



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Russell Oil, Inc.		Company Russell Oil, Inc.	
Well Thomas Trust #28-1		Well Thomas Trust #28-1	
Field		Field	
County Logan		County Logan	
State Kansas		State Kansas	
Location: API #: 15-109-21659-00-00		Other Services	
1105 FNL & 1450 FWL		CNL/CDL MEL	
SEC 28 TWP 14S RGE 33W		Elevation	
Permanent Datum	Ground Level	Elevation	2858
Log Measured From	Kelly Bushing	K.B.	2863
Drilling Measured From	Kelly Bushing	D.F.	2858
Date 11/30/2022			
Run Number	One		
Depth Driller	4571		
Depth Logger	4574		
Bottom Logged Interval	4573		
Top Log Interval	300		
Casing Driller	8.625 @ 348		
Casing Logger	346		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	5000		
Density / Viscosity	9.4 72		
pH / Fluid Loss	10.0 9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.50 @ 55		
Rmt @ Meas. Temp	0.38 @ 55		
Rmc @ Meas. Temp	0.68 @ 55		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.23 @ 121		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	121		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Larry Friend		

<<< 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.

Monument,
20 South to Indian Rd, 1 1/2 East,
South 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: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Larry Friend
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\russell_thomas trust 28-1.db
Dataset field/well/stkml/pass3.2/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 121	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 405	degF 30	Off	ft 4574

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

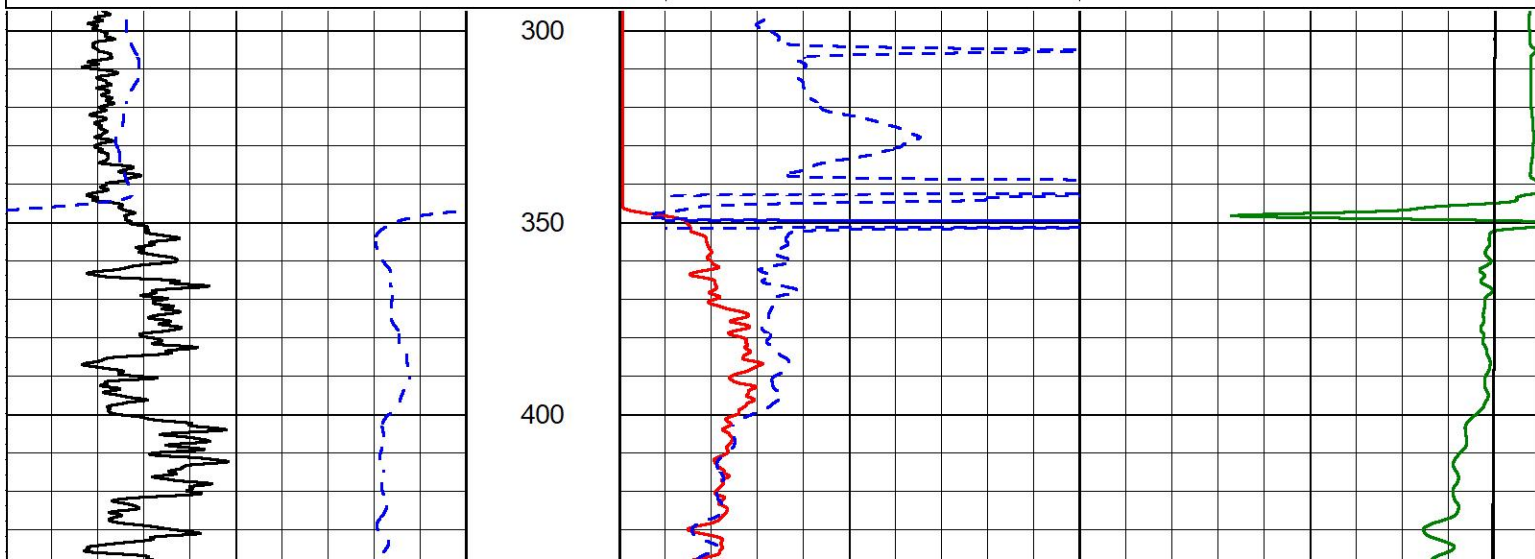


2" SCALE RESISTIVITY

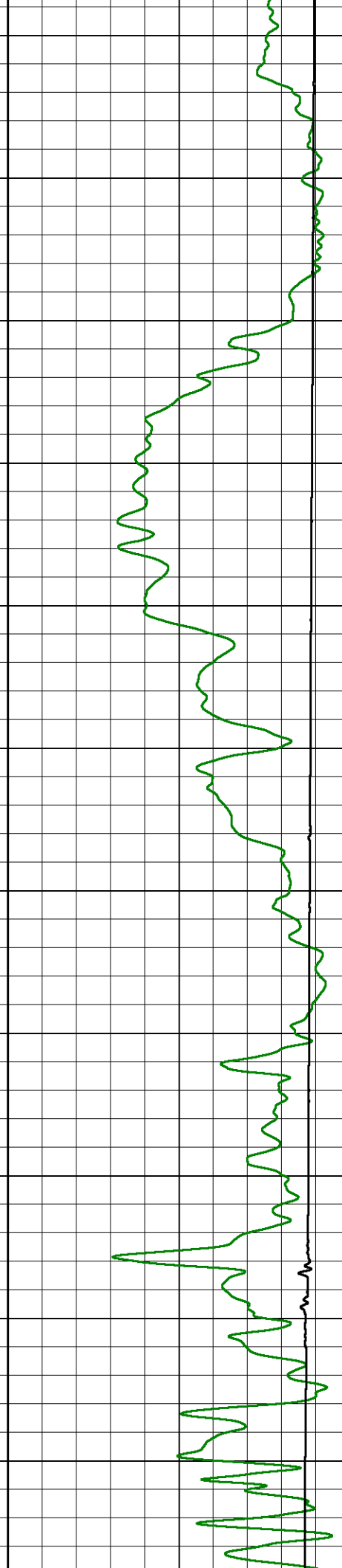
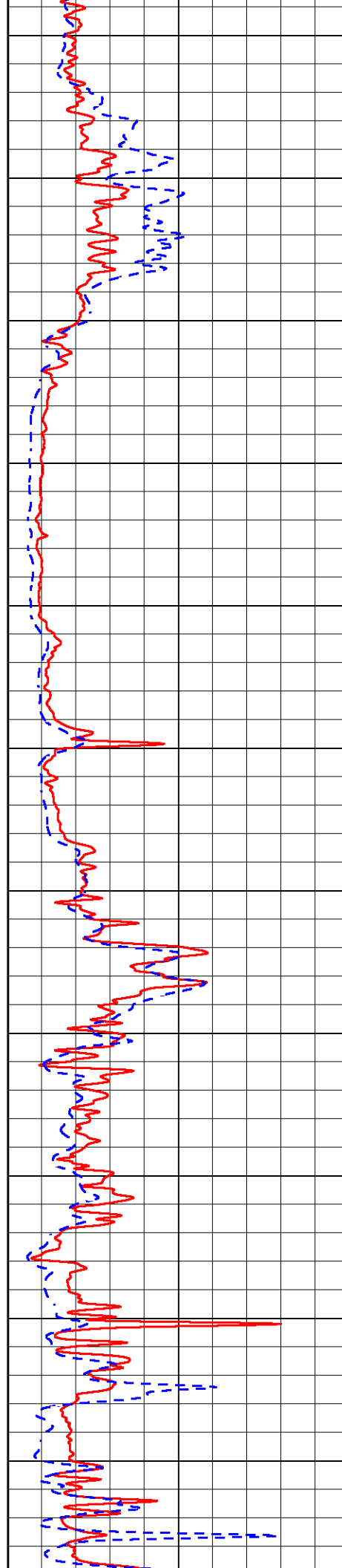
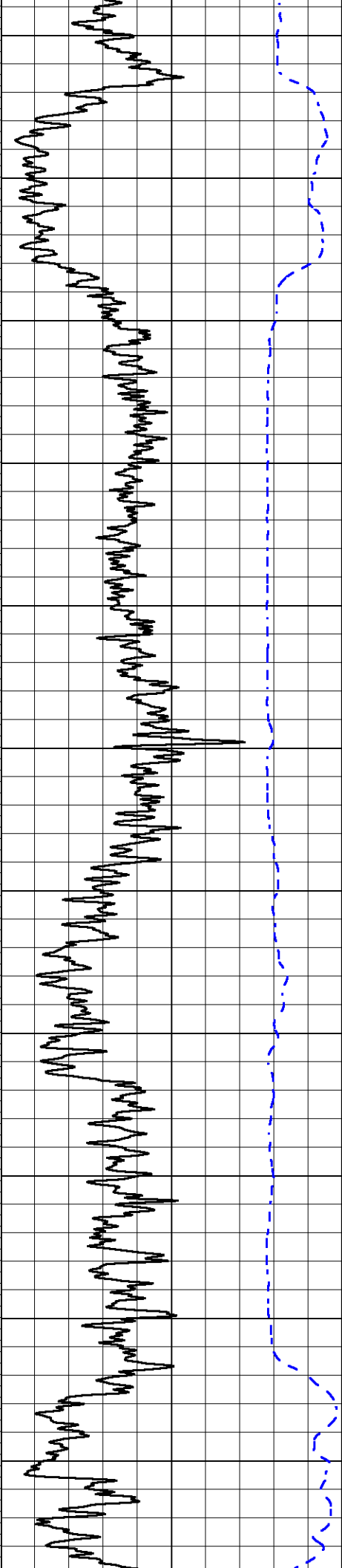
MAIN PASS

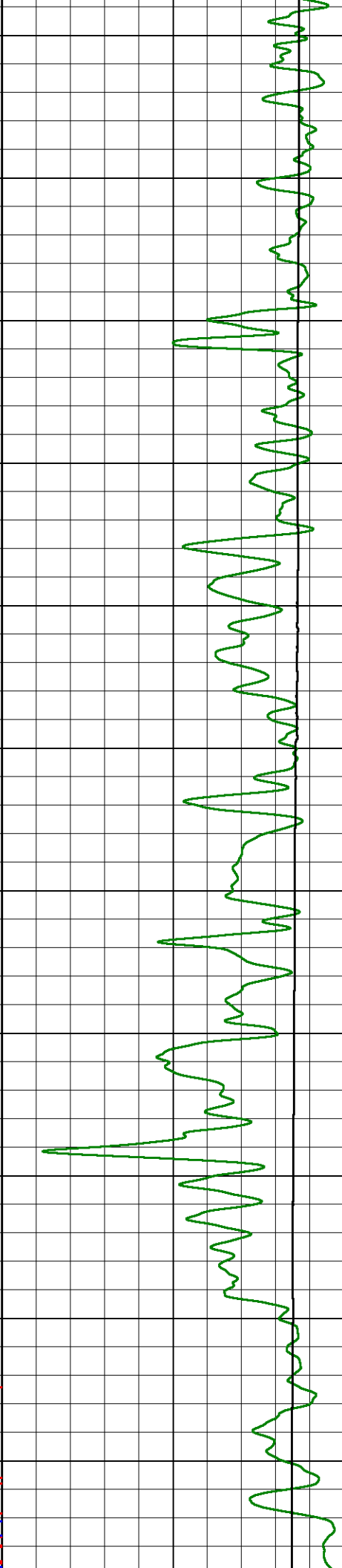
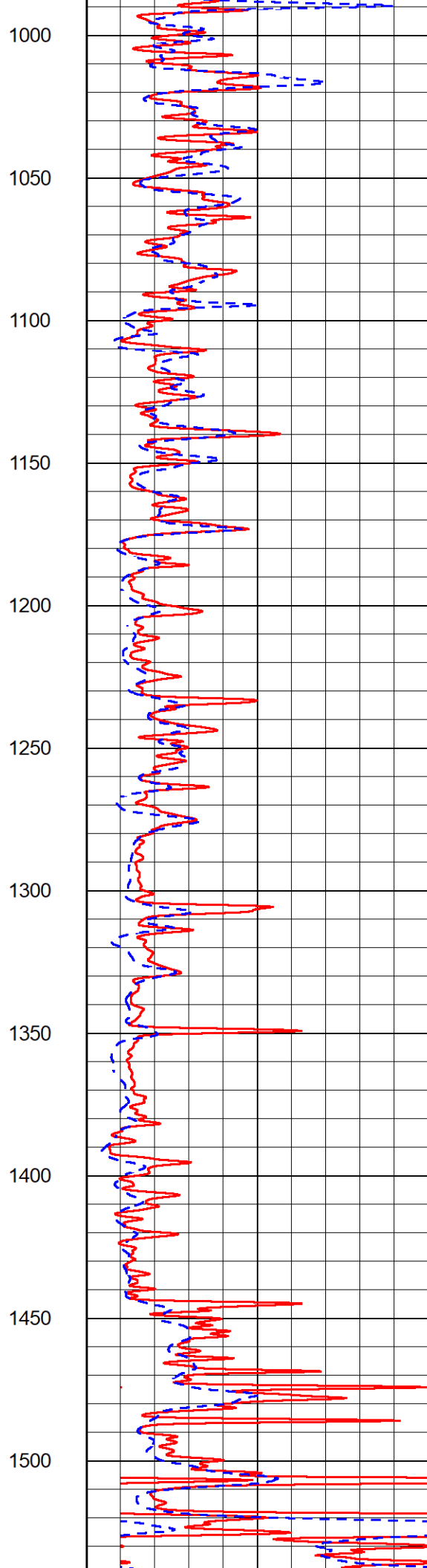
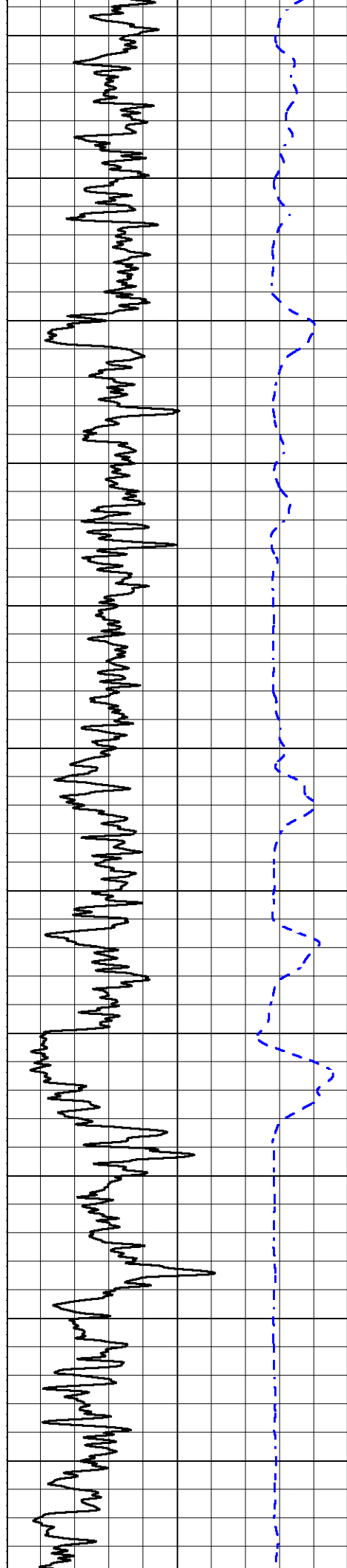
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Dataset Pathname stkml/pass3.3
Presentation Format _dil2in
Dataset Creation Wed Nov 30 13:31:41 2022
Charted by Depth in Feet scaled 1:600

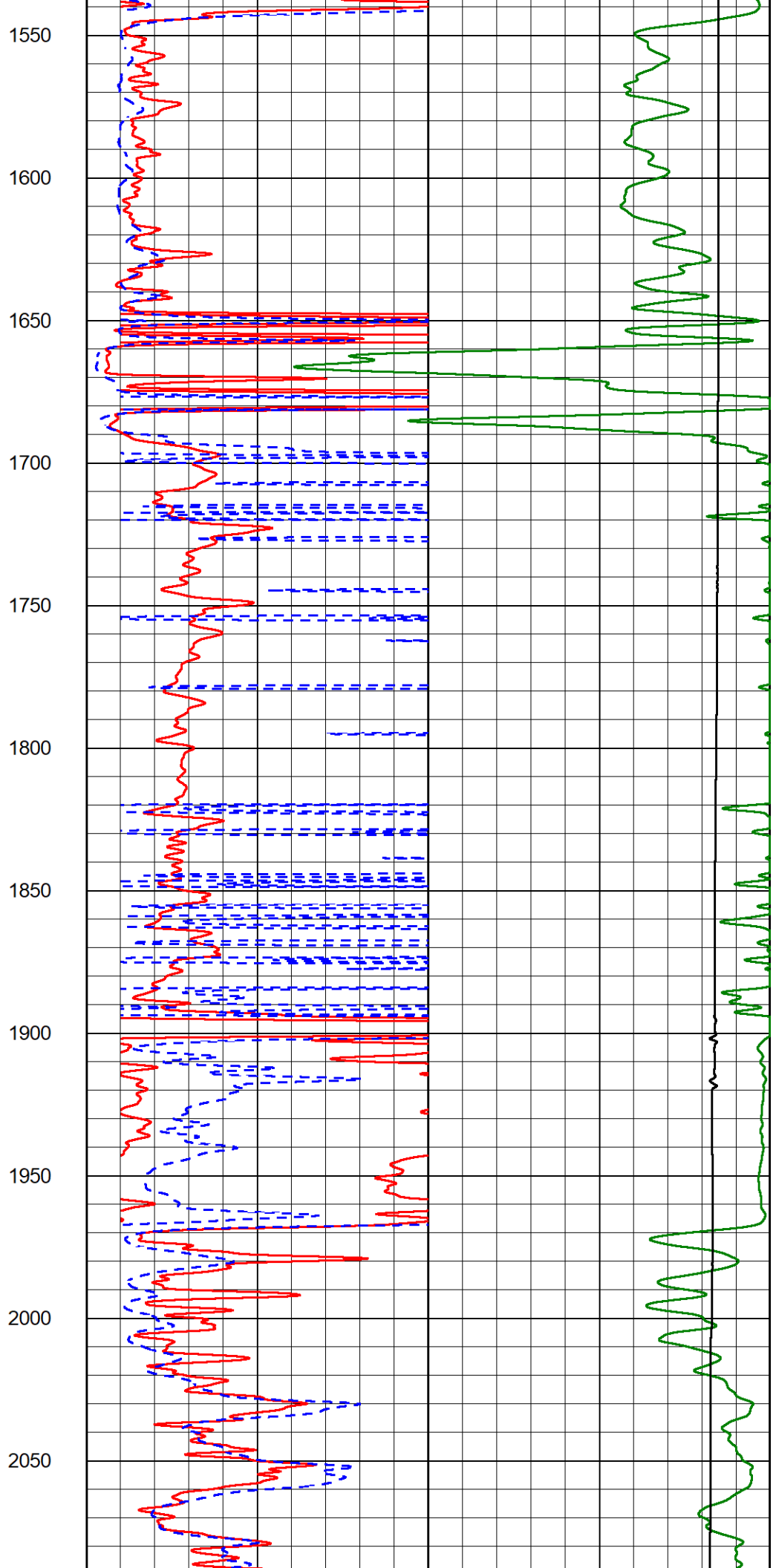
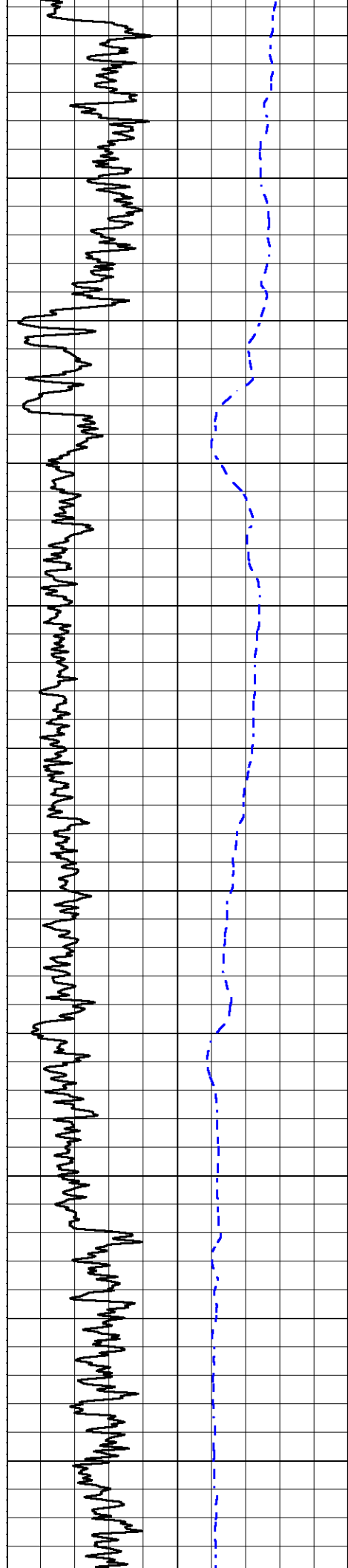
0	Gamma Ray (GAPI)	300	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

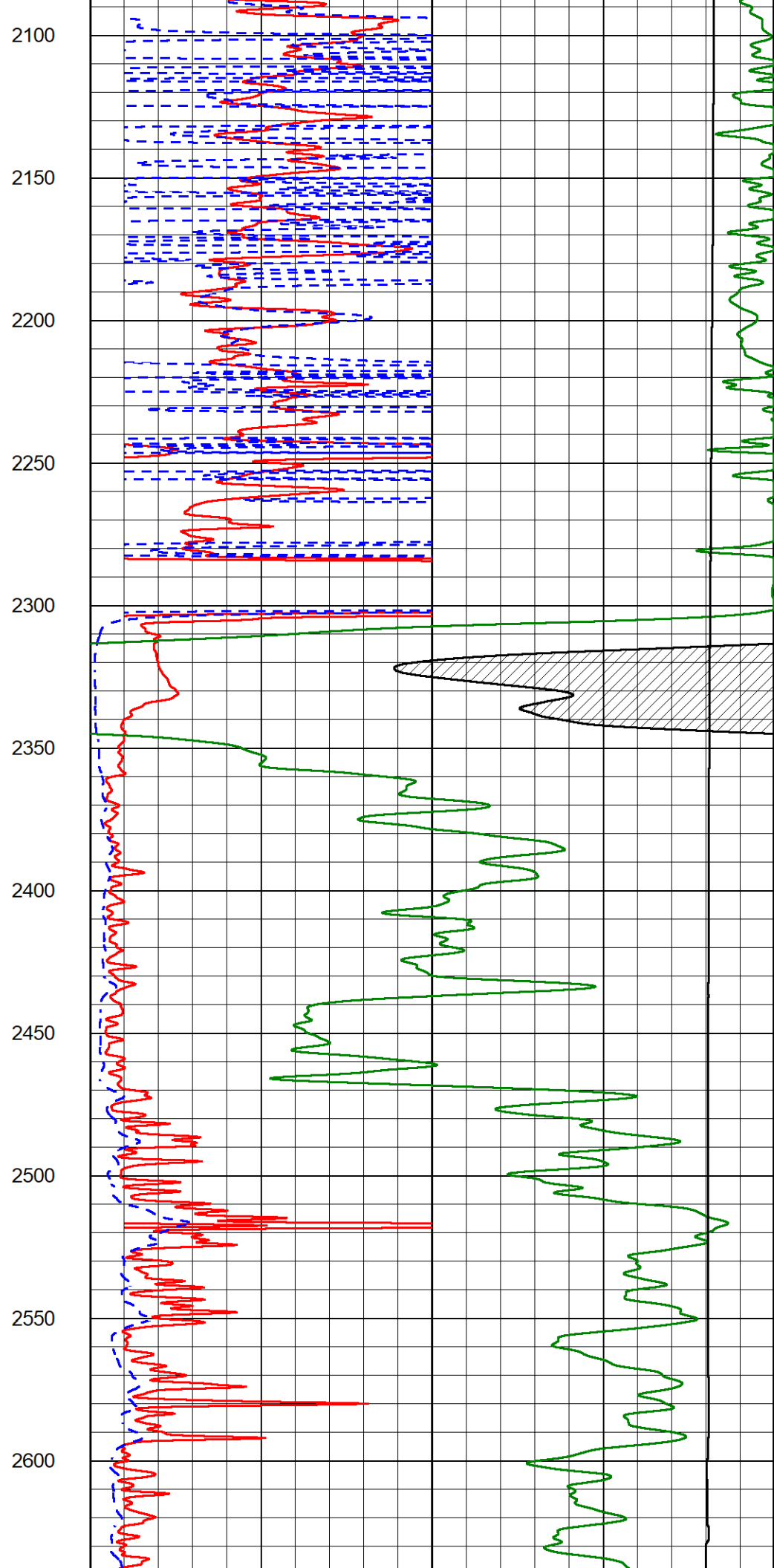
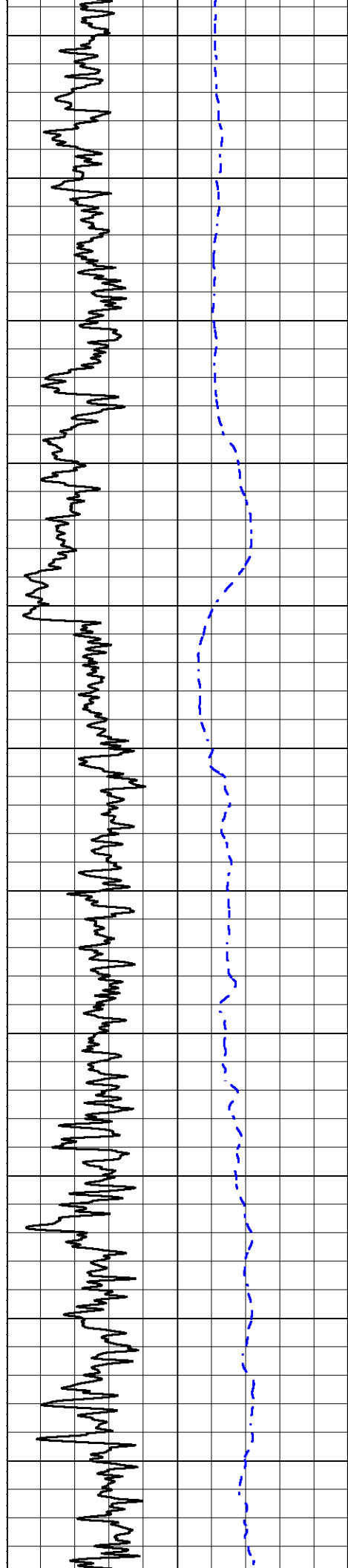


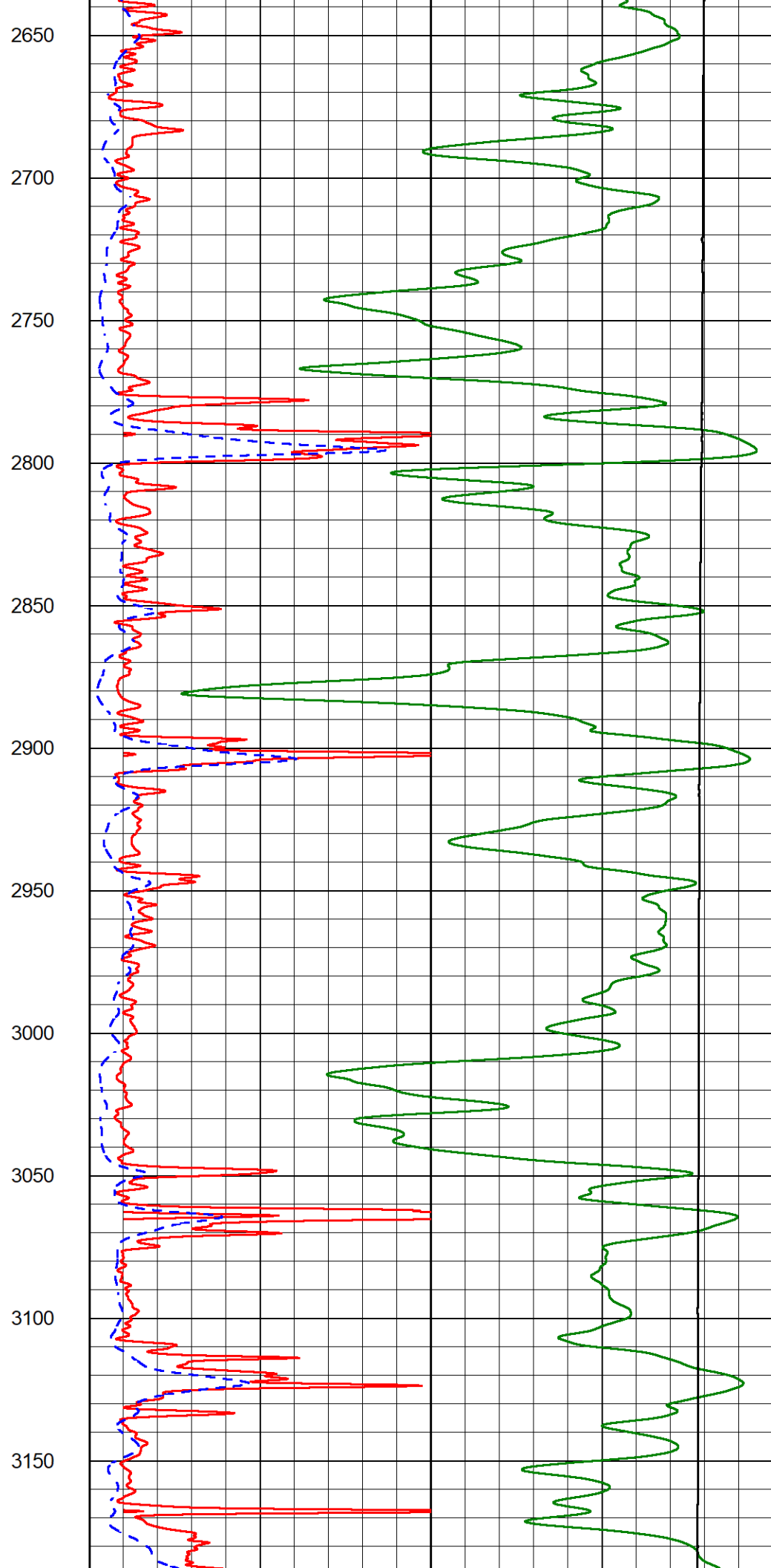
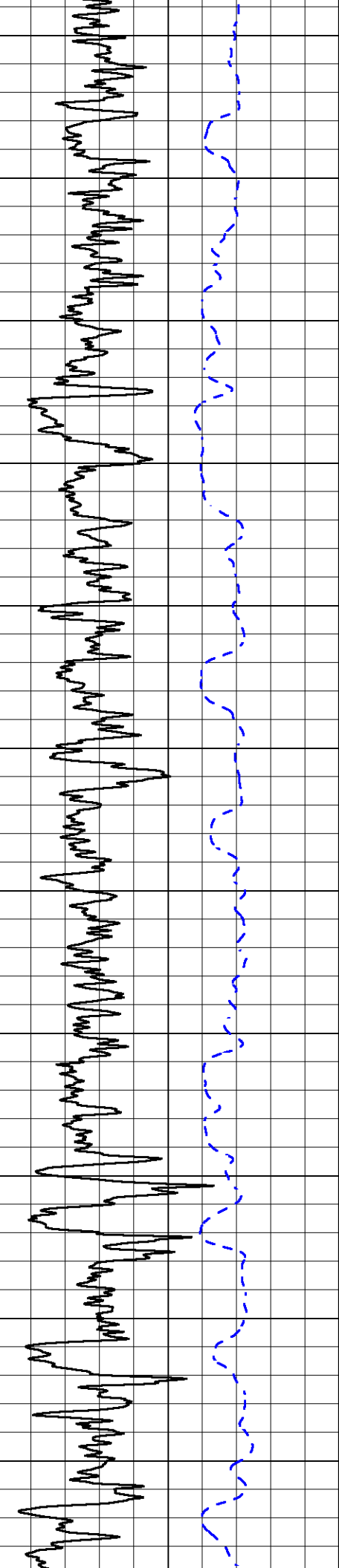
450
500
550
600
650
700
750
800
850
900
950

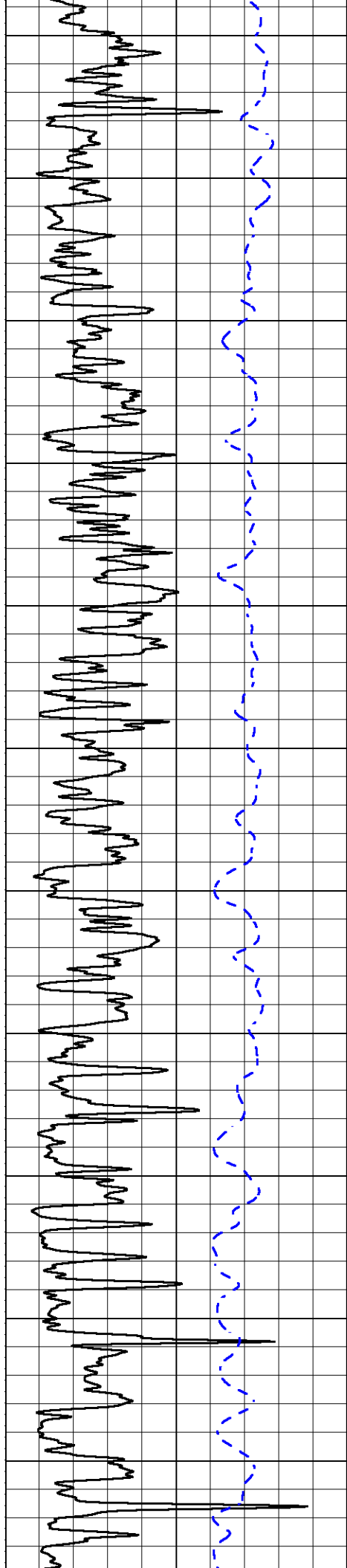












3200

3250

3300

3350

3400

3450

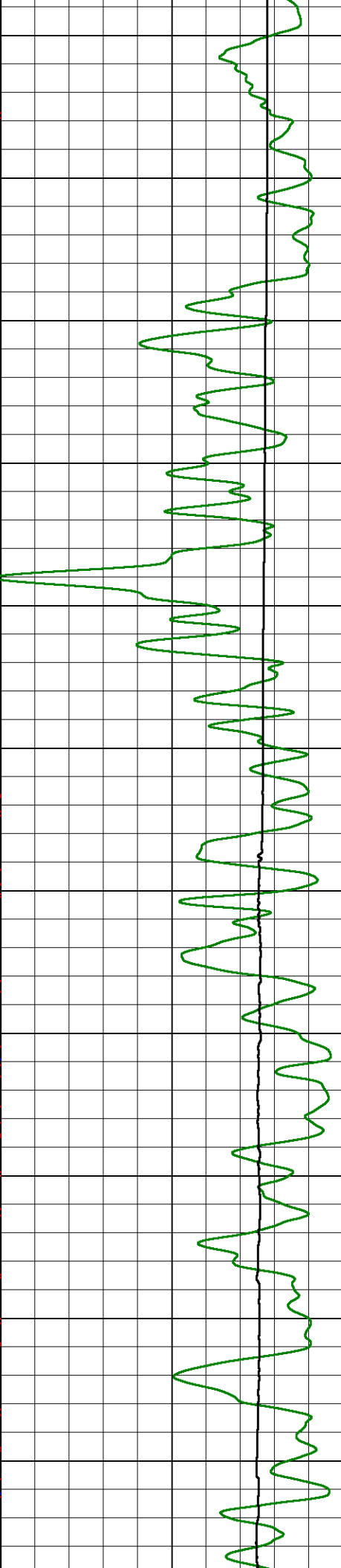
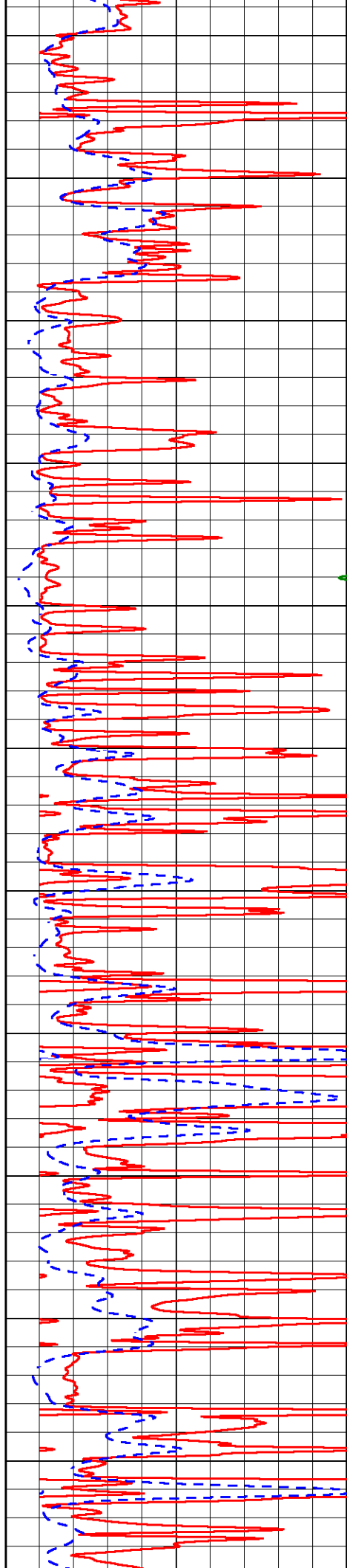
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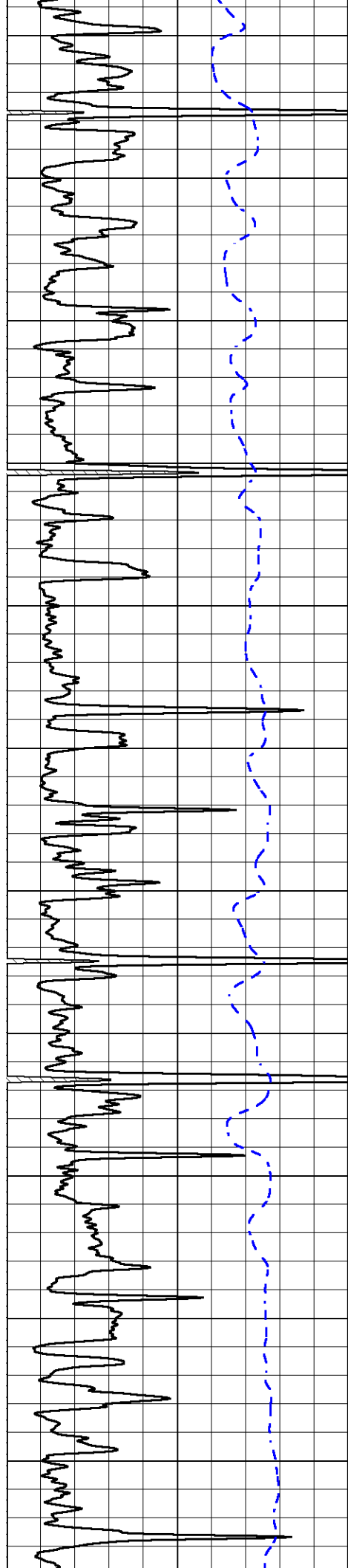
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3600

3650

3700





3750

3800

3850

3900

3950

4000

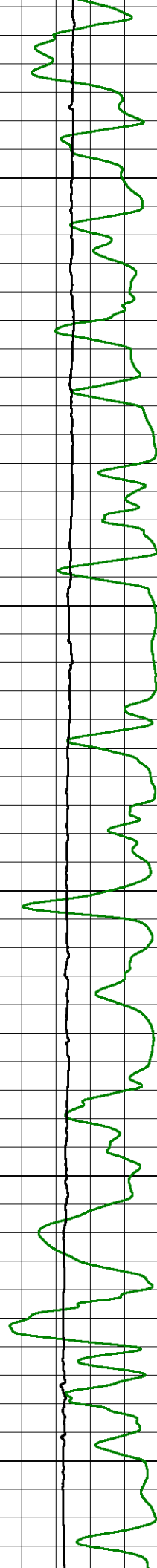
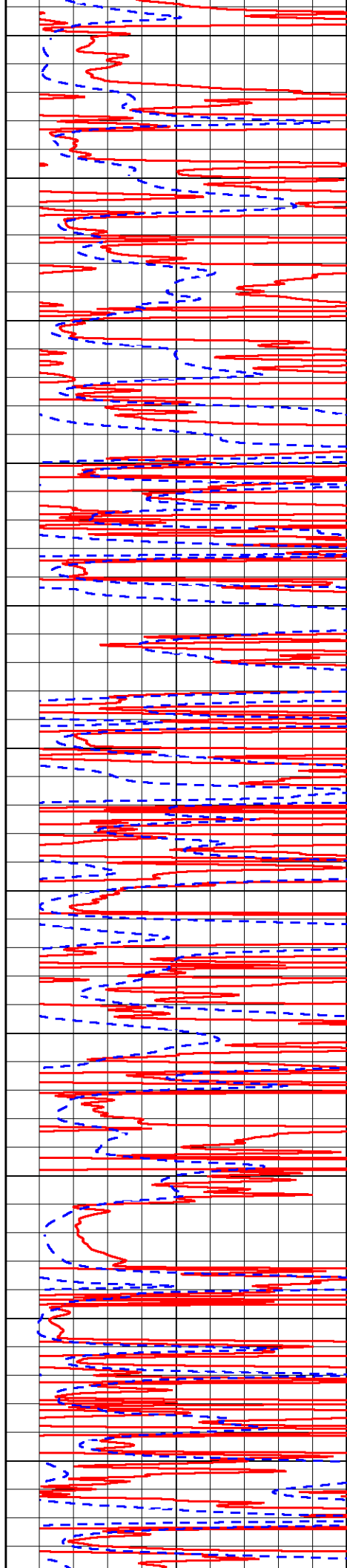
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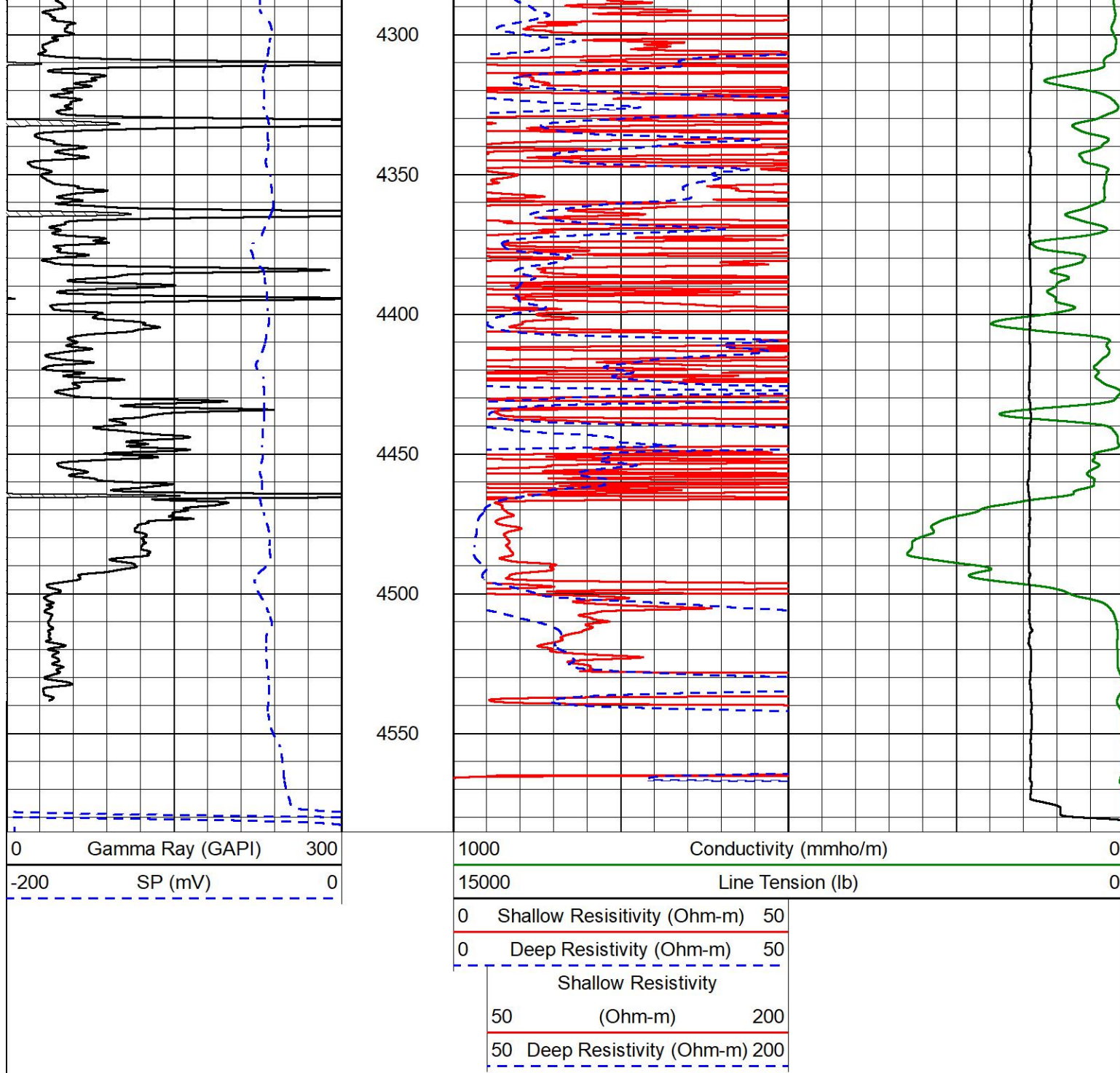
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4150

4200

4250





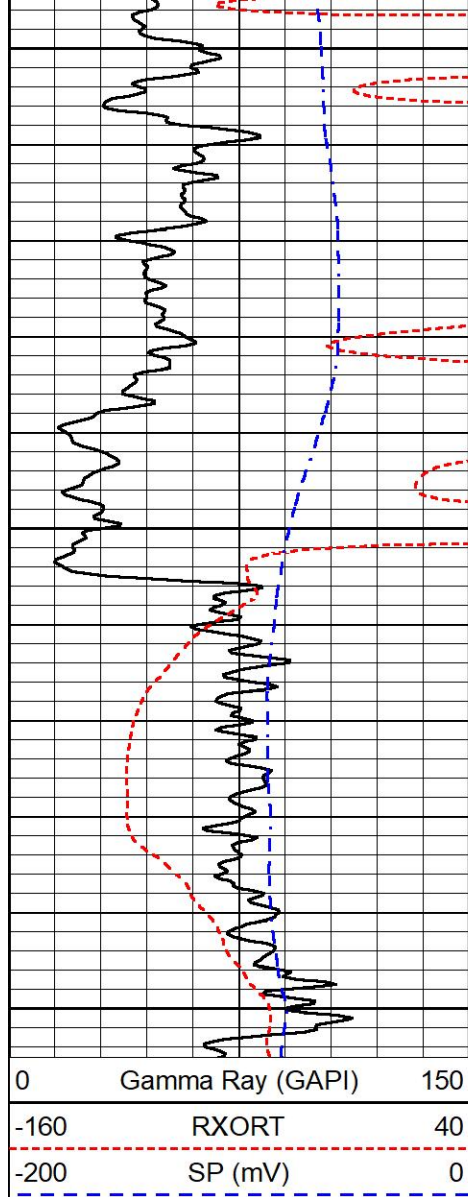
ANHYDRITE SECTION

MAIN PASS

Database File russell_thomas trust 28-1.db
 Dataset Pathname stkml/pass3.4
 Presentation Format _dil
 Dataset Creation Wed Nov 30 13:31:48 2022
 Charted by Depth in Feet scaled 1:240

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

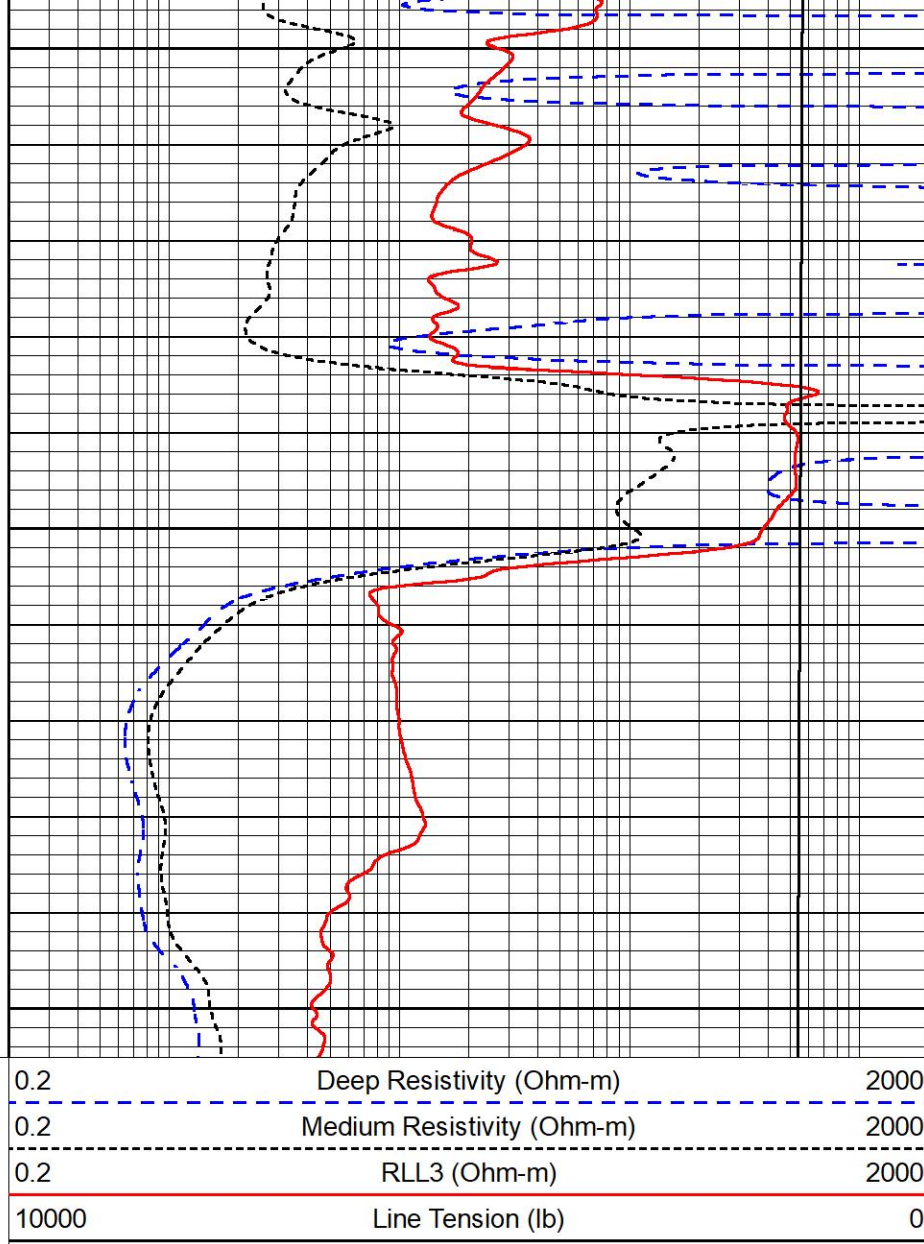
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



2250

2300

2350

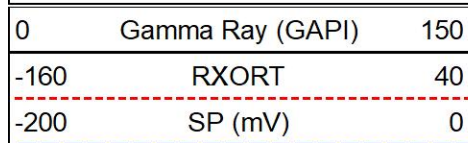


MIDWEST WIRELINE

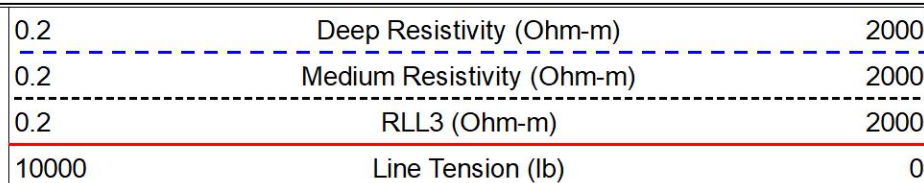
DETAIL SECTION

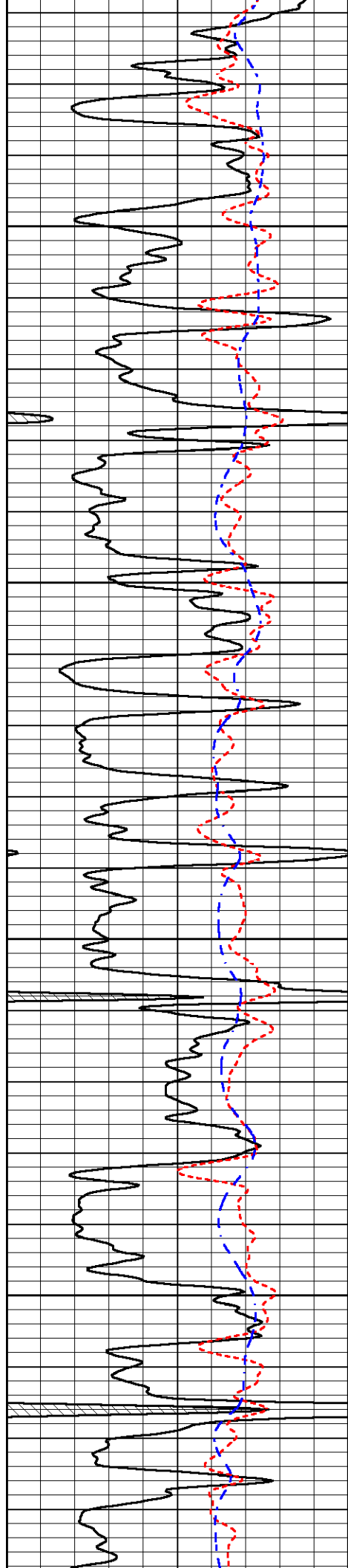
MAIN PASS

Database File russell_thomas trust 28-1.db
 Dataset Pathname stkml/pass3.1
 Presentation Format _dil
 Dataset Creation Wed Nov 30 13:27:05 2022
 Charted by Depth in Feet scaled 1:240



3500



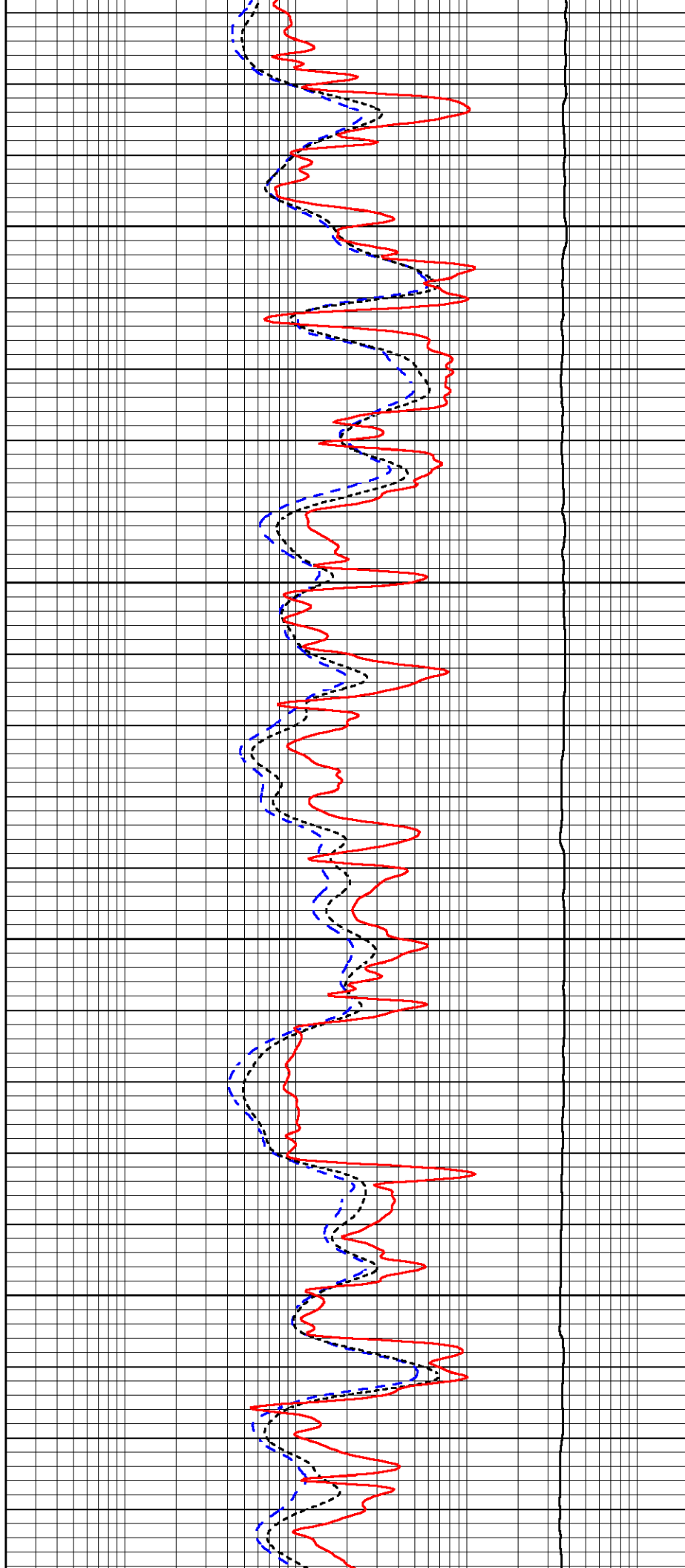


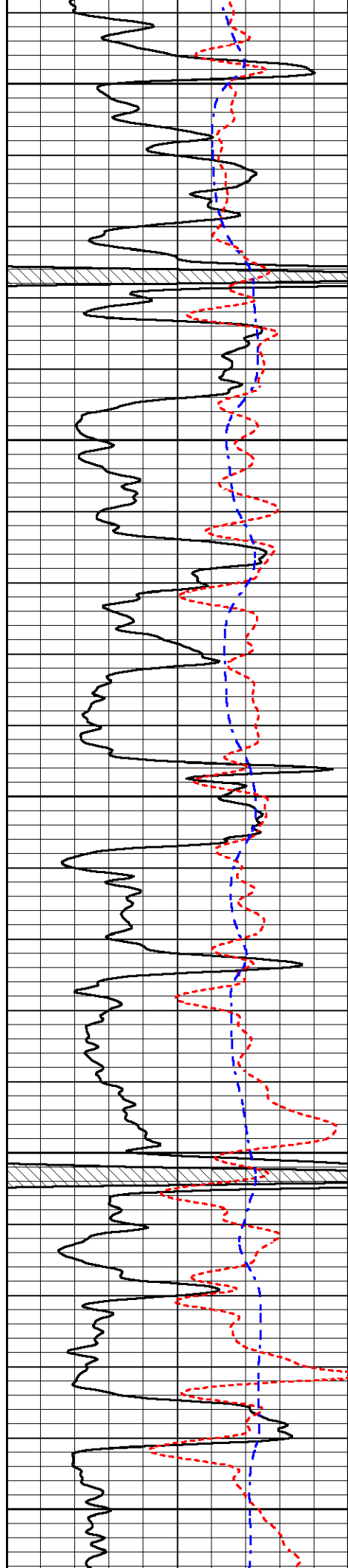
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3600

3650

3700





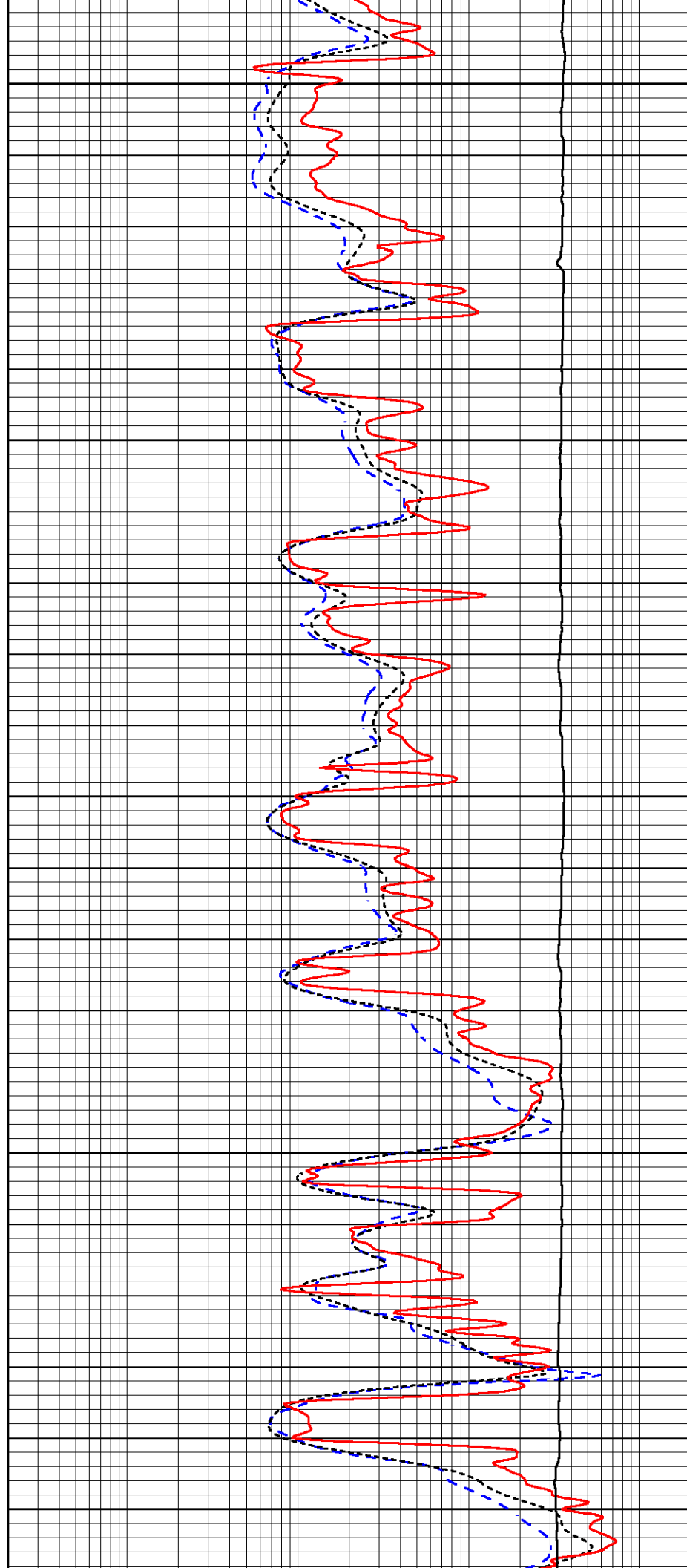
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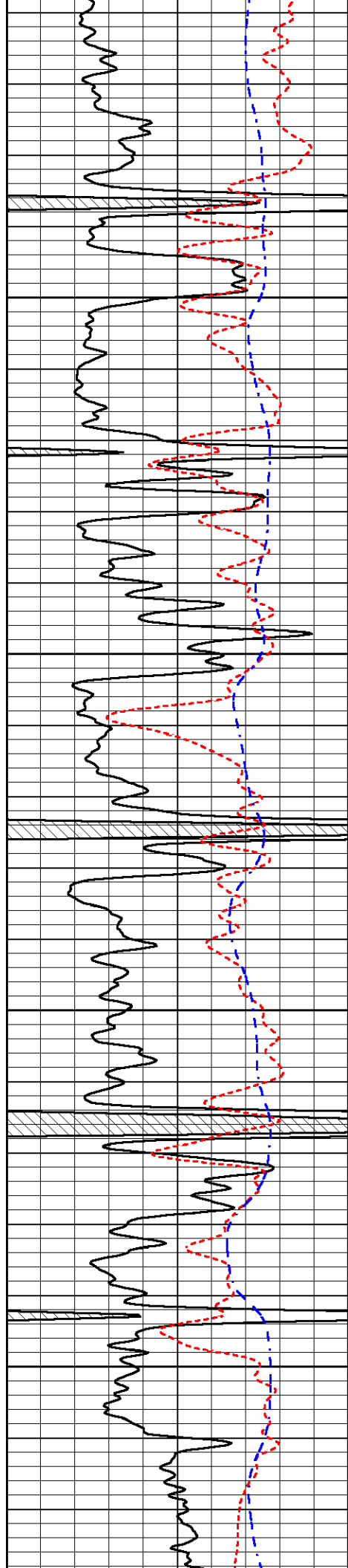
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3850

3900

3950



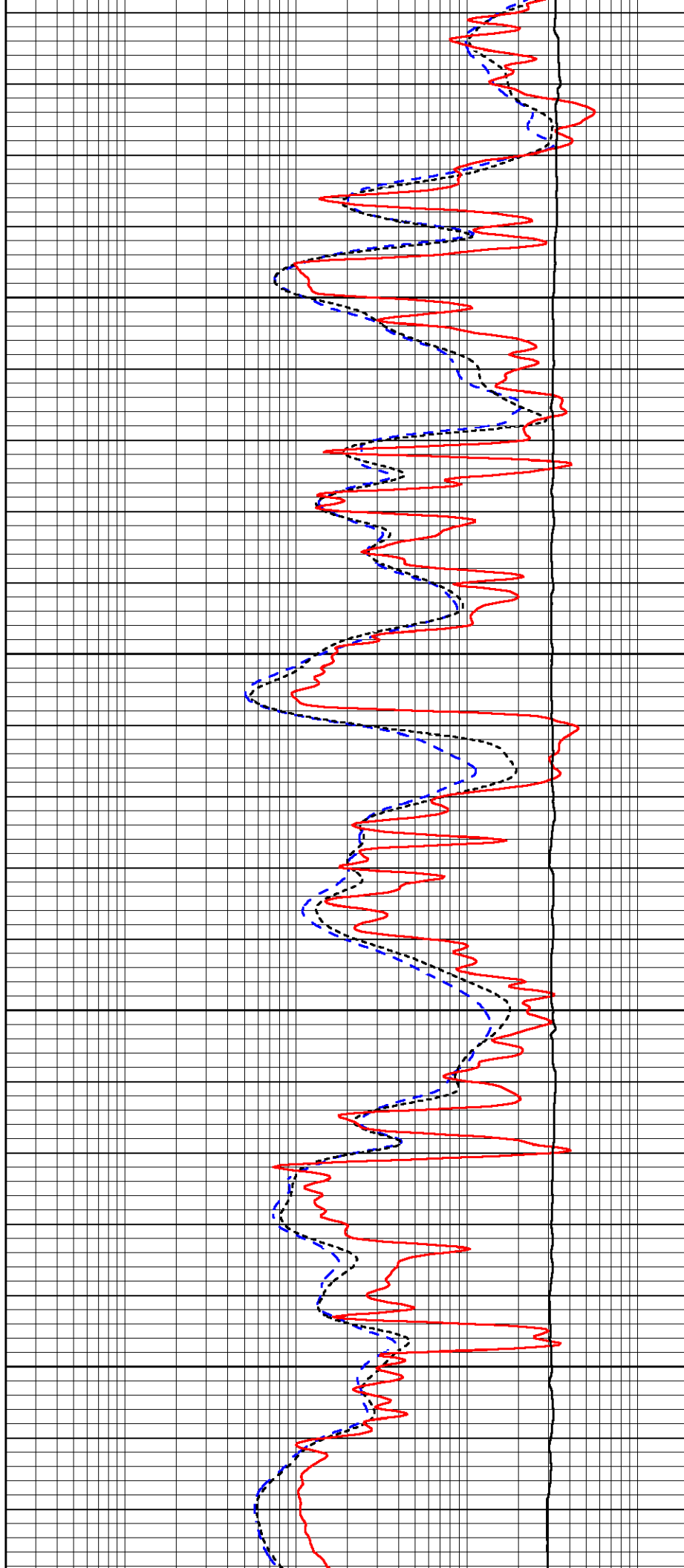


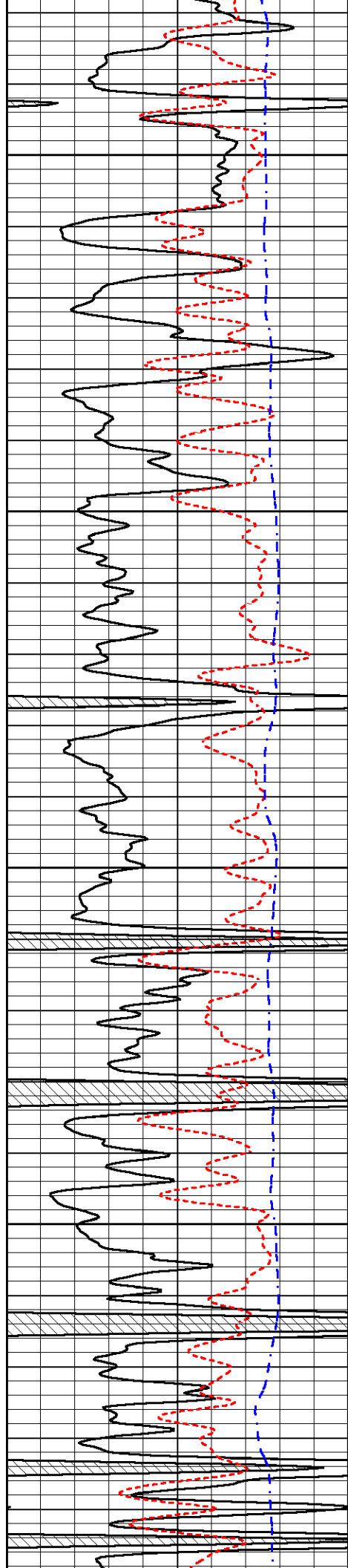
4000

4050

4100

4150



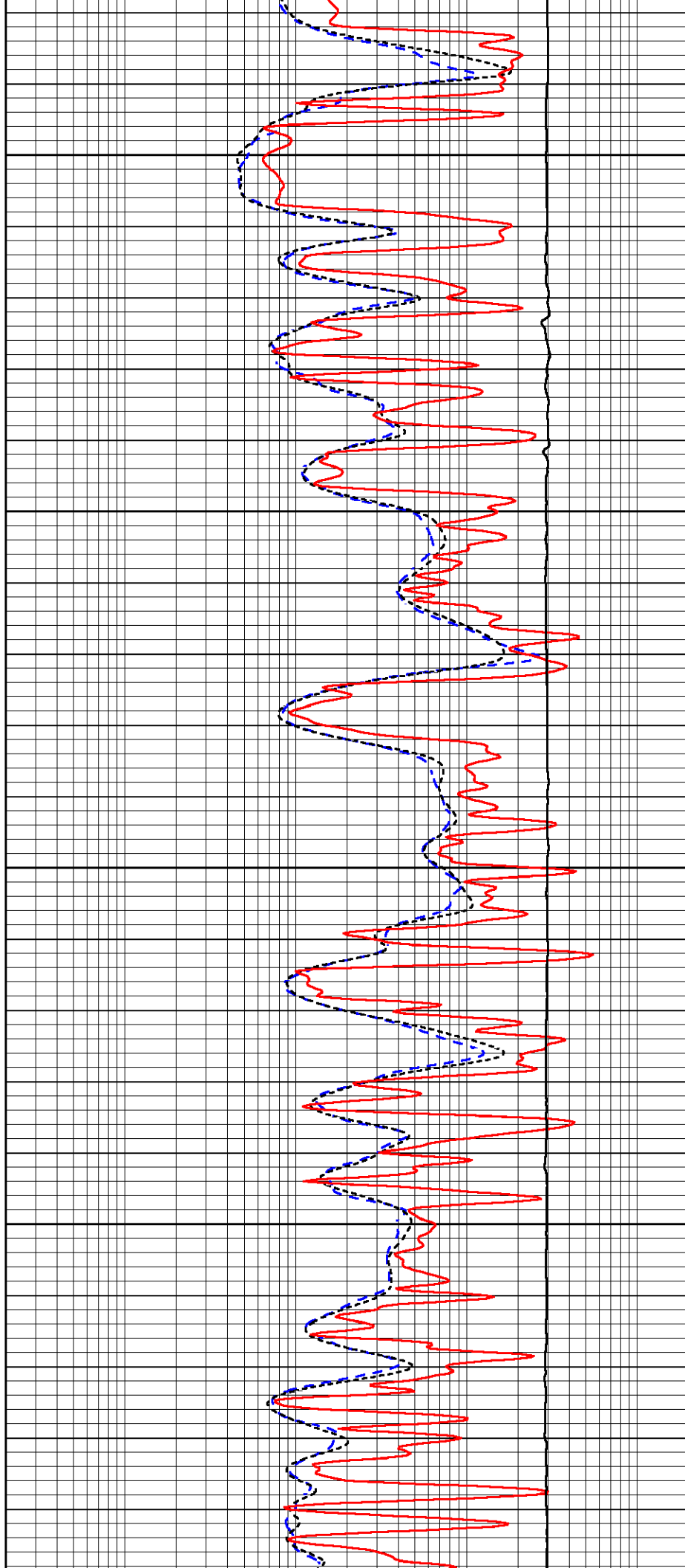


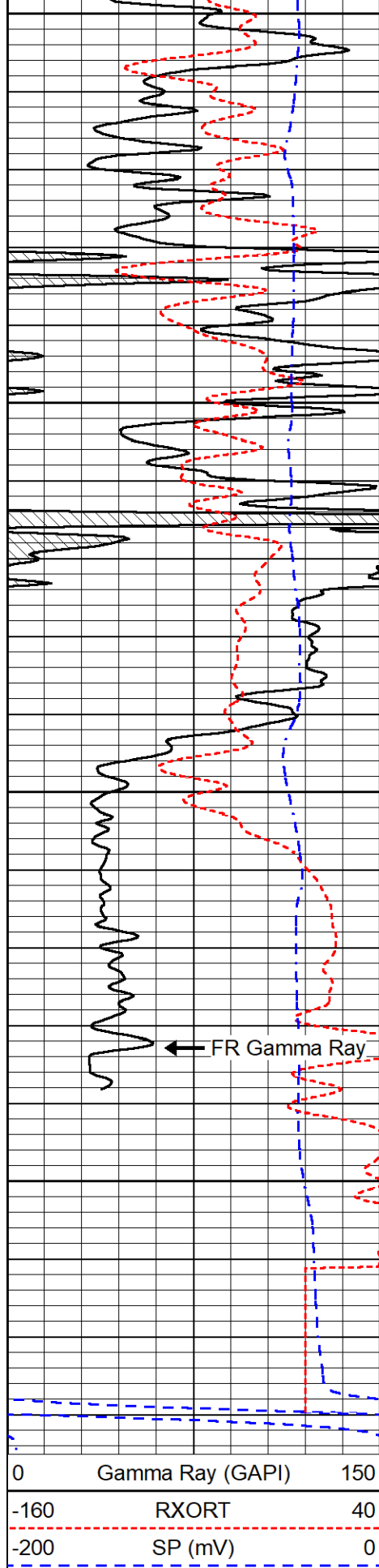
4200

4250

4300

4350



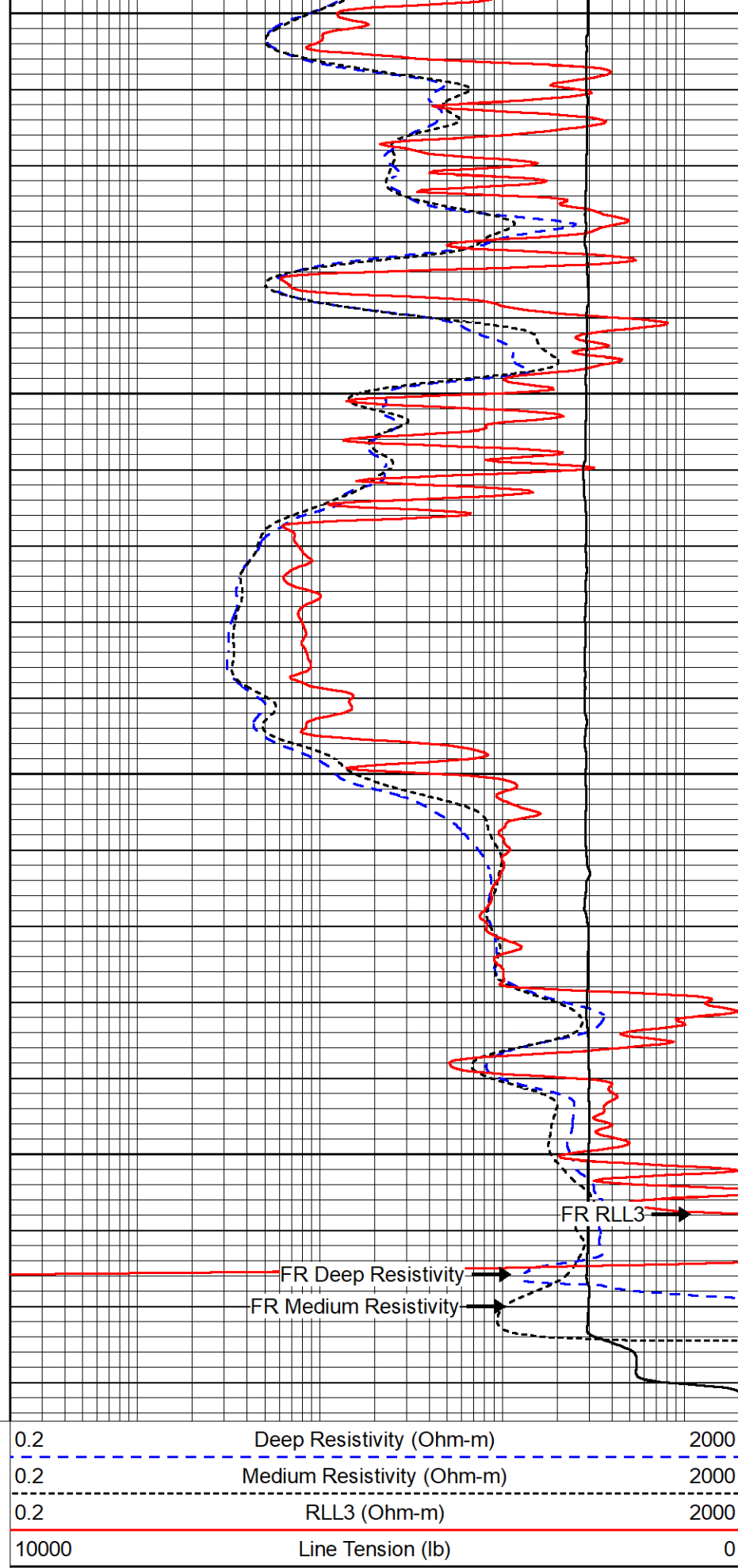


4400

4450

4500

4550



REPEAT SECTION

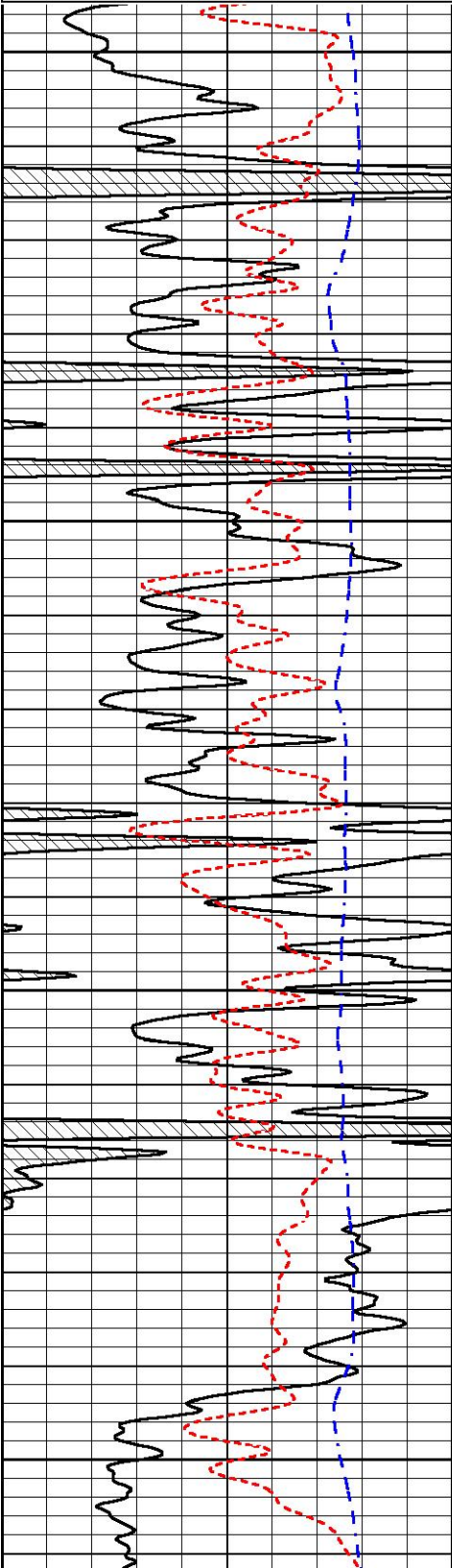


REPEAT PASS

Database File russell_thomas trust 28-1.db
Dataset Pathname stkml/pass2.1
Presentation Format _dil
Dataset Creation Wed Nov 30 12:50:02 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	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

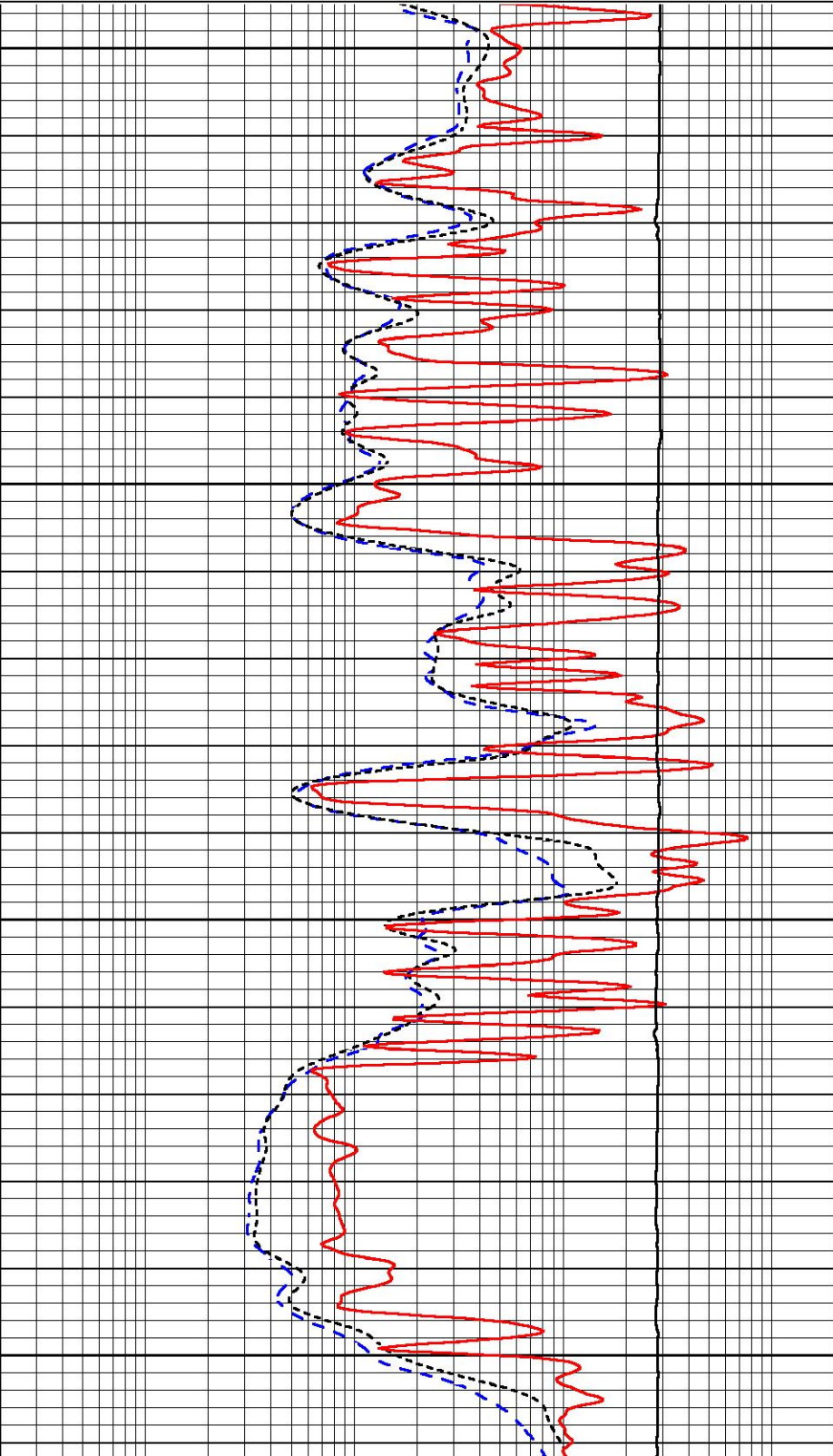


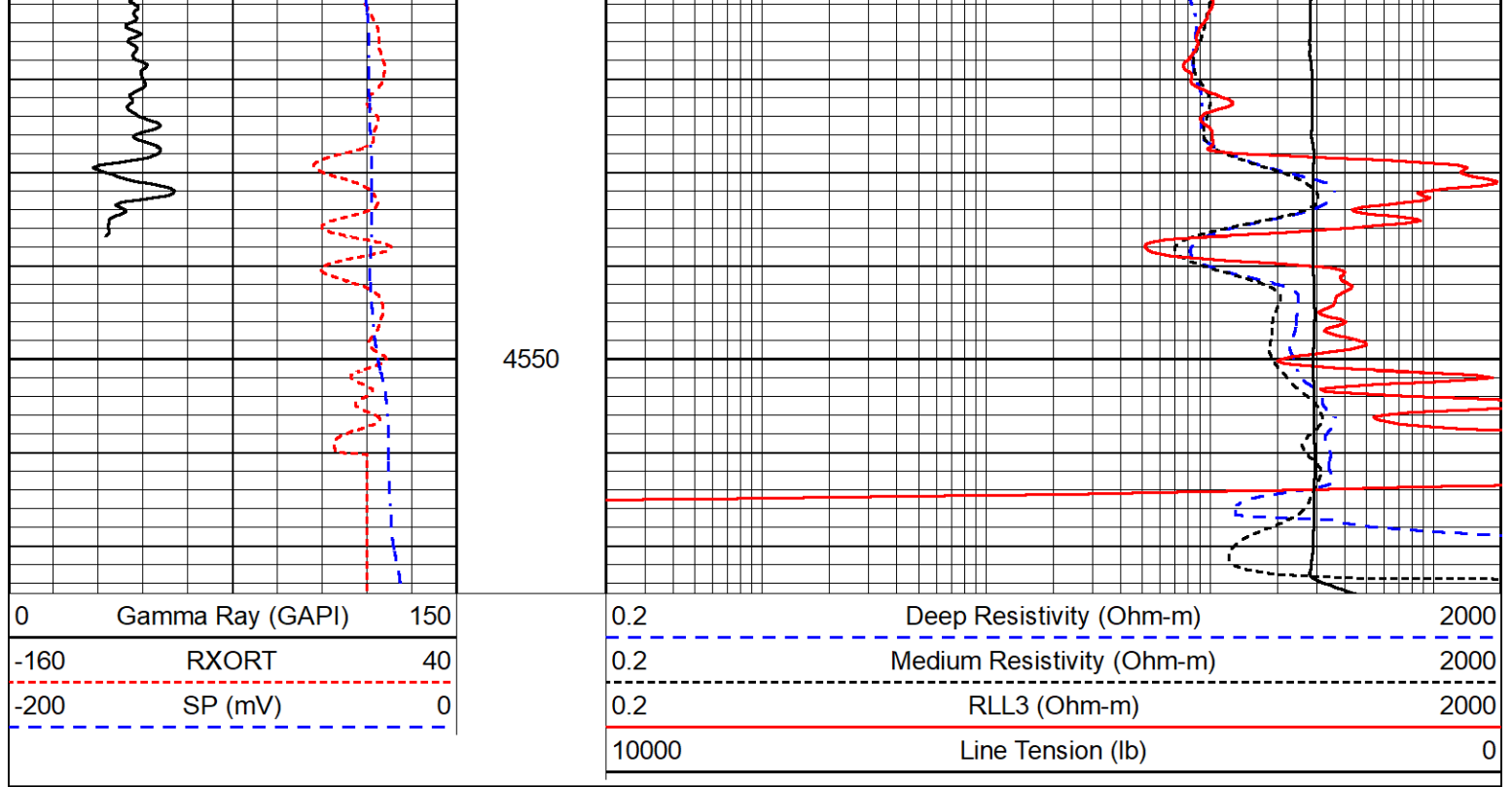
4350

4400

4450

4500





Calibration Report

Database File russell_thomas trust 28-1.db
 Dataset Pathname stkml/pass3.2
 Dataset Creation Wed Nov 30 12:59:42 2022

Dual Induction Calibration Report

Serial-Model: 505 HT-M&W
 Surface Cal Performed: Mon Nov 14 06:05:40 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.480	-48.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.390	-38.500

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
 Performed: Fri Nov 25 03:22:18 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	44000.0000	-2.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	45000.0000	-0.6000
Caliper	1.0046	1.1419	5.5000	20.0000	in	85.0000	-81.1700

Compensated Density Calibration Report

Serial-Model: 303-03-M&W
 Source #: 21170B
 Master Calibration Performed: Mon Oct 17 15:14:24 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.650	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.503		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.04		

Compensated Neutron Calibration Report

Serial-Model:	210-M&W
Source #:	N-1238
Master Calibration Performed:	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	Russell Oil, Inc.
Well	Thomas Trust #28-1
Field	
County	Logan
State	Kansas