MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Griffin Management LLC
Well Kamber #1
Field Lion West
County Pratt State Kansas

Location: API # : 15-151-22564-00-00
NW SW SE NE
2169 FNL & 1264 FEL
SEC 30 TWP 27S RGE 11W

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1757
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 1762
D.F.
G.L. 1757

Company Griffin Management LLC
Well Kamber #1
Field Lion West
County Pratt
State Kansas

Date	3/7/2023		
Run Number	One		
Depth Driller	4485		
Depth Logger	4486		
Bottom Logged Interval	4485		
Top Log Interval	1800		
Casing Driller	8.625 @ 260		
Casing Logger	259		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	5000		
Density / Viscosity	9.4 54		
pH / Fluid Loss	9.5 8.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.85 @ 70		
Rmf @ Meas. Temp	0.64 @ 70		
Rmc @ Meas. Temp	1.15 @ 70		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.49 @ 121		
Operating Rig Time	2.5 Hours		
Max Rec. Temp. F	121		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Eli Felts		

<<< Fold Here >>>

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.

Pratt, KS, 8.5 E to 100th Ave,
1 N, W at CG, NW to locatoin

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: Eli Felts
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (106)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (207-MW)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (307-08)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (401)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (501 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset:	griffin_kamber #1.db: field/well/StkMl/pass3.1
Total length:	42.33 ft
Total weight:	685.00 lb
O.D.:	4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin_kamber #1.db
Dataset field/well/StkMl/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	121	5.5	0	1	2	2.71
NPORSEL	**PERFS**	**SNDERR mmho/m**	**SNDERRM mmho/m**	**SPSHIFT mV**	**SRFTEMP degF**	**SZCOR**	**TDEPTH ft**
Limestone	No	0	0	30	40	Off	4486

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

MIDWEST WIRELINE

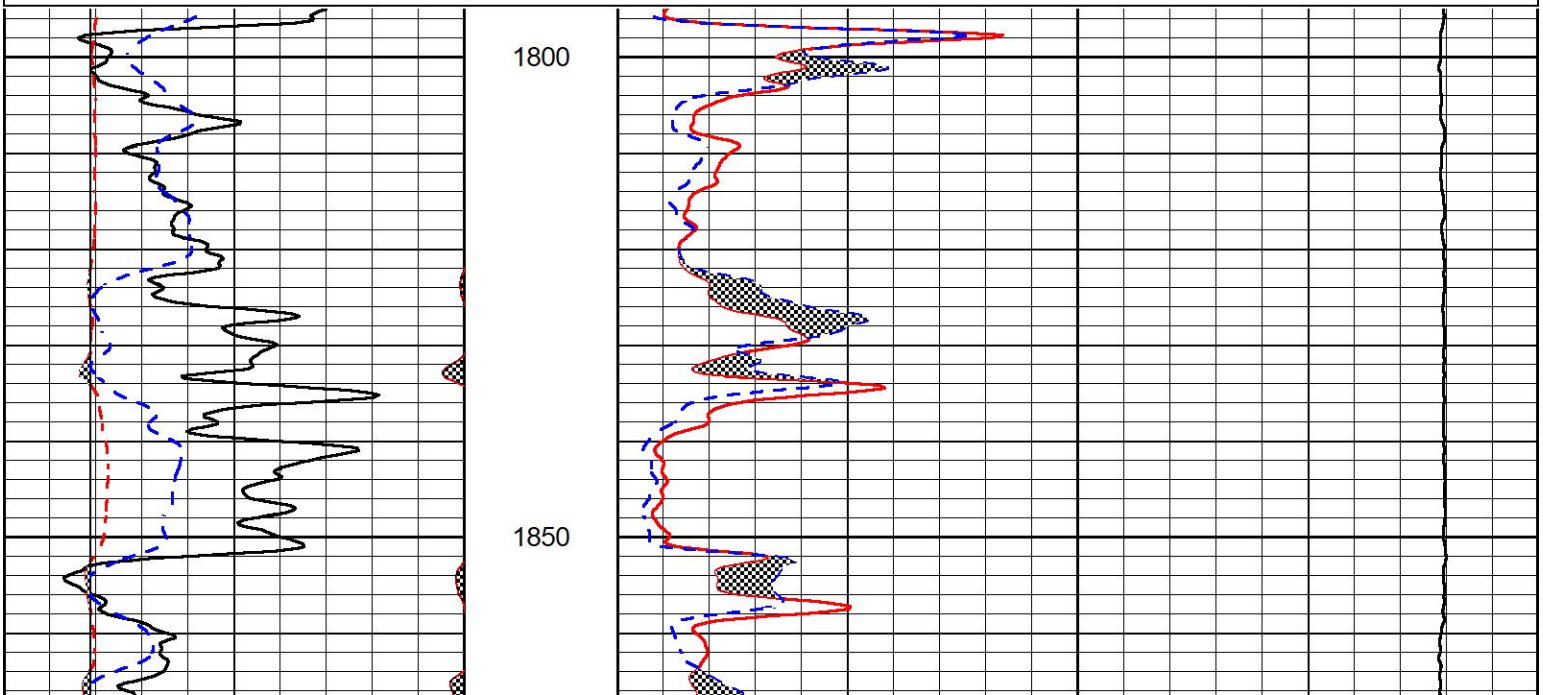
DETAIL SECTION

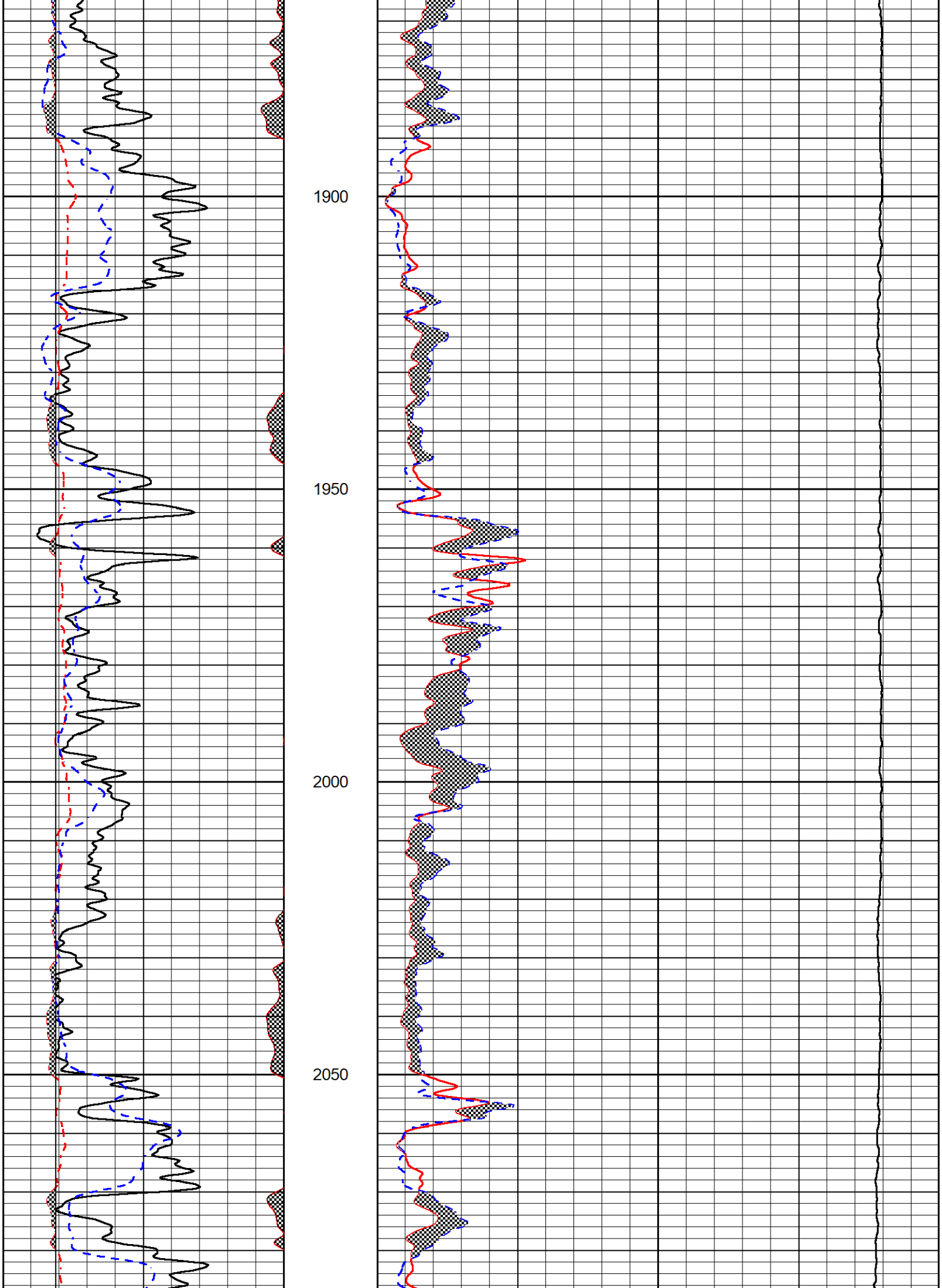
MAIN PASS

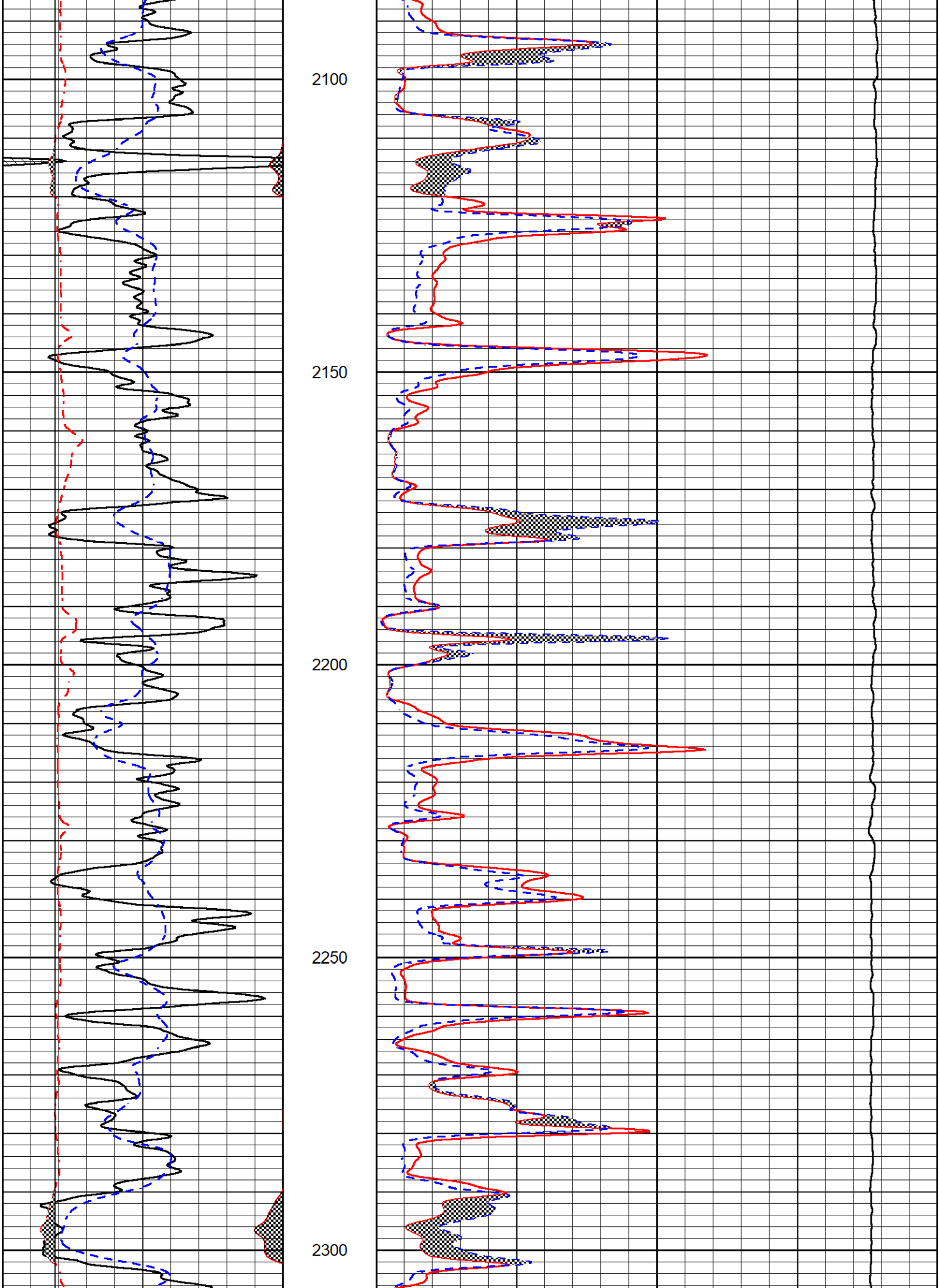
Database File	griffin_kamber #1.db
Dataset Pathname	StkMl/pass3.1
Presentation Format	_micro
Dataset Creation	Tue Mar 07 19:24:41 2023
Charted by	Depth in Feet scaled 1:240

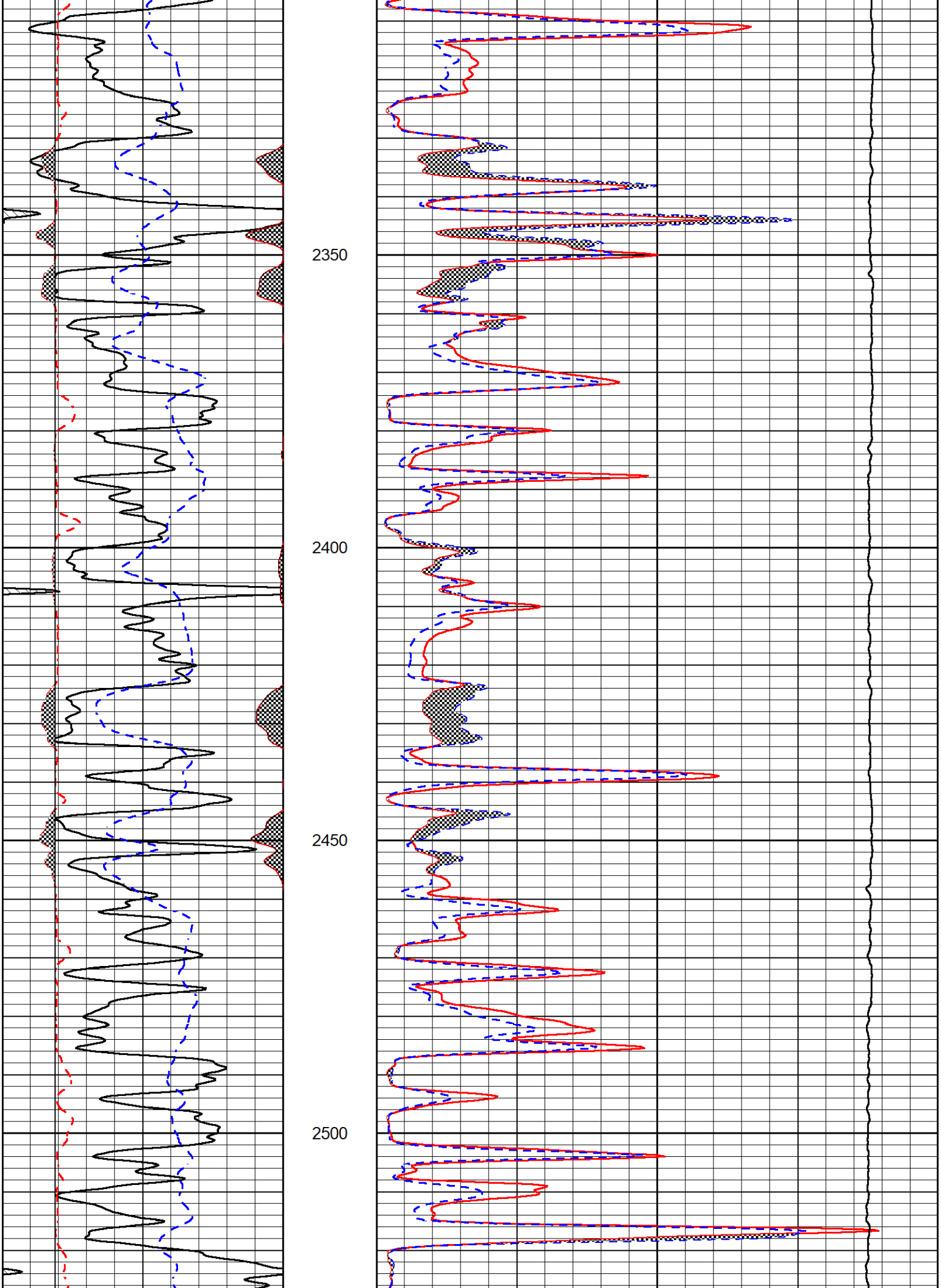
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

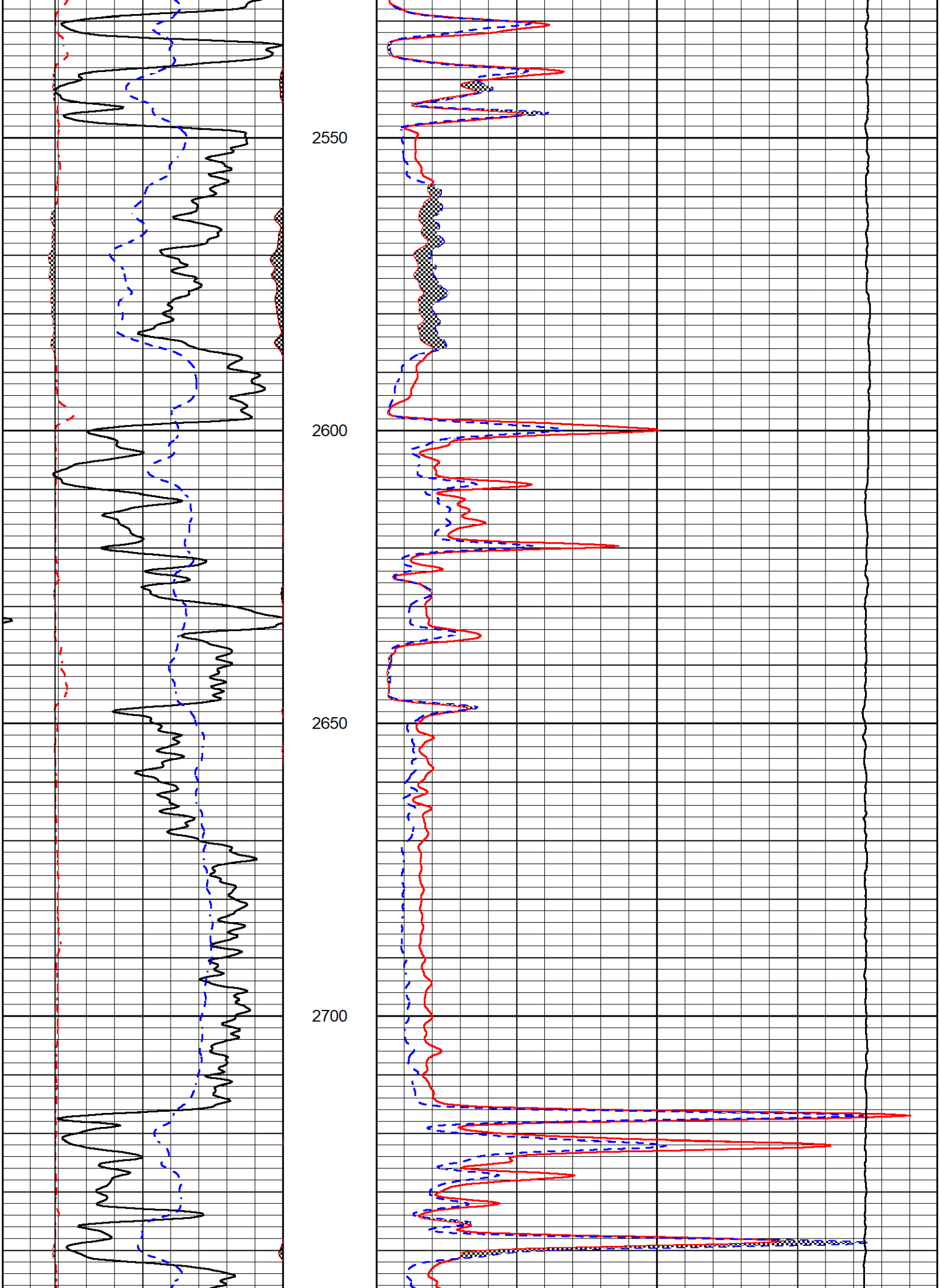
0	Micro Inverse 1 X 1 (Ohm-m)	80
0	Micro Normal 2" (Ohm-m)	80
10000	Line Weight (lb)	0

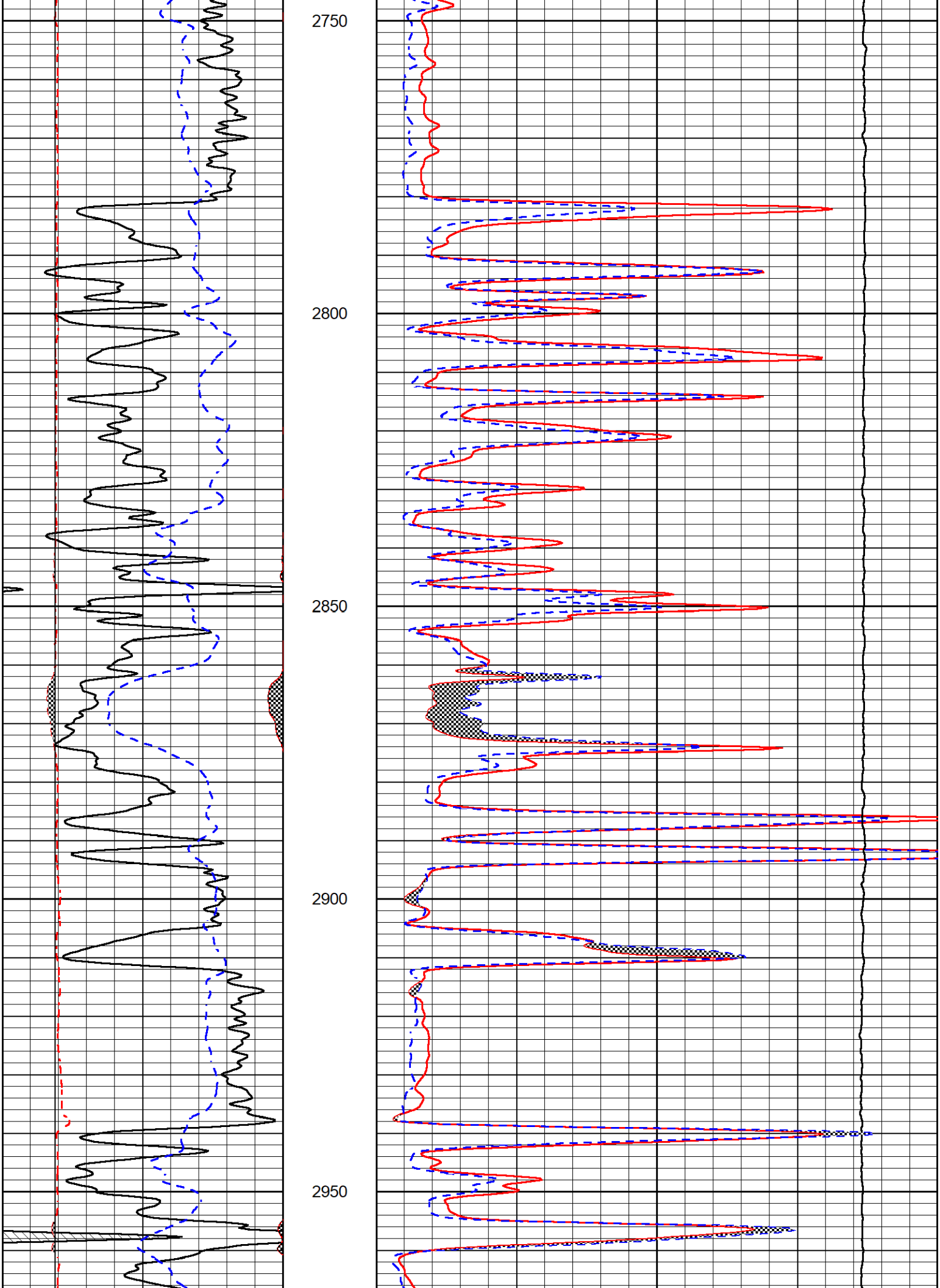


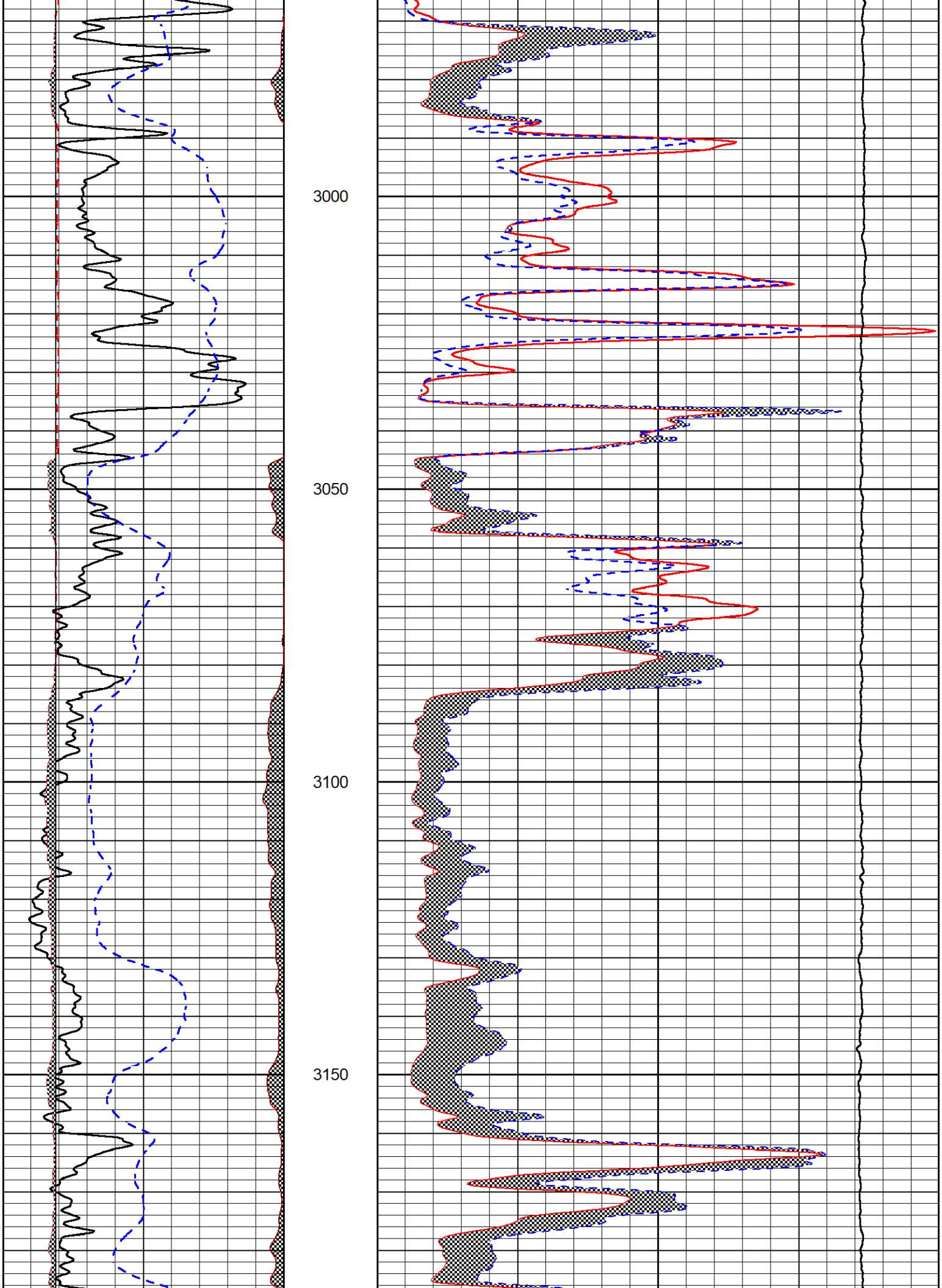

1900
1950
2000
2050

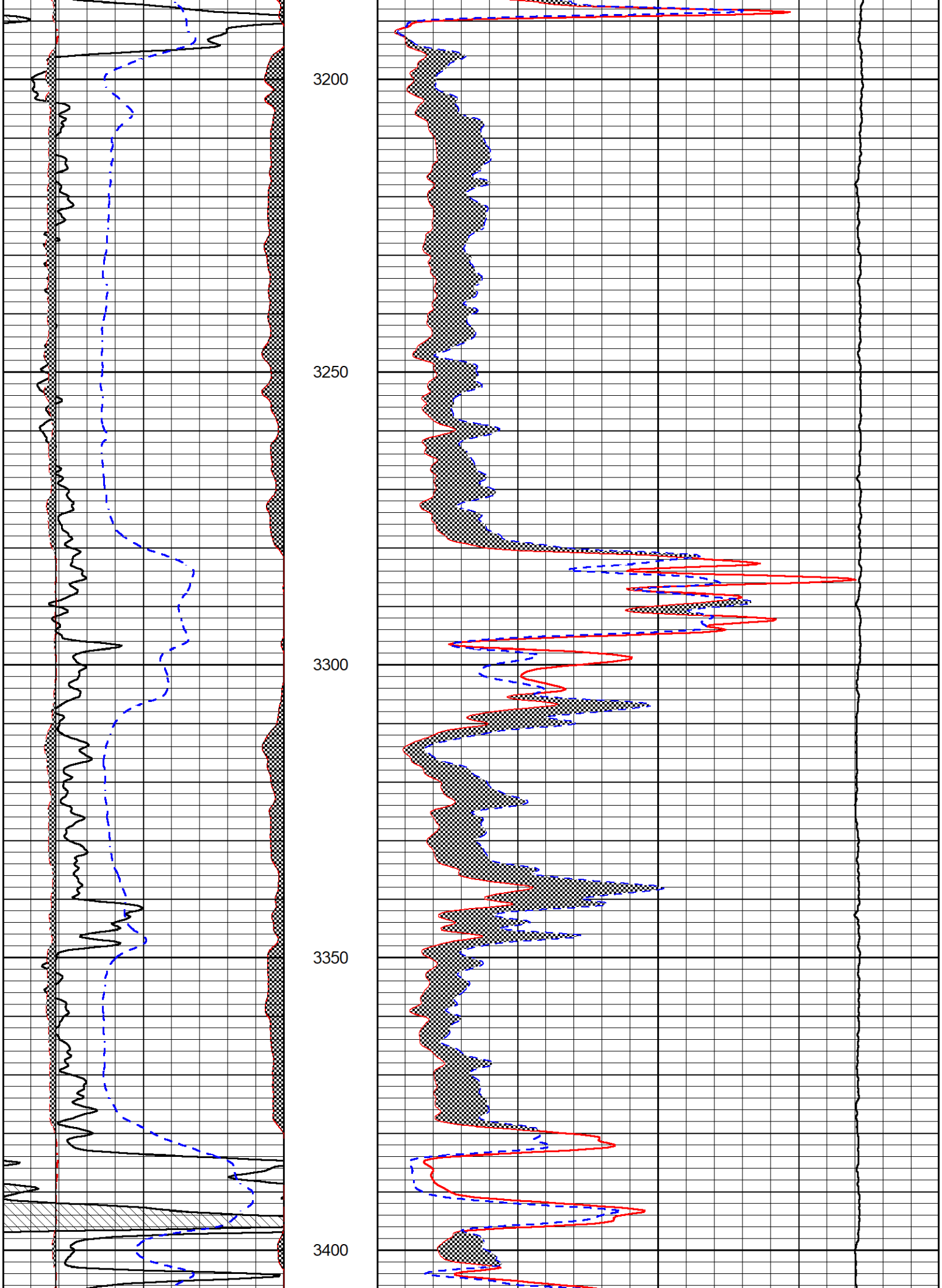

2100
2150
2200
2250
2300

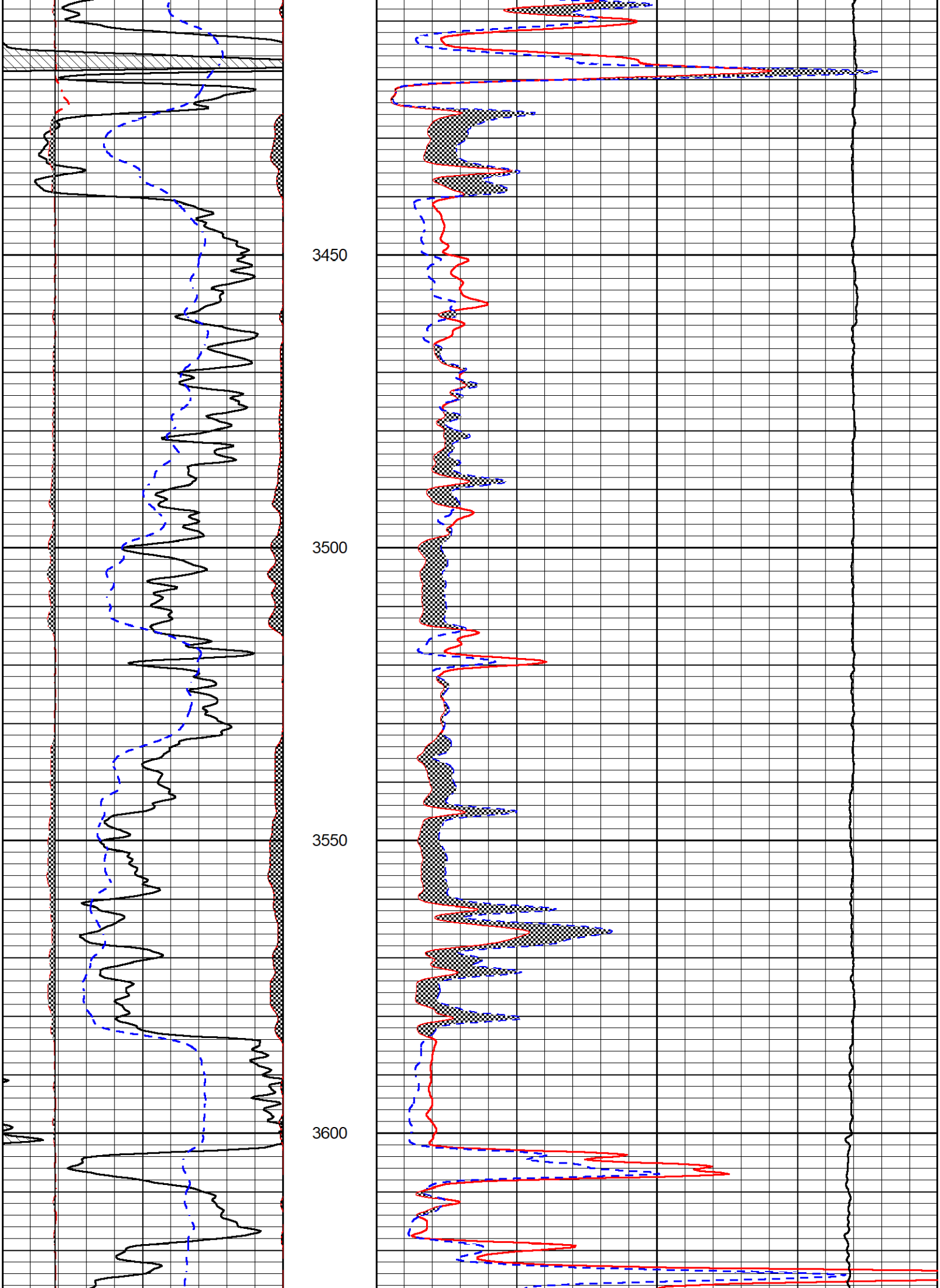

2350
2400
2450
2500

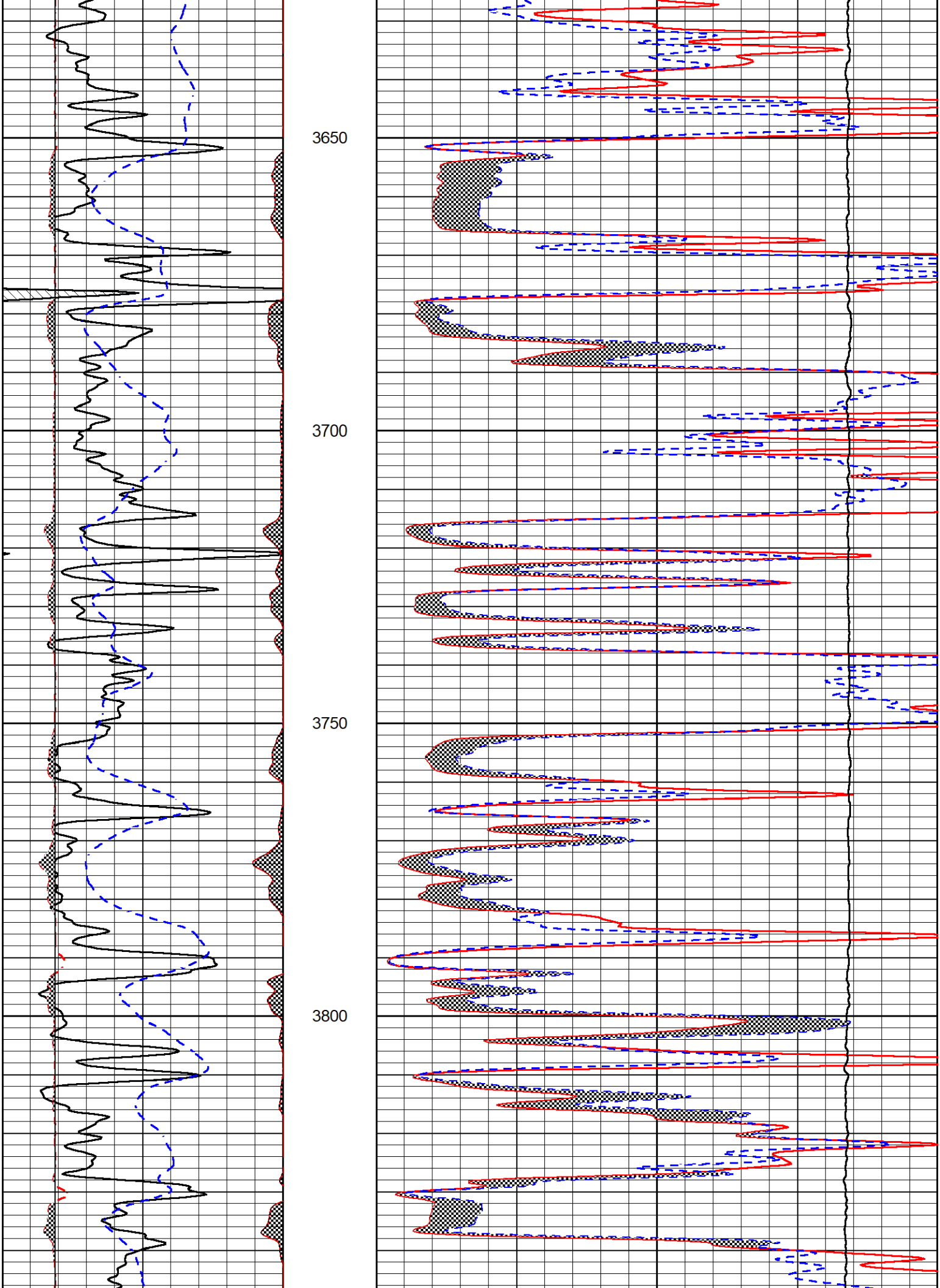

2550
2600
2650
2700

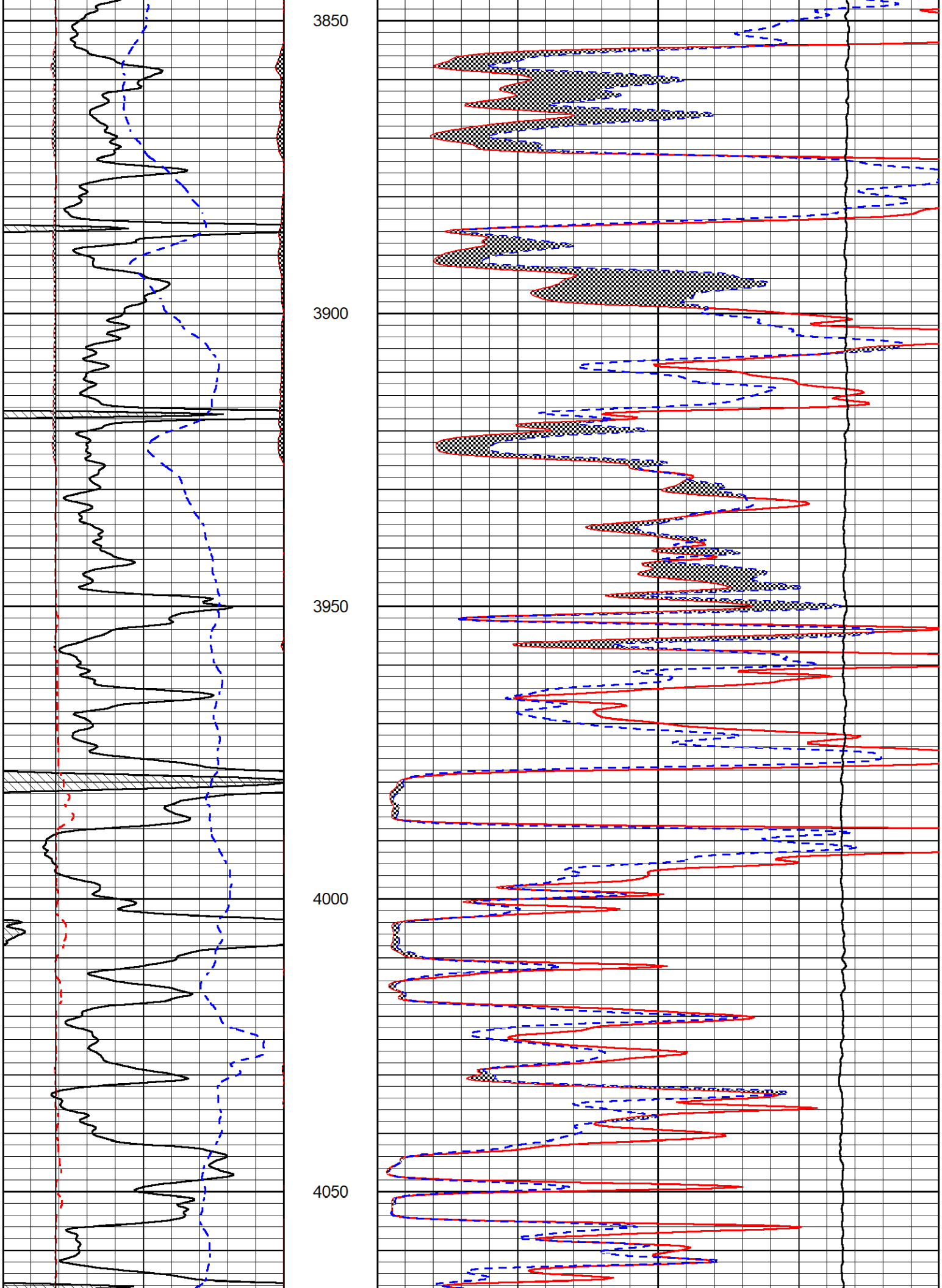

2750
2800
2850
2900
2950

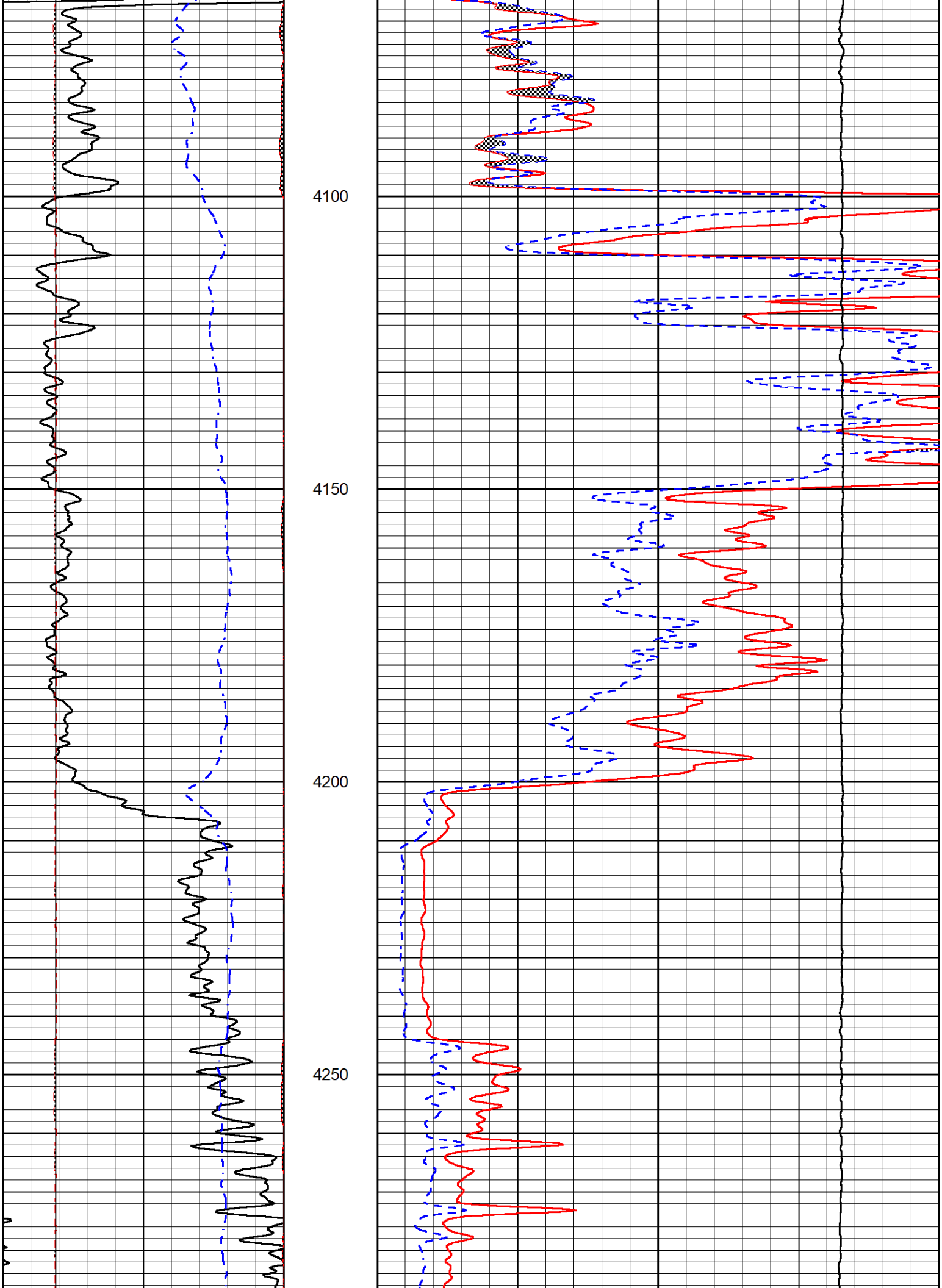

3000
3050
3100
3150

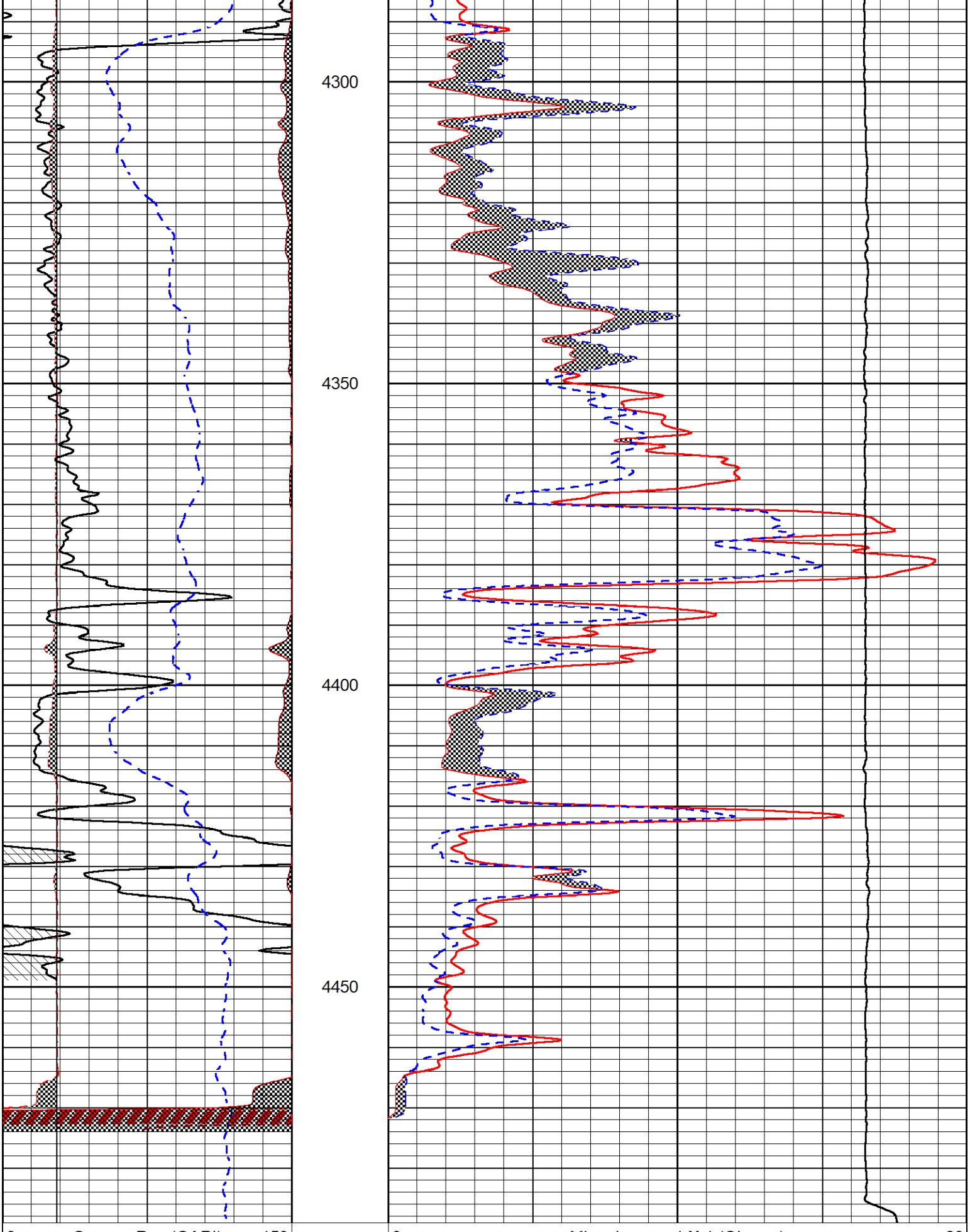

3200
3250
3300
3350
3400


3450
3500
3550
3600


3650
3700
3750
3800


3850
3900
3950
4000
4050


4100
4150
4200
4250


4300
4350
4400
4450
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) 80
0 Micro Normal 2" (Ohm-m) 80
10000 Line Weight (lb) 0

MIDWEST WIRELINE

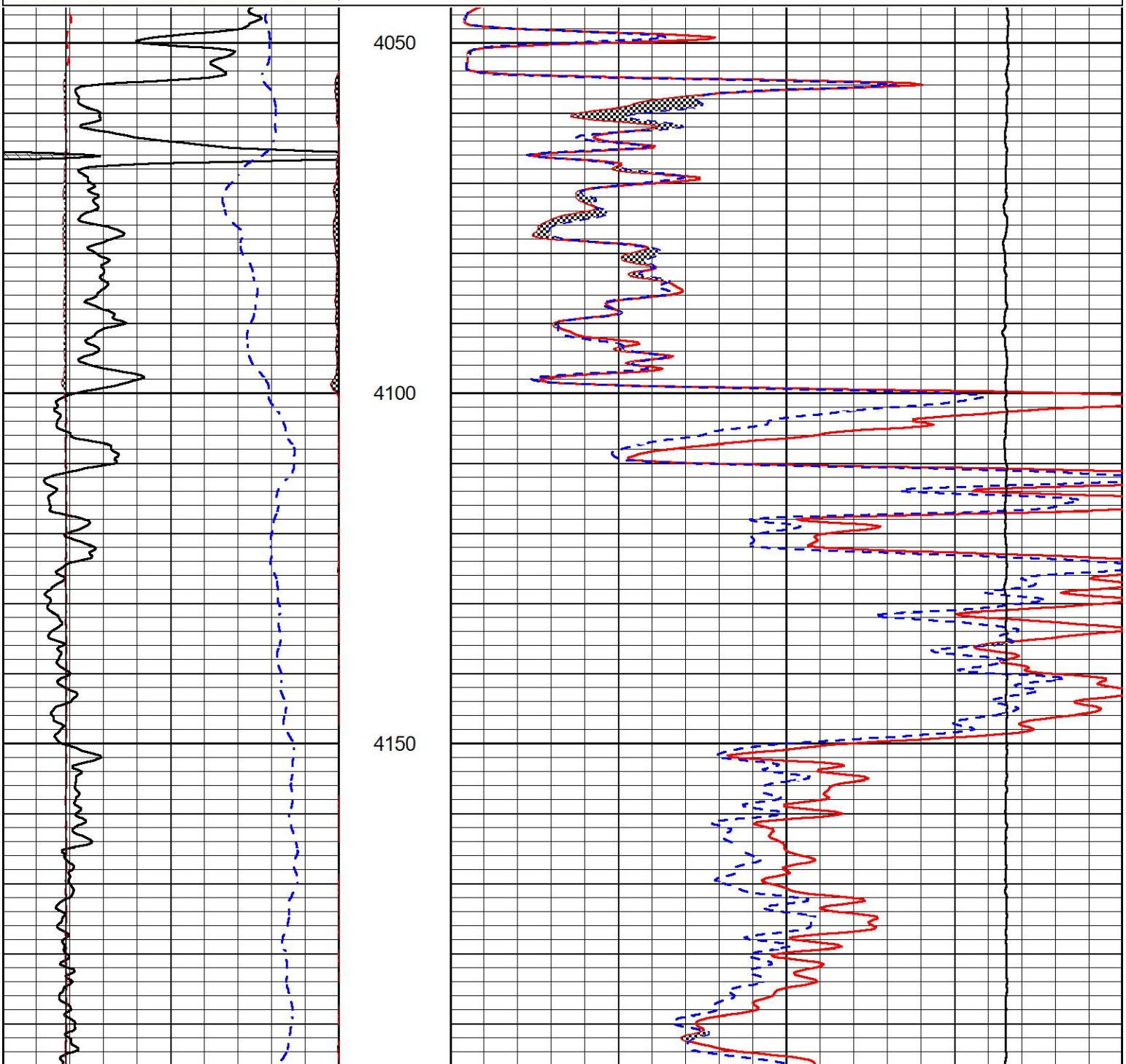
REPEAT SECTION

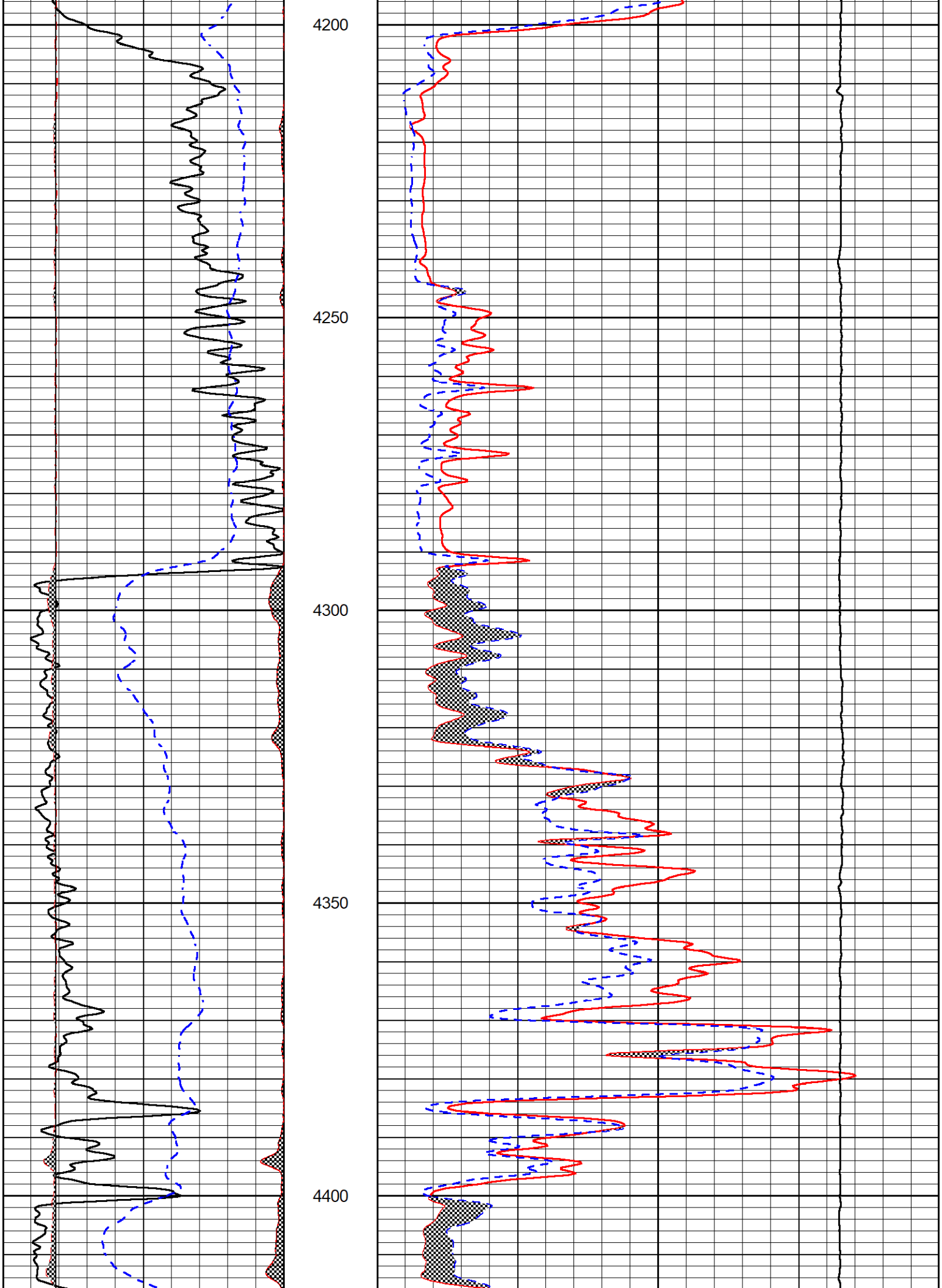
REPEAT PASS

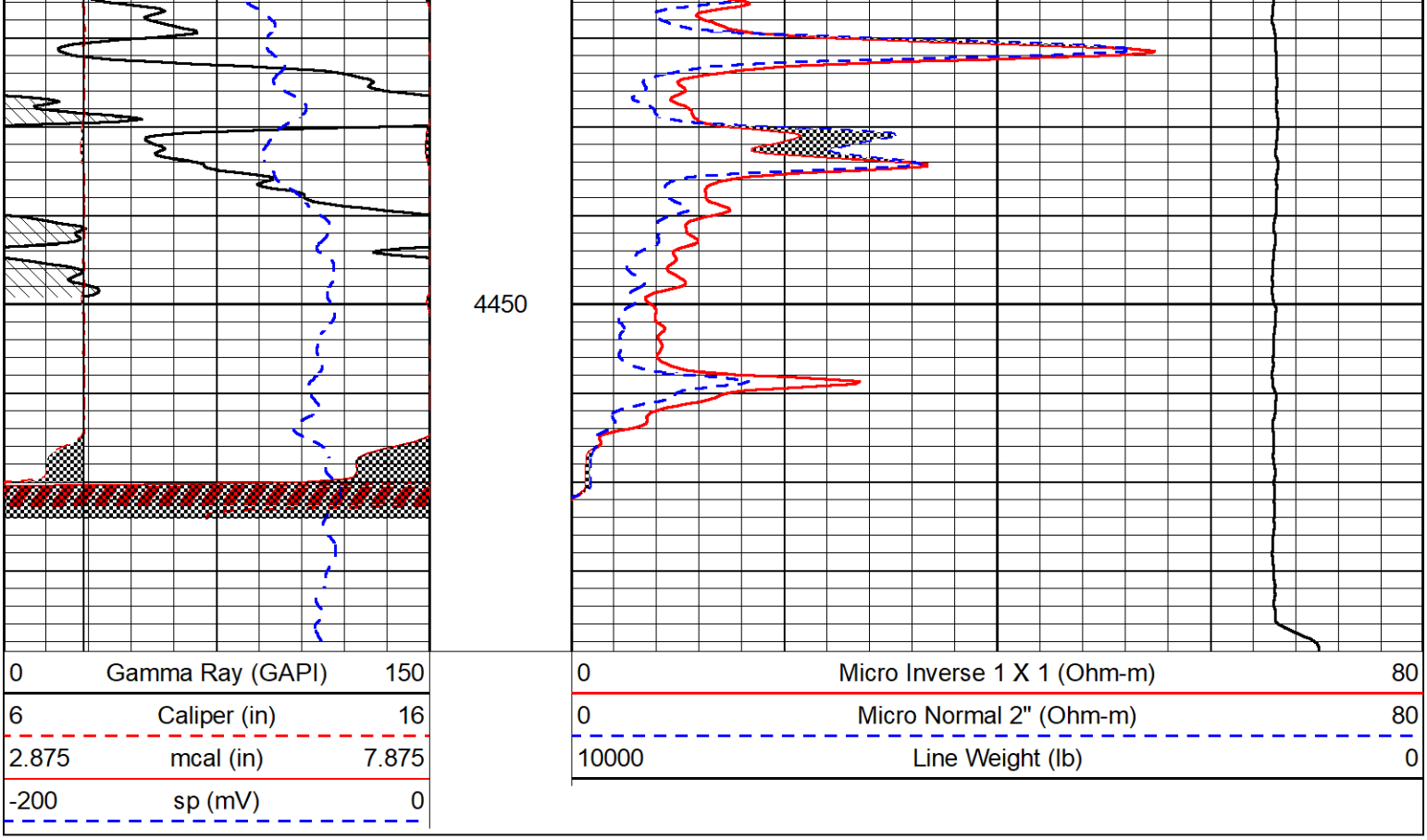
Database File	griffin_kamber #1.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_micro
Dataset Creation	Tue Mar 07 18:18:27 2023
Charted by	Depth in Feet scaled 1:240

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)	80
0	Micro Normal 2" (Ohm-m)	80
10000	Line Weight (lb)	0




4200
4250
4300
4350
4400



Calibration Report

Database File	griffin_kamber #1.db
Dataset Pathname	StkMl/pass3.1
Dataset Creation	Tue Mar 07 19:24:41 2023

Dual Induction Calibration Report

Serial-Model:	501 HT-M&W
Surface Cal Performed:	Thu Jan 12 19:31:52 2023

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-33.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.305	-31.000

Microlog Calibration Report

Serial-Model:	401-PSIML
Performed:	Tue Jan 31 07:24:49 2023

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	15500.0000	-0.5000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-139.2500

Compensated Density Calibration Report

Serial-Model:	307-08-M&W
Source #:	20762B
Master Calibration Performed:	Sat Feb 25 11:00:49 2023

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4131.04	5675.82	cps
Aluminum	2.635	g/cc	781.38	3576.78	cps

Spine Angle = 74.50 Density/Spine Ratio = 0.509

	Size		Reading
Small Ring	6.00	in	1.16
Large Ring	18.00	in	1.01

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W

CALIBRATION

	Detector	Readings		Target		Normalization
	Short Space	6240.00	cps	1000.00	cps	1.6025
	Long Space	460.00	cps	1000.00	cps	1.9500

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: 106
Tool Model: M&W
Performed: Fri Dec 3 15:10:46 2021

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
Calibrator Reading: 637.0 cps

Sensitivity: 0.5500 GAPI/cps



Company	Griffin Management LLC
Well	Kamber #1
Field	Lion West
County	Pratt
State	Kansas