MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Black Oak Exploration LLC
Well Threlkel Et Al #1-23
Field Wildcat
County Rawlins State Kansas

Location: API # : 15-153-21275-00-00
NE NE NE SE
2485 FSL & 200 FEL
SEC 23 TWP 3S RGE 35W

Other Services
CNL/CDL
DIL/BHCS

Elevation
K.B. 3002
D.F.
G.L. 2996

Company Black Oak Exploration LLC
Well Threlkel Et Al #1-23
Field Wildcat
County Rawlins
State Kansas

Permanent Datum	Ground Level	Elevation	2996		
Log Measured From	Kelly Bushing				
Drilling Measured From	KellyBushing				
Date	12/19/2021				
Run Number	One				
Depth Driller	4670				
Depth Logger	4674				
Bottom Logged Interval	4673				
Top Log Interval	250				
Casing Driller	8.625 @ 239				
Casing Logger	234				
Bit Size	7.875				
Type Fluid in Hole	Chemical				
Salinity,ppm CL	3700				
Density / Viscosity	9.2 62				
pH / Fluid Loss	10.5 7.6				
Source of Sample	FLOWLINE				
Rm @ Meas. Temp	0.9 @ 64				
Rmf @ Meas. Temp	0.68 @ 64				
Rmc @ Meas. Temp	1.22 @ 64				
Source of Rmf / Rmc	CHARTS				
Rm @ BHT	0.47 @ 123				
Operating Rig Time	6 Hours				
Max Rec. Temp. F	123				
Equipment Number	P-108				
Location	HAYS				
Recorded By	T. Martin				
Witnessed By	Clayton Camozzi				

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Atwood, KS, W to Rd 12,
1/2 S, W into

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: T. Martin	Primary Witness: Clayton Camozzi
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\black oak_threlkel et al #1-23.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	123	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	1090	50	Off	4674

MIDWEST WIRELINE

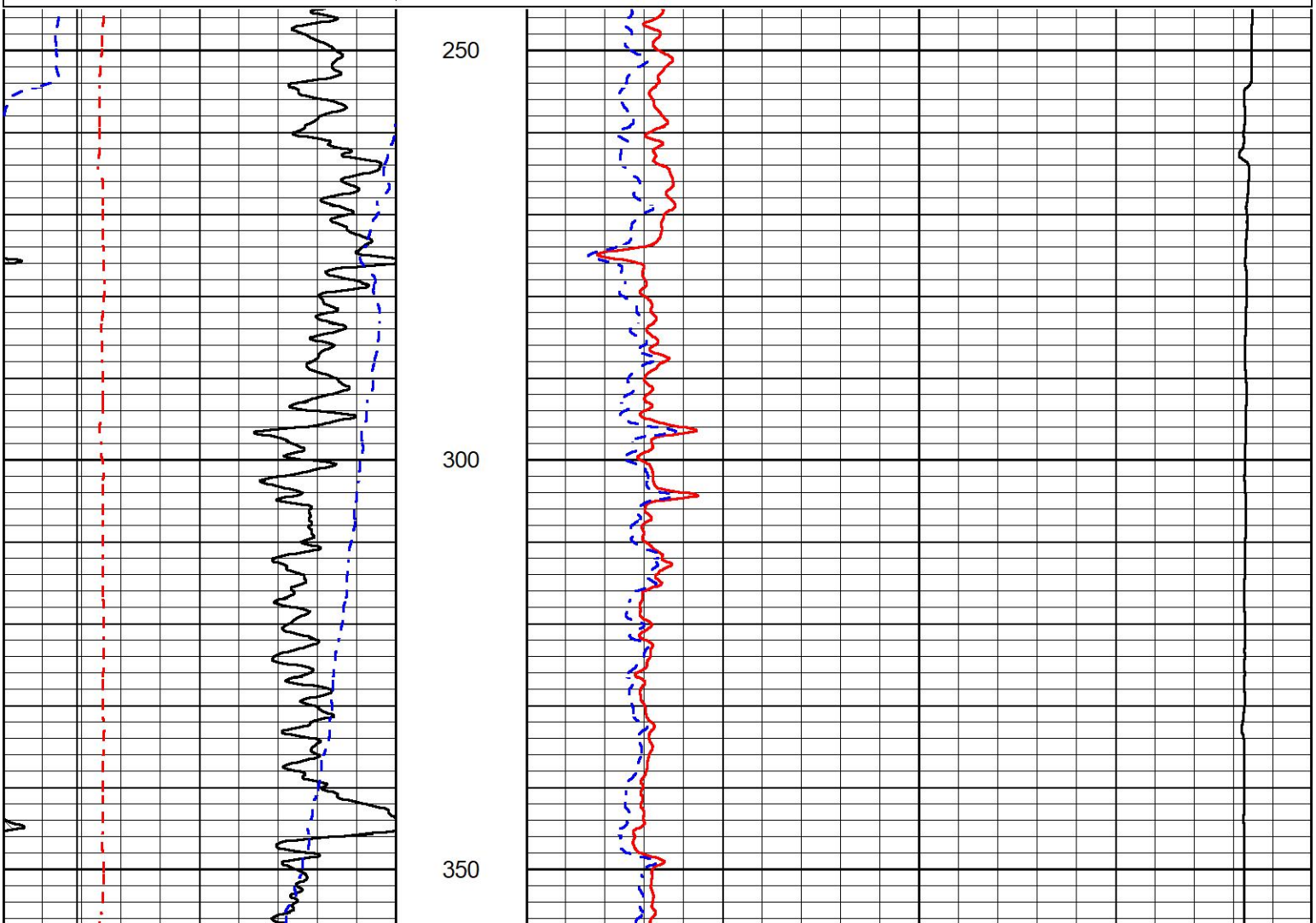
DETAIL SECTION

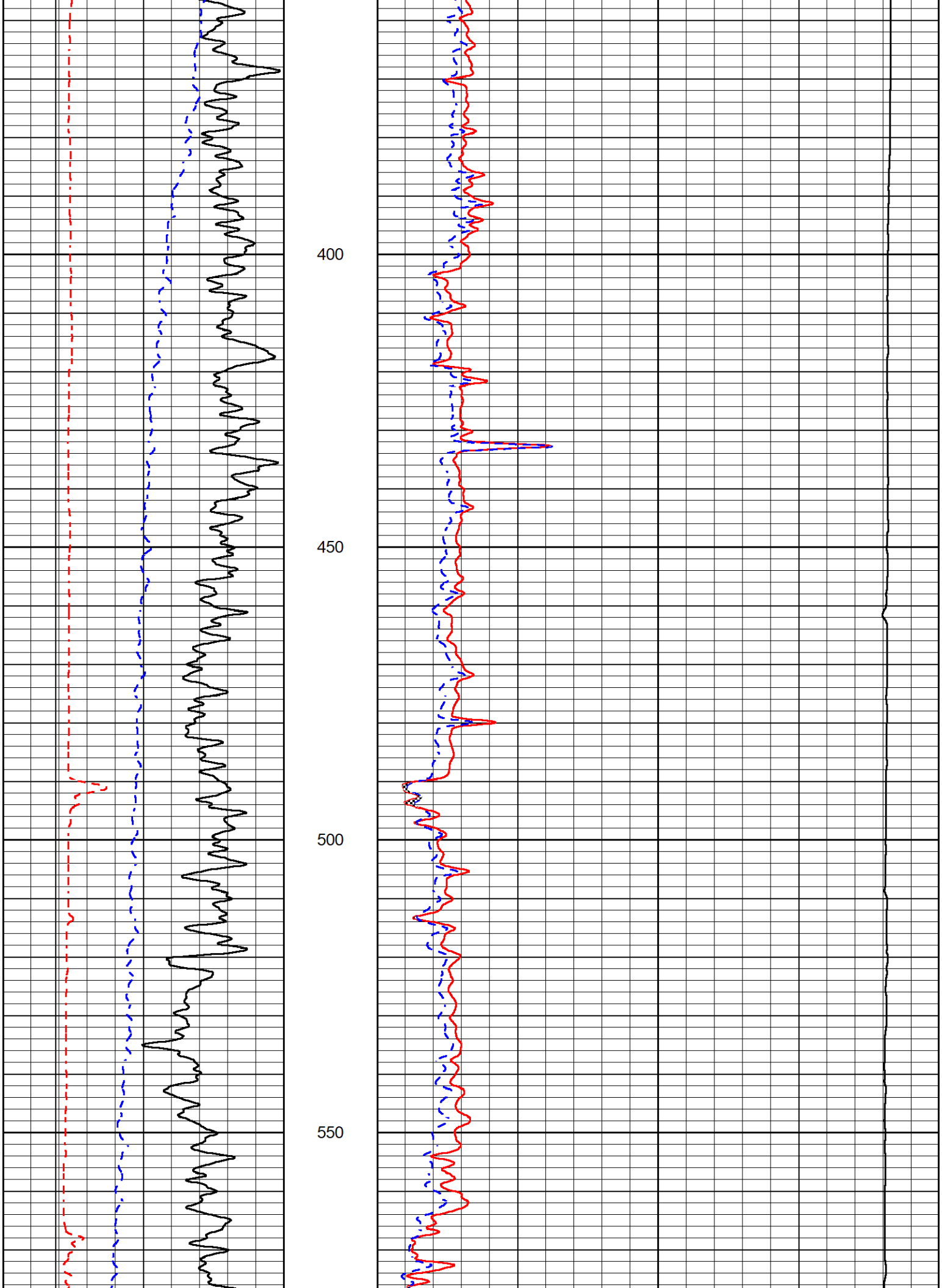
MAIN PASS

Database File	black oak_threlkel et al #1-23.db
Dataset Pathname	StkMI/pass3.1
Presentation Format	_micro
Dataset Creation	Sun Dec 19 07:46:59 2021
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

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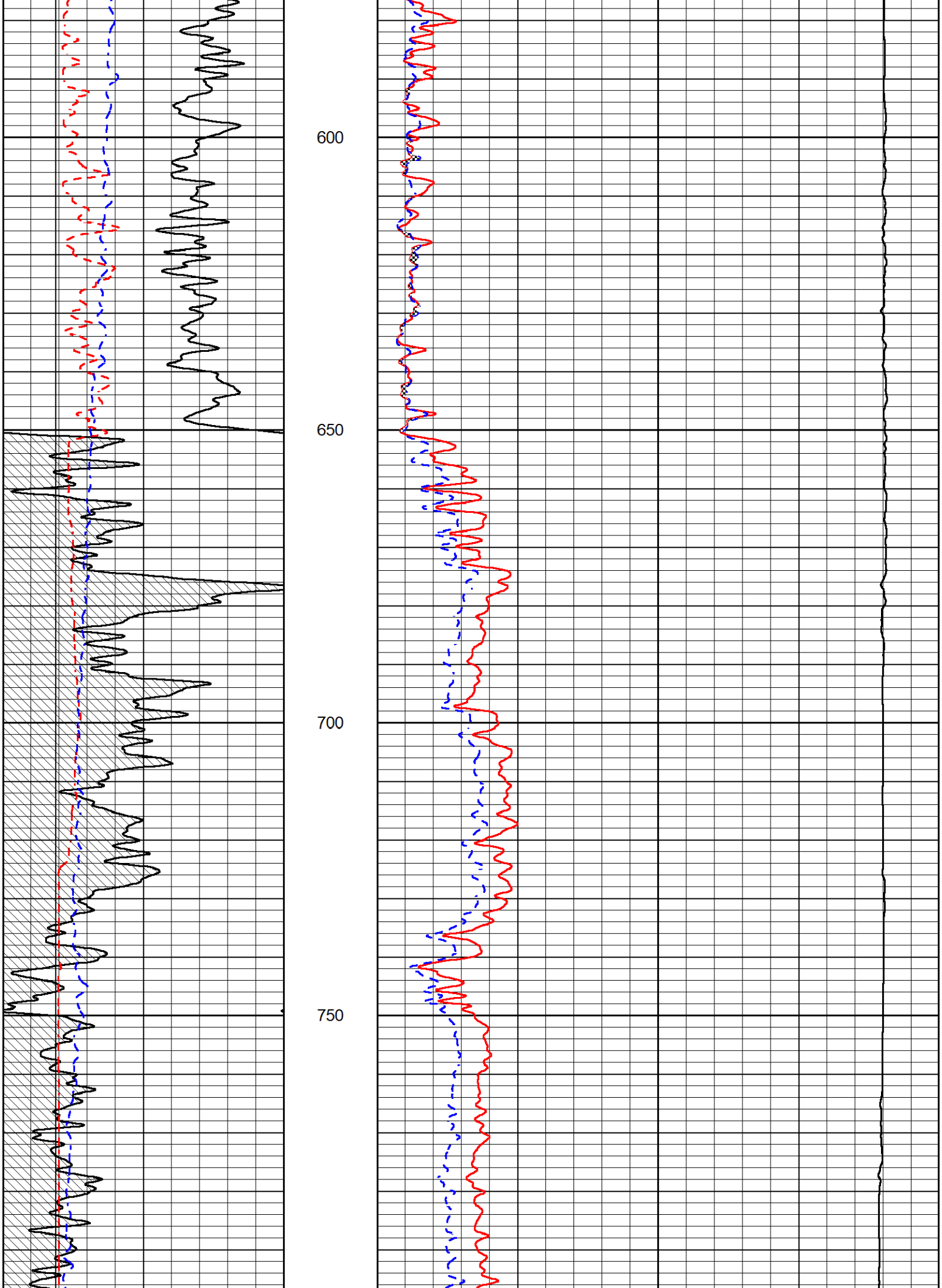
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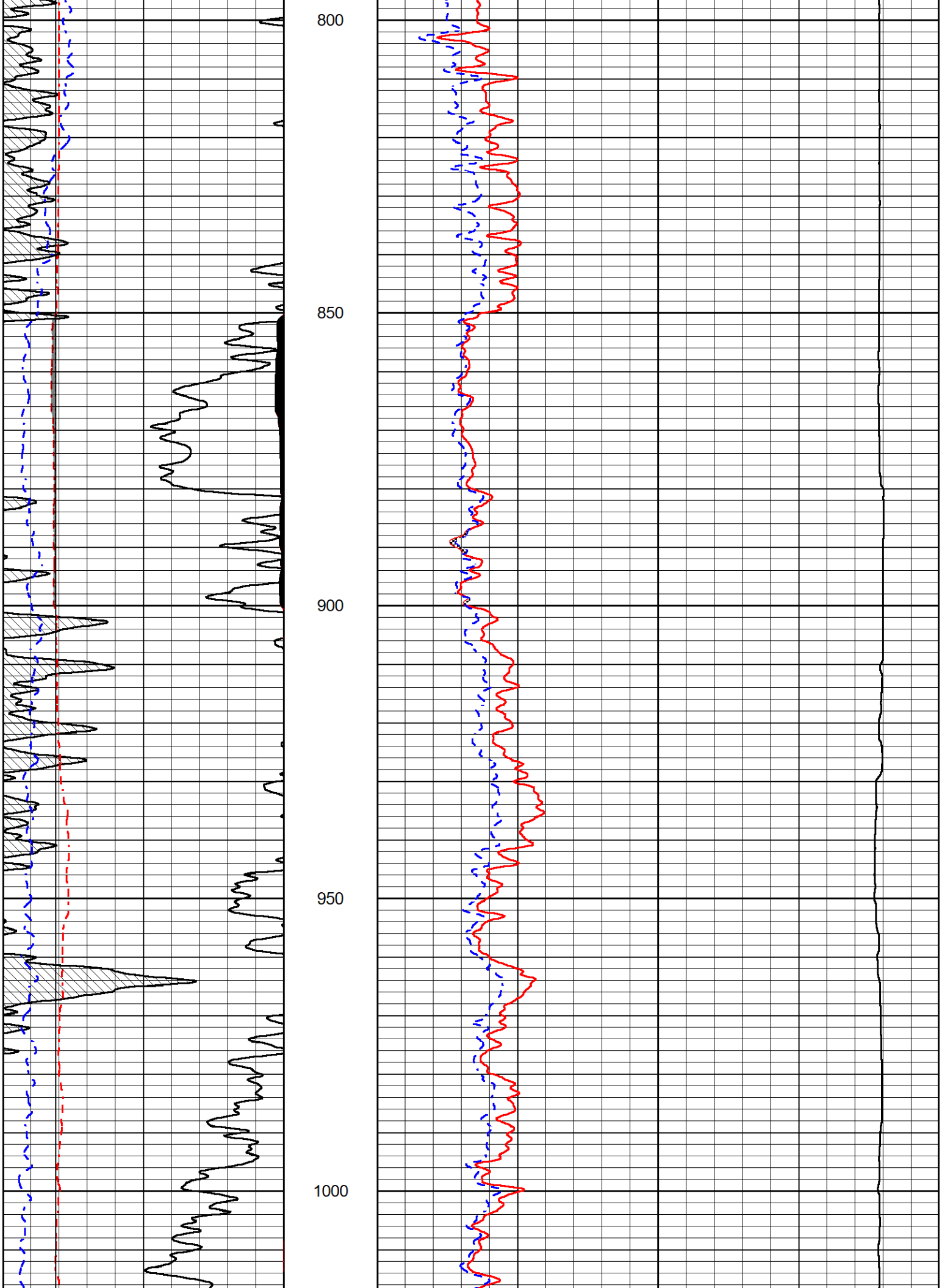
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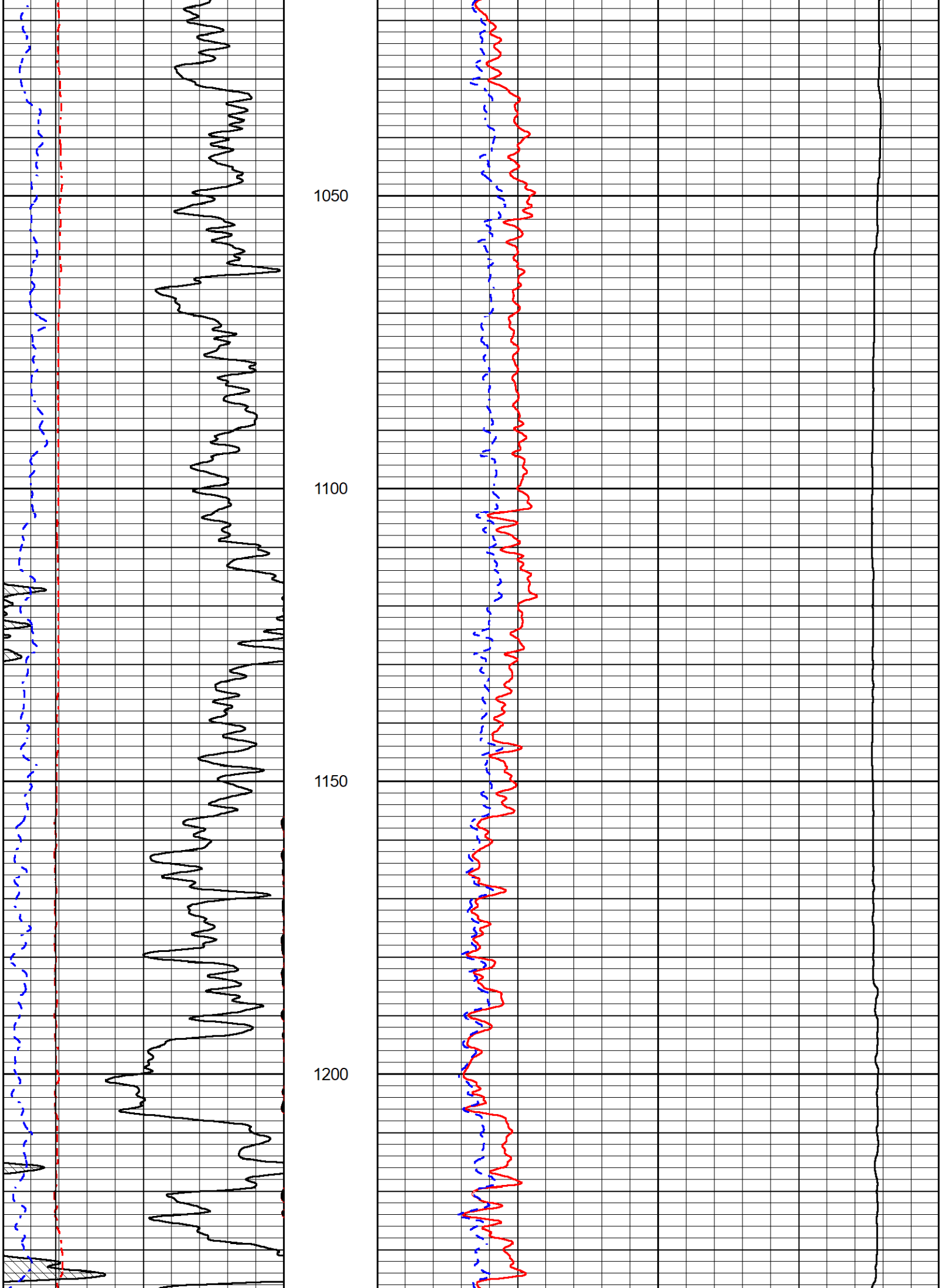
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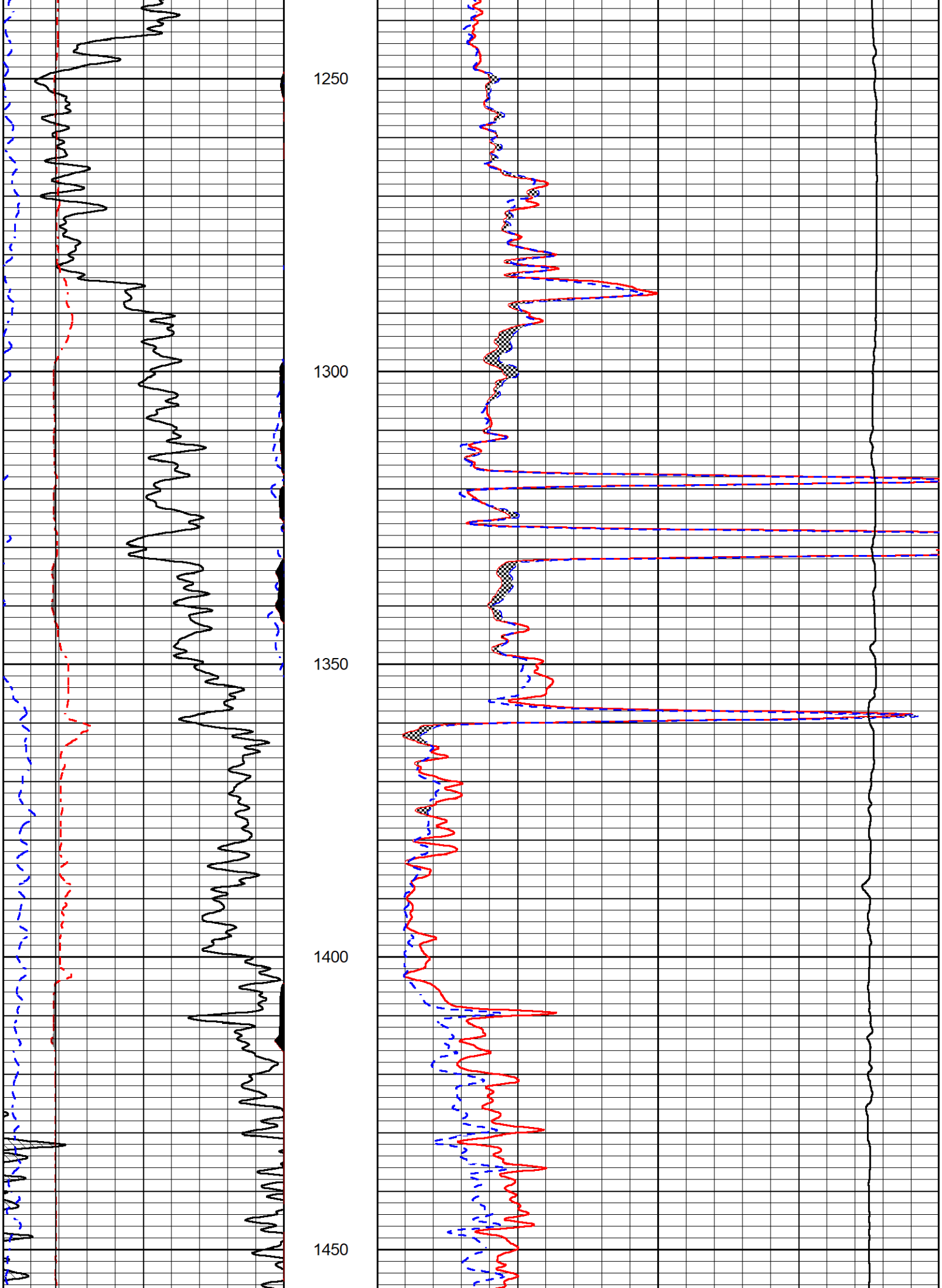
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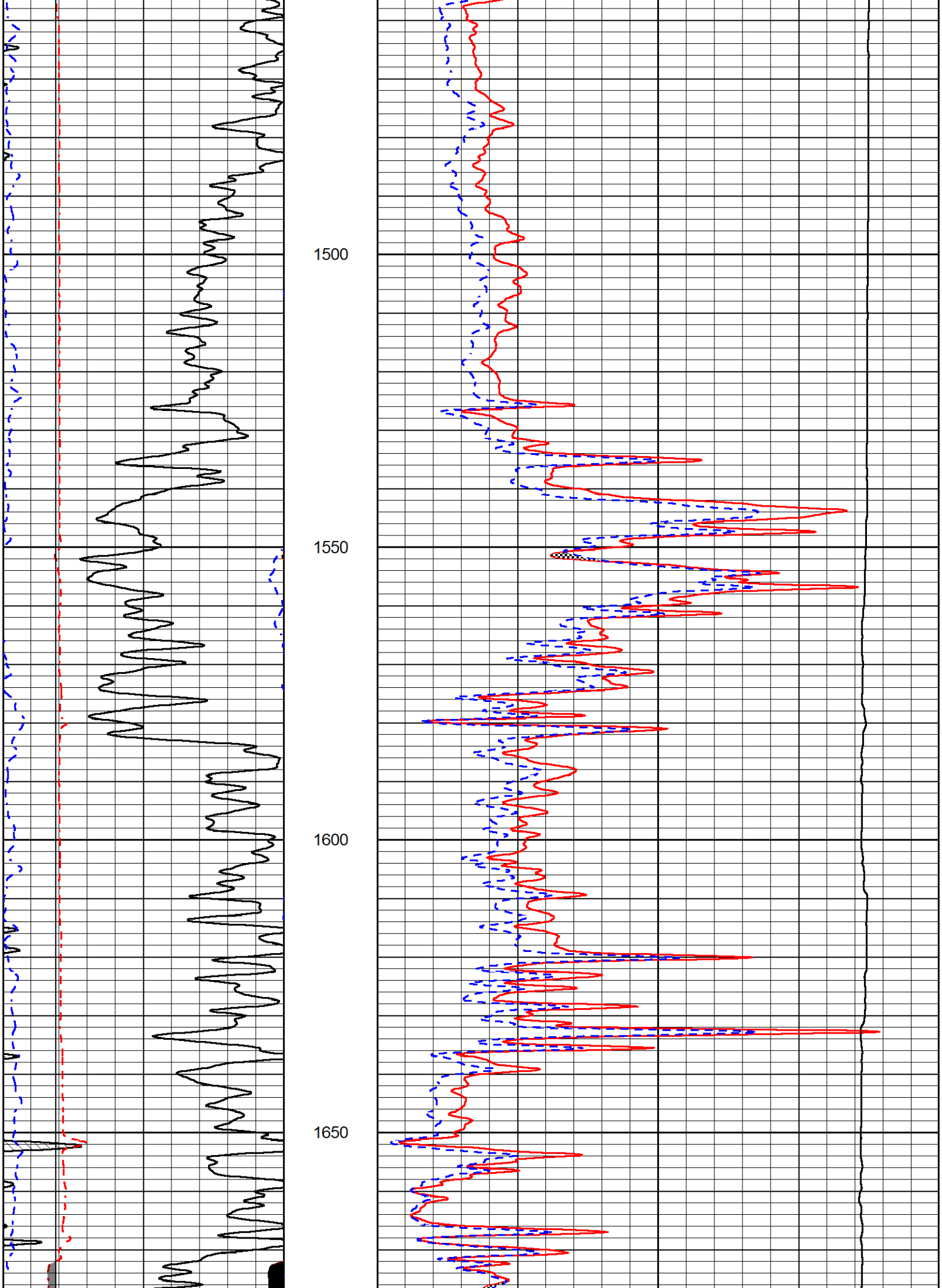
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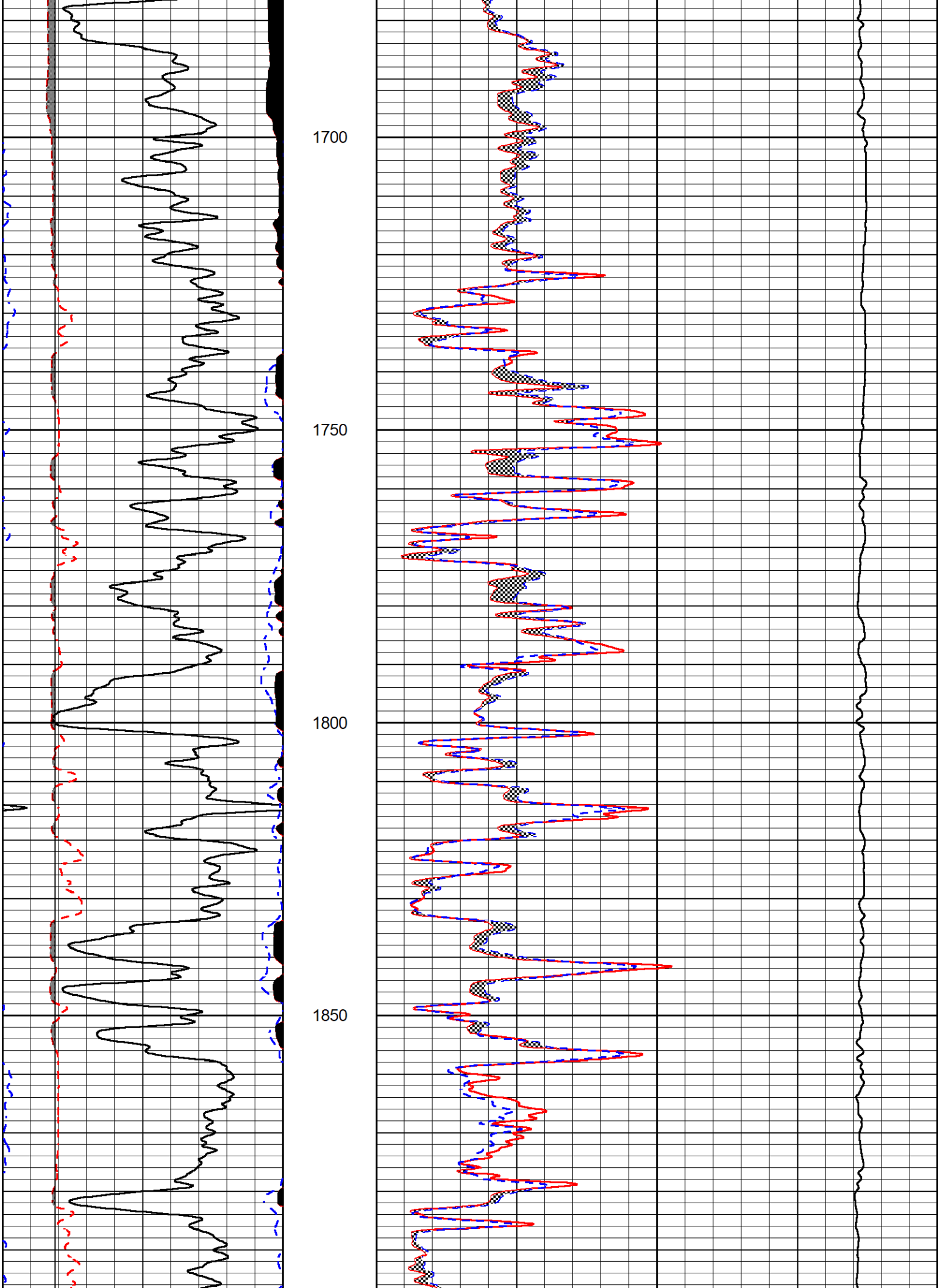
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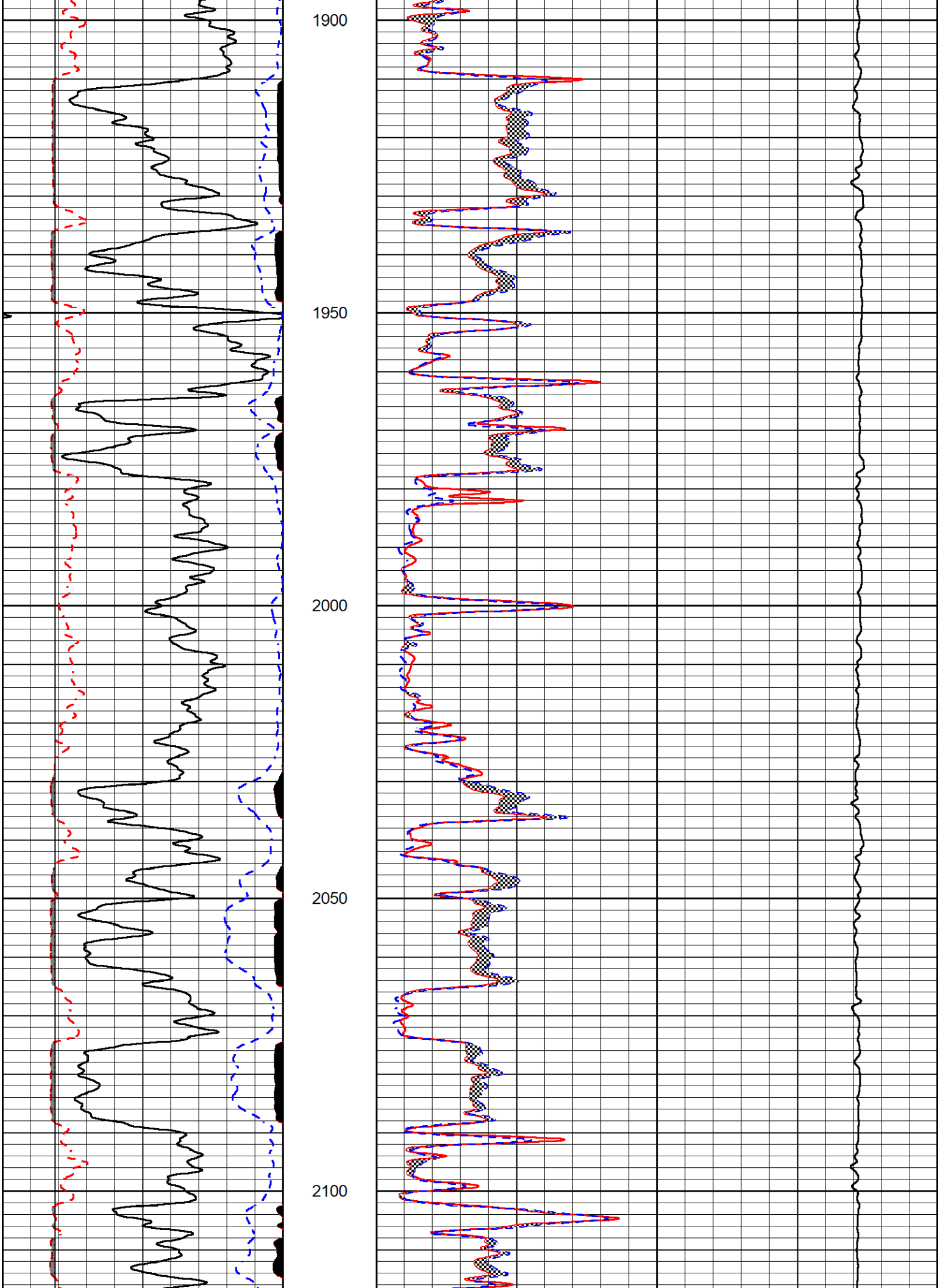
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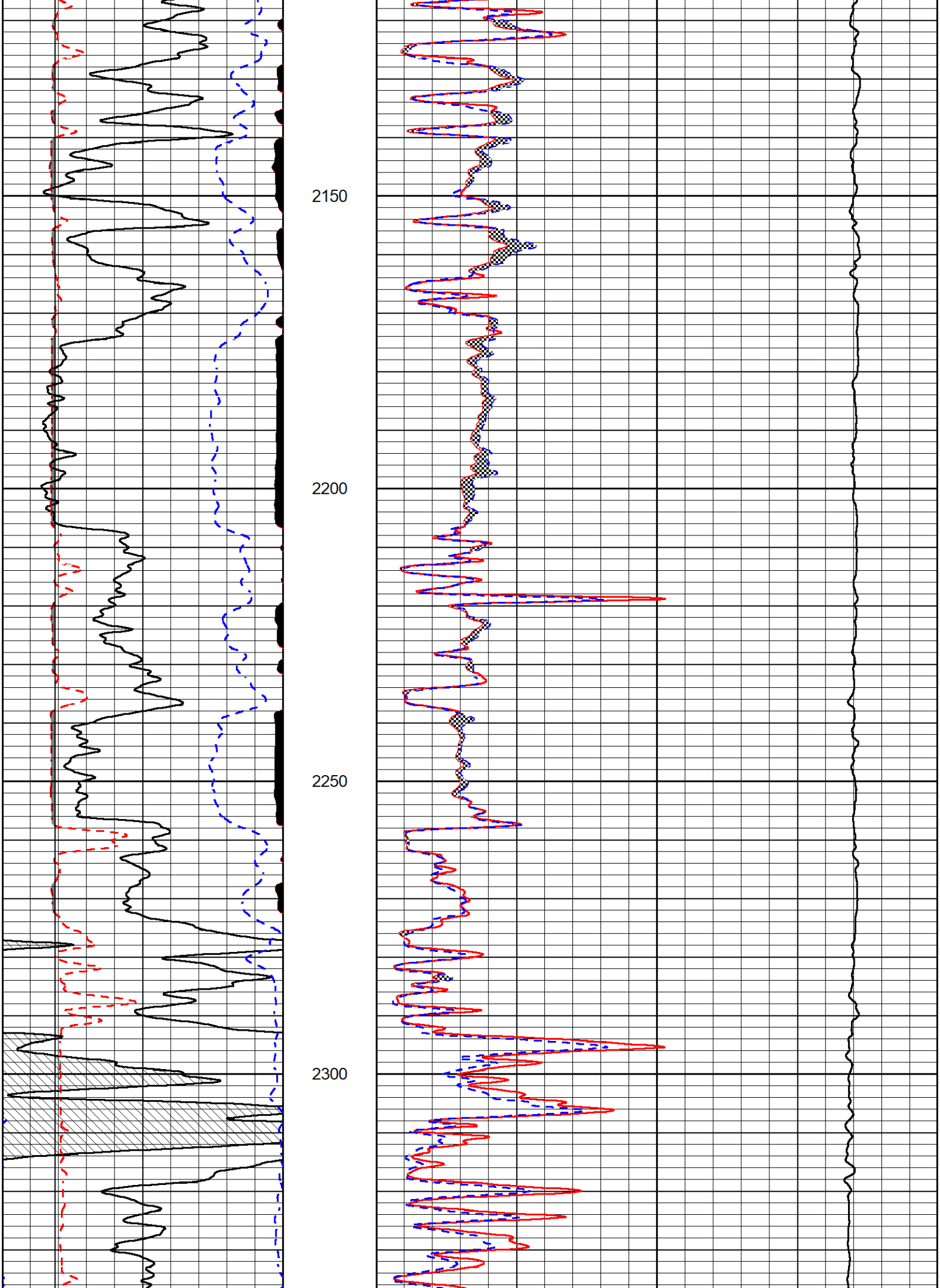
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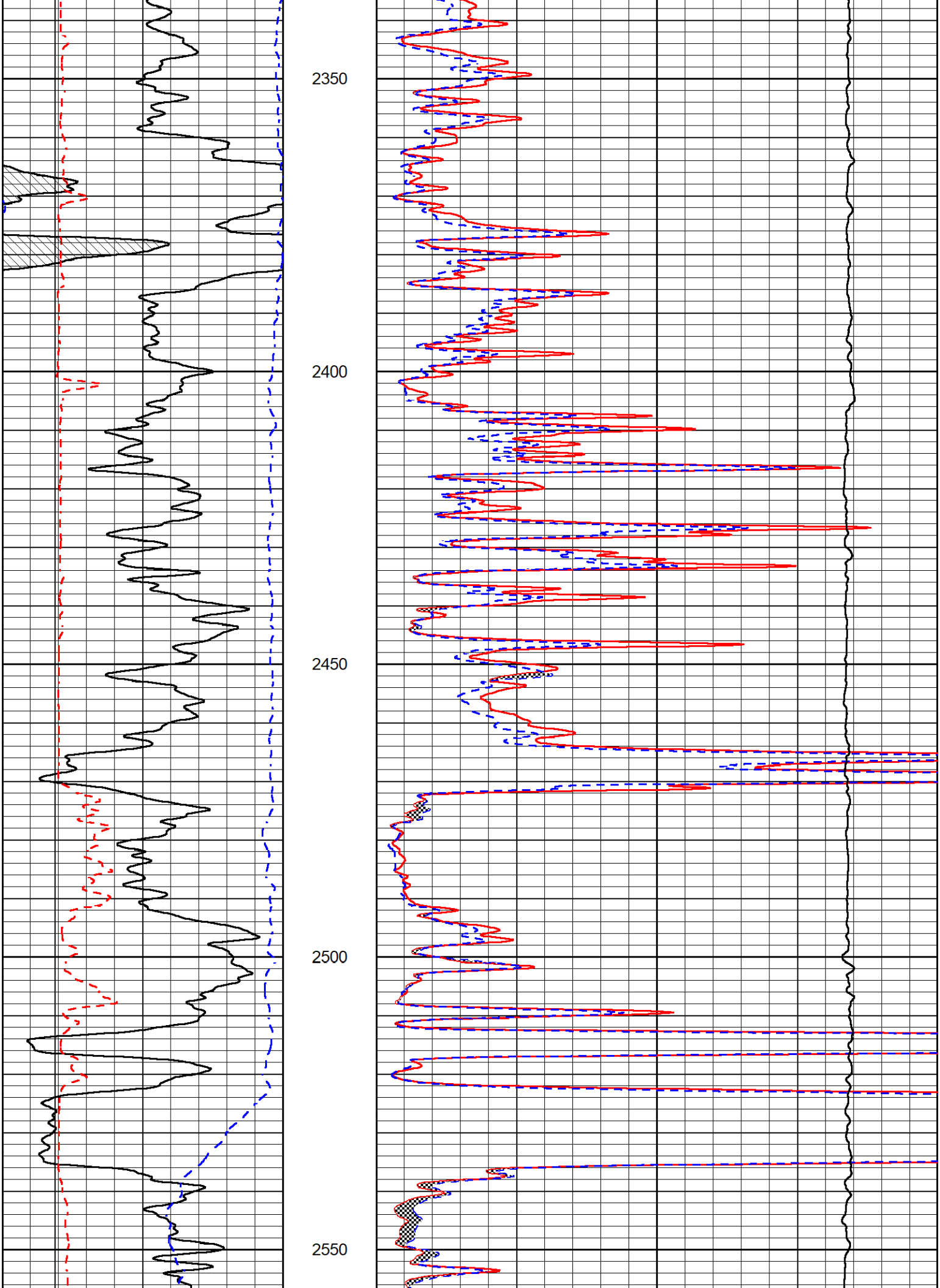
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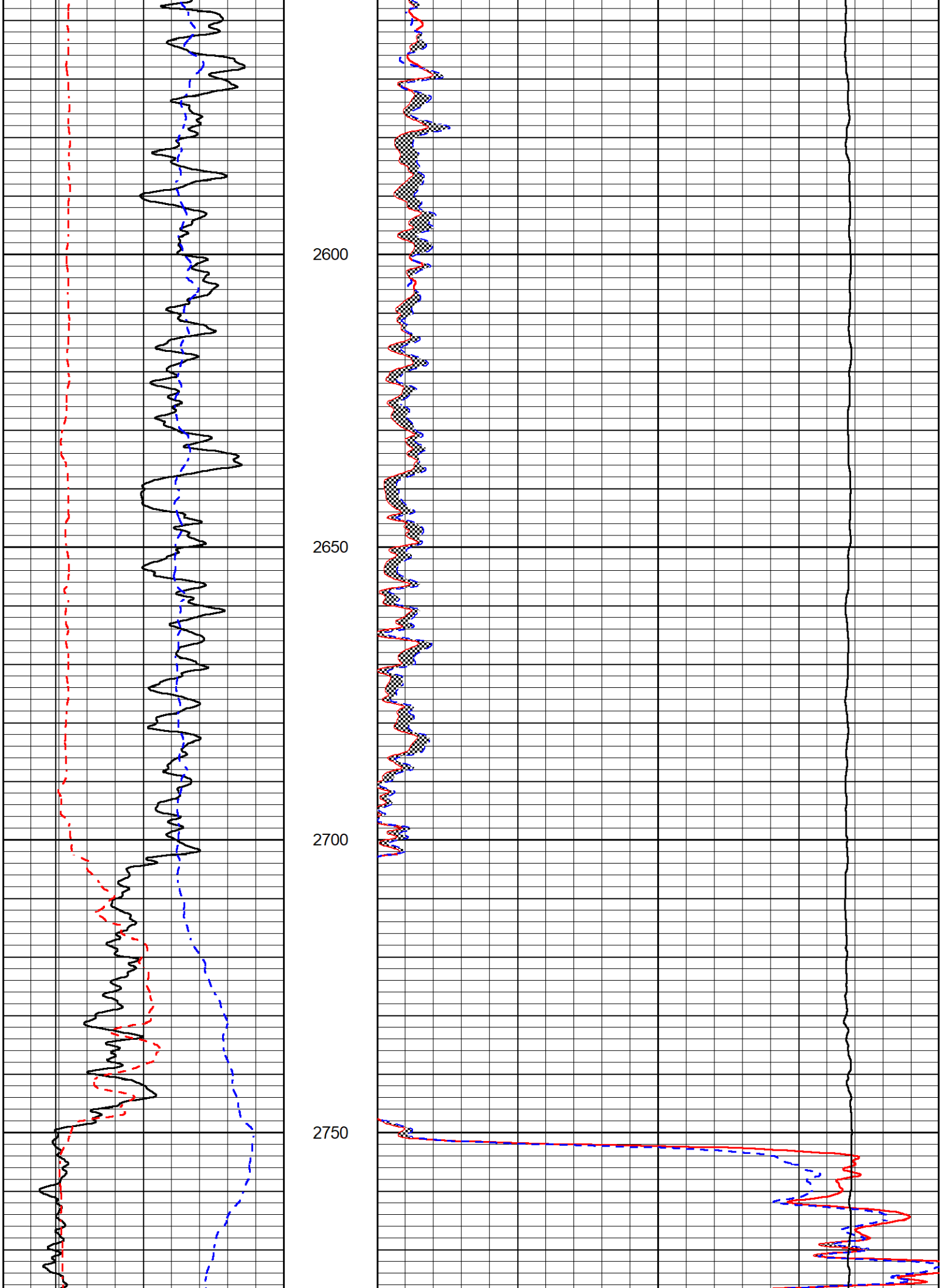
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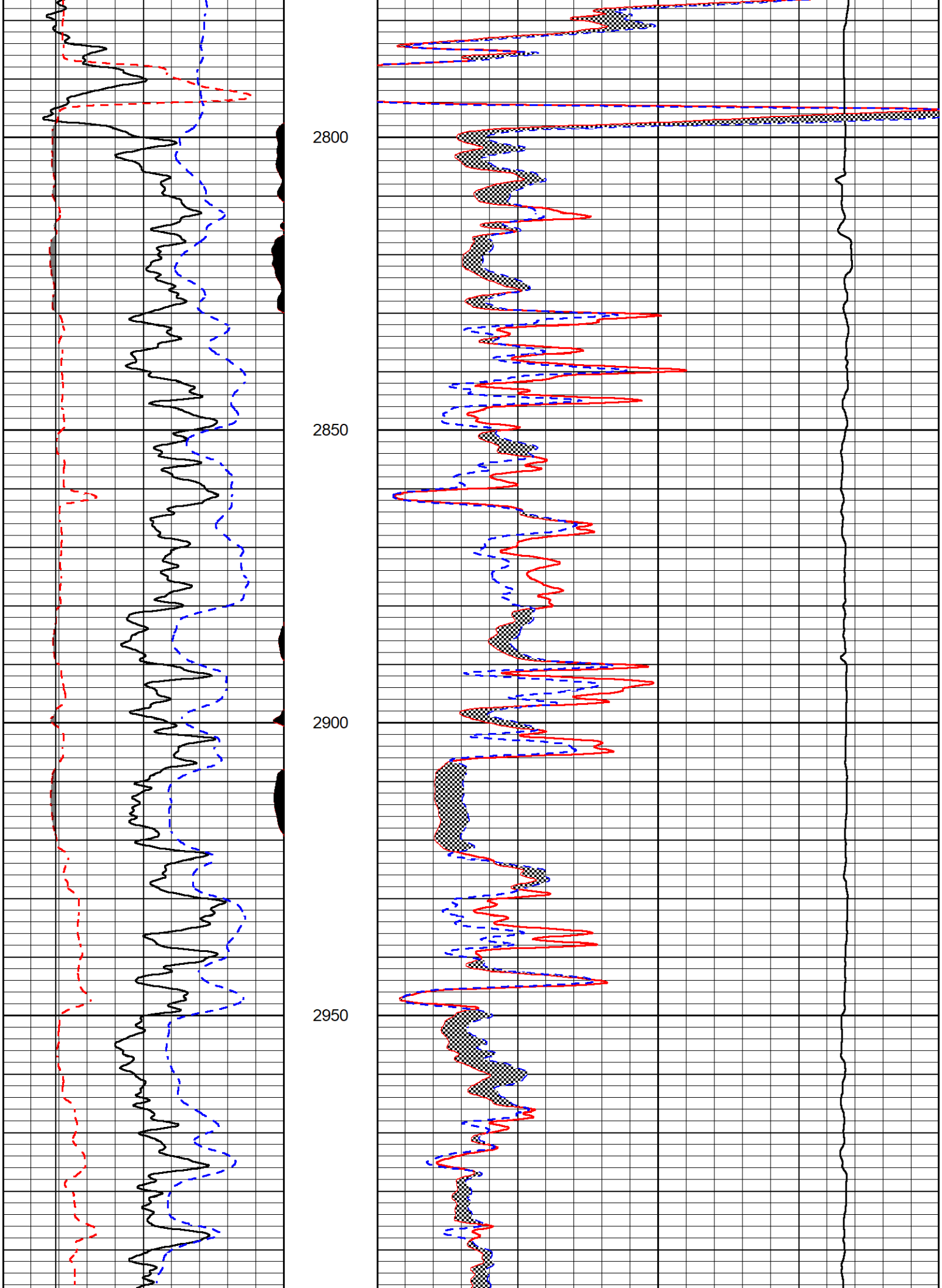
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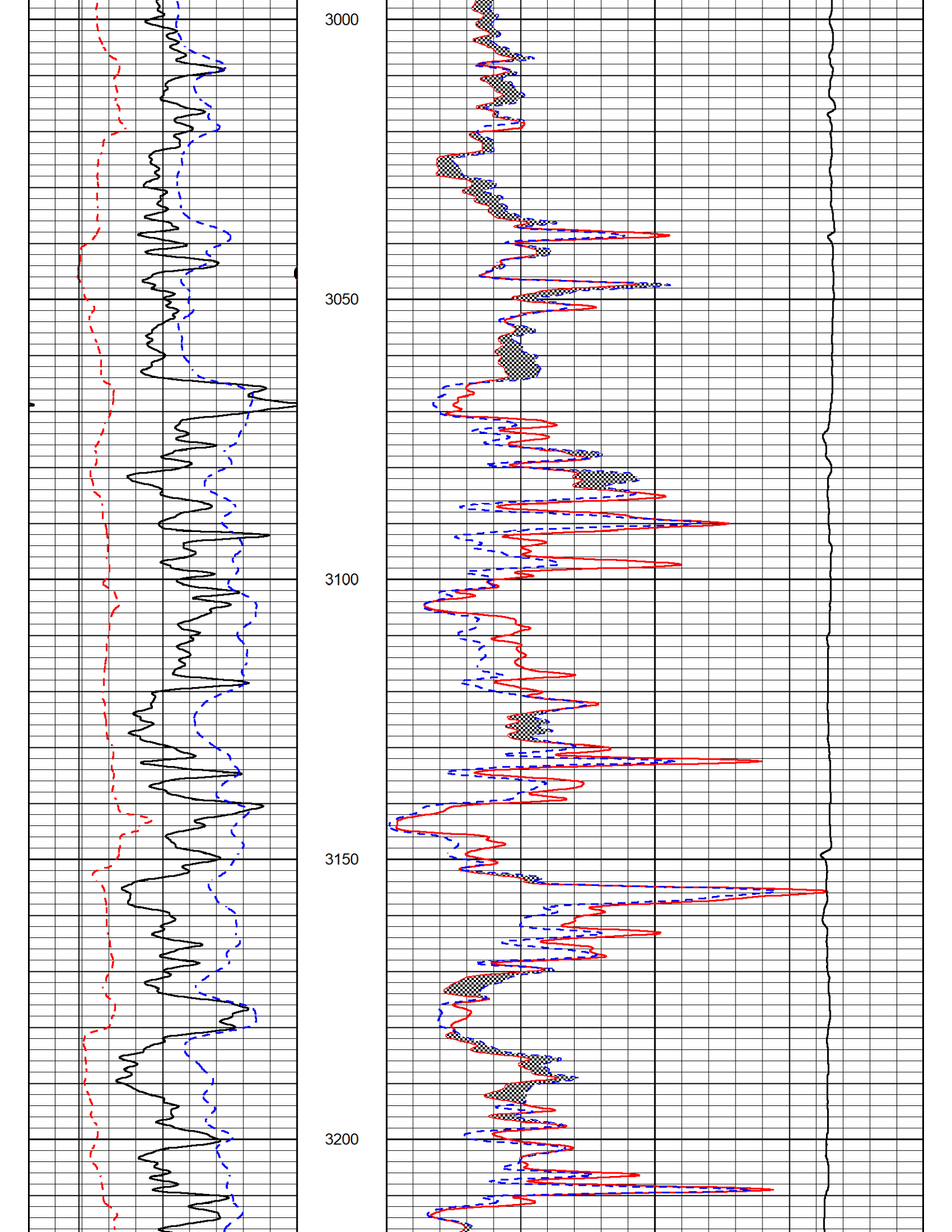
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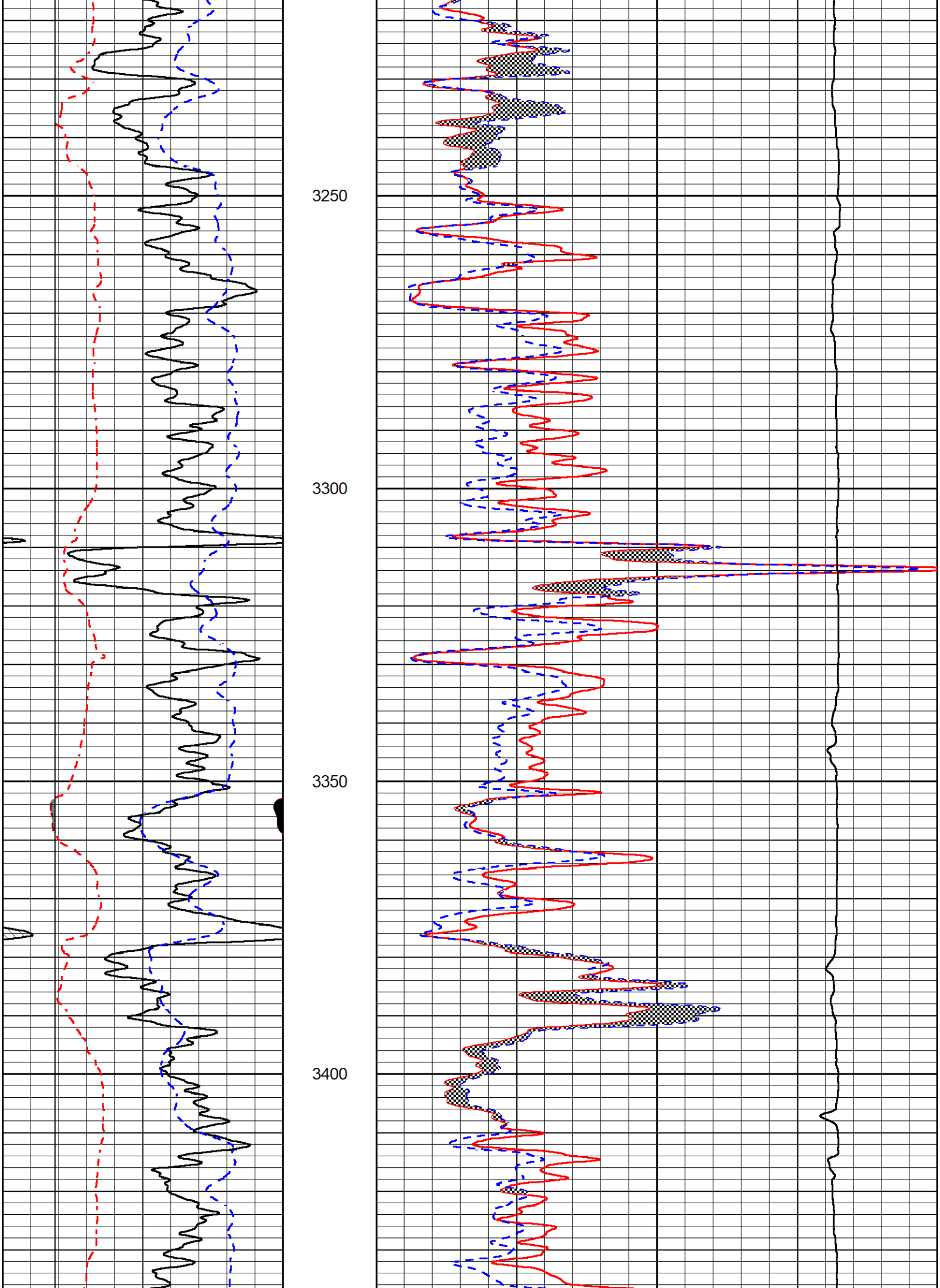
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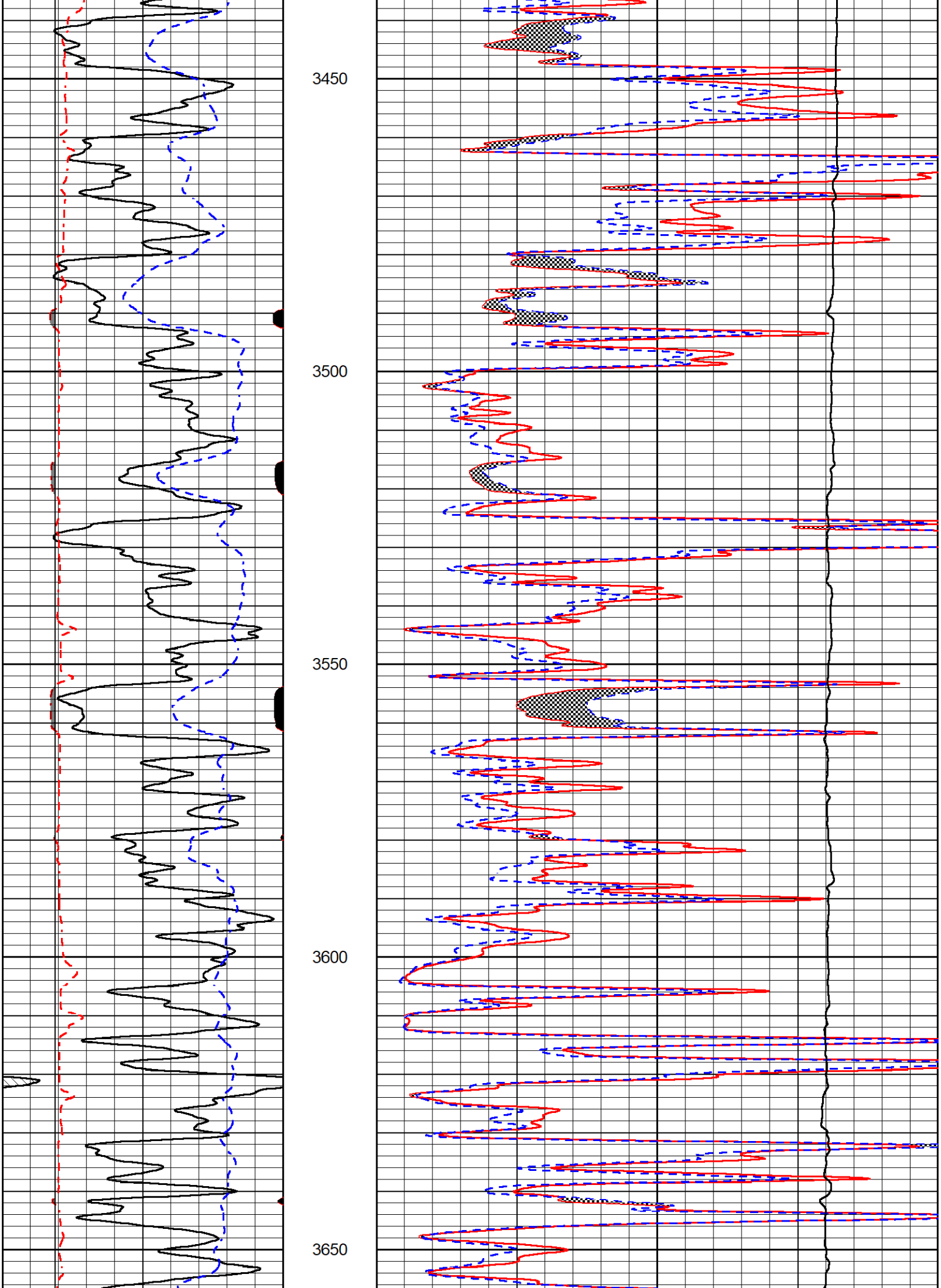
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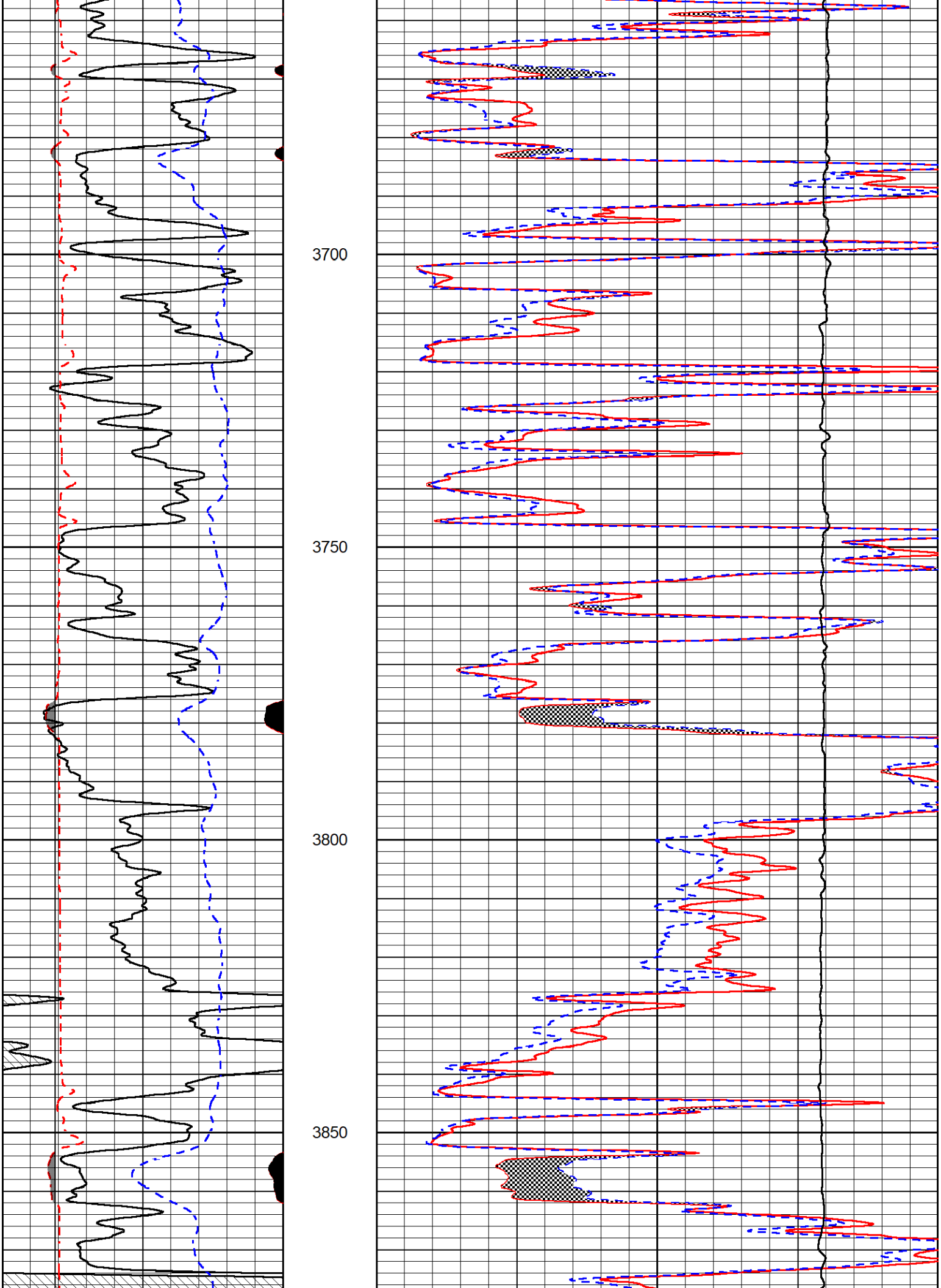
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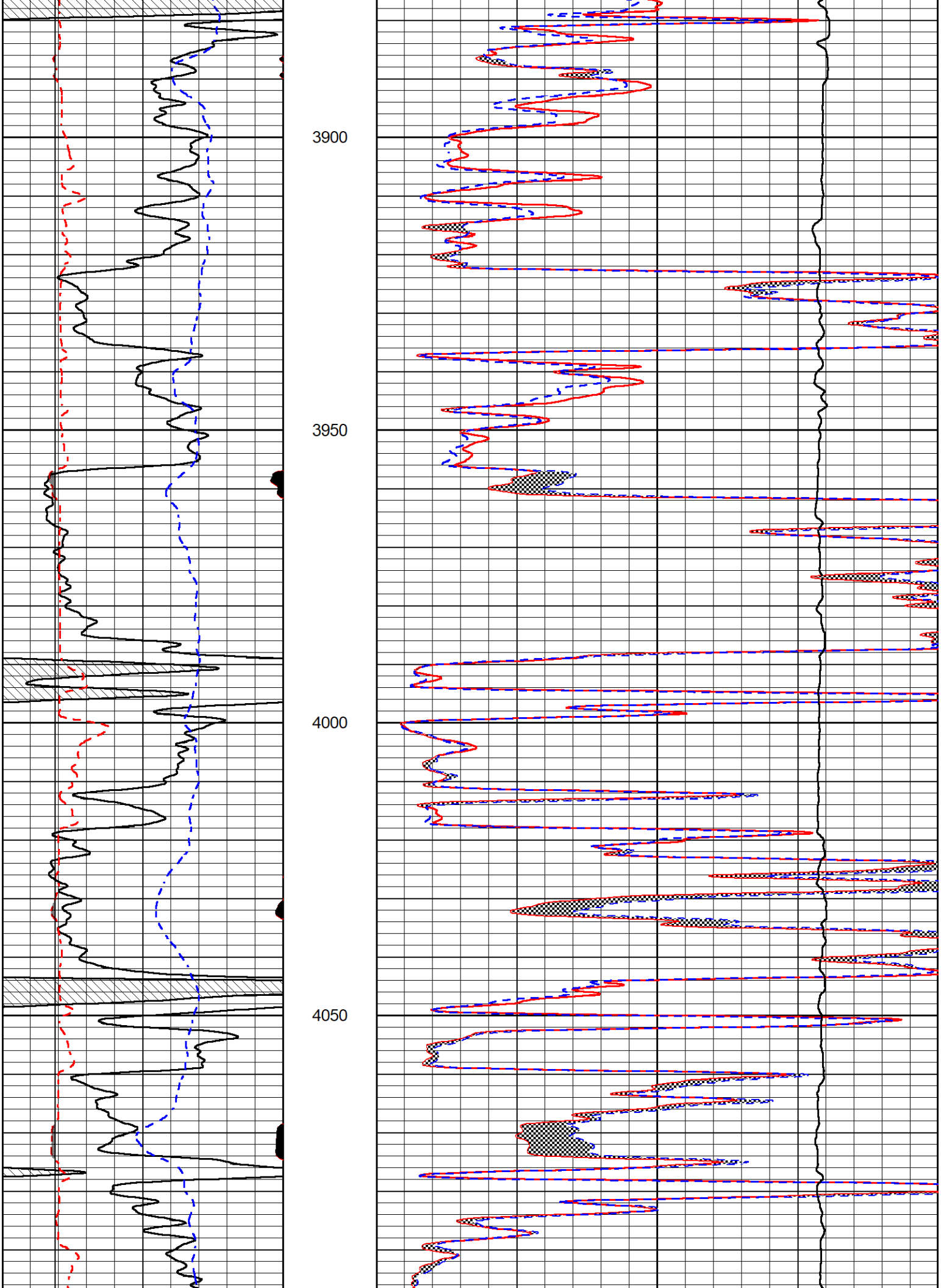
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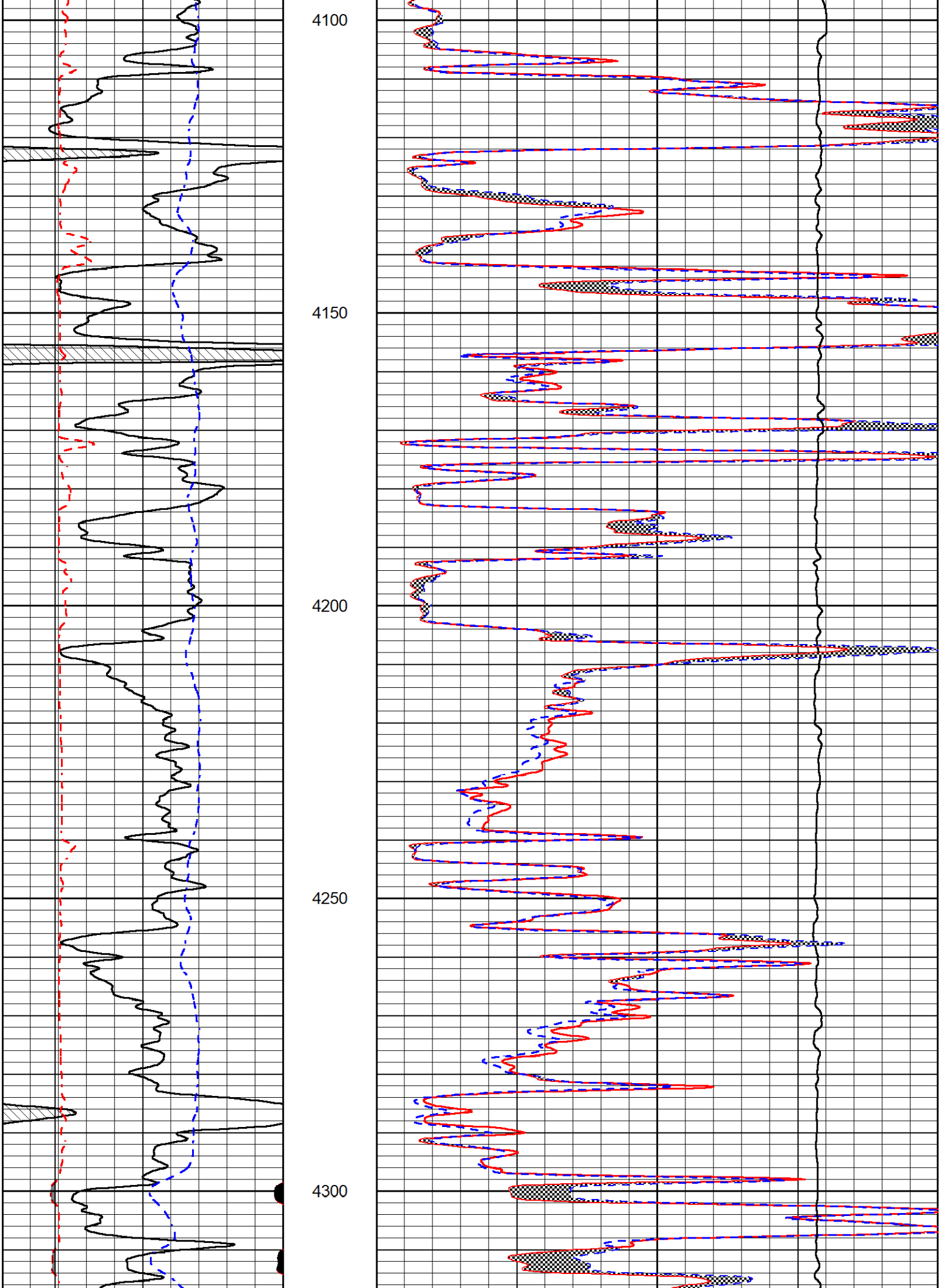
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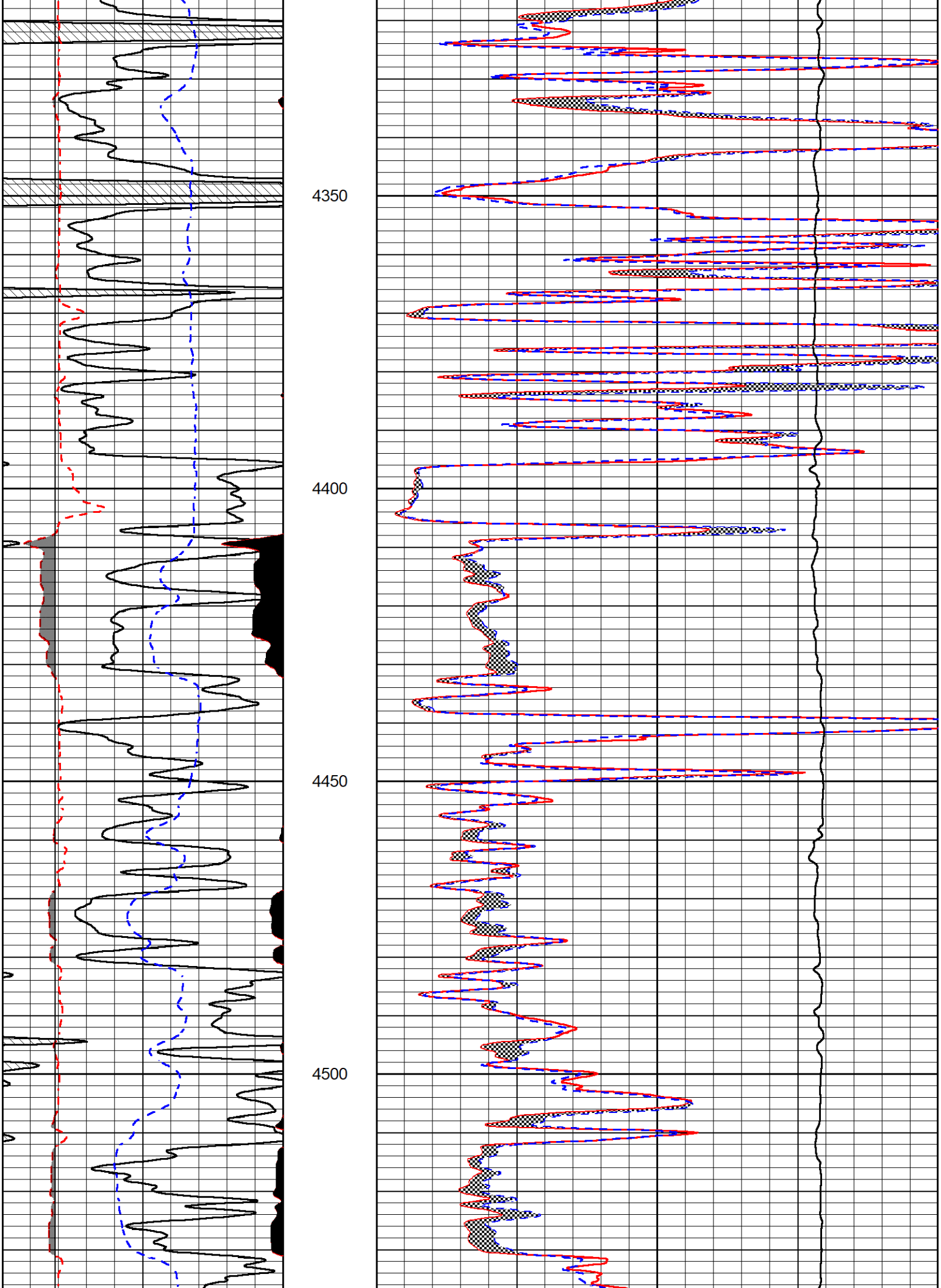
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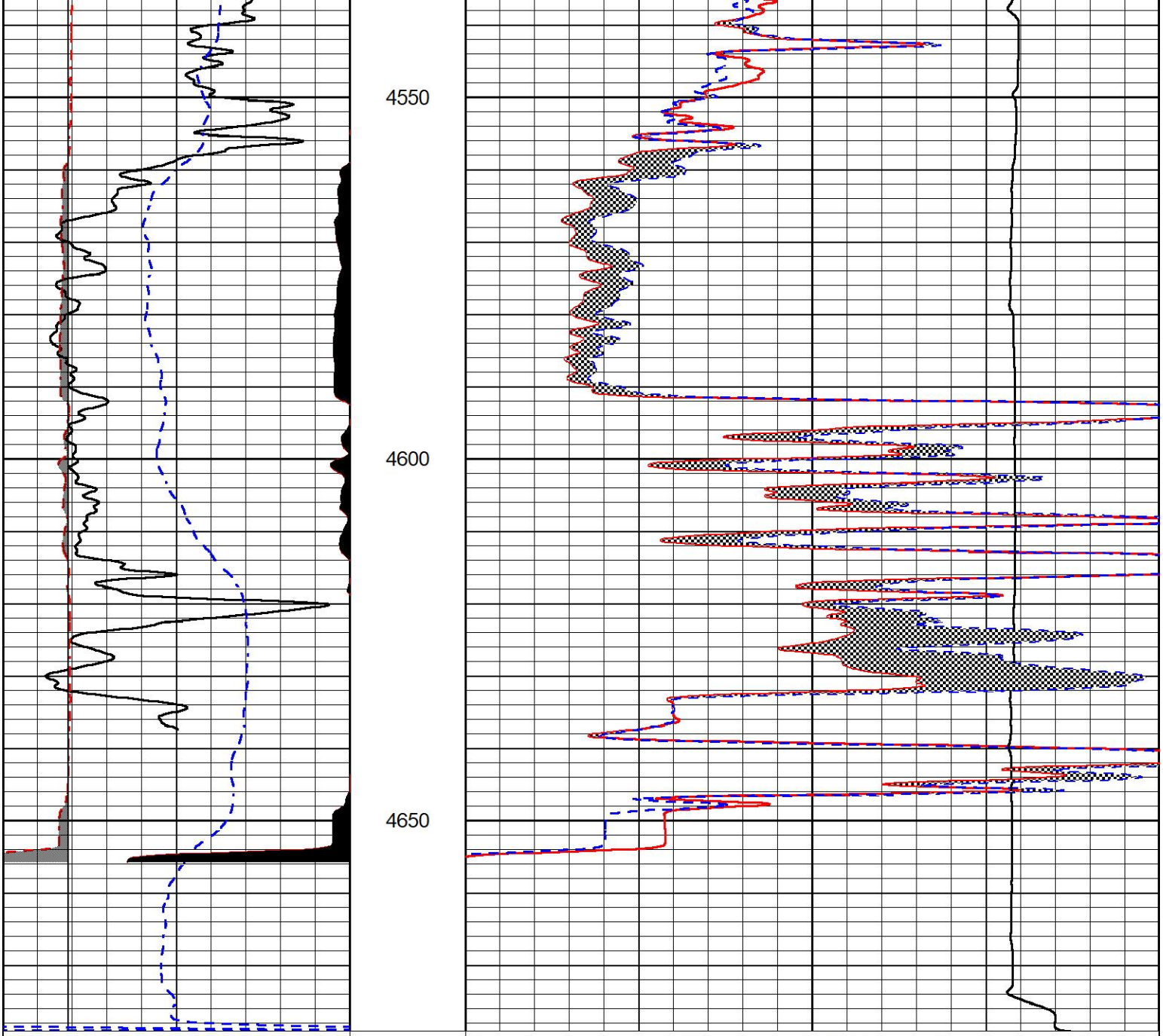


0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

MIDWEST WIRELINE

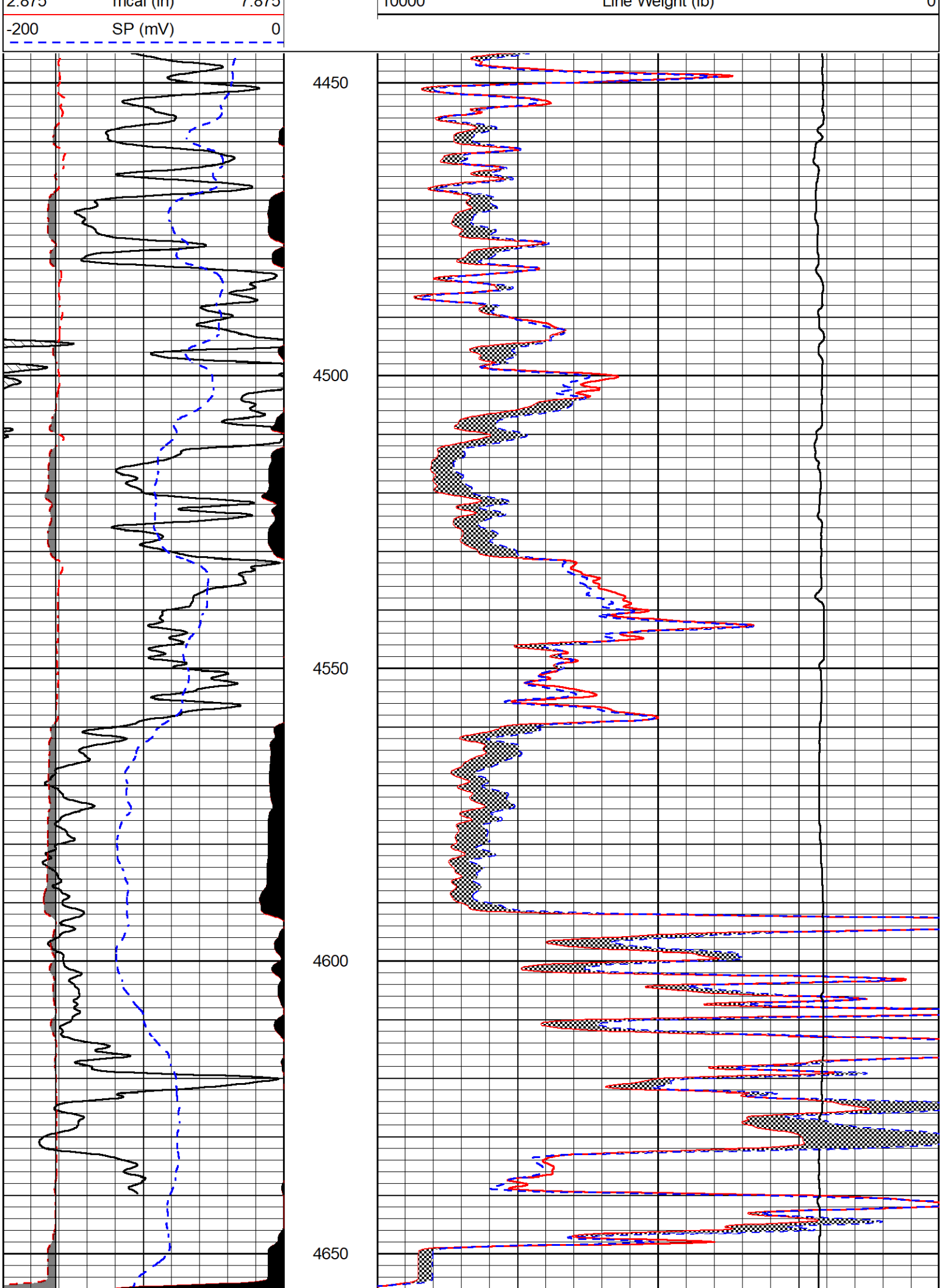
REPEAT SECTION

REPEAT PASS

Database File	black oak_threlkel et al #1-23.db
Dataset Pathname	StkMl/pass2.11
Presentation Format	_micro
Dataset Creation	Sun Dec 19 06:40:36 2021
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40


2.875
hcal (in)
7.875
-200
SP (mV)
0
10000
Line Weight (lb)
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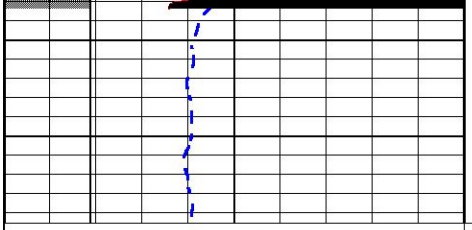
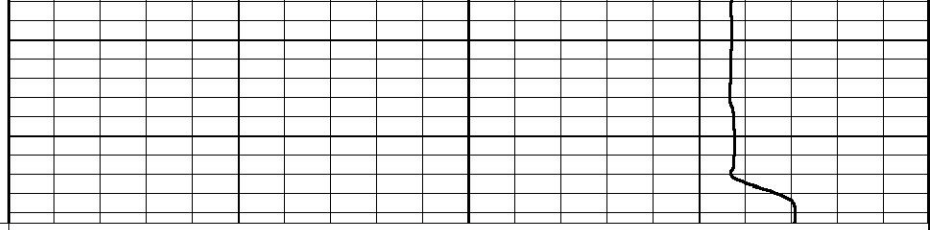
4500
4550
4600
4650



0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

MIDWEST WIRELINE

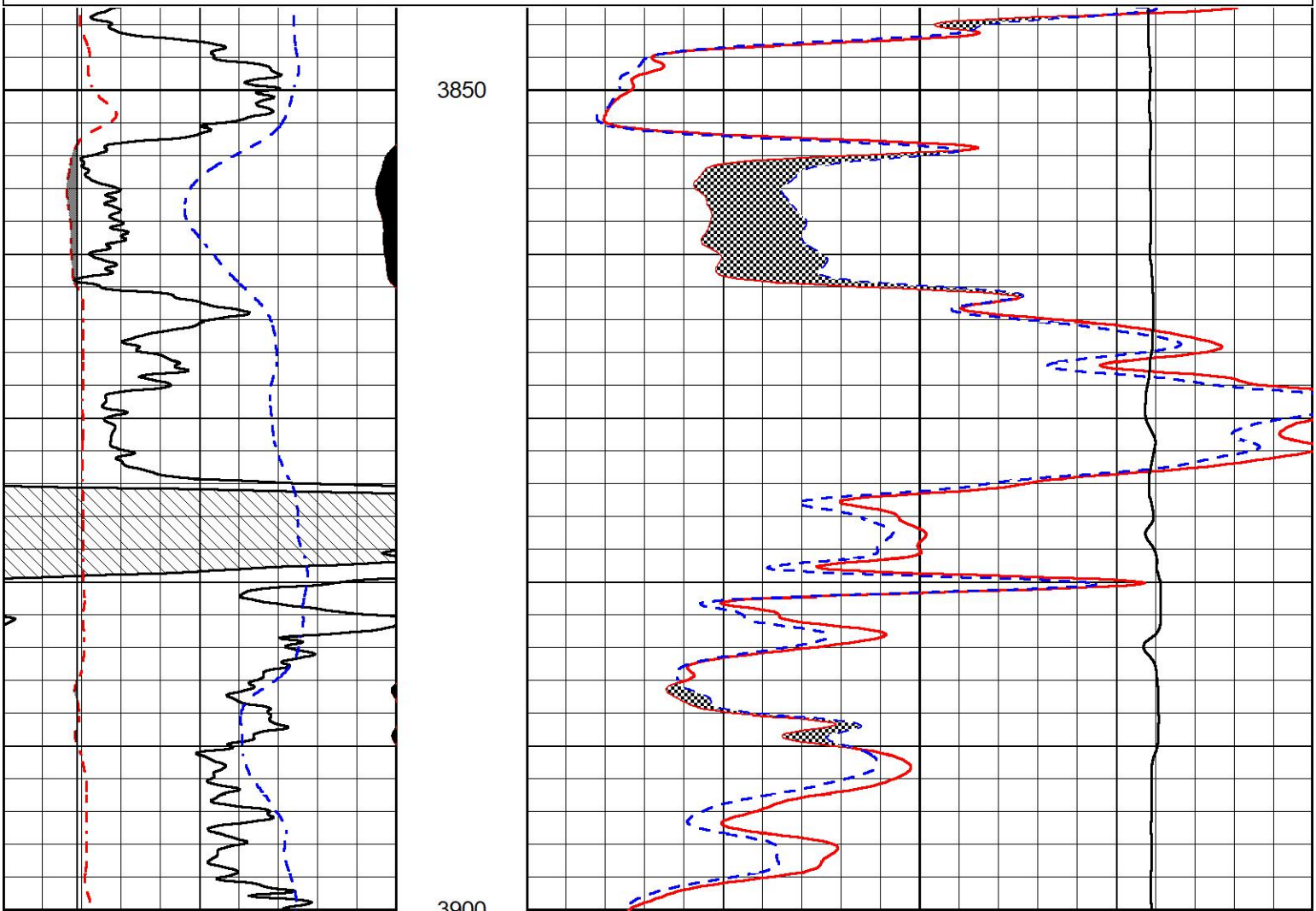
High Resolution

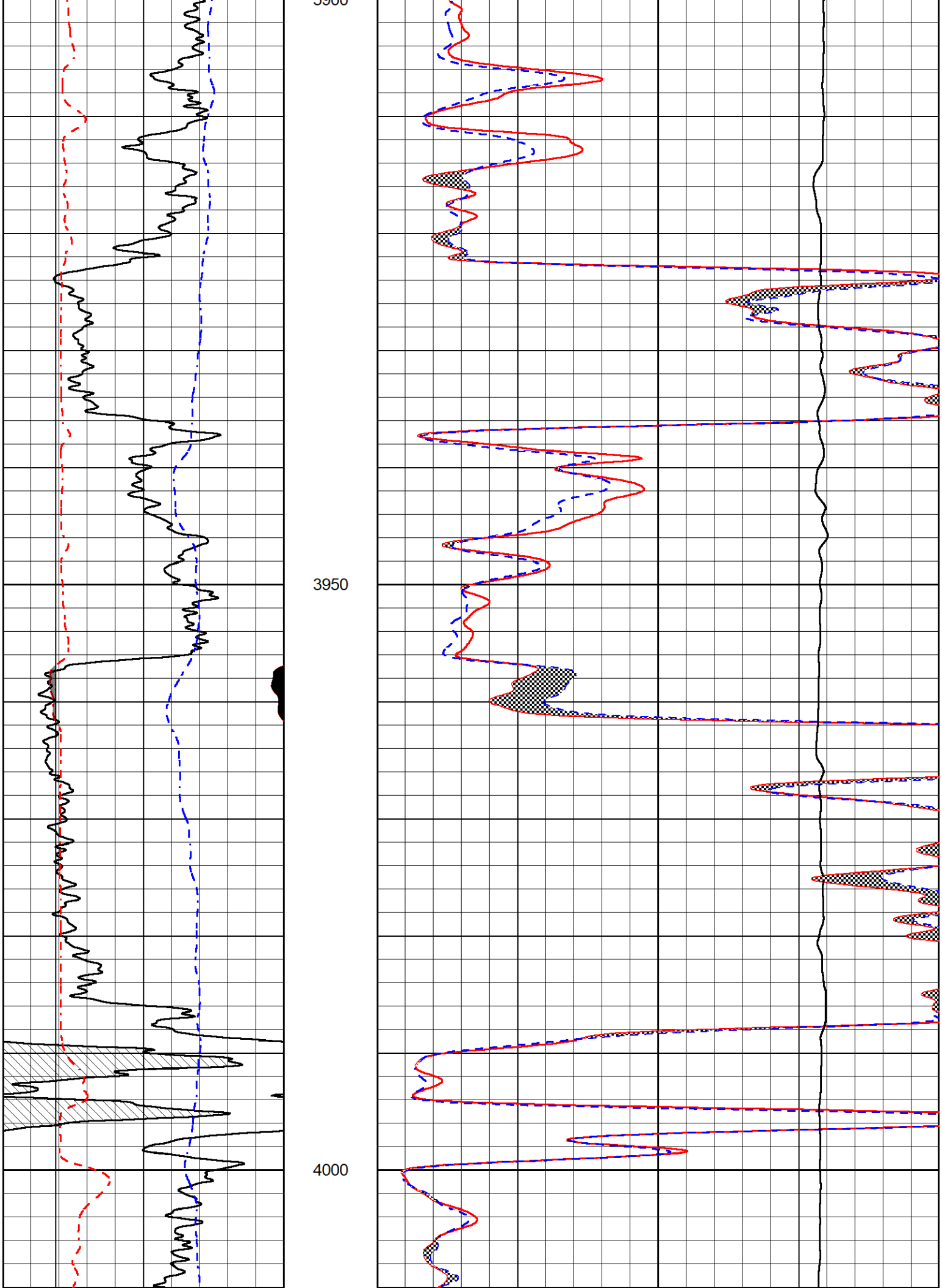
MAIN PASS

Database File	black oak_threlkel et al #1-23.db
Dataset Pathname	StkMI/pass4.1
Presentation Format	_micro
Dataset Creation	Sun Dec 19 06:45:05 2021
Charted by	Depth in Feet scaled 1:120

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

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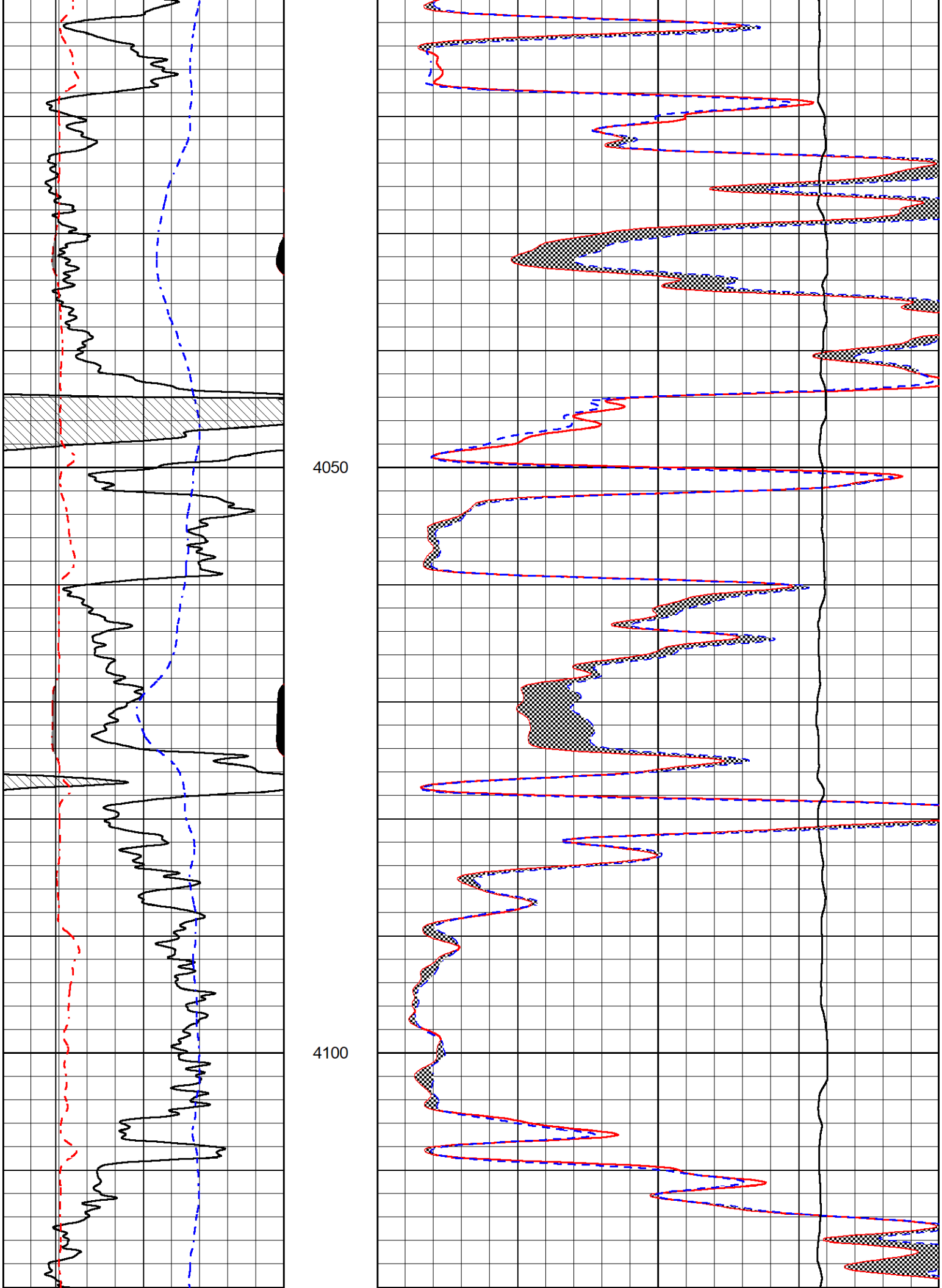
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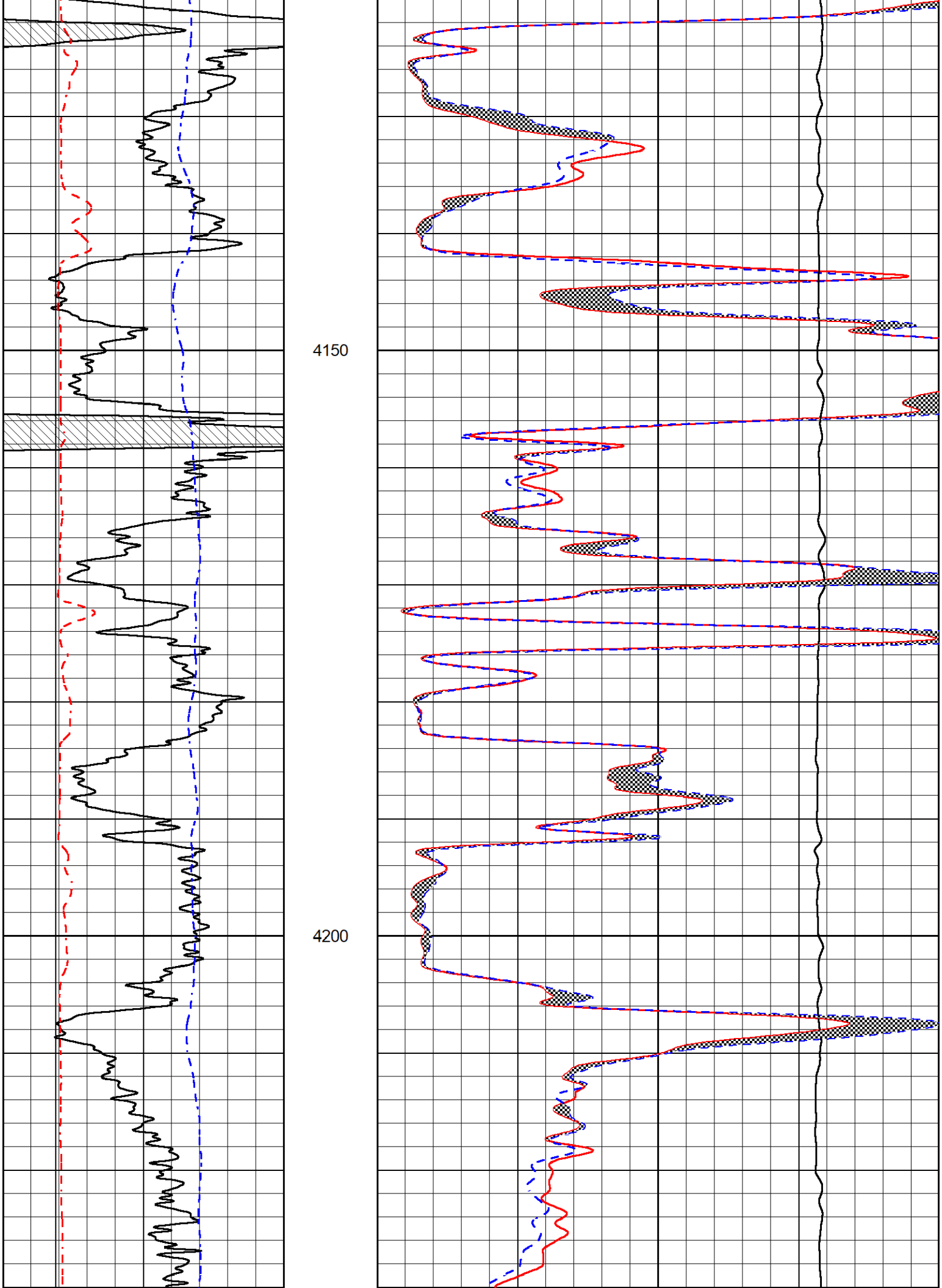
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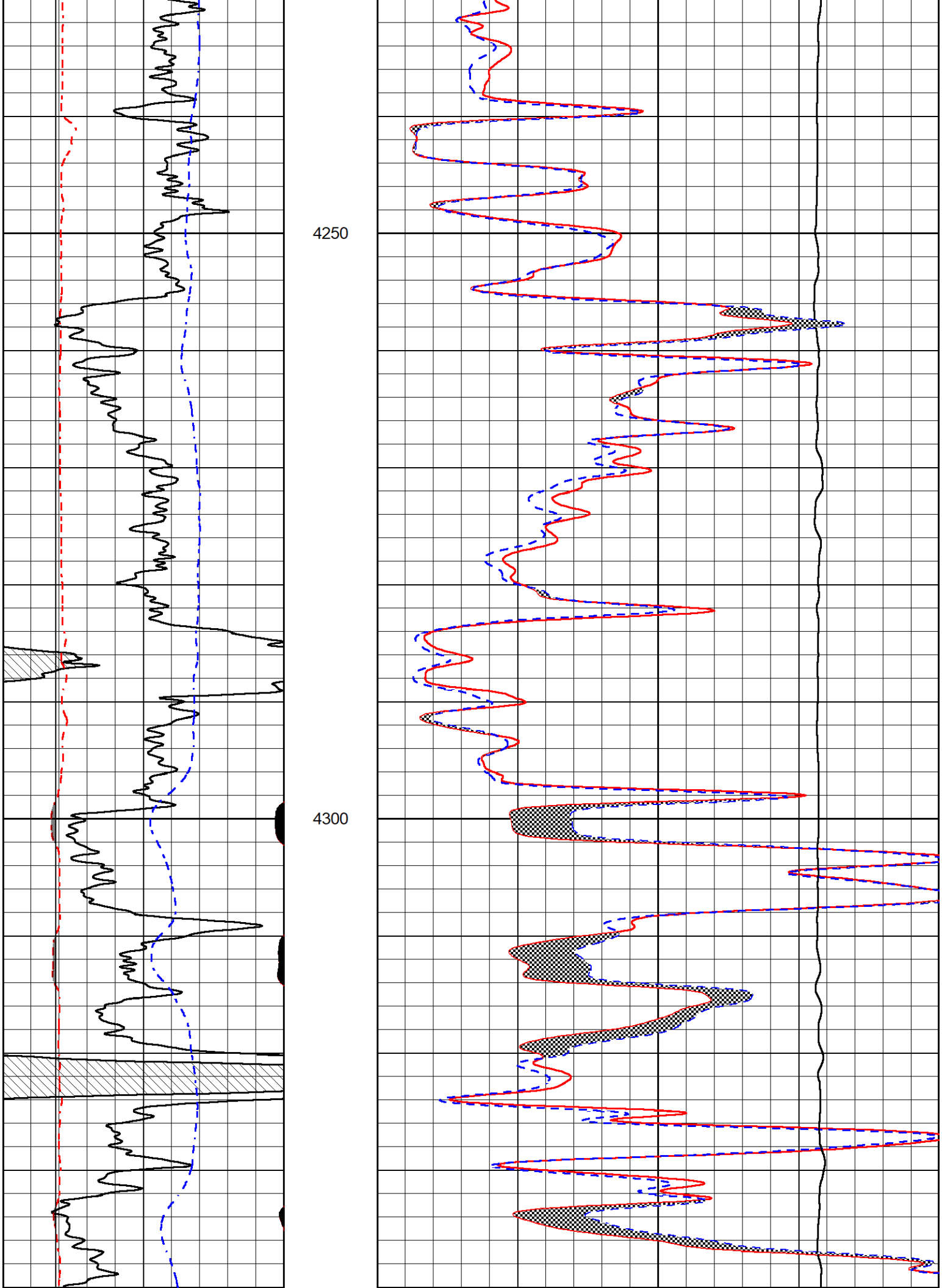
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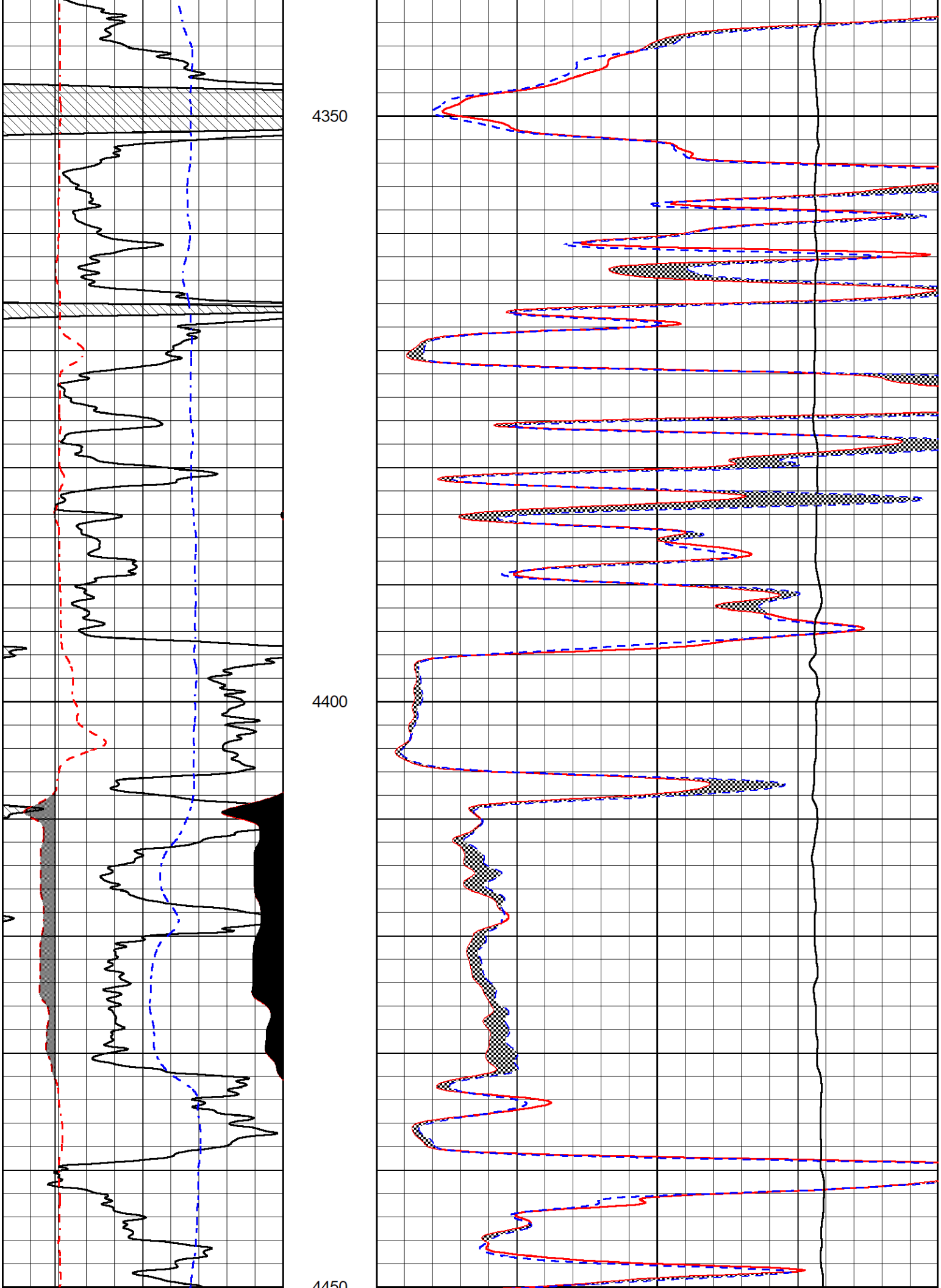
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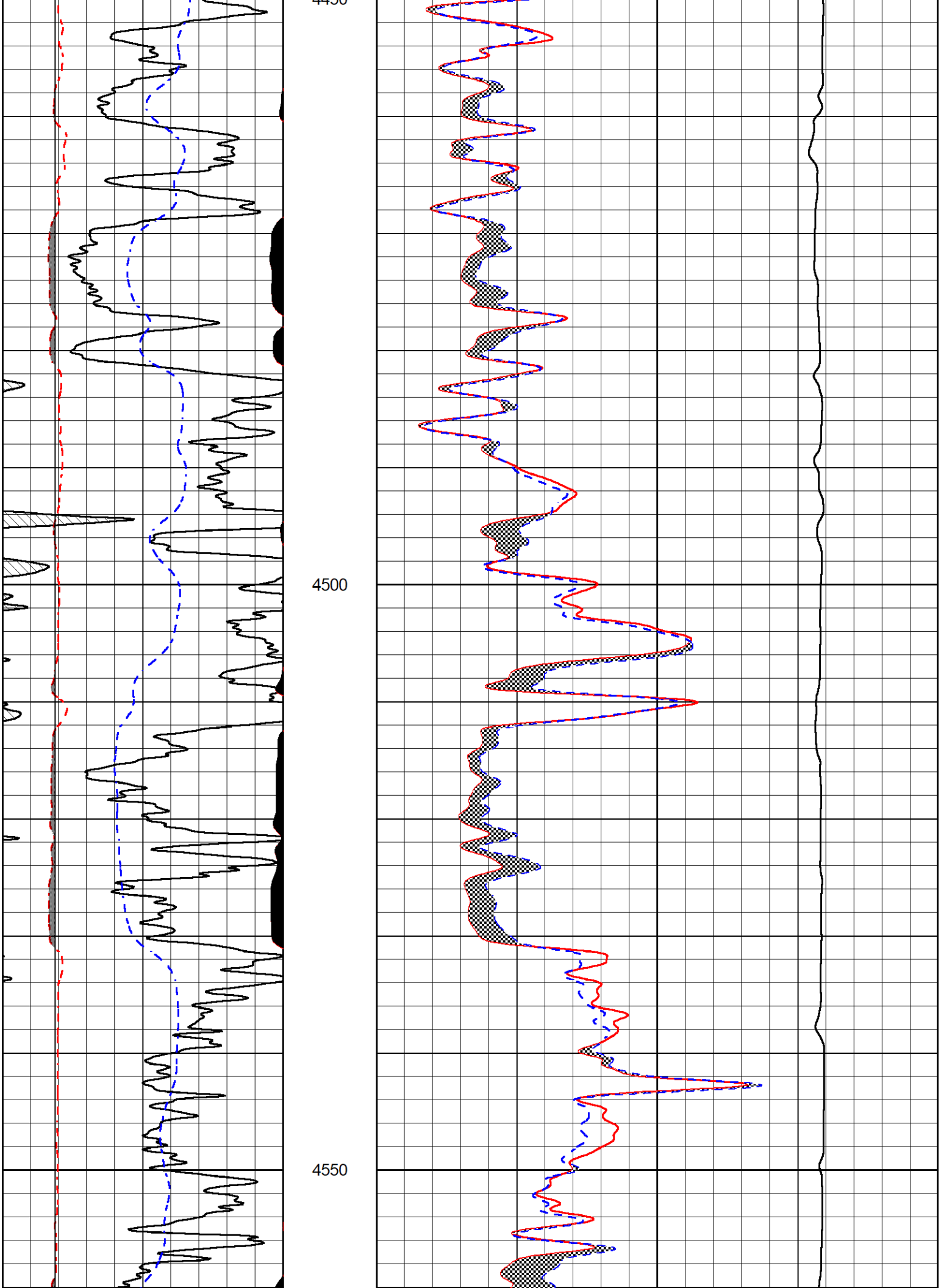
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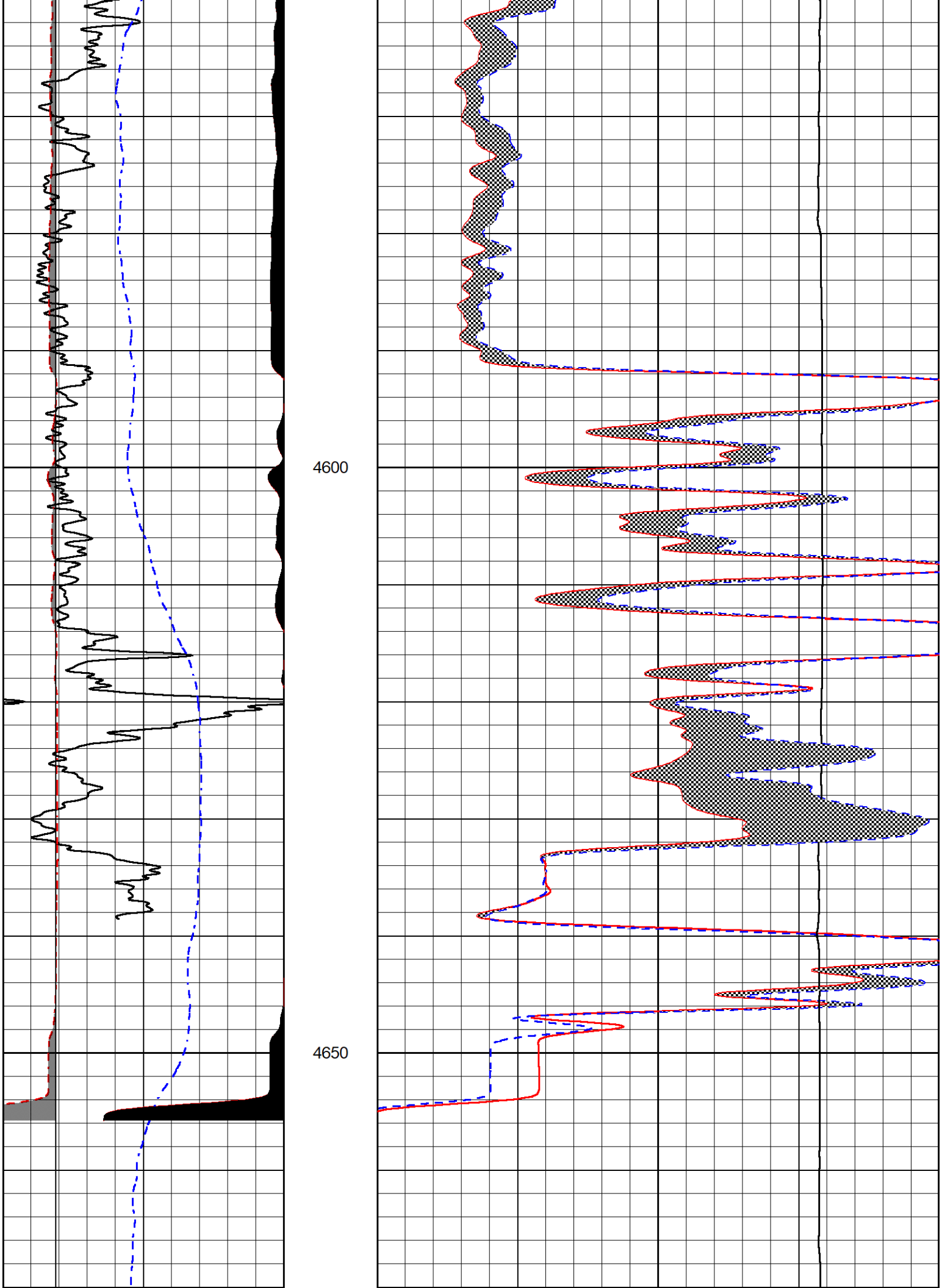
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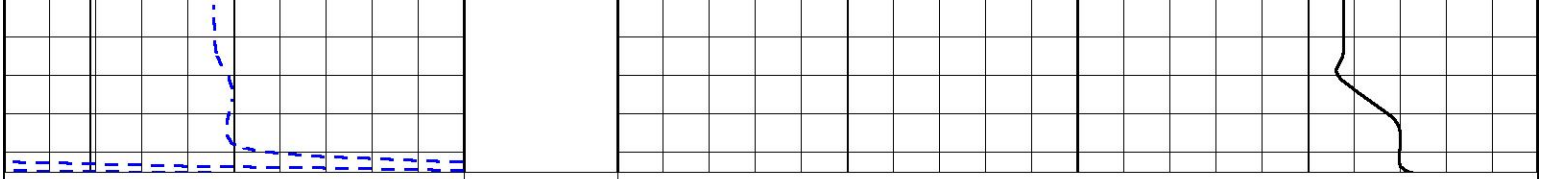

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (103)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (210)	5.00	3.50	100.00
CNSSC	36.48					
LSD	28.18		CDL-M&W (303-03)	8.50	4.00	250.00
DCAL	28.17					
SSD	27.68					
MCAL	19.58		ML-PSI STKBL ML (402)	7.58	4.00	65.00
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
CILD	8.33		DIL-M&W (504 HT)	18.25	3.50	220.00



Dataset:	black oak_threlkel et al #1-23.db: field/well/StkMl/pass3.1
Total length:	42.33 ft
Total weight:	685.00 lb
O.D.:	4.00 in

MIDWEST WIRELINE

Company	Black Oak Exploration LLC
Well	Threlkel Et Al #1-23
Field	Wildcat
County	Rawlins
State	Kansas