



MIDWEST WIRELINE

# MICRORESISTIVITY LOG

Company Griffin Management LLC  
 Well Marla #1  
 Field Moffett Northwest  
 County Barber  
 State Kansas

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 Well Marla #1  
 Field Moffett Northwest  
 County Barber State Kansas

Location: API #: 15-007-24397-00-00  
 2557 FSL 40 FEL  
 SEC 5 TWP 30S RGE 15W  
 Permanent Datum Ground Level Elevation 2002  
 Log Measured From Kelly Bushing  
 Drilling Measured From Kelly Bushing  
 Other Services  
 CNL/CDL  
 DIL  
 Elevation  
 K.B. 2007  
 D.F.  
 G.L. 2002

Date	12/5/2021
Run Number	One
Depth Driller	4880
Depth Logger	4879
Bottom Logged Interval	4878
Top Log Interval	2800
Casing Driller	8.625 @ 264
Casing Logger	264
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	4400
Density / Viscosity	9.05 55
pH / Fluid Loss	10.5 7.6
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.45 @ 80
Rmt @ Meas. Temp	0.34 @ 80
Rmc @ Meas. Temp	0.61 @ 80
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.29 @ 125
Operating Rig Time	3 Hours
Max Rec. Temp. F	125
Equipment Number	P-24
Location	Hays
Recorded By	D. Schmidt
Witnessed By	Charles Griffin

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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.

Croft,  
 South to County Line, South to the Y,  
 East and North to location

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

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

### Your Midwest Wireline Crew

Engineer: D. Schmidt  
 Operator:  
 Operator:  
 Operator:

### This Log Record Was Witnessed By

Primary Witness: Charles Griffin  
 Secondary Witness:  
 Secondary Witness:  
 Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48		CNT-M&W (207-MW)	5.00	3.50	100.00
LSD DCAL SSD	28.18 28.17 27.68		CDL-M&W (934-226)	8.50	4.00	250.00
MCAL MI MN	19.58 19.58 19.58		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.50 15.50		DIL-PSI HIGH TEMP (952-828)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: griffin\_marla 1.db: field/well/stkml/pass3.2  
 Total length: 42.33 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin\_marla 1.db  
 Dataset field/well/stkml/pass3.2/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	125	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	170	70	Off	4879

## 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



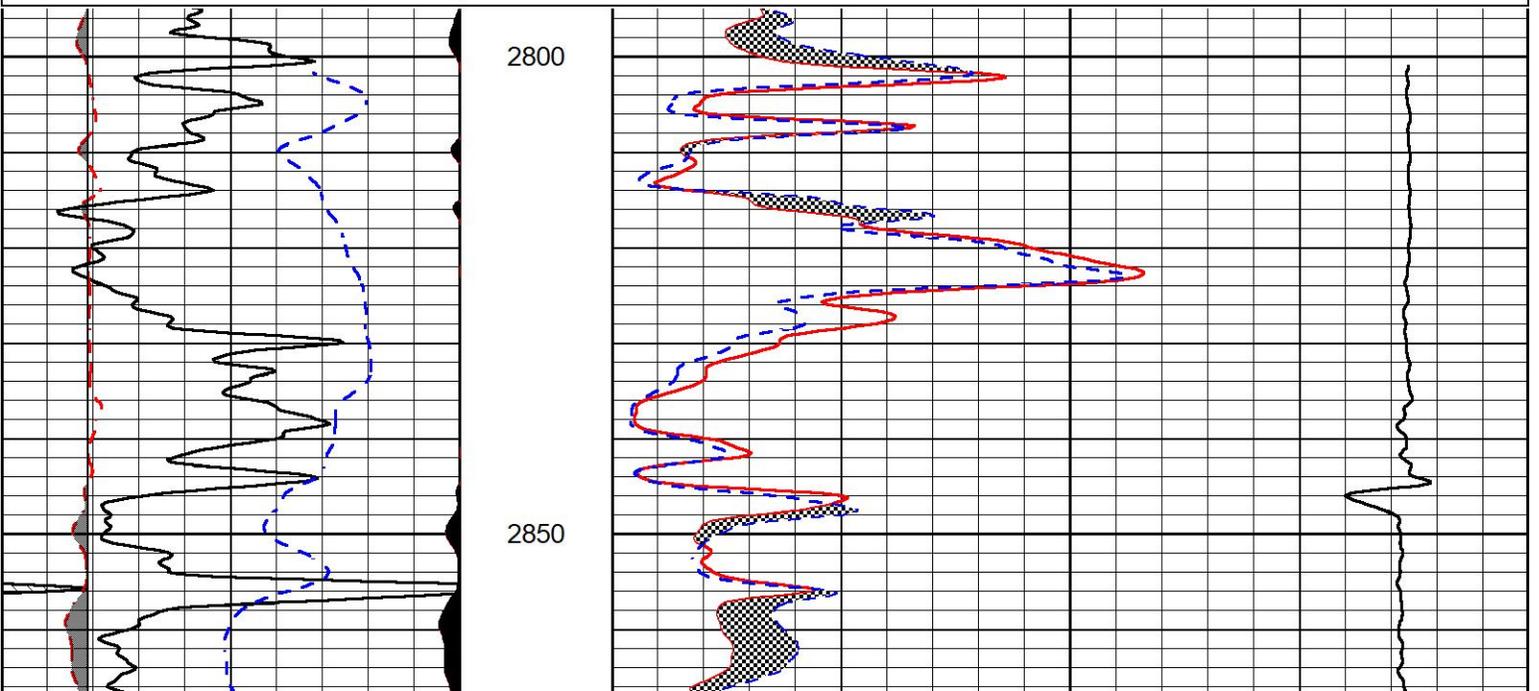
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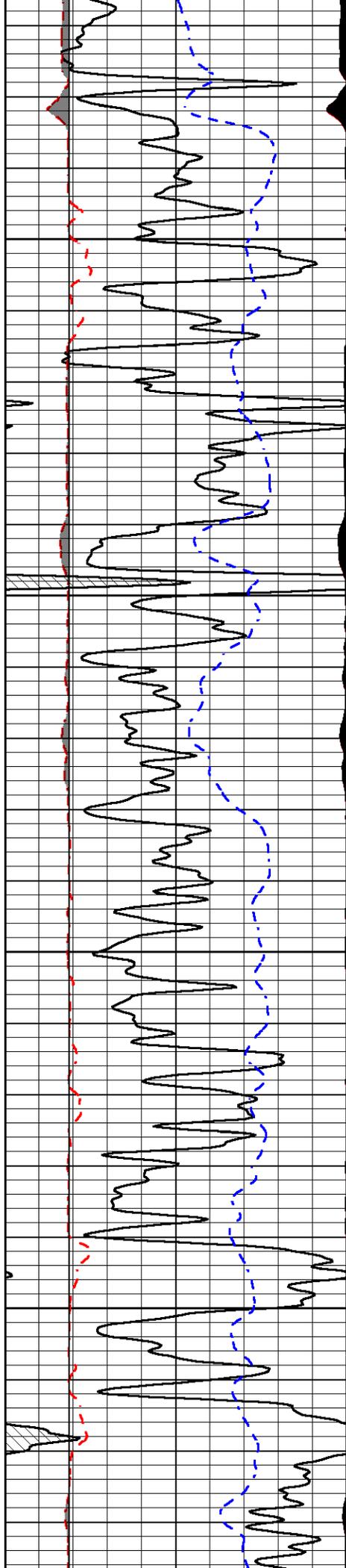
### MAIN PASS

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 Dataset Pathname stkml/pass3.1  
 Presentation Format \_micro  
 Dataset Creation Sun Dec 05 17:15:04 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



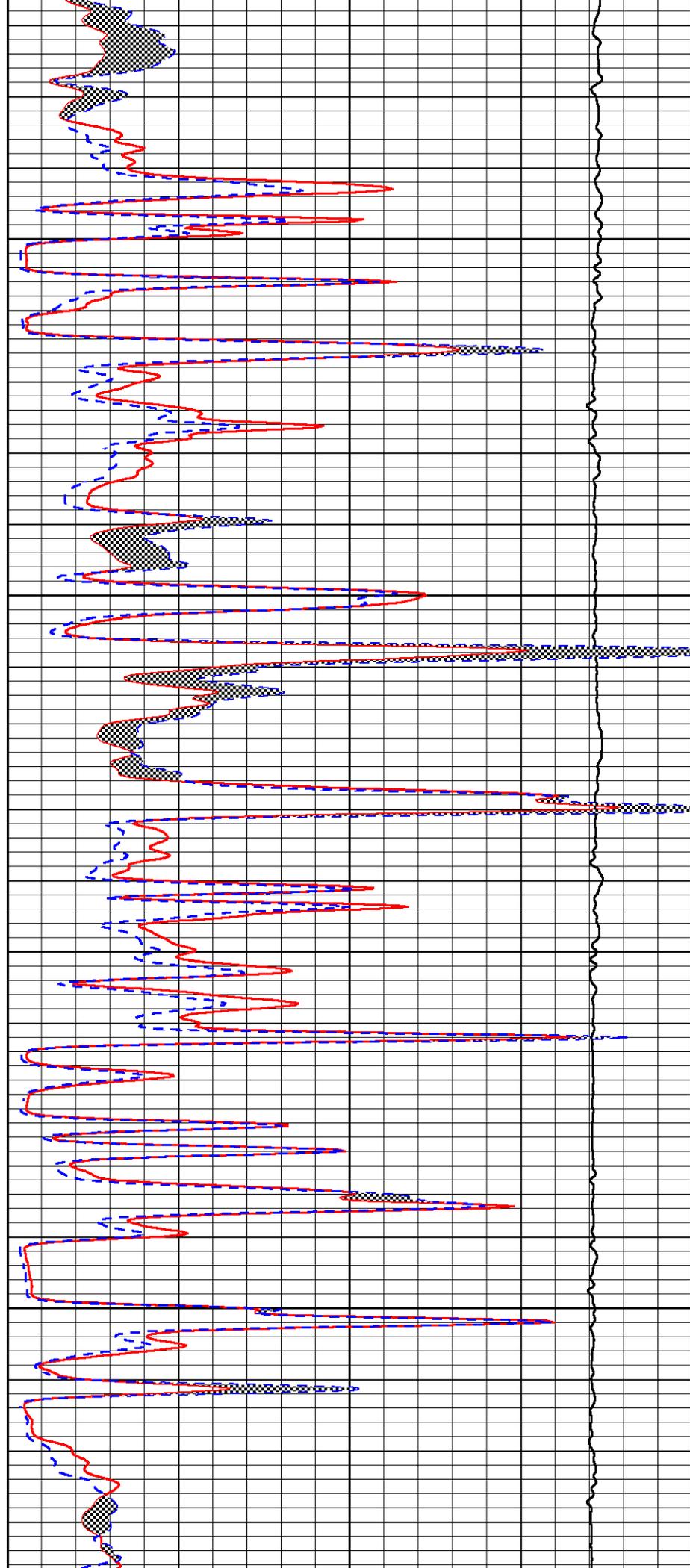


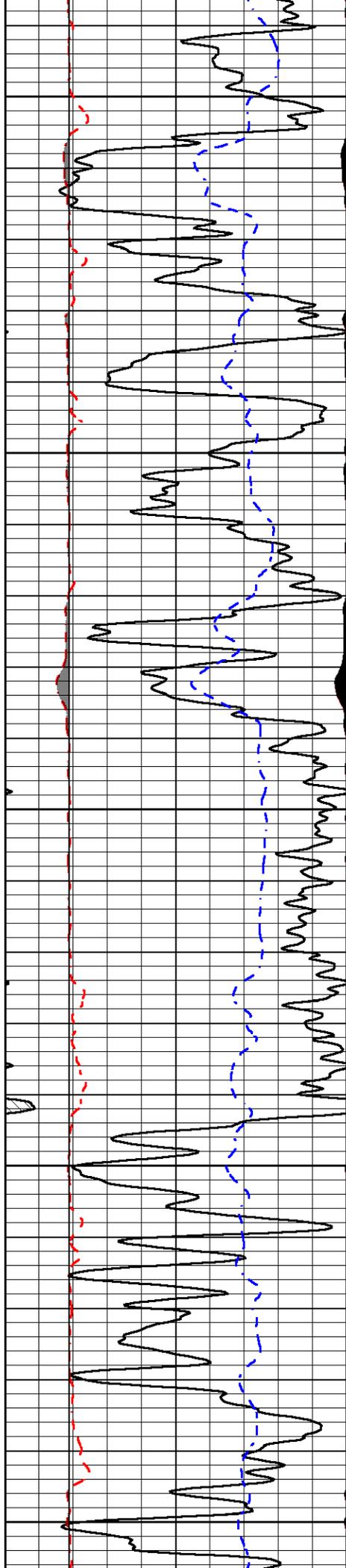
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2950

3000

3050





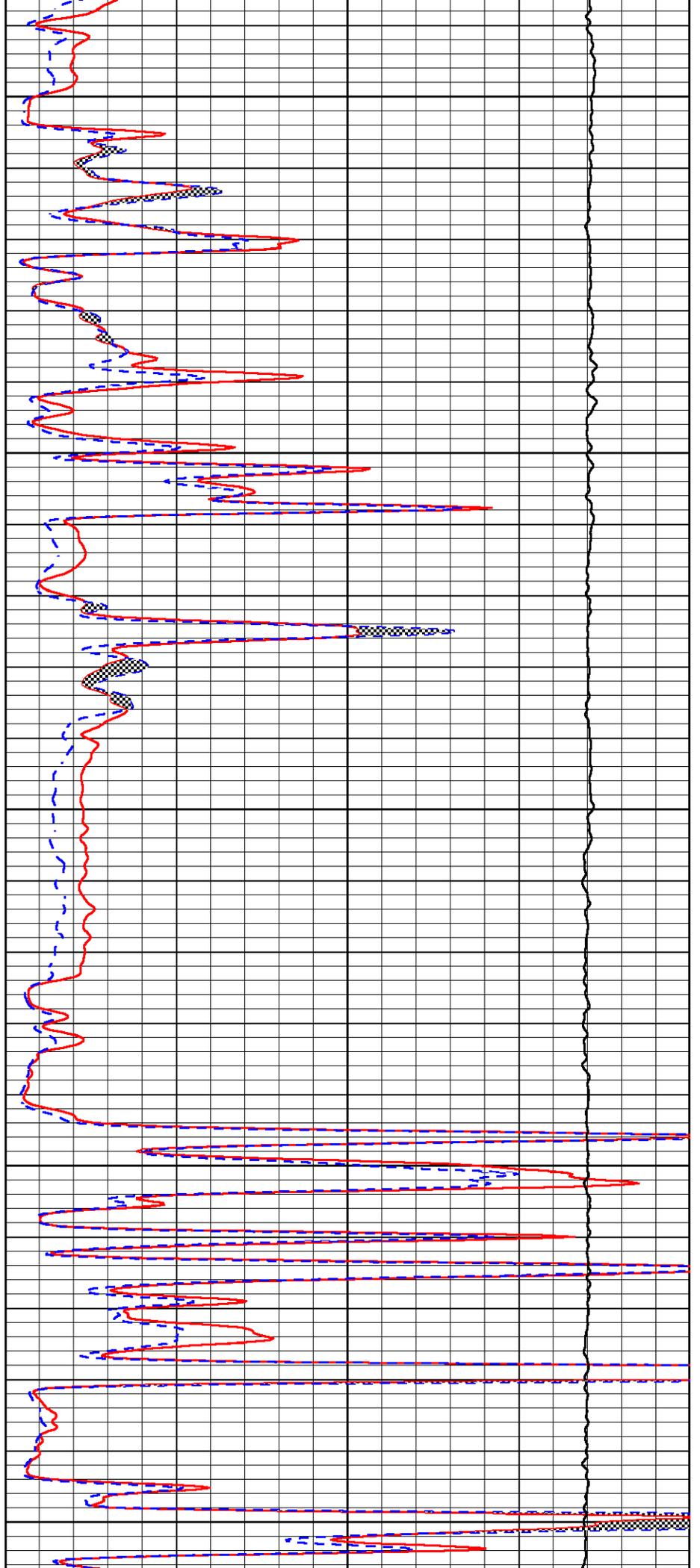
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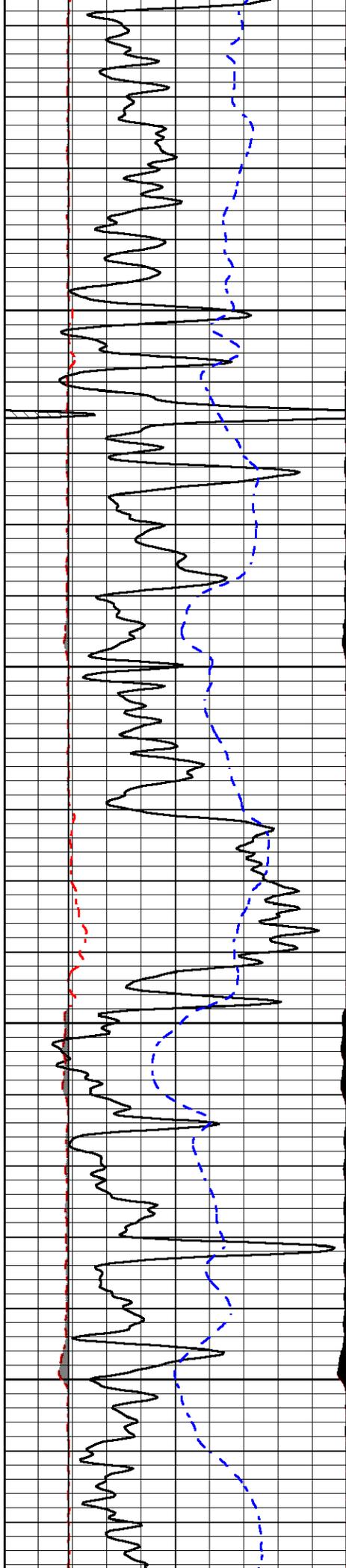
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3200

3250

3300



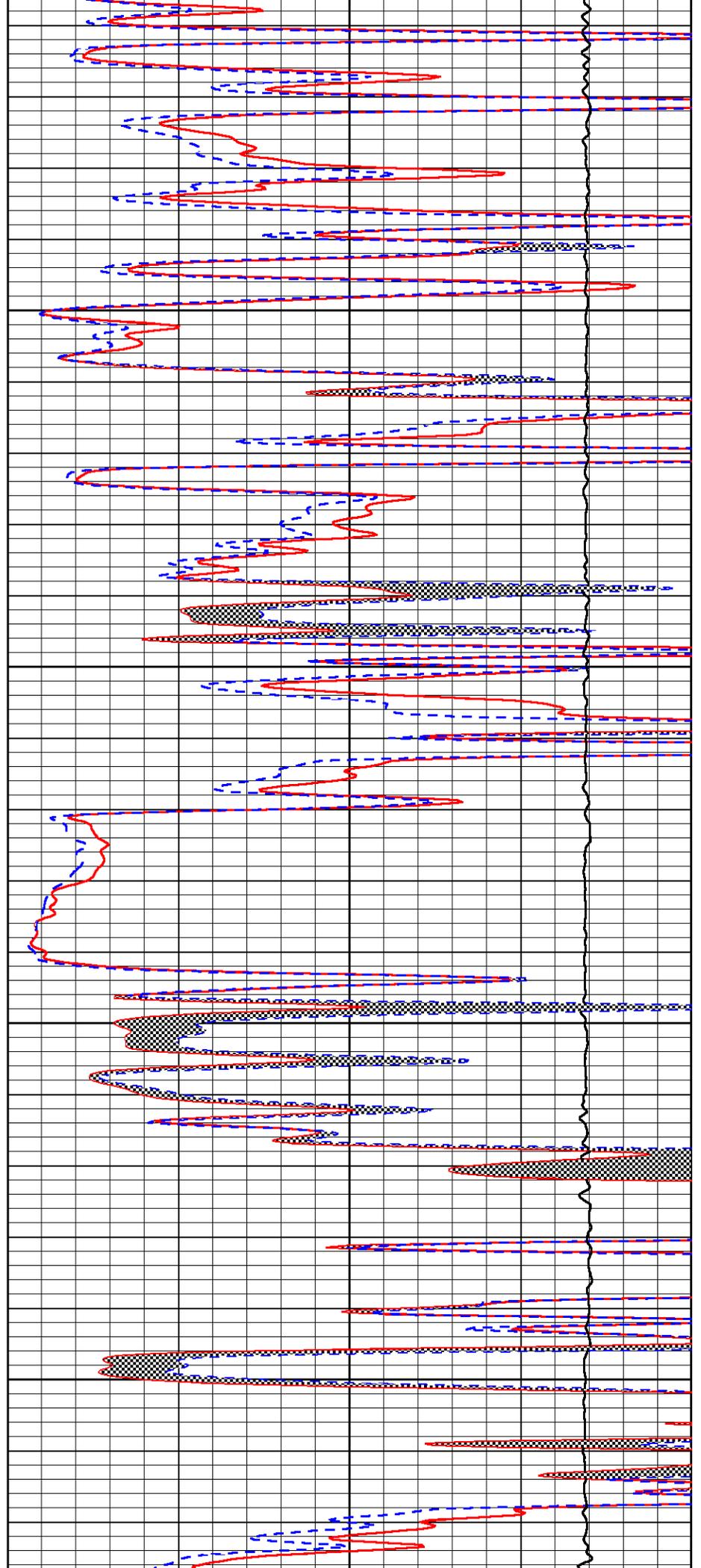


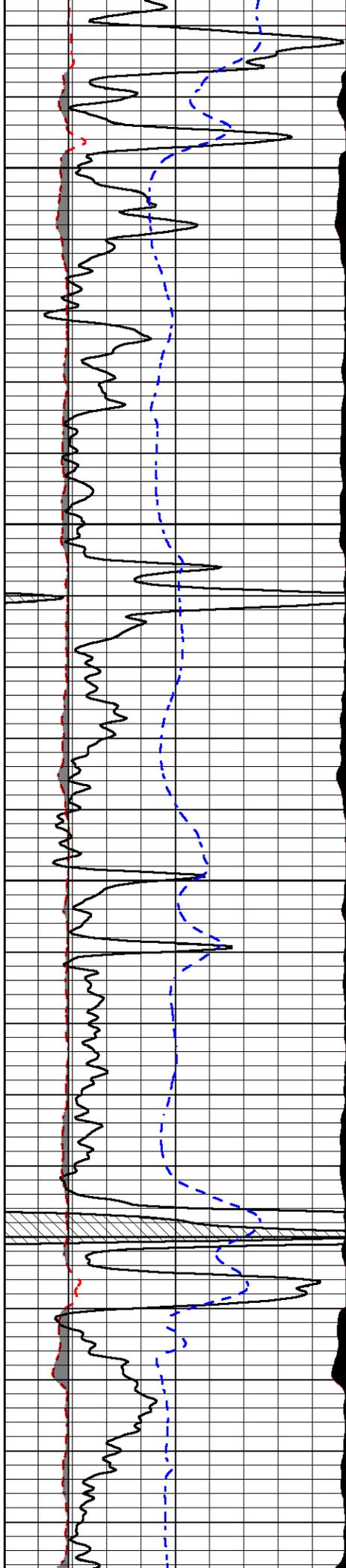
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3500



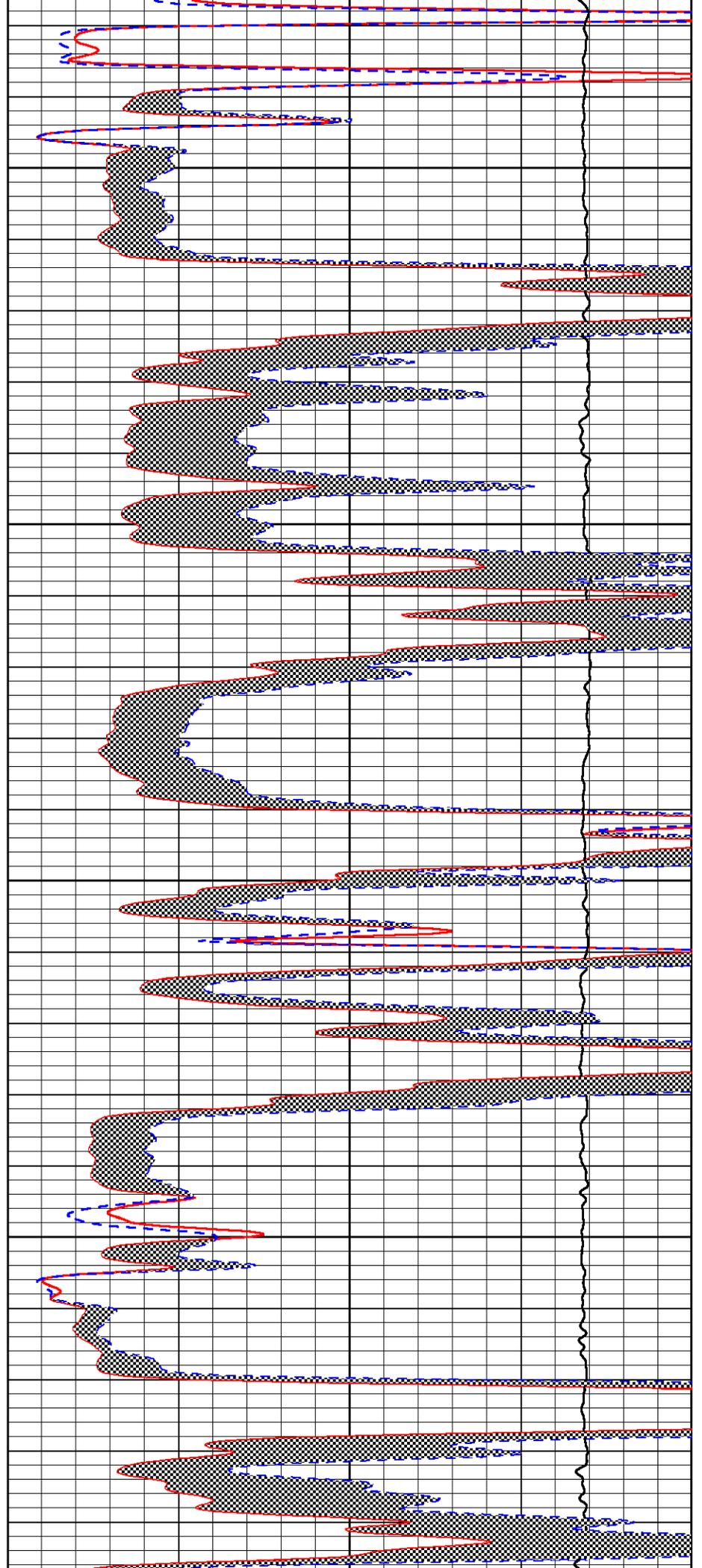


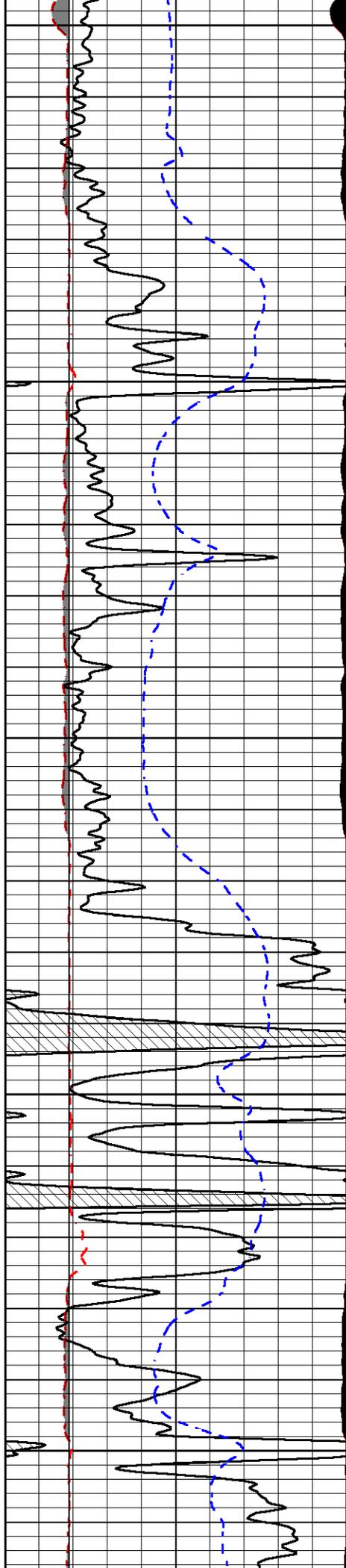
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3650

3700





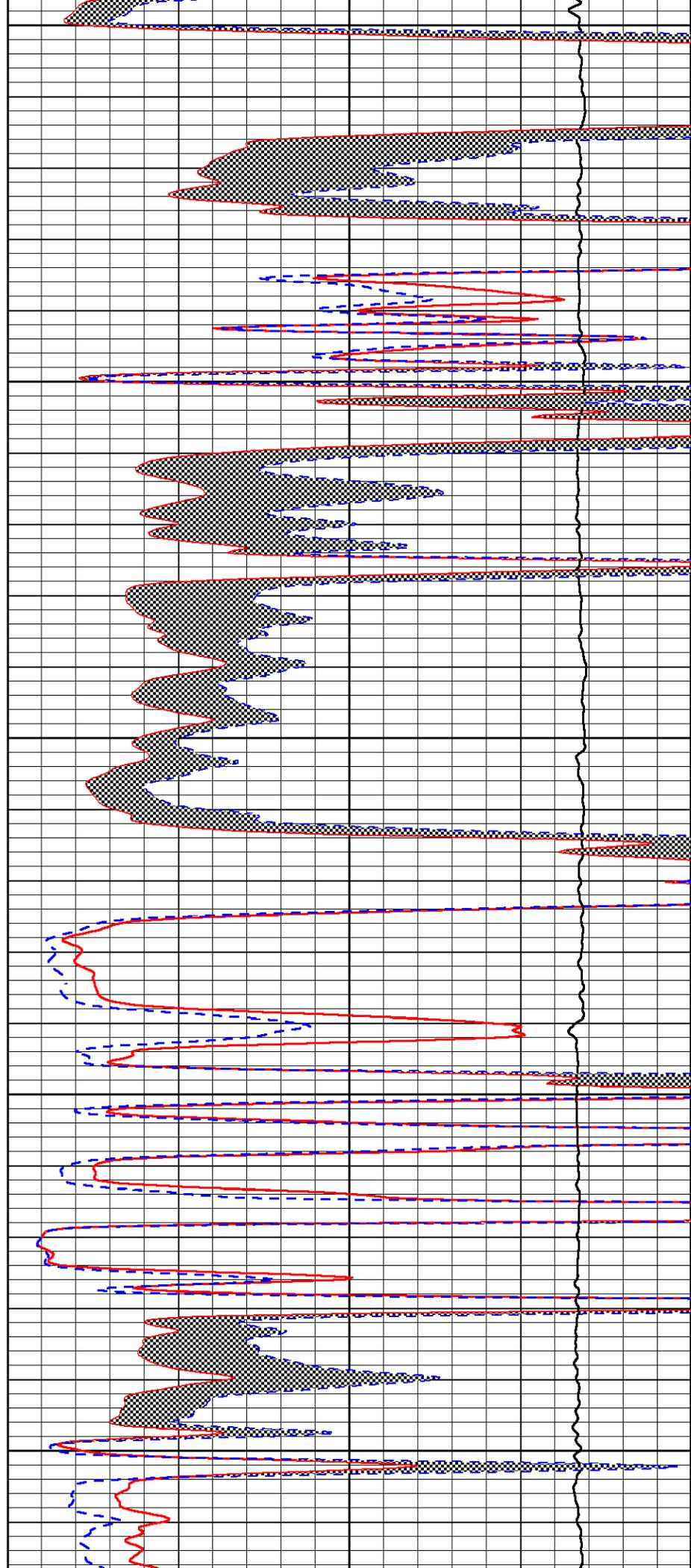
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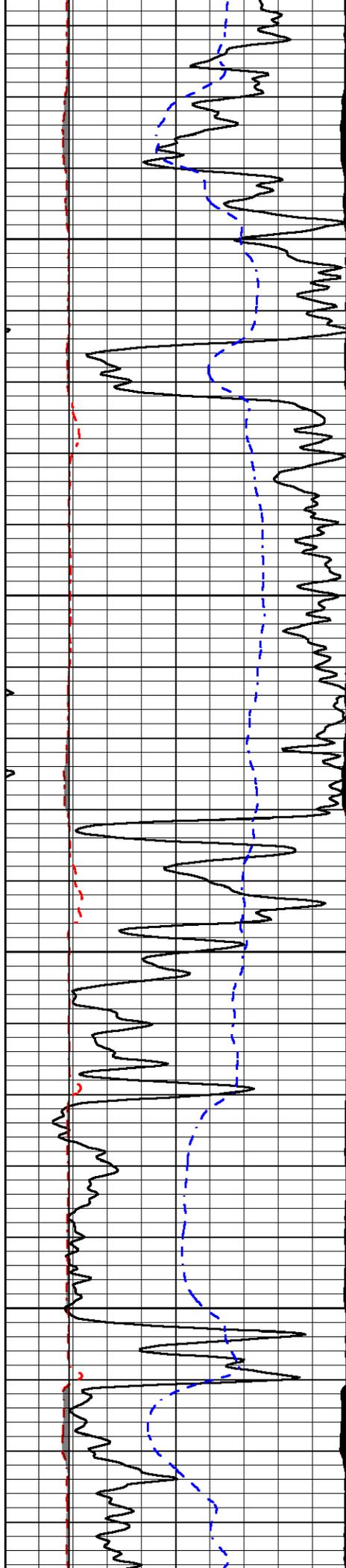
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3900

3950



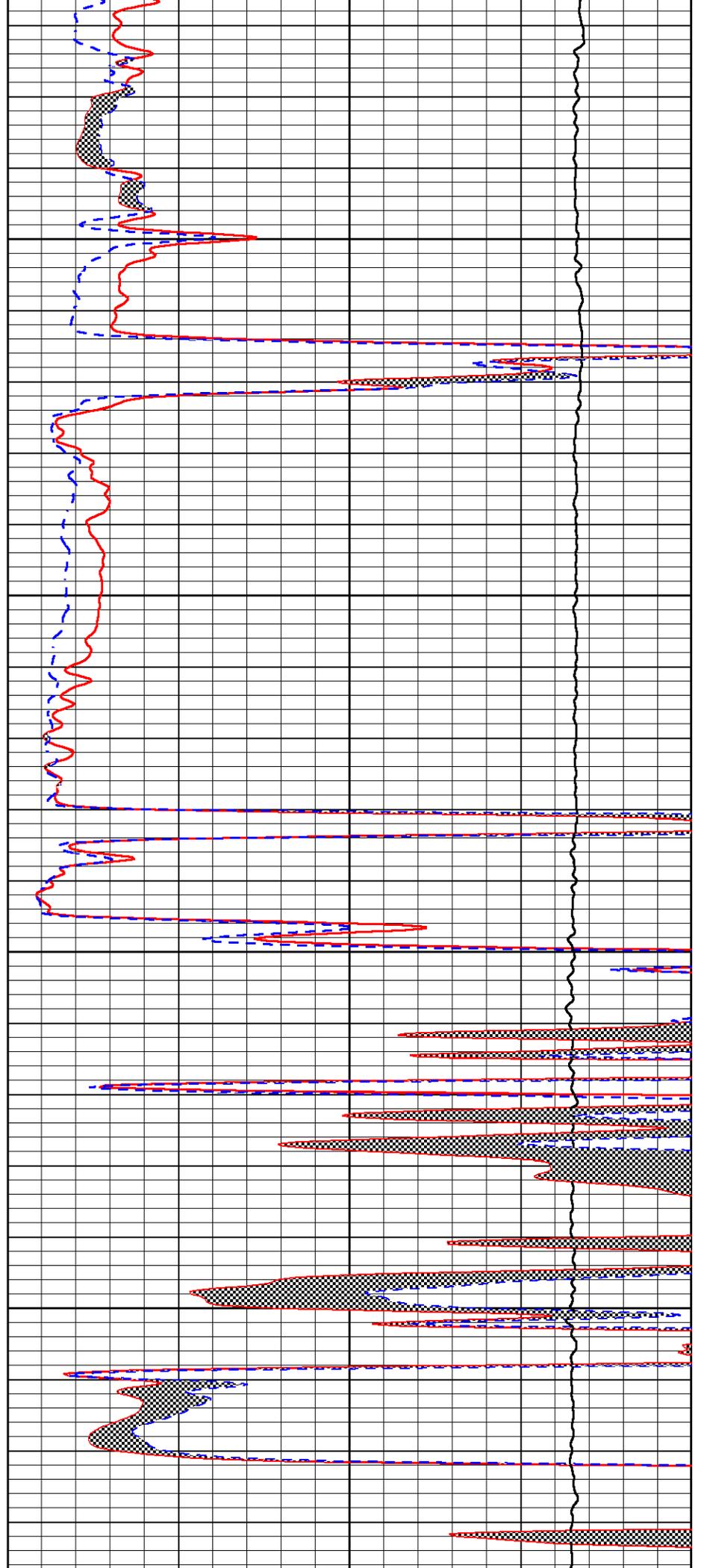


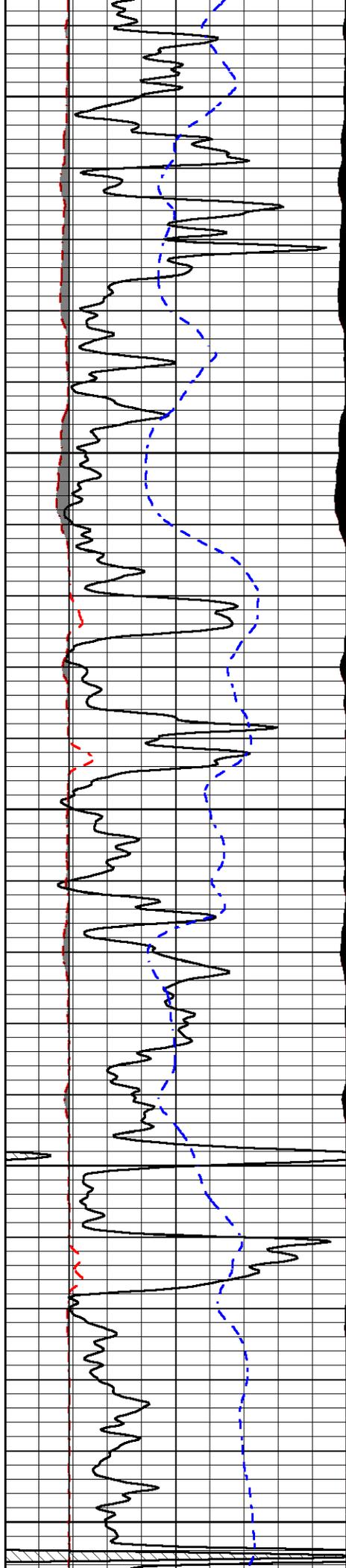
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4100

4150





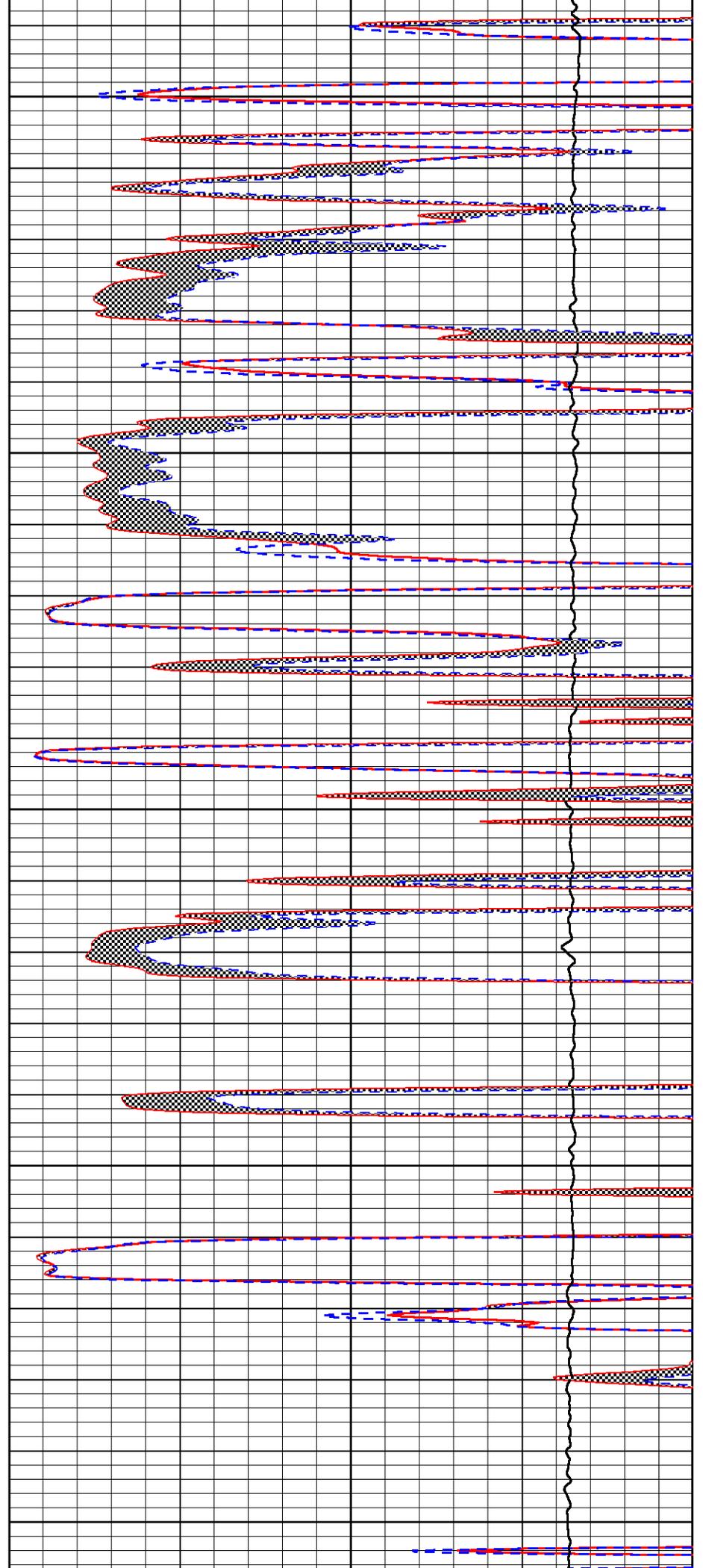
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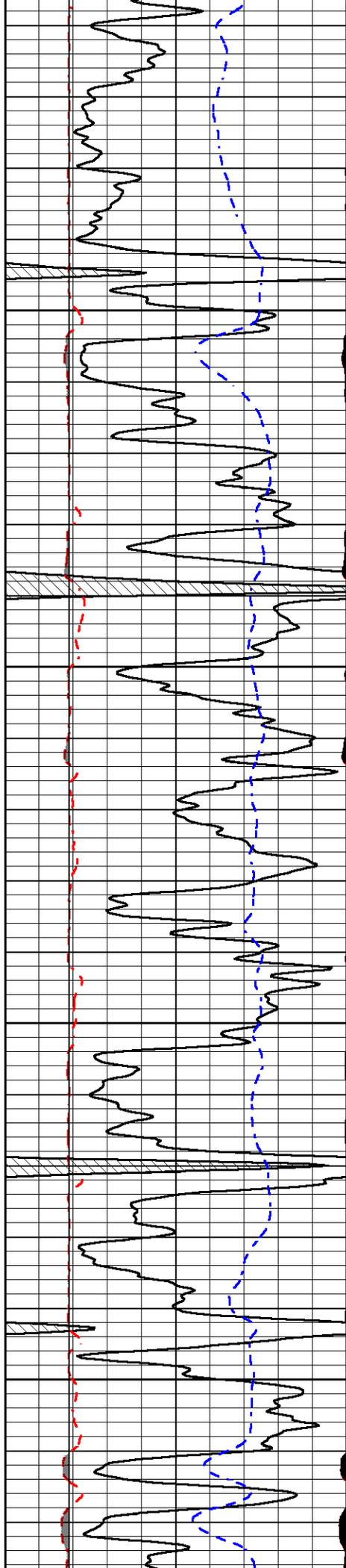
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4400



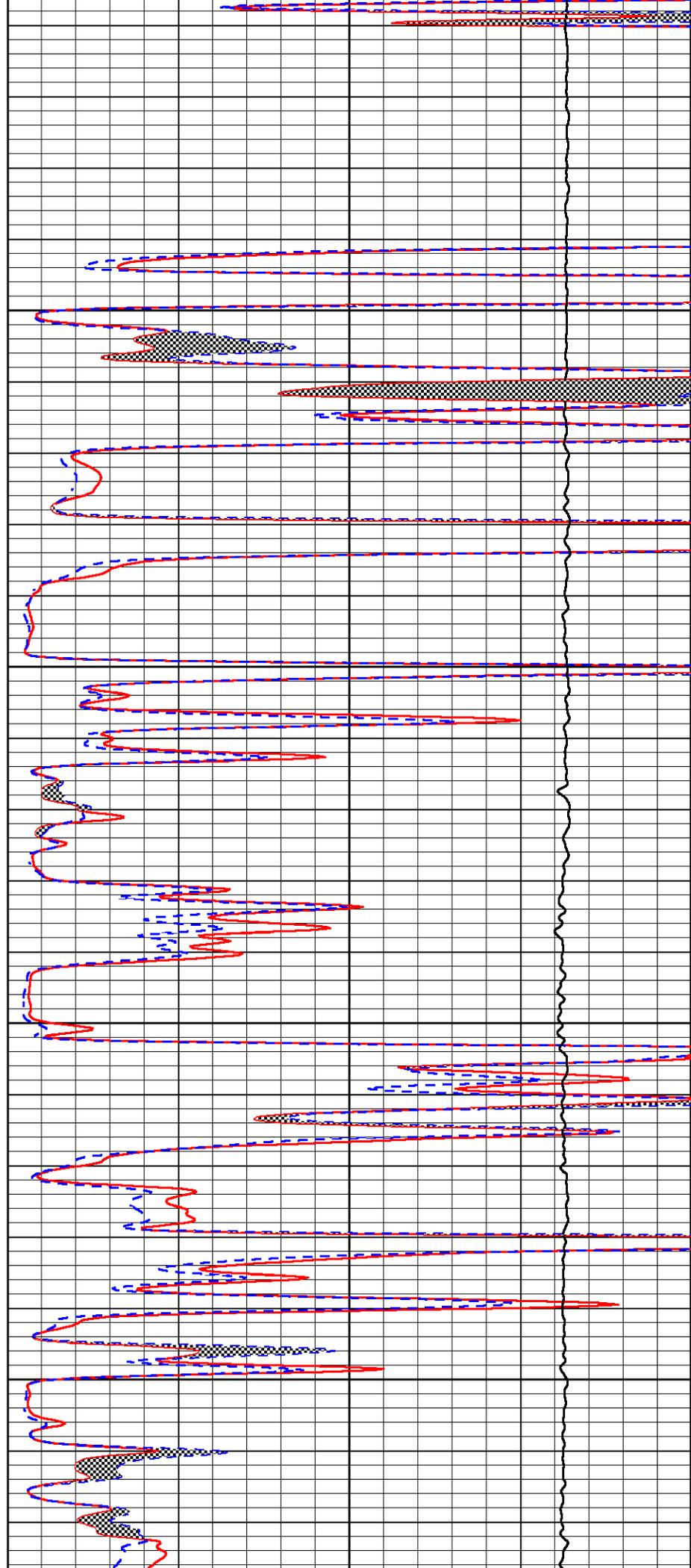


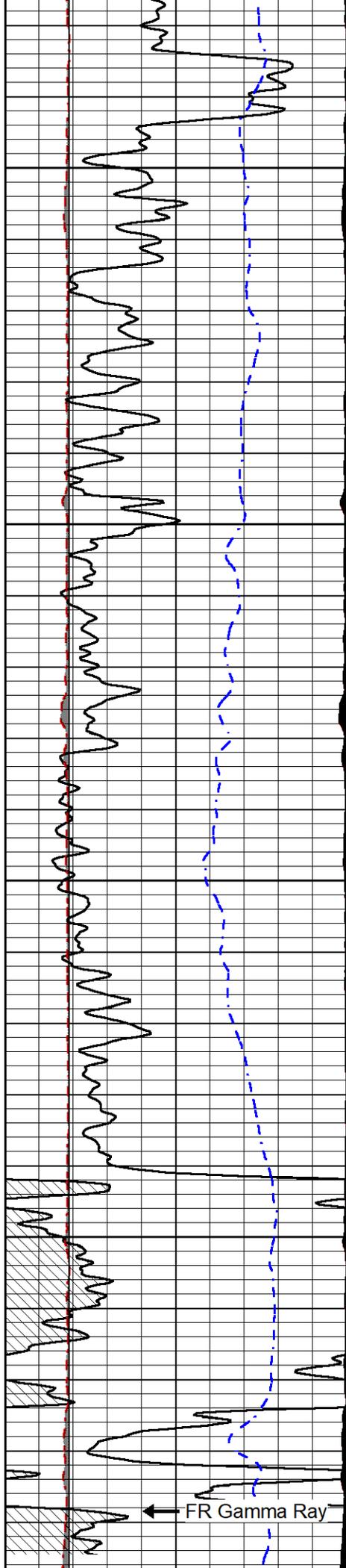
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4550

4600



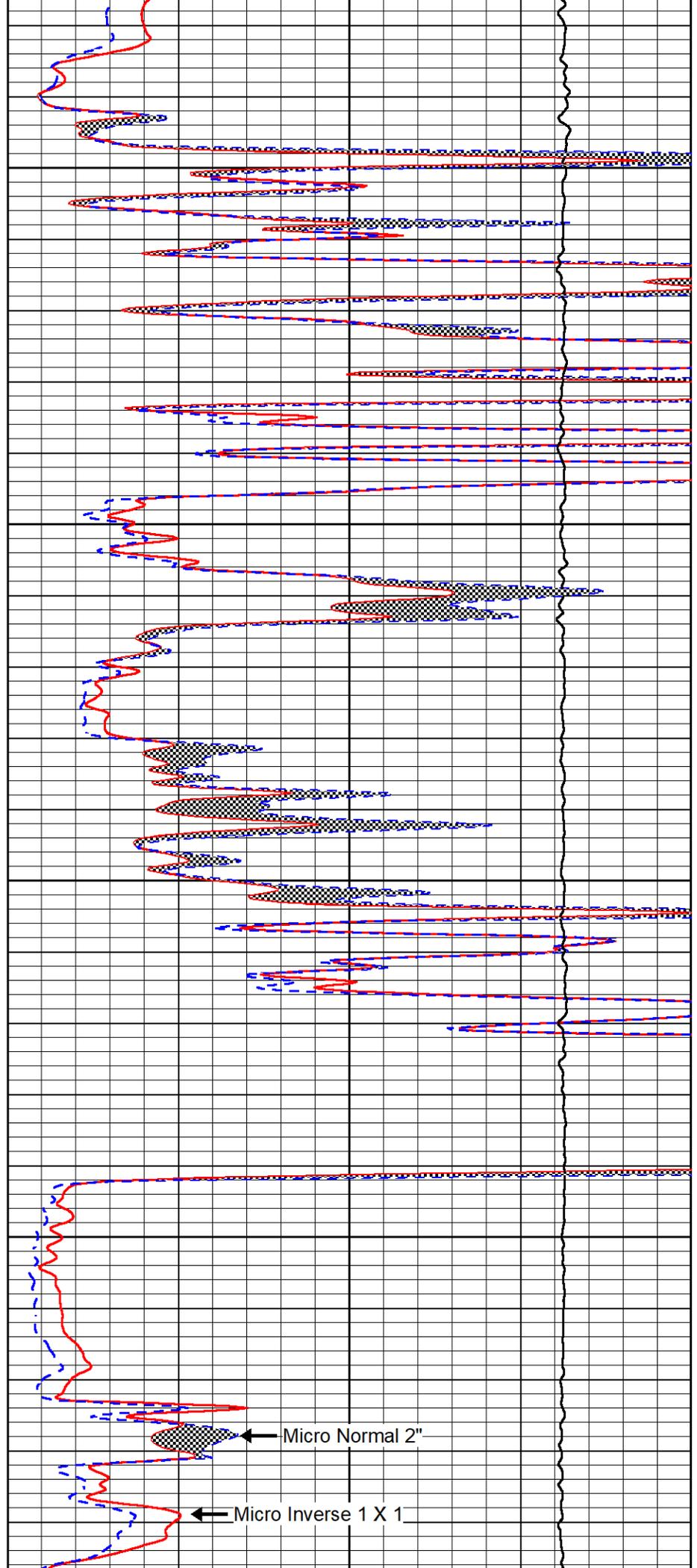


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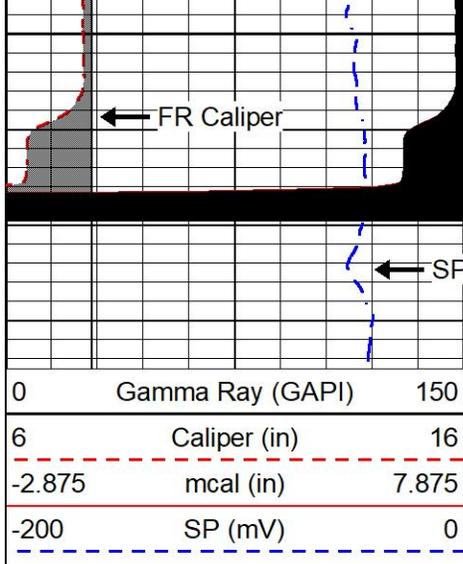
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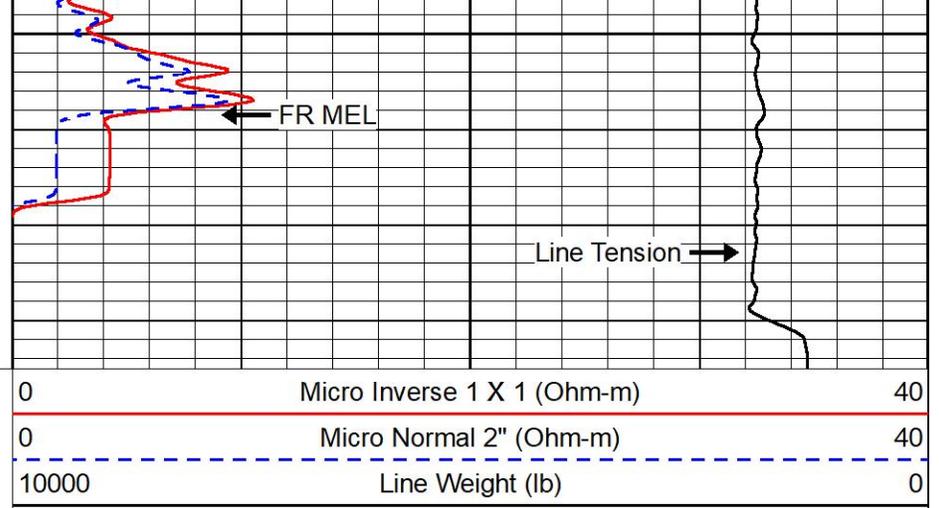


Micro Normal 2"

Micro Inverse 1 X 1



4850

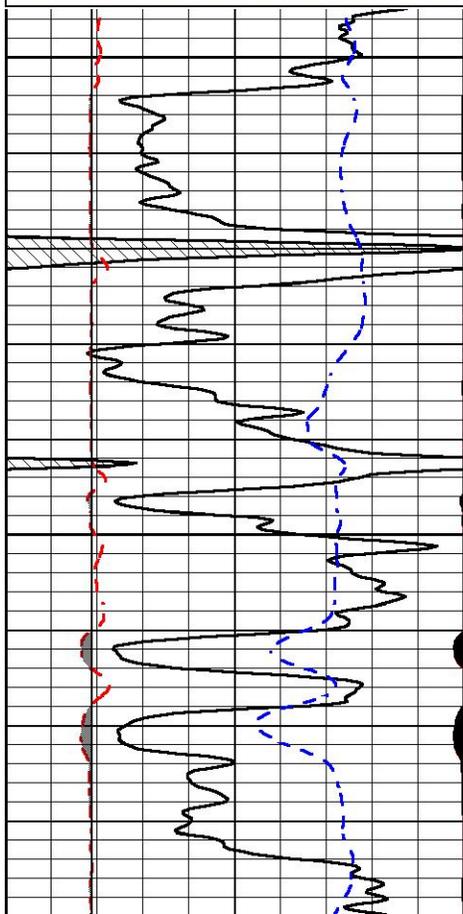
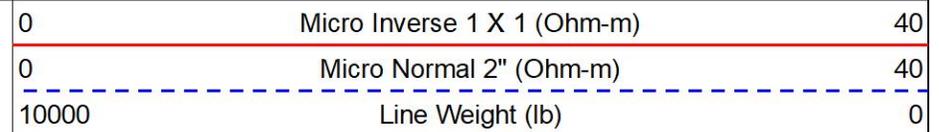
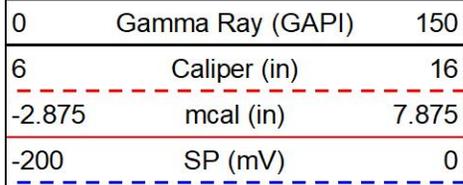


MIDWEST WIRELINE

# REPEAT SECTION

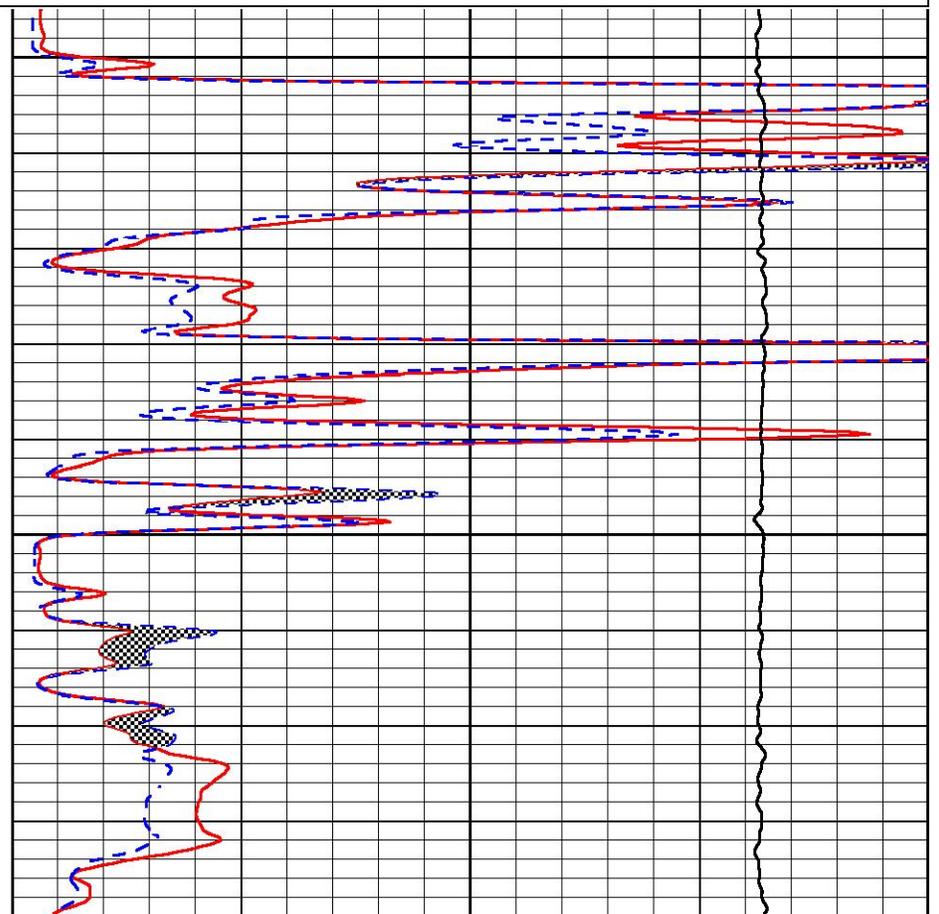
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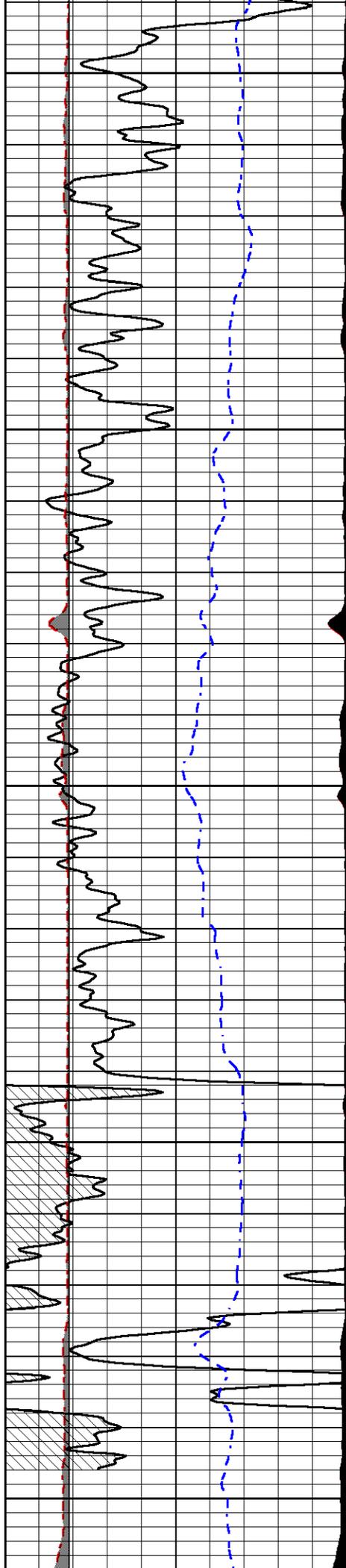
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 Presentation Format \_micro  
 Dataset Creation Sun Dec 05 16:24:15 2021  
 Charted by Depth in Feet scaled 1:240



4550

4600





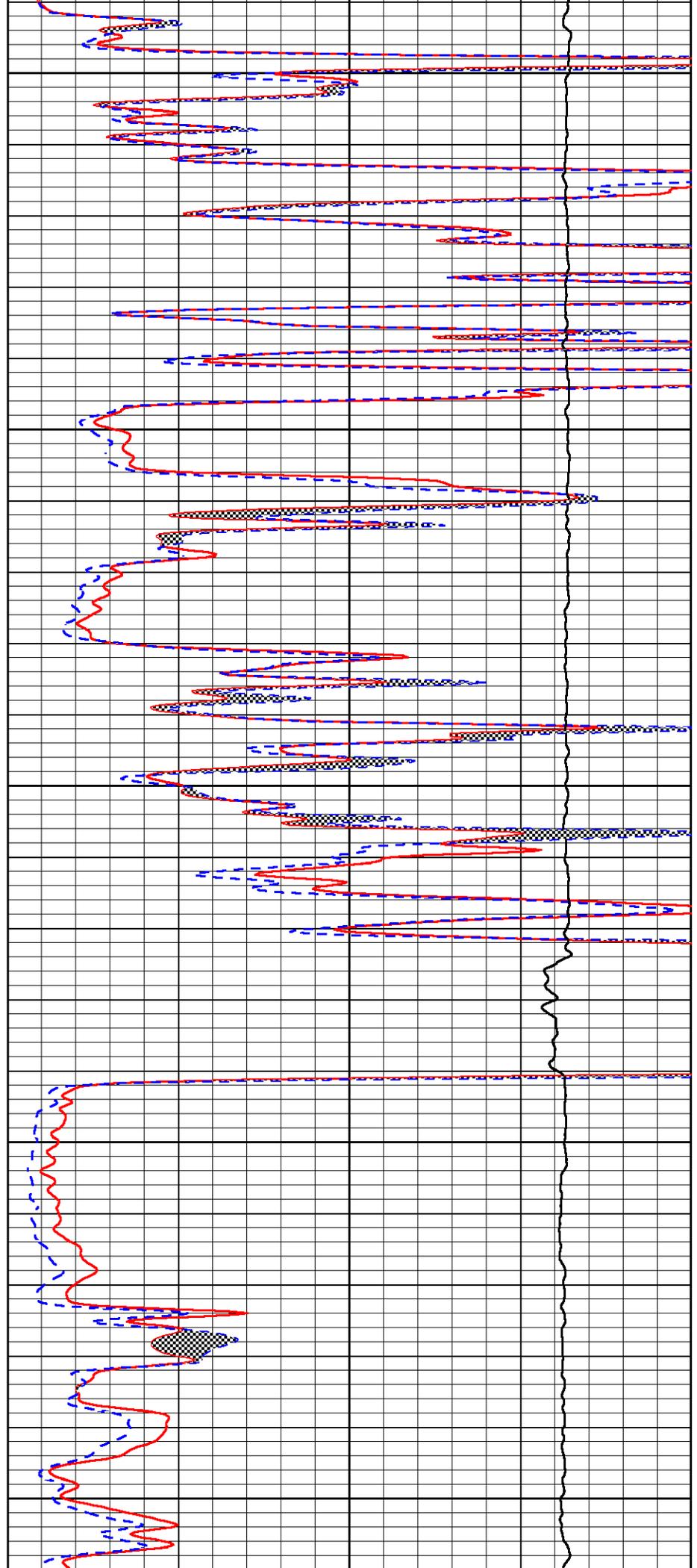
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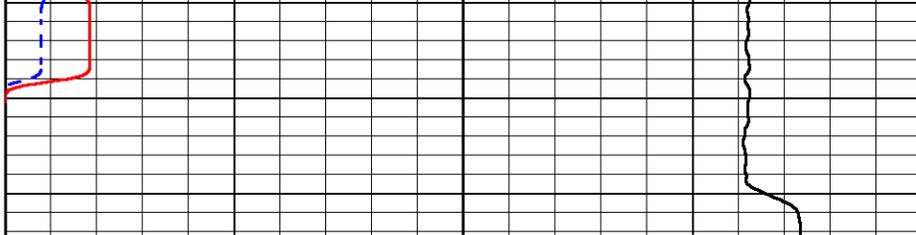
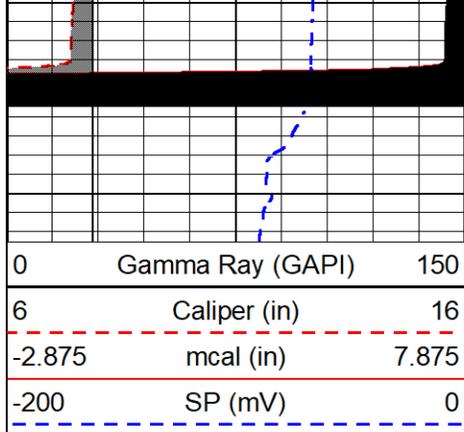
4700

4750

4800

4850





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

### Calibration Report

Database File griffin\_marla 1.db  
 Dataset Pathname stkml/pass3.2  
 Dataset Creation Sun Dec 05 16:38:37 2021

### Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP  
 Surface Cal Performed: Thu Nov 18 18:13:13 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.435	-35.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.300	-31.023

### Microlog Calibration Report

Serial-Model: PSI-01-PSIML  
 Performed: Wed Dec 1 16:06:14 2021

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	12000.0000	-0.5000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	9000.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-139.1250

### Compensated Density Calibration Report

Serial-Model: 934-226-M&W  
 Source #: 20762B  
 Master Calibration Performed: Tue Nov 16 13:52:04 2021

### Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3330.50	2332.69	cps
Aluminum	2.660	g/cc	627.41	1482.87	cps

Spine Angle = 74.82

Density/Spine Ratio = 0.523

	Size		Reading
Small Ring	8.00	in	1.16

## Compensated Neutron Calibration Report

Serial-Model:	207-MW-M&W
Source #:	100046B
Master Calibration Performed:	Mon Nov 29 15:06:24 2021

## Master 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

## Gamma Ray Calibration Report

Serial Number:	233-M&W
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



MIDWEST WIRELINE

Company	Griffin Management LLC
Well	Marla #1
Field	Moffett Northwest
County	Barber
State	Kansas