



MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company Cobalt Energy, LLC		Company Cobalt Energy, LLC	
Well McDaniel Trust #1-18		Well McDaniel Trust #1-18	
Field N/A		Field N/A	
County Logan		County Logan	
State Kansas		State Kansas	
Location: API #: 15-109-21608-00-00		Other Services	
SEC 18 TWP 15S RGE 33W		CNL/CDL DIL	
Permanent Datum	Ground Level	Elevation	2871'
Log Measured From	Kelly Bushing	K.B.	2882'
Drilling Measured From	Kelly Bushing	D.F.	N/A
		G.L.	2871'
Date	12/23/2020		
Run Number	One		
Depth Driller	4600'		
Depth Logger	4603'		
Bottom Logged Interval	4602'		
Top Log Interval	3500'		
Casing Driller	8.625" @ 351'		
Casing Logger	349'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	5000		
Density / Viscosity	9.2 65		
pH / Fluid Loss	10.5 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.30 @ 40		
Rmt @ Meas. Temp	0.23 @ 40		
Rmc @ Meas. Temp	0.41 @ 40		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.10 @ 122		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	122		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
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,
South to Gold Rd, 4 1/2 West, 2 South, 4 West,
South and East 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: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Larry Nicholson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cobalt_mcdanieltrust 1-18.db
Dataset field/well/stkml/pass4.4/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	100	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	420	0		0

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



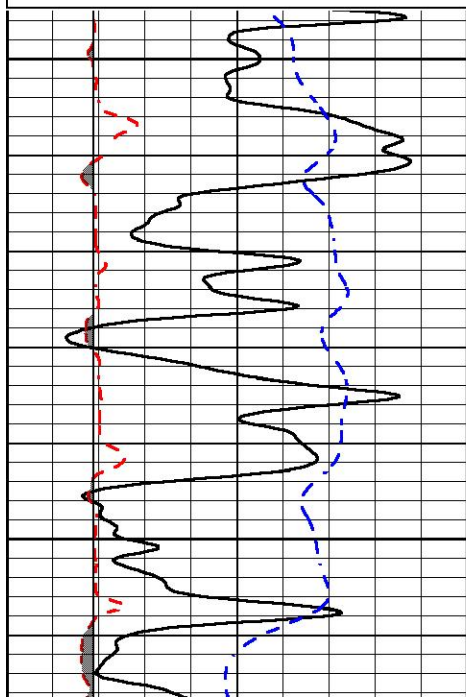
MIDWEST WIRELINE

MAIN PASS

Database File cobalt_mcdanieltrust 1-18.db
Dataset Pathname stkml/pass4.1
Presentation Format _micro
Dataset Creation Wed Dec 23 09:10:21 2020
Charted by Depth in Feet scaled 1:240

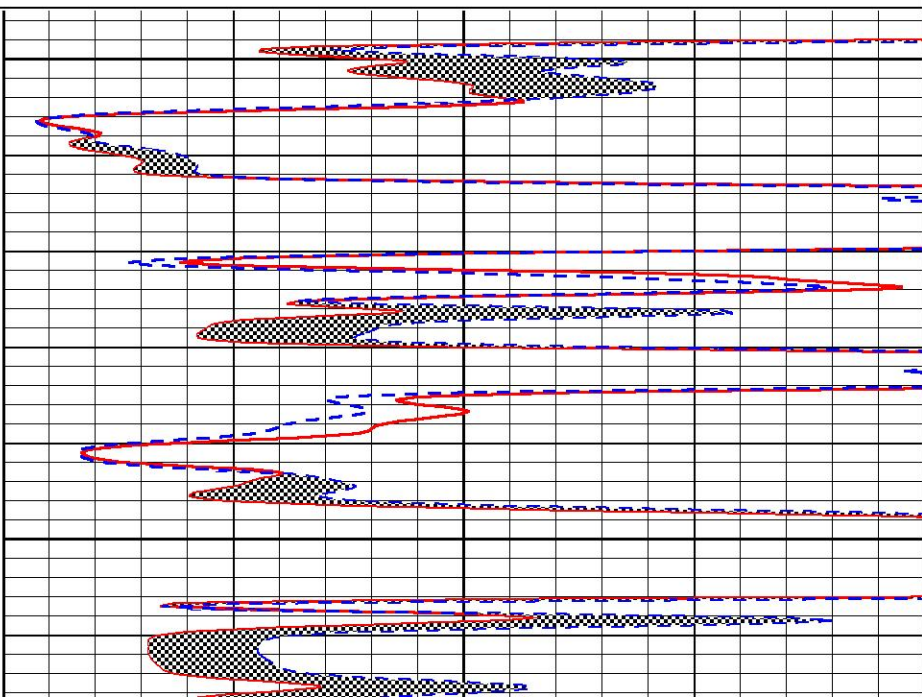
0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

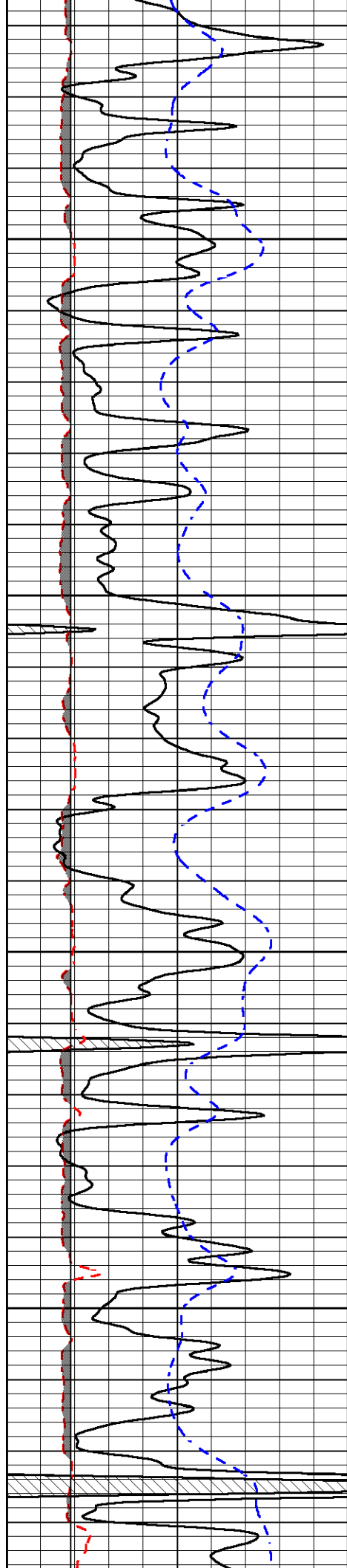
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40



3500

3550



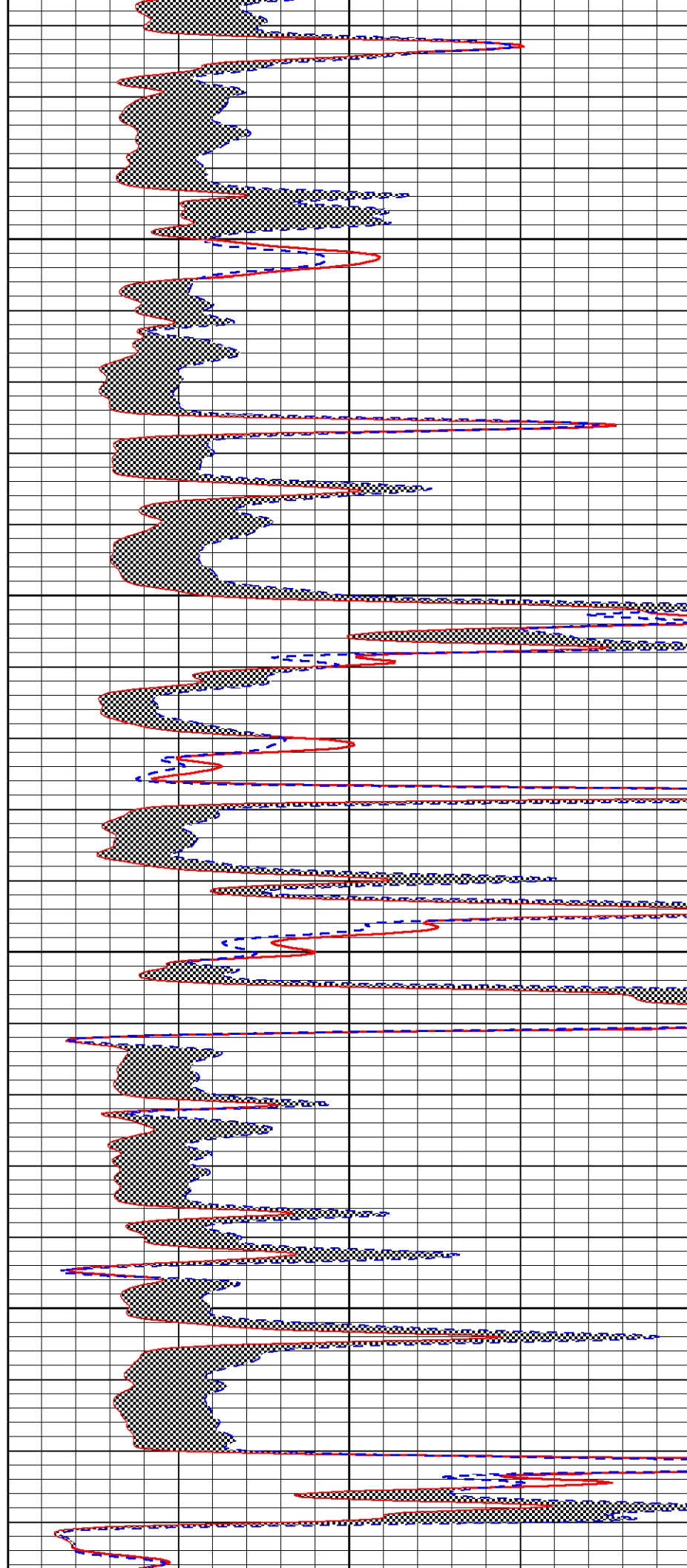


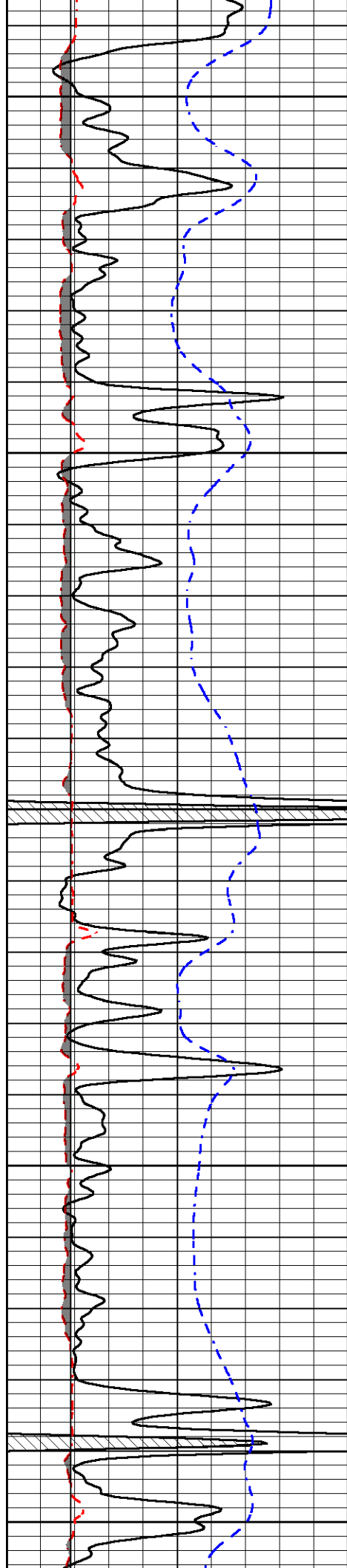
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3650

3700

3750





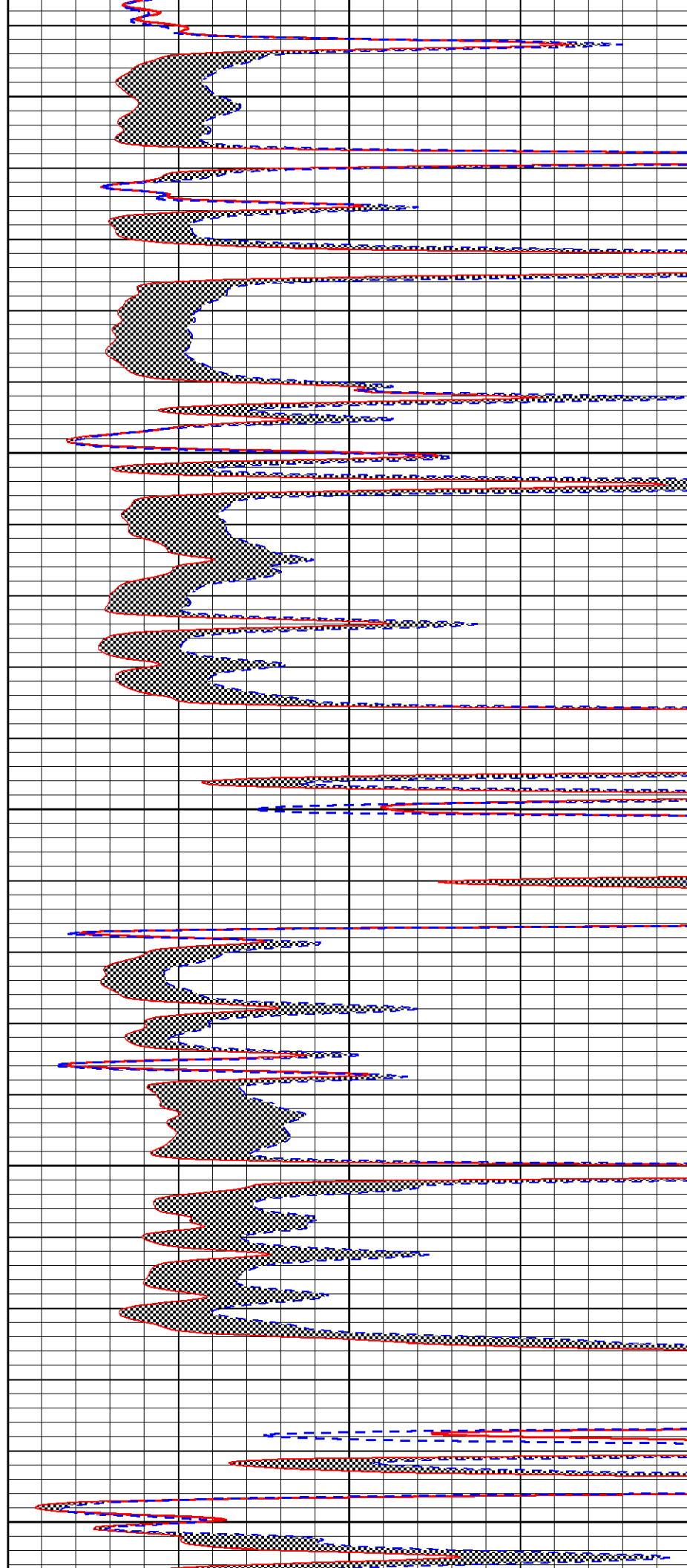
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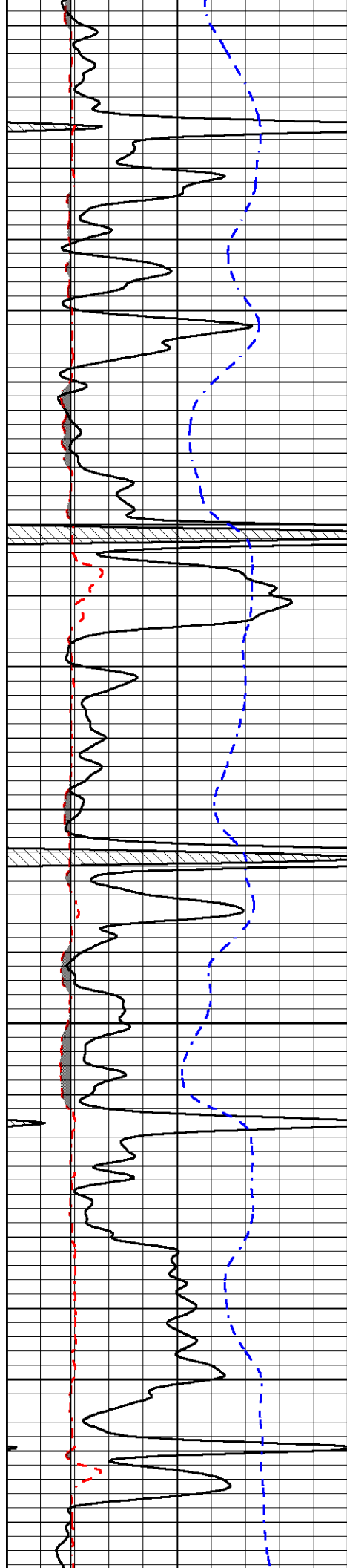
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3900

3950

4000



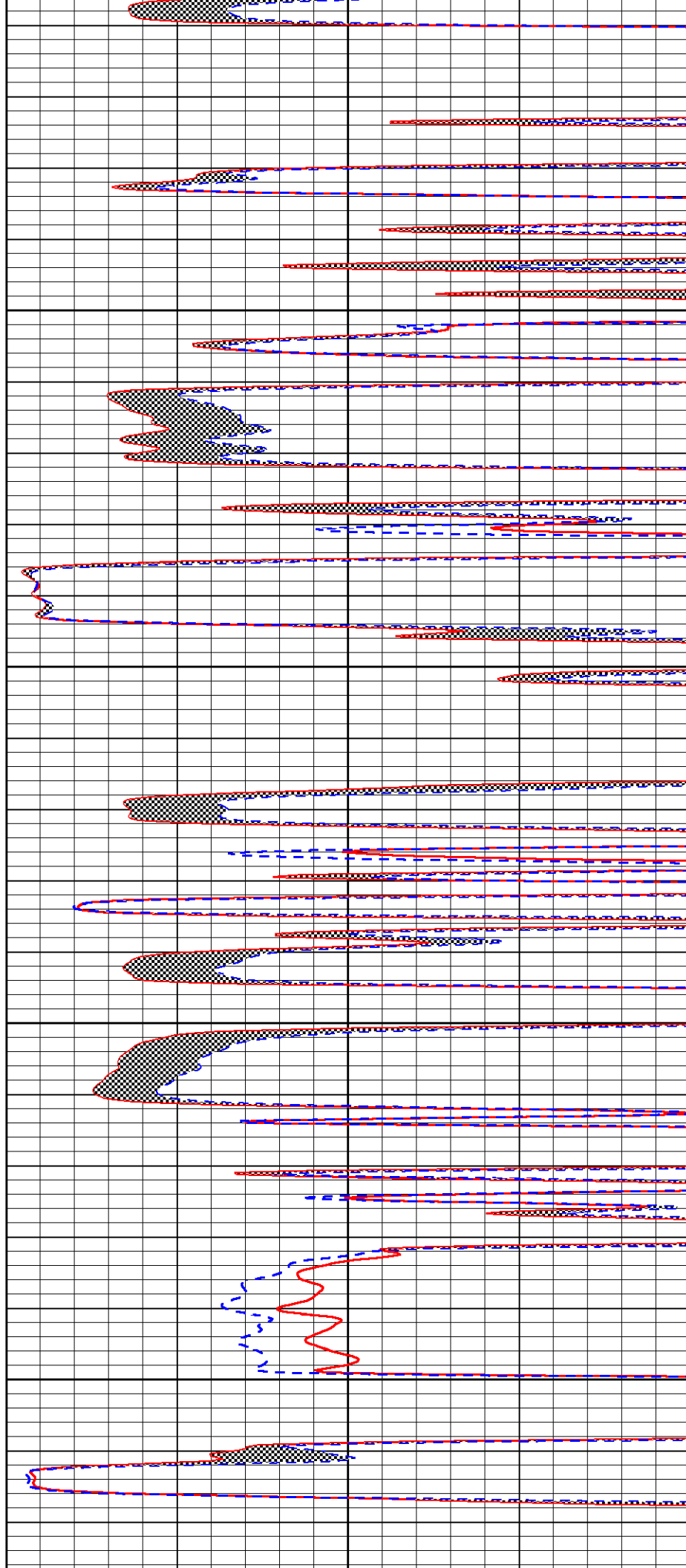


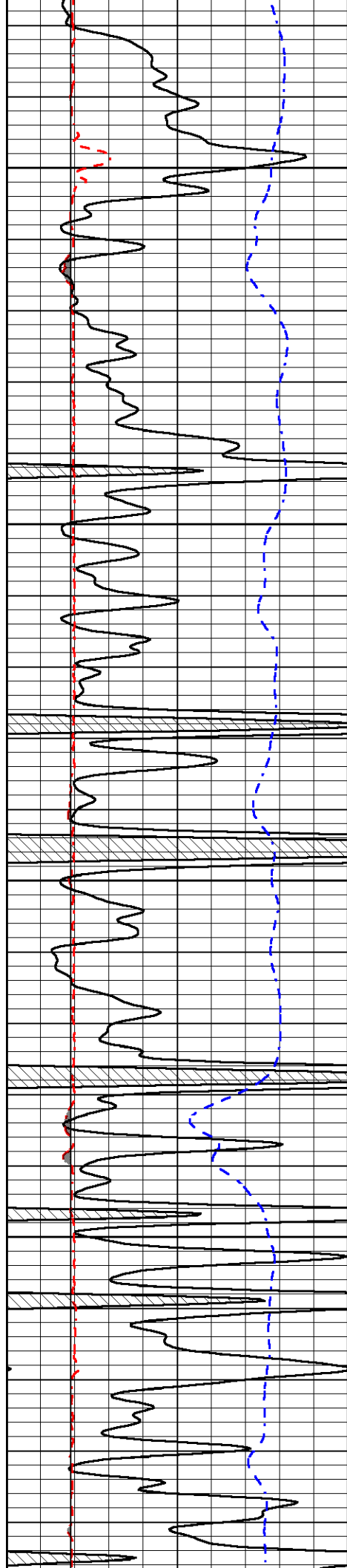
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4100

4150

4200



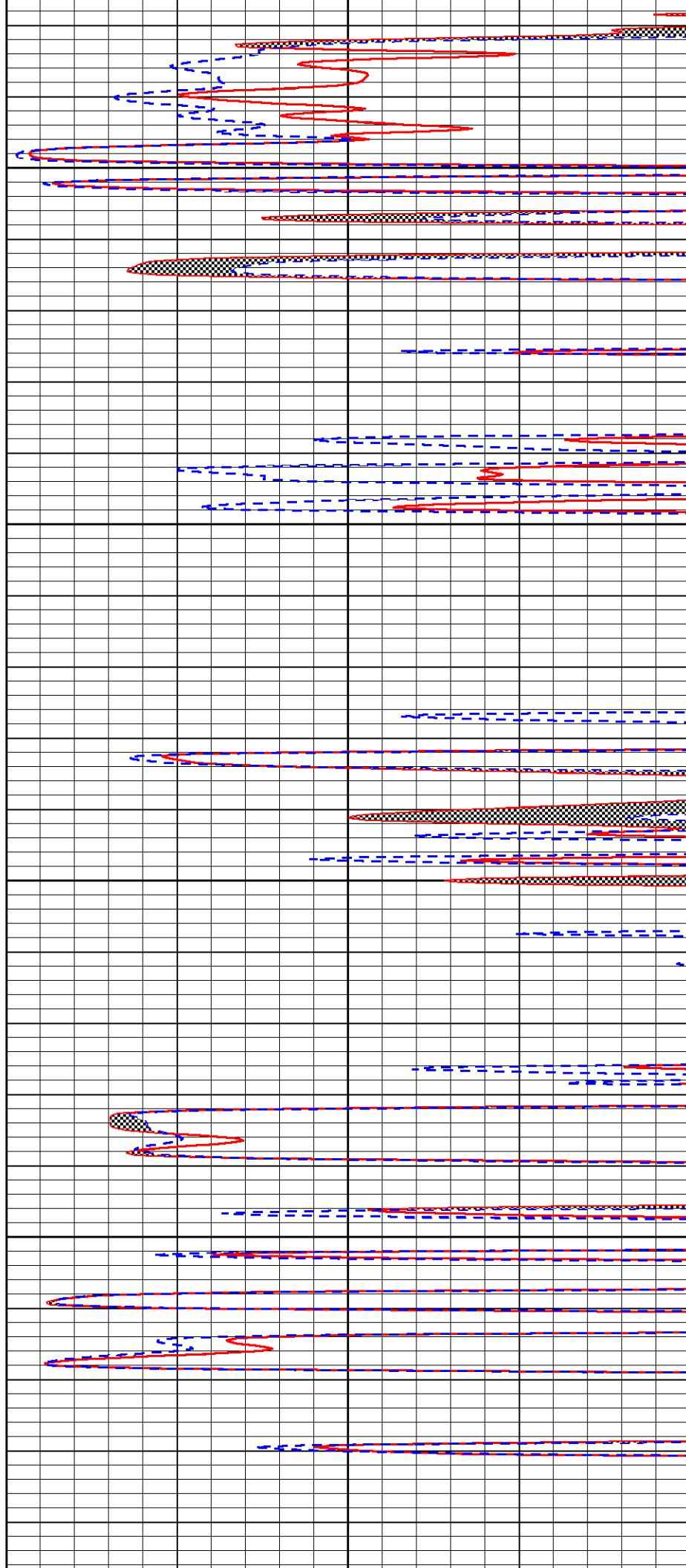


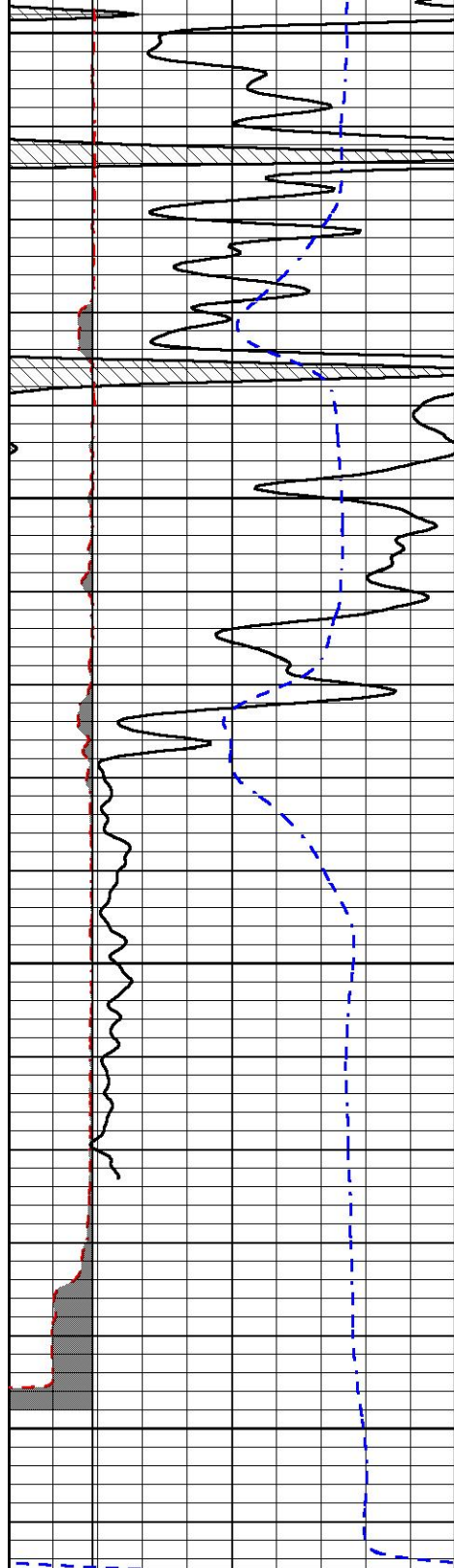
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4300

4350

4400





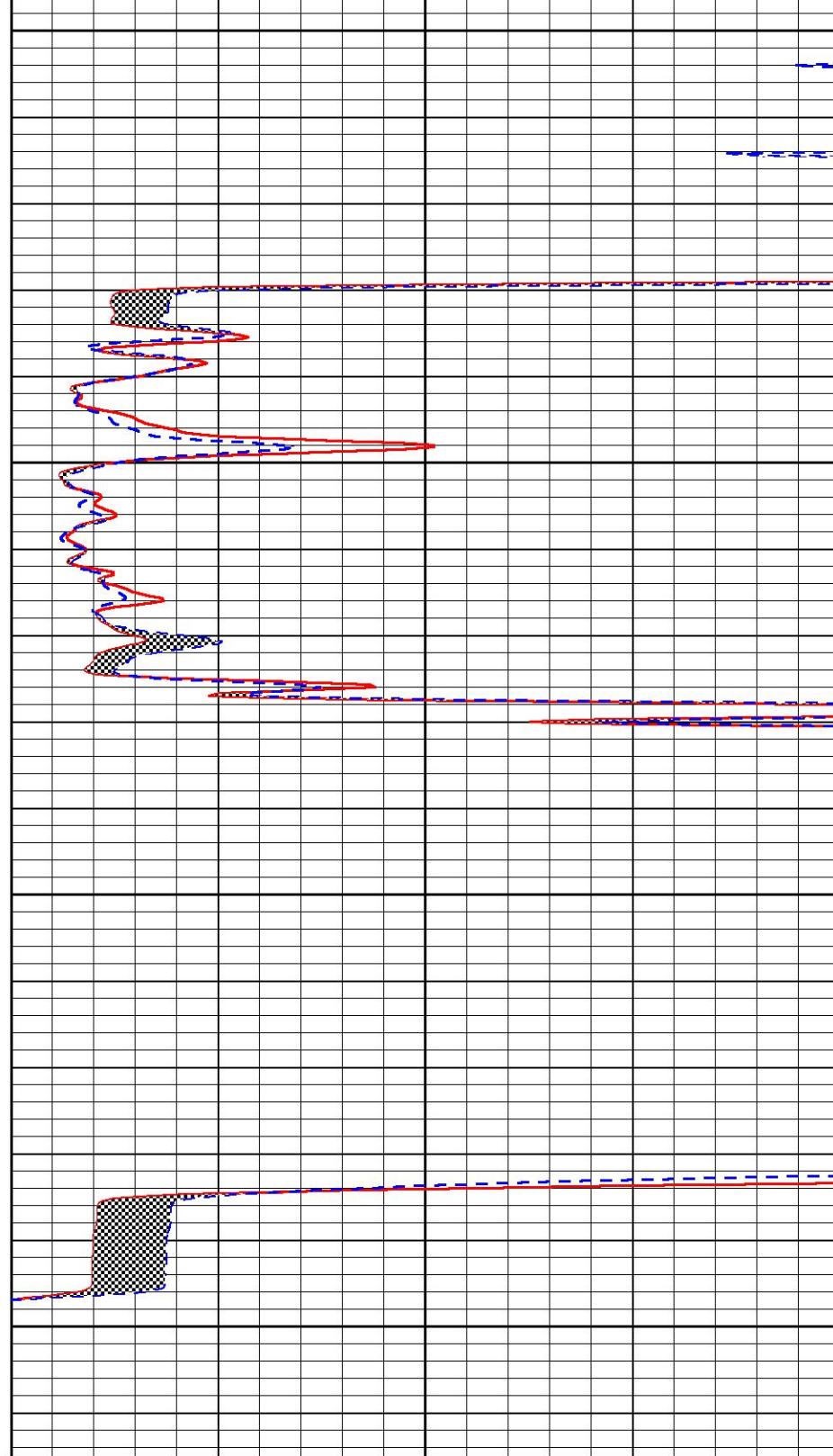
4450

4500

4550

4600

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0



0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40

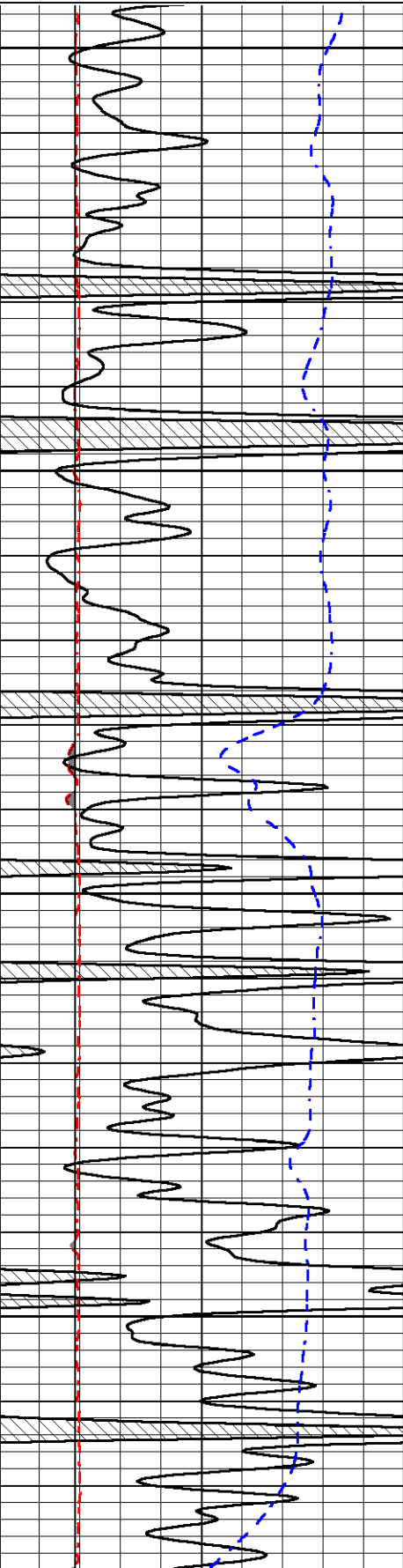


MIDWEST WIRELINE

REPEAT SECTION

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40

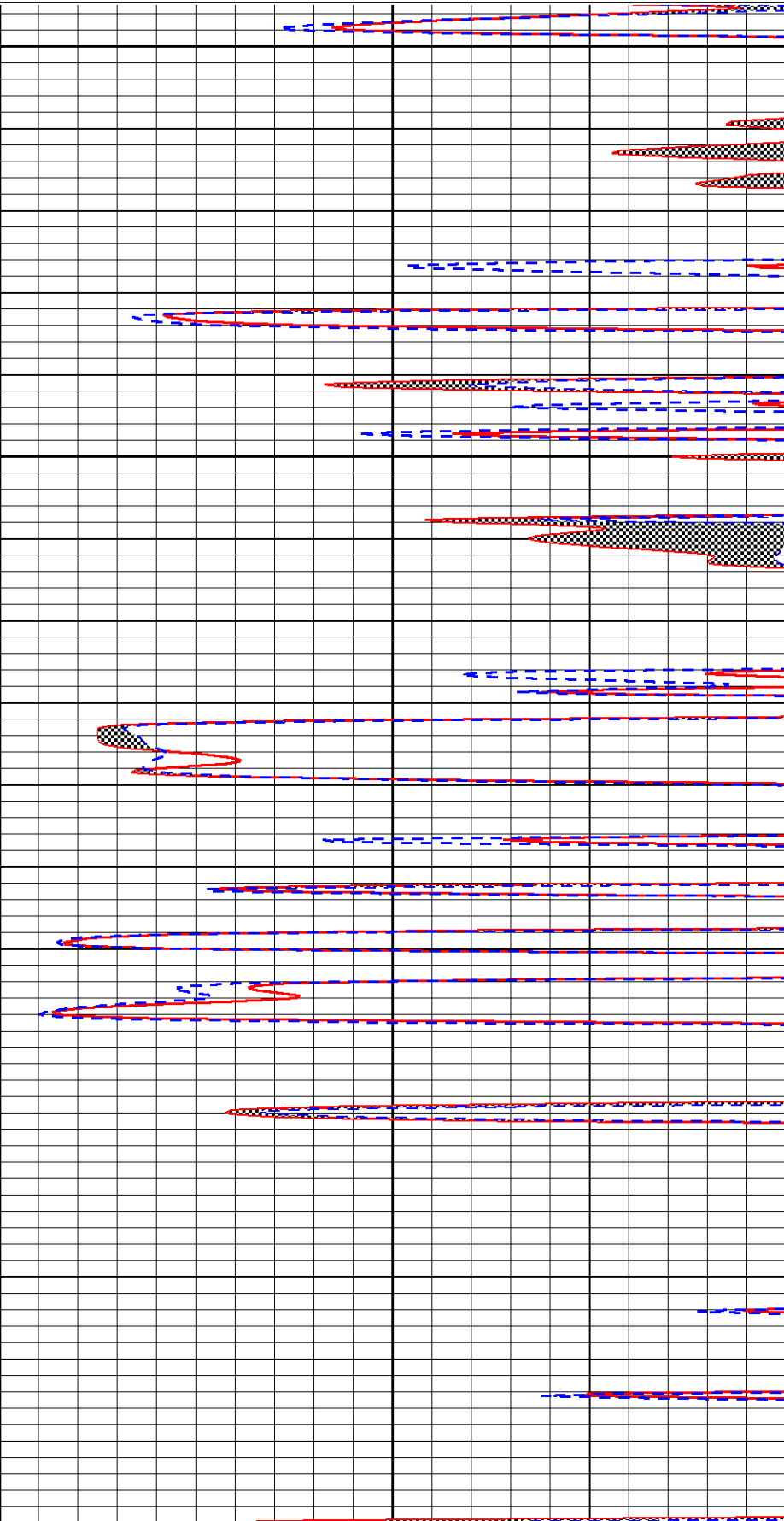


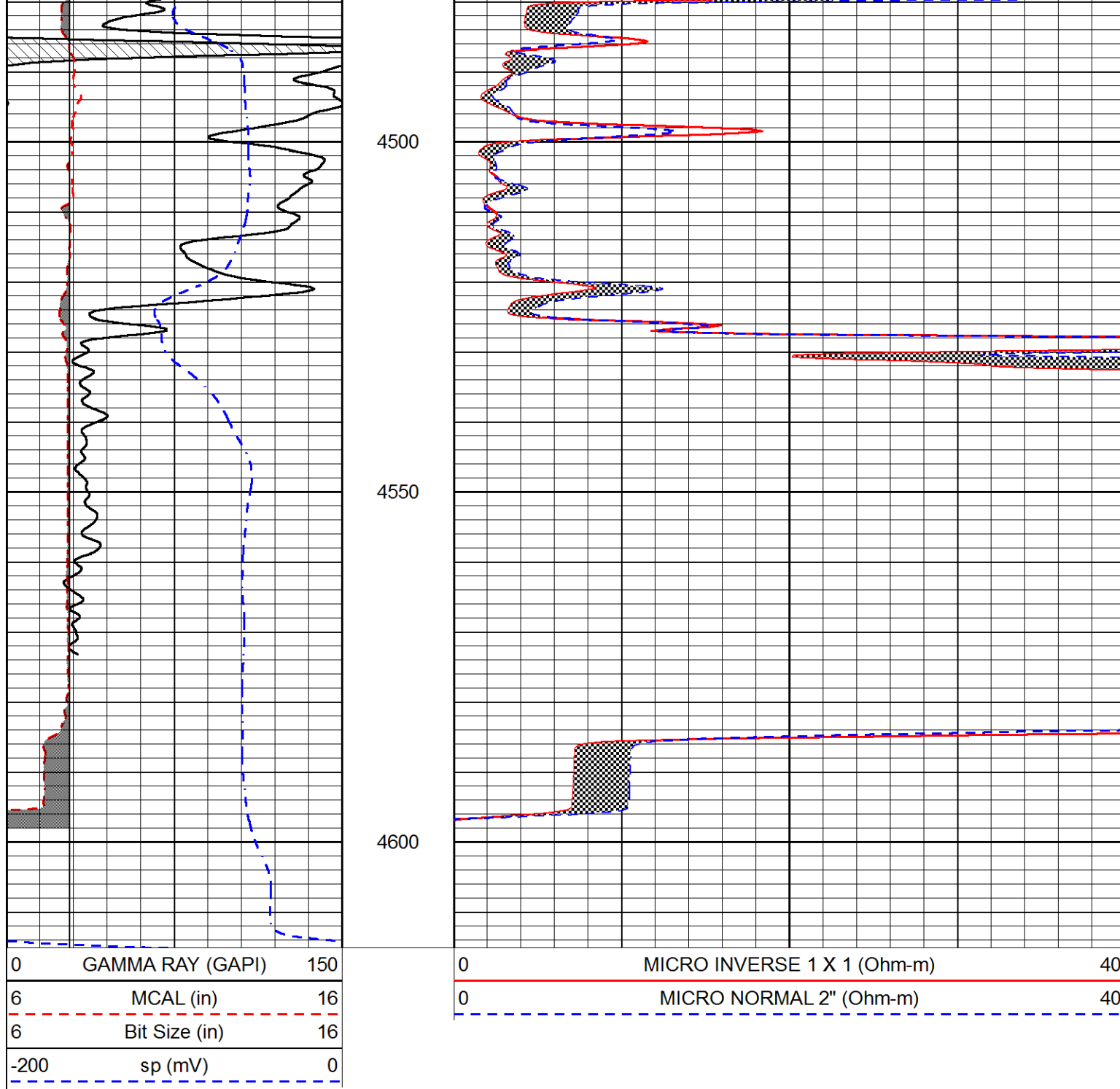
4300

4350

4400

4450





Calibration Report

Database File cobalt_mcdanieltrust 1-18.db
 Dataset Pathname stkml/pass4.4
 Dataset Creation Wed Dec 23 08:57:30 2020

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Sun Jun 28 08:39:24 2020

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-30.000
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-28.000

Microlog Calibration Report							
Serial-Model: Performed:				PSI-01-PSIML Tue Sep 29 10:01:17 2020			
Readings			References			Results	
	Zero	Cal		Zero	Cal	m	b
Normal	0.0000	1.0000		0.0000	1.0000	Ohm-m	23000.0000
Inverse	0.0000	1.0000		0.0000	1.0000	Ohm-m	21000.0000
Caliper	1.0033	1.0841		5.0000	16.5000	in	142.3500
							-138.5500
Compensated Density Calibration Report							
Serial-Model: Source / Verifier: Master Calibration Performed:				817-947-M&W 16955B / 2ci Sun Sep 20 22:09:47 2020			
Master Calibration							
	Density			Far Detector		Near Detector	
Magnesium	1.755	g/cc		6127.15		5922.31	cps
Aluminum	2.680	g/cc		1141.85		3762.09	cps
	Spine Angle = 74.89			Density/Spine Ratio = 0.532			
	Size			Reading			
Small Ring	4.50	in		1.02			
Large Ring	14.50	in		1.23			
Compensated Neutron Calibration Report							
Serial Number: Tool Model: Calibration Performed:				207-MW M&W WED FEB 13 10:30:30 2019			
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: Tool Model: Calibration Performed:		233-M&W M&W Sun Sep 20 22:10:24 2020					
Calibrator Value:		1.0	GAPI				
Background Reading:		0.0	cps				
Calibrator Reading:		1.0	cps				
Sensitivity:		0.5500	GAPI/cps				