



# MICRORESISTIVITY LOG

Company: AMERICAN WARRIOR, INC.  
 Well: BLAESI #9-6  
 Field: UNKNOWN  
 County: WALLACE  
 State: KANSAS

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 Well: BLAESI #9-6  
 Field: UNKNOWN  
 County: WALLACE  
 State: KANSAS

Location: 335' FSL & 1800' FEL  
 SEC 6 TWP 15S RGE 41W  
 Permanent Datum: GROUND LEVEL Elevation 3775'  
 Log Measured From: KELLY BUSHING  
 Drilling Measured From: KELLY BUSHING  
 Other Services: CNL/CDL DIL  
 Elevation: K.B. 3783', D.F. N/A, G.L. 3775'

Date	8/11/2017
Run Number	ONE
Depth Driller	5200'
Depth Logger	5202'
Bottom Logged Interval	5201'
Top Log Interval	3900'
Casing Driller	8.625" @ 366'
Casing Logger	364'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	5000
Density / Viscosity	9.4 58
pH / Fluid Loss	9.5 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.60 @ 80
Rmt @ Meas. Temp	0.45 @ 80
Rmc @ Meas. Temp	0.81 @ 80
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.38 @ 128
Operating Rig Time	4 HOURS
Max Rec. Temp. F	128
Equipment Number	91
Location	HAYS
Recorded By	D. SCHMIDT
Witnessed By	LUKE THOMPSON

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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.

SHARON SPRINGS,  
 9 WEST TO 9 RD, 8 SOUTH,  
 WEST AND NORTH TO LOCATION

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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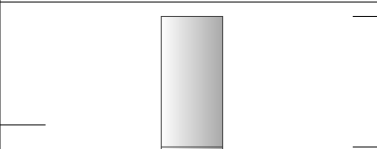
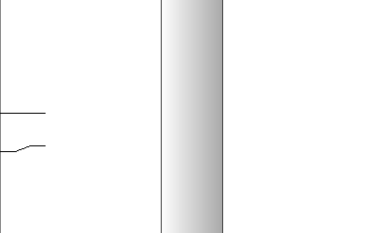
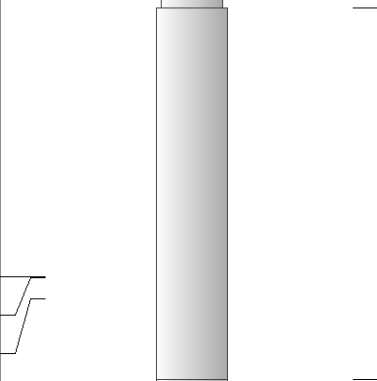
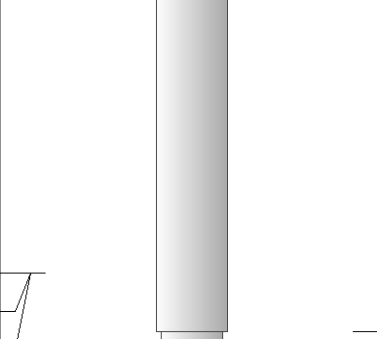
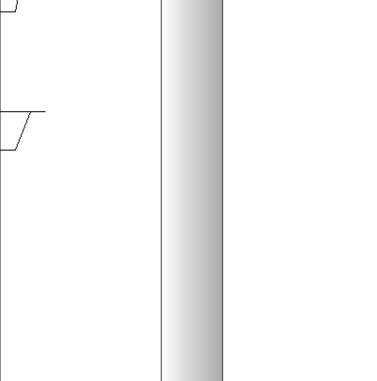
Your Pioneer Energy Services Crew Engineer: D. SCHMIDT Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: LUKE THOMPSON Secondary Witness: Secondary Witness: Secondary Witness:
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# Log Variables

Database C:\ProgramData\Warrior\Data\american warrior\_blaesi\_9-6.db  
 Dataset field/well/STKML/pass3.7/\_vars\_

## Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	500	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	5202	128	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	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 (90-1031)	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					

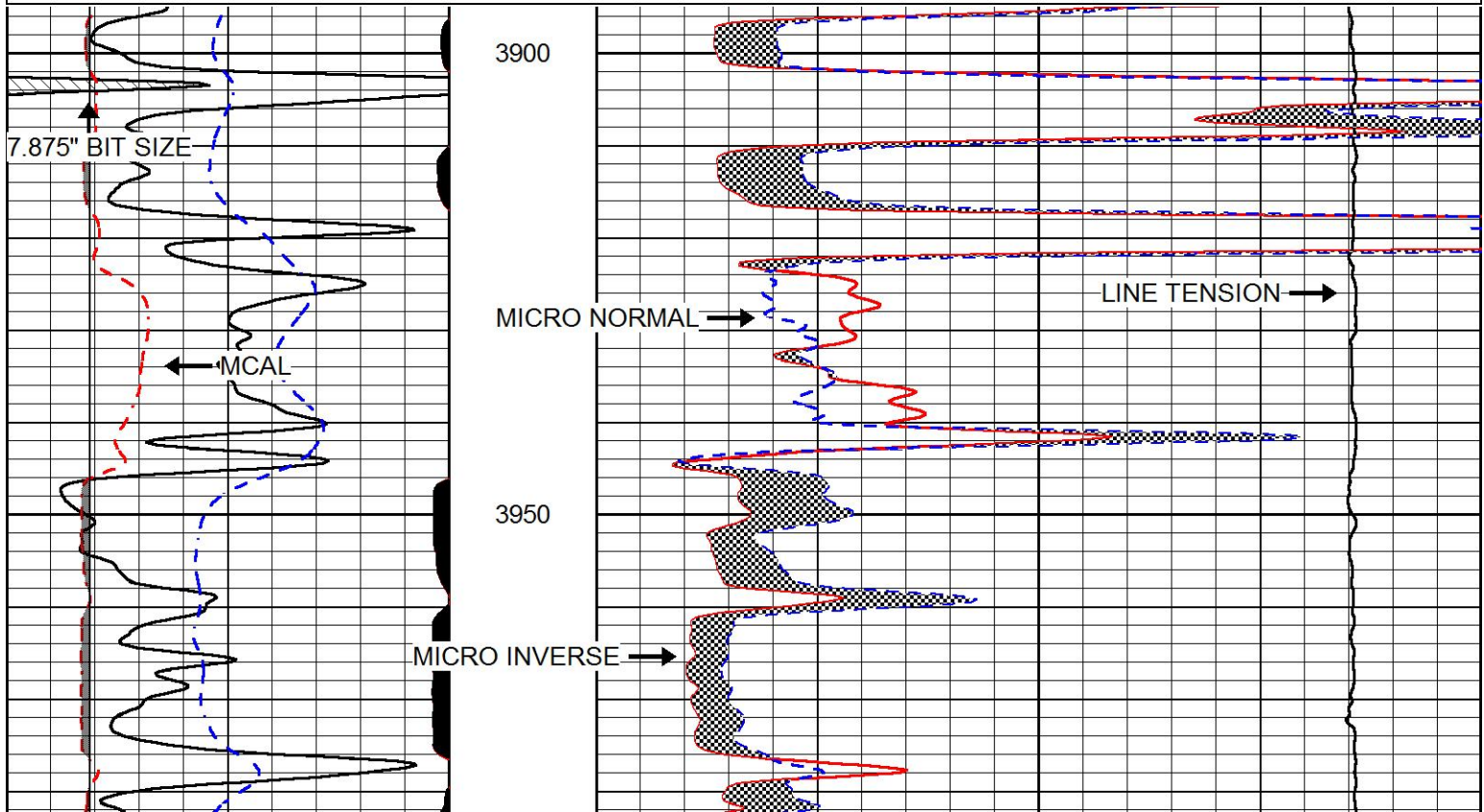
			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset:		american warrior_blaesi_9-6.db: field/well/STKML/pass3.7				
Total length:		43.08 ft				
Total weight:		685.00 lb				
O.D.:		4.00 in				

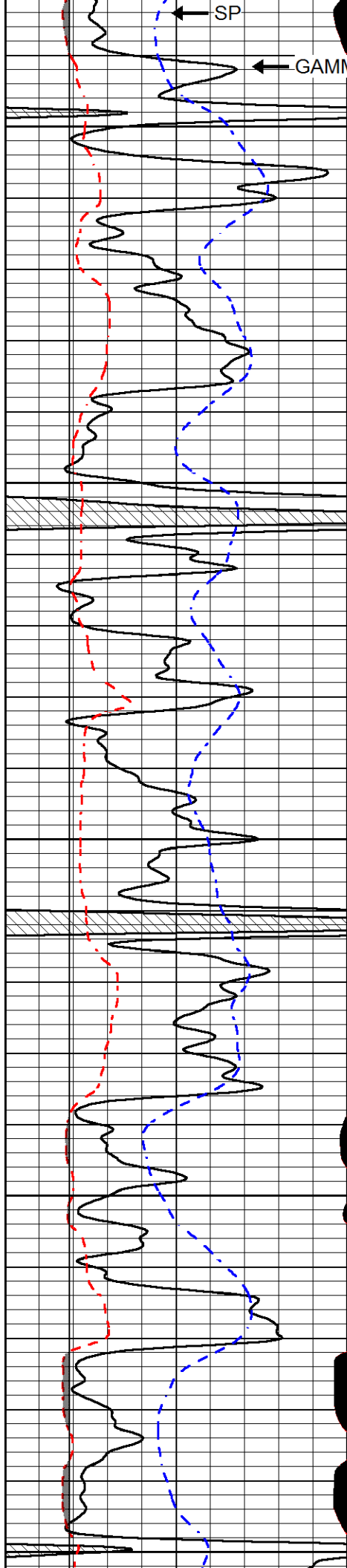


# MAIN PASS

Database File	american warrior_blaesi_9-6.db
Dataset Pathname	STKML/pass3.1
Presentation Format	micro
Dataset Creation	Fri Aug 11 13:20:09 2017
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0	Micro Inverse 1 X 1 (Ohm-m)	40
6	MCAL (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcals (in)	7.875	10000	Line Weight (lb)	0
6	Bit Size (in)	16			
-200	SP (mV)	0			





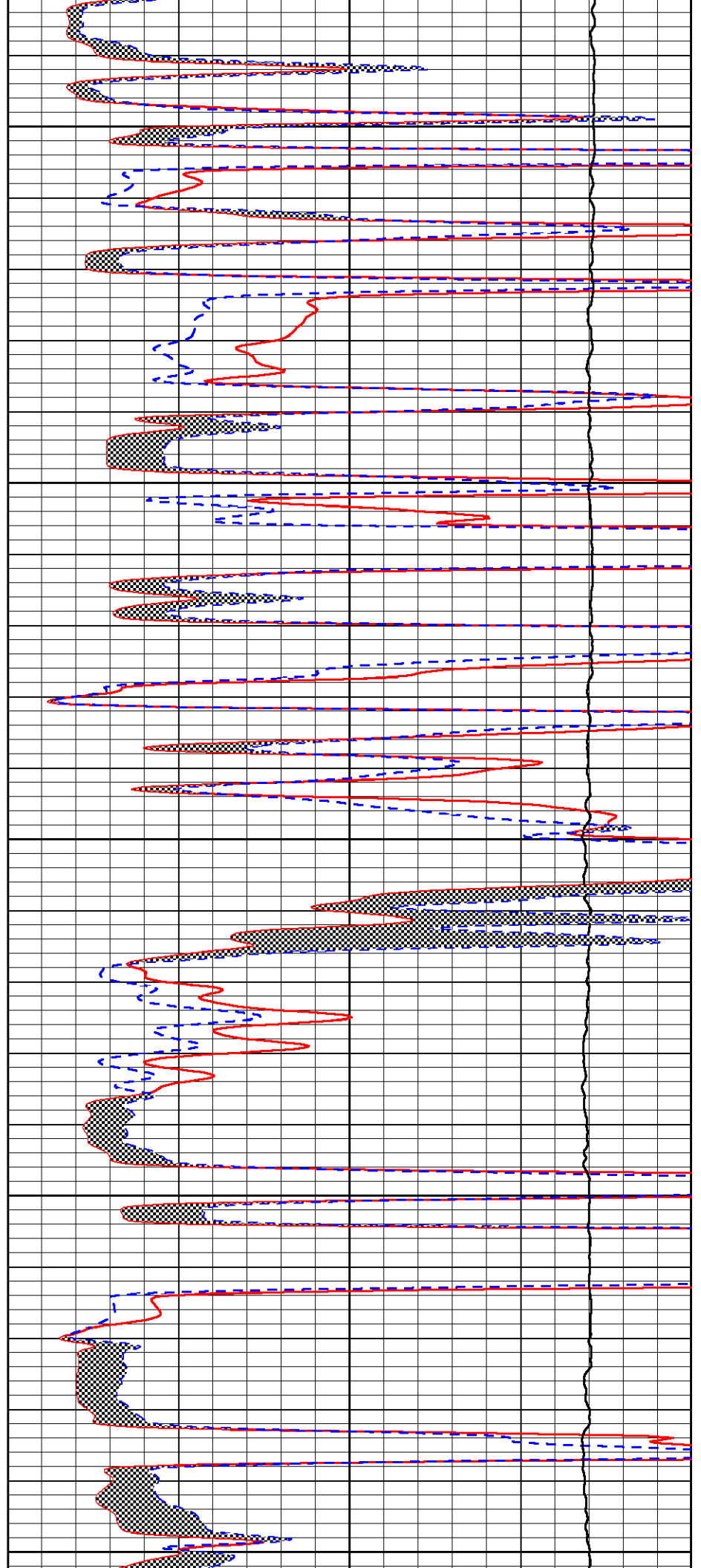
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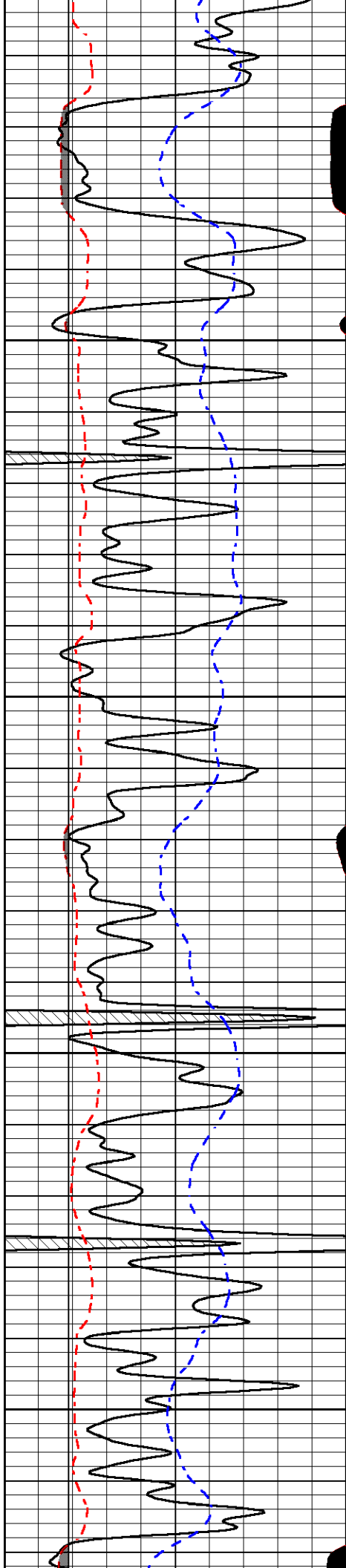
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4100

4150

4200



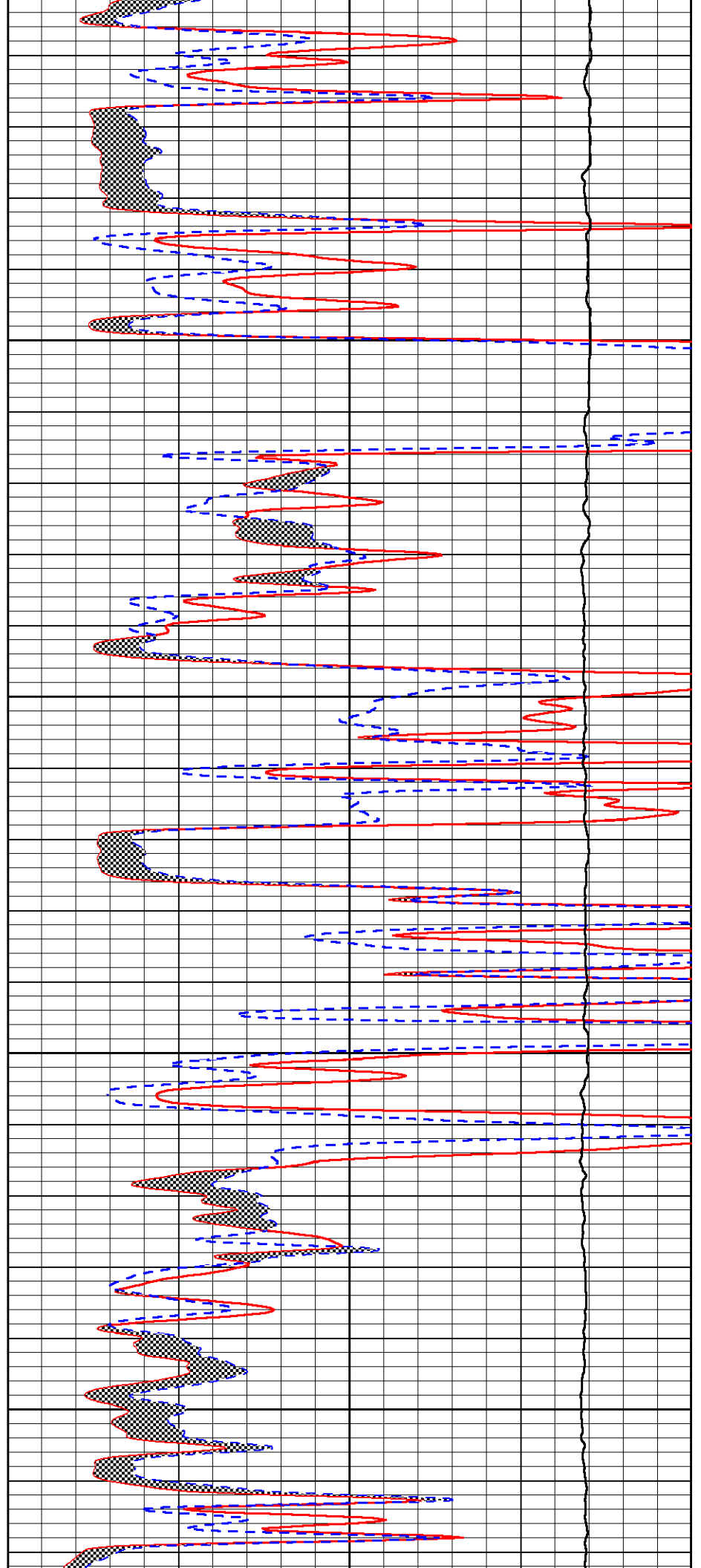


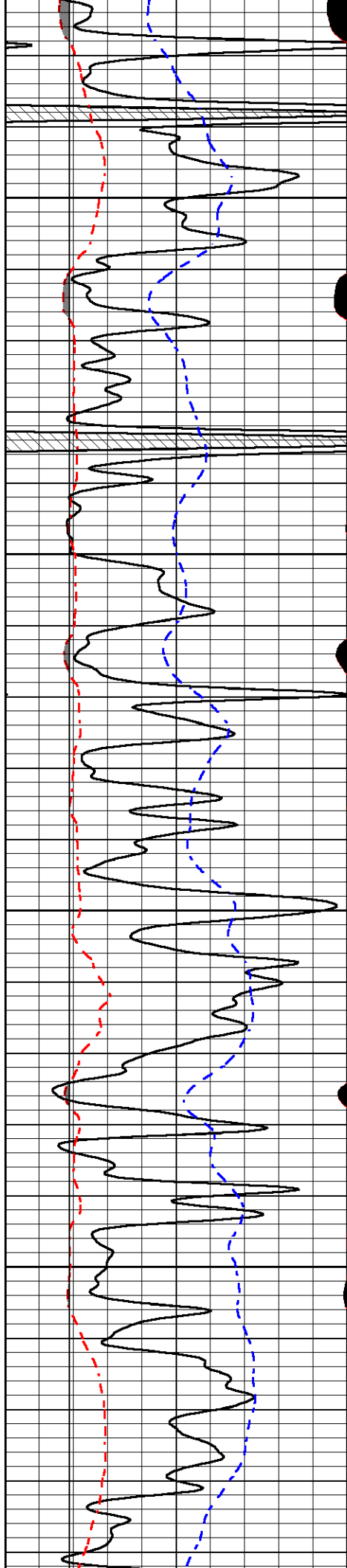
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4300

4350

4400



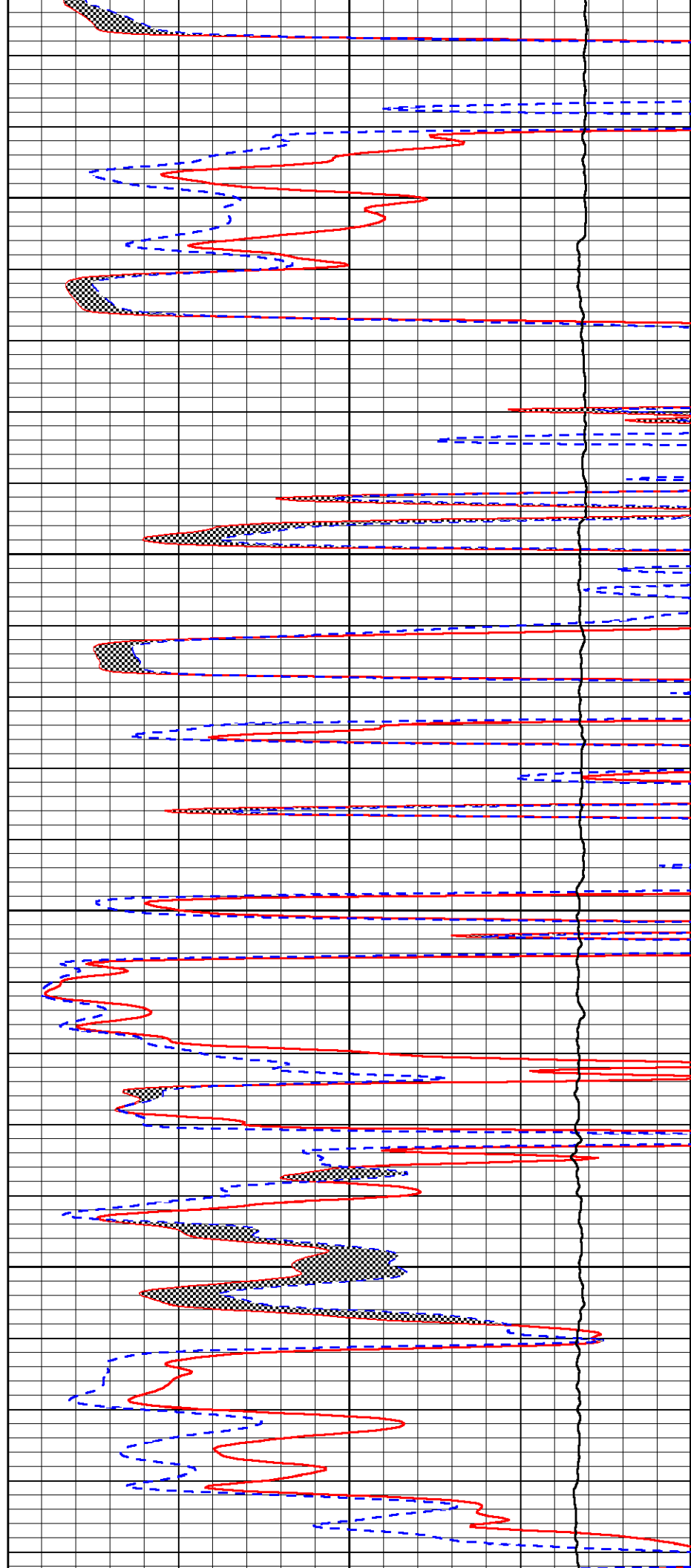


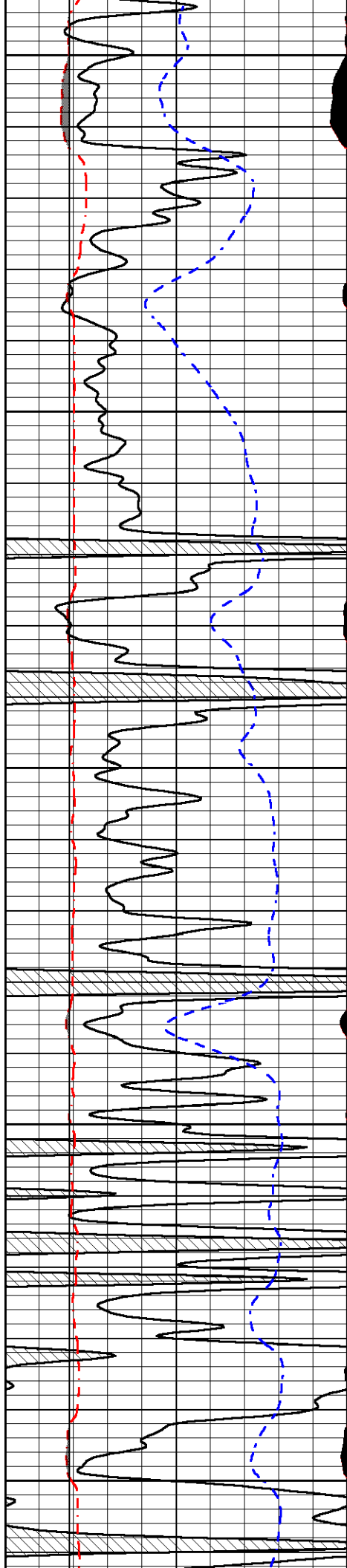
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4500

4550

4600





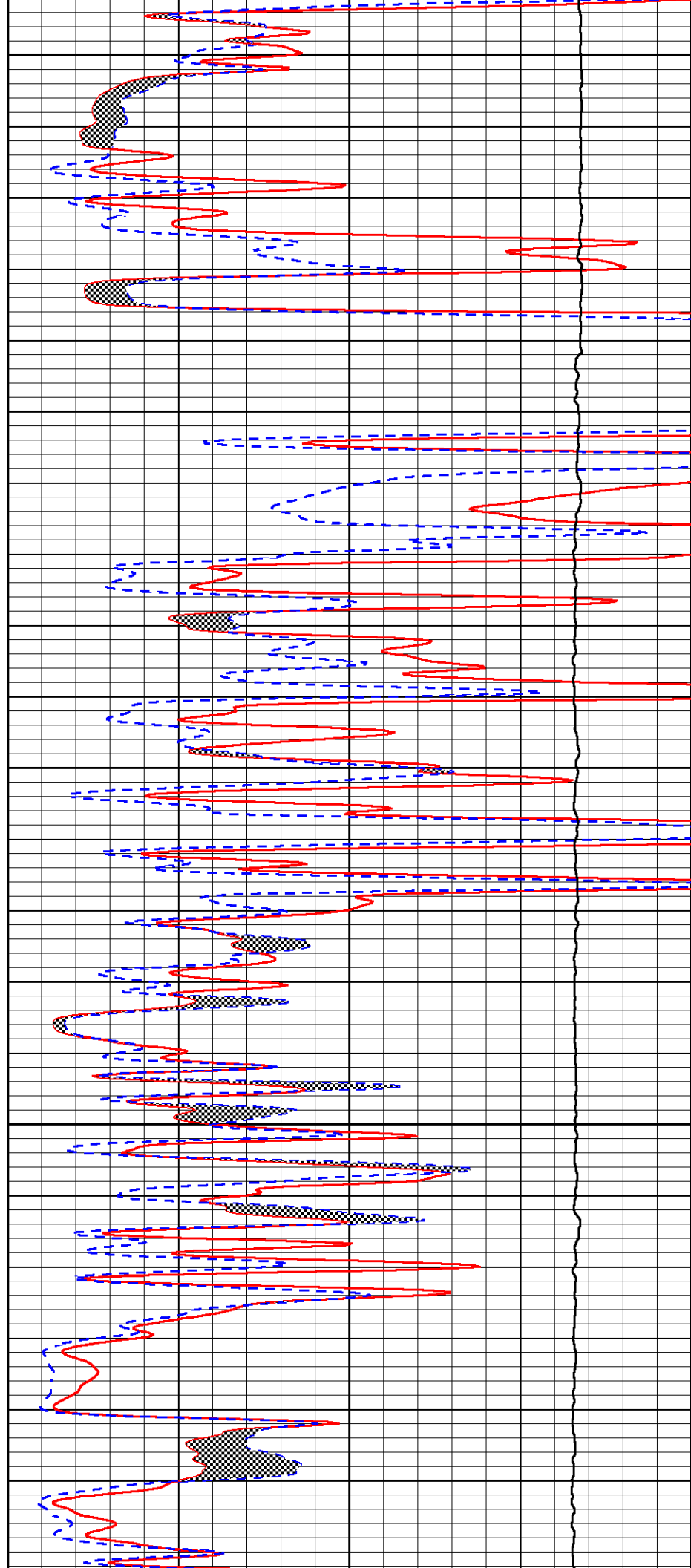
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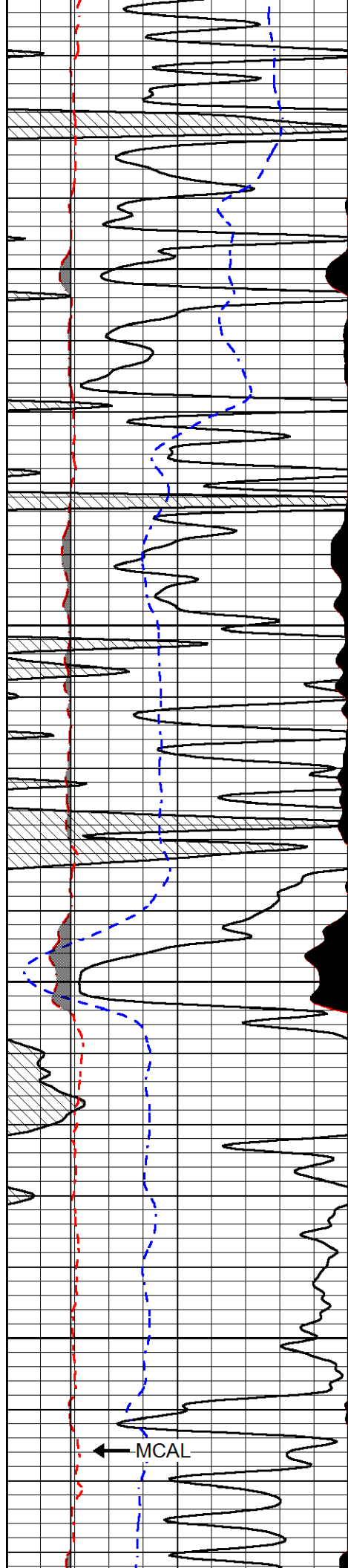
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4750

4800

4850



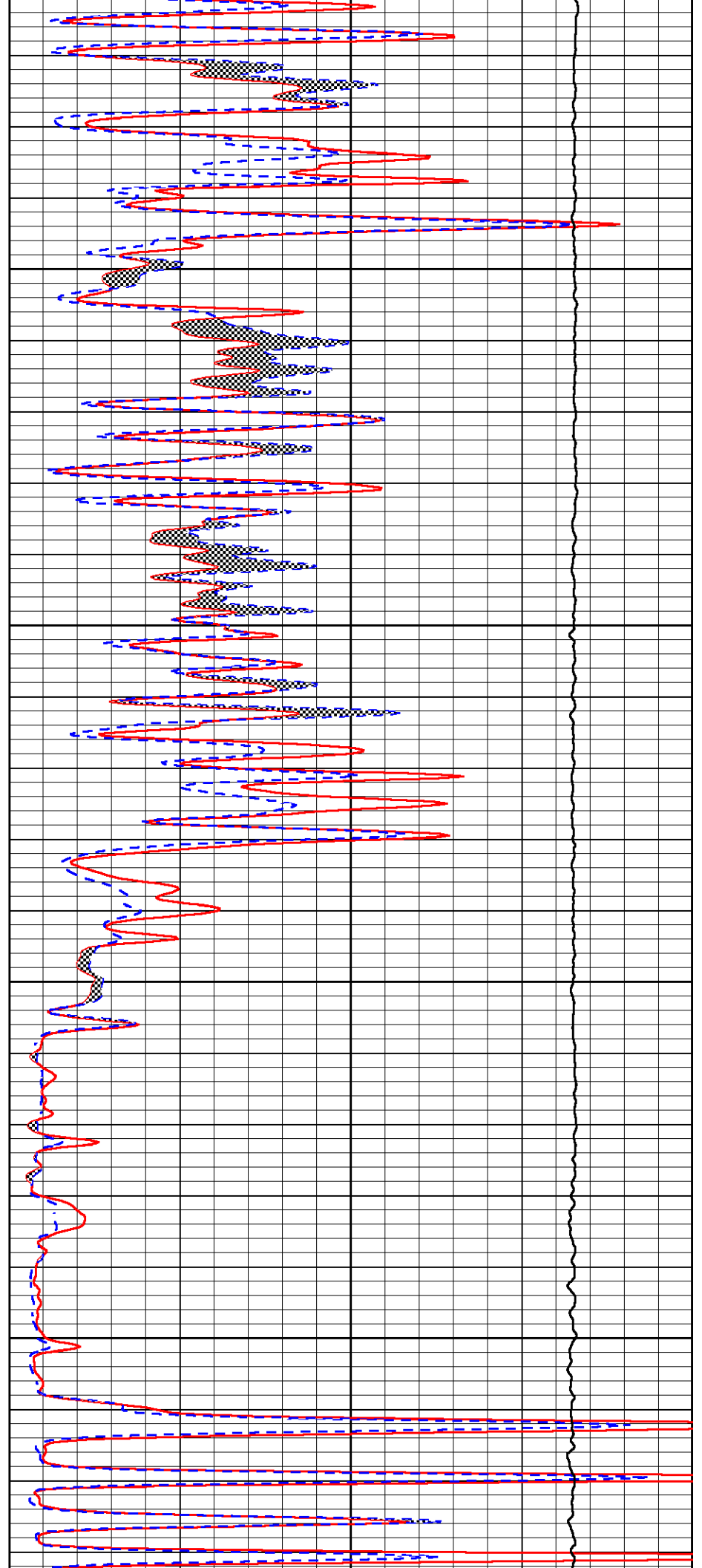


4900

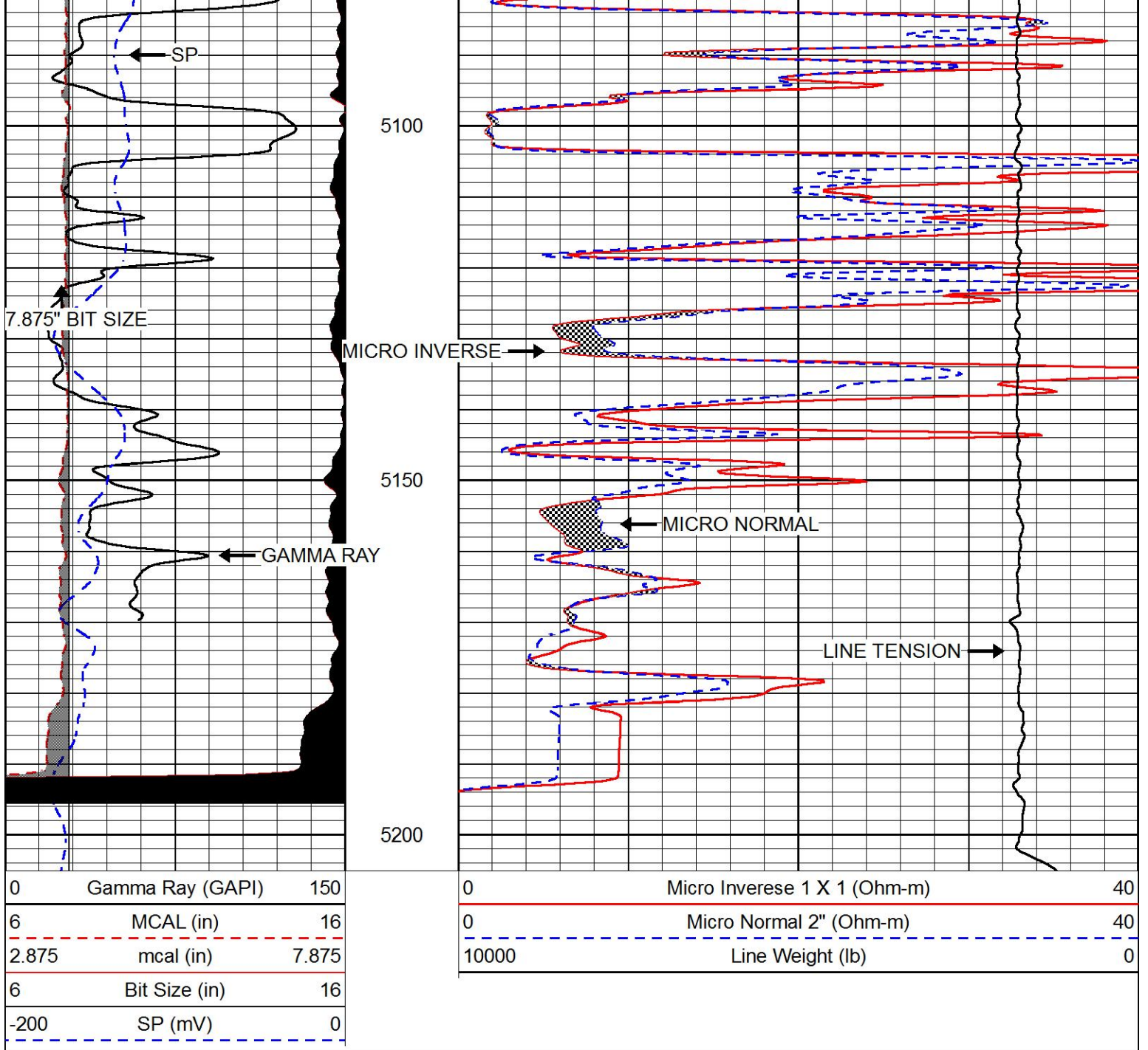
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5000

5050





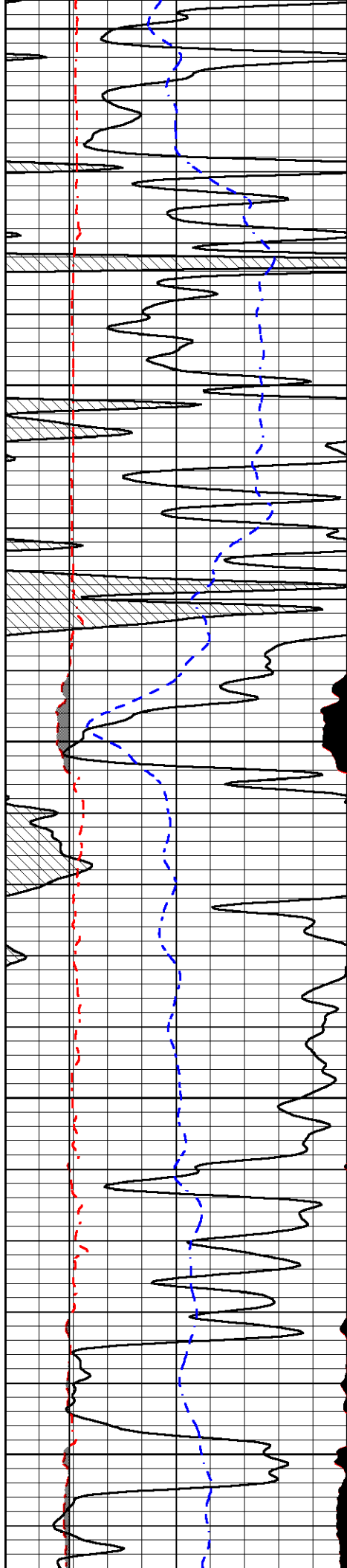


# REPEAT SECTION

Database File      american\_warrior\_blaesi\_9-6.db  
 Dataset Pathname    STKML/pass2.1  
 Presentation Format    micro  
 Dataset Creation      Fri Aug 11 13:26:14 2017  
 Charted by            Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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



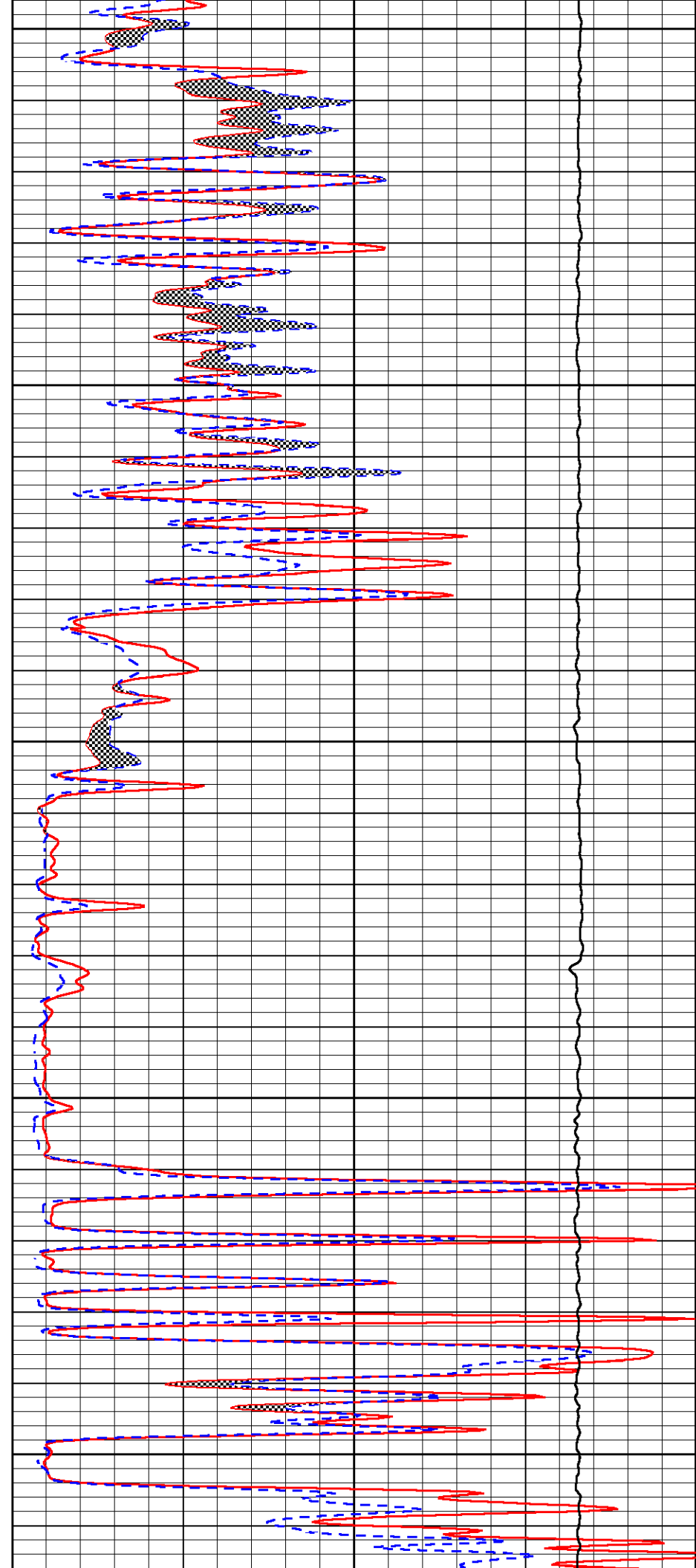
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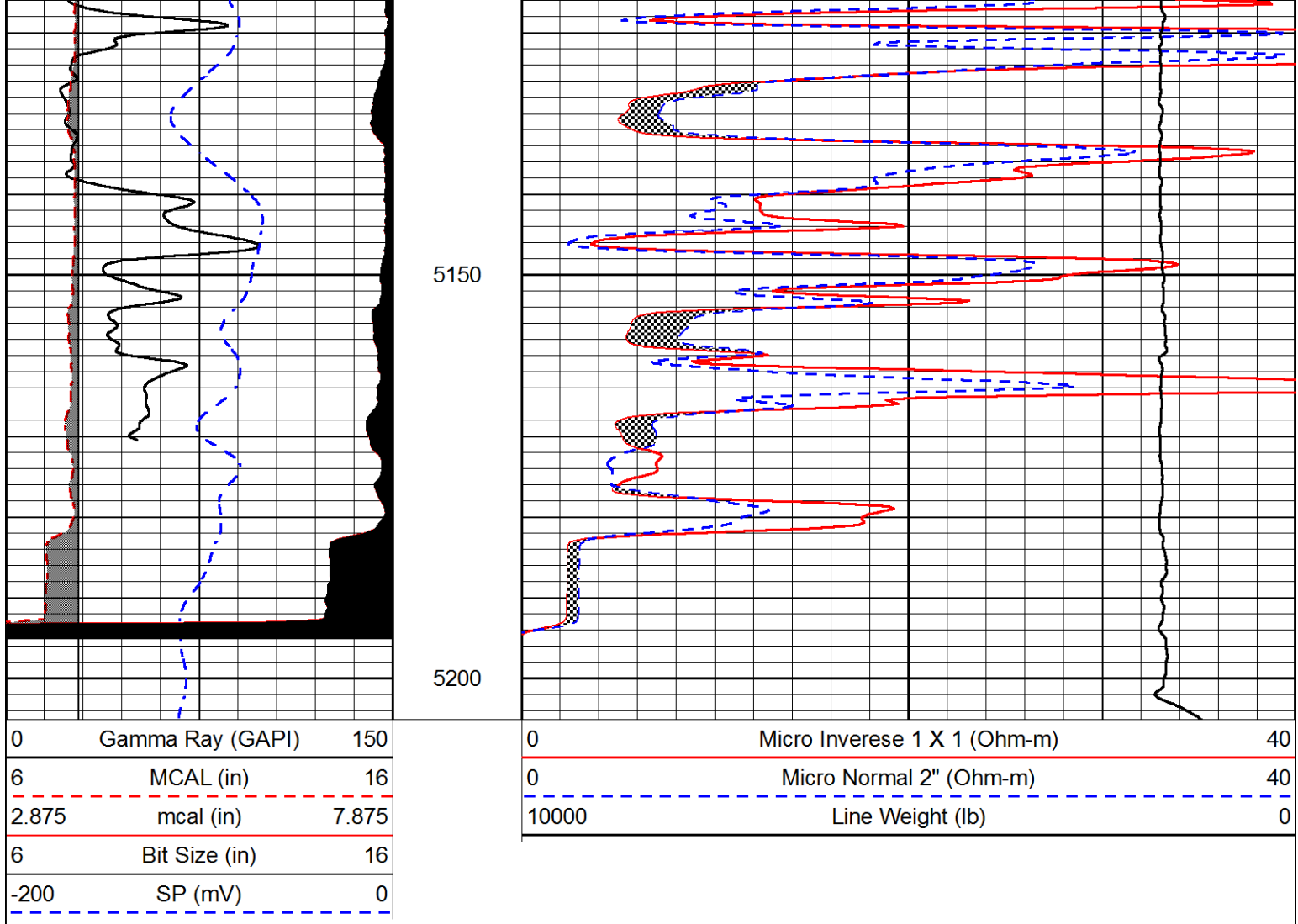
4950

5000

5050

5100





### Calibration Report

Database File american\_warrior\_blaesi\_9-6.db  
 Dataset Pathname STKML/pass3.7  
 Dataset Creation Fri Aug 11 12:48:38 2017

### Dual Induction Calibration Report

Serial-Model: PSI 91-M&W  
 Calibration Performed: Thu Aug 10 08:41:25 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-32.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

### Microlog Calibration Report

Serial-Model: PSI-01-PSIML  
 Performed: Fri Aug 11 11:41:38 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	-0.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	97.3300

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W  
 Source / Verifier: 16955B / 2ci  
 Master Calibration Performed: Wed Aug 02 00:28:57 2017

Master Calibration

	<u>Density</u>		<u>Far Detector</u>	<u>Near Detector</u>	
Magnesium	1.755	g/cc	4903.44	6153.79	cps
Aluminum	2.685	g/cc	934.50	4021.31	cps
	Spine Angle = 75.61			Density/Spine Ratio = 0.543	
	<u>Size</u>		<u>Reading</u>		
Small Ring	8.00	in	1.84		
Large Ring	22.00	in	1.46		

Compensated Neutron Calibration Report

Serial Number: 207-MW  
 Tool Model: M&W  
 Calibration Performed: Tues Aug 1 10:30:30 2017

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  
 Tool Model: M&W  
 Calibration Performed: Wed Aug 02 00:29:15 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



**PIONEER**  
 Pioneer Energy Services

Company AMERIAN WARRIOR, INC.  
 Well BLAESI #9-6  
 Field UNKNOWN  
 County WALLACE  
 State KANSAS