



MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company EPOC, LLC		Company EPOC, LLC	
Well	Eck 'A' SWD #1	Well	Eck 'A' SWD #1
Field	Hazlett	Field	Hazlett
County	Butler	County	Butler
State	Kanas	State	Kanas
Location: API #: 15-015-24167-00-00		Other Services	
50 FNL & 1125 FWL		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	1475
Log Measured From	Kelly Bushing	K.B.	1481
Drilling Measured From	Kelly Bushing	D.F.	1475
		G.L.	1475
SEC 32 TWP 23S RGE 5E			
Date	8/11/2022		
Run Number	One		
Depth Driller	3048		
Depth Logger	3046		
Bottom Logged Interval	3045		
Top Log Interval	1400		
Casing Driller	8.625 @ 205		
Casing Logger	209		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL			
Density / Viscosity			
pH / Fluid Loss			
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	2.2 @ 76		
Rmt @ Meas. Temp	1.65 @ 76		
Rmc @ Meas. Temp	2.97 @ 76		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	1.57 @ 106		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	106		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Ray Gilbert	Bill Stout	

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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.

Newton,
East to Purity Springs Rd, 2 South, 1/4 East,
South into

Log Measured From: Kelly Bushing

6 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: Ray Gilbert
Secondary Witness: Bill Stout
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\epoc_eck a swd 1.db
Dataset field/well/stkml/pass3.11/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	106	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	112	70		3046

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



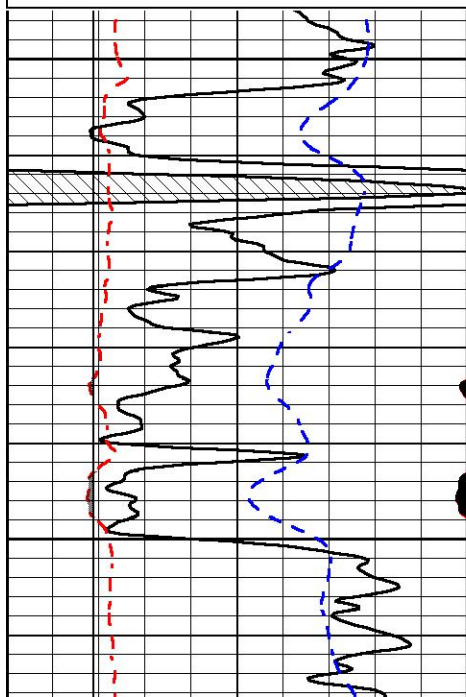
DETAIL SECTION

MAIN PASS

Database File epoc_eck a swd 1.db
Dataset Pathname stkml/pass3.1
Presentation Format _micro
Dataset Creation Thu Aug 11 06:50:23 2022
Charted by Depth in Feet scaled 1:240

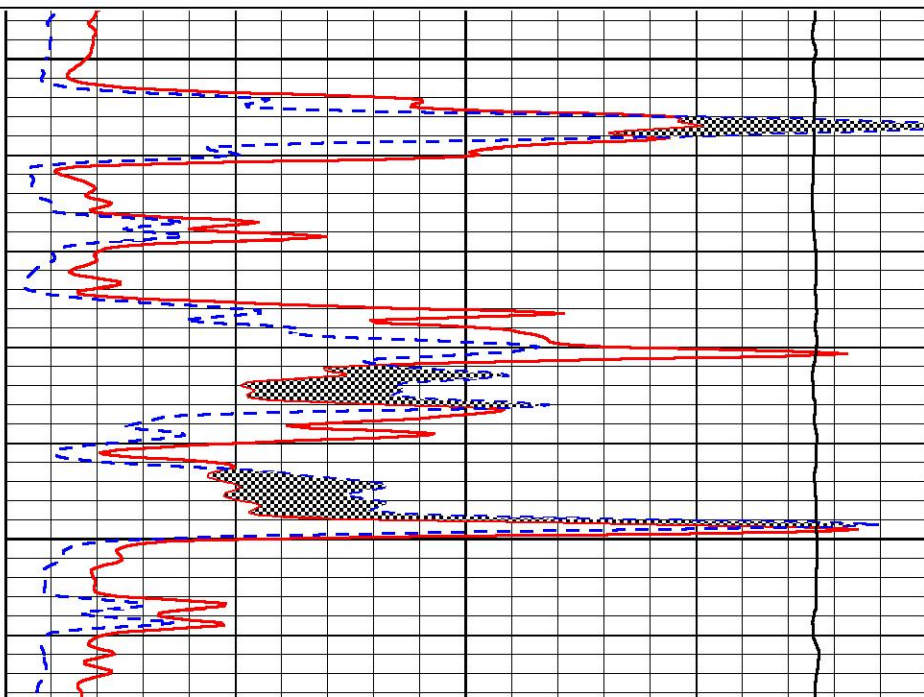
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

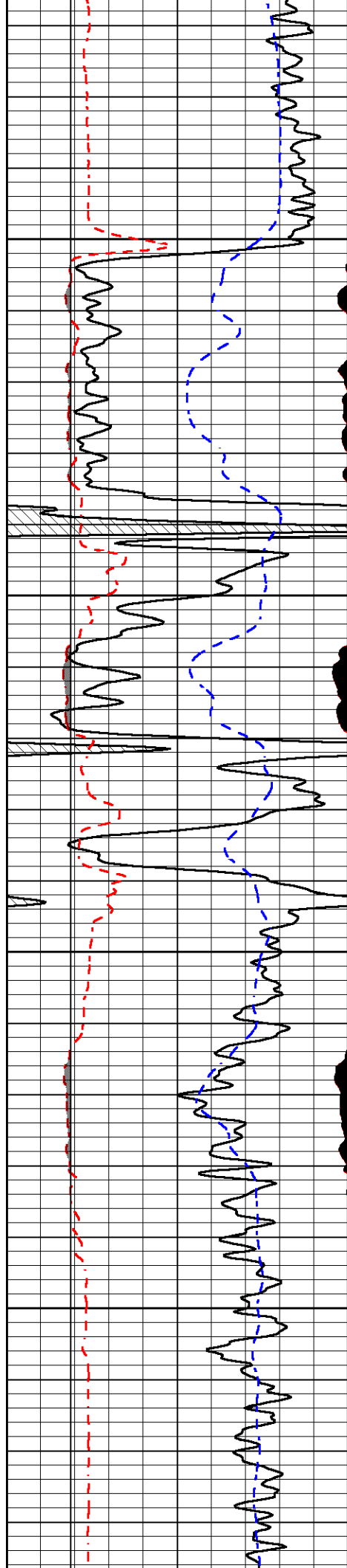
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



1400

1450



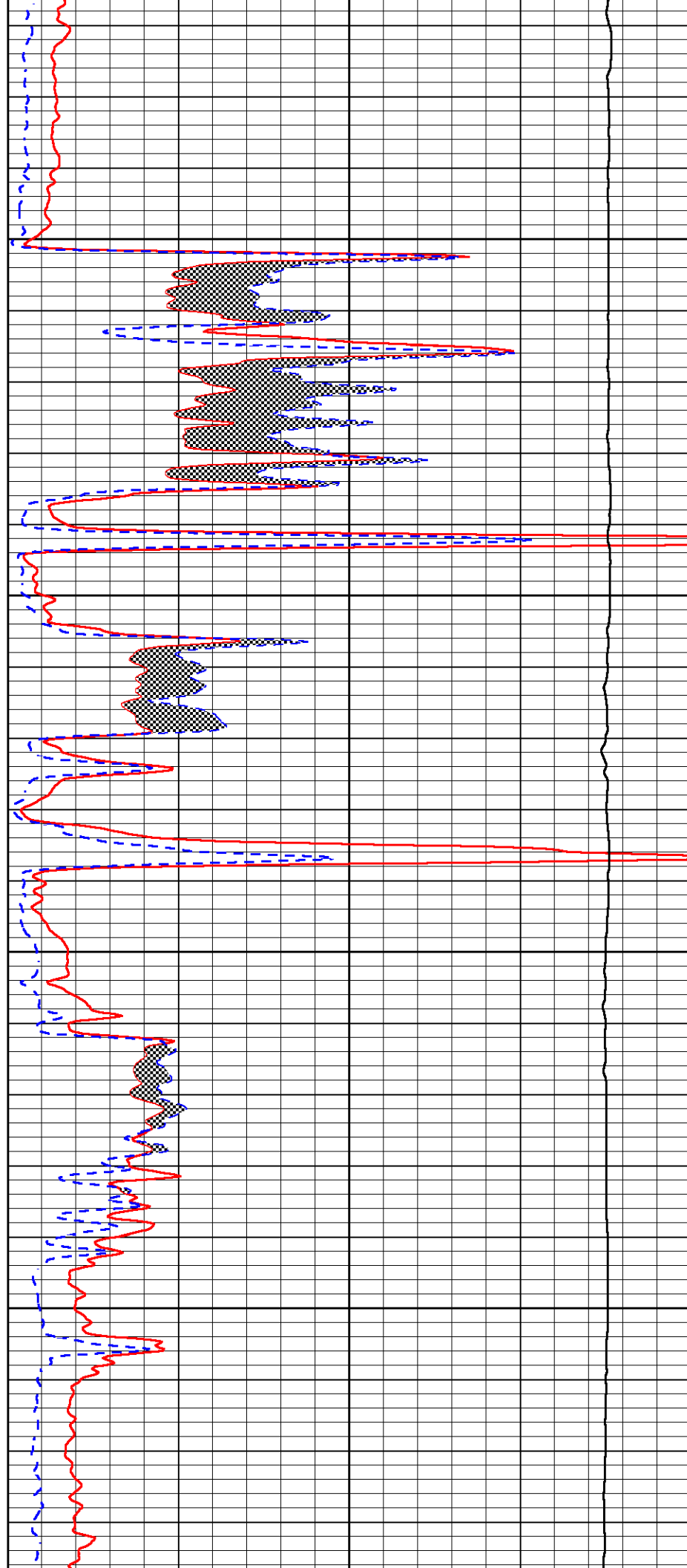


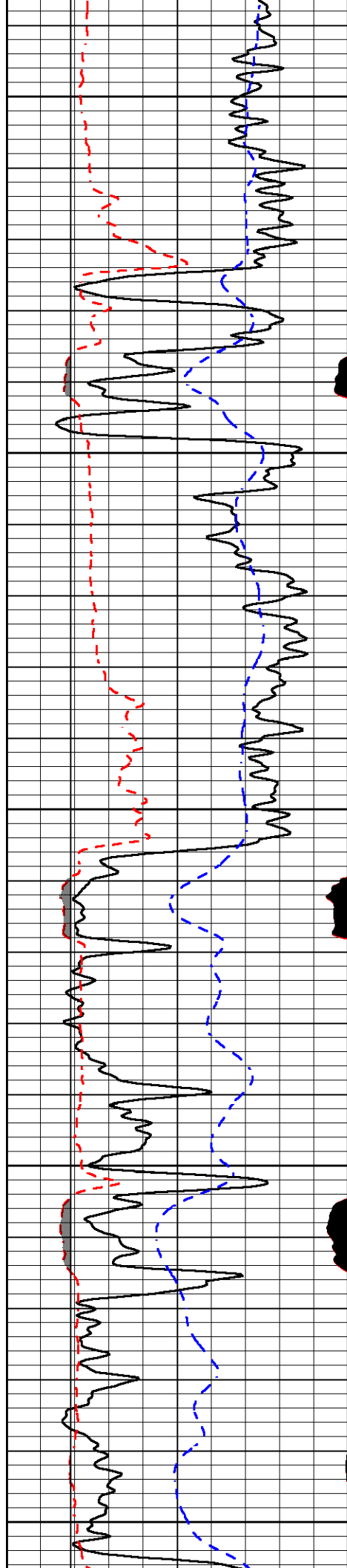
1500

1550

1600

1650





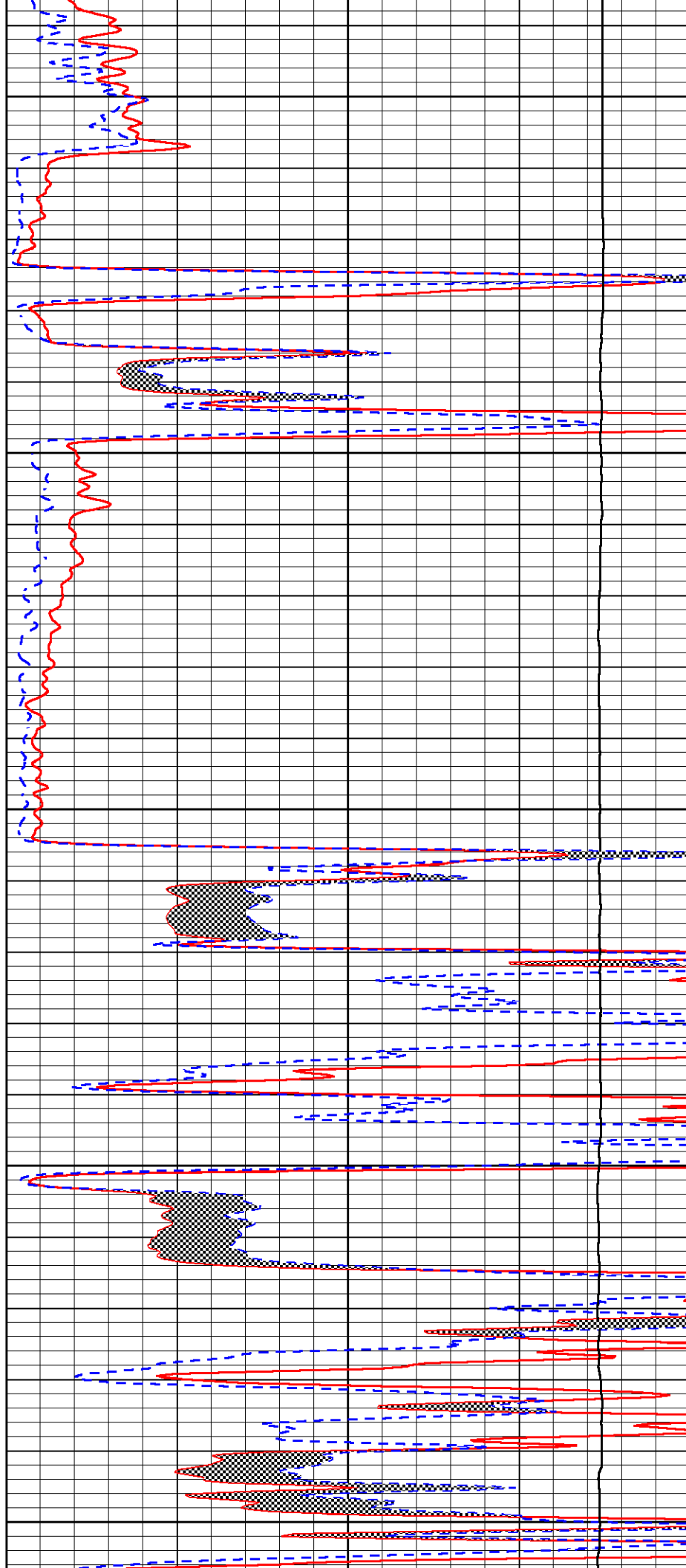
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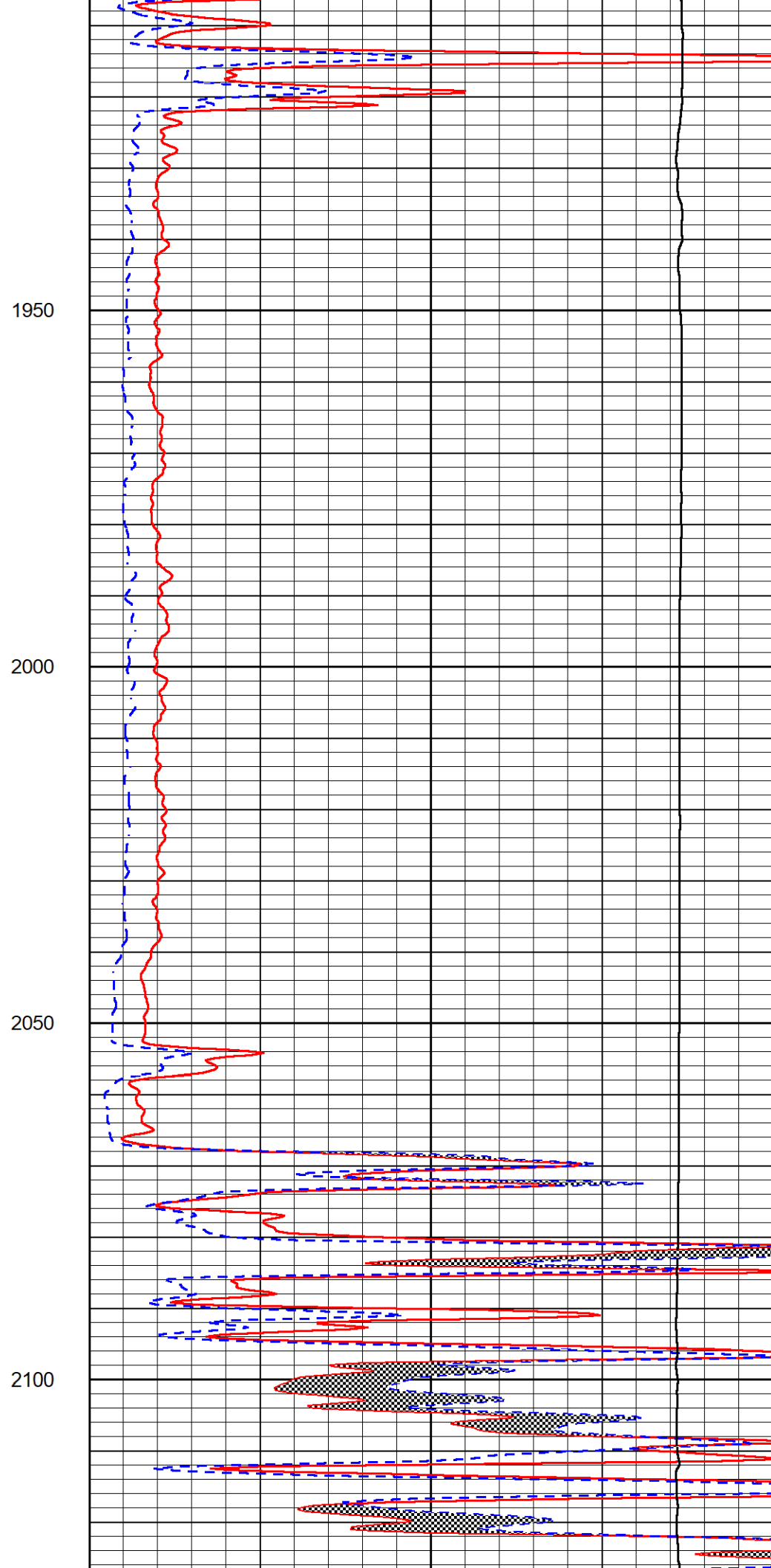
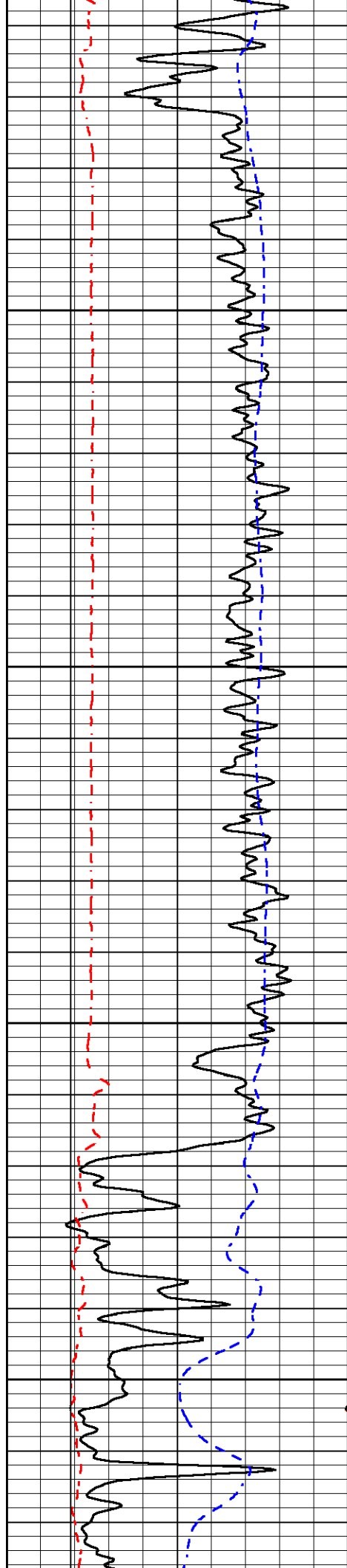
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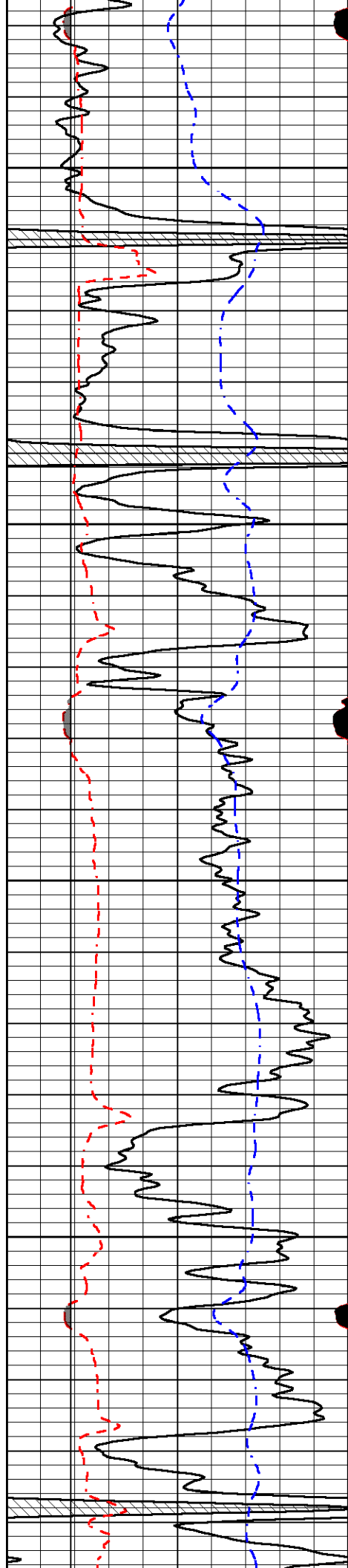
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1850

1900





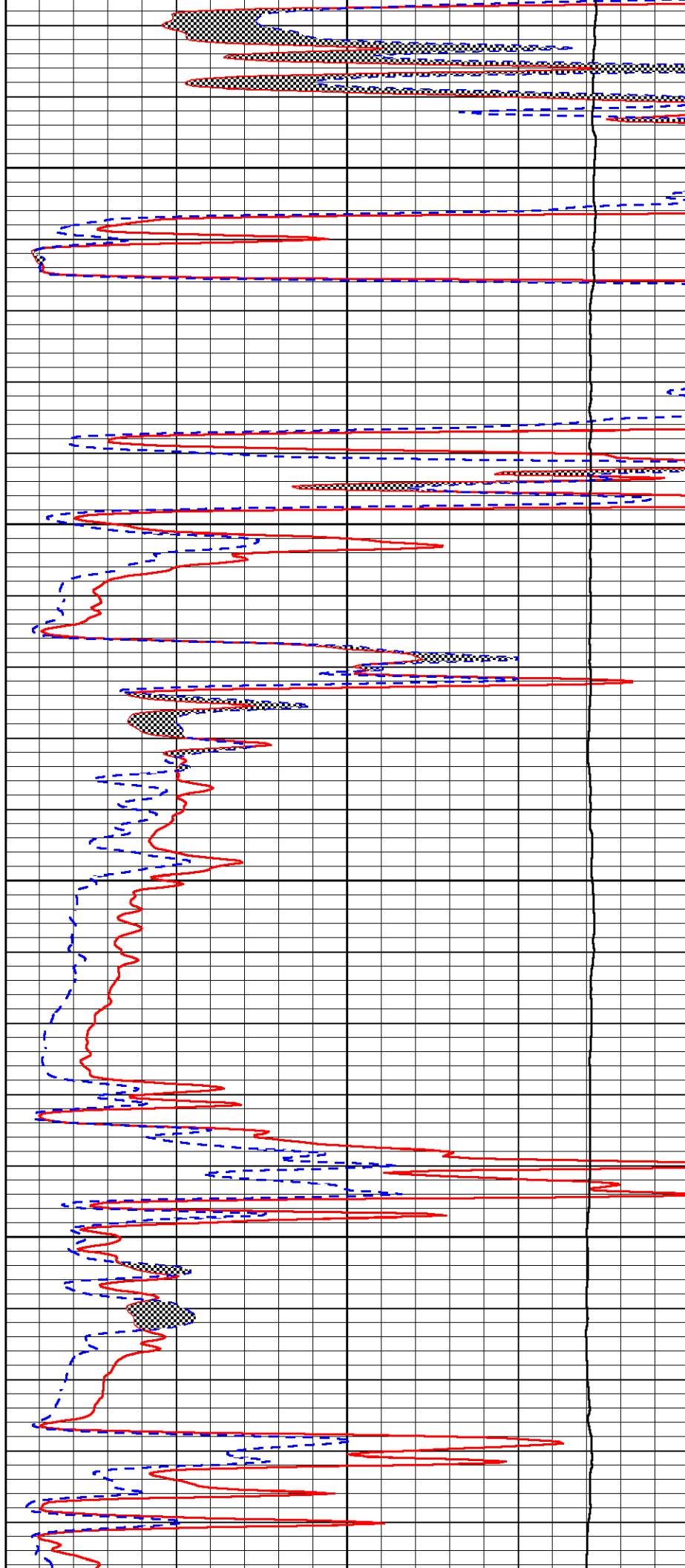


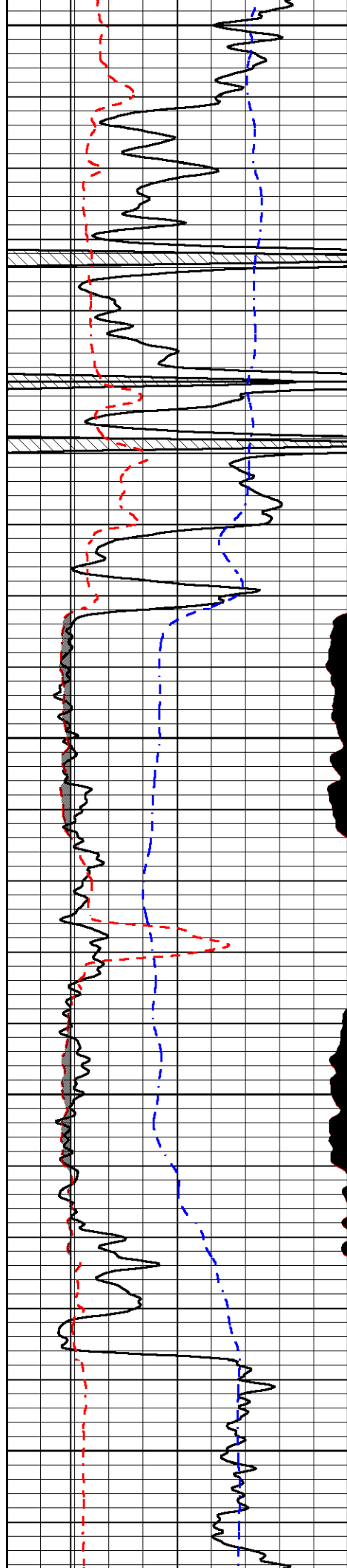
2150

2200

2250

2300





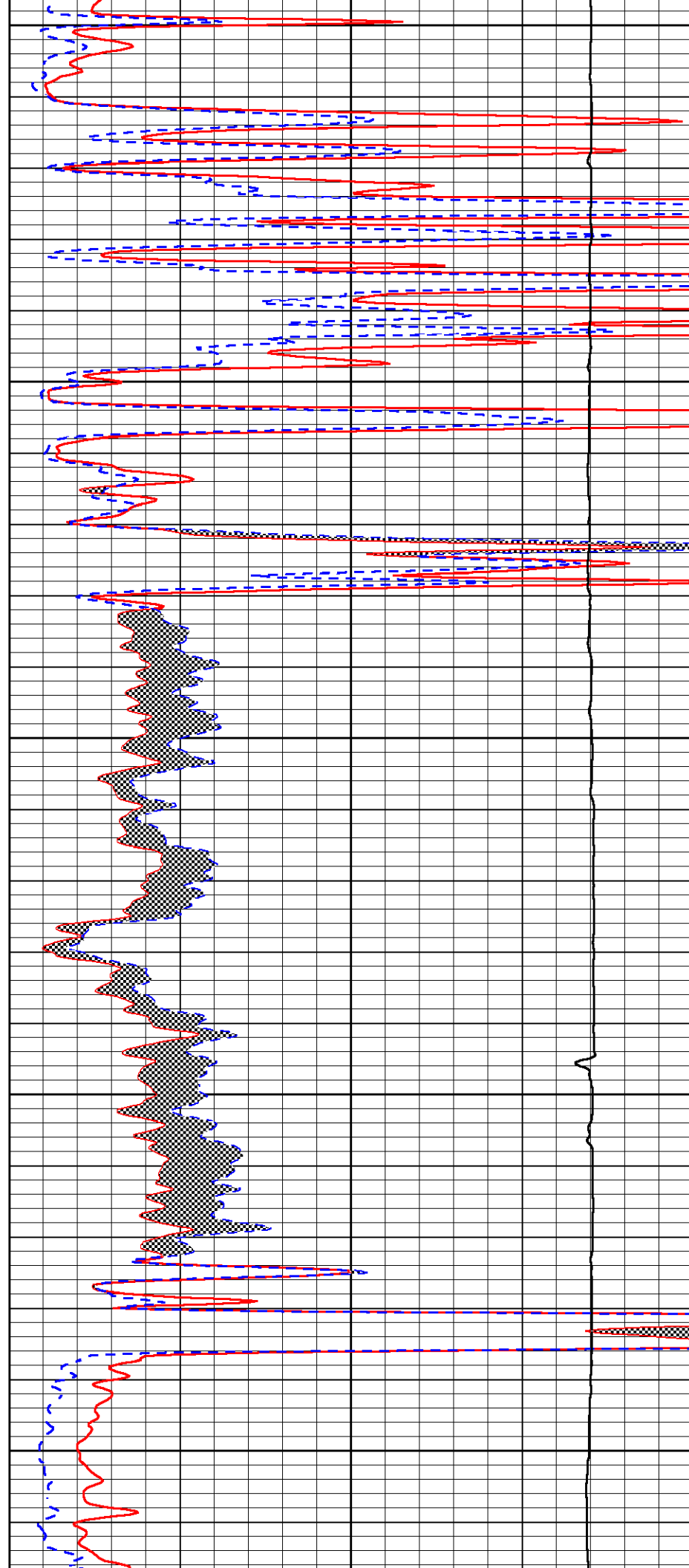
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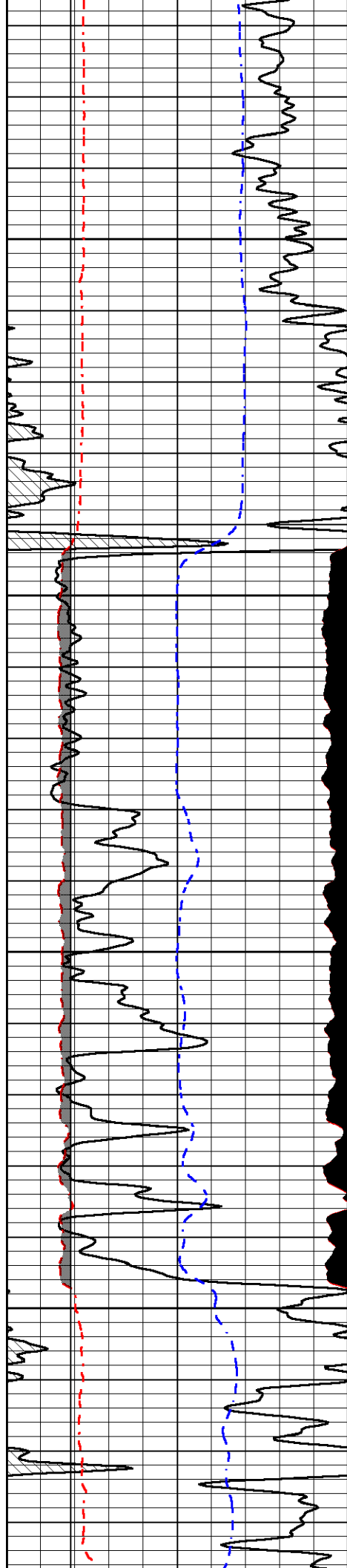
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2450

2500

2550



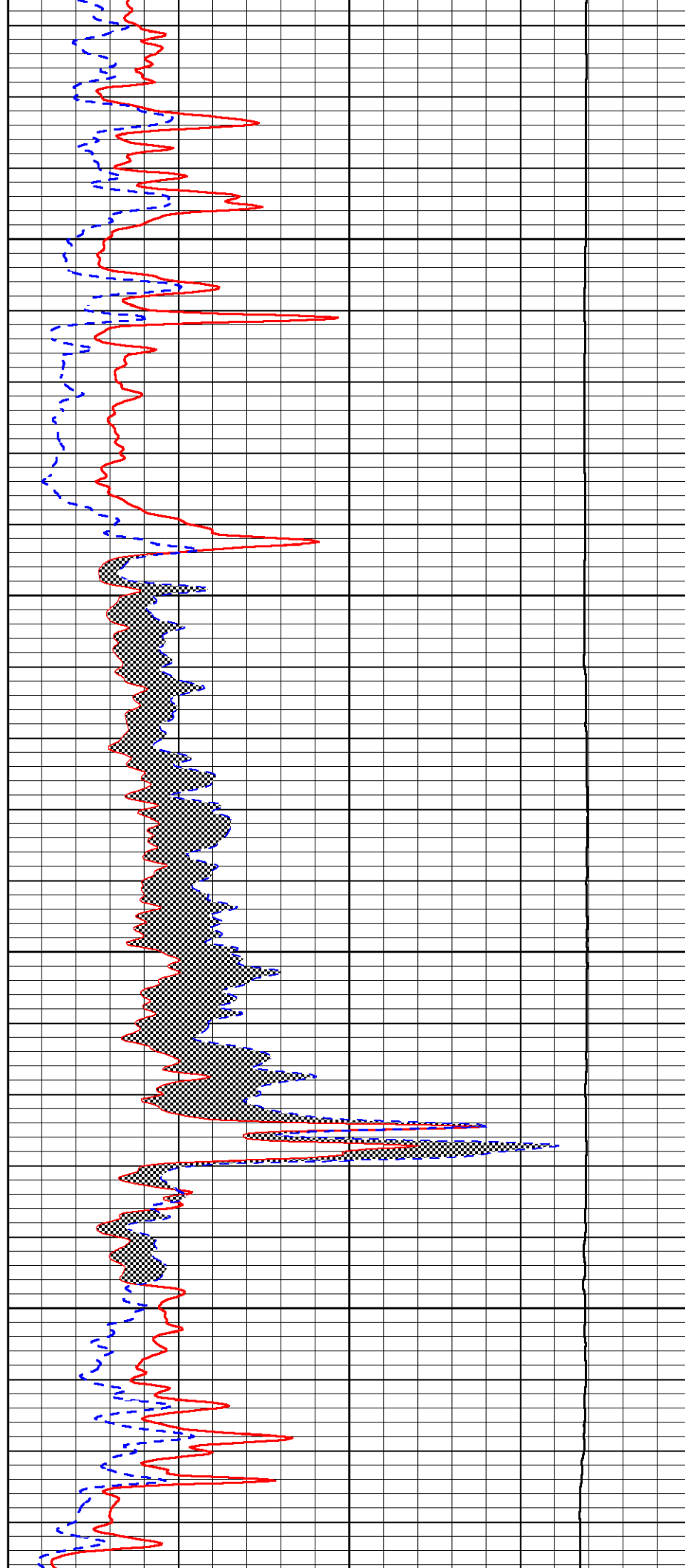


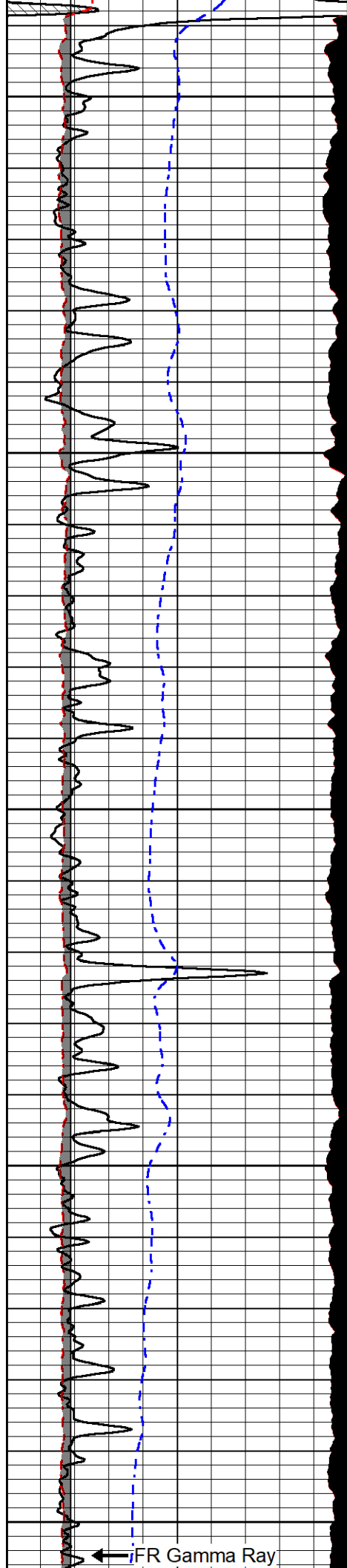
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2650

2700

2750





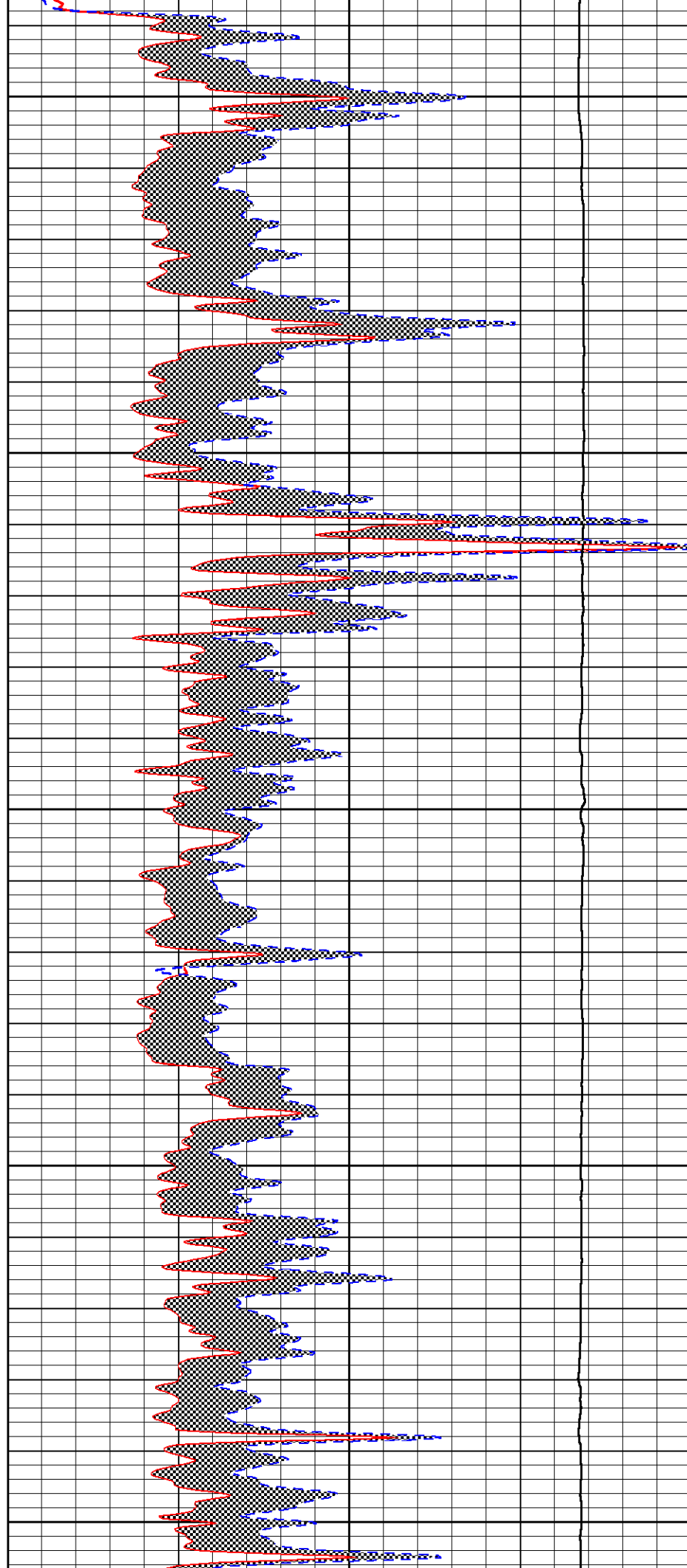
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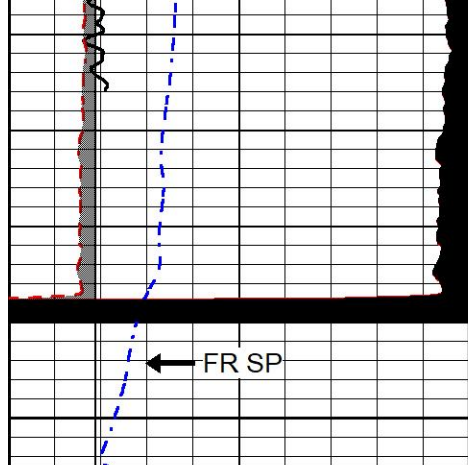
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2900

2950

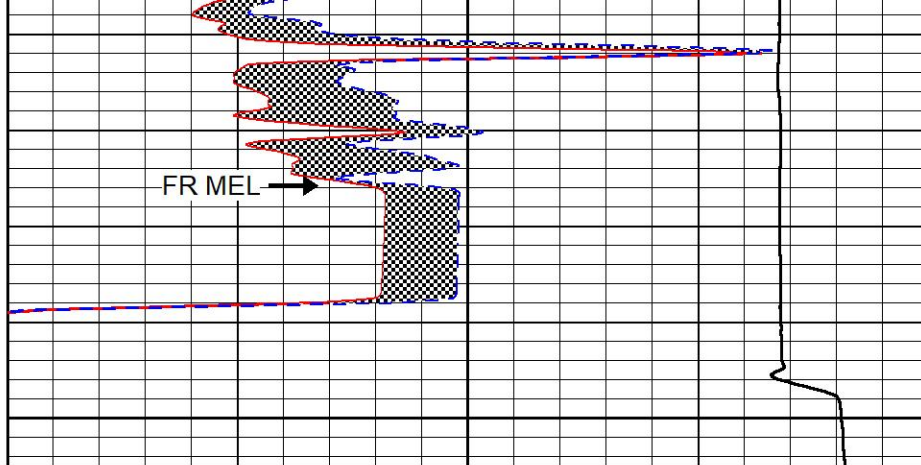
3000





0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

3050



0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



MIDWEST WIRELINE

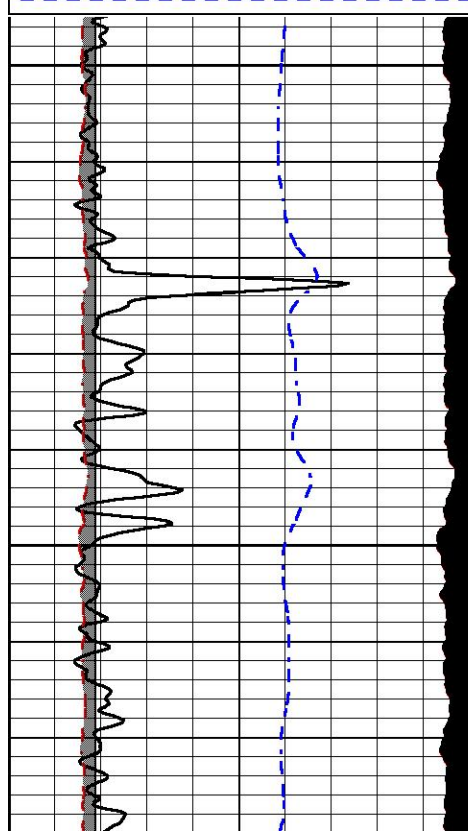
REPEAT SECTION

REPEAT PASS

Database File epoc_eck a swd 1.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _micro
 Dataset Creation Thu Aug 11 06:16:20 2022
 Charted by Depth in Feet scaled 1:240

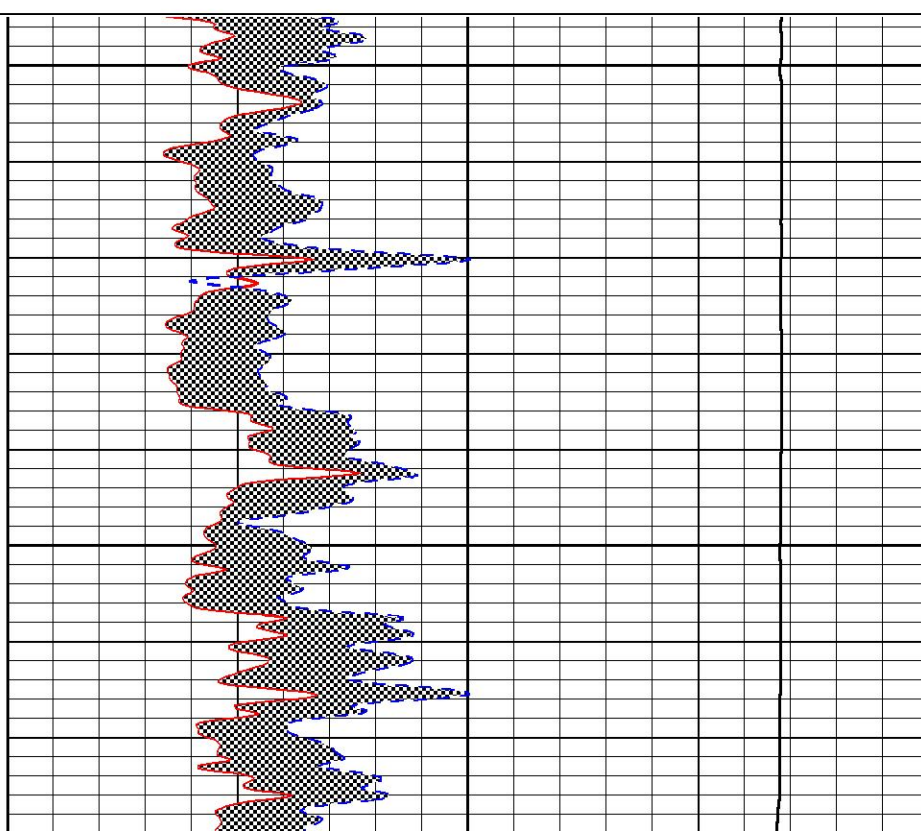
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

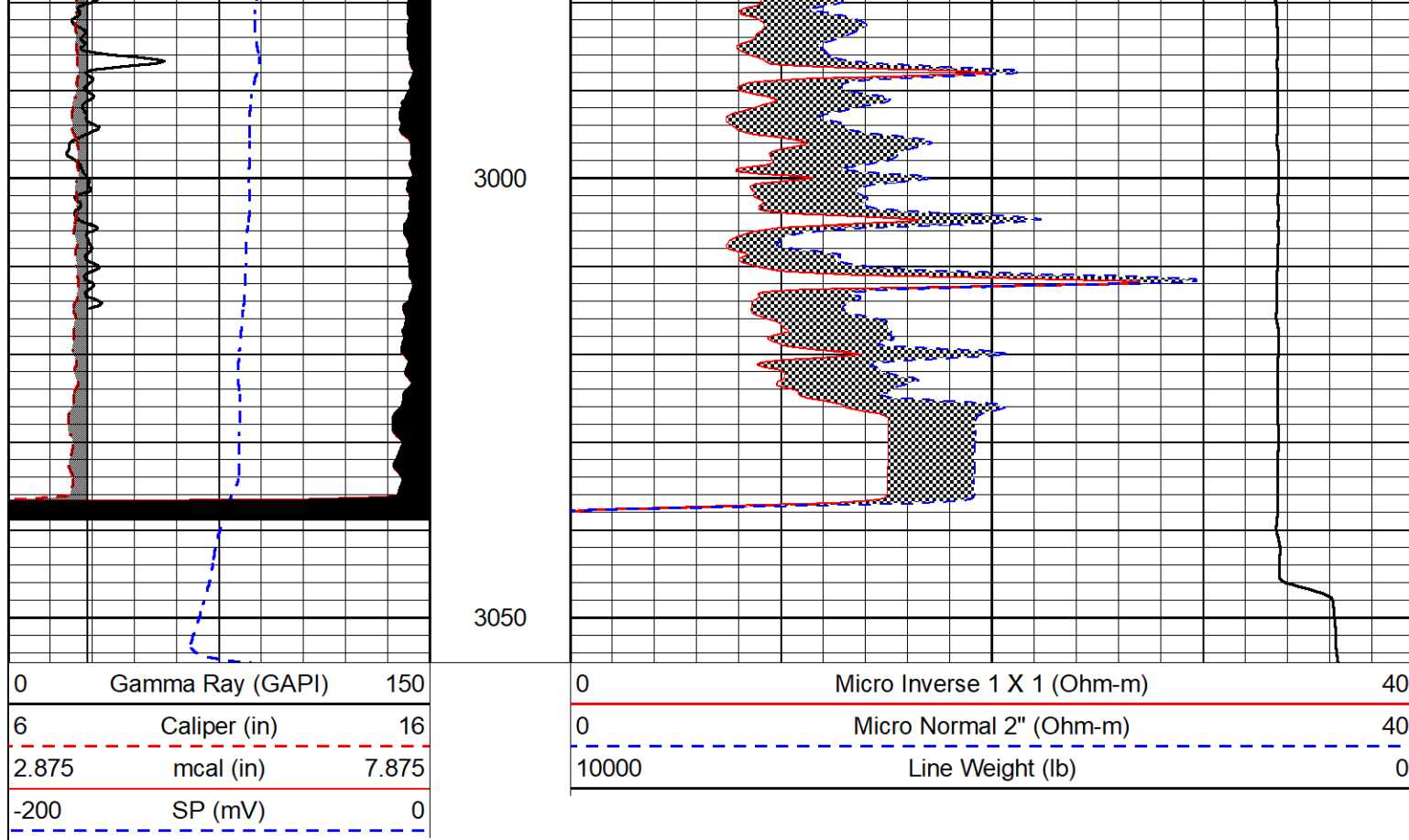
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



2900

2950





Calibration Report

Database File epoc_eck a swd 1.db
 Dataset Pathname stkml/pass3.11
 Dataset Creation Thu Aug 11 06:13:52 2022

Dual Induction Calibration Report

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

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.480	-55.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.390	-45.000

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	11000.0000	-2.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	10700.0000	-1.2000
Caliper	1.0049	1.0846	5.5000	20.0000	in	135.0000	-131.1000

Compensated Density Calibration Report

Serial-Model: 303-03-M&W
 Source #: 21170B
 Performed: Thu Aug 11 06:13:52 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.655	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.506		
	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	EPOC, LLC
Well	Eck 'A' SWD #1
Field	Hazlett
County	Butler
State	Kanas