



MIDWEST WIRELINE

# MICRORESISTIVITY LOG

Company: Griffin Management LLC  
 Well: Mary #4B  
 Field: N/A  
 County: Pratt  
 State: Kansas

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 Well: Mary #4B  
 Field: N/A  
 County: Pratt  
 State: Kansas

Location: API #: 15-151-22517-00-00  
 NE - SE - SE - NW  
 2257' FNL & 2263' FWL  
 SEC 33 TWP 29S RGE 15W  
 Permanent Datum: Ground Level Elevation 1960'  
 Log Measured From: Kelly Bushing  
 Drilling Measured From: Kelly Bushing  
 Other Services: CNL / CDL DIL  
 Elevation: K.B. 1971', D.F. G.L. 1960'

Date	8/26/2020
Run Number	One
Depth Driller	4800'
Depth Logger	4796'
Bottom Logged Interval	4795'
Top Log Interval	3600'
Casing Driller	8.625" @ 265'
Casing Logger	264'
Bit Size	7.875"
Type Fluid in Hole	Chemical
Salinity, ppm CL	6000
Density / Viscosity	9.6 48
pH / Fluid Loss	10.0 8.9
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.75 @ 82
Rmt @ Meas. Temp	0.56 @ 82
Rmc @ Meas. Temp	1.01 @ 82
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.5 @ 124
Operating Rig Time	2.5 Hours
Max Rec. Temp. F	148 Deg F
Equipment Number	P-108
Location	HAYS
Recorded By	T. Martin
Witnessed By	Eli J. Felts

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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.

Pratt, KS, appx 15 W to SW 140th Ave, 9.5 S to SW 110th St,  
 1 E, S & E into

Log Measured From: Kelly Bushing 11 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: M. Hiss	Primary Witness: Eli J. Felts	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Company	Offset (ft)	Substrate	Description	Length (ft)	C.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (817-947)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-PSI HIGH TEMP (952-828)	18.50	3.50	220.00
CILM	4.70					
SP	0.20					

Dataset: griffin management\_mary 4b\_20200826.db: field/well/StkMI/pass3.1  
 Total length: 43.08 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin management\_mary 4b\_20200826.db  
 Dataset field/well/StkMI/pass3.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	100	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	155	0	Off	0

## 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

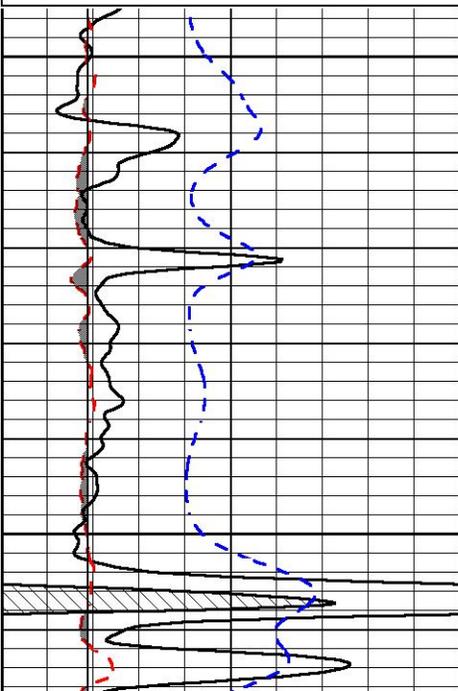


# MAIN PASS

Database File griffin management\_mary 4b\_20200826.db  
 Dataset Pathname StkMI/pass3.1  
 Presentation Format \_micro  
 Dataset Creation Thu Aug 27 00:26:35 2020  
 Charted by Depth in Feet scaled 1:240

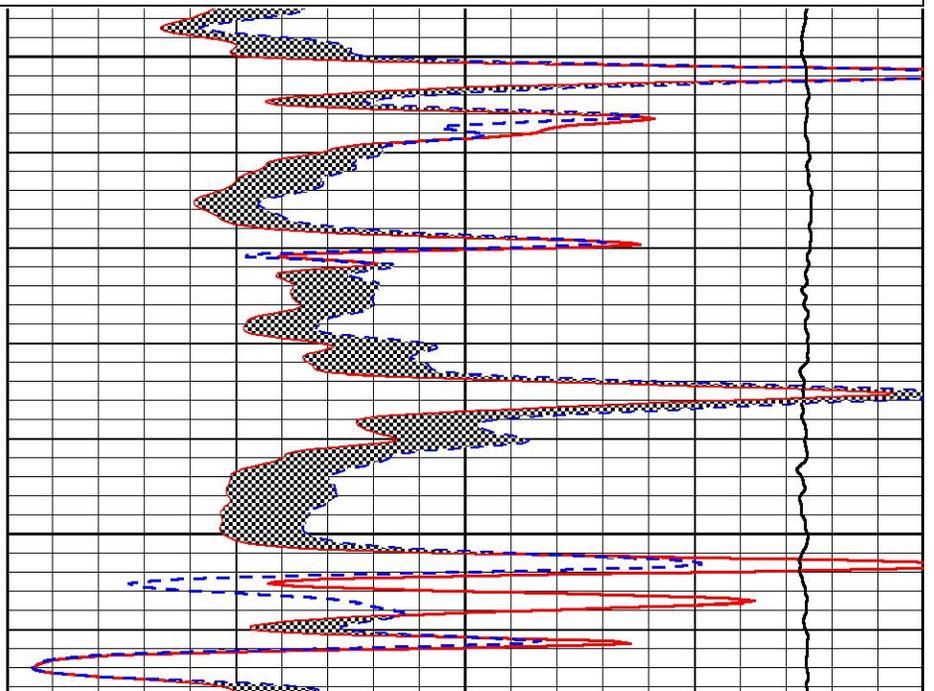
0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

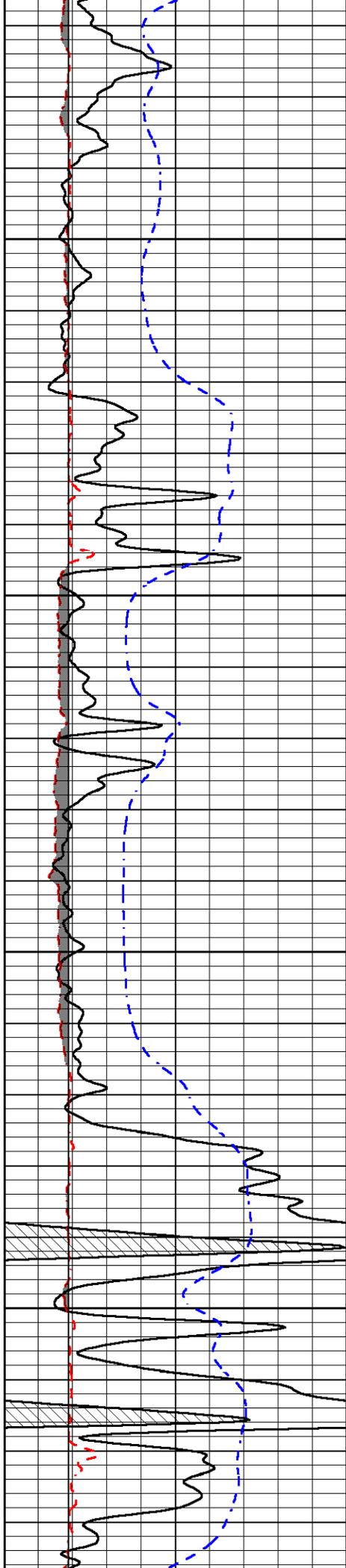
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3600

3650



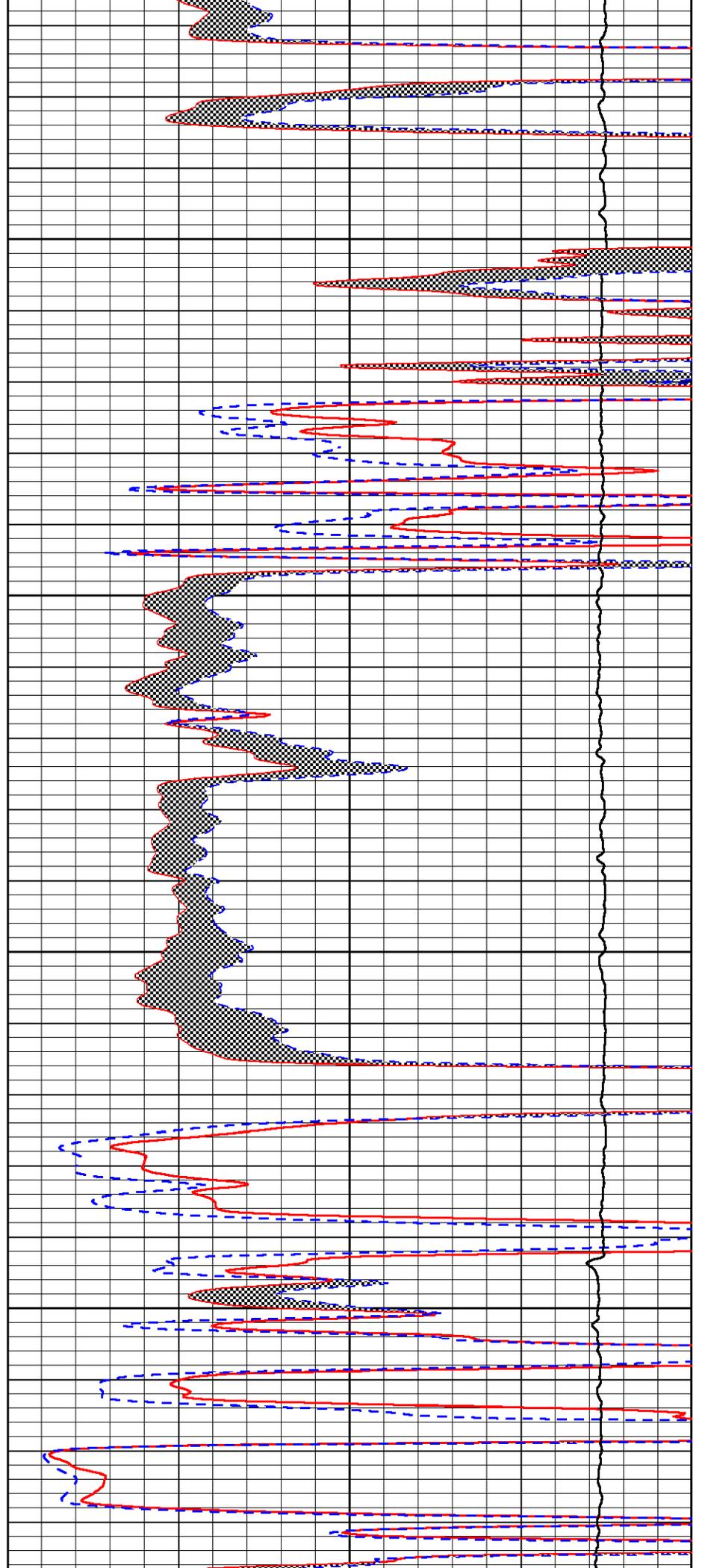


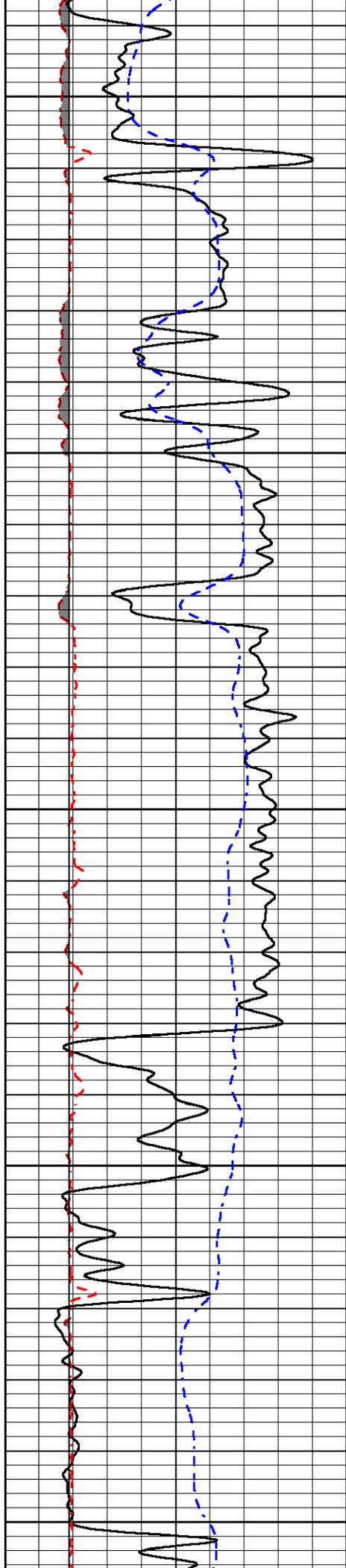
3700

3750

3800

3850





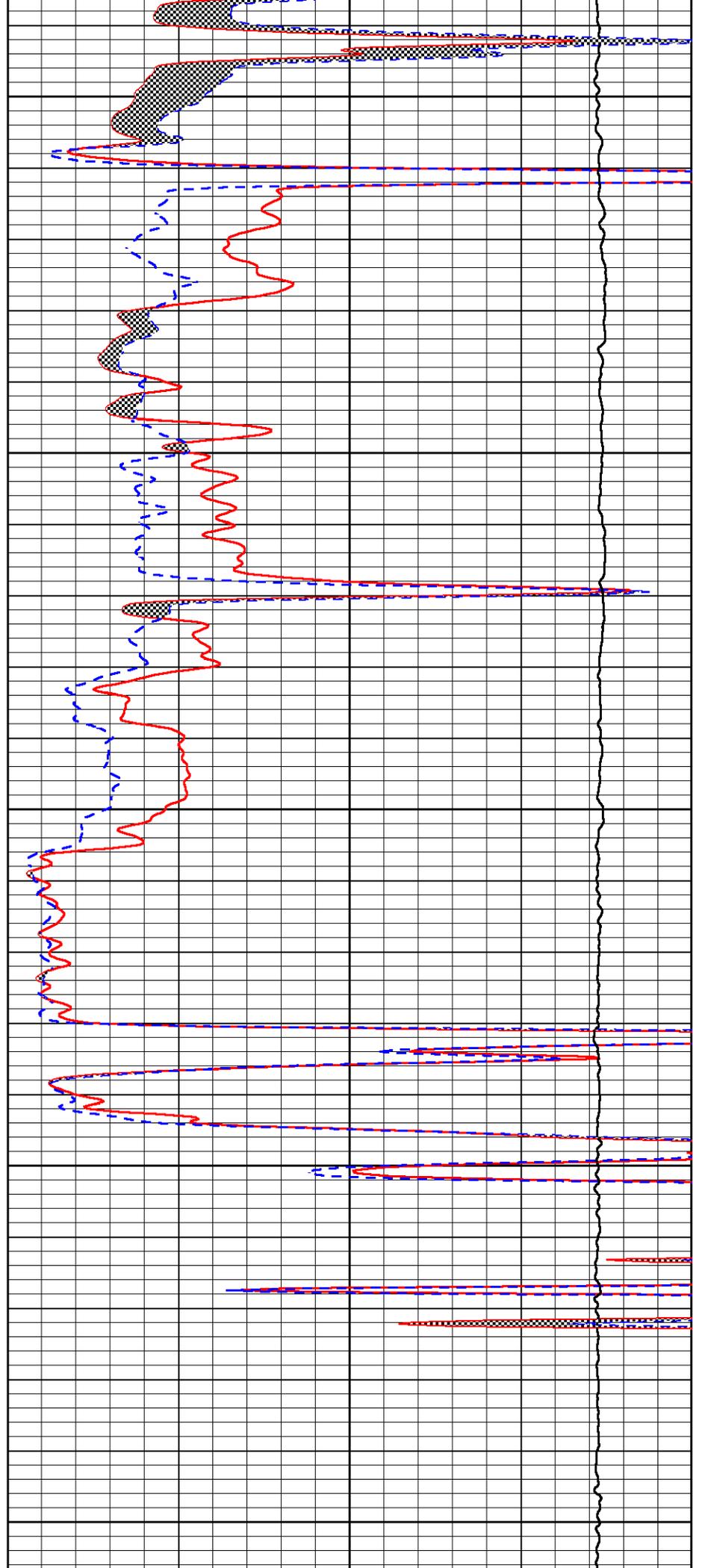
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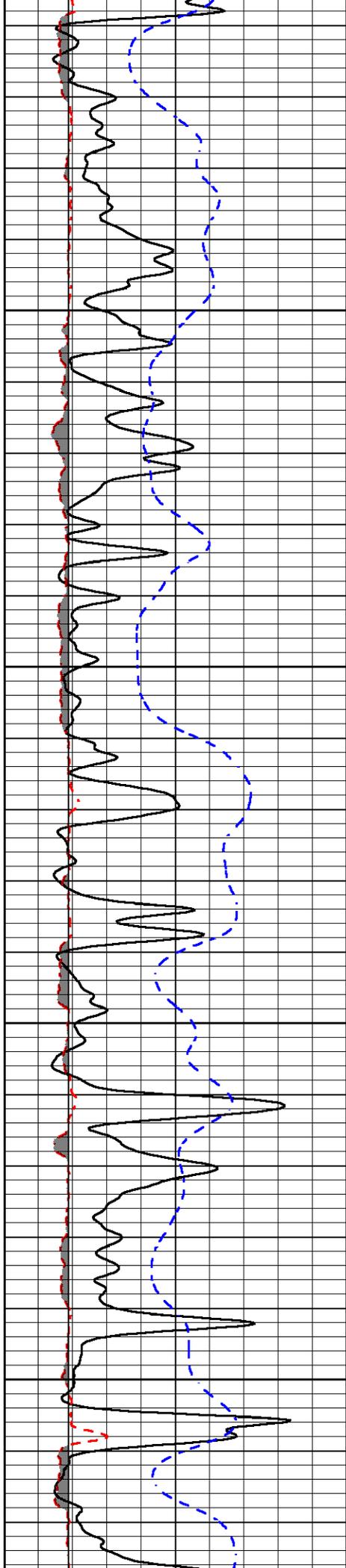
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4000

4050

4100



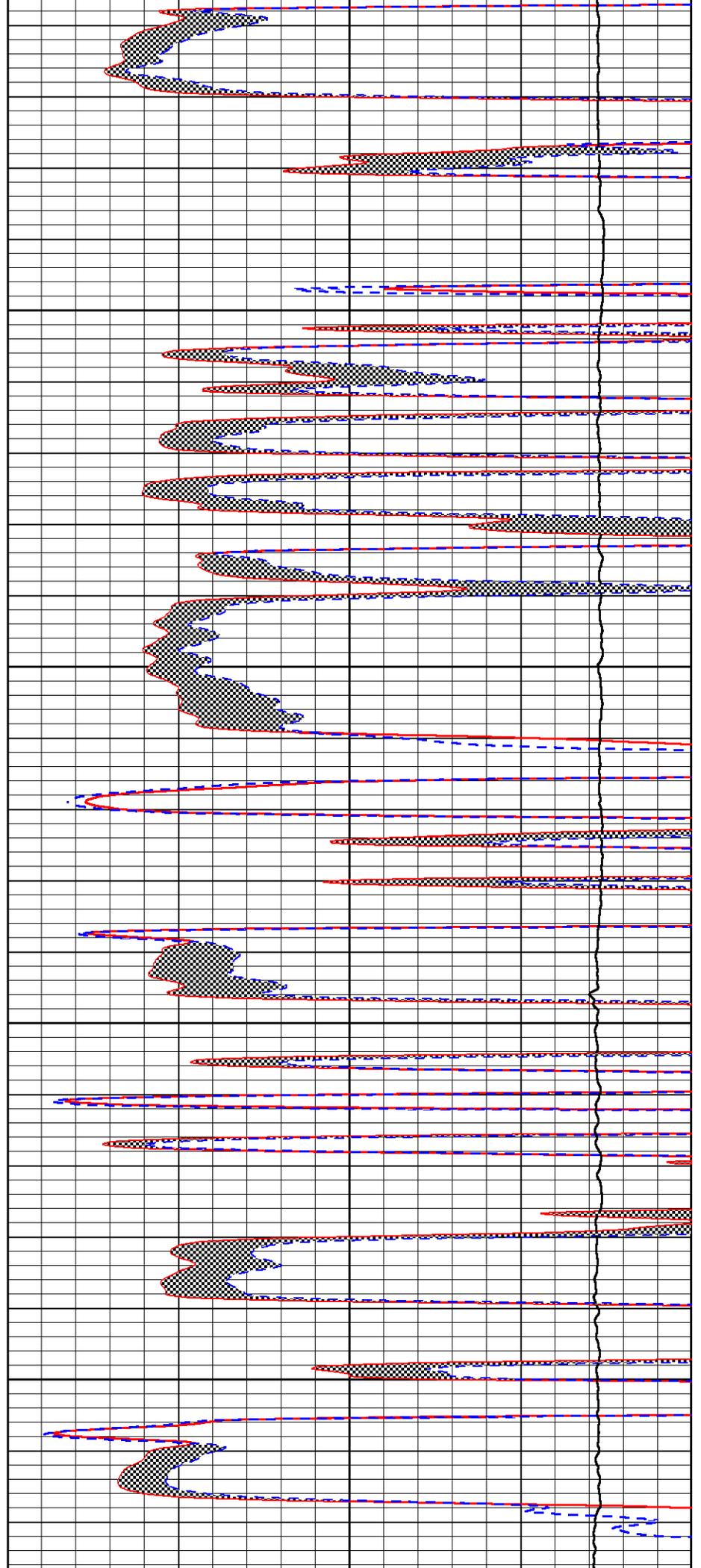


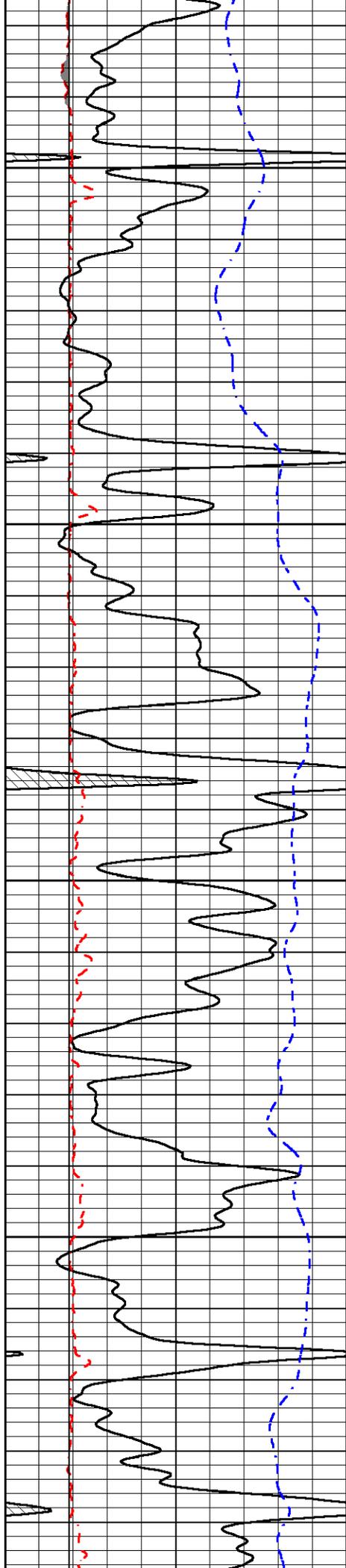
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4200

4250

4300



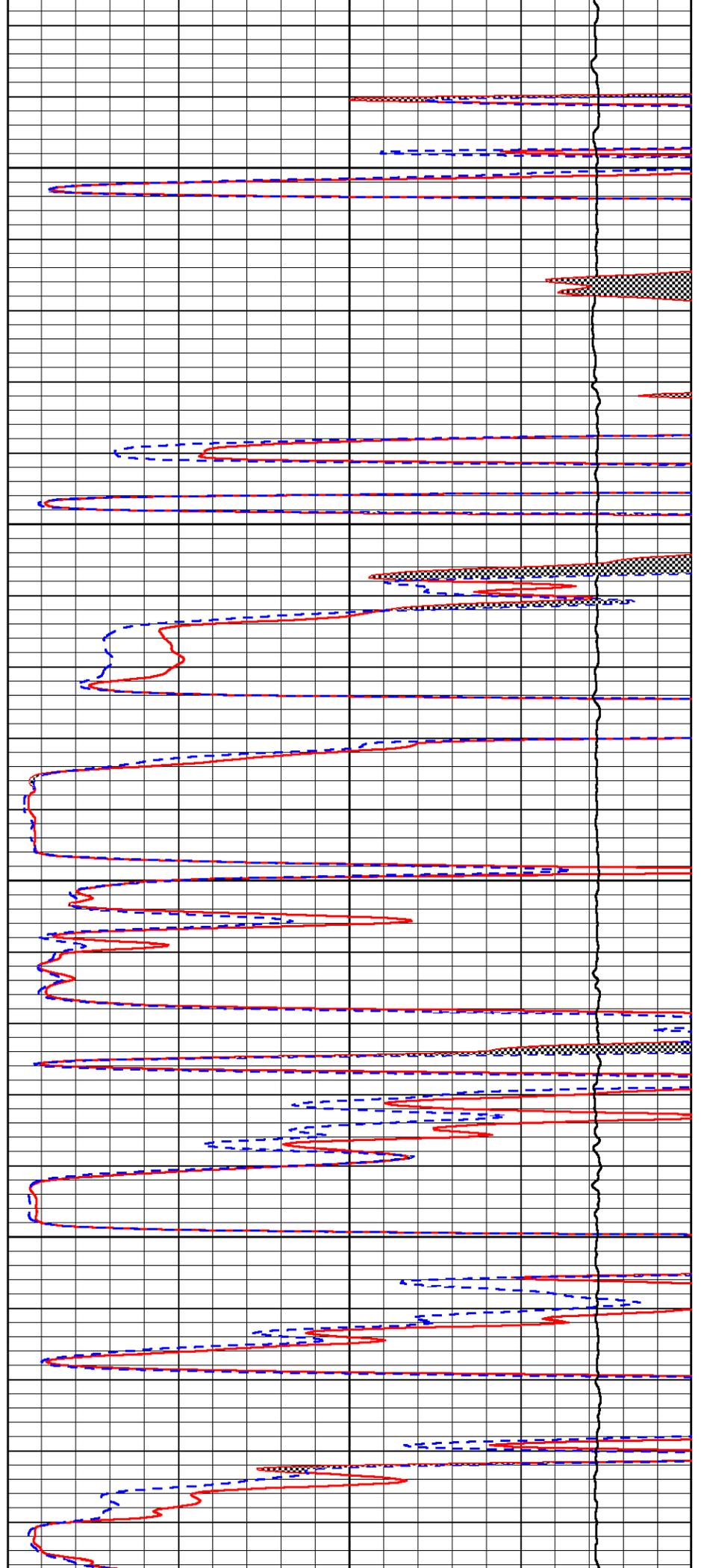


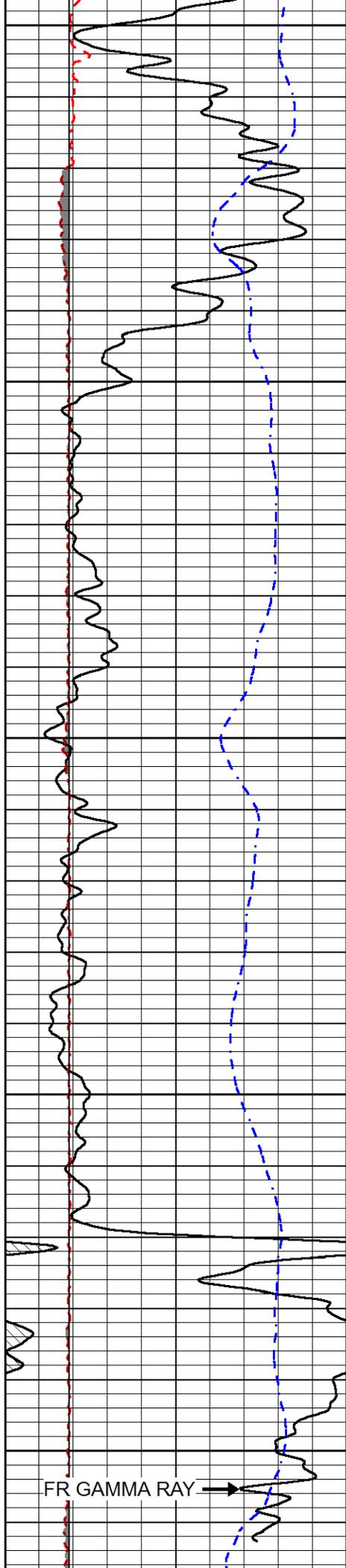
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4450

4500





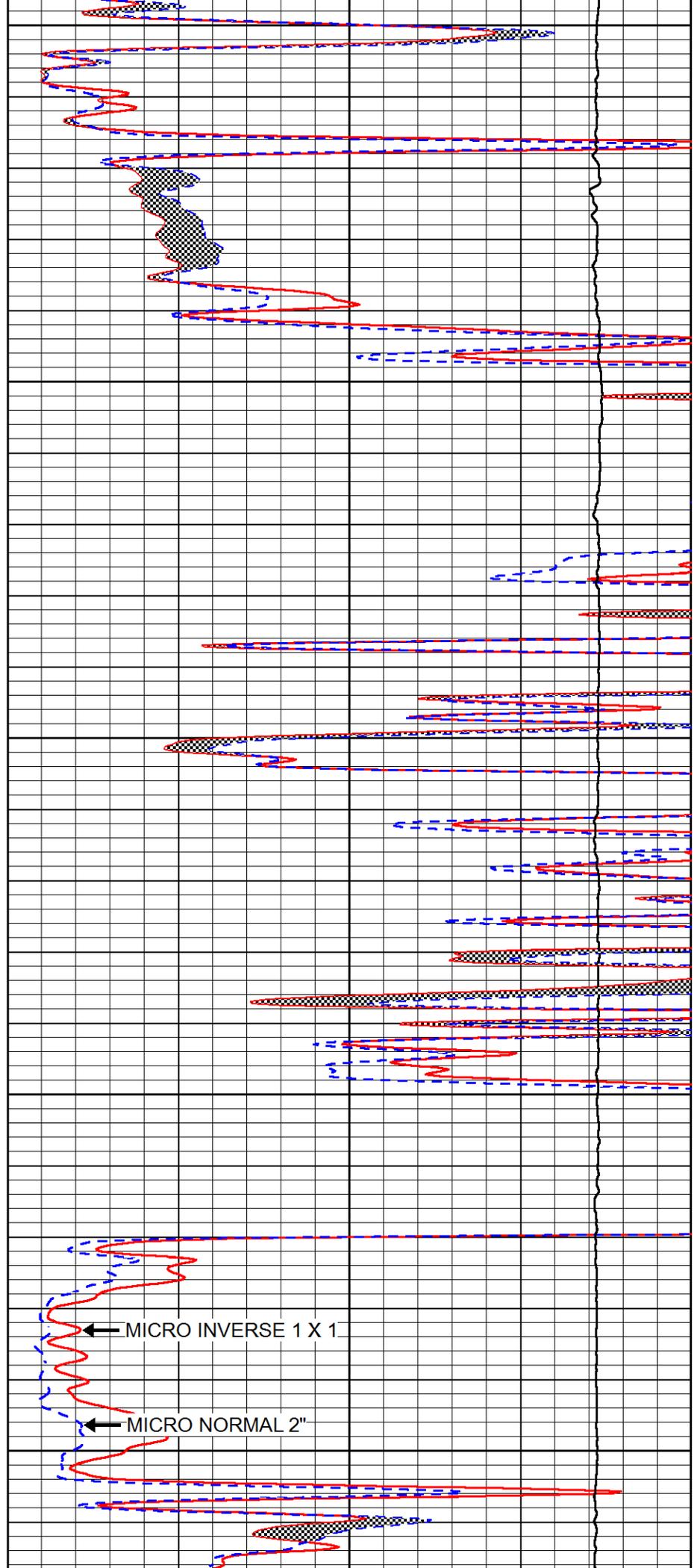
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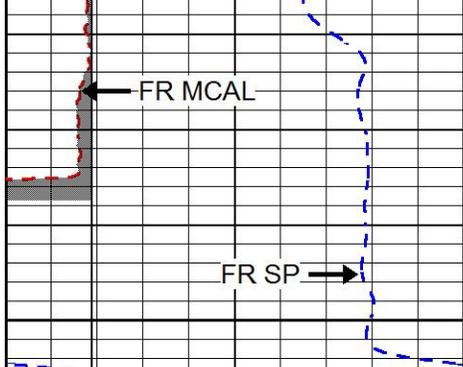
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4650

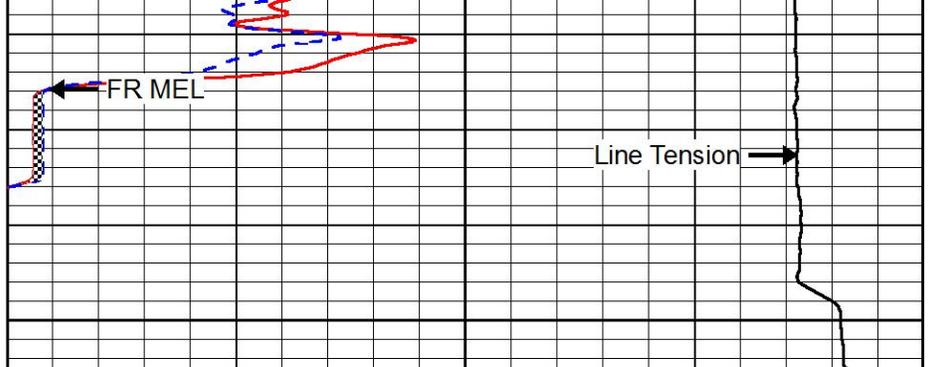
4700

4750





0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-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

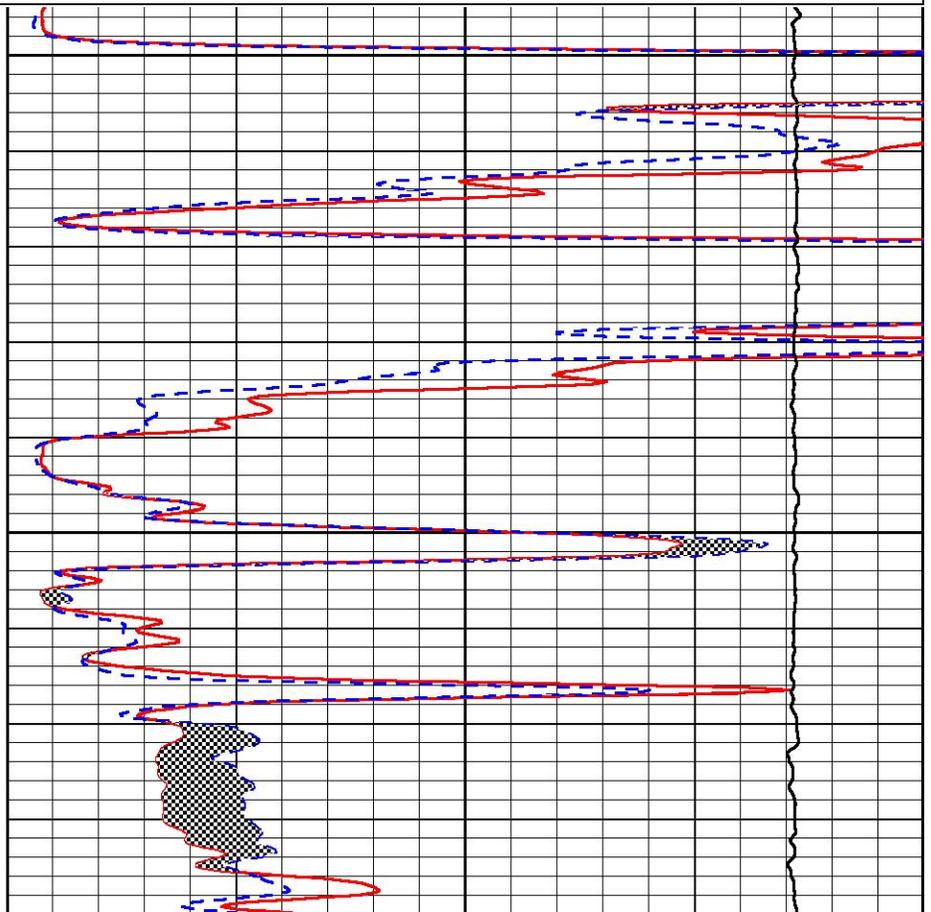
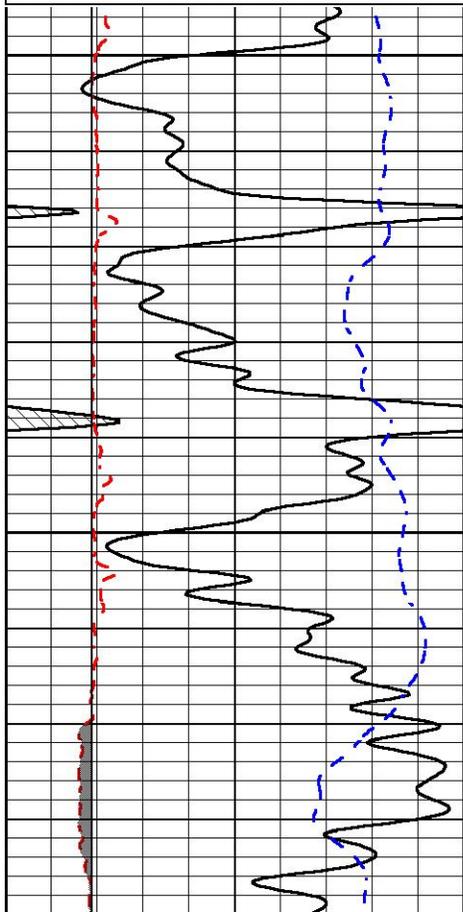


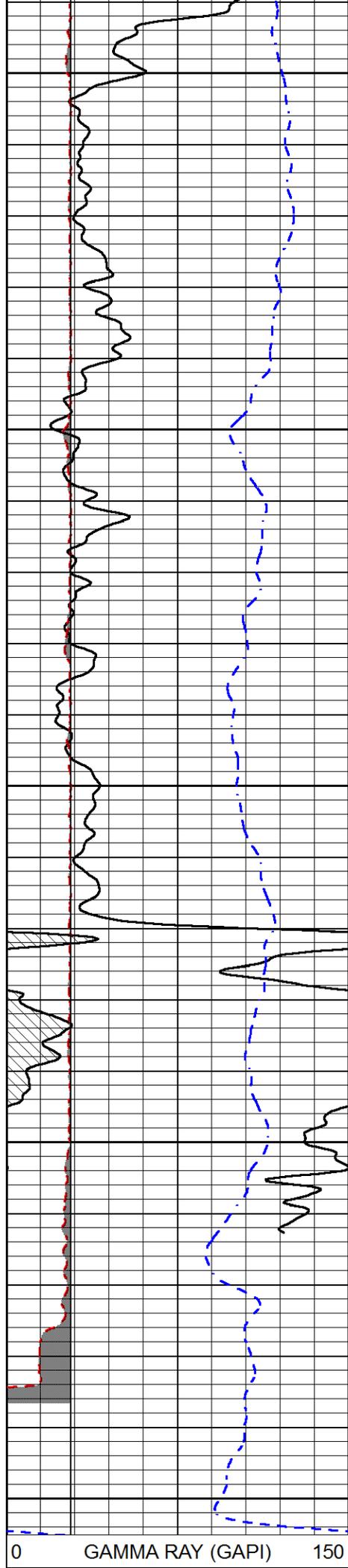
# REPEAT SECTION

Database File griffin management\_mary 4b\_20200826.db  
 Dataset Pathname StkMI/pass2.1  
 Presentation Format \_micro  
 Dataset Creation Thu Aug 27 00:04:20 2020  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-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





4600

4650

4700

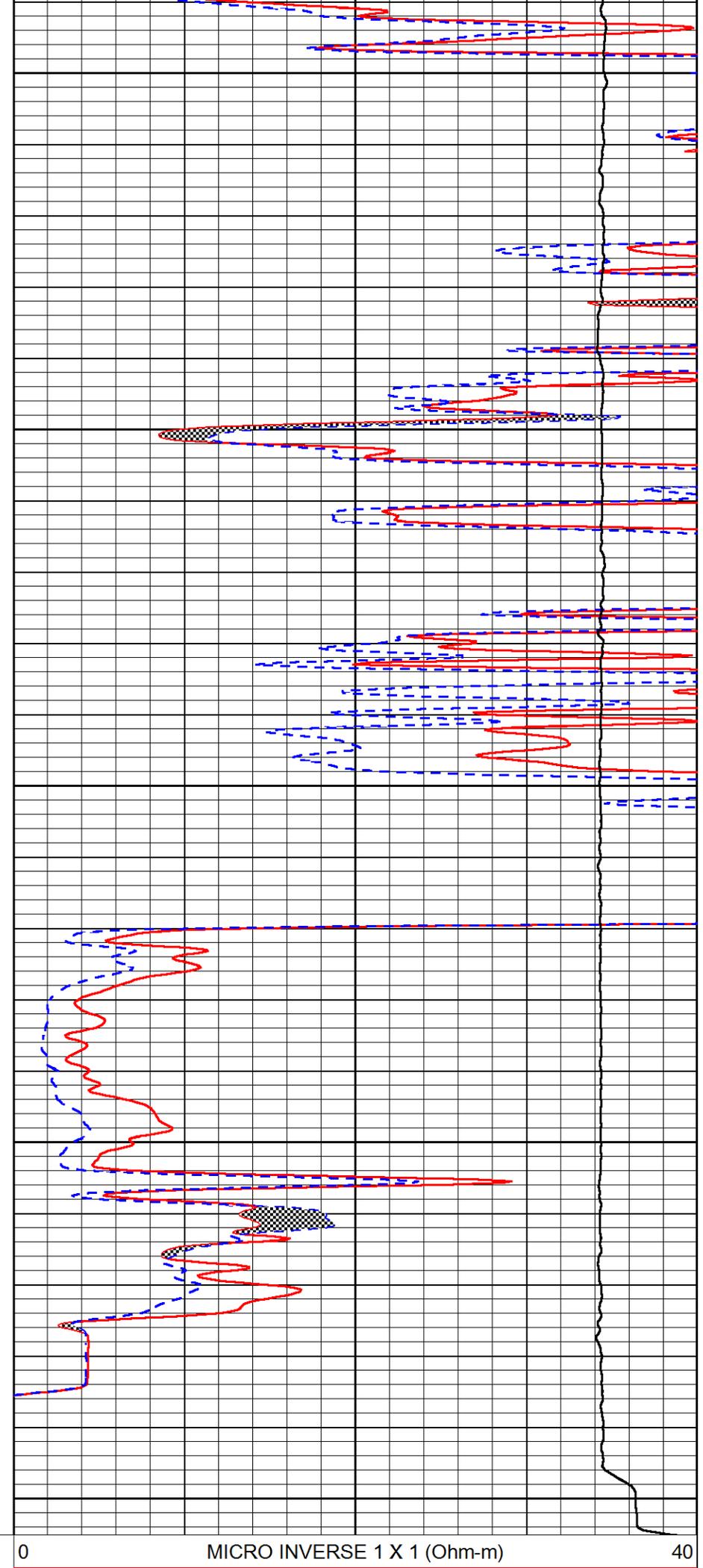
4750

4800

GAMMA RAY (GAPI)

0

150



MICRO INVERSE 1 X 1 (Ohm-m)

0

40

6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0

Calibration Report

Database File griffin management\_mary 4b\_20200826.db  
 Dataset Pathname StkMI/pass3.19  
 Dataset Creation Thu Aug 27 00:01:34 2020

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP  
 Calibration Performed: Sun Jun 28 08:39:24 2020

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-30.000
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-28.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML  
 Performed: Tue Jun 16 01:32:04 2020

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18500.0000	-1.7500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-1.3000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.5300

Compensated Density Calibration Report

Serial-Model: 817-947-M&W  
 Source / Verifier: 16955B / 2ci  
 Master Calibration Performed: Tue Sep 24 21:18:50 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.680	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.532		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	14.50	in	1.23		

Compensated Neutron Calibration Report

Serial Number: 207-MW  
 Tool Model: M&W  
 Calibration Performed: WED FEB 13 10:30:30 2019

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:	233-M&W	
Tool Model:	M&W	
Calibration Performed:	Fri Feb 07 01:42:40 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5350	GAPI/cps



Company	Griffin Management LLC
Well	Mary #4B
Field	N/A
County	Pratt
State	Kansas