



Weatherford®

PND-S CASED HOLE TRIPLE COMBO

Company URSA OPERATING COMPANY, LLC
Well BAT 23 CWI-24-07-96
Field WILDCAT
County GARFIELD State COLORADO Country USA
Location SHL: 1826' FSL & 2064' FWL (NESW)

Section 24 Township 7S Range 96W API Num 0504522313
Permanent Datum GL Elevation 5183 K.B. 5199
Log Measured From KB, 15.5 Above Perm Datum D.F. 5199
Drilling Meas From KB G.L. 5183

Date
Depth - Driller
Depth - Logger
Btm Log Interval
Top Log Interval
Casing - Driller
Casing - Logger
Bitsize
Type Fluid in Hole
Dens. / Misc.
pH / Fluid Loss
Source of Sample
Rm @ Meas. Temp
Rmf @ Meas. Temp
Rmc @ Meas. Temp
Source: Rmf / Rmc
Rm @ BHT
Max. Rec. Temp.

Run 1	Run 2	Run 3
FEB 27, 2014 OH	MAR 03, 2014 PND	
6450	6450	
6436	6370	
6409	6360	
2620	2600	
9.625" @ 1730	5.5" @ 6565	
1728		
7.875"	8.75"	
WBM	WATER	
10.3 / 42	8.3 / N/A	
9 / 6		
FLOWLINE		
1.800 @ 72.3		
1.440 @ 72.3		
2.160 @ 72.3		
C / C		
0.742 @ 185		
185		

PLOT TYPE: PND-S *CASED-HOLE TRIPLE COMBO LOG*

REMARKS:

Project: 5133-81062367
API Number: 0504522313
Company: URSA OPERATING COMPANY, LLC
Well: BAT 23CWI-24-07-96
Field: WILDCAT
County: GARFIELD
State: COLORADO
Country: USA
Log Date: MAR 03, 2014 PND

PND-S digital data matches PND-S field print.

Field Print was correlated to Weatherford wireline Sector Bond log dated
Mar. 3, 2014.

Porosity data computed from (PND-S, AI) Neutron/Density data.

Neutron = SS, RHOMA=2.68, RHOFI=1.0

Open Hole Porosities from BAT 23CWI-24-07-96 used to aid in calibrating AI
porosity curves. OH porosity log data affected by hole washouts.

Matrix model = Sand/Shale.

NOTE: PND-S Inelastic Porosity and Saturation estimates will be affected
adversely by inconsistent cement, multiple casing/tubing strings and/or
large borehole sections of the well. Pulsed neutron measurements in
recently-drilled wells will be subject to the effects of drilling fluid
invasion and must be considered to be of a relative nature.

APP Jobnum: #5734

CURVE DESCRIPTIONS:

CURVE LEGEND:

CCL = Collar Locator
BGN = Near Background Counts
BGF = Far Background Counts
GRP = Gamma Ray, from (PND-S) data
CSG1L = 5.5" Casing Flag
CSG1R = 5.5" Casing Flag
TENS = Line Tension (CH)
NEAR = Near Detector Counts
FAR = Far Detector Counts
RATI = Formation Ratio
RBNF = Ratio of (Near/Far) Bulk Inelastic data
SIGC = Formation Sigma, from (PND-S) data

DELI = Inelastic Data Quality Indicator, from (PND-S) Inelastic data
AIPN = Neutron-Type Porosity, from (PND-S) Capture data, (Matrix=SS)
AIPD = Density-Type Porosity, from (PND-S) Inelastic data, (Rhoma=2.68)

PARAMETERS:

BOREHOLE ENVIRONMENT:


BOREHOLE RECORD:
Bit Size Top - Bottom
7.875" 1730 - 6450'


CASING RECORD:
Size Top - Bottom
9.625" Surface - 1730'
5.5" Surface - 6565'


ANALYST: B. Smith
PROGRAM: multiple wts

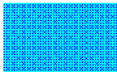
ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFULL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, 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.

 Poss.NormDeposits(BGN-F)

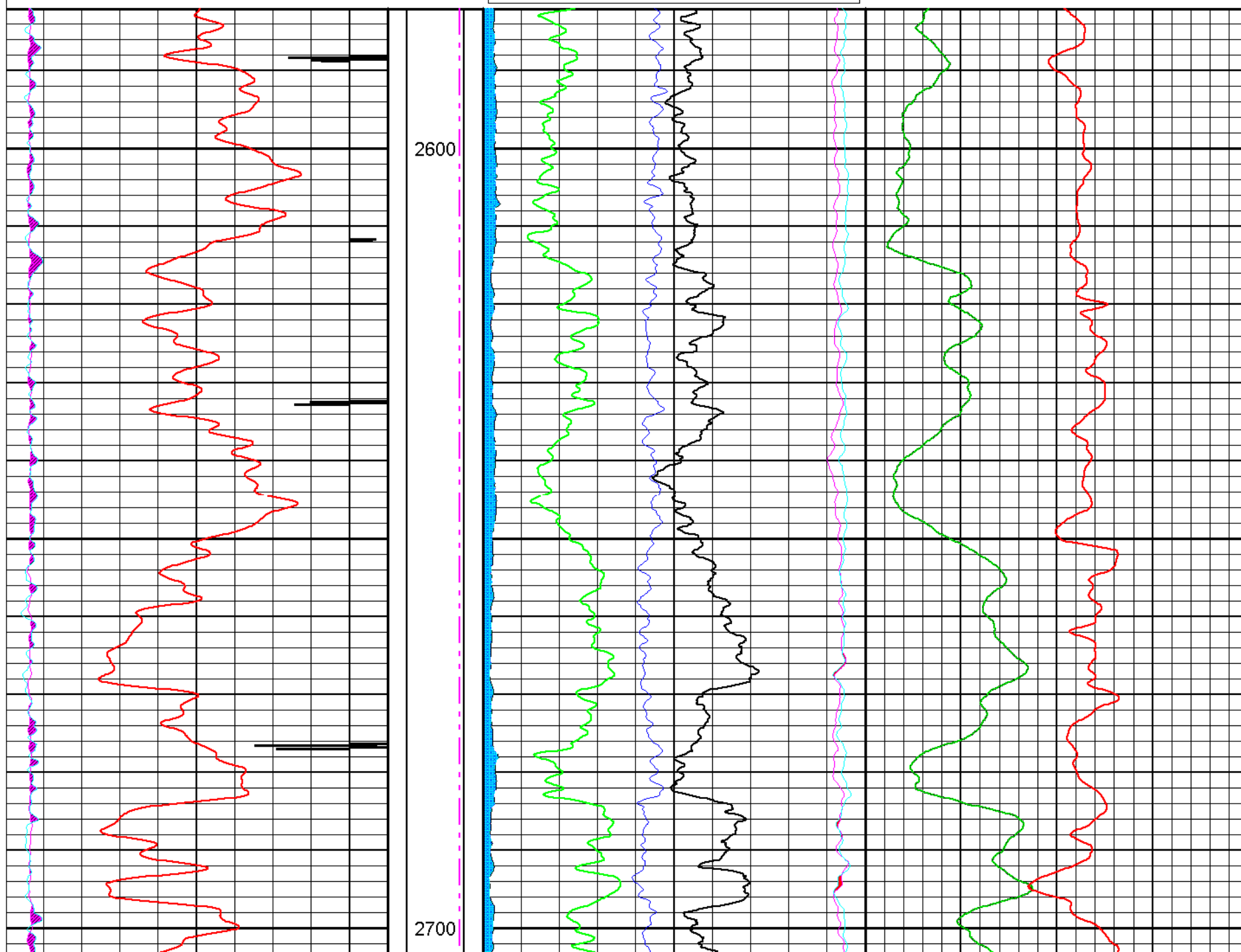
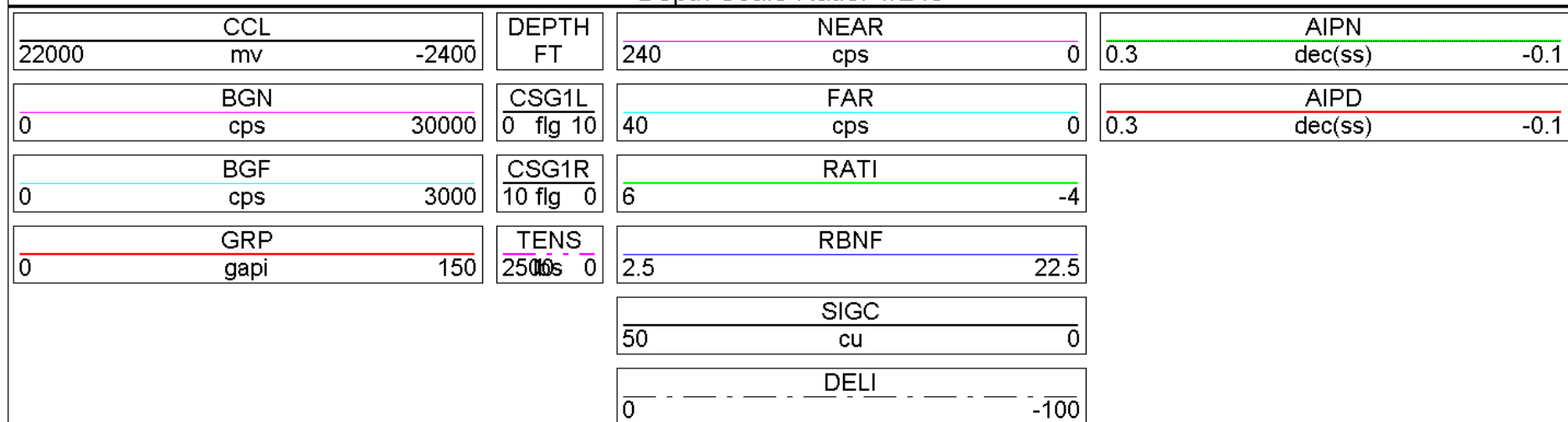
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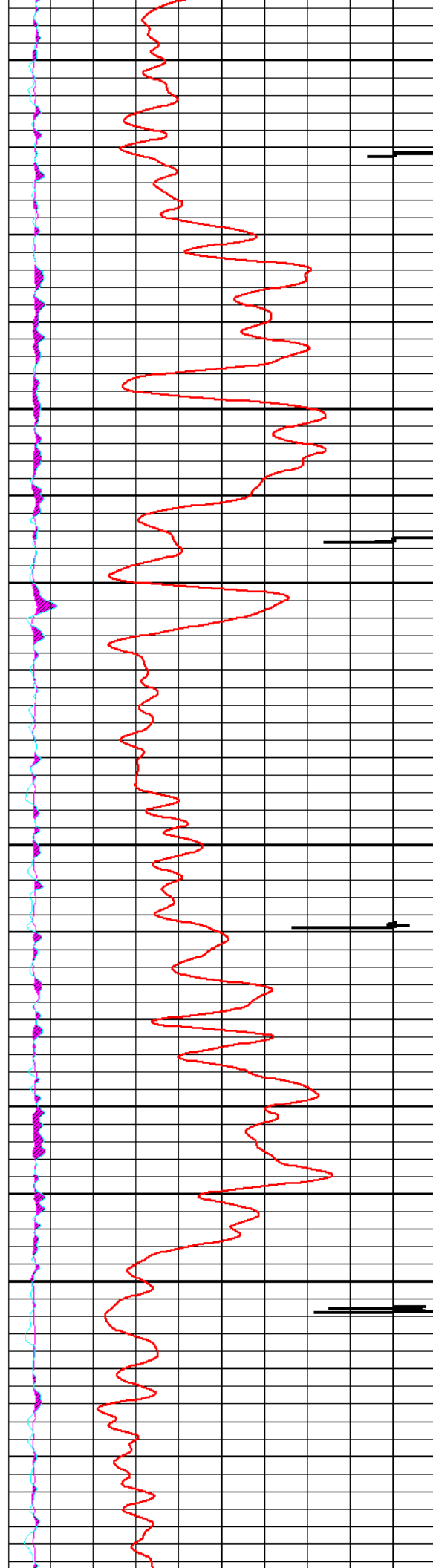
 Gas_Indication_from_RAT/INEL-RAT

 Lower_Inelastic_Data_Quality

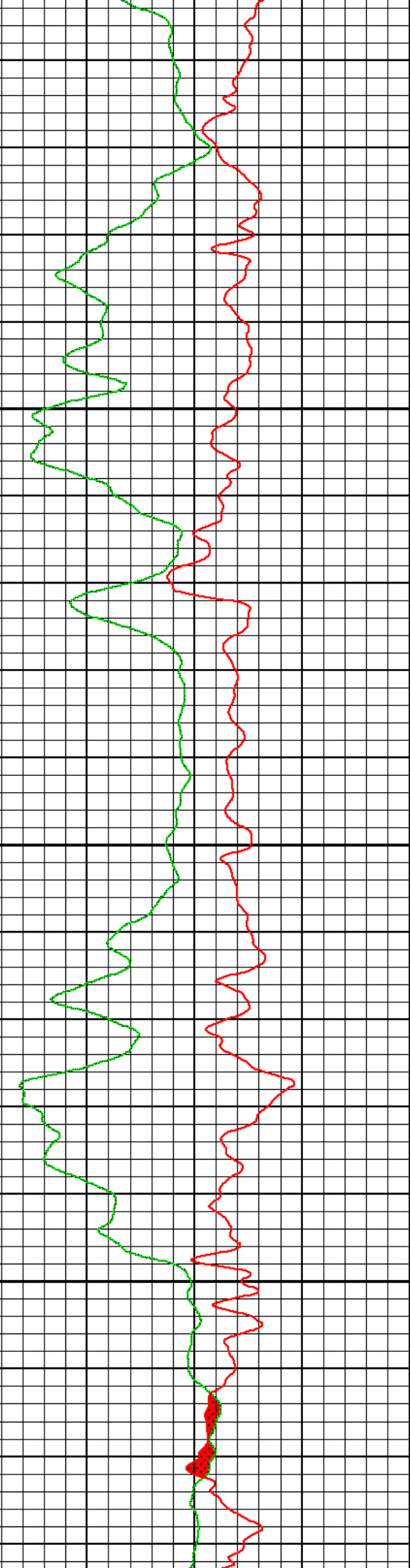
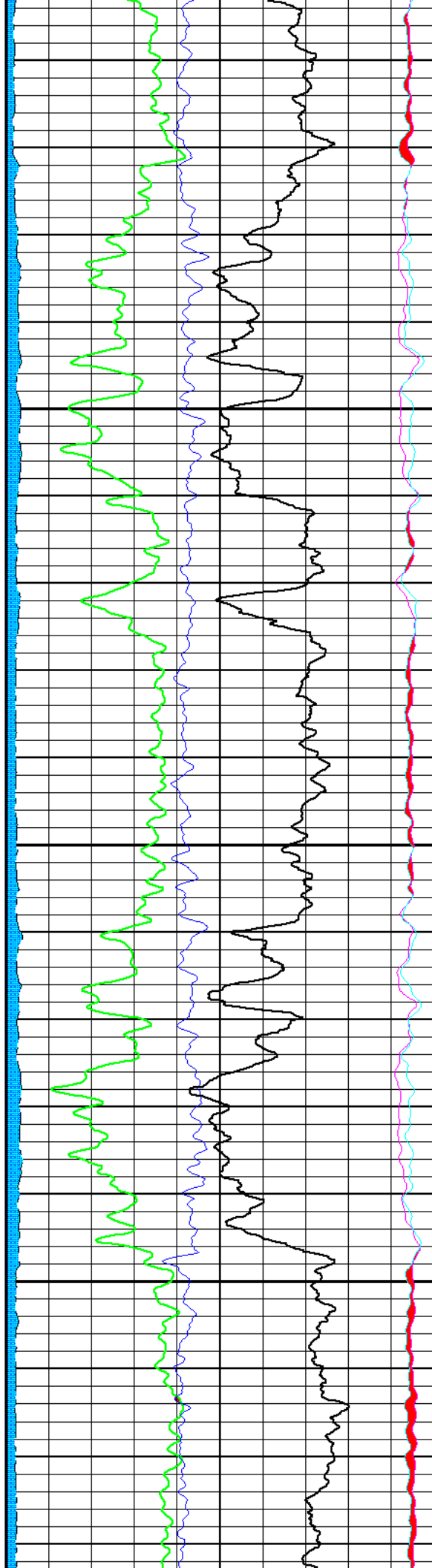
 Gas_Indication_from_AI_Porosity

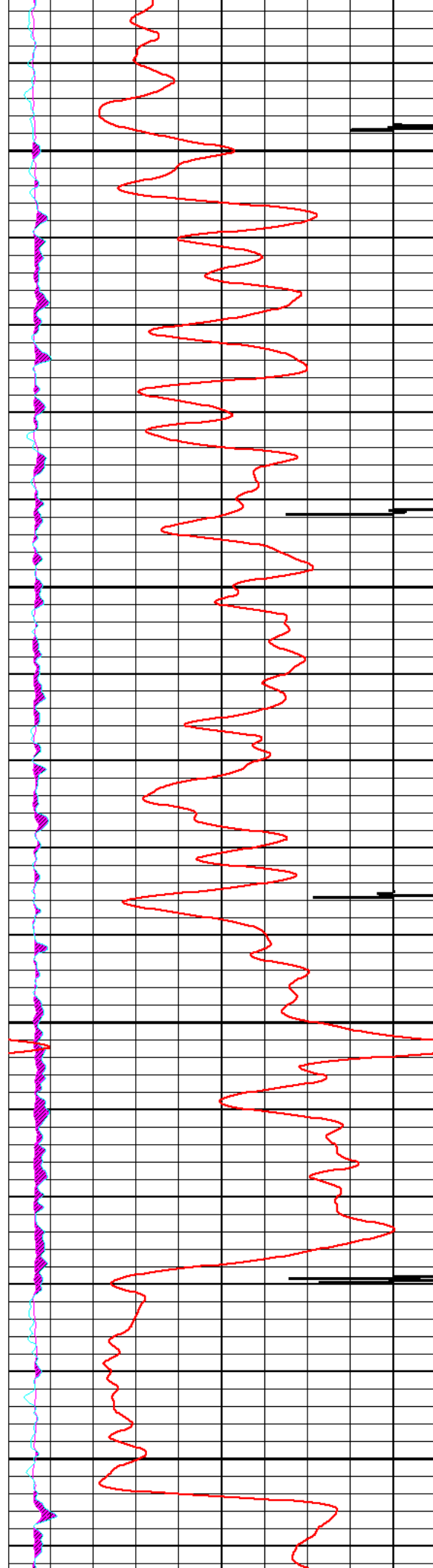
BAT 23 CWI-24-07-96
7 Mar 2014 @ 1:26
DEPTH (FT)
Interval: 2582.00 to 6372.00
Depth Scale Ratio: 1/240





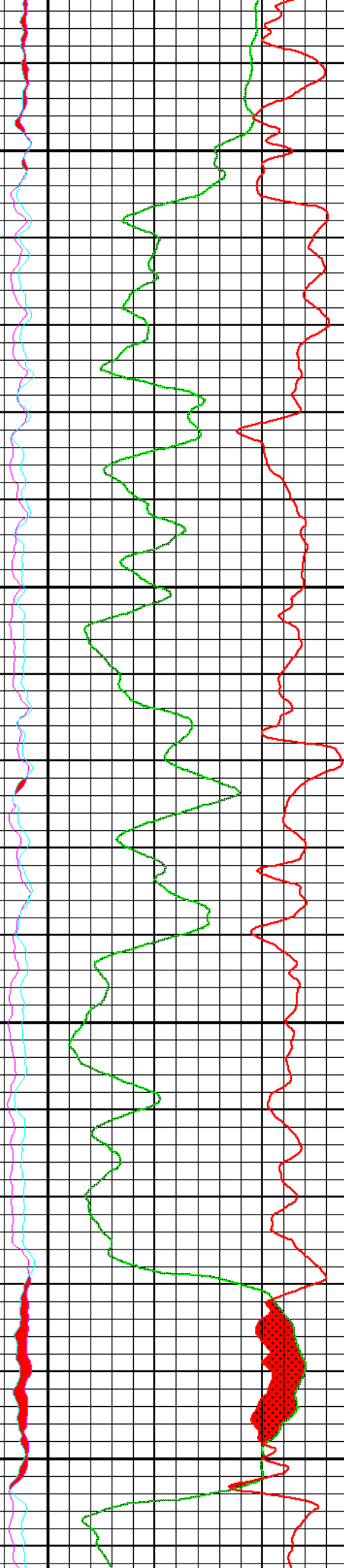
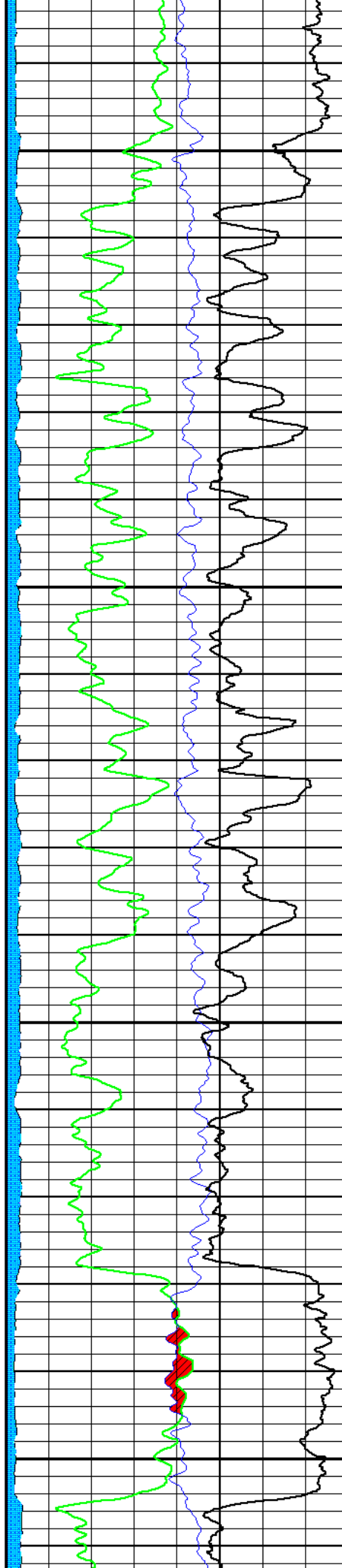
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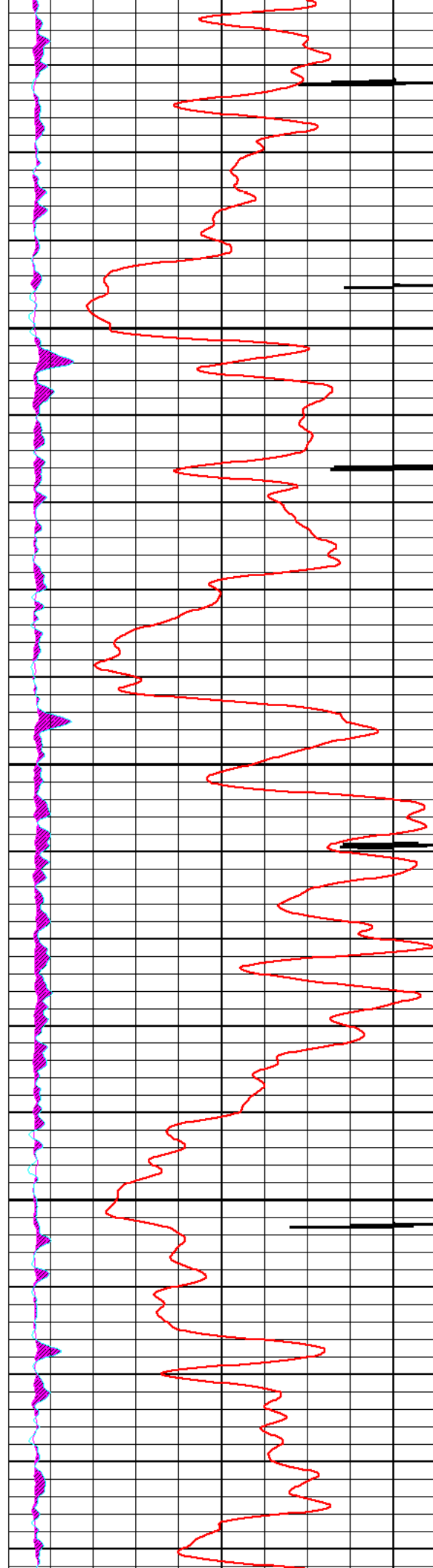




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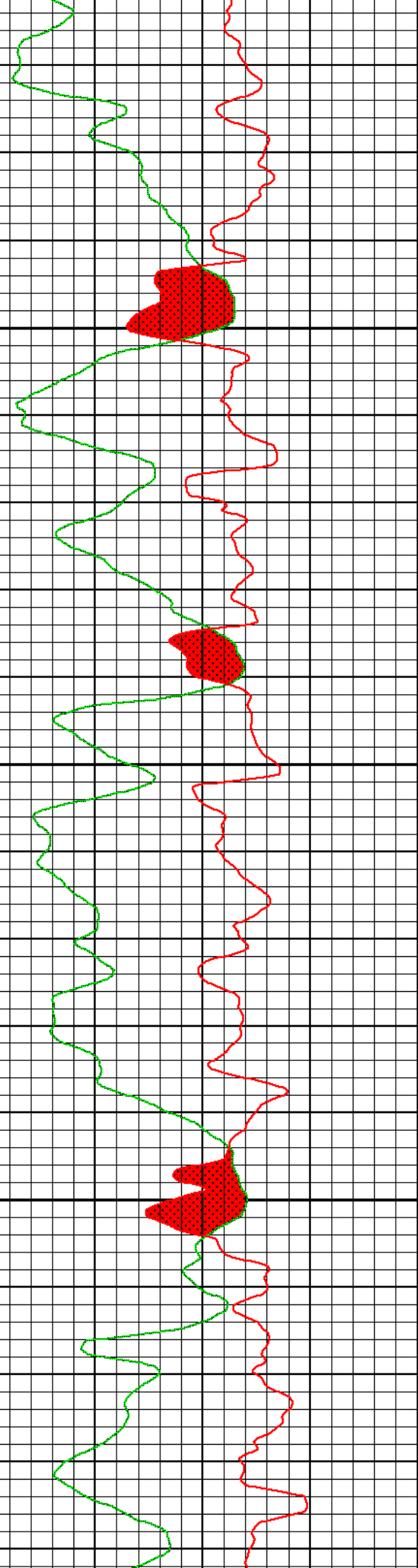
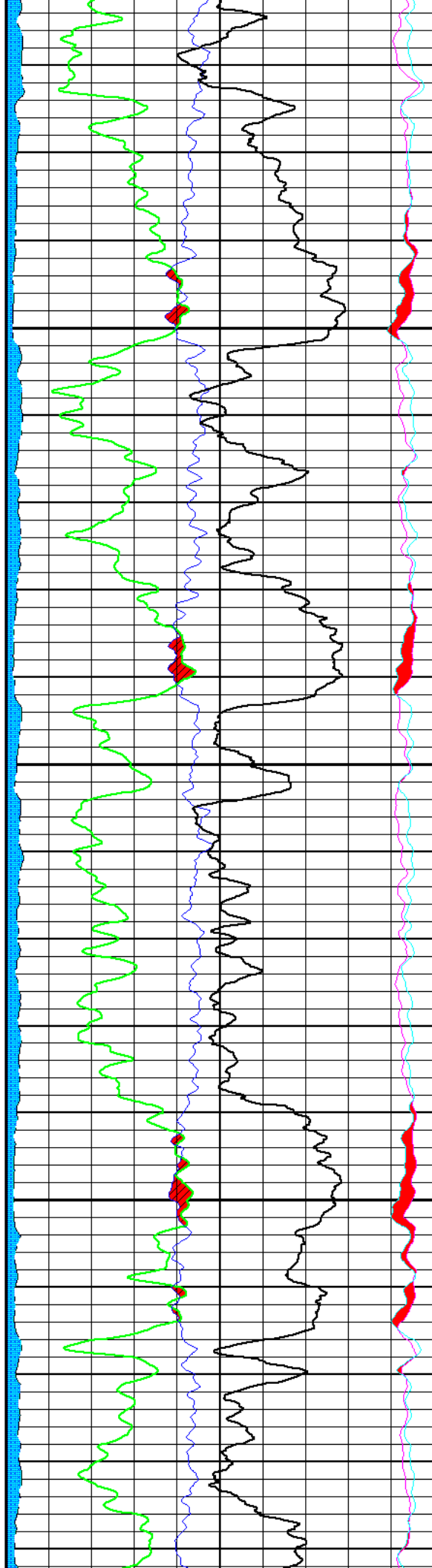
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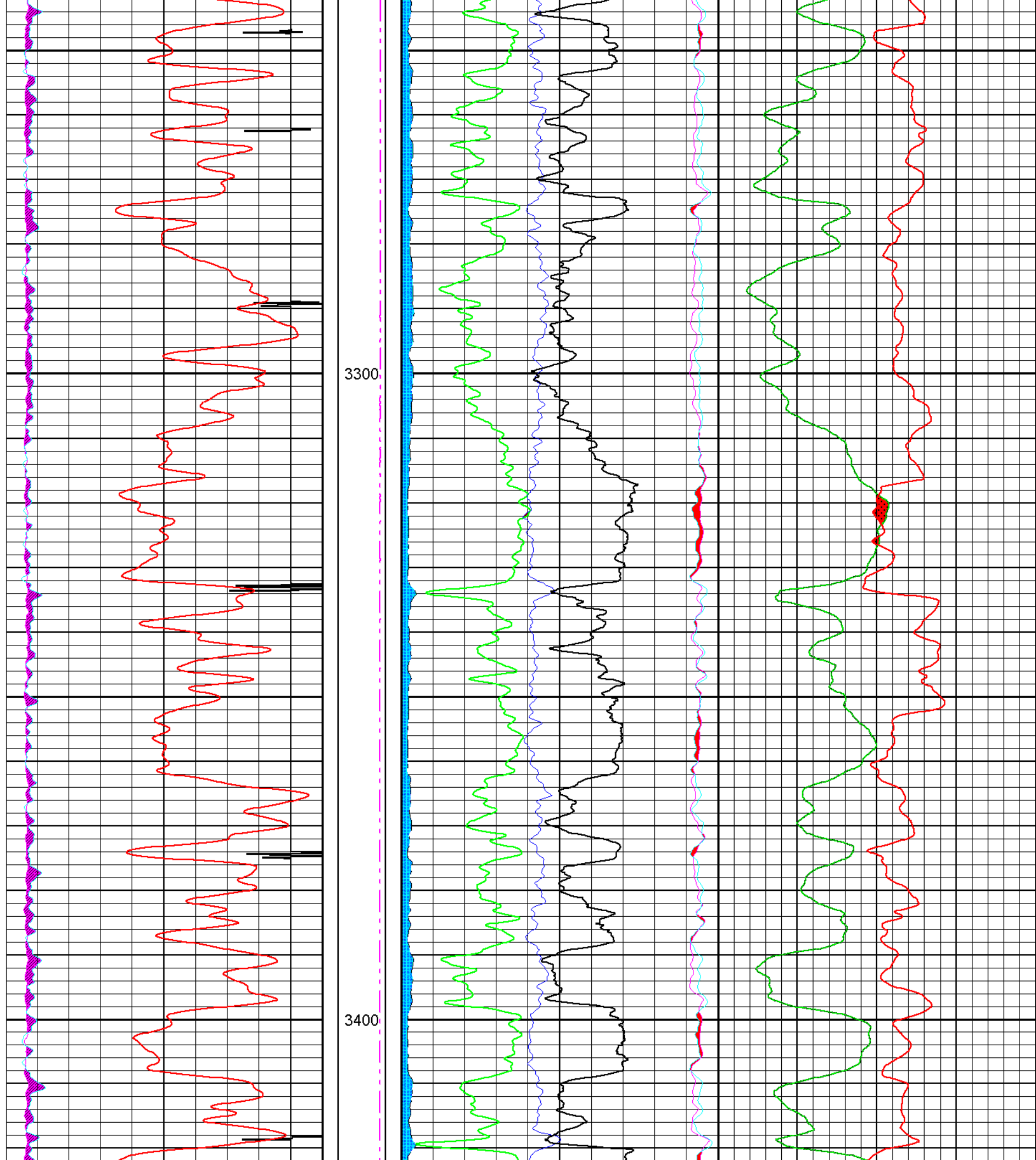


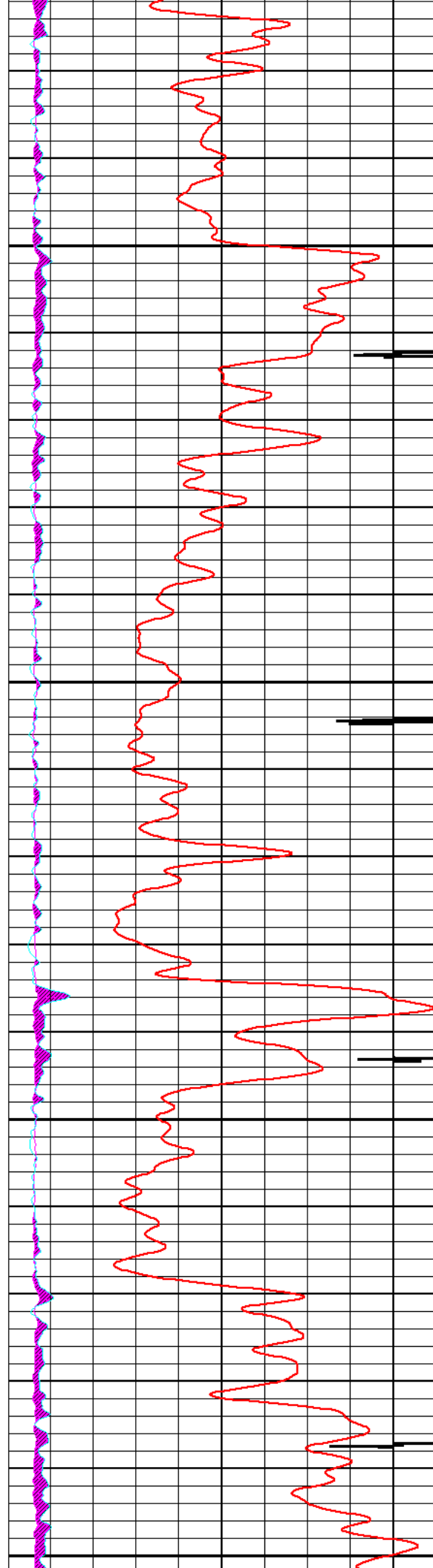


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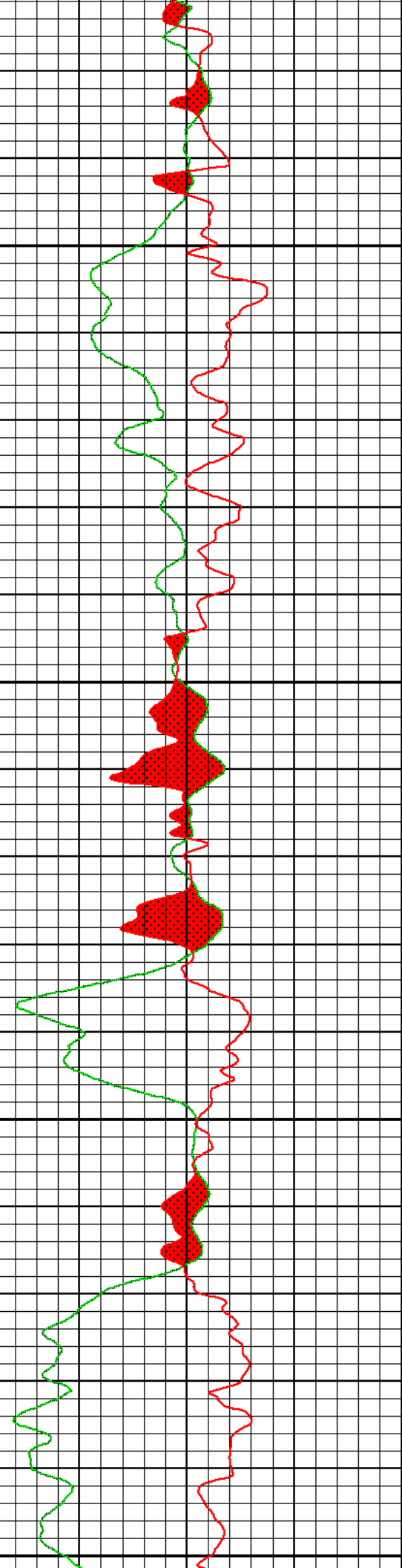
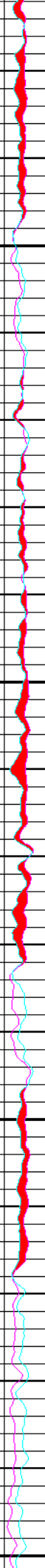
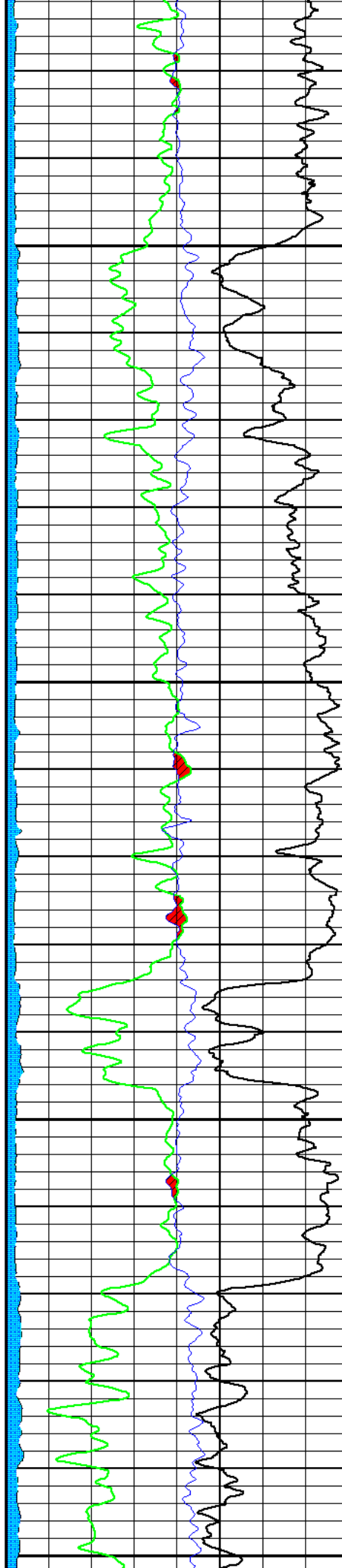


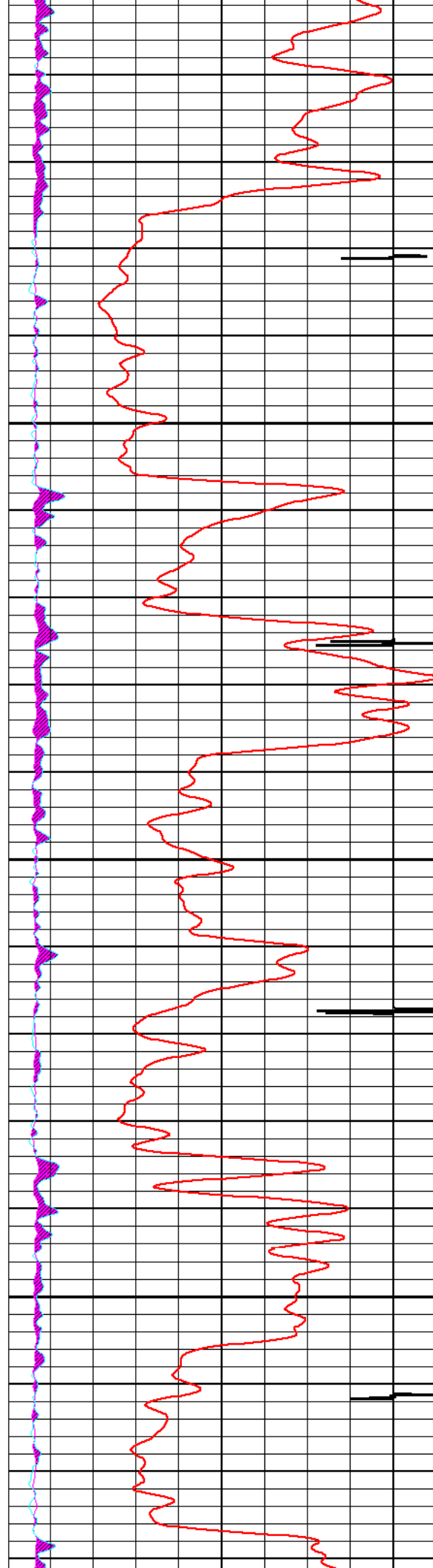




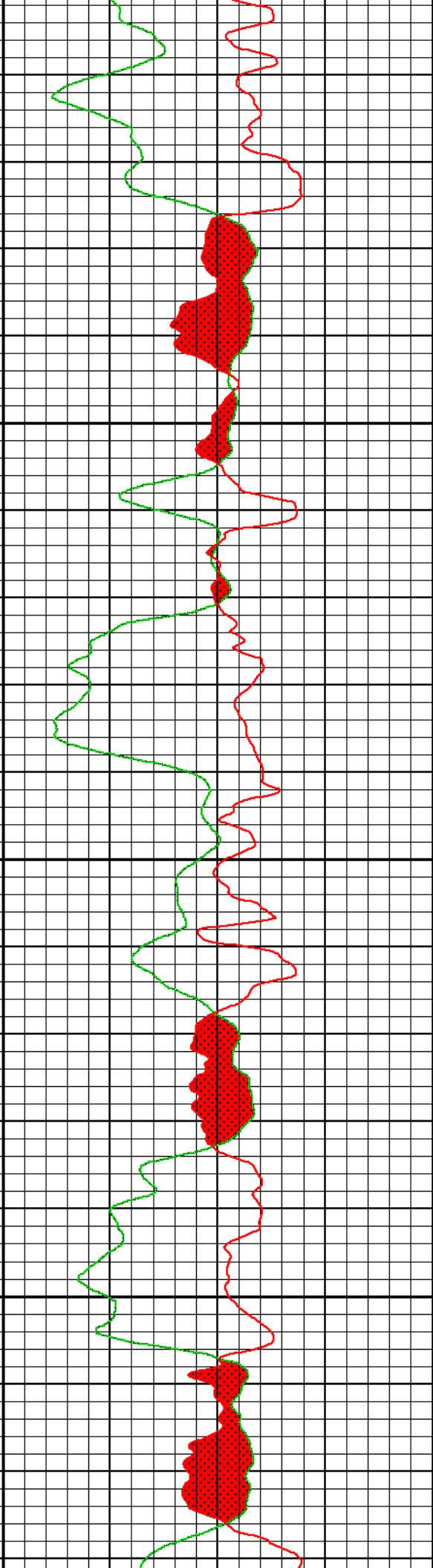
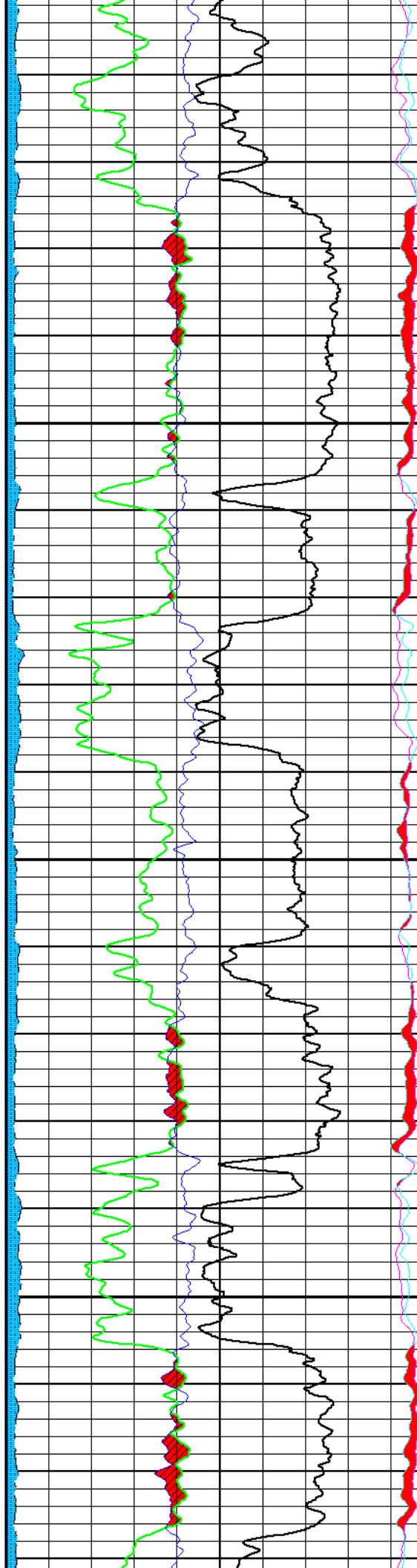
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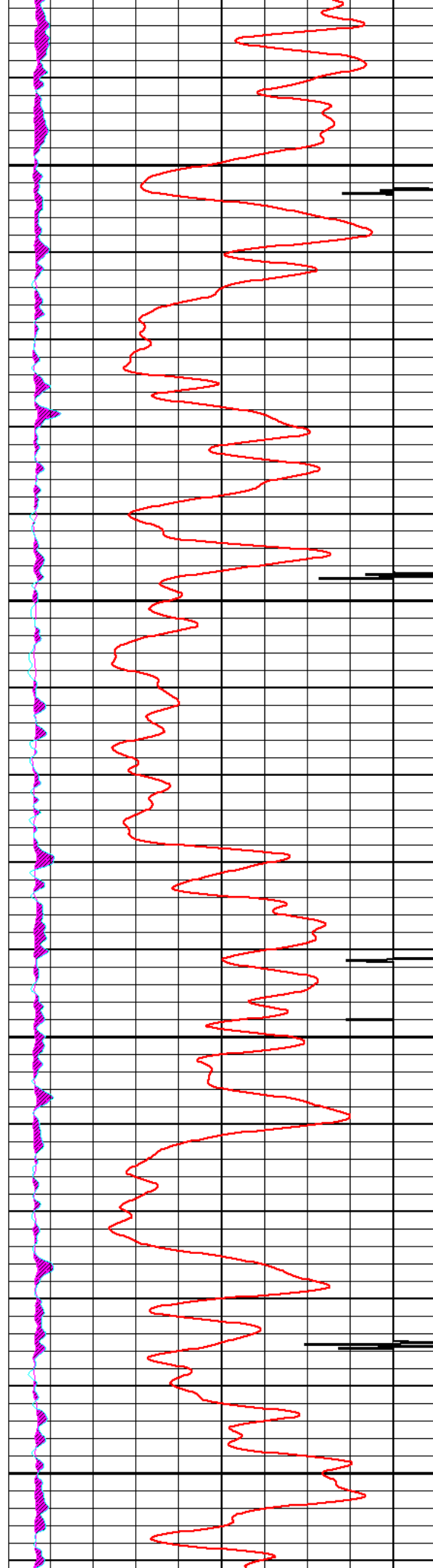
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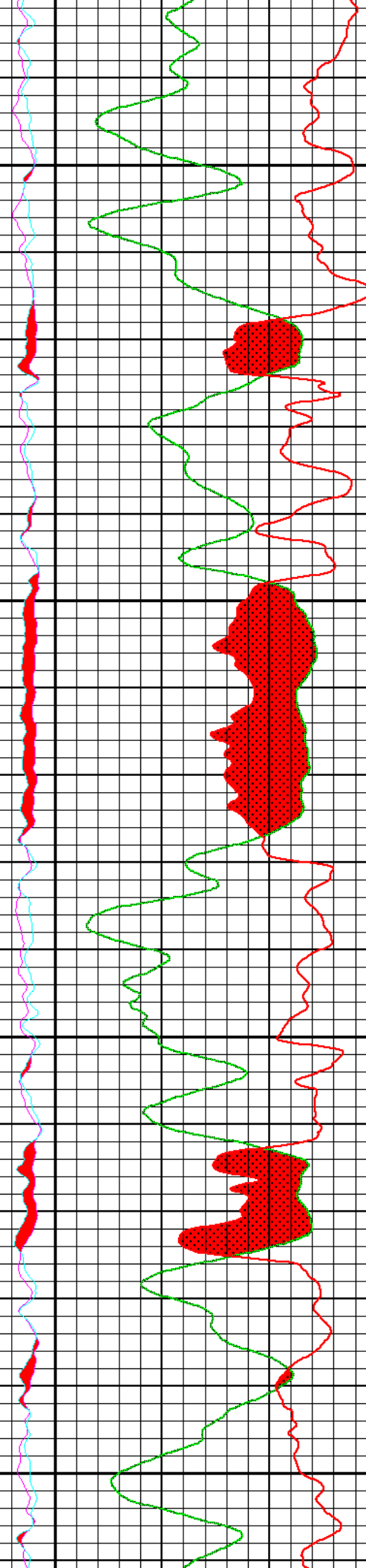
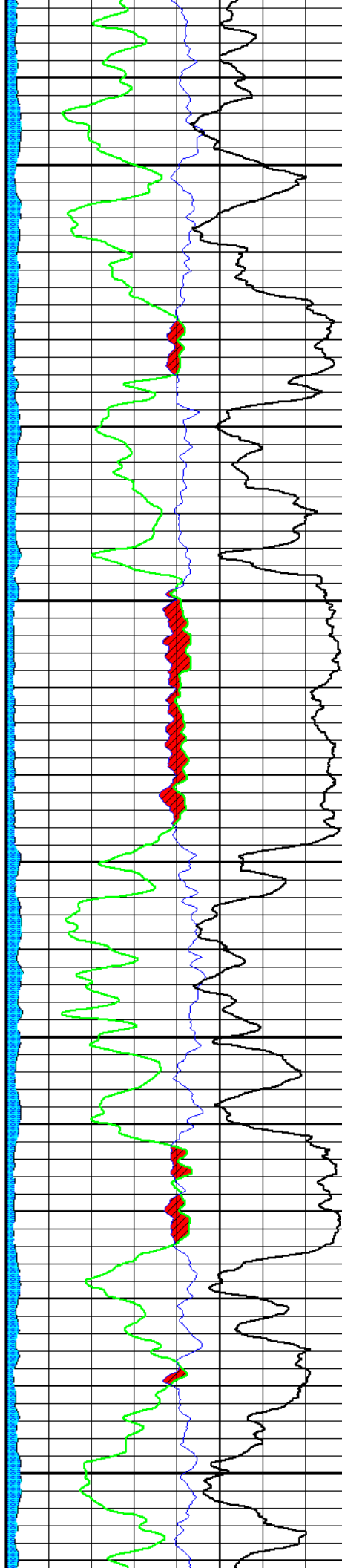
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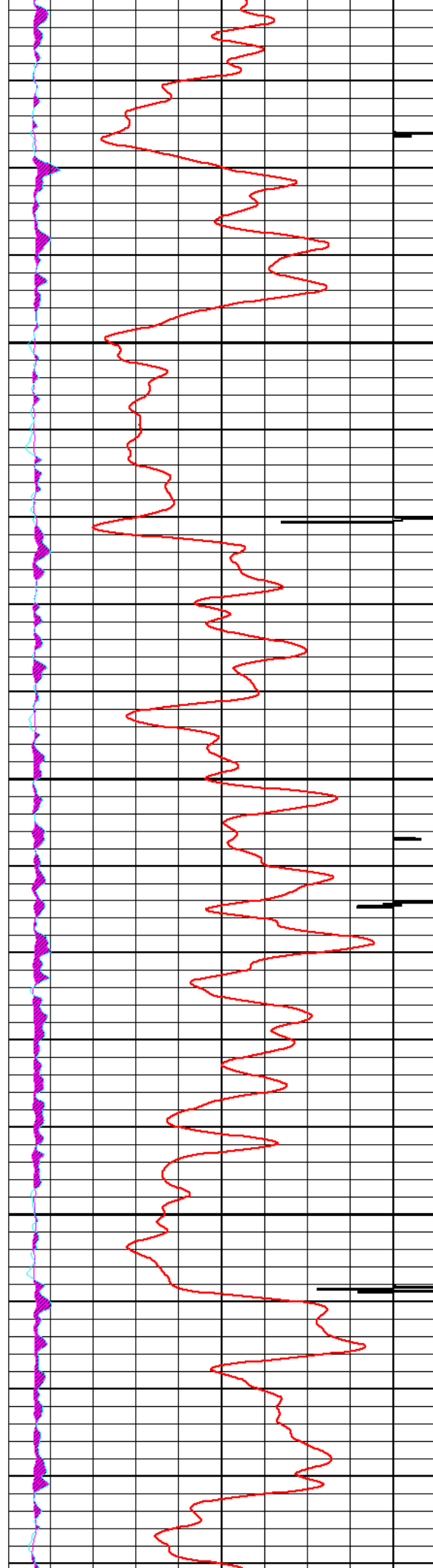




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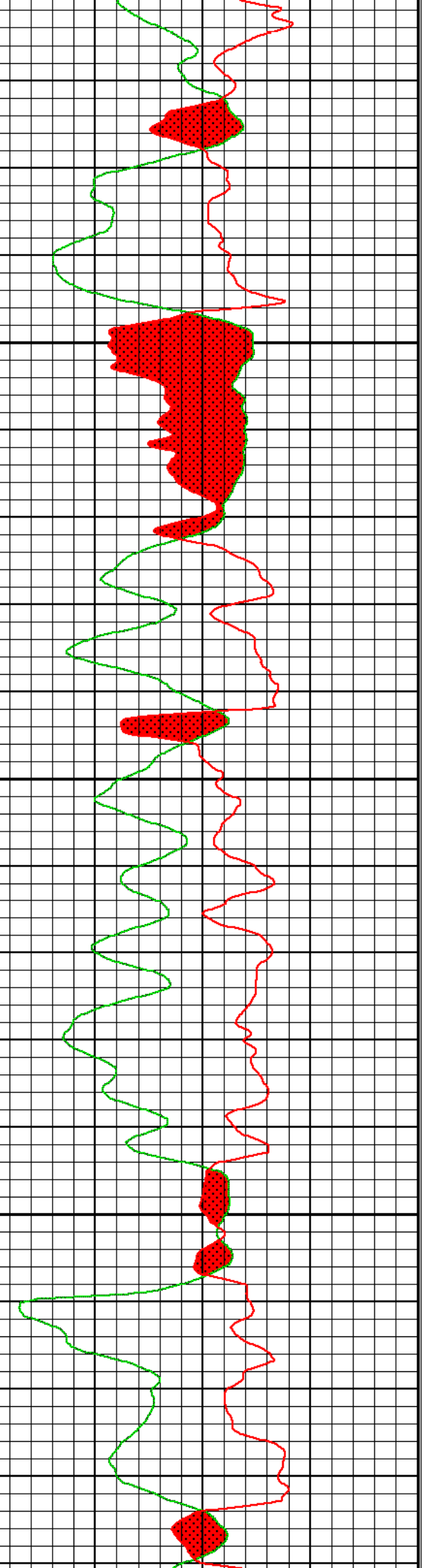
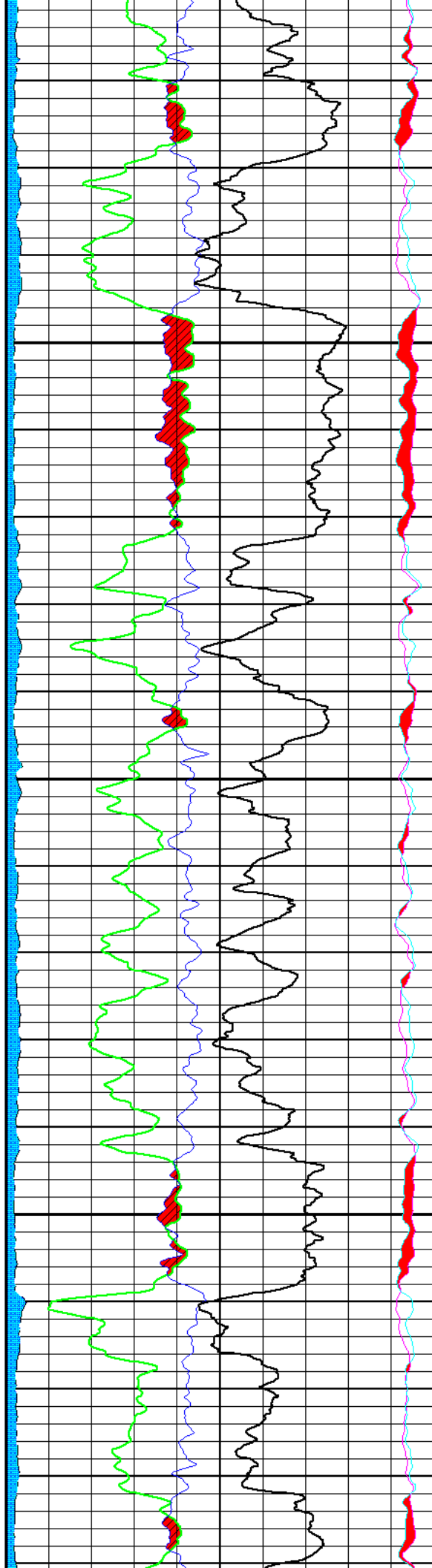
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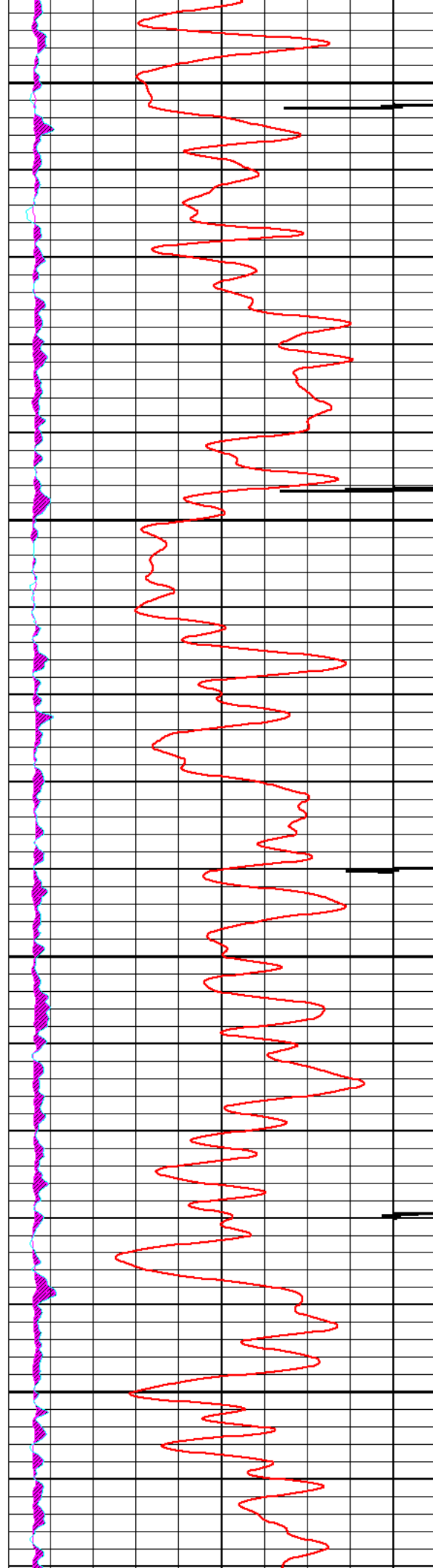




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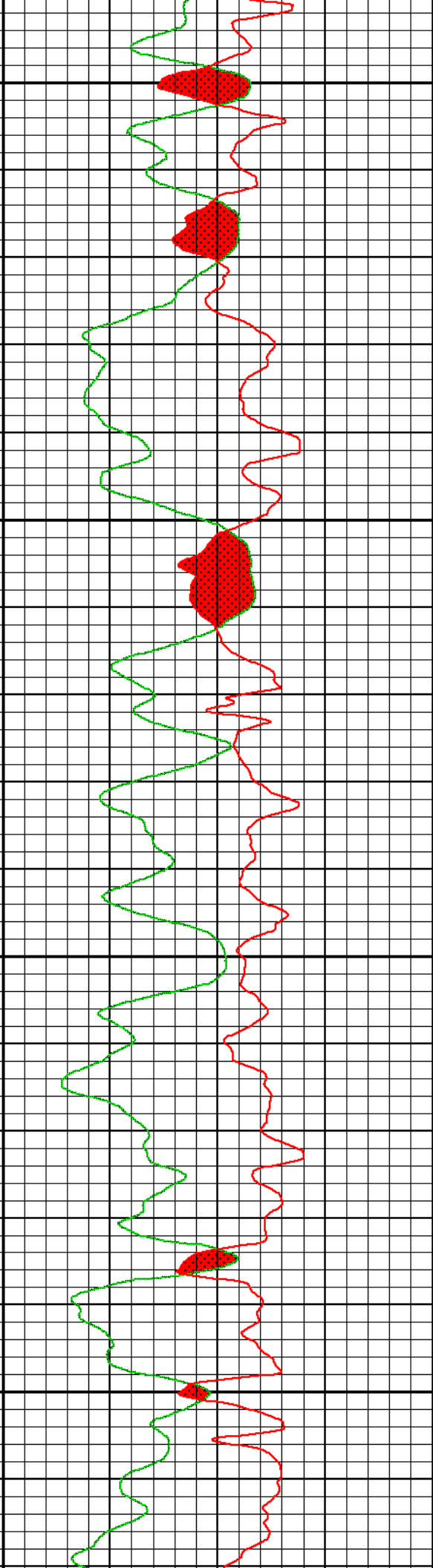
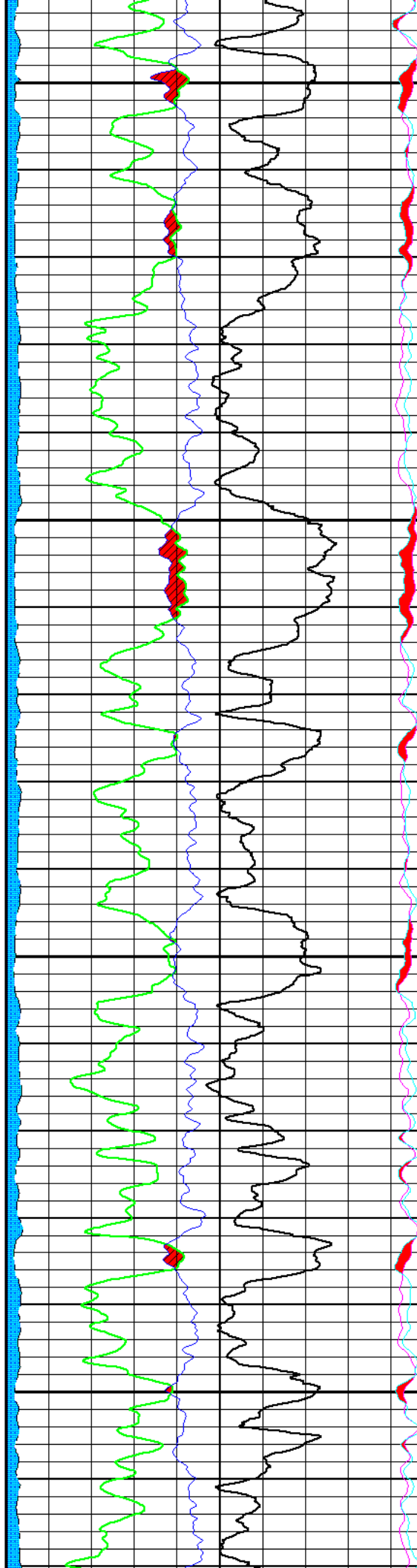
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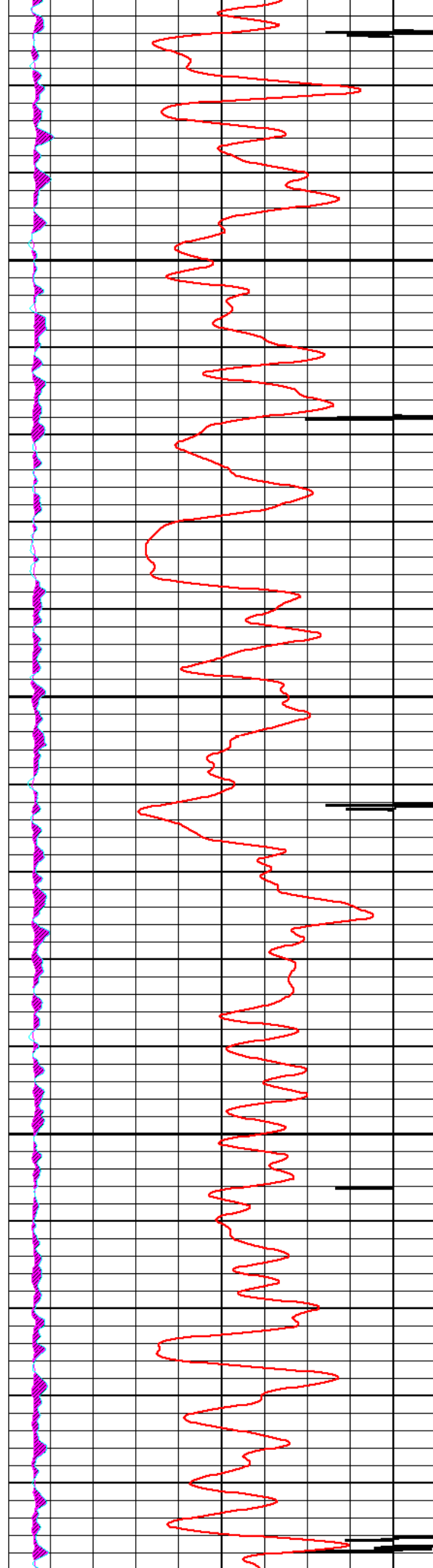




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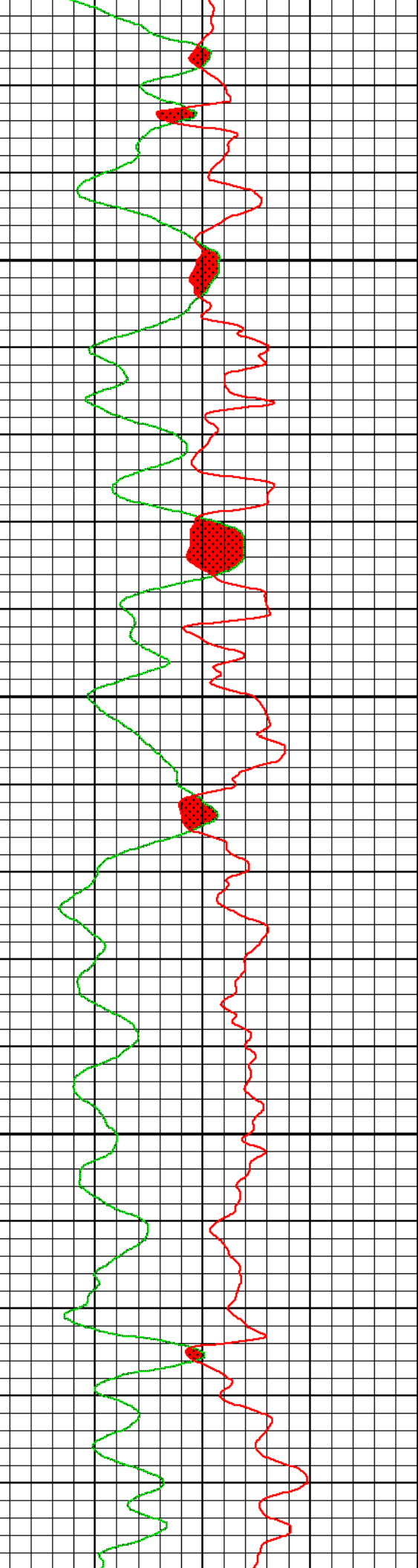
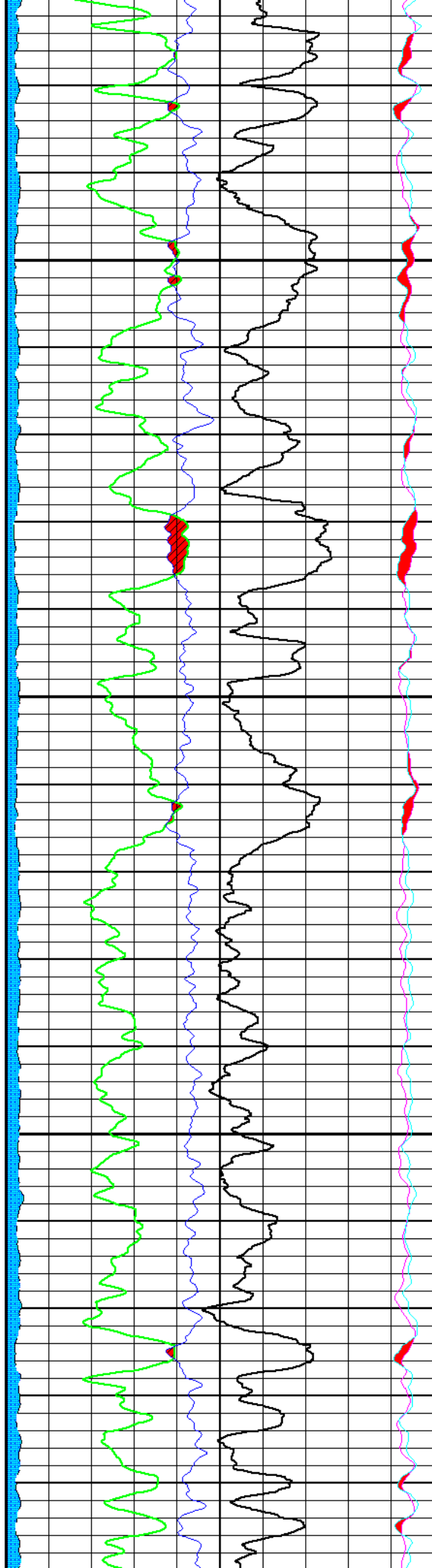
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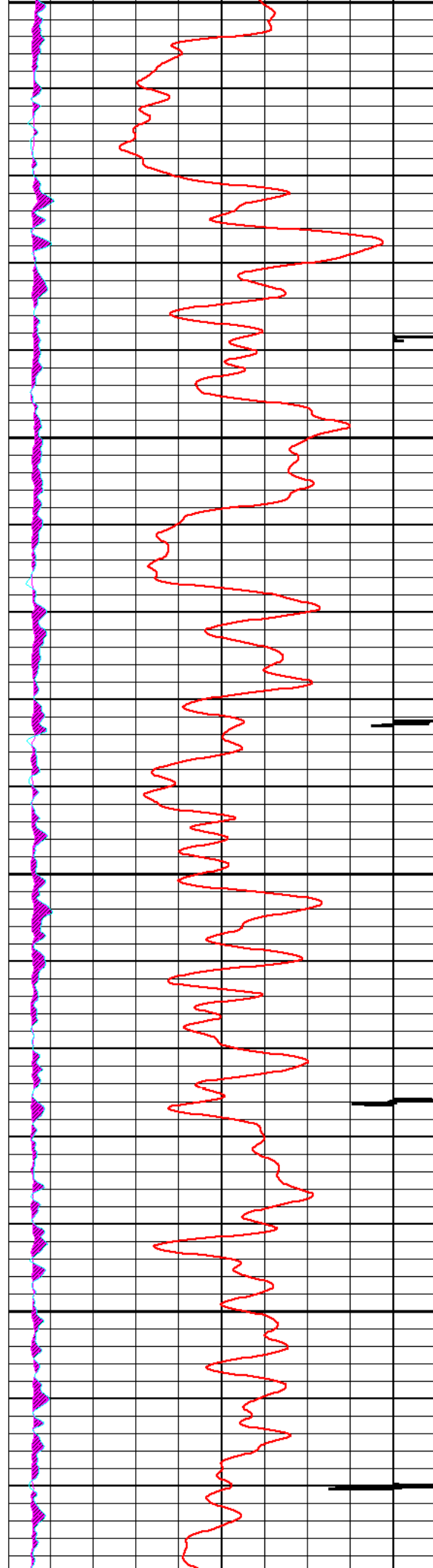




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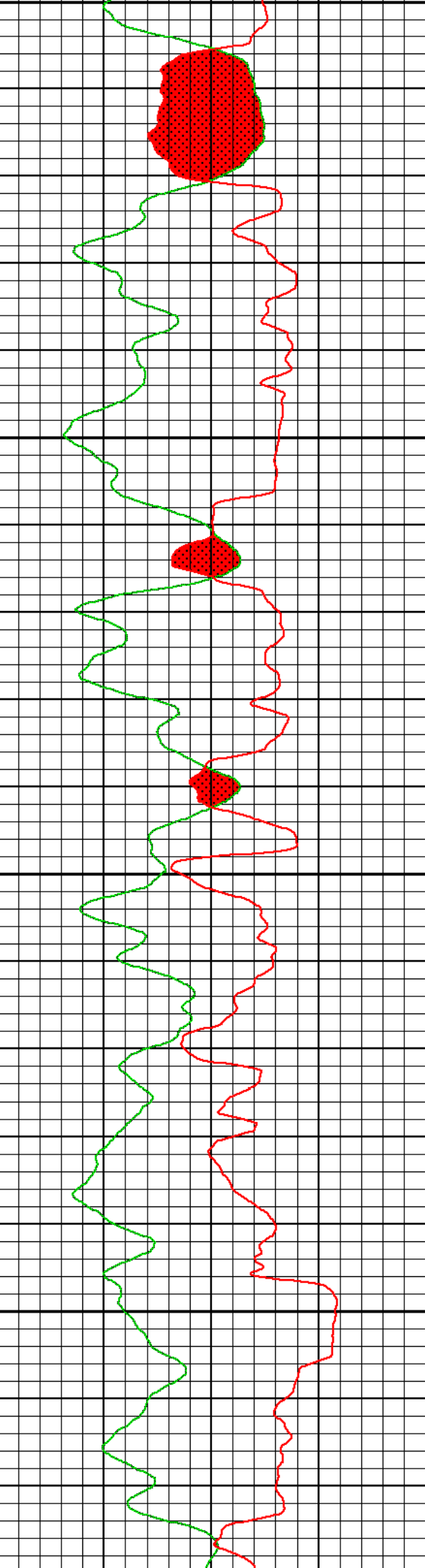
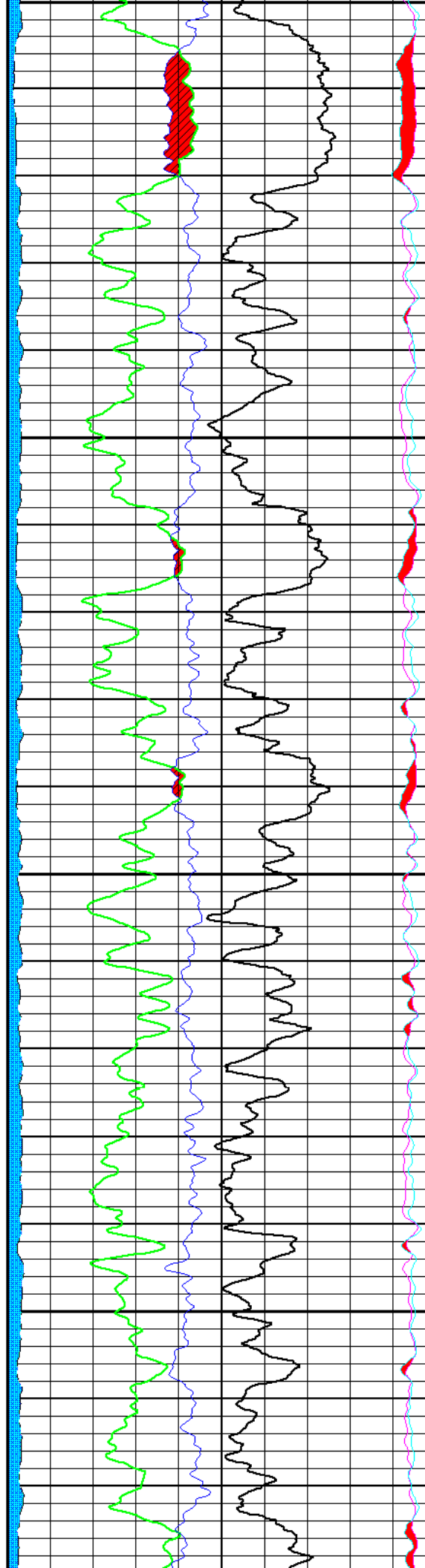
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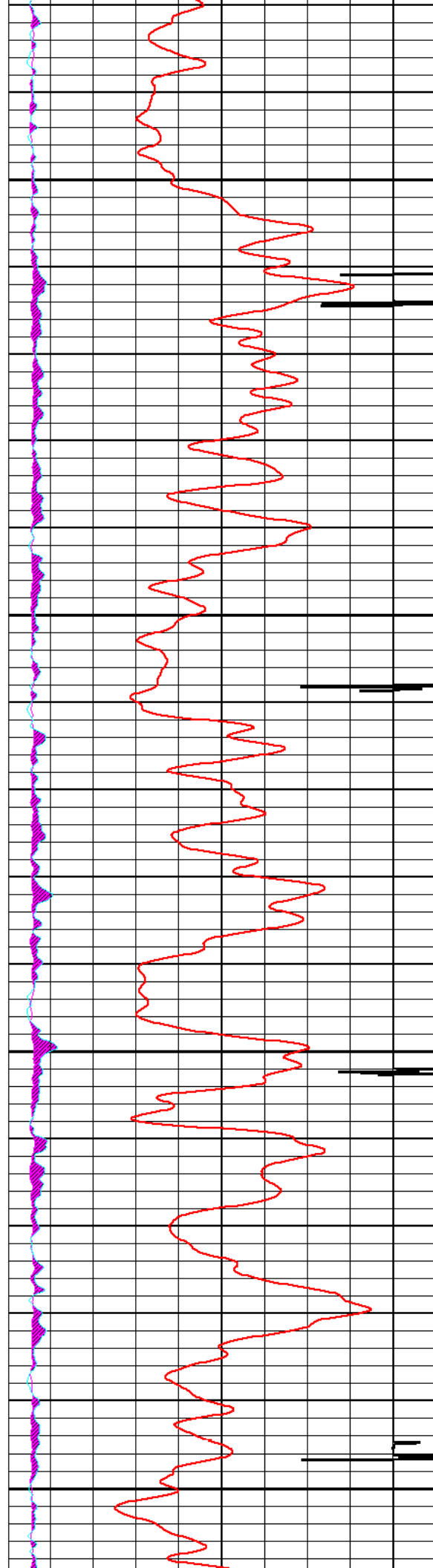




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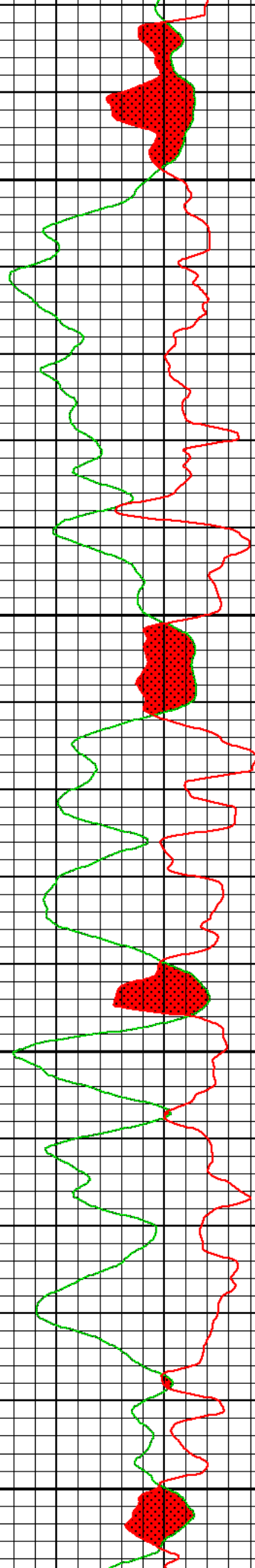
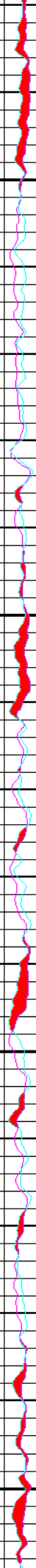
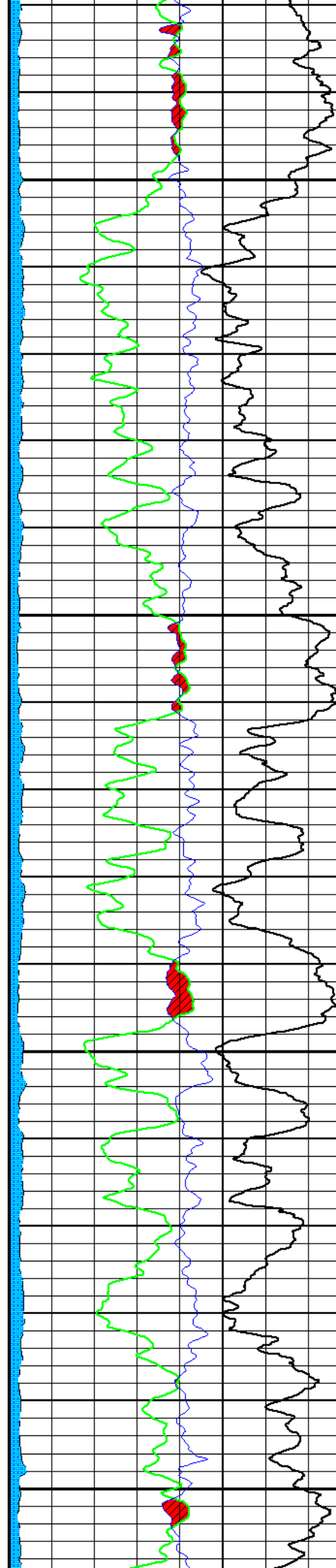
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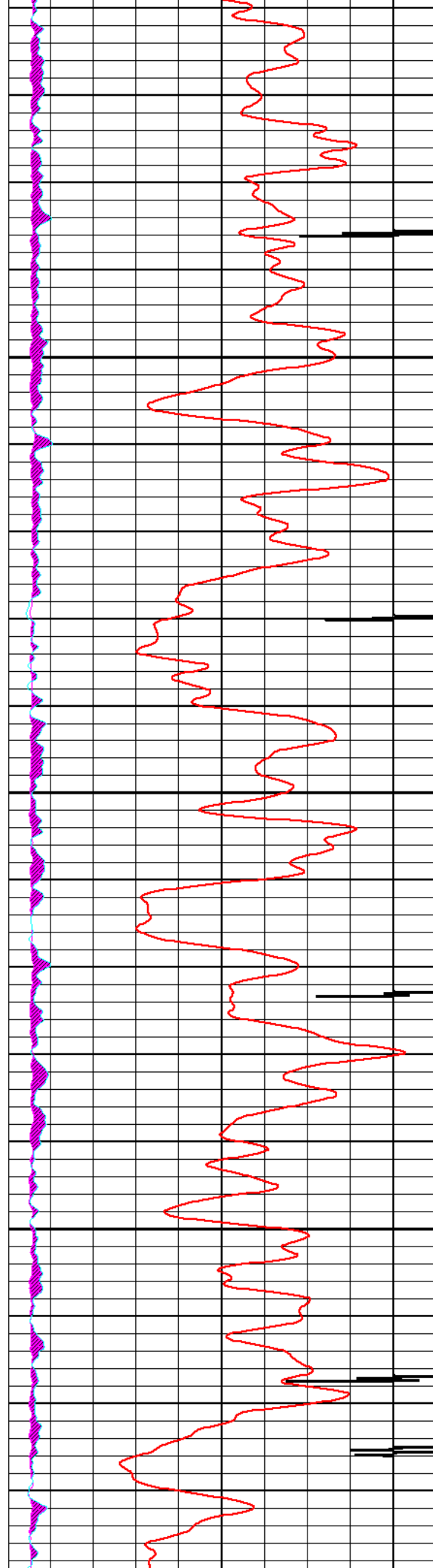




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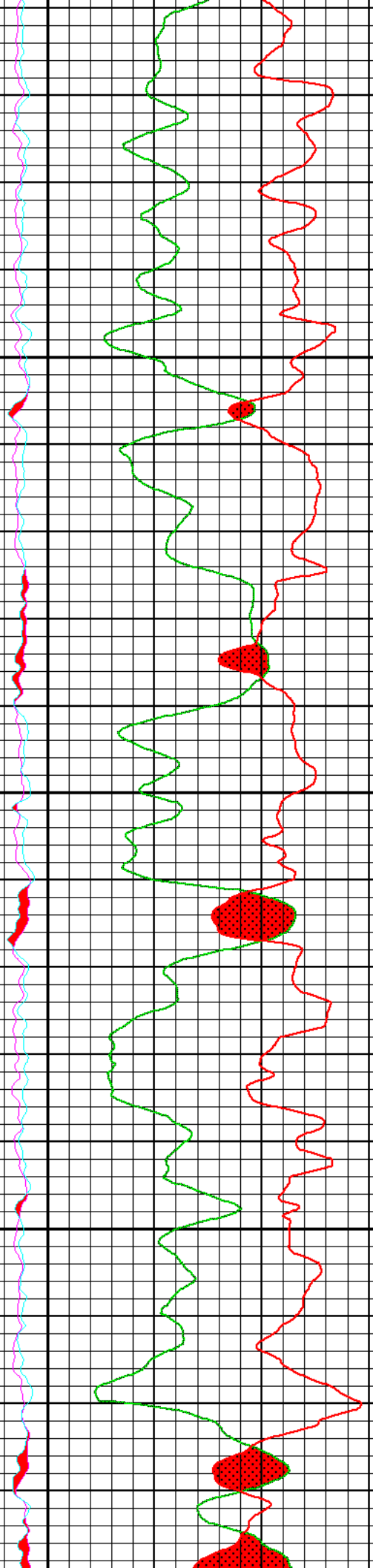
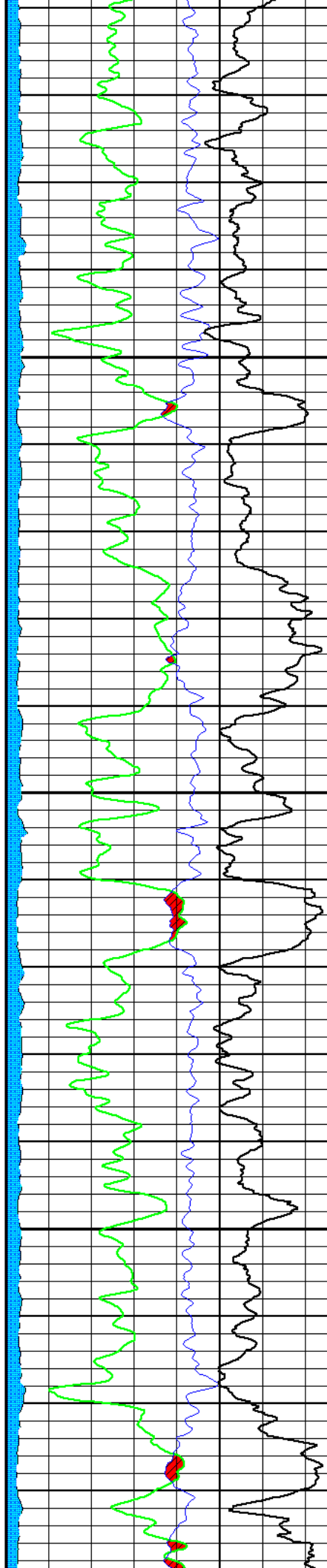
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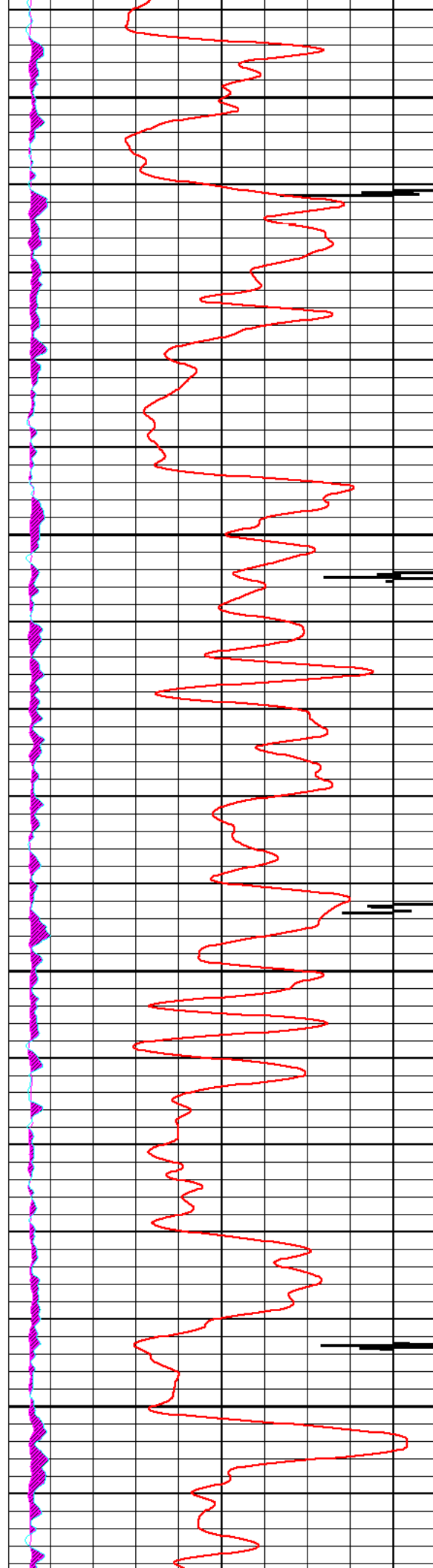




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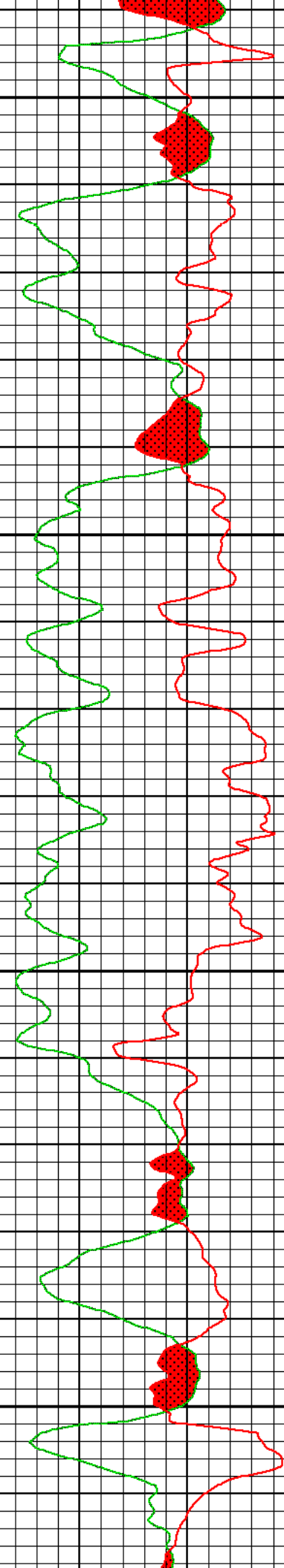
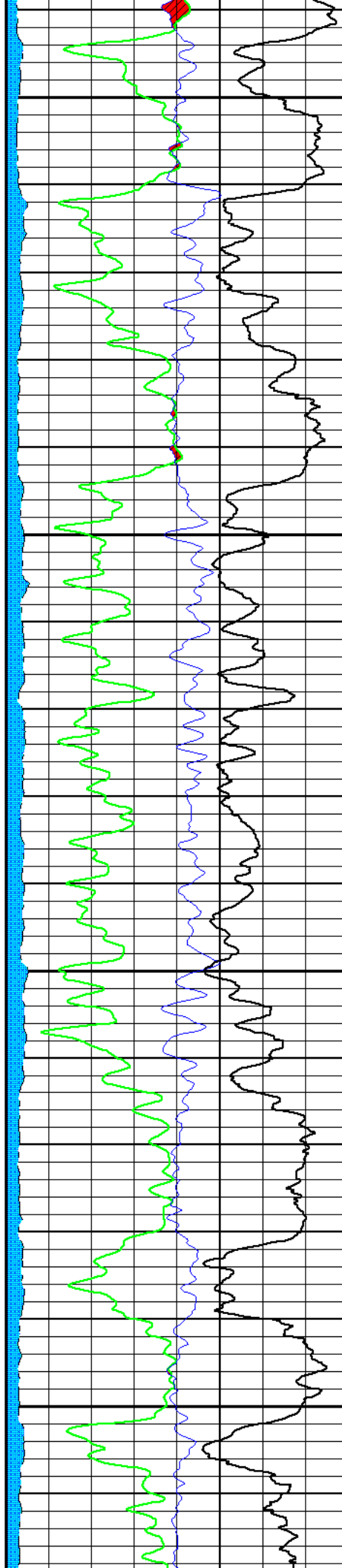
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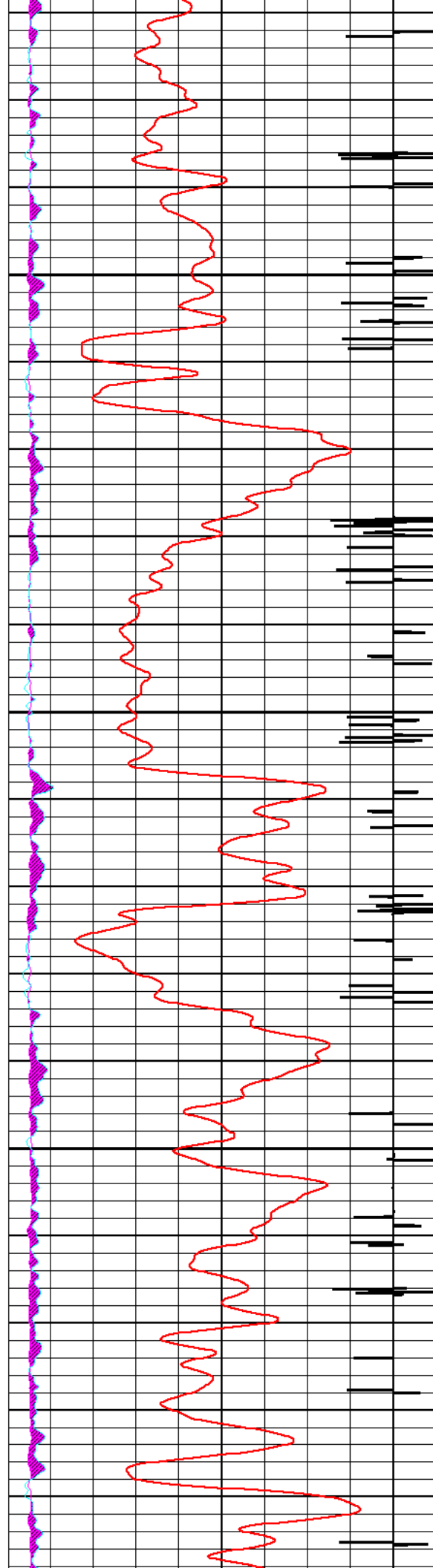




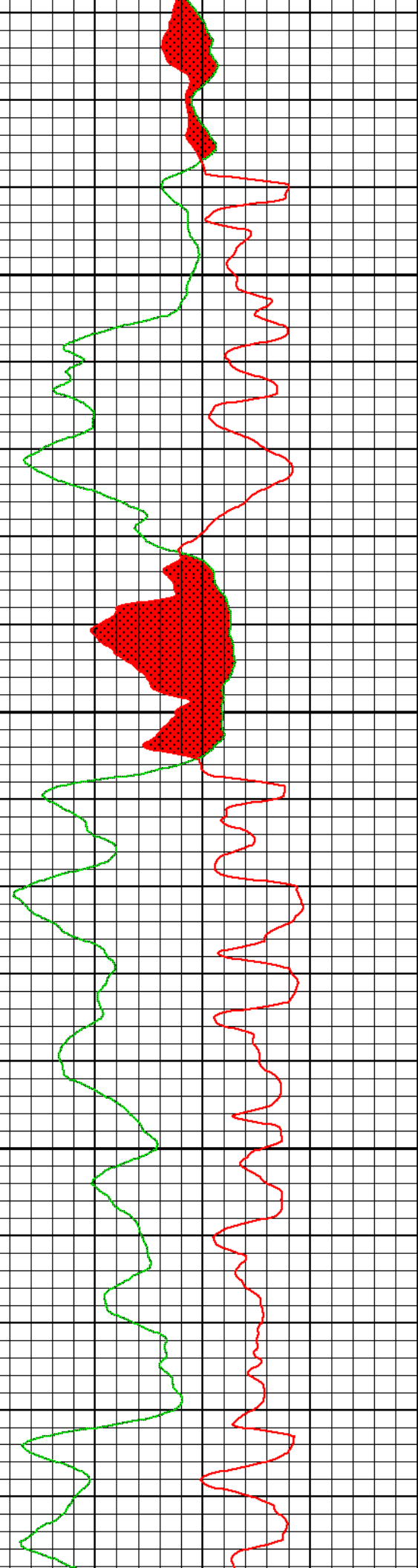
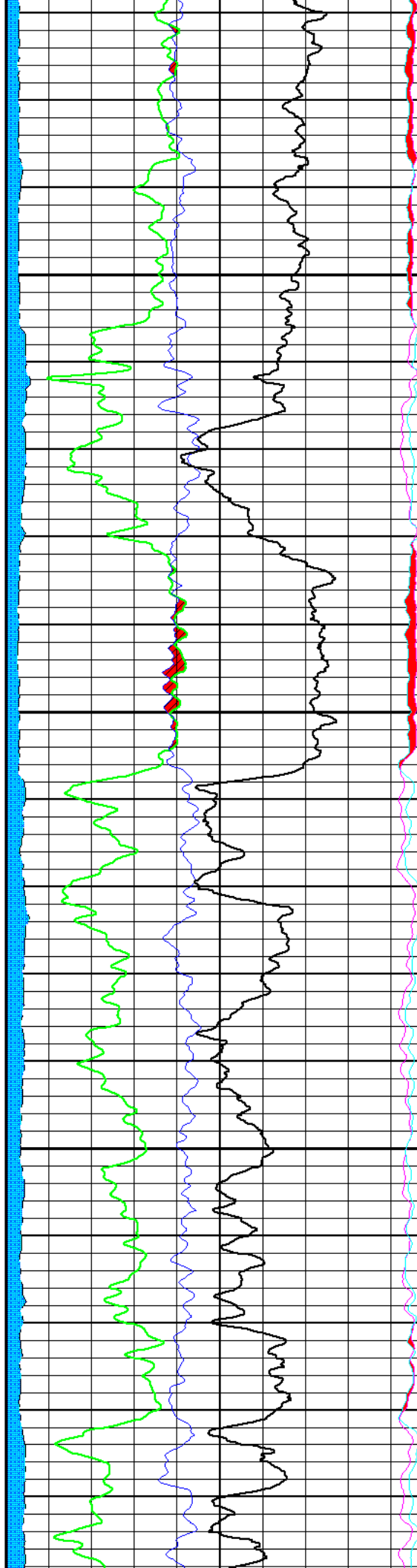
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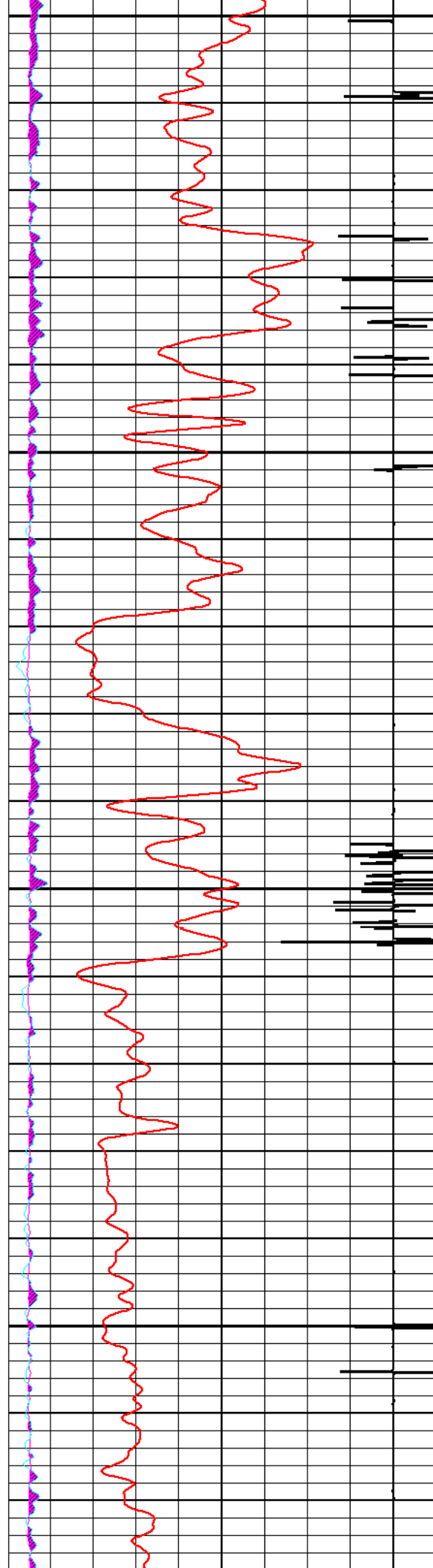
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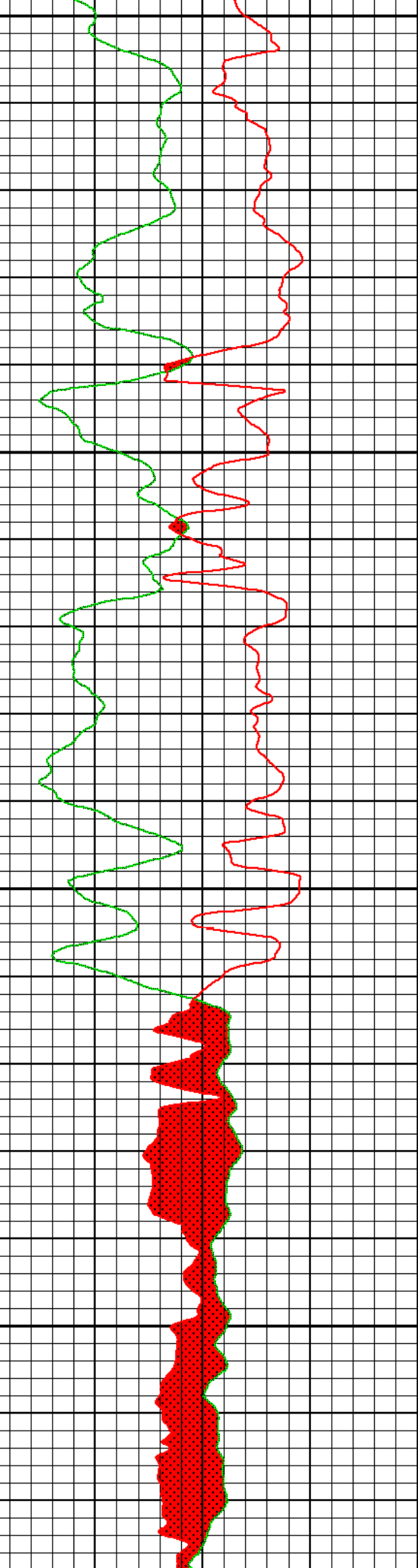
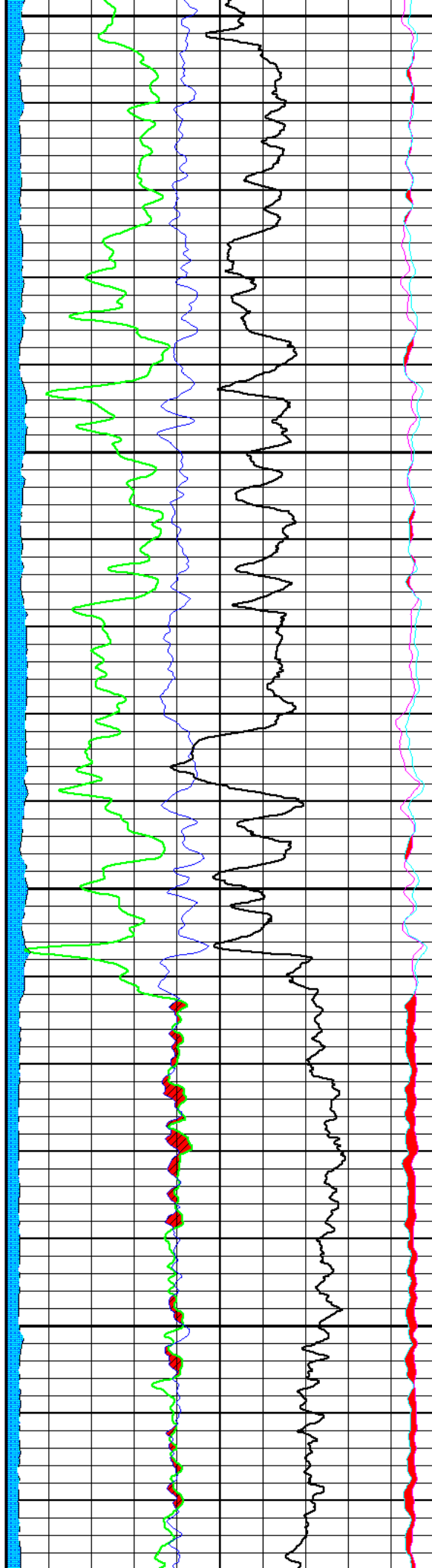
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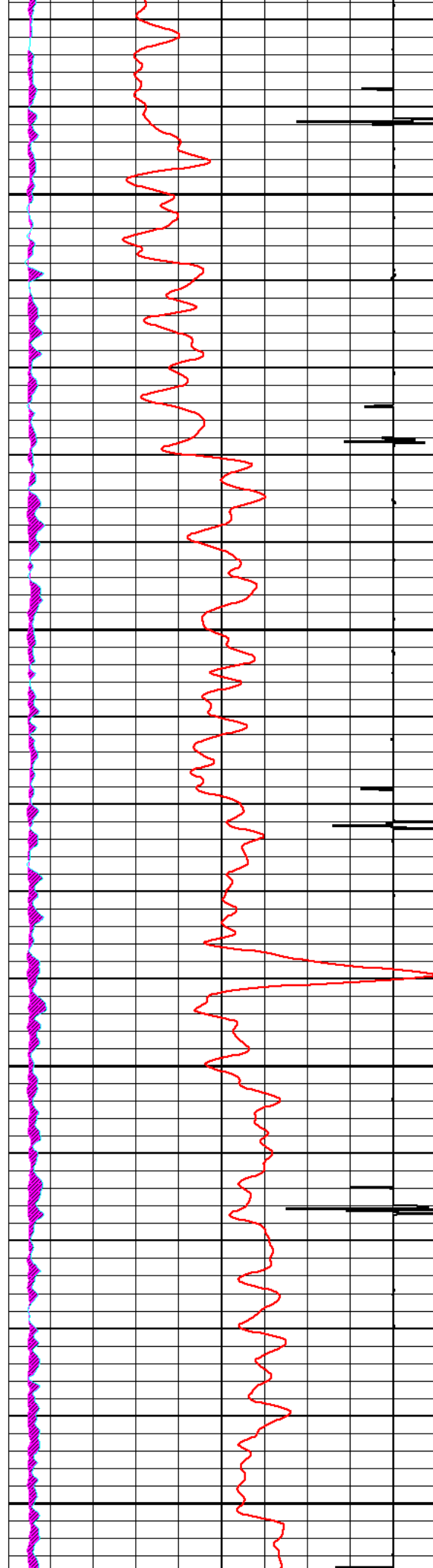




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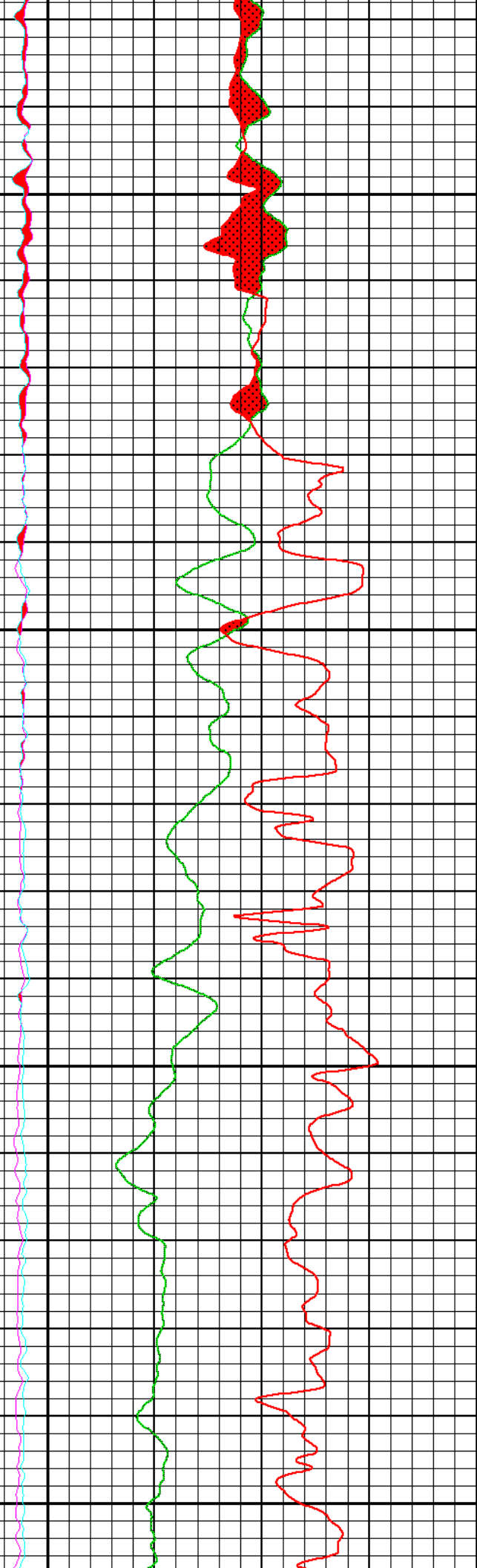
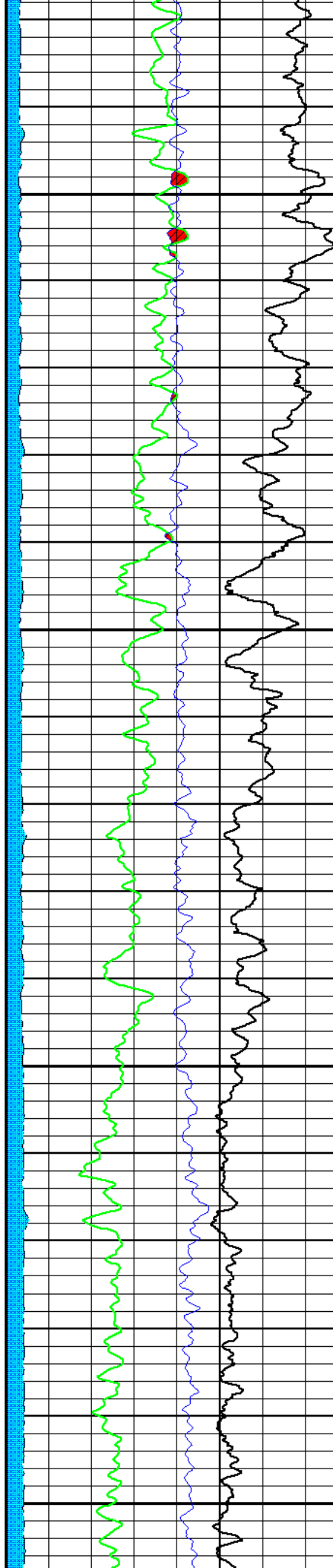
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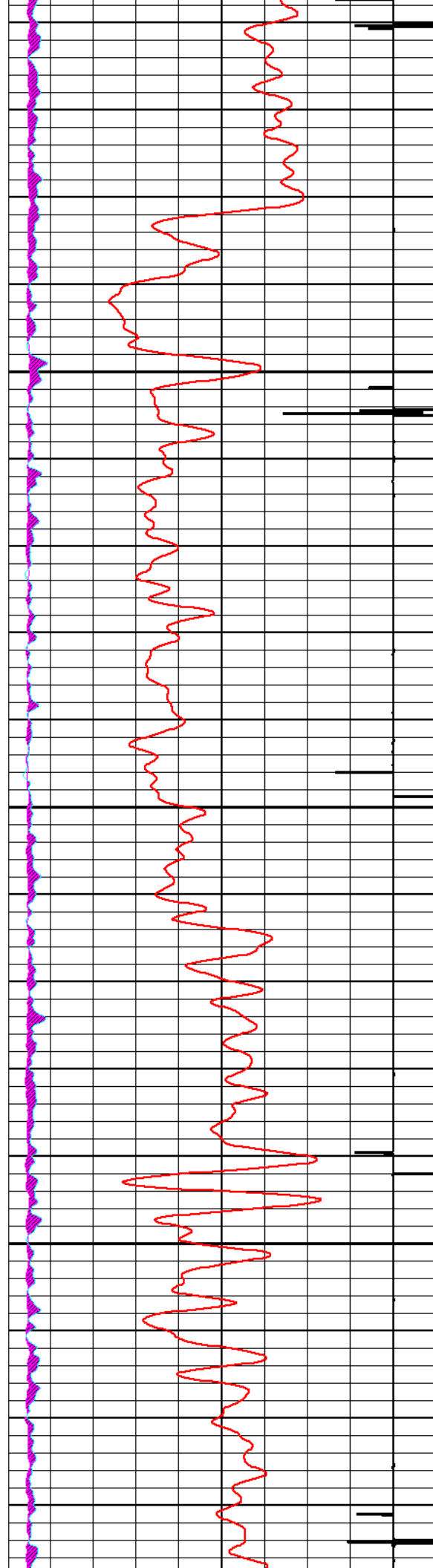




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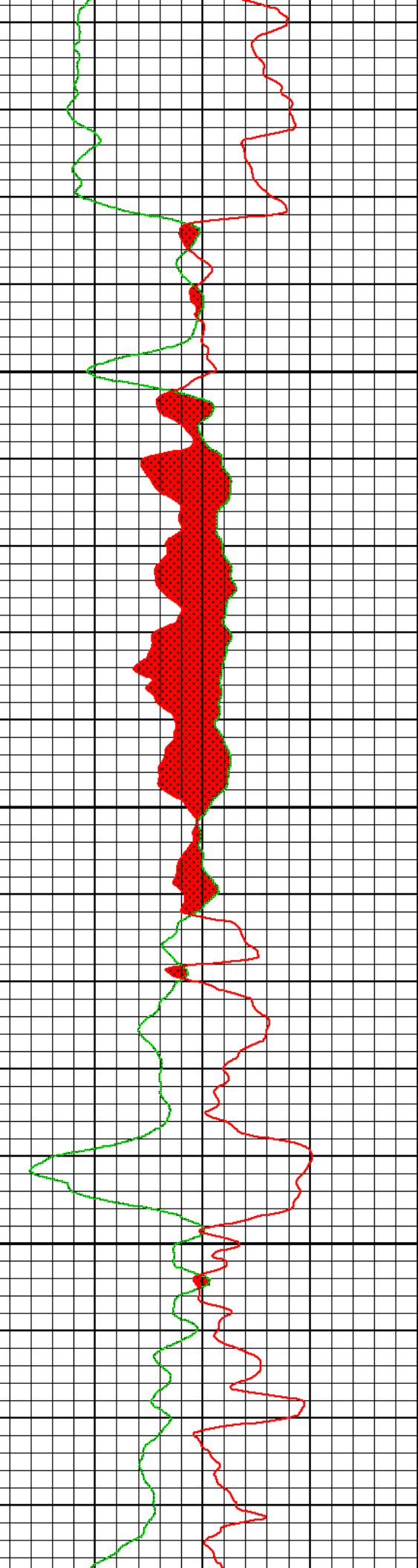
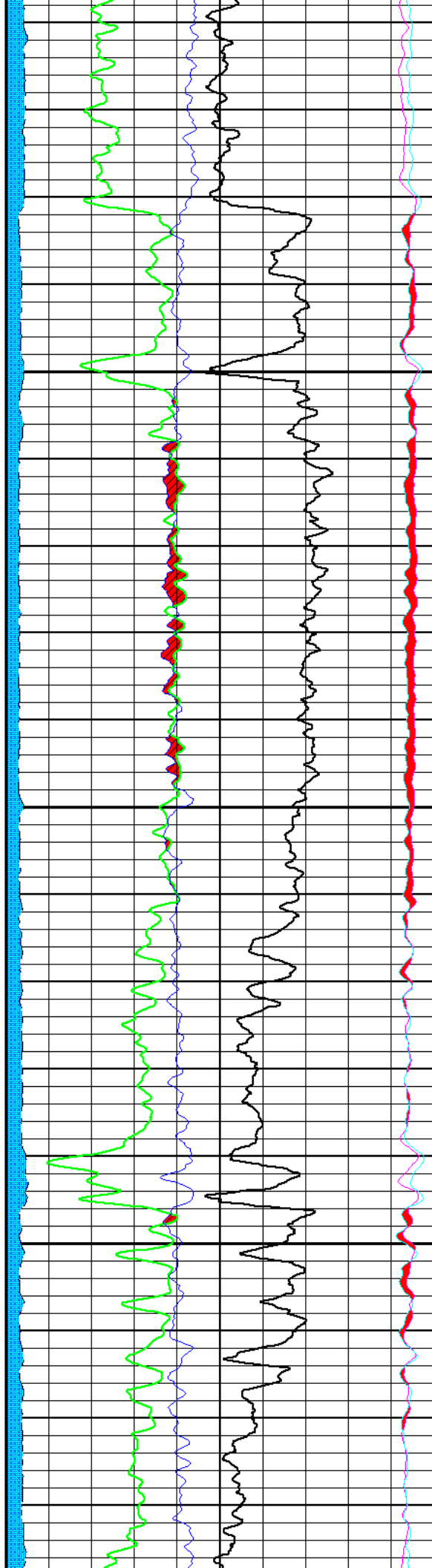
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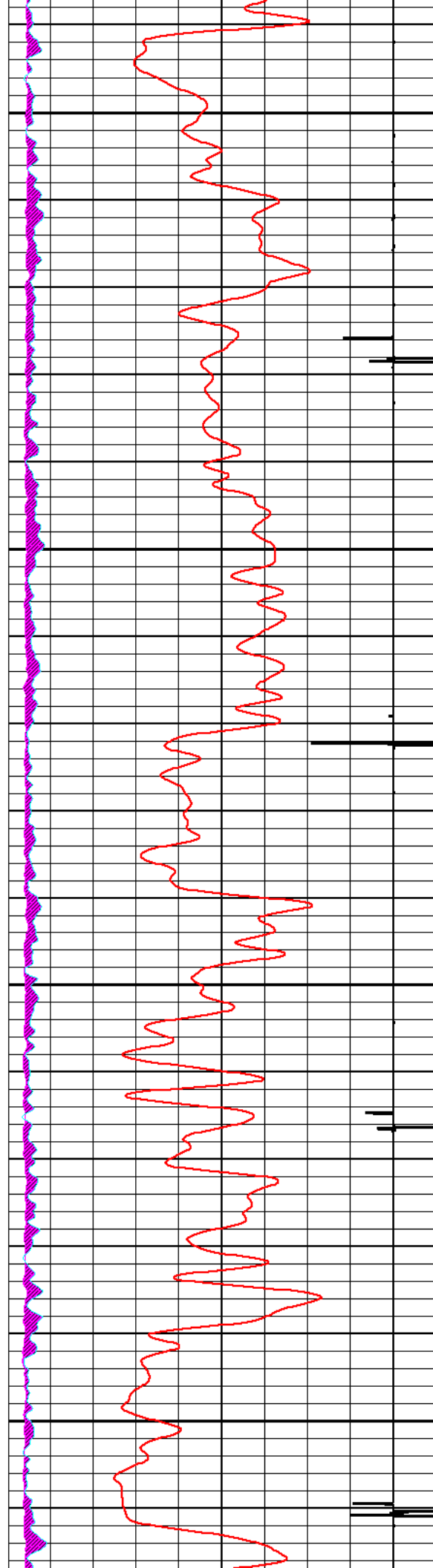




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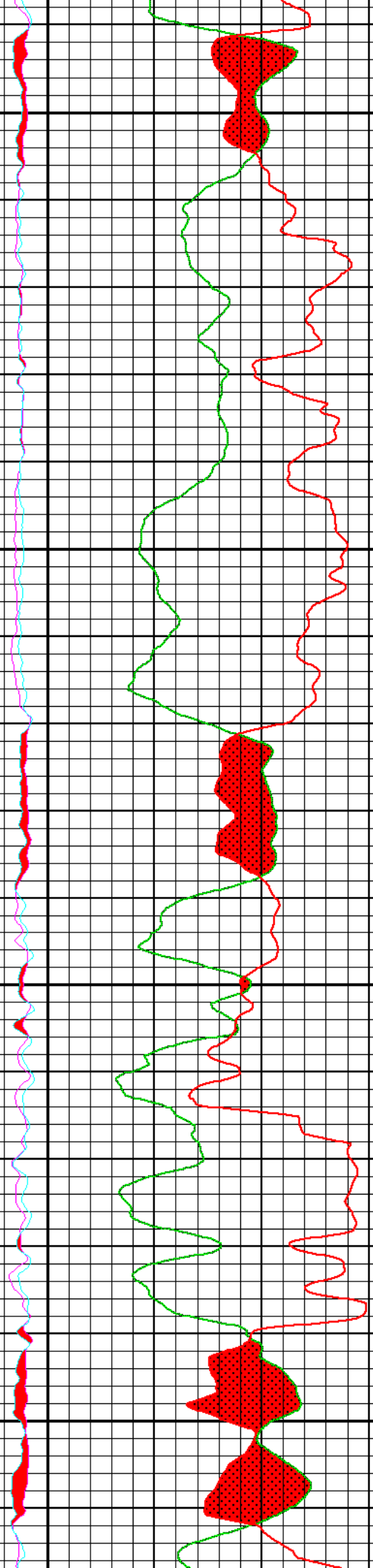
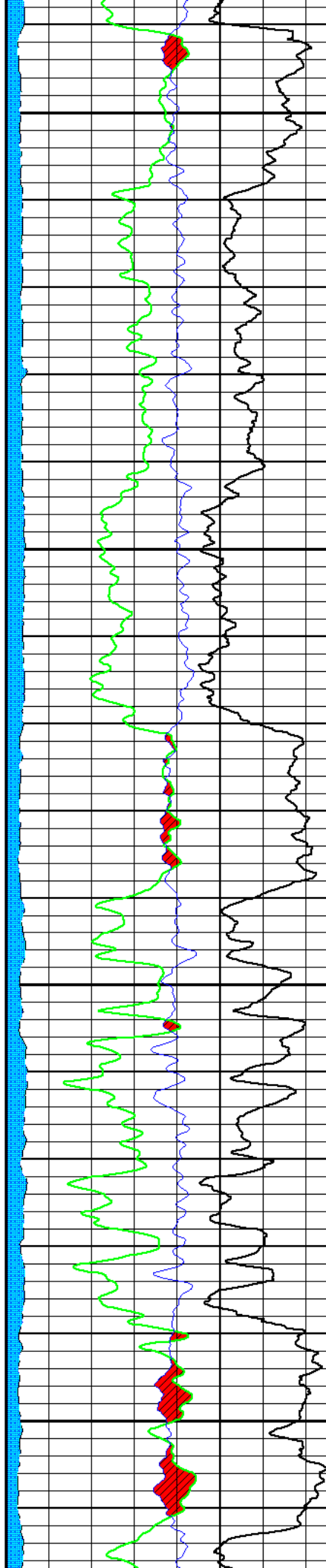
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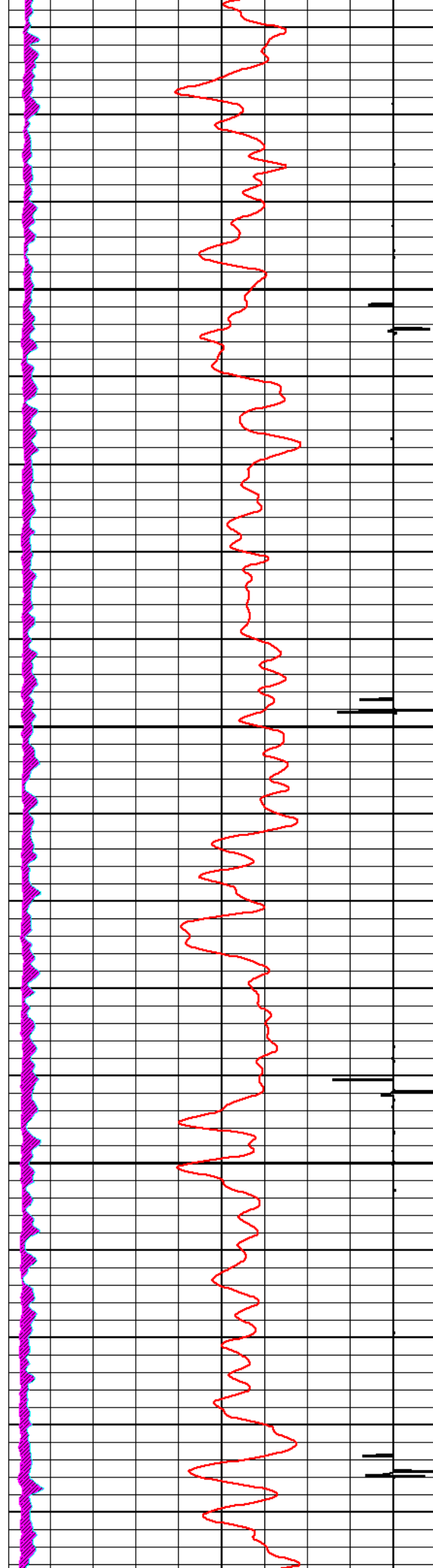




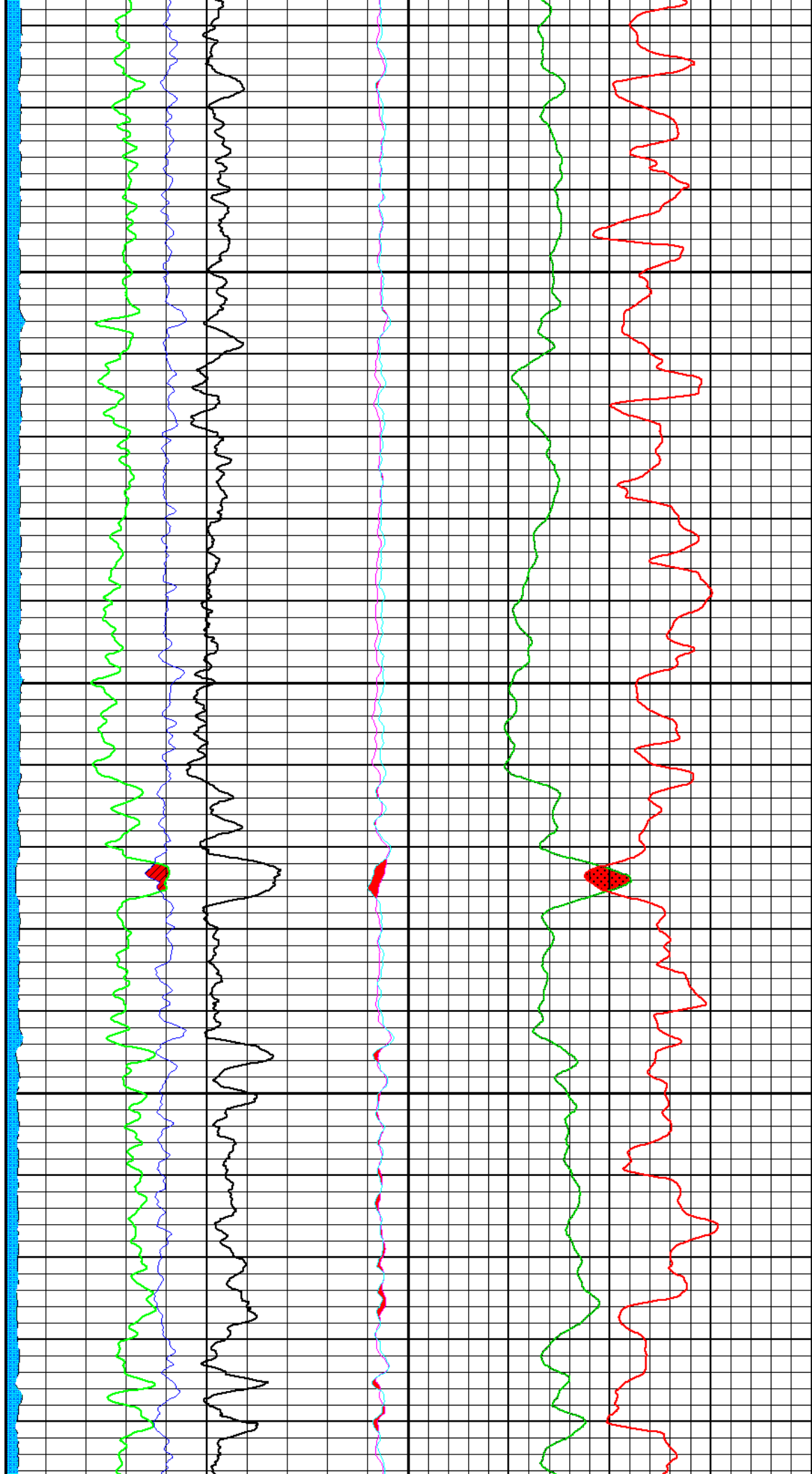
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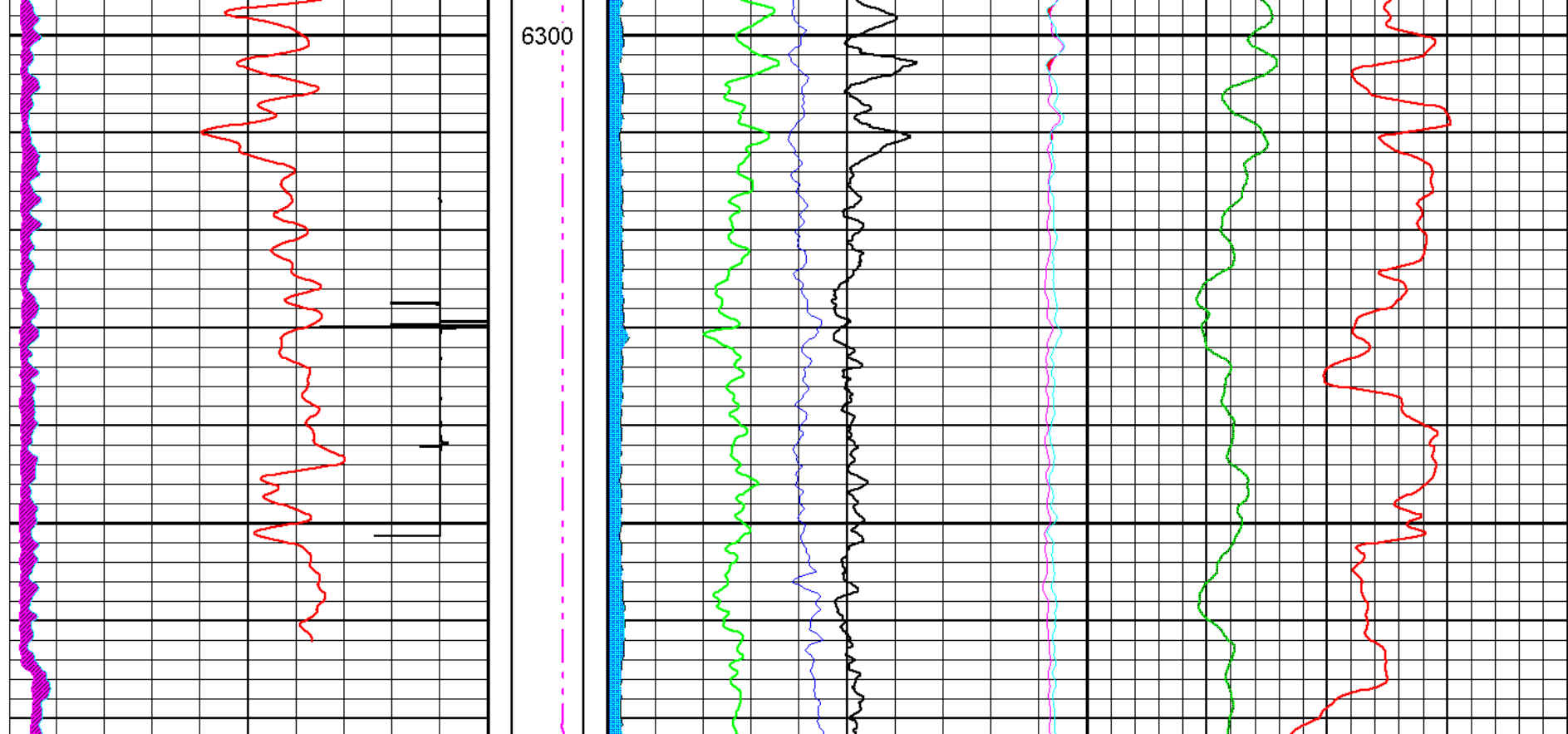
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6200





<div>CCL</div> <div>22000</div> <div>mv</div> <div>-2400</div>	<div>DEPTH</div> <div>FT</div> <div>6300</div>	<div>NEAR</div> <div>240</div> <div>cps</div> <div>0</div>	<div>AIPN</div> <div>0.3</div> <div>dec(ss)</div> <div>-0.1</div>
<div>BGN</div> <div>0</div> <div>cps</div> <div>30000</div>	<div>CSG1L</div> <div>0</div> <div>flg</div> <div>10</div>	<div>FAR</div> <div>40</div> <div>cps</div> <div>0</div>	<div>AIPD</div> <div>0.3</div> <div>dec(ss)</div> <div>-0.1</div>
<div>BGF</div> <div>0</div> <div>cps</div> <div>3000</div>	<div>CSG1R</div> <div>10</div> <div>flg</div> <div>0</div>	<div>RATI</div> <div>6</div> <div></div> <div>-4</div>	
<div>GRP</div> <div>0</div> <div>gapi</div> <div>150</div>	<div>TENS</div> <div>2500</div> <div>flg</div> <div>0</div>	<div>RBNF</div> <div>2.5</div> <div></div> <div>22.5</div>	
		<div>SIGC</div> <div>50</div> <div>cu</div> <div>0</div>	
		<div>DELI</div> <div>0</div> <div></div> <div>-100</div>	