



MIDWEST WIRELINE

DUAL INDUCTION
LOG

Company Ritchie Exploration, Inc.		Company Ritchie Exploration, Inc.	
Well Scheuerman-Hrbek Trust #1		Well Scheuerman-Hrbek Trust #1	
Field		Field	
County Scott		County Scott	
State Kansas		State Kansas	
Location: API #: 15-171-21280-00-00		Other Services	
SEC 21 TWP 16S RGE 31W		C/NL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	2921
Log Measured From	Kelly Bushing	K.B.	2932
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2921
Date	12/5/2021		
Run Number	One		
Depth Driller	4695		
Depth Logger	4695		
Bottom Logged Interval	4694		
Top Log Interval	200		
Casing Driller	8.625 @ 219		
Casing Logger	219		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3100		
Density / Viscosity	9.3 52		
pH / Fluid Loss	11.0 6.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 55		
Rmt @ Meas. Temp	0.45 @ 55		
Rmc @ Meas. Temp	0.81 @ 55		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.27 @ 123		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	123		
Equipment Number	P-24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	John Goldsmith		

<<< 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.

Healy,
West to Taos Rd, 3 1/2 North, 1/2 East,
South into

Log Measured From: Kelly Bushing11 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: D. Schmidt		Primary Witness: John Goldsmith	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\ritchie_scheurmanhrbek trust 1.db
Dataset field/well/stkml/pass3.5/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	123	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	230	40		4695

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

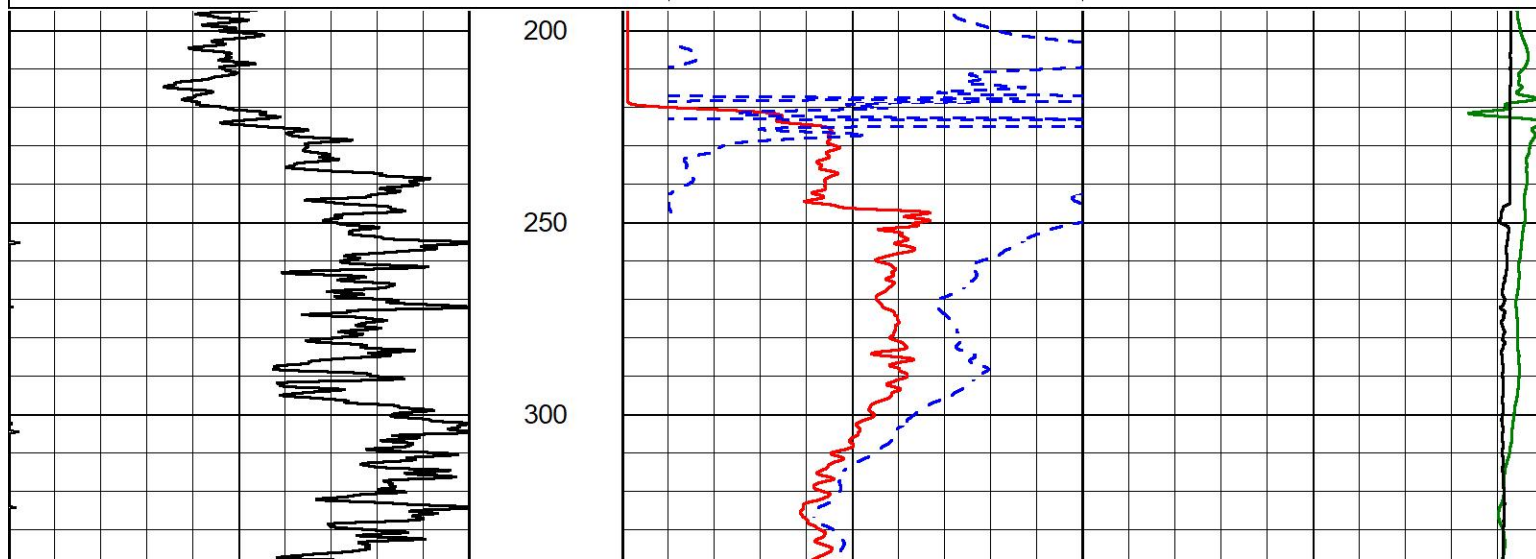


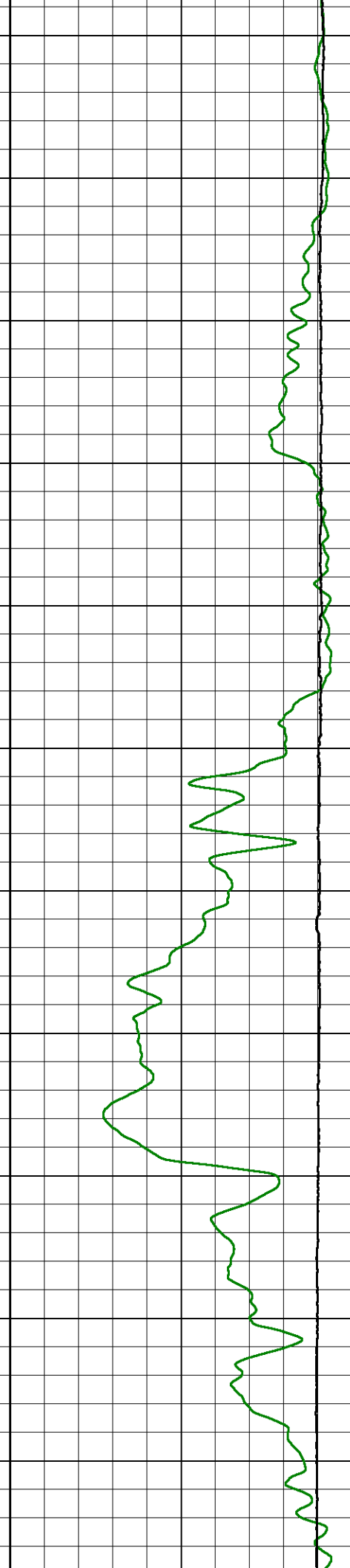
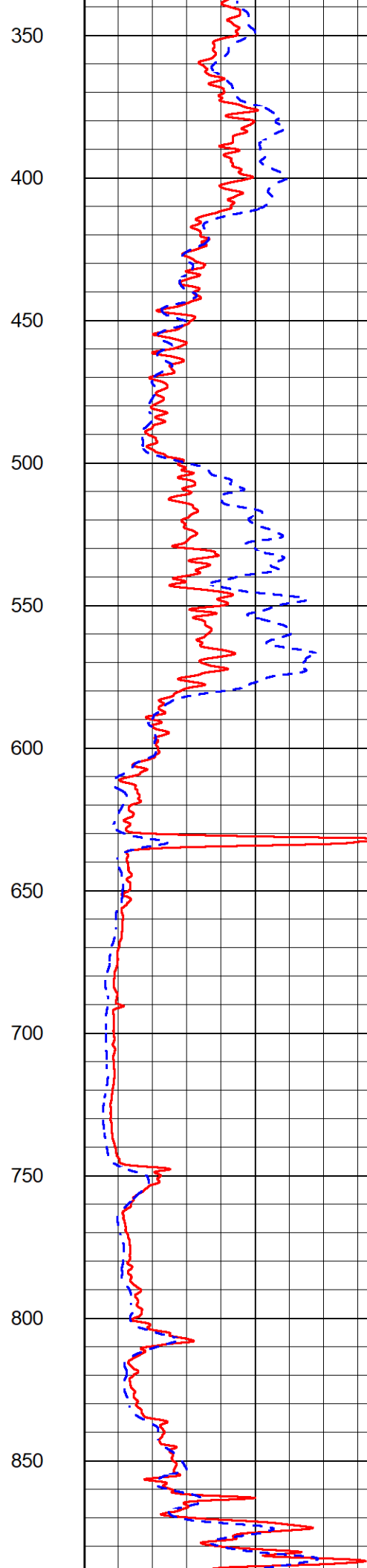
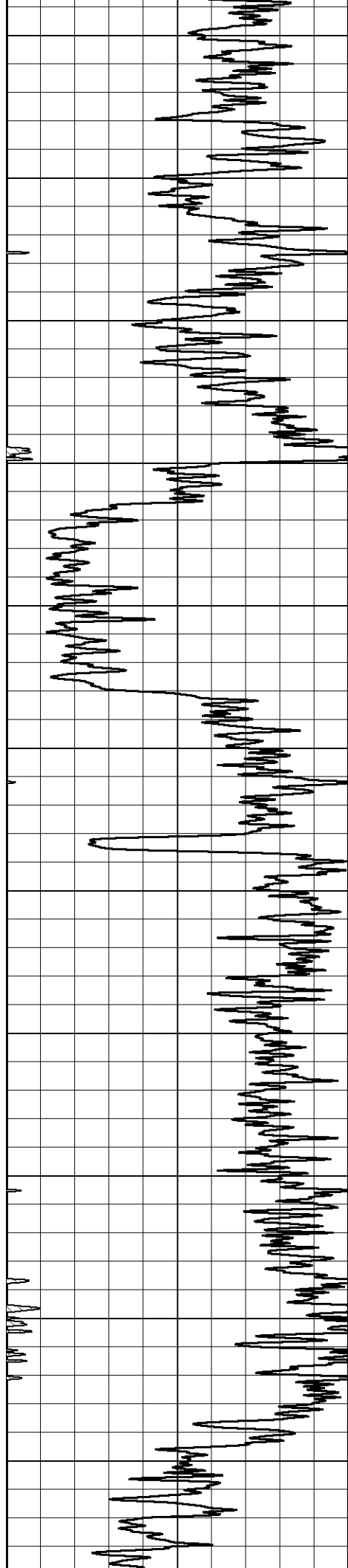
2" SCALE RESISTIVITY

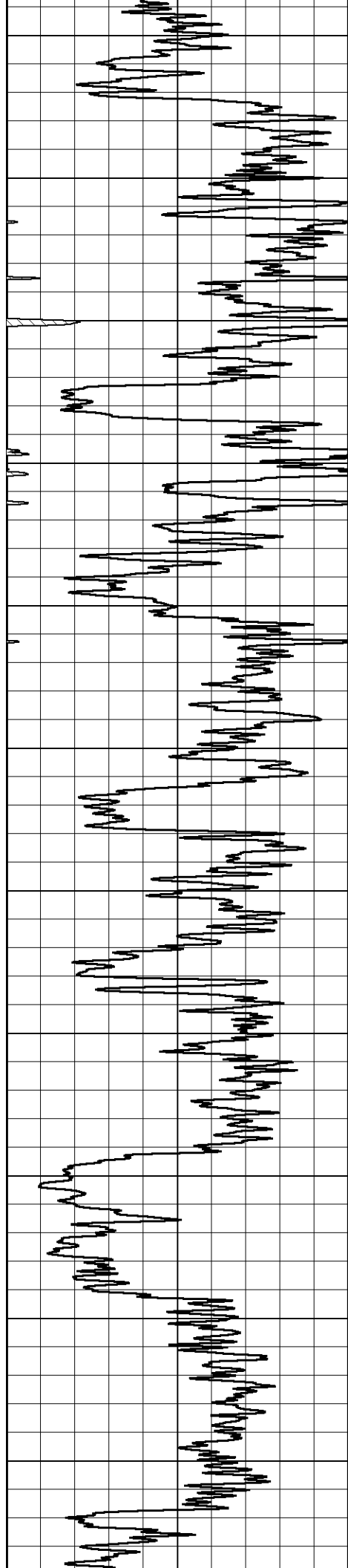
MAIN PASS

Database File ritchie_scheurmanhrbek trust 1.db
Dataset Pathname stkml/pass5.1
Presentation Format _dil2in
Dataset Creation Sun Dec 05 04:02:30 2021
Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200







900

950

1000

1050

1100

1150

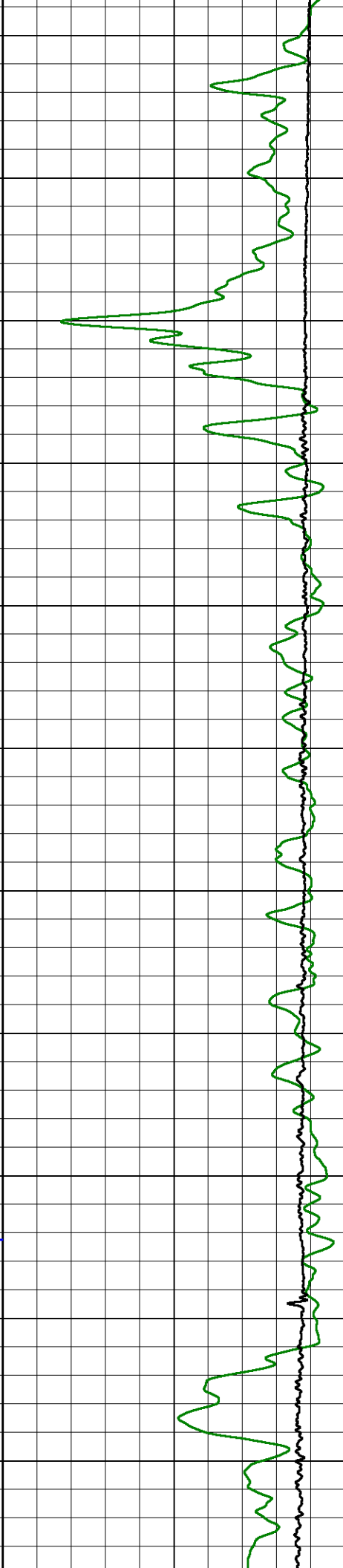
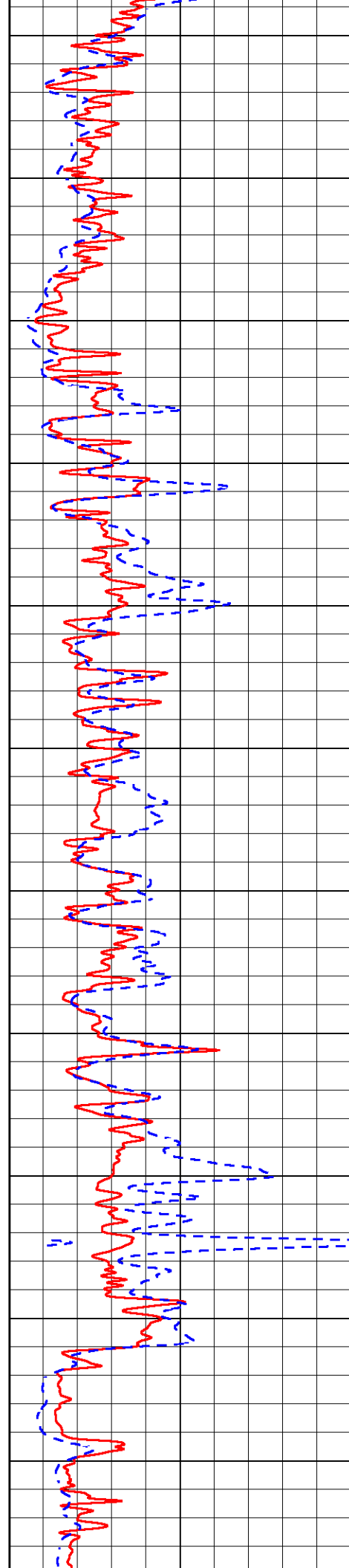
1200

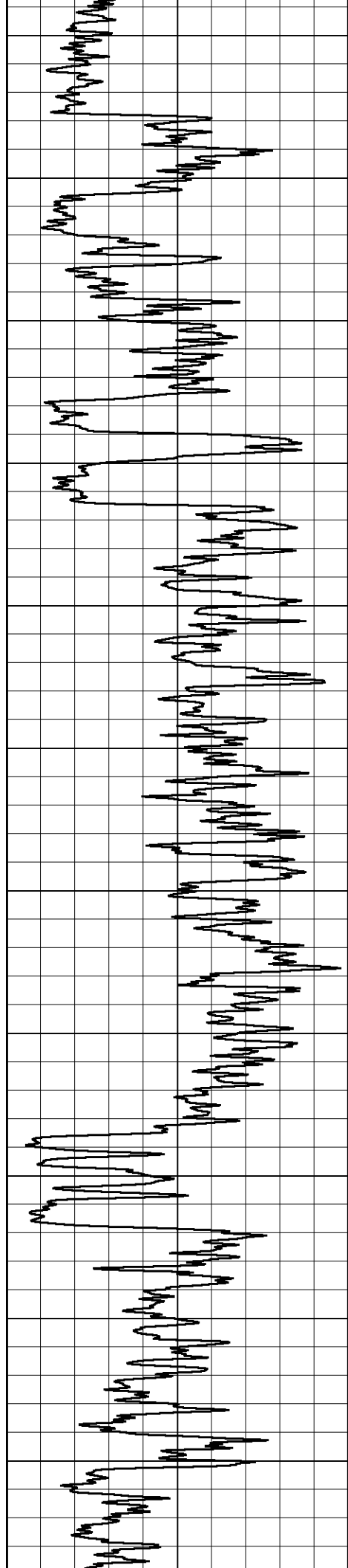
1250

1300

1350

1400





1450

1500

1550

1600

1650

1700

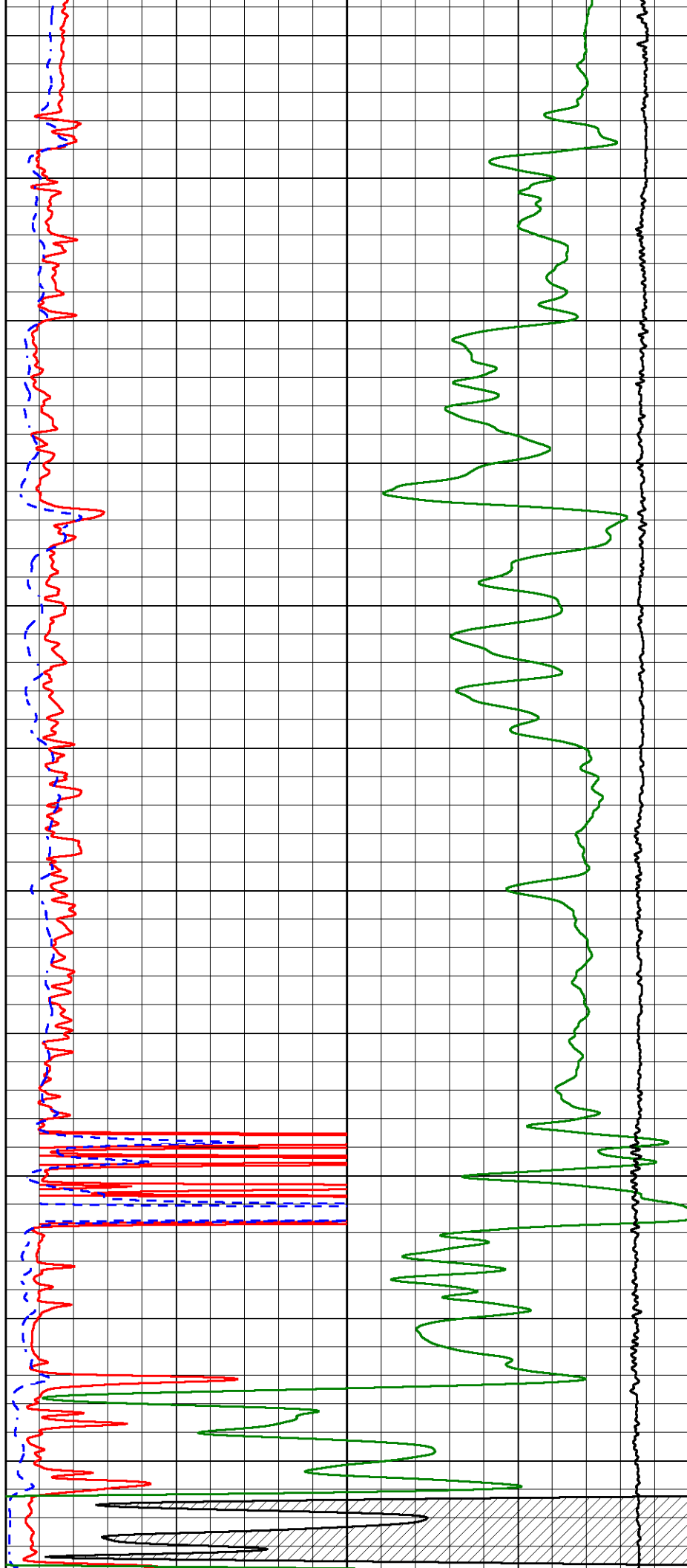
1750

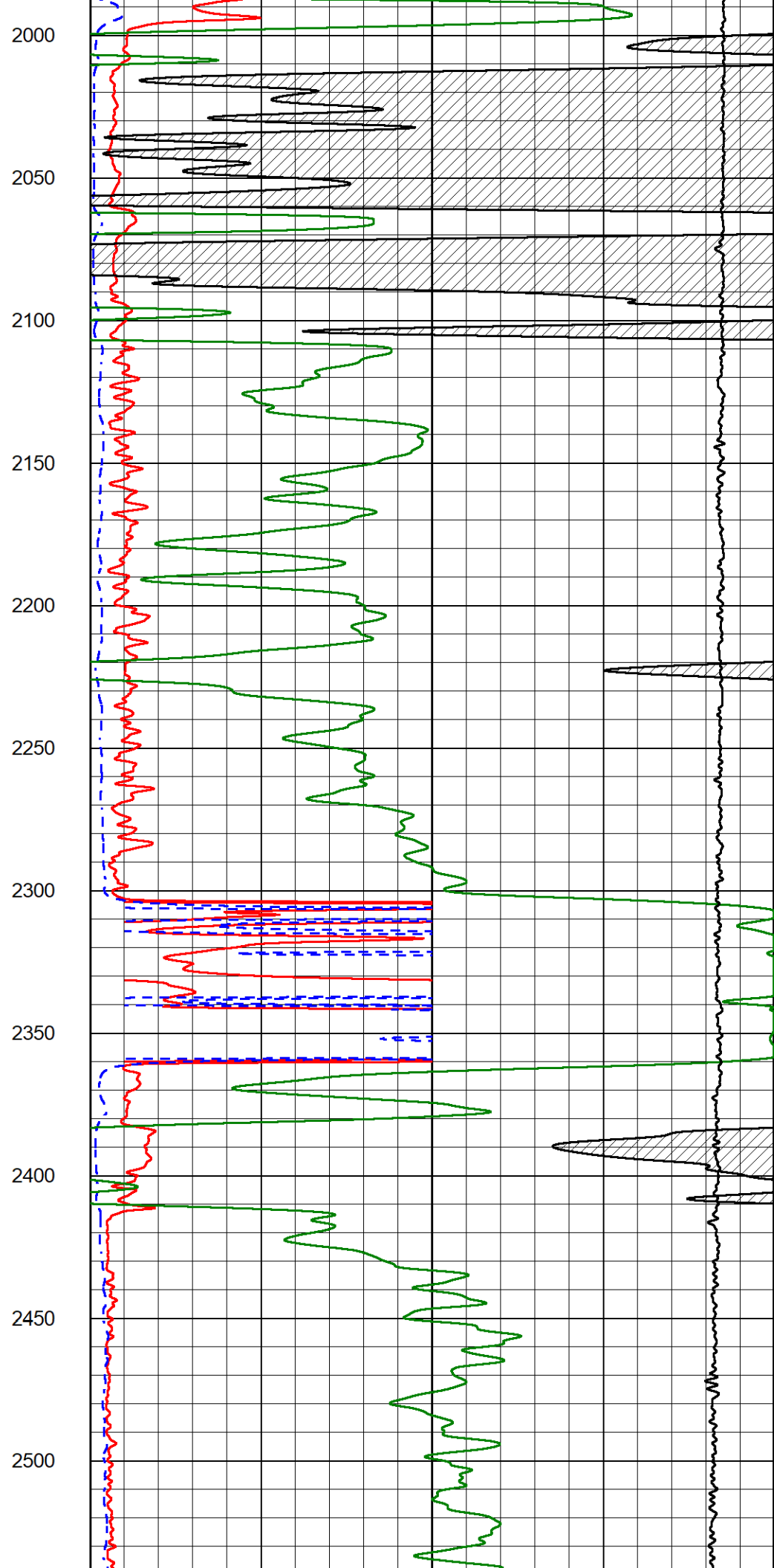
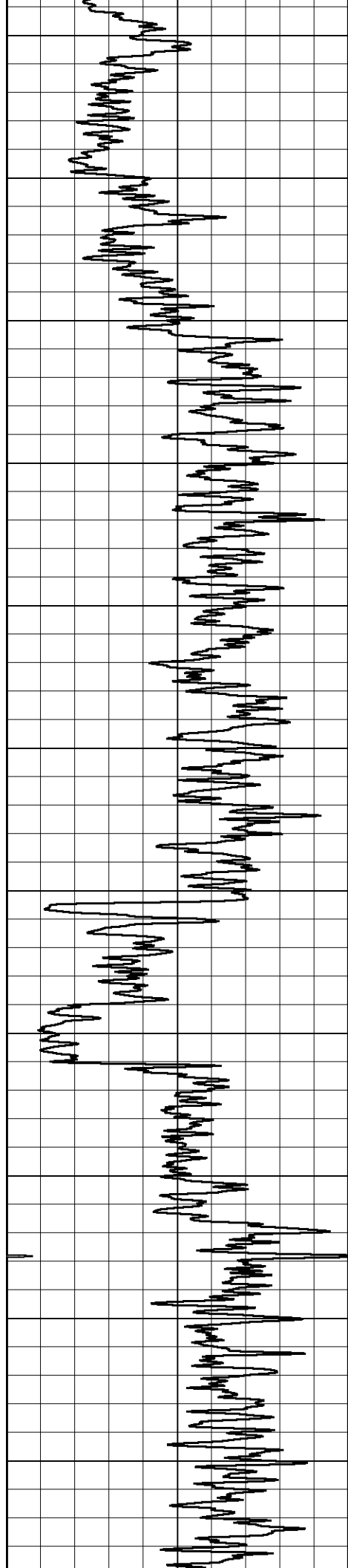
1800

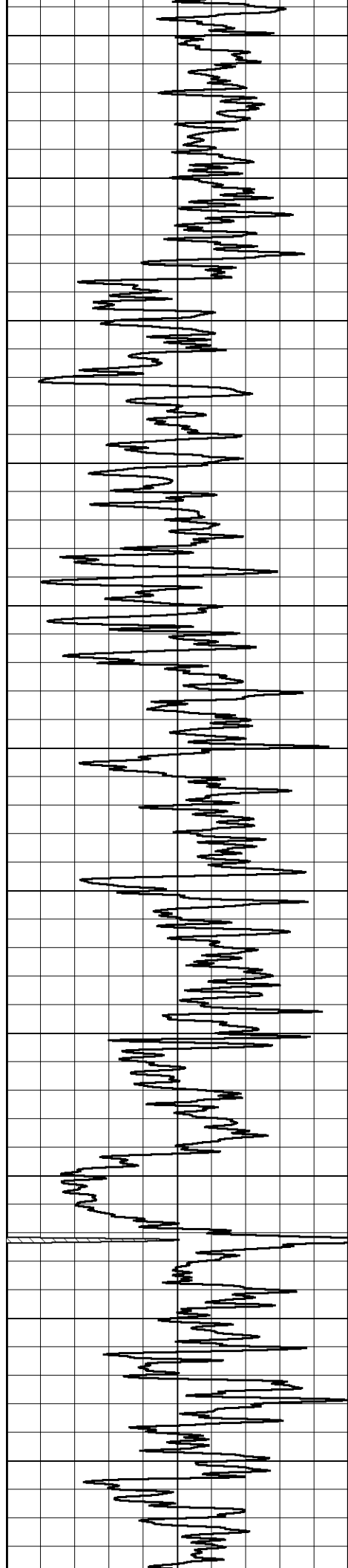
1850

1900

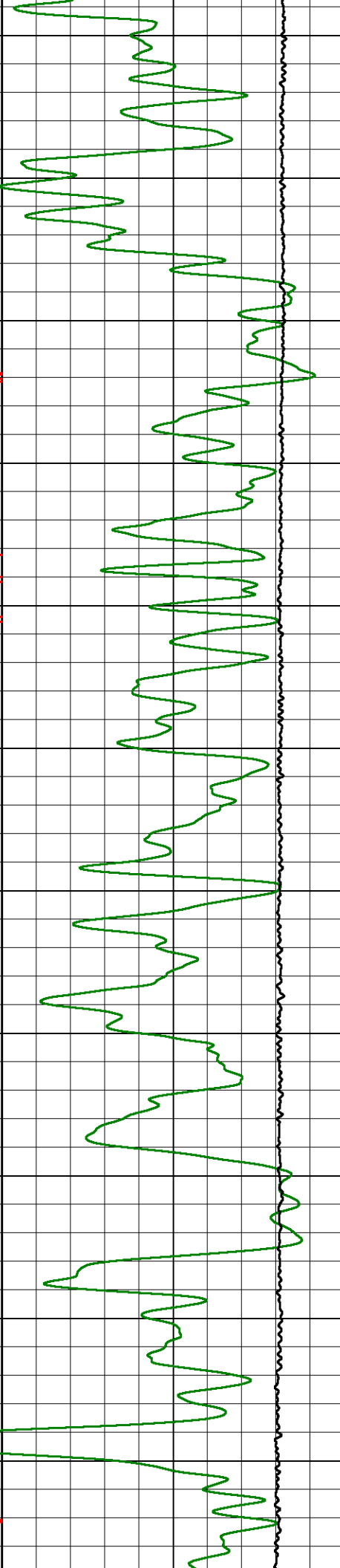
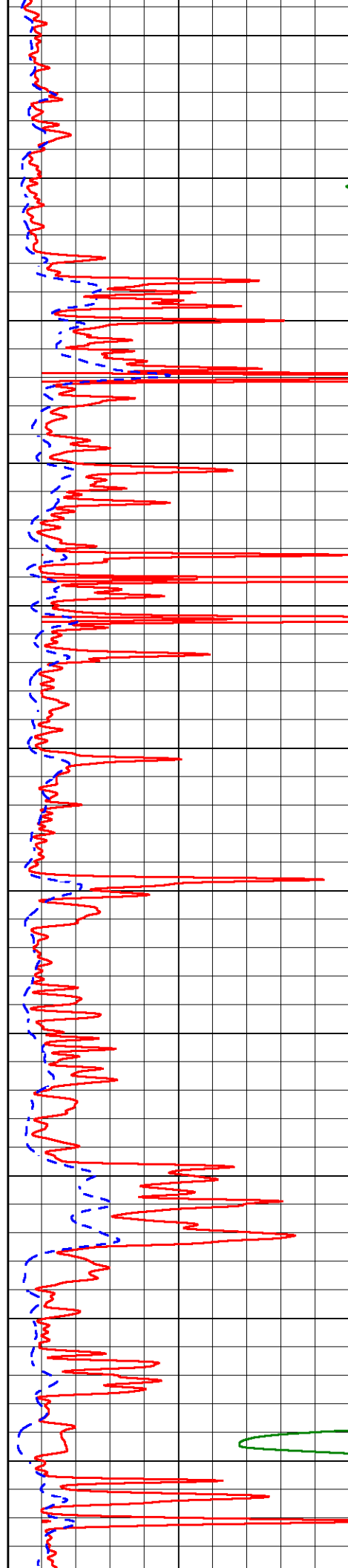
1950

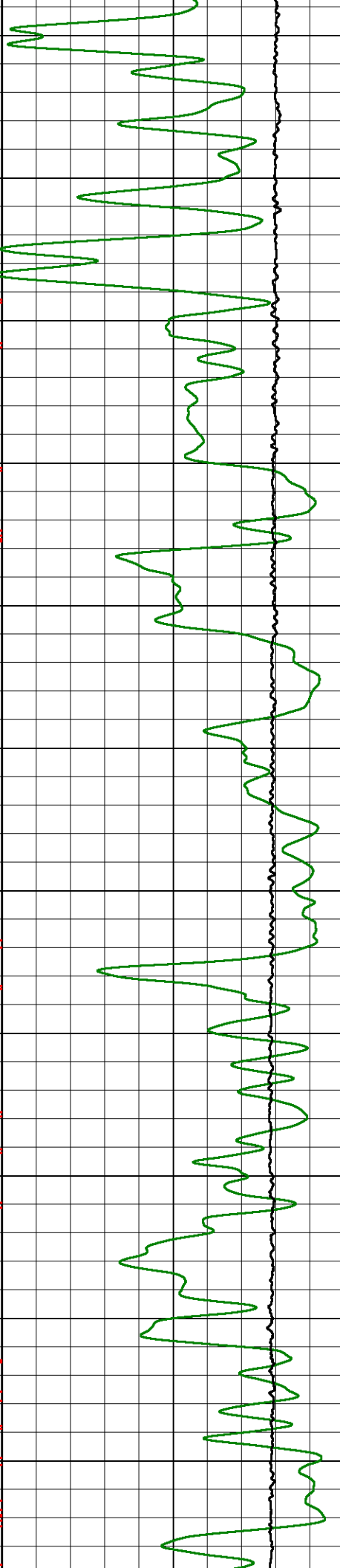
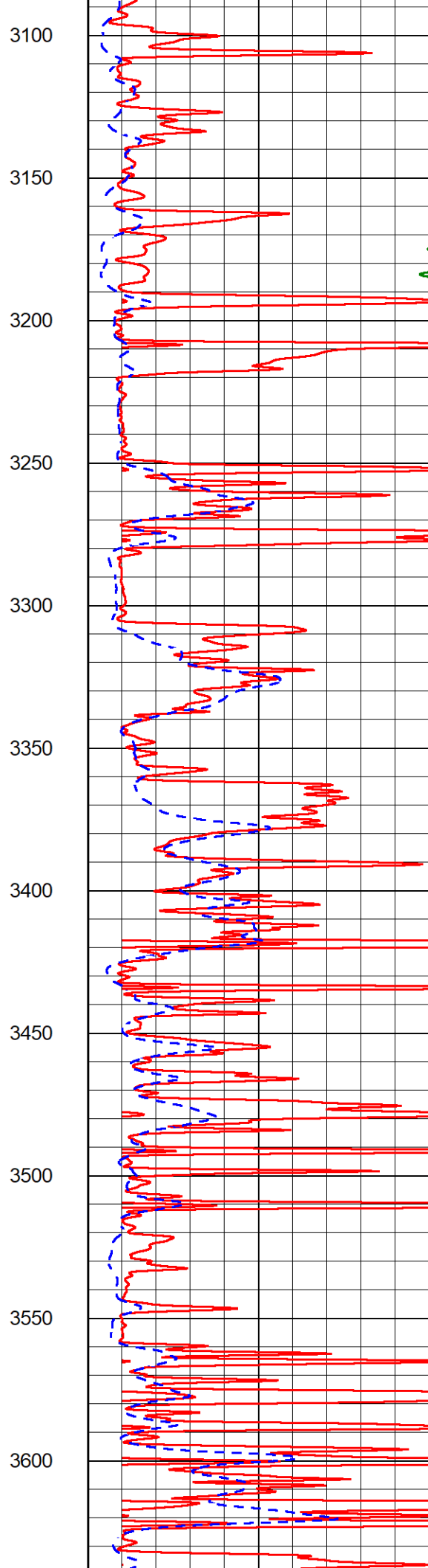
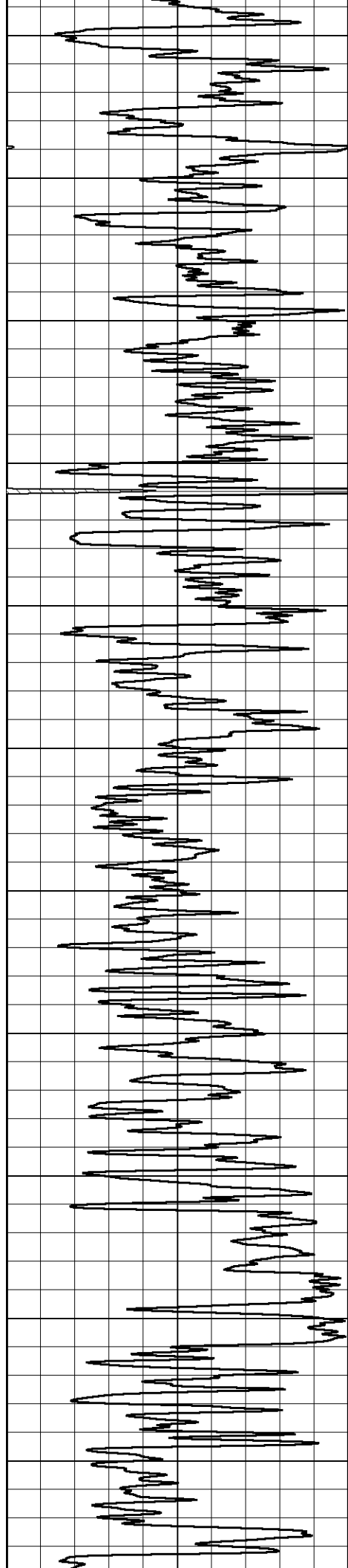


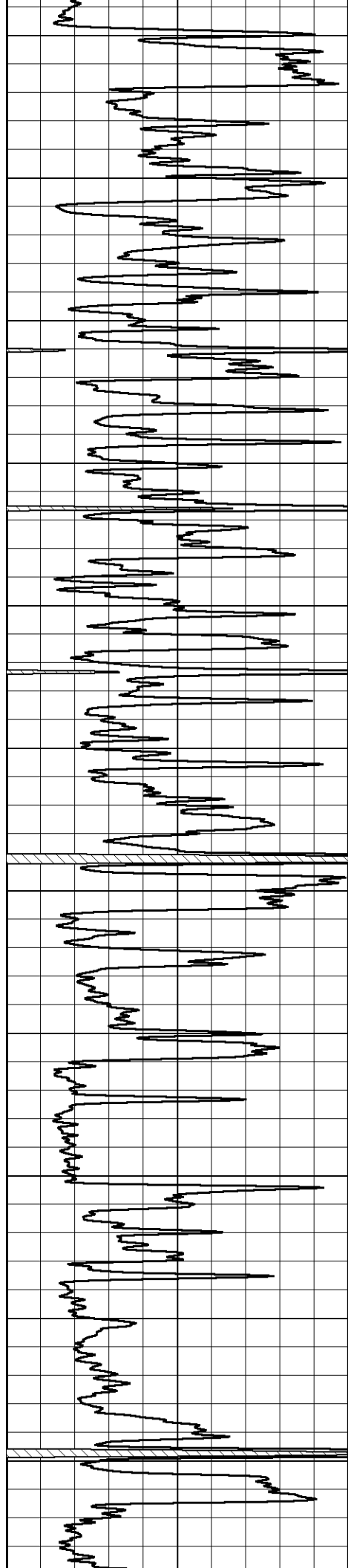




2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050







3650

3700

3750

3800

3850

3900

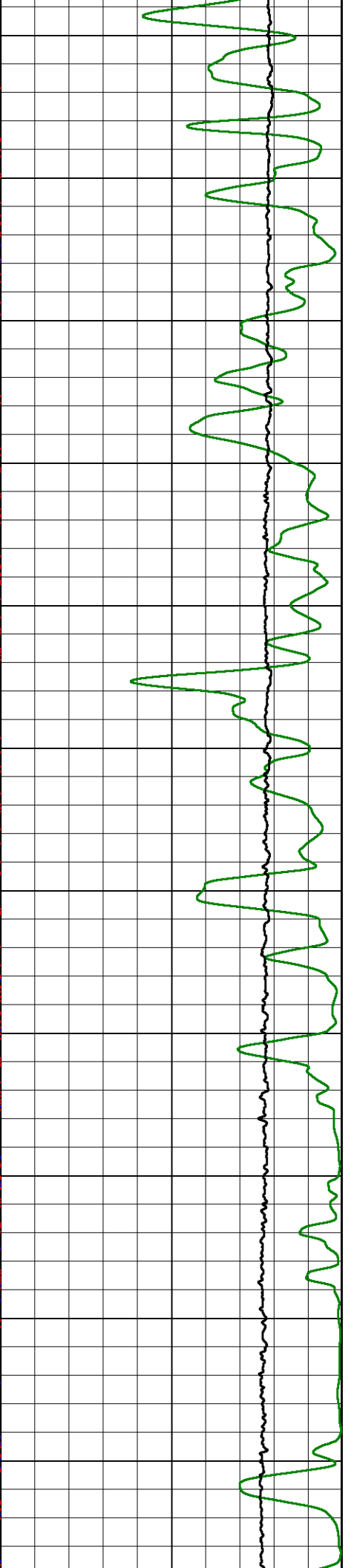
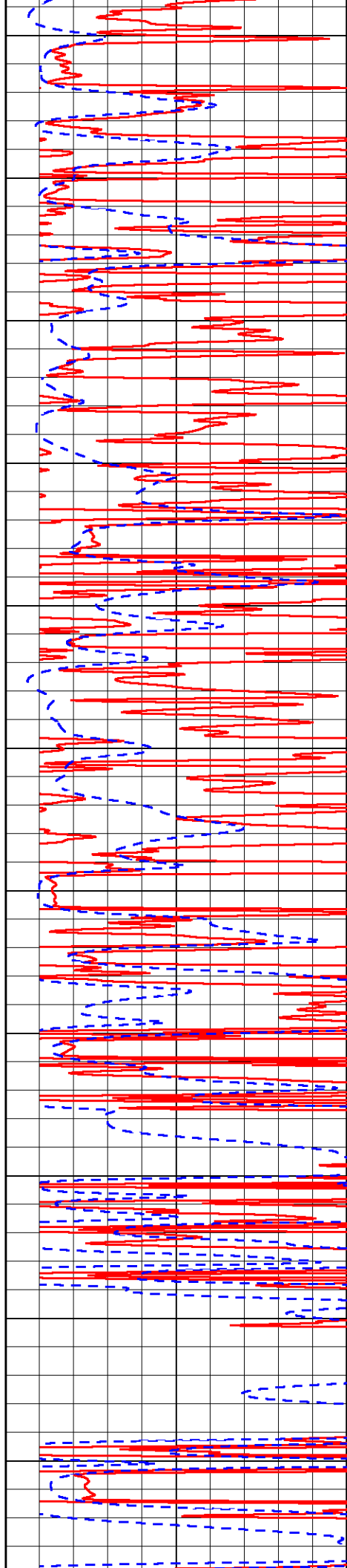
3950

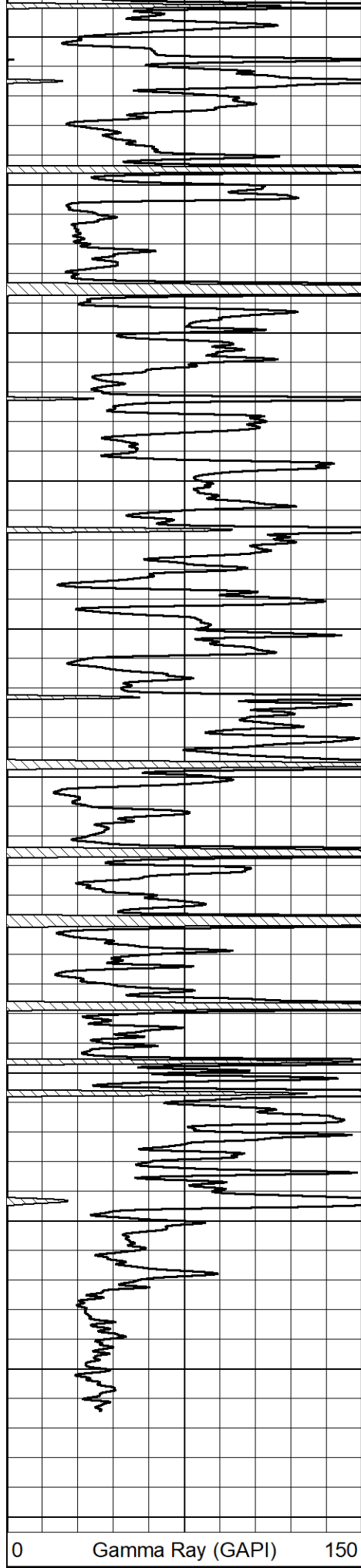
4000

4050

4100

4150





4200

4250

4300

4350

4400

4450

4500

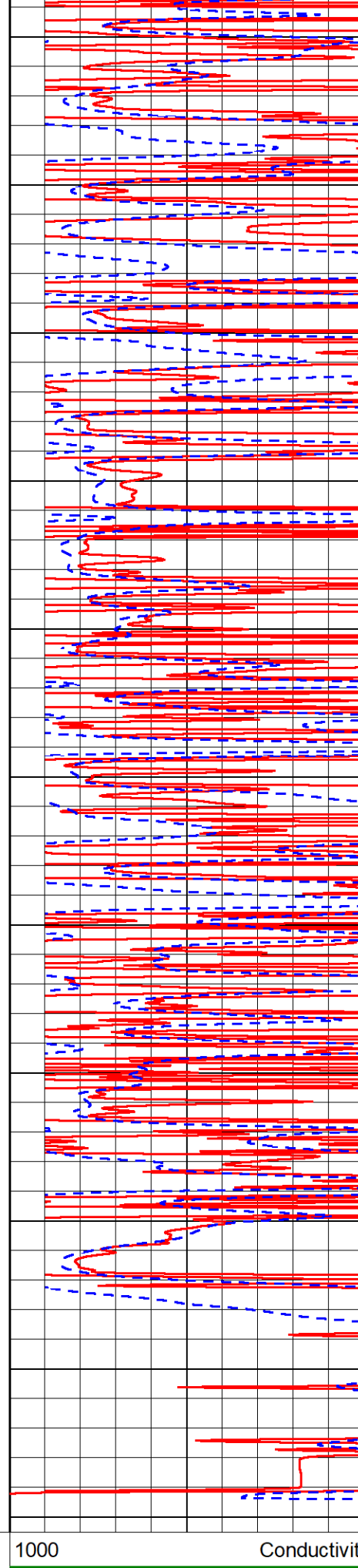
4550

4600

4650

4700

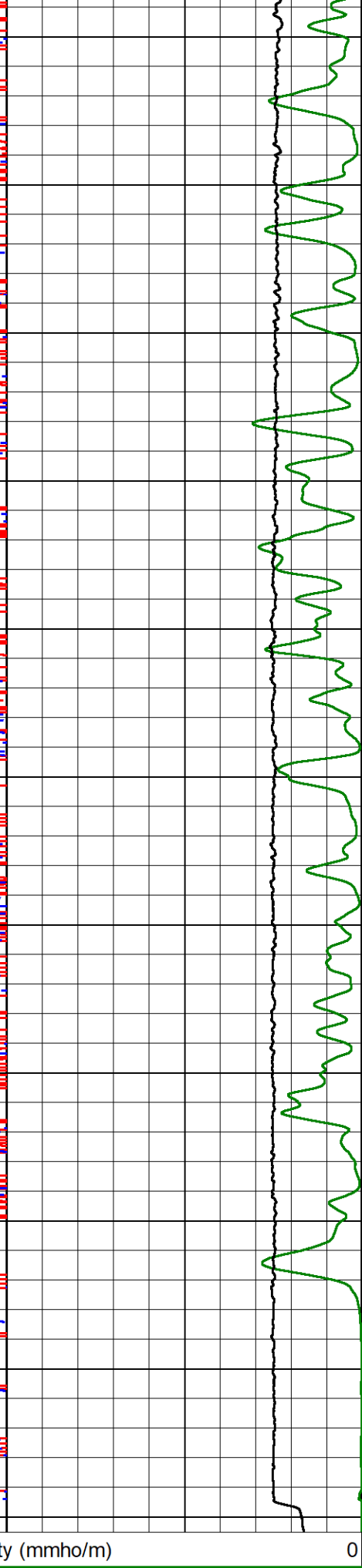
0 Gamma Ray (GAPI) 150



1000 Conductivity (mmho/m) 0

15000 Line Tension (lb) 0

0 Shallow Resistivity (Ohm-m) 50



0	Deep Resistivity (Ohm-m)	50
	Shallow Resistivity	
50	(Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200



MIDWEST WIRELINE

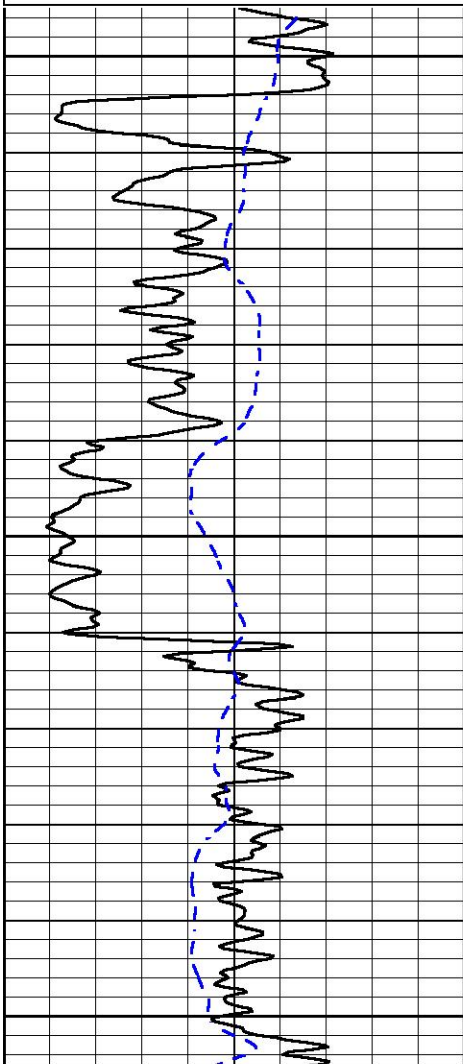
ANHYDRITE SECTION

MAIN PASS

Database File ritchie_scheurmanhrbek trust 1.db
Dataset Pathname stkml/pass6.1
Presentation Format _dil
Dataset Creation Sun Dec 05 04:02:48 2021
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

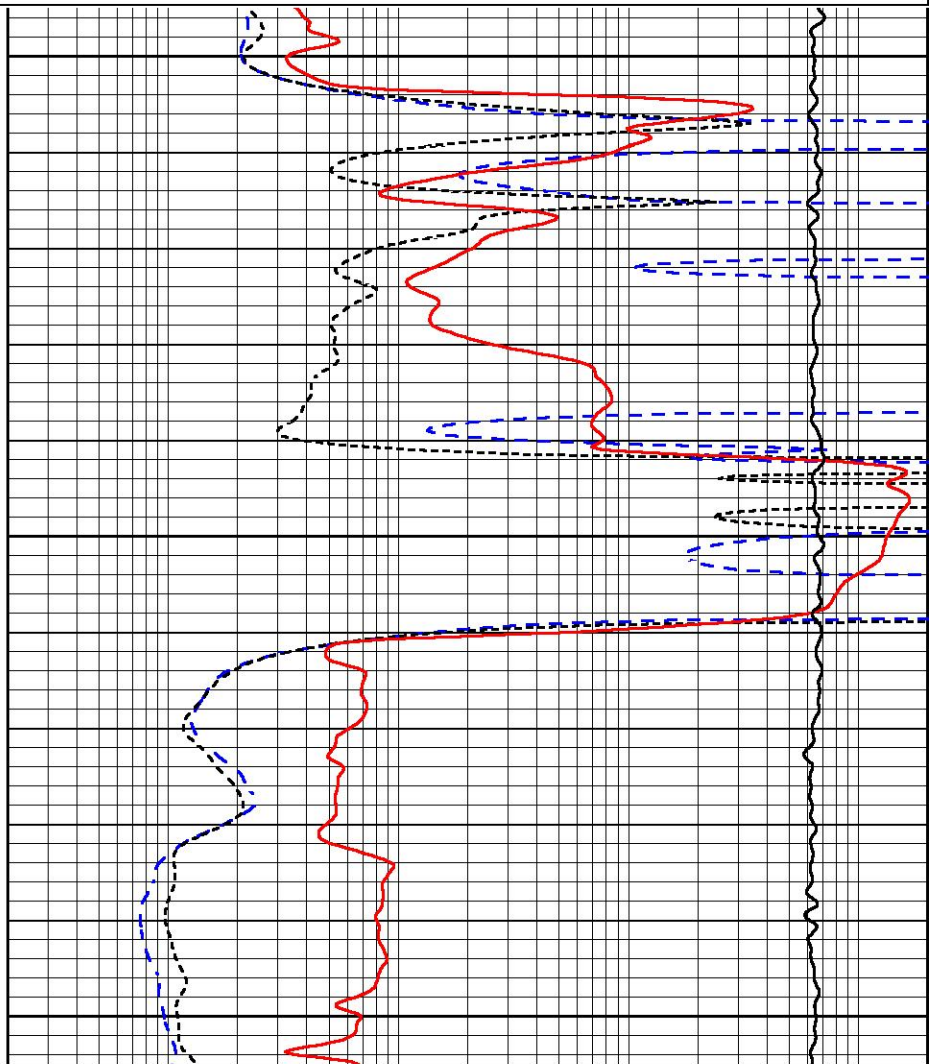
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0



2300

2350

2400



0	Gamma Ray (GAPI)	150
-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



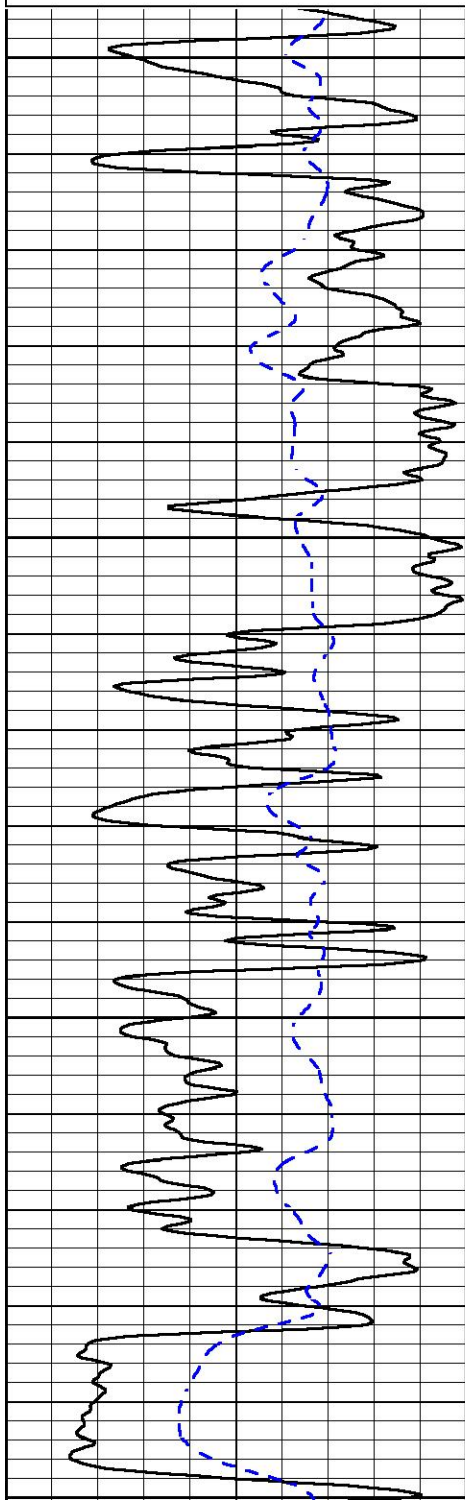
DETAIL SECTION

MAIN PASS

Database File ritchie_scheurmanhrbek trust 1.db
Dataset Pathname stkml/pass3.1
Presentation Format _dil
Dataset Creation Sun Dec 05 03:53:46 2021
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-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

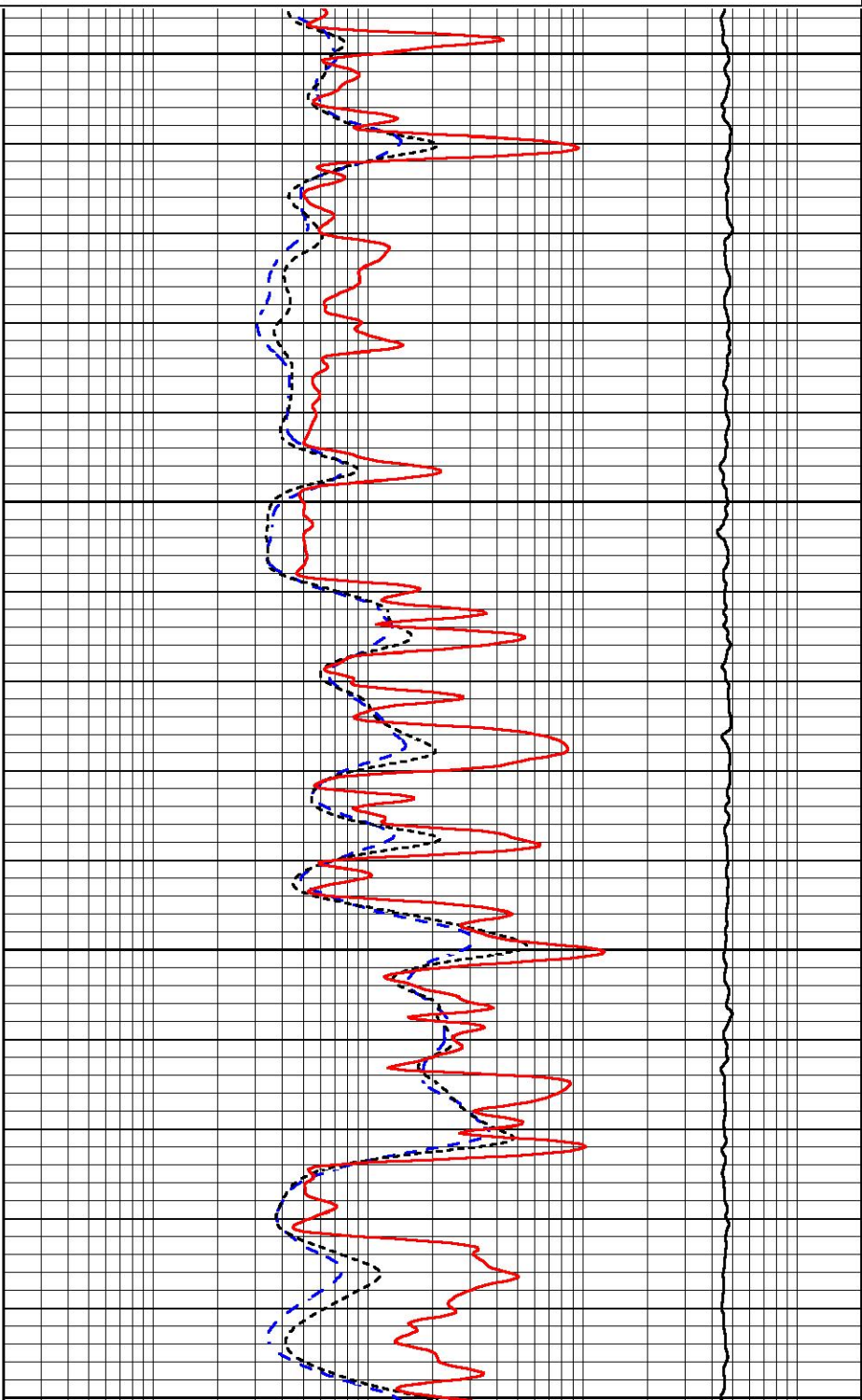


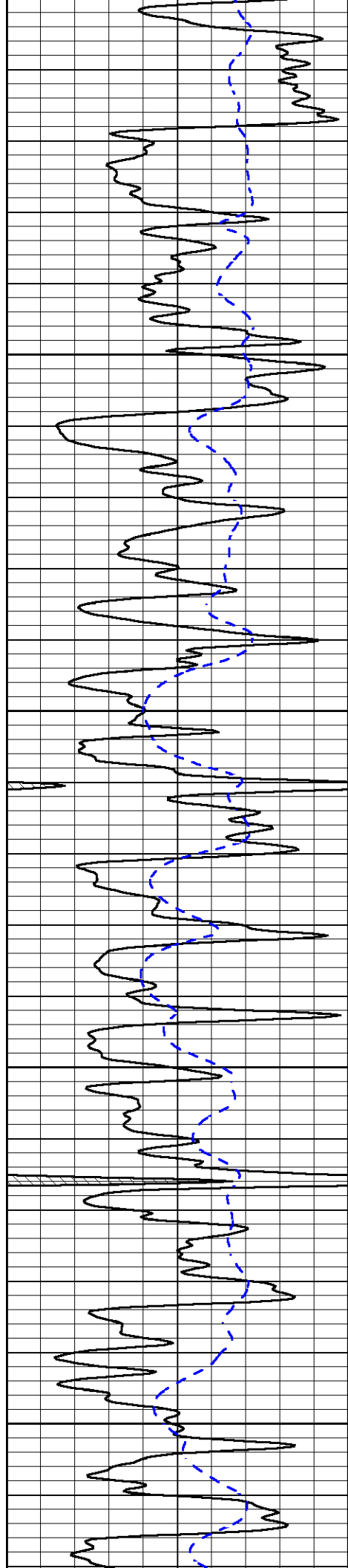
3500

3550

3600

3650





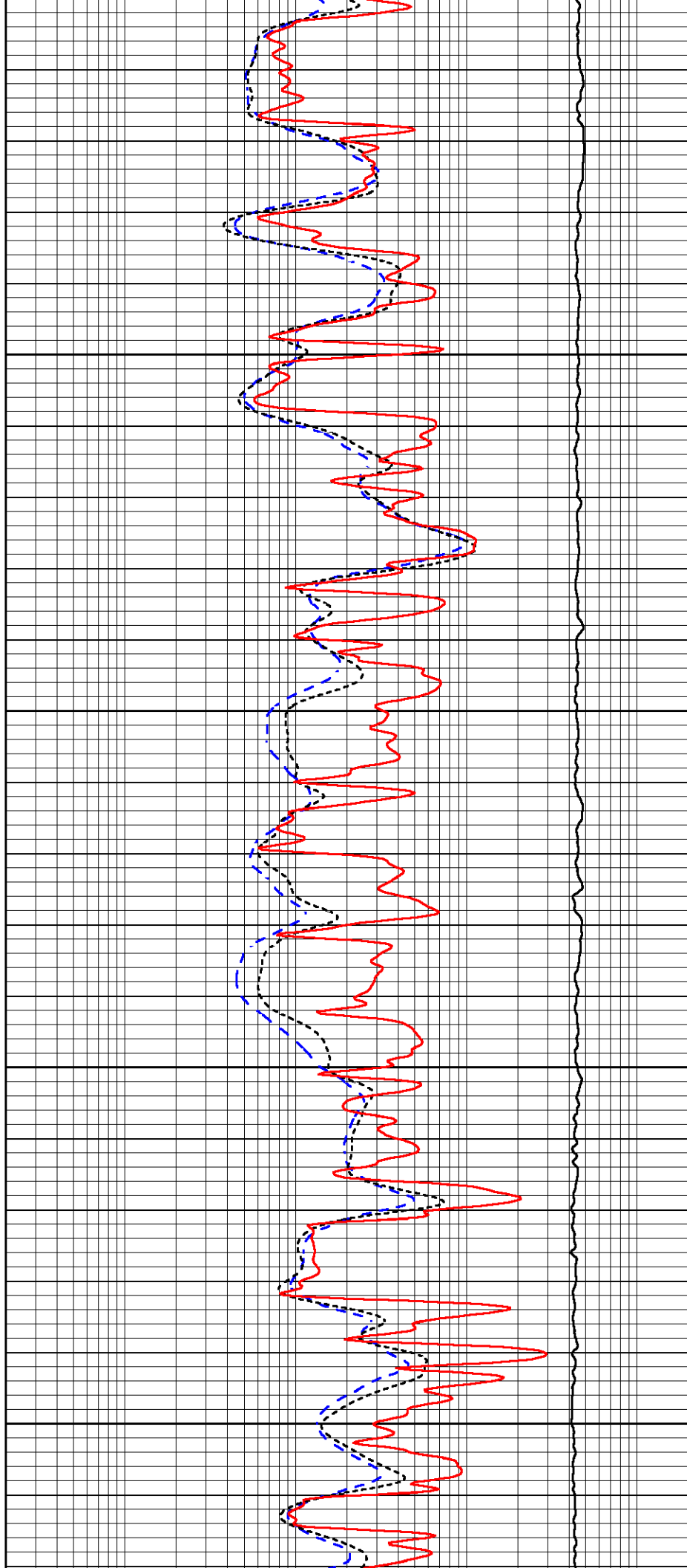
3850

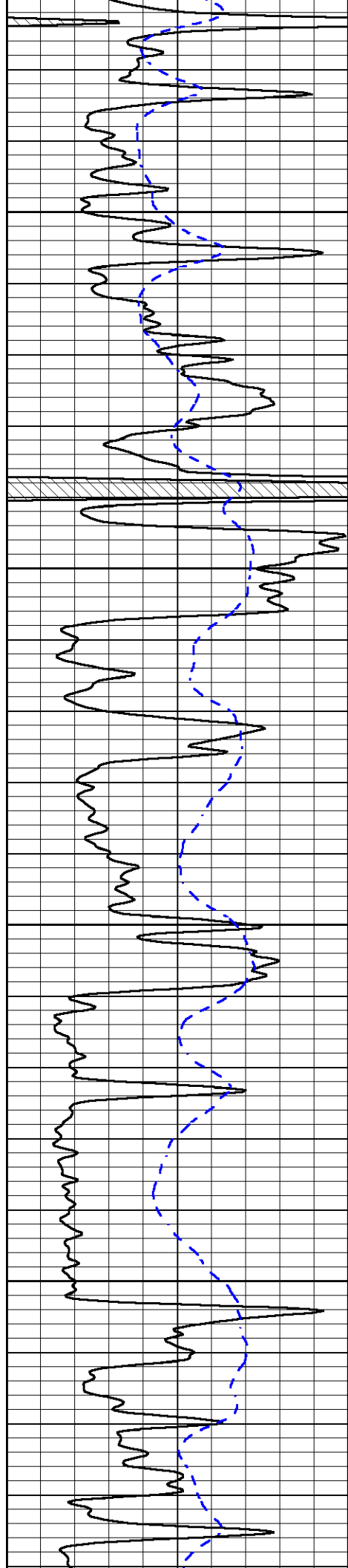
3700

3750

3800

3850



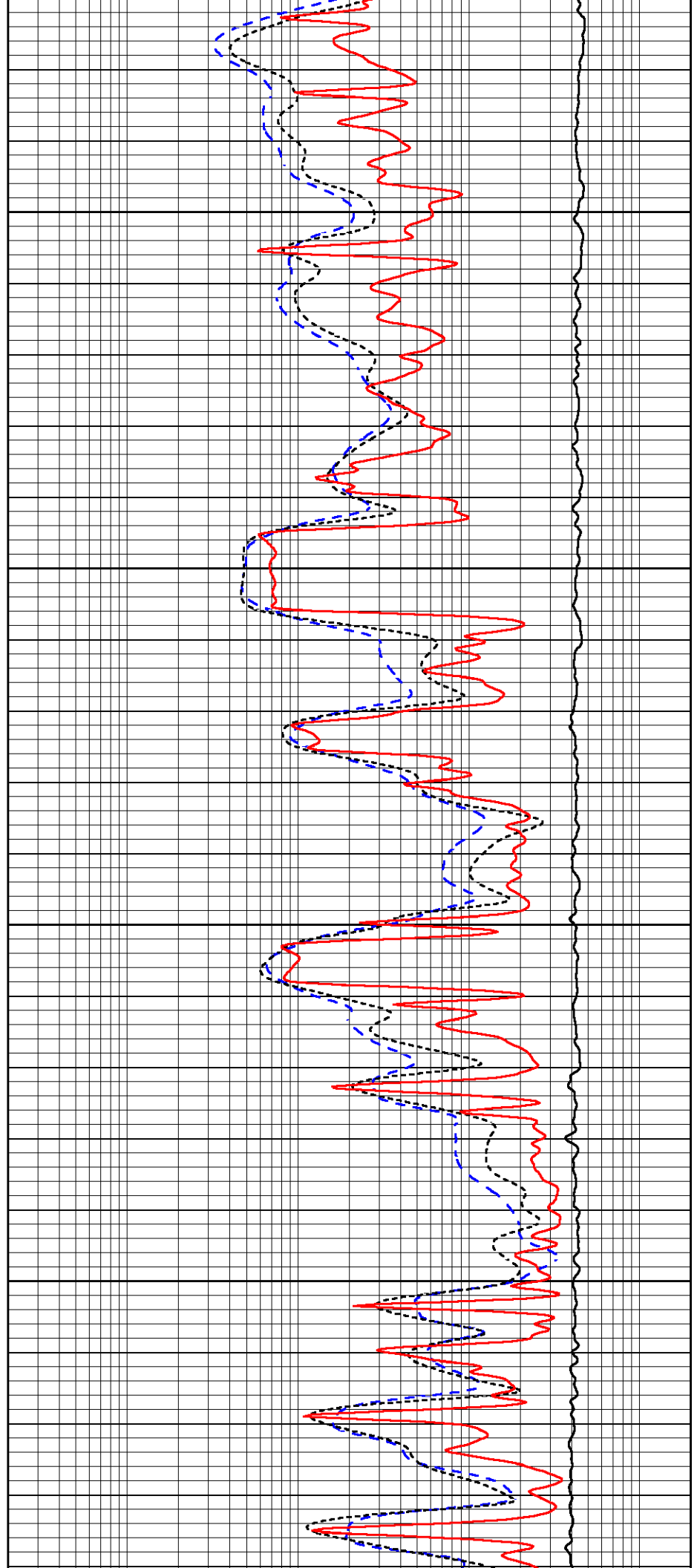


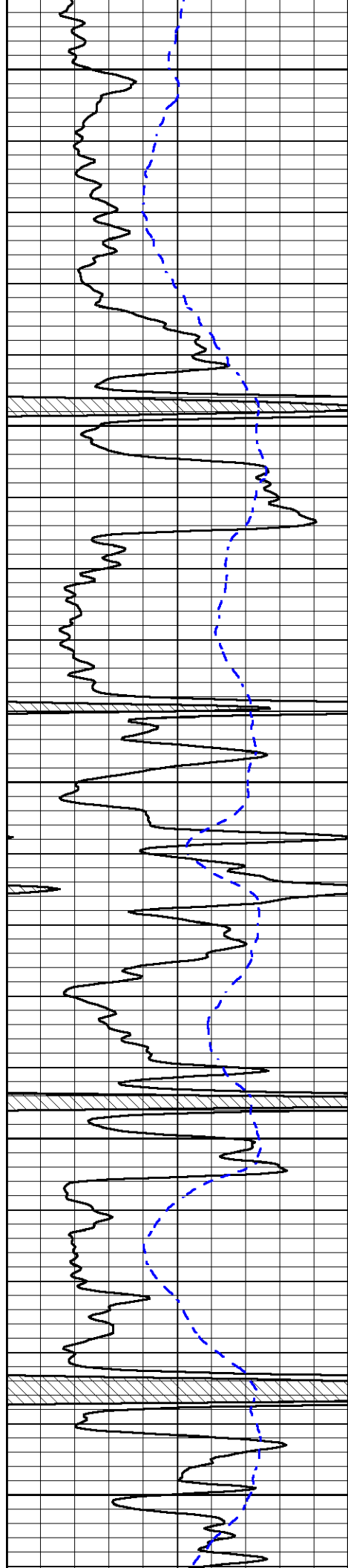
3900

3950

4000

4050





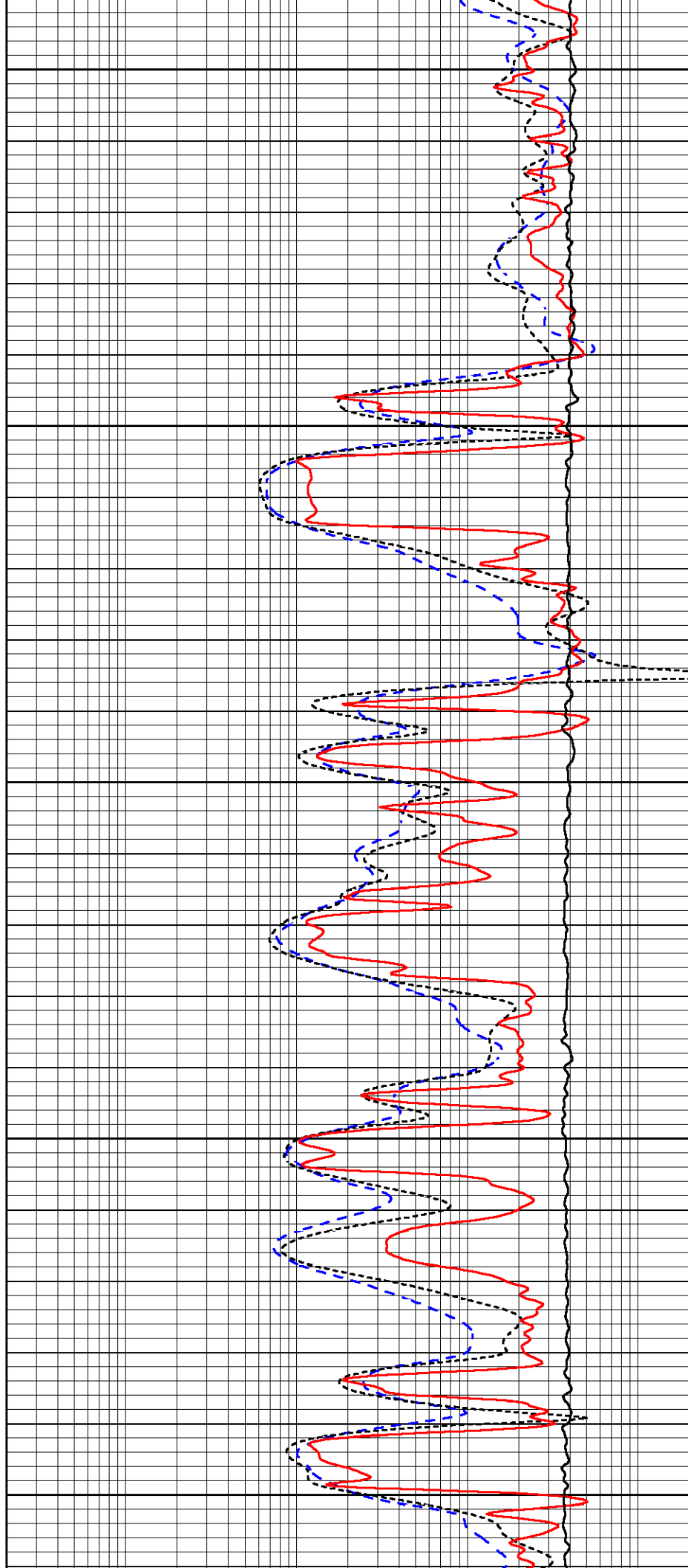
4100

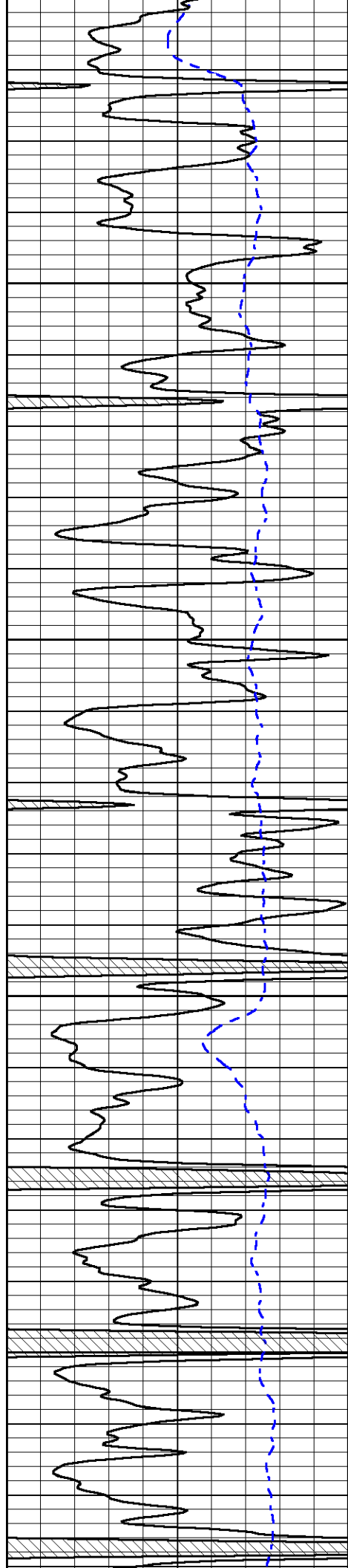
4150

4200

4250

4300



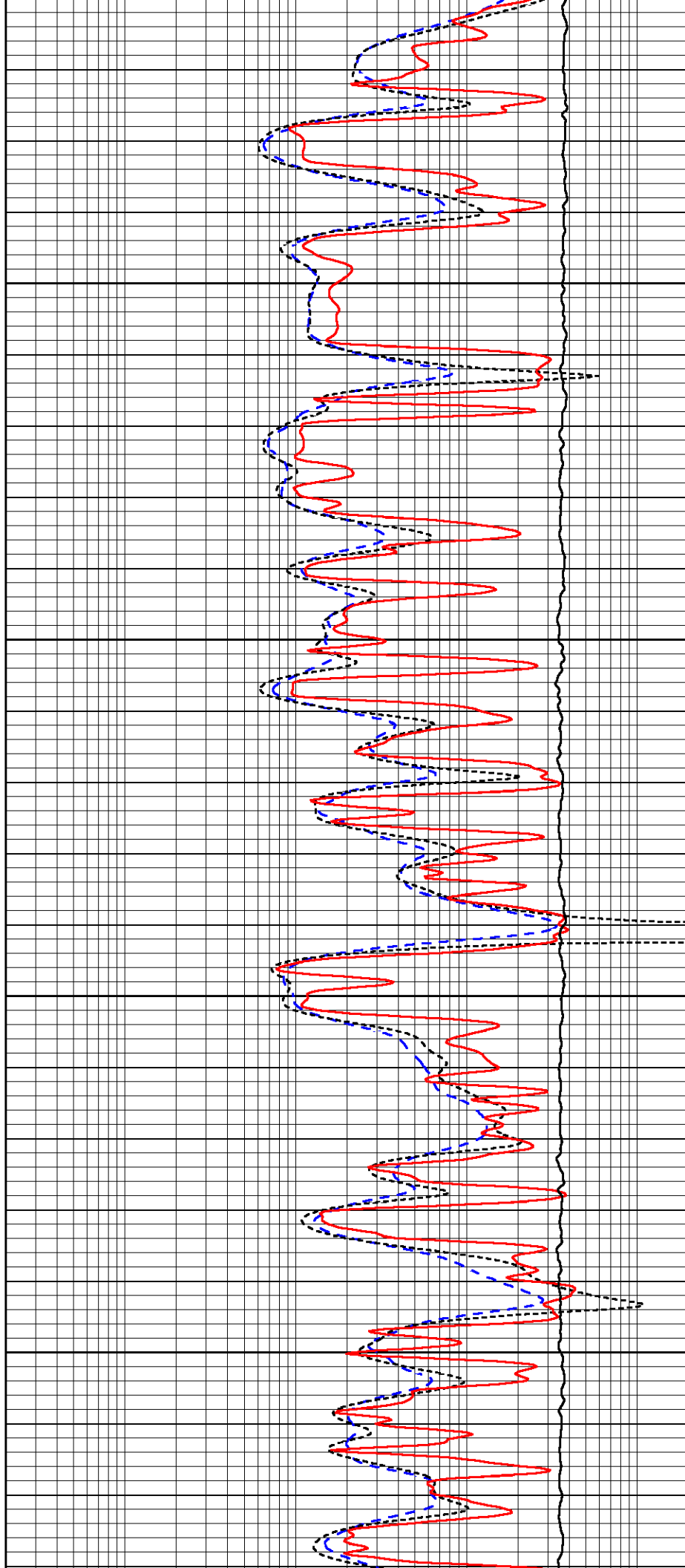


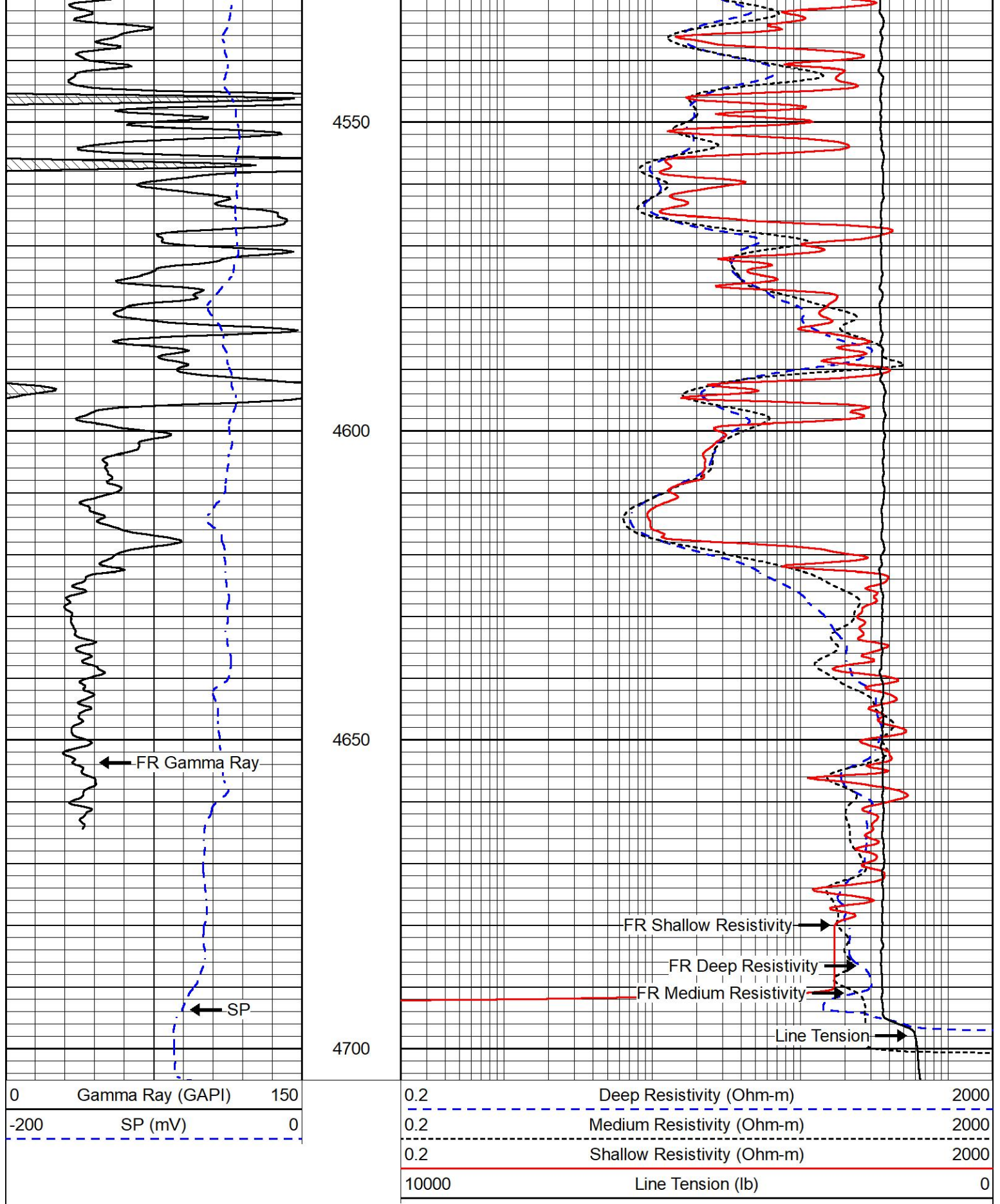
4350

4400

4450

4500





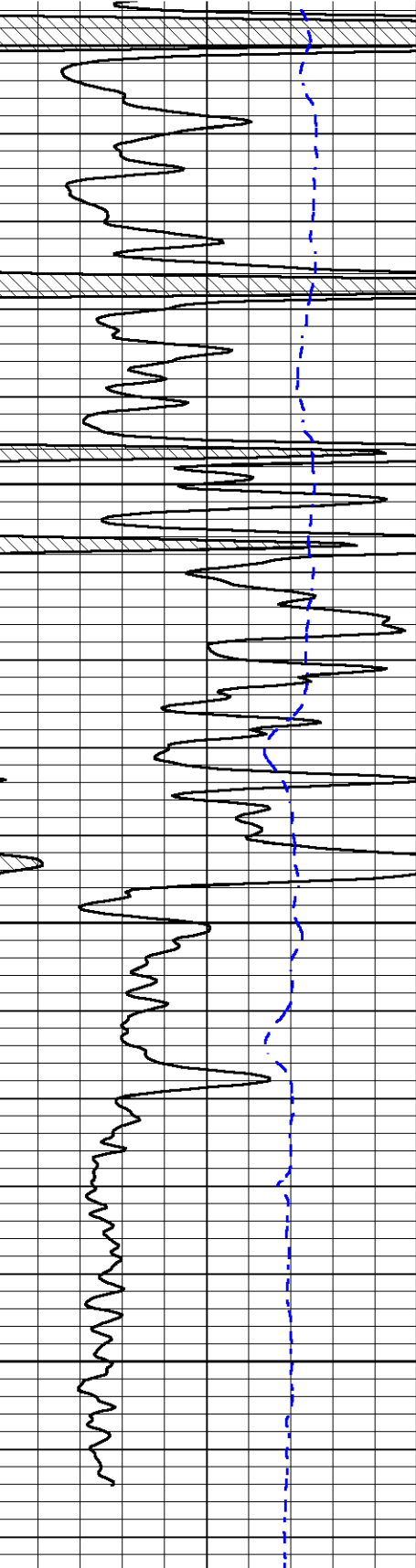
REPEAT SECTION

REPEAT PASS

Database File ritchie_scheurmanhrbek trust 1.db
Dataset Pathname stkml/pass2.1
Presentation Format _dil
Dataset Creation Sun Dec 05 03:13:27 2021
Charted by Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150
-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

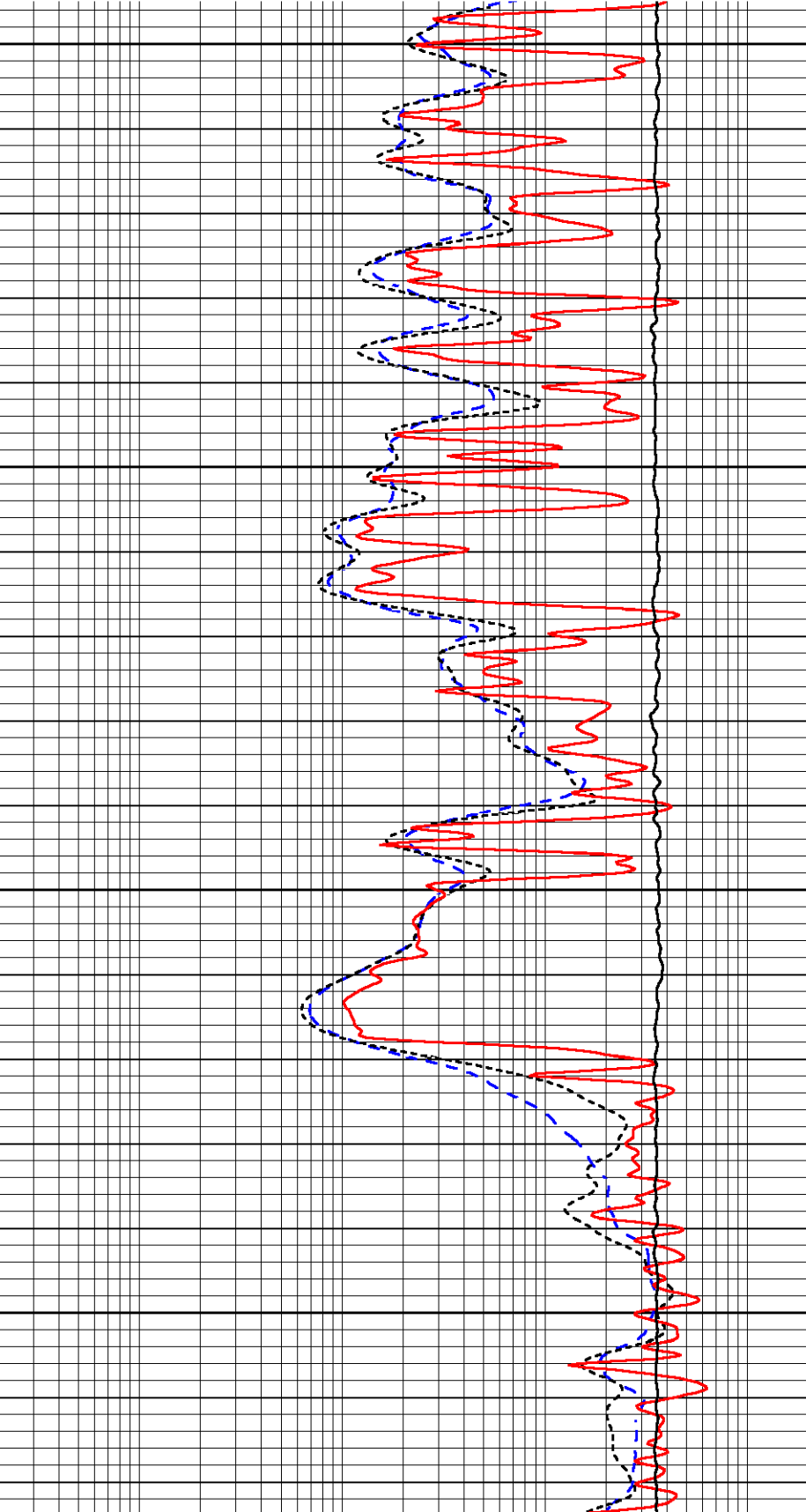


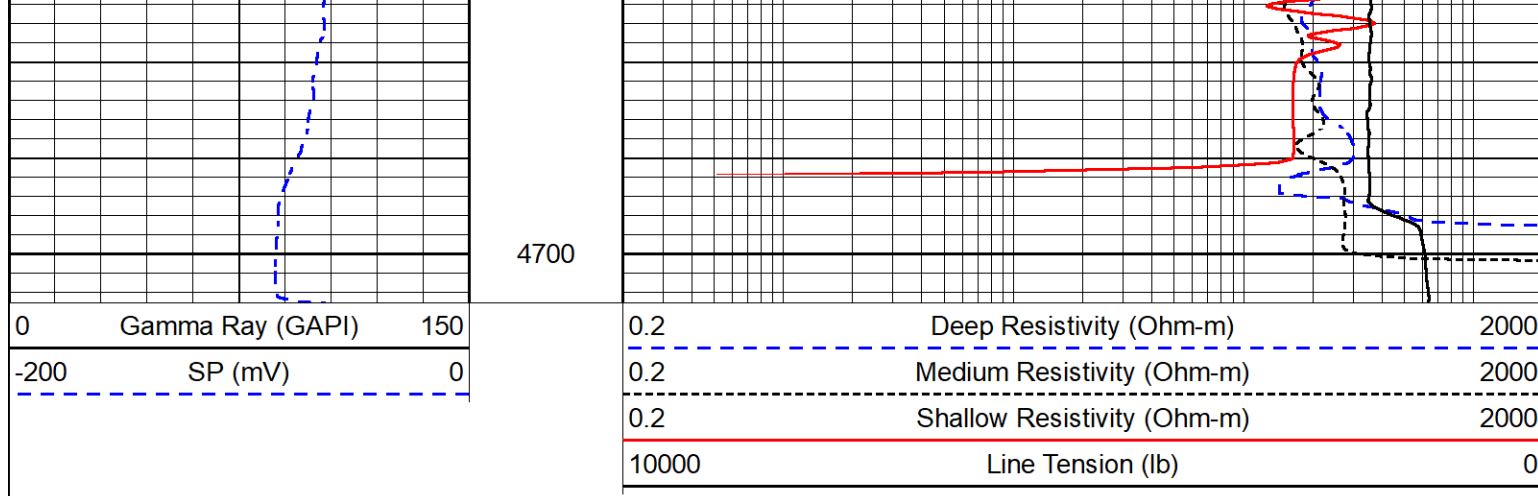
4500

4550

4600

4650





Calibration Report

Database File ritchie_scheurmanhrbek trust 1.db
 Dataset Pathname stkml/pass3.5
 Dataset Creation Sun Dec 05 03:07:33 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	-32.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.300	-32.000

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	9000.0000	-0.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	9000.0000	-0.4000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-139.2500

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	2.650	g/cc	627.41	1482.87	cps

Spine Angle = 74.82

Density/Spine Ratio = 0.517

Size

Reading

Small Ring	8.00	in	1.16
Large Ring	13.00	in	1.01

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

	Company	Ritchie Exploration, Inc.
	Well	Scheuerman-Hrbek Trust #1
	Field	
	County	Scott
	State	Kansas