



MICRORESISTIVITY LOG

MIDWEST WIRELINE

Company Cholla Production, LLC			
Well	Wrangler #1-23		
Field	Walz		
County	Trego		
State	Kansas		
Location: API #: 15-195-23115-00-00			
SEC 23 TWP 11S RGE 21W			
Permanent Datum	Ground Level	Elevation	2265'
Log Measured From	Kelly Bushing		
Drilling Measured From	Kelly Bushing		
Date		3/9/2021	
Run Number	One		
Depth Driller	3950'		
Depth Logger	3951'		
Bottom Logged Interval	3950'		
Top Log Interval	3000'		
Casing Driller	8.625" @ 306'		
Casing Logger	306'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3000		
Density / Viscosity	9.2	56	
pH / Fluid Loss	10.0	6.0	
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.40 @ 60		
Rmt @ Meas. Temp	0.30 @ 60		
Rmc @ Meas. Temp	0.54 @ 60		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.21 @ 116		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	116		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Charlie Sturdavant		

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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.

I-70 and Riga Rd,
North to F Rd, 1 East to 390, 1 North,
1/2 East to location (stay north of farmstead)

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: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Charlie Sturdavant
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cholla_wrangler 1-23.db
Dataset field/well/stkml/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	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	215	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



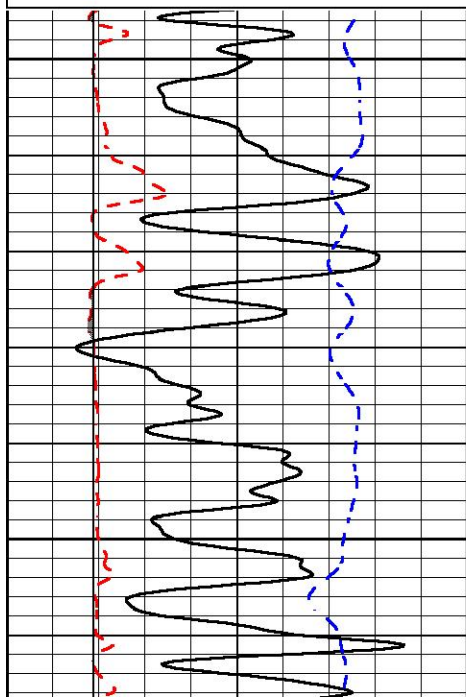
MIDWEST WIRELINE

MAIN PASS

Database File cholla_wrangler 1-23.db
Dataset Pathname stkml/pass3.1
Presentation Format _micro
Dataset Creation Tue Mar 09 21:15:48 2021
Charted by Depth in Feet scaled 1:240

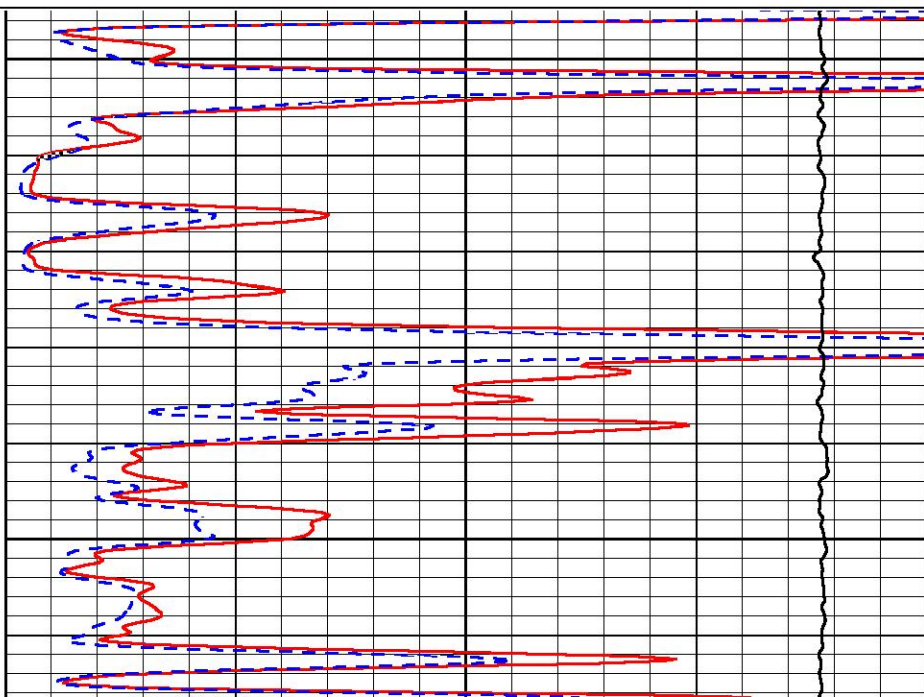
0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

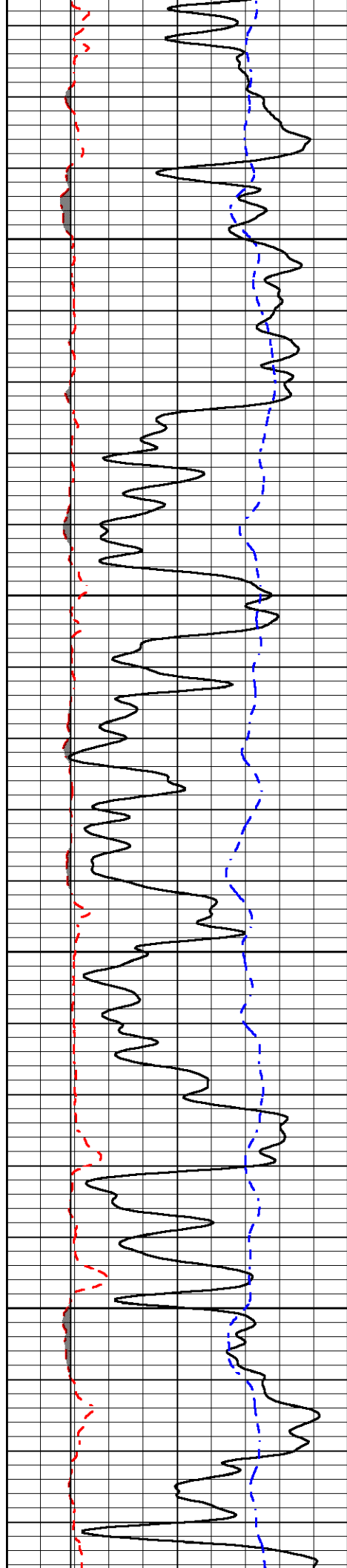
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0



3000

3050



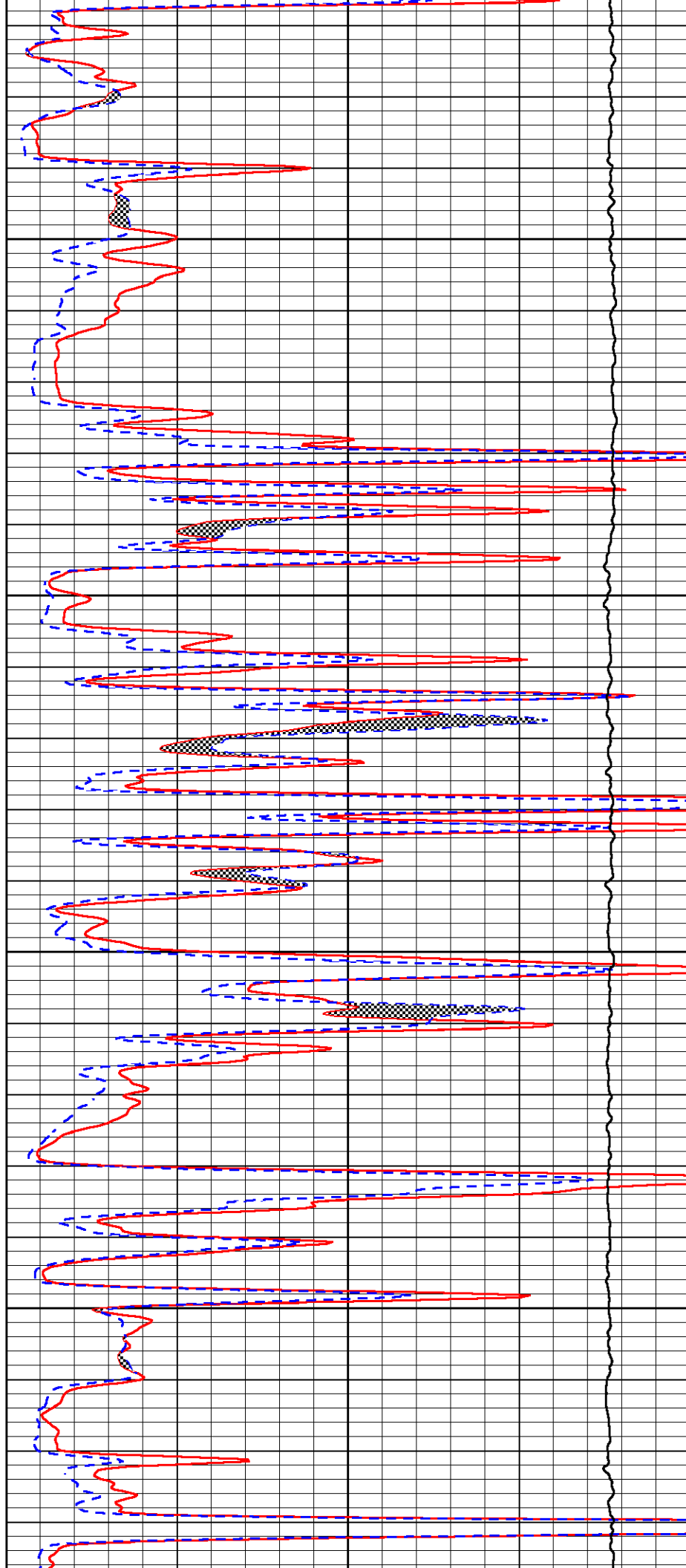


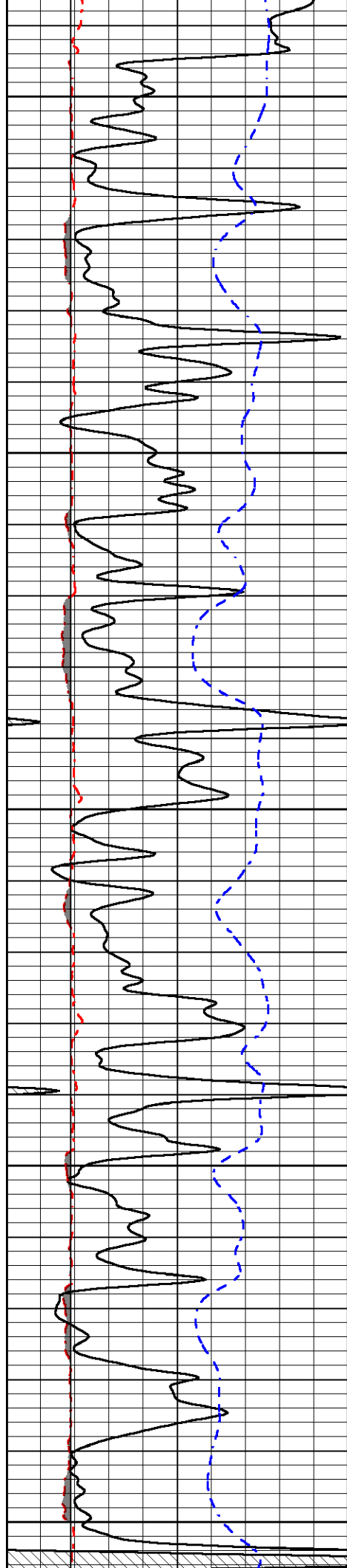
3100

3150

3200

3250





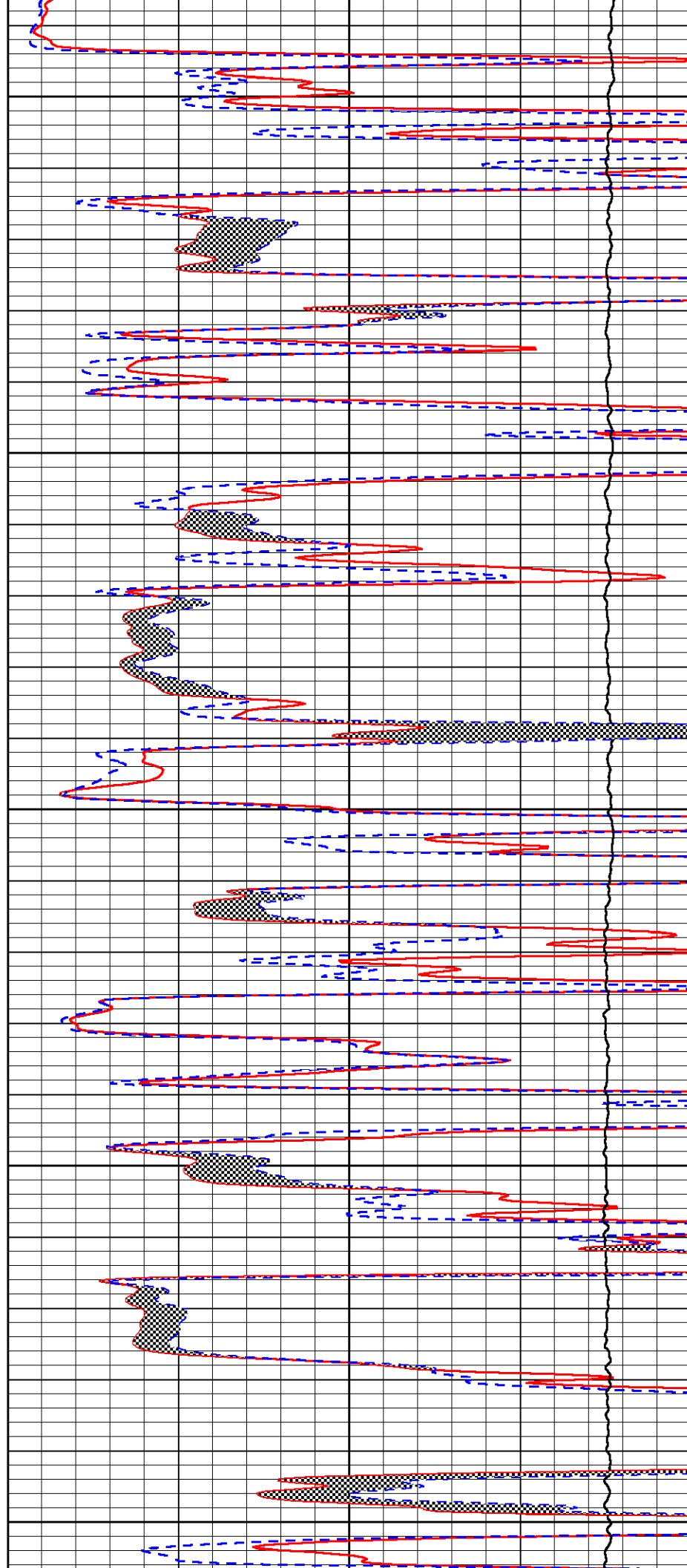
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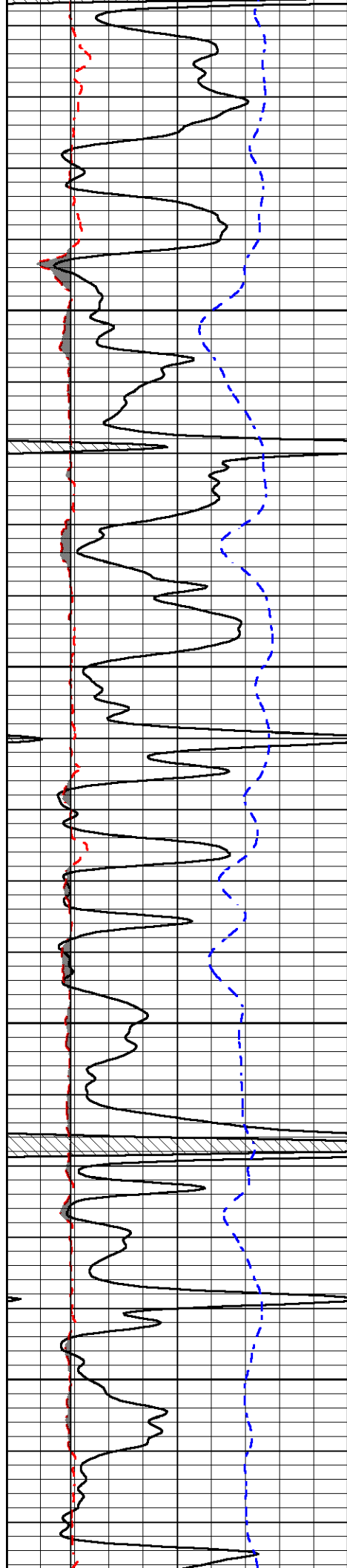
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3400

3450

3500



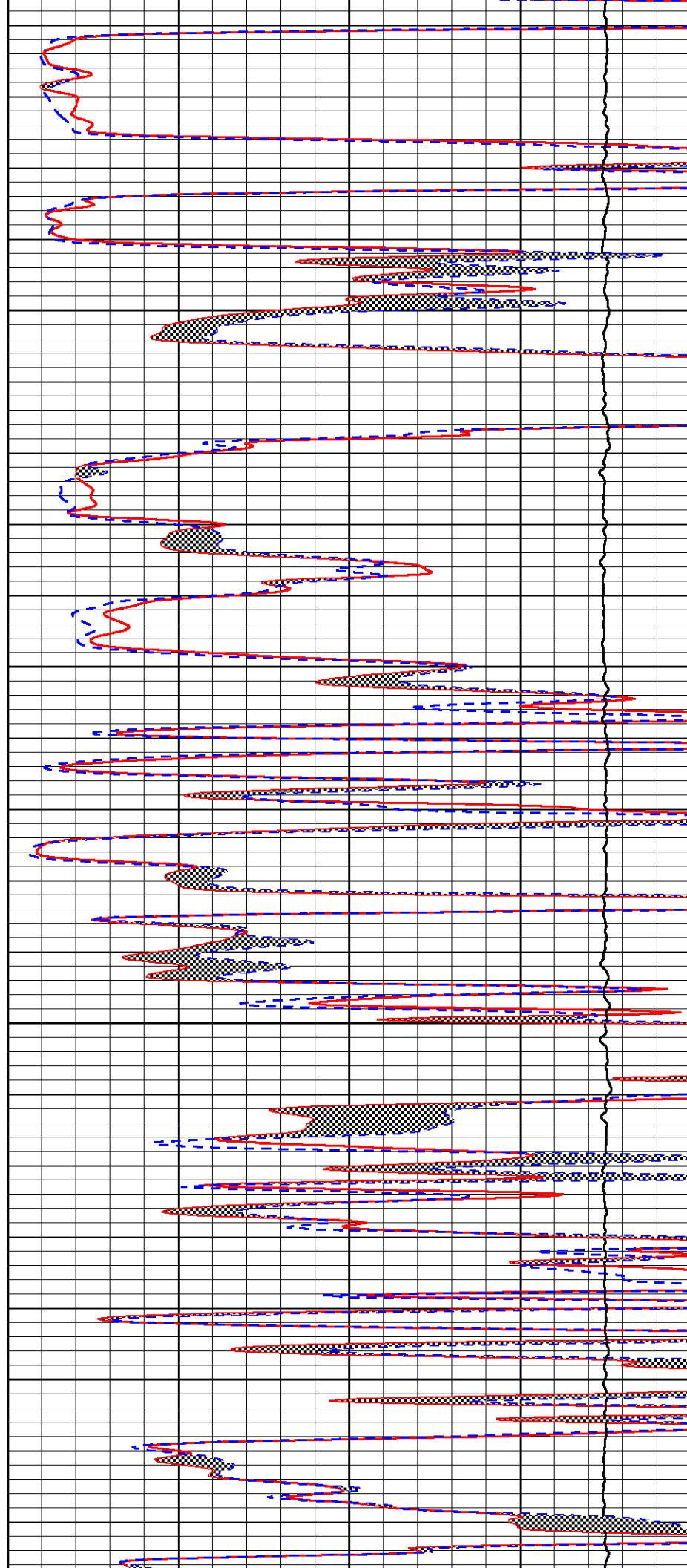


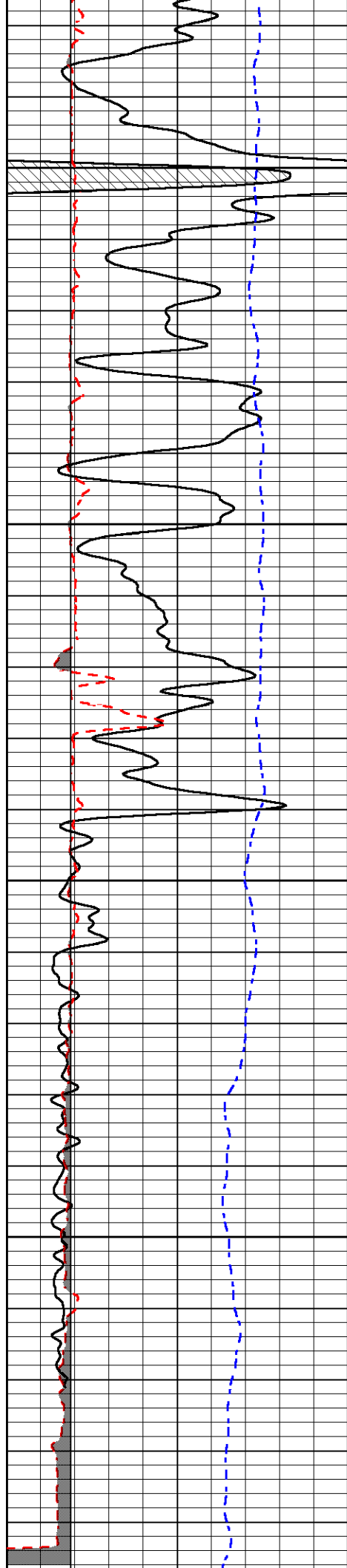
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3600

3650

3700



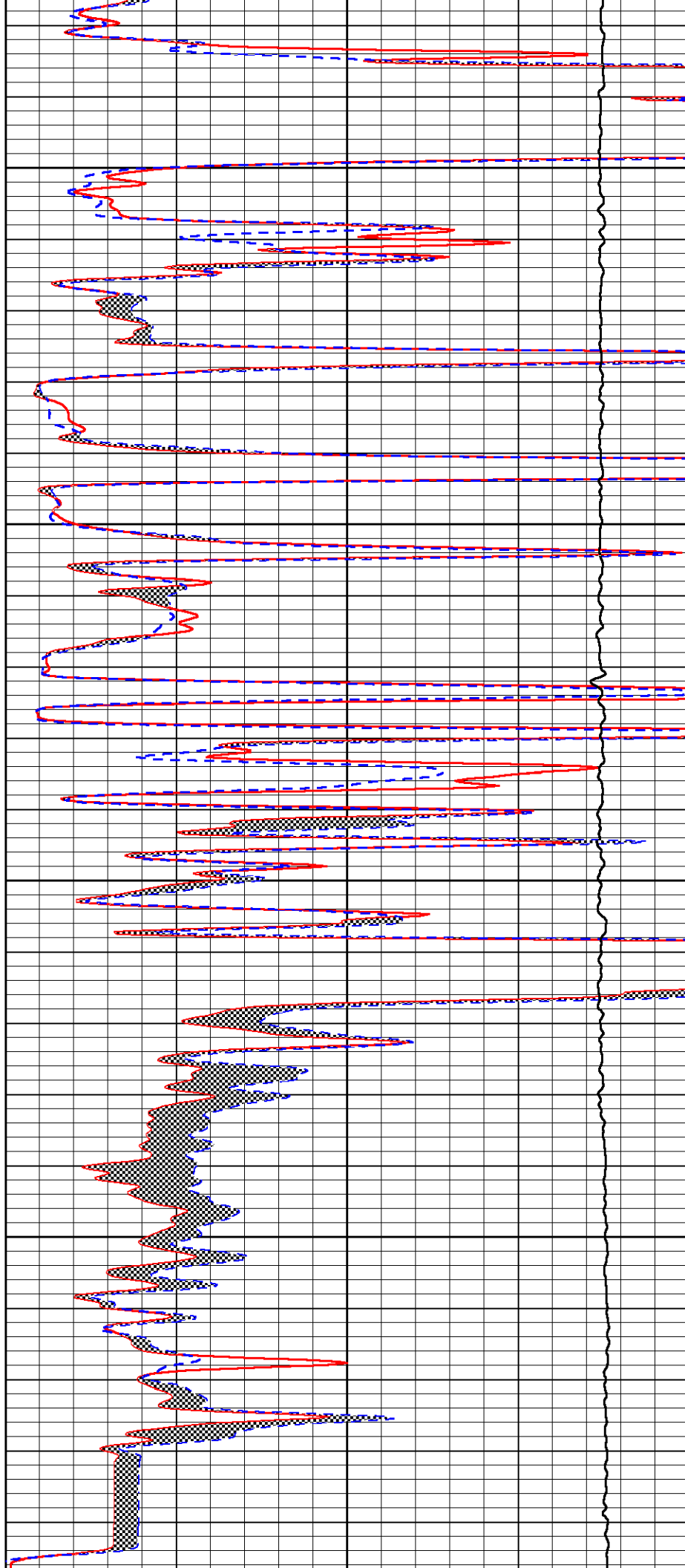


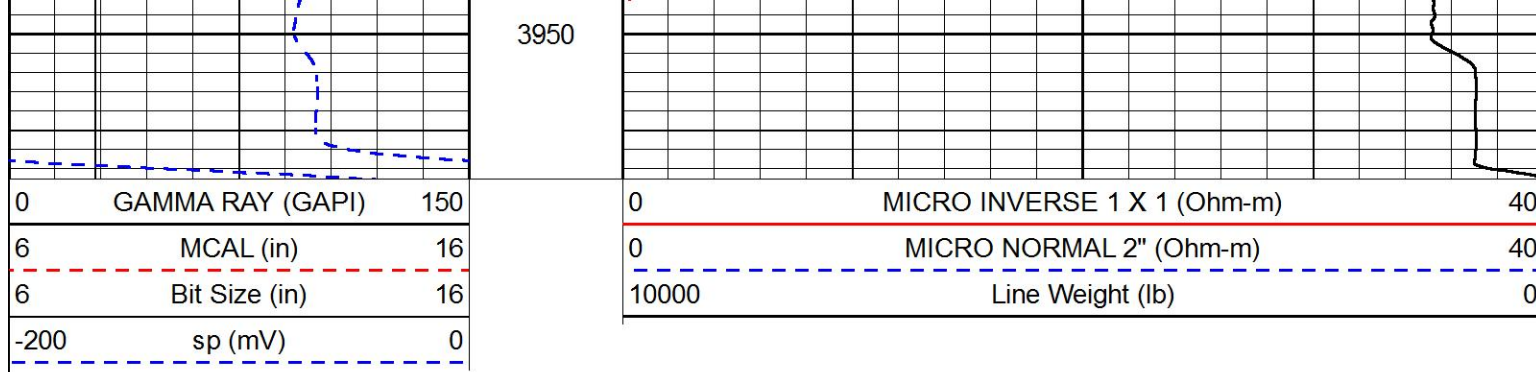
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3800

3850

3900

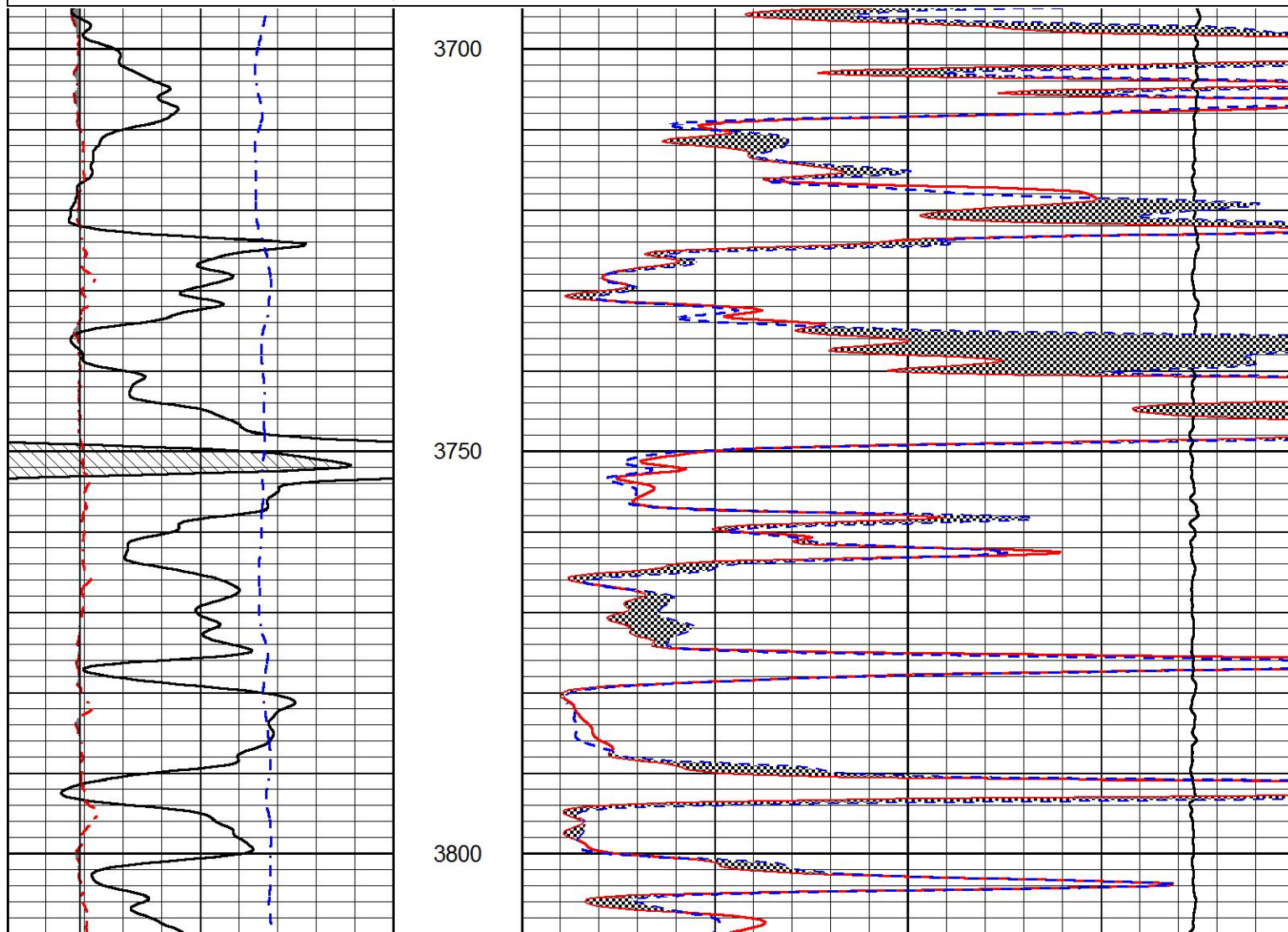
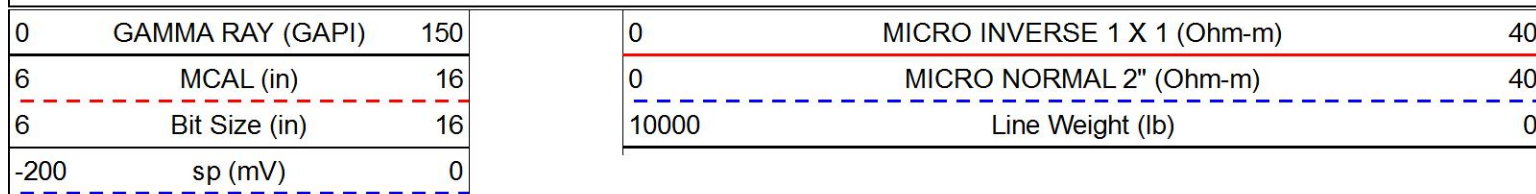


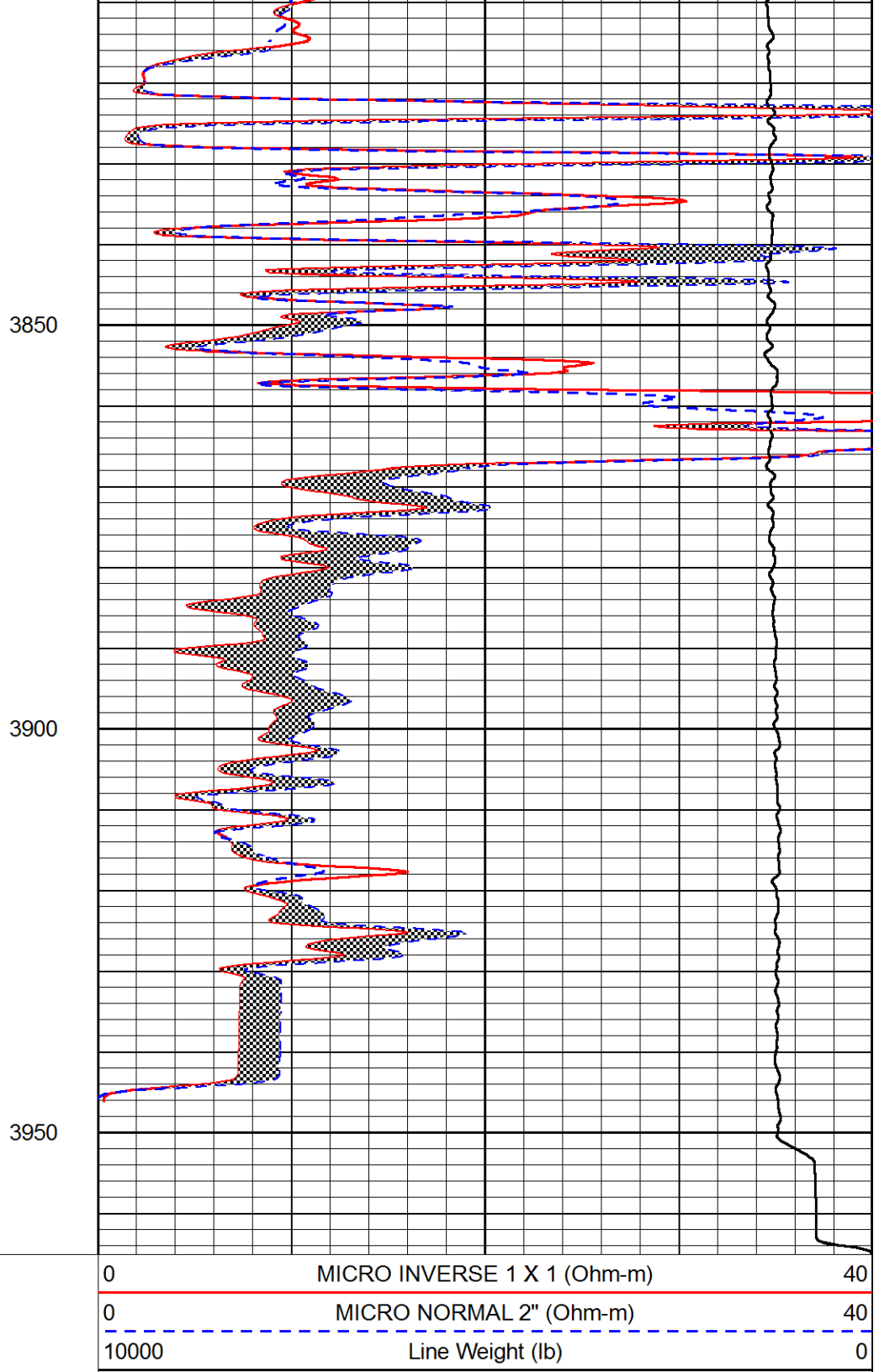
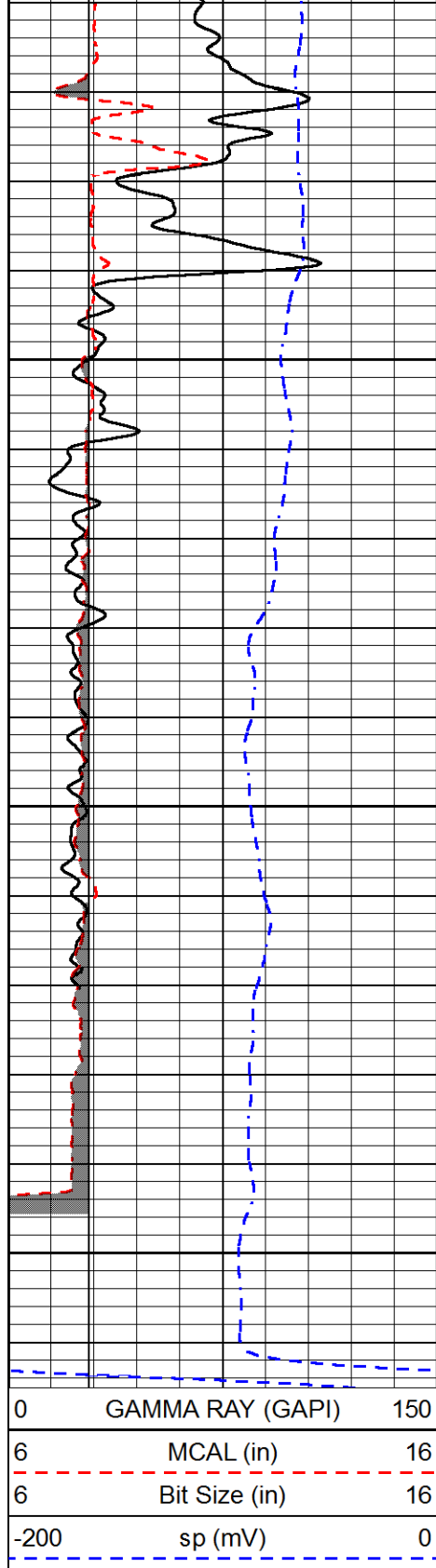


MIDWEST WIRELINE

REPEAT SECTION

Database File cholla_wrangler 1-23.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _micro
 Dataset Creation Tue Mar 09 21:19:05 2021
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File cholla_wrangler 1-23.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Tue Mar 09 21:15:48 2021

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Wed Mar 03 05:24:49 2021

Readings

References

Results

Readings			References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-33.000
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-30.000

Microlog Calibration Report							
Serial-Model: Performed:			PSI-01-PSIML Wed Mar 03 05:24:59 2021				
Readings		References			Results		
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	12000.0000	-0.3000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	13000.0000	0.3000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.6000

Compensated Density Calibration Report							
Serial-Model: Source / Verifier: Master Calibration Performed:			817-947-M&W 16955B / 2ci Wed Mar 03 05:25:05 2021				
Master Calibration							
	Density		Far Detector		Near Detector		
Magnesium	1.755	g/cc	6127.15		5922.31	cps	
Aluminum	2.675	g/cc	1141.85		3762.09	cps	
Spine Angle = 74.89			Density/Spine Ratio = 0.529				
	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 MAR 3 7:30:30 2021				
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 Wed Mar 03 05:25:33 2021					
Calibrator Value:		1.0	GAPI				
Background Reading:		0.0	cps				
Calibrator Reading:		1.0	cps				
Sensitivity:		0.5500	GAPI/cps				

