



MIDWEST WIRELINE

MICRORESISTIVITY
LOG

Company American Warrior, Inc.		Company American Warrior, Inc.	
Well	Hubin #3-10	Well	Hubin #3-10
Field	Lippoldt West	Field	Lippoldt West
County	Hodgeman	County	Hodgeman
State	Kansas	State	Kansas
Location: API #: 15-083-22010-00-00		Other Services	
1333 FSL & 1692 FWL		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	2337
Log Measured From	Kelly Bushing	K.B.	2350
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2337
Date	7/2/2022		
Run Number	One		
Depth Driller	4725		
Depth Logger	4652		
Bottom Logged Interval	4651		
Top Log Interval	3800		
Casing Driller	8.625 @ 311		
Casing Logger	311		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3000		
Density / Viscosity	9.3 54		
pH / Fluid Loss	9.5 8.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.45 @ 72		
Rmt @ Meas. Temp	0.34 @ 72		
Rmc @ Meas. Temp	0.61 @ 72		
Source of Rmt / Rmc	Charts		
Rm @ BHT	0.26 @ 123		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	123		
Equipment Number	24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Kevin Timson		

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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.

Jetmore,
East to 219 Rd, South to K Rd, 2 East,
North 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		This Log Record Was Witnessed By	
Engineer: D. Schmidt		Primary Witness: Kevin Timson	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\american warrior_hubin 3-10.db
Dataset field/well/stkml/pass3.2/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	125	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	85	70	Off	4652

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

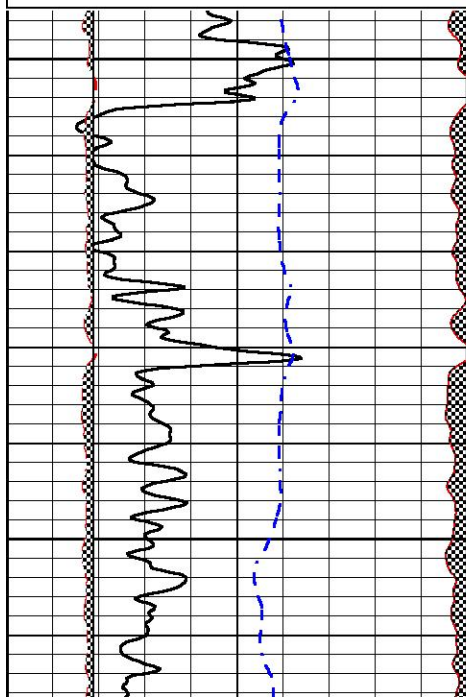
DETAIL SECTION

MAIN PASS

Database File american warrior_hubin 3-10.db
Dataset Pathname stkml/pass3.1
Presentation Format _micro
Dataset Creation Sat Jul 02 10:10:20 2022
Charted by Depth in Feet scaled 1:240

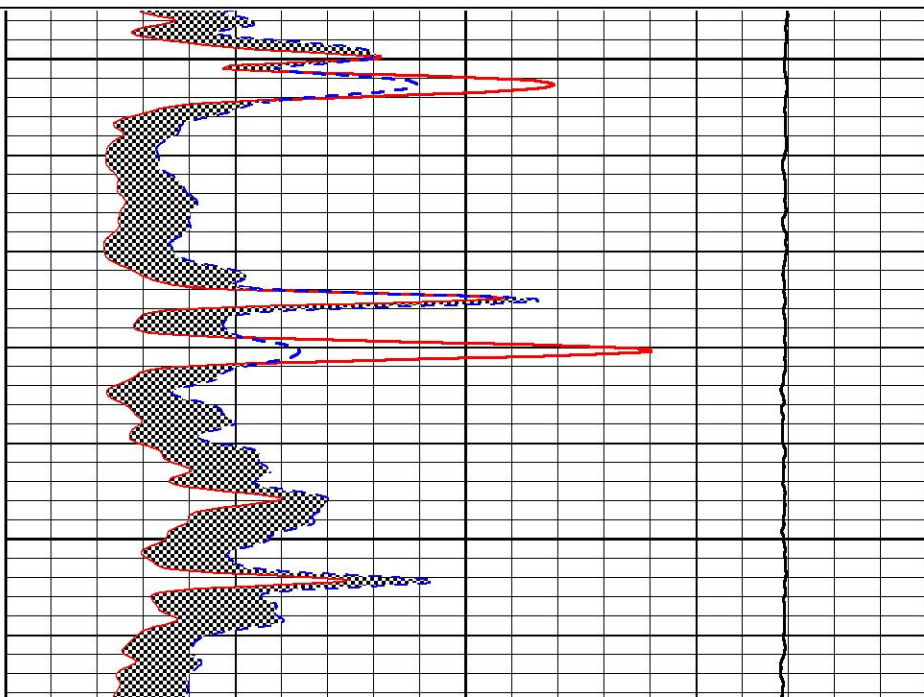
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

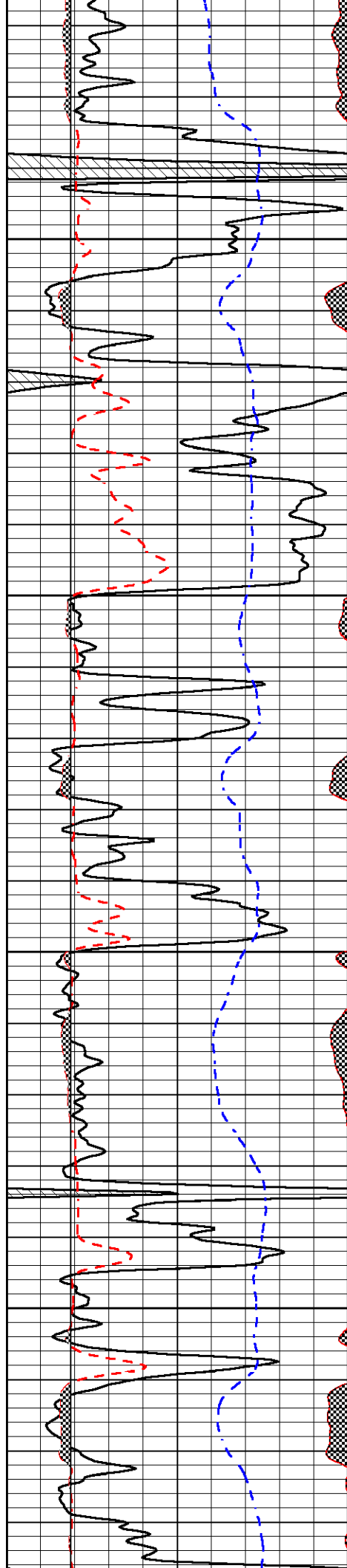
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3800

3850



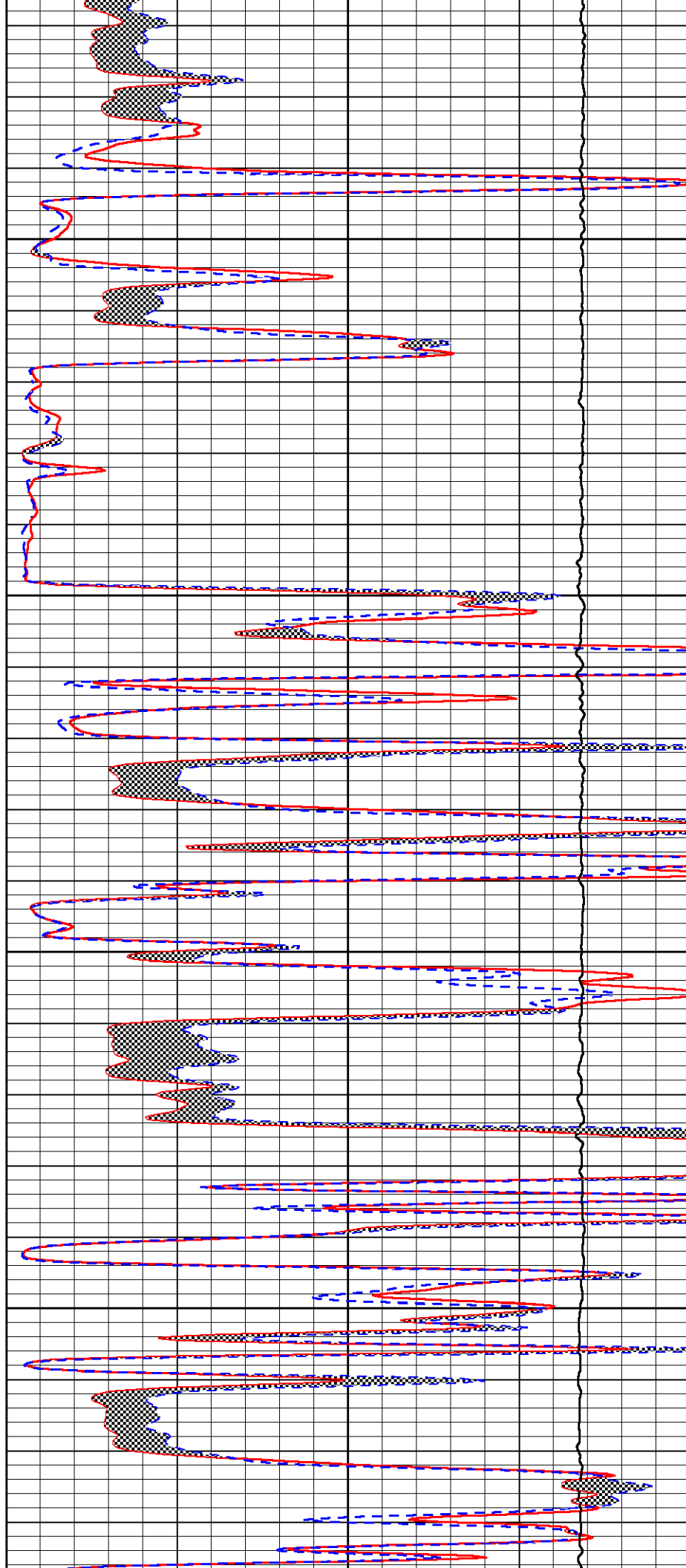


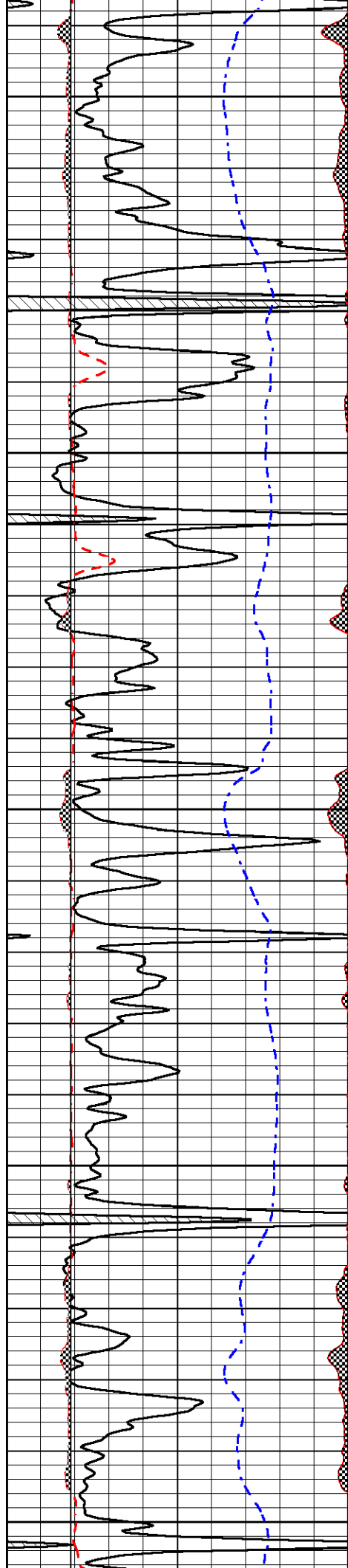
3900

3950

4000

4050





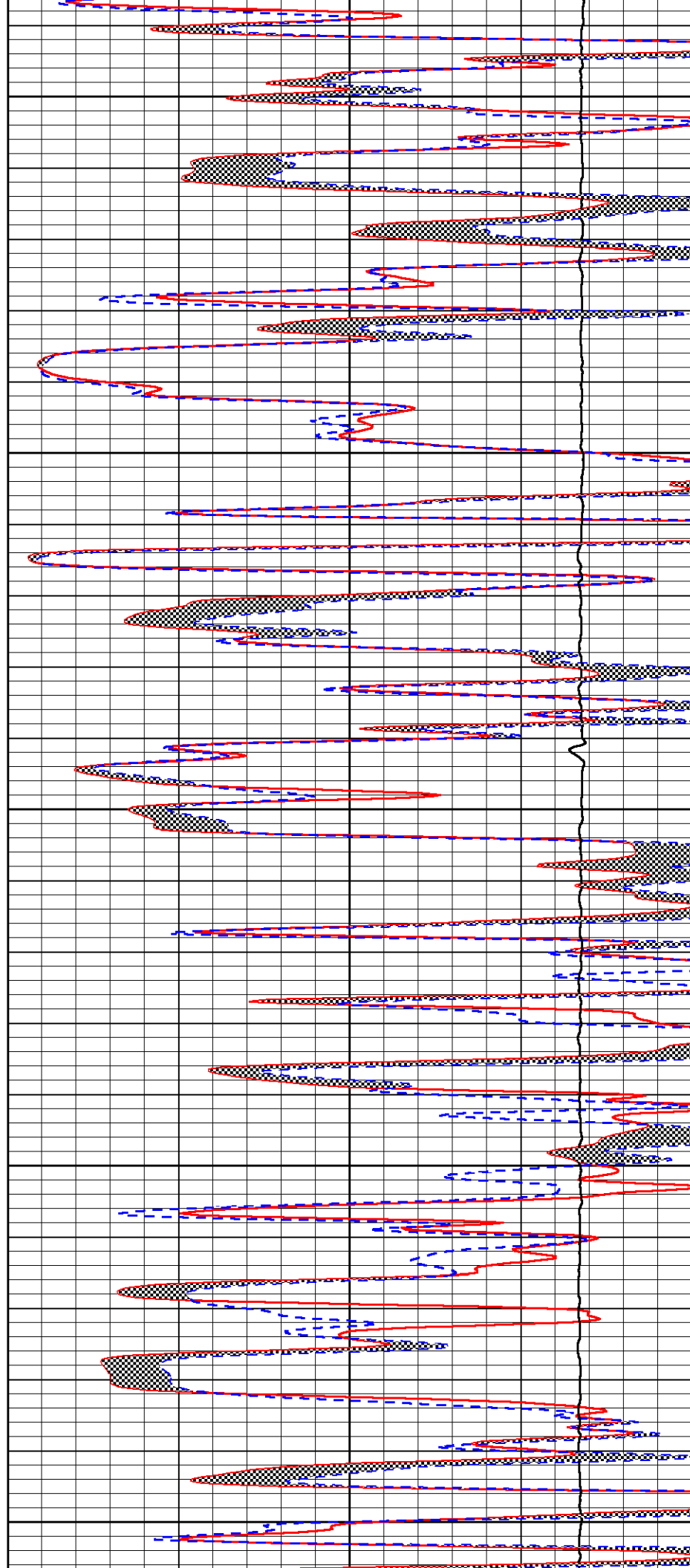
4100

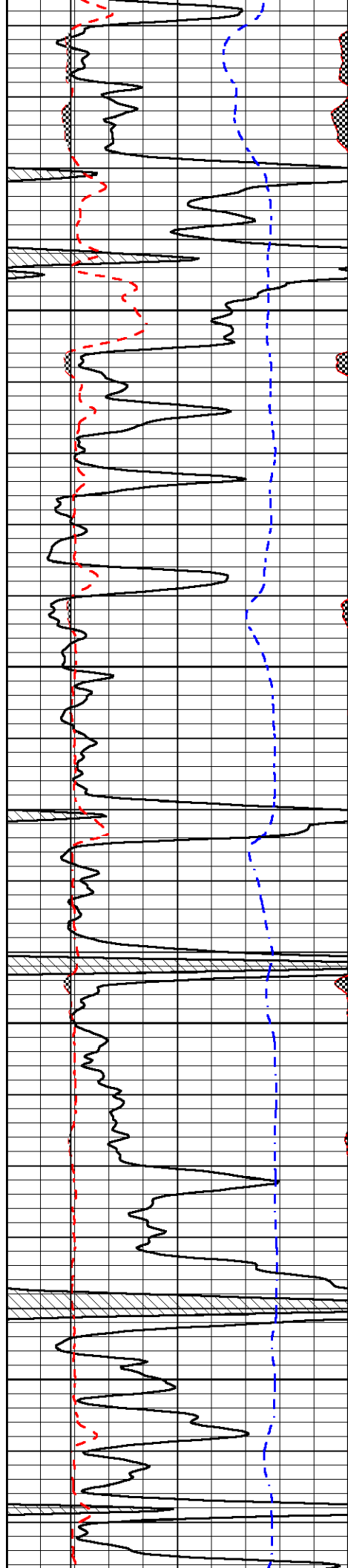
4150

4200

4250

4300



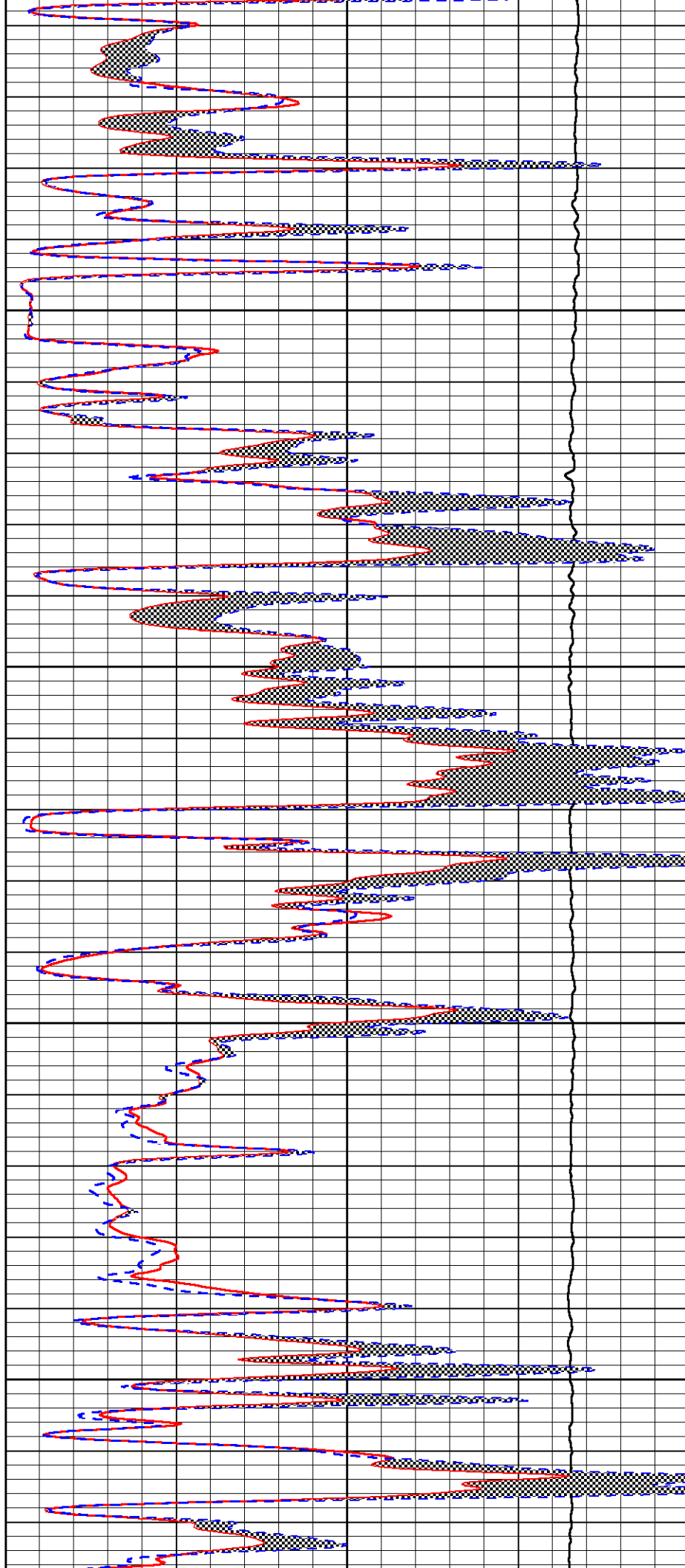


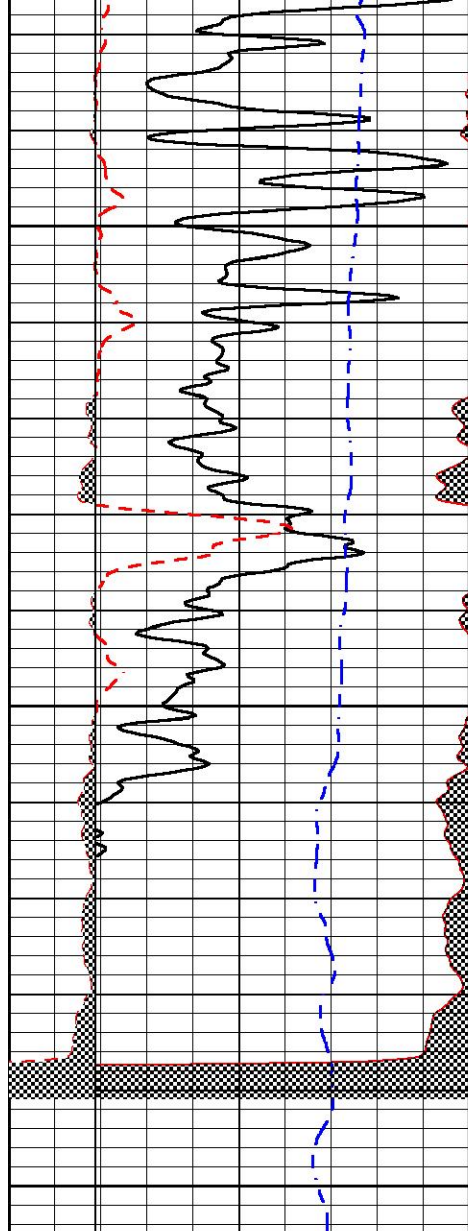
4350

4400

4450

4500



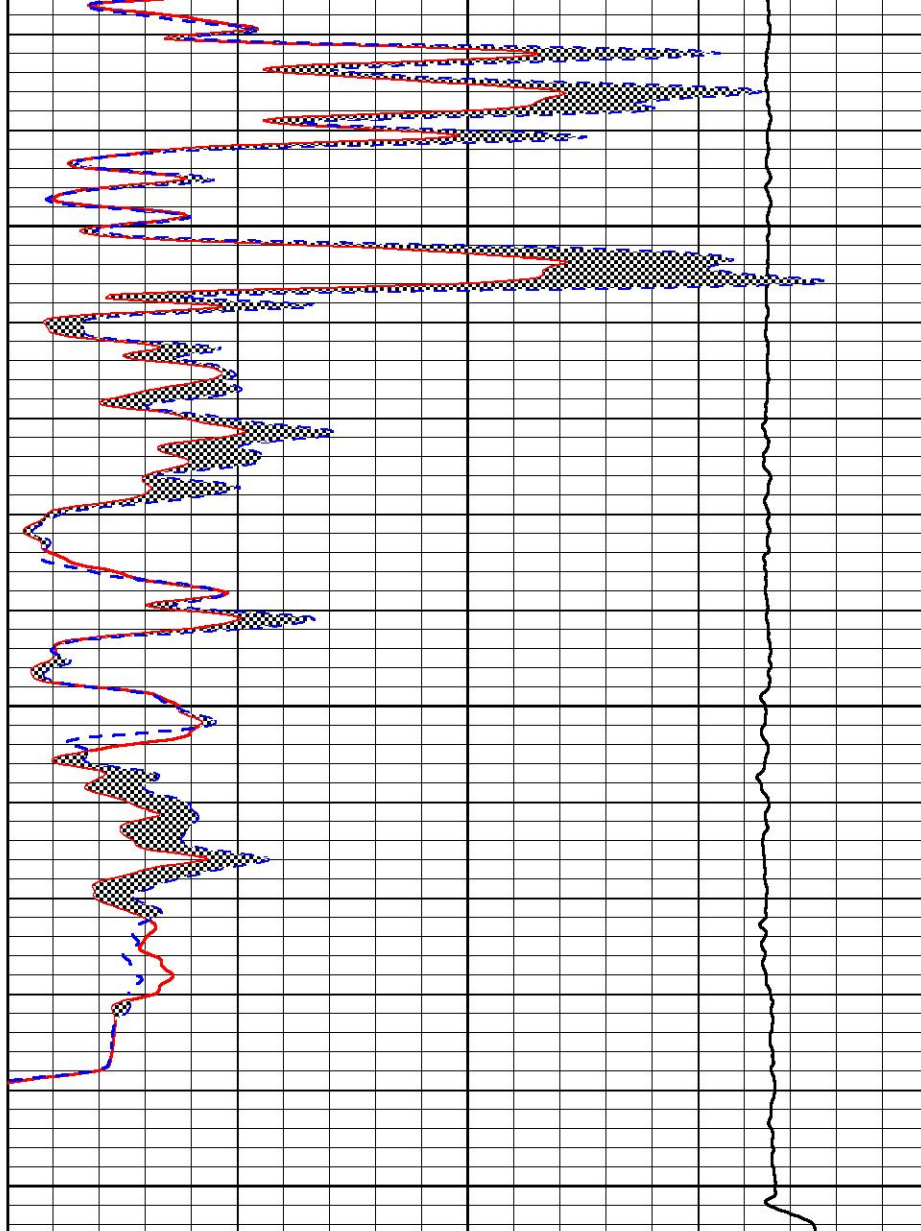


0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

4550

4600

4650



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



MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

Database File american_warrior_hubin 3-10.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _micro
 Dataset Creation Sat Jul 02 09:40:31 2022
 Charted by Depth in Feet scaled 1:240

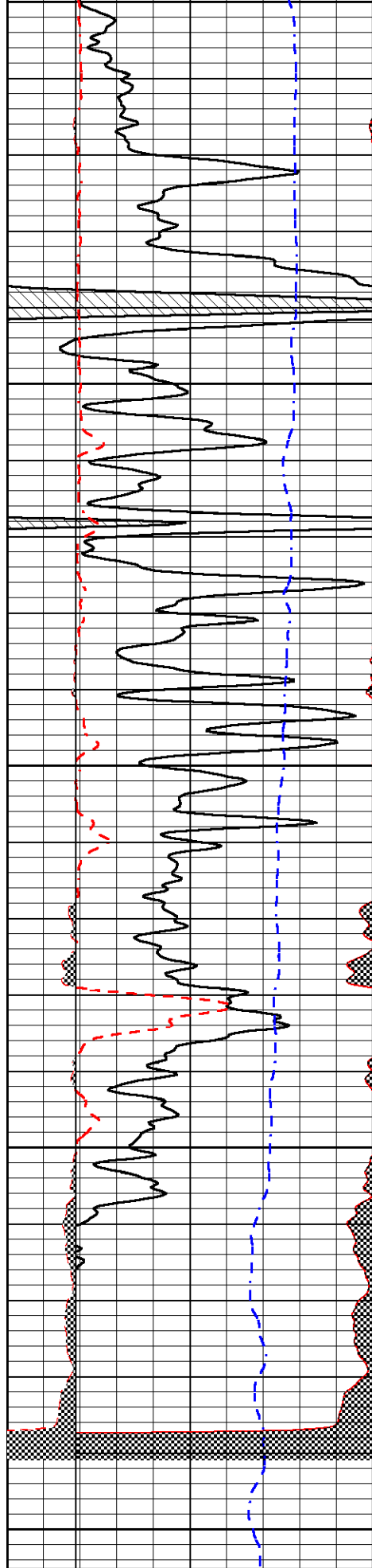
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

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



4450





4450

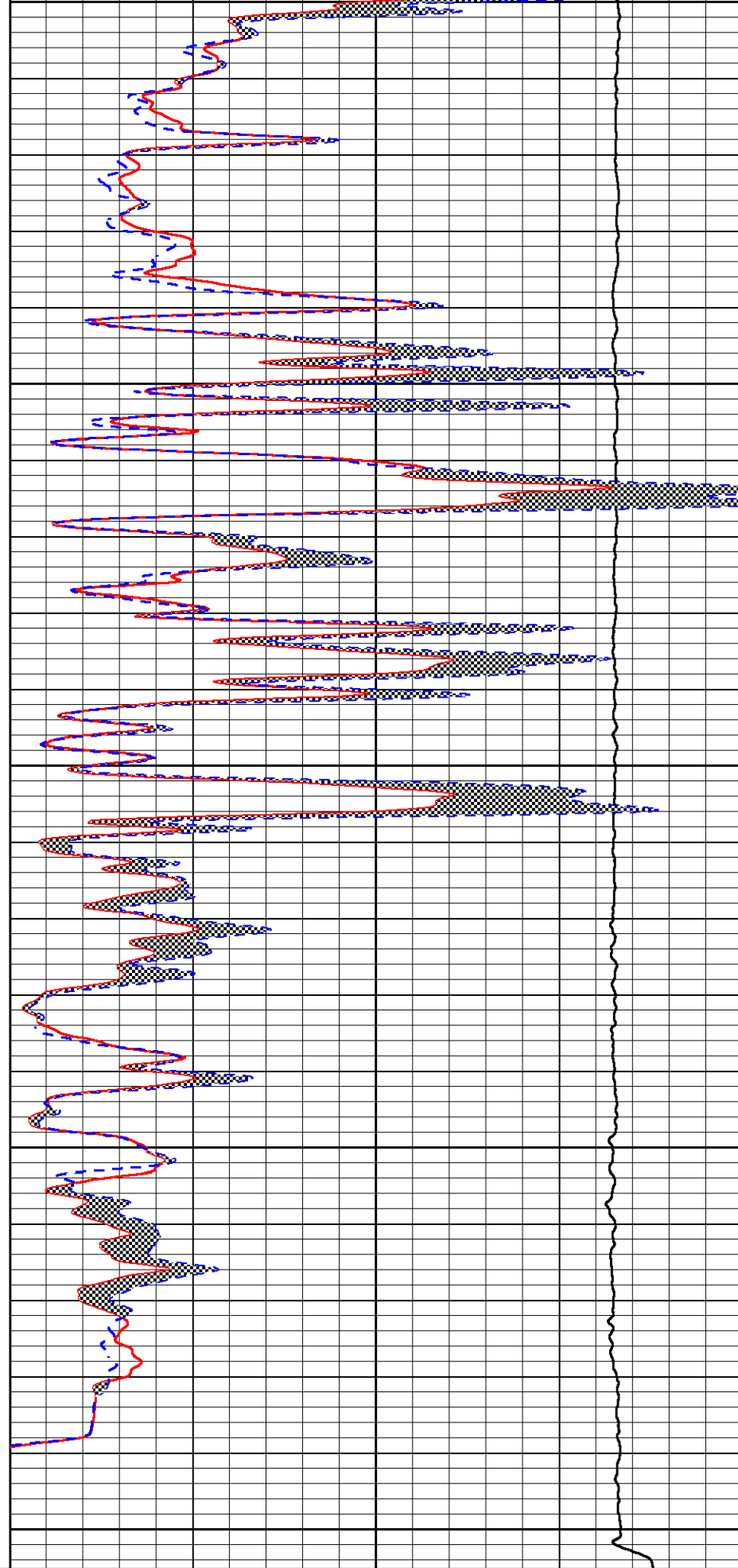
4500

4550

4600

4650

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



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

Calibration Report	
Database File	american warrior_hubin 3-10.db
Dataset Pathname	stkml/pass3.2
Dataset Creation	Sat Jul 02 09:46:12 2022

Dual Induction Calibration Report

Serial-Model:	501 HT-M&W
Surface Cal Performed:	Sat Apr 30 02:12:10 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-34.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.350	-11.000

Microlog Calibration Report

Serial-Model:	401-PSIML
Performed:	Mon Jun 27 17:53:09 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	31500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.4000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-140.1000

Compensated Density Calibration Report

Serial-Model:	302-02-M&W
Source #:	20762B
Master Calibration Performed:	Wed Jun 22 01:19:51 2022

Master Calibration						
	Density		Far Detector		Near Detector	
	Magnesium	1.755 g/cc	4422.04	6163.44	cps	
	Aluminum	2.655 g/cc	835.14	3912.91	cps	
Spine Angle = 74.75			Density/Spine Ratio = 0.521			
	Size		Reading			
	Small Ring	8.00 in	0.53			
	Large Ring	16.00 in	0.60			

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W

CALIBRATION			
Detector	Readings	Target	Normalization
Sh-40	83.639	1000.00	1.0005

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:	101	
Tool Model:	M&W	
Performed:	Mon Jan 24 19:14:46 2022	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.5500	GAPI/cps

	Company	American Warrior, Inc.
	Well	Hubin #3-10
	Field	Lippoldt West
	County	Hodgeman
	State	Kansas