



MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Castle Resources, Inc.	
Well	Werth #1
Field	
County	Ellis
State	Kansas
Company Castle Resources, Inc.	
Well	Werth #1
Field	
County	Ellis
State	Kansas
Location:	API #: 15-051-27063-00-00
NE SW 1980 FSL & 1980 FWL SEC 3 TWP 13S RGE 18W	
Permanent Datum	Ground Level
Log Measured From	Kelly Bushing
Drilling Measured From	Kelly Bushing
Elevation	2175
Other Services	CNL/CDL DIL
K.B.	2180
D.F.	
G.L.	2175
Date	11/14/2022
Run Number	One
Depth Driller	3785
Depth Logger	3784
Bottom Logged Interval	3783
Top Log Interval	2900
Casing Driller	8.625 @ 220
Casing Logger	208
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	7000
Density / Viscosity	8.9 50
pH / Fluid Loss	11.3 8.38
Source of Sample	Flowline
Rm @ Meas. Temp	0.75 @ 68
Rmf @ Meas. Temp	0.56 @ 68
Rmc @ Meas. Temp	1.01 @ 68
Source of Rmf / Rmc	Charts
Rm @ BHT	0.45 @ 114
Operating Rig Time	2.5 Hours
Max Rec. Temp. F	114
Equipment Number	P-24
Location	Hays
Recorded By	T. Martin
Witnessed By	Jerry Green

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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.

Hays, KS, N to Feedlot Rd,
1/2 E, N into

Log Measured From: Kelly Bushing

5 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: Jerry Green
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 CNSSC	37.23 36.48			CNT-M&W (207-MW)	5.00	3.50	100.00
				CDL-M&W (305-24)	8.50	4.00	250.00
LSD DCAL SSD	28.18 28.17 27.68						
				ML-PSIML (401)	7.58	4.00	65.00
MCAL MI MN	19.58 19.58 19.58						
RLL3F RLL3	15.50 15.50						
				DIL-M&W (502 HT)	18.25	3.50	220.00
CILD	8.33						
CILM	4.50						
SP	0.20						
Dataset: Total length: Total weight: O.D.:				castle_werth #1.db: field/well/StkMI/pass3.1 42.33 ft 685.00 lb 4.00 in			

Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle_werth #1.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 114	in 4.5	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 40	Off	ft 3784

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



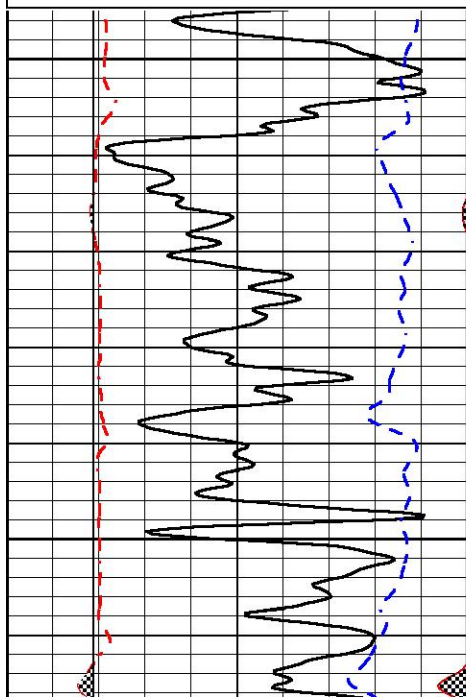
DETAIL SECTION

MAIN PASS

Database File castle_werth #1.db
Dataset Pathname StkMI/pass3.1
Presentation Format _micro
Dataset Creation Mon Nov 14 15:06:25 2022
Charted by Depth in Feet scaled 1:240

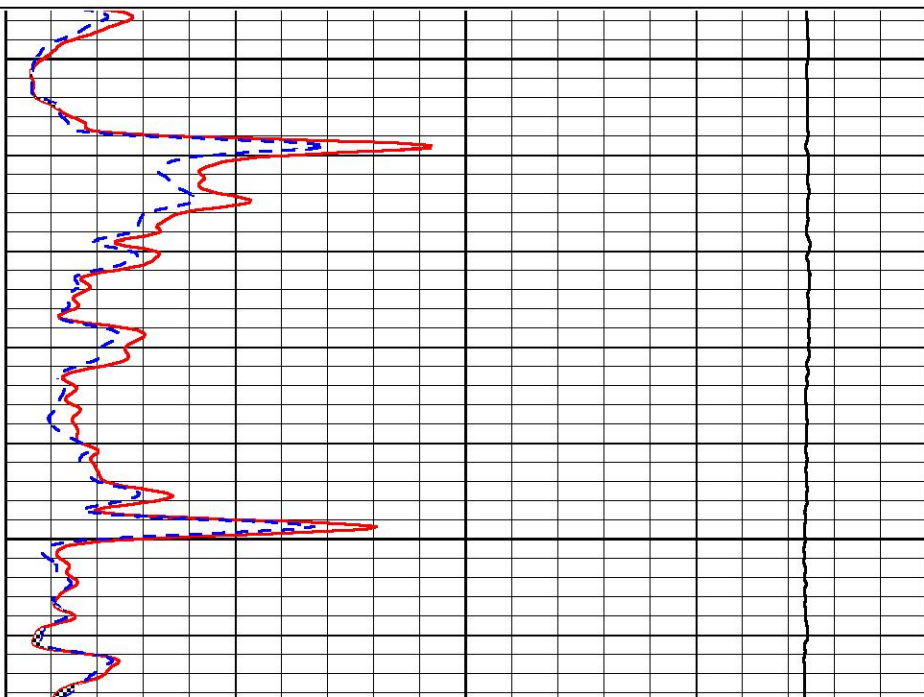
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

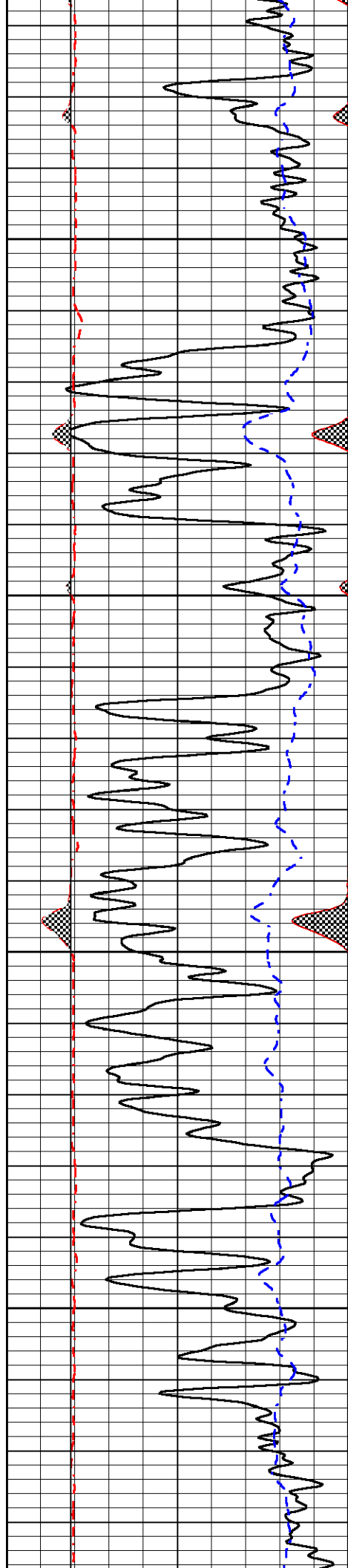
0	Micro Inverse 1 X 1 (Ohm-m)	100
0	Micro Normal 2" (Ohm-m)	100
10000	Line Weight (lb)	0



2900

2950



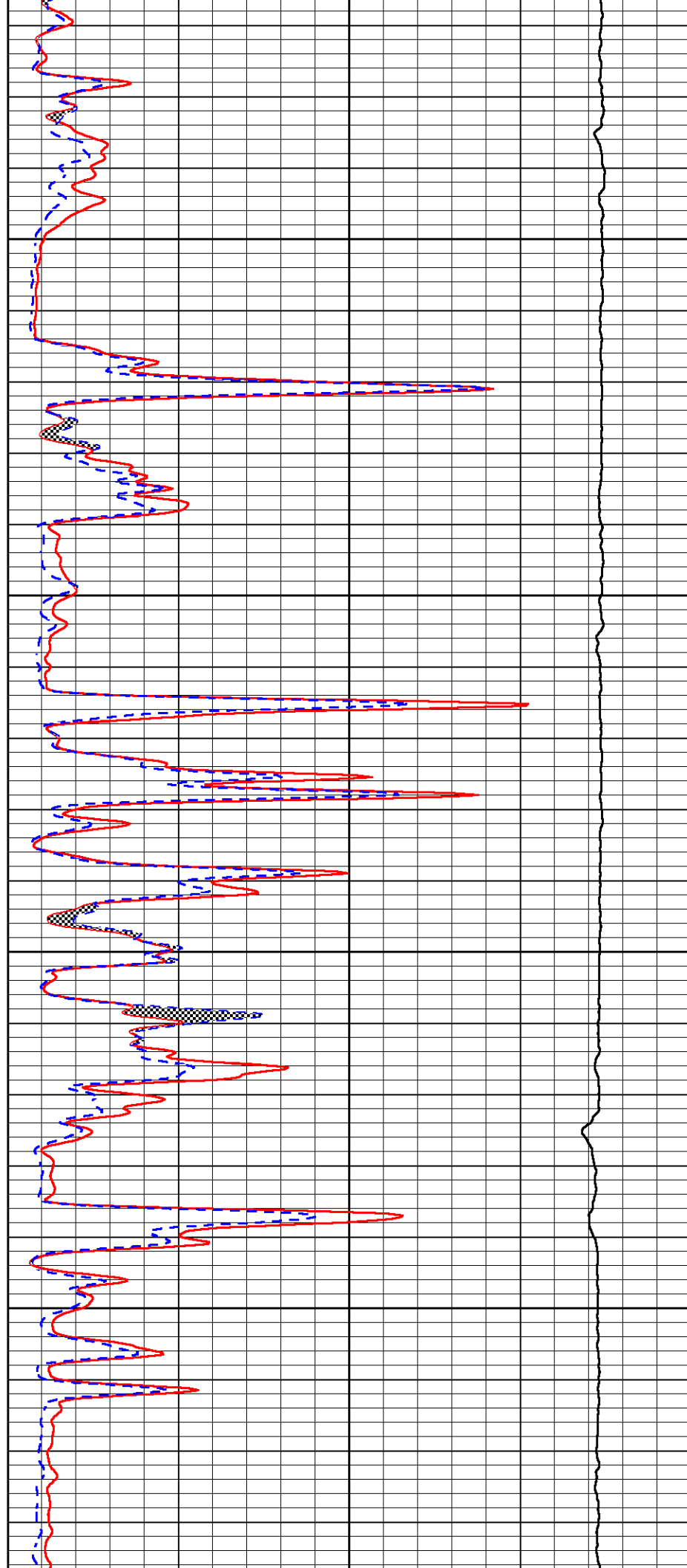


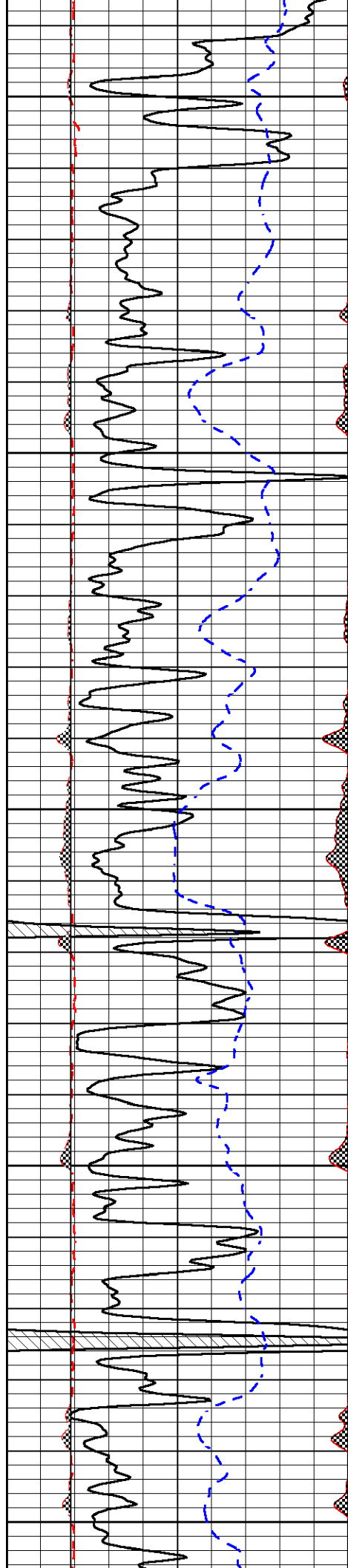
3000

3050

3100

3150





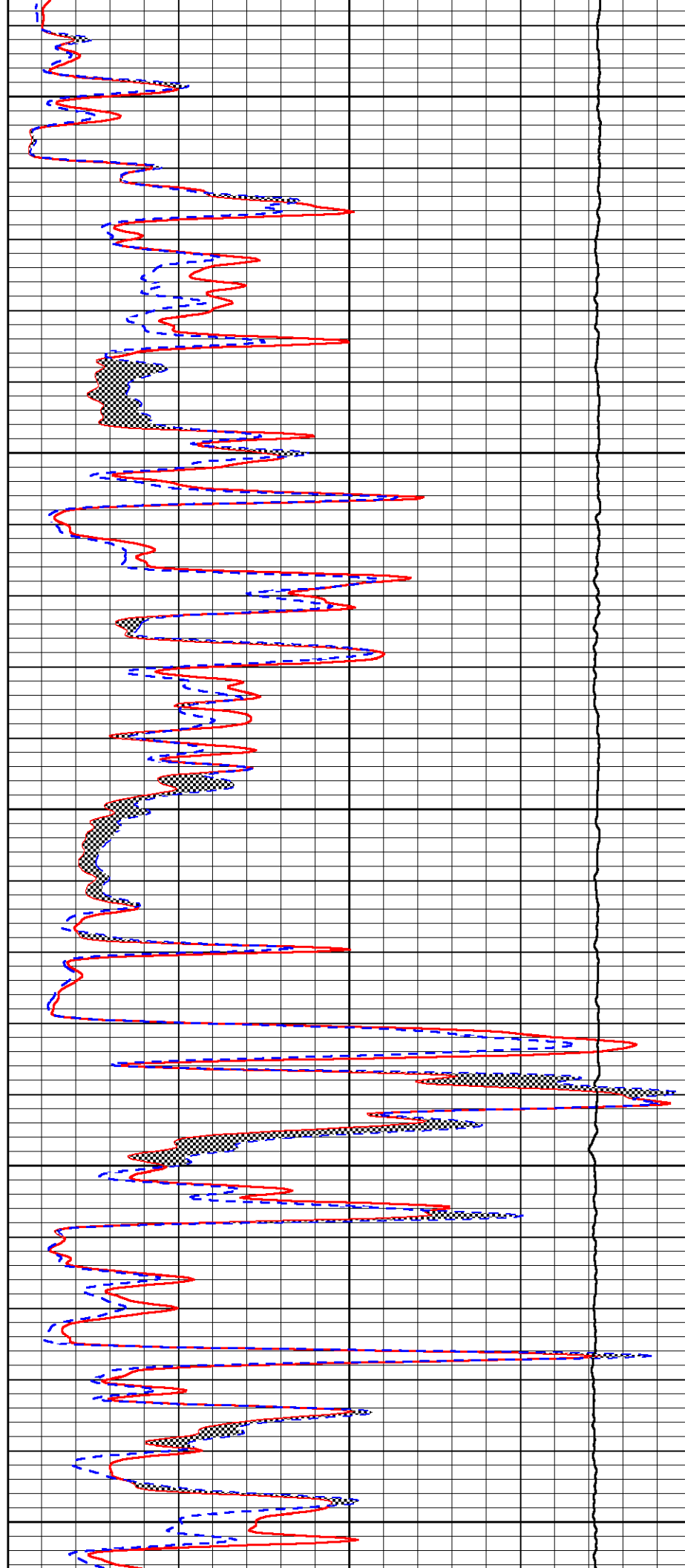
3200

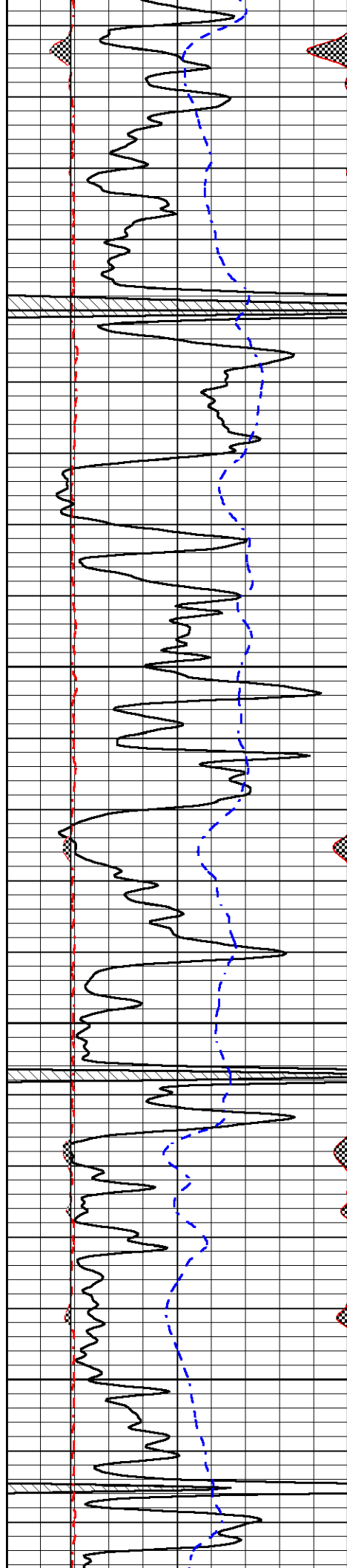
3250

3300

3350

3400



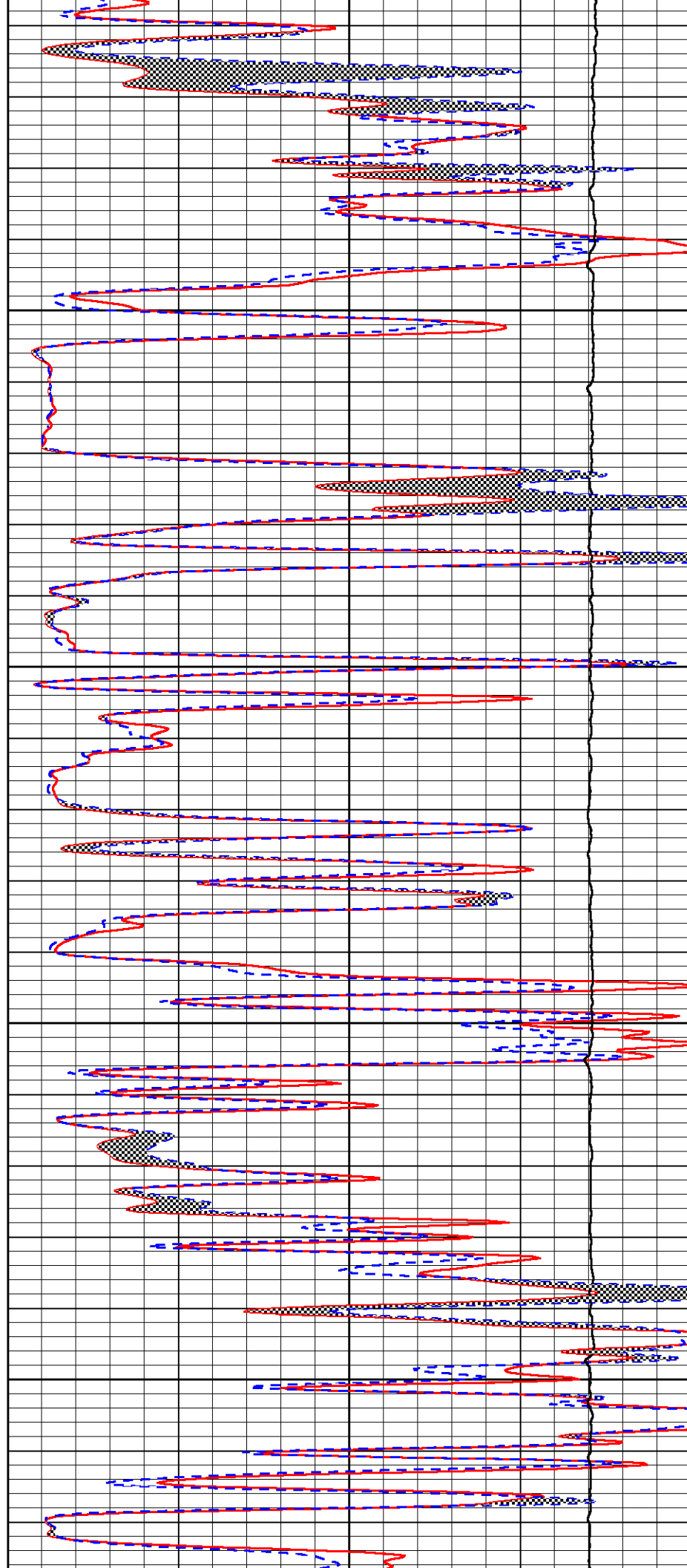


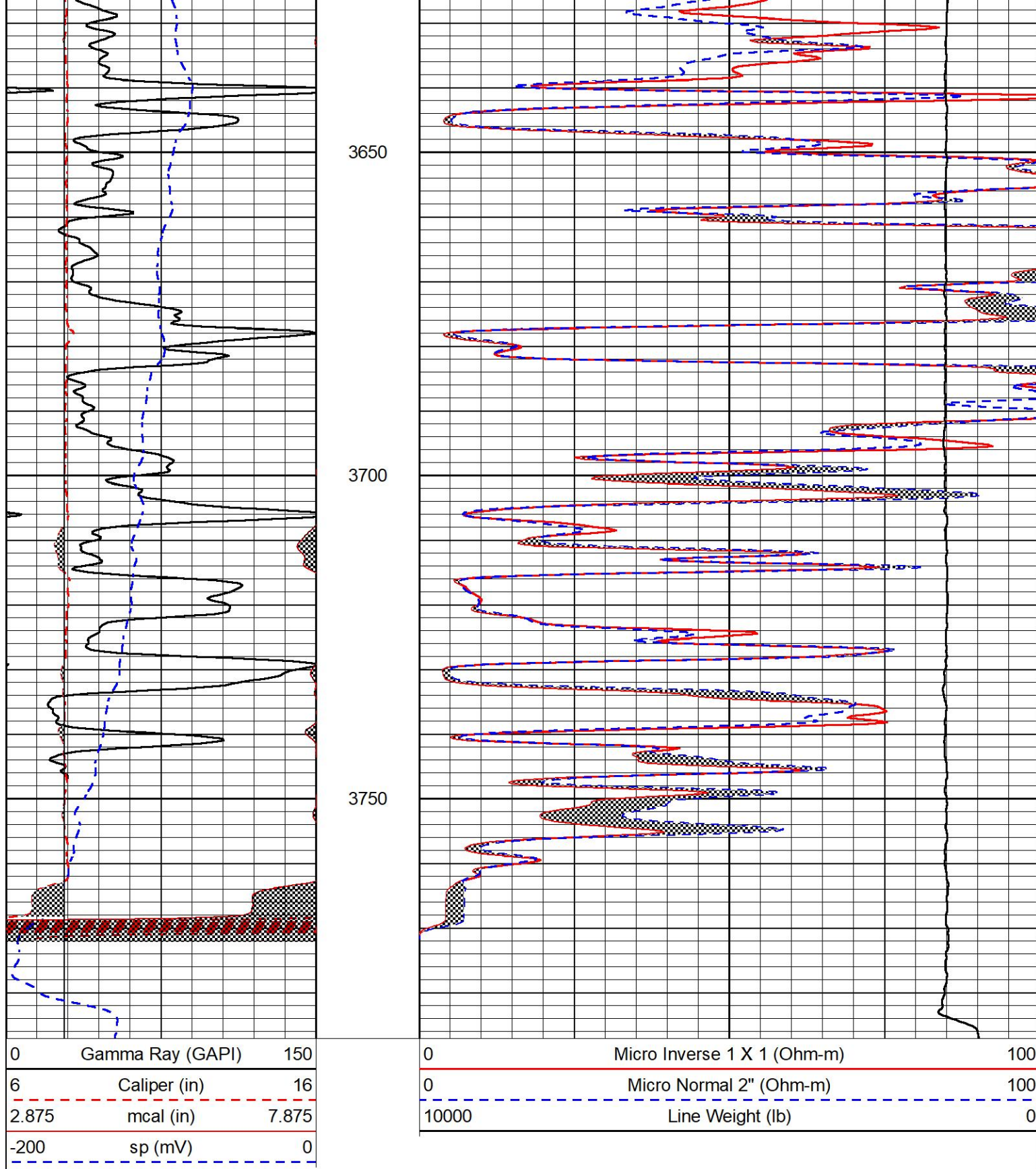
3450

3500

3550

3600





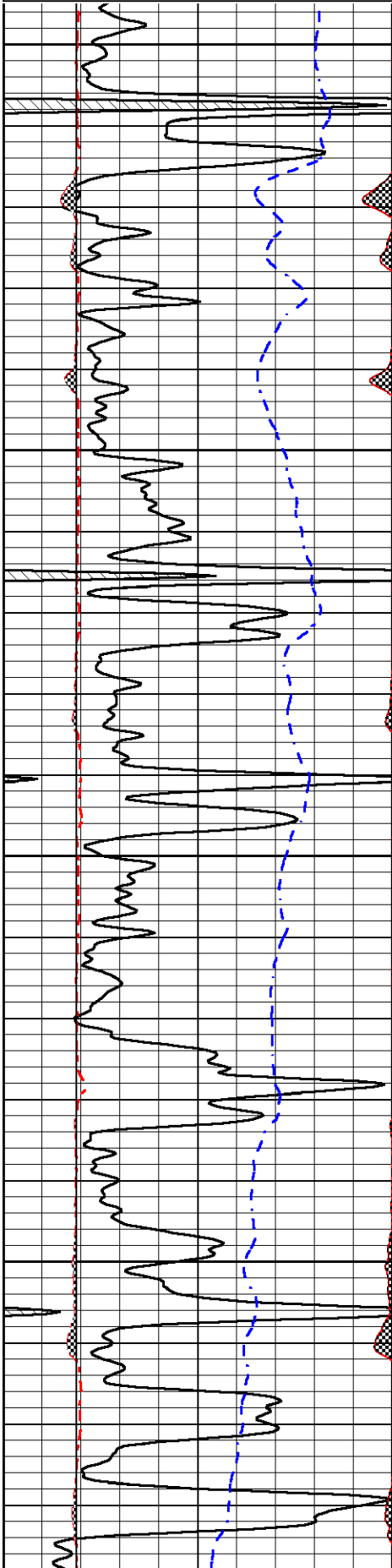
REPEAT SECTION

REPEAT PASS

Database File castle_werth #1.db
 Dataset Pathname StkMI/pass2.1
 Presentation Format _micro
 Dataset Creation Mon Nov 14 14:20:39 2022

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)	100
0	Micro Normal 2" (Ohm-m)	100
10000	Line Weight (lb)	0

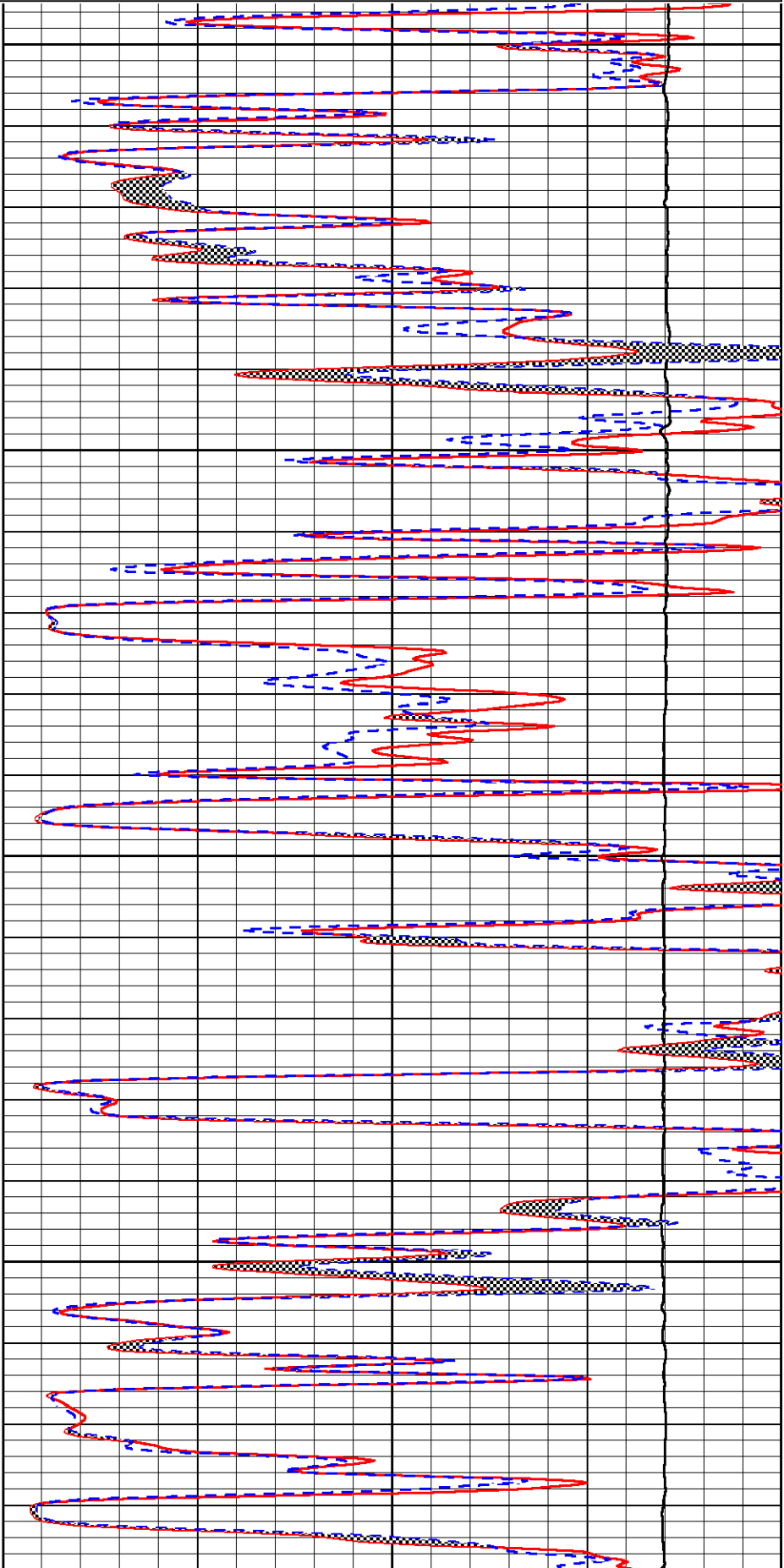


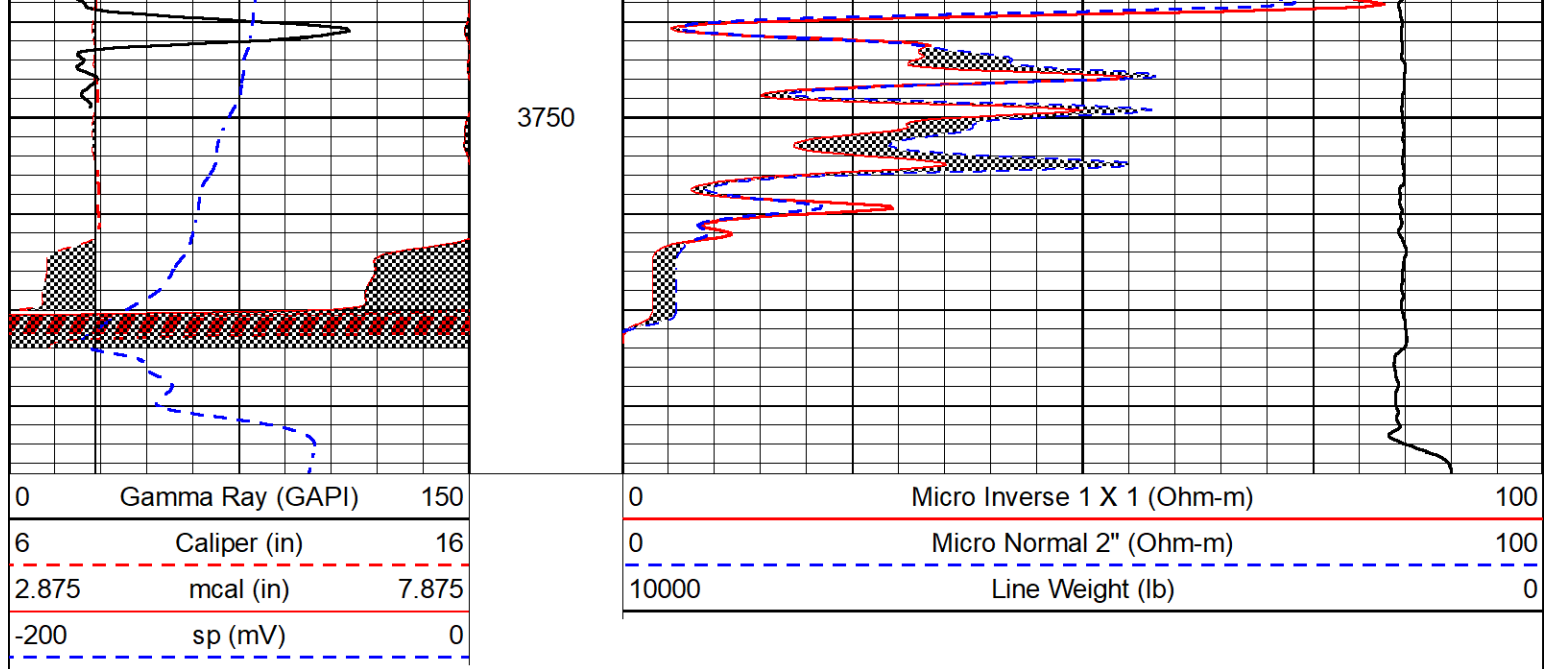
3550

3600

3650

3700





Calibration Report		
Database File	castle_werth #1.db	
Dataset Pathname	StkMI/pass3.1	
Dataset Creation	Mon Nov 14 15:06:25 2022	

Dual Induction Calibration Report

Serial-Model:	502 HT-M&W
Surface Cal Performed:	Mon Nov 7 15:53:48 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	255.800	mmho/m	0.454	-30.000
Medium	113.335	1585.690	0.000	255.800	mmho/m	0.350	-10.500

Microlog Calibration Report

Serial-Model:	401-PSIML
Performed:	Mon Nov 7 15:53:59 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	19500.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	98.0000	-93.1500

Compensated Density Calibration Report

Serial-Model:	305-24-M&W
Source #:	20762B
Master Calibration Performed:	Mon Jun 20 16:54:11 2022

Master Calibration			
	Density	Far Detector	Near Detector
Magnesium	1.755	4771.25	5404.27

Magnesium	1.755	g/cc	4771.35	5494.27	cps
Aluminum	2.650	g/cc	908.54	3539.54	cps
Spine Angle = 75.15			Density/Spine Ratio = 0.522		
	Size		Reading		
Small Ring	4.00	in	1.74		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report
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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

	Company	Castle Resources, Inc.
	Well	Werth #1
	Field	



County
State

Ellis
Kansas