



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Russell Oil, Inc.		Company Russell Oil, Inc.	
Well Johnson #14-1		Well Johnson #14-1	
Field		Field	
County Logan		County Logan	
State Kansas		State Kansas	
Location: API #: 15-109-21653-00-00		Other Services	
SEC 14 TWP 11S RGE 32W		CNU/CDL MEL	
Permanent Datum	Ground Level	Elevation	3049
Log Measured From	Kelly Bushing		
Drilling Measured From	Kelly Bushing		
Date 8/15/2022			
Run Number	One		
Depth Driller	4720		
Depth Logger	4719		
Bottom Logged Interval	4718		
Top Log Interval	300		
Casing Driller	8.625 @ 311		
Casing Logger	309		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3200		
Density / Viscosity	9.3 61		
pH / Fluid Loss	10.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.70 @ 88		
Rmt @ Meas. Temp	0.53 @ 88		
Rmc @ Meas. Temp	0.95 @ 88		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.50 @ 123		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	123		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Kitt Noah		

<<< 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.

Oakley,
1 South on Hwy 83 to Daydream Rd, 1/4 East,
South and West into

Log Measured From: Kelly Bushing 10 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: Kitt Noah
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\russell_johnson 14-1.db
Dataset field/well/stkml/pass4.10/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 123	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 345	degF 95	Off	ft 4719

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

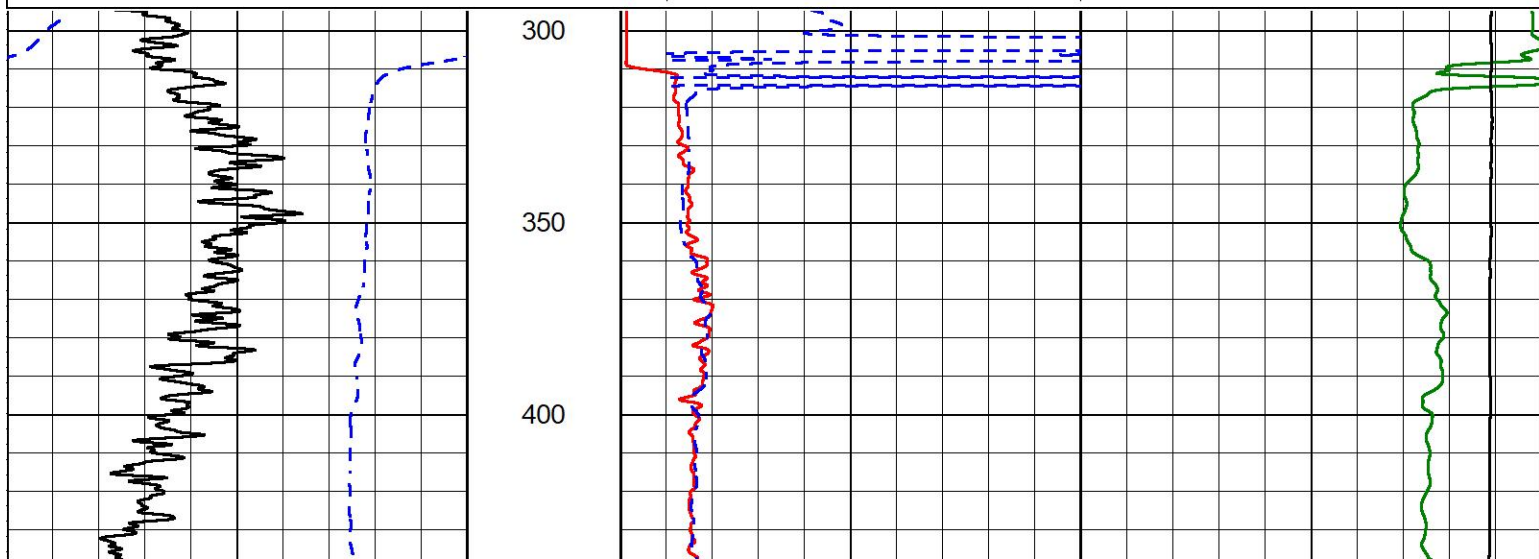


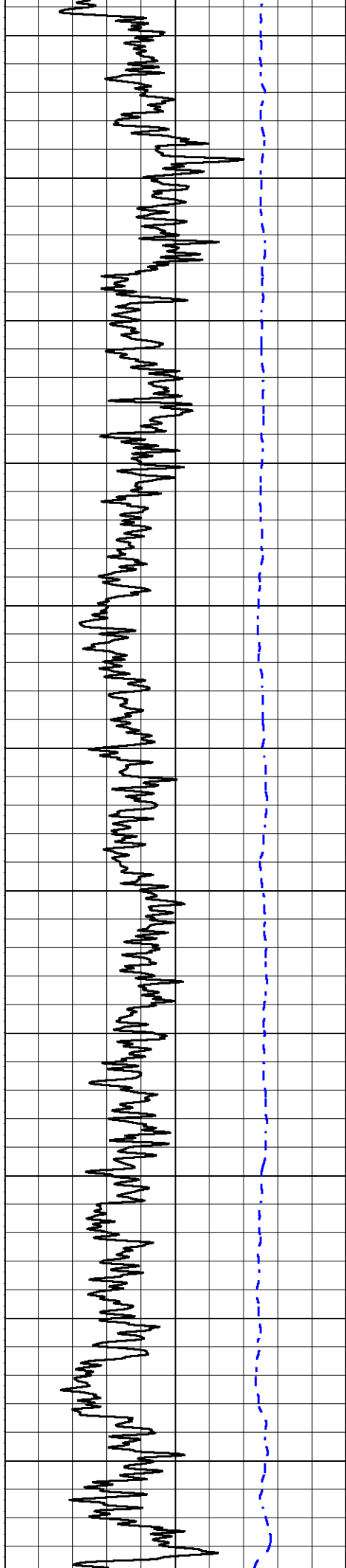
2" SCALE RESISTIVITY

MAIN PASS

Database File russell_johnson 14-1.db
Dataset Pathname stkml/pass4.3
Presentation Format _dil2in
Dataset Creation Mon Aug 15 21:04:47 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

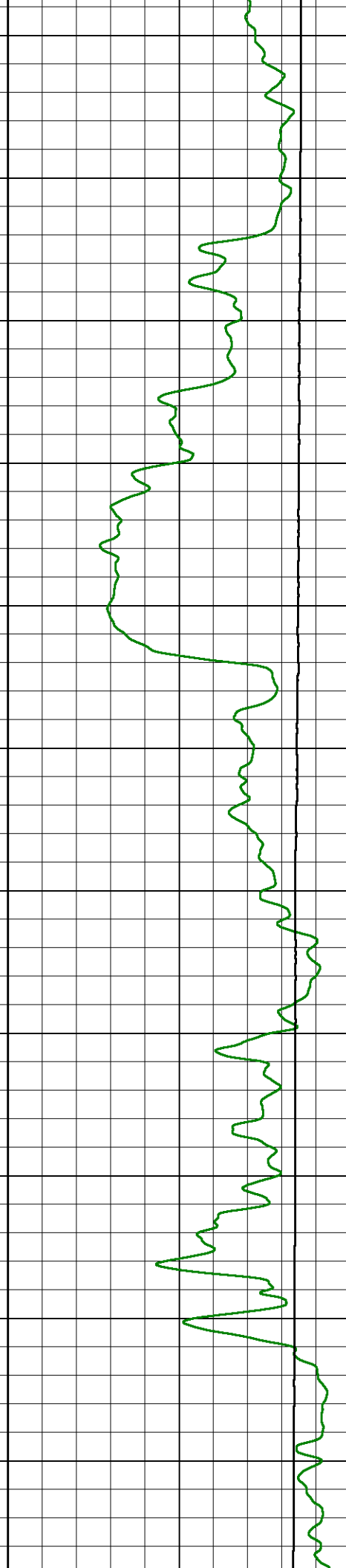
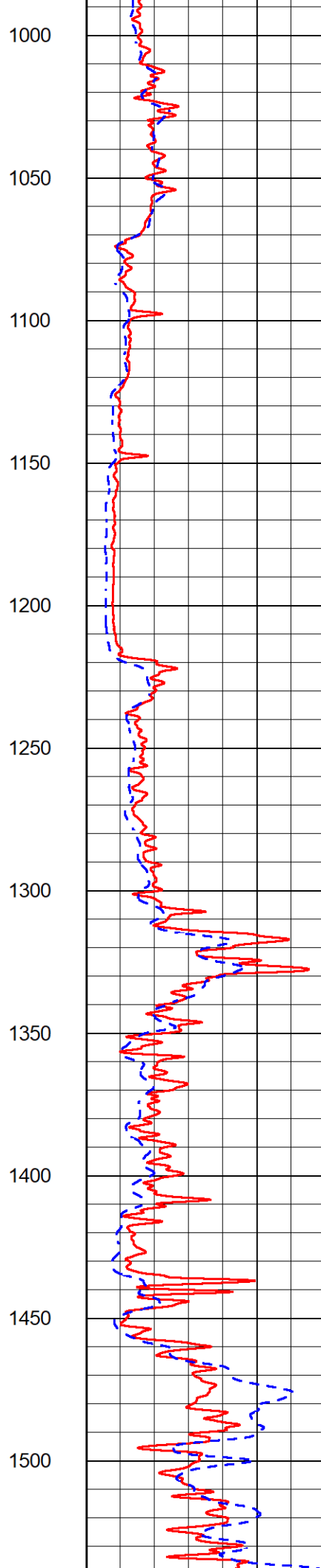
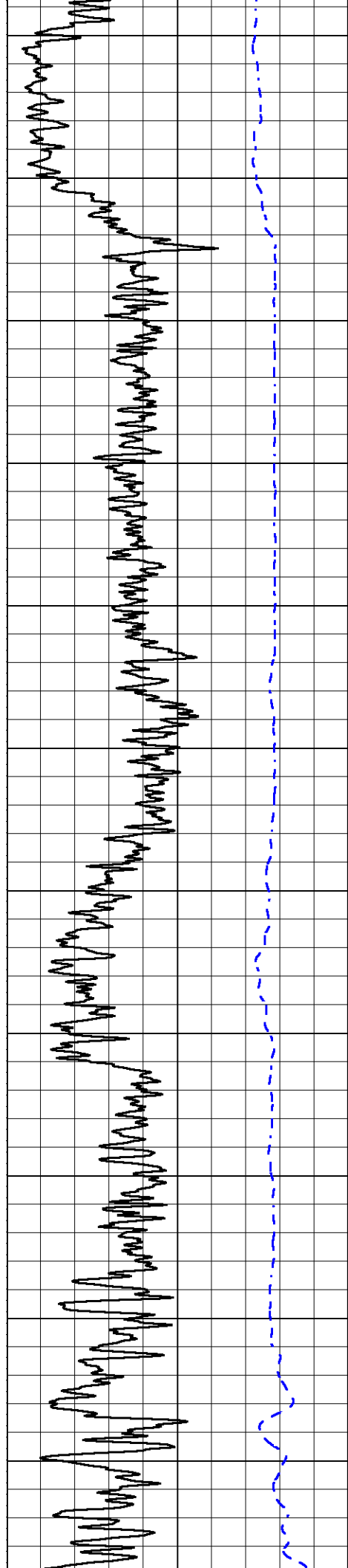
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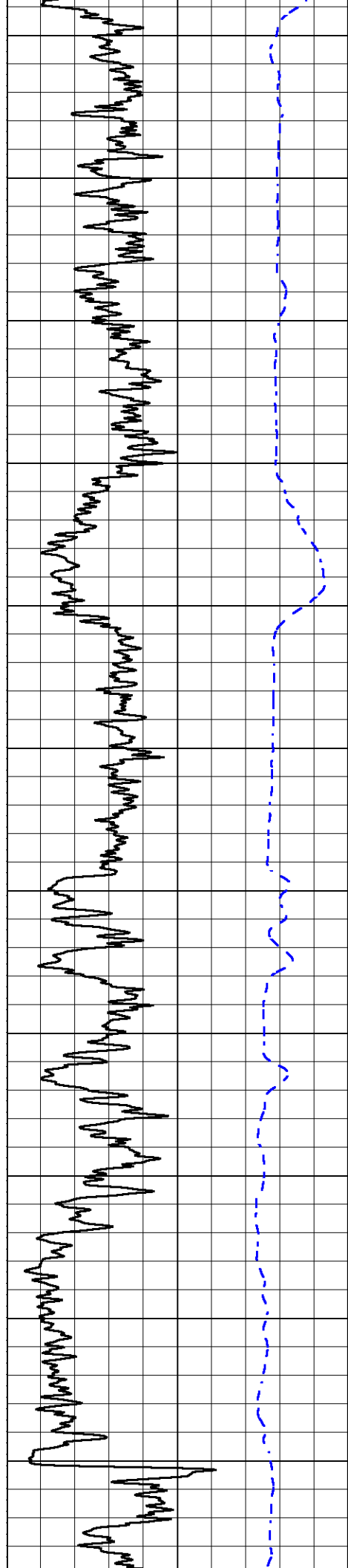
850

900

950







1550

1600

1650

1700

1750

1800

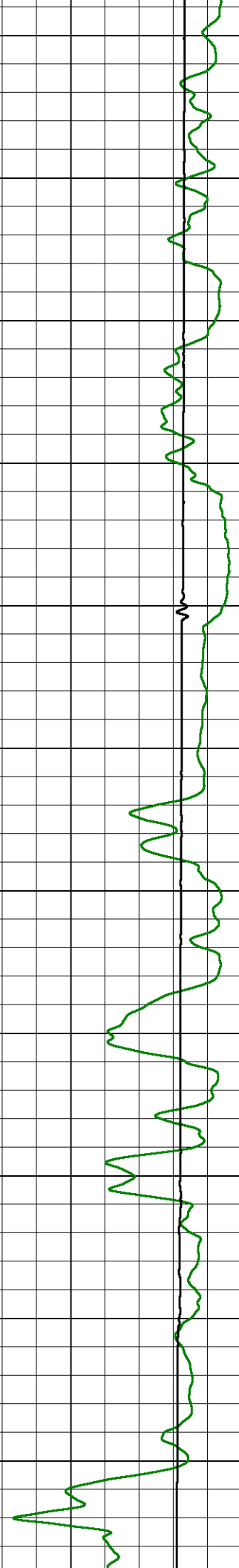
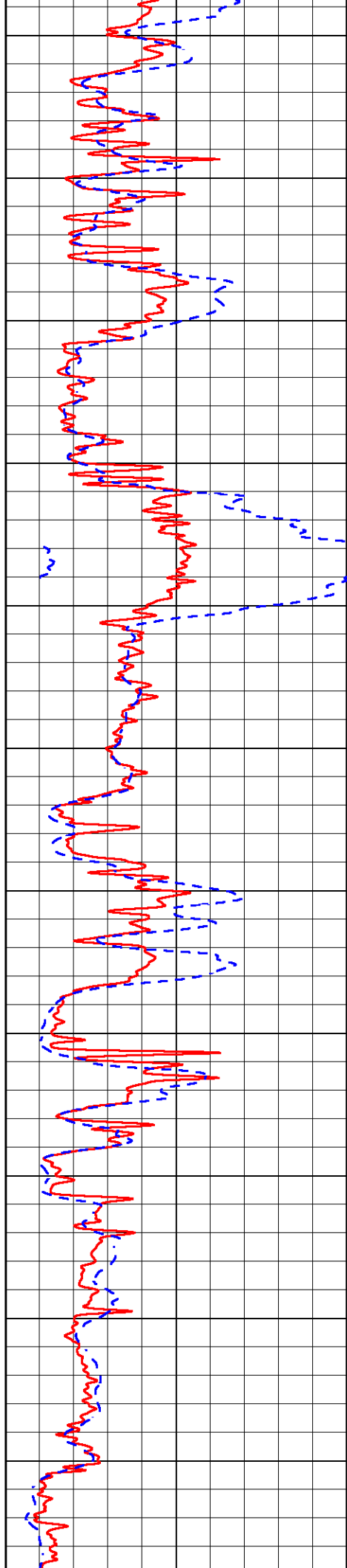
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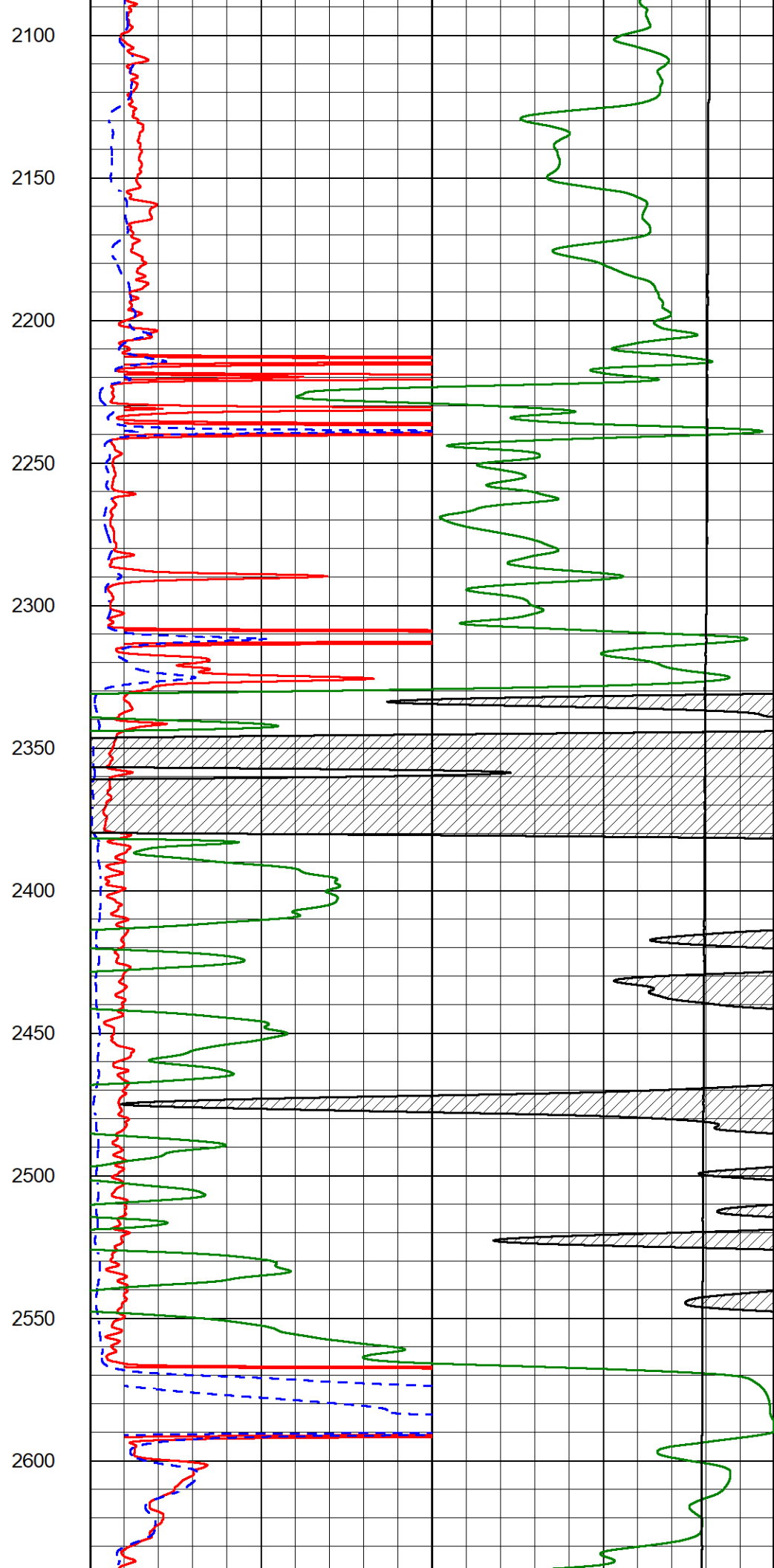
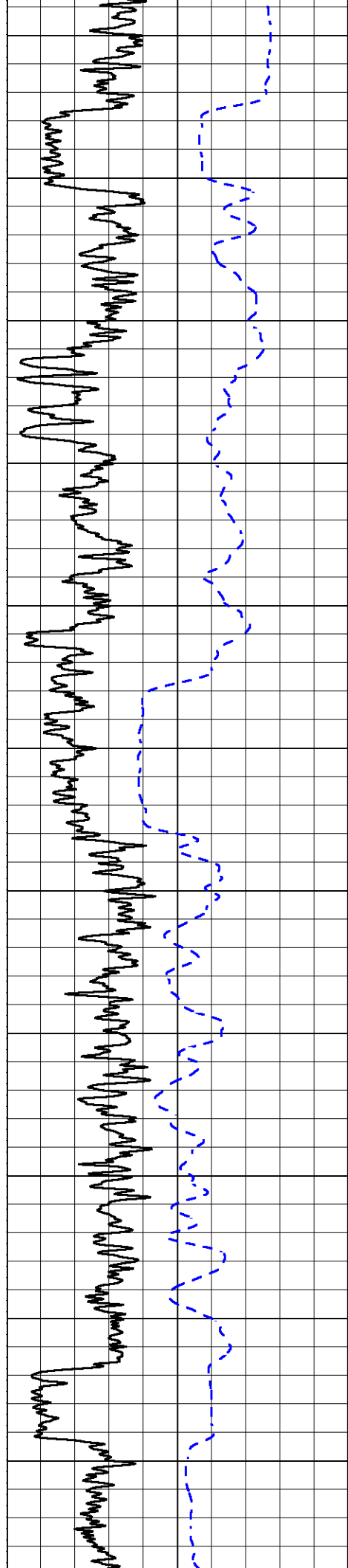
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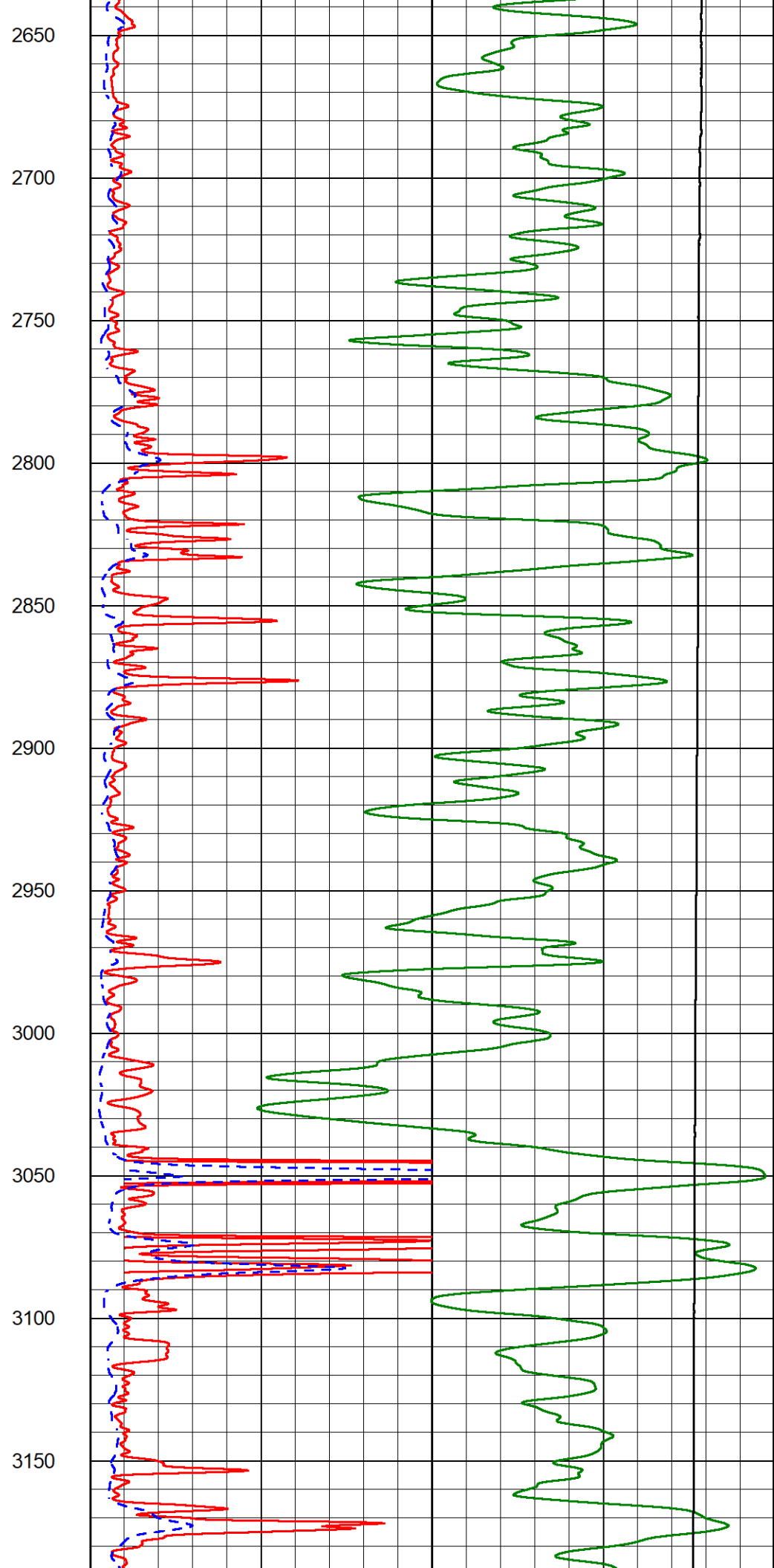
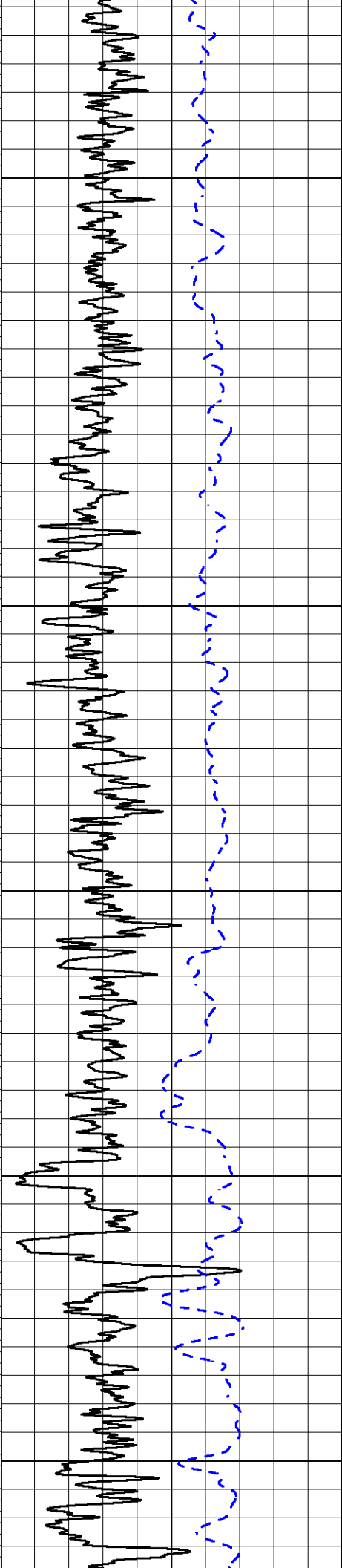
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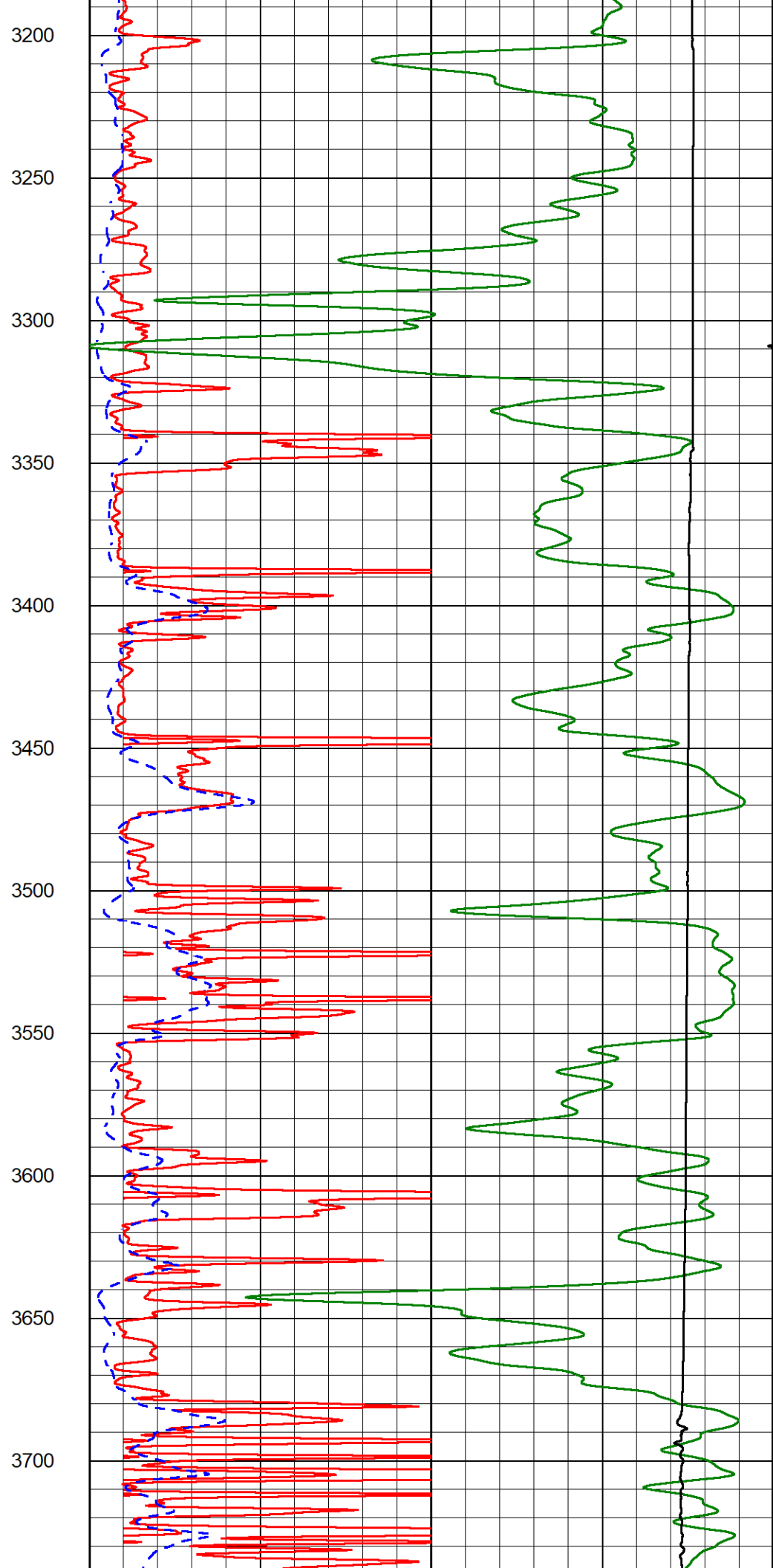
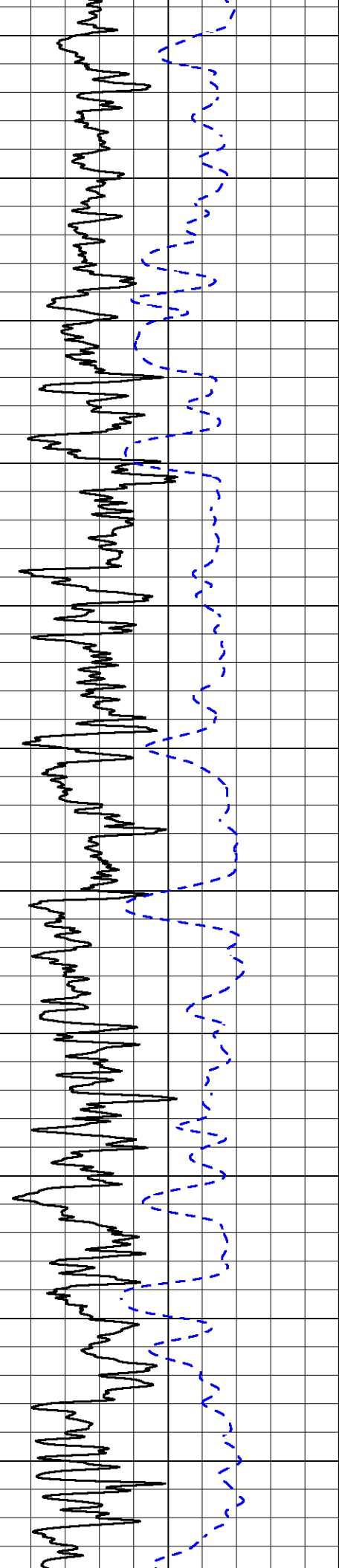
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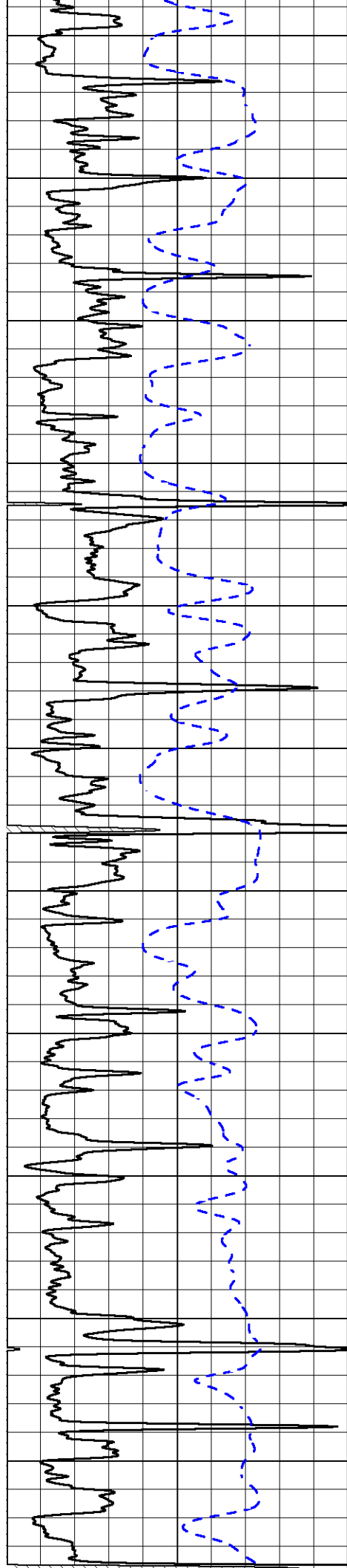
2050











3750

3800

3850

3900

3950

4000

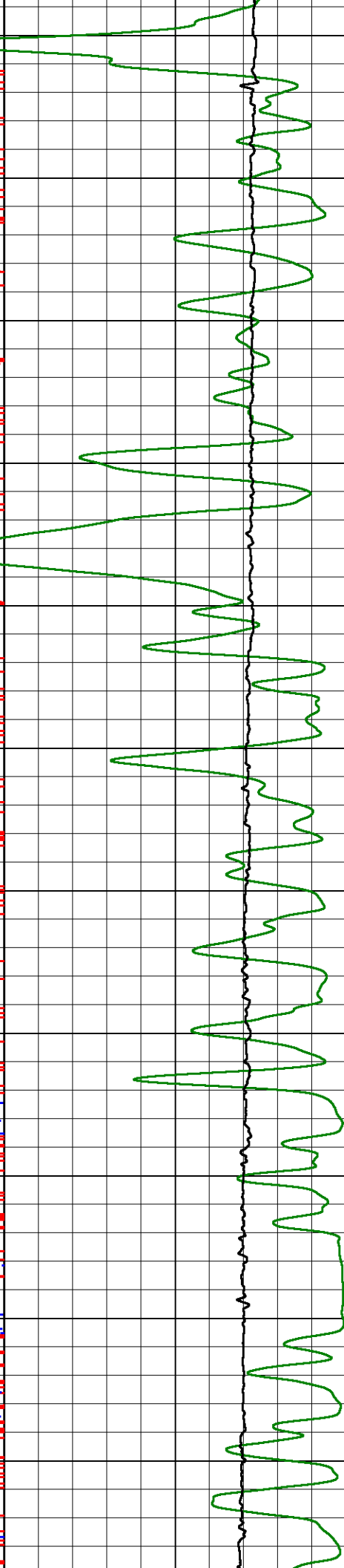
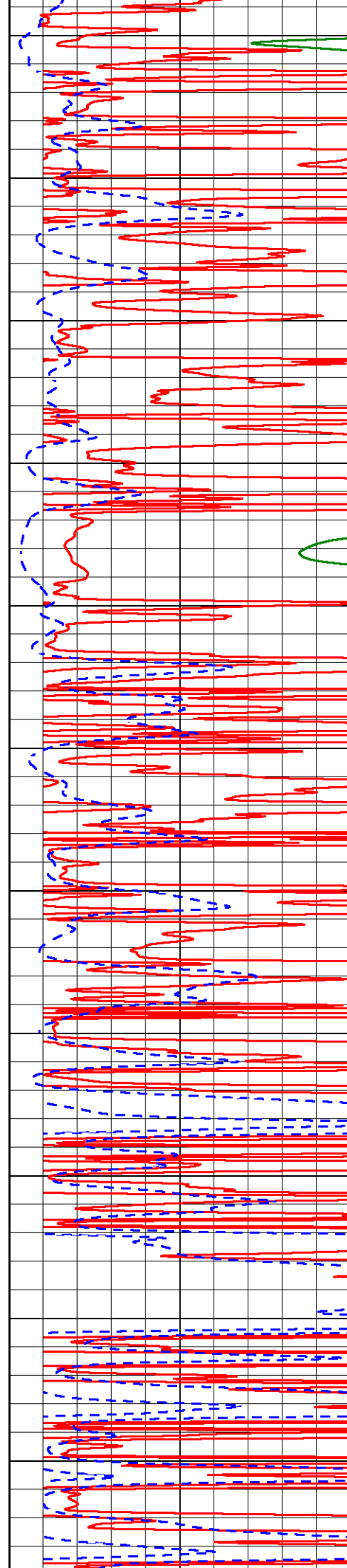
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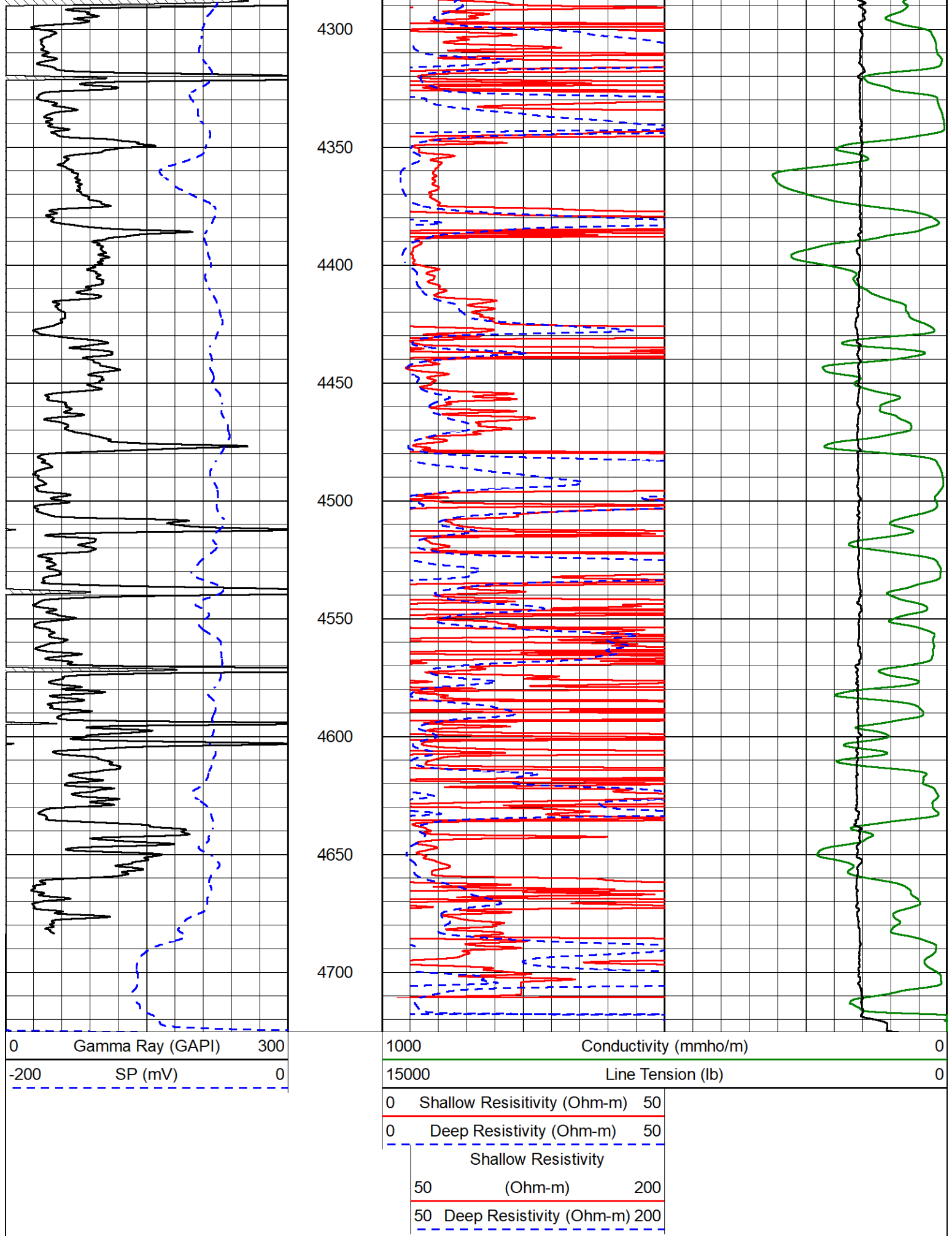
4100

4150

4200

4250







MIDWEST WIRELINE

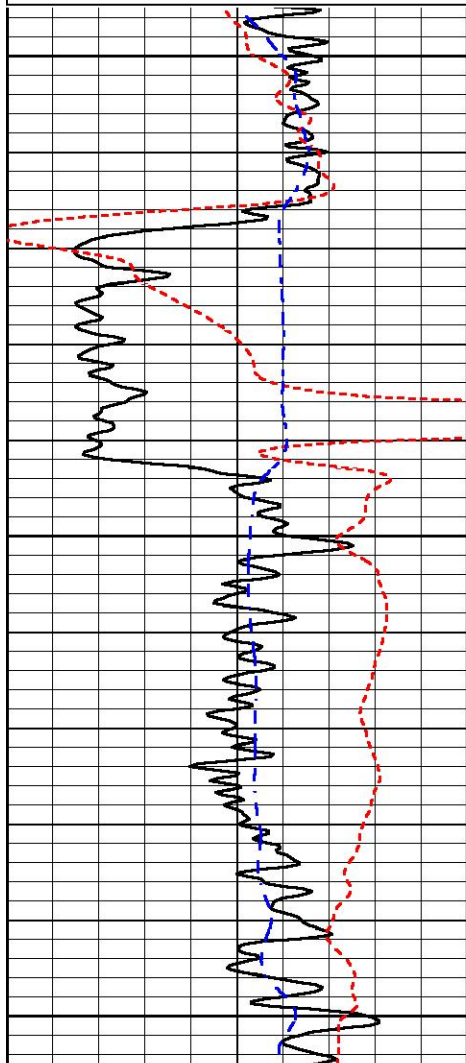
ANHYDRITE SECTION

MAIN PASS

Database File russell_johnson 14-1.db
 Dataset Pathname stkml/pass4.4
 Presentation Format _dil
 Dataset Creation Mon Aug 15 21:04:59 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

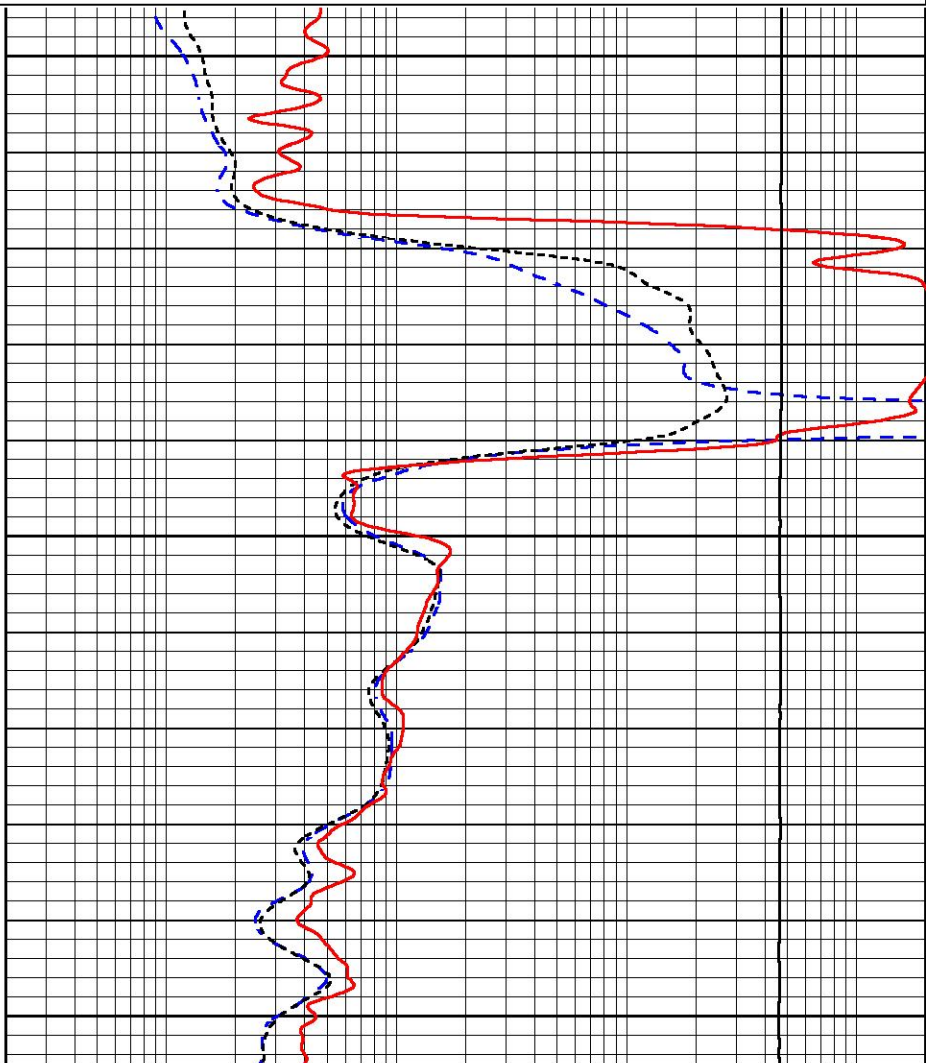


2550

2600

2650

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



MIDWEST WIRELINE

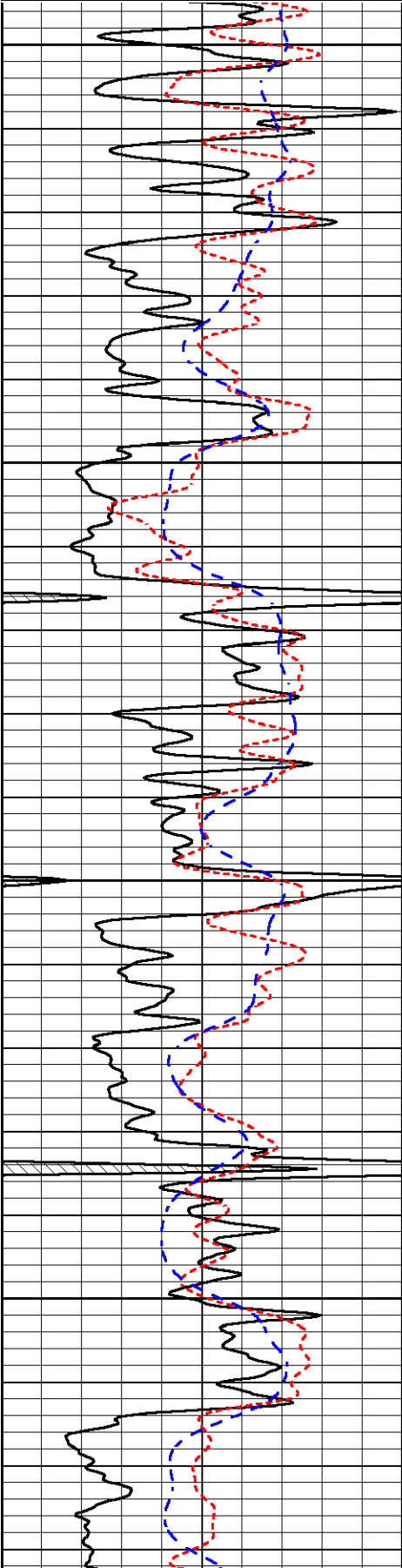
DETAIL SECTION

MAIN PASS

Database File russell_johnson 14-1.db
 Dataset Pathname stkml/pass4.1

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

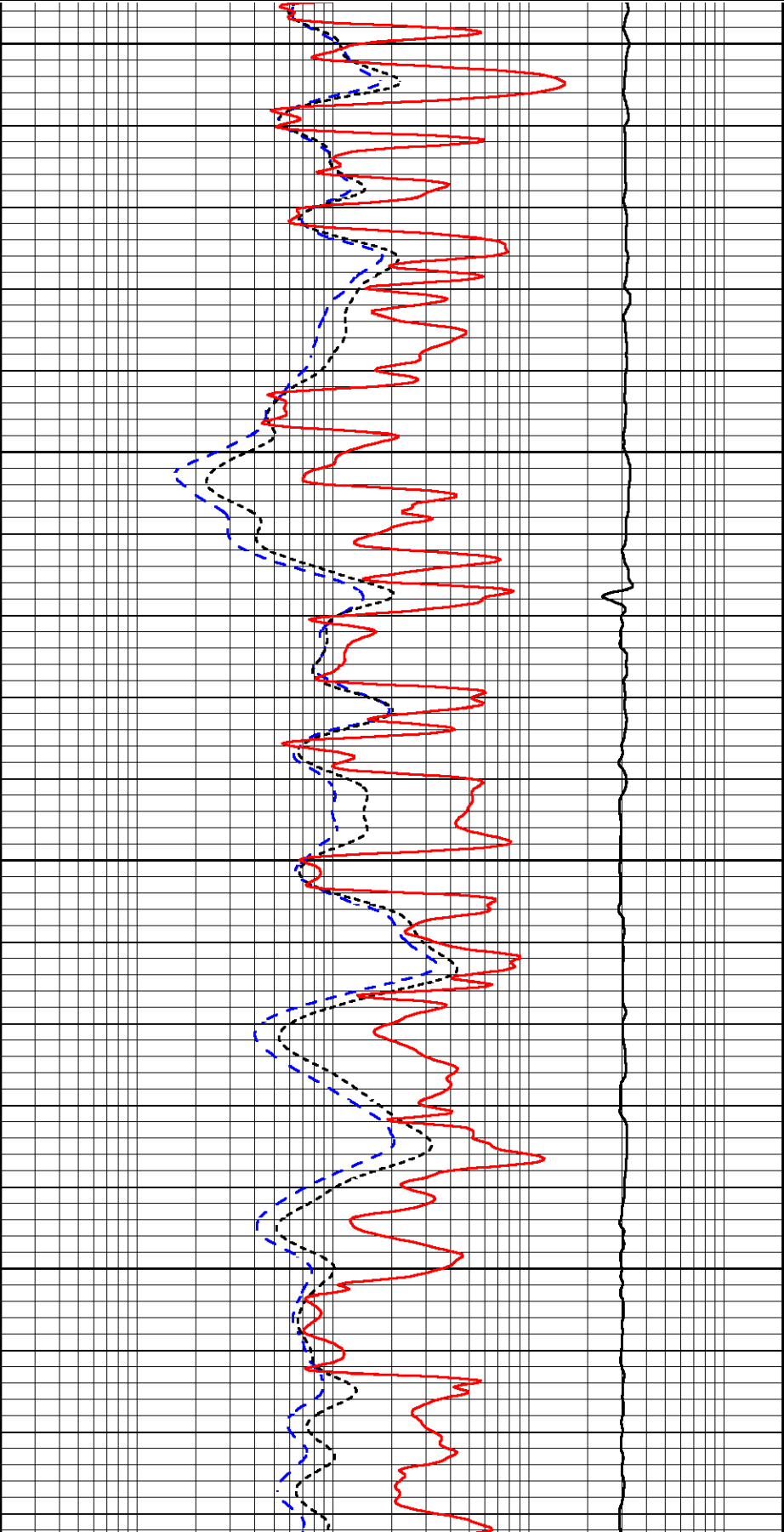


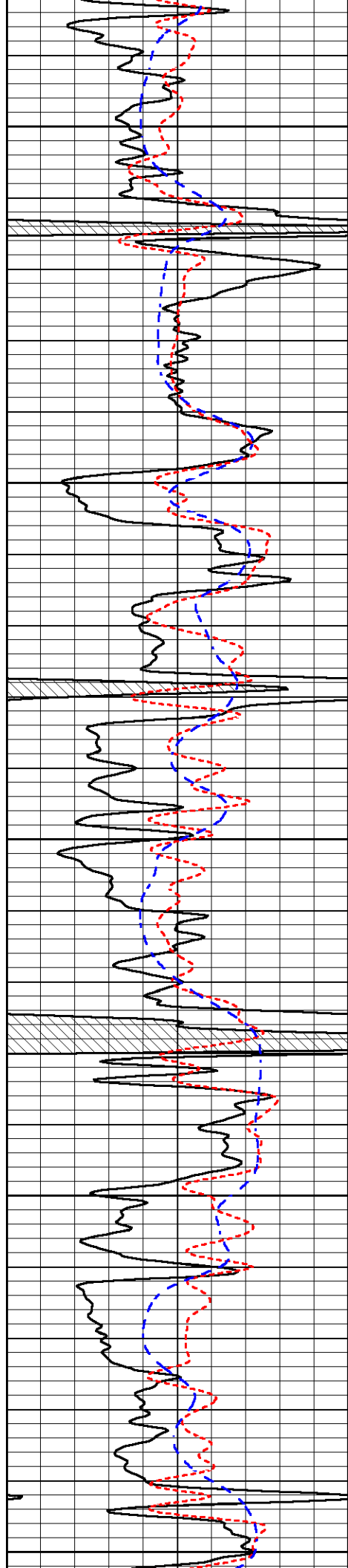
3700

3750

3800

3850





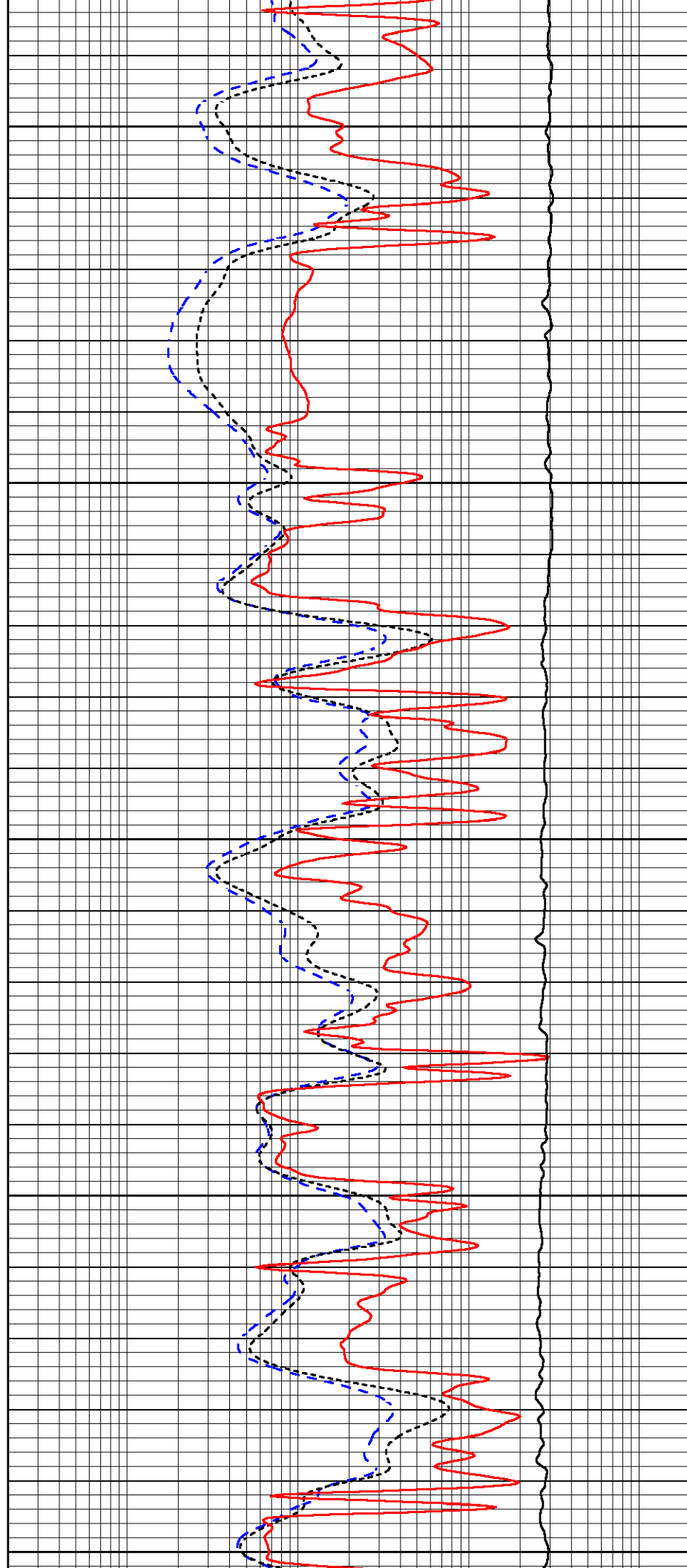
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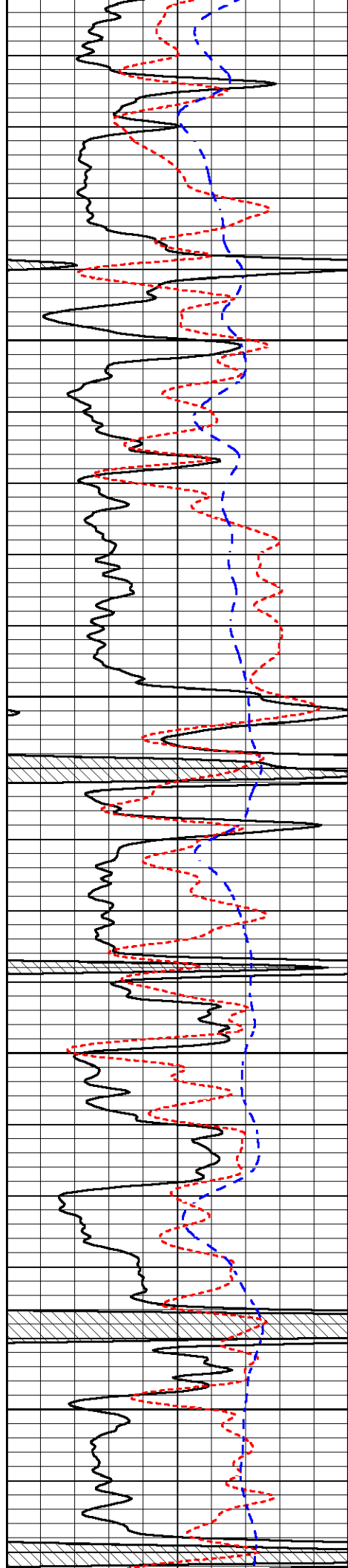
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4000

4050

4100



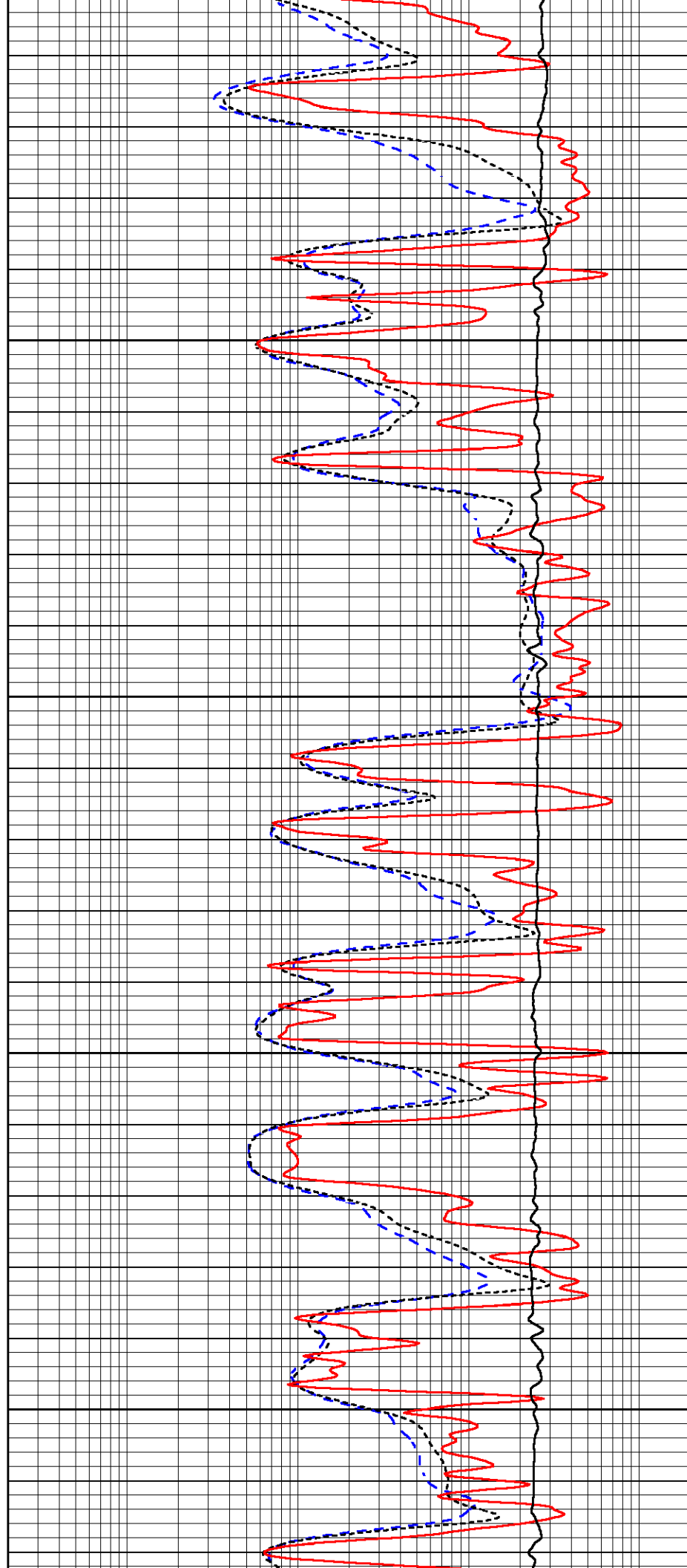


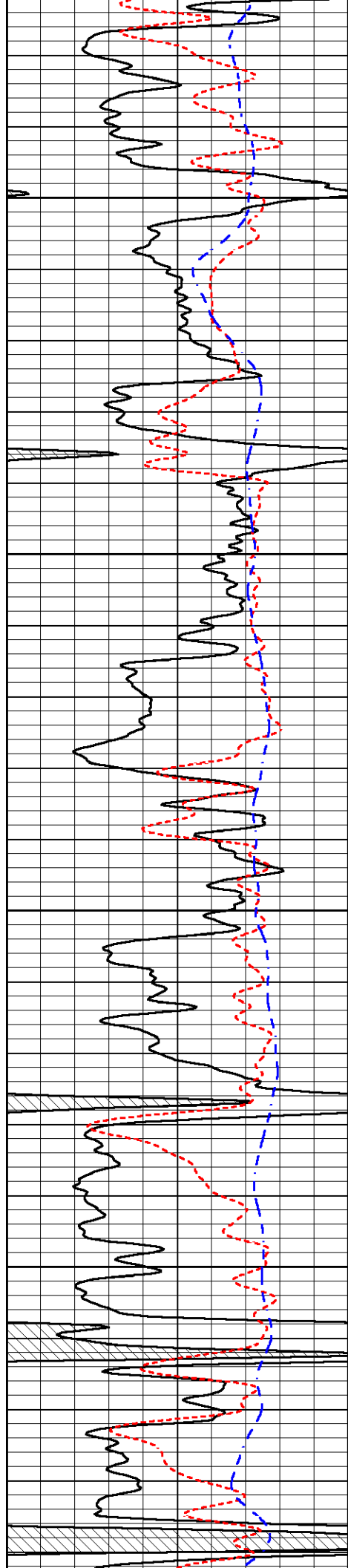
4150

4200

4250

4300



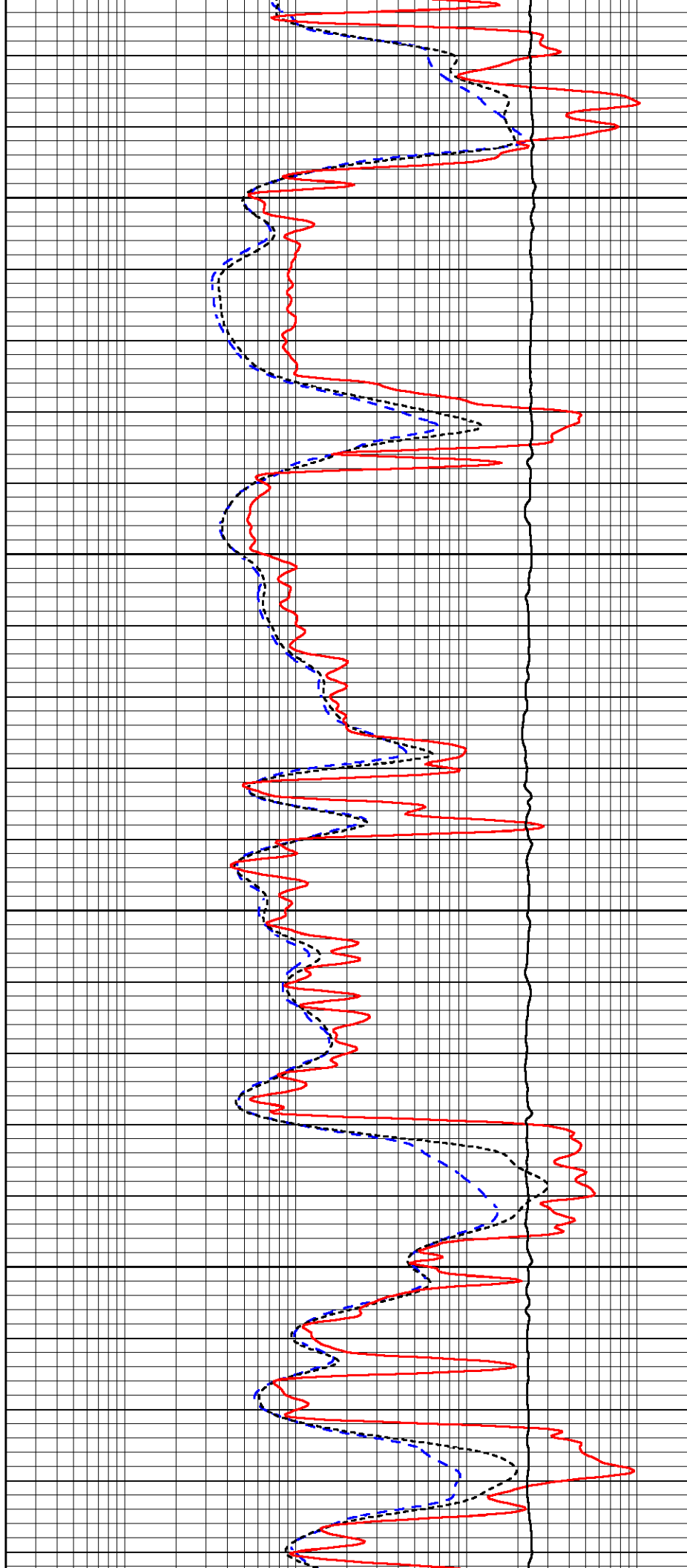


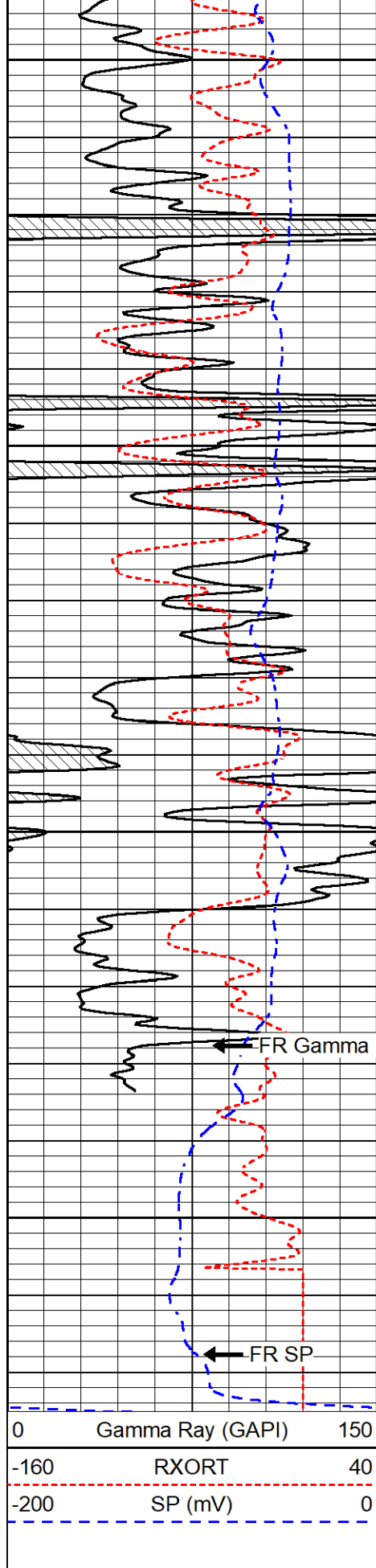
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4400

4450

4500





4550

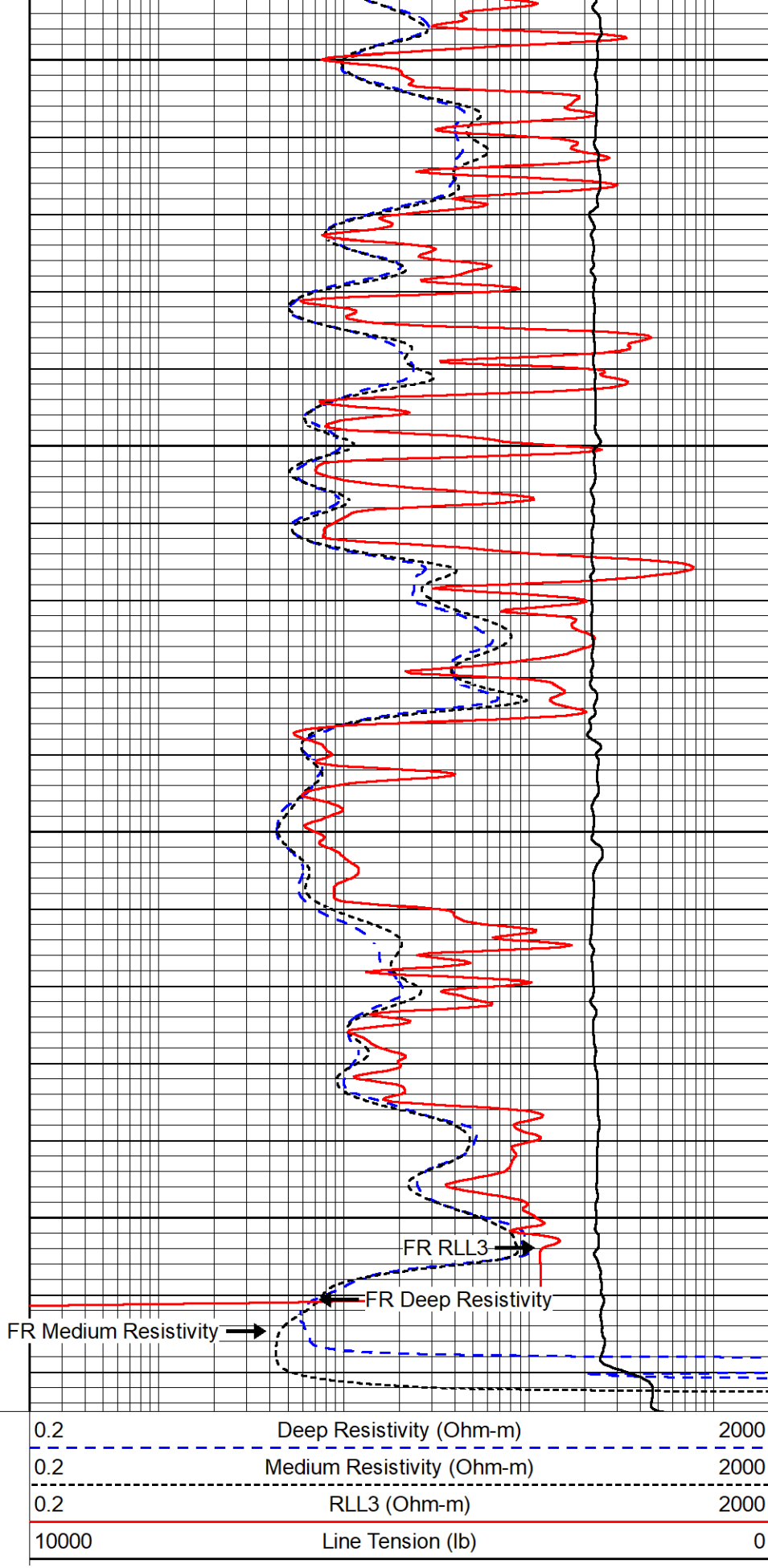
4600

4650

4700

FR Gamma Ray

FR SP



FR RLL3

FR Deep Resistivity

FR Medium Resistivity

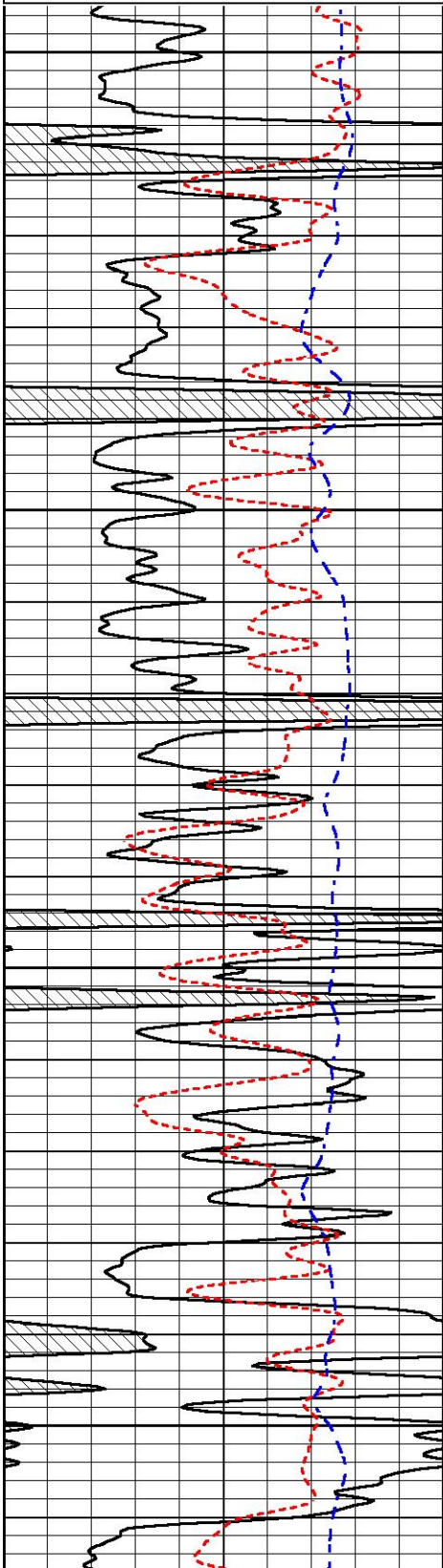


REPEAT SECTION

Database File russell_johnson 14-1.db
 Dataset Pathname stkml/pass3.1
 Presentation Format _dil
 Dataset Creation Mon Aug 15 20:15:19 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

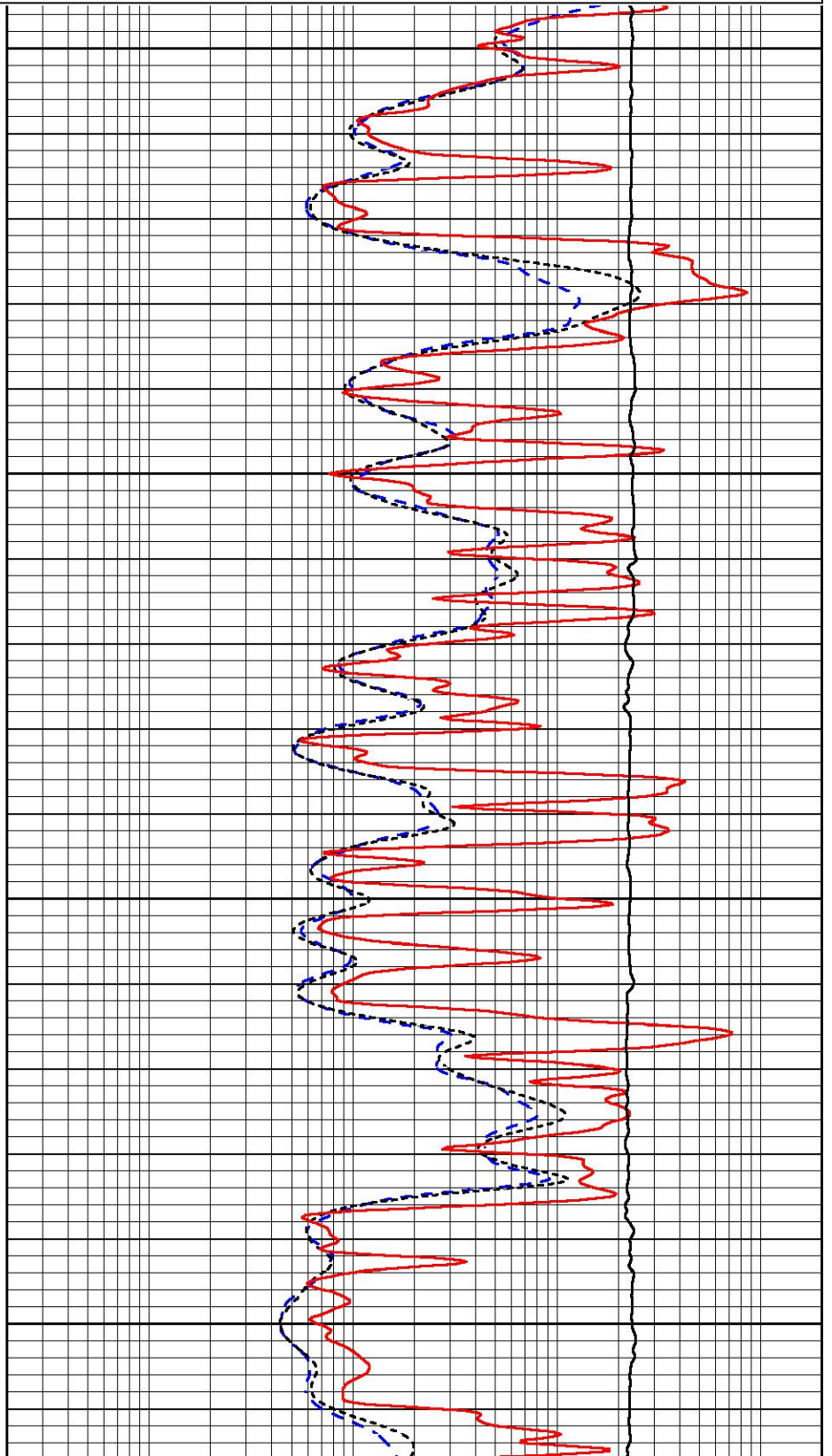


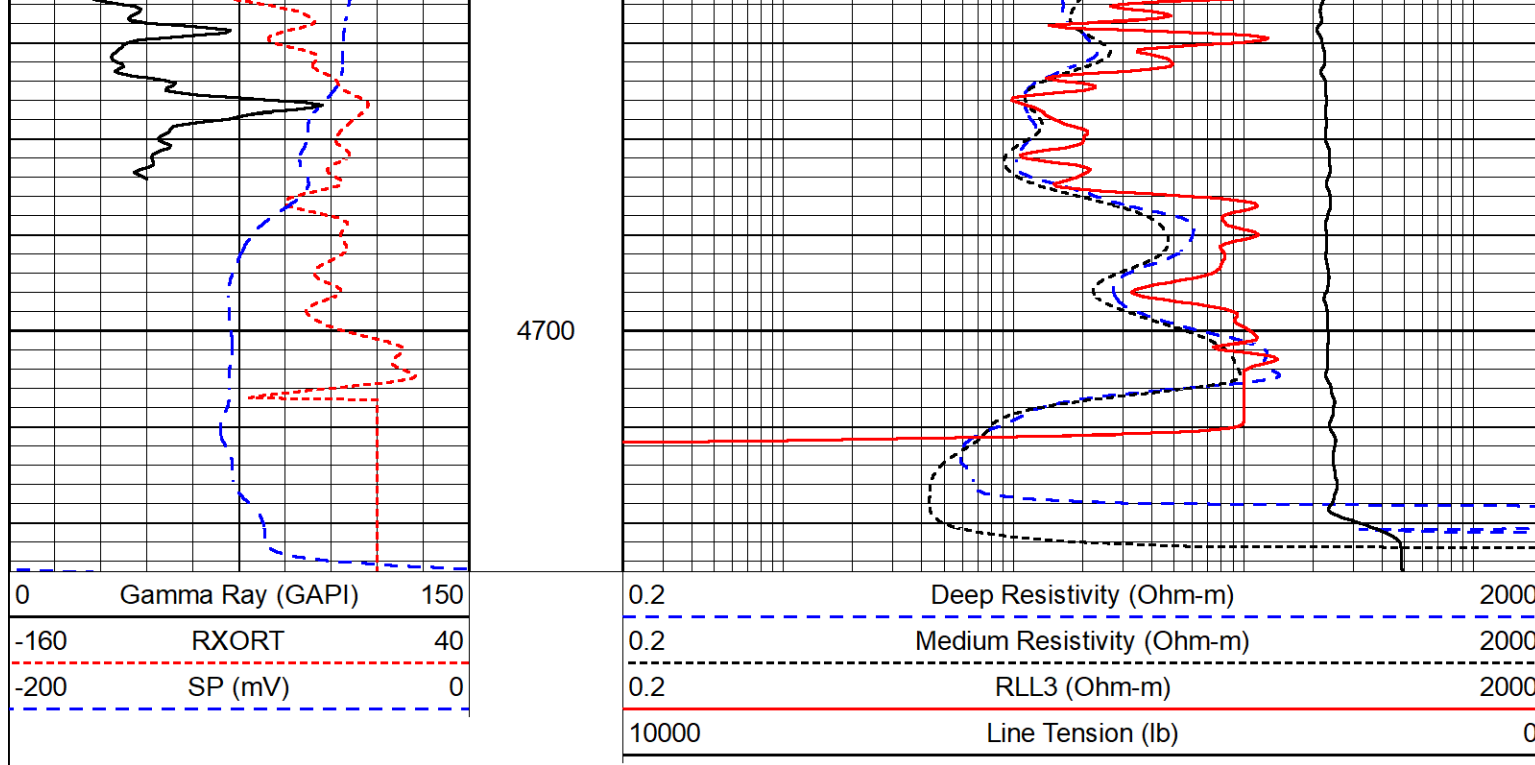
4500

4550

4600

4650





Calibration Report		
Database File	russell_johnson 14-1.db	
Dataset Pathname	stkml/pass4.10	
Dataset Creation	Mon Aug 15 20:11:54 2022	

Dual Induction Calibration Report

Serial-Model:	505 HT-M&W
Surface Cal Performed:	Wed Feb 2 12:55:14 2022

Readings		References			Results	
Loop:	Air	Loop	Air	Loop	m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.480
Medium	1348.000	1348.000	0.000	255.800	mmho/m	-59.000
						-56.000

Microlog Calibration Report

Serial-Model:	401-PSI STKBL ML
Performed:	Mon Aug 1 06:22:24 2022

Readings		References			Results	
	Zero	Cal	Zero	Cal	m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	15000.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	-1.5000
Caliper	1.0049	1.0846	5.5000	20.0000	in	14700.0000
						-0.8000
						135.0000
						-131.2500

Compensated Density Calibration Report
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Serial-Model:	304-04-M&W
Source #:	21170B
Master Calibration Performed:	Sun May 29 09:31:45 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6392.84	8538.69	cps
Aluminum	2.685	g/cc	1184.69	5433.63	cps
Spine Angle = 74.99			Density/Spine Ratio = 0.533		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

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

 MIDWEST WIRELINE	Company	Russell Oil, Inc.
	Well	Johnson #14-1
	Field	
	County	Logan
	State	Kansas