



PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company AMERICAN WARRIOR, INC.
Well BLAESI NO. 10-6
Field UNKNOWN
County WALLACE
State KANSAS

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Well BLAESI NO. 10-6
Field UNKNOWN
County WALLACE State KANSAS

Location: API #: 15-199-20445-00-00

335' FSL & 335' FEL

SEC 6 TWP 15S RGE 41W

Permanent Datum GROUND LEVEL Elevation 3761'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
DIL
Elevation
K.B. 3769'
D.F. N/A
G.L. 3761'

Date	8/24/2017		
Run Number	ONE		
Depth Driller	5200'		
Depth Logger	5200'		
Bottom Logged Interval	5199'		
Top Log Interval	4000'		
Casing Driller	8.625" @ 371'		
Casing Logger	370'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	3,500		
Density / Viscosity	9.3 56		
pH / Fluid Loss	10.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.85 @ 62		
Rmt @ Meas. Temp	.64 @ 62		
Rmc @ Meas. Temp	1.15 @ 62		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.41 @ 128		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	128 DEGF		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
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
WEST TO S-9 ROAD, SOUTH TO FIELD ROAD, WEST INTO

Log Measured From: KELLY BUSHING 8 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: LUKE THOMPSON
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

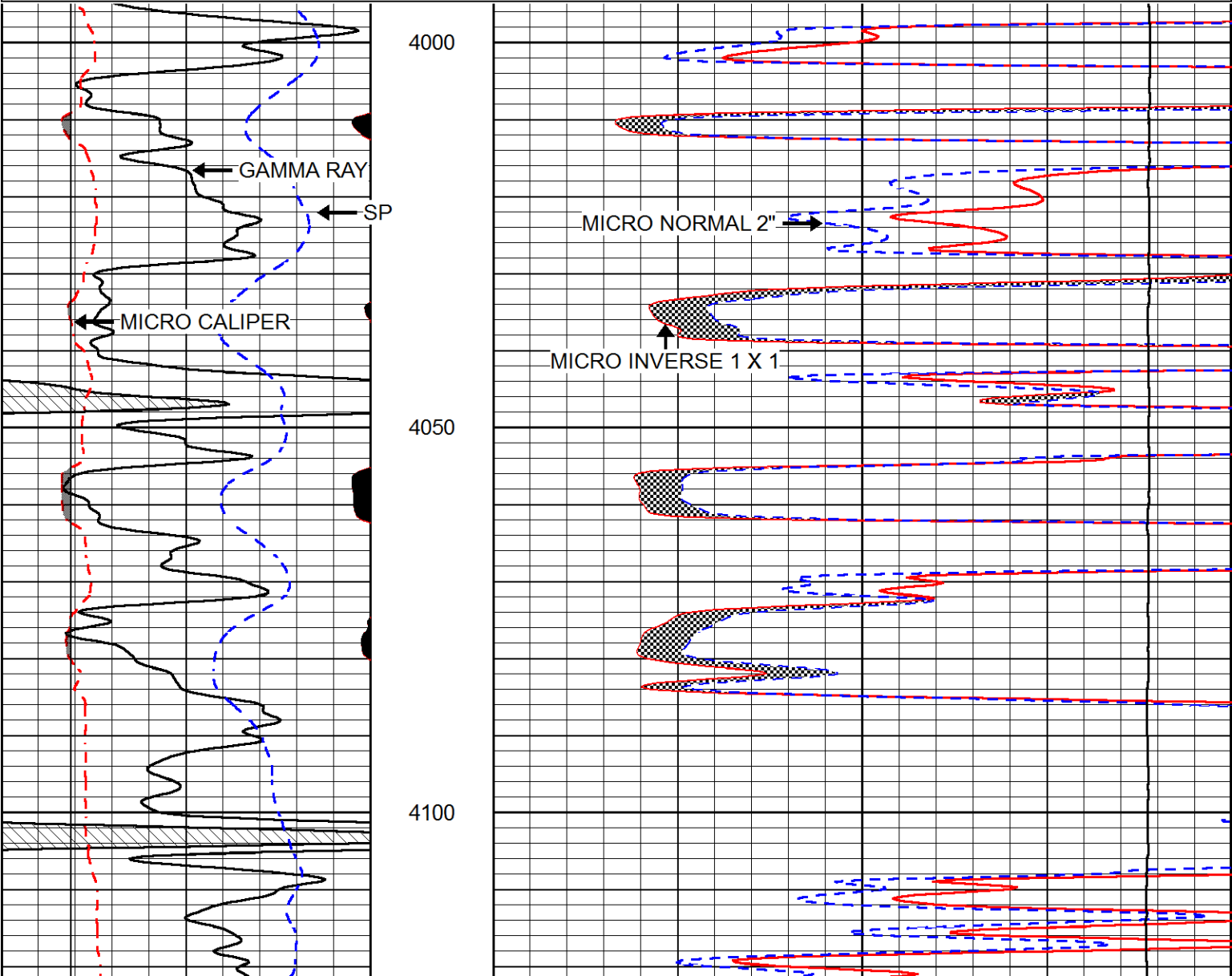
A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 128	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 175	degF 61	Off	ft 5196

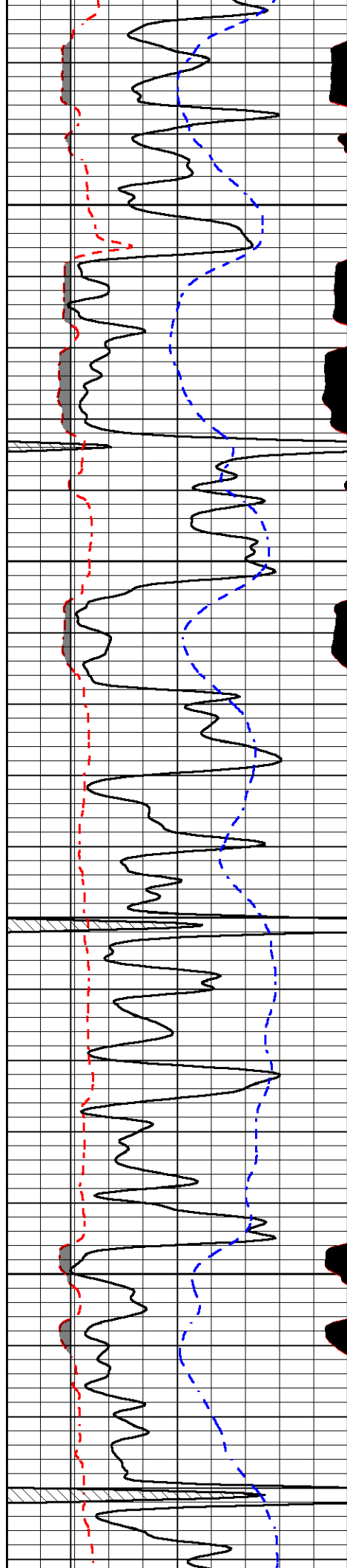
Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	29.90			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	29.15						
LSD	20.85			CDL-M&W (168-986)	8.50	4.00	250.00
	20.83						
	20.35						
DCAL							
SSD							
RLL3F	15.80						
RLL3	15.80						
CILD	8.00			DIL-PSI HIGH TEMP (PSI 216 HT)	18.50	3.50	220.00

CILM	4.70								
SP	0.20								
Dataset: american_warrior_blaesi_10_6.db: field/well/stack/pass3.1 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									

Database File	american_warrior_blaesi_10_6.db
Dataset Pathname	stack/pass3.1
Presentation Format	micro
Dataset Creation	Thu Aug 24 07:16:37 2017
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0	MICRO INVERSE 1 X 1 (Ohm-m)	40
6	MICRO CALIPER (in)	16	0	MICRO NORMAL 2" (Ohm-m)	40
6	BIT SIZE (in)	16	15000	LINE TENSION (lb)	0
-200	SP (mV)	0			



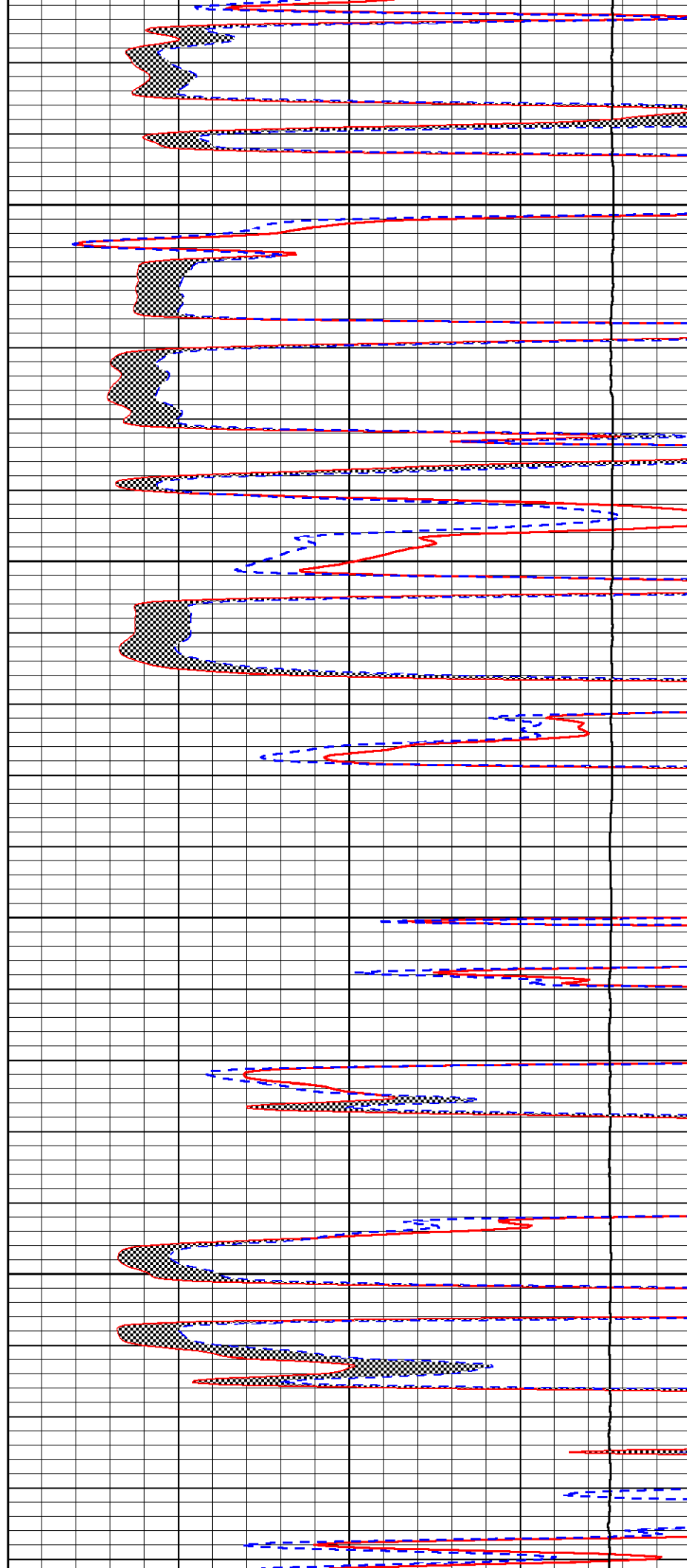


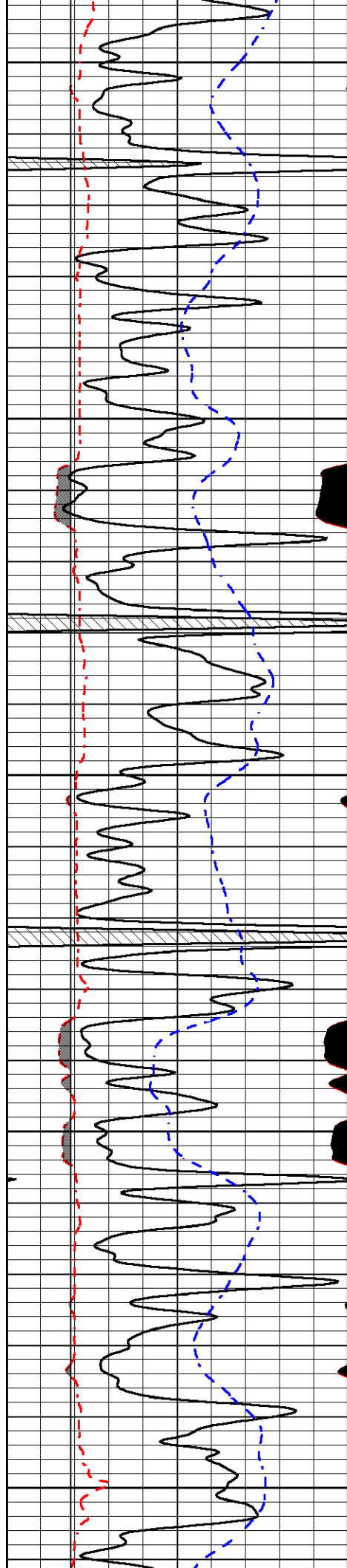
4150

4200

4250

4300





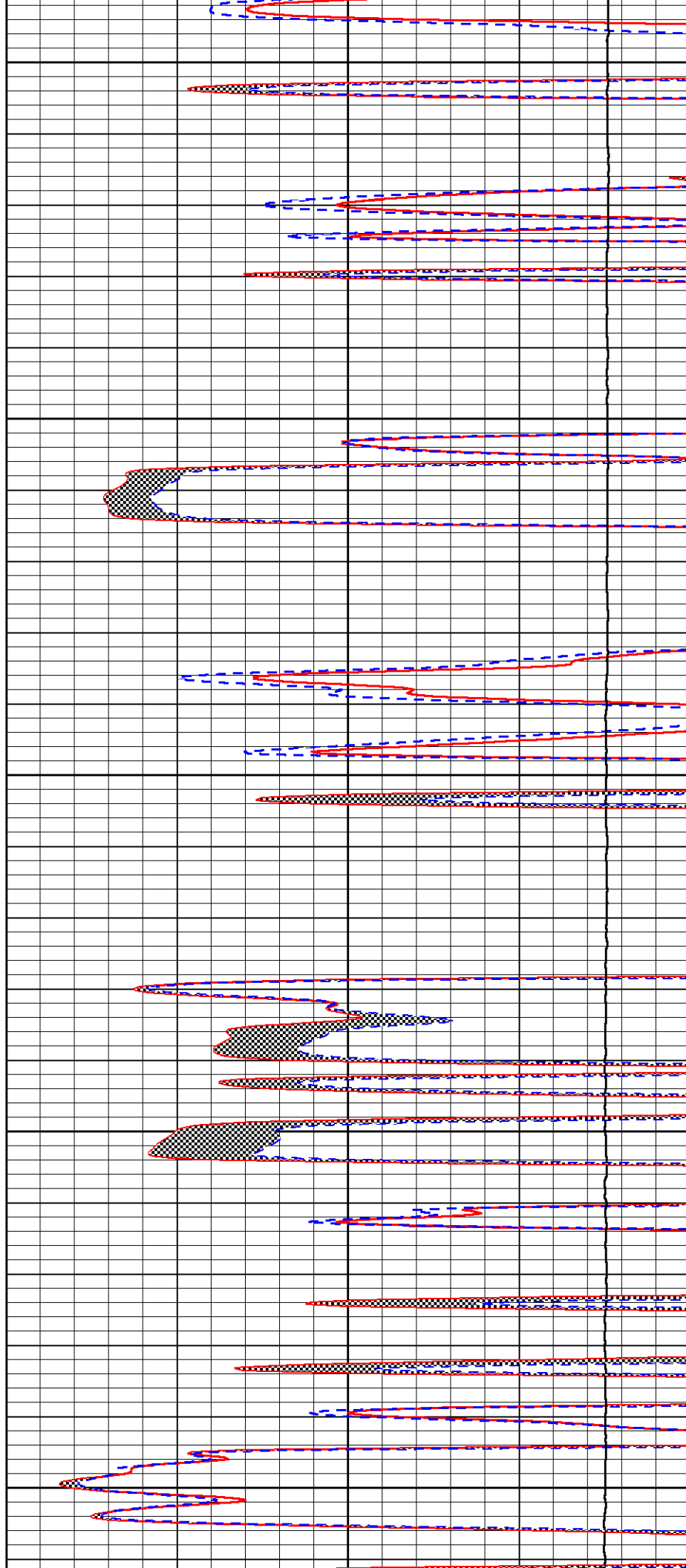
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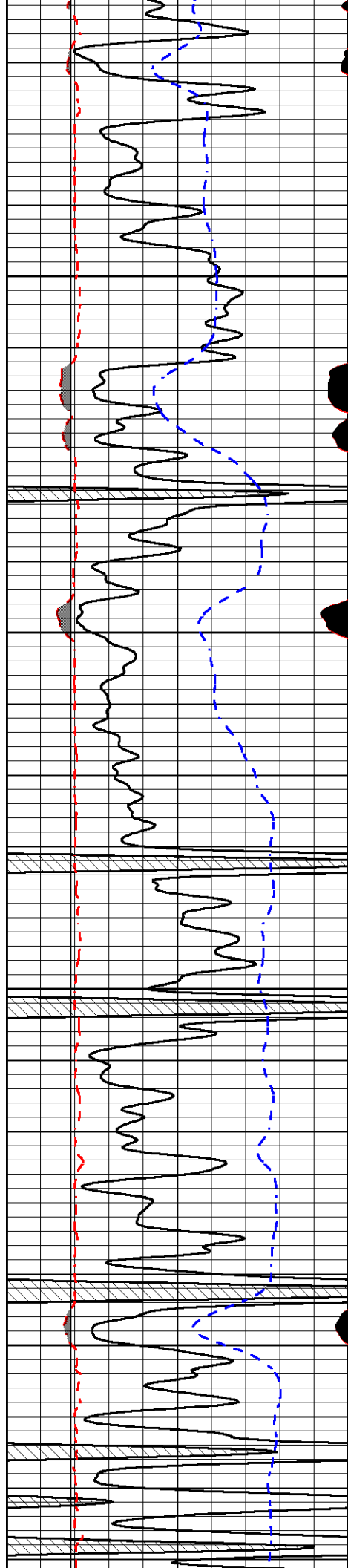
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4450

4500

4550



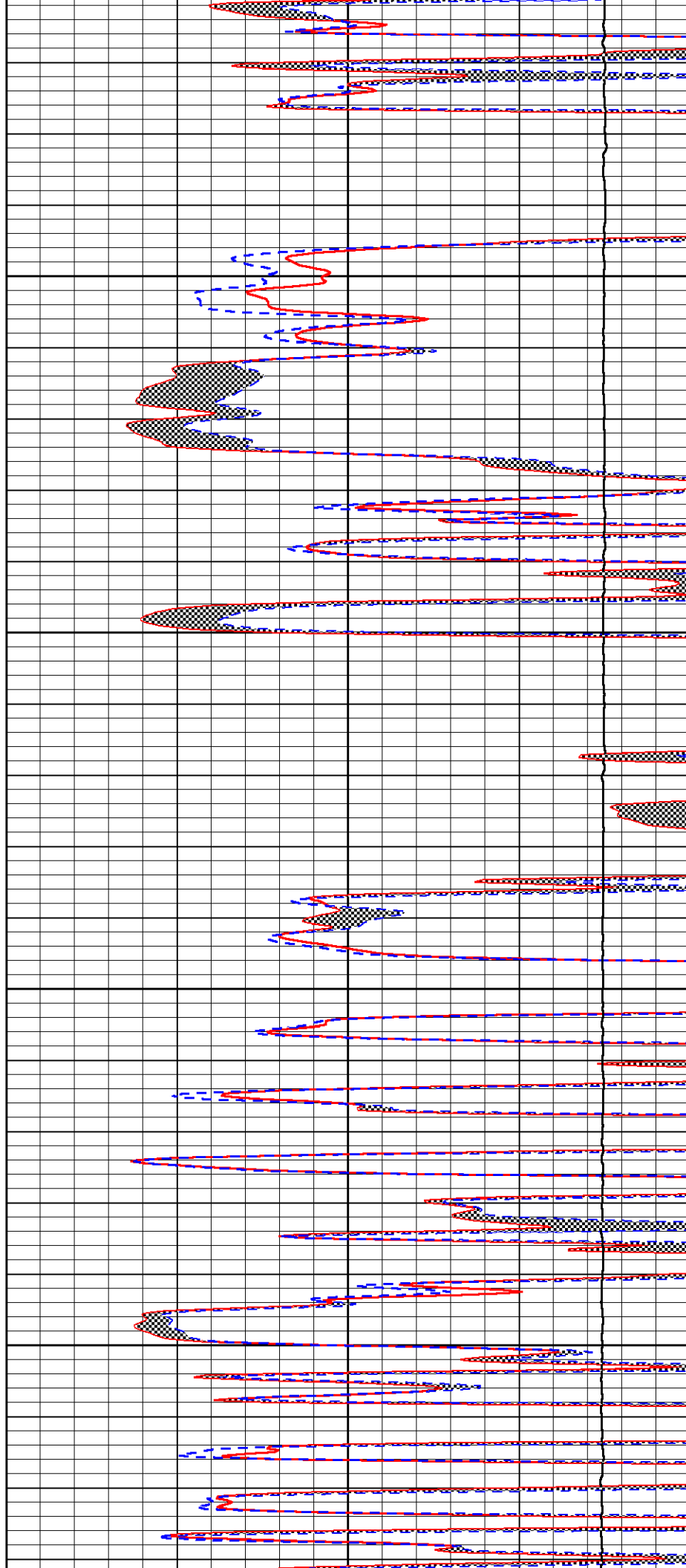


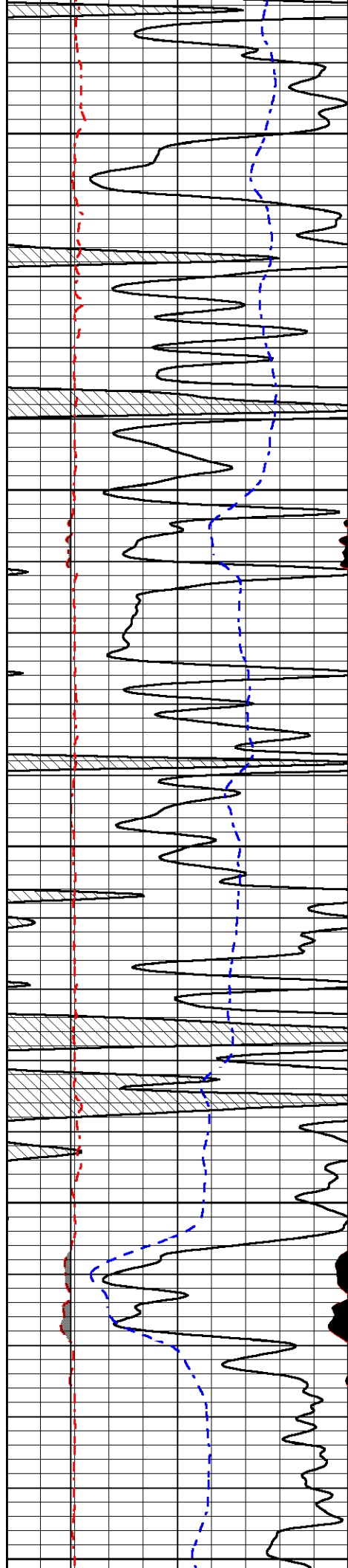
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4650

4700

4750





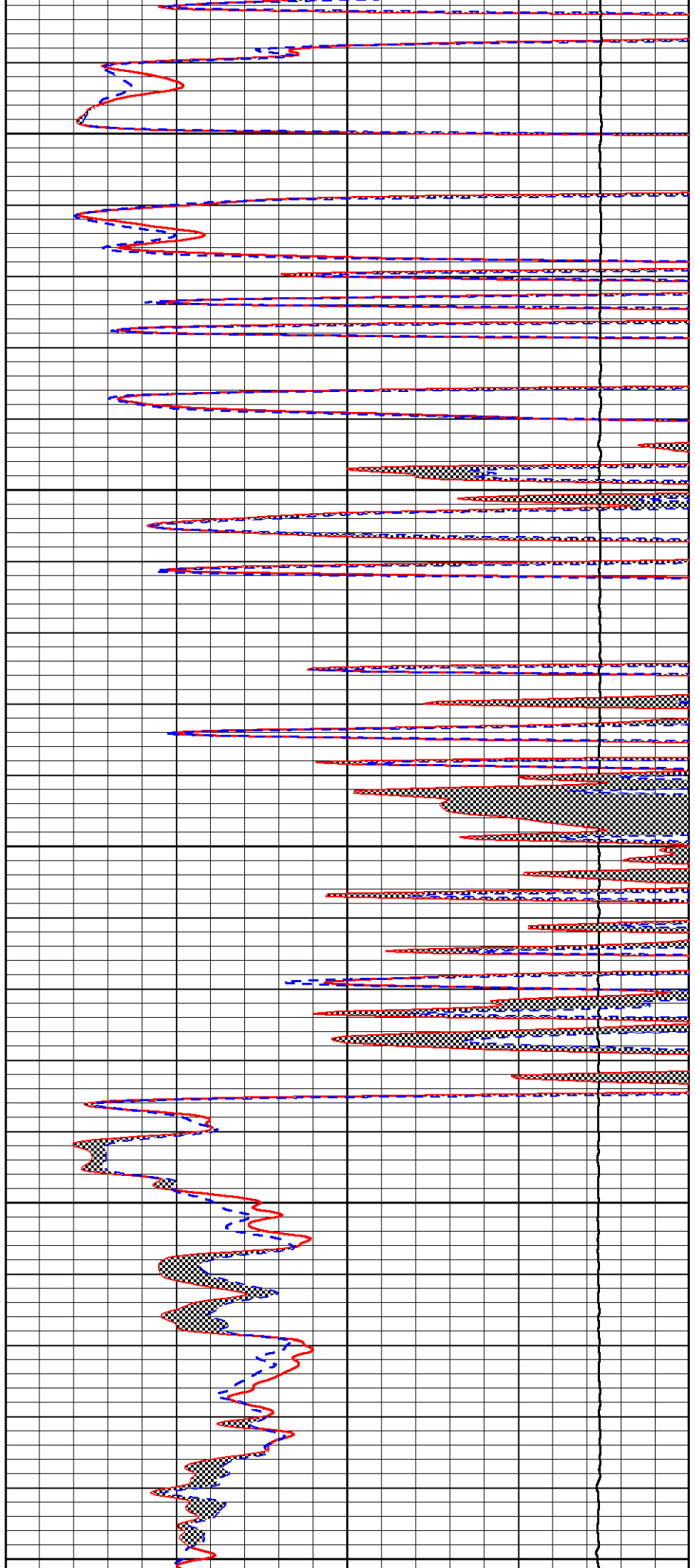
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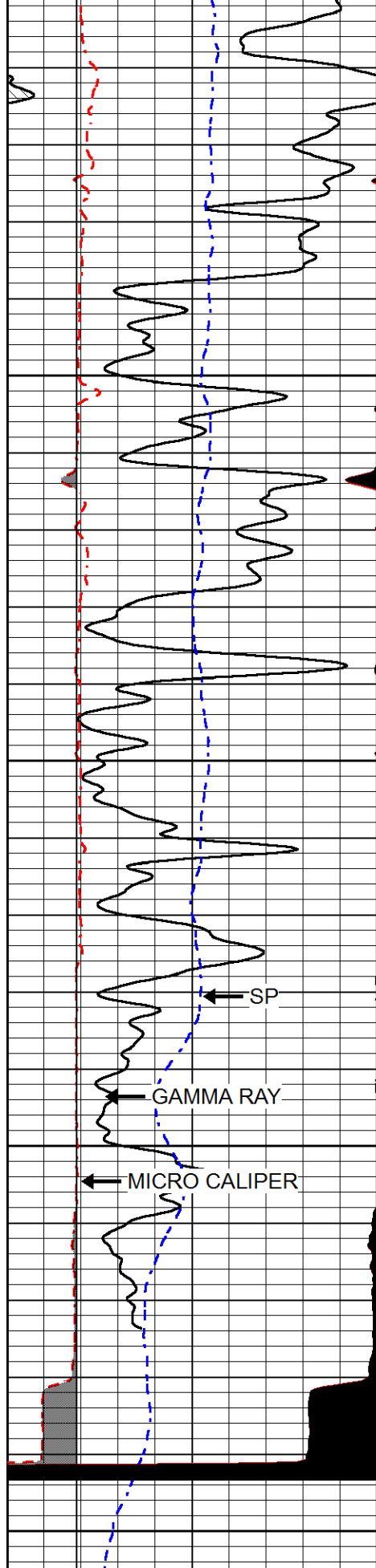
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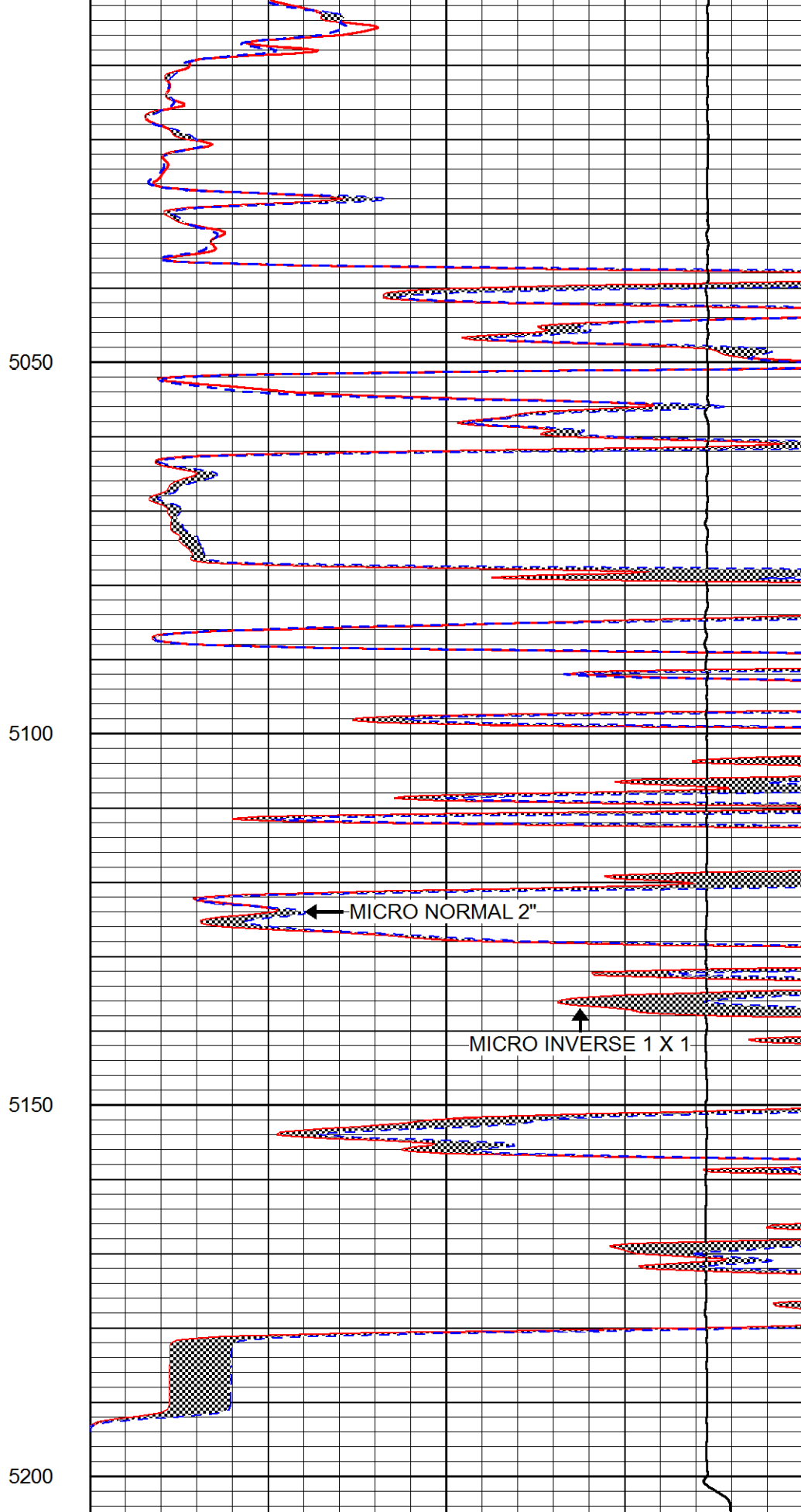
4950

5000





0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16



0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2'' (Ohm-m)	40
15000	LINE TENSION (lb)	0

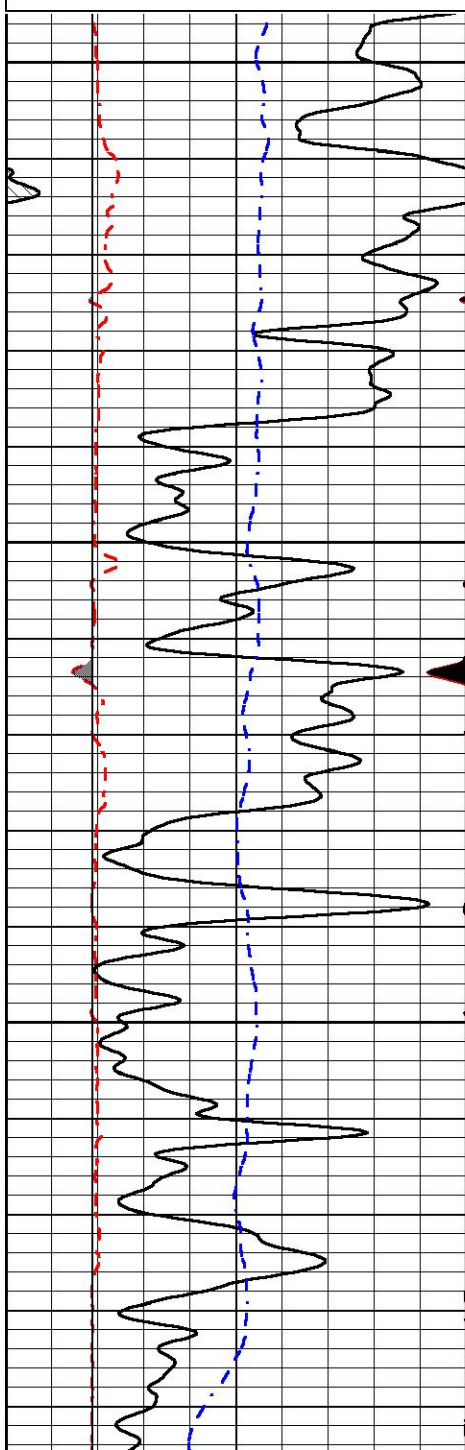


REPEAT SECTION

Database File american_warrior_blaesi_10_6.db
 Dataset Pathname stack/pass2.1
 Presentation Format micro
 Dataset Creation Thu Aug 24 07:16:49 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

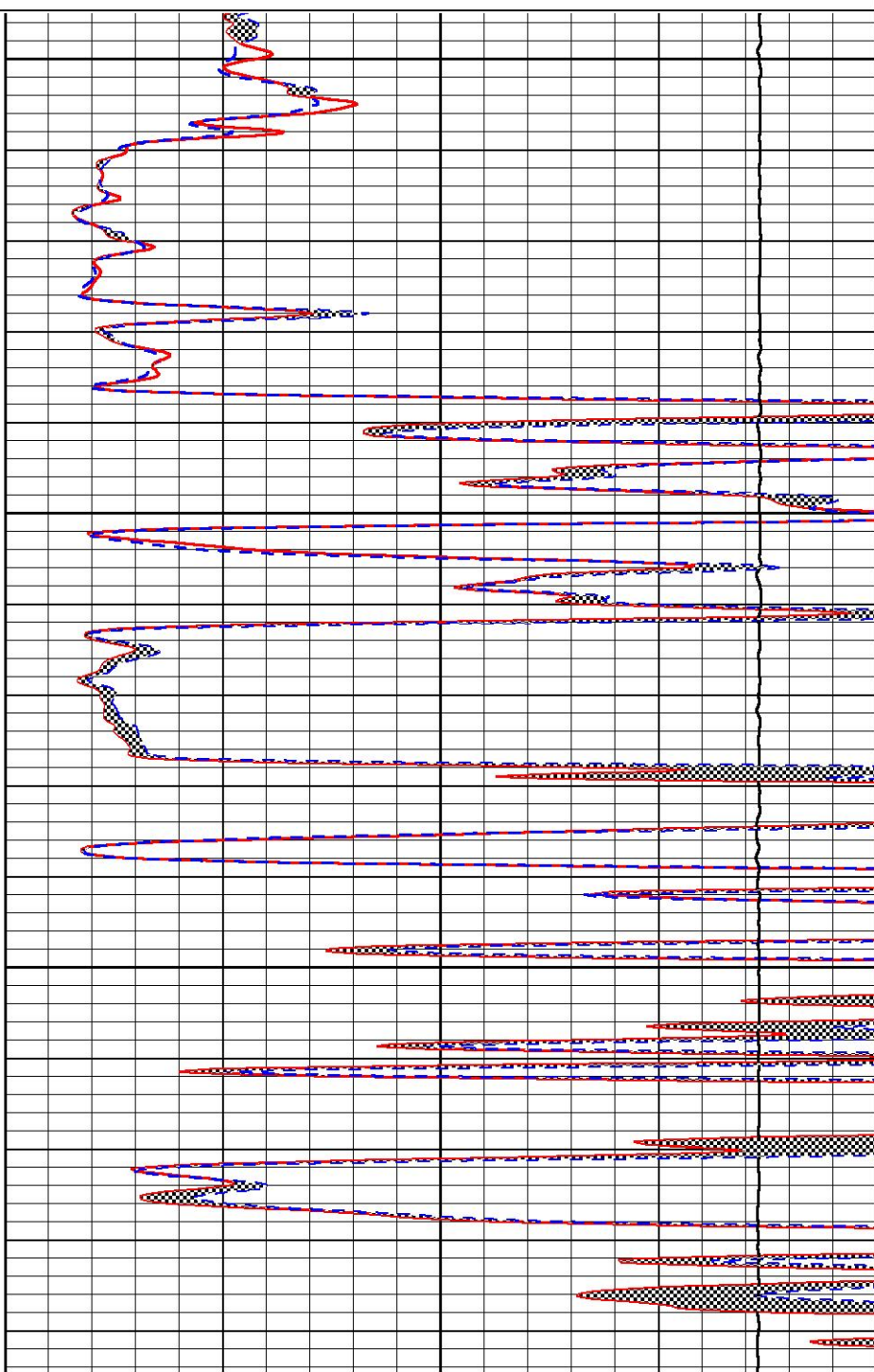
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0

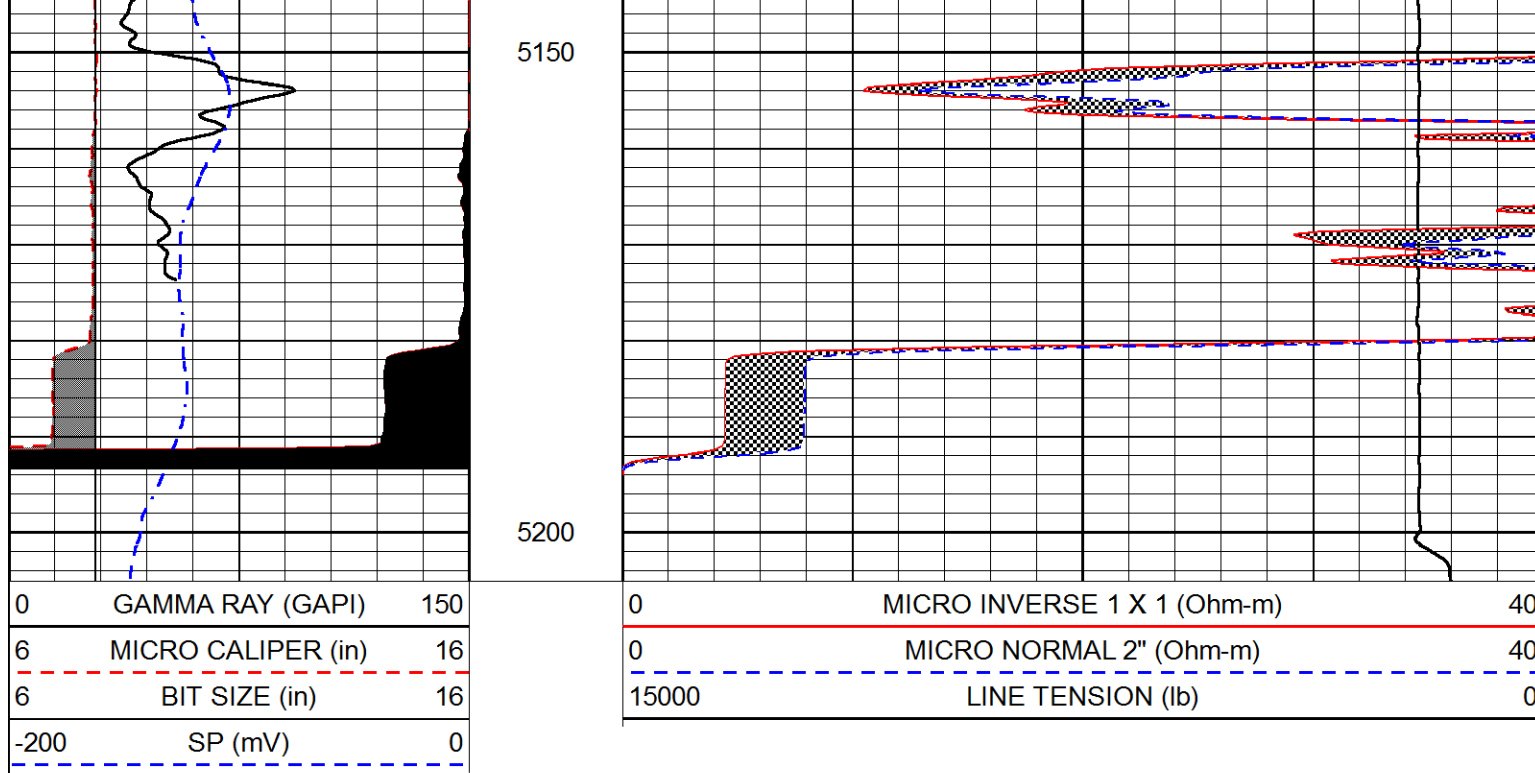


5000

5050

5100





Calibration Report	
Database File	american_warrior_blaesi_10_6.db
Dataset Pathname	stack/pass3.1
Dataset Creation	Thu Aug 24 07:16:37 2017

Dual Induction Calibration Report

Serial-Model:	PSI 216 HT-PSI HIGH TEMP
Calibration Performed:	Thu Aug 24 03:44:32 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	75.411	495.929	4.000	250.000	mmho/m	0.750	-40.115
Medium	75.269	470.661	10.000	100.000	mmho/m	0.628	-22.133

Compensated Density Calibration Report
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Serial-Model:	168-986-M&W
Source / Verifier:	/
Master Calibration Performed:	Tue Apr 11 16:07:47 2017

Master Calibration						
	Density			Far Detector		Near Detector
Magnesium	1.755	g/cc		4691.86		4818.19 cps
Aluminum	2.675	g/cc		859.57		3020.22 cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523			
	Size			Reading		
Small Ring	4.00	in		1.03		
Large Ring	14.00	in		1.23		

Compensated Neutron Calibration Report

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 Apr 11 16:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



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