

HALLIBURTON

RESERVOIR
MONITORING
TOOL

FIELD COPY

Company	BILL BARRETT CORP.		
Well	STATE OF CO 1S-66-36-1609CH		
Field			
County	ADAMS	State	CO
Company BILL BARRETT CORP.			
Well STATE OF CO 1S-66-36-1609CH			
Field			
County	ADAMS	State	CO
API No.:	05-001-09785-0000	Serv. #:	901275266
Location: NWNW 39.925237N, -104.732413W		Other Services	
Sec: 36 Twp: 1S Rge: 66W		RBT	

Permanent Datum	GL	Elevation	5180	Elevation	
Log Measured From	KB	23	Ft. above perm. datum	K.B. 5203	
Drilling Measured From	KB			D.F. 5180	
Date @ Time Logged	16-APR-14 @ 7:00	Type Fluid in Hole	FRESH WATER		
Run No.	ONE	Density of Fluid	8.33		
Depth - Driller	7900	Fluid Level	SURFACE		
Depth - Logger	7020	Cement Top Est. Logged	MEASURED		
Bottom - Logged Interval	7020	Equipment / Location	8537 / US RS		
Top - Log Interval	SURFACE	Recorded by	SULLIVAN		
Max. Recorded Temp.	189	Witnessed by	CURTIS		
CEMENTING DATA		Protection	String	Liner	
Date / Time Cemented		String			
Primary / Squeeze					
Expected Compressive Strength	psi@ hrs	psi@ hrs	psi@ hrs	psi@ hrs	
Cement Volume					
Cement Type / Weight	/	/	/	/	
Formulation					
Mud Type / Mud Wgt.	/	/	/	/	
Borehole Record		Casing & Tubing Record			
Run Number	Bit	From	To	Size	Weight
				9 5/8	36
				7	26
					SURFACE
					1495
					7900

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HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

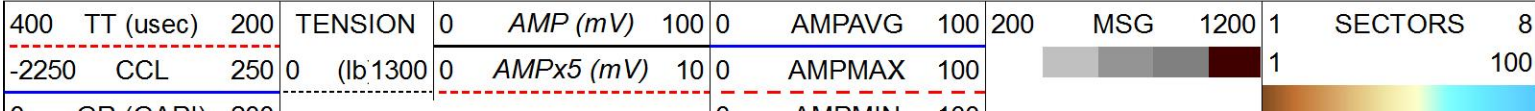
RMT LOG FROM 7020' TO 1495' & RBT LOGGED TO SURFACE.
RECALIBRATION FAILED FROM 1426' TO 356' DUE TO SOFTWARE GLITCH

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES

HALLIBURTON

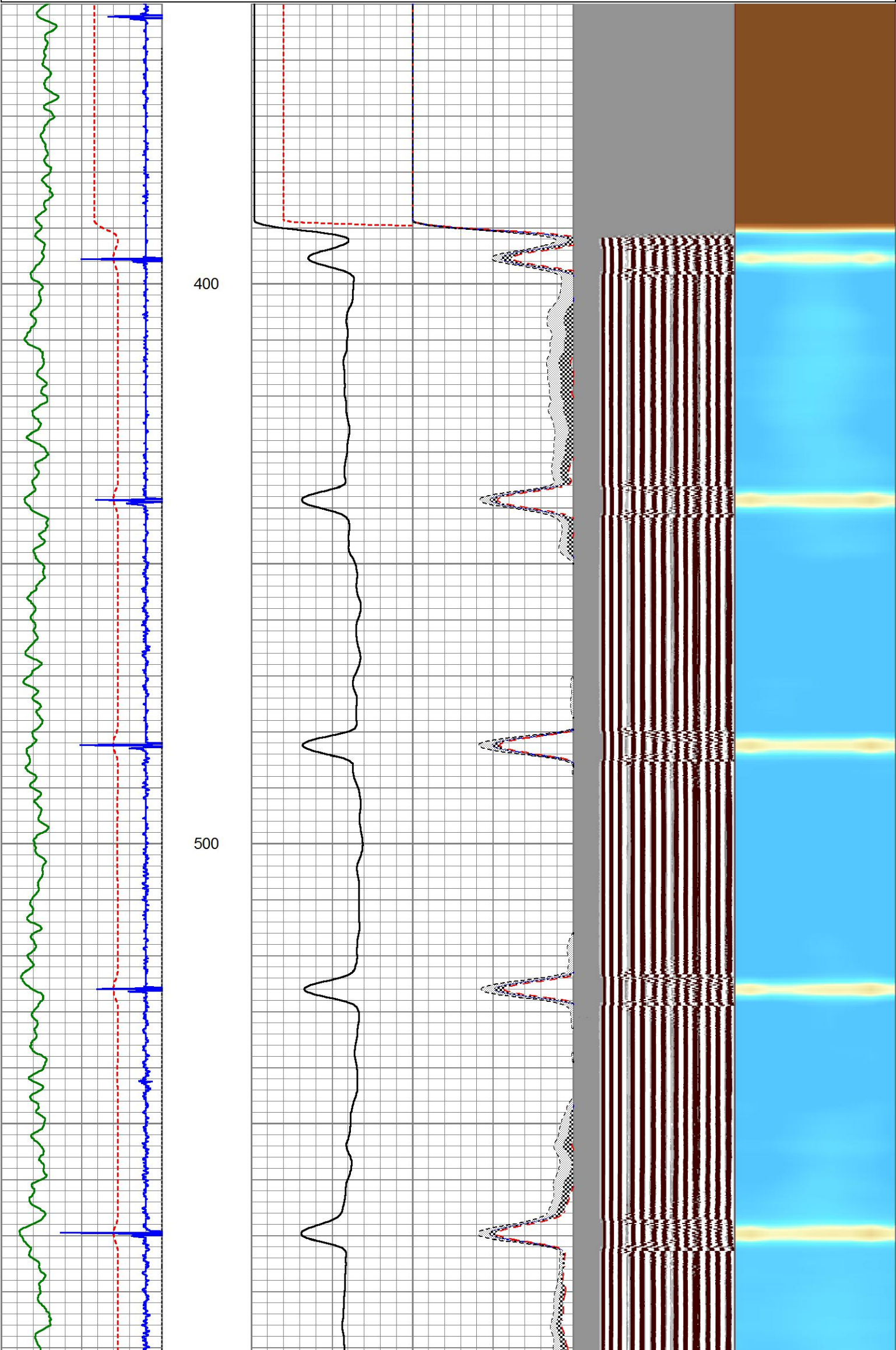
MAIN LOG TOP CBL

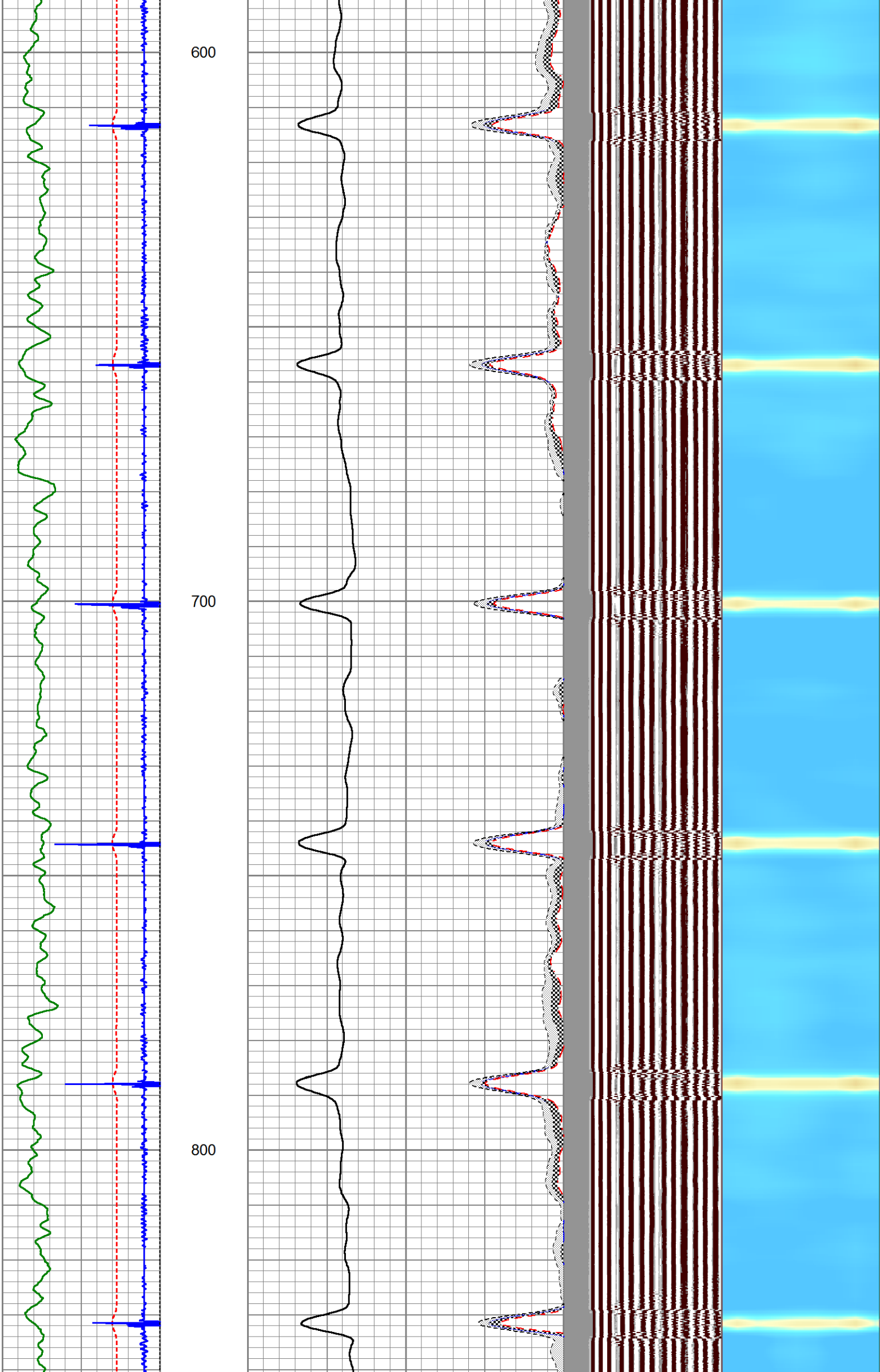
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Dataset Pathname main1/main1
Presentation Format radial
Dataset Creation Wed Apr 16 01:44:11 2014
Charted by Depth in Feet scaled 1:240

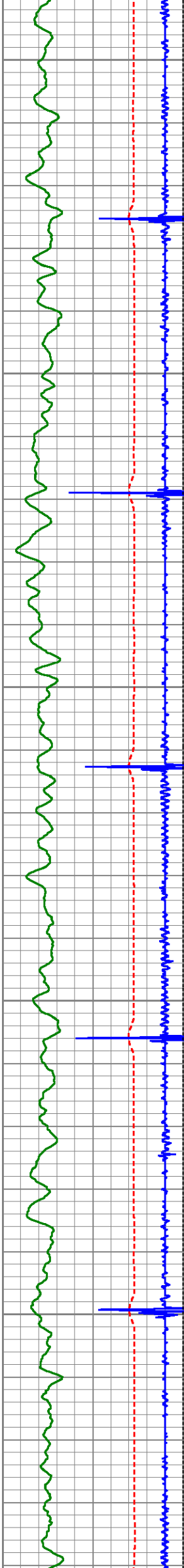


0 GR (GAPI) 200

0 AMPMIN 100

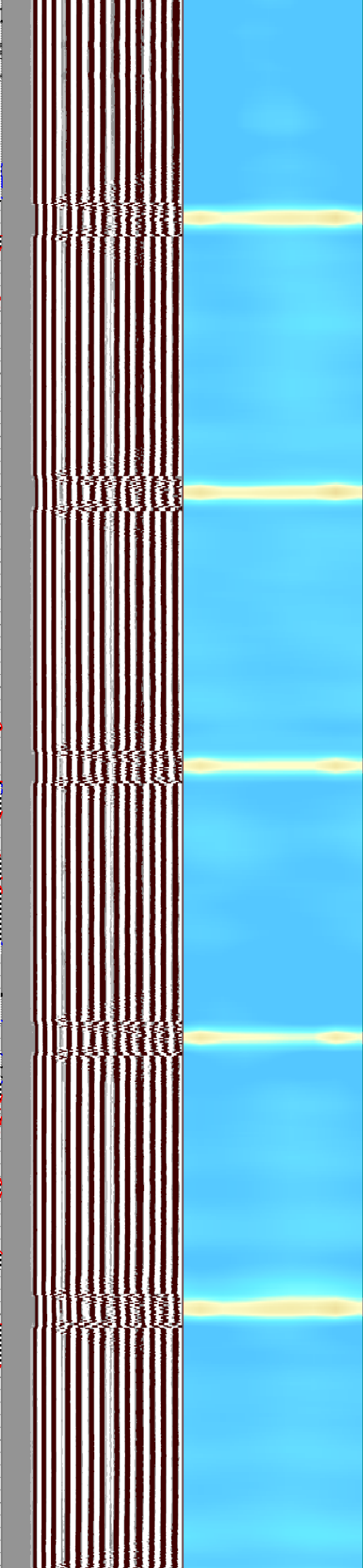
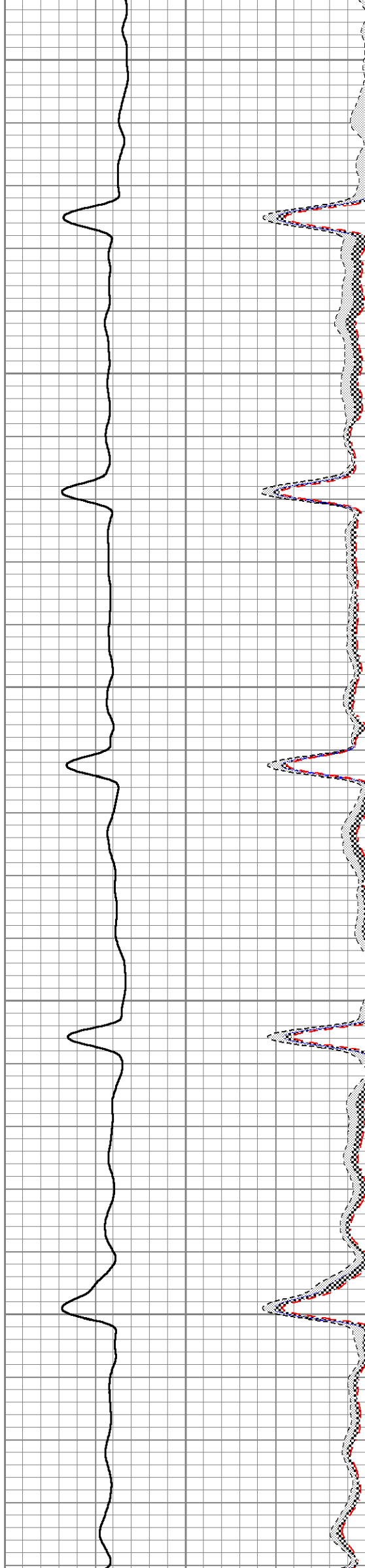


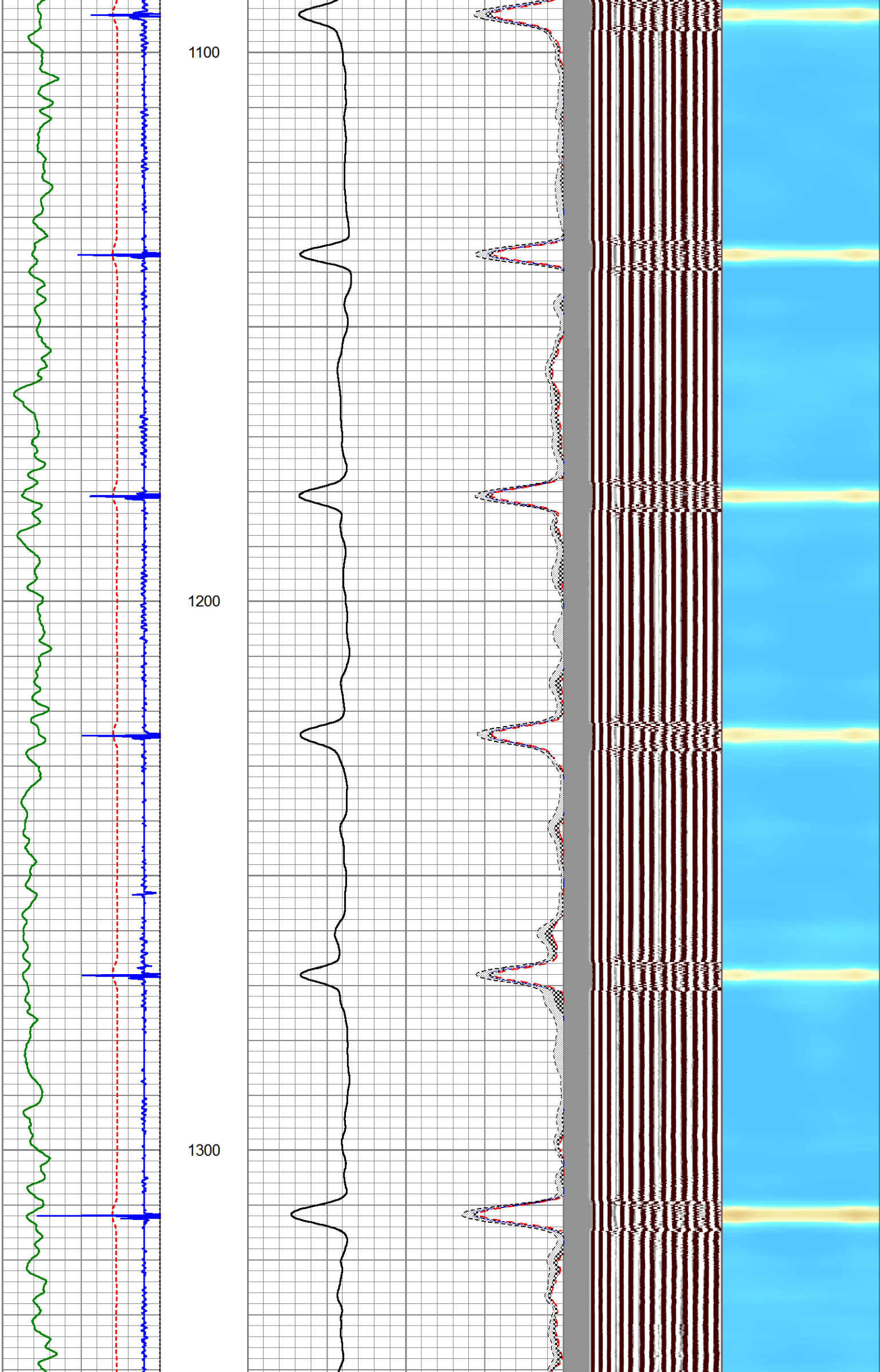


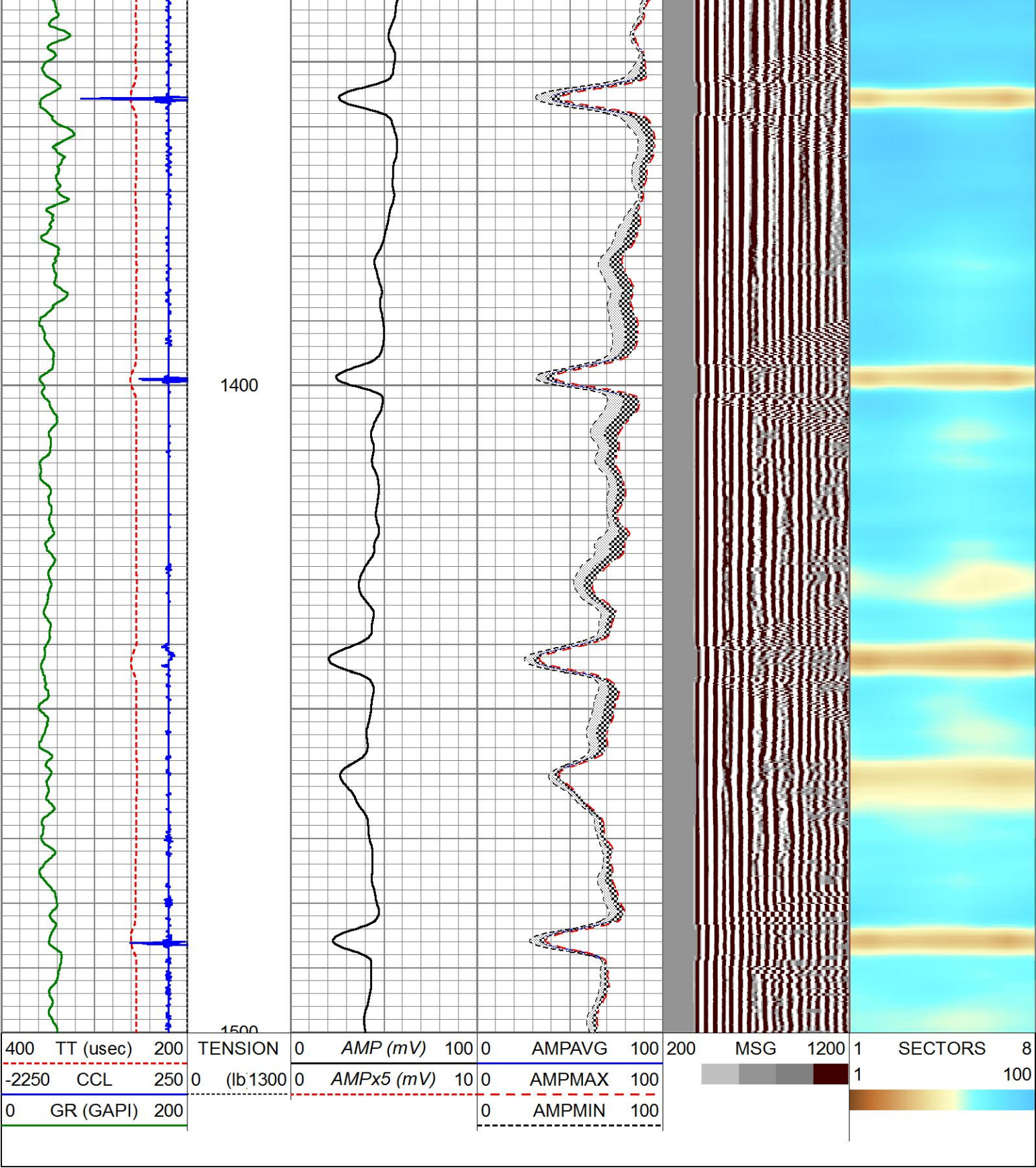


900

1000







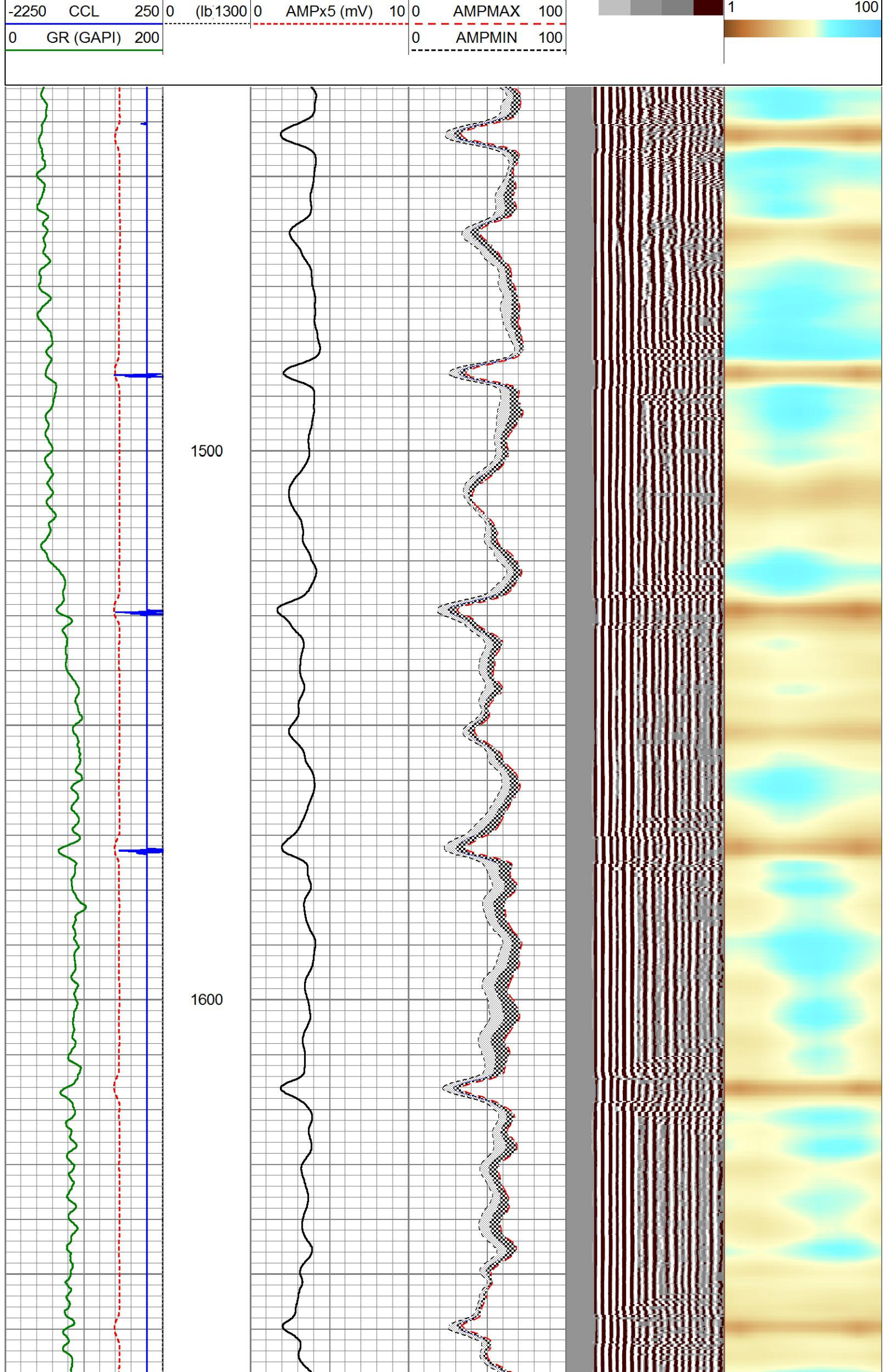
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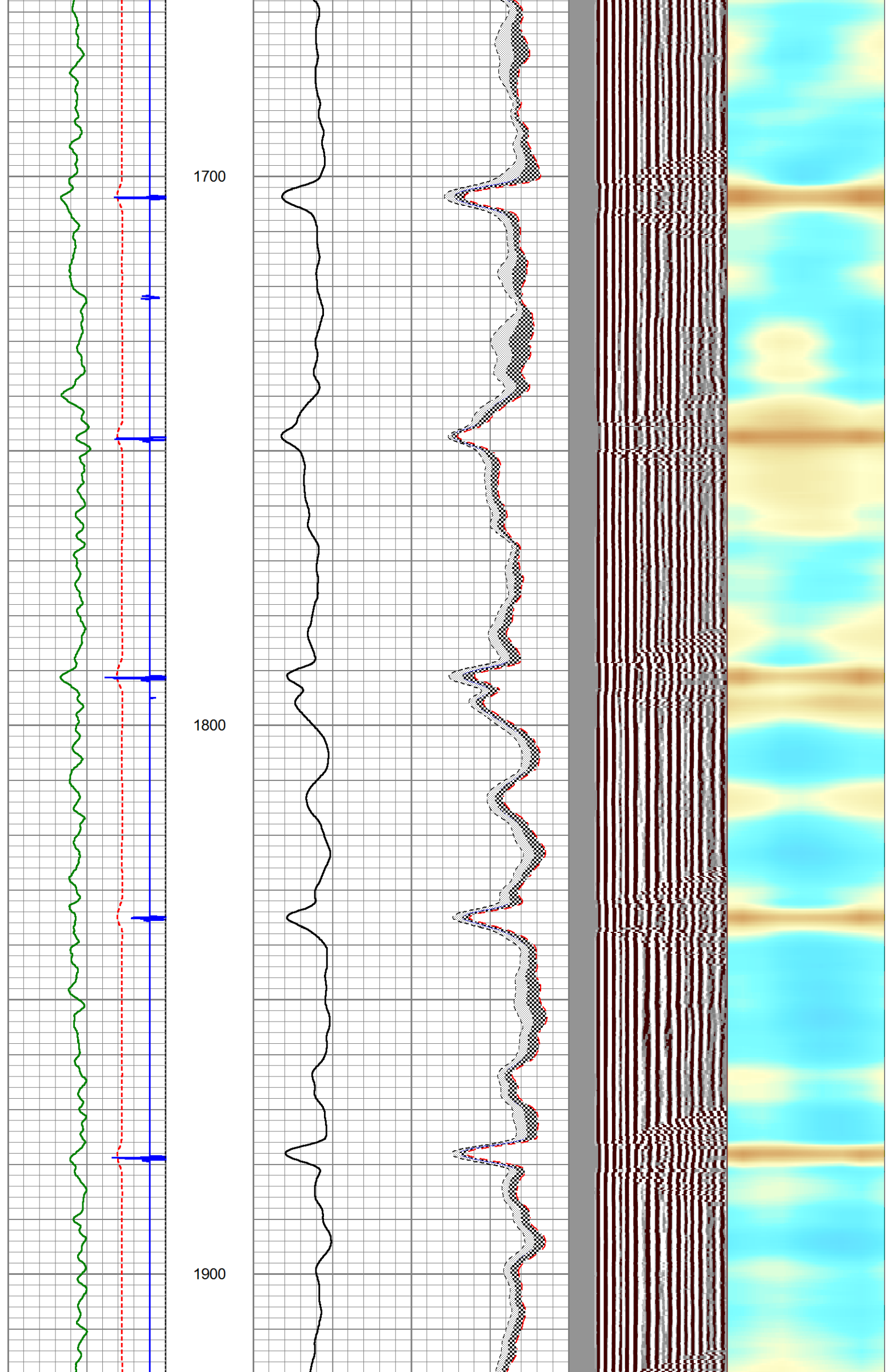
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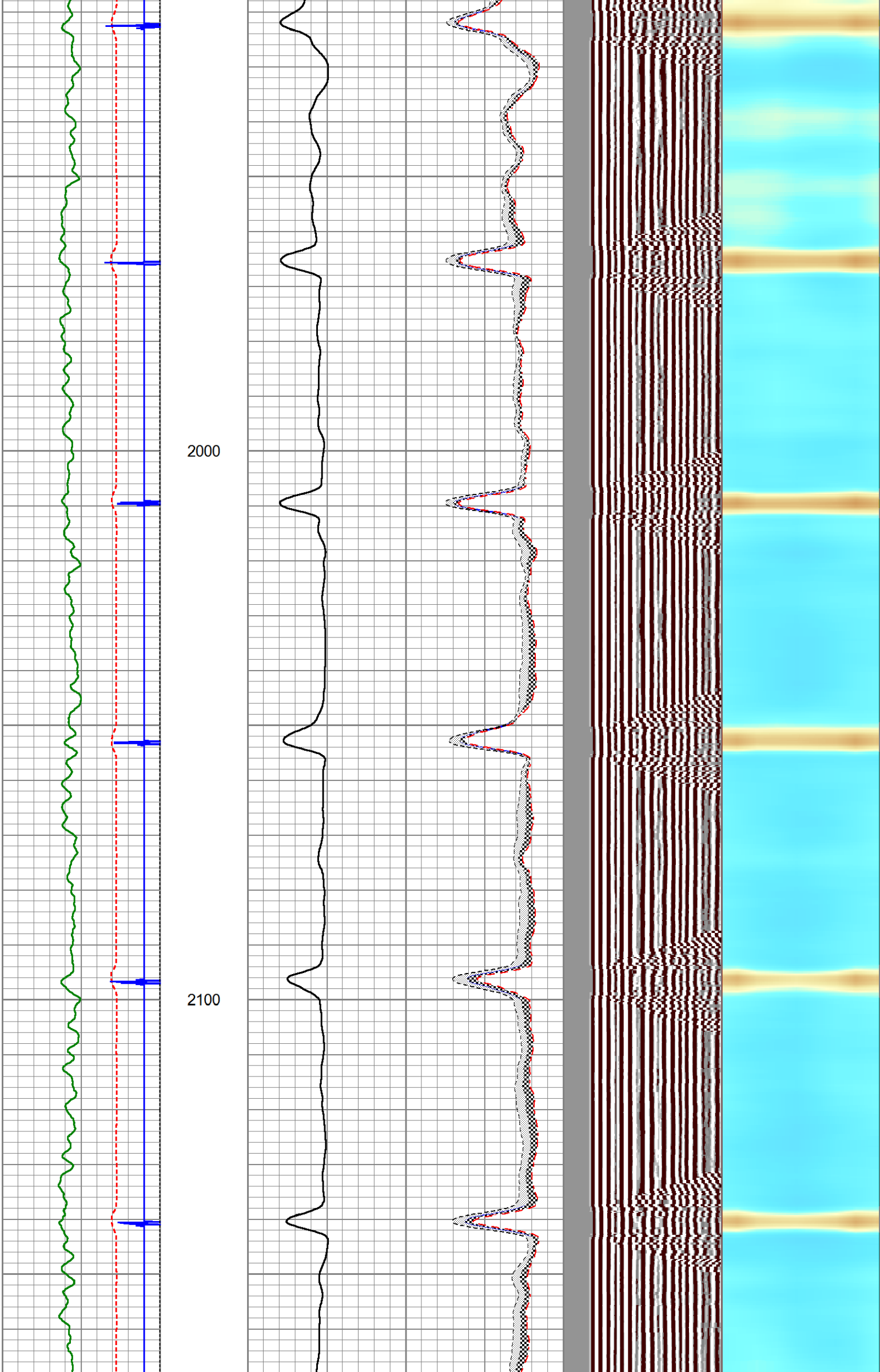
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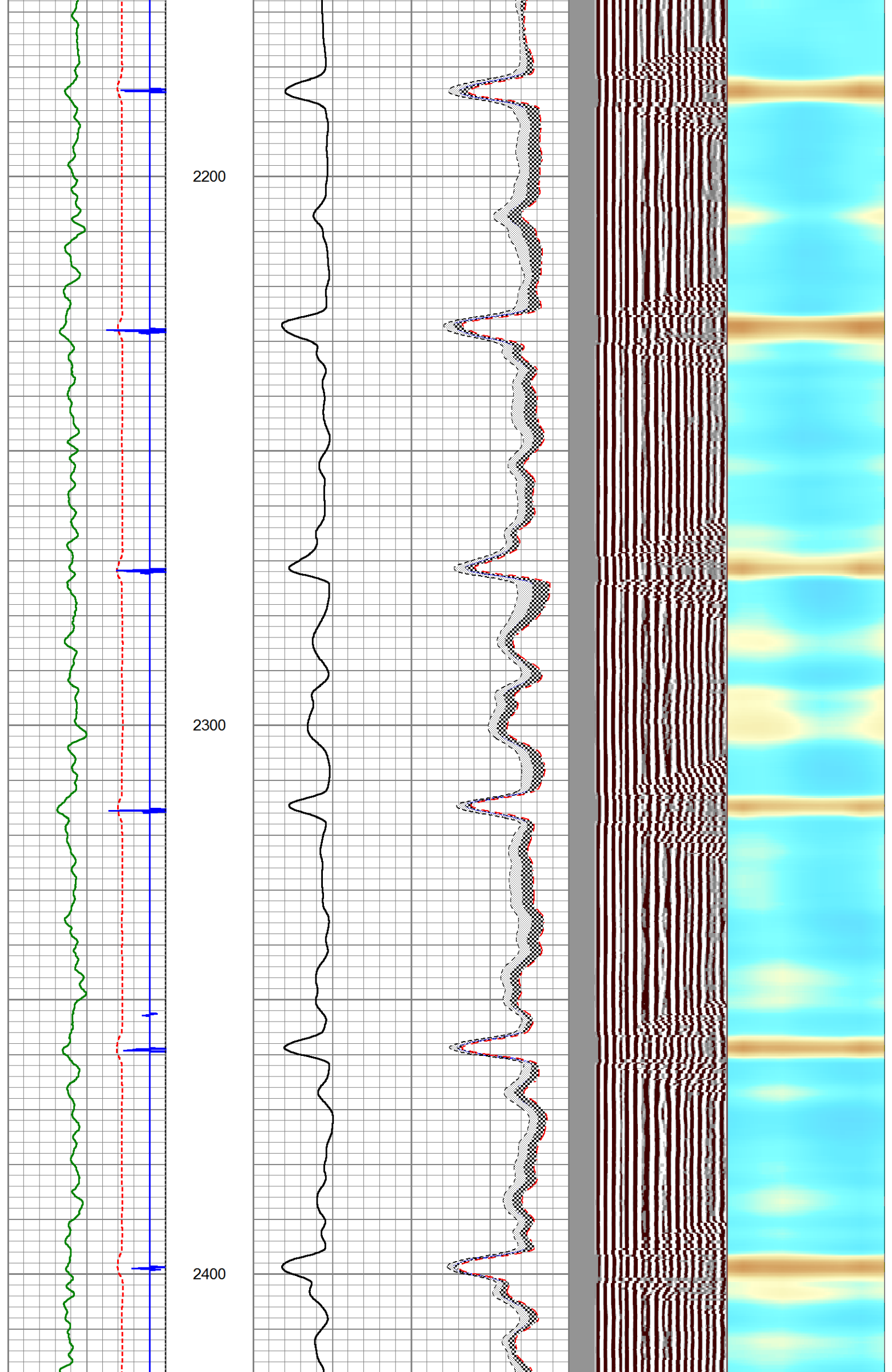
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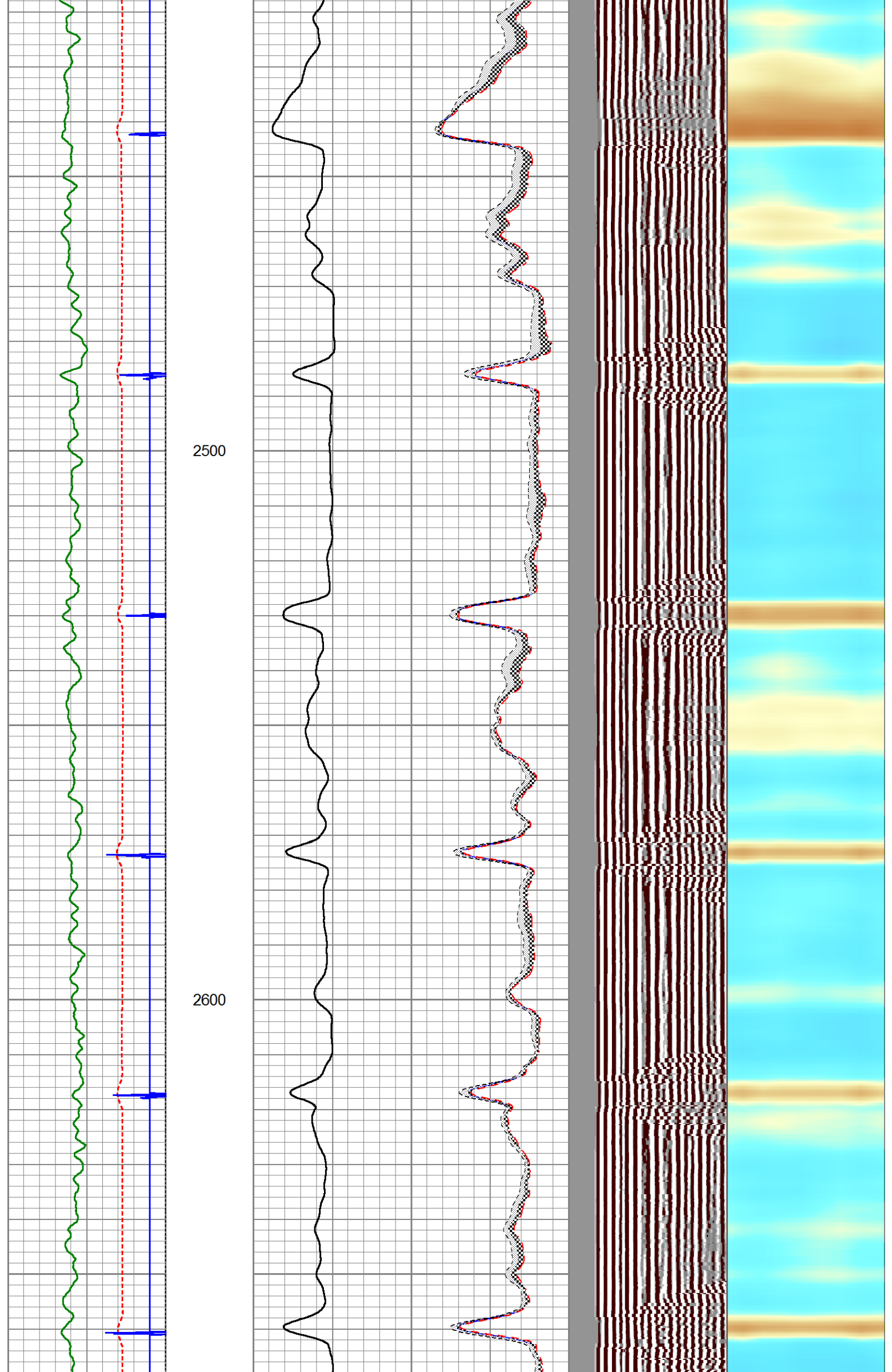
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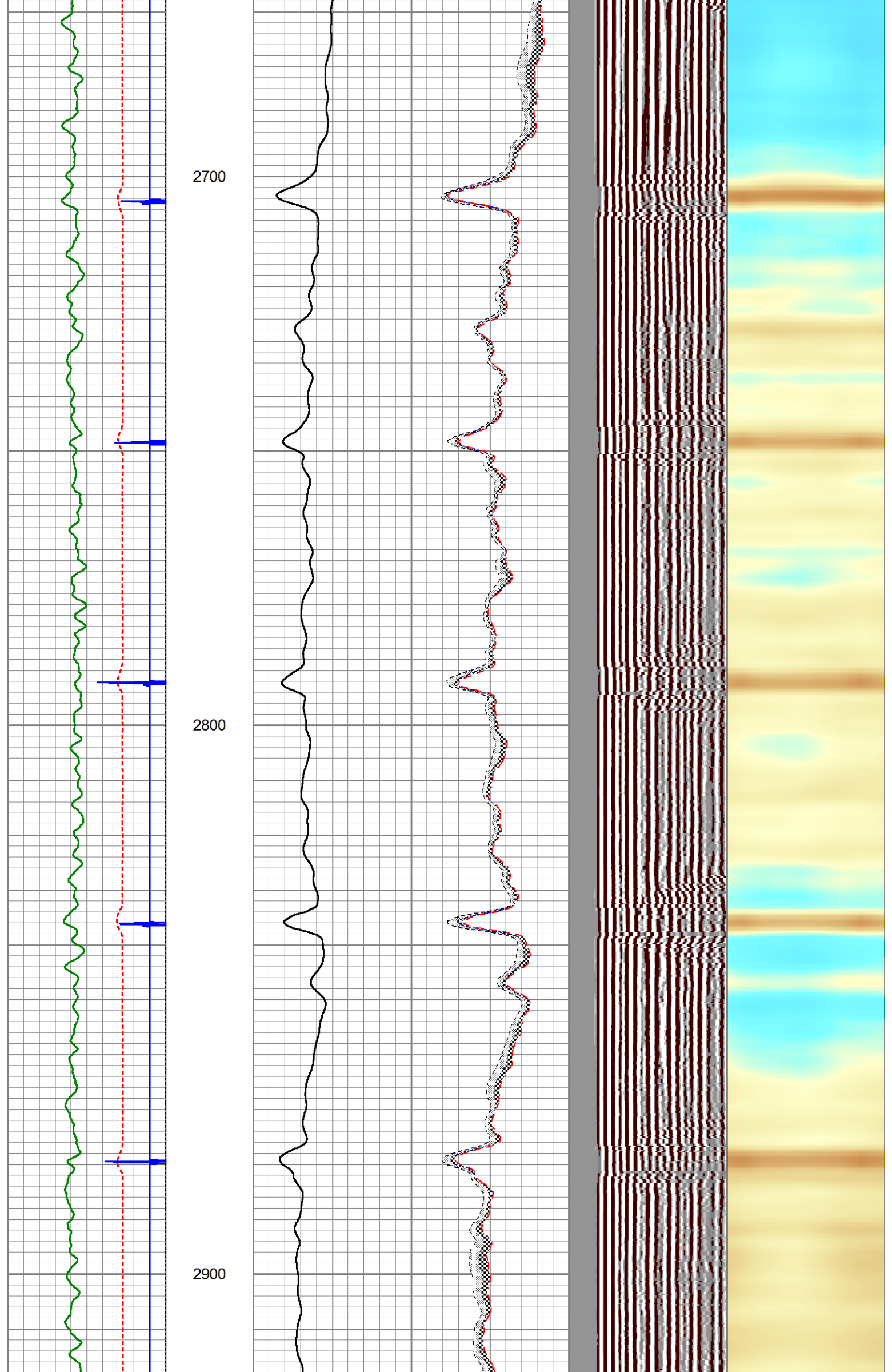


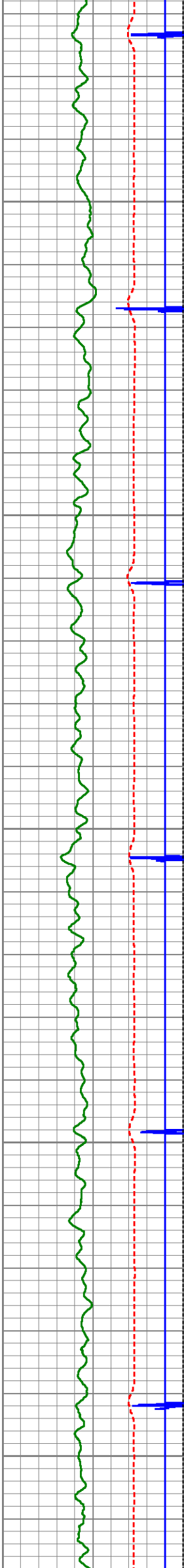






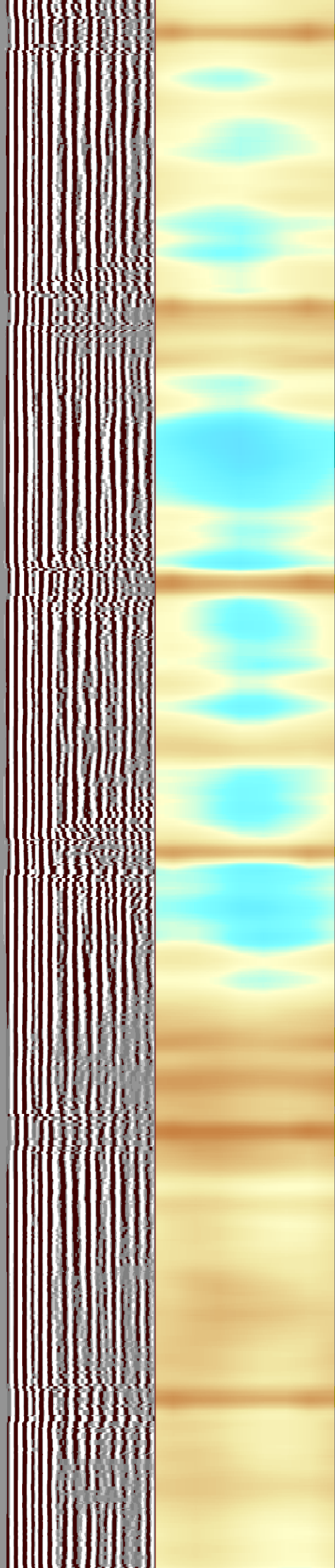
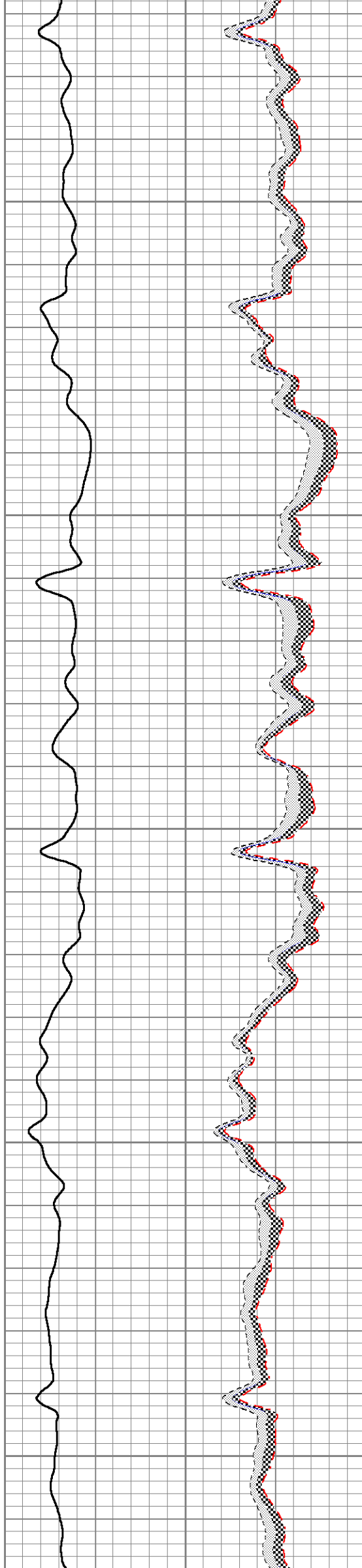


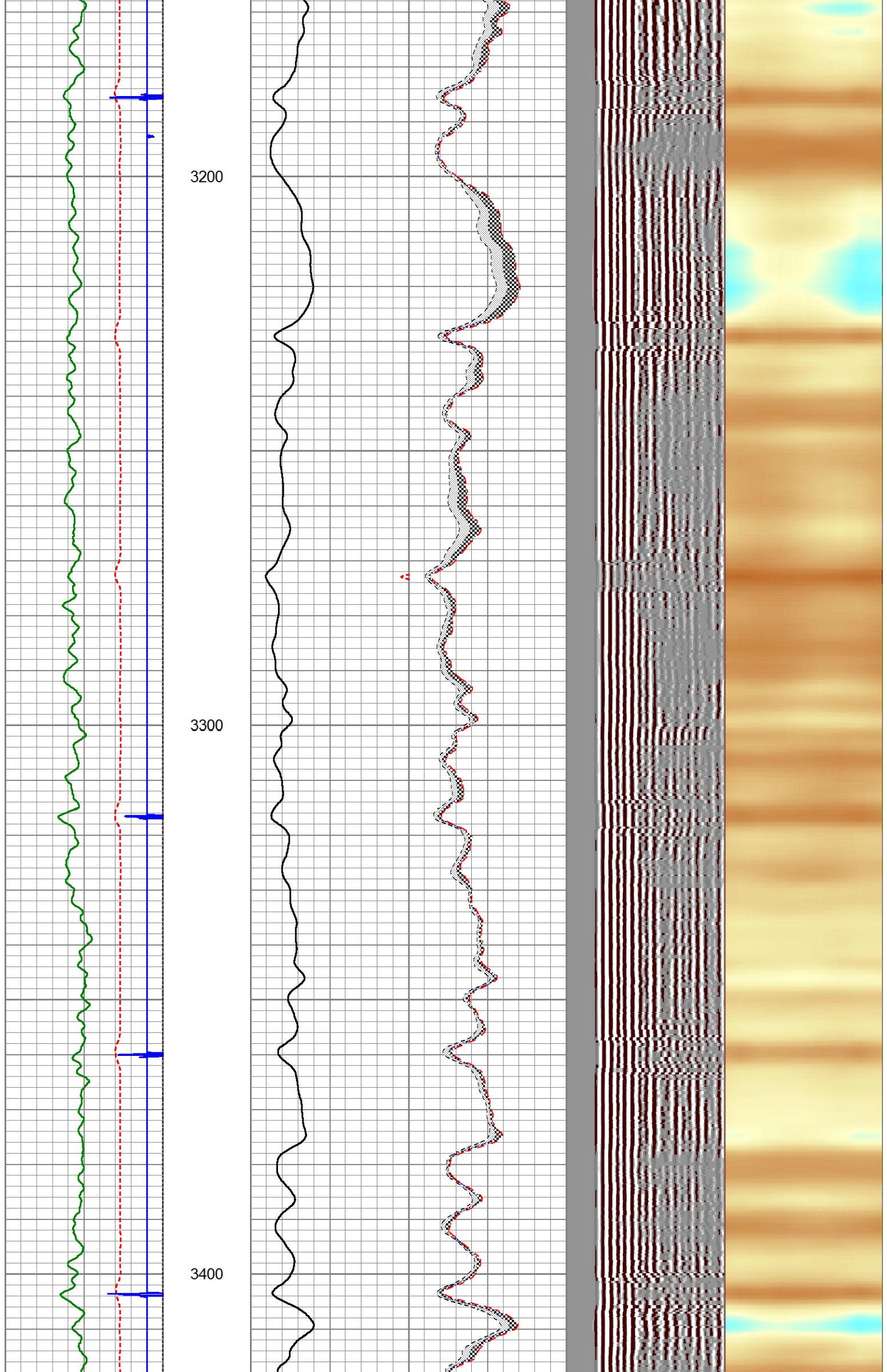


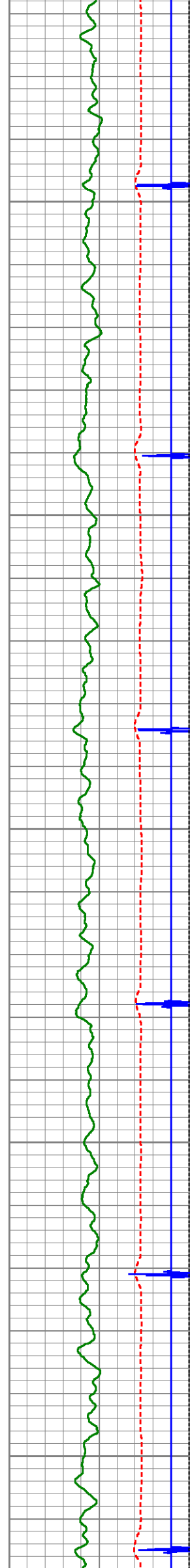


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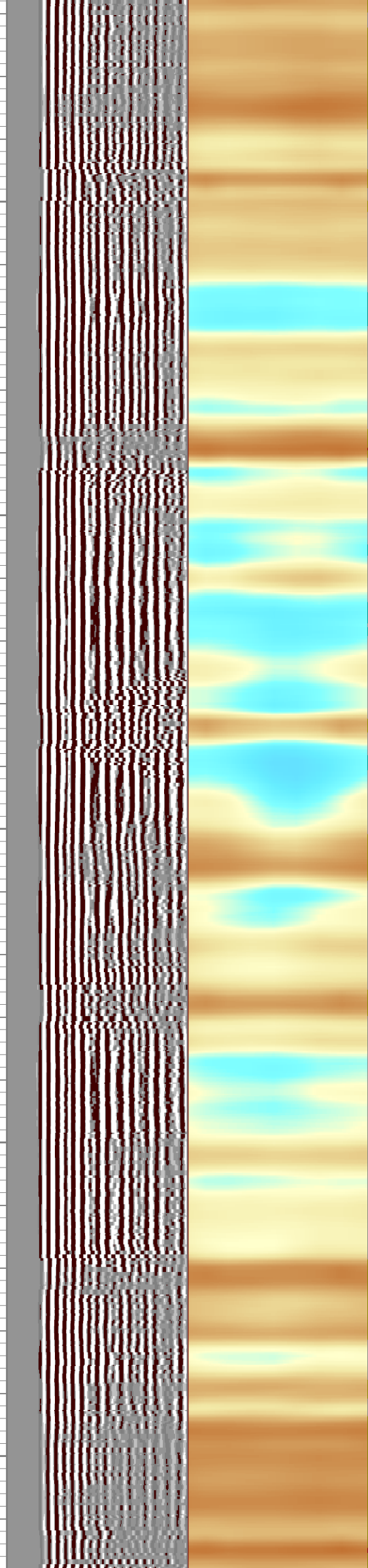
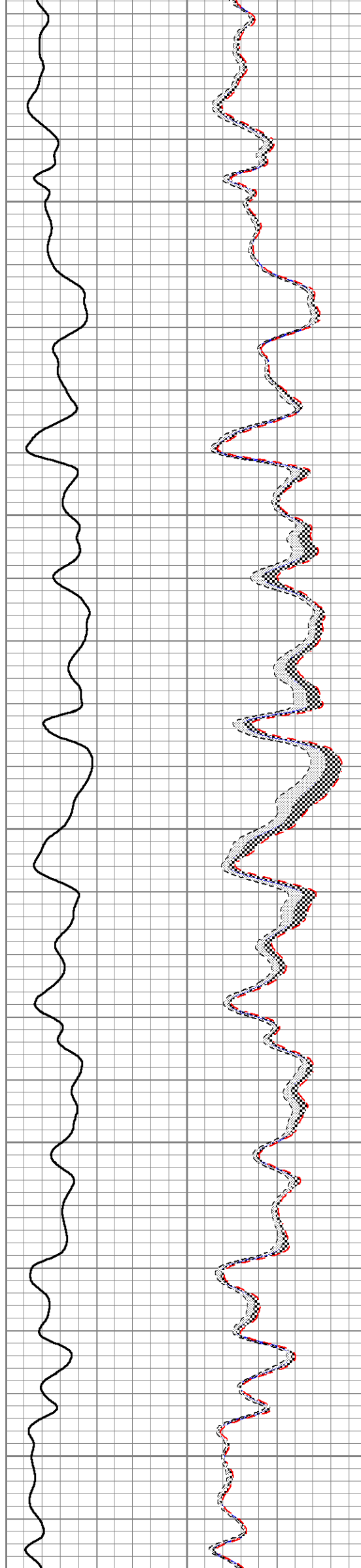


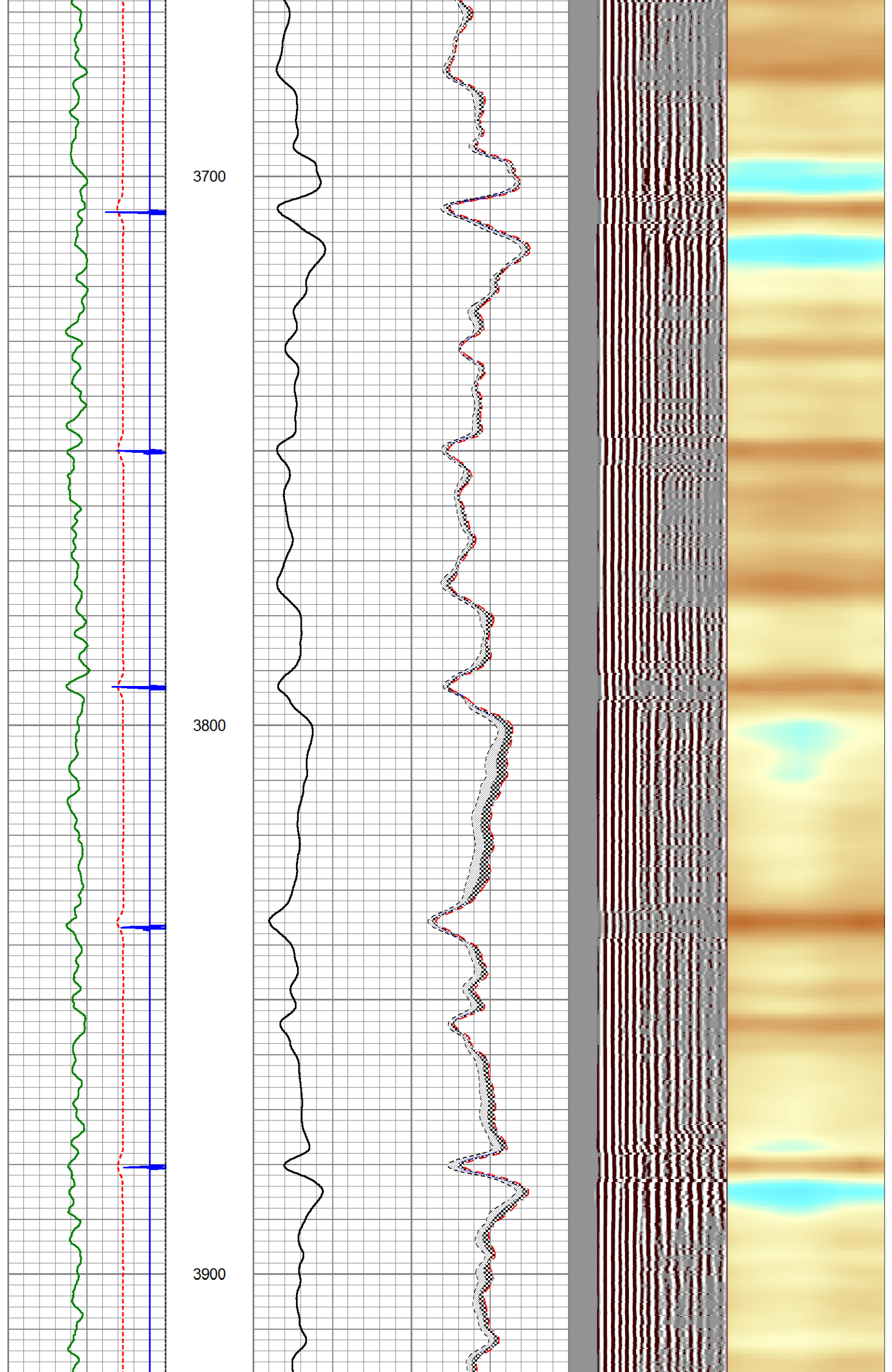


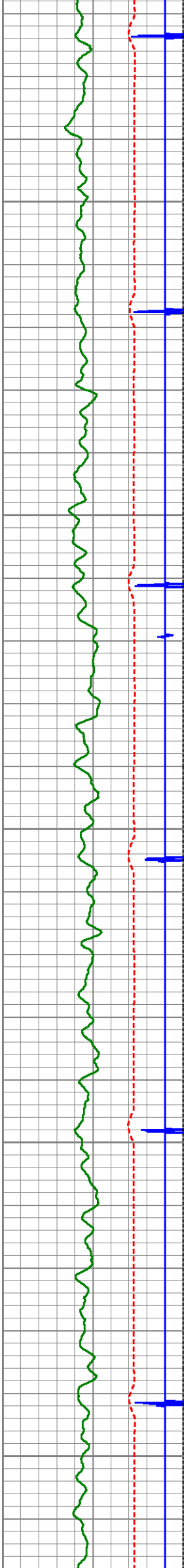


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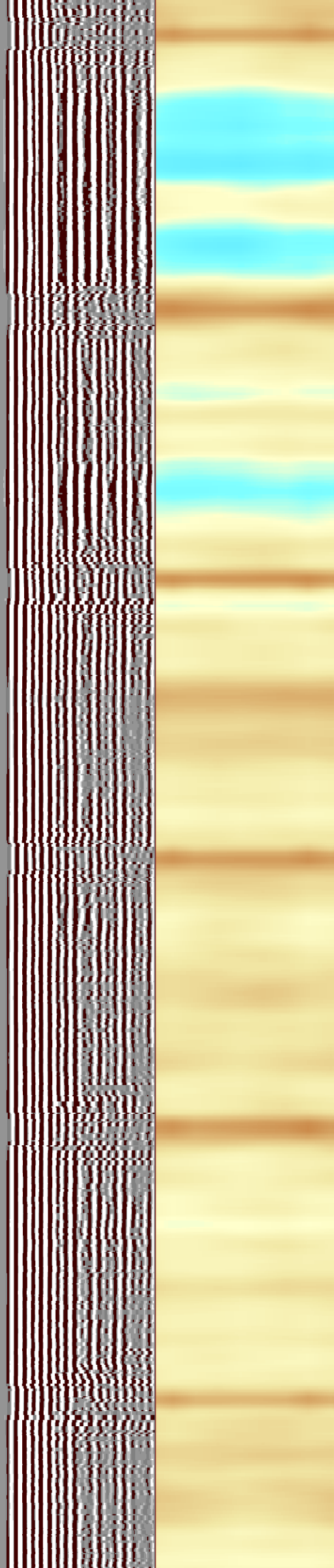
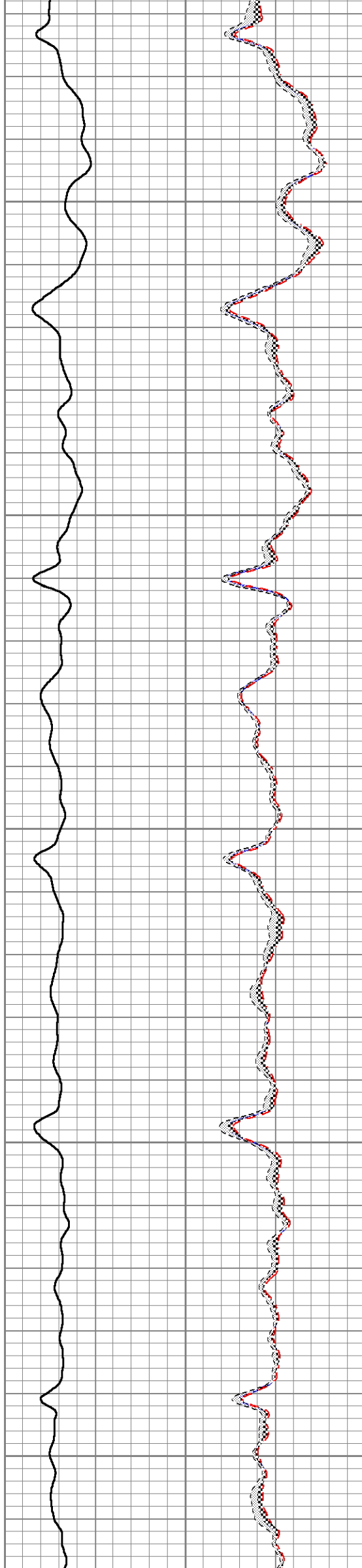


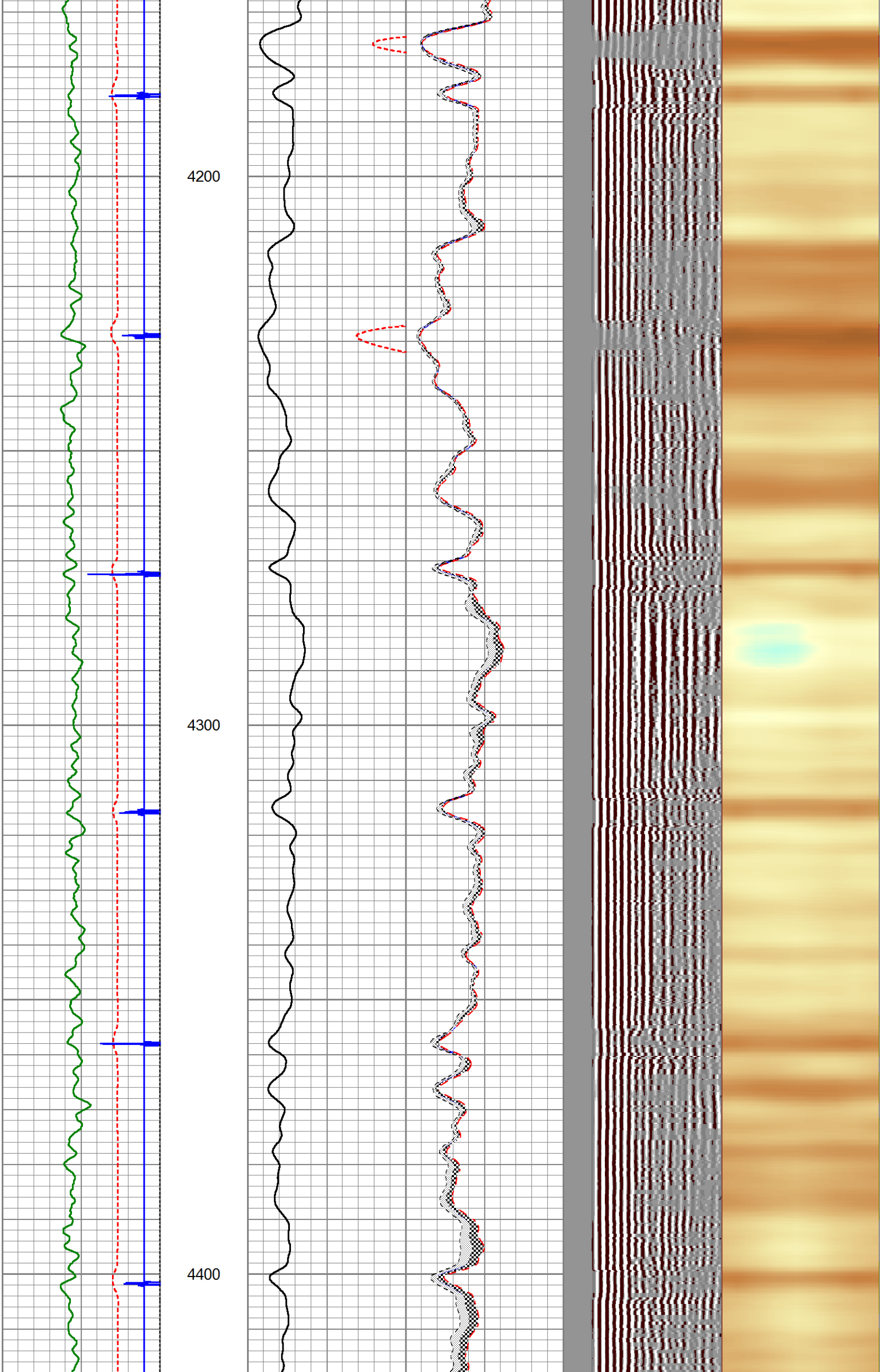


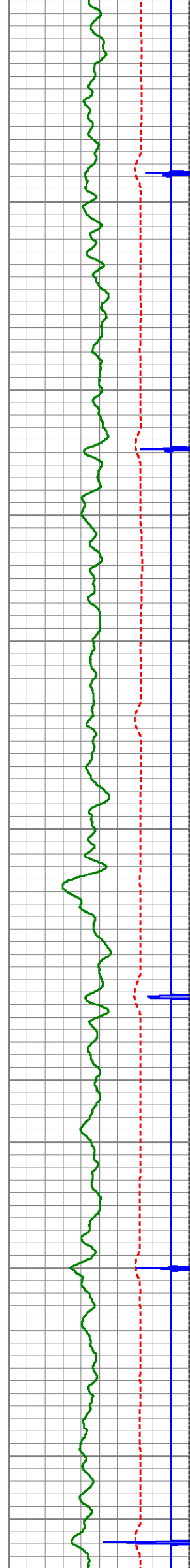


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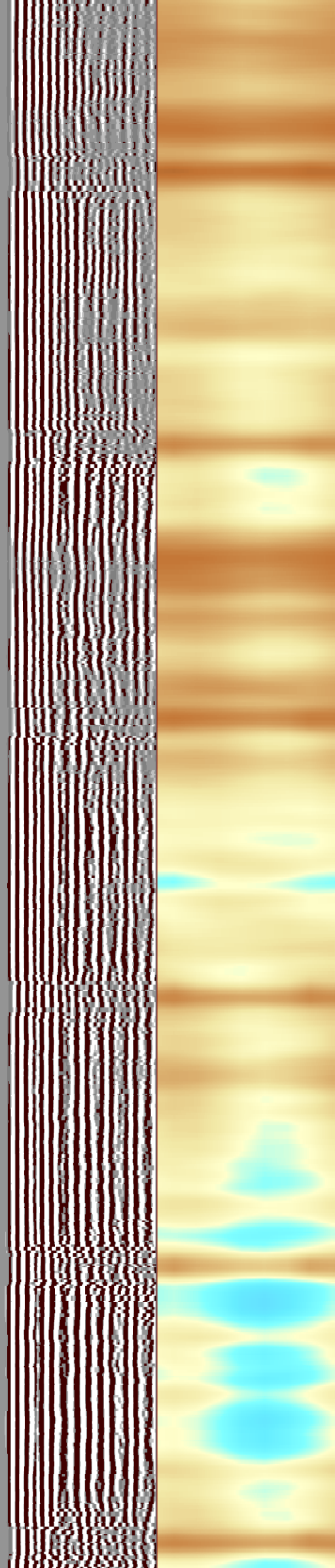
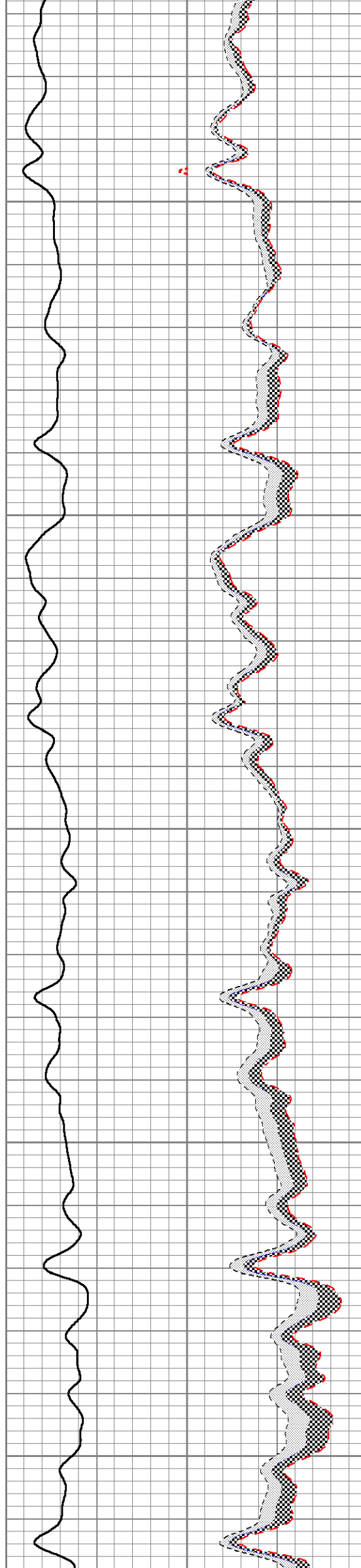


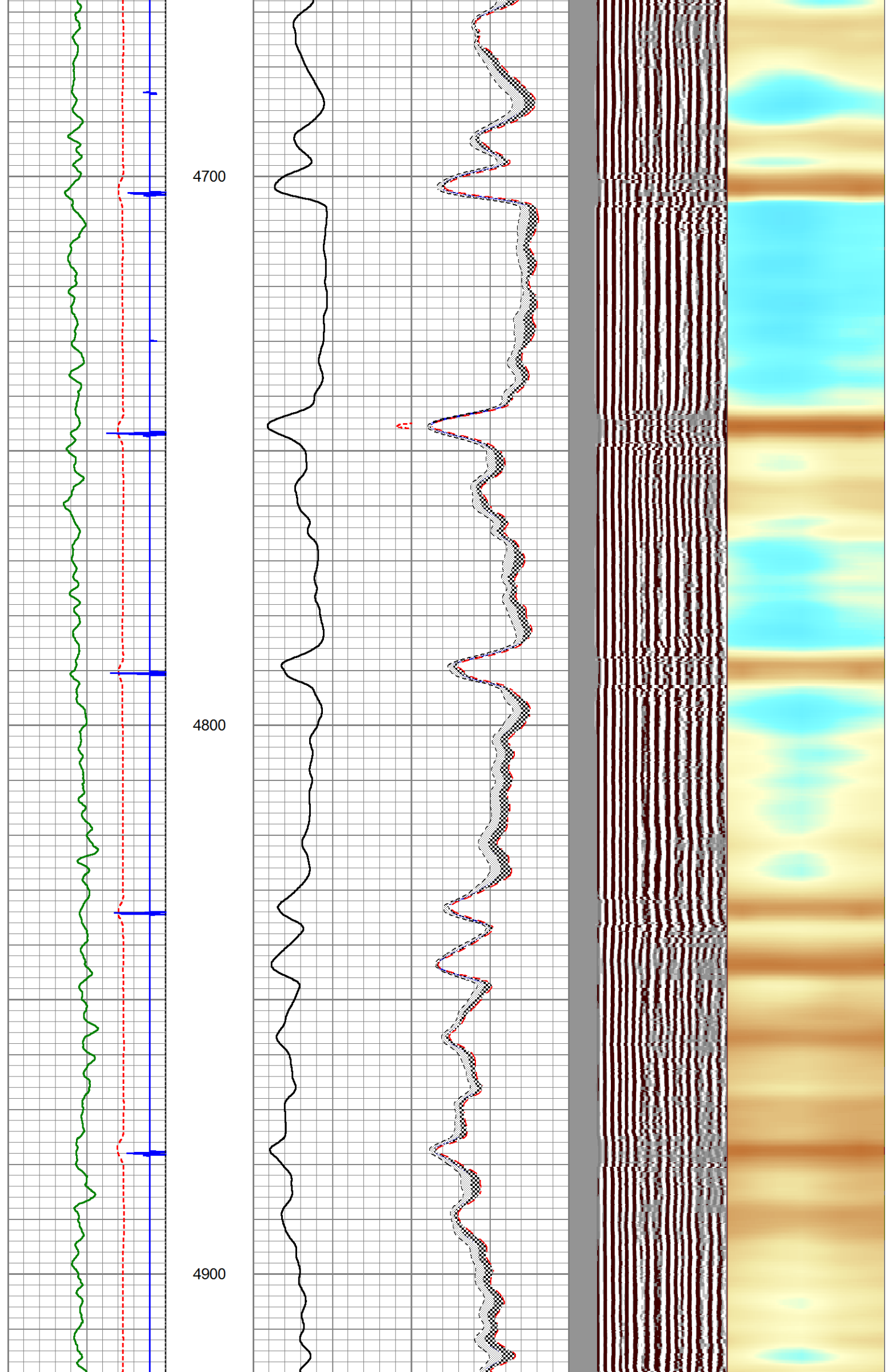


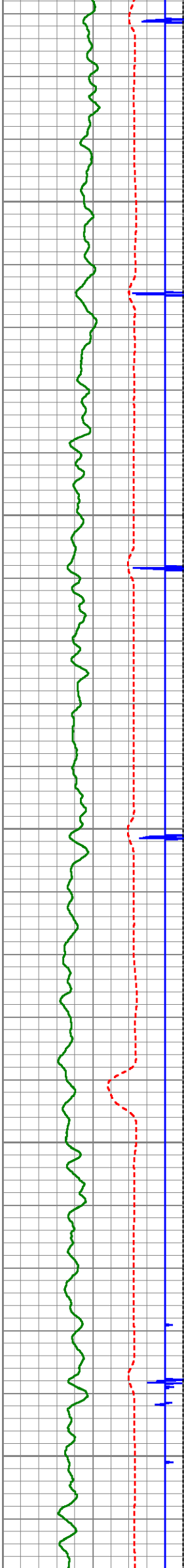


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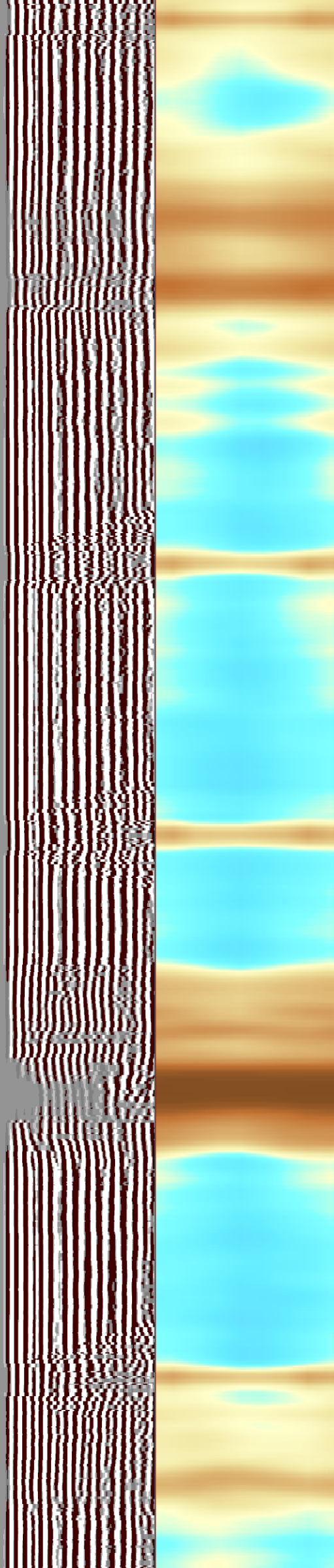
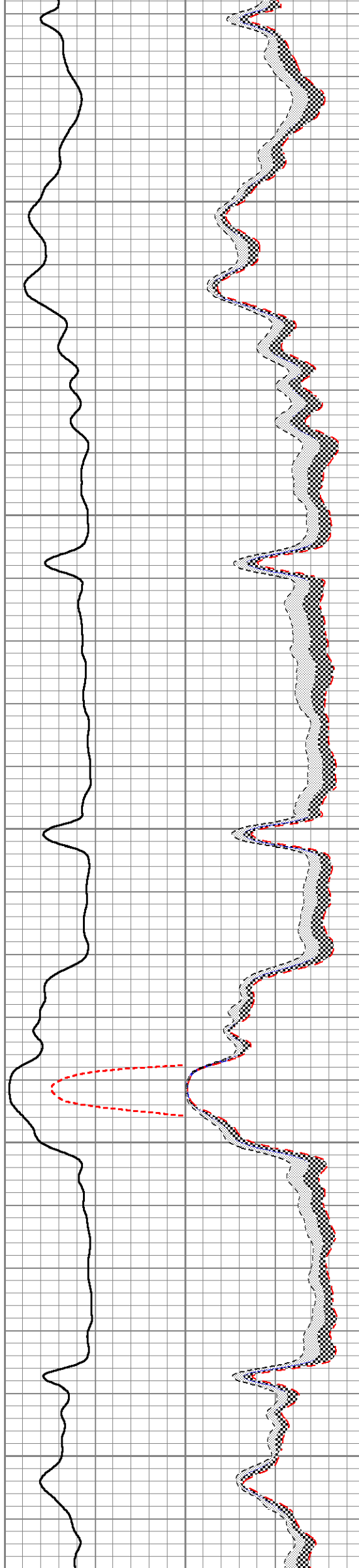


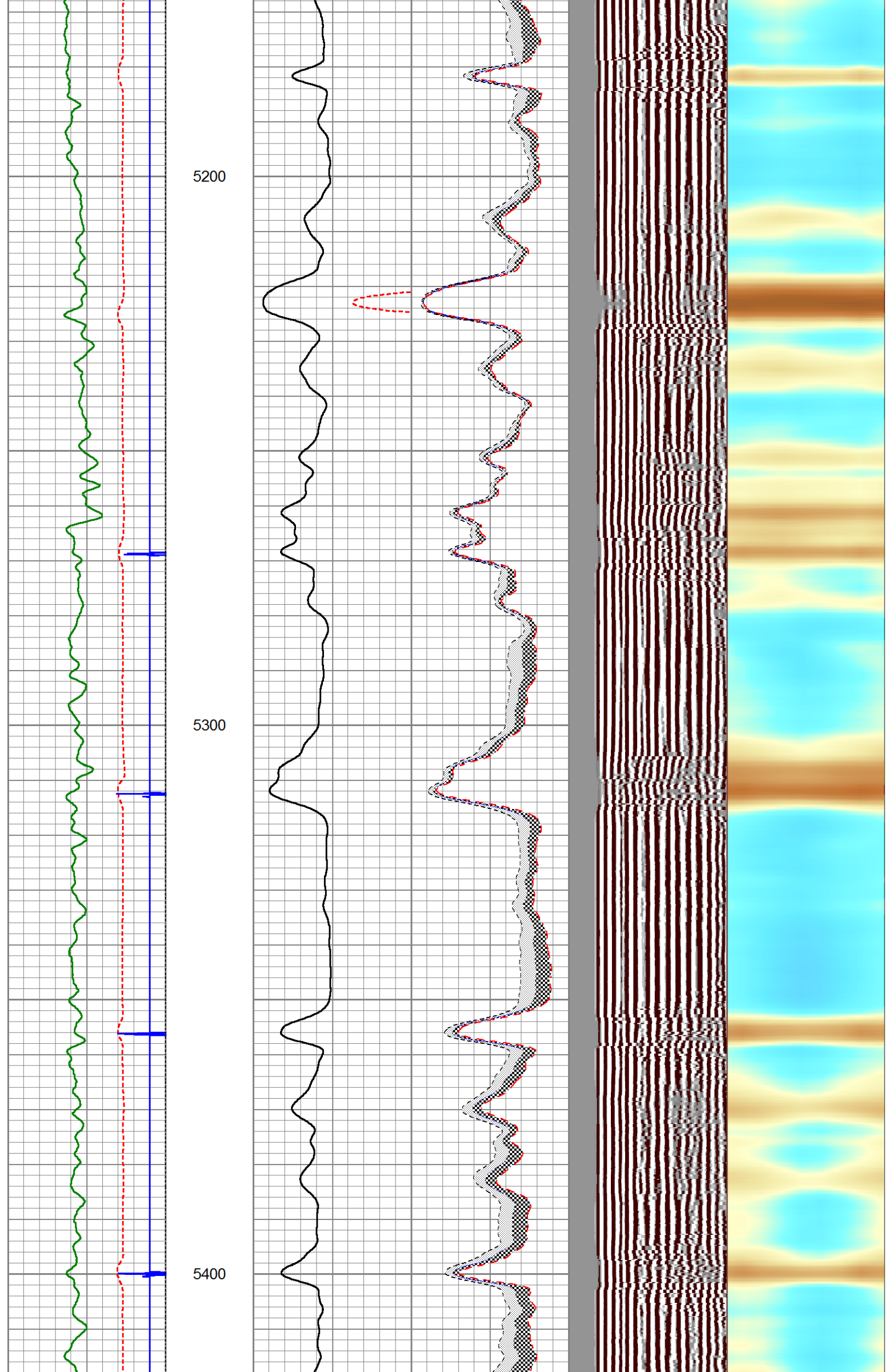


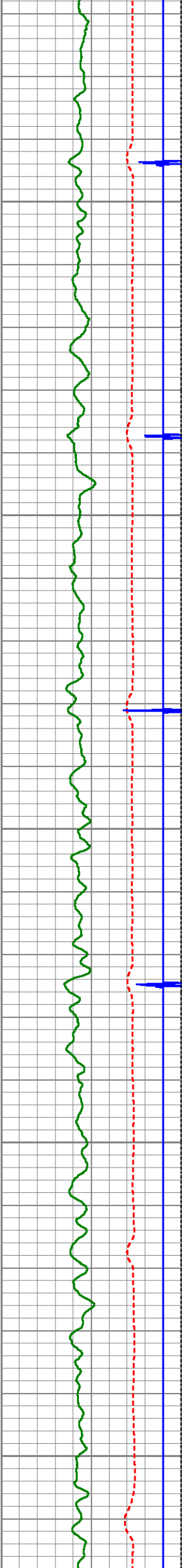


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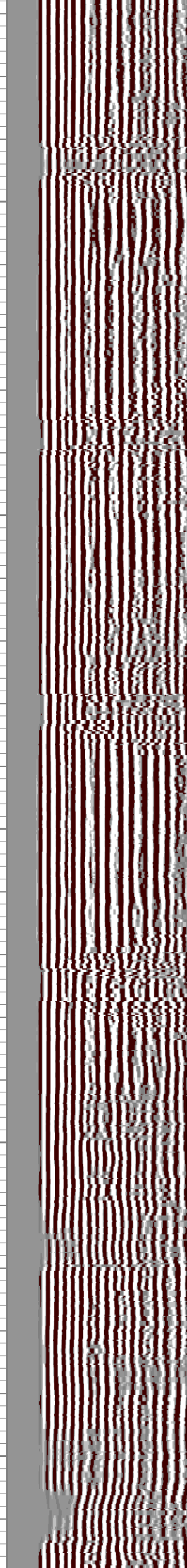
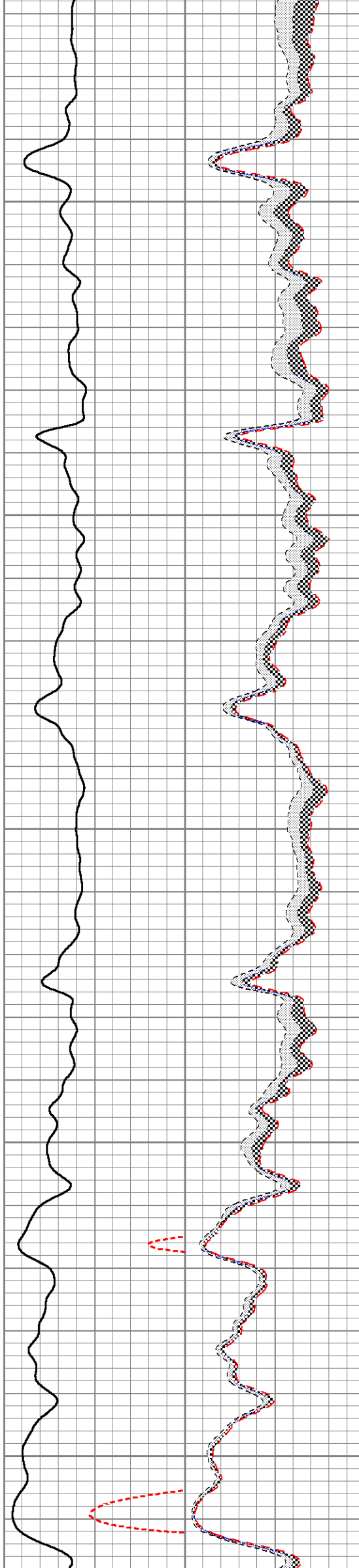


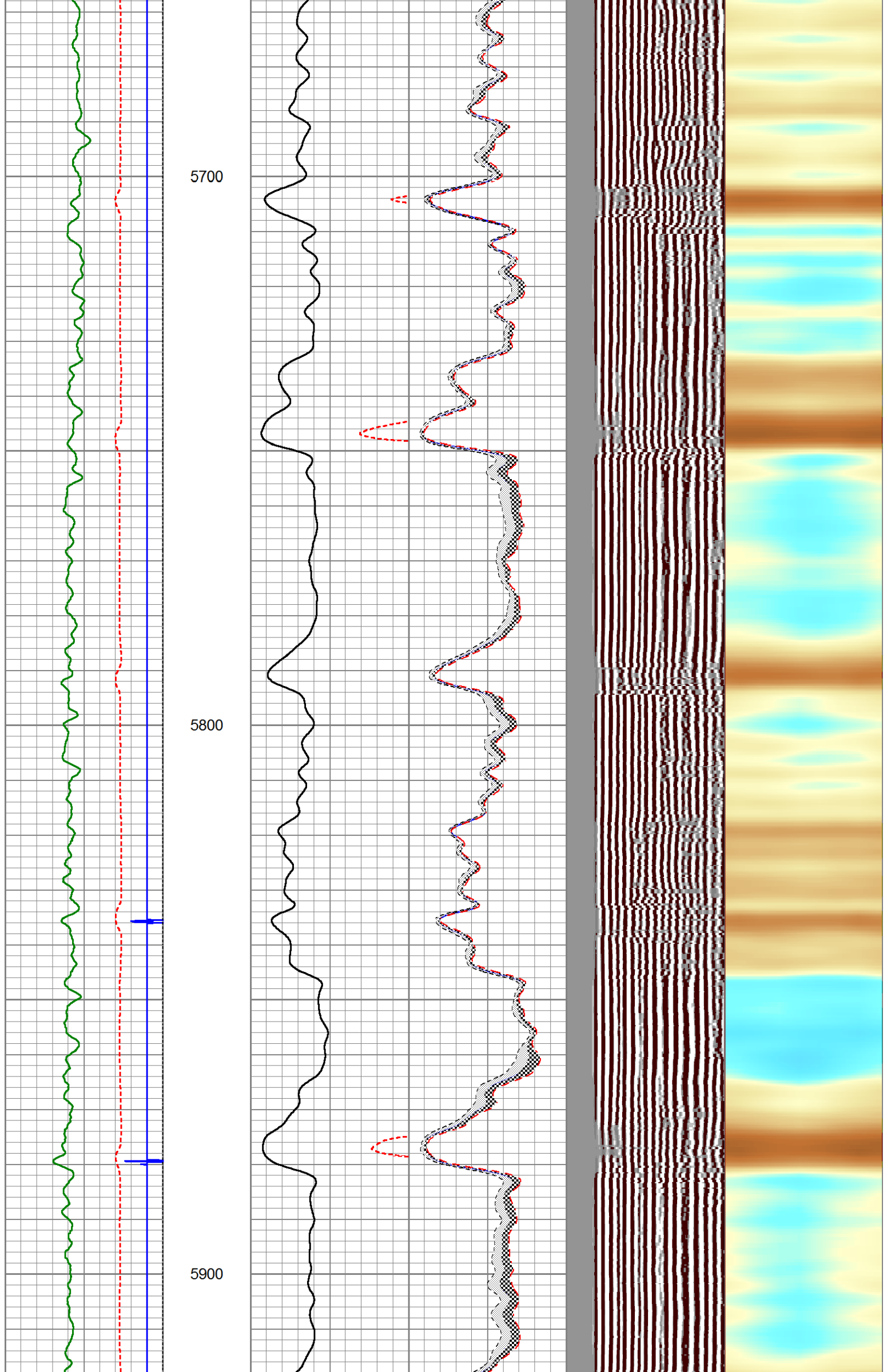


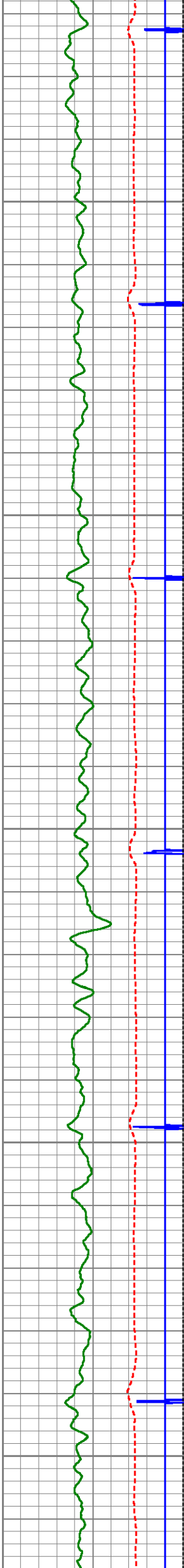


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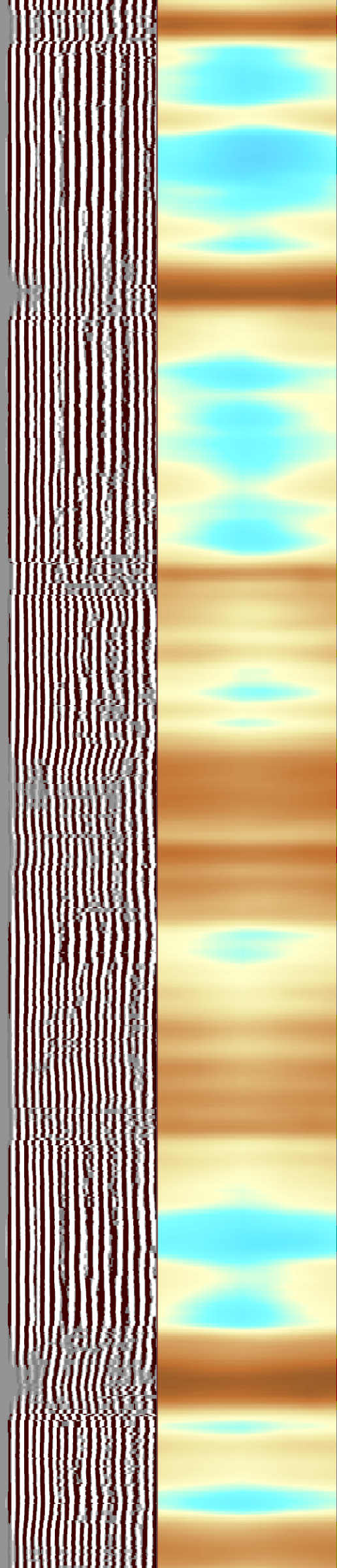
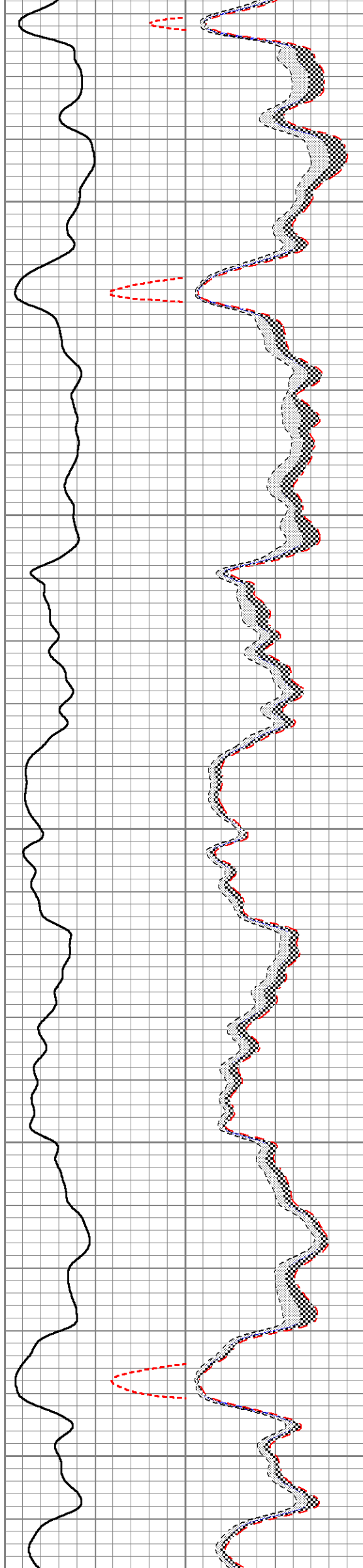


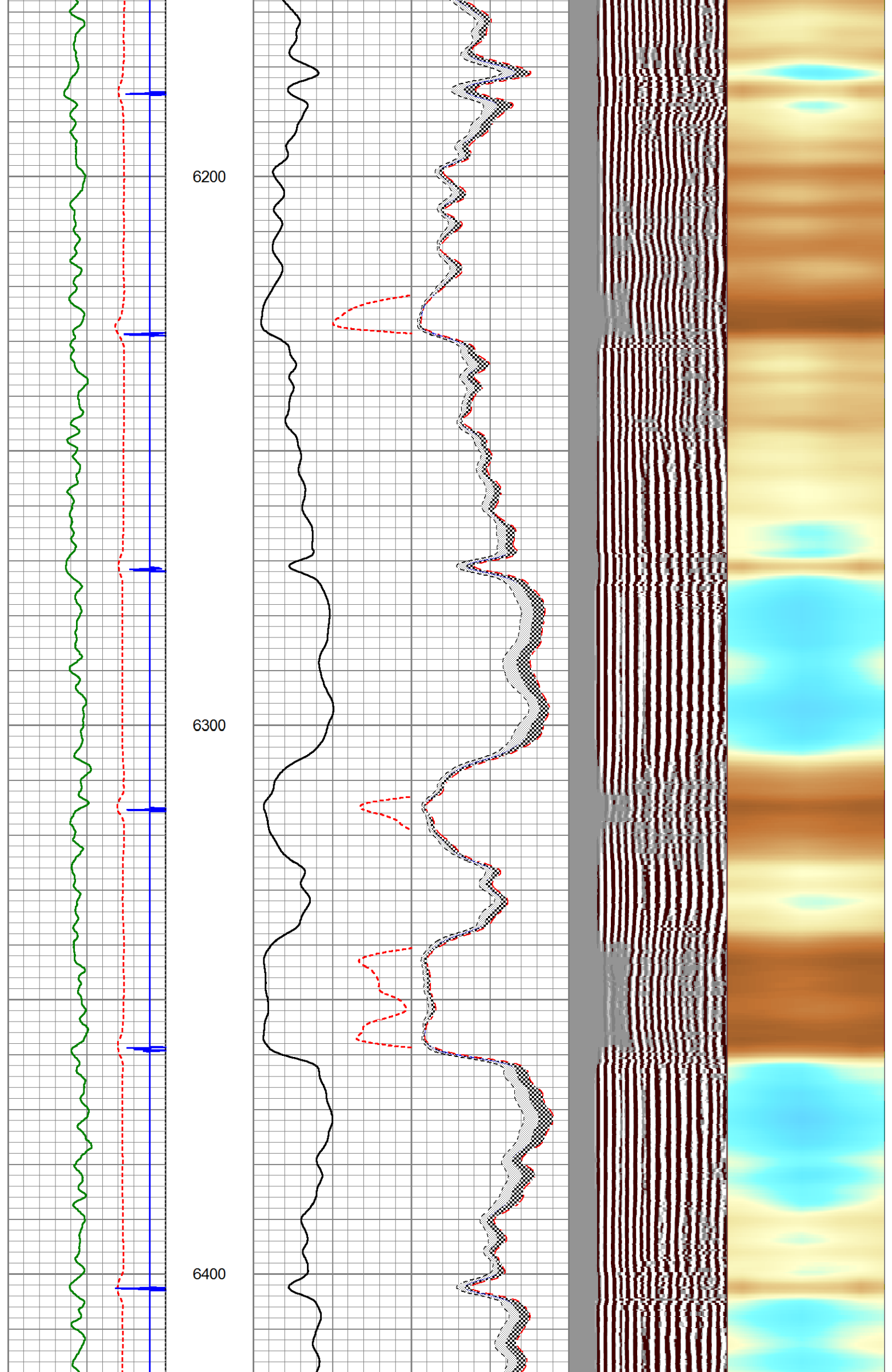


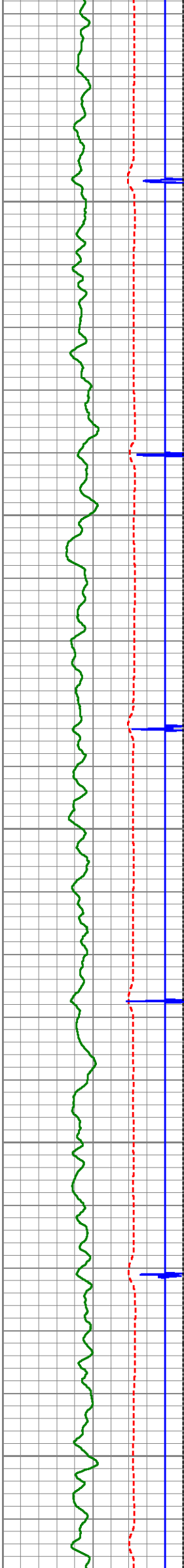


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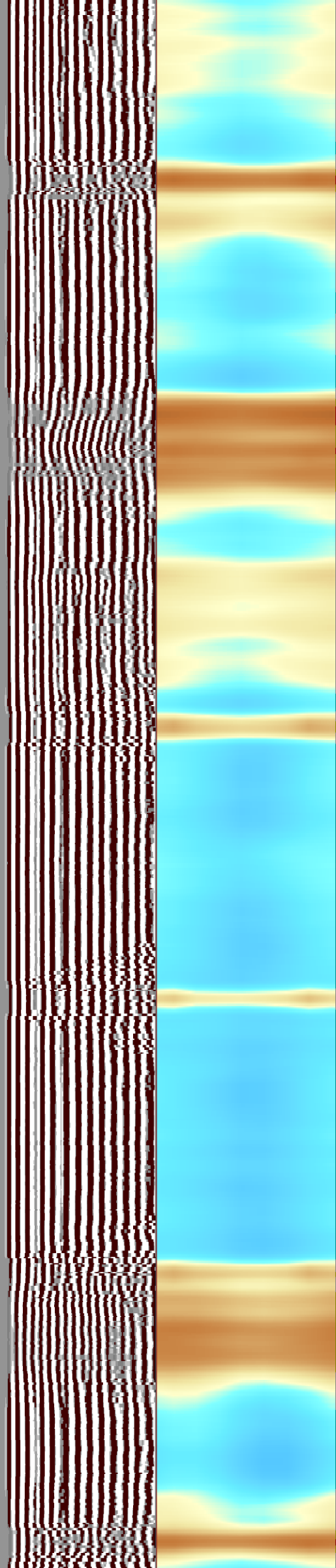
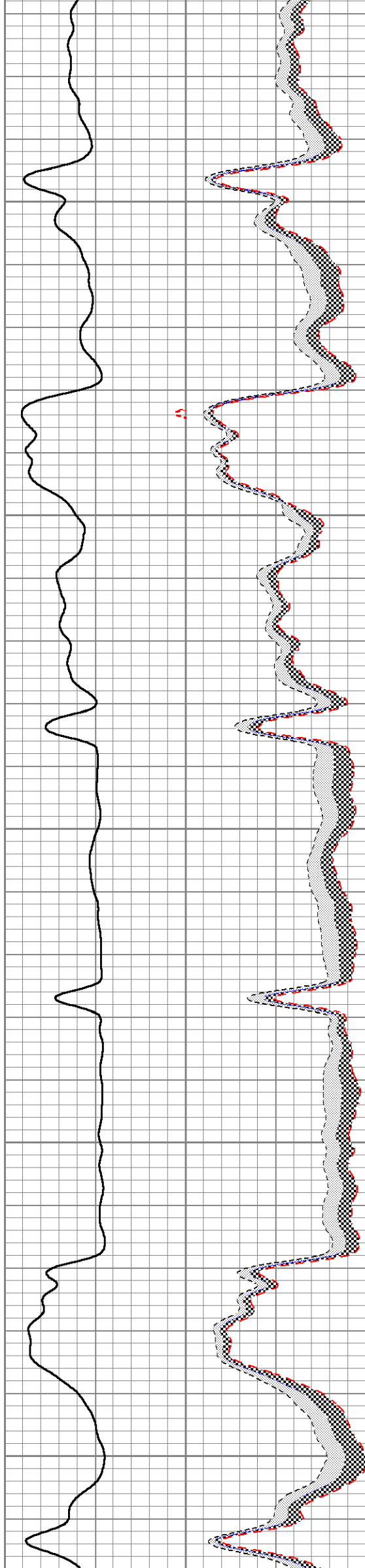


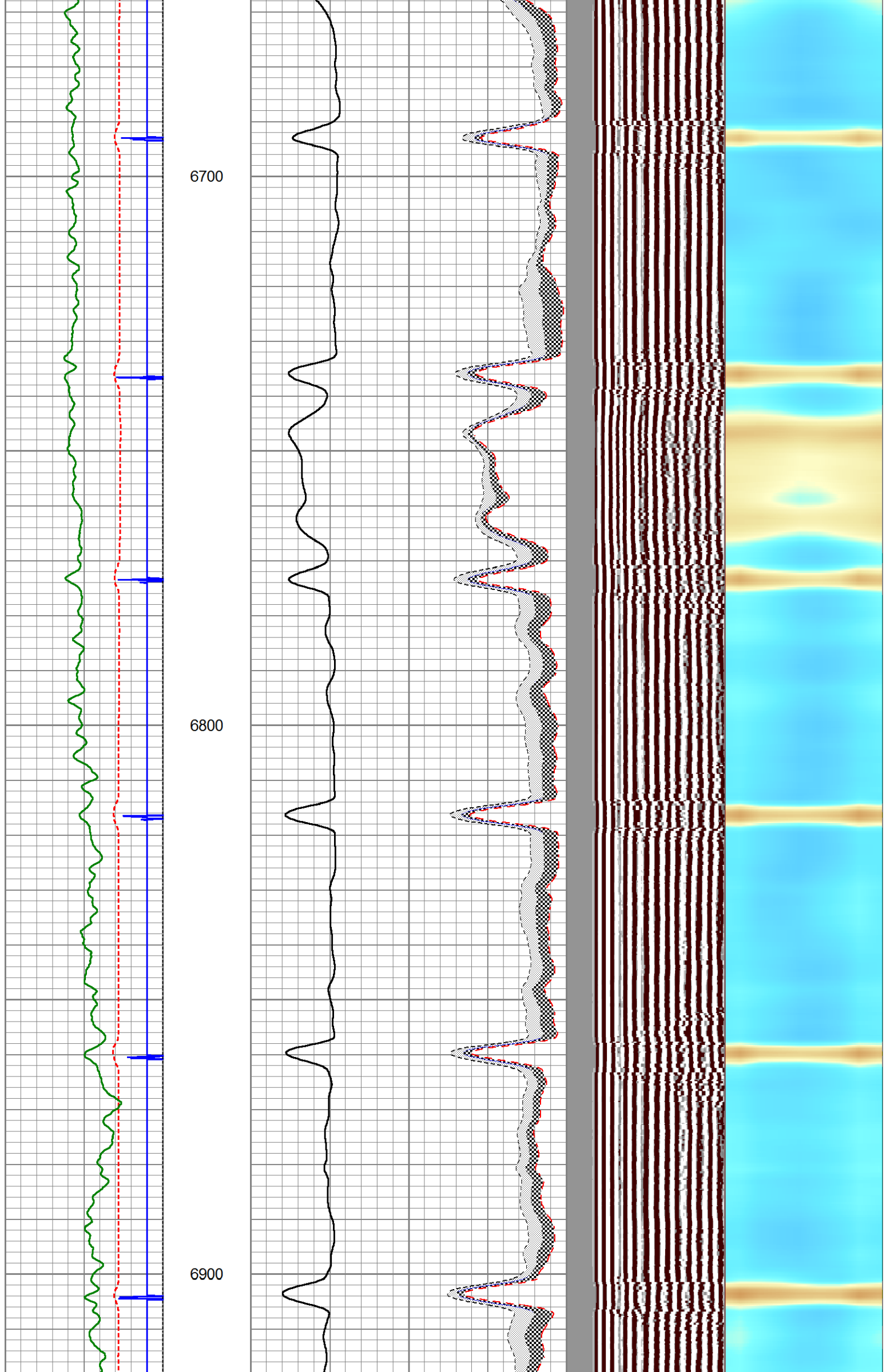


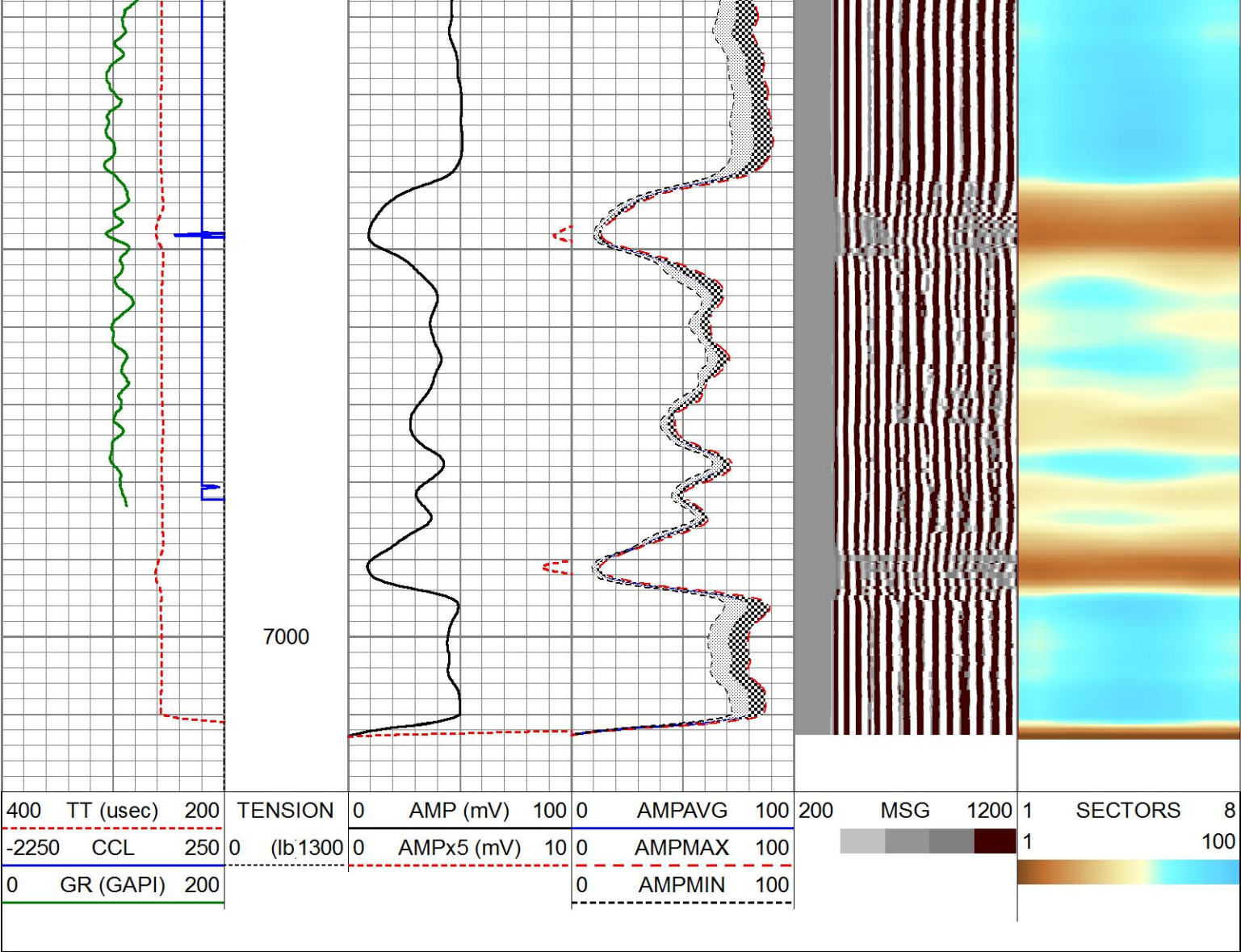


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6600







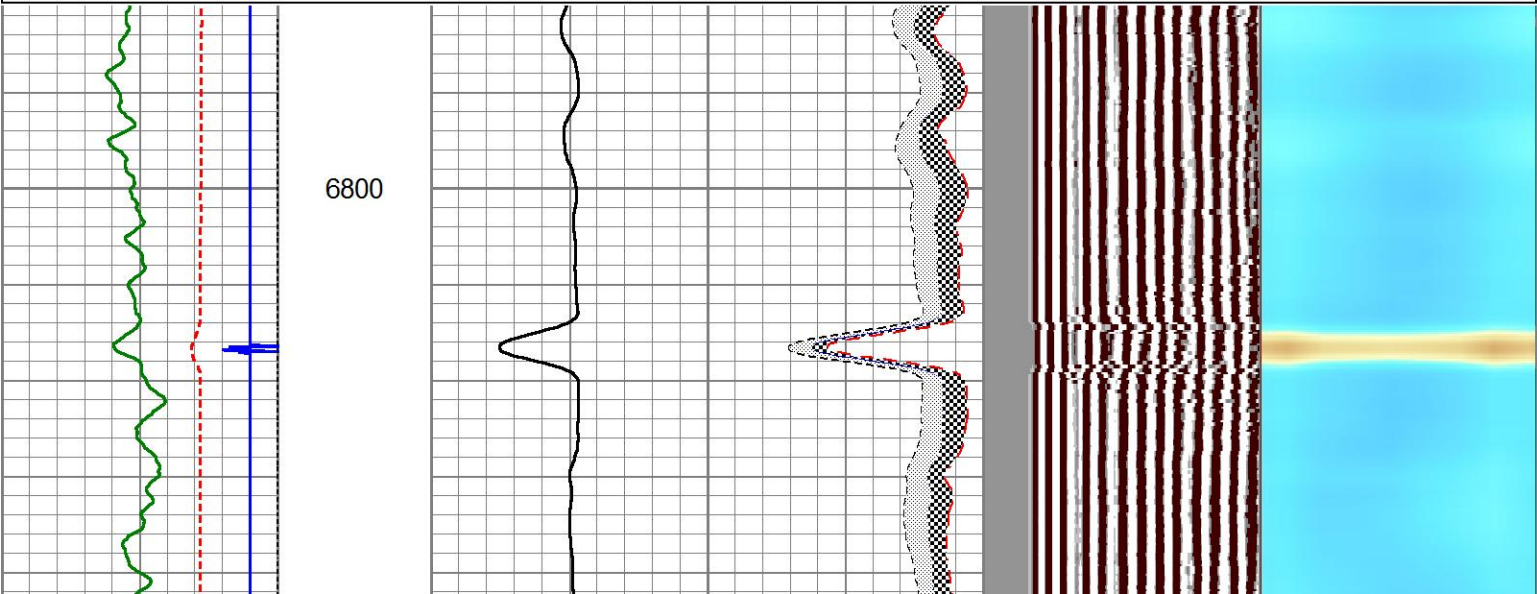
HALLIBURTON

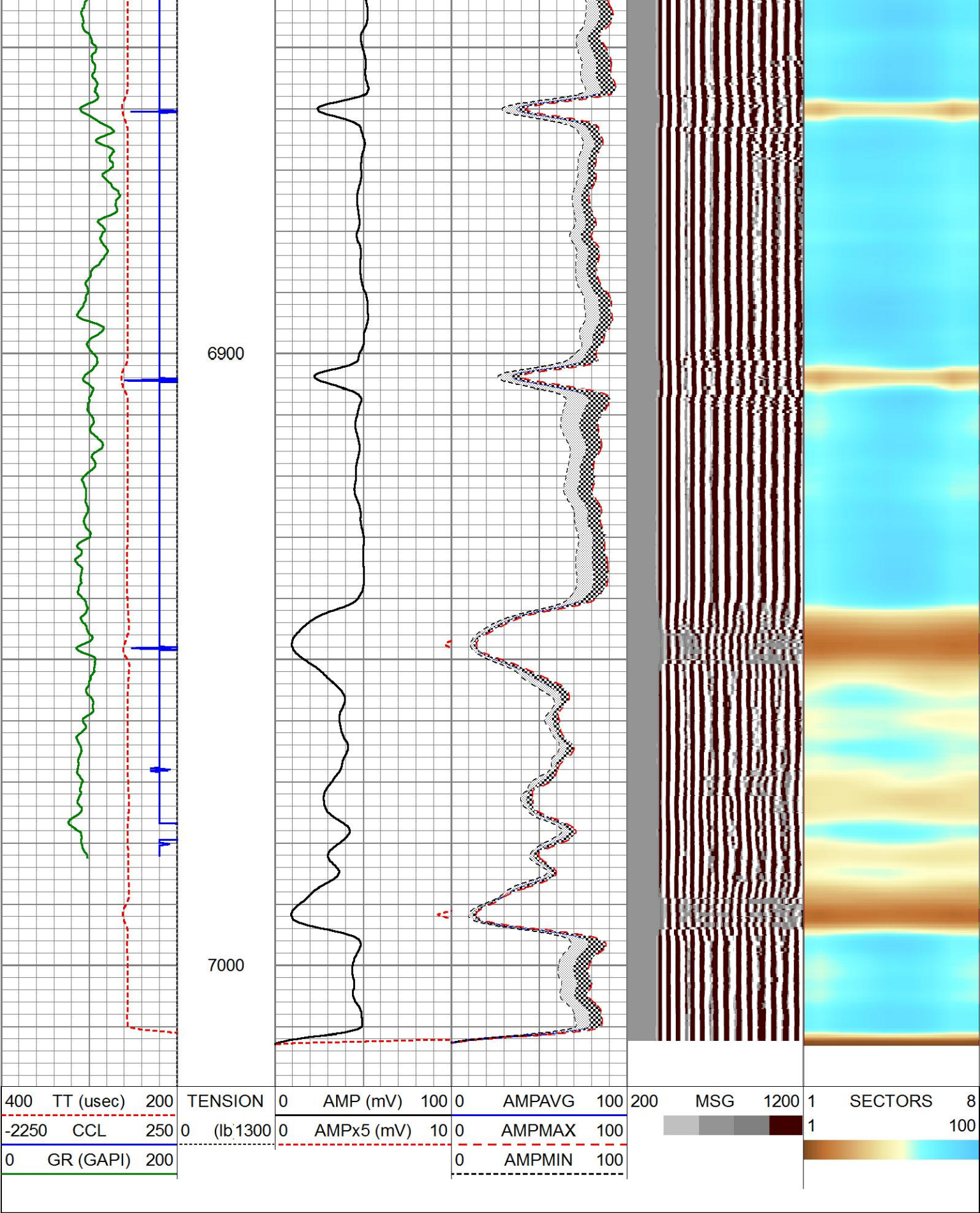
REPEAT PASS

Database File
Dataset Pathname
Presentation Format
Dataset Creation
Charted by

soc_1s-66-36.db
repeat1/repeat1.1
radial
Wed Apr 16 08:04:14 2014
Depth in Feet scaled 1:240

400	TT (usec)	200	TENSION	0	AMP (mV)	100	0	AMPAVG	100	200	MSG	1200	1	SECTORS	8
-2250	CCL	250	0 (lb 1300)	0	AMPx5 (mV)	10	0	AMPMAX	100				1		100
0	GR (GAPI)	200					0	AMPMIN	100						





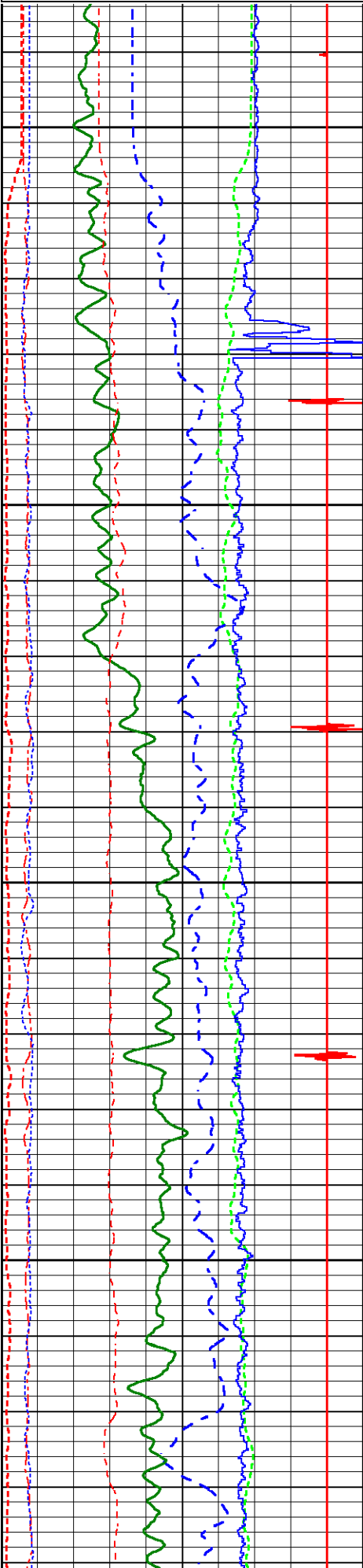
HALLIBURTON

MAIN LOG

Database File soc_1s-66-36.db
Dataset Pathname main1/main1.1
Presentation Format RMTE_M~1
Dataset Creation Wed Apr 16 09:50:00 2014
Charted by Depth in Feet scaled 1:240

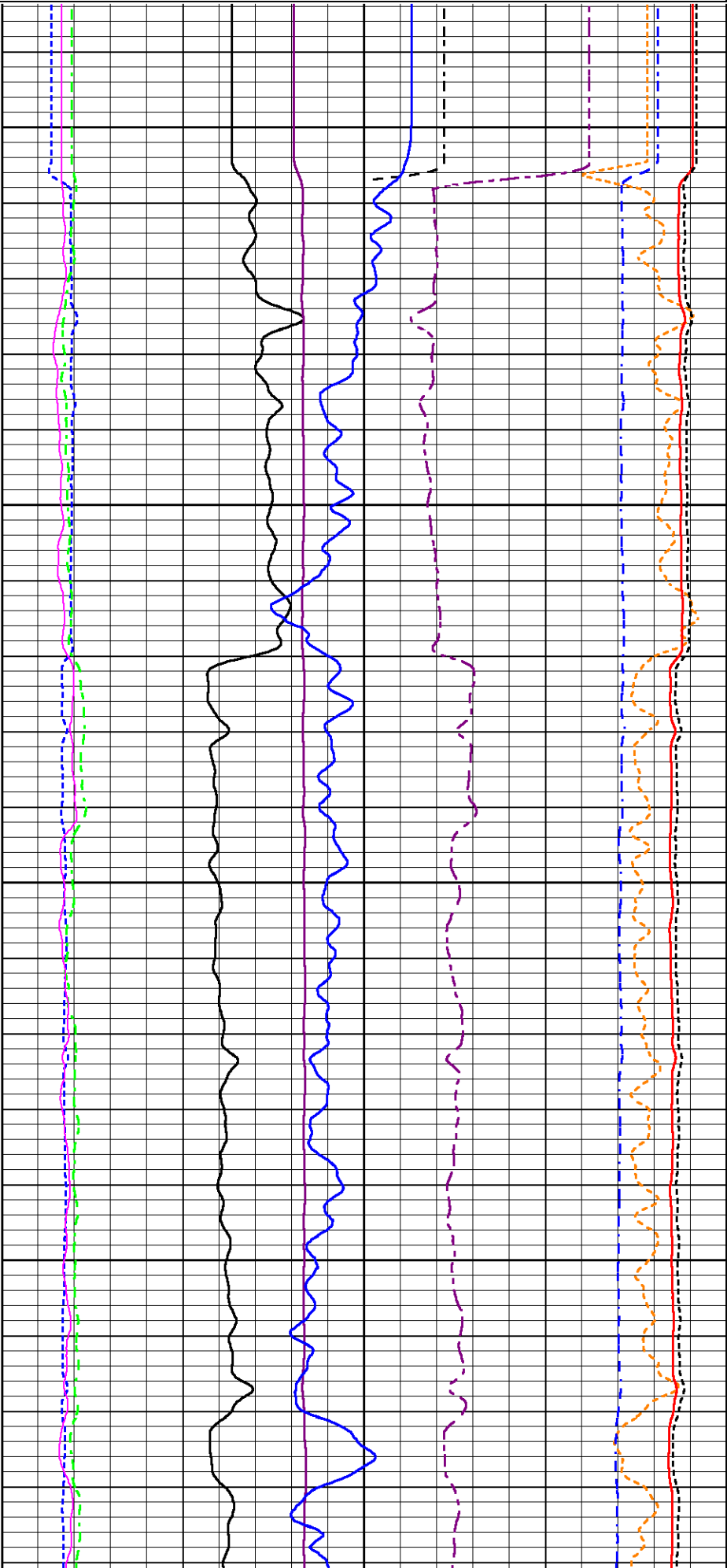
200	Near Bore Si (SGBN)	0	TENSION	0		RATIO (RNF)	1.2
0	GAL	100	0 (lb 1300)	0	RIN	0	60000
						Near Counts (NCAD)	0

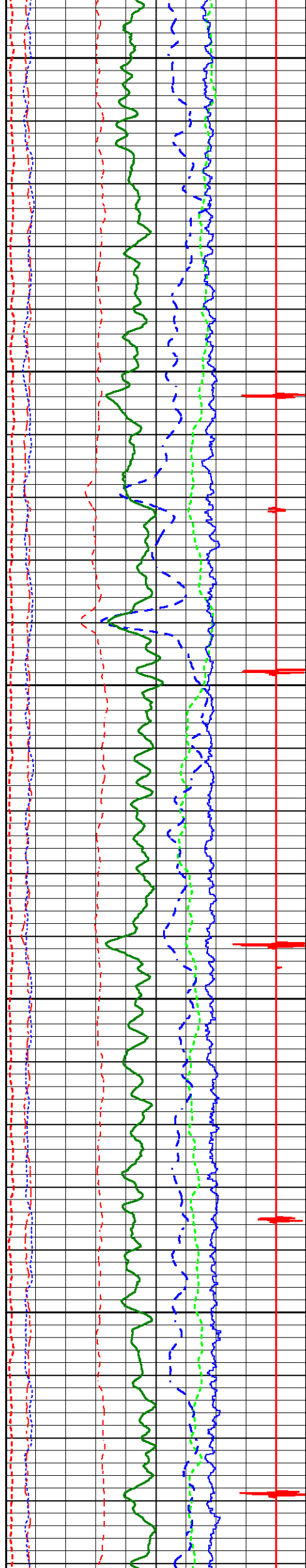
10	FAR FIT ERR (SGFF)	40	0	RIN	9	60000	Near Counts (NCAP)	0
0	GR (GAPI)	200	0	H YIELD (YH2)	1	100000	FAR INTEL CT (FSIN)	0
0	NEAR FIT ERR (SGFN)	100	0	H YIELD (YH1)	1	100000	NEAR INTEL CT (NSIN)	0
-4500	CCL	500	45	SGIN				0
0	IN FIT ERR (CFTR1) NEAR	1		INOX2		ET INL NEAR (NNI)		
0	IN FIT ERR CFTR2) FAR	1	-1500	1500	50000	-1000		
50	LSPD (ft/min)	0						



1500

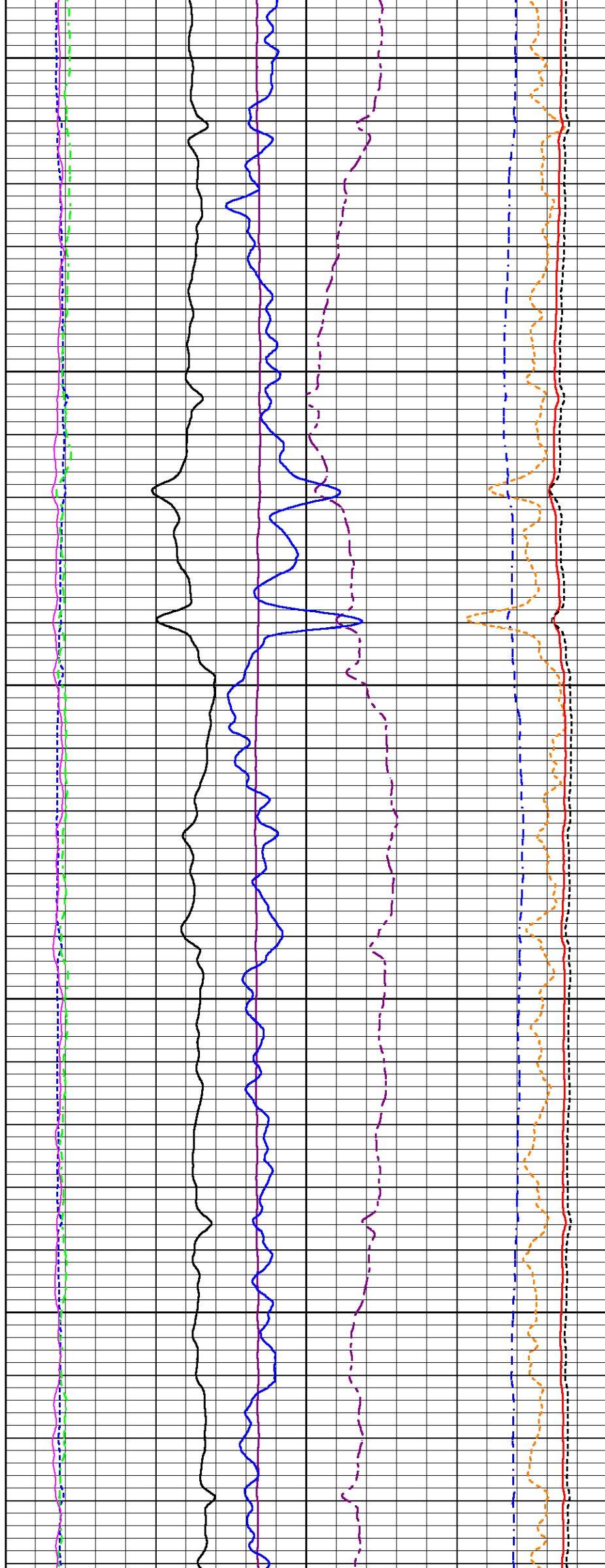
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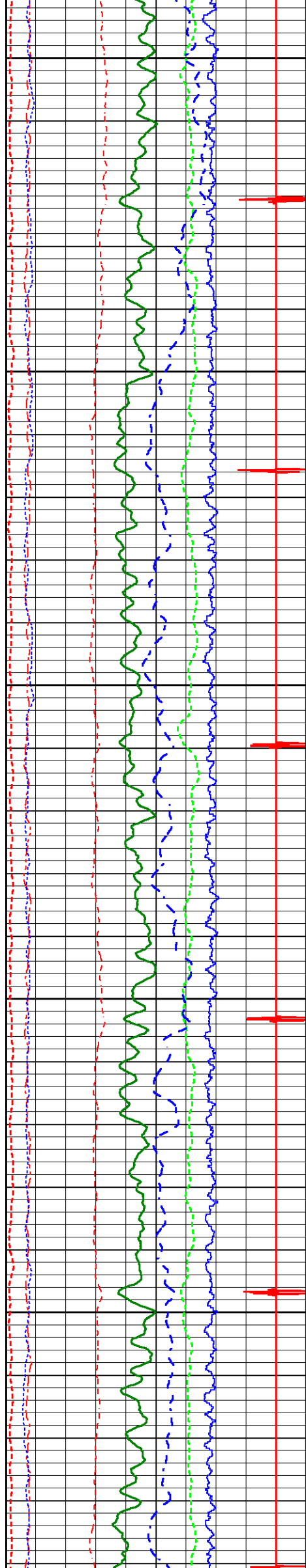




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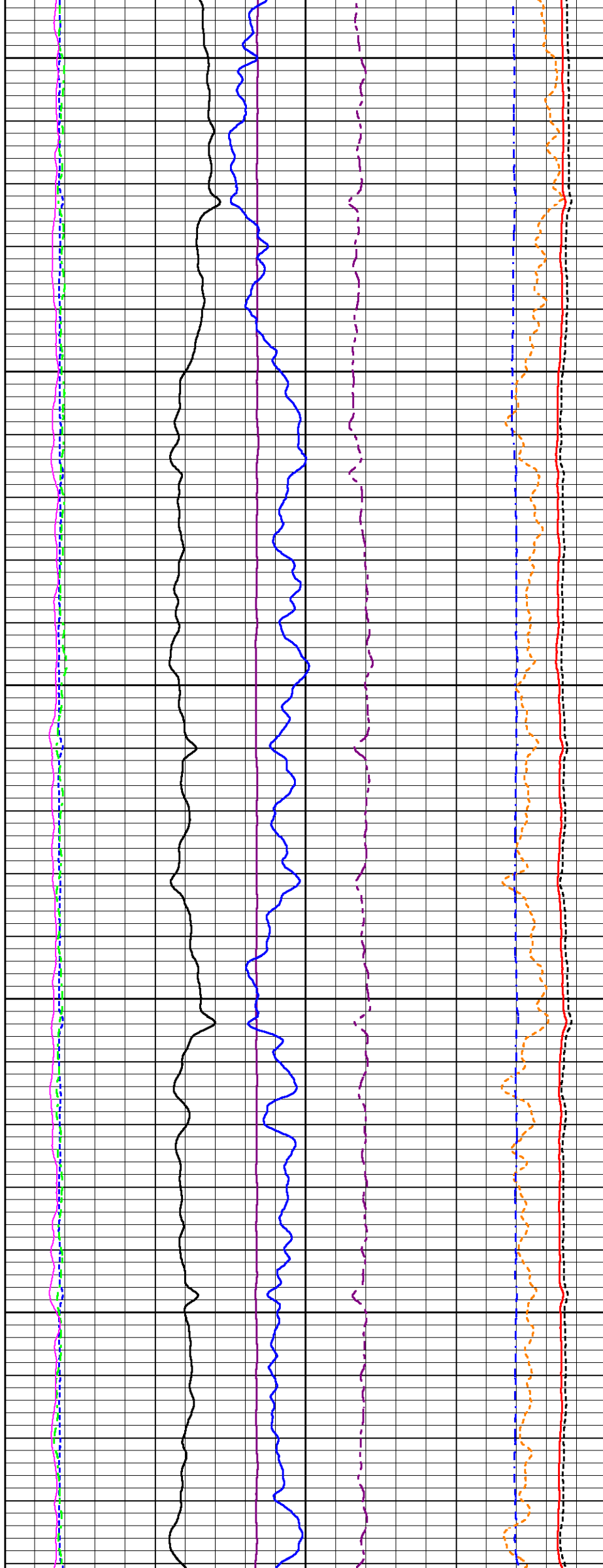


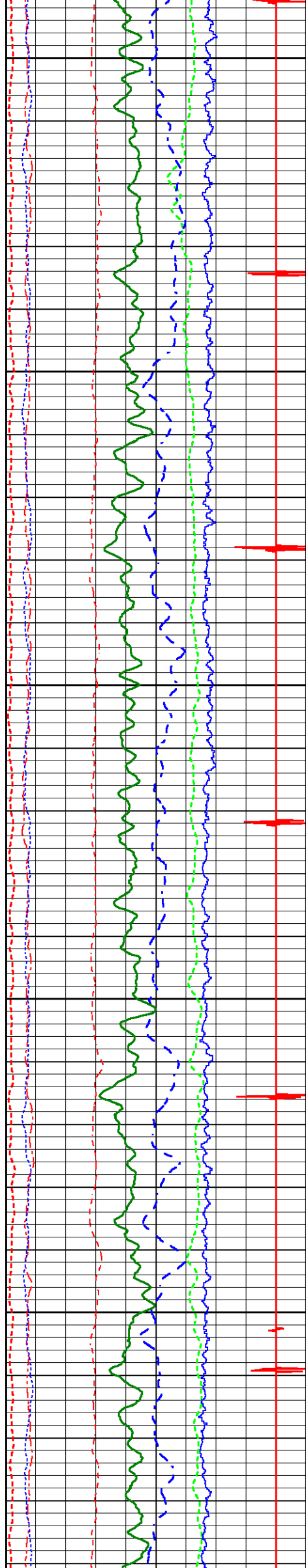


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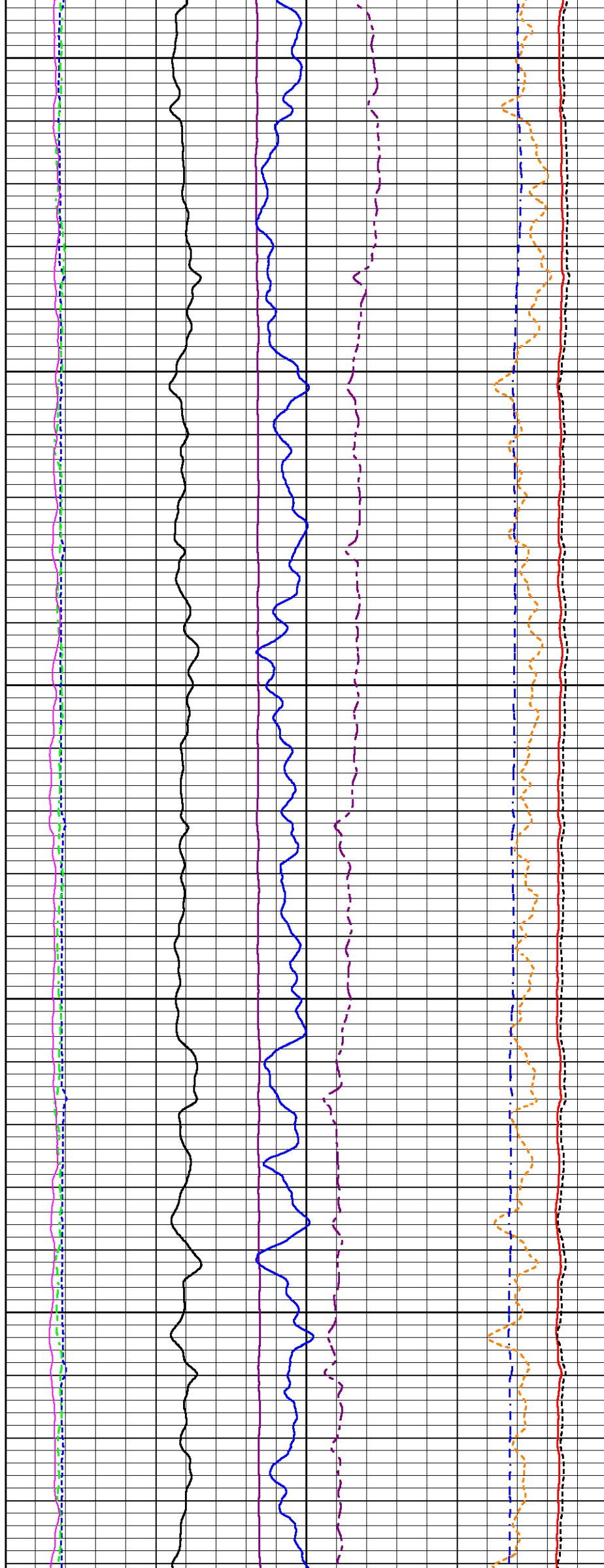
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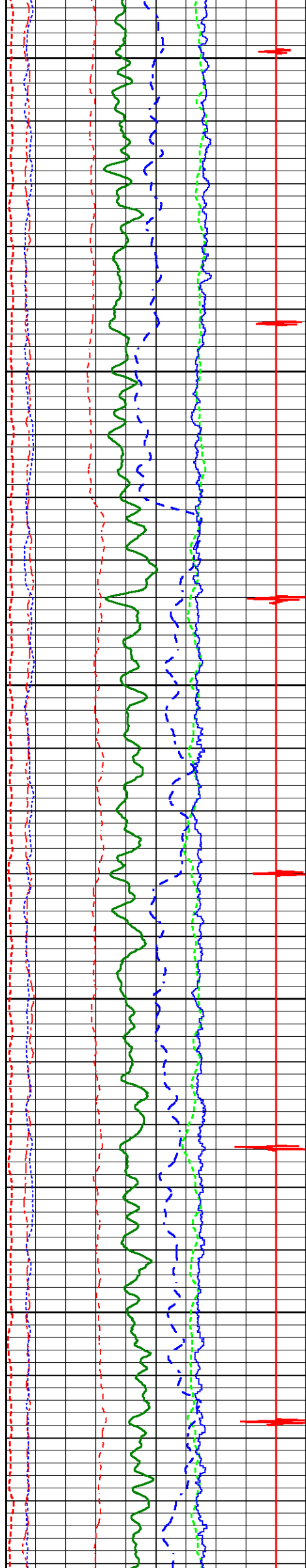




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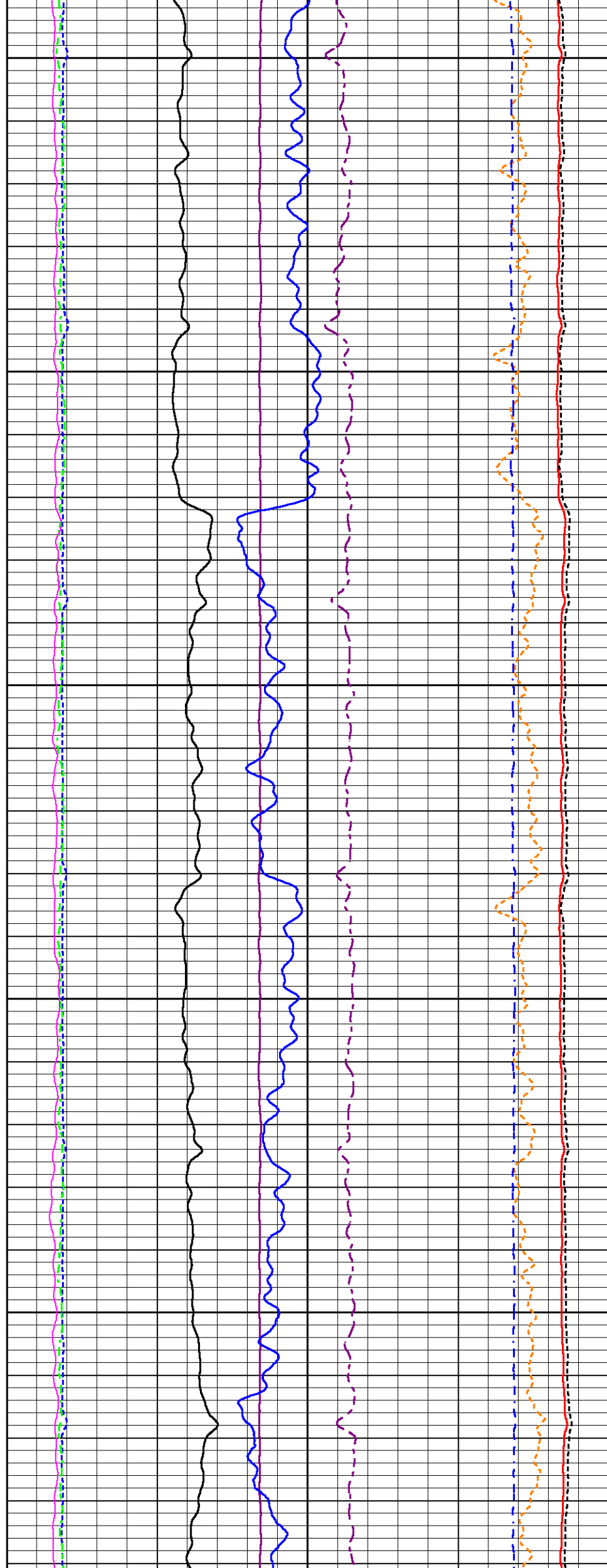


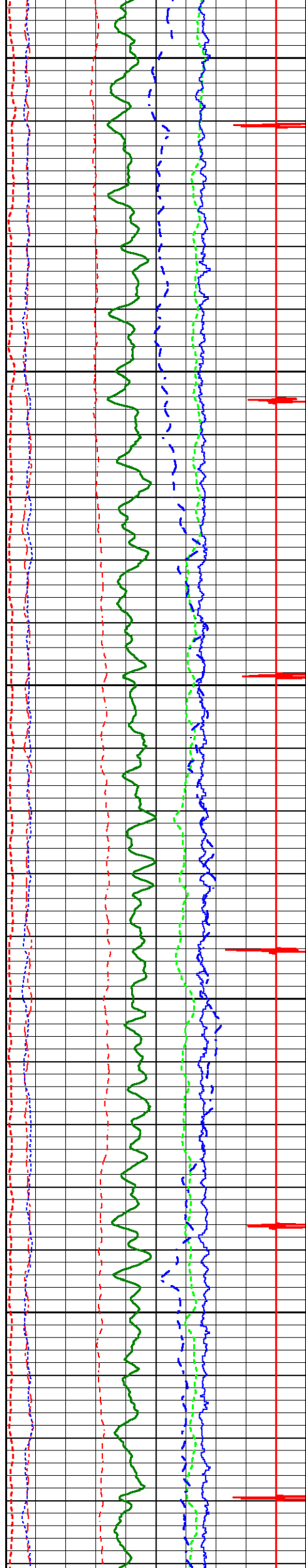


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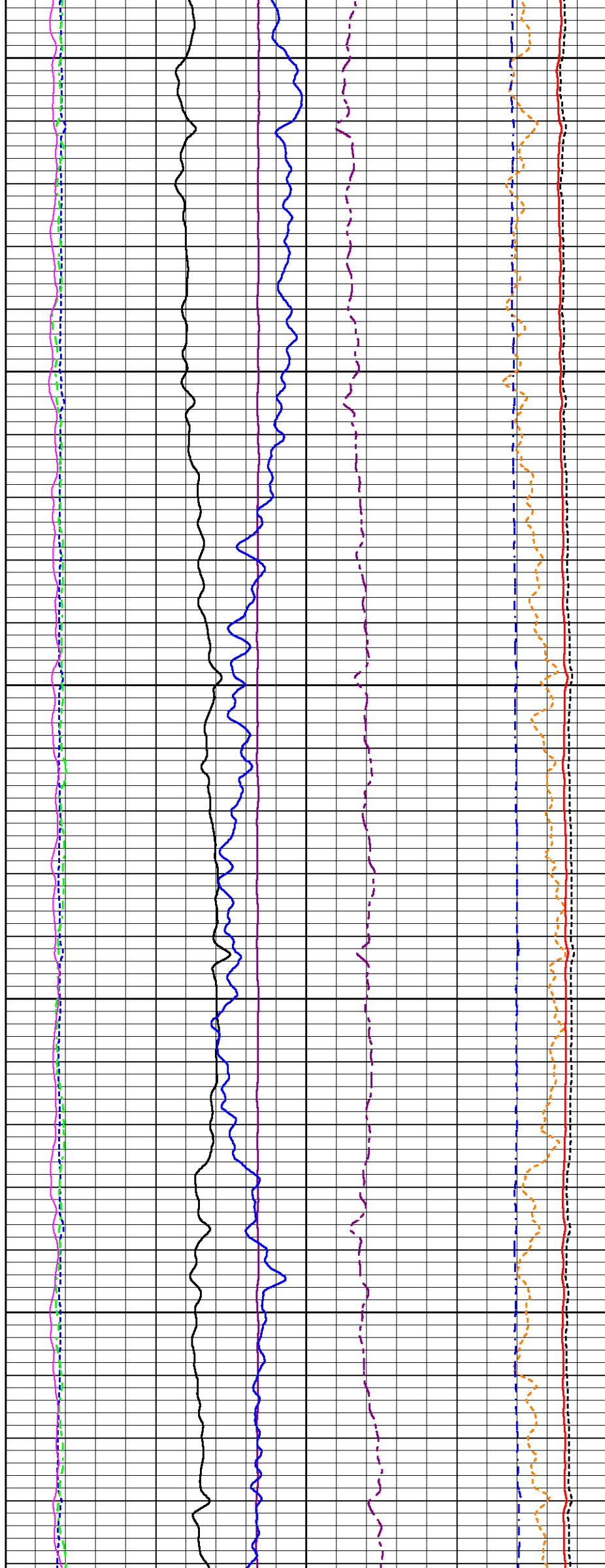
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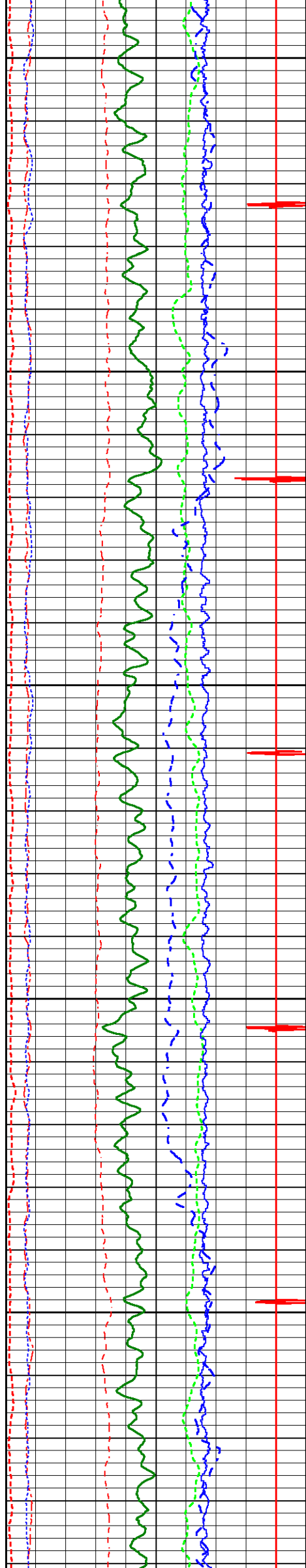




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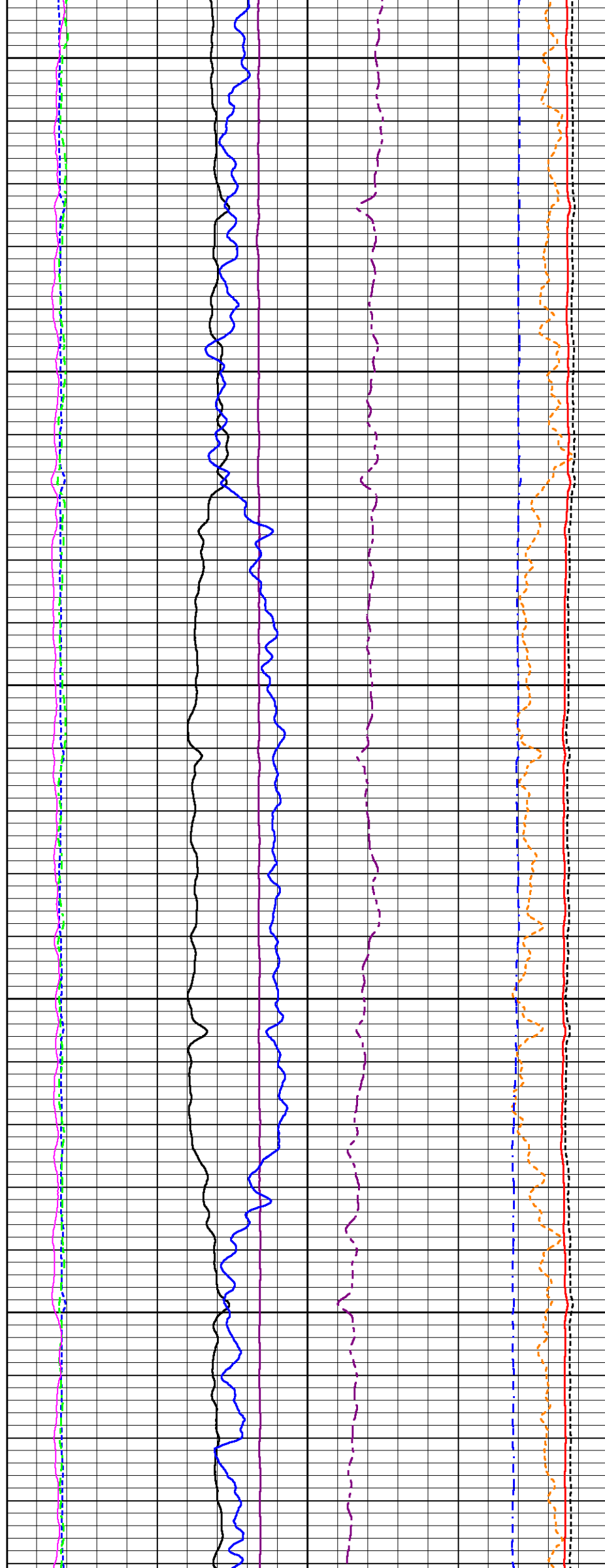


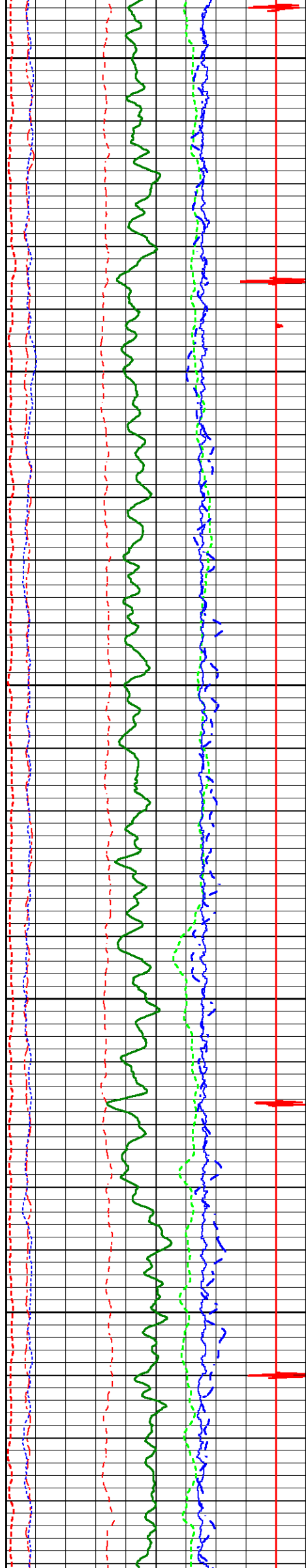


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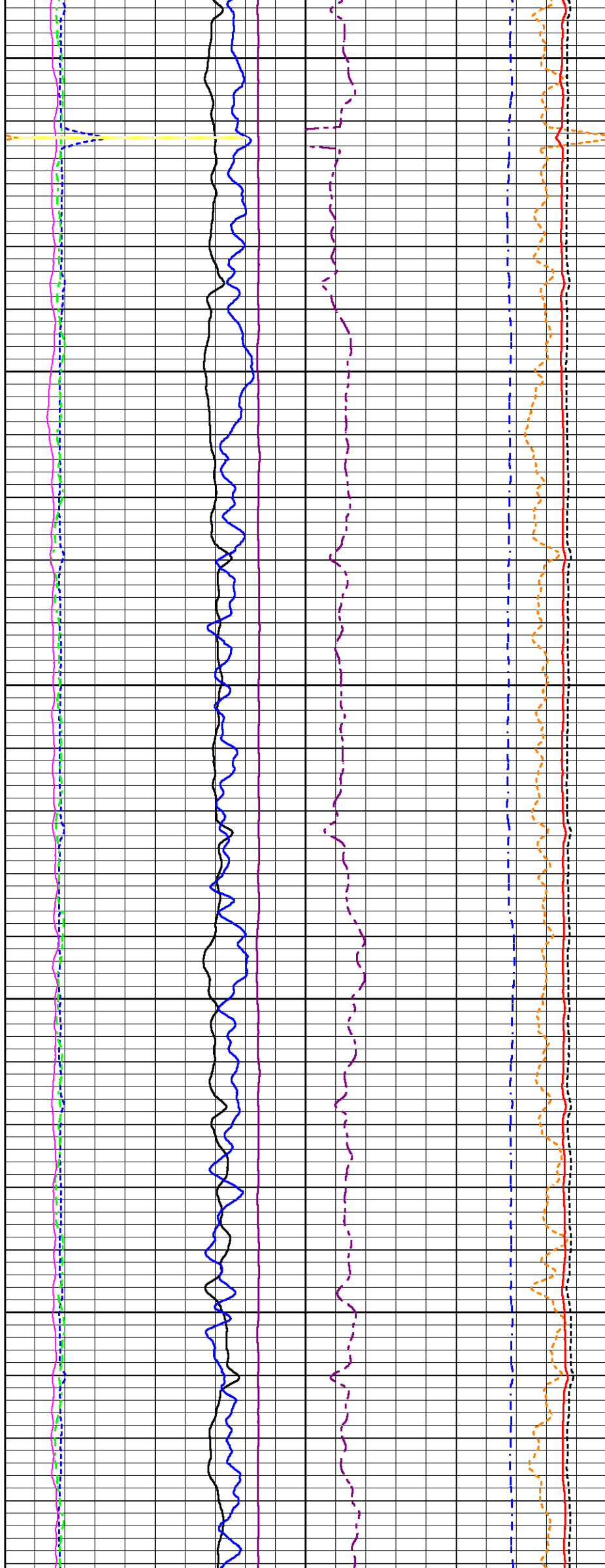
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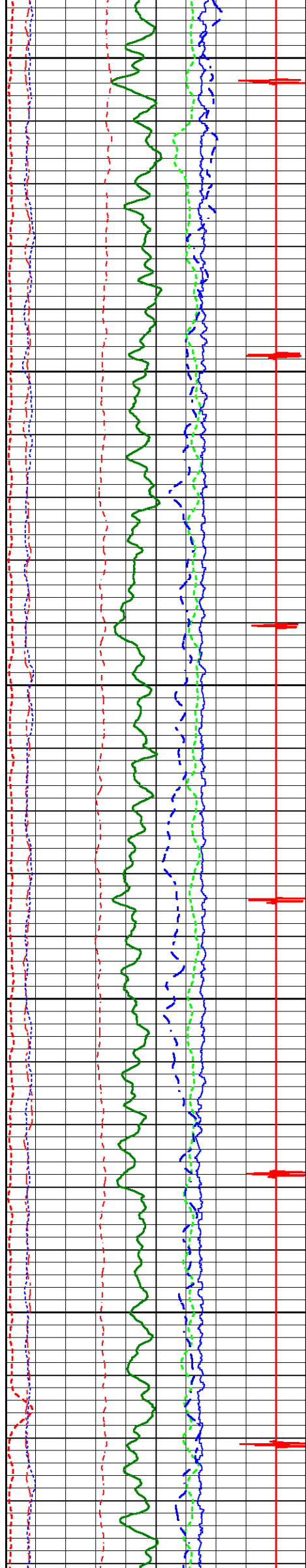




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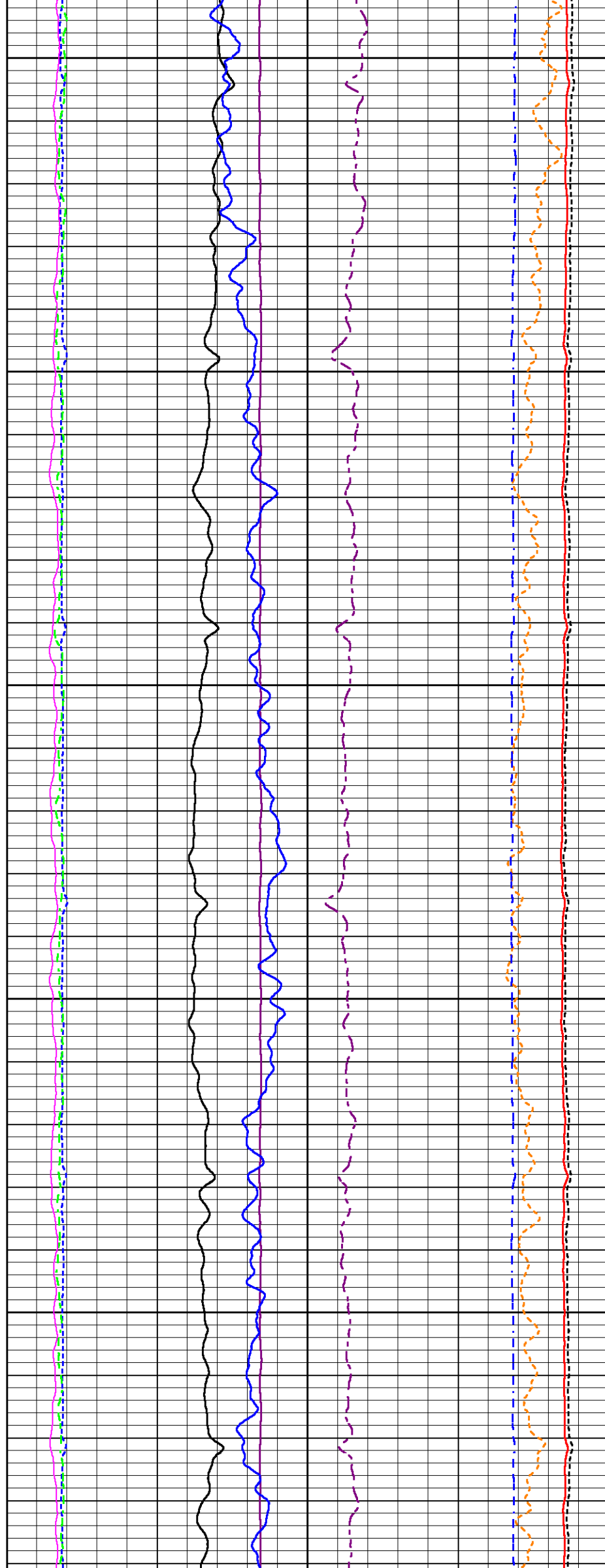


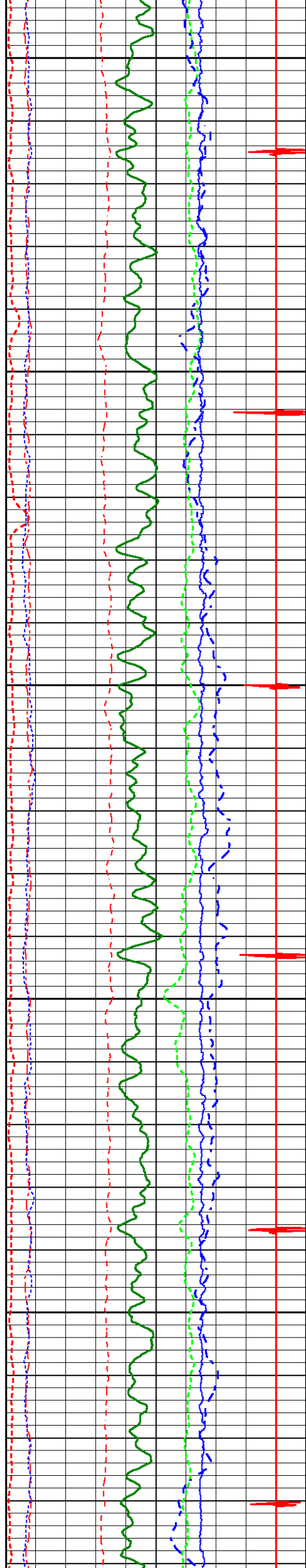


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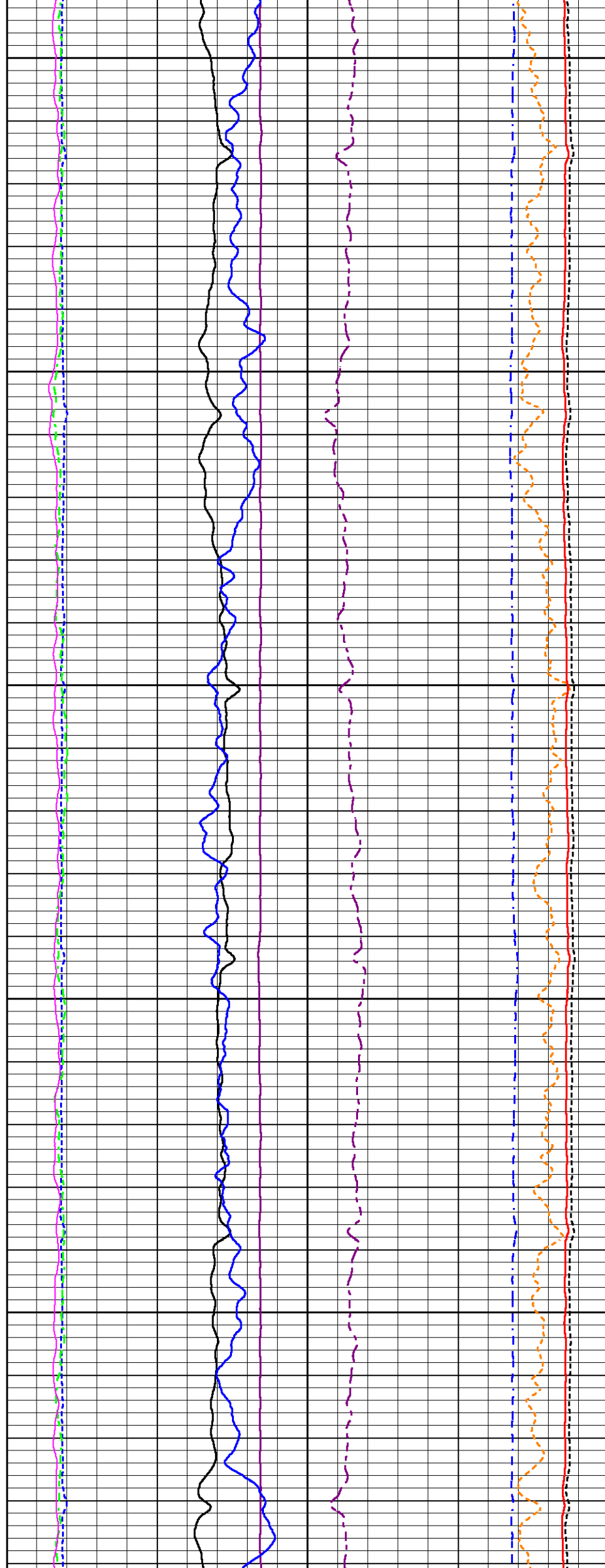
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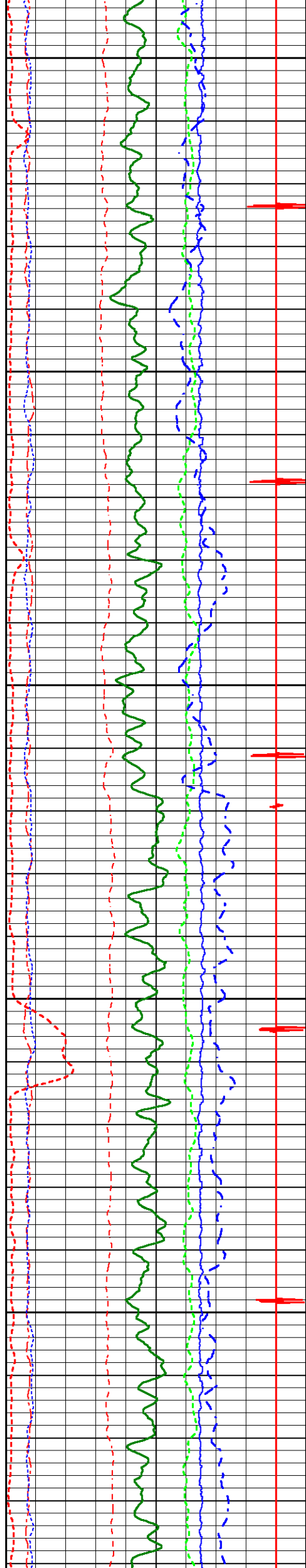




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3800

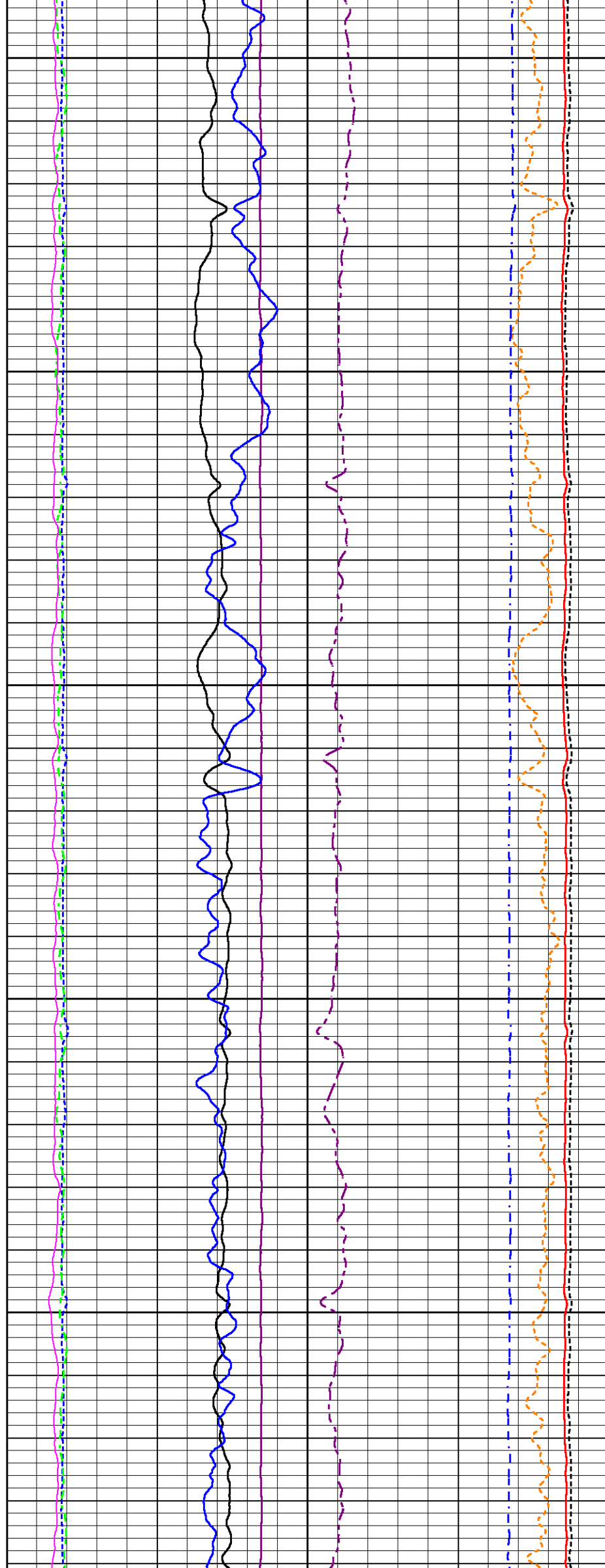


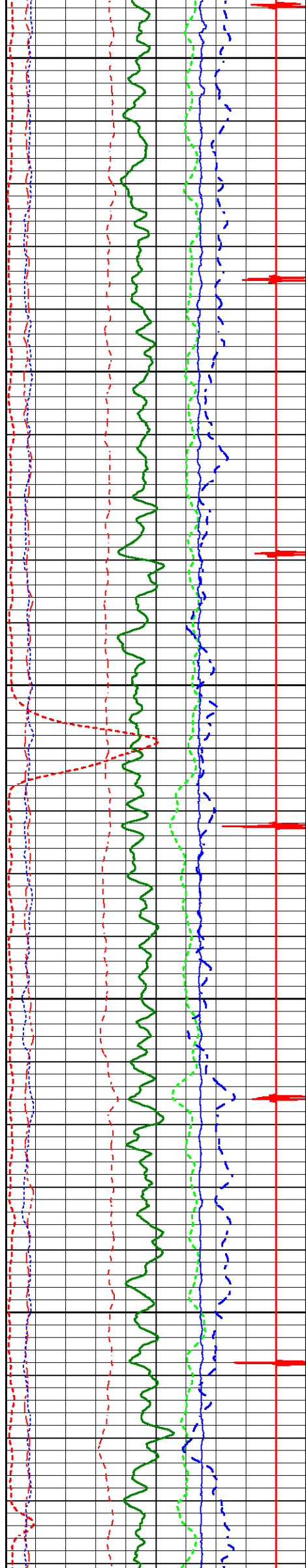


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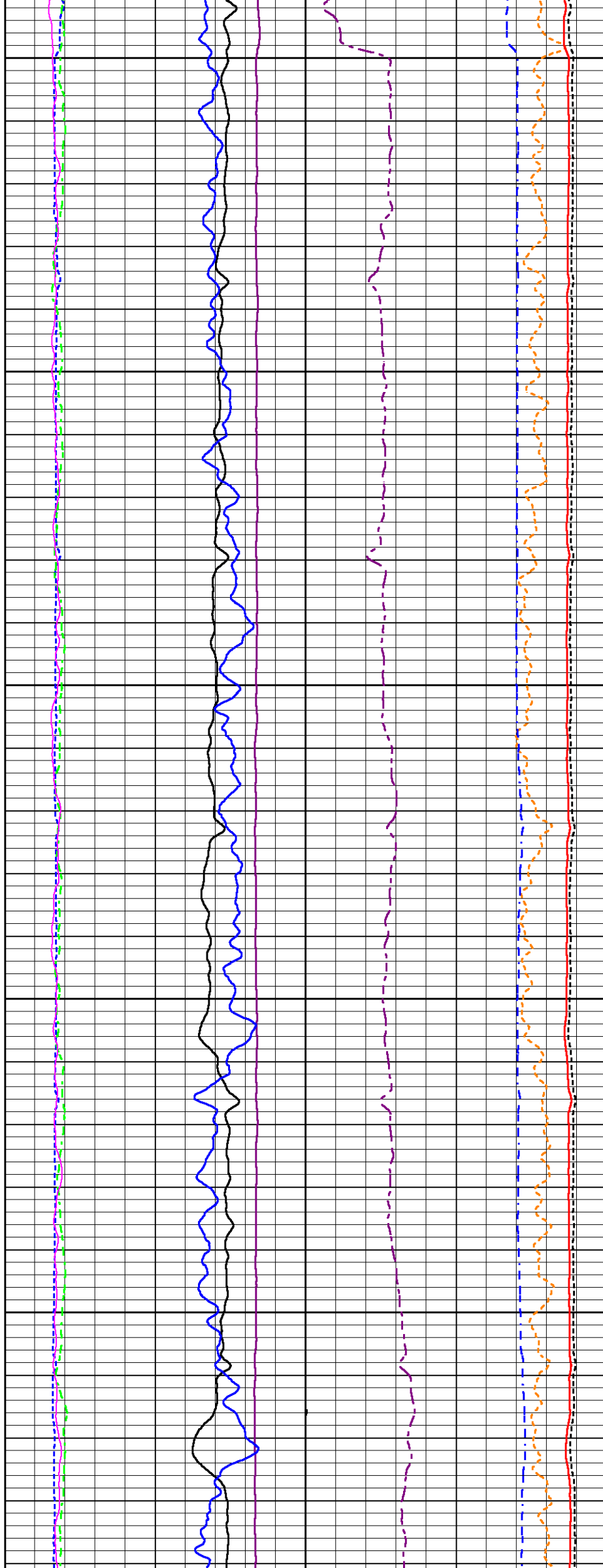
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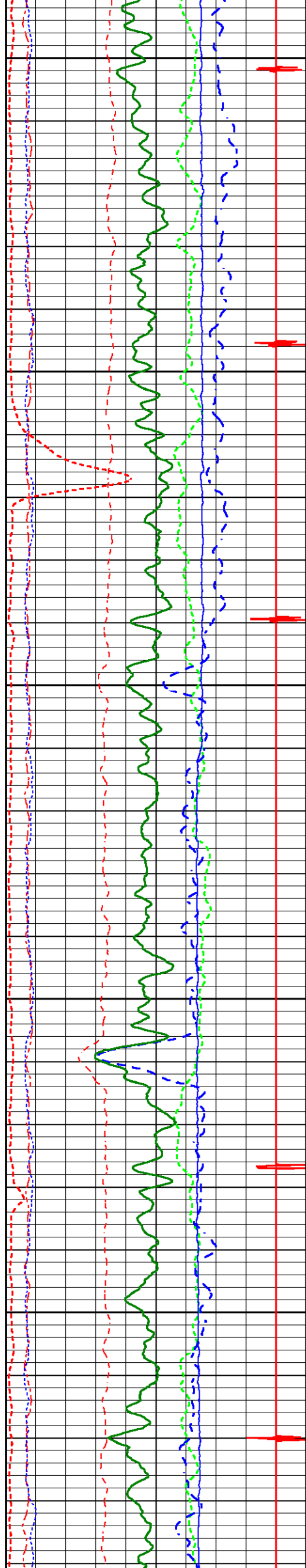




4200

4300

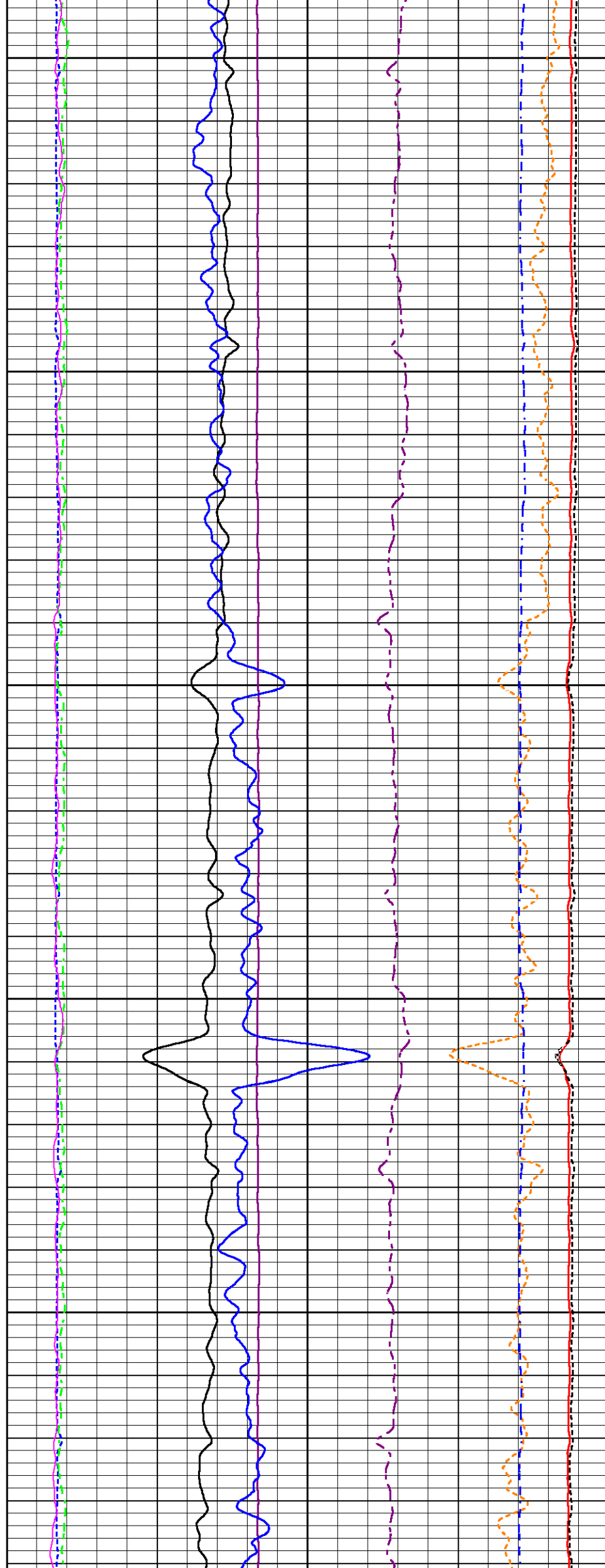


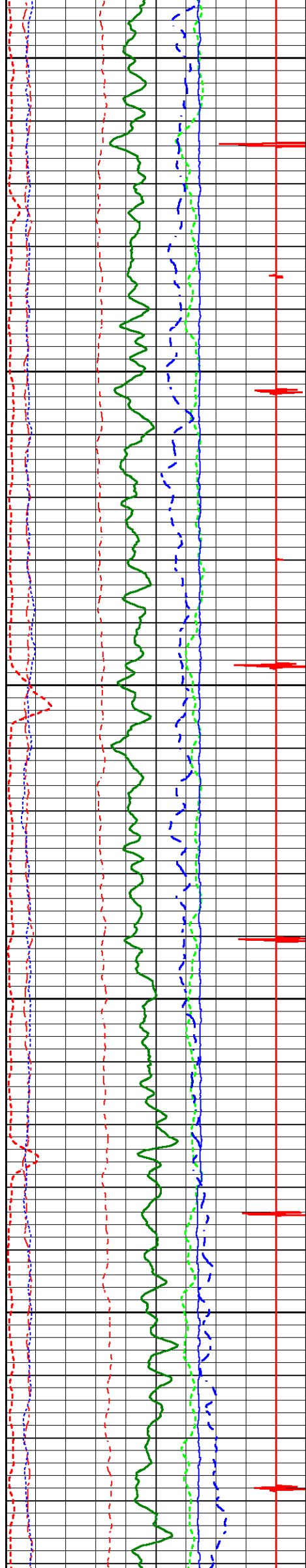


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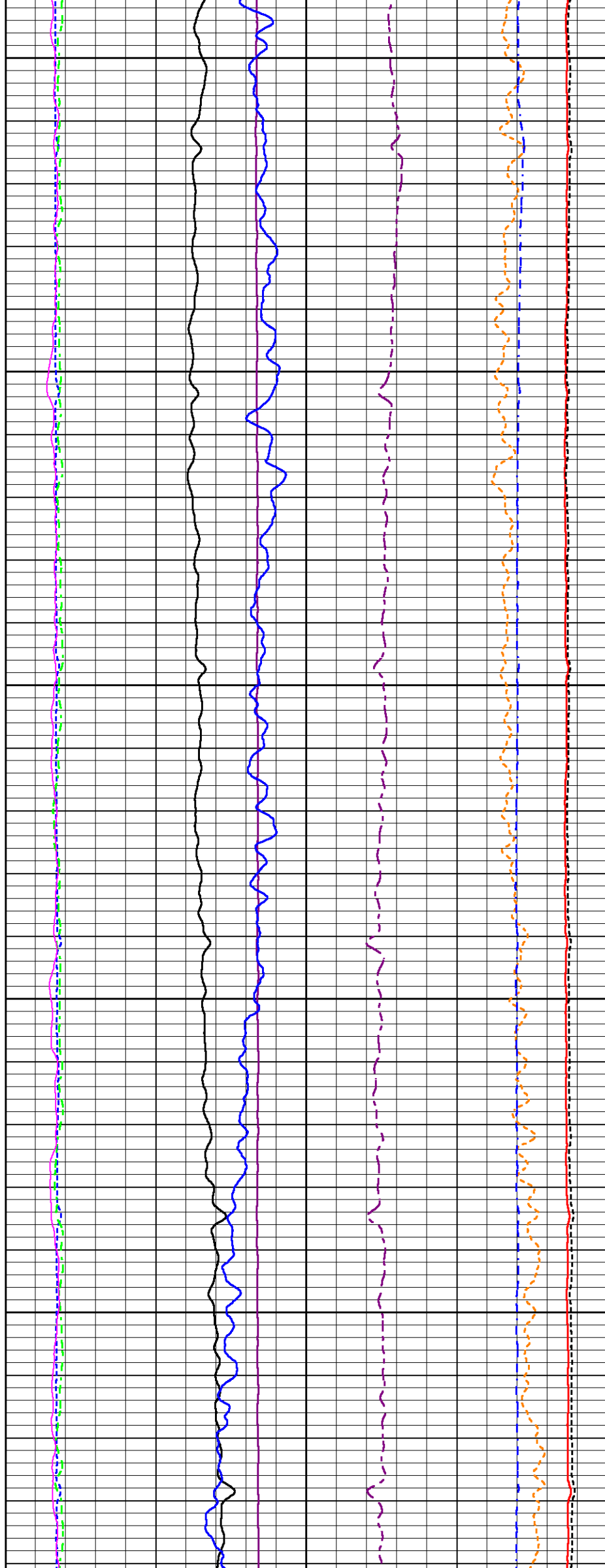
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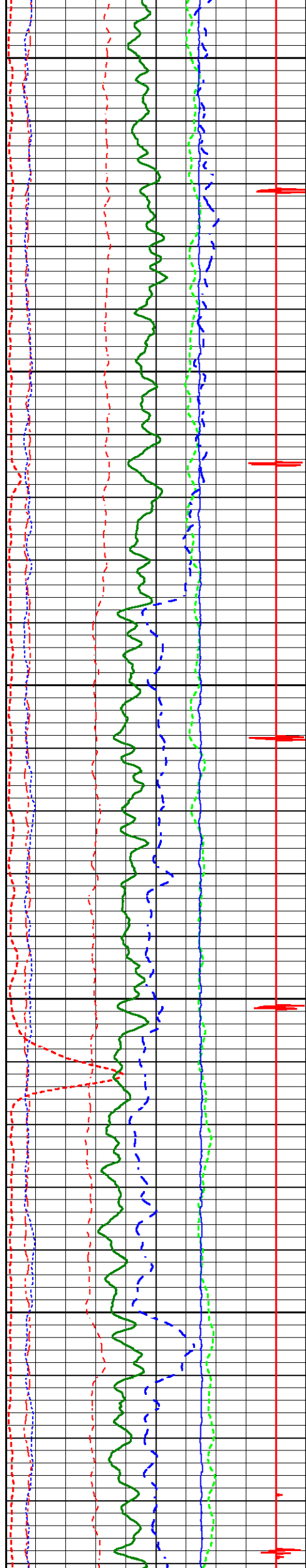




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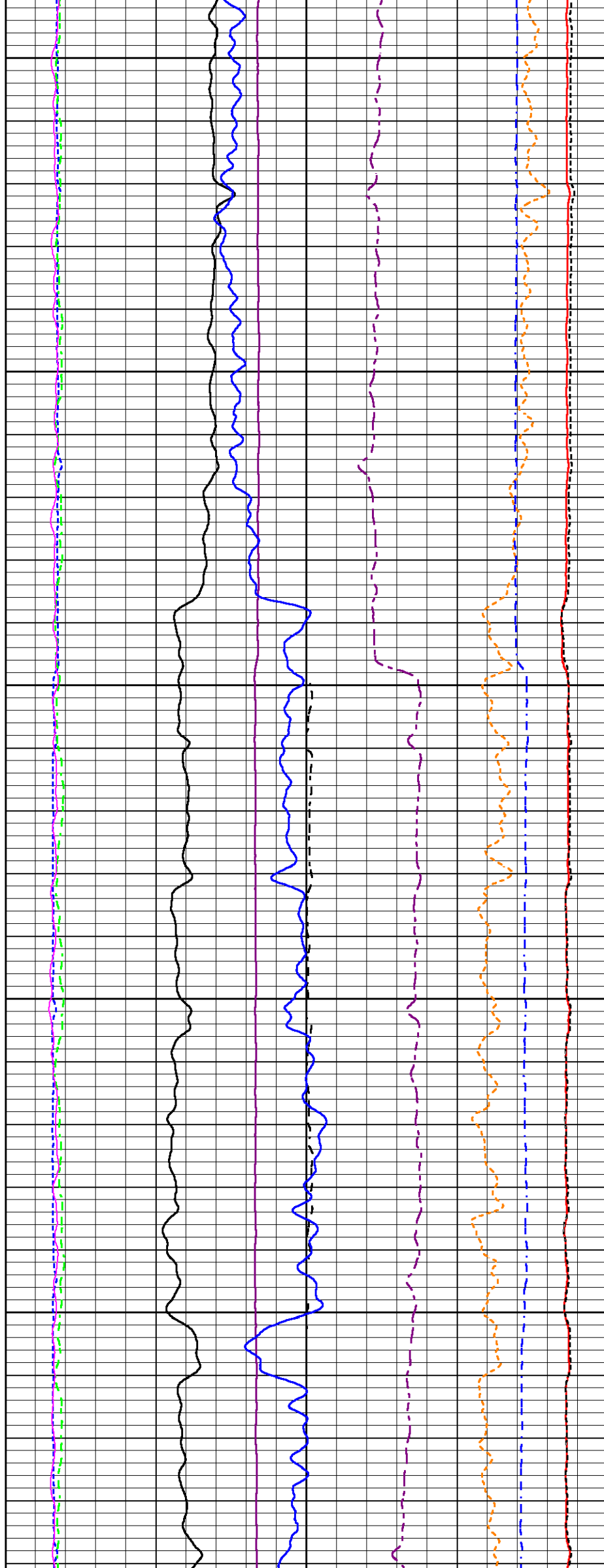


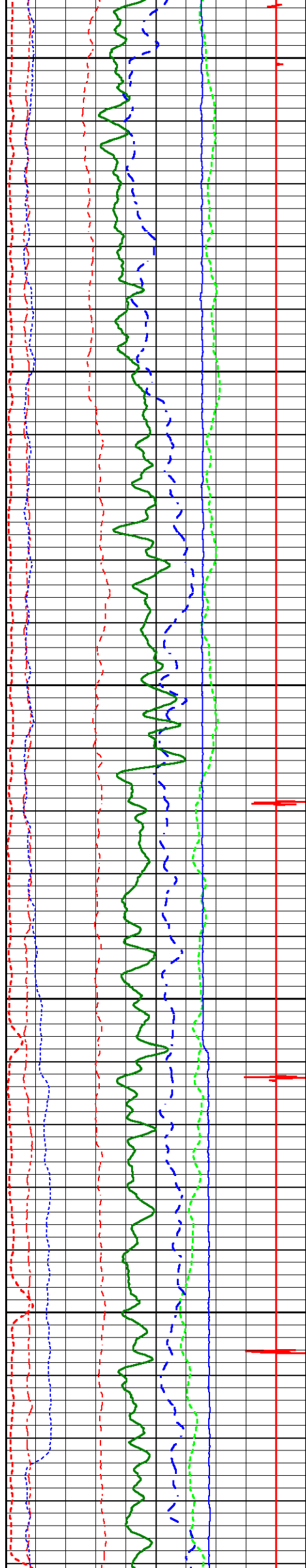


4900

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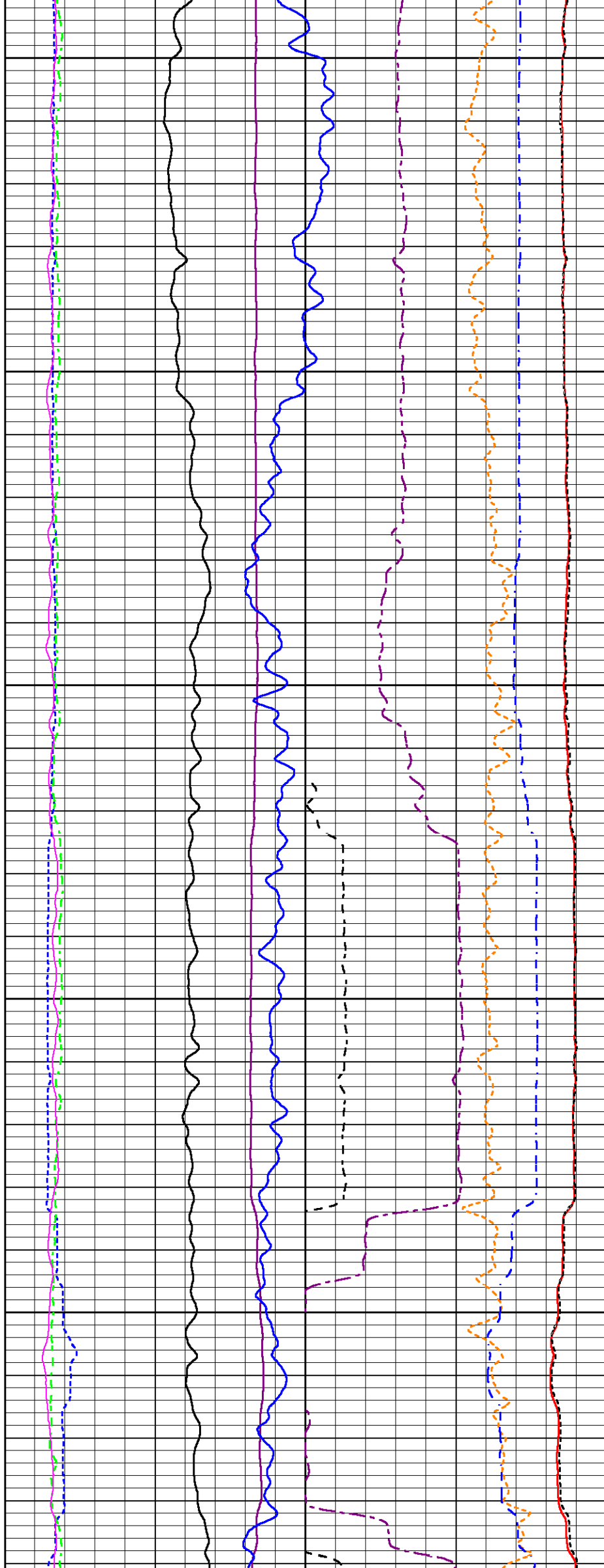
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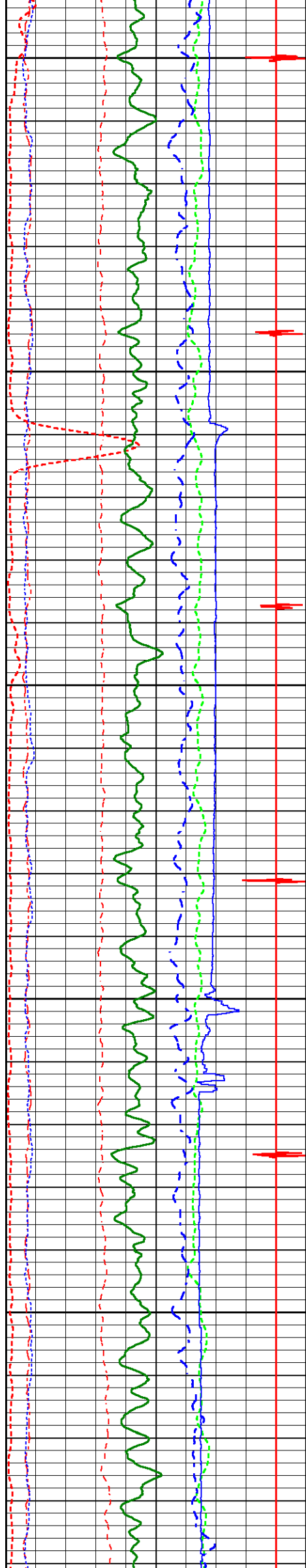




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5300

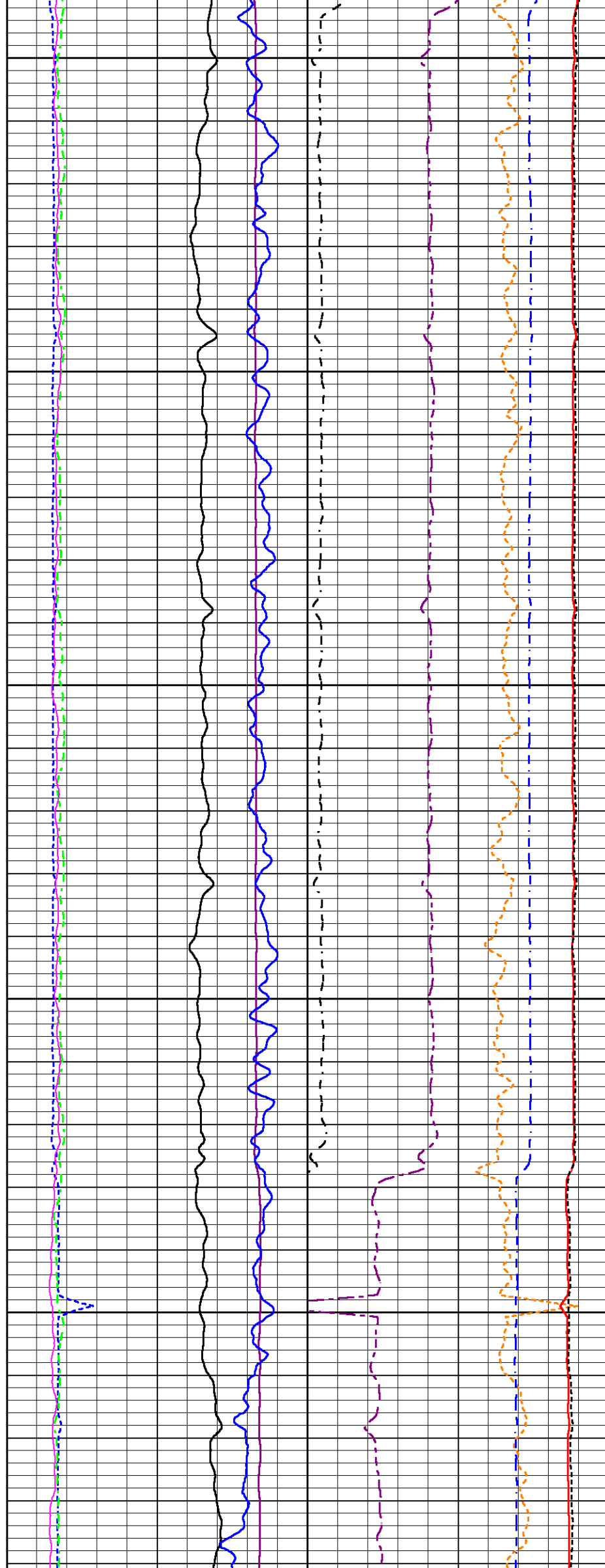


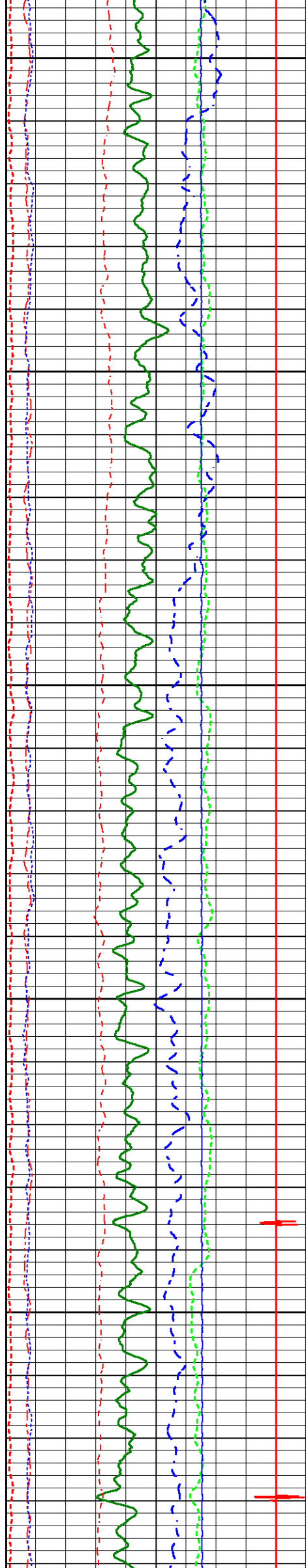


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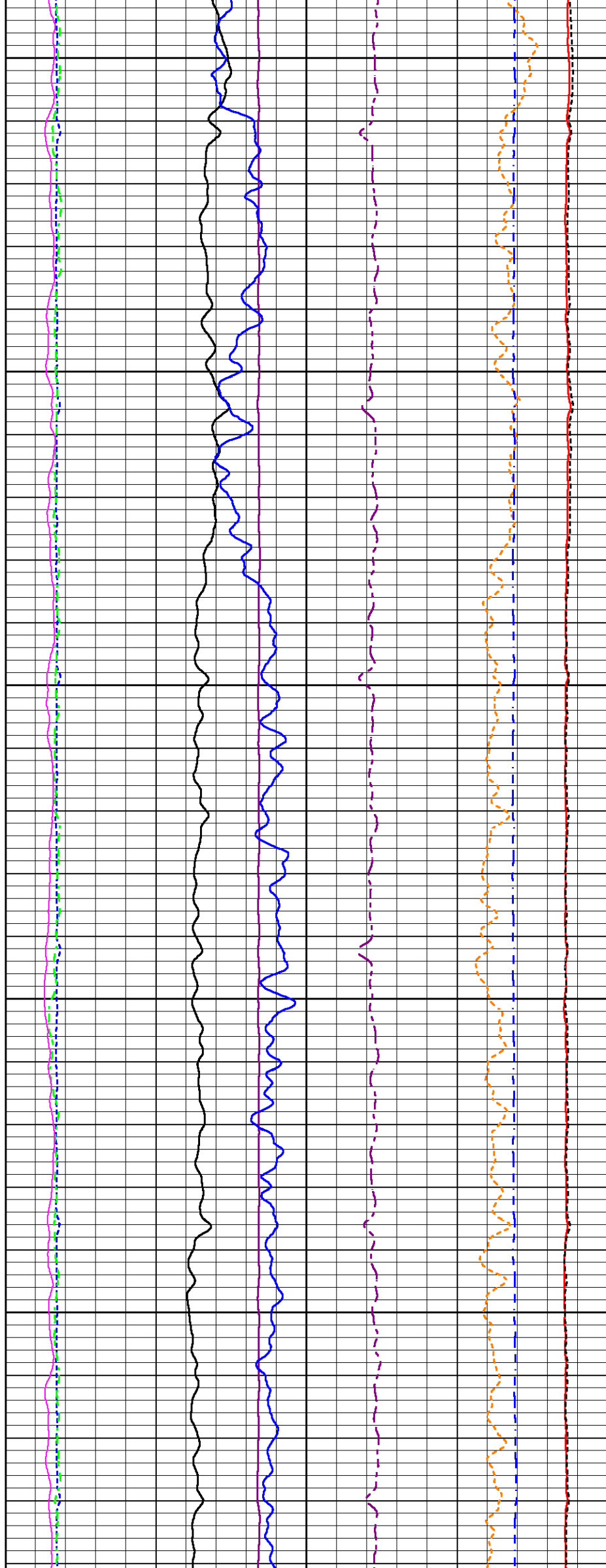
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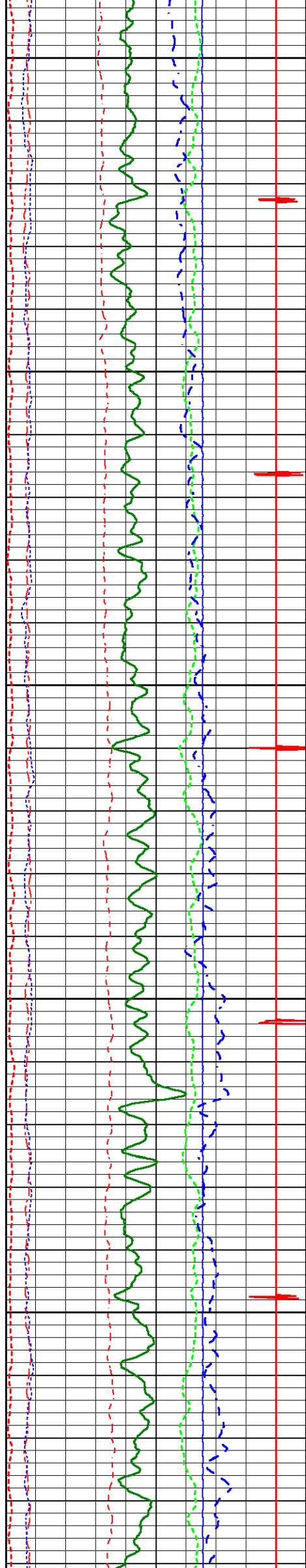




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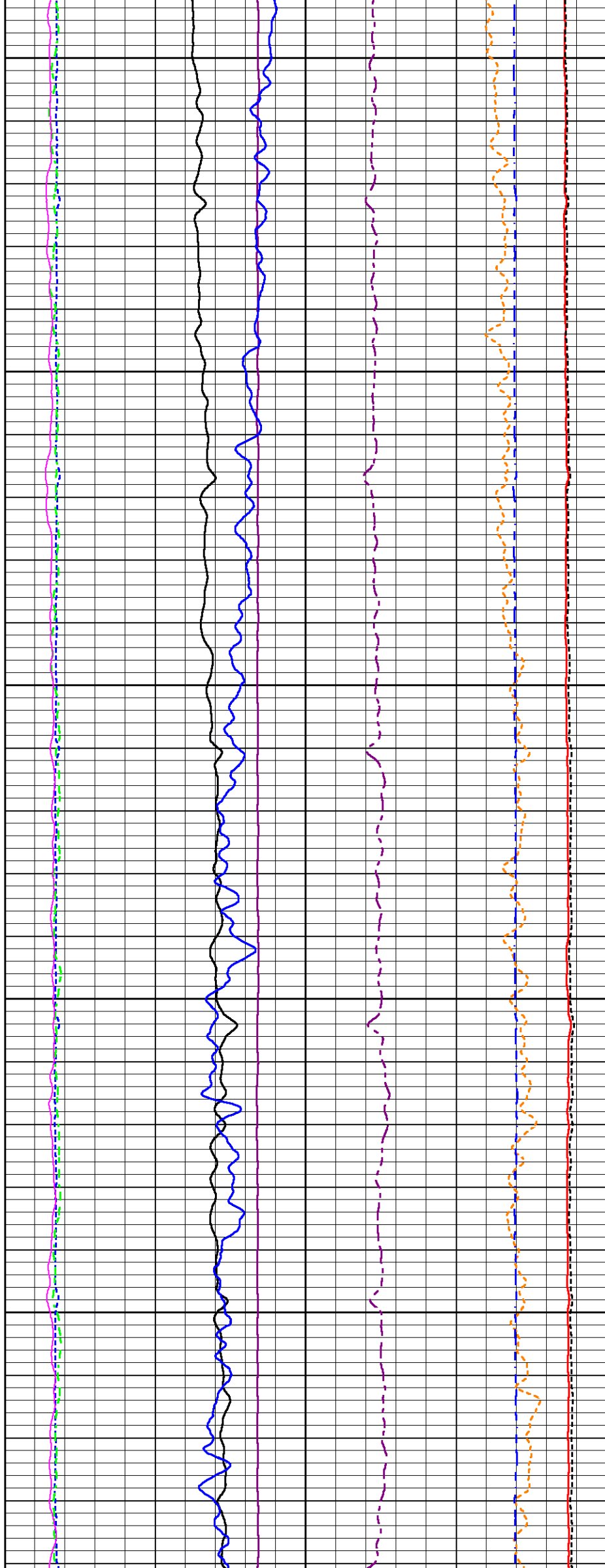


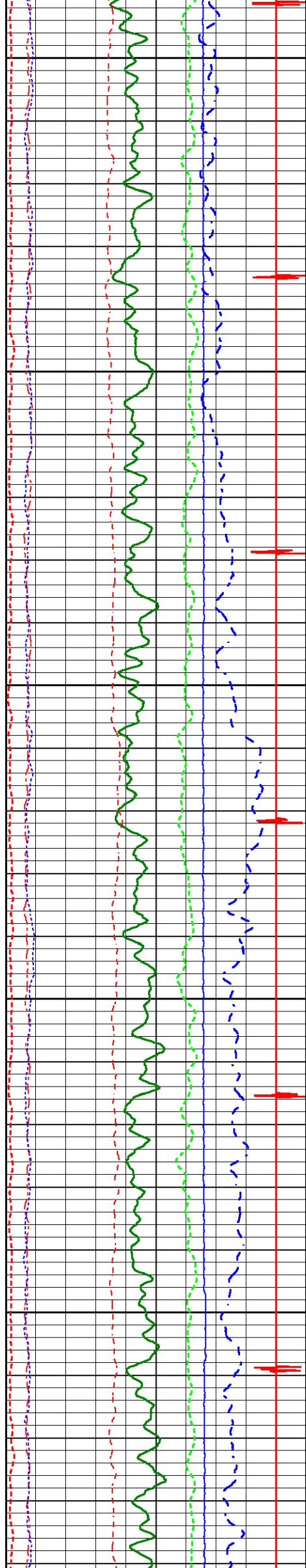


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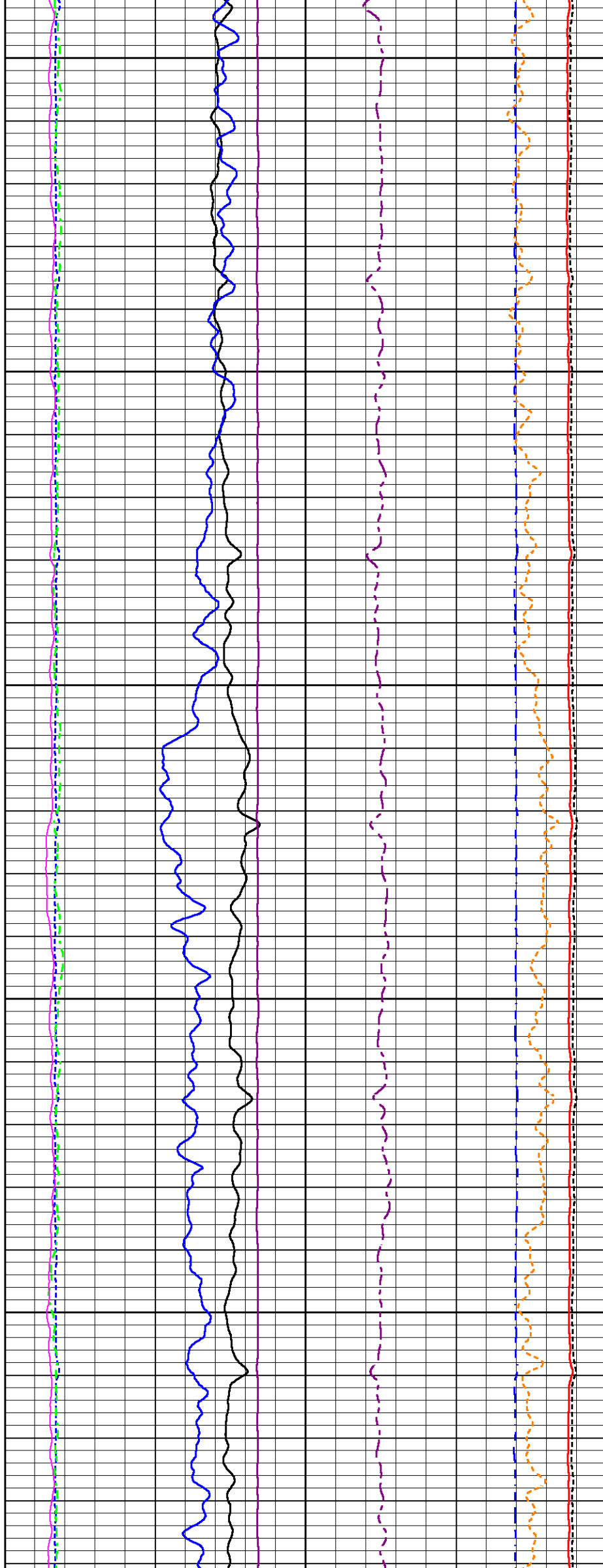
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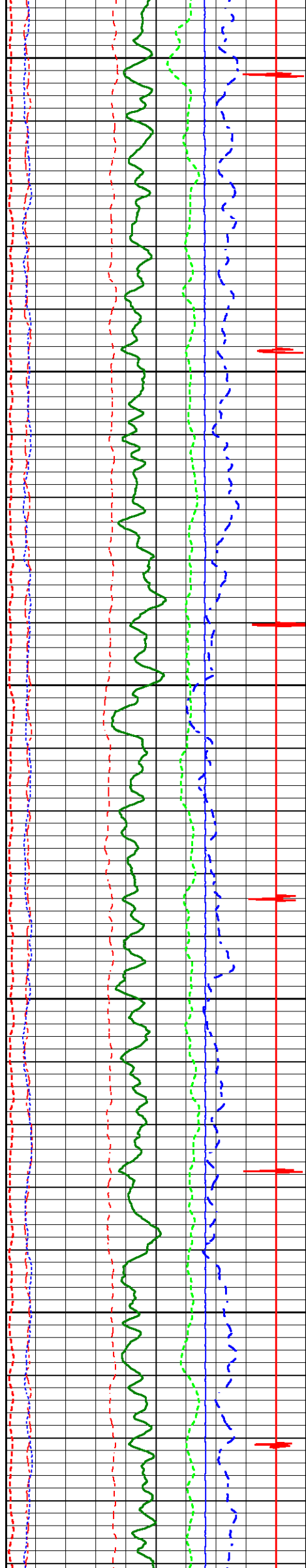




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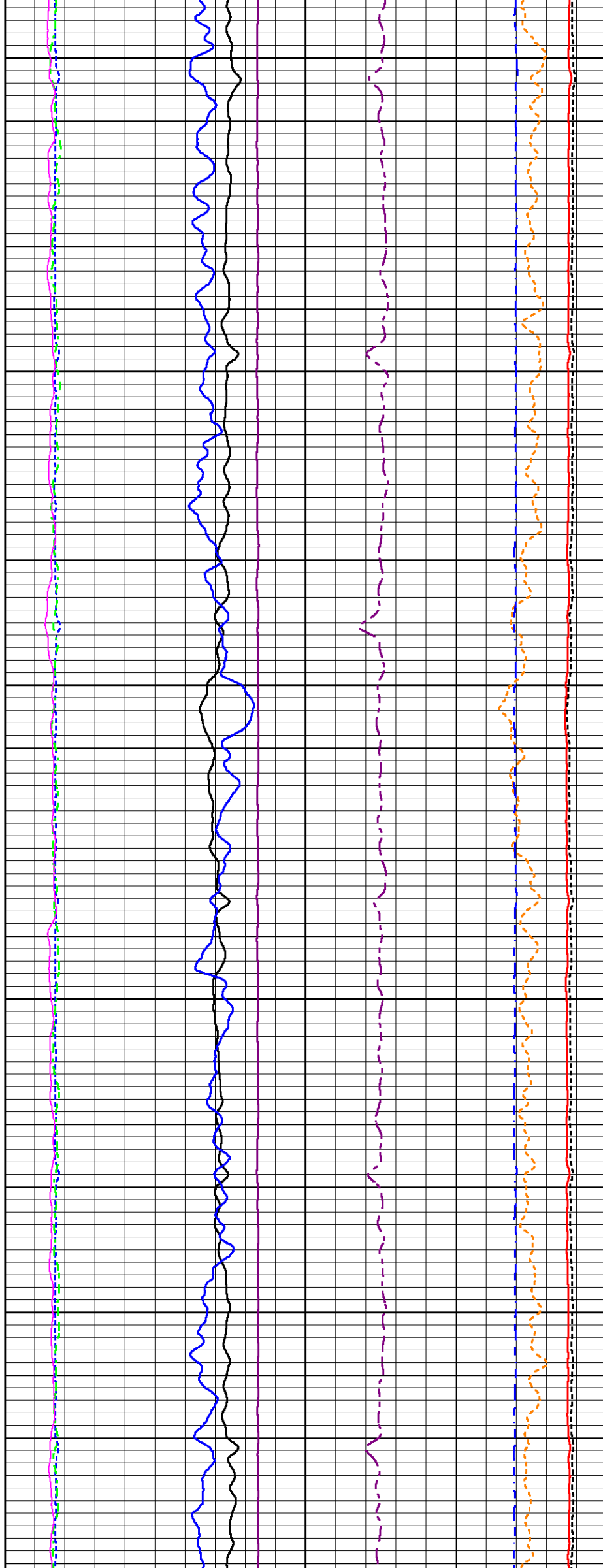


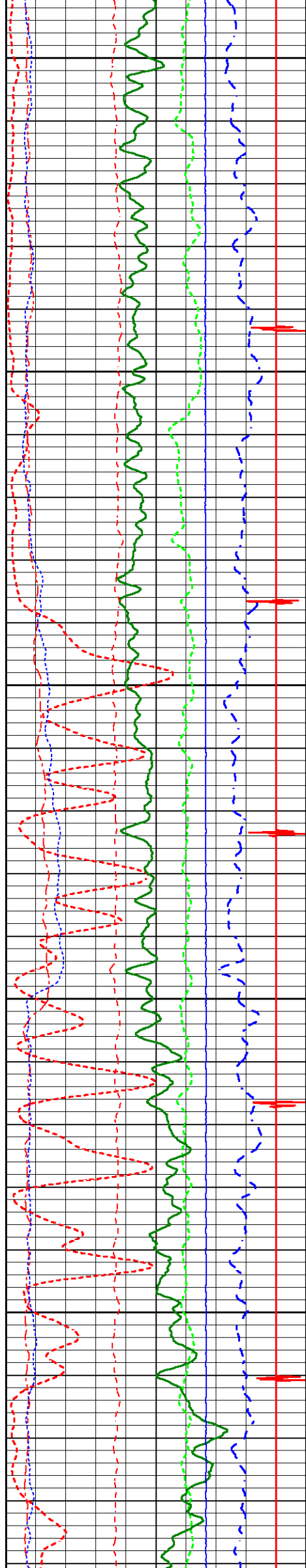


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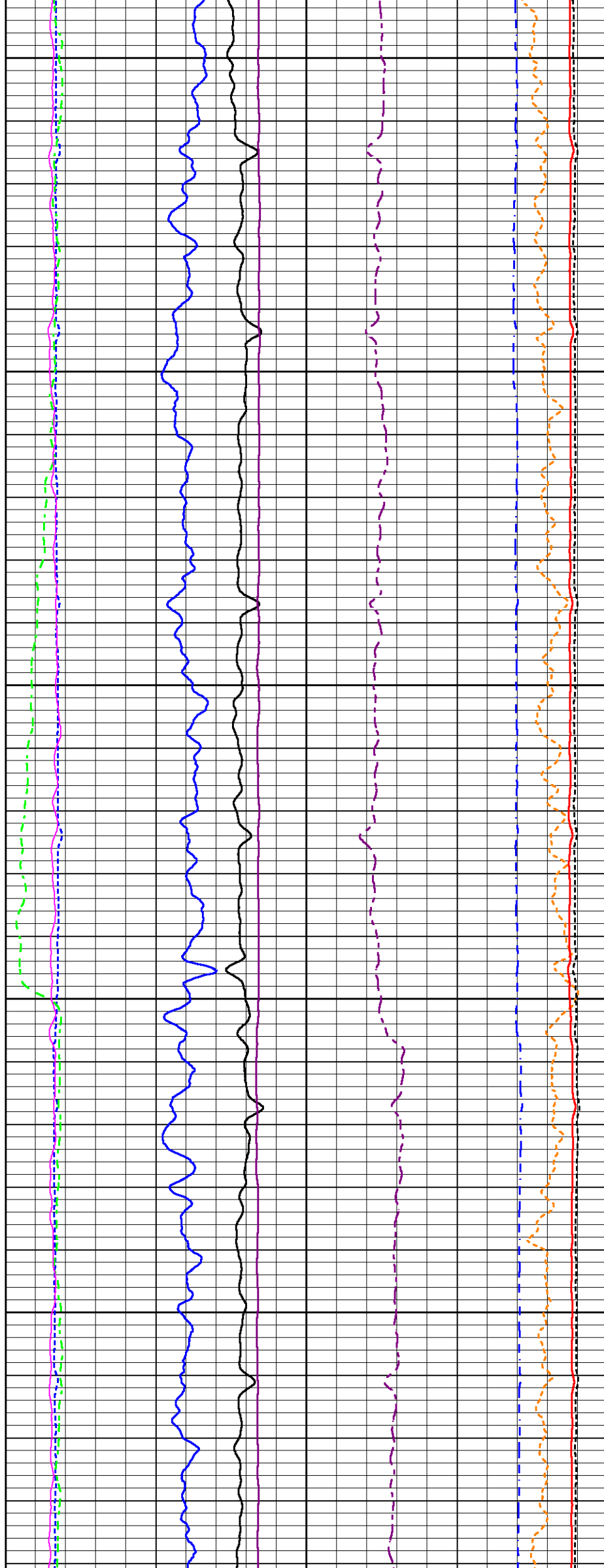
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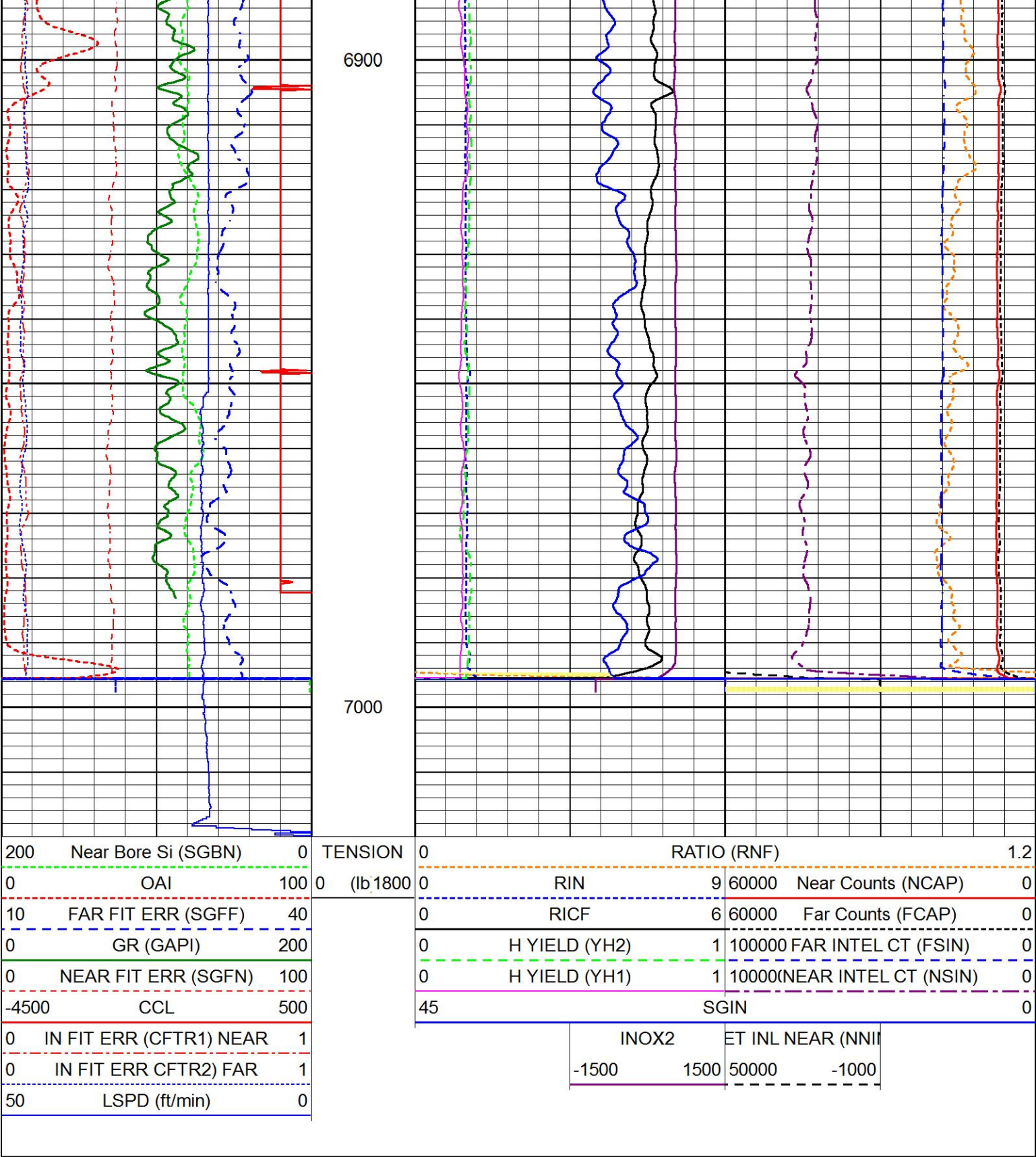




6700

6800





HALLIBURTON

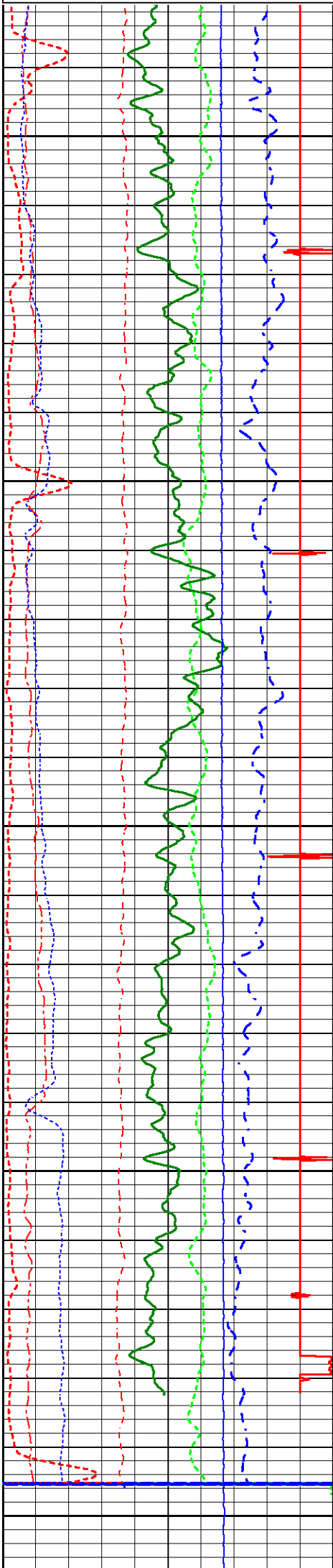
REPEAT PASS

Database File	soc_1s-66-36.db
Dataset Pathname	repeat1/repeat1.1
Presentation Format	RMTE_M~1
Dataset Creation	Wed Apr 16 08:04:14 2014
Charted by	Depth in Feet scaled 1:240

200	Near Bore Si (SGBN)	0	TENSION	0	RATIO (RNF)				1.2	
0	OAI	100	0 (lb/1800	0	RIN	9	60000	Near Counts (NCAP)	0	
10	FAR FIT ERR (SGFF)	40		0	RICF	6	60000	Far Counts (FCAP)	0	
0	GR (GAPI)	200		0	H YIELD (YH2)	1	100000	FAR INTEL CT (FSIN)	0	
0	NEAR FIT ERR (SGFN)	100		0	H YIELD (YH1)	1	10000	(NEAR INTEL CT (NSIN)	0	
4500	CCL	500		45	SGIN					0
0	IN FIT ERR (CFTR1) NEAR	1			INOX2		ET INL NEAR (NNII)			
0	IN FIT ERR CFTR2) FAR	1			-1500	1500	50000	-1000		
50	LSPD (ft/min)	0								

4500	CCL	500
0	IN FIT ERR (CFTR1) NEAR	1
0	IN FIT ERR CFTR2) FAR	1
50	LSPD (ft/min)	0

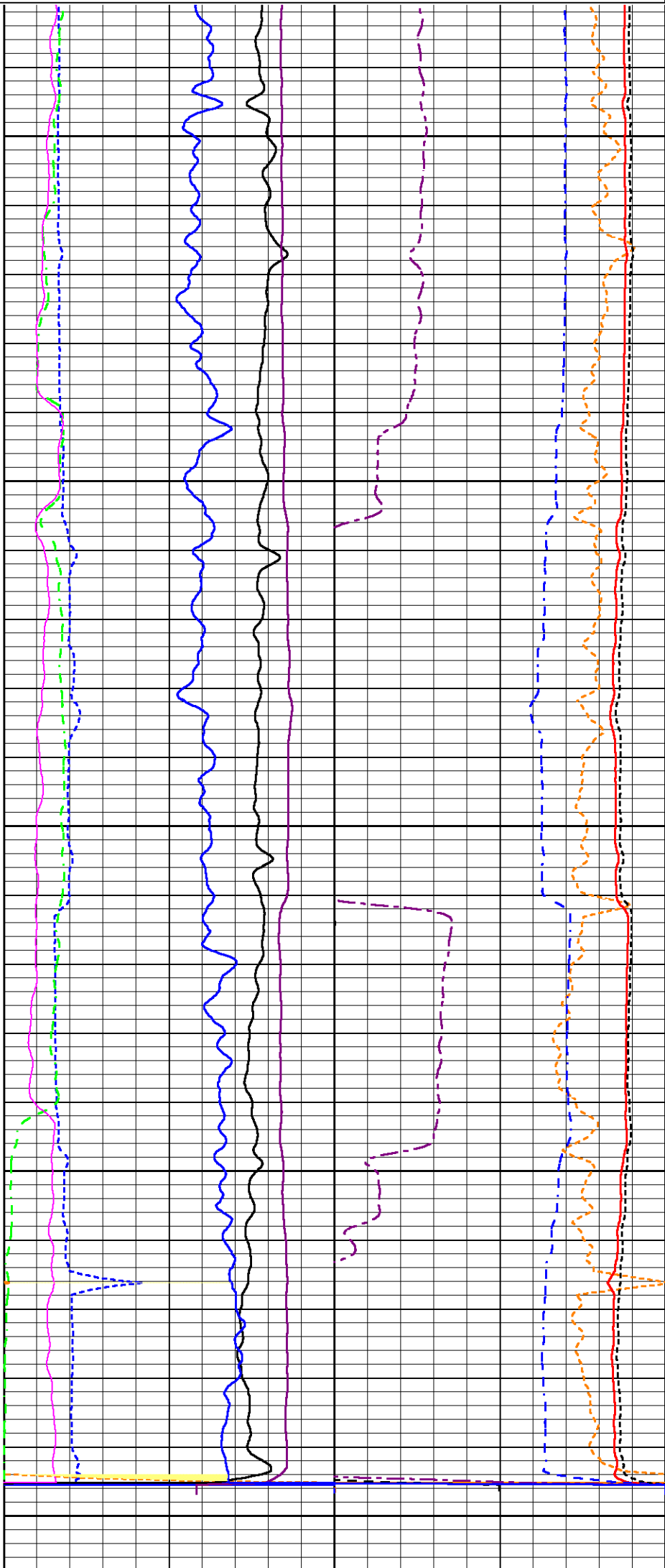
45	INOX2	SGIN	ET INL NEAR (NNI	0
	-1500	1500	50000	-1000



6800

6900

7000



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Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	86.00	80.00	6.00	+/-15.00	V
ITCR2	3055	3250	-195	+/-250	cps
Near Detector					
H	Channel 59	Expected Value 60 +/-2	Amplitude 0.0275	FWHM 5.26	Tol. <6.00
Fe	206	206 +/-2	0.0960	----	----
NGAIN = 0.995	NZOFF = 0.9				
Far Detector					
H	Channel 60	Expected Value 60 +/-2	Amplitude 0.0395	FWHM 4.95	Tol. <6.50
Fe	209	208 +/-2	0.0921	----	----
FGAIN = 0.993	FZOFF = 0.1				
Flask Temperature	57.8 degF				
Result	Logged	Expected Value	Diff.	Tol.	Units
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.64	1.64	0.00	+/-0.05	
TCCR2	4938	5000	-62	+/-1000	cps
ITCR2	3012	3200	-188	+/-250	cps

Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	87.00	80.00	7.00	+/-15.00	V
FCAP	10271	10000	271	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
N/F Normalizer	0.95	0.95	-0.00	+/-0.10	
N/F Inel Norm	0.61	0.61	0.00	+/-0.06	
RNF	1.05	1.07	-0.02	+/-0.12	
RINC	1.63	1.64	-0.01	+/-0.18	
SGFN	24.10	24.00	0.10	+/-0.50	cu
SGFF	22.91	22.85	0.06	+/-0.50	cu
FSIN	24556	24000	556	+/-2000	cps
FCAP	10334	10000	334	+/-1000	cps
NFTR	0.82			<5.00	
FFTR	0.92			<5.00	
NBKG	201			<500	cps
FBKG	103			<500	cps
RTN	0.65	0.40	-0.25	+/-0.25	usec
RTF	0.42	0.40	0.02	+/-0.10	usec

Calibration Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.2.14.3				
Log Data Acquisition Software Modules					
HRMTI Module	2013.11.14.0				
RMTI Module	2014.2.14.3				

Gamma Ray Calibration Report					
Serial Number:	10002717				
Tool Model:	002				
Performed:	Tue Apr 01 14:52:01 2014				
Calibrator Value:	243.0	GAPI			

Background Reading:	40.3	cps
Calibrator Reading:	164.9	cps
Sensitivity:	1.9504	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	37.39		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	35.13					
RmtTFGT	24.47					
RmtFBACK	24.47					
RmtFCAPT	24.47					
RmtFINEL	24.47					
RmtTNGT	23.97					
RmtNBACK	23.97		TTTCU-002 (10002717) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
RmtNCAPT	23.97					
RmtNINEL	23.97					
TLINICNT	16.22					
RmtGenClamp\	16.22					
RmtFTemp	16.22					
RmtFP5V	16.22		XHU-003 (10004394) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
RmtFPMHV	16.22					
RmtFPMI	16.22					
RmtFPrgSt1	16.22					
RmtFDetStat	16.22					
RmtNTemp	16.22					
RmtNPMHV	16.22					
RmtNPMI	16.22					
RmtNPrgSt1	16.22					
RmtNDetStat	16.22					
RmtGenIonl	16.22					
RmtGen15Busv	16.22		RMTI-A (12210556) Halliburton RMTI Tool	14.00	2.13	77.00
RmtGenLvdsV	16.22					
RmtGenSyncV	16.22					
RmtGenClamp\	16.22					
RmtGenP5V	16.22					
RmtGenP33V	16.22					
RmtGen200V	16.22					
RmtGenP15VI	16.22					
RmtGenTemp	16.22					
RmtGenP5VI	16.22					
RmtGenI	16.22		X-OVER-SondexxGo Sondex Box x Go Pin Cross Over	0.31	1.69	1.00
RmtGenPv	16.22					
RmtGenCmd	16.22		AUH-001 (11072111) Adaptor Ultrawire/Halliburton	0.38	1.69	3.00
RmtGenIspl	16.22					
RmtGenIsPv	16.22		CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
RmtGenIsPcmc	16.22					
RmtGenRepPv	16.22					
RmtGenRepV	16.22					
RmtGenRepSv	16.22					
RmtGenContSt:	16.22					
RmtCommFWa	16.22					
RmtCommFlask	16.22					
CBLROT	8.31		RBT-004 (1142) Radial Bond Tool (UW 3 1/8) 20K Rated	9.48	3.13	140.00
CBLTEMP	8.31					
WVFS8	8.31					
WVFS7	8.31					
WVFS6	8.31					
WVFS5	8.31					
WVFS4	8.31					
WVFS3	8.31					
WVFS2	8.31		CENT-Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	20.00
WVES1	8.31					

WVF01	0.01			BUL-001 (000001)	0.30	1.69	1.50
WVF3FT	8.31			Bullnose			
WVF5FT	7.31			Dataset:	soc_1s-66-36.db: field/well/main1/main1.1		
HVOLTX	0.00			Total length:	40.96 ft		
ITEMPX	0.00			Total weight:	370.50 lb		
TSTAMP	0.00			O.D.:	3.13 in		

Company	BILL BARRETT CORP.		
Well	STATE OF CO 1S-66-36-1609CH		
Field			
County	ADAMS	State	CO
HALLIBURTON	RESERVOIR MONITORING TOOL FIELD COPY		