



MIDWEST WIRELINE

DUAL INDUCTION

Company Castle Resources, Inc.
 Well Mollhagen #3
 Field Geneseo-Edward
 County Ellsworth
 State Kansas

Company Castle Resources, Inc.
 Well Mollhagen #3
 Field Geneseo-Edward
 County Ellsworth State Kansas

Location: API #: 15-053-21400-00-00
 SE NW SE NW
 1750 FNL & 3390 FEL
 SEC 9 TWP 17S RGE 8W
 Permanent Datum Ground Level Elevation 1720
 Log Measured From Kelly Bushing
 Drilling Measured From Kelly Bushing
 Other Services
 CNL/CDL
 MEL
 Elevation
 K.B. 1725
 D.F.
 G.L. 1720

Date	7/23/2024
Run Number	One
Depth Driller	3350
Depth Logger	3346
Bottom Logged Interval	3345
Top Log Interval	200
Casing Driller	8.625 @ 220
Casing Logger	208
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	6000
Density / Viscosity	9.0 44
pH / Fluid Loss	11.0 10.4
Source of Sample	Flowline
Rm @ Meas. Temp	0.85 @ 80
Rmt @ Meas. Temp	0.64 @ 80
Rmc @ Meas. Temp	1.15 @ 80
Source of Rmf / Rmc	Charts
Rm @ BHT	0.62 @ 110
Operating Rig Time	2 Hours
Max Rec. Temp. F	110
Equipment Number	P-24
Location	Hays
Recorded By	T. Martin
Witnessed By	Jerry Green

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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.

Ellsworth, KS, S on 14 to Rd T,
 1/2 E, S 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		This Log Record Was Witnessed By	
Engineer: T. Martin	Operator:	Primary Witness: Jerry Green	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Company	Offset (ft)	Substrate	Description	Length (ft)	O.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33		GR-M&W (105)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48		CNT-M&W (201-M&W)	5.00	3.50	100.00
LSD DCAL SSD	28.18 28.17 27.68		CDL-M&W (305-24)	8.50	4.00	250.00
			ML-PSIML (401)	7.58	4.00	65.00
MCAL MI MN	19.58 19.58 19.58					
RLL3F RLL3	15.50 15.50					
CILD	8.33		DIL-M&W (507)	18.25	3.50	220.00
CILM	4.50					
SP	0.20					

Dataset: castle_mollhagen #3.db: field/well/StkMI2/pass3.1
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle_mollhagen #3.db
 Dataset field/well/StkMI2/pass3.1/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 110	CASEOD in 5.5	CASETHCK in 0	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	NPORSEL Limestone	PERFS No
SNDERR mmho/m 3	SNDERRM mmho/m -6	SPSHIFT mV 180	SRFTEMP degF 70	SZCOR Off	TDEPTH ft 3346		

Variable Description

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 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

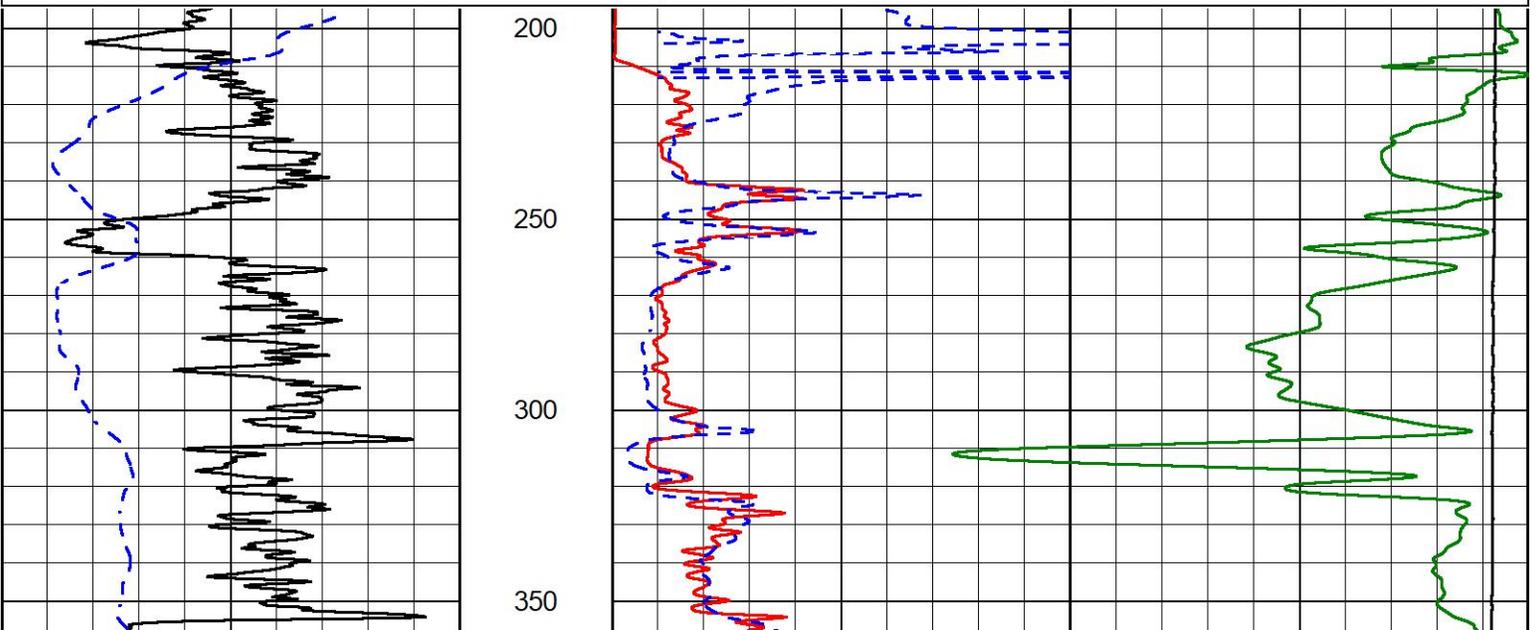


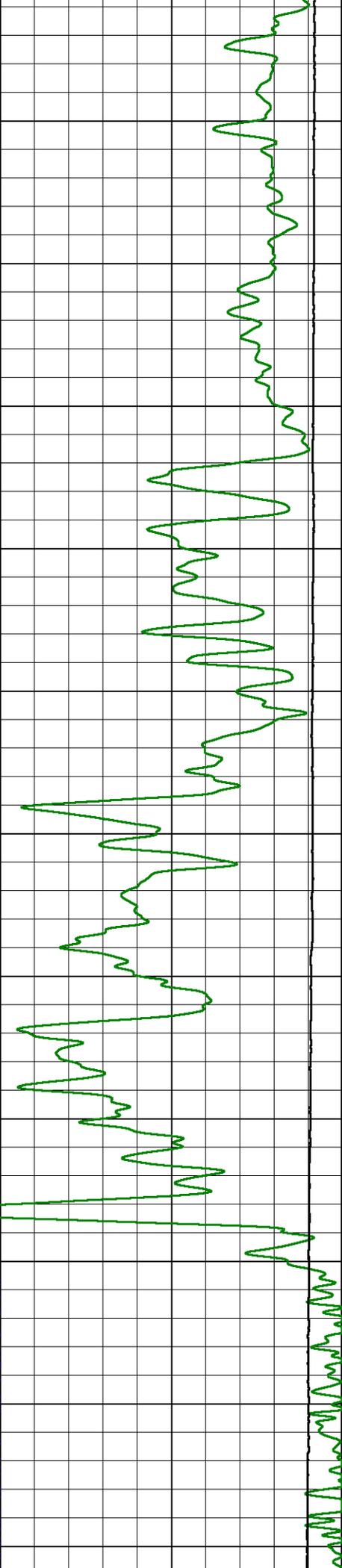
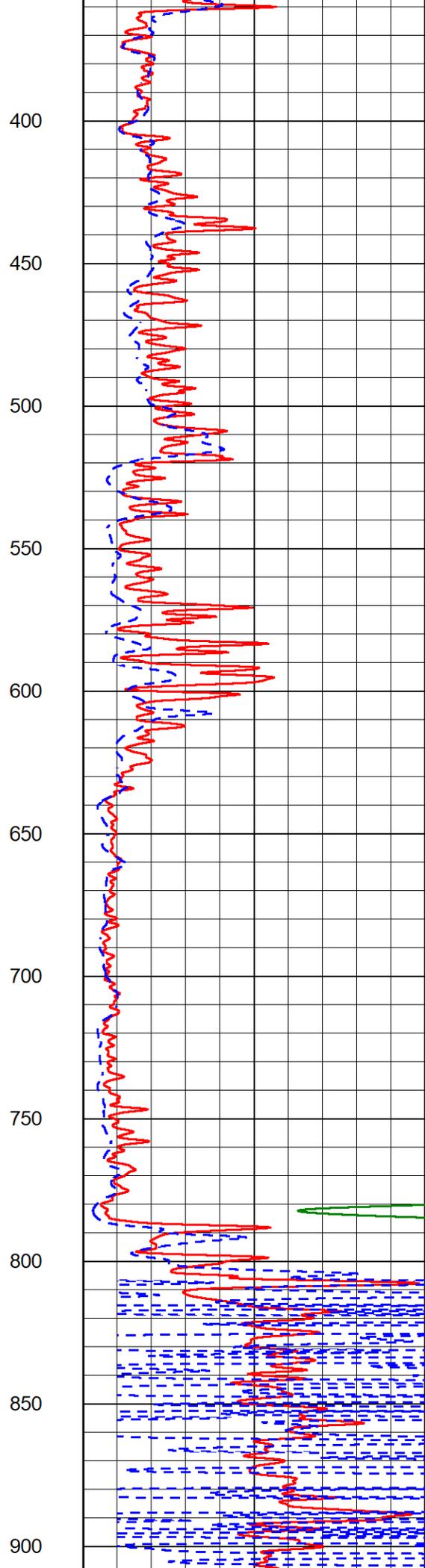
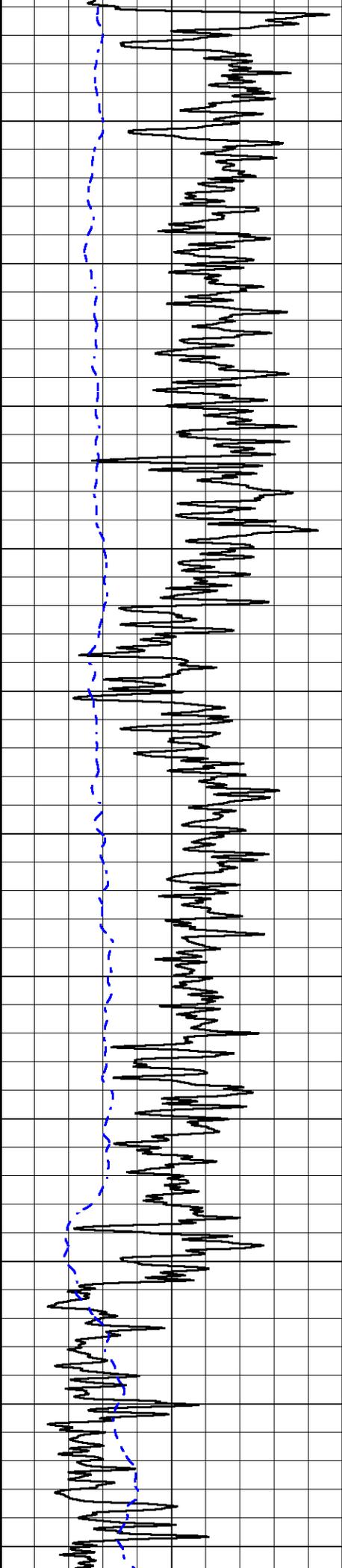
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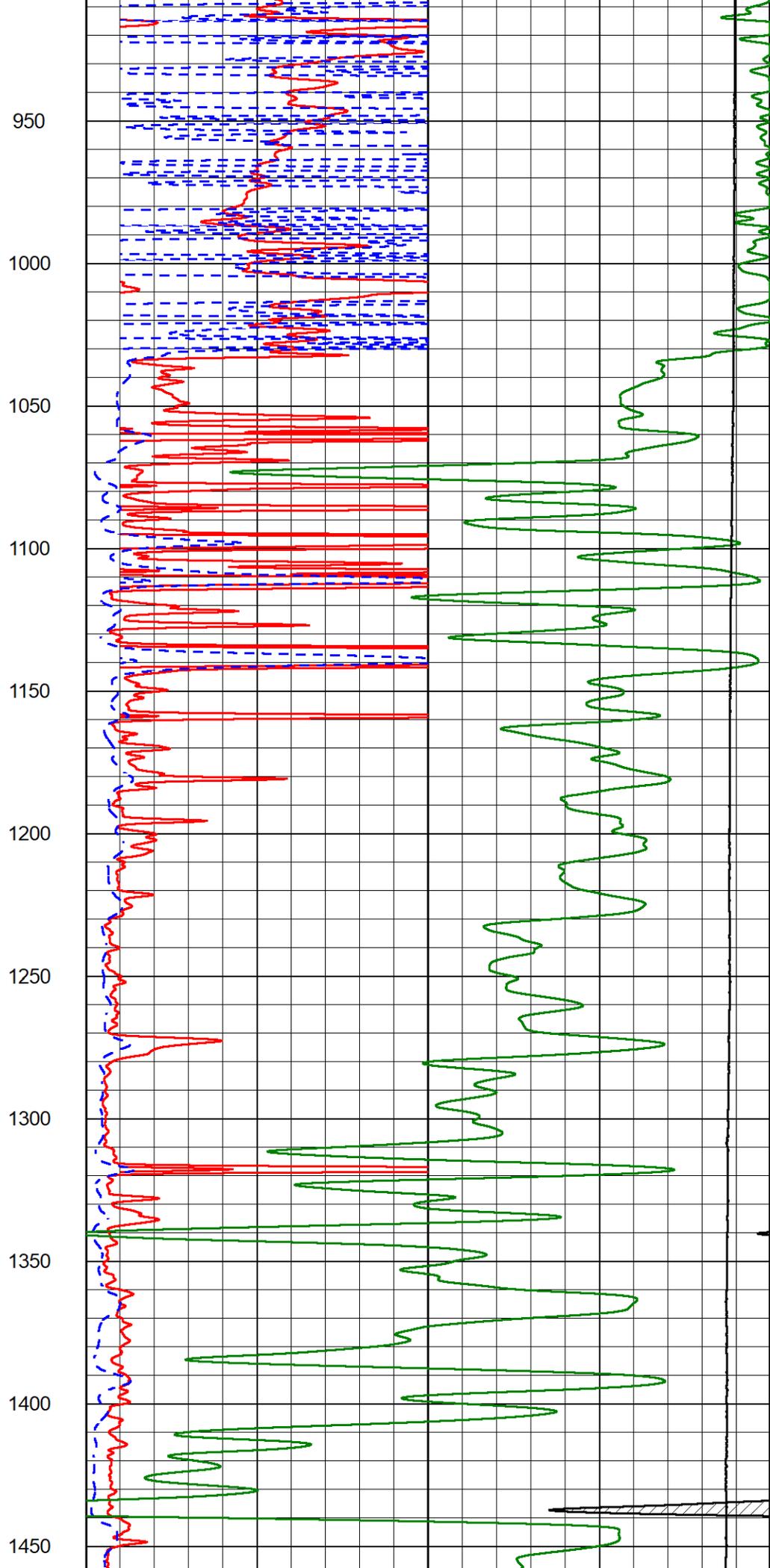
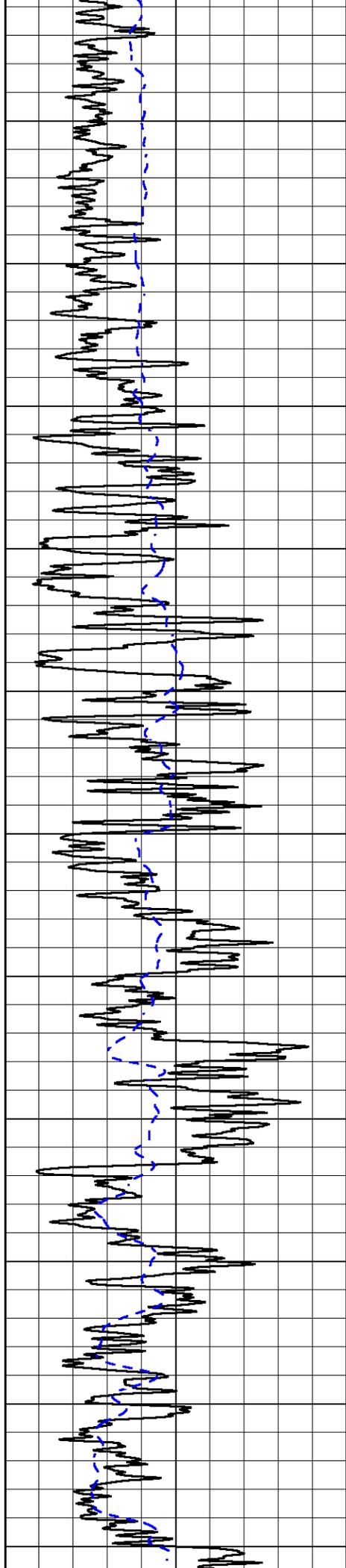
MAIN PASS

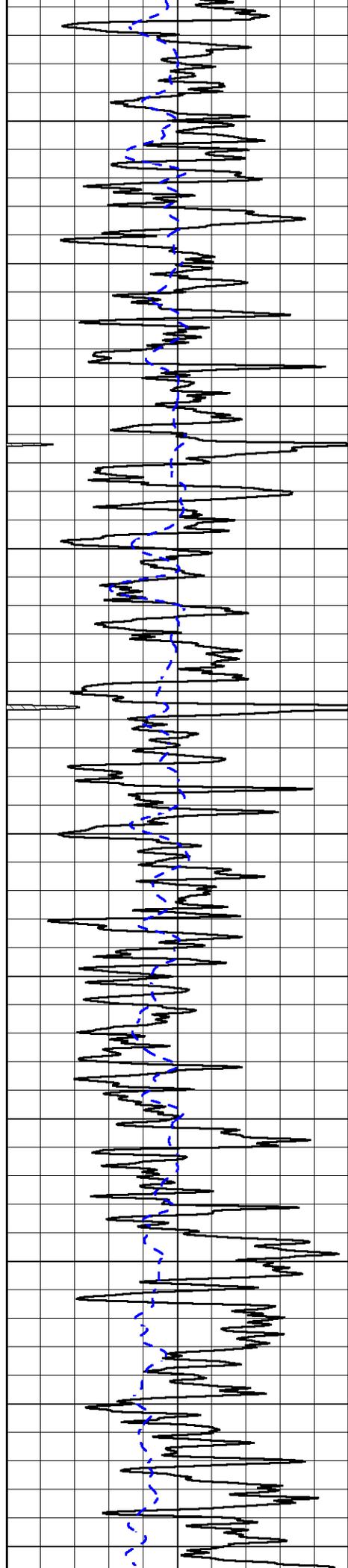
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 Dataset Pathname StkMI2/pass3.2
 Presentation Format _dil2in
 Dataset Creation Tue Jul 23 07:39:13 2024
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	RLL3 (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			50	RLL3 (Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

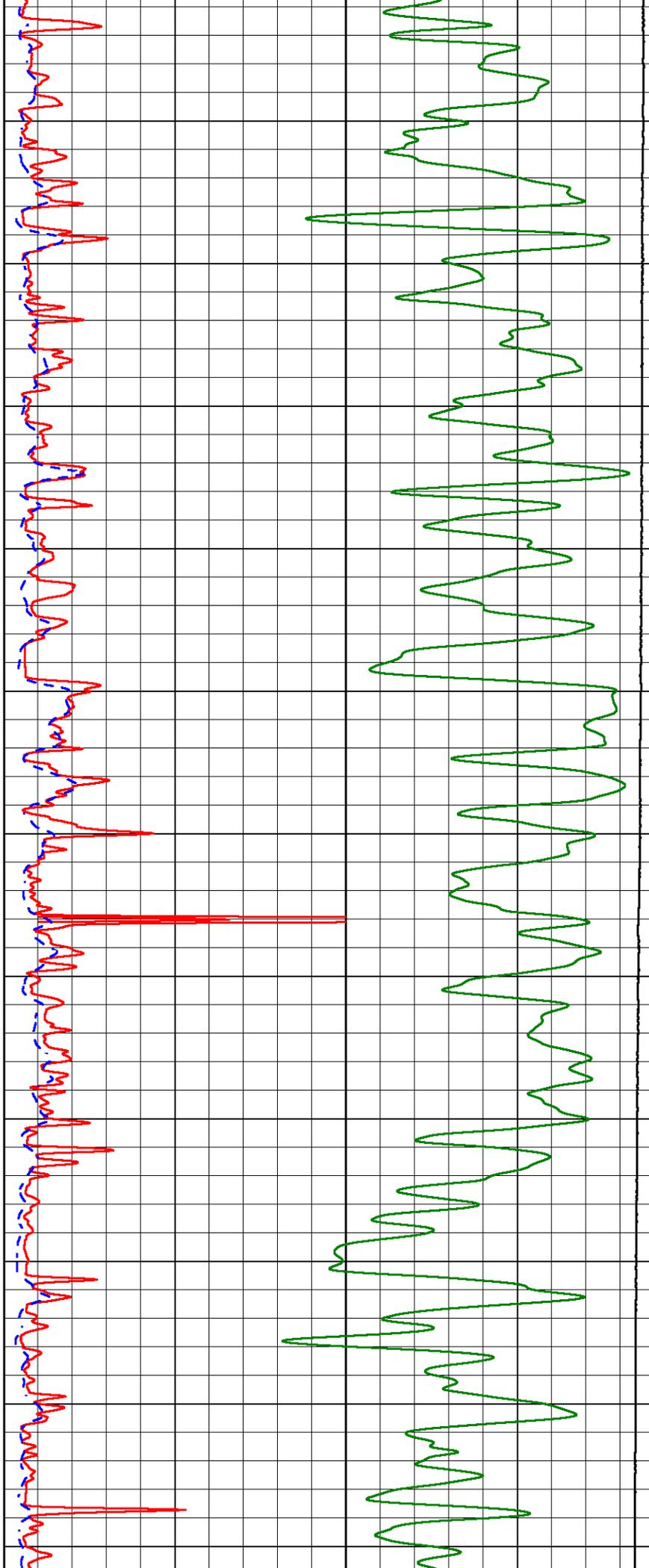


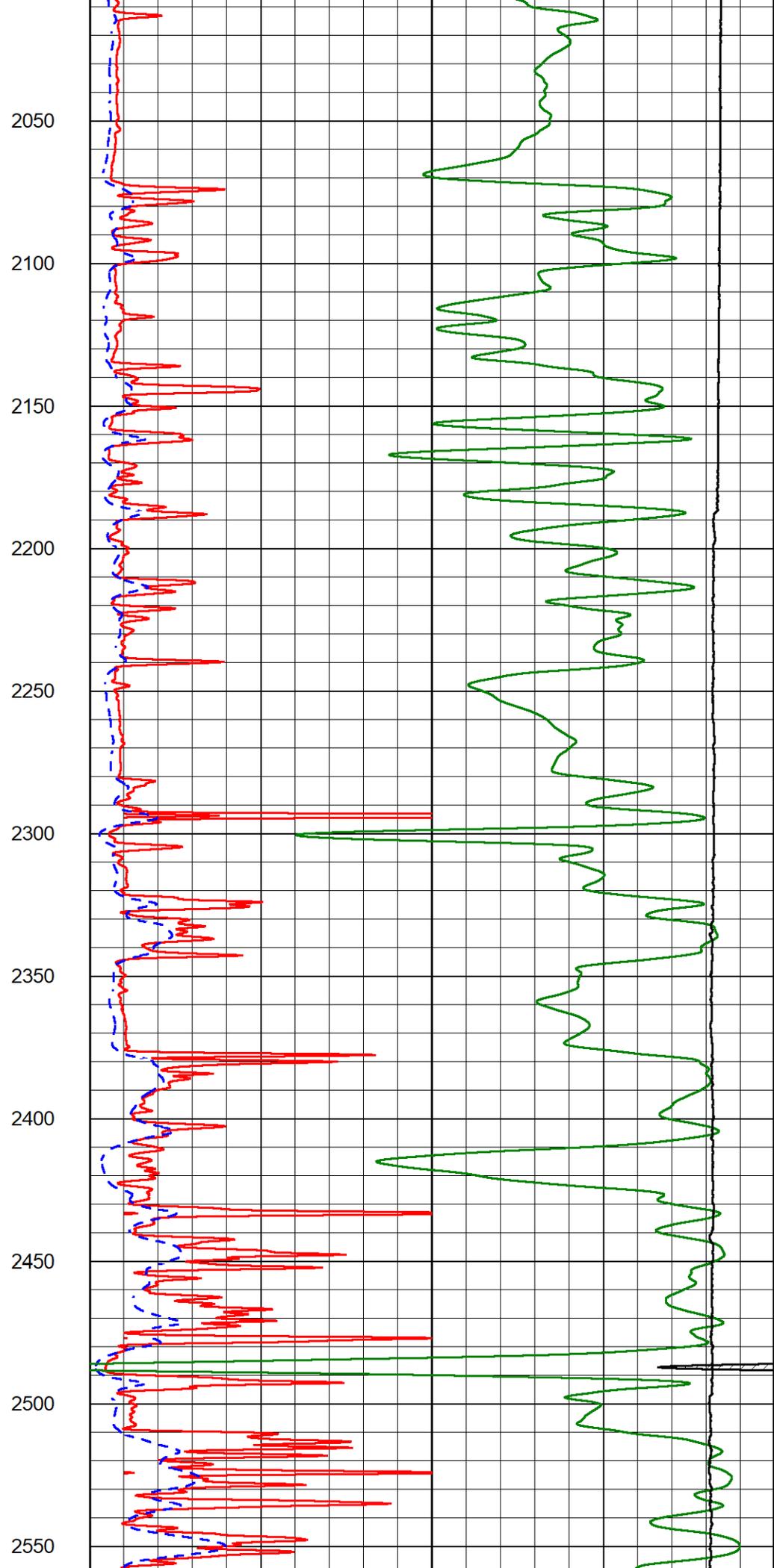
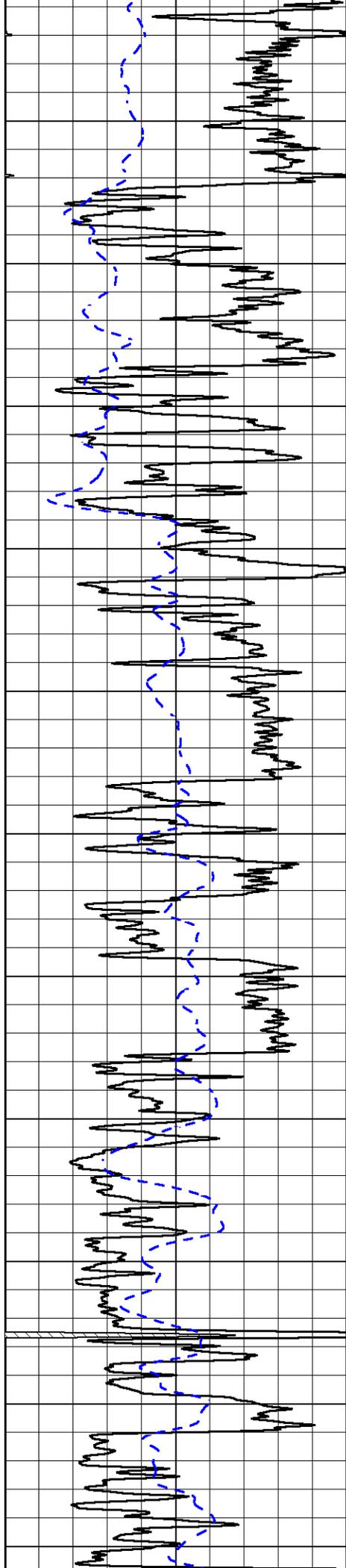


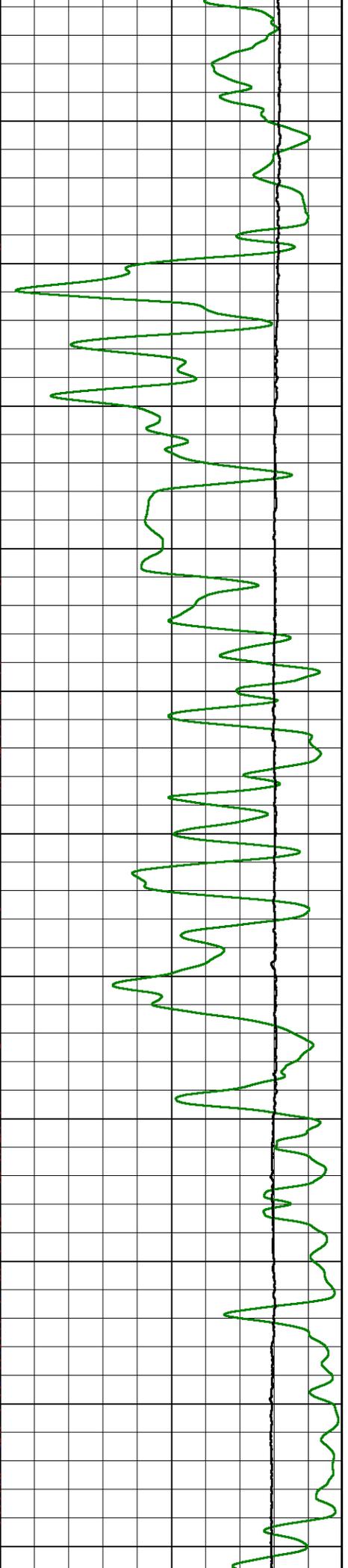
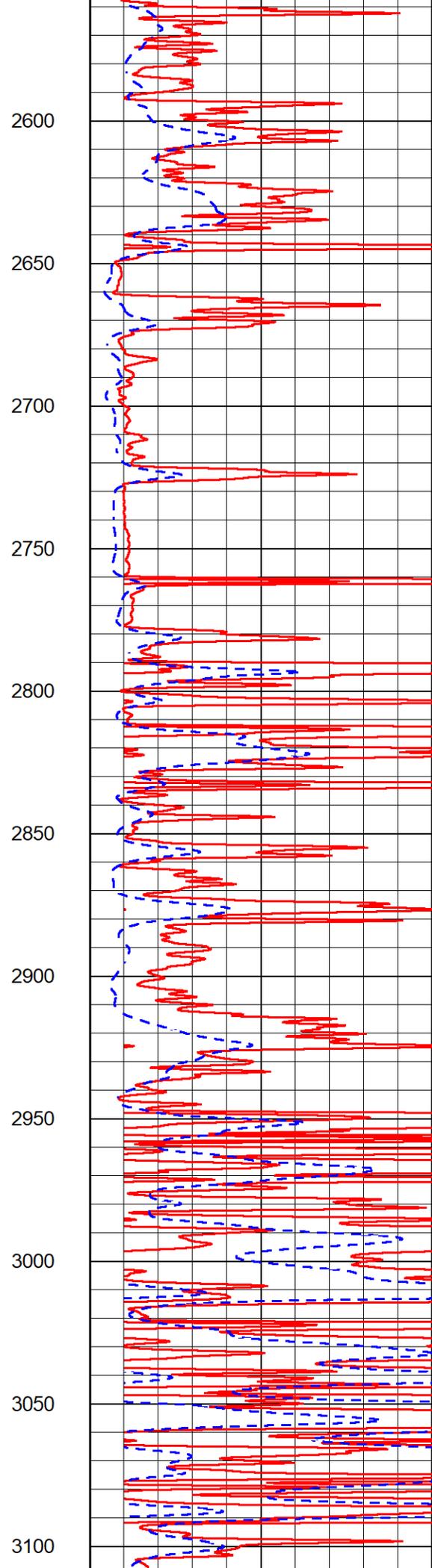
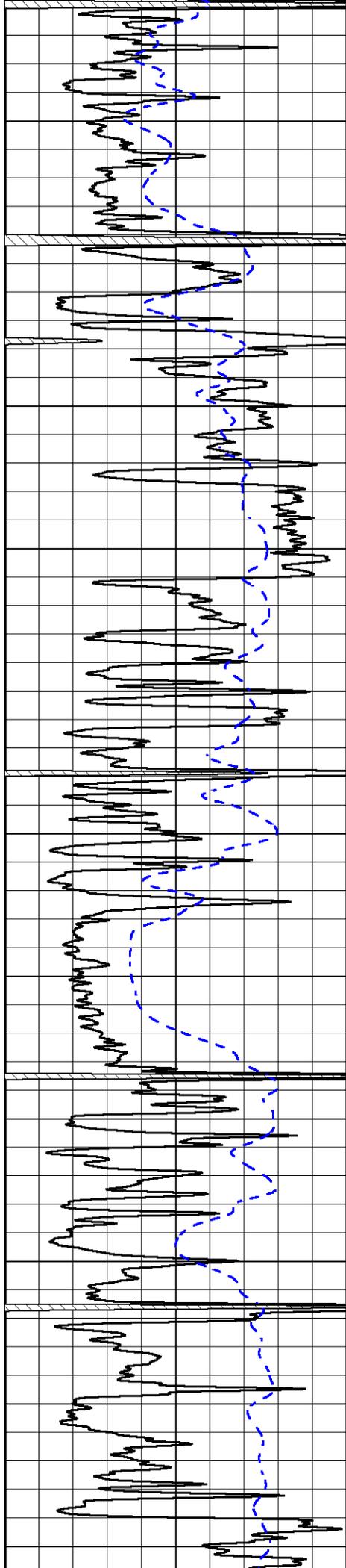


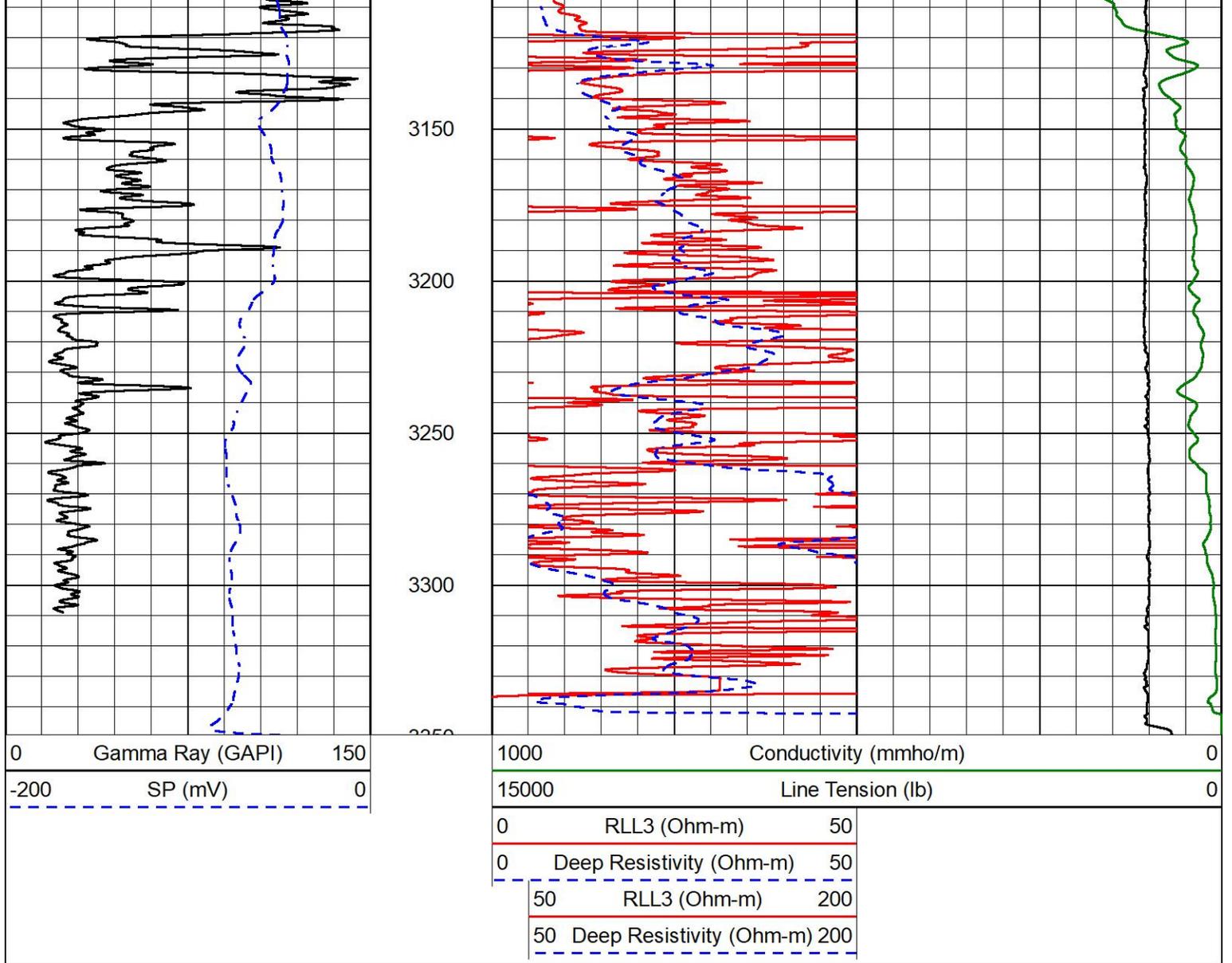


1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000









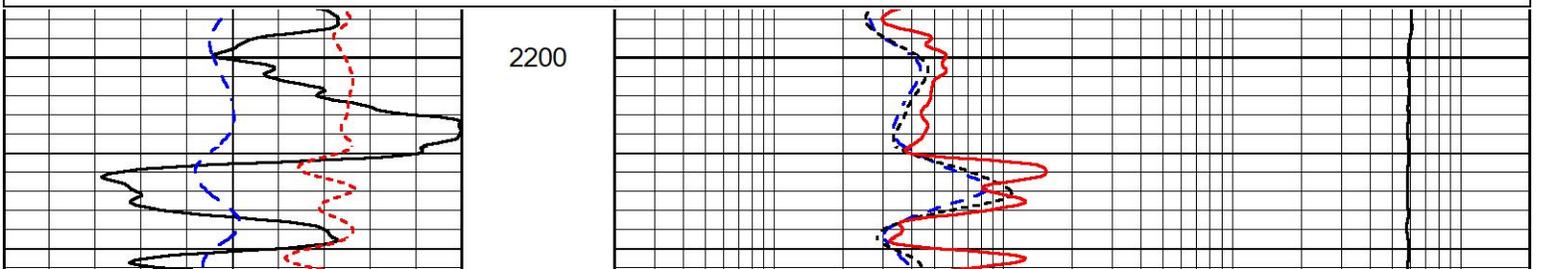
MIDWEST WIRELINE

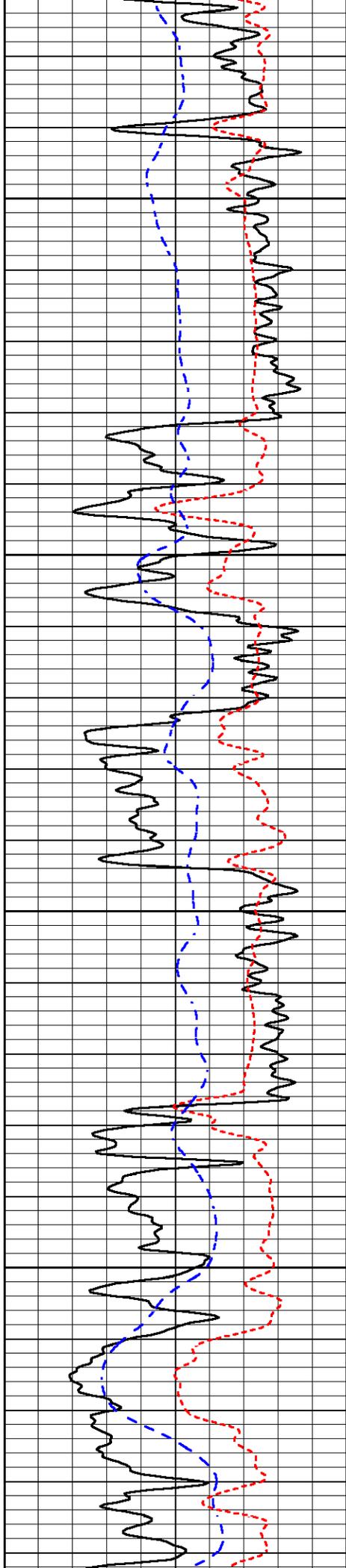
DETAIL SECTION

MAIN PASS

Database File castle_mollhagen #3.db
 Dataset Pathname StkMI2/pass3.1
 Presentation Format _dil
 Dataset Creation Tue Jul 23 07:39:24 2024
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXORT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	RLL3 (Ohm-m)	2000
			10000	Line Tension (lb)	0



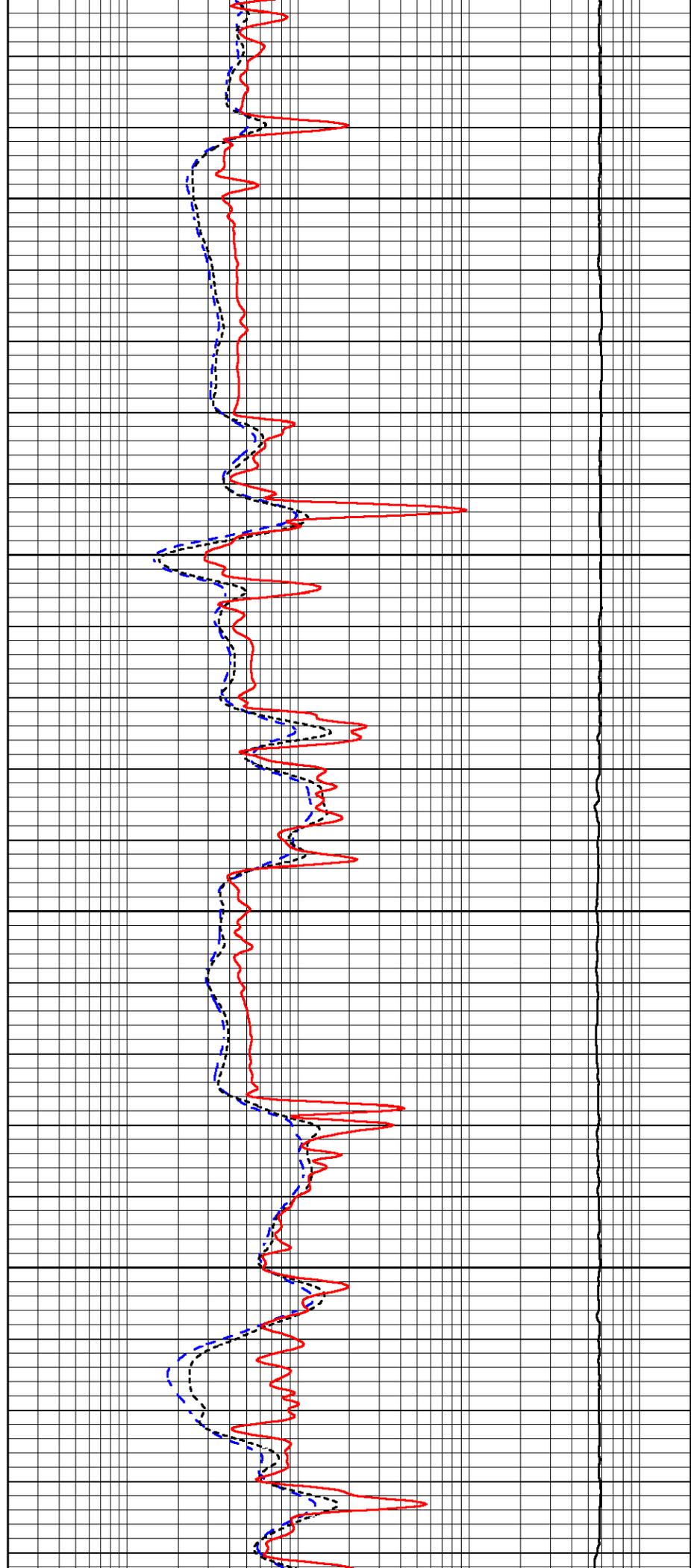


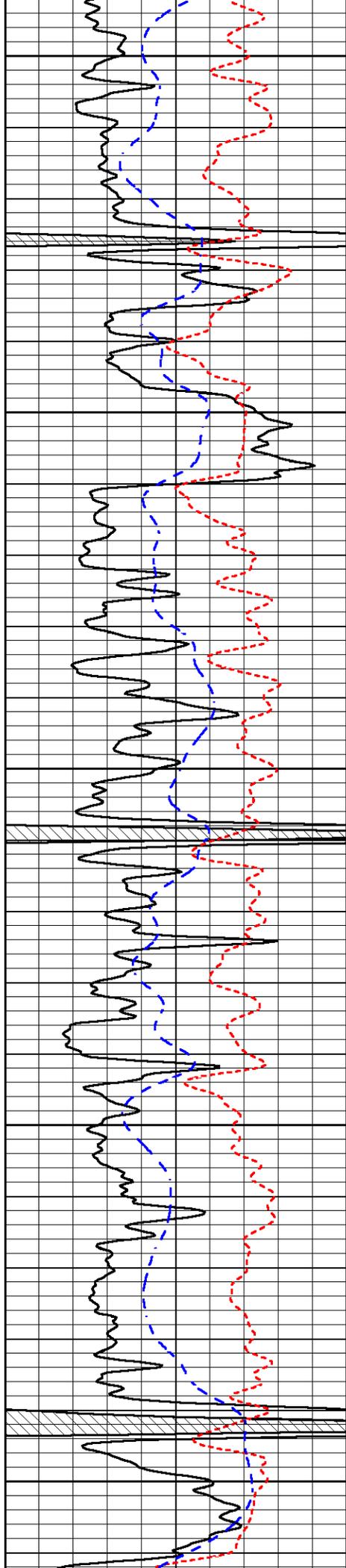
2250

2300

2350

2400





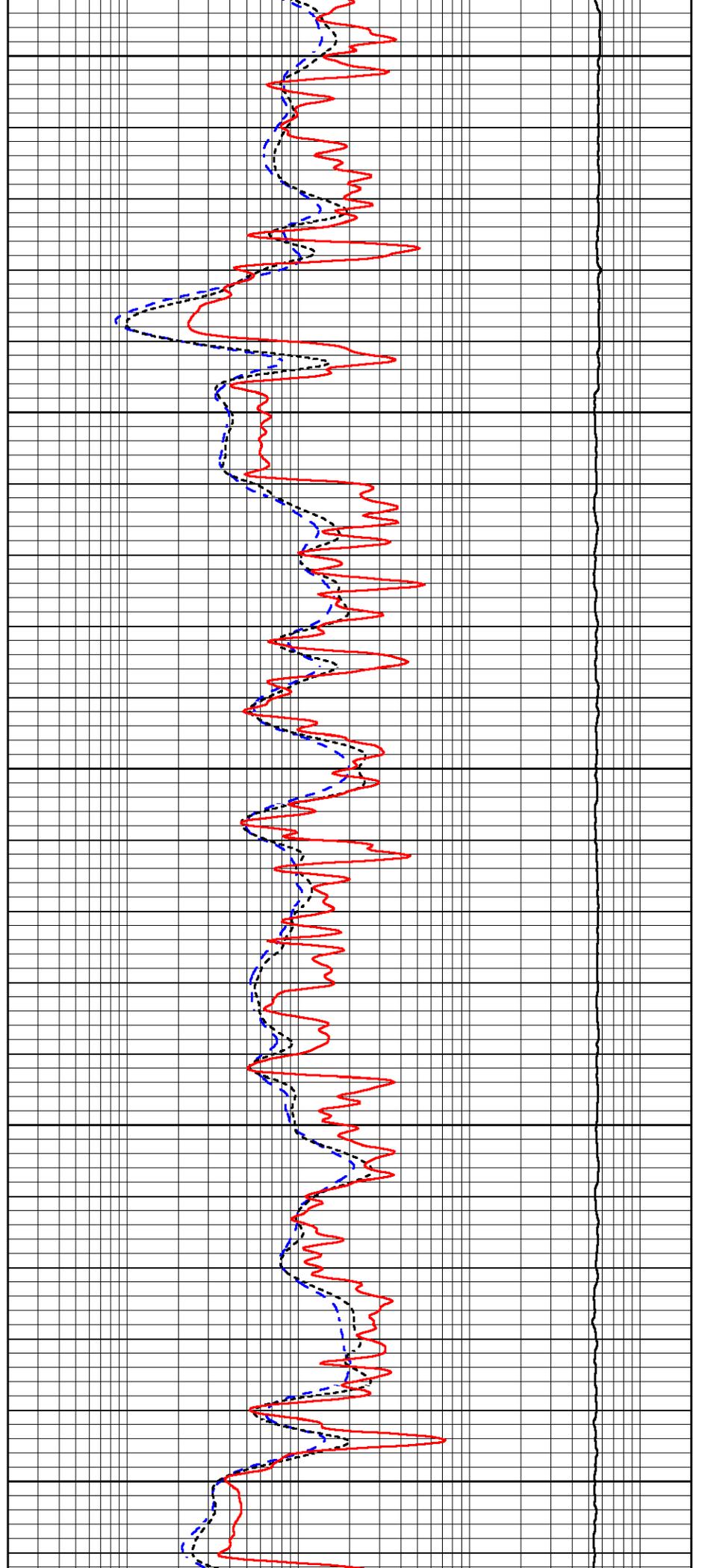
2450

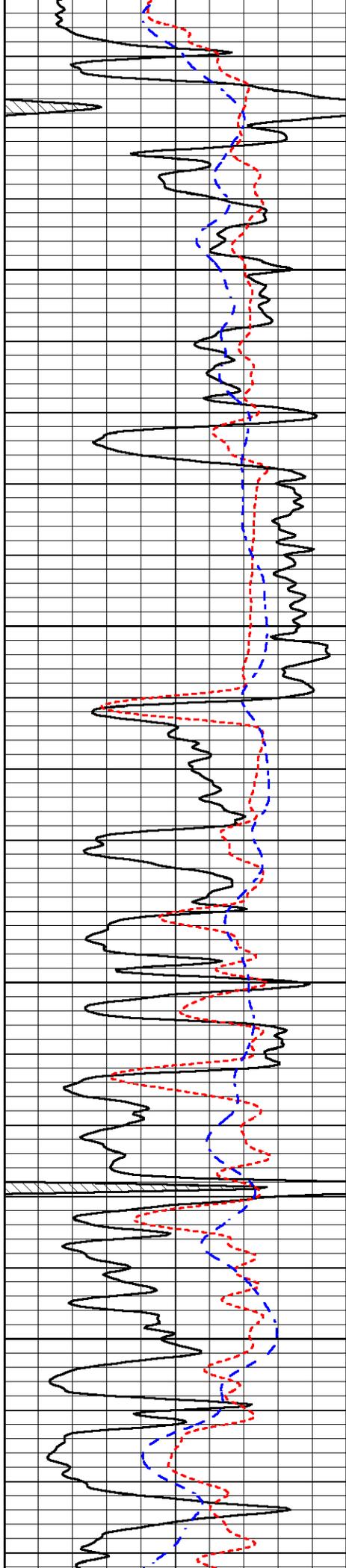
2500

2550

2600

2650



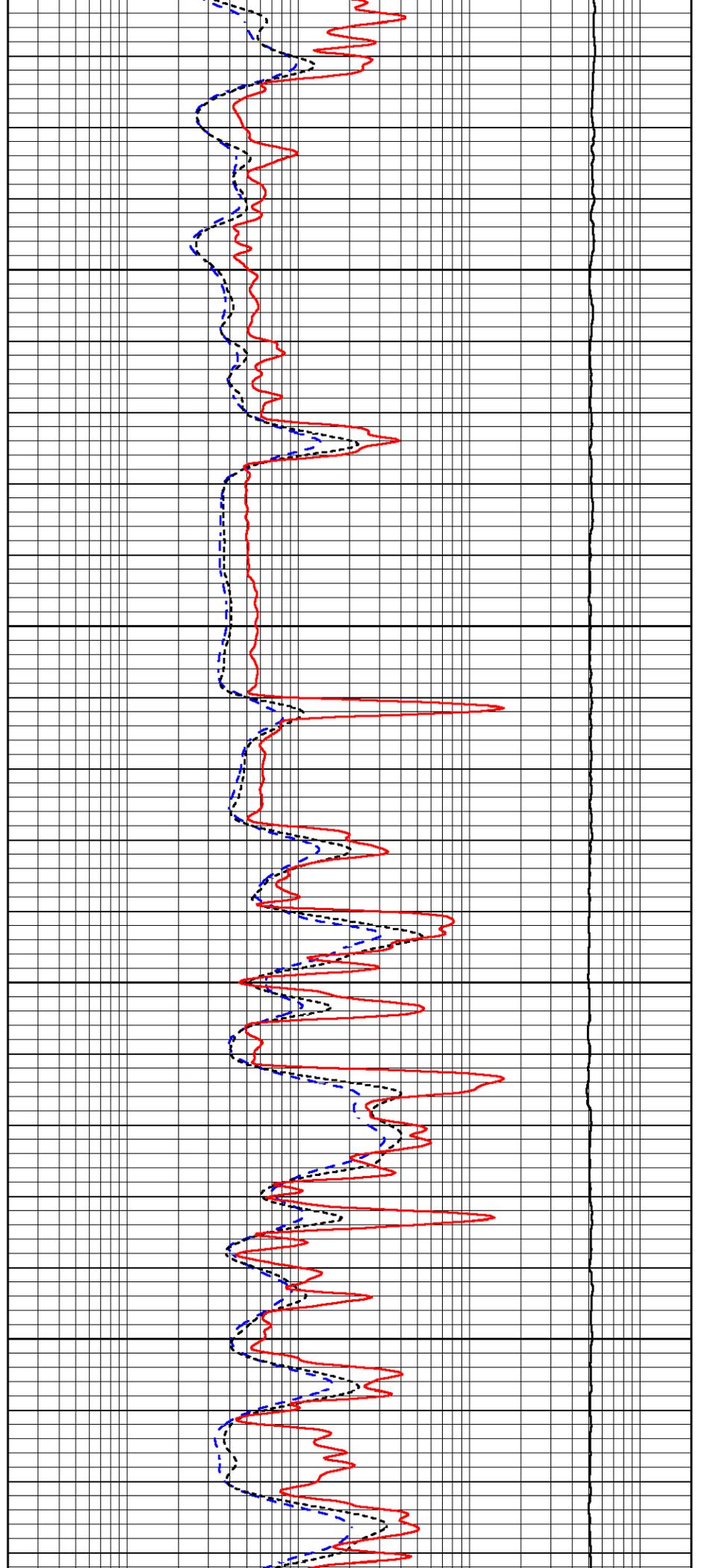


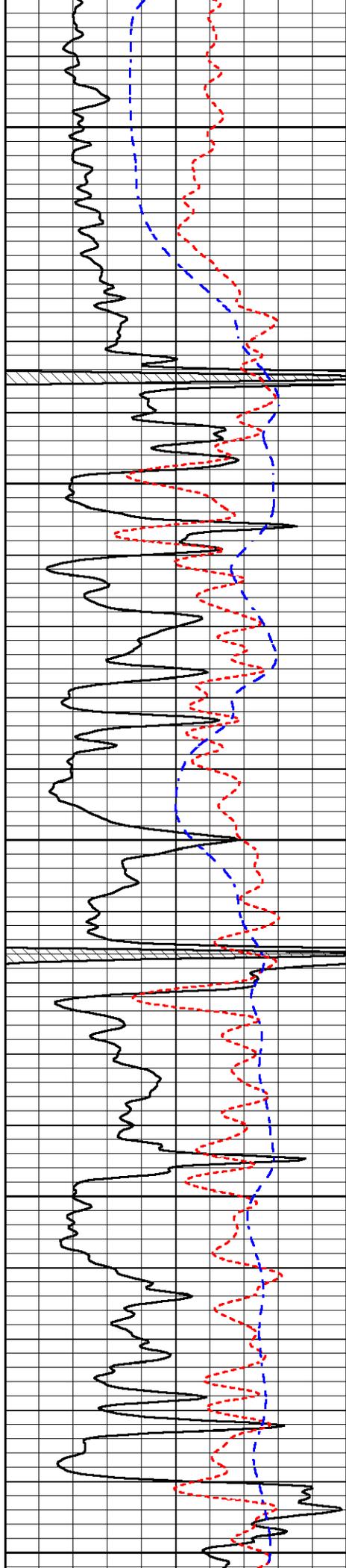
2700

2750

2800

2850





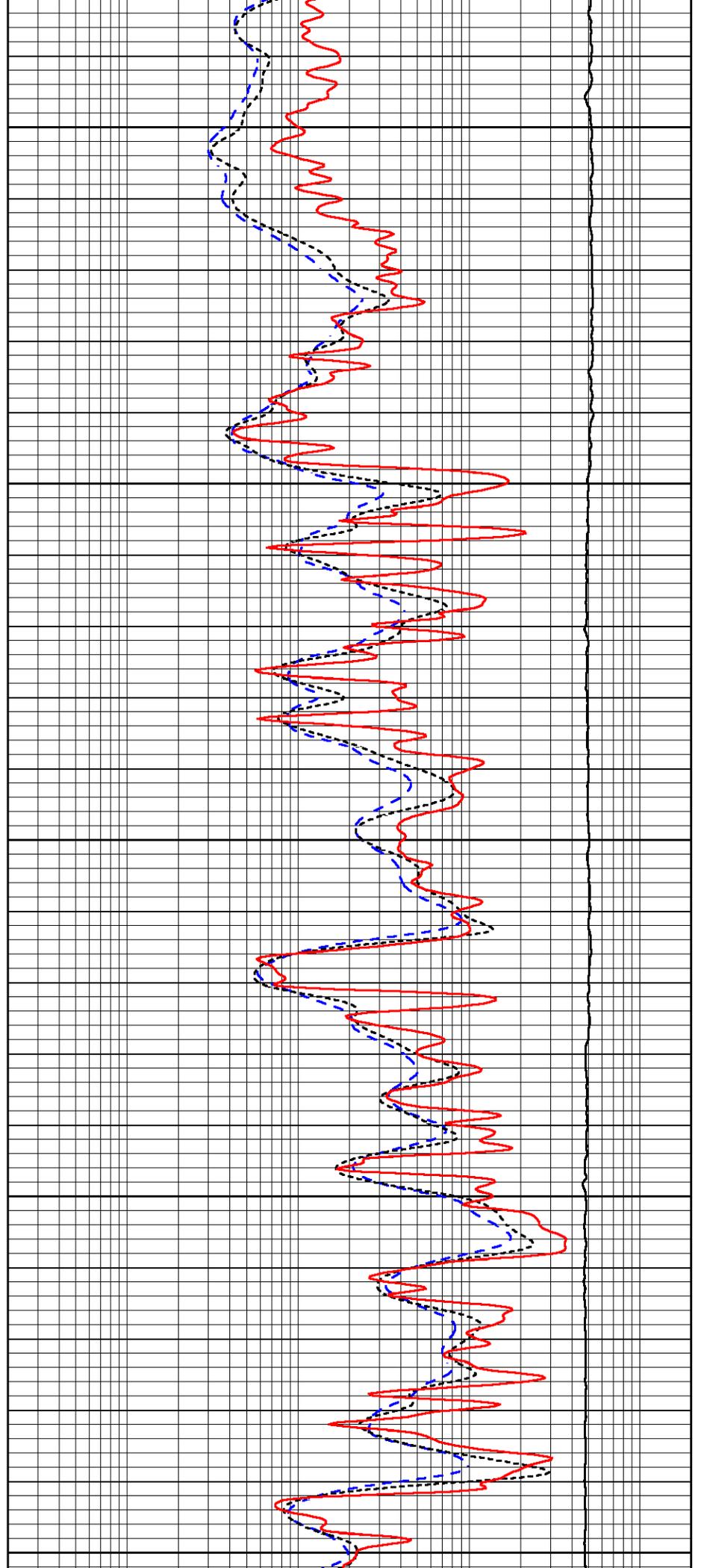
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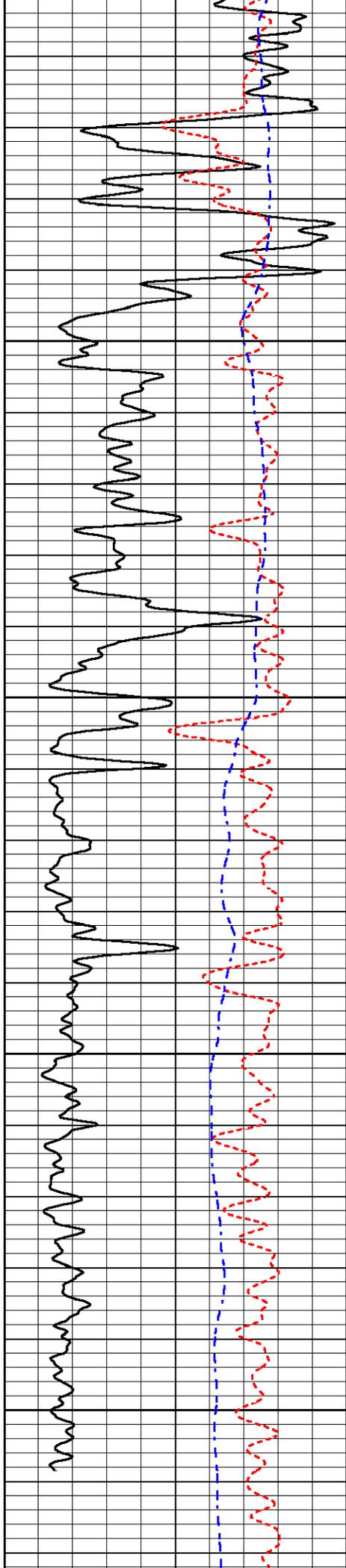
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3000

3050

3100



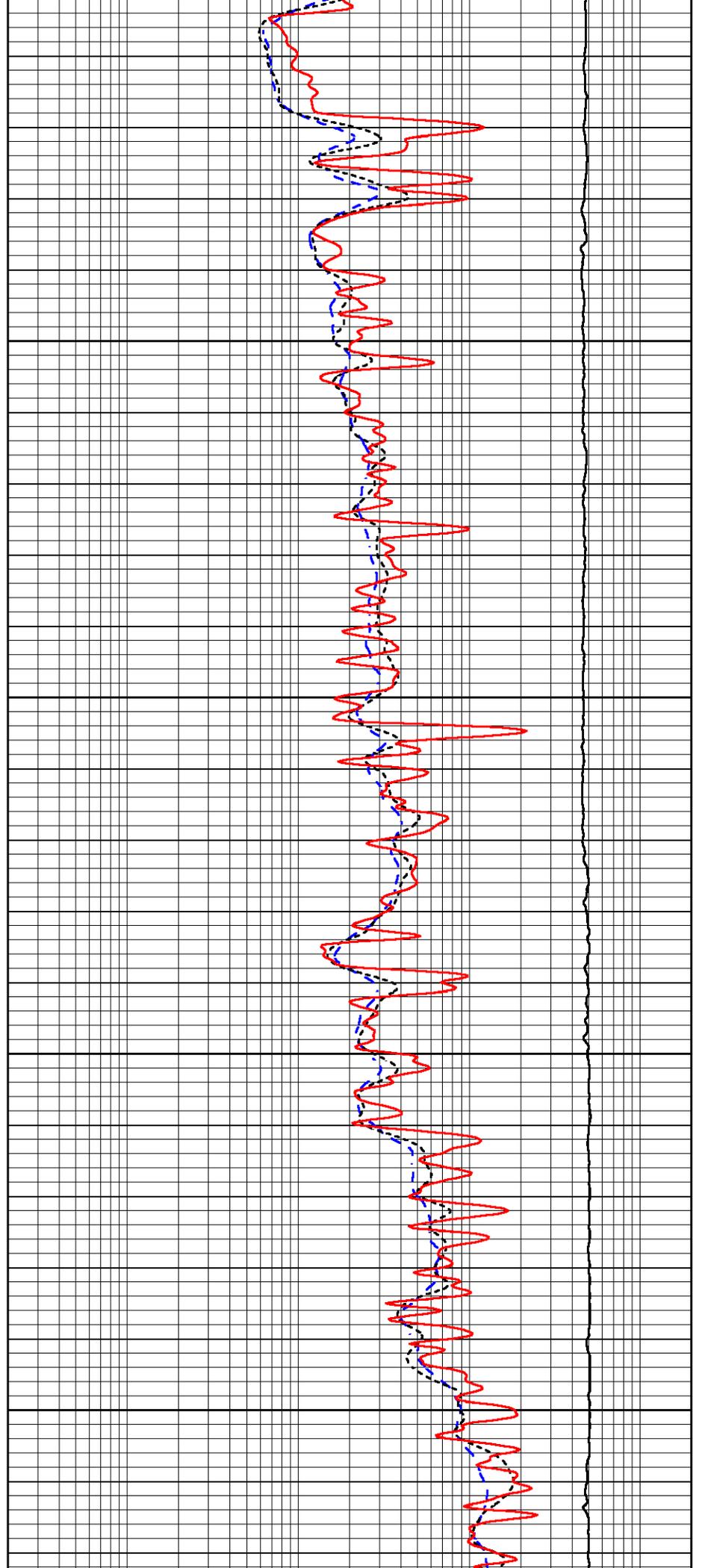


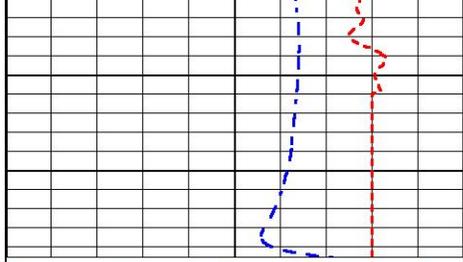
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3200

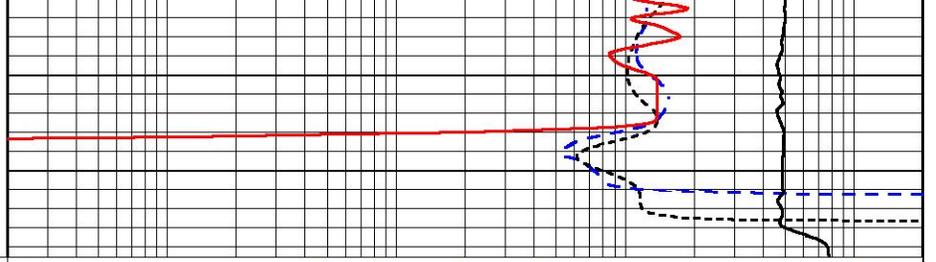
3250

3300





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

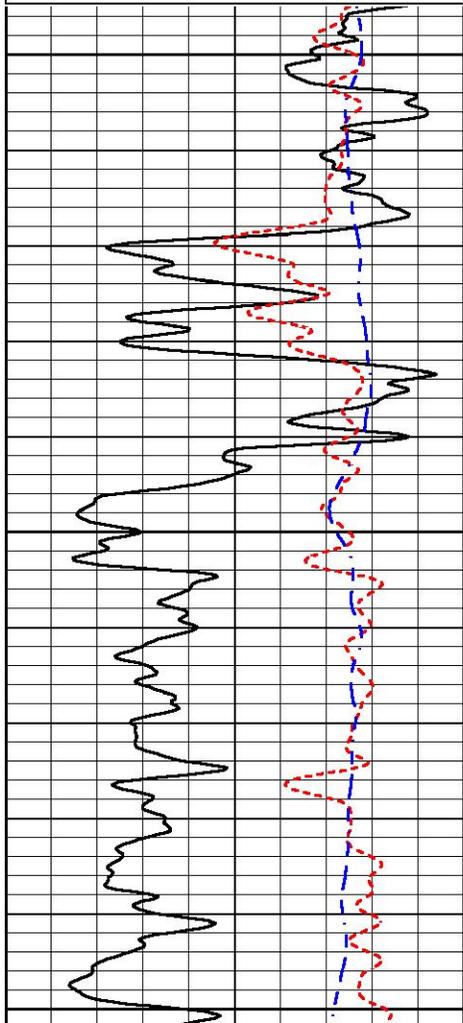
REPEAT SECTION

REPEAT PASS

Database File castle_mollhagen #3.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _dil
 Dataset Creation Tue Jul 23 06:52:50 2024
 Charted by Depth in Feet scaled 1:240

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

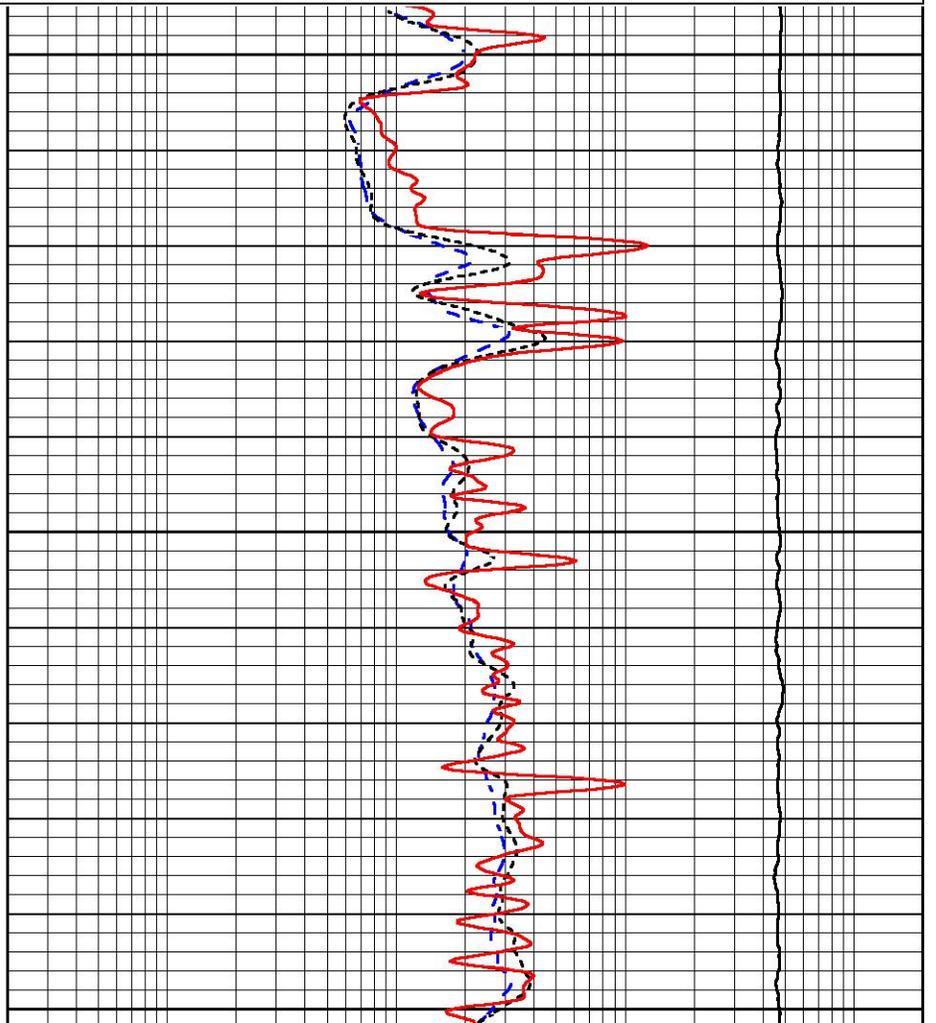
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

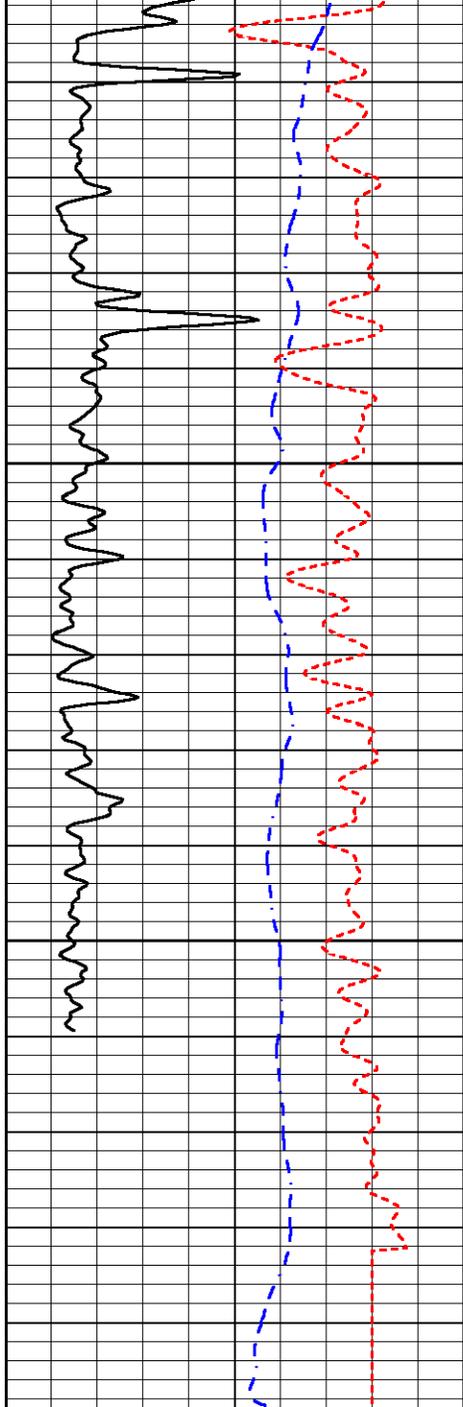


3100

3150

3200

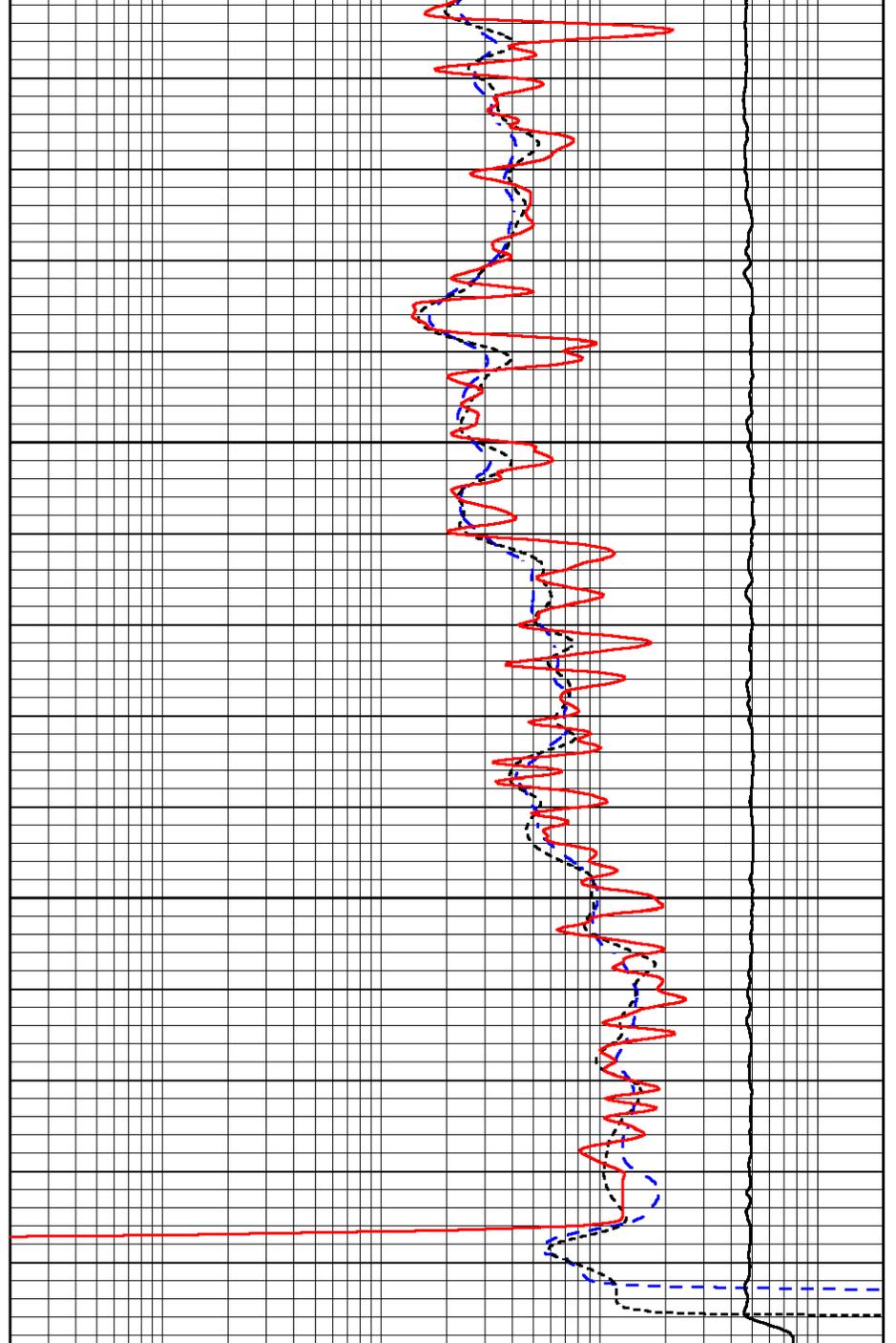




3250

3300

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

Calibration Report

Database File castle_mollhagen #3.db
 Dataset Pathname StkMI2/pass3.1
 Dataset Creation Tue Jul 23 07:39:24 2024

Dual Induction Calibration Report

Serial-Model: 507-M&W
 Surface Cal Performed:

Readings

References

Results

Loop: Air Loop Air Loop m b

Deep	68.570	638.100	0.000	255.800	mmho/m	0.500	-37.000
Medium	184.288	716.191	0.000	255.800	mmho/m	0.450	-79.000

Microlog Calibration Report

Serial-Model: 401-PSIML
 Performed: Mon Sep 25 22:02:56 2023

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	15500.0000	-0.5000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	-1.2500
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-139.1500

Compensated Density Calibration Report

Serial-Model: 305-24-M&W
 Source / Verifier: 20762B / 2ci
 Master Calibration Performed: Tue Feb 6 18:43:03 2024
 Before Survey Verification Performed:
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.680	g/cc	5028.88	5761.57	cps
Aluminum	2.560	g/cc	1122.37	3952.02	cps
Spine Angle = 75.89			Density/Spine Ratio = 0.569		
	Size		Reading		
Small Ring	4.00	in	1.74		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report

Serial Number: 201-M&W
 Tool Model: M&W

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

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps	pu	pu
	Long Space	cps		
2)	Short Space	cps	pu	
	Long Space	cps		
3)	Short Space	cps	pu	
	Long Space	cps		

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	105	
Tool Model:	M&W	
Performed:	Mon Aug 7 20:46:01 2023	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.6000	GAPI/cps



MIDWEST WIRELINE

Company	Castle Resources, Inc.
Well	Mollhagen #3
Field	Geneseo-Edward
County	Ellsworth
State	Kansas