DUAL INDUCTION LOG

Company GRAND MESA OPERATING
Well PRETTY WOMAN #1-20
Field BUTTERFIELD - OVERLAND NORTHEAS
County GOVE
State KANSAS

Company GRAND MESA OPERATING
Well PRETTY WOMAN #1-20
Field BUTTERFIELD - OVERLAND NORTHEAST
County GOVE State KANSAS

Location: API # : 15-063-22422-0000
1450' FNL & 529' FEL
NW - NE - SE - SE
SEC 20 TWP 14S RGE 20W

Other Services
CDL/CNL/PE
MEL/SONIC

Elevation
K.B. 2829
D.F. 2827
G.L. 2818

Permanent Datum GROUND LEVEL Elevation 2818
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Date	12/3/22		
Run Number	ONE		
Depth Driller	4571		
Depth Logger	4572		
Bottom Logged Interval	4570		
Top Log Interval	00		
Casing Driller	10 3/4"@246'		
Casing Logger	246		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES: 2,900 PPM	
Density / Viscosity	9.2/60		
pH / Fluid Loss	10.5/6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	2.00@65F		
Rmf @ Meas. Temp	1.50@65F		
Rmc @ Meas. Temp	2.40@65F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	1.07@120F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	11:00 P.M.		
Maximum Recorded Temperature	120F		
Equipment Number	8916		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	GARET DINKEL		

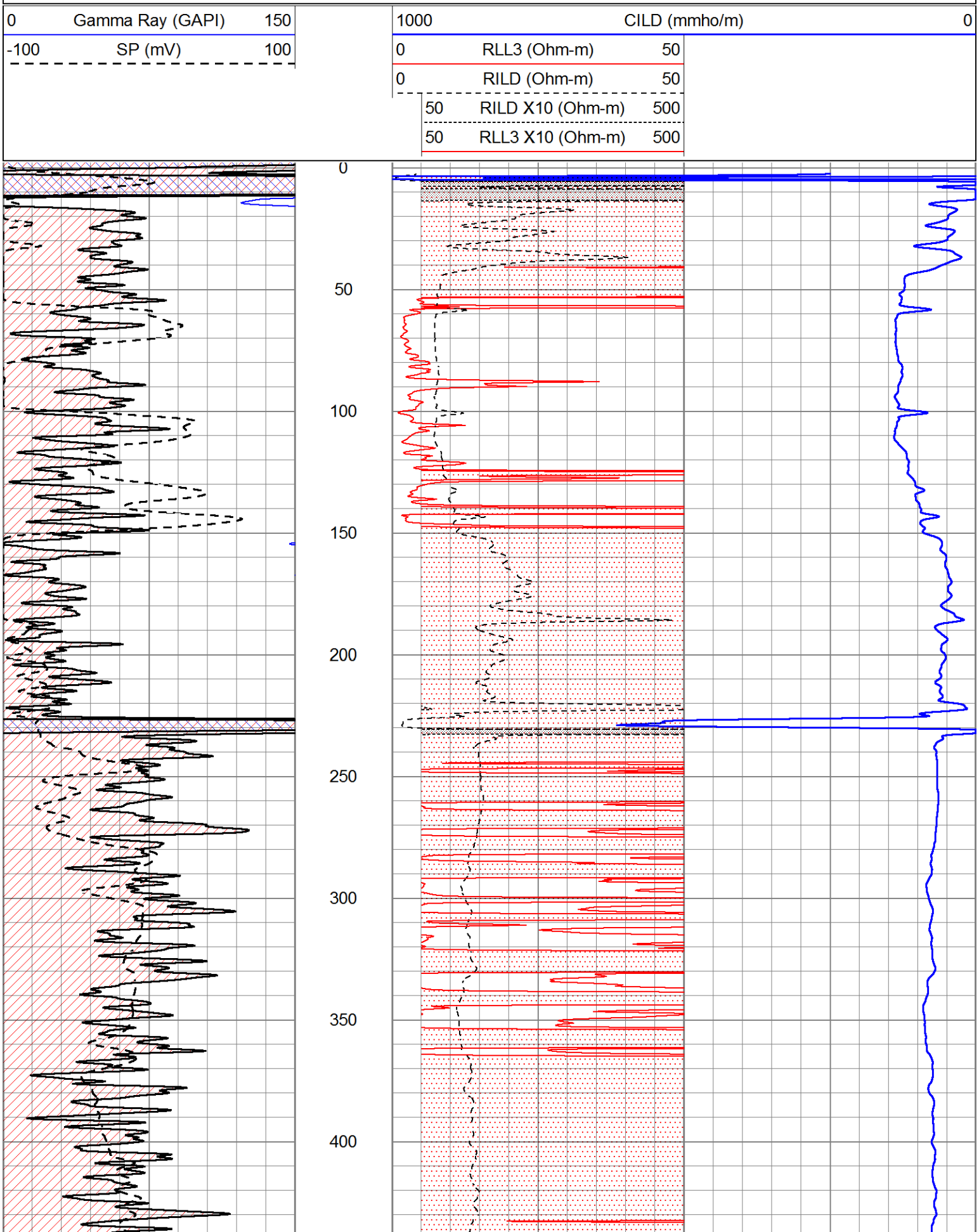
<<< Fold Here >>>

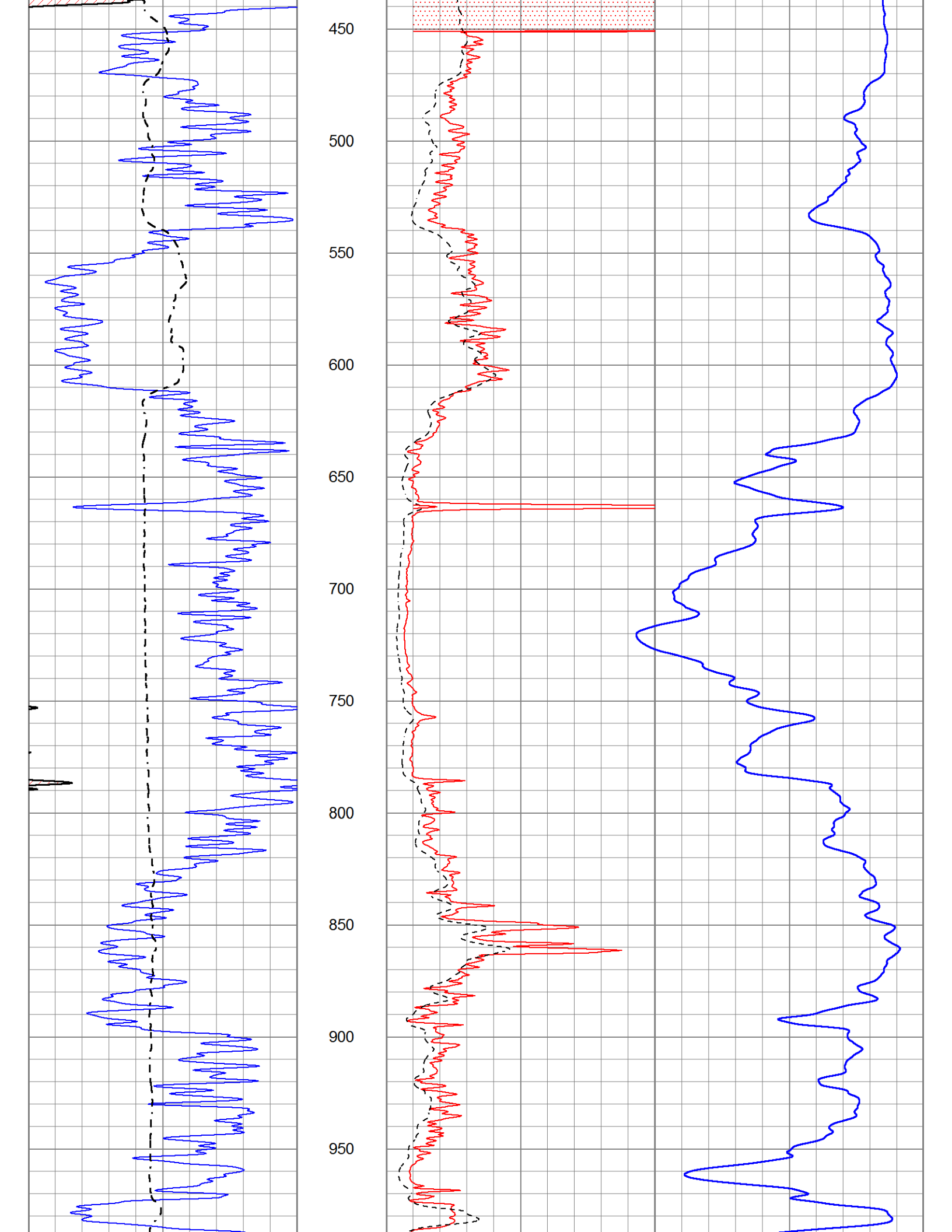
Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
DIRECTIONS:
GOVE, KS., 11S. ON HWY 23 TO "RD. I", (COBERLY SIGN) 8 1/4W., 1N. INTO

MAIN SECTION

Database File	6809pe.db
Dataset Pathname	pass3.1M
Presentation Format	_dil2
Dataset Creation	Sun Dec 04 00:56:06 2022
Charted by	Depth in Feet scaled 1:600

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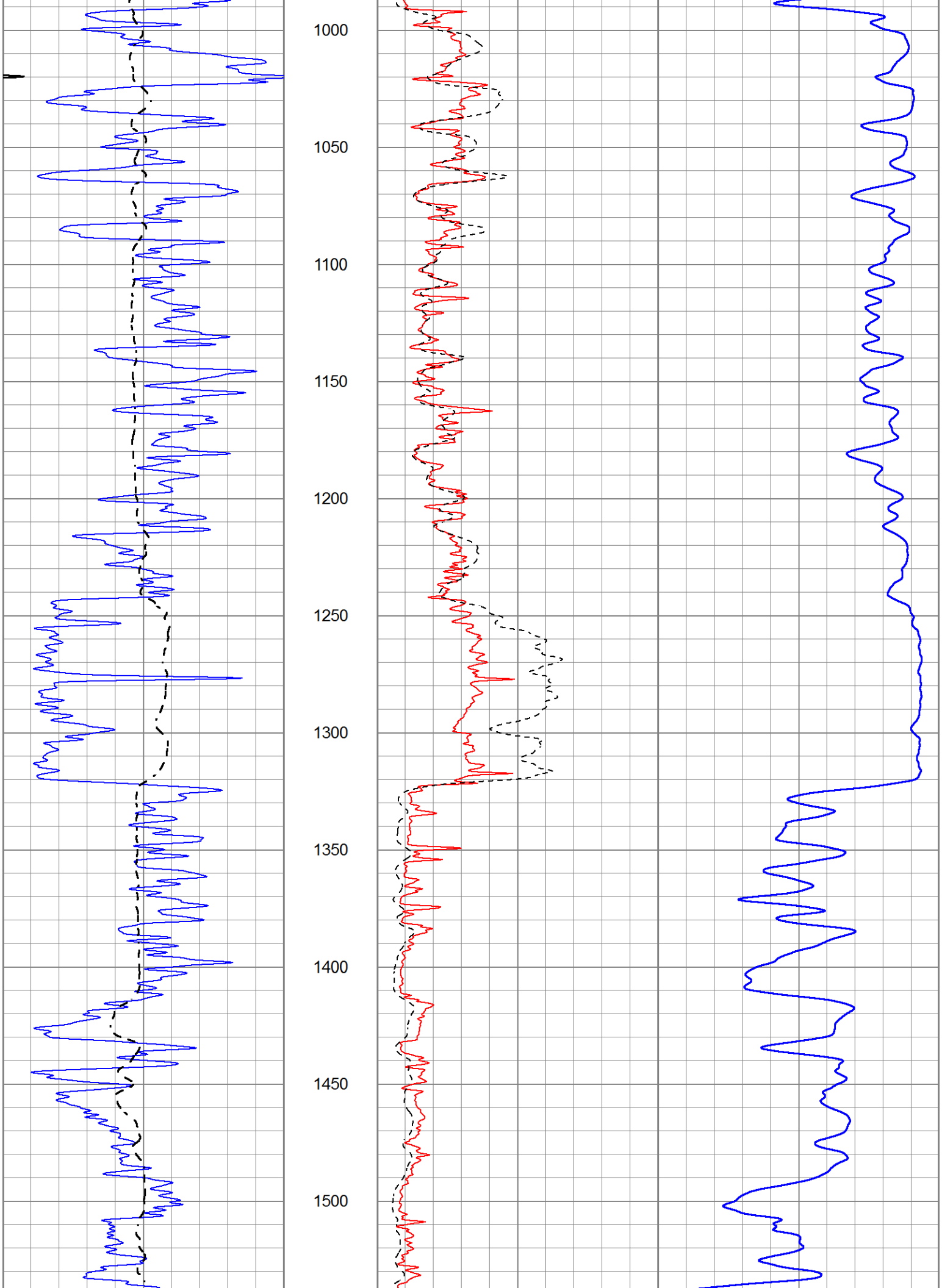
850
900
950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1300
1350
1400
1450
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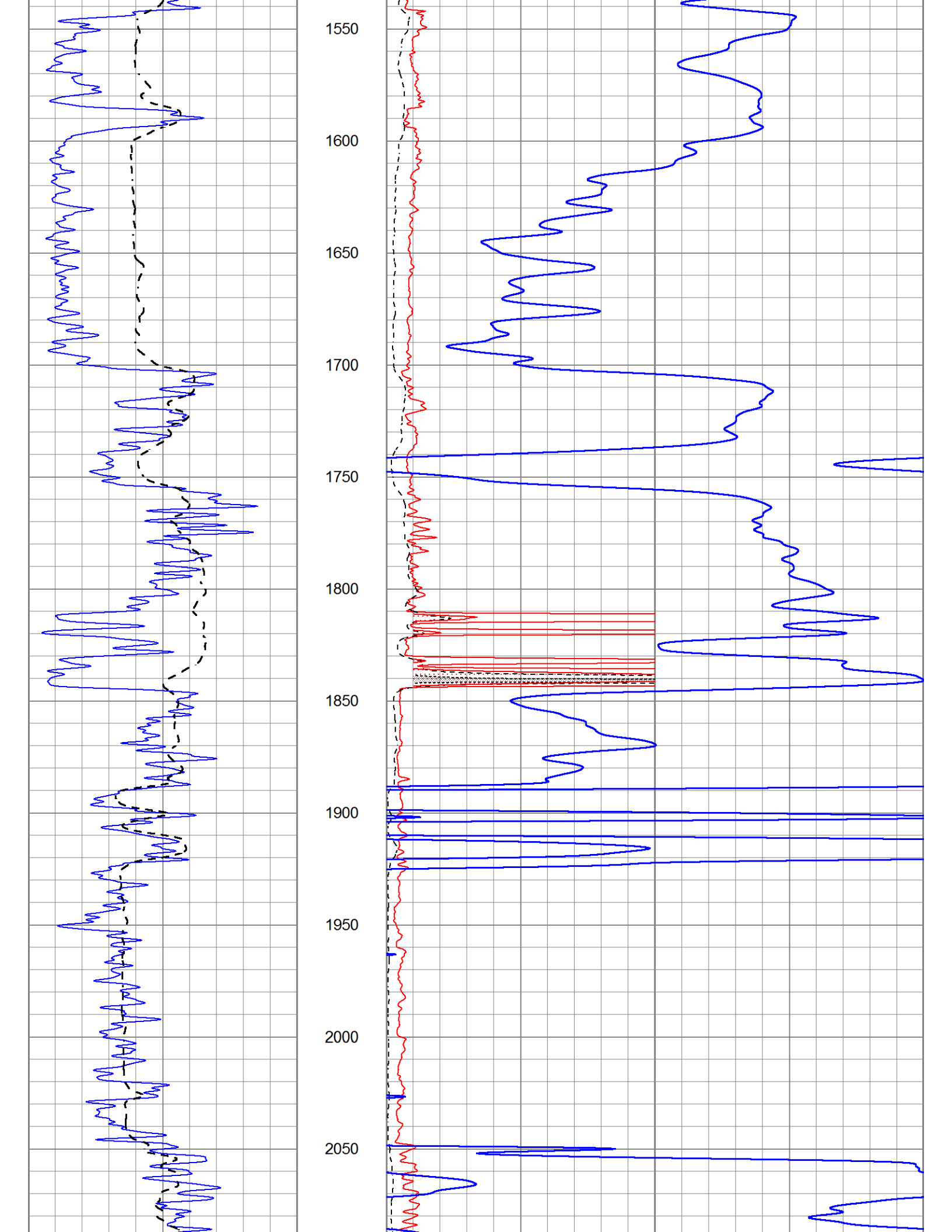
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1700
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1850
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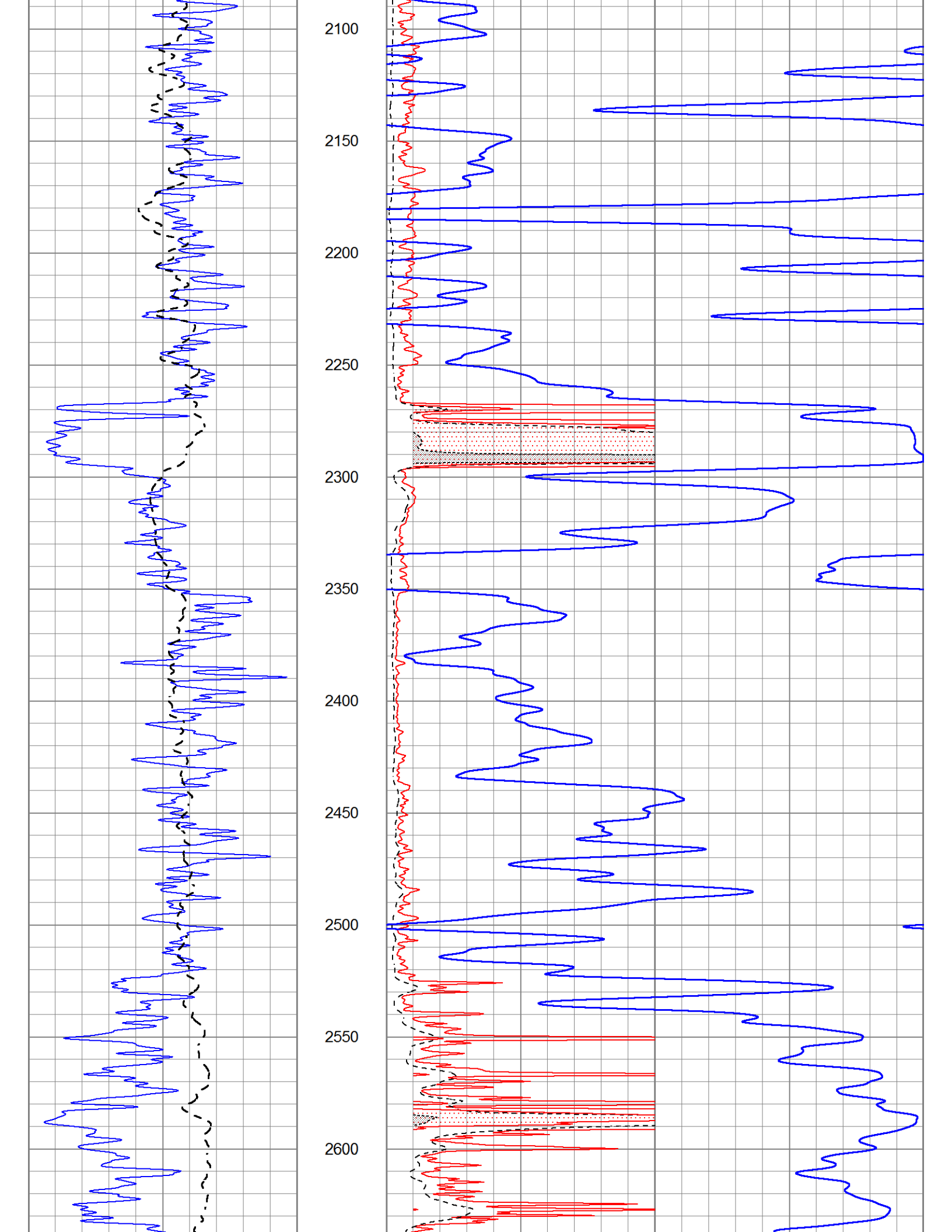
2000
2050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2500
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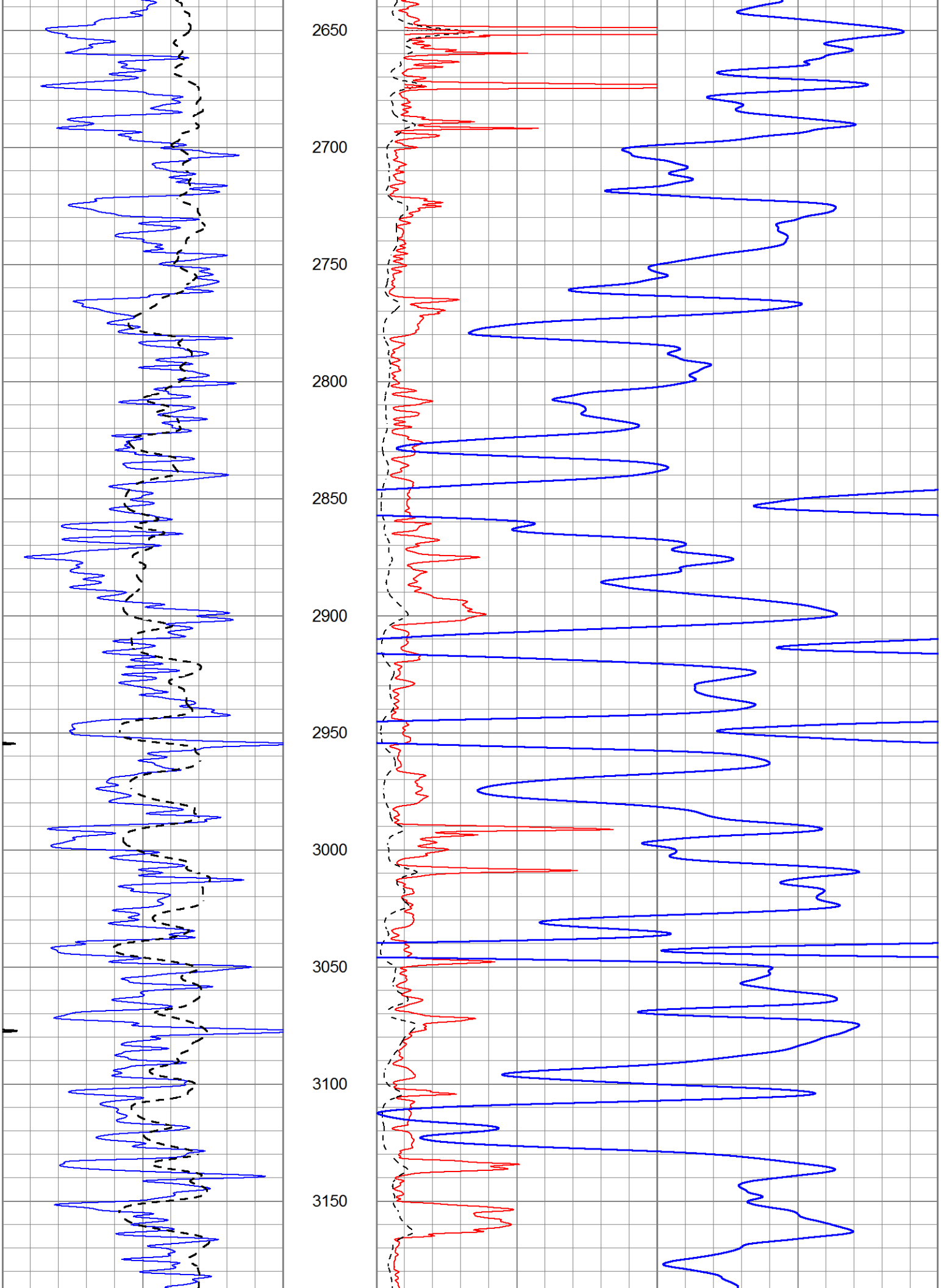
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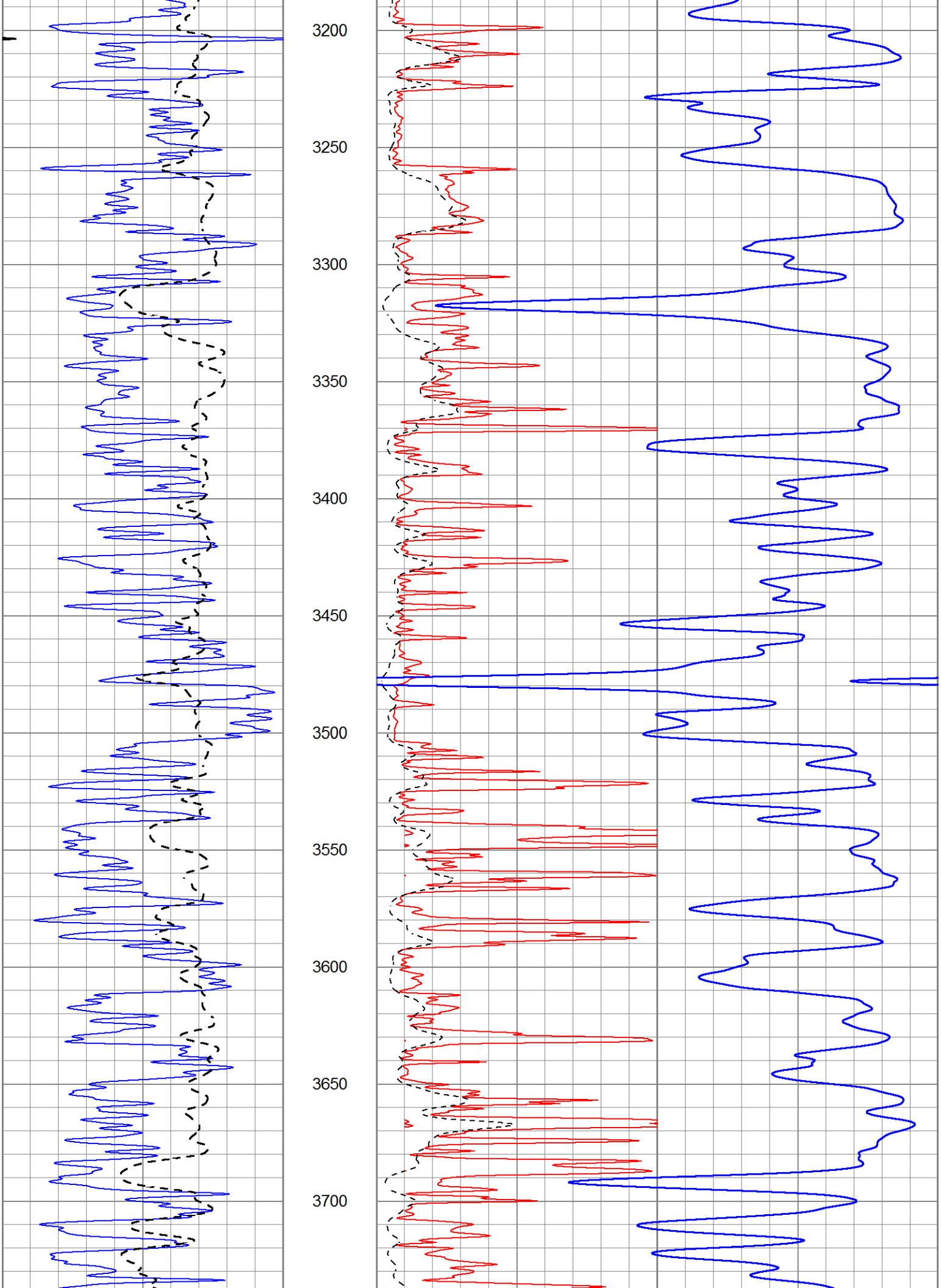
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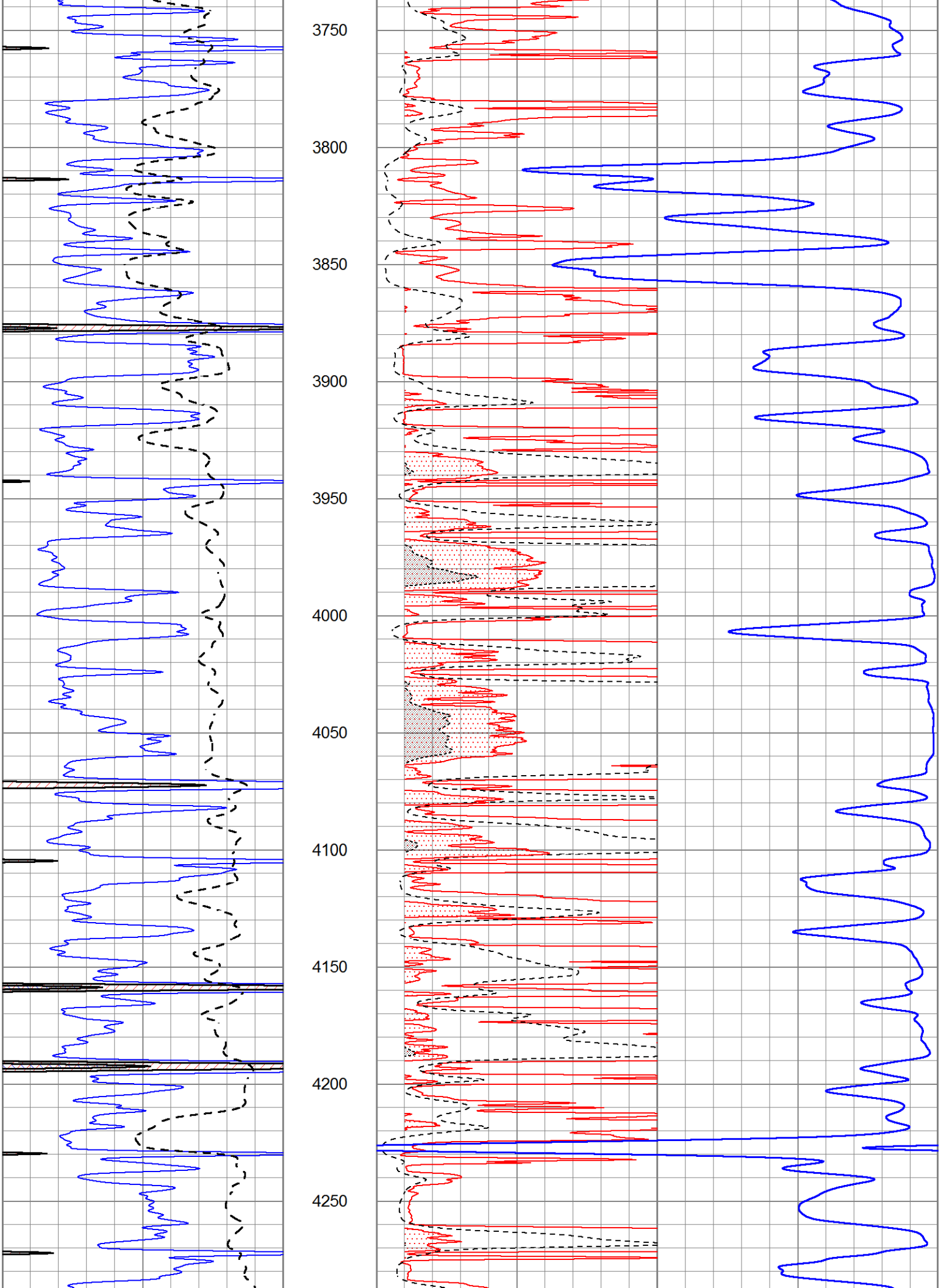
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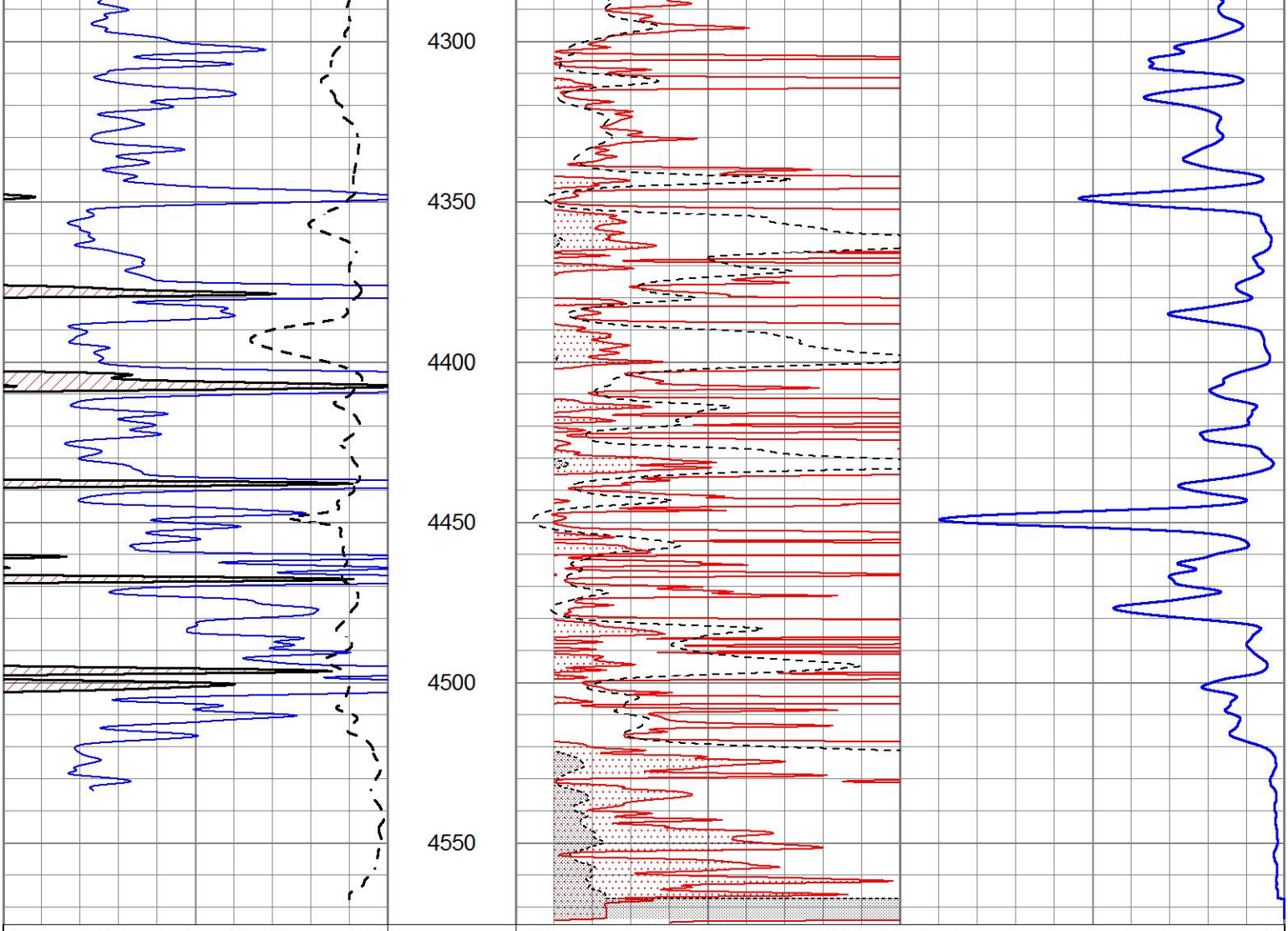
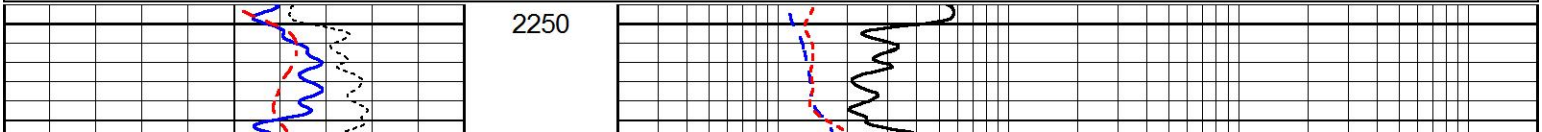


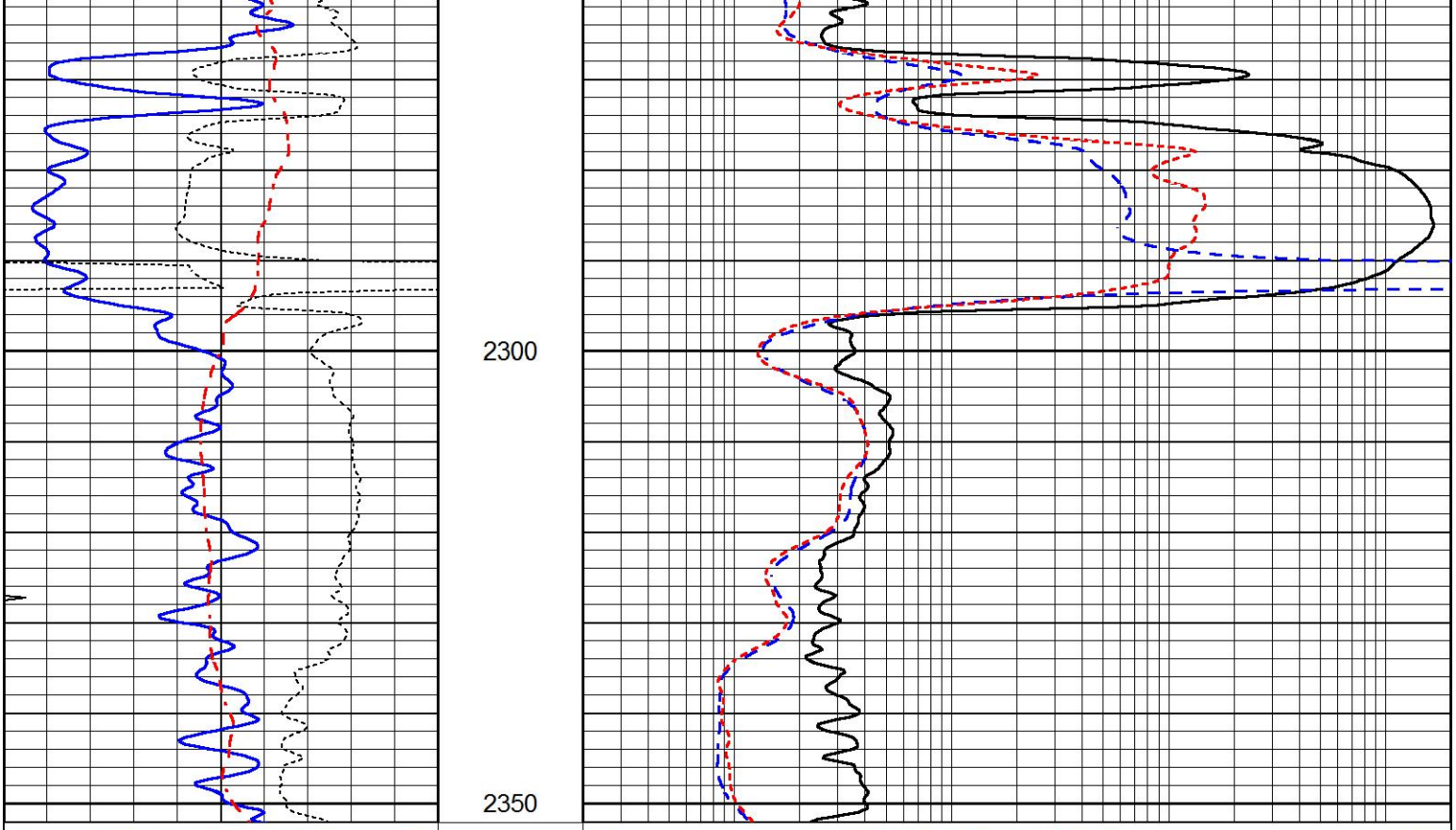
ANHYDRITE

Database File	6809pe.db
Dataset Pathname	pass3.1A
Presentation Format	_dil
Dataset Creation	Sun Dec 04 00:56:50 2022
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

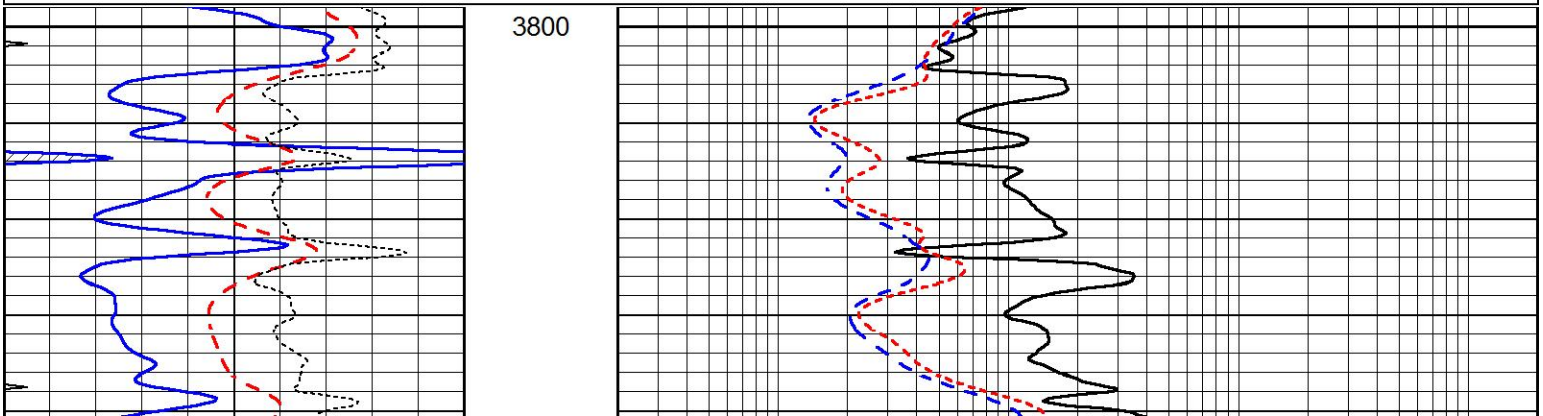
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

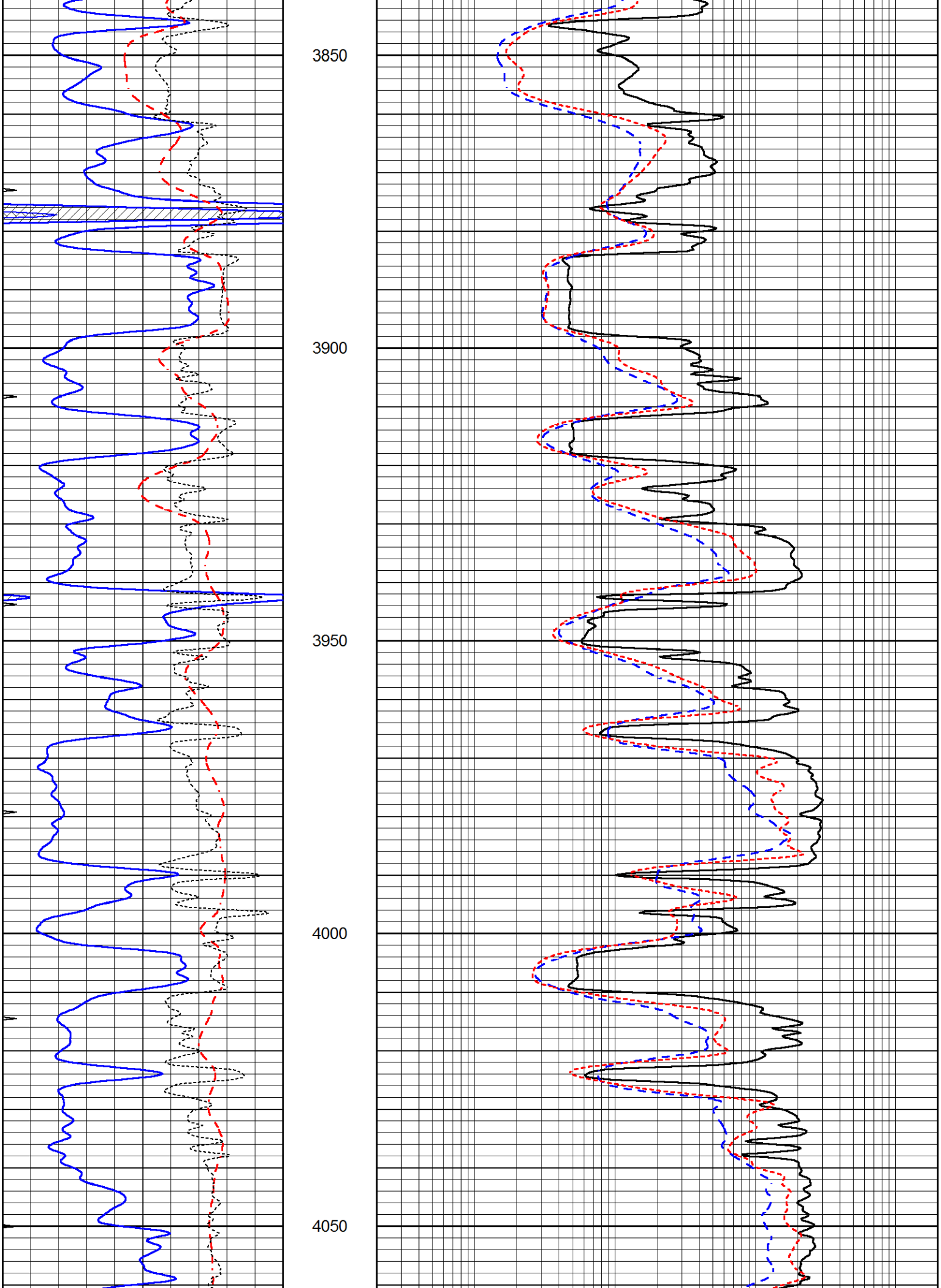
MAIN SECTION

Database File	6809pe.db
Dataset Pathname	pass3.1M
Presentation Format	_dil
Dataset Creation	Sun Dec 04 00:56:06 2022
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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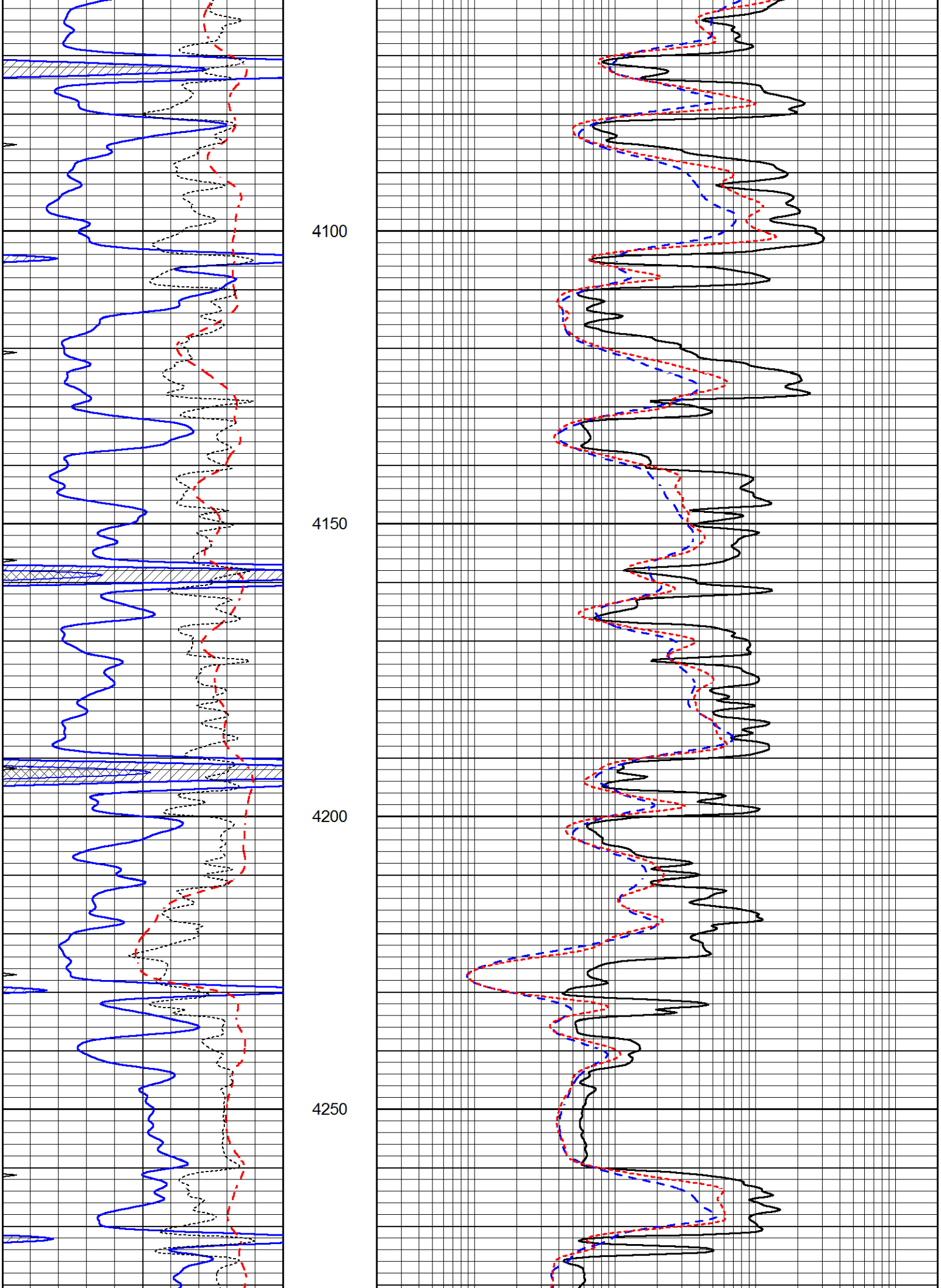
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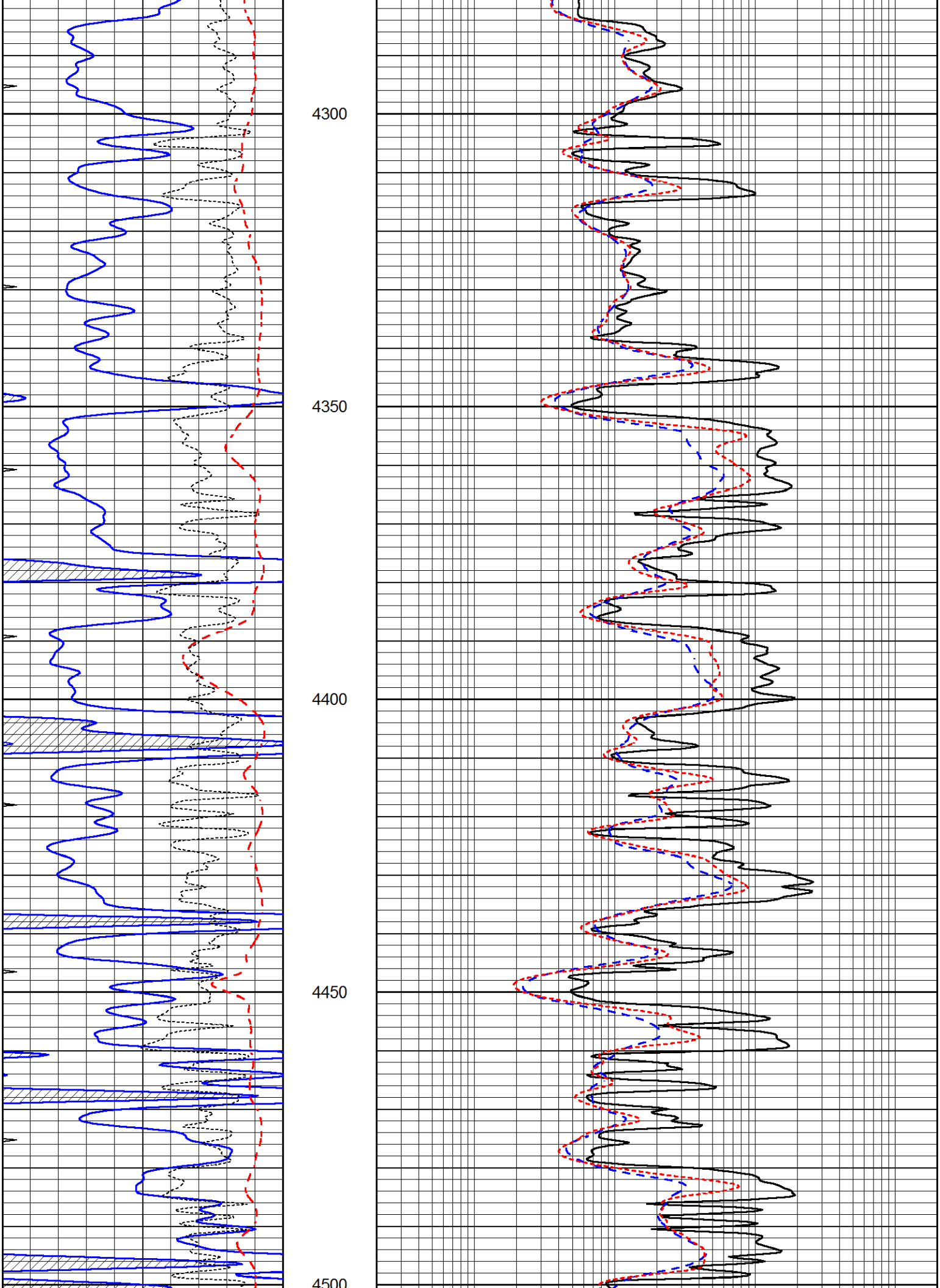
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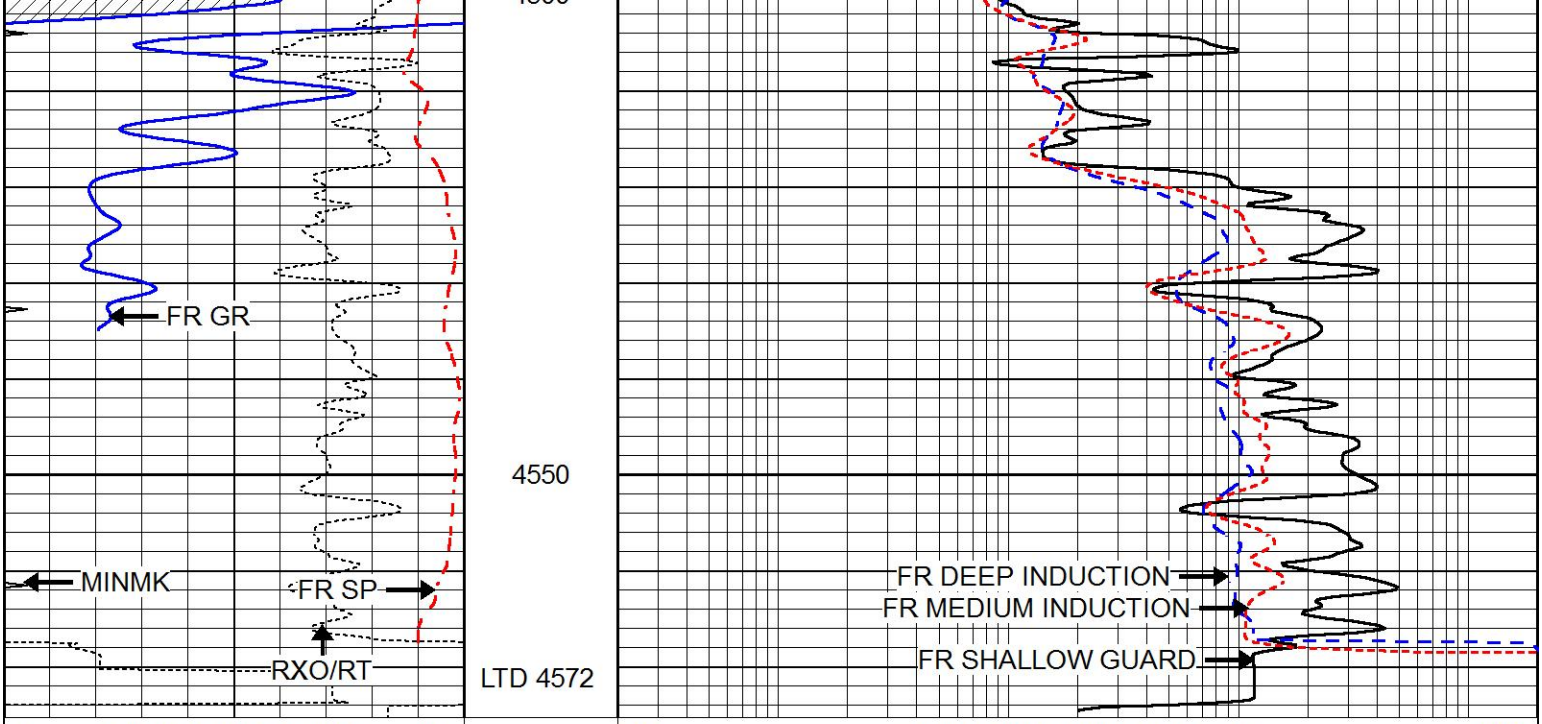


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

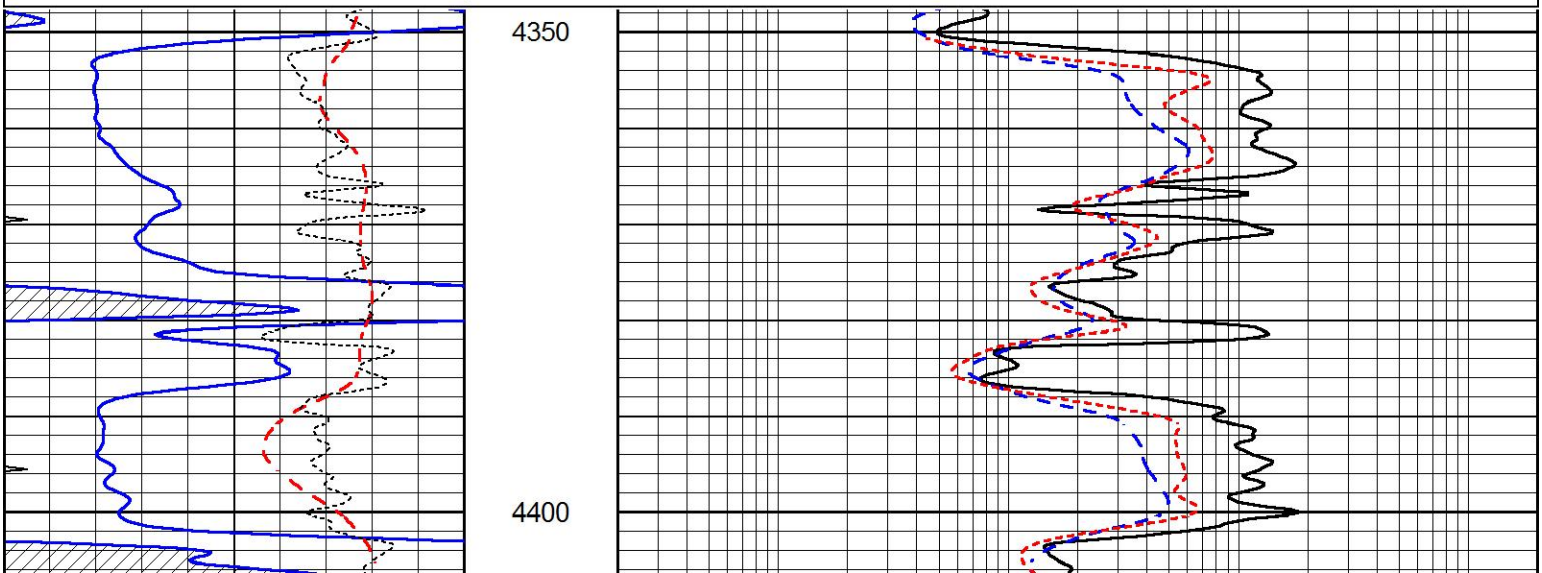
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

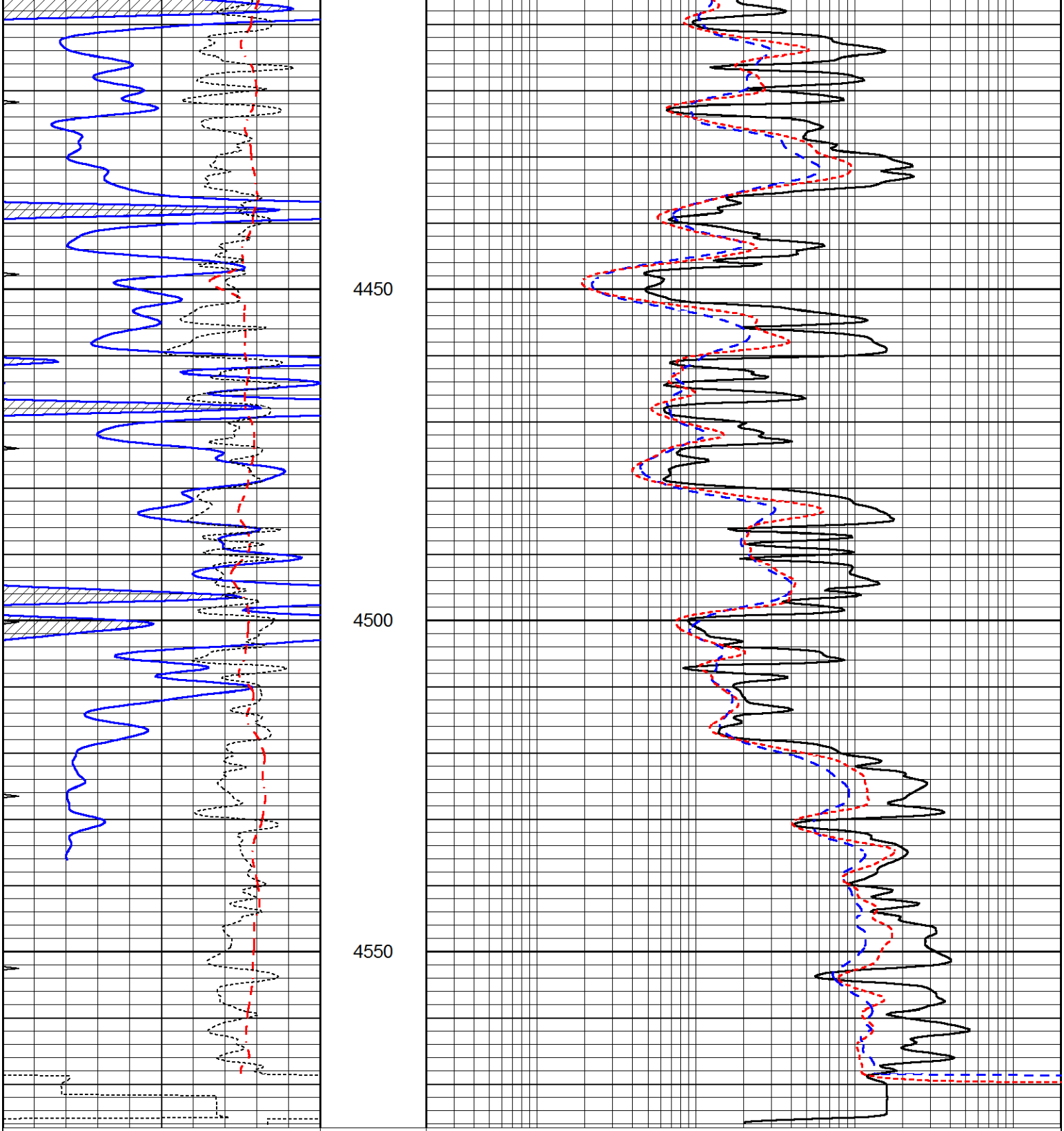
REPEAT SECTION

Database File	6809pe.db
Dataset Pathname	pass2.1R
Presentation Format	_dil
Dataset Creation	Sun Dec 04 00:44:15 2022
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	6809pe.db
Dataset Pathname	pass3.1M
Dataset Creation	Sun Dec 04 00:56:06 2022

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Thu Nov 17 16:51:10 2022
Downhole Cal Performed:	Mon Sep 10 14:28:38 2018
After Survey Verification Performed:	Mon Sep 10 14:28:40 2018

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	8.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	620.000	-4.000
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: 004 Model: PRB

Master Calibration

Performed Fri Nov 04 15:19:59 2022

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1153.2	7232.1	2536.8	2279.5	cps
Window 2	1055.6	6225.5	2222.3	2030.5	cps
Window 3	902.5	3849.3	1546.4	1462.0	cps
Window 4	254.4	258.2	253.1	253.9	cps
Long Space	0.0	5169.9	1166.7	974.9	cps
Short Space	4.7	1383.0	950.5	792.1	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	

Rib Angle	: 45.9	Rib Slope	: 1.031	Density/Spine Ratio	: 0.573
Spine Angle	: 75.9	Spine Slope	: 3.970	Spine Intercept	: -20.2

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

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: Tue Nov 08 13:43:57 2022

Calibrator Value: 150.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8500	GAPI/cps