MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company American Warrior, Inc.
Well Hall #1-21
Field Shaeffer-RothGarn
County Stafford
State Kansas

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County Stafford State Kansas

Location: API # : 15-185-24115-00-00
602 FNL & 1337 FEL
SEC 21 TWP 21S RGE 13W

Other Services
CNL/CDL
MEL

Permanent Datum Ground Level Elevation 1887
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 1900
D.F.
G.L. 1887

Date	8/29/2022		
Run Number	One		
Depth Driller	3986		
Depth Logger	3978		
Bottom Logged Interval	3977		
Top Log Interval	3000		
Casing Driller	8.625 @ 352		
Casing Logger	351		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	8500		
Density / Viscosity	8.9	50	
pH / Fluid Loss	11.5	8.8	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.40 @ 82		
Rmf @ Meas. Temp	0.30 @ 82		
Rmc @ Meas. Temp	0.54 @ 82		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.28 @ 116		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	116		
Equipment Number	24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Jim Musgrove		

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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.

Great Bend,
South to county line, 3 South, 1/4 West,
South into

Log Measured From: Kelly Bushing 13 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: Jim Musgrove
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (106)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (207-MW)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (307-11)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (402)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (501 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: amwar_hall 1-21.db: field/well/stkml/pass3.10
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\amwar_hall 1-21.db
Dataset field/well/stkml/pass3.10/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	116	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	110	80	Off	3978

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

MIDWEST WIRELINE

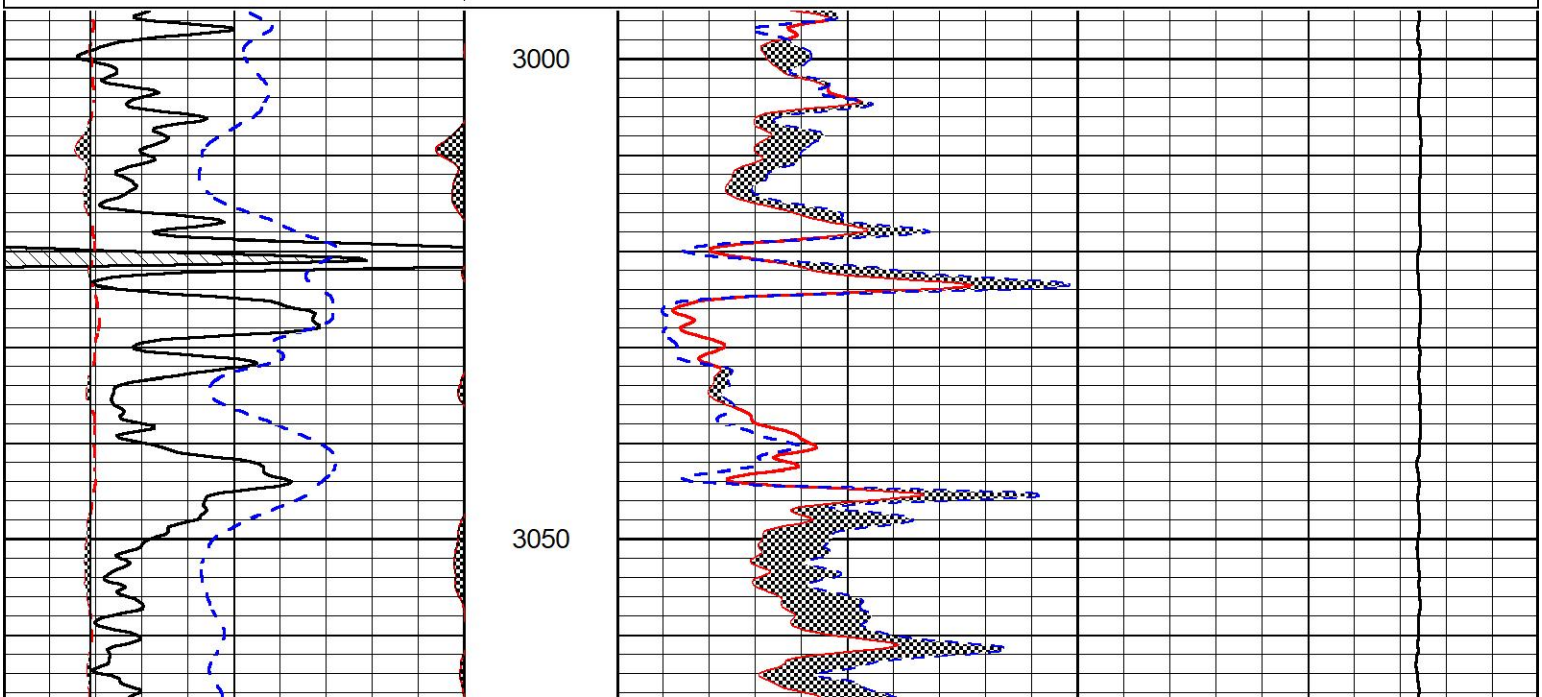
DETAIL SECTION

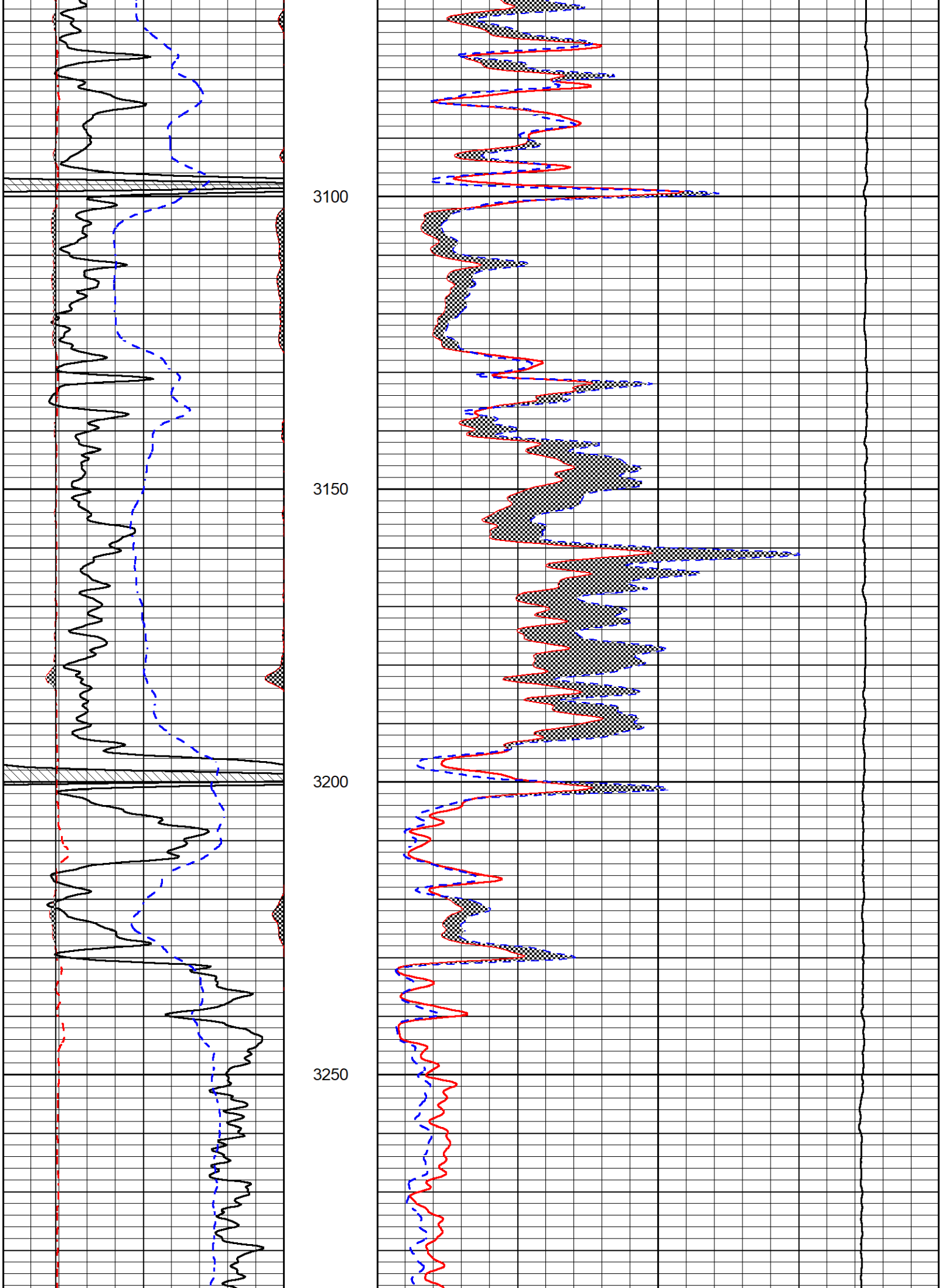
MAIN PASS

Database File	amwar_hall 1-21.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_micro
Dataset Creation	Mon Aug 29 10:35:01 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

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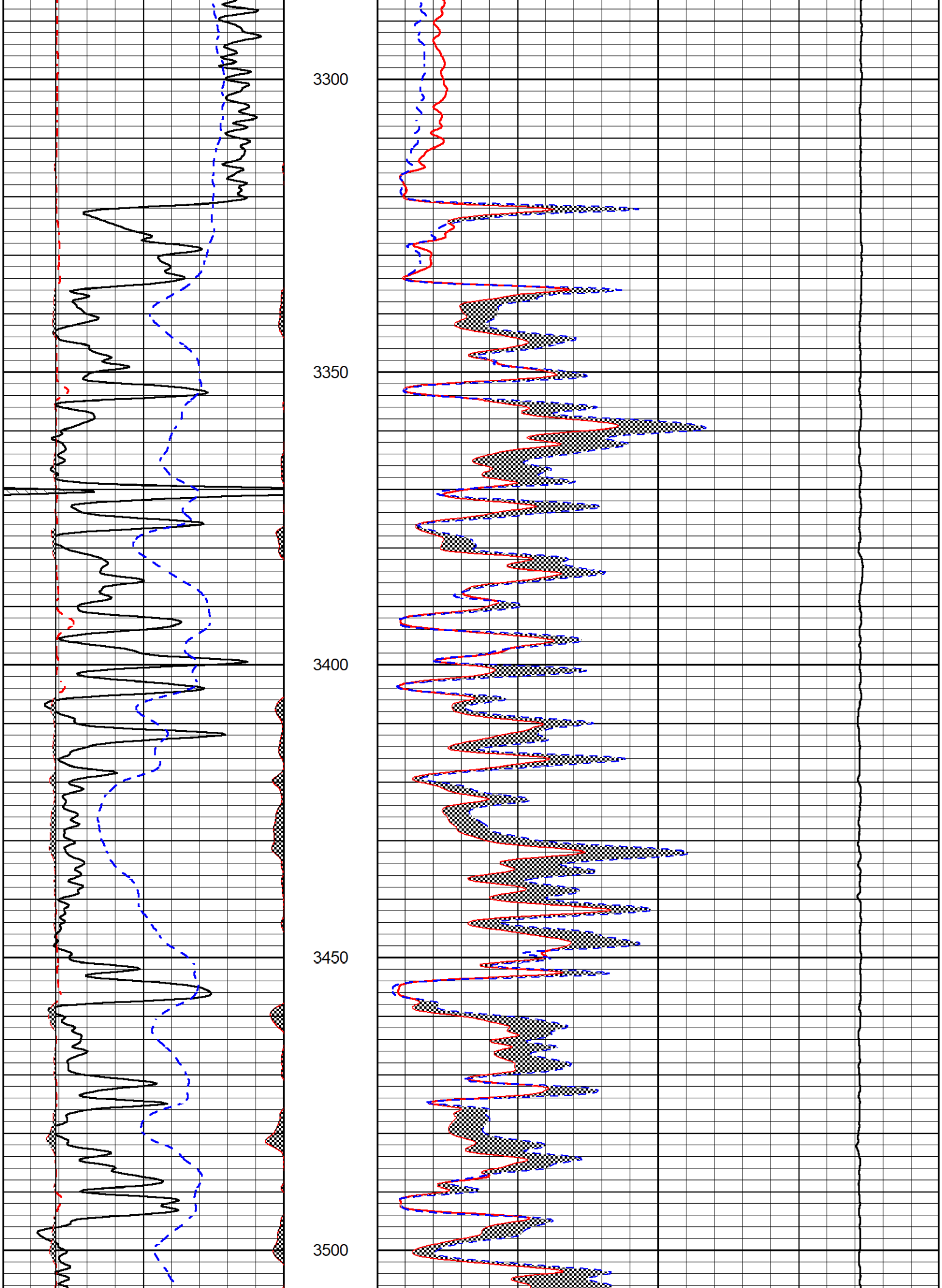
3250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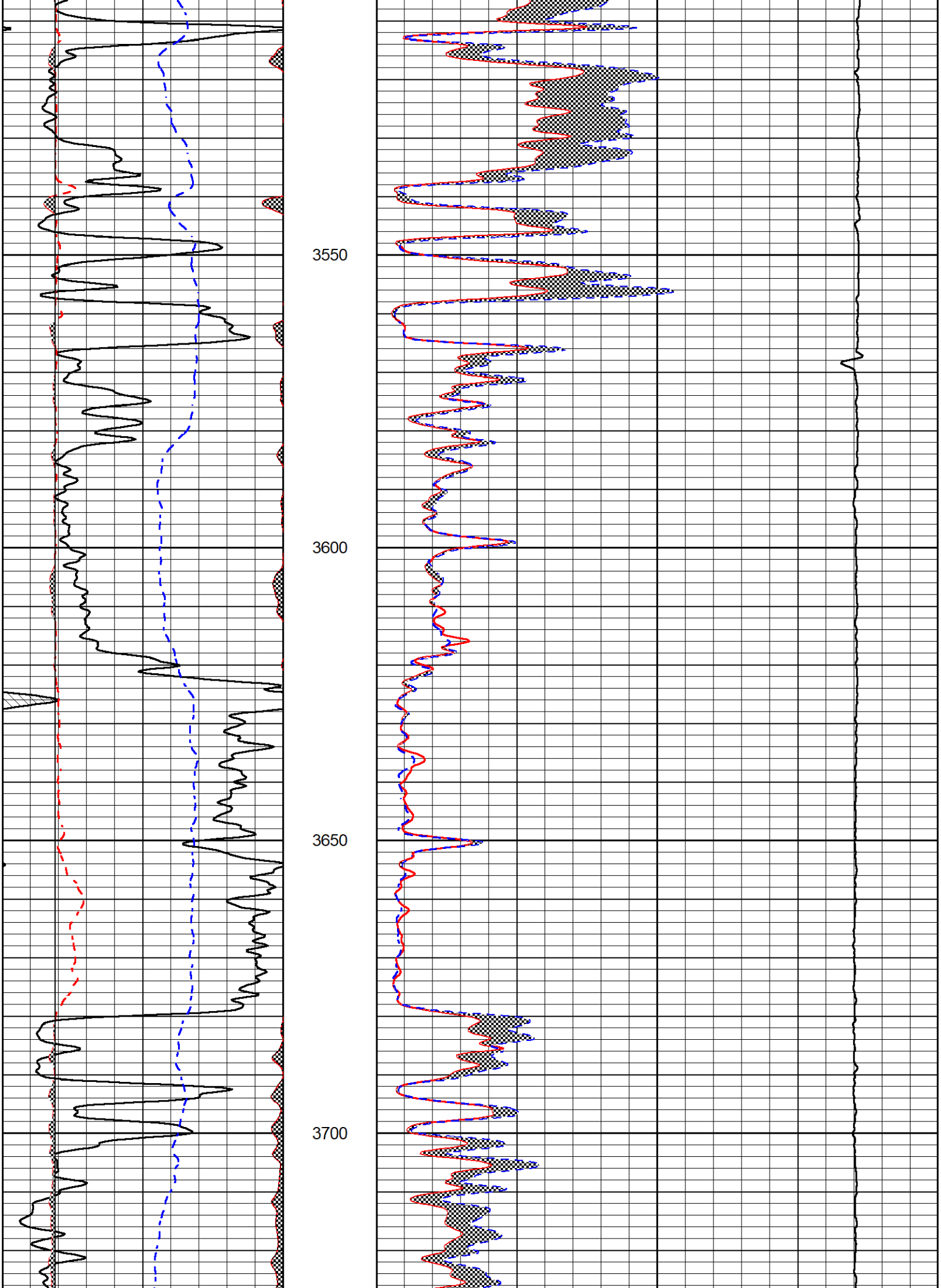
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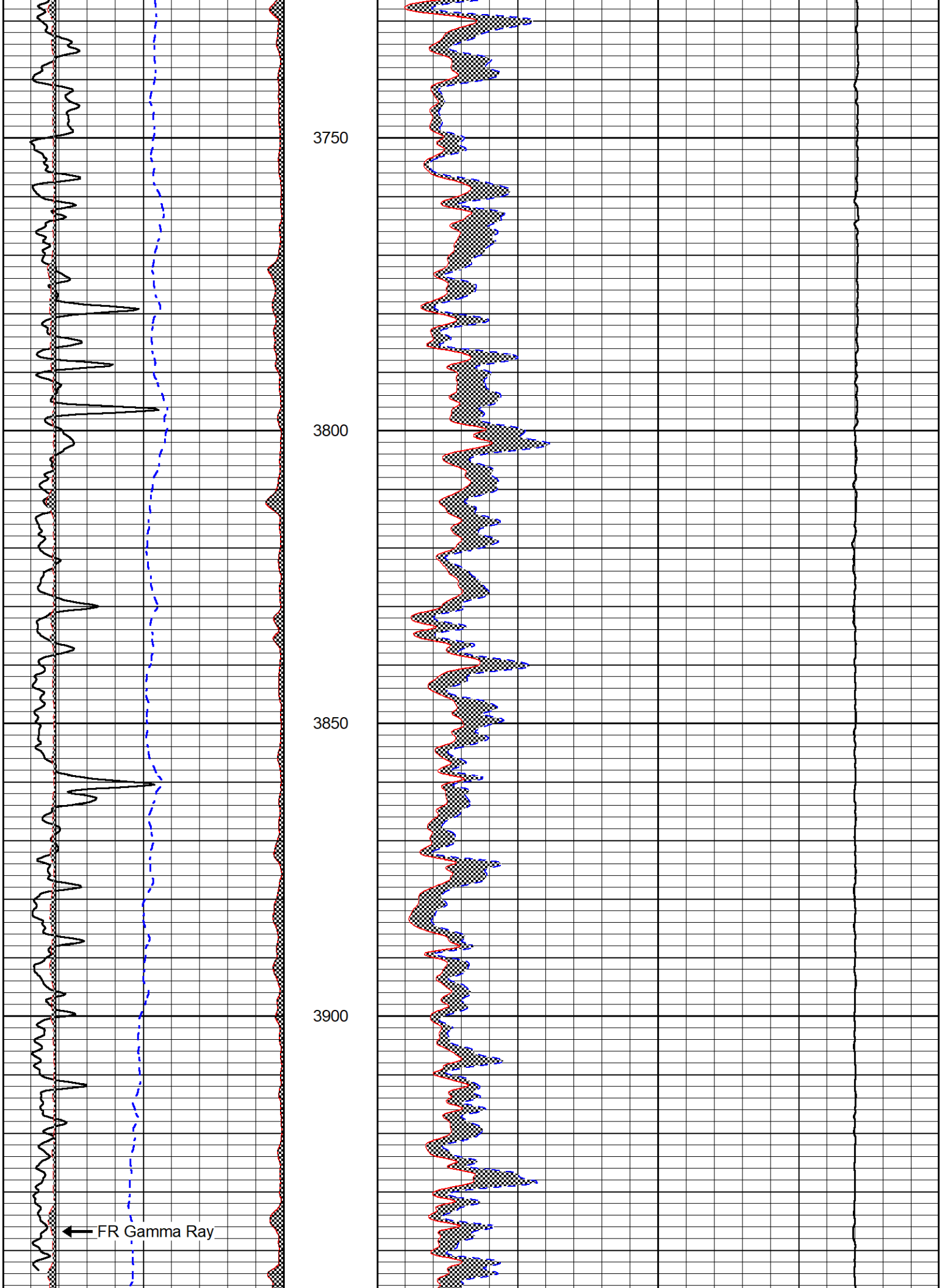
3700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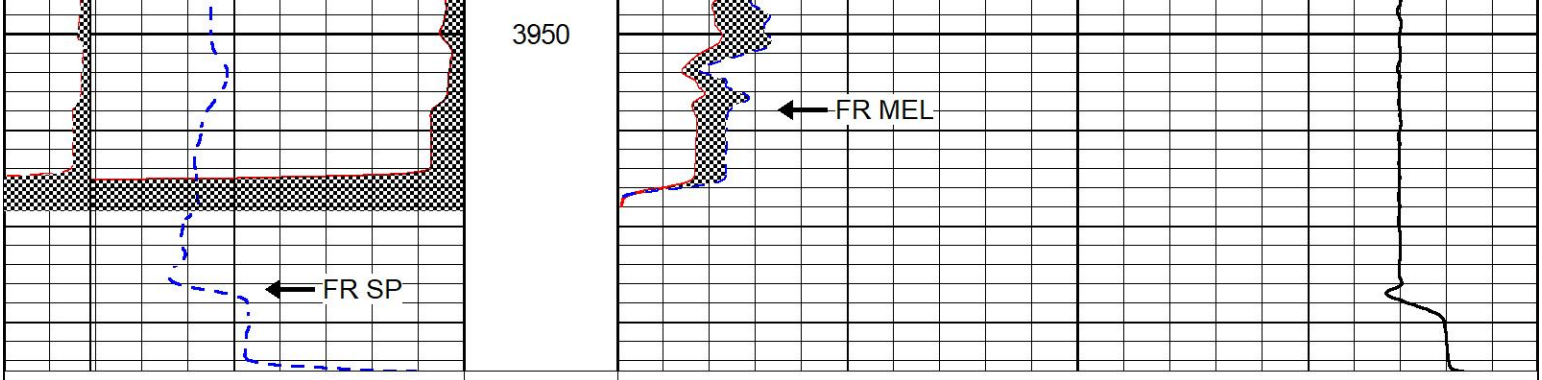
3800
3850
3900
FR Gamma Ray



0	Gamma Ray (GAPI)	150	0	Micro Inverse 1 X 1 (Ohm-m)	40
6	Caliper (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcal (in)	7.875	10000	Line Weight (lb)	0
-200	sp (mV)	0			

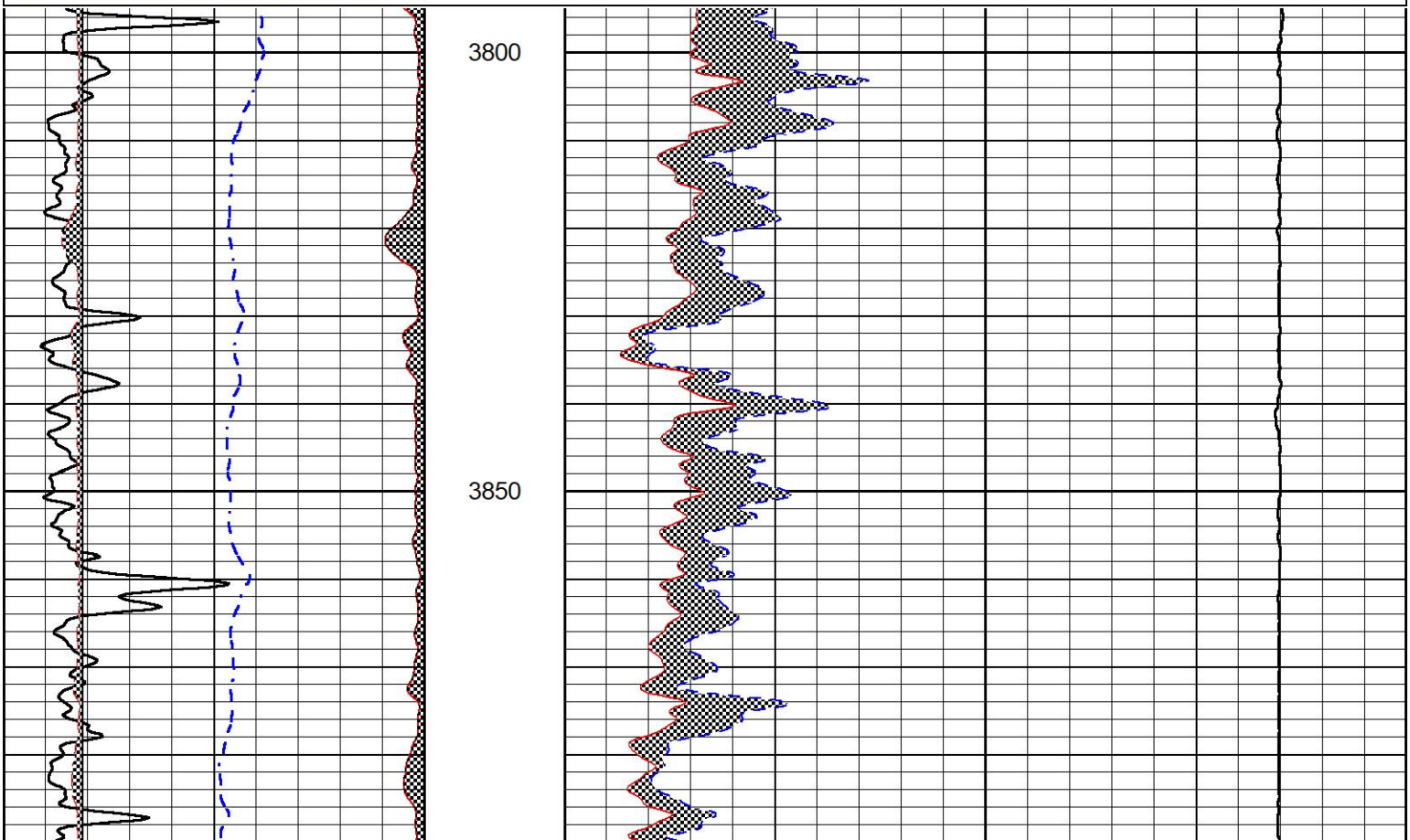
MIDWEST WIRELINE

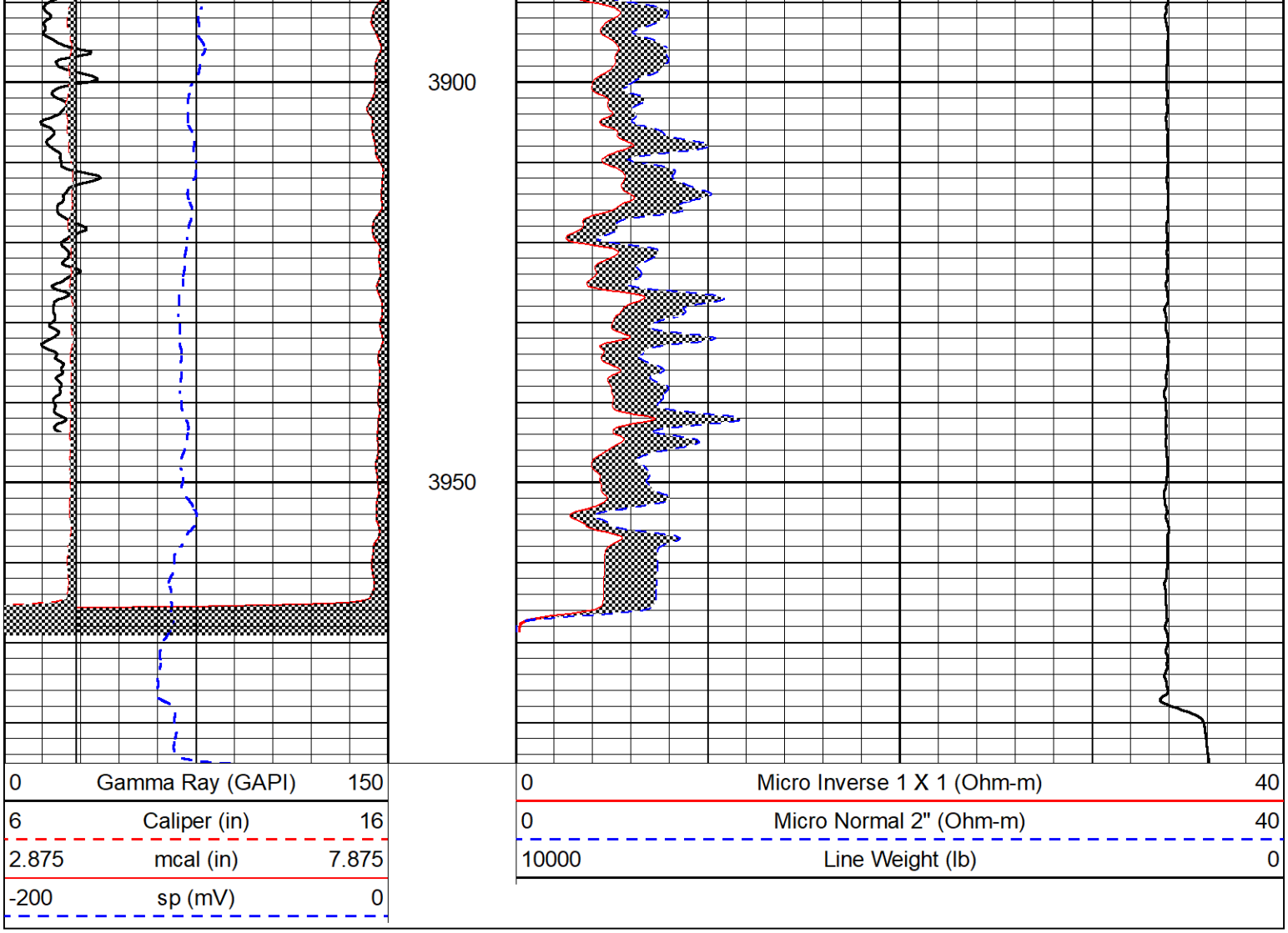
REPEAT SECTION

REPEAT PASS

Database File	amwar_hall 1-21.db
Dataset Pathname	stkml/pass2.10
Presentation Format	_micro
Dataset Creation	Mon Aug 29 09:53:24 2022
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0	Micro Inverse 1 X 1 (Ohm-m)	40
6	Caliper (in)	16	0	Micro Normal 2" (Ohm-m)	40
2.875	mcal (in)	7.875	10000	Line Weight (lb)	0
-200	sp (mV)	0			





Calibration Report

Database File	amwar_hall 1-21.db
Dataset Pathname	stkml/pass3.10
Dataset Creation	Mon Aug 29 09:51:35 2022

Dual Induction Calibration Report

Serial-Model:	501 HT-M&W
Surface Cal Performed:	Sat Aug 27 21:37:29 2022

	Readings		References			Results	
Loop:	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:	Sun Jul 17 13:11:21 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	0.2000

Caliper	1.0052	1.0858	5.0000	16.5000	in	65.0000	-59.8500

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	American Warrior, Inc.
Well	Hall #1-21
Field	Shaeffer-RothGarn
County	Stafford
State	Kansas