



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No:	Company	WPX ENERGY
CH074110	Well	HOEPPLI RMF 44-36
API No:	Field	RULLISON
05045215480000	County	GARFIELD
	State	COLORADO
	Location	Other Services
56 SS 94W RMF 33-35 NABORS SSD 576	SHL: 2613' FNL & 2594' FEL BHL: 367' FSL & 728' FEL SEC 36 TWP 6S RGE 94W	BOND LOG
Permanent Datum Log Measured From Drill Measured From	G.L. Elevation 6528 ft K.B. 26 ft Above P. D. KELLY BUSHING	Elevations KB 5554 ft DF GL 6528 ft

Date	21/JUL/13	
Run	ONE	
Service Order	B24A55	
Depth Driller	9566 ft	
Depth Logger	9547 ft	
Bottom Logged Interval	9537 ft	
Top Logged Interval	5490 ft	
Time Started	12:30	
Time Finished	19:00	
Operator Rig Time	6.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	75 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	10 fpm	
Maximum Recorded Temperature	243 degF	
Reference Log	BAKER HUGHES BOND LOG	
Reference Log Date	21/JUL/15	
Equipment No.	4271	GRAND JUNCTION
Recorded By	M. KINSEL	9712
Witnessed By	MR. BOB CADY	GRAND JUNCTION

- 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	3082.68 ft
8.75 In	0 ft	9621 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In	N/A	N/A	0 ft	2885 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	9568 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH A BAKER HUGHES BOND LOG DATED 21 JULY 2013 AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 2 FEET UP. DEPTH SHIFTING PROCESS CREATES THE POTENTIAL FOR COLLAR LENGTHS TO VARY FROM OTHER CASED HOLE LOGS WITHOUT A GAMMA RAY REFERENCE. SHORT JOINT: 6396' - 6420' BHT: 243 degF

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	RPM	8281FA	10401926	FREE
1	1	RPM	8281PA	10160383	FREE
1	1	RPM	8281EA	10423671	FREE
1	1	GAMMA RAY	8262XY	10485470	FREE
1	1	TEL/CCL	8248EA	10296408	FREE
1	1	PCM	8250EA	10397894	FREE

MAIN LOG
PNC 3D MODE

SPL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		5449.750	9559.910
PNC Porosity	Borehole Size	8.750	inch	5449.750	9559.910
PNC Porosity	Casing Size	4.500	inch	5449.750	9559.910
PNC Porosity	Gas Filled	Non Gas Filled		5449.750	9559.910
PNC Porosity	Matrix	Sandstone		5449.750	9559.910

DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
8248EA	-15.320	FLTM					
8248EA	-13.320	CCL	CHV				
8262XY	-10.189	GR4					
8281XA	-0.662	HVC3Q0	SEQ3	AMA3	AML3	BKX	CXS
		CPT3Q0	CPT3Q2	CPT3Q3	CPT3Q4	ET3	IXS
		MCS3	MCS3Q0	QCAL3	RGN3	RICX	SDA3
		CDL3	CDL3	CDL3	CDL3	YD	LOGF07

8281XA

-0.250

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

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

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

MM

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

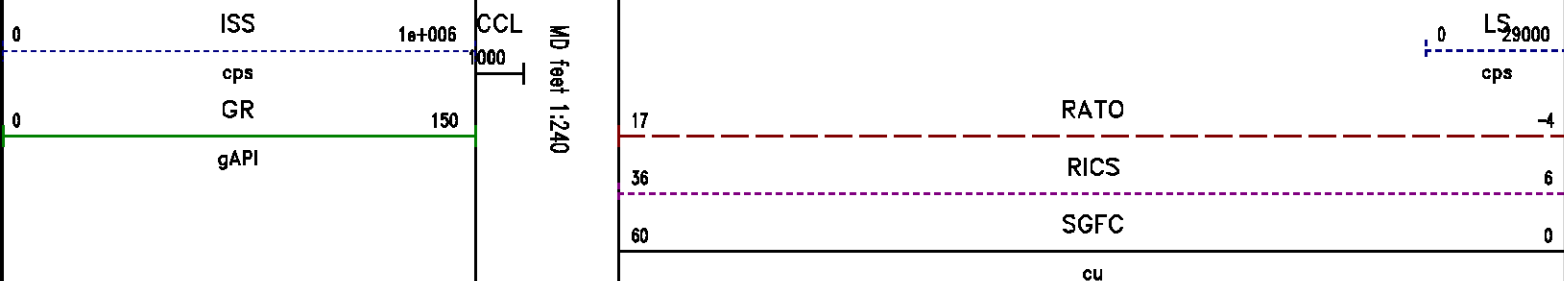
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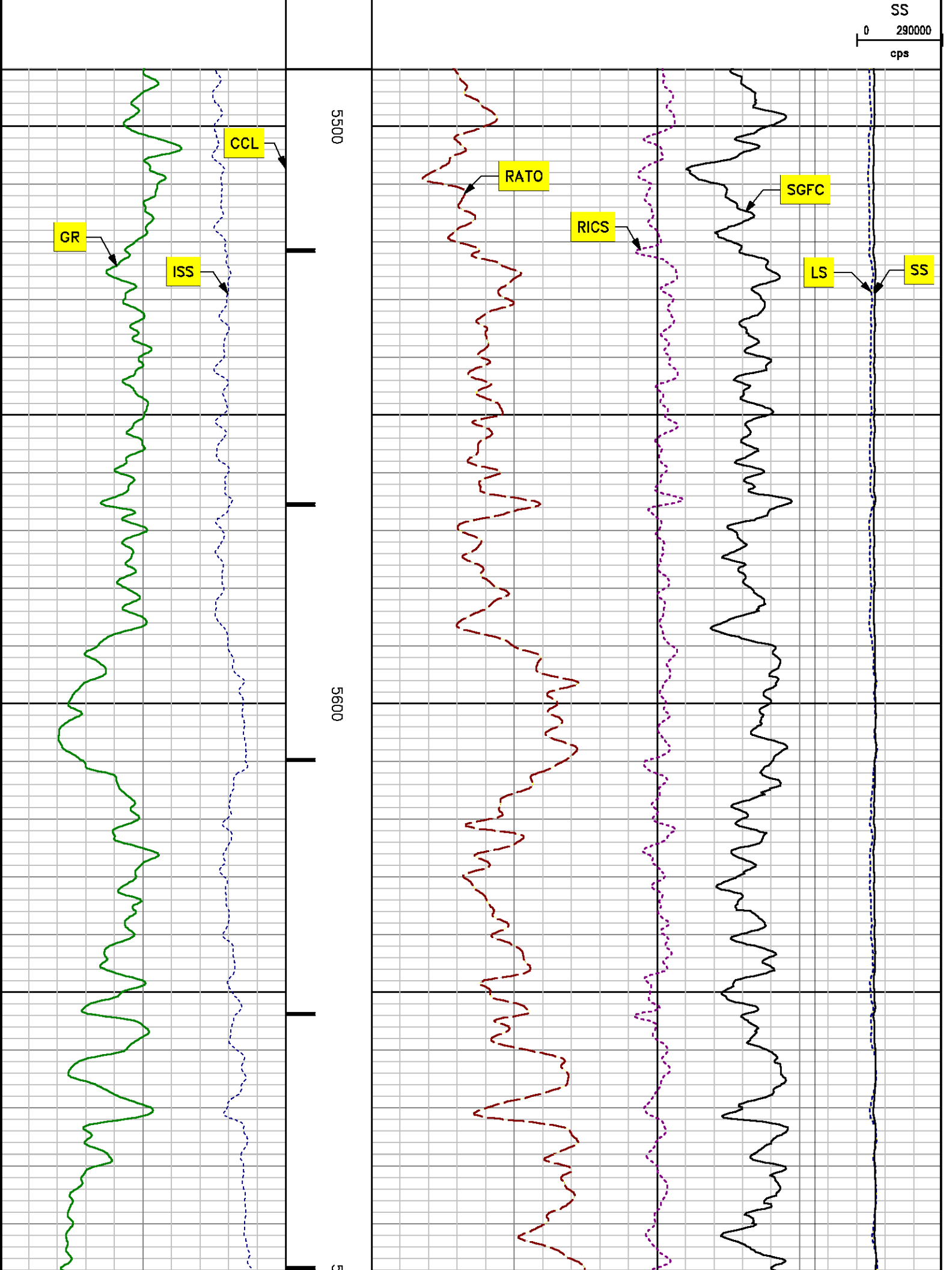
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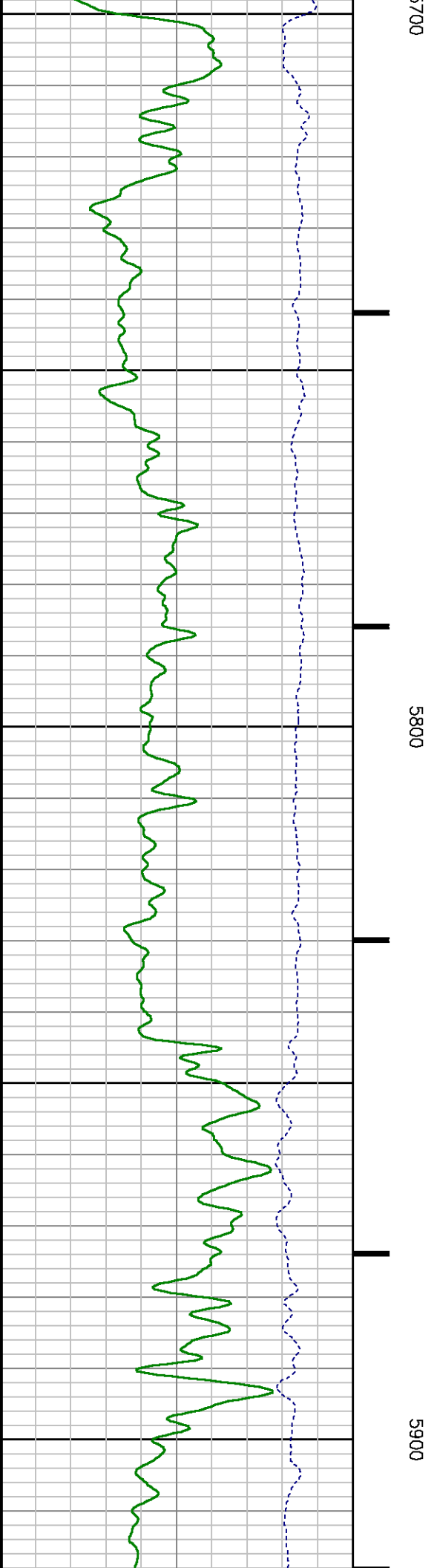
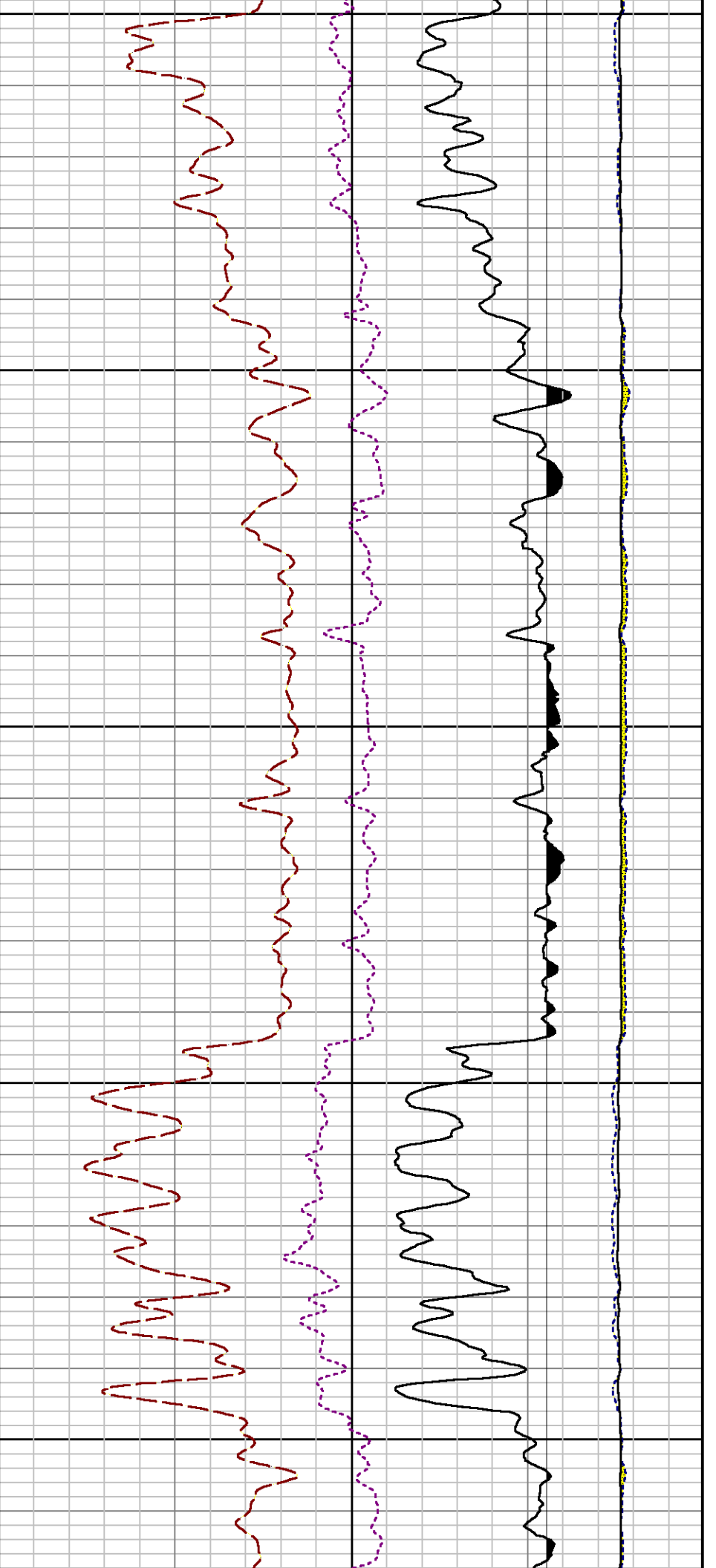
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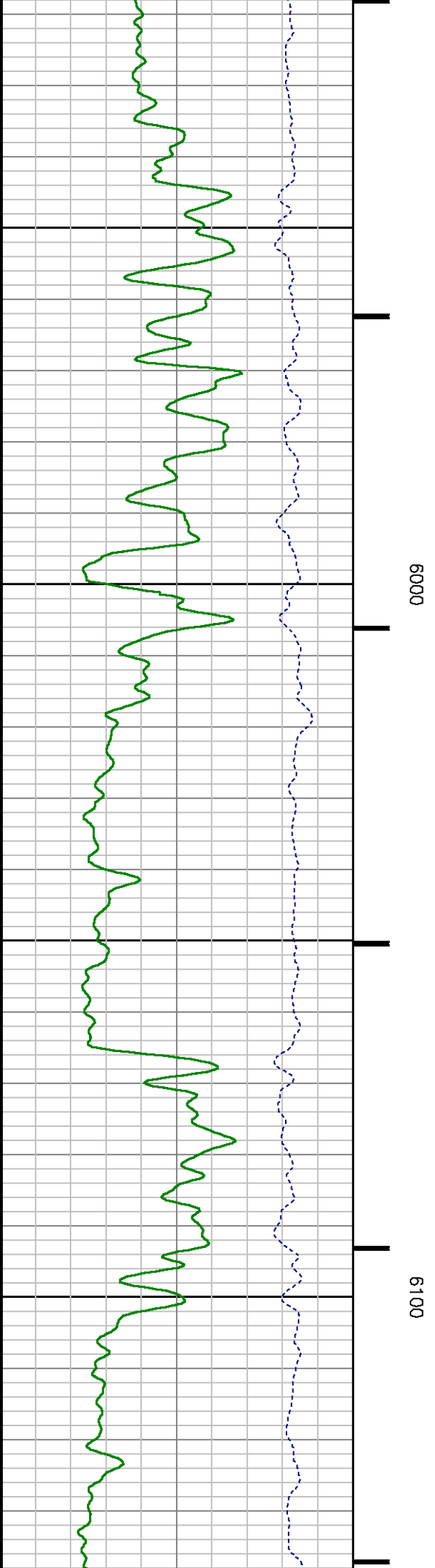
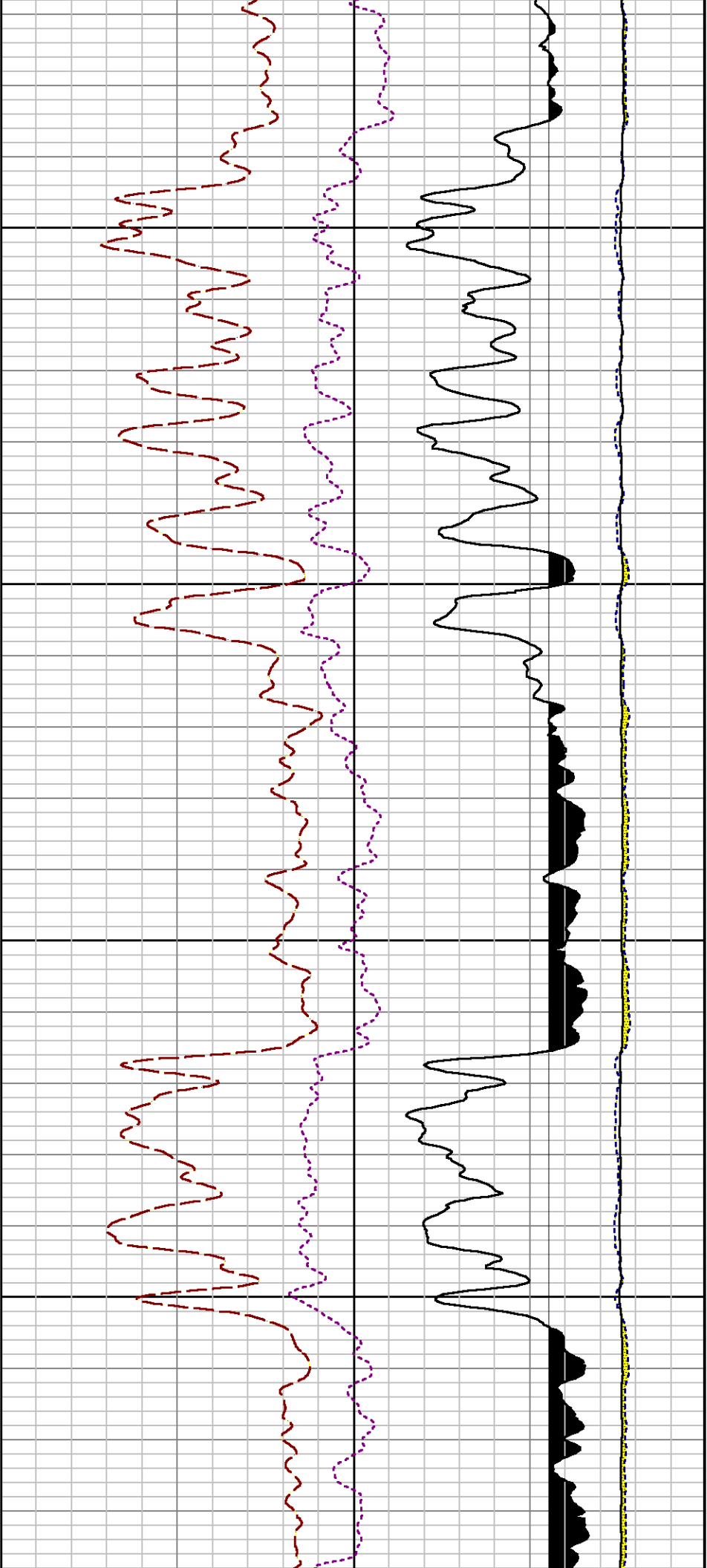
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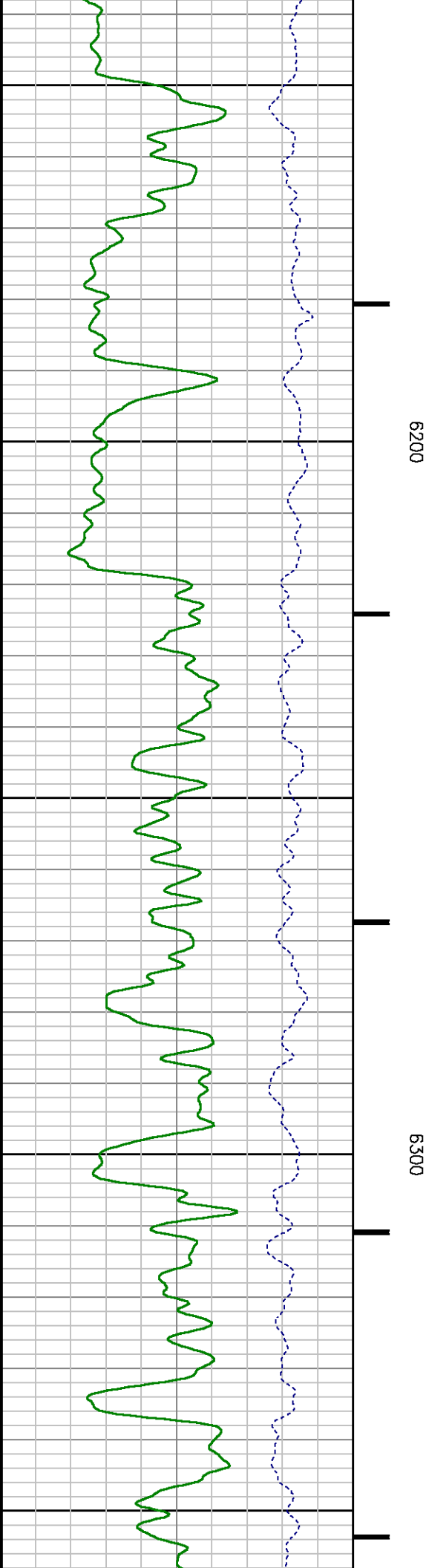
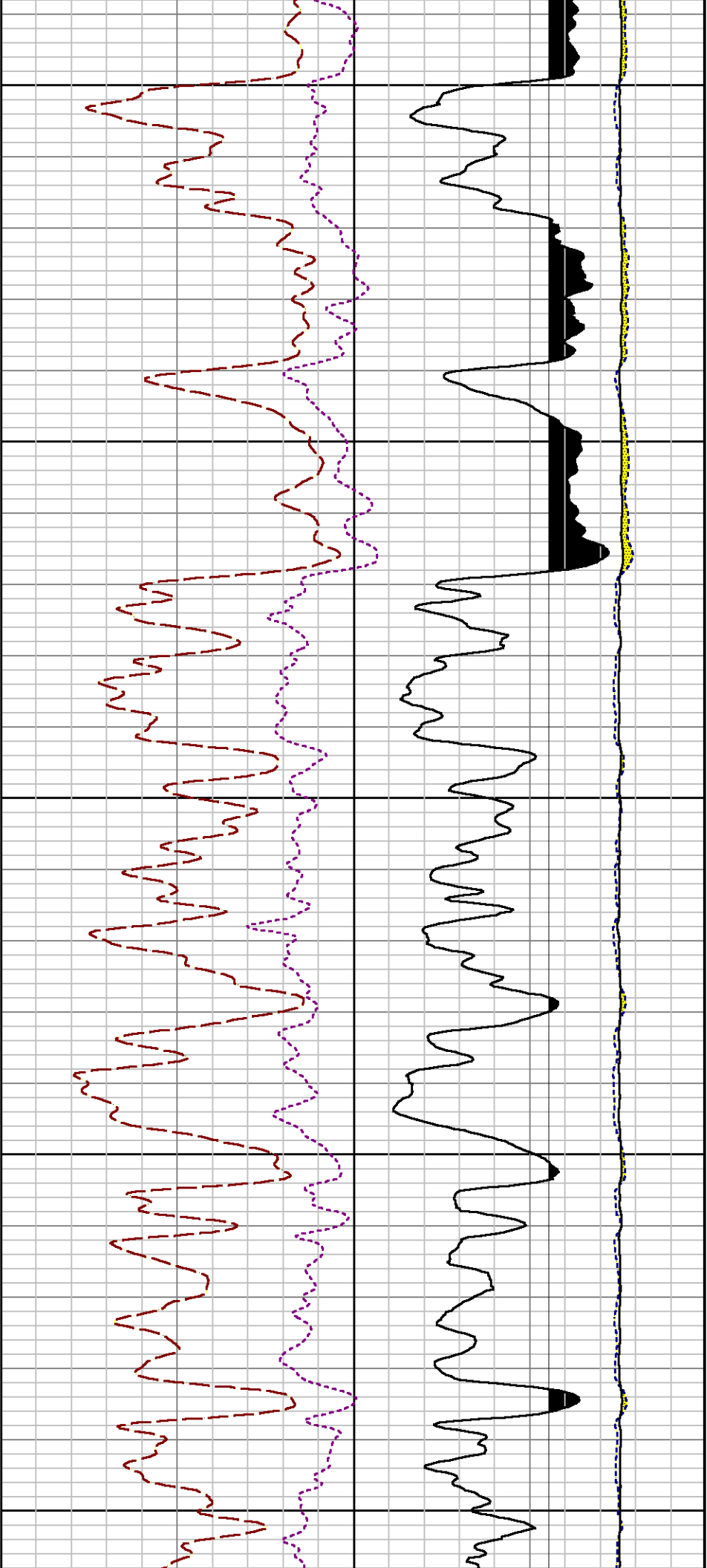
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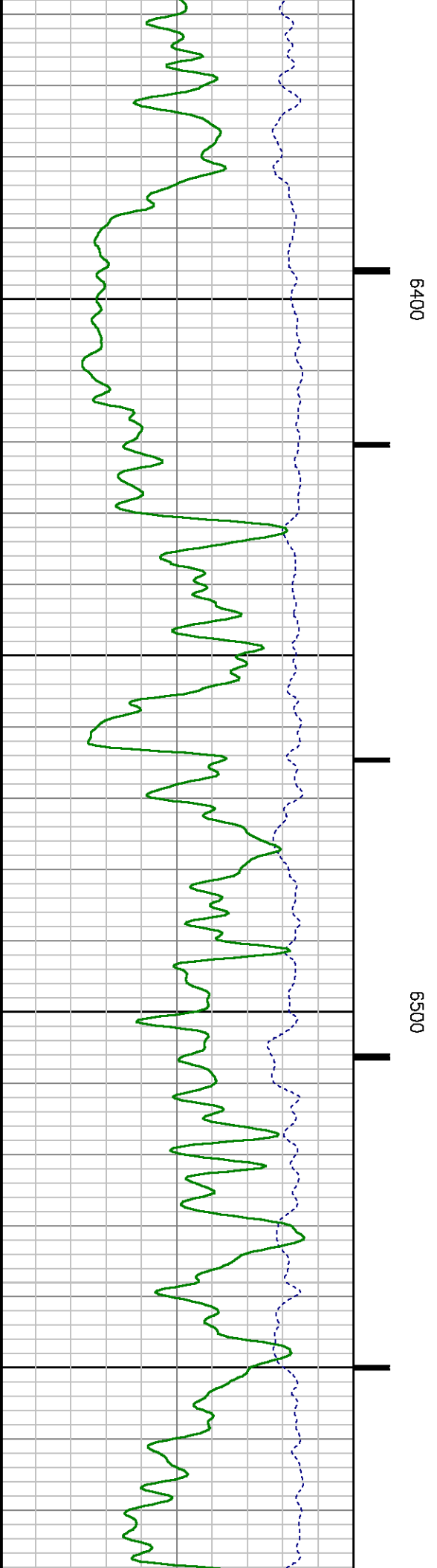
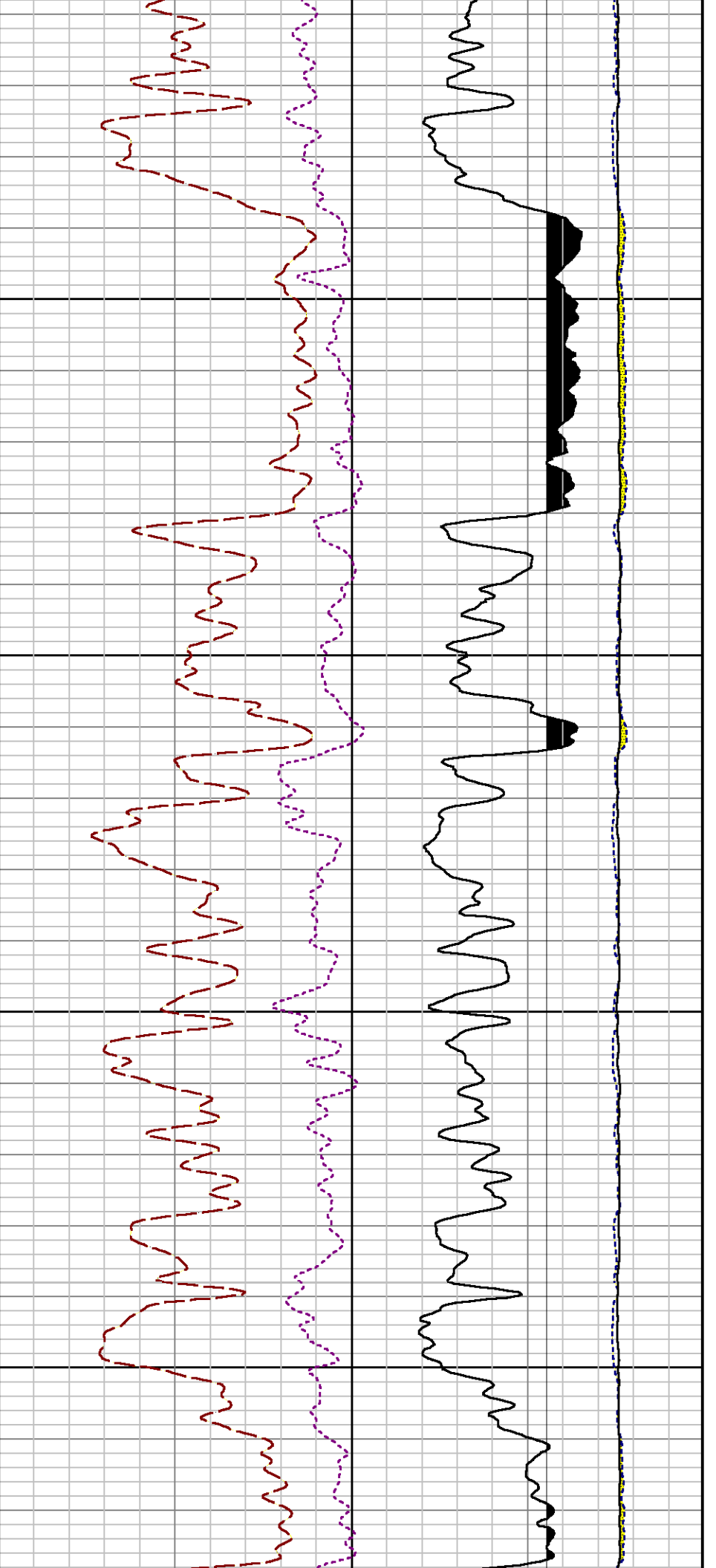


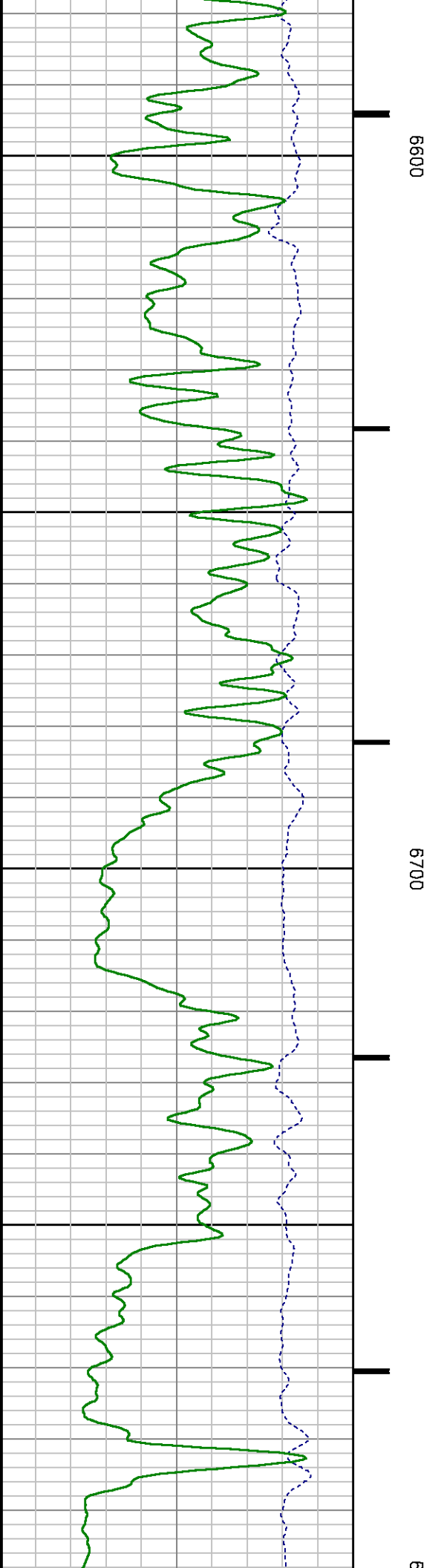
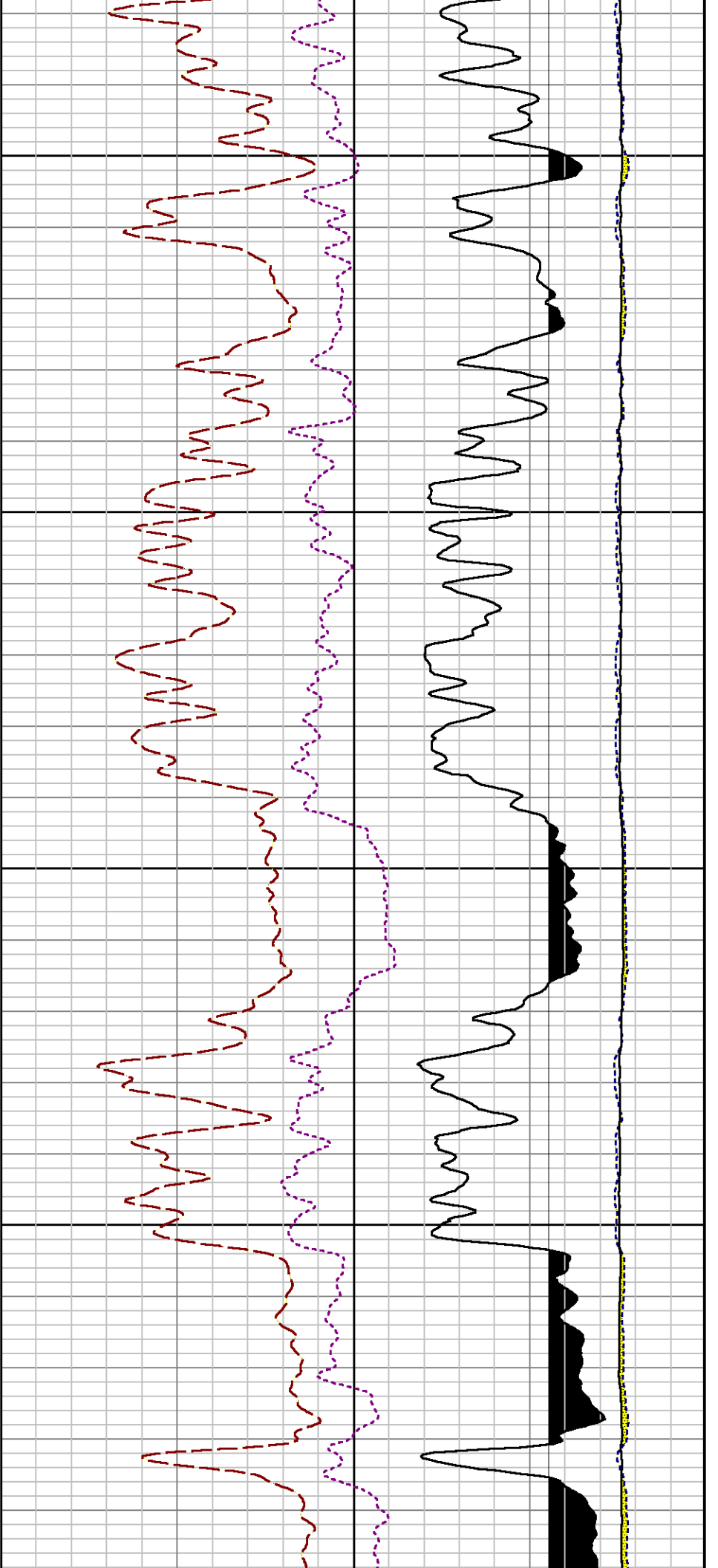


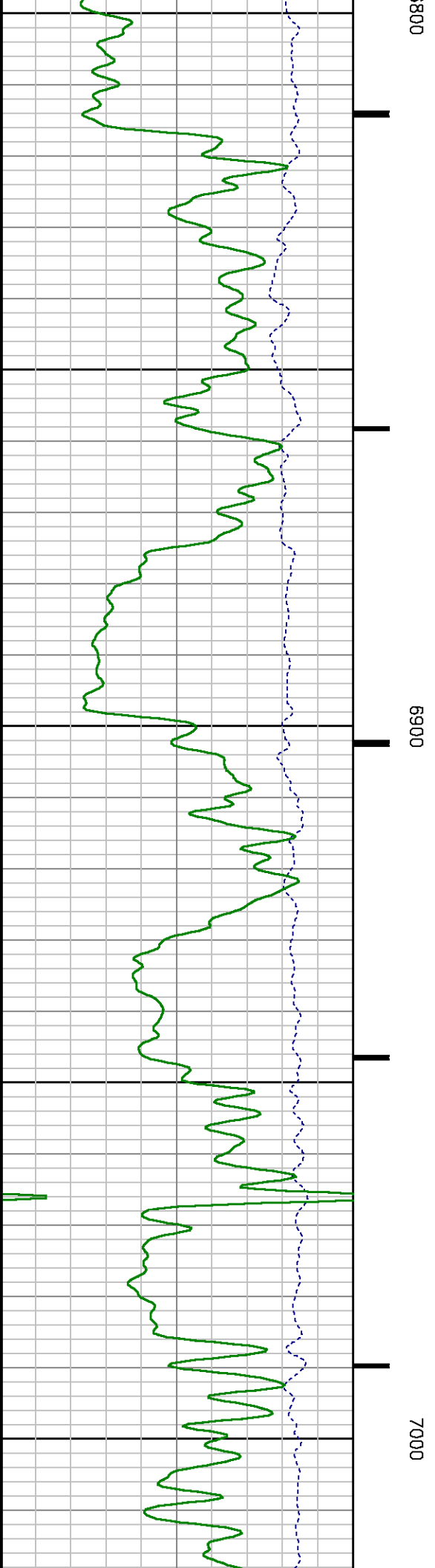
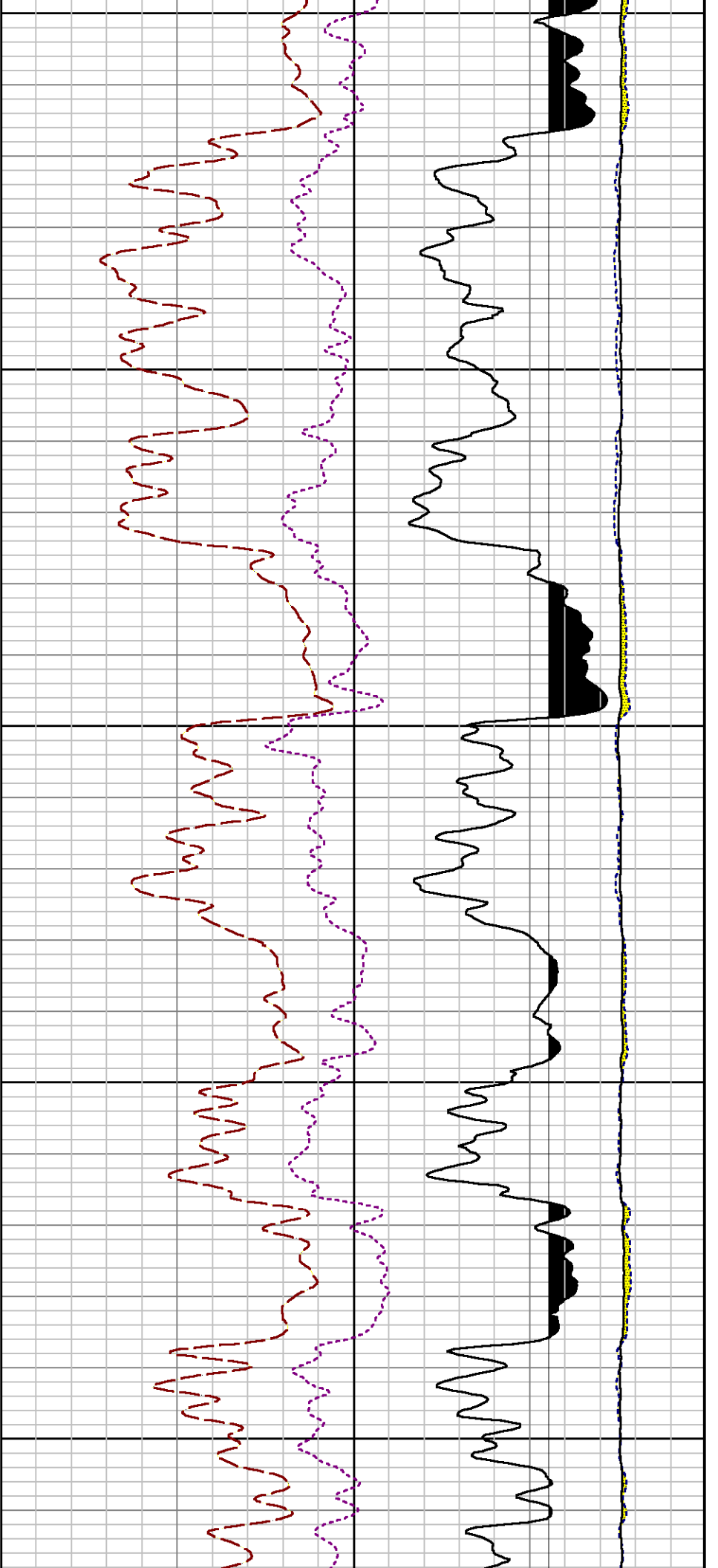


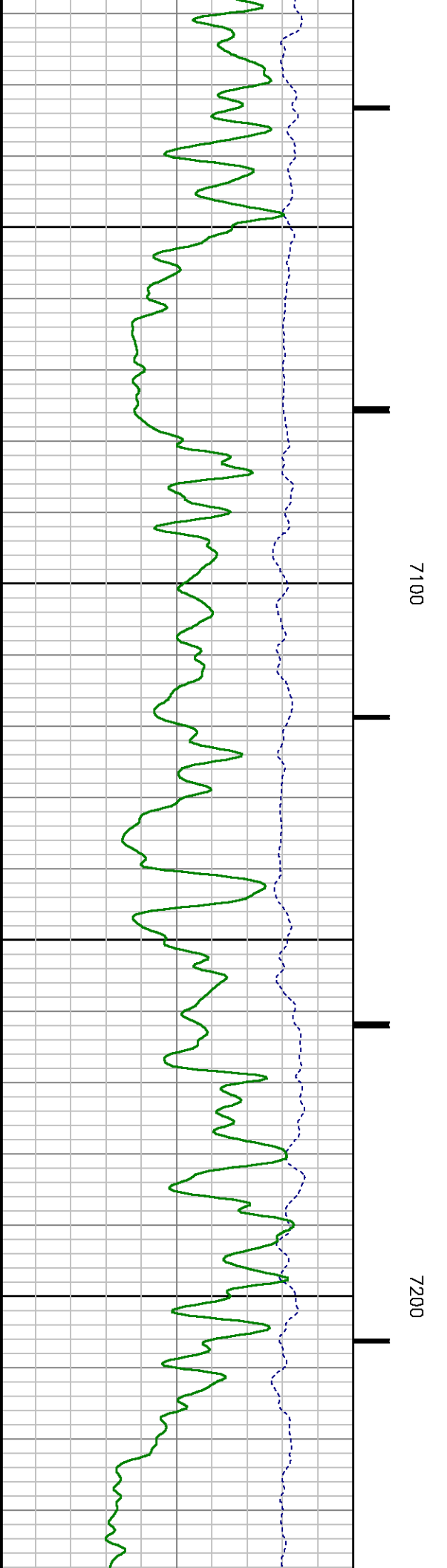
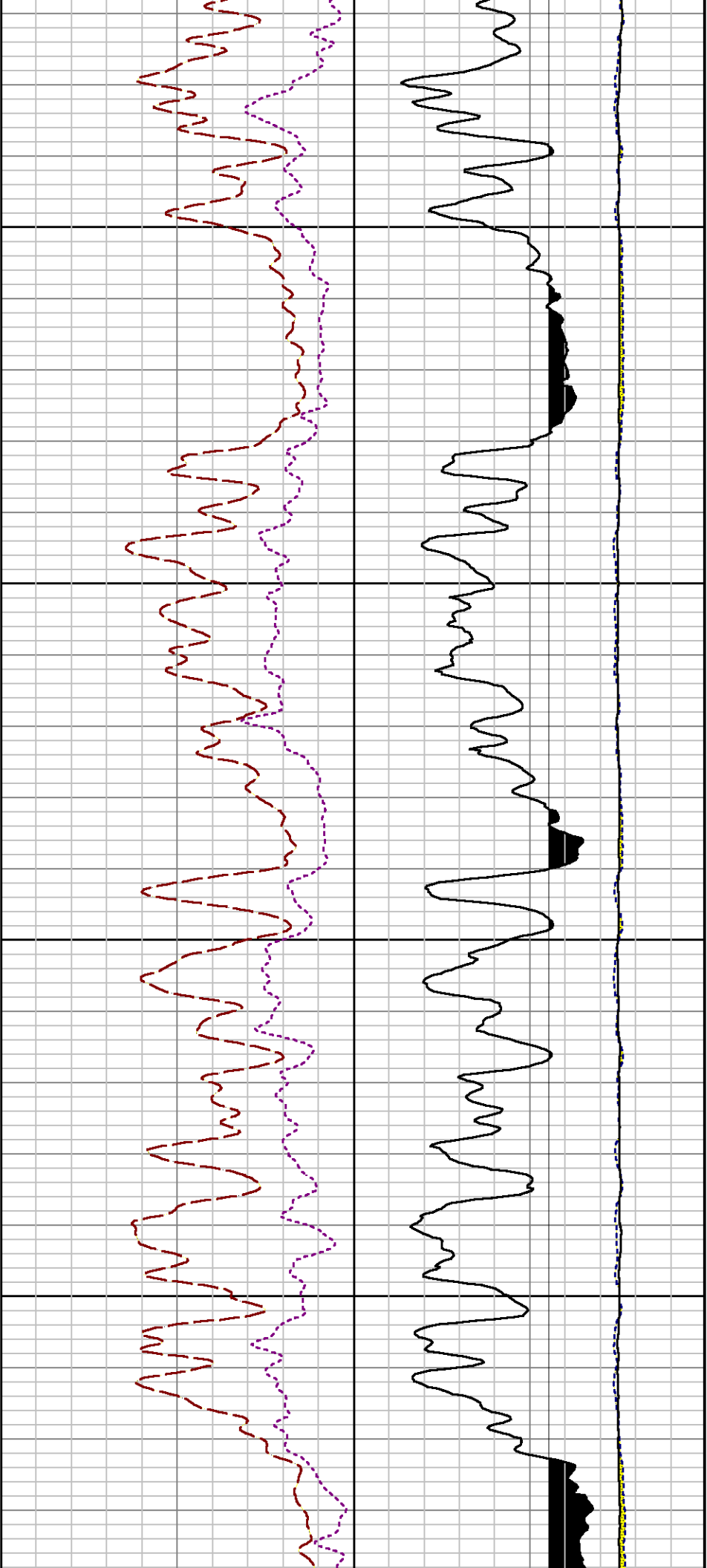


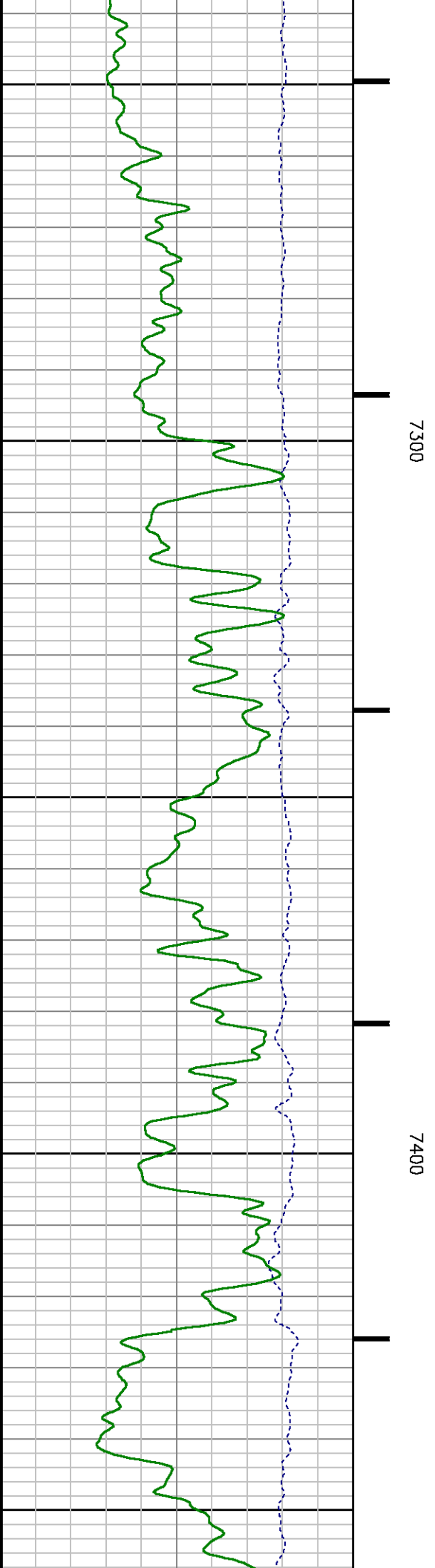
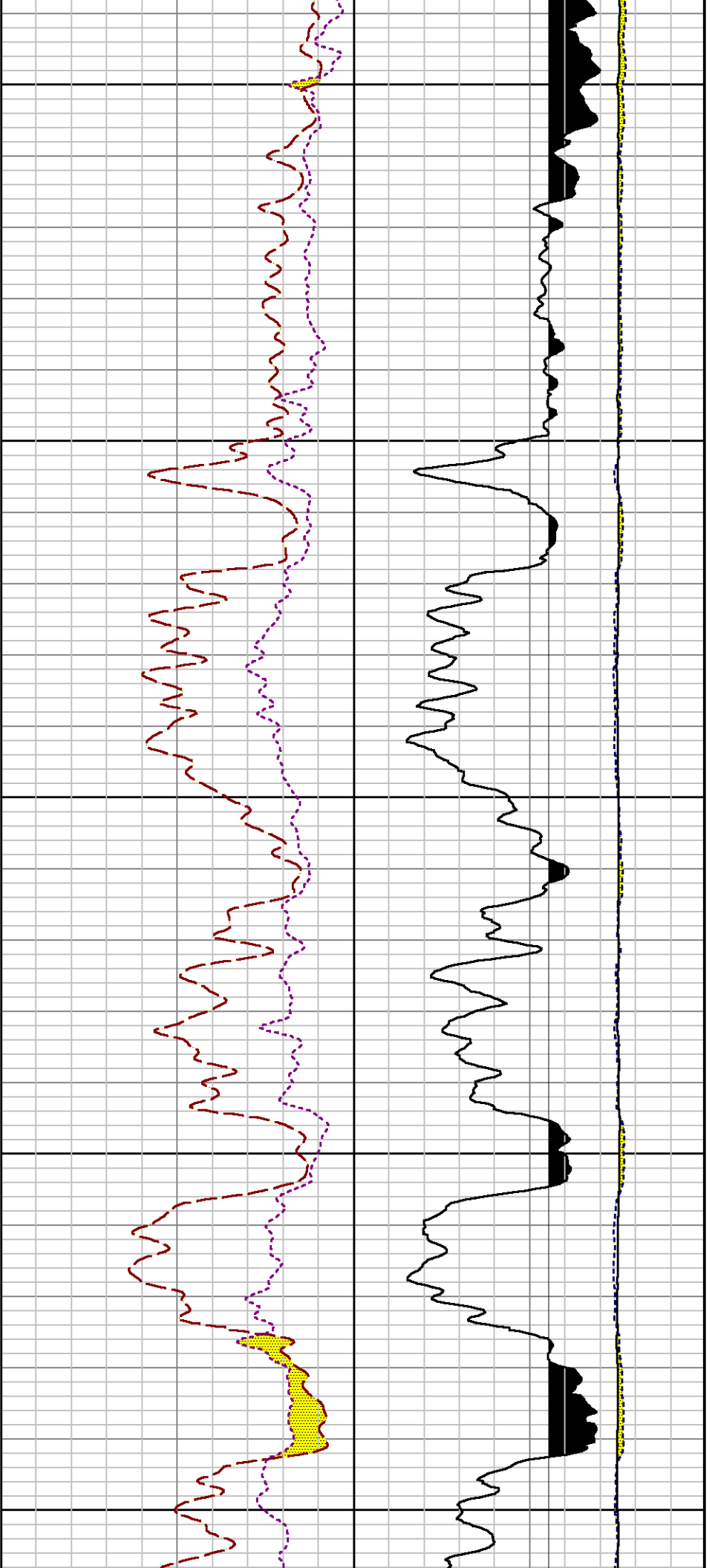


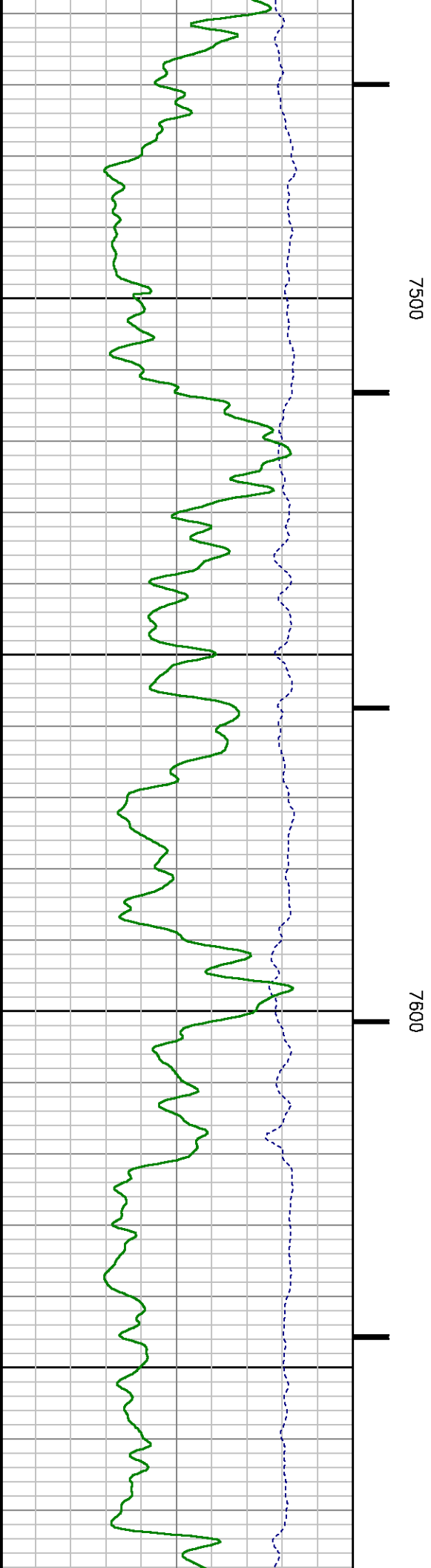
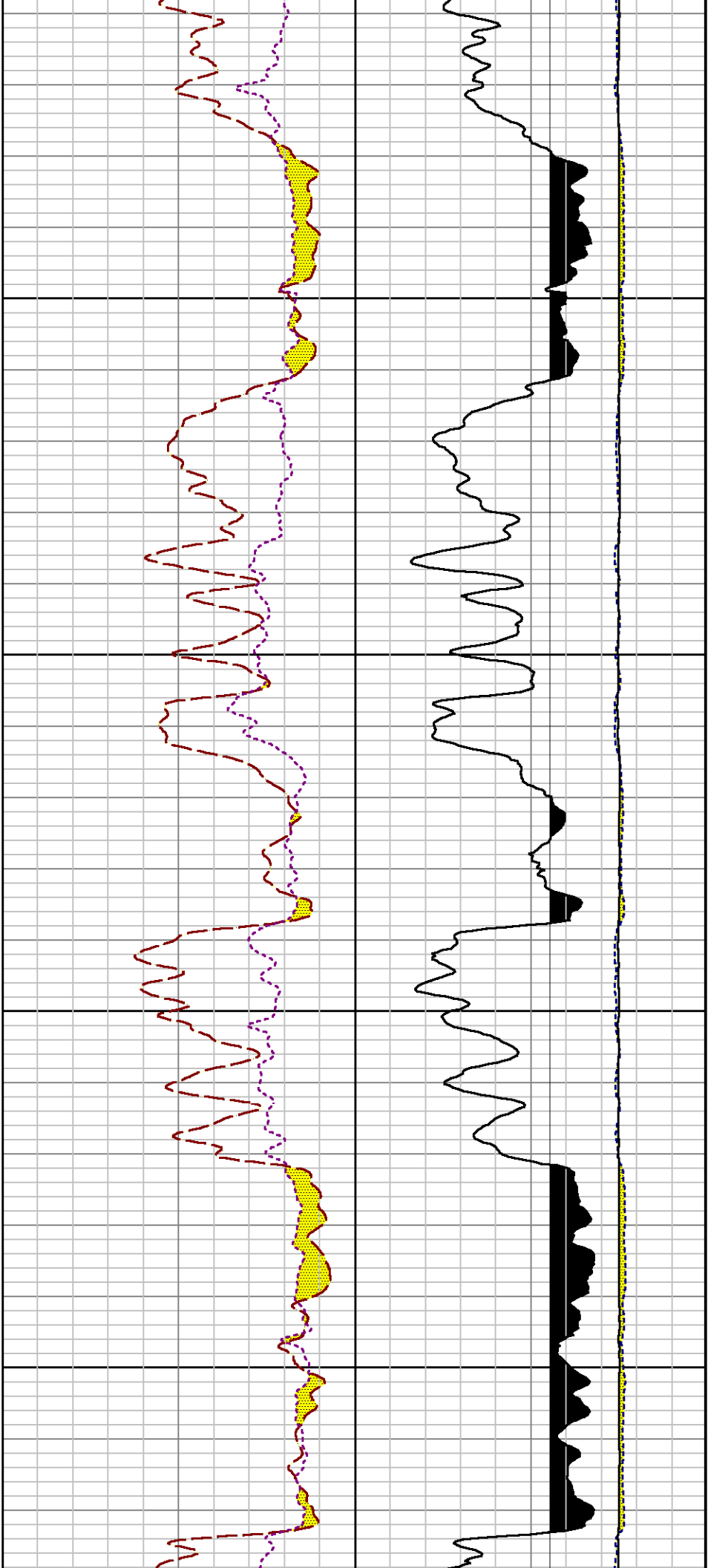


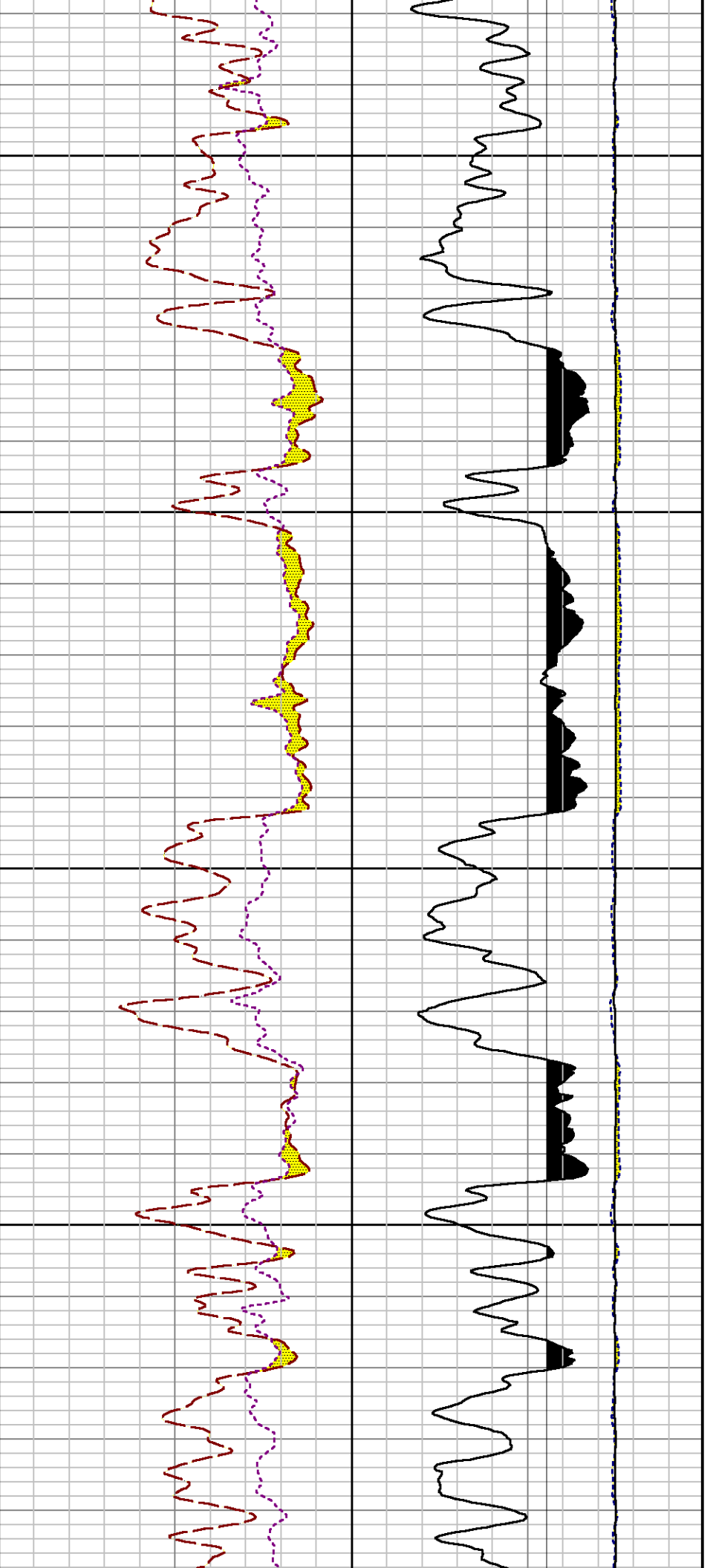








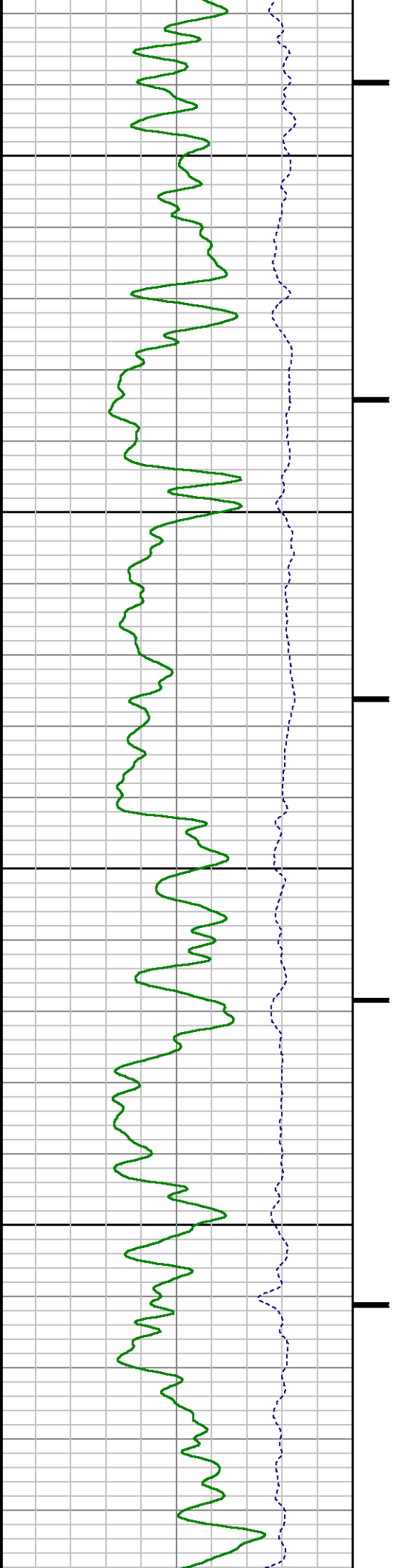


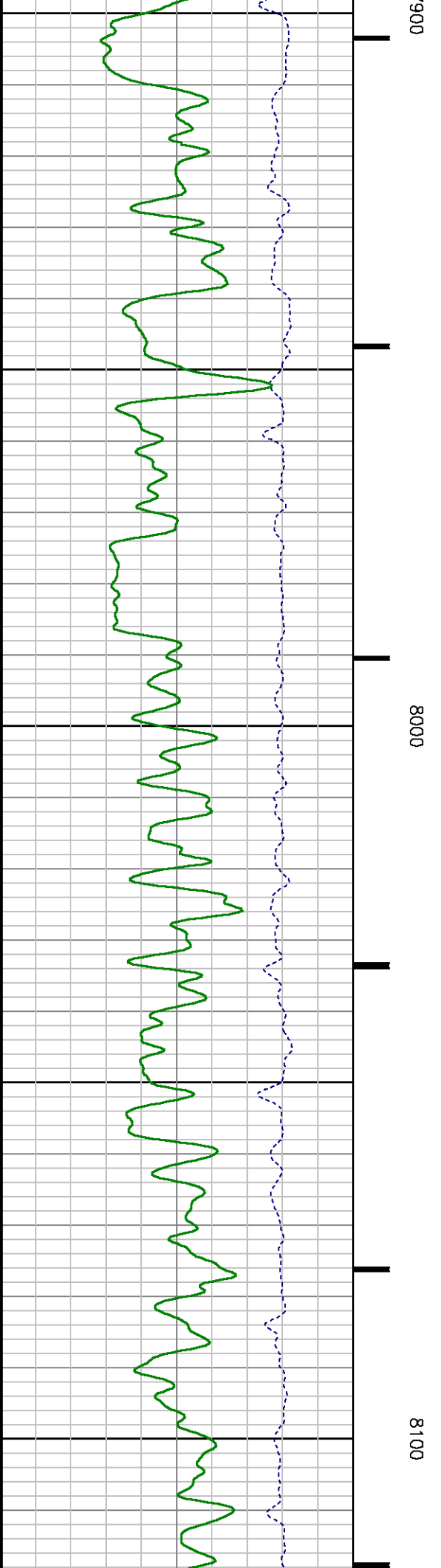
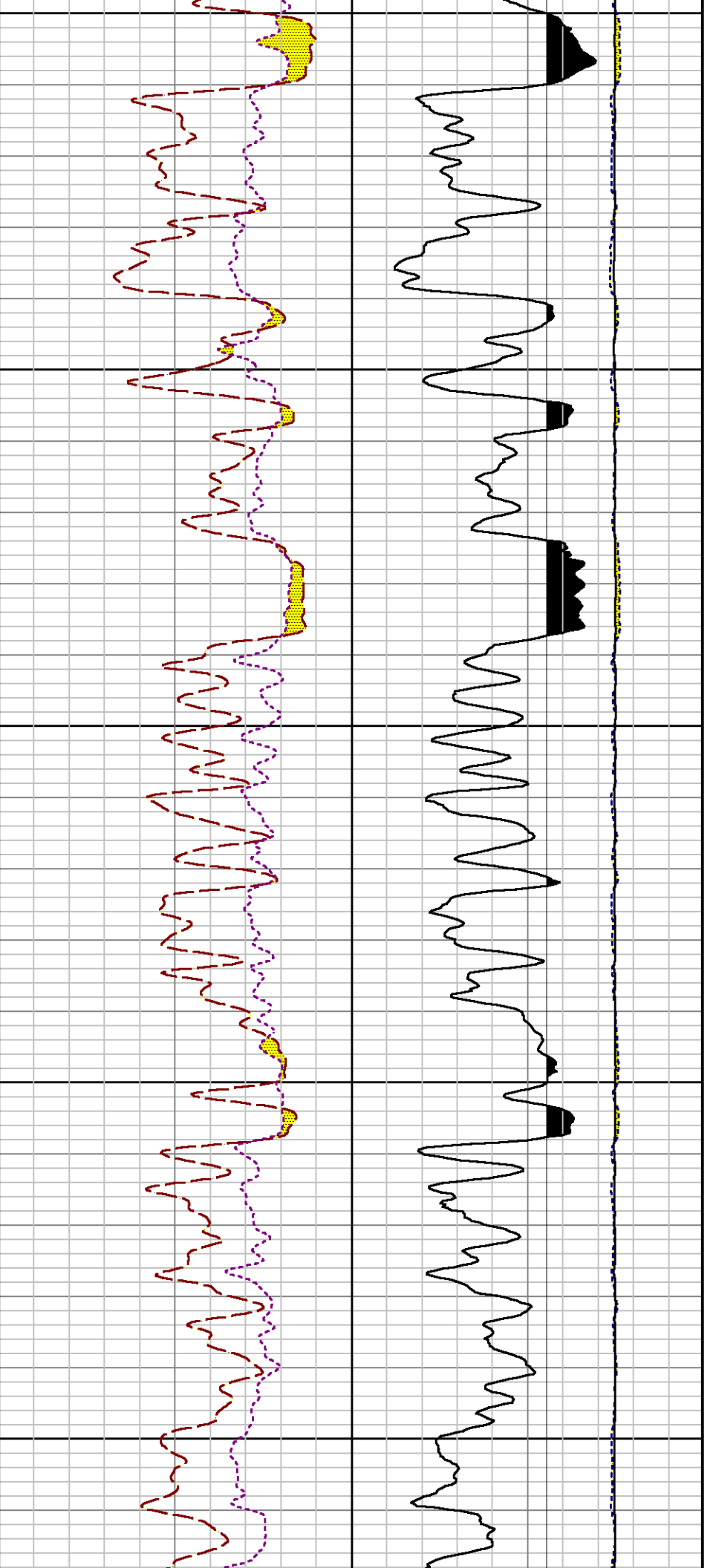


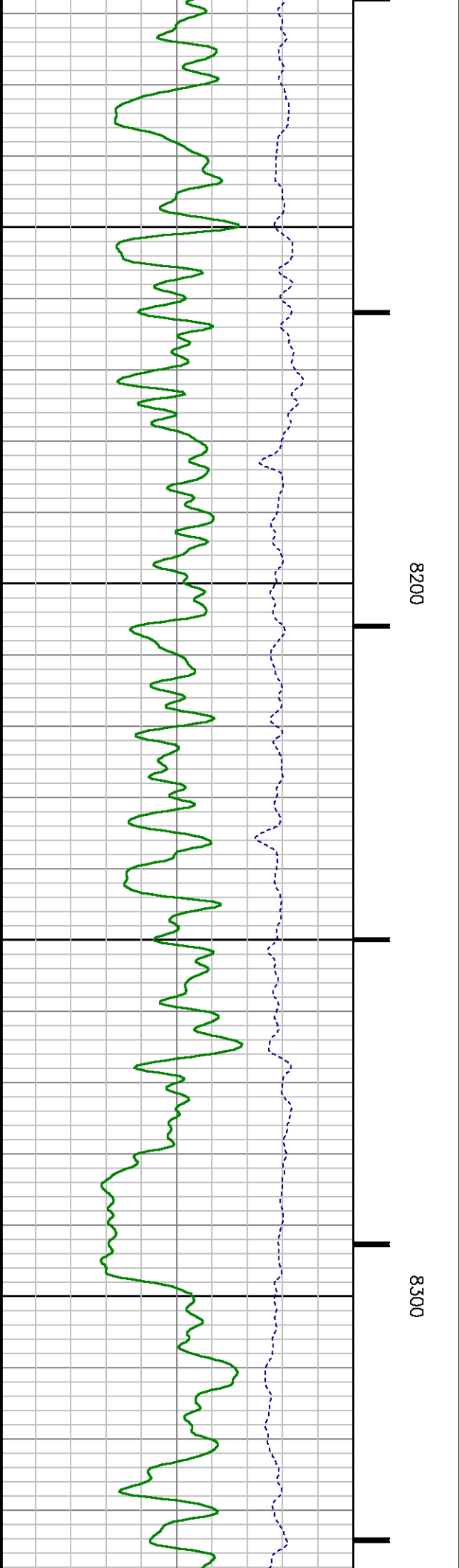
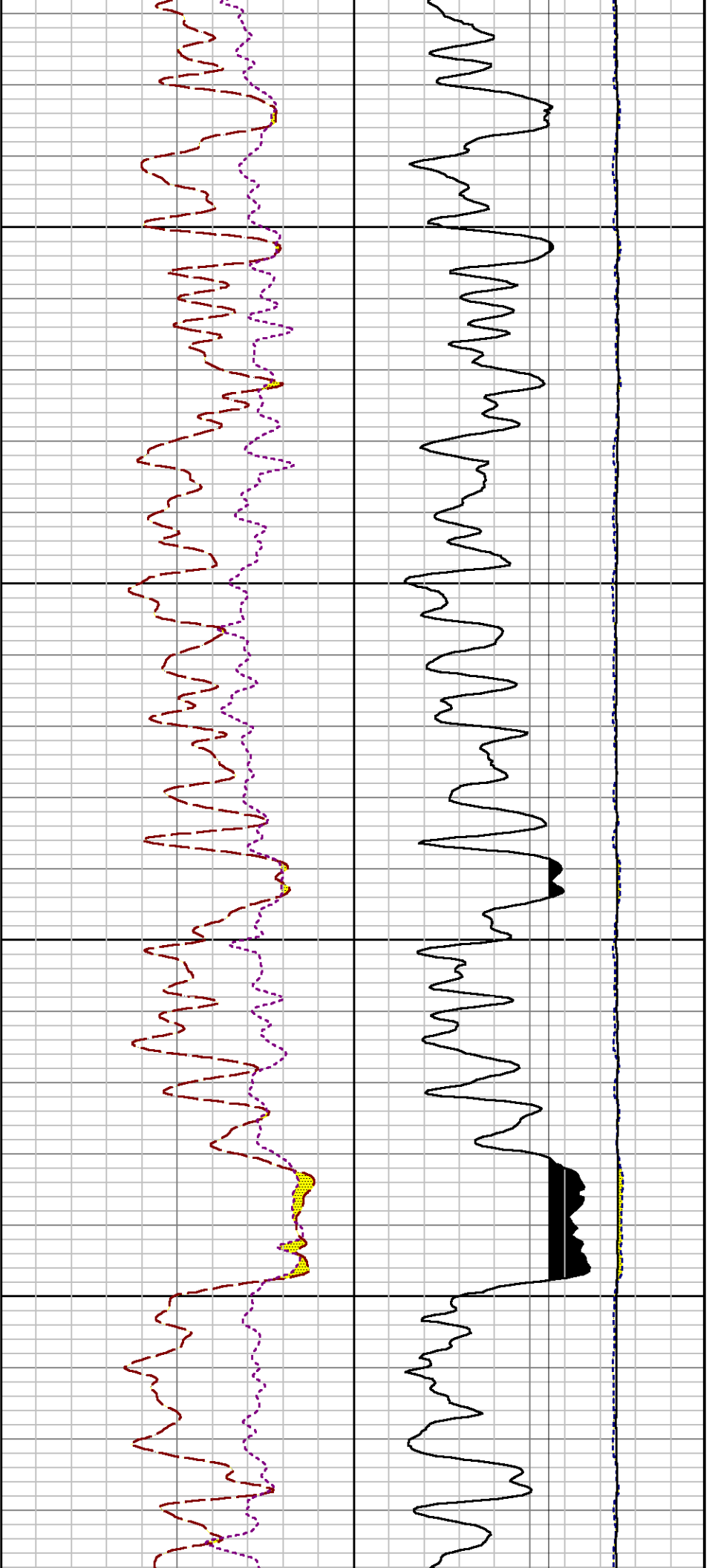
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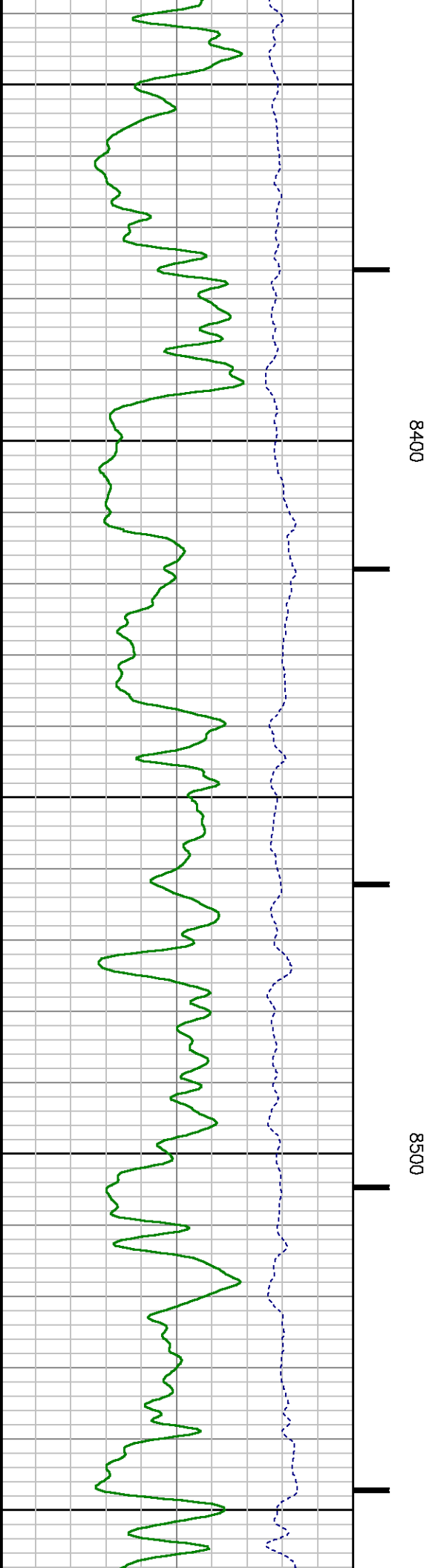
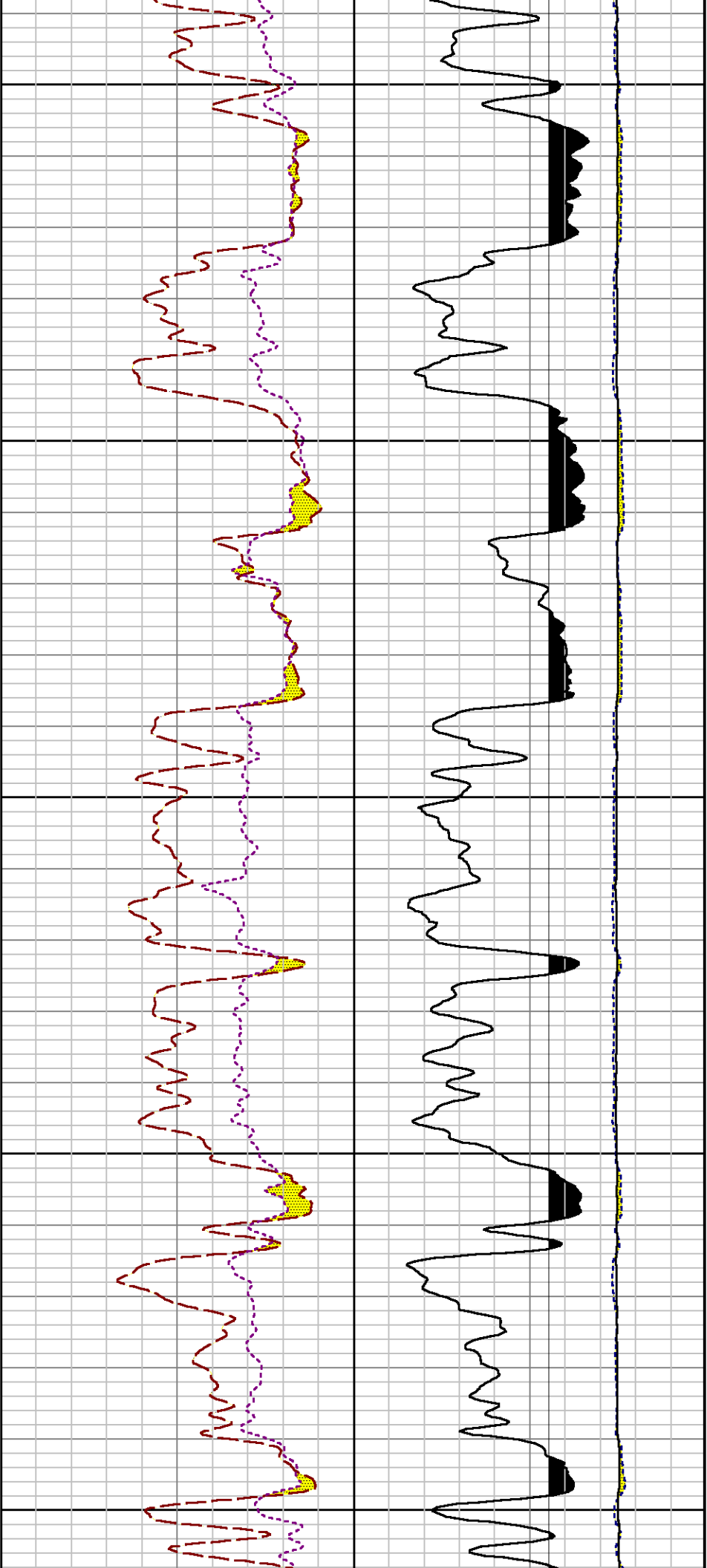
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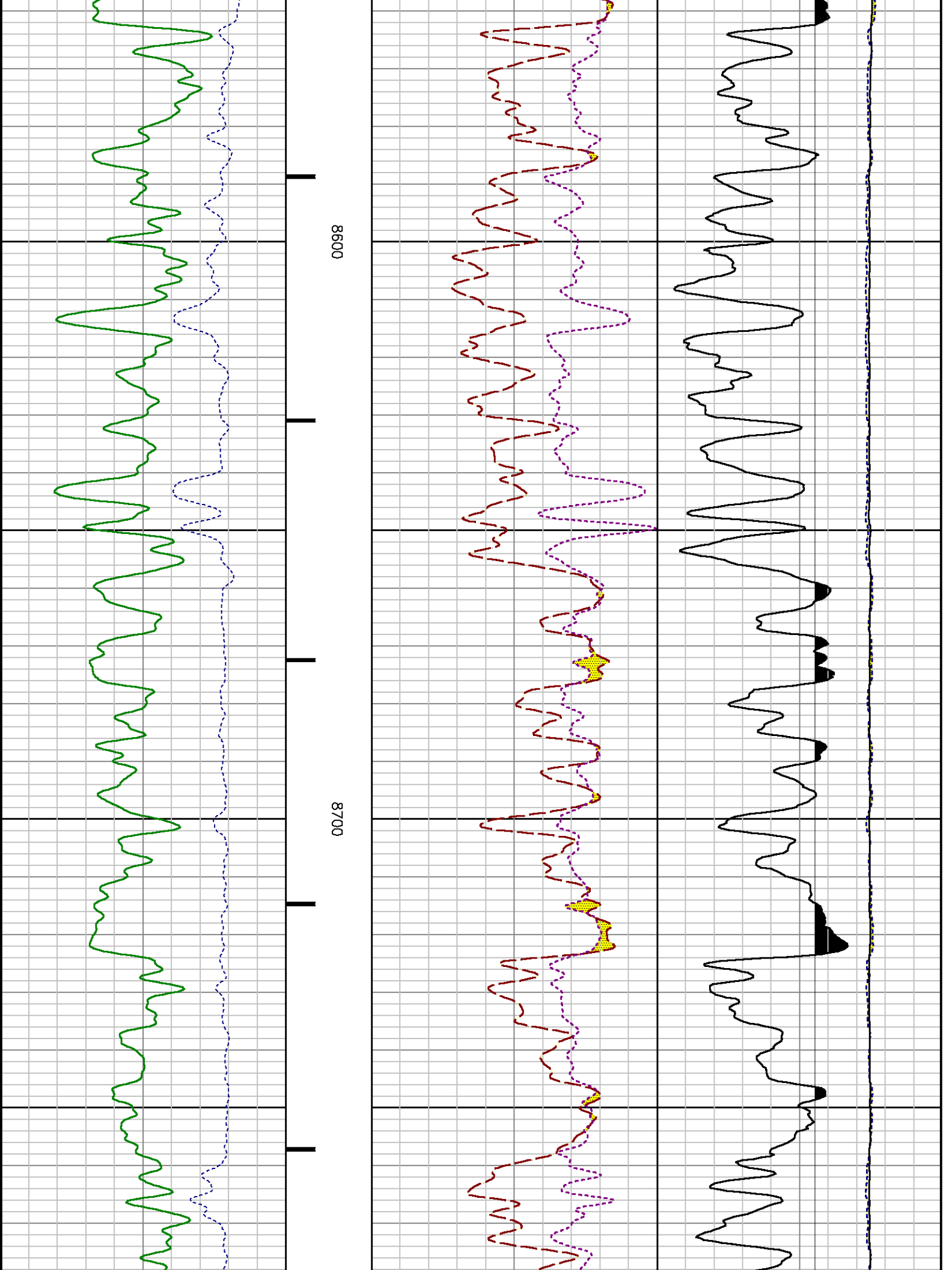
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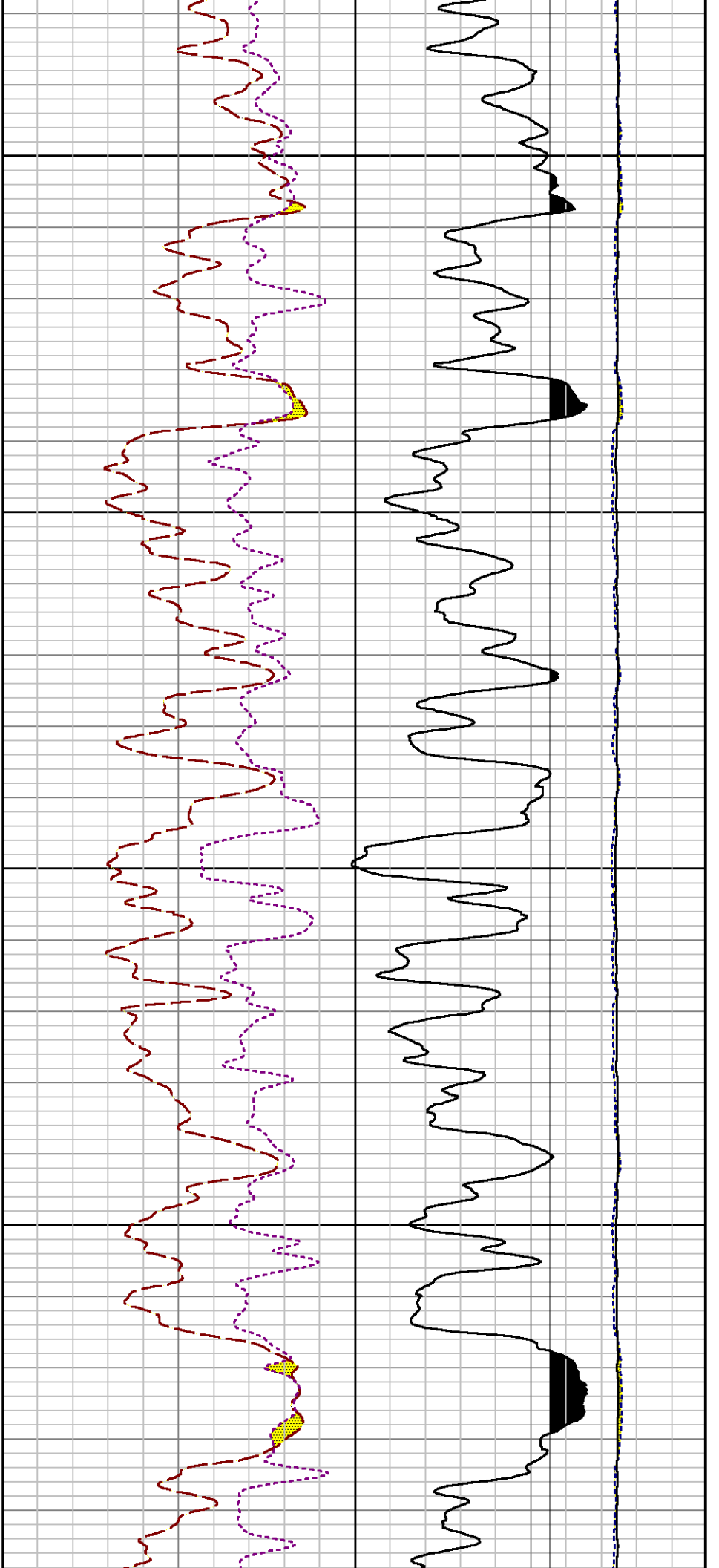








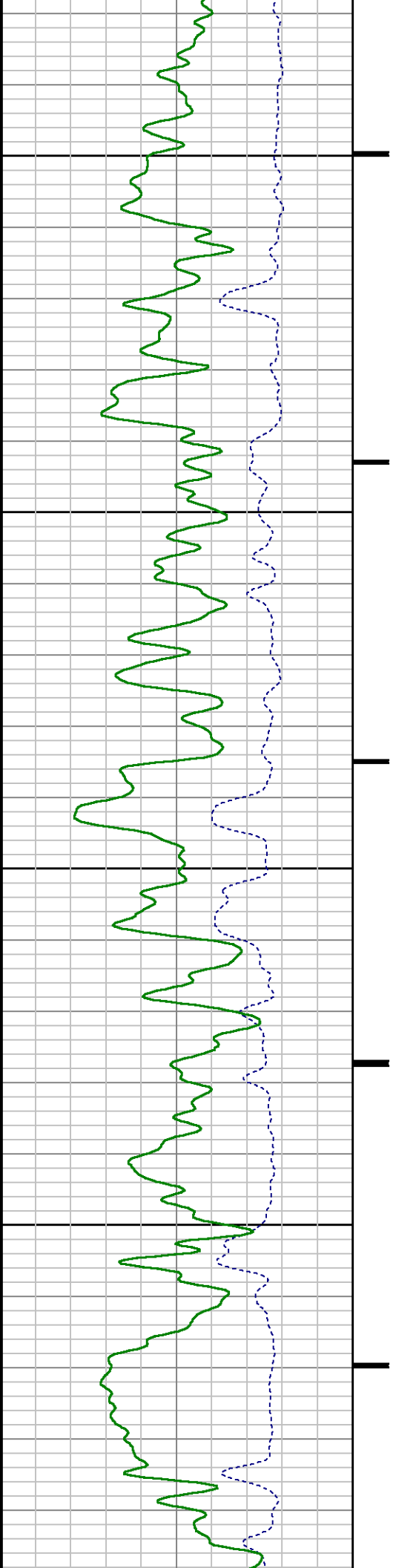


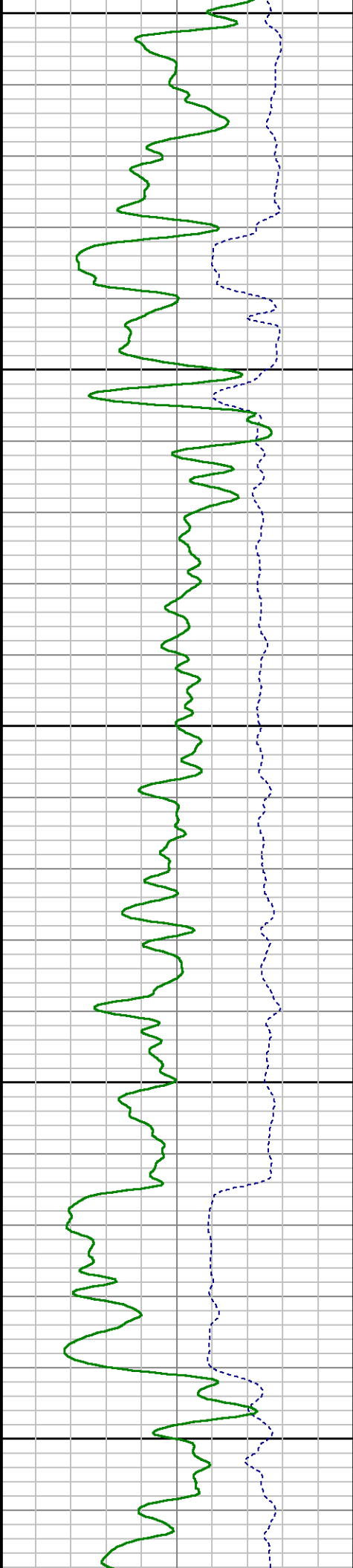
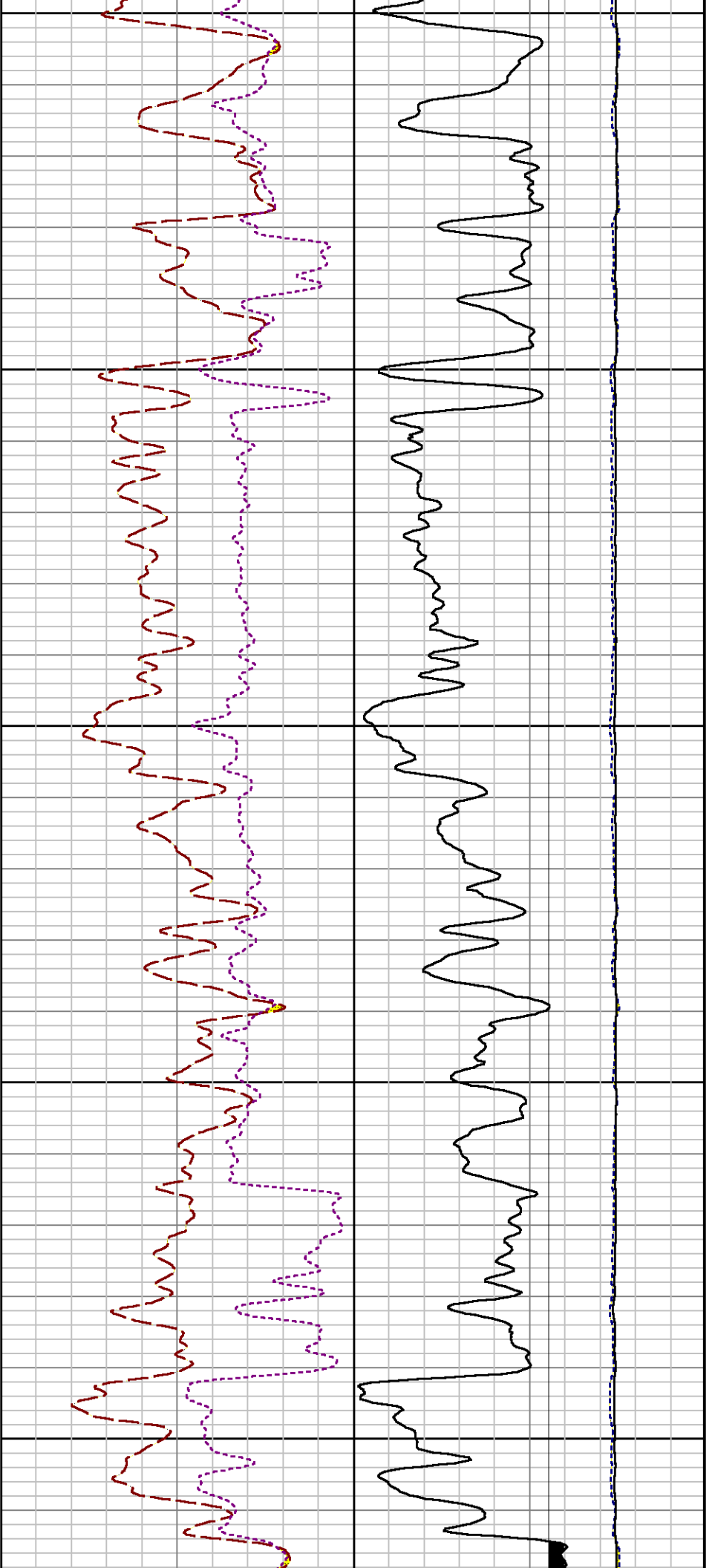


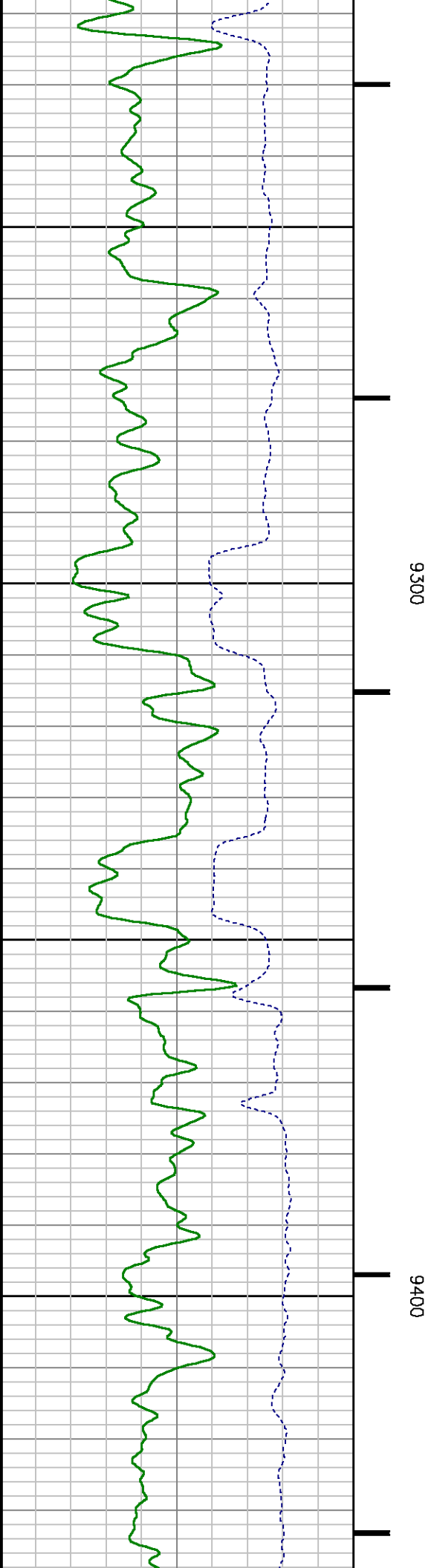
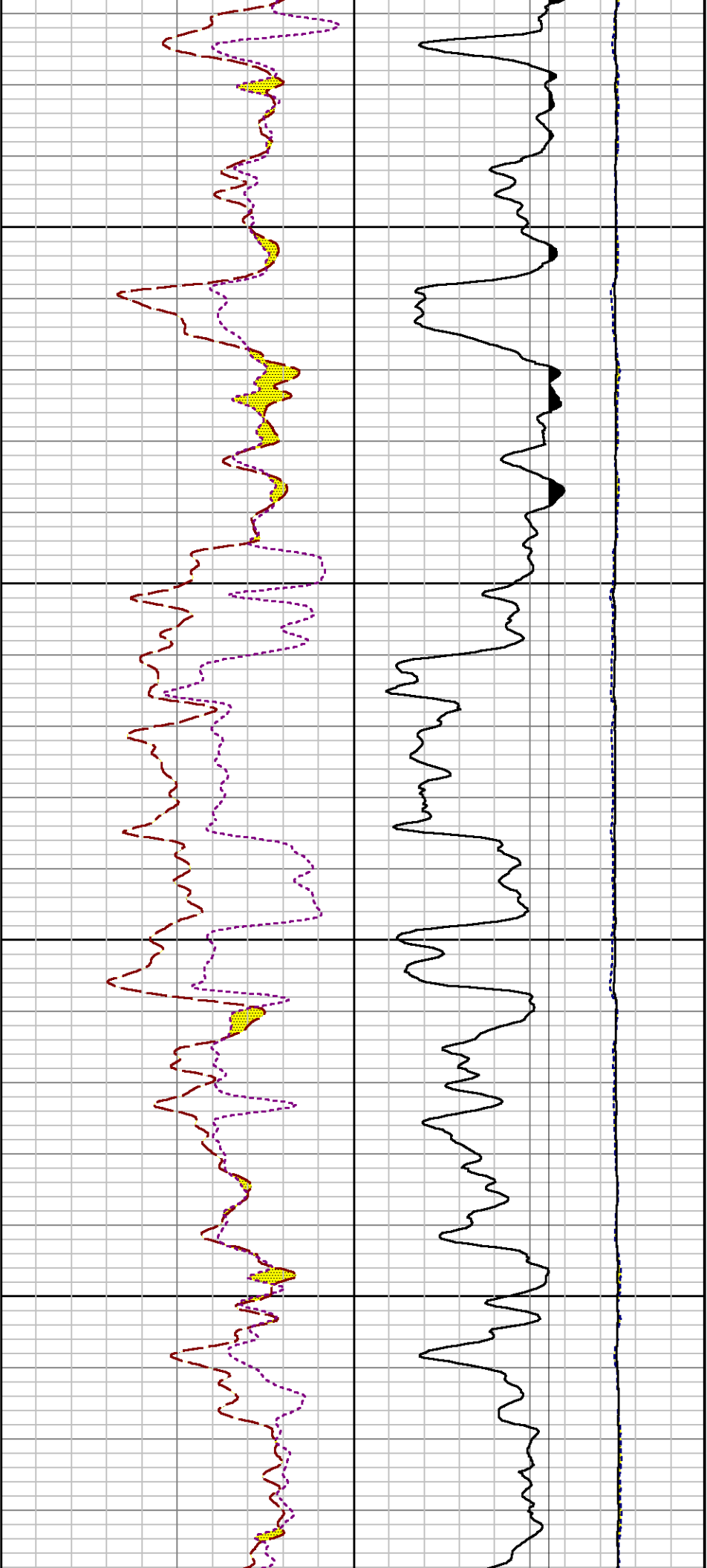
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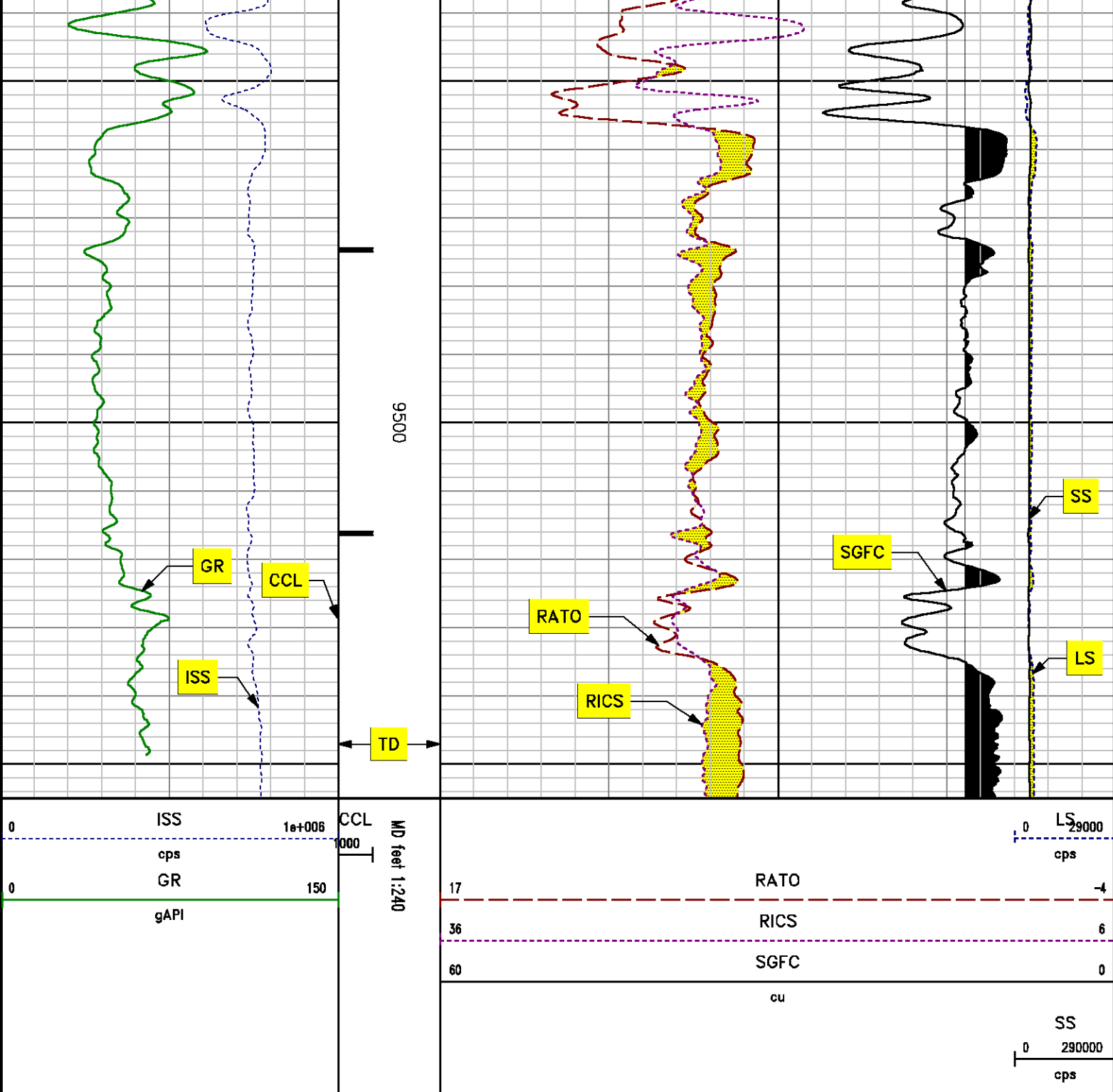
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9









***REPEAT LOG
PNC 3D MODE***

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		8749.874	9063.250
PNC Porosity	Borehole Size	8.750	inch	8749.874	9063.250
PNC Porosity	Casing Size	4.500	inch	8749.874	9063.250
PNC Porosity	Gas Filled	Non Gas Filled		8749.874	9063.250
PNC Porosity	Matrix	Sandstone		8749.874	9063.250

DEPTH OFFSETS

(for Acquired Curves)

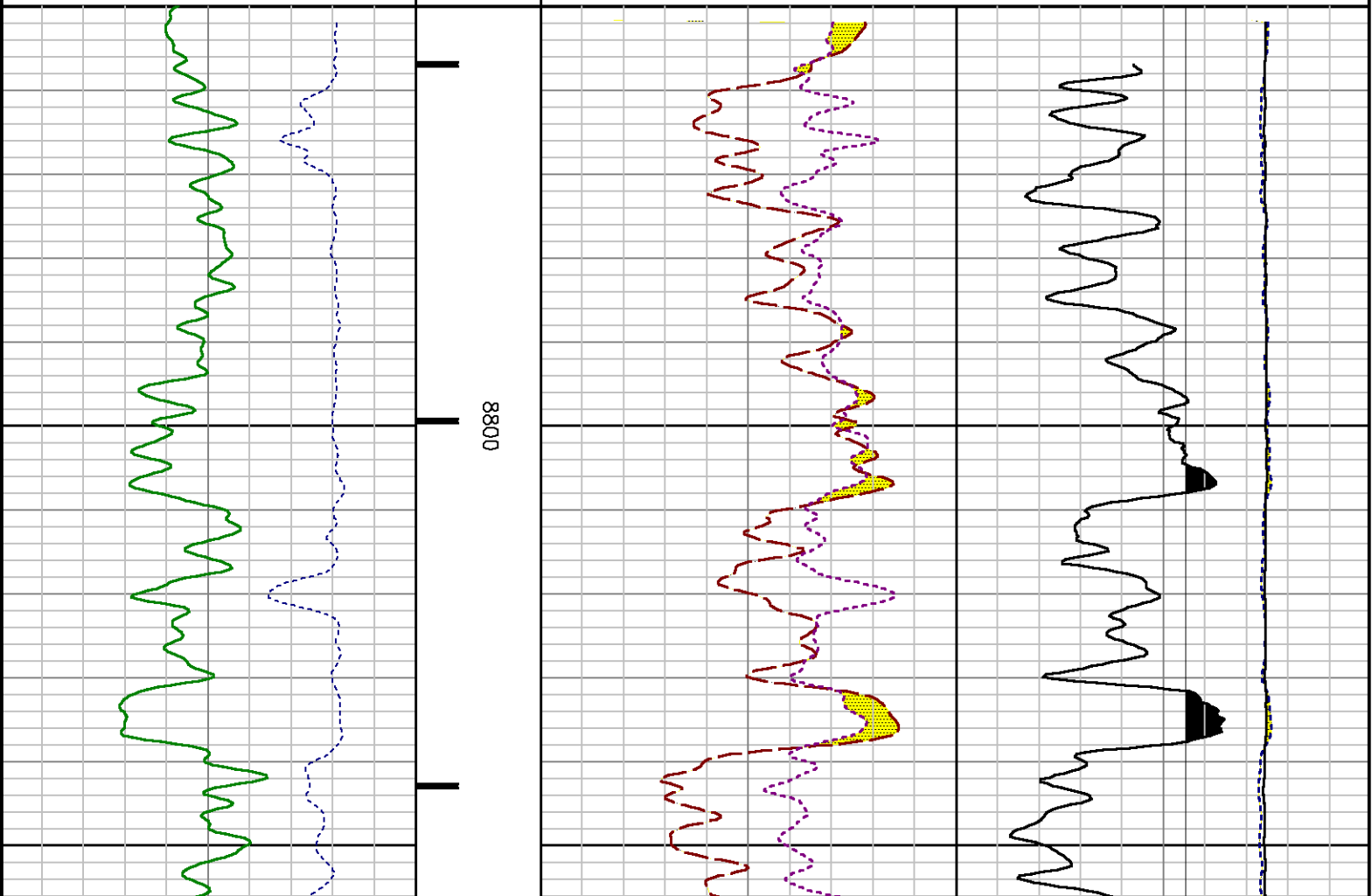
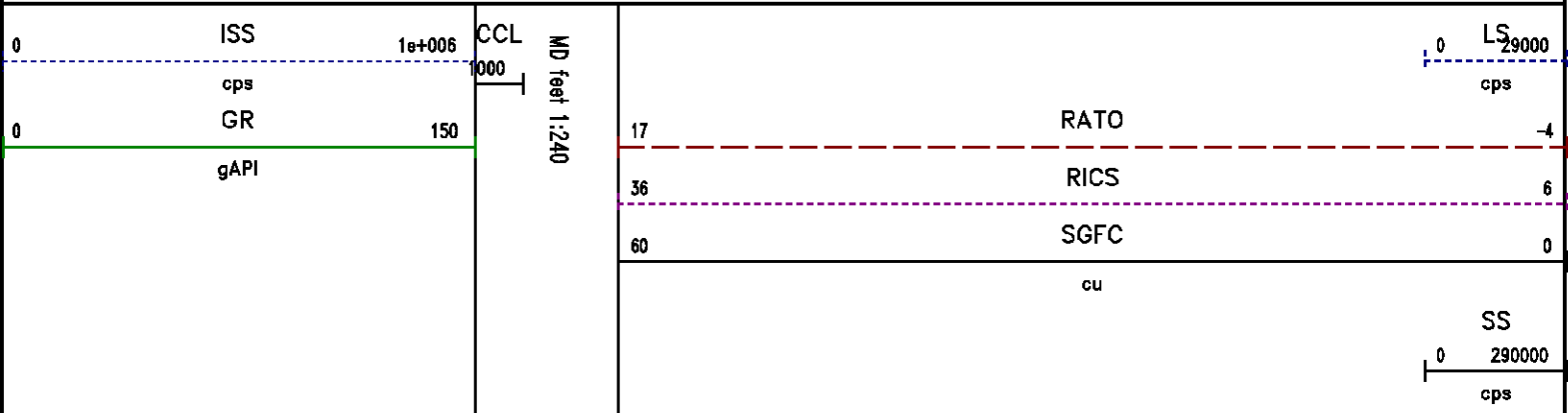
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
8248EA	-15.320	FLTM					
8248EA	-13.320	CCL	CHV				
8262XY	-10.189	GR4					
8281XA	-0.662	HVC3Q0	SEQ3	AMA3	AML3	BKX	CXS
		CPT3Q0	CPT3Q2	CPT3Q3	CPT3Q4	ET3	IXS
		MCS3	MCS3Q0	QCAL3	RGN3	RICX	SDA3
		SDL3	SGA3	SGL3	STA3	XS	ASPEC3
		AMB3	AMF3	CHF3	IXSC	IXSN	RAT023
		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
		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
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		QPD2	QPD3	QMD1	QMD2	QMD3	QDG1
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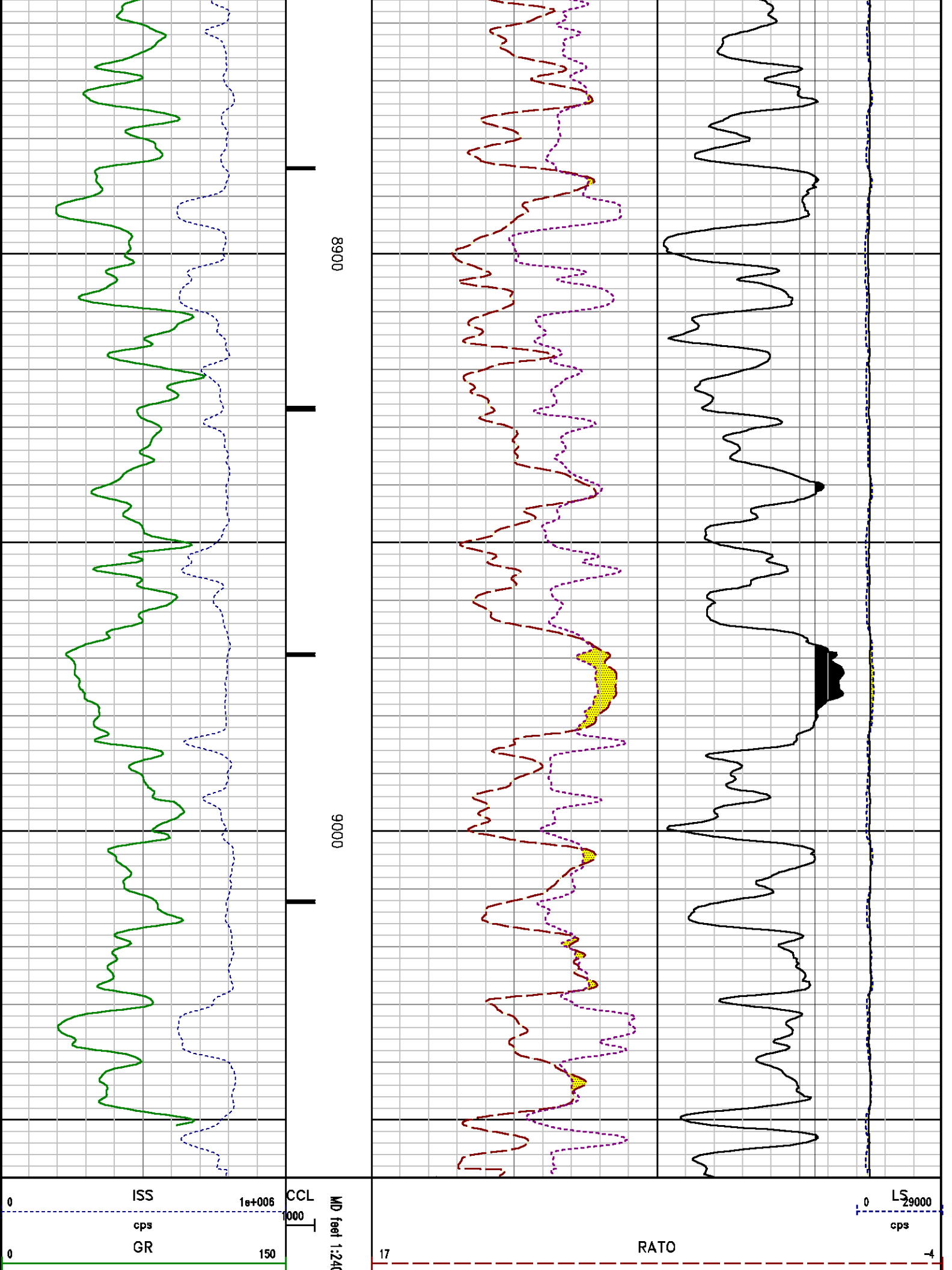
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G2R	ISSR	SSR	SS2R	RATOR	RATO13R
RBORR	RICSR	RINR	RIN13R	RONER	RPORR
RTWOR					
TEN	TTEN				

SYSTEM

0.000

Created by : RPM9, v5.3.1.0
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : HOEPPLI RWF 44-36
File Name : d:\welldata\44rpm\repeat.xtf
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Interval : 8750.00 - 9060.00 feet UP
Created : 7/21/2013 11:55:49 AM





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CALIBRATION SUMMARY

GAMMA RAY (GR4)

Calibration File: C:\case\calver\GR\470J9.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 19 08:23:22 2013 TOOL SERIES: 8262XY ASSET: 470 SEQ: J9

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K JIG	119.20	447.27	0.549	65.40	245.40	180.00

Verification File: C:\case\calver\GR\470J9.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Fri Jul 19 08:26:05 2013 TOOL SERIES: 8262XY ASSET: 470 SEQ: J9

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K JIG	117.27	449.96	0.549	64.34	246.88	182.54

PNC #2

Calibration File: C:\case\calver\PNC\3832.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 19 16:41:07 2013 TOOL SERIES: 8281XA ASSET: 383 SEQ: 2

Calibrator #

shop shop

Source #

8281AA 10160601

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	812595	134.00	2255.00	2247.00	2211.00	122.93	7.00	0.9890

Interpolated

1300000

158.11

2241.80

2243.19

2212.68

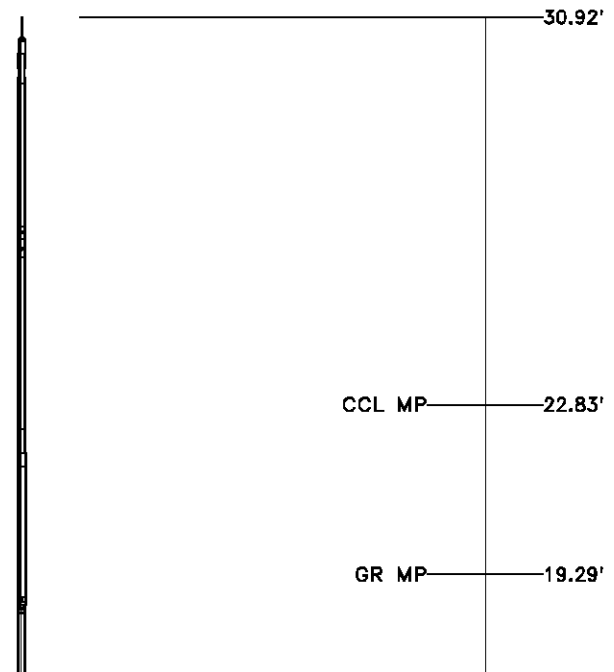
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	812595	7802.44	1232.37	162.46	25.77	0.14	24.28	0.28
					25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	812595	172481.70	26763.71	90371.66	32188.86	8488.26	54777.54	13597.75
Fit Quality %		0.75	0.71	0.71	0.72	0.76	0.68	0.80

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	812595	1.43	4.71	30.36	14.83	10.65	3.79	4.03
		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 %		0.08	0.14	0.12	0.02	0.11	0.07	0.10
Reduced	1374983	1.43	4.72	30.40	14.88	10.66	3.79	4.03
		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

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
GAMMA RAY	
Series	8262XA
Mnemonic	GR
Diameter	1.70"
Weight	15.00 lb
Length	3.17'



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: 30.92'
Total Weight: Not Available
Max Diameter: 0' 1.70"



Baker Atlas



Company

WPX ENERGY

Well

HOEPPLI RWF 44-36

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 2613' FNL & 2594' FEL

BHL: 367' FSL & 728' FEL

SEC

36

TWP

6S

RGE

94W

Elevations

KB 6554 ft

DF

GL 6528 ft

File No:

CH074110

API No:

05045215480000

36 6S 94W

RWF 33-36

NABORS SSD 576