



Weatherford®

SECTOR BOND
GAMMA RAY / CCL LOG

COMPANY URSA OPERATING COMPANY		WELL BAT 33B-24-07-96	
FIELD BATTLEMENT MESA		CNTY GARFIELD STATE CO	
COMPANY URSA OPERATING COMPANY		WELL BAT 33B-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	5972'		
DEPTH LOGGER	5972'		
BITM. LOG INTERVAL	5968'		
TOP LOG INTERVAL	SURFACE		
OPEN HOLE SIZE	8.625"		
TYPE FLUID	WATER		
DENS.	8.3	N/A	
MAX. REC. TEMP. °F	194 DEG. F.		
EST. CEMENT TOP	SEE LOG		
TIME WELL READY	R.O.A.		
TIME LOGGER ON BITM.	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 # 80212865
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'

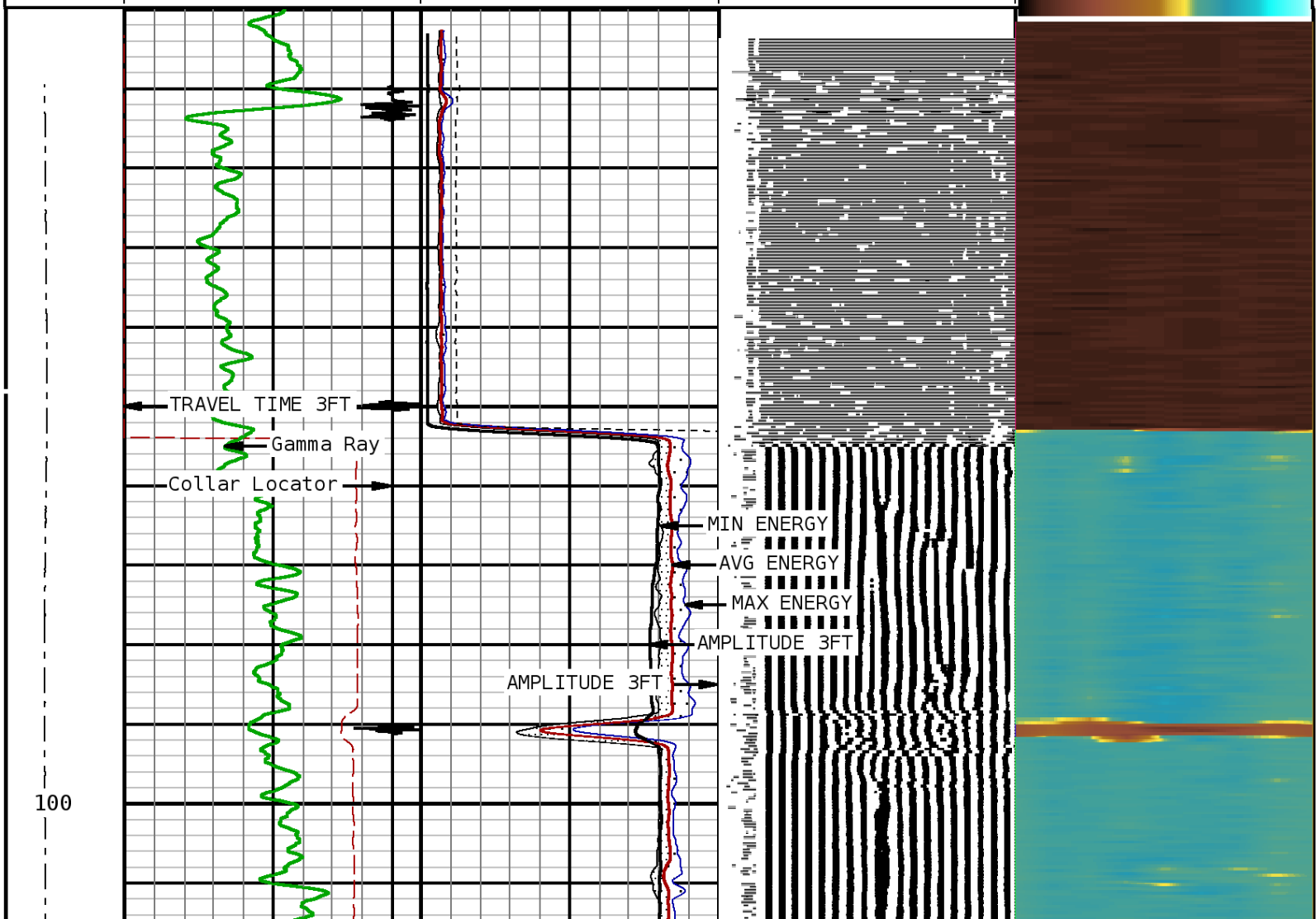
PROCESSED VERSION: 2012.07.18.162"

MAIN PASS

80211344 CBLMAIN

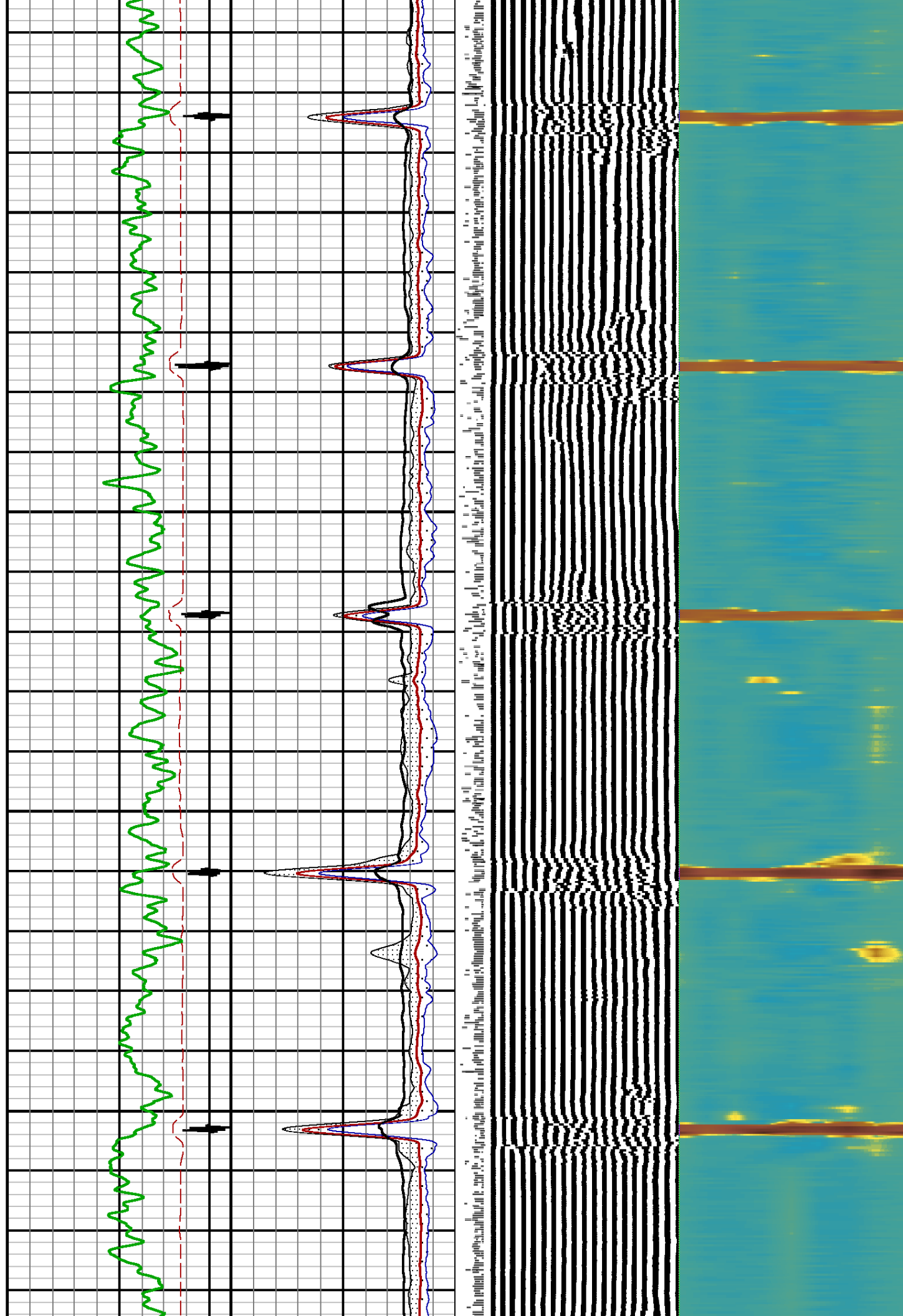
FINISH DEPTH: 9.4 Feet DIRECTION: UP DATE: 02/24/2014 TIME: 18:41 MODE: ORIGINAL

		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		MIN ENERGY		VARIABLE DENSITY 5FT	
0 2000		0 Millivolts 100		VARIABLE ENERGY	
TRAVEL TIME 3FT				200 Microseconds 1200	
318 Microseconds 218				0 Millivolts 100	



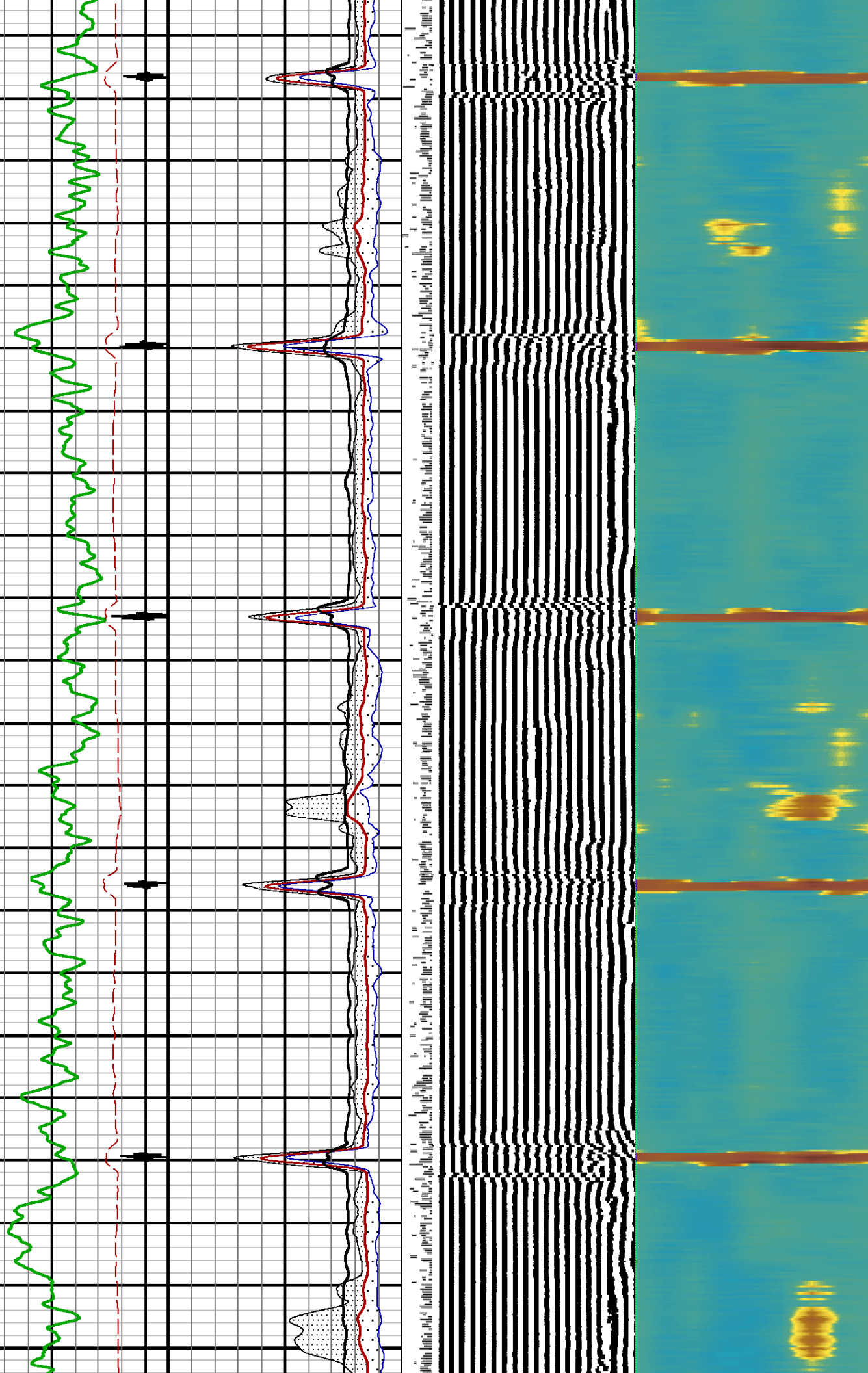
200

300



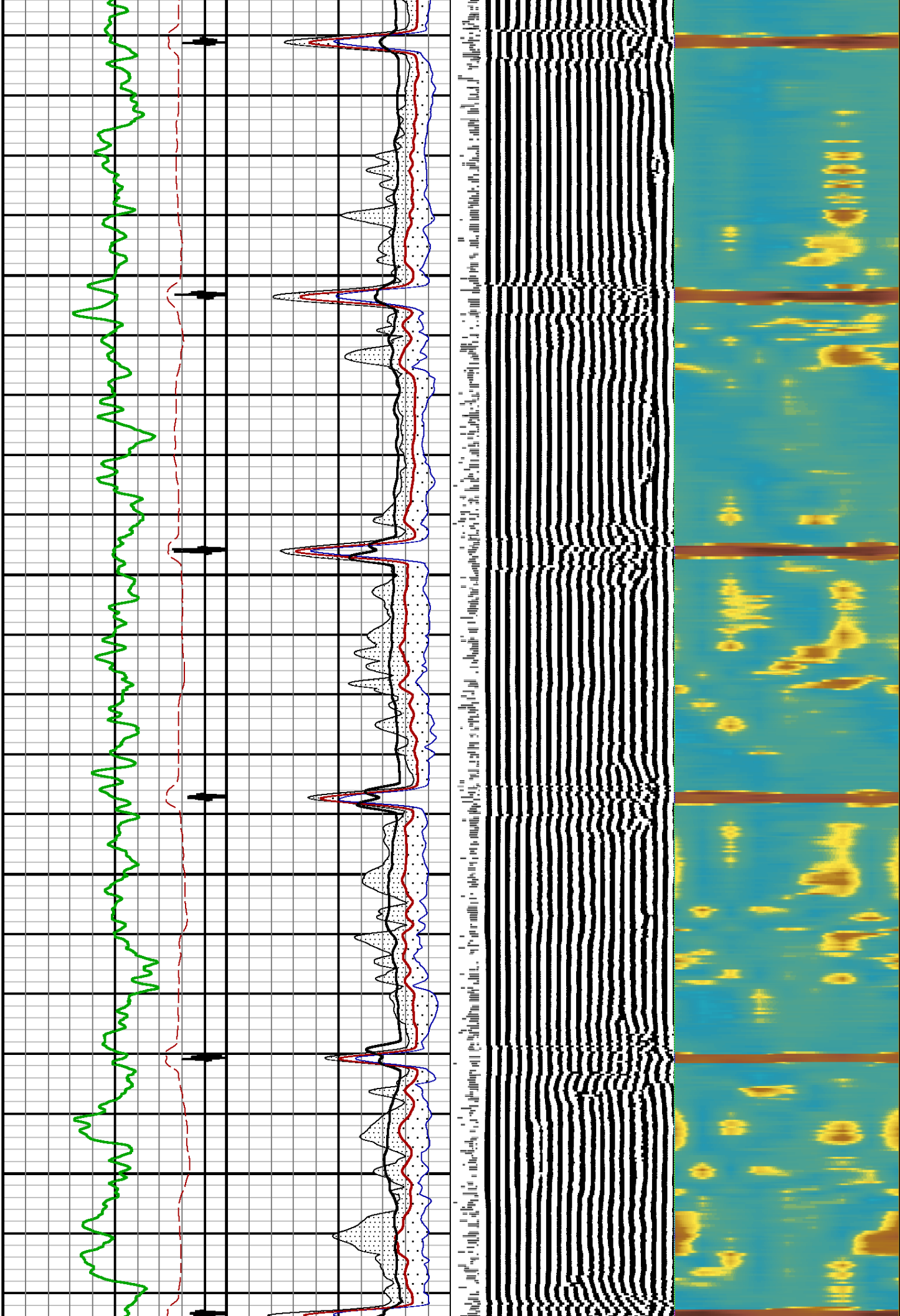
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500



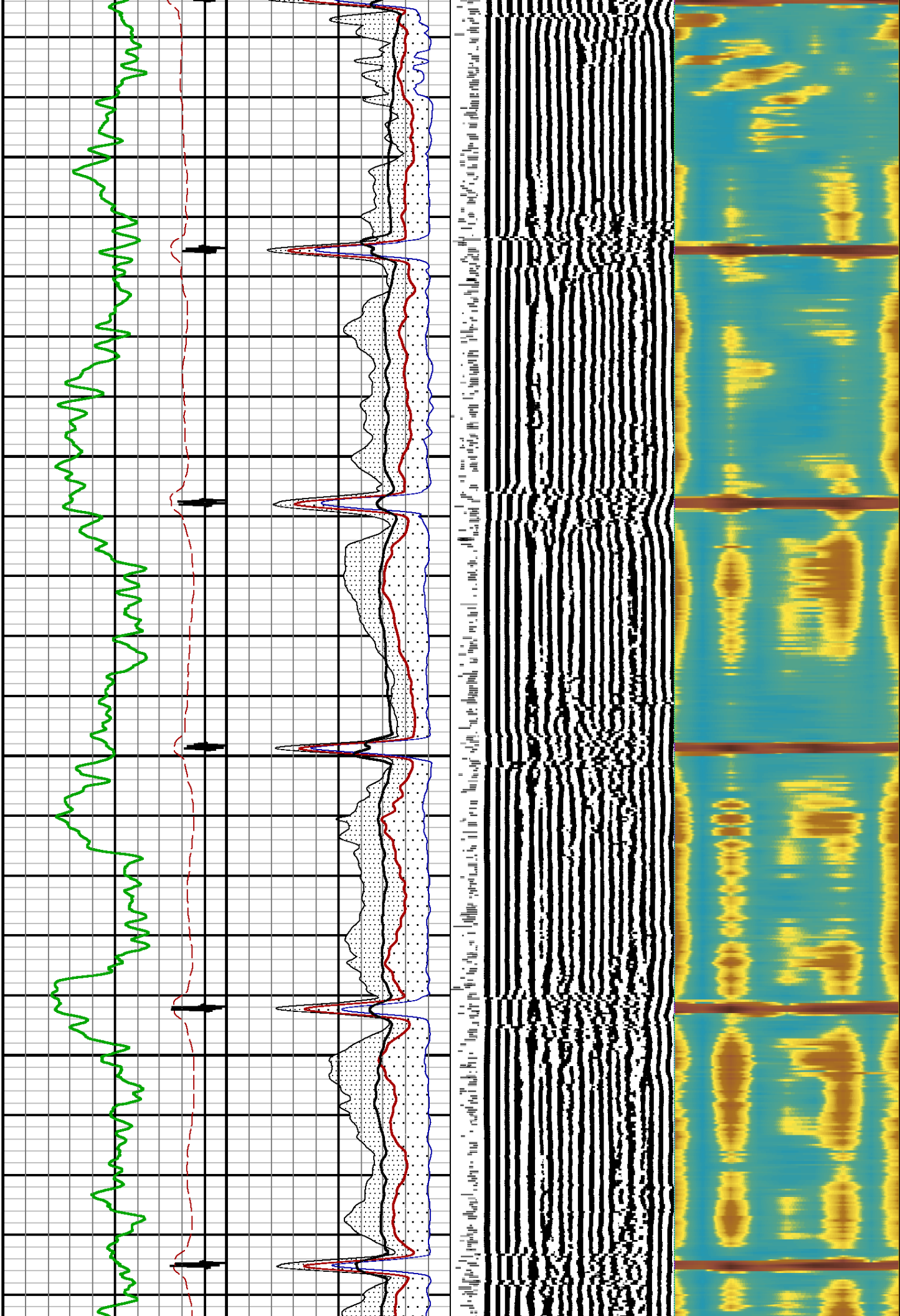
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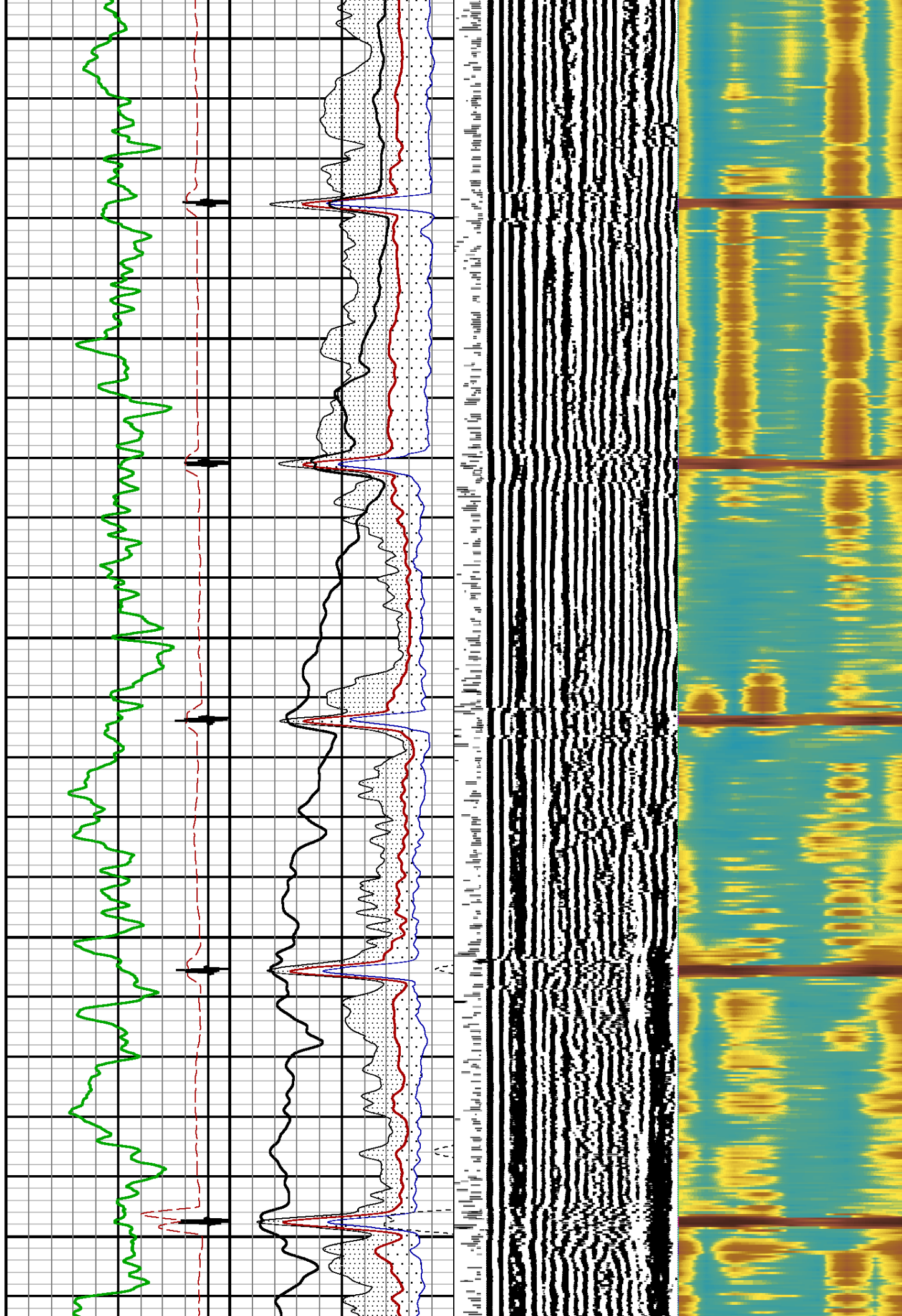
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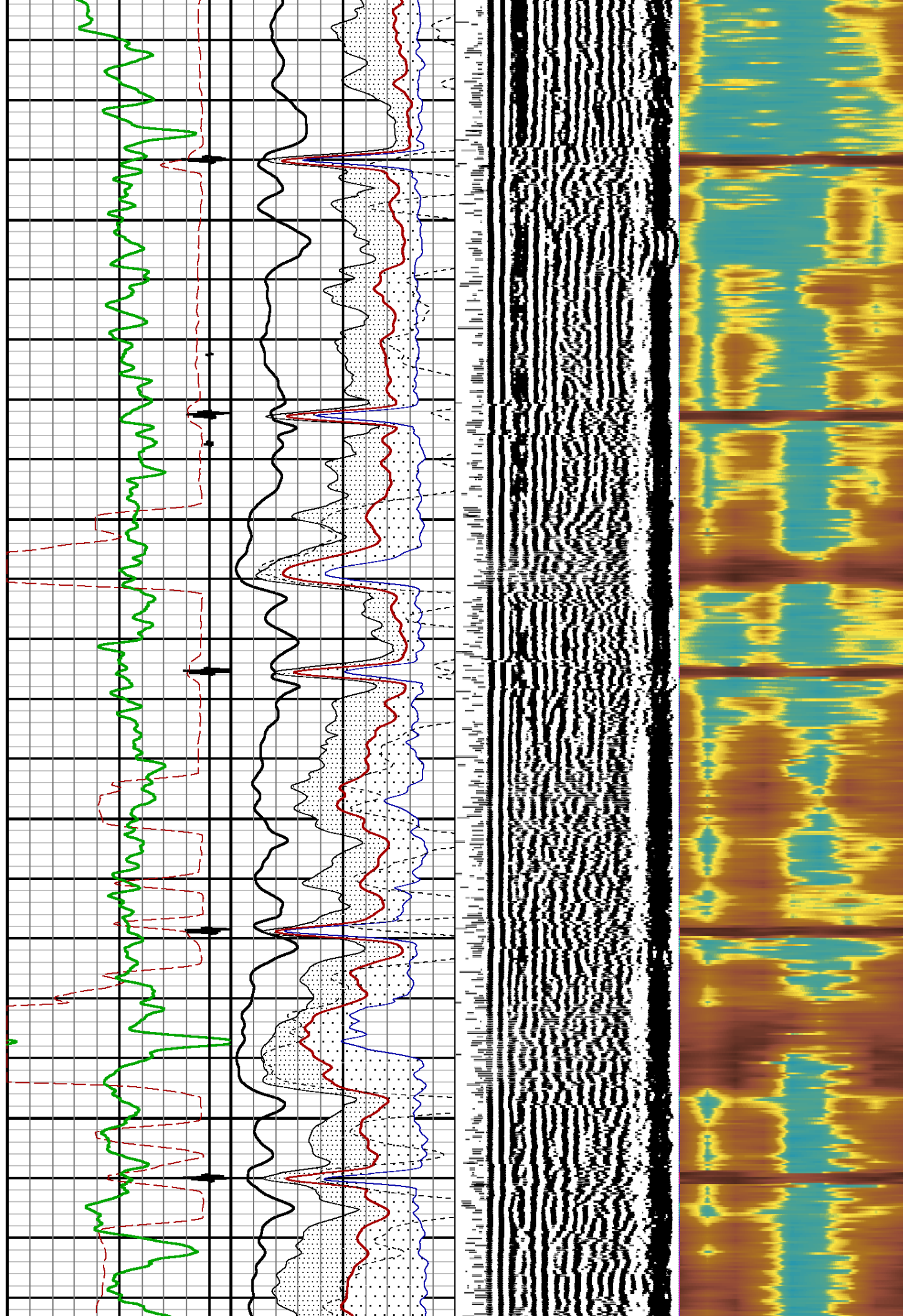
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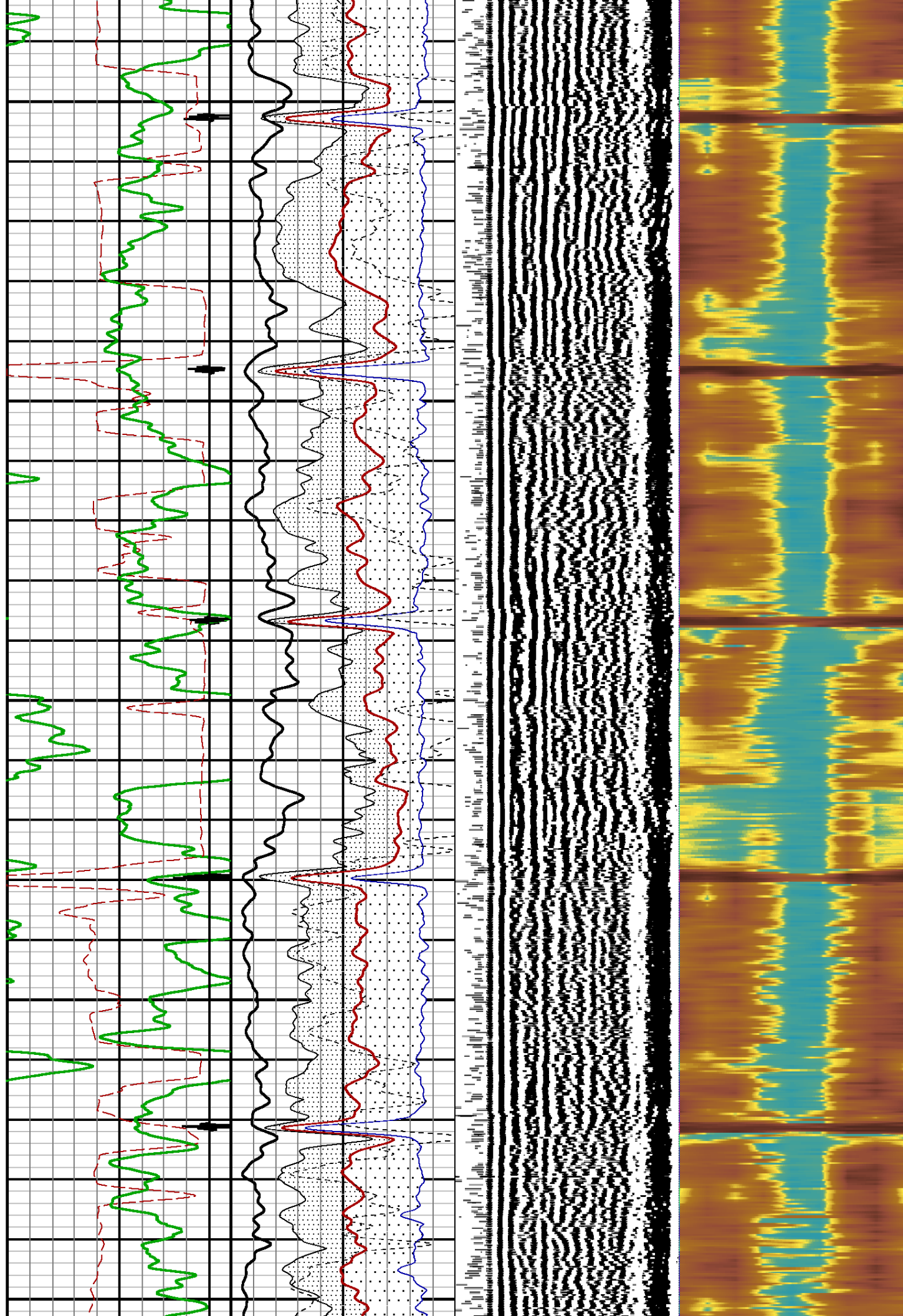
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1400



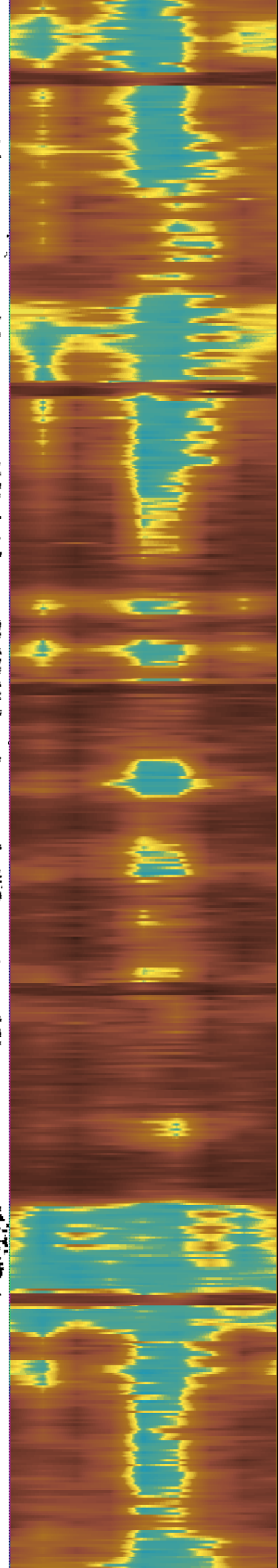
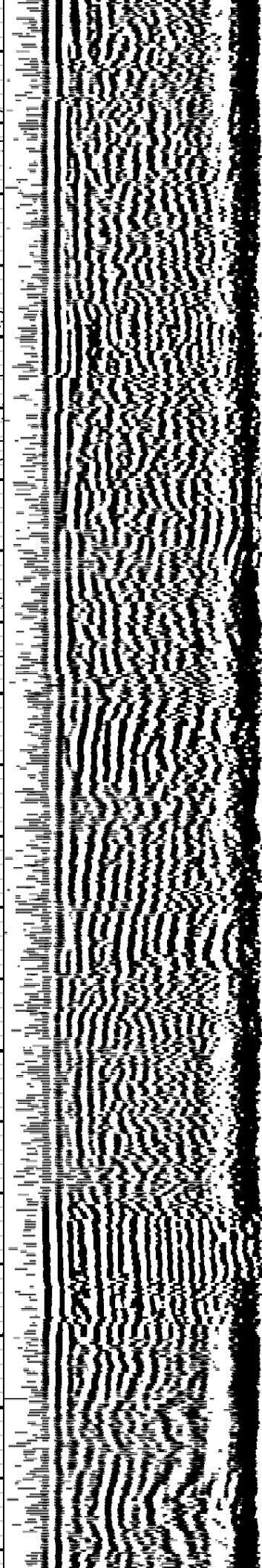
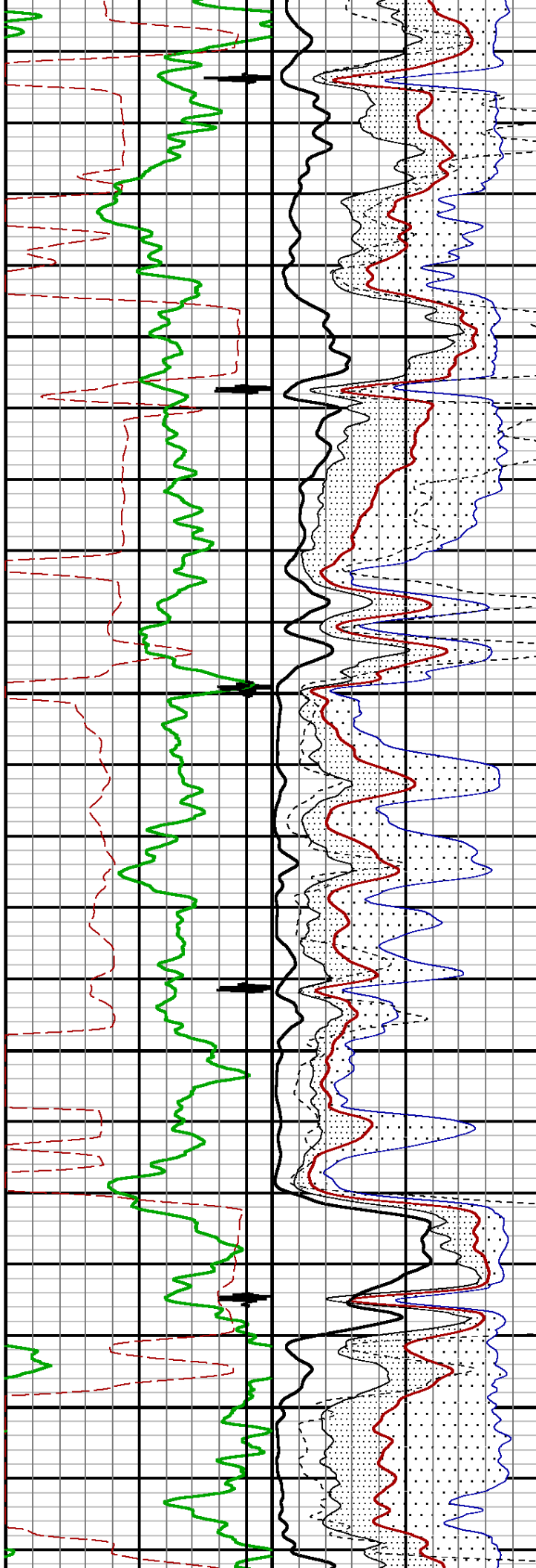
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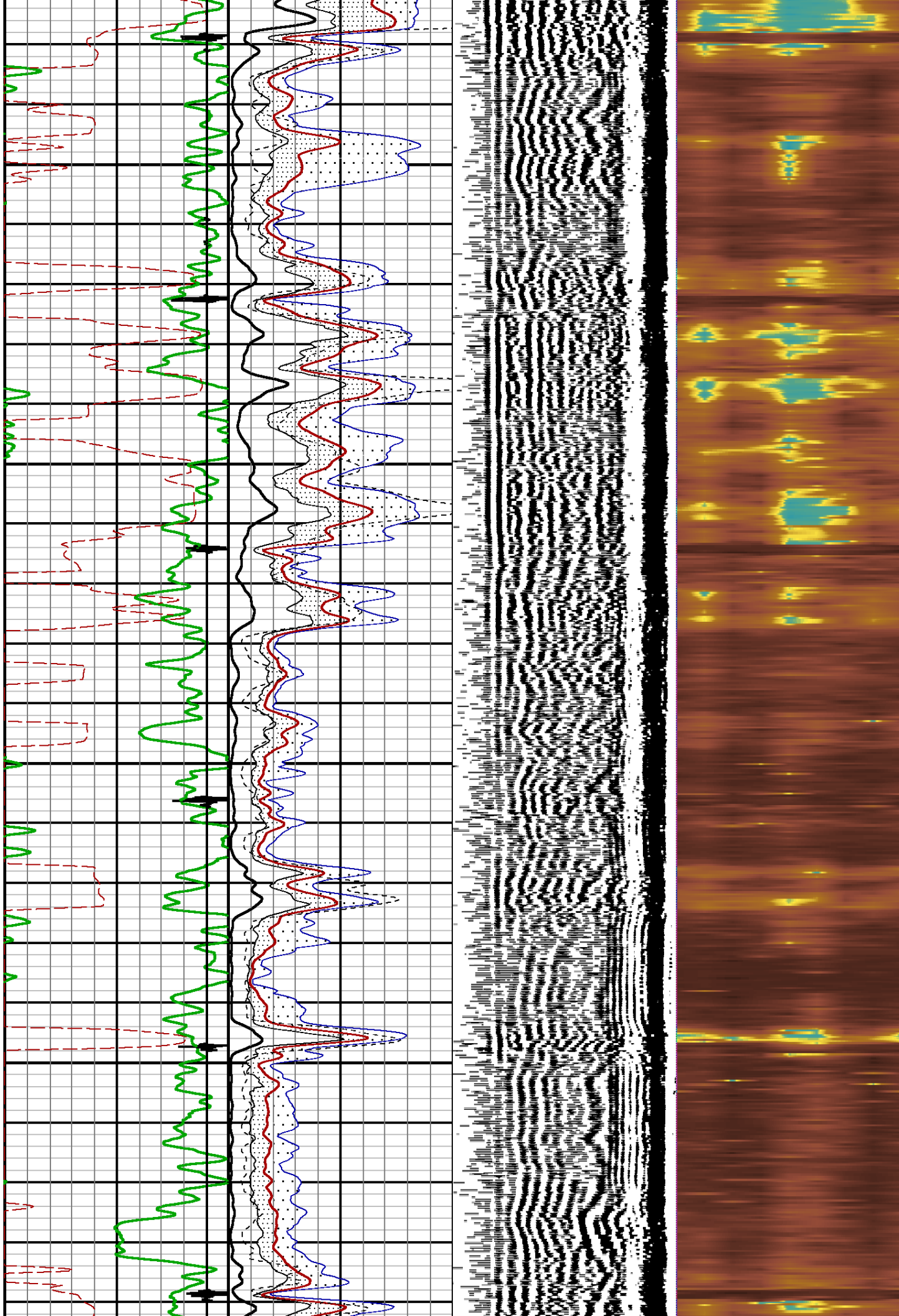
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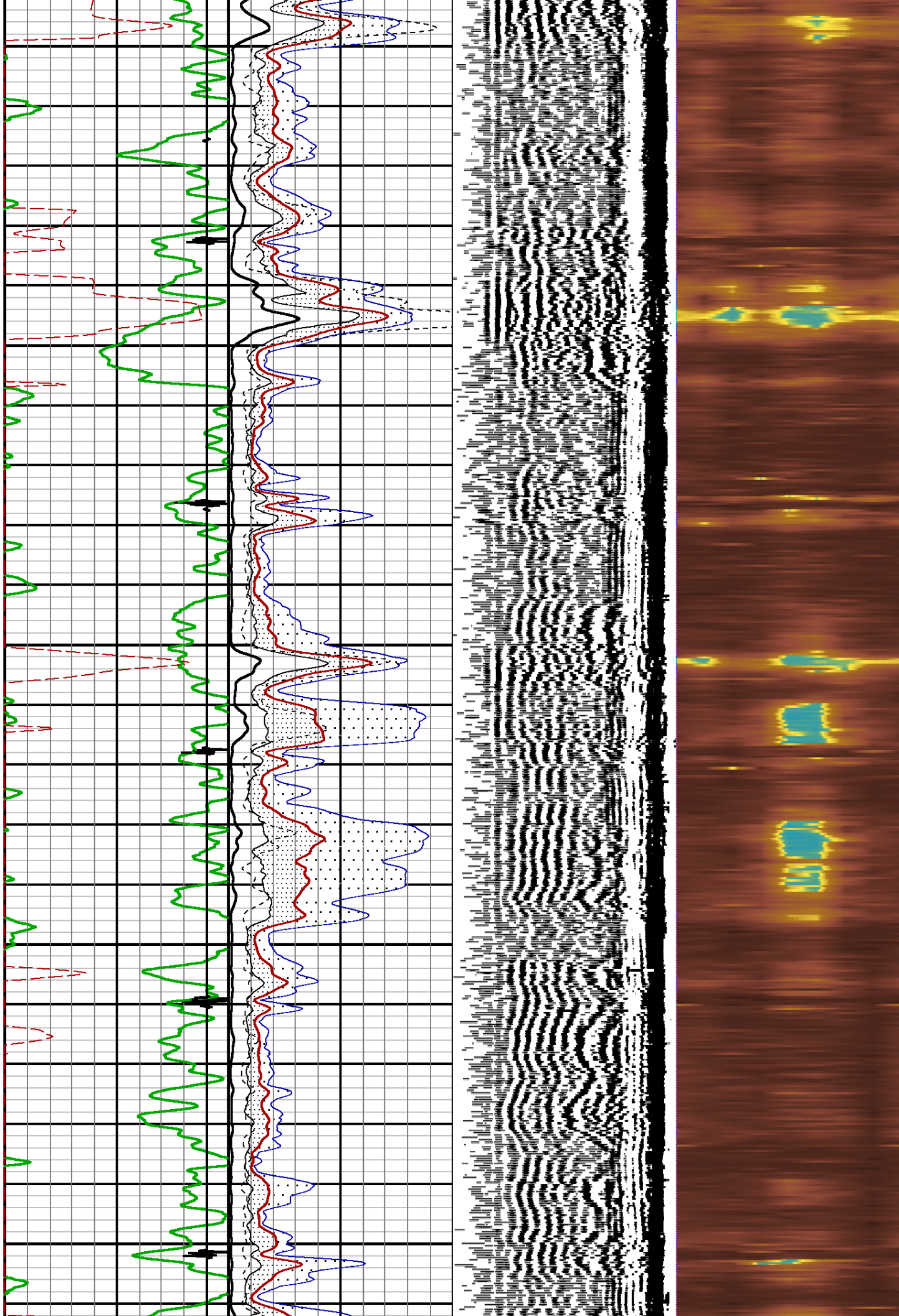
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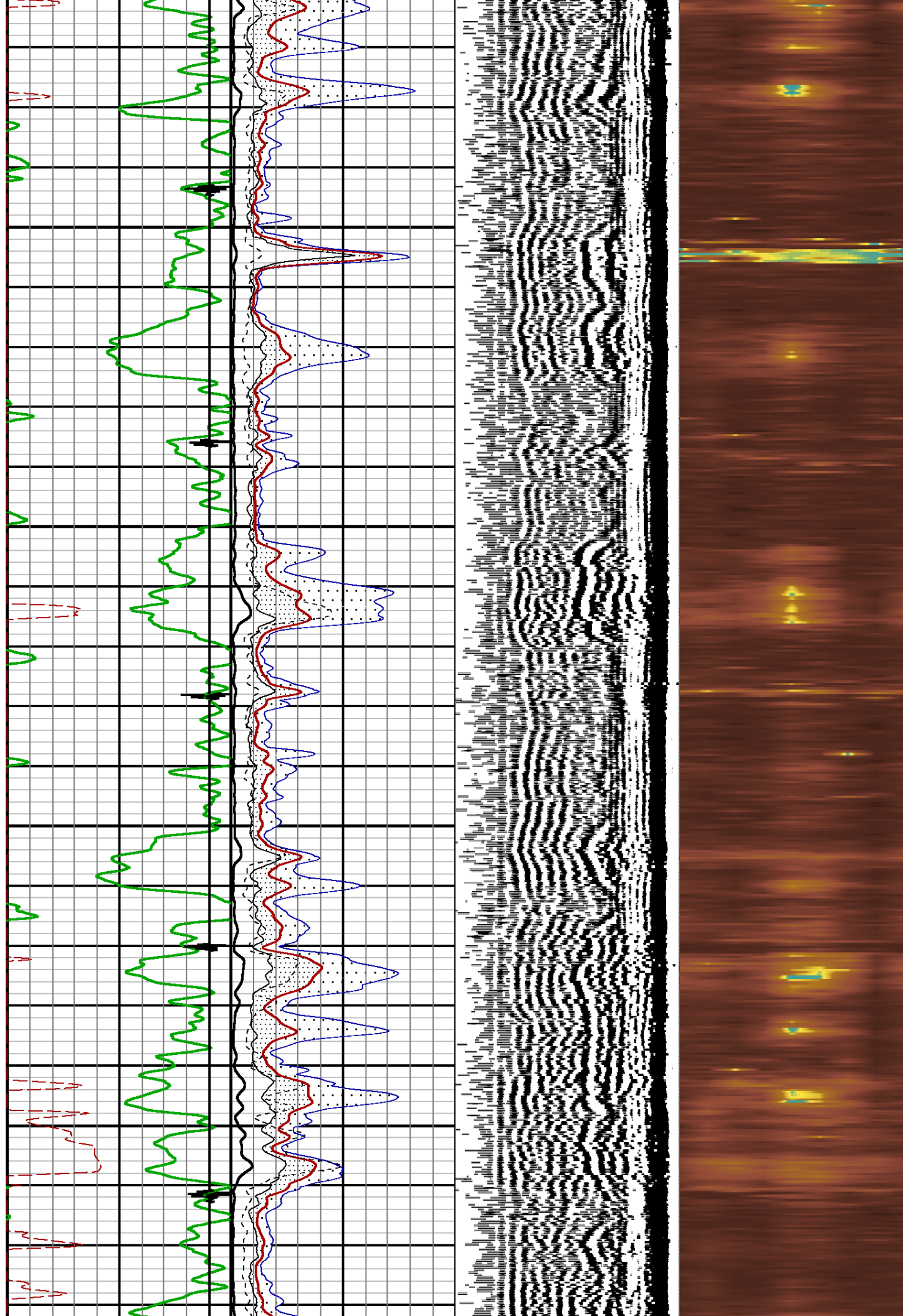
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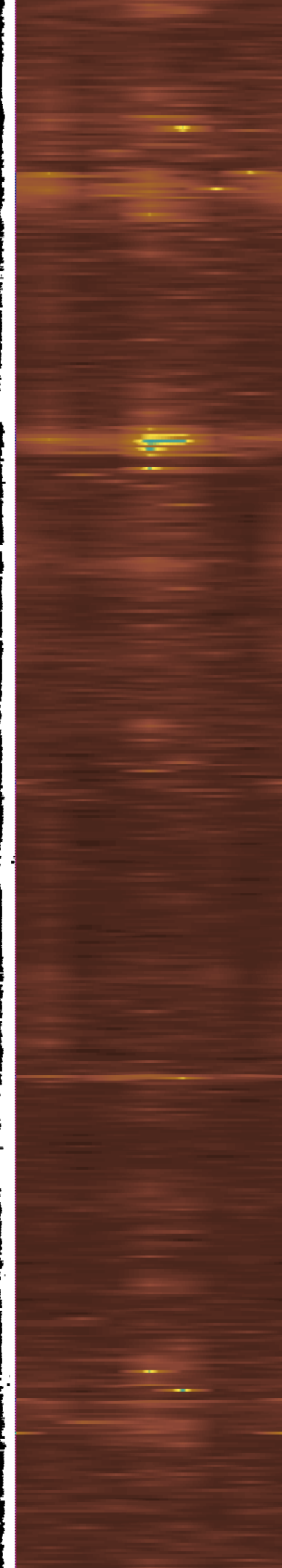
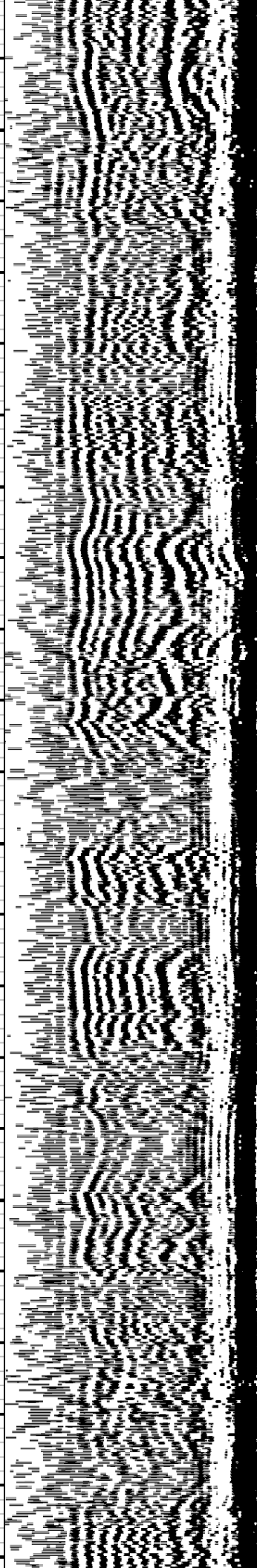
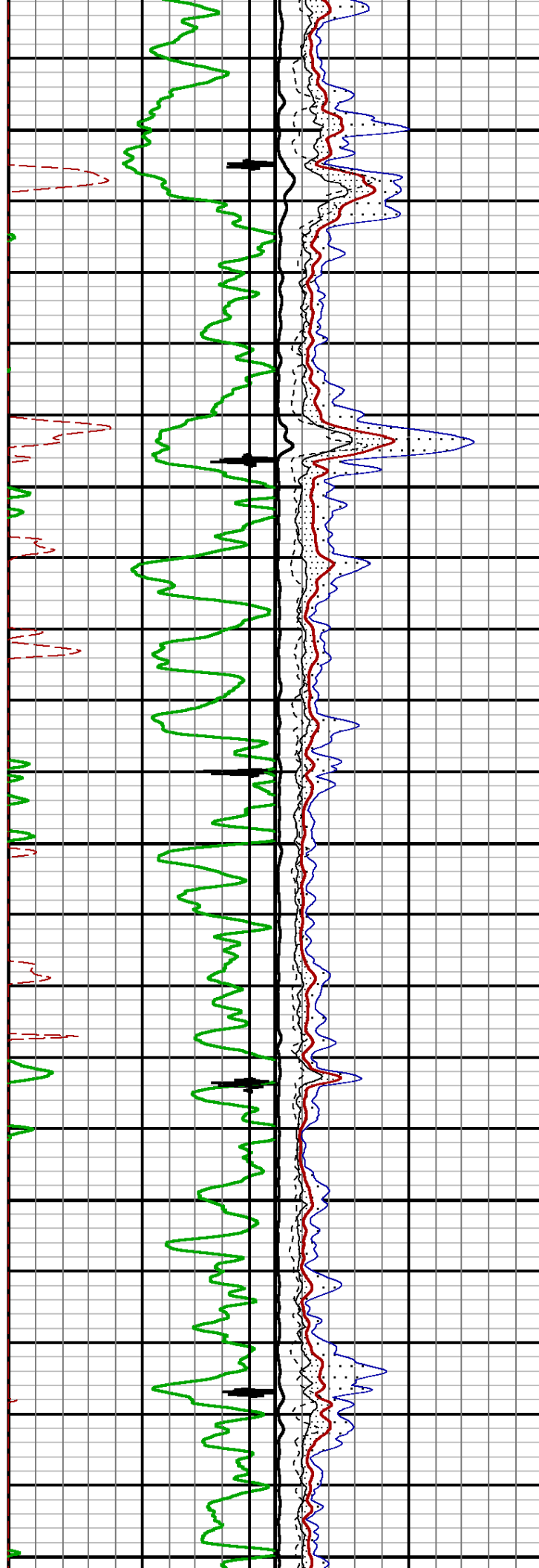
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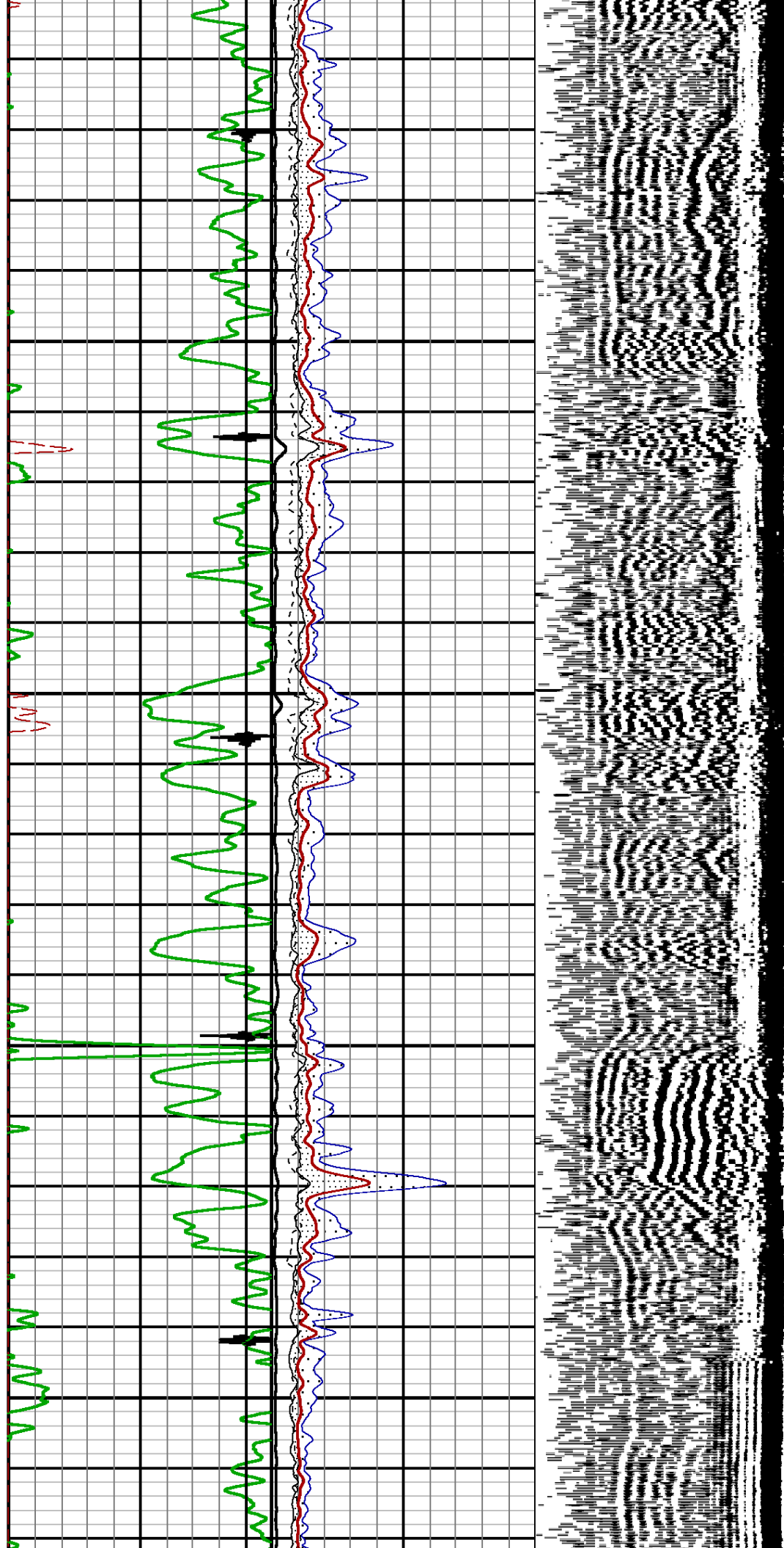
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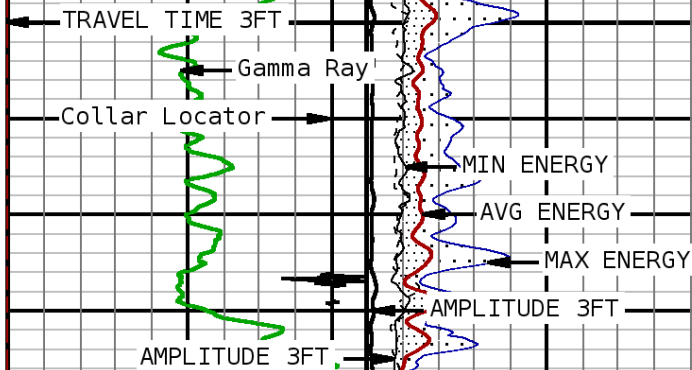


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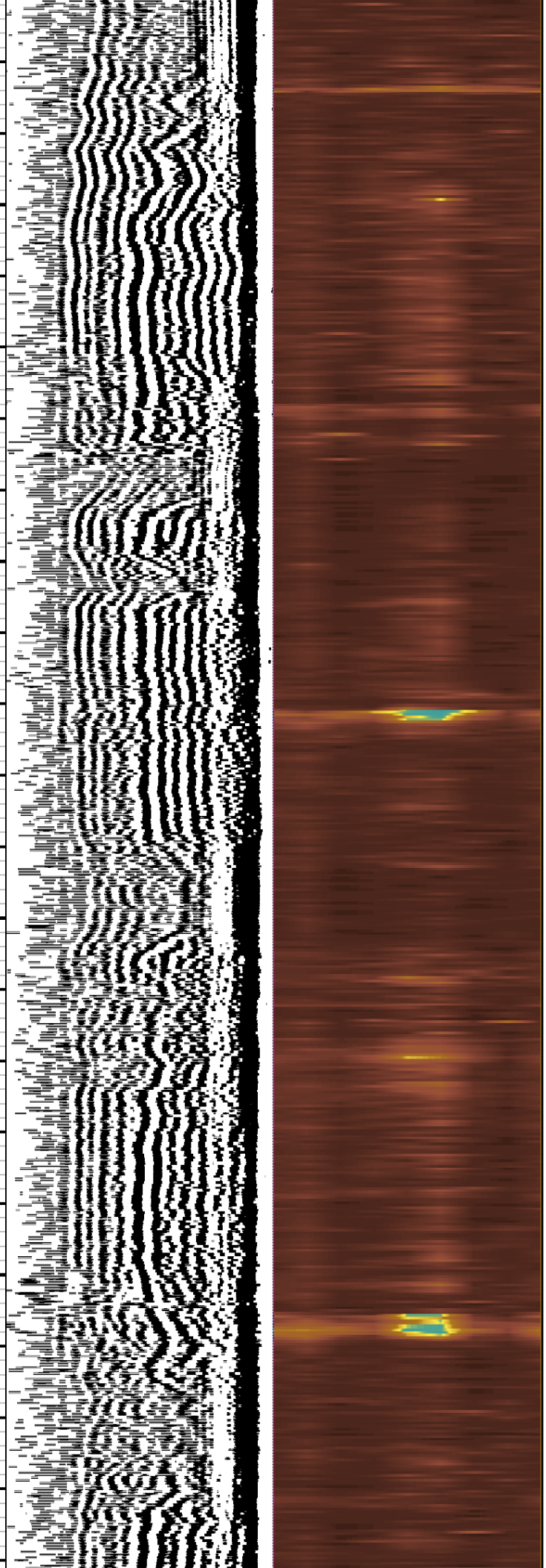
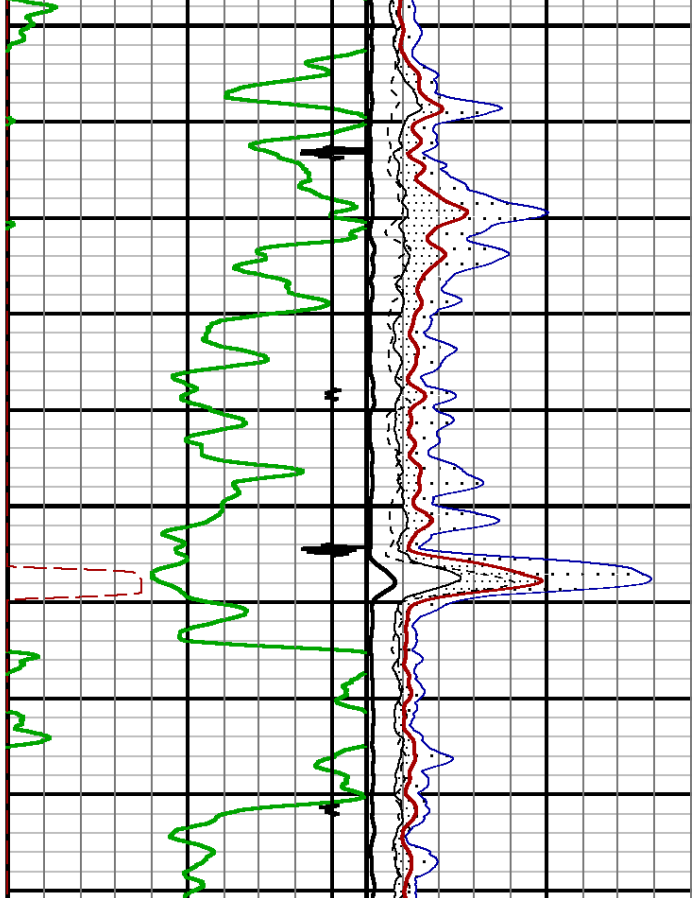
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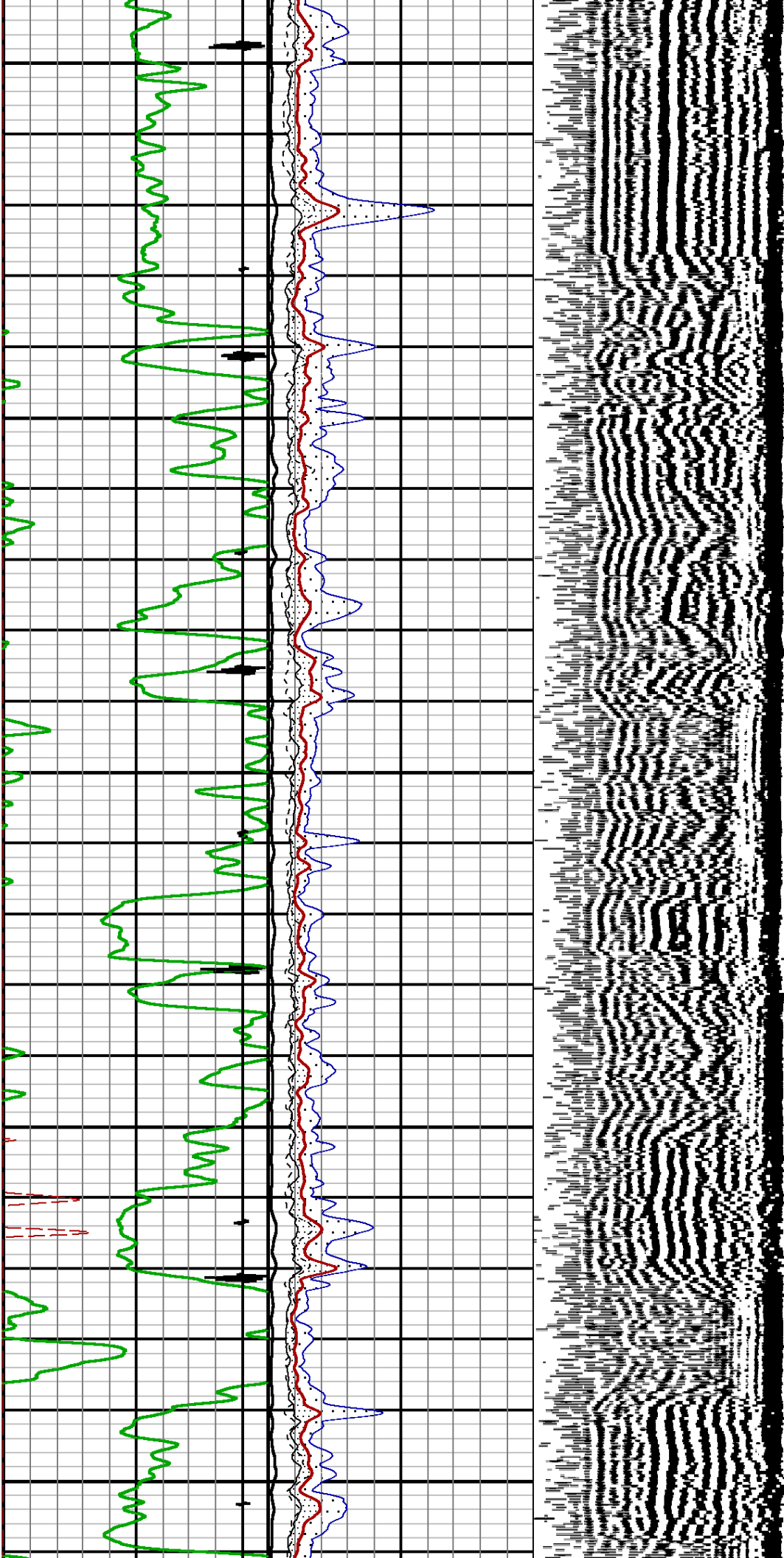
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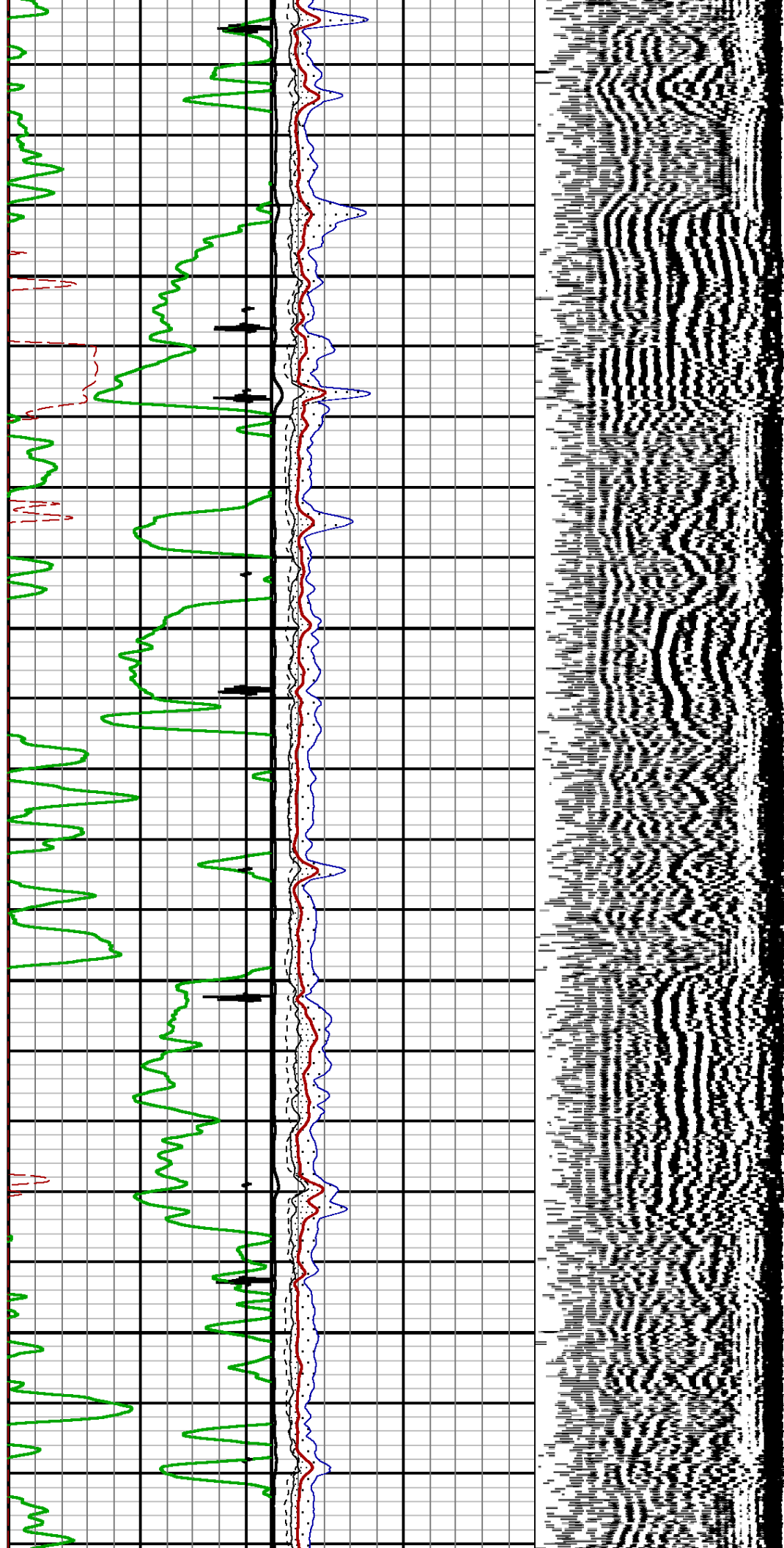
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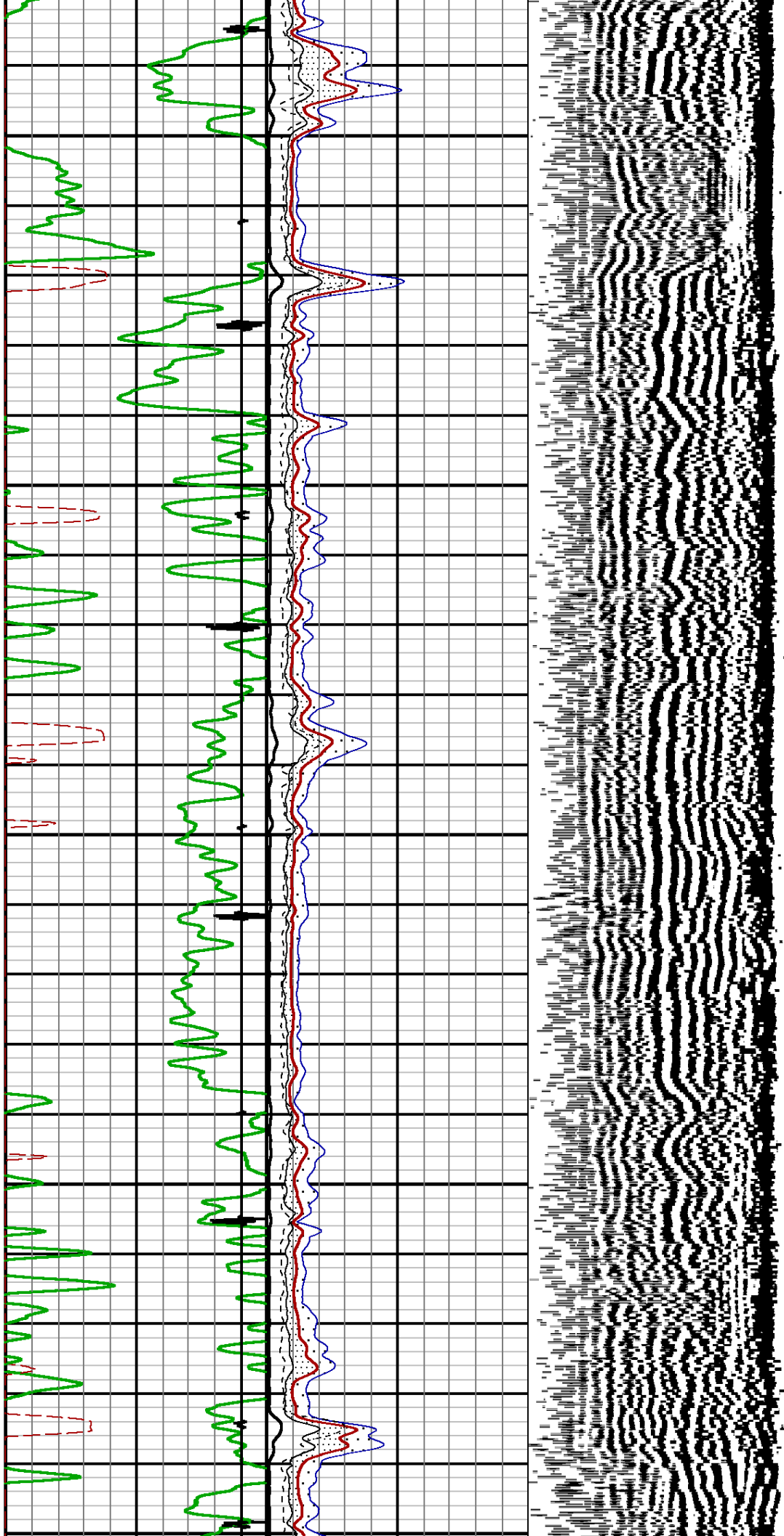
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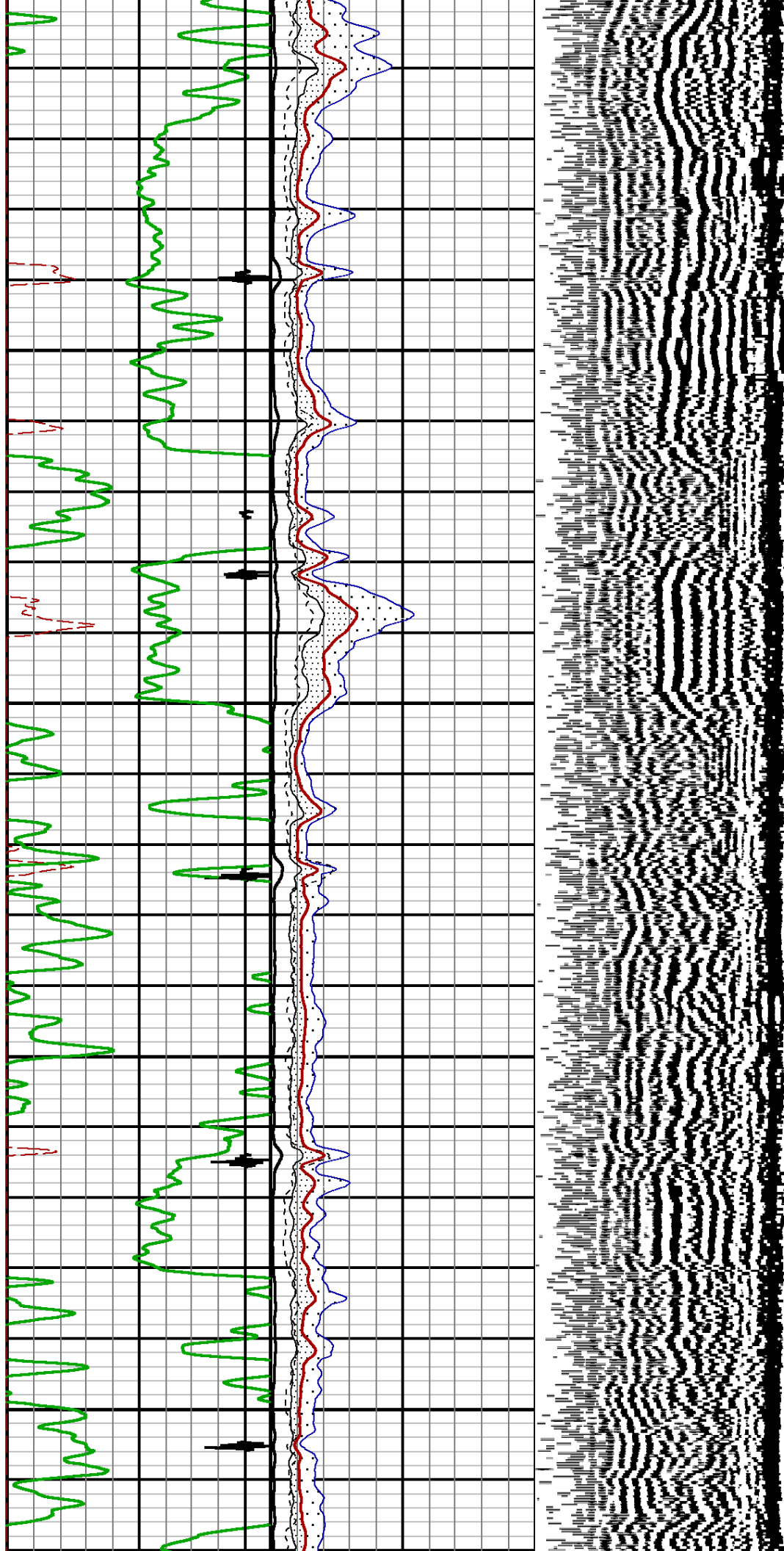
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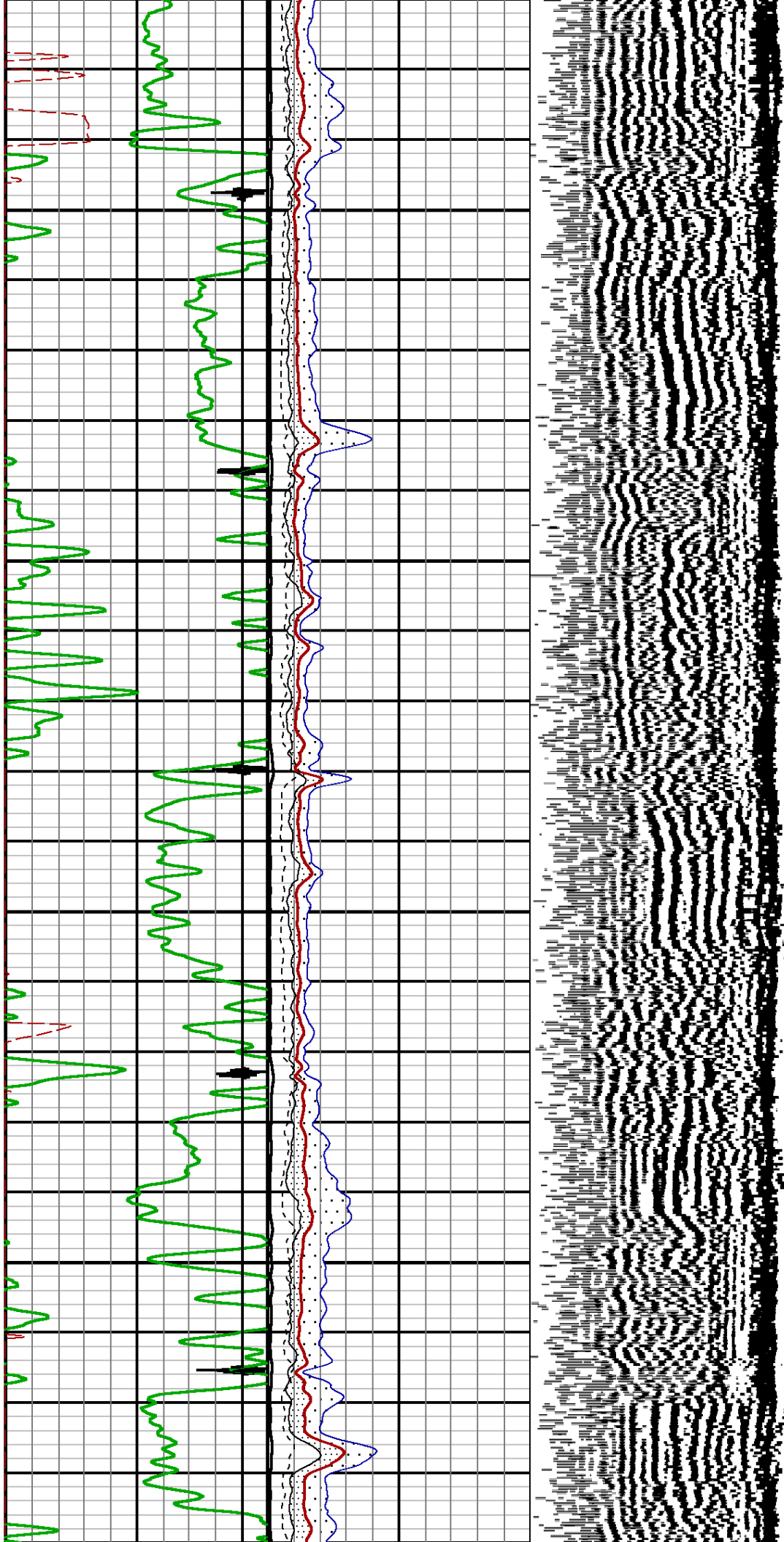
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4000



4100

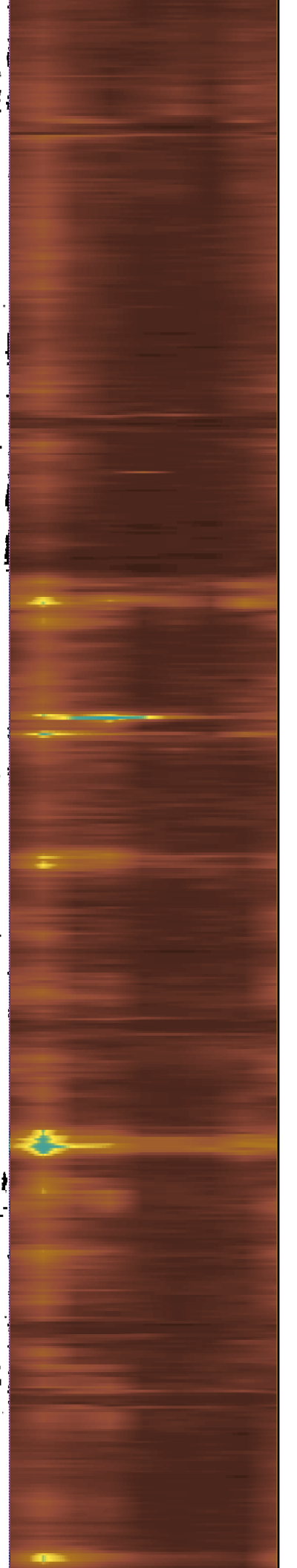
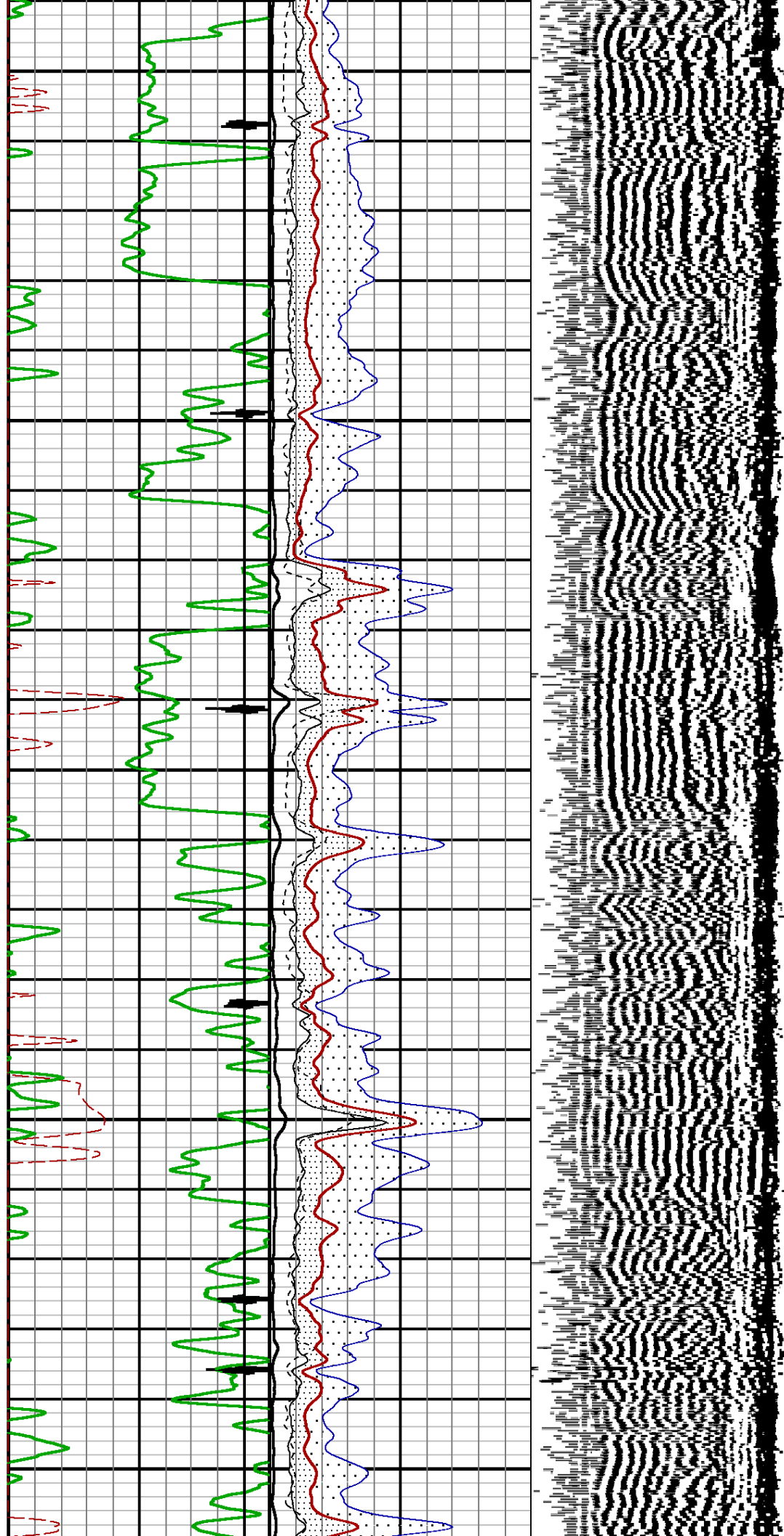
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4300

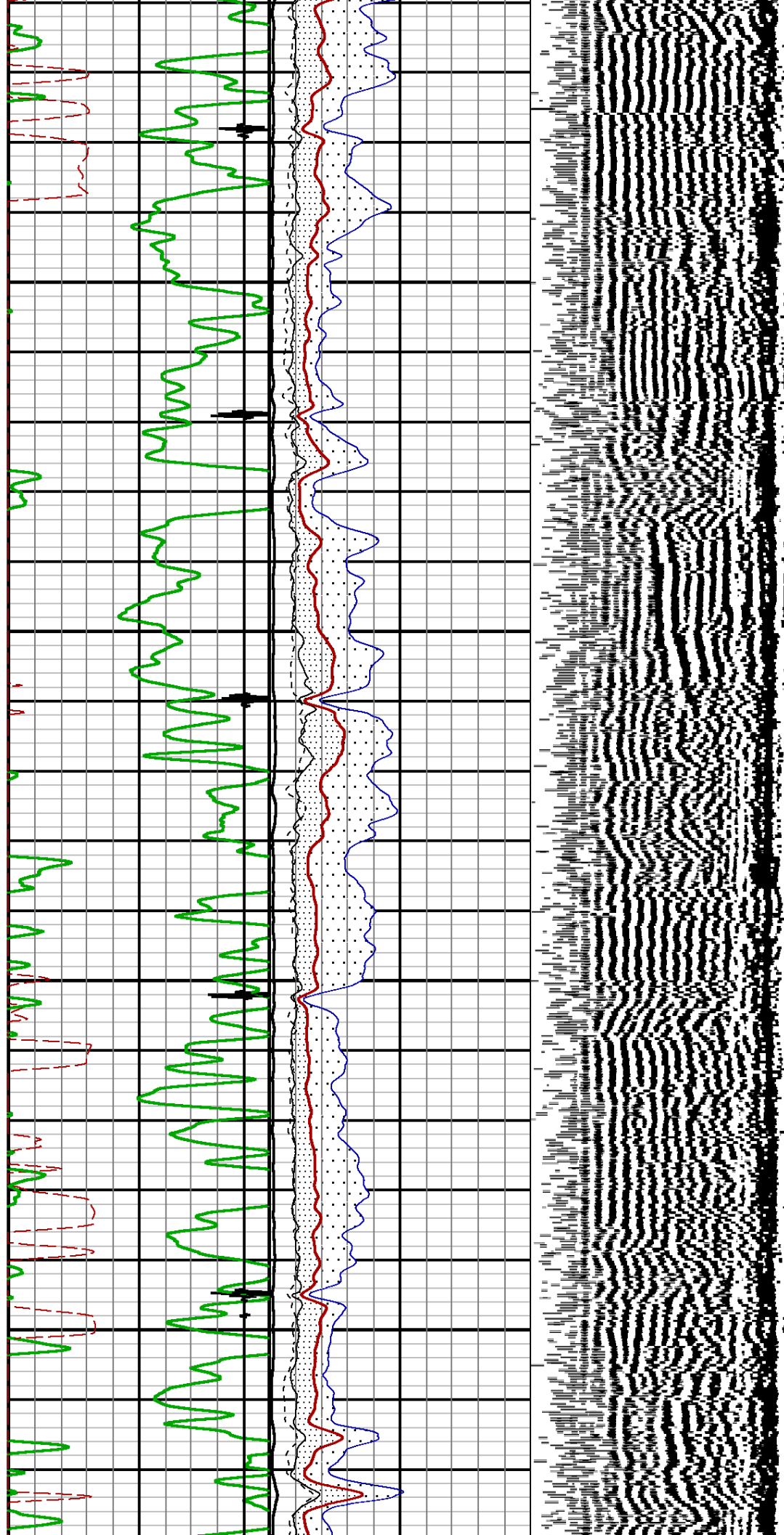
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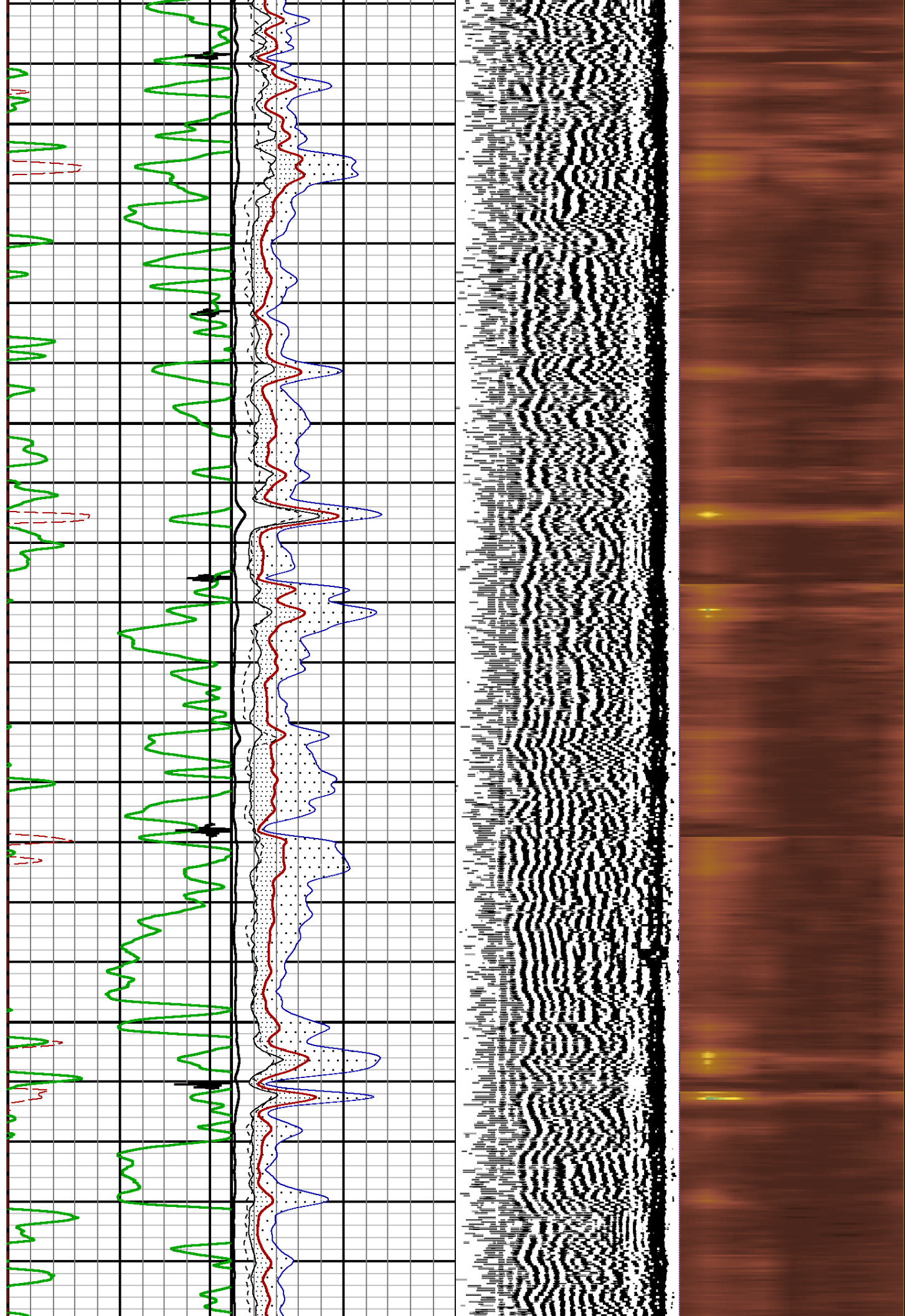
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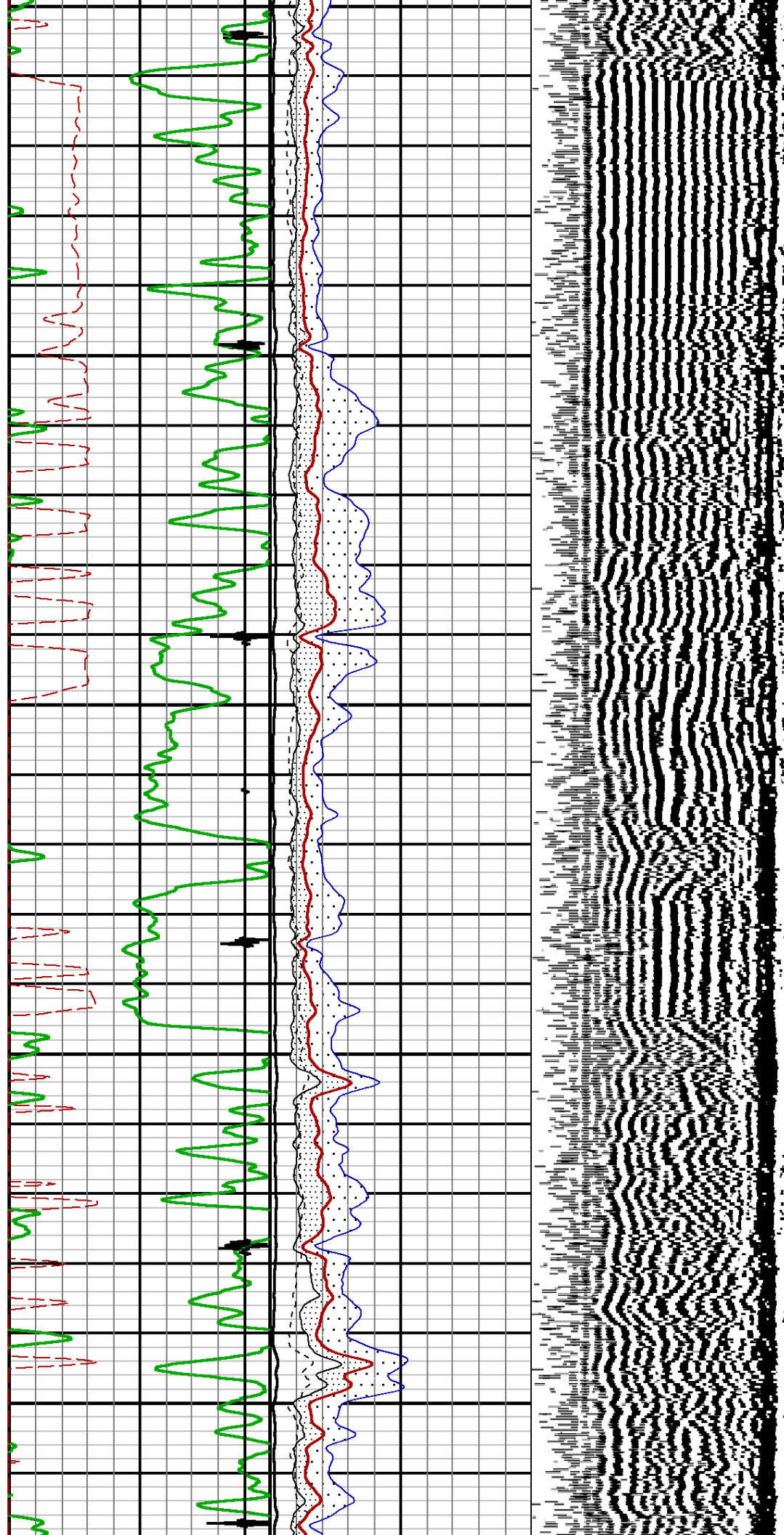
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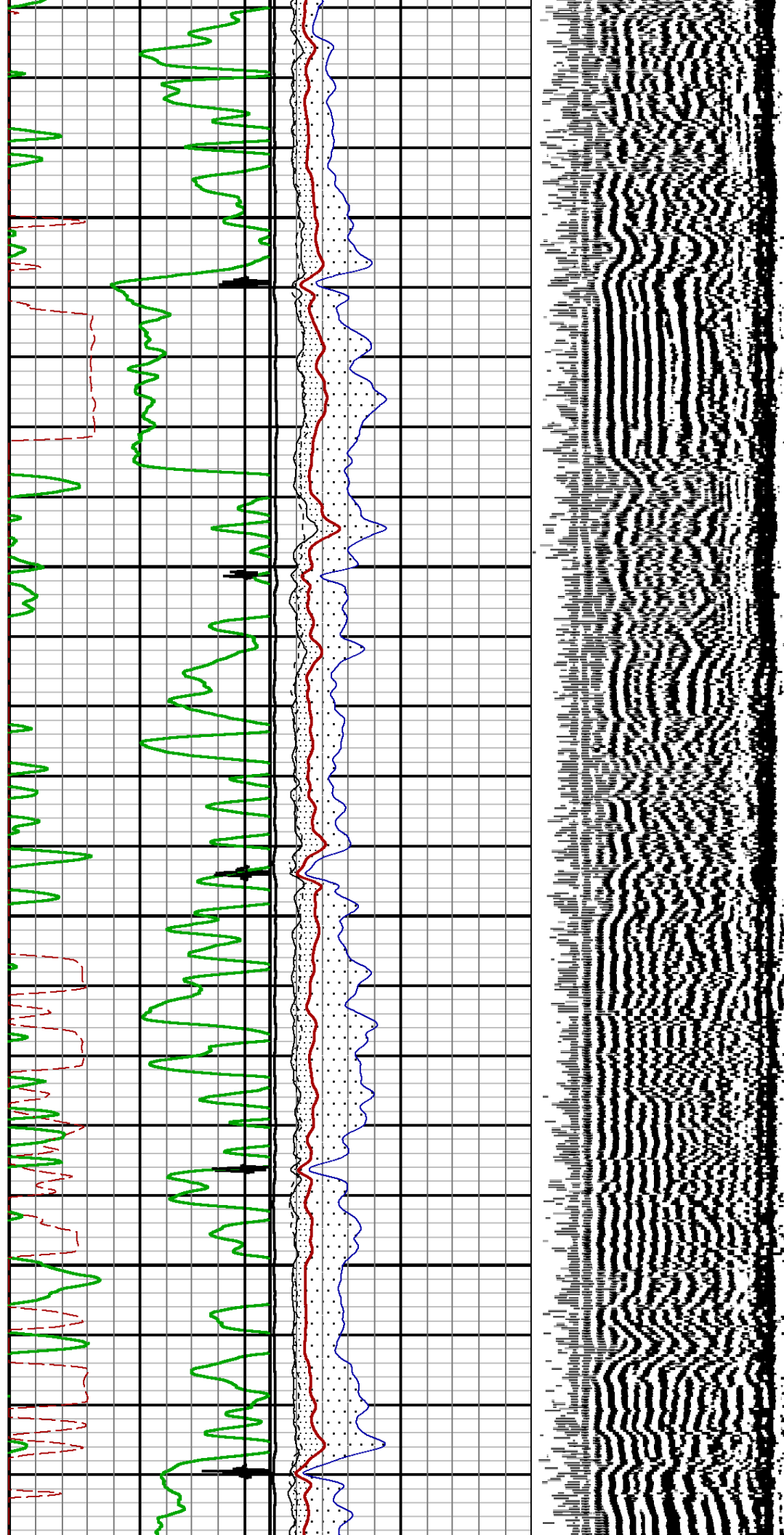
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5100



5200

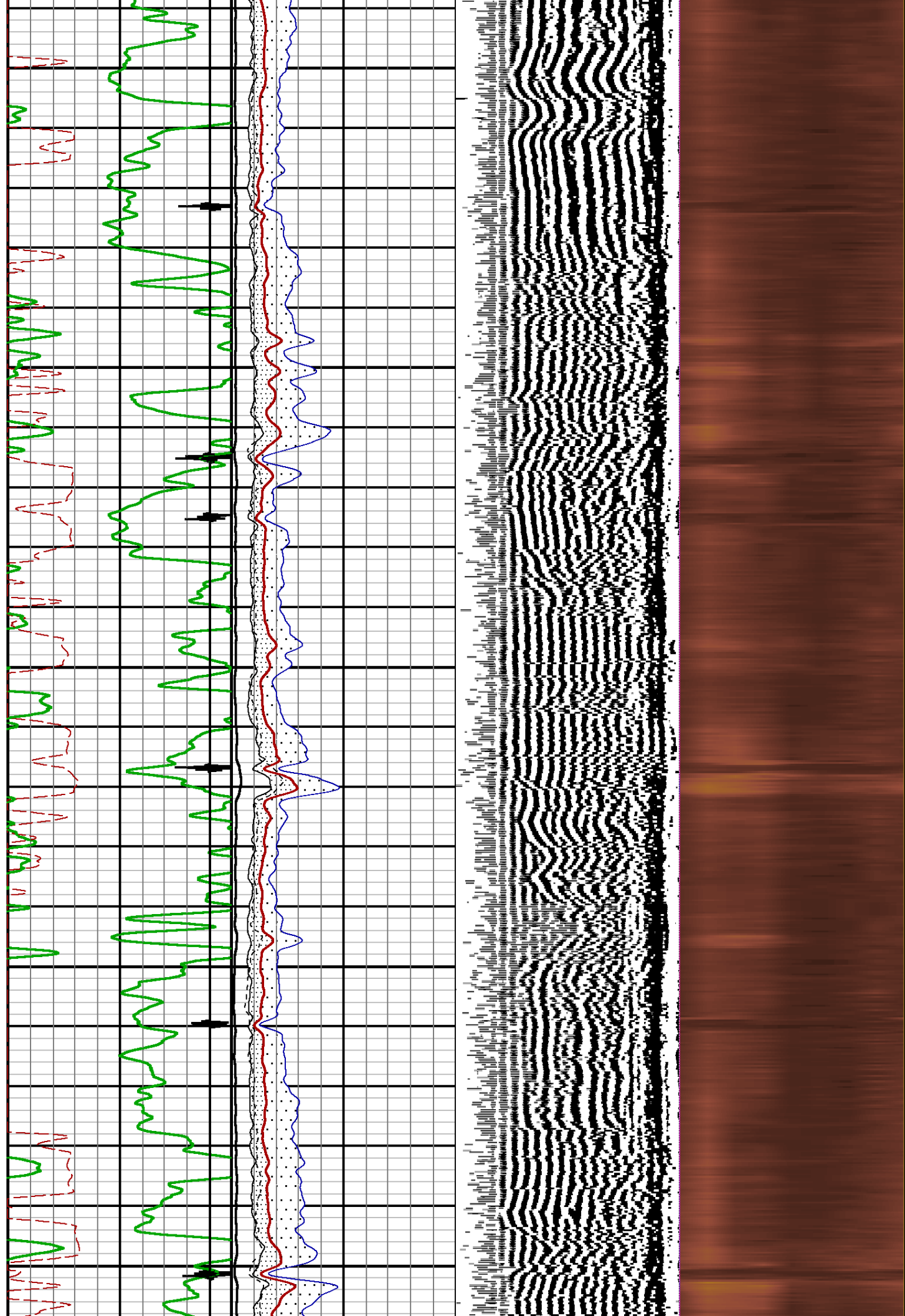
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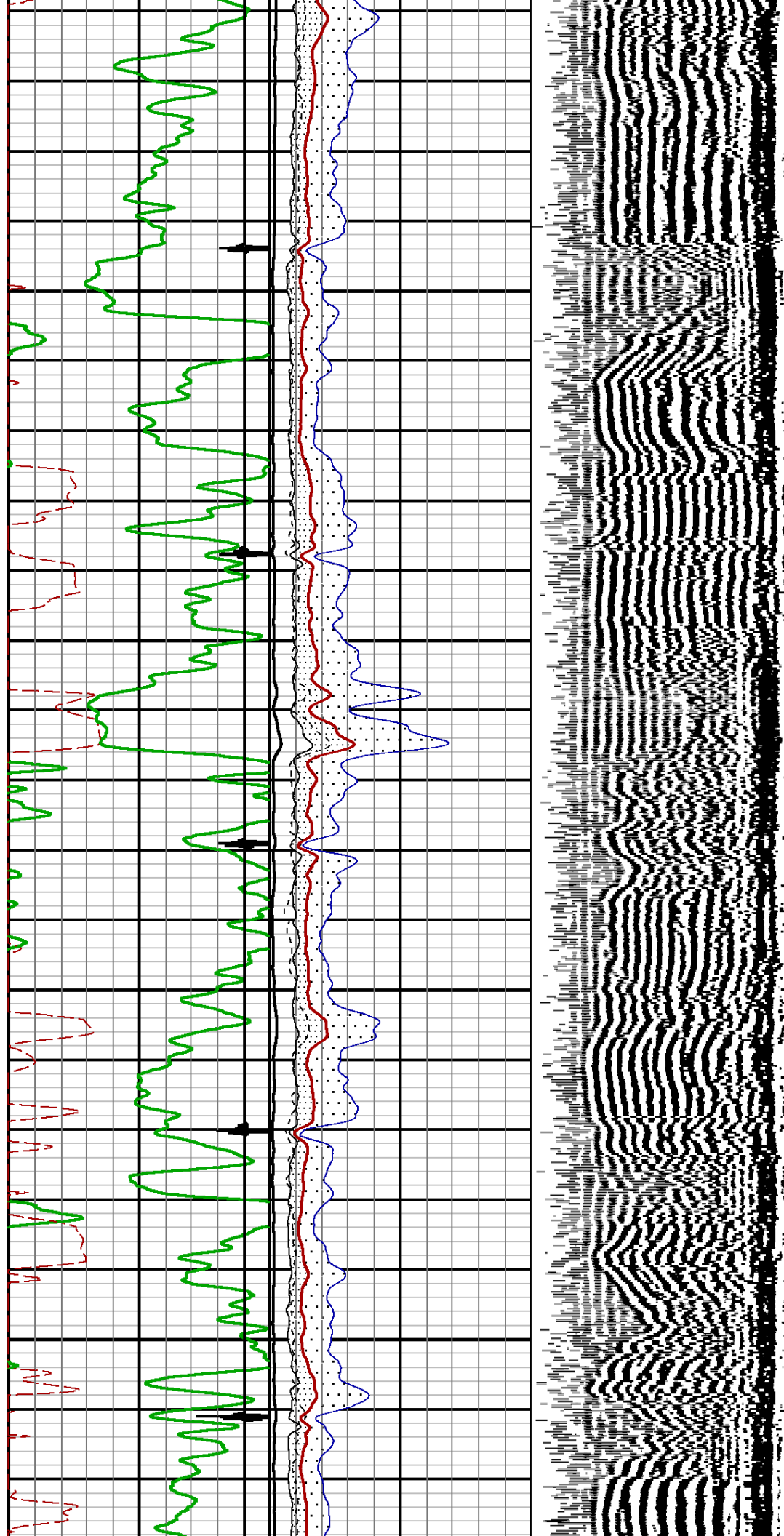
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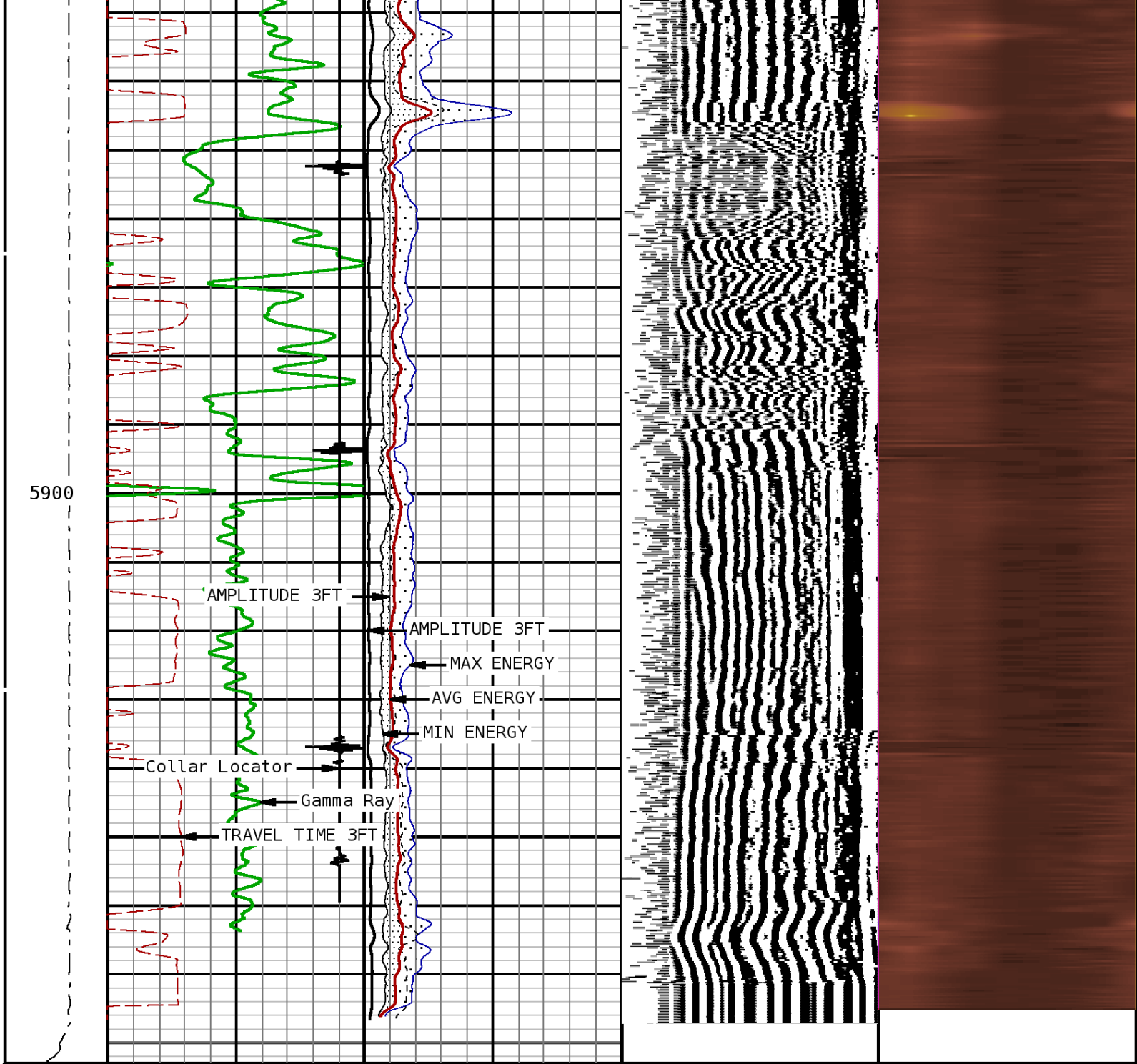
5600



5700

5800





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

START DEPTH: 5983.0 DIRECTION: UP DATE: 02/24/2014 TIME: 18:37 MODE: ORIGINAL

80211344 CBLMAIN

MAIN PASS

DEPTH SCALE: 5":100'

LOGGED VERSION: 2012.07.18.162"

DEPTH SCALE: 5":100'

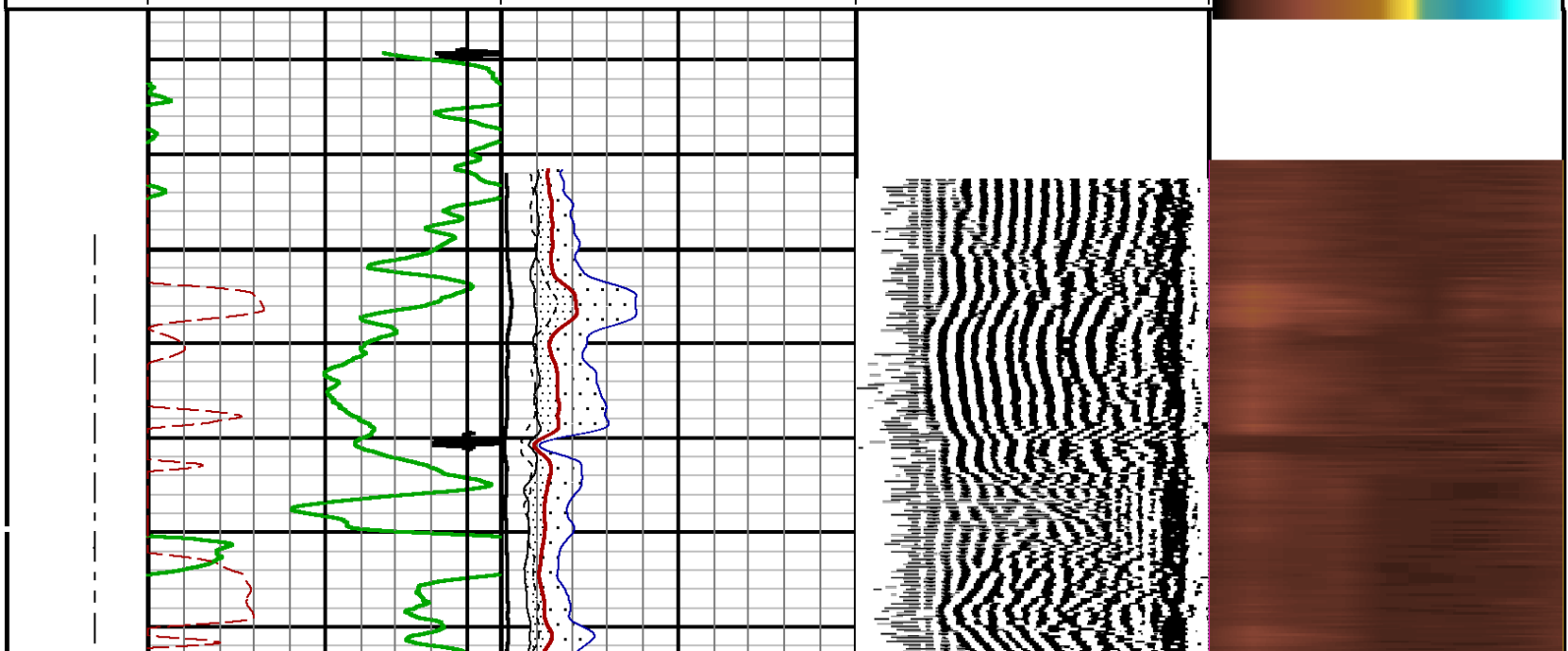
PROCESSED VERSION: 2012.07.18.162"

REPEAT PASS

80211344 CBLREPEAT

FINISH DEPTH: 5748.4 Feet DIRECTION: UP DATE: 02/24/2014 TIME: 18:45 MODE: ORIGINAL

				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



Collar Locator			MAX ENERGY	
-8000	Millivolts	800	0	100
			AMPLITUDE 3FT	
			0	100
			AMP X 5	
			0	20

START DEPTH: 5985.3	DIRECTION: UP	DATE: 02/24/2014	TIME: 18:45	MODE: ORIGINAL
80211344 CBLREPEAT				

REPEAT PASS				
DEPTH SCALE: 5":100'	LOGGED VERSION: 2012.07.18.162"			

02/24/14	11:50	557.7 F	Ver 162R 2.0b	Job 80212865
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Sector Bond Before Calibration				
Tool Type	SBT-AA	Serial No	sbta237	

Sensor	Description	Standard	Measured
AMP 3FT	ZERO	1.00	1.00
	PLUS	81.00	2053.40
AMP 5FT	ZERO	5.00	4.20
	PLUS	95.00	3188.40
1 SECTOR AMP	ZERO	5.00	72.50
	PLUS	95.00	1878.10
2 SECTOR AMP	ZERO	5.00	43.80
	PLUS	95.00	1922.60
3 SECTOR AMP	ZERO	5.00	93.80
	PLUS	95.00	1904.50
4 SECTOR AMP	ZERO	5.00	58.40
	PLUS	95.00	2482.20
5 SECTOR AMP	ZERO	5.00	72.20
	PLUS	95.00	2019.40
6 SECTOR AMP	ZERO	5.00	56.30
	PLUS	95.00	2183.90
7 SECTOR AMP	ZERO	5.00	51.20
	PLUS	95.00	2053.40

7 SECTOR AMP	ZERO	5.00	51.60
	PLUS	95.00	2340.60
8 SECTOR AMP	ZERO	5.00	49.70
	PLUS	95.00	2261.50

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

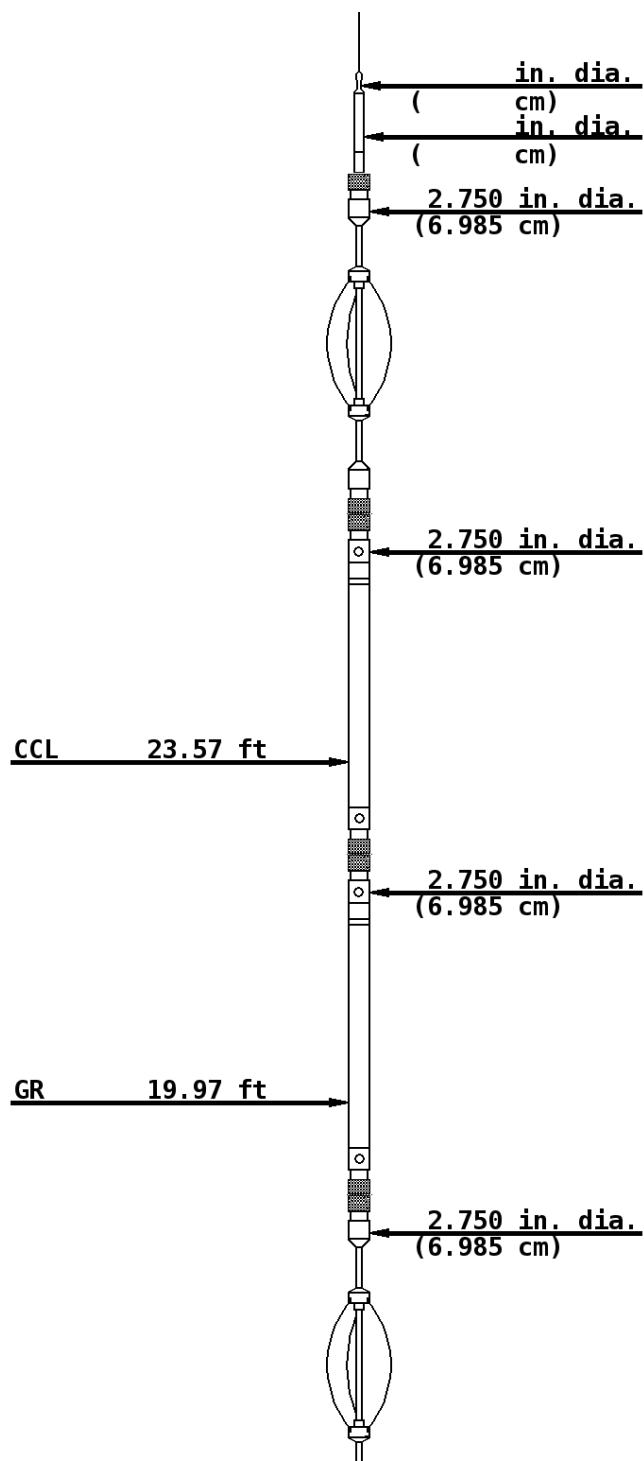
Weight 39.8 lb
Length 3.40 ft
Max. Diameter 2.717 in

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

2.750 in. dia.
(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 33B-24-07-96

FIELD BATTLEMENT MESA

COUNTY GARFIELD

STATE COLORADO



Weatherford®