



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: CH089267 WPX ENERGY

Well: FEDERAL RGU 44-24-198

Field: SULPHUR CREEK

County: RIO BLANCO State: COLORADO

API No: 05103120830000

Location: SHL: 2111' FSL & 1673' FEL

BHL: 1025' FSL & 661' FEL (SESE)

SEC 24 TWP 15 RGE 98W

Other Services
BOND LOG

Permanent Datum: GL Elevation 6596 ft

Log Measured From: KB 21 ft Above P. D.

Drill Measured From: KELLY BUSHING KB 6617 ft
DF
GL 6596 ft

Date	08/AUG/14	
Run	ONE	
Service Order	US089267J	
Depth Driller	12917 ft	
Depth Logger	12843 ft	
Bottom Logged Interval	12833 ft	
Top Logged Interval	3914 ft	
Time Started	1630	
Time Finished	0630	
Operator Rig Time	13 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	89 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	287 degF	
Reference Log	BAKER HUGHES	
Reference Log Date	08/AUG/14	
Equipment No.	Location	GRAND UCT
Recorded By	FLOYD RENEAU	
Witnessed By	WAYNE MARGOTTE	

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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
14.73/13.5	80 ft	3914 ft
8.75/7.875	3914 ft	12917 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			21 ft	80 ft
9.625 in			21 ft	3914 ft
4.5 in	11.6 lbm/ft	P-110	21 ft	12917 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 8/8/2014 at the client's request.
The amount of linear shift is -7.5 feet.
Logged in PNC-3D mode.
BHT = 278°F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	RPM	8281FA	10401926	FREE
1	1	RPM	8281PA	10414345	FREE
1	1	RPM	8281EA	10190984	FREE
1	1	GR	2812LA	10274385	FREE
1	1	TEL/CCL	8248ED	10296408	FREE
1	1	PCM	8250EA	10397894	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		3882.481	4143.540
PNC Porosity	Borehole Size	8.750	inch	3882.481	4143.540
PNC Porosity	Casing Size	4.500	inch	3882.481	4143.540
PNC Porosity	Gas Filled	Non Gas Filled		3882.481	4143.540
PNC Porosity	Matrix	Sandstone		3882.481	4143.540

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
		CPT3Q0	CPT3Q2	CPT3Q3	CPT3Q4	ET3
		MCS3	MCS3Q0	QCAL3	RGN3	RICX
		SDL3	SGA3	SGL3	STA3	XS
						ASPEC3

8281XA

-0.250

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

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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 SGBS 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

SYSTEM

0.000

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Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

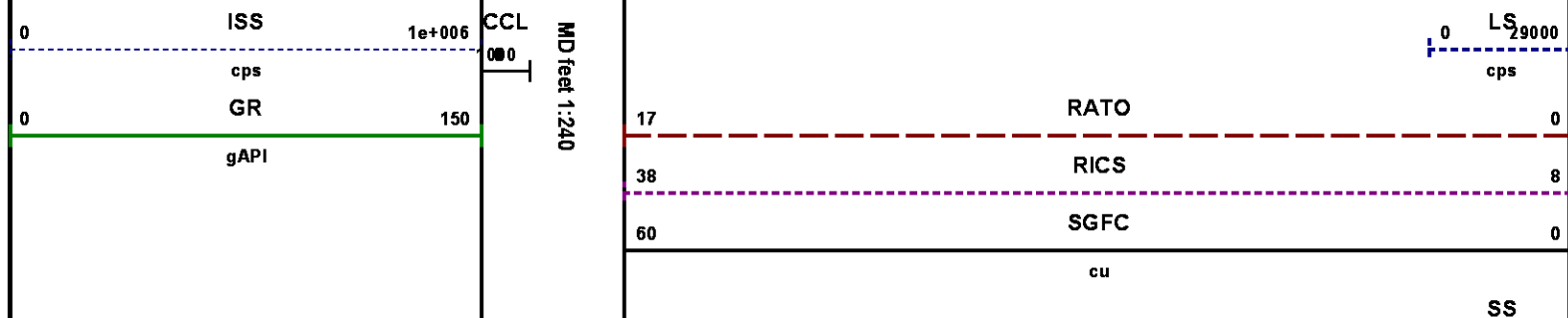
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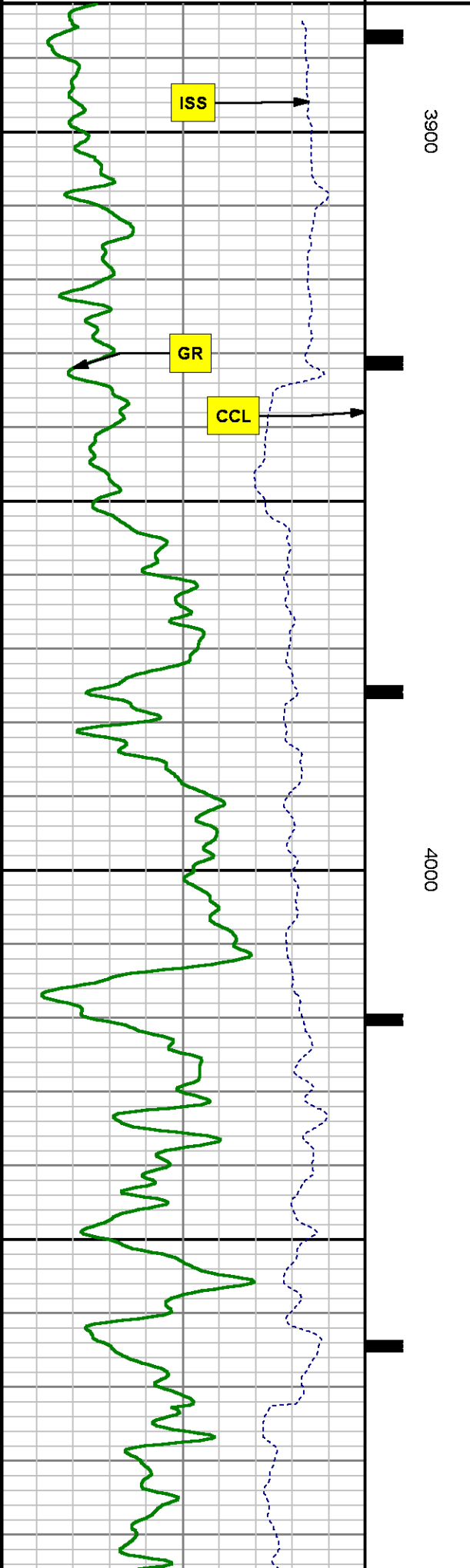
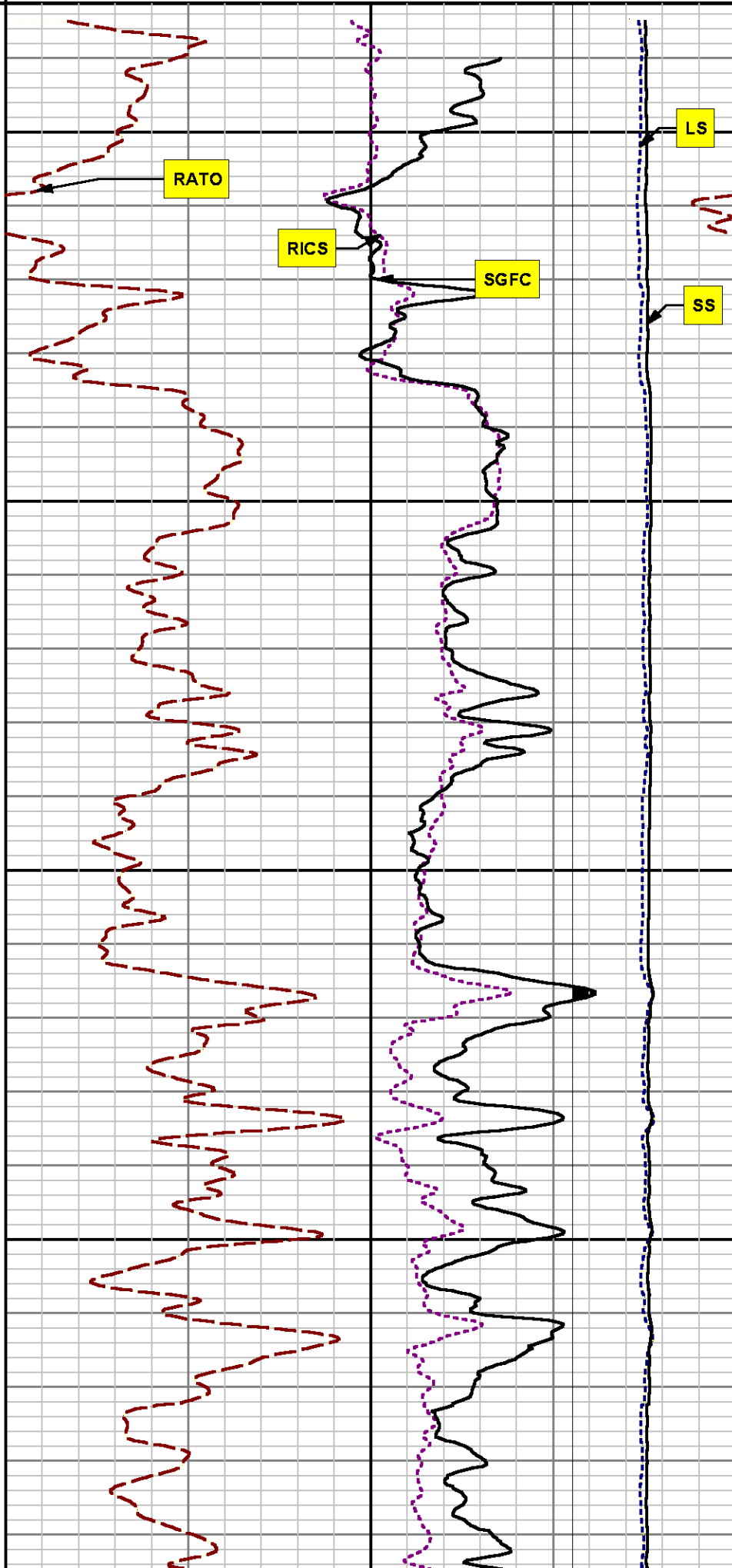
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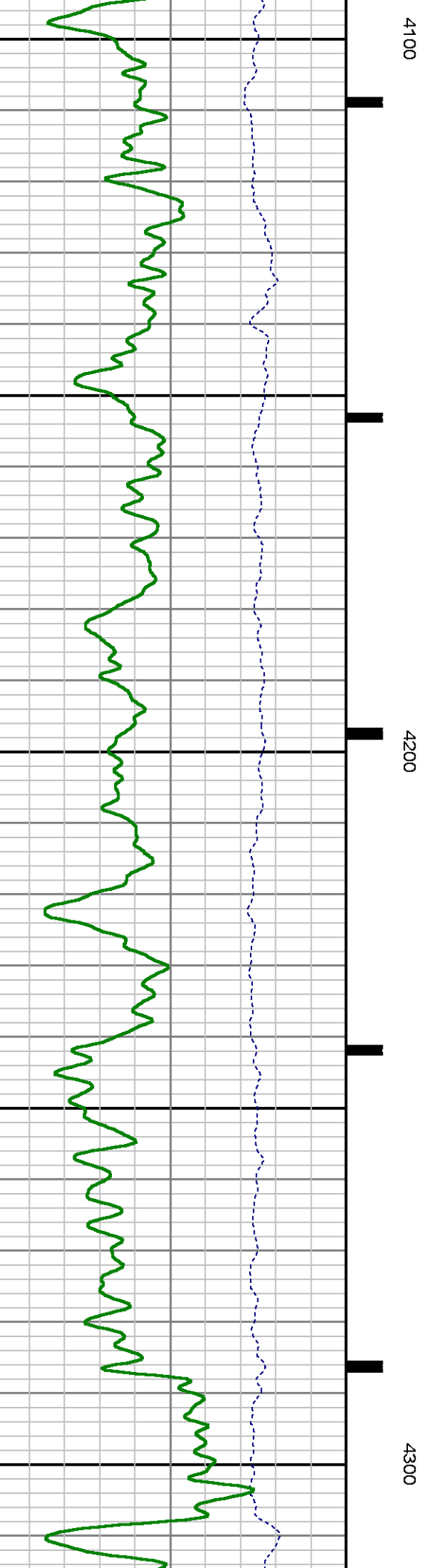
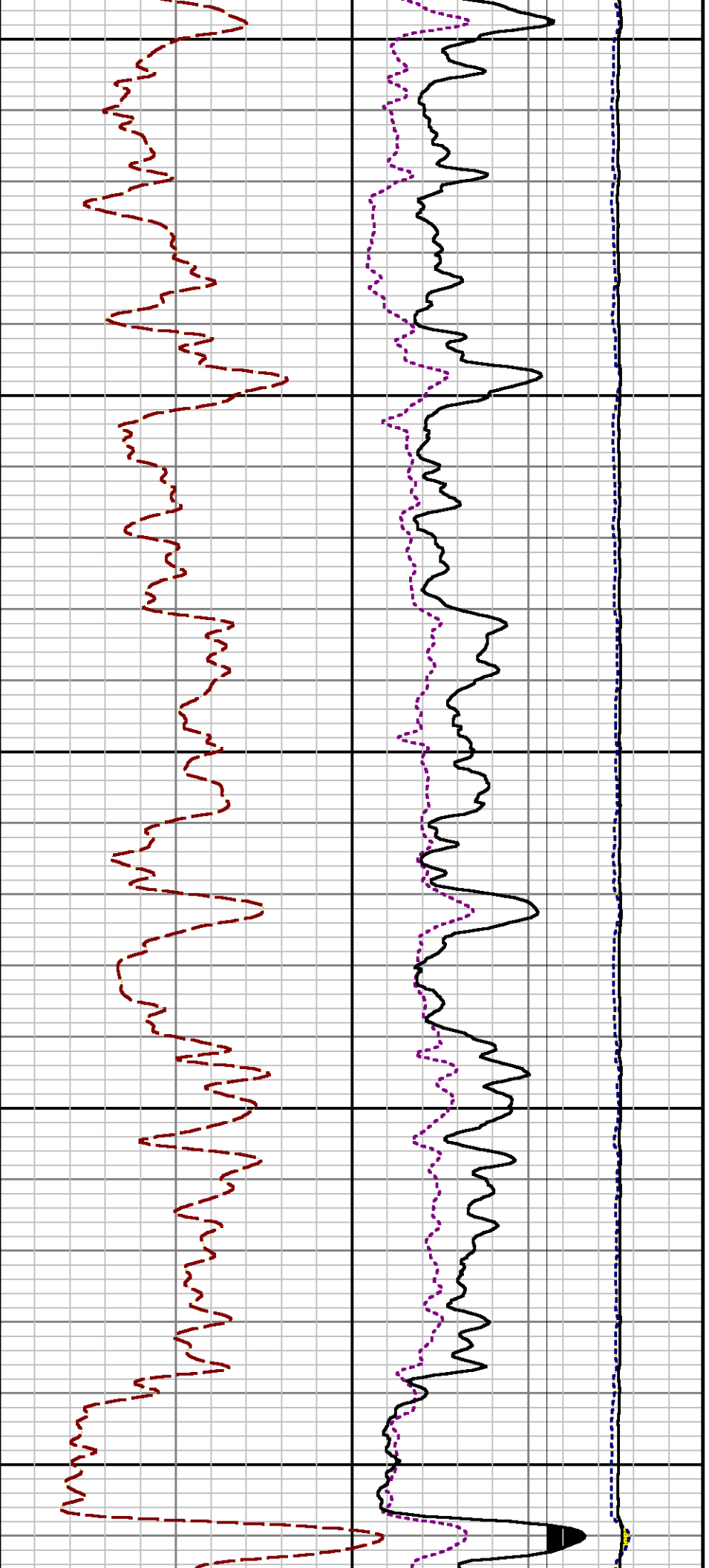
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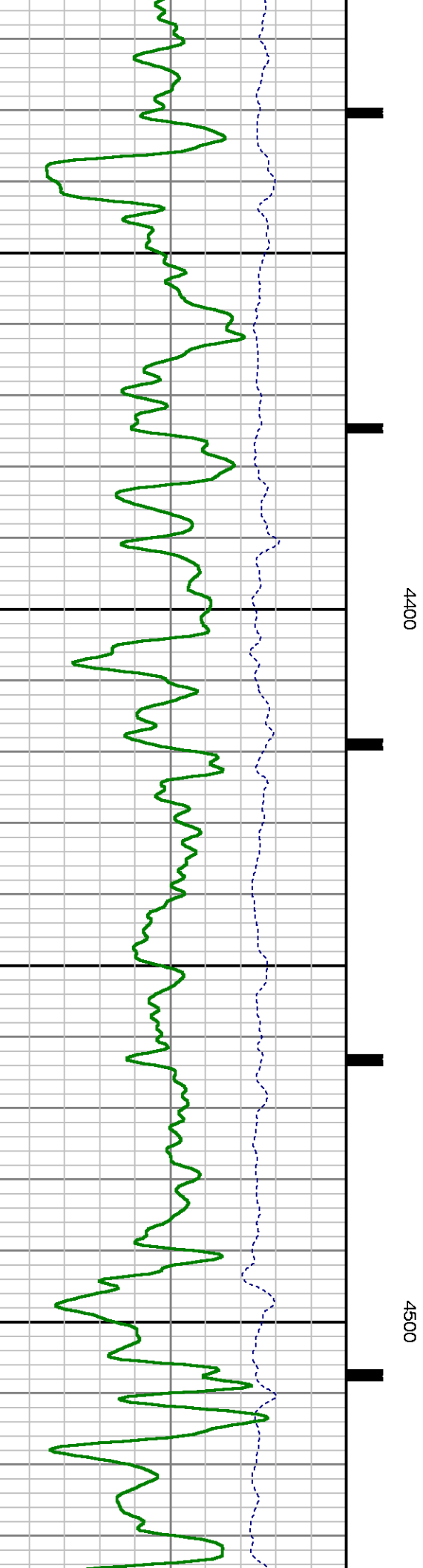
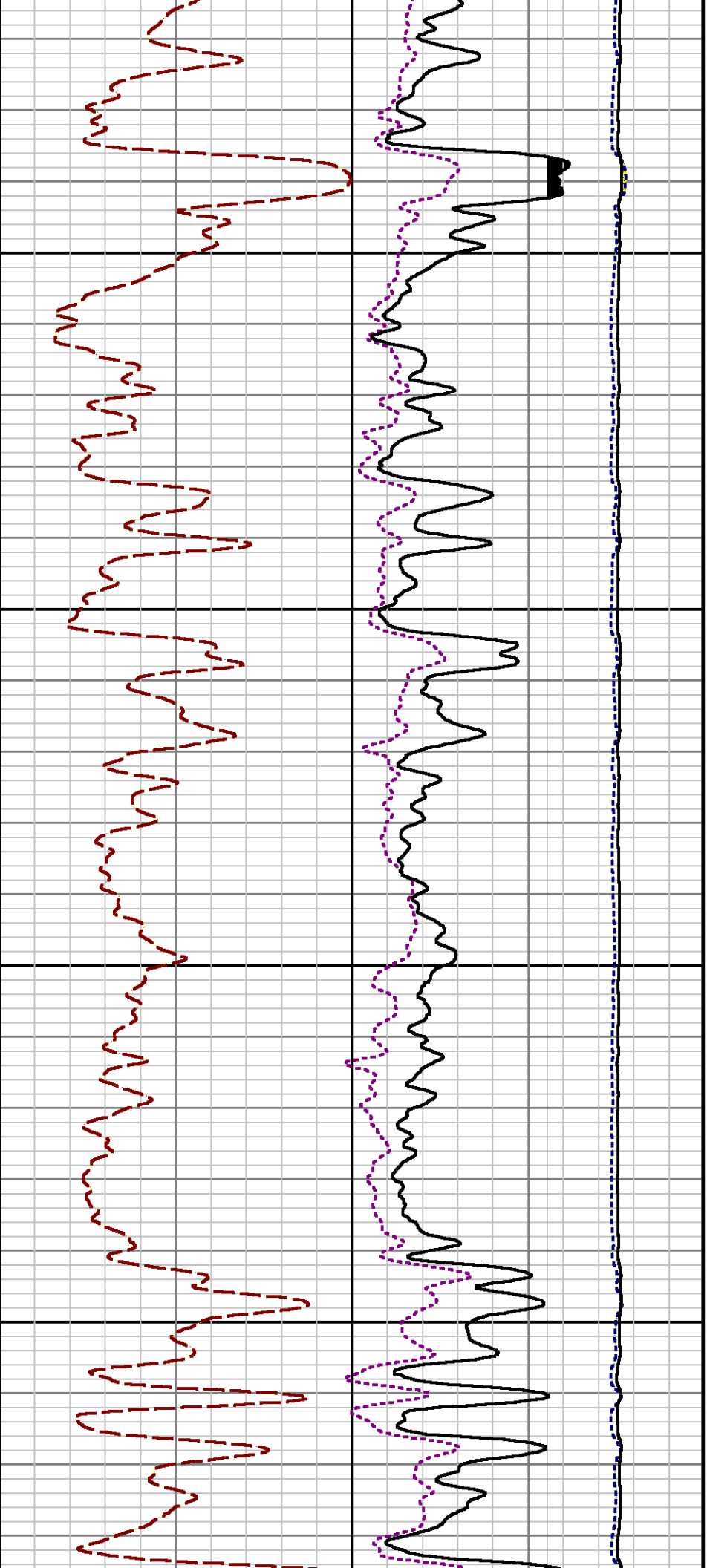
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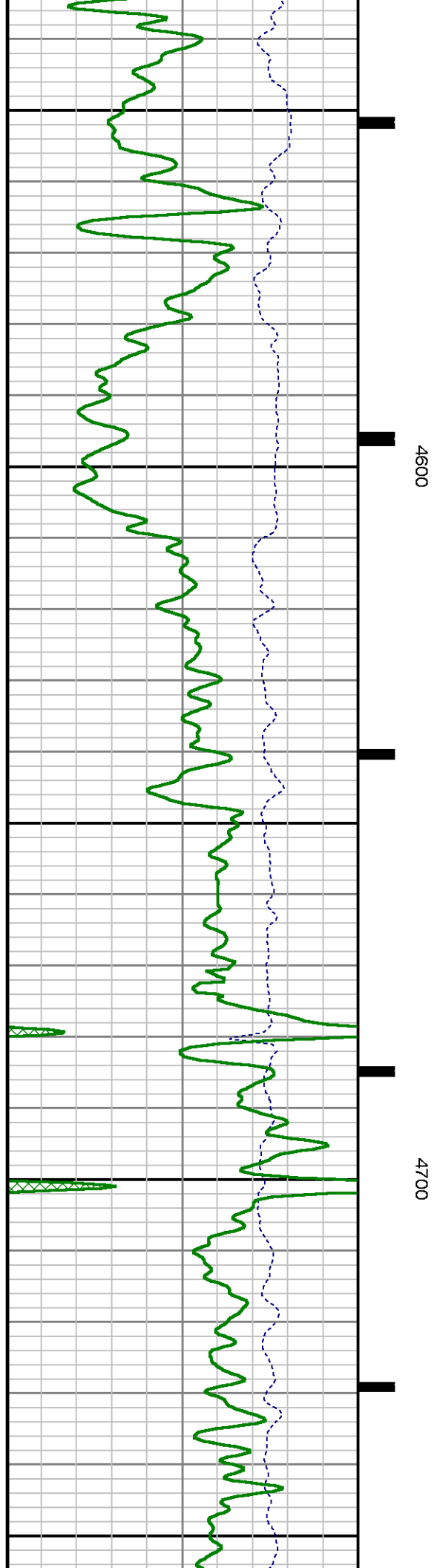
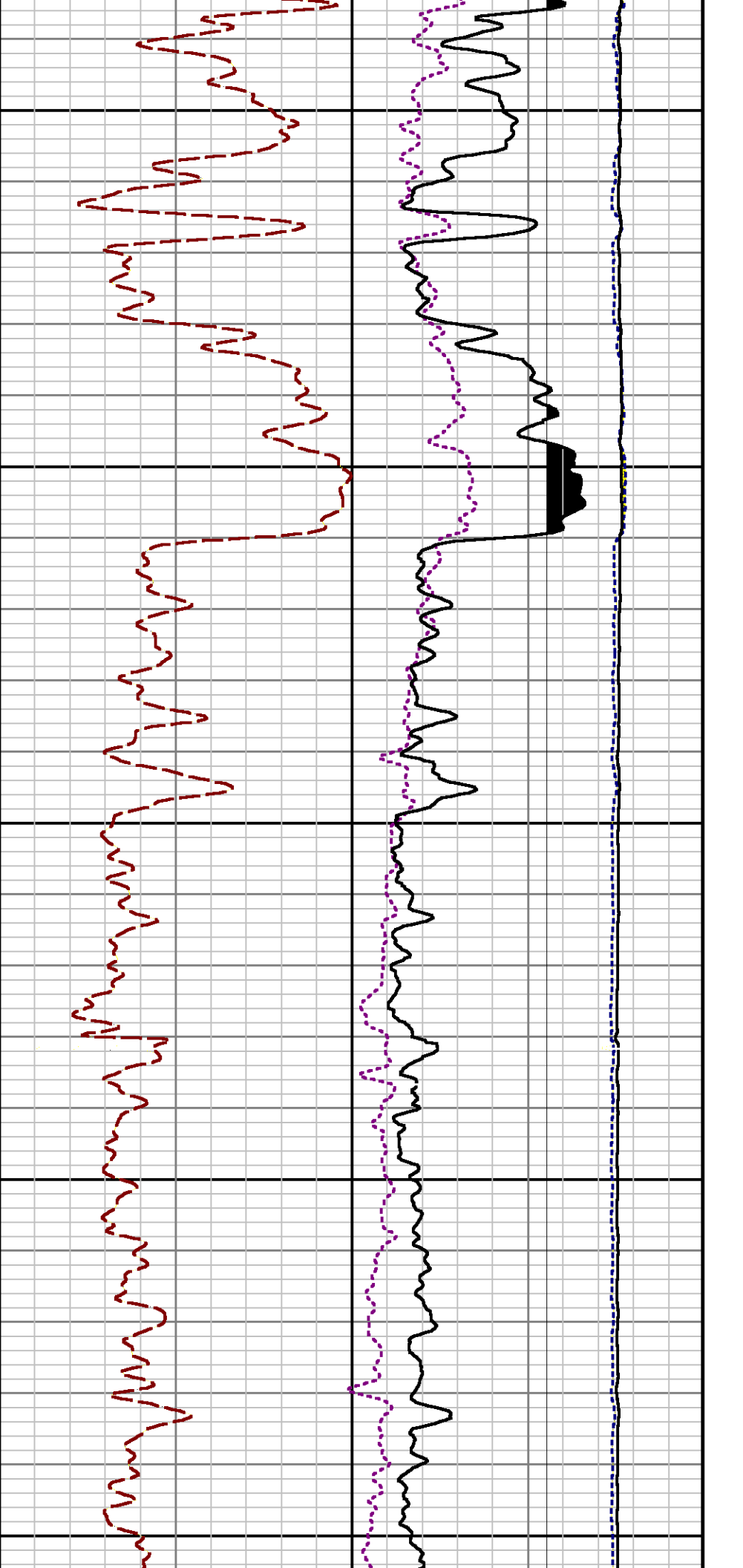
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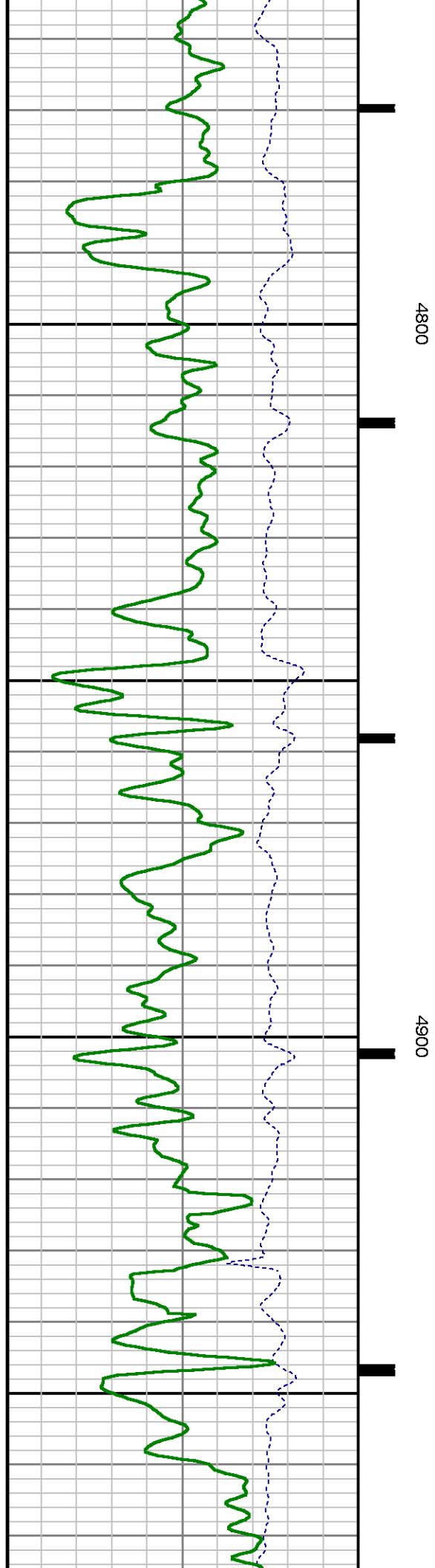
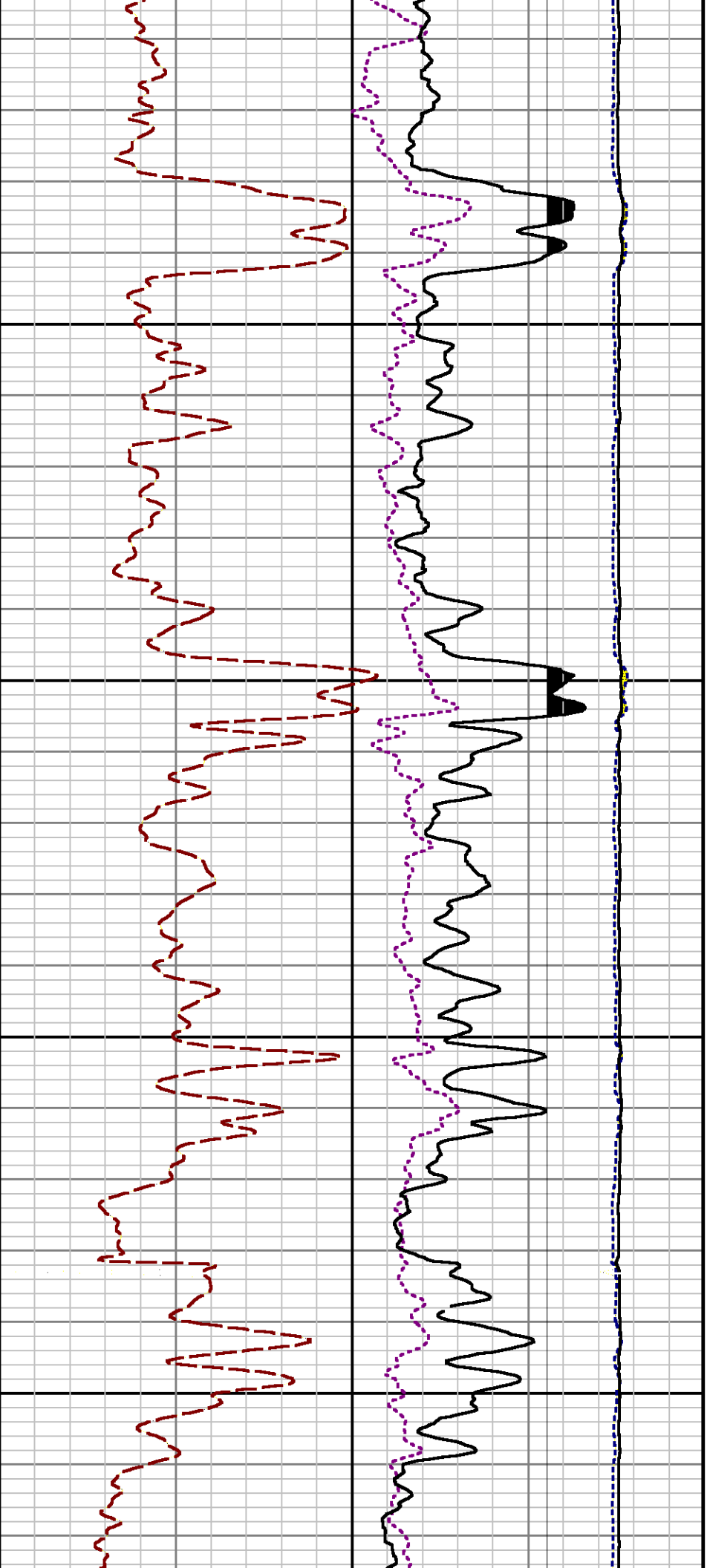


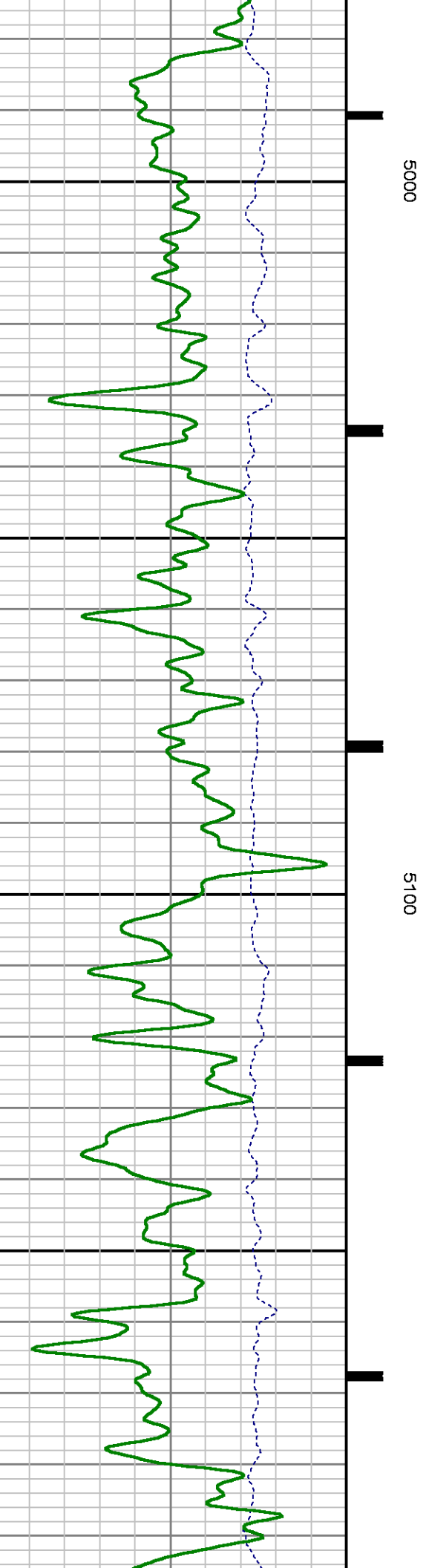
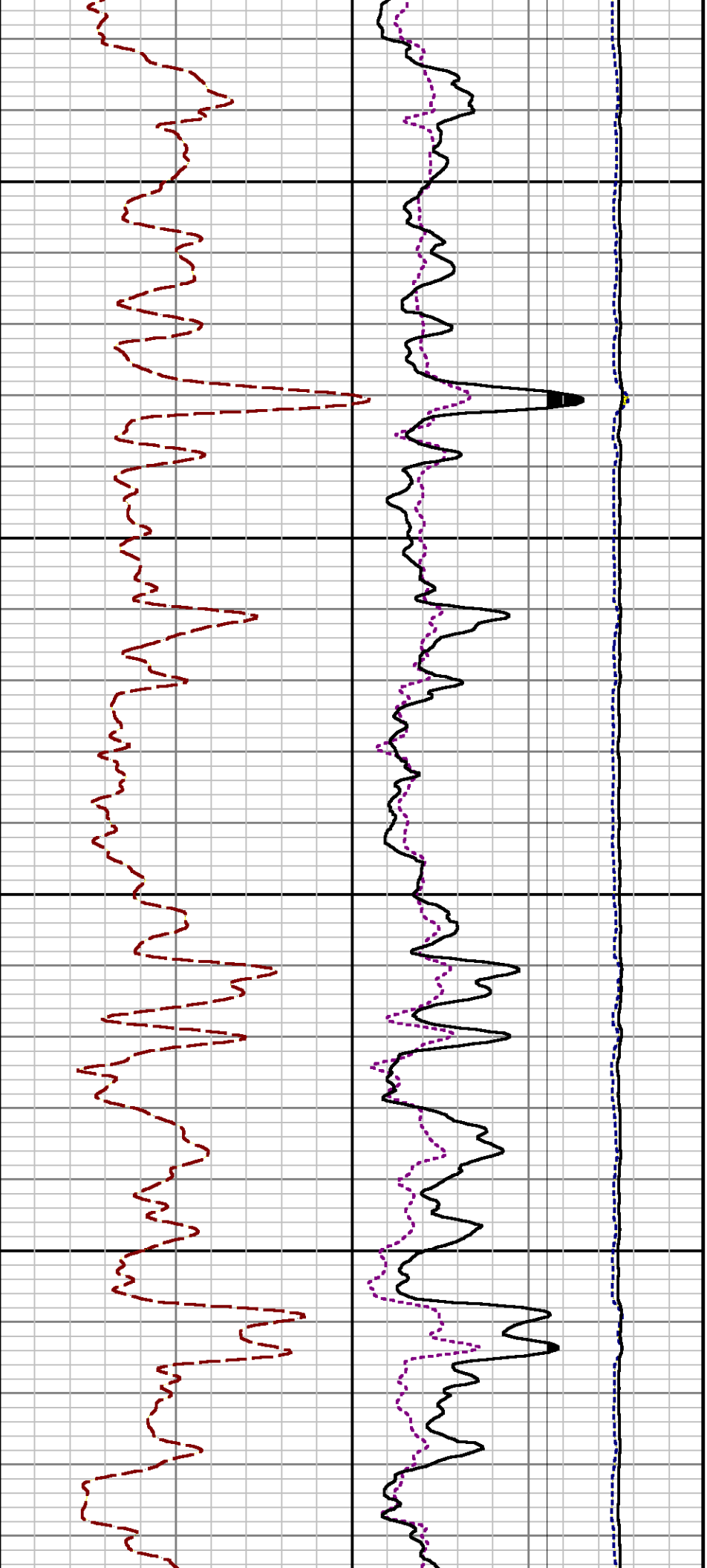


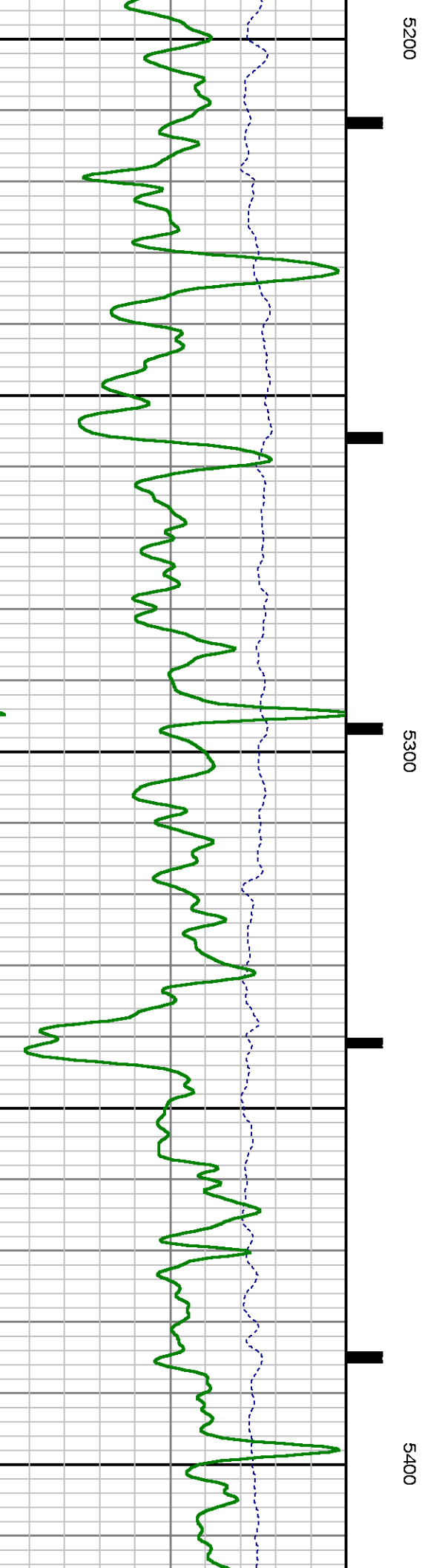
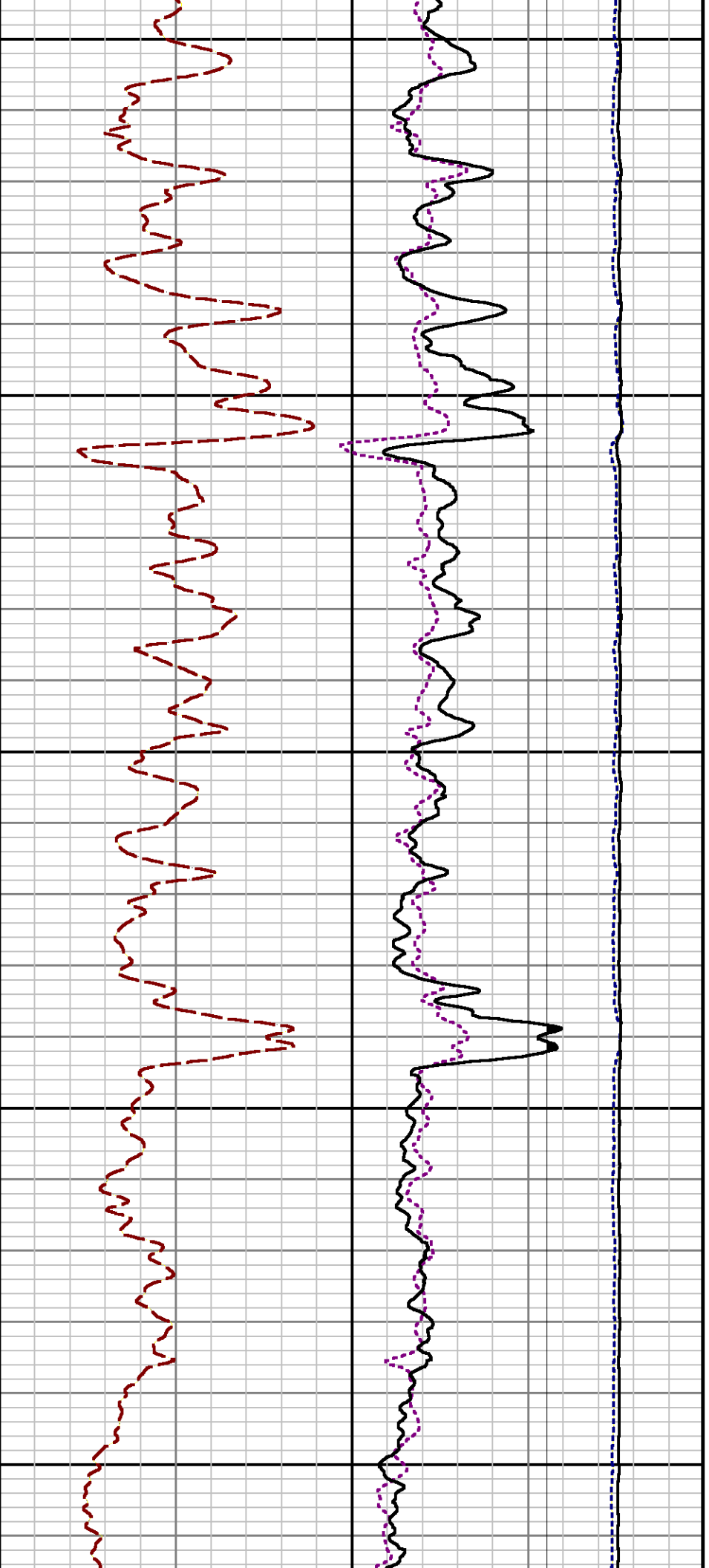


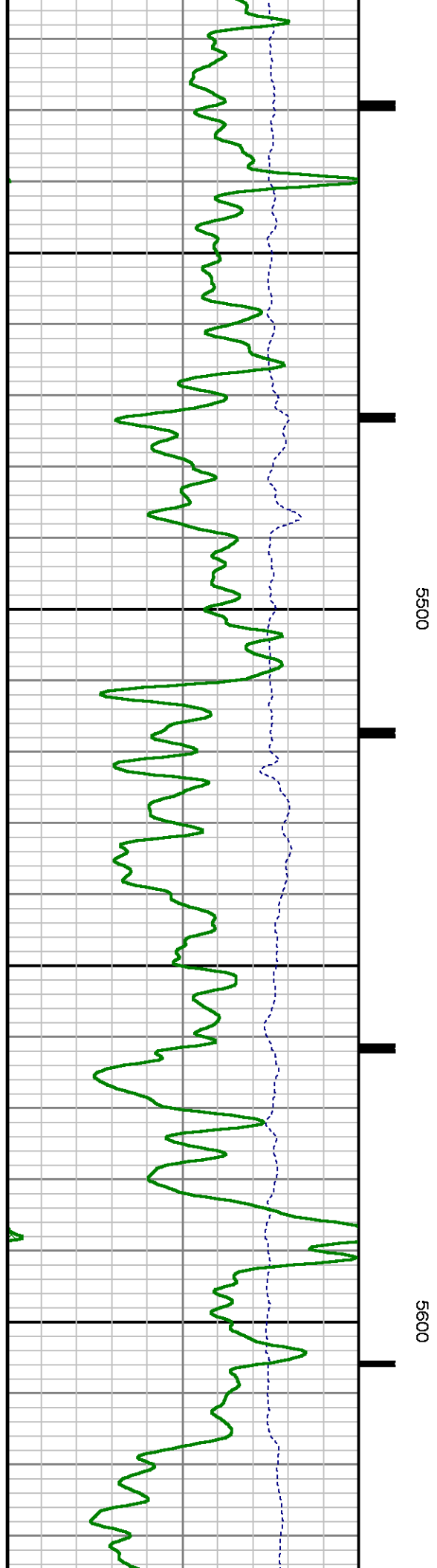
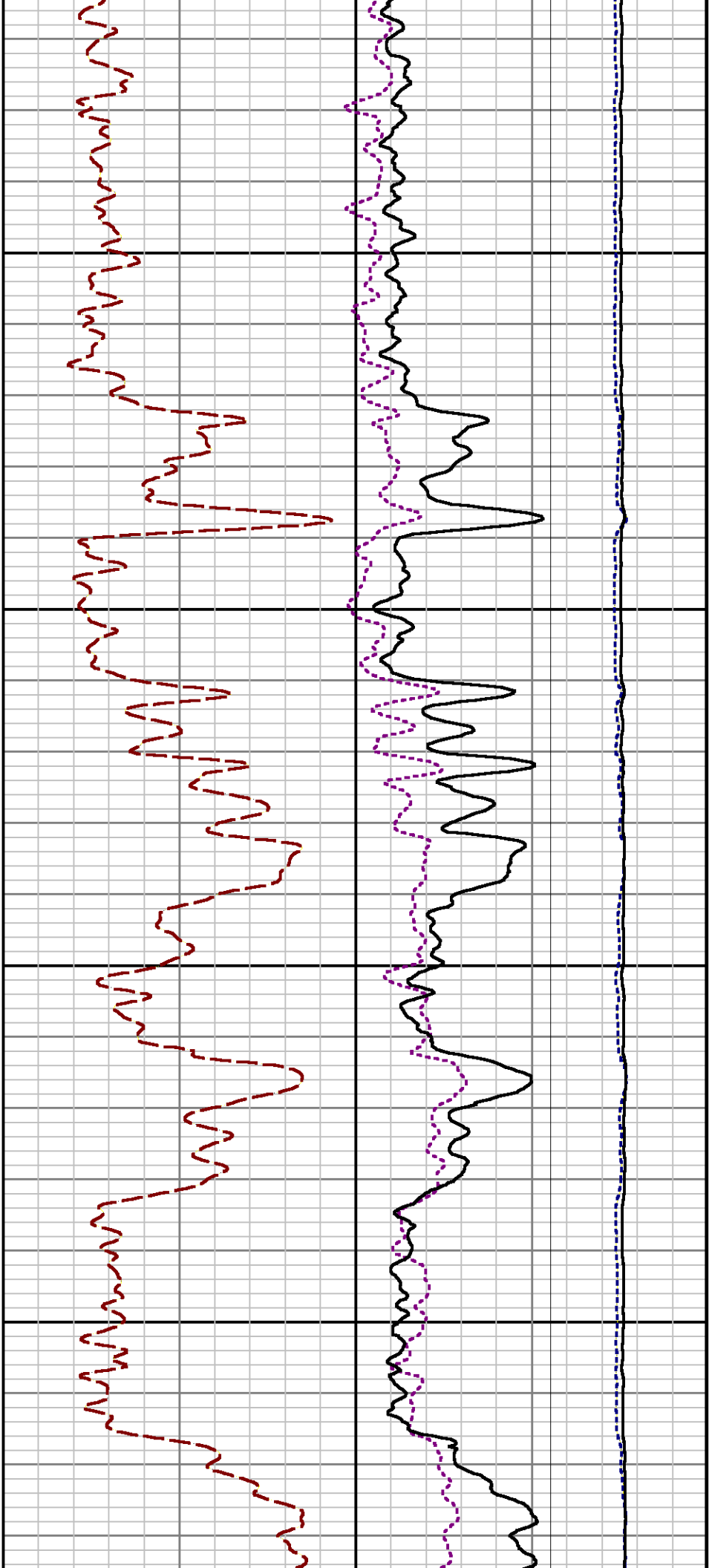


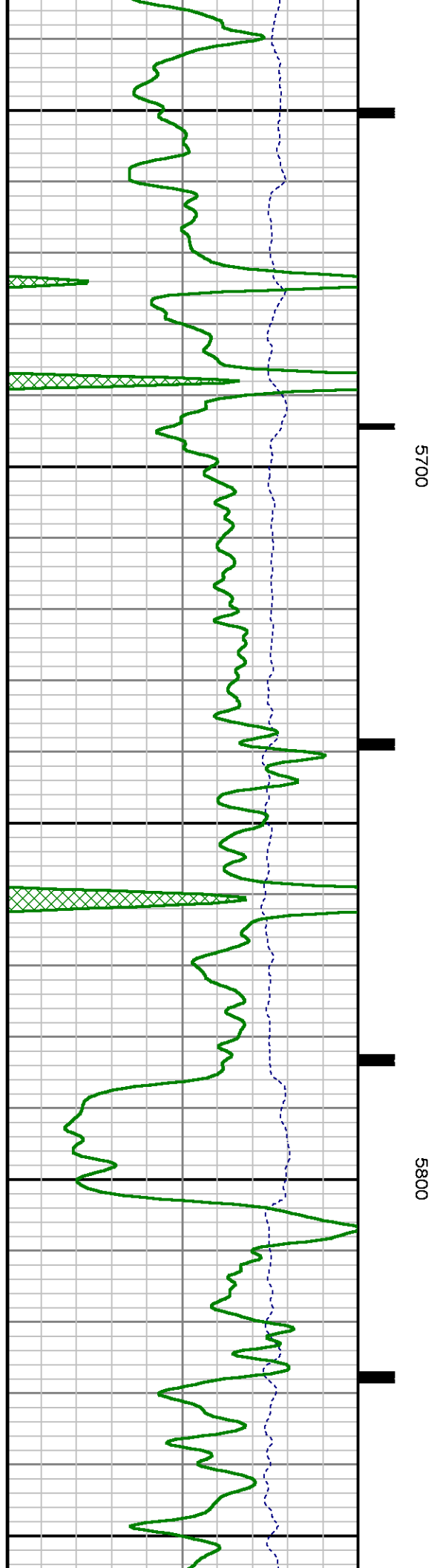
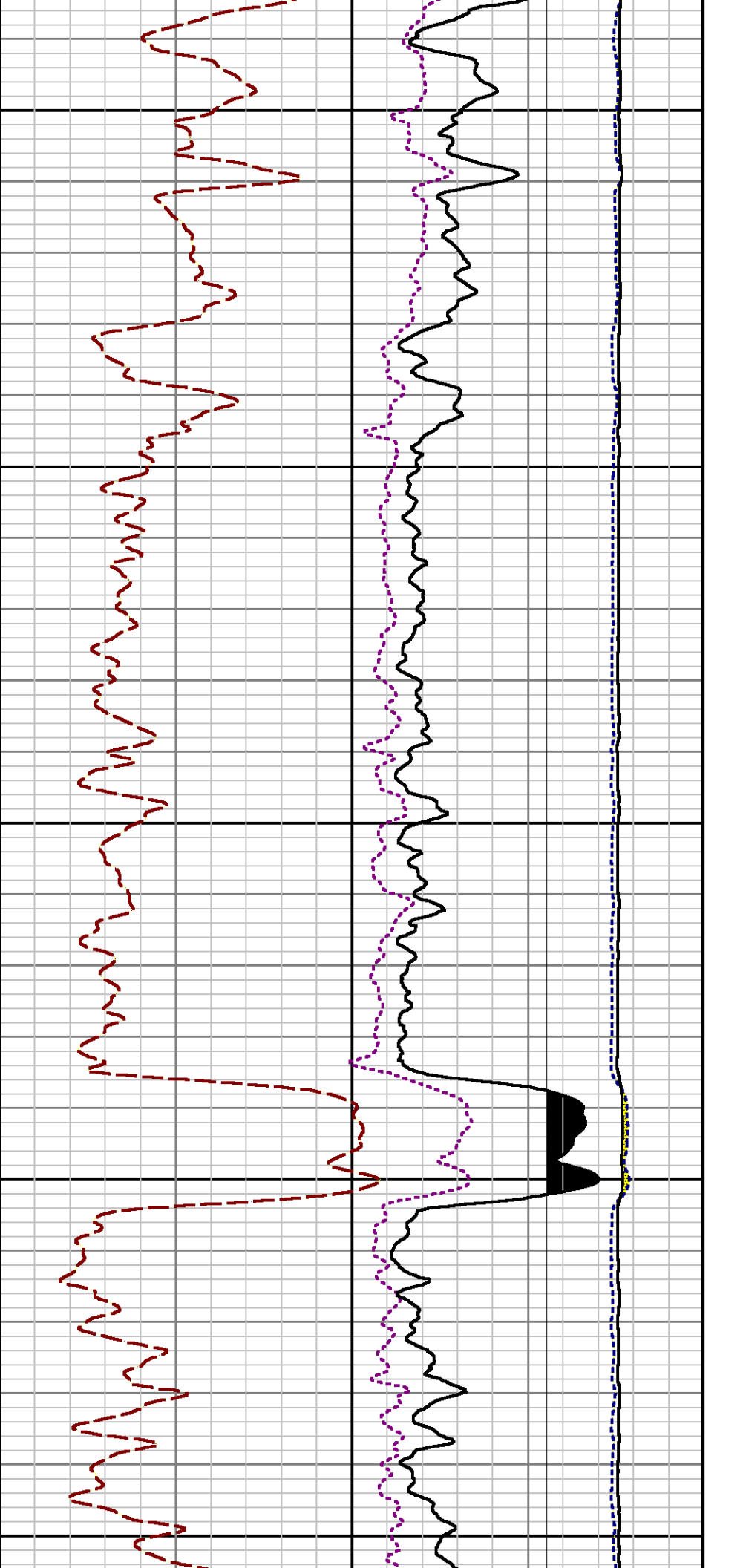


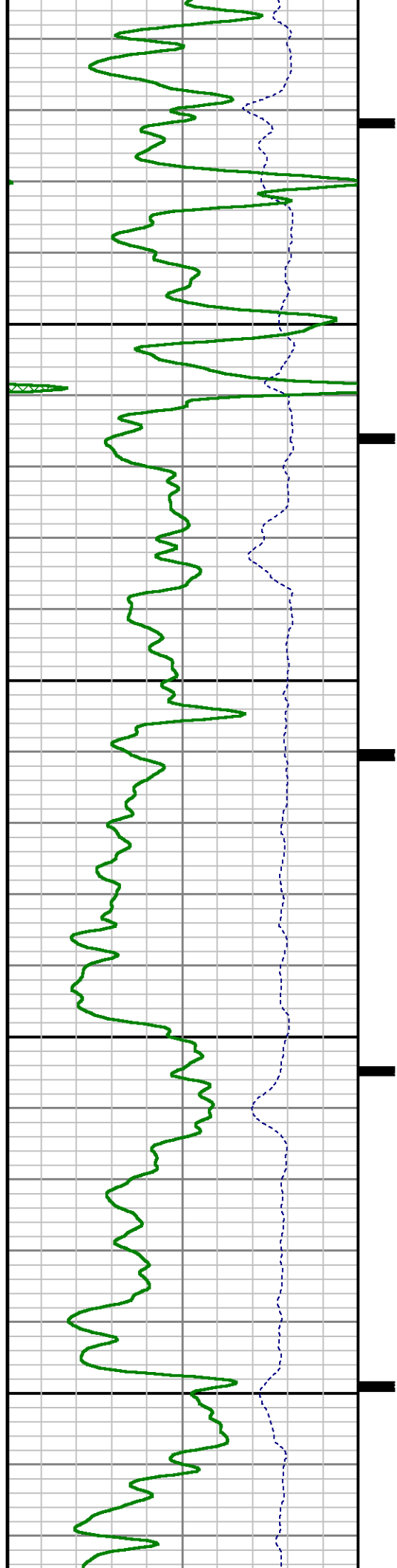






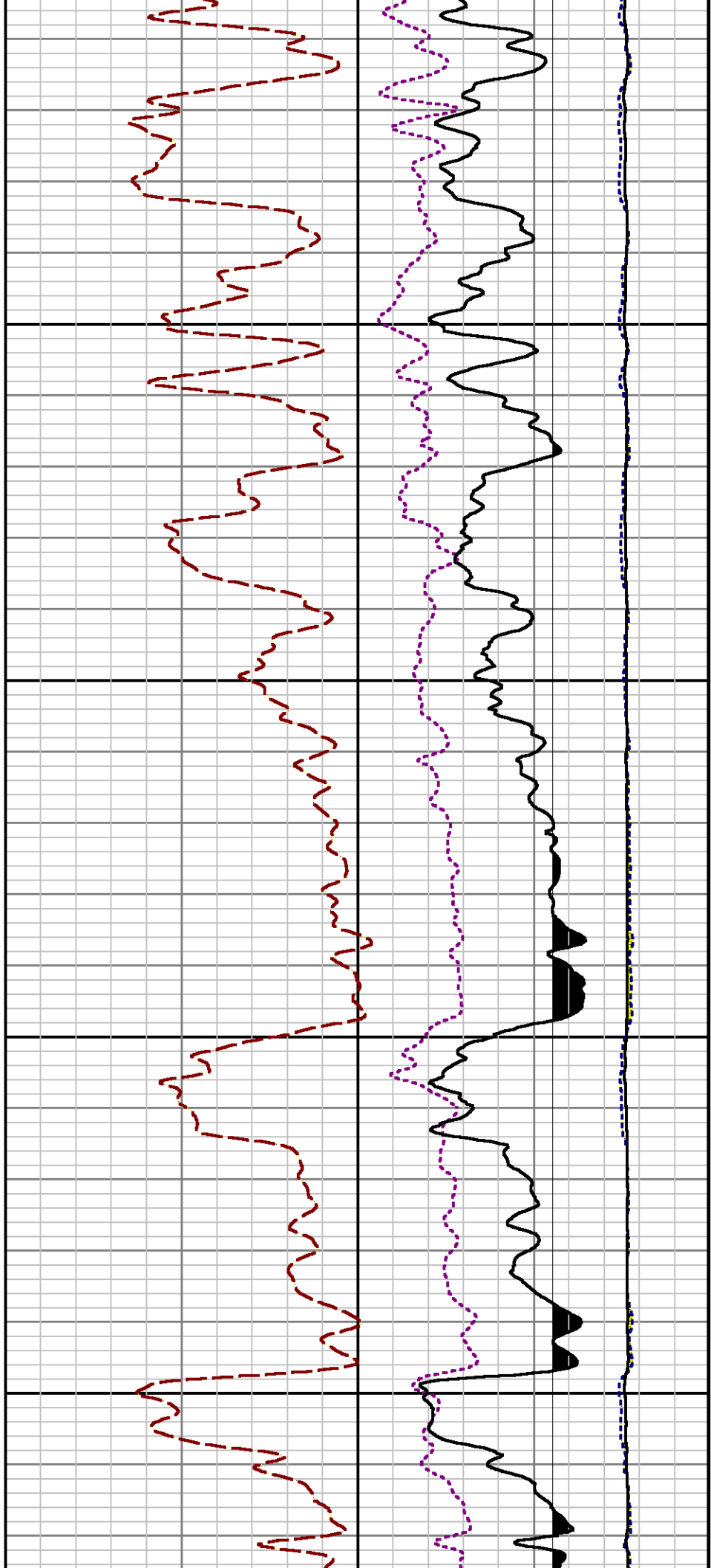


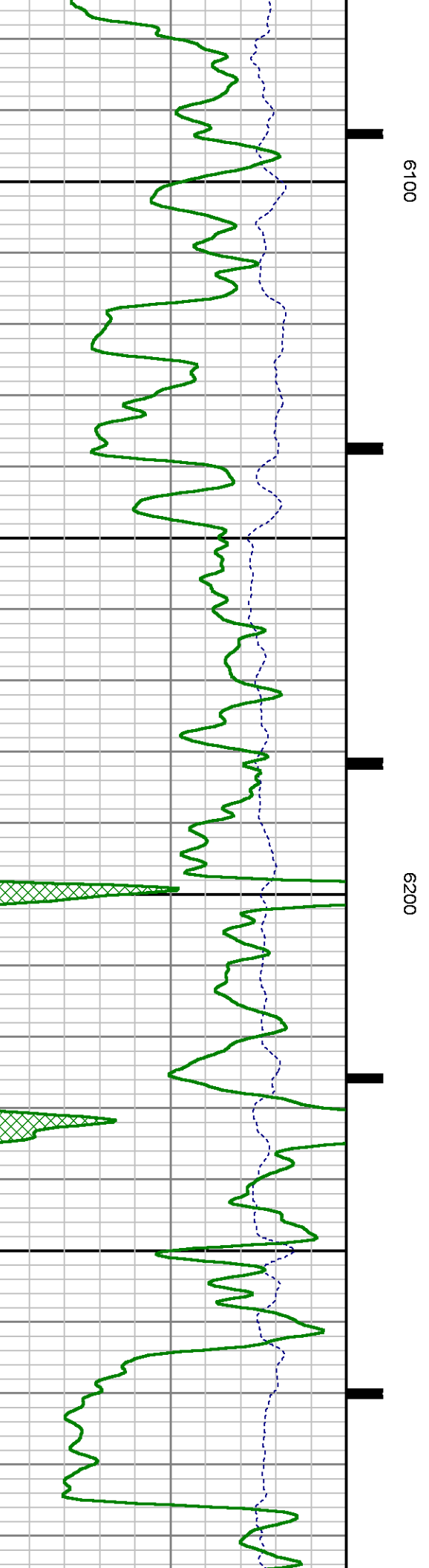
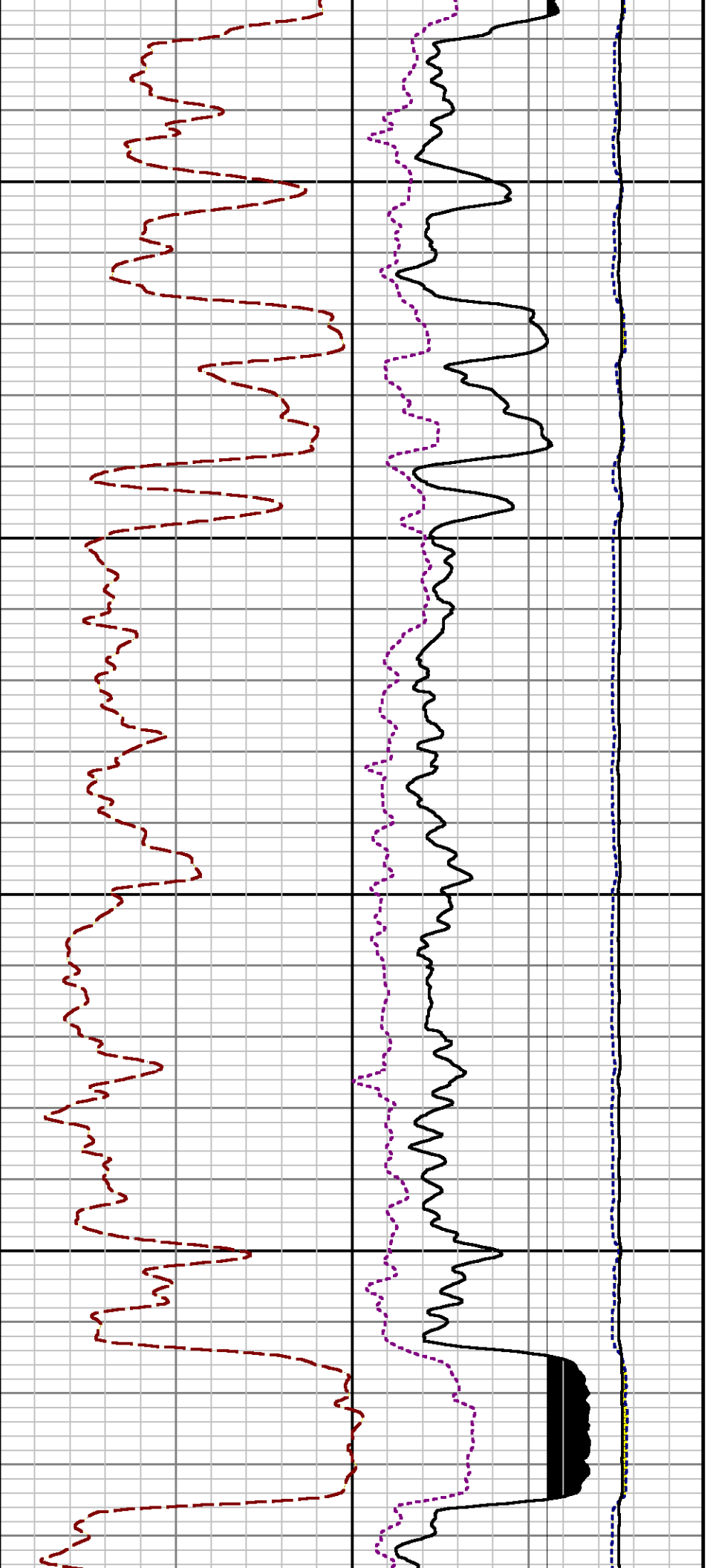


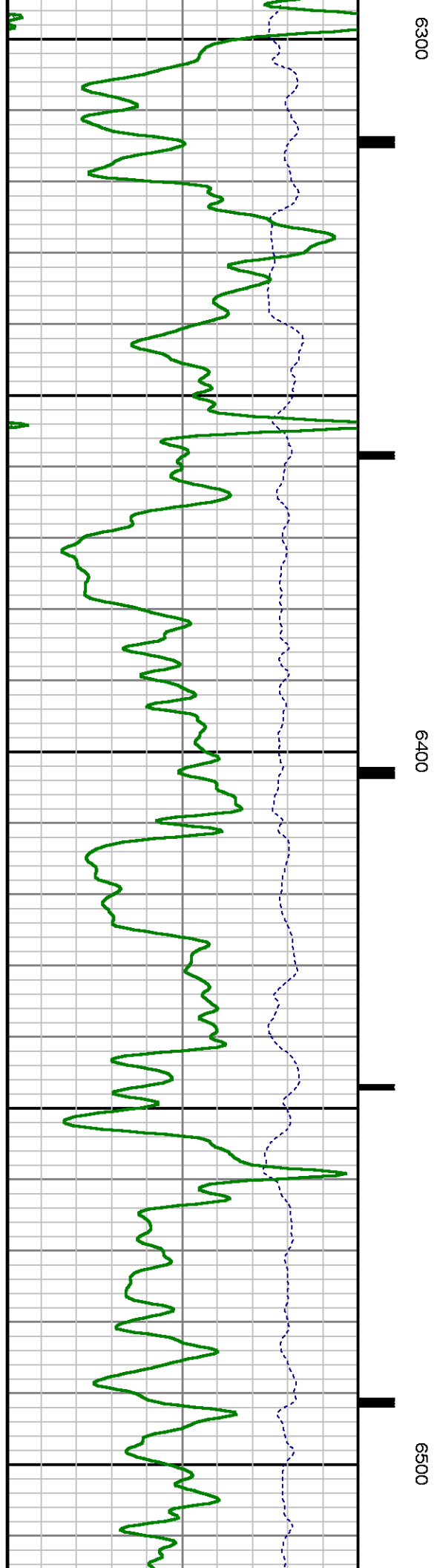
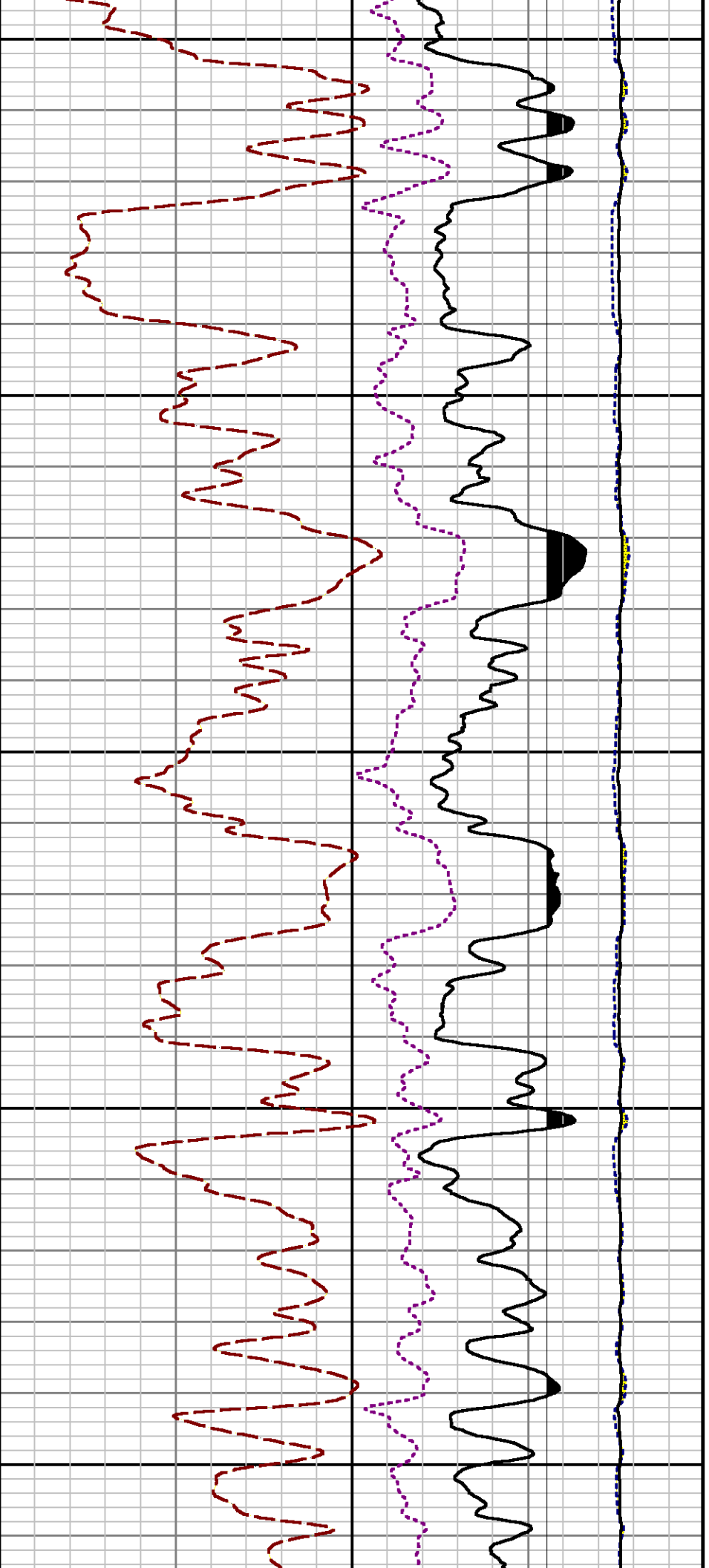


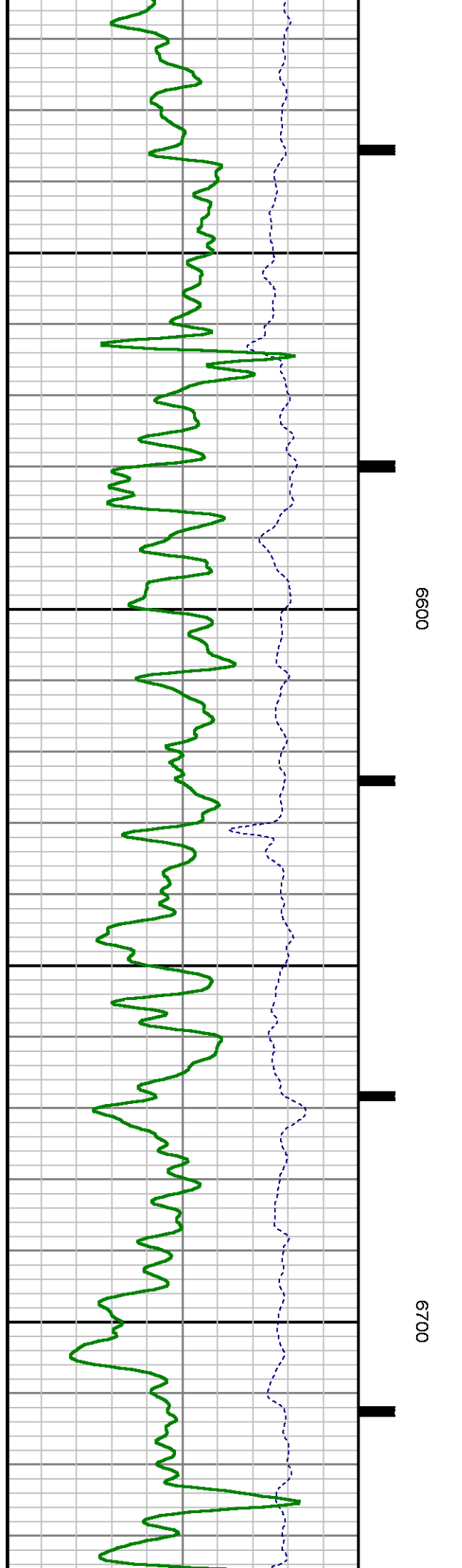
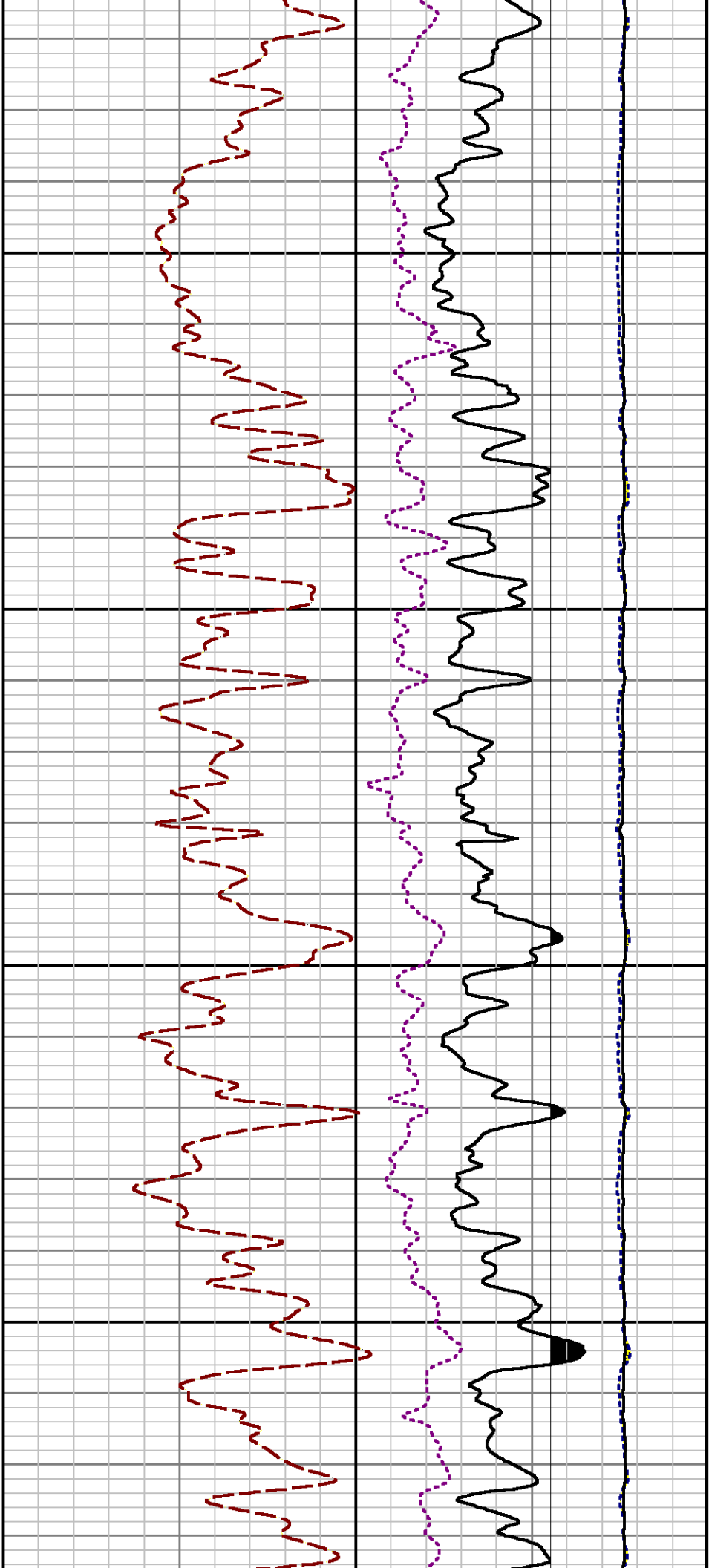
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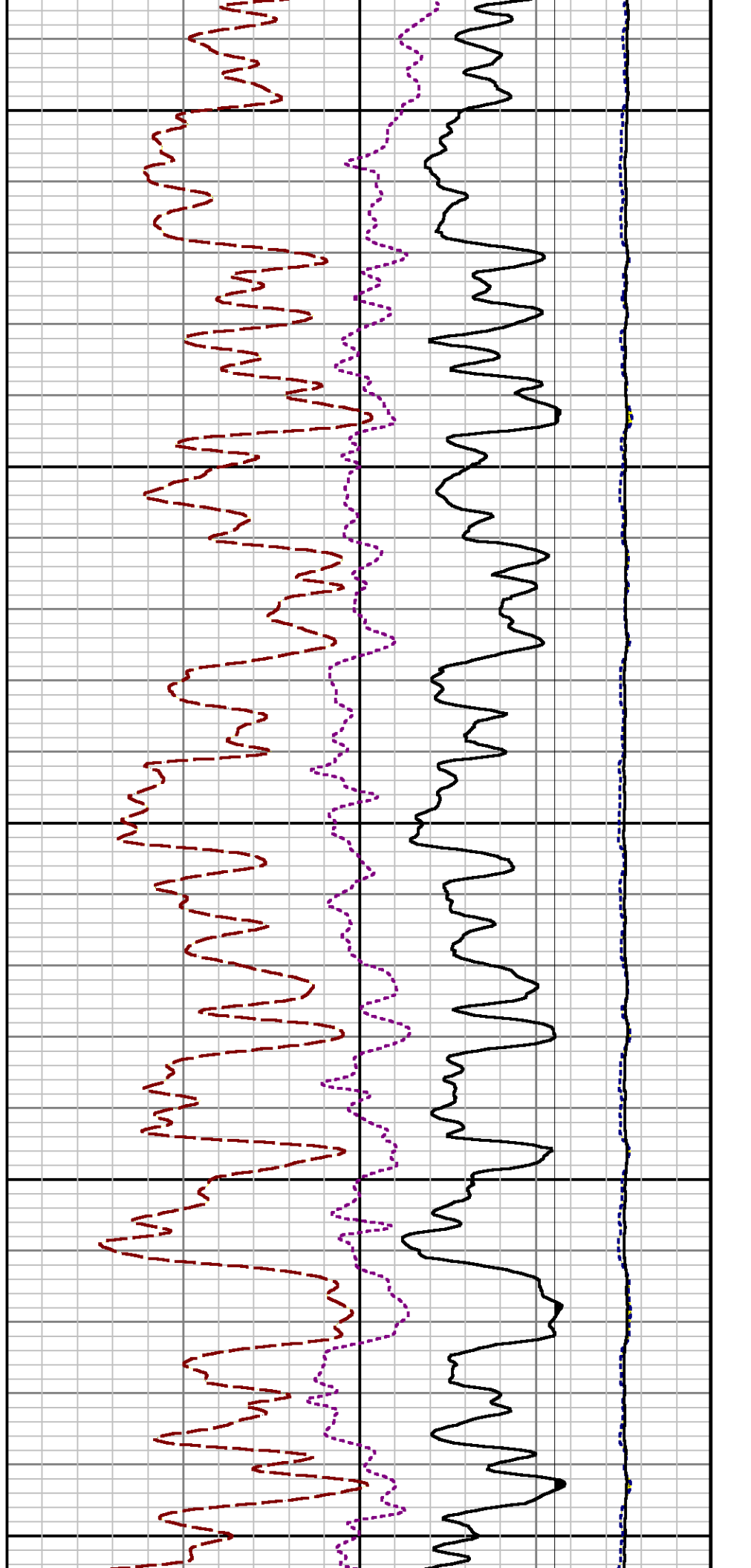
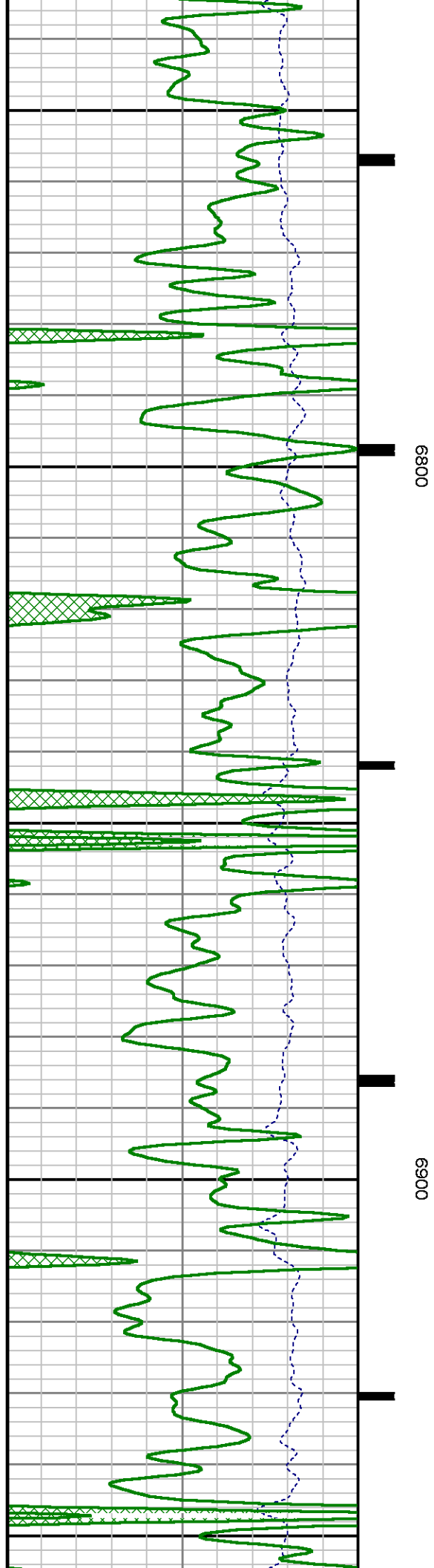
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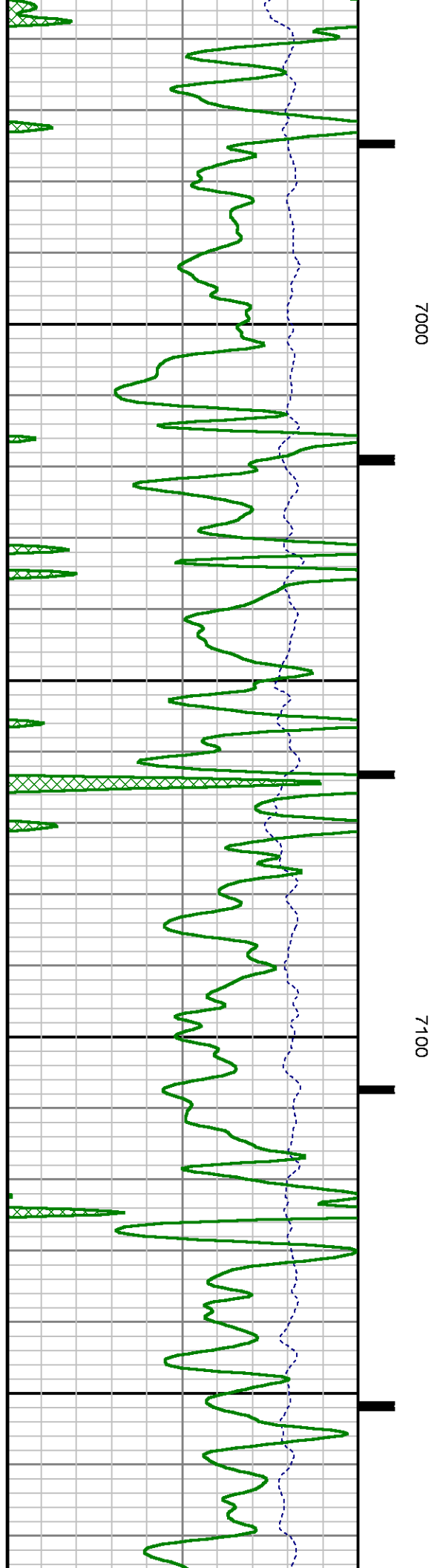
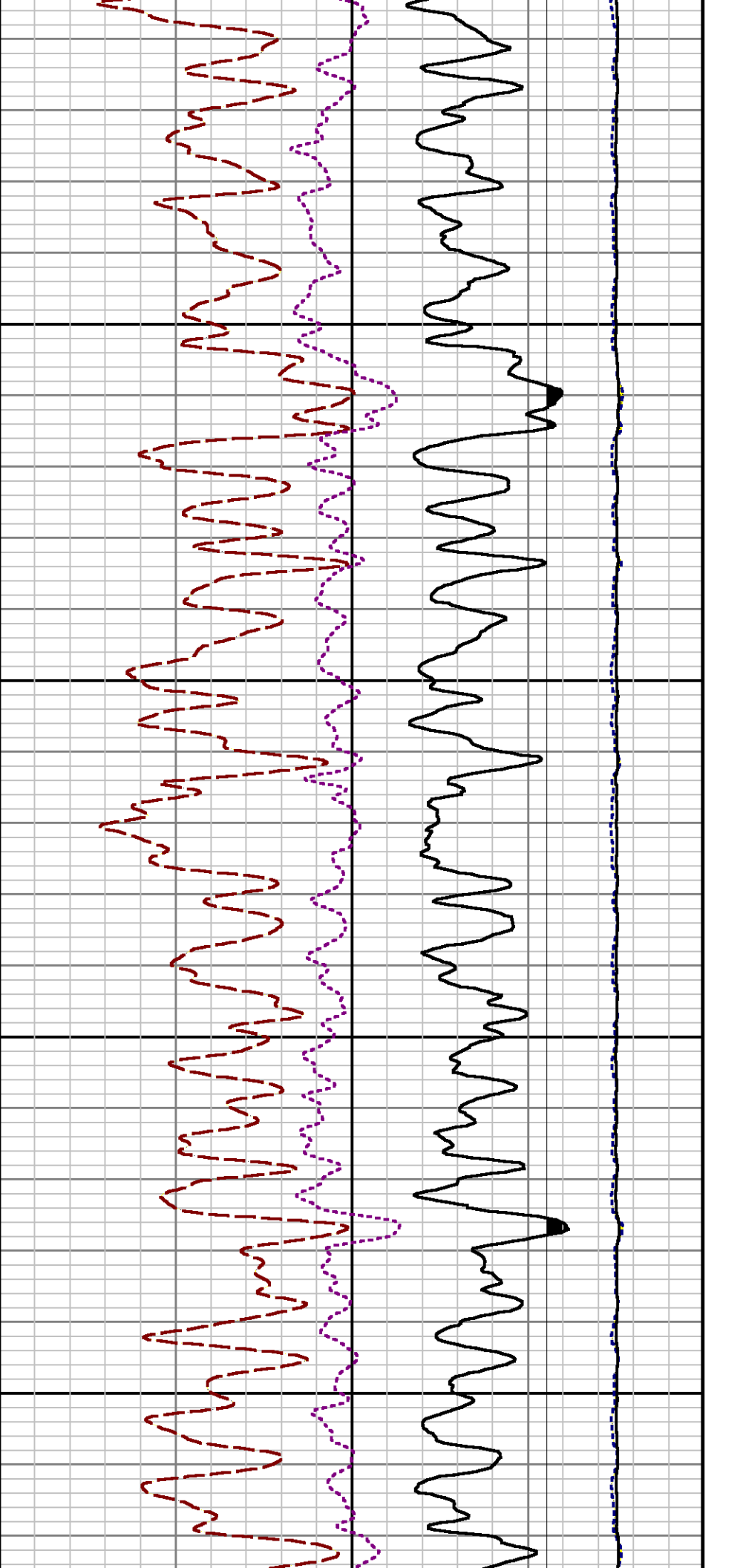


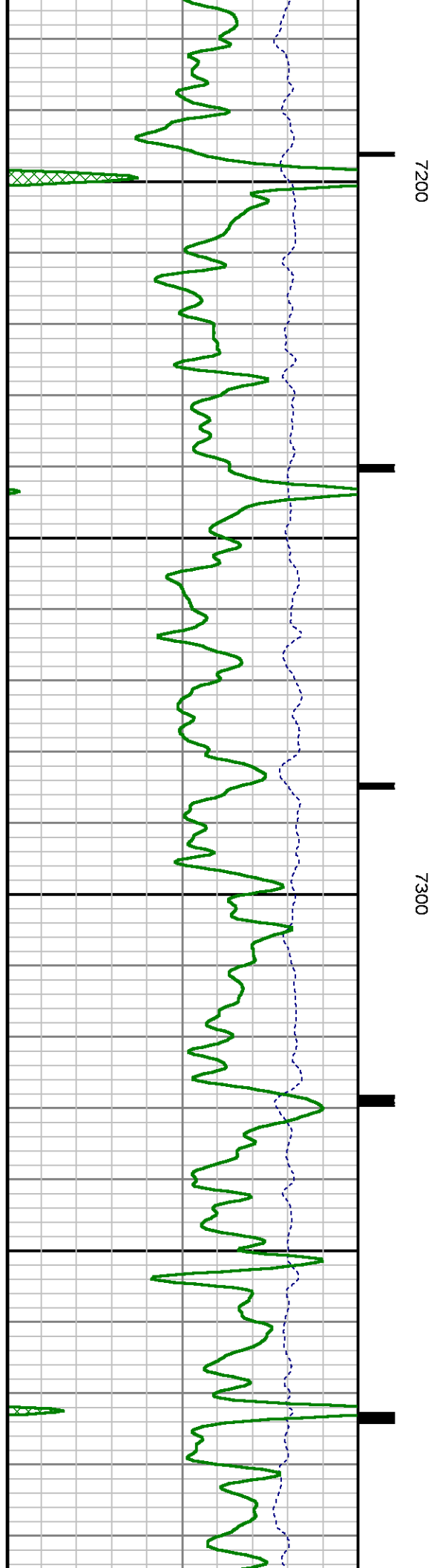
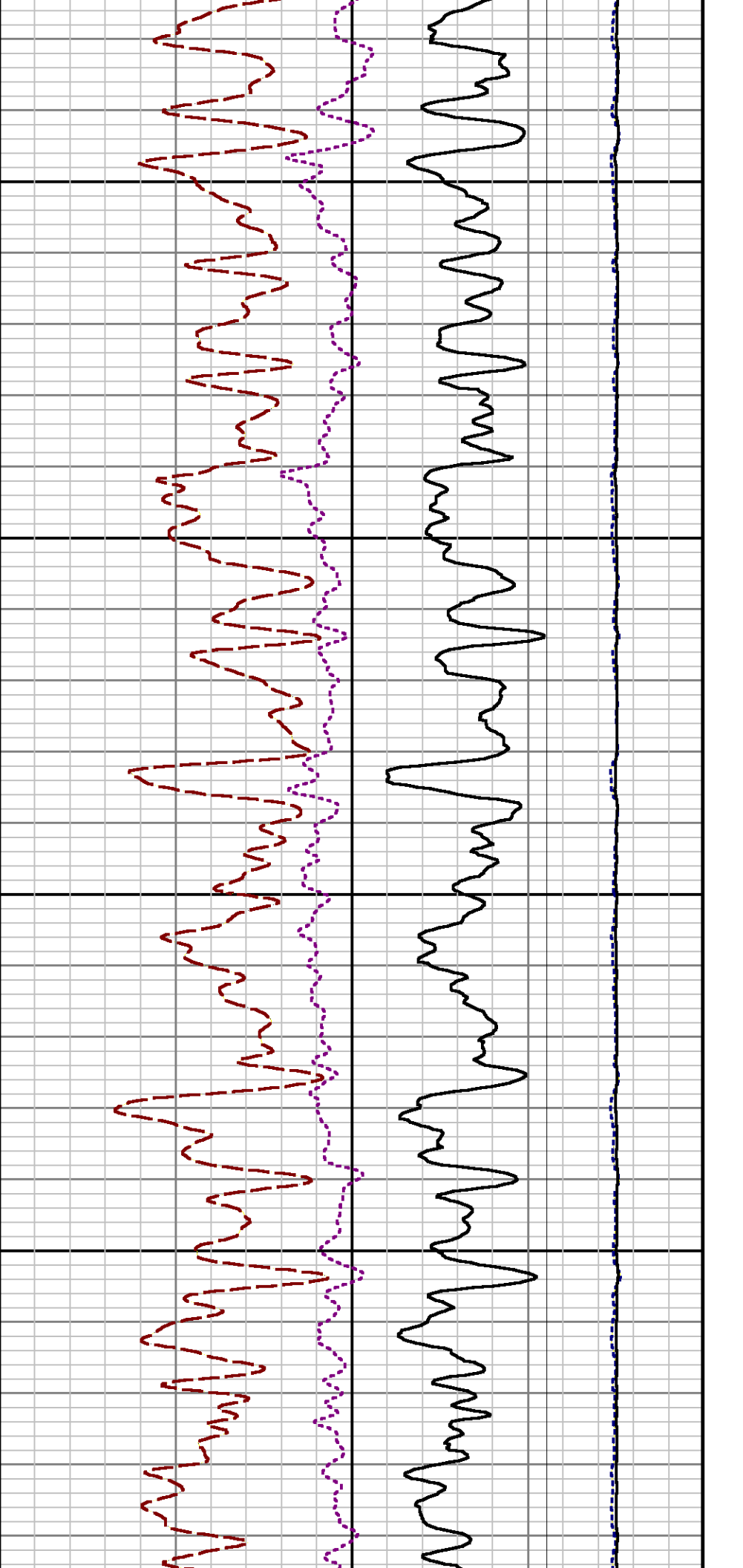


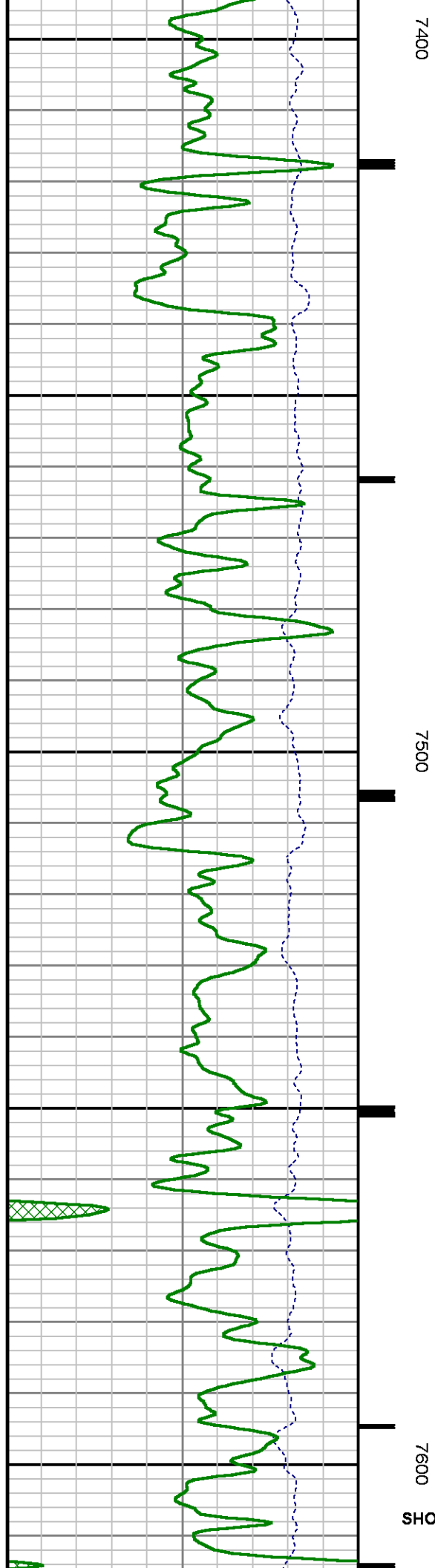
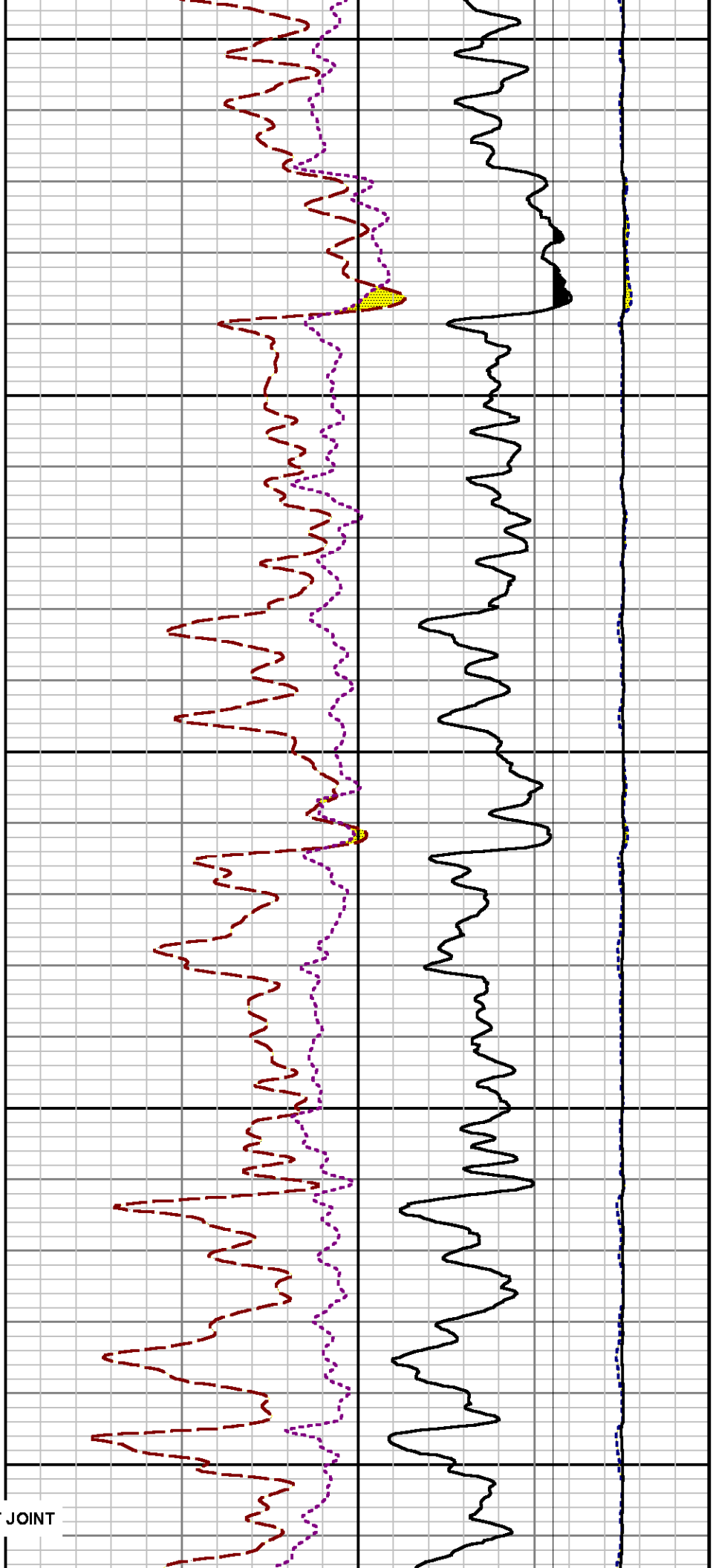


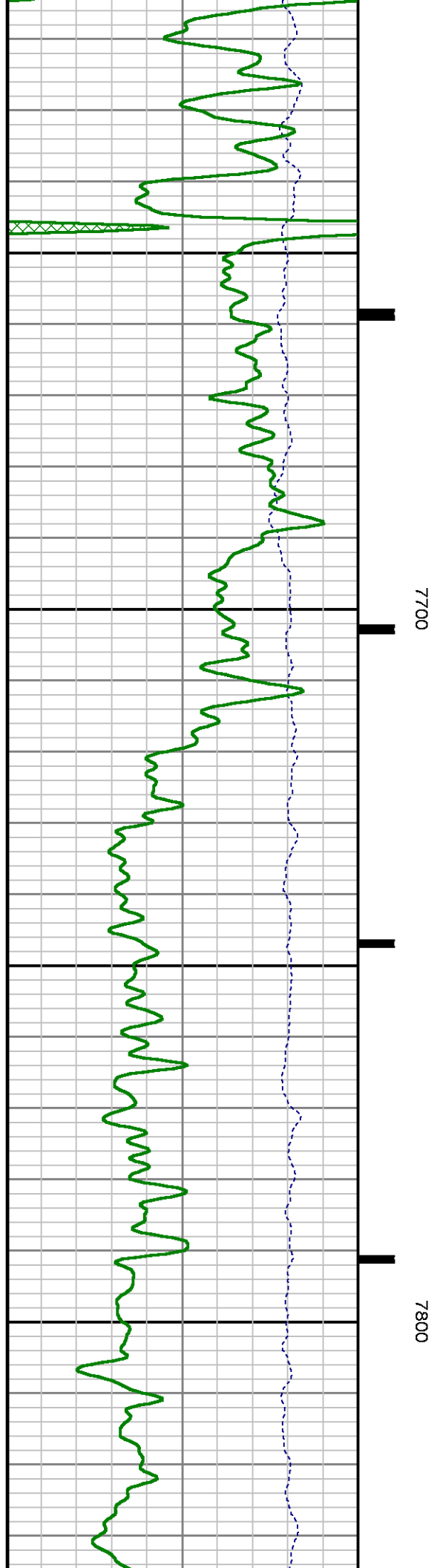
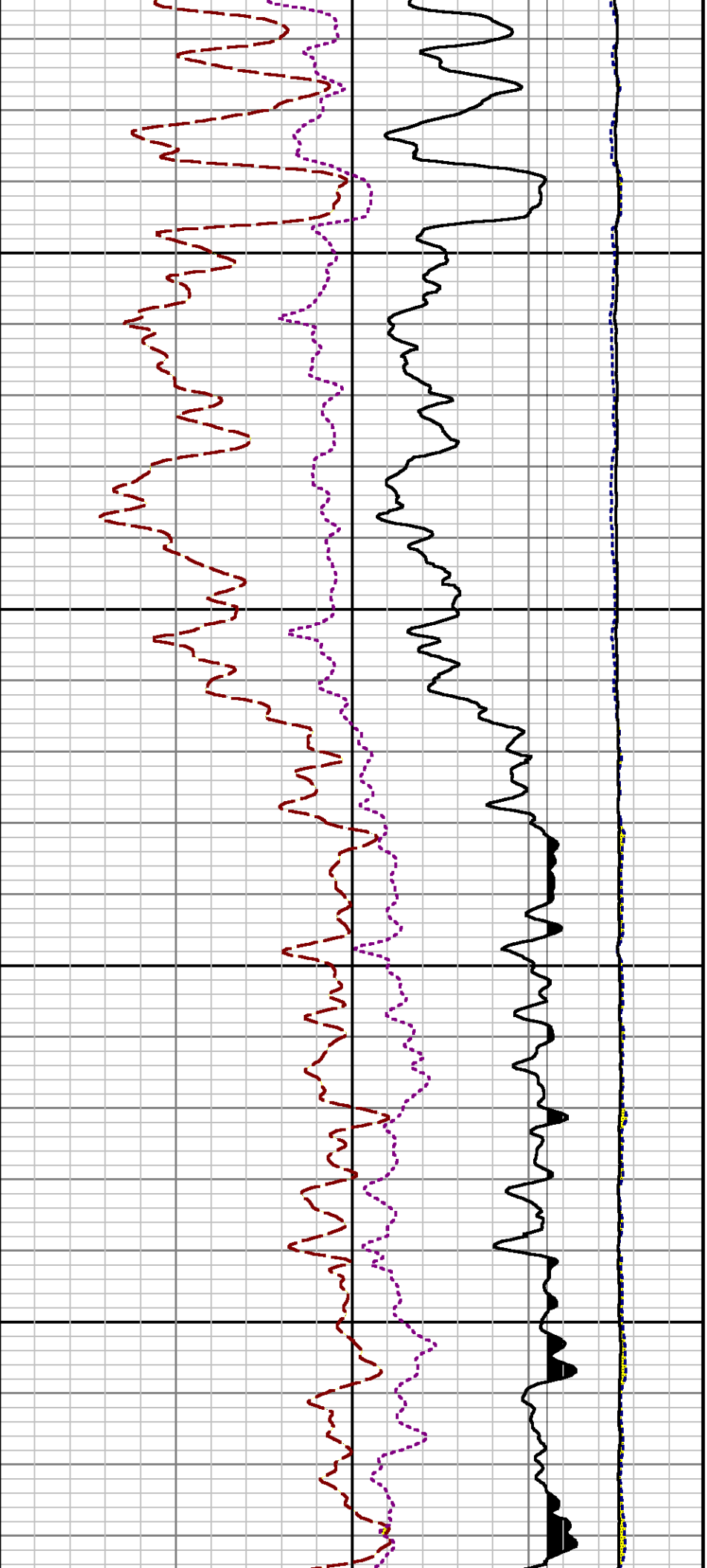


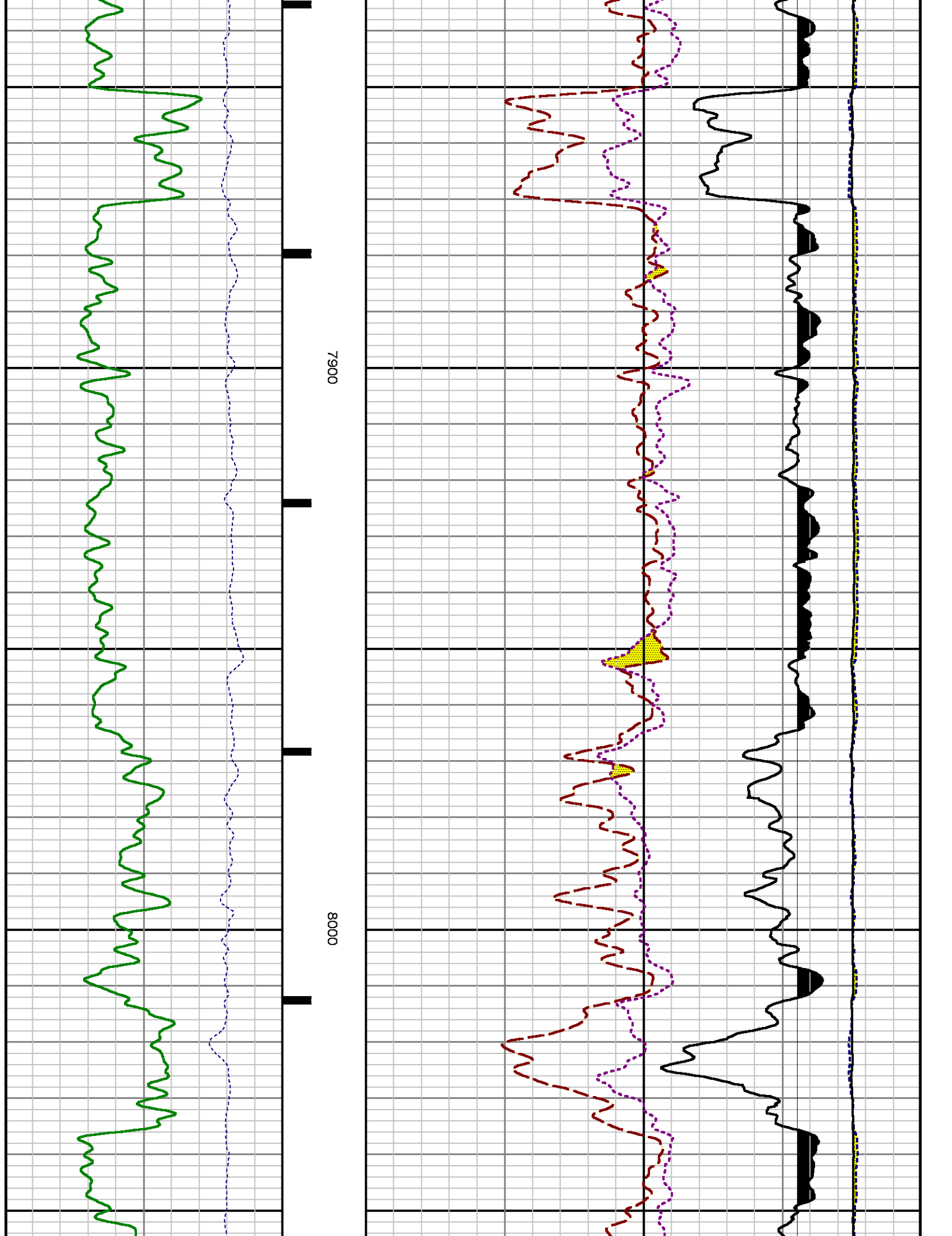


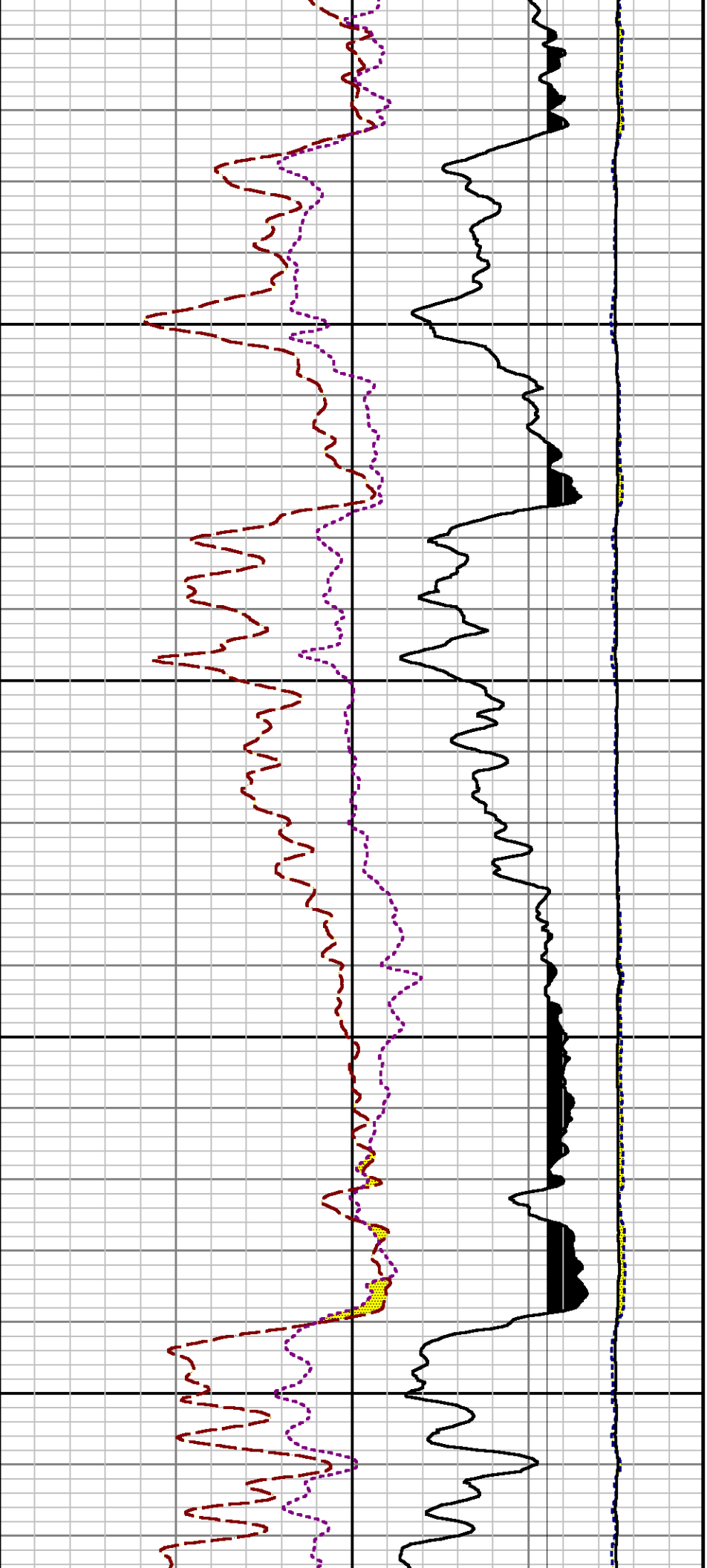






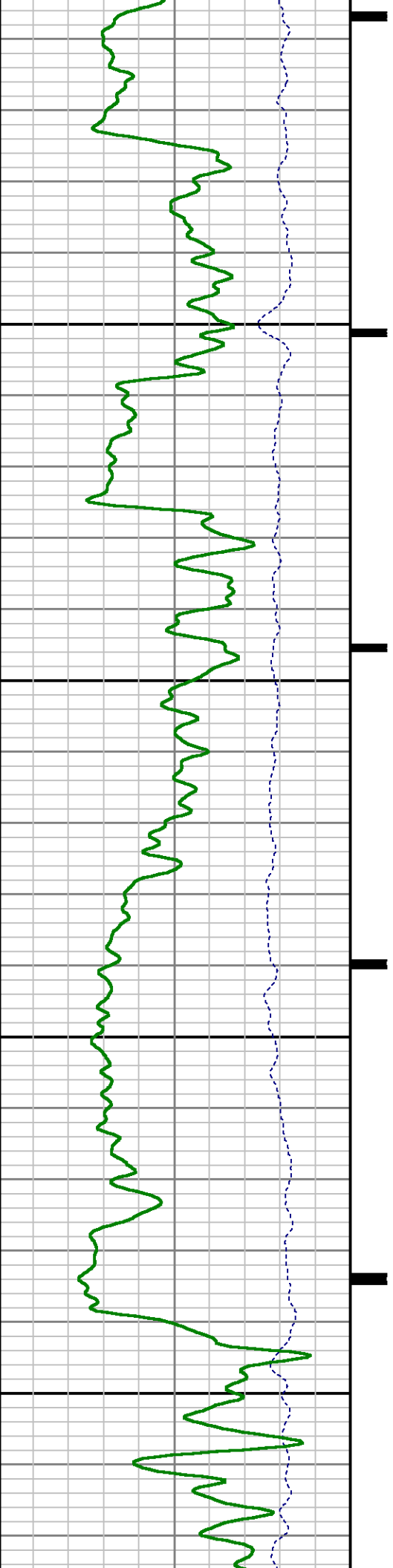


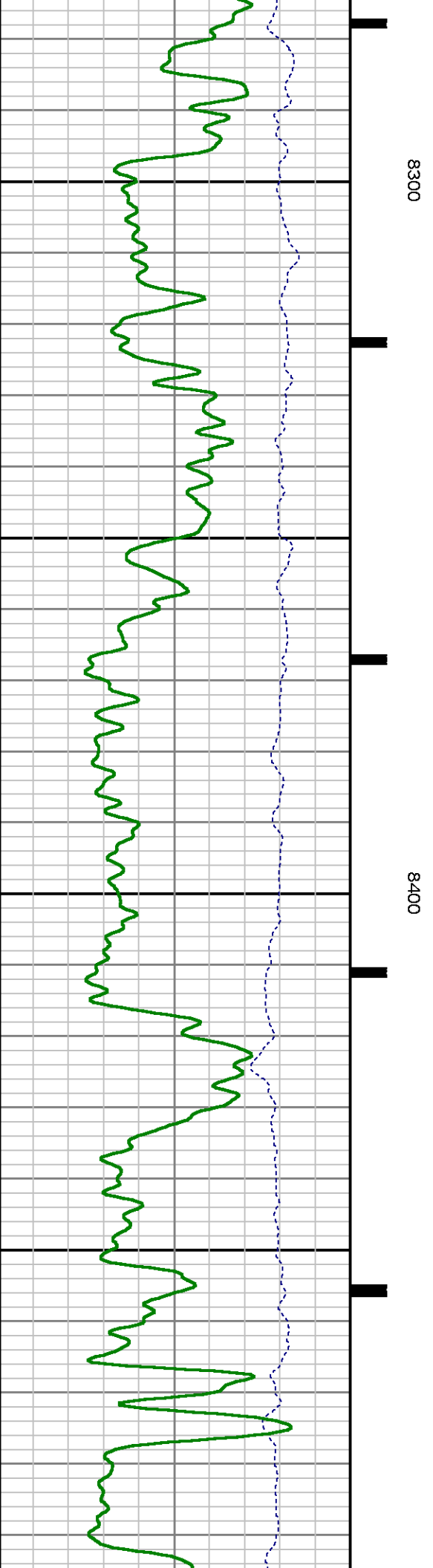
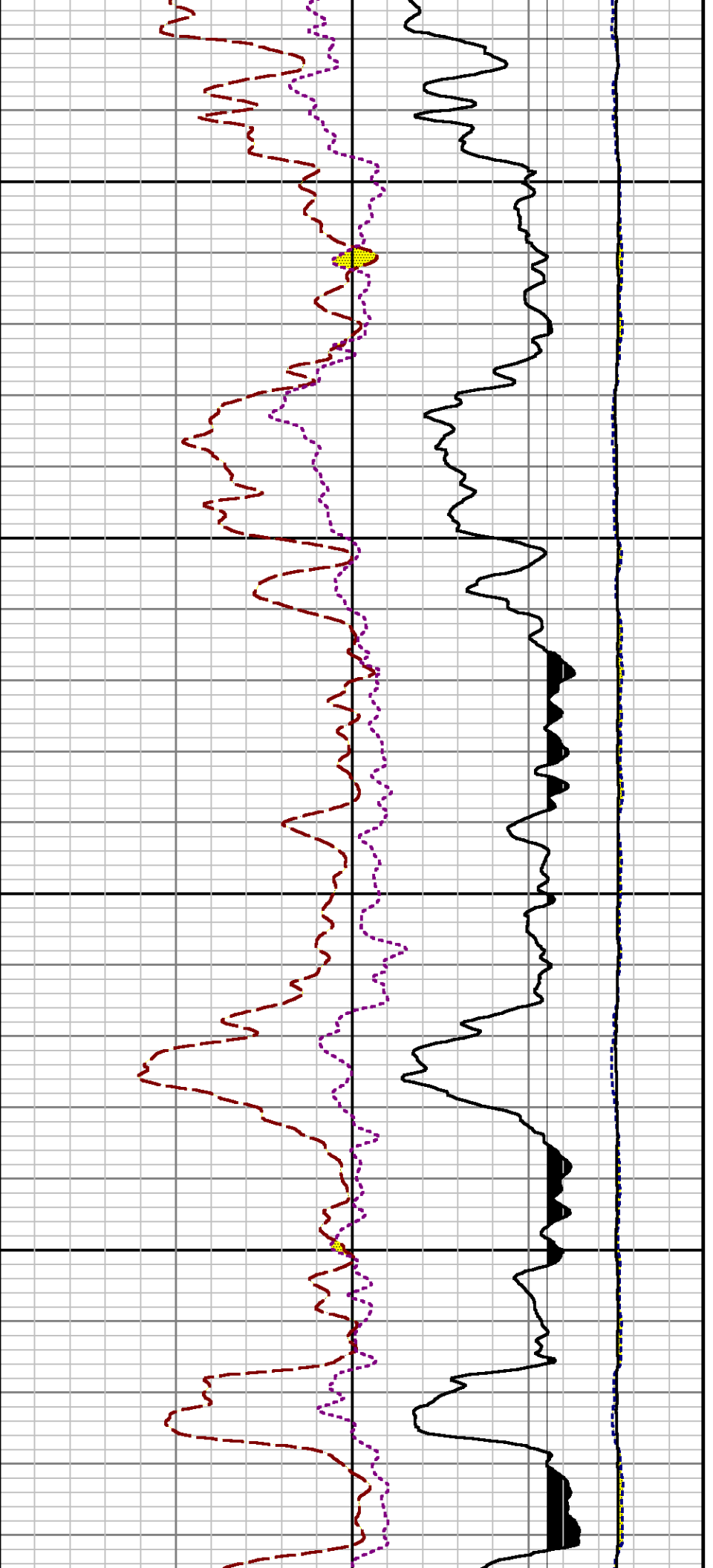


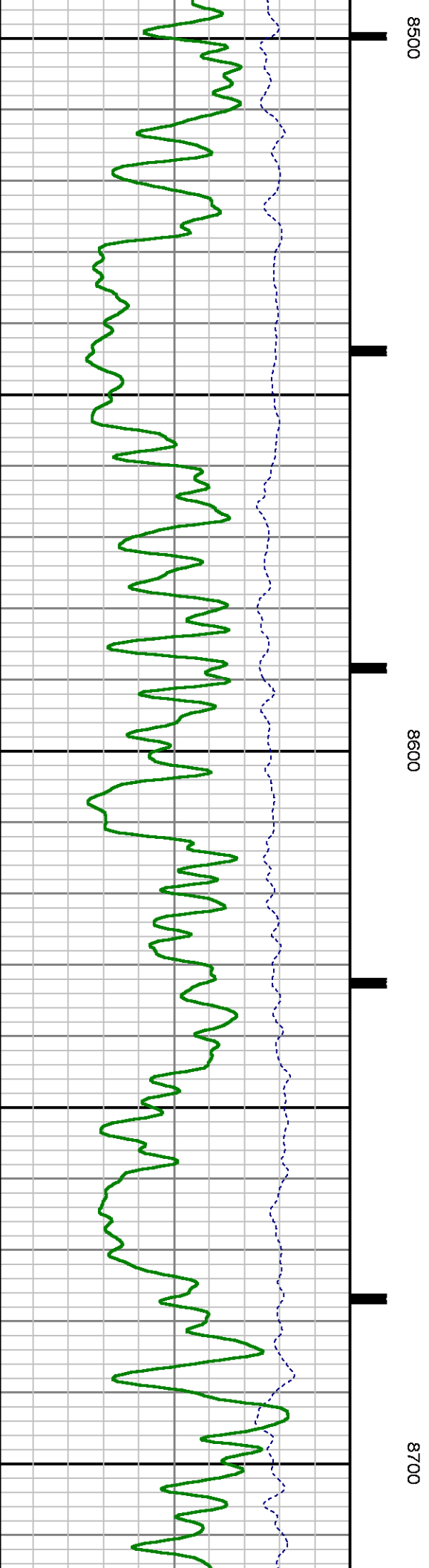
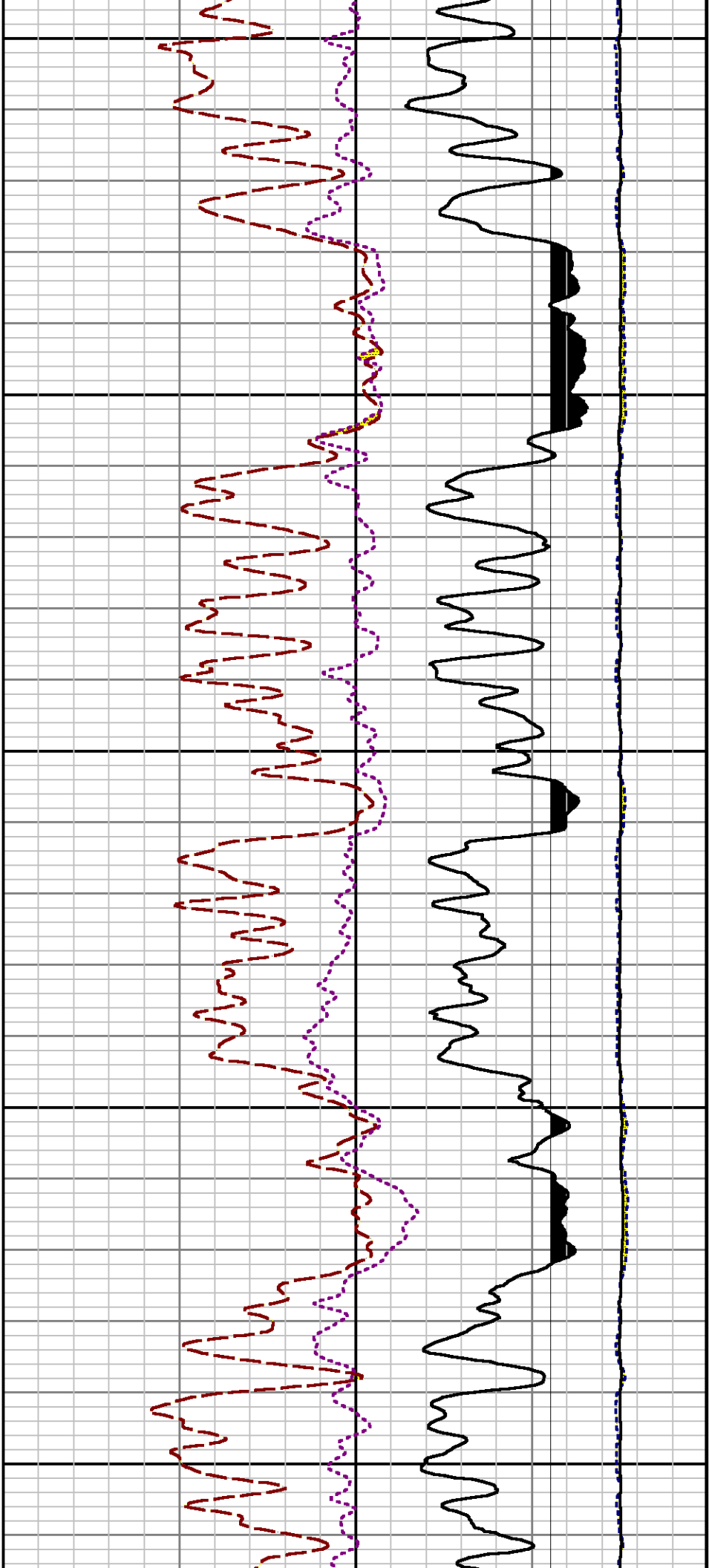


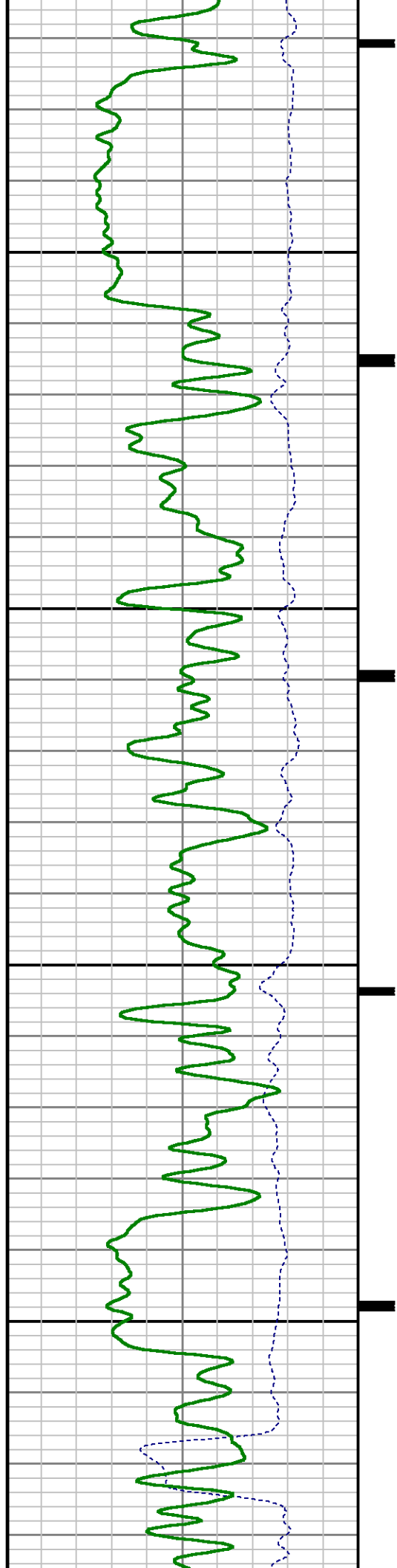
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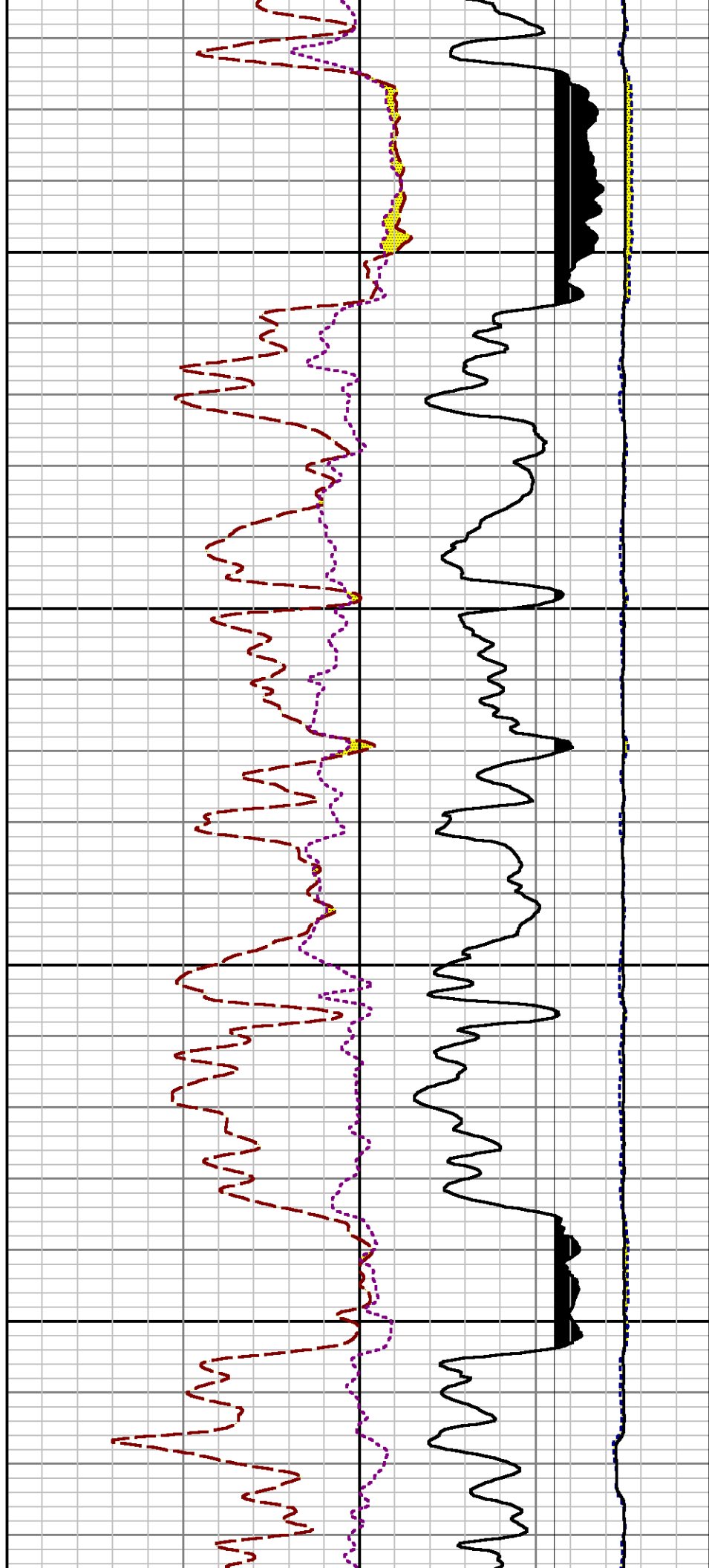


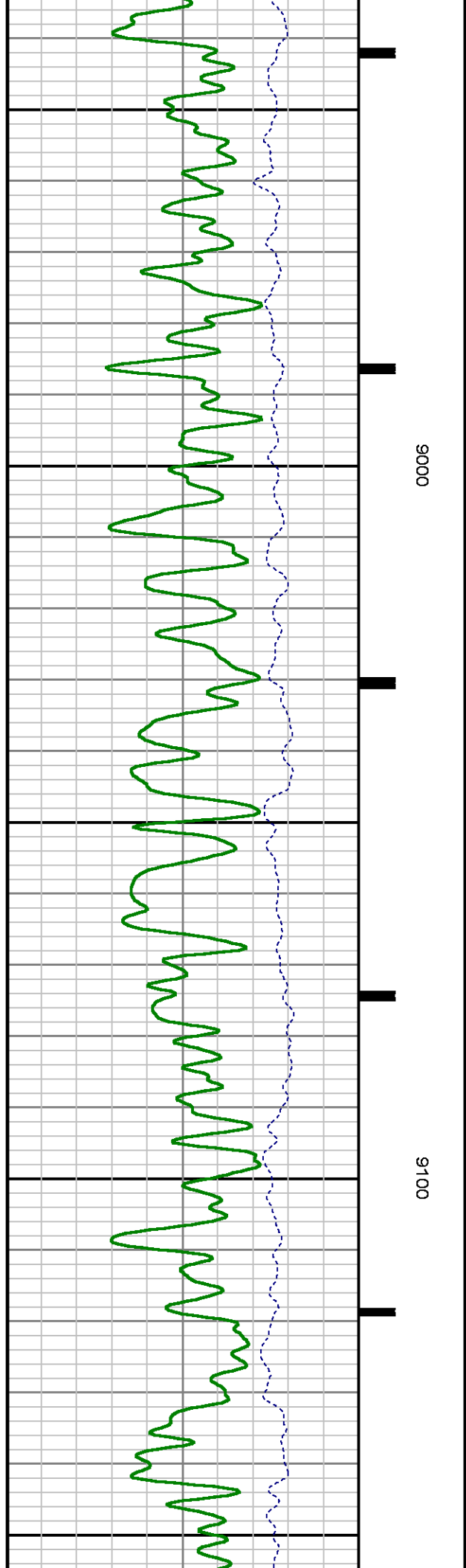
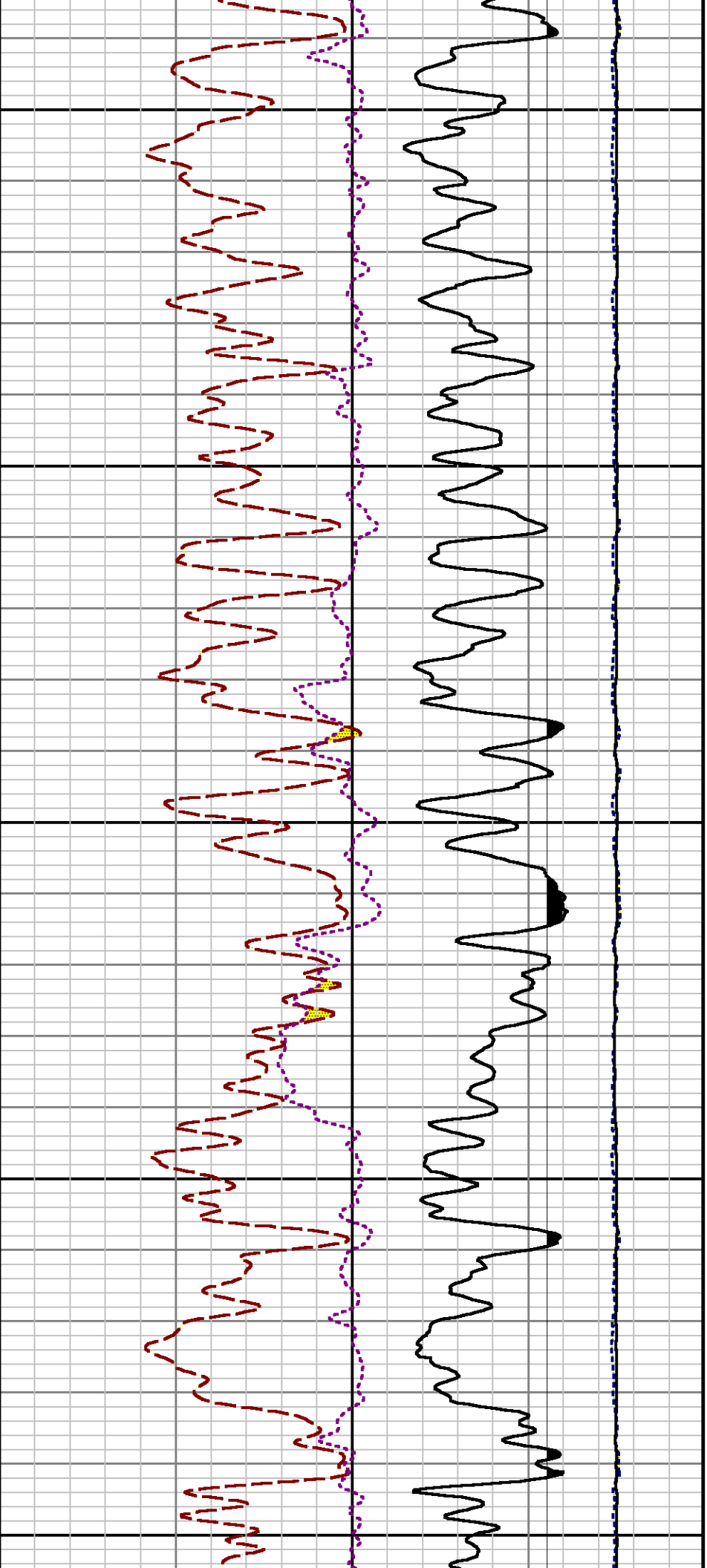


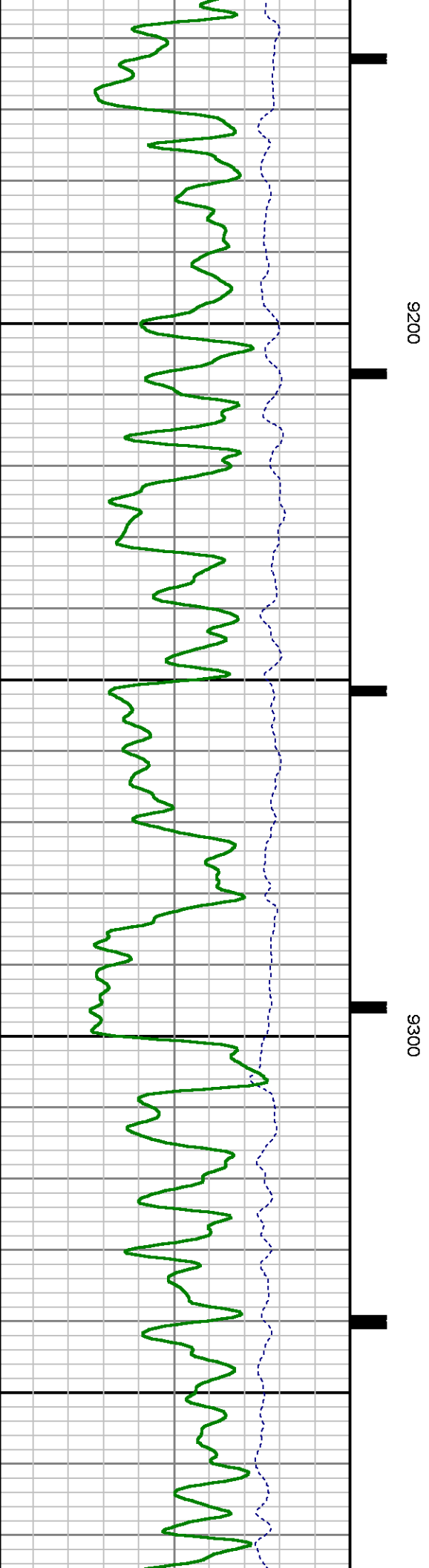
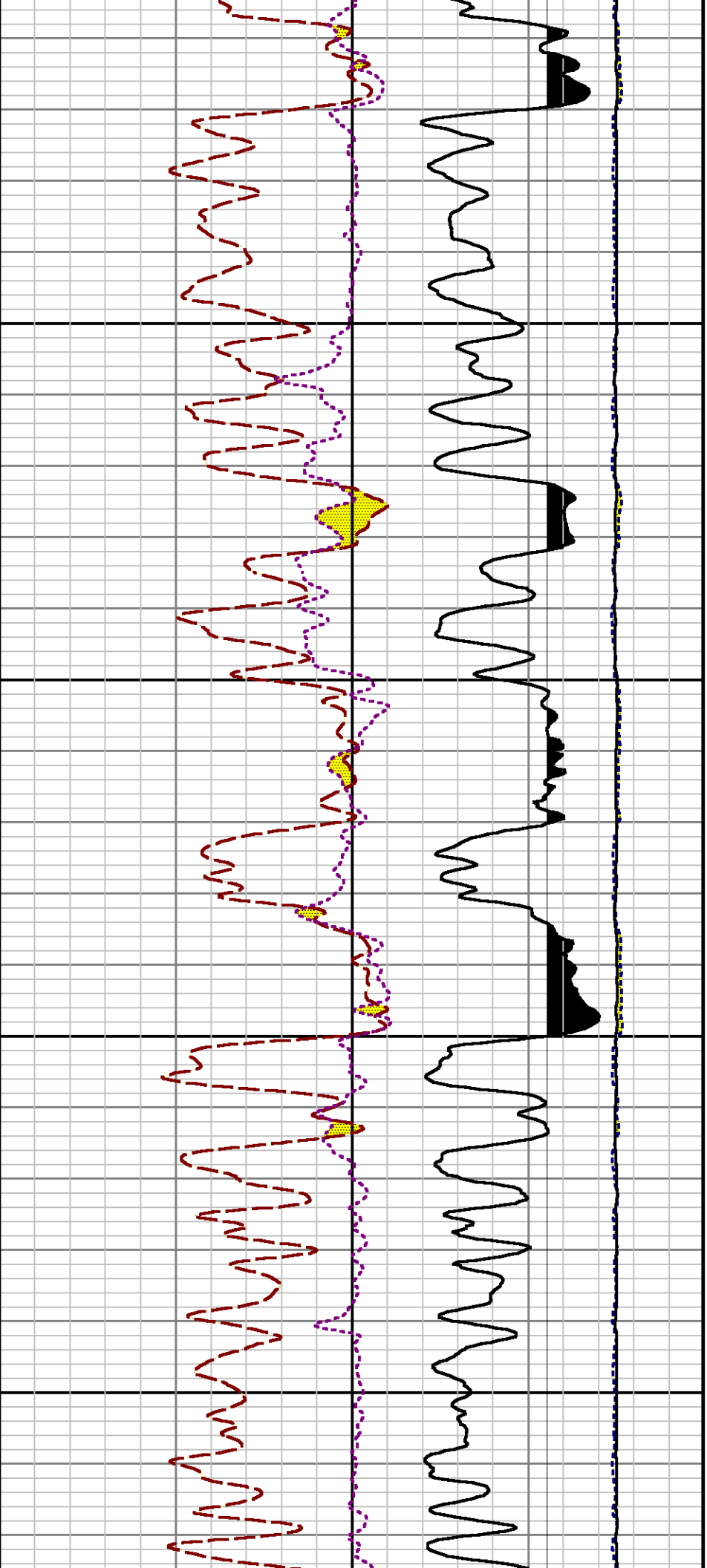


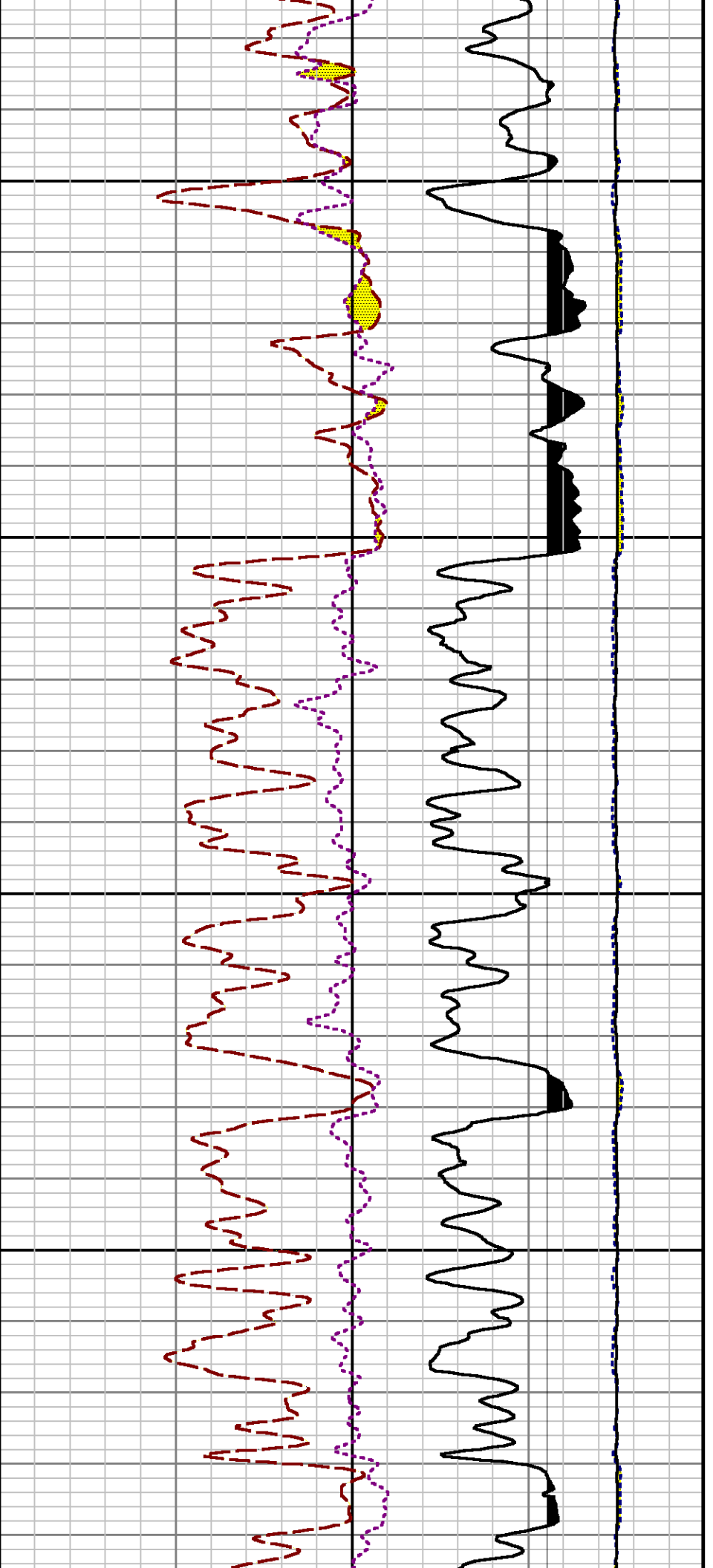
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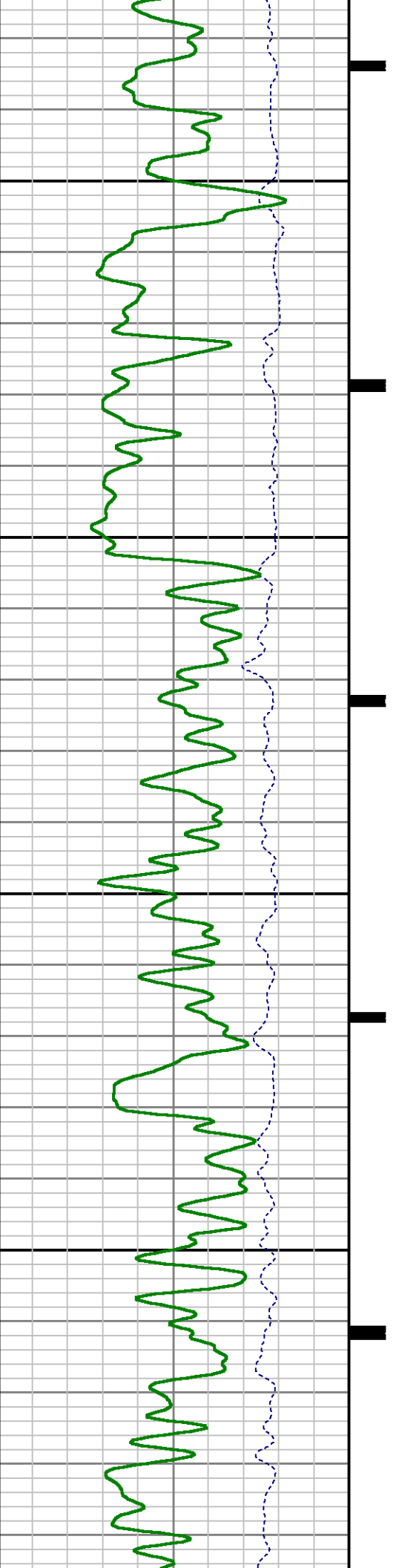


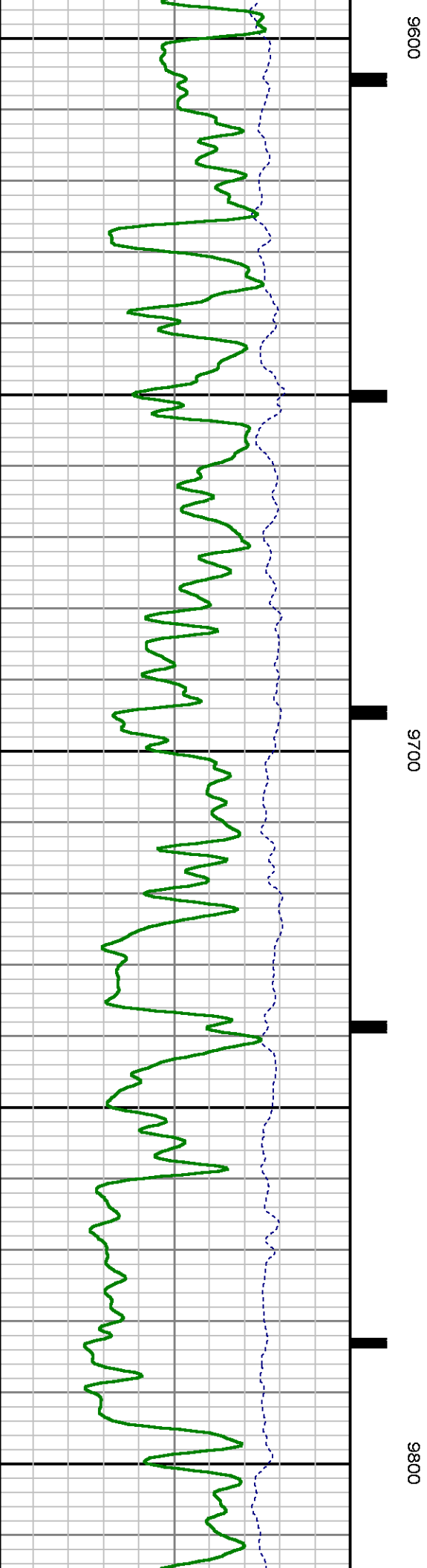
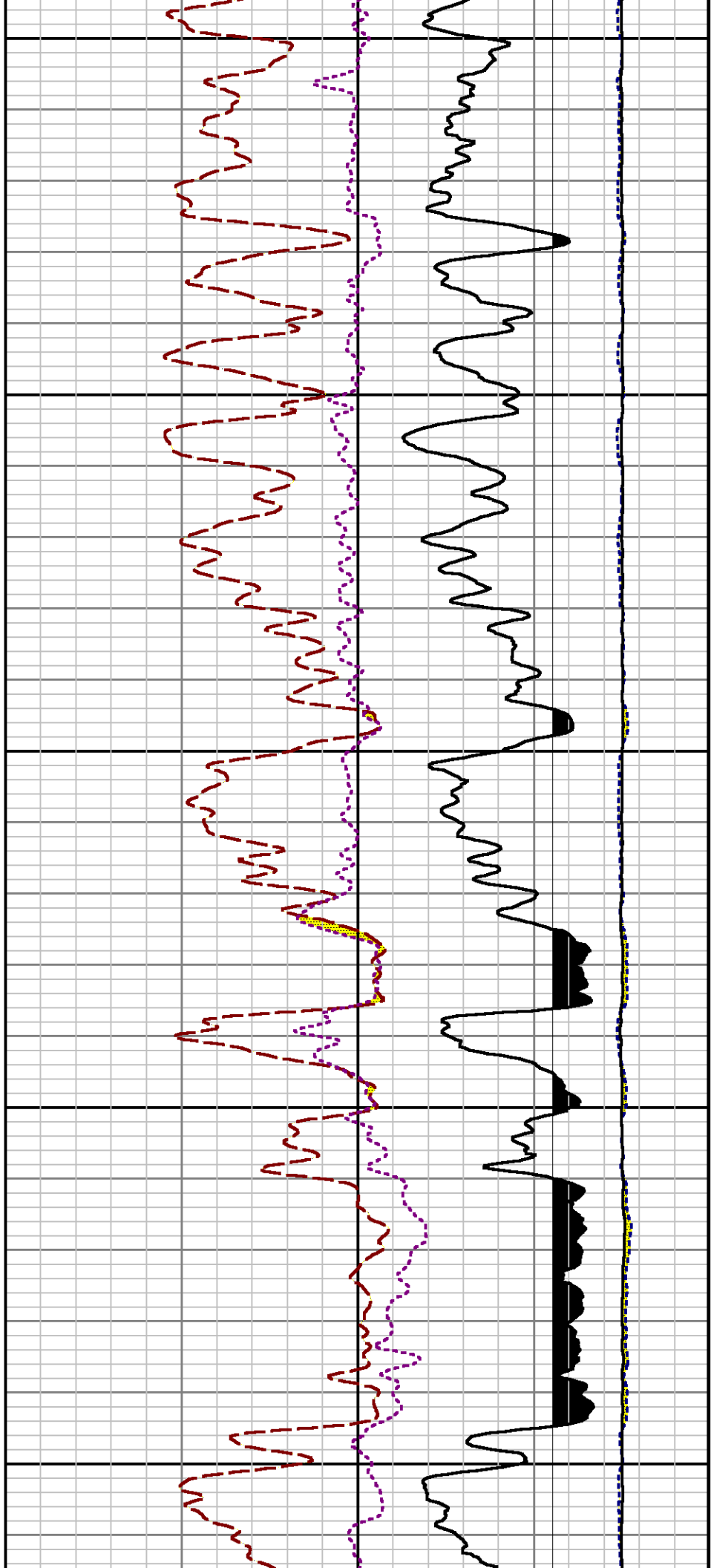


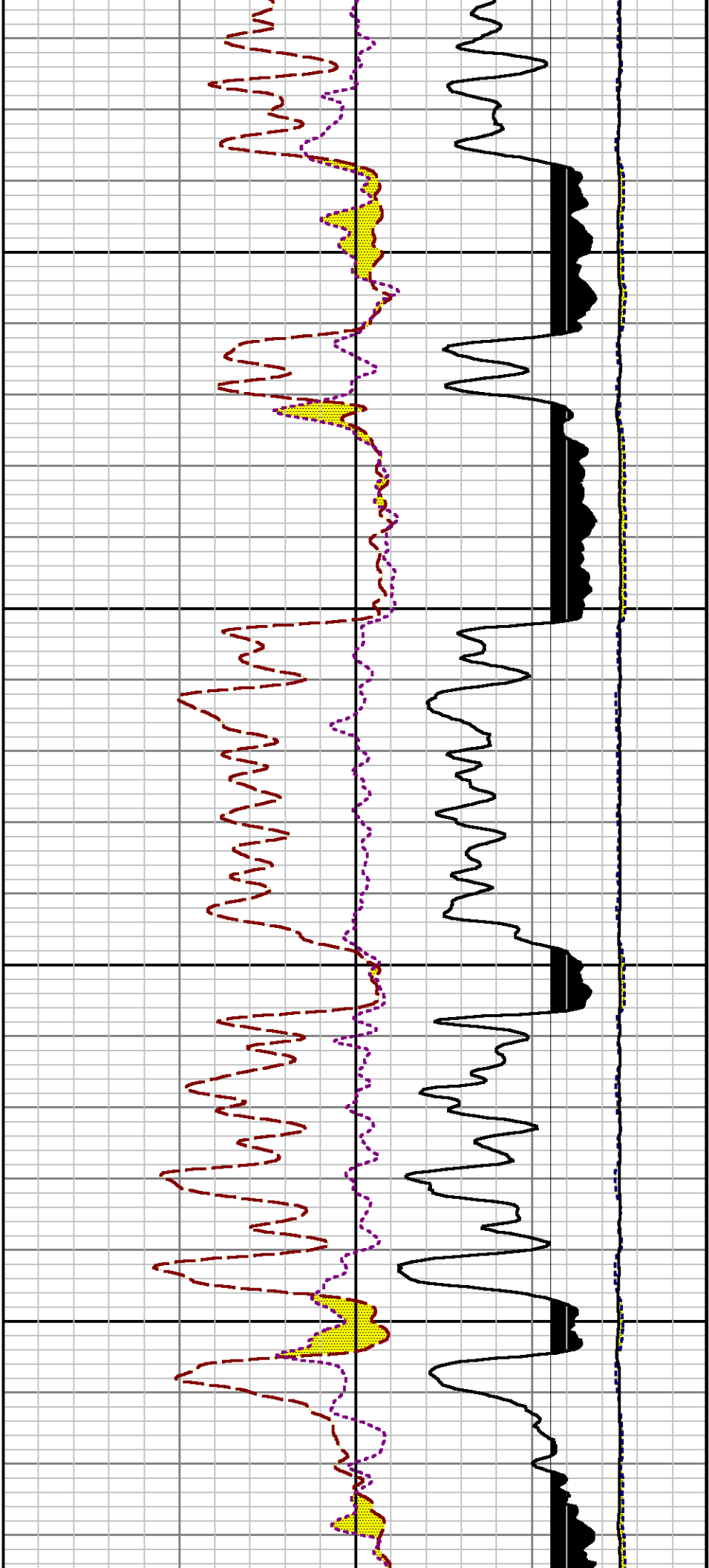


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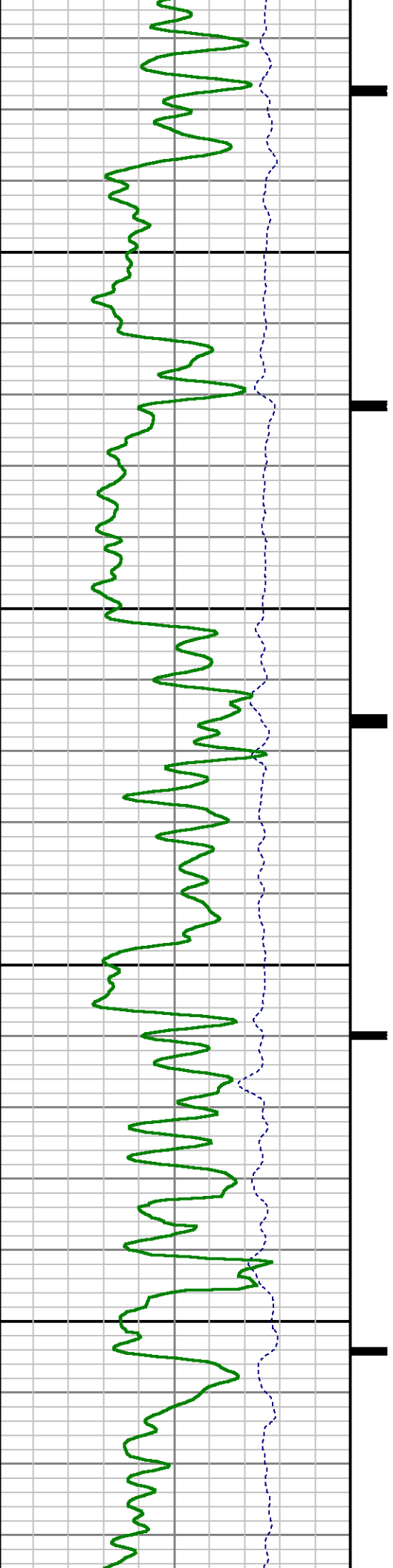


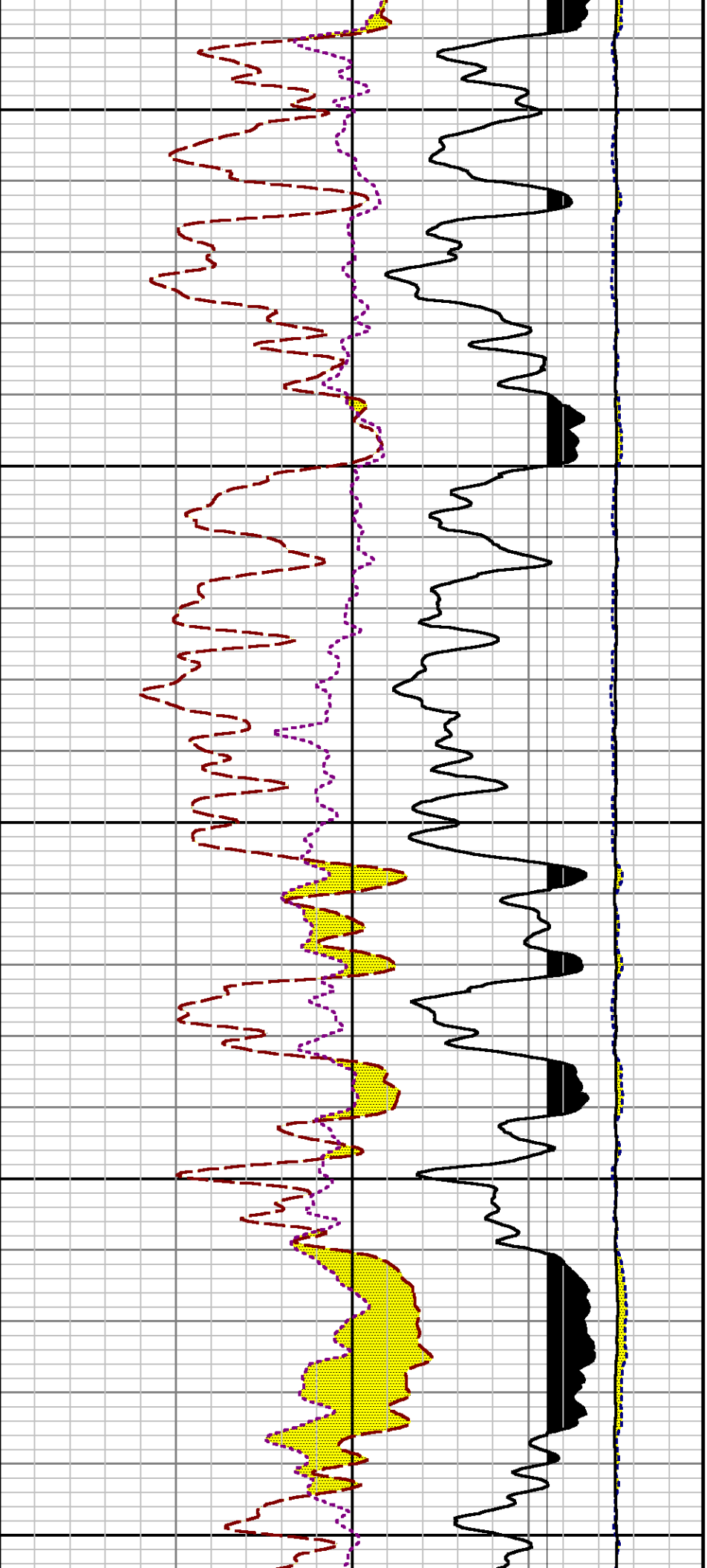




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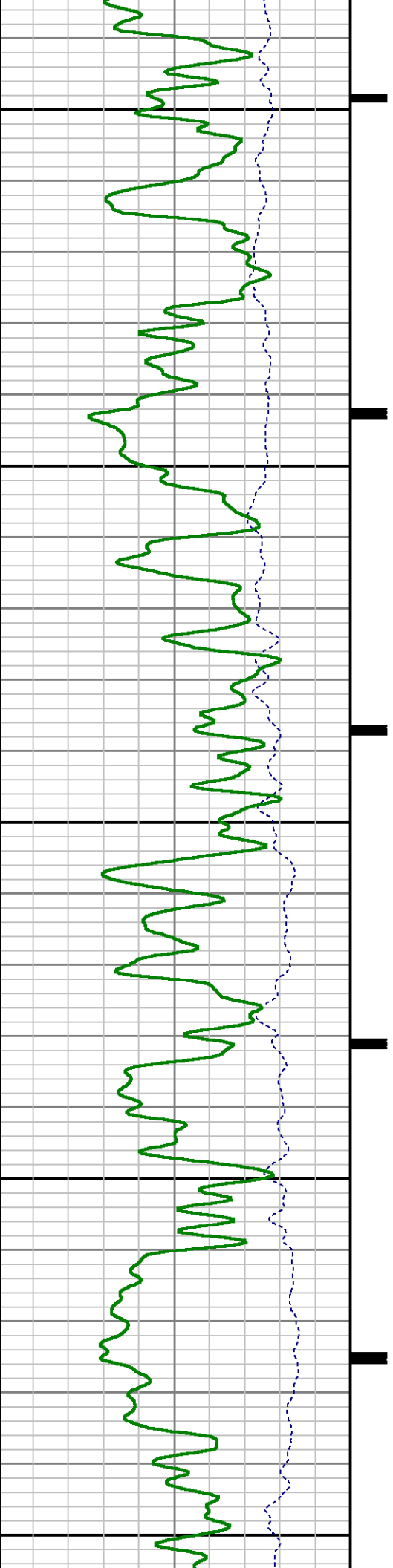
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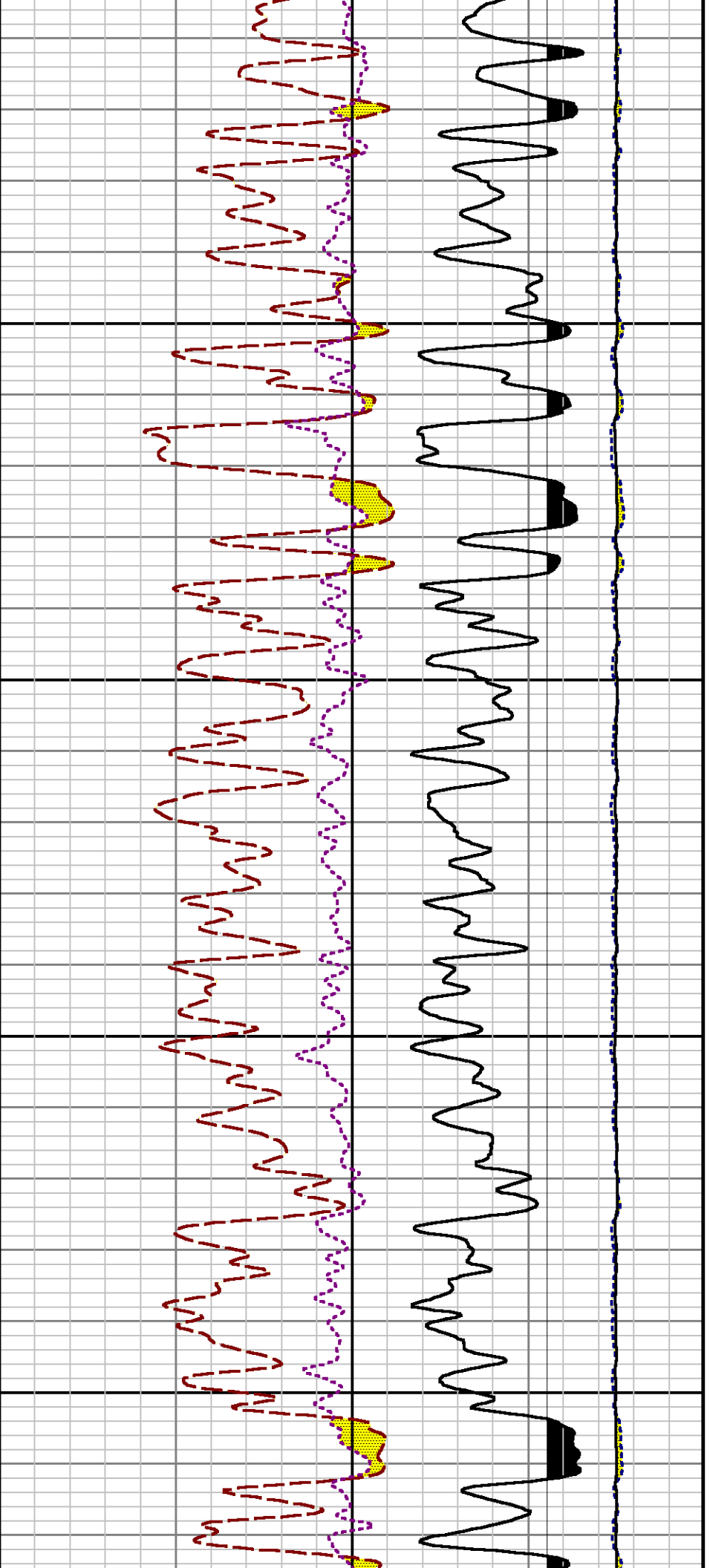




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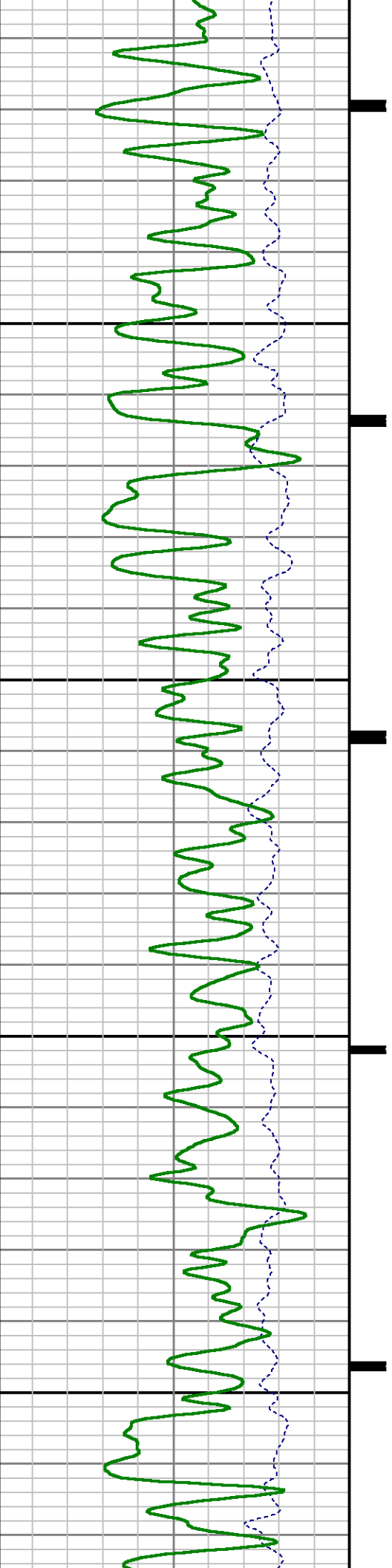
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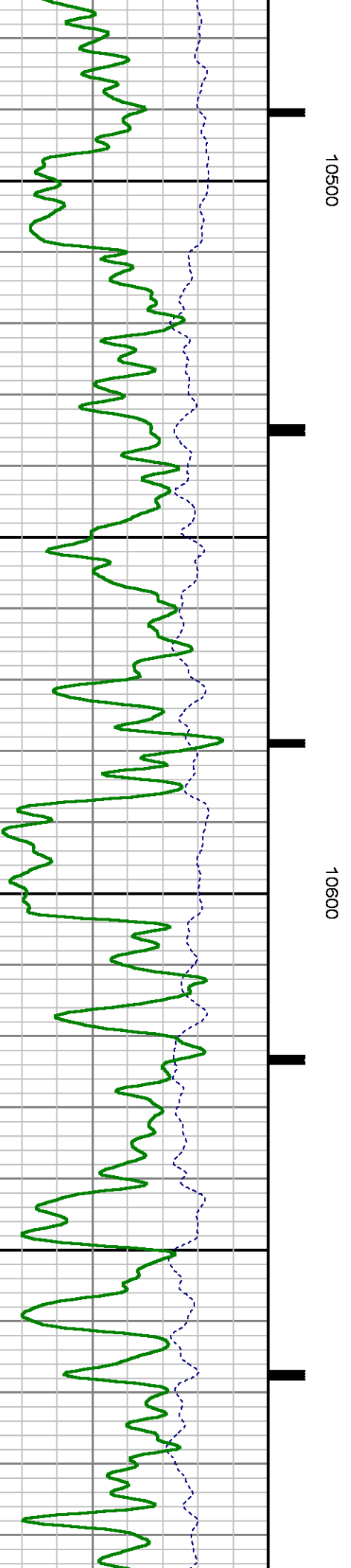
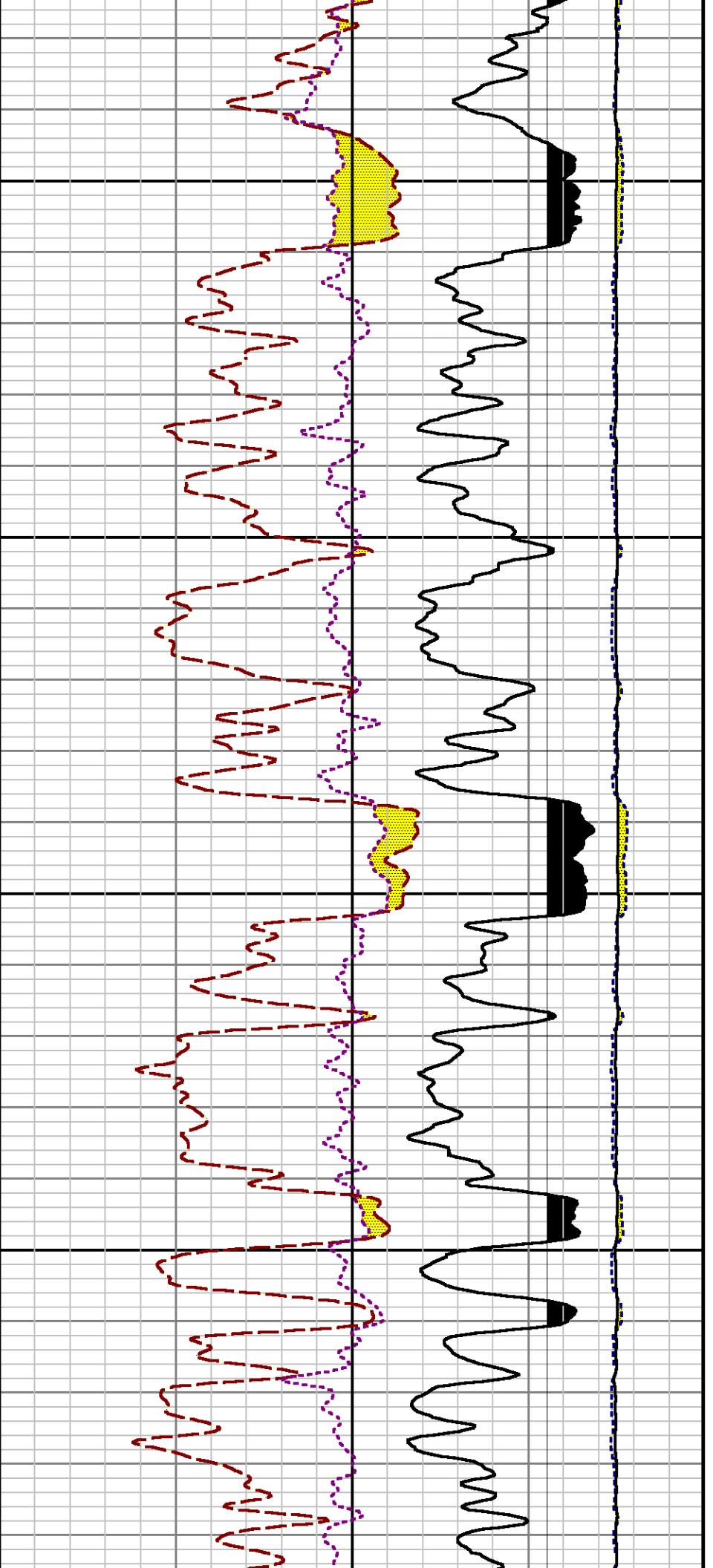


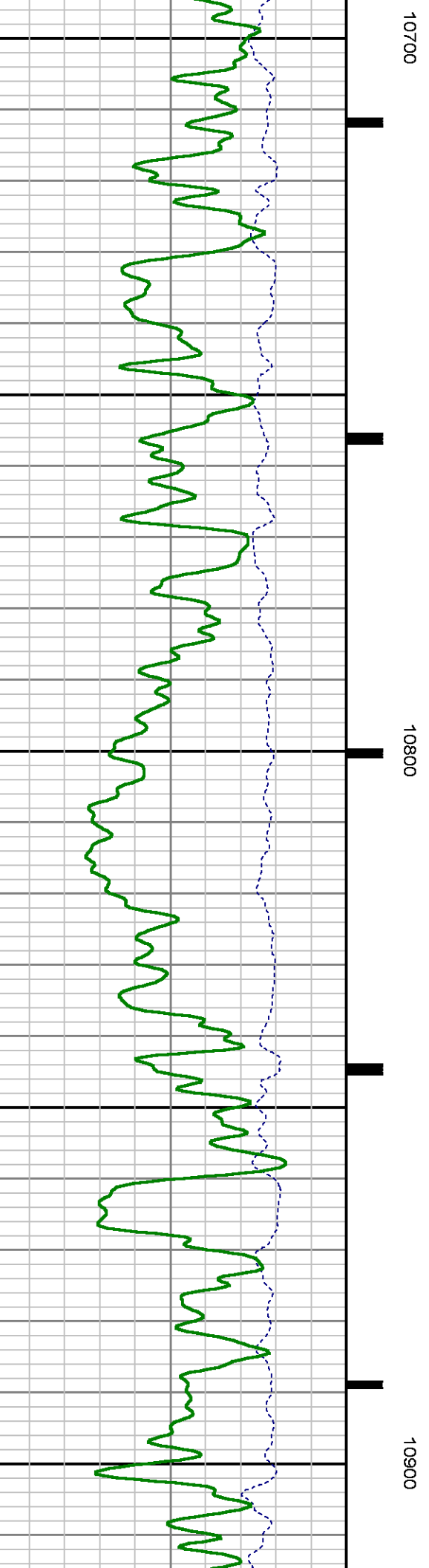
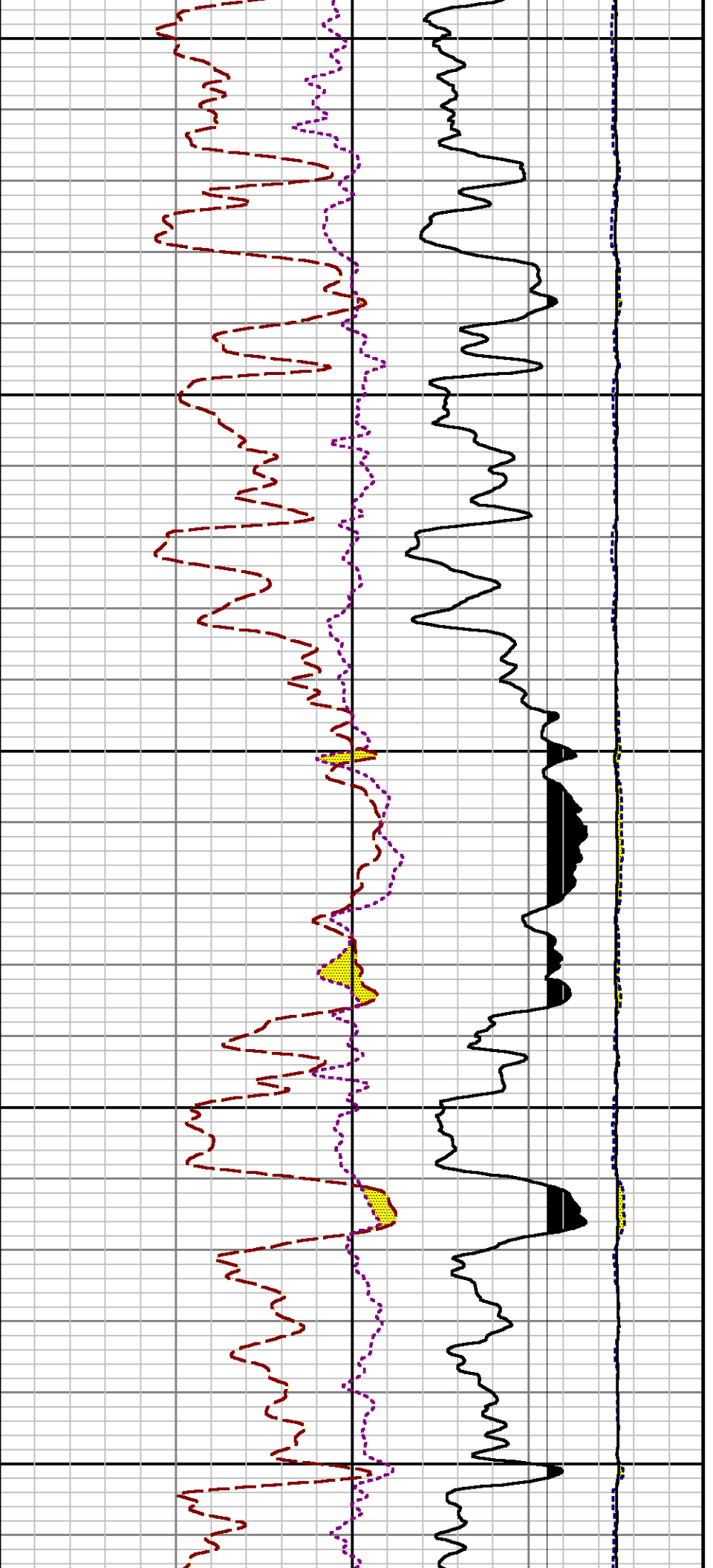


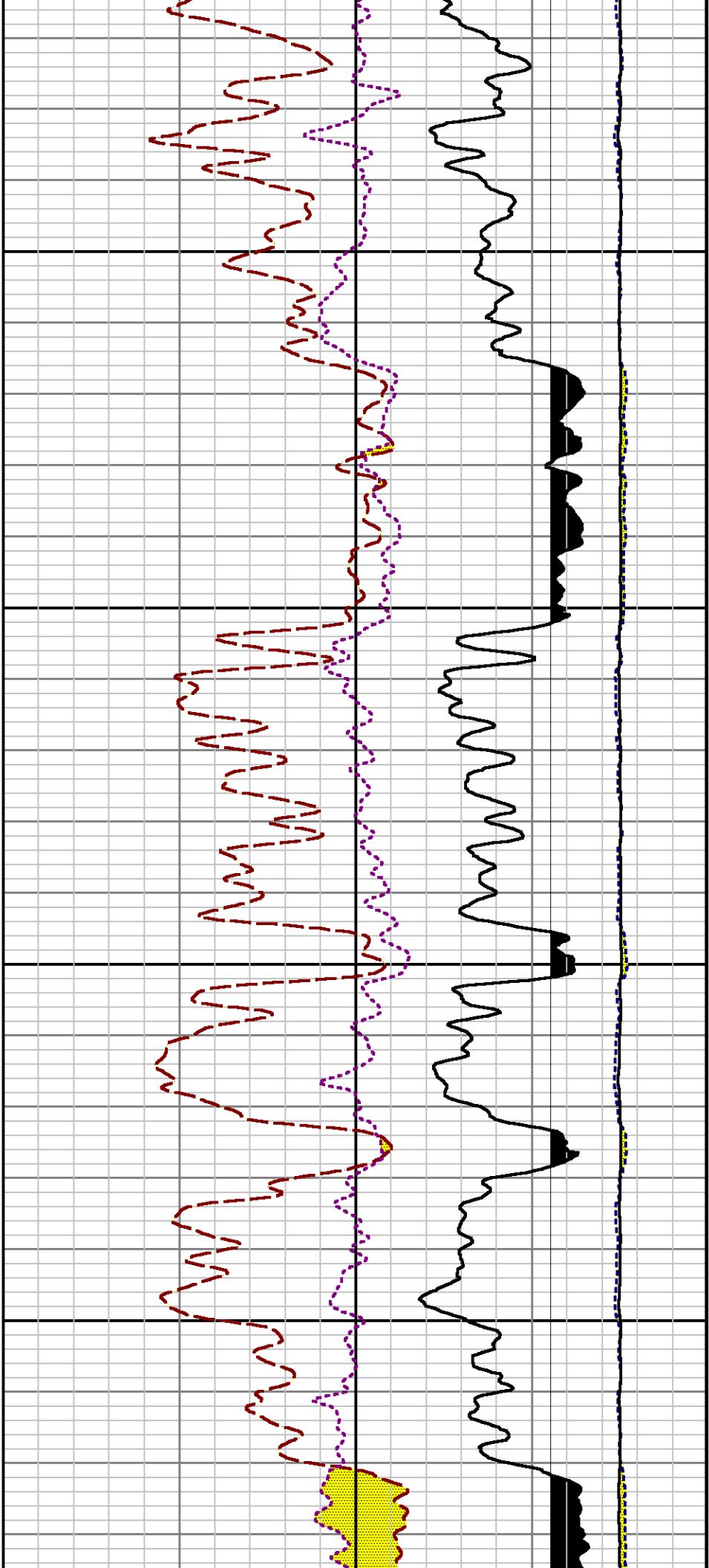
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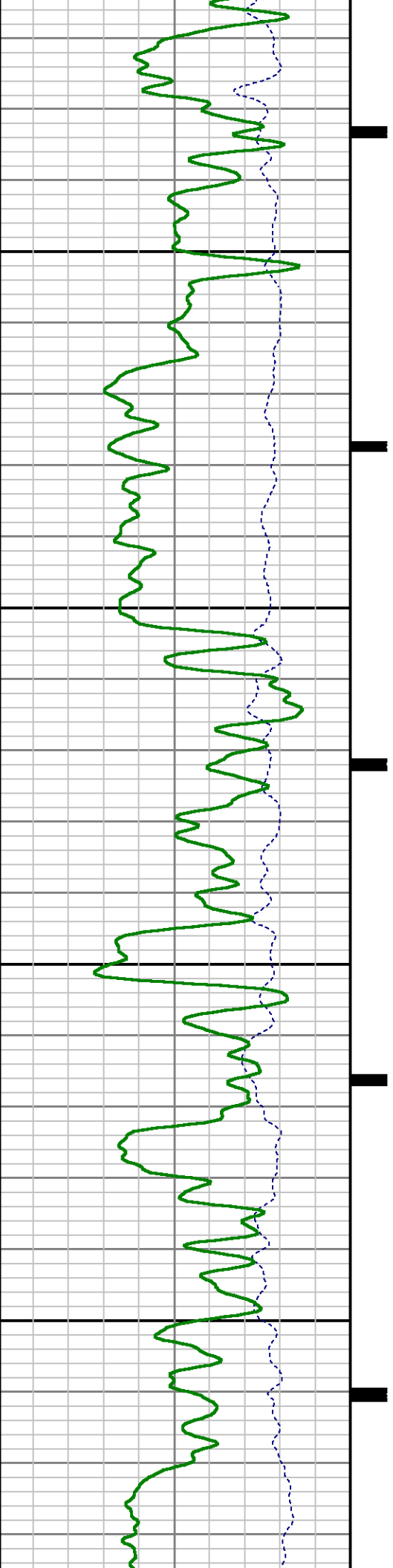


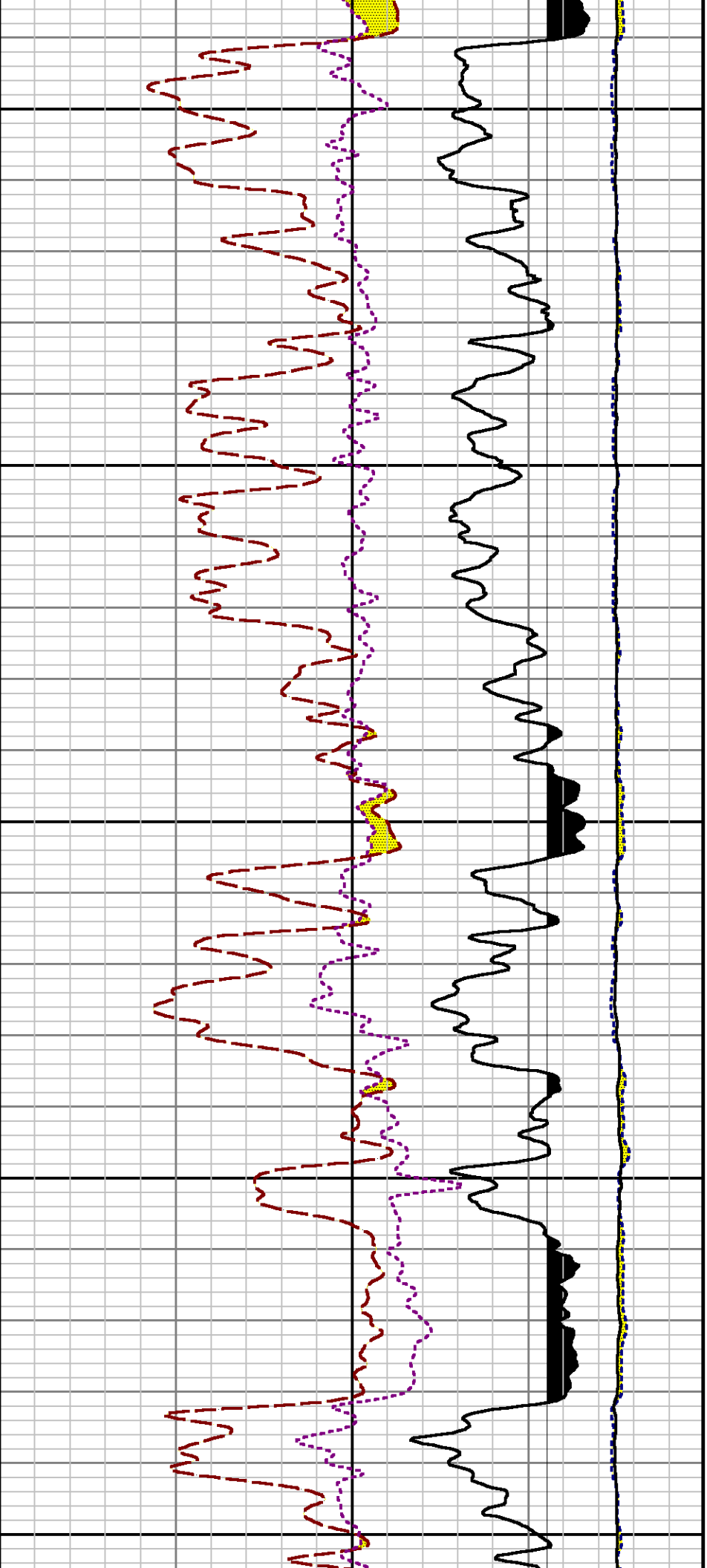




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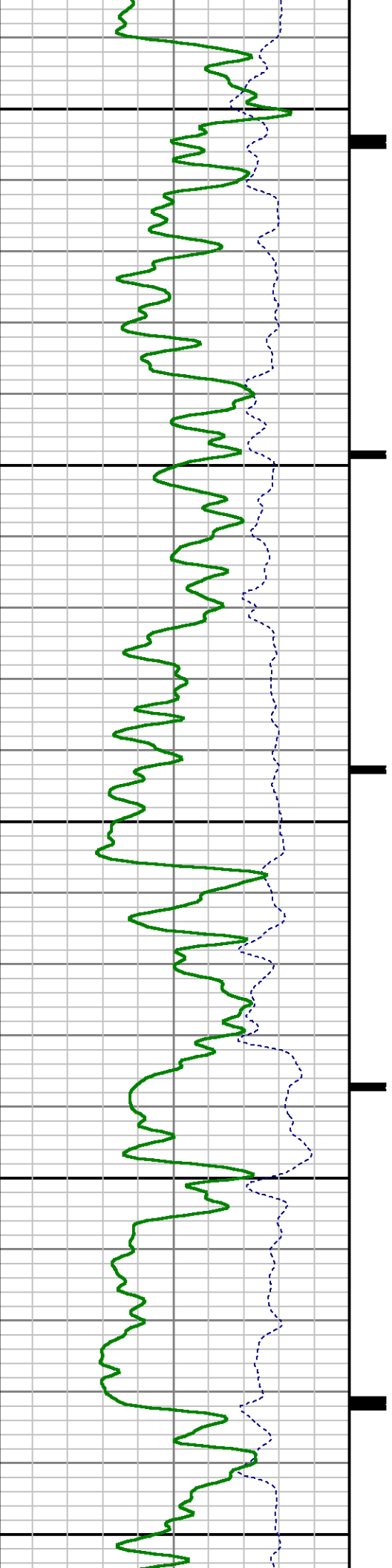
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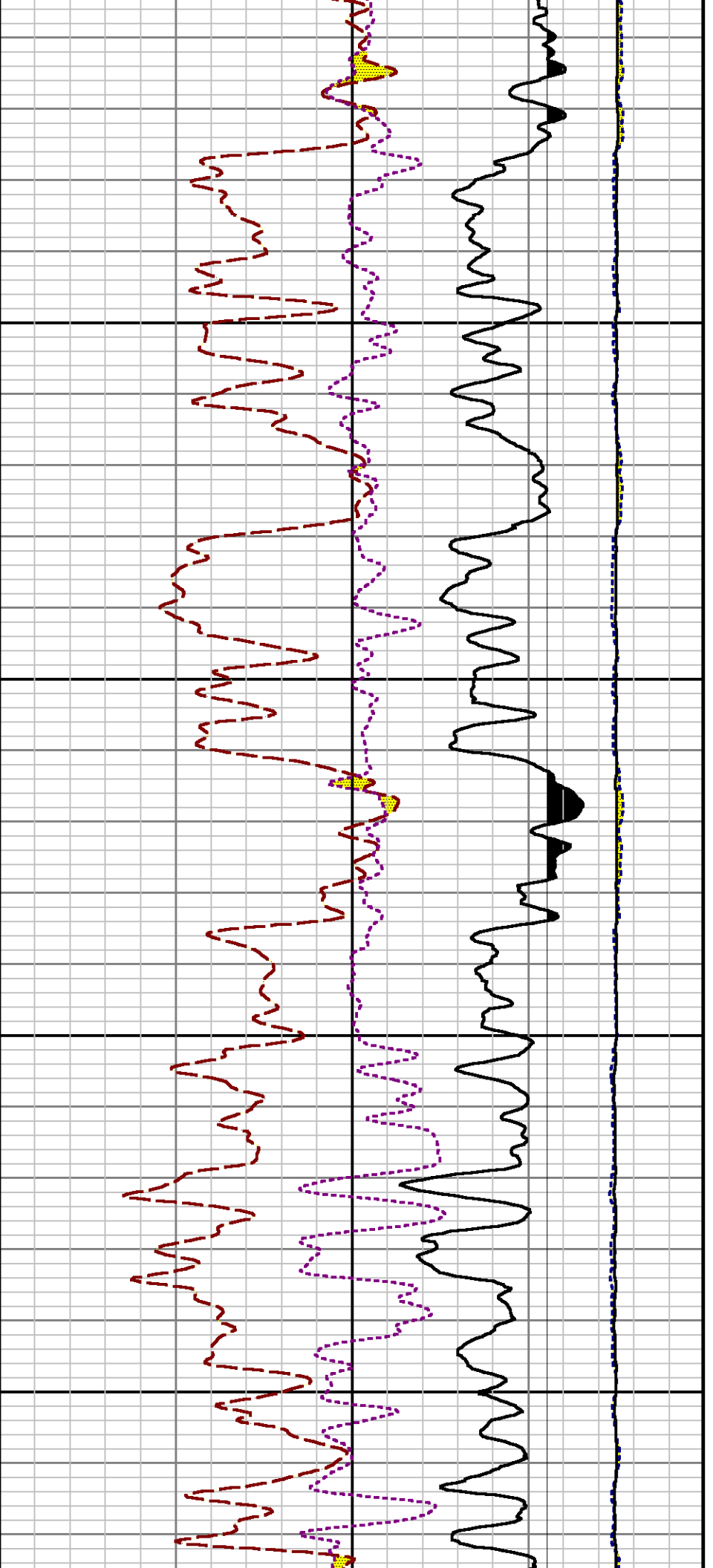




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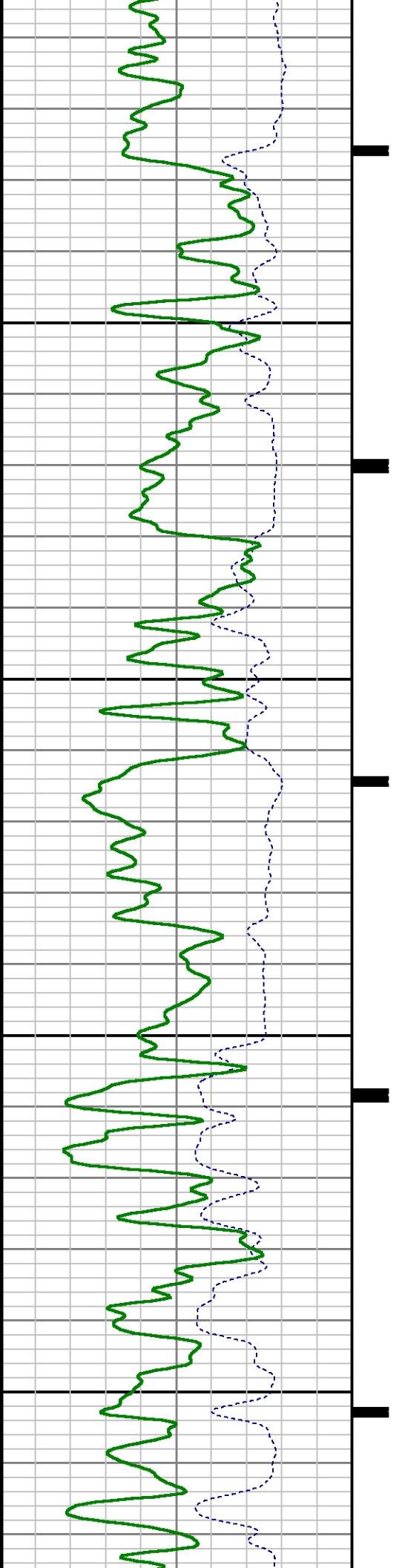
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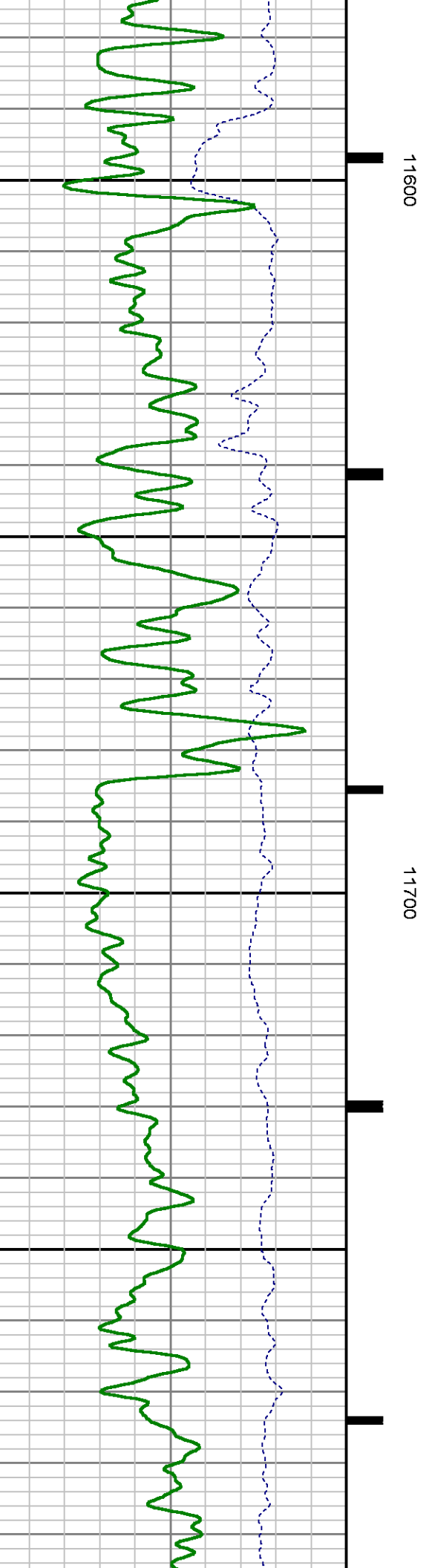
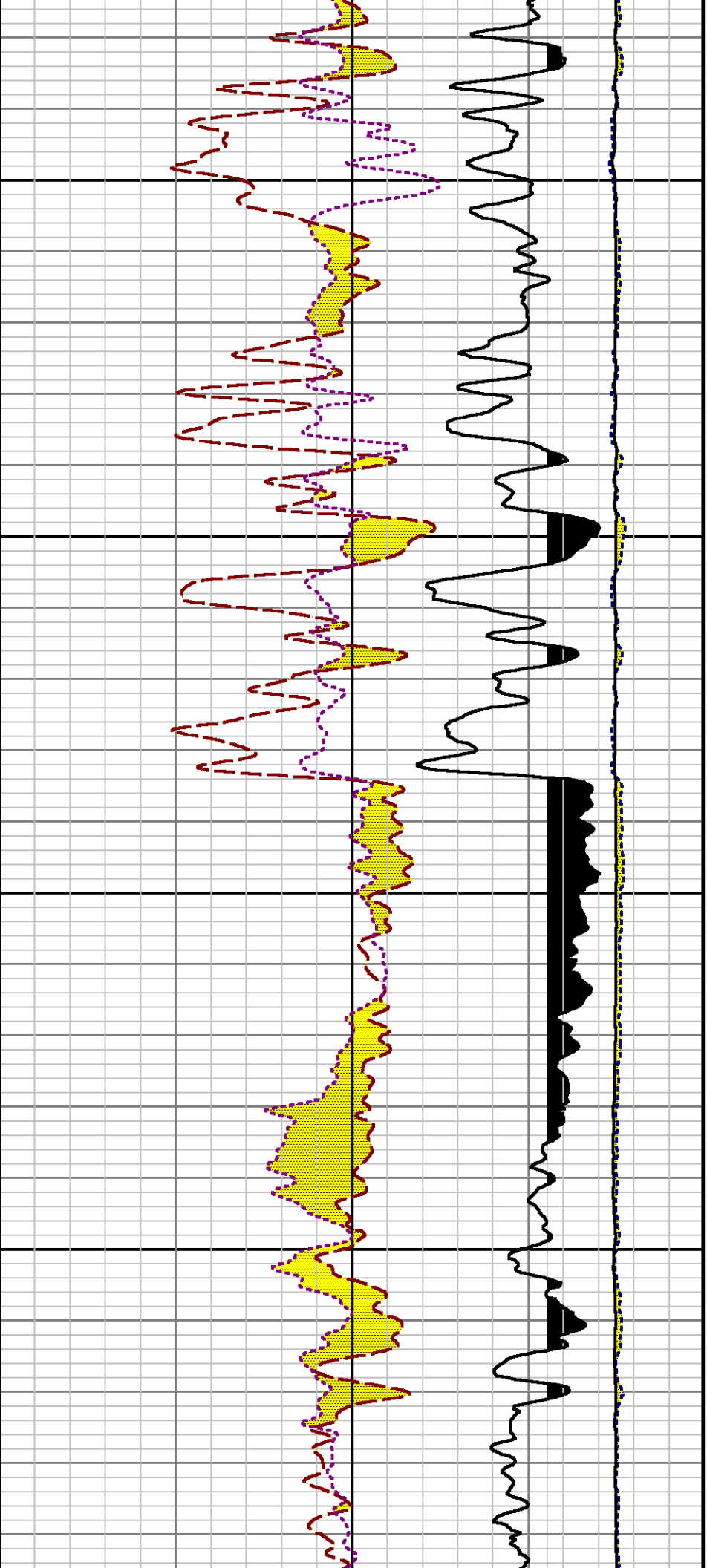


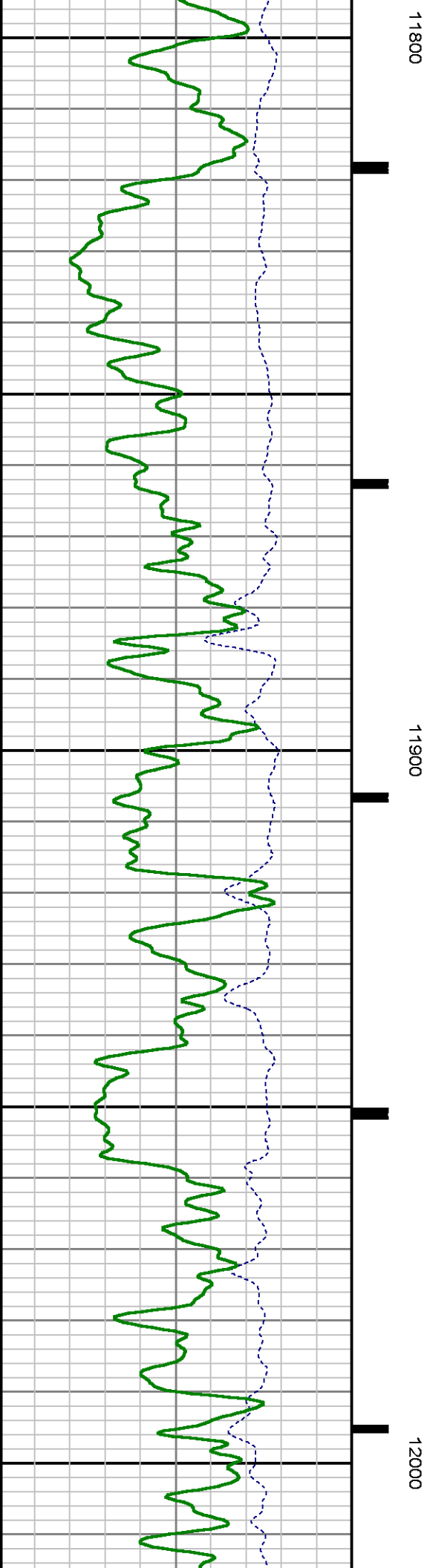
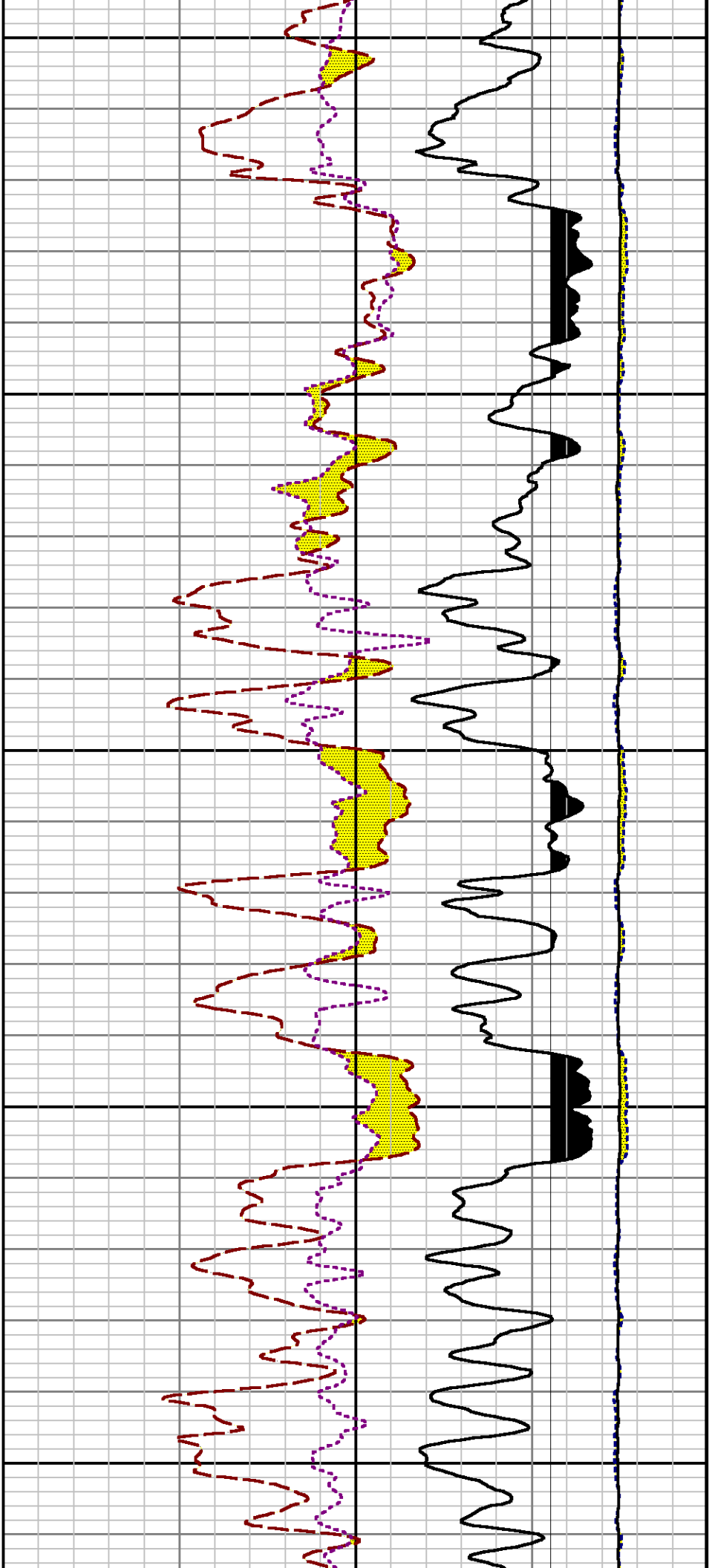


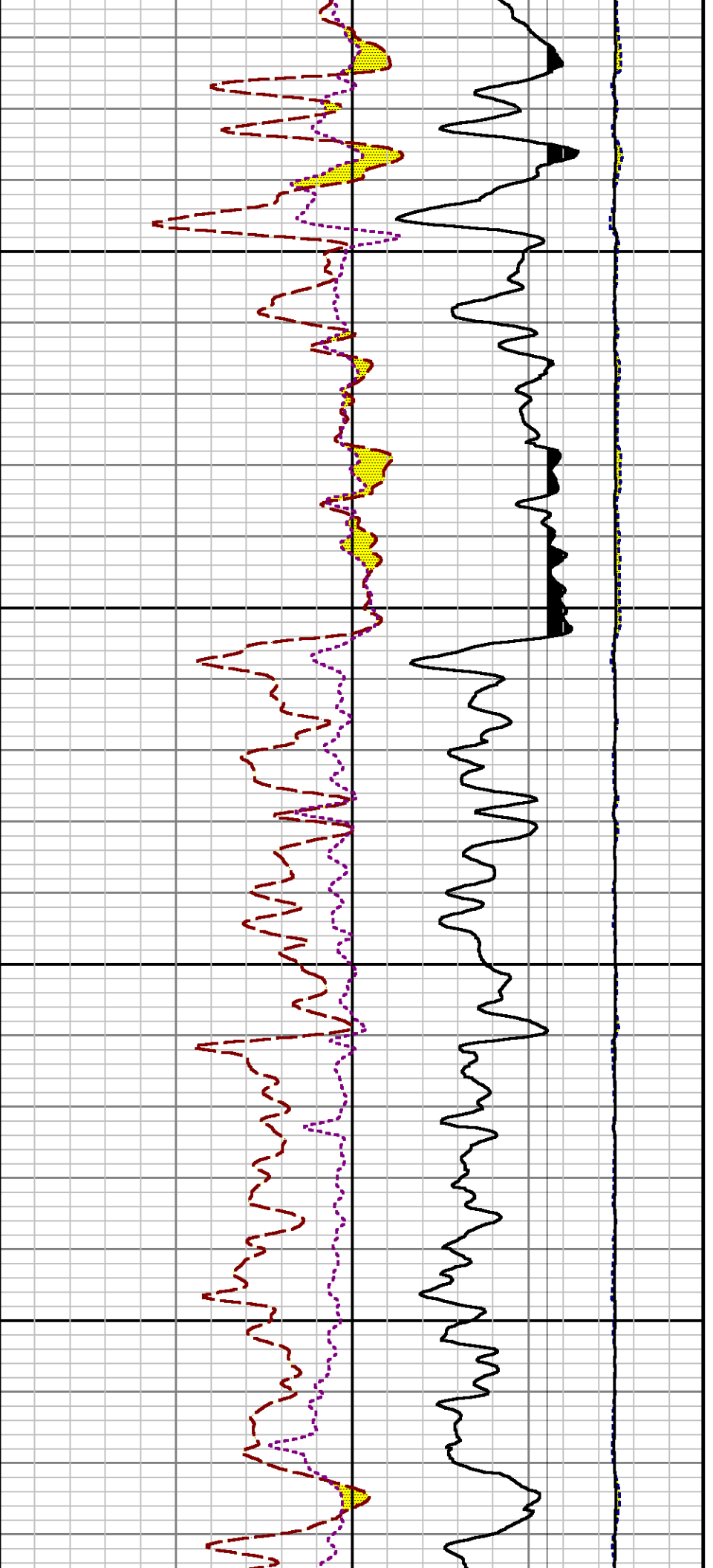
11400

11500



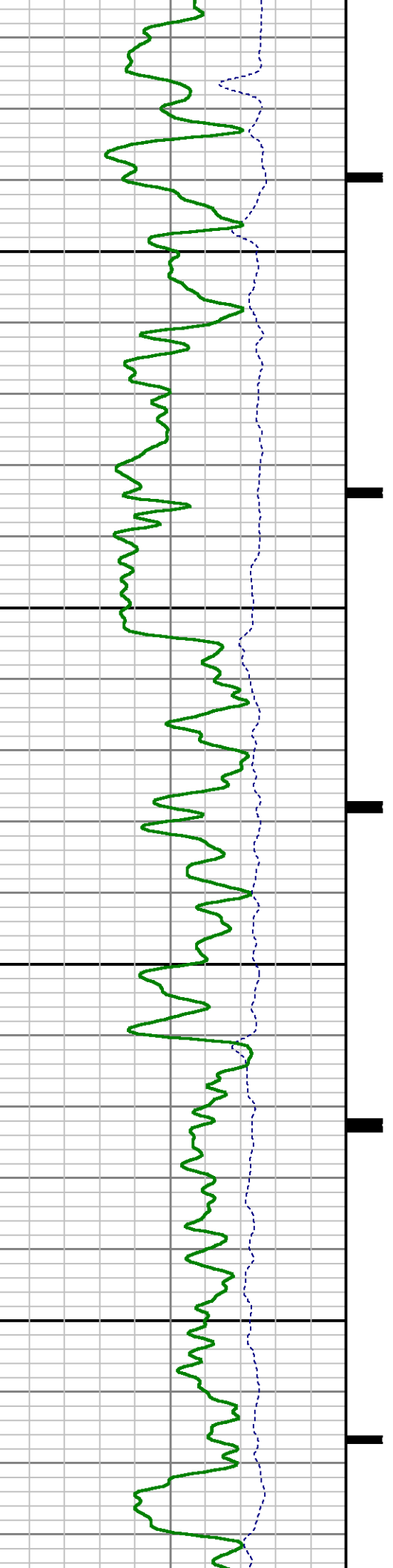


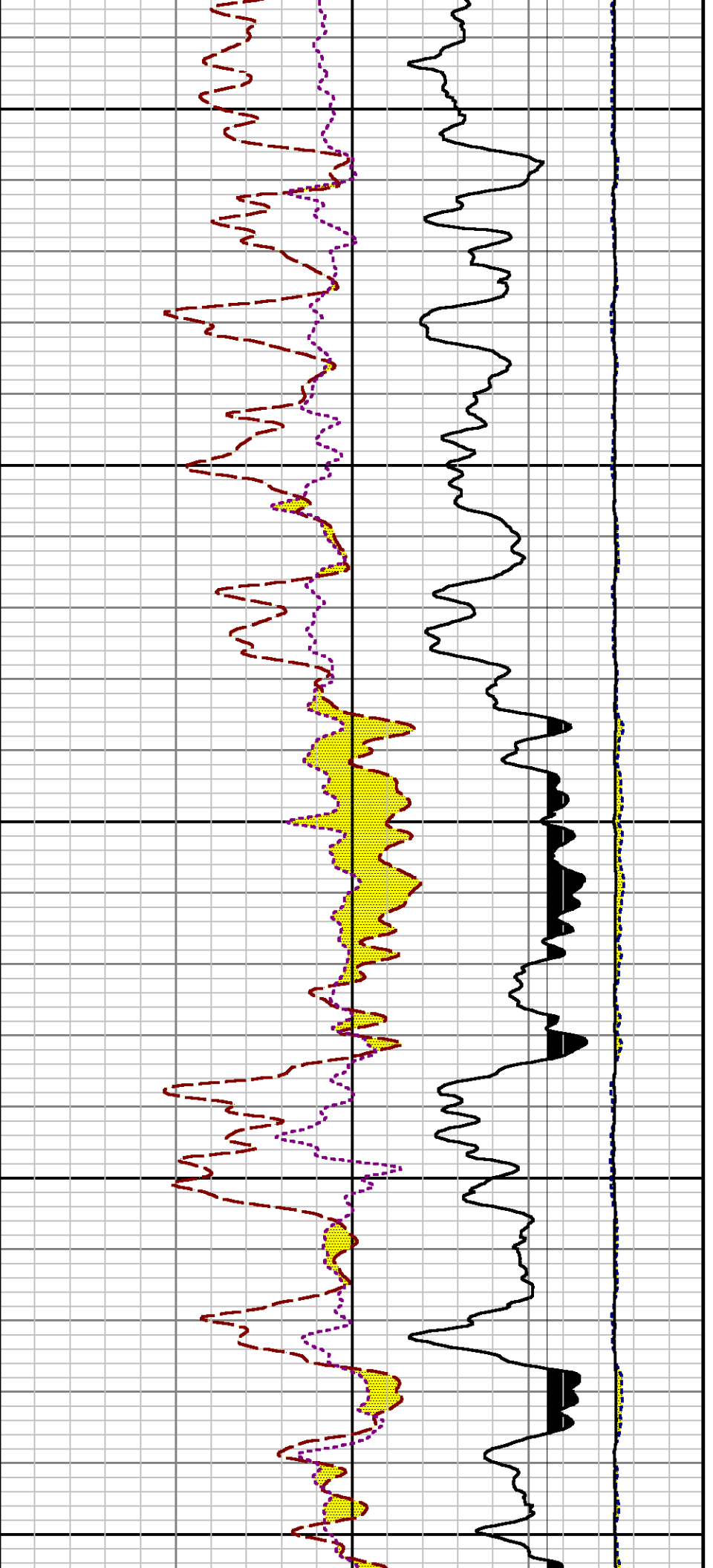




12100

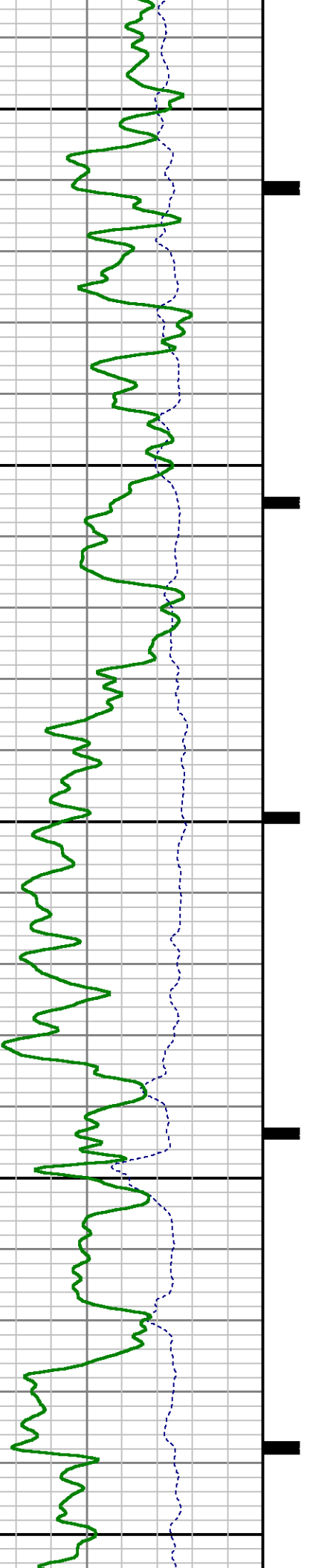
12200

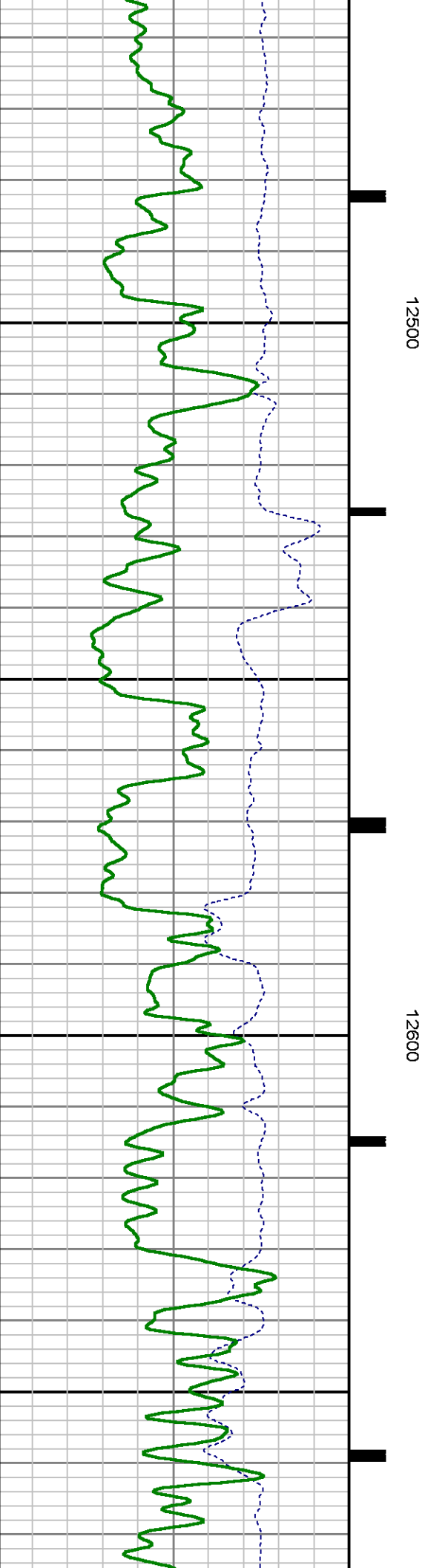
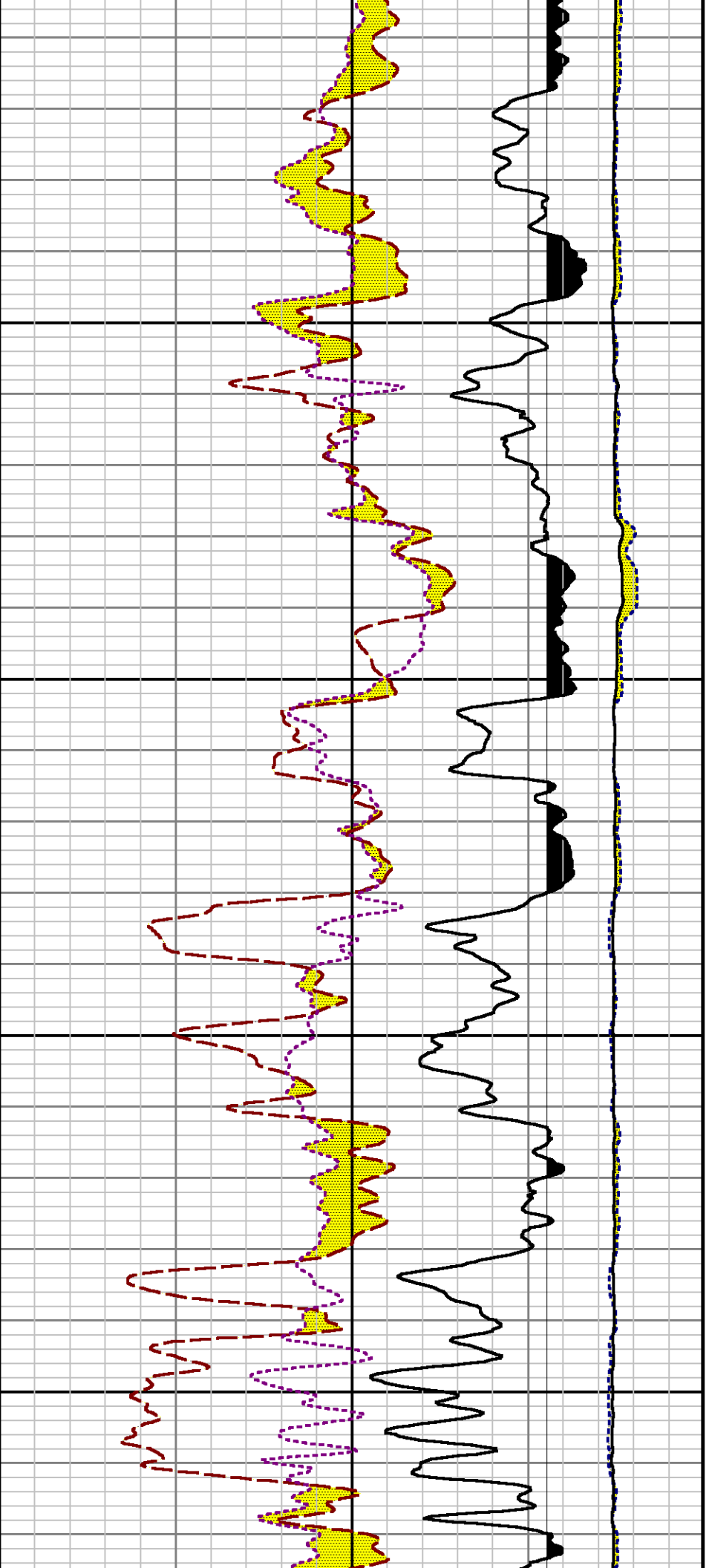


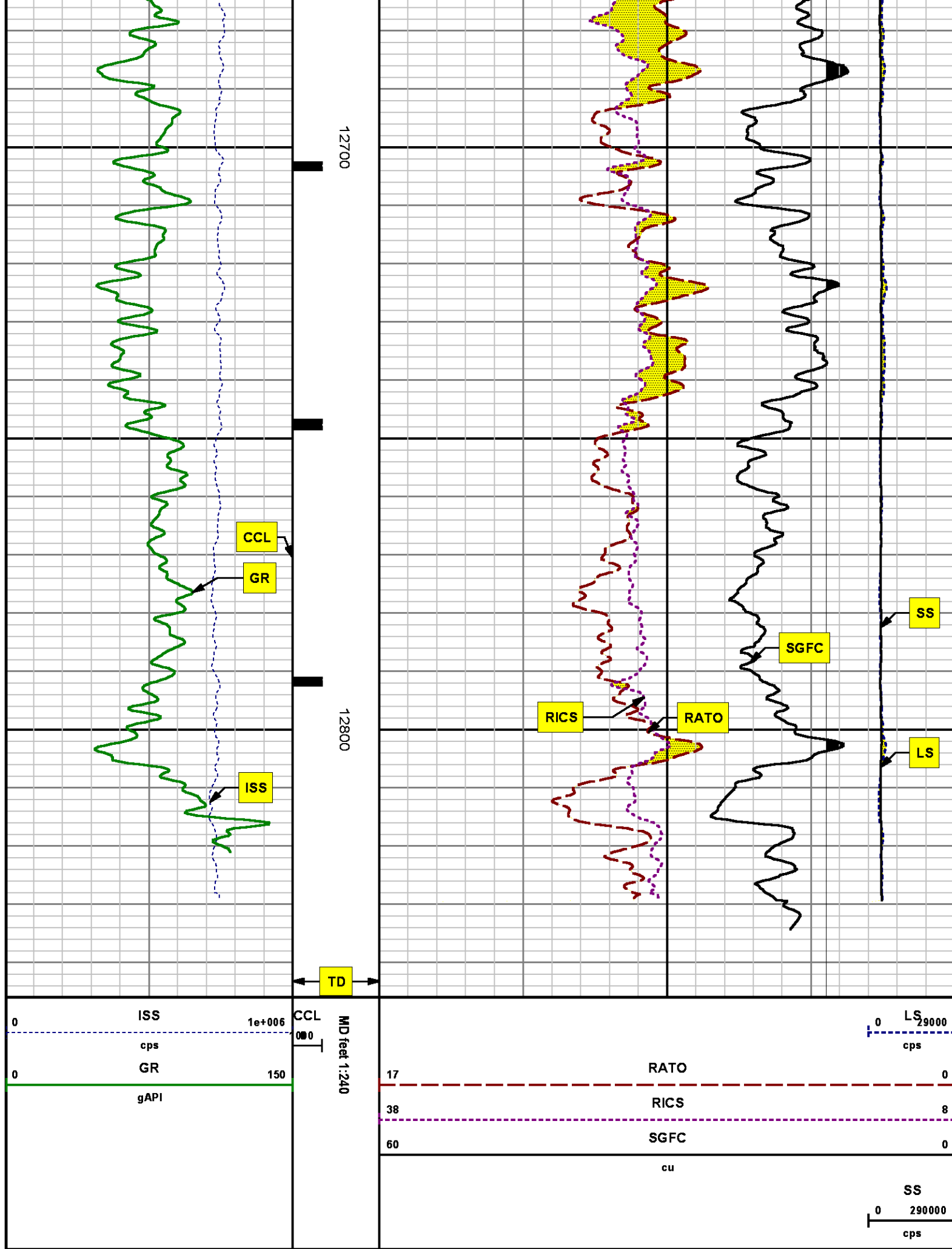


12300

12400







REPEAT SECTION

PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		12022.070	12346.320
PNC Porosity	Borehole Size	8.750	inch	12022.070	12346.320
PNC Porosity	Casing Size	4.500	inch	12022.070	12346.320
PNC Porosity	Gas Filled	Non Gas Filled		12022.070	12346.320
PNC Porosity	Matrix	Sandstone		12022.070	12346.320
TPS Pressure	Temperature Corr. Source	Fixed (72.00)	degF	12022.070	12346.320

DEPTH OFFSETS

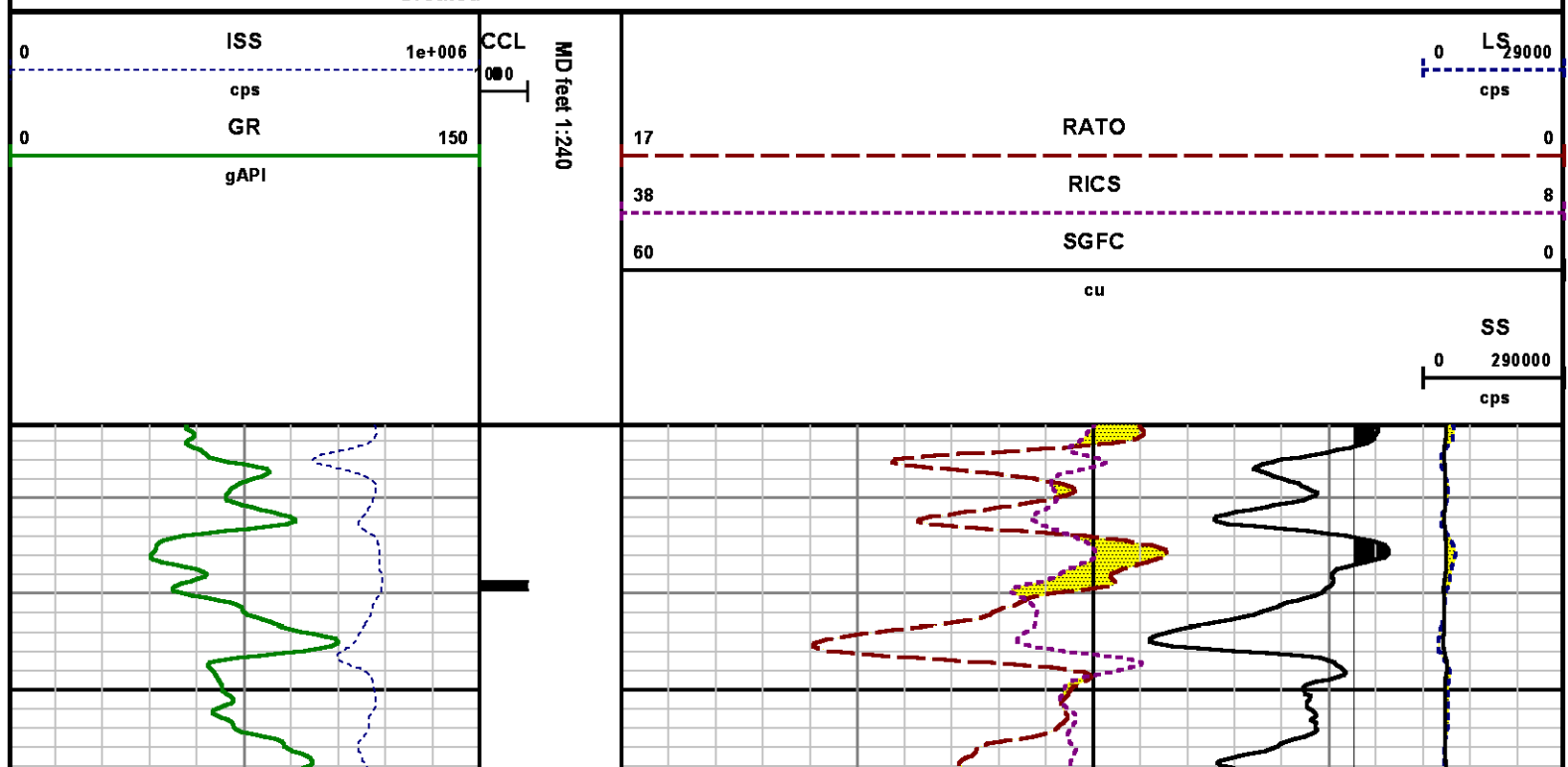
(for Acquired Curves)

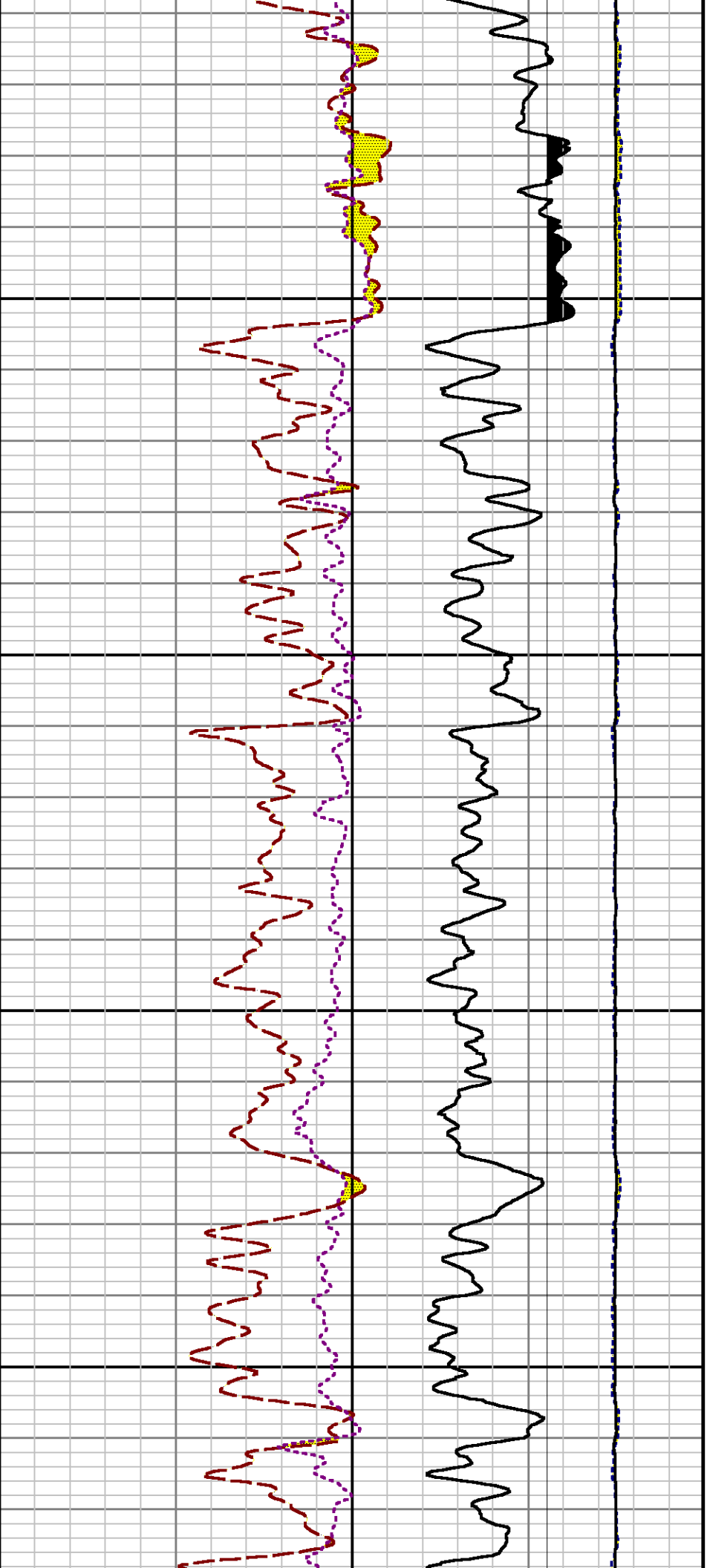
SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-26.519	FLTM
8248ED	-24.519	CCL CHV
2812LA	-21.969	GR
8281XA	-12.702	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 SDL3 SGA3 SGL3 STA3 XS ASPEC3 AMB3 AMF3 CHF3 IXSC IXSN RATO23 RICXC RIN13C RIN23 RIN23C SD3D 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 CPT1Q2D CPT1Q2E CPT1Q2F CPT1Q2G

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	WDTH1	RICSC	CSSR	G1R
G2R	ISSR	SSR	SS2R	RATOR	RATO13R
RBORR	RICSR	RINR	RIN13R	RONER	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

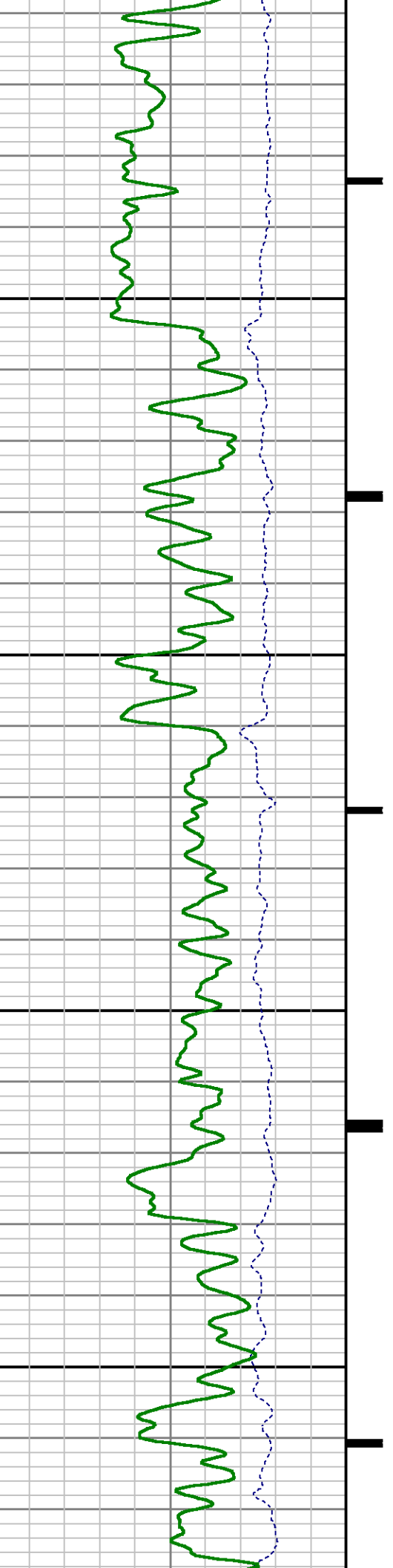
Created by : RPM9, v5.3.1.0
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : FEDERAL RGU 44-24-198
File Name : d:\welldata\wpx\rgu 44-24-198\44rp\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 12022.32 - 12353.32 feet UP
Created : 8/8/2014 5:48:42 PM

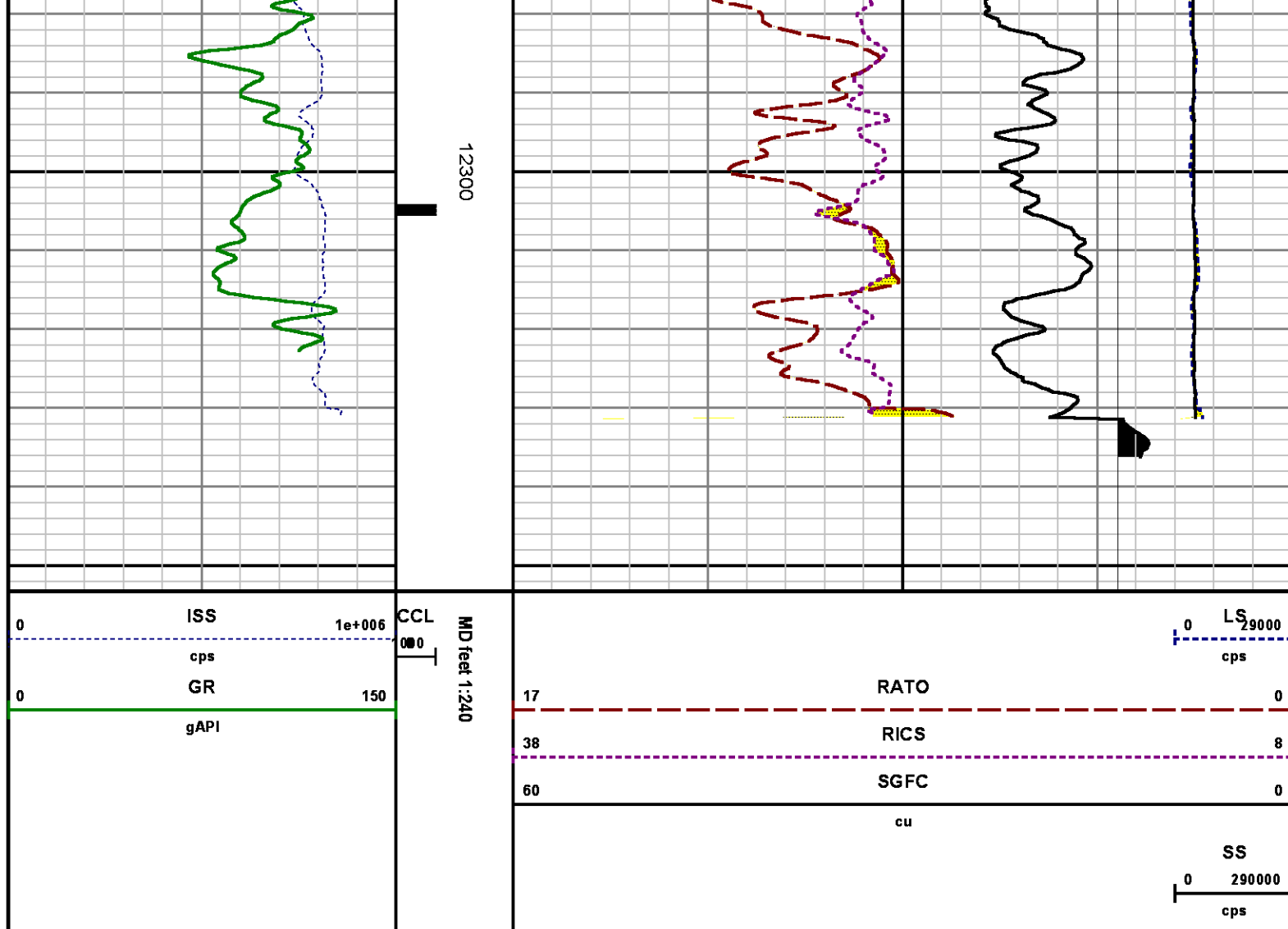




12100

12200





CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\38530.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Jun 30 08:38:51 2014

TOOL SERIES: 2812LA ASSET: 385 SEQ: 30

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	42.56	269.00	0.927	39.47	249.47	210.00

Verification File: C:\case\calver\GR\38530.VP

DATE/TIME PERFORMED: Mon Jun 30 08:42:33 2014

TOOL SERIES: 2812LA

ASSET: 385

SEQ: 30

Calibrator #

Background

Calibrator On

Multiplicative

Background

Calibrator On

Differential

[cps]

[cps]

[api]

[api]

[api]

S2K WA-612

41.56

270.56

0.927

38.54

250.91

212.37

PNC

Calibration File: C:\case\calver\PNC\34531.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Jul 30 12:25:24 2014

TOOL SERIES: 8281XA

ASSET: 345

SEQ: 31

Calibrator #

Source #

2437XB 112674

8281AA 10148476

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	819245	119.00	2274.00	2251.00	2241.00	109.25	7.00	0.9808
Interpolated	1300000	140.97	2253.66	2240.93	2235.60			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	819245	5919.25	962.48	136.92	25.83	0.14	24.23	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	819245	168936.23	26190.87	88936.02	31684.52	8271.11	53822.45	13235.05
Fit Quality %		3.08	2.94	2.87	2.87	2.72	2.81	2.82

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	819245	1.43	4.85	31.28	15.22	10.75	3.83	4.07
		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 %		0.11	0.98	1.00	0.90	0.09	0.10	0.09
Reduced	1262130	1.43	4.81	31.07	15.11	10.74	3.82	4.06
		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

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

TELEMETRY / CCL

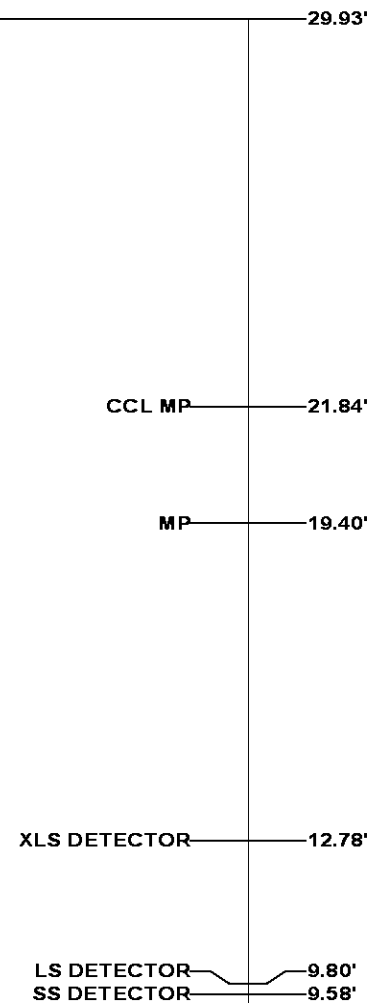
Series 8248EA
 Mnemonic PCM
 Diameter 1.70"
 Weight 20.00 lb
 Length 4.46'
 Measure Point 1.00' CCL MP
 Temp Rating 350.00 °F
 Press Rating 15000.00 PSI

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 RGU 44-24-198

Field

SULPHUR CREEK

County

RIO BLANCO

State

COLORADO

Location

SHL: 2111' FSL & 1673' FEL

BHL: 1025' FSL & 661' FEL (SESE)

SEC

24

TWP

1S

RGE

98W

Elevations

KB 6617 ft

DF

GL 6596 ft

File No:

CH089267

API No:

05103120830000

24 1S 98W

RGU 33-24-198 PAD

CYCLONE 29