



Baker Atlas

RESERVOIR PERFORMANCE MONITOR

File No: CH081740	Company Well	WPX ENERGY FEDERAL RG 412-14-298
API No: 05103117930000	Field County	SULPHUR CREEK RIO BLANCO
	State CO	
14 2S 98W RG 12-14-298 PAD CYCLONE 29	Location SHL: 1563' FNL & 495' FWL BHL: 2295' FNL & 640' FWL SEC 14 TWP 25 RGE 98W	Other Services BOND LOG
Permanent Datum Log Measured From Drill Measured From	GL KB KB Elevation 21 ft Above P. D.	Elevations KB 6561 ft DF GL 6560 ft

Date	25/JAN/14	
Run	ONE	
Service Order	US625095	
Depth Driller	10881 ft	
Depth Logger	10807 ft	
Bottom Logged Interval	10797 ft	
Top Logged Interval	3018 ft	
Time Started	10:00	
Time Finished	19:30	
Operator Rig Time	9.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	NA	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	271 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	25/JAN/14	
Equipment No.	4271	GRAND JCT.
Recorded By	NEWELL	
Witnessed By	WAYNE MARCOTTE	

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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	0 ft	80 ft
14.75/13.5	80 ft	3018 ft
8.75/7.875	3018 ft	10951 ft

Casing Record				
Size	Weight	Grade	From	To
18 in			0 ft	80 ft
9.625 in			0 ft	3018 ft
4.5 in	11.5 lbm/ft	P-110	0 ft	10951 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 1/25/2014 at the client's request.
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.

The amount of linear shift is 2 feet.

Logged In PNC-3D mode.

BHT = 271 °F

SJ = 5619'-5641'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	PCM	8250EA	10314363	FREE
1	1	TEL/CCL	8248ED	Z120493	FREE
1	1	GR	2812LA	10274385	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8283PA	10160383	FREE
1	1	RPM	8281FA	10401926	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		2975.250	9510.000
PNC Porosity	Borehole Size	8.750	inch	2975.250	9510.000
PNC Porosity	Casing Size	4.500	inch	2975.250	9510.000
PNC Porosity	Gas Filled	Non Gas Filled		2975.250	9510.000
PNC Porosity	Matrix	Sandstone		2975.250	9510.000
PNC Porosity	Borehole	Cased		9510.000	10813.504
PNC Porosity	Borehole Size	8.750	inch	9510.000	10813.504
PNC Porosity	Casing Size	4.500	inch	9510.000	10813.504
PNC Porosity	Gas Filled	Non Gas Filled		9510.000	10813.504
PNC Porosity	Matrix	Sandstone		9510.000	10813.504

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	RAT023
		RICXC	RIN13C	RIN23	RIN23C	SD3D	SG3D
		SGB3	SGF3	WDTH3	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	RTW023	SDA2
8281XA	0.000	SDL2	SGA2	SGB2	SGF2	SGK2	SGL2
		STA2	ASPEC2	ILSC	ILSN	WDTH2	RICLC
		CLSR	ILSR	LSR	RICLR		
		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	RAT0	RAT013
		RBOR	RGN1	RICS	RIN	RONE	RPOR
		RTW0	RIN13	RONE13	RTW013	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	HOC	FE2XC	ISSC	RINC
		ISSN	RDEN	WDTH1	RICSC	CSSR	G1R
		G2R	ISSR	SSR	SS2R	RATOR	RAT013R
		RBORR	RICSR	RINR	RIN13R	RONER	RPORR
		RTWOR					
SYSTEM	0.000	TEN	TTEN				

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

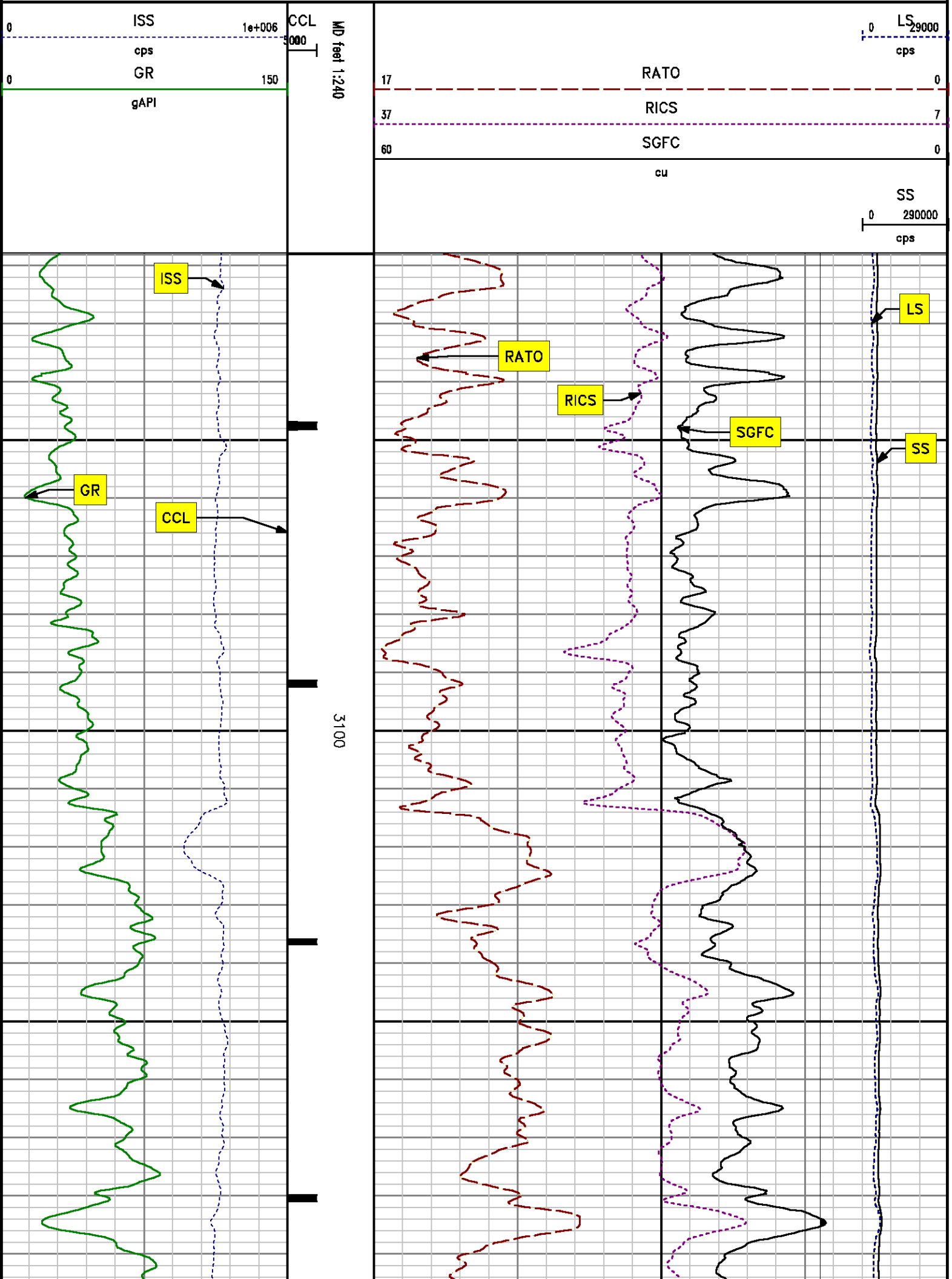
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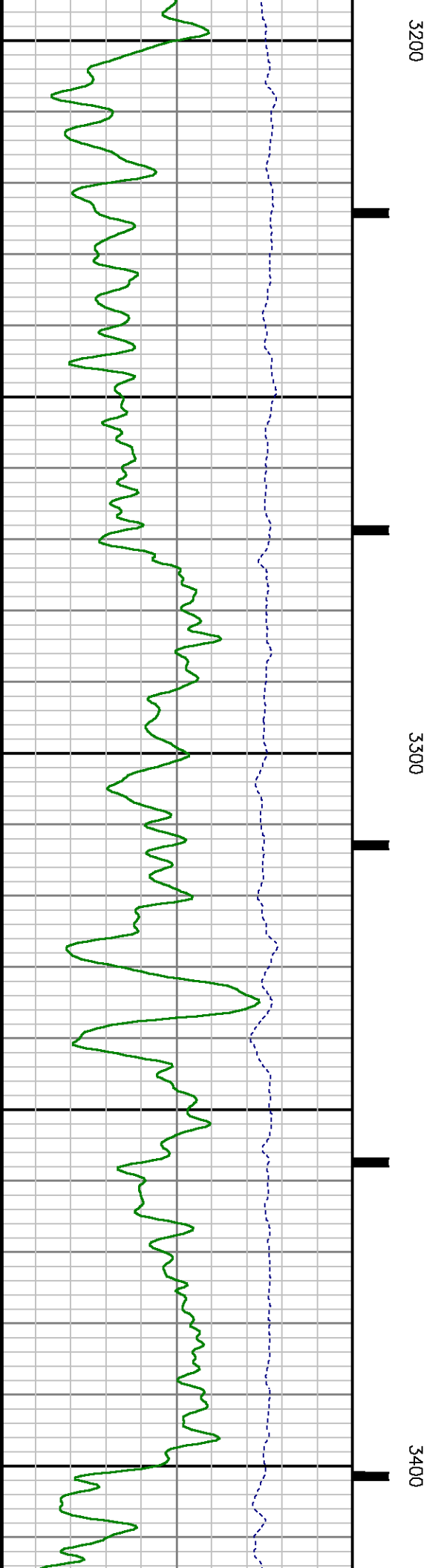
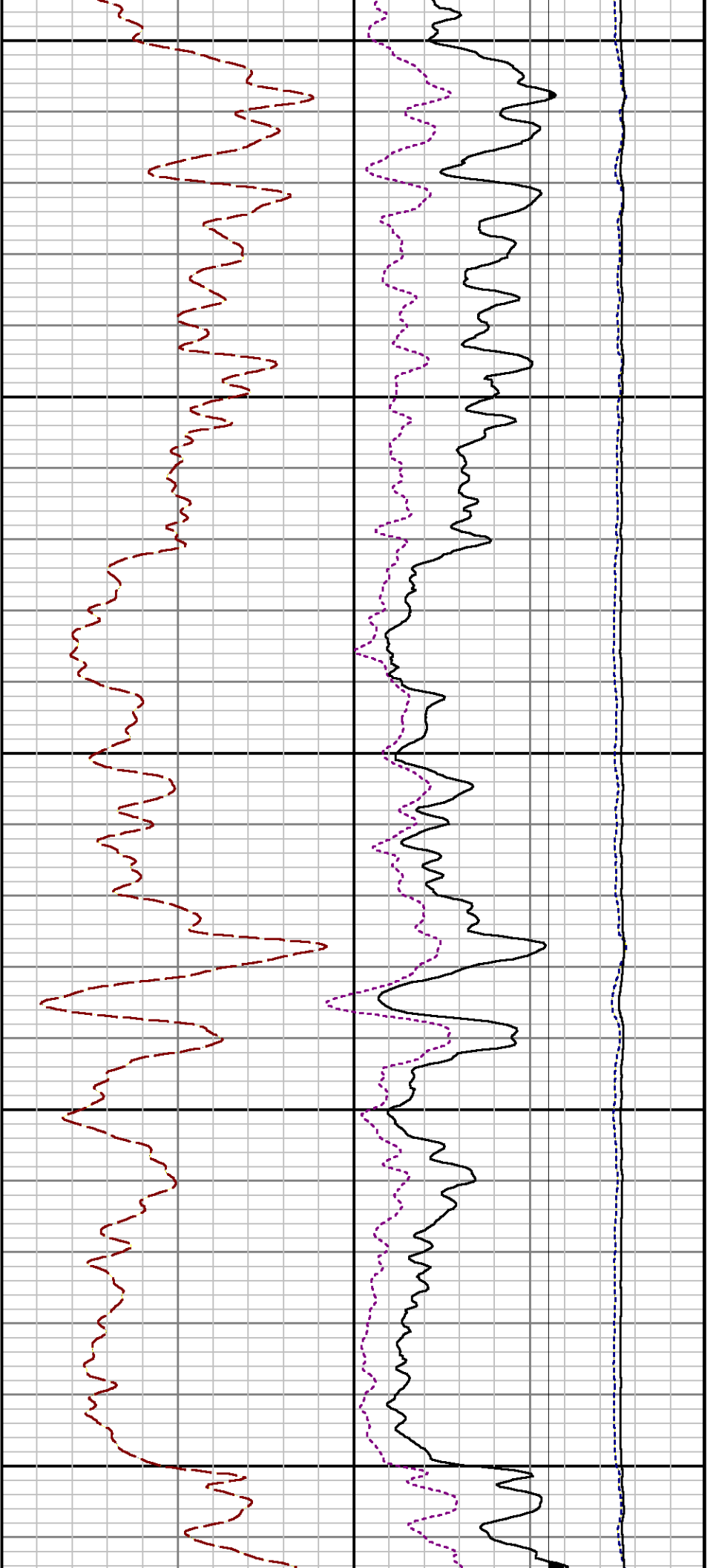
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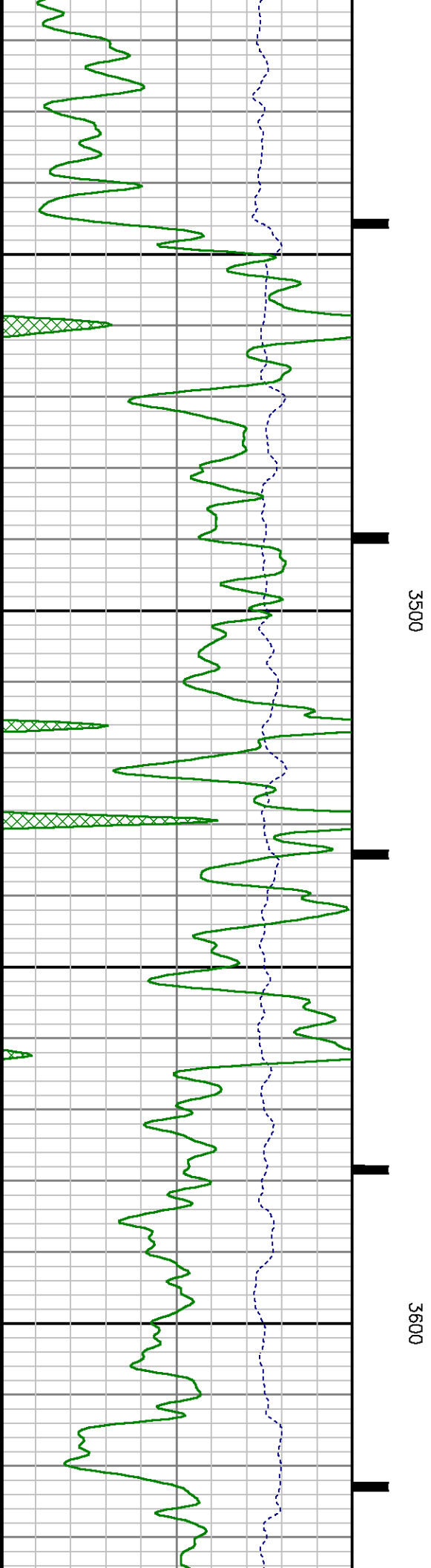
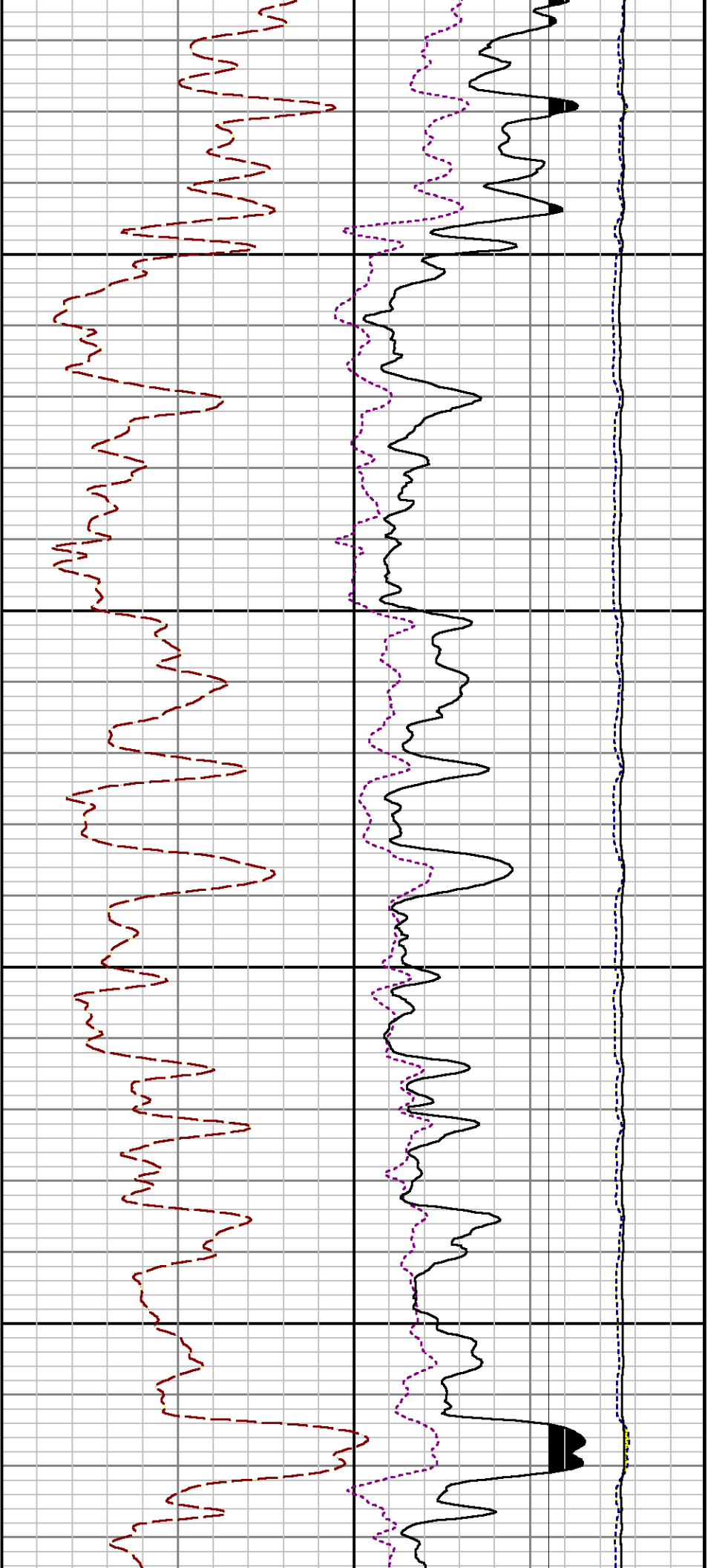
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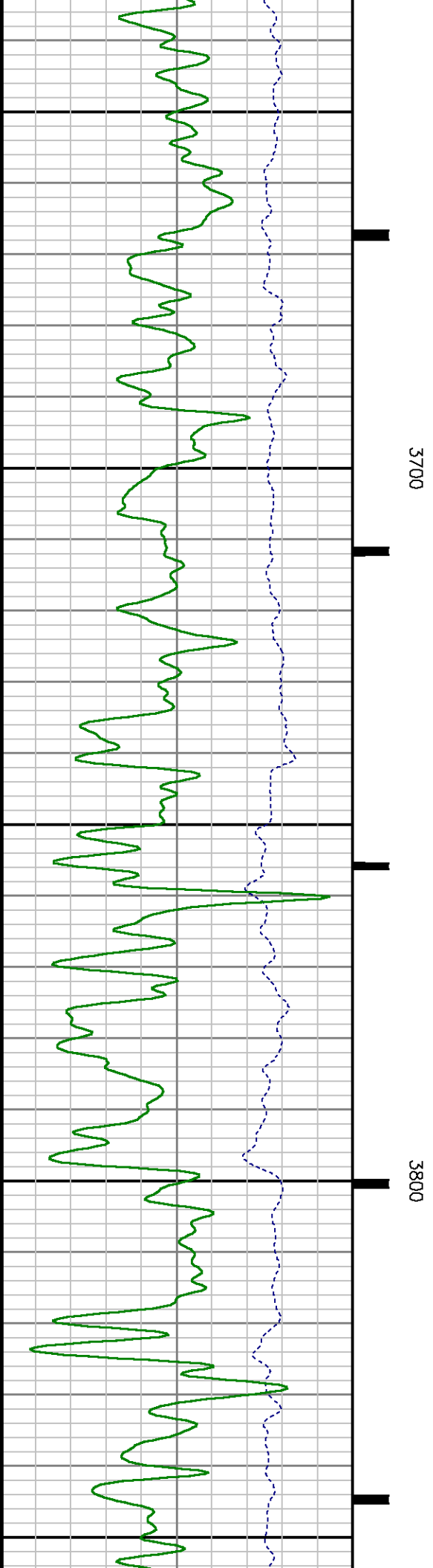
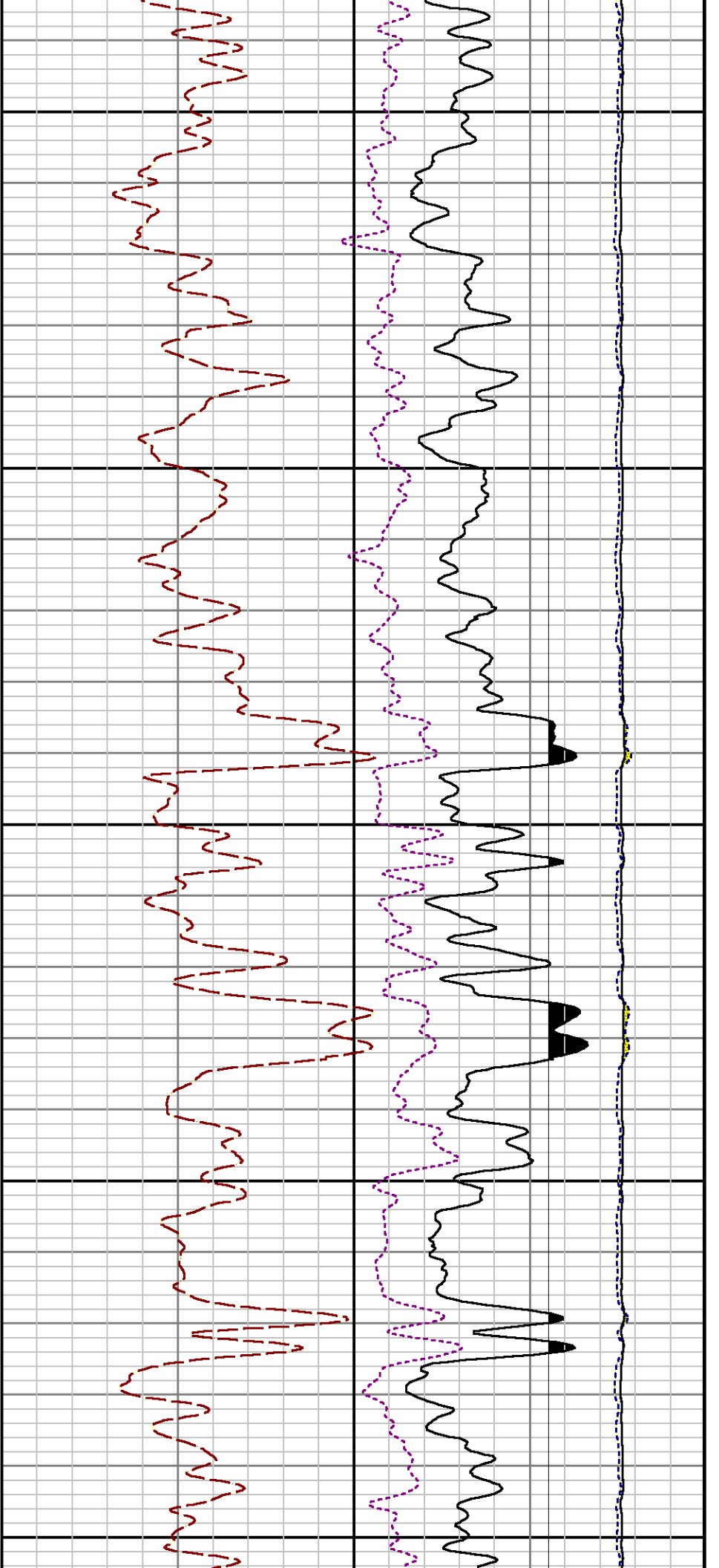
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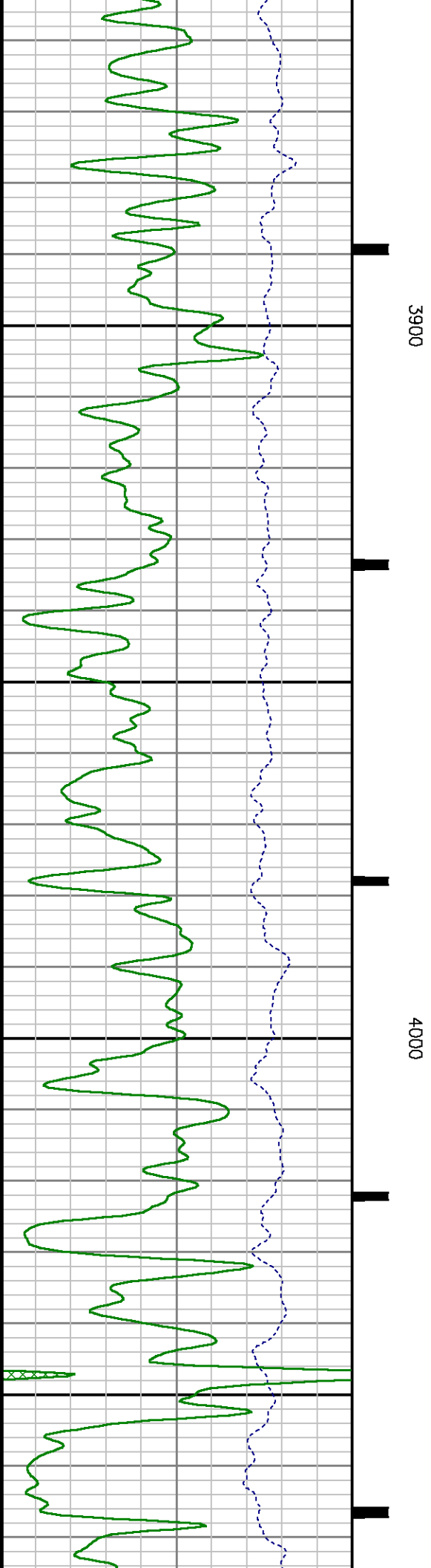
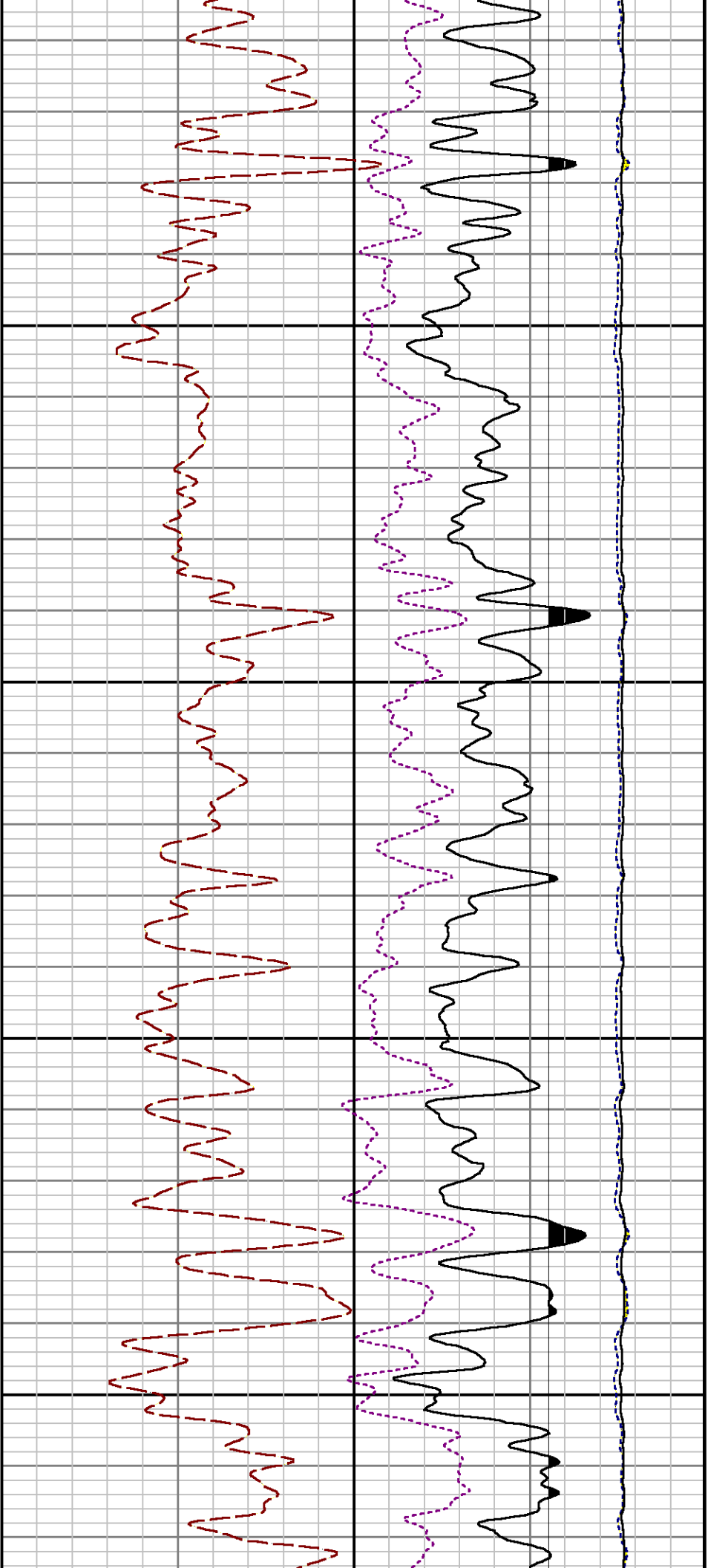
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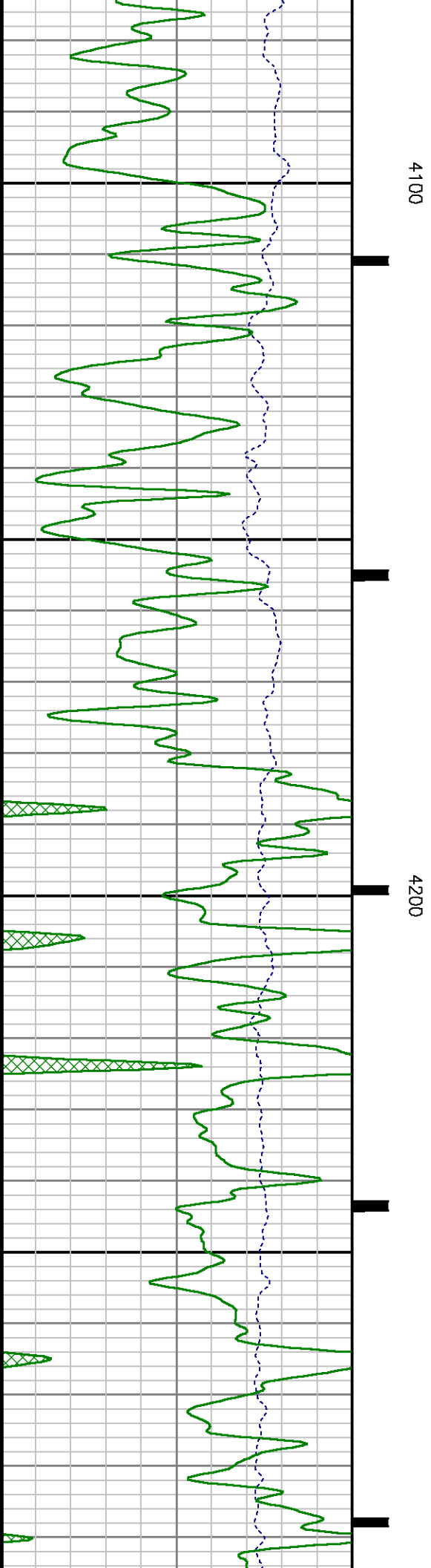
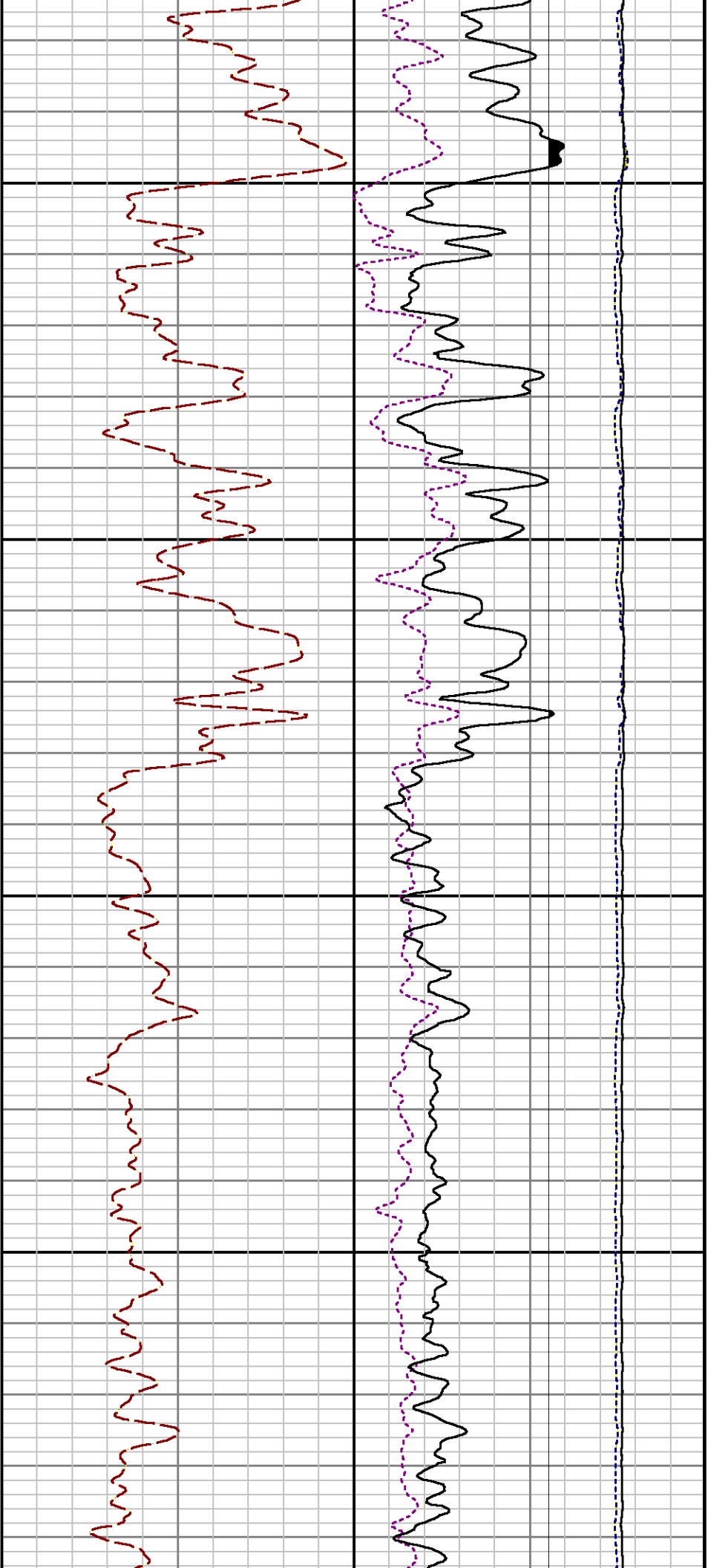


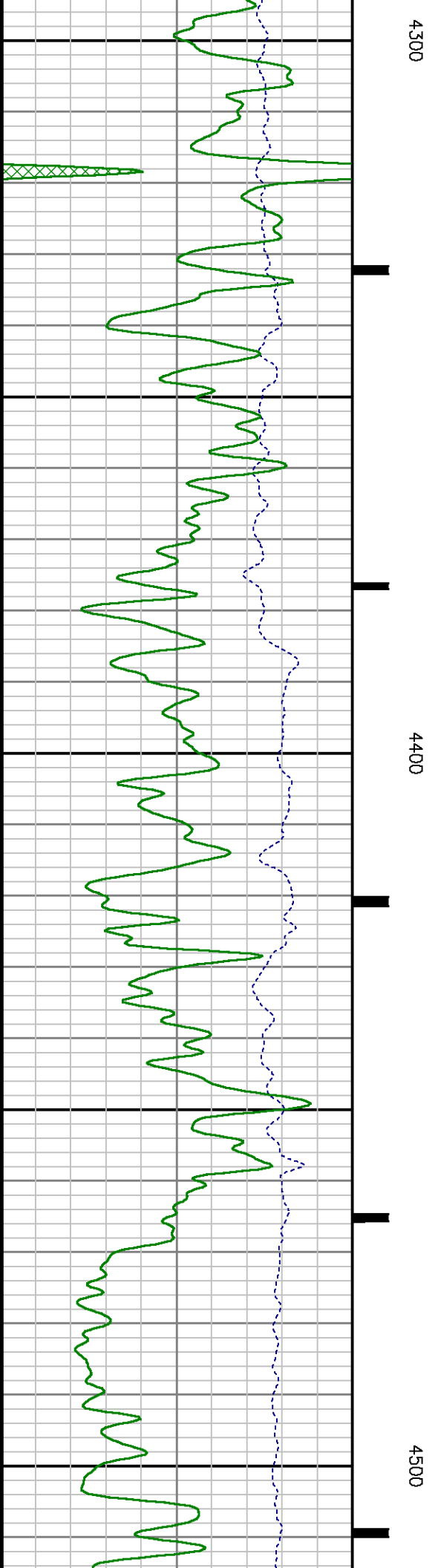
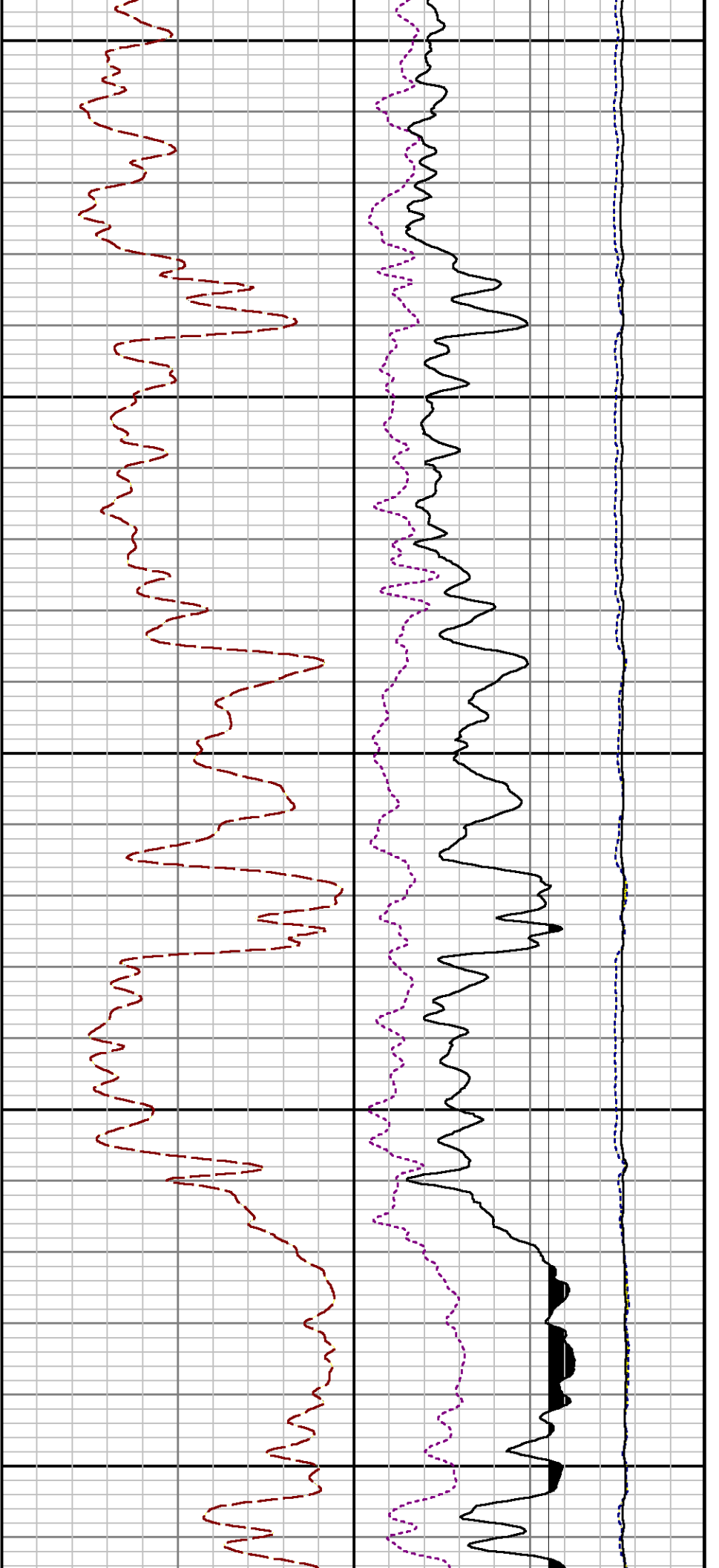


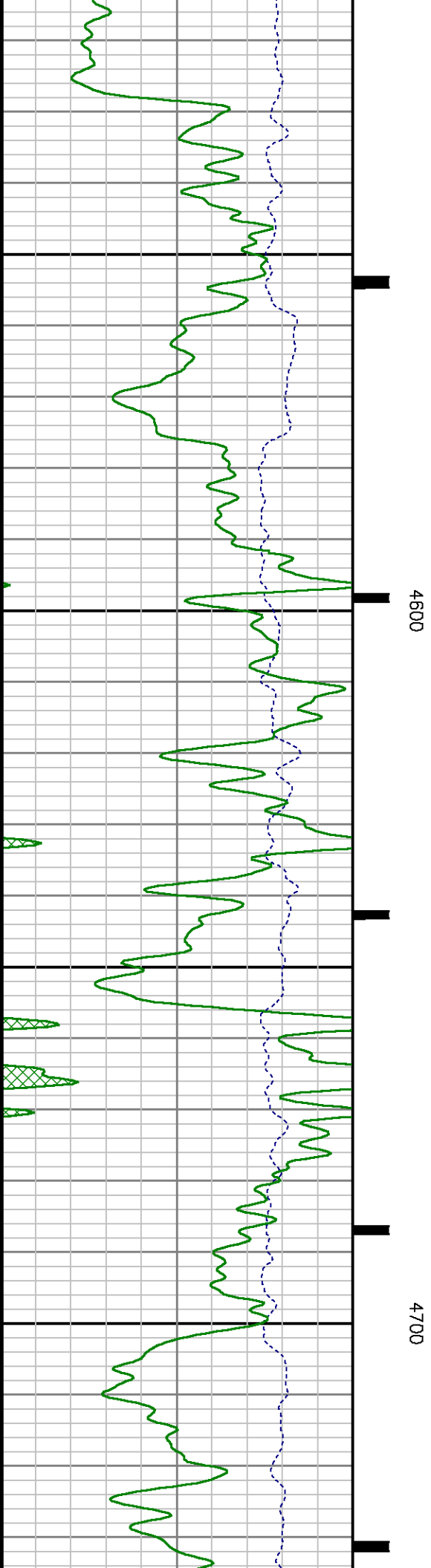
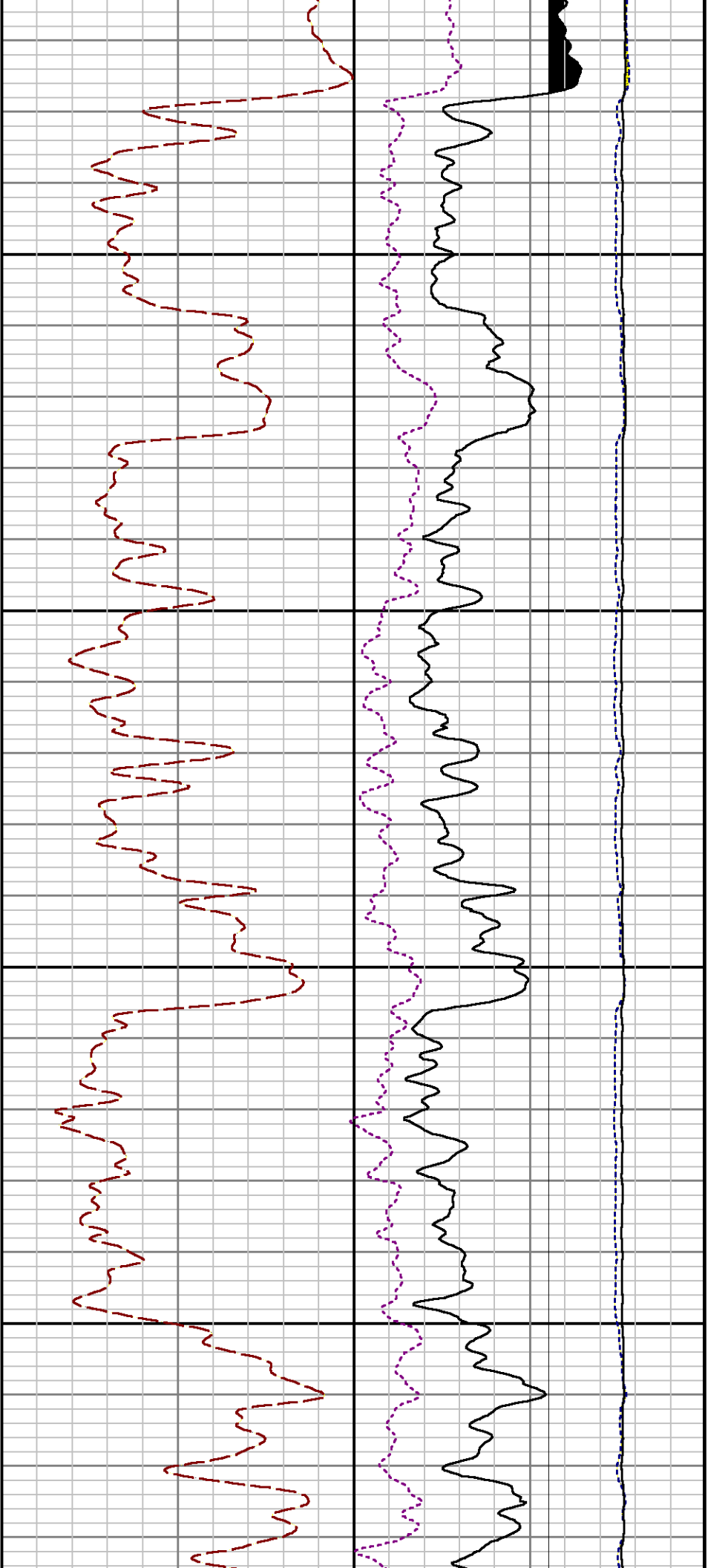


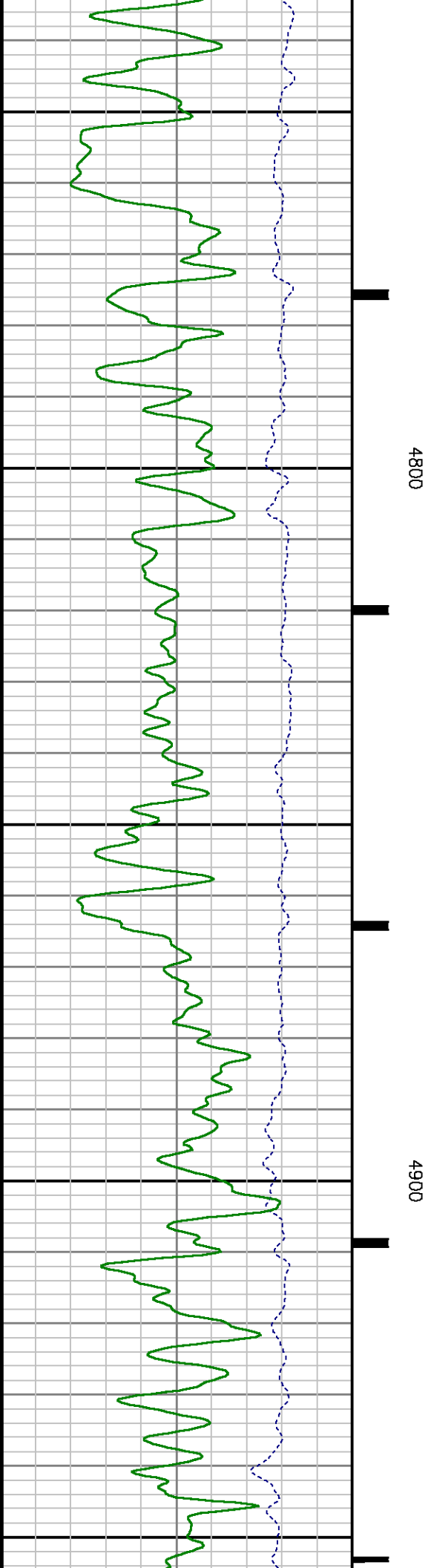
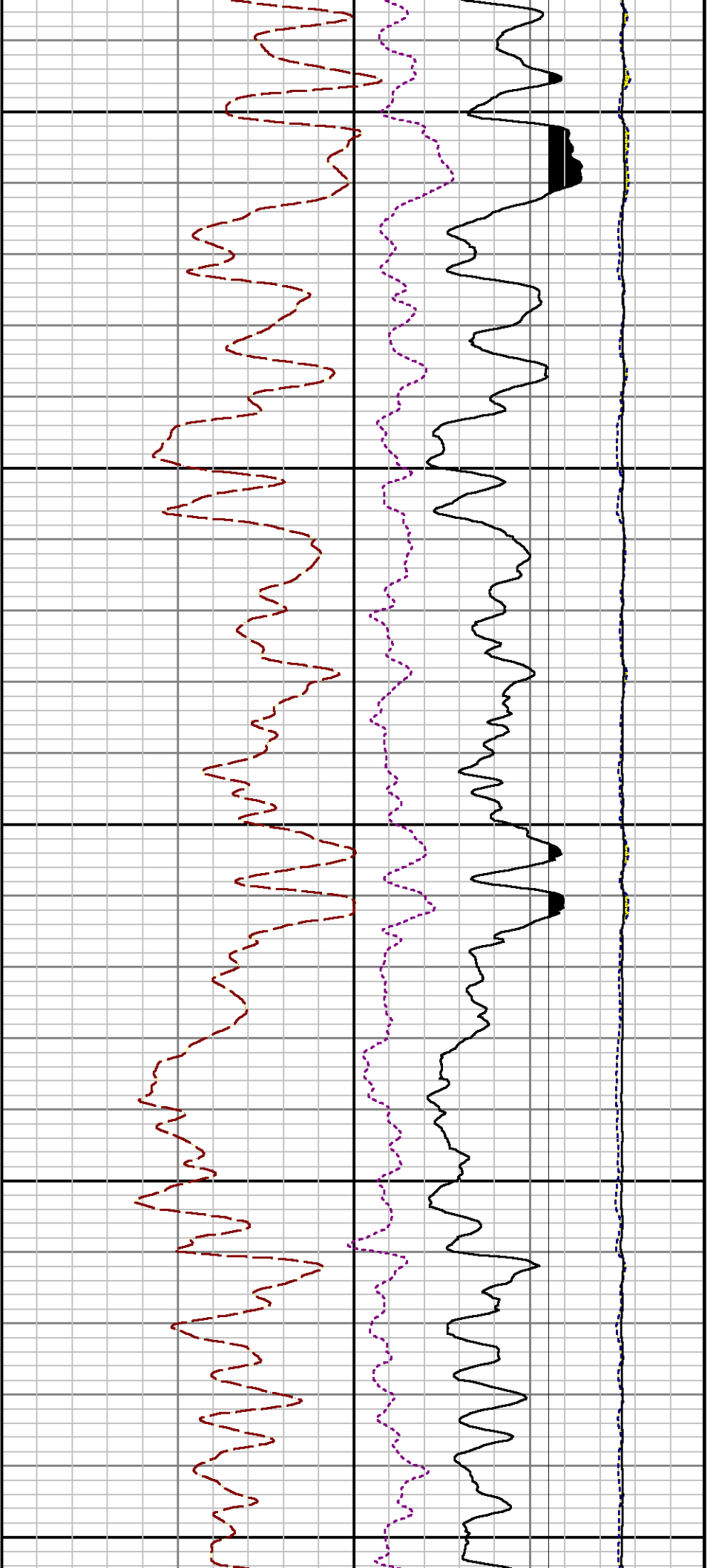


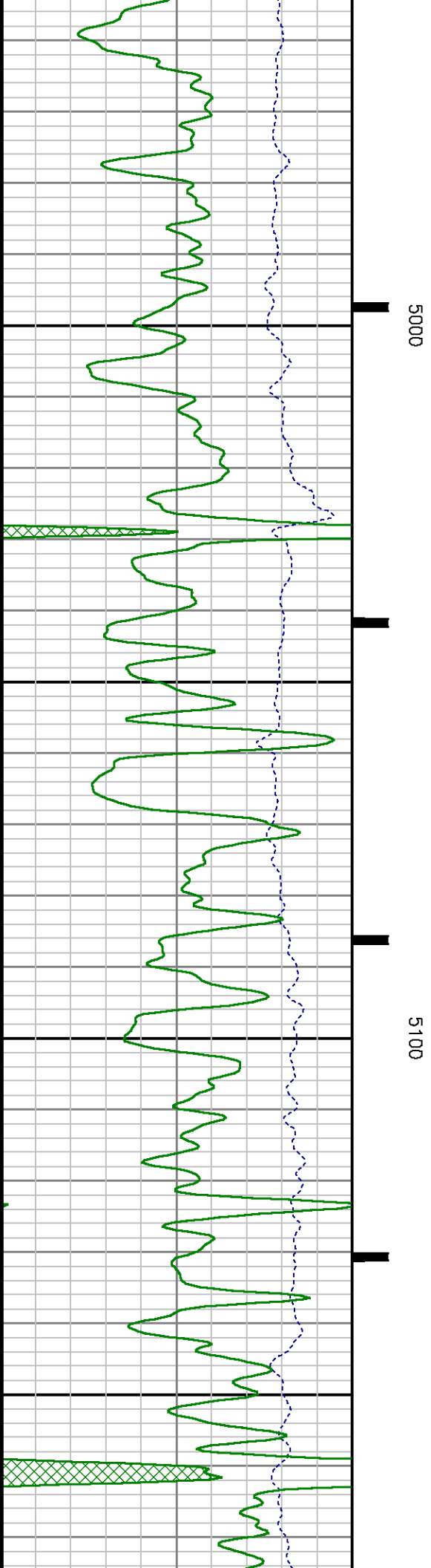
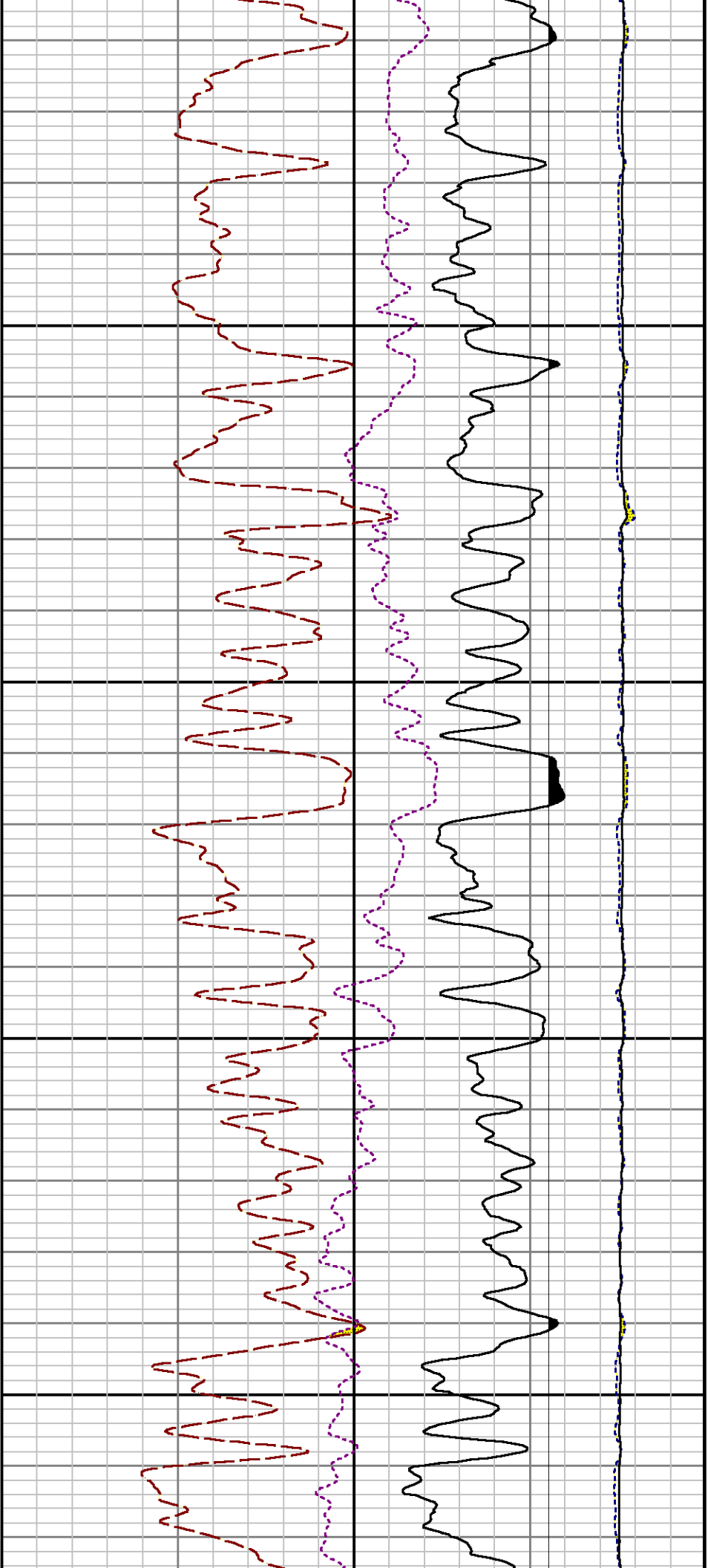


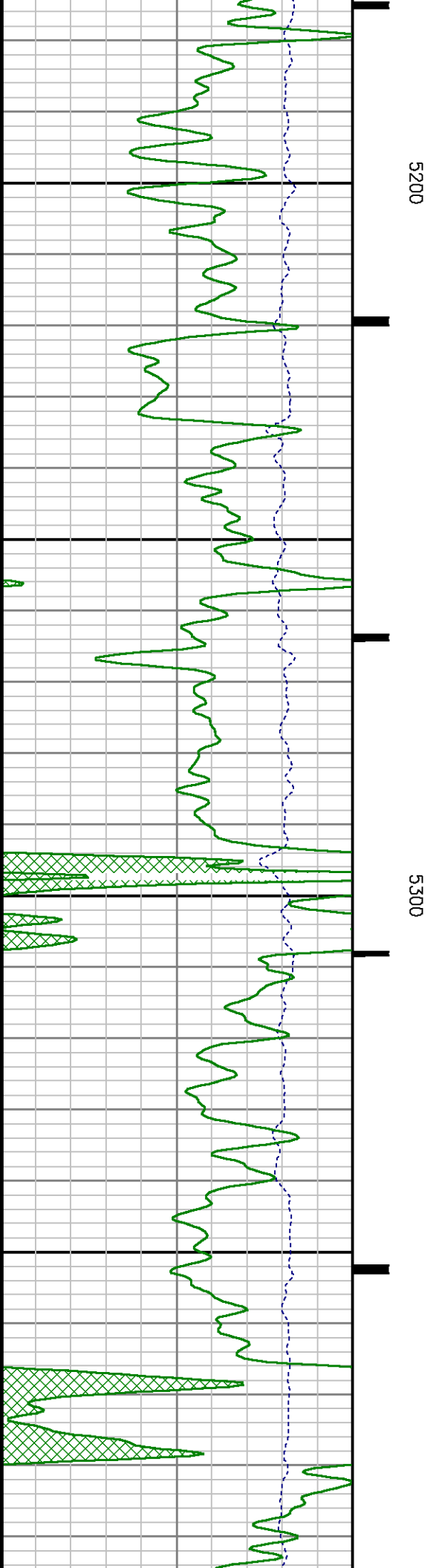
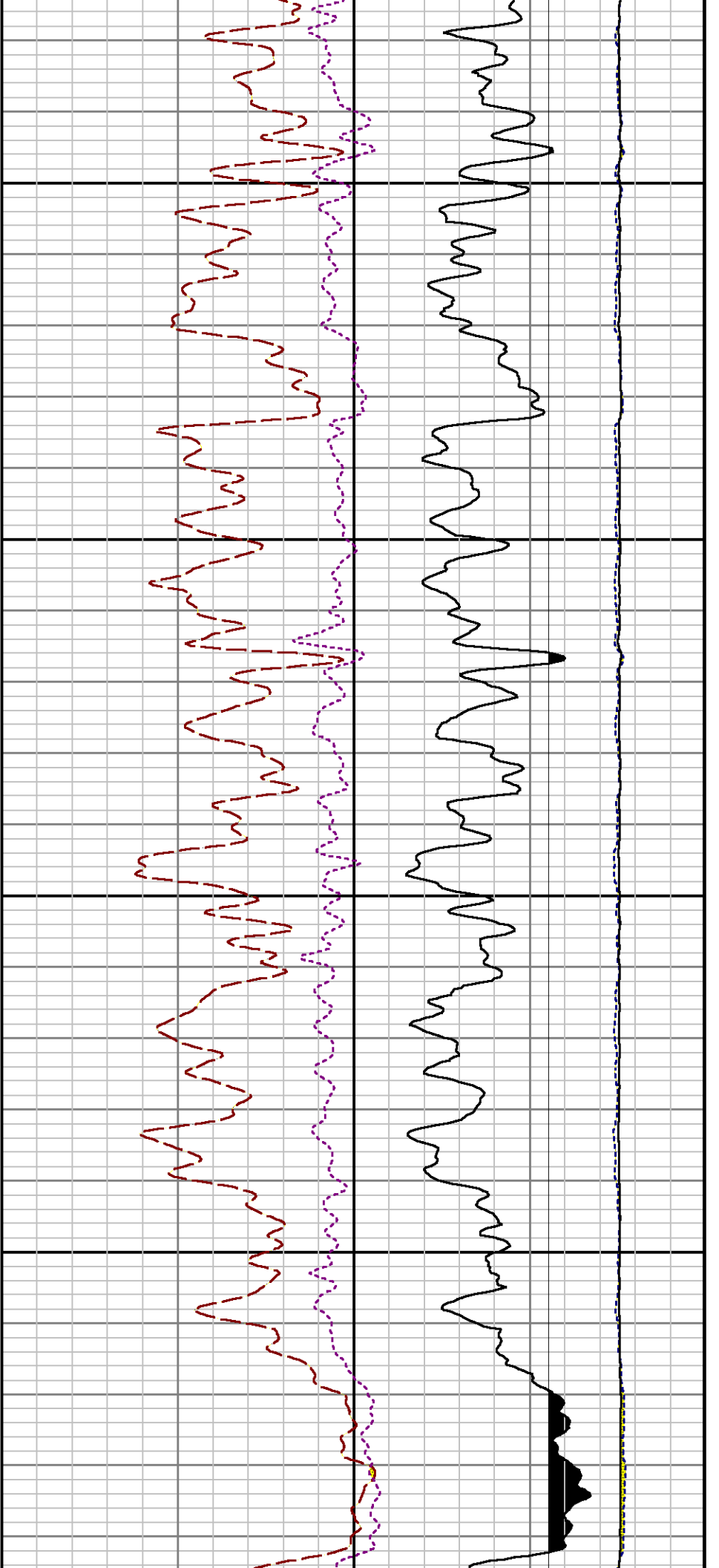


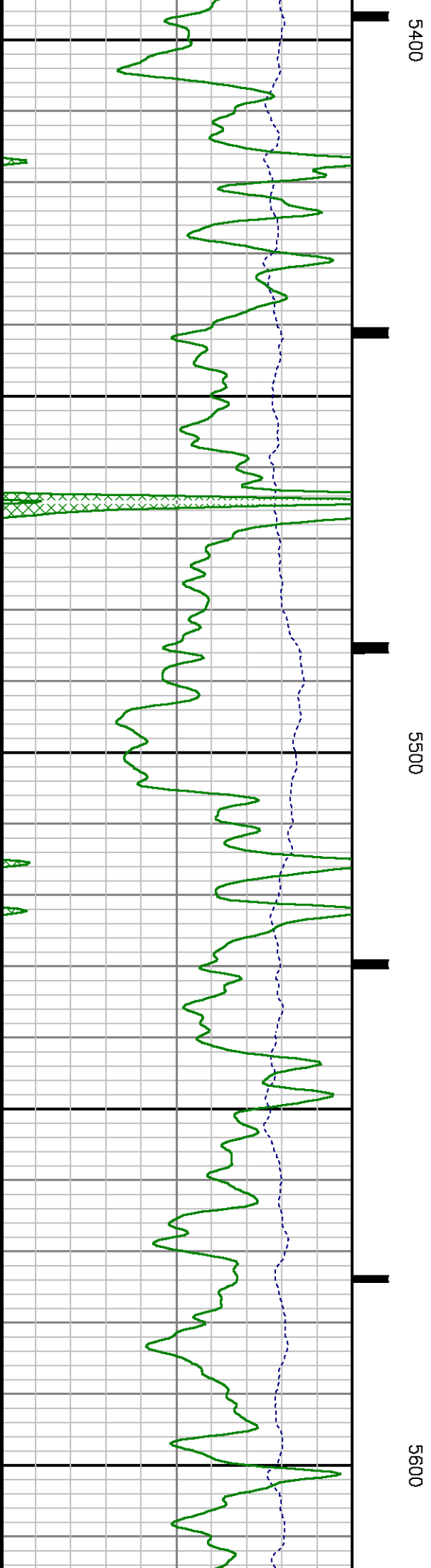
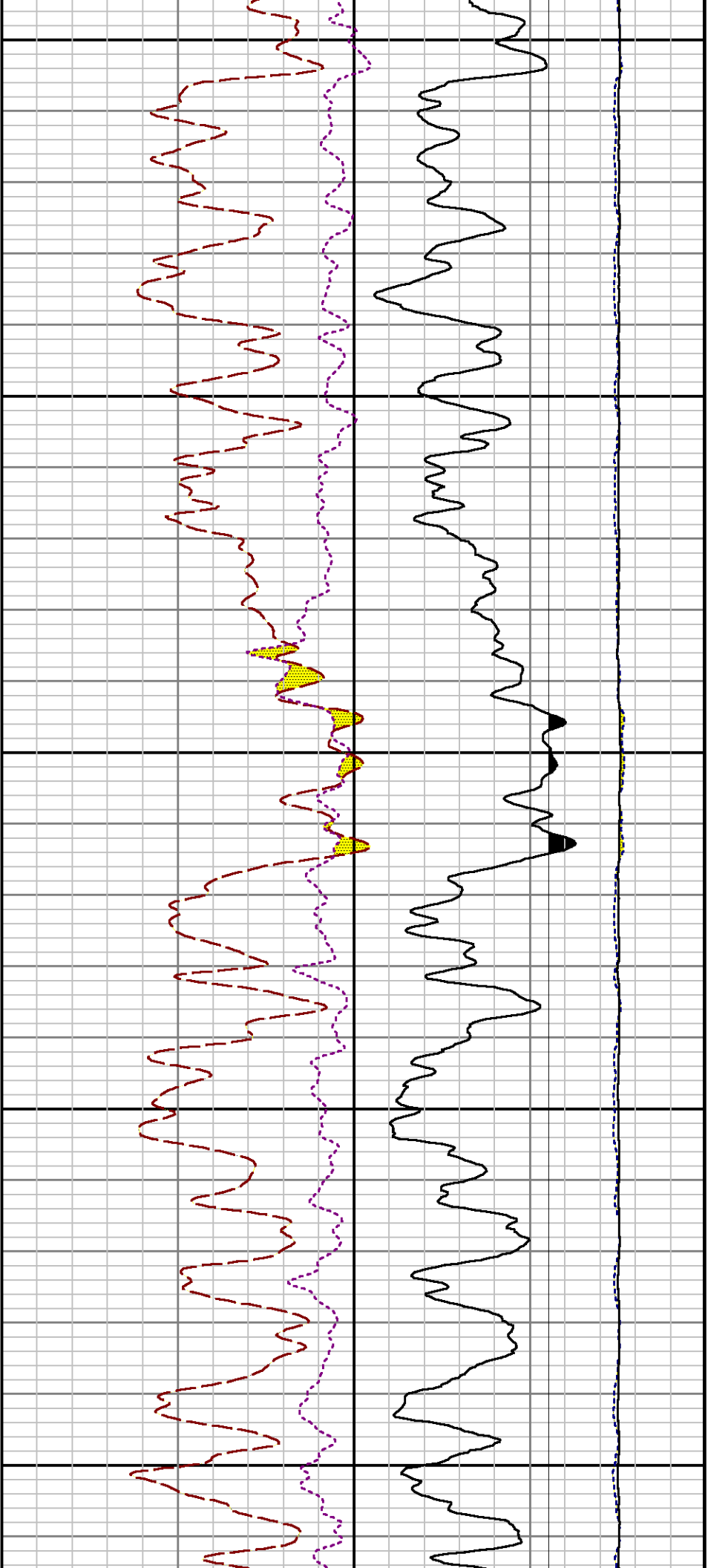


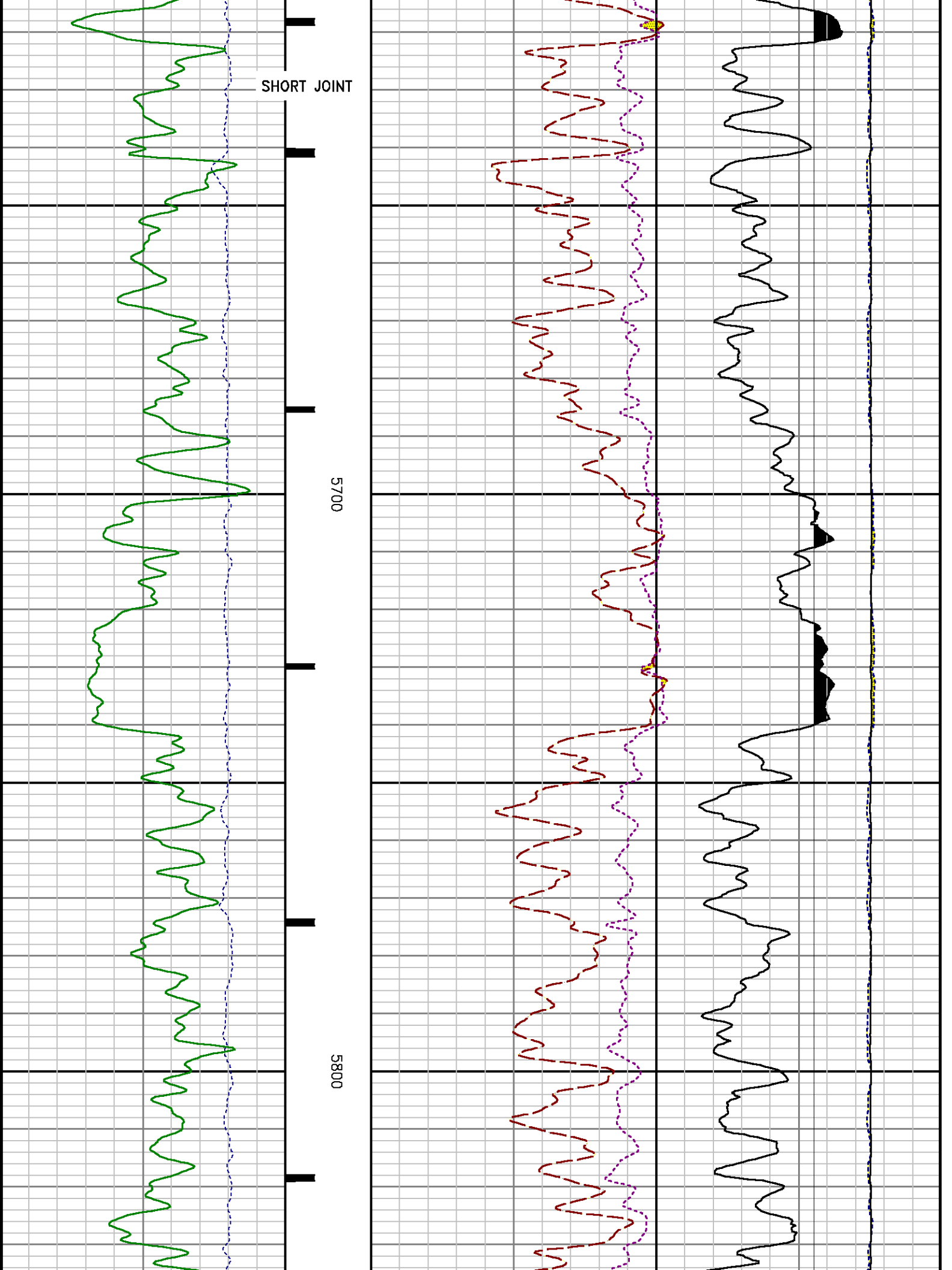


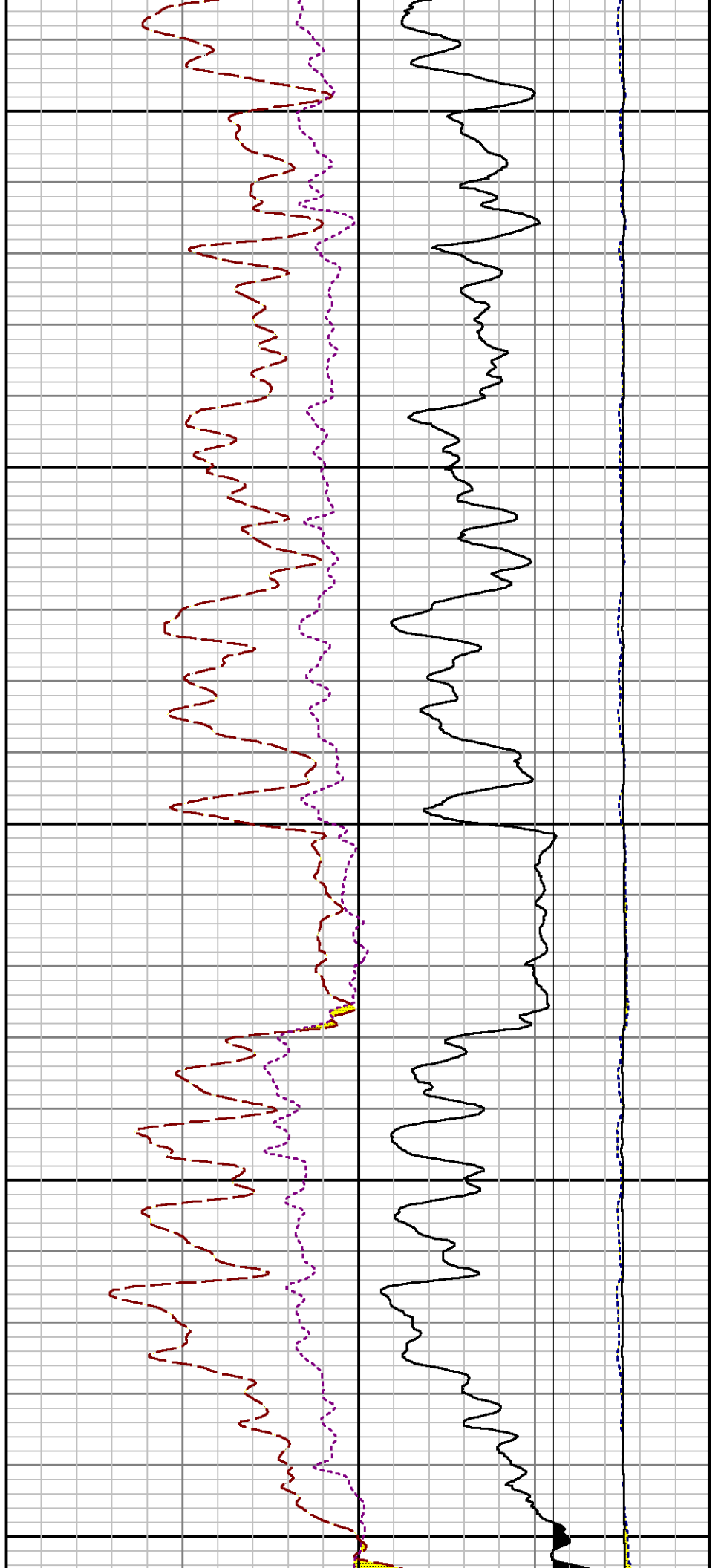
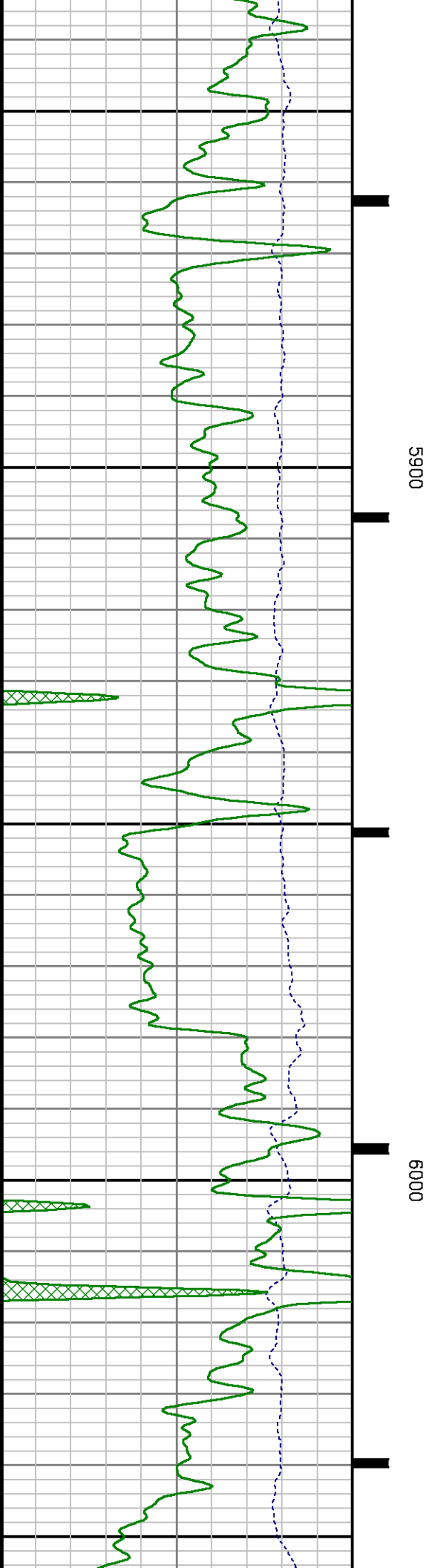


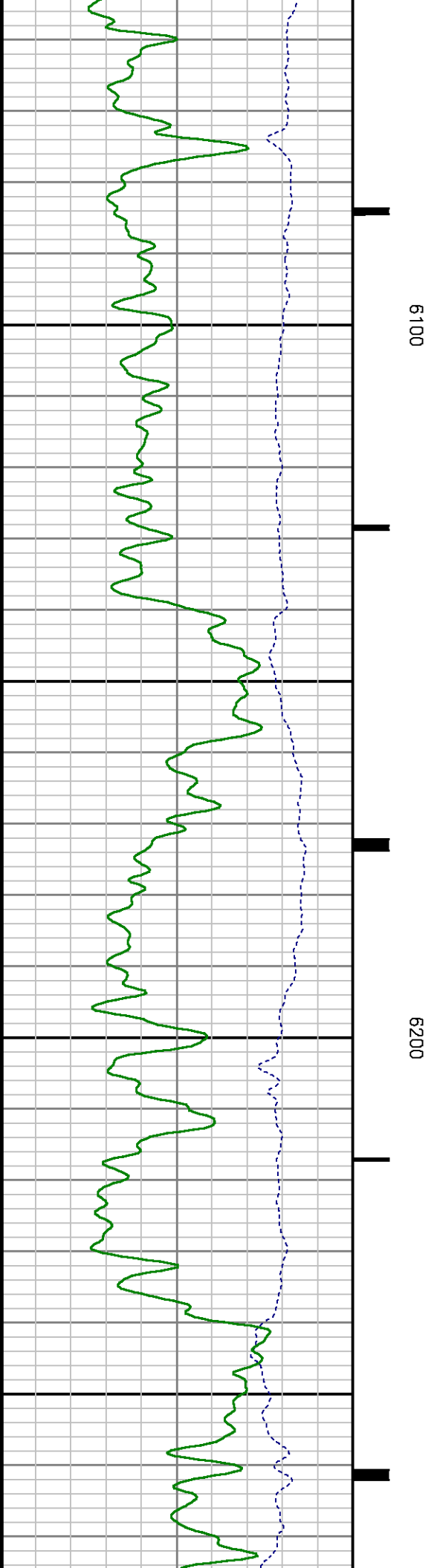
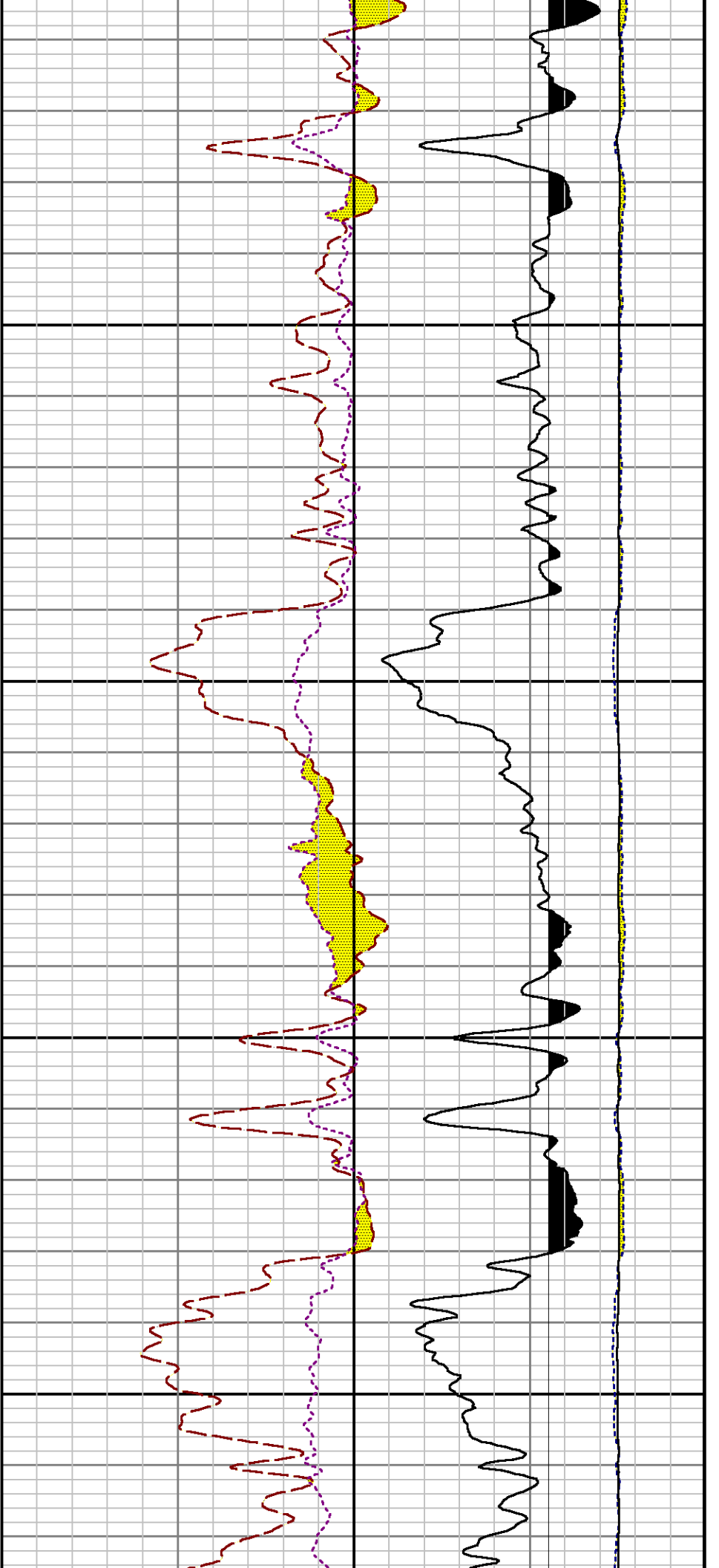


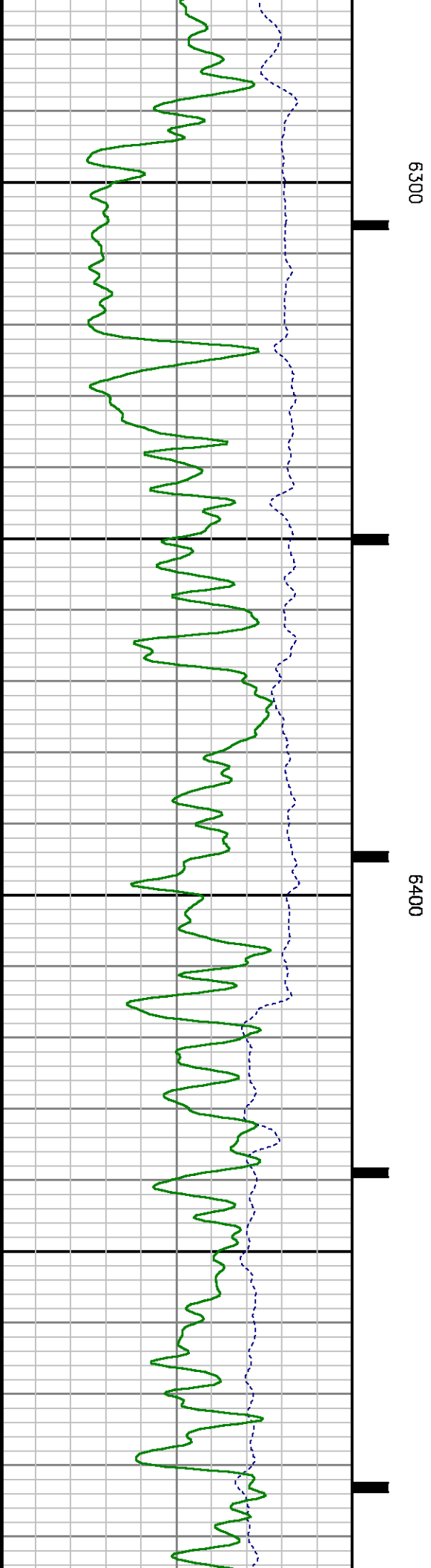
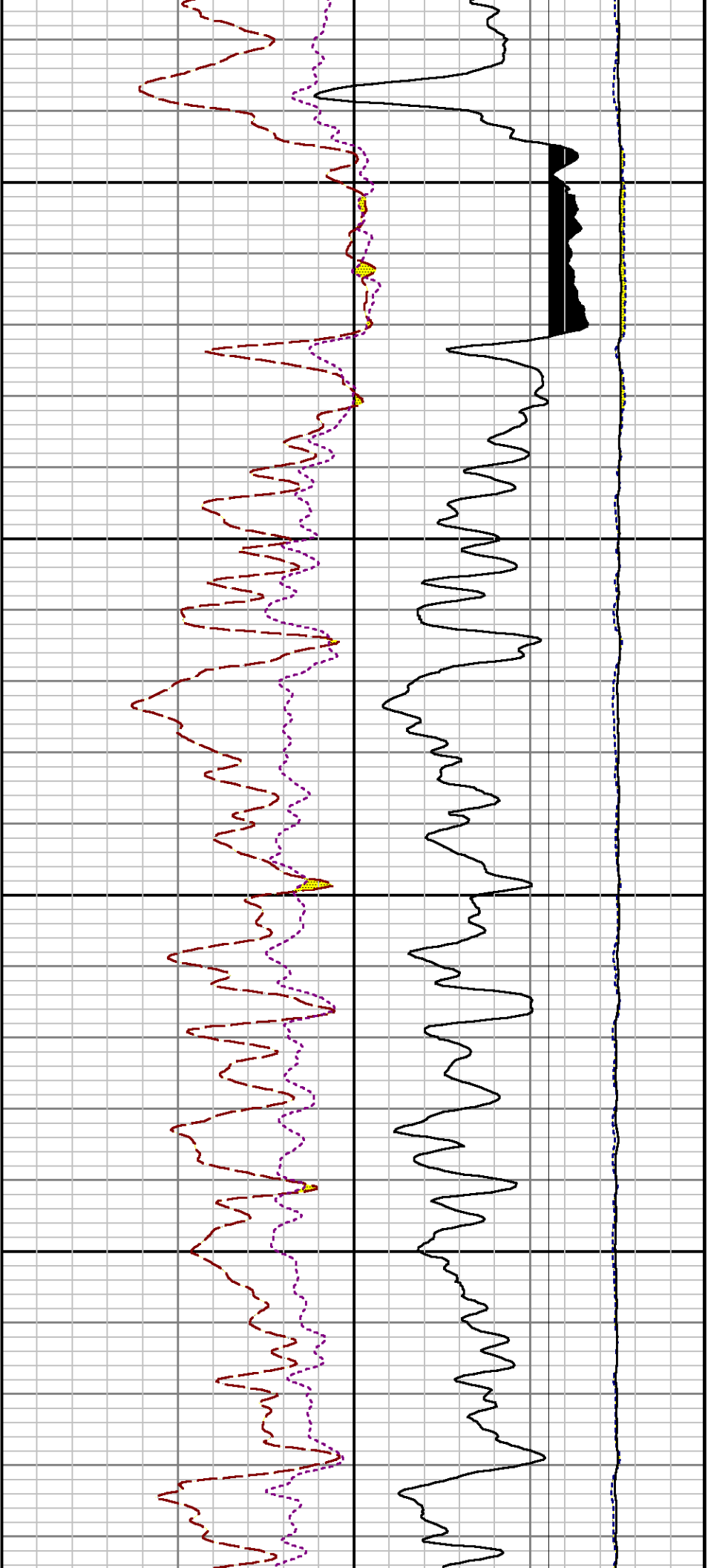


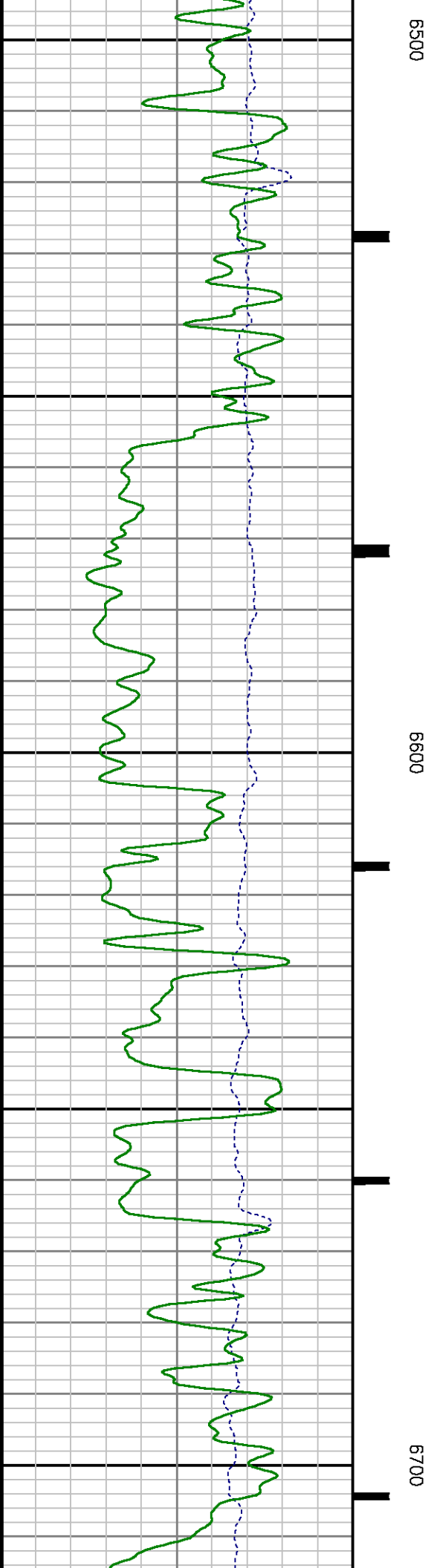
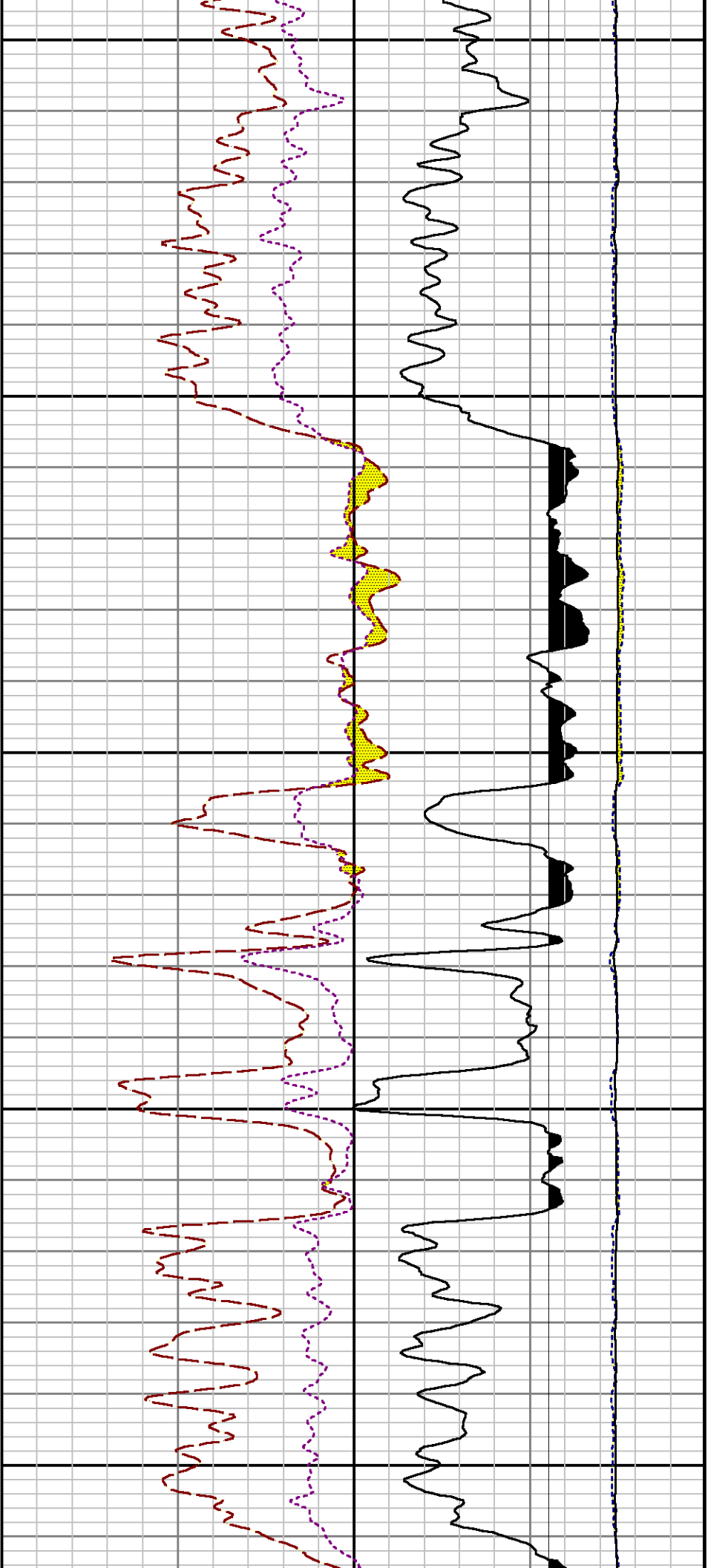


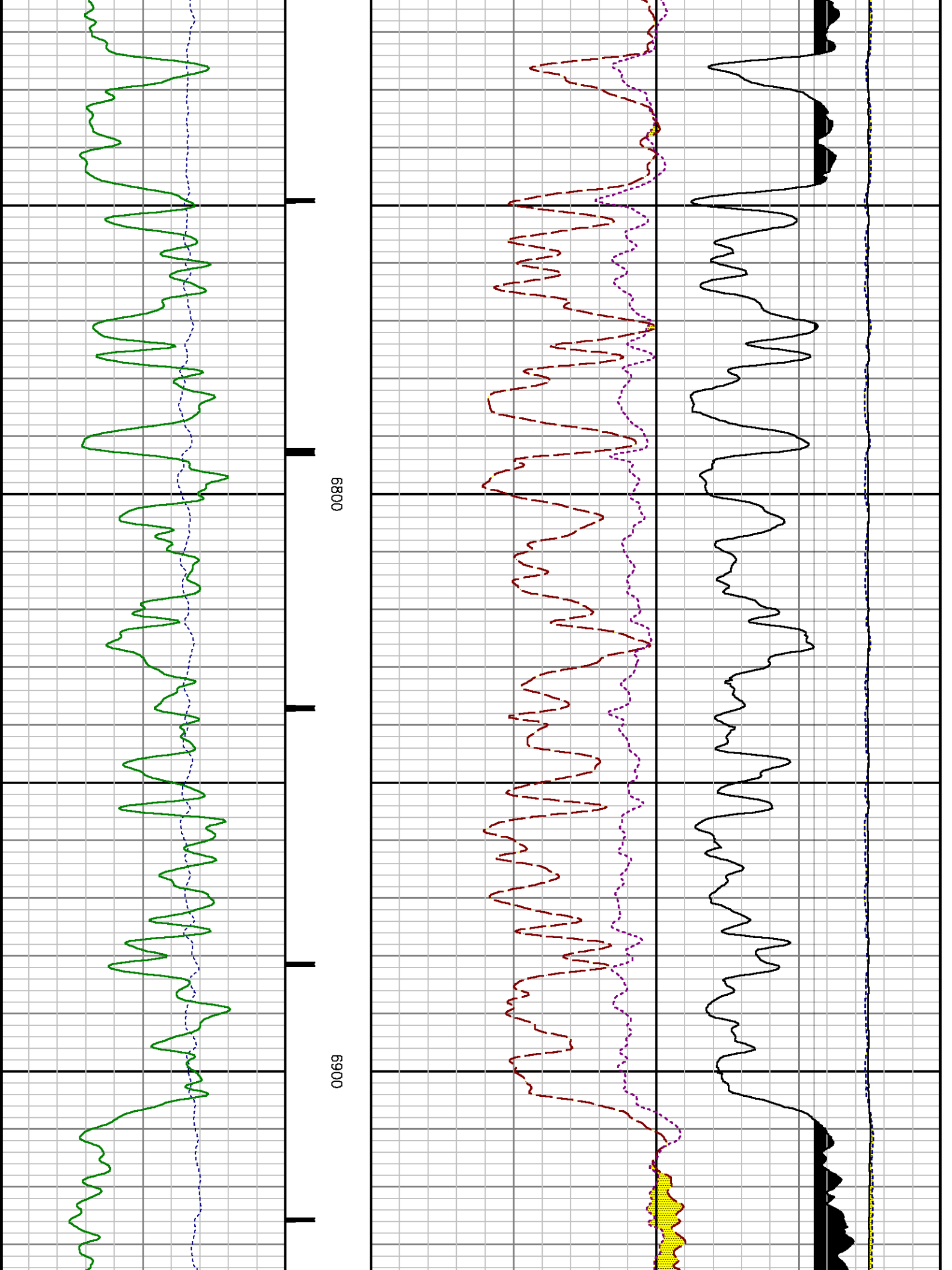


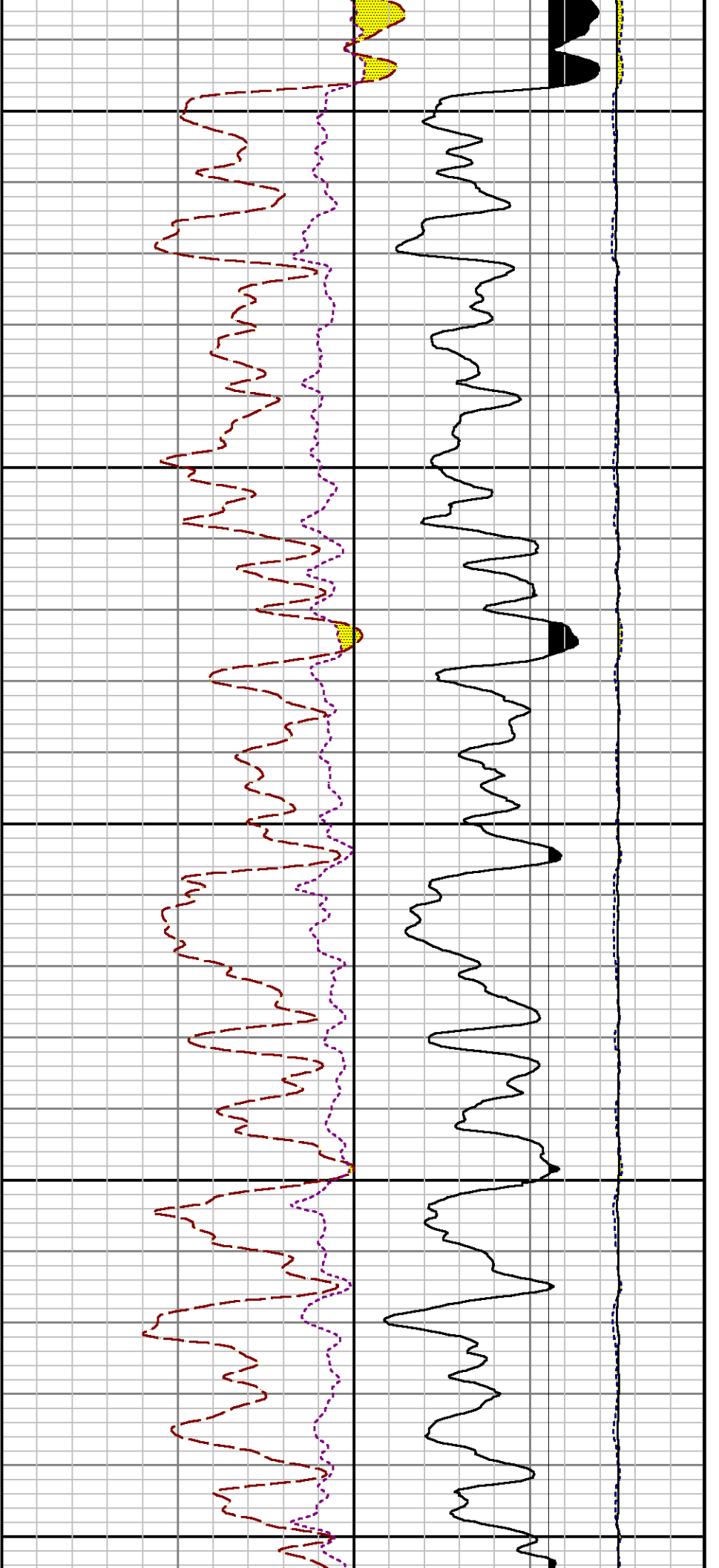






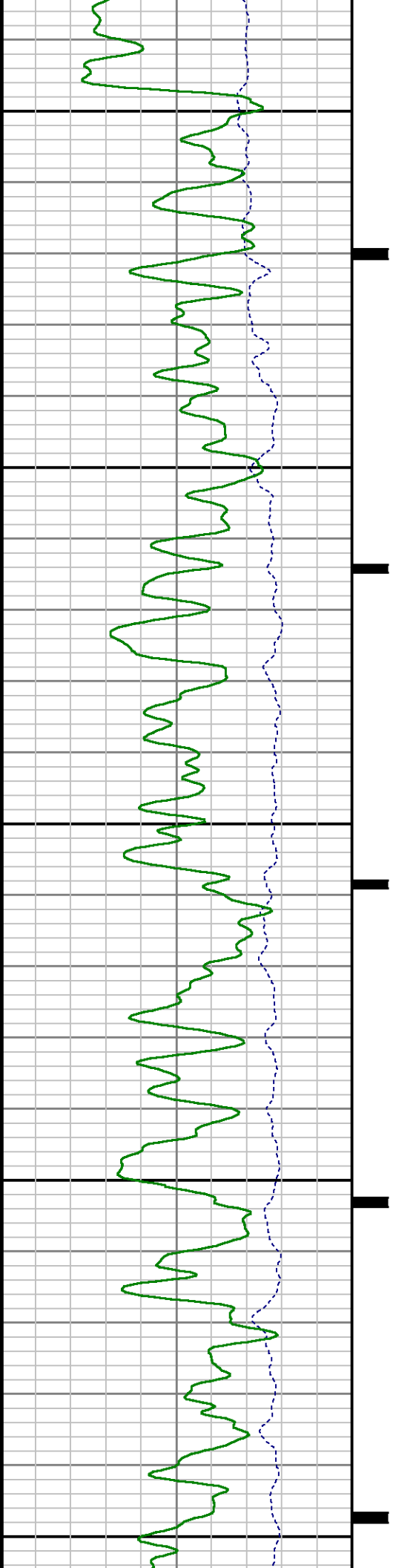


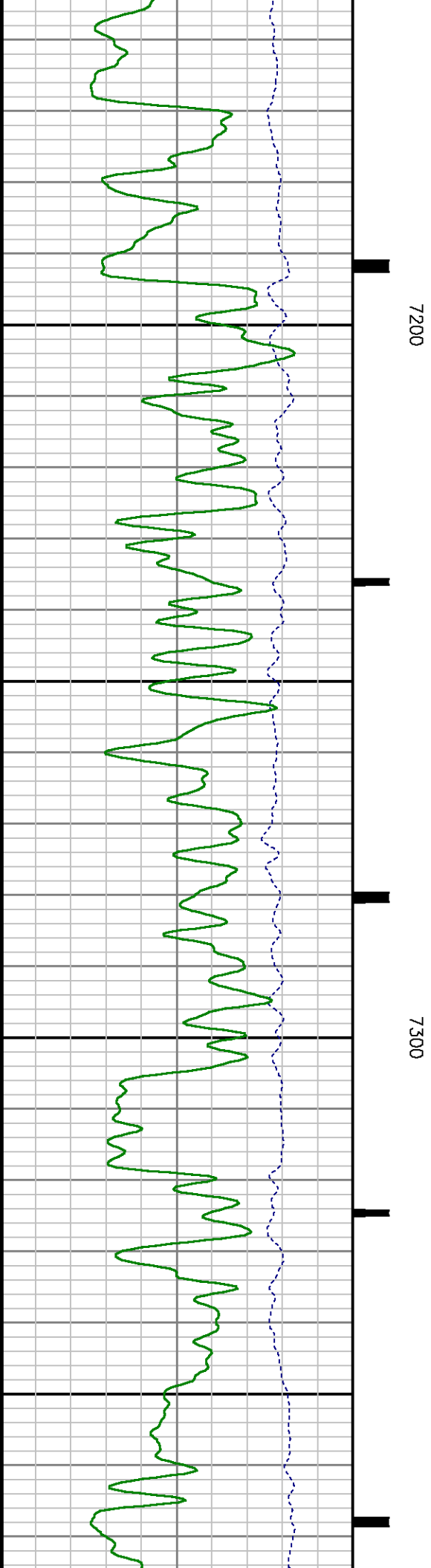
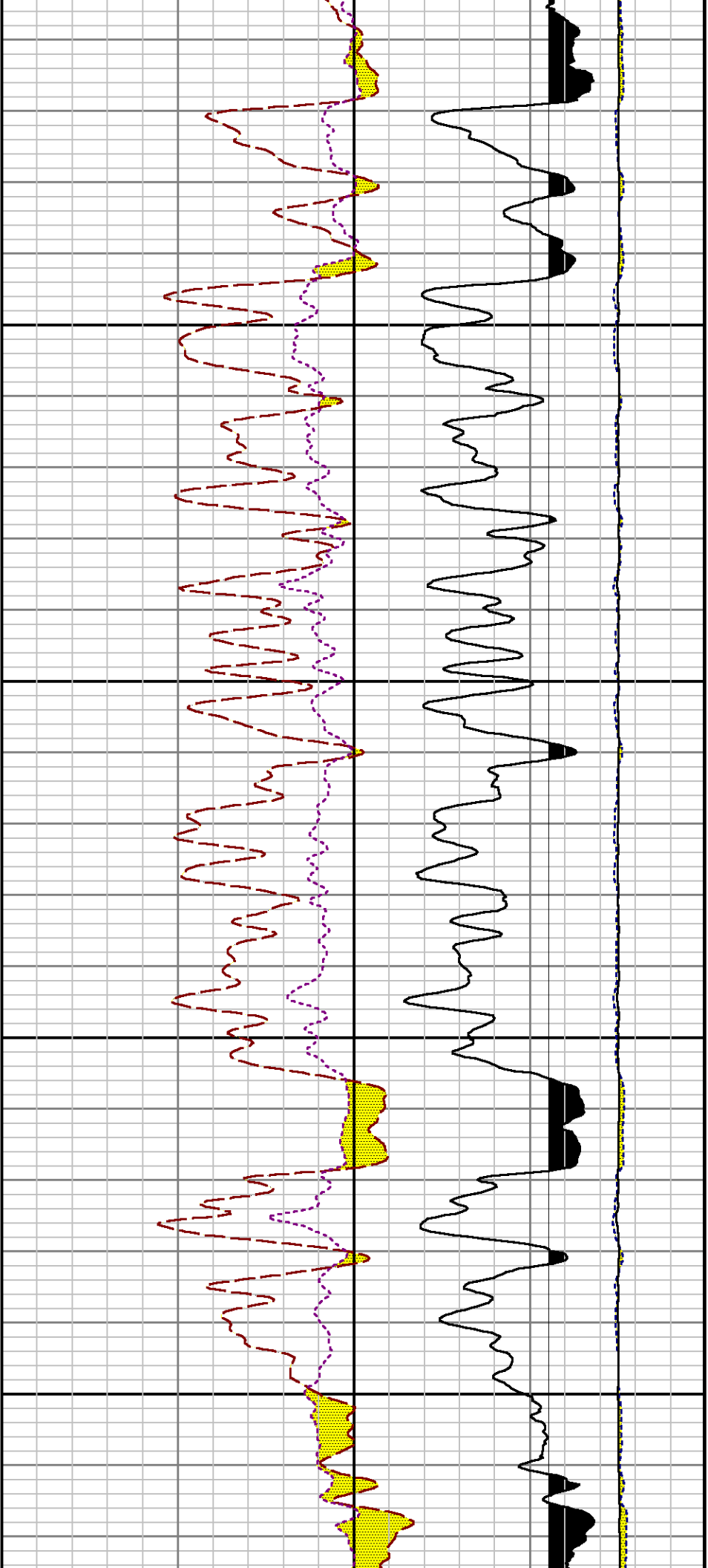


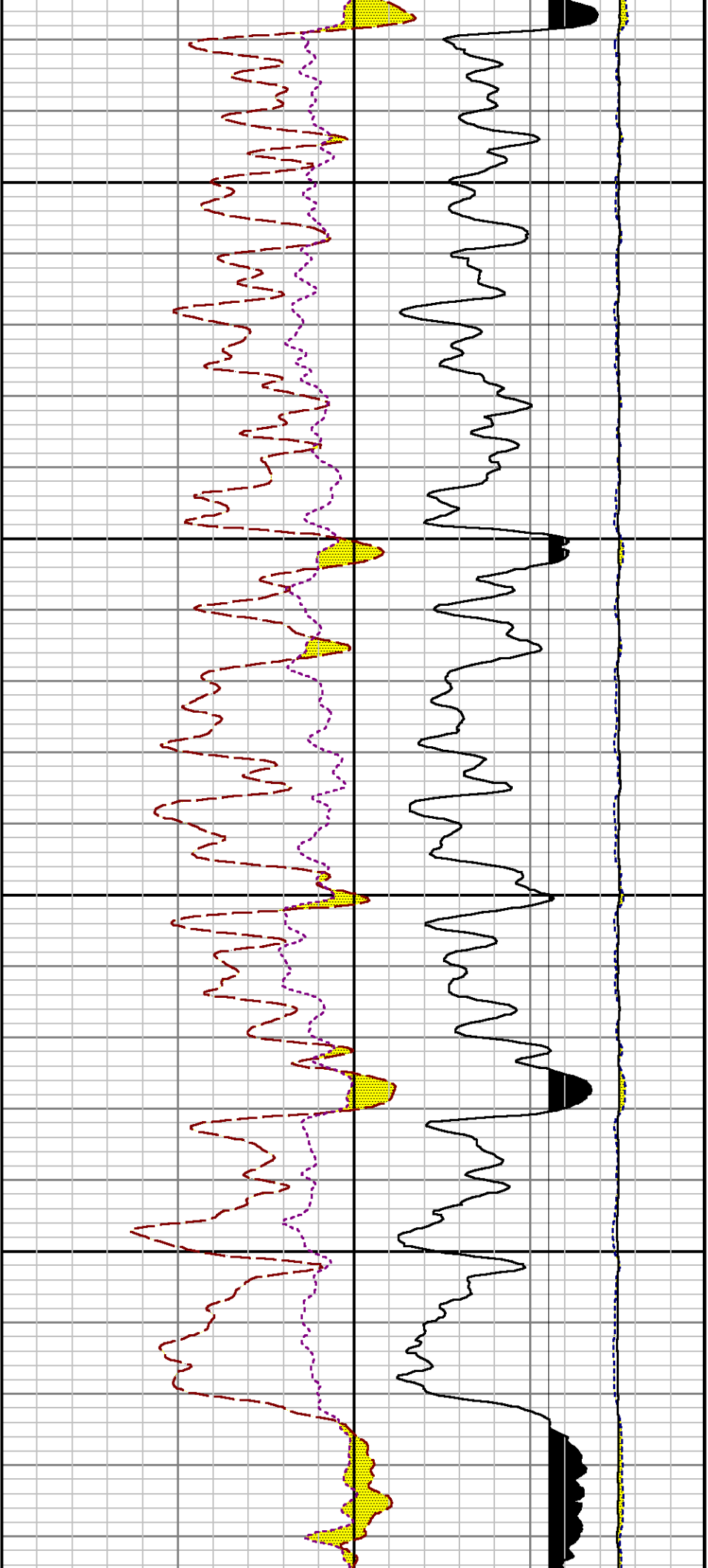


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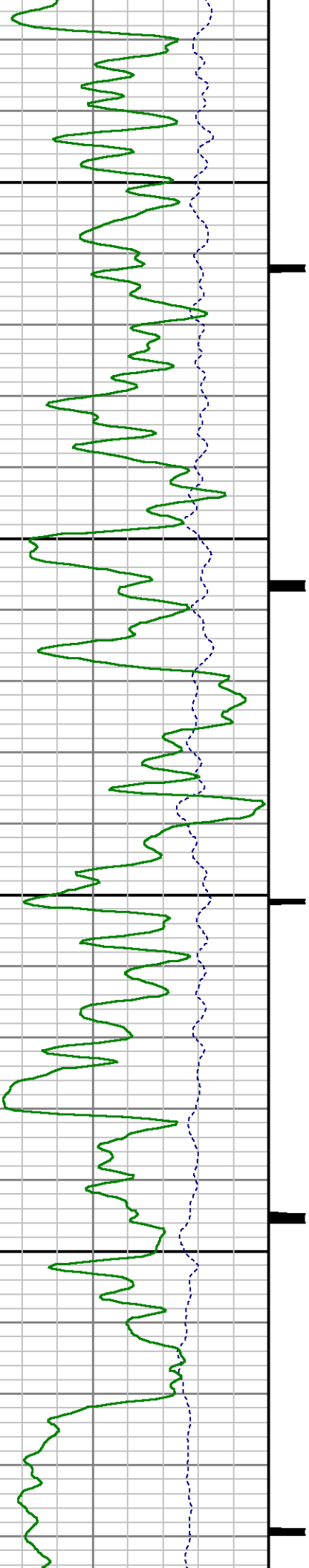


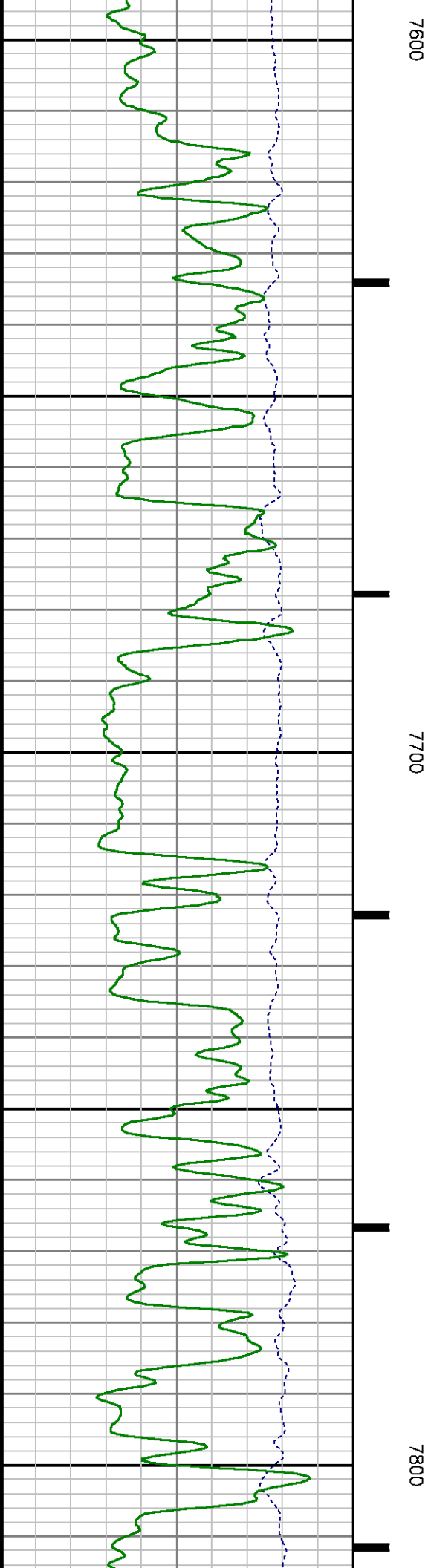
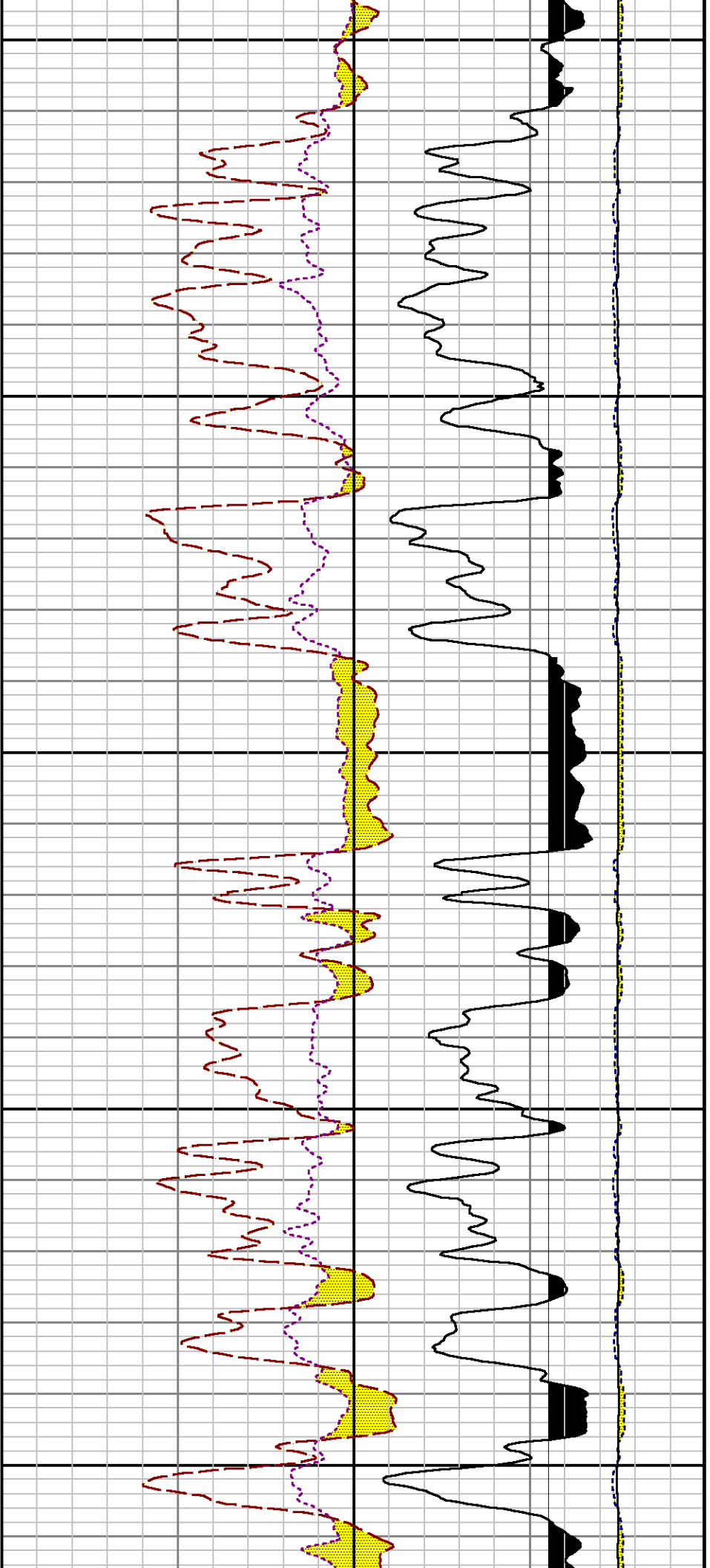


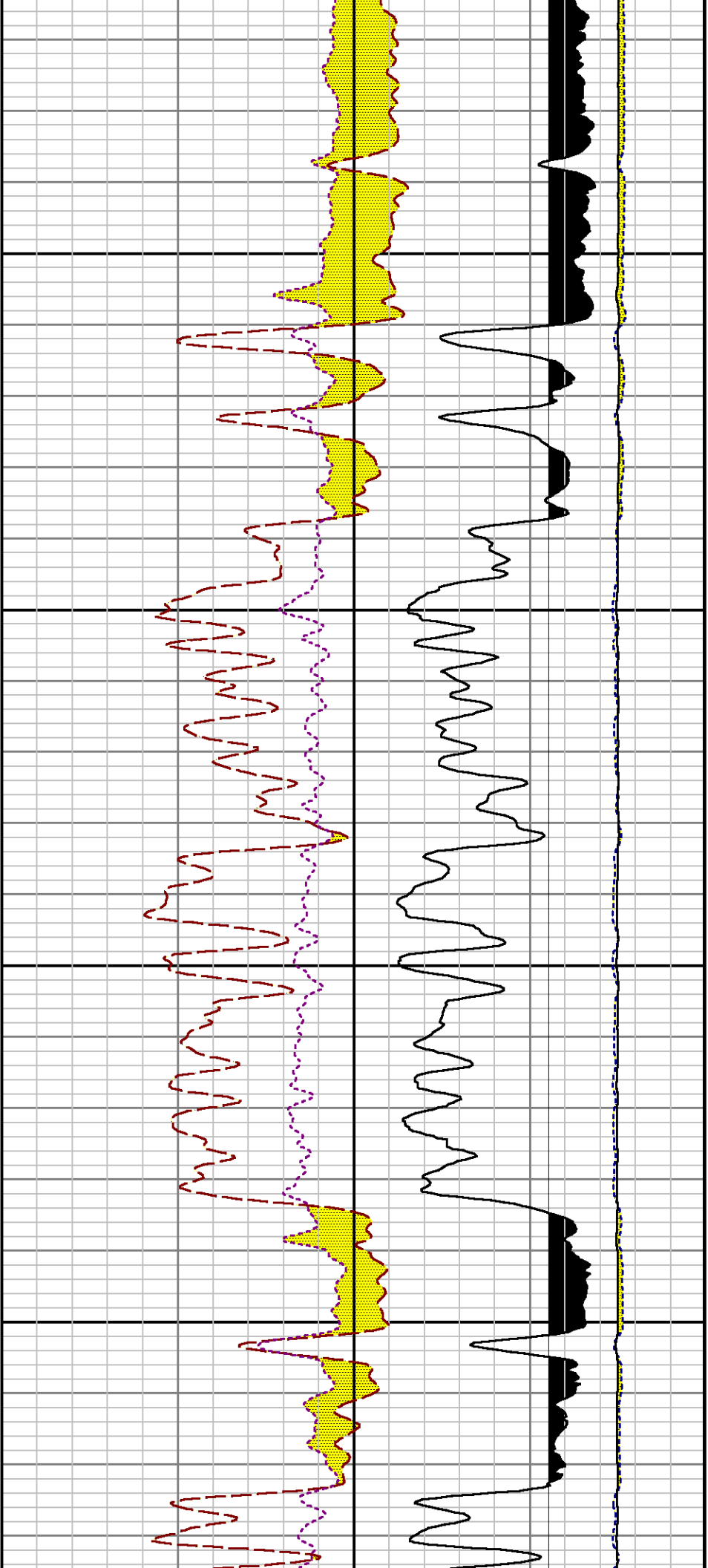


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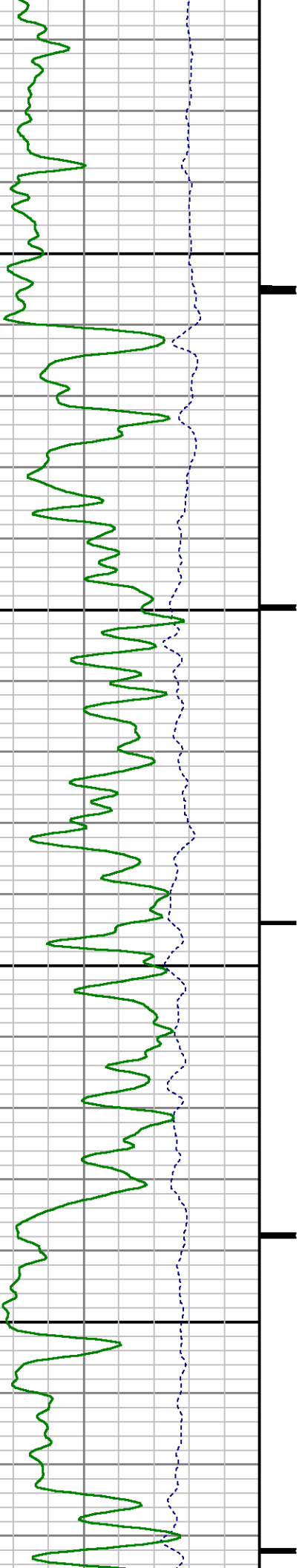


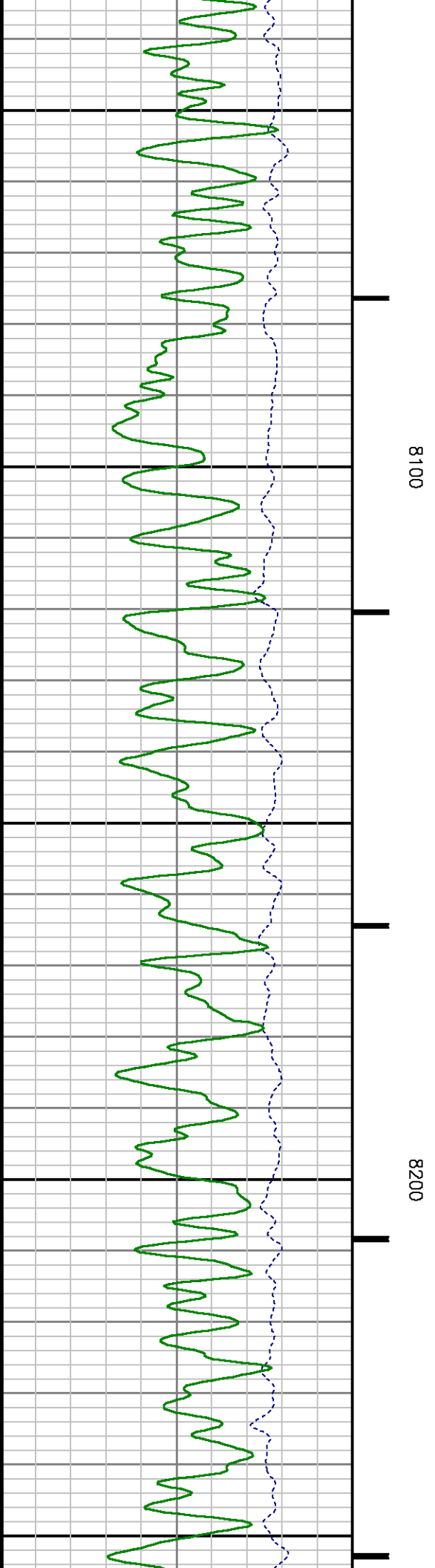
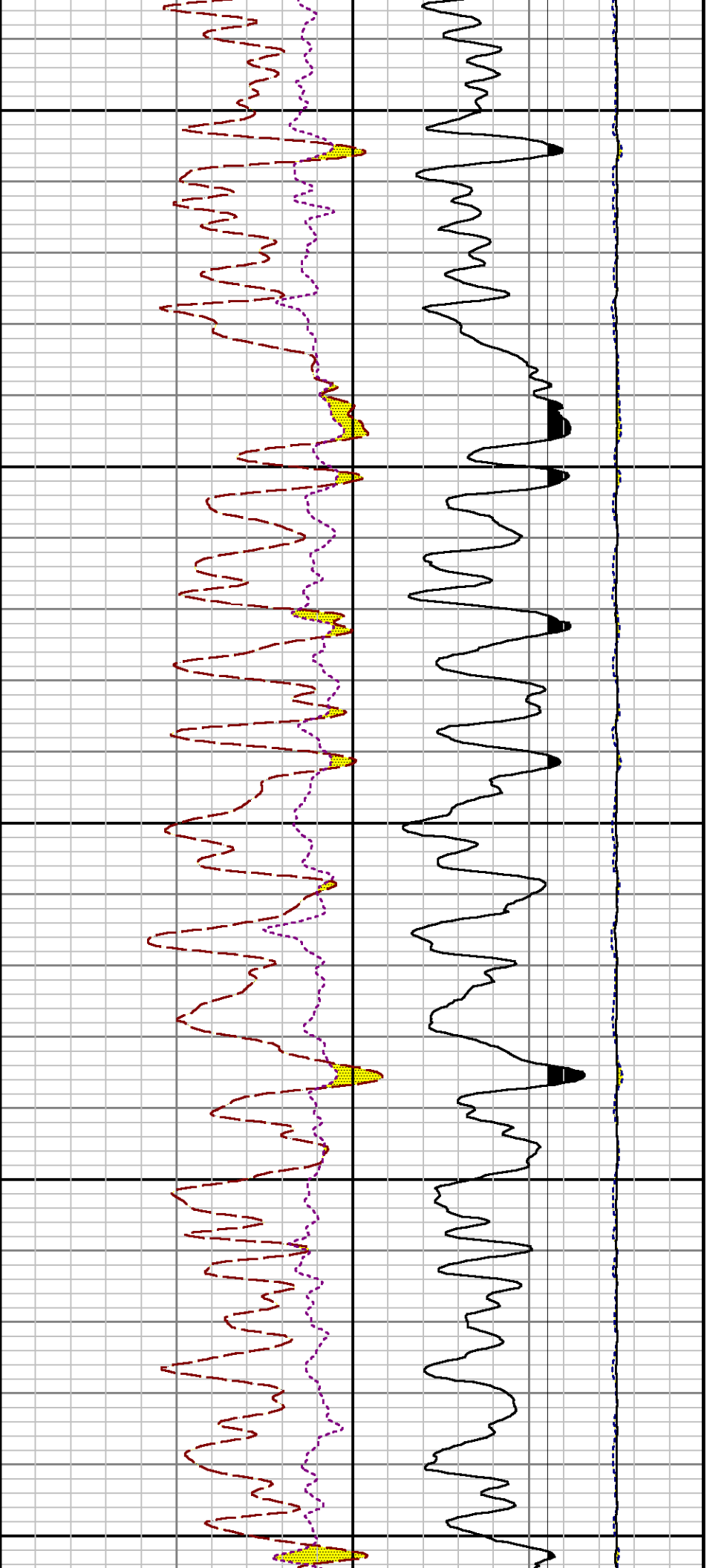


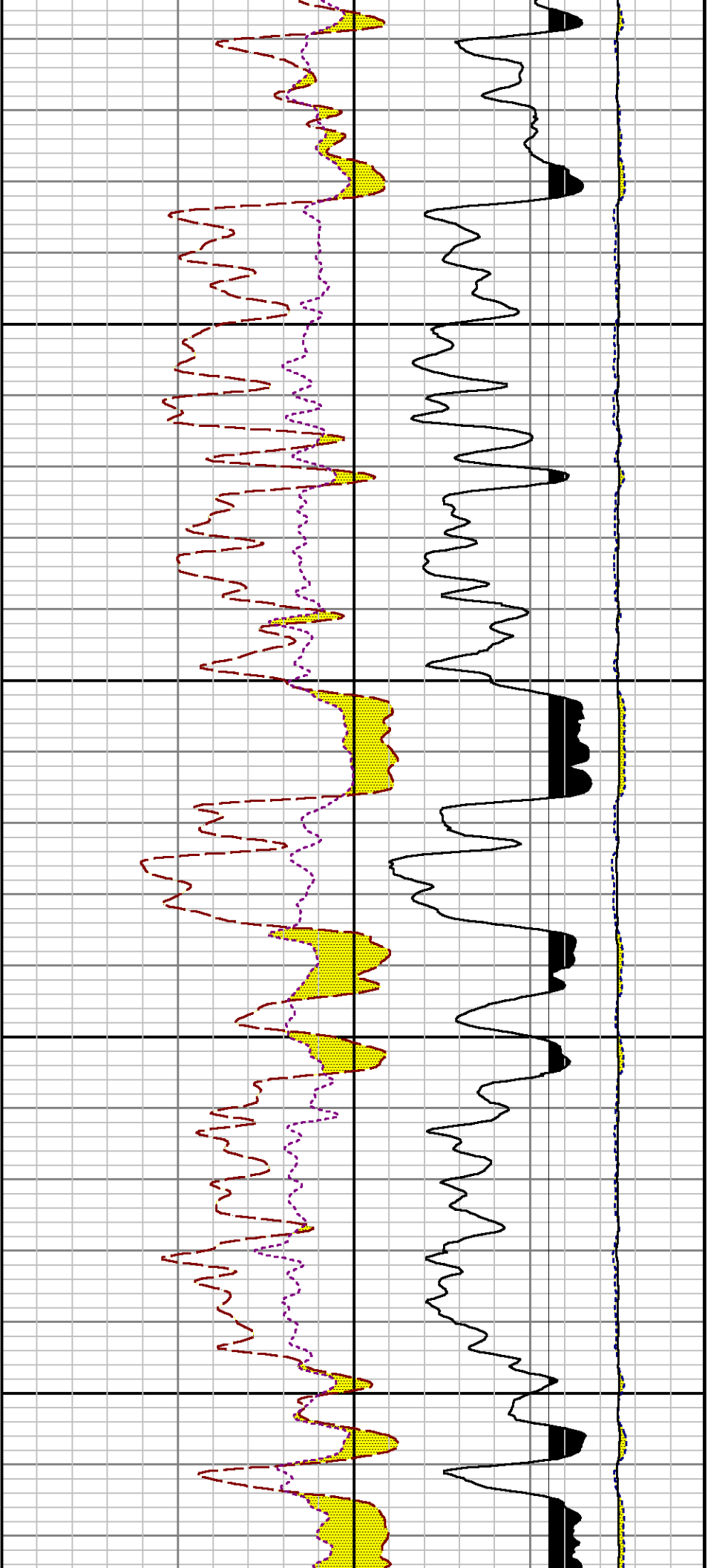


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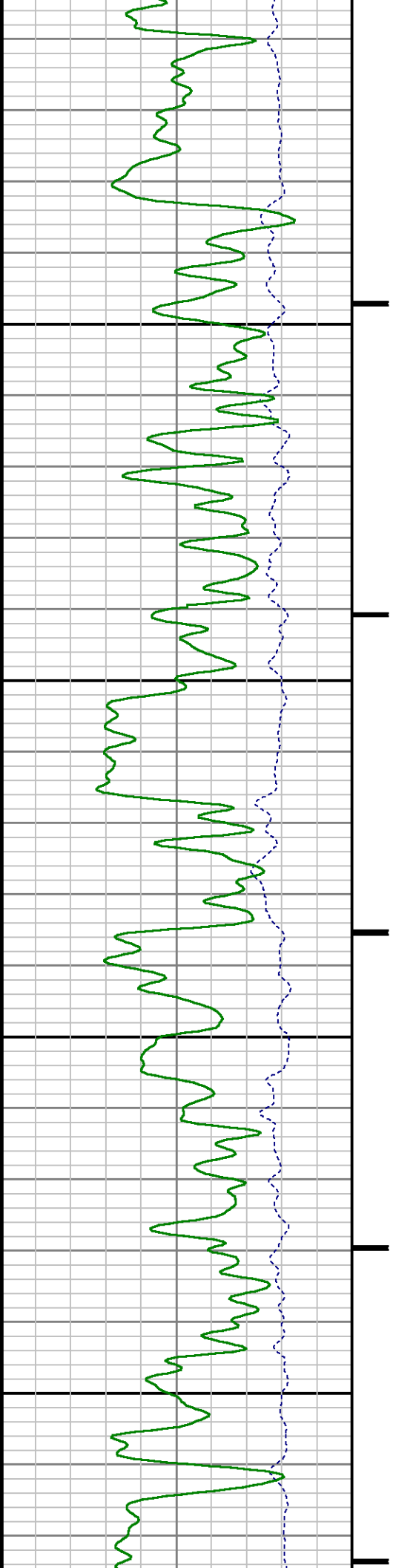


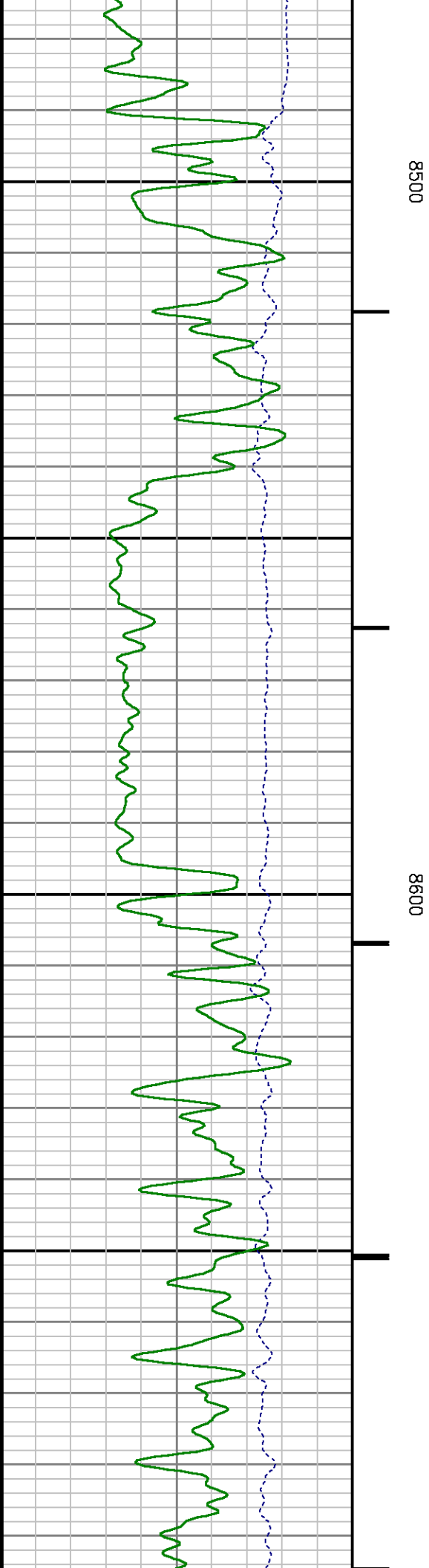
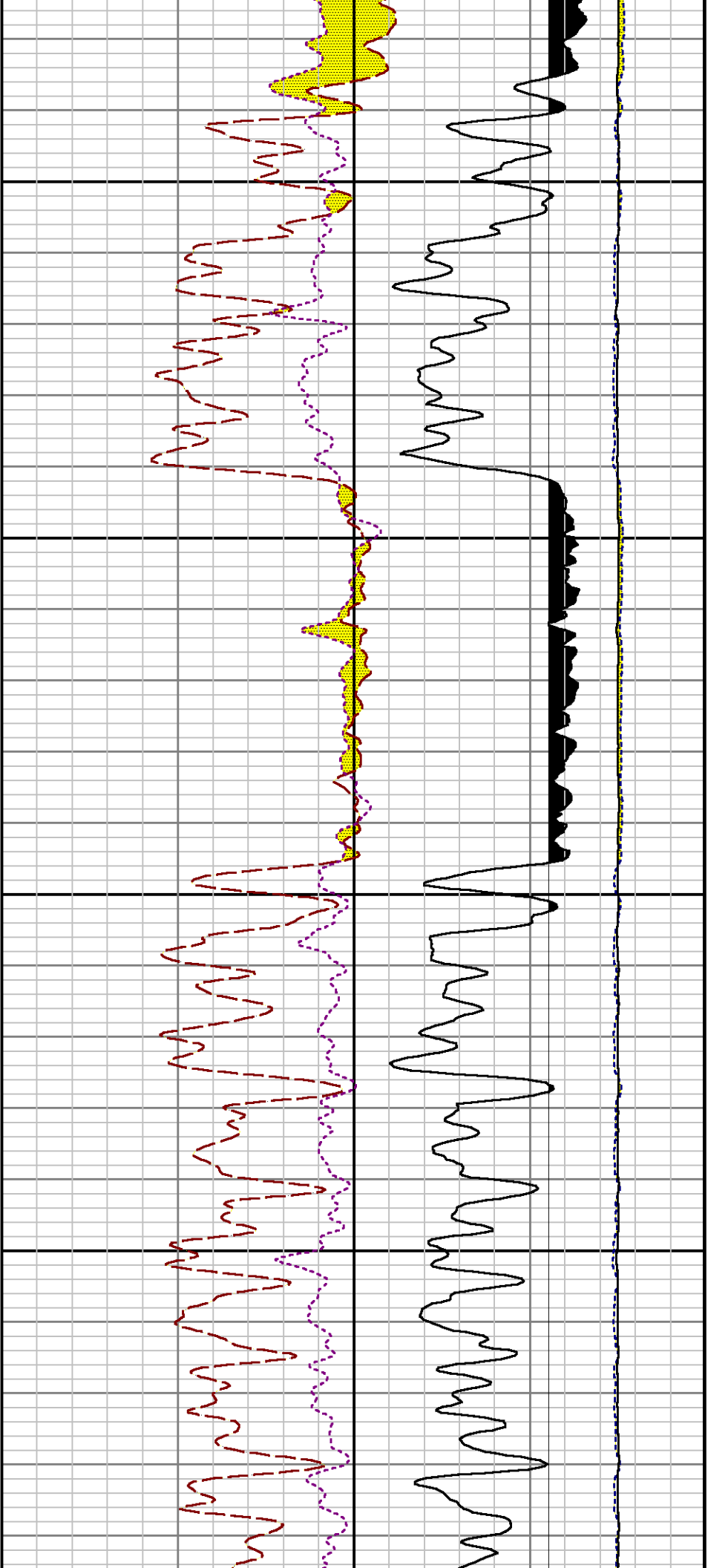


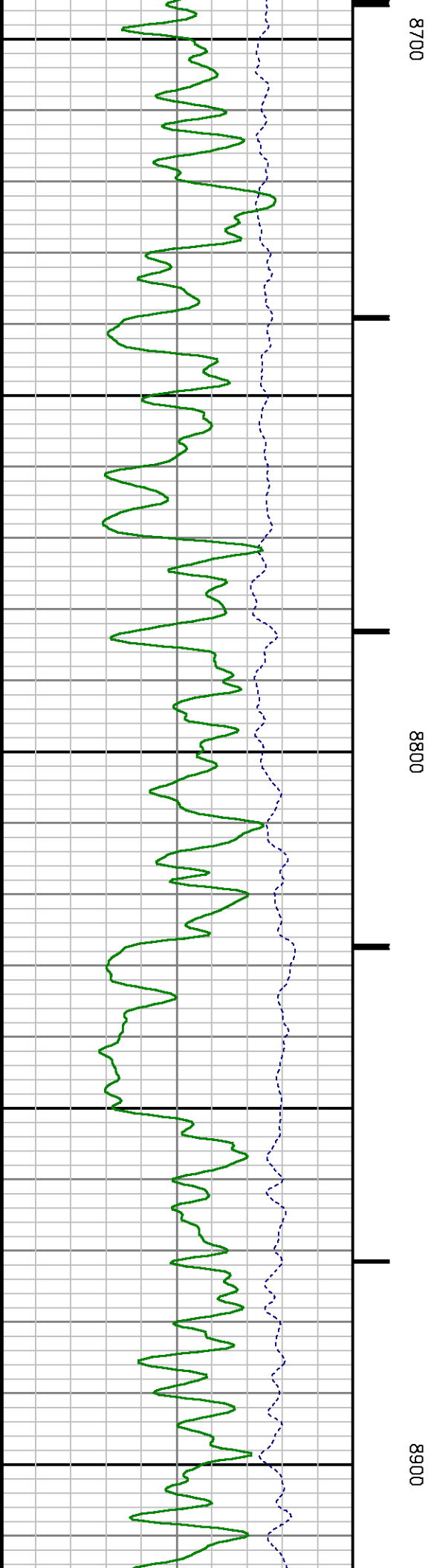
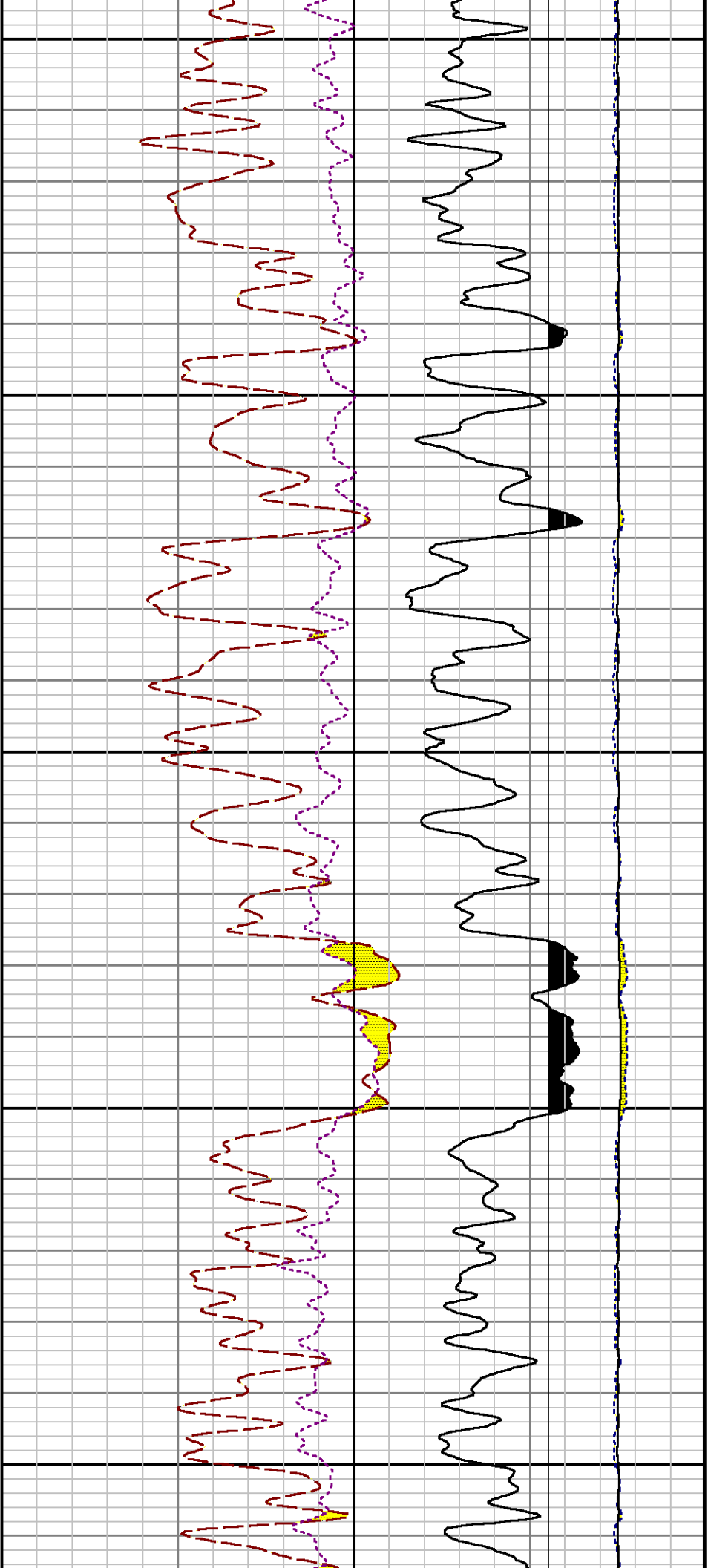


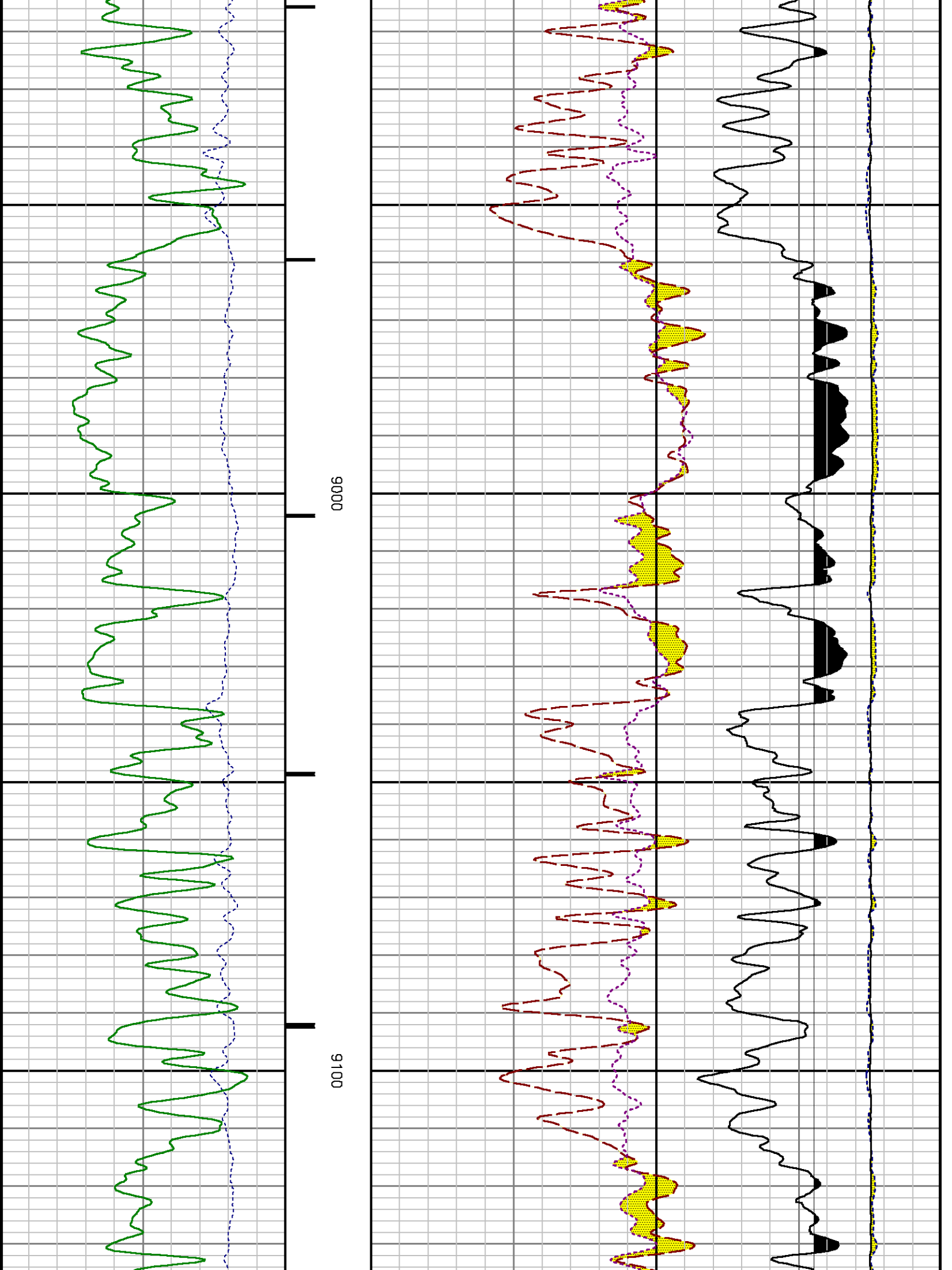
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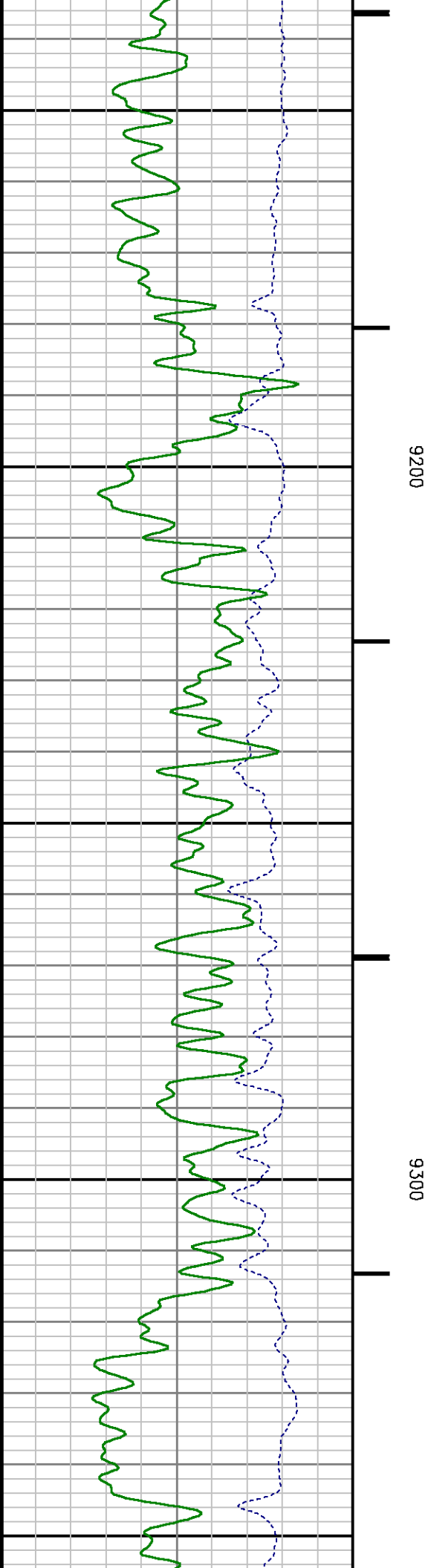
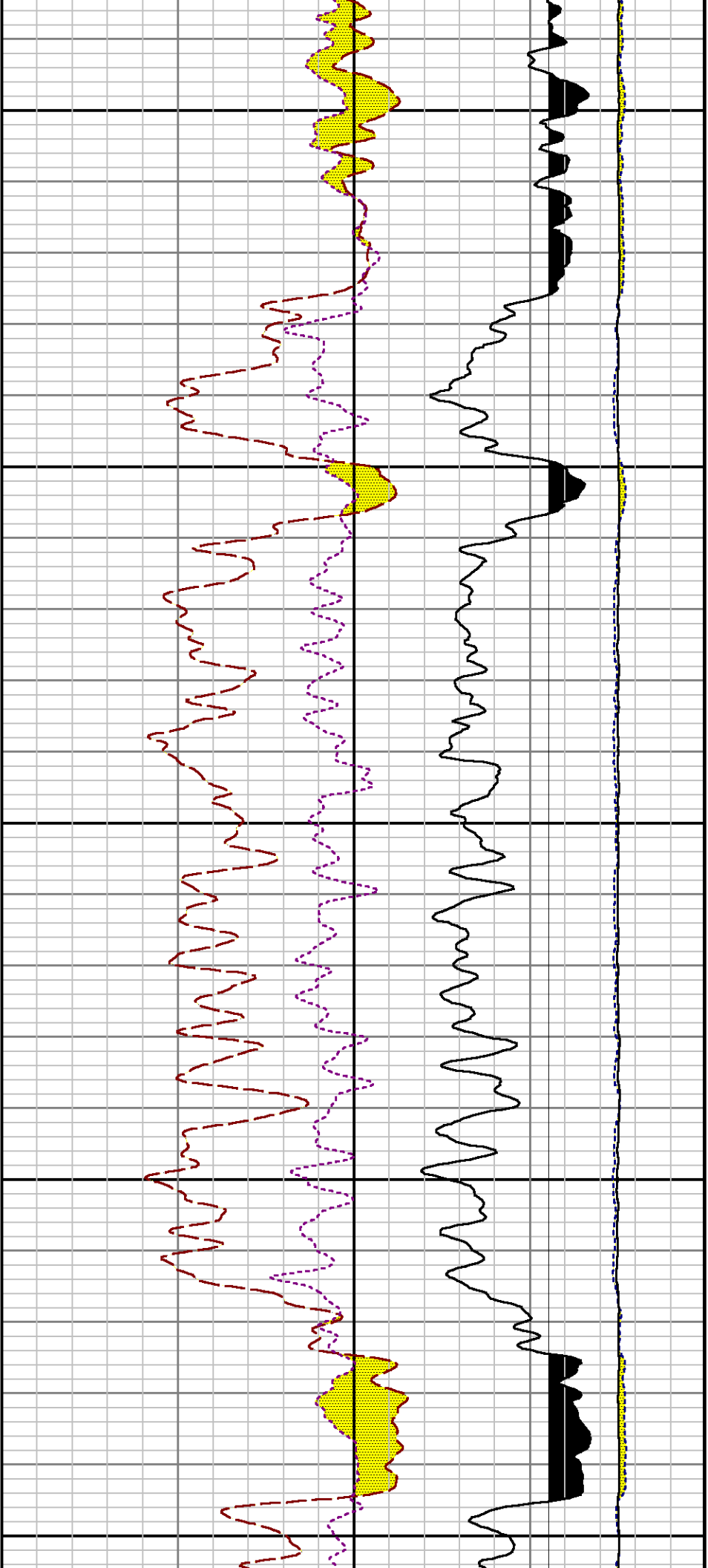
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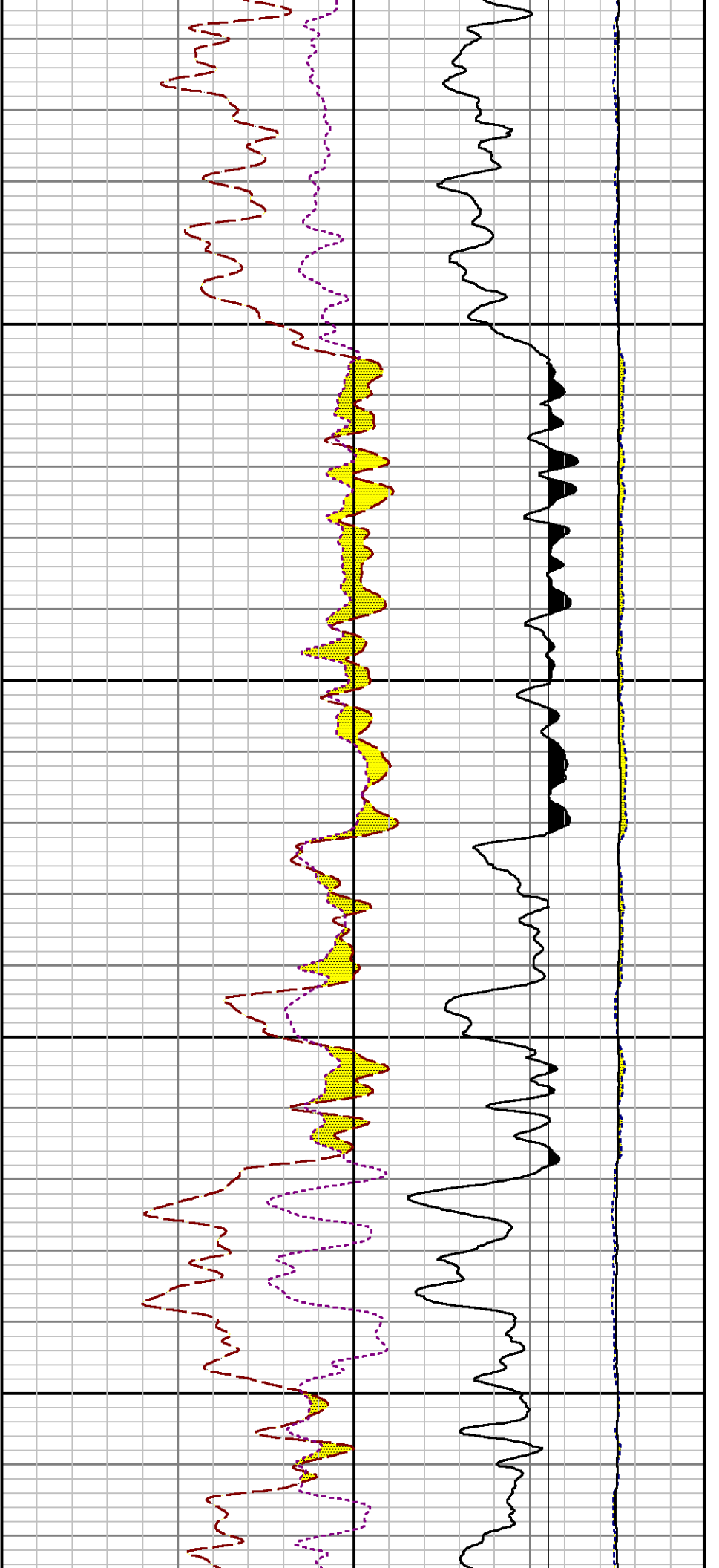






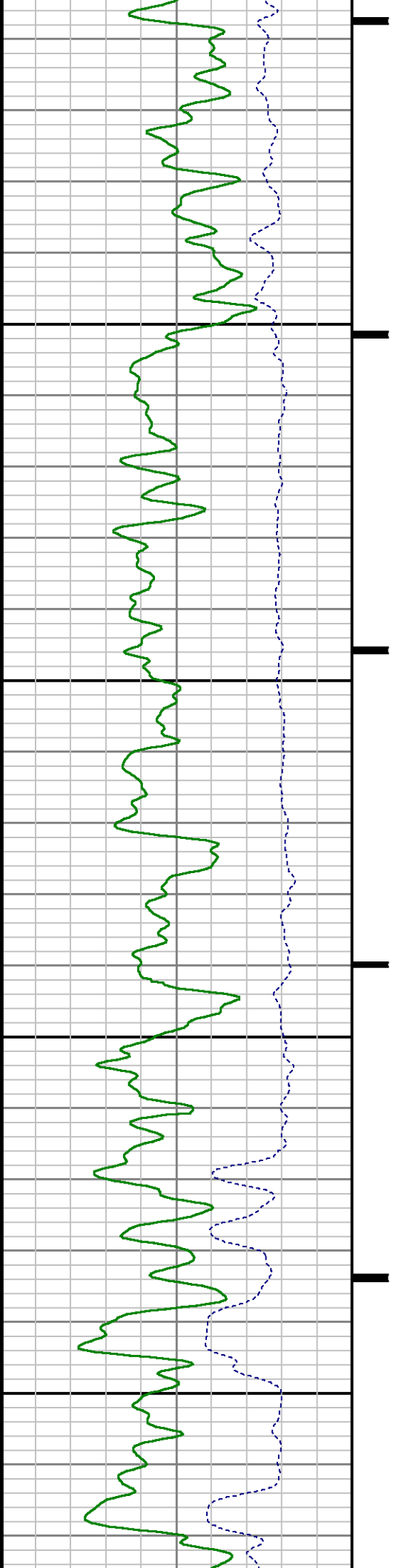


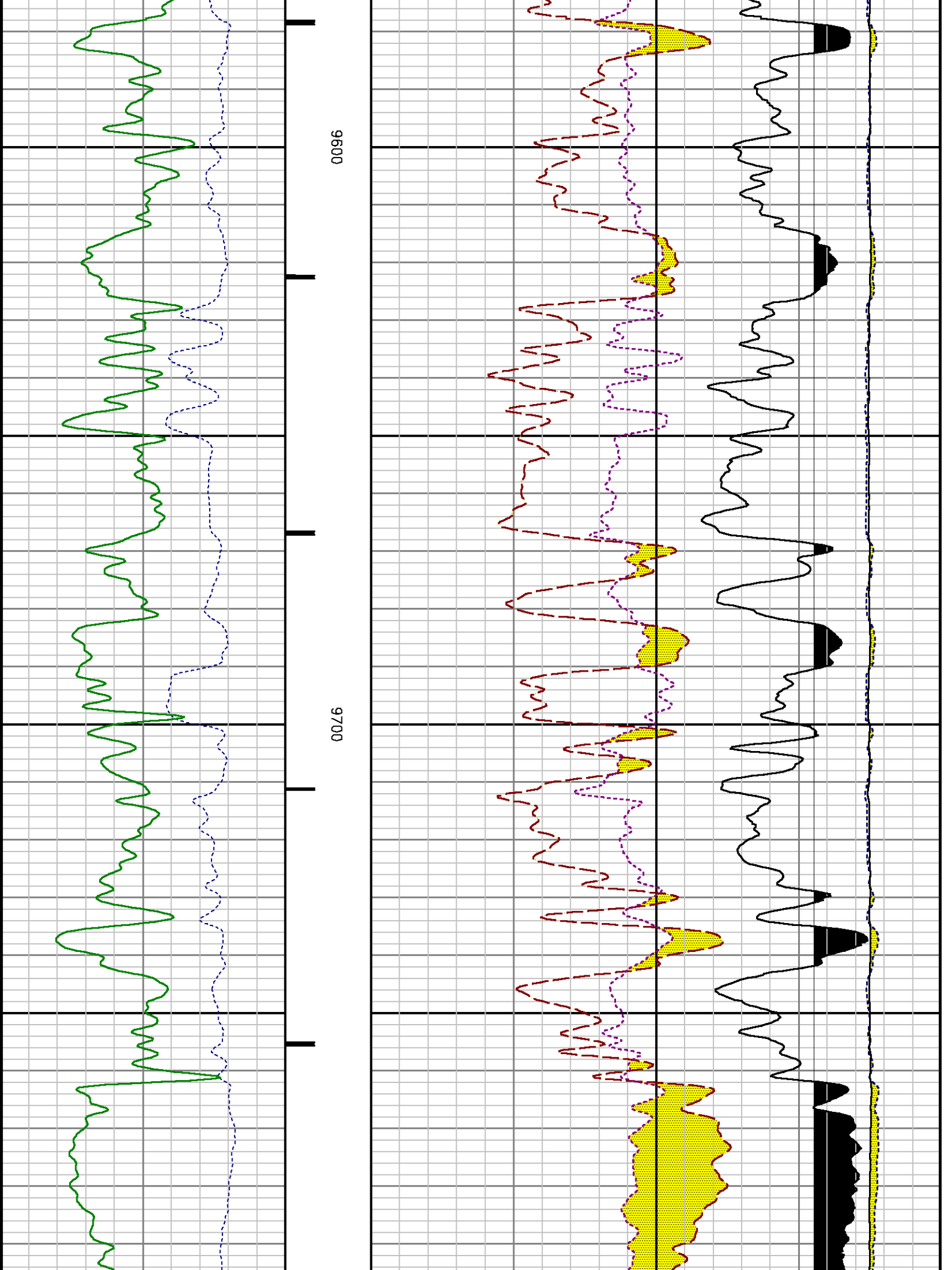


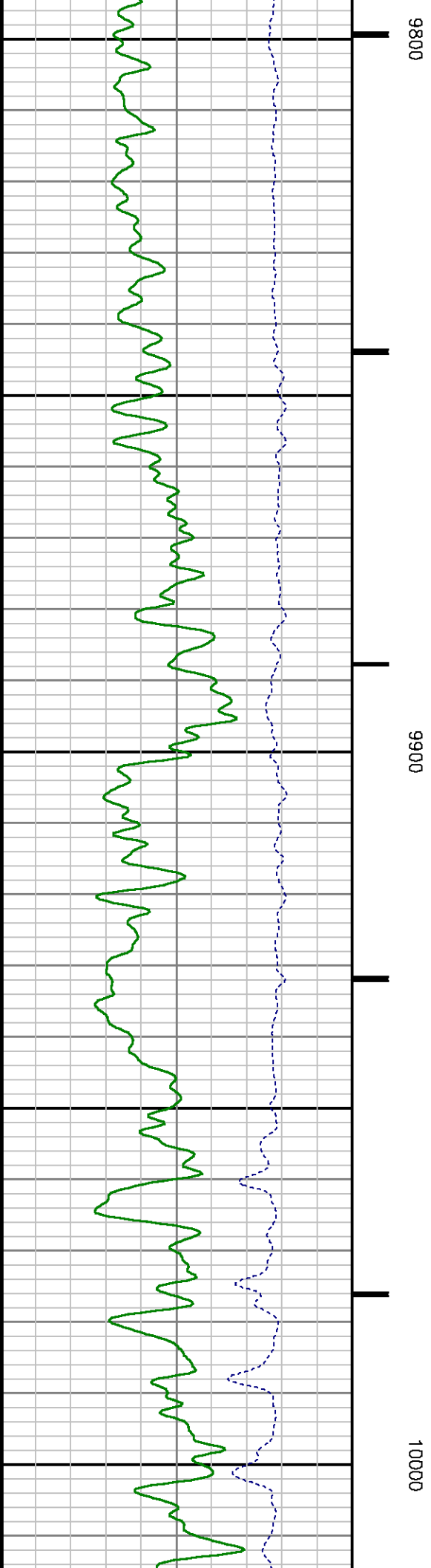
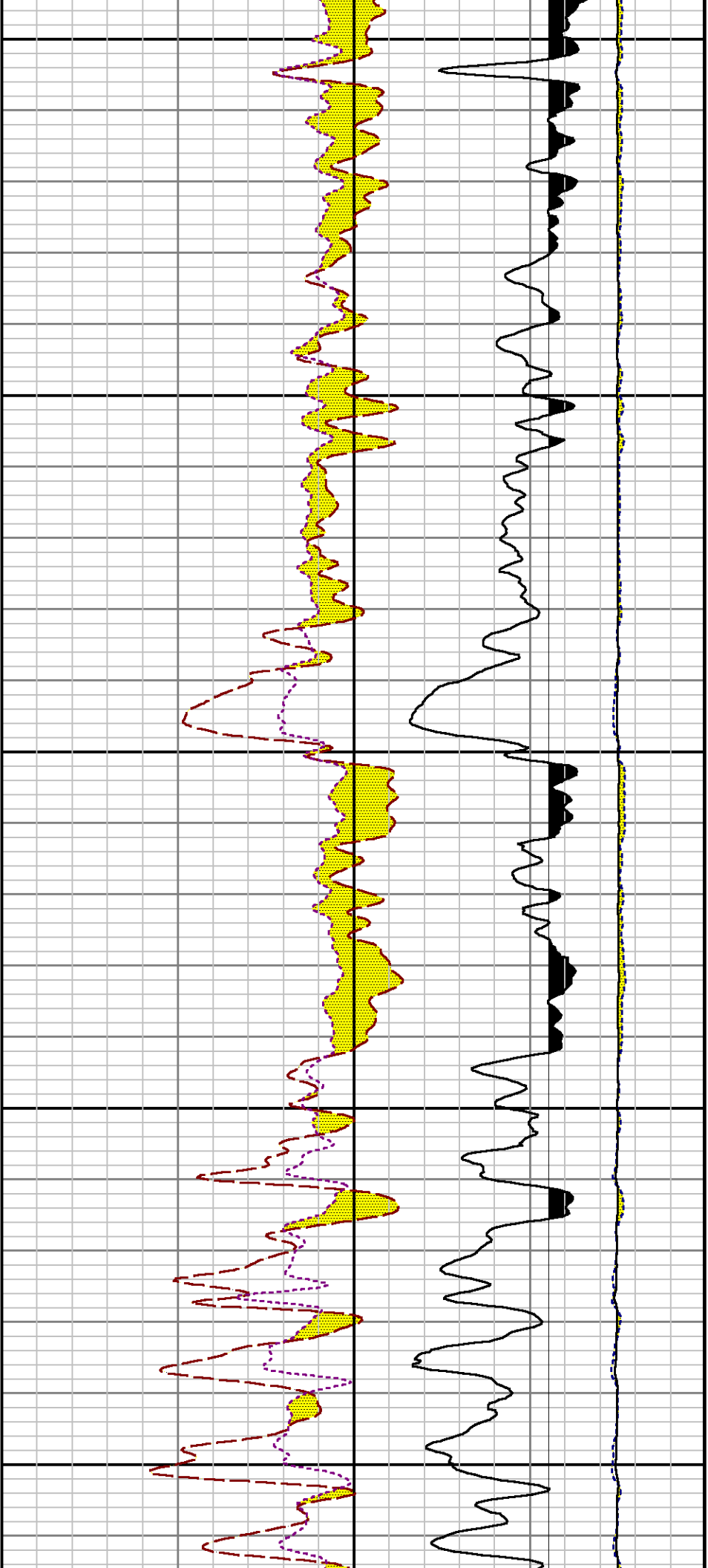


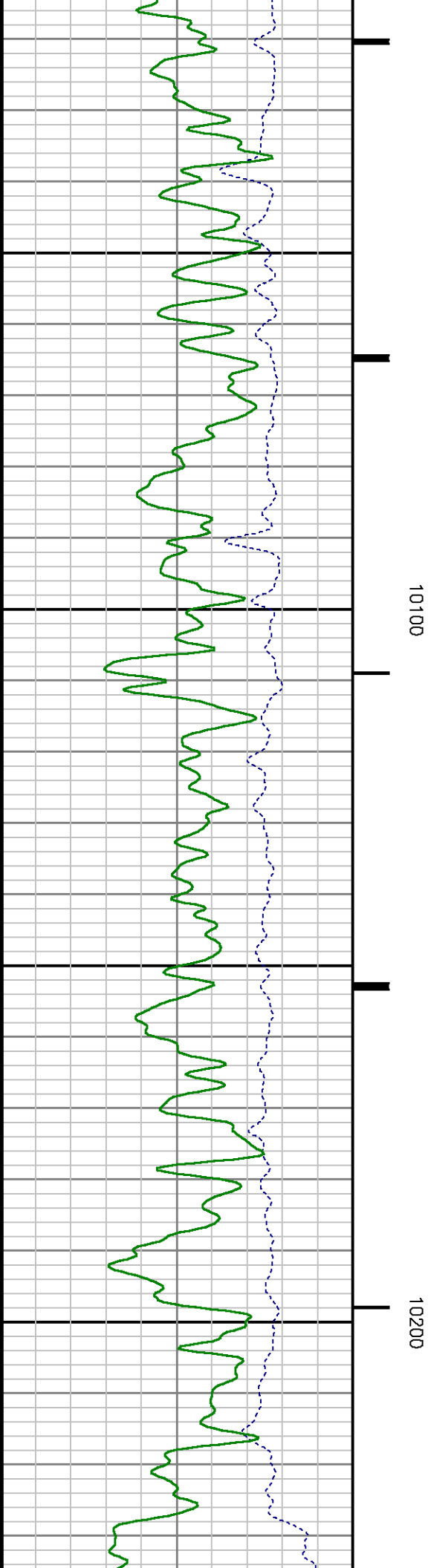
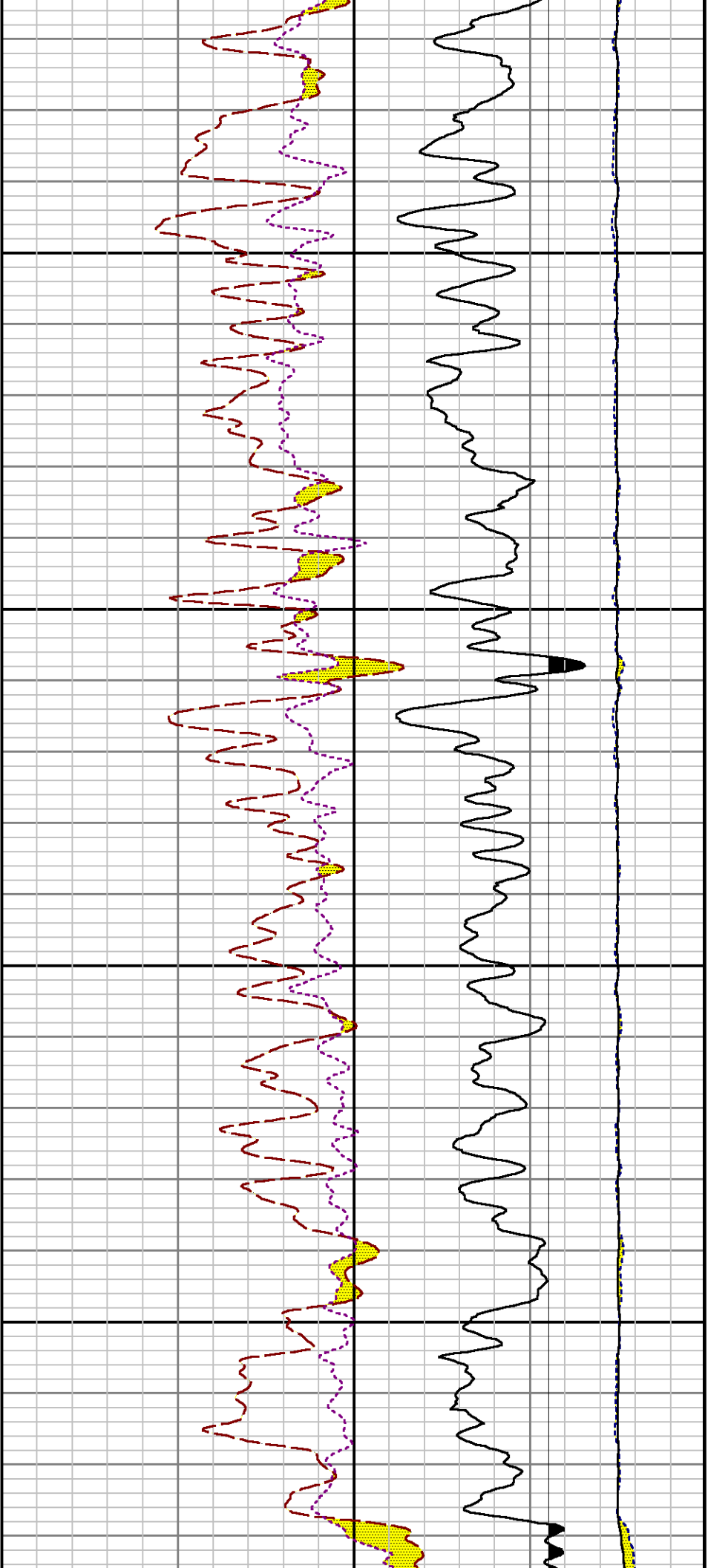
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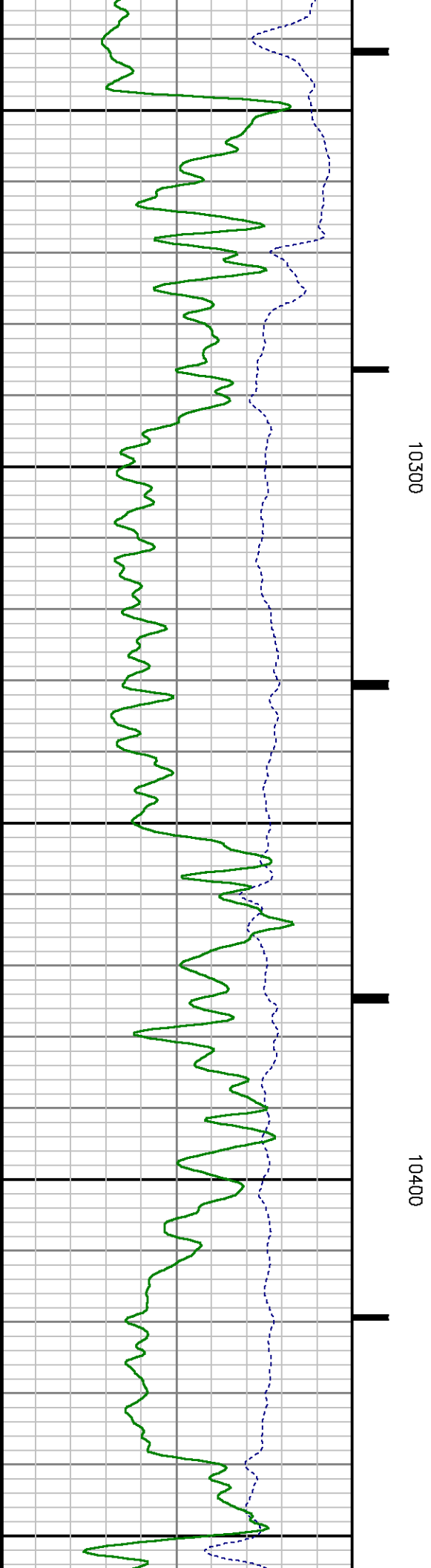
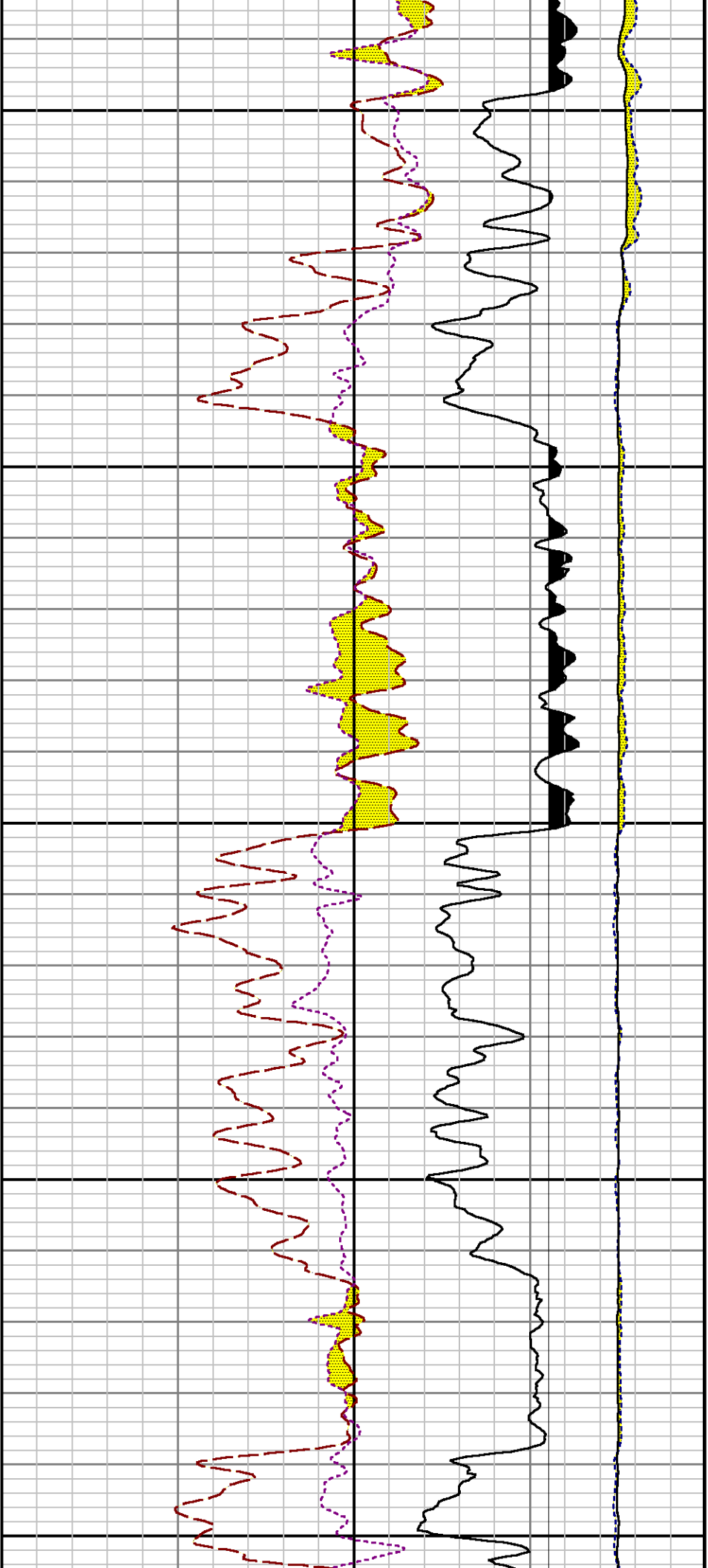
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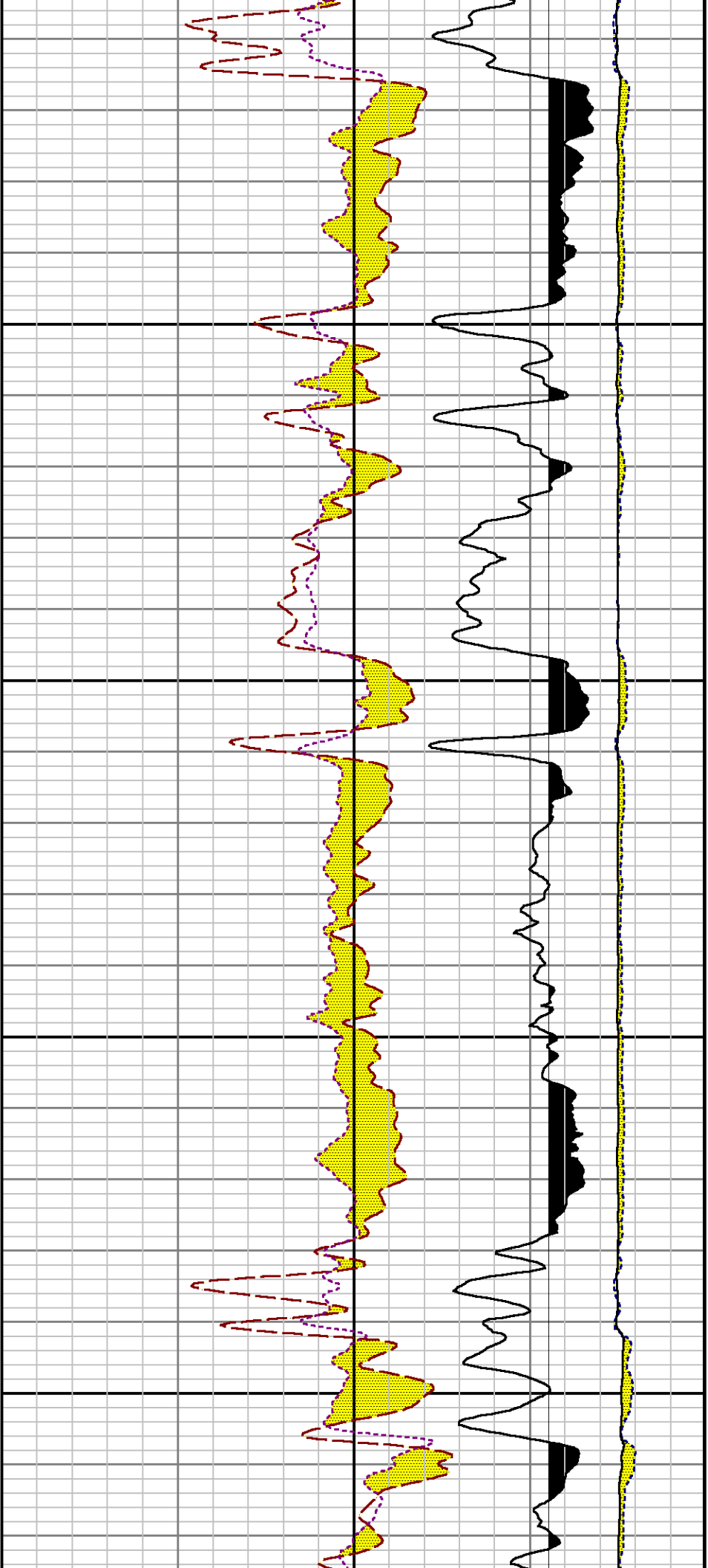






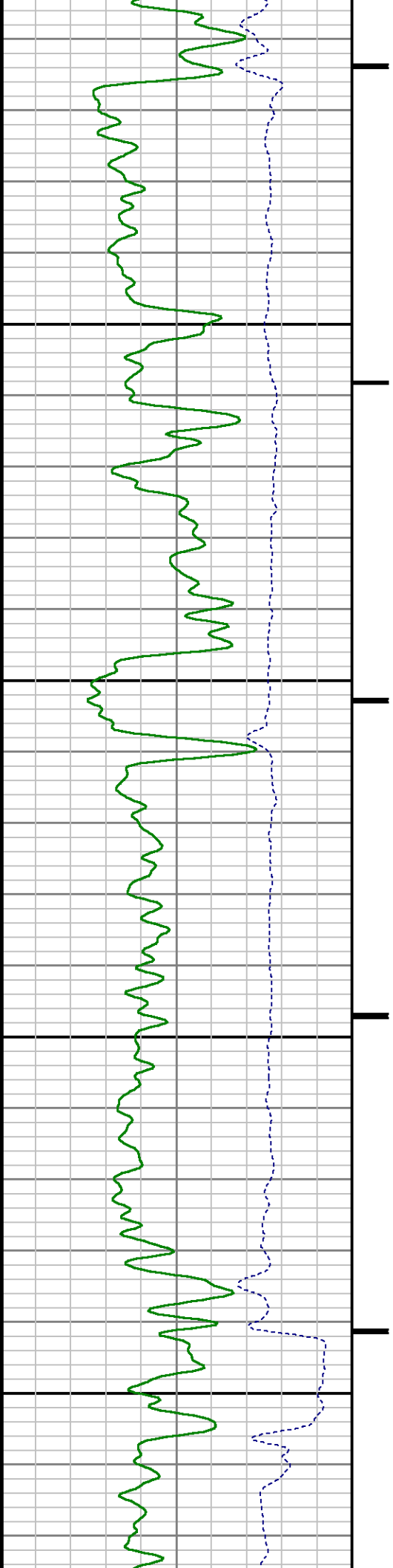


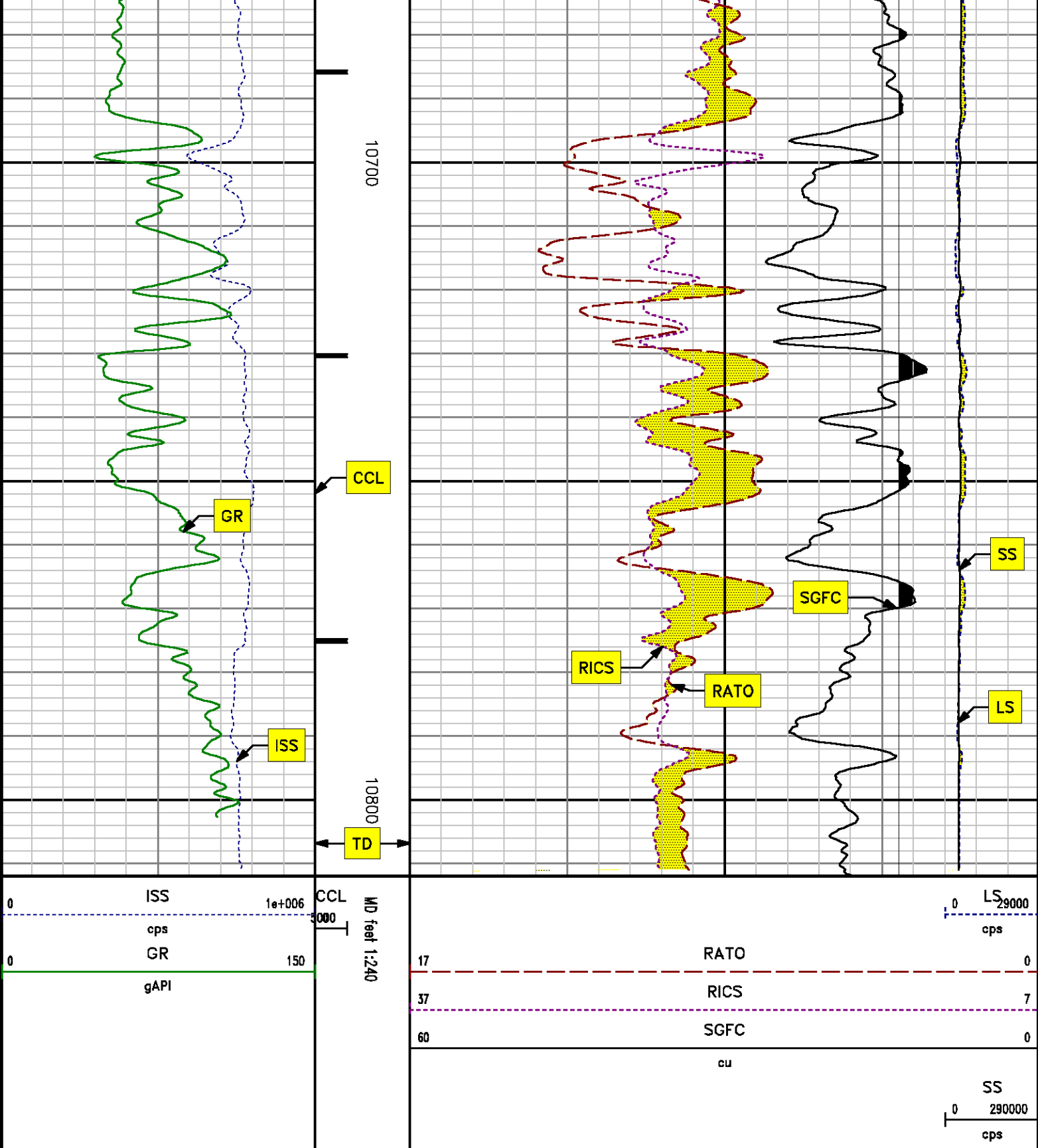




10500

10600





REPEAT SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		10019.816	10349.379
PNC Porosity	Borehole Size	8.750	inch	10019.816	10349.379
PNC Porosity	Casing Size	4.500	inch	10019.816	10349.379
PNC Porosity	Gas Filled	Non Gas Filled		10019.816	10349.379
PNC Porosity	Matrix	Sandstone		10019.816	10349.379

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	RAT023
		RICXC	RIN13C	RIN23	RIN23C	SD3D	SG3D
		SGB3	SGF3	WDTH3	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	RTW023	SDA2
		SDL2	SGA2	SGB2	SGF2	SGK2	SGL2
		STA2	ASPEC2	ILSC	ILSN	WDTH2	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	RAT0	RAT013
		RBOR	RGN1	RICS	RIN	RONE	RPOR
		RTWO	RIN13	RONE13	RTW013	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	HOC	FE2XC	ISSC	RINC
ISSN	RDEN	WDTH1	RICSC	CSSR	G1R
G2R	ISSR	SSR	SS2R	RATOR	RATO13R
RBORR	RICSR	RINR	RIN13R	RONER	RPORR
RTWOR					
TEN	TTEN				

SYSTEM

0.000

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

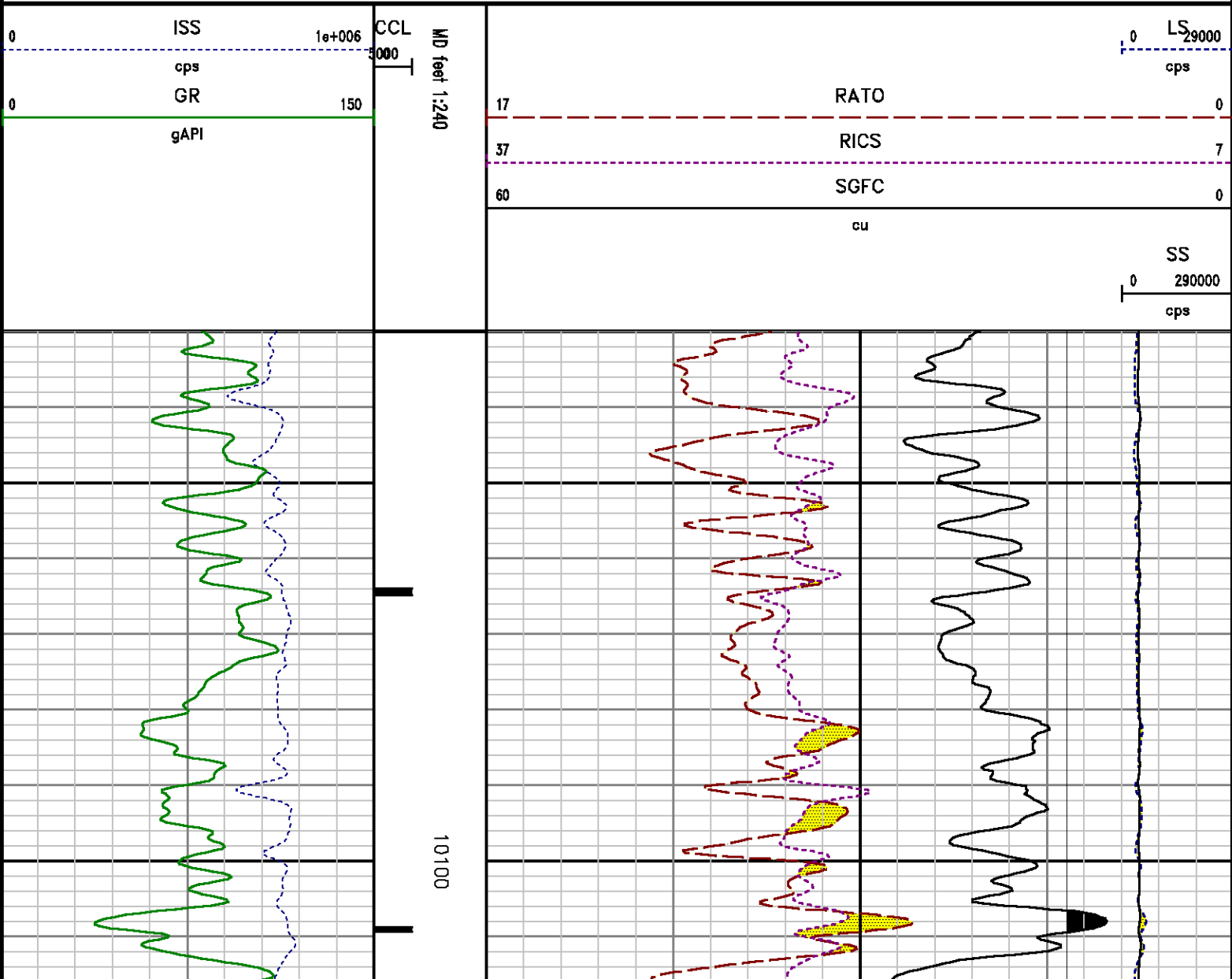
Well : FEDERAL RG 412-14-298

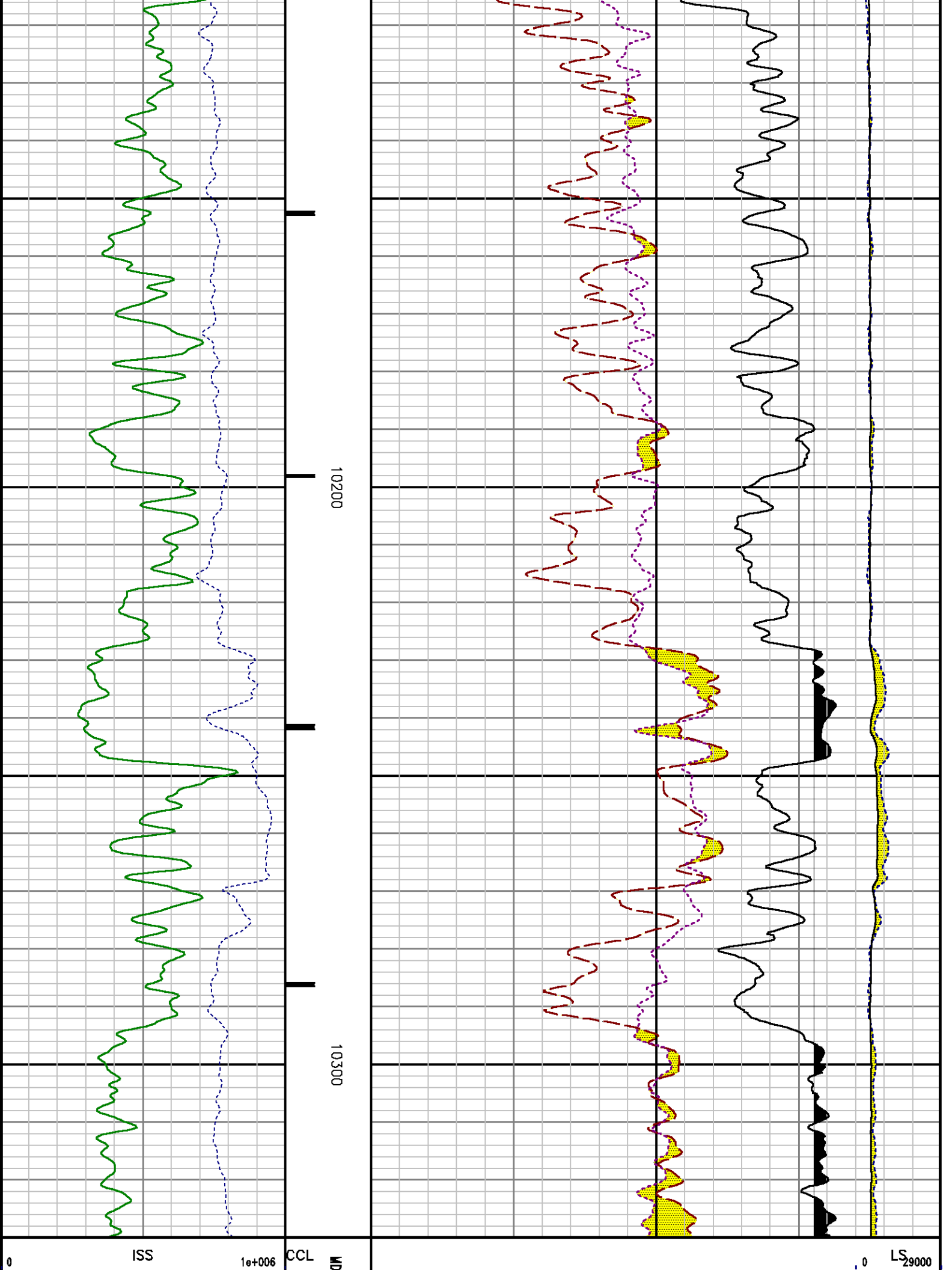
File Name : d:\well\data\wpx\federal rg 412-14-298\rpm412\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 10030.00 - 10330.00 feet UP

Created : 1/25/2014 10:59:54 AM





CALIBRATION SUMMARY

PNC

PNC 3D CALIBRATION SUMMARY

Calibrator #

Source #

gj	shop
----	------

8281AA 10160601

	ISS	RBOR		RIN ISS/ILS		RIN13 ISS/IXS		RICS ISS/CSS		RATO SS/LS		RTWO SS2/LS		RONE CSS/CLS	
Raw Data	813732	1.43		4.57		29.51		14.52		10.61		3.77		4.00	
		1.42	1.45	3.55	5.52	22.20	32.70	10.99	16.34	10.06	11.10	3.57	3.95	3.78	4.22

Fit Quality %

0.07

0.27

0.24

0.14

0.24

0.23

0.21

Reduced

1403031

1.43

4.59

29.68

14.59

10.62

3.78

4.00

1.42 1.45

4.33 5.52

27.80 32.70

13.70 16.34

10.06 11.10

3.57 3.95

3.76 4.22

GAMMA RAY

Calibration File: C:\case\calver\GR\385J9.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jan 09 15:25:11 2014

TOOL SERIES: 2812LA ASSET: 385 SEQ: J9

Calibrator #	Background [cps]	Calibrator On [cps]
S2K WA612	62.82	283.64

Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
0.951	59.74	269.74	210.00

Verification File: C:\case\calver\GR\385J9.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Thu Jan 09 15:29:10 2014

TOOL SERIES: 2812LA ASSET: 385 SEQ: J9

Calibrator #	Background [cps]	Calibrator On [cps]
S2K WA612	63.02	280.18

Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
0.951	59.93	266.45	206.51

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"

29.93'

CCL MP 21.84'

MP 19.40'

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

XLS DETECTOR 12.78'

LS DETECTOR 9.80'
SS DETECTOR 9.58'

0.00'

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



Company	WPX ENERGY		
Well	FEDERAL RG 412-14-298		
Field	SULPHUR CREEK		
County	RIO BLANCO	State	CO

File No:
CH081740
API No:
05103117950000

Location

SHL: 1663' FNL & 495' FWL
BHL: 2295' FNL & 640' FWL

Elevations

KB 6581 ft
DF
GL 6560 ft

14 2S 98W
RG 12-14-298 PAD
CYCLONE 29

SEC 14 TWP 2S RGE 98W

CASE

Baker Atlas