



Radial Cement Bond
Variable Density Log
W/ Temp/GammaRay/CCL

Company Antero Resources

Well Maggie 2H

Field Rabbit Ears

County Tyler State West Virginia

Location: API #: 47095026380000

Other Services
N/A

SEC N/A TWP N/A RGE N/A

Permanent Datum Ground Level Elevation
Log Measured From Kelly Bushing 25' A.P. D.
Drilling Measured From Kelly Bushing

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

Company Antero Resources
Well Maggie 2H
Field Rabbit Ears
County Tyler
State West Virginia

Date	1-May-2020	
Run Number	One	
Depth Driller	22,728 ft.	
Depth Logger	6,942 ft.	
Bottom Logged Interval	6,942 ft	
Top Log Interval	Surface	
Open Hole Size	n/a	
Type Fluid	Freshwater	
Density / Viscosity	n/a	
Max. Recorded Temp.	159 deg F	
Estimated Cement Top	5,122 ft.	
Time Well Ready	07:00	
Time Logger on Bottom	14:42	
Equipment Number	132	
Location	Marietta, Ohio	
Recorded By	Tom Weese	
Witnessed By	Chris Young	
Borehole Record		
Run Number	Bit	From To
Tubing Record		
Run Number	Size	Weight From To
Casing Record		
Surface String	Size	Wd/Ft
Prod. String	9 5/8 in.	54.5 #
Production String	5 1/2	23 #
Liner		
Marker Joint		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Primary Log on Well

Log Correlated to Marker Joint at (5,687' - 5,697')
Depth Correction (-18)

Main Pass 0 PSI
Repeat Pass 0 PSI

Thank You For Using Nine Energy Wireline of Marietta, Ohio

RECEIVED
Office of Oil and Gas

APR 03 2023

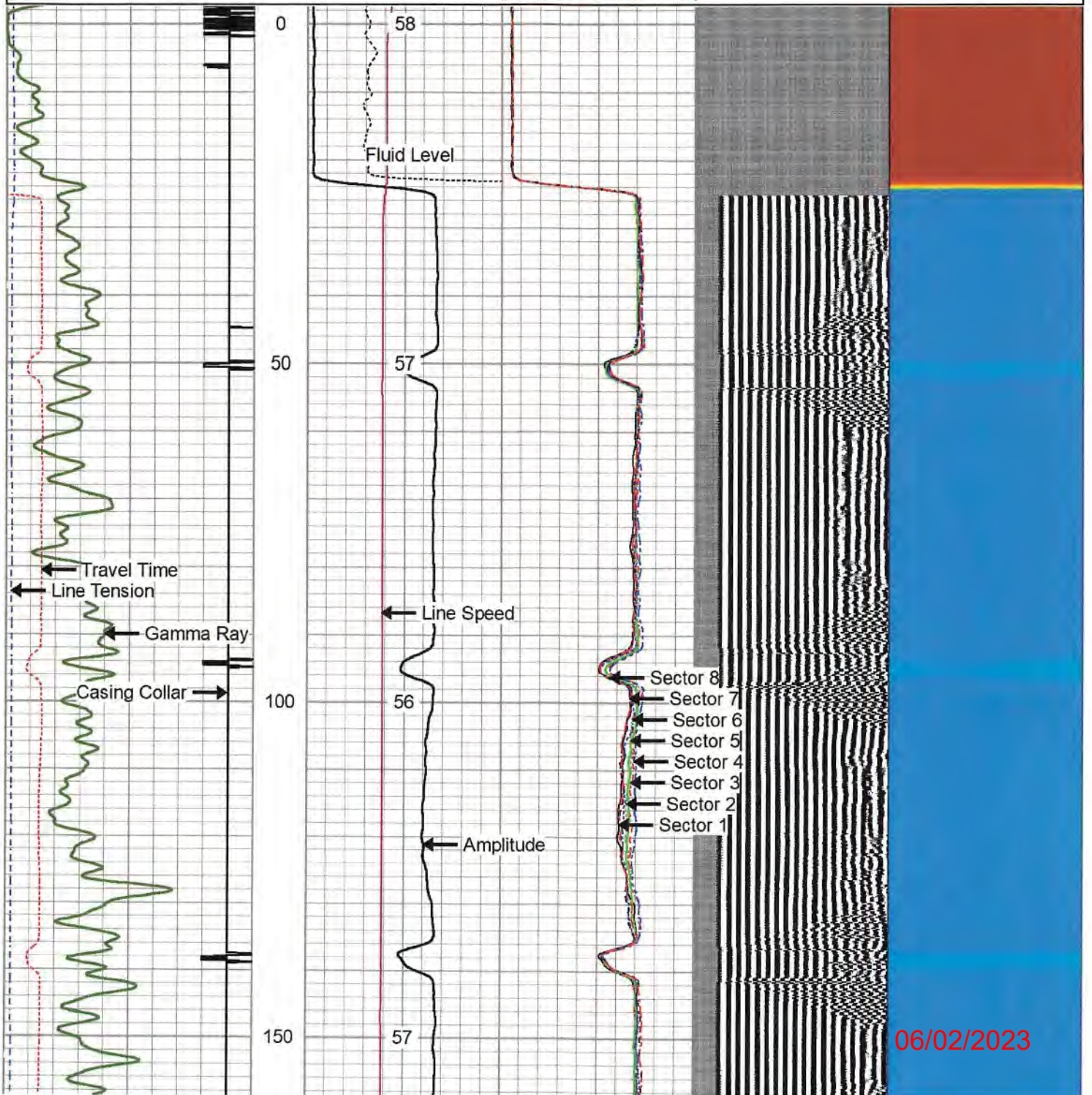
WV Department of
Environmental Protection



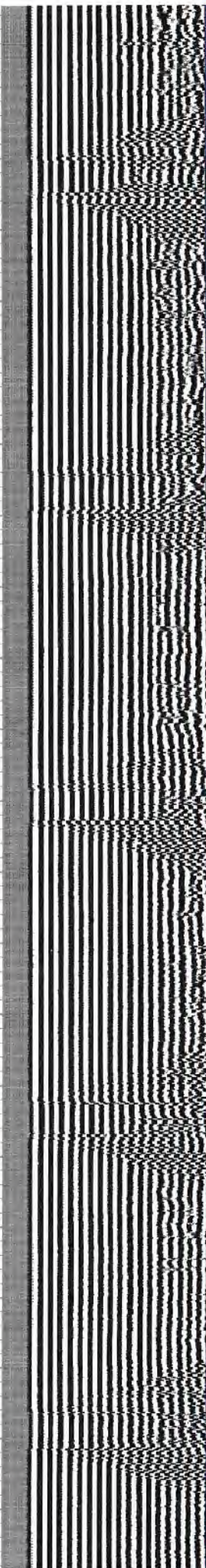
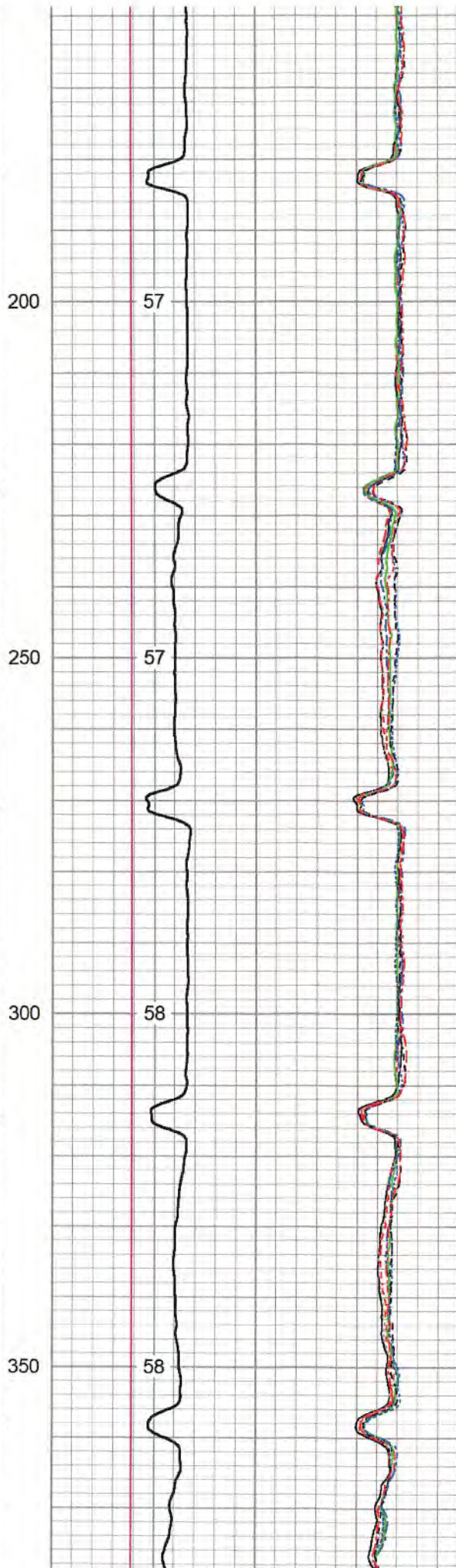
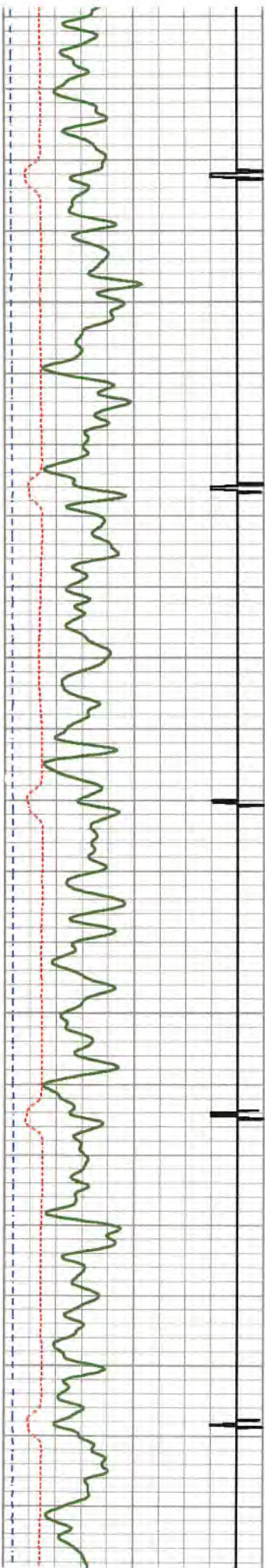
Main Pass 0 PSI

Database File antero_gamehengeeast_maggie2h_rcbl_nineenergy_may_2_2020.db
 Dataset Pathname Rabbit_Ears/Maggie_2H/RCBL_1/pass4
 Presentation Format 9rcbl
 Dataset Creation Sat May 02 14:52:21 2020
 Charted by Depth in Feet scaled 1:240

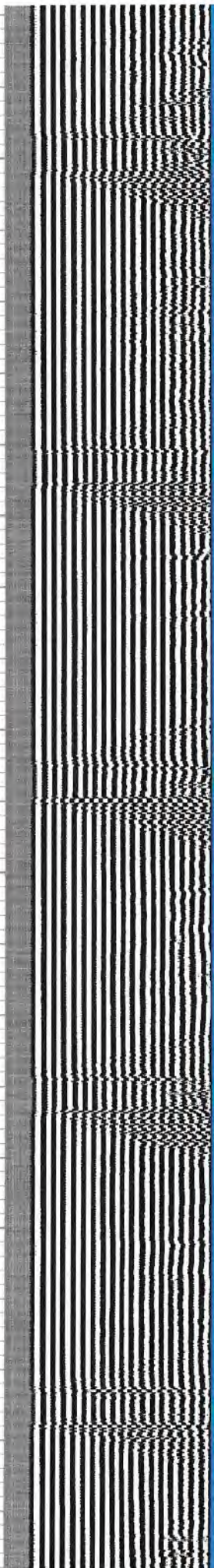
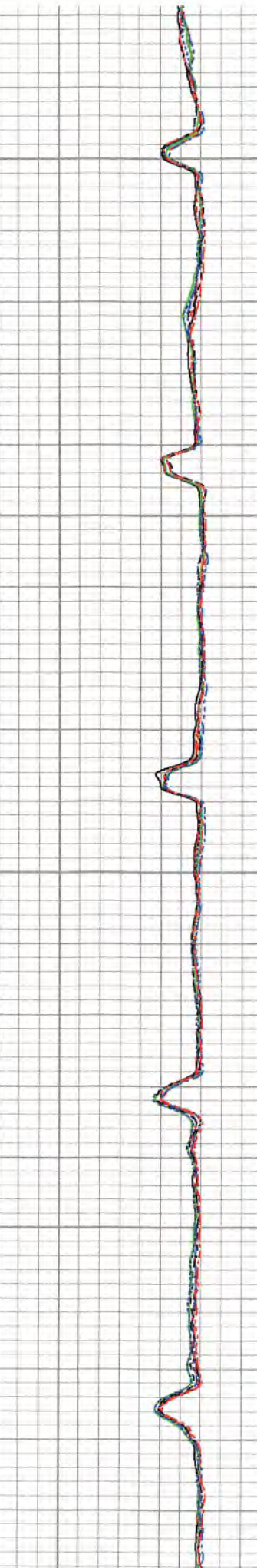
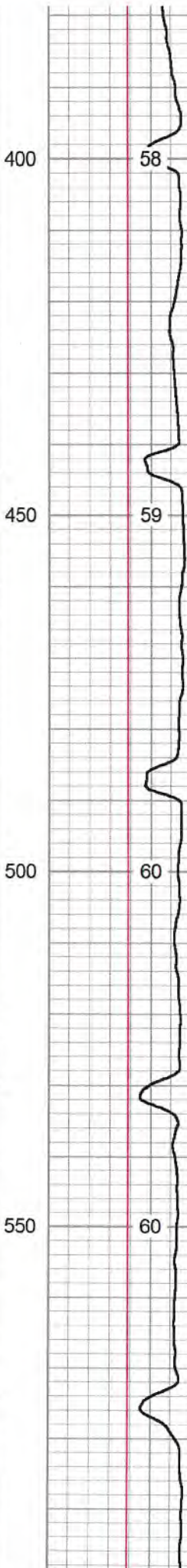
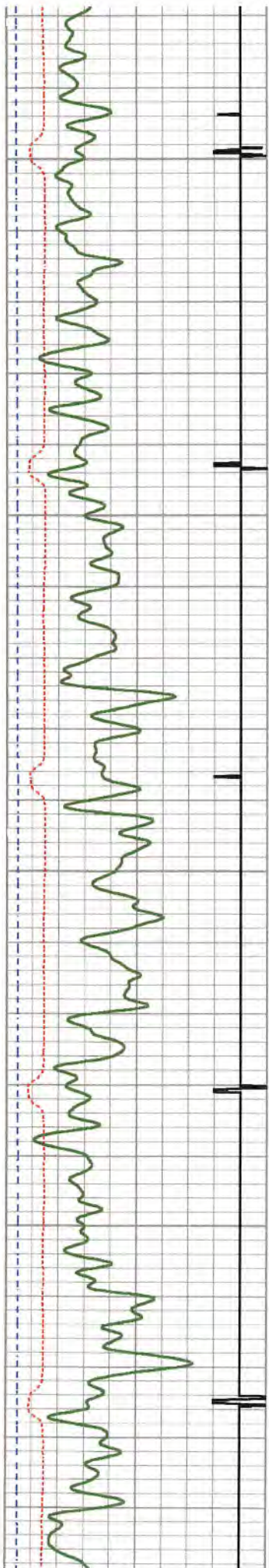
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9	Casing Collar	-1		Amplified Amplitude		-5	Sector 2	150	200	(usec)		
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	Sector 3	150				
0	Line Tension (lb)	5000		Line Speed		-5	Sector 4	150				
			-500	(ft/min)	500	-5	Sector 5	150				
				TEMP		-5	Sector 6	150				
				(degF)		-5	Sector 7	150				
						-5	Sector 8	150				



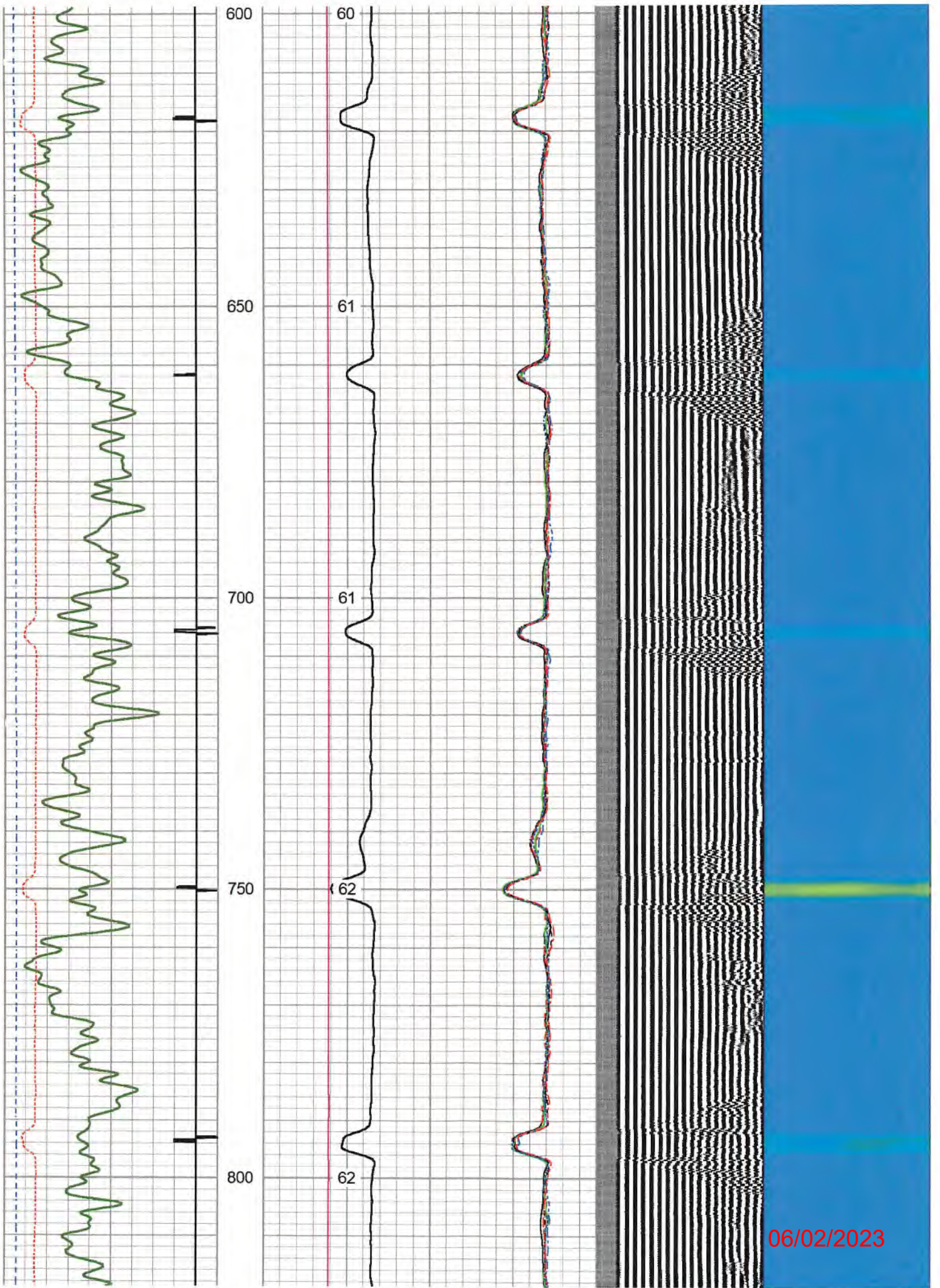
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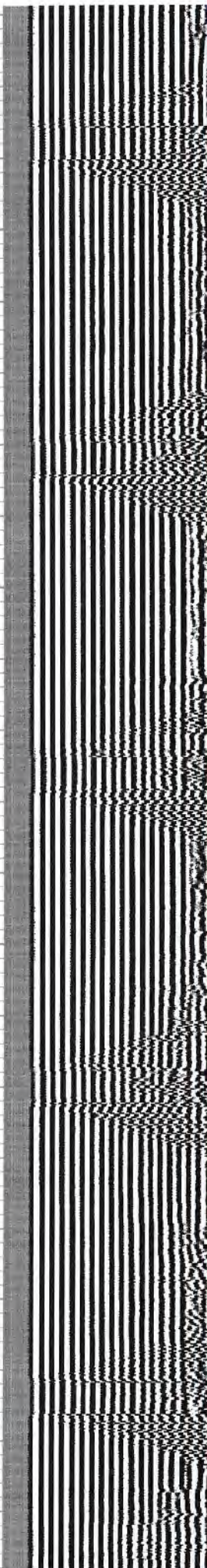
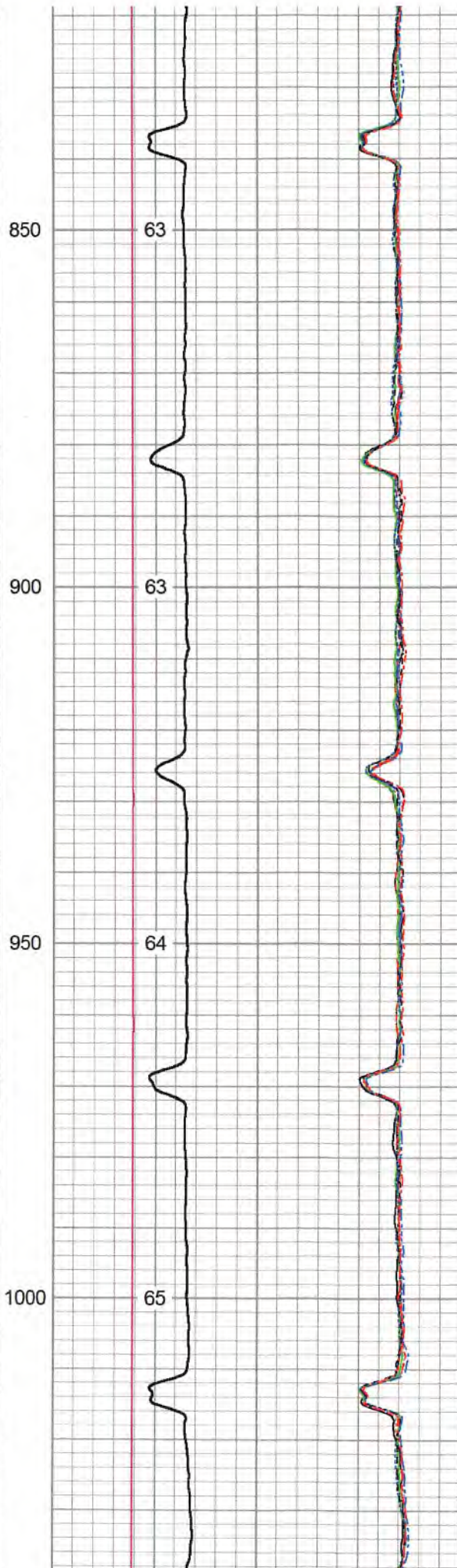
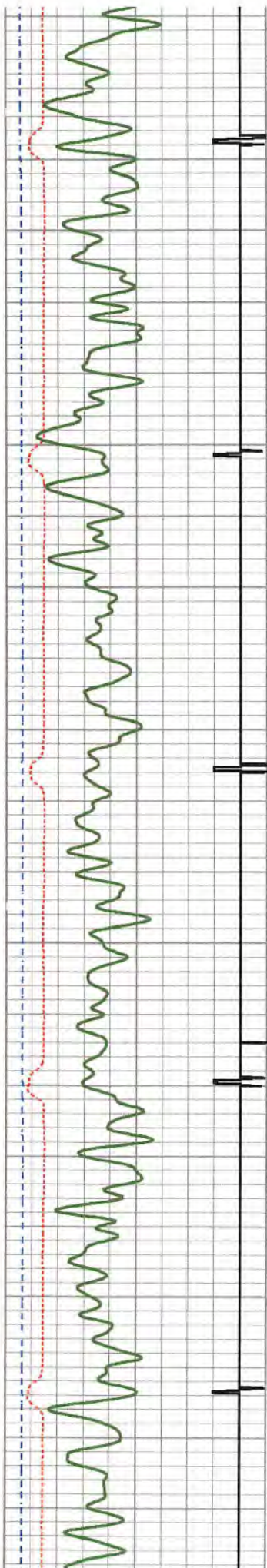


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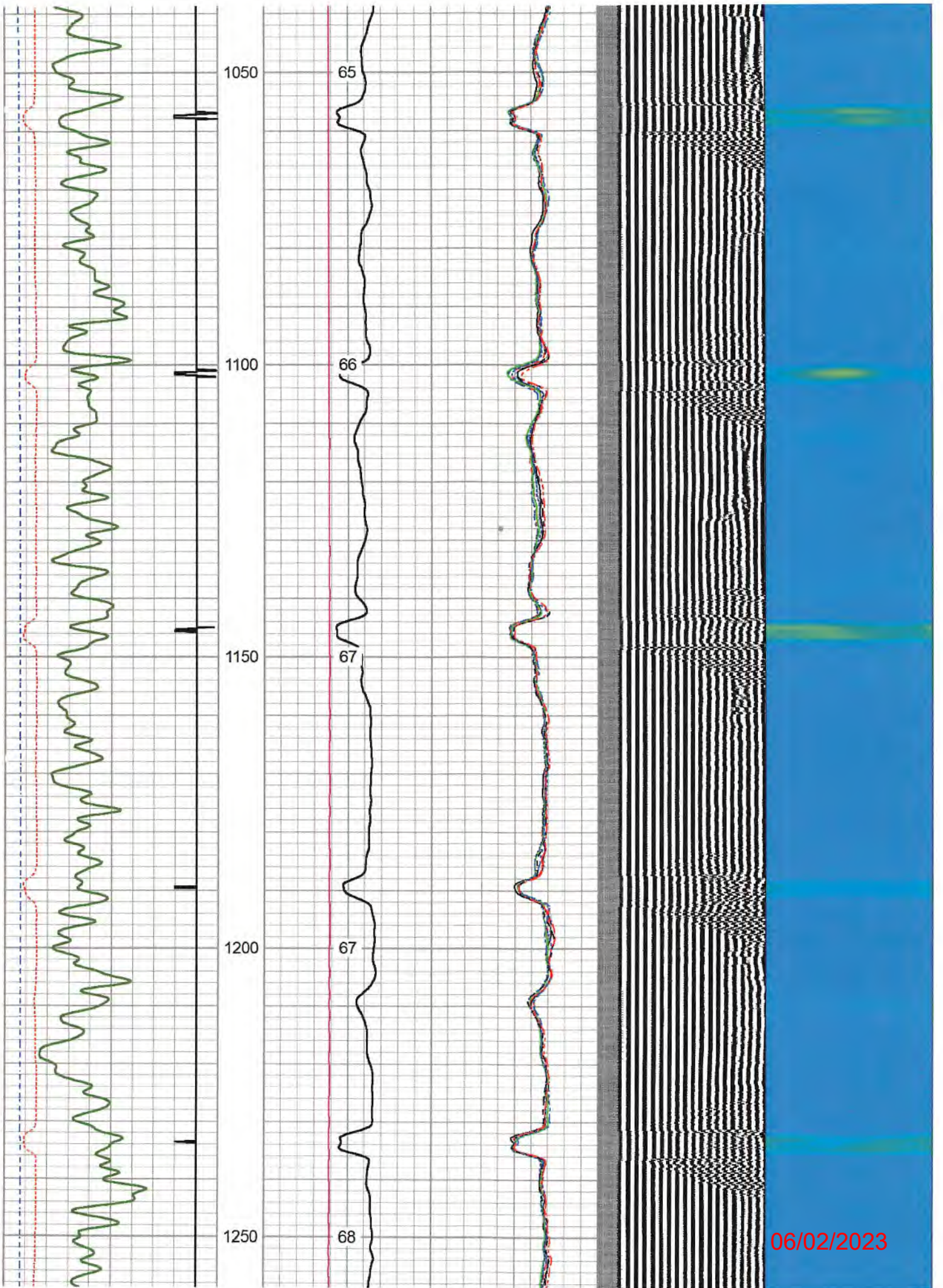


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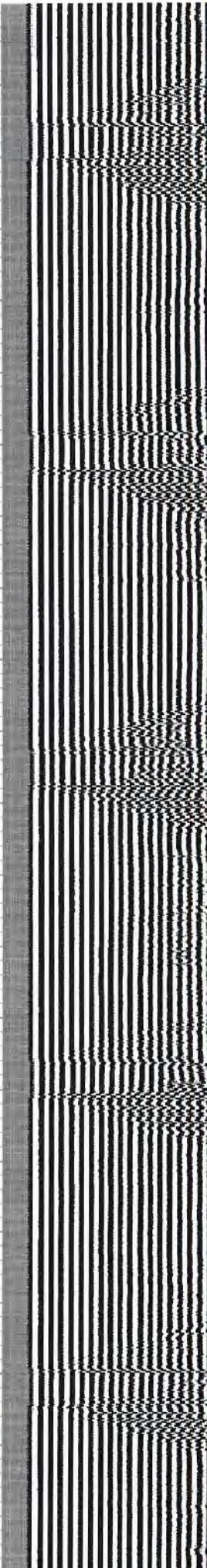
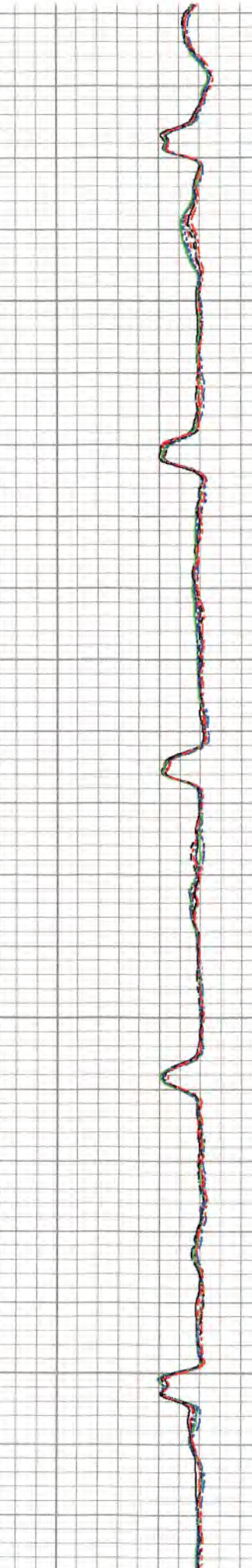
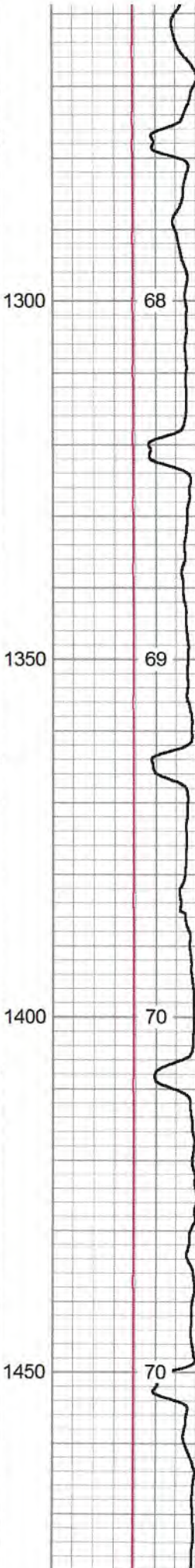
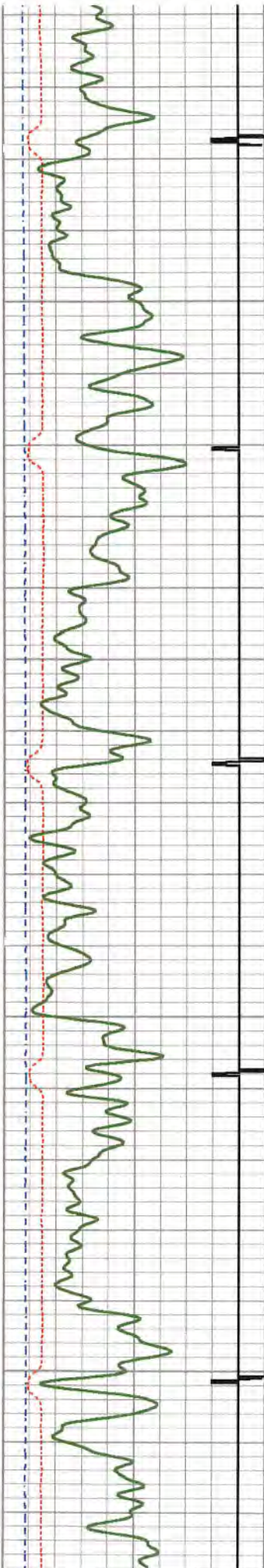




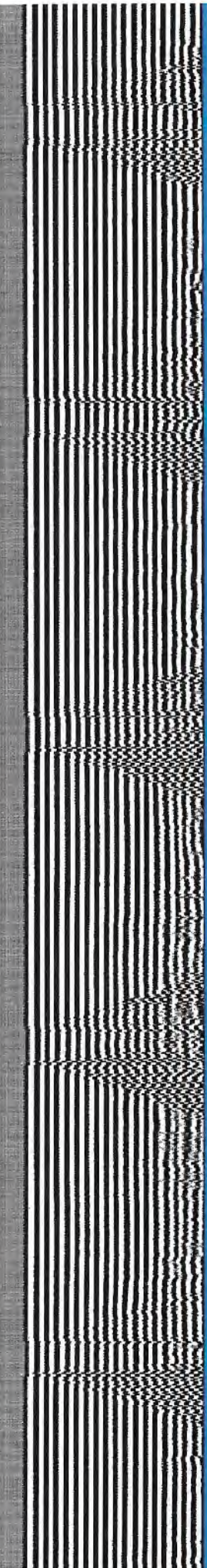
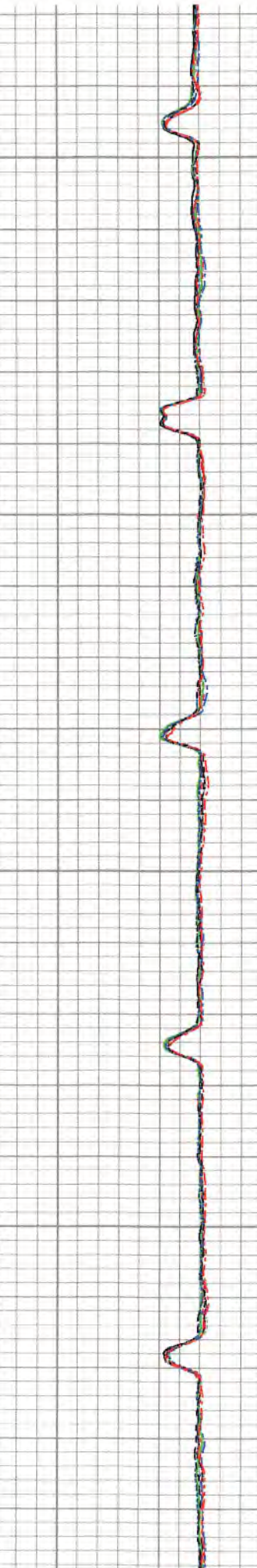
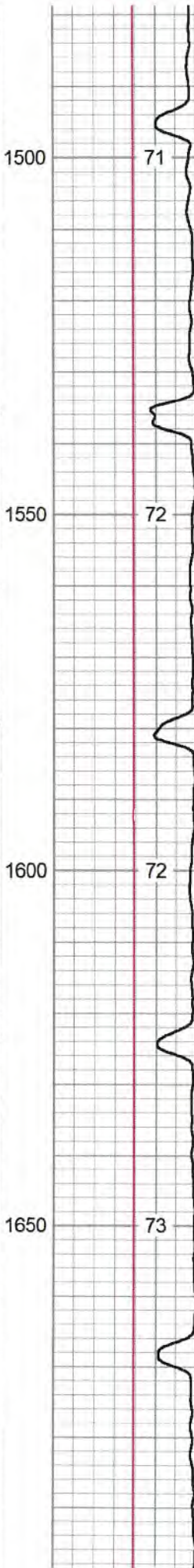
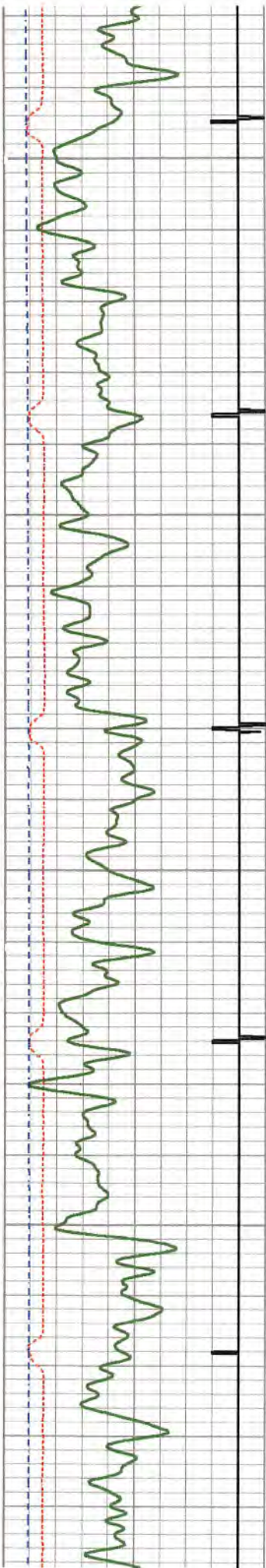
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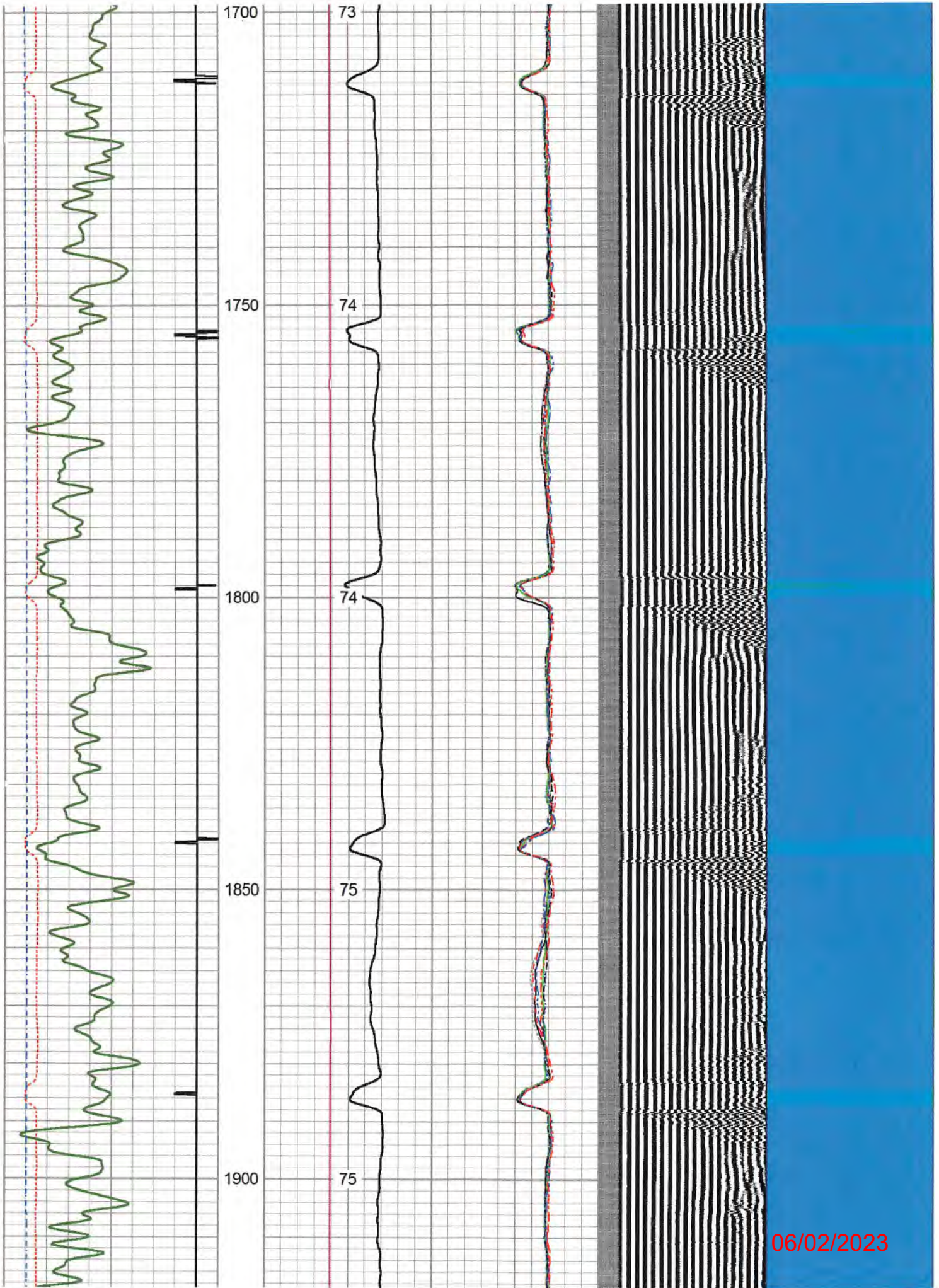
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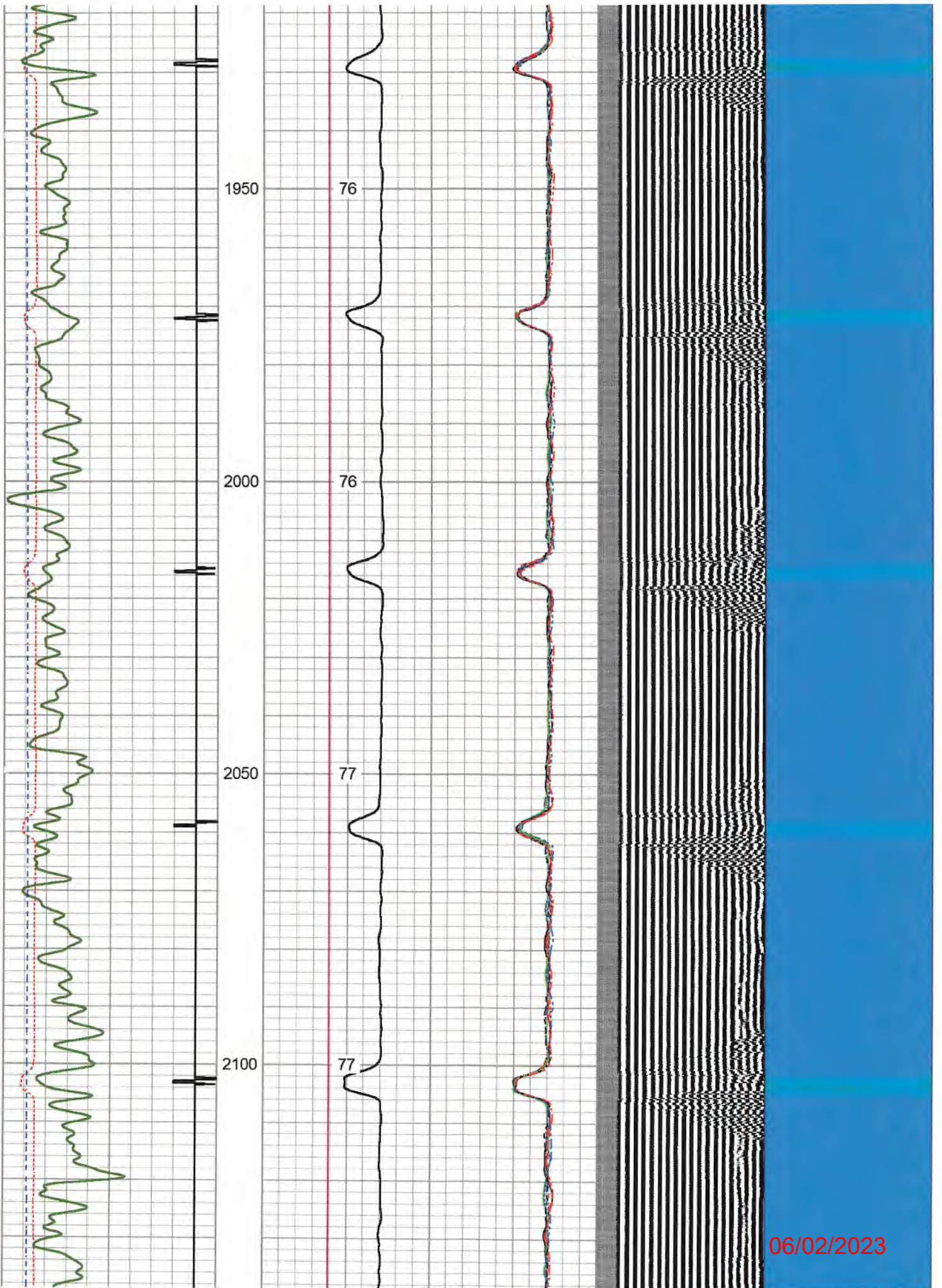
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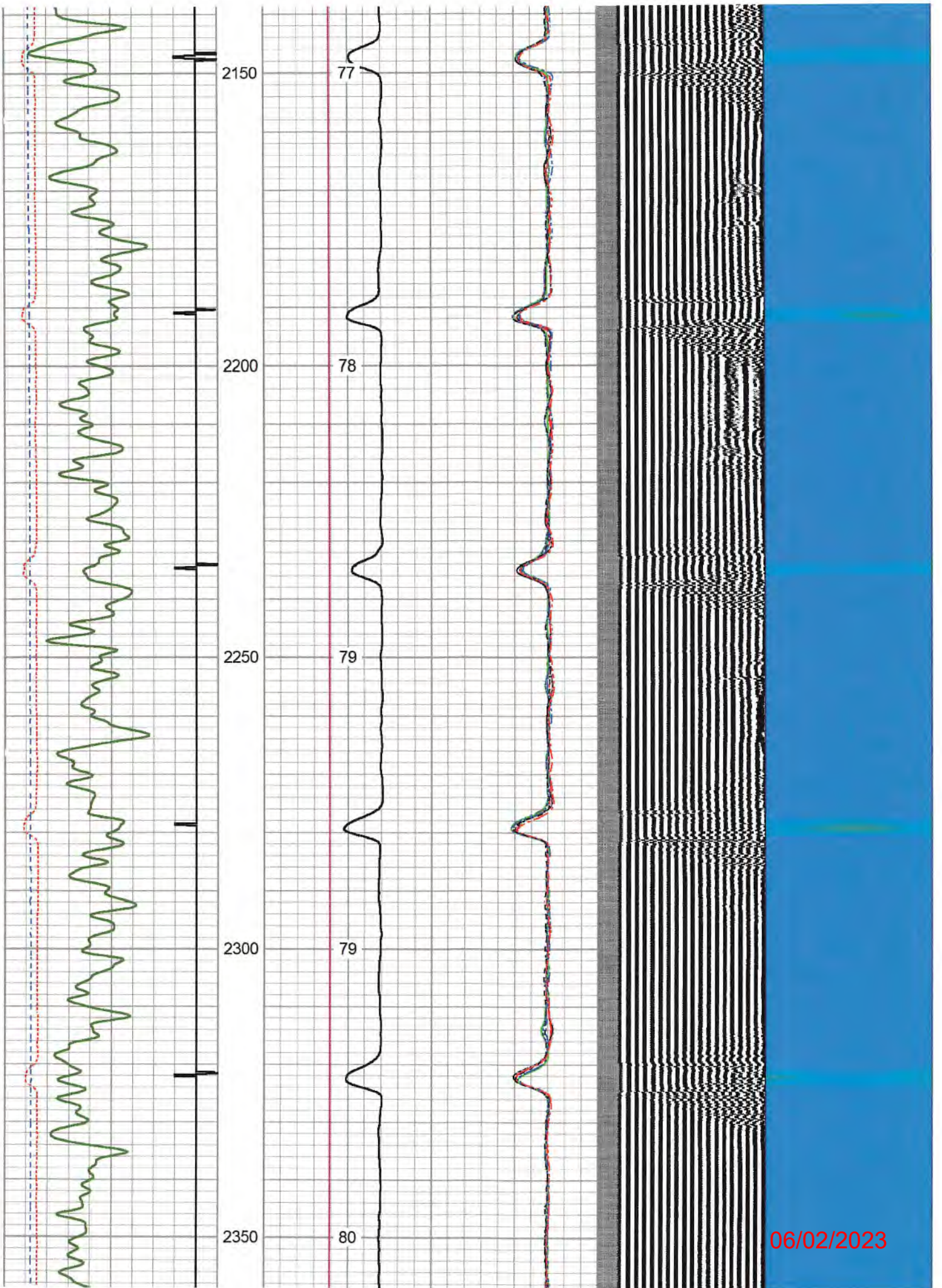
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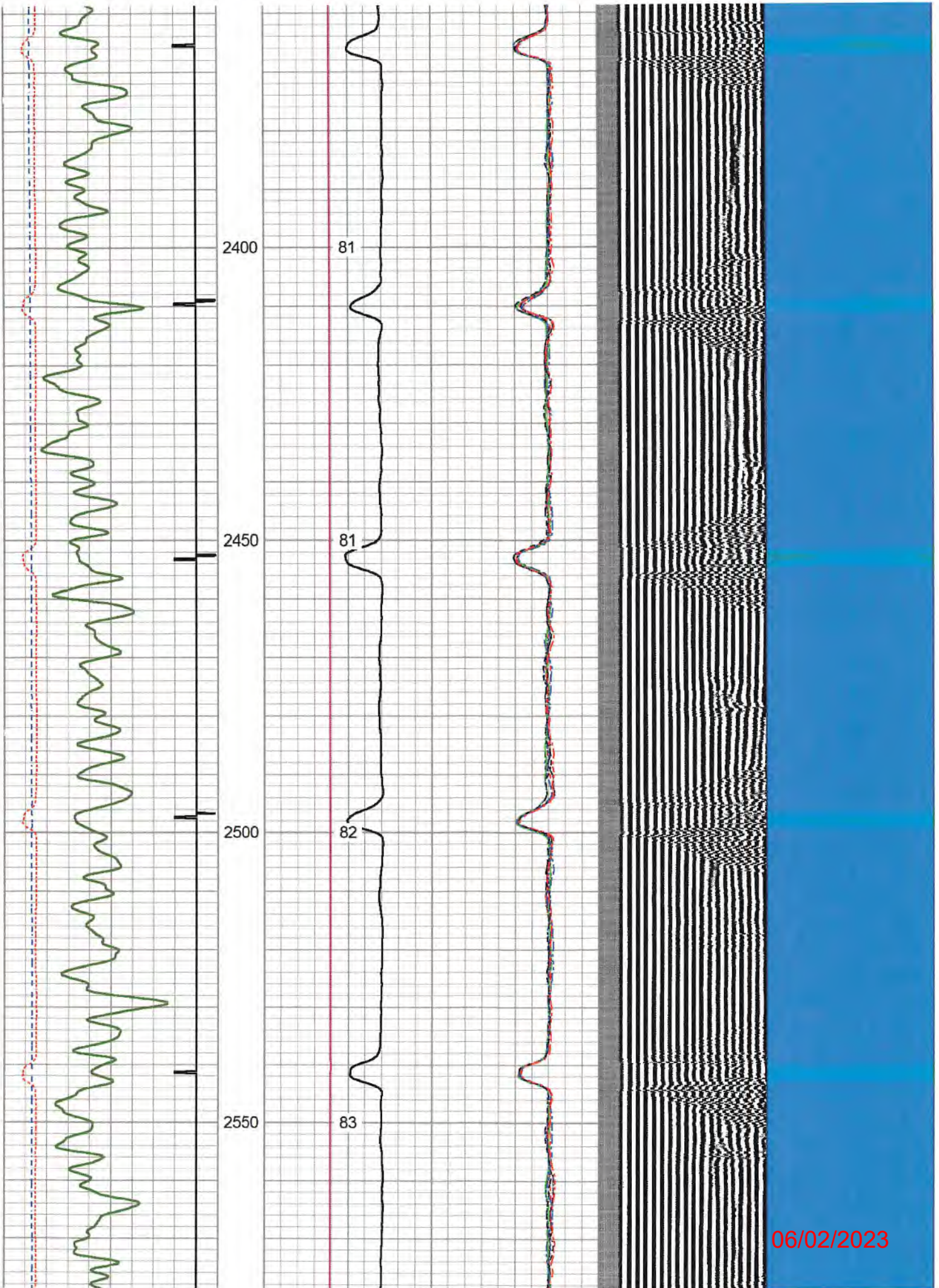


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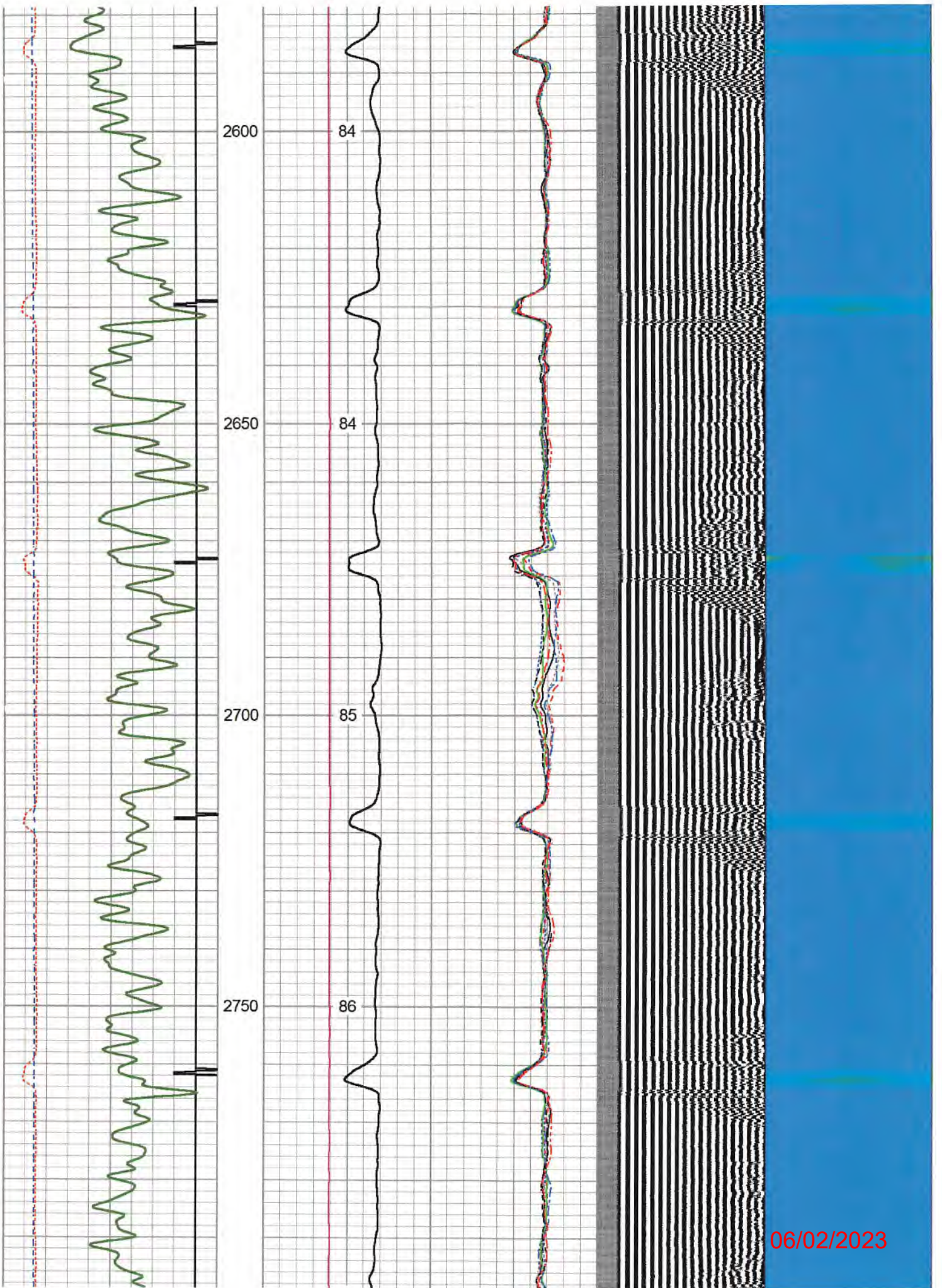


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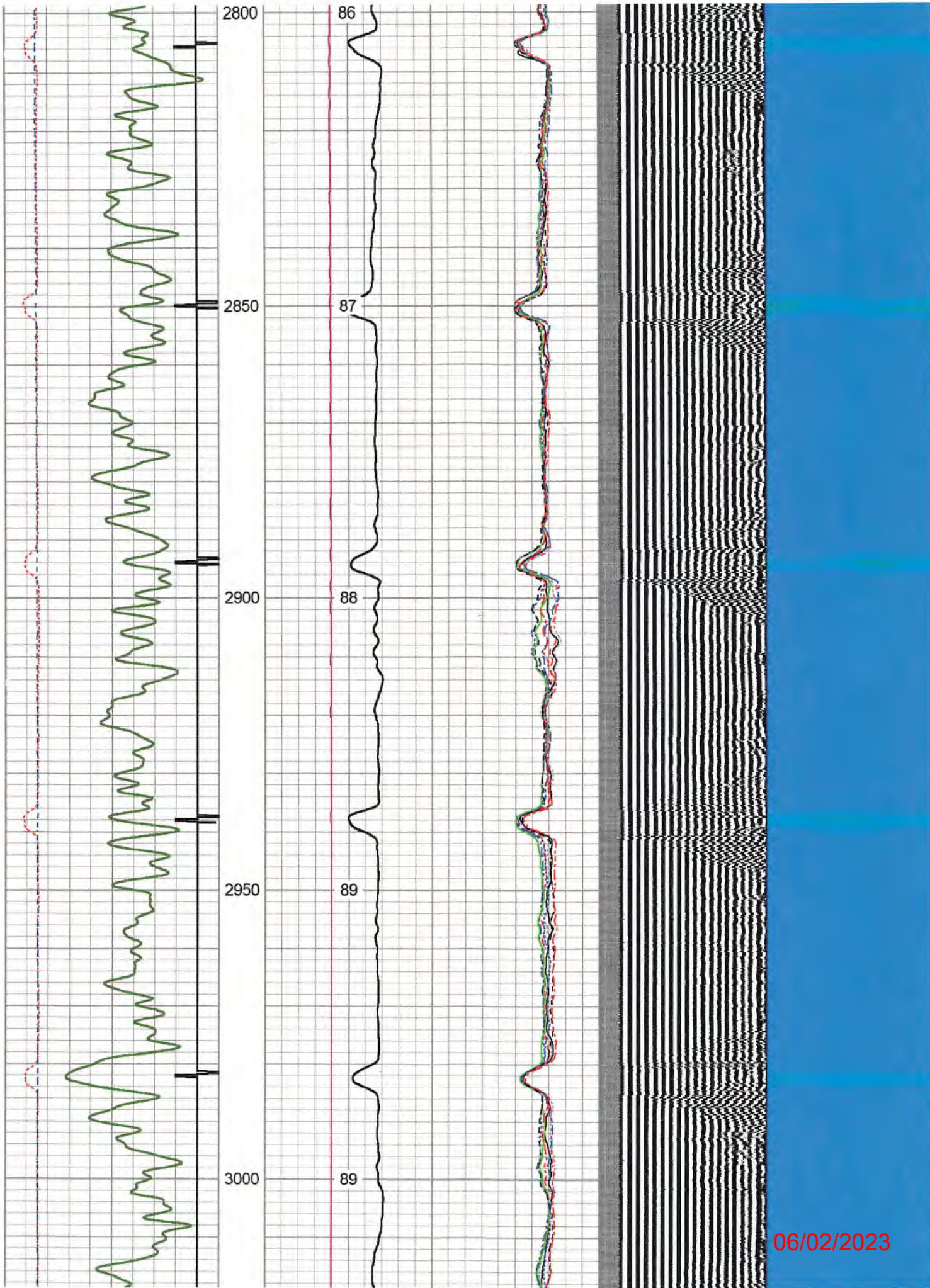




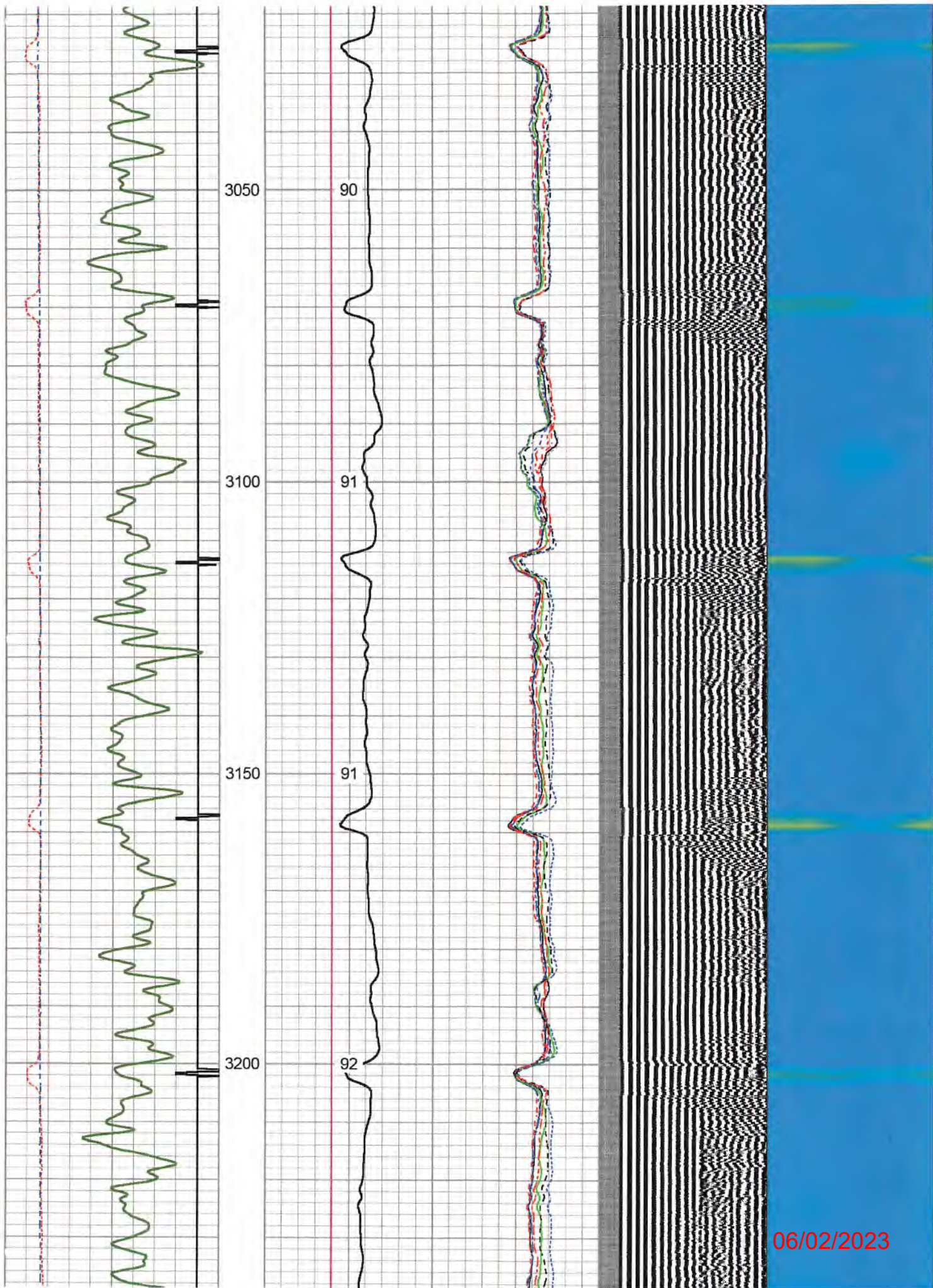
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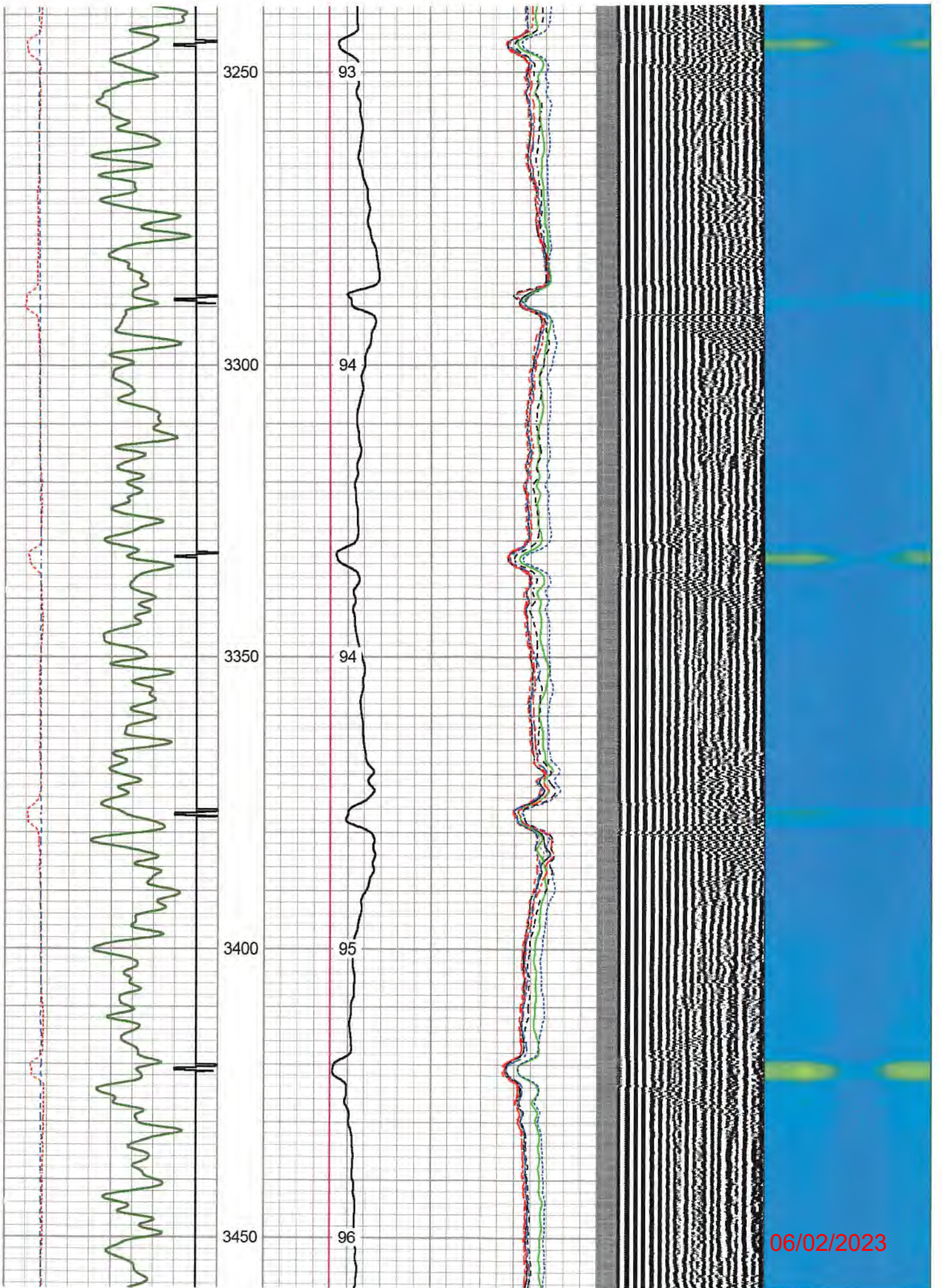
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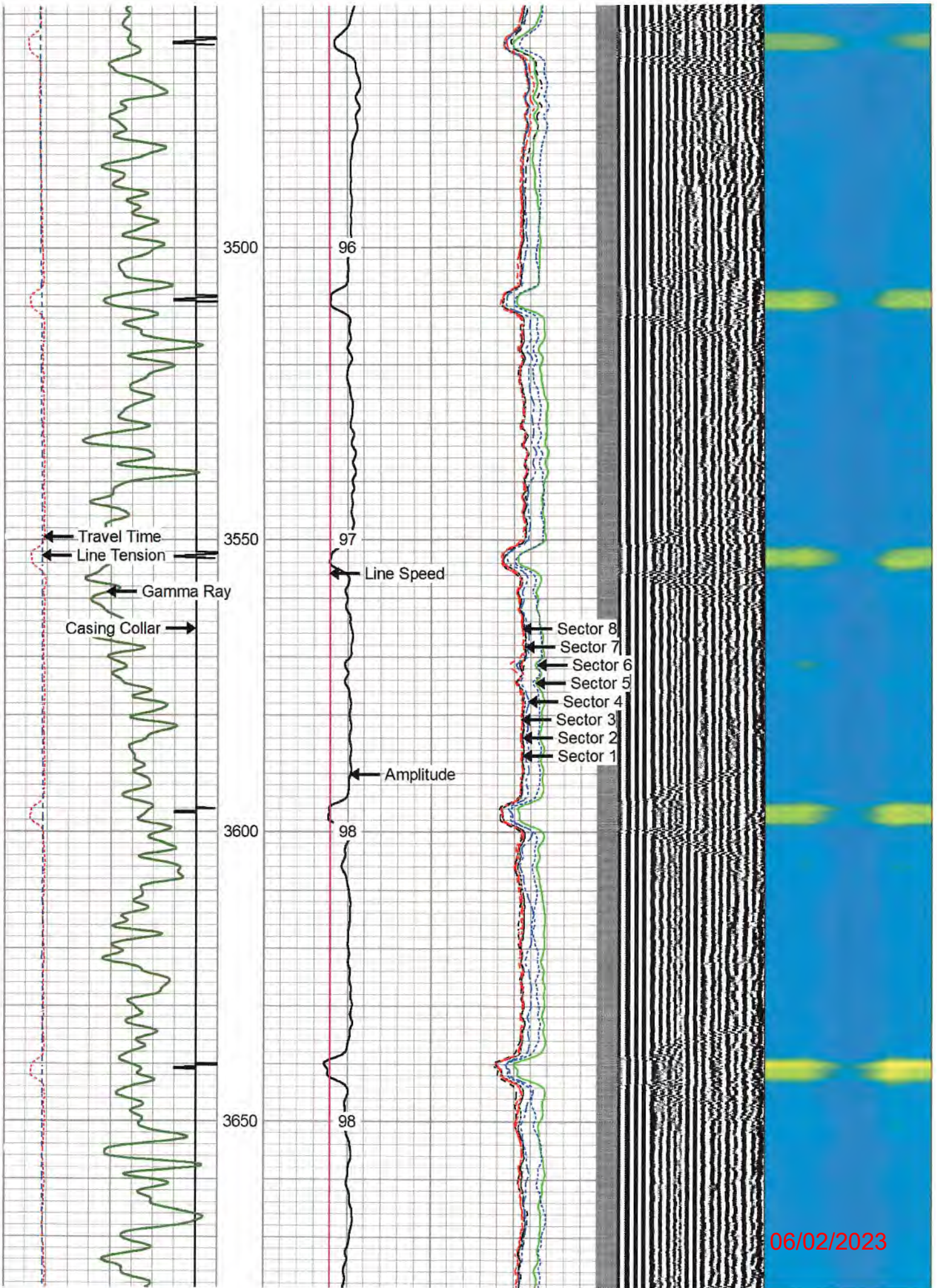


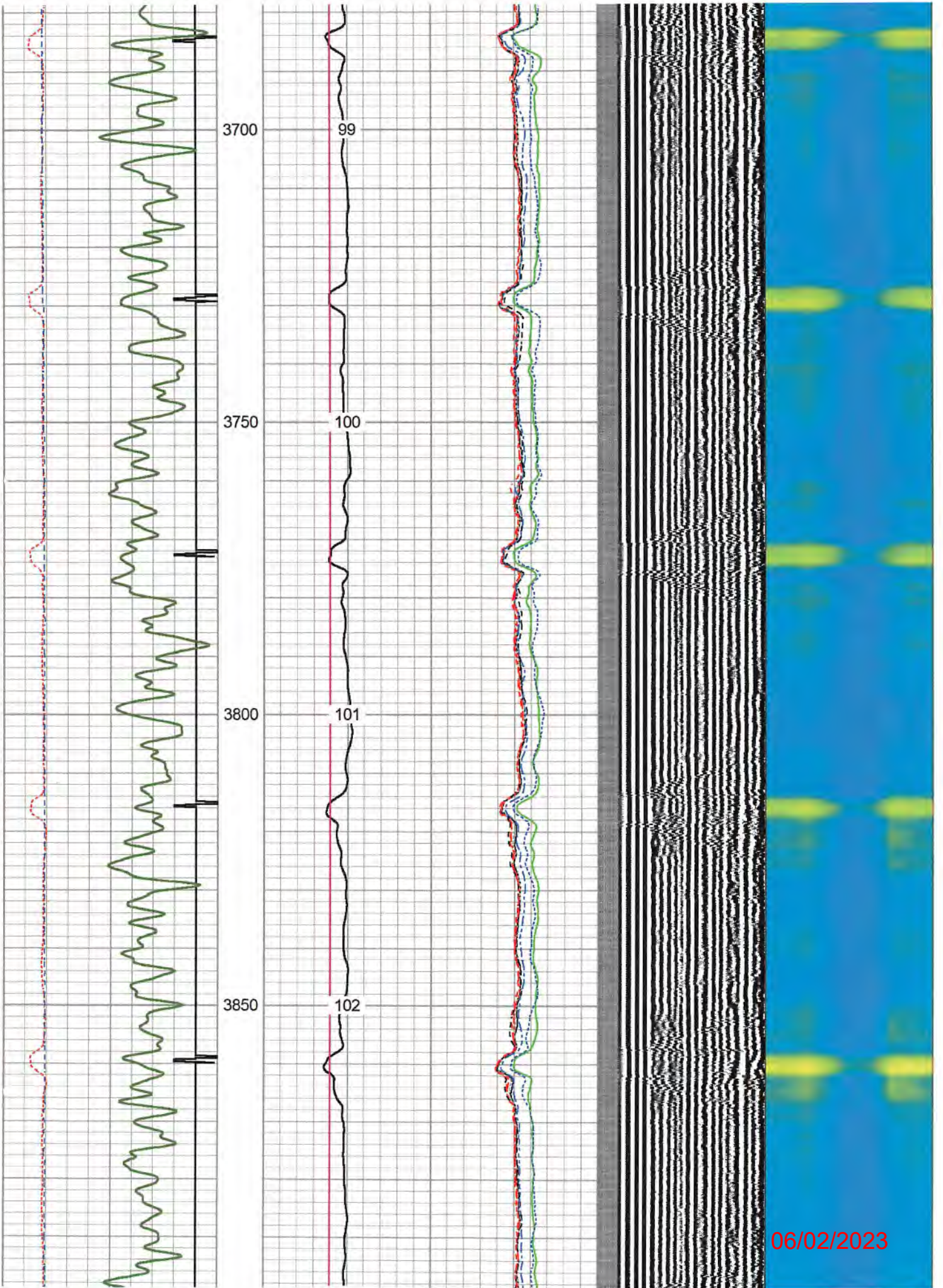
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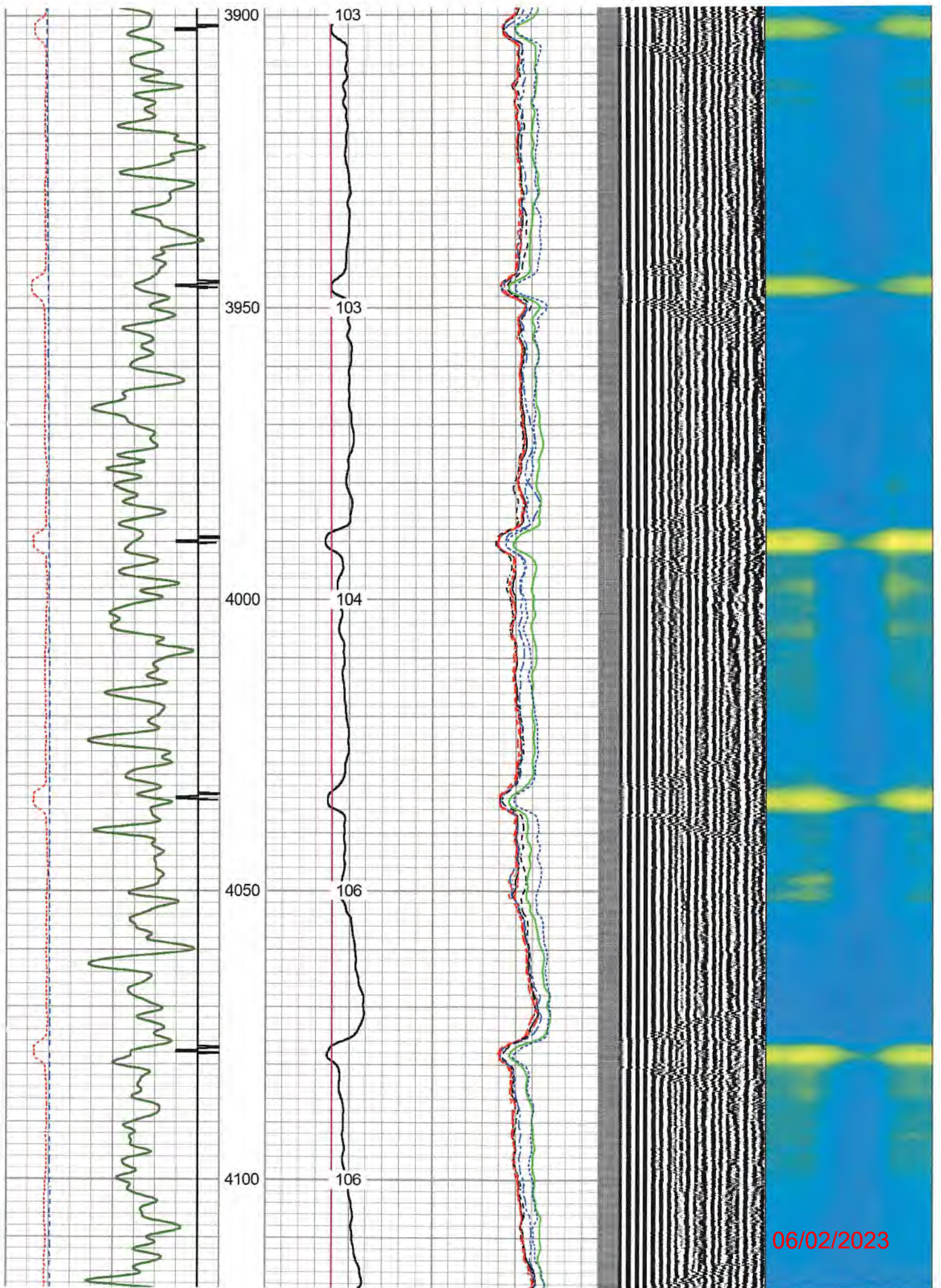
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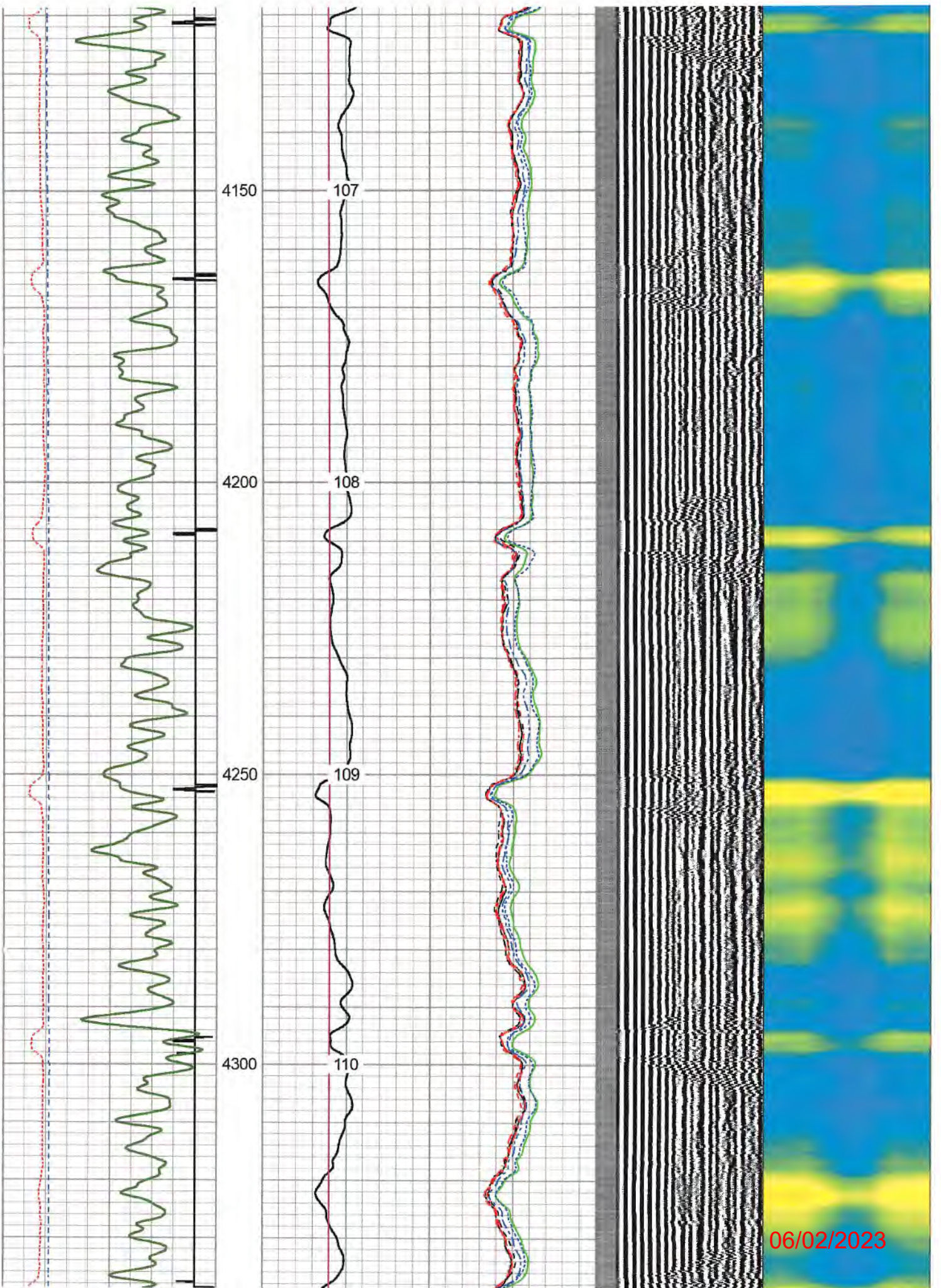


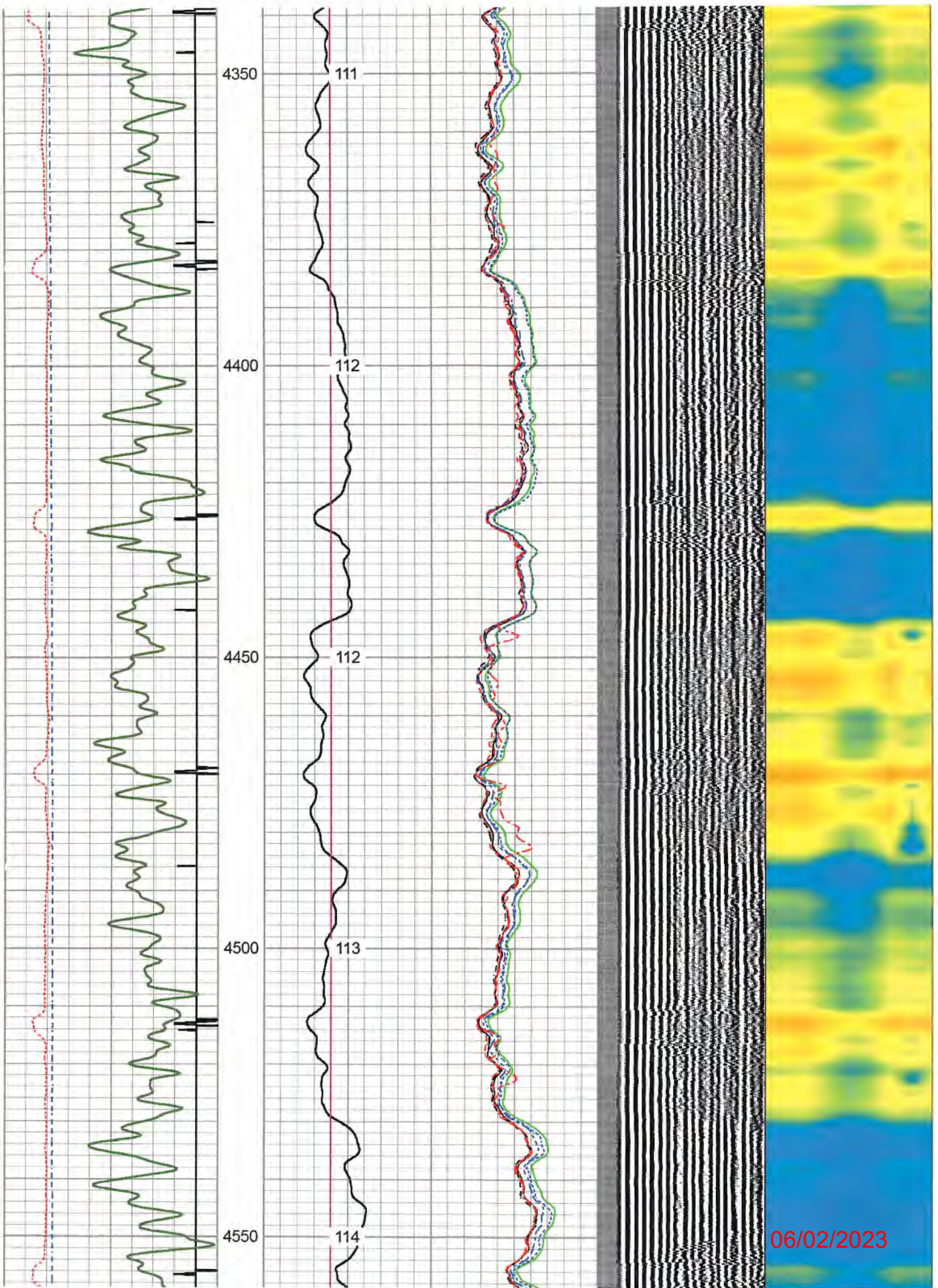


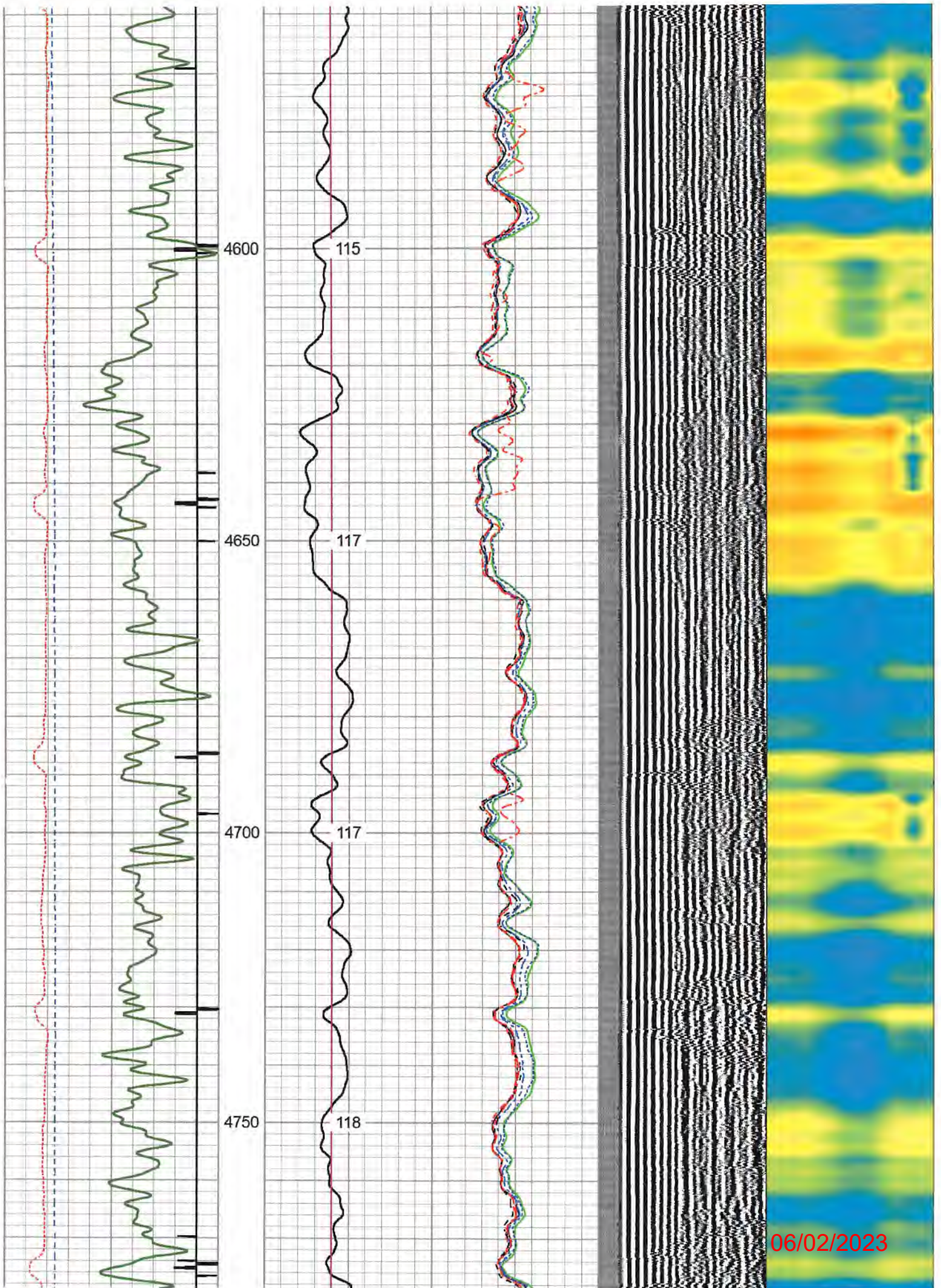
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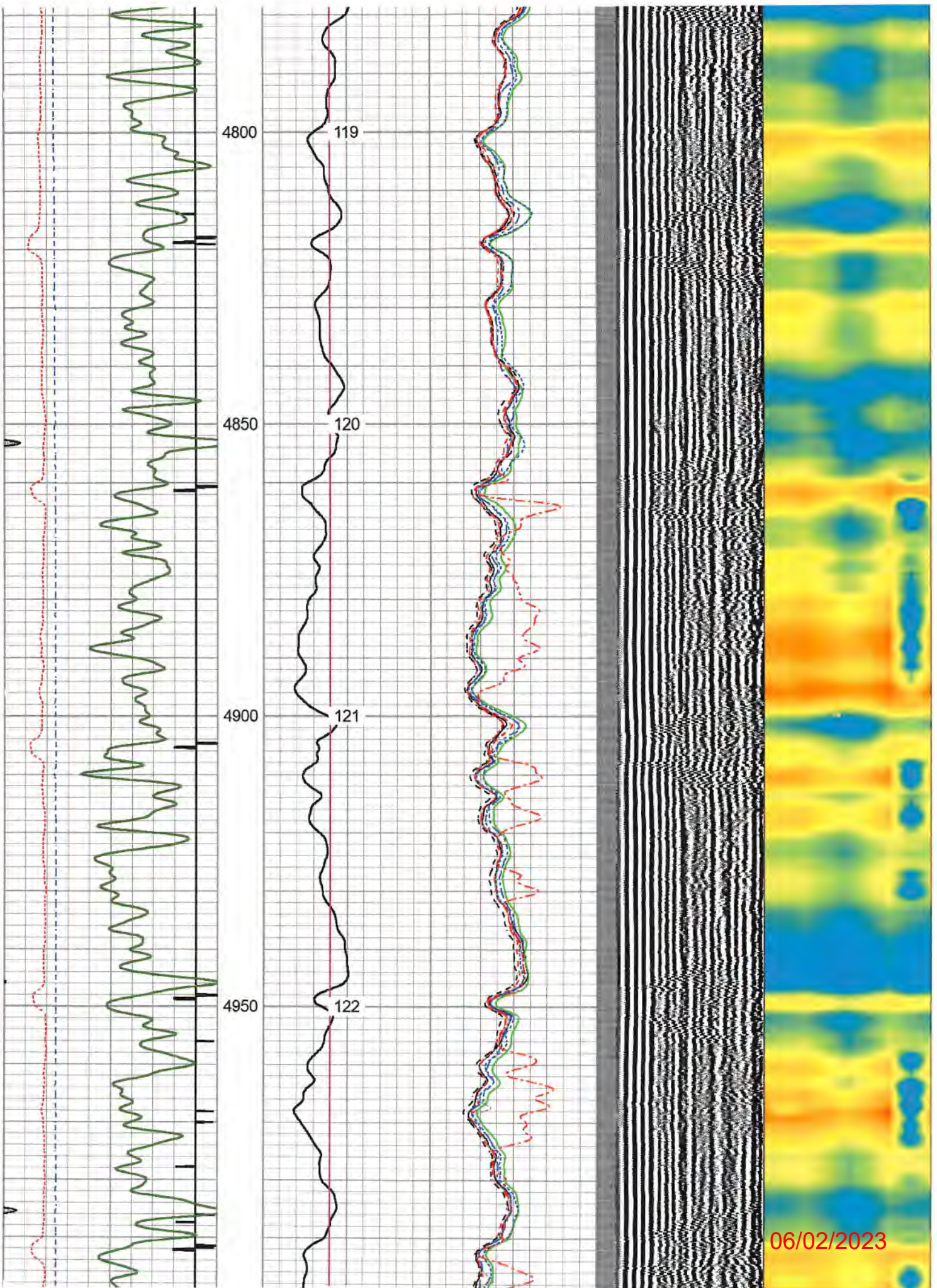


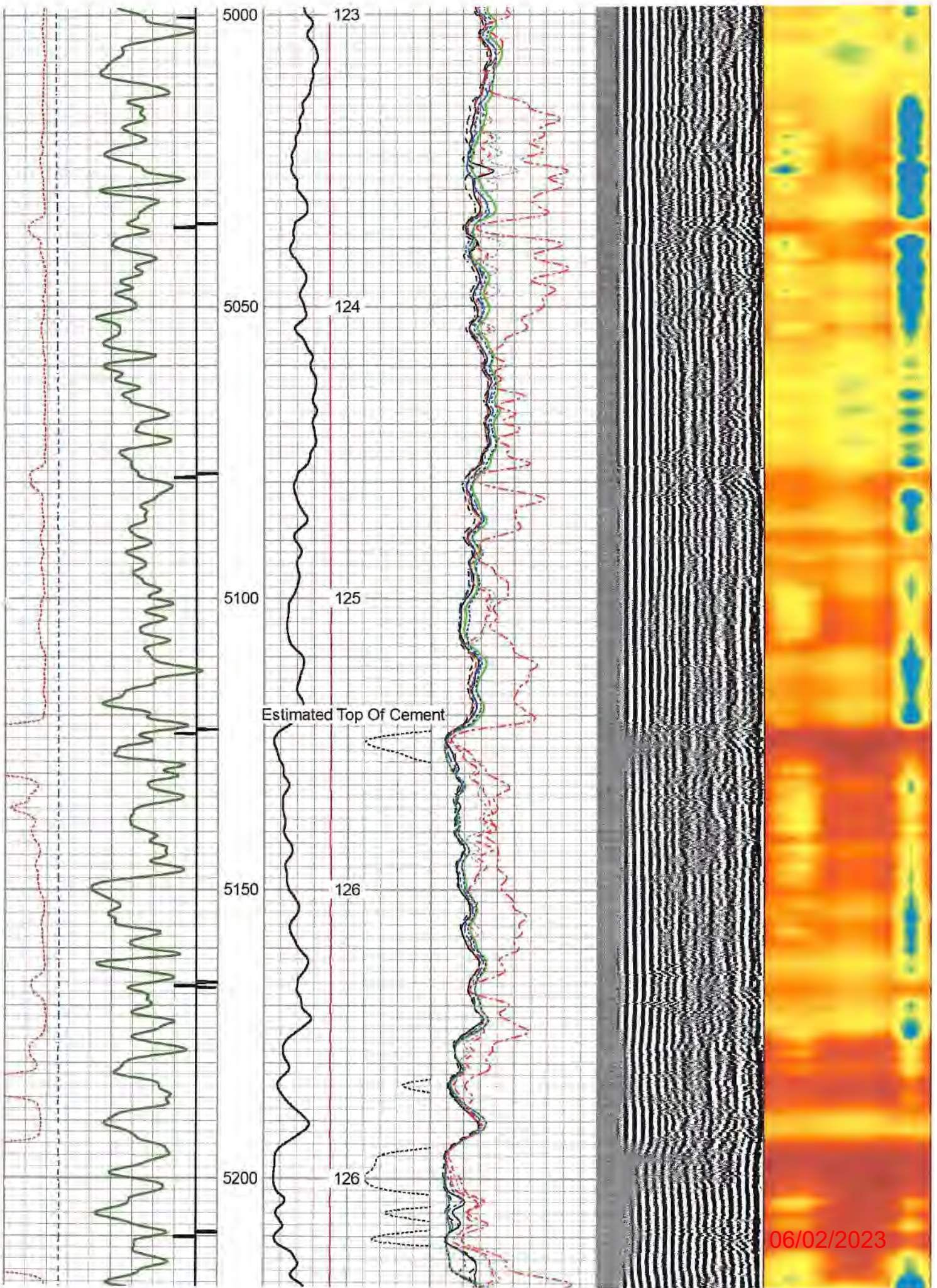
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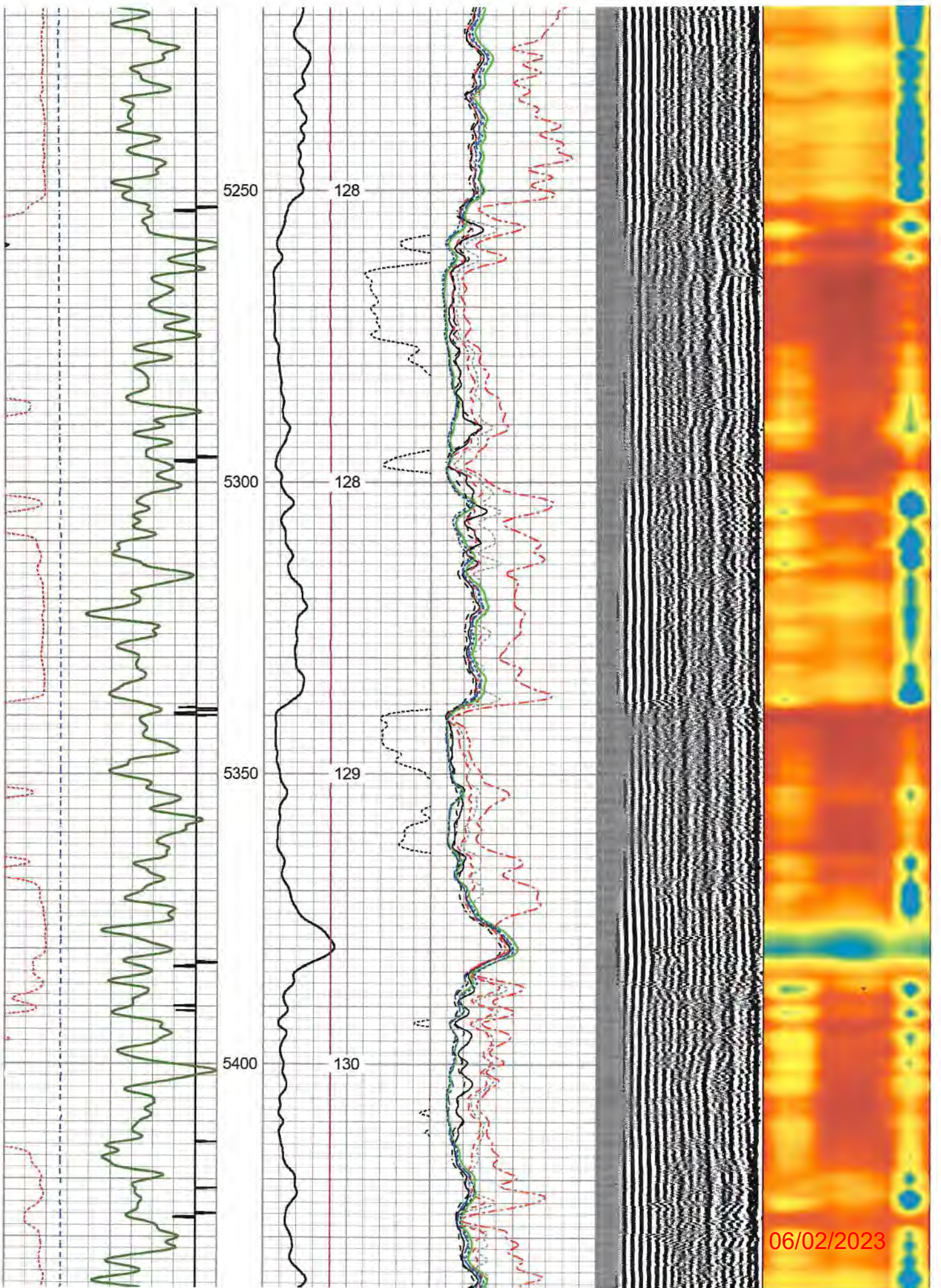




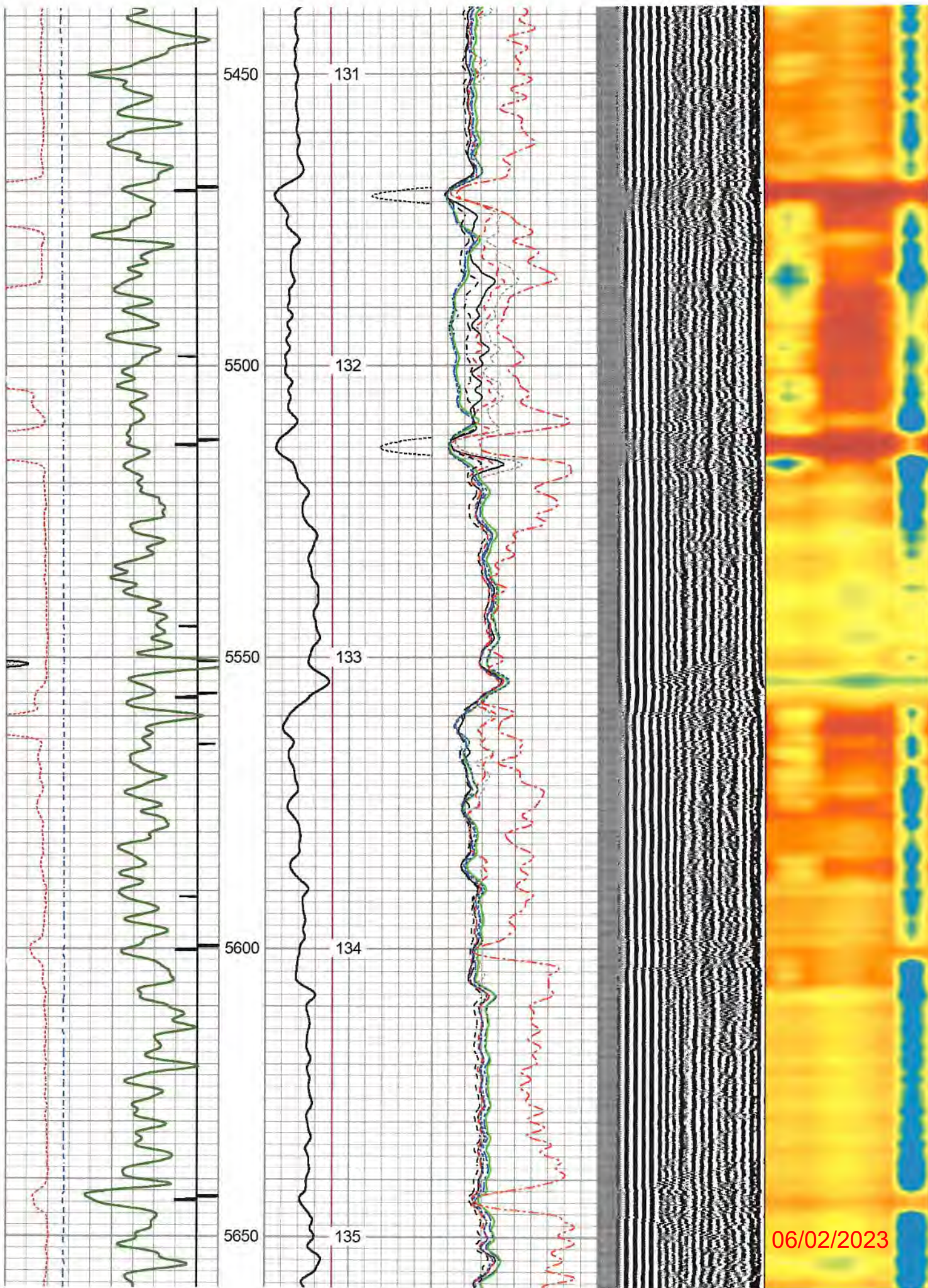




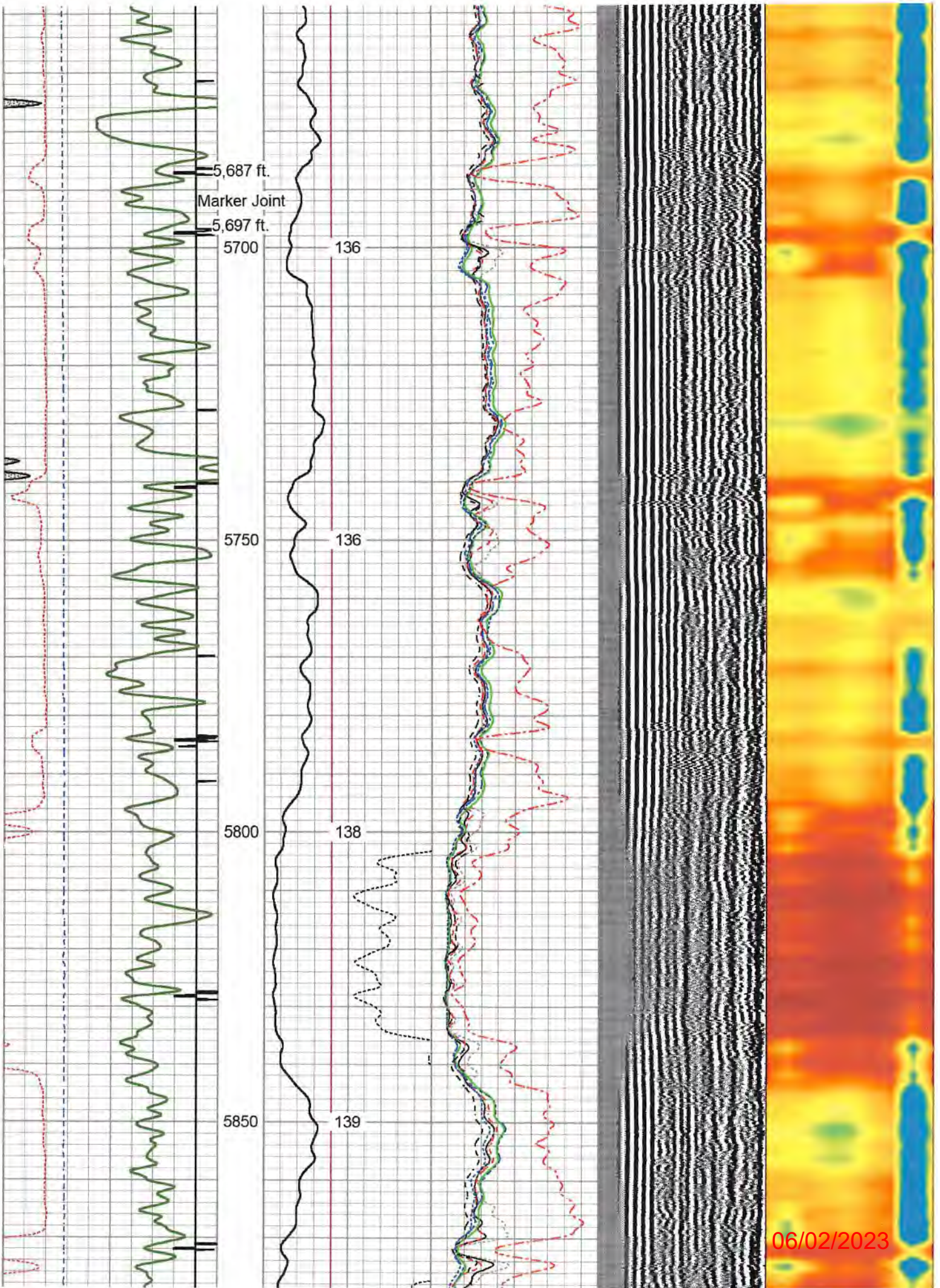




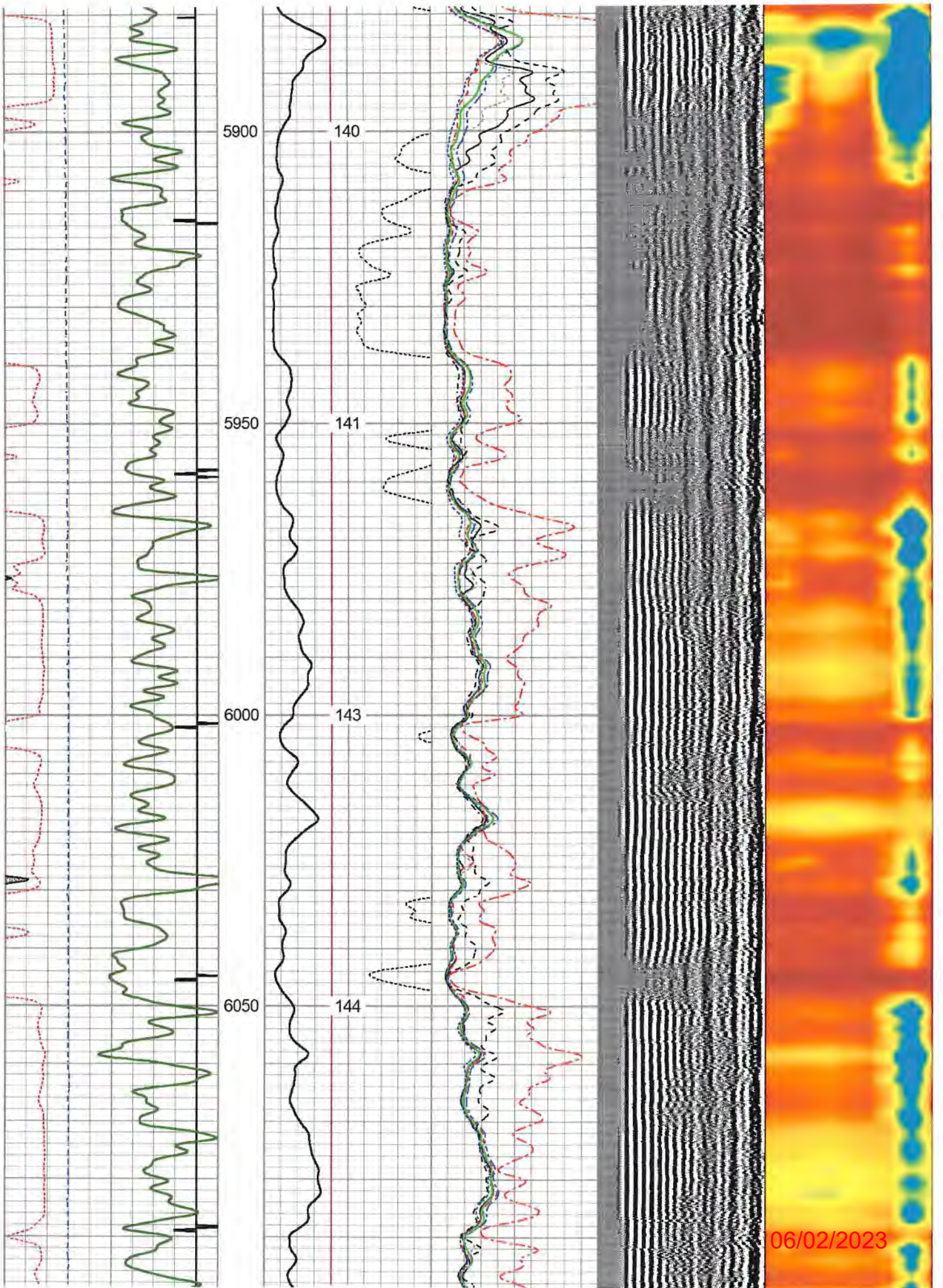
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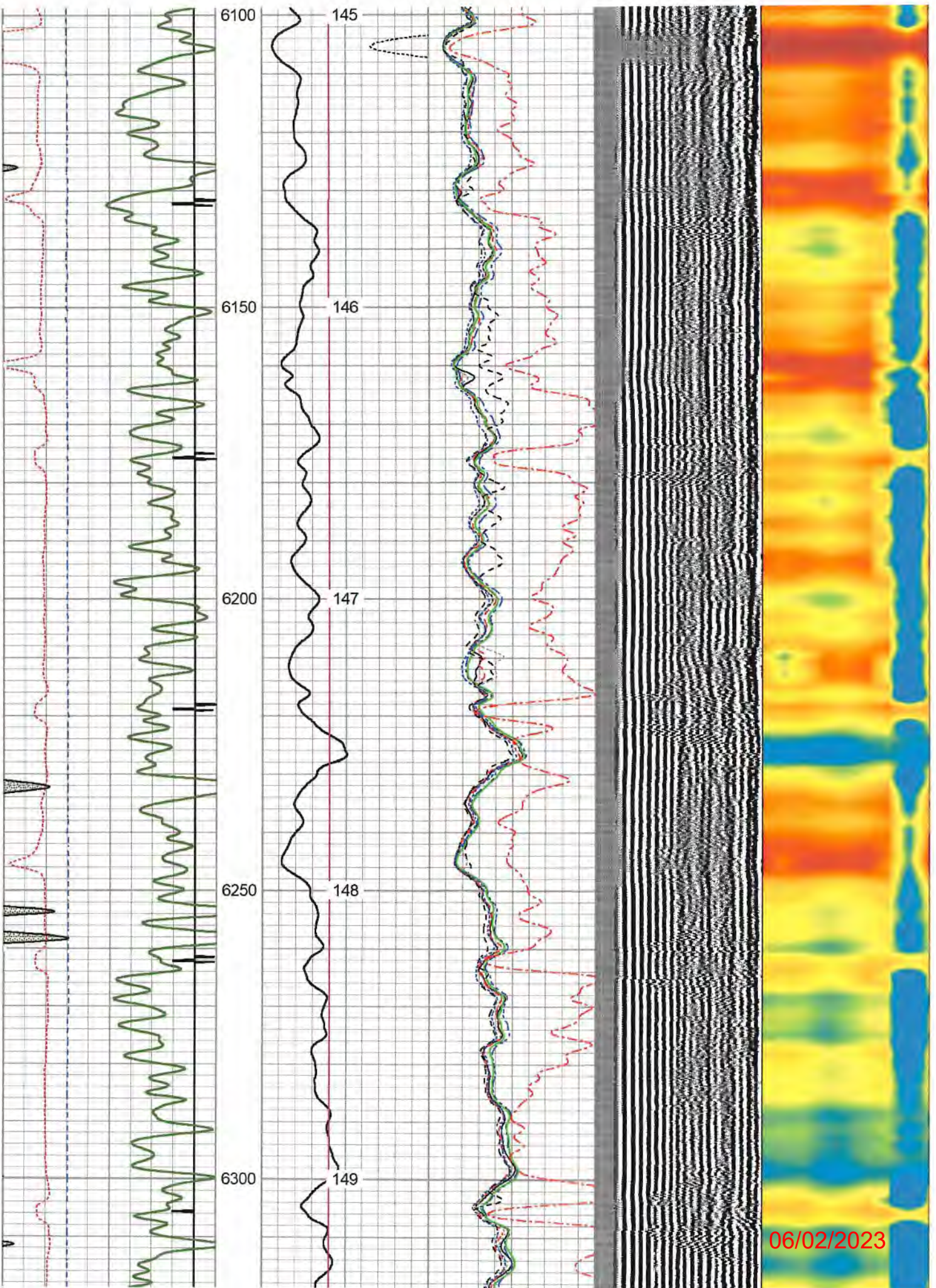
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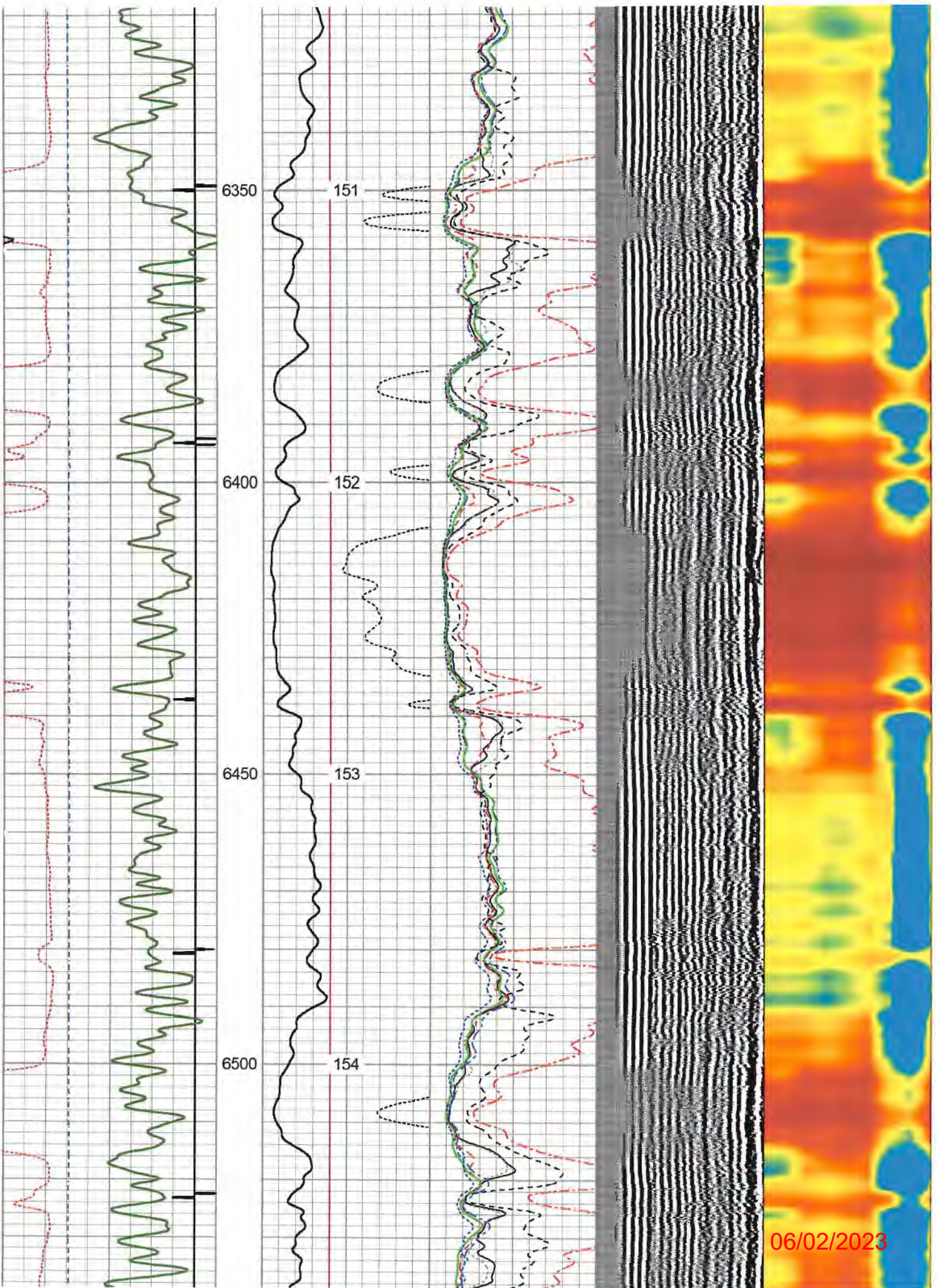
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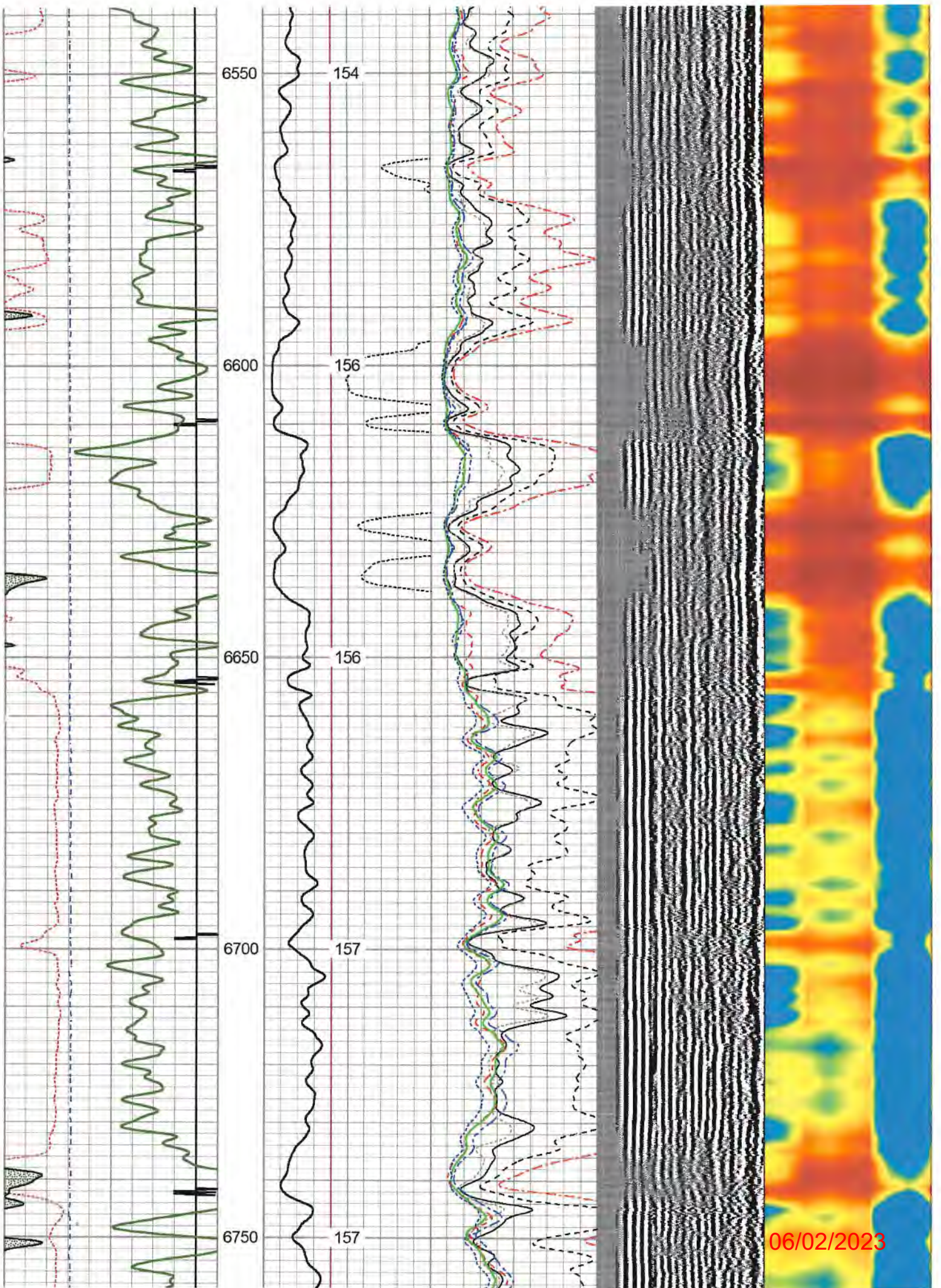
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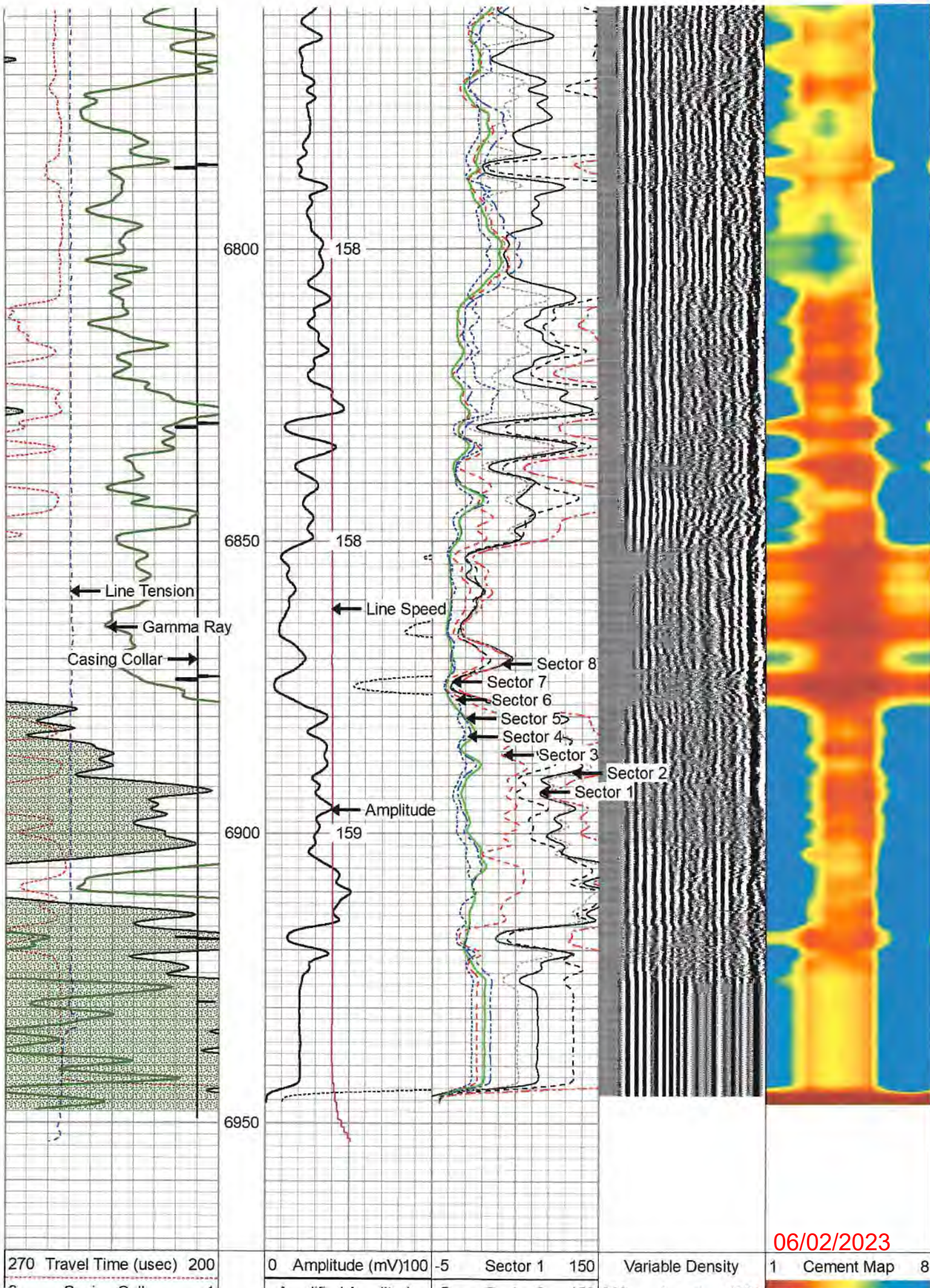


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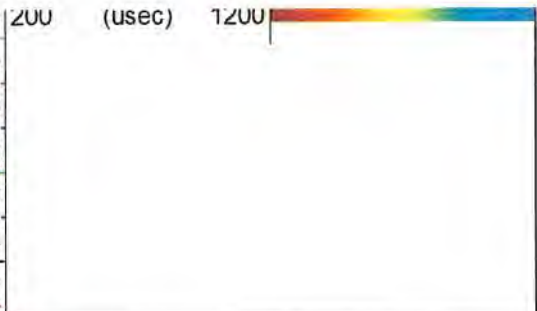
06/02/2023





9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

Amplified Amplitude	-5	Sector 2	150	
0 (mV)	10	-5	Sector 3	150
Line Speed	-5	Sector 4	150	
-500 (ft/min)	500	-5	Sector 5	150
TEMP	-5	Sector 6	150	
(degF)	-5	Sector 7	150	
	-5	Sector 8	150	

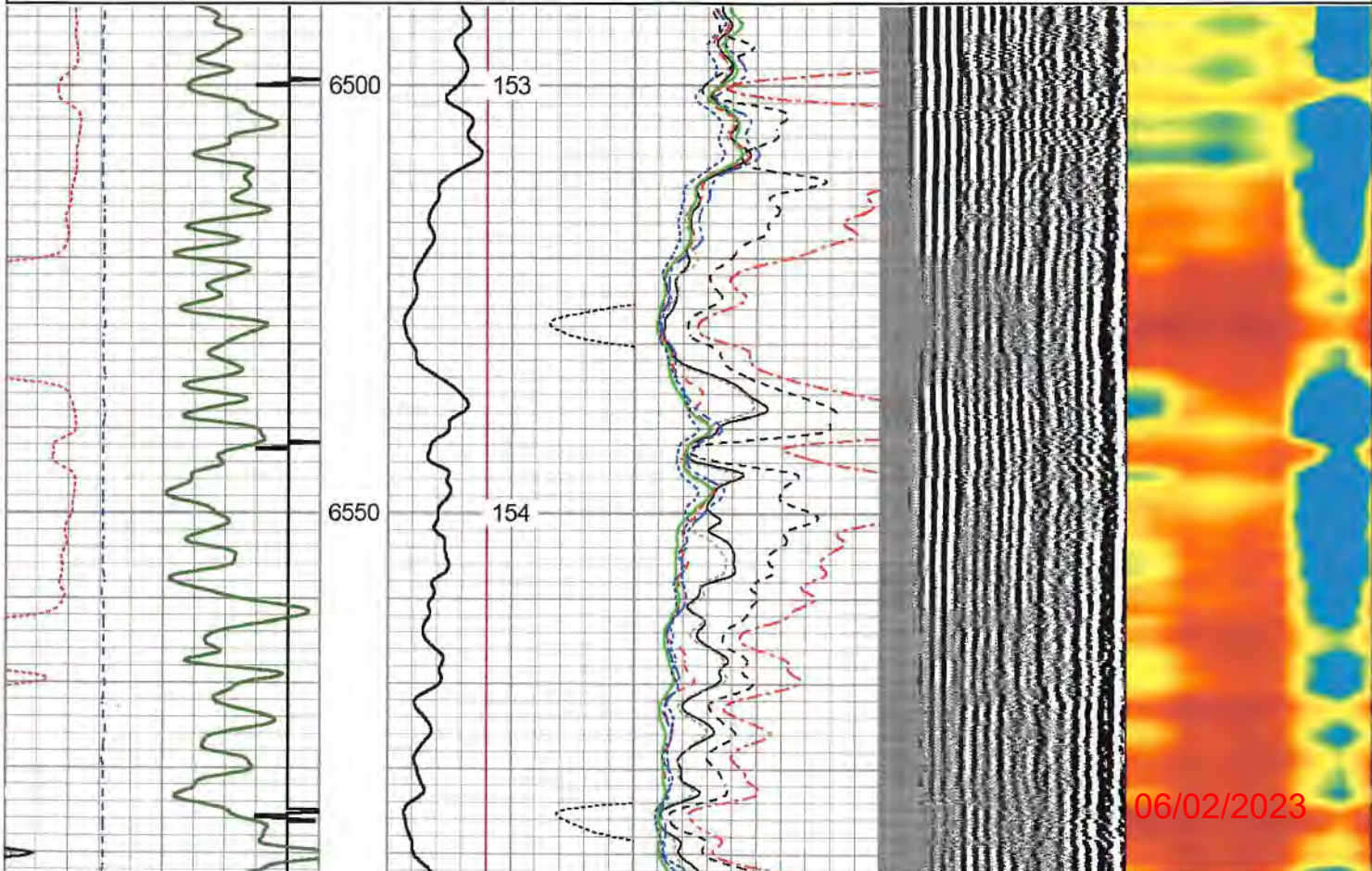
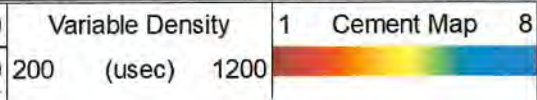


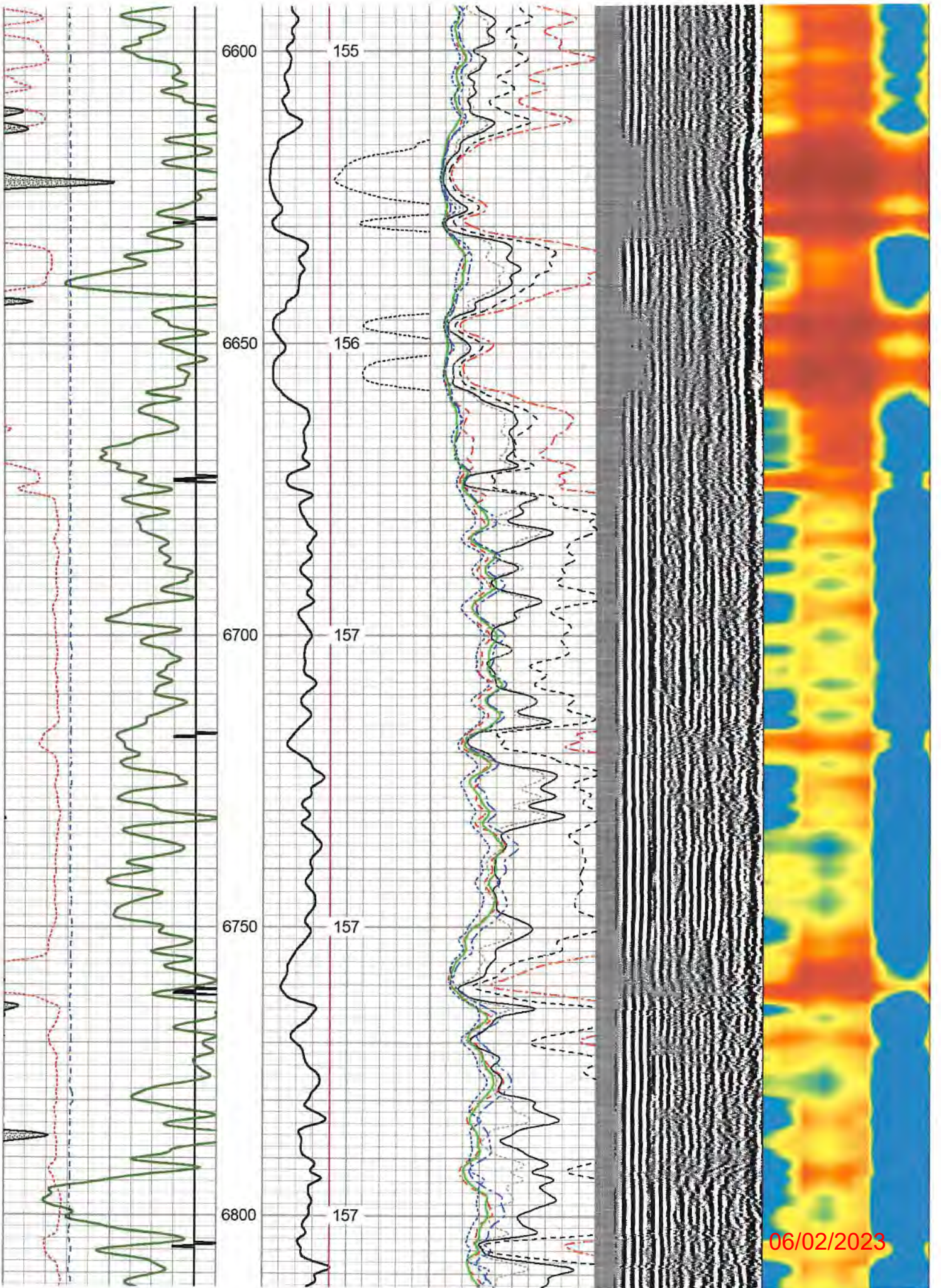
Repeat Pass 0 PSI

Database File antero_gamehengeeast_maggie2h_rcbl_nineenergy_may_2_2020.db
 Dataset Pathname Rabbit_Ears/Maggie_2H/RCBL_1/pass2
 Presentation Format 9rcbl
 Dataset Creation Sat May 02 14:45:05 2020
 Charted by Depth in Feet scaled 1:240

270	Travel Time (usec)	200
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

0	Amplitude (mV)	100	-5	Sector 1	150
Amplified Amplitude	-5	Sector 2	150		
0 (mV)	10	-5	Sector 3	150	
Line Speed	-5	Sector 4	150		
-500 (ft/min)	500	-5	Sector 5	150	
TEMP	-5	Sector 6	150		
(degF)	-5	Sector 7	150		
	-5	Sector 8	150		

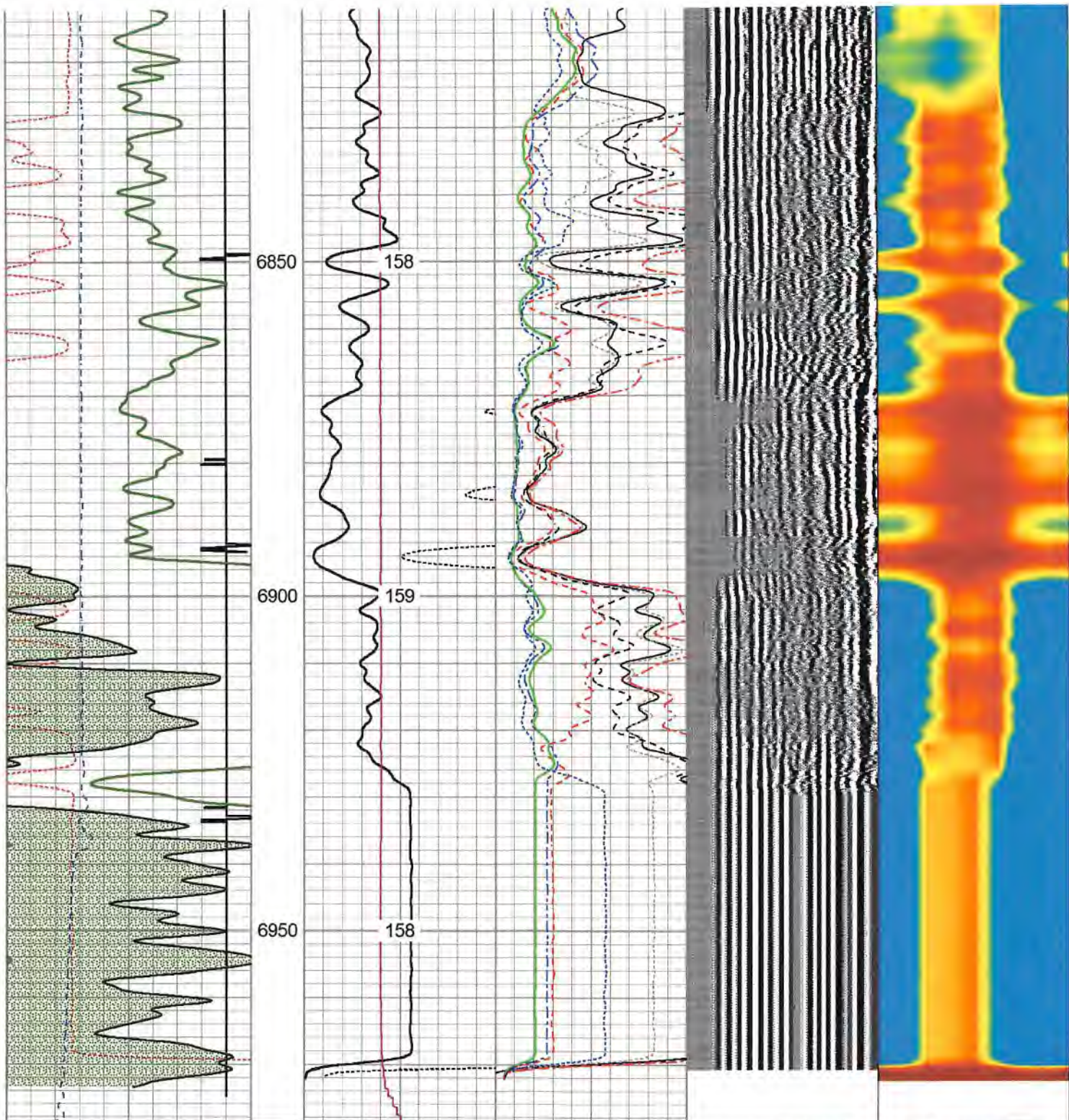




6600
6650
6700
6750
6800

155
156
157
157
157

06/02/2023



270	Travel Time (usec)	200	0	Amplitude (mV)	100	-5	Sector 1	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1		Amplified Amplitude		-5	Sector 2	150	200	(usec)		
0	Gamma Ray (GAPI)	150	0	(mV)	10	-5	Sector 3	150				
0	Line Tension (lb)	5000		Line Speed		-5	Sector 4	150				
			-500	(ft/min)	500	-5	Sector 5	150				
				TEMP		-5	Sector 6	150				
				(degF)		-5	Sector 7	150				
						-5	Sector 8	150				

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 150	CASEOD in 5.5	CASETHCK in 0.415	CASEWGHT lb/ft 23	MAXAMPL mV 72	MINAMPL mV 3.4
MINATTN db/ft 9.6	PERFS No	PPT usec 0	SRFTEMP degF 0	TDEPTH ft 0			

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector	MINAMPL : Minimum Amplitude
BOREID : Borehole I.D.	MINATTN : Minimum Attenuation
BOTTEMP : Bottom Hole Temperature	PERFS : Perforation Flag
CASEOD : Casing O.D.	PPT : Predicted Pipe Time
CASETHCK : Casing Thickness	SRFTEMP : Surface Temperature
CASEWGHT : Casing Weight	TDEPTH : Total Depth
MAXAMPL : Maximum Amplitude	

Calibration Report

Database File antero_gamehengeeast_maggie2h_rcbl_nineenergy_may_2_2020.db
 Dataset Pathname Rabbit_Ears/Maggie_2H/RCBL_1/pass4
 Dataset Creation Sat May 02 14:52:21 2020

Gamma Ray Calibration Report

Serial Number: FW1211-86
 Tool Model: Probe
 Performed: Thu Dec 19 22:27:19 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.8000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1312-32
 Tool Model: Probe275T

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 1577.008 ft

Master Calibration, performed Sat May 02 15:46:20 2020:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.016	0.477	3.400	71.921	130.679	1.008
CAL	1.011	1.005				
5'	0.015	0.445	3.400	71.921	159.453	1.006
SUM						
S1	0.050	0.491	3.400	100.000	219.137	-7.648
S2	0.009	0.460	3.400	100.000	214.109	1.568
S3	0.007	0.464	3.400	100.000	211.060	2.022
S4	0.006	0.477	3.400	100.000	205.028	2.111
S5	0.006	0.493	3.400	100.000	198.228	2.289
S6	0.007	0.493	3.400	100.000	198.392	2.004
S7	0.005	0.479	3.400	100.000	203.698	2.348
S8	0.008	0.467	3.400	100.000	210.314	1.700



06/02/2023

Internal Reference Calibration, performed (Not Performed):

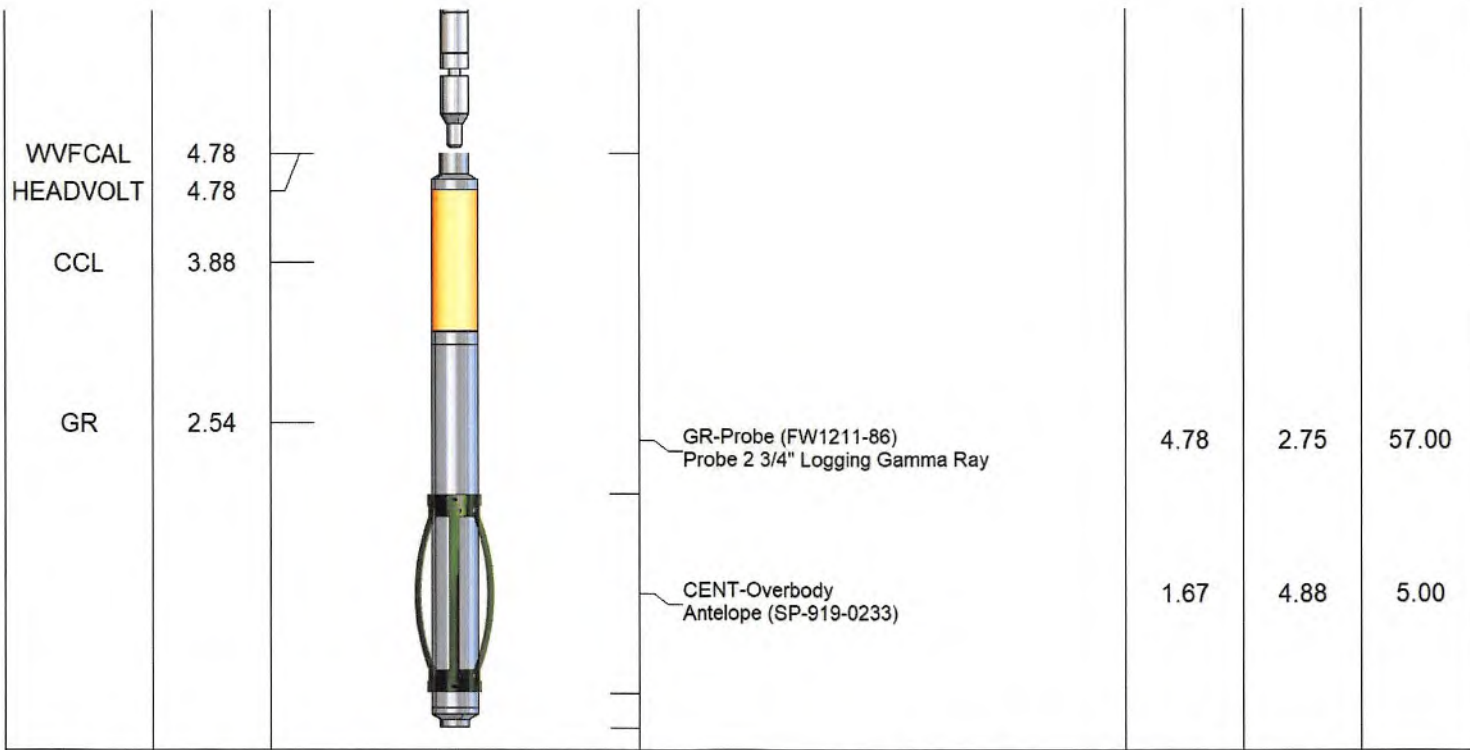
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.011	1.005	1.000	0.000

Air Zero Calibration, performed Sat May 02 08:40:59 2020:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	14.11		CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00
			CENT-Overbody Antelope (SP-919-0233)	1.67	4.88	5.00
Temp	11.27		RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	9.03					
WVFS7	9.03					
WVFS6	9.03					
WVFS5	9.03					
WVFS4	9.03					
WVFS3	9.03					
WVFS2	9.03					
WVFS1	9.03					
WVF3FT	9.03					
WVF5FT	8.03					

06/02/2023



Dataset: antero_gamehengeeast_maggie2h_rcbl_nineenergy_may_2_2020.db: Rabbit_Ears/Maggie_2H/RCBL_1/pass4
 Total length: 15.17 ft
 Total weight: 162.00 lb
 O.D.: 4.88 in

	Company	Antero Resources
	Well	Maggie 2H
	Field	Rabbit Ears
	County	Tyler
	State	West Virginia