



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company **CARMEN SCHMITT, INC.**

Well **SB UNIT #1**

Field **WILDCAT**

County **ROOKS** State **KANSAS**

Location: API #: 15-163-24410-00-00

100' FNL & 300' FEL

SEC 36 TWP 7S RGE 16W

Permanent Datum **GROUND LEVEL** Elevation **1777'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Other Services
CNL/CDL
MEL
Elevation
K.B. 1787'
D.F. N/A
G.L. 1777'

Date **3/17/2020**

Run Number **ONE**

Depth Driller **3425'**

Depth Logger **3422'**

Bottom Logged Interval **3421'**

Top Log Interval **1075'**

Casing Driller **8.625" @ 1111'**

Casing Logger **1108'**

Bit Size **7.875"**

Type Fluid in Hole **CHEMICAL**

Salinity, ppm CL **3000**

Density / Viscosity **9.4 50**

pH / Fluid Loss **10.0 9.6**

Source of Sample **FLOWLINE**

Rm @ Meas. Temp **.80 @ 63**

Rmt @ Meas. Temp **.60 @ 63**

Rmc @ Meas. Temp **1.08 @ 63**

Source of Rmt / Rmc **CHARTS**

Rm @ BHT **.46 @ 110**

Operating Rig Time **2 HOURS**

Max Rec. Temp. F **110 DEGF**

Equipment Number **P-108**

Location **HAYS**

Recorded By **J. HENRICKSON**

Witnessed By **BRAD RINE**

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, 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.

WOODSTON KANSAS

2 WEST TO 30 RD, 2 SOUTH TO J AVE, 1 EAST, 1 1/2 SOUTH INTO

Log Measured From: **KELLY BUSHING**

10 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES

www.pioneerenergy.com

785-625-3858

Your Pioneer Energy Services Crew

Engineer: **J. HENRICKSON**

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: **BRAD RINE**

Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 109	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 275	degF 50	Off	ft 3422

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	44.50			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	41.40			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	40.65						
LSD	32.35			CDL-M&W (934-229)	8.50	4.00	250.00
DCAL	32.33			ML-PSI UDM ML (UDM-01)	11.50	4.00	215.00
SSD	31.85			Stackable Microlog Tools			
MCAL	20.87						
MI	20.87						
MN	20.87						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (55-222)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: carmen_schmitt_sb_unit_1.db: field/well/stackml/pass3.1
Total length: 47.00 ft
Total weight: 835.00 lb
O.D.: 4.00 in



MAIN PASS

Database File carmen_schmitt_sb_unit_1.db
Dataset Pathname stackml/pass3.1
Presentation Format dil2in
Dataset Creation Tue Mar 17 01:40:18 2020
Charted by Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 150

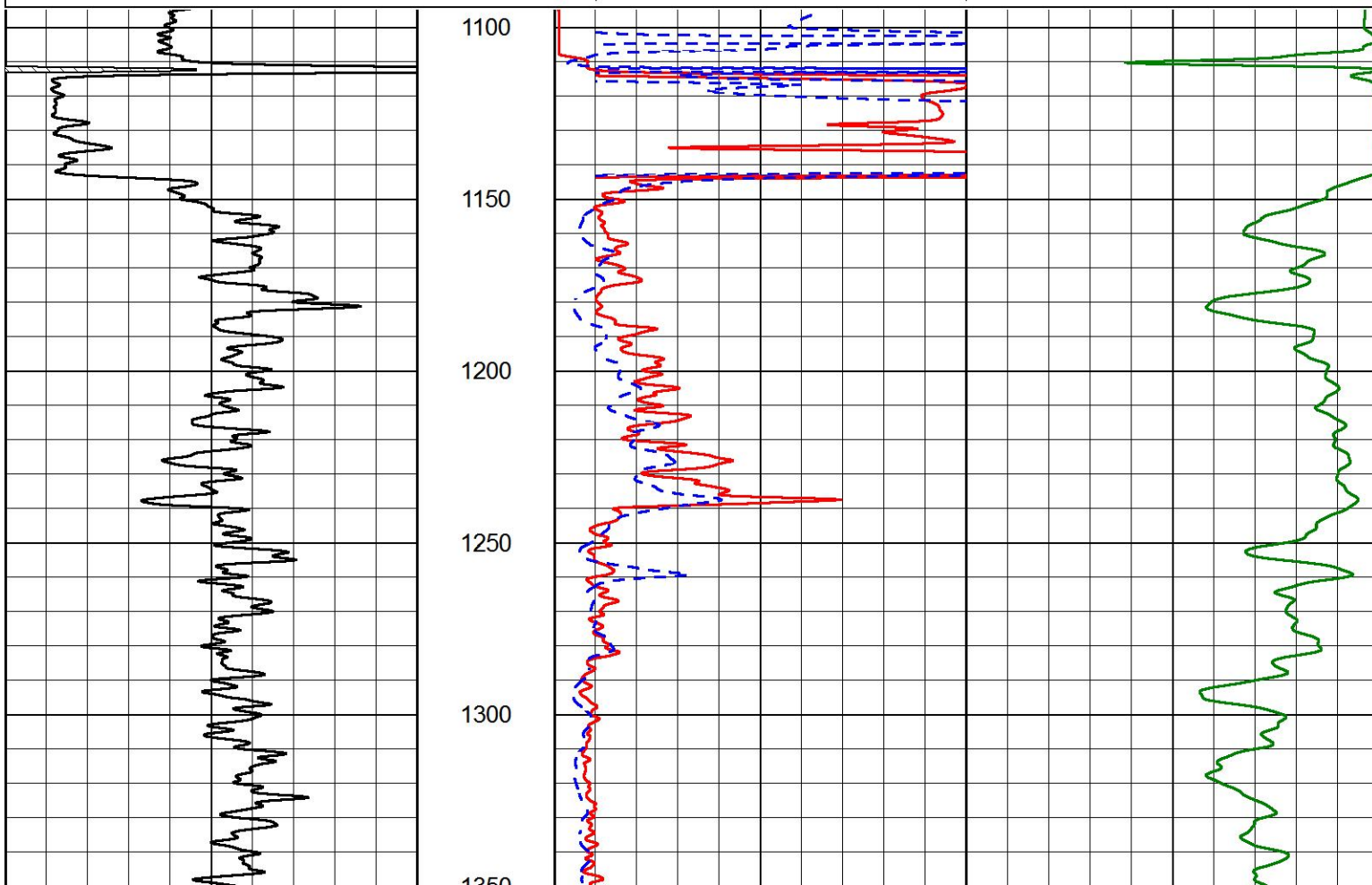
2000 CILD (mmho/m) 0

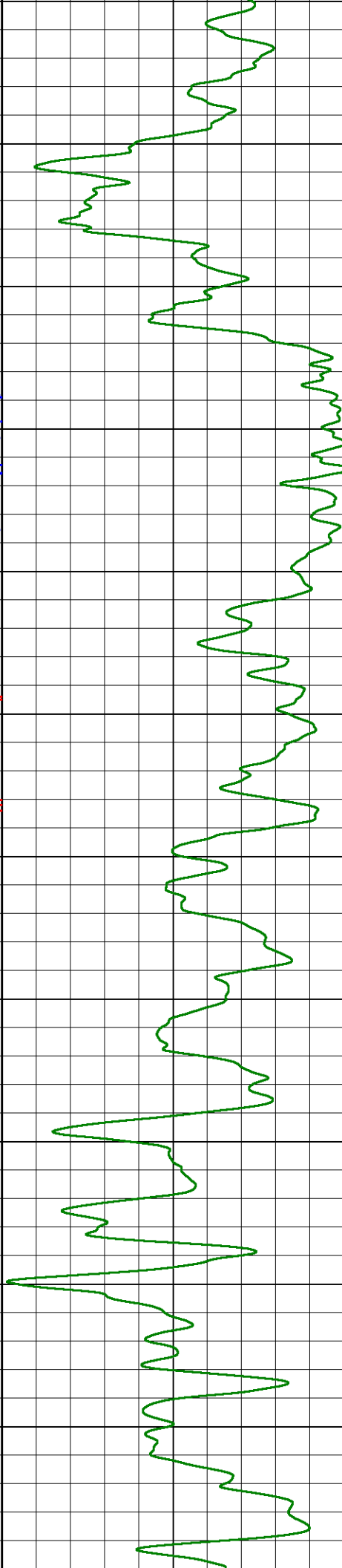
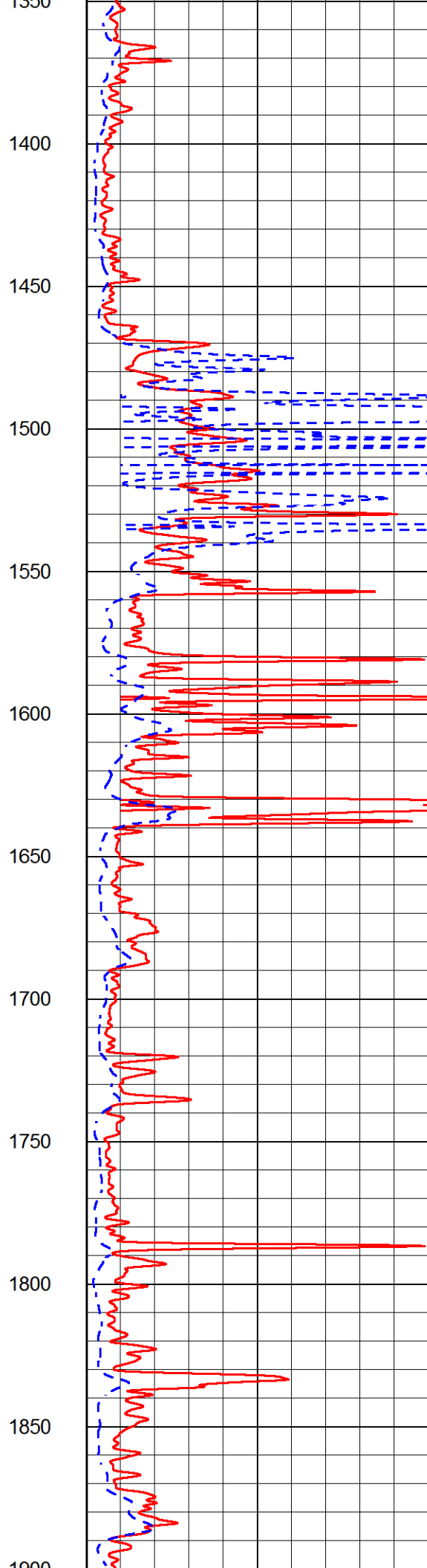
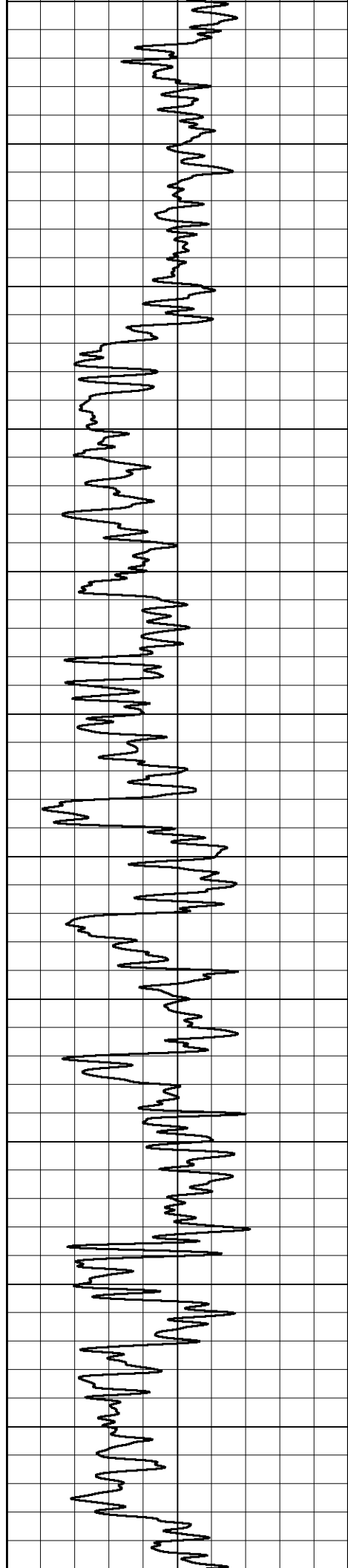
0 RLL3 (Ohm-m) 50

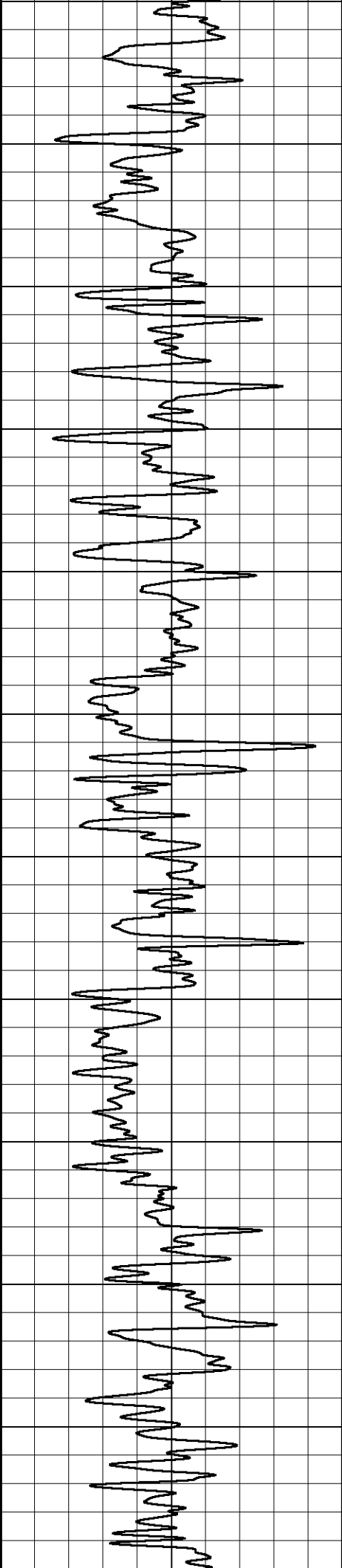
0 DEEP RESISTIVITY (Ohm-m) 50

50 RLL3 (Ohm-m) 200

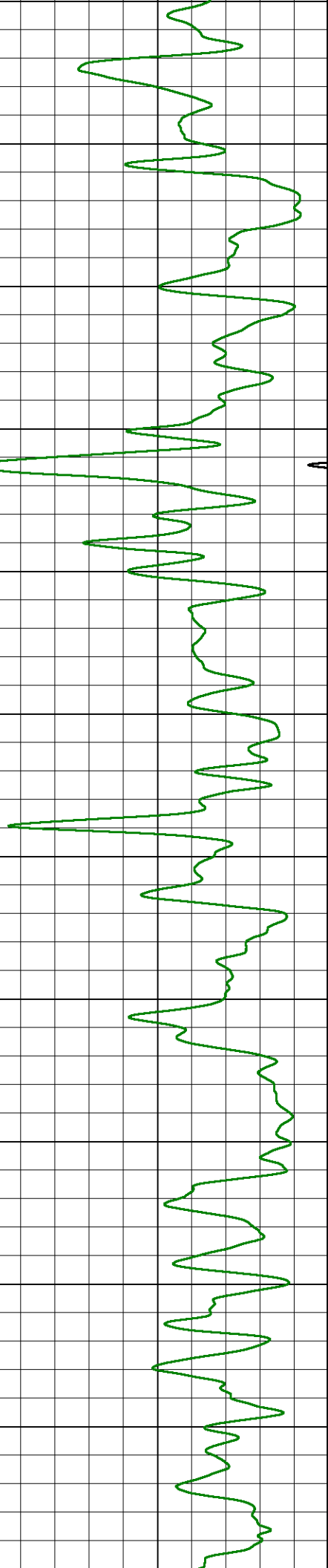
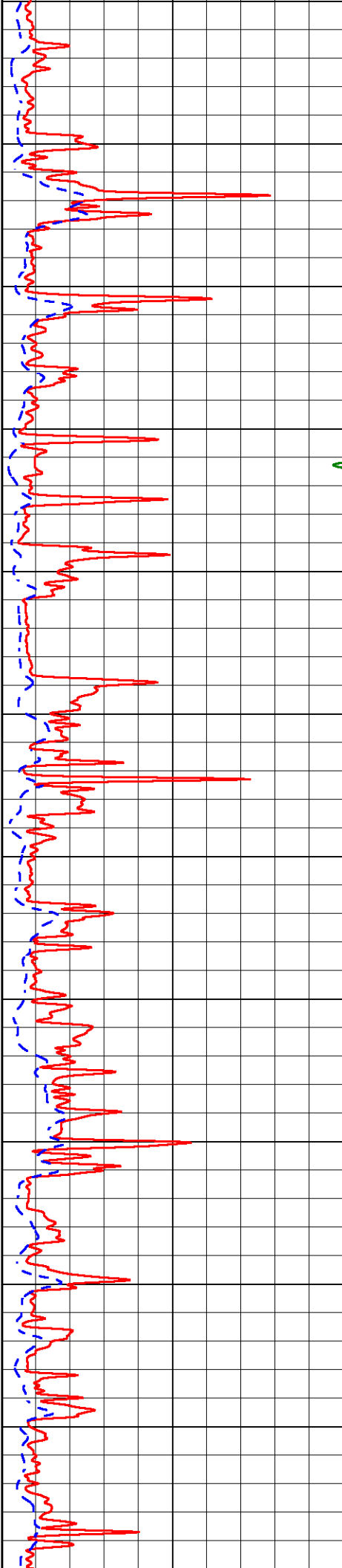
50 RILD (Ohm-m) 200

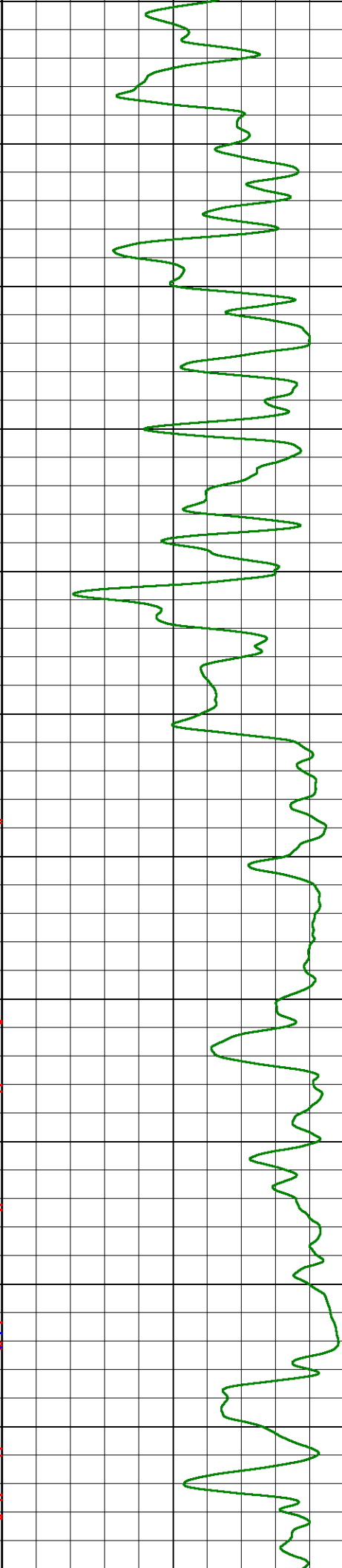
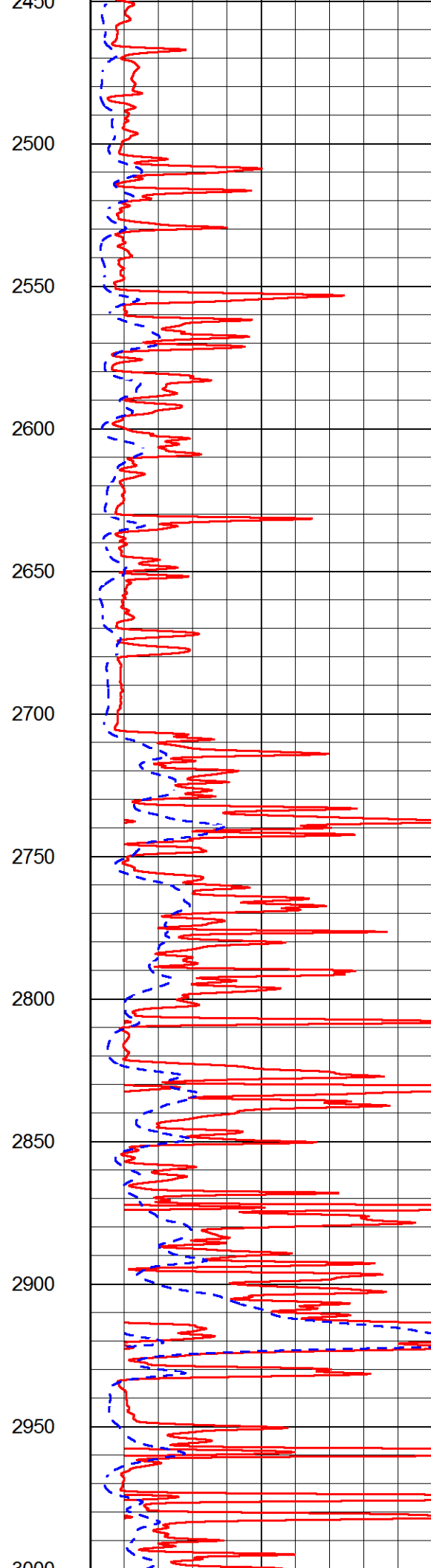
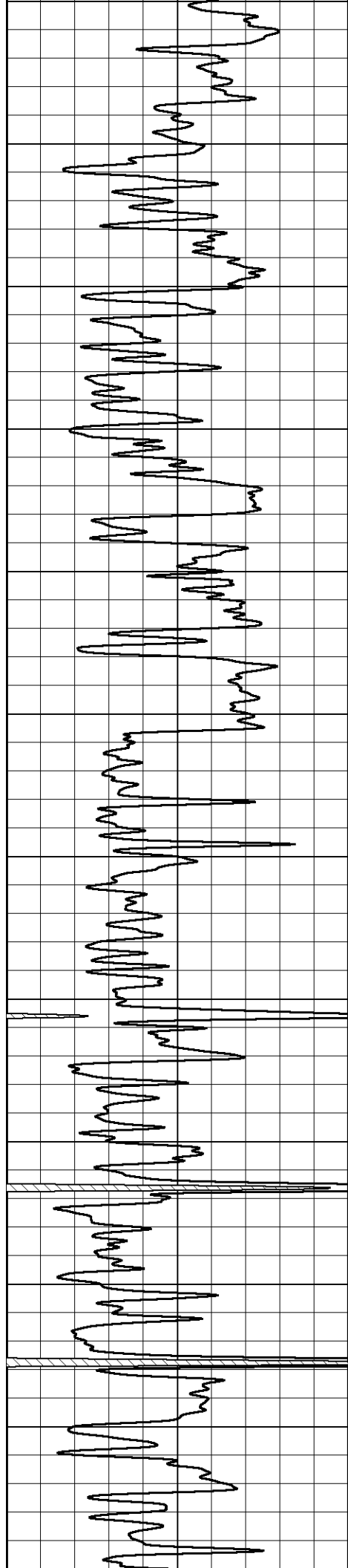


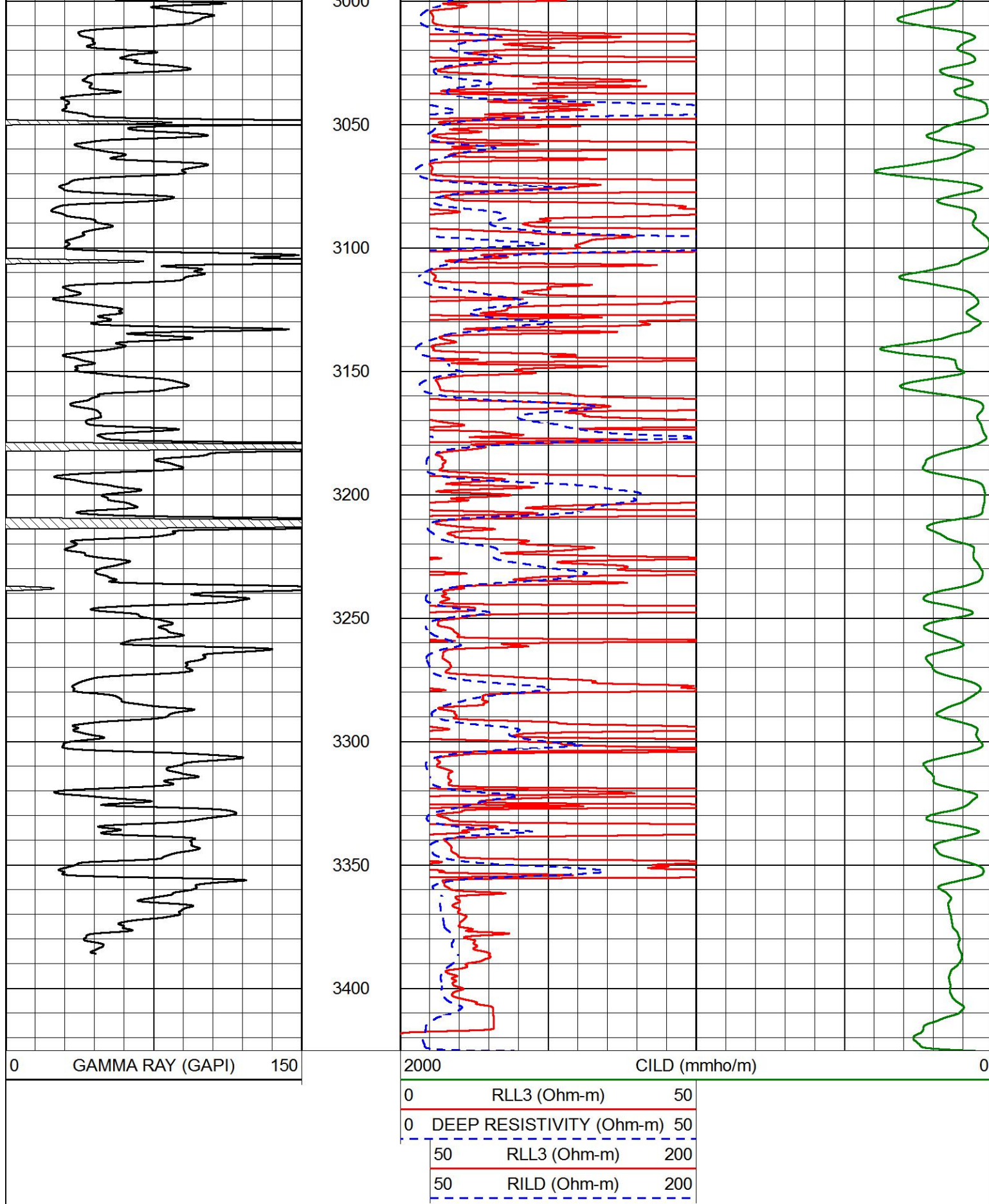




1900
1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450



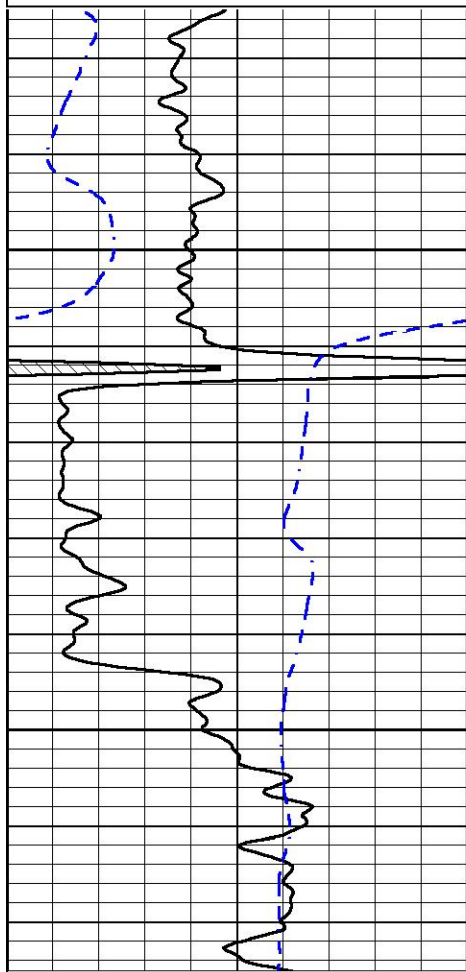




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 Dataset Pathname stackml/pass3.1
 Presentation Format dil
 Dataset Creation Tue Mar 17 01:40:18 2020
 Charted by Depth in Feet scaled 1:240

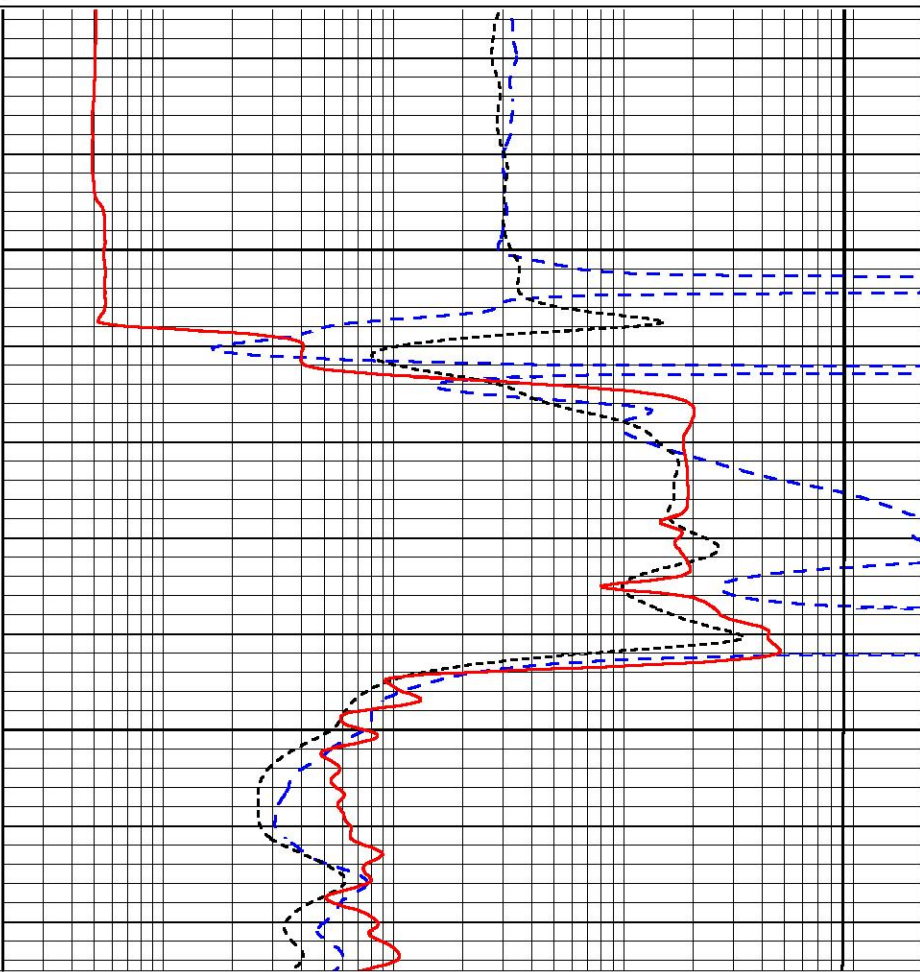
0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

0.2 DEEP RESISTIVITY (Ohm-m) 2000
 0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
 0.2 RLL3 (Ohm-m) 2000
 15000 LINE TENSION (lb) 0



1100

1150



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 RLL3 (Ohm-m) 2000
 15000 LINE TENSION (lb) 0

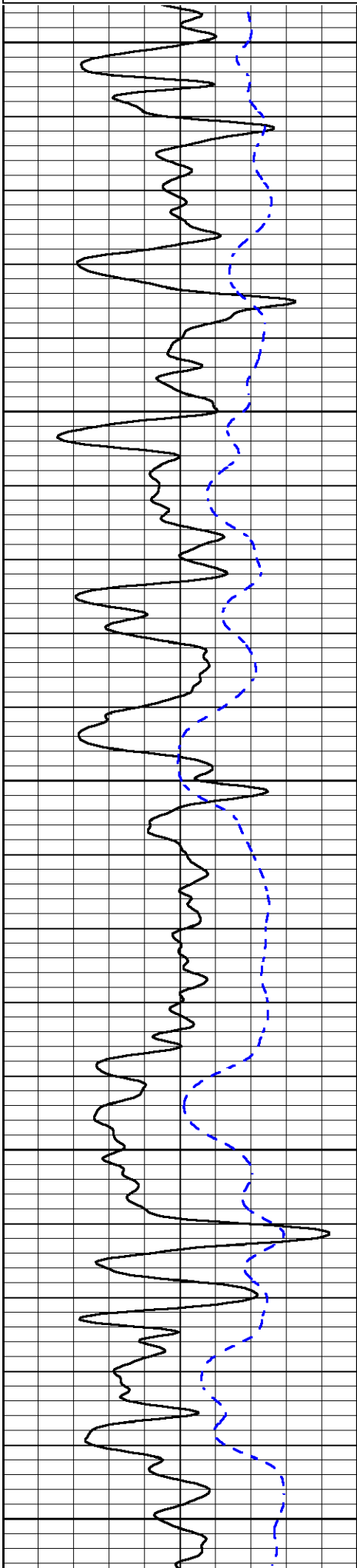


MAIN PASS

Database File carmen_schmitt_sb_unit_1.db
 Dataset Pathname stackml/pass3.1
 Presentation Format dil
 Dataset Creation Tue Mar 17 01:40:18 2020
 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 RLL3 (Ohm-m) 2000



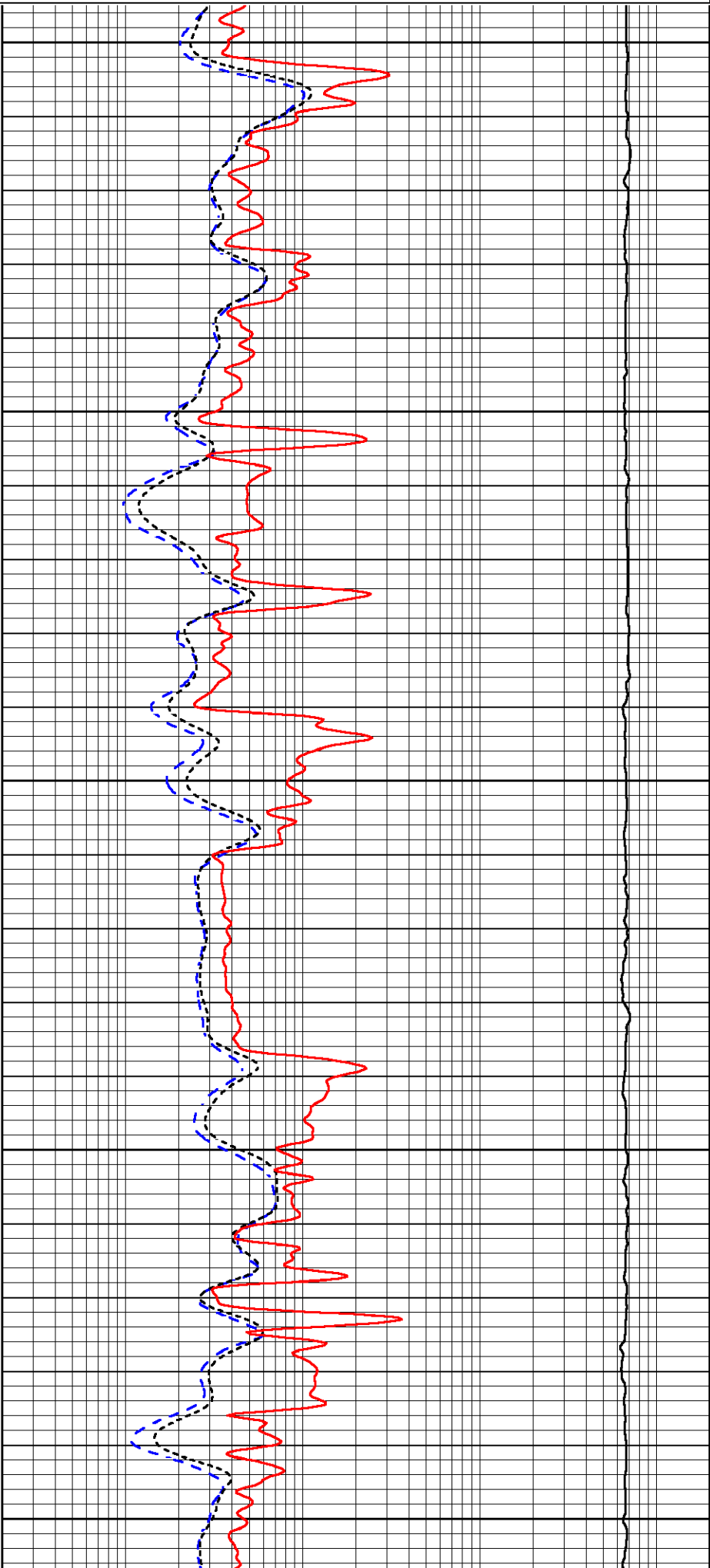
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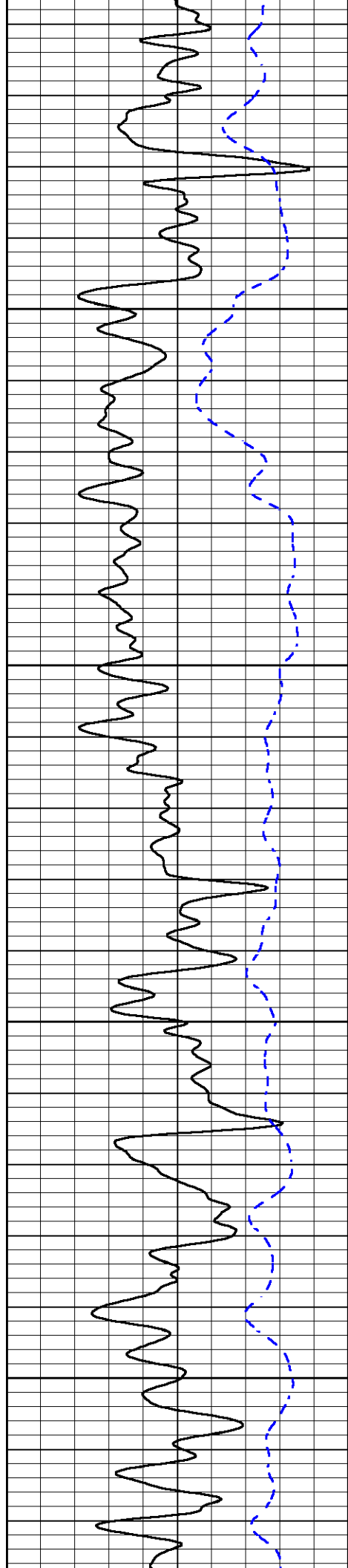
2050

2100

2150

2200



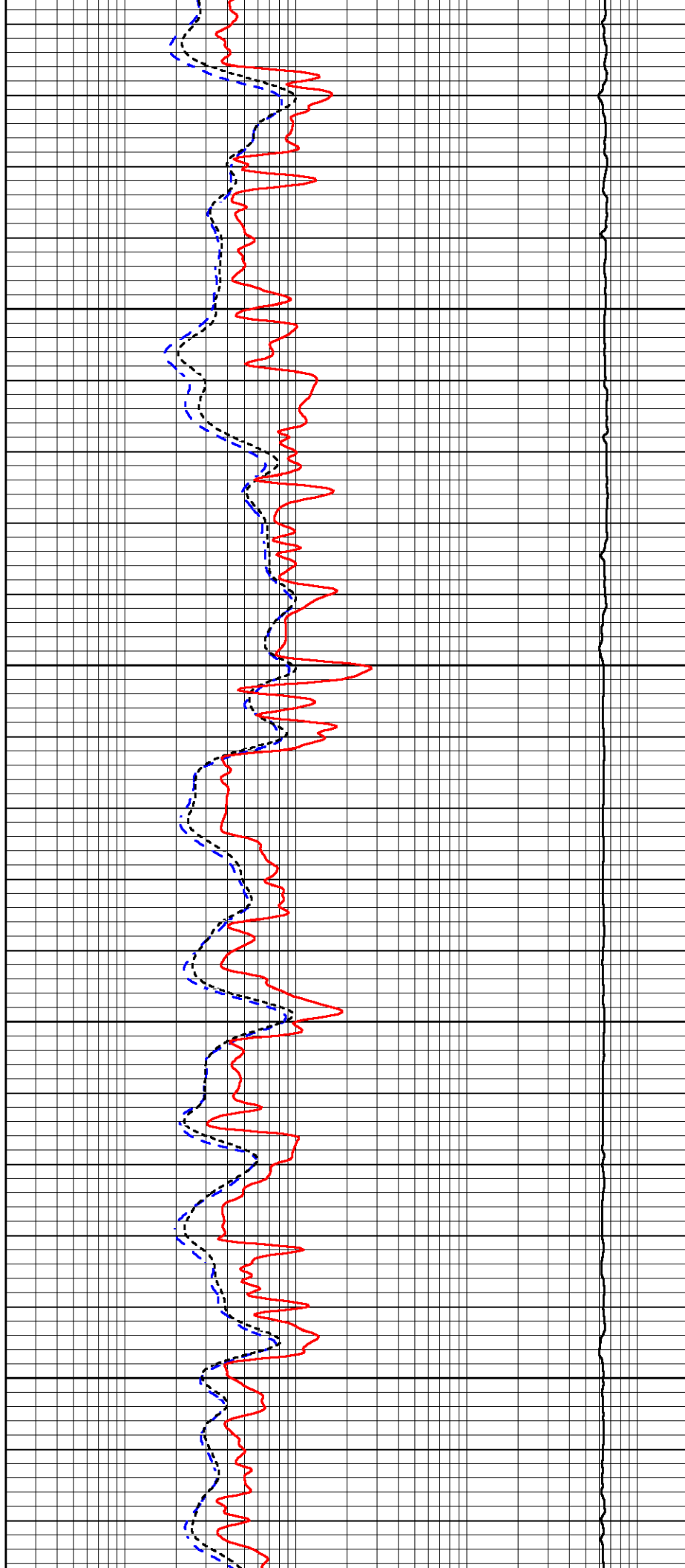


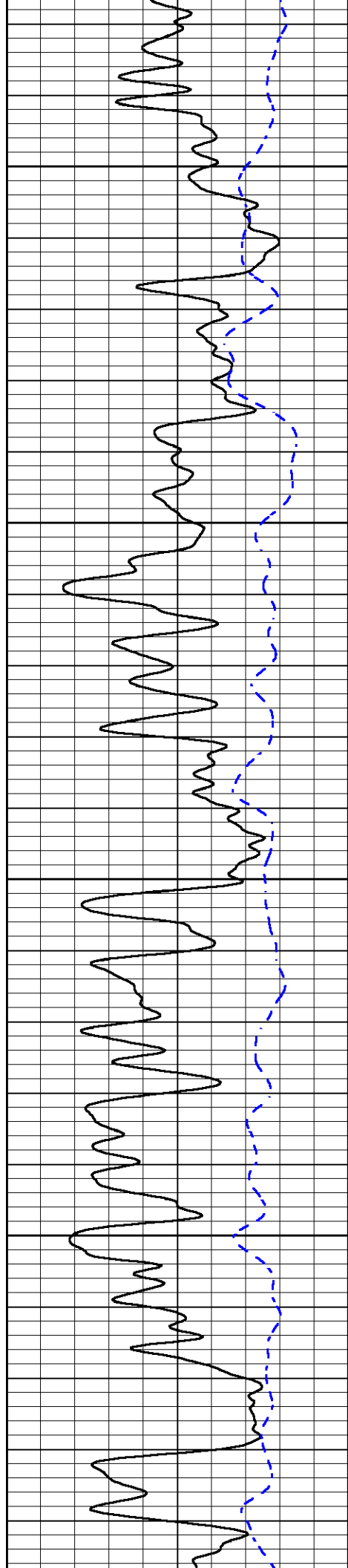
2250

2300

2350

2400



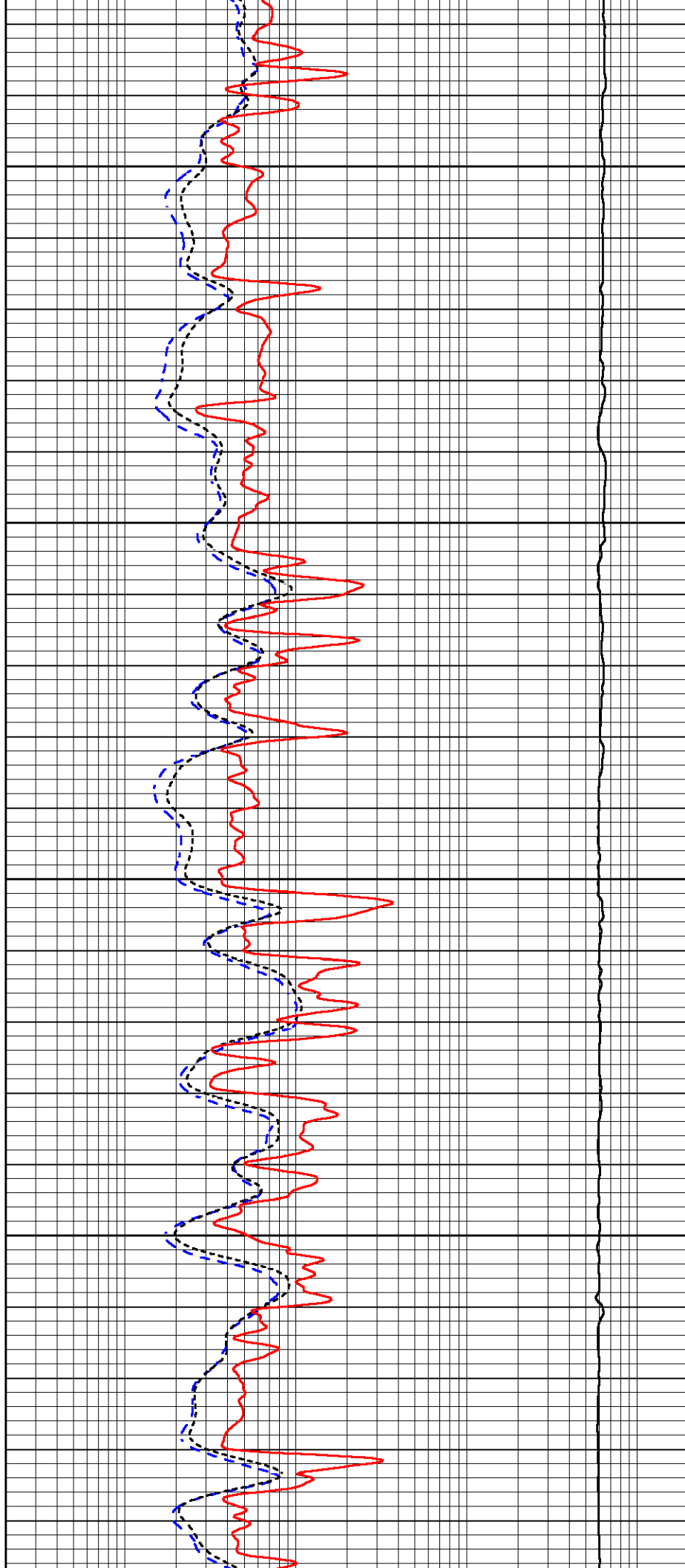


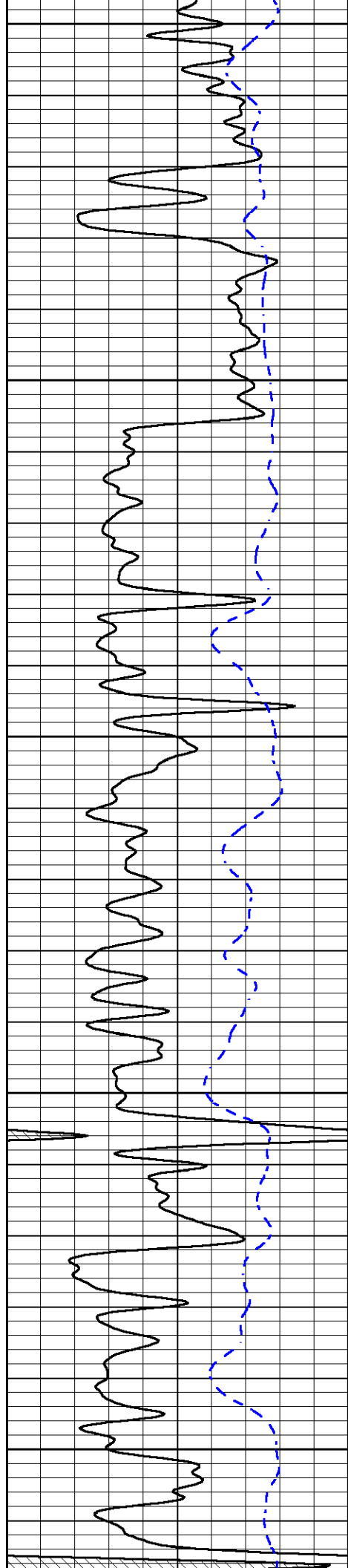
2450

2500

2550

2600





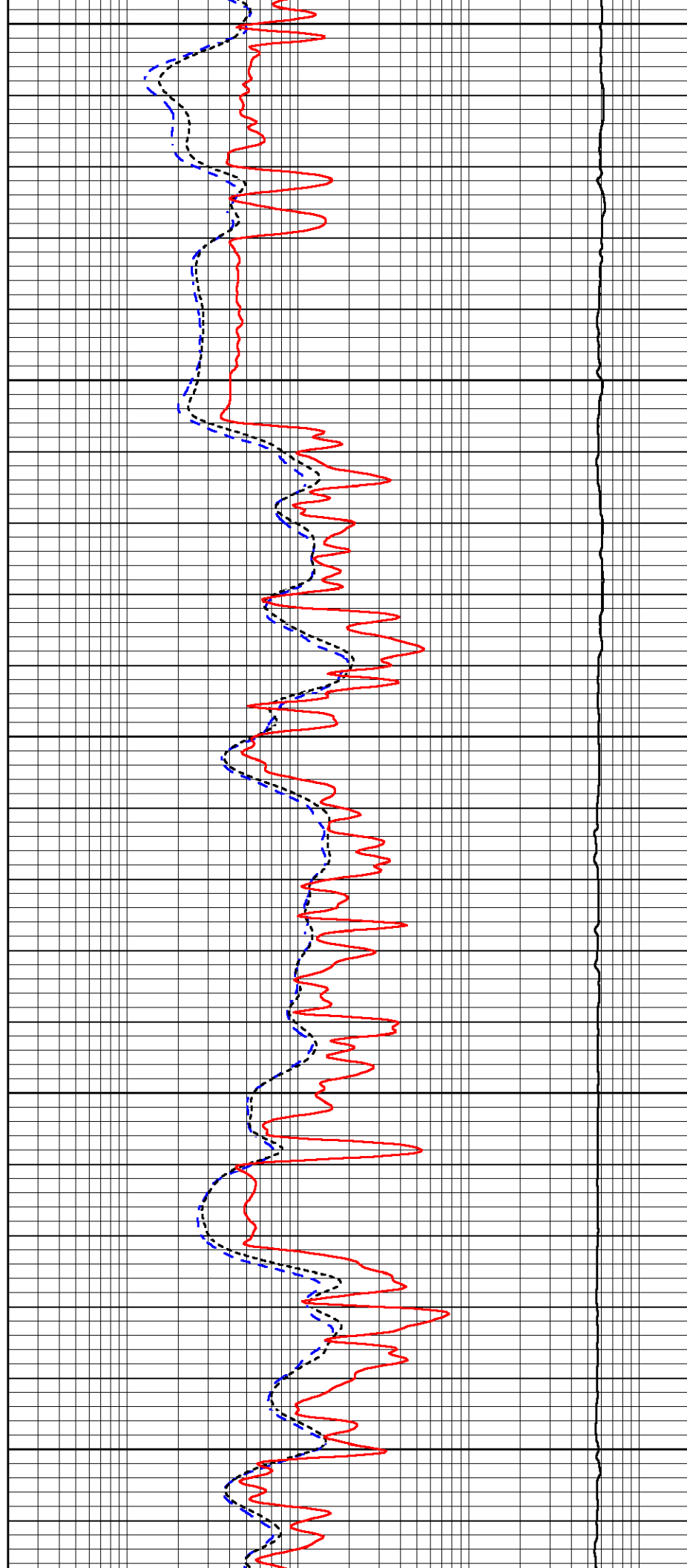
2650

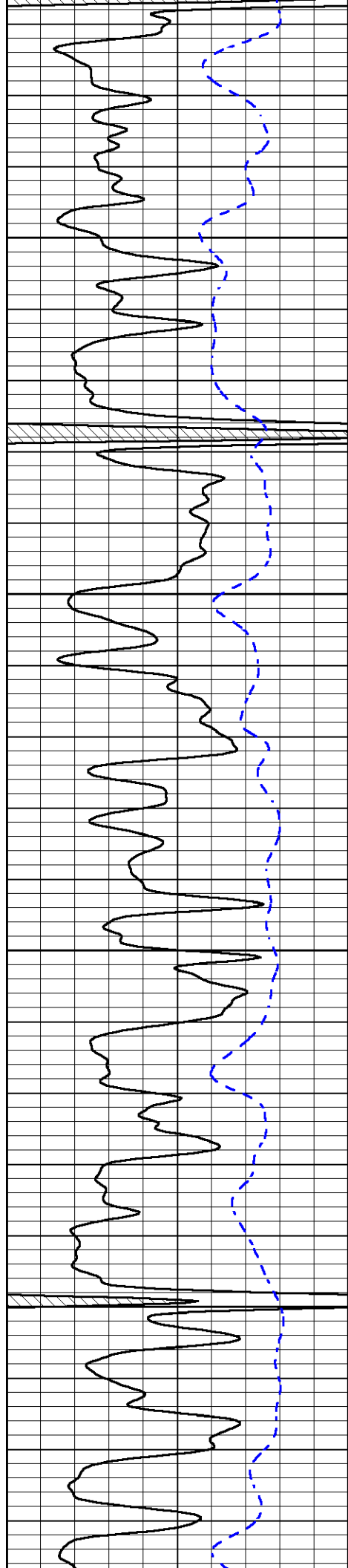
2700

2750

2800

2850



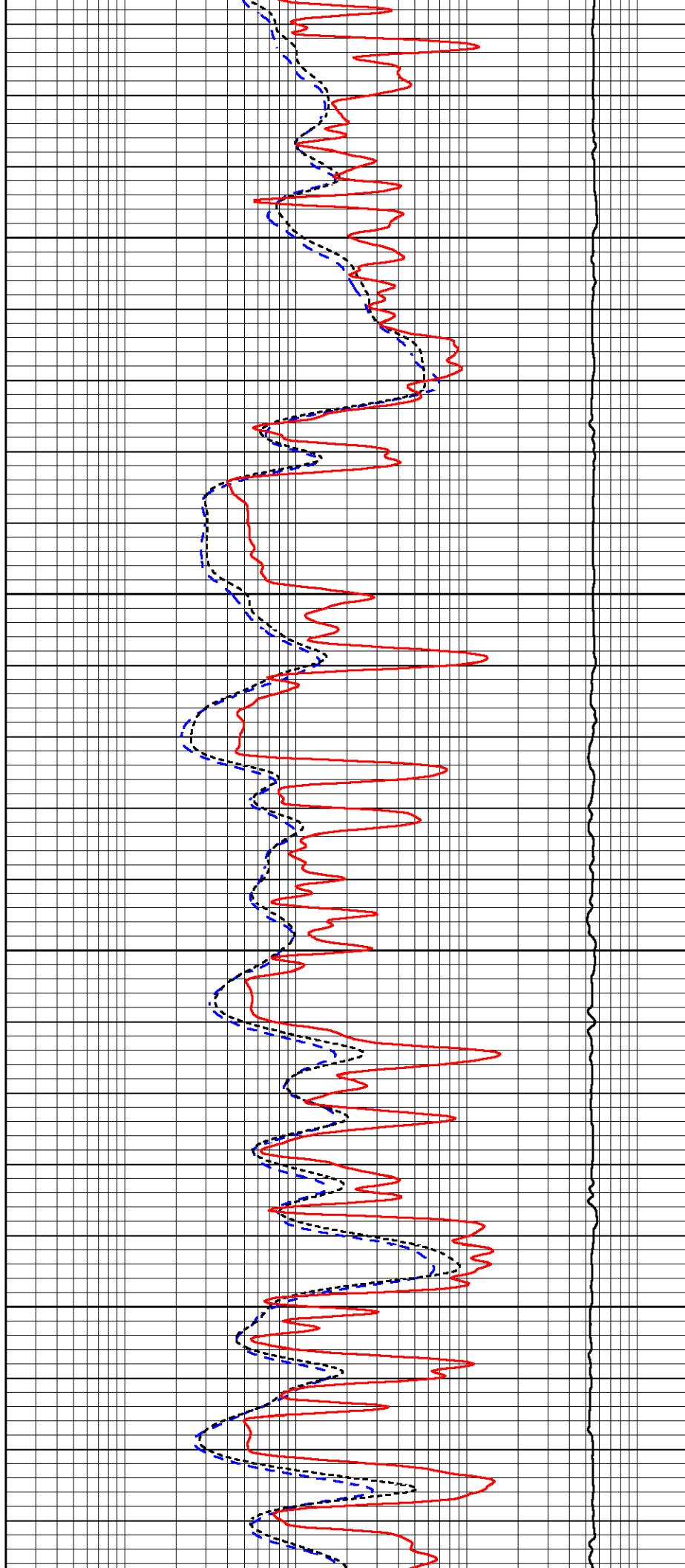


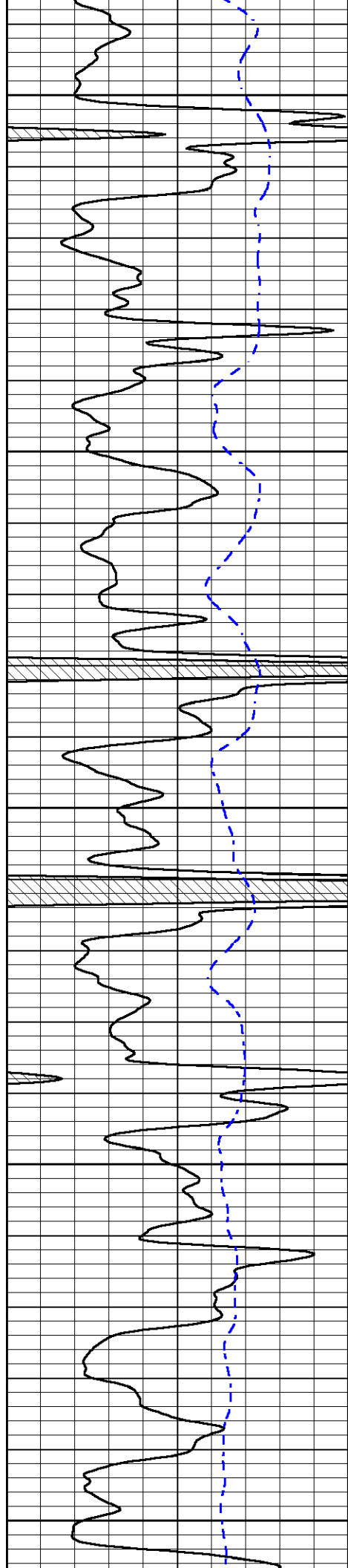
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2950

3000

3050





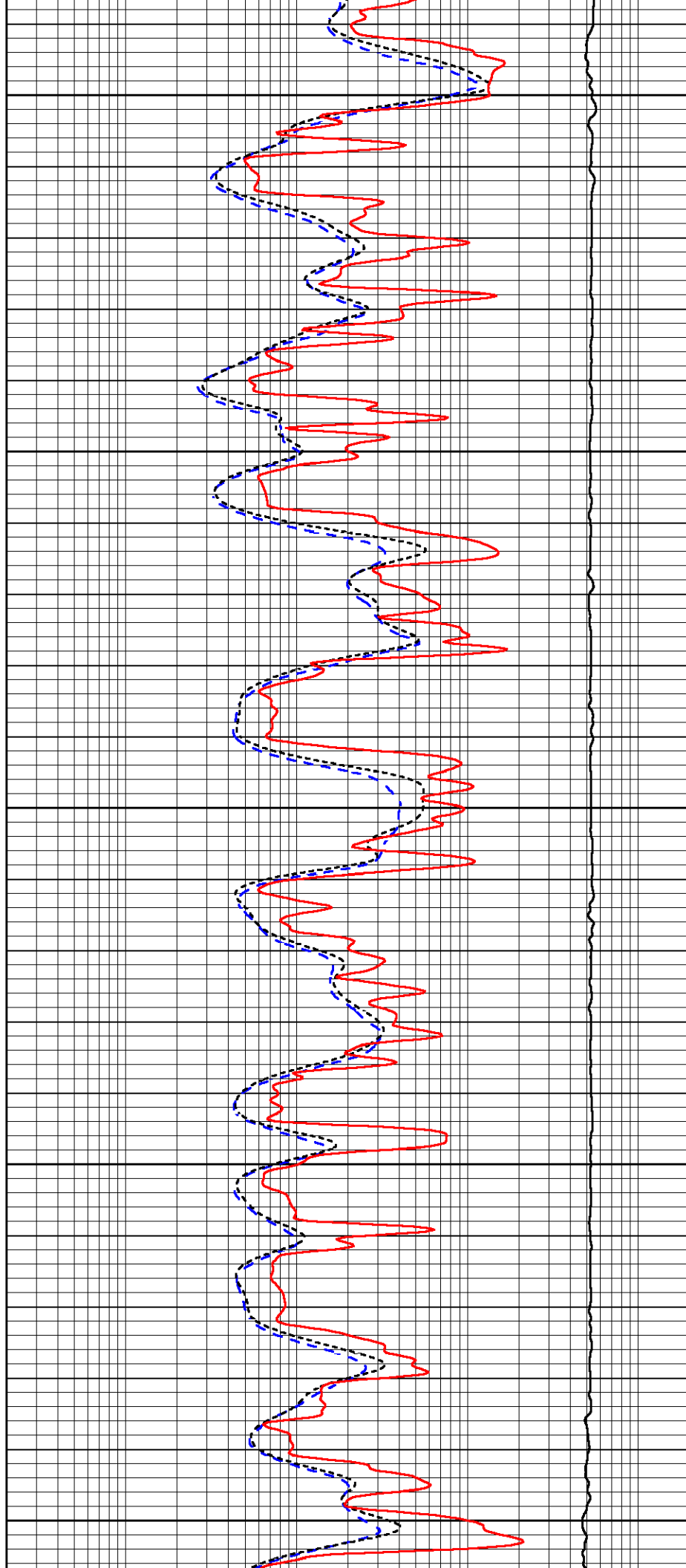
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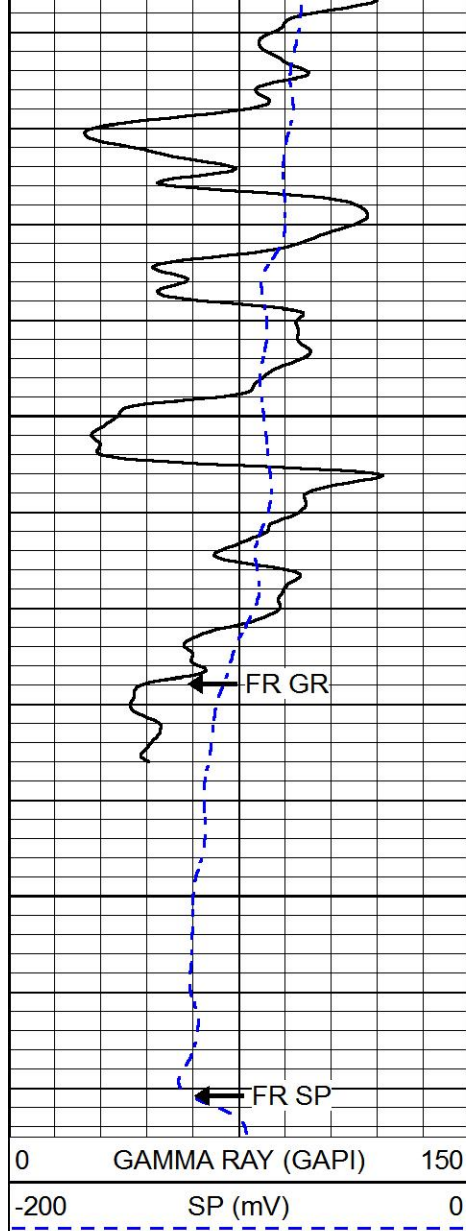
3150

3200

3250

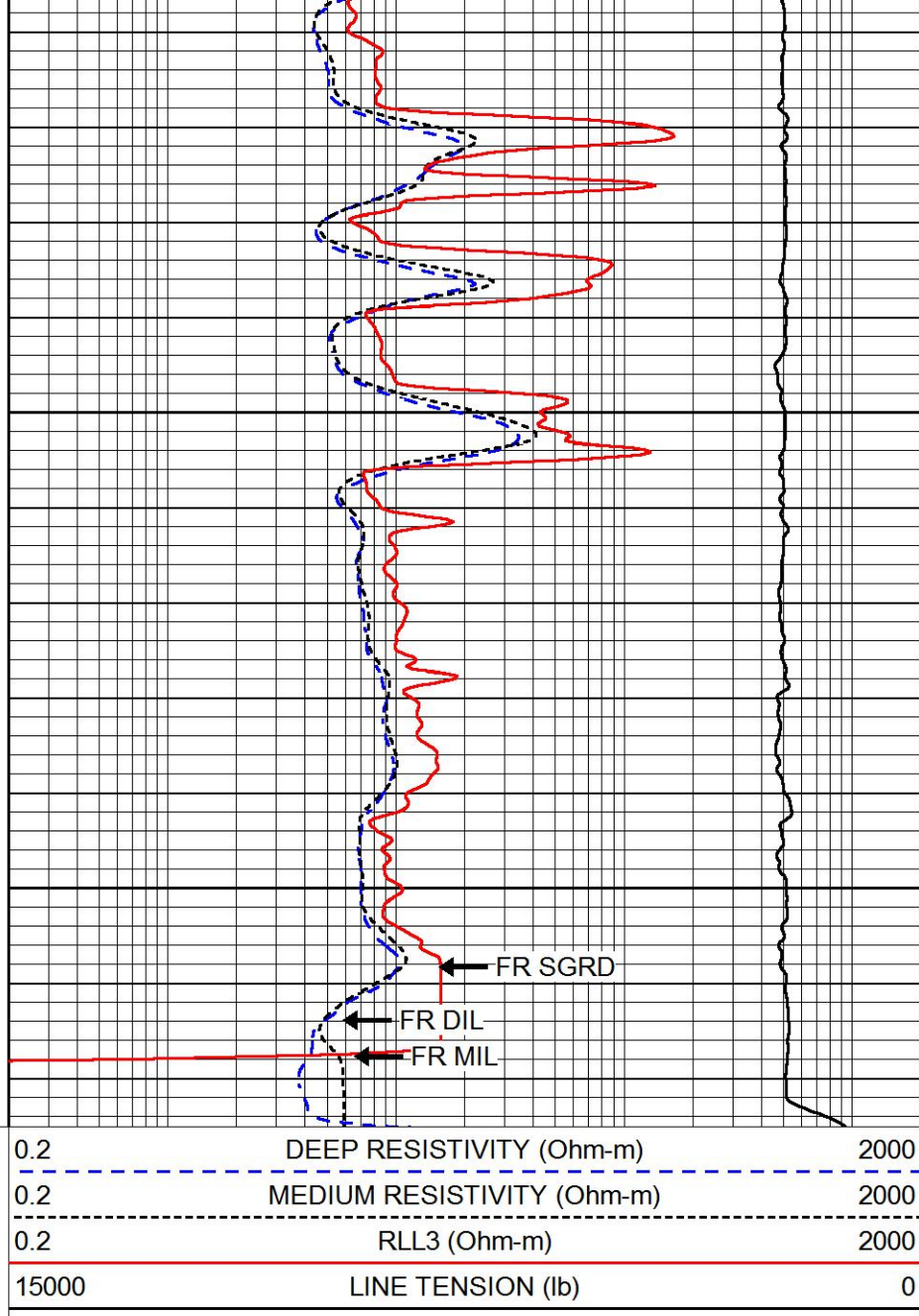
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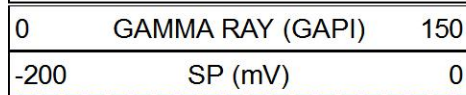
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3400

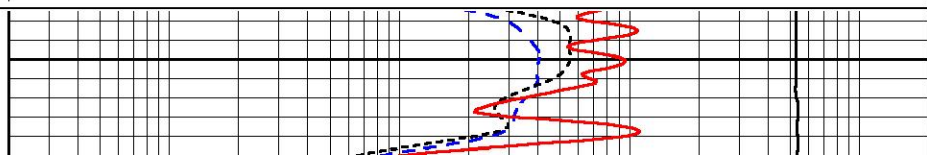
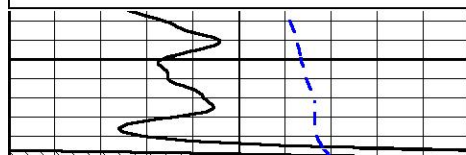
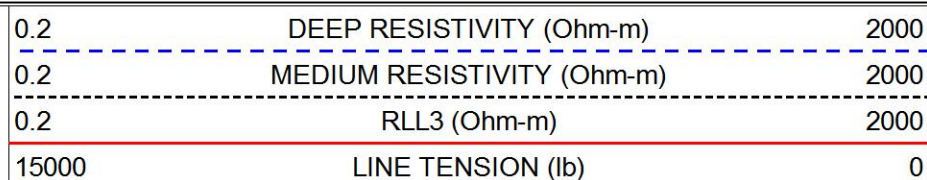


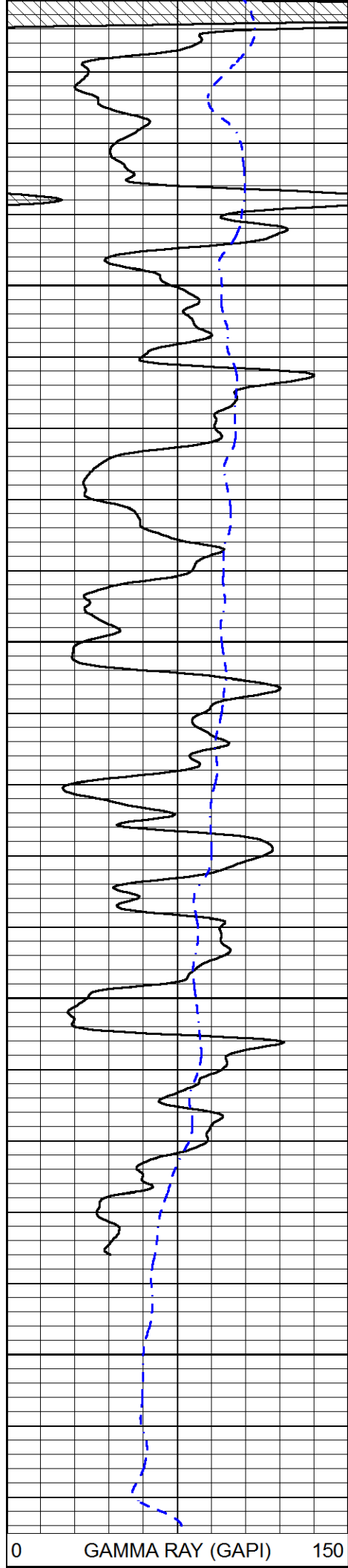
REPEAT SECTION

Database File carmen_schmitt_sb_unit_1.db
Dataset Pathname stackml/pass2.1
Presentation Format dil
Dataset Creation Tue Mar 17 01:39:30 2020
Charted by Depth in Feet scaled 1:240



3200





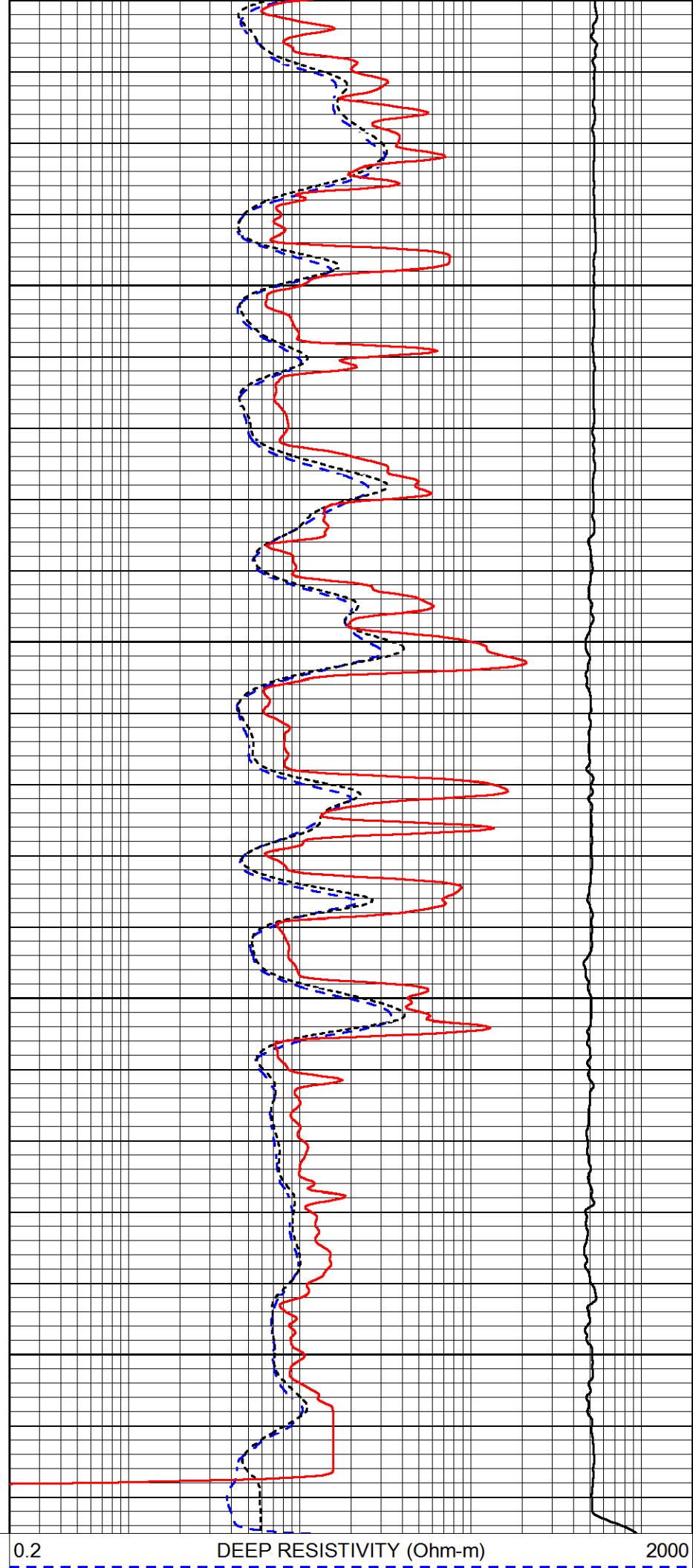
3250

3300

3350

3400

0 GAMMA RAY (GAPI) 150



0.2 DEEP RESISTIVITY (Ohm-m) 2000

-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			15000	LINE TENSION (lb)	0

Calibration Report	
Database File	carmen_schmitt_sb_unit_1.db
Dataset Pathname	stackml/pass3.1
Dataset Creation	Tue Mar 17 01:40:18 2020

Dual Induction Calibration Report

Serial-Model:	55-222-M&W
Calibration Performed:	Tue Dec 10 05:11:10 2019

Readings		References		Results	
Loop:	Air	Loop	Air	Loop	Gain Offset
Deep	167.000	835.000	0.000	255.800 mmho/m	0.500 -41.000
Medium	0.000	1348.000	142.000	255.800 mmho/m	0.370 -15.000

Microlog Calibration Report

Serial-Model:	UDM-01-PSI UDM ML
Performed:	Fri May 31 06:10:42 2019

Readings		References		Results	
	Zero	Cal	Zero	Cal	m b
Normal	0.0000	1.0000	0.0000	1.0000 Ohm-m	45000.0000 -1.0000
Inverse	0.0000	1.0000	0.0000	1.0000 Ohm-m	25000.0000 -1.0000
Caliper	1.0019	1.2642	8.0000	22.0000 in	53.3774 -47.6000

Compensated Density Calibration Report
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Serial-Model:	934-229-M&W
Source / Verifier:	21170B /
Master Calibration Performed:	Thu Dec 19 15:46:53 2019

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3391.68	2392.26	cps
Aluminum	2.670	g/cc	645.86	1568.99	cps
Spine Angle = 75.73			Density/Spine Ratio = 0.535		
	Size		Reading		
Small Ring	4.00	in	1.39		
Large Ring	14.00	in	1.04		

Compensated Neutron Calibration Report
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Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	Wed Nov 16 11:21:36 2016

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:	89-M&W		
Tool Model:	M&W		
Calibration Performed:	Tue Dec 10 05:11:34 2019		
Calibrator Value:	1000.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	6.2	cps	
Sensitivity:	0.5200	GAPI/cps	

 PIONEER Pioneer Energy Services	Company	CARMEN SCHMITT, INC.
	Well	SB UNIT #1
	Field	WILDCAT
	County	ROOKS
	State	KANSAS