



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH084820

Company Well WPX ENERGY FEDERAL NER 414-32

API No: RULISON

County GARFIELD State CO

05045217800000

Location

SHL: 185' FNL & 2593' FWL (5 75 93W)

BHL: 505' FSL & 545' FWL (32 65 93W)

SEC 32 TWP 6S RGE 93W

Other Services

BOND LOG

32 65 93W
RU 23-5 PAD
NABORS 576

Permanent Datum GL Elevation 7603 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KB Elevations KB 7629 ft DF GL 7603 ft

Date	27/APR/14	
Run	ONE	
Service Order	US625393	
Depth Driller	10322 ft	
Depth Logger	10262 ft	
Bottom Logged Interval	10242 ft	
Top Logged Interval	6163 ft	
Time Started	0730	
Time Finished	1400	
Operator Rig Time	6.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	93 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	245 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	26/APR/14	
Equipment No.	4271	GRAND JUNCTION
Recorded By	FLOYD RENEAU	
Witnessed By	JEFF DUCY	

- FOLD HERE

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record		
Bit Size	From	To
13.5 in	0 ft	1128 ft
8.75 in	1128 ft	10322 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1128 ft
4.5 in	11.6 lbm/ft	P-110	0 ft	10322 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 4/26/2014 at the client's request.
The amount of linear shift is 6 feet.
Logged in PNC-3D mode.
BHT = 245 °F
SJ = 7016'-7037'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	TEMP	8255XA	11774568	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	RPM	8281PA	10585555	FREE
1	1	RPM	8281EA	10169250	FREE
1	1	GR	2812LA	10274382	FREE
1	1	TEL/CCL	8248ED	10460262	FREE
1	1	PCM	8250EA	10586851	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		6134.750	10247.938
PNC Porosity	Borehole Size	8.750	inch	6134.750	10247.938
PNC Porosity	Casing Size	4.500	inch	6134.750	10247.938
PNC Porosity	Gas Filled	Non Gas Filled		6134.750	10247.938
PNC Porosity	Matrix	Sandstone		6134.750	10247.938
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	6134.750	10247.938

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	-21.969	GR
8281XA	-12.702	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3

8281XA

-12.291

SDL3 SGA3 SGL3 STA3 XS ASPEC3
AMB3 AMF3 CHF3 IXSC IXSN RATO23
RICXC RIN13C RIN23 RIN23C SD3D SG3D
SGB3 SGF3 WDT3 CXSR IXSR XSR
RICXR

HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2
BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3
CPT2Q4 ET2 ILS LS MCS2 MCS2Q0
QCAL2 RGN2 RICL RONE23 RTWO23 SDA2
SDL2 SGA2 SGB2 SGF2 SGK2 SGL2
STA2 ASPEC2 ILSC ILSN WDT2 RICLC
CLSR ILSR LSR RICLR

8281XA

-12.041

CPRS HVC1Q0 MV SEQ SEQ1 AMA1
AMB1 AME1 AMF1 AML1 BKS CHF1
CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A
CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1
G1 G2 GE1S GE2S ISS MCS1
MCS1Q0 QA1 QCAL1 QM1 RATO RATO13
RBOR RGN1 RICS RIN RONE RPOR
RTWO RIN13 RONE13 RTWO13 SALB SC1
SDA1 SDL1 SGA1 SGB1 SGBC SGE1
SGF1 SGFC SGK1 SGL1 SS SS2
STA1 PD1S PD2S PD3S MD1S MD2S
MD3S DG1S DG2S DG3S PD1M PD2M
PD3M MD1M MD2M MD3M DG1M DG2M
DG3M MVS MA MVM FILV IAM
TA PVM PVS IAS SSTAT QPD1
QPD2 QPD3 QMD1 QMD2 QMD3 QDG1
QDG2 QDG3 QMA QTA QFILV QMV
QPV QIA DERR DCNT QPK1 QSA1
PKS1 ASPEC1 H0C FE2XC ISSC RINC
ISSN RDEN WDT1 RICSC CSSR G1R
G2R ISSR SSR SS2R RATOR RATO13R
RBORR RICSR RINR RIN13R RONE RPORR
RTWOR

8255XA

-0.792

PTFS PTMS

8255XA

-0.775

SPF1 SPFQ TSCP TSDP

8255XA

0.000

DTEM TEMP TNF

SYSTEM

0.000

TEN TTEN

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : FEDERAL NER 414-32

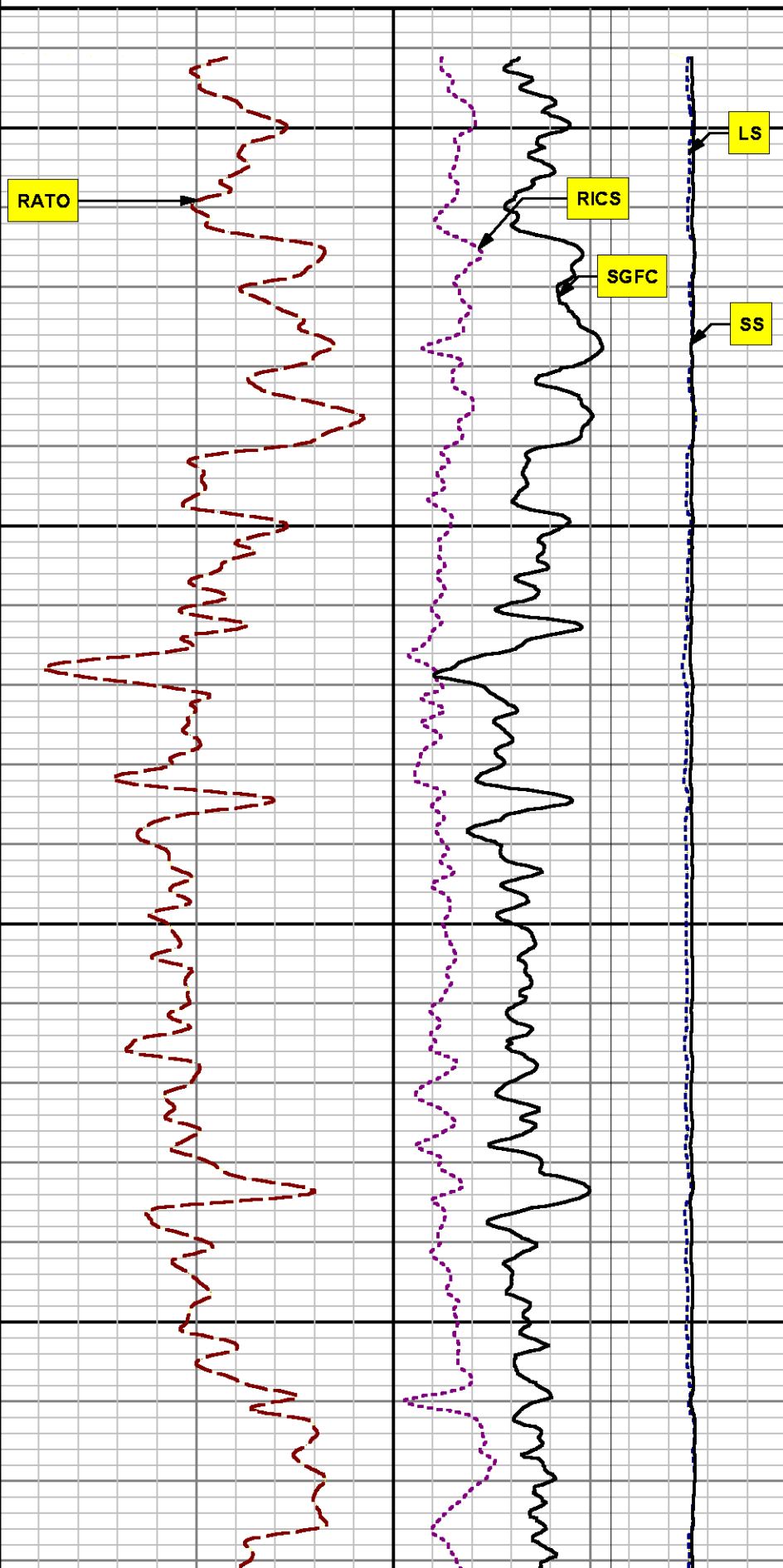
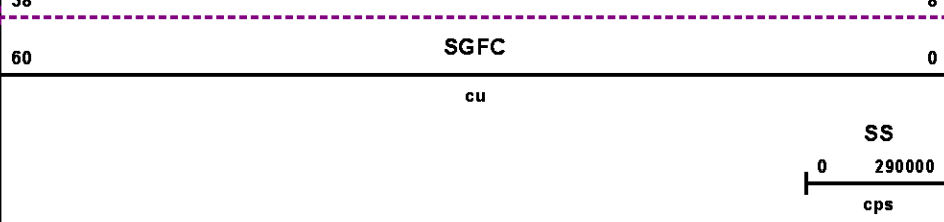
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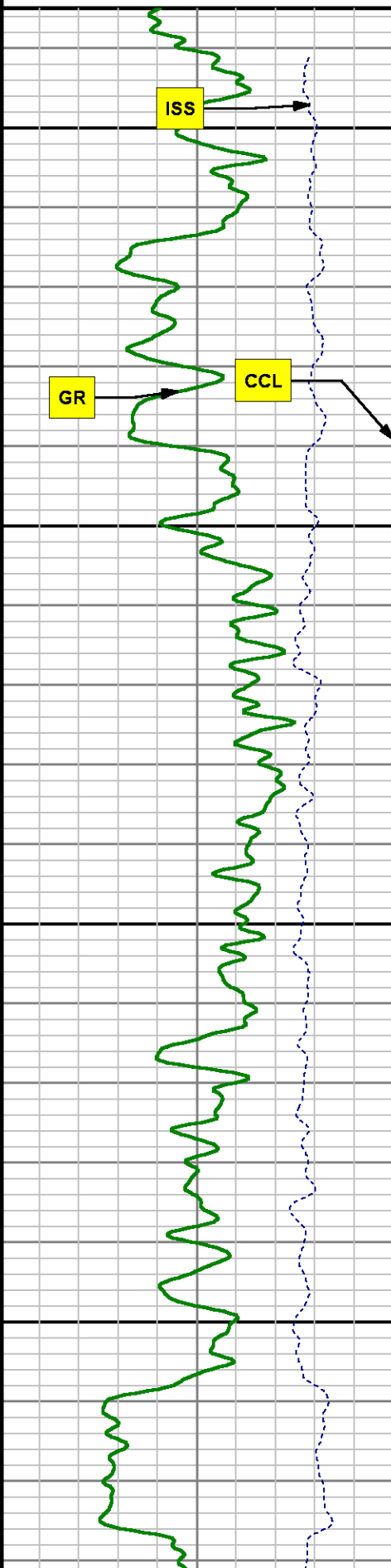
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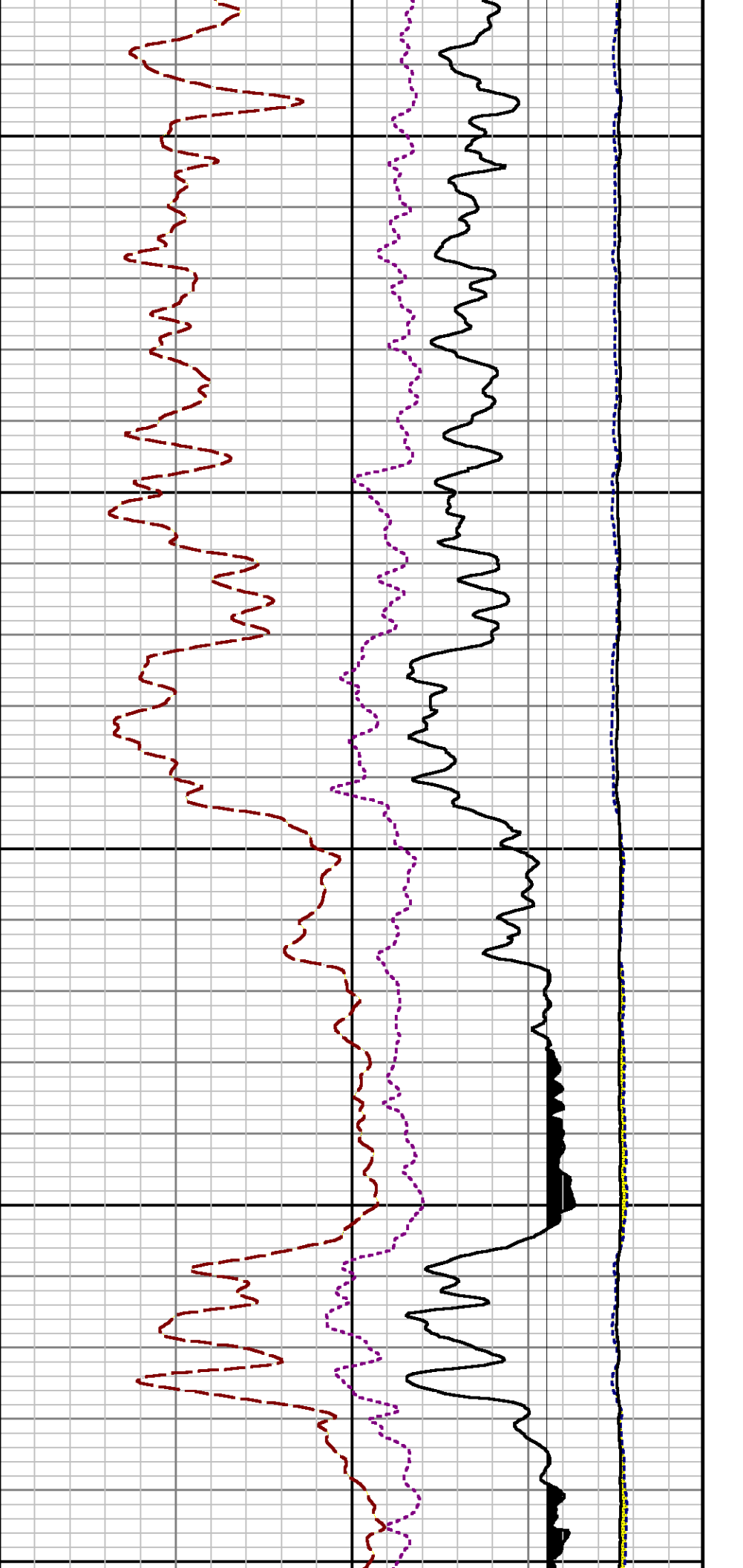




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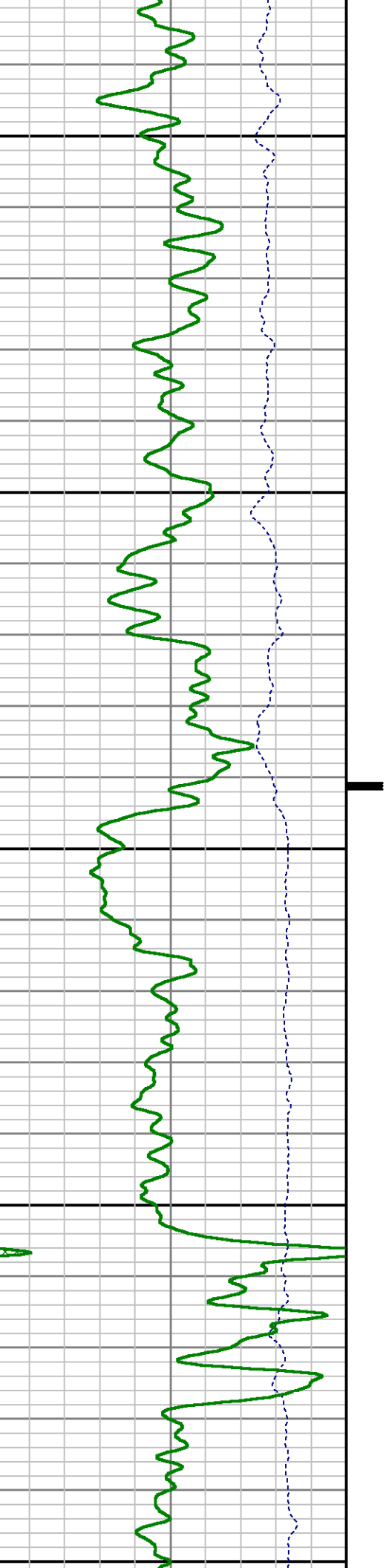
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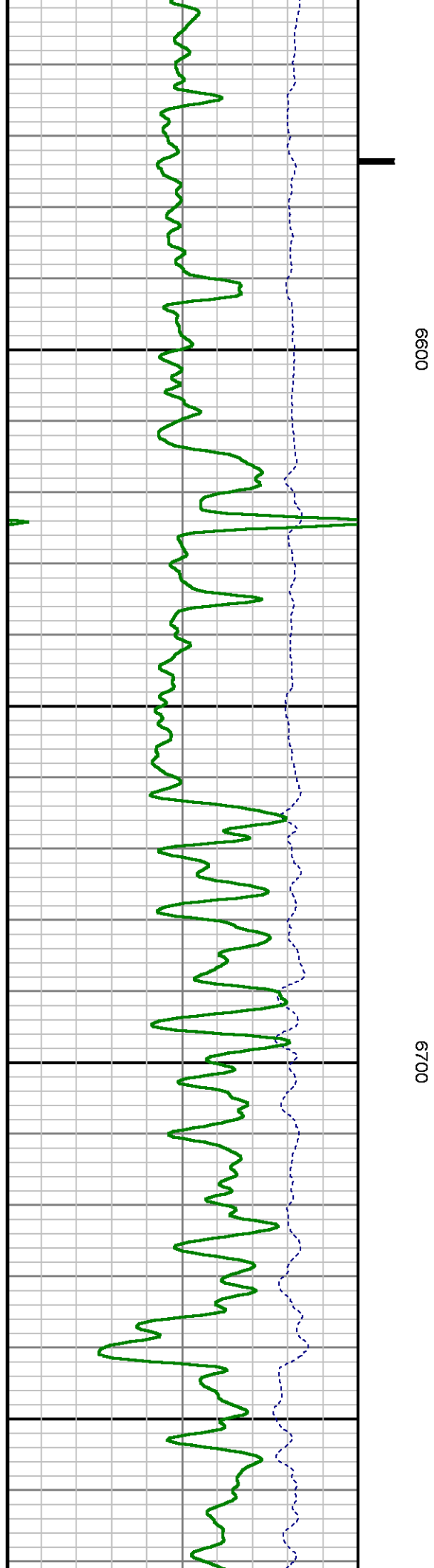
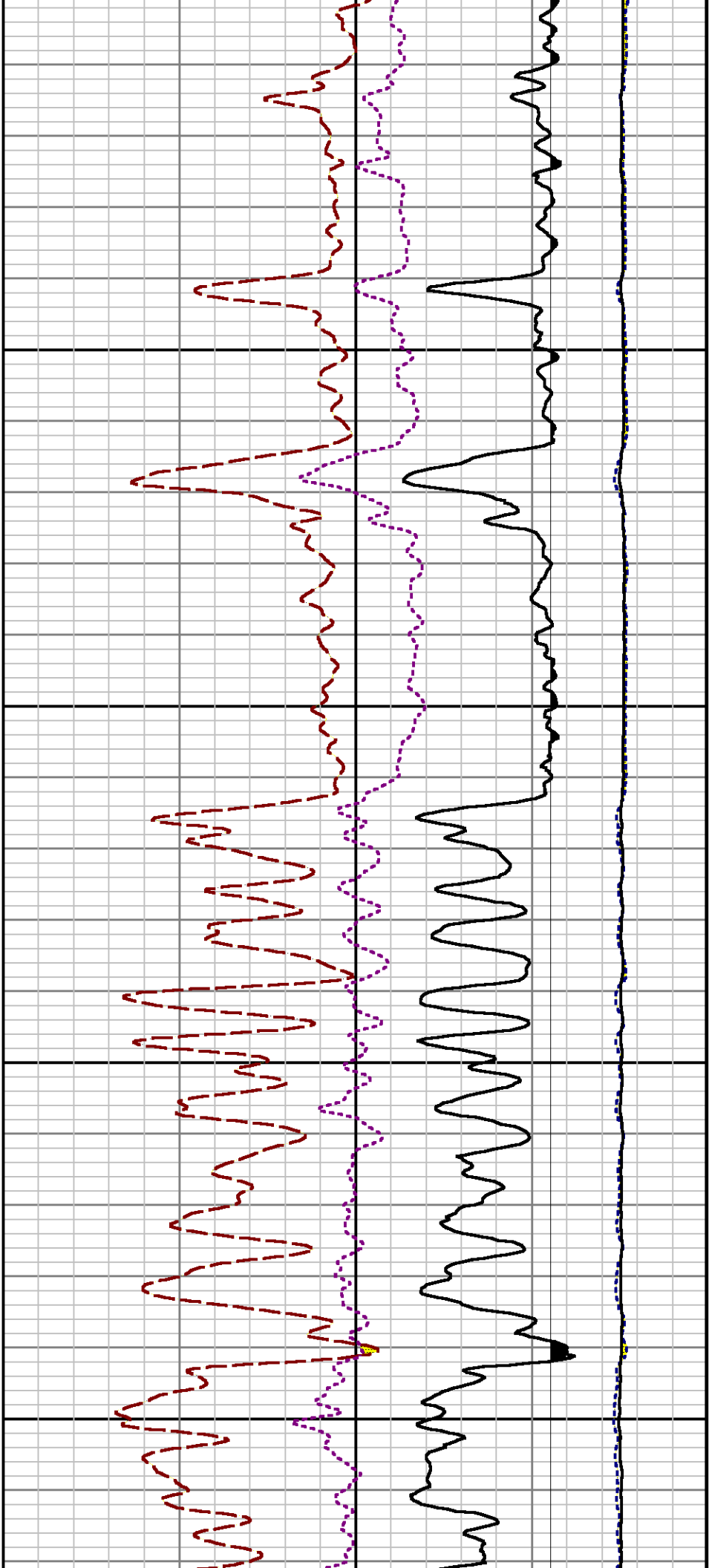


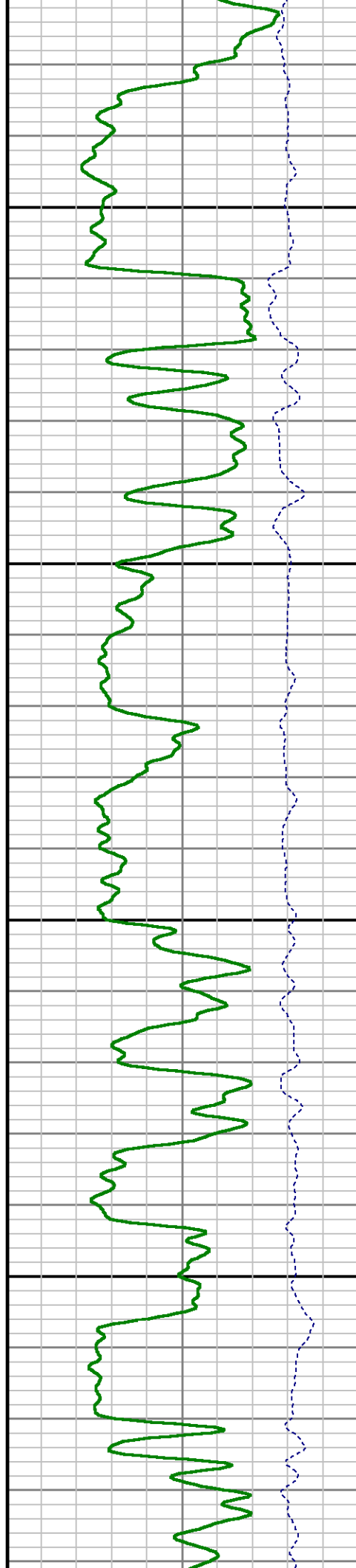


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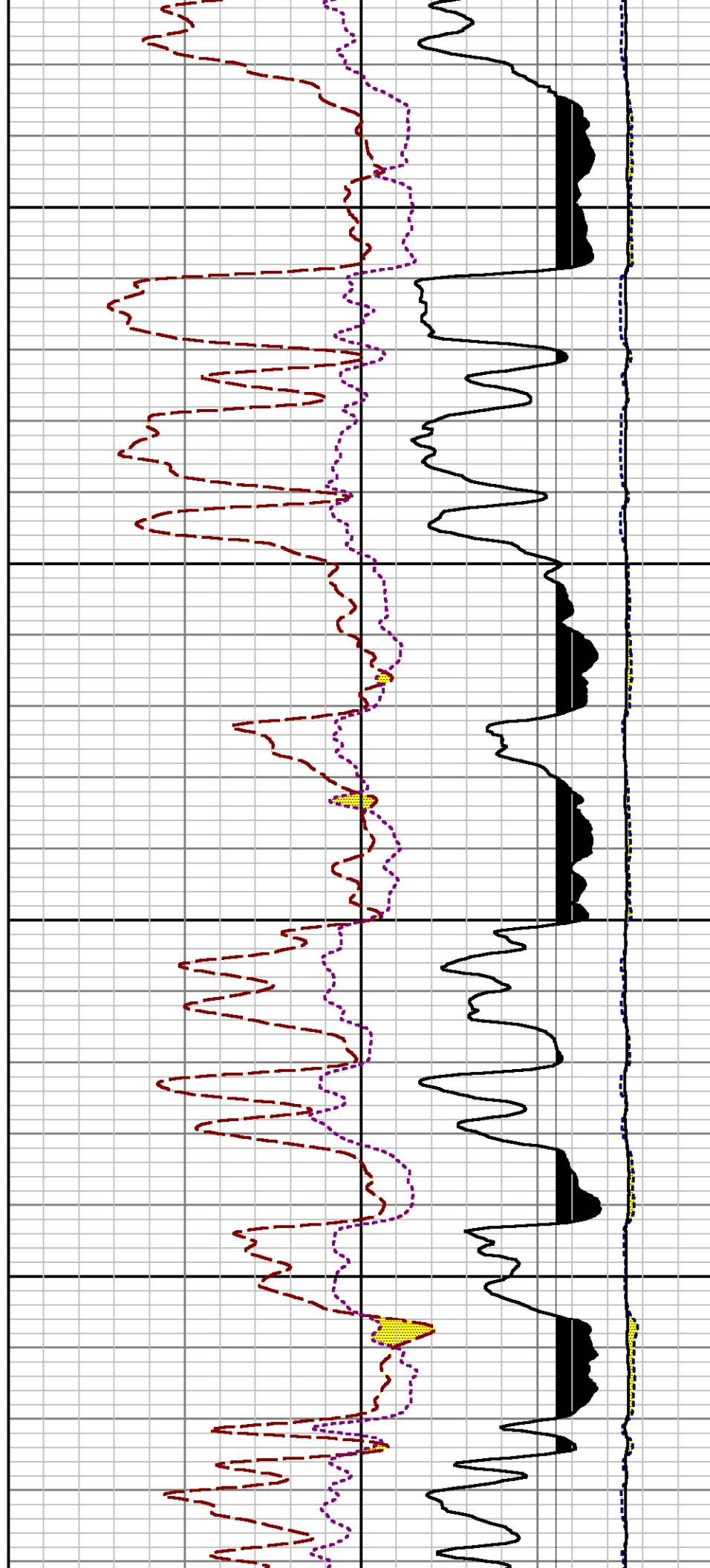


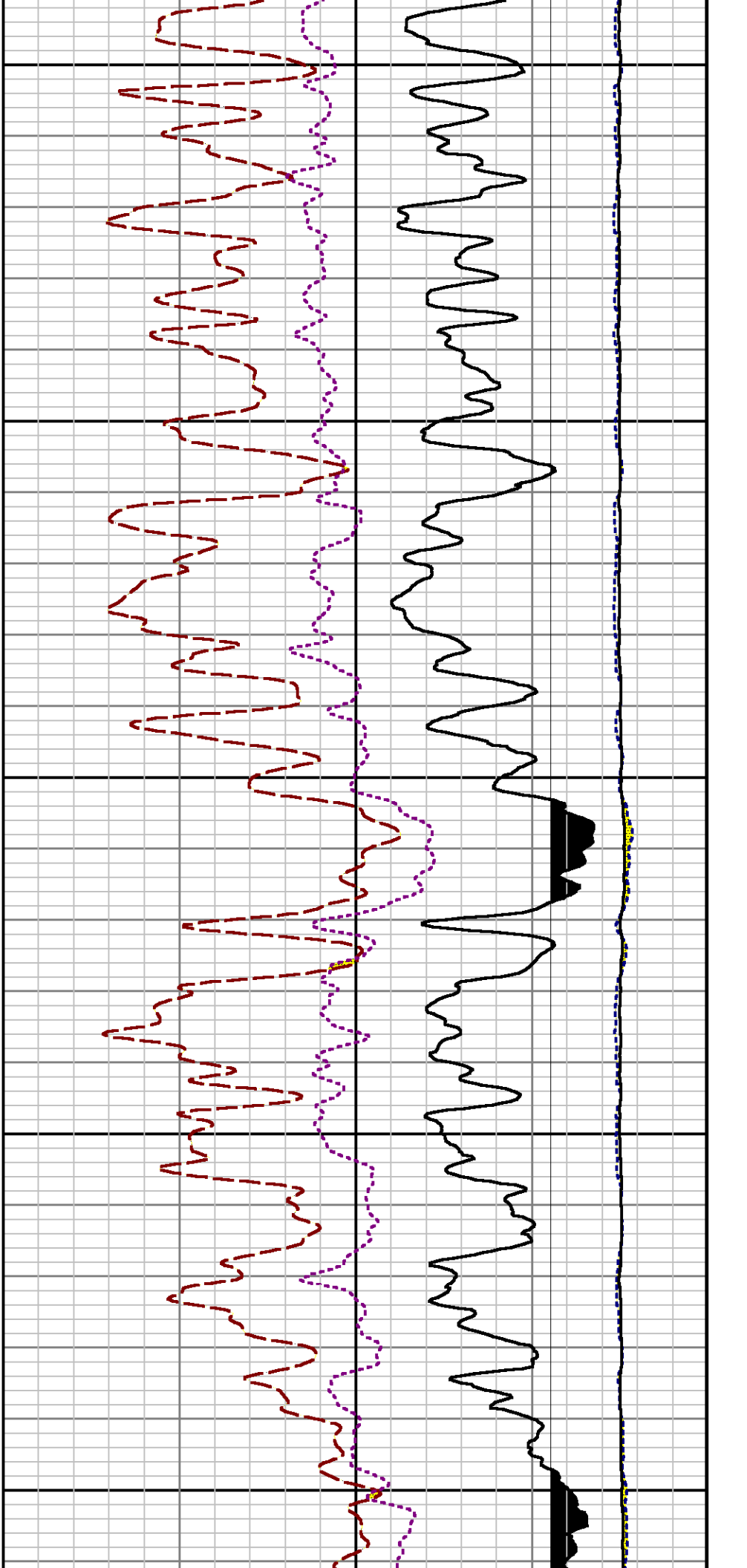




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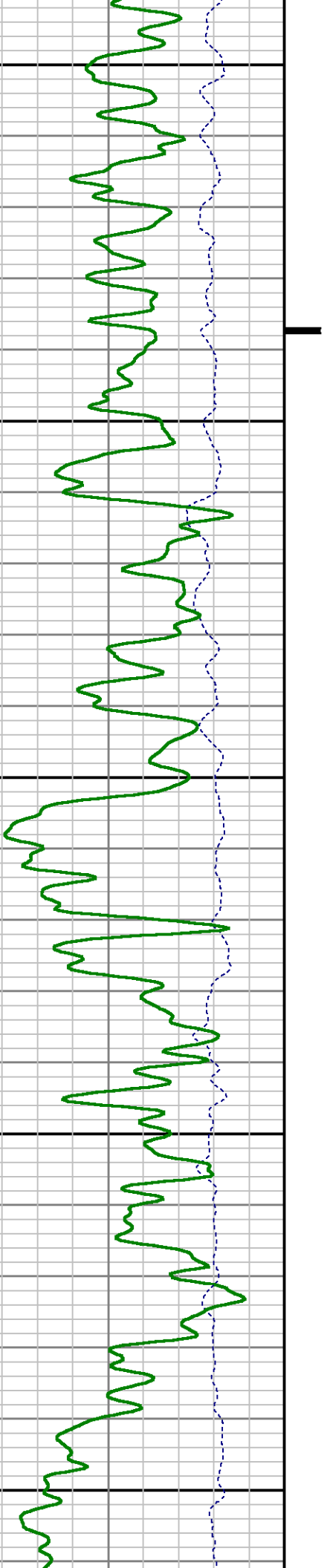


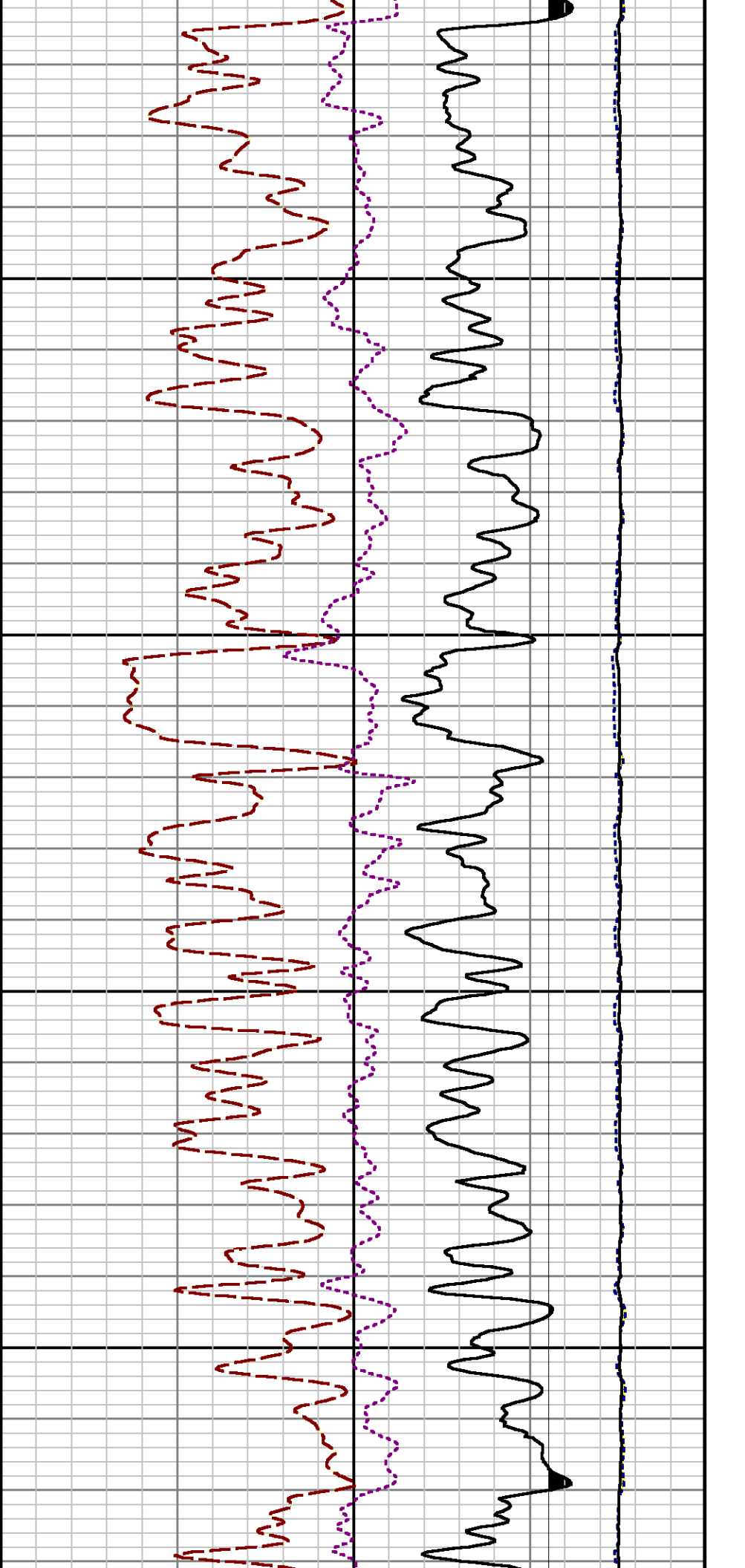


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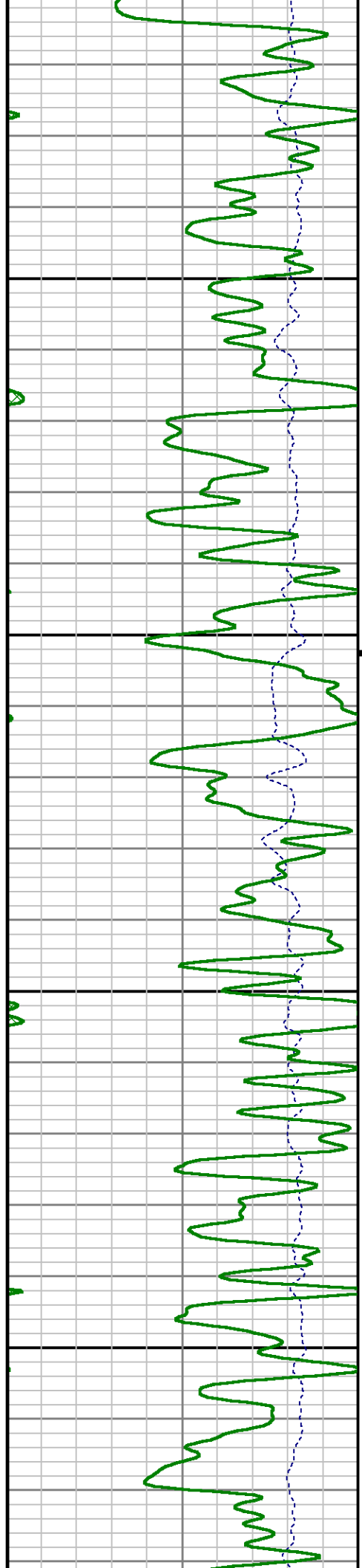
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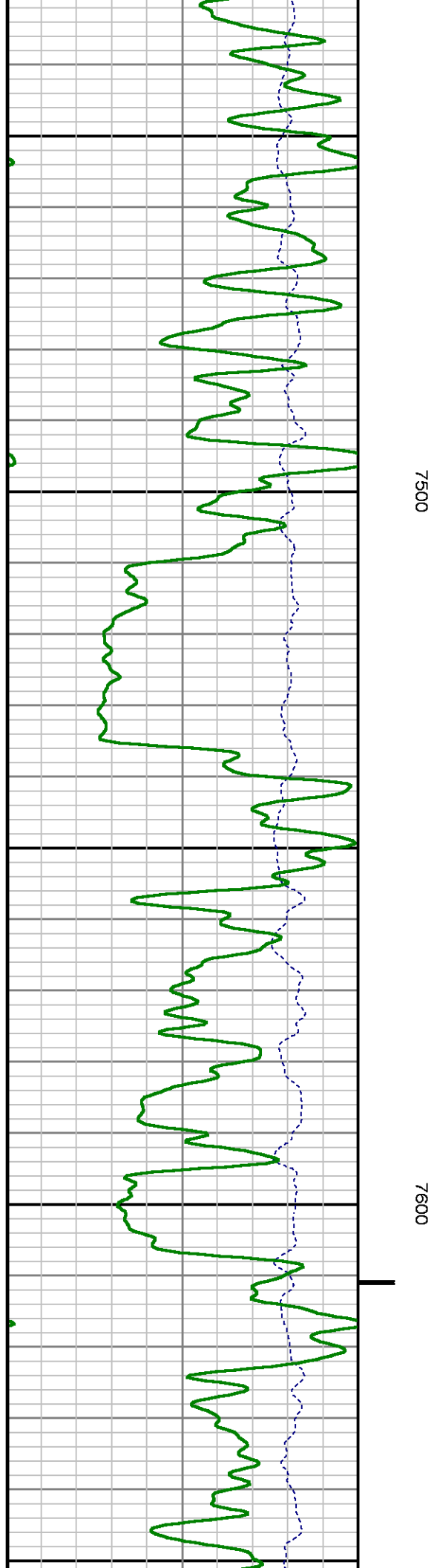
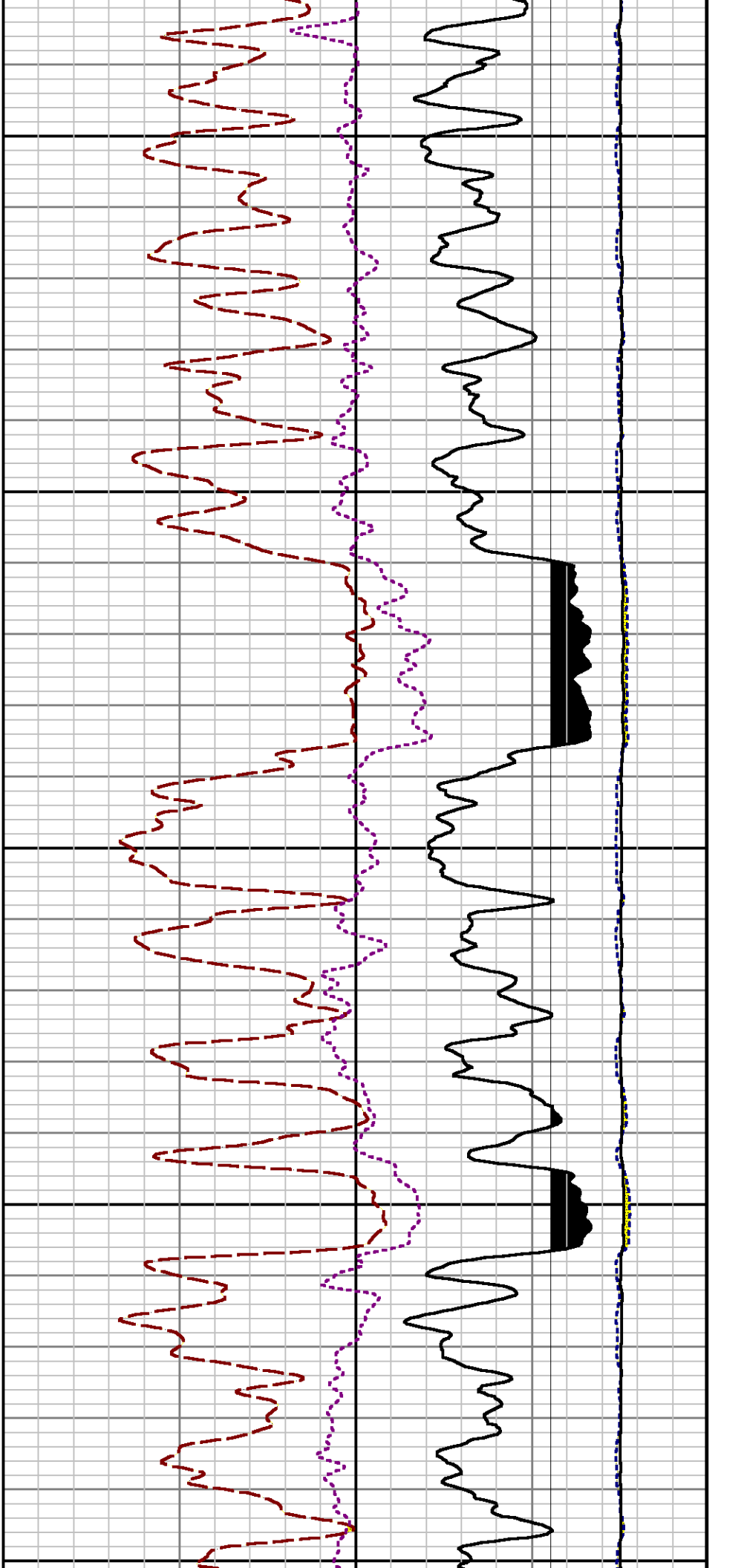


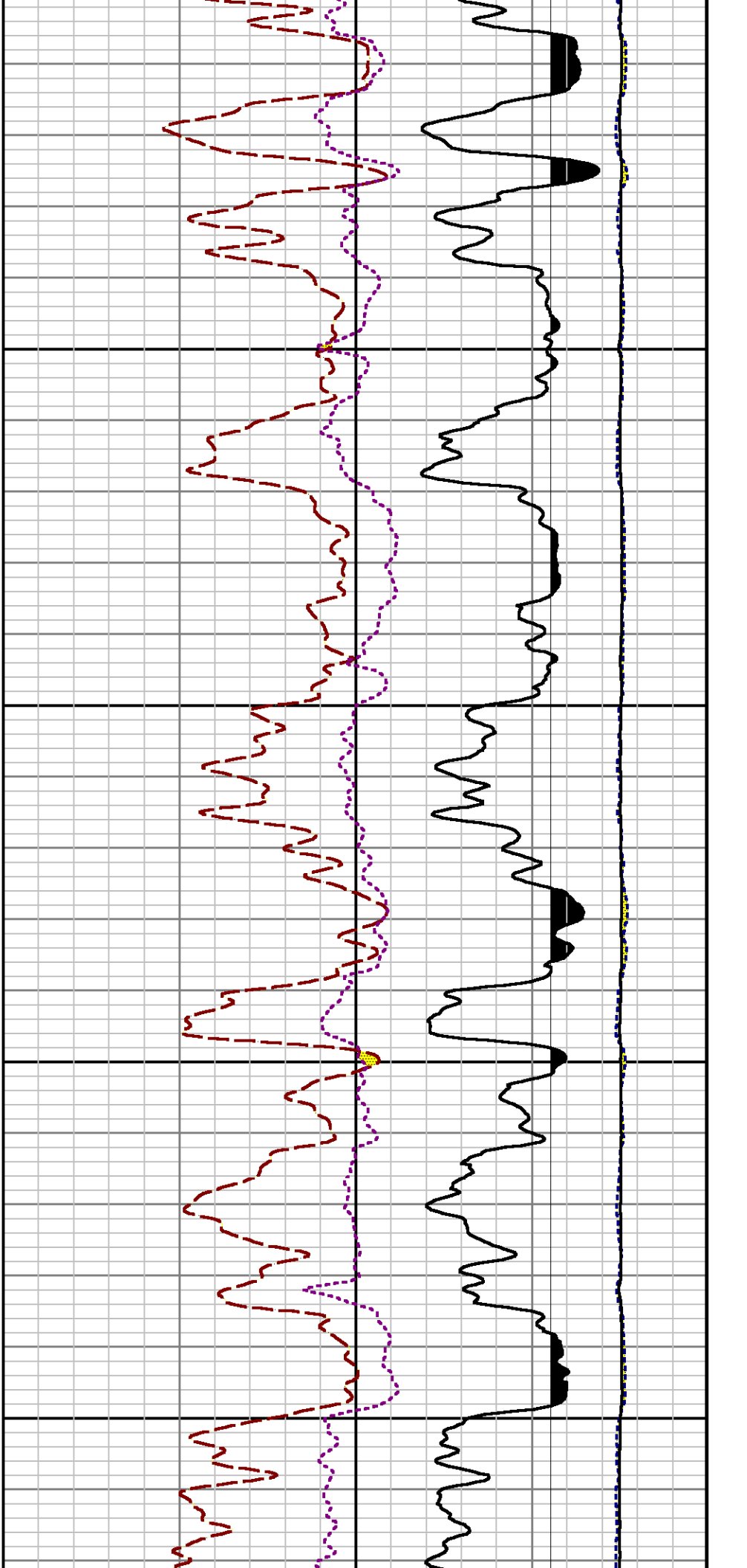


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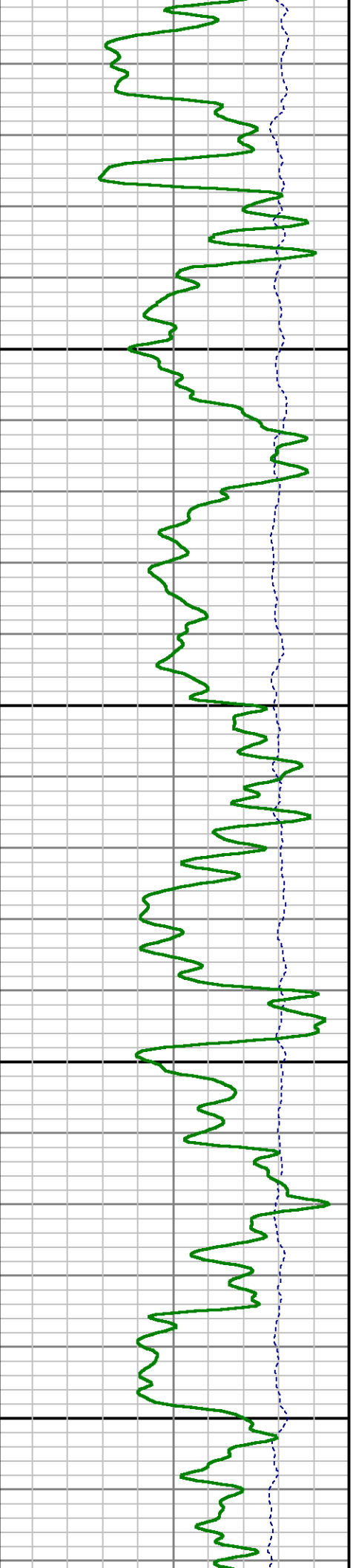


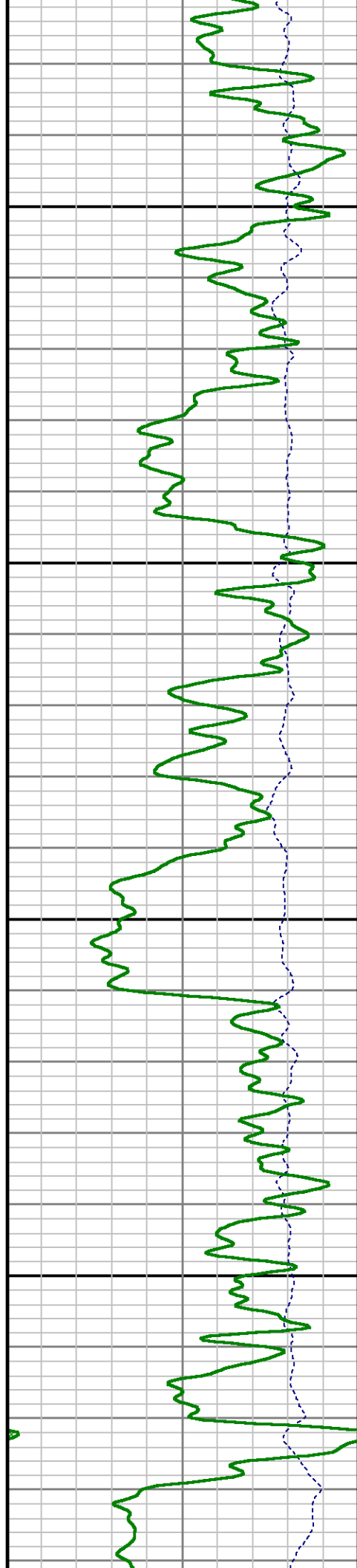




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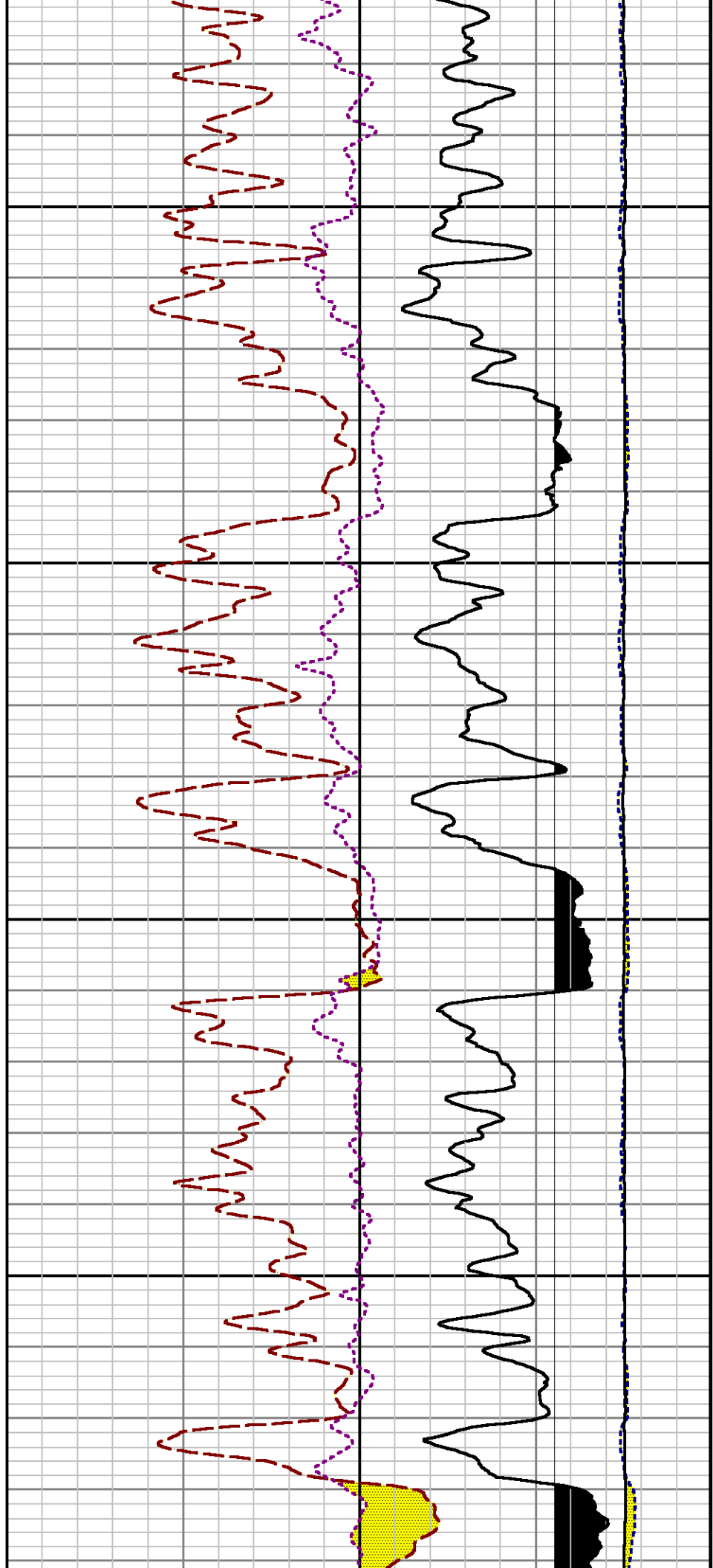
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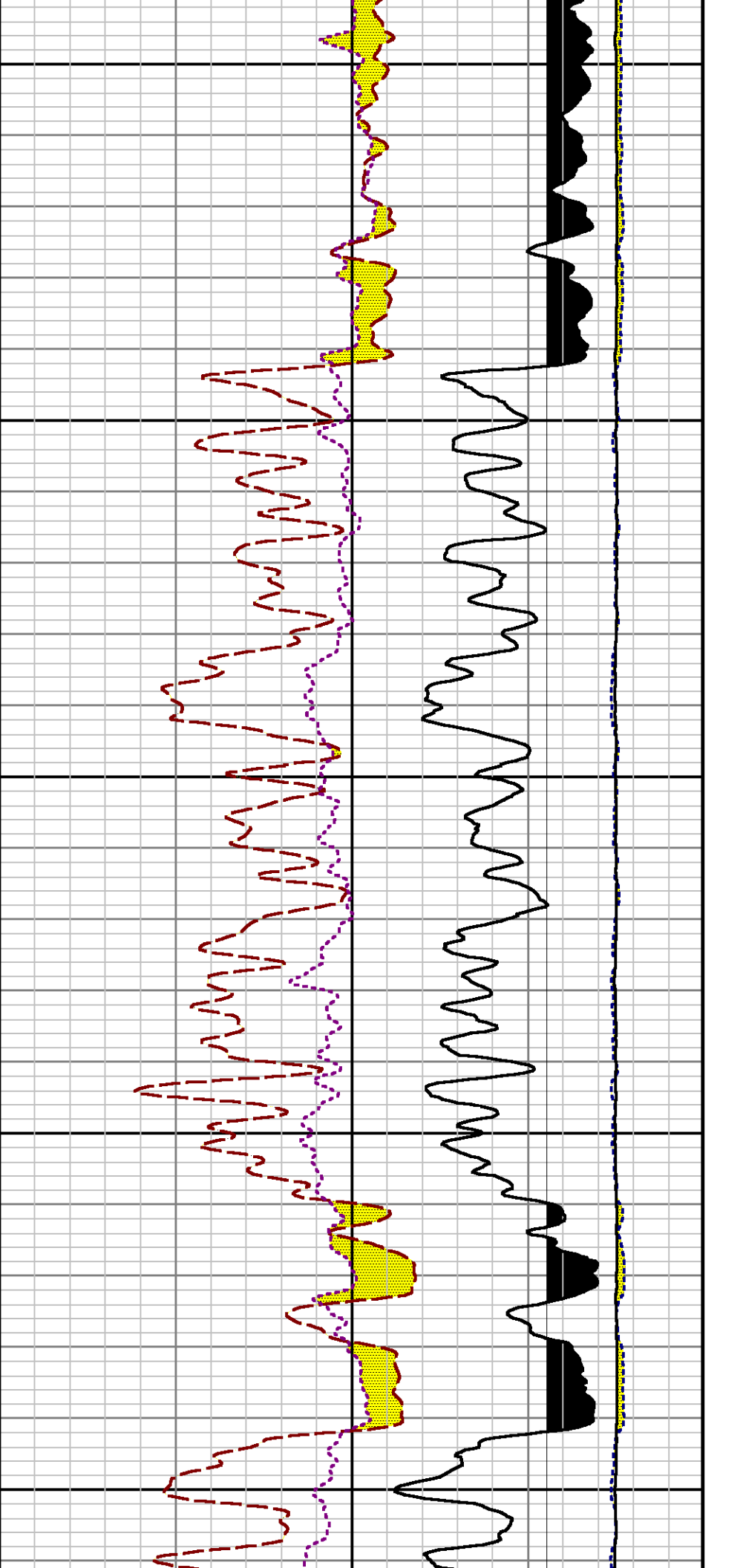




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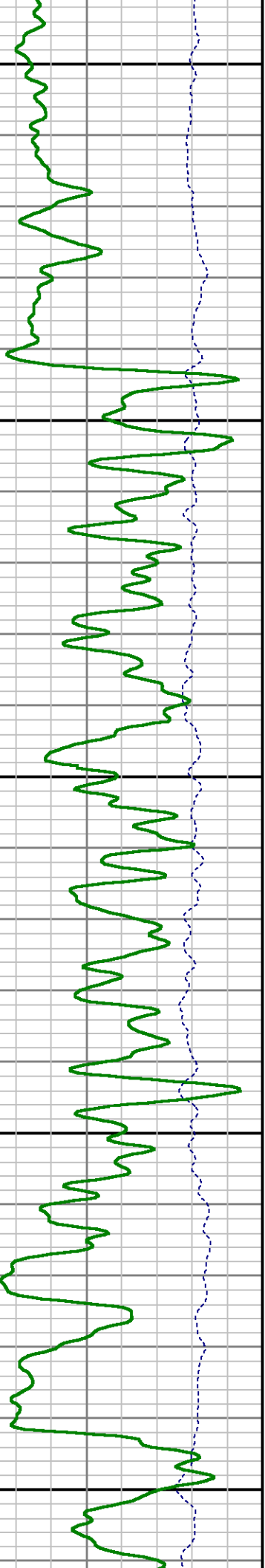


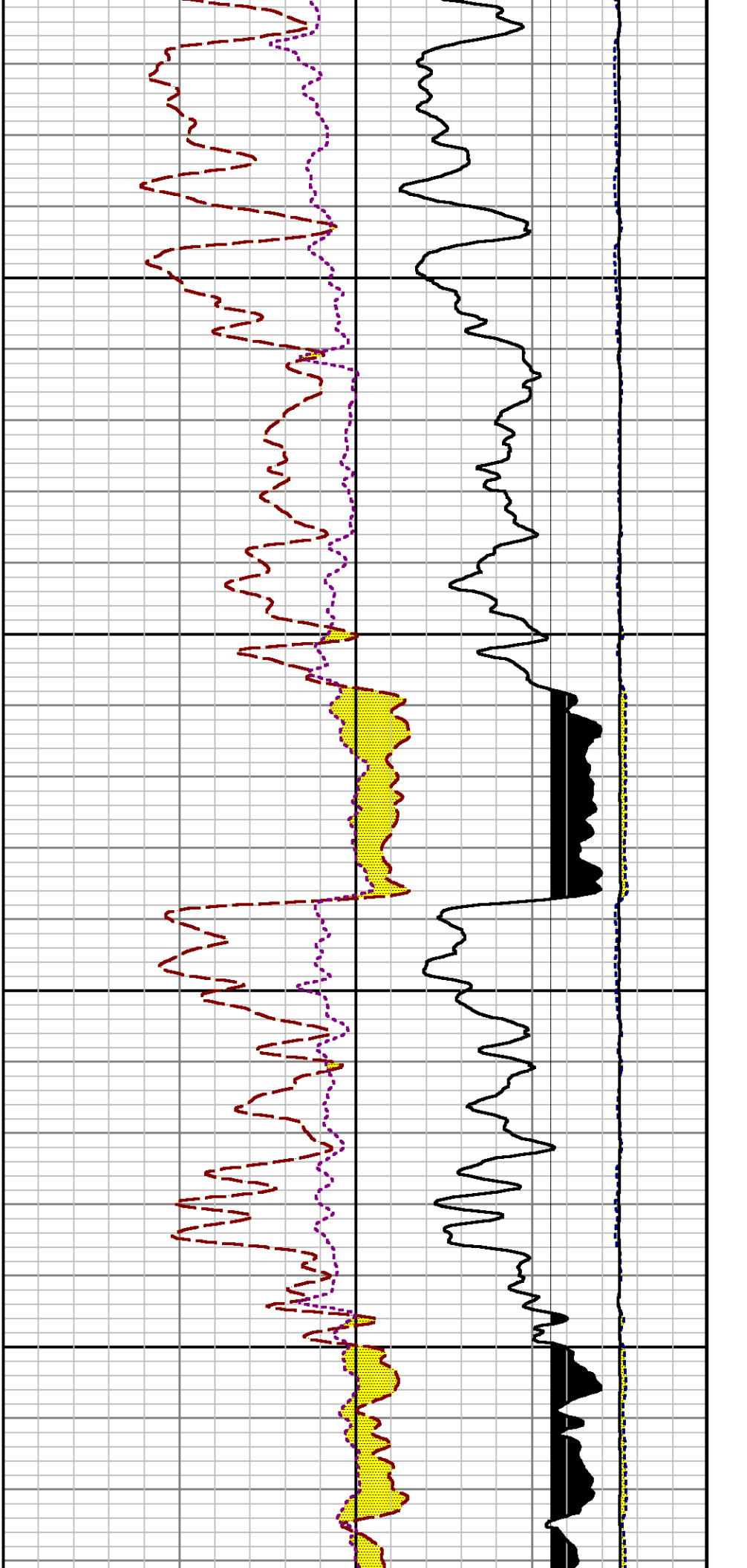


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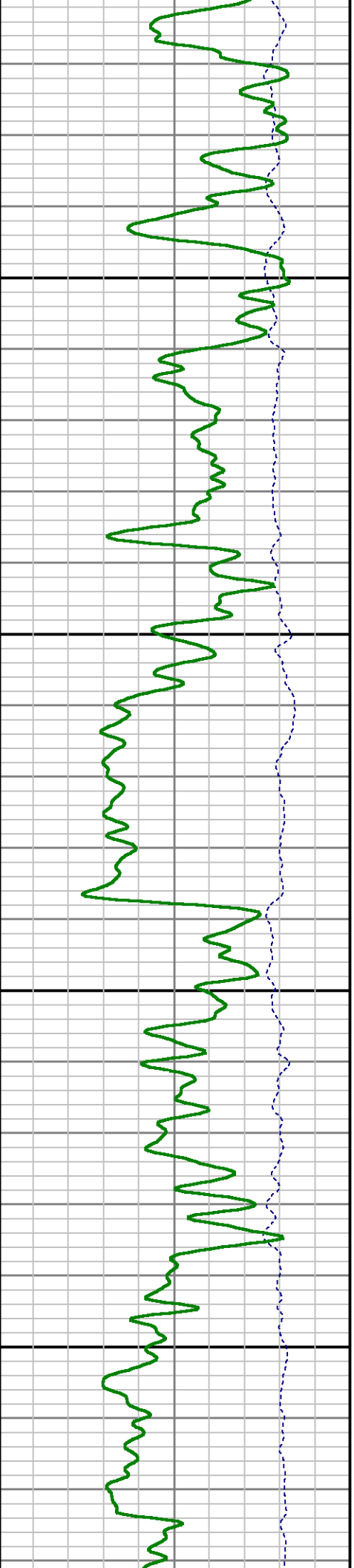
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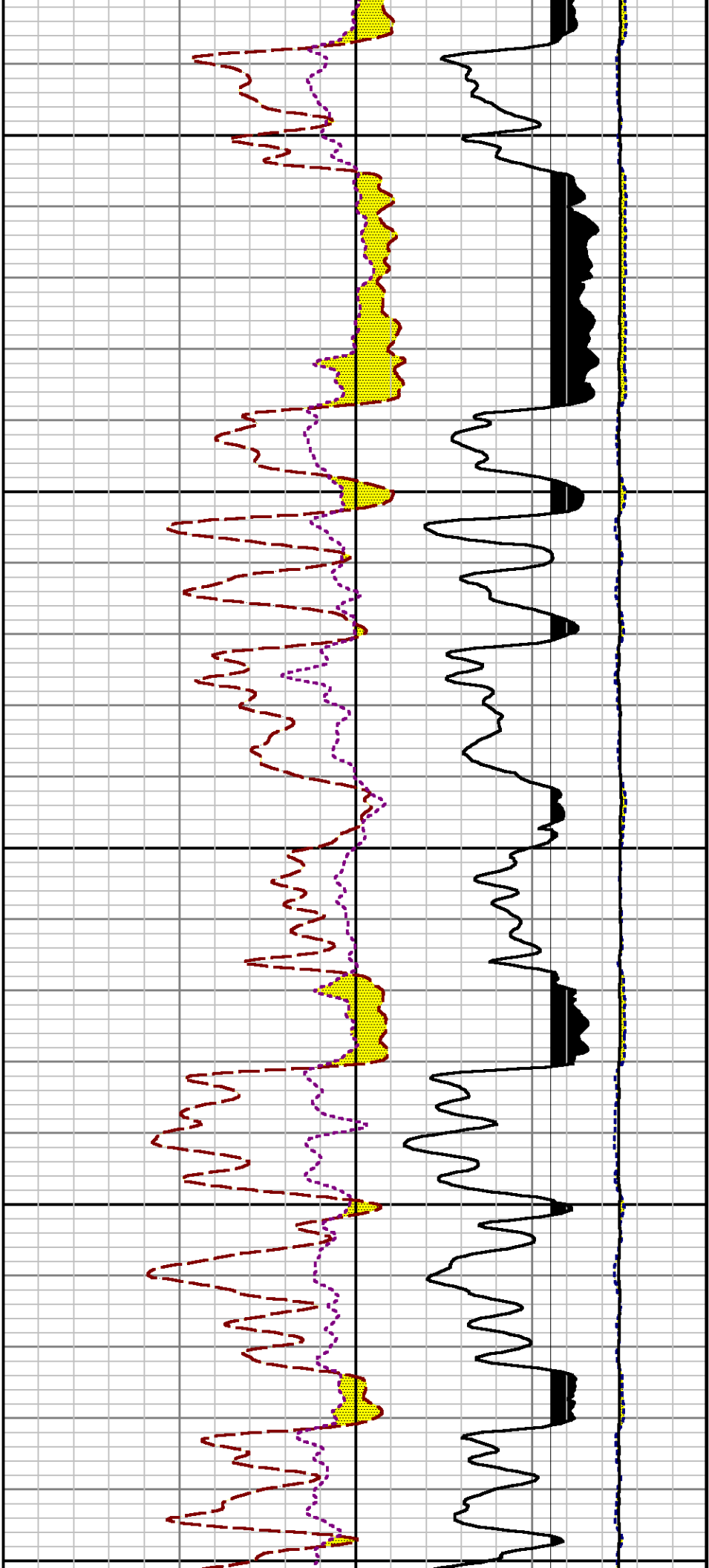




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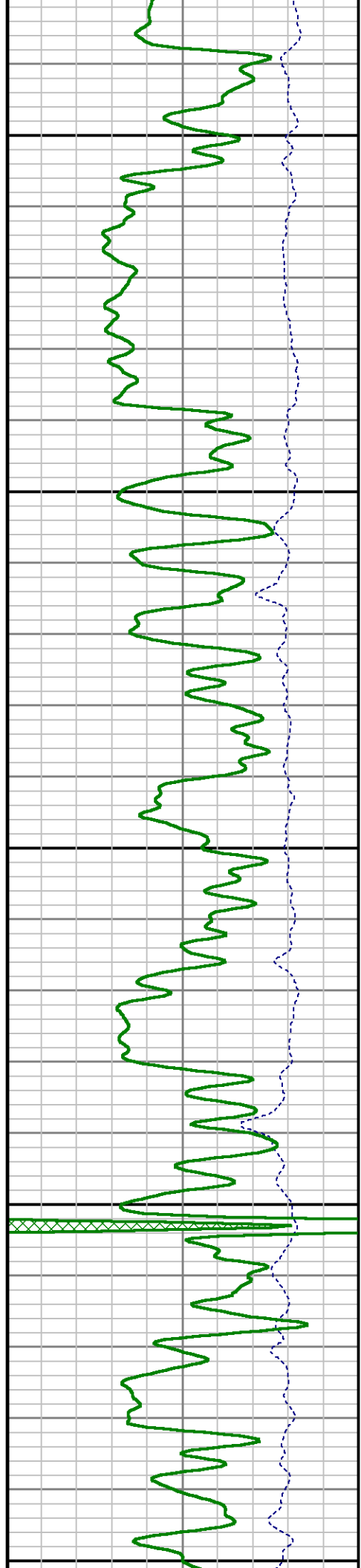
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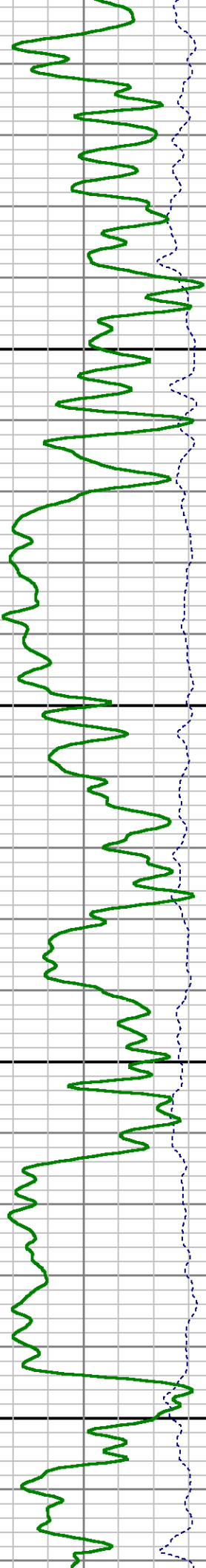




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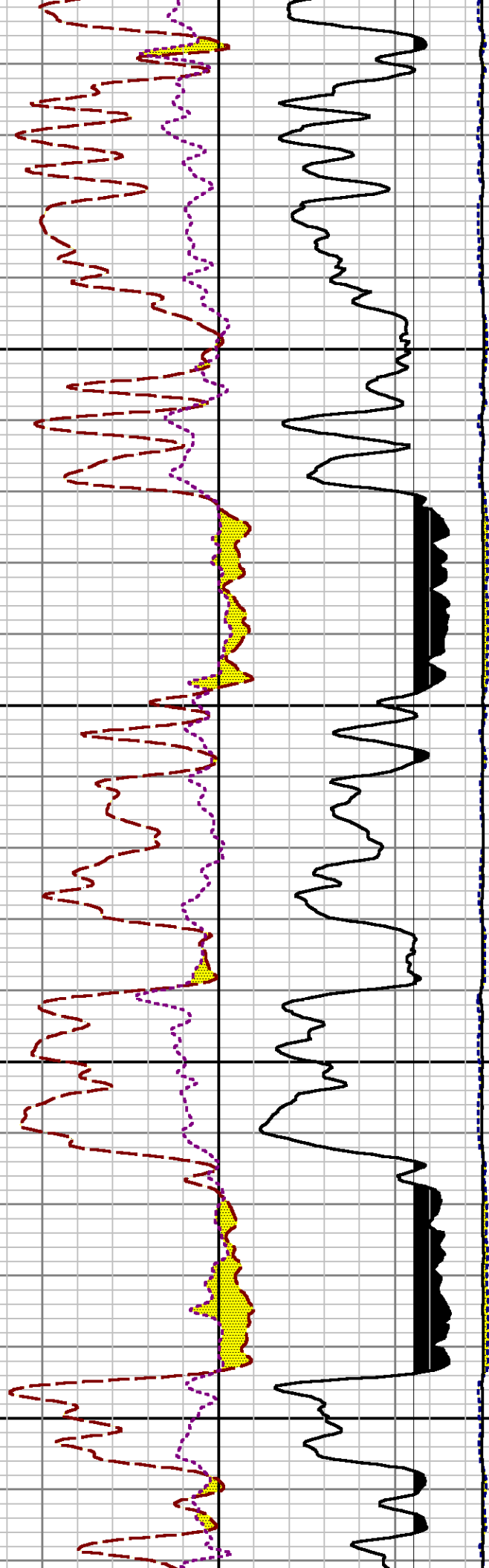
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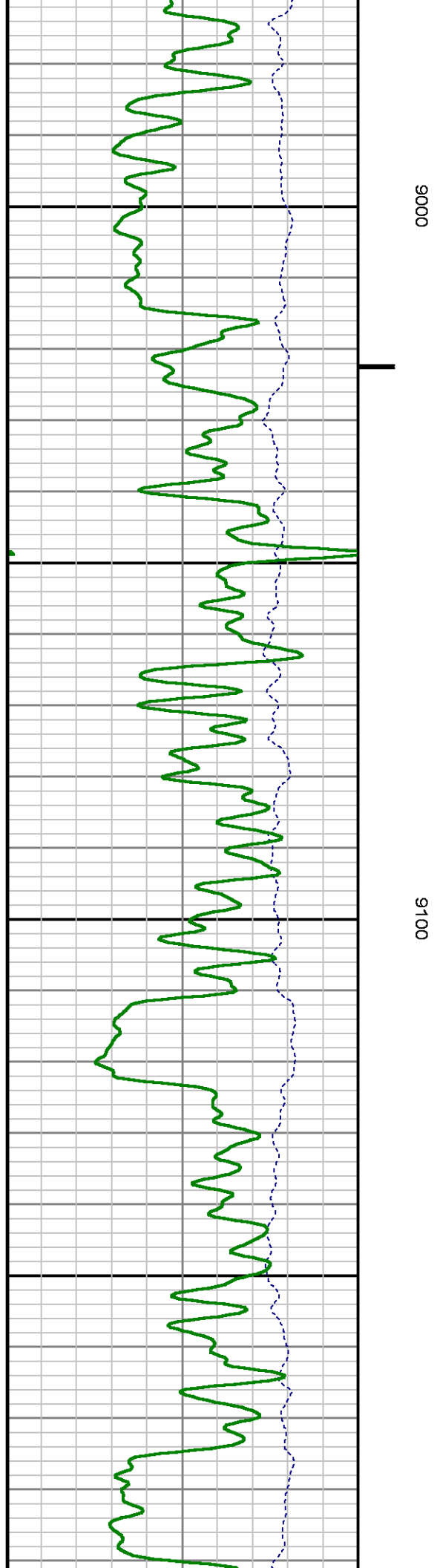
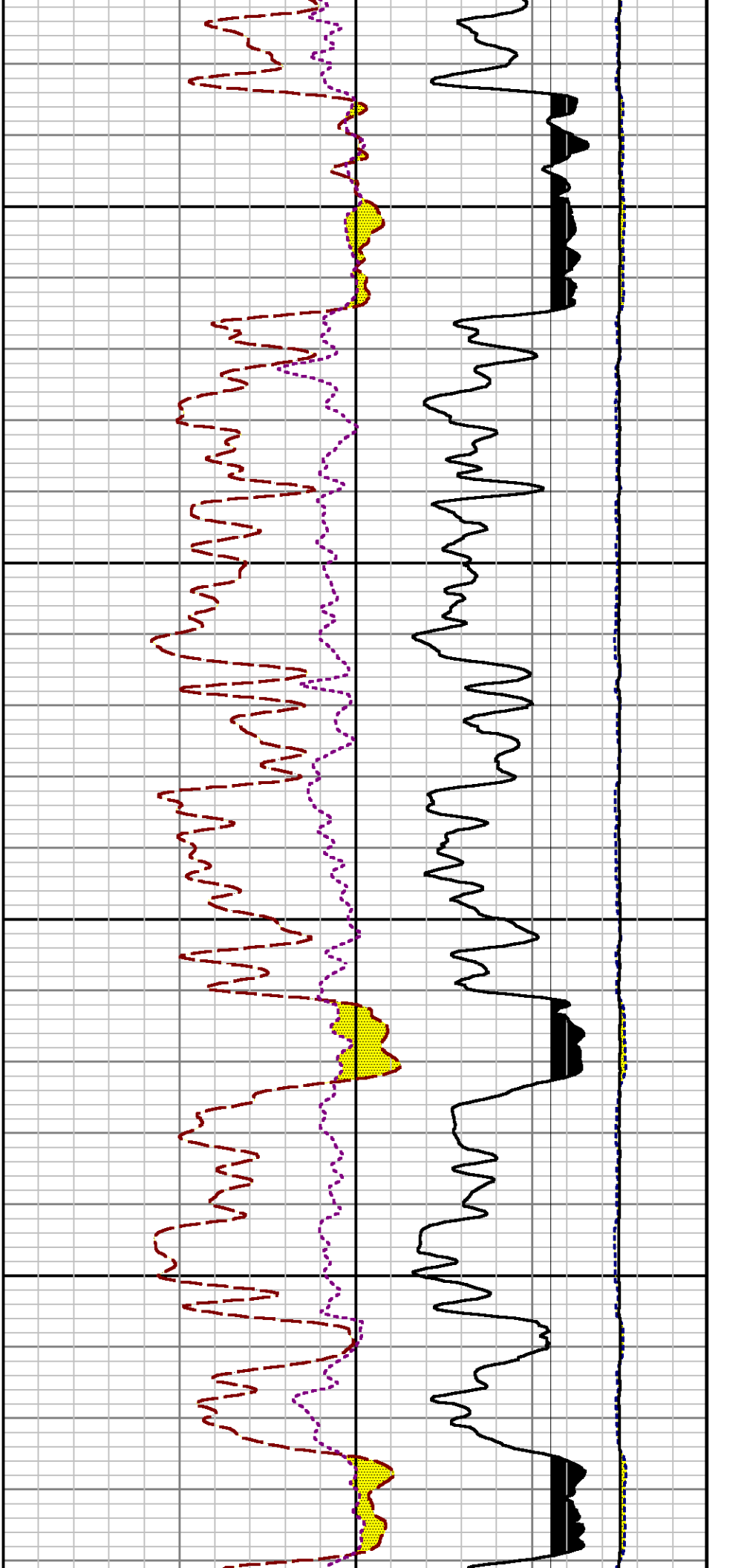


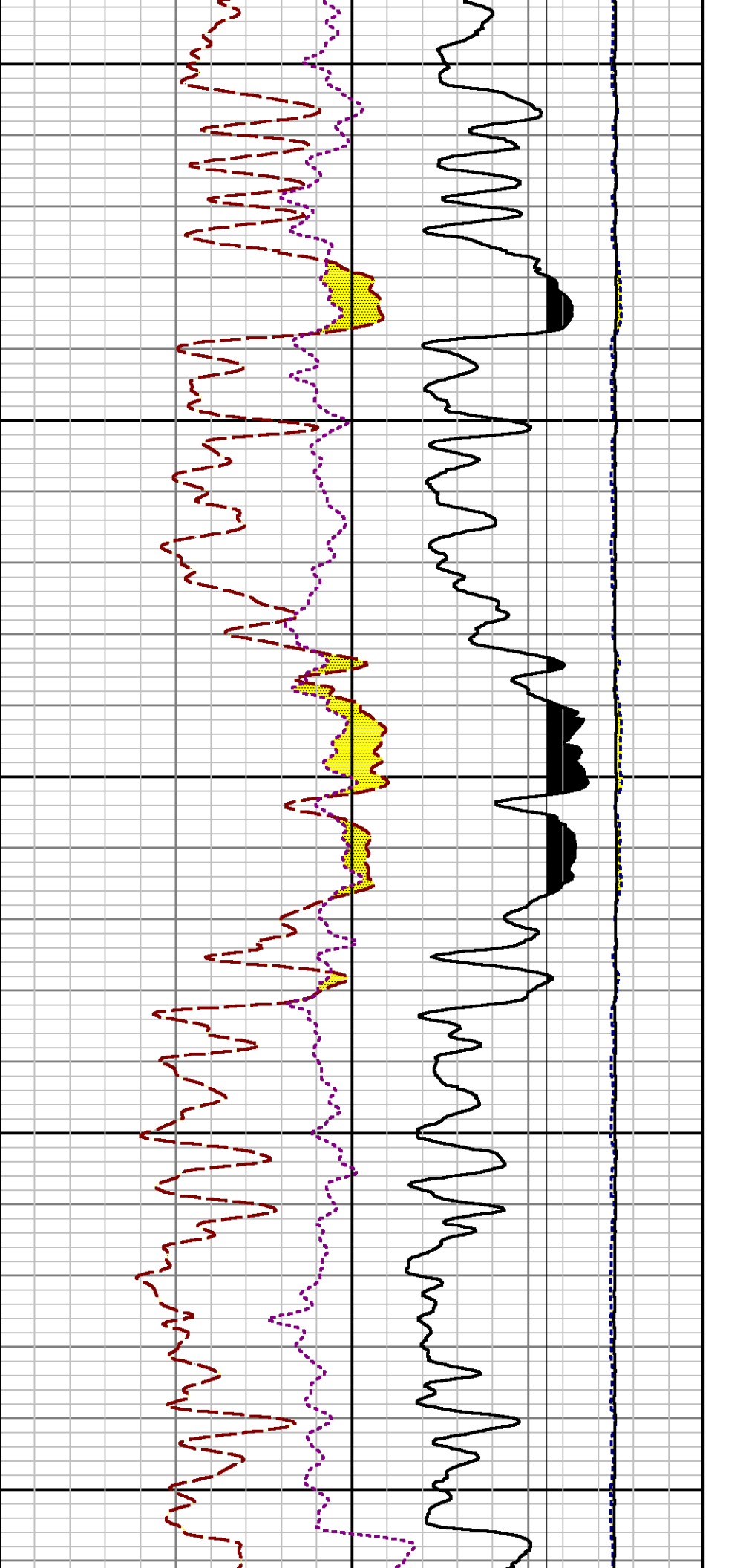


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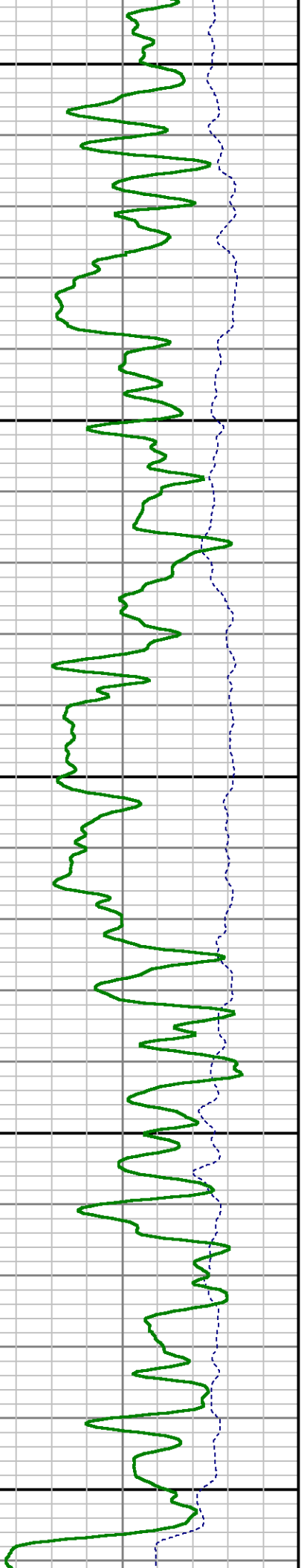


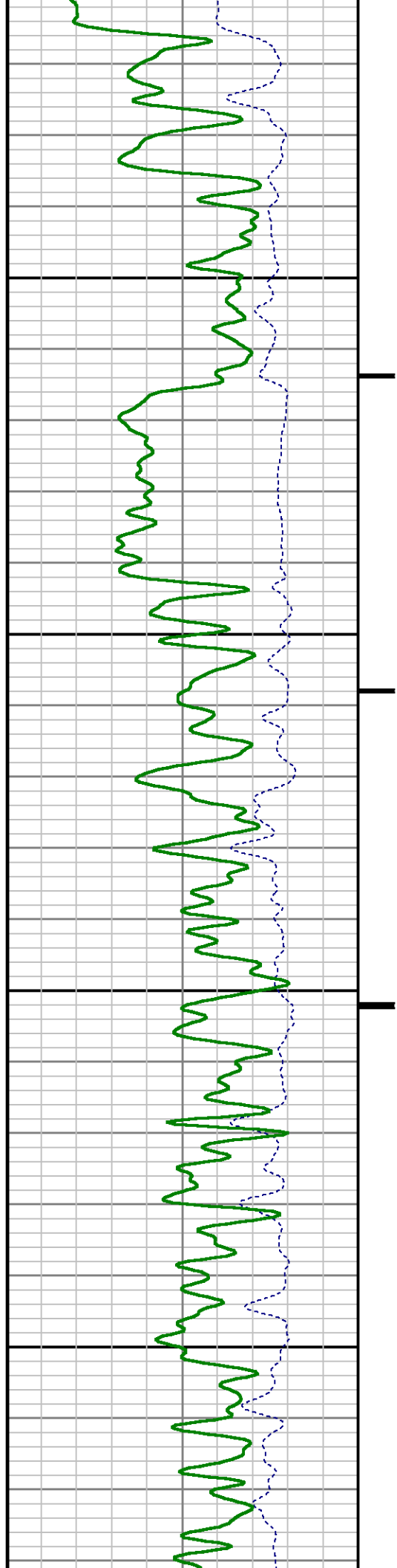


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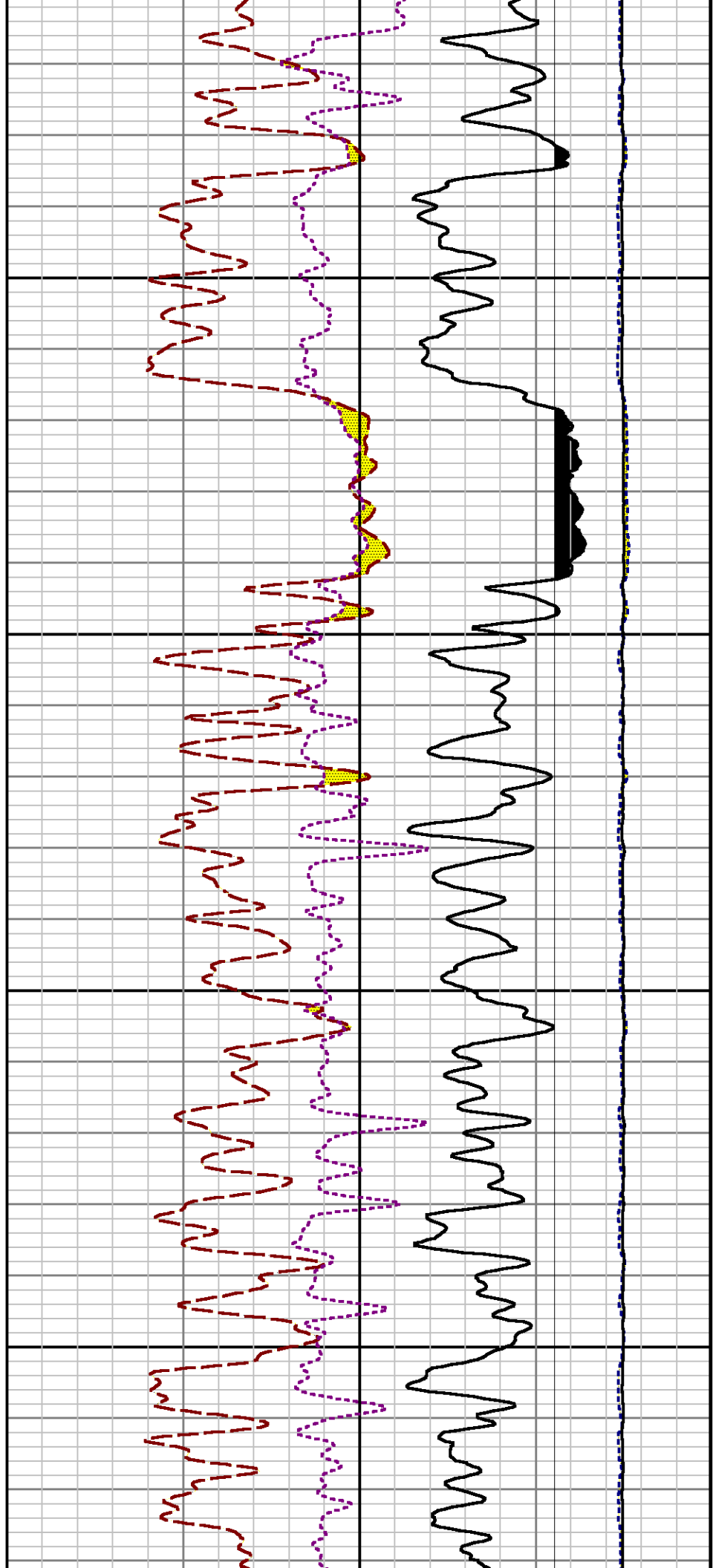
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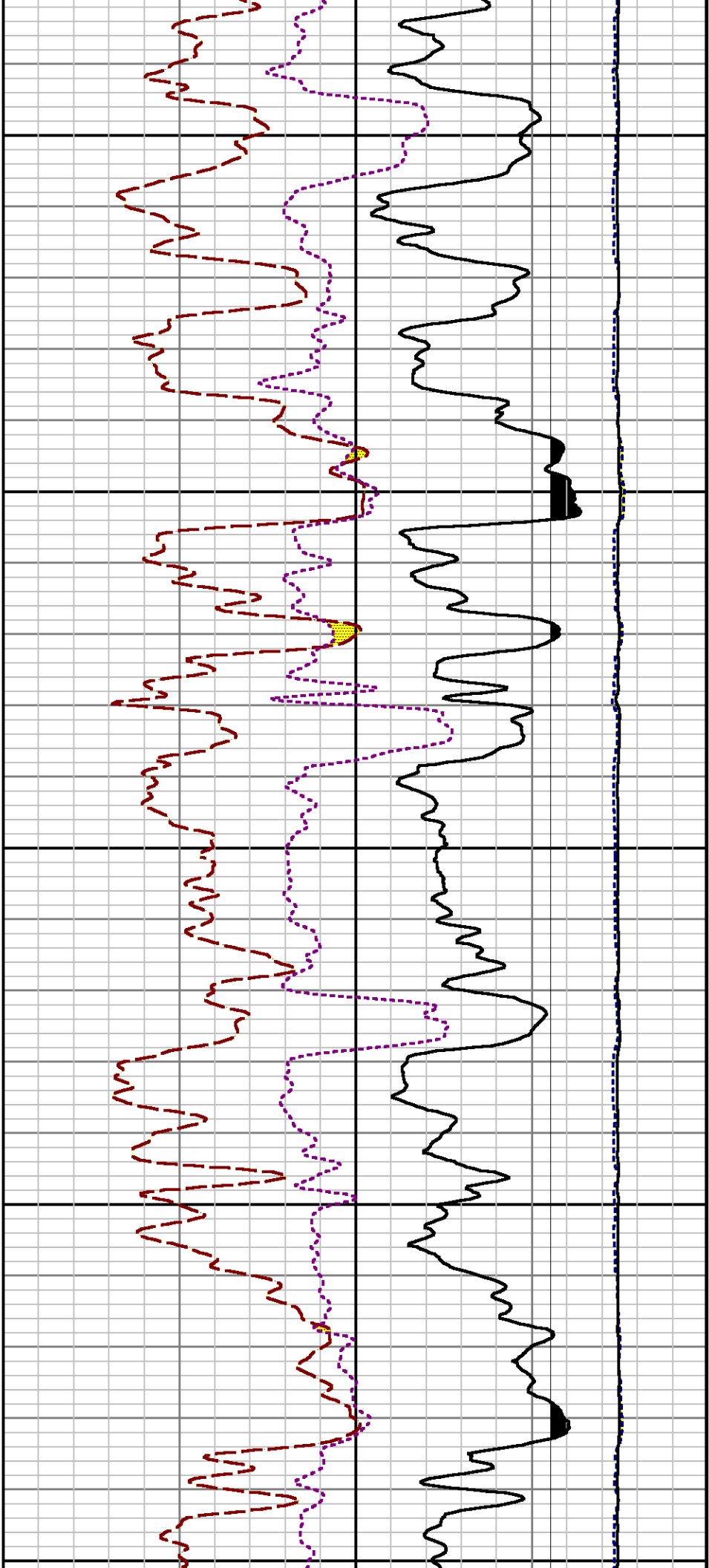




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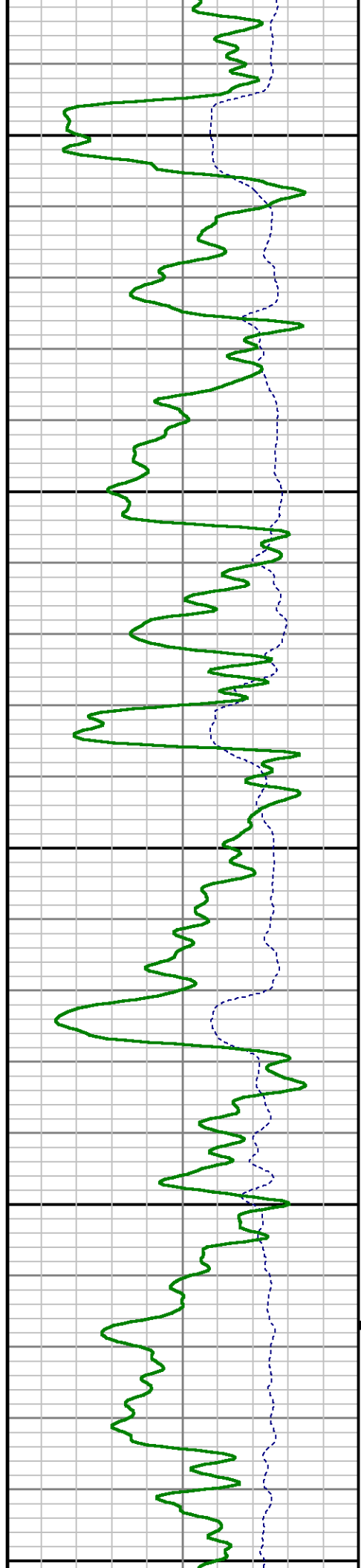


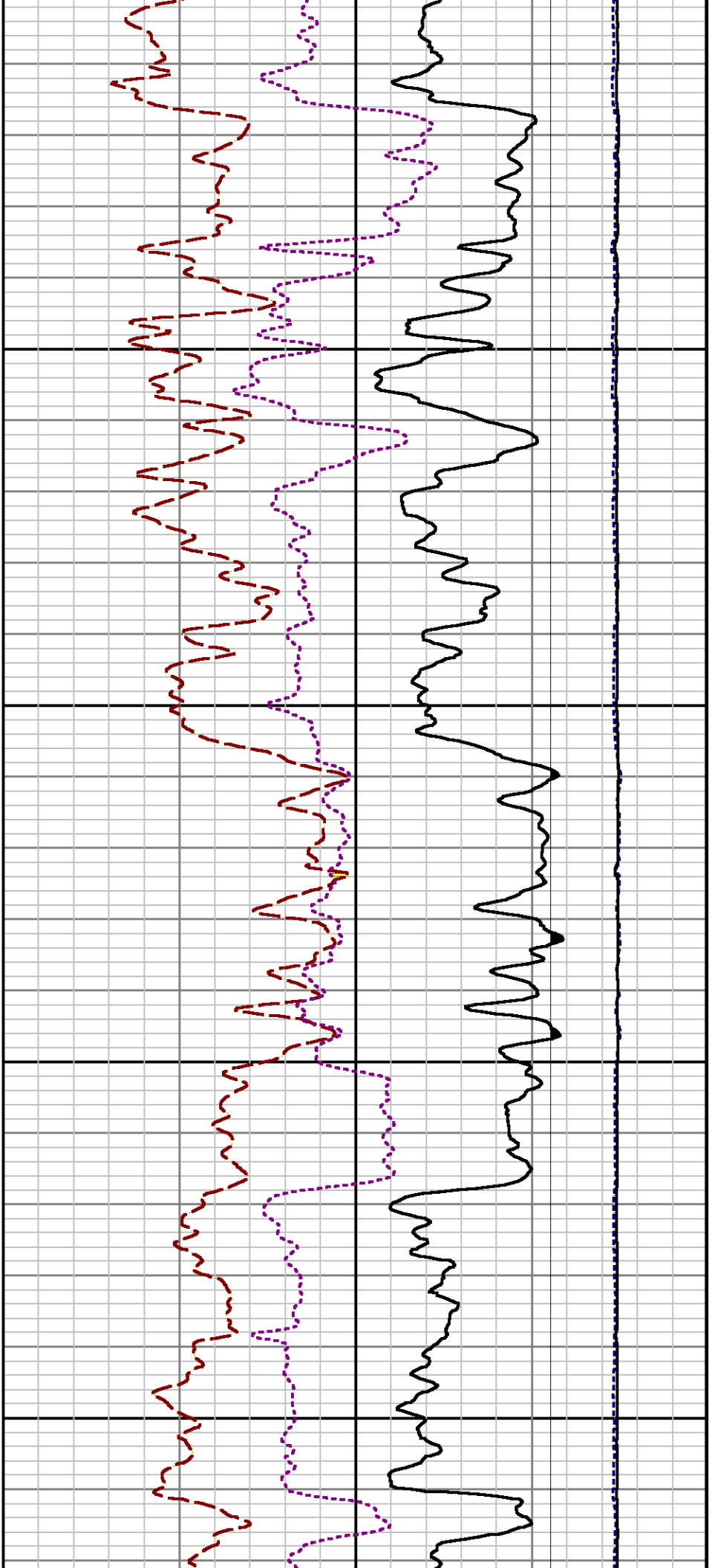


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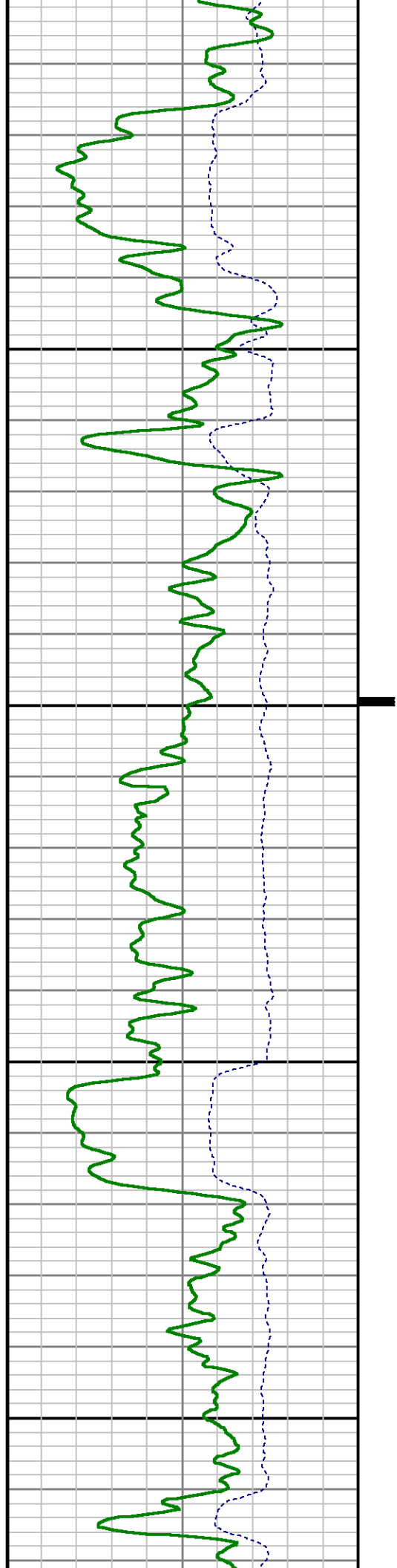
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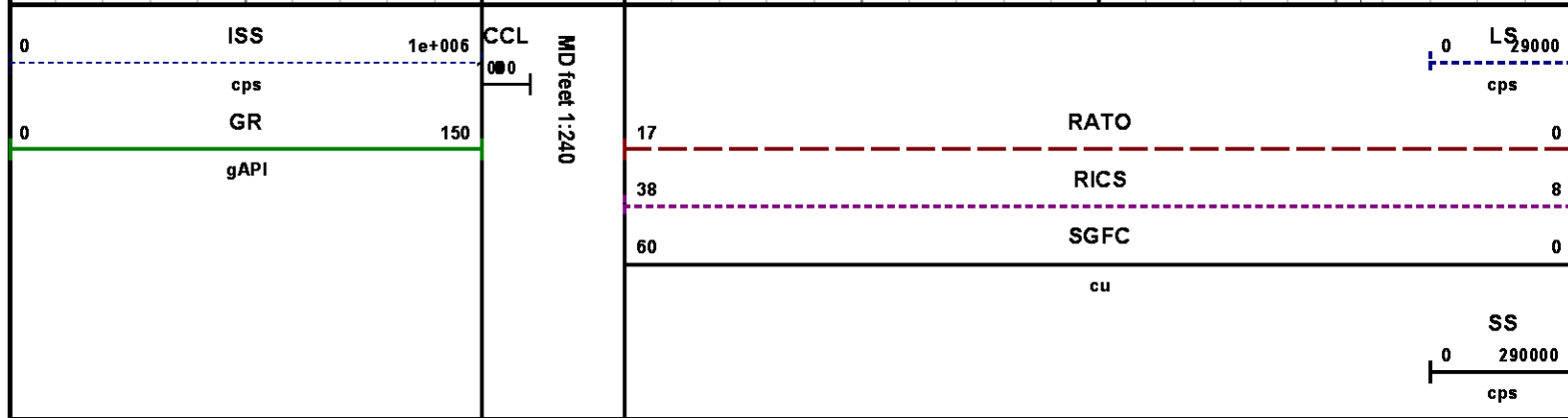
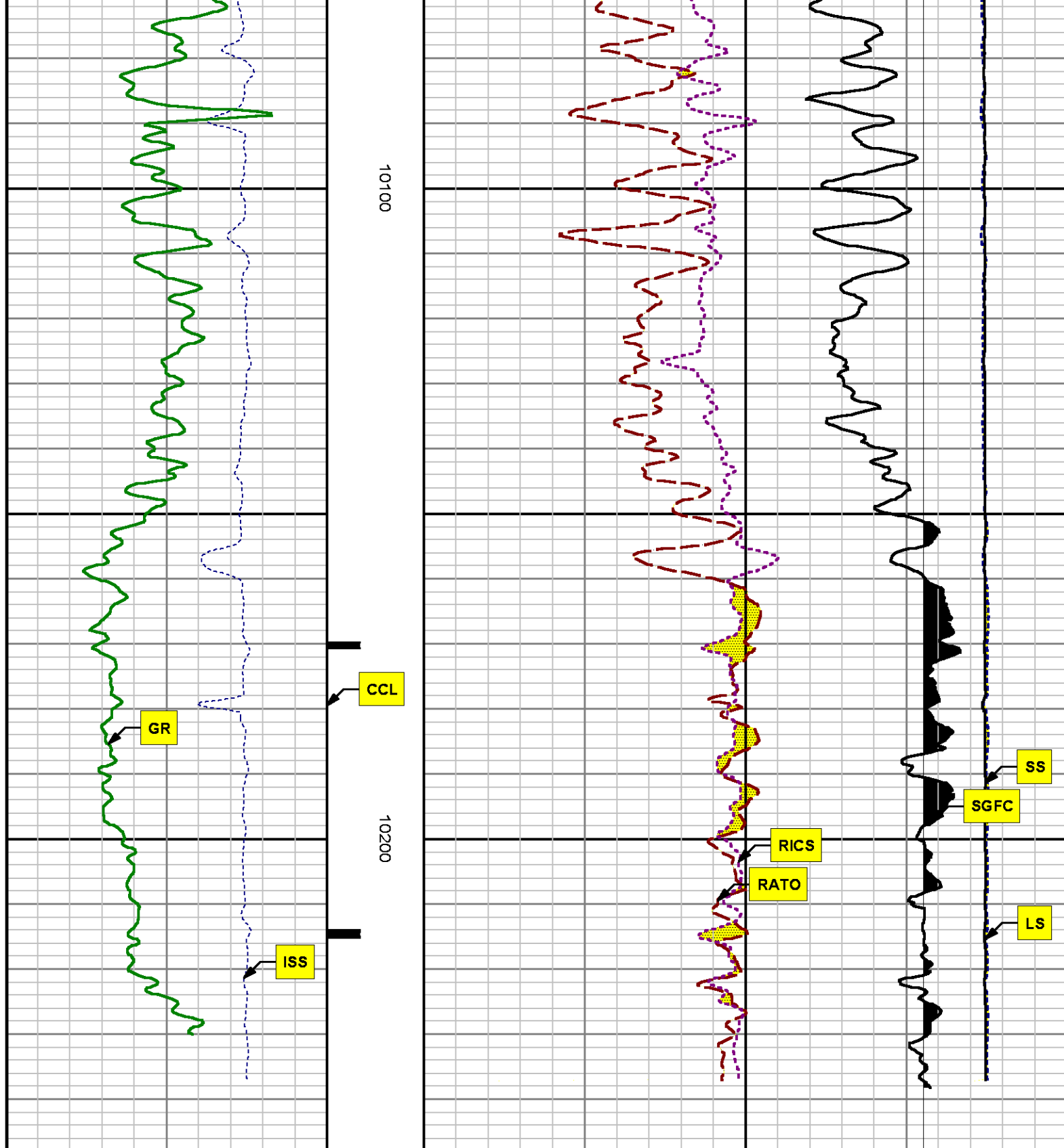




9900

10000





REPEAT SECTION

PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		9409.813	9747.844
PNC Porosity	Borehole Size	8.750	inch	9409.813	9747.844
PNC Porosity	Casing Size	4.500	inch	9409.813	9747.844
PNC Porosity	Gas Filled	Non Gas Filled		9409.813	9747.844
PNC Porosity	Matrix	Sandstone		9409.813	9747.844
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	9409.813	9747.844

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	-21.969	GR
8281XA	-12.702	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 SDL3 SGA3 SGL3 STA3 XS ASPEC3 AMB3 AMF3 CHF3 IXSC IXSN RATO23 RICXC RIN13C RIN23 RIN23C SD3D SG3D SGB3 SGF3 WDT3 CXSR IXSR XSR RICXR
8281XA	-12.291	HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2 BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3 CPT2Q4 ET2 ILS LS MCS2 MCS2Q0 QCAL2 RGN2 RICL RONE23 RTWO23 SDA2 SDL2 SGA2 SGB2 SGF2 SGK2 SGL2 STA2 ASPEC2 ILSC ILSN WDT2 RICLC CLSR ILSR LSR RICLR
8281XA	-12.041	CPRS HVC1Q0 MV SEQ SEQ1 AMA1 AMB1 AME1 AMF1 AML1 BKS CHF1

CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A
 CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1
 G1 G2 GE1S GE2S ISS MCS1
 MCS1Q0 QA1 QCAL1 QM1 RATO RATO13
 RBOR RGN1 RICS RIN RONE RPOR
 RTWO RIN13 RONE13 RTWO13 SALB SC1
 SDA1 SDL1 SGA1 SGB1 SGBBC SGE1
 SGF1 SGFC SGK1 SGL1 SS SS2
 STA1 PD1S PD2S PD3S MD1S MD2S
 MD3S DG1S DG2S DG3S PD1M PD2M
 PD3M MD1M MD2M MD3M DG1M DG2M
 DG3M MVS MA MVM FILV IAM
 TA PVM PVS IAS SSTAT QPD1
 QPD2 QPD3 QMD1 QMD2 QMD3 QDG1
 QDG2 QDG3 QMA QTA QFILV QMV
 QPV QIA DERR DCNT QPK1 QSA1
 PKS1 ASPEC1 H0C FE2XC ISSC RINC
 ISSN RDEN WDH1 RICSC CSSR G1R
 G2R ISSR SSR SS2R RATOR RATO13R
 RBORR RICSR RINR RIN13R RONE13R RPORR
 RTWOR
 PTFS PTMS
 SPF1 SPFQ TSCP TSDP
 DTEM TEMP TNF
 TEN TTEN

8255XA -0.792
 8255XA -0.775
 8255XA 0.000
 SYSTEM 0.000

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

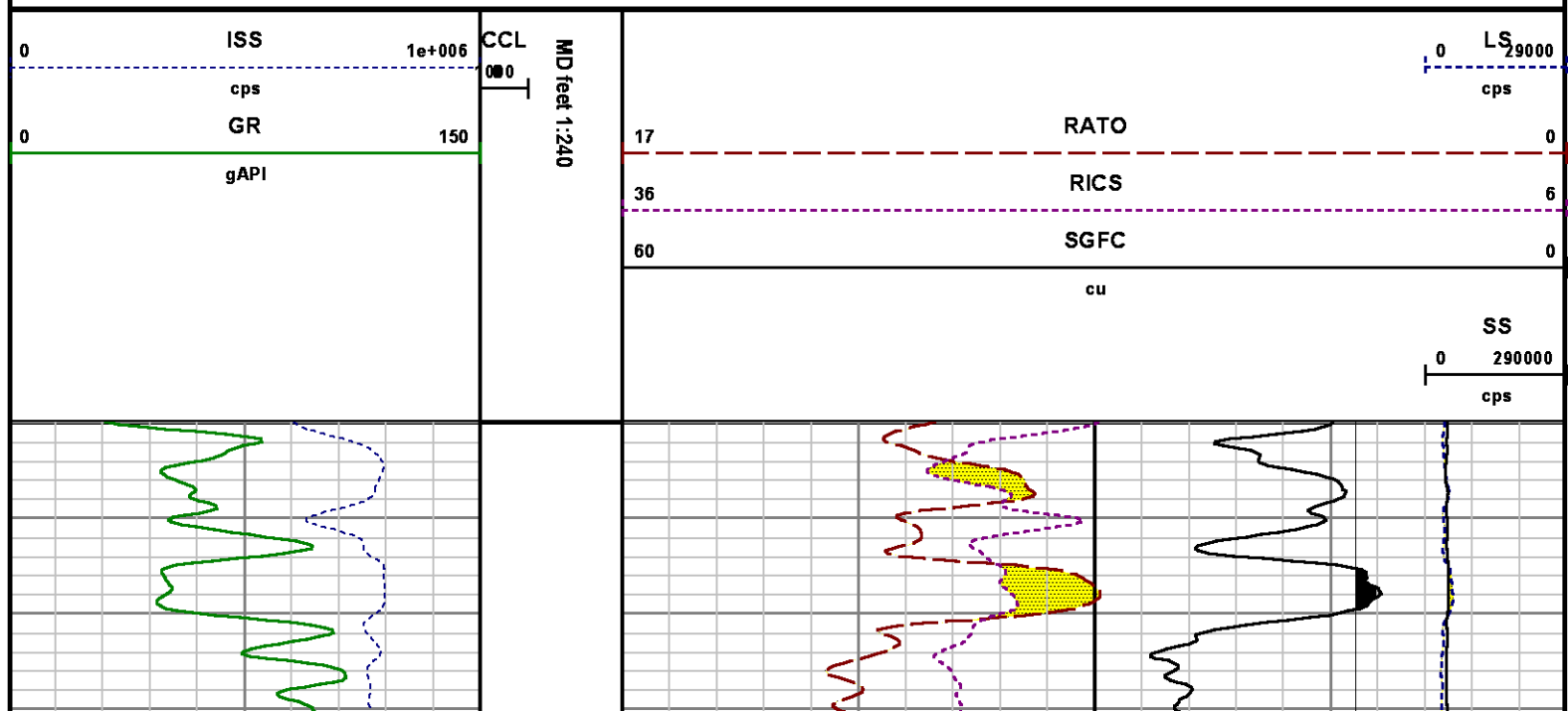
Well : FEDERAL NER 414-32

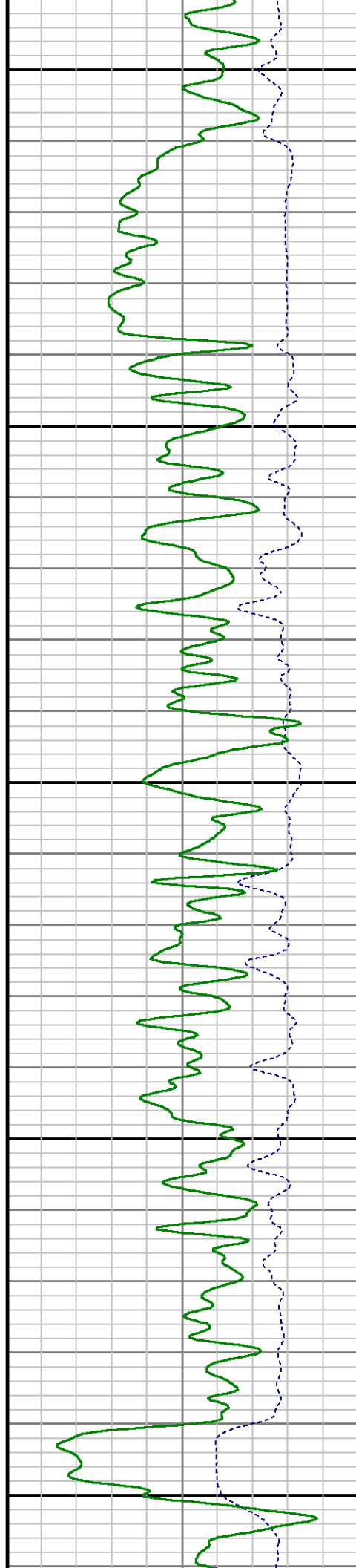
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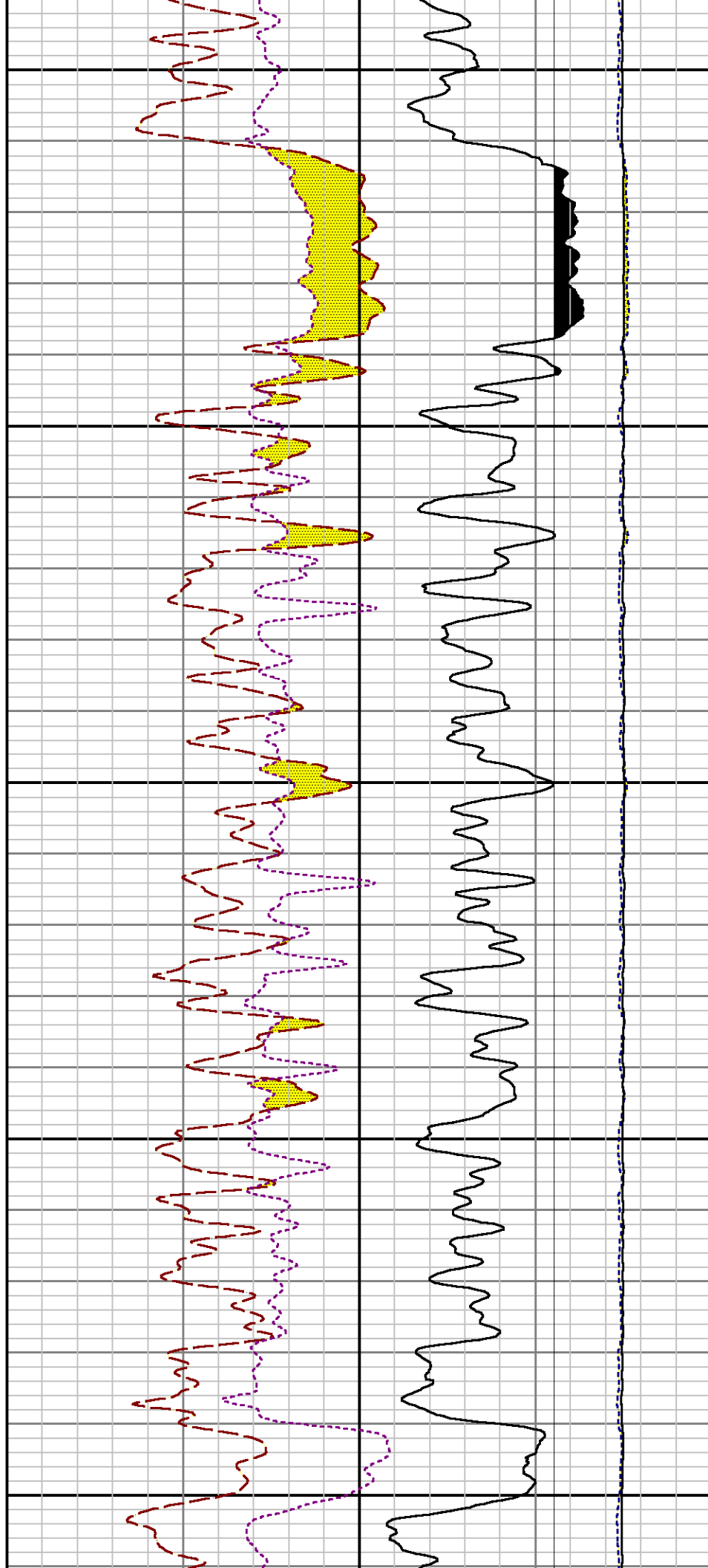
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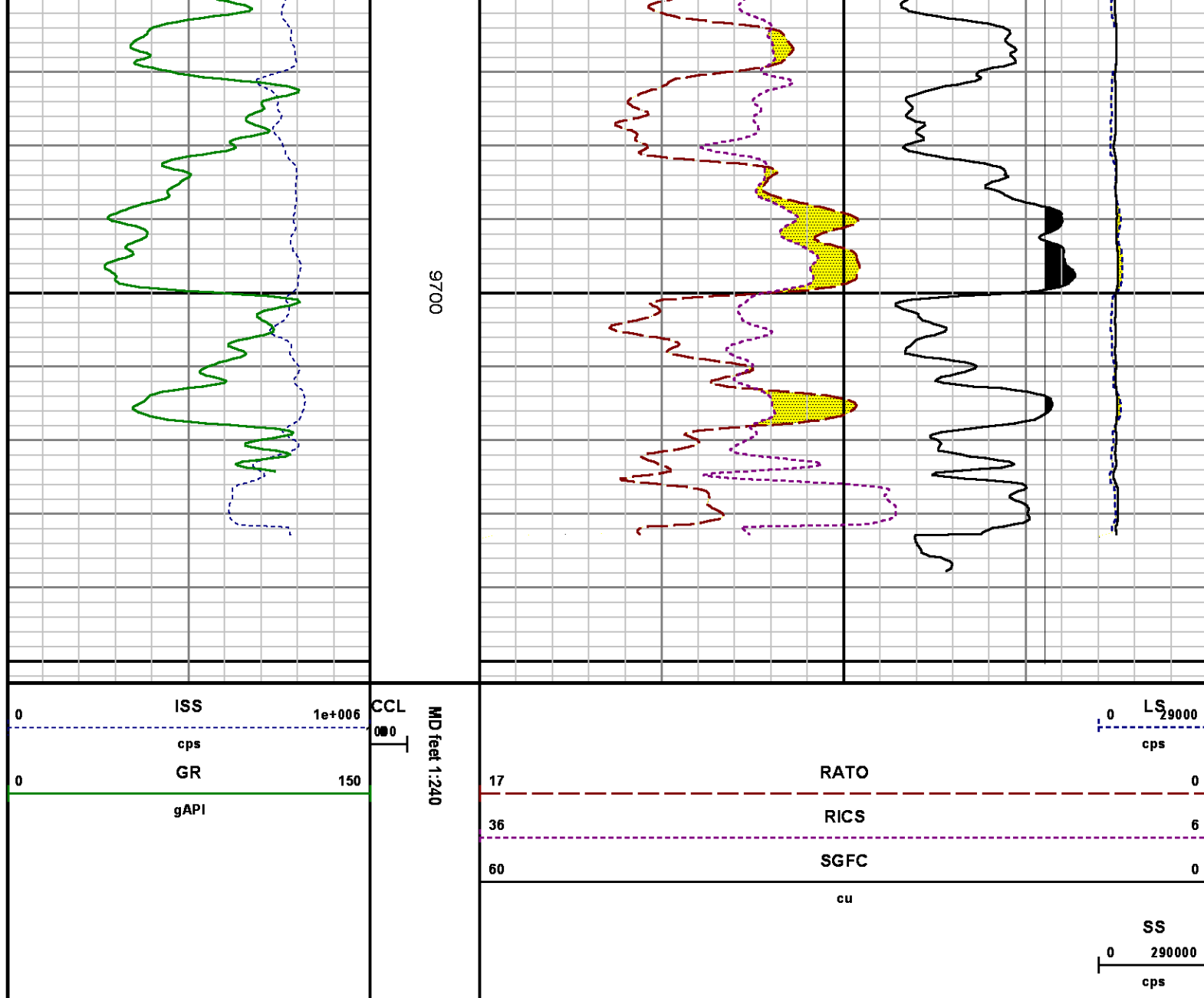




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CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\38219.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Apr 19 16:31:28 2014

TOOL SERIES: 2812LA ASSET: 382 SEQ: 19

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]

S2K	51.88	260.02	1.009	52.34	262.34	210.00
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Verification File:
C:\case\calver\GR\38219.VP

PRIMARY VERIFICATION						
DATE/TIME PERFORMED: Sat Apr 19 16:38:08 2014			TOOL SERIES: 2812LA	ASSET: 382	SEQ: 19	
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	51.54	263.60	1.009	52.00	265.95	213.95

PNC

Calibration File:
C:\case\calver\PNC\55525.cal

PNC 3D CALIBRATION SUMMARY											
DATE/TIME PERFORMED: Fri Apr 25 18:25:14 2014				TOOL SERIES: 8281XA		ASSET: 555		SEQ: 25			
Calibrator #						Source #					
2437xb 12674						8281AA 11765054					
		ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL		
Raw Data		805176	120.00	2331.00	2273.00	2234.00	108.55	7.00	0.9843		
Interpolated		1300000	141.72	2308.02	2267.71	2229.00					
		ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2		
Raw Data		805176	6336.16	994.53	143.80	25.86	0.14	24.06	0.28		
						25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40		
		ISS	ILS	IXS	SS	SS2	LS	CSS	CLS		
Raw Data		805176	169525.92	26760.55	88448.11	31484.04	8267.11	53495.99	13229.94		
Fit Quality %			1.32	1.41	1.18	1.17	1.39	1.11	1.43		
		ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE		
				ISS/ILS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS		
Raw Data		805176	1.43	4.75	30.09	15.05	10.70	3.81	4.04		
			1.42 1.45	3.55 5.52	22.20 32.70	10.99 16.34	10.06 11.10	3.57 3.95	3.76 4.22		
Fit Quality %			0.06	0.06	0.16	0.02	0.12	0.13	0.17		
Reduced		1388413	1.43	4.76	30.18	15.07	10.70	3.81	4.05		
			1.42 1.45	4.33 5.52	27.60 32.70	13.70 16.34	10.06 11.10	3.57 3.95	3.76 4.22		

TEMPERATURE

TEMPERATURE

Calibration File: C:\case\calver\TEMP\77456813.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: FEB 13 2014

TOOL SERIES: 8255XA ASSET: 774568 SEQ: 13

	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
Coefficients	-9.274653e+000	1.055639e-001	2.143764e-006	-2.782846e-010	0.000000e+000	0.000000e+000

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PCM POWER SUPPLY

Series 8250EA
Mnemonic PCM
Diameter 1.70"
Weight 18.00 lb
Length 3.86'
Temp Rating 350.00 °F

TELEMETRY / CCL

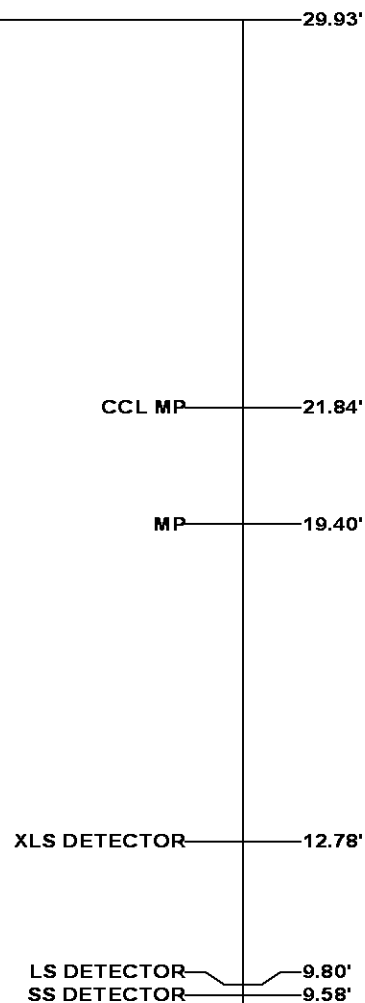
Series 8248EA
Mnemonic PCM
Diameter 1.70"
Weight 20.00 lb
Length 4.46'
Measure Point 1.00' CCL MP
Temp Rating 350.00 °F
Press Rating 15000.00 PSI

SONDEX GAMMA RAY

Series 2812LA
Mnemonic SNDX
Diameter 1.69"

RESERVOIR PERFORMANCE MONITOR

Series 8281XA
Mnemonic RPM
Diameter 1.70"
Weight 75.00 lb
Length 18.58'
Measure Point 9.49' SS DETECTOR
Measure Point 9.72' LS DETECTOR
Measure Point 12.69' XLS DETECTOR
Temp Rating 350.00 °F
Press Rating 20000.00 PSI



0.00'

Total Length: 29.93'
Total Weight: Not Available
Max Diameter: 0' 1.70"



Baker Atlas

CASE

Company

WPX ENERGY

Well

FEDERAL NER 414-32

Field

RULISON

County

GARFIELD

State

CO

Location

SHL: 185' FNL & 2593' FWL (5 7S 93W)

BHL: 505' FSL & 646' FwL (32 6S 93W)

SEC

32

TWP

6S

RGE

93W

Elevations

KB 7629 ft

DF

GL 7603 ft

File No:

CH084820

API No:

05045217800000

32 6S 93W

RU 23-S PAD

NABORS 576