



MIDWEST WIRELINE

MICRORESISTIVITY LOG

CompanyCobalt Energy LLC		Company Cobalt Energy LLC	
Well Mac Family #1-34		Well Mac Family #1-34	
Field		Field	
County Logan	State Kansas	County Logan	State Kansas
Location: API #: 15-109-21632-00-00		Other Services	
Permanent Datum NW SE NW NE		CNL/CDL	
Log Measured From Kelly Bushing		DIL	
Drilling Measured From Kelly Bushing		Elevation	
SEC 34 TWP 15S RGE 34W		K.B. 2986	
		D.F. 2975	
		G.L. 2975	
Date 6/29/2022	Run Number One		
Depth Driller 4704			
Depth Logger 4703			
Bottom Logged Interval 4702			
Top Log Interval 3600			
Casing Driller 8.625 @ 396			
Casing Logger 396			
Bit Size 7.875			
Type Fluid in Hole Chemical			
Salinity ,ppm CL 5400			
Density / Viscosity 9.2 63			
pH / Fluid Loss 10.5 8.8			
Source of Sample FLOWLINE			
Rm @ Meas. Temp 0.75 @ 76			
Rmf @ Meas. Temp 0.56 @ 76			
Rmc @ Meas. Temp 1.01 @ 76			
Source of Rmf / Rmc CHARTS			
Rm @ BHT 0.46 @ 123			
Operating Rig Time 3 Hours			
Max Rec. Temp. F 123			
Equipment Number P-108			
Location HAYS			
Recorded By T. Martin			
Witnessed By Larry Nicholson			

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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.

Oakley, KS, S to Gold Rd, W to 390, S to Elk Rd,
W to 340, S to Dakota, W to 320, 2 S, W into

Log Measured From: Kelly Bushing

11 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: Larry Nicholson
Secondary Witness:
Secondary Witness:
Secondary Witness:

[illegible]

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cobalt_mac family #1-34.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	123	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	855	90		4703

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



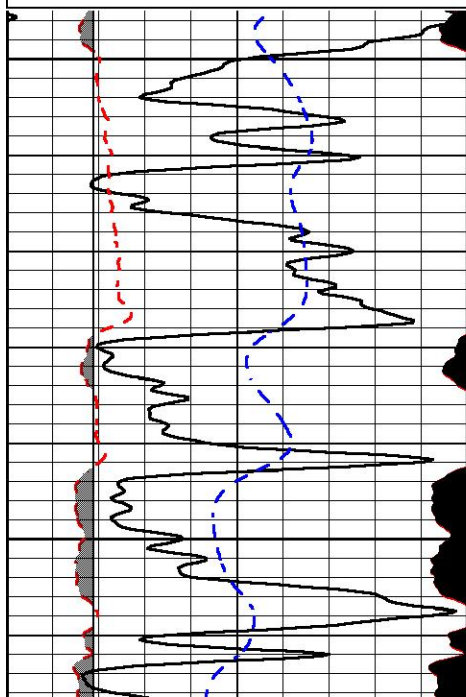
DETAIL SECTION

MAIN PASS

Database File cobalt_mac family #1-34.db
Dataset Pathname StkMI/pass3.1
Presentation Format _micro
Dataset Creation Wed Jun 29 12:13:07 2022
Charted by Depth in Feet scaled 1:240

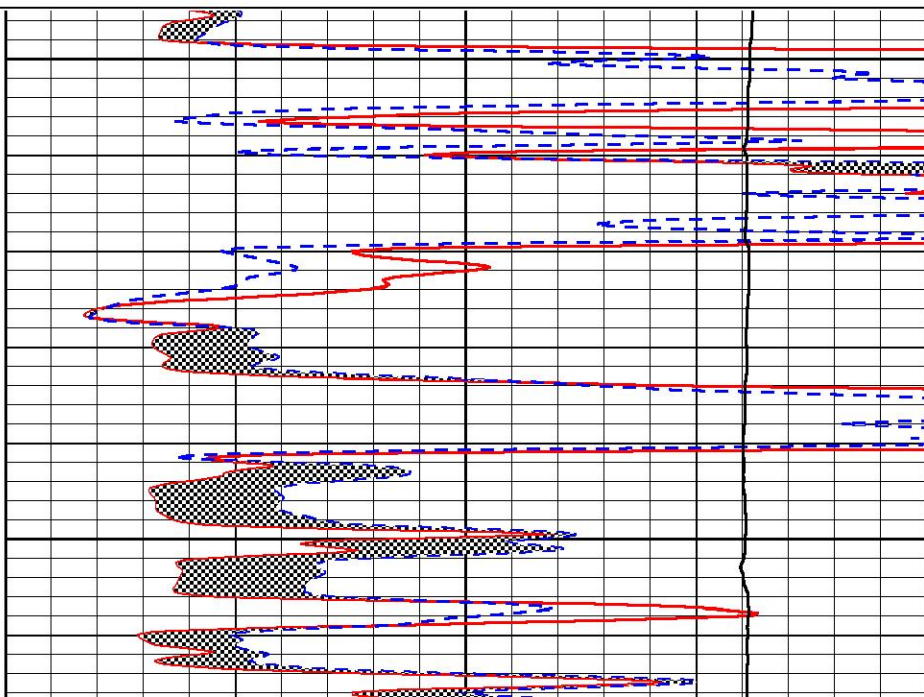
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

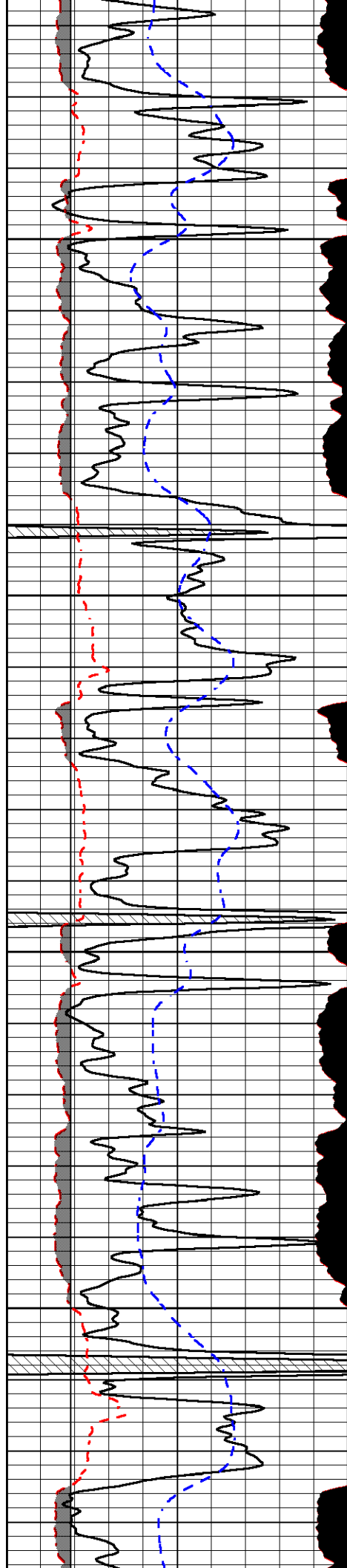
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3600

3650



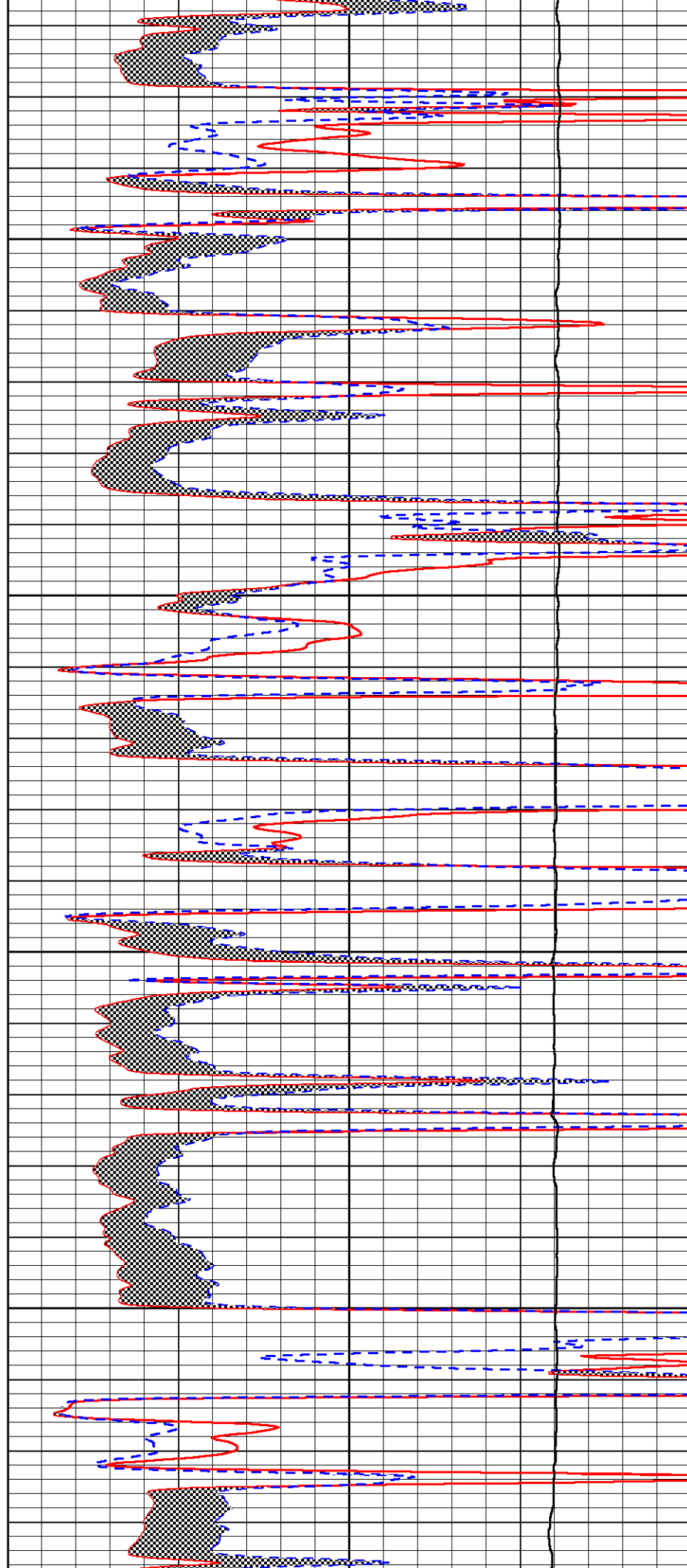


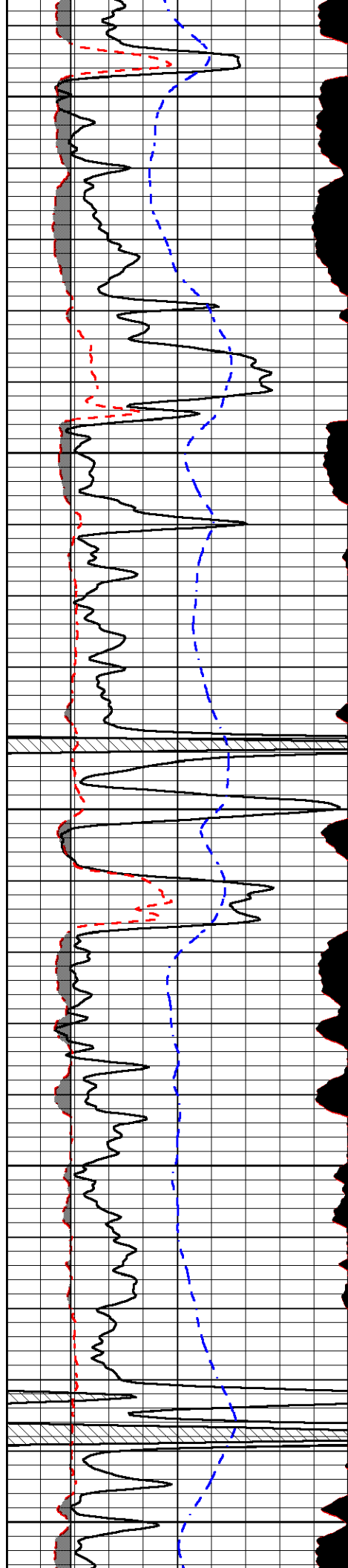
3700

3750

3800

3850





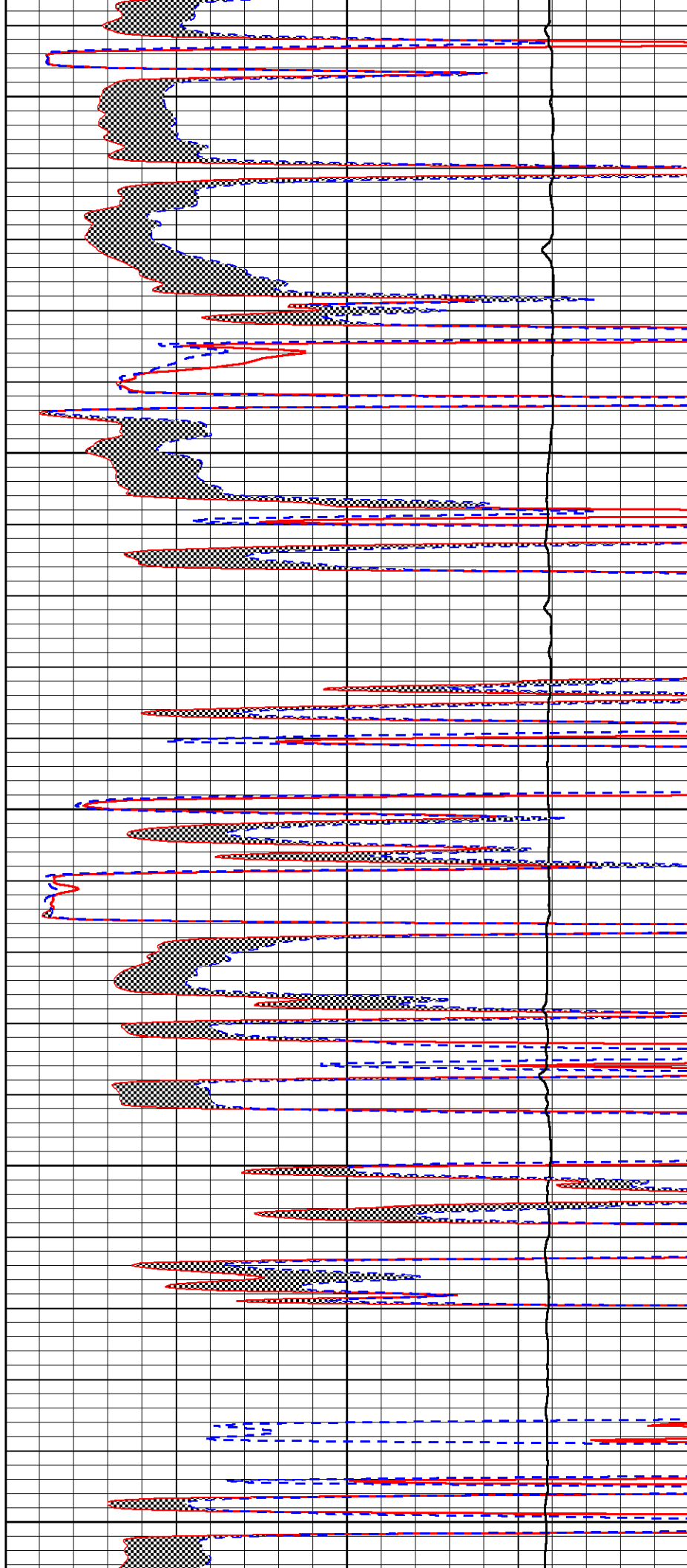
3900

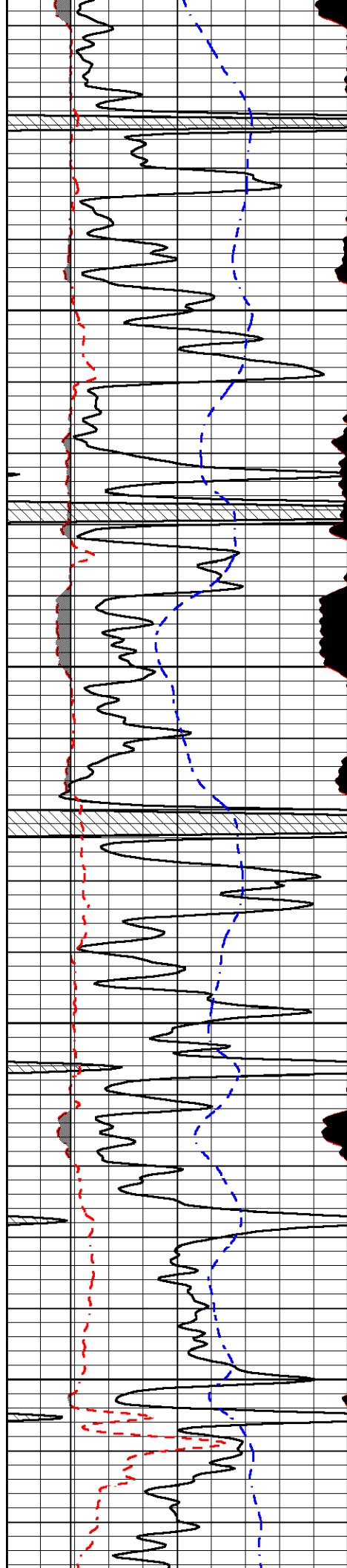
3950

4000

4050

4100



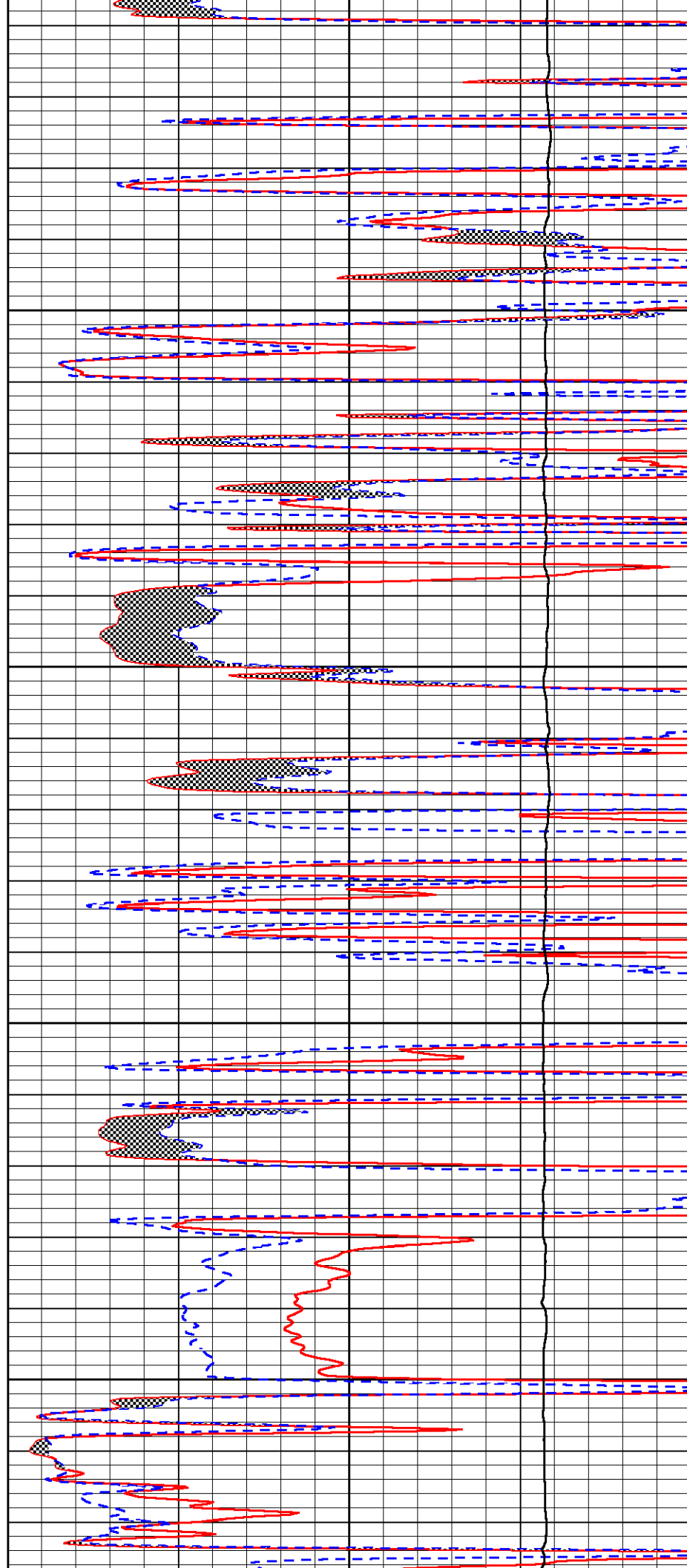


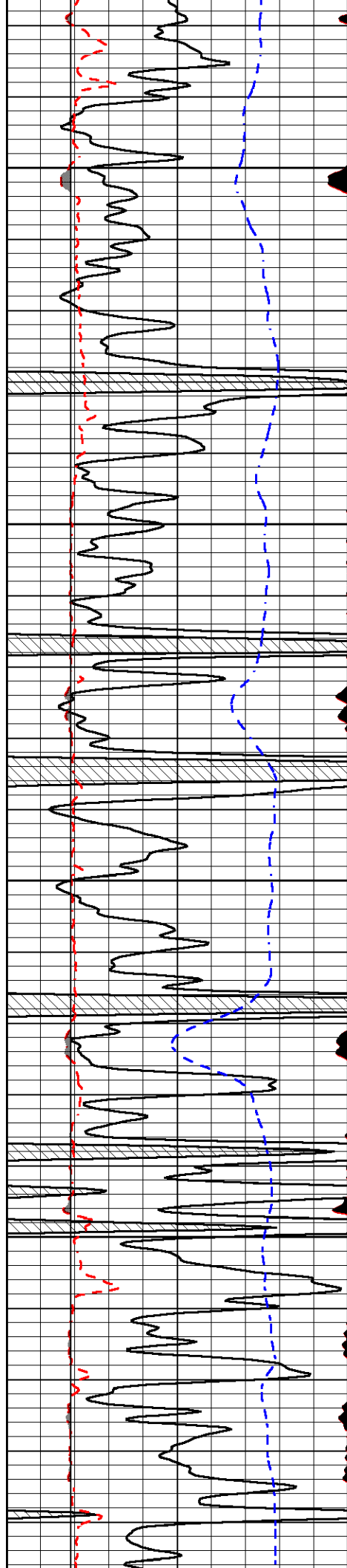
4150

4200

4250

4300



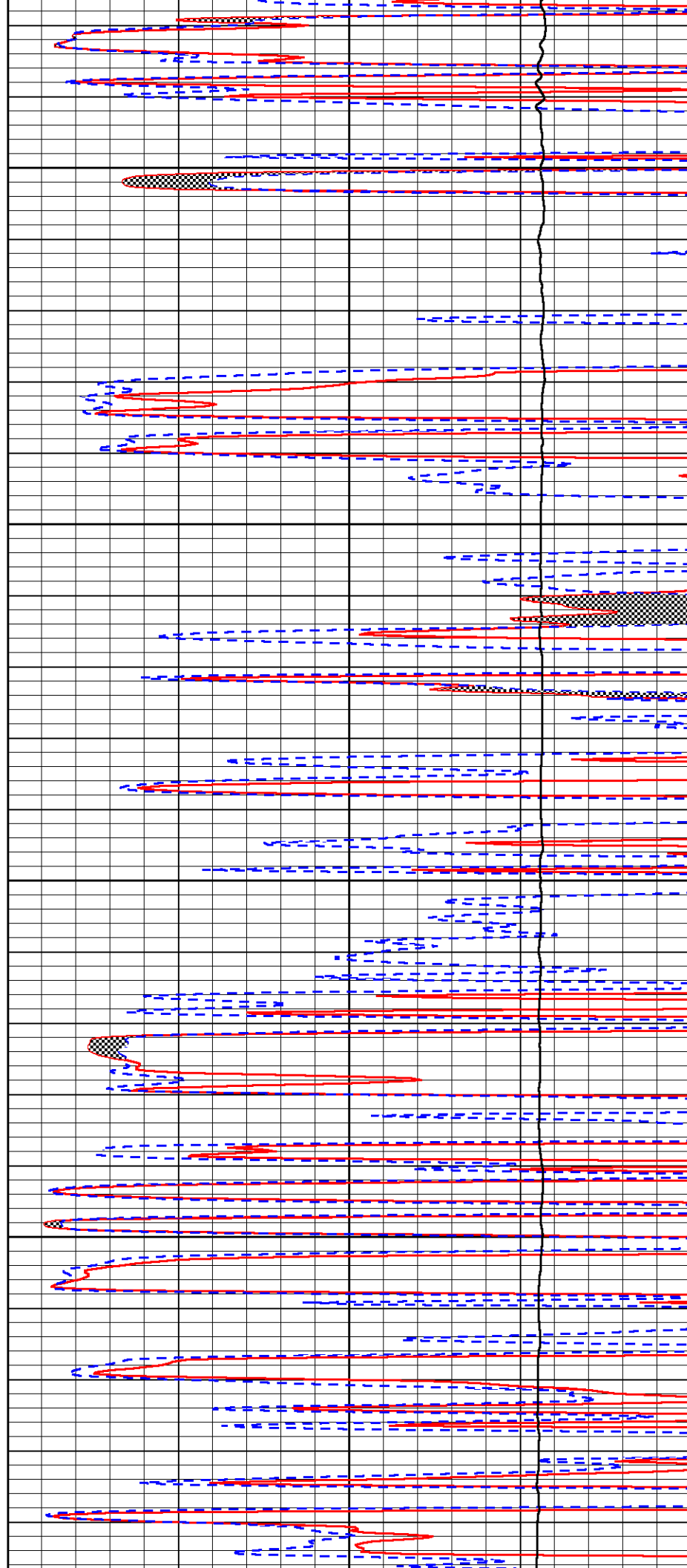


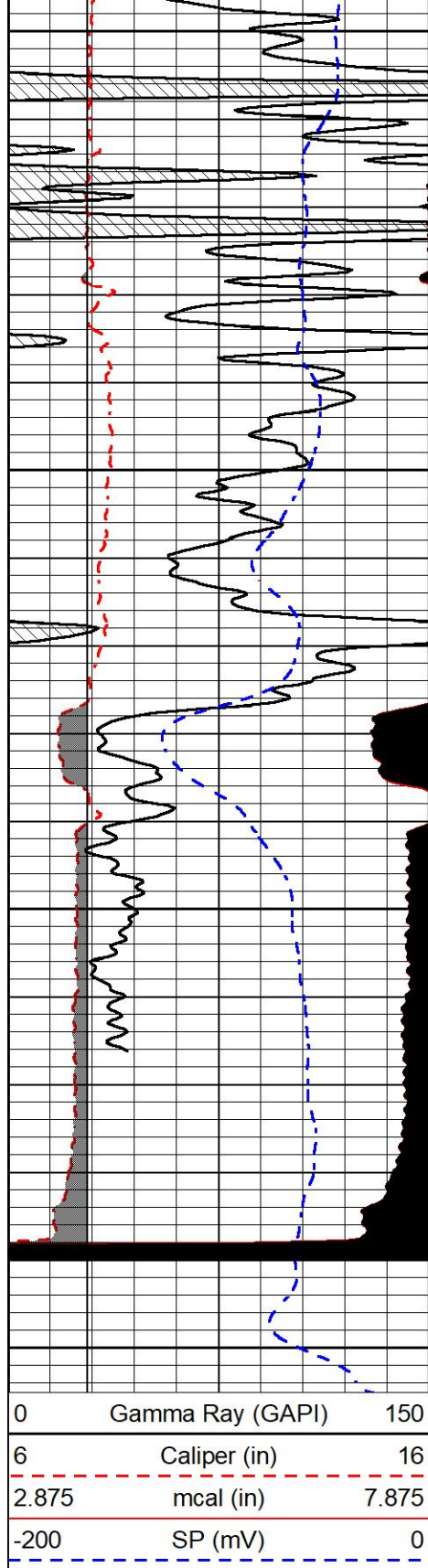
4350

4400

4450

4500



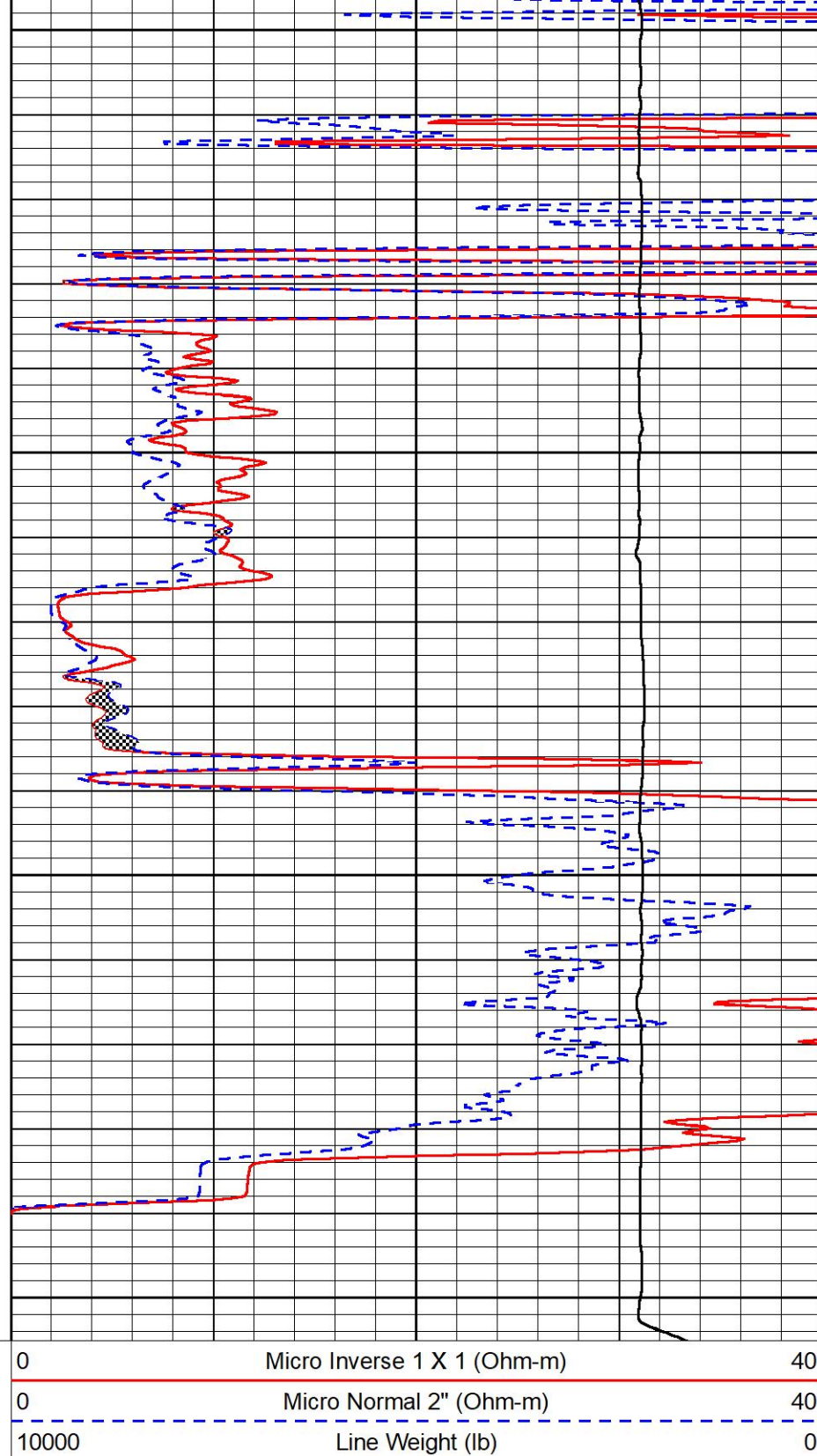


4550

4600

4650

4700

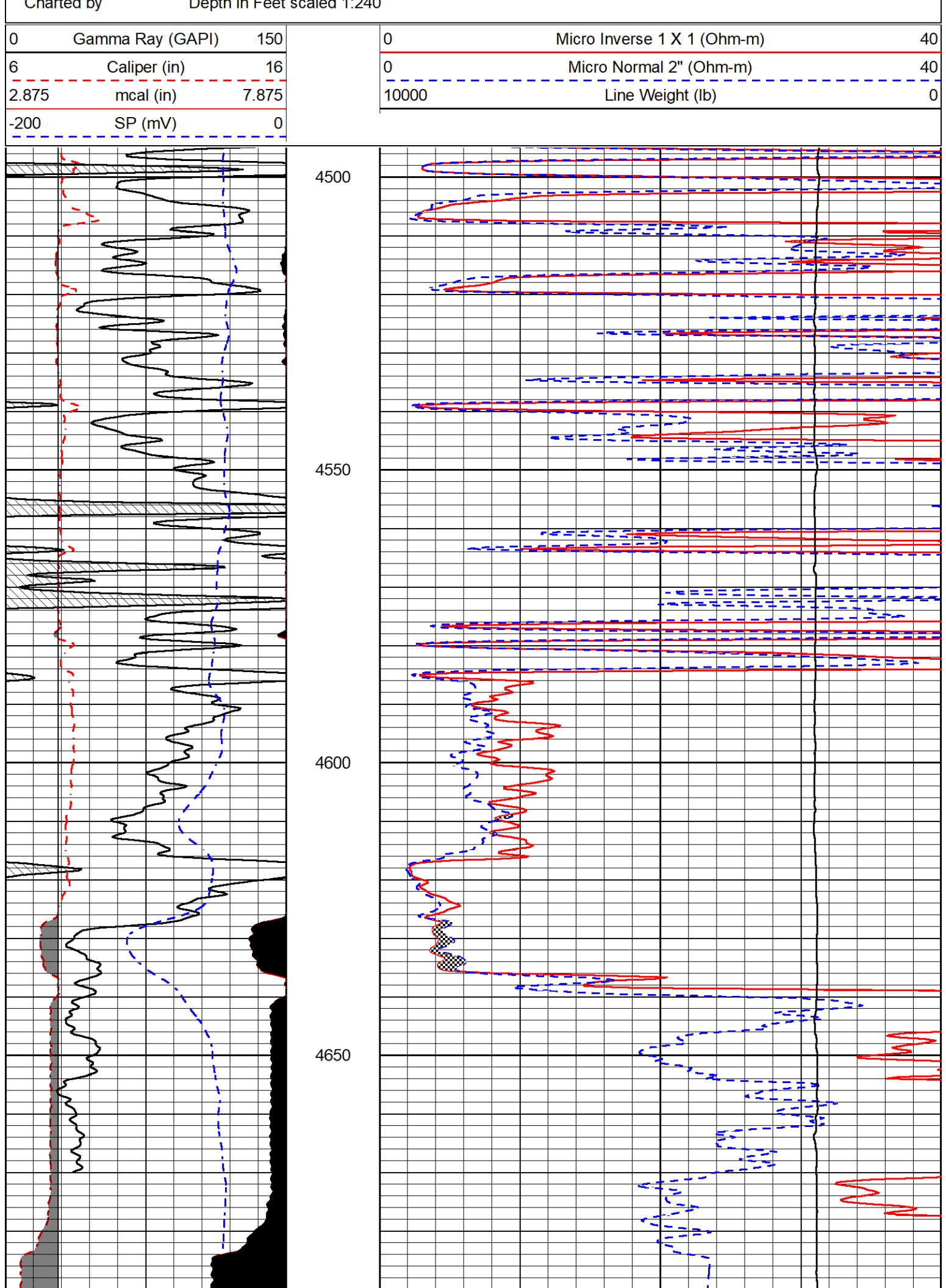


MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

Database File cobalt_mac family #1-34.db
 Dataset Pathname StkMI/pass2.1
 Presentation Format _micro
 Dataset Creation Wed Jun 29 11:33:48 2022
 Charted by Depth in Feet scaled 1:240



Compensated Neutron Calibration Report

Serial-Model:	210-M&W
Source #:	N-1238
Master Calibration Performed:	Fri Dec 3 09:16:24 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:	103
Tool Model:	M&W
Performed:	Fri Dec 3 12:13:24 2021
Calibrator Value:	500.0 GAPI
Background Reading:	28.0 cps
Calibrator Reading:	986.0 cps
Sensitivity:	0.5700 GAPI/cps



Company	Cobalt Energy LLC
Well	Mac Family #1-34
Field	
County	Logan
State	Kansas