



MIDWEST WIRELINE

# DUAL INDUCTION LOG

Company Brehm Asset Management LLC  
 Well SEIB #2-27  
 Field SEIB  
 County Ness State Kansas

Location: API #: 15-135-26131-00-00  
 2301 FNL & 1980 FEL  
 SEC 27 TWP 20S RGE 21W  
 Permanent Datum Ground Level Elevation 2195  
 Log Measured From Kelly Bushing  
 Drilling Measured From Kelly Bushing  
 Other Services  
 CNL/CDL  
 MEL  
 Elevation  
 K.B. 2200  
 D.F. G.L. 2195

Date	1/7/2022
Run Number	One
Depth Driller	4430
Depth Logger	4432
Bottom Logged Interval	4431
Top Log Interval	250
Casing Driller	8.625 @ 266
Casing Logger	262
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	11,800
Density / Viscosity	9.6 45
pH / Fluid Loss	8.5 11.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.30 @ 71
Rmt @ Meas. Temp	.23 @ 71
Rmc @ Meas. Temp	.41 @ 71
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.18 @ 120
Operating Rig Time	2 Hours
Max Rec. Temp. F	120
Equipment Number	P-108
Location	HAYS
Recorded By	J. Henrickson
Witnessed By	Ed Glassman

<<< 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.

Bazine Kansas  
10 South, 3 East, 1 1/2 South,  
East 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

Engineer: J. Henrickson  
Operator:  
Operator:  
Operator:

### This Log Record Was Witnessed By

Primary Witness: Ed Glassman  
Secondary Witness:  
Secondary Witness:  
Secondary Witness:

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\brehm\_seib\_2\_27.db  
 Dataset field/well/stackml/pass4.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	115	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	600	50	Off	4432

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 CNSSC	37.23 36.48		CNT-M&W (210)	5.00	3.50	100.00
LSD DCAL SSD	28.18 28.17 27.68		CDL-M&W (303-03)	8.50	4.00	250.00
MCAL MI MN	19.58 19.58 19.58		ML-PSI STKBL ML (402)	7.58	4.00	65.00
RLL3F RLL3	15.50 15.50					
CILD	8.33		DIL-M&W (504 HT)	18.25	3.50	220.00

CILM 4.50

SP 0.20

Dataset: brehm\_seib\_2\_27.db: field/well/stackml/pass4.1  
 Total length: 42.33 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in



MIDWEST WIRELINE

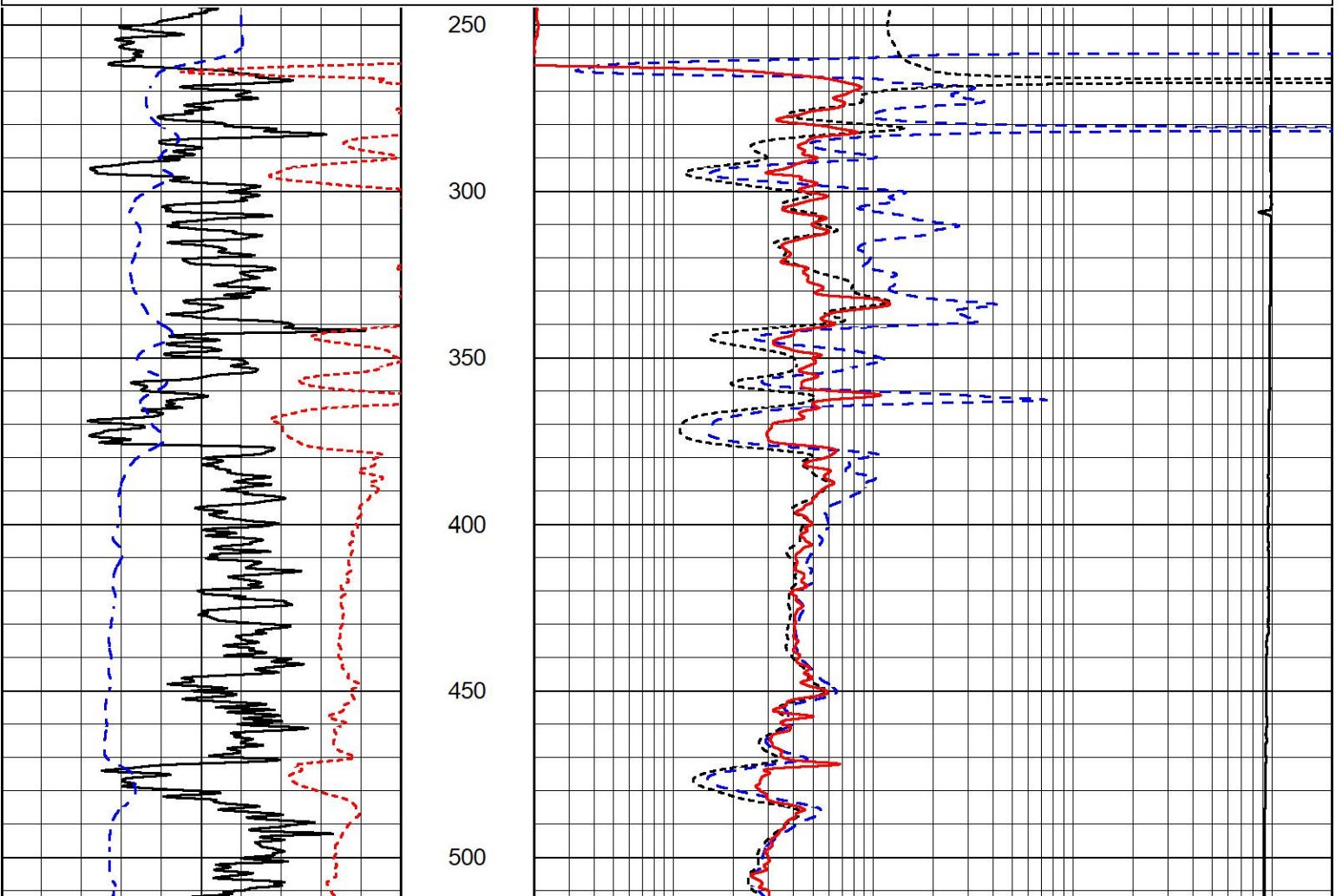
## 2" SCALE RESISTIVITY

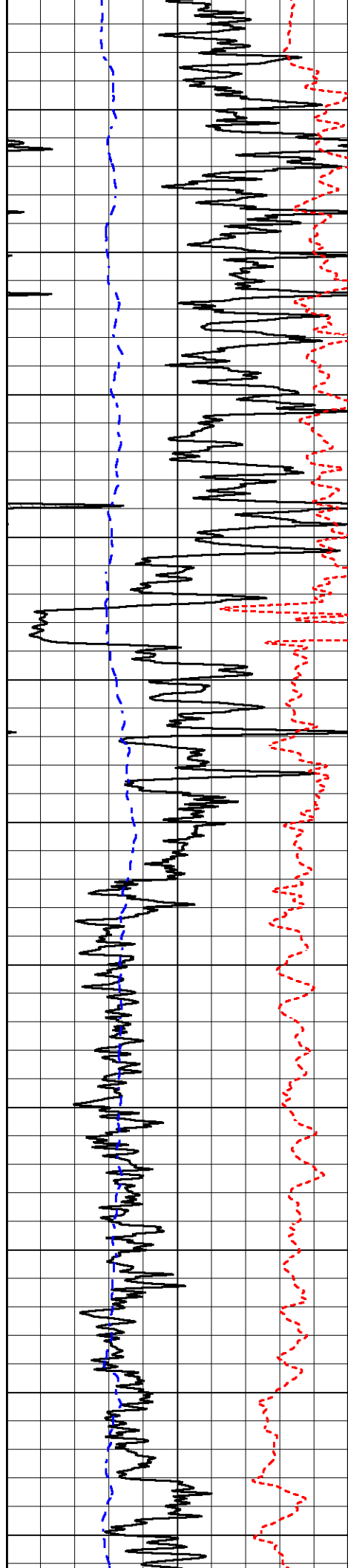
### MAIN PASS

Database File brehm\_seib\_2\_27.db  
 Dataset Pathname stackml/pass6.1  
 Presentation Format \_dil  
 Dataset Creation Fri Jan 07 19:05:59 2022  
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0





550

600

650

700

750

800

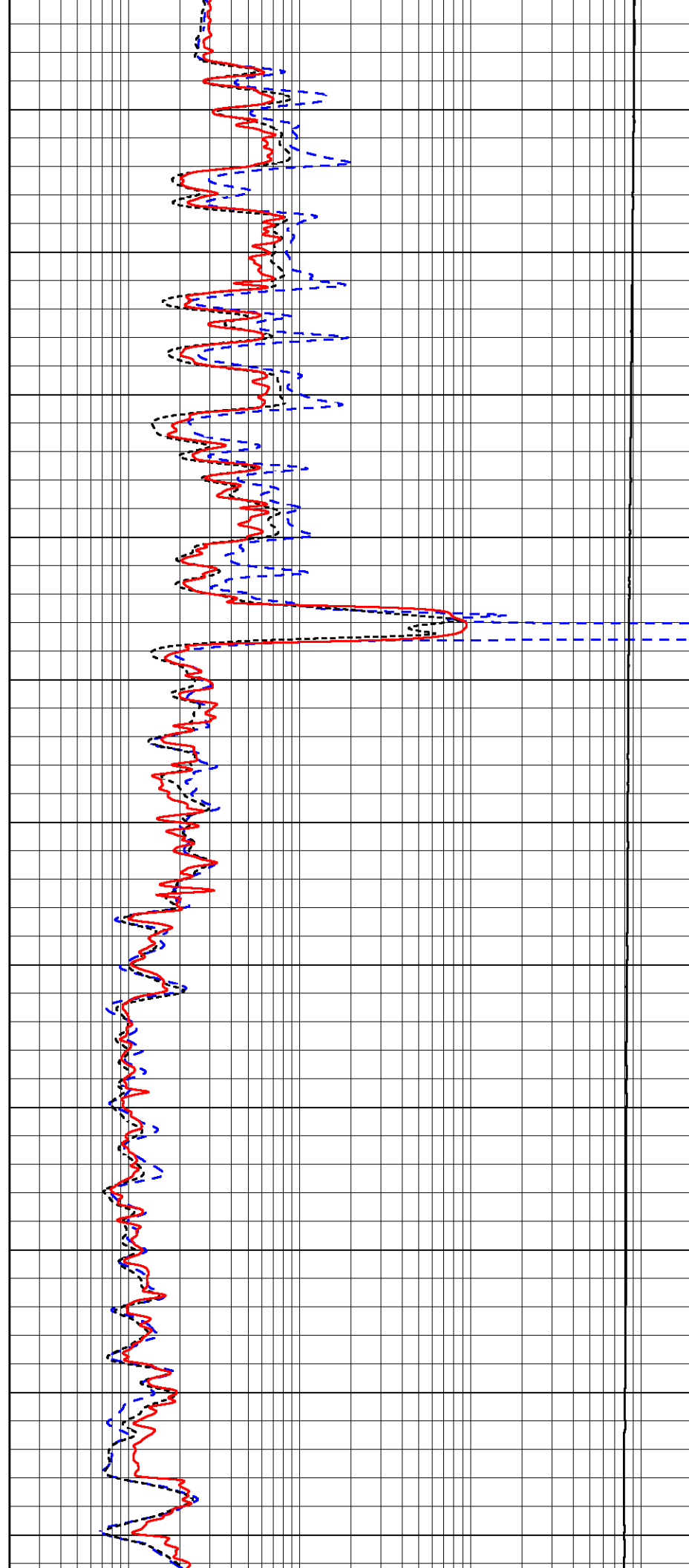
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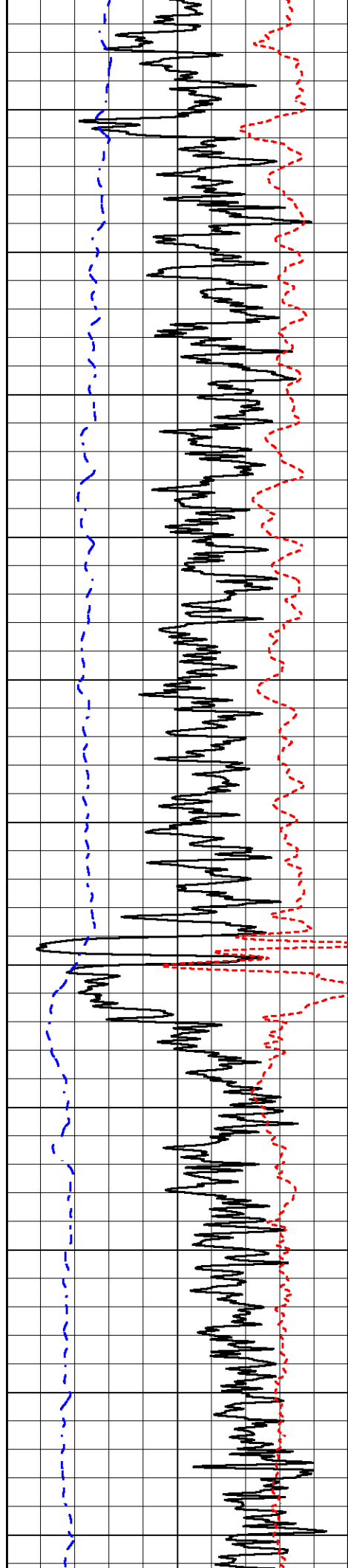
900

950

1000

1050





1100

1150

1200

1250

1300

1350

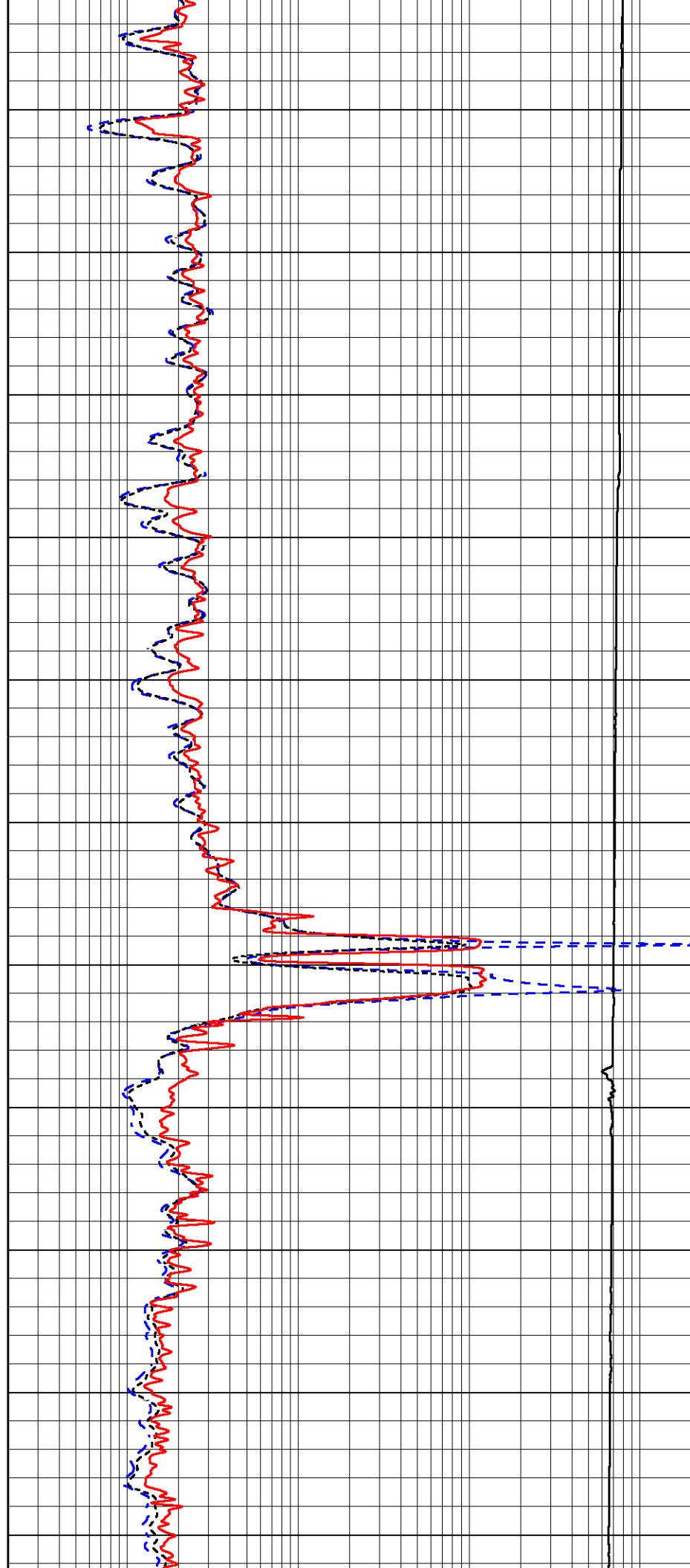
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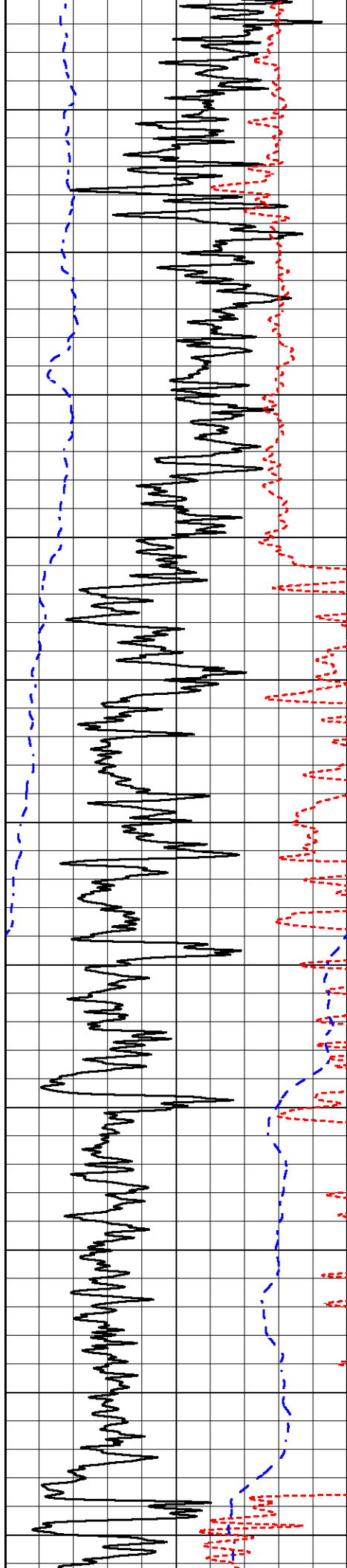
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1500

1550

1600





1650

1700

1750

1800

1850

1900

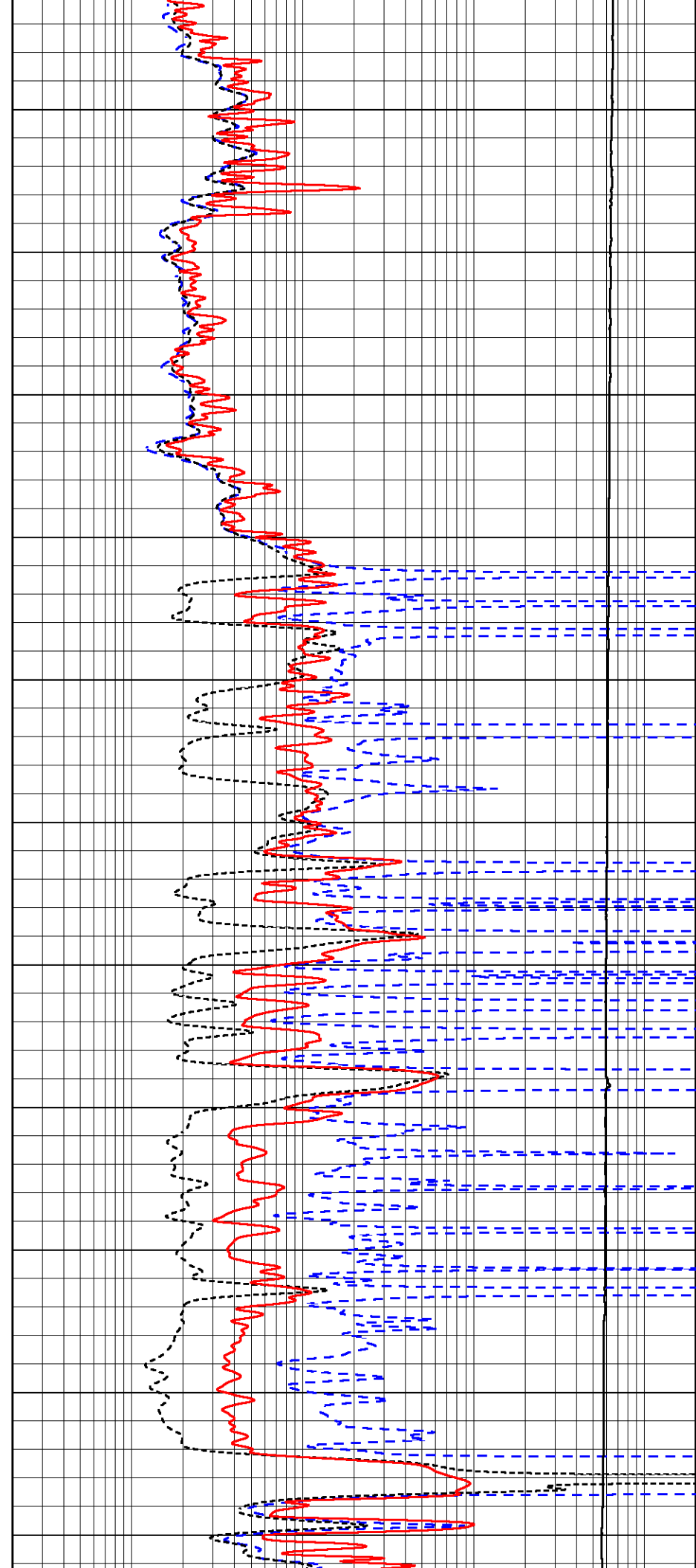
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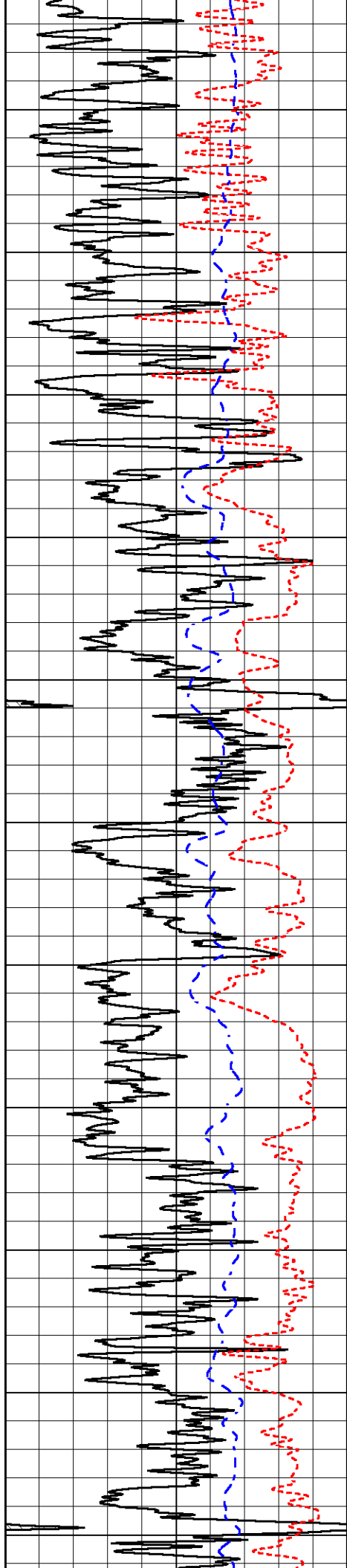
2000

2050

2100

2150





2200

2250

2300

2350

2400

2450

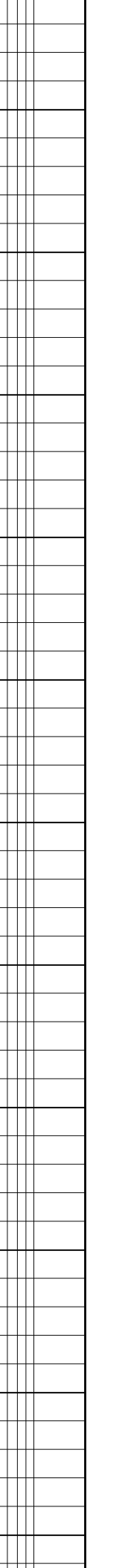
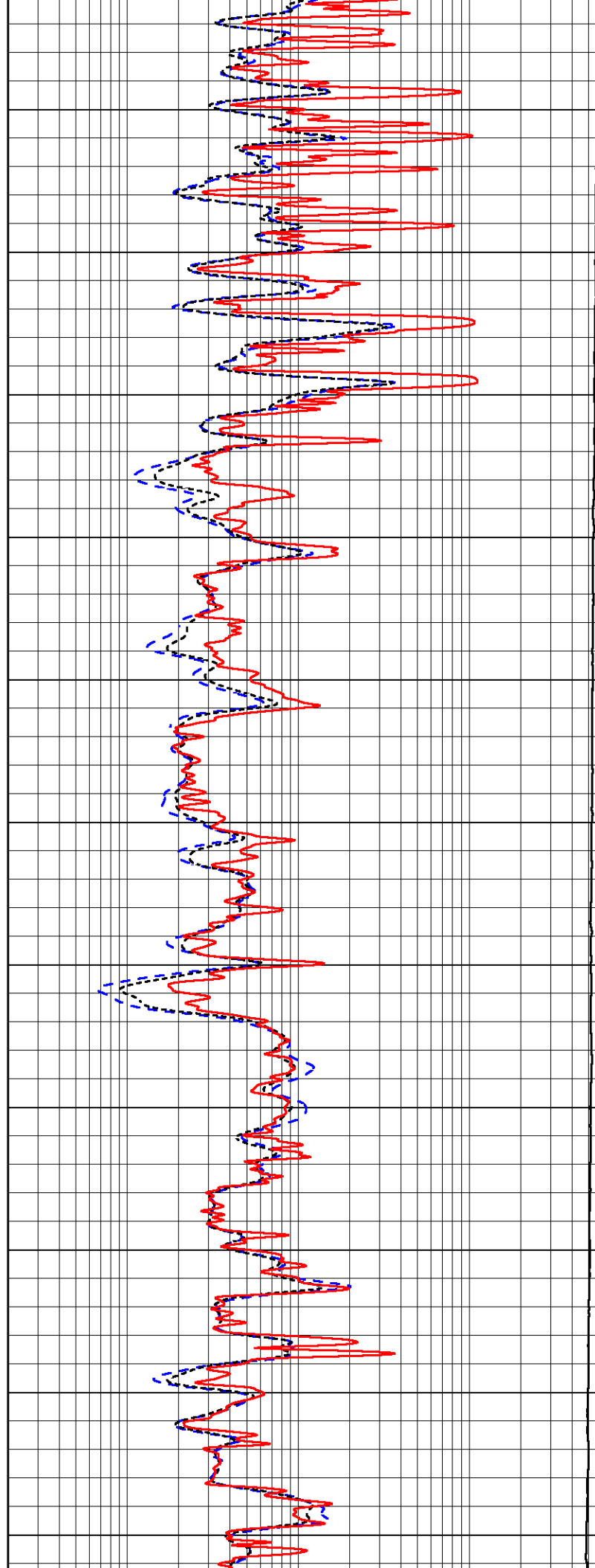
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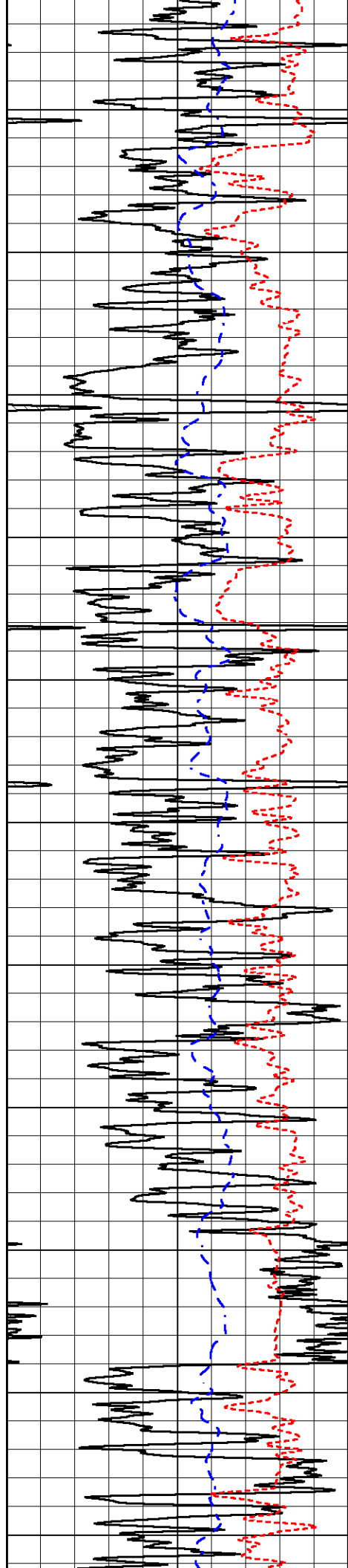
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2600

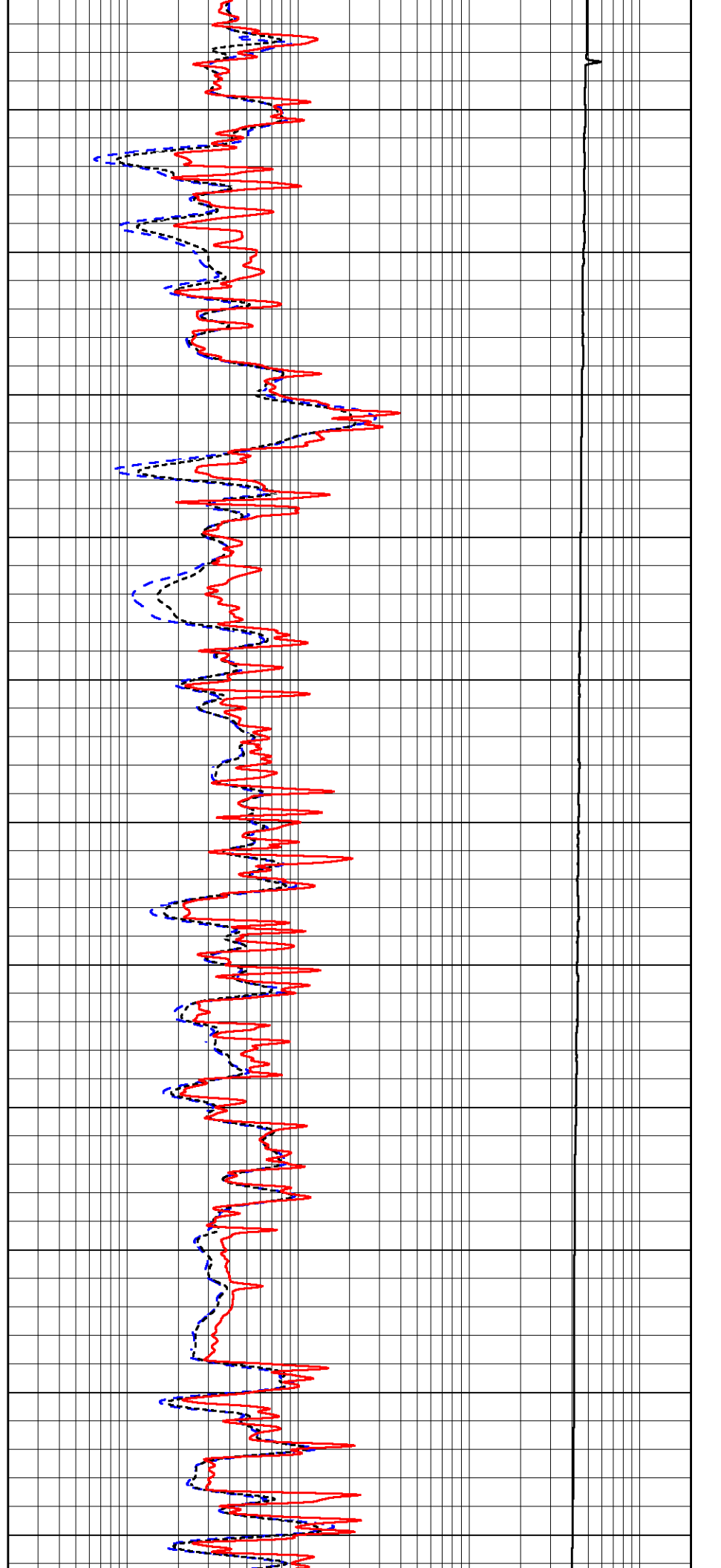
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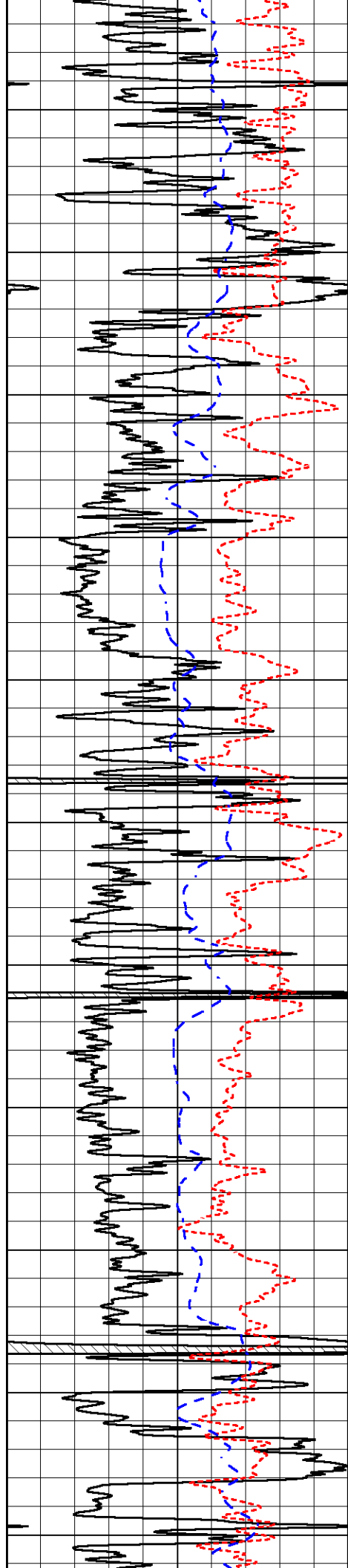
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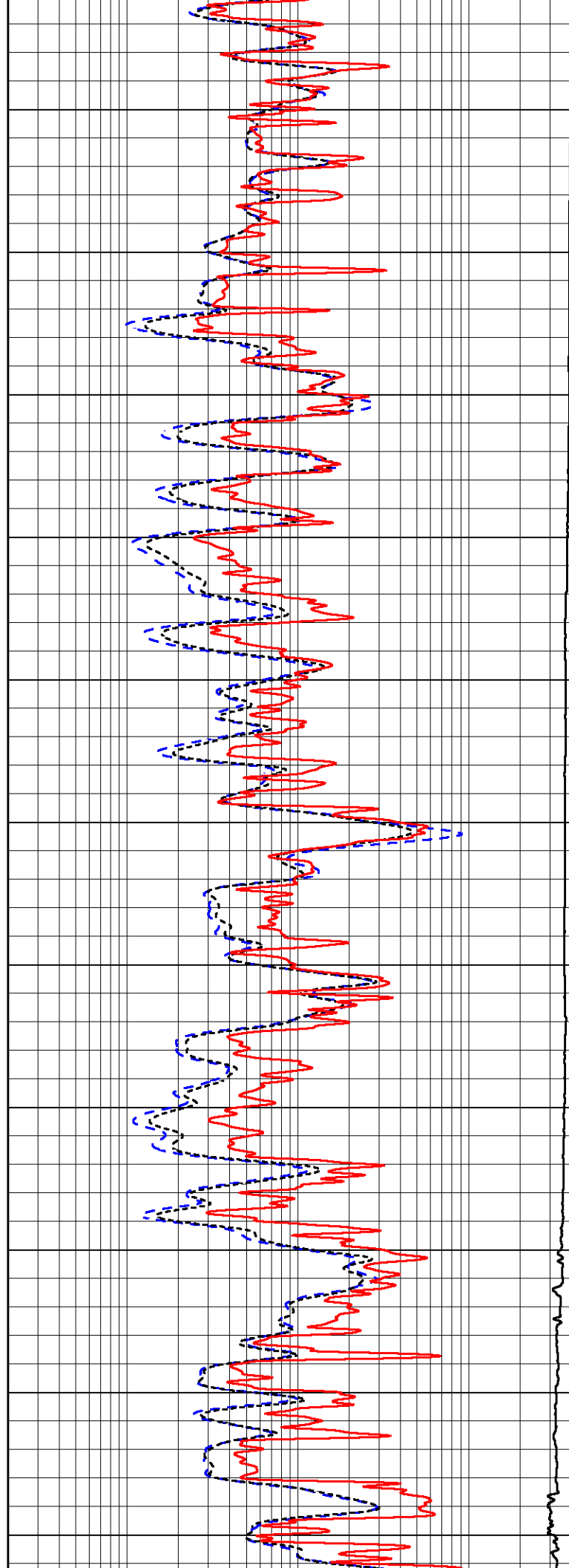


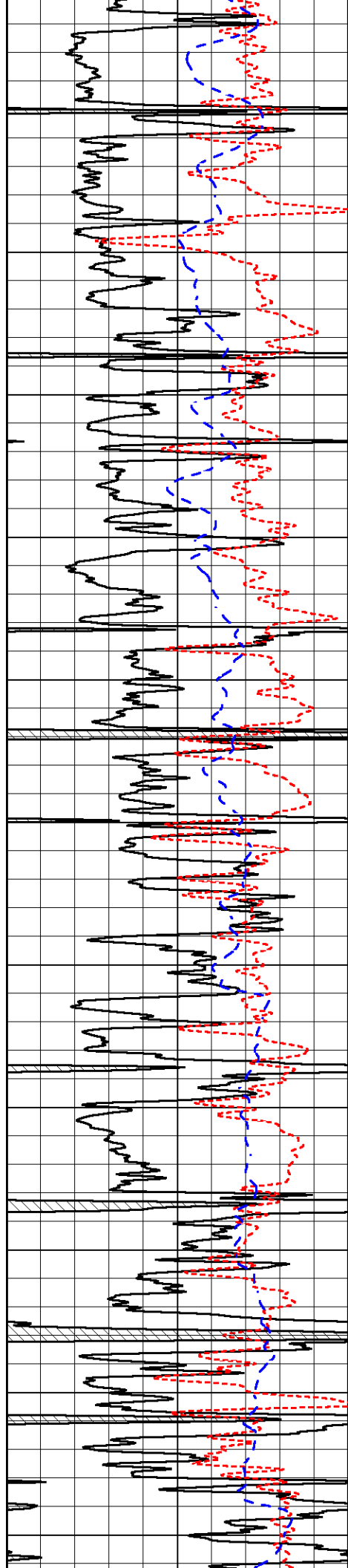
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2800  
2850  
2900  
2950  
3000  
3050  
3100  
3150  
3200  
3250



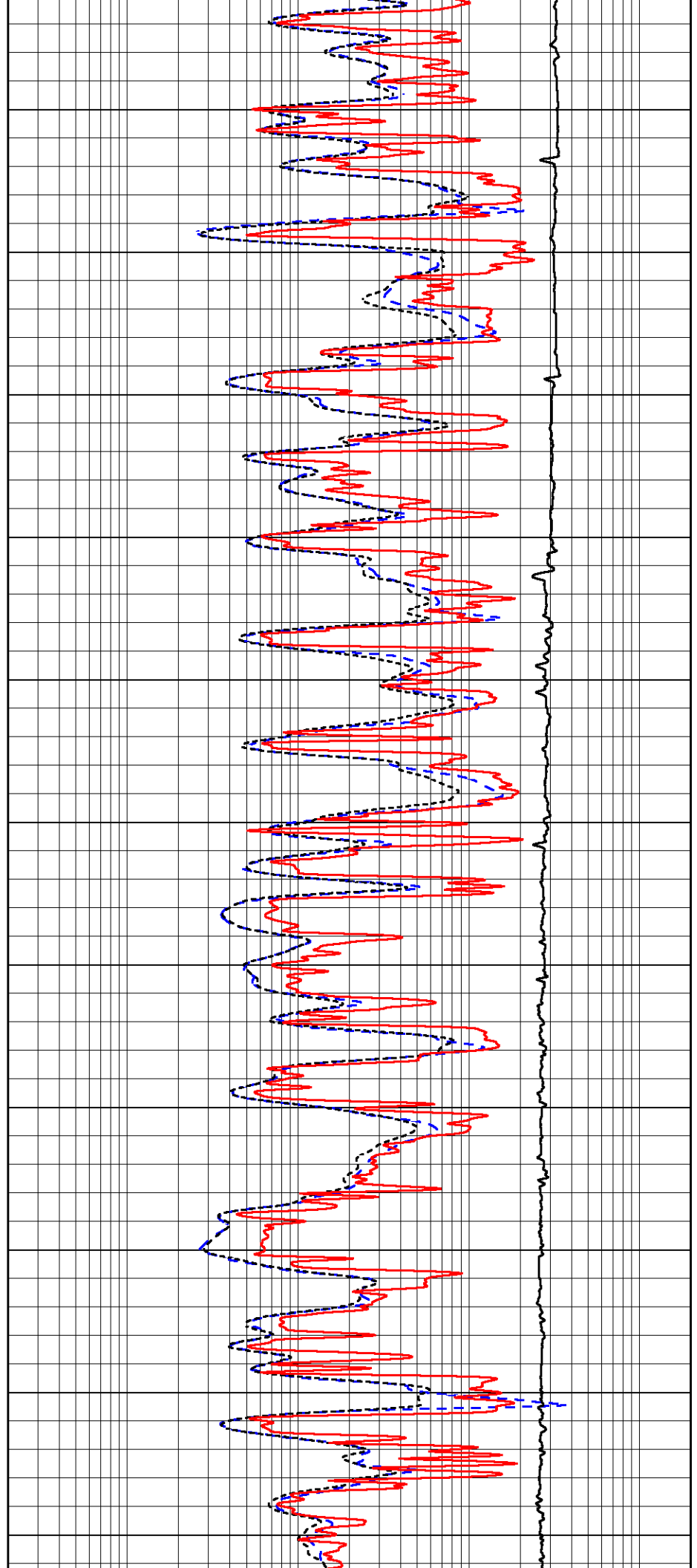


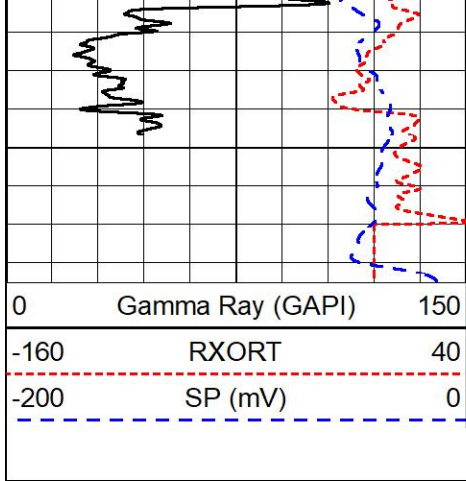
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3350  
3400  
3450  
3500  
3550  
3600  
3650  
3700  
3750  
3800



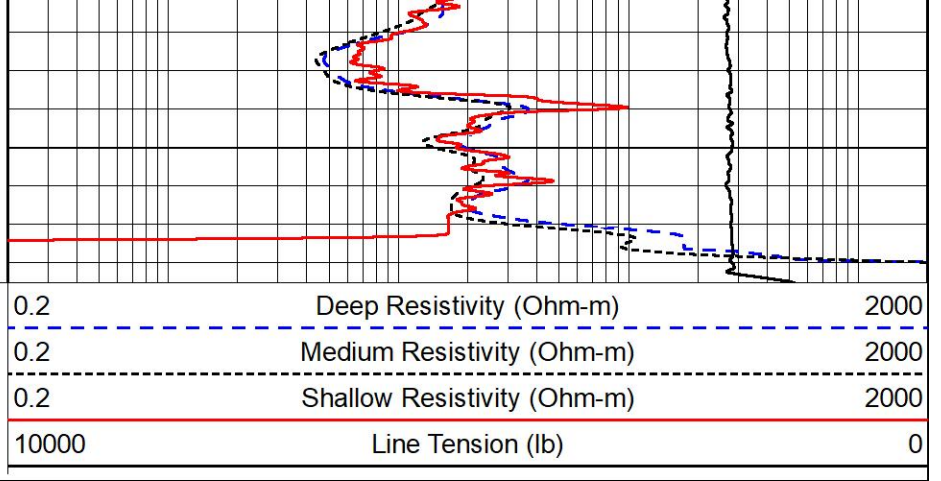


3850  
3900  
3950  
4000  
4050  
4100  
4150  
4200  
4250  
4300  
4350





4400

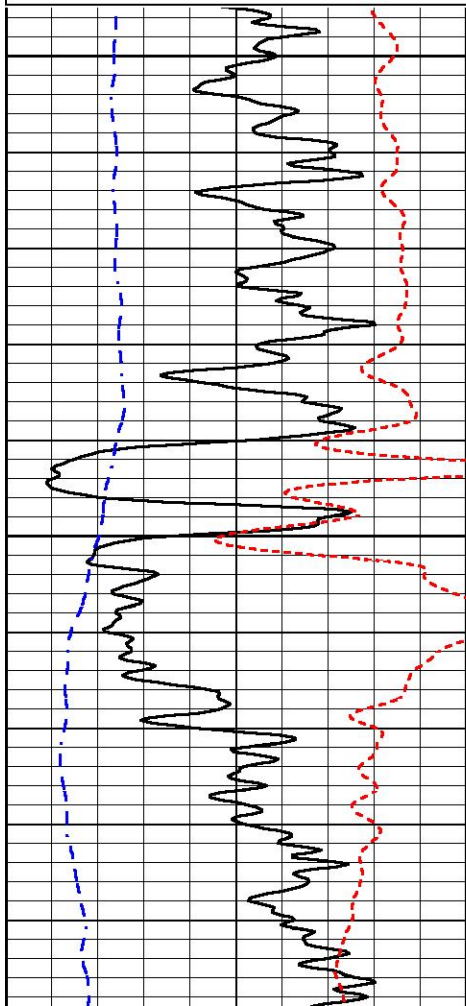
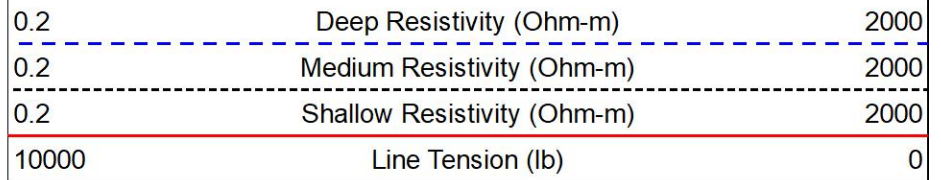
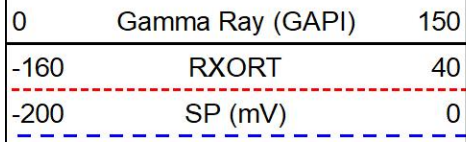


MIDWEST WIRELINE

# ANHYDRITE SECTION

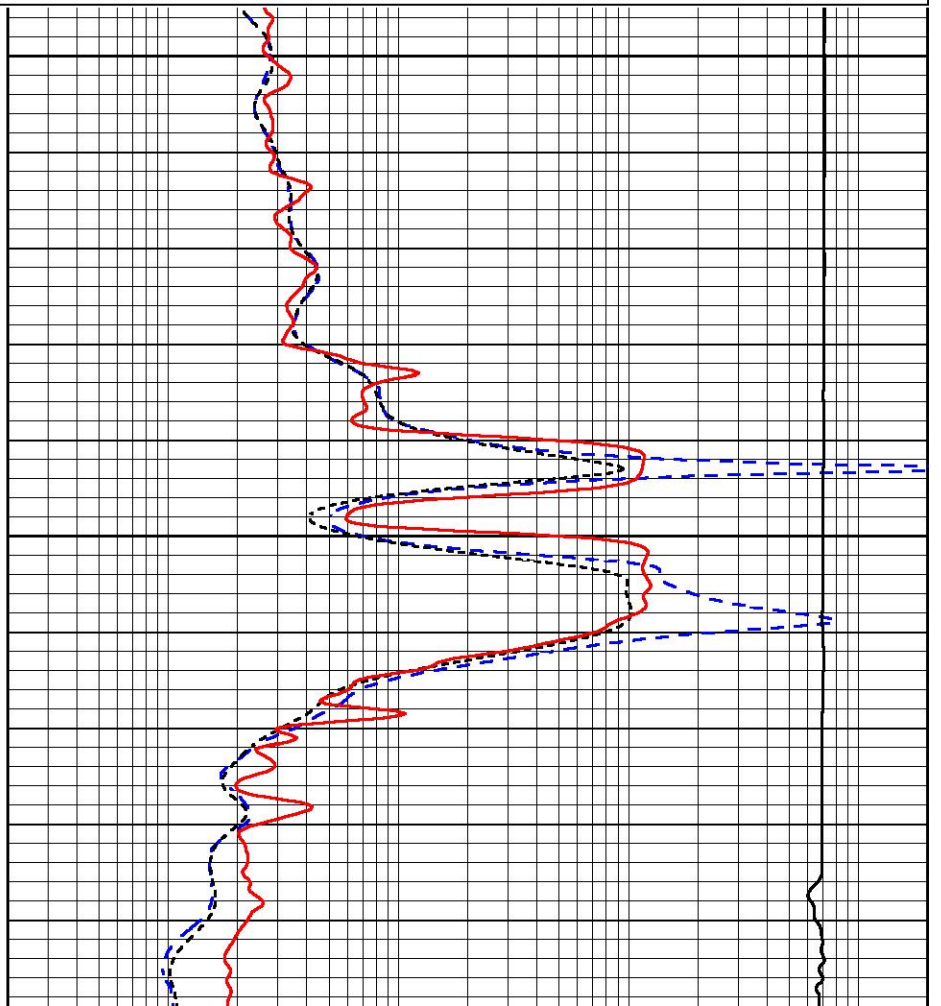
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Database File      brehm\_seib\_2\_27.db  
 Dataset Pathname    stackml/pass5.1  
 Presentation Format    \_dil  
 Dataset Creation      Fri Jan 07 18:53:38 2022  
 Charted by            Depth in Feet scaled 1:240



1350

1400



0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

1450

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



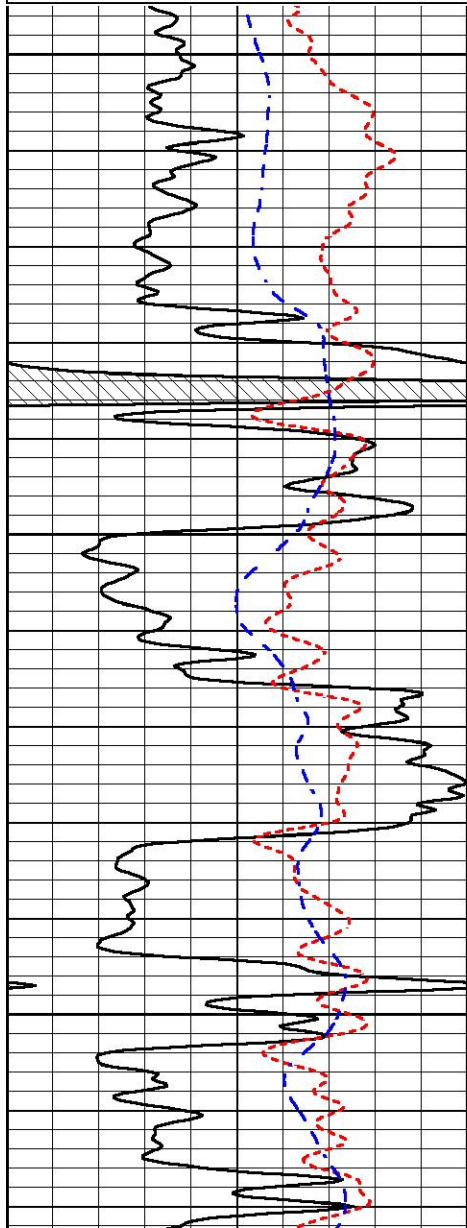
# DETAIL SECTION

## MAIN PASS

Database File        brehm\_seib\_2\_27.db  
 Dataset Pathname    stackml/pass4.1  
 Presentation Format    \_dil  
 Dataset Creation      Fri Jan 07 18:28:22 2022  
 Charted by            Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

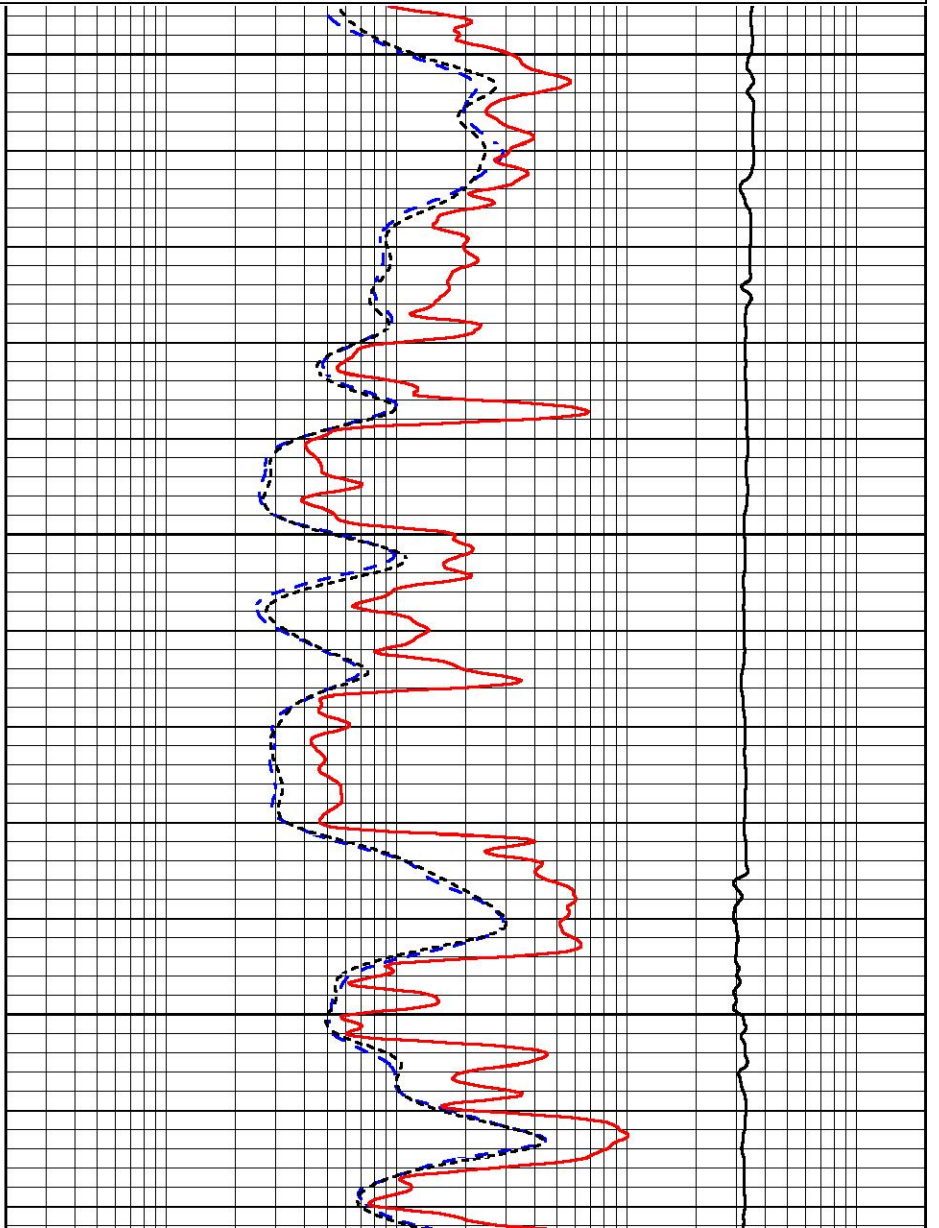
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

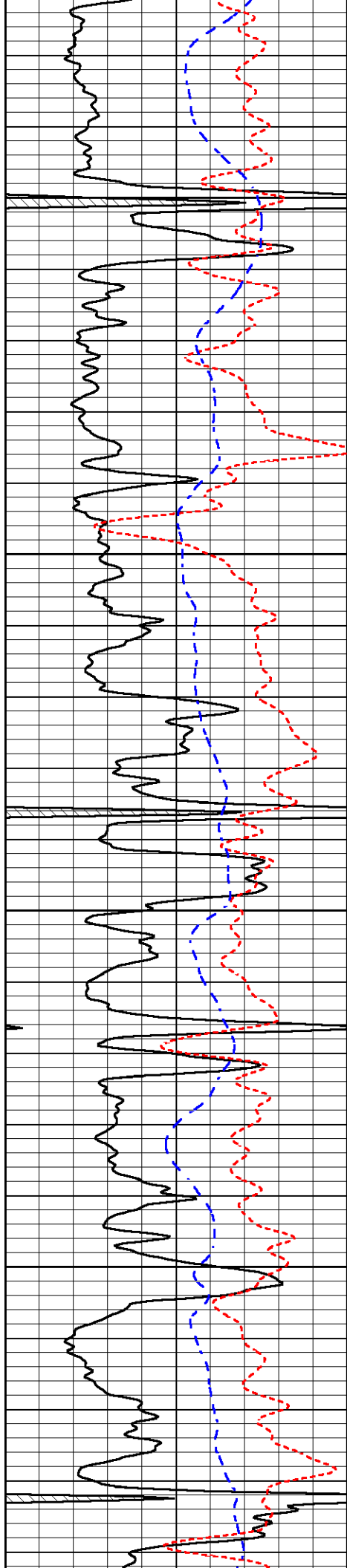


3700

3750

3800



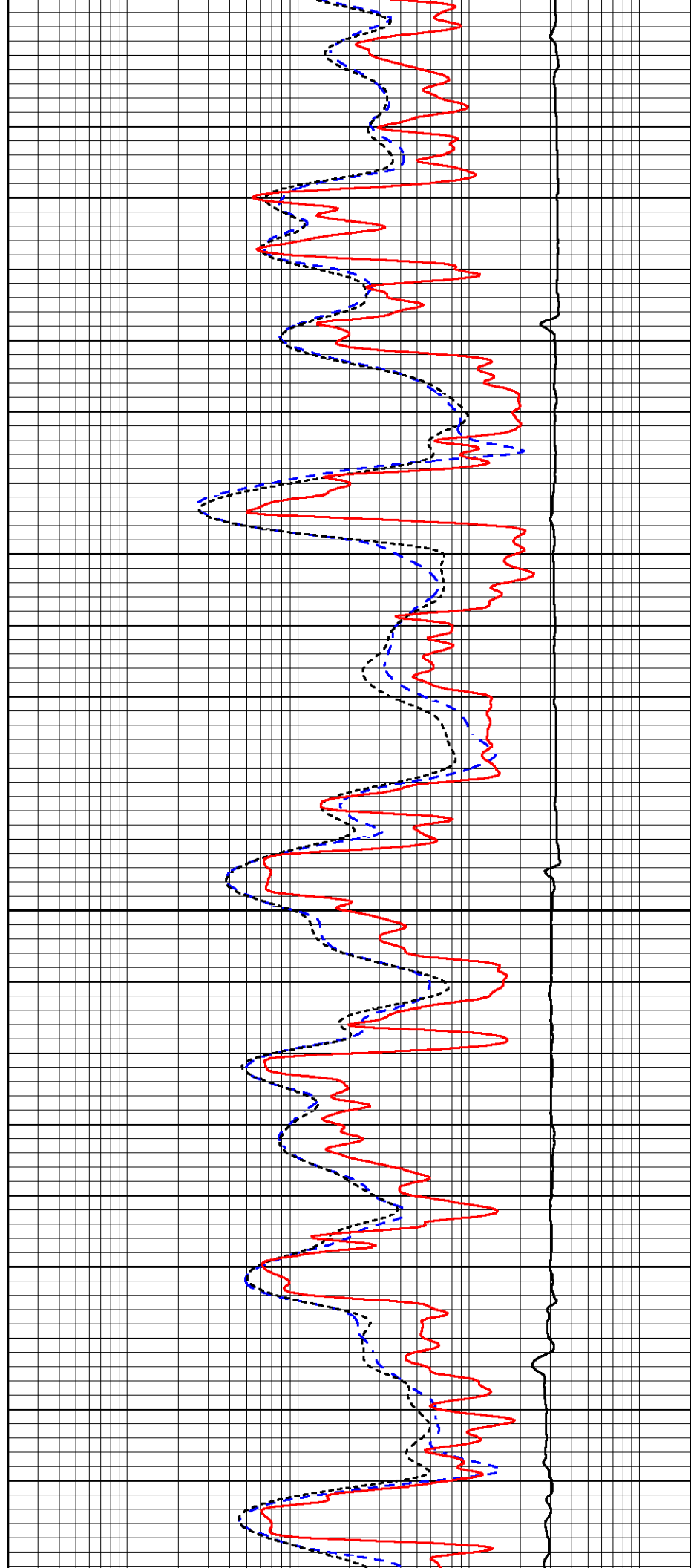


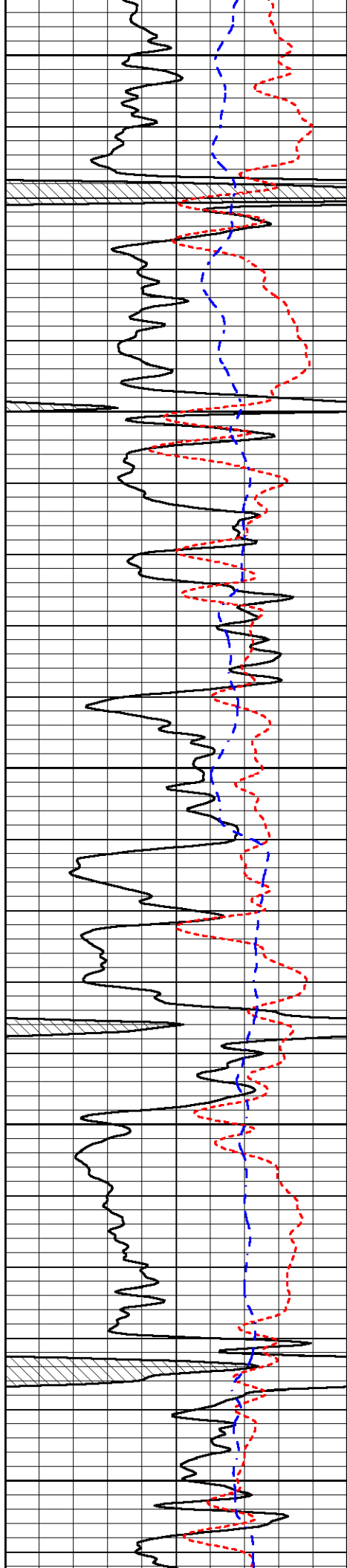
3850

3900

3950

4000





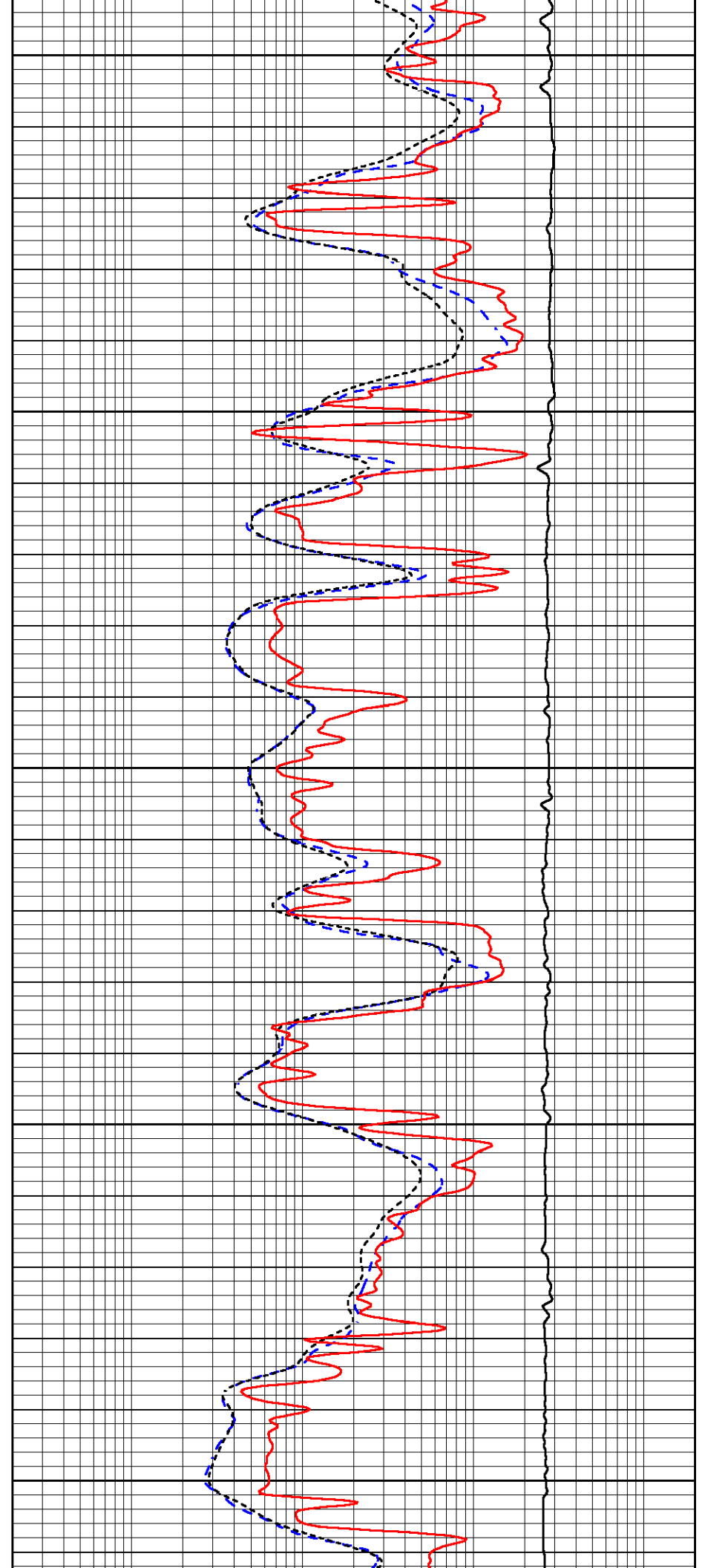
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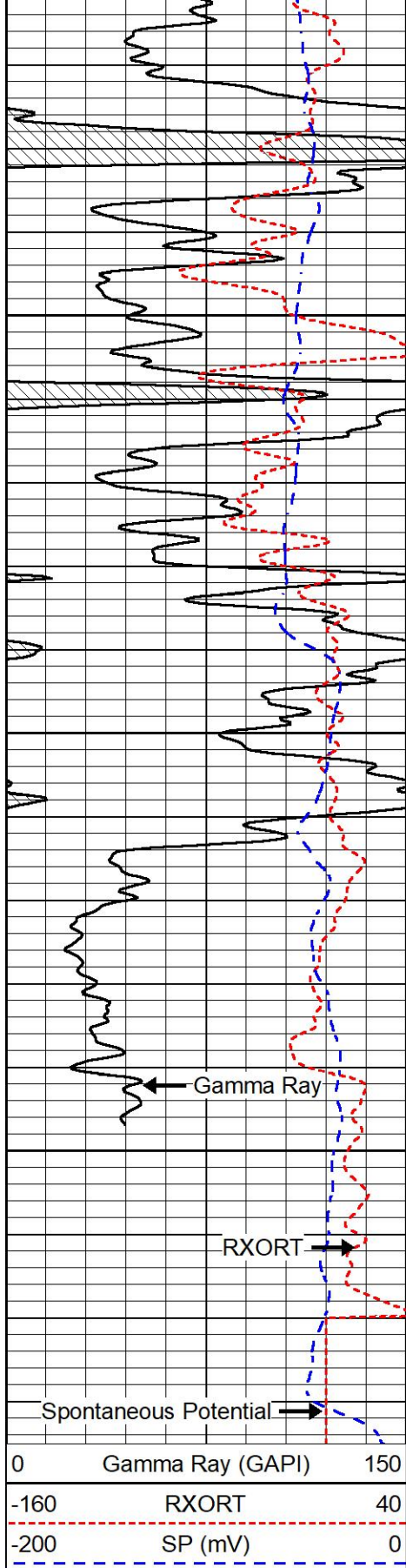
4100

4150

4200

4250

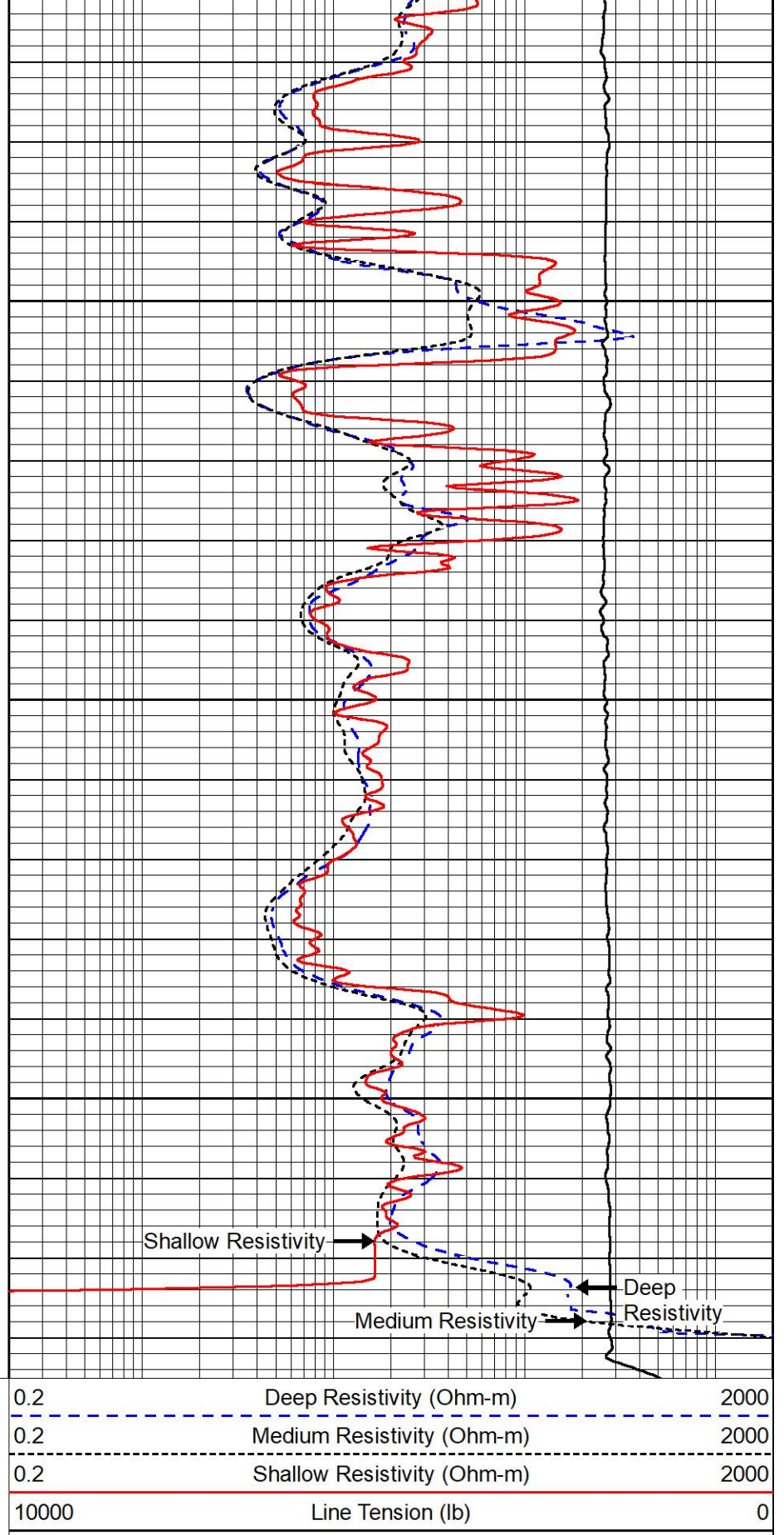




4300

4350

4400



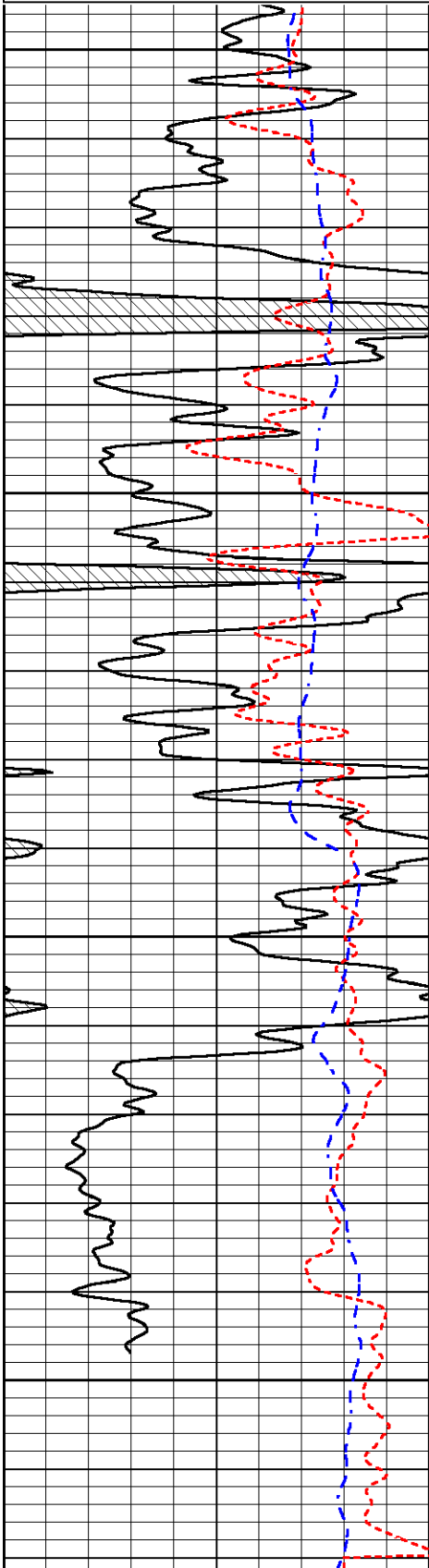
REPEAT SECTION

REPEAT PASS

Database File    brehm\_seib\_2\_27.db  
 Dataset Pathname    stackml/pass2.1  
 Presentation Format    \_dil  
 Dataset Creation    Fri Jan 07 18:27:04 2022  
 Charted by    Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

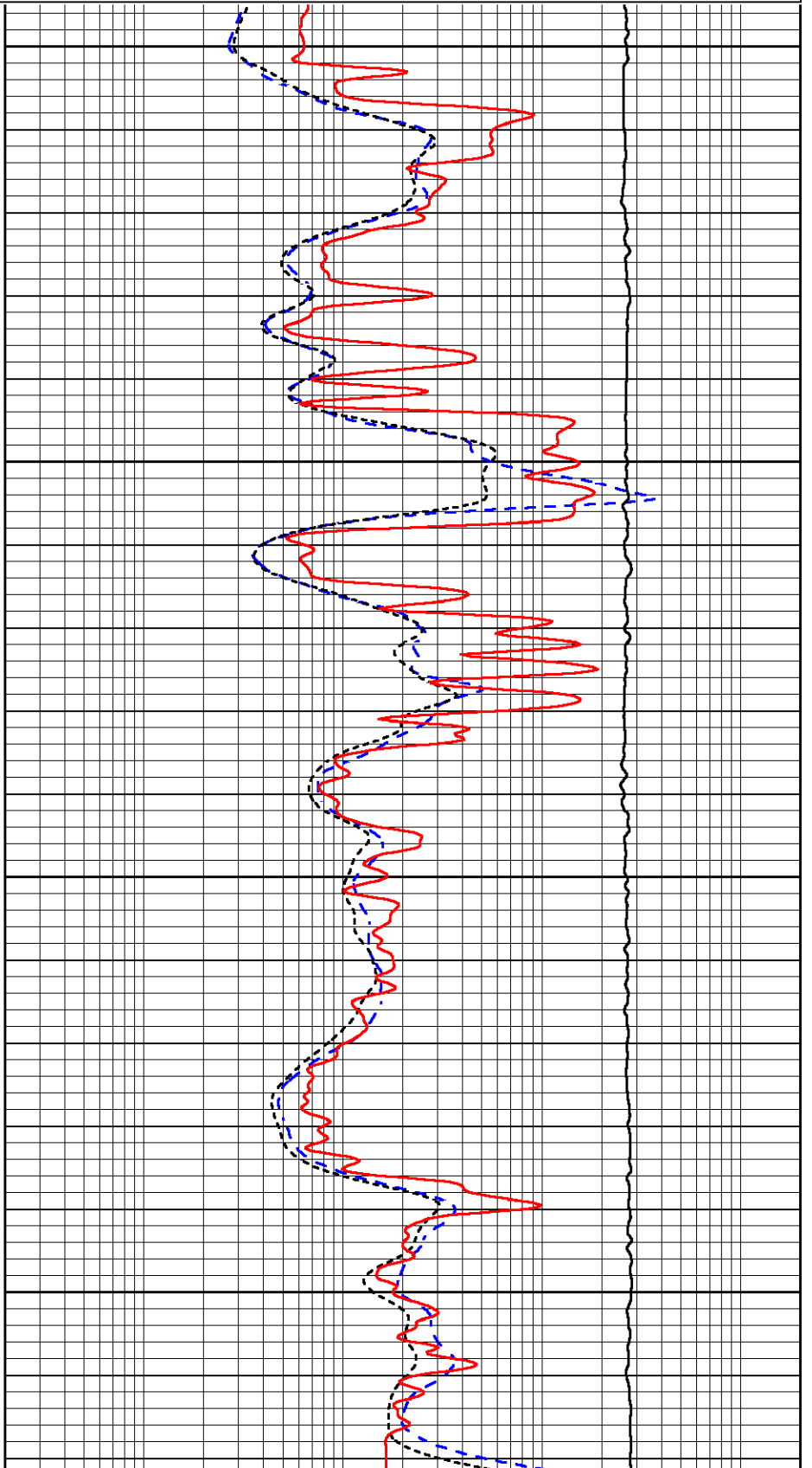


4250

4300

4350

4400



0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

Calibration Report	
Database File	brehm_seib_2_27.db
Dataset Pathname	stackml/pass4.1
Dataset Creation	Fri Jan 07 18:28:22 2022

Dual Induction Calibration Report	
Serial-Model:	504 HT-M&W
Surface Cal Performed:	Thu Dec 16 22:32:49 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.500

Microlog Calibration Report	
Serial-Model:	402-PSI STKBL ML
Performed:	Thu Dec 16 22:29:48 2021

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	23000.0000	-1.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1520	-131.2000

Compensated Density Calibration Report	
Serial-Model:	303-03-M&W
Source #:	21170B
Master Calibration Performed:	Thu Dec 16 23:28:34 2021

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.670	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.515		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.05		

Compensated Neutron Calibration Report	
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Serial-Model:  
Source #:  
Master Calibration Performed:

210-M&W  
N-1238  
Fri Dec 3 09:16:24 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: 103  
Tool Model: M&W  
Performed: Fri Dec 3 12:13:24 2021

Calibrator Value: 500.0 GAPI

Background Reading: 28.0 cps  
Calibrator Reading: 986.0 cps

Sensitivity: 0.5700 GAPI/cps



Company Brehm Asset Management LLC  
Well SEIB #2-27  
Field SEIB  
County Ness  
State Kansas