



MIDWEST WIRELINE

MICRORESISTIVITY
LOG

Company American Warrior, Inc.		Company American Warrior, Inc.	
Well	Hubin Unit #2-10	Well	Hubin Unit #2-10
Field	Lippoldt West	Field	Lippoldt West
County	Hodgeman	County	Hodgeman
State	Kansas	State	Kansas
Location: API #: 15-083-22011-00-00		Other Services	
SEC 10 TWP 23S RGE 23W		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	2324
Log Measured From	Kelly Bushing	K.B.	2337
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2324
Date	6/22/2022		
Run Number	One		
Depth Driller	4700		
Depth Logger	4705		
Bottom Logged Interval	4704		
Top Log Interval	3800		
Casing Driller	8.625 @ 314		
Casing Logger	313		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	6900		
Density / Viscosity	9.25 46		
pH / Fluid Loss	9.0 11.2		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.8 @ 74		
Rmf @ Meas. Temp	0.6 @ 74		
Rmc @ Meas. Temp	1.08 @ 74		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.48 @ 123		
Operating Rig Time	2.5 Hours		
Max Rec. Temp. F	123		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
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, S to L Rd, 1 E to Rd 219,
S to K Rd, 2 E, N 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: T. Martin		Primary Witness: Kevin Timson	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\amwar_hubin unit #2-10.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 123	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 55	degF 0	Off	ft 4705

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

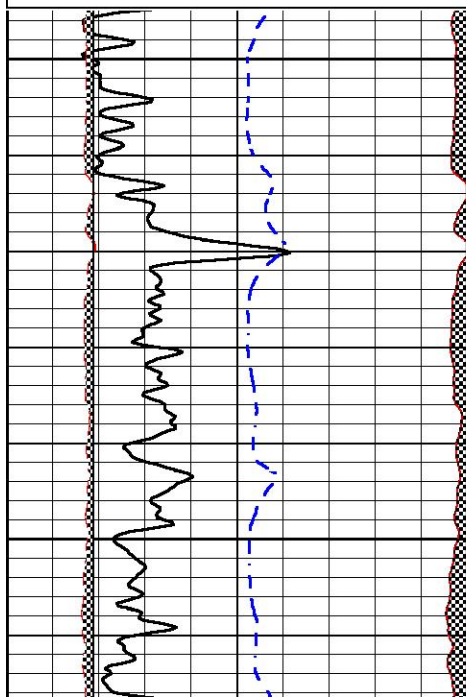
DETAIL SECTION

MAIN PASS

Database File amwar_hubin unit #2-10.db
Dataset Pathname StkMI/pass3.1
Presentation Format _micro
Dataset Creation Wed Jun 22 22:13:17 2022
Charted by Depth in Feet scaled 1:240

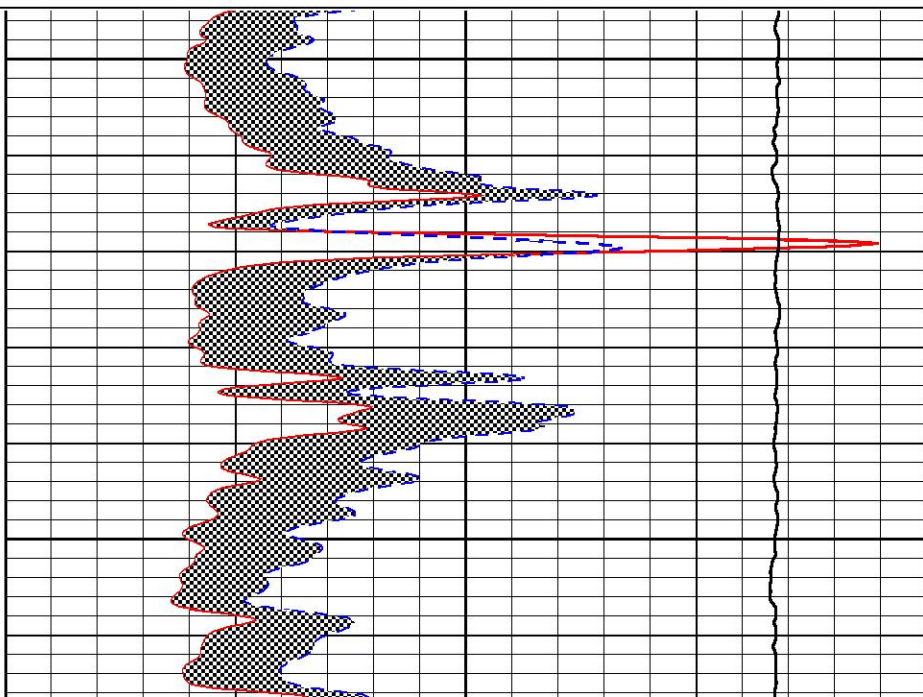
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

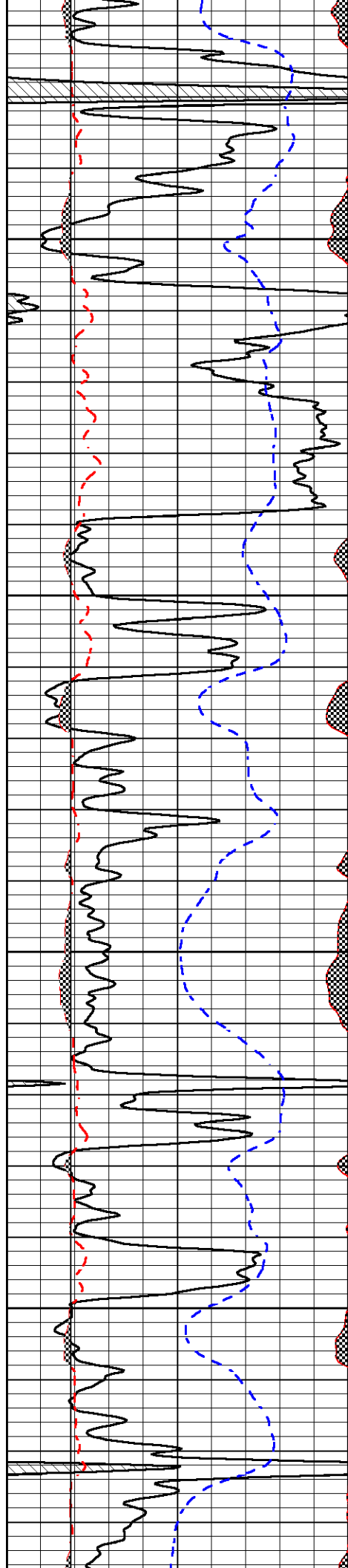
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3800

3850



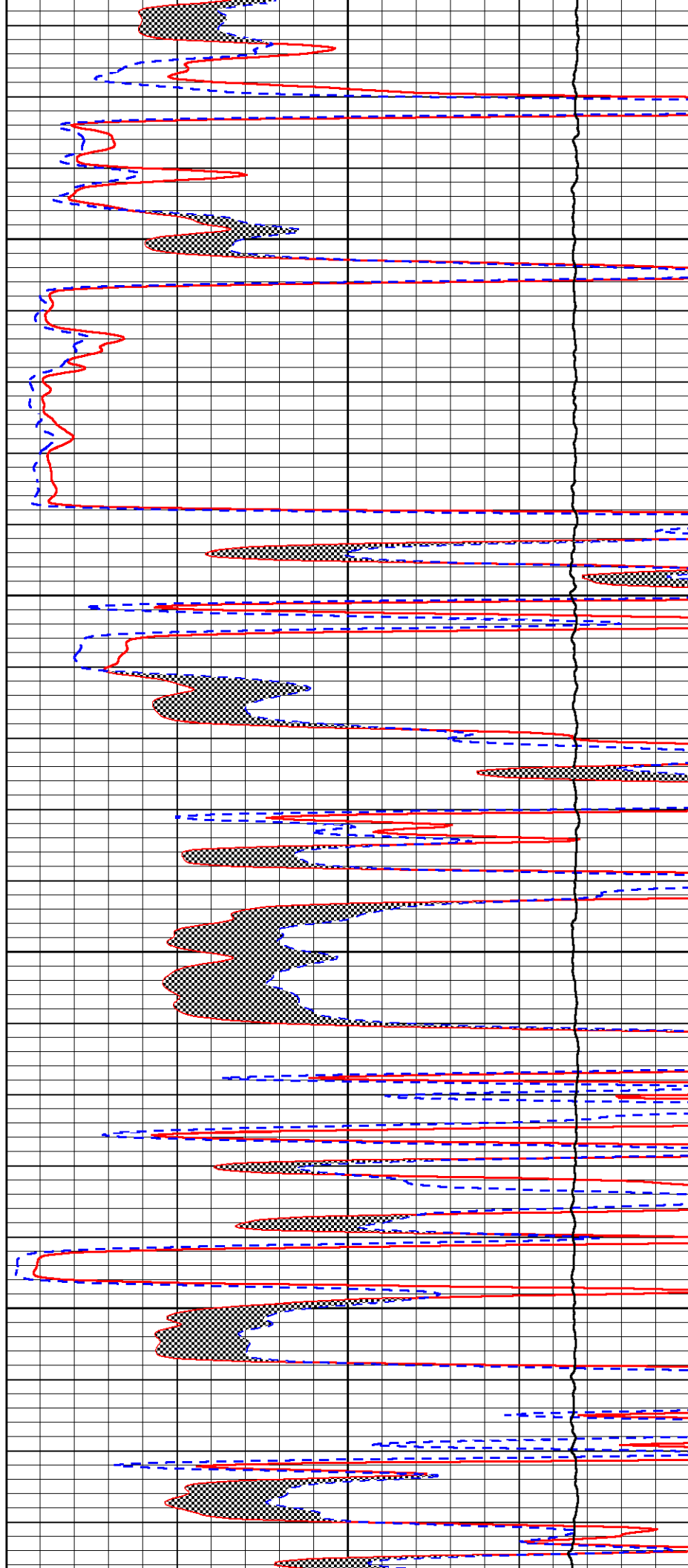


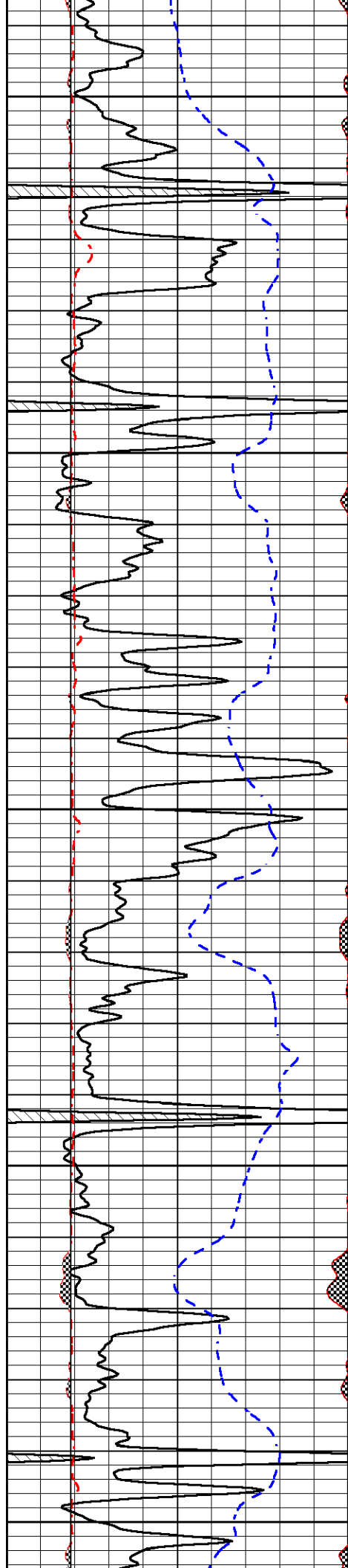
3900

3950

4000

4050





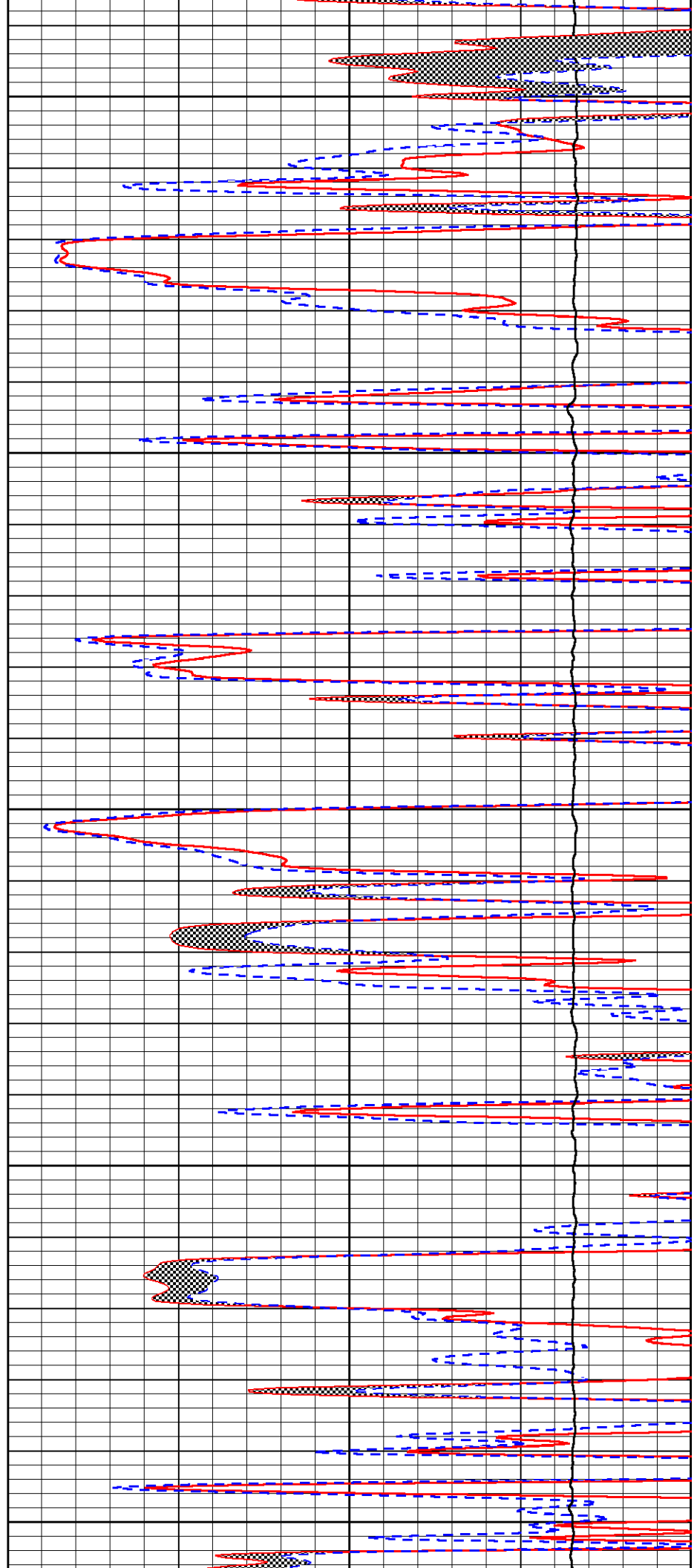
4100

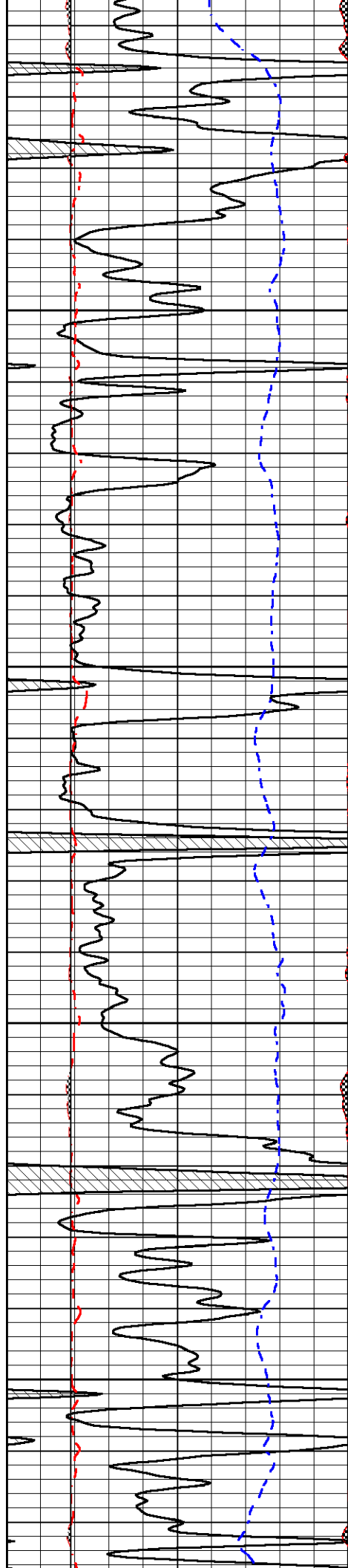
4150

4200

4250

4300



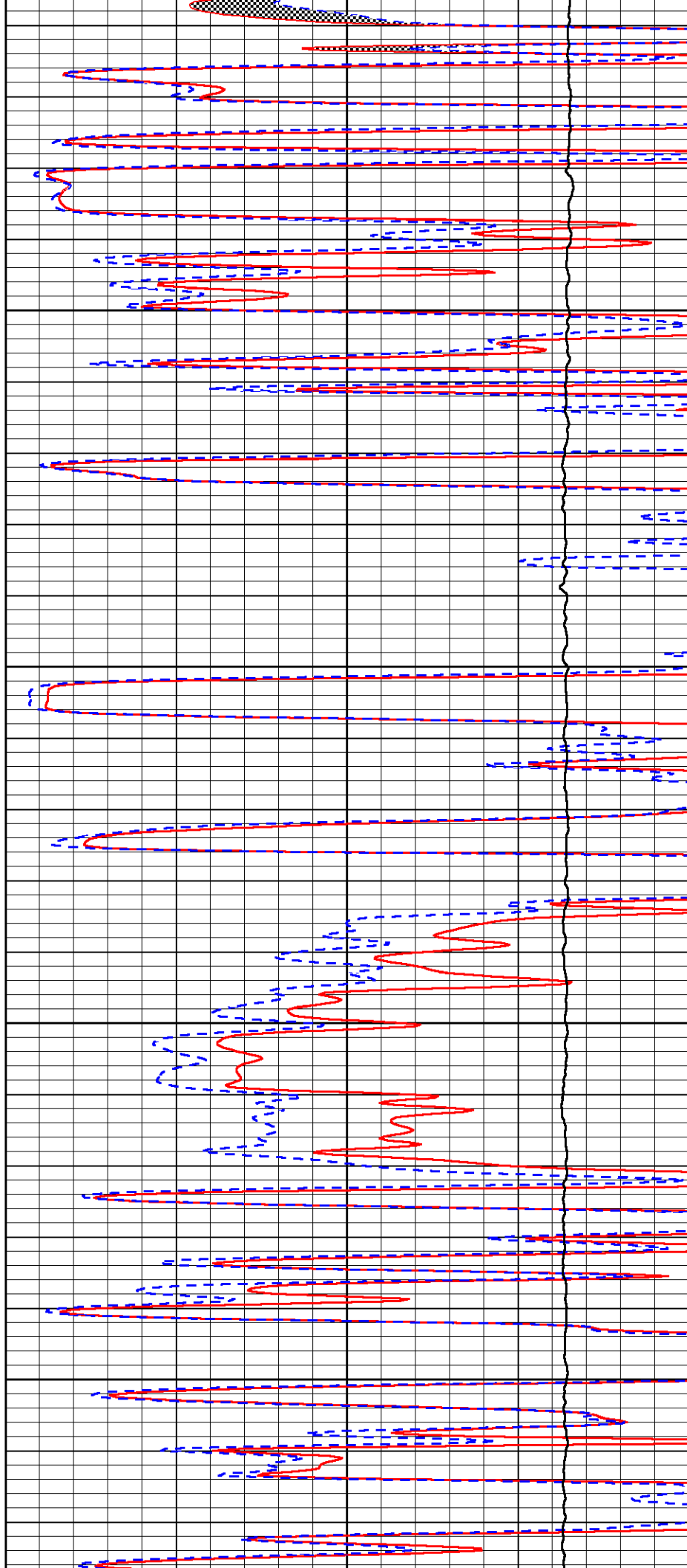


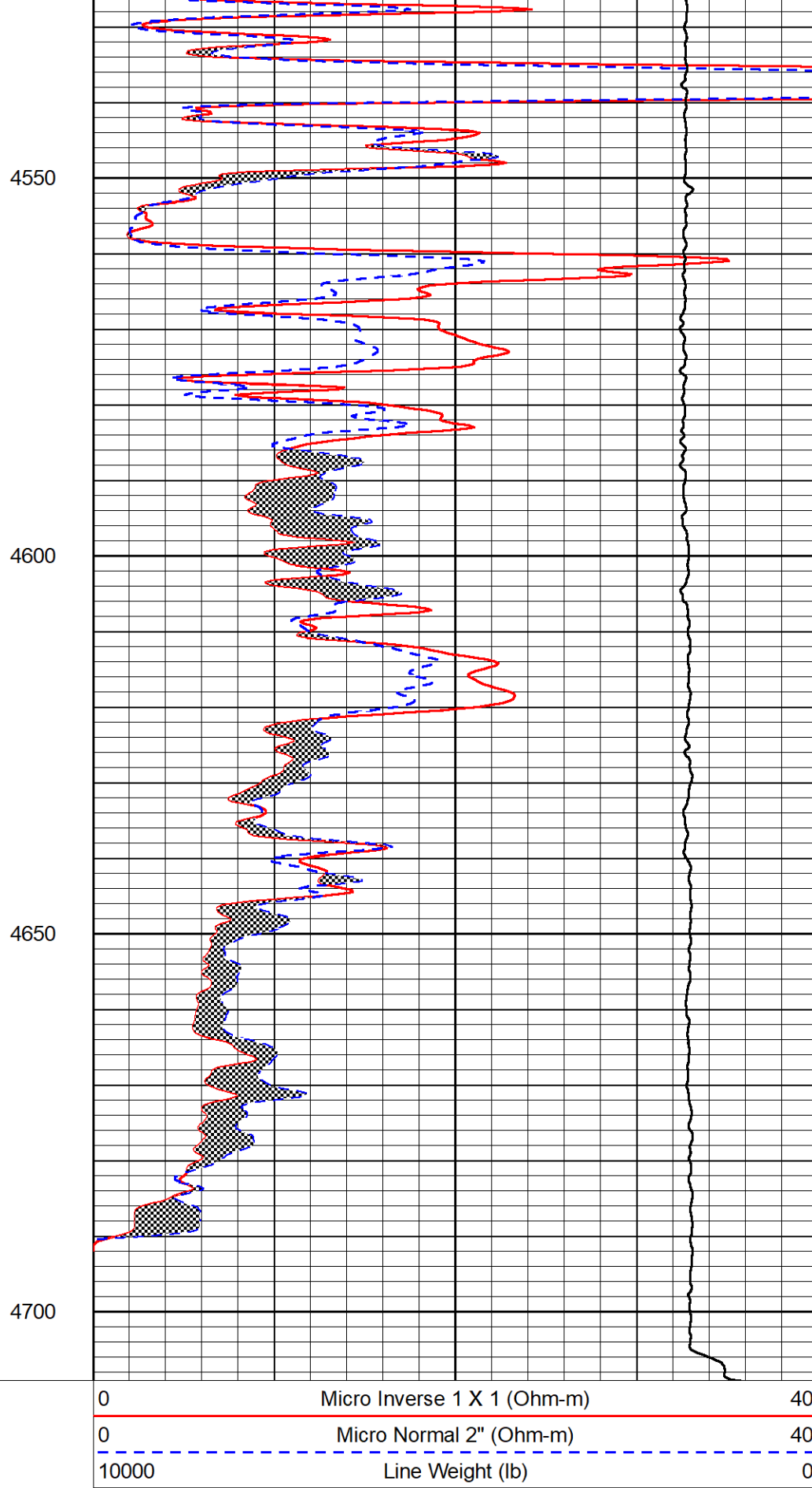
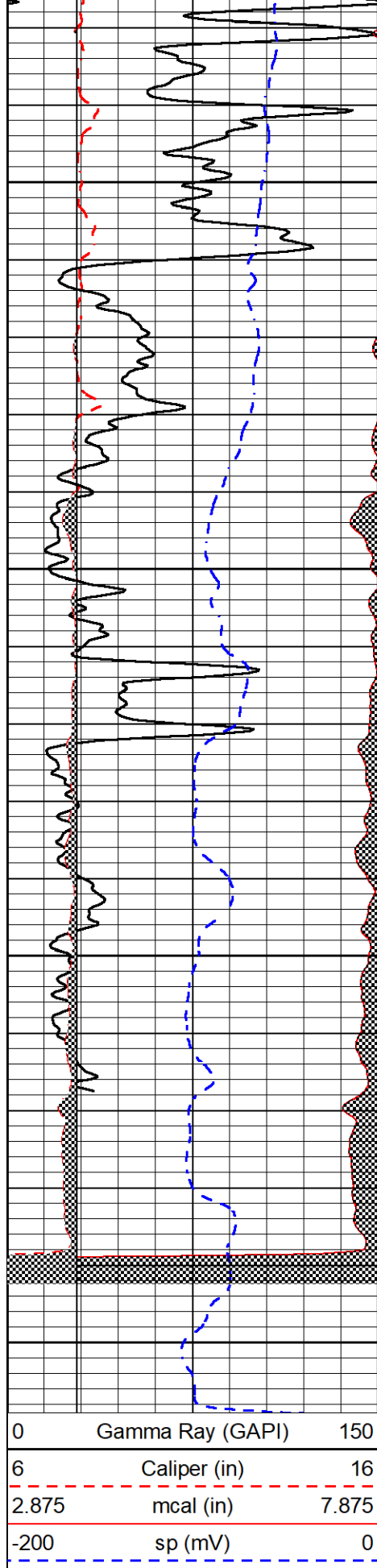
4350

4400

4450

4500





REPEAT SECTION

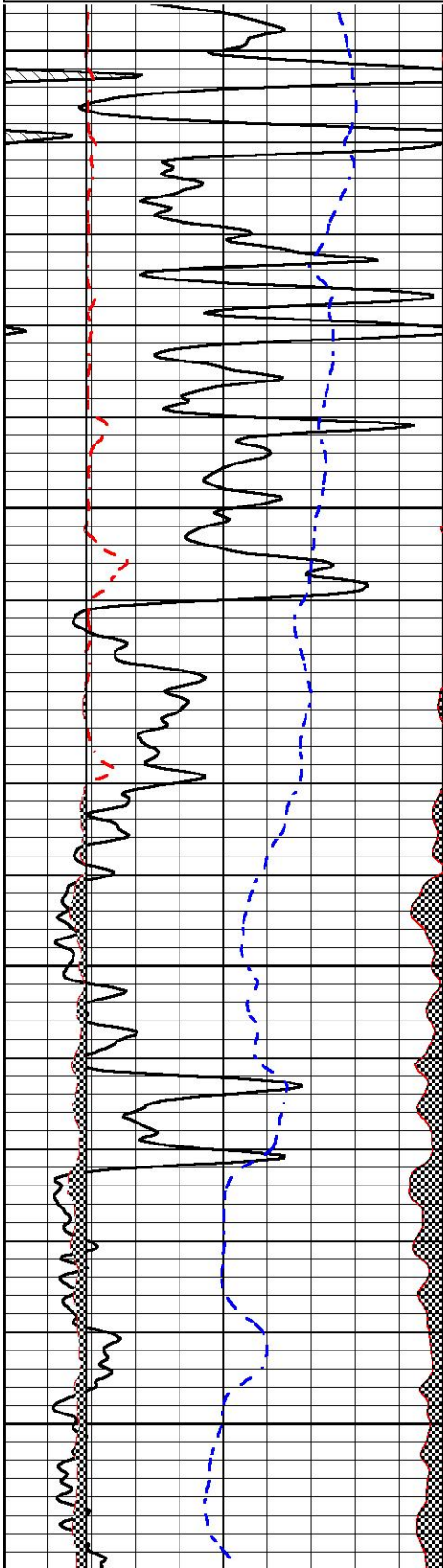


REPEAT PASS

Database File amwar_hubin unit #2-10.db
Dataset Pathname StkMI/pass2.1
Presentation Format _micro
Dataset Creation Wed Jun 22 21:36:51 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

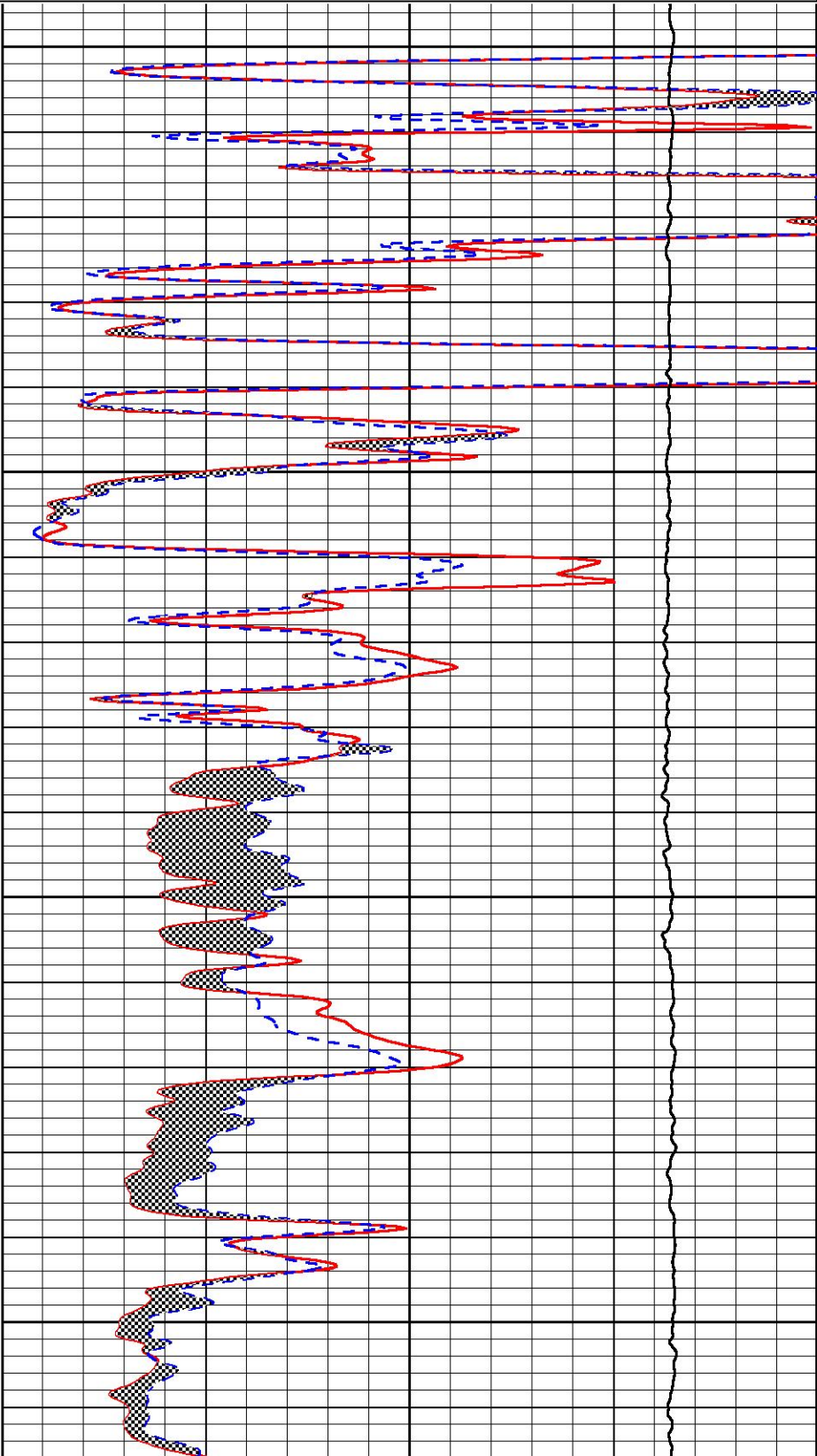


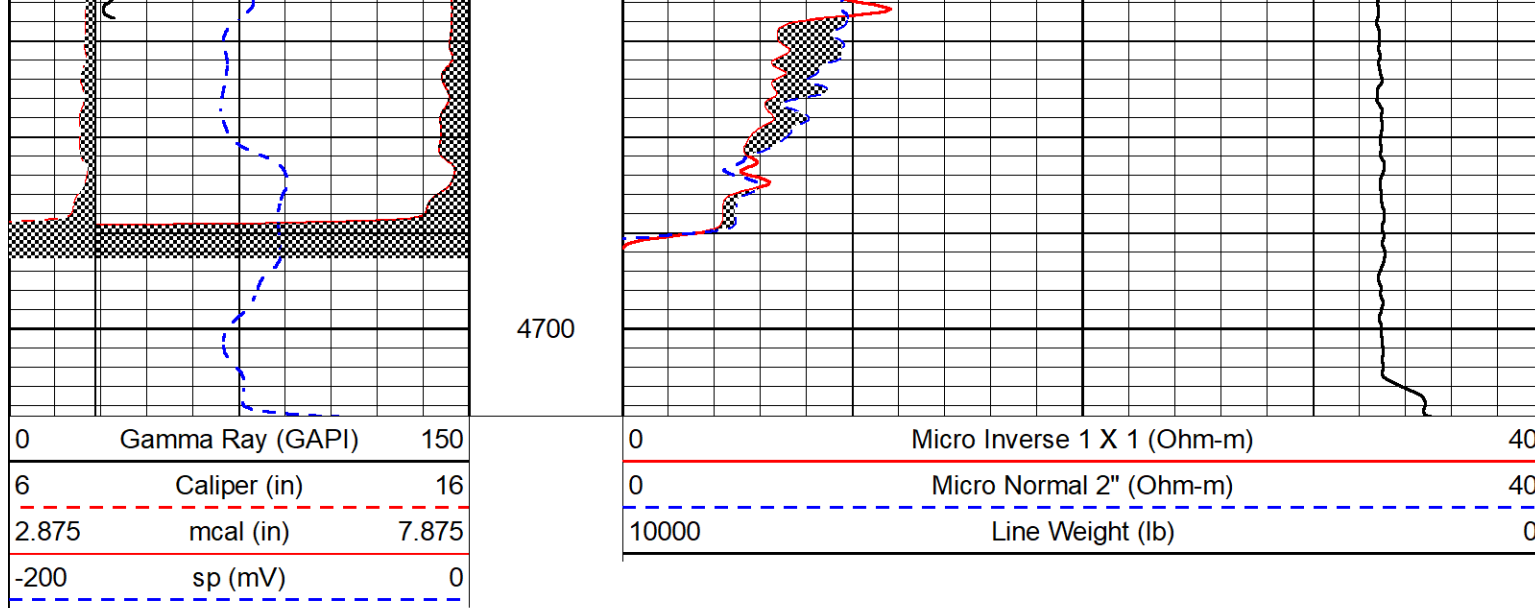
4500

4550

4600

4650





Calibration Report		
Database File	amwar_hubin unit #2-10.db	
Dataset Pathname	StkMI/pass3.1	
Dataset Creation	Wed Jun 22 22:13:17 2022	

Dual Induction Calibration Report

Serial-Model:	502 HT-M&W
Surface Cal Performed:	Wed Jun 22 04:33:34 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.454	-32.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.350	-9.000

Microlog Calibration Report

Serial-Model:	401-PSIML
Performed:	Wed Jun 22 01:19:38 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	22500.0000	-1.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	14000.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-138.8000

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	2.665	g/cc	835.14	3912.91	cps	

Spine Angle = 74.75

Density/Spine Ratio = 0.527

Size

Reading

Small Ring
Large Ring8.00
16.00in
in0.53
0.60

Compensated Neutron Calibration Report

Serial Number:
Tool Model:207-MW
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:	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 Unit #2-10

Field Lippoldt West

County Hodgeman

MIDWEST WIRELINE

State Kansas