MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company EPOC LLC
Well T. Wiebe #31-10
Field Hazlett
County Butler
State Kansas

Company EPOC LLC
Well T. Wiebe #31-10
Field Hazlett
County Butler State Kansas

Location: API # : 15-015-24159-00-00
S2 S2 SE
330 FSL & 1320 FEL
SEC 31 TWP 23S RGE 5E

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1483
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 1489
D.F.
G.L. 1483

Date	2/20/2022		
Run Number	One		
Depth Driller	2639		
Depth Logger	2604		
Bottom Logged Interval	2603		
Top Log Interval	2000		
Casing Driller	8.625 @ 237		
Casing Logger	244		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	1400		
Density / Viscosity	9.4 / 57		
pH / Fluid Loss	10.0 / 9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.8 @ 70		
Rmf @ Meas. Temp	0.6 @ 70		
Rmc @ Meas. Temp	1.08 @ 70		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.55 @ 102		
Operating Rig Time	2 Hours		
Max Rec. Temp. F	102		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Ray Gilbert		

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Newton, KS, E on 1st St ~22 mi to
Purity Springs Rd, 3 S, NW into

Log Measured From: Kelly Bushing 6 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: Ray Gilbert
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (101)	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 (305-05)	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: epoc_t wiebe #31-10.db: field/well/StkMl/pass3.1
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\epoc_t wiebe #31-10.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	102	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	320	50	Off	2604

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

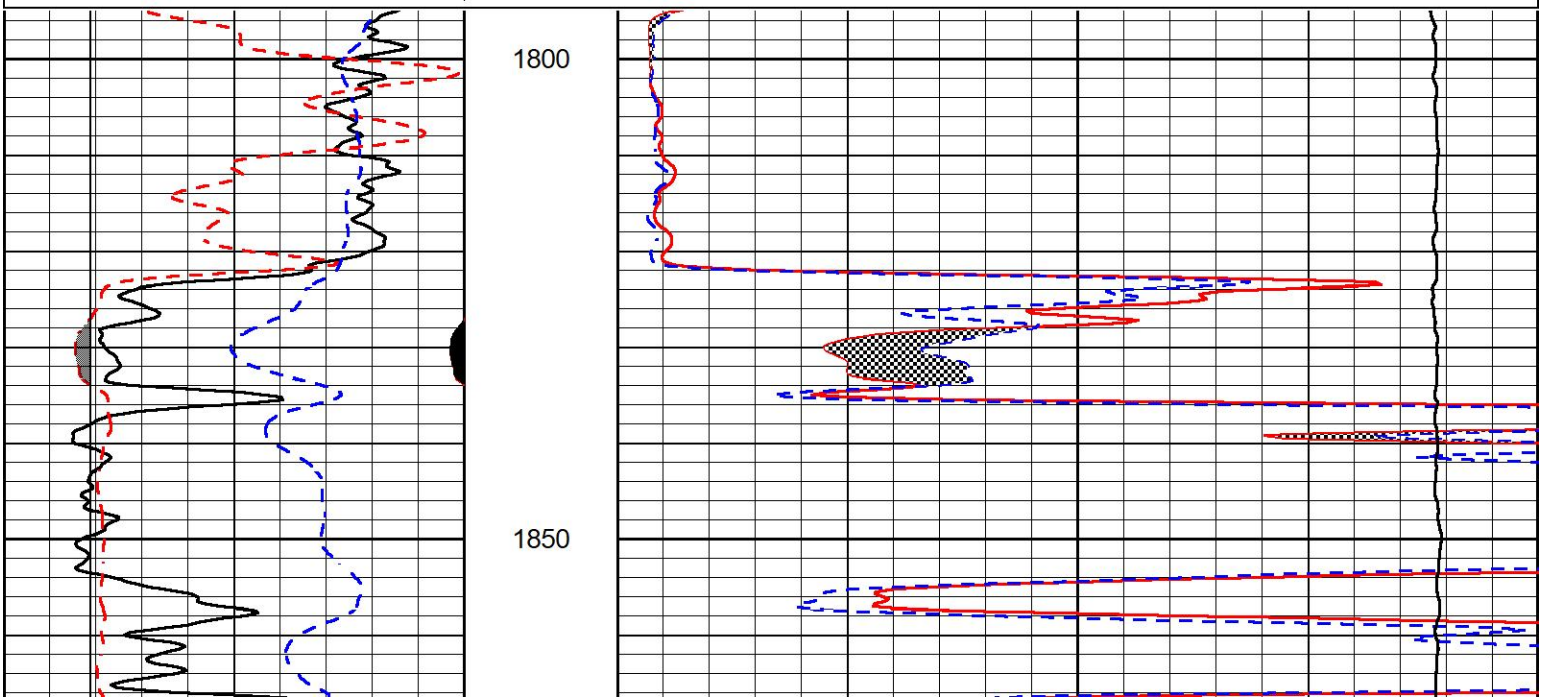
DETAIL SECTION

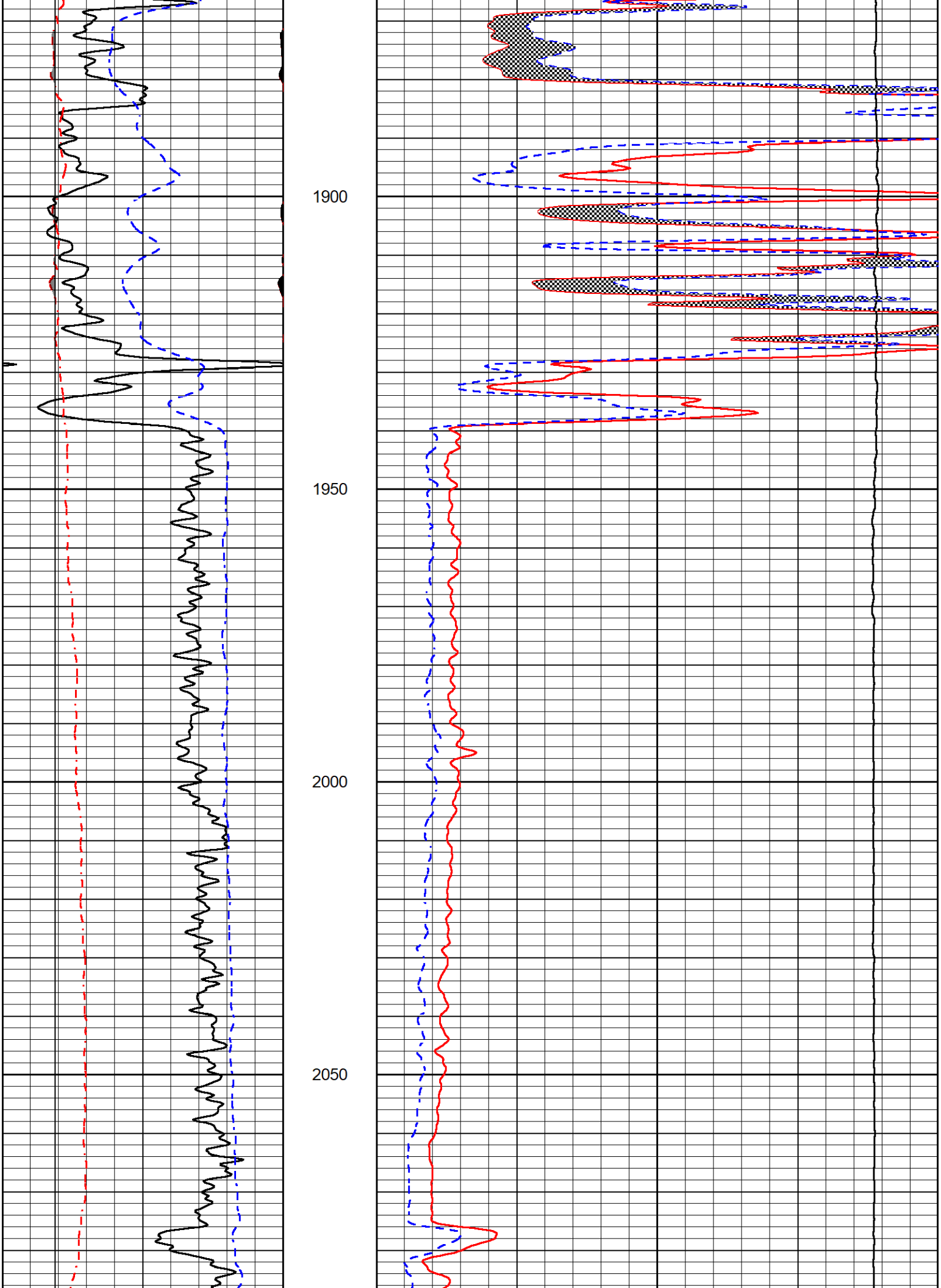
MAIN PASS

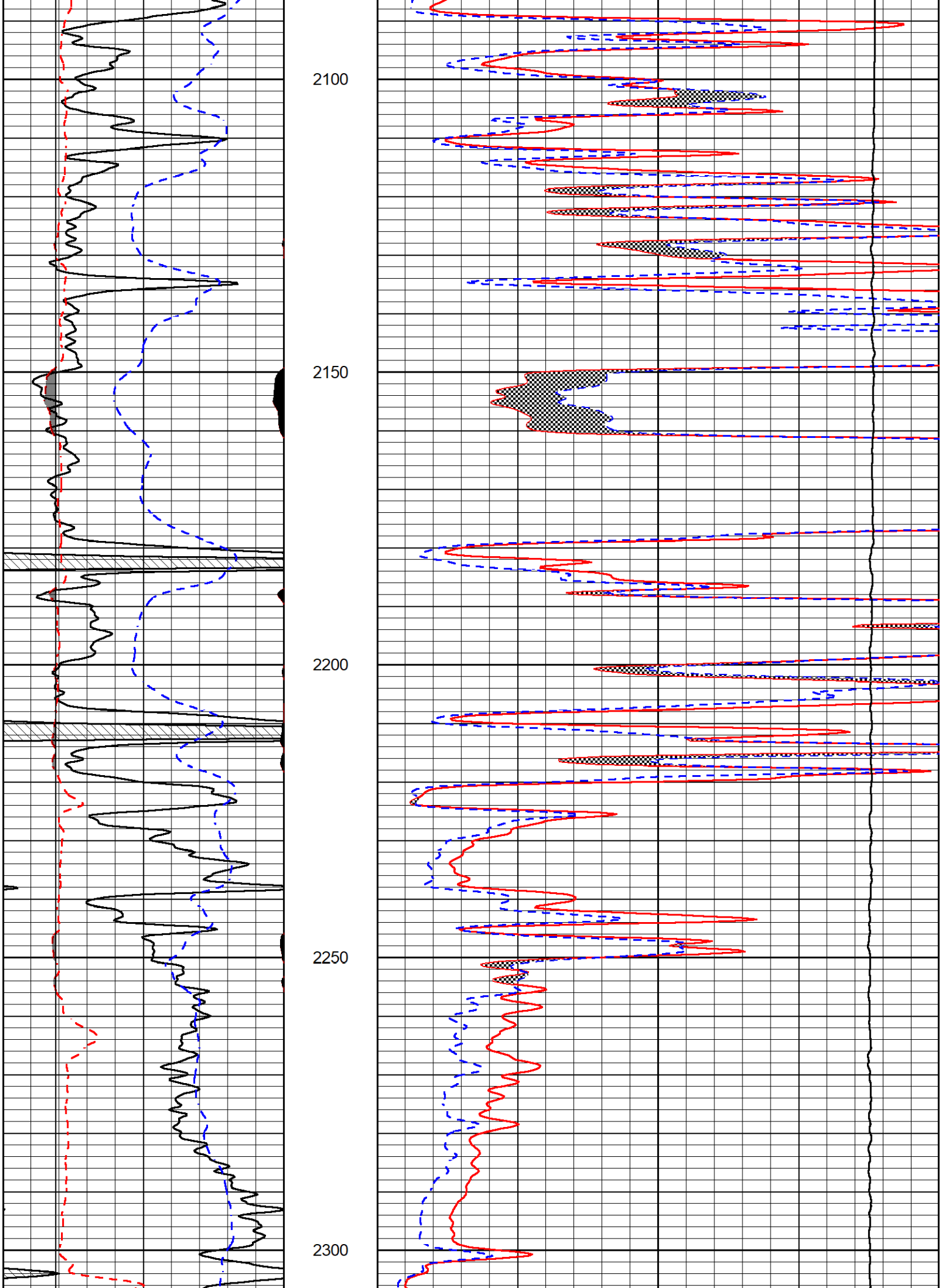
Database File	epoc_t wiebe #31-10.db
Dataset Pathname	StkMI/pass3.1
Presentation Format	_micro
Dataset Creation	Mon Feb 21 06:30:23 2022
Charted by	Depth in Feet scaled 1:240

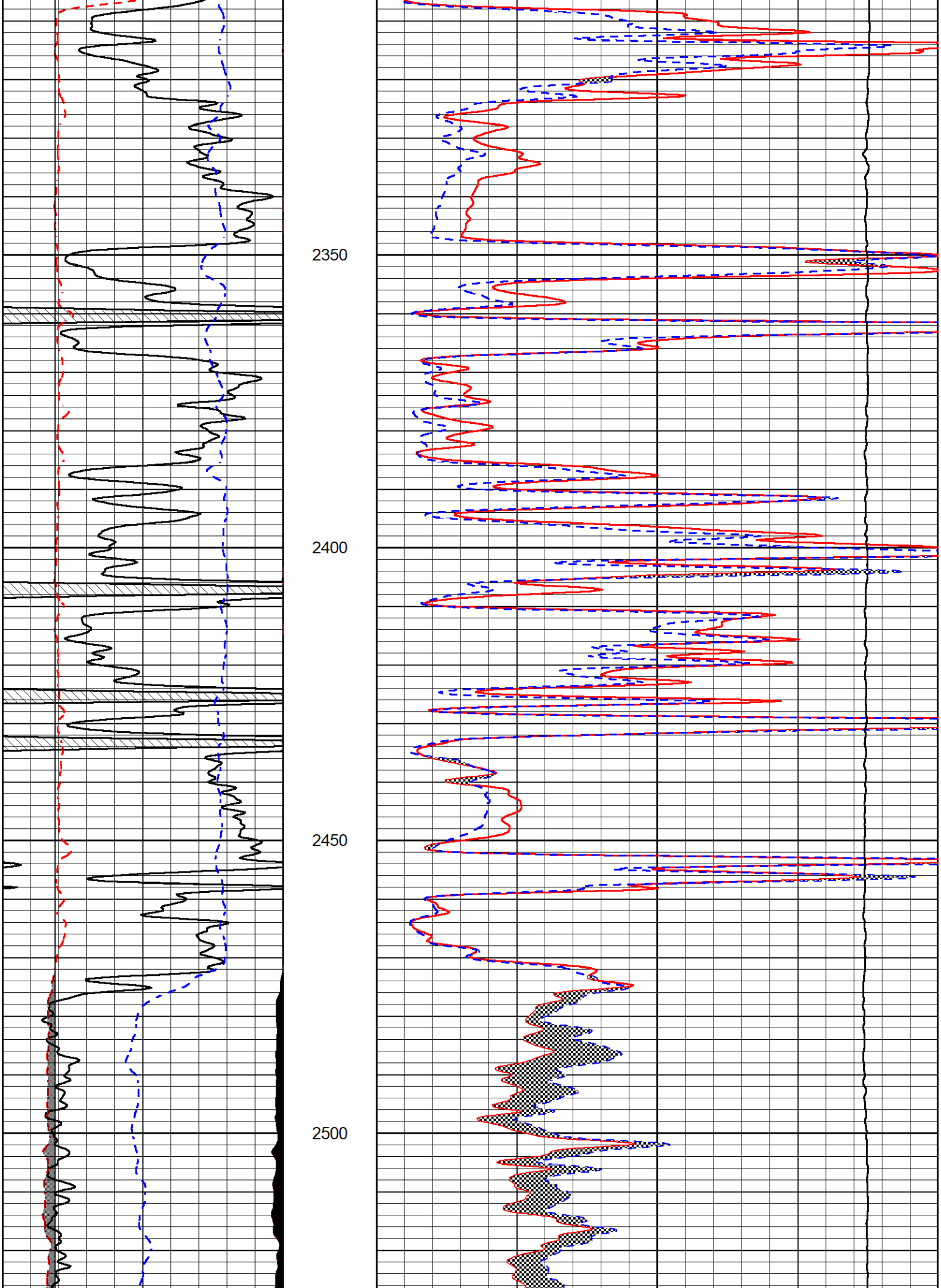
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
-2.875	mcal (in)	7.875
-200	SP (mV)	0

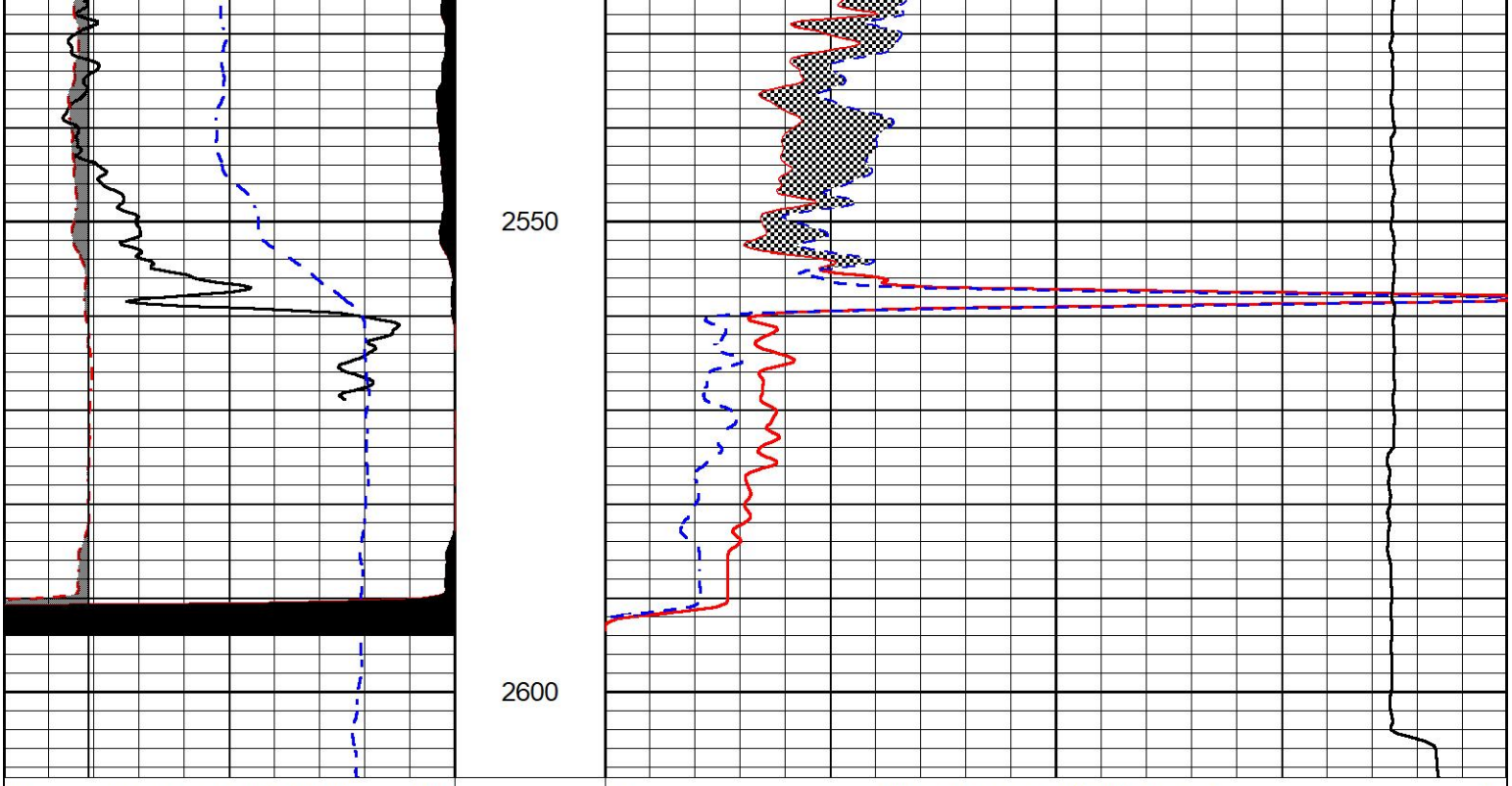
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0




1900
1950
2000
2050


2100
2150
2200
2250
2300


2350
2400
2450
2500



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

MIDWEST WIRELINE

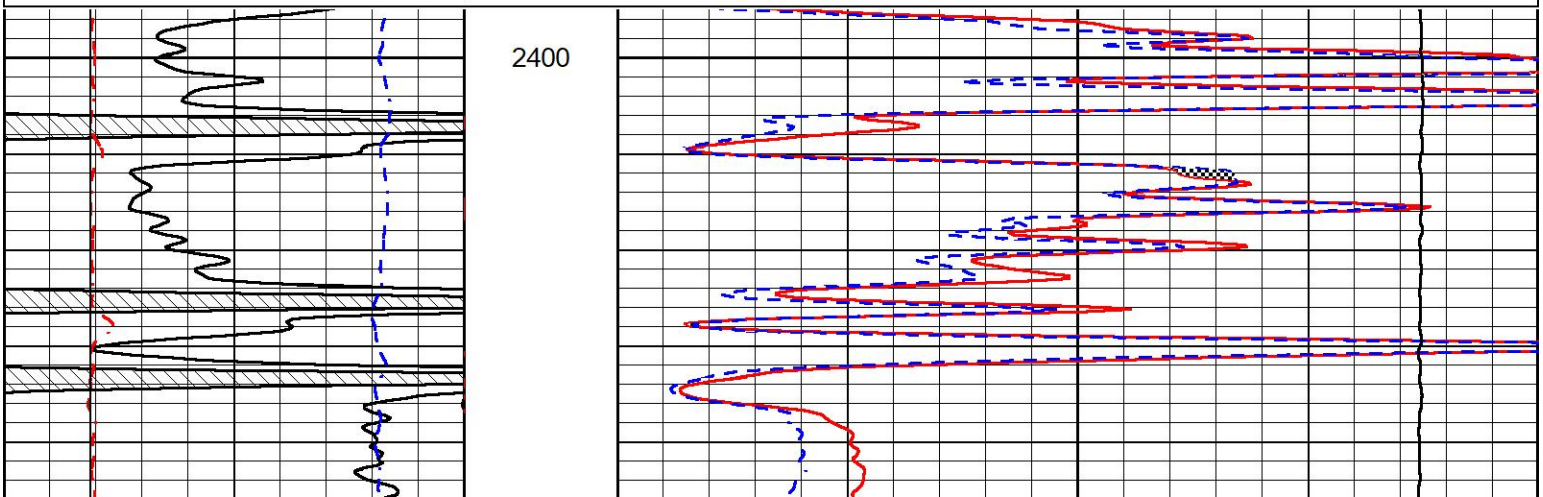
REPEAT SECTION

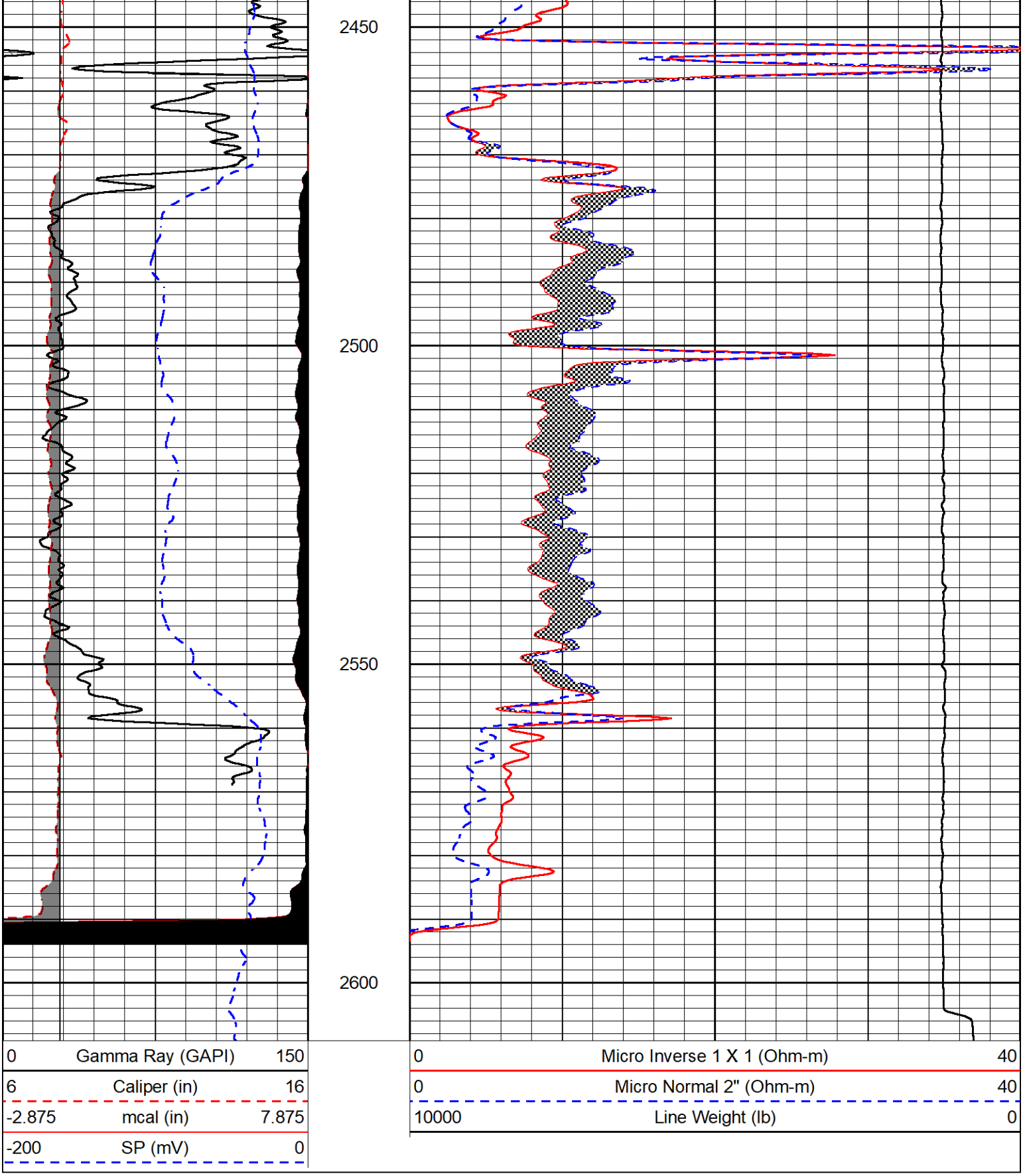
REPEAT PASS

Database File	epoc_t wiebe #31-10.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_micro
Dataset Creation	Mon Feb 21 06:18:28 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





Calibration Report

Database File	epoc_t wiebe #31-10.db
Dataset Pathname	StkMl/pass3.1
Dataset Creation	Mon Feb 21 06:30:23 2022

Dual Induction Calibration Report

Serial-Model:	501 HT-M&W
Surface Cal Performed:	Mon Jan 24 19:13:55 2022

Loop:	Readings Air	Readings Loop	References Air	References Loop		Results m	Results b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-41.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.320	-35.000

Microlog Calibration Report

Serial-Model: 402-PSIML
Performed: Mon Jan 24 20:31:16 2022

	Readings Zero	Readings Cal	References Zero	References Cal		Results m	Results b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21000.0000	-0.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	125.0000	-122.1500

Compensated Density Calibration Report

Serial-Model: 305-05-M&W
Source #: 20762B
Master Calibration Performed: Mon Jan 24 19:14:33 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8758.11	9709.36	cps
Aluminum	2.630	g/cc	1513.14	5652.54	cps

Spine Angle = 72.88

Density/Spine Ratio = 0.476

	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:	0.5500	GAPI/cps

MIDWEST WIRELINE

Company	EPOC LLC
Well	T. Wiebe #31-10
Field	Hazlett
County	Butler
State	Kansas