



Weatherford®

**SECTOR BOND
GAMMA RAY / CCL LOG**

COMPANY URSA OPERATING COMPANY		WELL BAT 32D-24-07-96	
FIELD BATTLEMENT MESA		CNTY GARFIELD STATE CO	
COMPANY URSA OPERATING COMPANY		WELL BAT 32D-24-07-96	
FIELD BATTLEMENT MESA		COUNTY GARFIELD STATE COLORADO	
LOCATION:		OTHER SERVICES:	
SEC.24 TWP.7S RGE96W		GR/JB PND	
PERM. DATUM GROUND LEVEL		ELEV. 5160'	
LOG MEASURED FROM K.B. 15.5 FT. ABOVE PERMANENT DATUM		ELEV.: K.B. 5175.5 D.F.	
DRILLING MEASURED FROM K.B.		G.L. 5160'	
DATE	24-FEB-2014		
RUN NO.	ONE		
DEPTH DRILLER	6187'		
DEPTH LOGGER	6168'		
BTM. LOG INTERVAL	6164'		
TOP LOG INTERVAL	SURFACE		
OPEN HOLE SIZE	8.75"		
TYPE FLUID	WATER		
DENS.	8.3	10.00	
MAX. REC. TEMP. °F	190 DEG. F.		
EST. CEMENT TOP	SEE LOG		
TIME WELL READY	R.O.A.		
TIME LOGGER ON BTM.	SEE LOG		
EQUIP. NO.	14068		
LOCATION	GRD. JUNCTION		
RECORDED BY	P. MAZUR		
WITNESSED BY	L. GRIEGER		
BOREHOLE RECORD		TUBING RECORD	
RUN NO.	BIT FROM TO	SIZE	WGT. FROM TO
CASING RECORD	SIZE	WT/FT	GRADE TYPE JOINT TOP BOTTOM
SURFACE STRING			
PROD. STRING	4.5"	11.6	P-110 SURF. T.D.
LINER			

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

REMARKS	Rig: CRANE #15062	Service Order # 80204164
WEATHERFORD SECTOR BOND LOG IS THE PRIMARY LOG FOR THIS WELL		
ALL LOGGED INTERVALS PER CUSTOMER REQUEST		
THANKS FOR USING WEATHERFORD WIRELINE SERVICES GRD. JUNCTION, CO (970)263-8501		

EQUIPMENT DATA			
Run No.	Tool Type	Tool No.	Other
ONE	CENA	220	
ONE	CTBA	323	
ONE	GRBA	317	
ONE	CENB	157	
ONE	SBTA	238	
ONE	CENA	216	
ONE	TEMP	002	

DEPTH SCALE: 5":100'

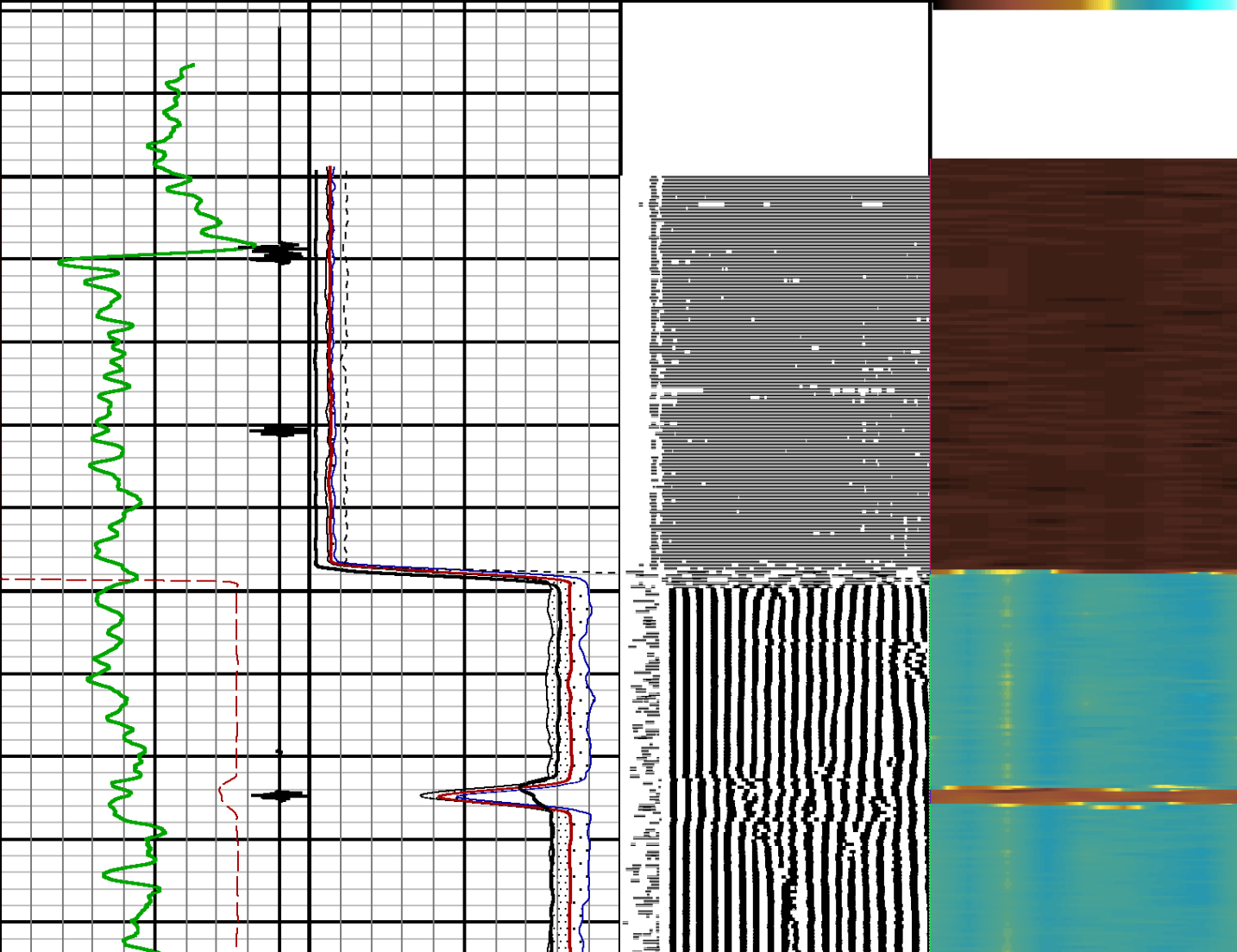
PROCESSED VERSION: 2012.07.18.162"

MAIN PASS

80204164 CBLMAIN

FINISH DEPTH: 5.7 Feet DIRECTION: UP DATE: 02/25/2014 TIME: 05:11 MODE: TRACE PLAYBACK

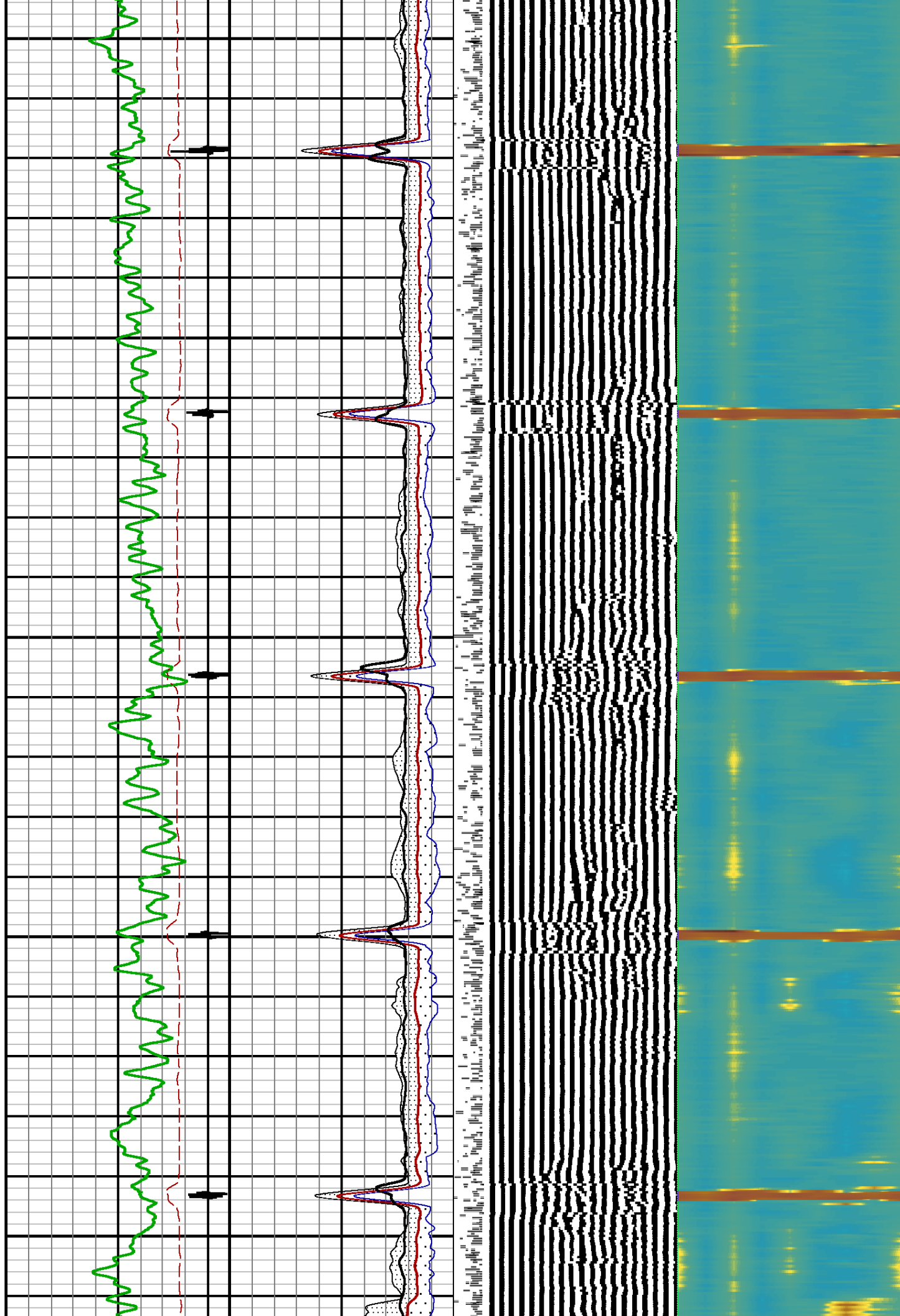
		AMP X 5			
		0 Millivolts 20			
		AMPLITUDE 3FT			
		0 Millivolts 100			
Collar Locator		MAX ENERGY			
-8000 Millivolts 800		0 Millivolts 100			
Gamma Ray		AVG ENERGY			
0 API 150		0 Millivolts 100			
Tension	TRAVEL TIME 3FT	MIN ENERGY		VARIABLE DENSITY 5FT	VARIABLE ENERGY
0 2000	318 Microseconds 218	0 Millivolts 100		200 Microseconds 1200	0 Millivolts 100



100

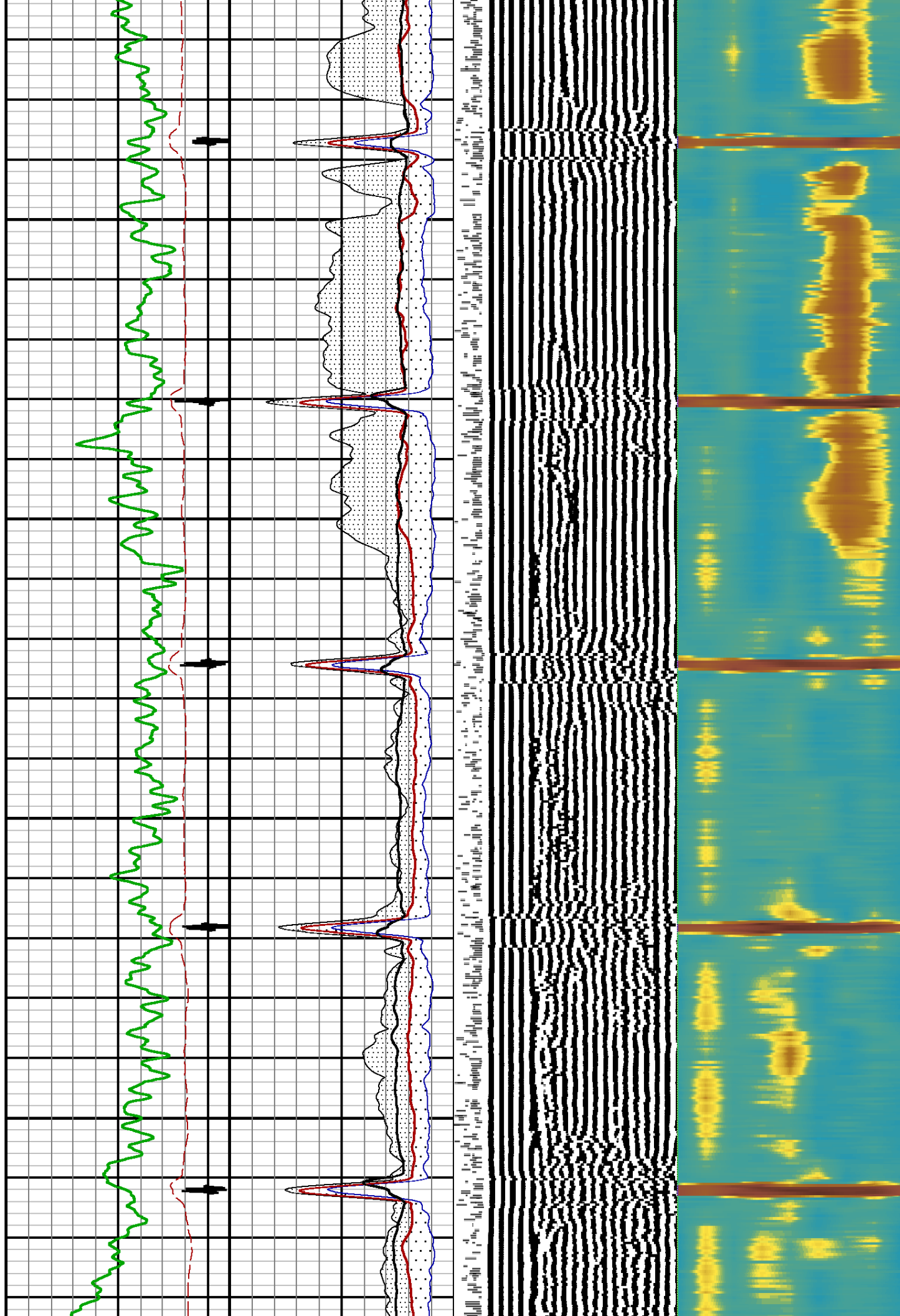
200

300



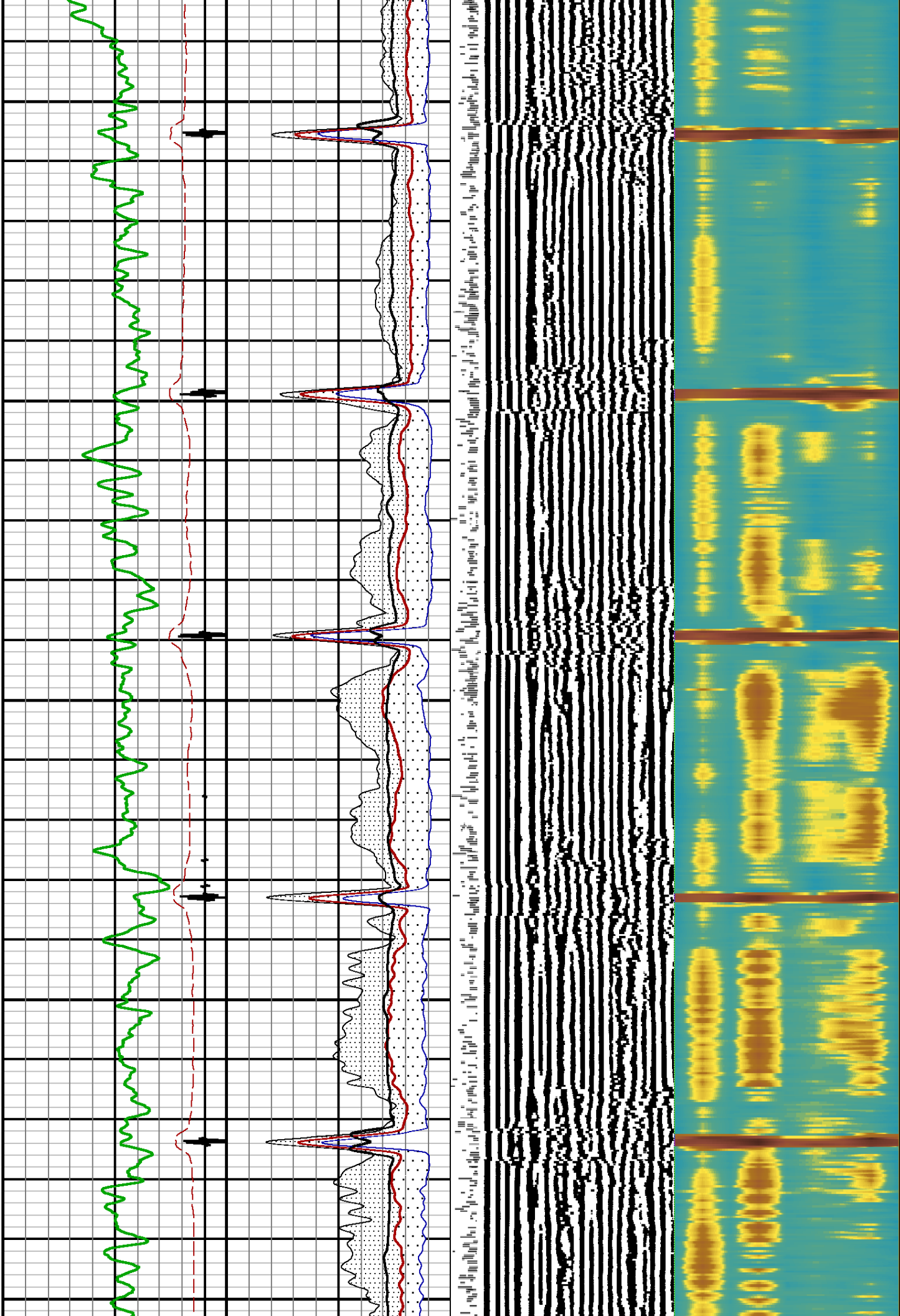
400

500



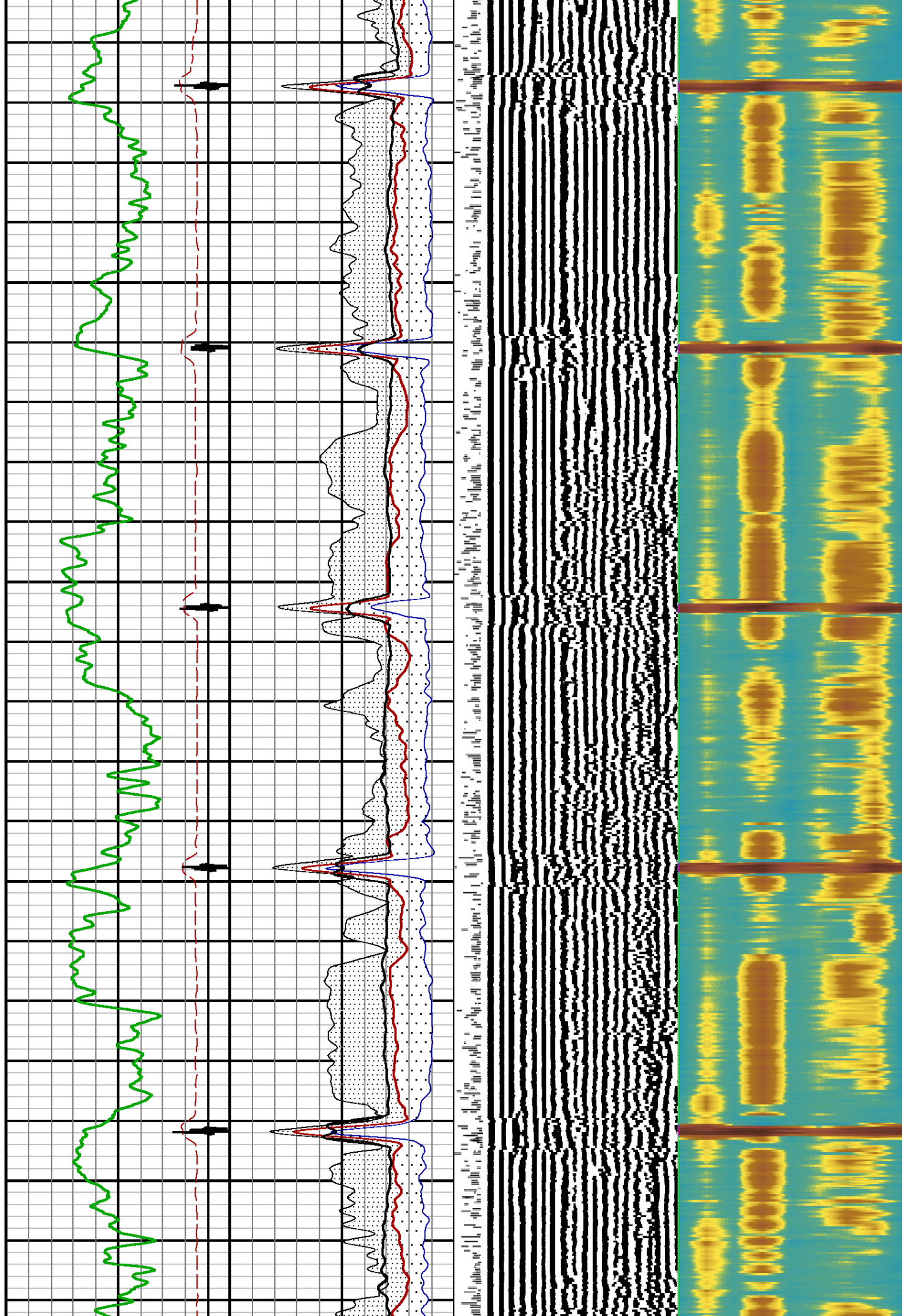
600

700



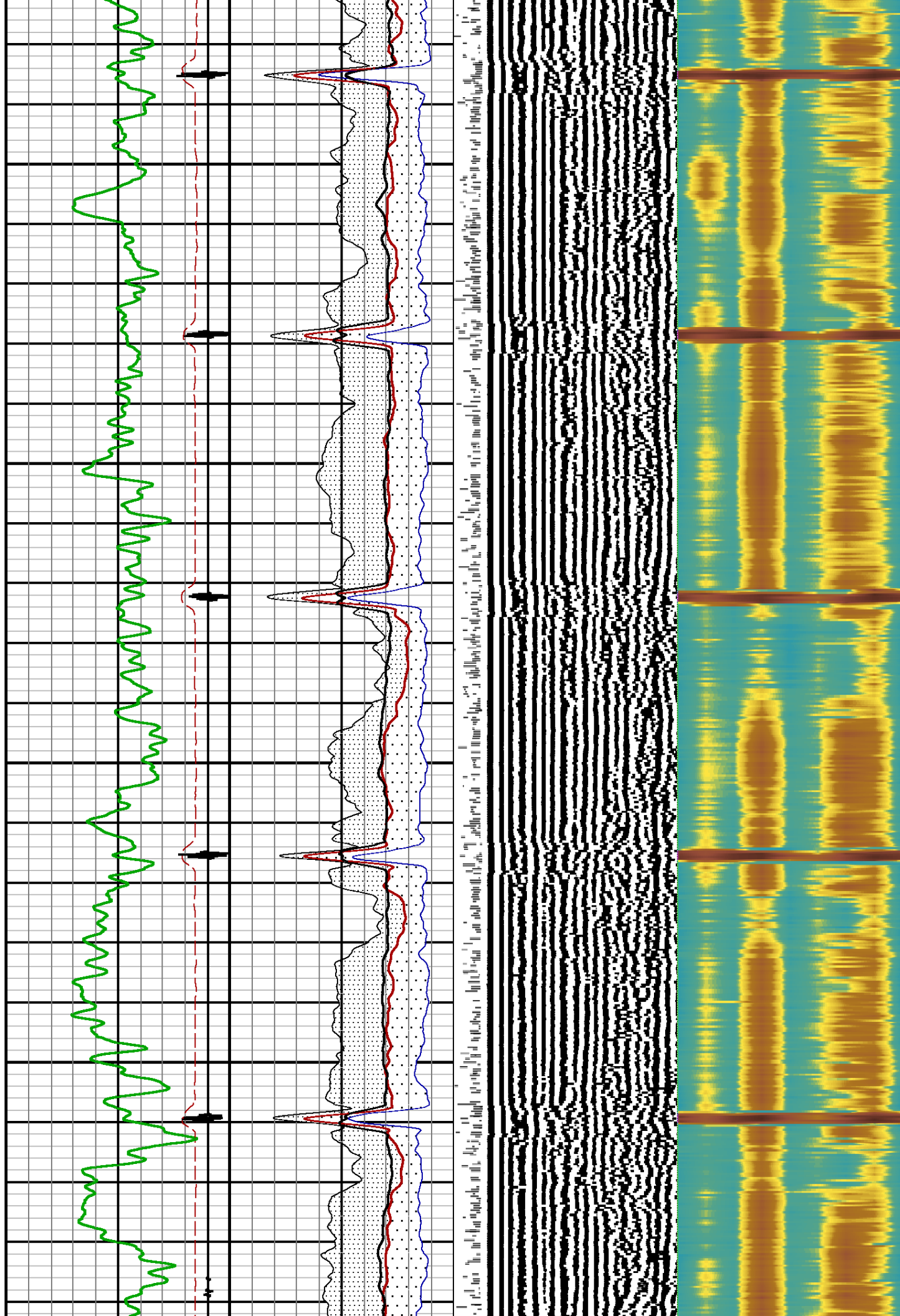
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900



1000

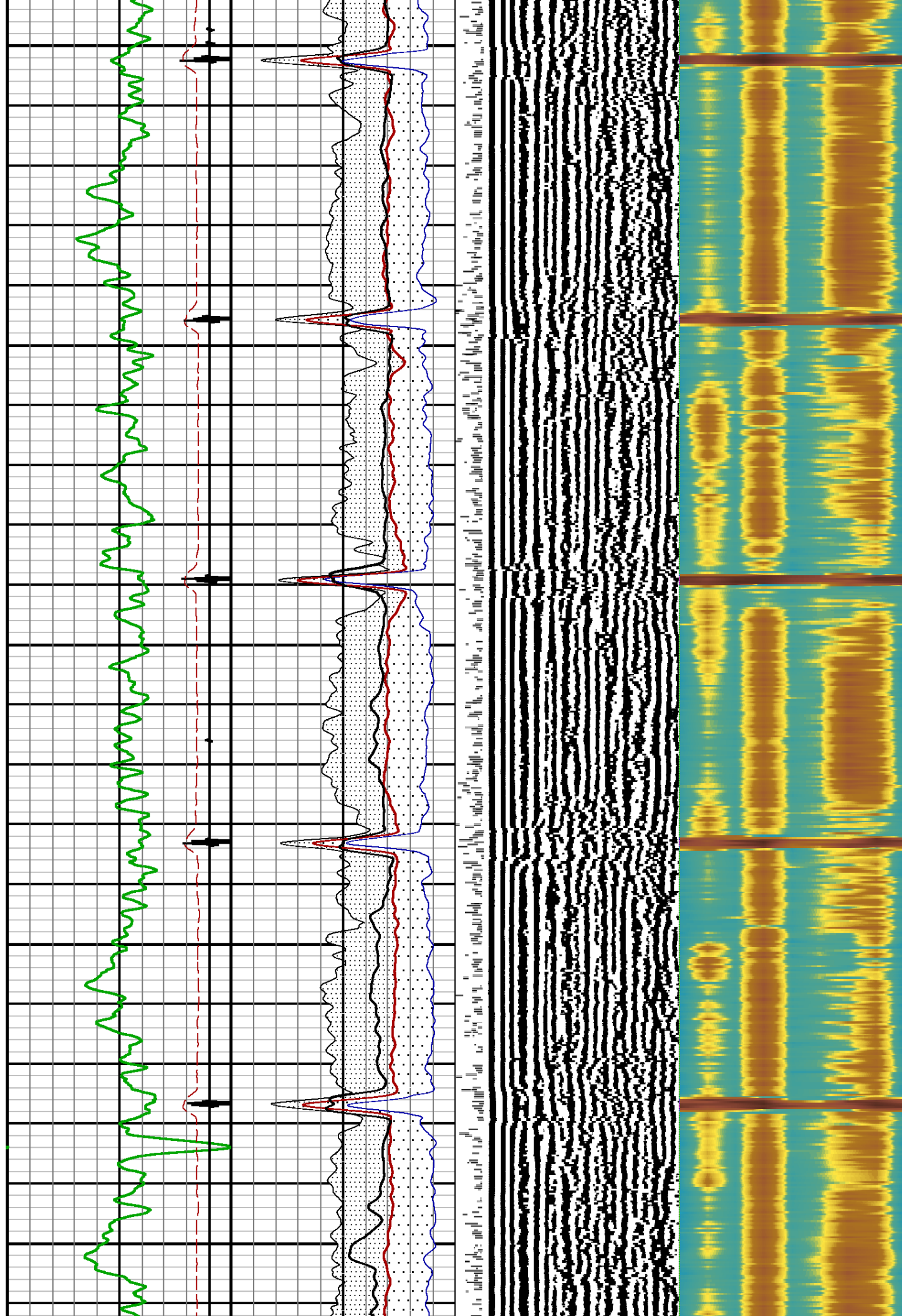
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1200

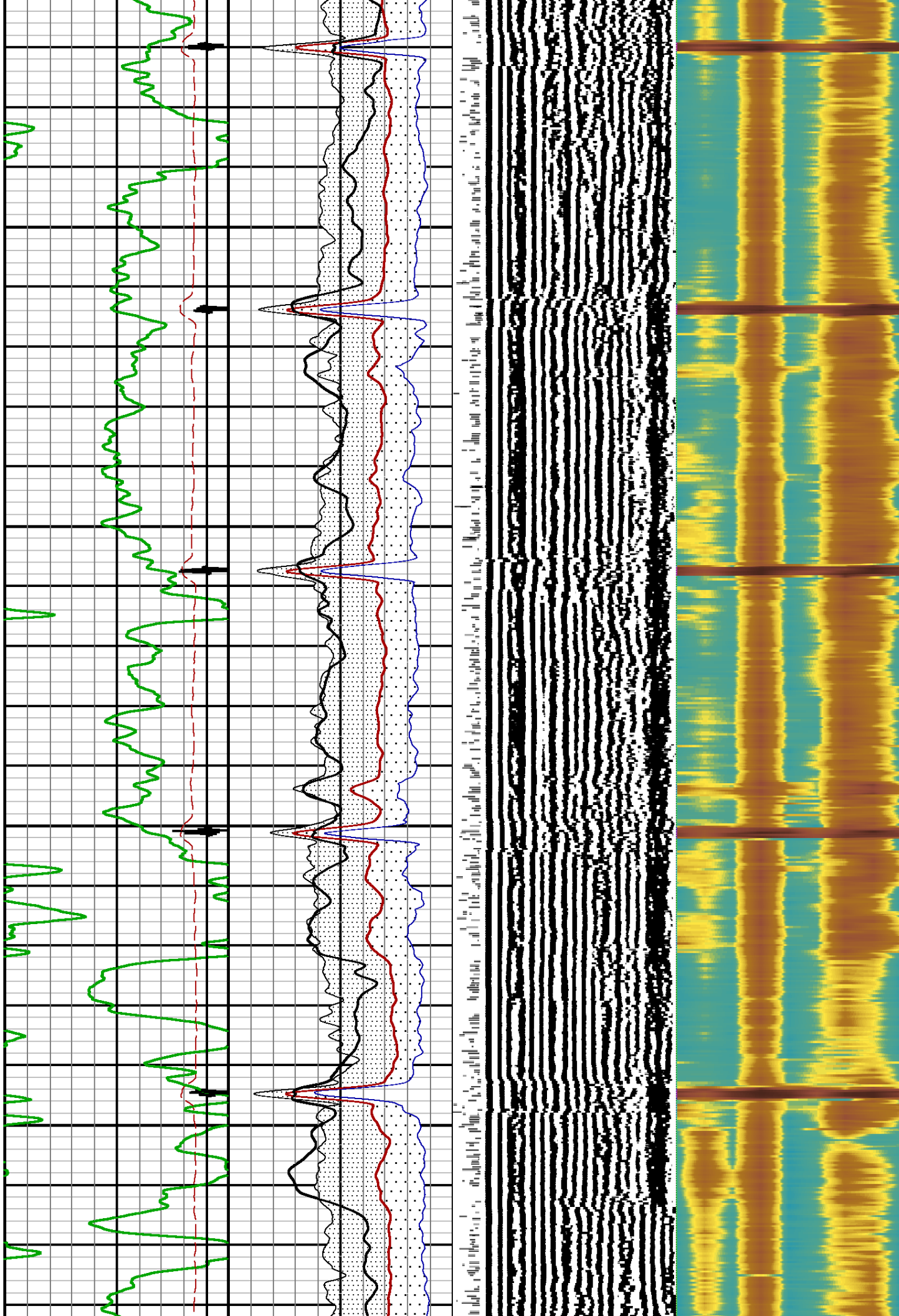
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1400



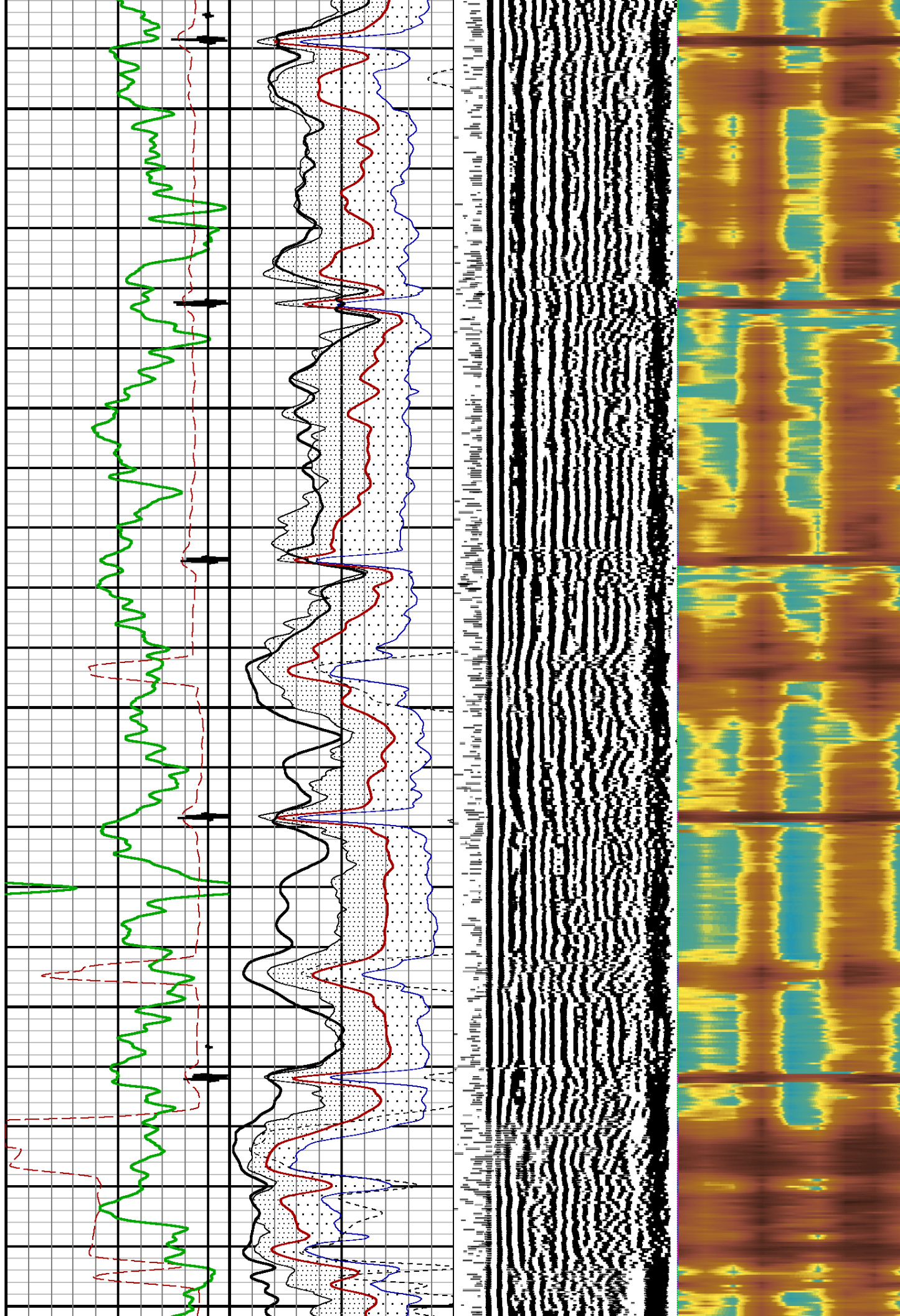
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1600



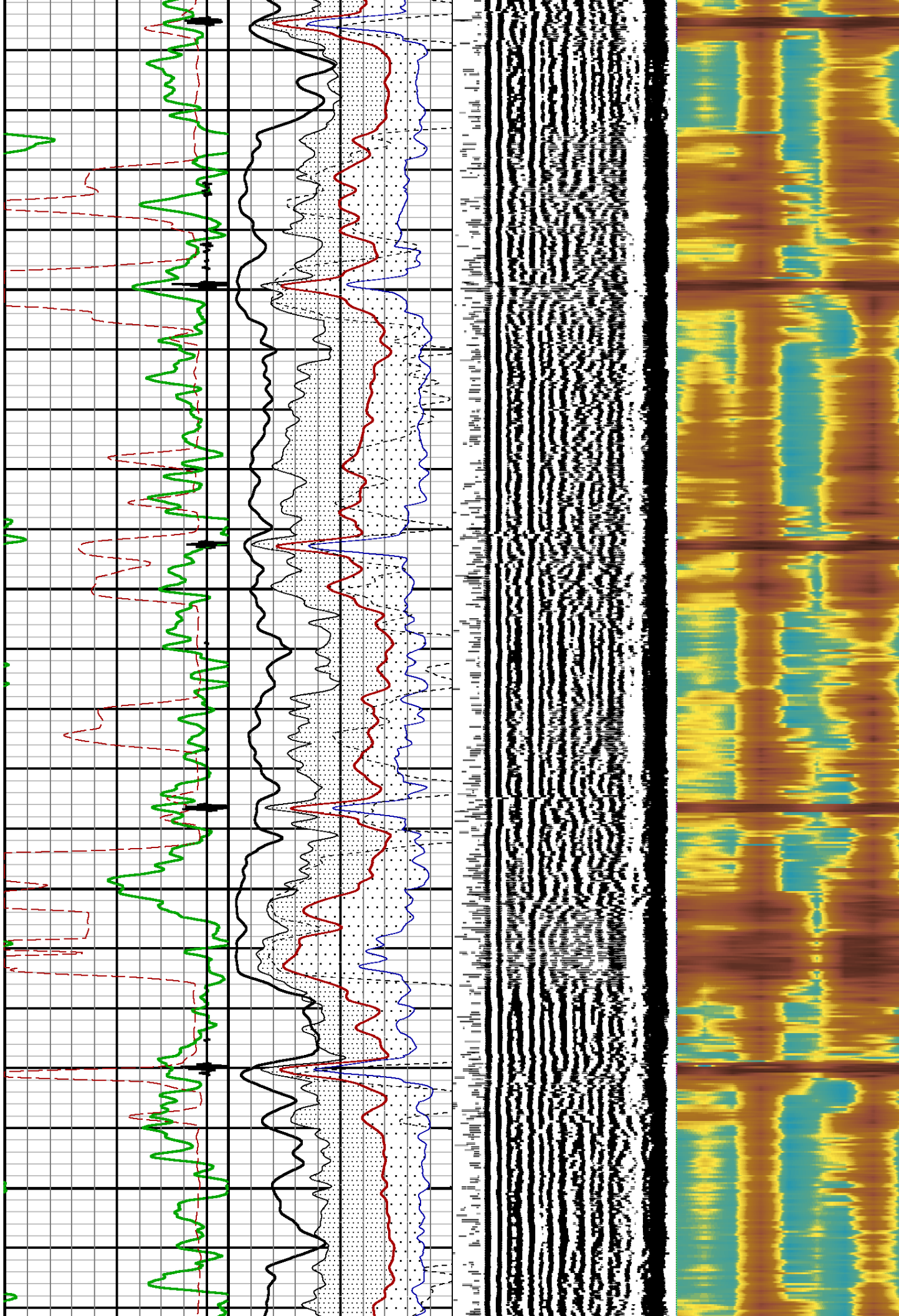
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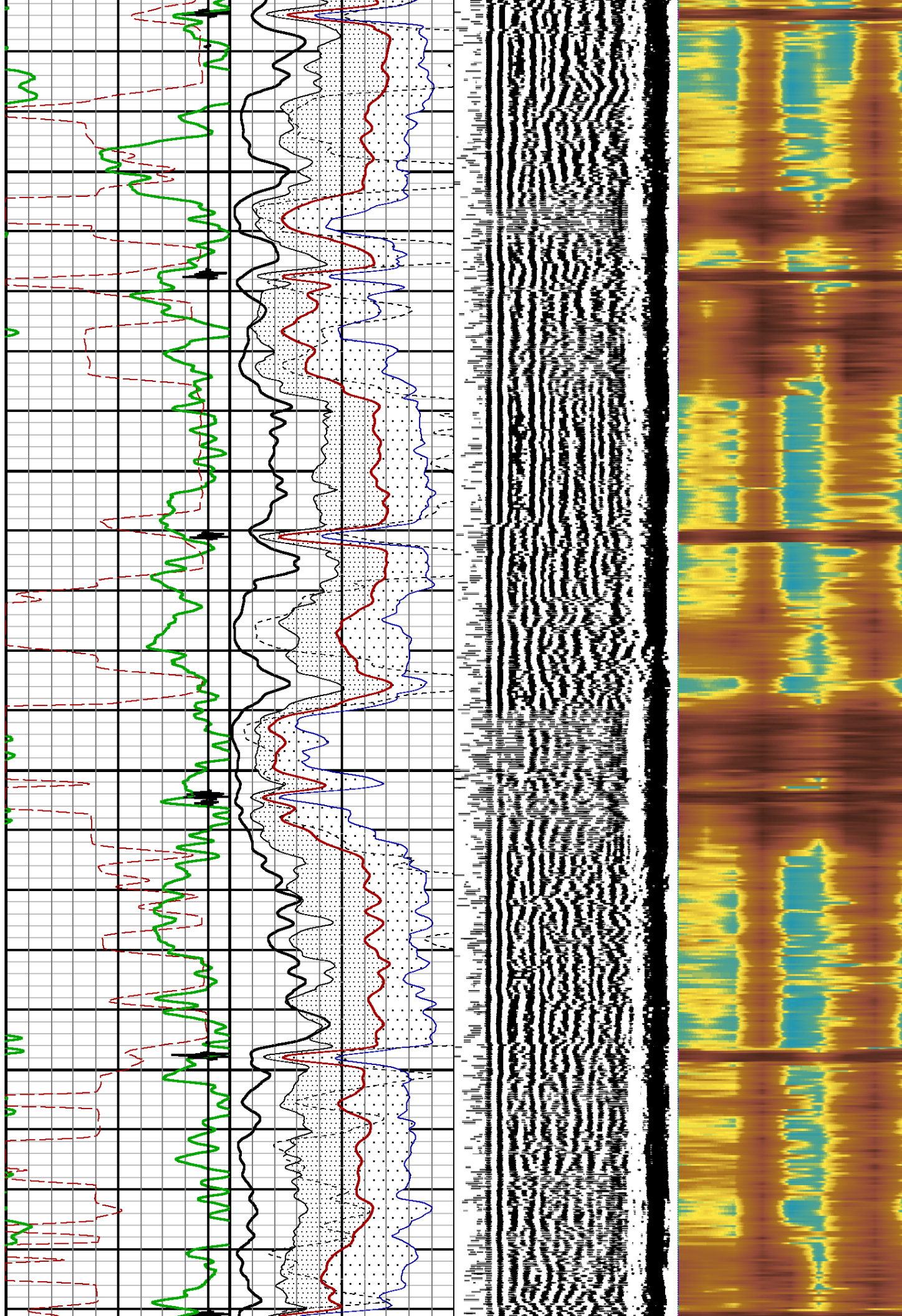
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2000



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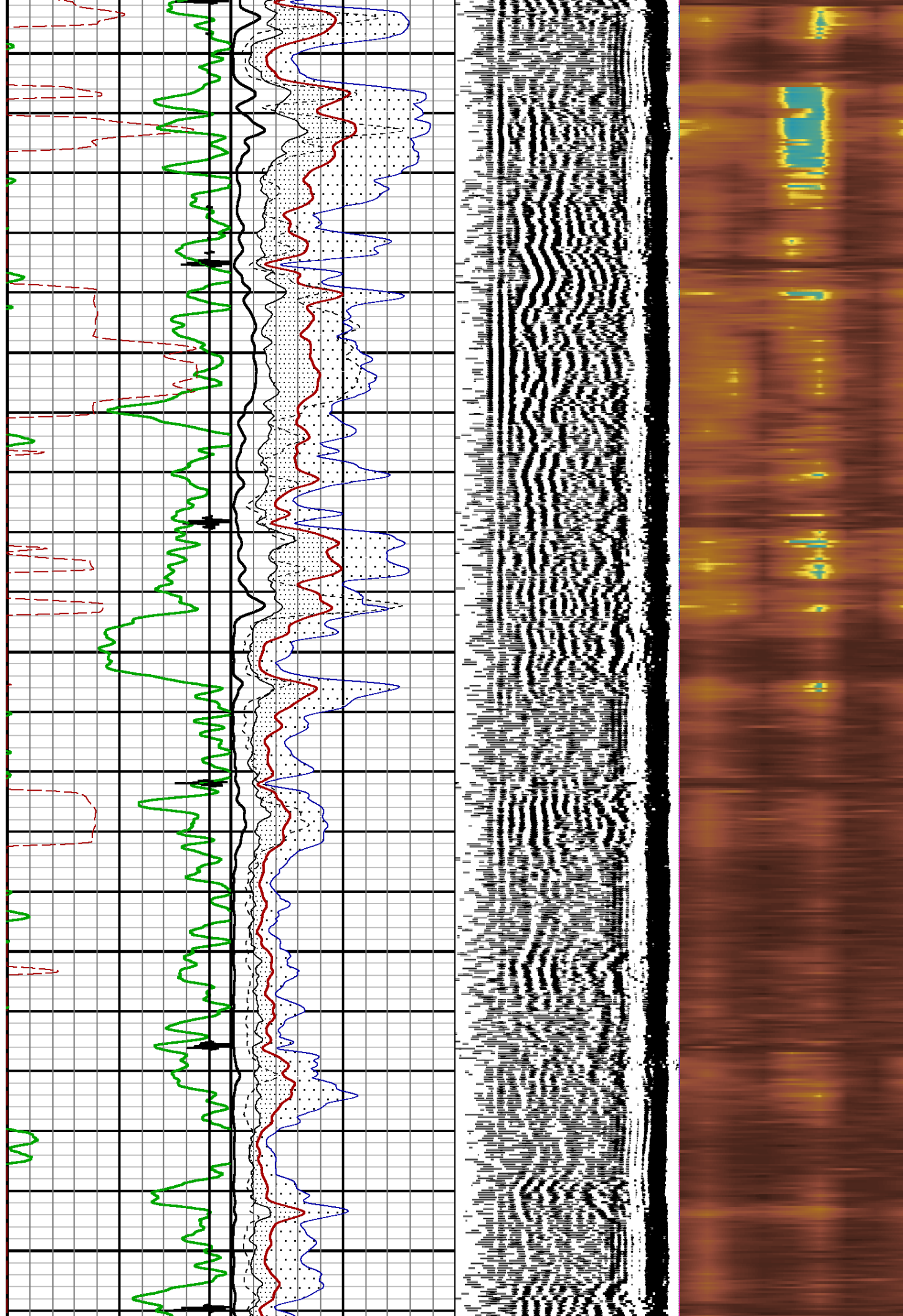
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2300

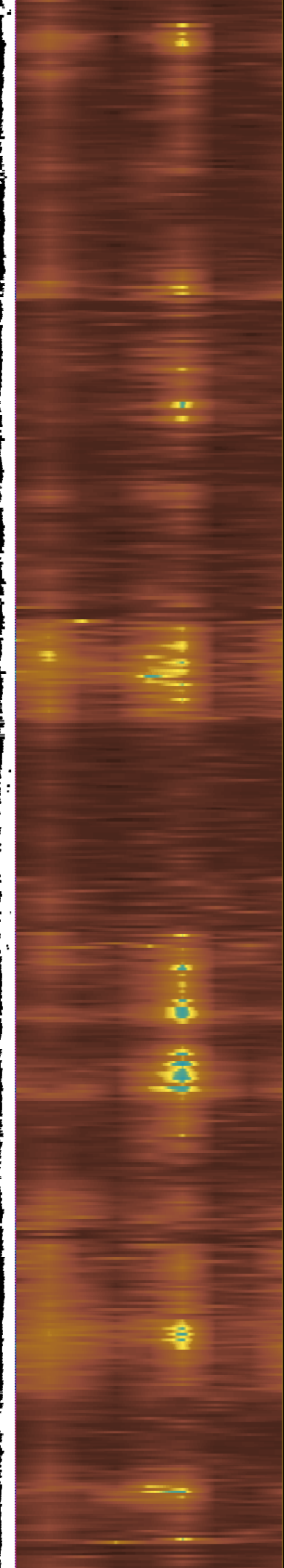
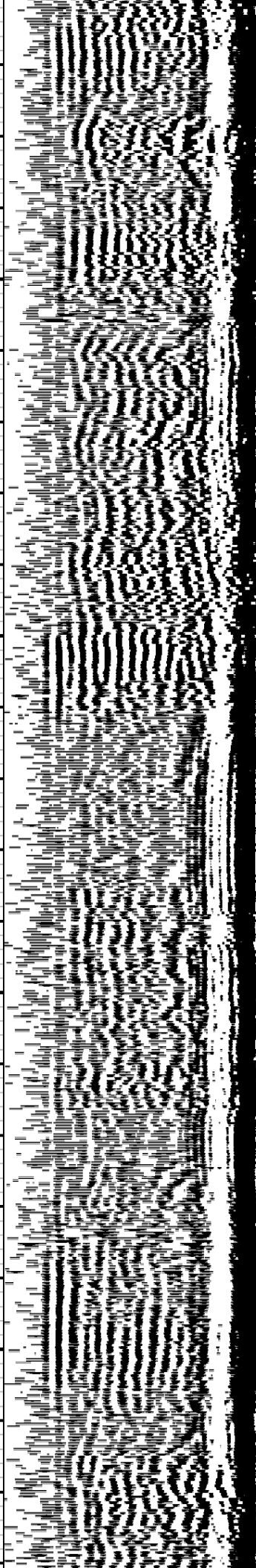
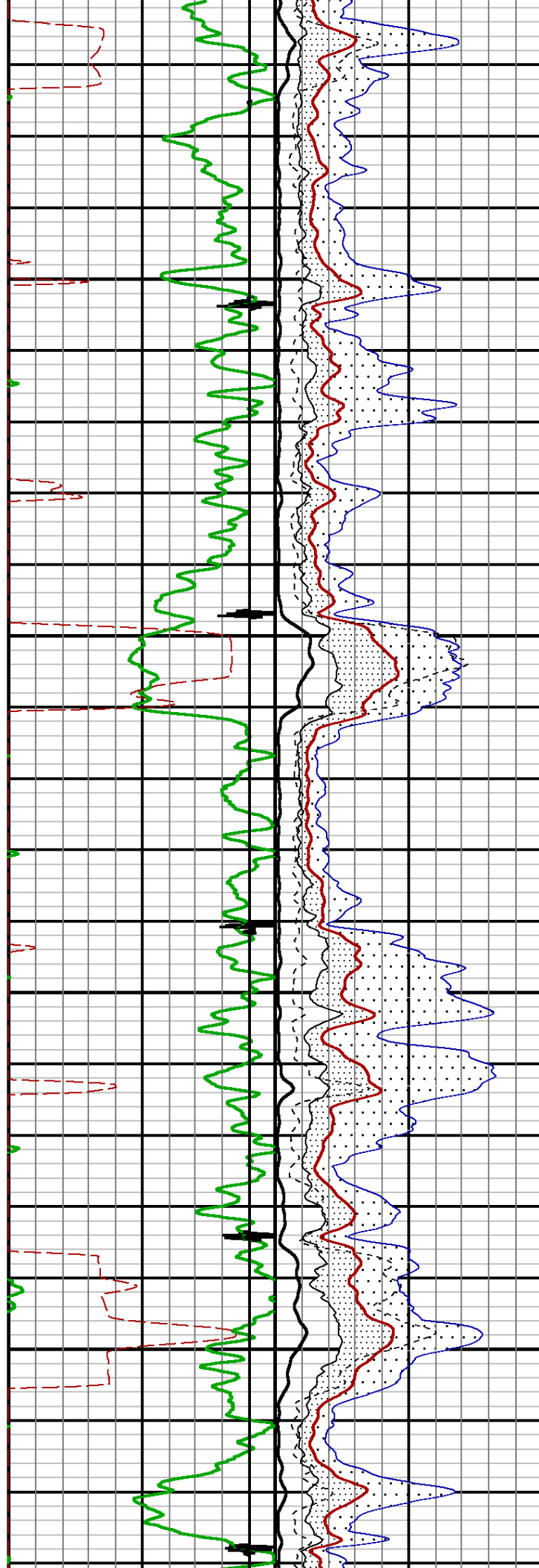
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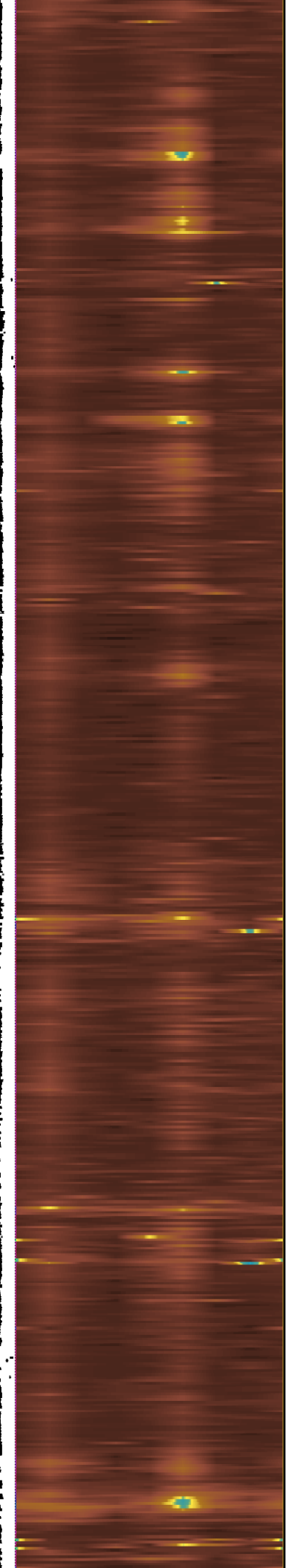
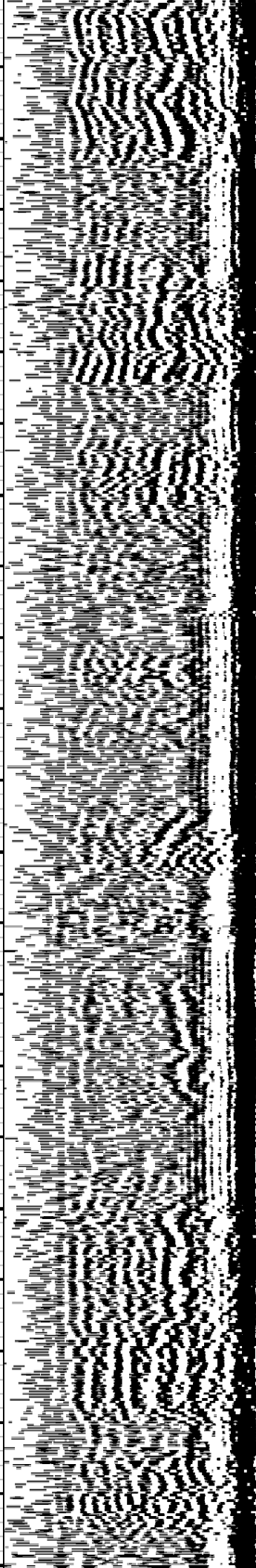
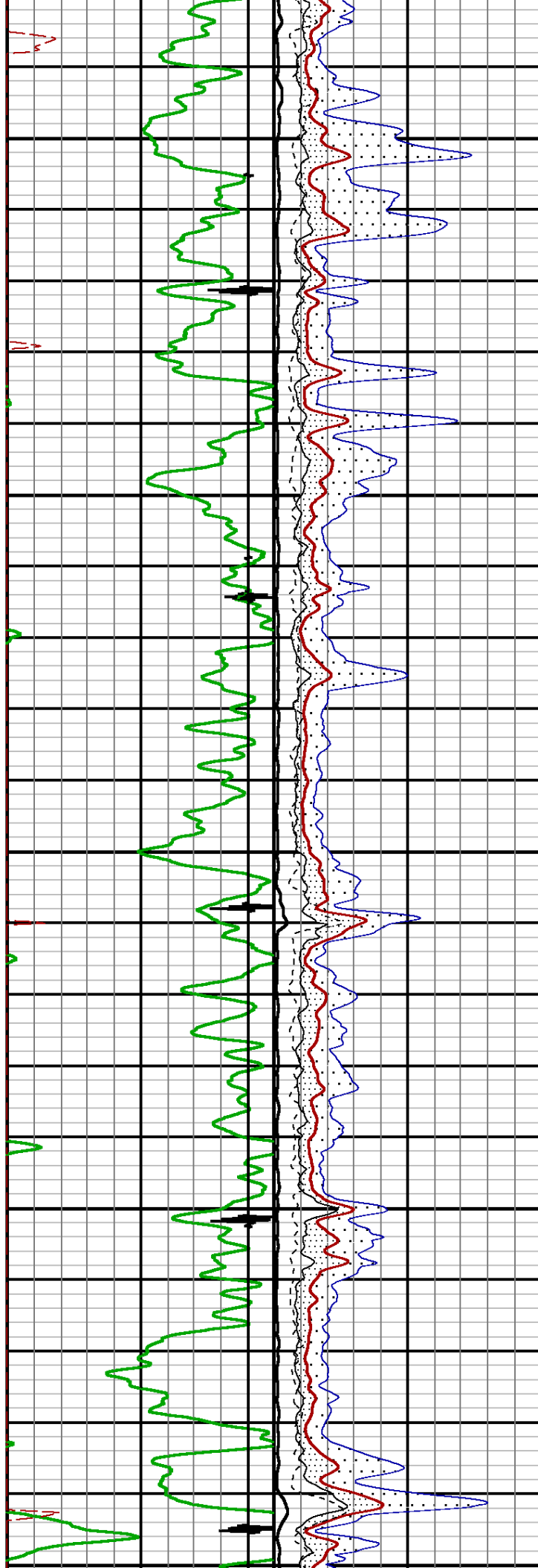
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2700



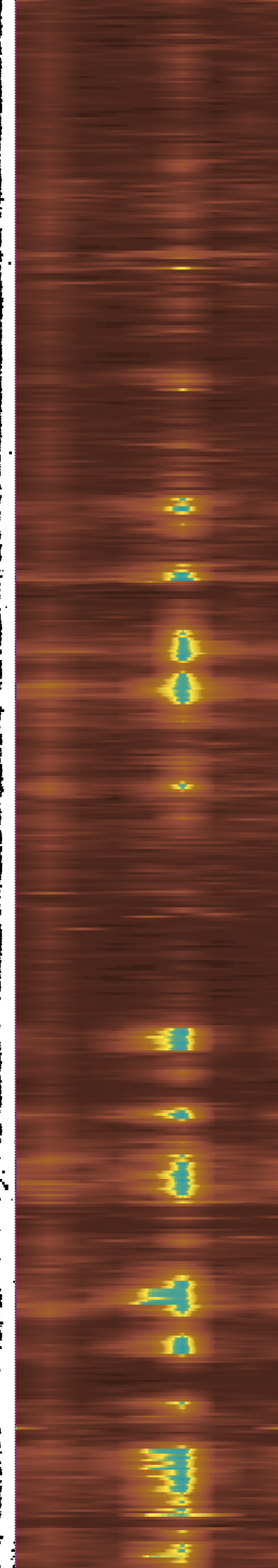
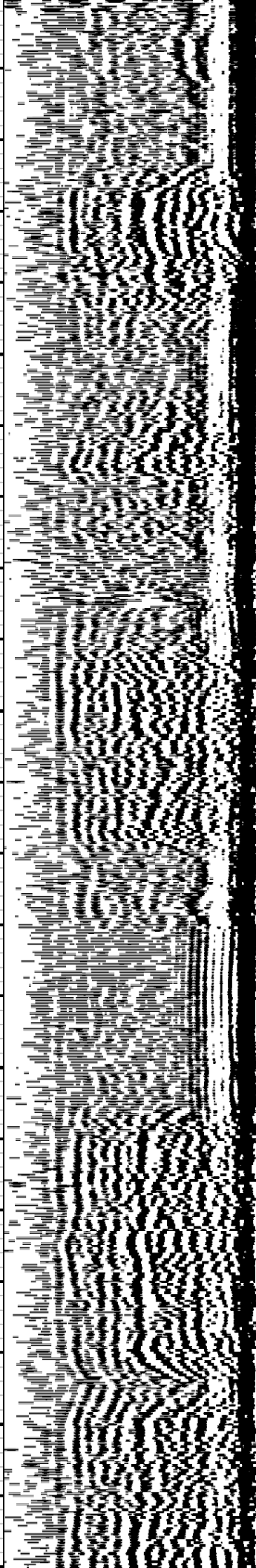
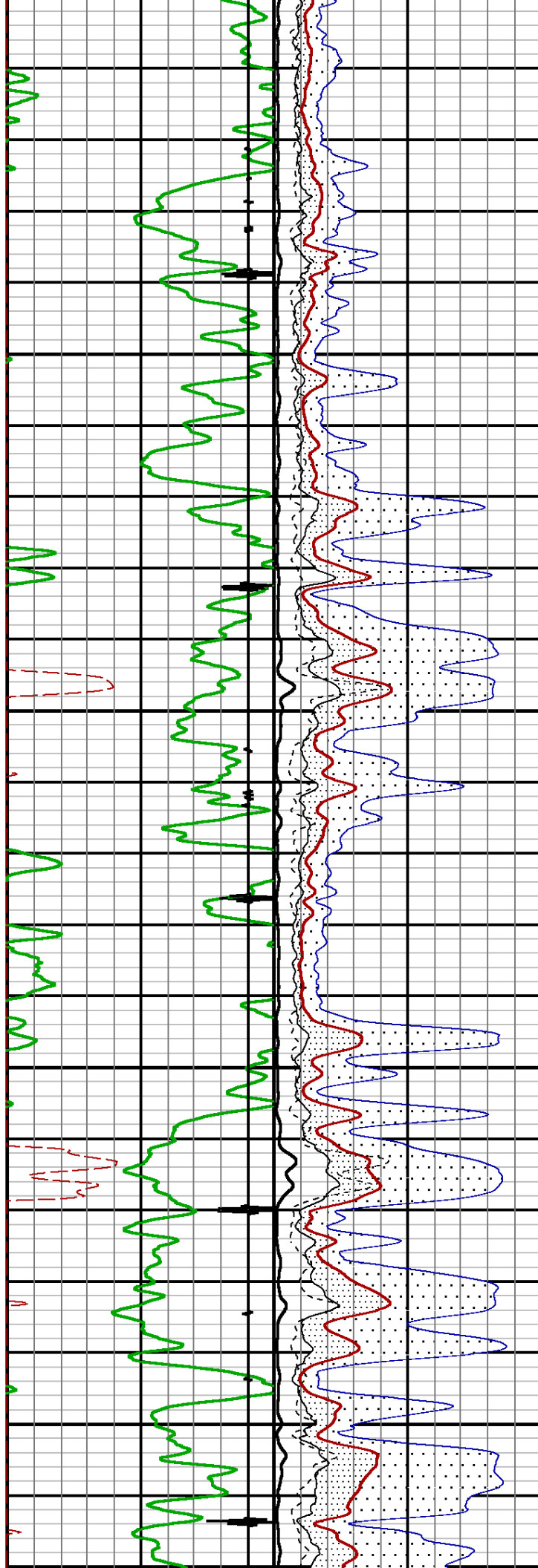
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2900



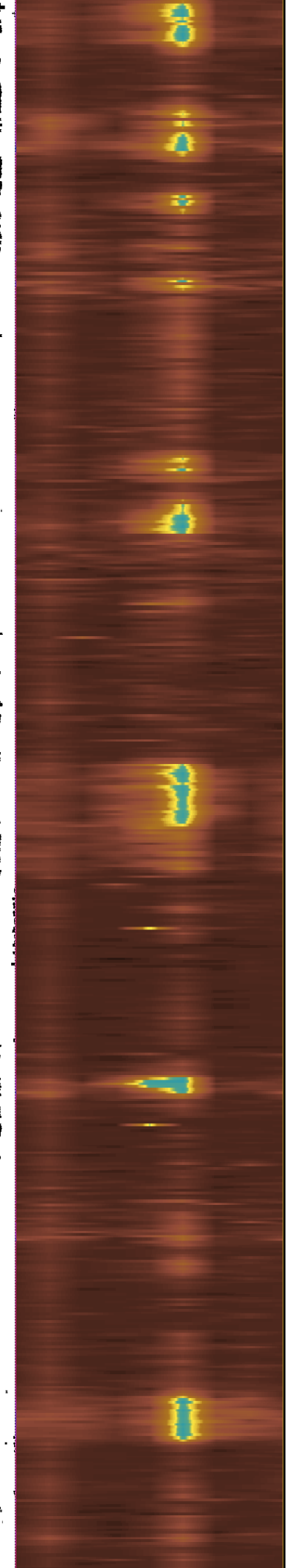
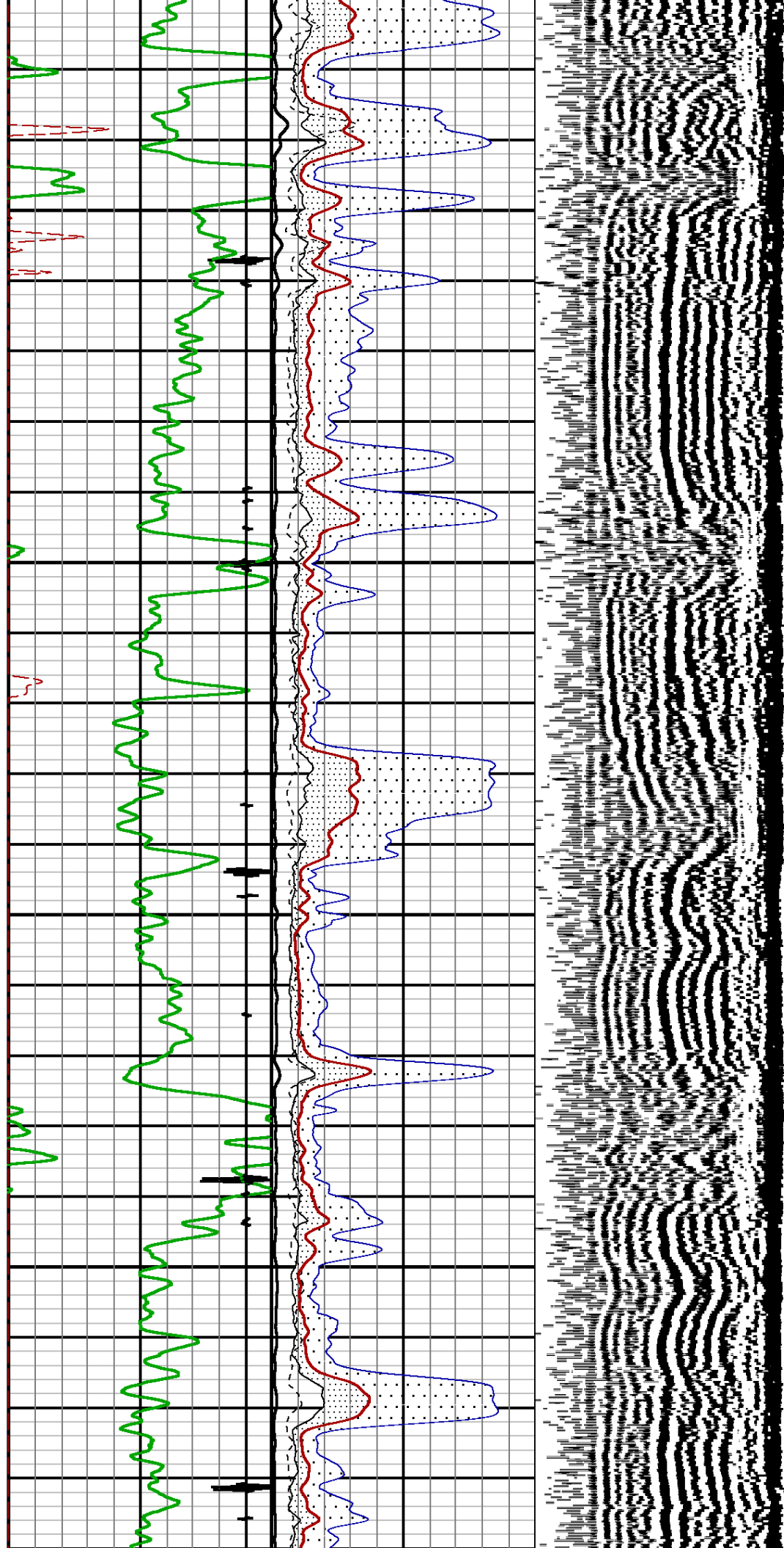
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3100



3200

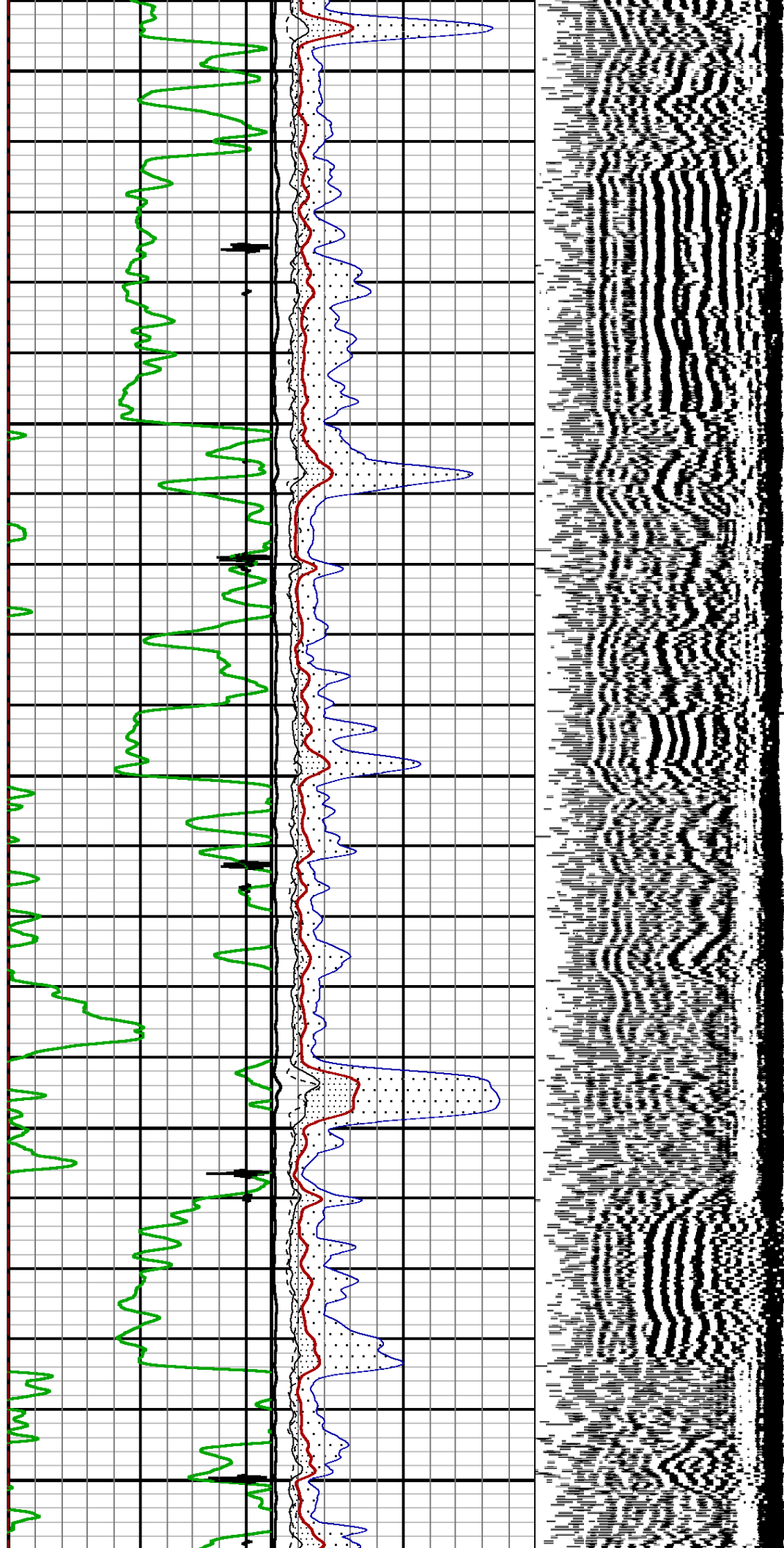
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3400

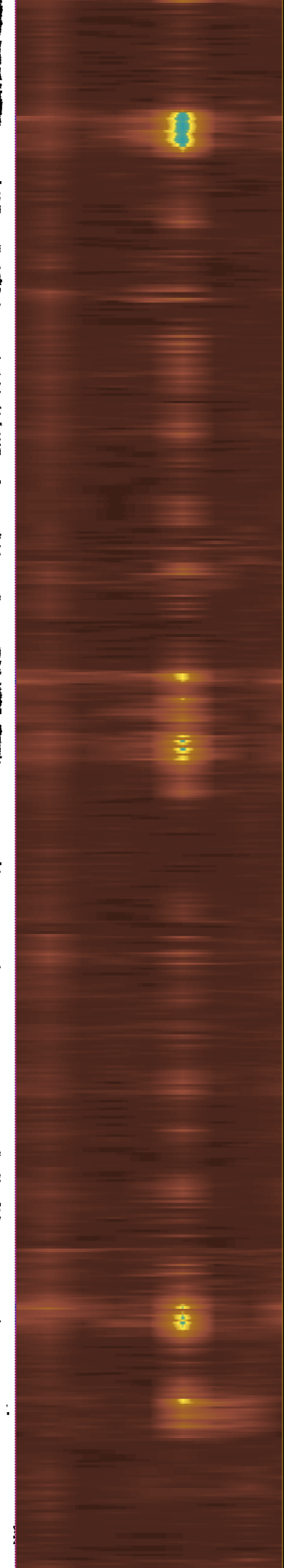
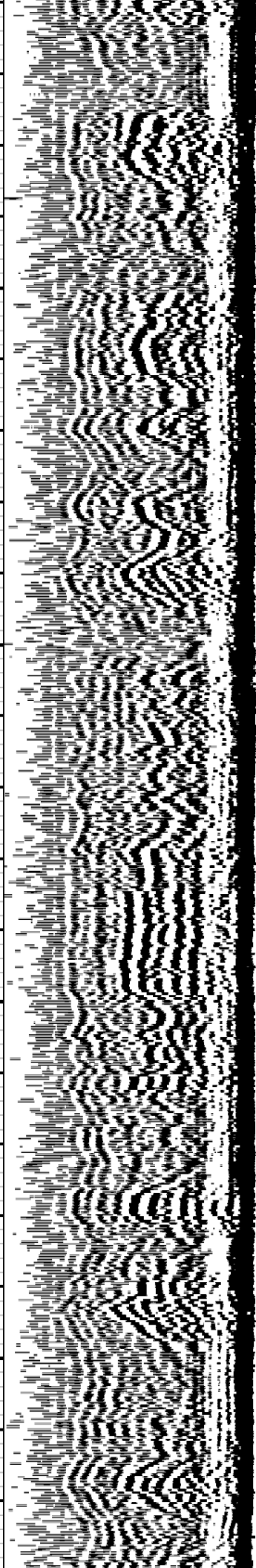
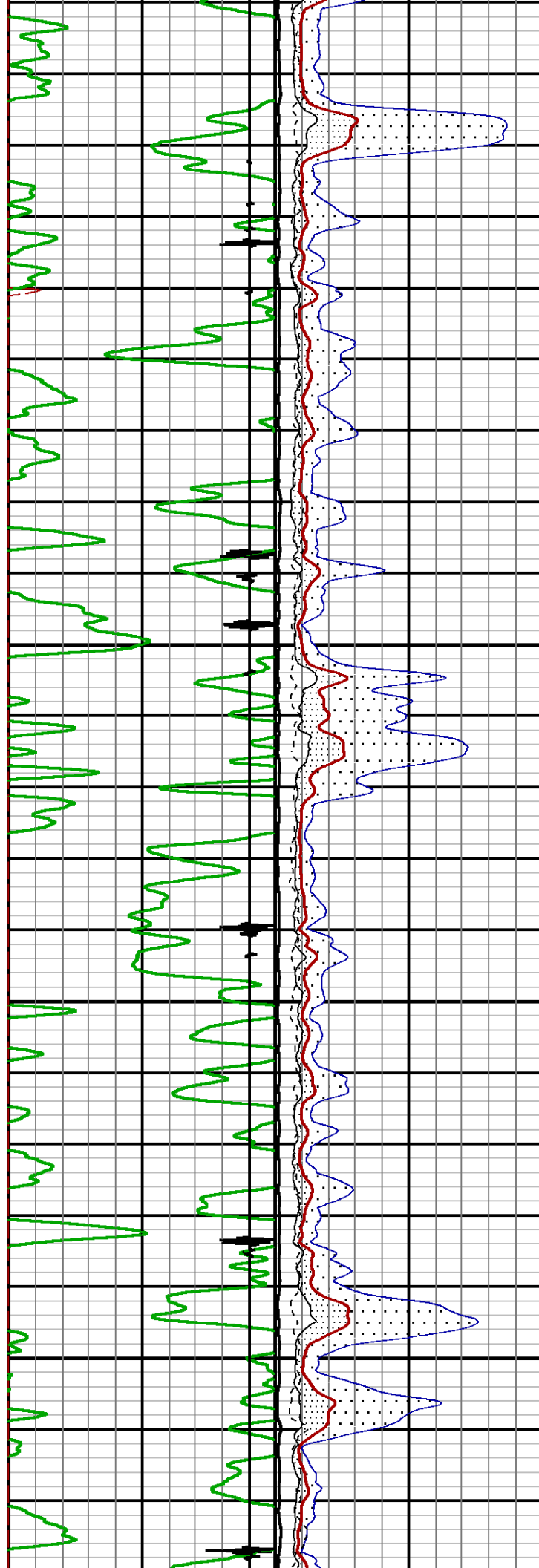
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3600



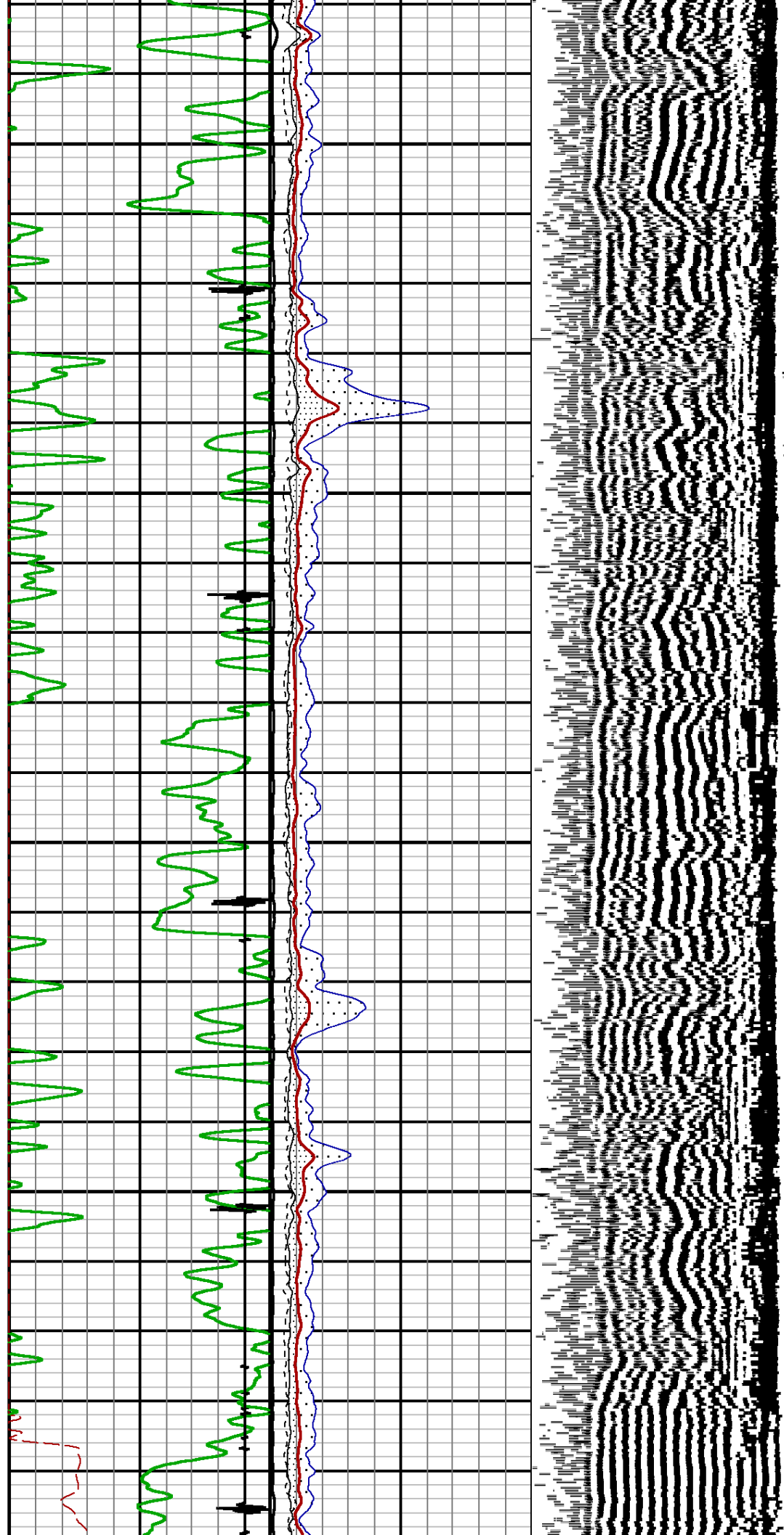
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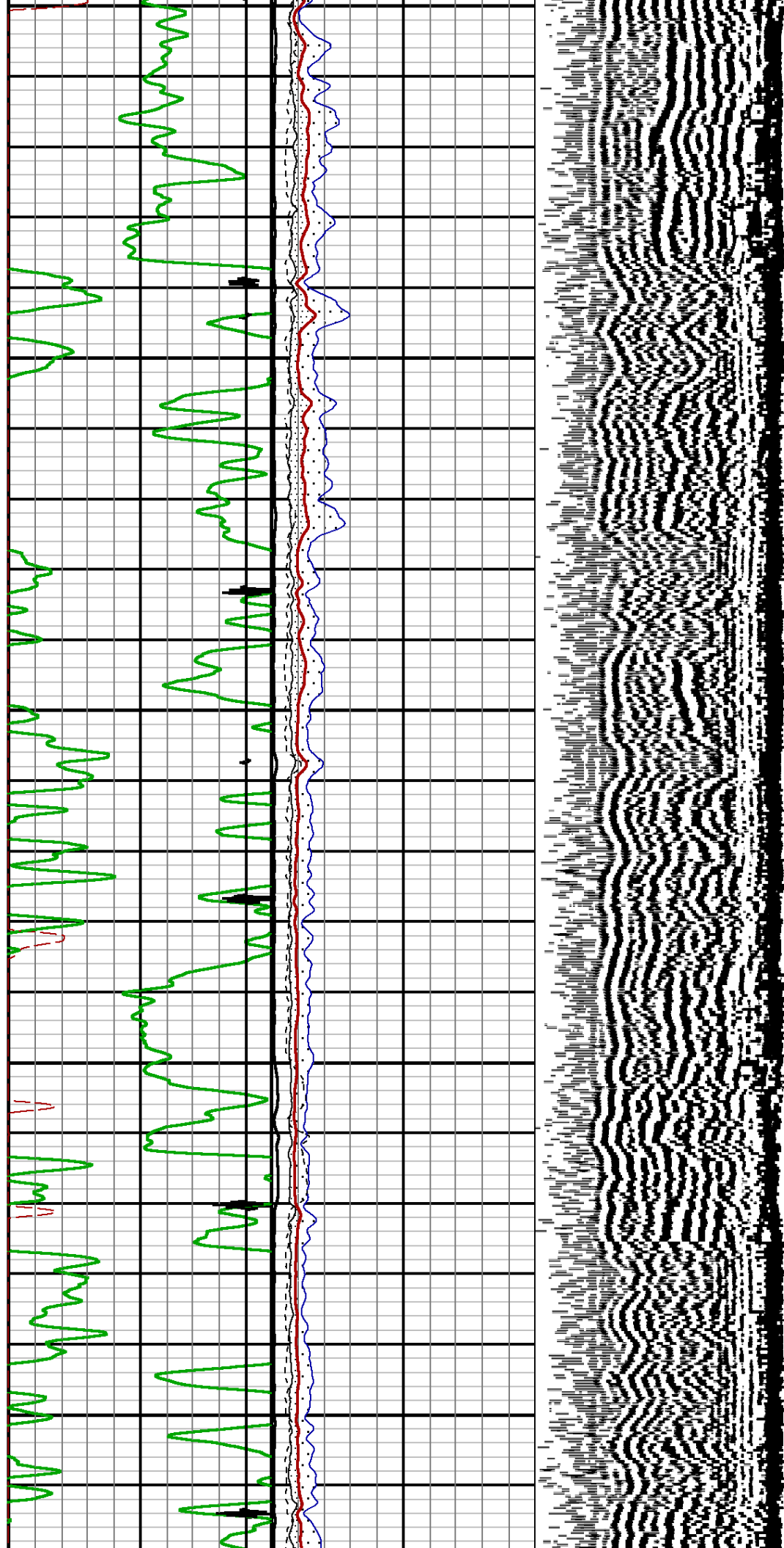
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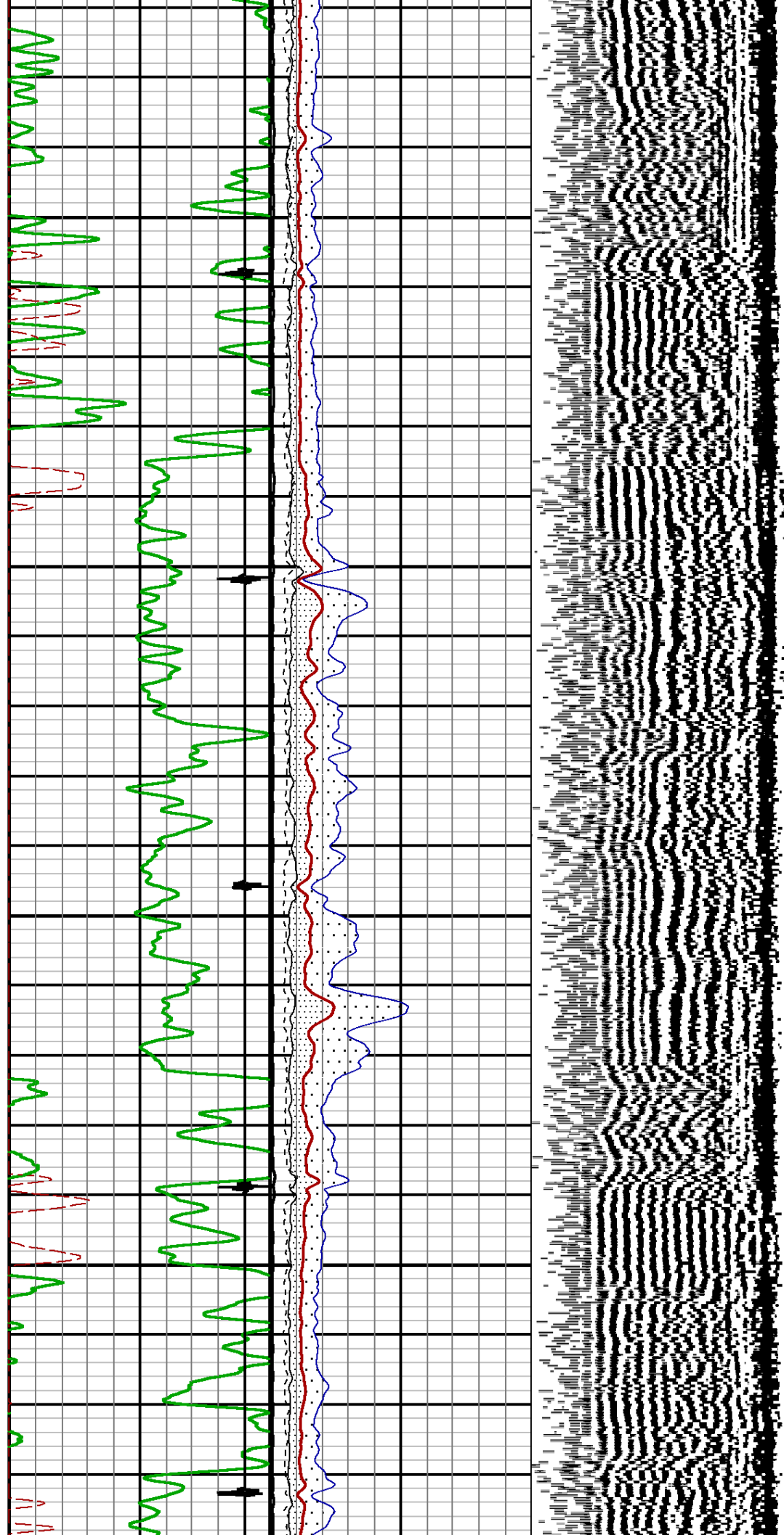
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4200



4300

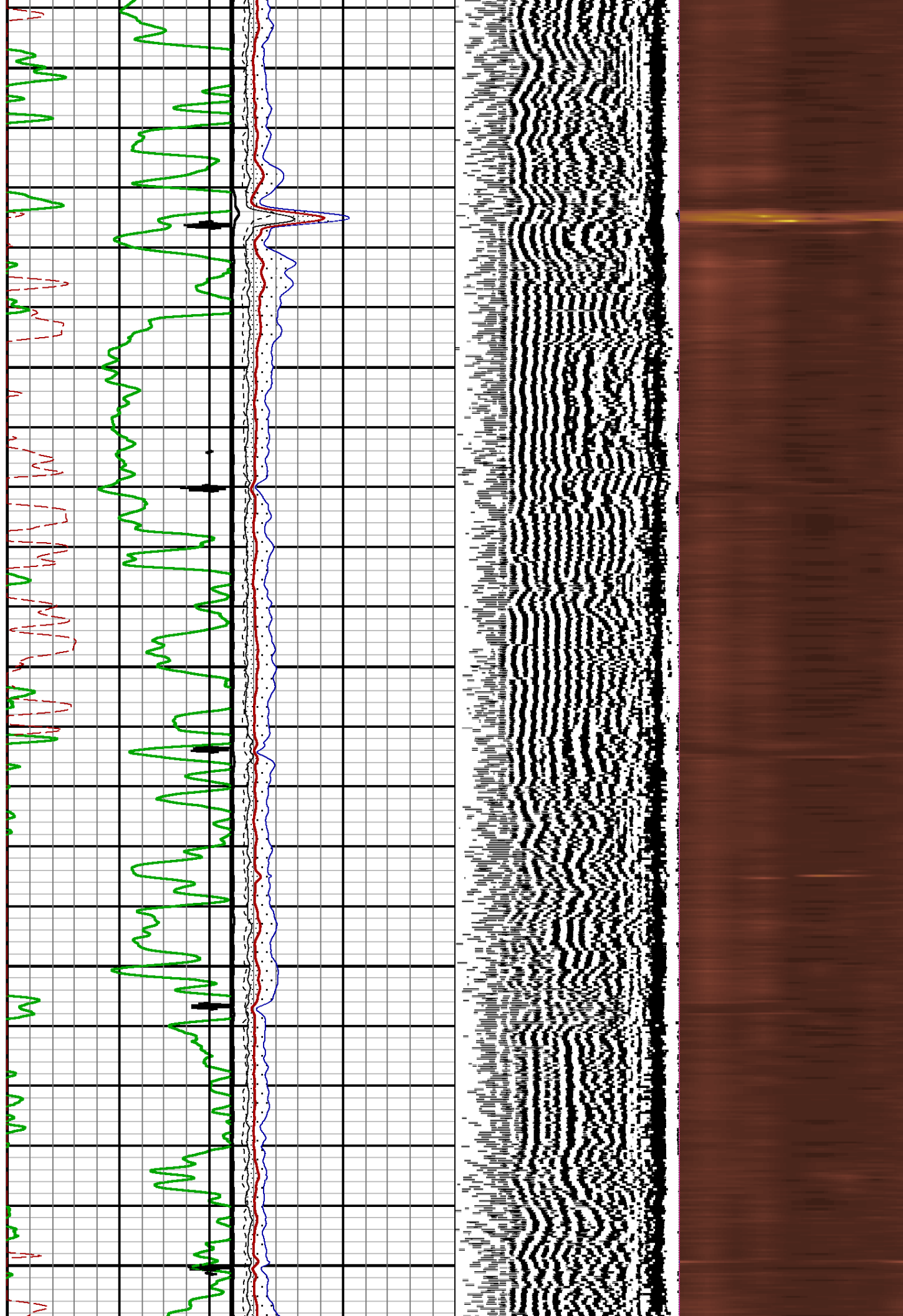
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4500

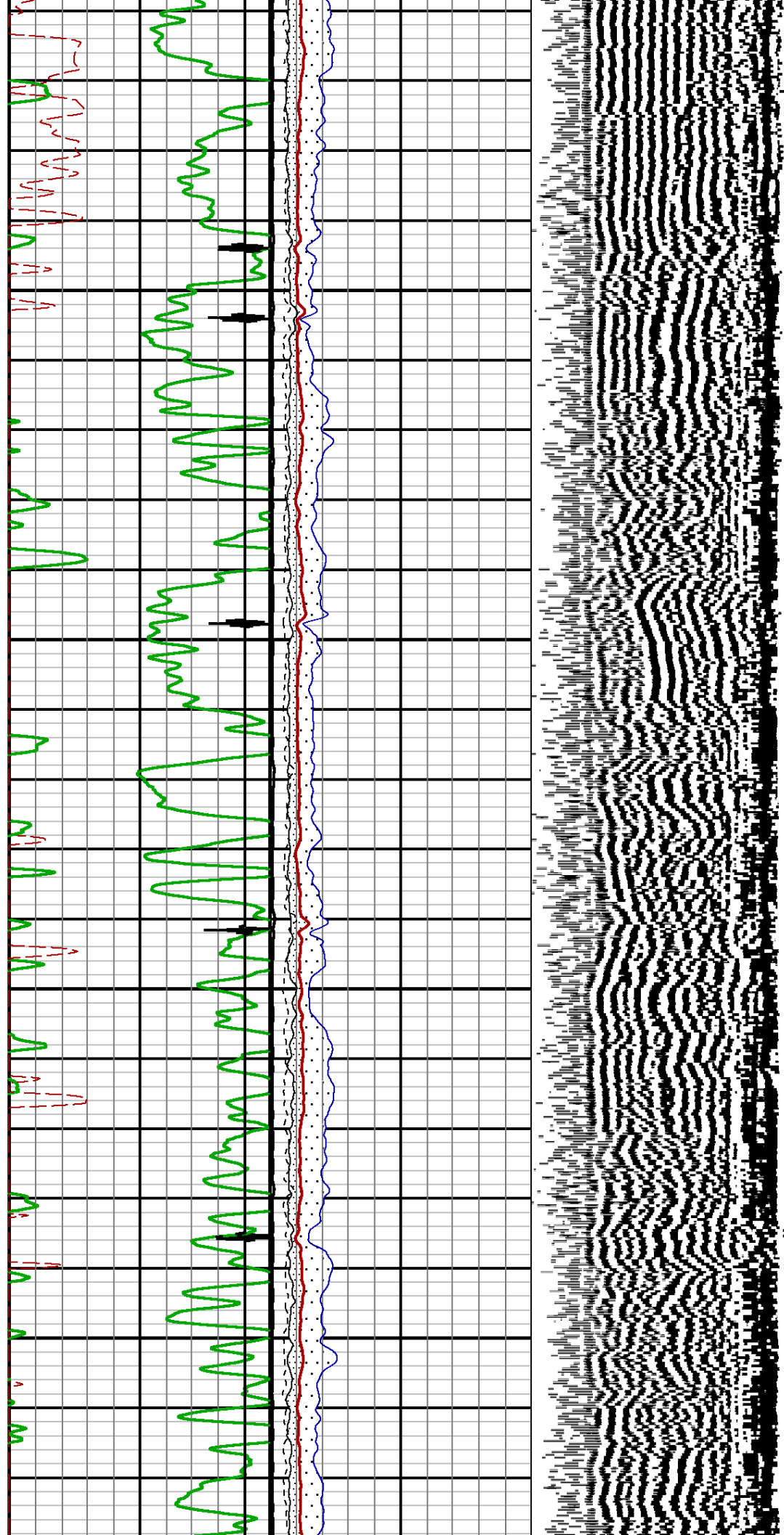
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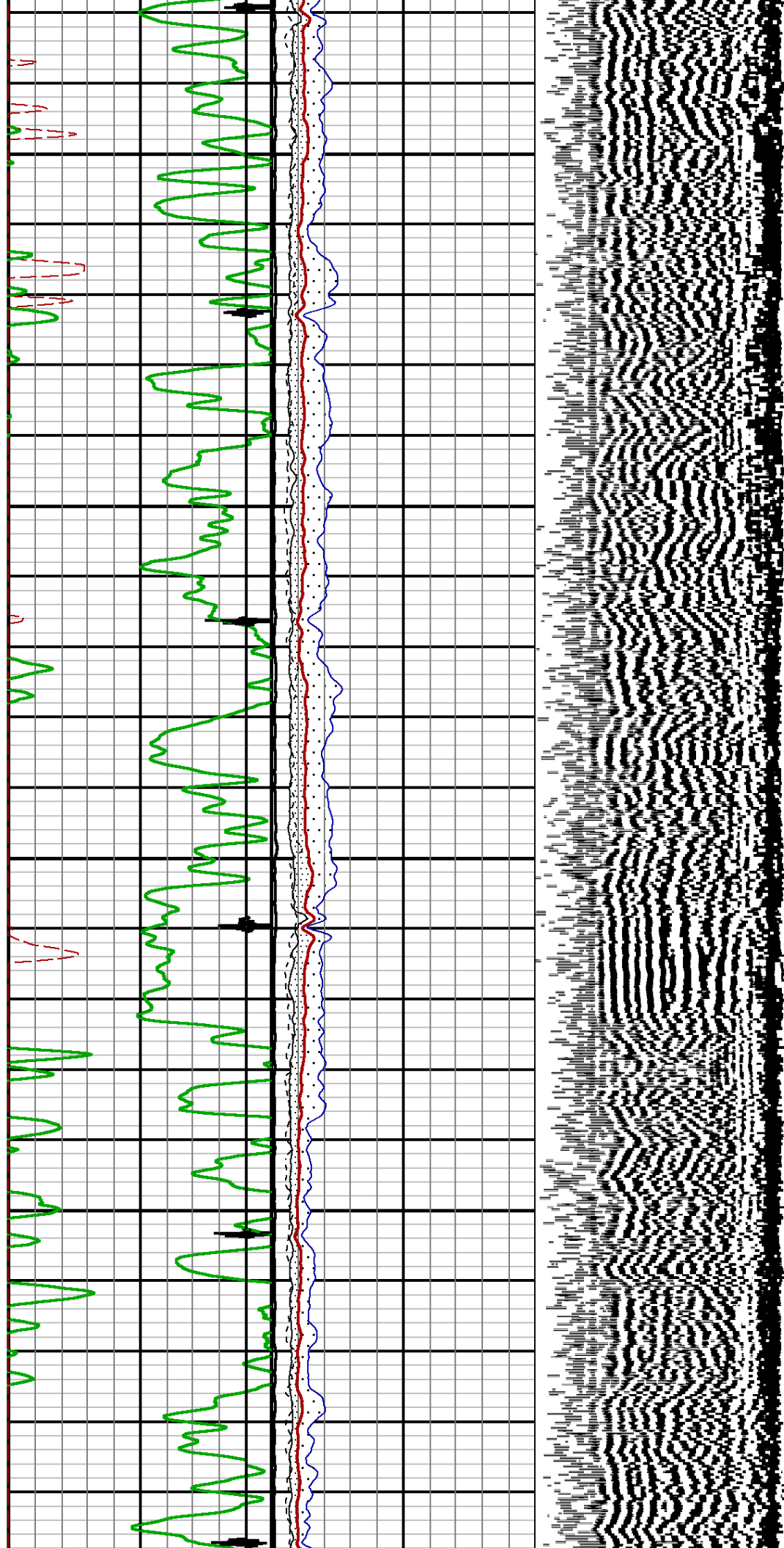
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4900



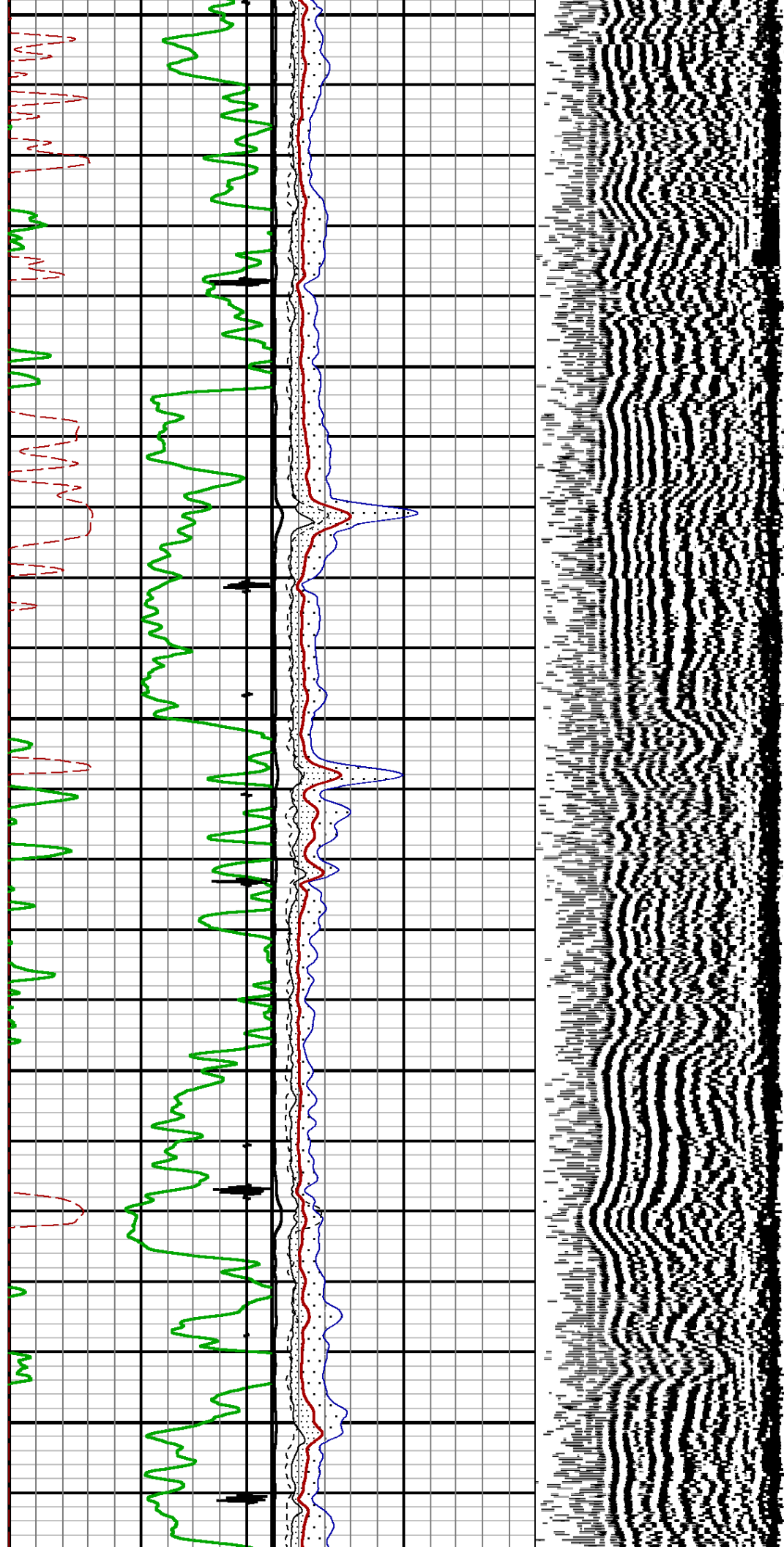
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5100



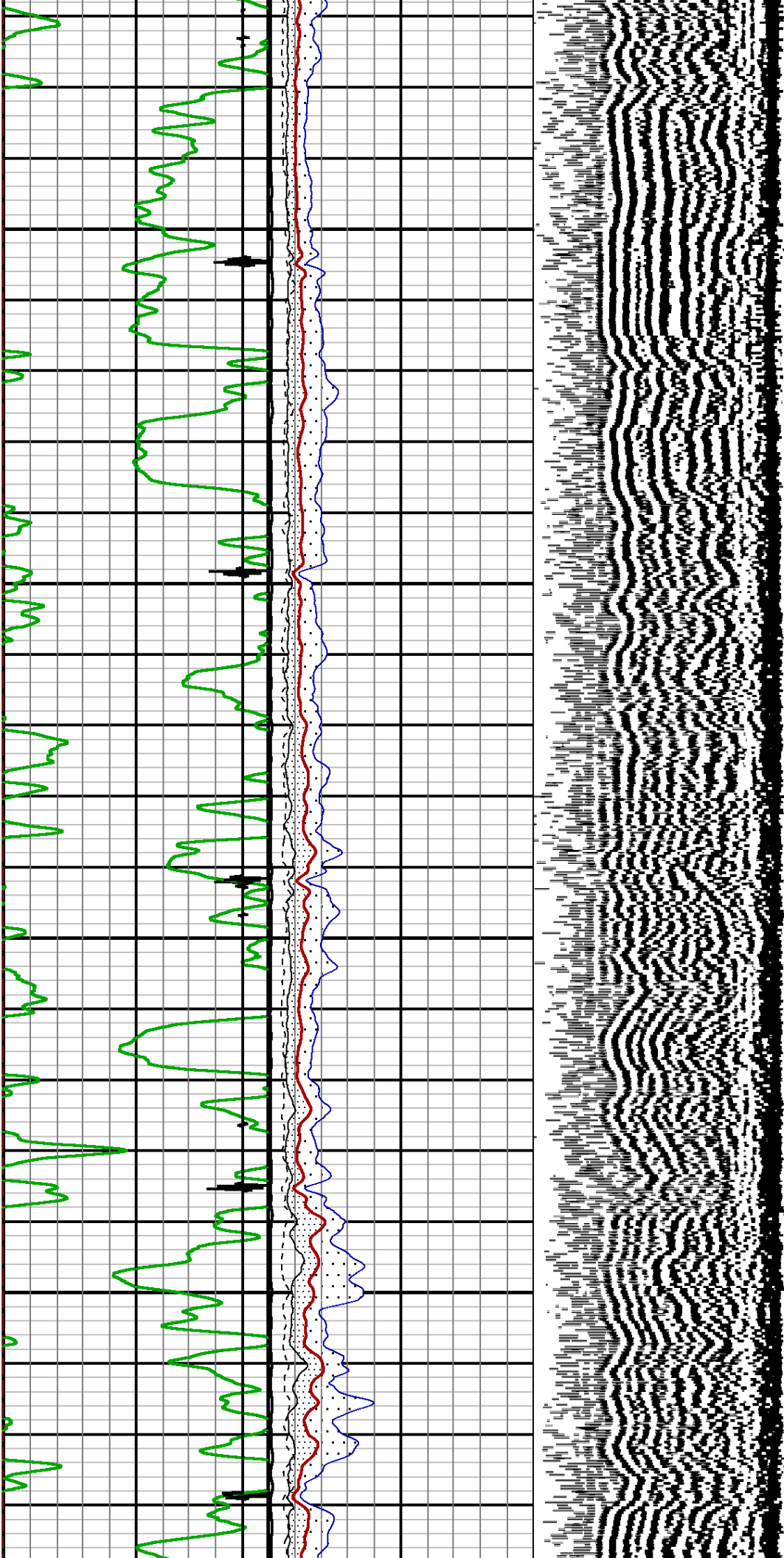
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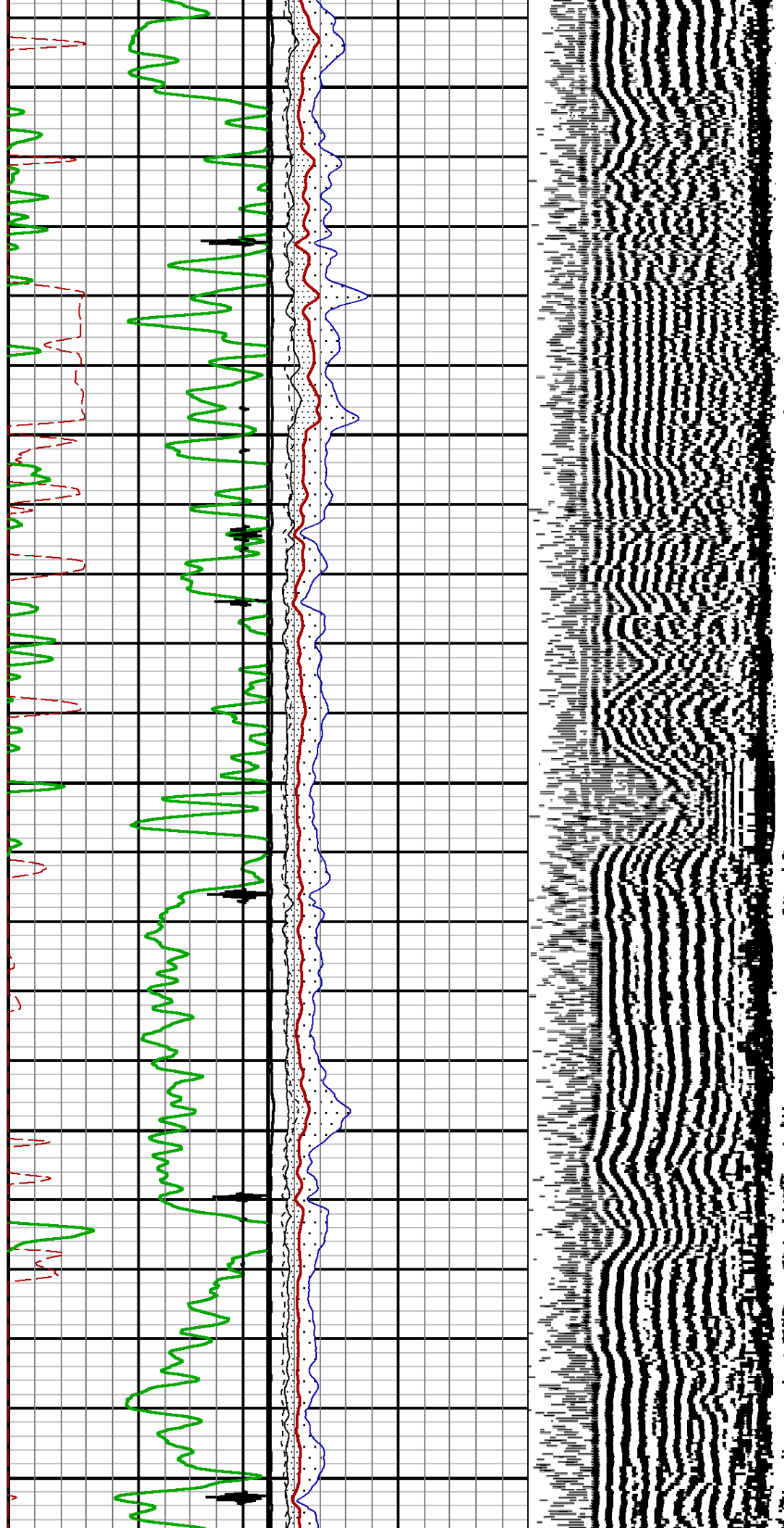
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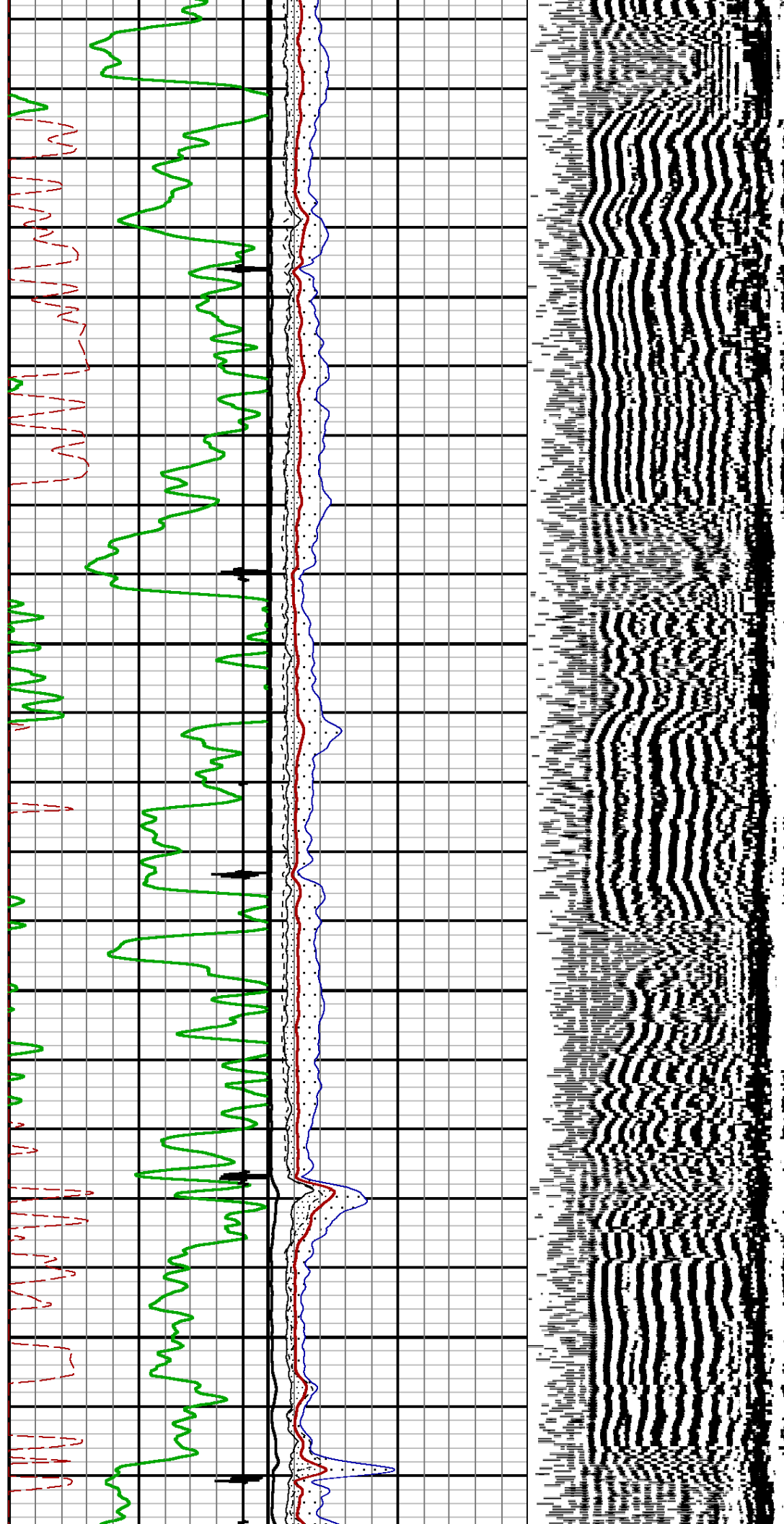
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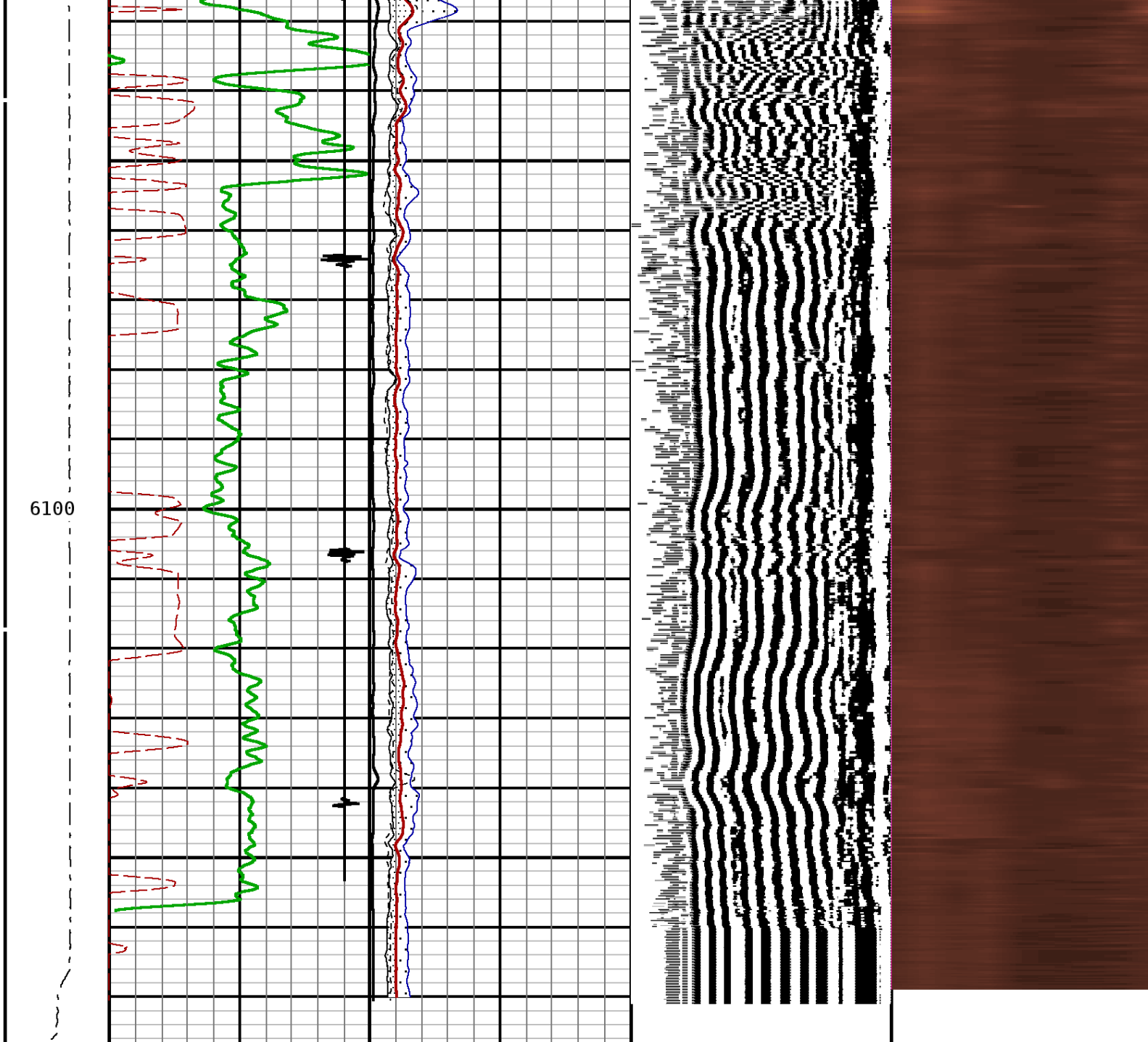
5800



5900

6000





Tension 0 2000	TRAVEL TIME 3FT			MIN ENERGY		VARIABLE DENSITY 5FT			VARIABLE ENERGY	
	318	Microseconds	218	0	Millivolts 100	200	Microseconds	1200	0	Millivolts 100
	Gamma Ray			AVG ENERGY						
	0	API	150	0	Millivolts 100					
	Collar Locator			MAX ENERGY						
	-8000	Millivolts	800	0	Millivolts 100					
				AMPLITUDE 3FT						
			0	Millivolts 100						
			AMP X 5							
			0	Millivolts 20						

START DEPTH: 6177.0 DIRECTION: UP DATE: 02/25/2014 TIME: 05:07 MODE: TRACE PLAYBACK

80204164 CBLMAIN

MAIN PASS

DEPTH SCALE: 5":100'

LOGGED VERSION: 2012.07.18.162"

DEPTH SCALE: 5":100'

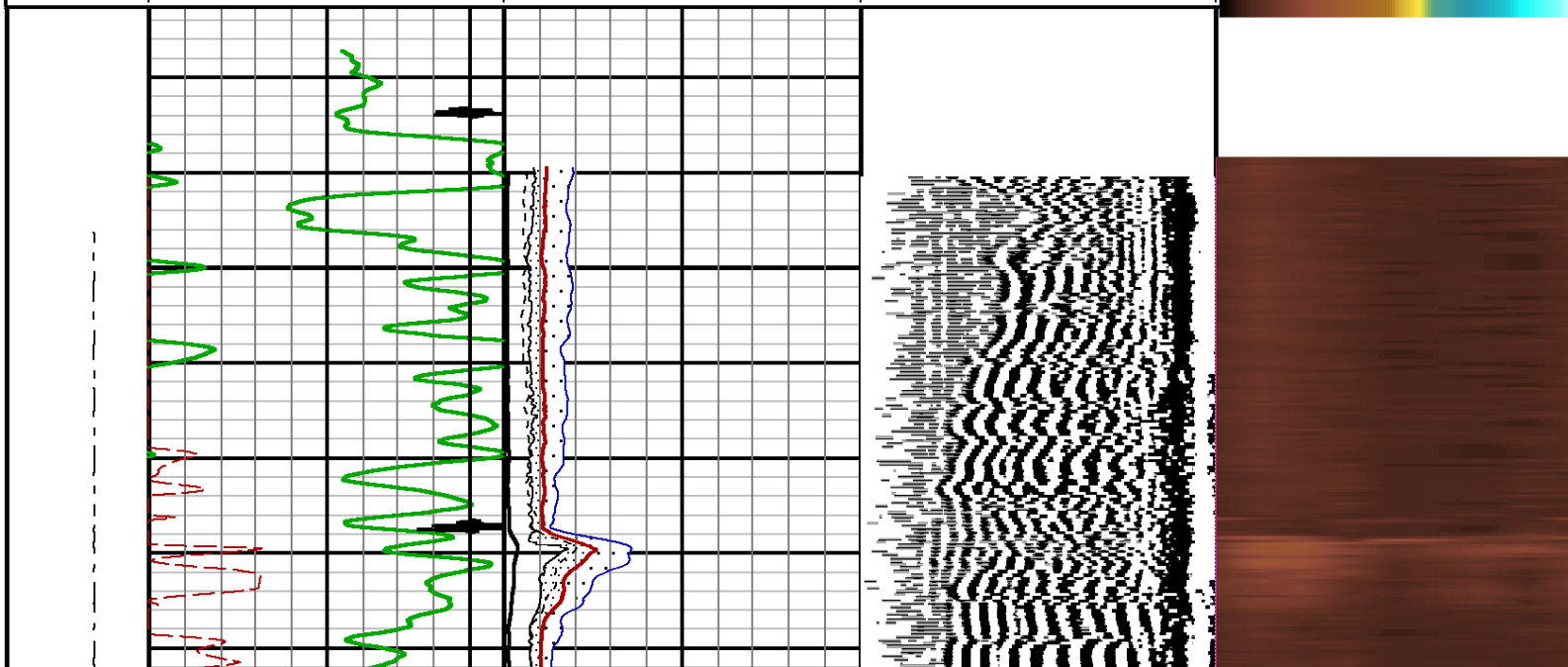
PROCESSED VERSION: 2012.07.18.162"

80204164

FINISH DEPTH: 5946.3 Feet DIRECTION: UP DATE: 02/25/2014 TIME: 05:18 MODE: ORIGINAL

		AMP X 5			

		0	Millivolts	20	
		AMPLITUDE 3FT			
		0	Millivolts	100	
		MAX ENERGY			
		0	Millivolts	100	
		Collar Locator			
		-8000	Millivolts	800	
		Gamma Ray			
		0	API	150	
		AVG ENERGY			
		0	Millivolts	100	
		MIN ENERGY			
		0	Millivolts	100	
		VARIABLE DENSITY 5FT			
		200	Microseconds	1200	
		VARIABLE ENERGY			
		0	Millivolts	100	
		Tension			
		0	2000		
		TRAVEL TIME 3FT			
		318	Microseconds	218	



	AMPLITUDE 3FT		
0	Millivolts	100	
AMP X 5			
0	Millivolts	20	

START DEPTH: 6174.0

DIRECTION: UP

DATE: 02/25/2014

TIME: 05:18

MODE: ORIGINAL

80204164

DEPTH SCALE: 5":100'

LOGGED VERSION: 2012.07.18.162"

02/24/14	11:50	557.7 F	Ver 162R 2.0b	Job 80212865
Sector Bond Before Calibration				
Tool Type	SBT-AA	Serial No	sbta237	
Sensor	Description	Standard	Measured	
AMP 3FT	ZERO	1.00	0.80	
	PLUS	81.00	2020.50	
AMP 5FT	ZERO	5.00	0.90	
	PLUS	95.00	3111.80	
1 SECTOR AMP	ZERO	5.00	74.30	
	PLUS	95.00	1844.50	
2 SECTOR AMP	ZERO	5.00	38.80	
	PLUS	95.00	1834.90	
3 SECTOR AMP	ZERO	5.00	79.00	
	PLUS	95.00	2035.90	
4 SECTOR AMP	ZERO	5.00	74.00	
	PLUS	95.00	2380.60	
5 SECTOR AMP	ZERO	5.00	72.00	
	PLUS	95.00	1994.80	
6 SECTOR AMP	ZERO	5.00	61.60	
	PLUS	95.00	2182.00	
7 SECTOR AMP	ZERO	5.00	53.70	
	PLUS	95.00	2347.00	

Cased Hole Cablehead

Weight 2.2 lb
Length 1.02 ft
Max. Diameter 1.685 in

Total Stack Weight 219.2 lb in air
Total Stack Length 27.85 ft

Slim Hole Centralizer

Weight 11.9 lb
Length 2.49 ft
Max. Diameter 2.717 in

Collar Locator

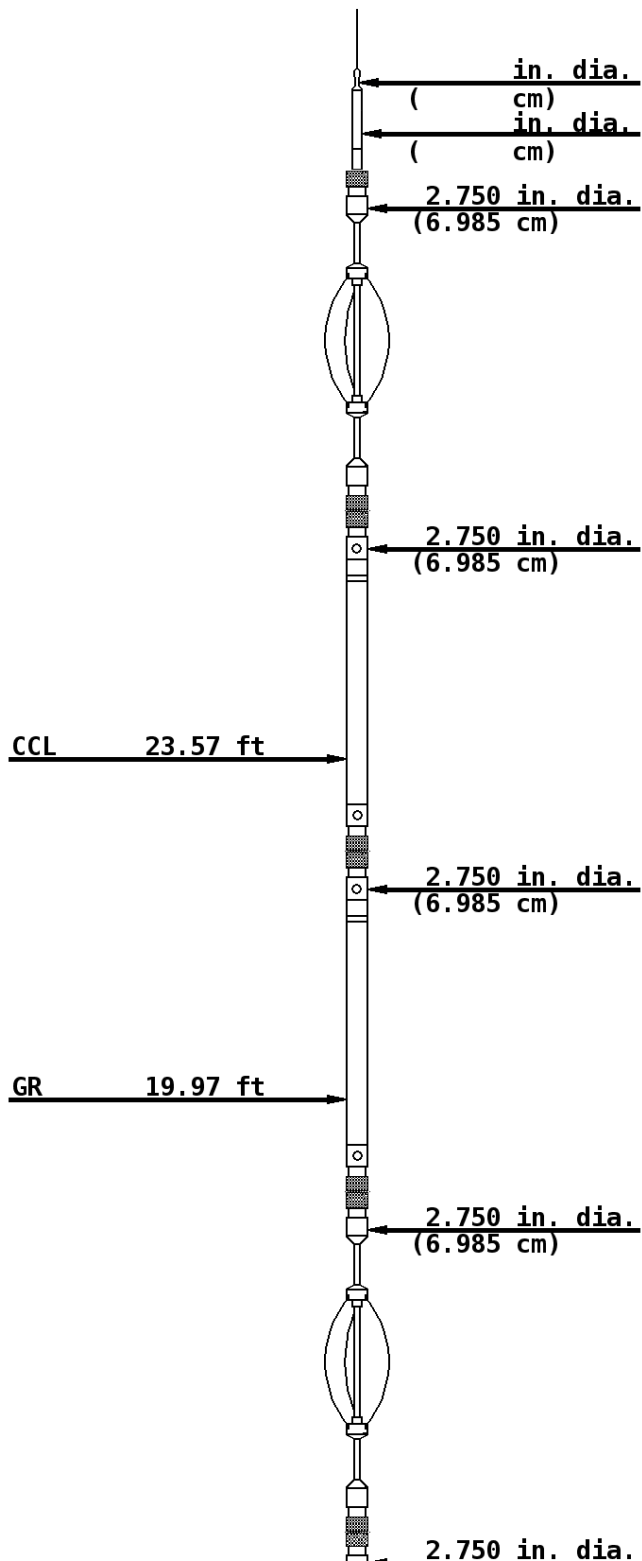
Weight 39.8 lb
Length 3.40 ft
Max. Diameter 2.717 in

Slim Hole Gamma Ray

Weight 39.8 lb
Length 4.71 ft
Max. Diameter 2.717 in

Slim Hole Centralizer

Weight 23.8 lb
Length 3.08 ft
Max. Diameter 2.717 in



Sector Bond

Weight 89.8 lb
Length 10.32 ft
Max. Diameter 2.717 in

SBT/CBL Tx

SBT Rx 7.77 ft

3' Rx 7.28 ft

5' Rx 6.28 ft

(6.985 cm)

Slim Hole Centralizer

Weight 11.9 lb
Length 2.82 ft
Max. Diameter 2.717 in

2.750 in. dia.
(6.985 cm)

COMPANY URSA OPERATING COMPANY

WELL BAT 32D-24-07-96

FIELD BATTLEMENT MESA

COUNTY GARFIELD

STATE COLORADO



Weatherford®