



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH090864	Company Well Field County	WPX ENERGY FEDERAL BCU 542-30-198 SULPHUR CREEK GARFIELD	State COLORADO
API No: 05103119960000	Location SHL: 2063' FSL & 2136' FEL BHL: 2411' FSL & 650' FEL (NESE) SEC 30 TWP 1N RGE 98W		Other Services BOND LOG TEMP
30 1N 98W BCU 33-30-198 PAD CYCLONE 29	Permanent Datum Log Measured From Drill Measured From		Elevations KB 6738 ft DF GL 6738 ft

Date	26/SEP/14	
Run	ONE	
Service Order	US090864	
Depth Driller	10935 ft	
Depth Logger	10863 ft	
Bottom Logged Interval	10863 ft	
Top Logged Interval	26 ft	
Time Started	0830	
Time Finished	2000	
Operator Rig Time	9.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	78 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	249 degF	
Reference Log	BAKER HUGHES OPEN HOLE	
Reference Log Date	09/SEP/14	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	WAYNE MORCOTTE	

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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
30 in	21 ft	80 ft
14.75 in	80 ft	3289 ft
8.75 in	3289 ft	10935 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			21 ft	80 ft
9.625 in			21 ft	3289 ft
4.5 in	11.6 lbm/ft	P-110	21 ft	10935 ft

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 9/09/2014 at the clients request.

The amount of linear shift is 12 feet.

The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

BHT = 249°F

SJ = 5927'-5947'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	TEPM	8255XA	Z120516	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	RPM	8281PA	10169251	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	GR	2812LA	10274385	FREE
1	1	TEL/CCL	8248ED	10460262	FREE
0	0	PCM	8250EA	10586851	FREE

MAIN SECTION
 PNC 3-D MODE

SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		3277.750	10852.612
PNC Porosity	Borehole Size	8.750	inch	3277.750	10852.612
PNC Porosity	Casing Size	4.500	inch	3277.750	10852.612
PNC Porosity	Gas Filled	Non Gas Filled		3277.750	10852.612
PNC Porosity	Matrix	Sandstone		3277.750	10852.612

DEPTH OFFSETS		
(for Acquired Curves)		
SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-14.478	FLTM
8248ED	-12.478	CCL CHV
2812LA	-9.928	GR

8281XA

-0.662

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 WIDTH3 CXSR IXSR XSR
 RICXR

8281XA

-0.250

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 WIDTH2 RICLC
 CLSR ILSR LSR RICLR

8281XA

0.000

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 SGB1 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 WIDTH1 RICSC CSSR G1R
 G2R ISSR SSR SS2R RATOR RATO13R
 RBORR RICSR RINR RIN13R RONE13 RPORR
 RTWOR

SYSTEM

0.000

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Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : FEDERAL BCU 542-30-198

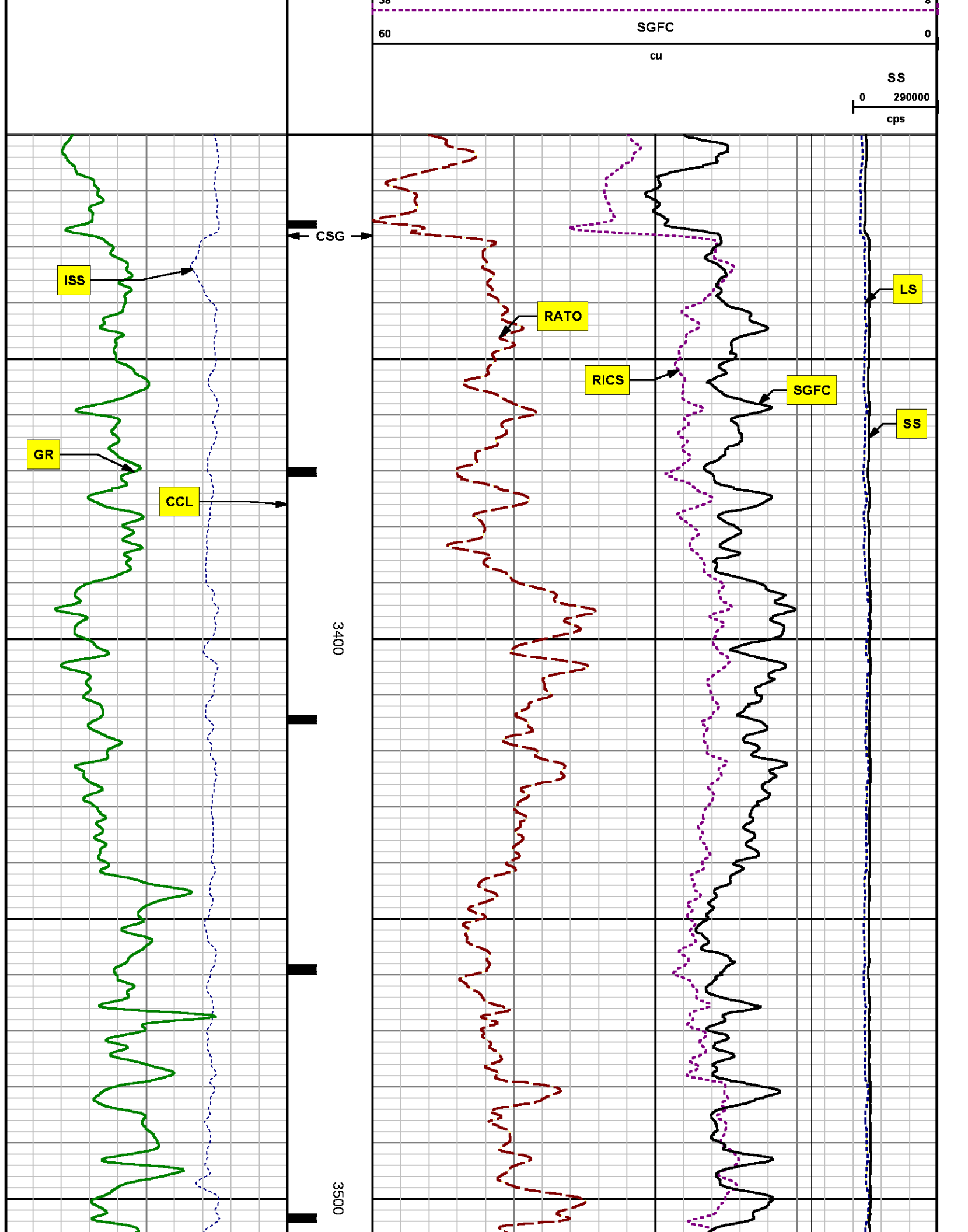
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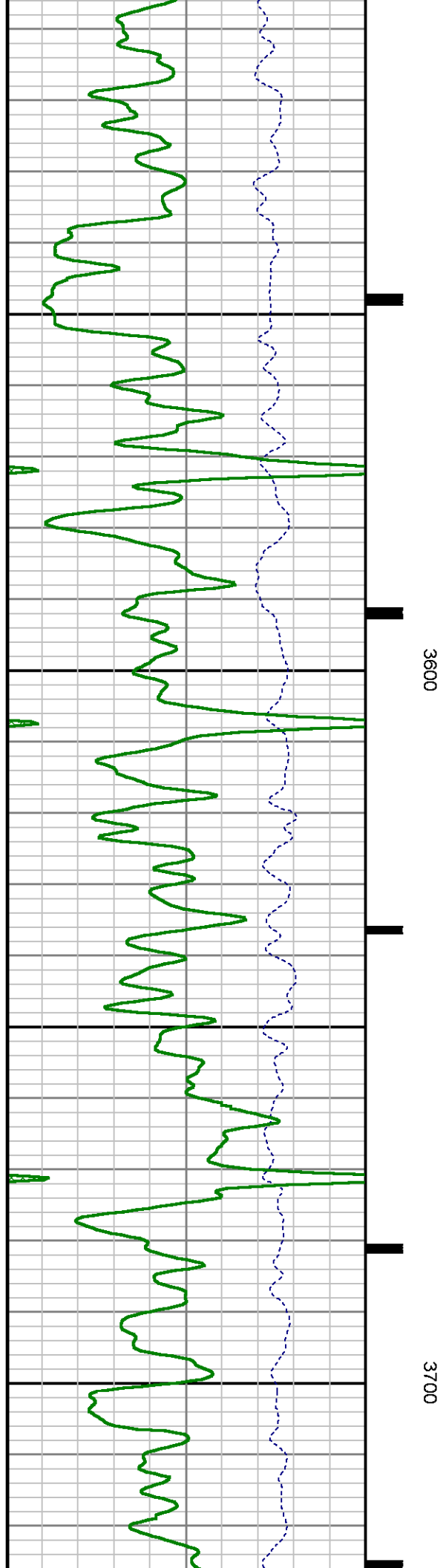
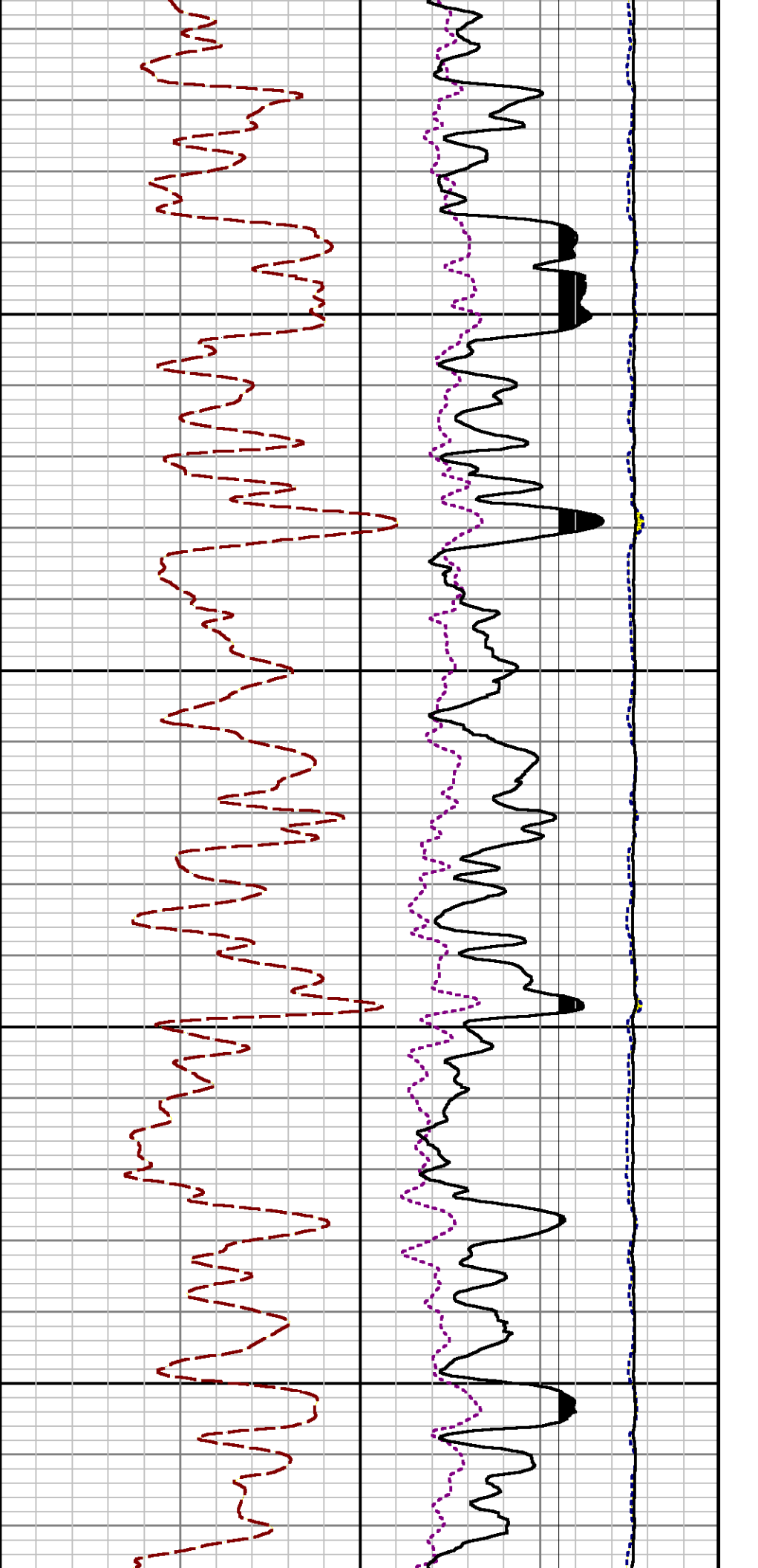
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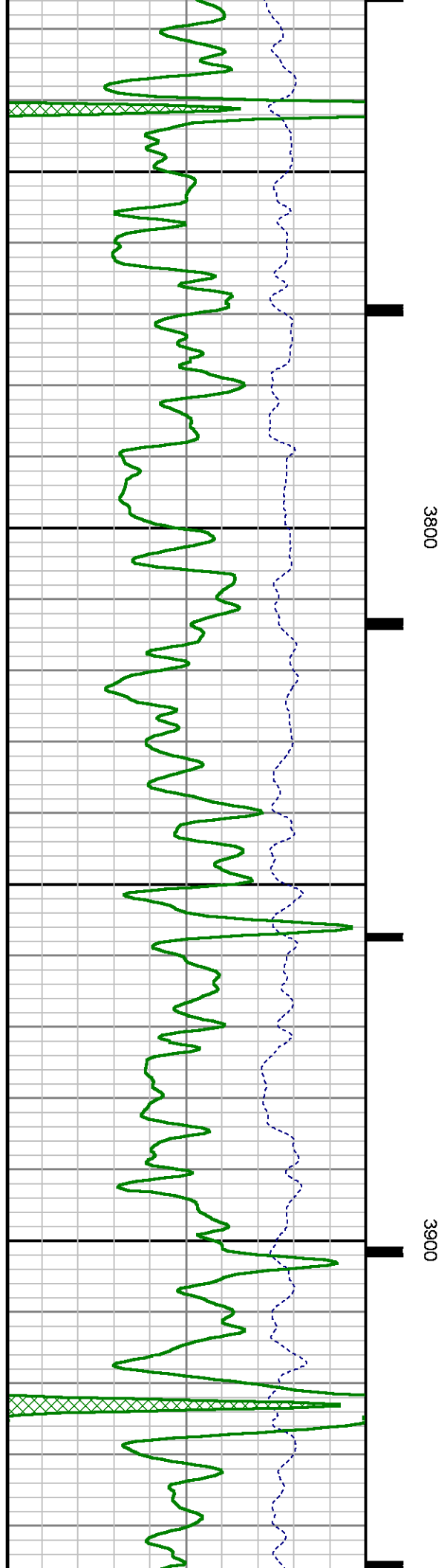
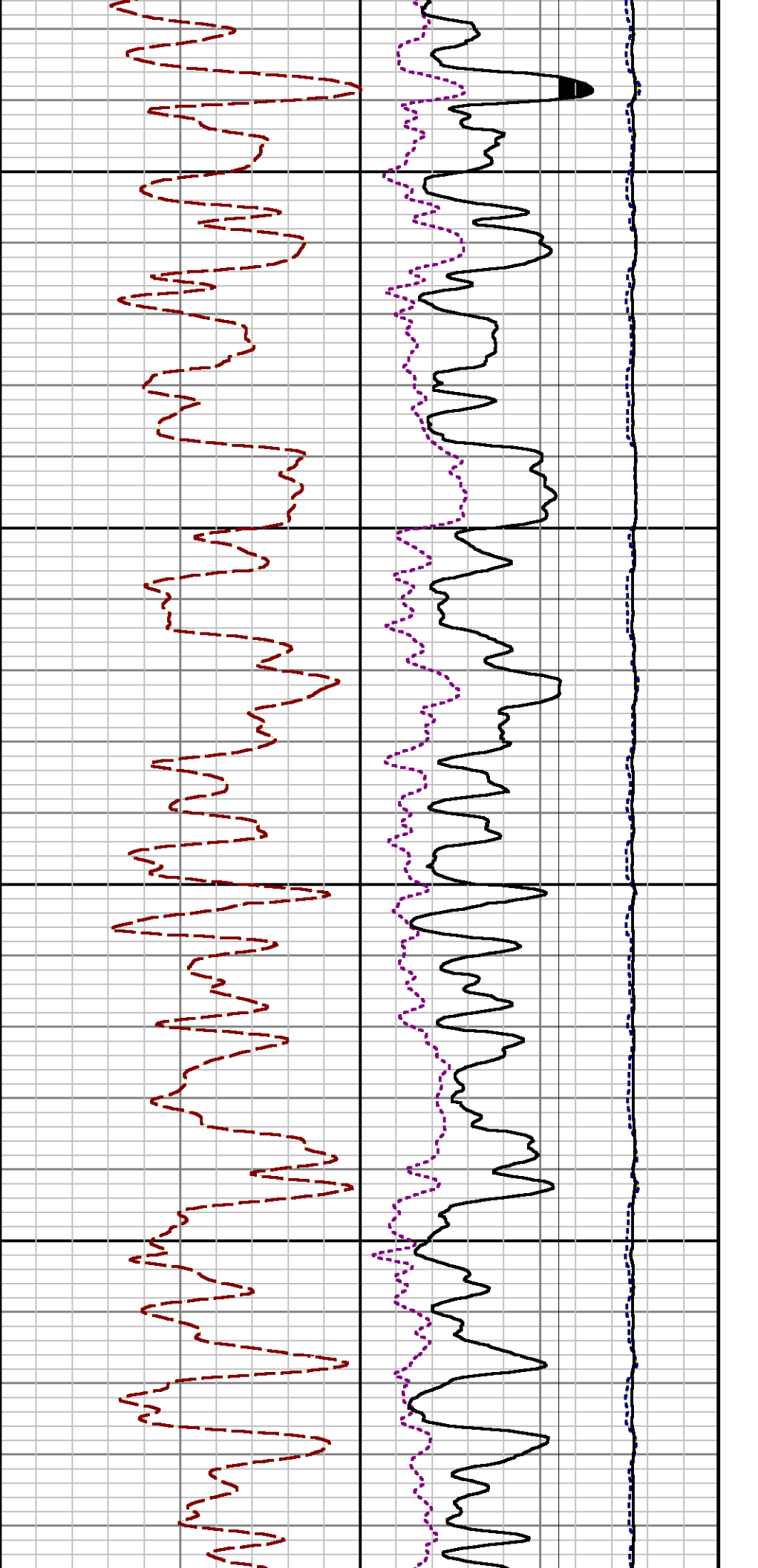
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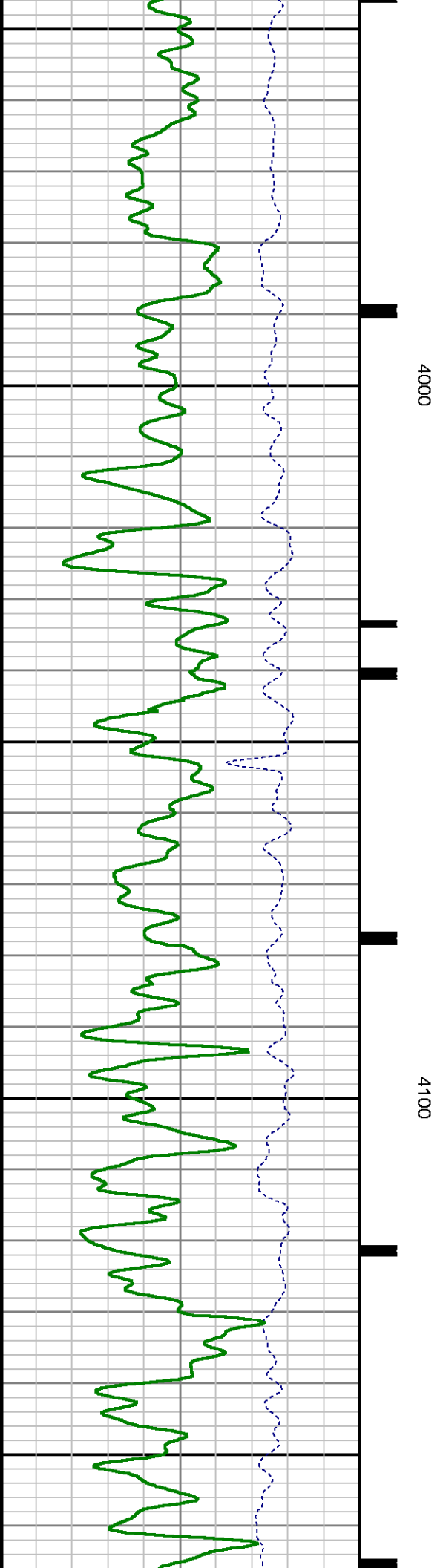
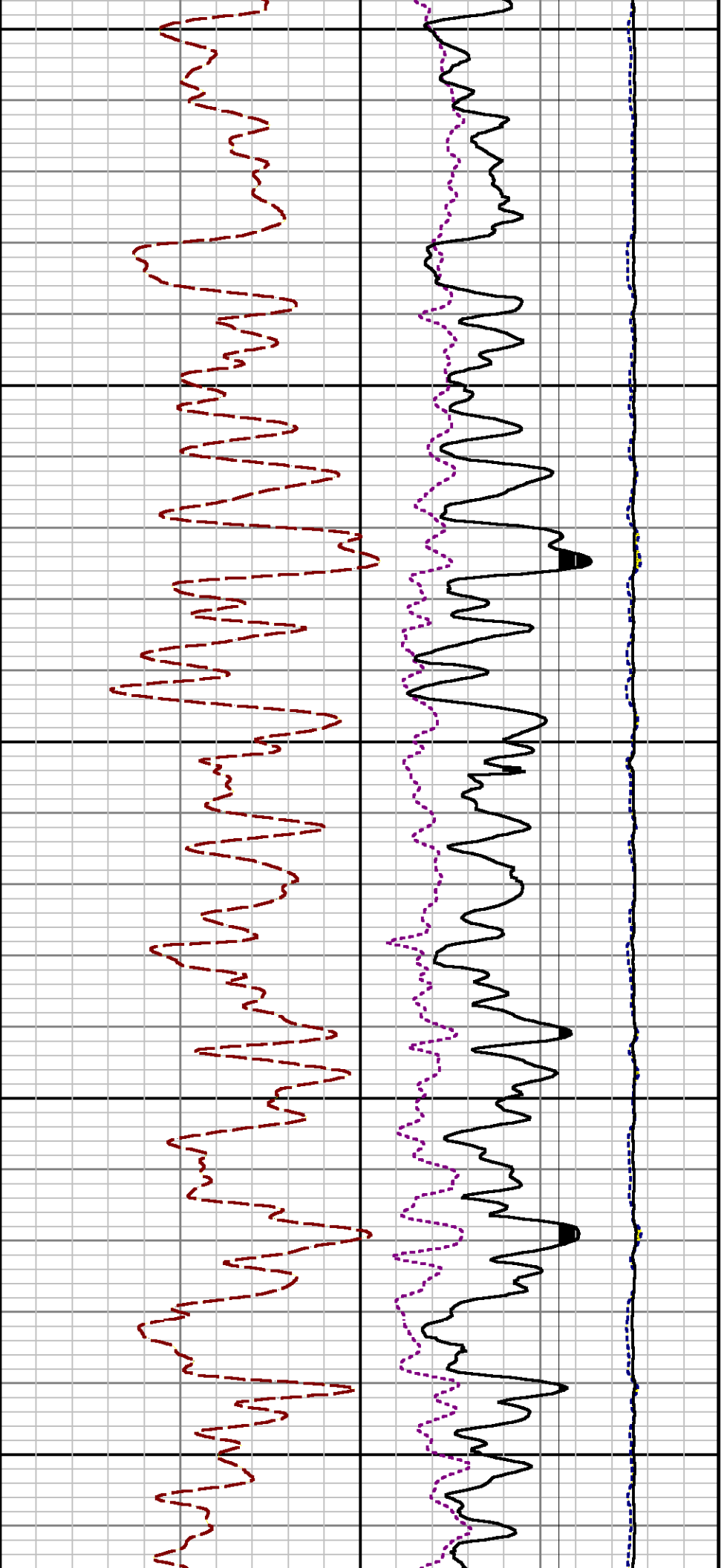
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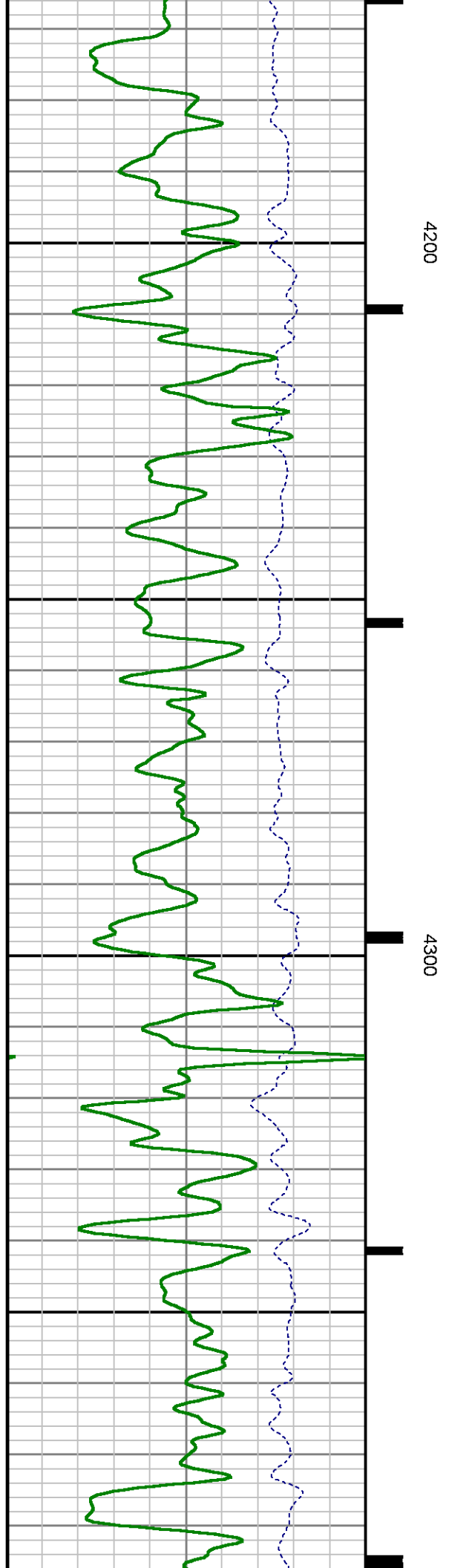
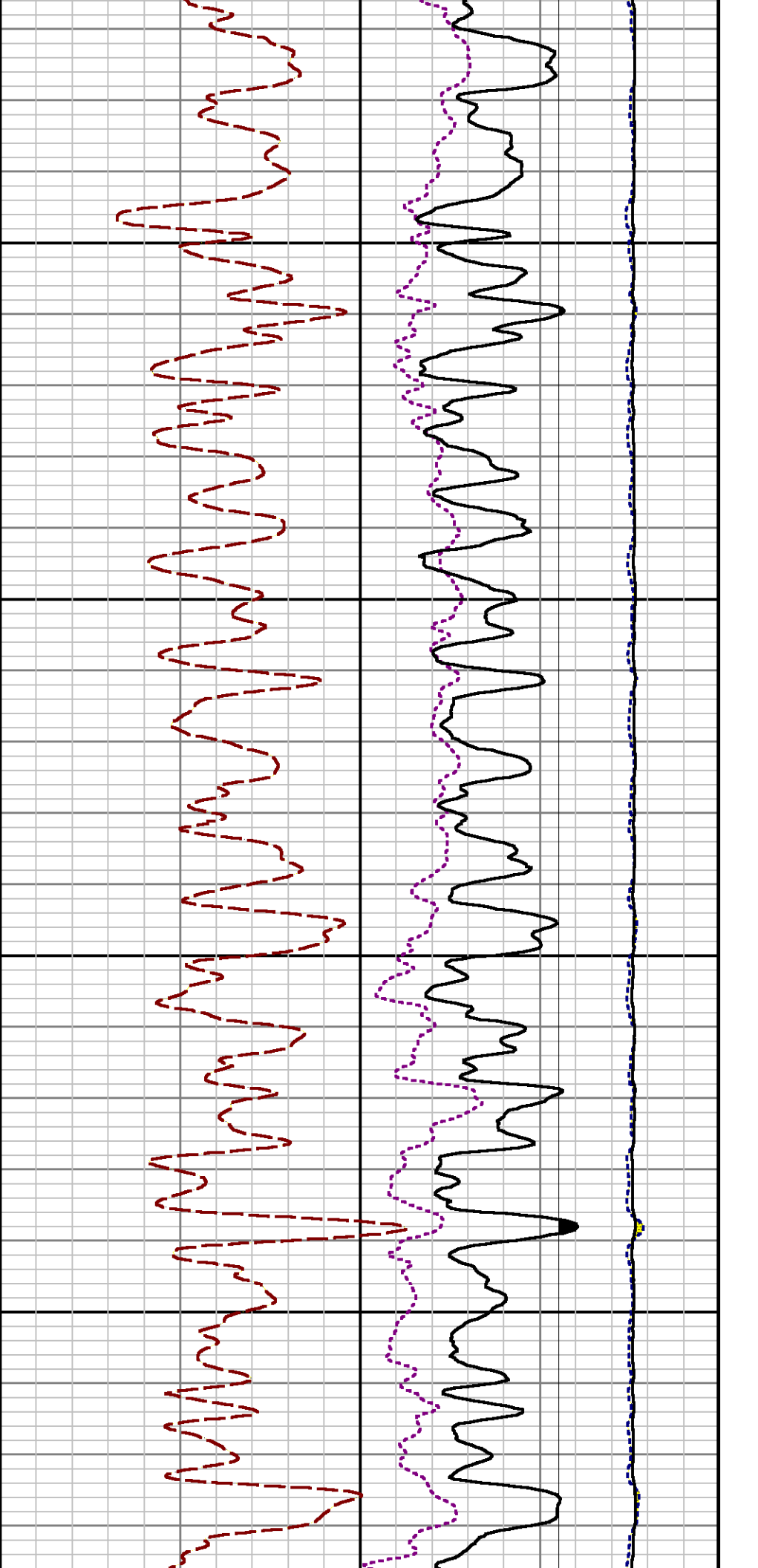


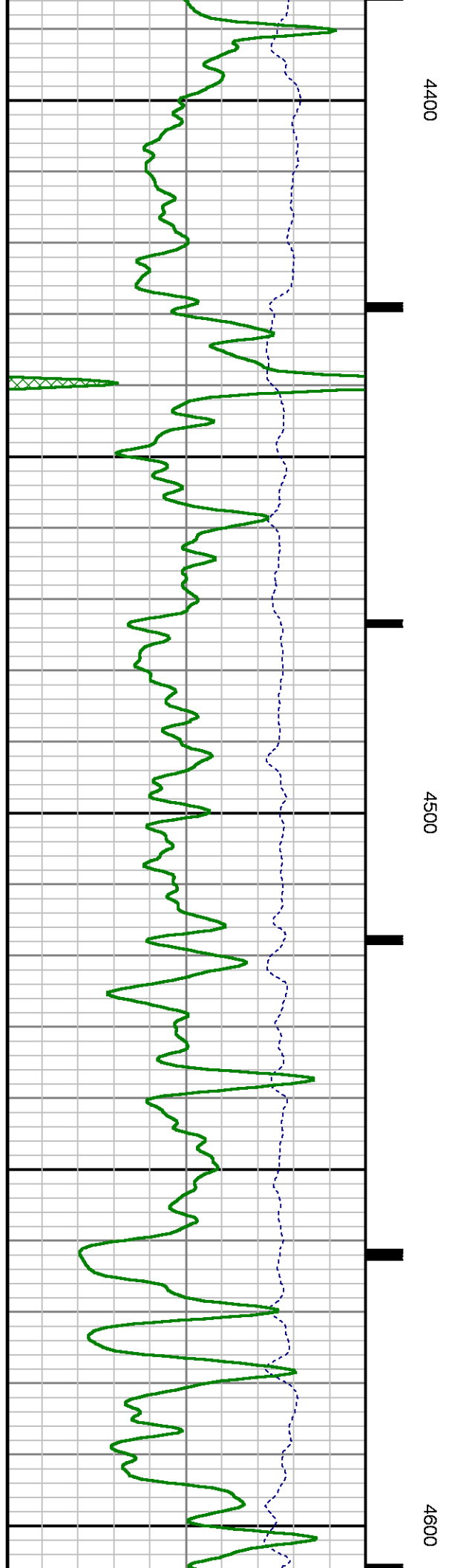
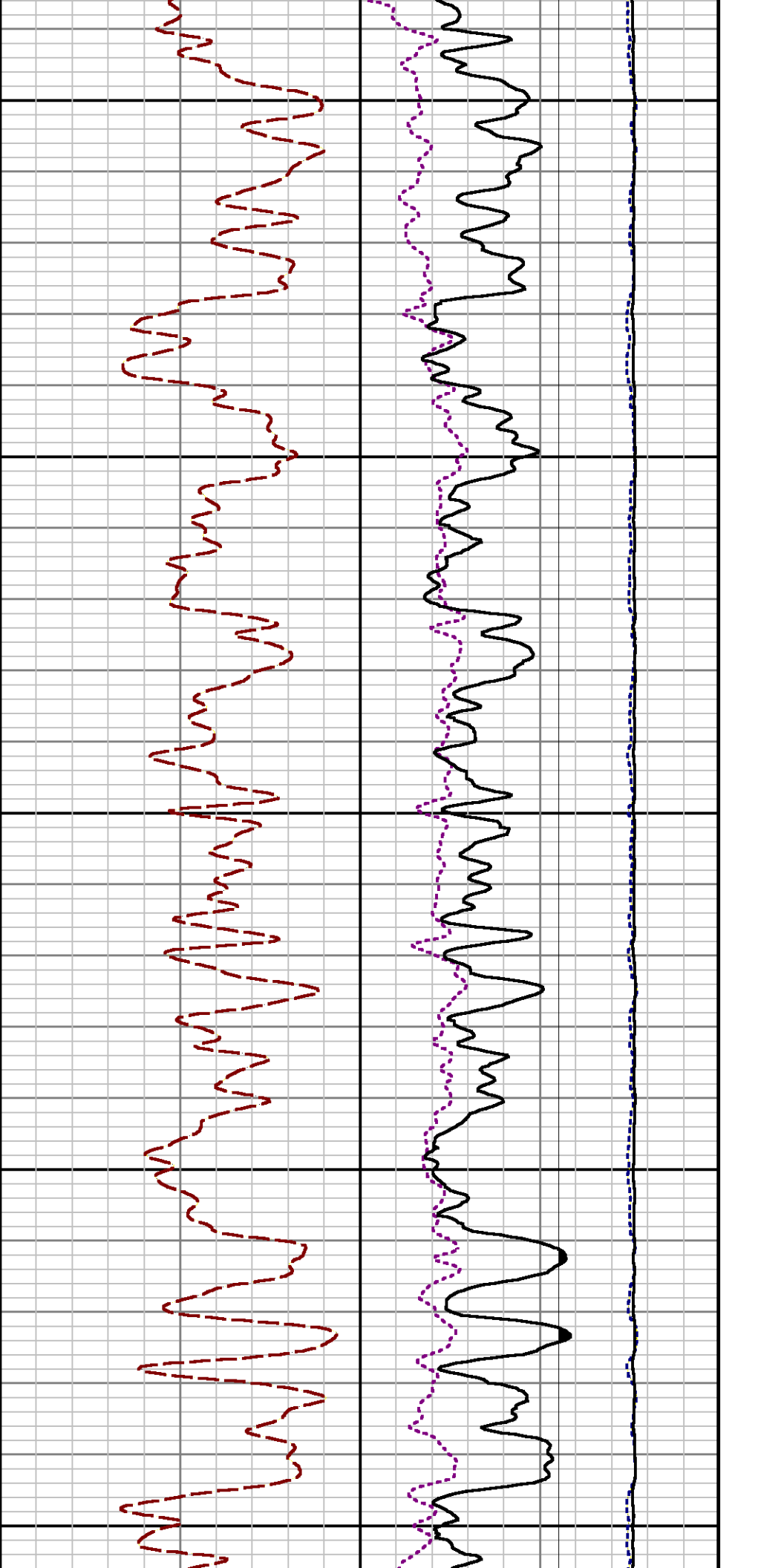


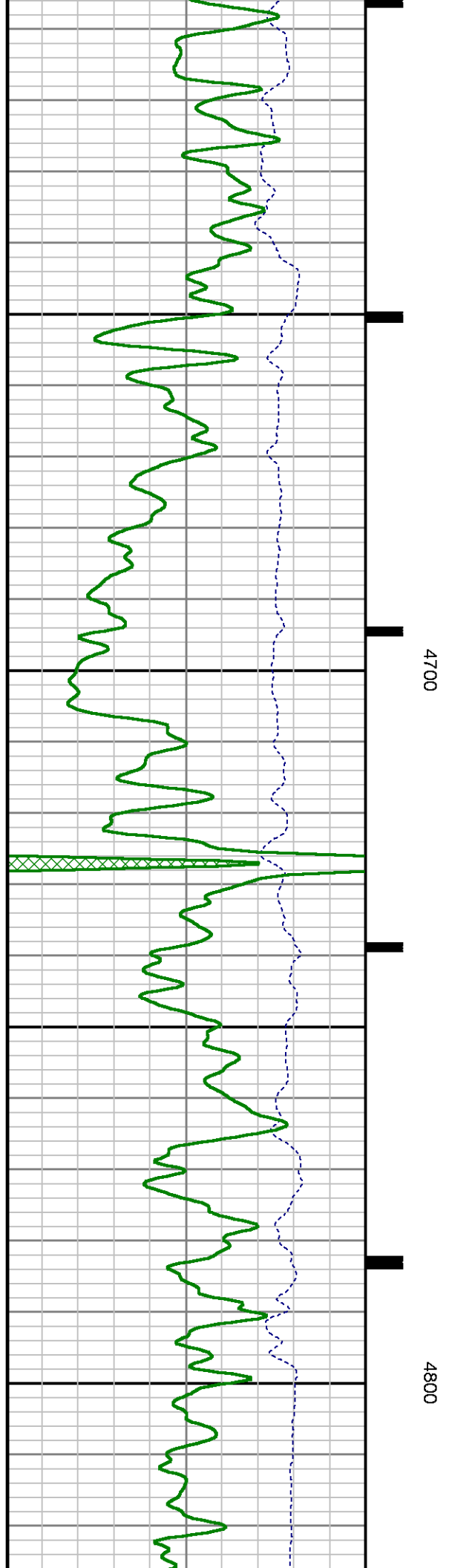
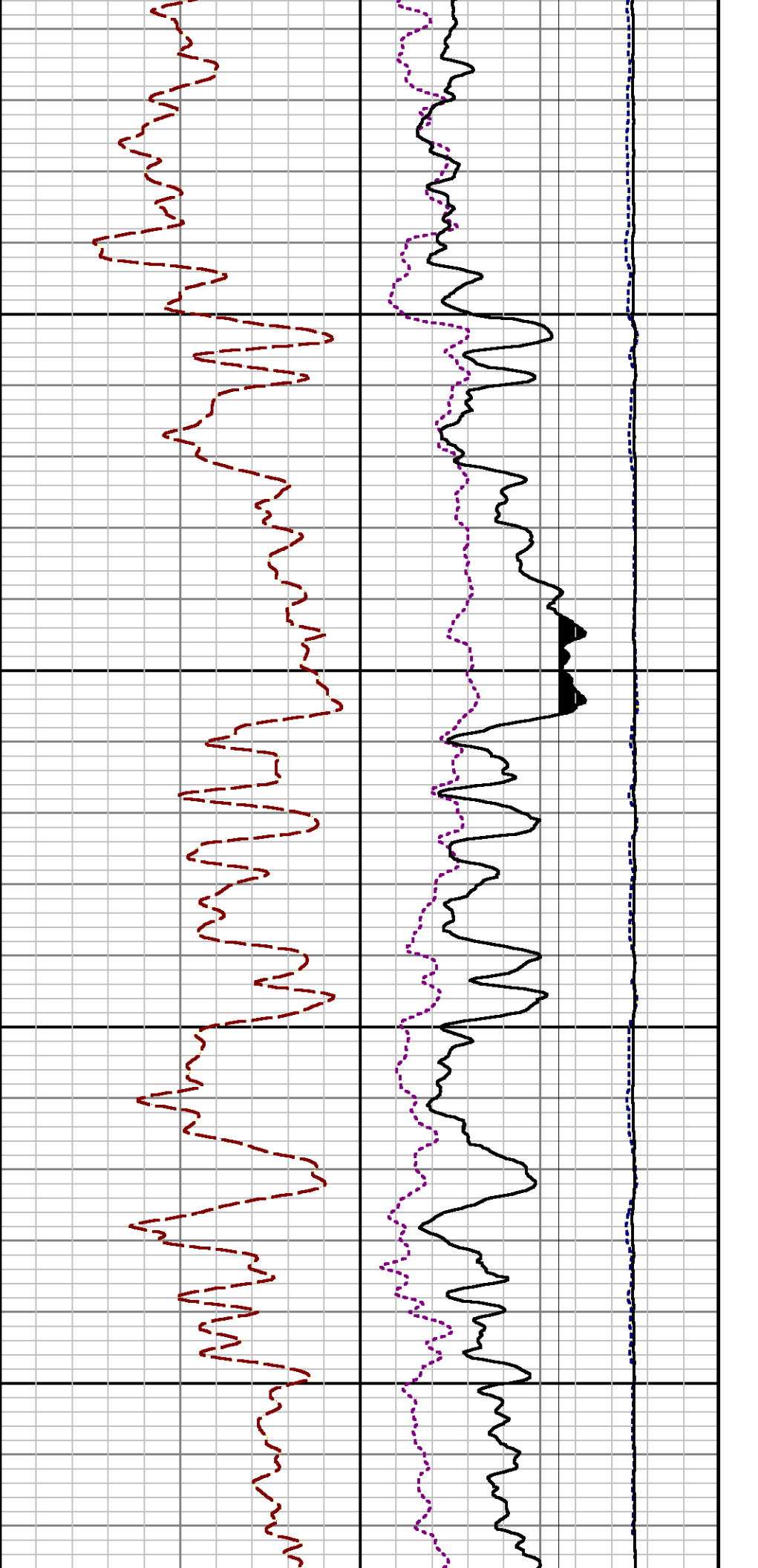


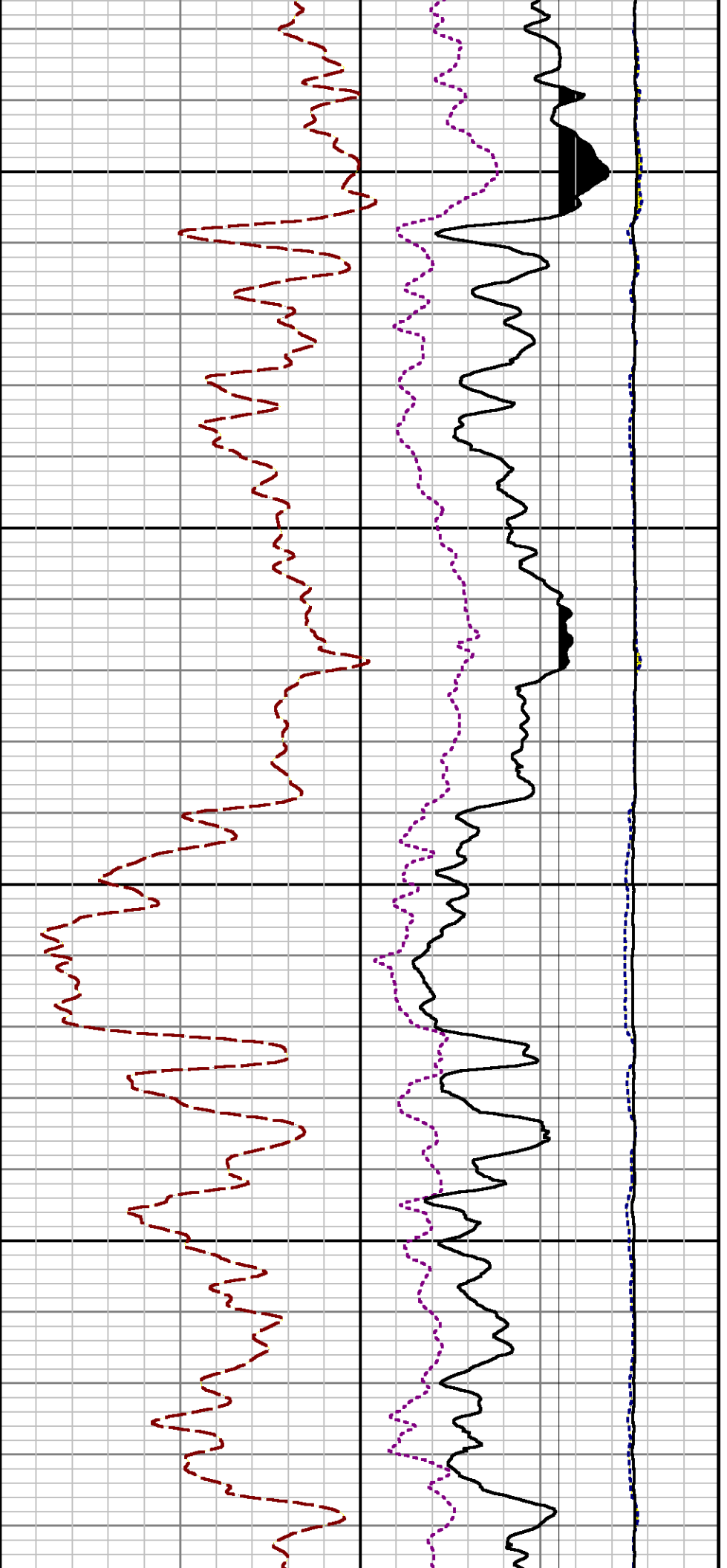






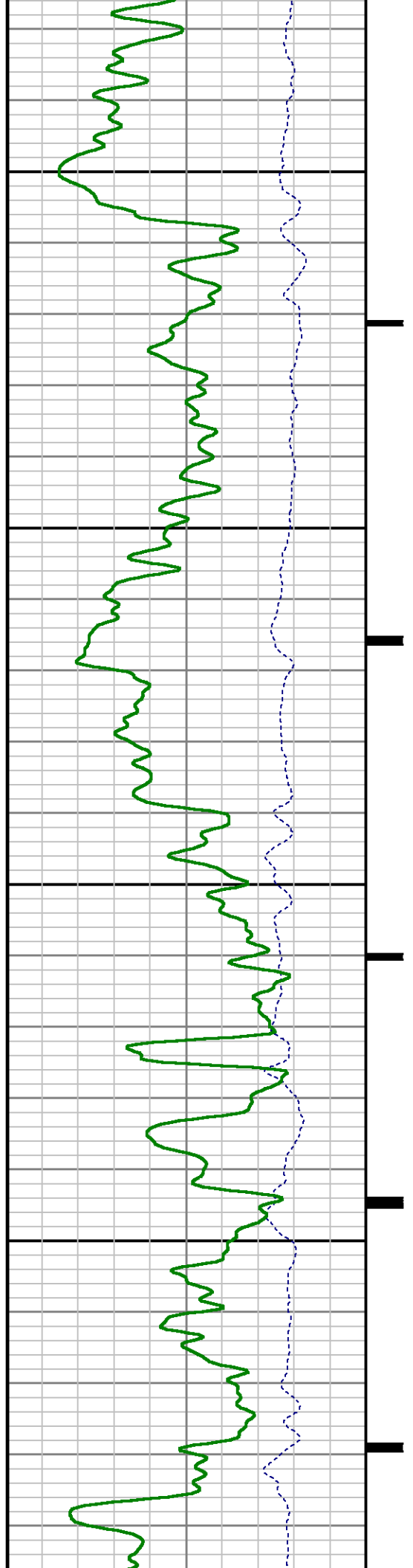


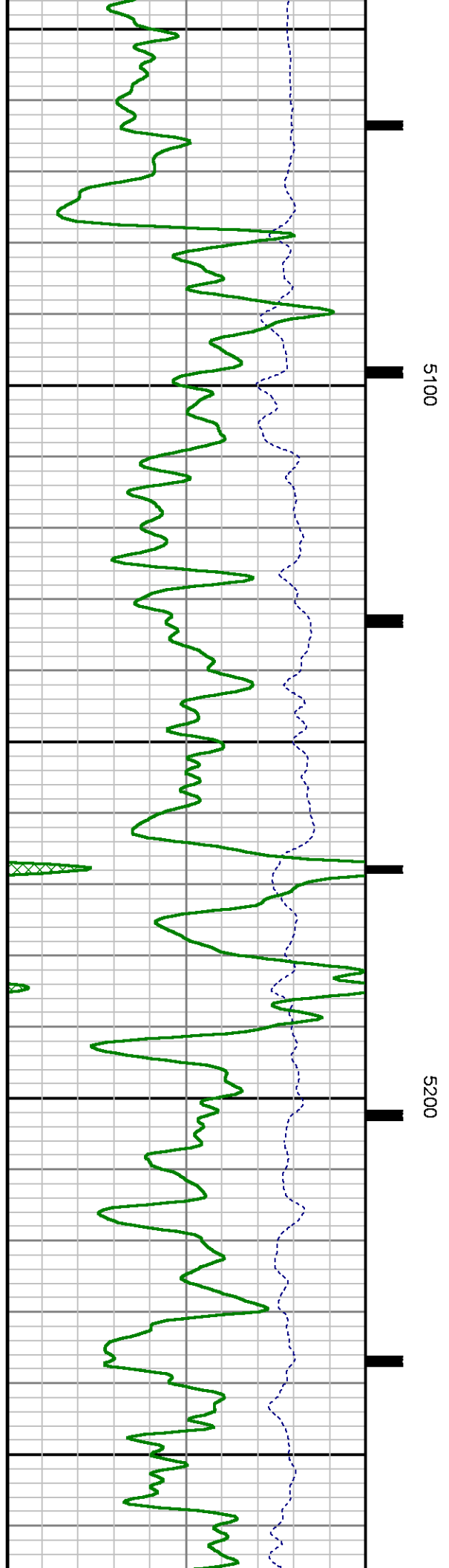
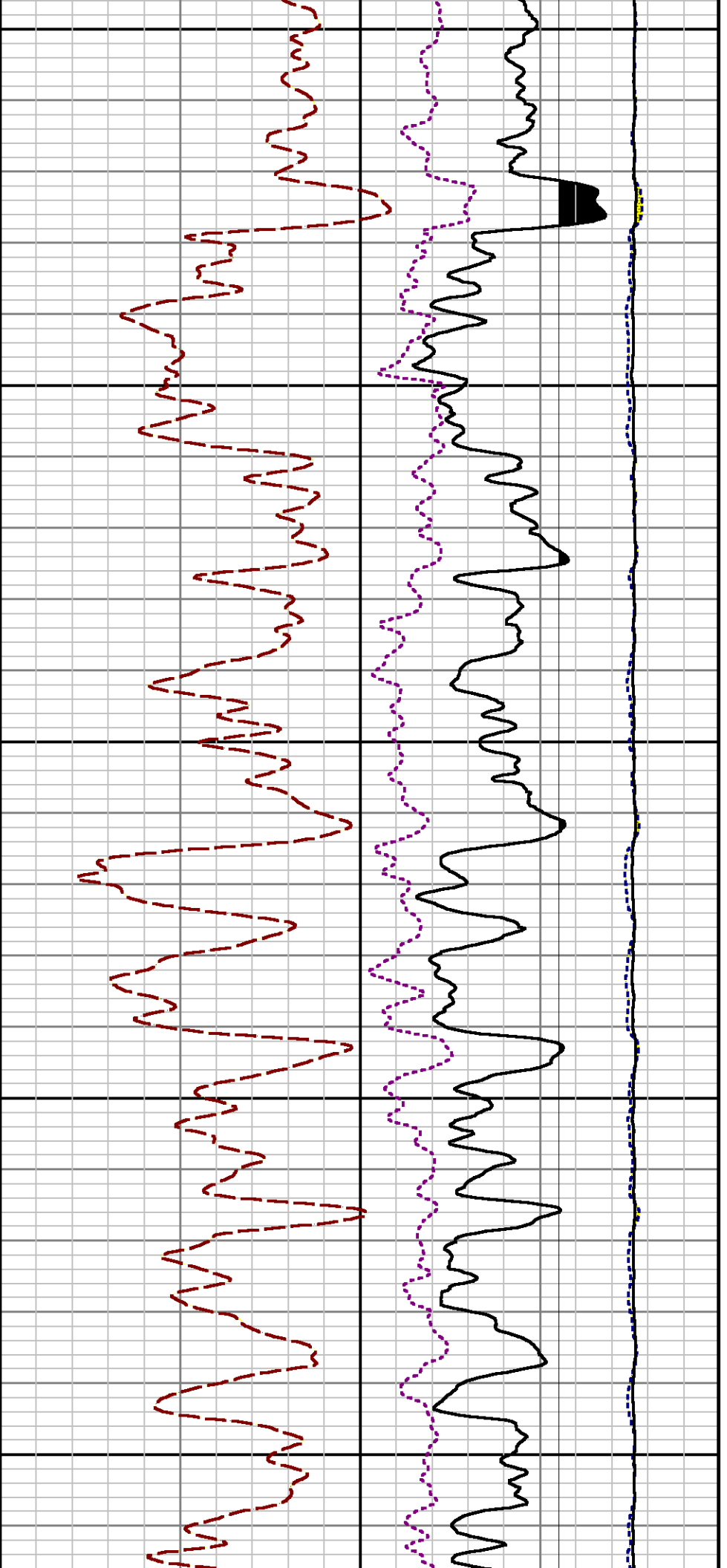


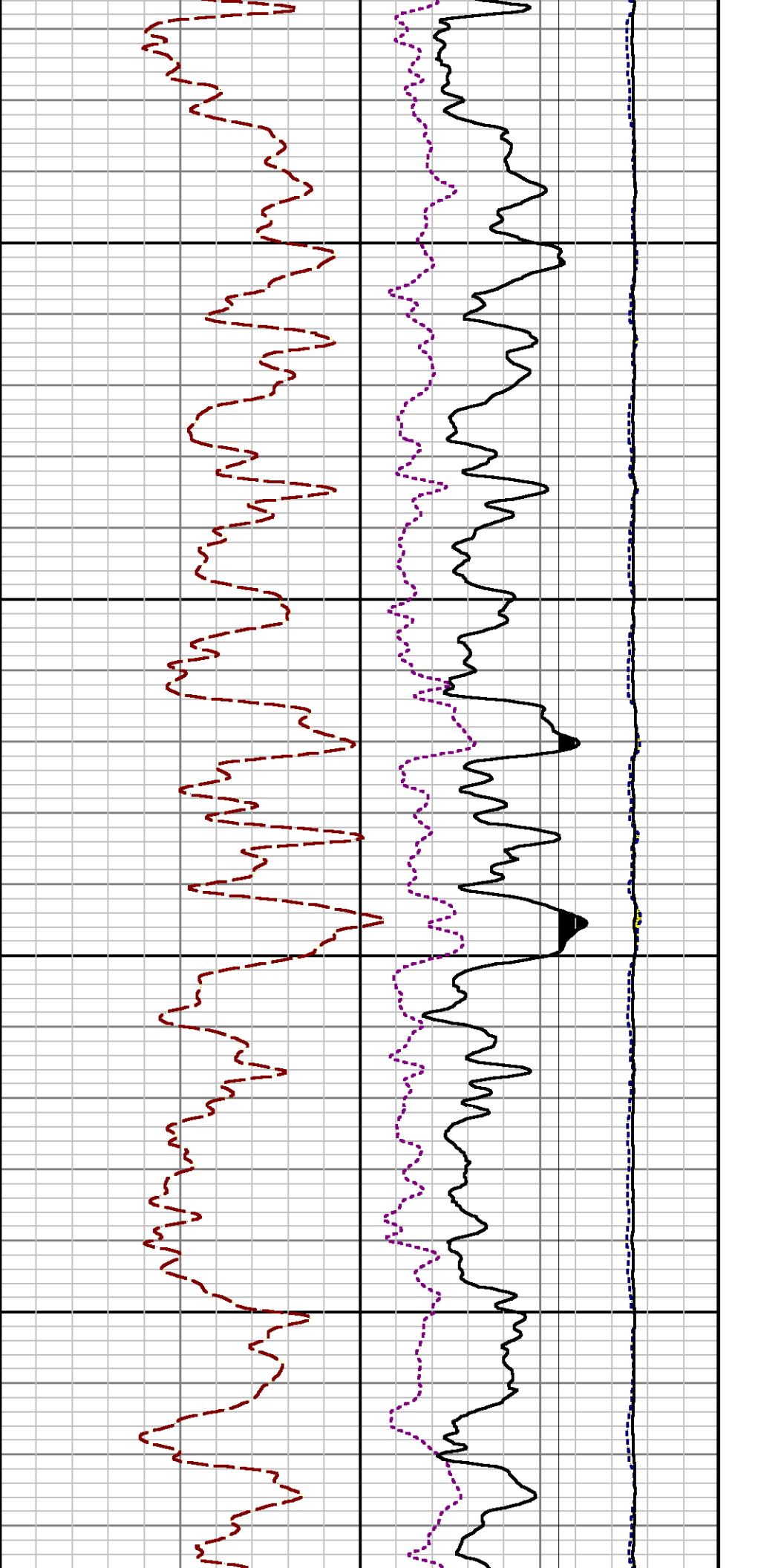


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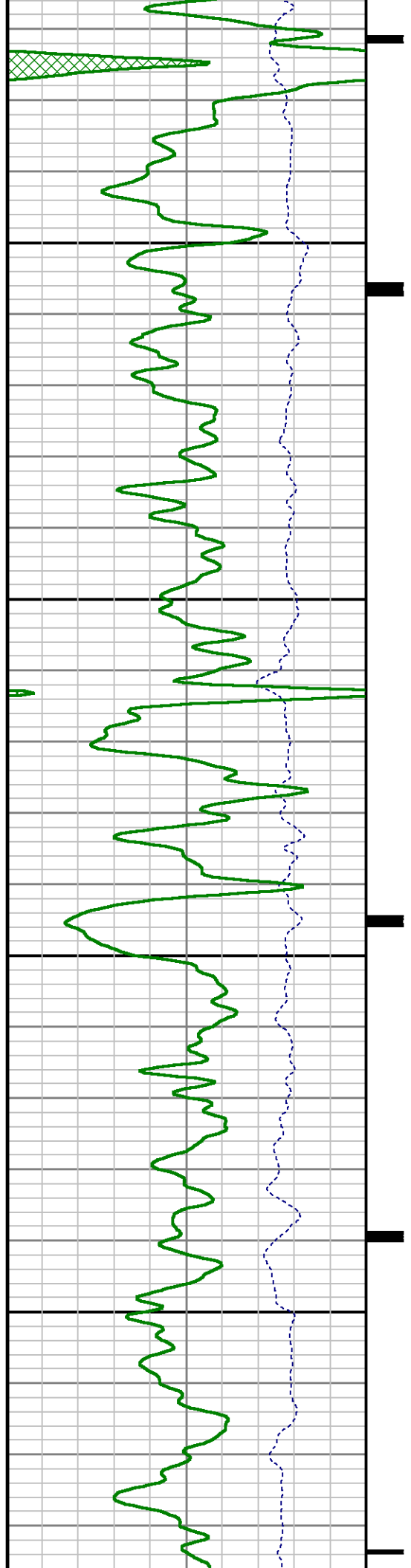


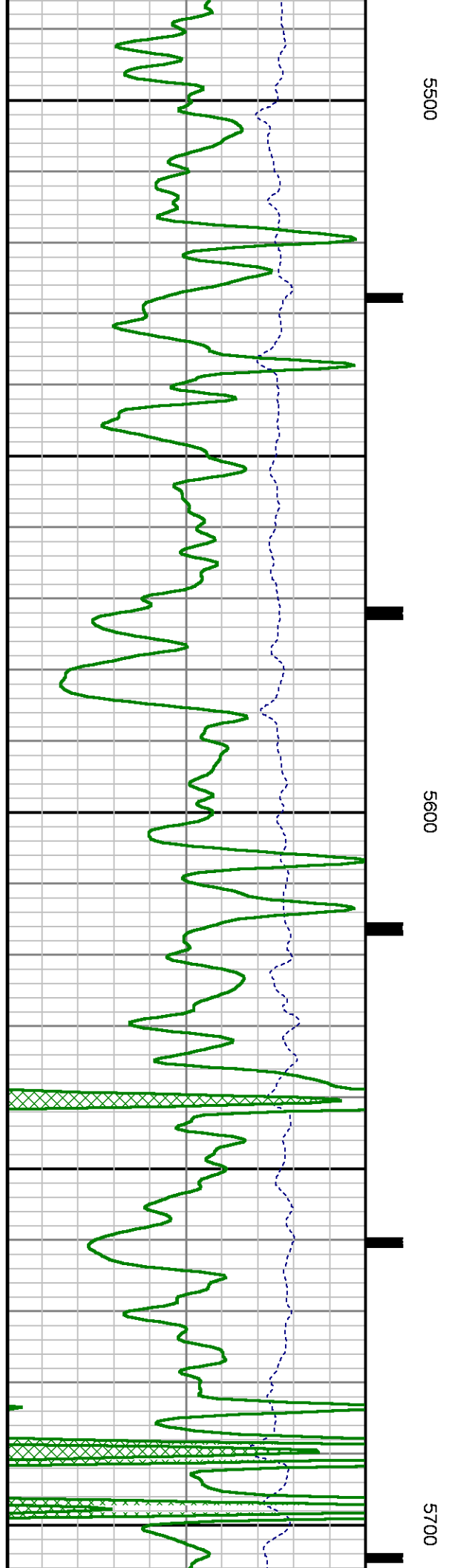
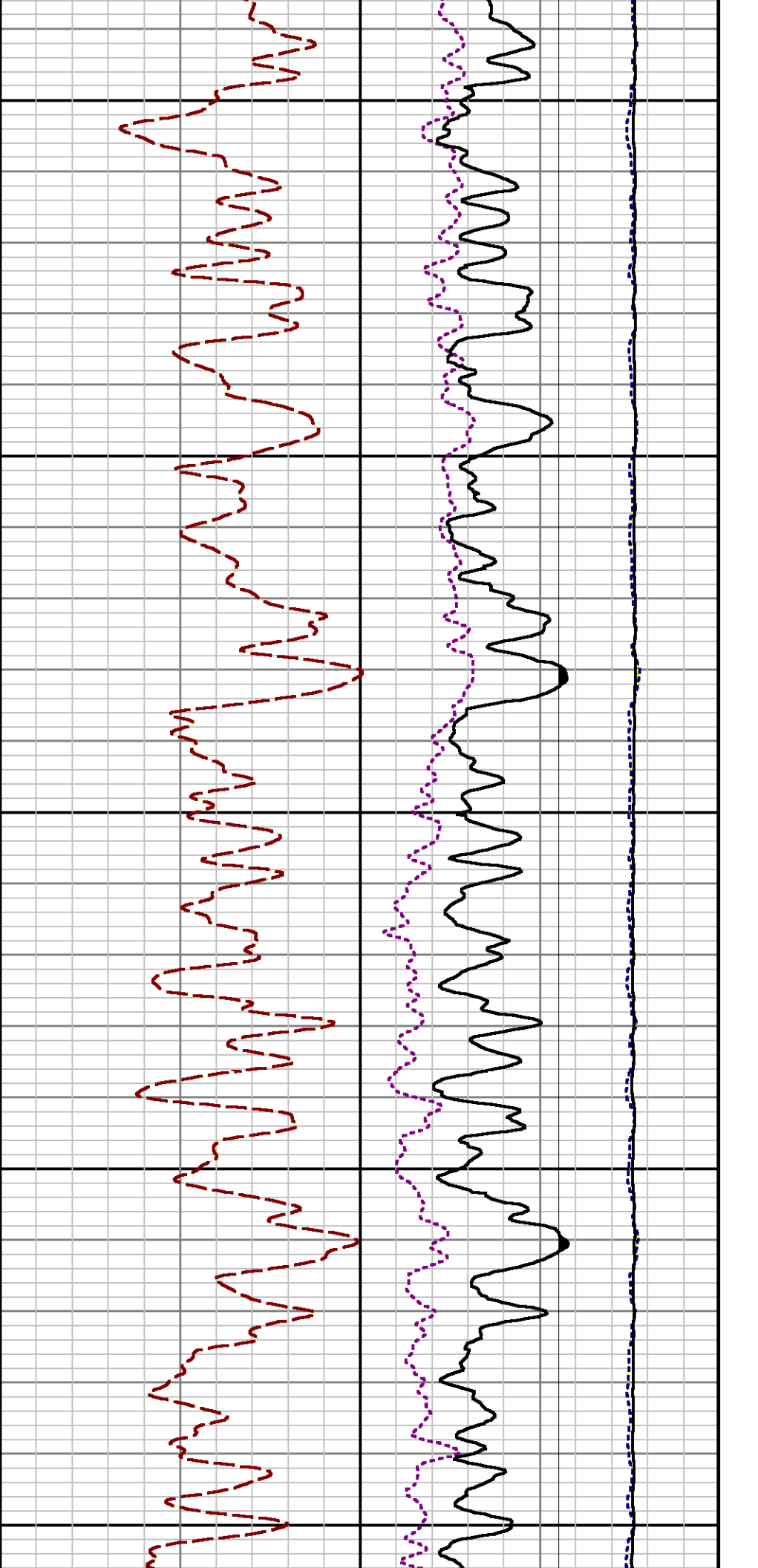


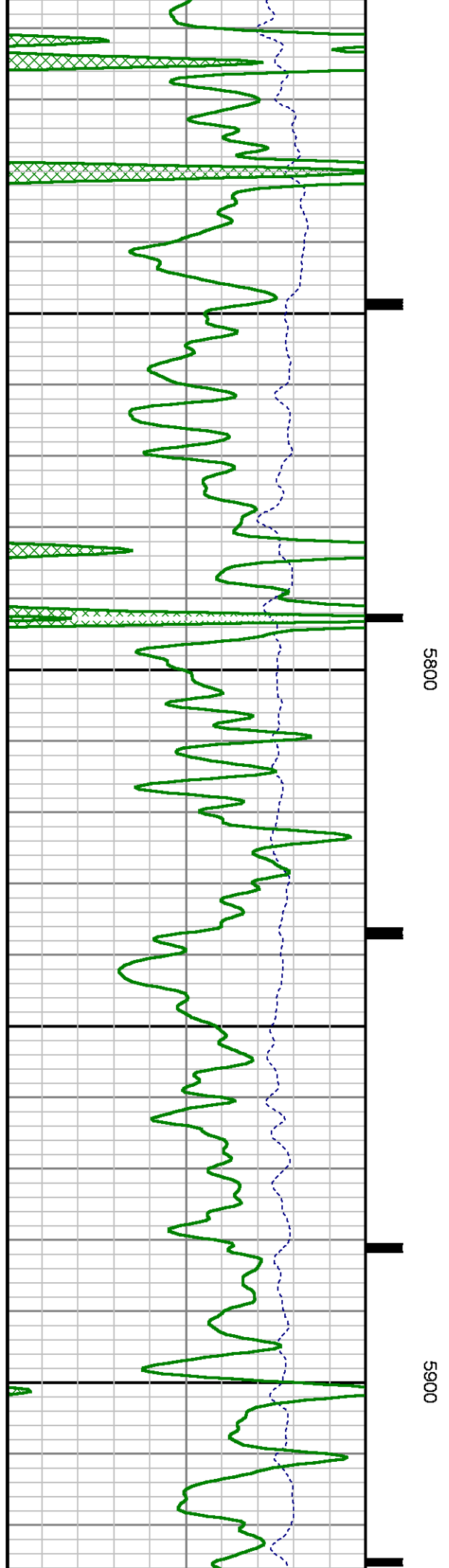
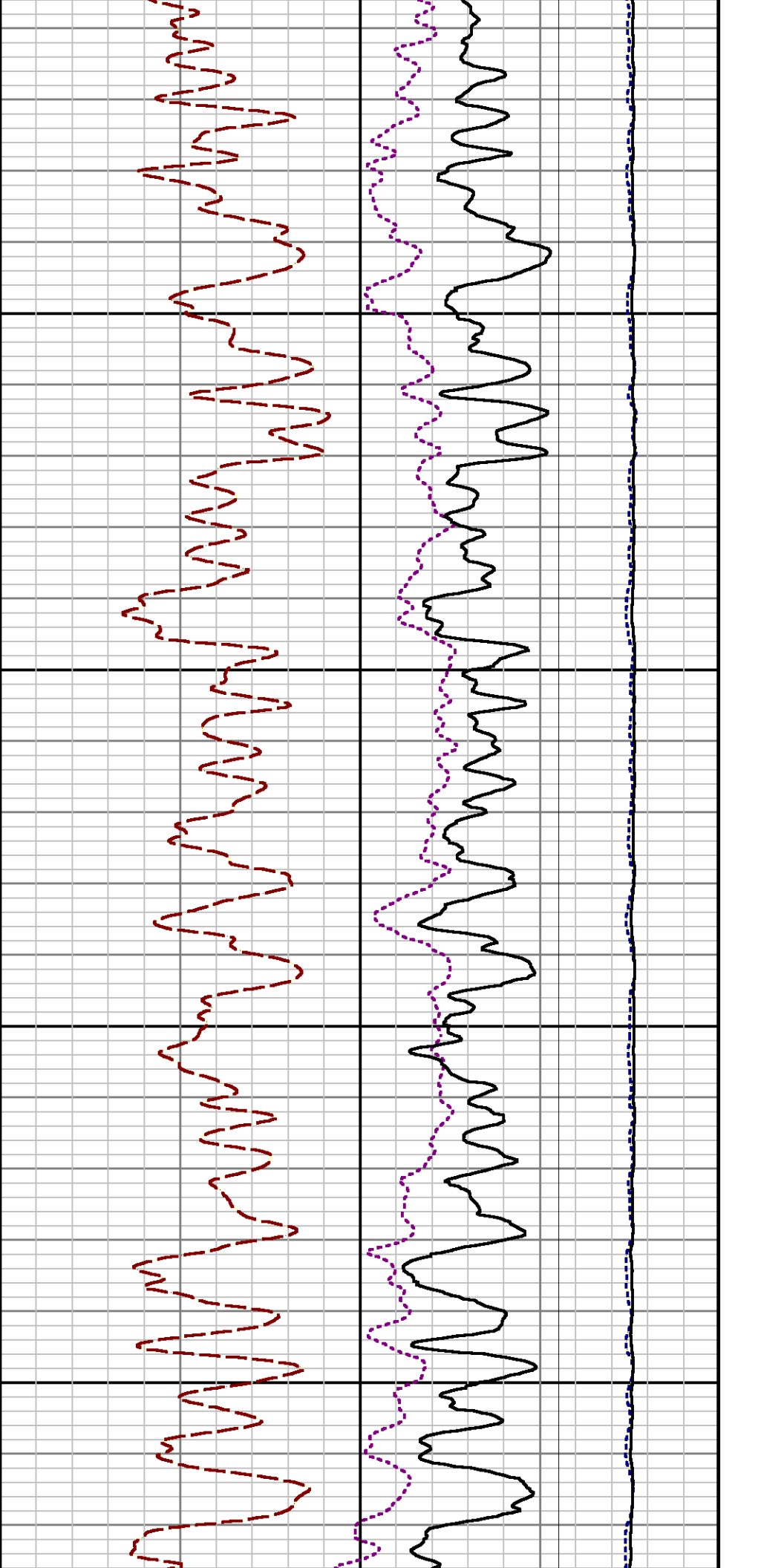


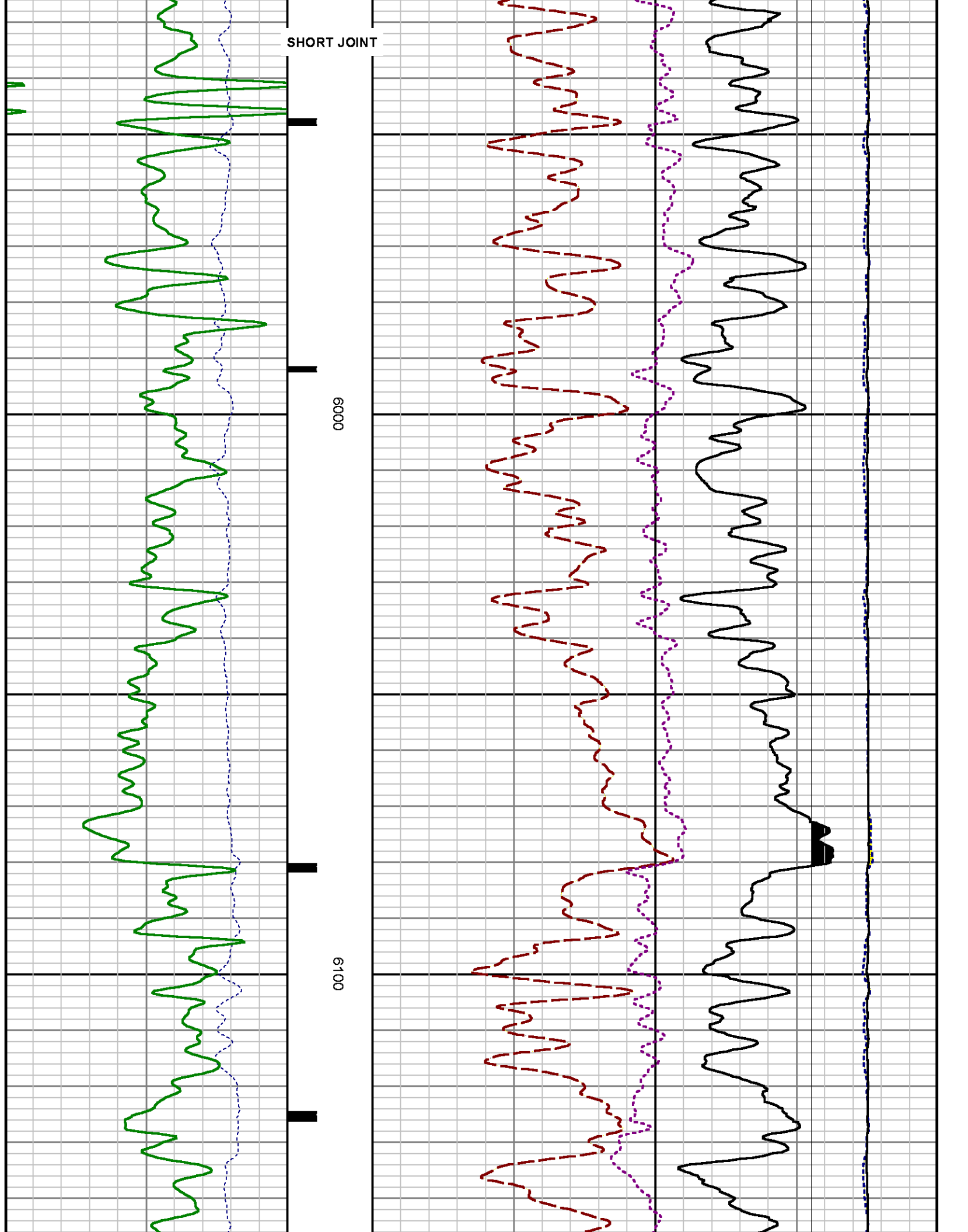
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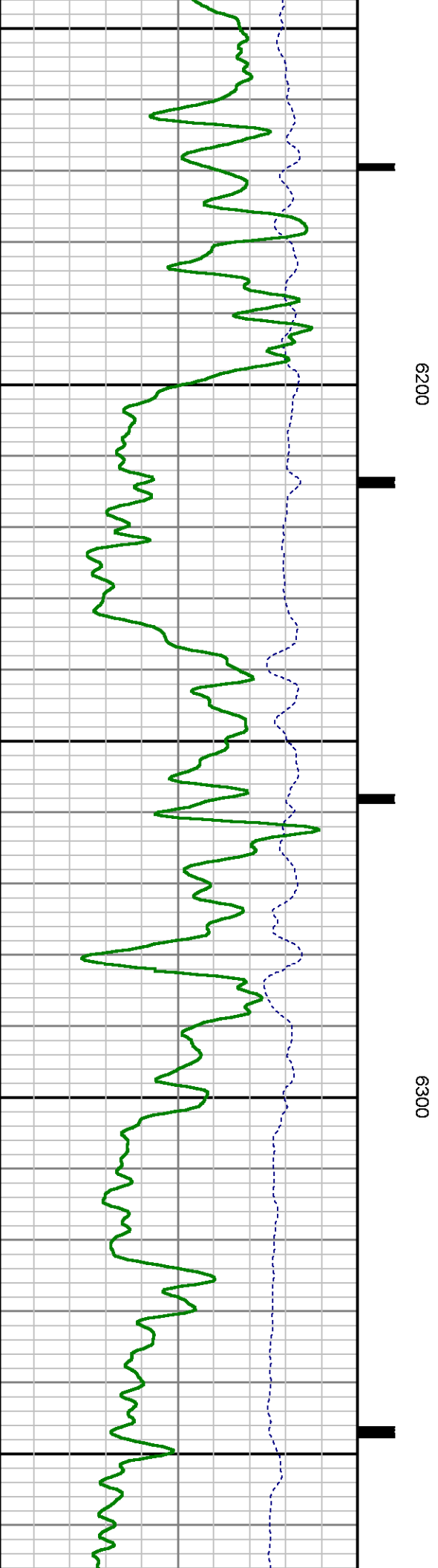
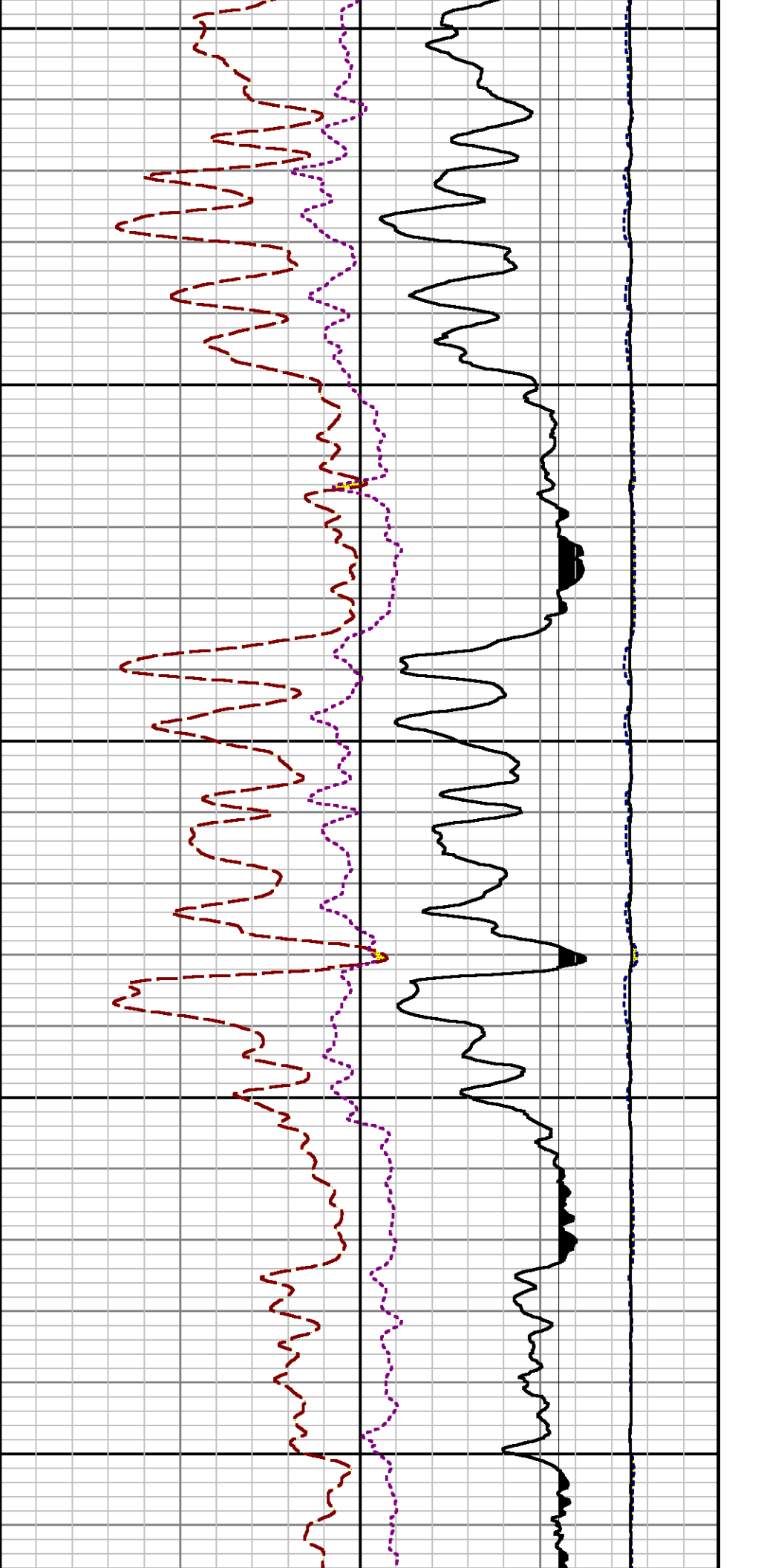
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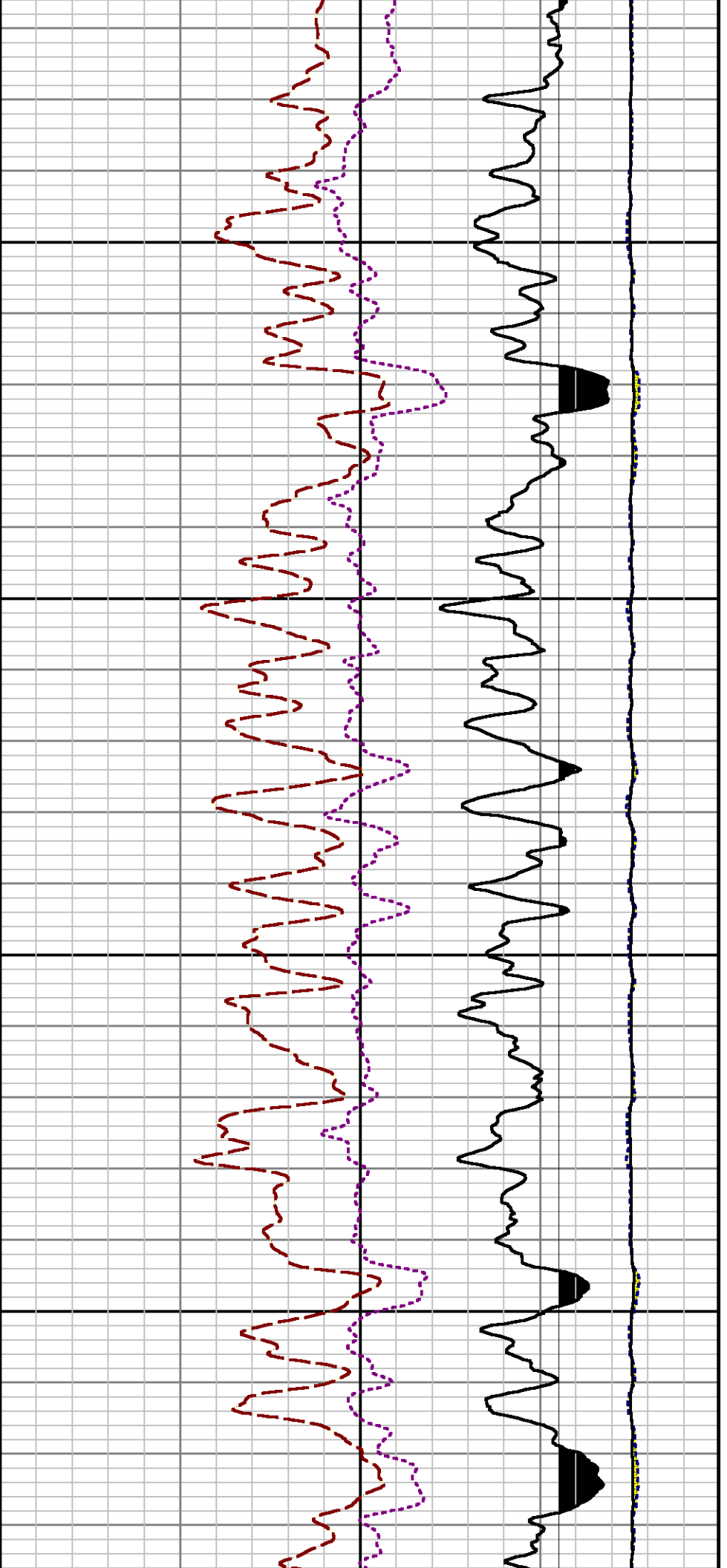






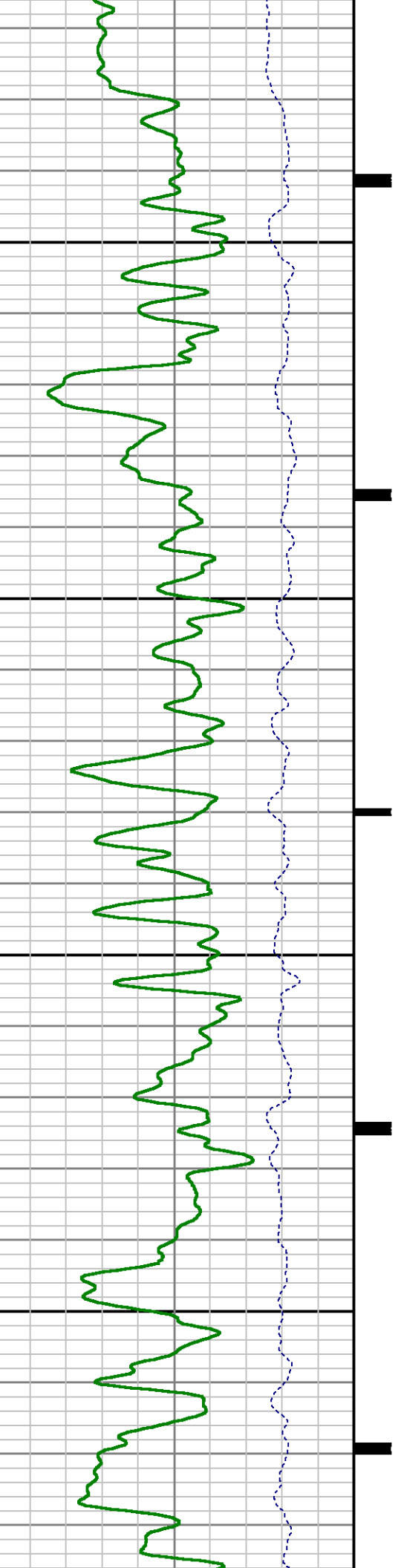


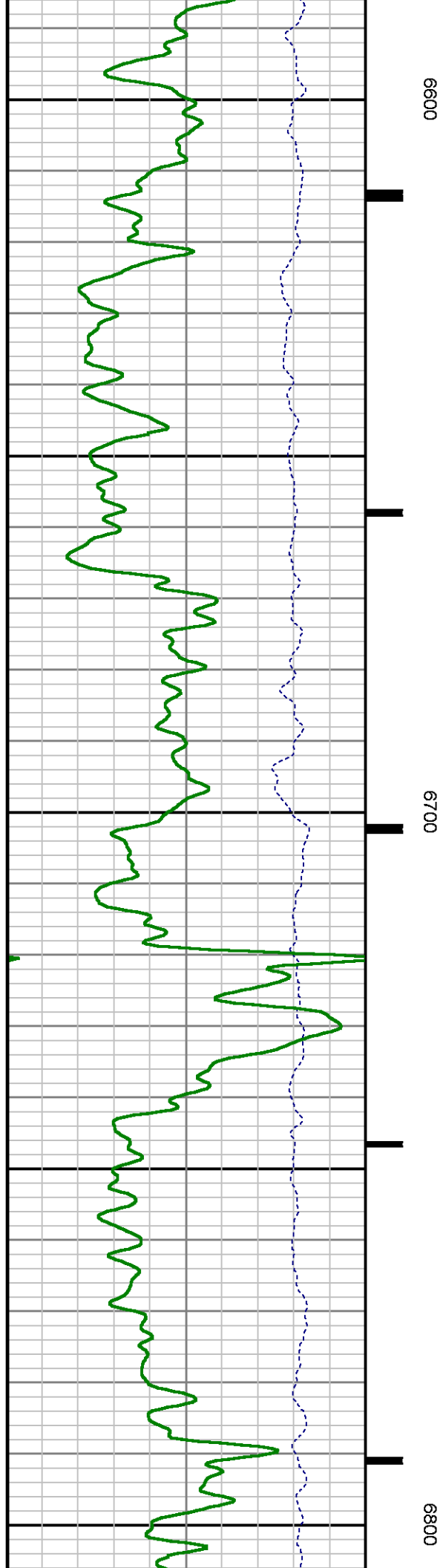
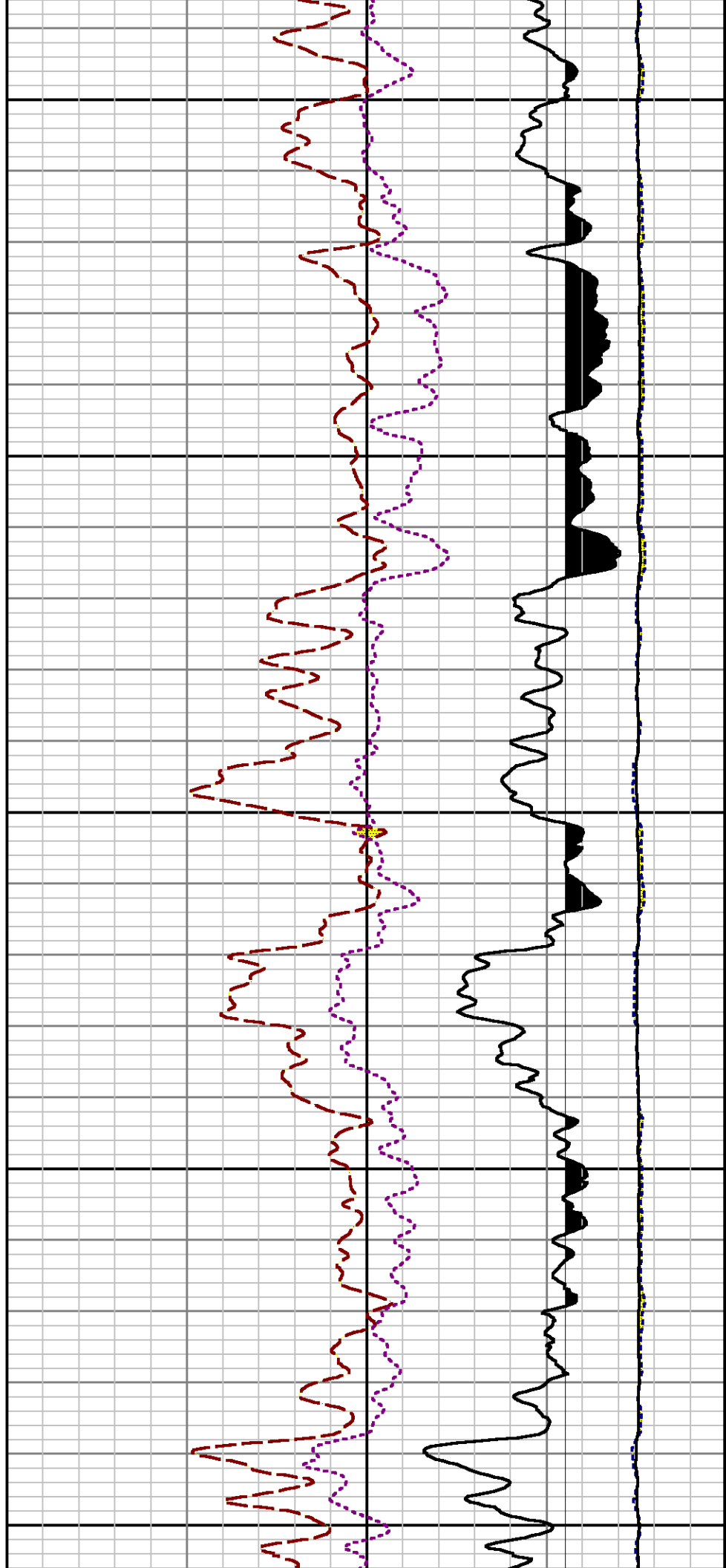


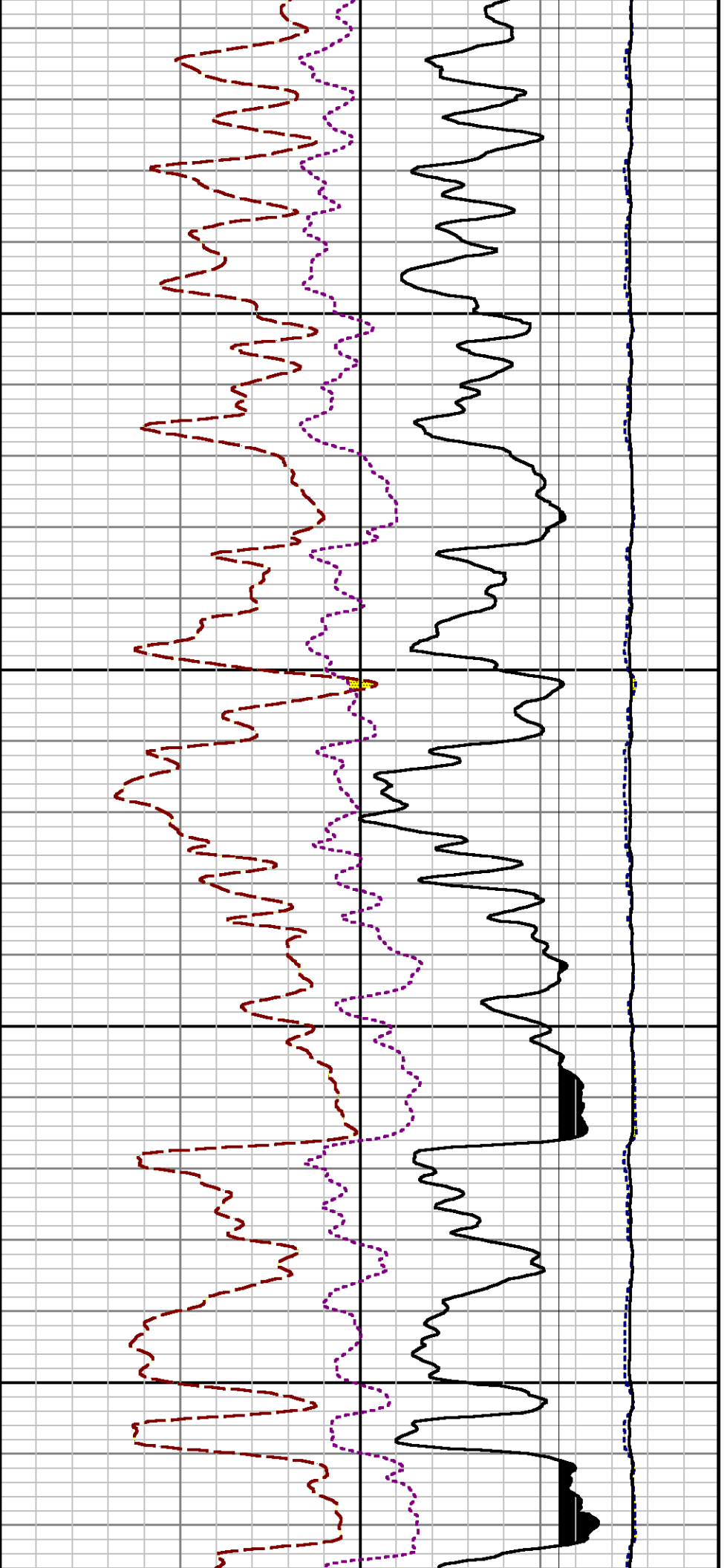


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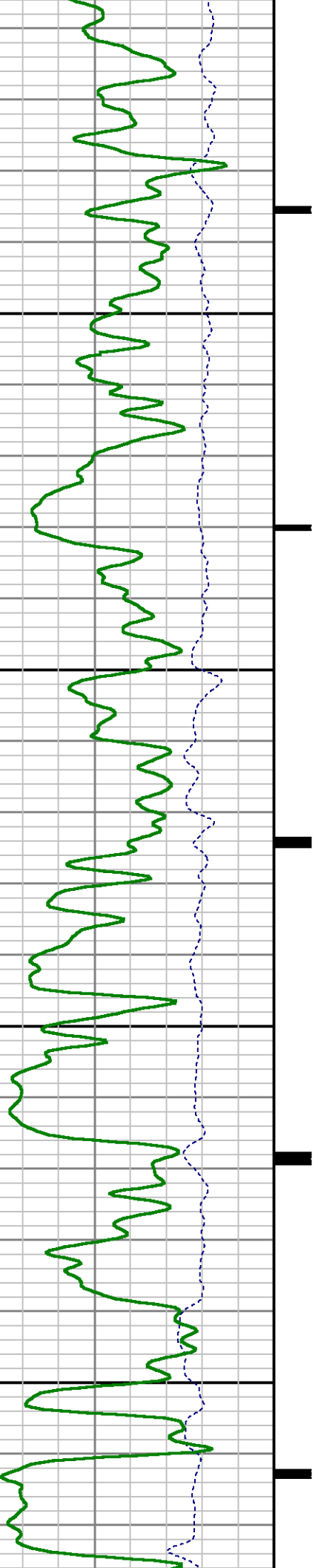


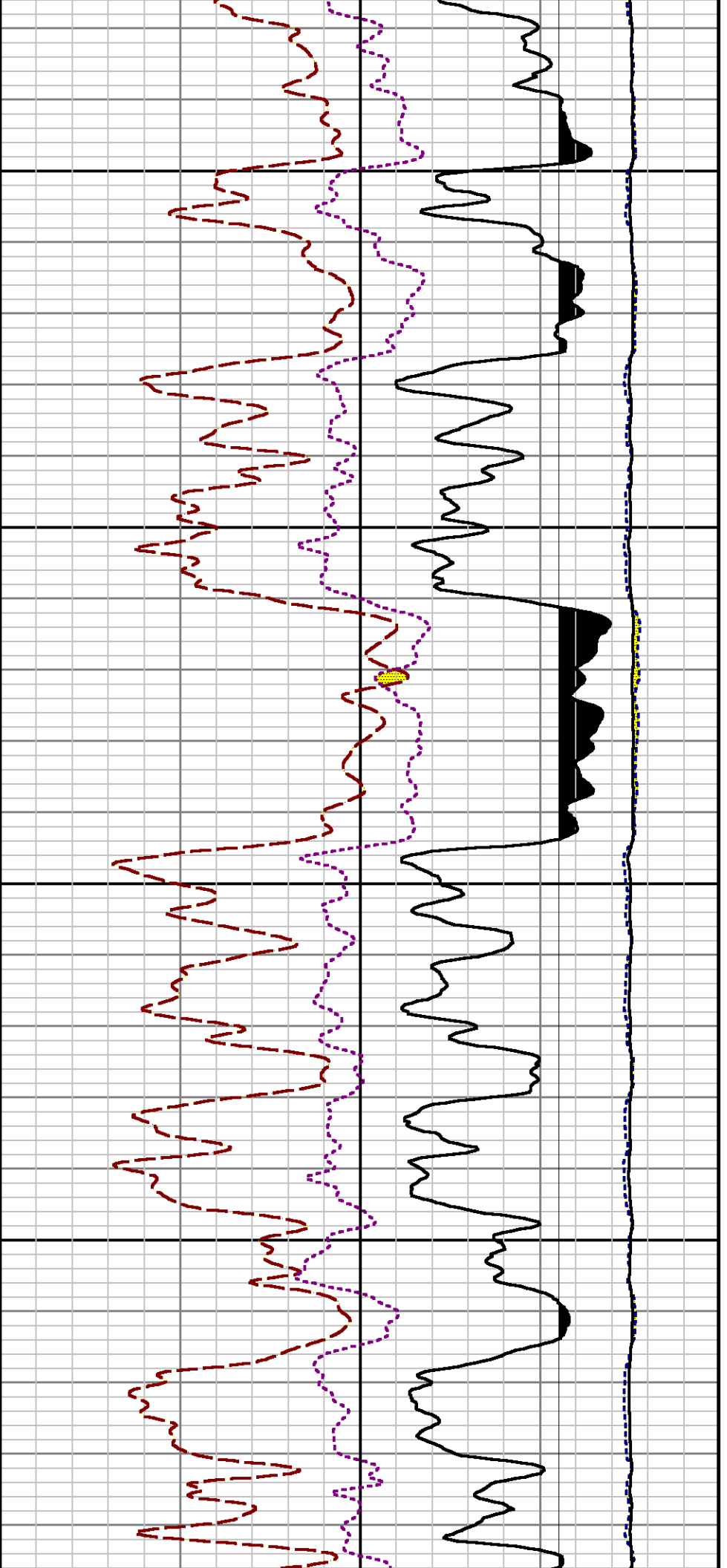




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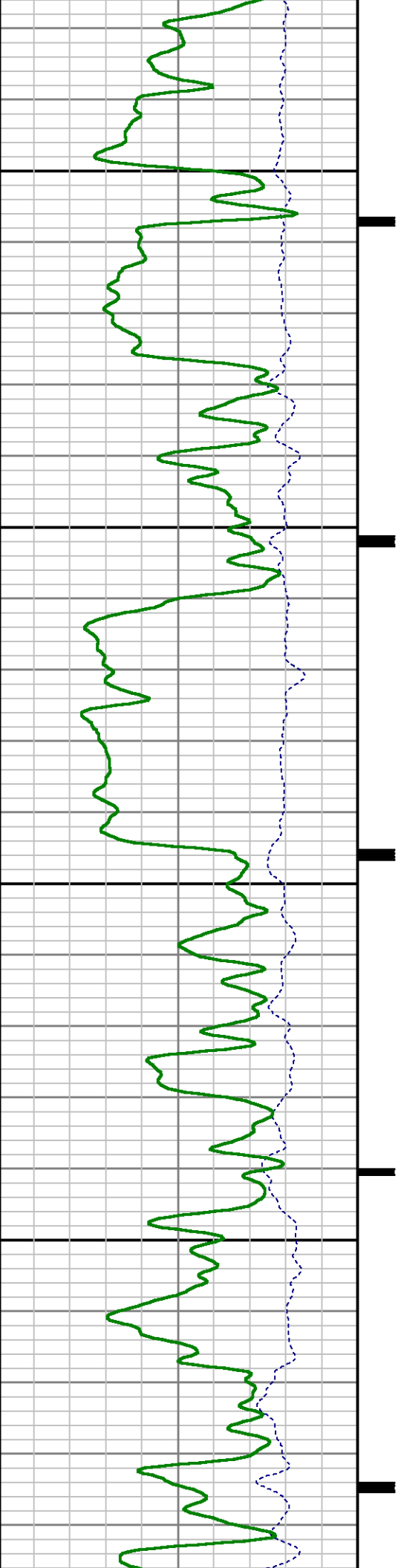
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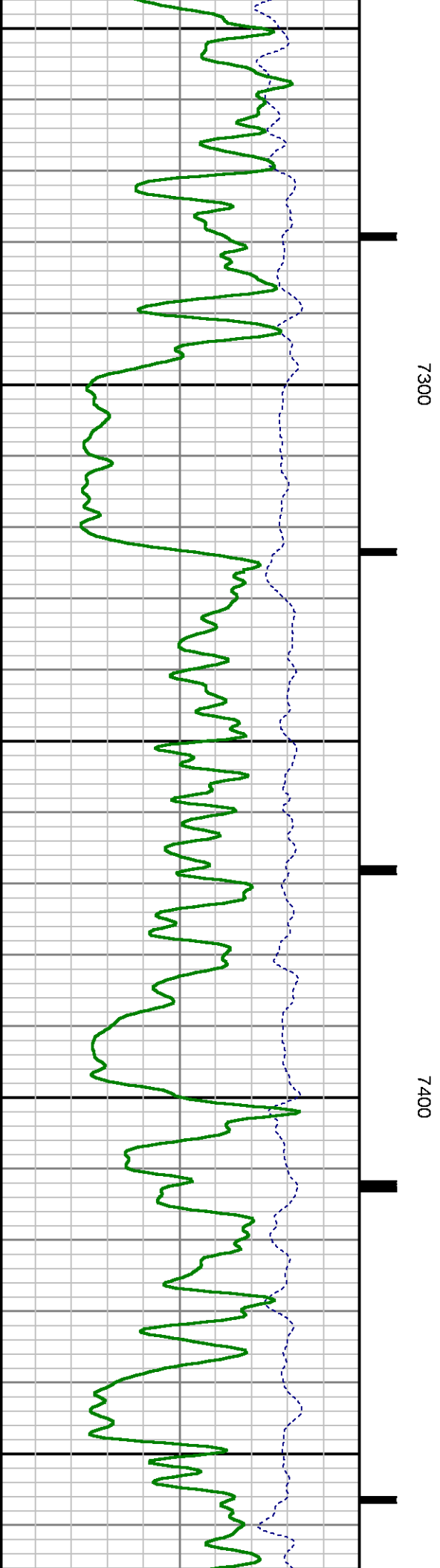
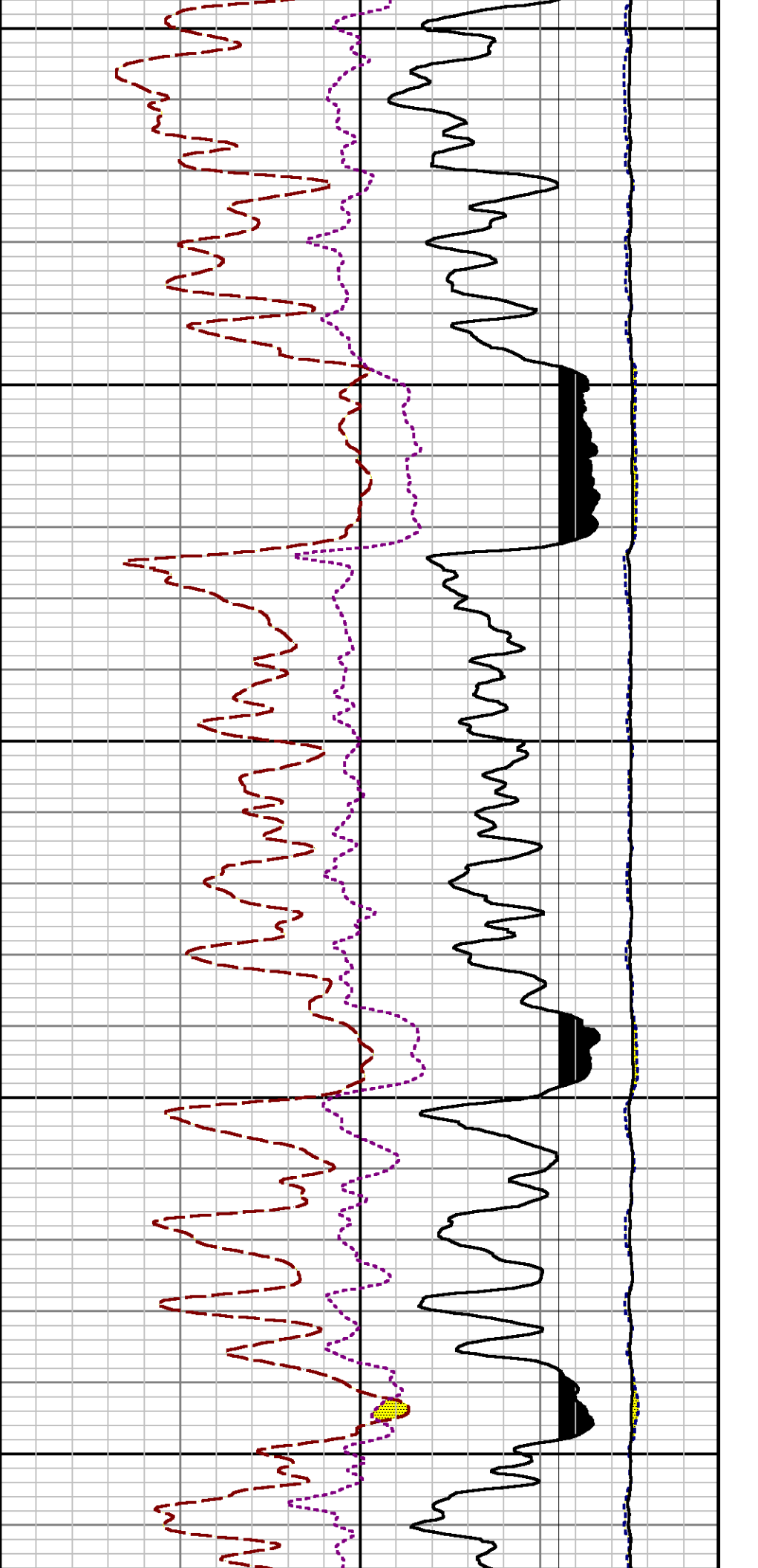


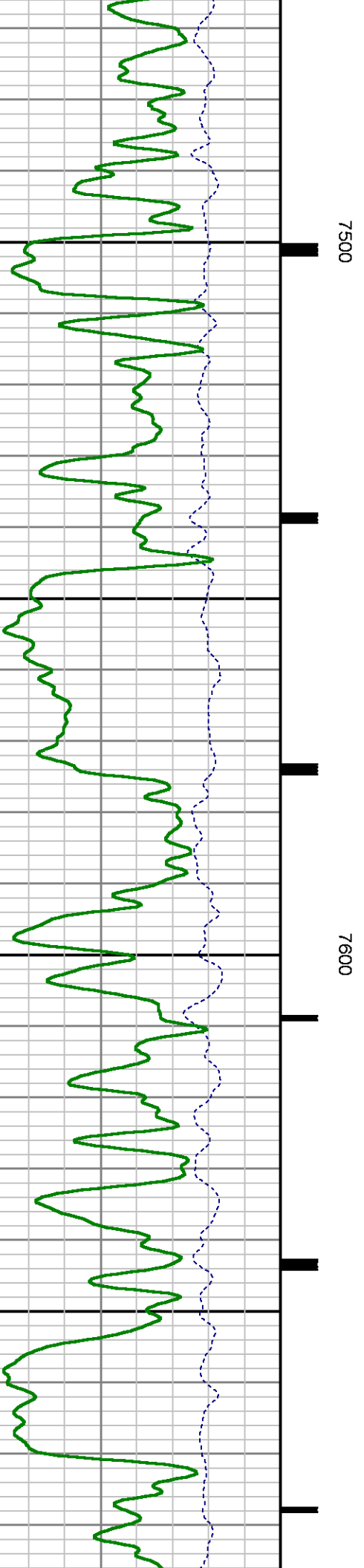
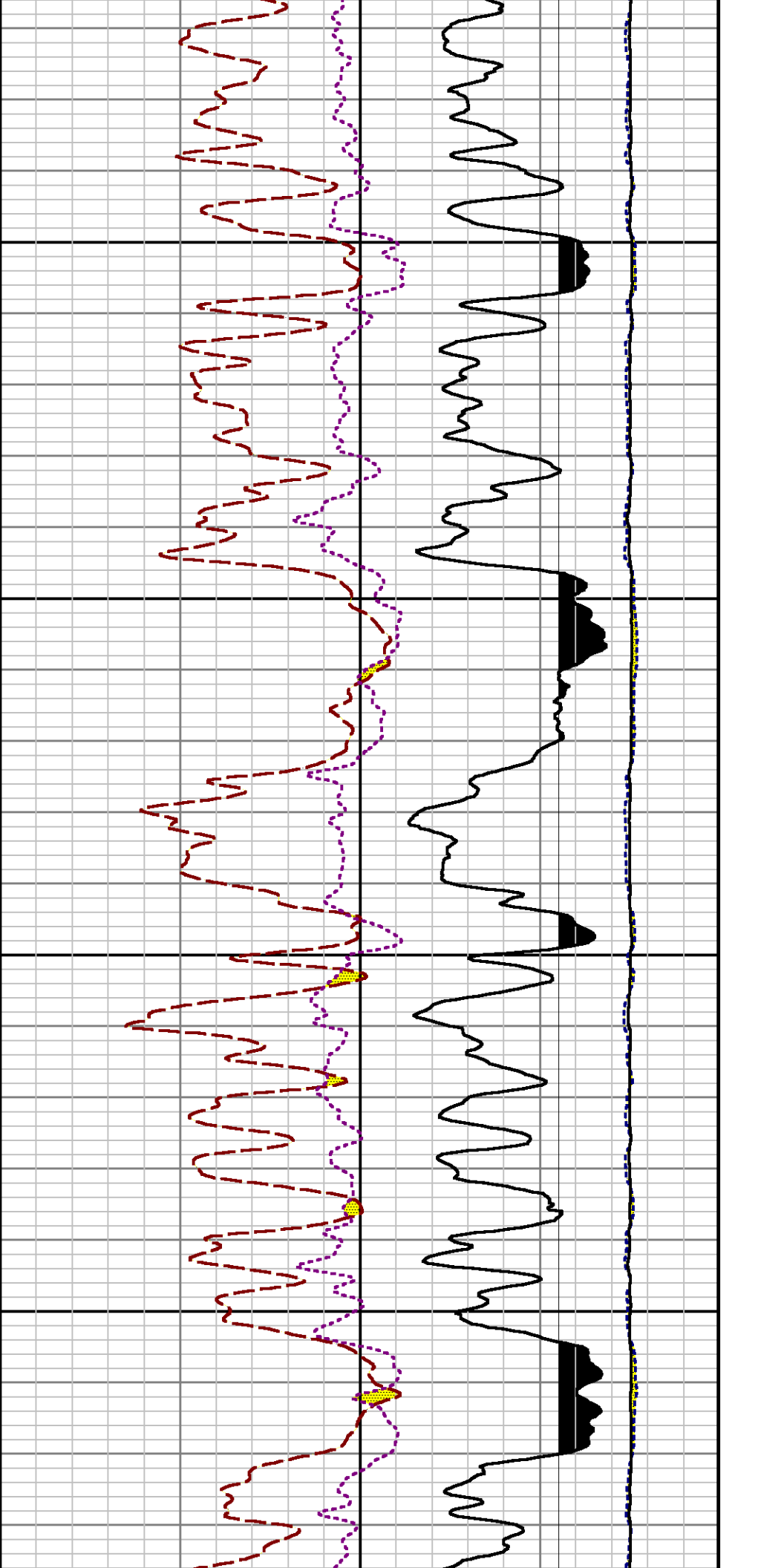


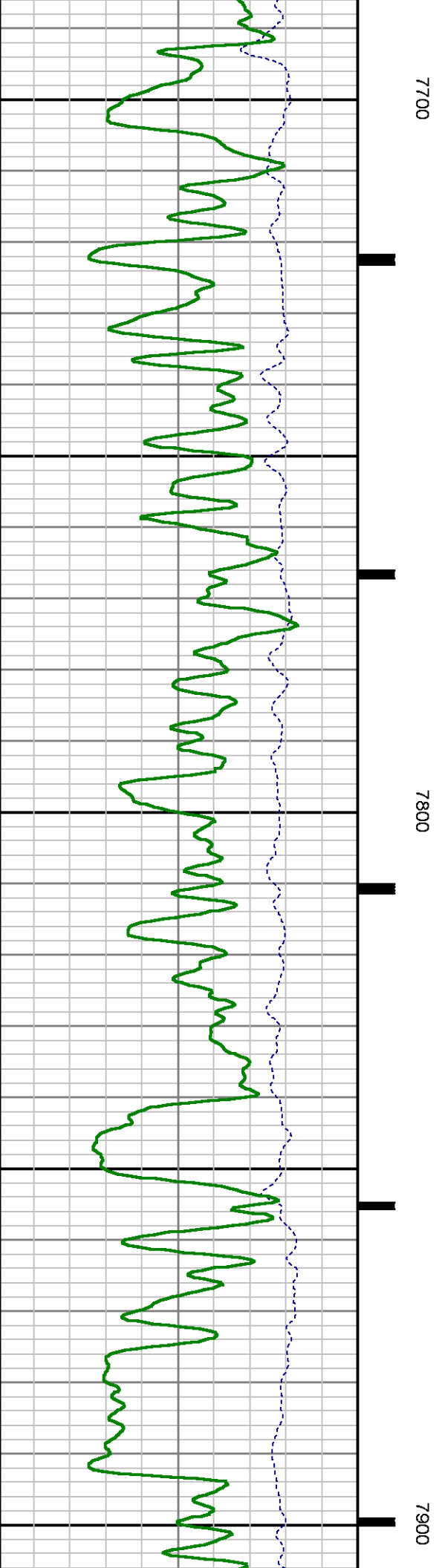
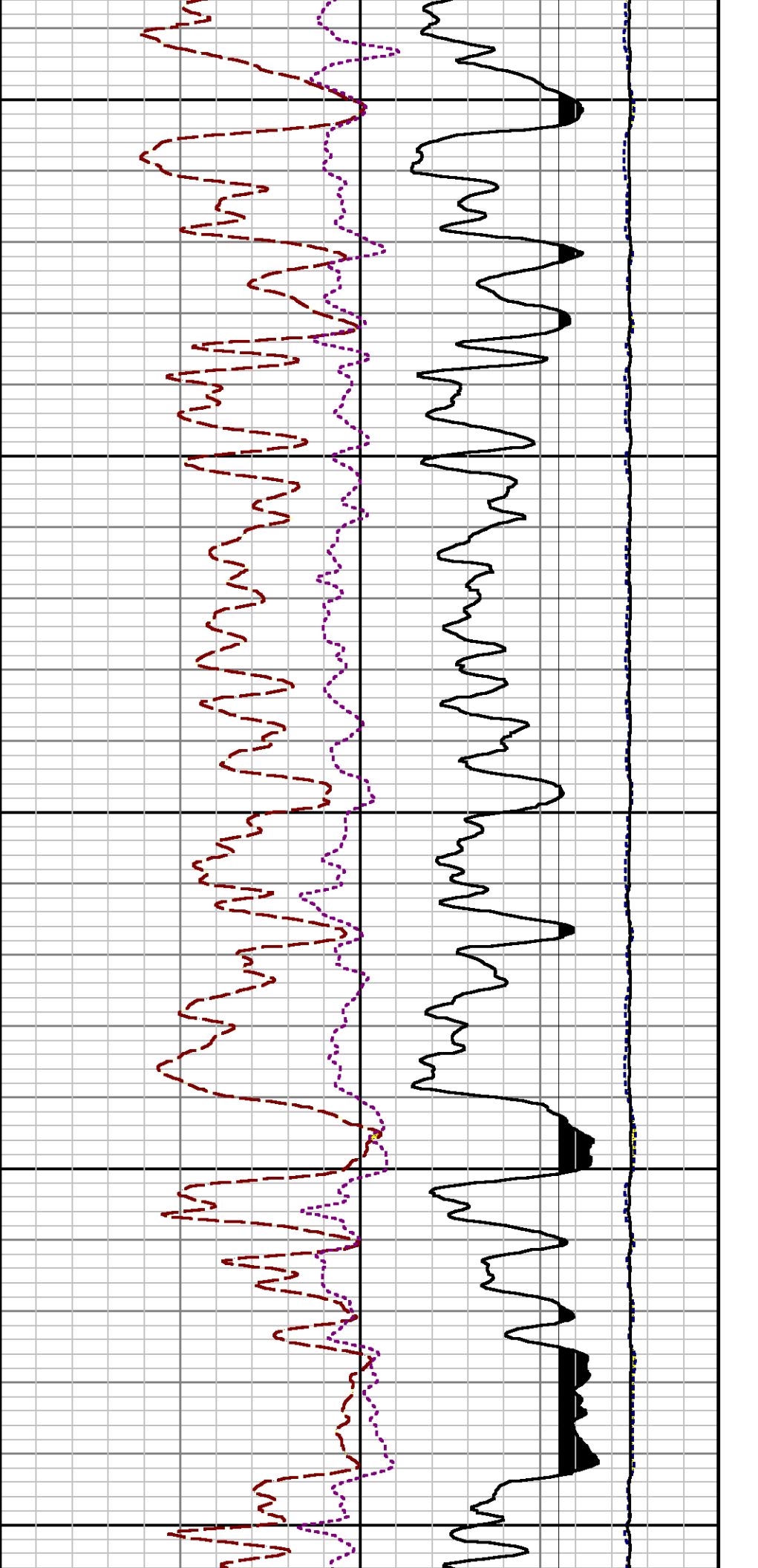
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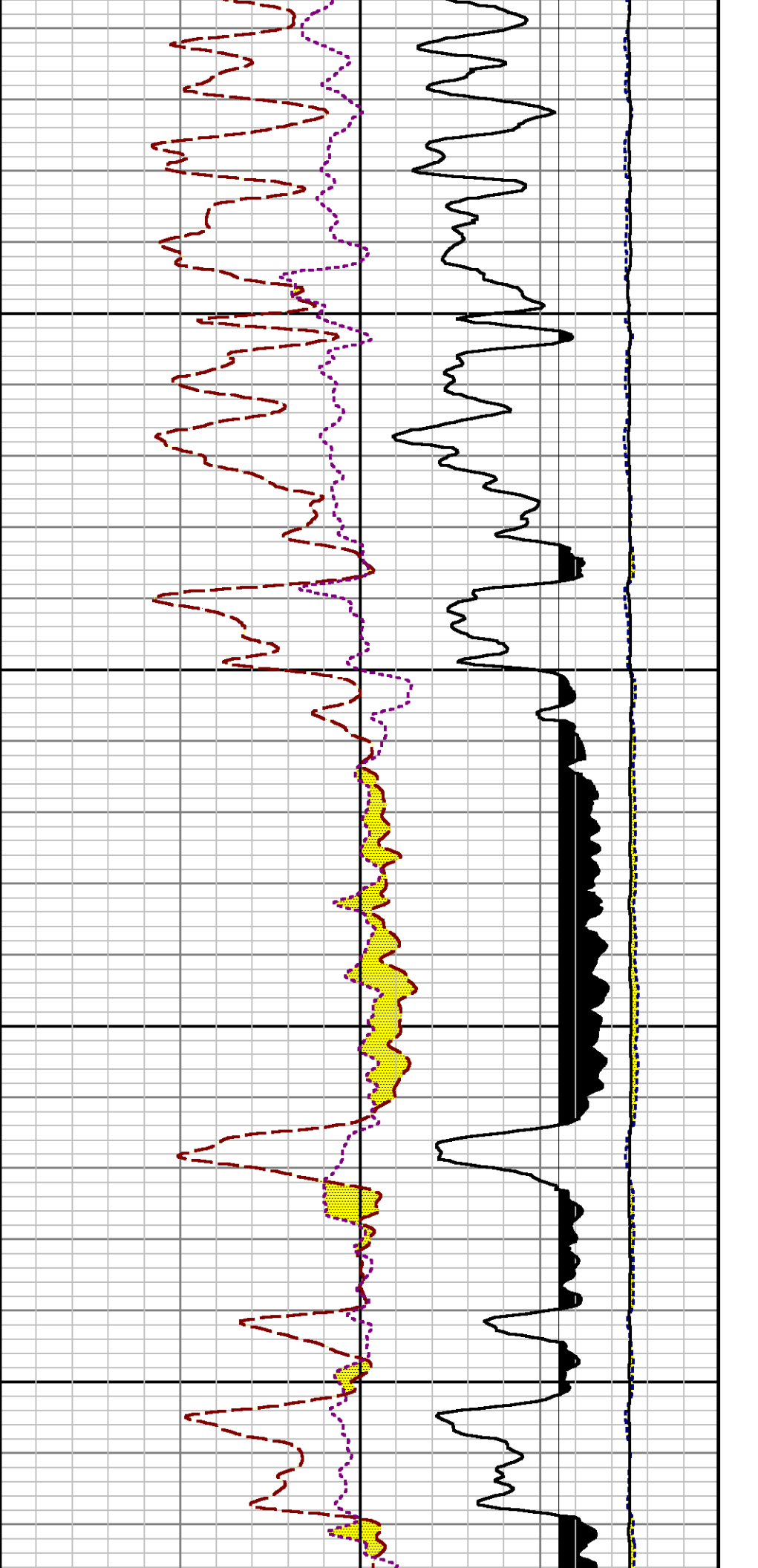
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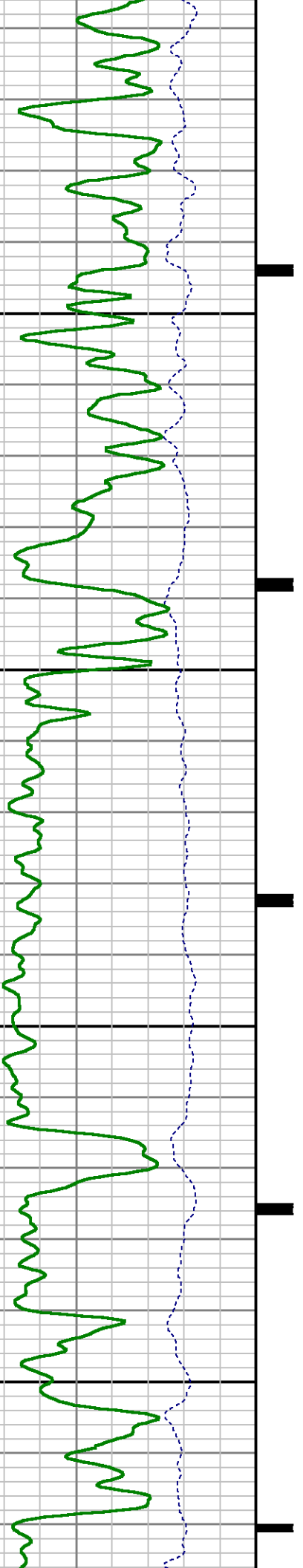


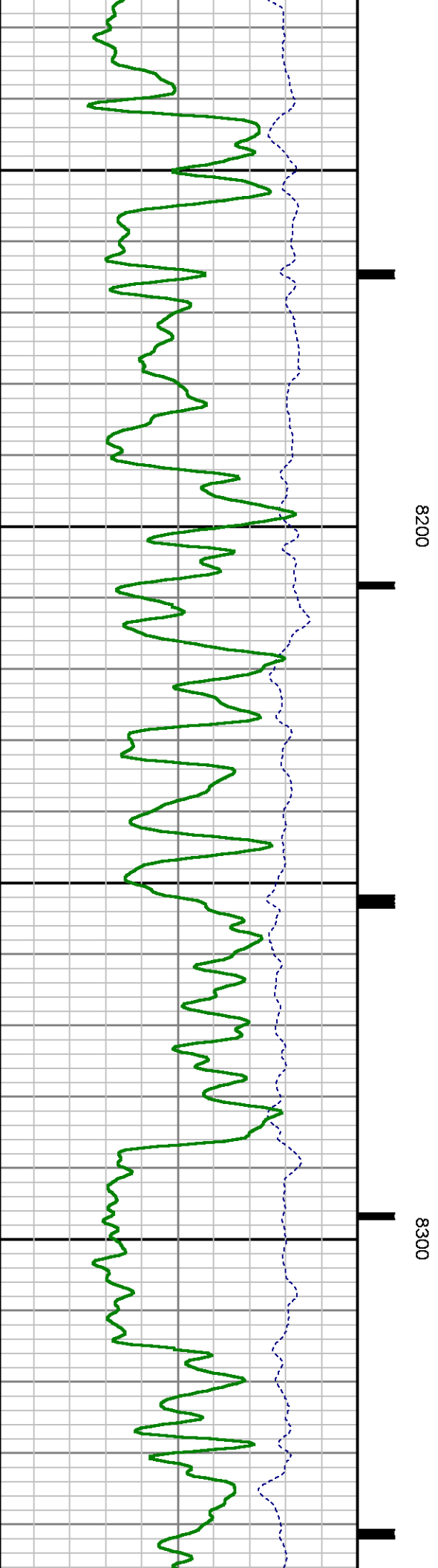
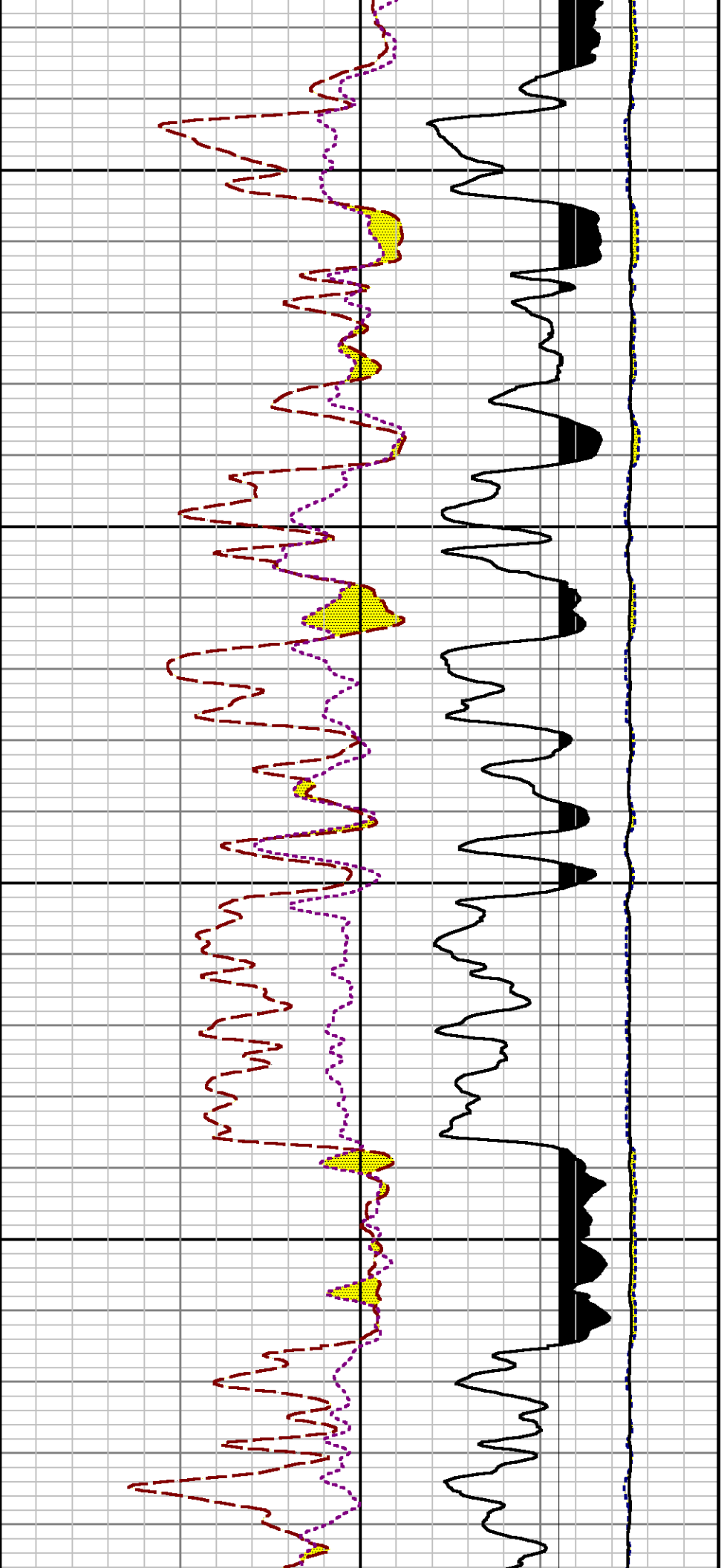


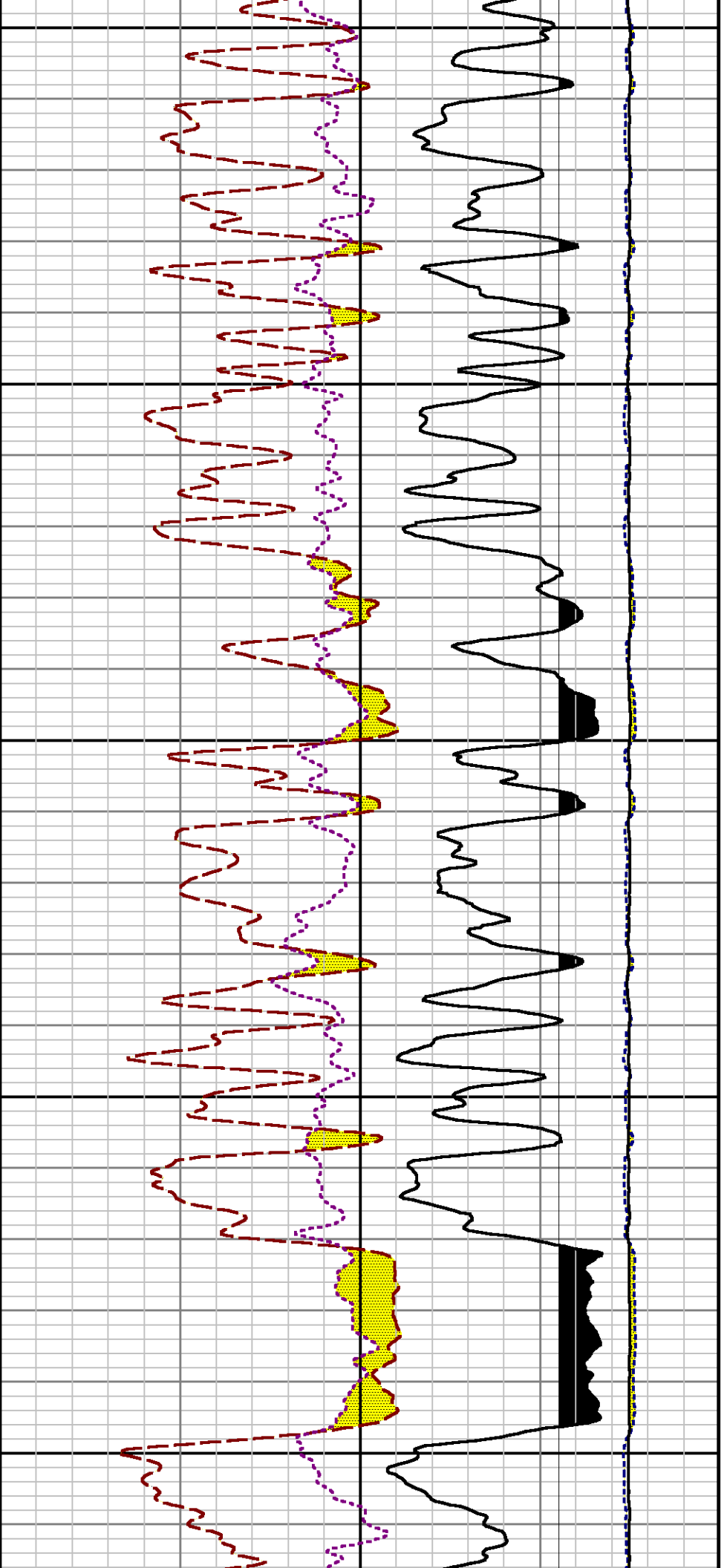


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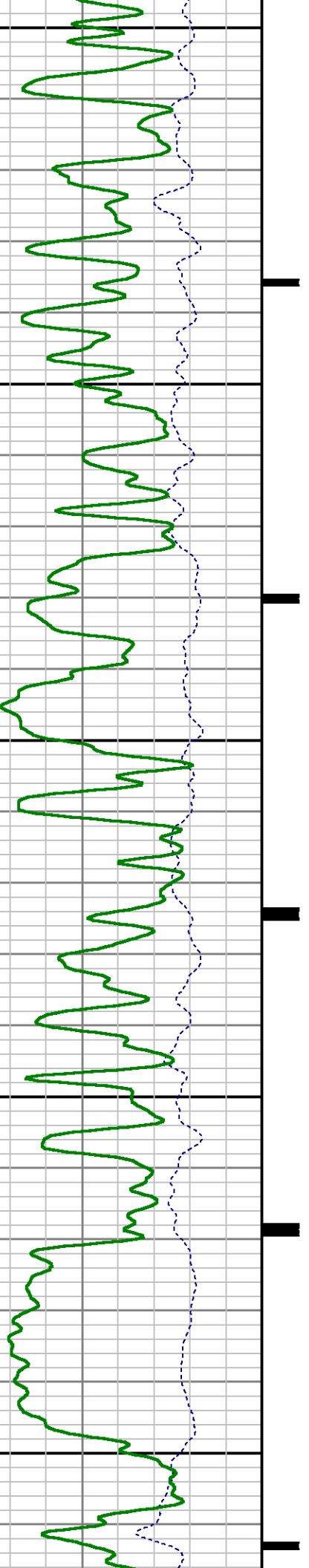


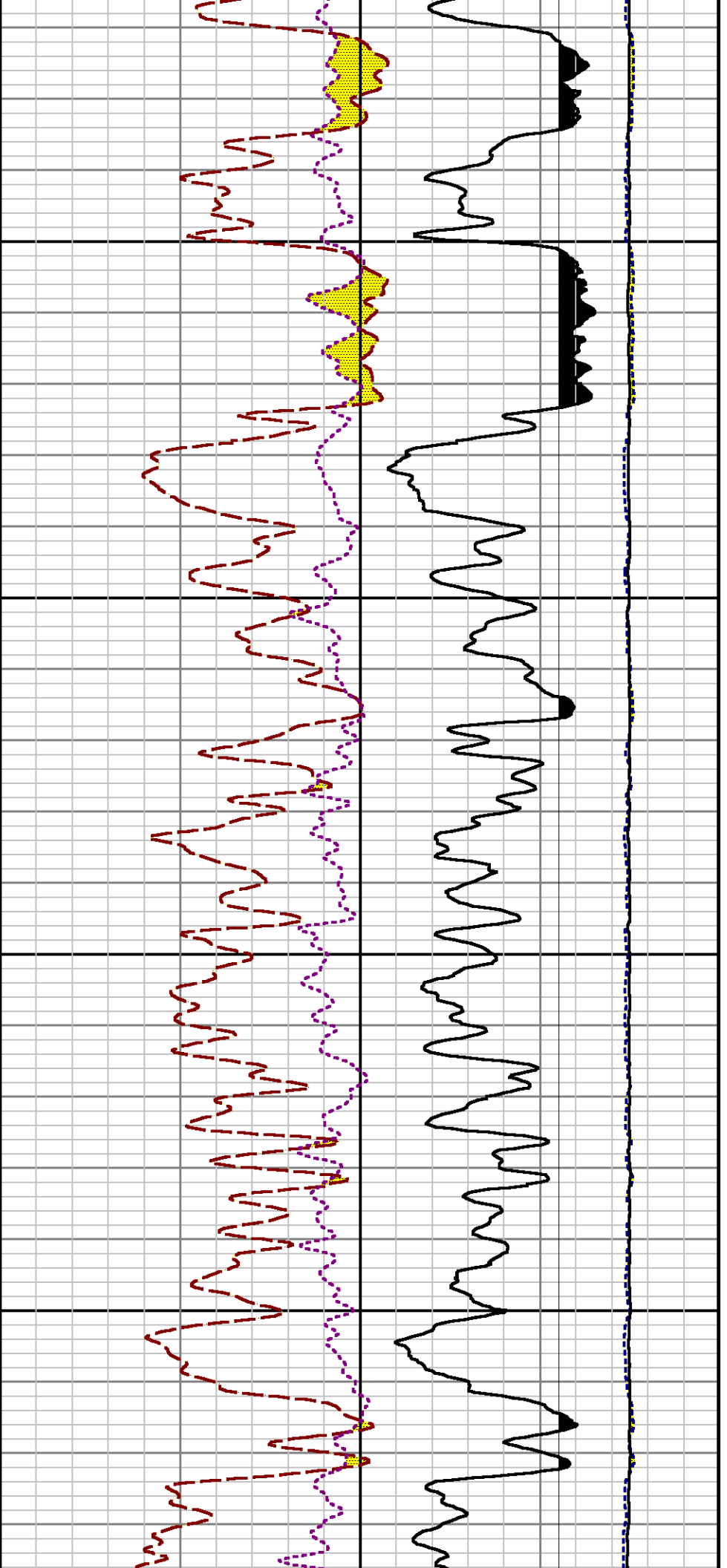




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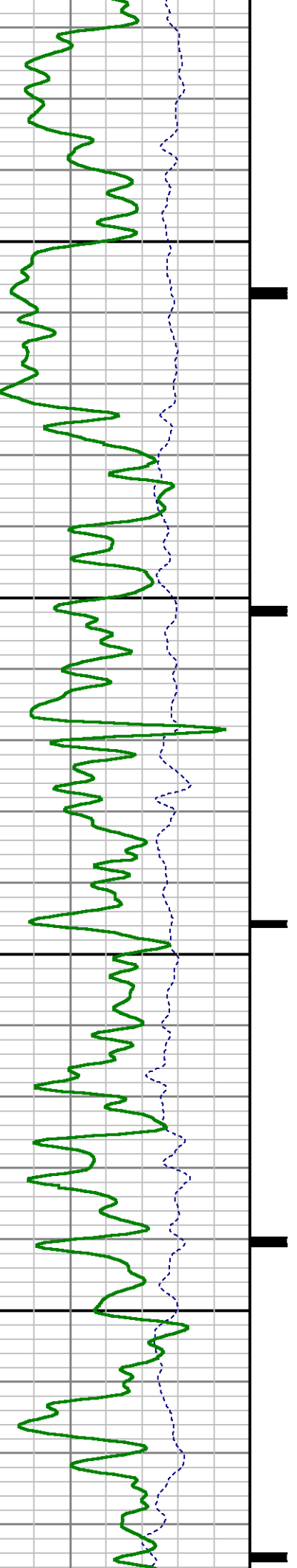
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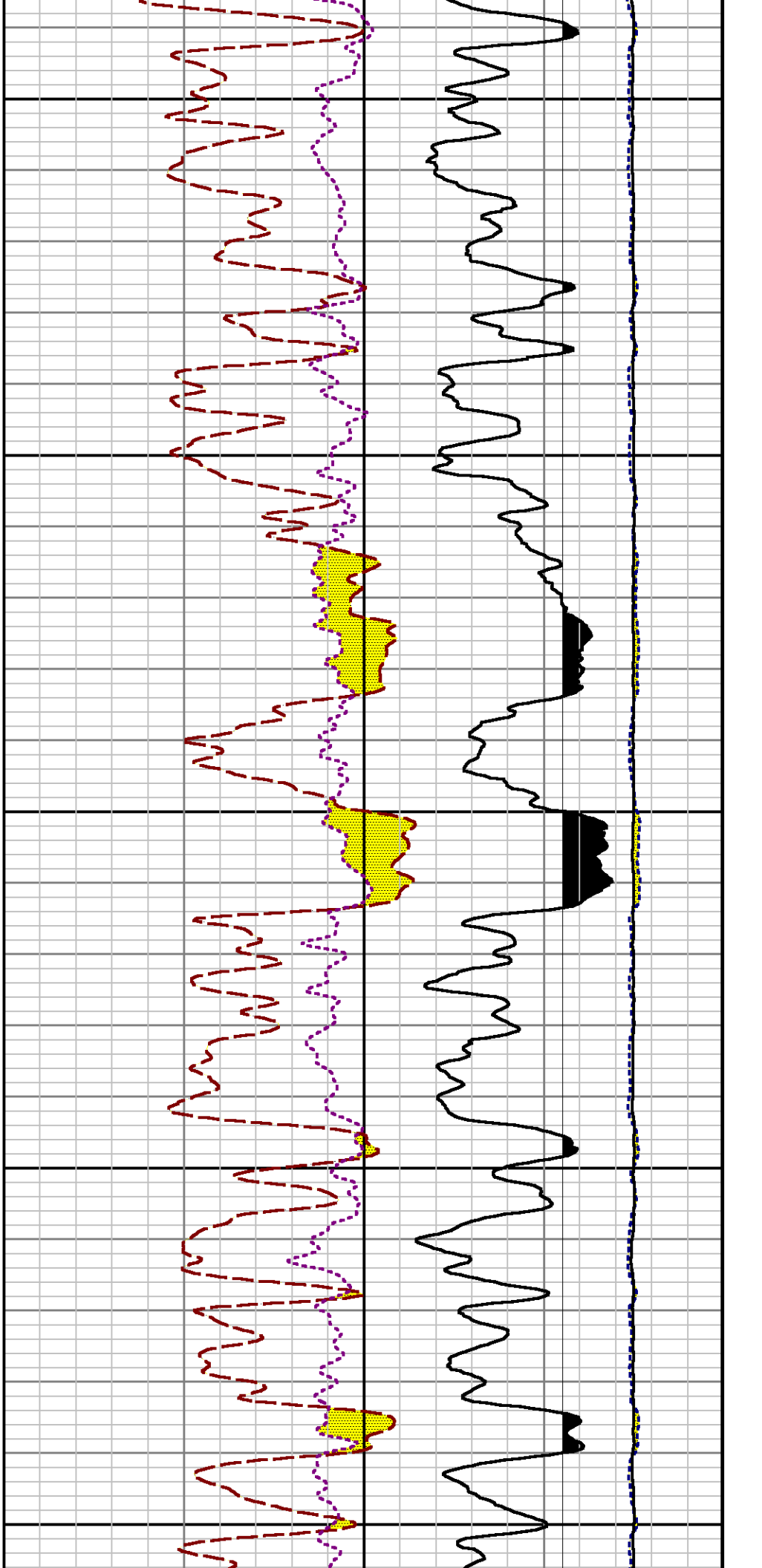
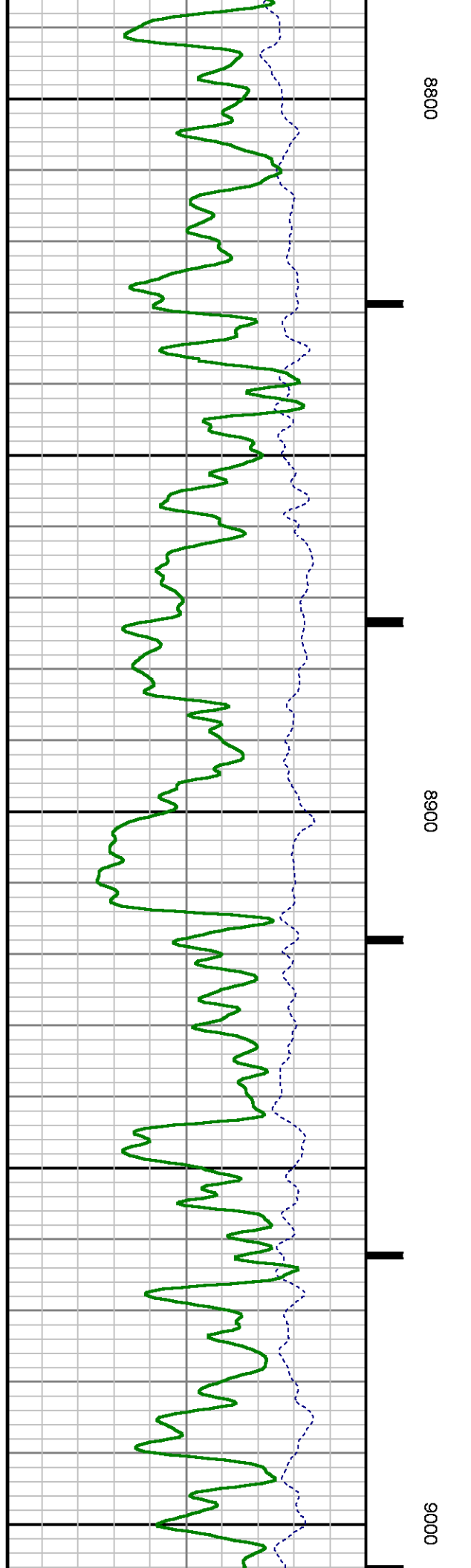


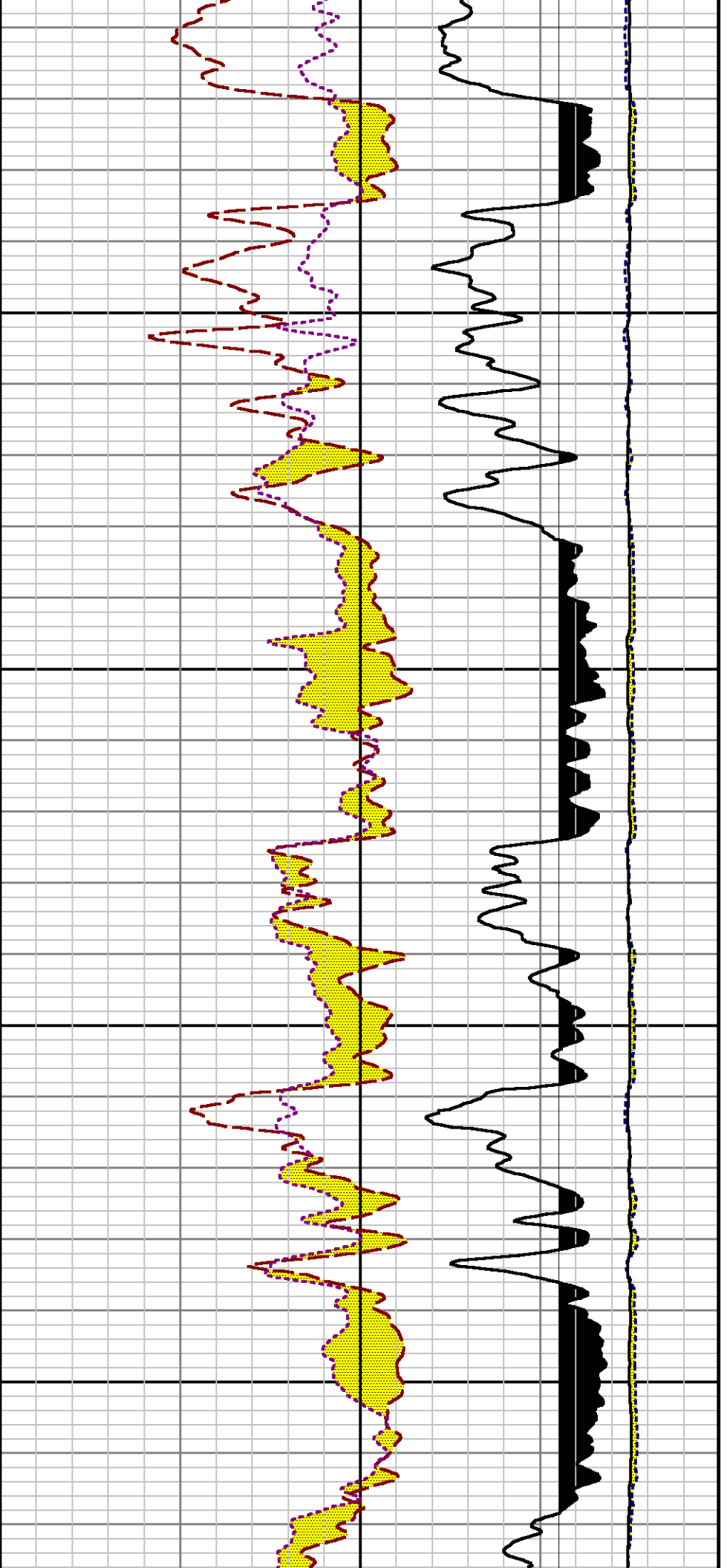


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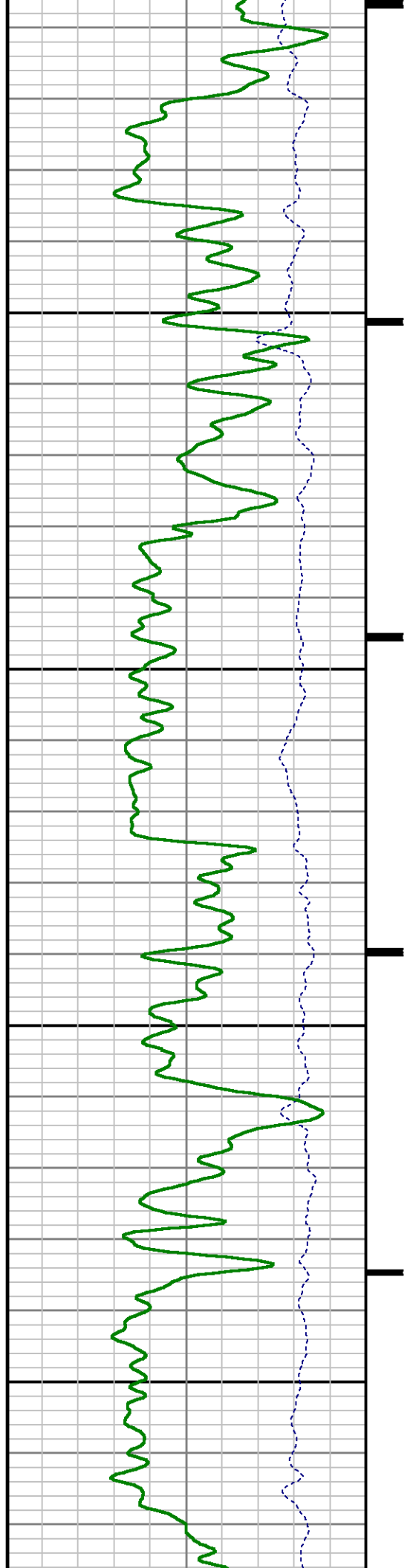


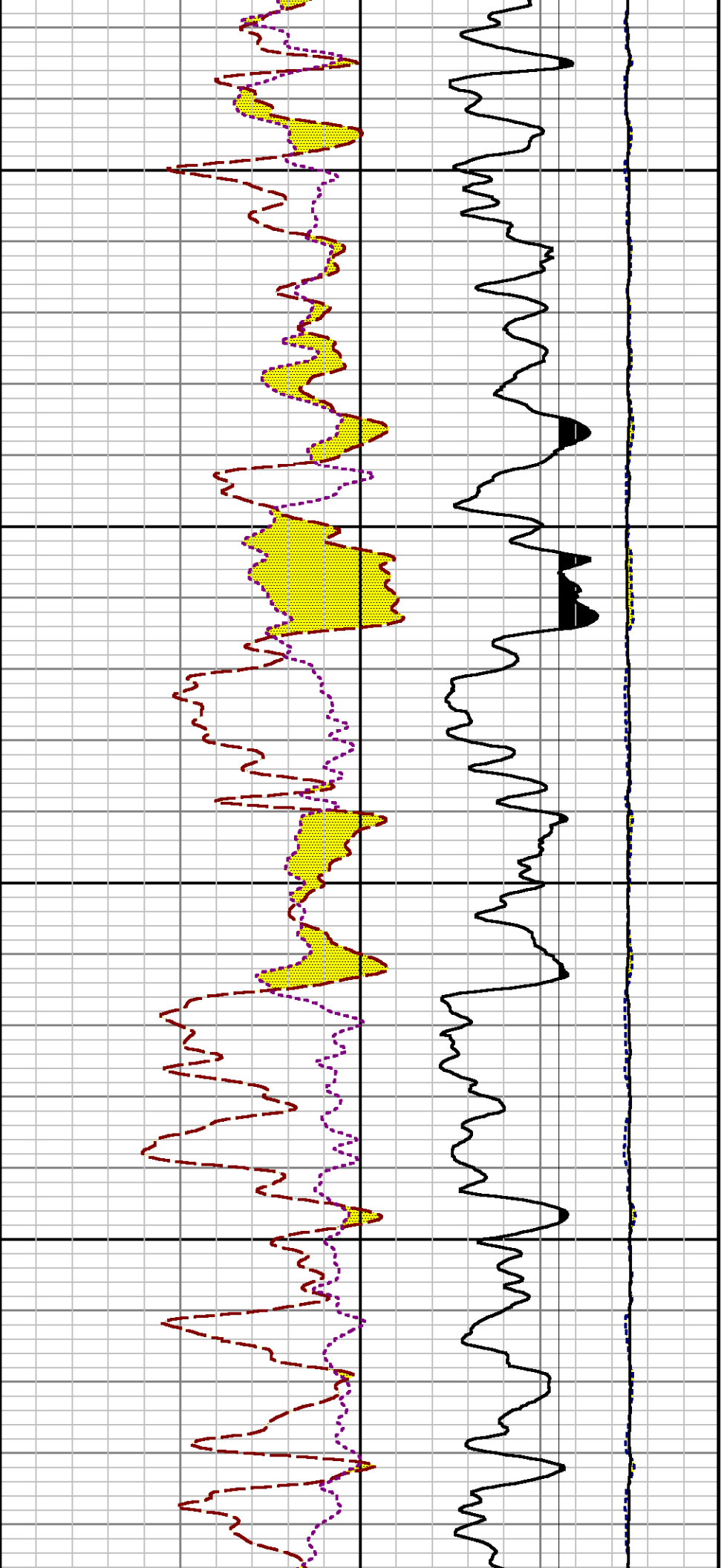




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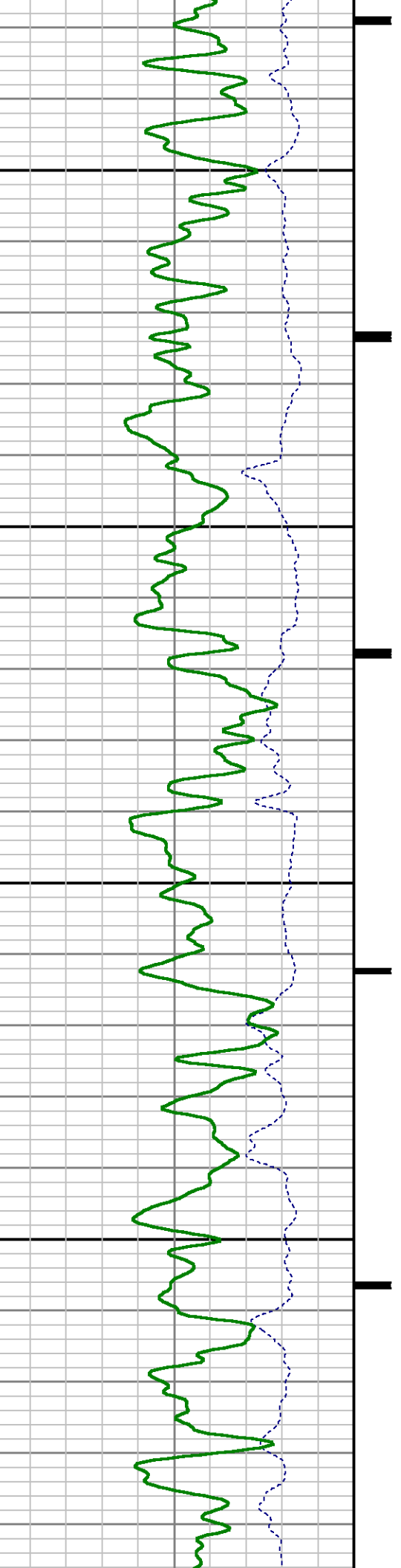
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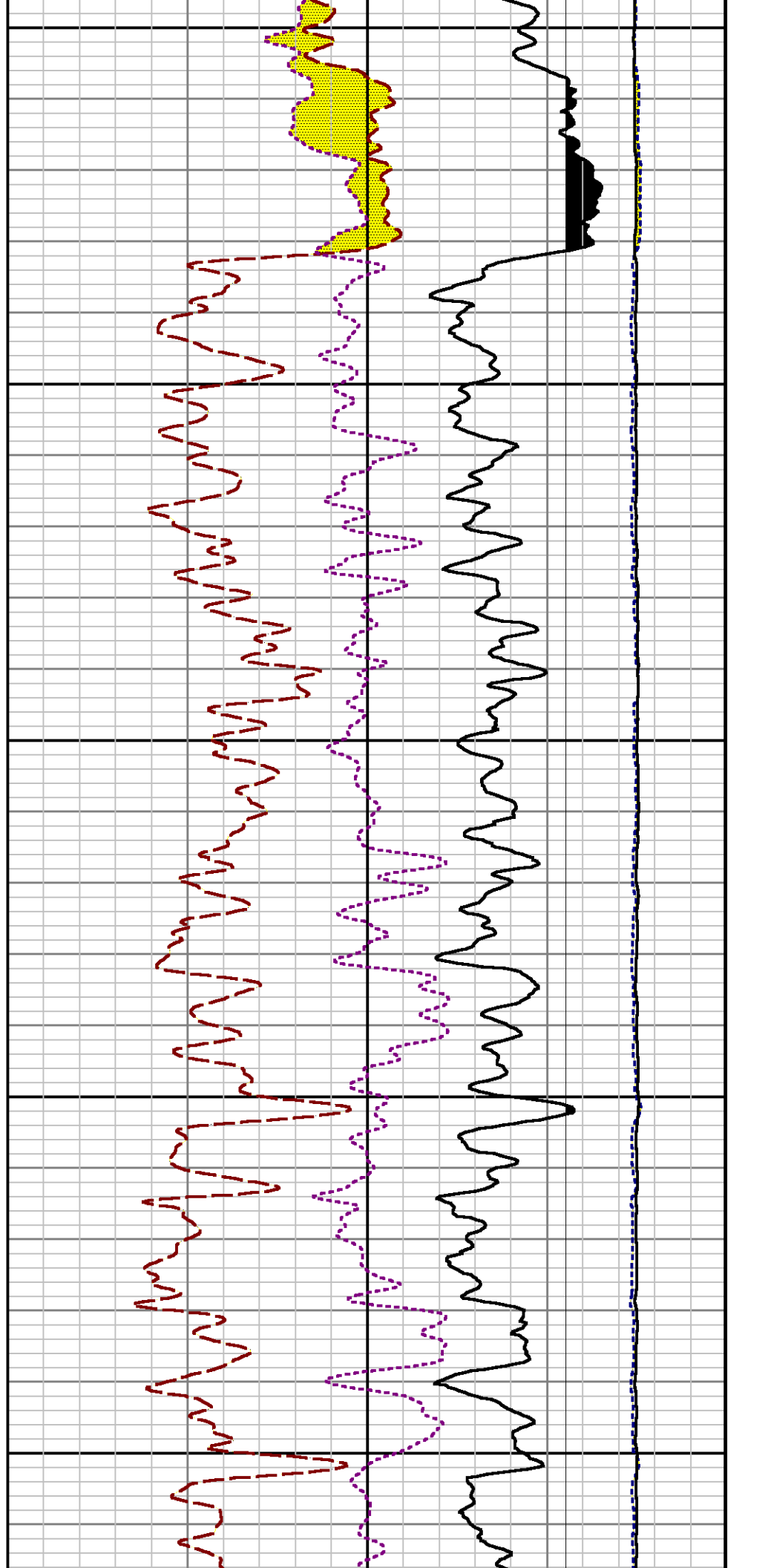
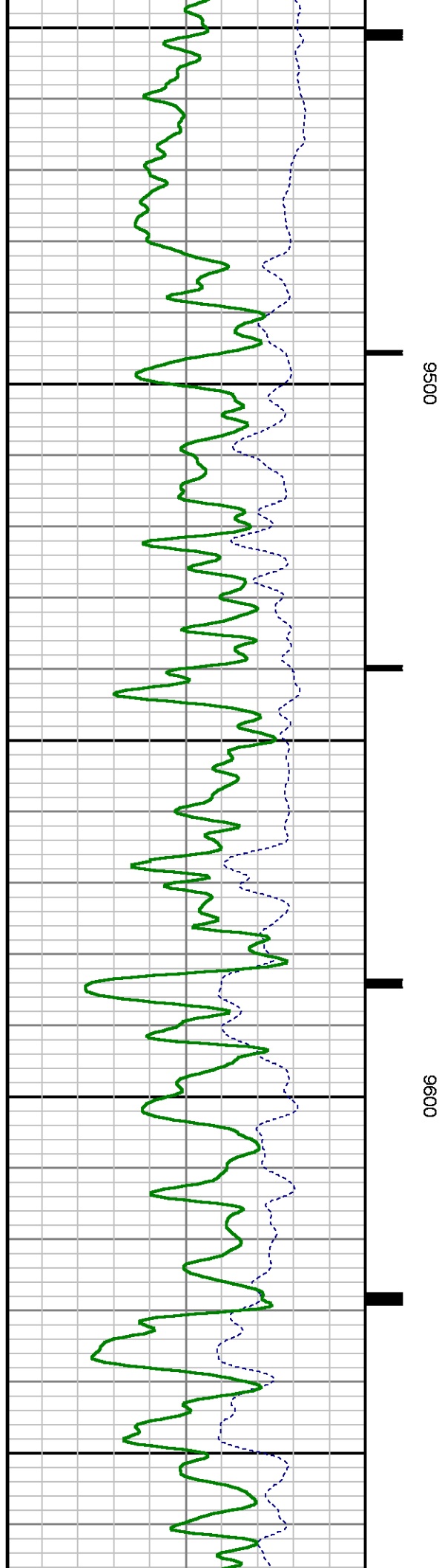


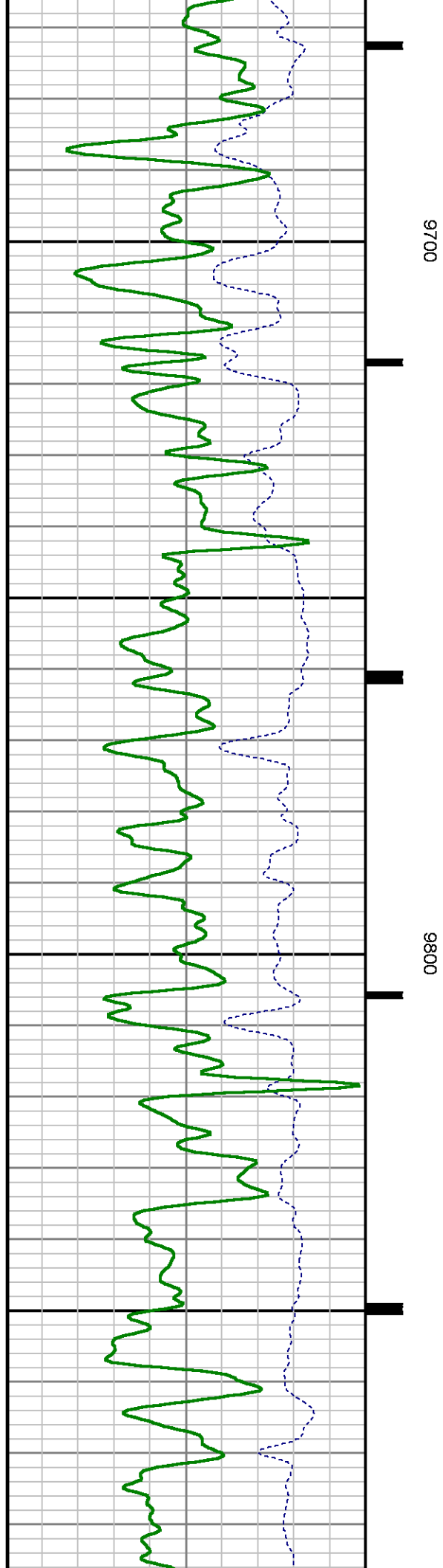
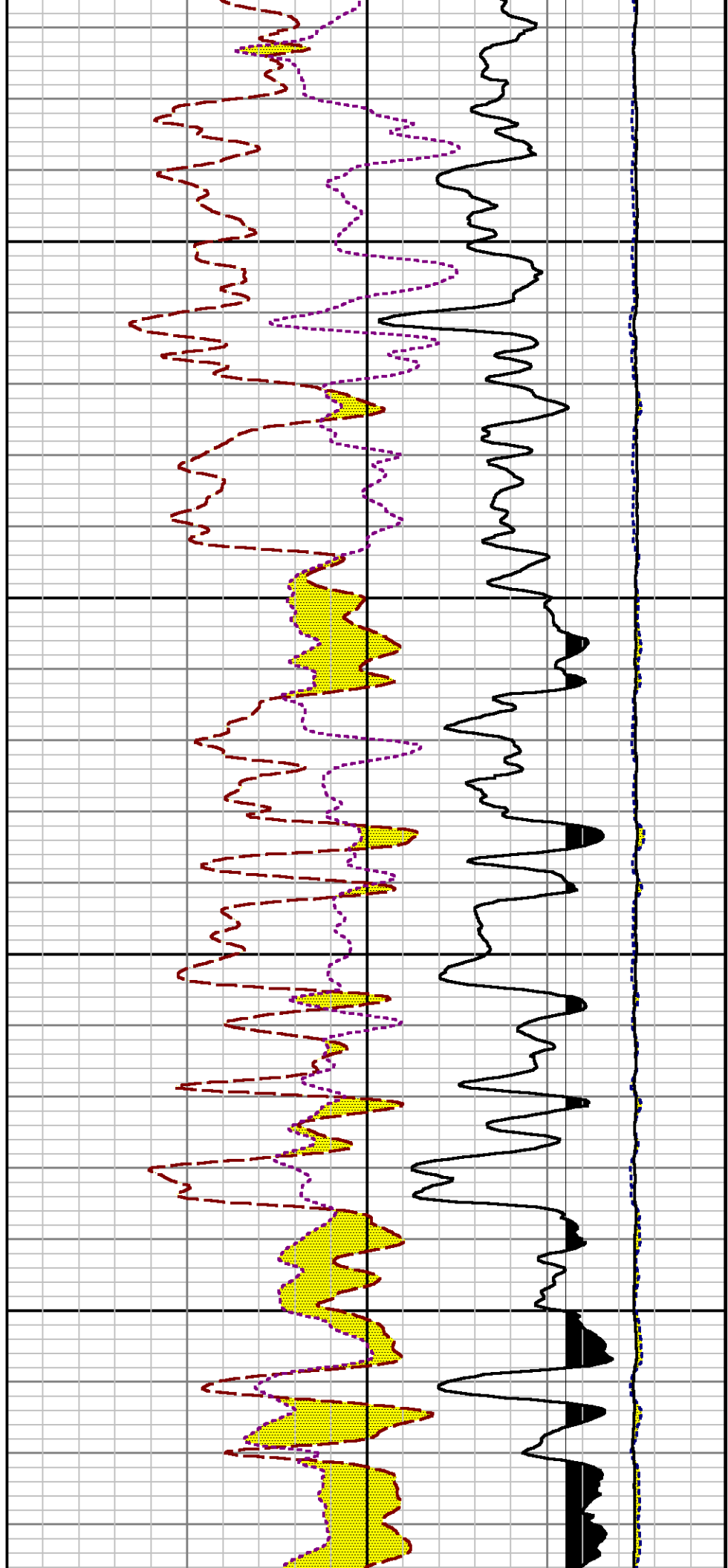


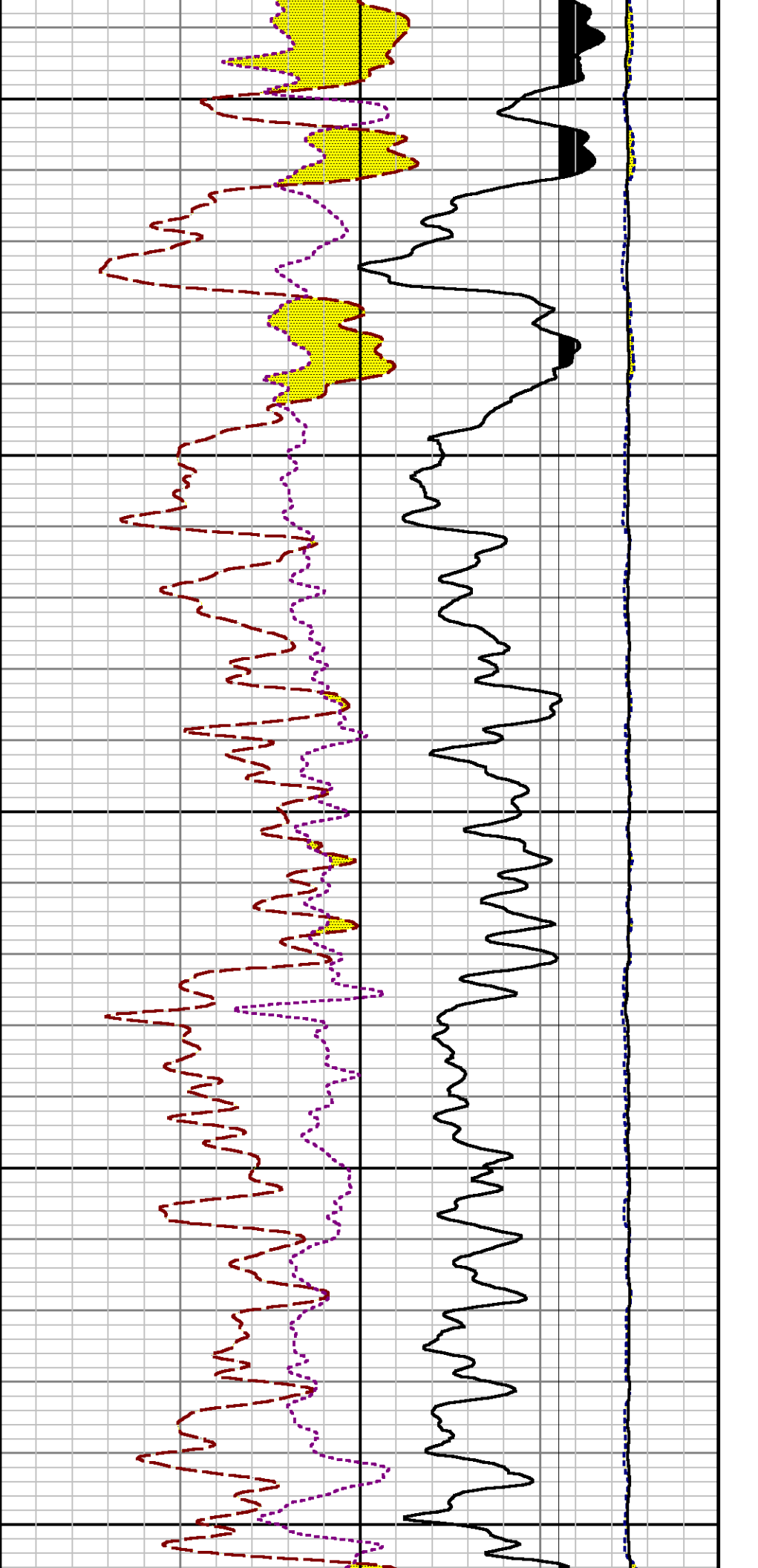
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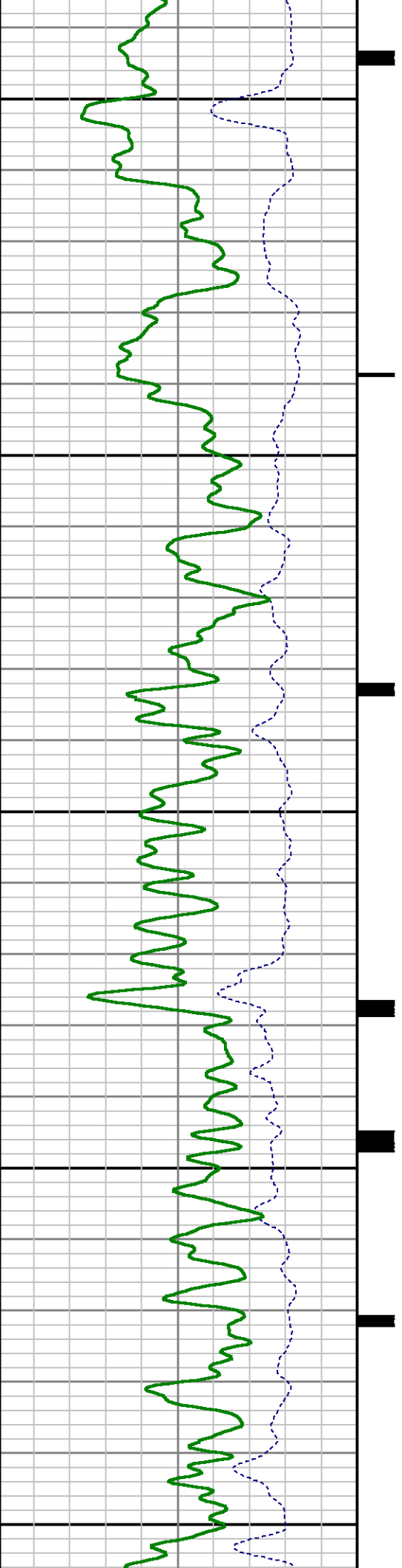


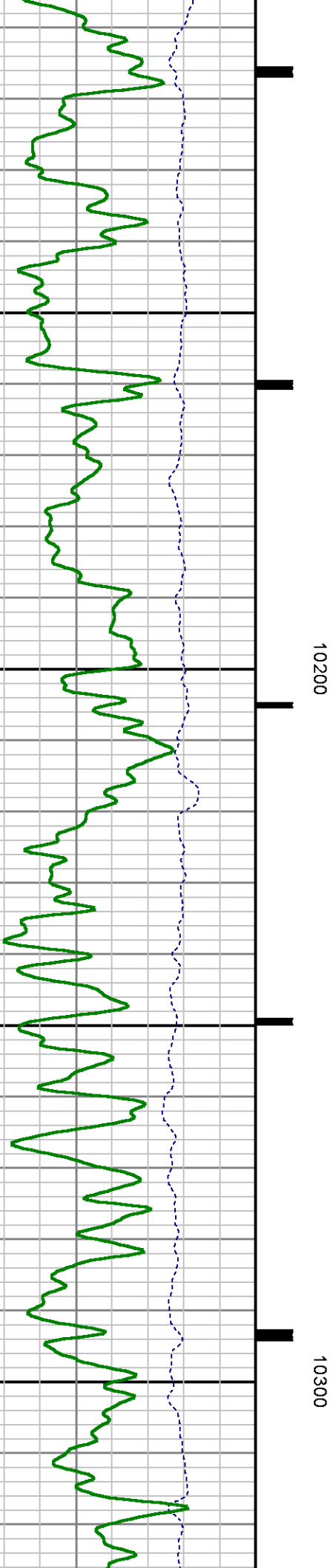
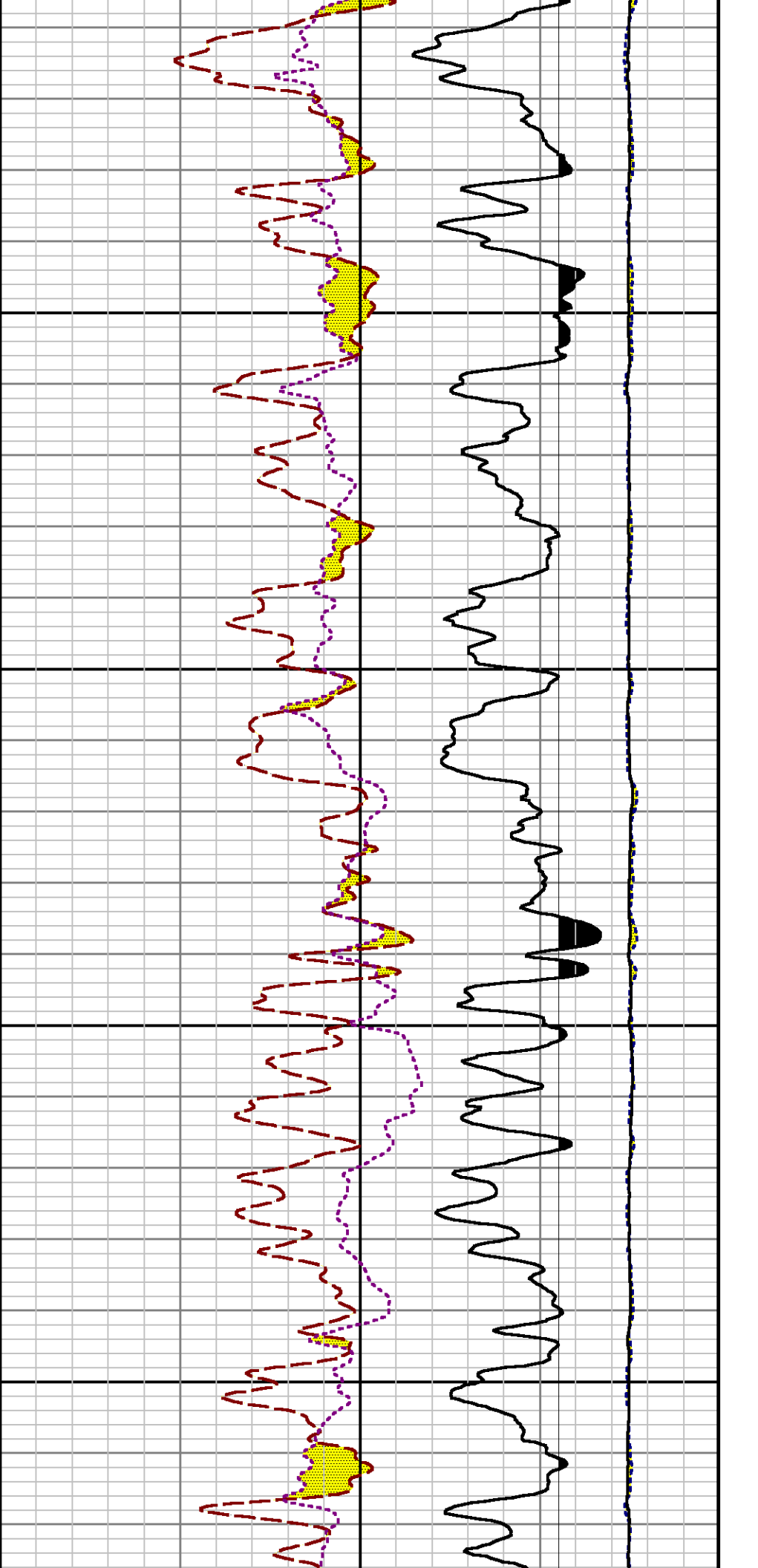


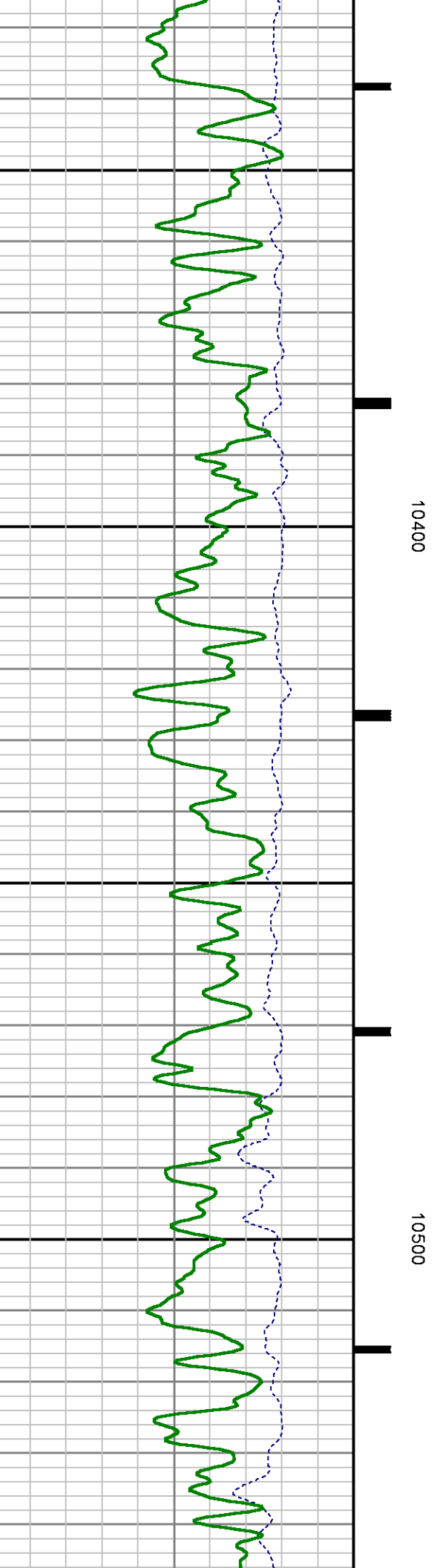
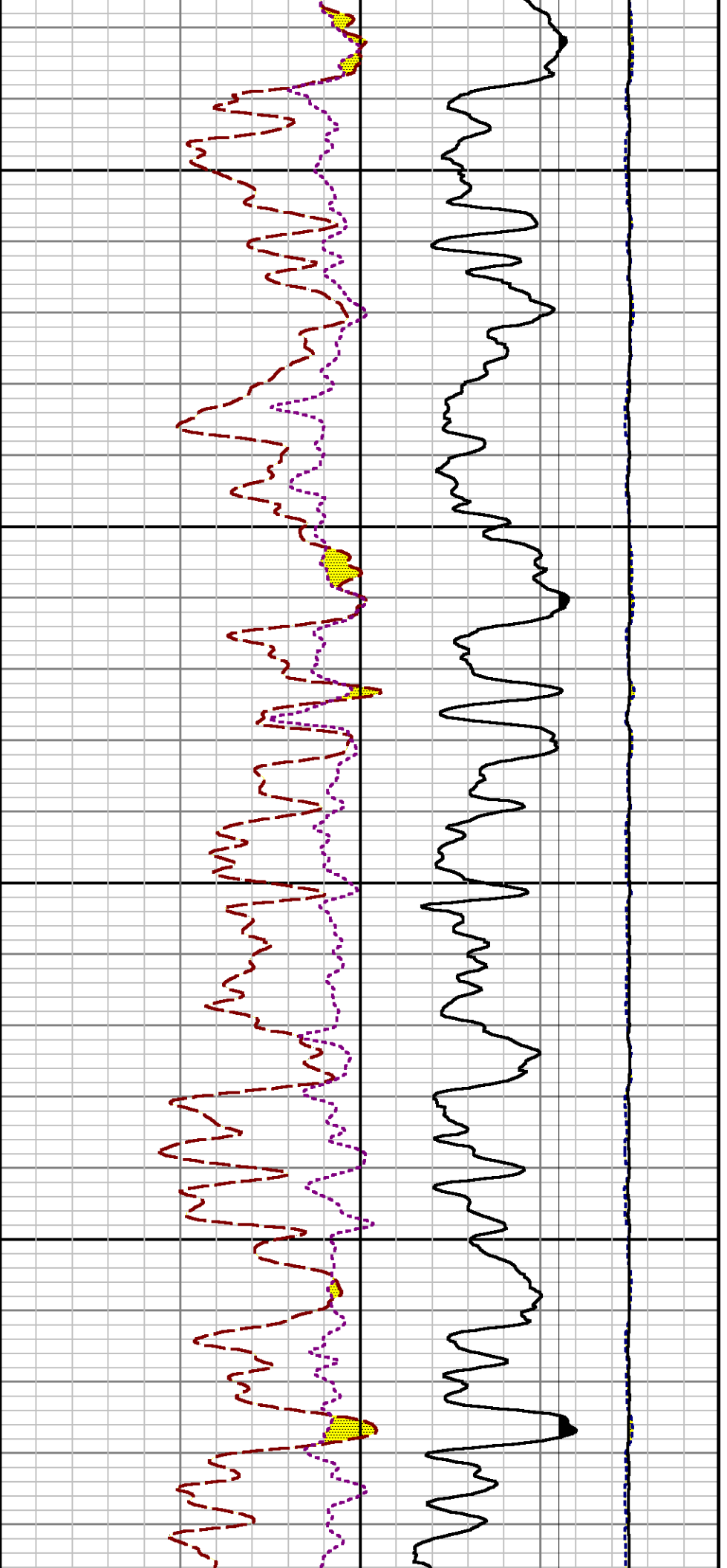
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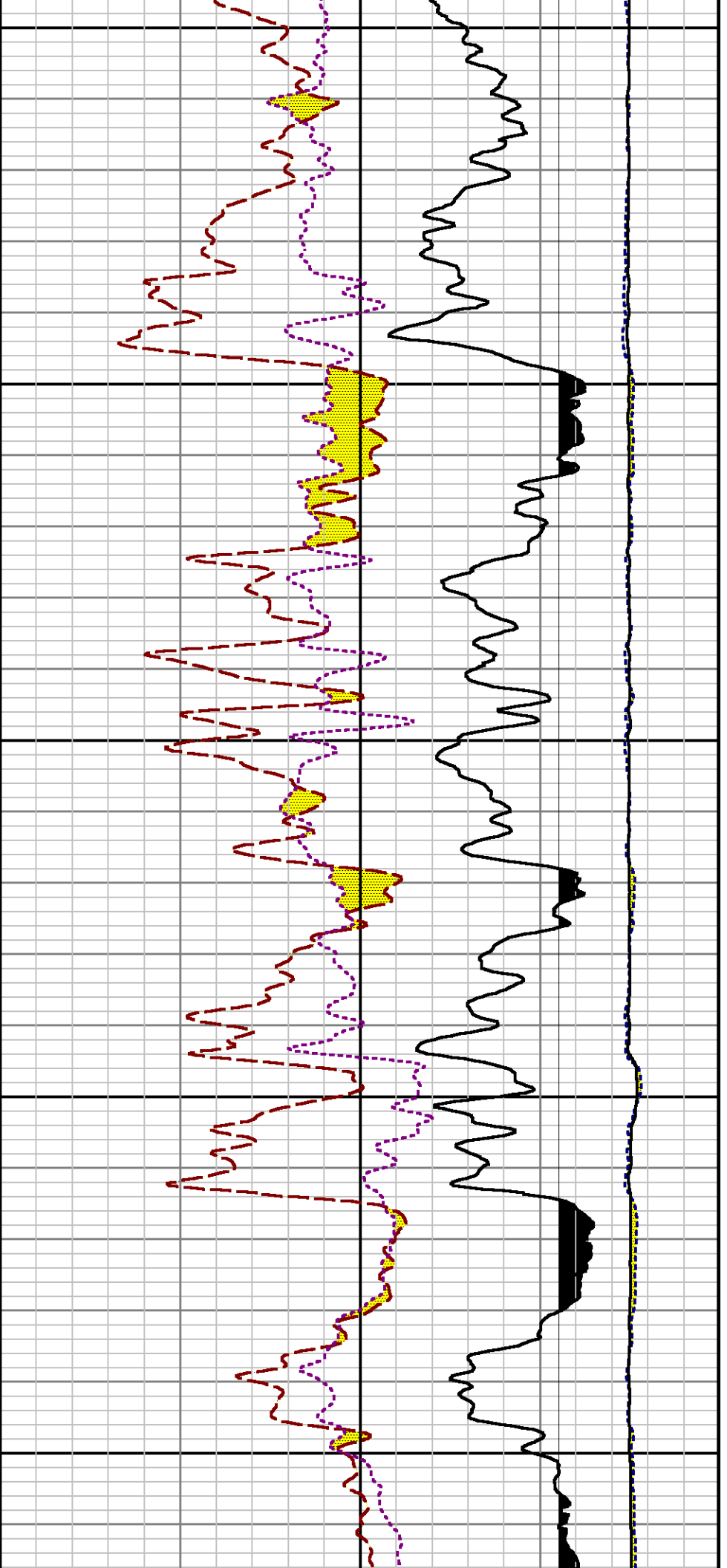
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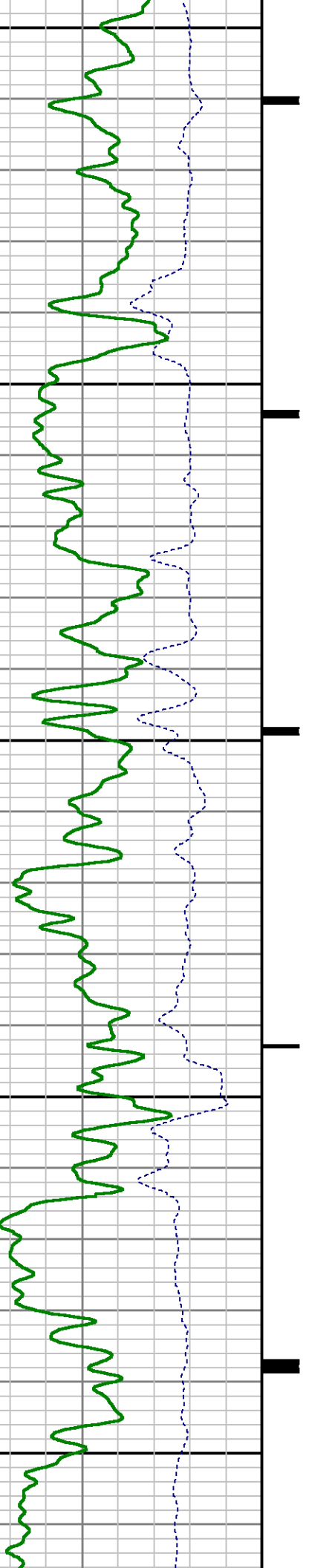


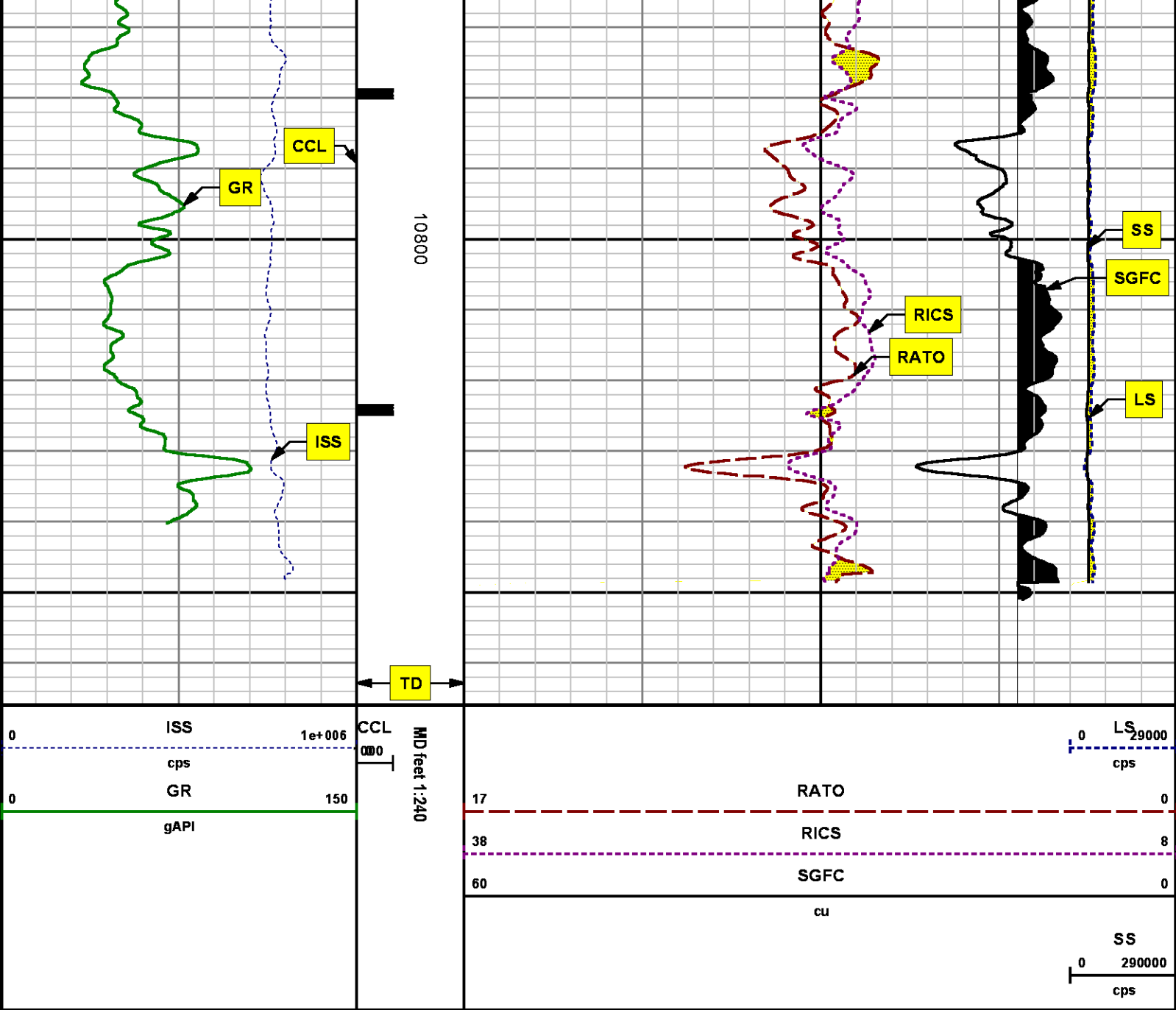




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10700





REPEAT SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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PNC Porosity	Borehole	Cased		10197.184	10510.290
PNC Porosity	Borehole Size	8.750	inch	10197.184	10510.290
PNC Porosity	Casing Size	4.500	inch	10197.184	10510.290
PNC Porosity	Gas Filled	Non Gas Filled		10197.184	10510.290
PNC Porosity	Matrix	Sandstone		10197.184	10510.290

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-14.478	FLTM
8248ED	-12.478	CCL CHV
2812LA	-9.928	GR
8281XA	-0.662	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	-0.250	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	0.000	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 RONE13 RPORR

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

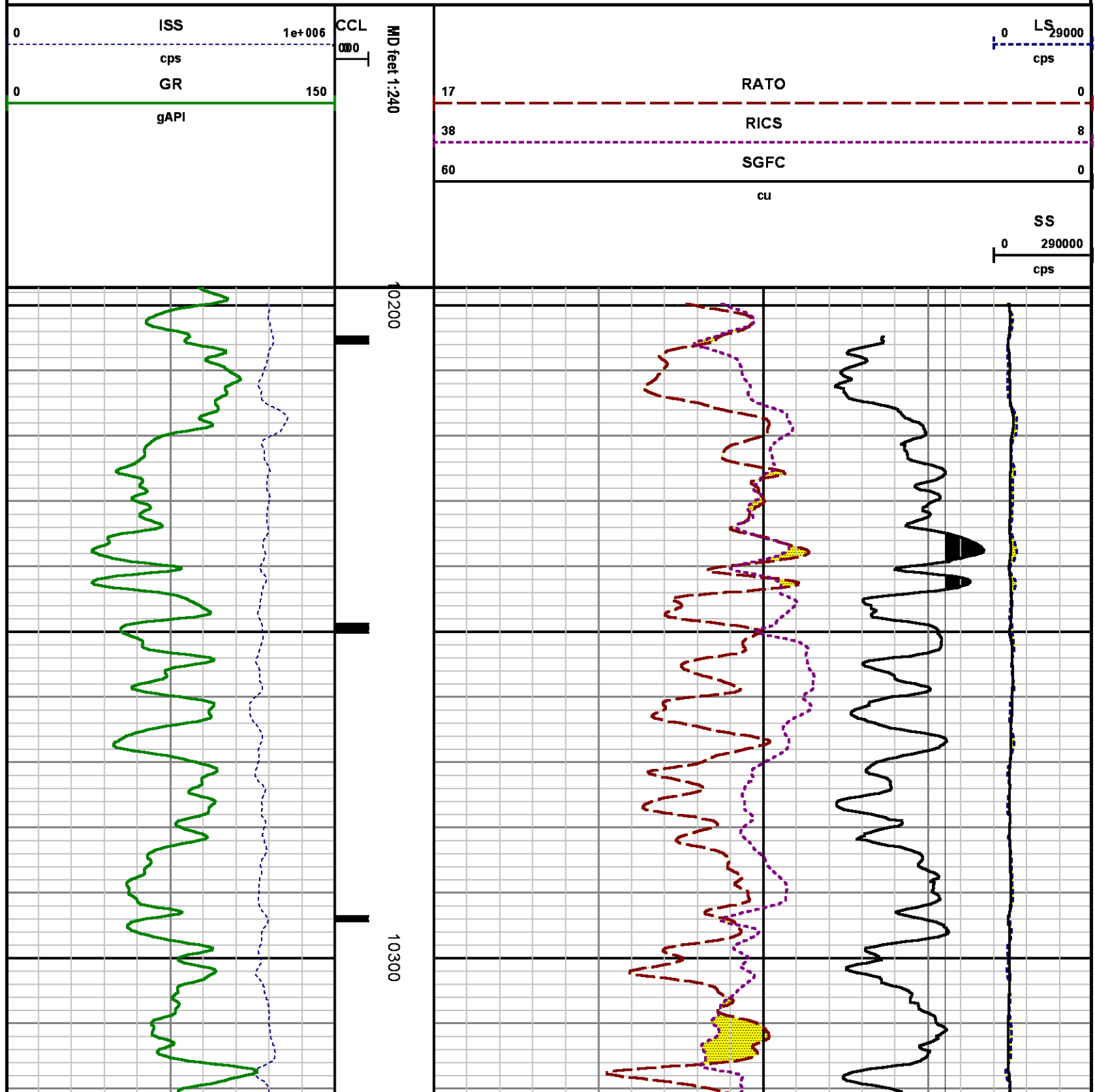
Well : FEDERAL BCU 542-30-198

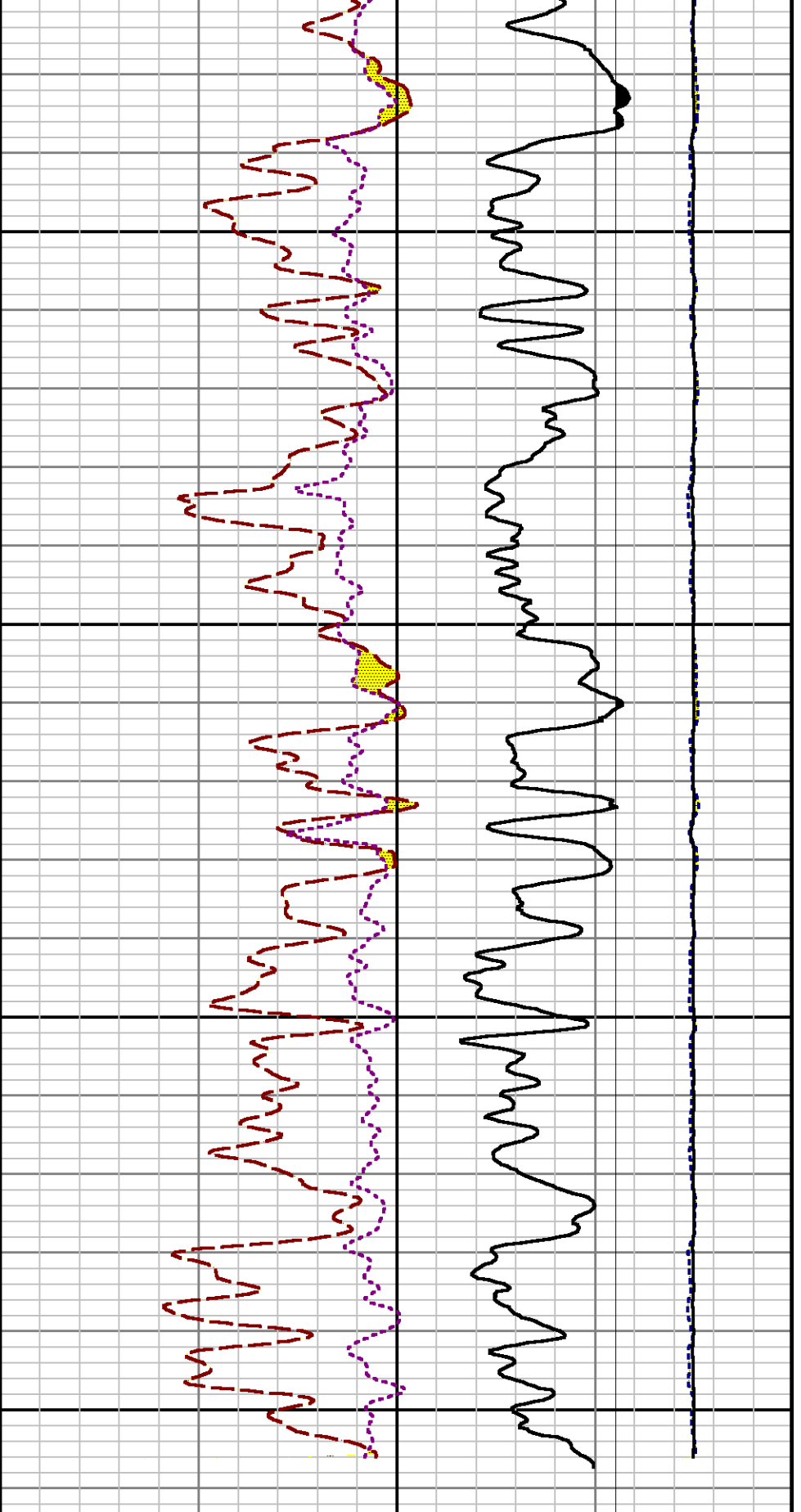
File Name : d:\welldata\wpx\bcu 542-30-198\542rpm\rpm.xtf

Mode : PlotMgr 5.4.504

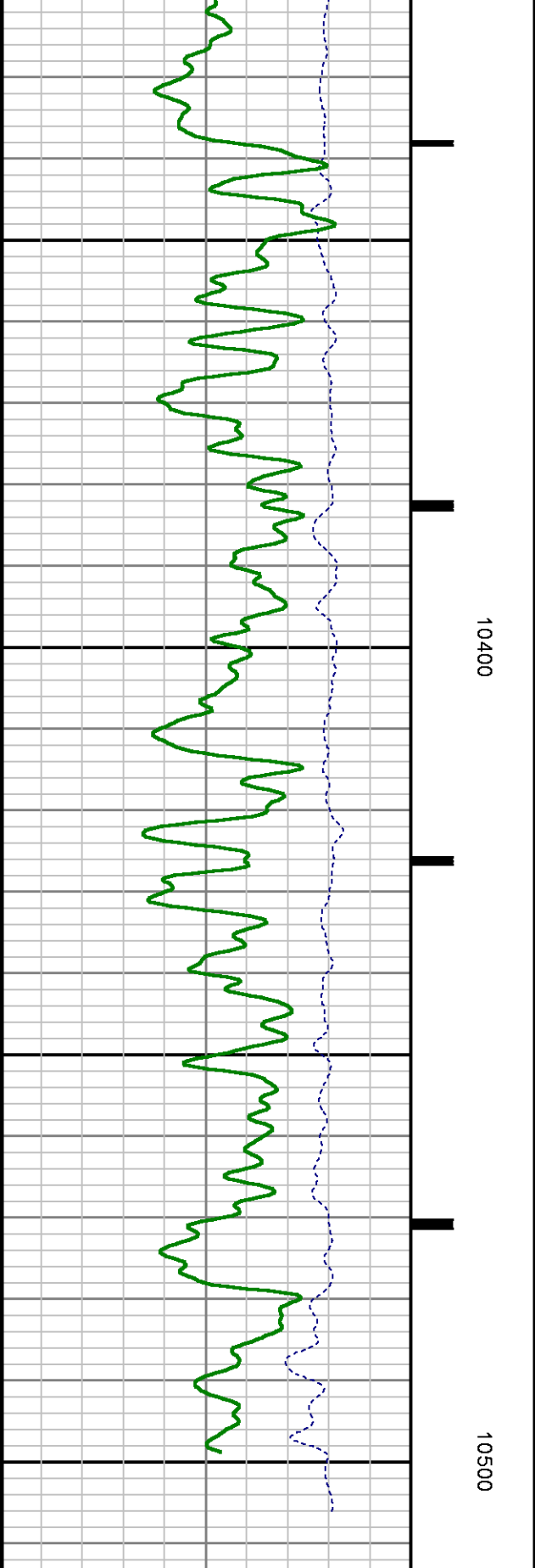
Interval : 10197.29 - 10513.29 feet UP

Created : 9/26/2014 11:02:41 AM





0		LS ₂₉₀₀₀	0
		cps	
17	RATO		0
38	RICS		8
60	SGFC		0



0		ISS	1e+006	CCL	MD feet 1:240
		cps		000	
0		GR	150		
		gAPI			

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\38515.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 15 07:23:36 2014 TOOL SERIES: 2812LA ASSET: 385 SEQ: 15

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	85.63	306.18	0.952	81.54	291.54	210.00

Verification File: C:\case\calver\GR\38515.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Mon Sep 15 07:27:22 2014 TOOL SERIES: 2812LA ASSET: 385 SEQ: 15

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	85.13	310.48	0.952	81.06	295.63	214.57

PNC

Calibration File: C:\case\calver\PNC\25117.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Sep 17 13:32:09 2014 TOOL SERIES: 8281XA ASSET: 251 SEQ: 17

Calibrator #

2437XB 112674

Source #

8281AA 10220684

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	816811	123.00	2297.00	2292.00	2306.00	108.96	7.00	0.9925
Interpolated	1300000	142.22	2278.61	2286.35	2301.44			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	816811	7824.32	1325.50	169.22	25.76	0.14	24.27	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	816811	169831.69	26829.93	88232.01	31440.33	8315.89	53438.83	13288.97
Fit Quality %		0.64	0.57	0.66	0.62	0.64	0.62	0.67

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	816811	1.43	4.81	30.45	15.28	10.61	3.78	4.02
		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 %		0.05	0.09	0.07	0.08	0.03	0.02	0.05
Reduced	1370106	1.43	4.83	30.56	15.35	10.60	3.78	4.02
		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

Calibration File: C:\case\calver\TEMP\120516AU.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: 09 AUG 2010 TOOL SERIES: 8255XA ASSET: 120516 SEQ: AU

	T(0)	T(1)	T(2)	T(3)	T(4)	T(5)
Coefficients	-8.673169e+000	9.576065e-002	6.395448e-006	-9.461013e-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

33.24'

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

TEMPERATURE / PRESSURE

Series 8255XA
Mnemonic SRPL
Diameter 1.70"
Weight 13.00 lb
Length 3.30'

CCL MP 25.15'

MP 22.70'

XLS DETECTOR 16.08'

LS DETECTOR 13.10'

SS DETECTOR 12.88'

PRES MP 1.61'

0.00'

Total Length: 33.24'

Total Weight: Not Available

Max Diameter: 0' 1.70"



Baker Atlas

CASE

Company

WPX ENERGY

Well

FEDERAL BCU 542-30-198

Field

SULPHUR CREEK

County

GARFIELD

State

COLORADO

Location

SHL: 2063' FSL & 2135' FEL

BHL: 2411' FSL & 650' FEL (NESE)

Elevations

KB 6759 ft

DF

GL 6738 ft

File No:

CH090864

API No:

05103119960000

30 1N 98W

BCU 33-30-198 PAD

CYCLONE 29

SEC 30 TWP 1N RGE 98W