



PIONEER
Pioneer Energy Services

**MICRORESISTIVITY
LOG**

Company MURFIN DRILLING COMPANY, INC.
Well YOUNGMEYER 'A' NO. 1-14
Field WILDCAT
County ELK
State KANSAS

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Well YOUNGMEYER 'A' NO. 1-14
Field WILDCAT
County ELK State KANSAS

Location: API #: 15-049-22611-00-00
1400' FWL & 2400' FEL
SEC 14 TWP 29S RGE 8E
Permanent Datum GROUND LEVEL Elevation 1598'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING
Other Services
CNL/CDL
DIL/BHCS
Elevation
K.B. 1604'
D.F. N/A
G.L. 1598'

Date	7/16/2017
Run Number	TWO
Depth Driller	3280'
Depth Logger	3279'
Bottom Logged Interval	3278'
Top Log Interval	1000'
Casing Driller	8.625" @ 40'
Casing Logger	50'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	900
Density / Viscosity	9.5 55
pH / Fluid Loss	9.96 8.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.20 @ 74
Rmt @ Meas. Temp	.90 @ 74
Rmc @ Meas. Temp	1.62 @ 74
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.82 @ 109
Operating Rig Time	4 HOURS
Max Rec. Temp. F	109 DEGF
Equipment Number	108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	KEN WALLACE

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

LATHAM KANSAS
8 EAST ON BLAINE STREET, NORTH INTO @ GREEN RANCH SIGN

Log Measured From: KELLY BUSHING 6 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

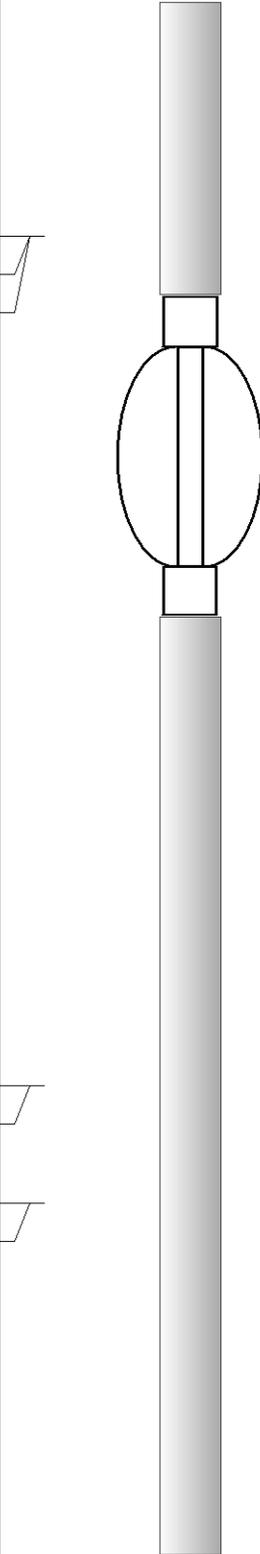
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. HENRICKSON	Primary Witness: KEN WALLACE
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

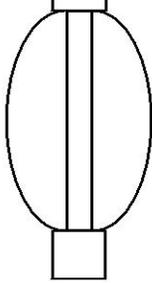
Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfin_youngmeyer_a_1_14.db
 Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	109	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	-190	76	Off	3279

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
MCAL MI MN	28.00 28.00 28.00		ML-Armadillo (Armadillo-4) Pengo micro log tool mandrel with Armadillo Electronics	5.00	3.50	100.00
			CENT-PENGO	5.50	3.00	70.00
WVF4 WVF1	13.50 13.50		SLT-PENGO (0001)	16.00	3.50	300.00
WVF3 WVF2	11.50 11.50					



CENT-PENGO

5.50

3.00

70.00

Dataset: murfin_youngmeyer_a_1_14.db: field/well/SONMEL/pass3
 Total length: 32.00 ft
 Total weight: 540.00 lb
 O.D.: 3.50 in

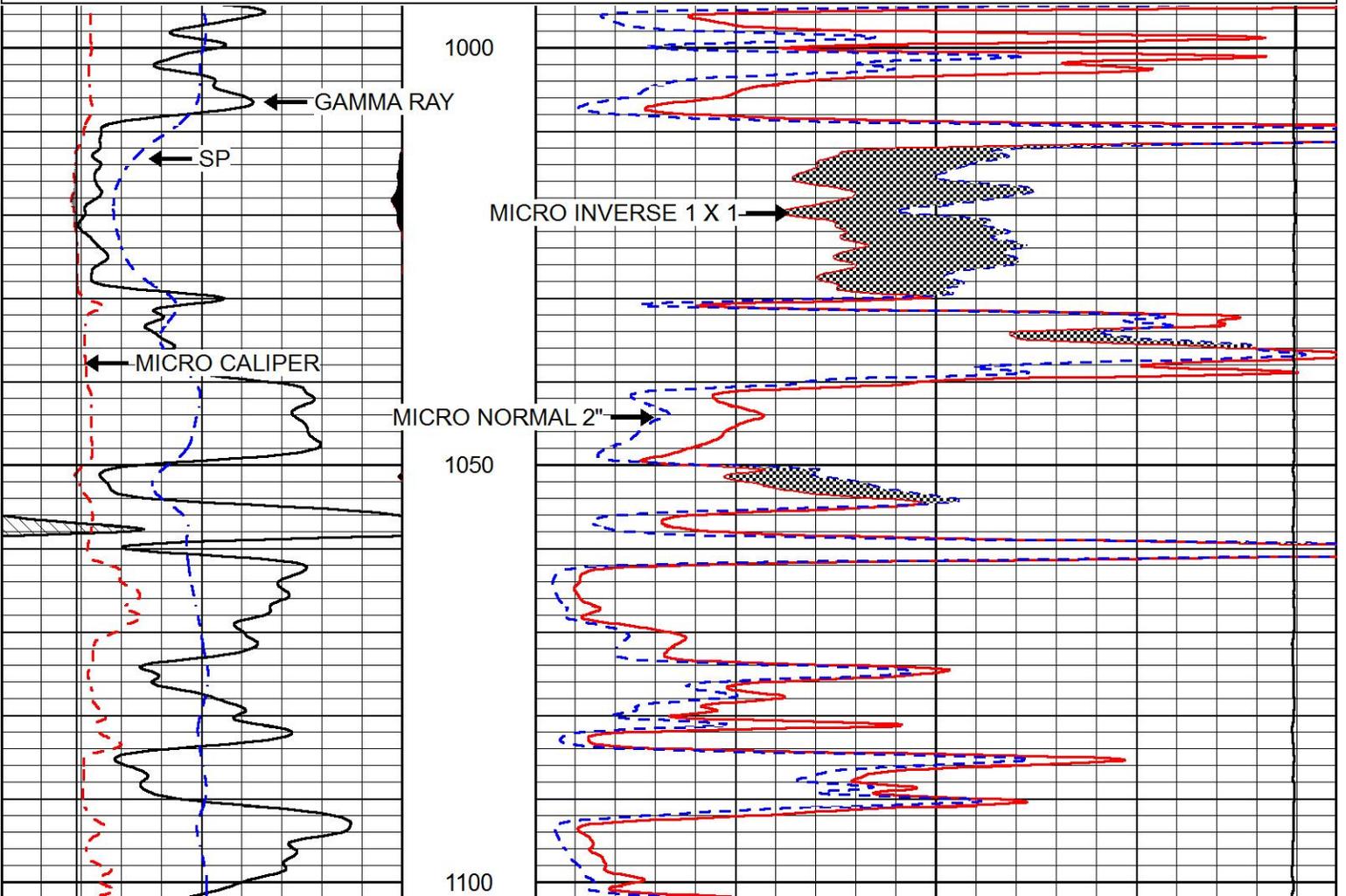


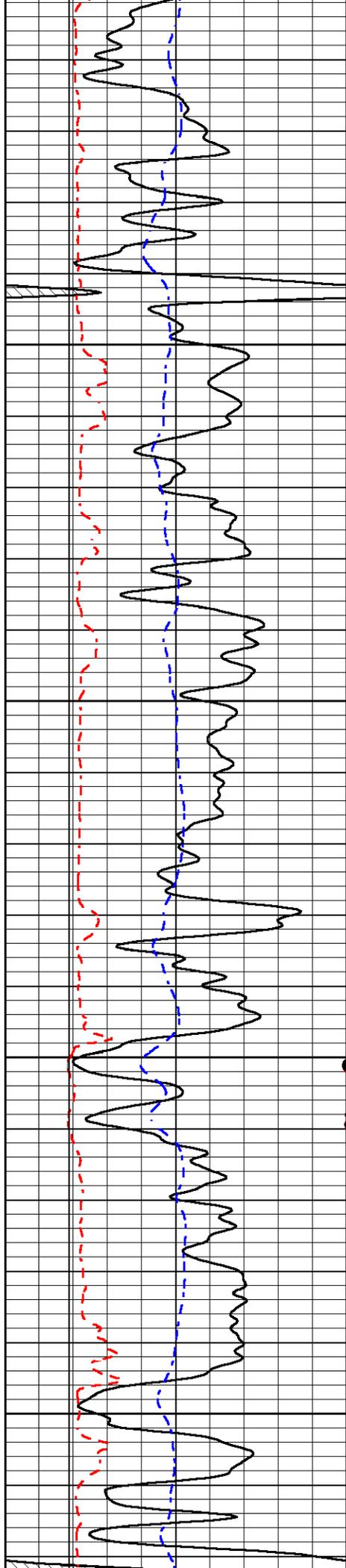
MAIN PASS

Database File: murfin_youngmeyer_a_1_14.db
 Dataset Pathname: stack/pass3.1
 Presentation Format: micro
 Dataset Creation: Sun Jul 16 23:39:50 2017
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0



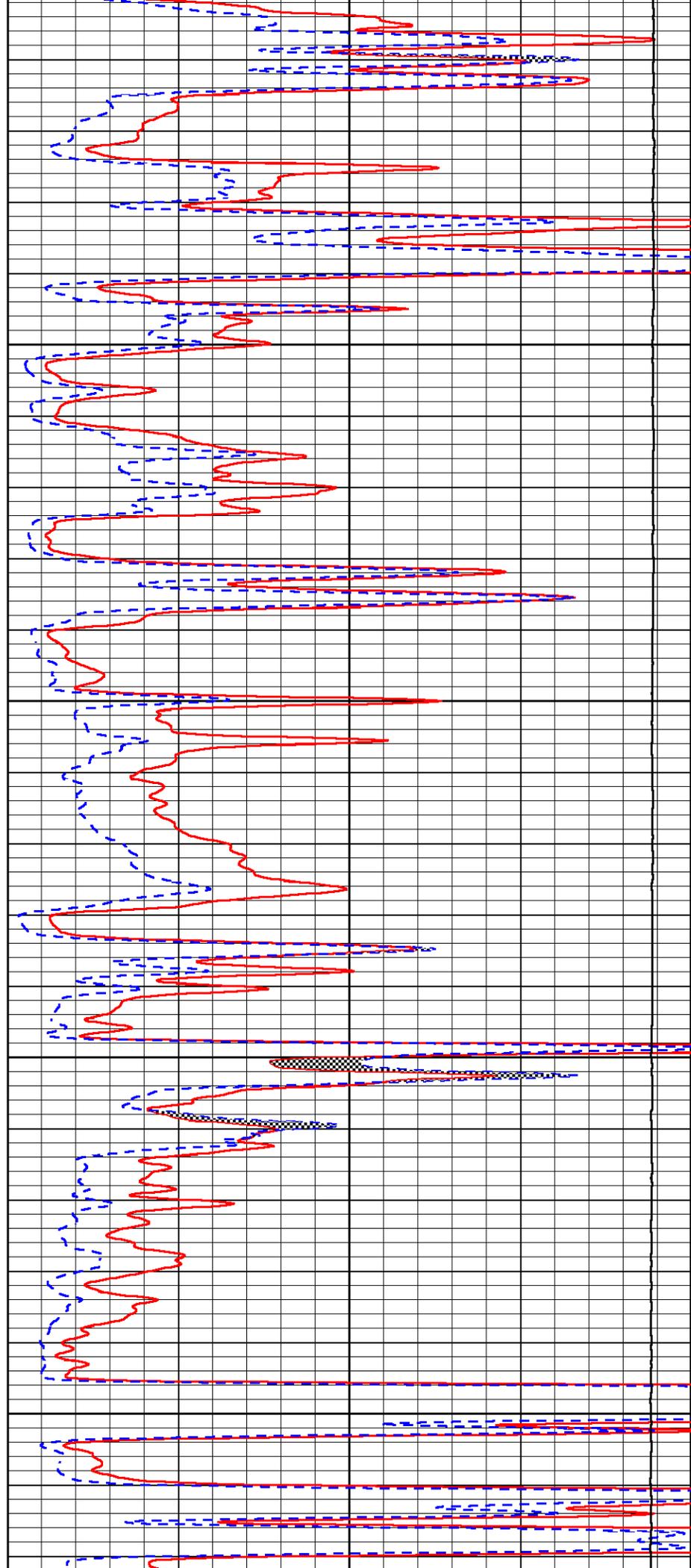


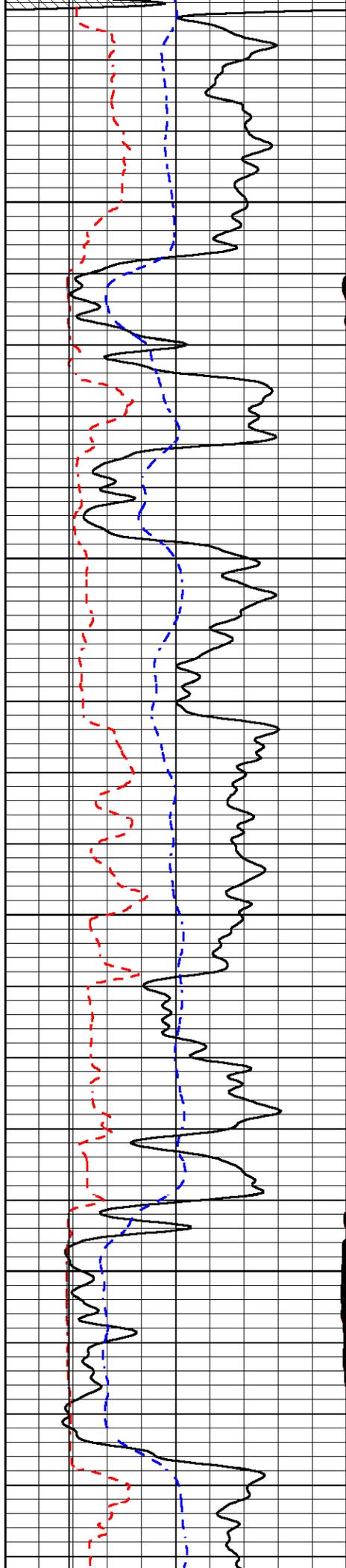
1150

1200

1250

1300



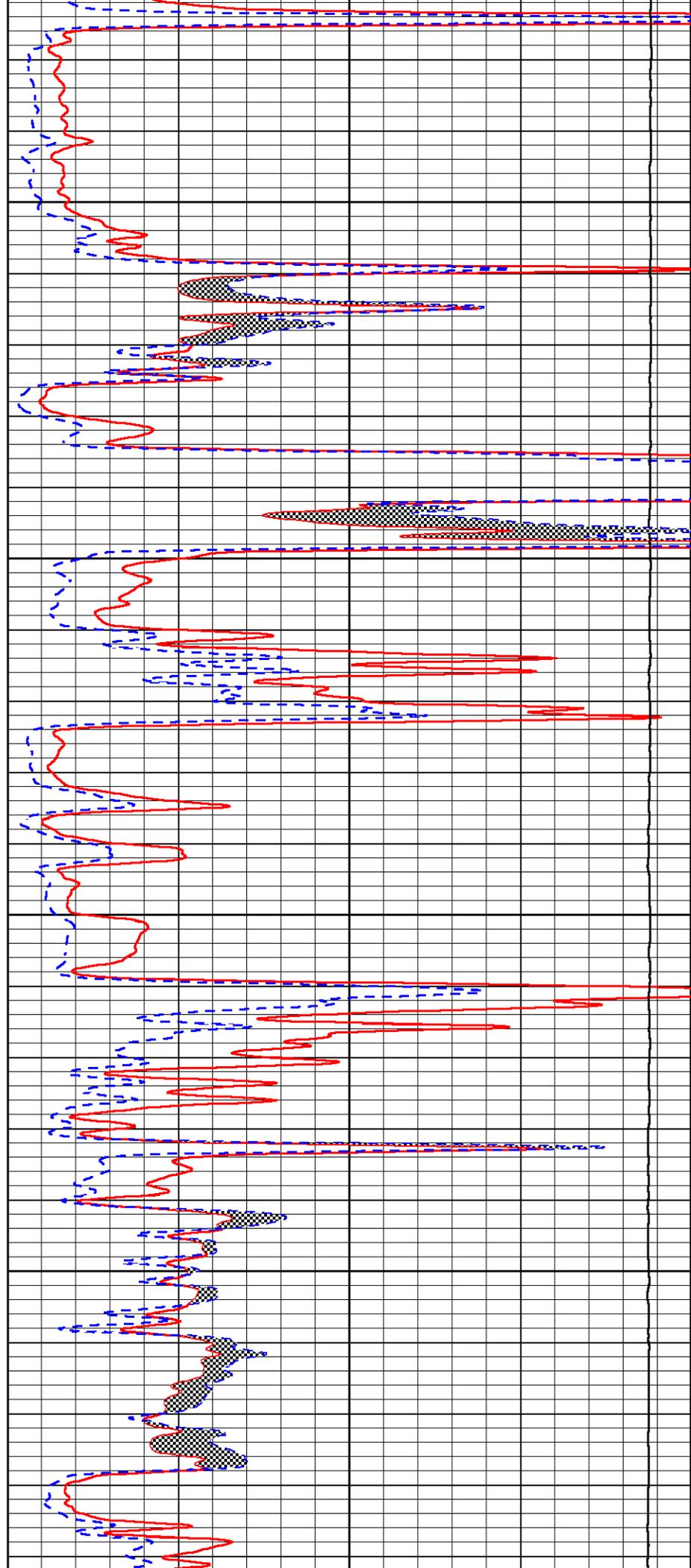


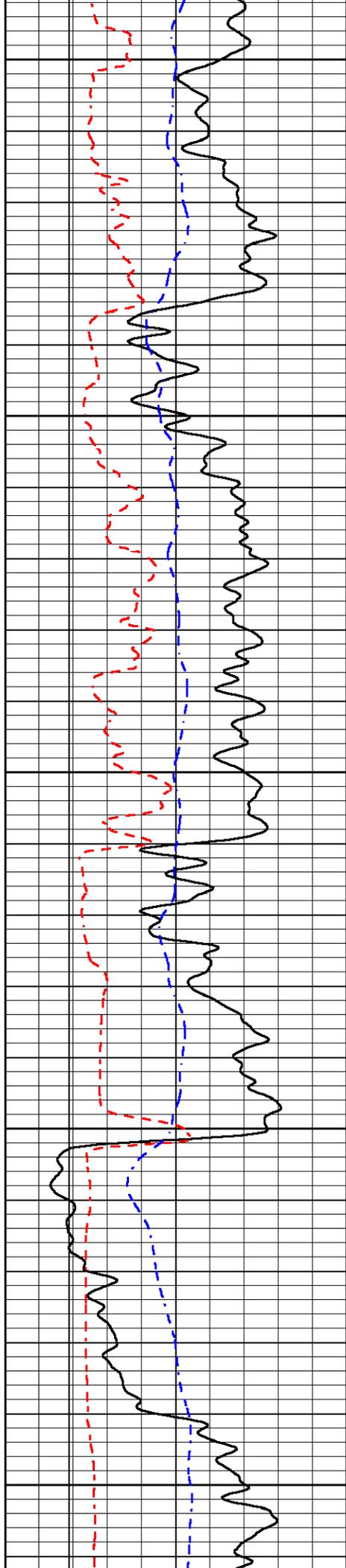
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1400

1450

1500





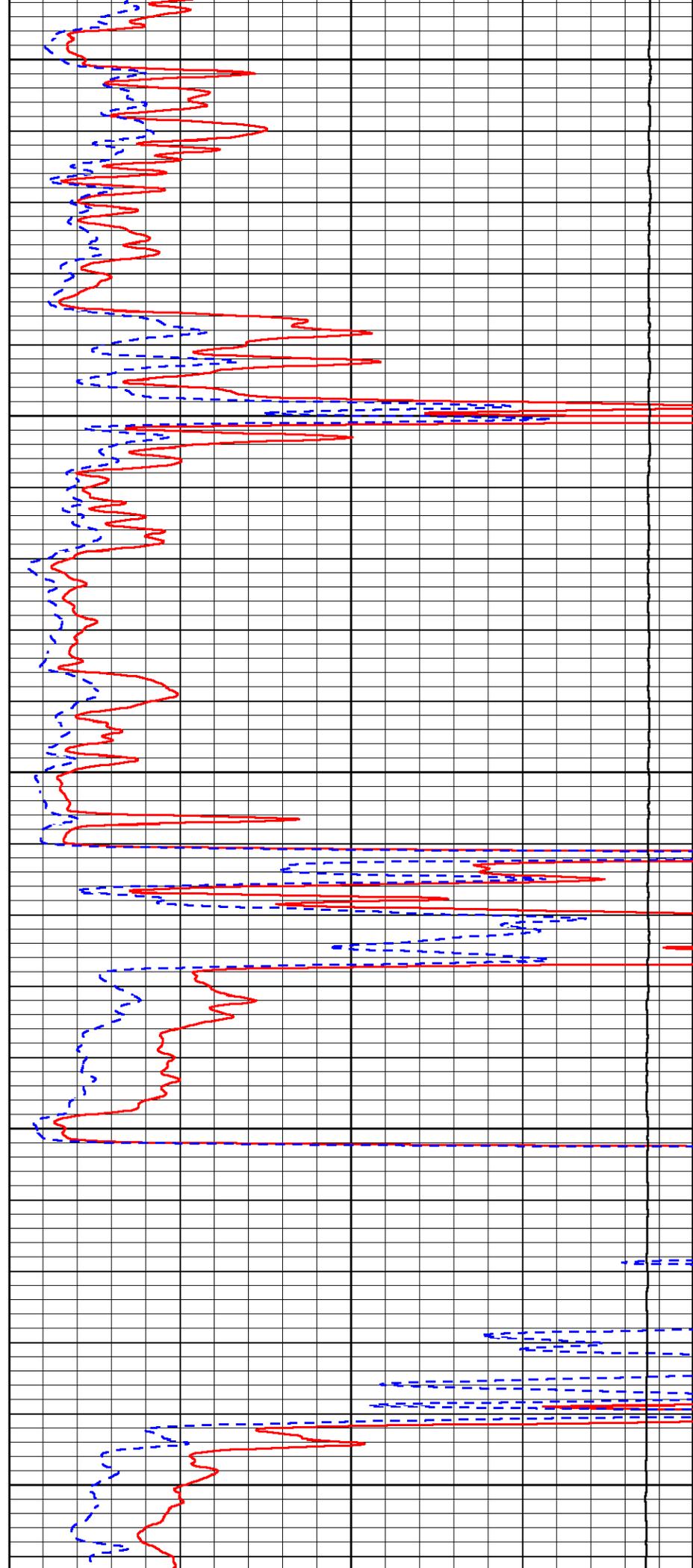
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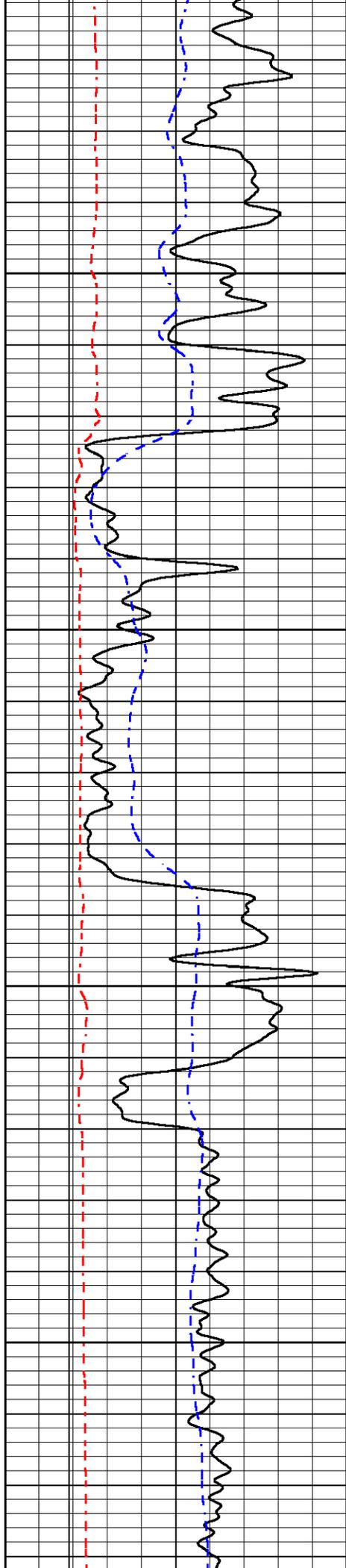
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1650

1700

1750



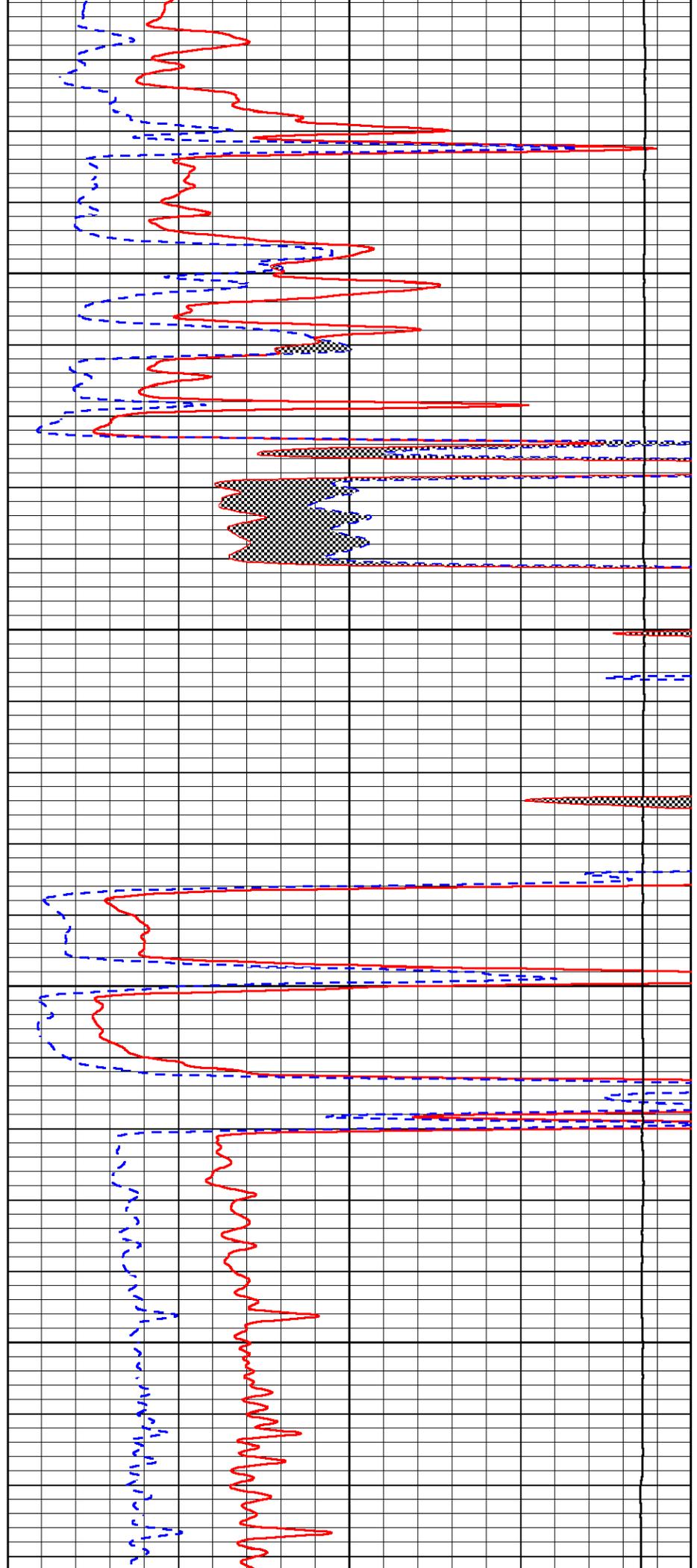


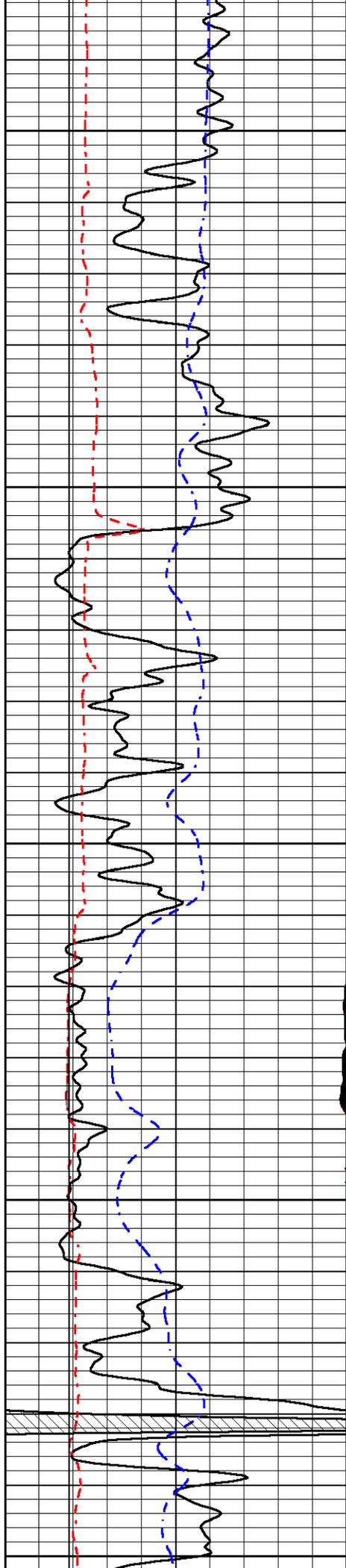
1800

1850

1900

1950





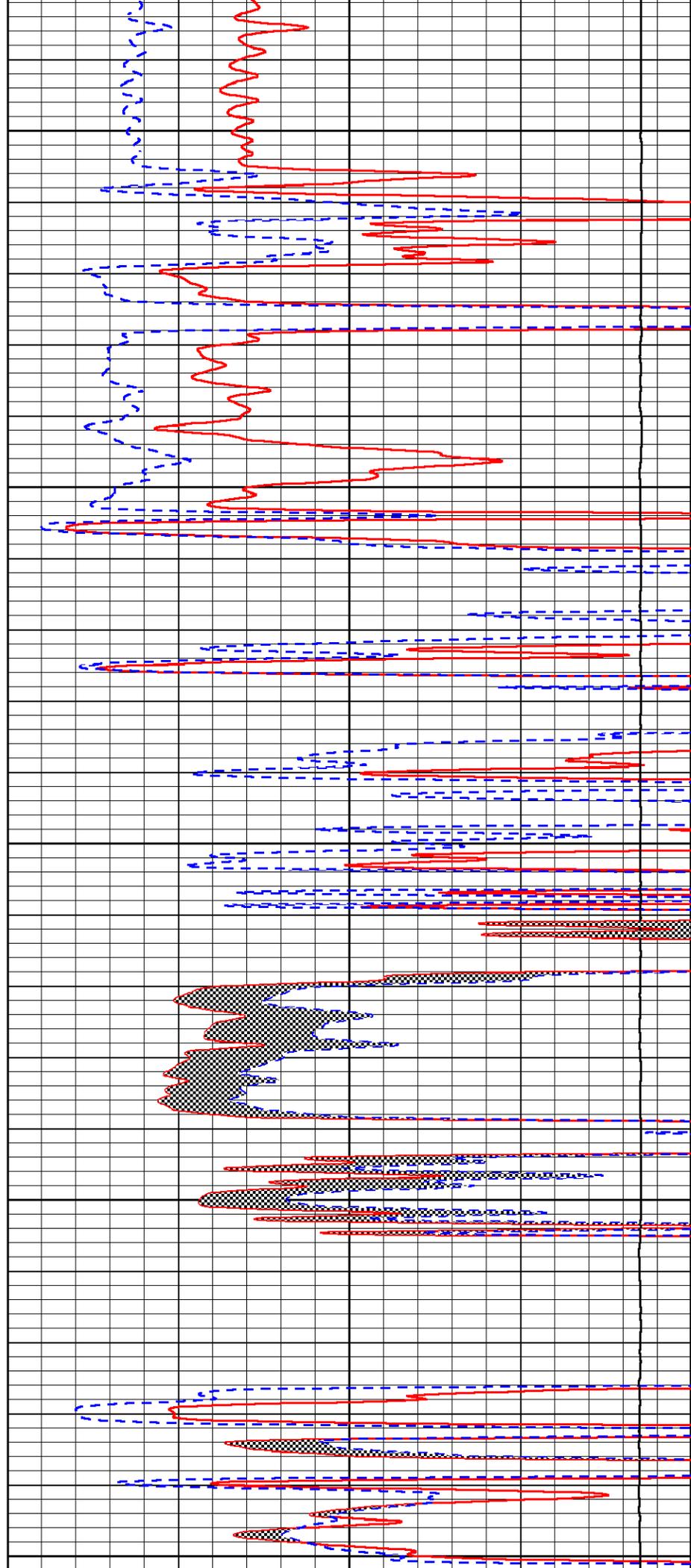
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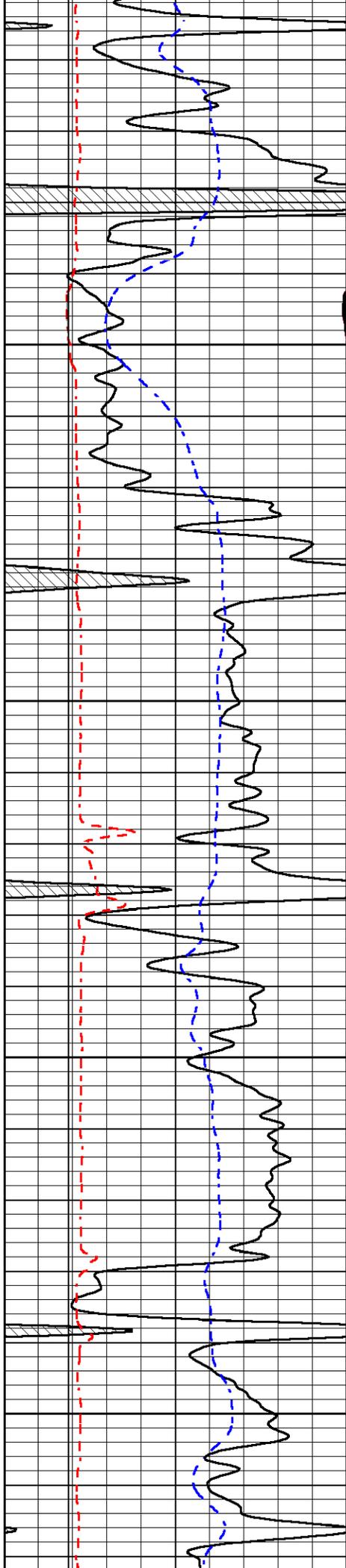
2050

2100

2150

2200



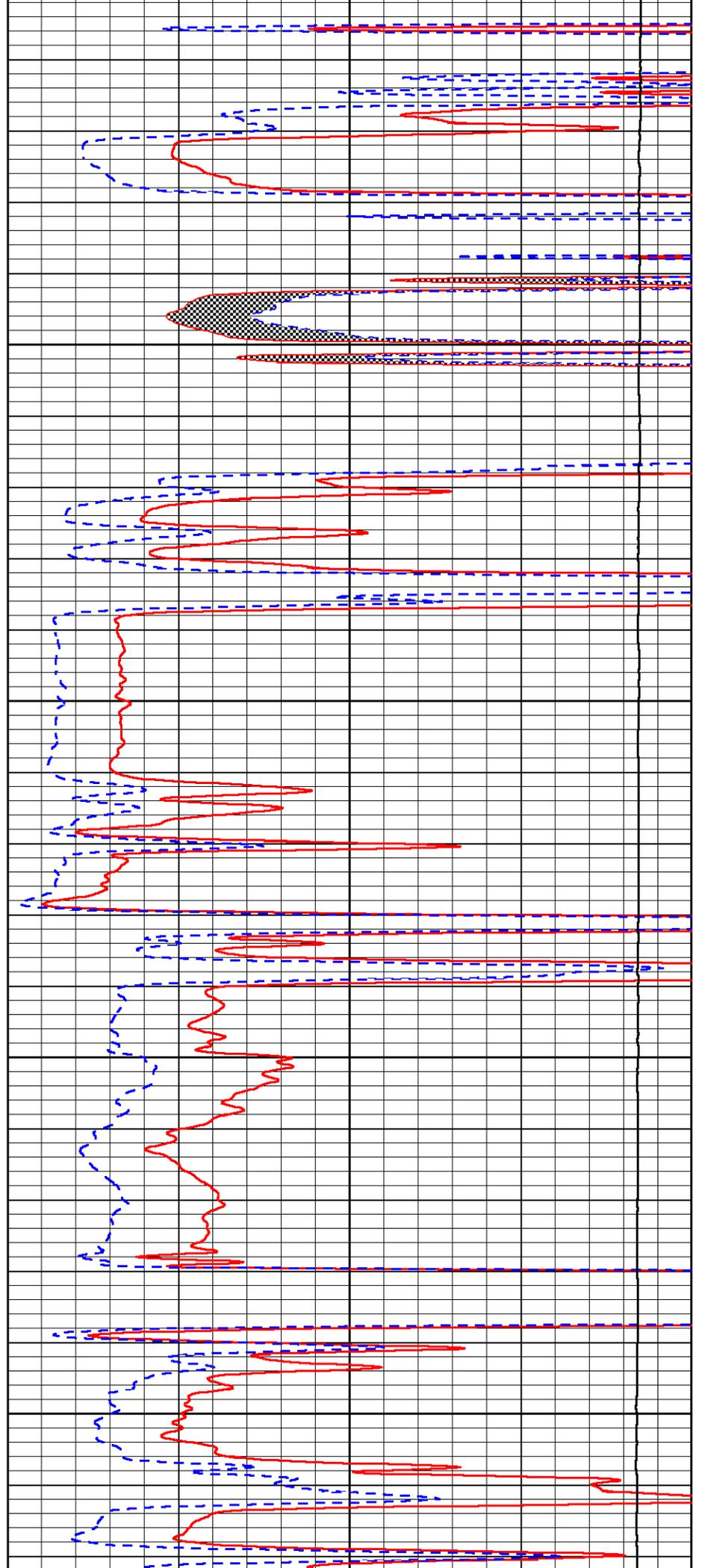


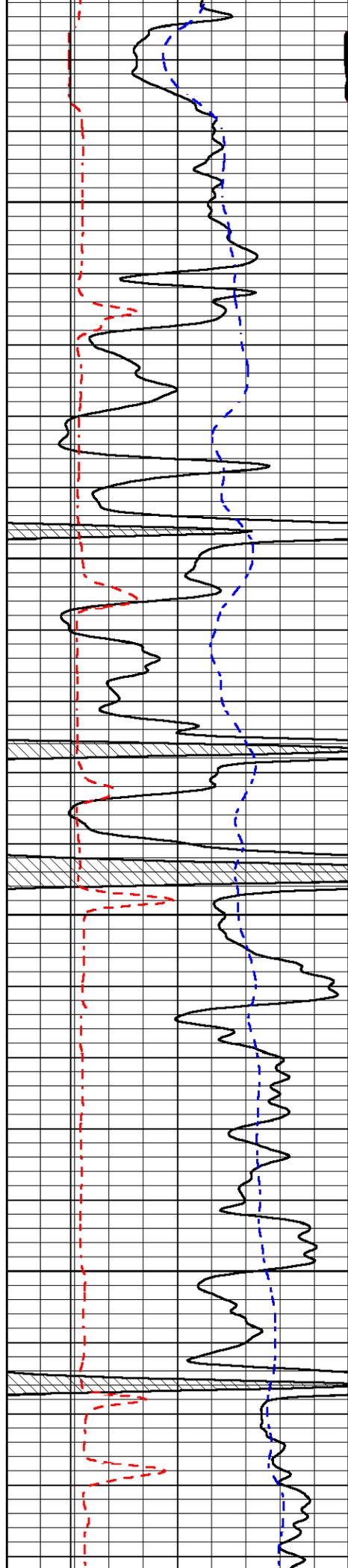
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2300

2350

2400



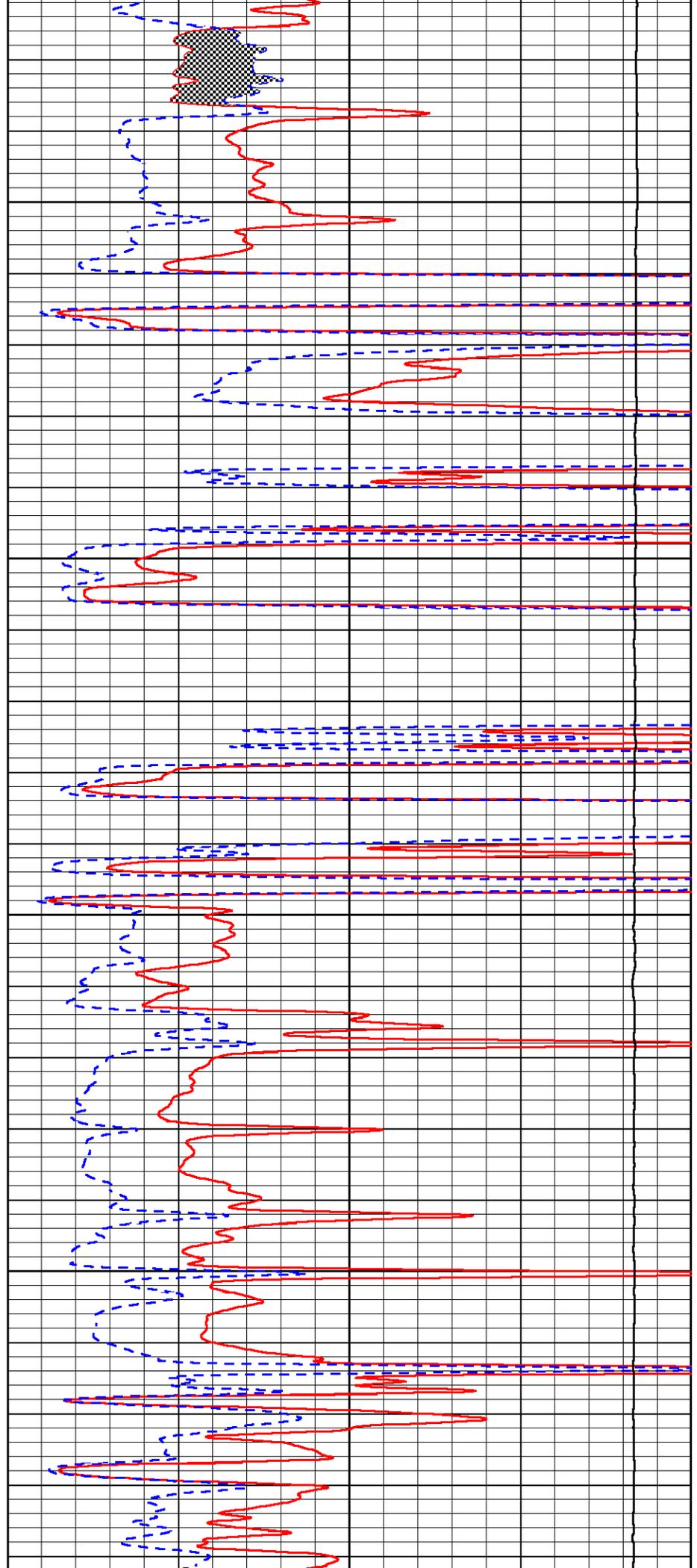


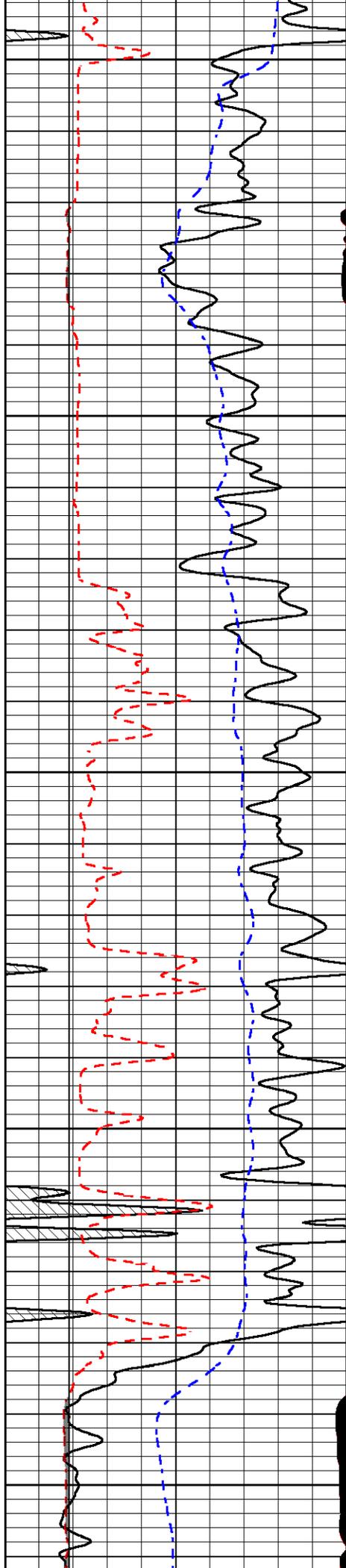
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2500

2550

2600





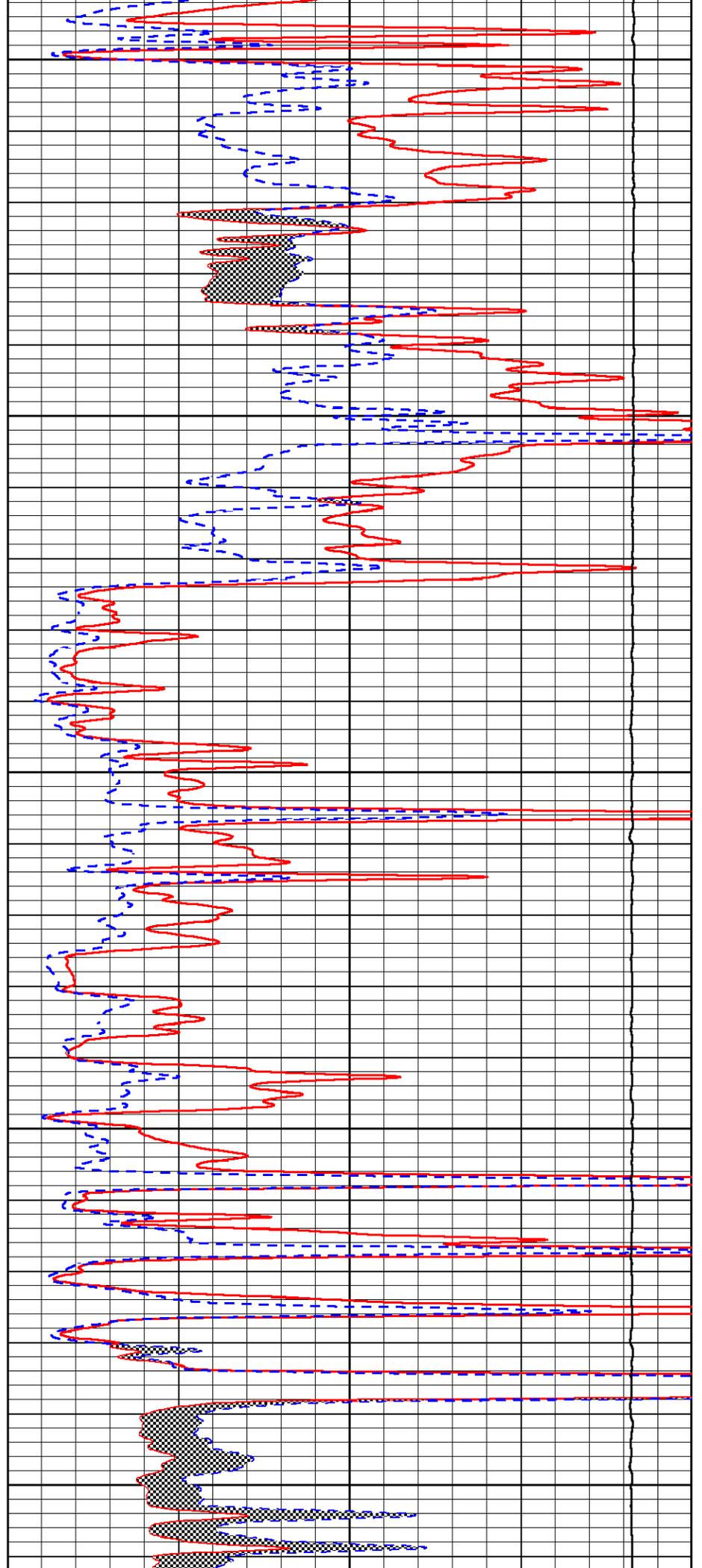
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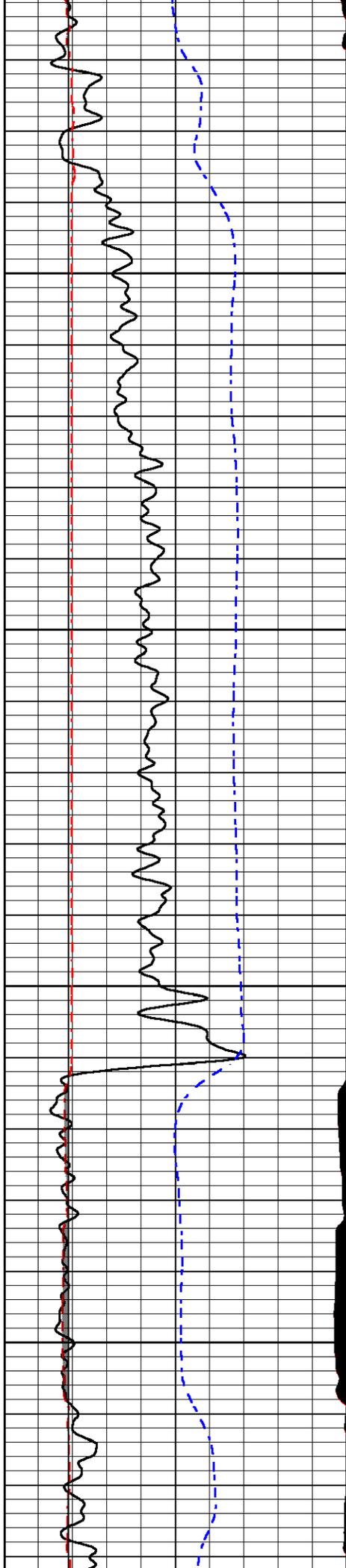
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2750

2800

2850



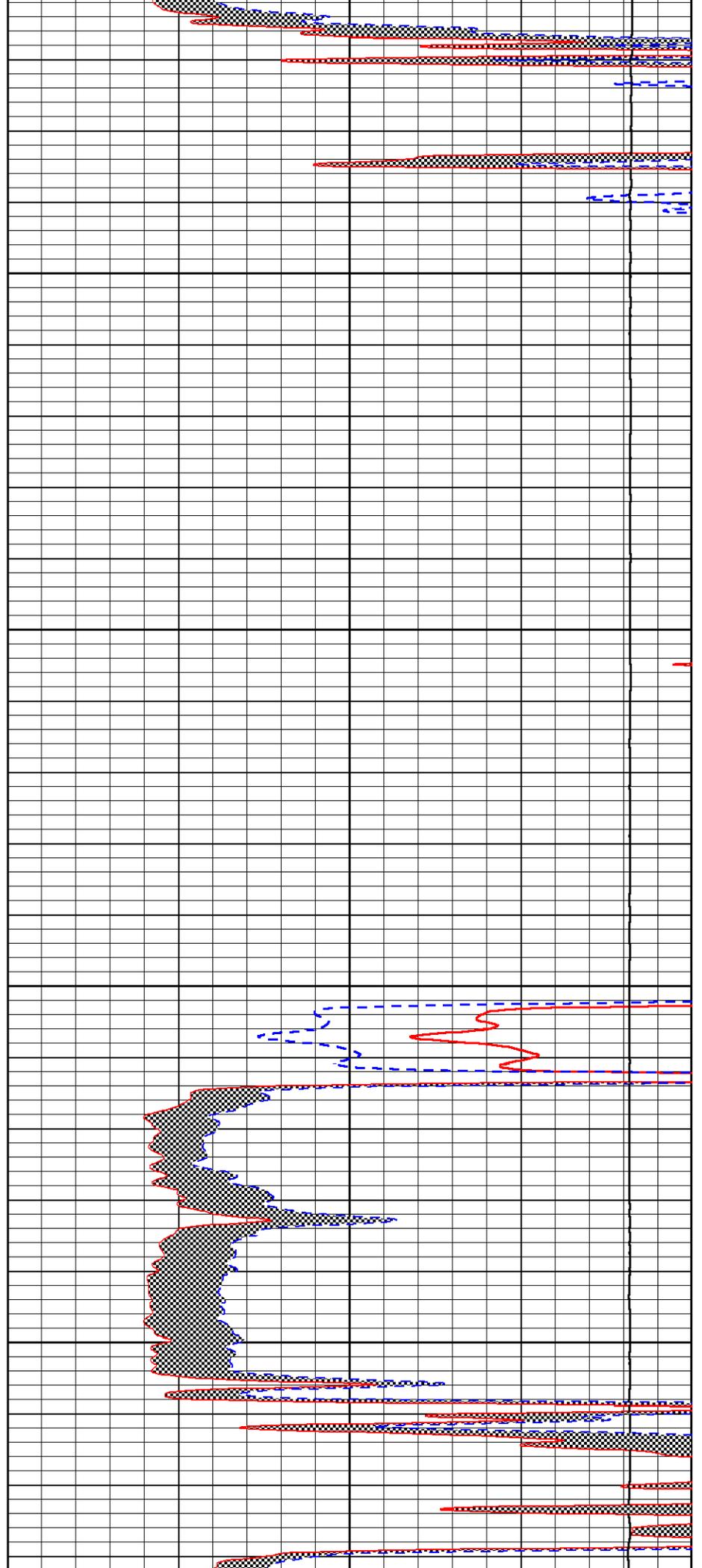


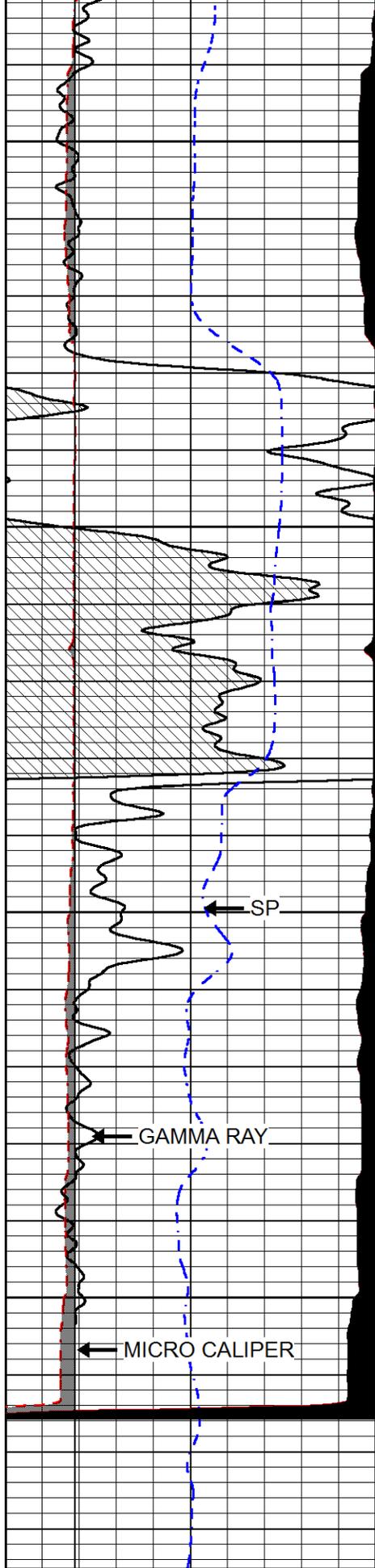
2900

2950

3000

3050





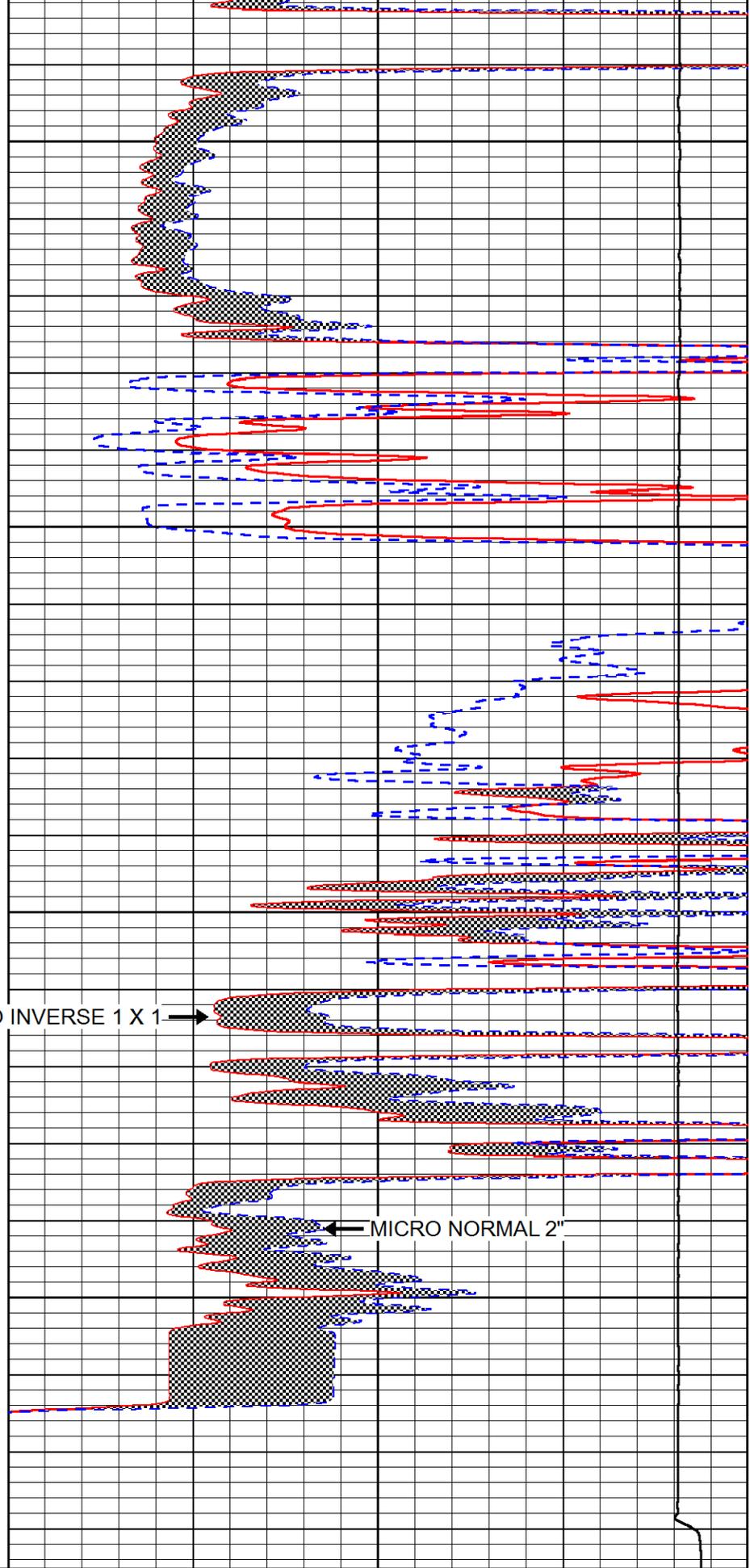
3100

3150

3200

3250

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
200	SP (mV)	0



MICRO INVERSE 1 X 1

MICRO NORMAL 2"

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

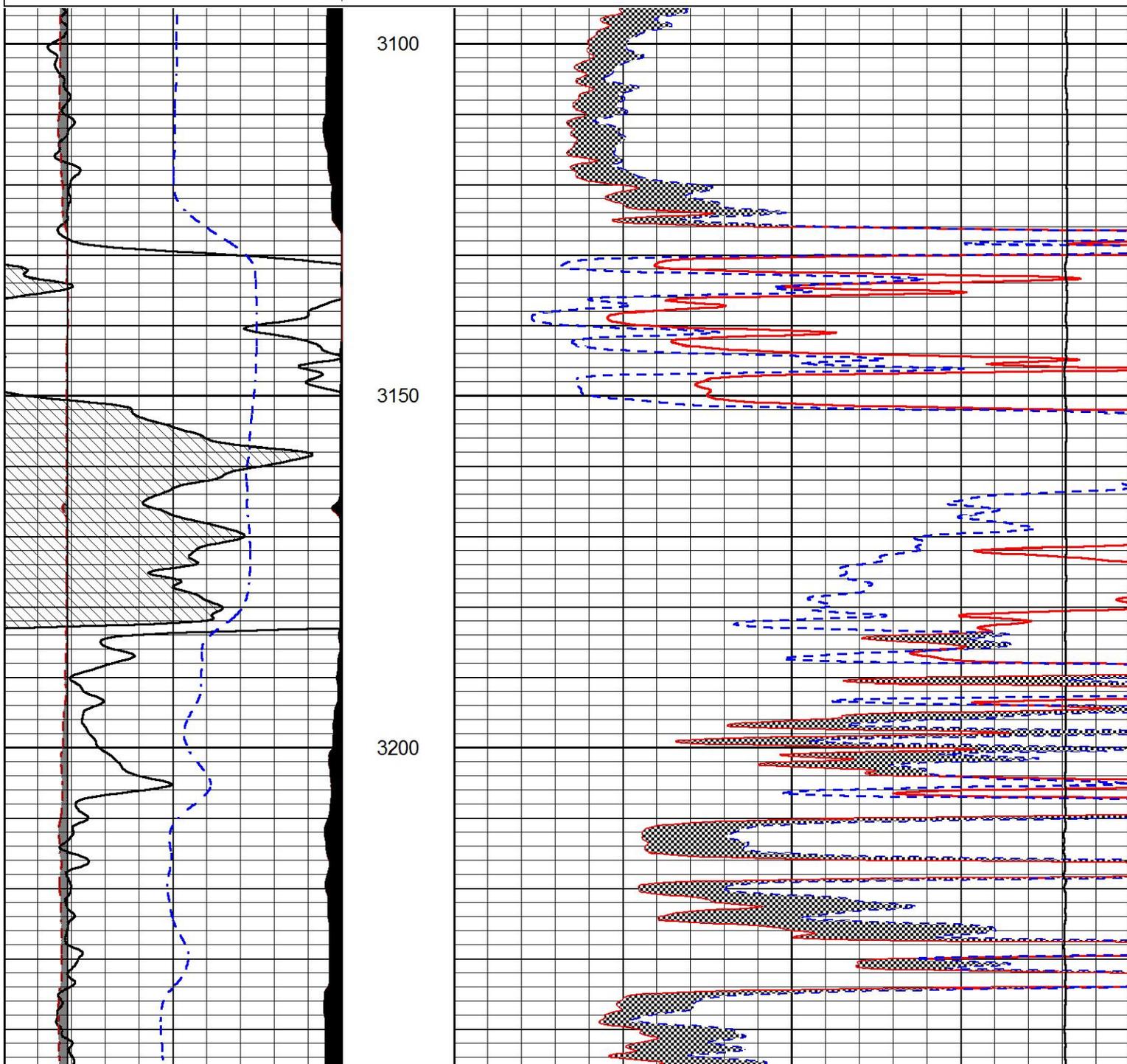


REPEAT SECTION

Database File murfin_youngmeyer_a_1_14.db
 Dataset Pathname stack/pass2.1
 Presentation Format micro
 Dataset Creation Sun Jul 16 22:26:33 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0



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:	89-M&W		
Tool Model:	M&W		
Calibration Performed:	Tue Apr 11 16:08:01 2017		
Calibrator Value:	1000.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	6.2	cps	
Sensitivity:	0.5200	GAPI/cps	

 <p>PIONEER Pioneer Energy Services</p>	Company	MURFIN DRILLING COMPANY, INC.
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	Field	WILDCAT
	County	ELK
	State	KANSAS