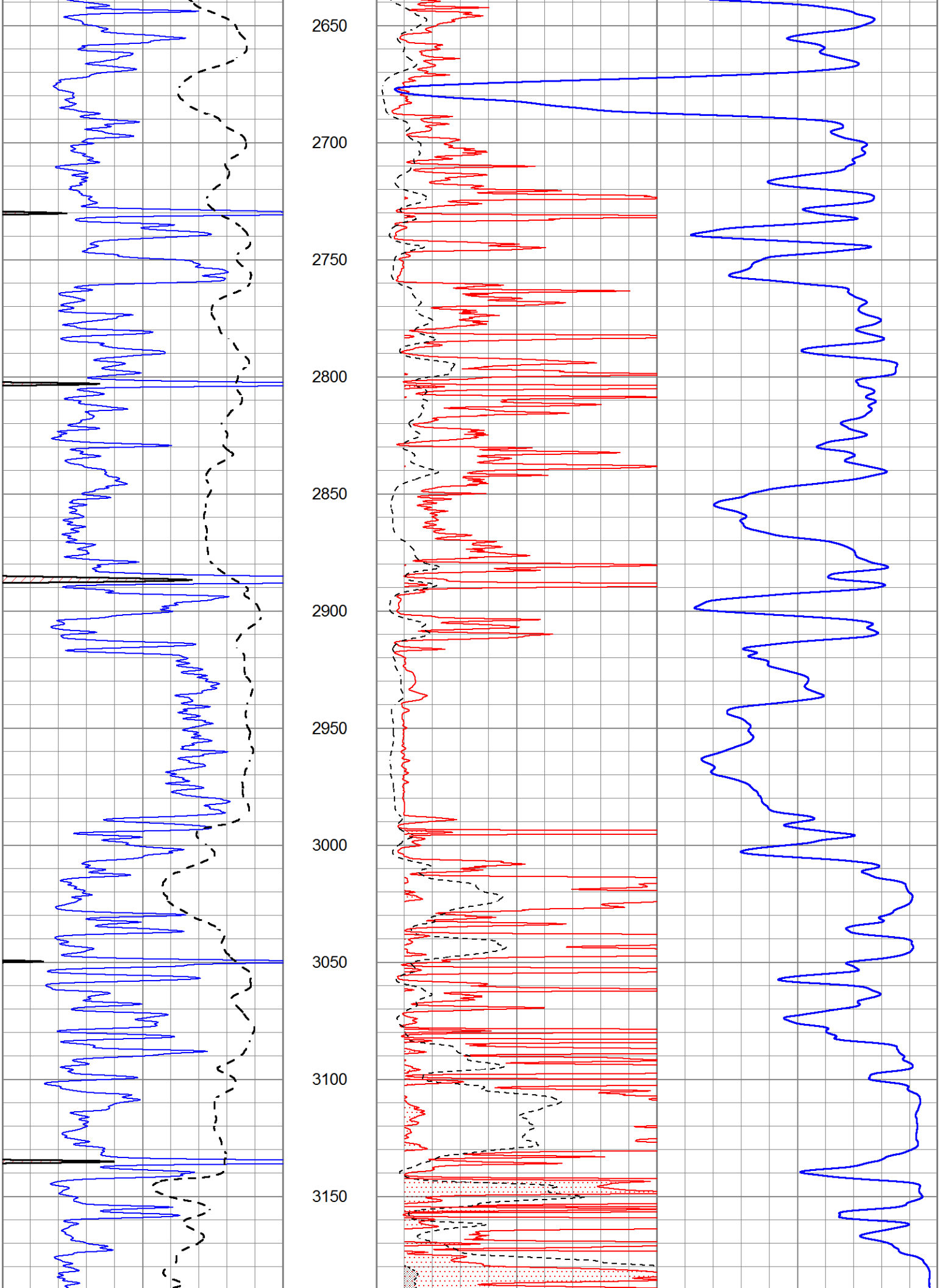
2200
2250
2300
2350
2400
2450
2500
2550
2600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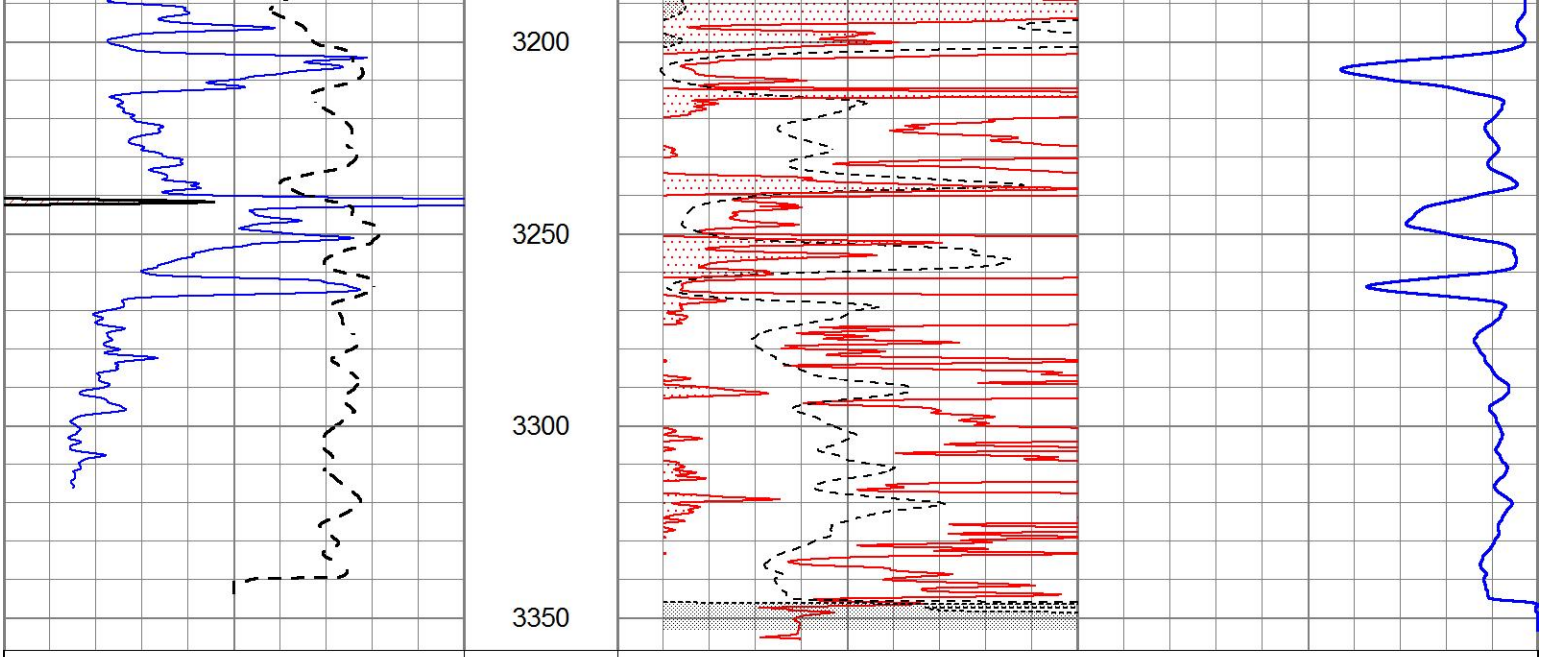
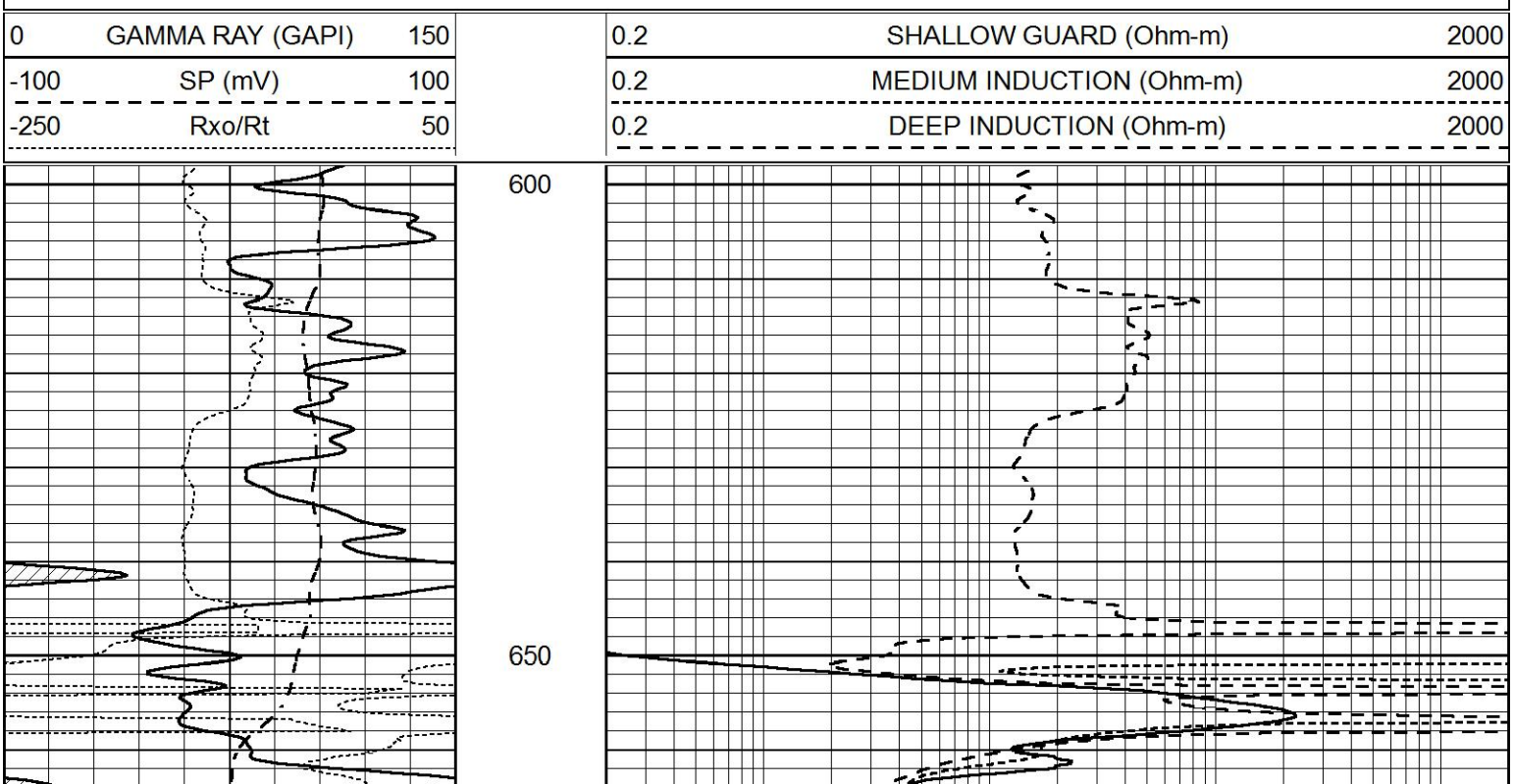
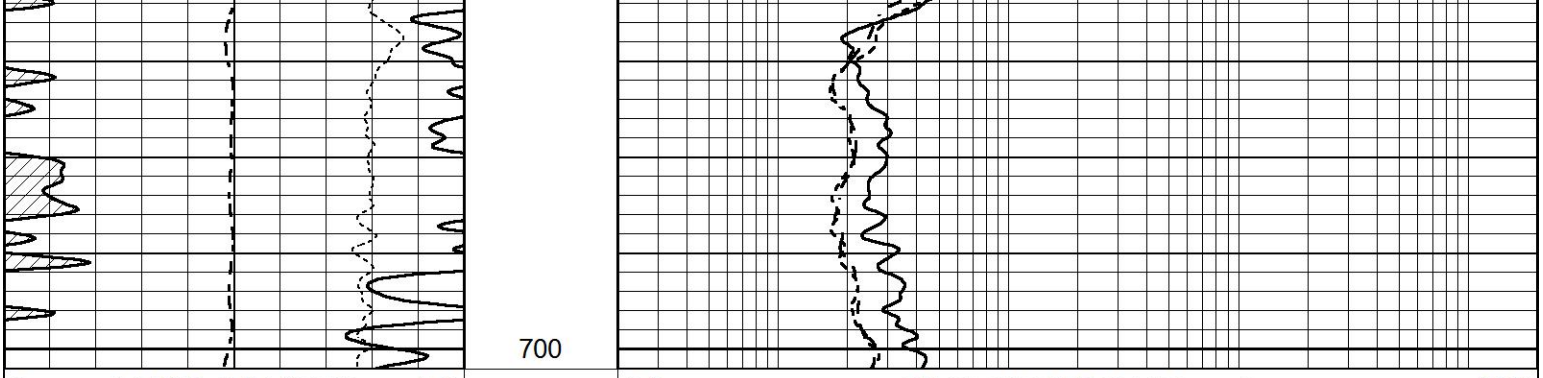
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150



ANHYDRITE

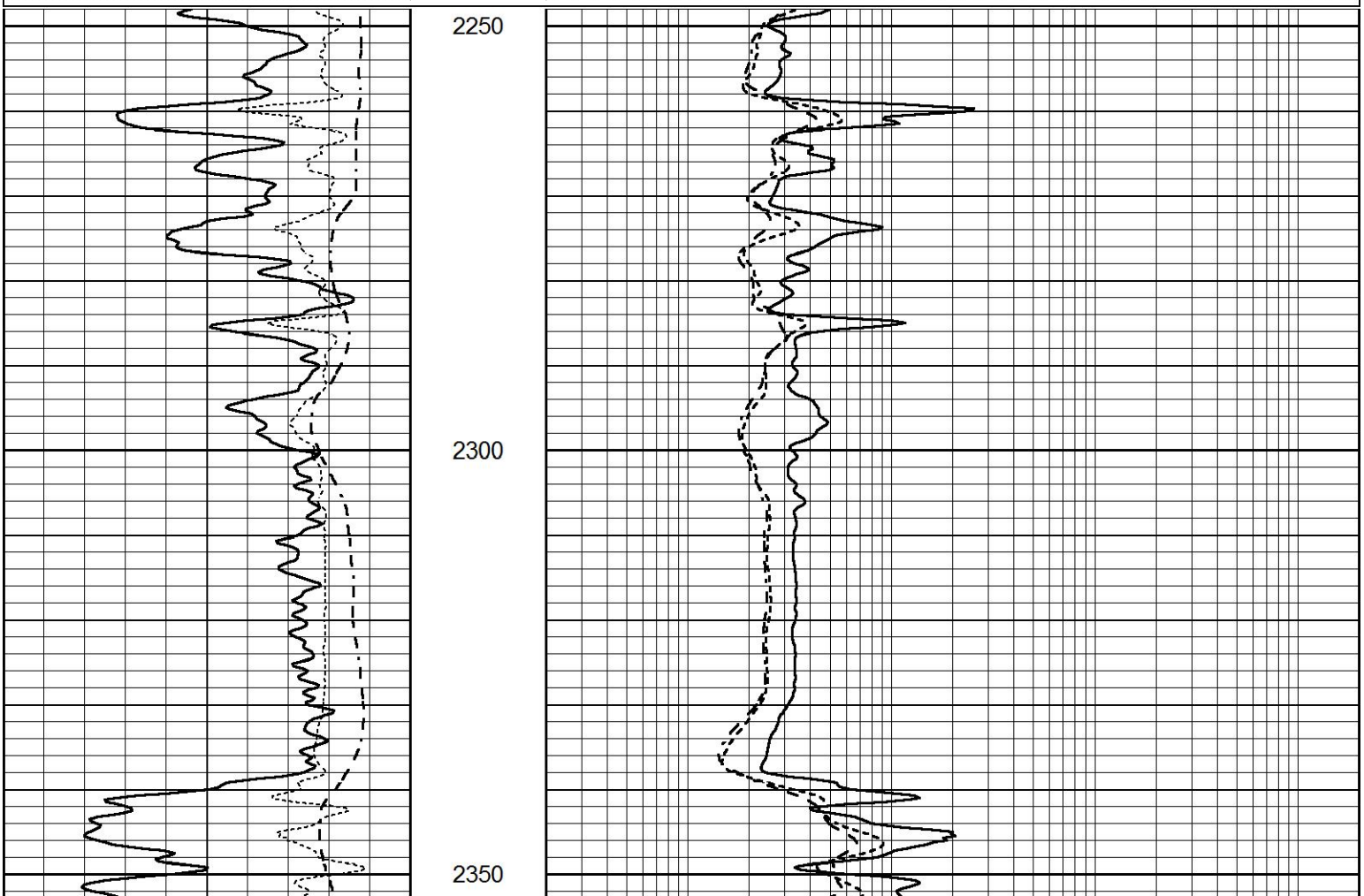
Database File	7549ddn.db
Dataset Pathname	pass5A
Presentation Format	_dil
Dataset Creation	Sat Feb 25 09:31:44 2023
Charted by	Depth in Feet scaled 1:240

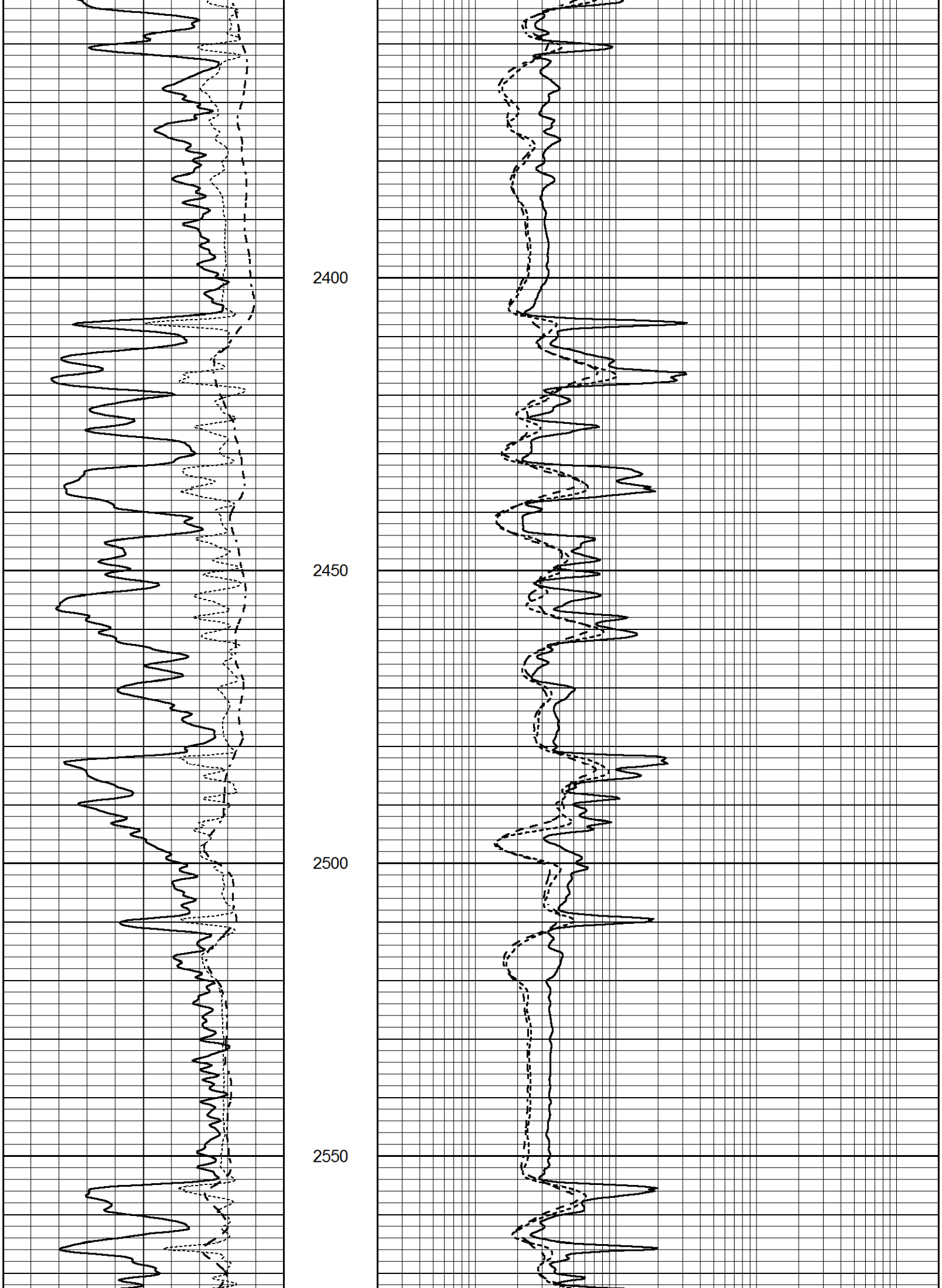




MAIN SECTION

Database File	7549ddn.db
Dataset Pathname	pass5MN1
Presentation Format	_dil
Dataset Creation	Sat Feb 25 10:06:49 2023
Charted by	Depth in Feet scaled 1:240

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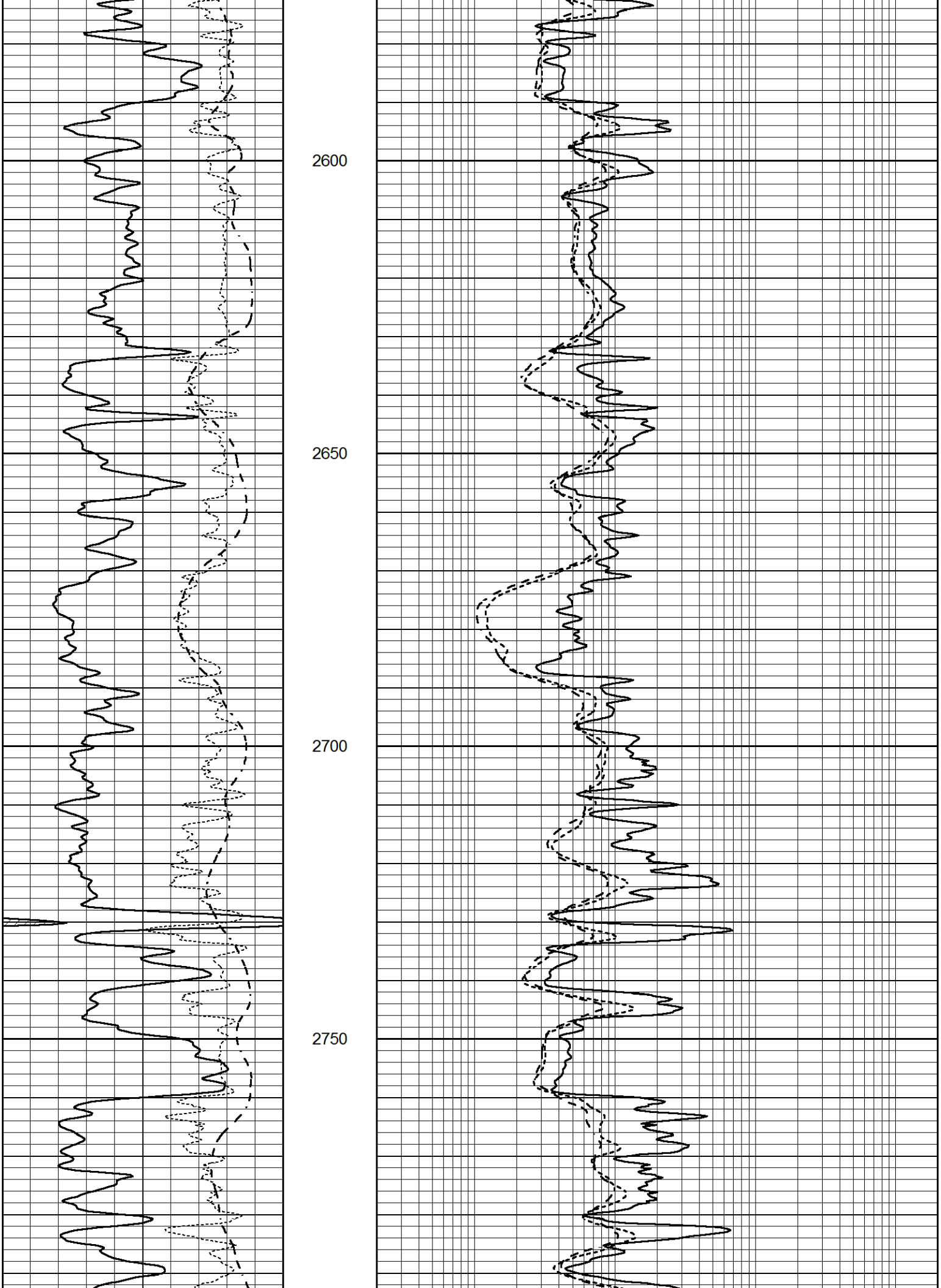
2450
2500
2550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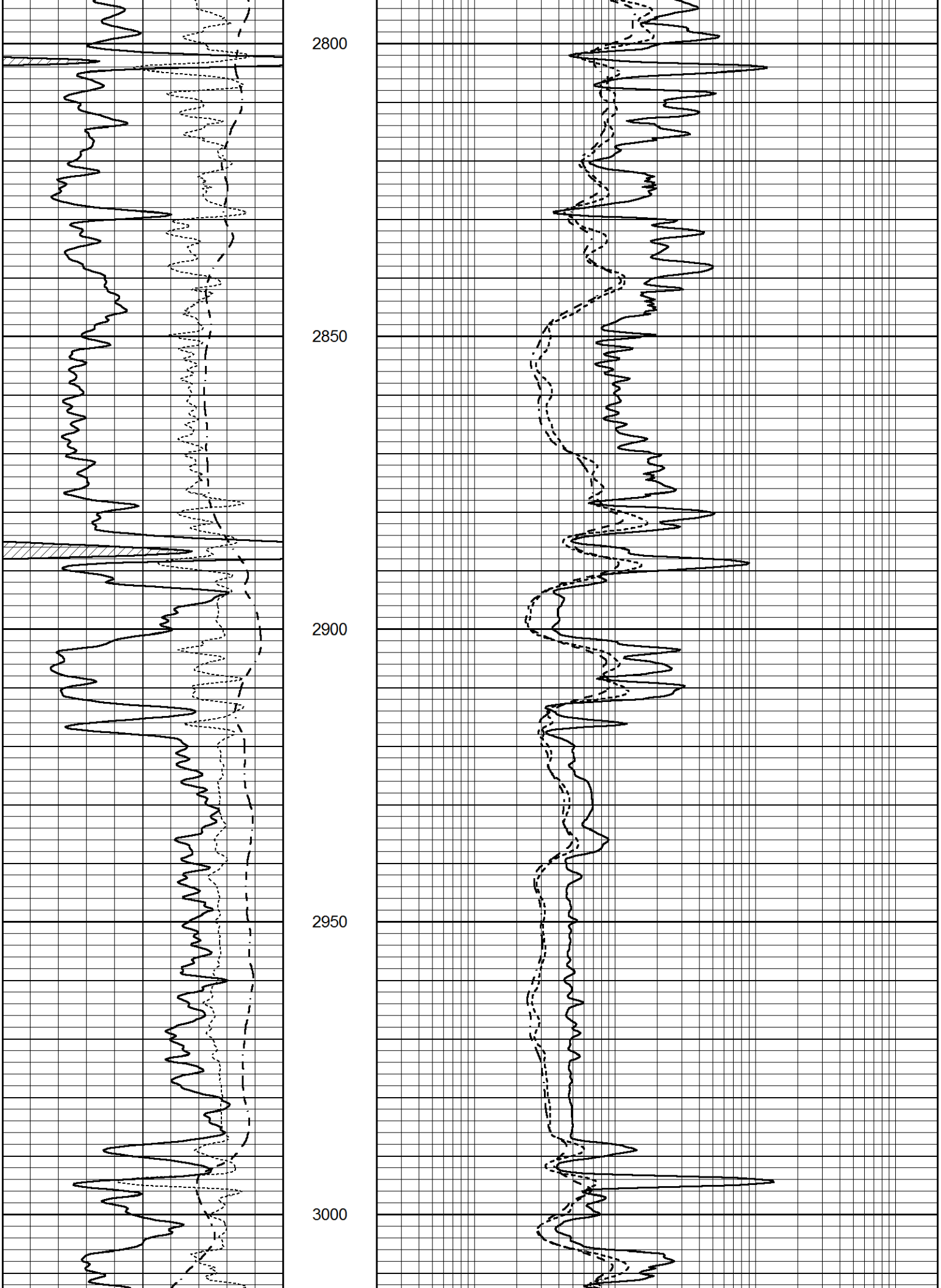
2650
2700
2750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2850
2900
2950
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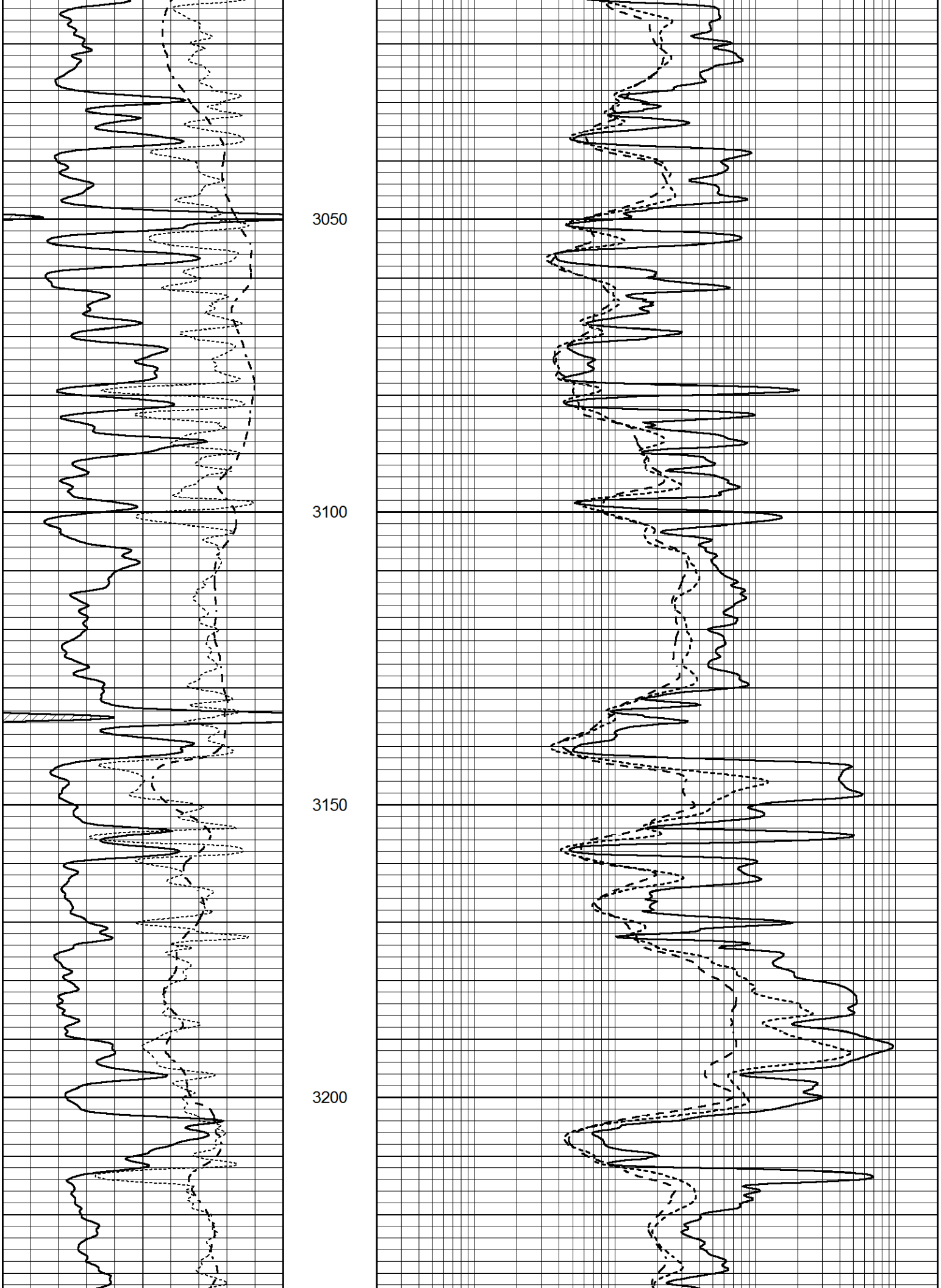
3050
3100
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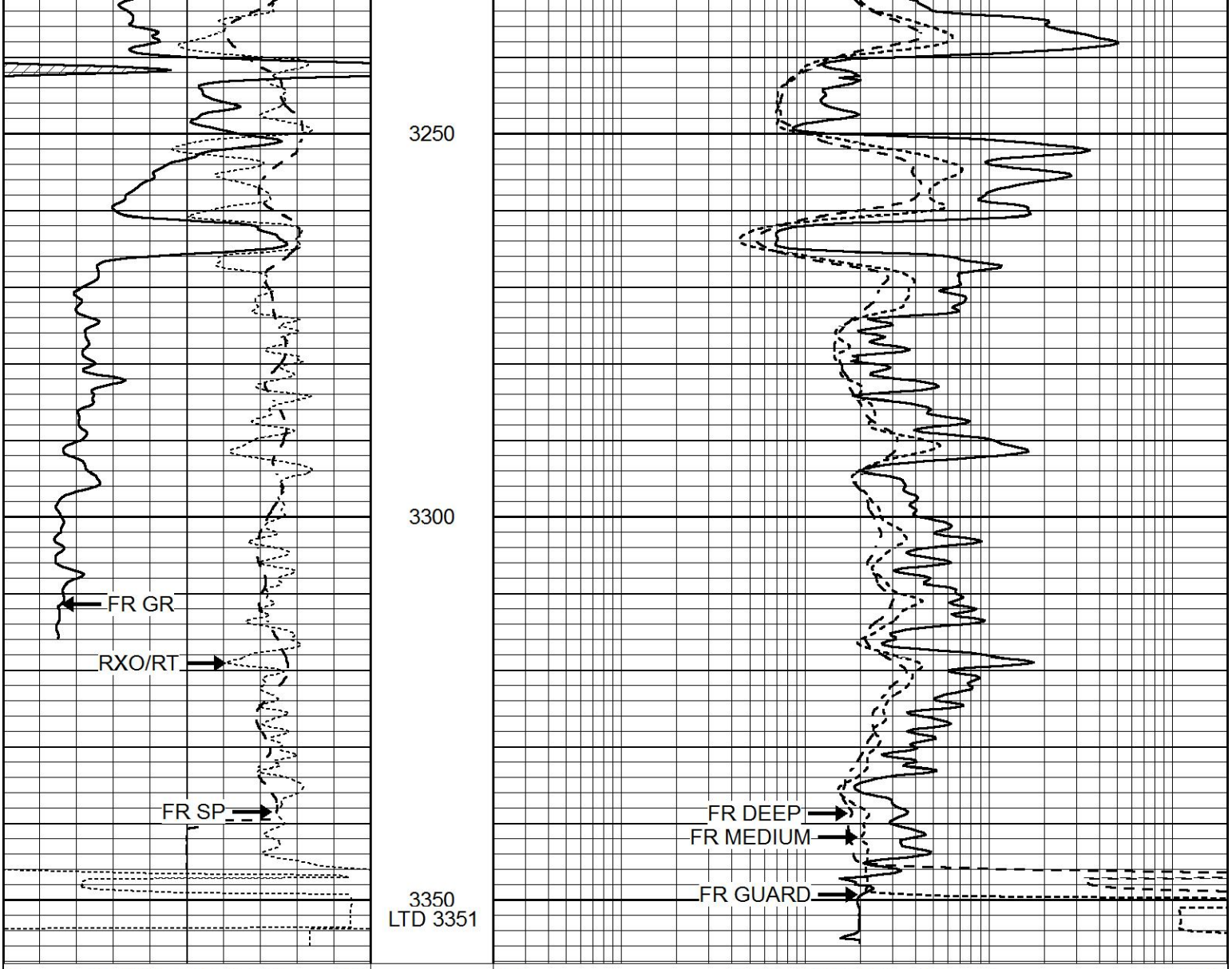
3200



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

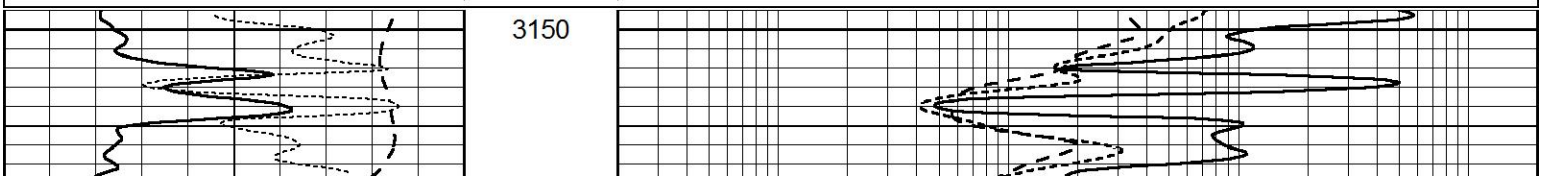
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

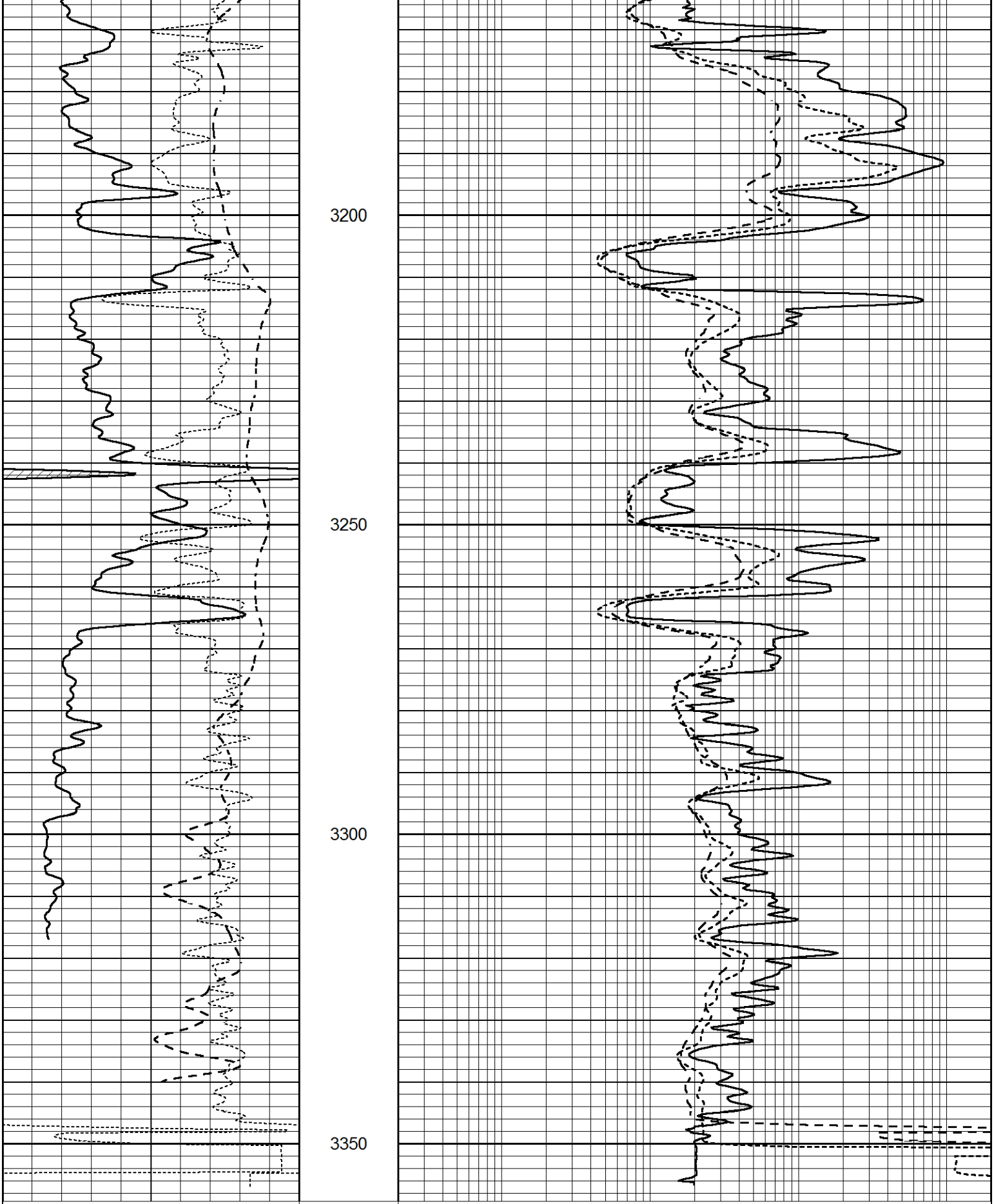
REPEAT SECTION

Database File	7549ddn.db
Dataset Pathname	pass3DR1
Presentation Format	_dil
Dataset Creation	Sat Feb 25 10:11:39 2023
Charted by	Depth in Feet scaled 1:240

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

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





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

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

Calibration Report

Database File	7549ddn.db
Dataset Pathname	pass5MN1
Dataset Creation	Sat Feb 25 10:06:49 2023

Dual Induction Calibration Report

Serial-Model:	FW1410-55-Probe
Surface Cal Performed:	Thu Jun 30 01:48:00 2022
Downhole Cal Performed:	Tue Feb 19 11:44:24 2019
After Survey Verification Performed:	Tue Feb 19 11:44:27 2019

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	650.000	-3.000
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	-10.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report

Serial: 140704
Model: V4_10P
Source Number: 74GBq-19

Master Calibration

Performed: Mon Jan 16 12:13:16 2023

	Background	Aluminum	Magnesium	
Window 1	510.34	5430.90	23328.68	cps
Window 2	43.13	1220.81	5782.94	cps
Window 4	220.94	1221.84	5140.68	cps
Window 5	541.58	7453.23	13730.42	cps
Window 6	40.88	1109.92	2626.60	cps
Window 8	256.72	2483.83	4003.08	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha:	: -1.8151	SS Alpha:	: -0.5949	LS CPE:	: 1.1494
LS Beta:	: 115604.5658	SS Beta:	: 10827.9221	SS CPE:	: 1.7503

Before Survey Backround Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration — Performed: Mon Jan 16 12:13:16 2023

Results Readings		References (in)			
Low	High	Low	High	Gain	Offset
7710.6	11244.4	8.0	14.0	0.0	-6.5

Before Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

After Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

Compensated Neutron Calibration Report

Serial Number: 080621PMC
Tool Model: NABORS

PRE-SURVEY VERIFICATION

Detector	Readings		Measured		Target	
Short Space	566.40	cps				
Long Space	640.00	cps	-1.07	pu	-1.07	pu

POST-SURVEY VERIFICATION

Detector	Readings		Measured		Target	
Short Space		cps				
Long Space		cps		pu		pu

Gamma Ray Calibration Report

Serial Number: 7

Tool Model:	ProbeI	
Performed:	Wed Feb 15 09:34:11 2023	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5000	GAPI/cps