



MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company		ARP Operating LLC	
Well	Hudson #1-15		
Field	Unnamed		
County	Ellis	State	Kansas
Location:		API # : 15-051-27027-00-00	Other Services
Permanent Datum		Ground Level	Elevation 2281
Log Measured From		Kelly Bushing	K.B. 2289
Drilling Measured From		Kelly Bushing	D.F. 2281
SEC 15 TWP 12S RGE 20W		CNL/CDL DIL/BHCS	
Date	3/13/2022		
Run Number	Two		
Depth Driller	4096		
Depth Logger	4094		
Bottom Logged Interval	4093		
Top Log Interval	3400		
Casing Driller	8.625 @ 224		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4000		
Density / Viscosity	9.0	58	
pH / Fluid Loss	11.0	5.2	
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.9 @ 68		
Rmf @ Meas. Temp	0.68 @ 68		
Rmc @ Meas. Temp	1.22 @ 68		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.52 @ 117		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	117		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Sean Deenihan		

<<< Fold Here >>>

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.

Ellis, KS, 5 N, E into

Log Measured From: Kelly Bushing 8 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: T. Martin
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Sean Deenihan
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\arp_hudson #1-15.db
Dataset field/well/Stack/pass4.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	117	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	80	60		4094

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



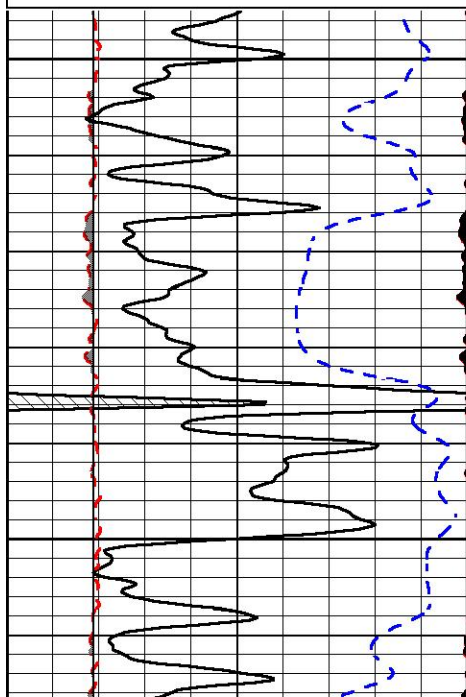
DETAIL SECTION

MAIN PASS

Database File arp_hudson #1-15.db
Dataset Pathname Stack/pass4.1
Presentation Format _micro
Dataset Creation Sun Mar 13 22:00:59 2022
Charted by Depth in Feet scaled 1:240

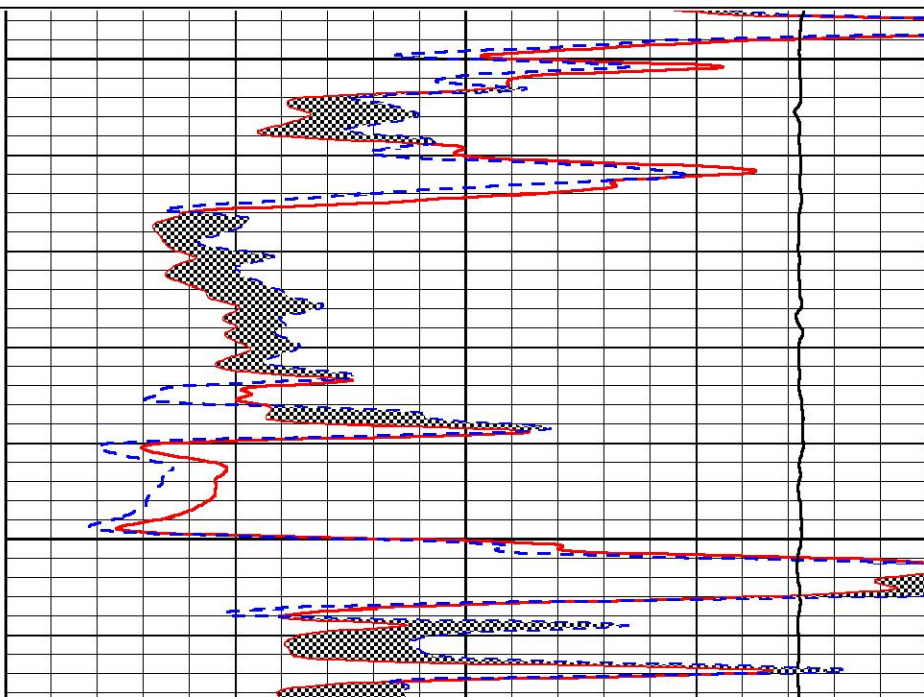
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

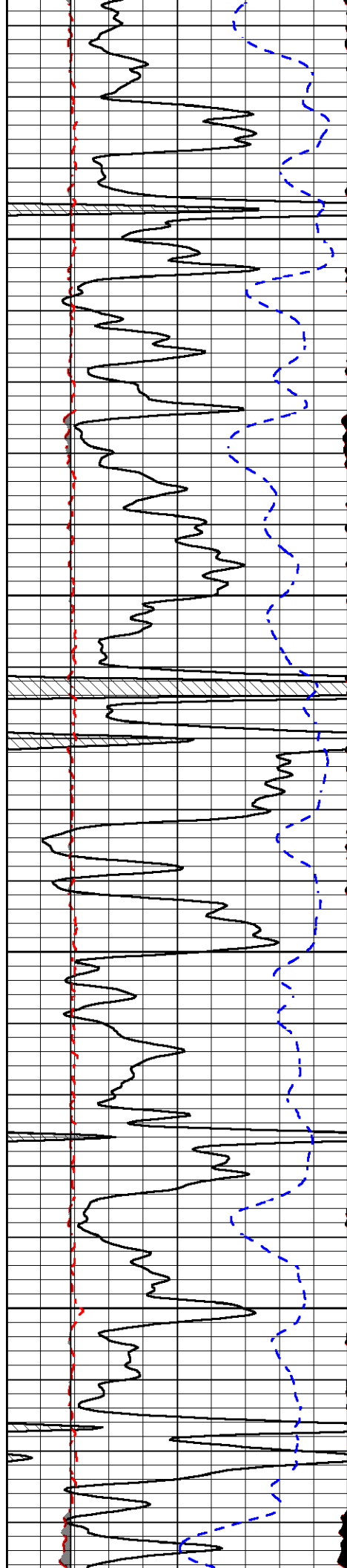
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3400

3450



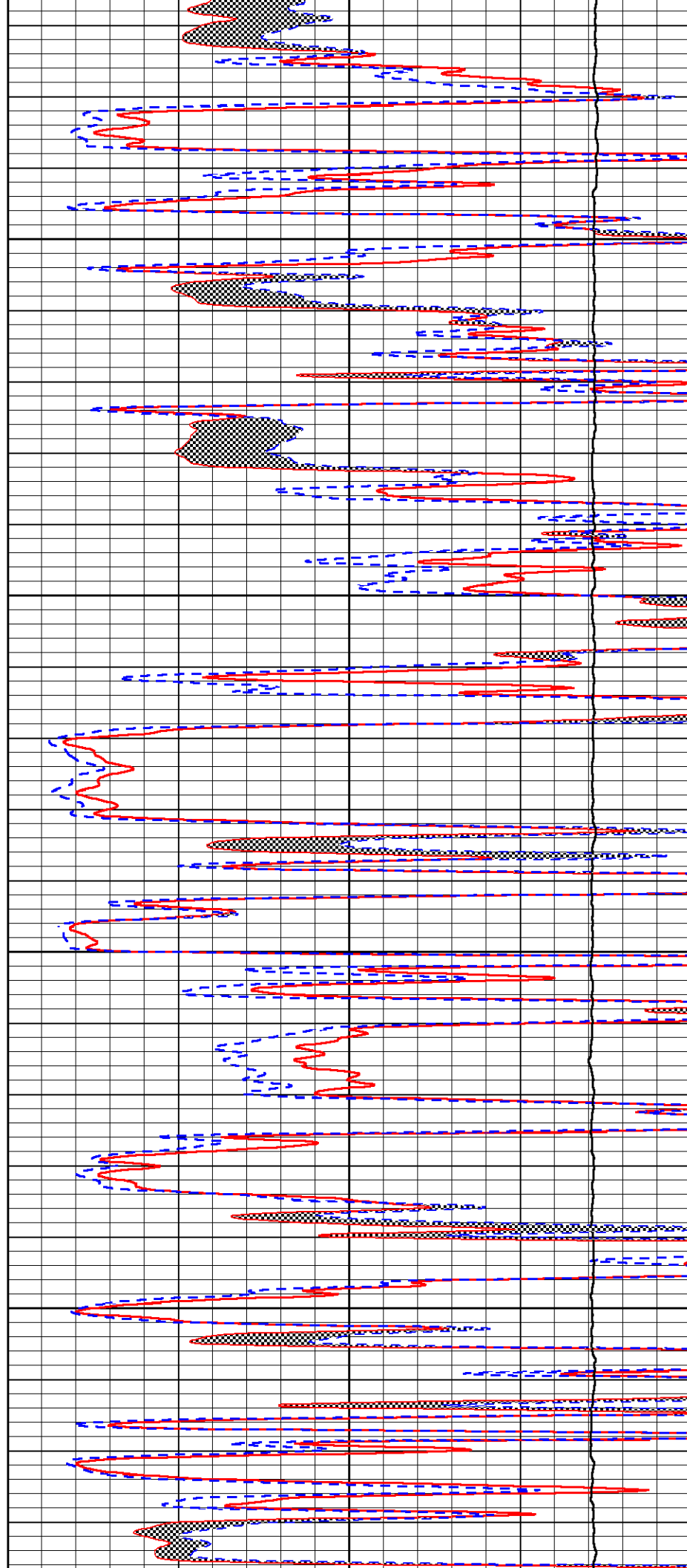


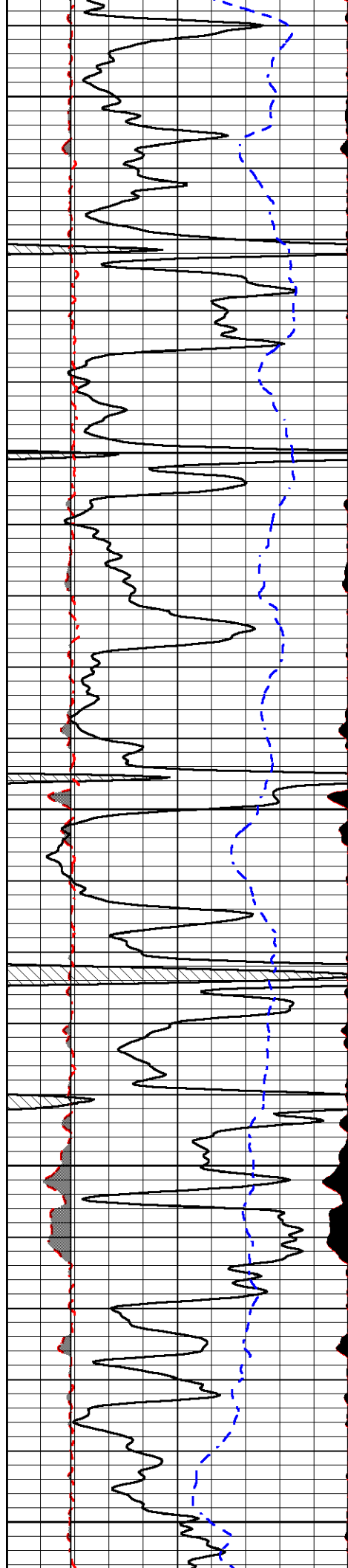
3500

3550

3600

3650





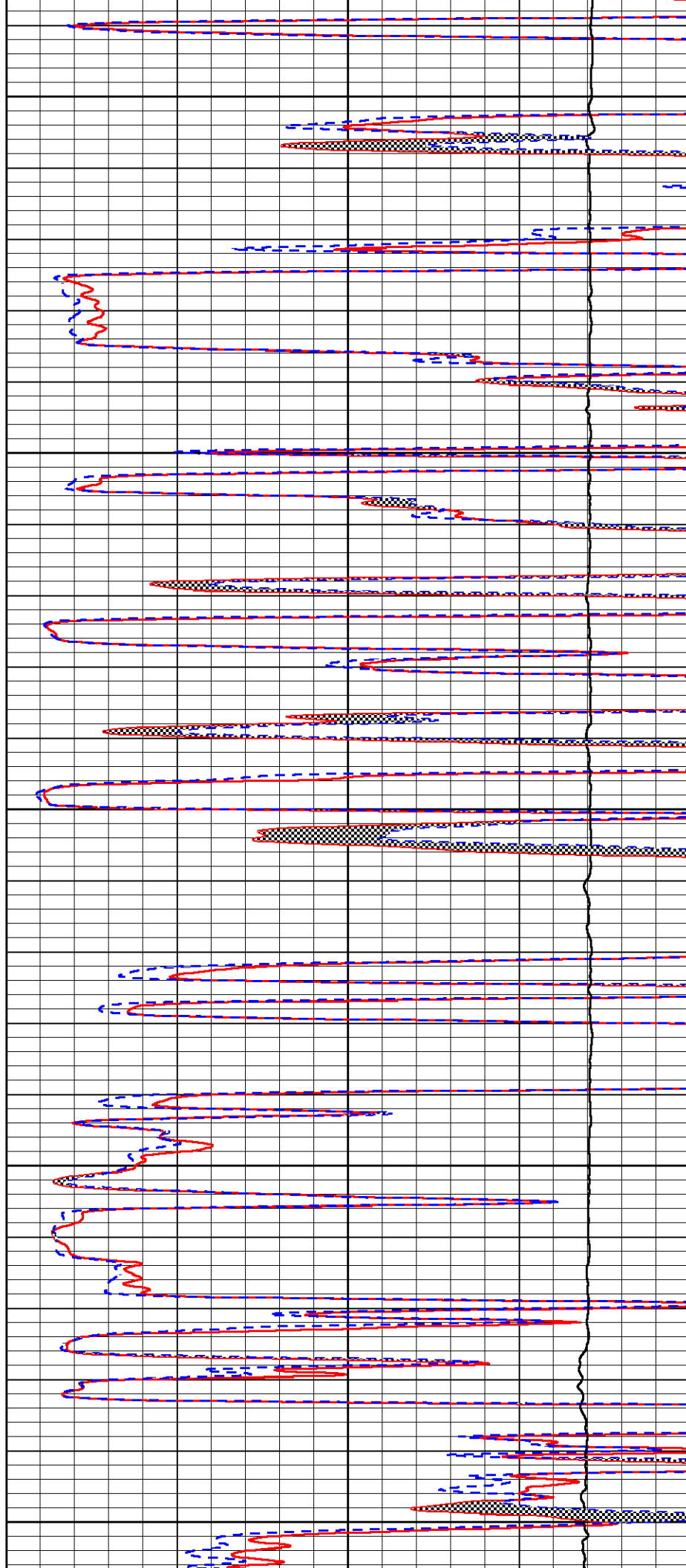
3700

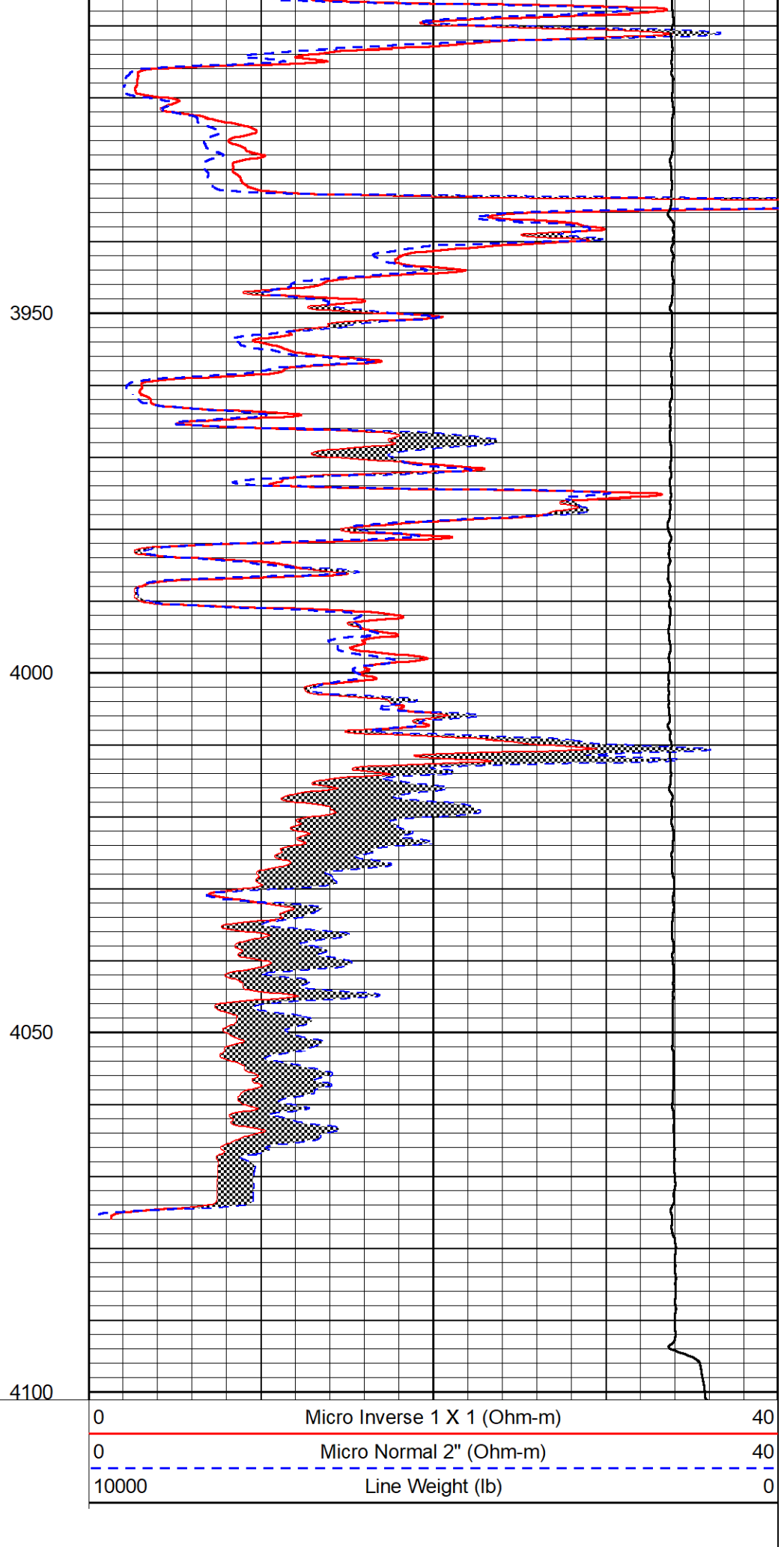
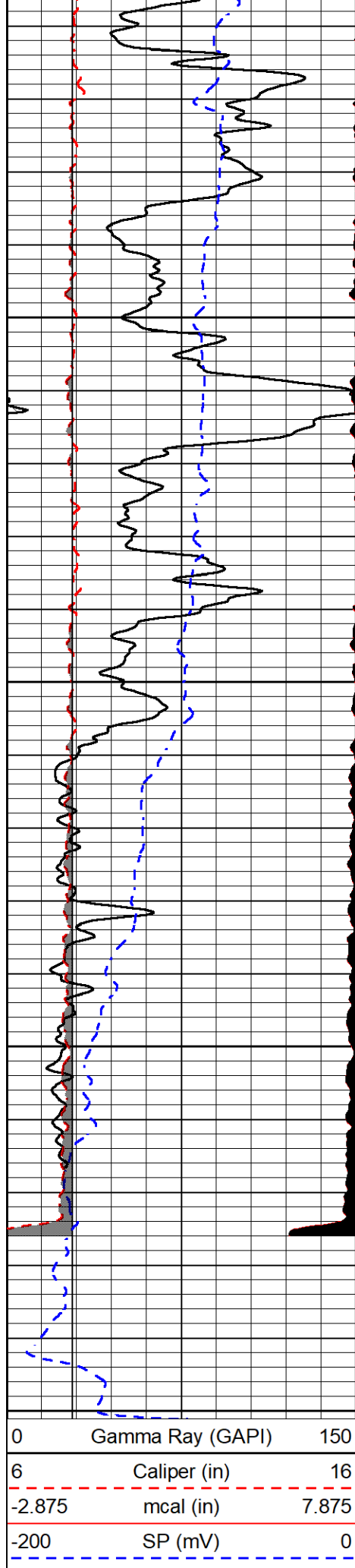
3750

3800

3850

3900







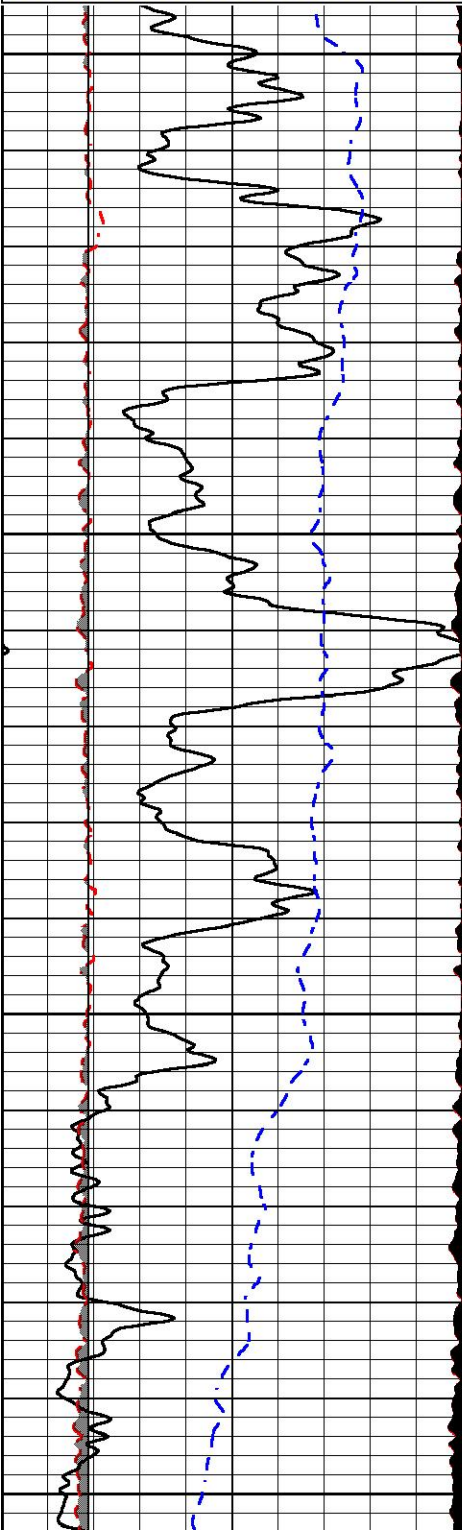
REPEAT SECTION

REPEAT PASS

Database File arp_hudson #1-15.db
Dataset Pathname Stack/pass3.1
Presentation Format _micro
Dataset Creation Sun Mar 13 21:22:15 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

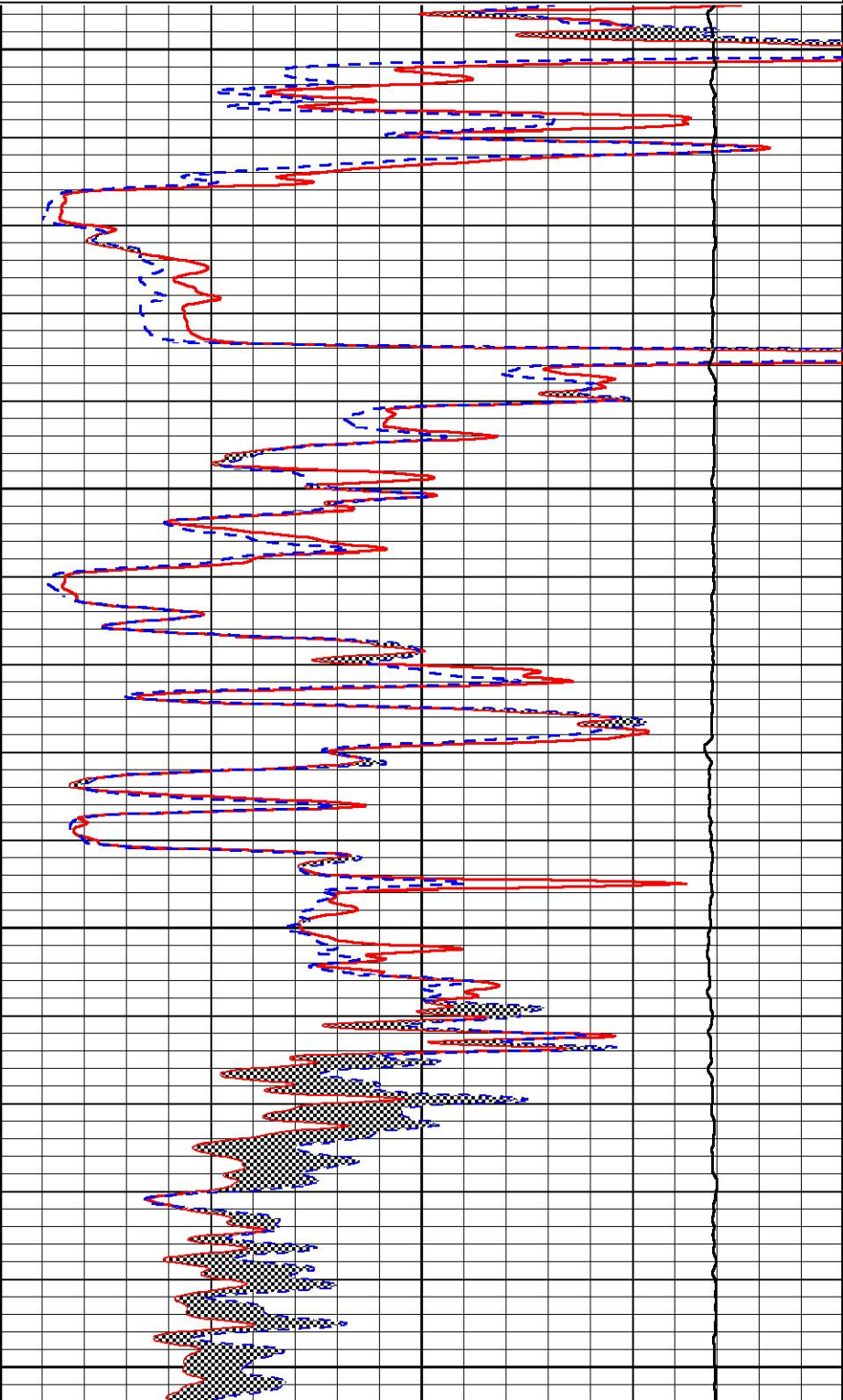


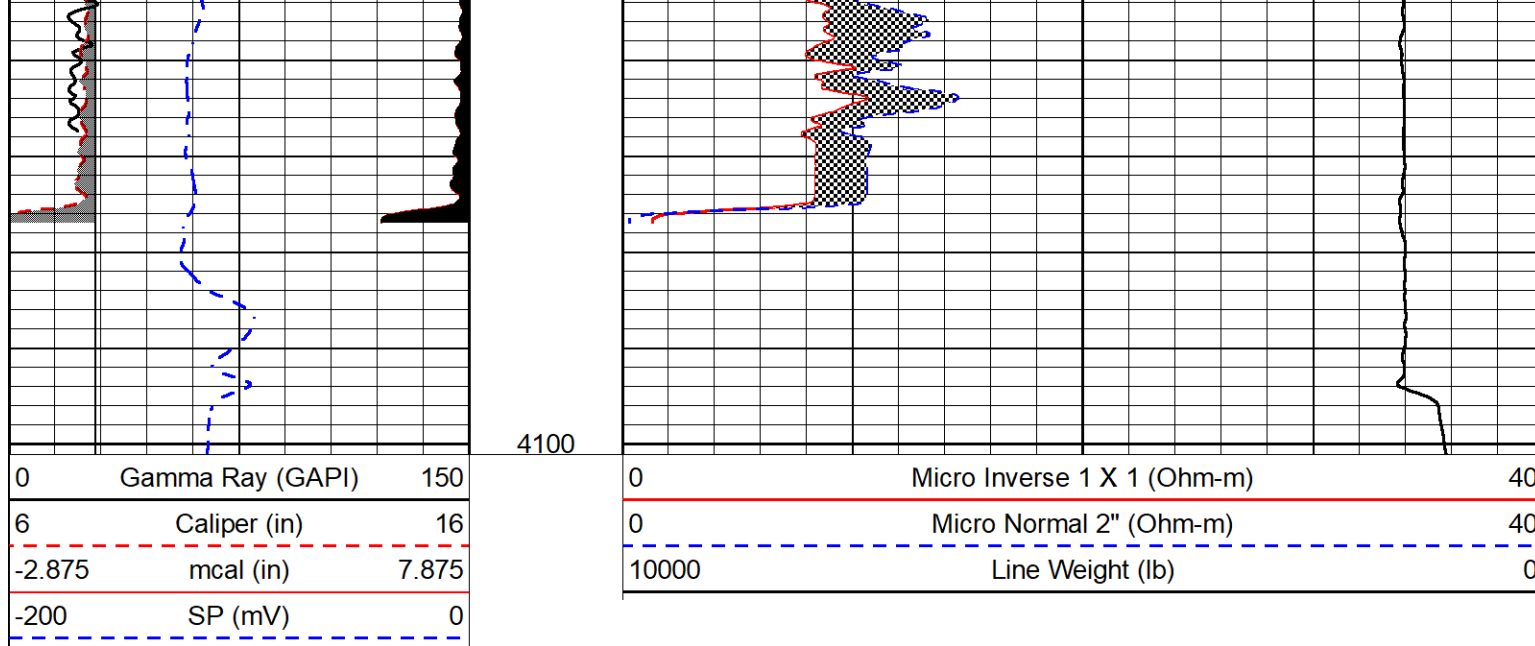
3900

3950

4000

4050





Calibration Report

Database File arp_hudson #1-15.db
 Dataset Pathname Stack/pass4.4
 Dataset Creation Sun Mar 13 21:40:46 2022

Dual Induction Calibration Report

Serial-Model: 502 HT-M&W
 Surface Cal Performed: Wed Feb 9 17:39:00 2022

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.454
Medium	113.335	1585.690	0.000	442.000	mmho/m	-33.000
						-8.500

Compensated Density Calibration Report

Serial-Model: 305-05-M&W
 Source #: 20762B
 Master Calibration Performed: Sat Mar 12 21:07:42 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8862.47	9339.96	cps
Aluminum	2.620	g/cc	1556.73	5707.29	cps
Spine Angle = 74.19			Density/Spine Ratio = 0.479		
	Size		Reading		
Small Ring	4.00	in	1.75		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report

Serial-Model: 207-MW-M&W

Source #:

100046B

Master Calibration Performed:

Mon Nov 29 15:06:24 2021

Master 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

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:	0.5700	GAPI/cps



Company	ARP Operating LLC
Well	Hudson #1-15
Field	Unnamed
County	Ellis
State	Kansas