



Weatherford®

DENSITY C-THRU

Company MARATHON OIL COMPANY
Well 596-31C-24
Field GRAND VALLEY
County GARFIELD State COLORADO Country U.S.A.
Location SHL: 2170' FSL & 605' FWL

Section 31 Township 5S Range 96W API Num 0504516025
Permanent Datum G.L. Elevation 8521 K.B. 8545
Log Measured From K.B., 24 Above Perm Datum D.F. 8544
Drilling Meas From K.B. G.L. 8521

	Run 1	Run 2	Run 3
Date	01-28-09 (WFT-OH)	09-21-09 (WFT-CH)	
Depth - Driller	9744'	9744'	
Depth - Logger	9717'	9513'	
Btm Log Interval	9668'	6250'	
Top Log Interval	8325'	2384'	
Casing - Driller	2384'	9744'	
Casing - Logger	9.625" @ 2384'	4.5" @ 9513'	
Bitsize	7.875"	7.875"	
Type Fluid in Hole	GEL CHEM	FRESH WATER	
Dens. / Visc.	9.50 / 85.00		
pH / Fluid Loss	9.30 / 5.40		
Source of Sample	FLOWLINE	N/A	
Rm @ Meas. Temp	1.78 @ 76°F		
Rmf @ Meas. Temp	1.42 @ 76°F		
Rmc @ Meas. Temp	2.14 @ 76°F		
Source: Rmf / Rmc	CALC / CALC		
Rm @ BHT	0.90 @ 153°F		
Max. Rec. Temp.	153°F		

PLOT TYPE: DENSITY C-THRU

REMARKS:

Project: 3516293
API Number: 05-045-16025
Company: MARATHON OIL COMPANY
Well: 596-31C-24
Field: GRAND VALLEY
County: GARFIELD
State: COLORADO

Country: USA
Log Date: 9-21-09 (WFT-CH)

Open Hole data recorded by Weatherford Compact Tools on Jan-28-2009
Cased Hole data recorded by Weatherford Compact Tools on Sept-21-2009
Porosity data computed via C-Thru technique
2.68 g/cc Density Matrix used to calculate Porosity
Wash out / Poor Cement effects density Porosity from 6780-7370, 7560-7980
8390-8490, 8570-8630

CURVE DESCRIPTIONS:

CURVE LEGEND:

GRGC = Gamma Ray from Sept-2009
GRGC_OH = Gamma Ray from Jan-2009
CCLG = Casing Collar Locator
CLDC = Density Caliper from Sept-2009
CLDC_OH = Density Caliper from Jan-2009
SMTU = Tension from Sept-2009
PDFC = Far Density Counts from Sept-2009
PDFC_OH = Far Density Counts from Jan-2009
PDNC = Near Density Counts Sept-2009
PDNC_OH = Near Density Counts Jan-2009
DCOR = Density Correction from Sept-2009
DCOR_OH = Density Correction from Jan-2009
NPRS = Sandstone Neutron Por. Sept-2009
NPRS_OH = Sandstone Neutron Por. Jan-2009
DPOR = Base Density Porosity Sept-2009
DPOR_OH = Base Density Porosity Jan-2009
DNND = Near Neutron Raw
DNND_OH = Near Neutron Raw Jan-2009
DNFD = Far Neutron Raw
DNFD_OH = Far Neutron Raw Jan-2009

BOREHOLE ENVIRONMENT:

BOREHOLE RECORD:

Bit Size	Top	- Bottom
14.750	2384	- 2444'
8.750	2444	- 7587'
7.875	7587	- 9700'

CASING RECORD:

Size	Top	- Bottom
4.5 Surface	-	9700'

ANALYST: Can Le
PROGRAM: Well Manager V.9

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 WILLFULL 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.

WEATHERFORD INTERNATIONAL, LTD.



Gas_Indication_from_Neut/Den.



Lower_Data_Quality

596-31C-24
16 Oct 2009 @ 16:40
DEPTH (FT)
Interval: 6280.00 to 9506.50
Depth Scale Ratio: 1/240

CCLG
63000 mv -7000

DEPTH
FT

NPRS
0.3 dec -0.1

CLDC
3 in 13

CSG
0 flag 0

DPOR
0.3 dec -0.1

GRGC
0 gapi 150

CSG
1 flag 0

SMTU
0 5600

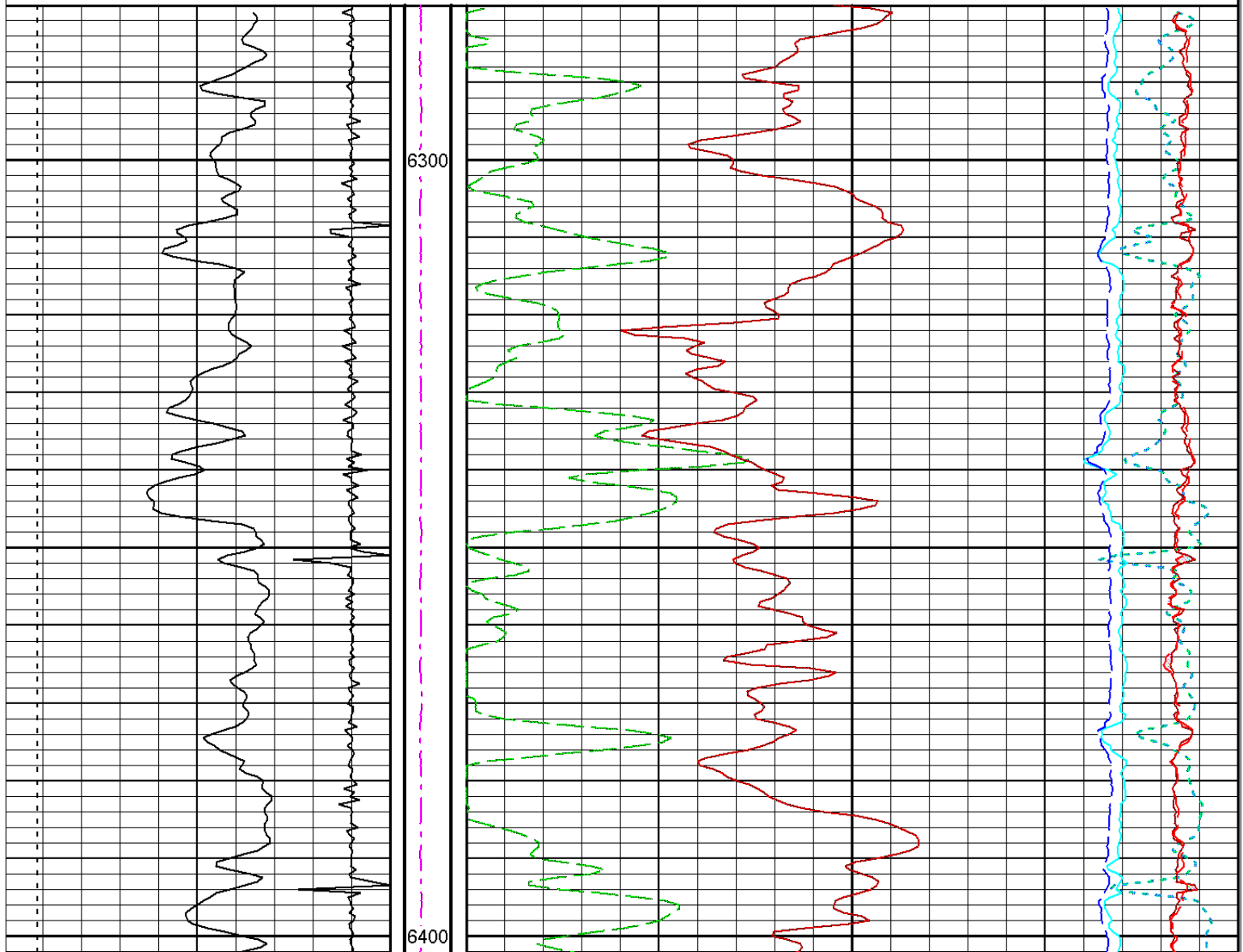
DCOR
-0.8 g/c3 0.2

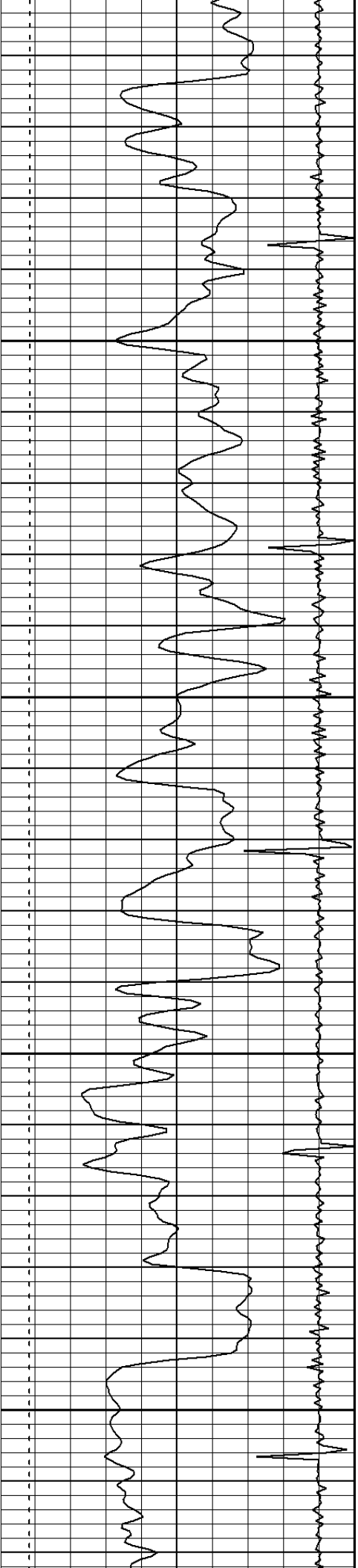
PDNC
130000 cps 0

PDFC
30000 cps -1000

DNND
35000 snu -7000

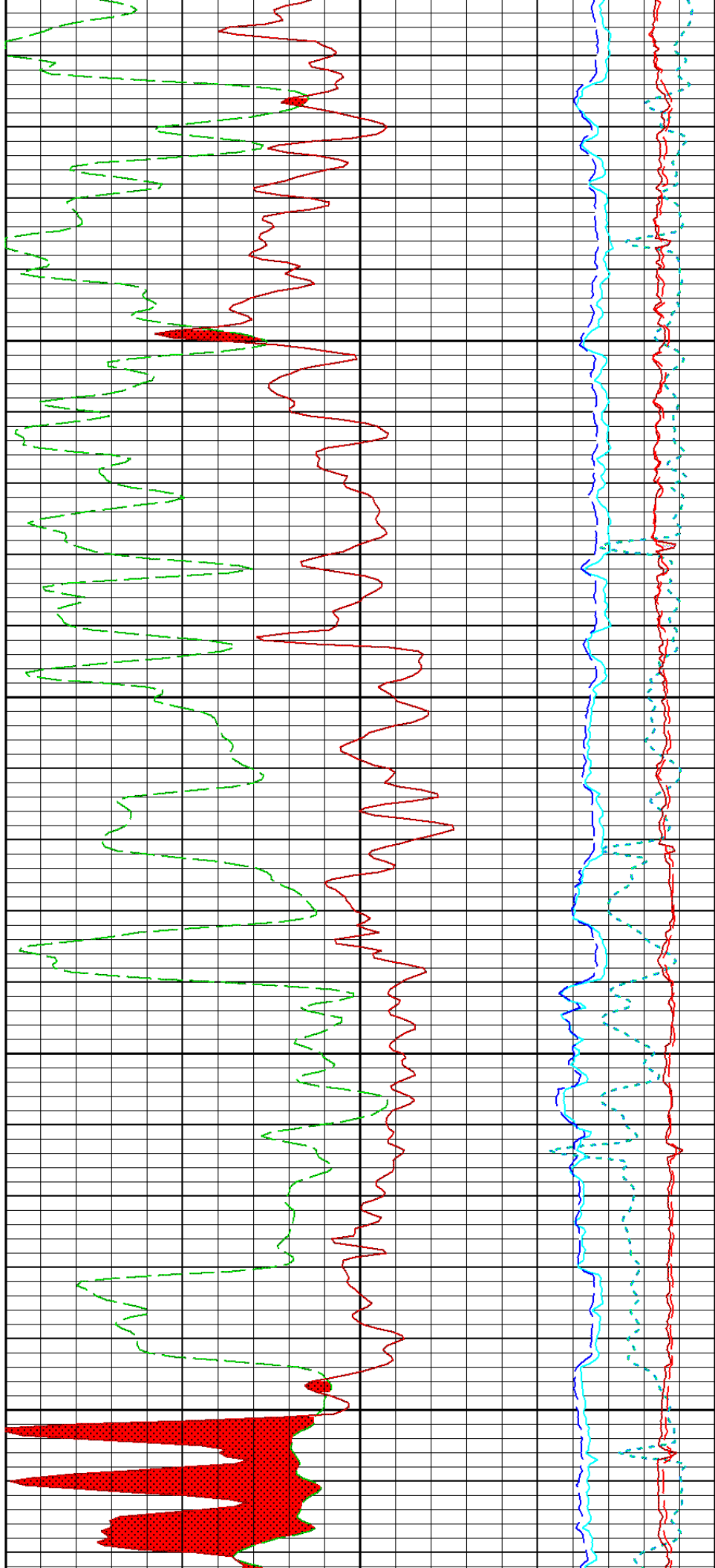
DNFD
7000 snu -3000





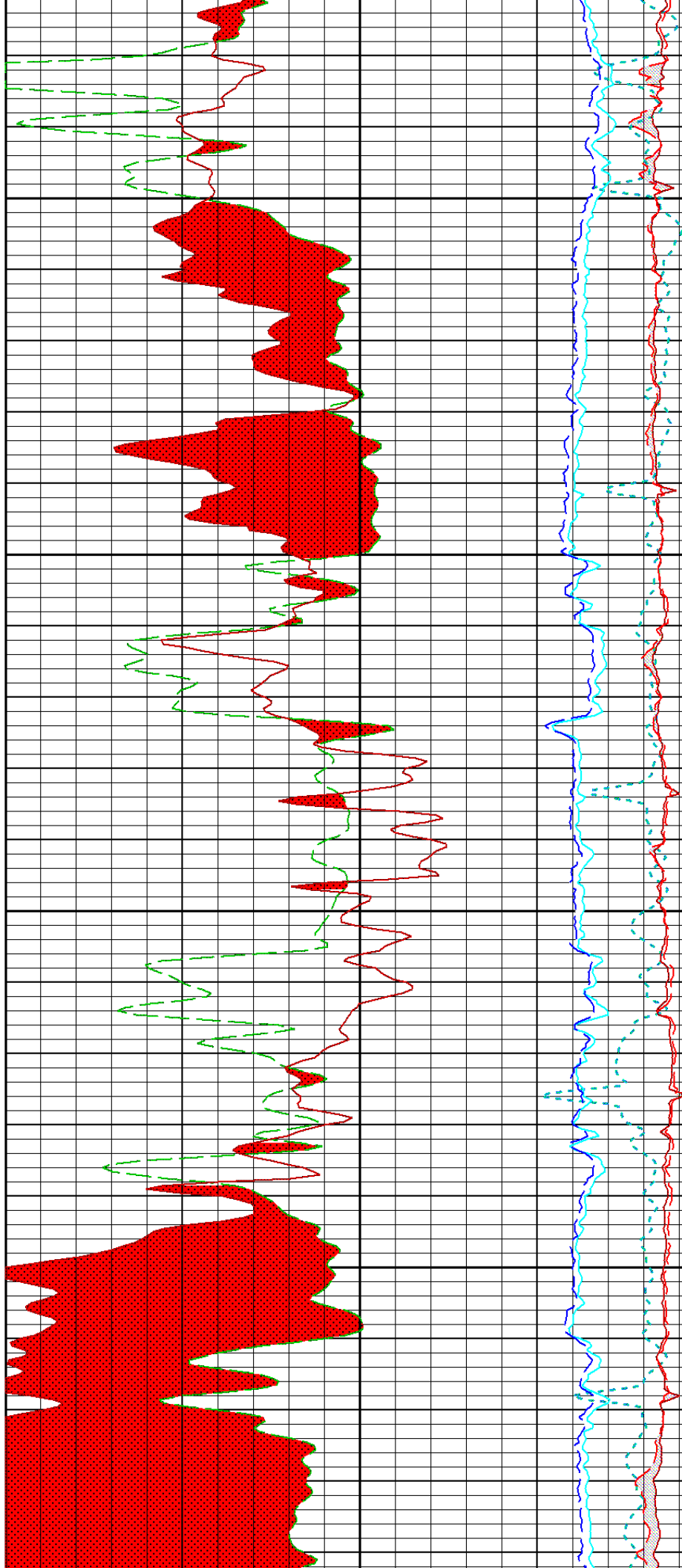
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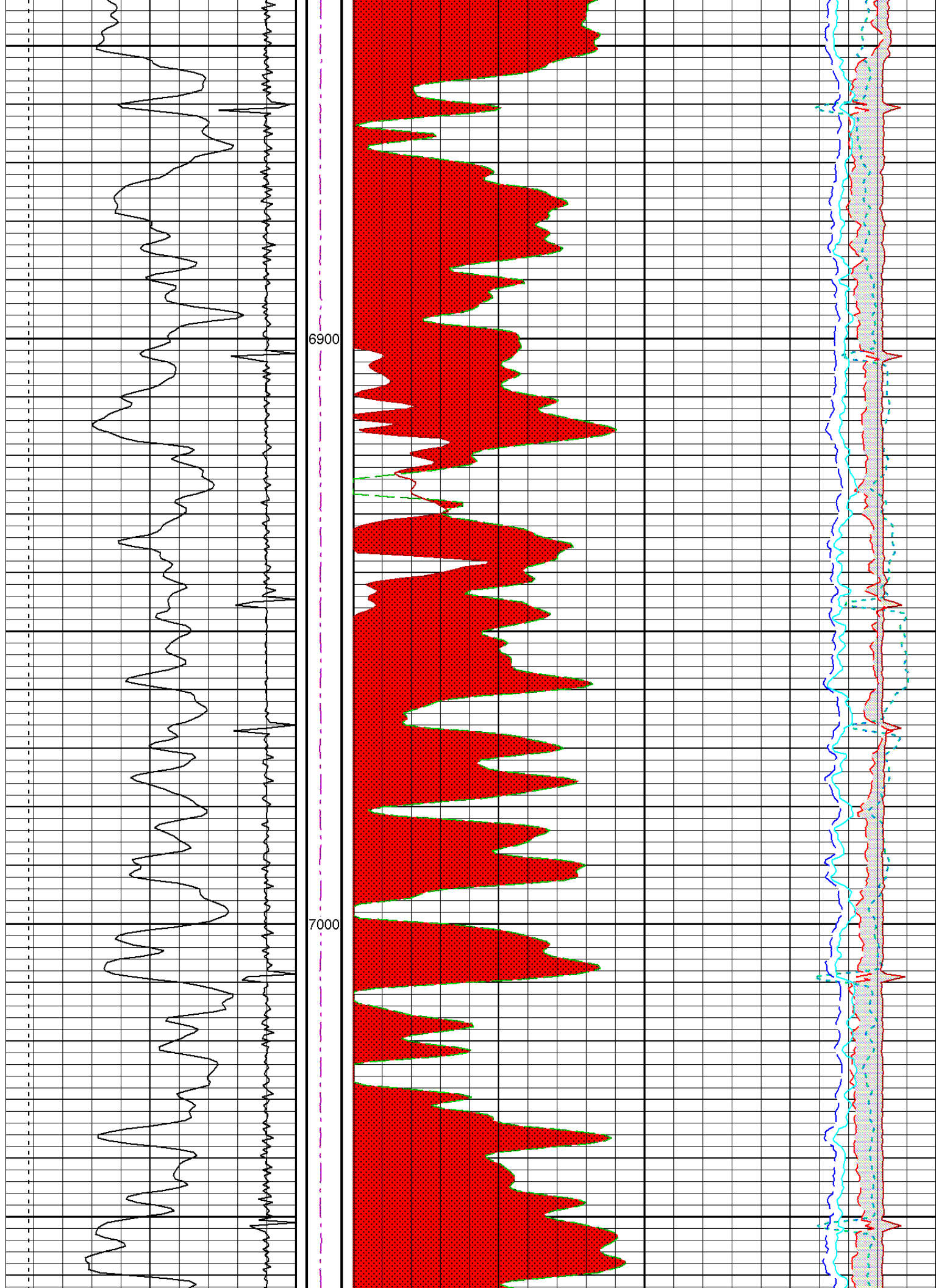
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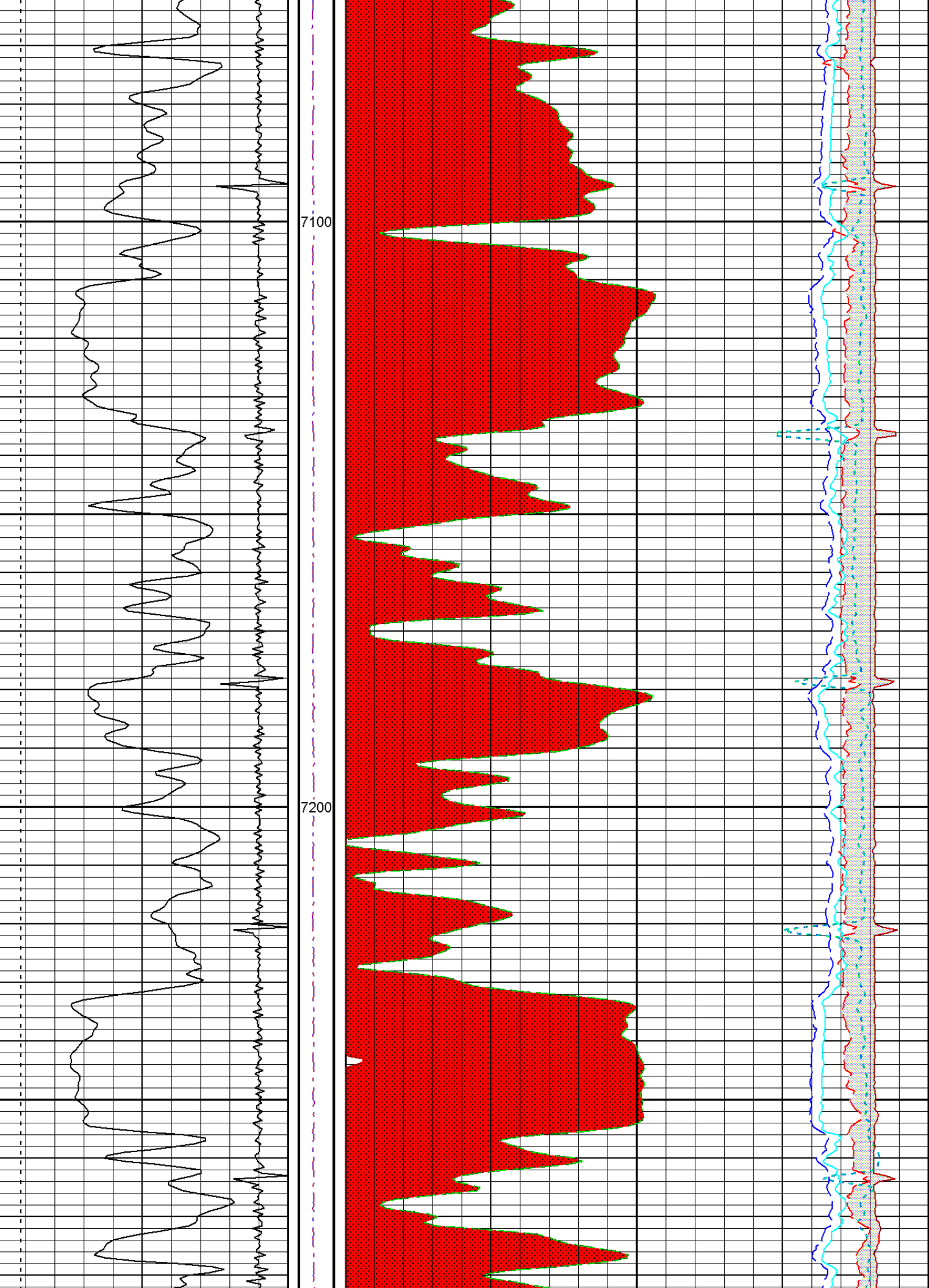


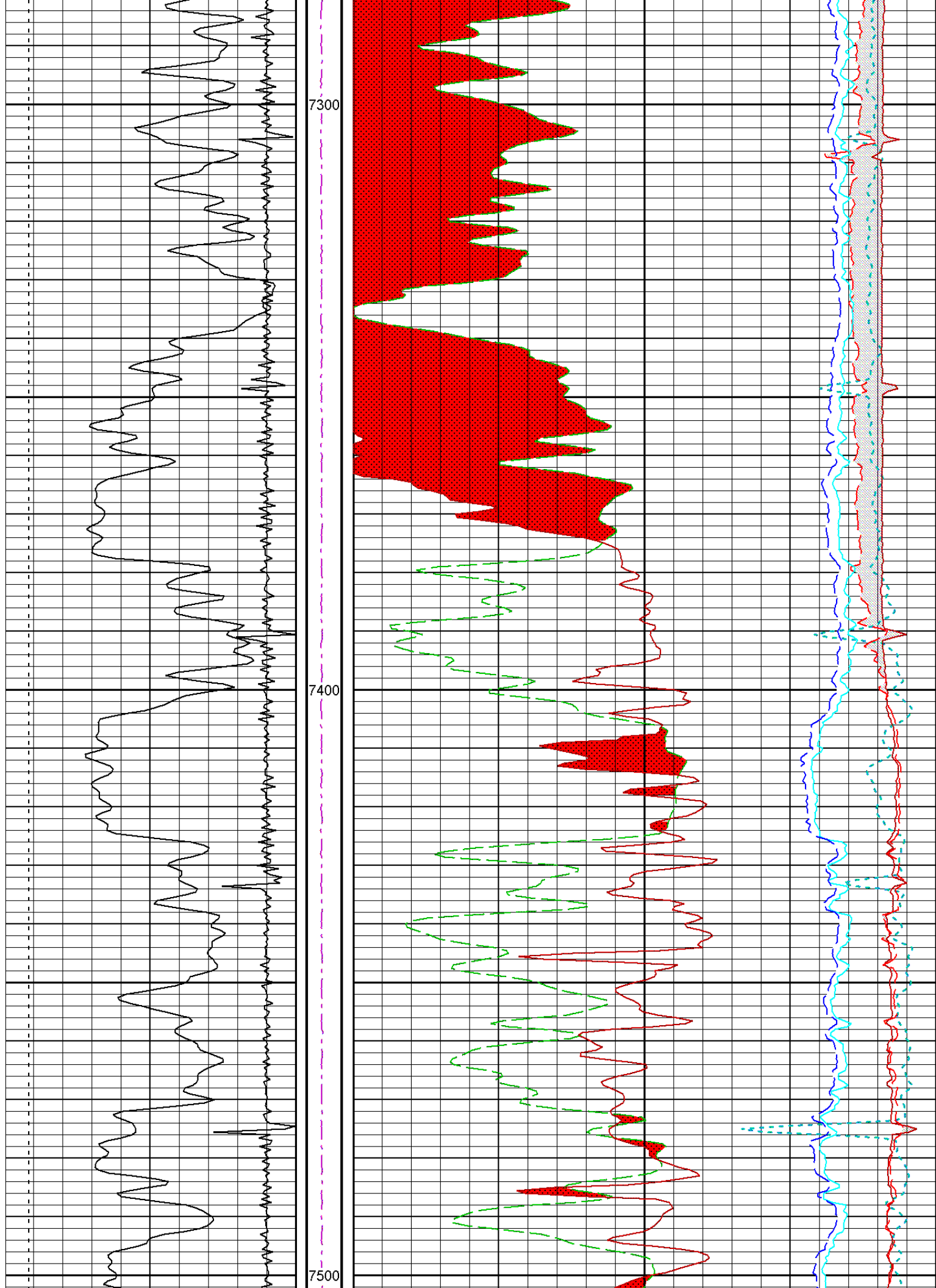
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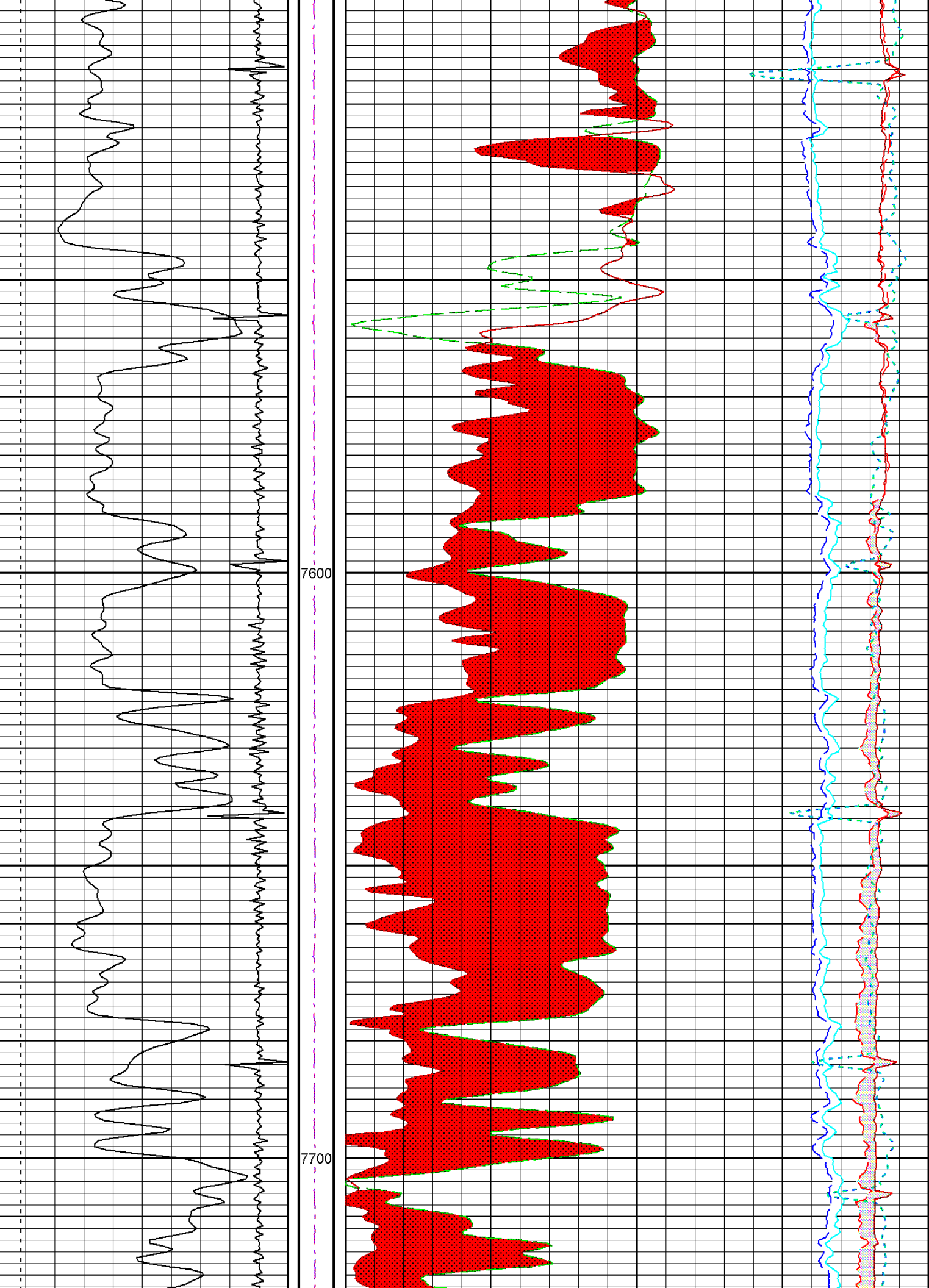
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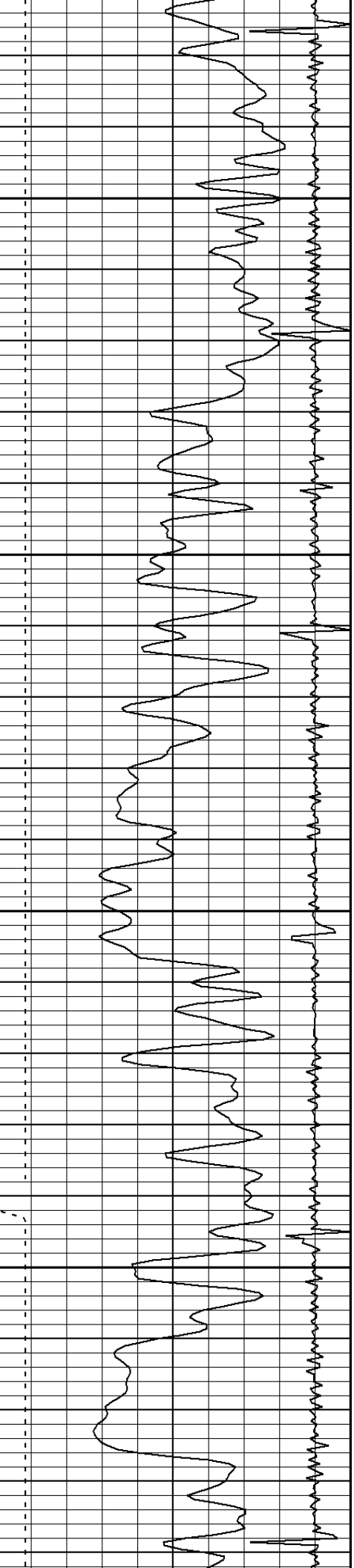






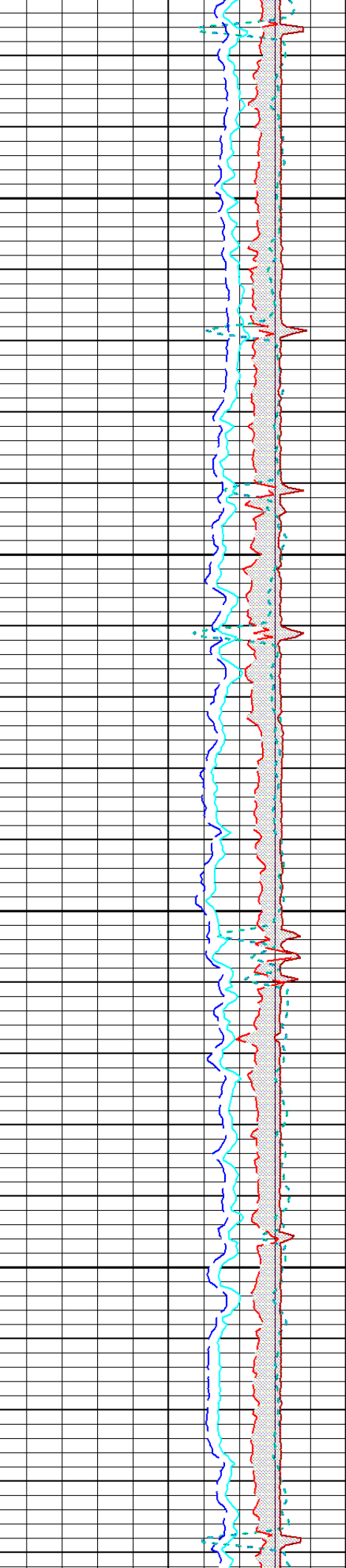
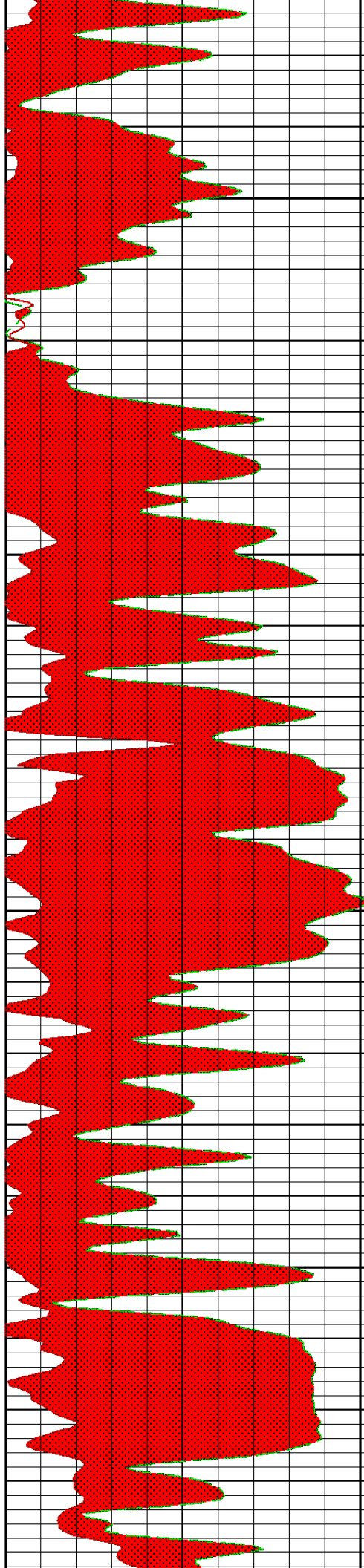






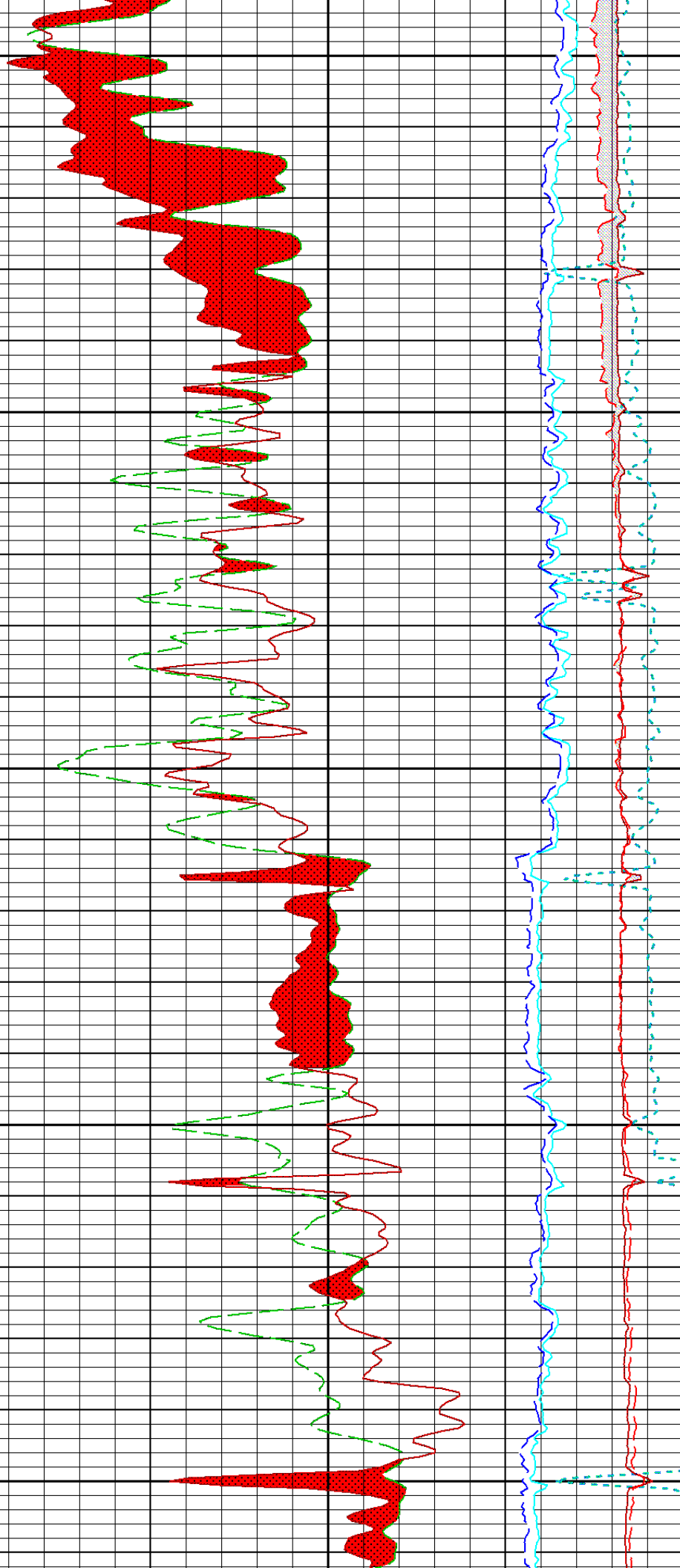
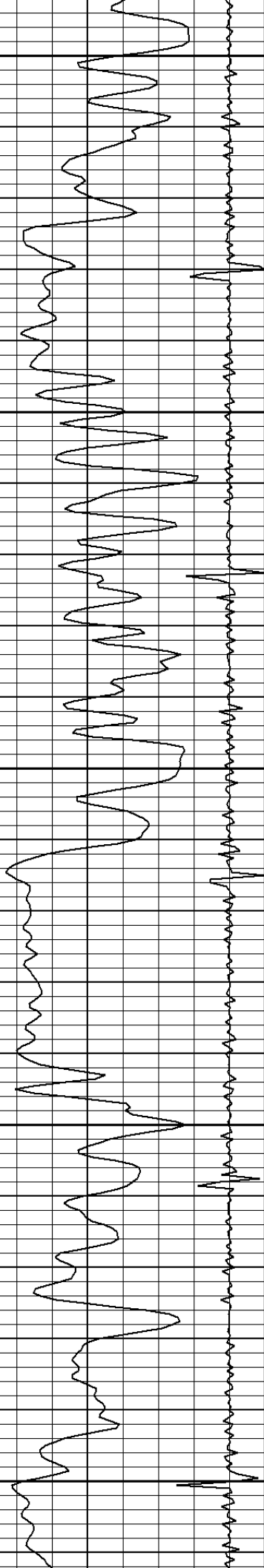
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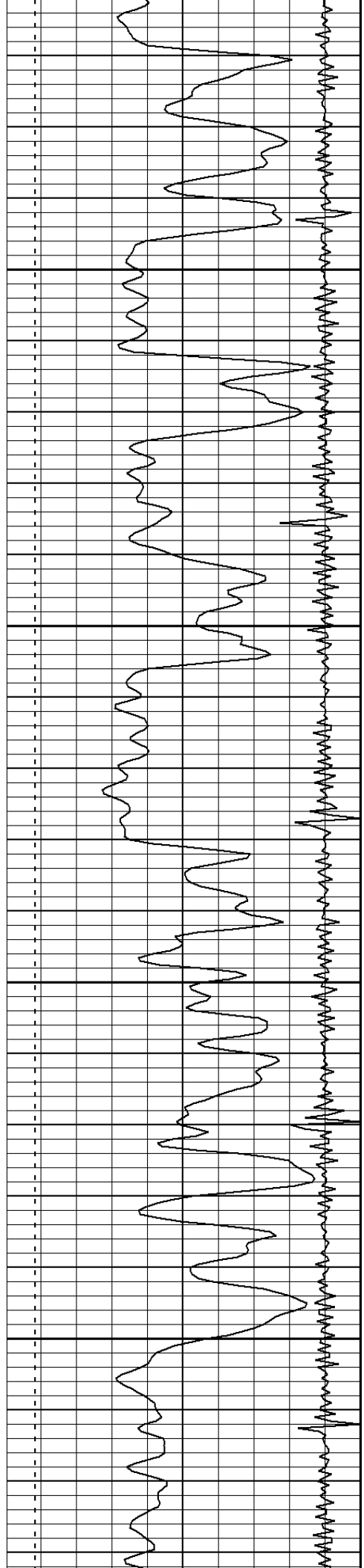
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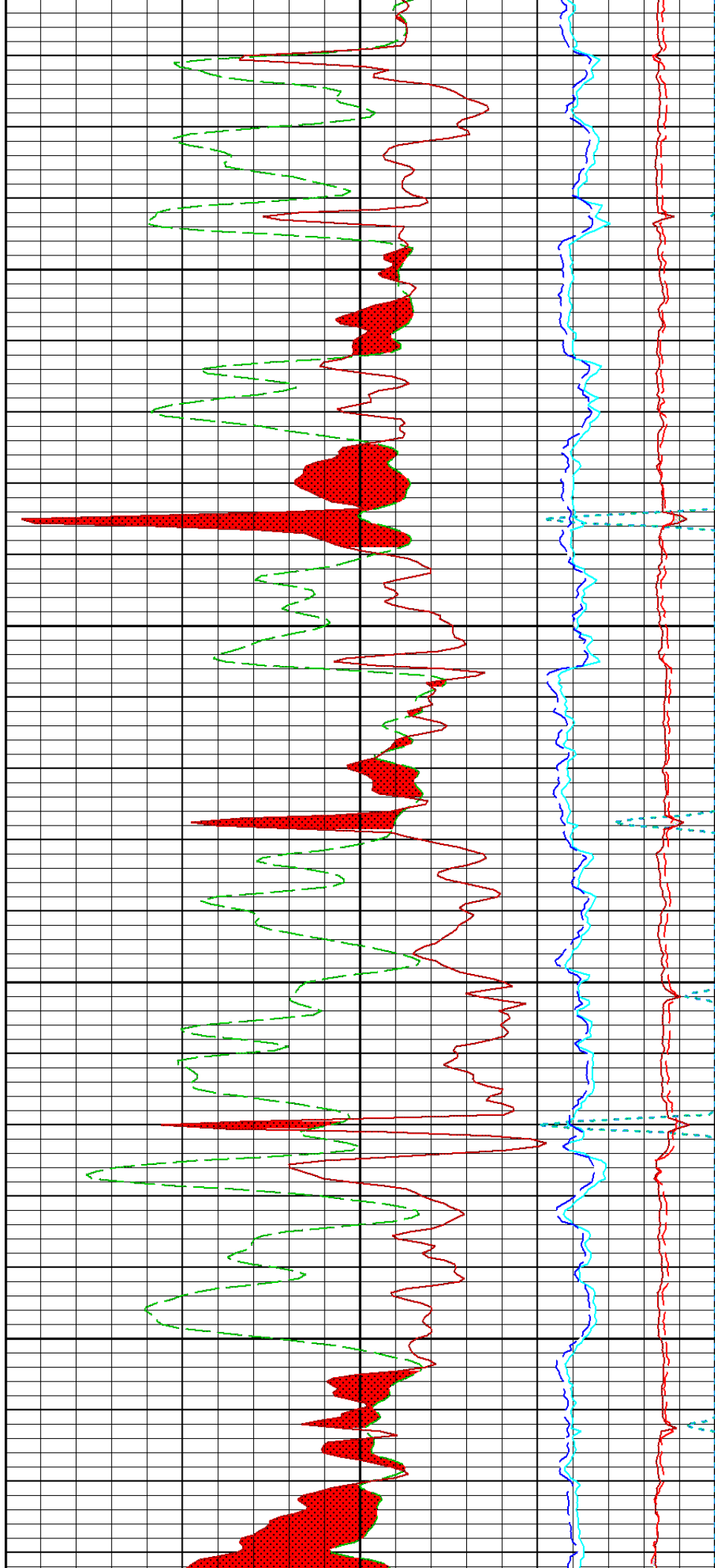
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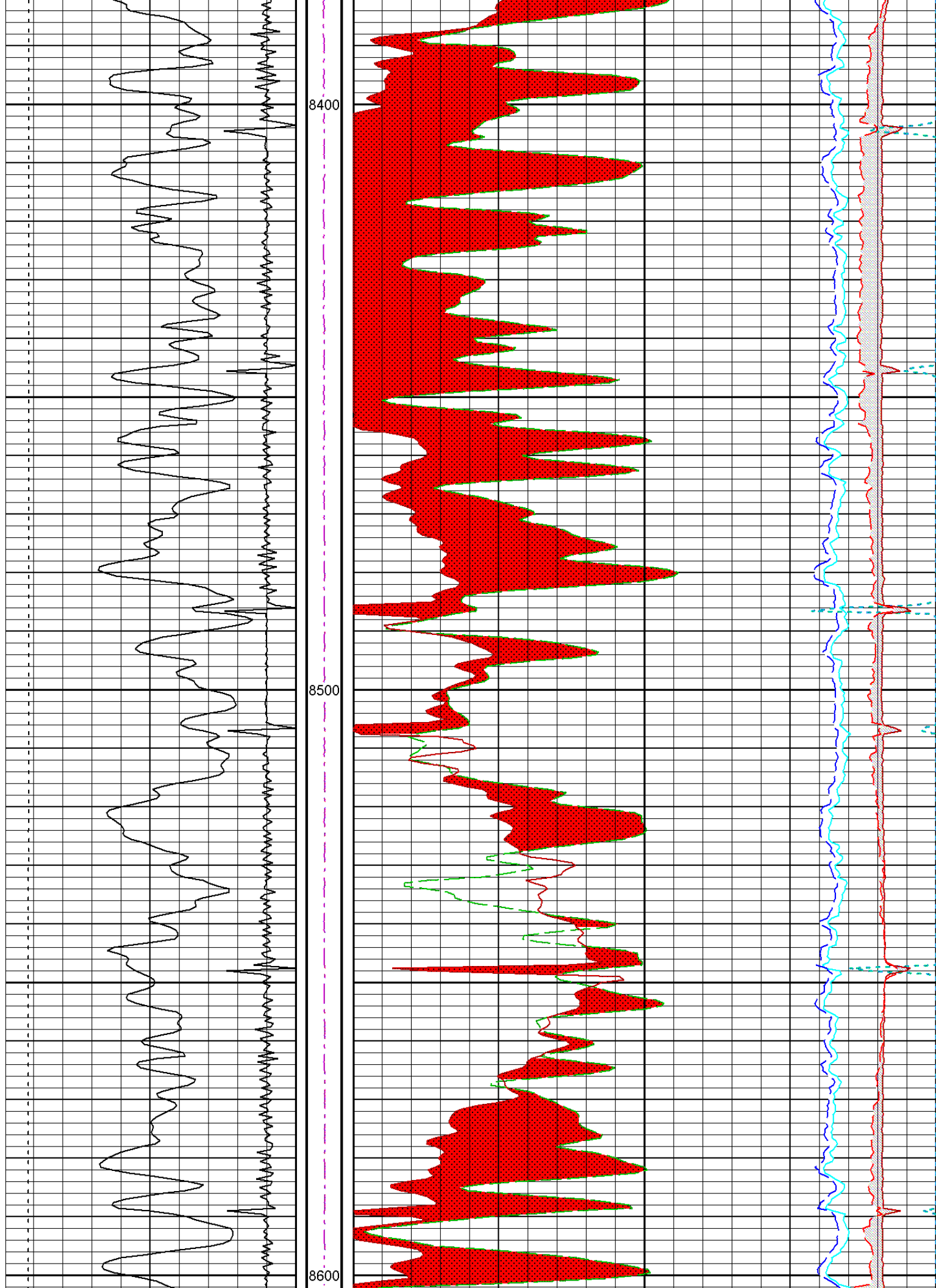


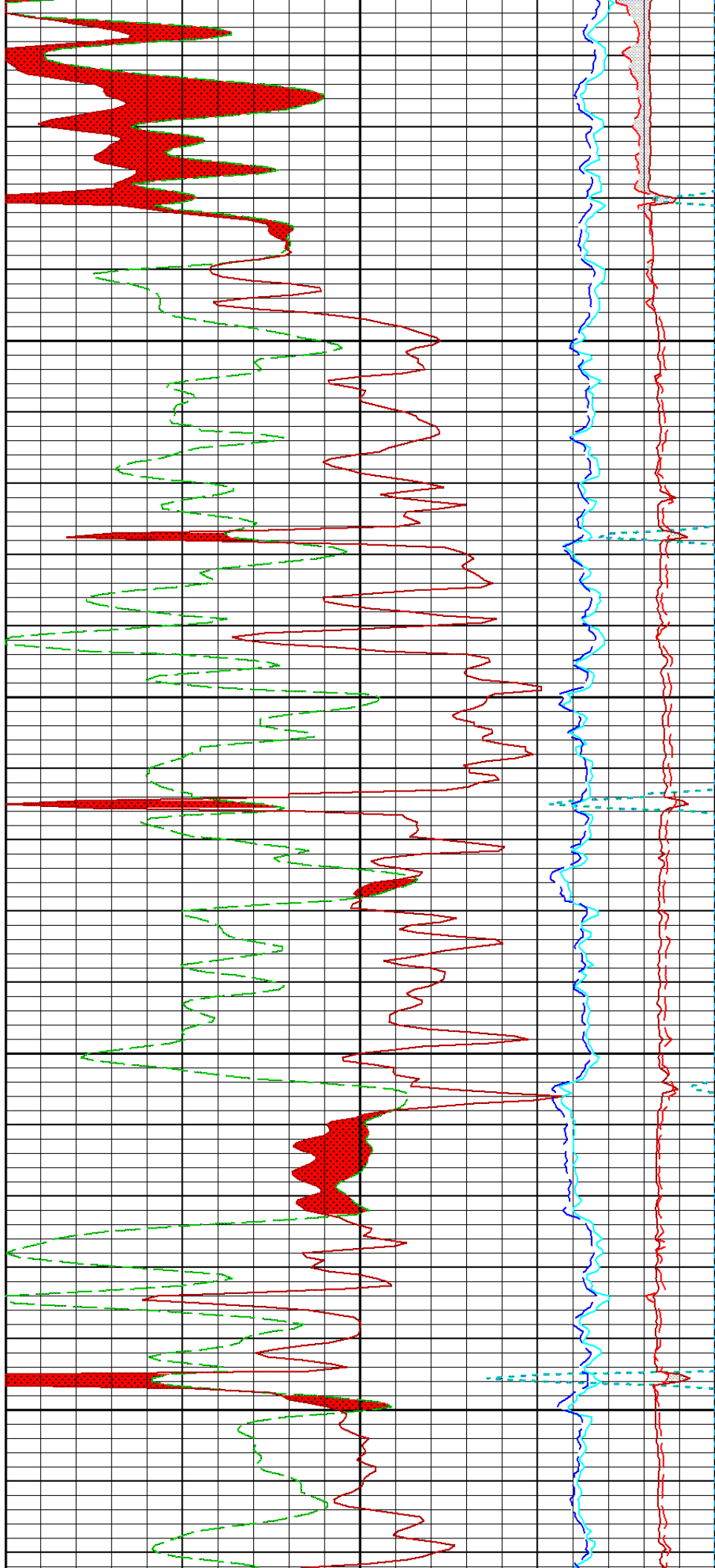


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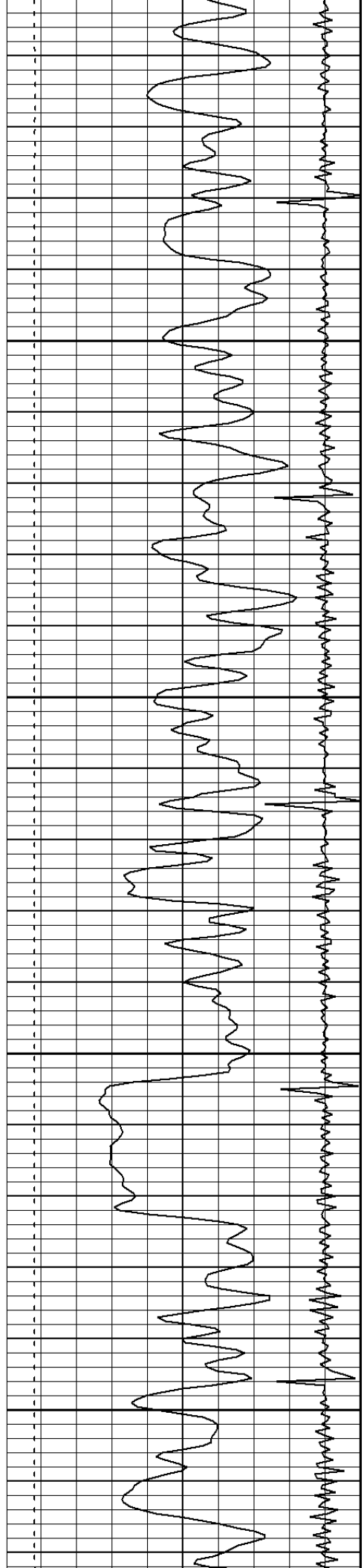


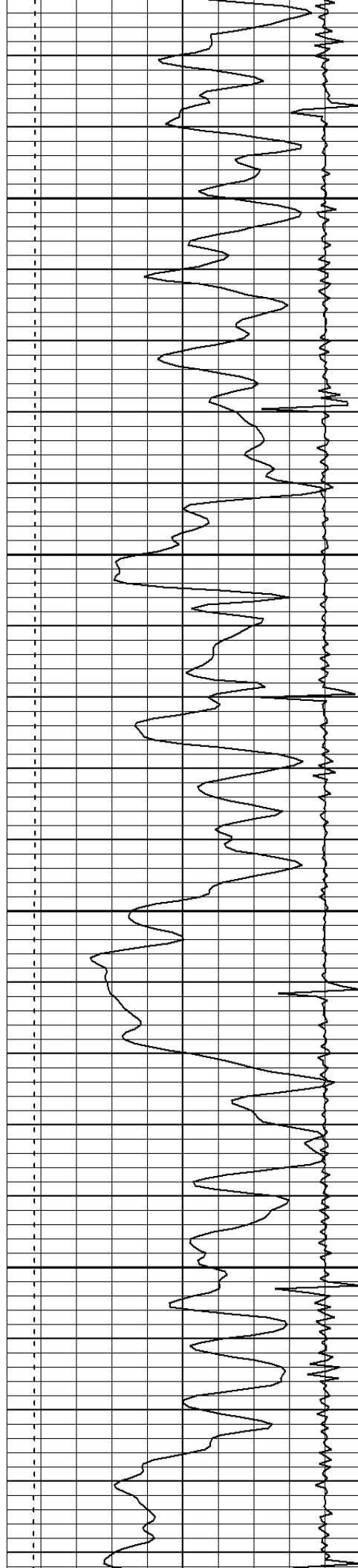




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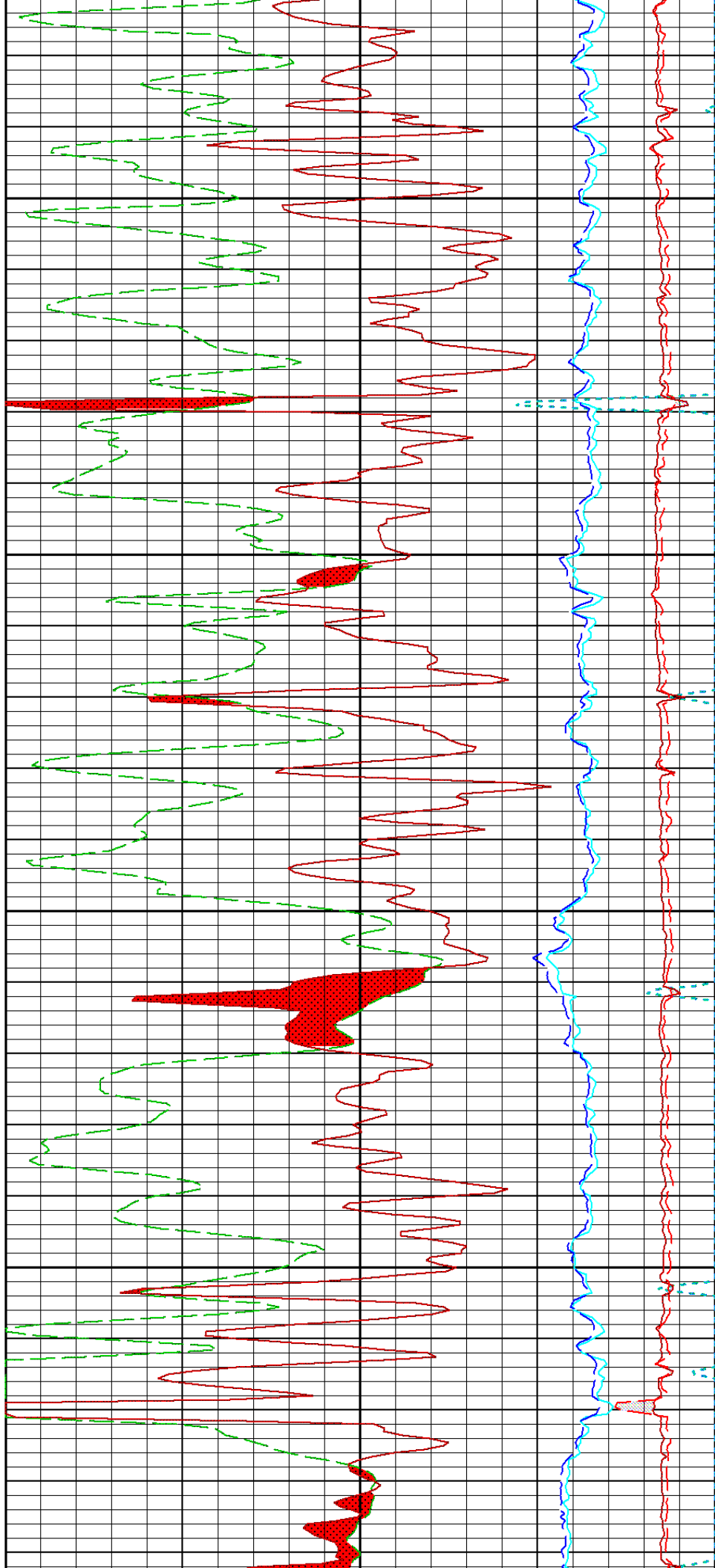
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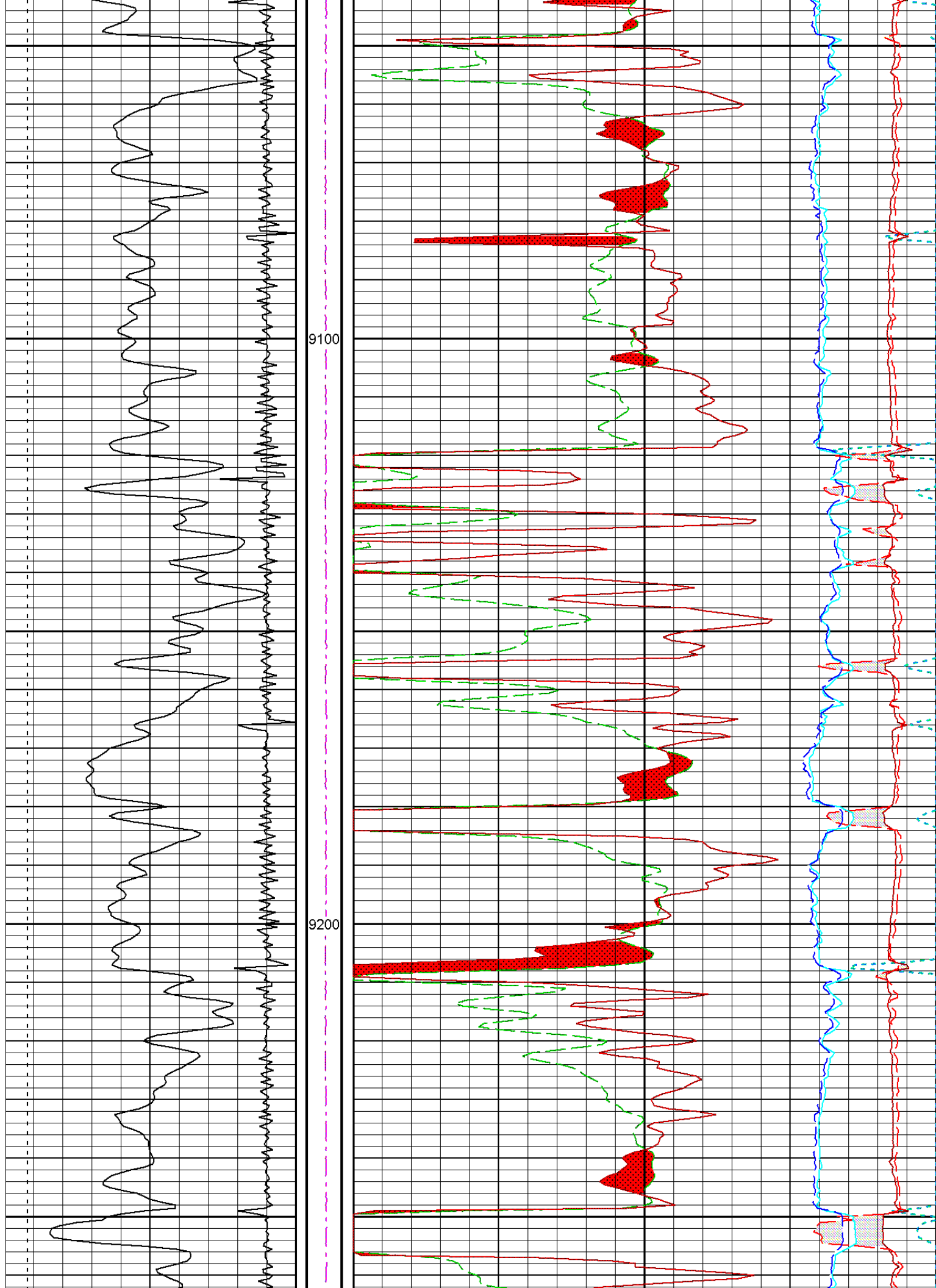


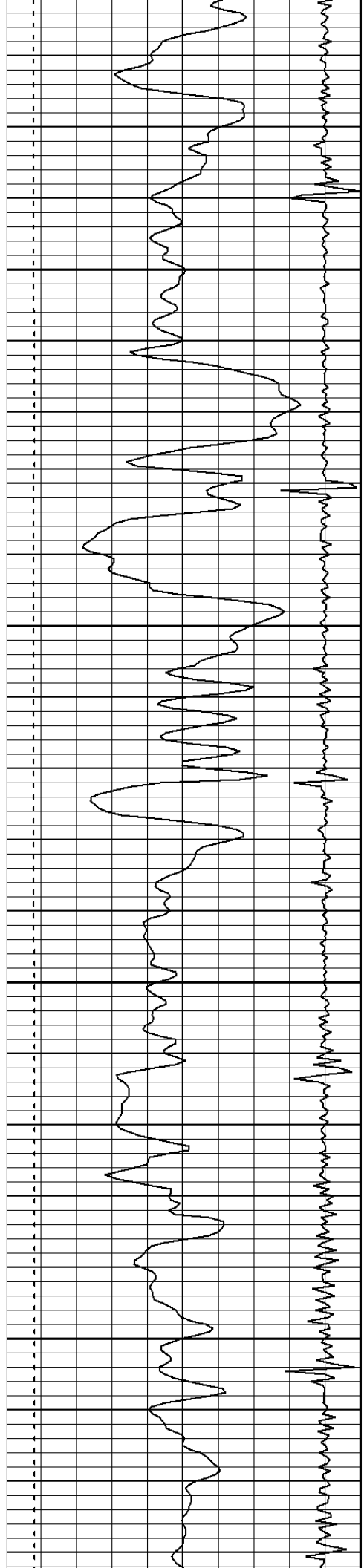


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9000

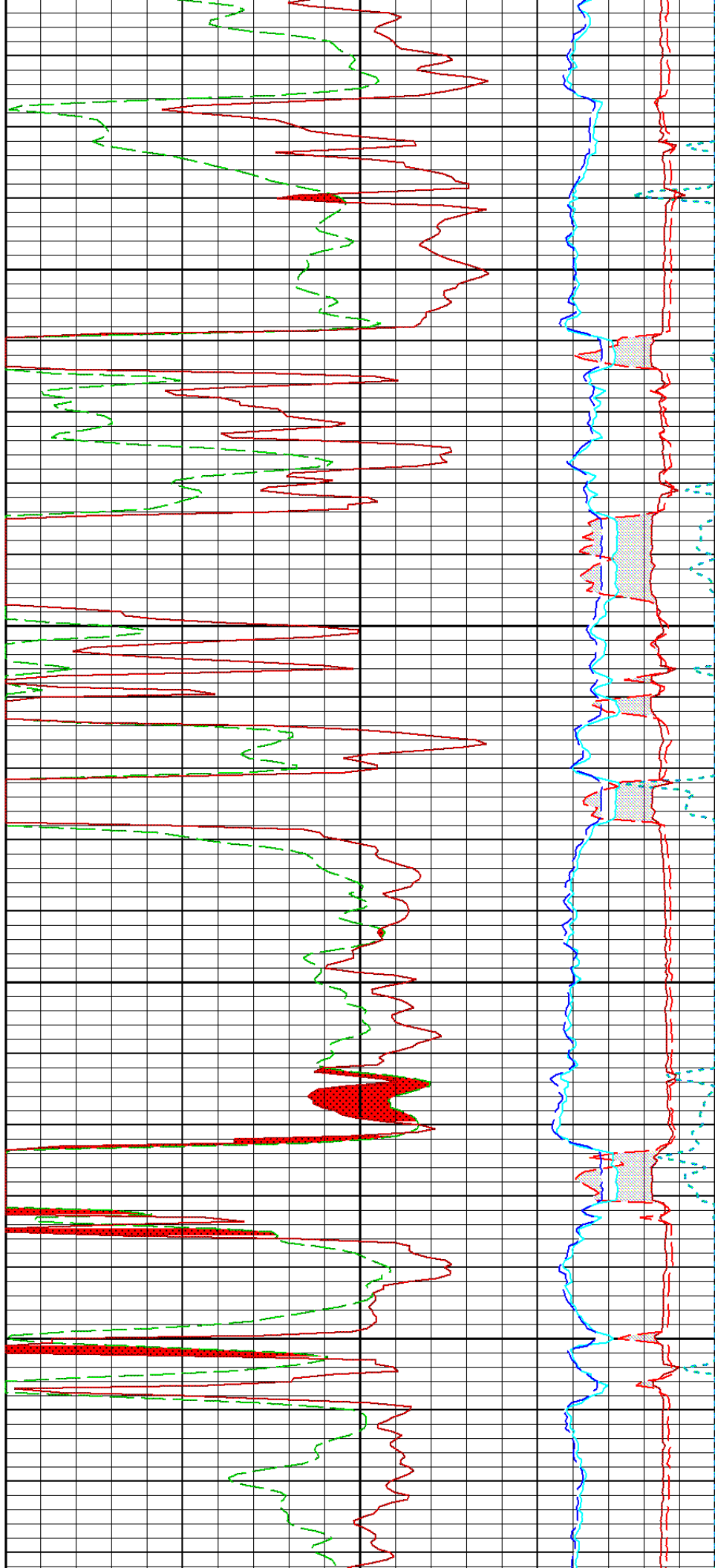


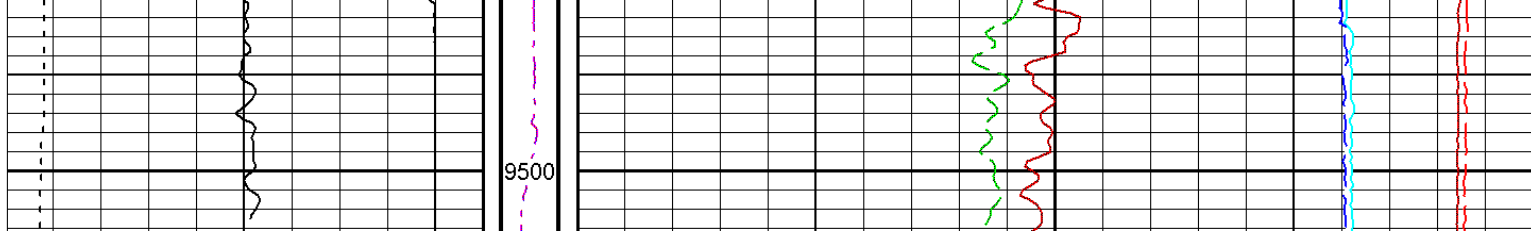




9300

9400





CCLG
63000 mv -7000

DEPTH
FT

NPRS
0.3 dec -0.1

CLDC
3 in 13

CSG
0 flag 0

DPOR
0.3 dec -0.1

GRGC
0 gapi 150

CSG
1 flag 0

DCOR
-0.8 g/c3 0.2

SMTU
0 5000

PDNC
130000 cps 0

PDFC
30000 cps -1000

DNND
35000 snu -7000

DNFD
7000 snu -3000