



MICRORESISTIVITY LOG

Pioneer Energy Services

Company SUMMIT OPERATING LLC
 Well YOUNGER # 1-17
 Field REICHEL
 County RUSH
 State KANSAS

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Location: API #: 15-165-22165-00-00
 831' FNL & 1460' FWL
 SEC 17 TWP 16S RGE 17W
 Permanent Datum GROUND LEVEL Elevation 2006'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 CNL/CDL DIL
 Elevation
 K.B. 2011'
 D.F. N/A
 G.L. 2006'

Date	5/24/2019
Run Number	TWO
Depth Driller	3581'
Depth Logger	3580'
Bottom Logged Interval	3579'
Top Log Interval	1800'
Casing Driller	8.625" @ 1122'
Casing Logger	1121'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	5000
Density / Viscosity	9.3 53
pH / Fluid Loss	9.5 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.40 @ 72
Rmt @ Meas. Temp	0.30 @ 72
Rmc @ Meas. Temp	0.54 @ 72
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.26 @ 112
Operating Rig Time	4 HOURS
Max Rec. Temp. F	112
Equipment Number	P-24
Location	HAYS
Recorded By	M. HISS
Witnessed By	MARC DOWNING

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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.

LIEBENTHAL, KS.
 4 1/2 MILES EAST, 1 MILE NORTH,
 1/4 EAST, SOUTH INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew Engineer: M. HISS Operator: I. MABB Operator: Operator:	This Log Record Was Witnessed By Primary Witness: MARC DOWNING Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\summit_younger_1_17.db
 Dataset field/well/MEL/pass1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	2	2	610	50	Off	3580

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
						
			ML-Armadillo (ARM001) Pengo Mandrel & Armadillo ML Electronics (2014)	5.50	3.50	100.00
MCAL	1.00					
MI	1.00					
MN	1.00					

Dataset: summit_younger_1_17.db: field/well/MEL/pass1
 Total length: 5.50 ft
 Total weight: 100.00 lb
 O.D.: 3.50 in

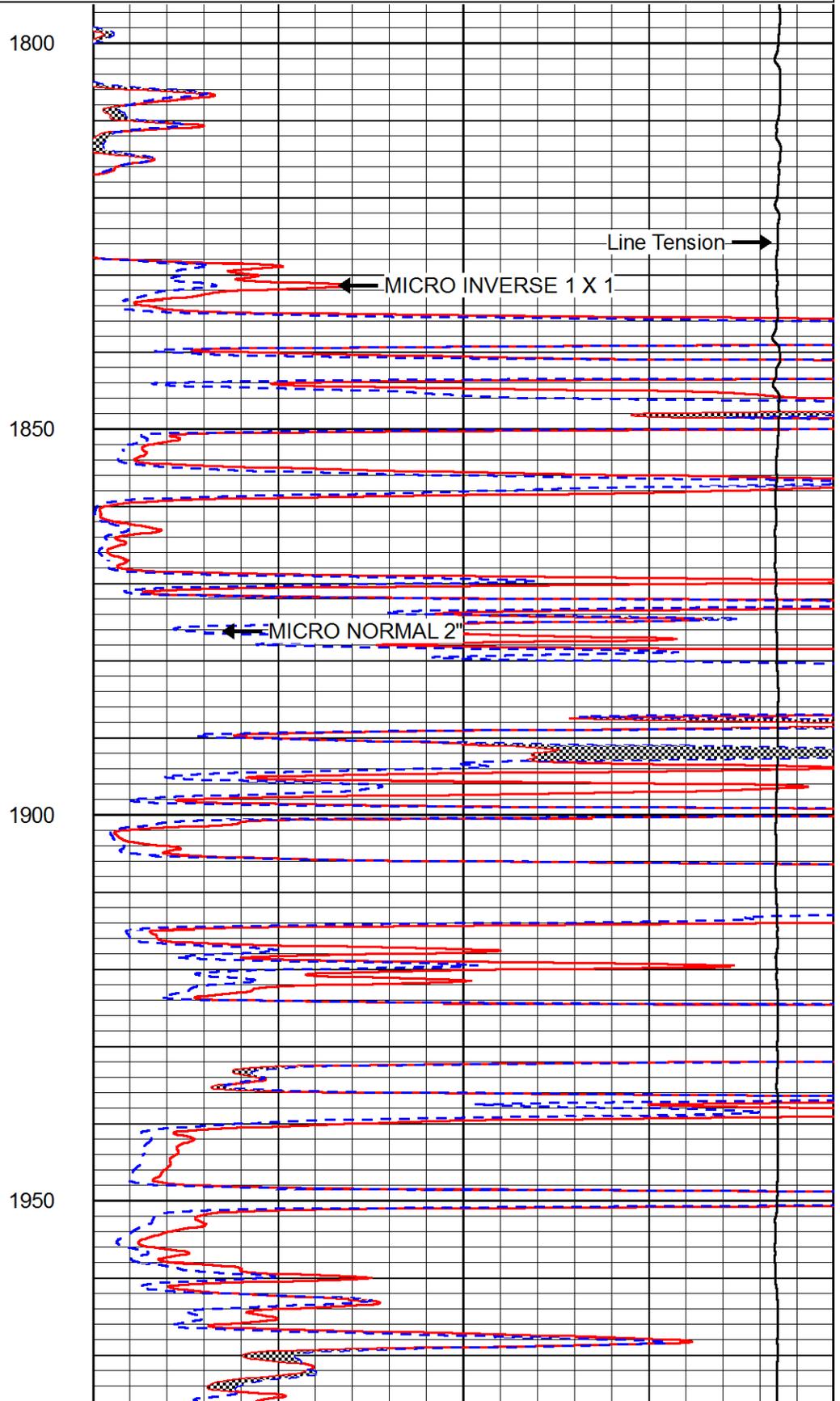
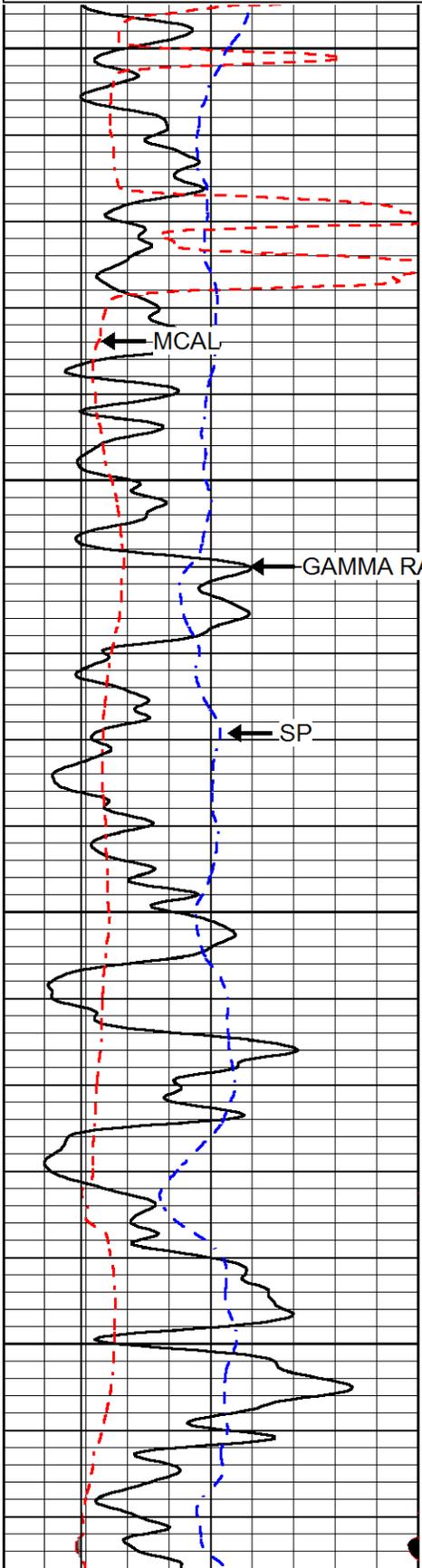


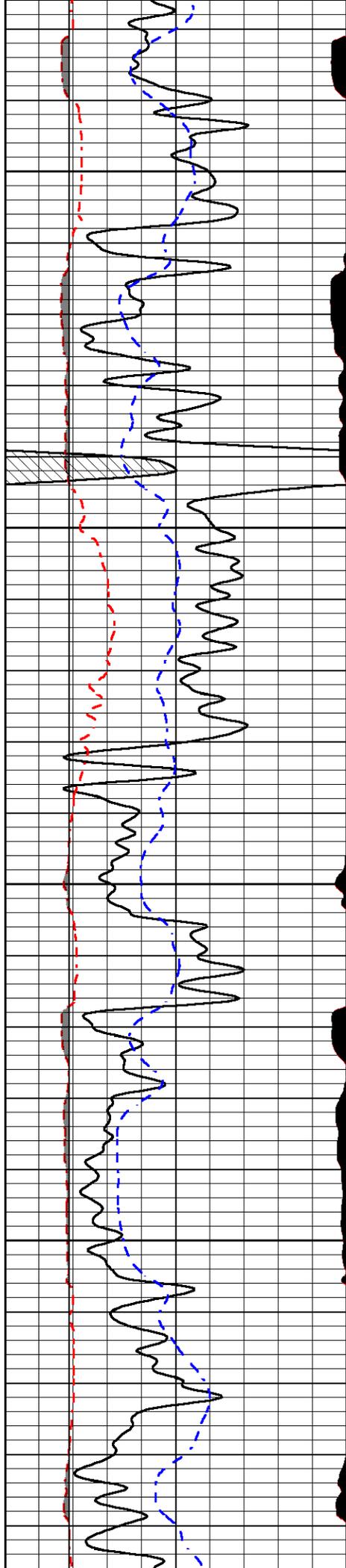
MAIN PASS

Database File summit_younger_1_17.db
 Dataset Pathname stack/pass3.1

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
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
10000	Line Weight (lb)	0



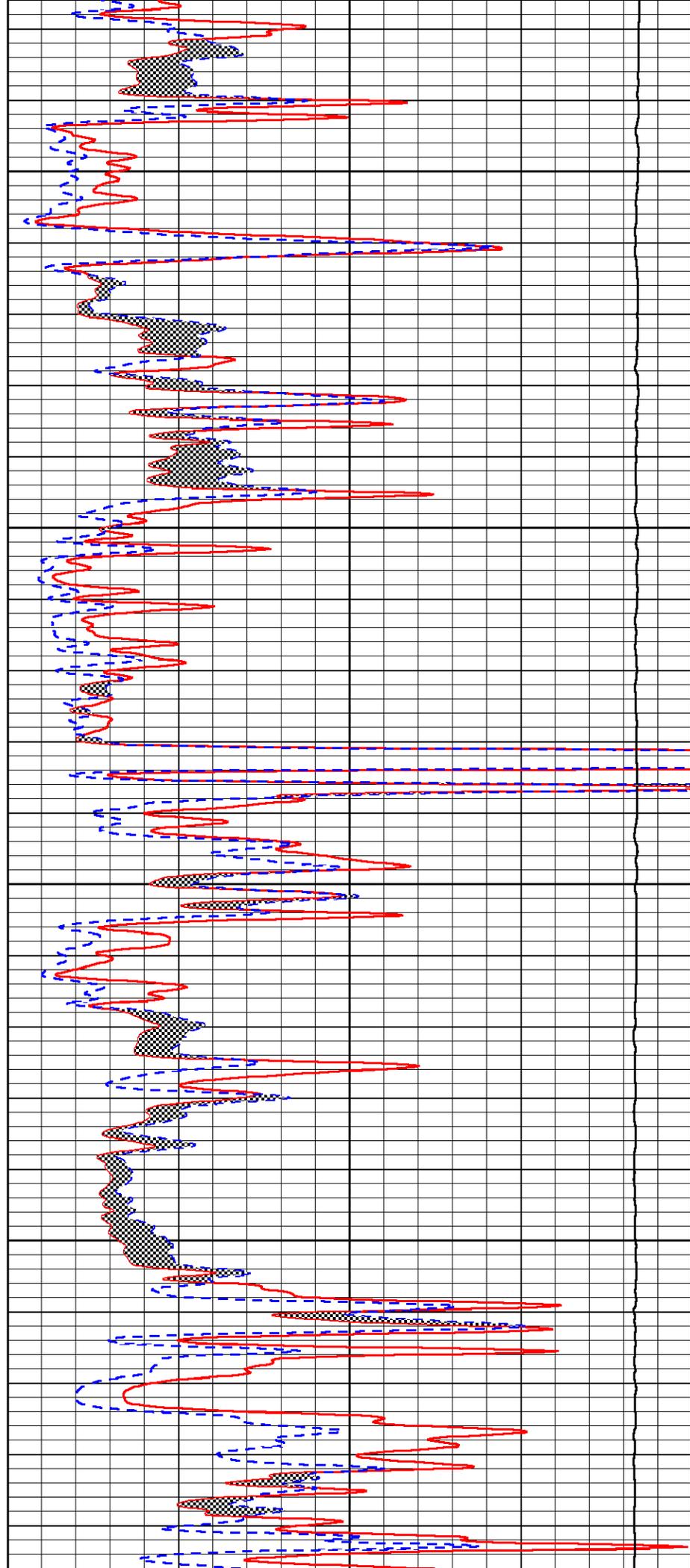


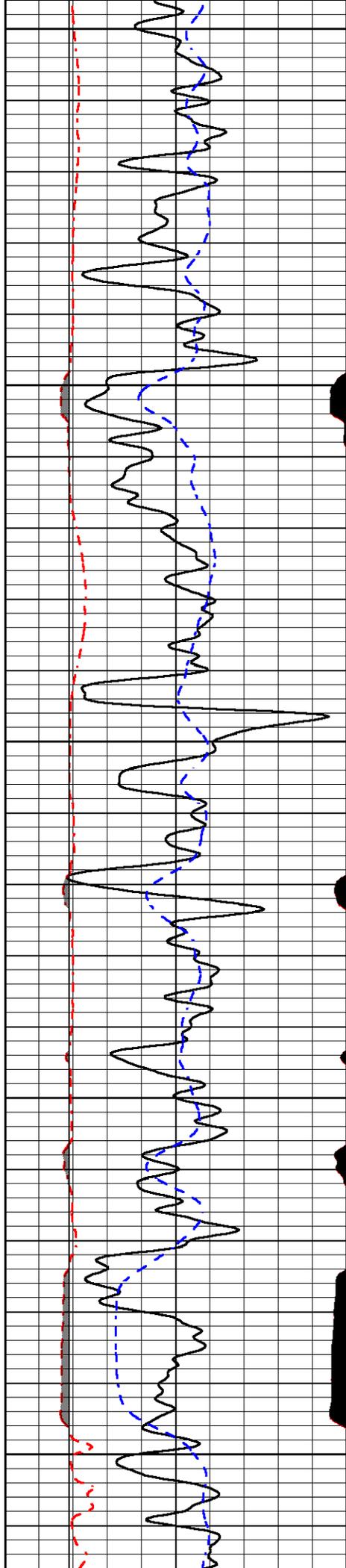
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2050

2100

2150





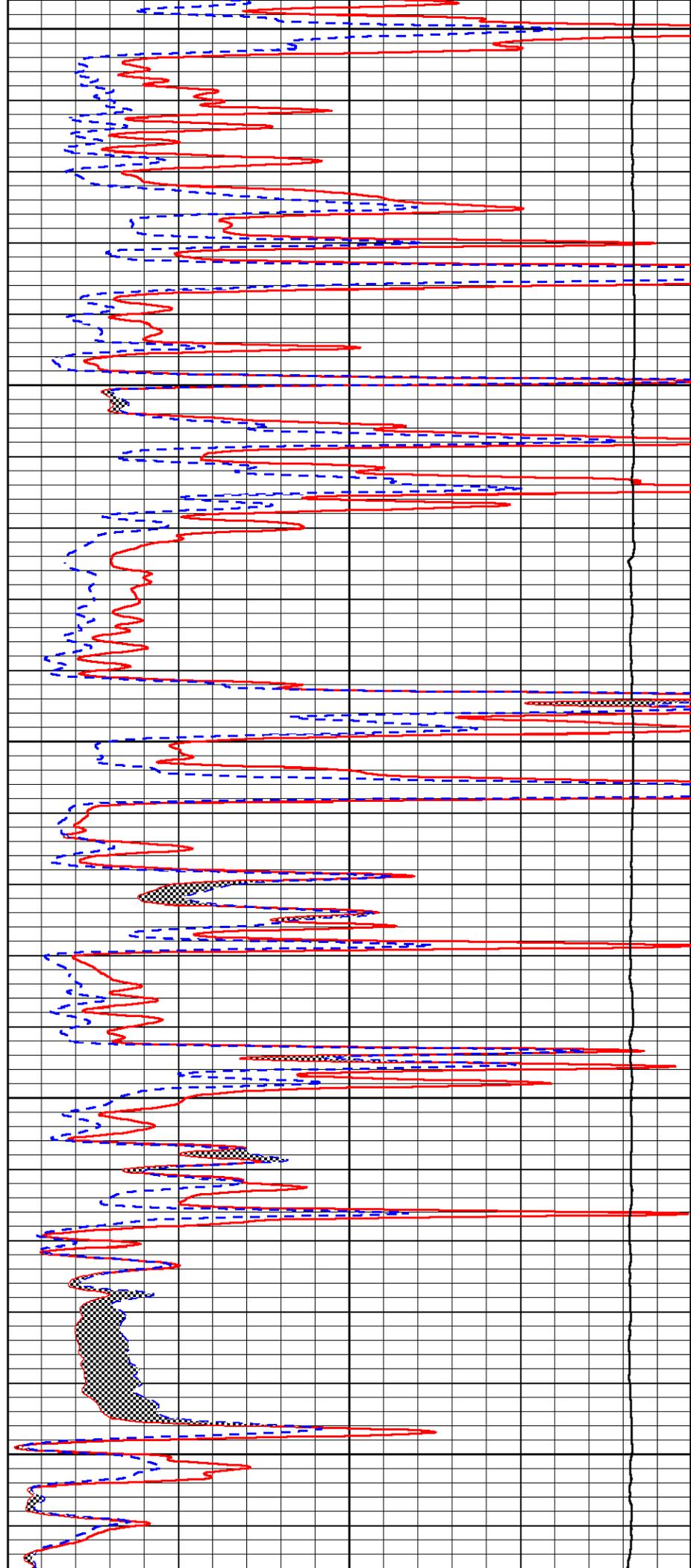
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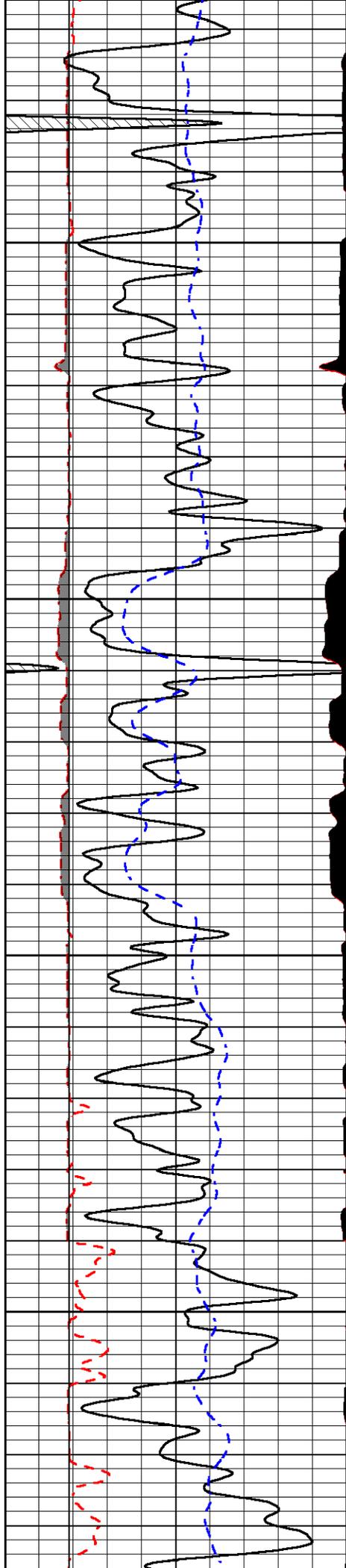
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2300

2350

2400



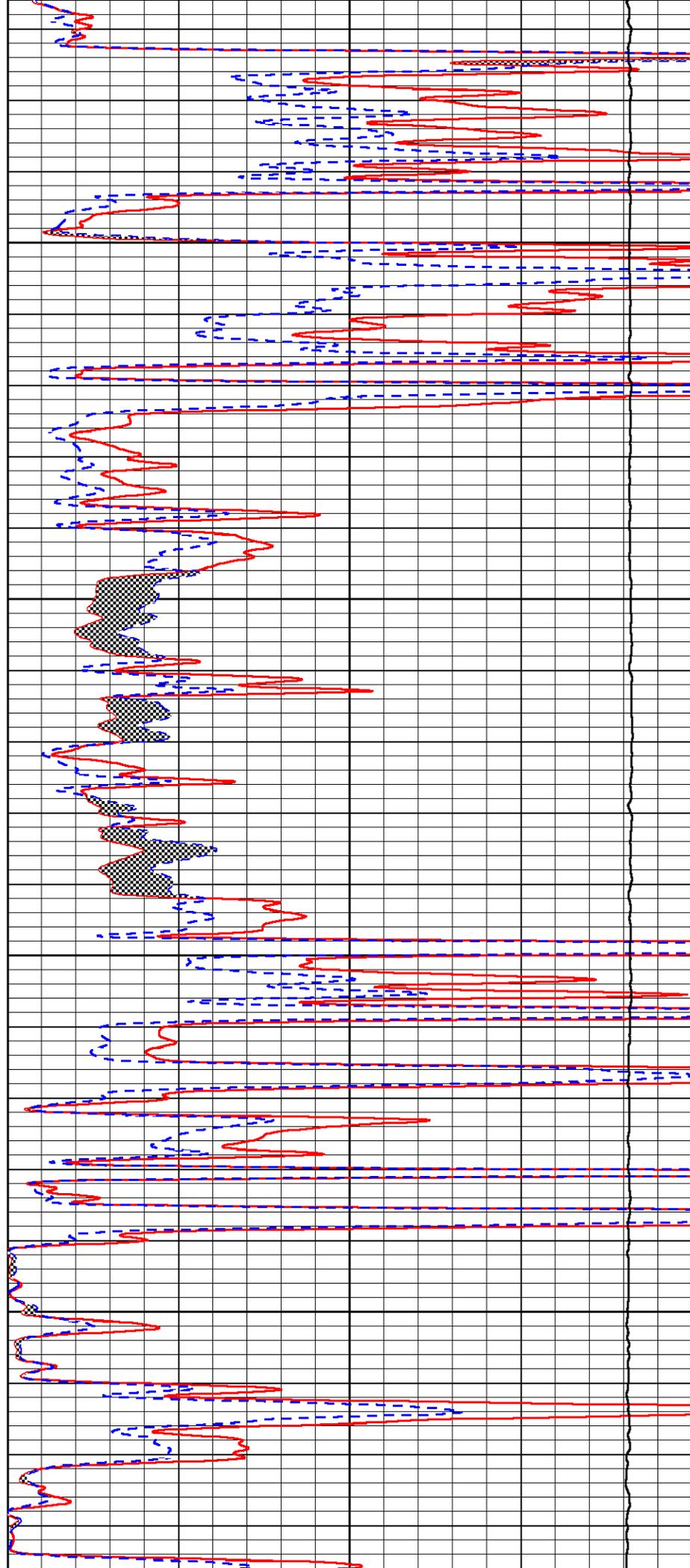


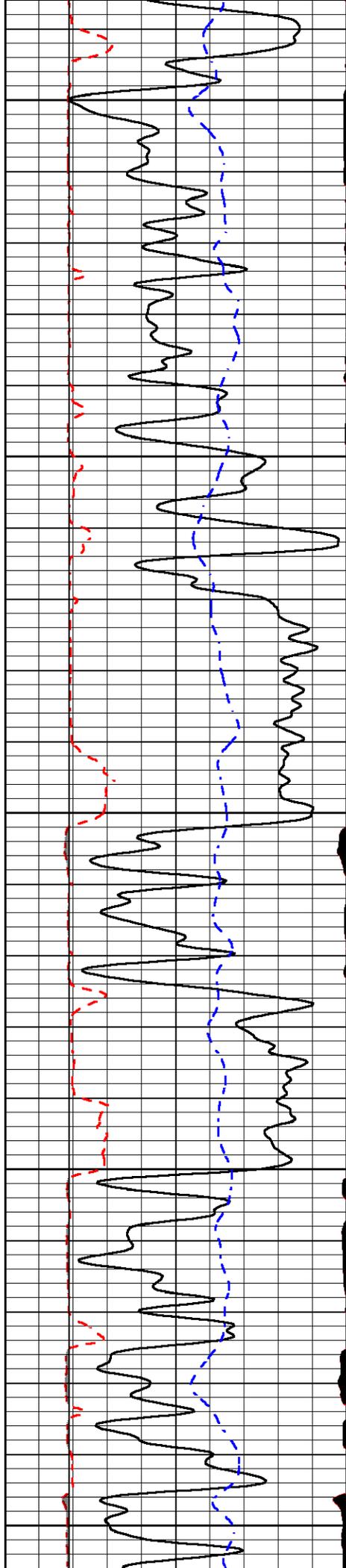
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2550

2600





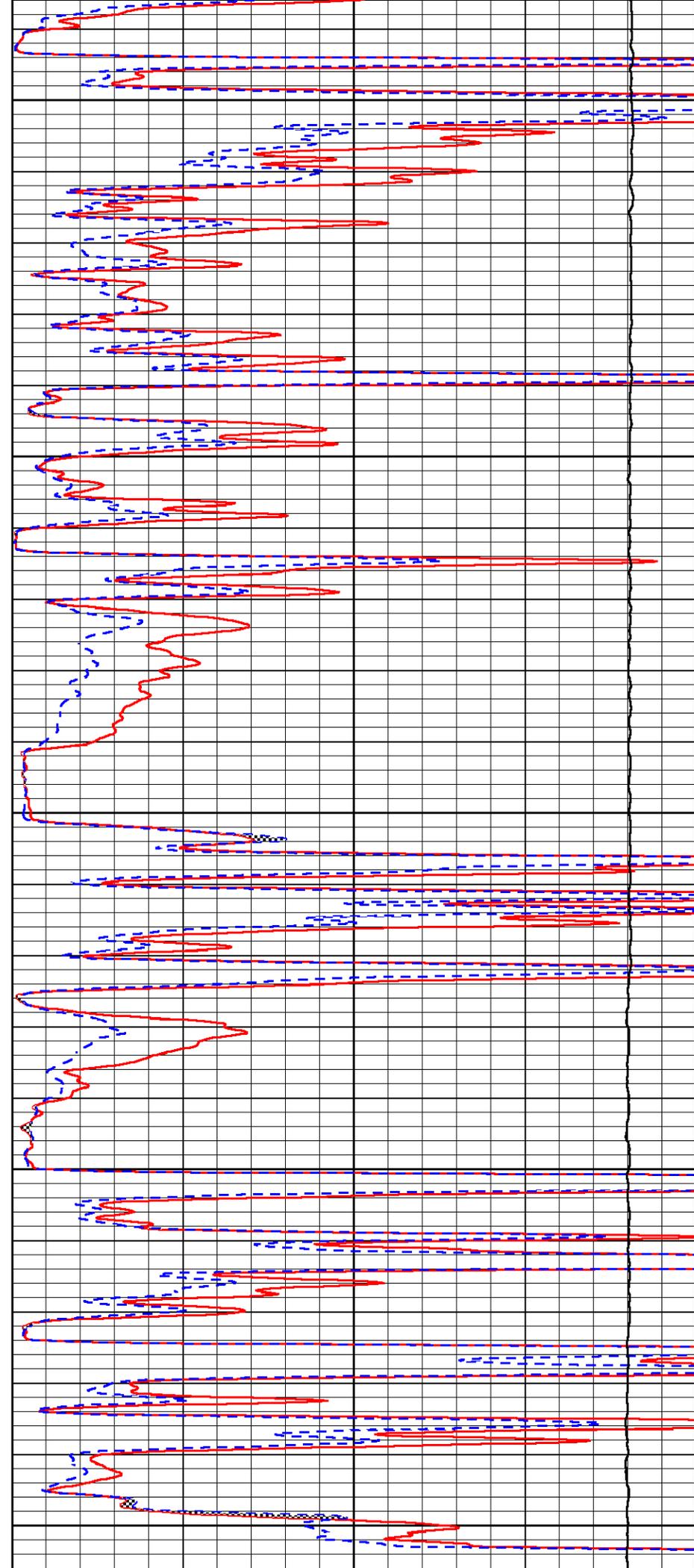
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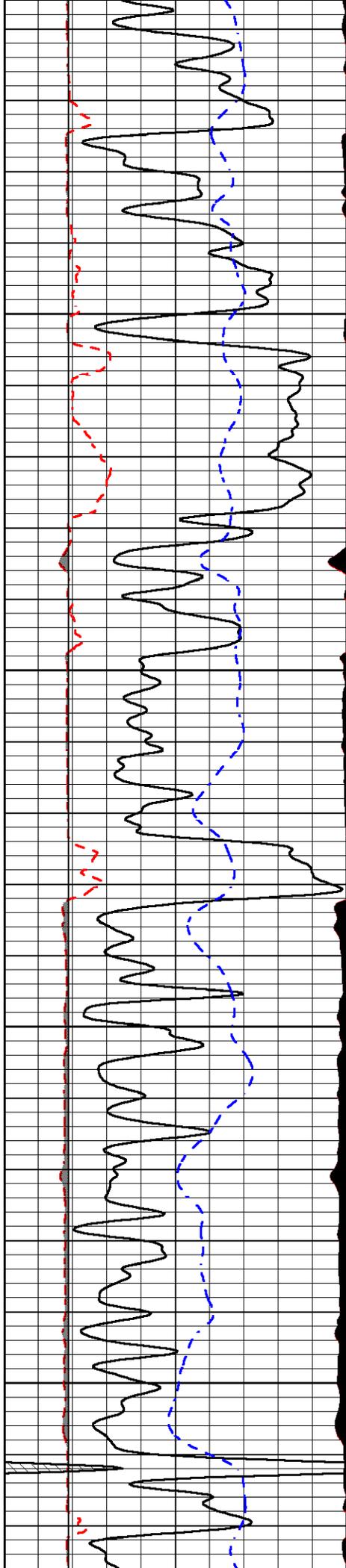
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2850



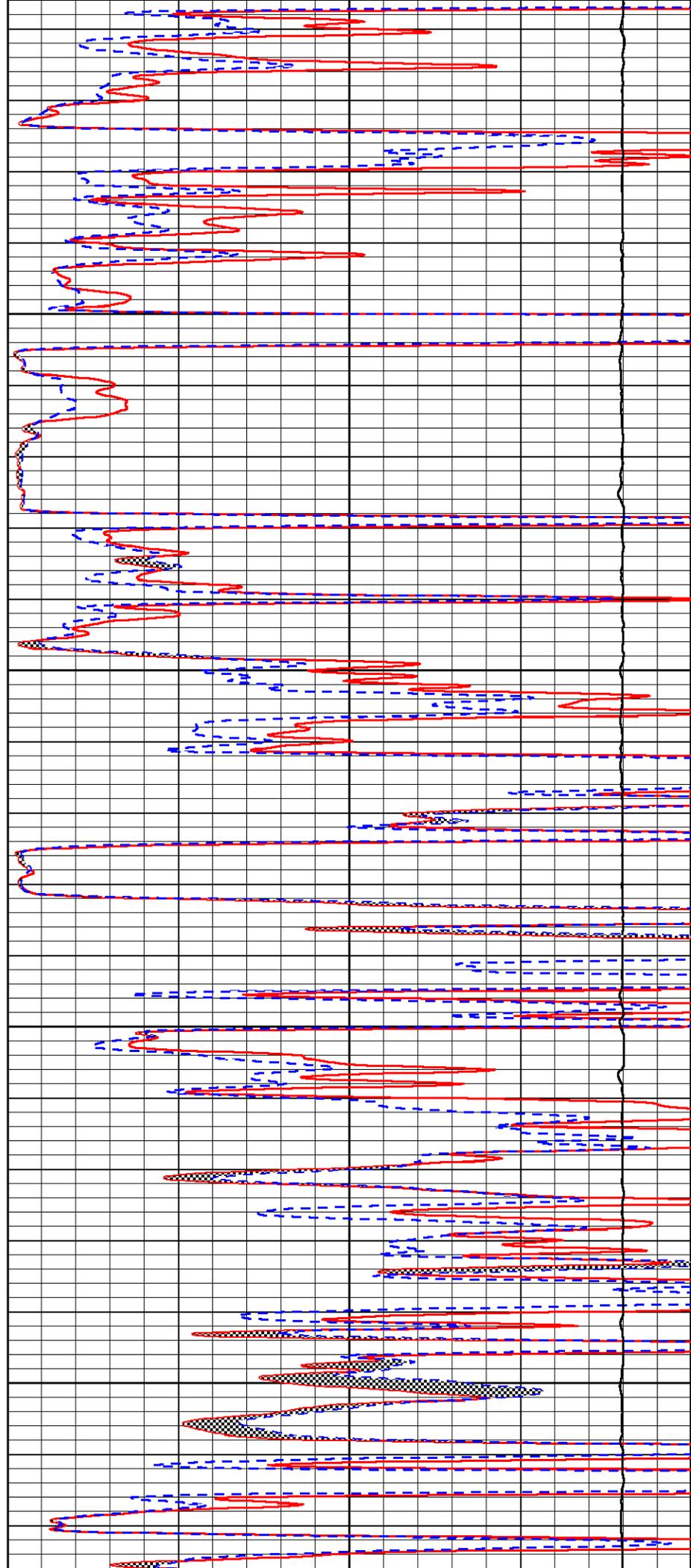


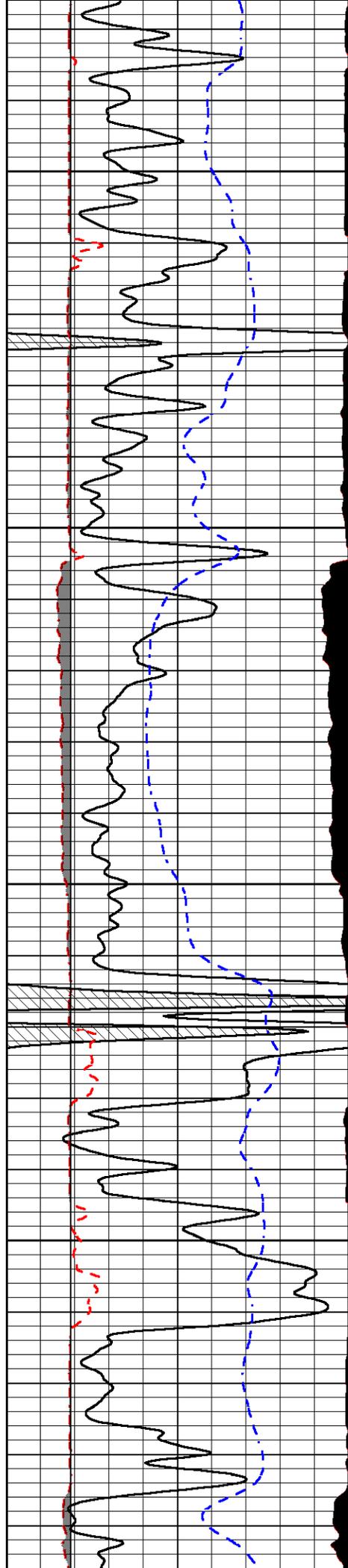
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2950

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3050



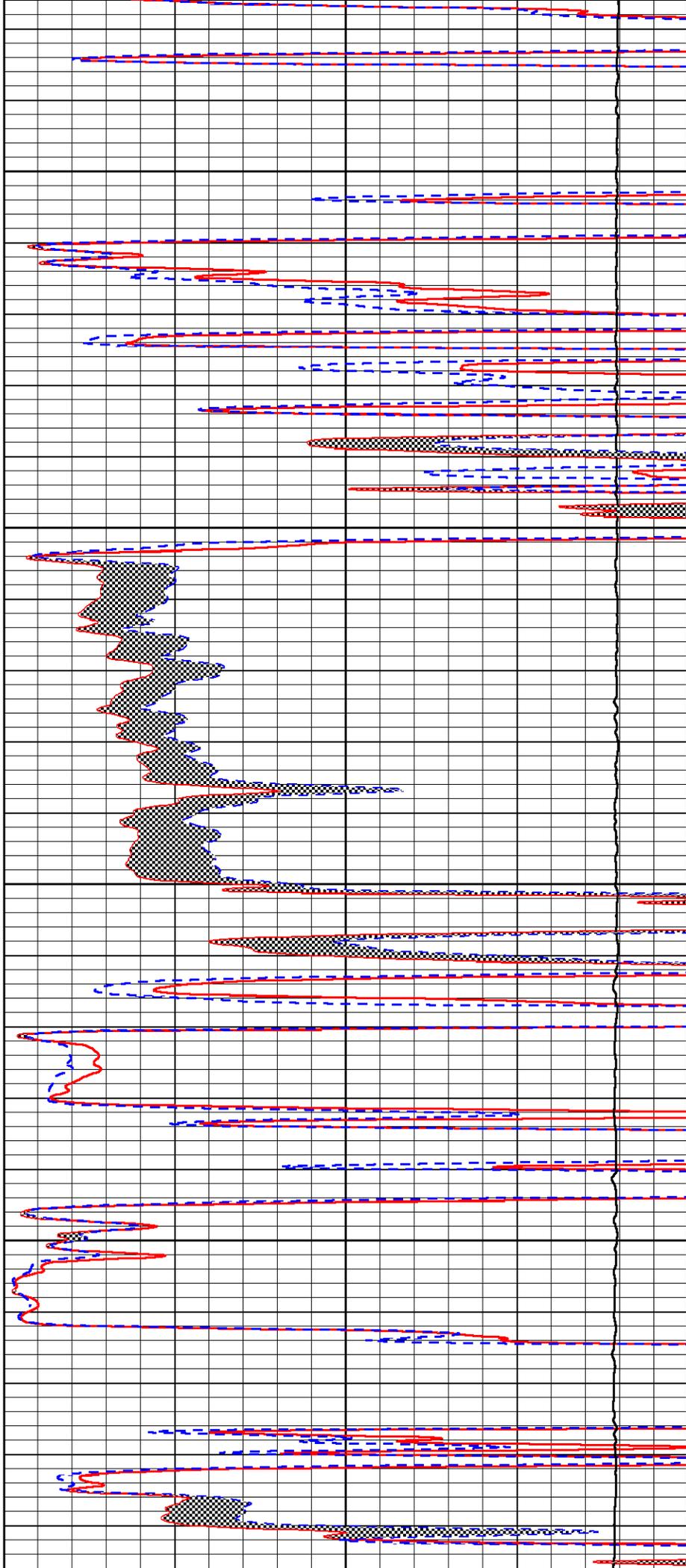


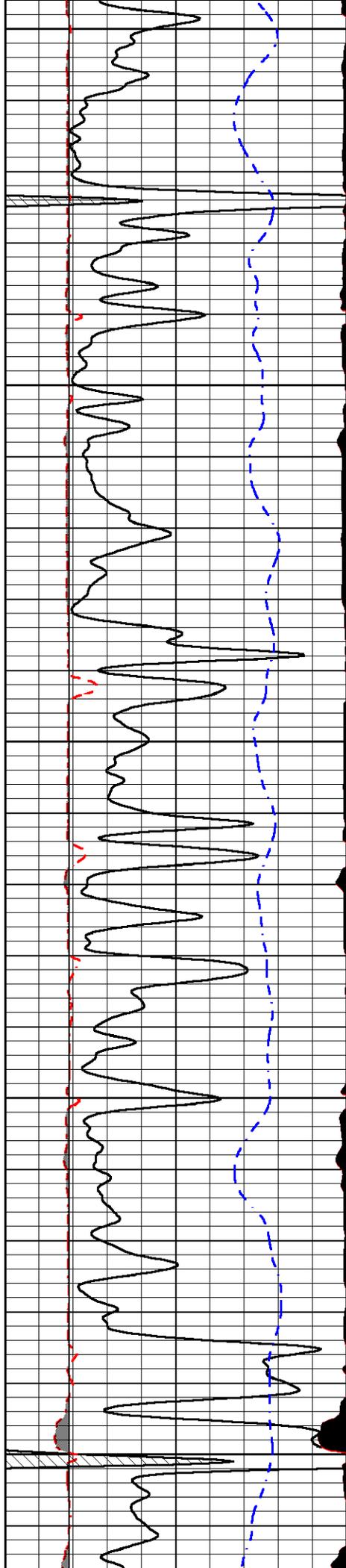
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3150

3200

3250





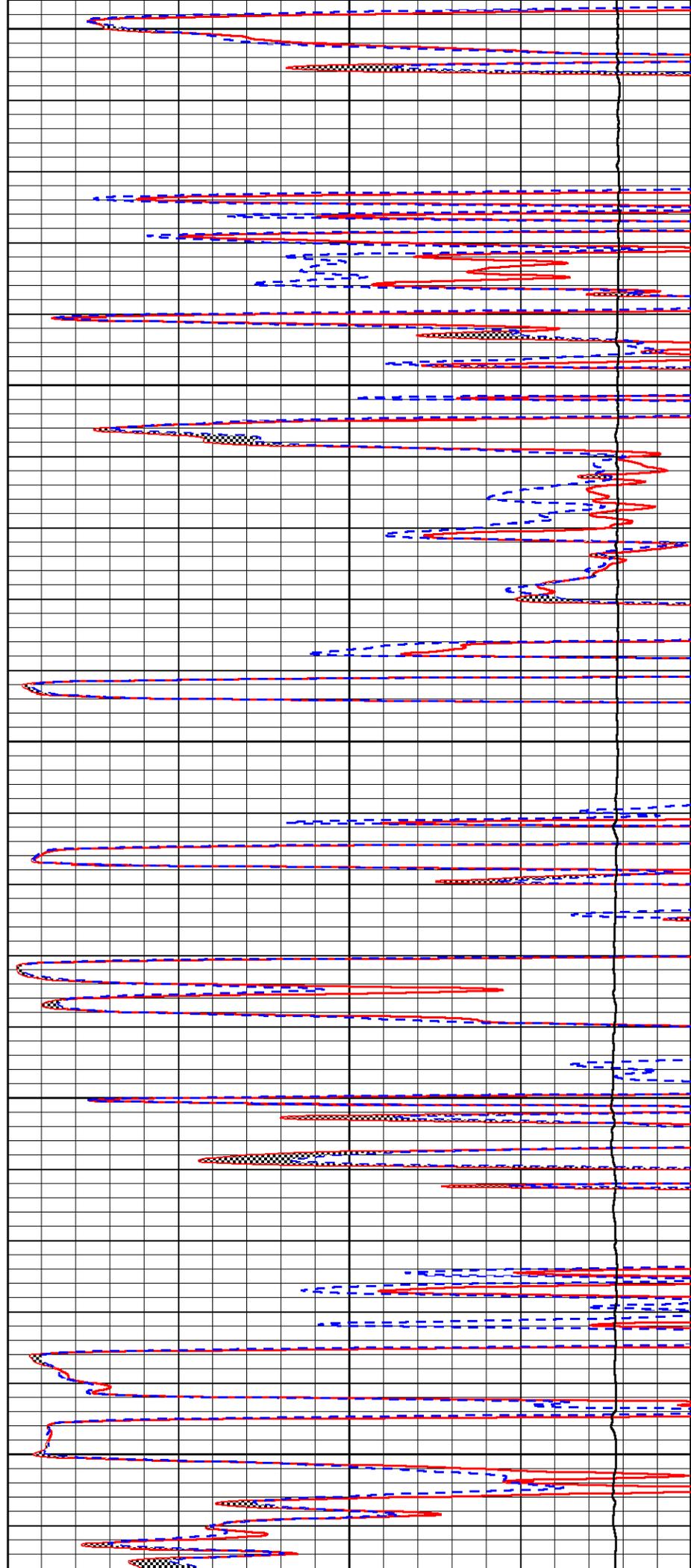
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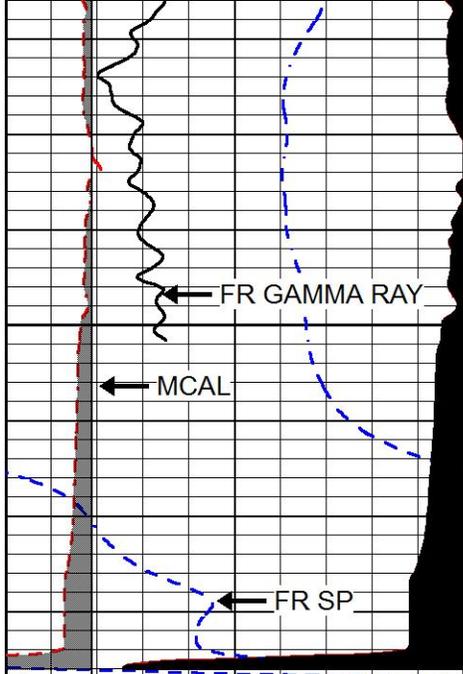
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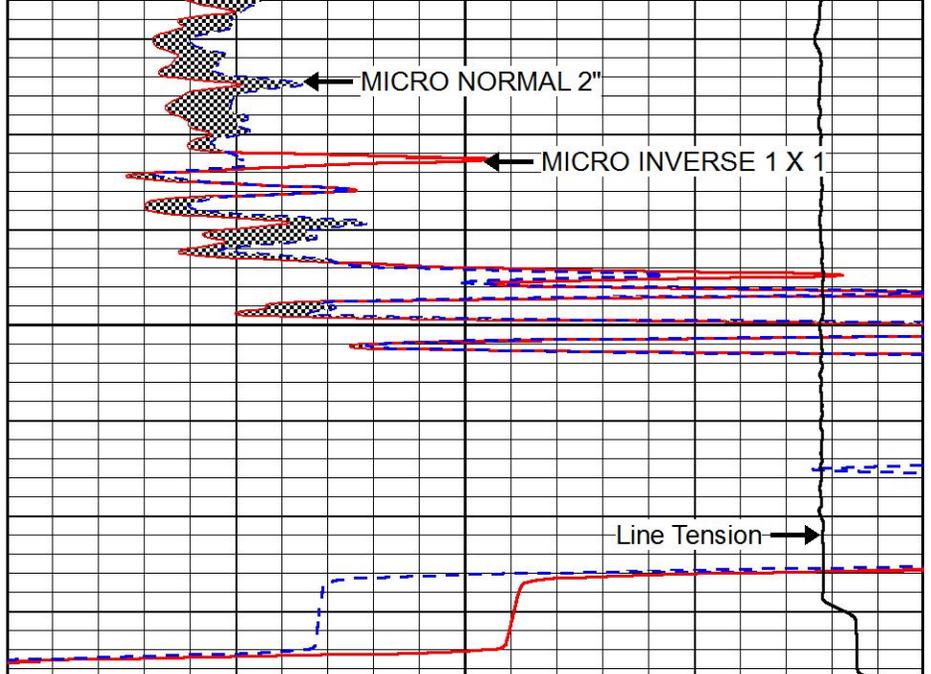
3450

3500





0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0

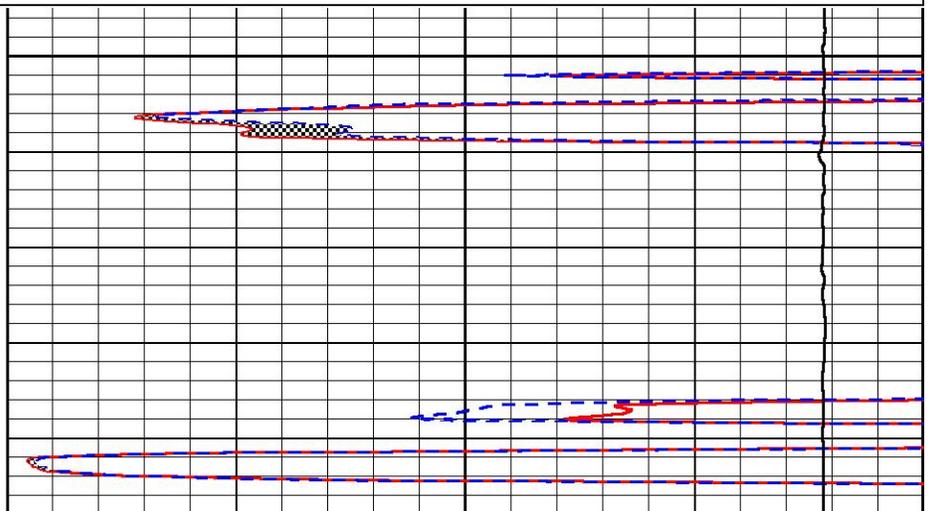
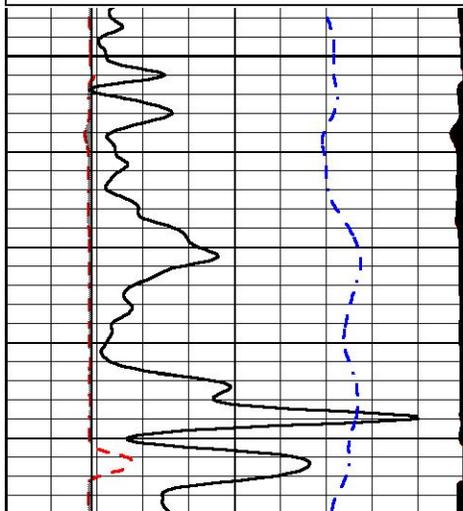


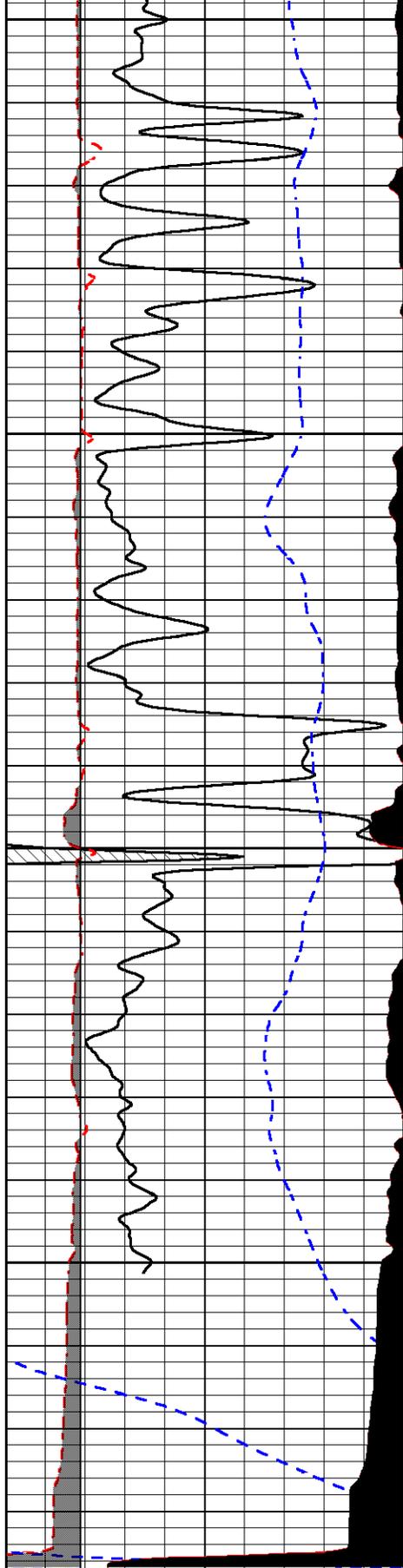
REPEAT SECTION

Database File: summit_younger_1_17.db
 Dataset Pathname: stack/pass2.1
 Presentation Format: _micro
 Dataset Creation: Fri May 24 11:44:29 2019
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0





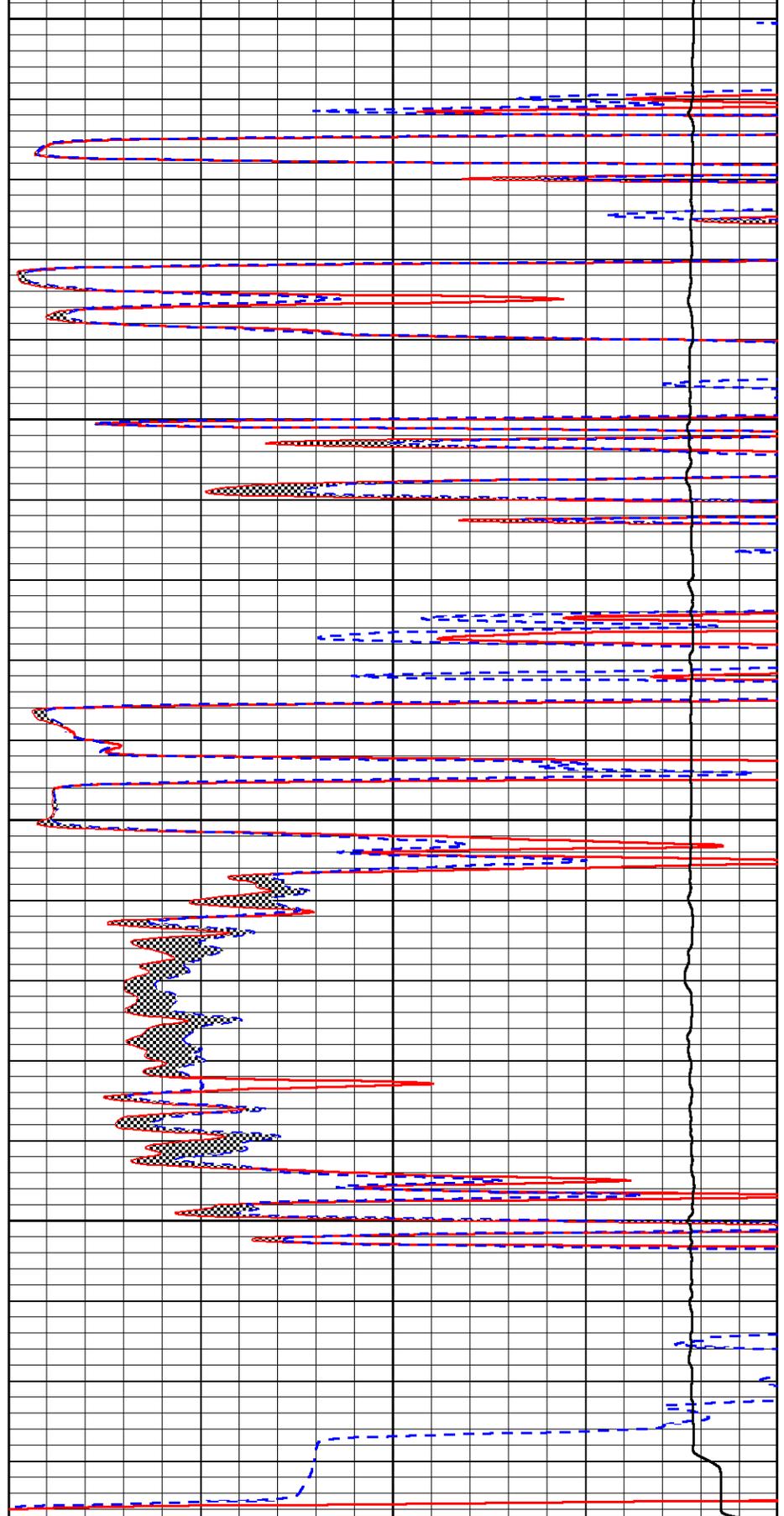
3400

3450

3500

3550

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0

Calibration Report

Database File summit_younger_1_17.db
 Dataset Pathname MEL/pass1
 Dataset Creation Fri May 24 12:04:48 2019

Microlog Calibration Report

Serial-Model: ARM001-Armadillo
 Performed: Fri Jul 14 14:07:44 2017

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Normal	0.0127	0.6730	V	0.0000	10.0000	Ohm-m	25.5000	-2.4000
Inverse	0.0029	0.8729	V	0.0000	10.0000	Ohm-m	22.0000	-1.5000
Caliper	0.6693	6.5160	V	6.0000	19.0000	in	2.2235	4.5118



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