



MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company Murfin Drilling Company, Inc.

Well MJ Unit #1-10

Field

County Cheyenne State Kansas

Location: API #: 15-023-21582-00-00

SEC 10 TWP 3S RGE 39W

Permanent Datum Ground Level Elevation 3419

Log Measured From Kelly Bushing

Drilling Measured From Kelly Bushing

Other Services

CNL/CDL
DIL/BHCS

Elevation
K.B. 3424
D.F.
G.L. 3419

Date 9/29/2022

Run Number One

Depth Driller 5189

Depth Logger 5187

Bottom Logged Interval 5186

Top Log Interval 3750

Casing Driller 8.625 @ 301

Casing Logger 301

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 600

Density / Viscosity 9.3 75

pH / Fluid Loss 10.5 6.8

Source of Sample Flowline

Rm @ Meas. Temp 0.90 @ 88

Rmf @ Meas. Temp 0.68 @ 88

Rmc @ Meas. Temp 1.22 @ 88

Source of Rmf / Rmc Charts

Rm @ BHT 0.62 @ 128

Operating Rig Time 6 Hours

Max Rec. Temp. F 128

Equipment Number P-24

Location Hays

Recorded By D. Schmidt

Witnessed By Marc Summervill

<<< 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.

Wheeler,
2 East, 5 North

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: Marc Summervill
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

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

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	128	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	350	90		5187

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



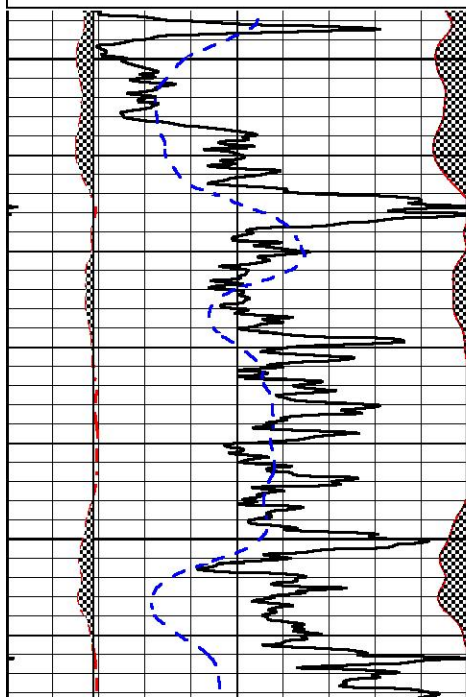
DETAIL SECTION

MAIN PASS

Database File murfin_mj unit 1-10.db
Dataset Pathname stkml/pass4.1
Presentation Format _micro
Dataset Creation Thu Sep 29 19:53:04 2022
Charted by Depth in Feet scaled 1:240

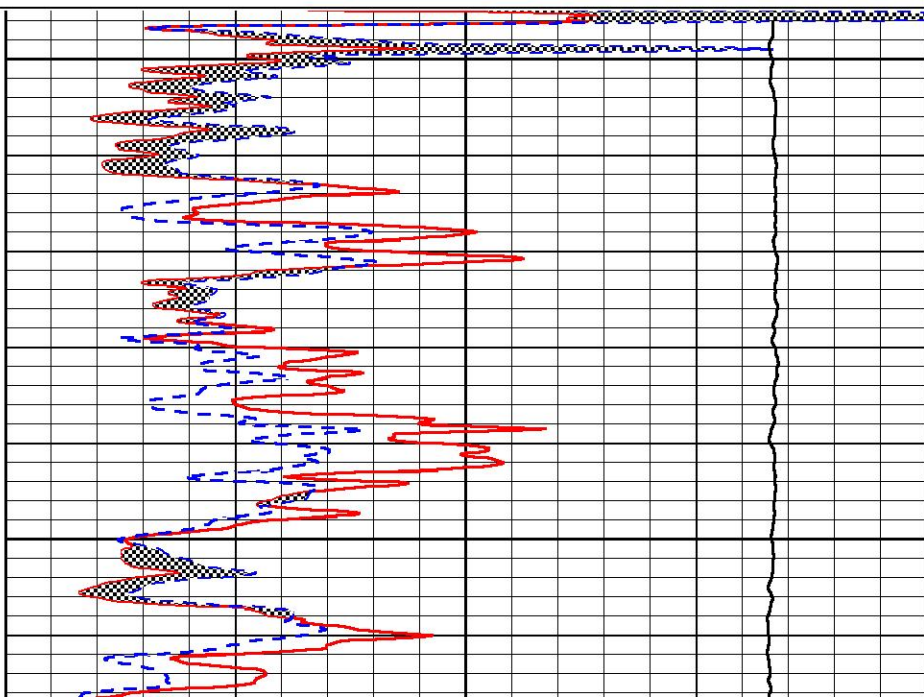
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

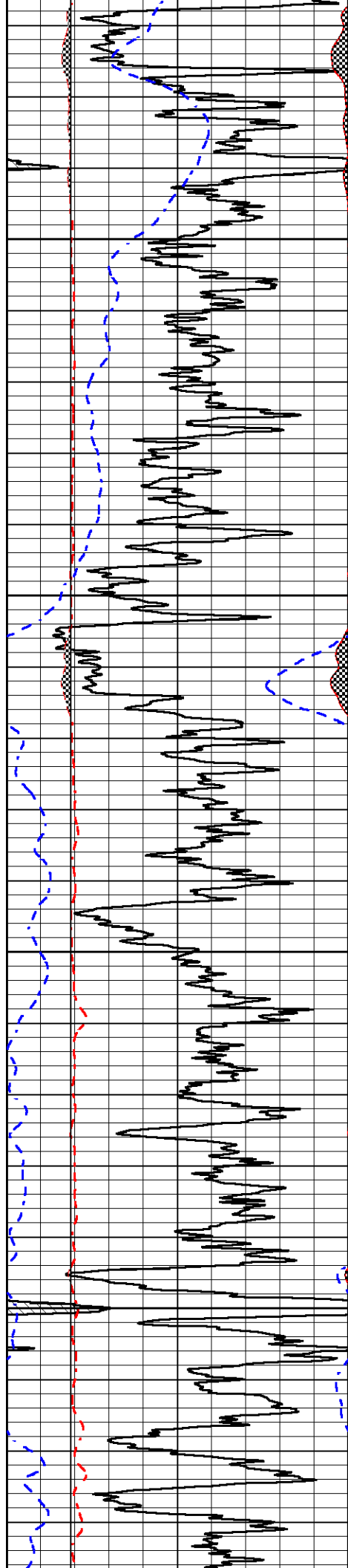
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3750

3800



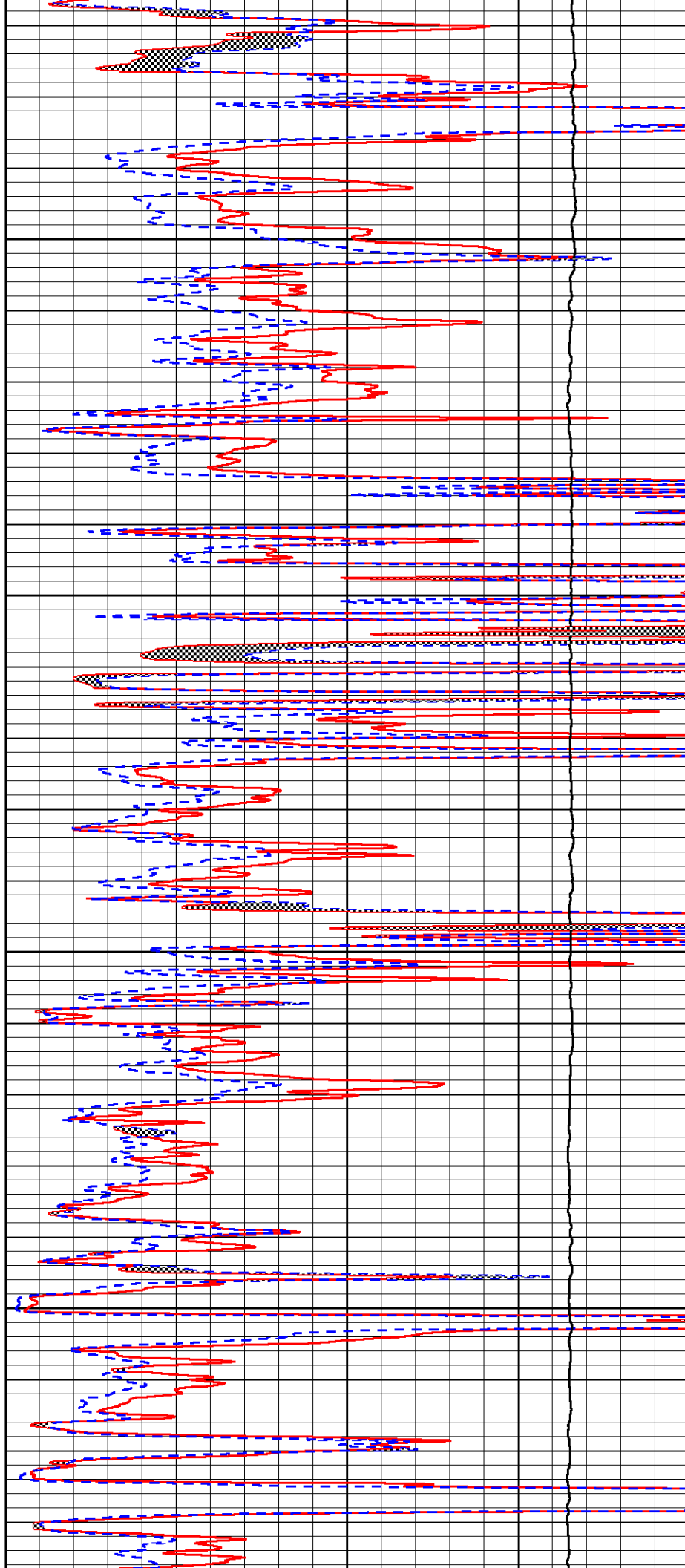


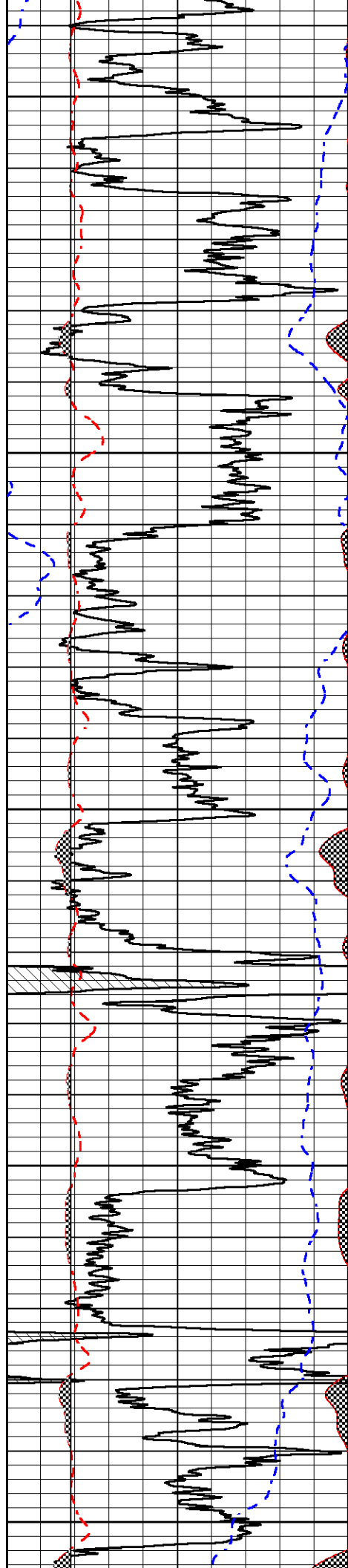
3850

3900

3950

4000





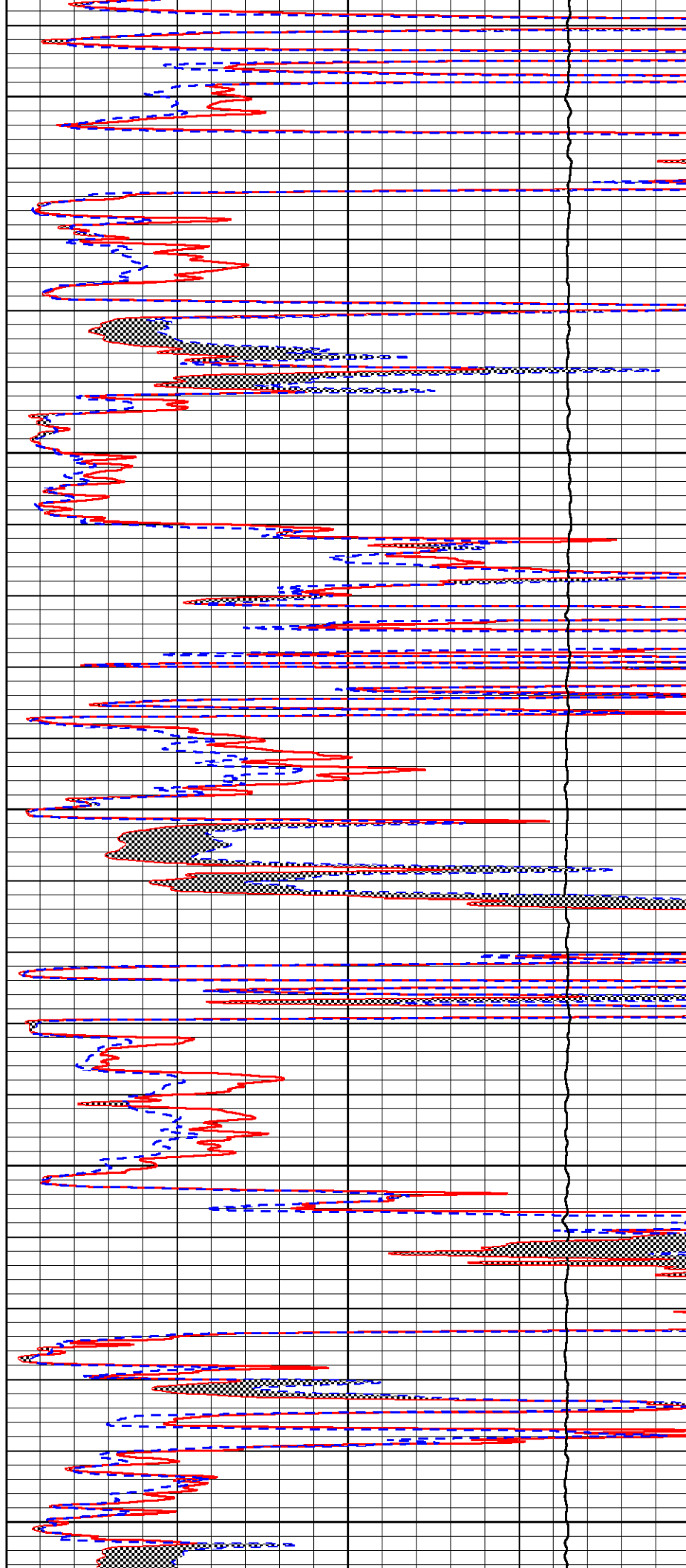
4050

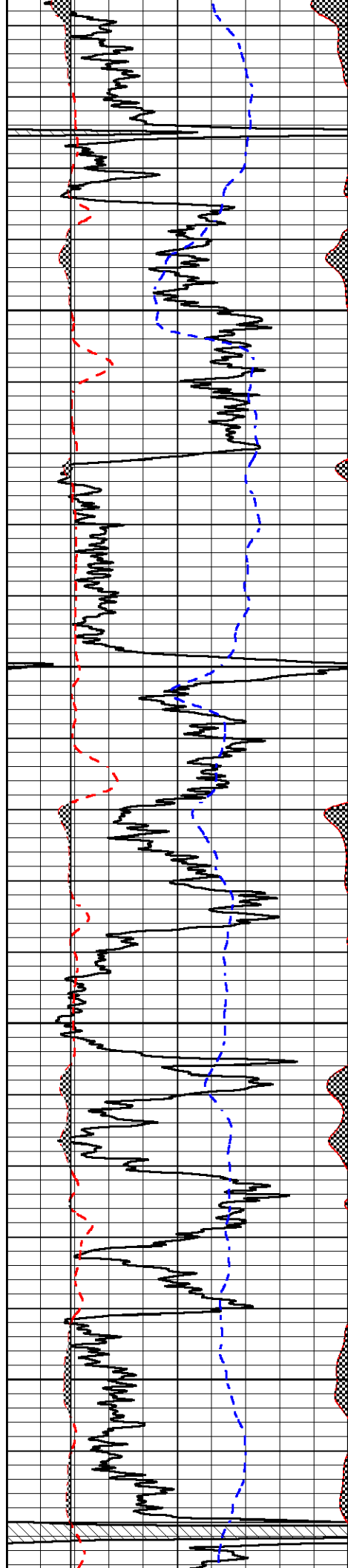
4100

4150

4200

4250



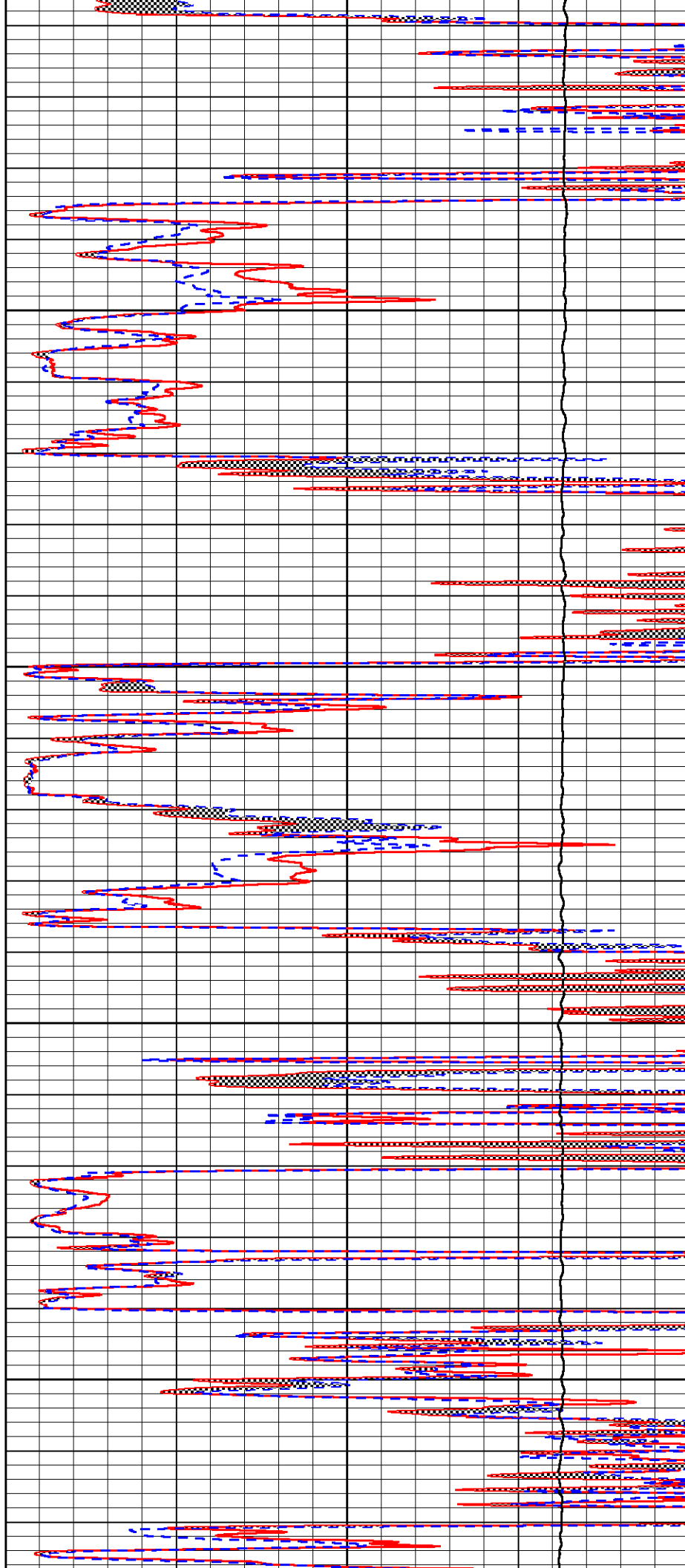


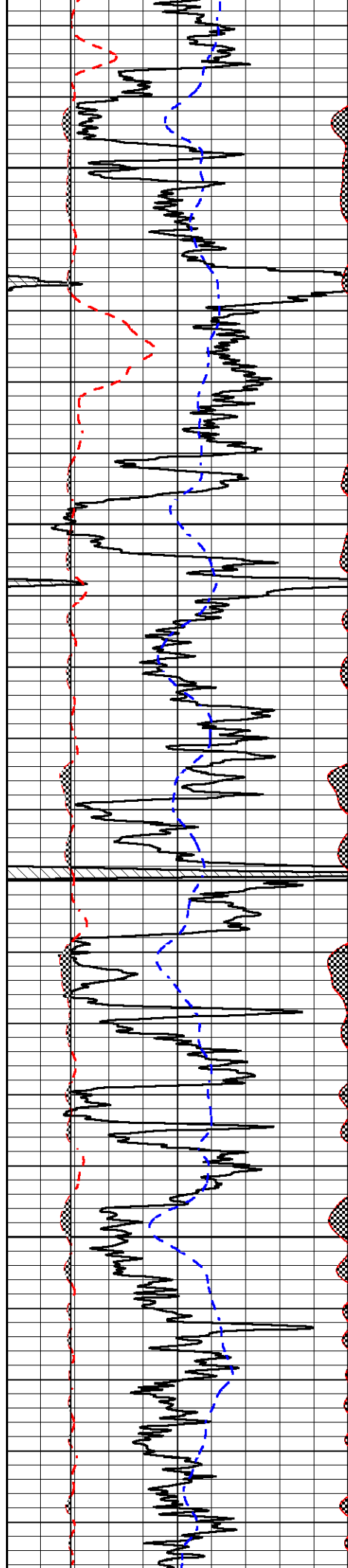
4300

4350

4400

4450



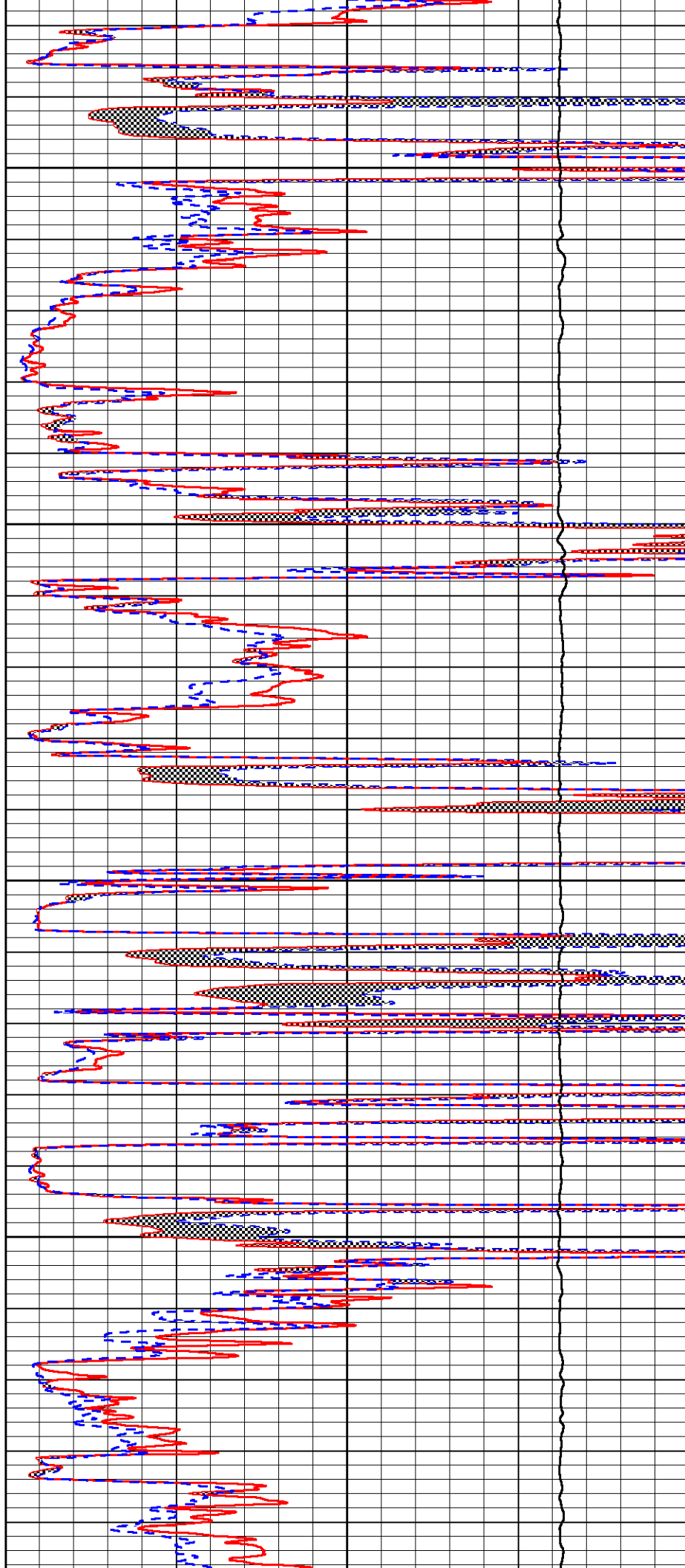


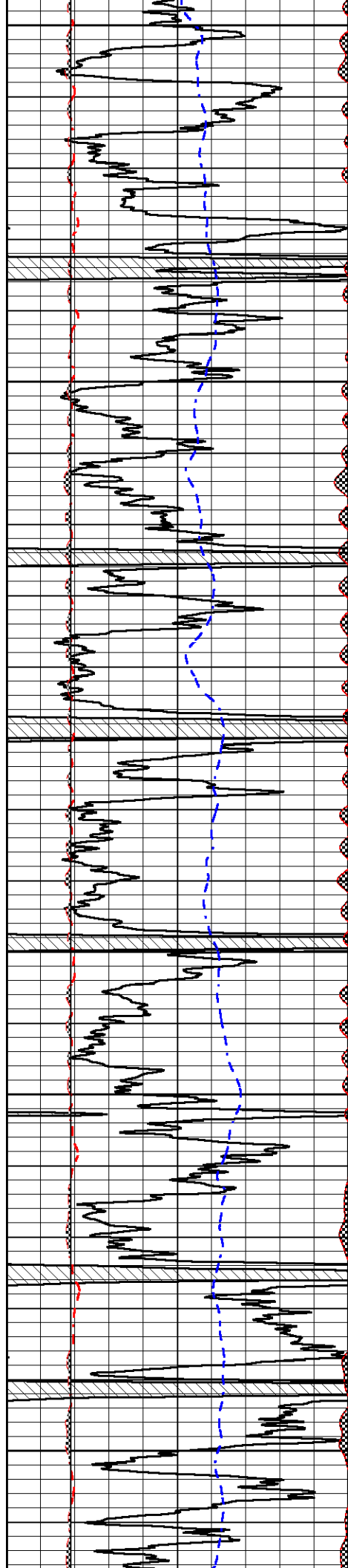
4500

4550

4600

4650





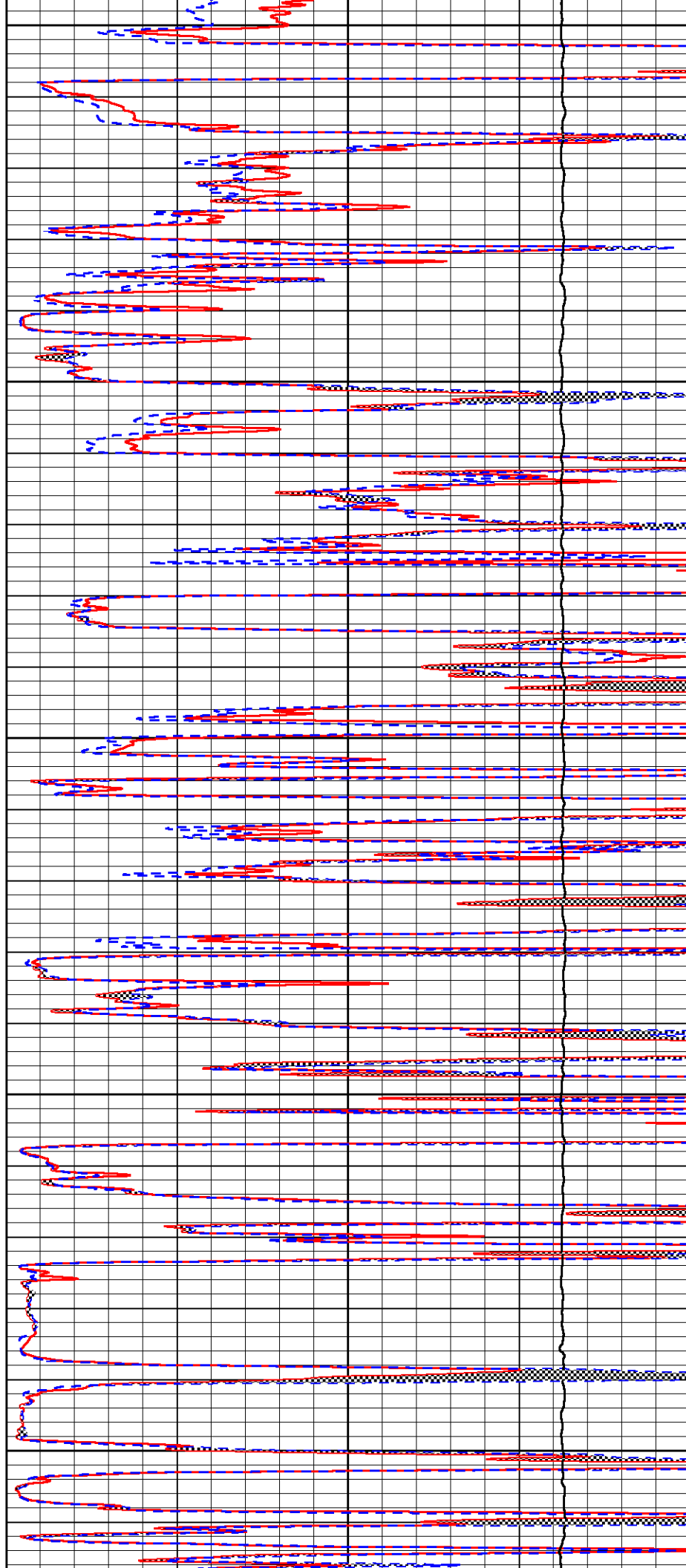
4700

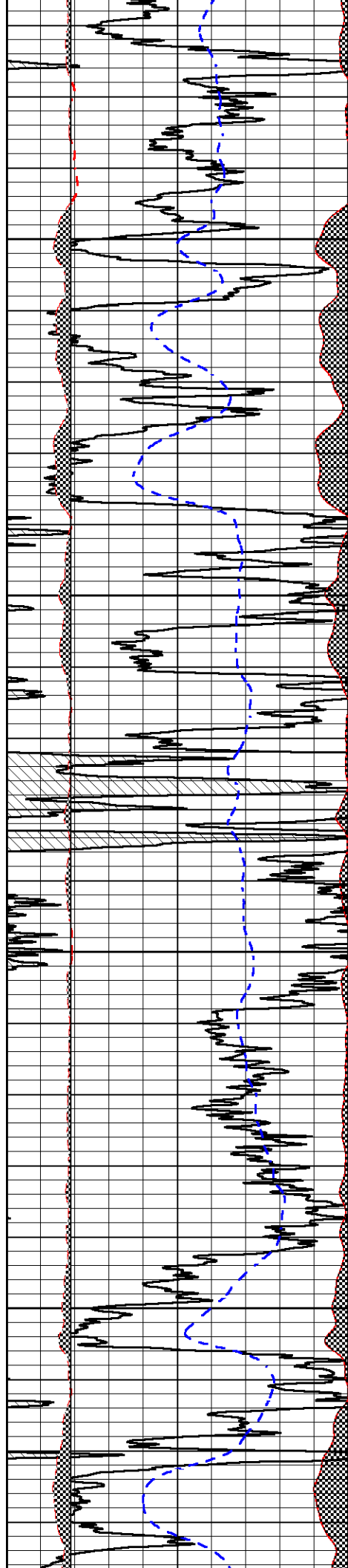
4750

4800

4850

4900



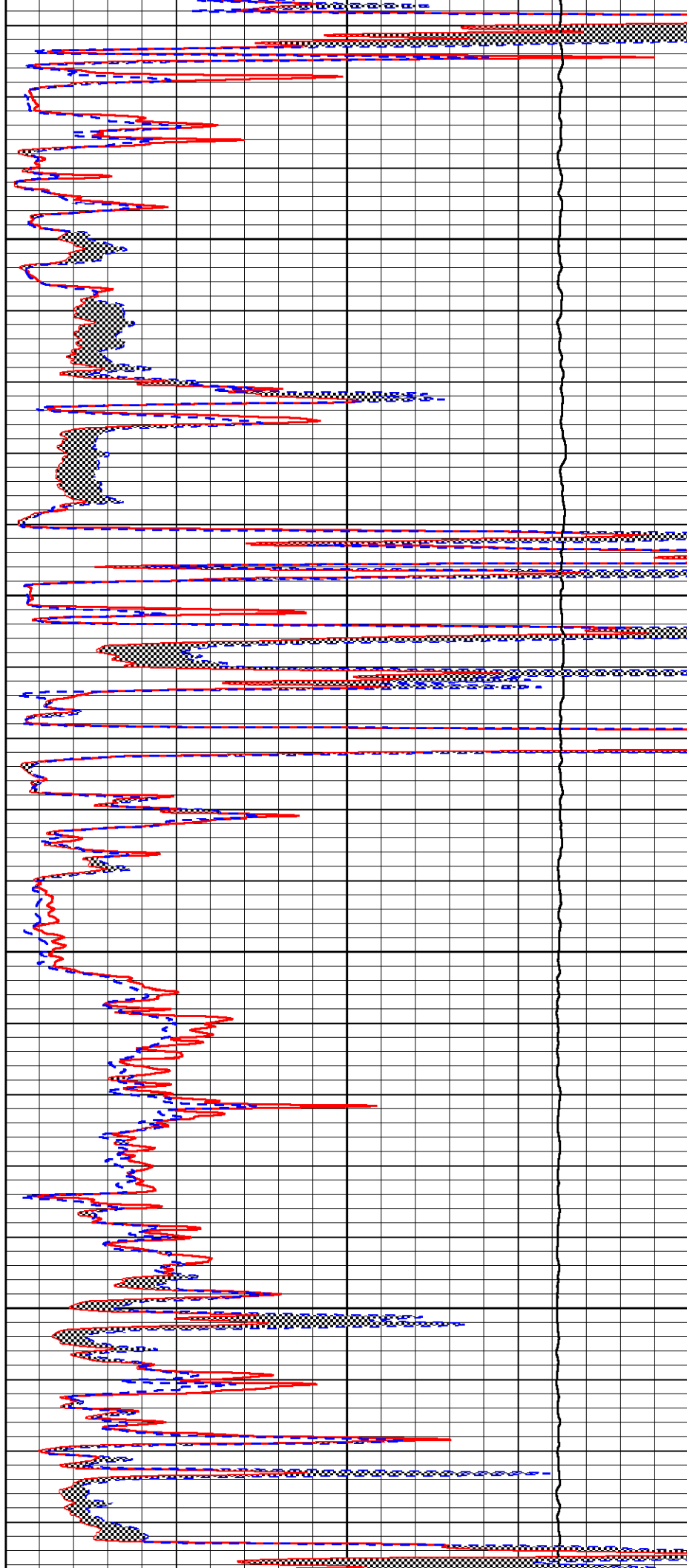


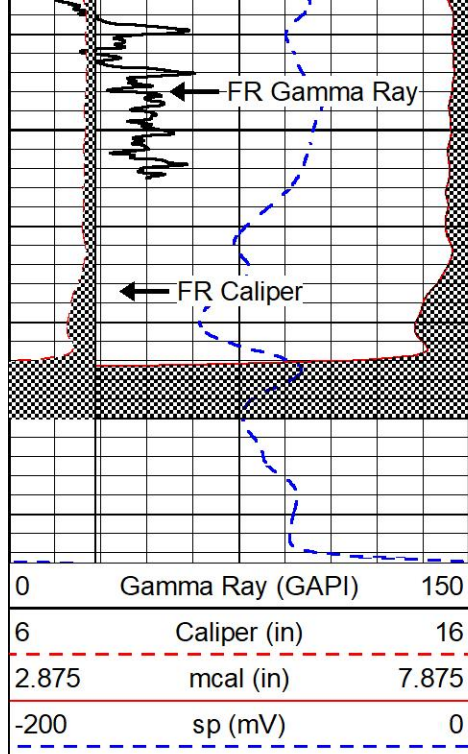
4950

5000

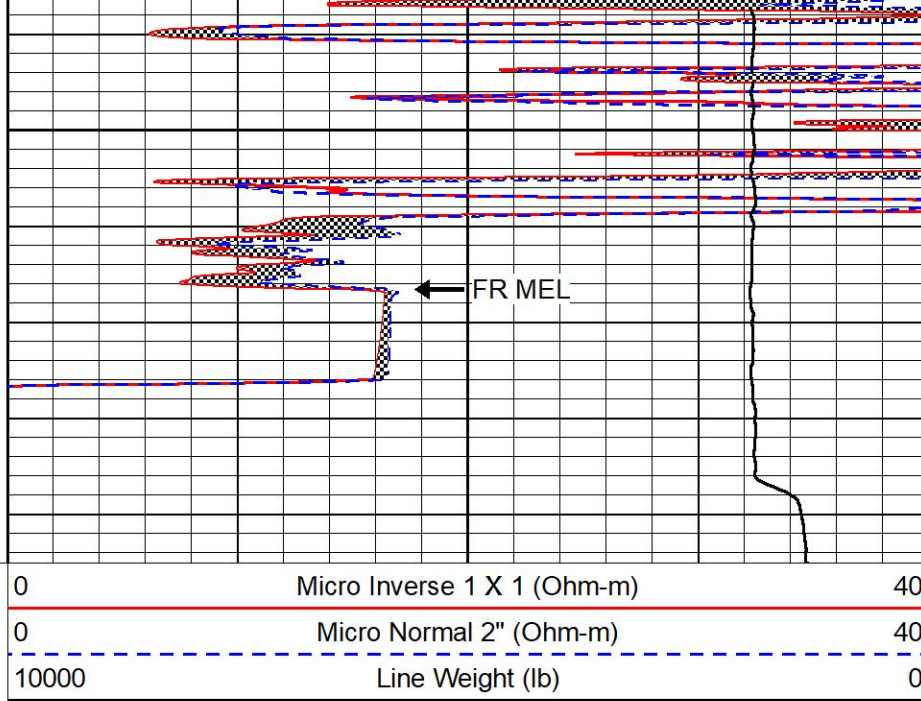
5050

5100





5150

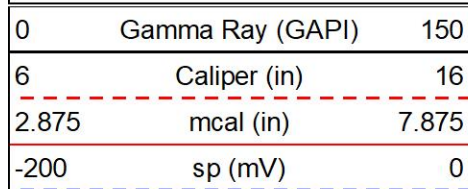


MIDWEST WIRELINE

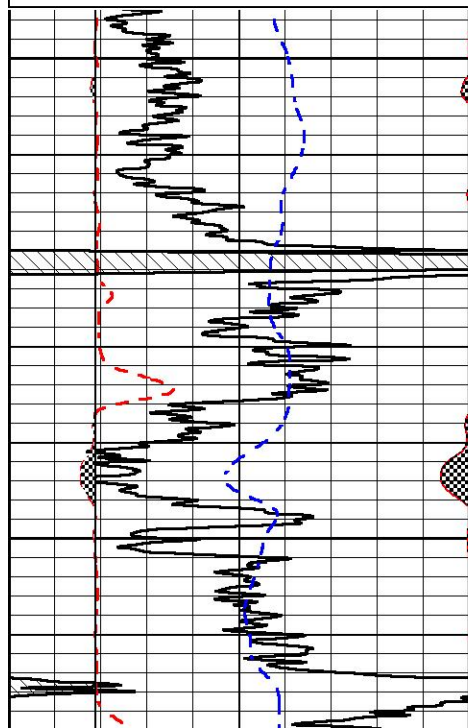
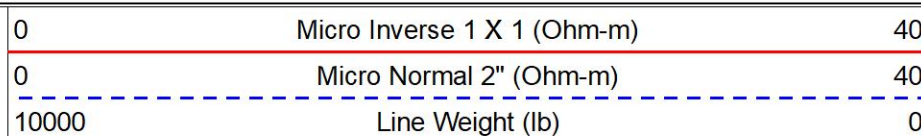
REPEAT SECTION

REPEAT PASS

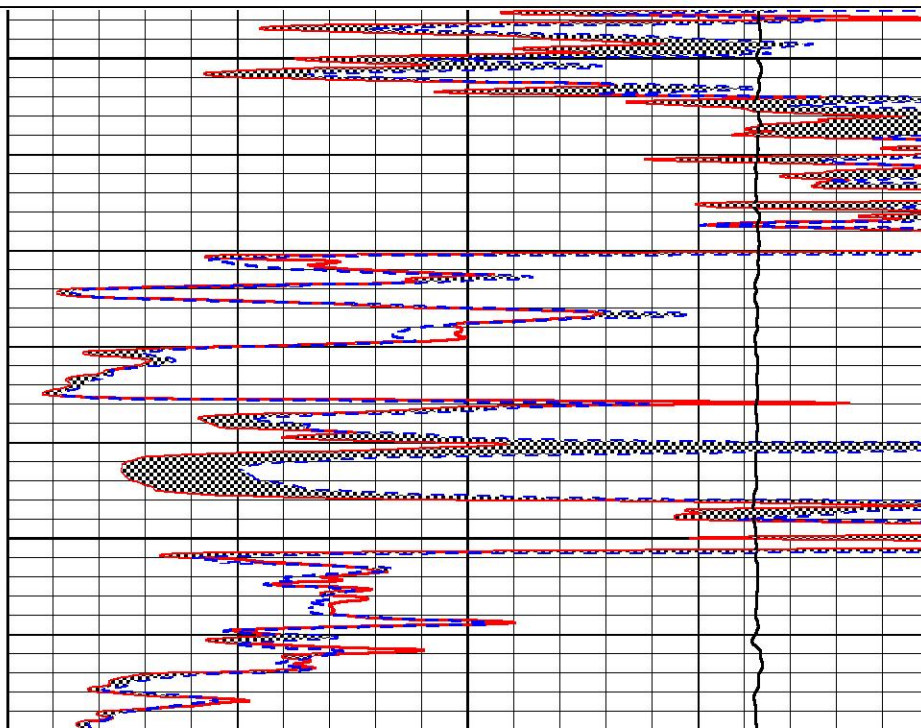
Database File murfin_mj unit 1-10.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _micro
 Dataset Creation Thu Sep 29 19:22:20 2022
 Charted by Depth in Feet scaled 1:240

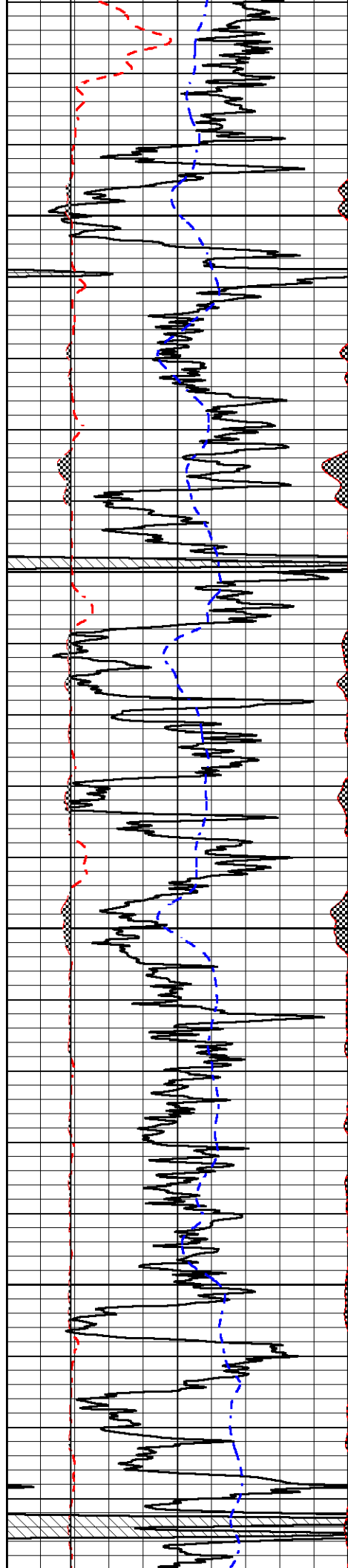


4450



4500



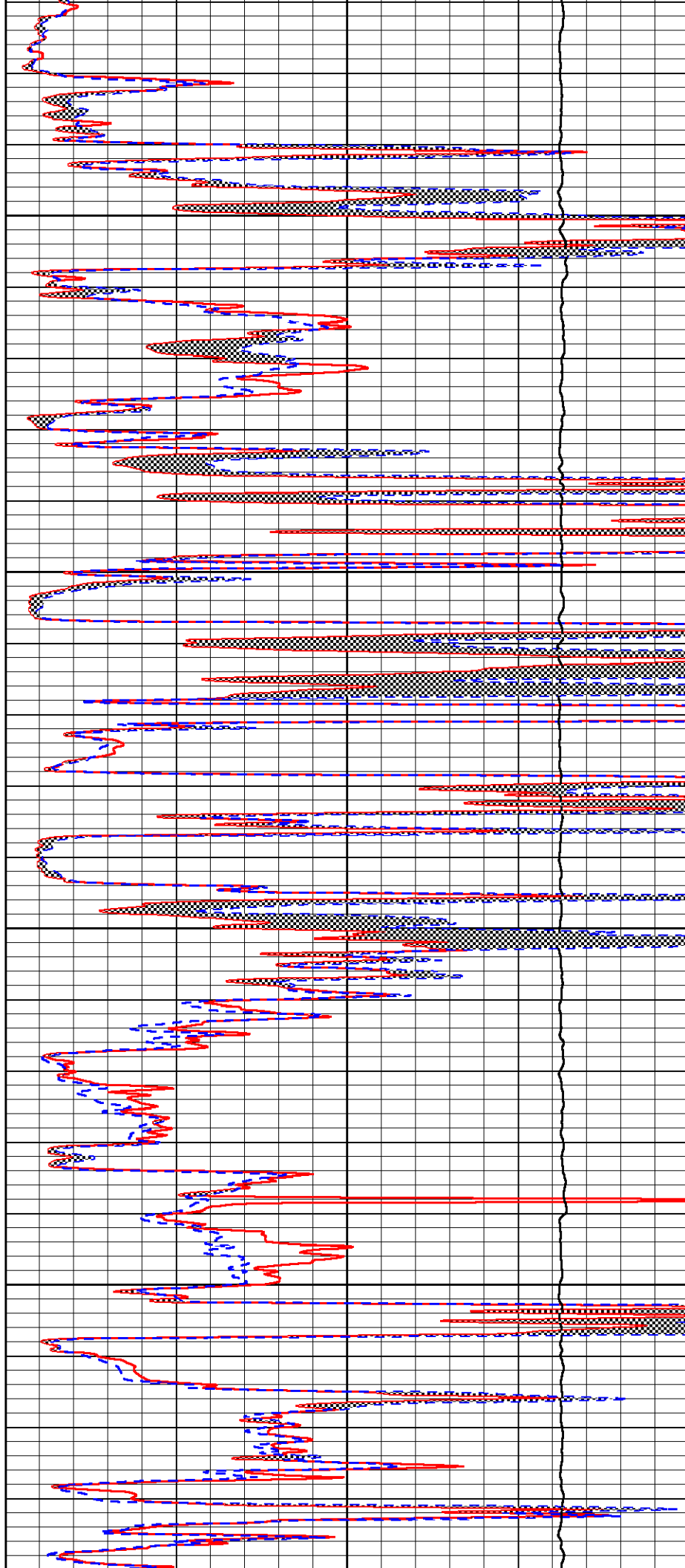


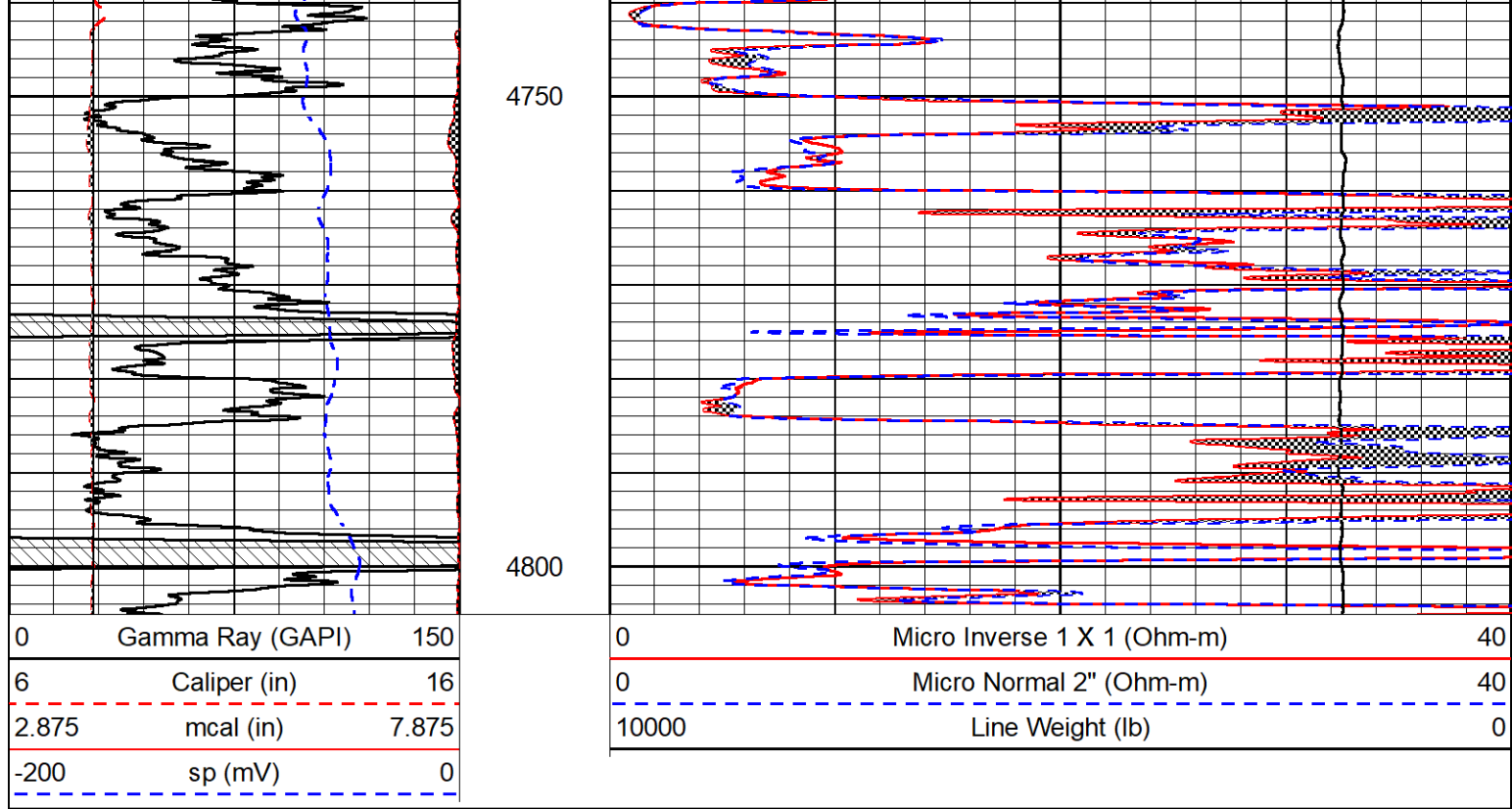
4550

4600

4650

4700





Calibration Report

Database File: murfin_mj unit 1-10.db
 Dataset Pathname: stkml/pass4.1
 Dataset Creation: Thu Sep 29 19:53:04 2022

Dual Induction Calibration Report

Serial-Model: 501 HT-M&W
 Surface Cal Performed: Thu Sep 22 17:20:27 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-37.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.305	-35.000

Microlog Calibration Report

Serial-Model: 402-PSIML
 Performed: Thu Sep 22 17:20:33 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	24500.0000	-1.2500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	28000.0000	-1.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	120.0000	-117.2750

Compensated Density Calibration Report

Serial-Model: 307-11-M&W
 Source #: 20762B
 Master Calibration Performed: Sat Aug 27 10:20:16 2022

Master Calibration					
	Density			Far Detector	Near Detector
Magnesium	1.755	g/cc		3600.52	4768.22 cps
Aluminum	2.670	g/cc		693.98	3106.20 cps
	Spine Angle = 75.41			Density/Spine Ratio = 0.538	
	Size			Reading	
Small Ring	6.00	in		1.16	
Large Ring	18.00	in		1.01	
Compensated Neutron Calibration Report					
	Serial Number:		207-MW		
	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		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	
3)	Short Space		cps		
	Long Space		cps	pu	
POST-SURVEY VERIFICATION					
	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	pu
3)	Short Space		cps		
	Long Space		cps	pu	pu
Gamma Ray Calibration Report					
	Serial Number:	106			
	Tool Model:	M&W			
	Performed:	Fri Dec 3 15:10:46 2021			
	Calibrator Value:	500.0	GAPI		
	Background Reading:	24.0	cps		
	Calibrator Reading:	637.0	cps		
	Sensitivity:	0.5500	GAPI/cps		



MIDWEST WIRELINE

Company	Murfin Drilling Company, Inc.
Well	MJ Unit #1-10
Field	
County	Cheyenne
State	Kansas