



**RADIAL BOND LOG**  
**GAMMA RAY**  
**VDL,CCL**

Company ANTERO RESOURCES CORPORATION  
 Well WICK 3H  
 Field MARCELLUS  
 County TYLER  
 State WV

Company ANTERO RESOURCES CORPORATION  
 Well WICK 3H  
 Field MARCELLUS  
 County TYLER State WV

Location: AFE A08789 API #: 47095025950000  
 SEC TWP RGE  
 Log Measured From GL Elevation  
 Drilling Measured From  
 Other Services  
 Elevation  
 K.B.  
 D.F.  
 G.L.

Date	9-5-19			
Run Number	1			
Depth Driller	16946'			
Depth Logger	6373'			
Bottom Logged Interval	6373'			
Top Log Interval	SURFACE			
Open Hole Size	N/A			
Type Fluid	WATER			
Density / Viscosity	N/A			
Max. Recorded Temp.	134.3 DEG			
Estimated Cement Top	4296'			
Time Well Ready	N/A			
Time Logger on Bottom	13:05			
Equipment Number	624874			
Location	BRIDGEPORT			
Recorded By	P DAVIDSON			
Witnessed By	R RIVERA			

Borehole Record		Casing Record					
Run Number	Bit	From	To	Size	Weight	From	To
				13 3/8	54.5	632'	0
				9 5/8	36	2607'	0
				5 1/2	23	16946'	0

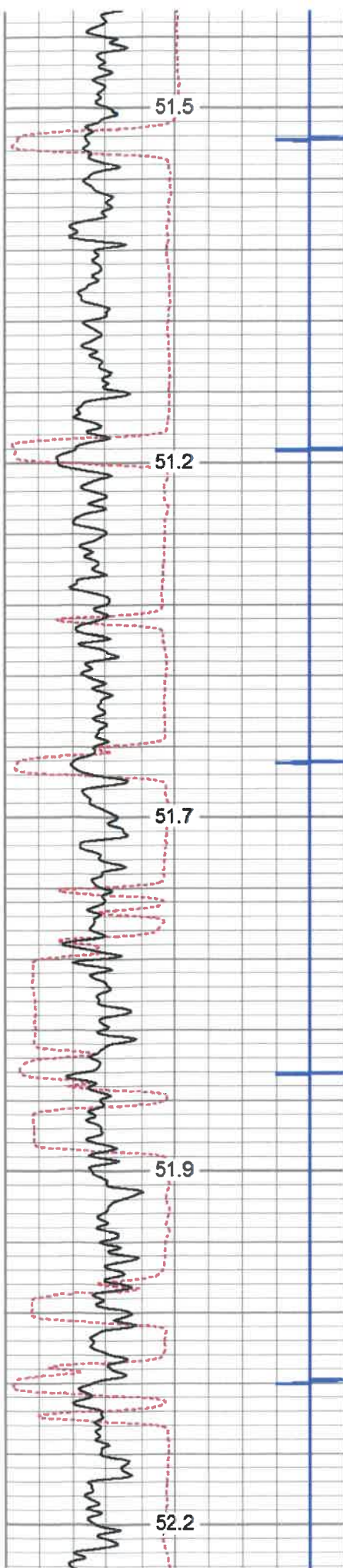
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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**

MARKER JOINT @5226'-5241'  
 LOG TD 6373'  
 CEMENT TOP @ 4296'  
 LOG RAN UNDER 1500 PSI

THANK YOU FOR CHOOSING KLX ENERGY



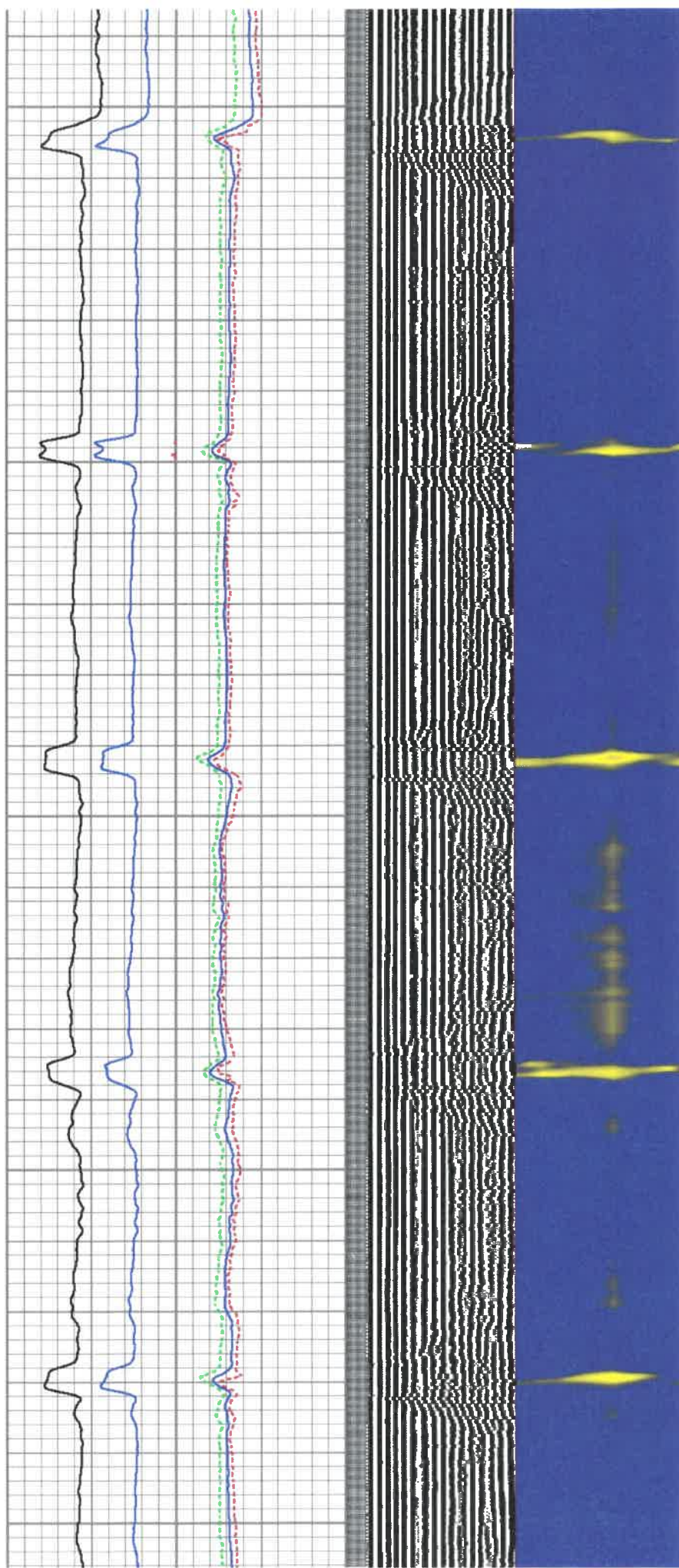
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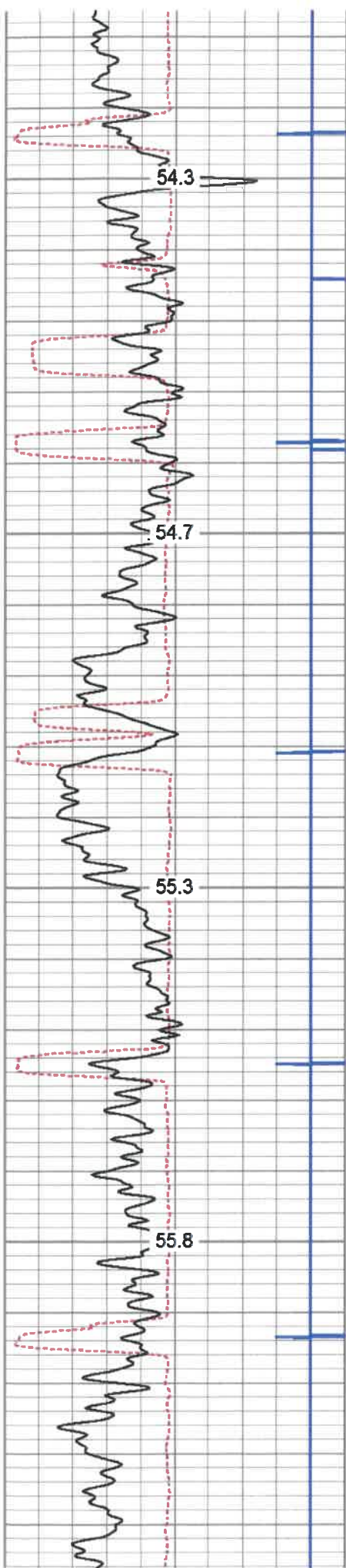
200

250

300

350



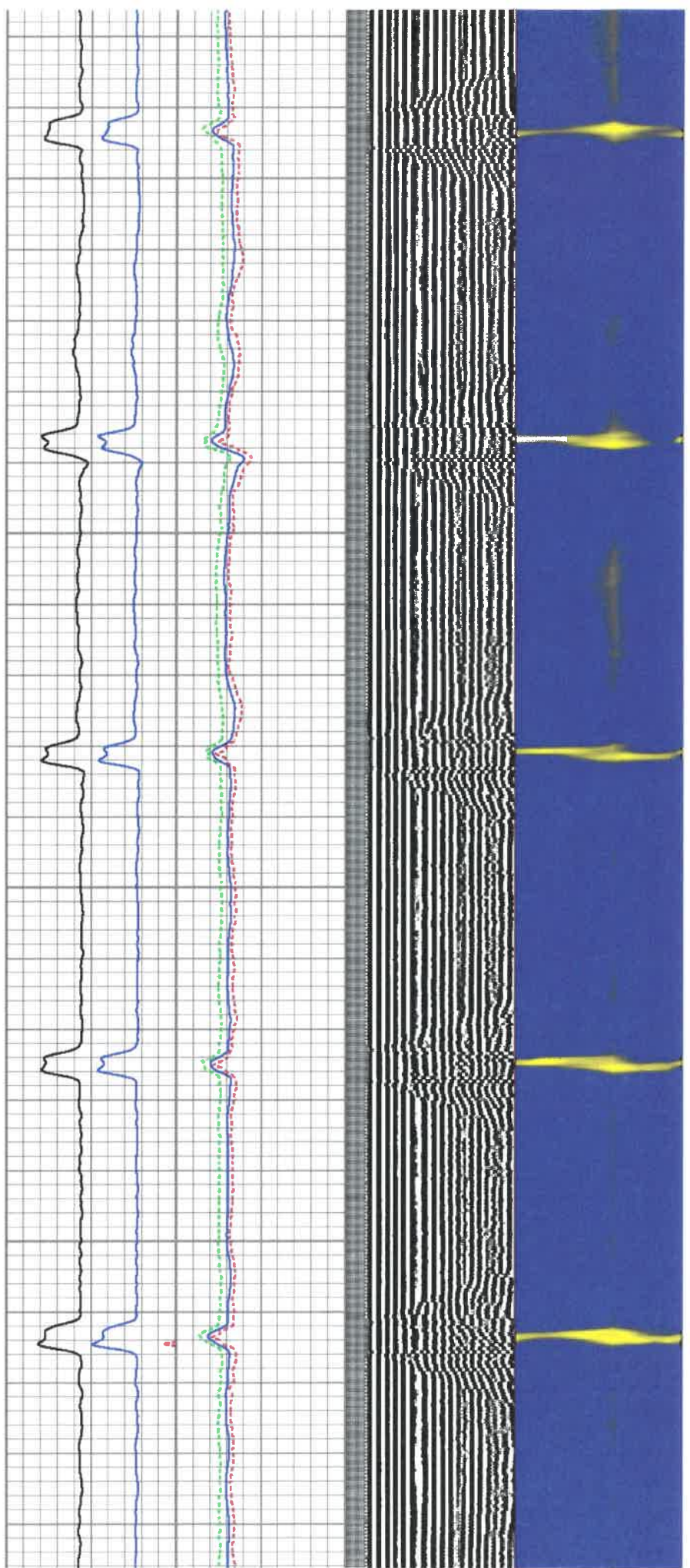


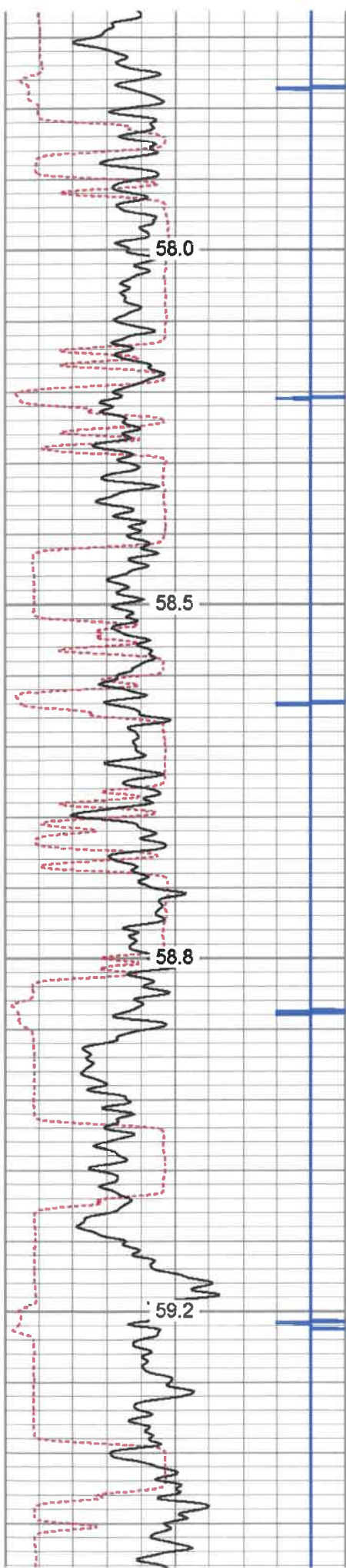
600

650

700

750



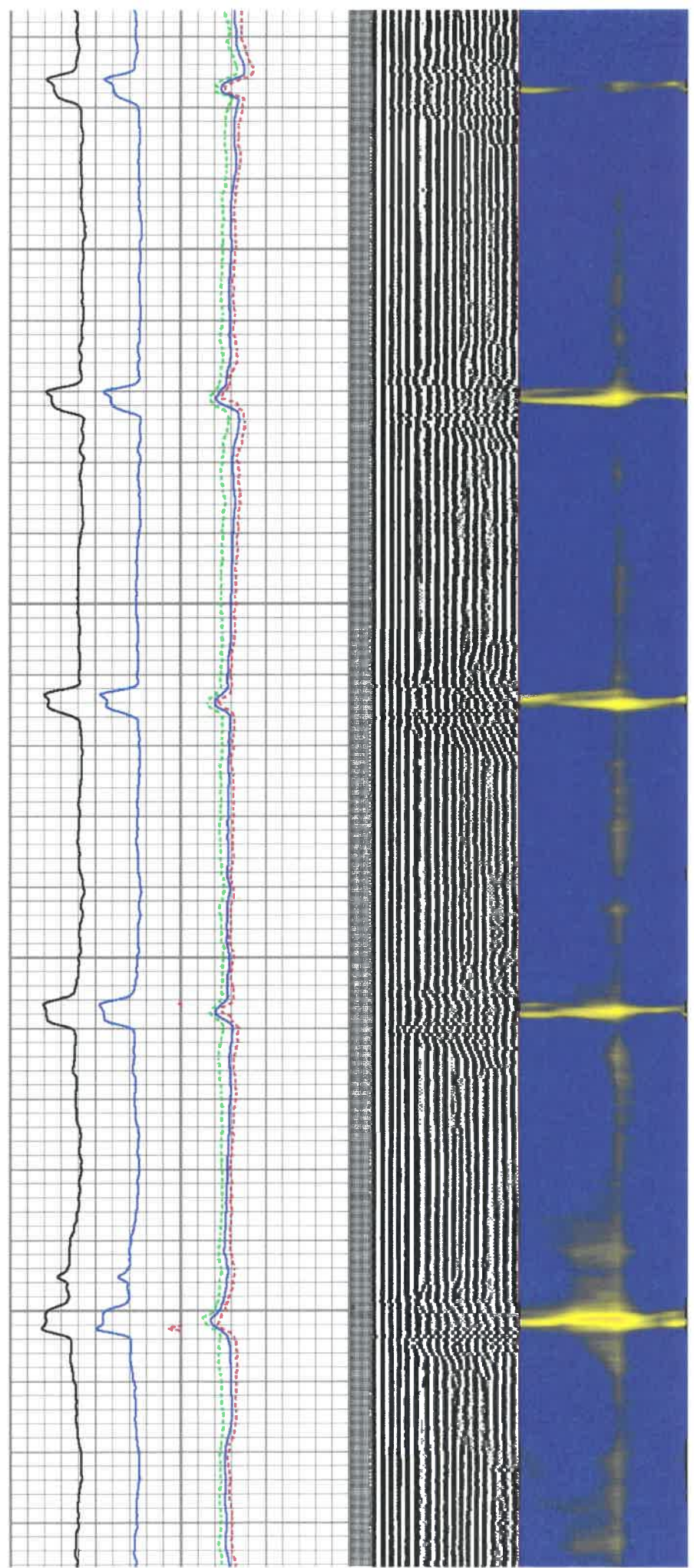


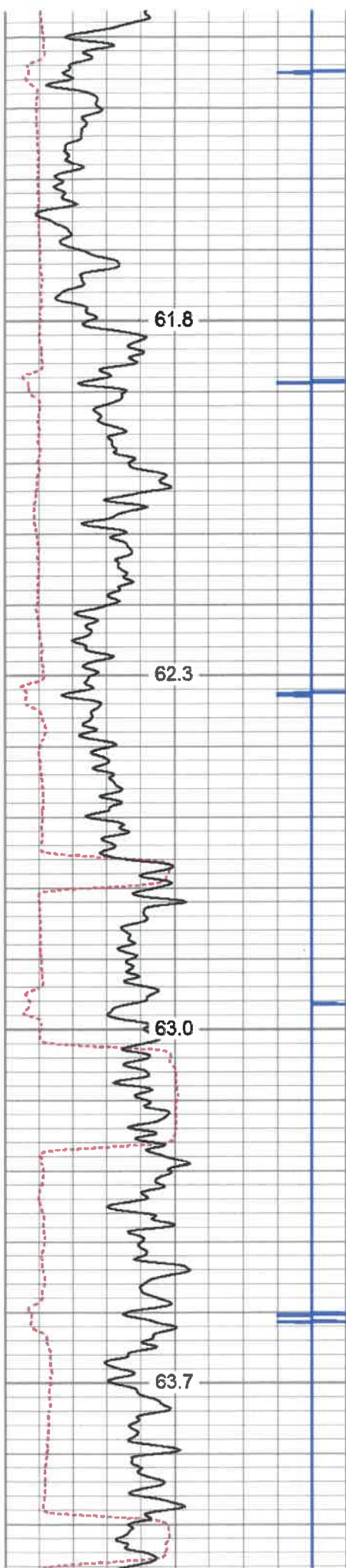
1050

1100

1150

1200



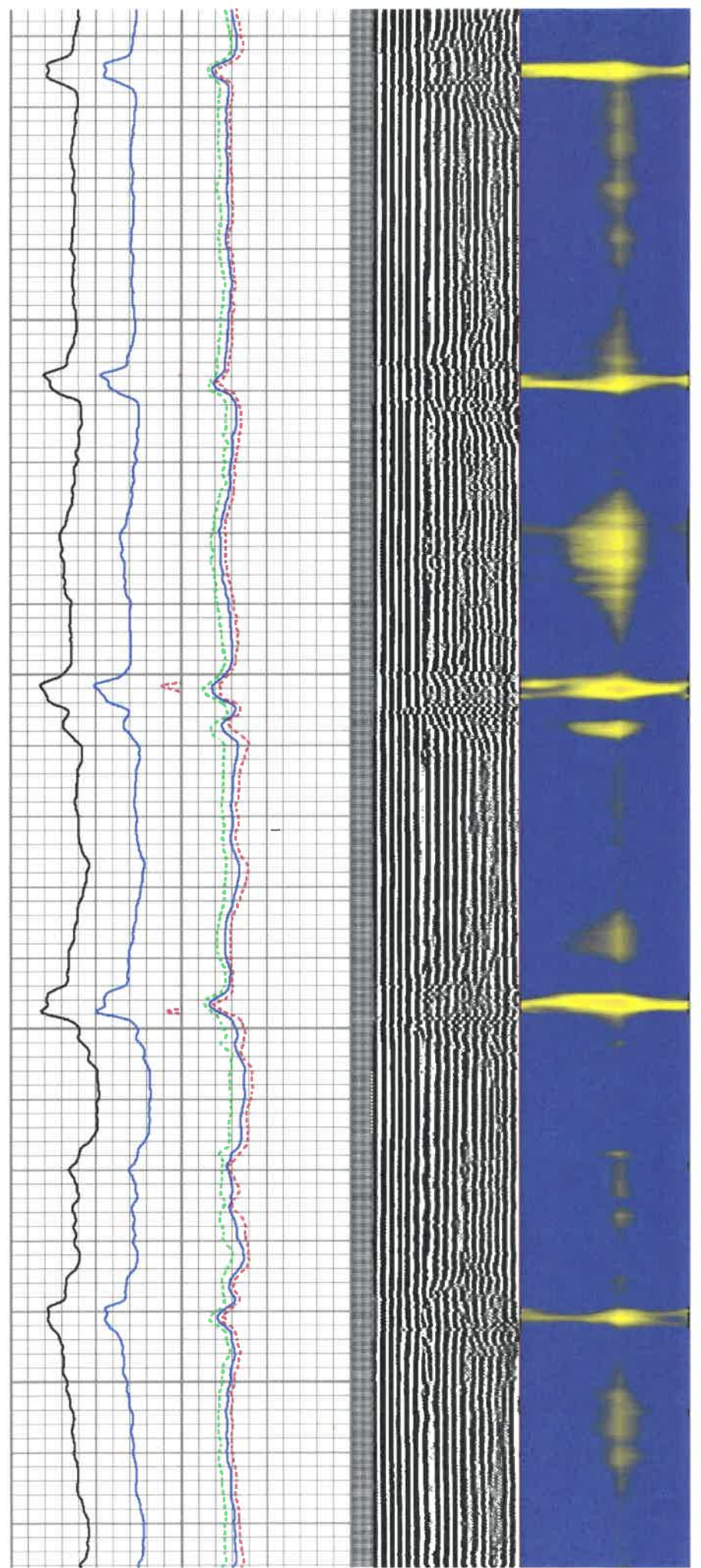


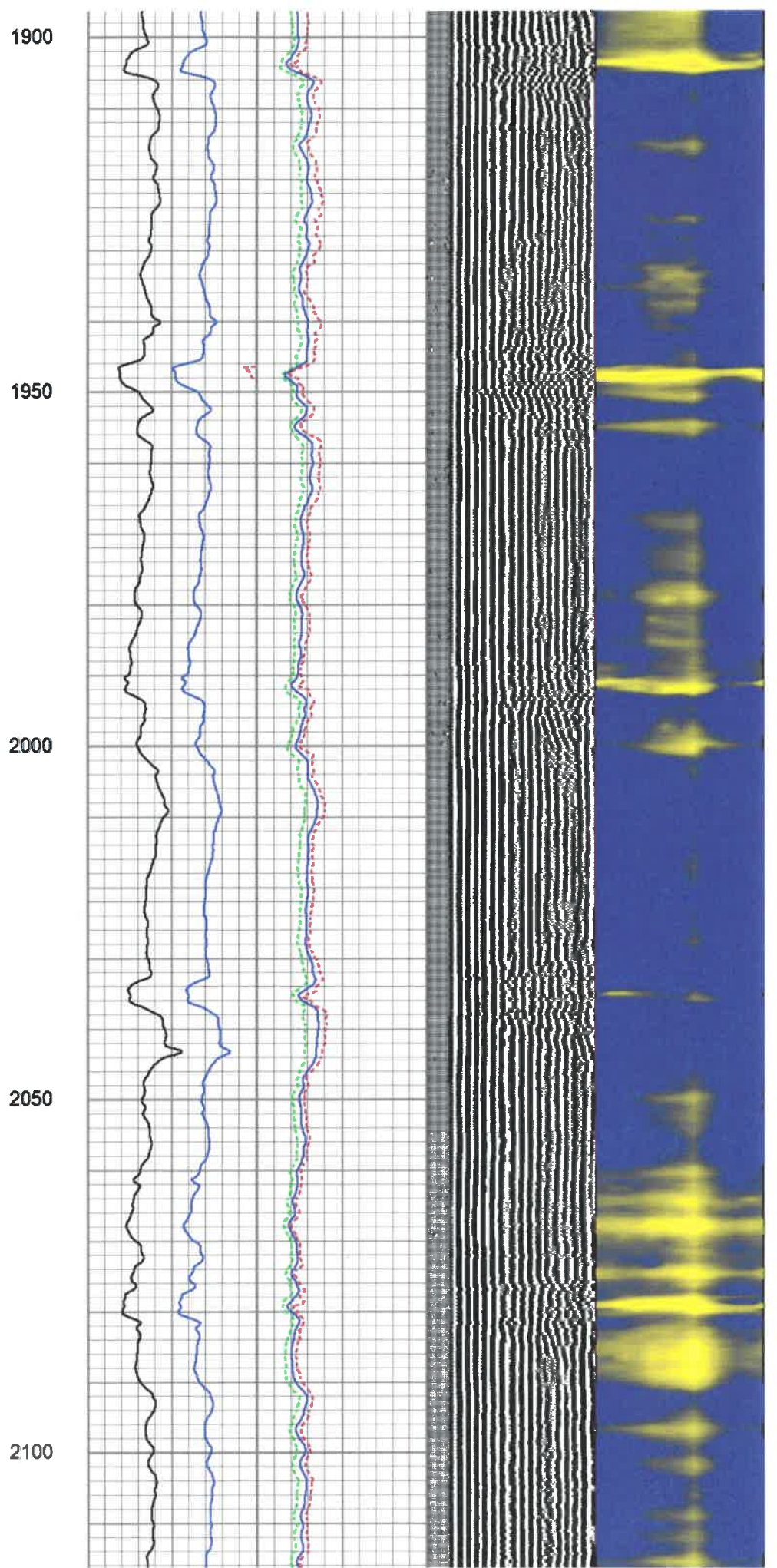
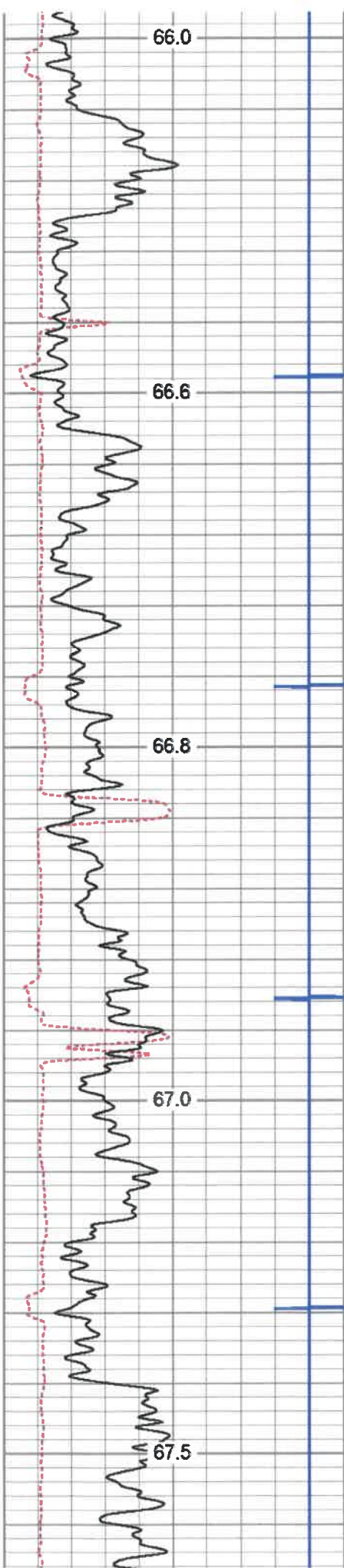
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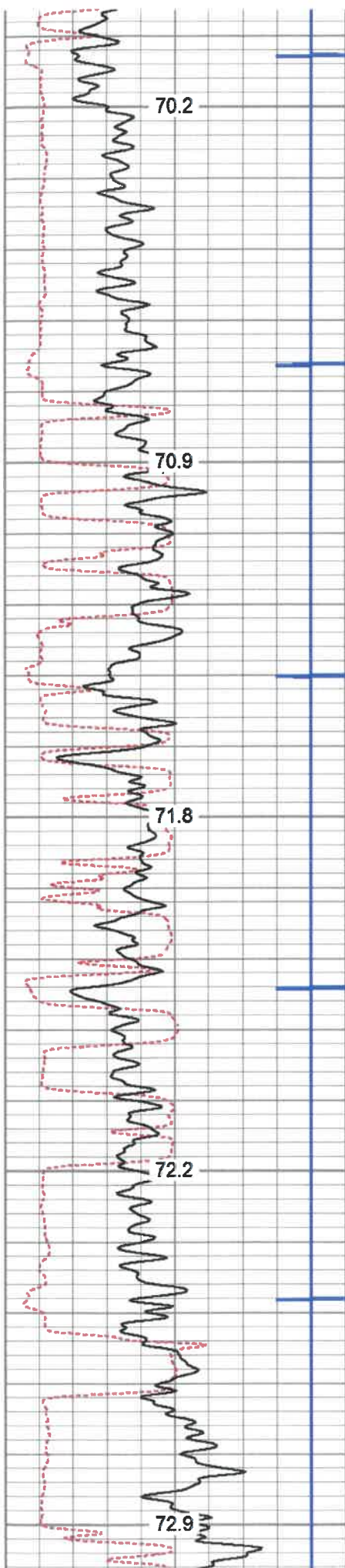
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1600

1650







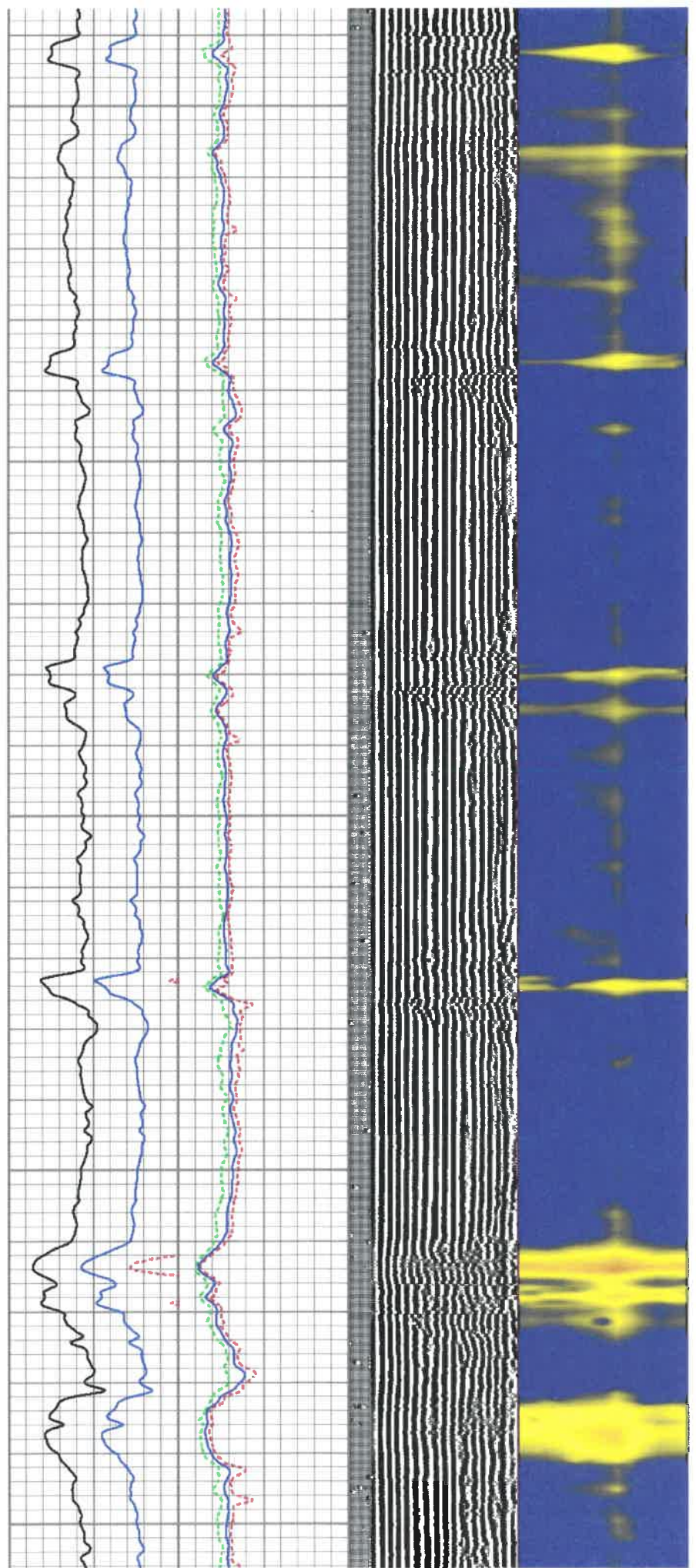
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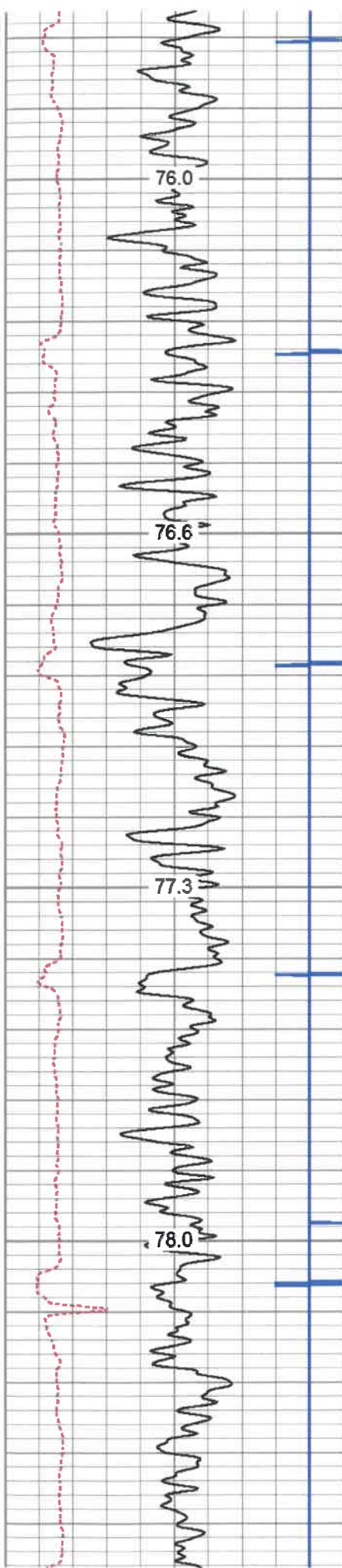
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2450

2500

2550



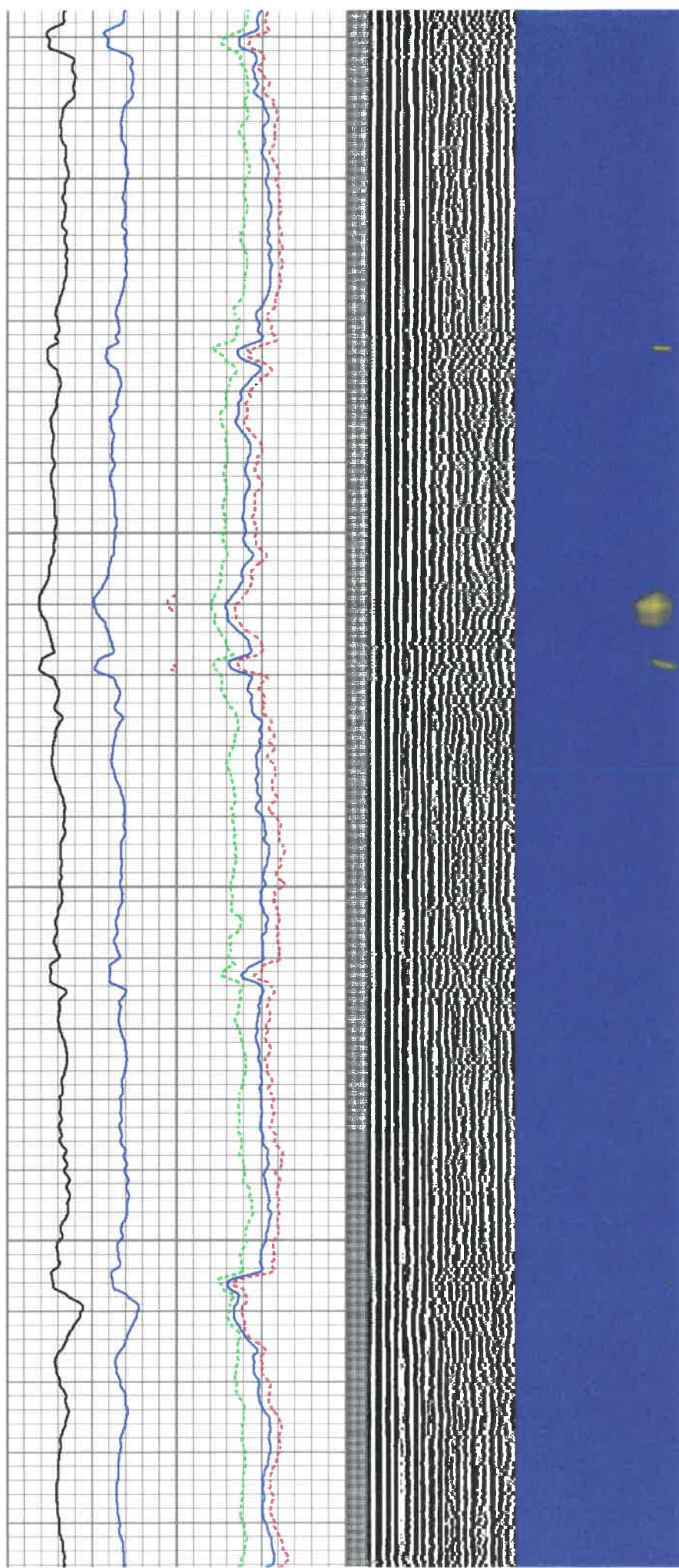


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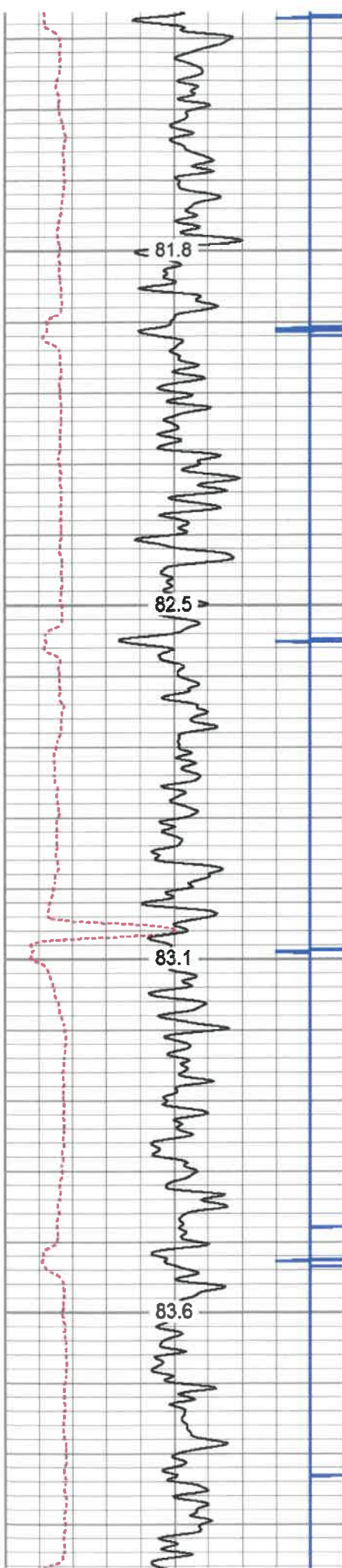
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2900

2950





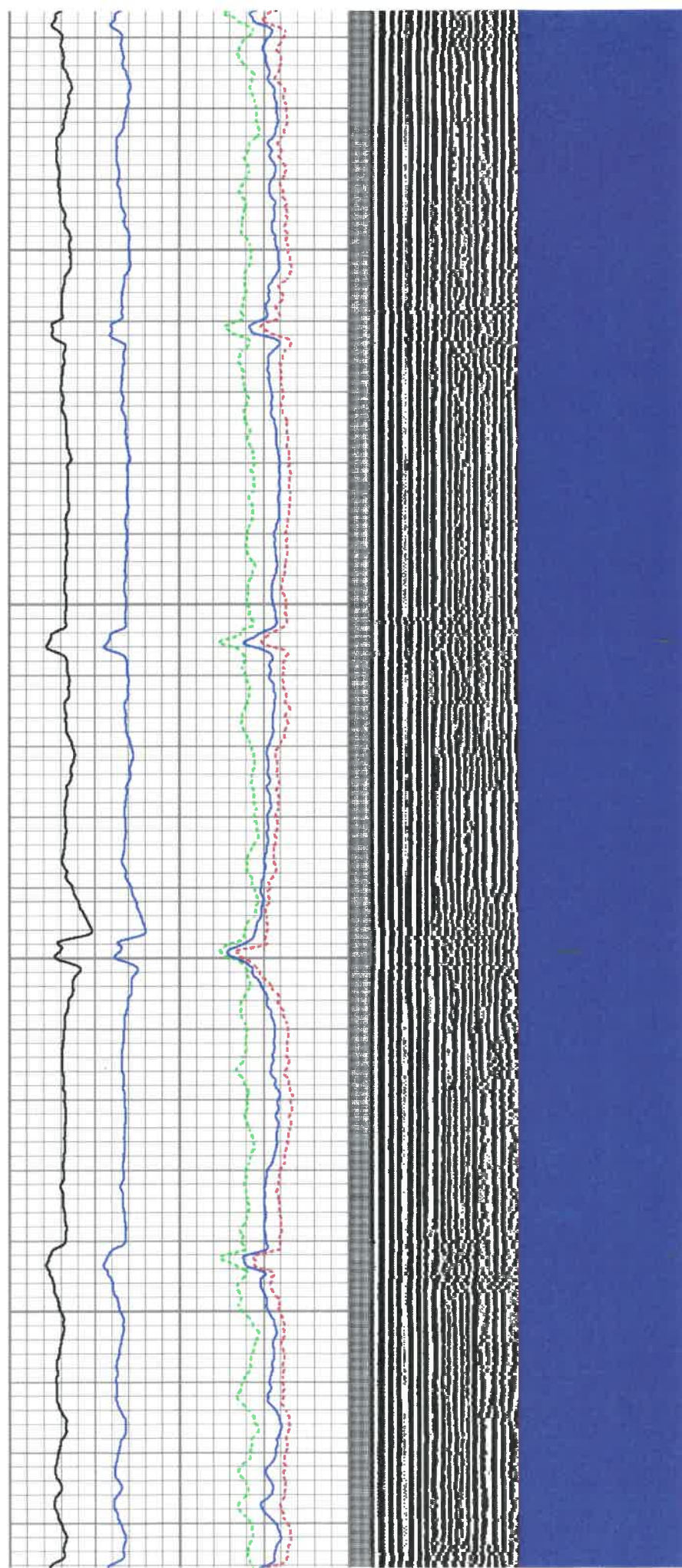


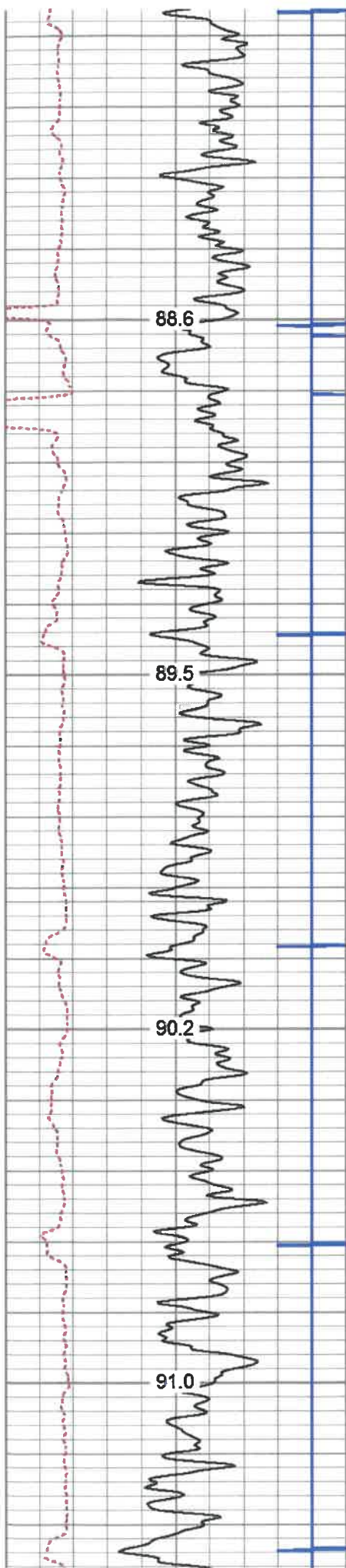
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3350

3400



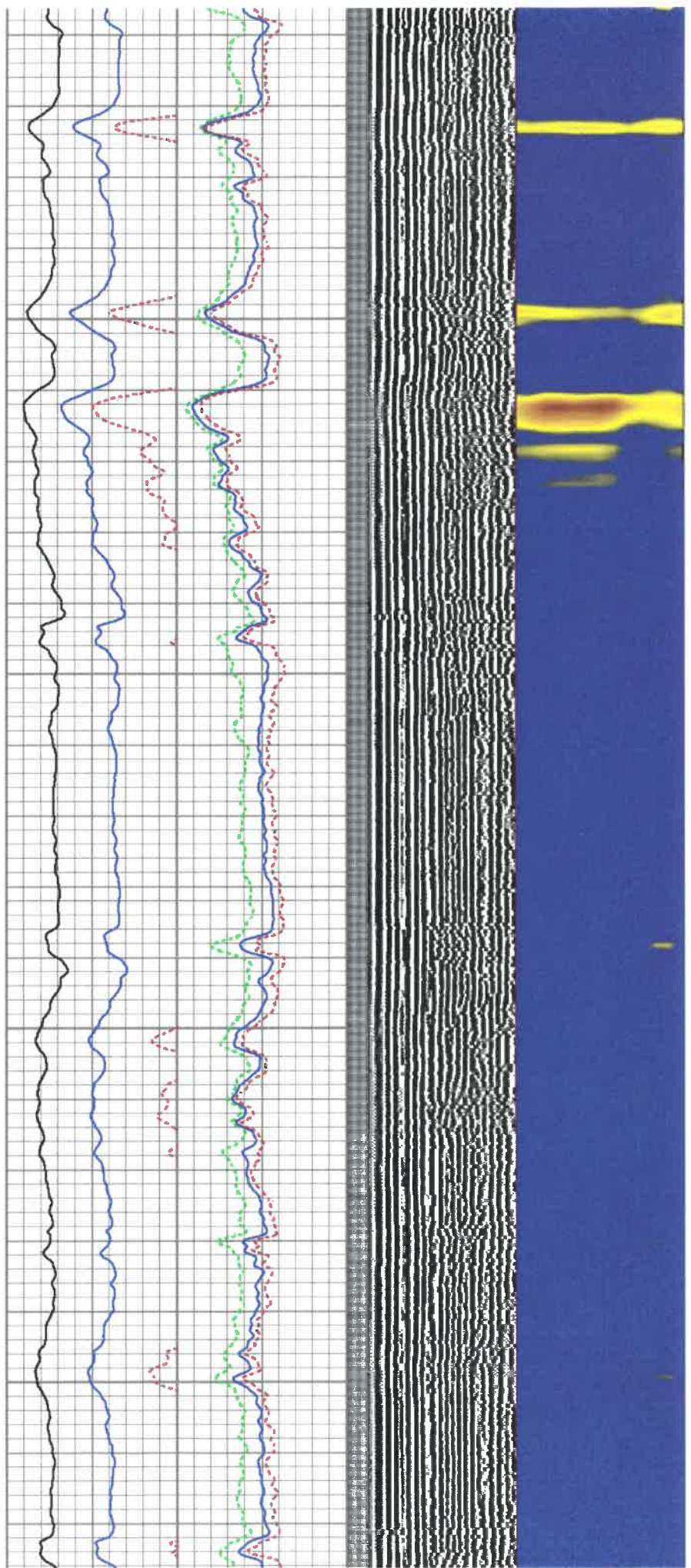


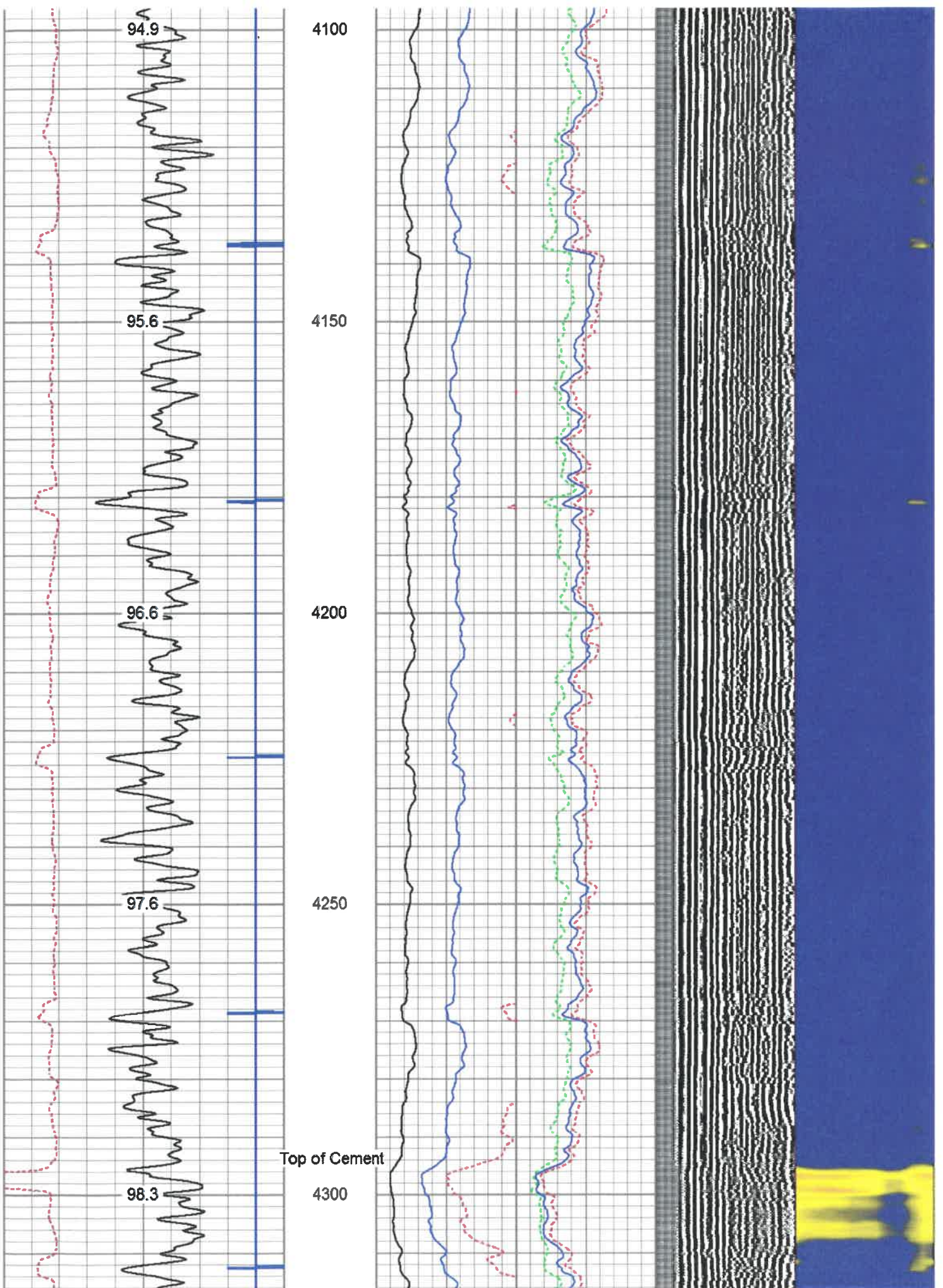
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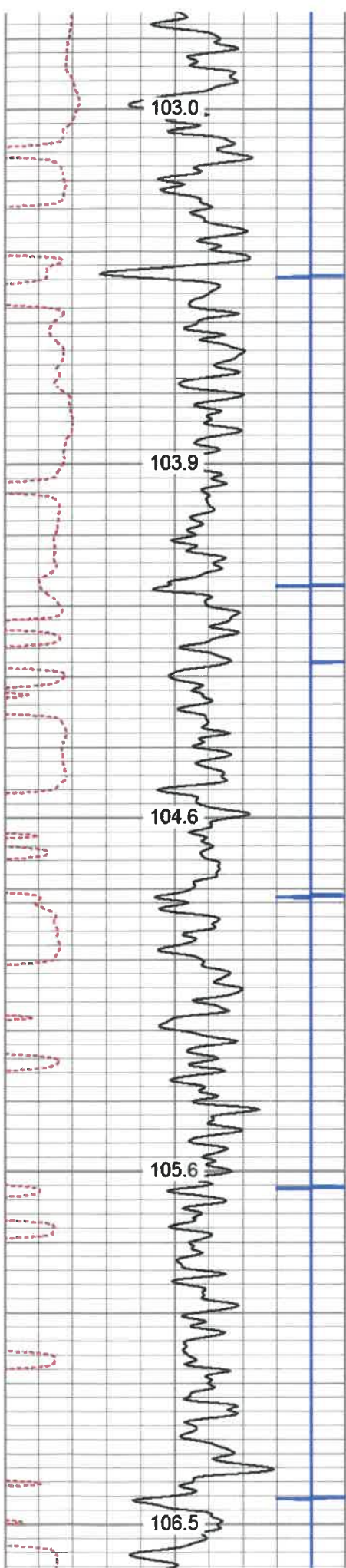
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3800

3850







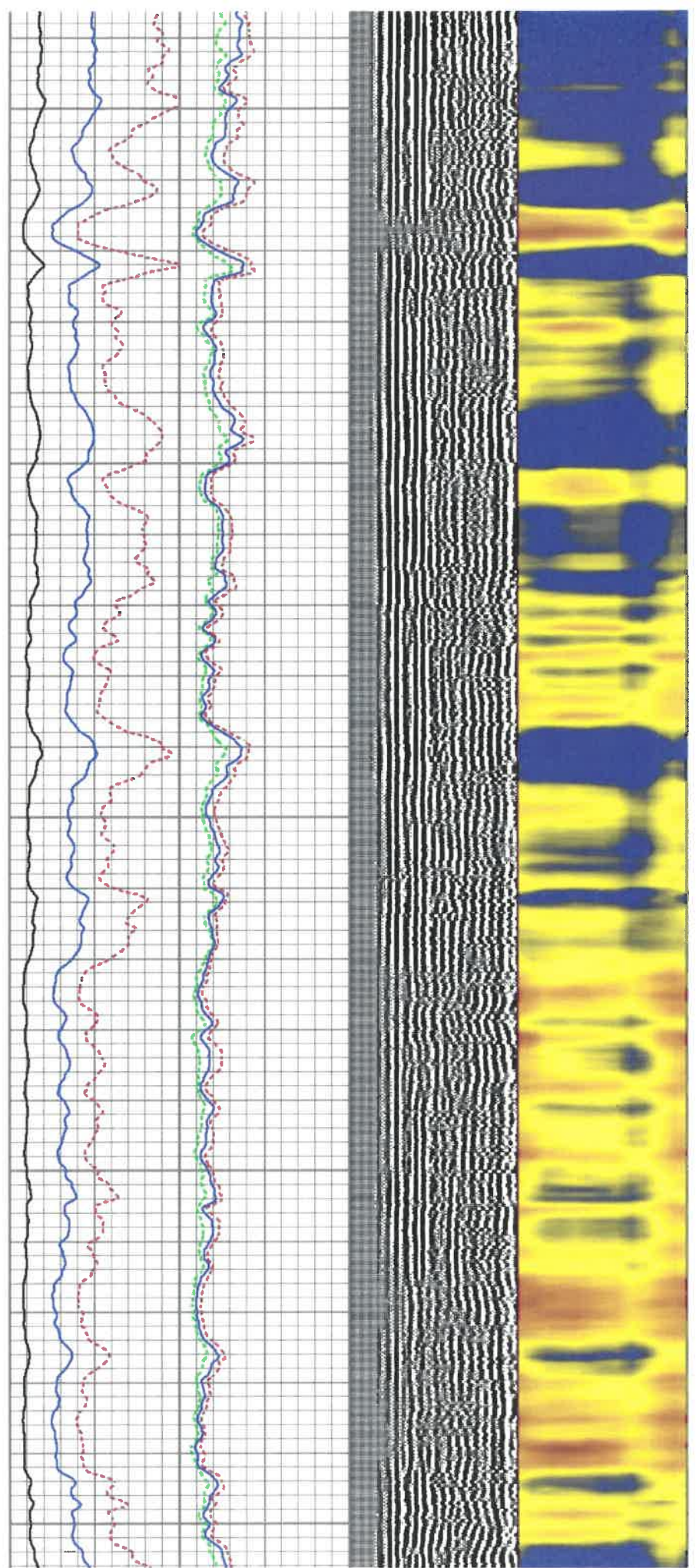
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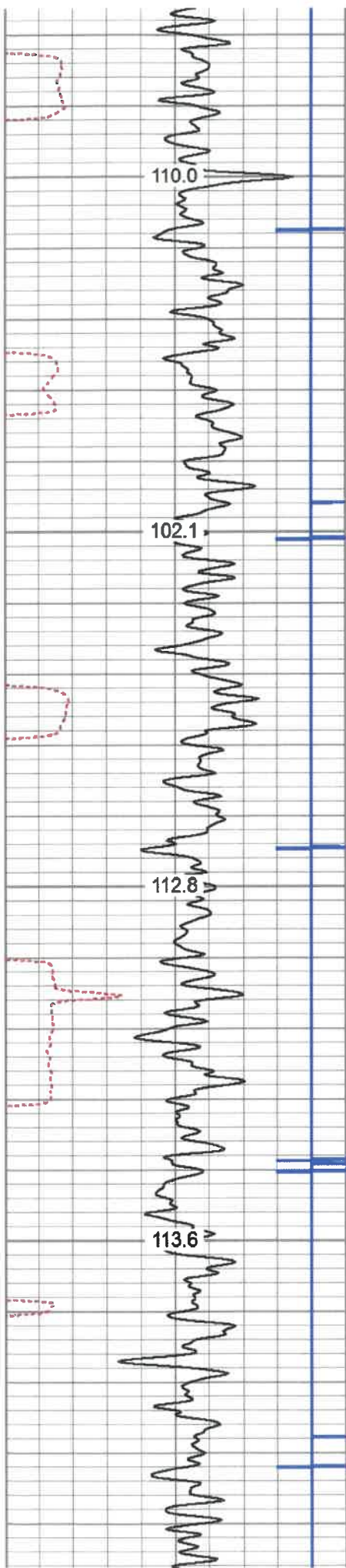
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4650

4700

4750



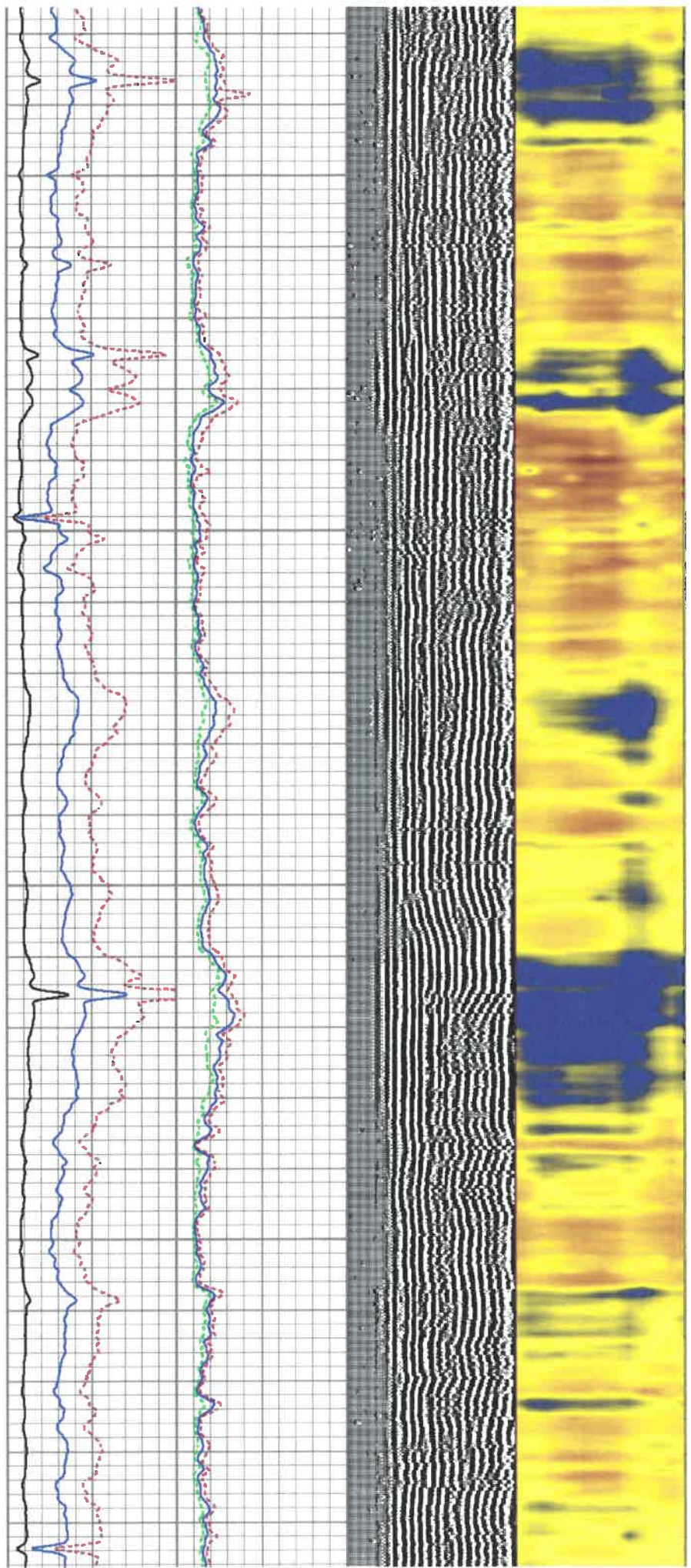


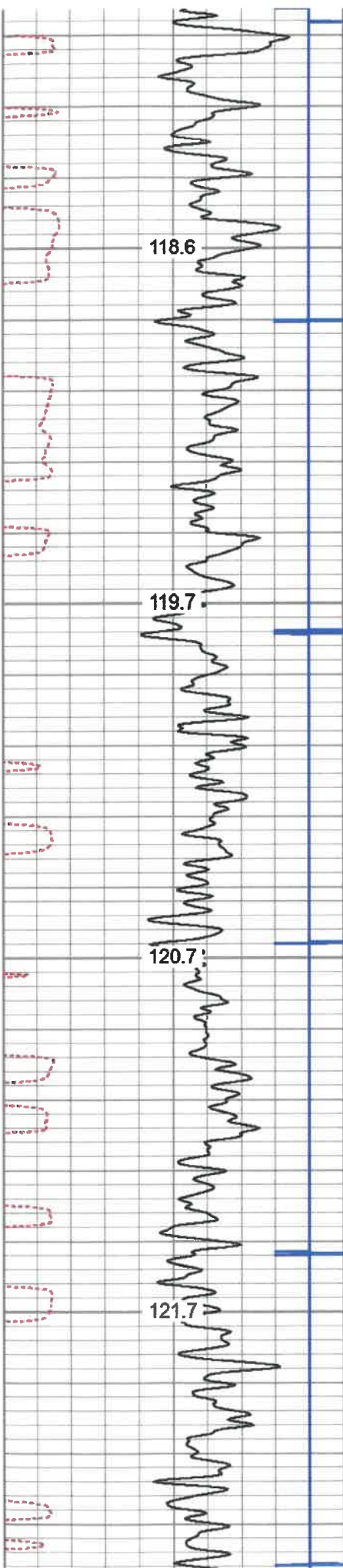
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5050

5100

5150



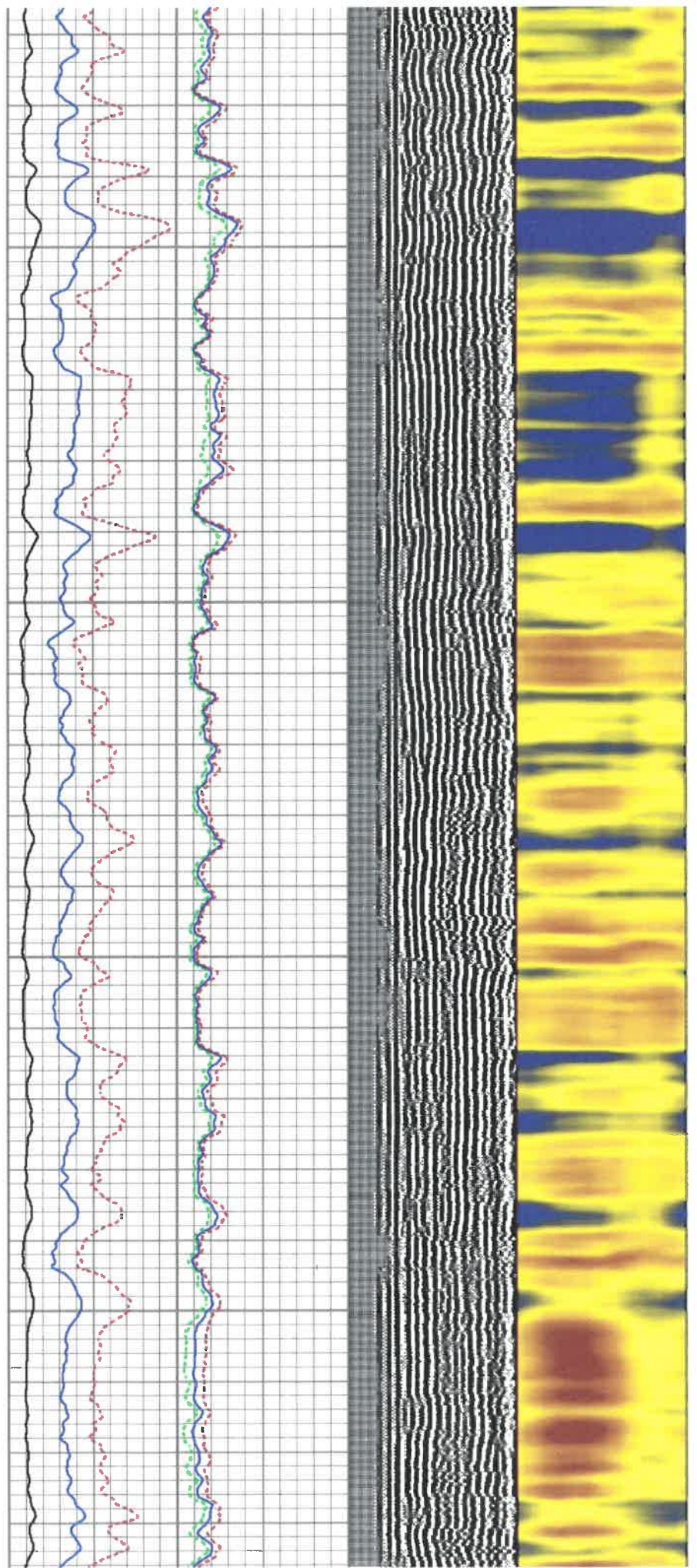


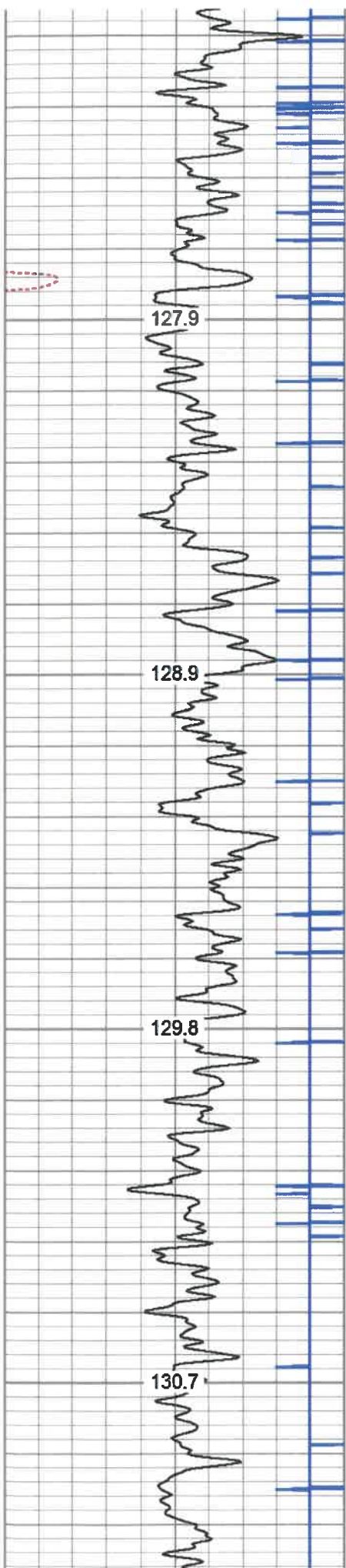
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5500

5550

5600



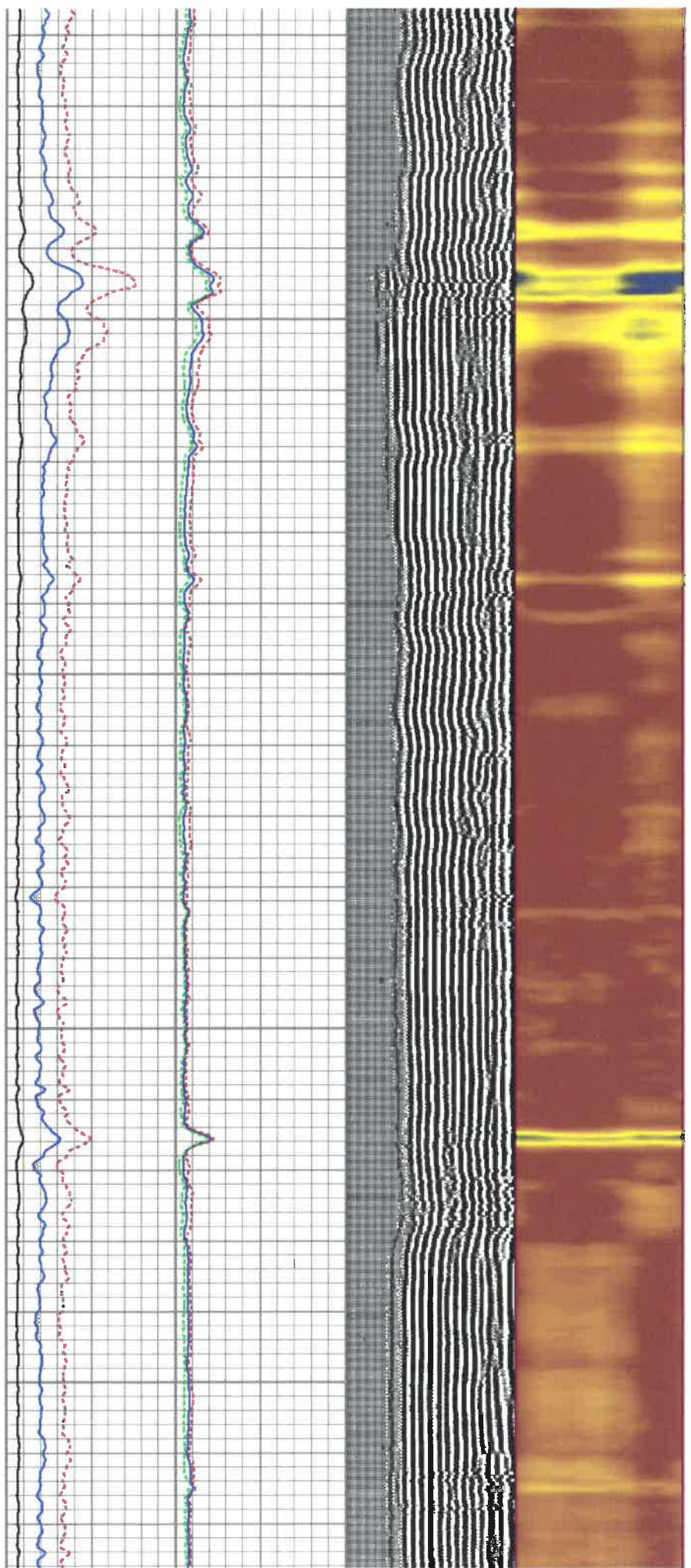


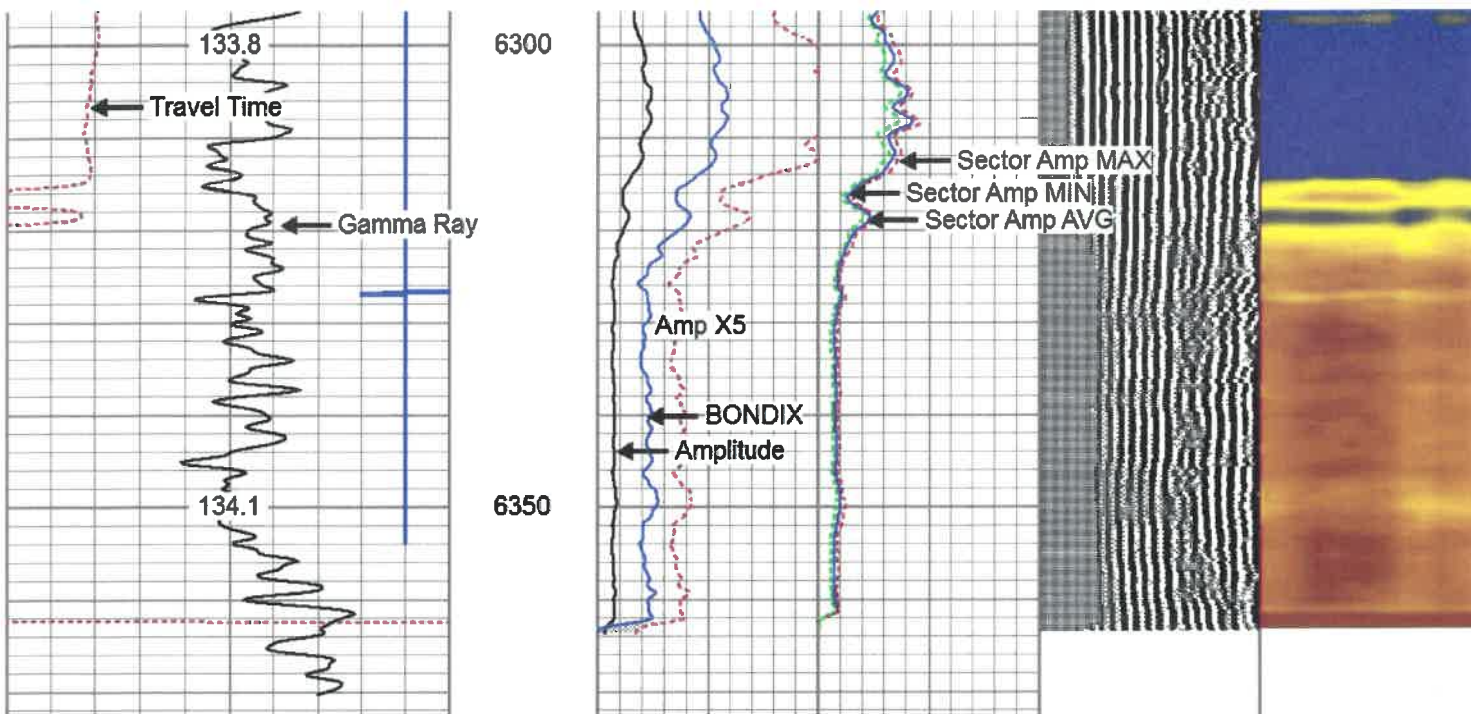
5900

5950

6000

6050





280	Travel Time (usec)	180	Amplitude		Sector Amp AVG	VDL	1 Sector Map 12
9	Casing Collar	-1	0 (mV)	100	Sector Amp MAX	200 (usec) 1200	
0	Gamma Ray (GAPI)	180	Amp X5		Sector Amp MIN		
180	GR (GAPI)	360	0 (mV)	20			
	TEMP (degF)		1	BONDIX	0		



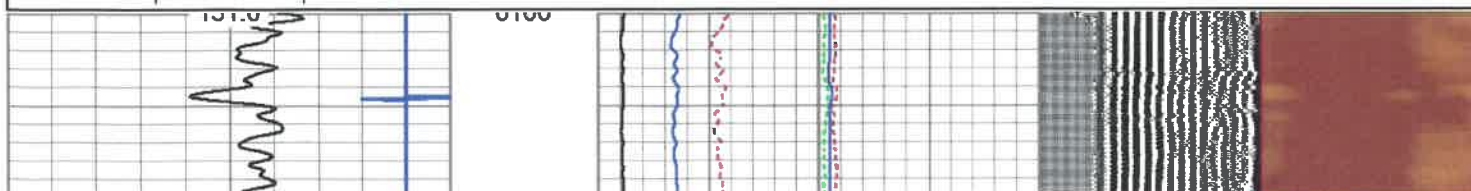
# MAIN PASS 1500PSI



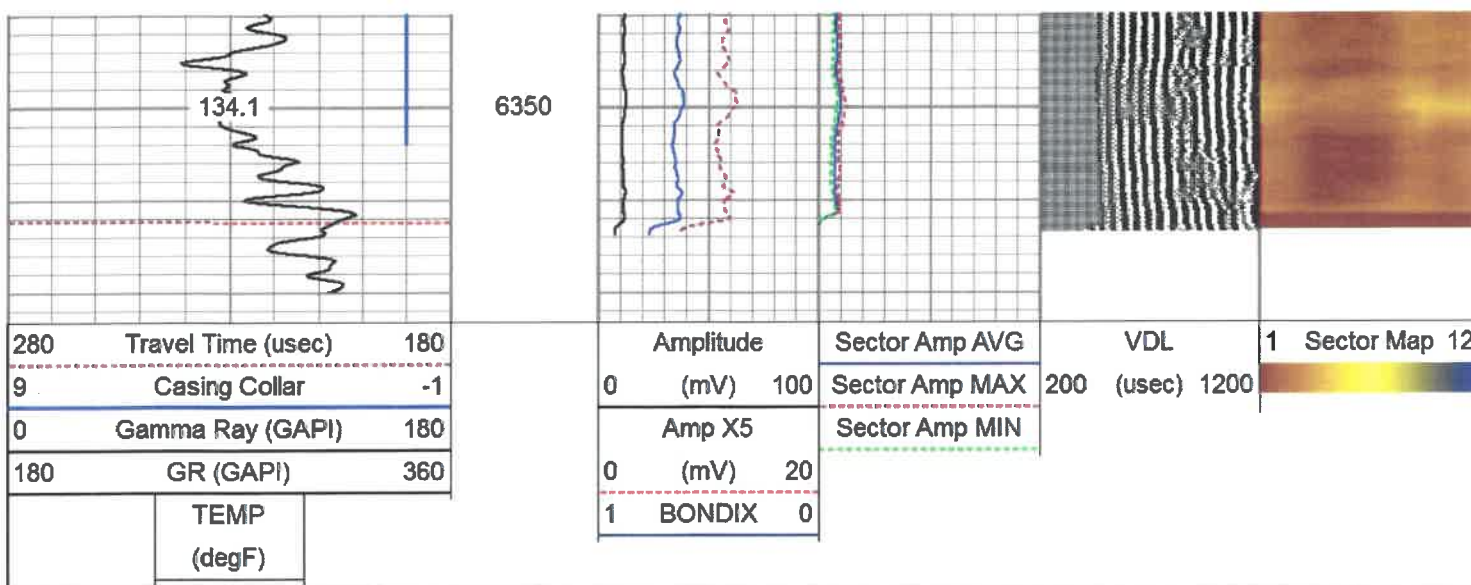
## Repeat Pass

Database File wick3h.db  
 Dataset Pathname pass3.3  
 Presentation Format antero  
 Dataset Creation Fri Sep 06 10:13:42 2019  
 Charted by Depth in Feet scaled 1:240

280	Travel Time (usec)	180	Amplitude		Sector Amp AVG	VDL	1 Sector Map 12
9	Casing Collar	-1	0 (mV)	100	Sector Amp MAX	200 (usec) 1200	
0	Gamma Ray (GAPI)	180	Amp X5		Sector Amp MIN		
180	GR (GAPI)	360	0 (mV)	20			
	TEMP (degF)		1	BONDIX	0		







## Log Variables

DatabaseC:\ProgramData\Warrior\Data\wick3h.db  
Dataset field/well/run1/pass3/\_vars\_

### Top - Bottom

BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL
TEMP	in 7.875	degF 100	in 5.5	in 0	lb/ft 23	mV 71.9
MINAMPL	MINATTN	PERFS	PPT	SRFTEMP	TDEPTH	
mV 3.5	db/ft 0.8	No	usec 219	degF 0	ft 0	

### Variable Description

BHTEMP\_Src : BHTEMP Input Source Selector  
BOREID : Borehole I.D.  
BOTTEMP : Bottom Hole Temperature  
CASEOD : Casing O.D.  
CASETHCK : Casing Thickness  
CASEWGHT : Casing Weight  
MAXAMPL : Maximum Amplitude

MINAMPL : Minimum Amplitude  
MINATTN : Minimum Attenuation  
PERFS : Perforation Flag  
PPT : Predicted Pipe Time  
SRFTEMP : Surface Temperature  
TDEPTH : Total Depth

### Calibration Report

Database File wick3h.db  
Dataset Pathname pass3  
Dataset Creation Thu Sep 05 13:15:34 2019

### Gamma Ray Calibration Report

Serial Number: 0111  
Tool Model: Tek-Co 2 3/4  
Performed: Fri Aug 02 20:12:43 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.5000 GAPI/cps

### Segmented Cement Bond Log Calibration Report

Serial Number: T12\_01  
Tool Model: Tek12

WVFSYNC	13.04		<p>SCBL-Tek12 (T12_01) Tekco 400 Deg F 12 Sector RIB with Temp</p> <p>Tek-2.75 2 3/4" Tekco Adjustable Centralizer</p> <p>GR-Tek-Co 2 3/4 (0111) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray</p> <p>Titan-1.4375_Cap Titan 1 7/16" Cap</p>	9.13	3.25	135.00
WVFCAL	13.04					
WVFS12	11.75					
WVFS11	11.75					
WVFS10	11.75					
WVFS9	11.75					
WVFS8	11.75					
WVFS7	11.75					
WVFS6	11.75					
WVFS5	11.75					
WVFS4	11.75					
WVFS3	11.75					
WVFS2	11.75					
WVFS1	11.75					
WVF3FT	11.00					
WVF5FT	10.00					
WVFTEMP	6.67					
GR	1.31					

**Dataset:** wick3h.db: field/well/run1/pass3  
**Total length:** 21.37 ft  
**Total weight:** 256.00 lb  
**O.D.:** 3.25 in



**Company** ANTERO RESOURCES CORPORATION  
**Well** WCK 3H  
**Field** MARCELLUS  
**County** TYLER  
**State** WV **Country**