



FILE NO: CH092551	COMPANY WPX ENERGY
API NO: 05103121390000	WELL FEDERAL RGU 444-23-198
	FIELD SULPHUR CREEK
	COUNTY RIO BLANCO
	STATE COLORADO
Version 23 1S 98W RGU 43-23-198 PA AZTEC 1000	LOCATION: SHL: 1028' FSL & 645' FEL BHL: 477' FSL & 631' FEL SEC 23 TWP 1S RGE 98W
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	OTHER SERVICES BOND LOG ELEVATIONS: KB 6592 FT DF GL 6567 FT
GL ELEVATION 6567 FT KB 25 FT ABOVE P.D. KELLY BUSHING	

DATE	12-Dec-2014
RUN	1
TRIP	1
SERVICE ORDER	US092551
DEPTH DRILLER	12623 FT
DEPTH LOGGER	12596 FT
BOTTOM LOGGED INTERVAL	12586 FT
TOP LOGGED INTERVAL	3898 FT
TIME STARTED	0900
TIME FINISHED	2030
OPERATOR RIG TIME	11.5 HRS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	82 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	287 DEGF
REFERENCE LOG	BAKER HUGHE OPEN LOG
REFERENCE LOG DATE	21-Nov-2014
EQUIP. NO.	4271
LOCATION	GRAND JCT
RECORDED BY	FLOYD RENEAU
WITNESSED BY	DUSTIN WELSH

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	25 FT	80 FT
13.5 IN	80 FT	3898 FT
7.875 IN	3898 FT	12623 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
18 IN			25 FT	80 FT
9.625 IN			25 FT	3898 FT
4.5 IN	11.6 LB/F	P-110	25 FT	12623 FT

CEMENTING DATA							
JOB TYPE	FROM	TO	TIME	DATE	CEMENT TYPE	DENSITY	VOLUME

PERFORATION RECORD						
PERFORATION TYPE	POSITION	PHASING	SPACING	DENSITY	FROM	TO

REMARKS
RUN1 TRIP 1: 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 11/21/2014 at the clients request.

clients 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 8.5 feet.  
Logged with Zero PSI at wellhead.

BHT = 287degF

SJ = 7326'-7348'

Thanks you for choosing Baker-Hughes.

#### EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TEMP	8255XA	Z120516	FREE
1	1	RPM	8281FA	10307727	FREE
1	1	RPM	8283PA	10585555	FREE
1	1	RPM	8281EA	10190984	FREE
1	1	GR	2812LA	10274382	FREE
1	1	TEL/CCL	8248EA	10590814	FREE
1	1	PCM	8250EA	10408796	FREE

#### MAIN SECTION PNC-3D MODE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014  
Patches: 5

Plotted: Sun Dec 14 20:01:44 2014

#### PARAMETER AND FILTER SUMMARY REPORT

FILE: D:\dat1a\092551\012g02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 29.250 ft BOTTOM DEPTH: 12589.000 ft

#### SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR	FILTER ()	medium (1)		TOP BOTTOM

#### RAL CCL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
CCL FLOOR	CCL FLOOR	0		TOP BOTTOM

#### PARAMETER AND FILTER SUMMARY REPORT

FILE: D:\dat1a\092551\01354h02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 129.750 ft BOTTOM DEPTH: 12590.000 ft

#### SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR	FILTER ()	medium (1)		TOP BOTTOM

#### RPM PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM

OPEN/CASED HOLE	CASED HOLE	"	"
BOREHOLE SIZE	7.88	in	"
CASING SIZE	4.54	in	"
MATRIX	SANDSTONE	"	"
CORRECTION BUFFER	11	"	"

## CURVE DESCRIPTION REPORT

**CURVE NAME**   **CREATION DATE**

**CURVE DESCRIPTION**

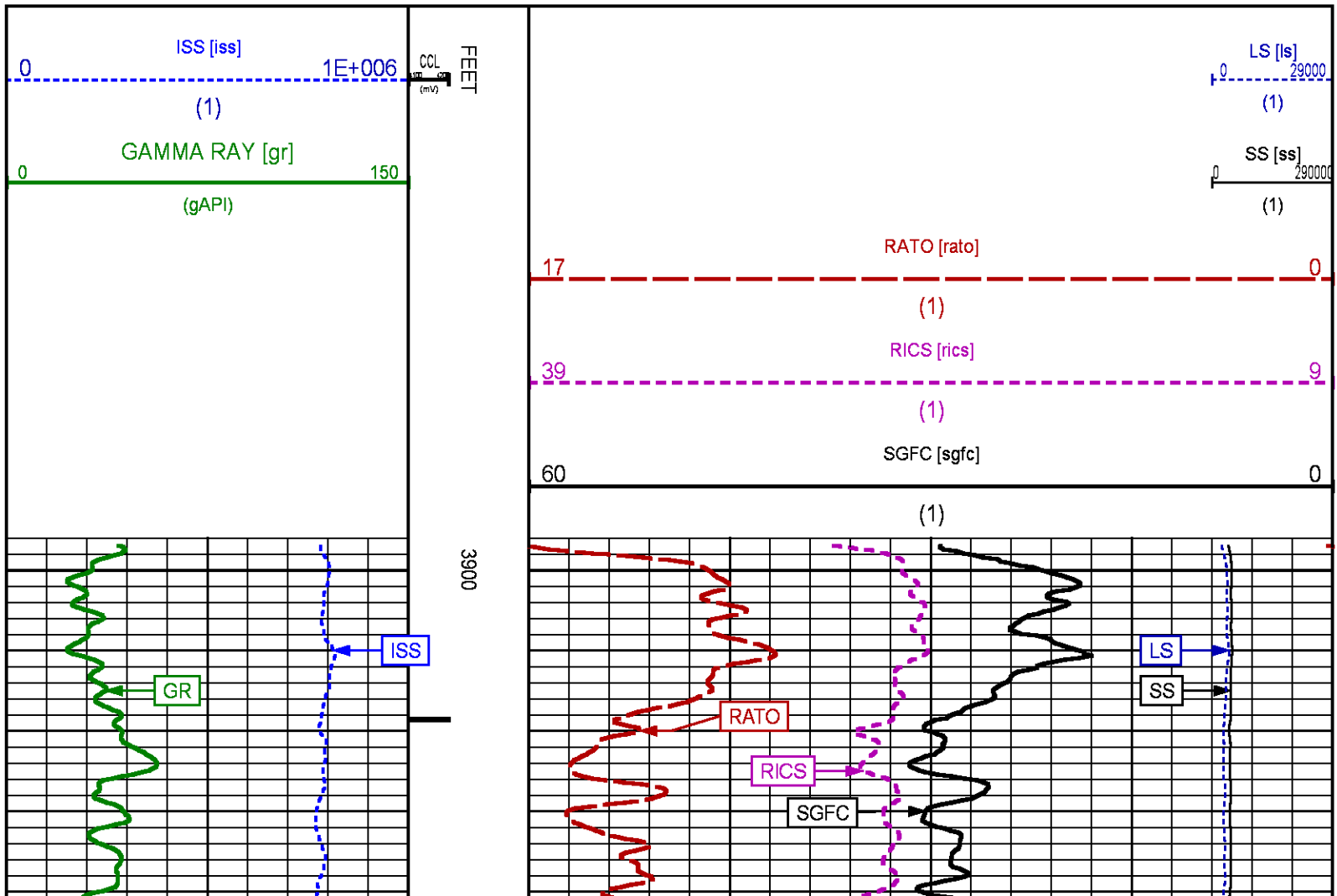
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F1:GR	Dec 14 19:32:58 2014	GAMMA RAY
F1:ISS	Dec 14 19:32:59 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 14 19:32:59 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 14 19:33:07 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 14 19:33:09 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 14 19:33:09 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 14 19:33:09 2014	SHORT SPACE COUNT RATE

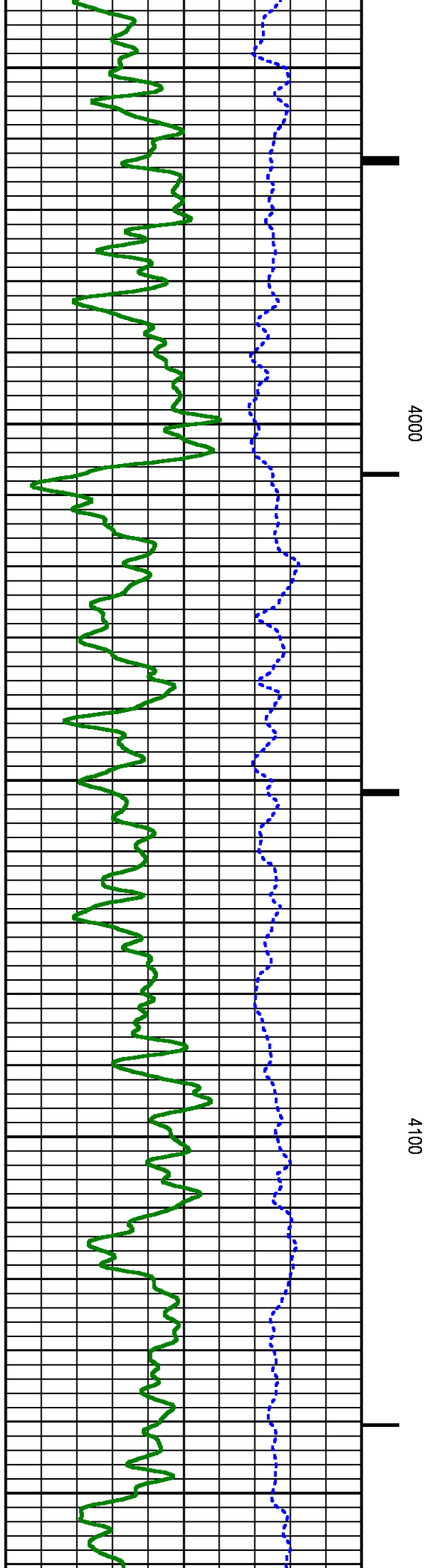
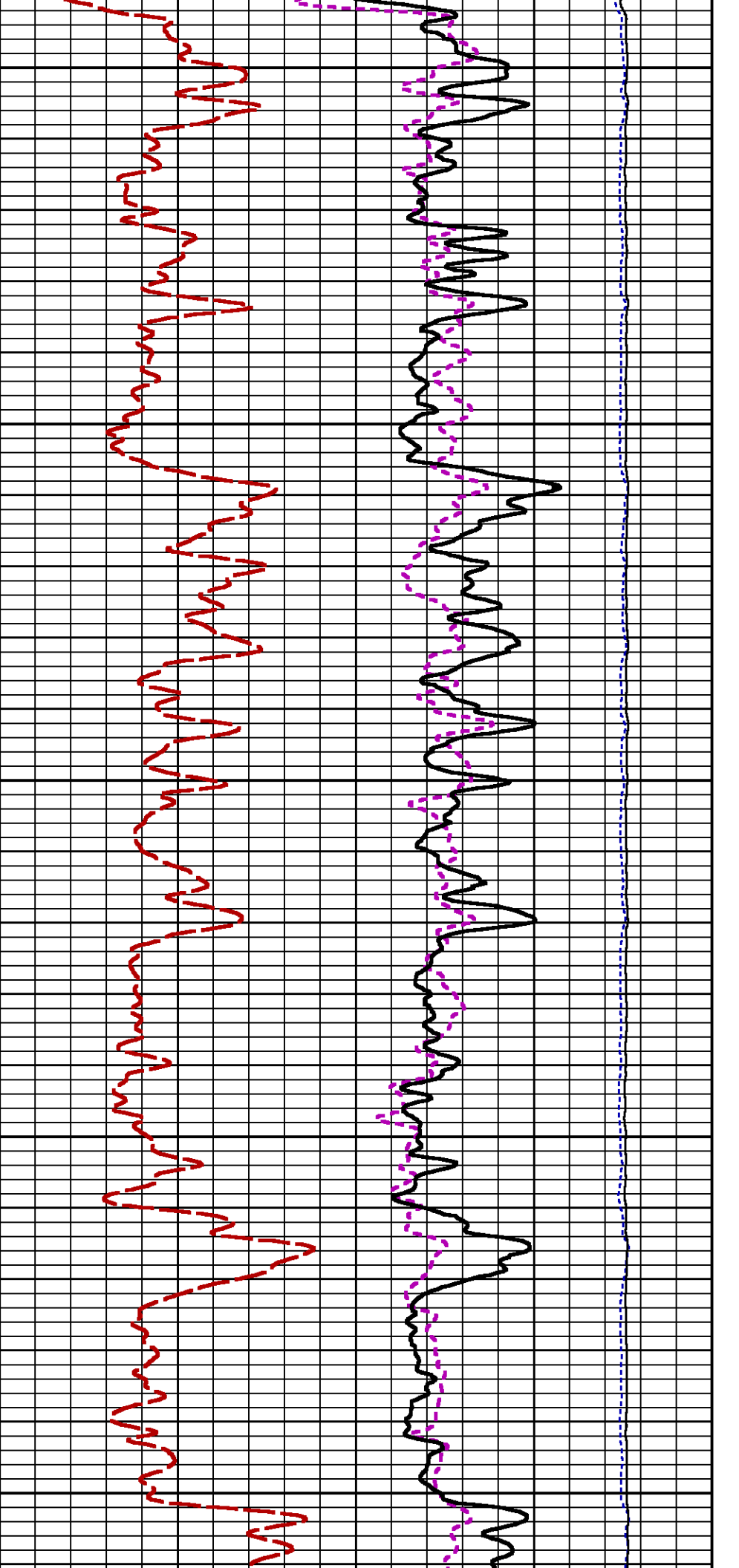
## CURVE MEASURE POINT OFFSET

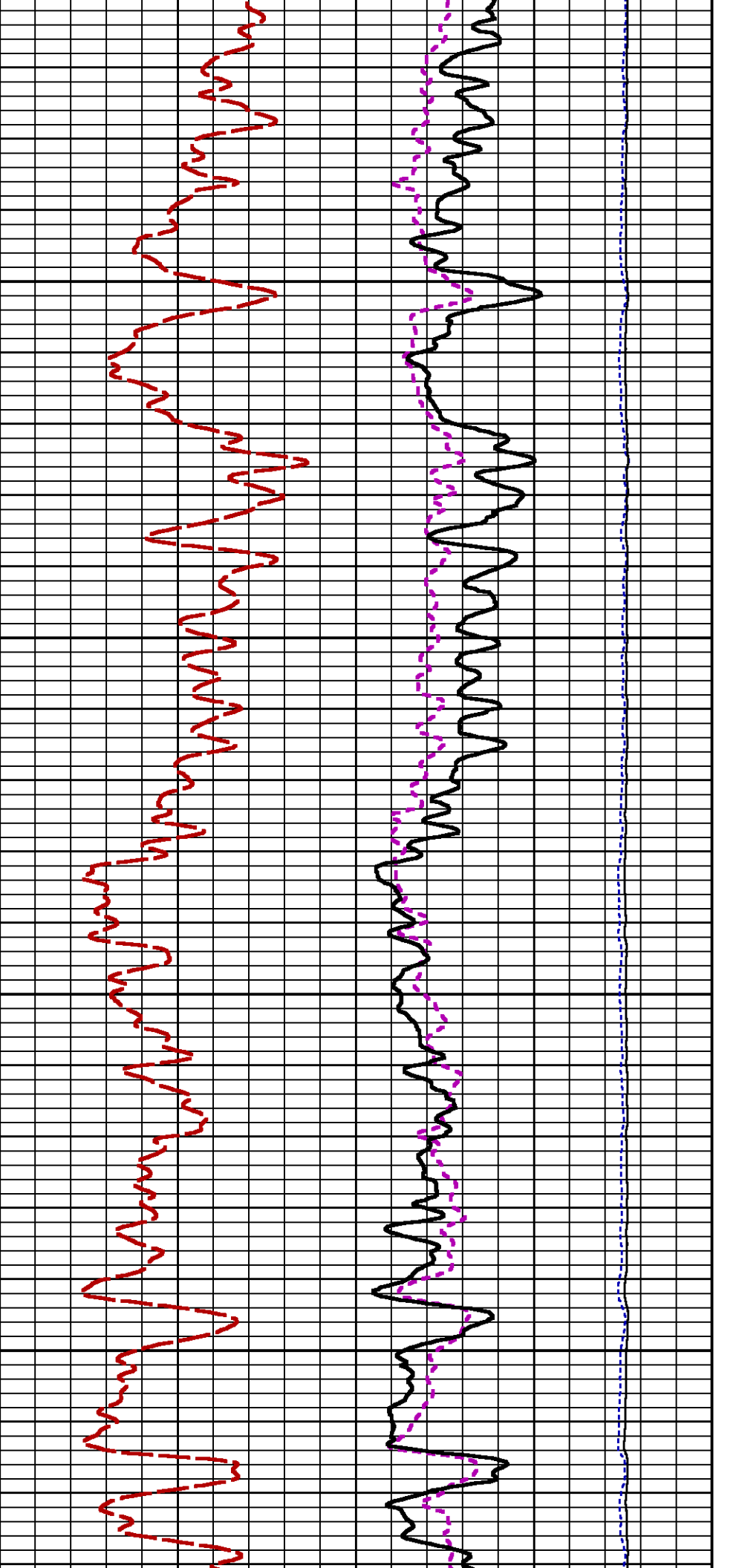
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

**Presentation** : BHI9YQMTY1:D:\dat1a\092551\444\_RPM\_MAIN.fvpdf [5"/100' Scale]  
**Plot Interval** : 3897 - 12600 Feet

**Data File 1** : F1 : BHI9YQMTY1:D:\dat1a\092551\444RPM\_MAIN.xtf  
**Created On** : Dec 13 10:50:32 2014  
**Company** : WPX ENERGY  
**Well** : FEDERAL RGU 444-23-198  
**Field** : SULPHUR CREEK  
**File Interval** : 14.25 - 12598.3 Feet  
**OCT** : n354h

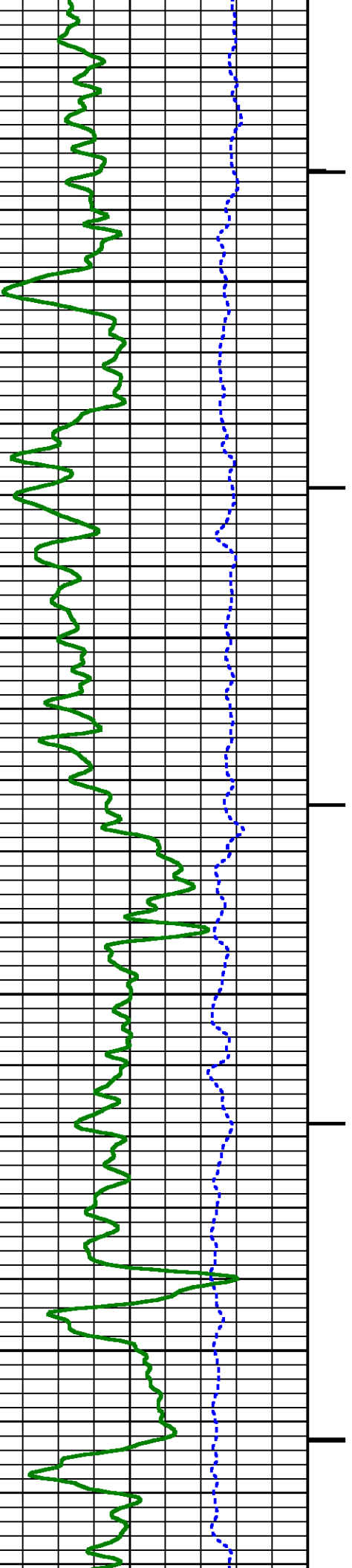
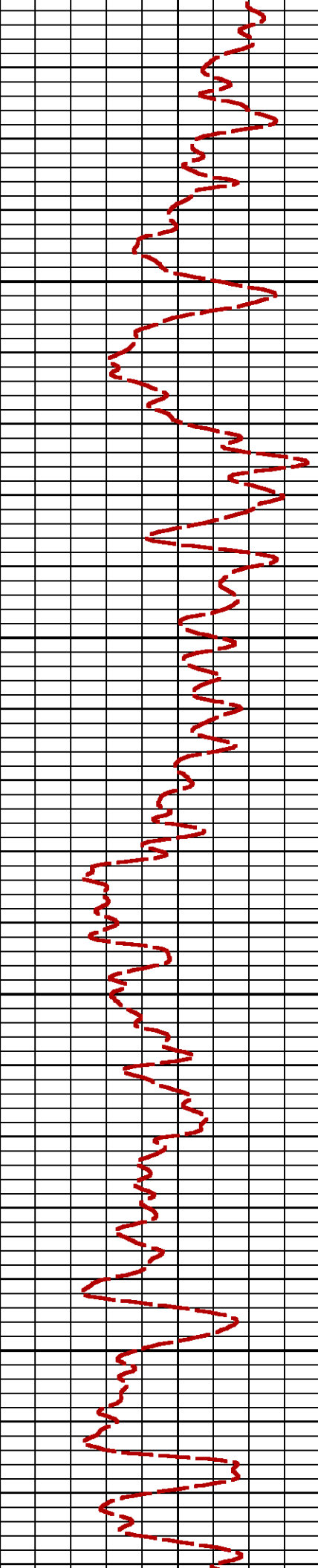


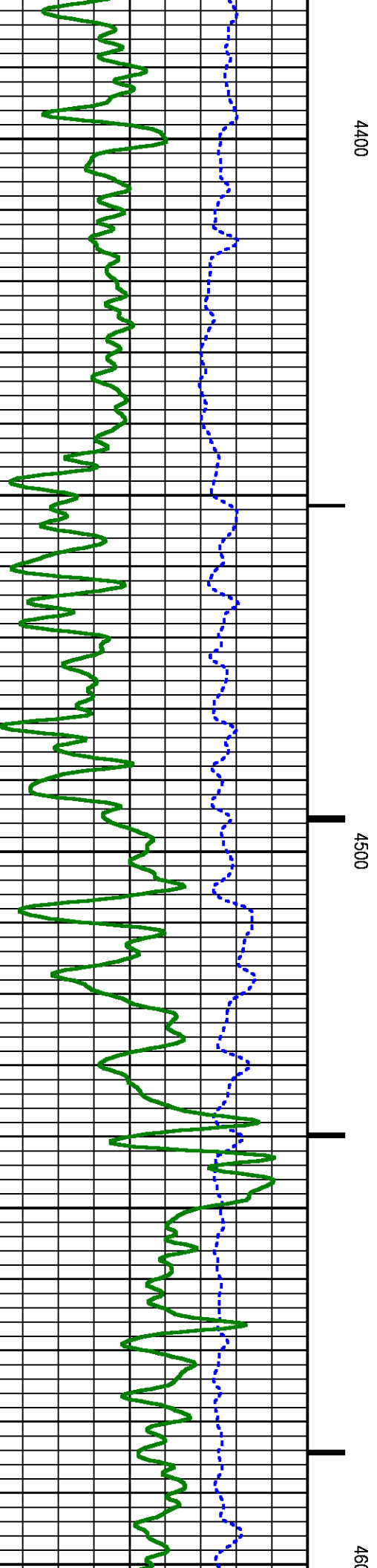
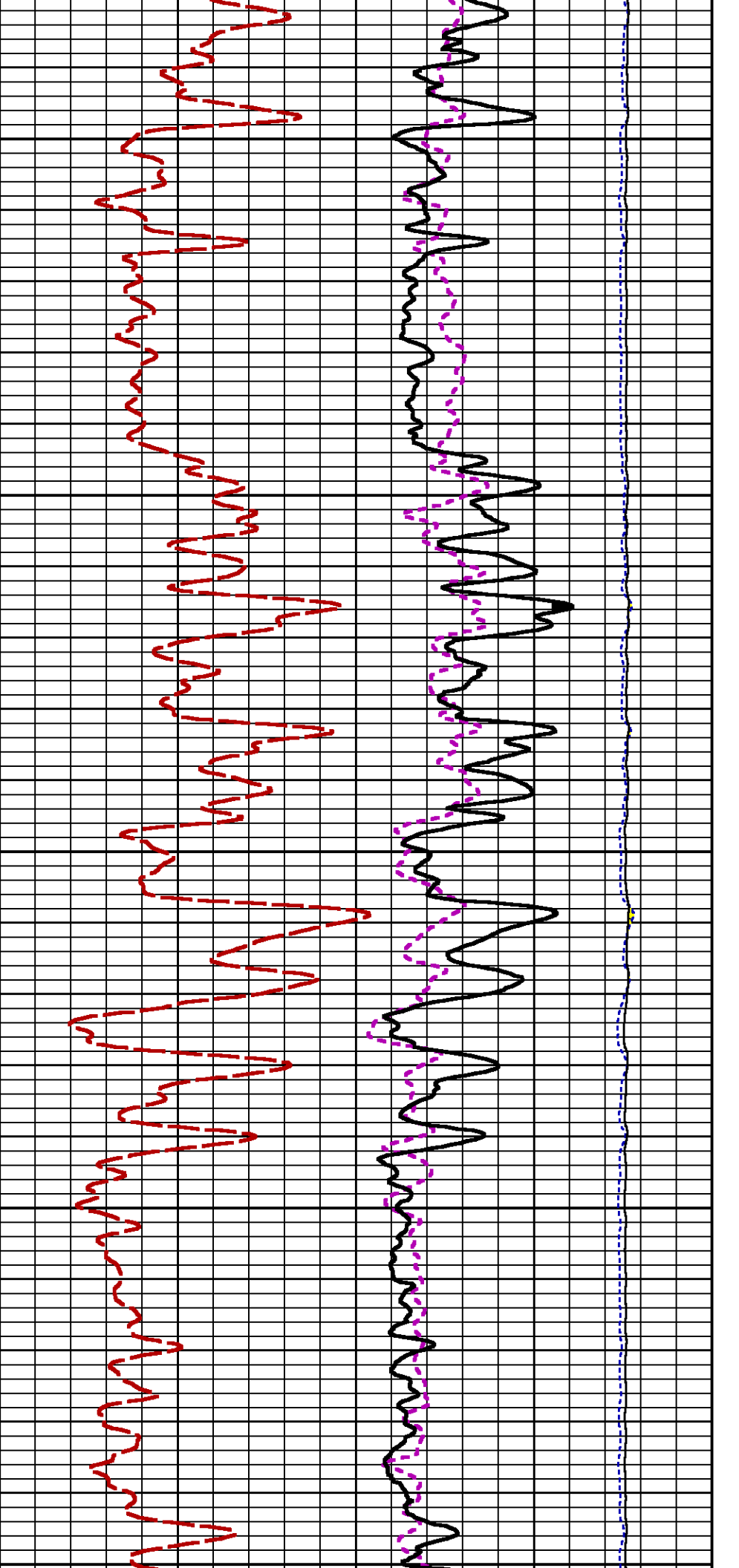


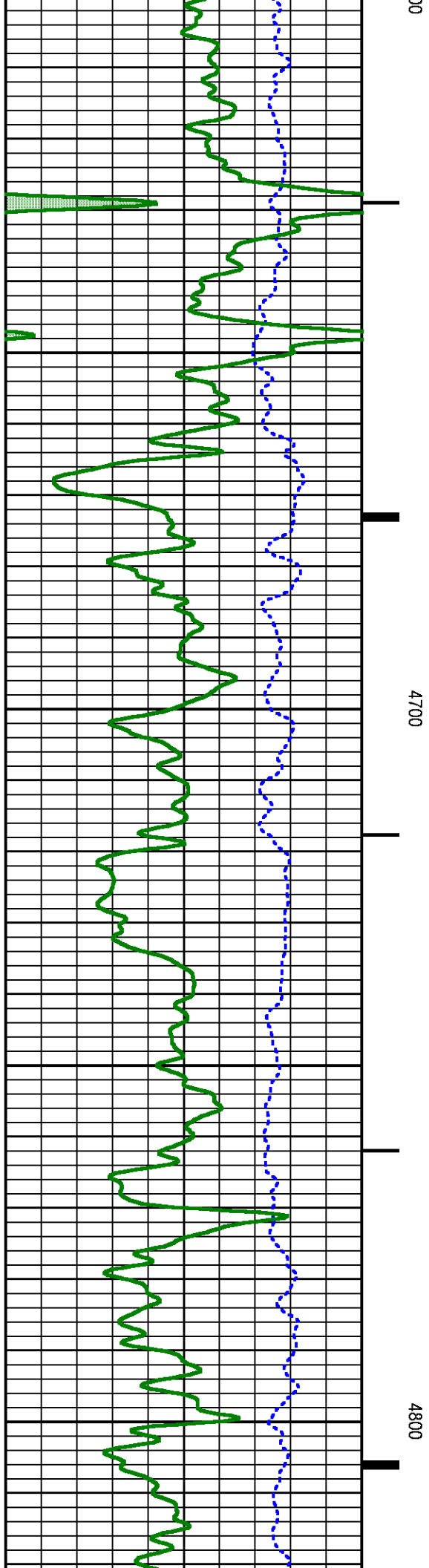
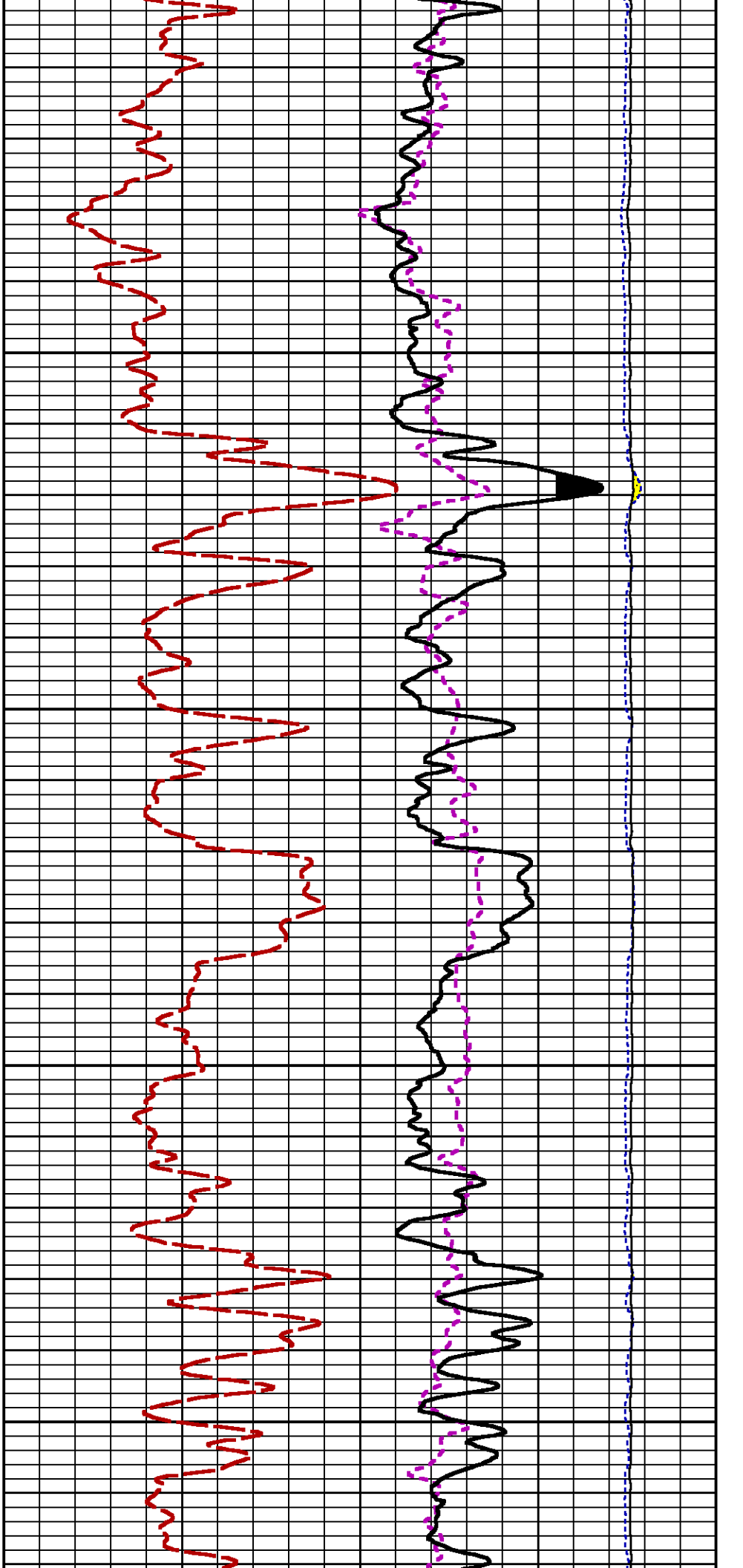


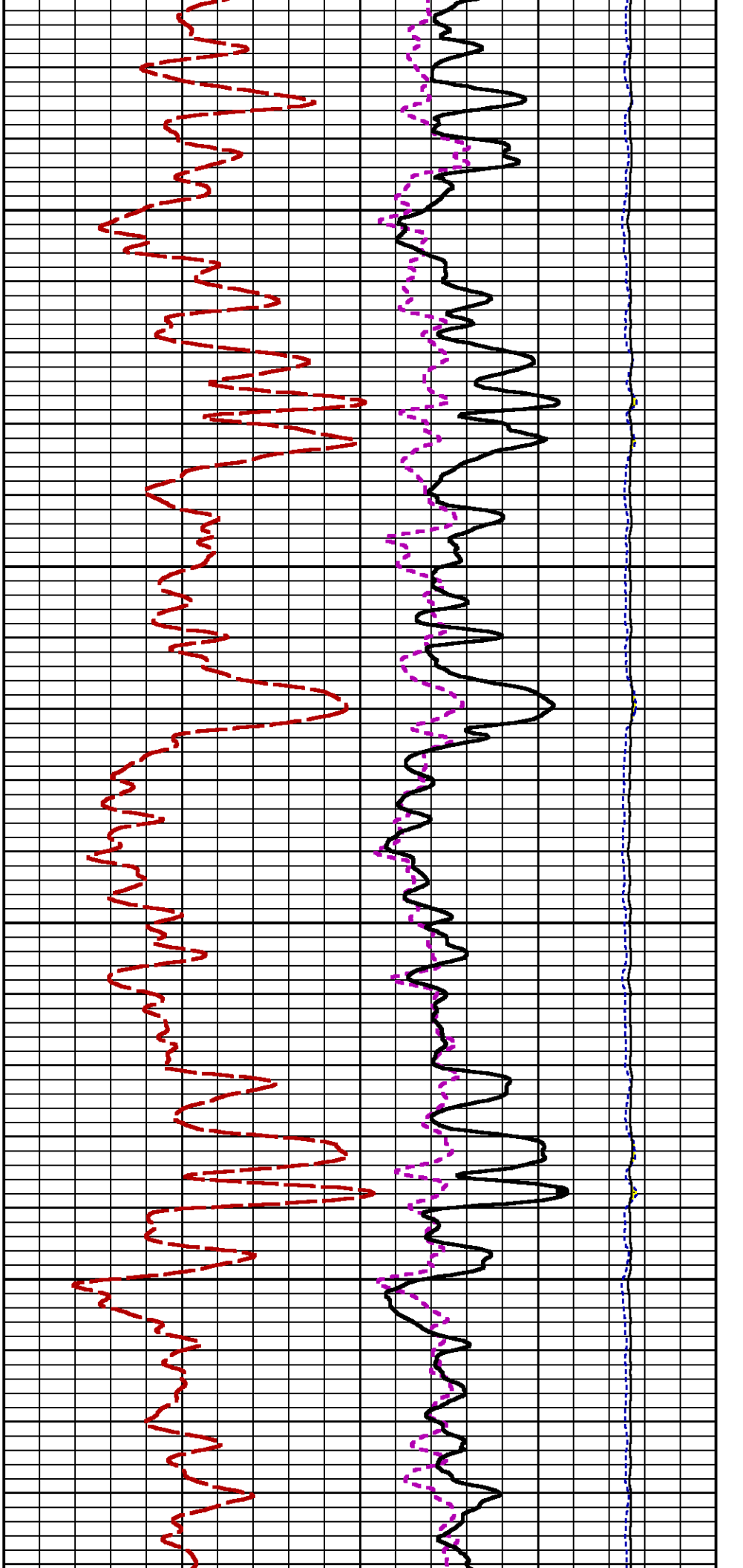
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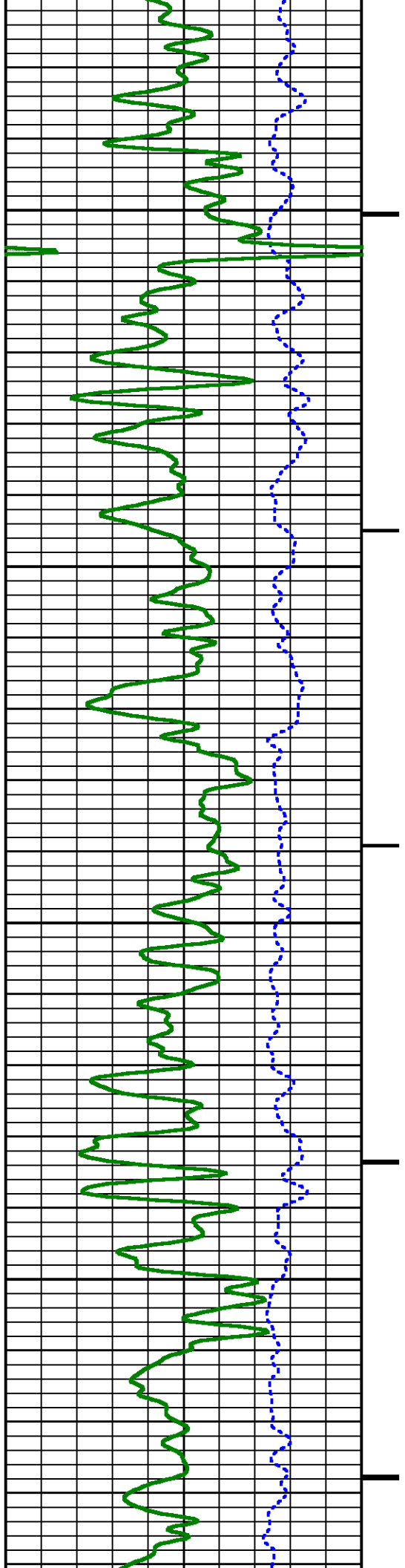




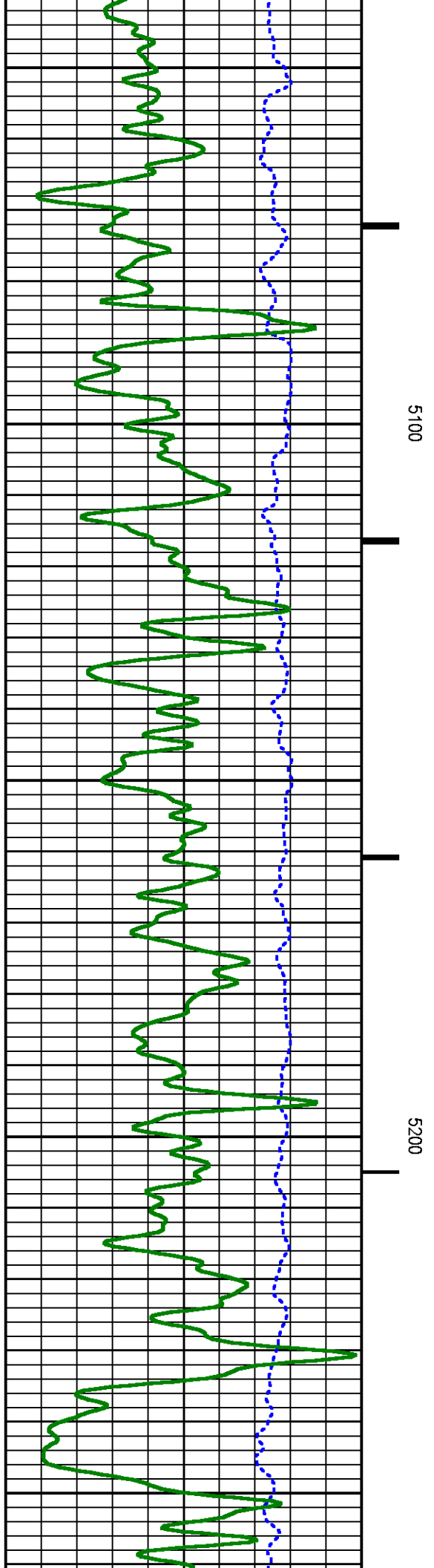
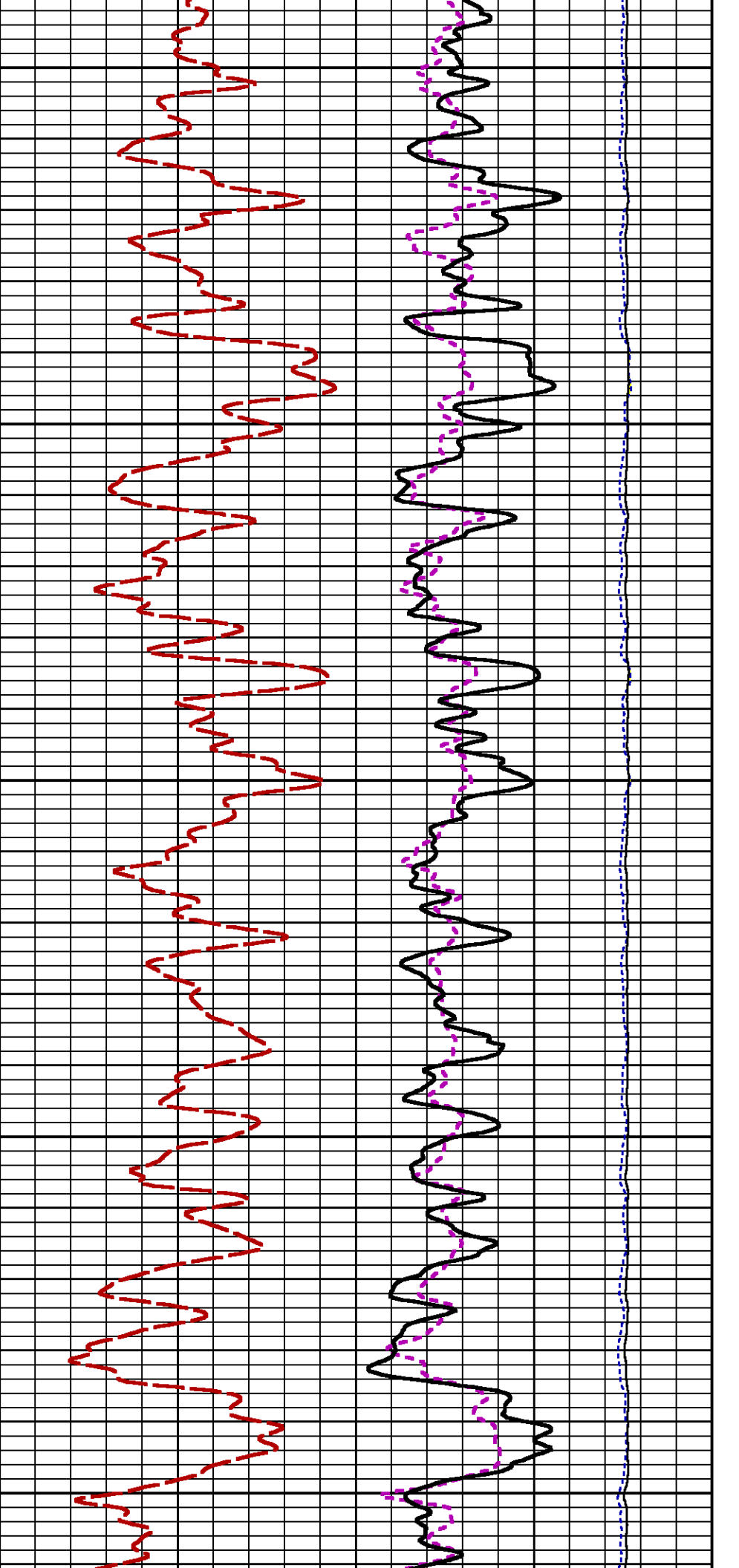


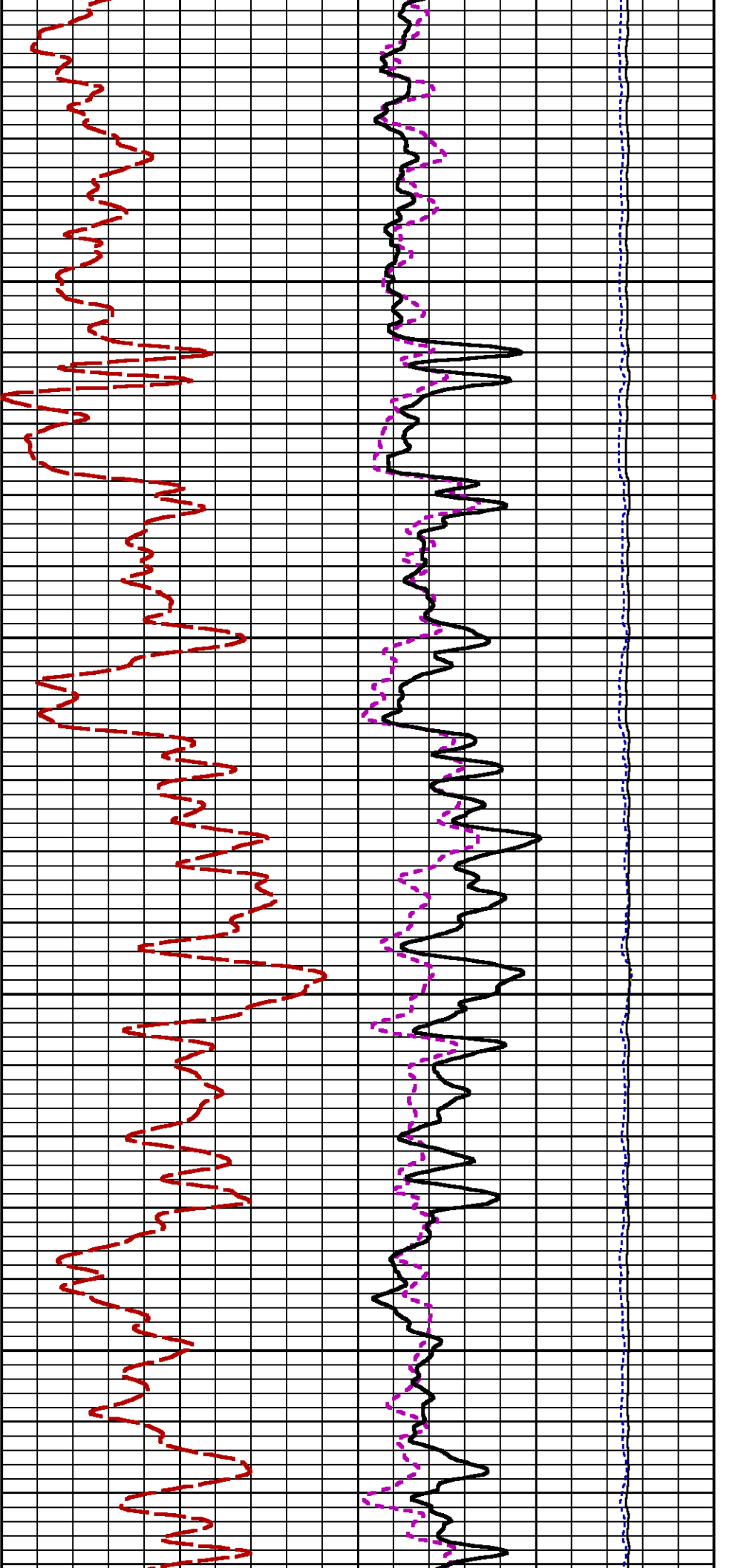
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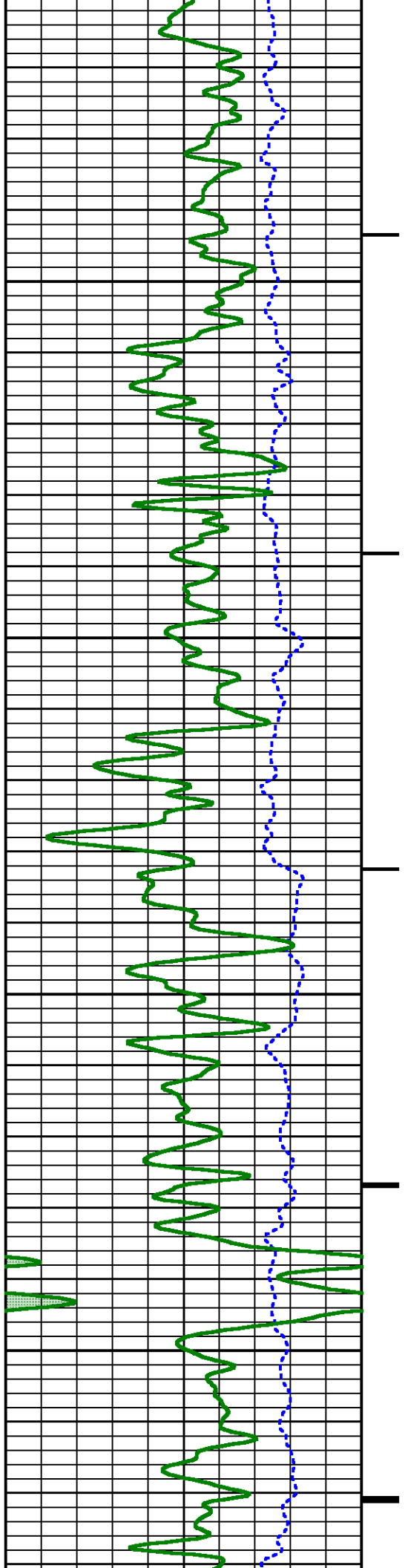


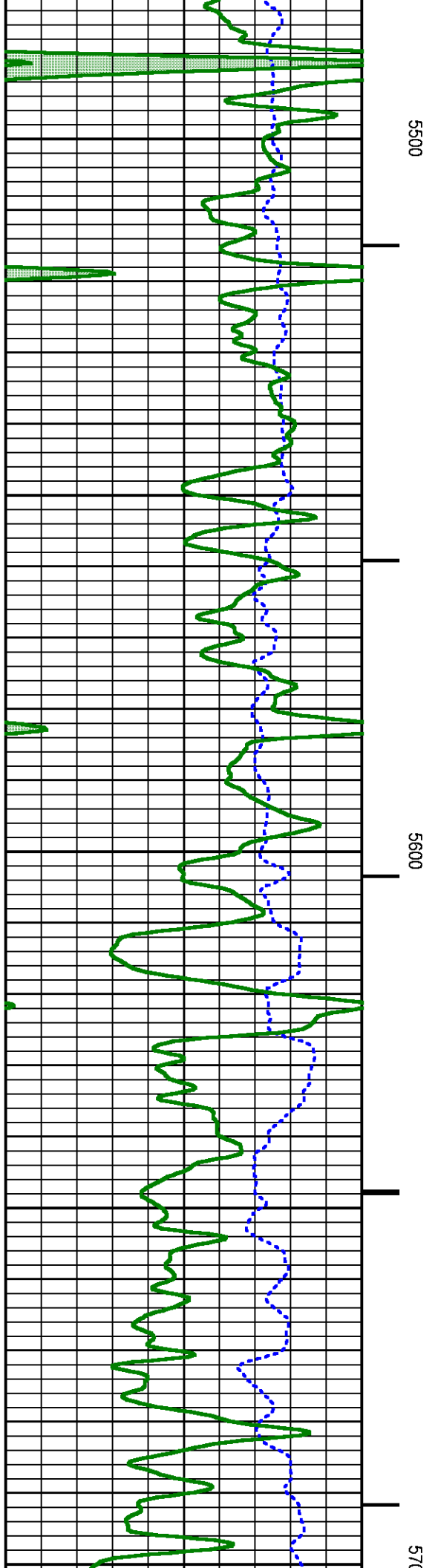
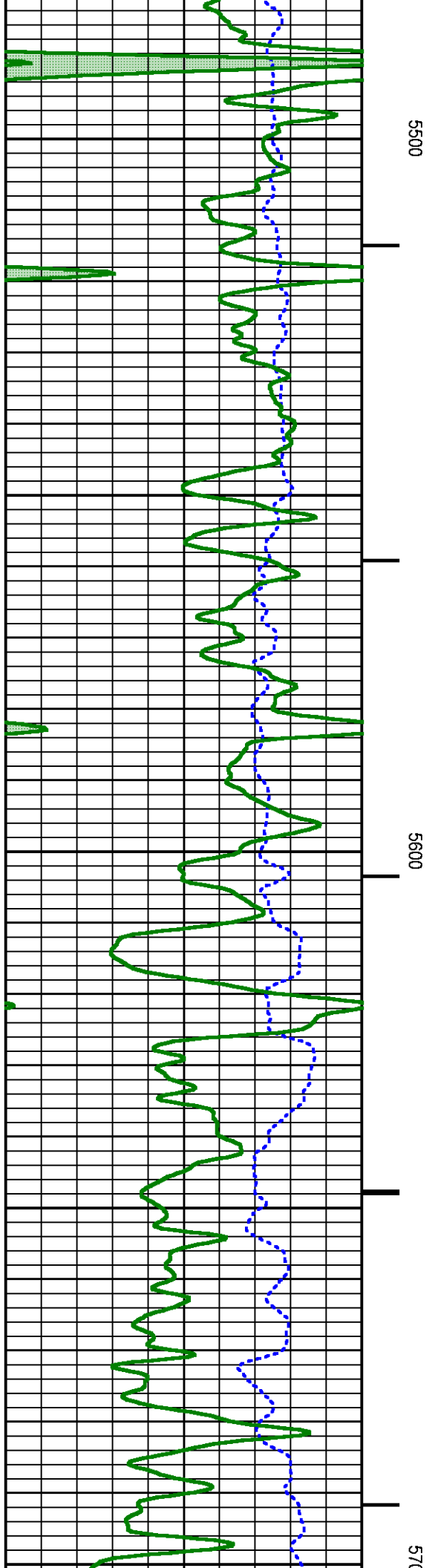
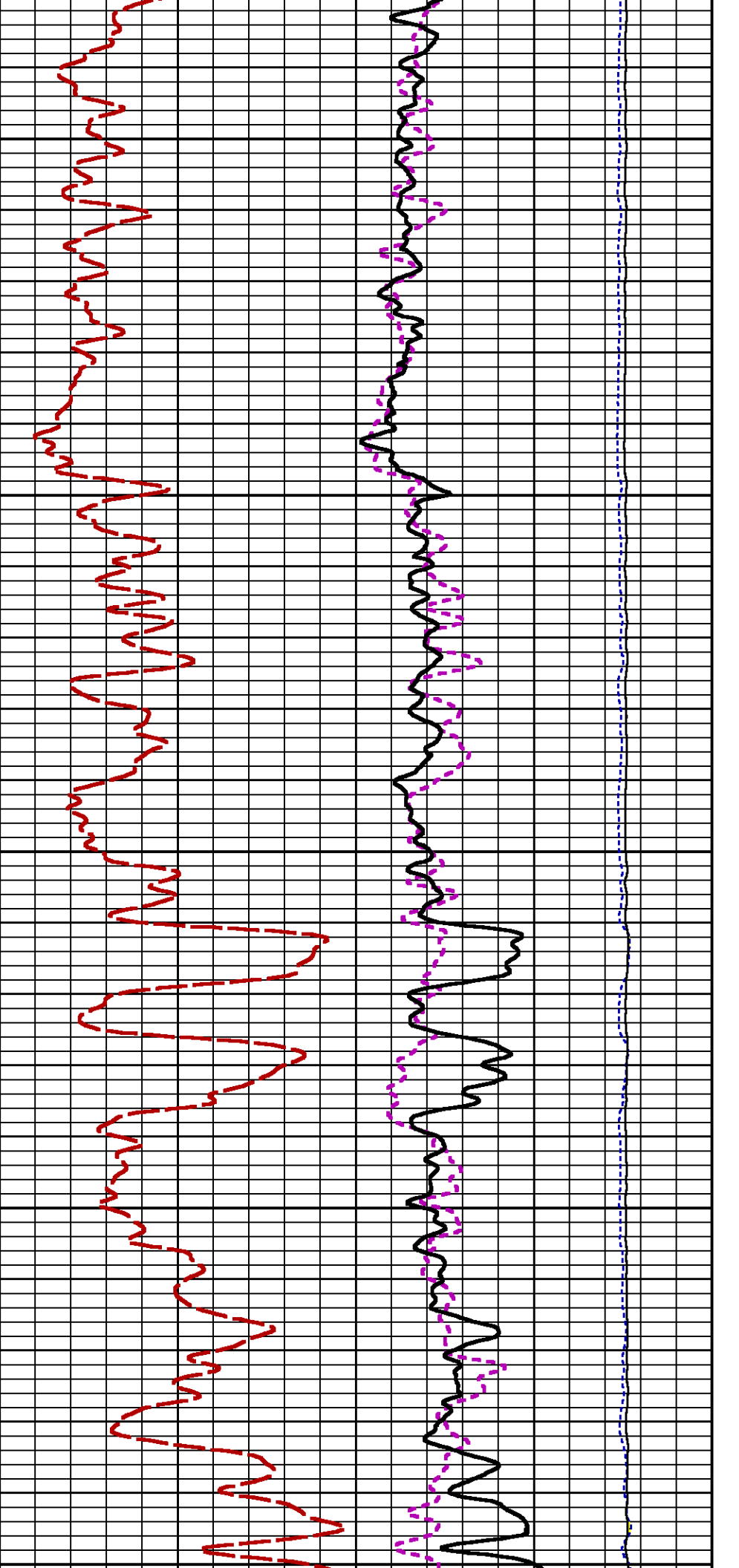


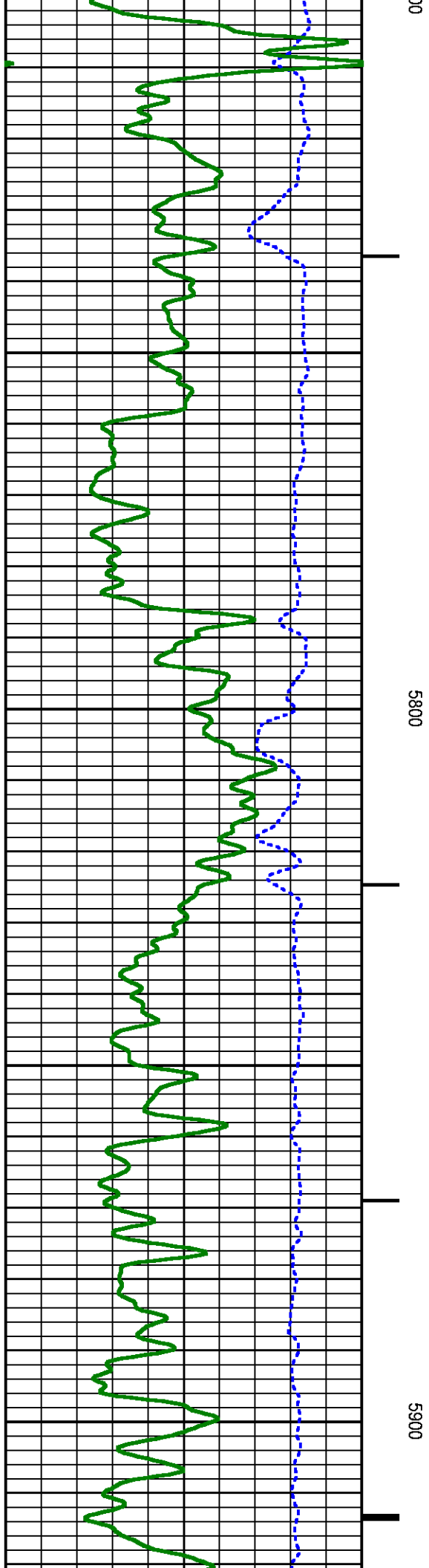
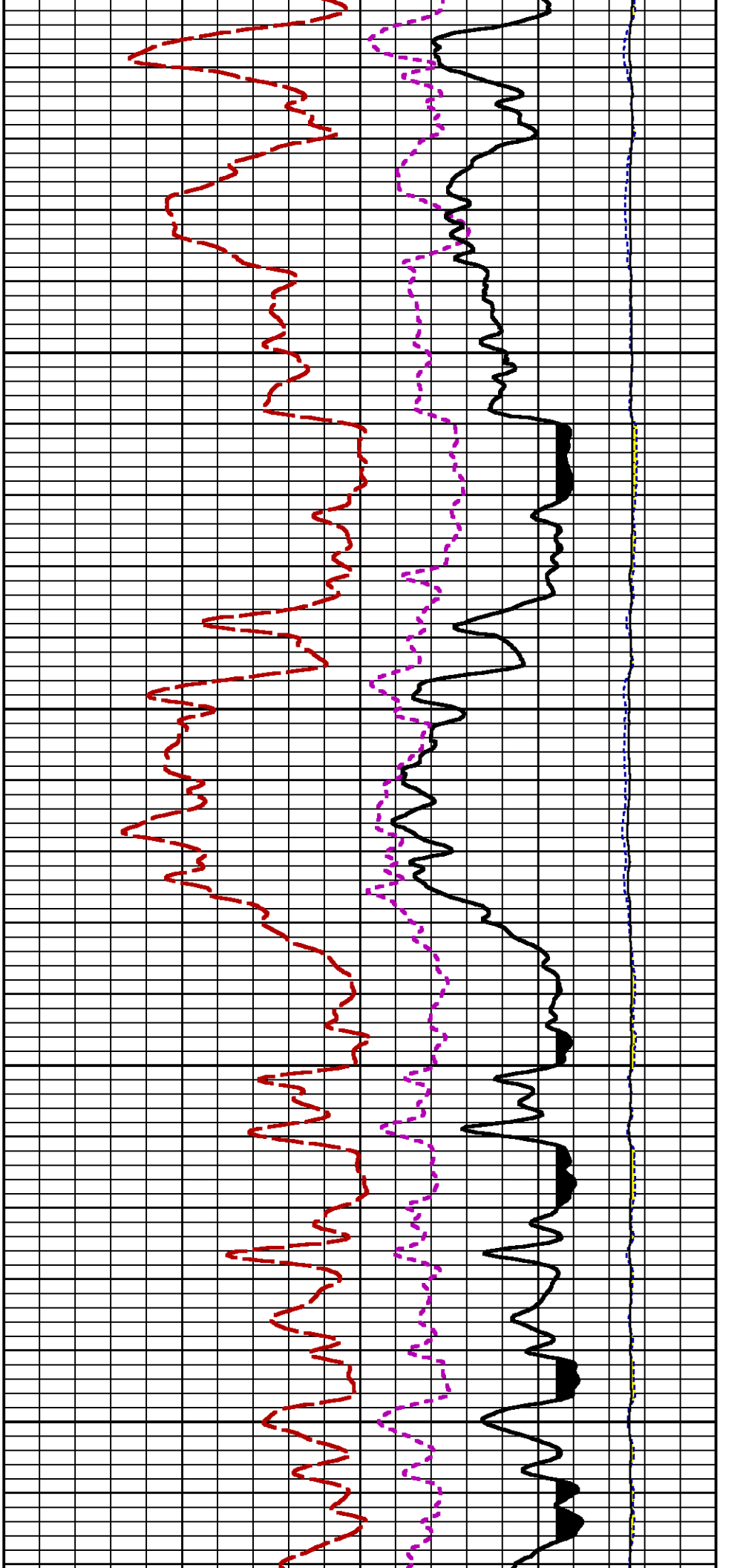


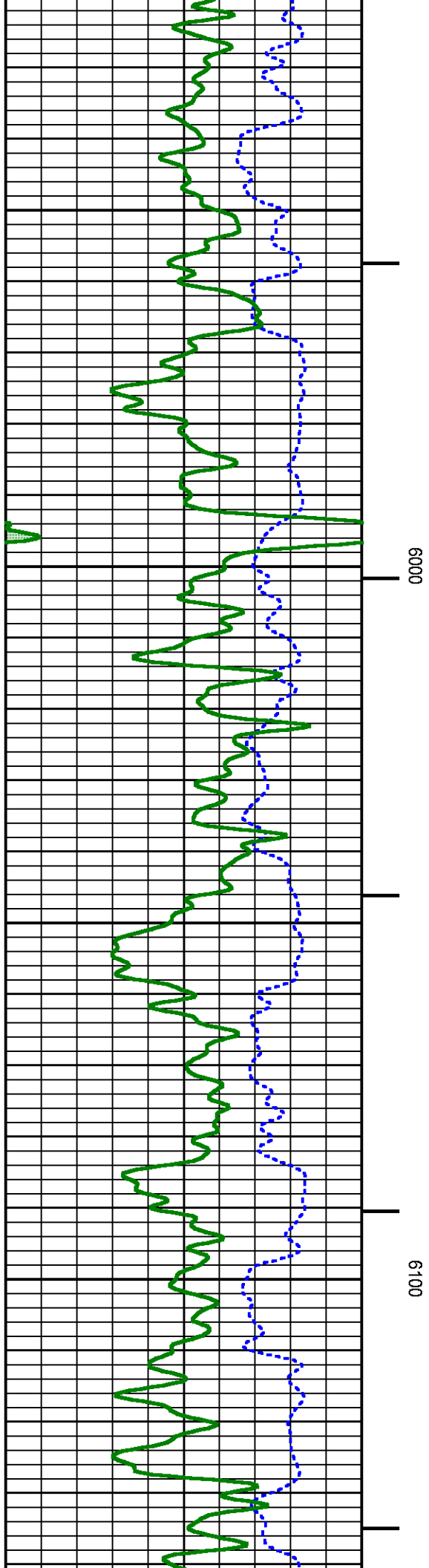
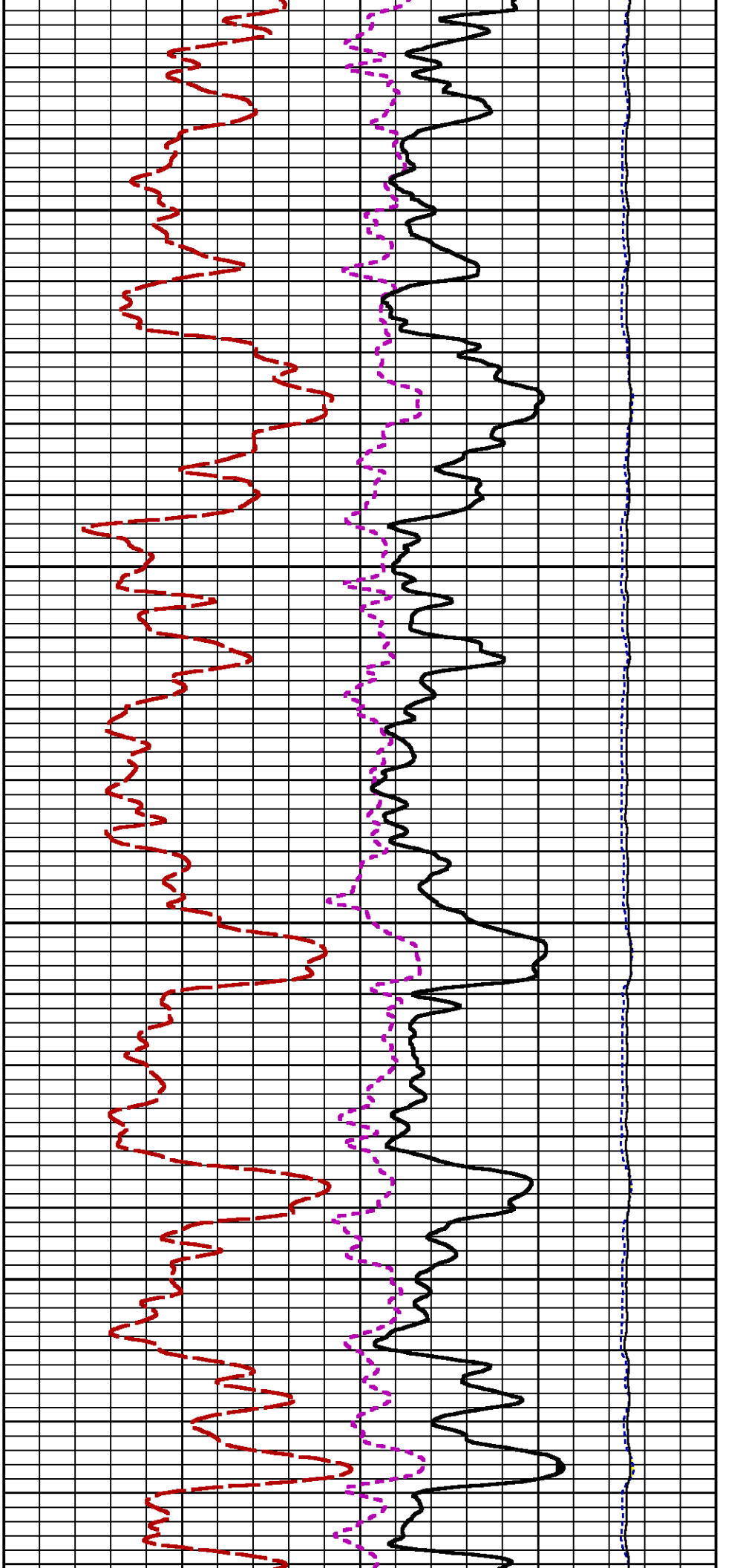
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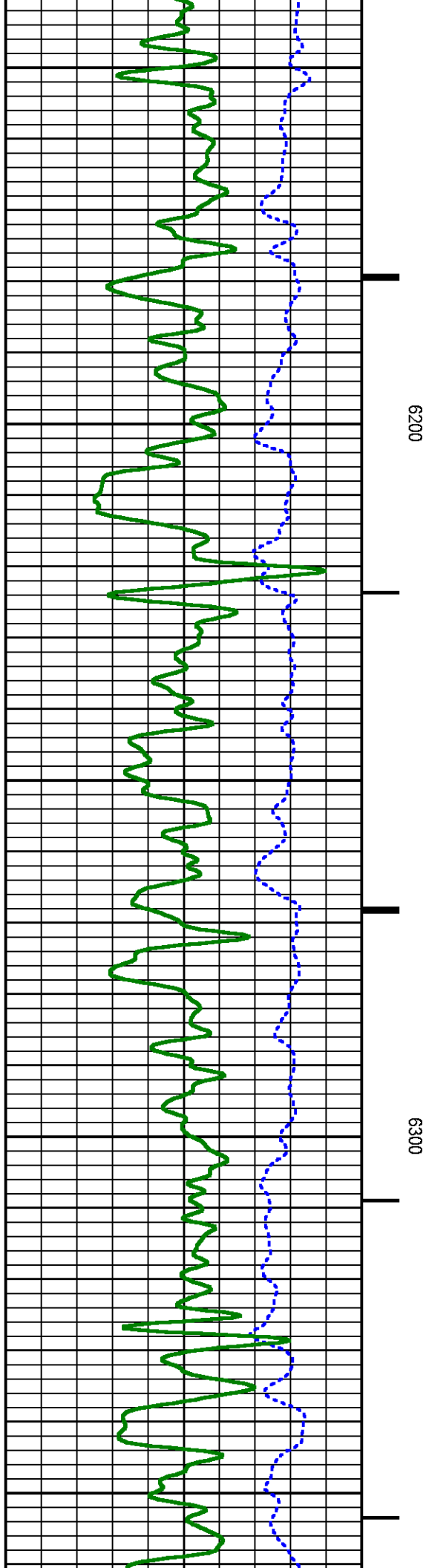
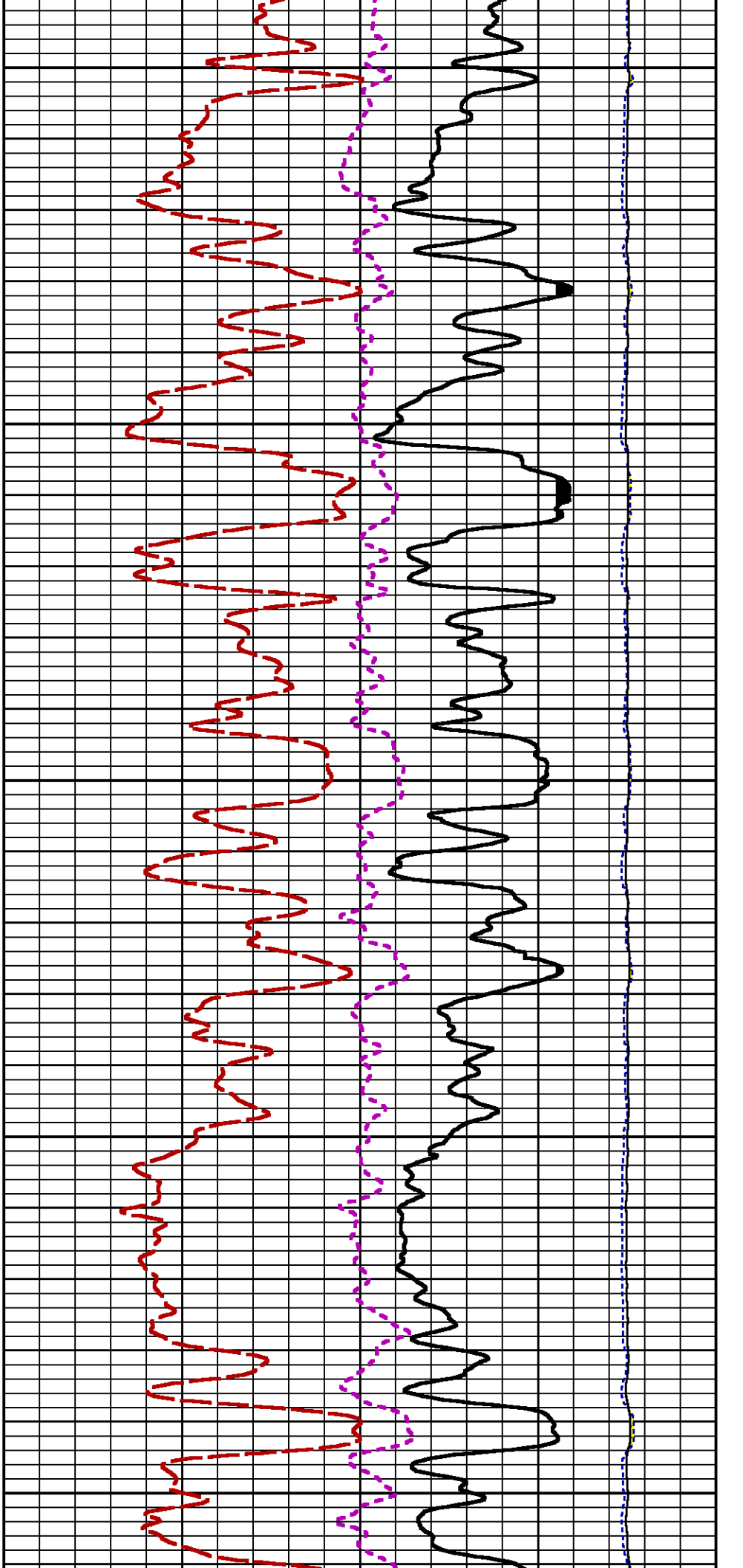
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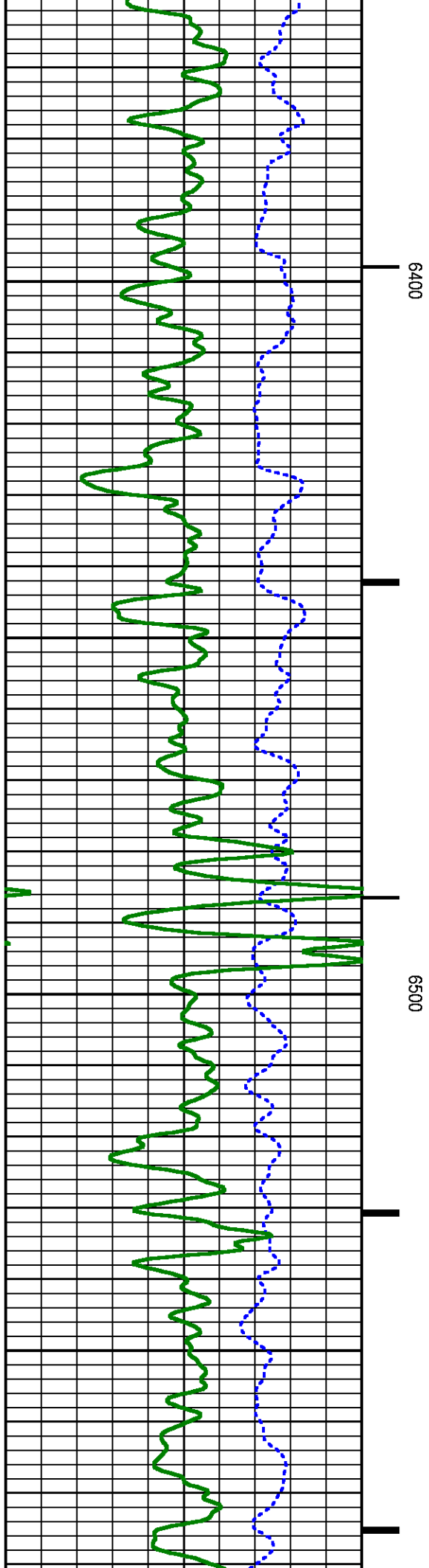
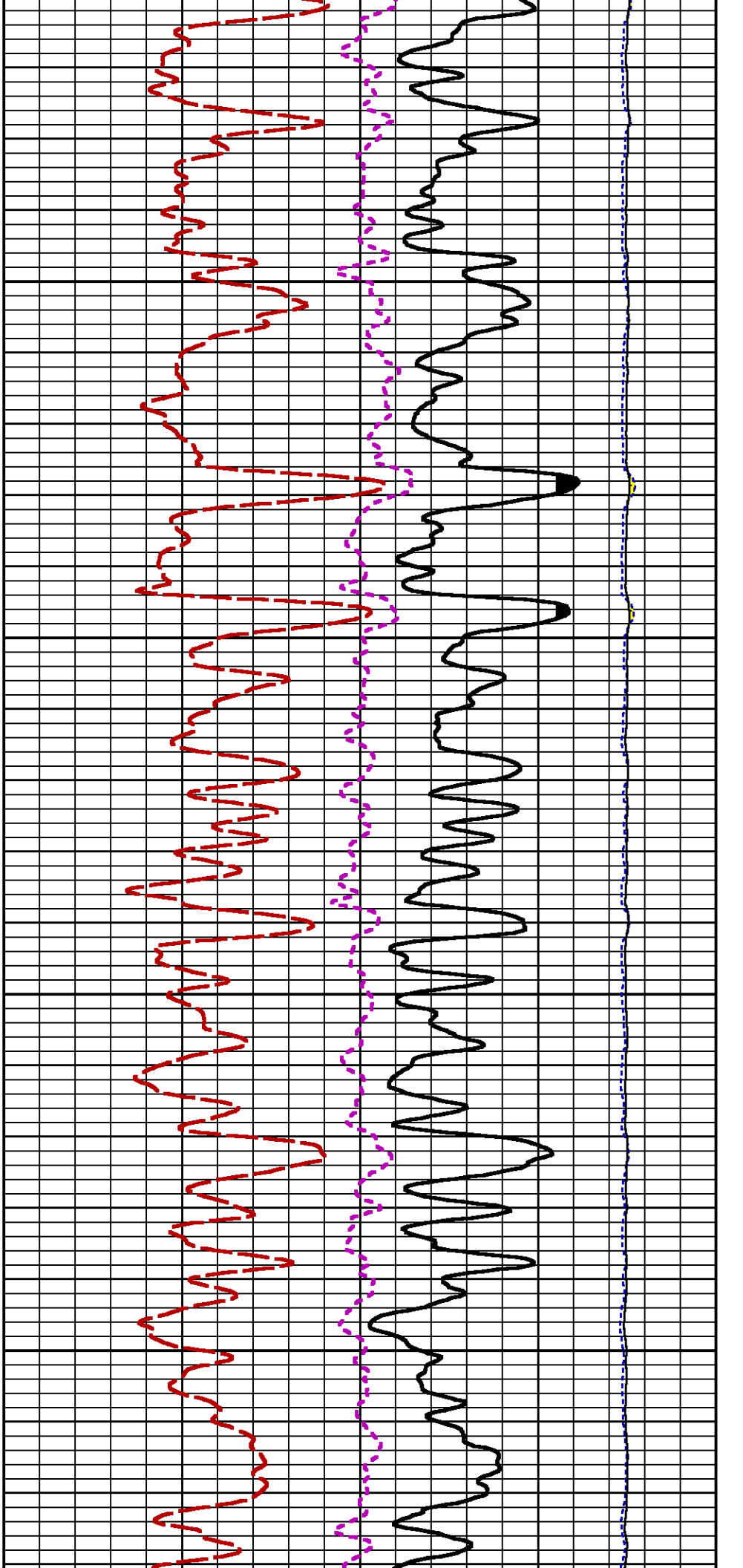


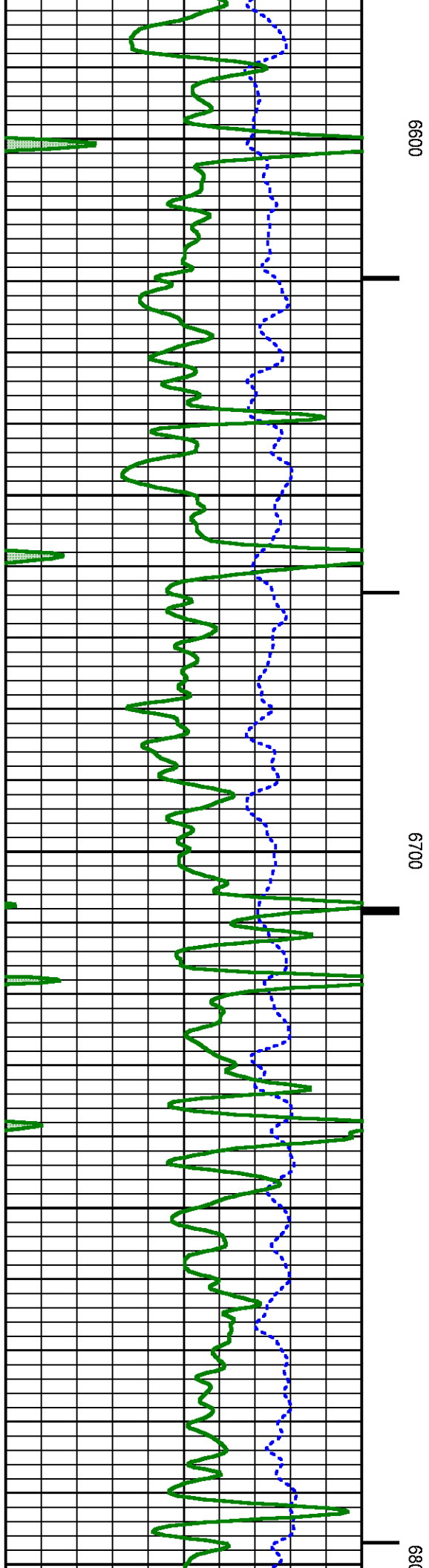
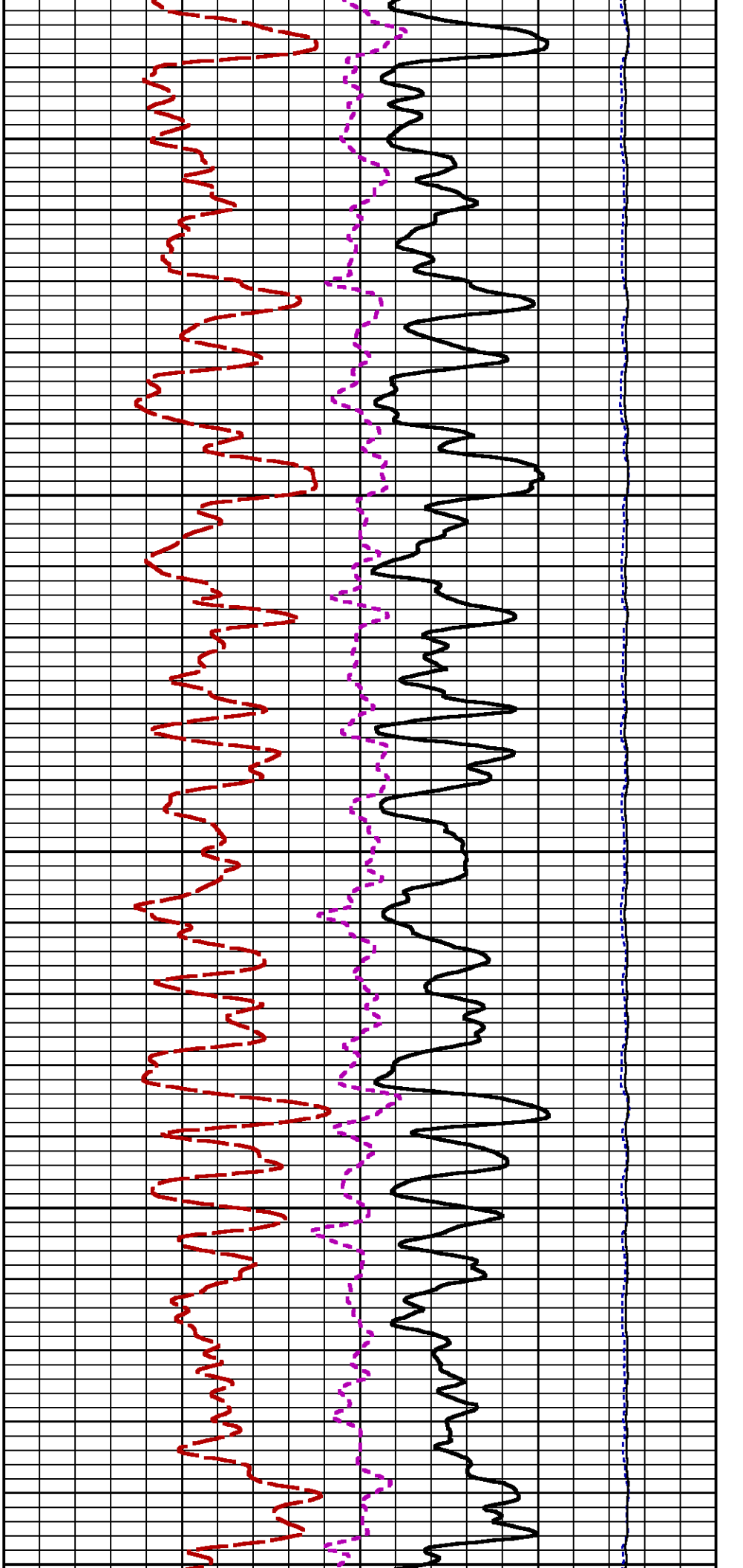




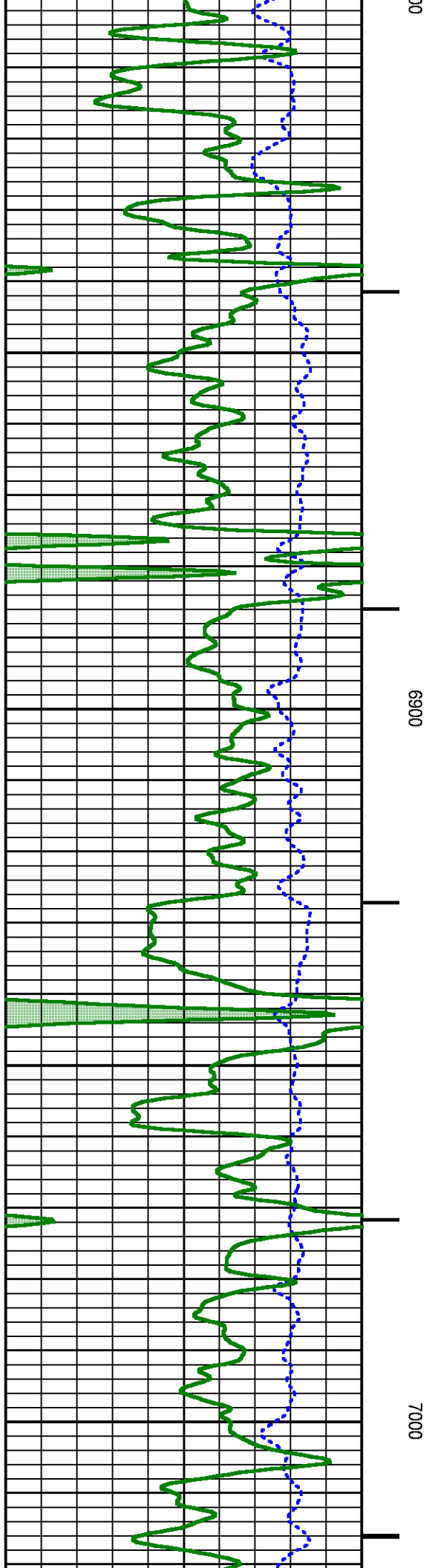
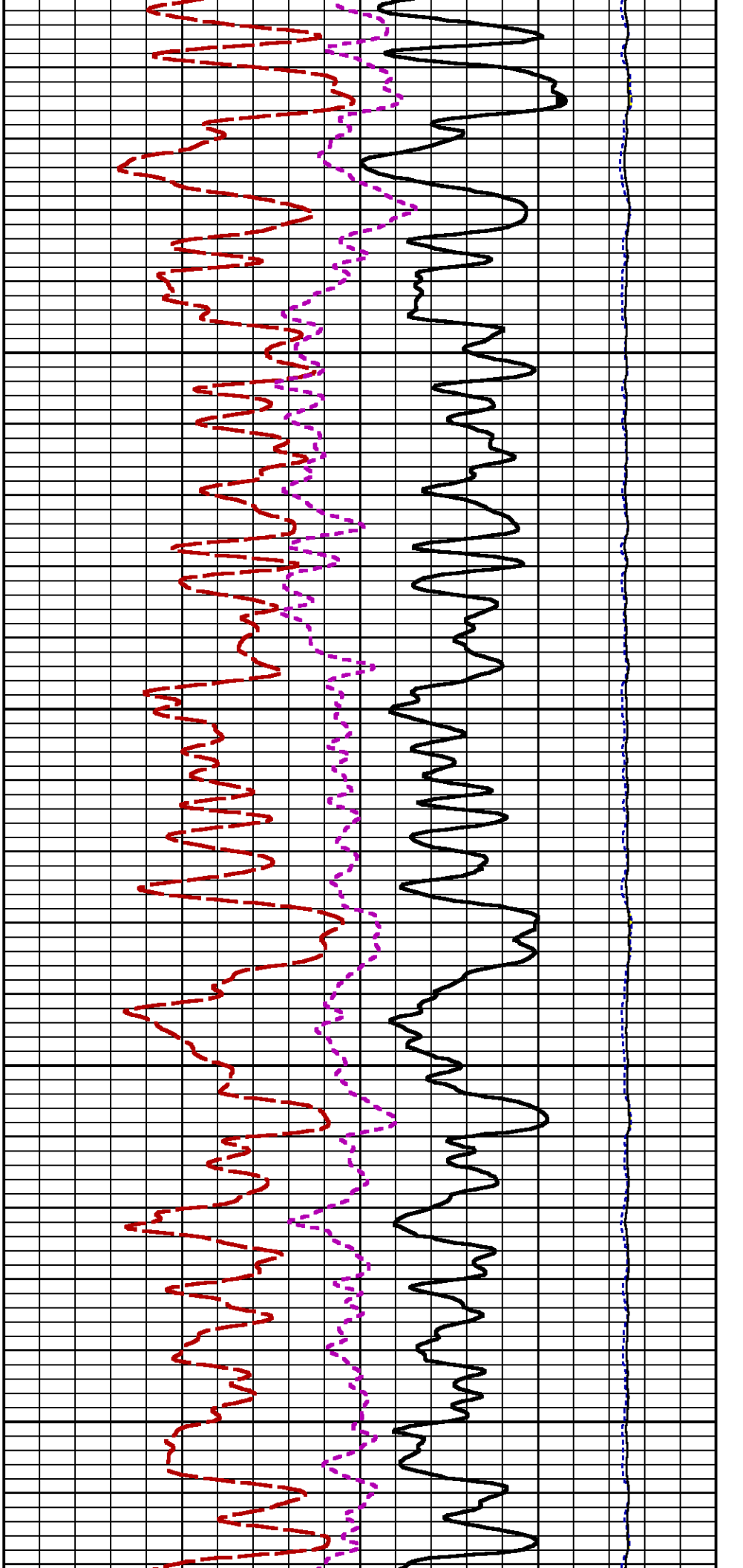


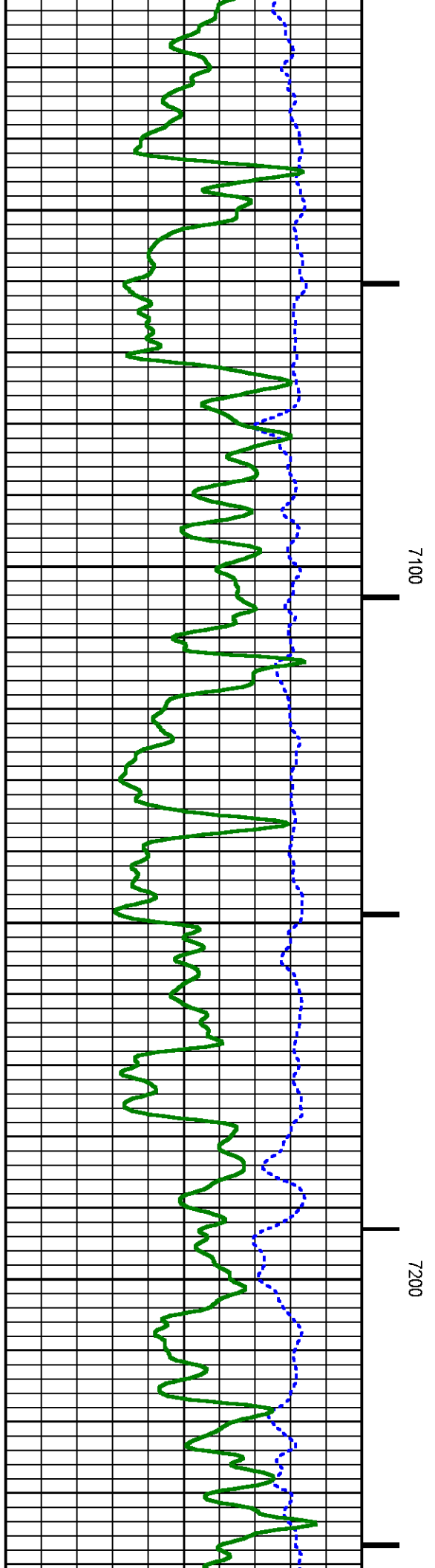
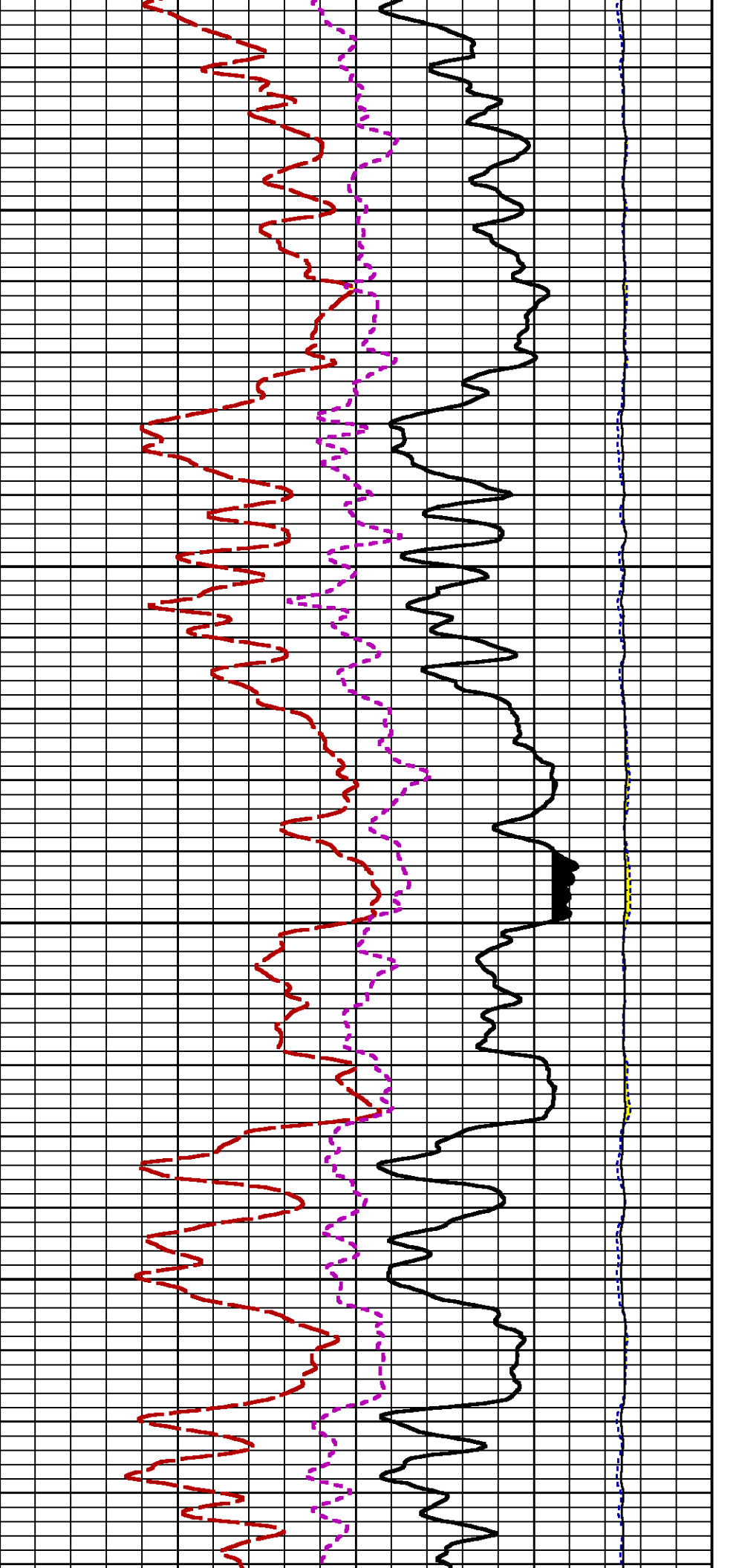


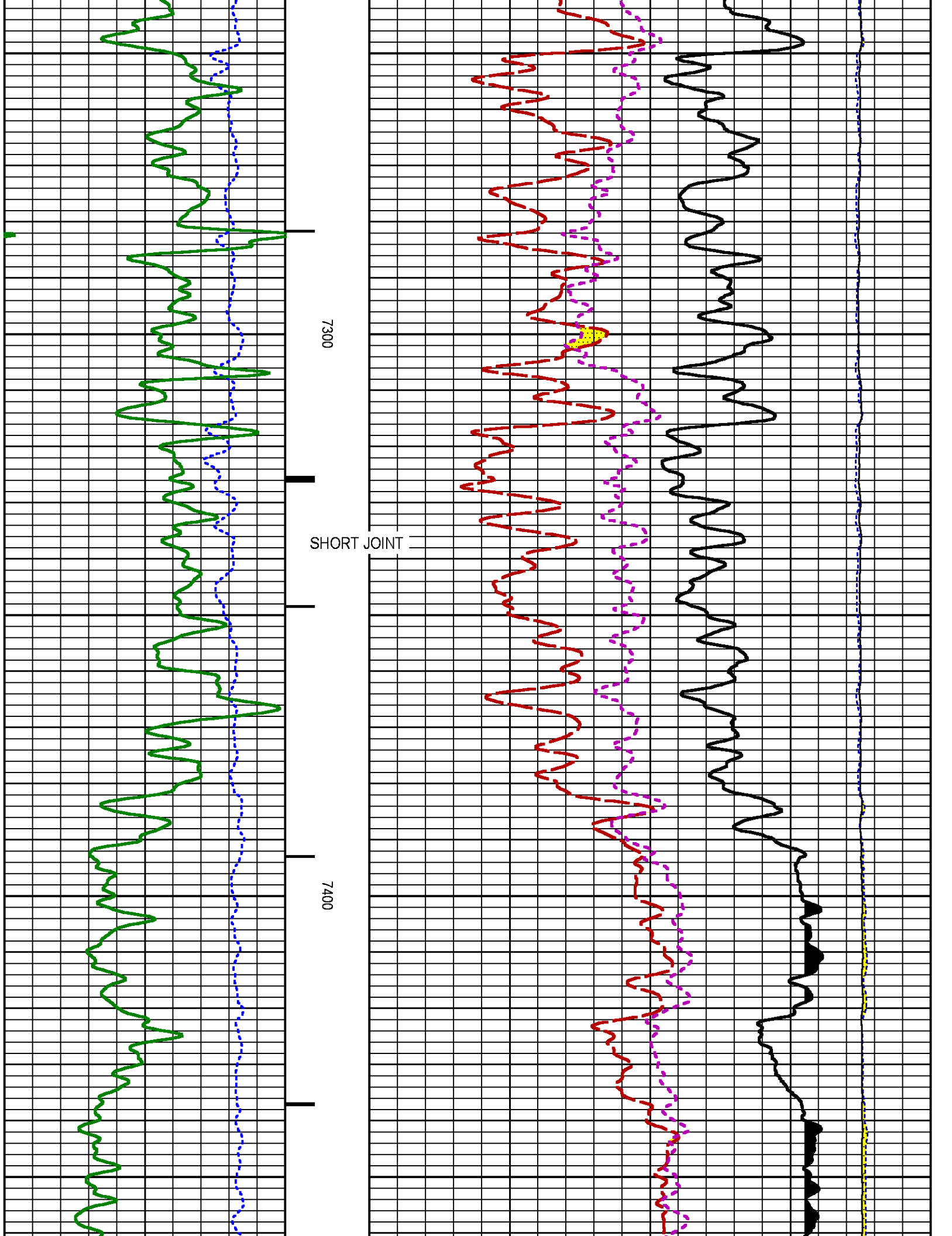


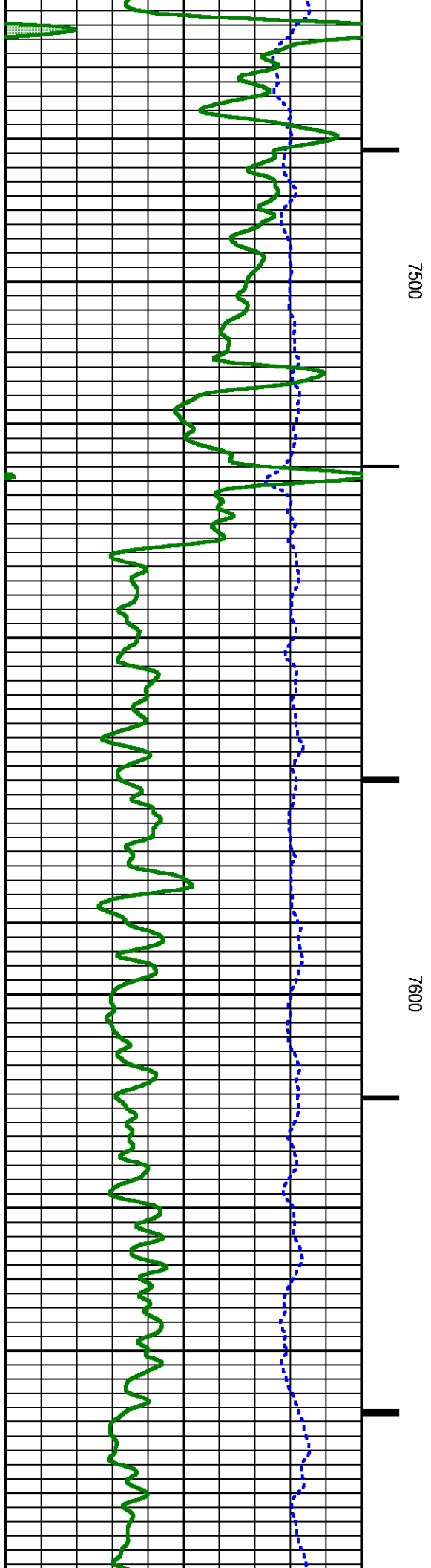
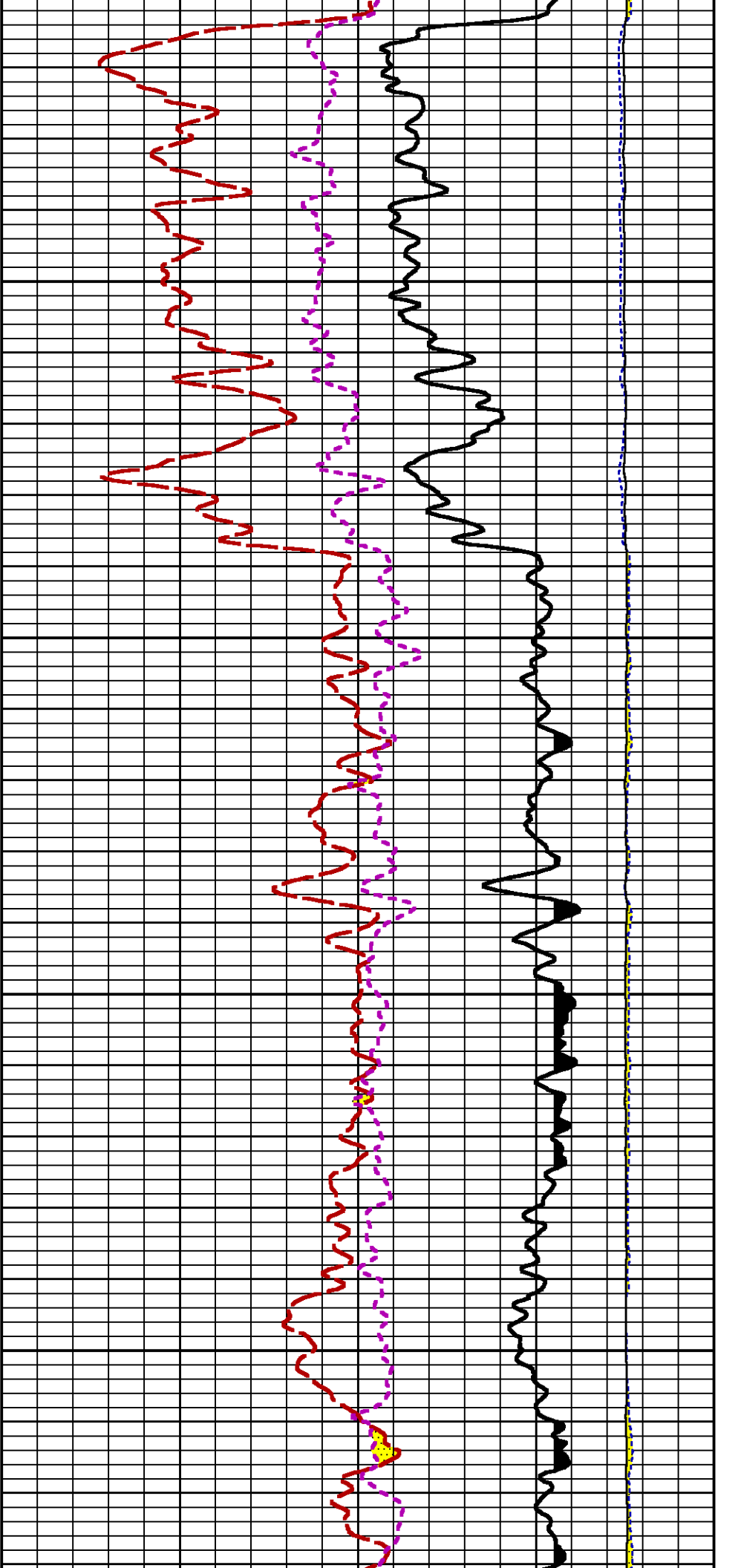


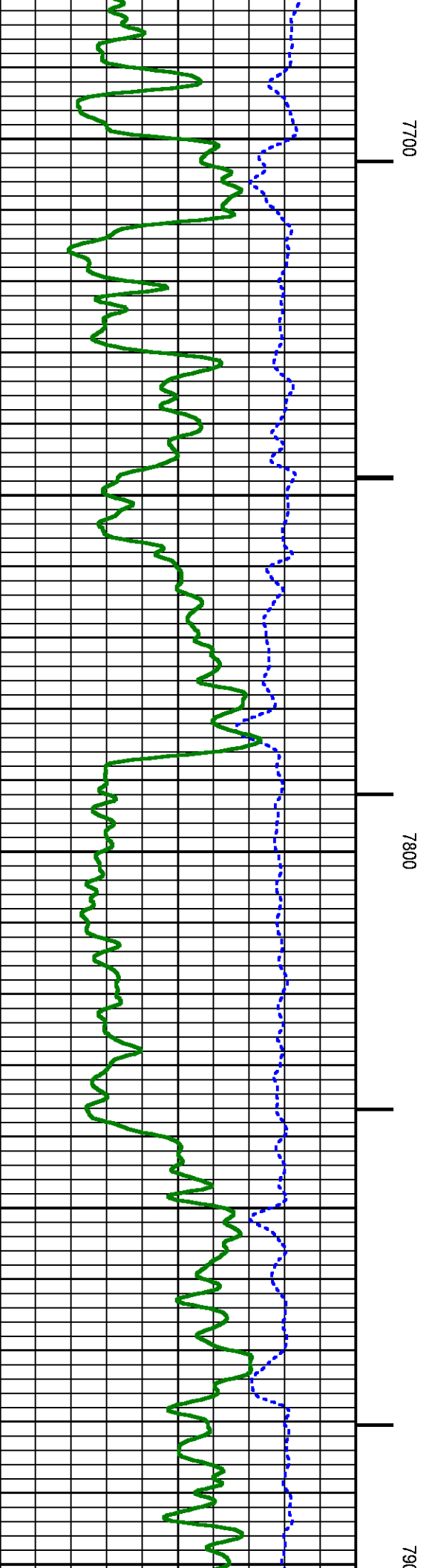
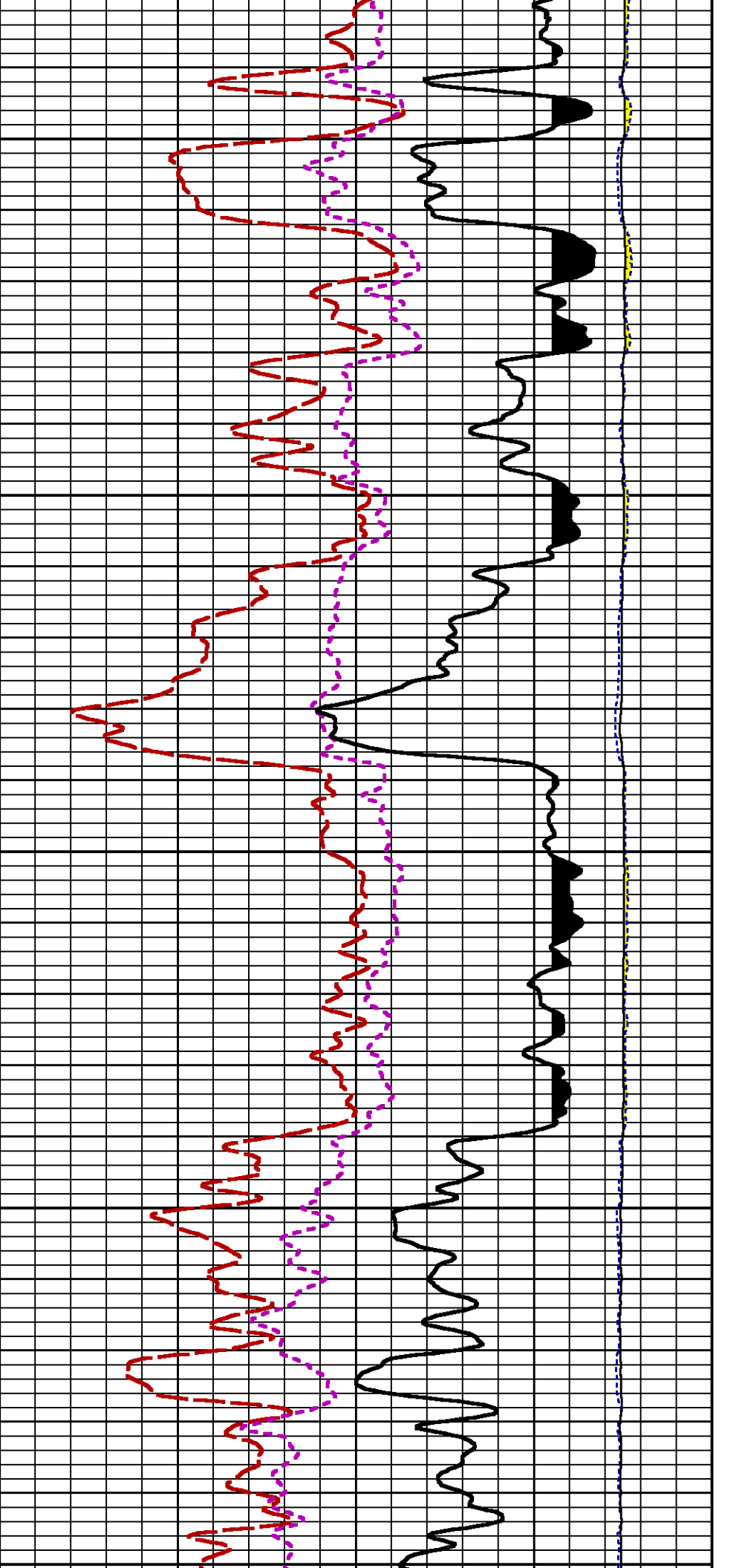


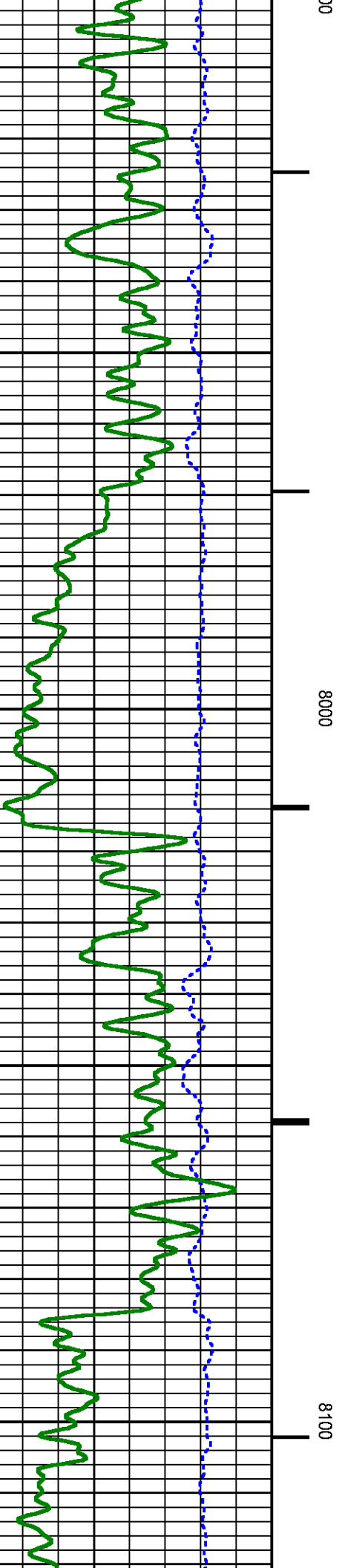
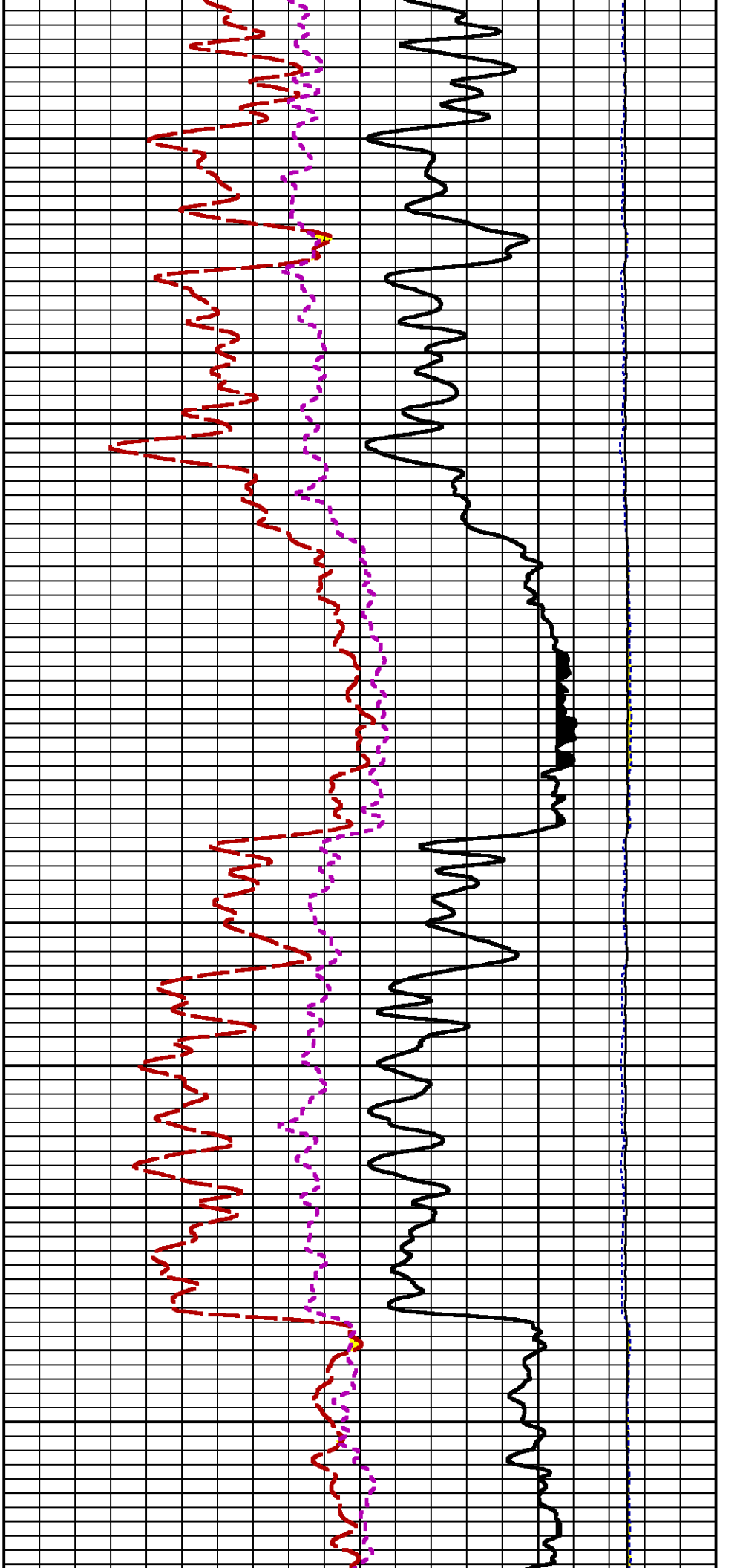


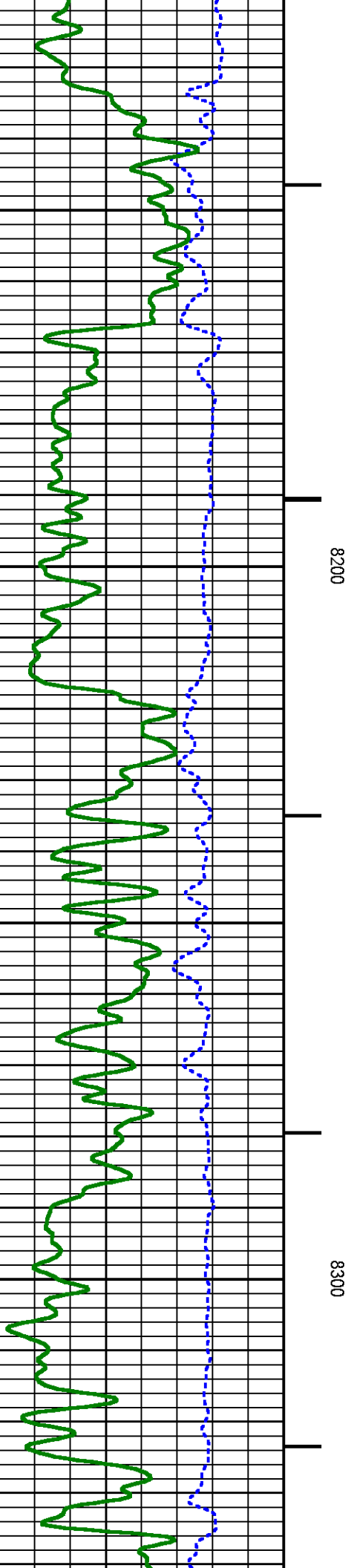
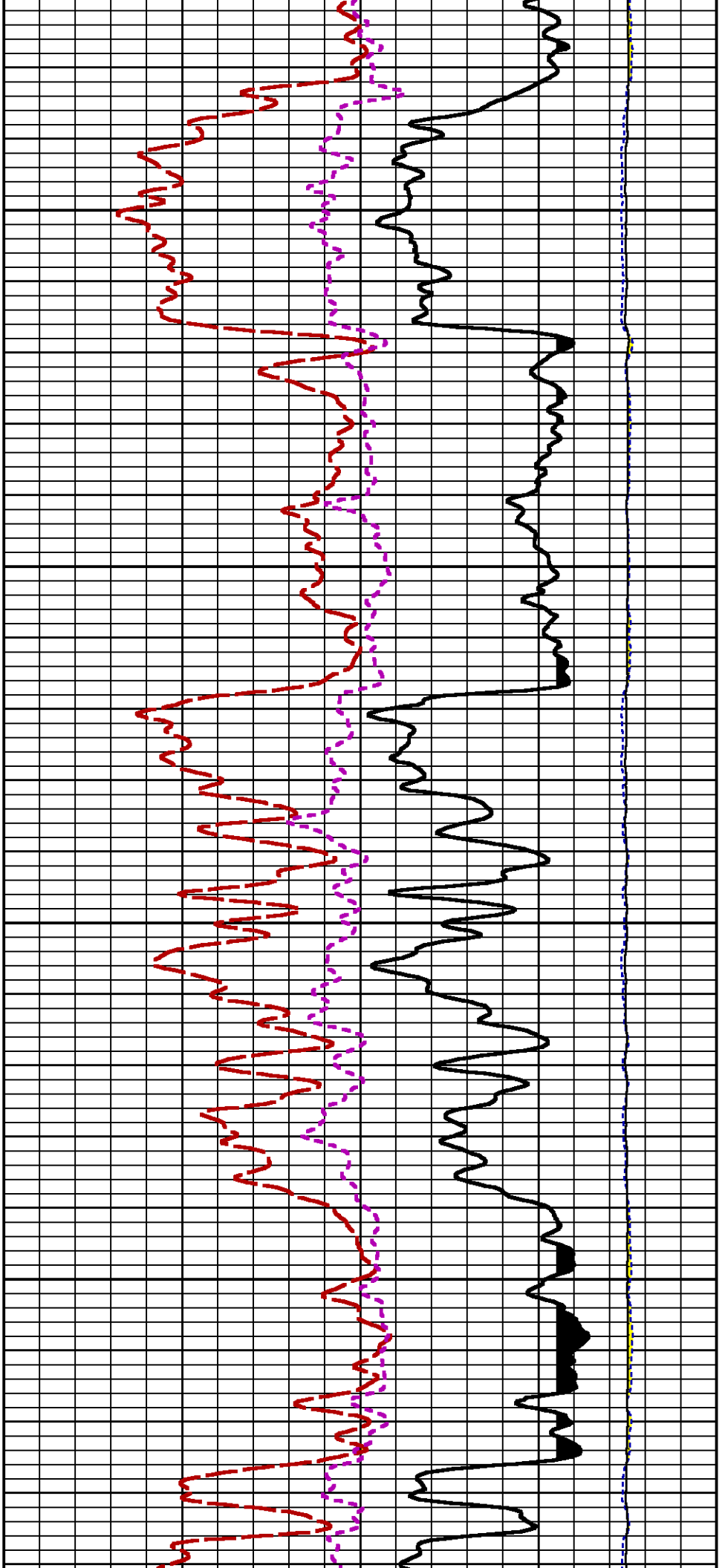


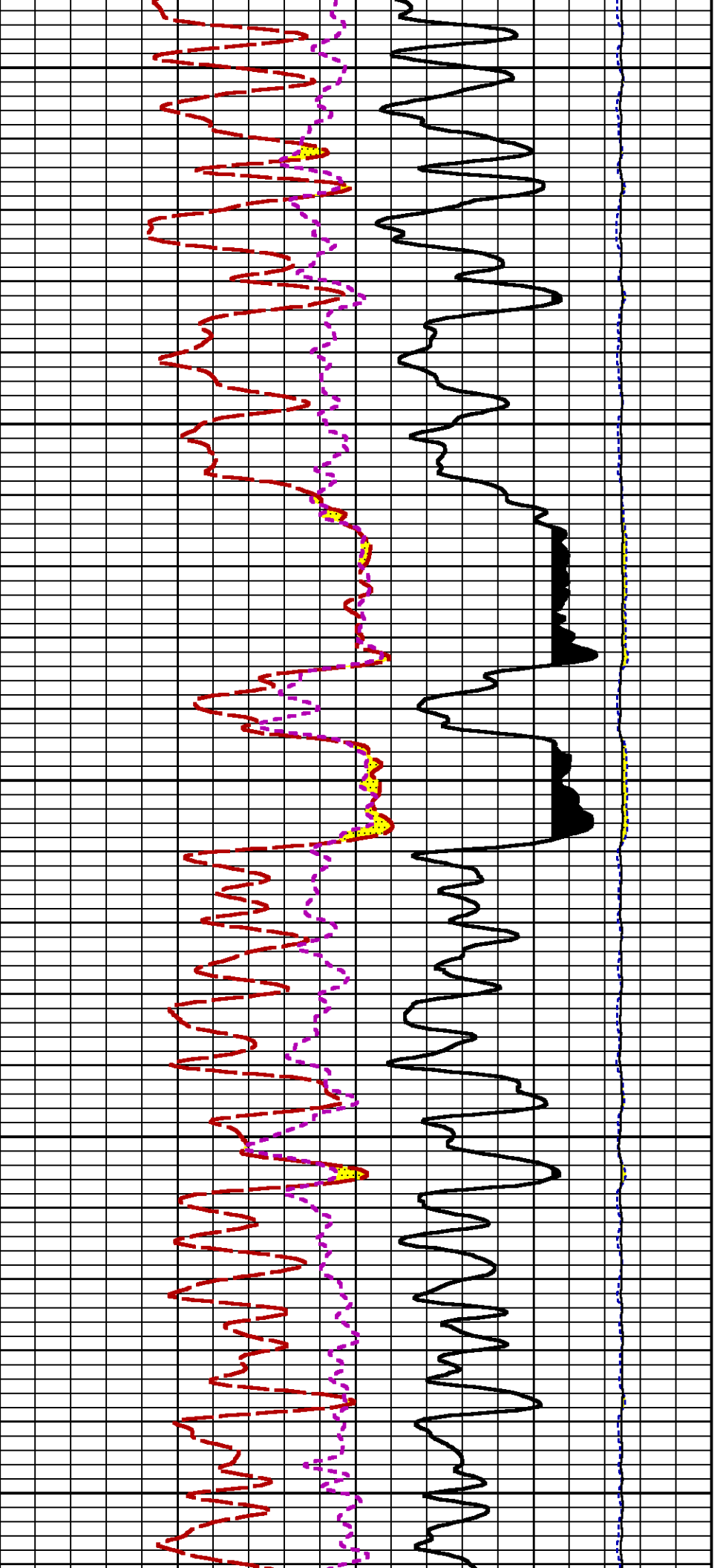






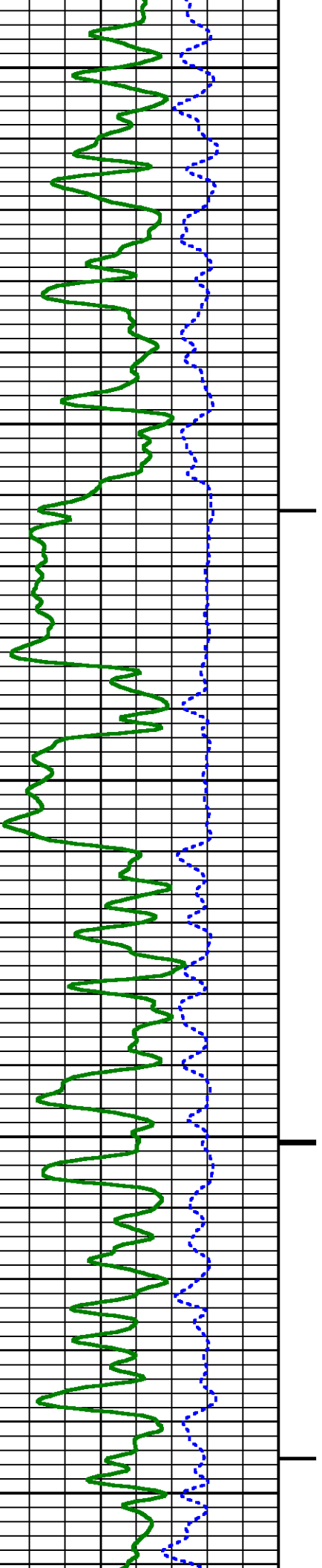




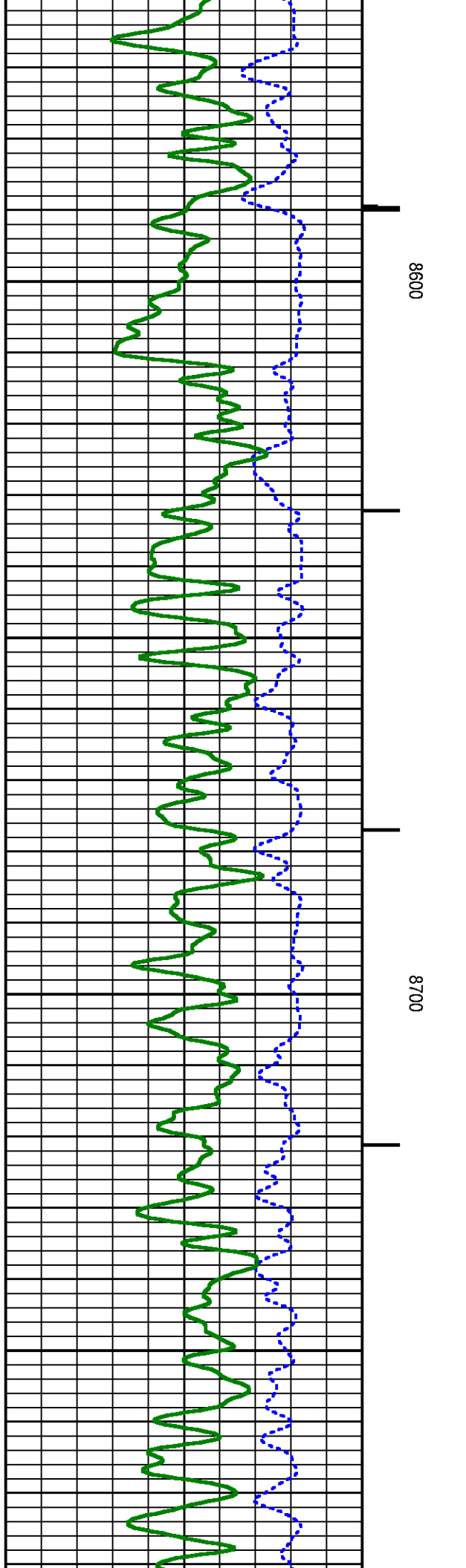
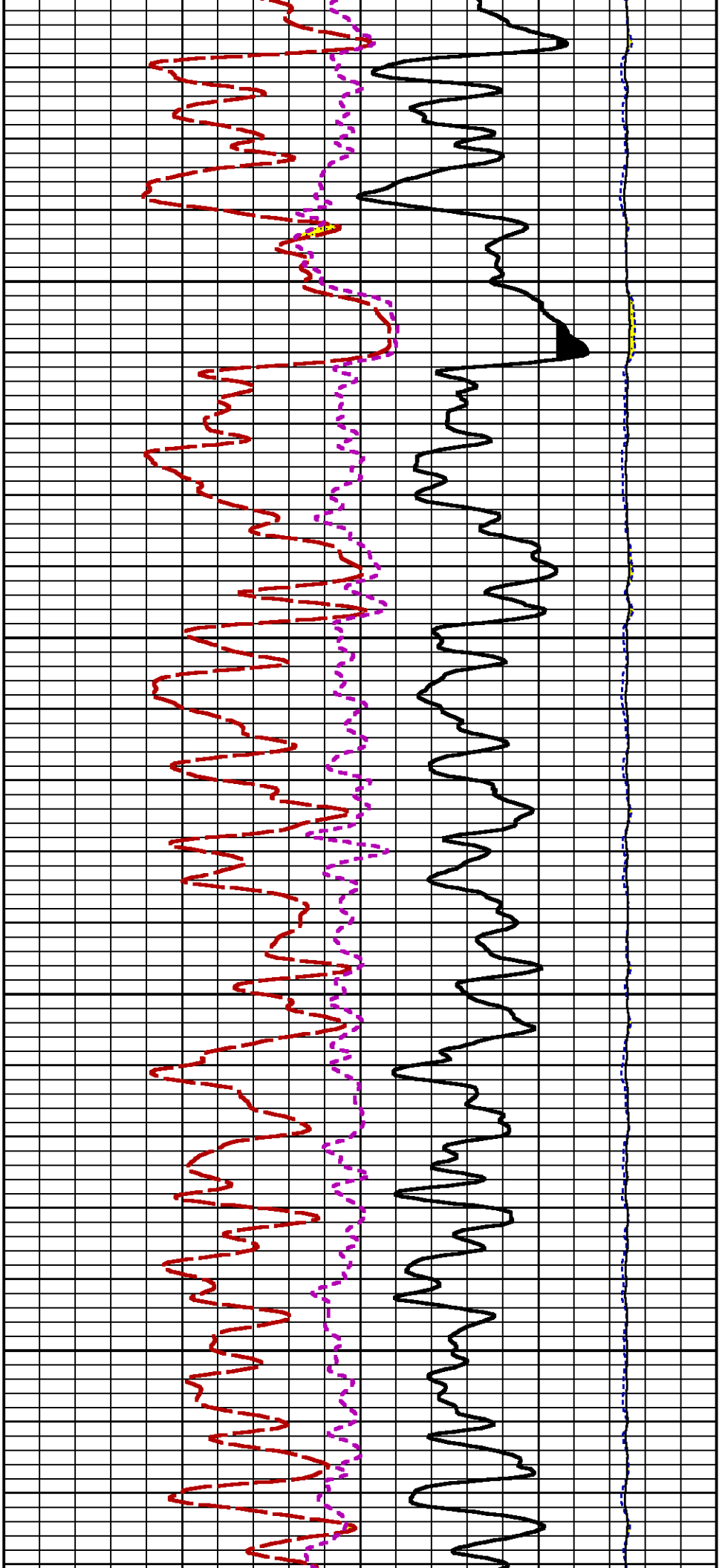


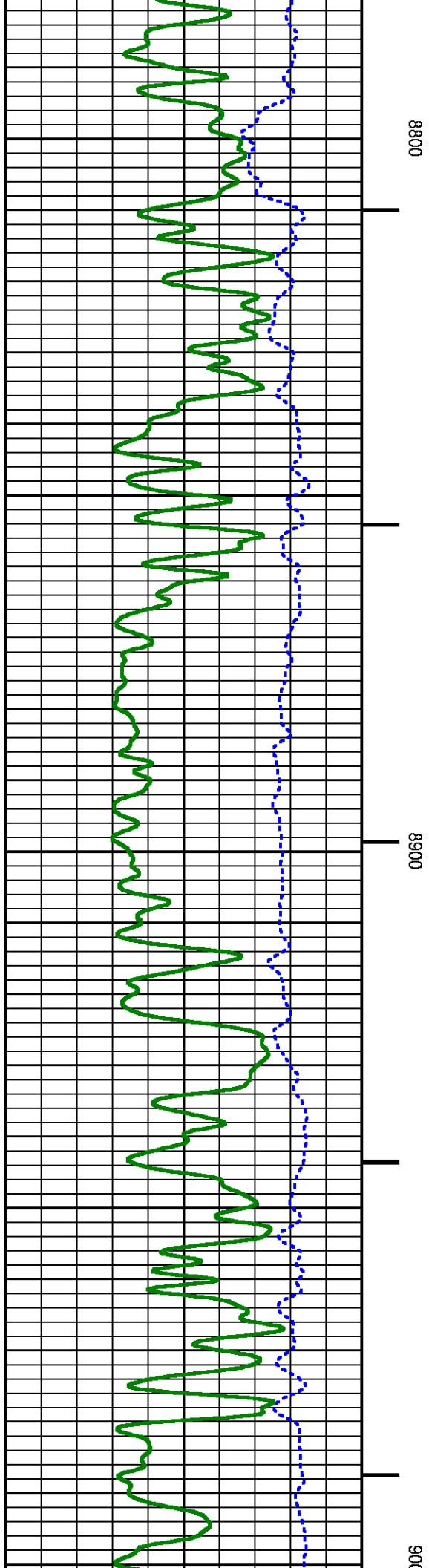
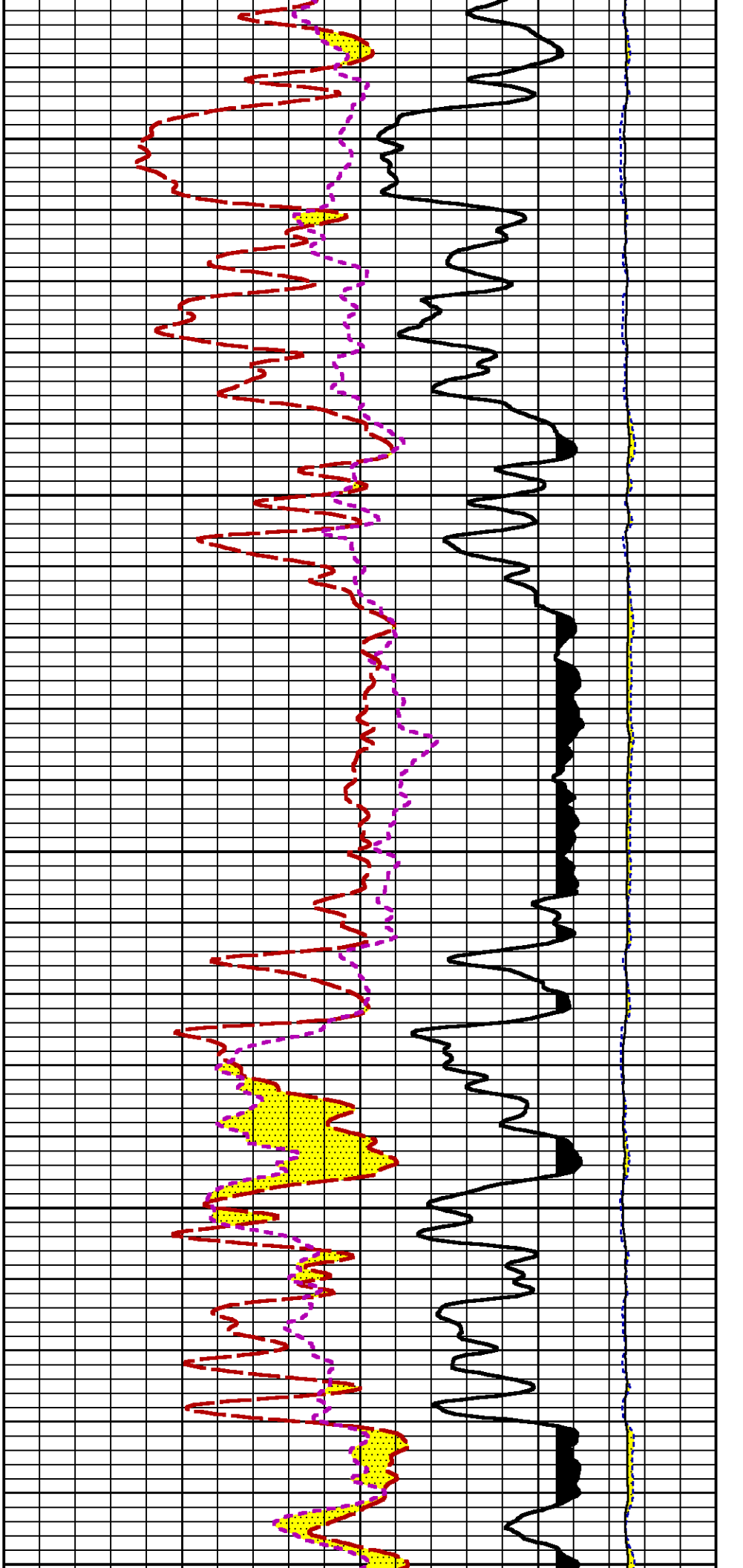
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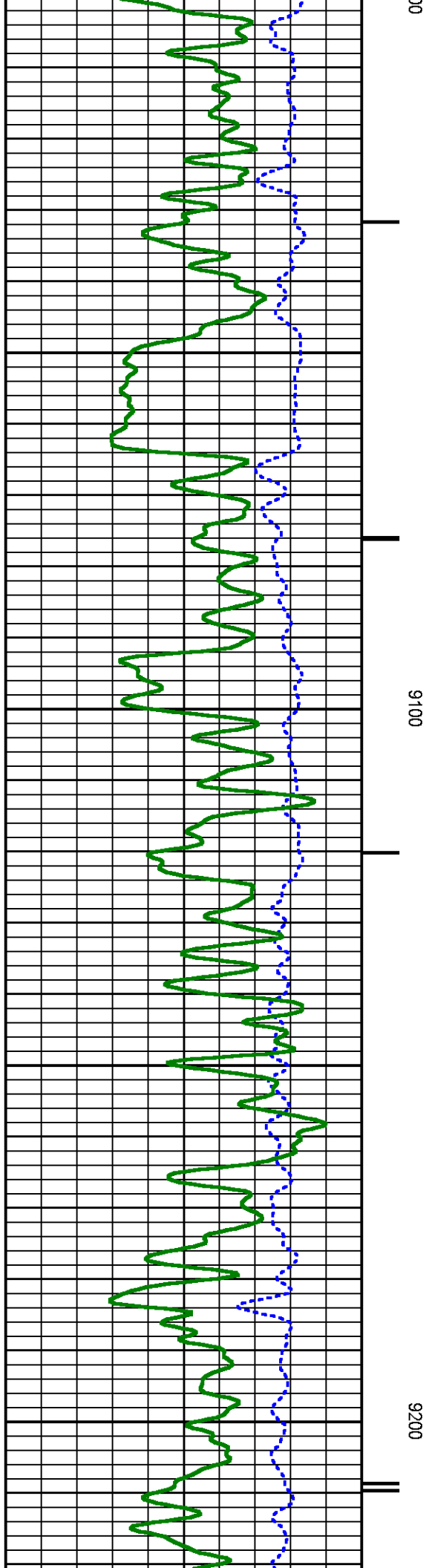
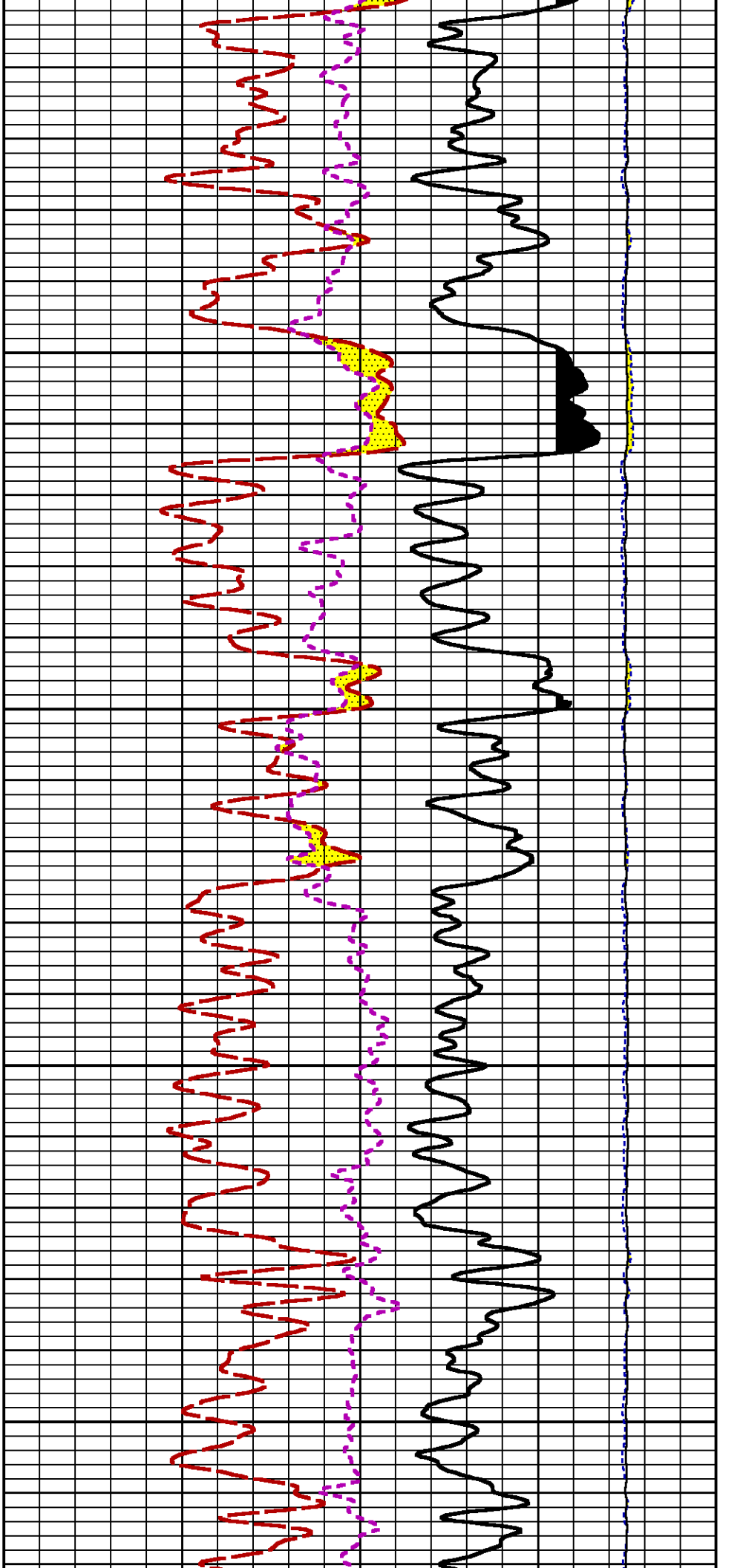
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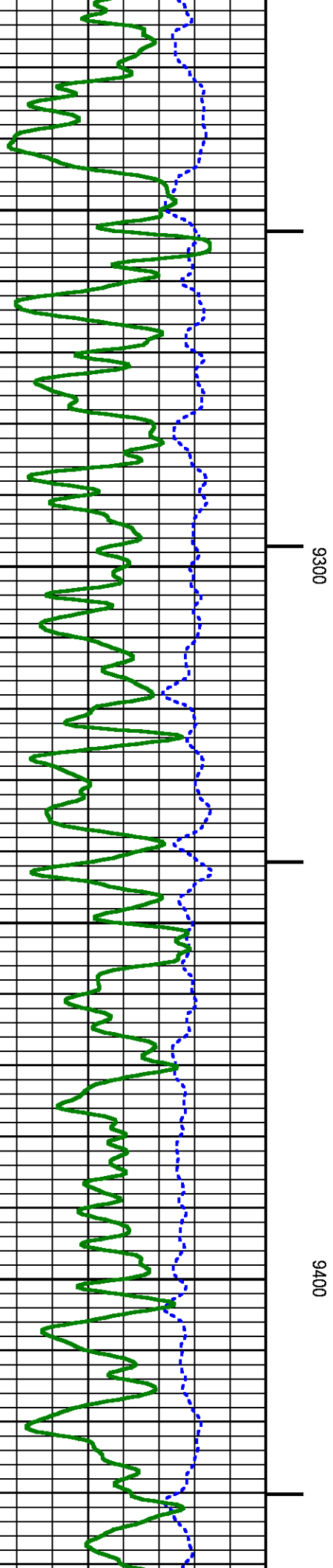
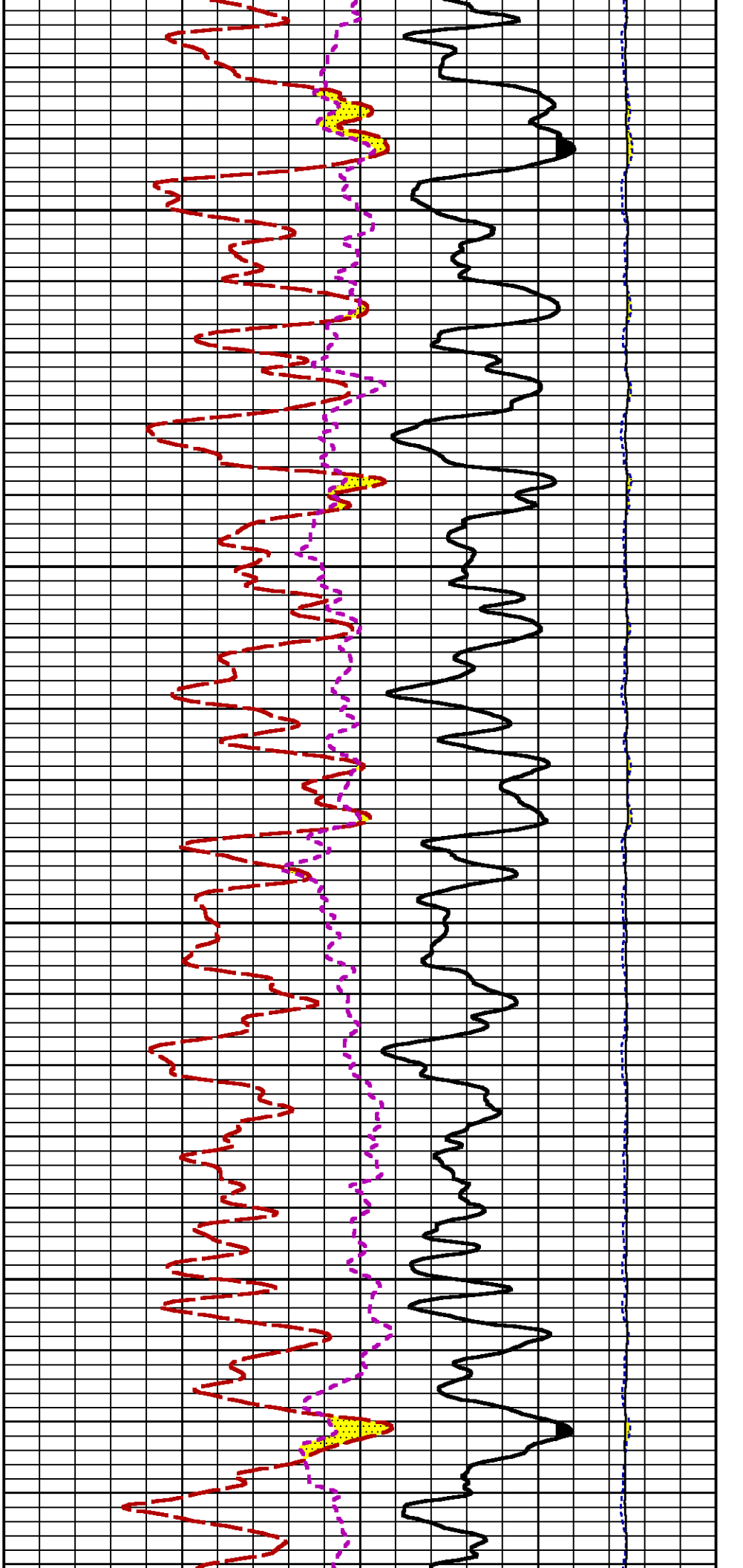


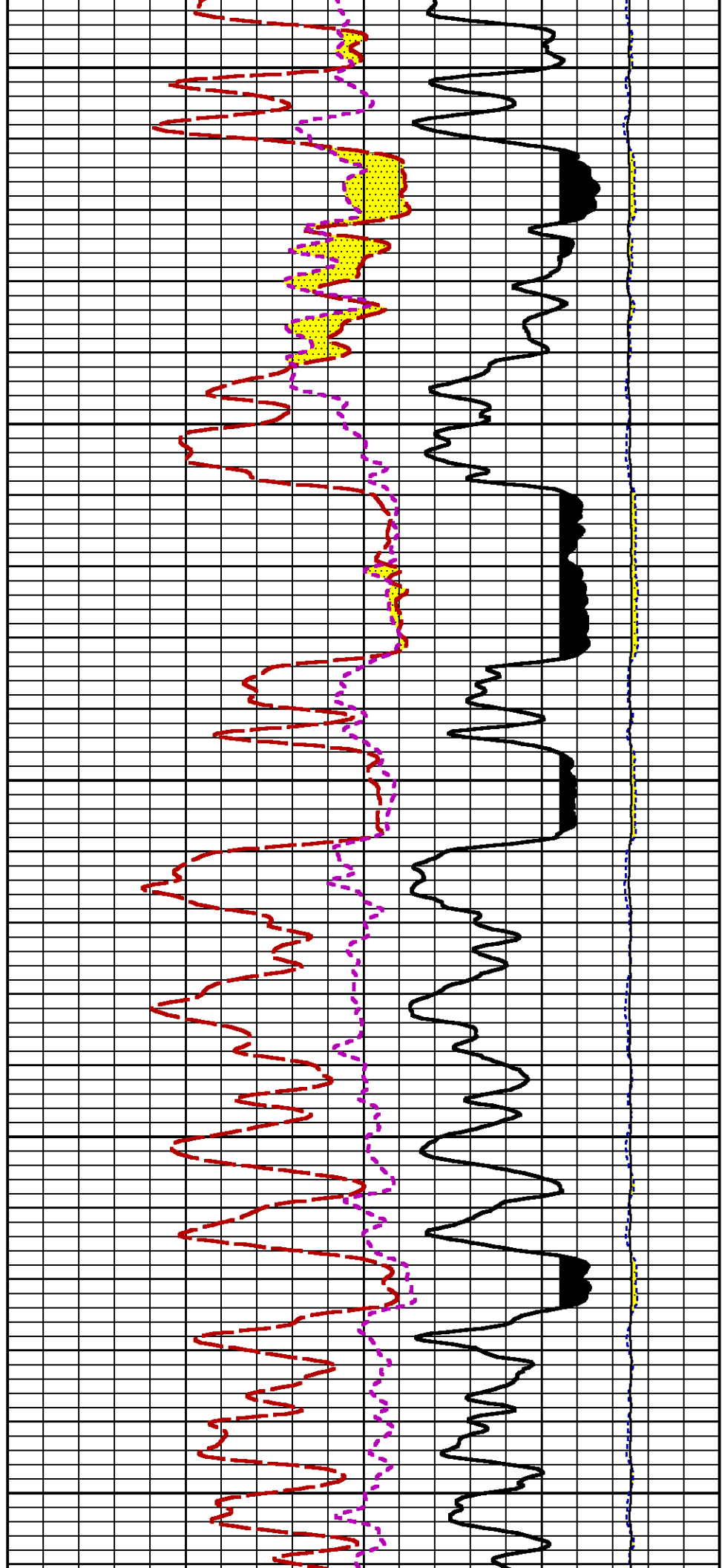
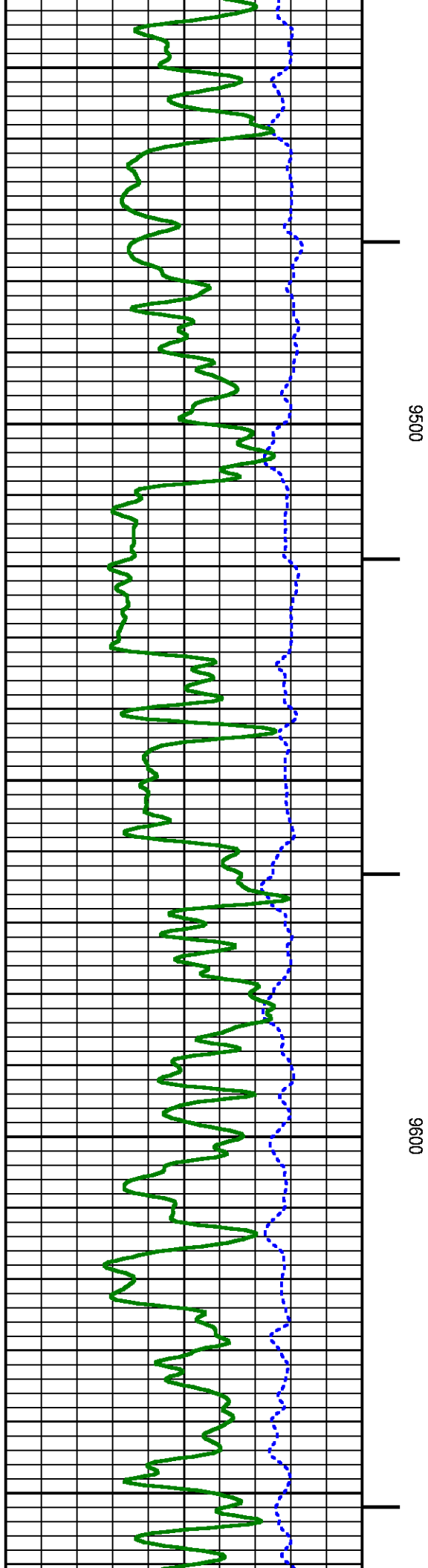


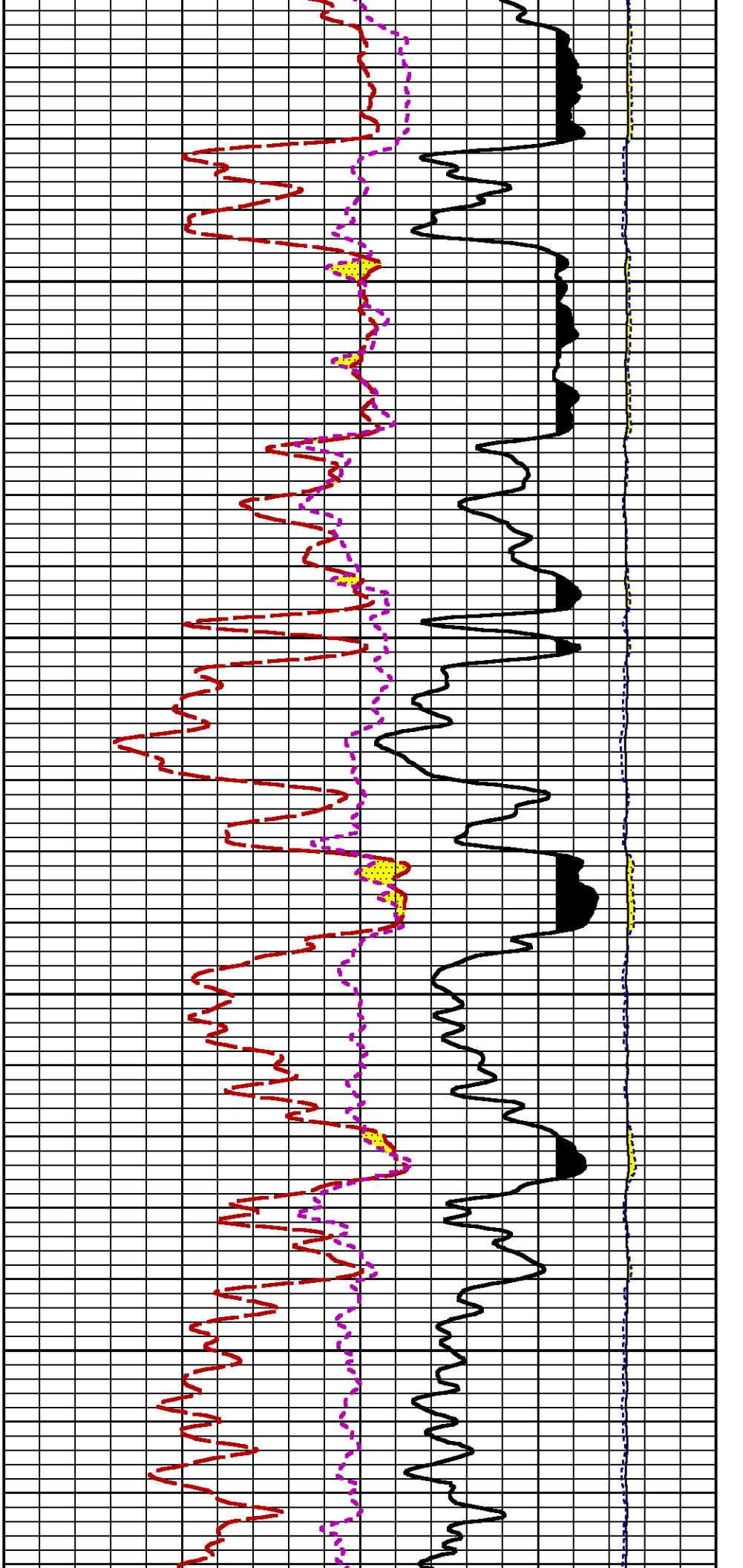






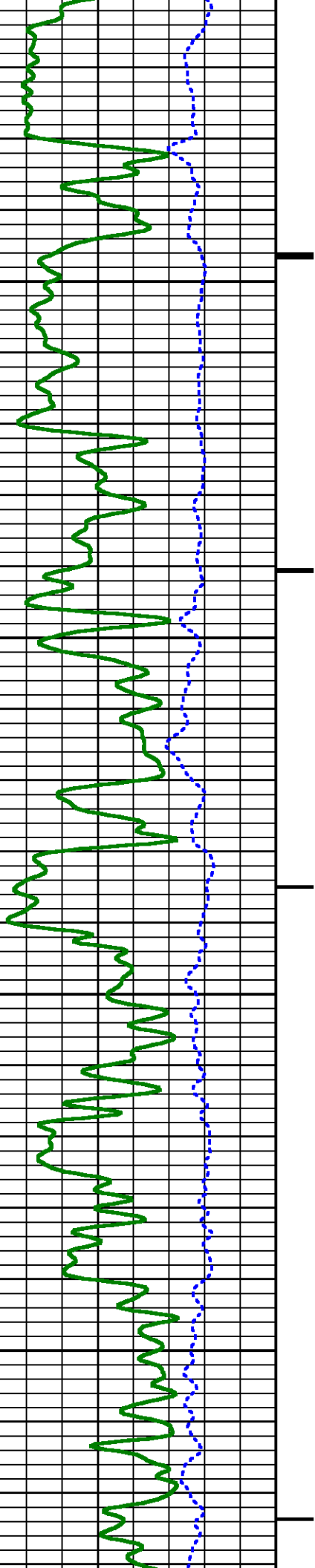


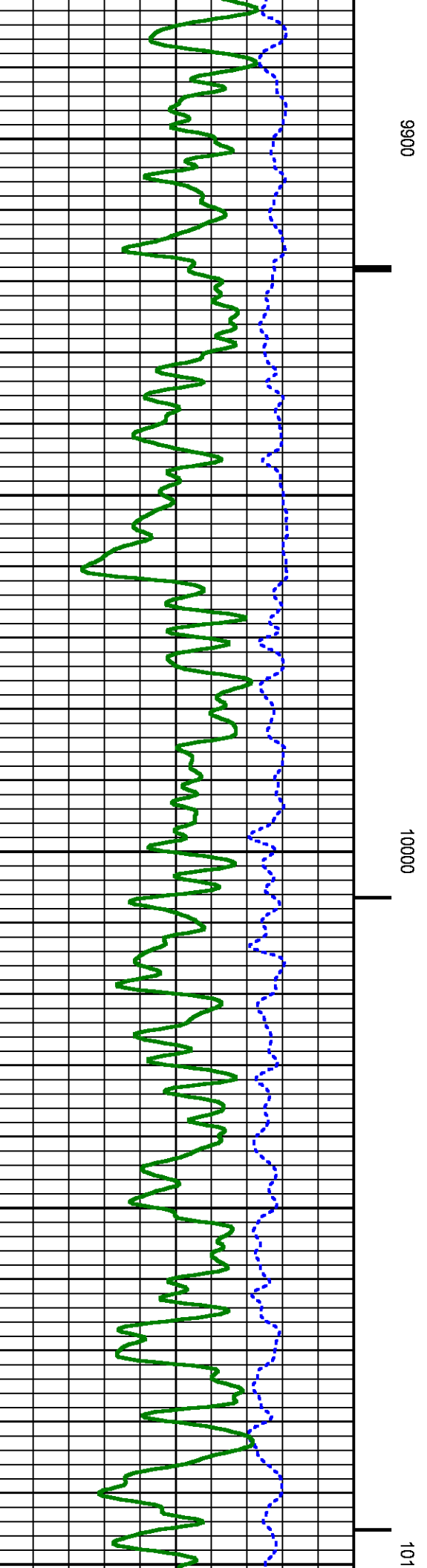
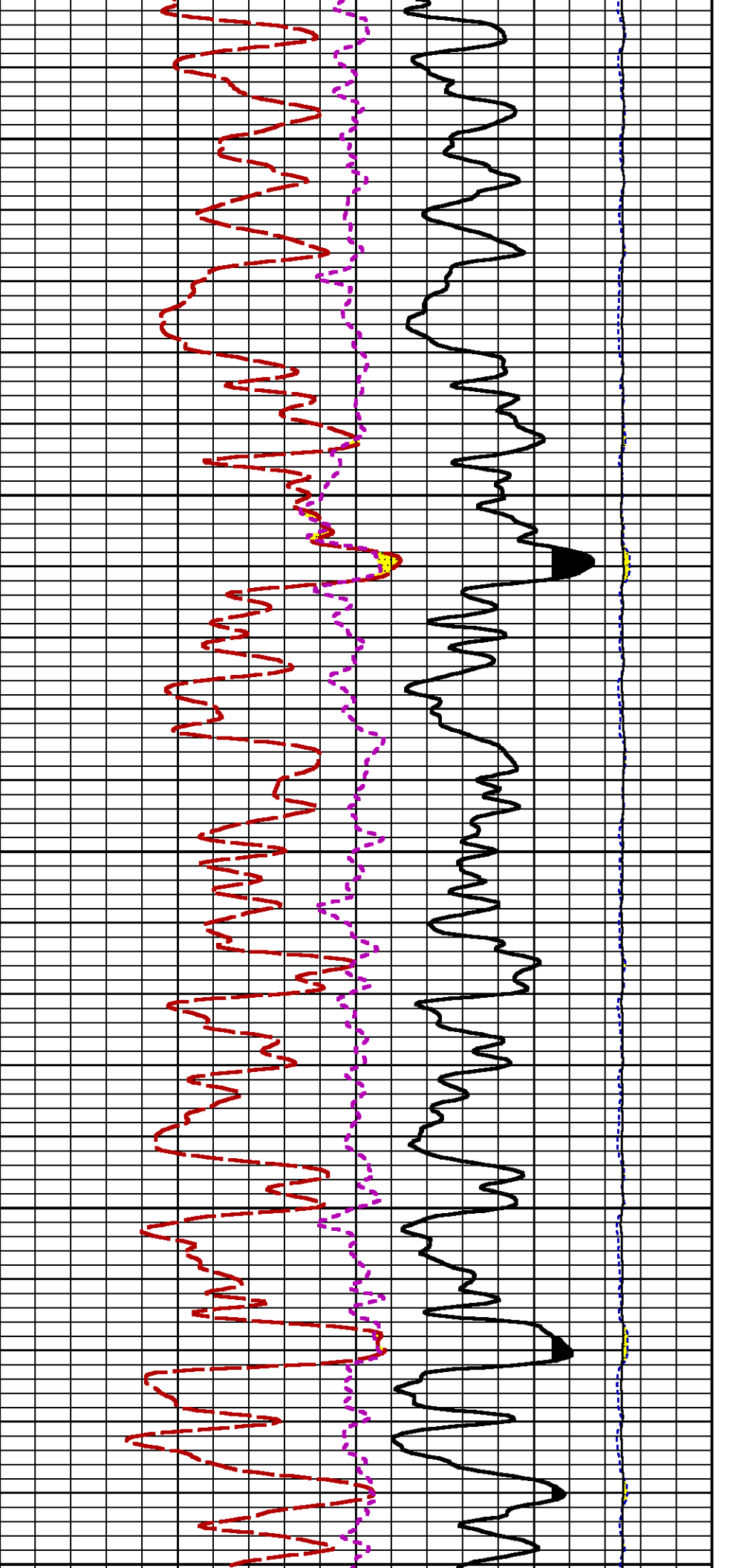


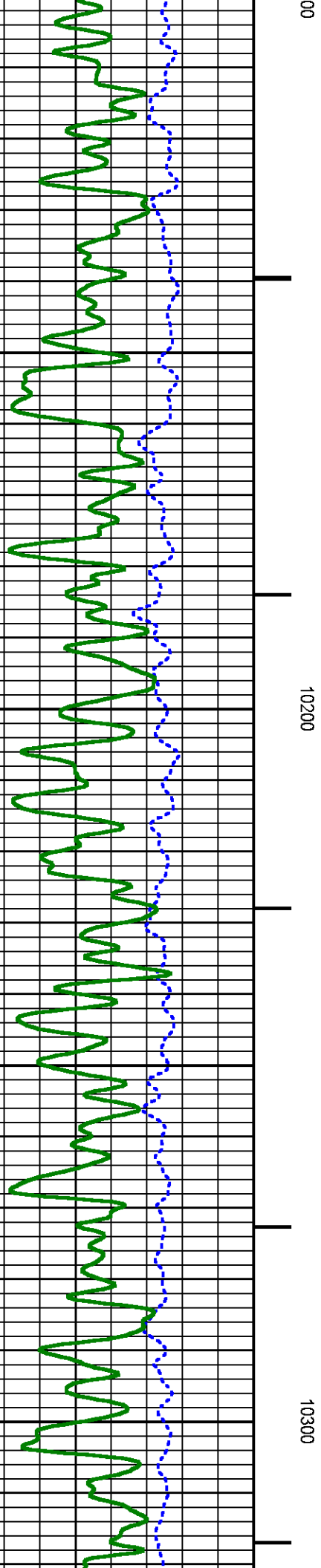
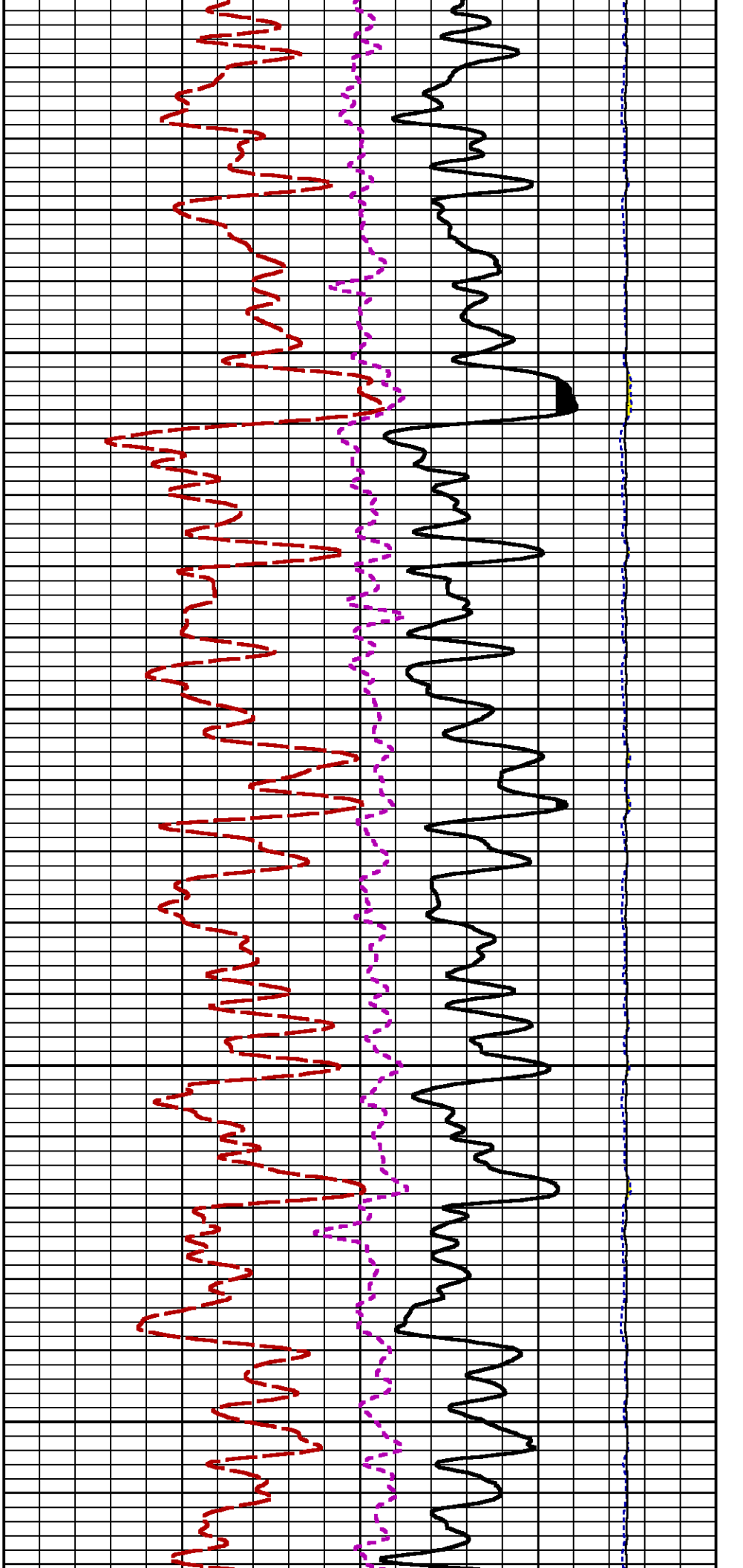


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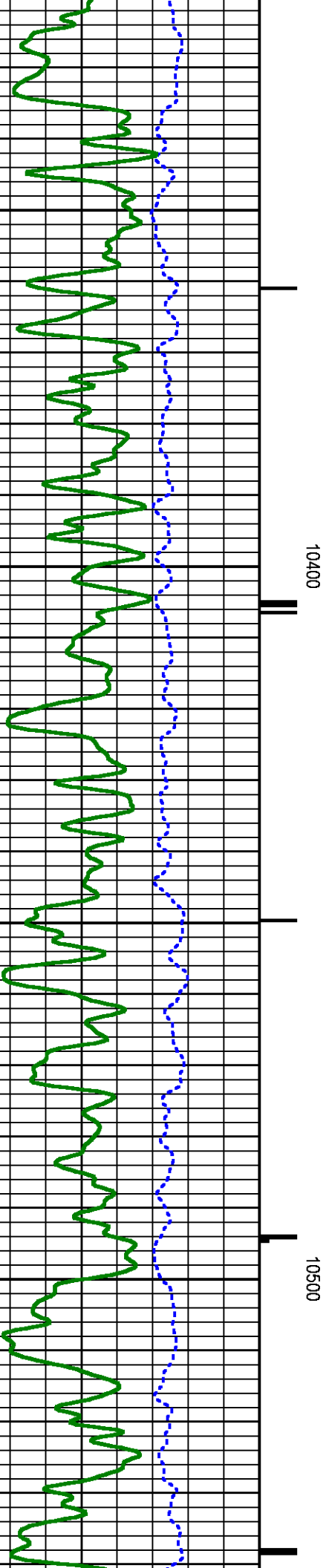
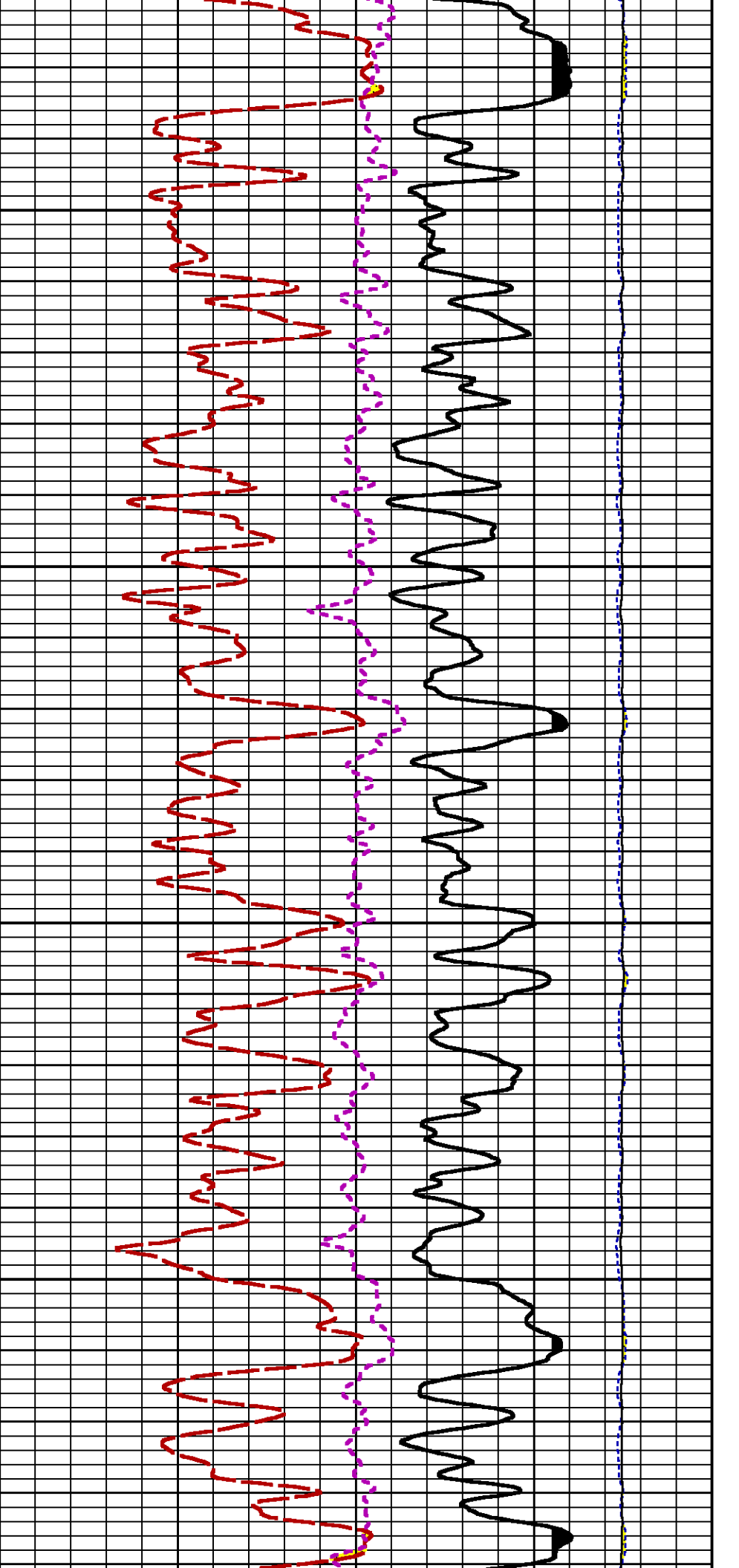
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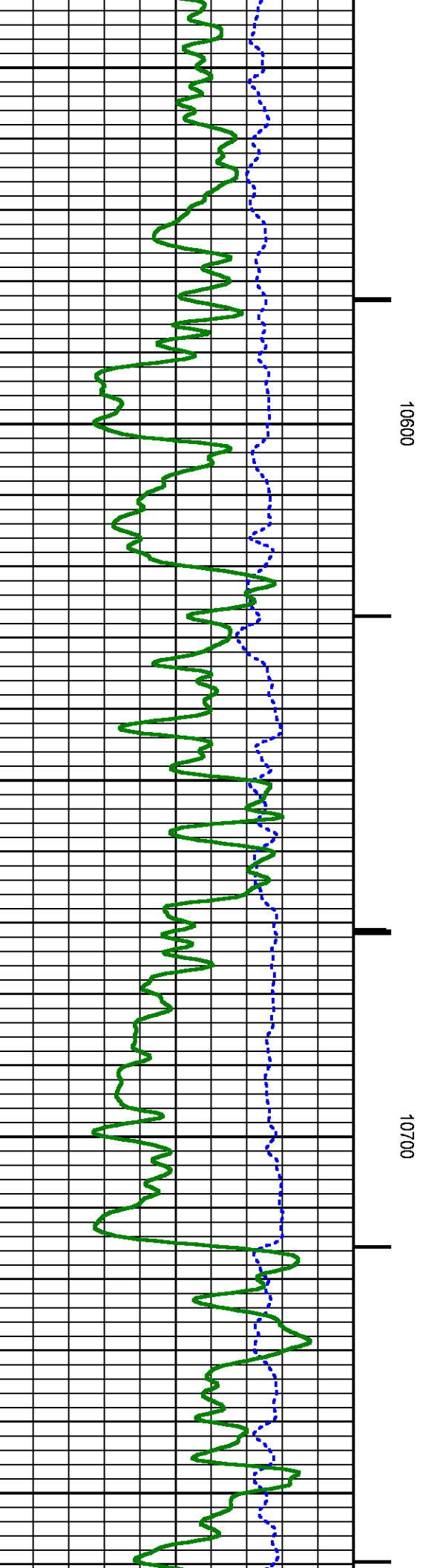
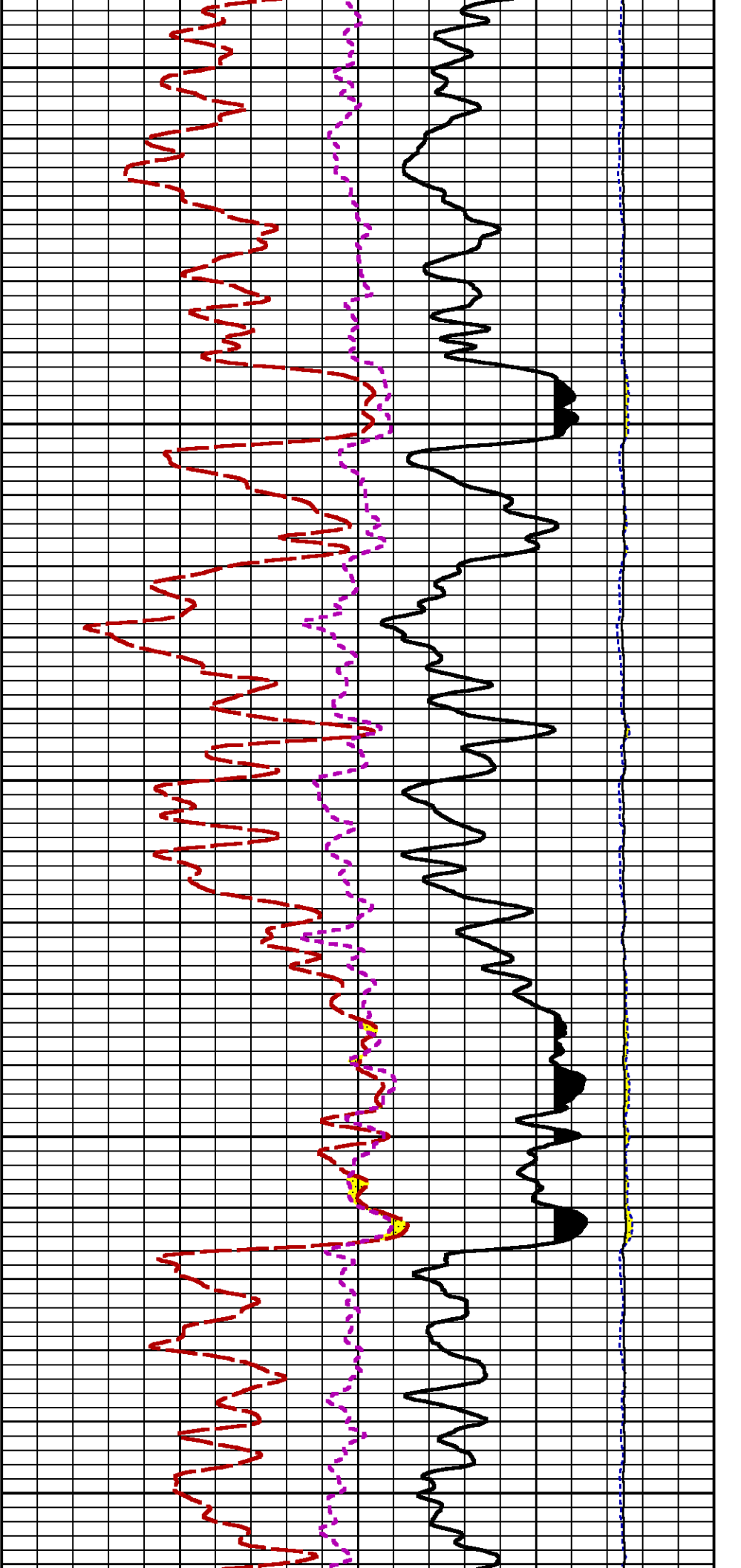


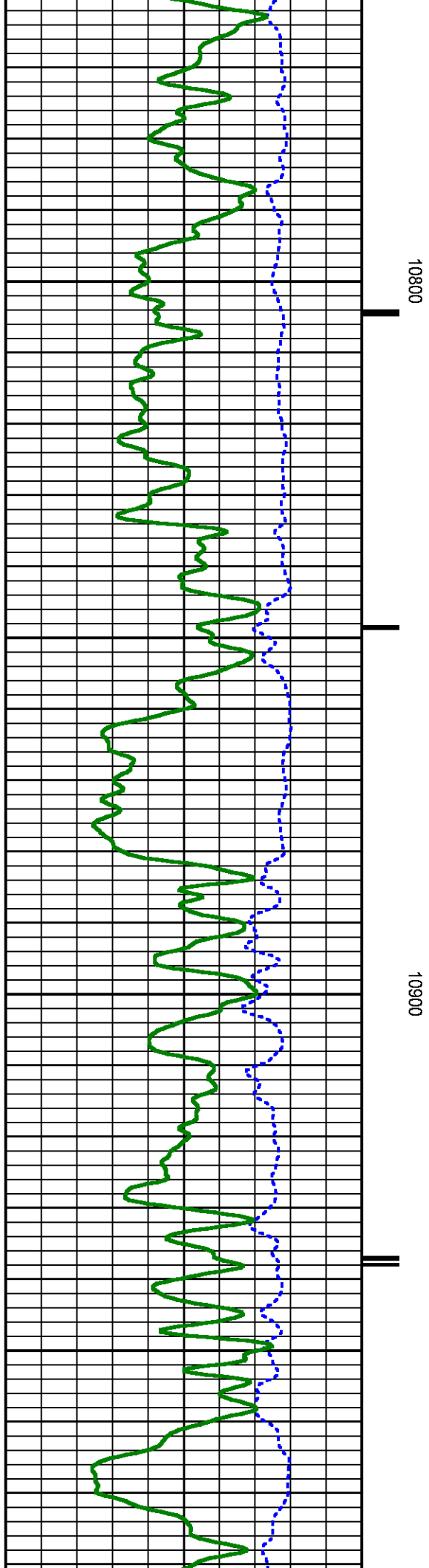
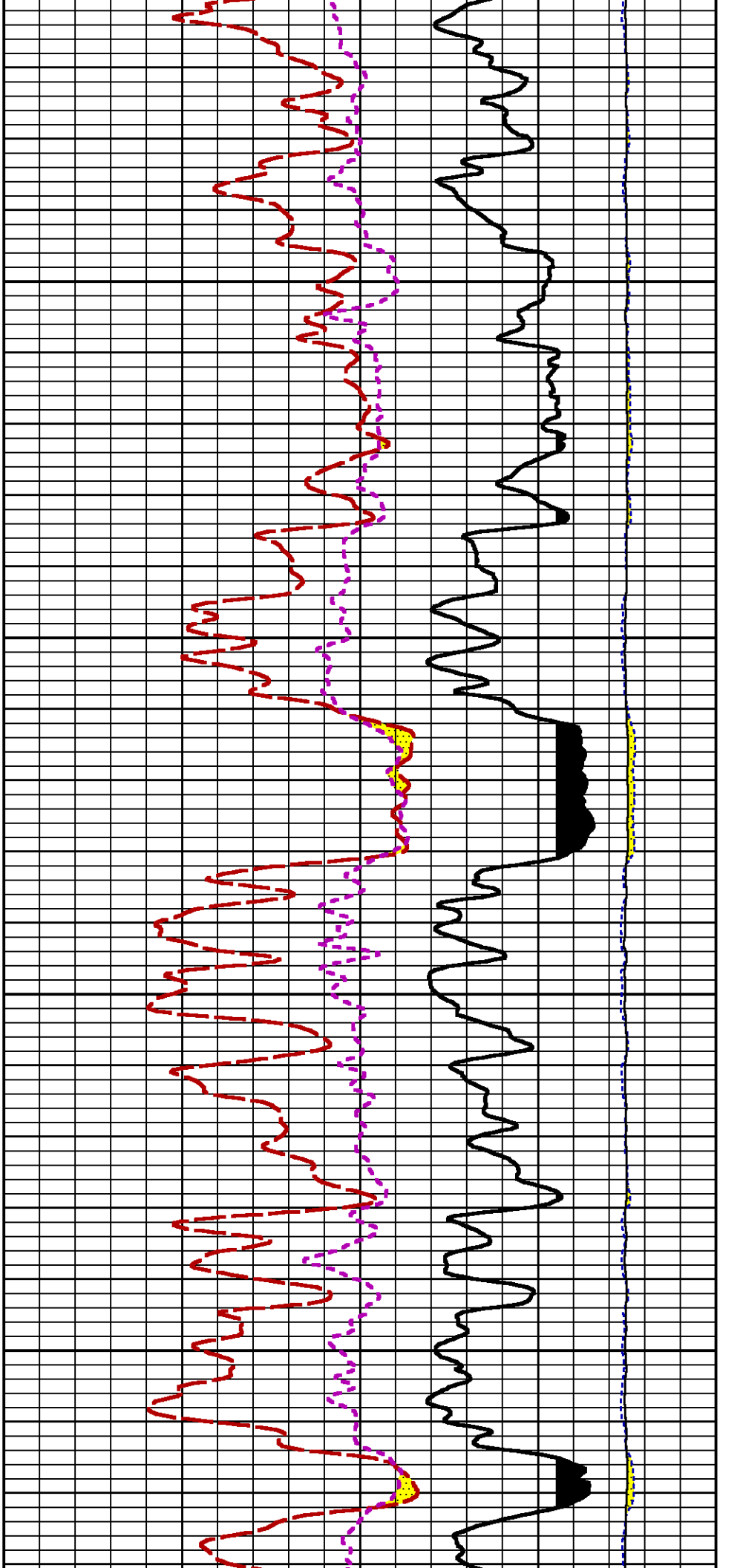


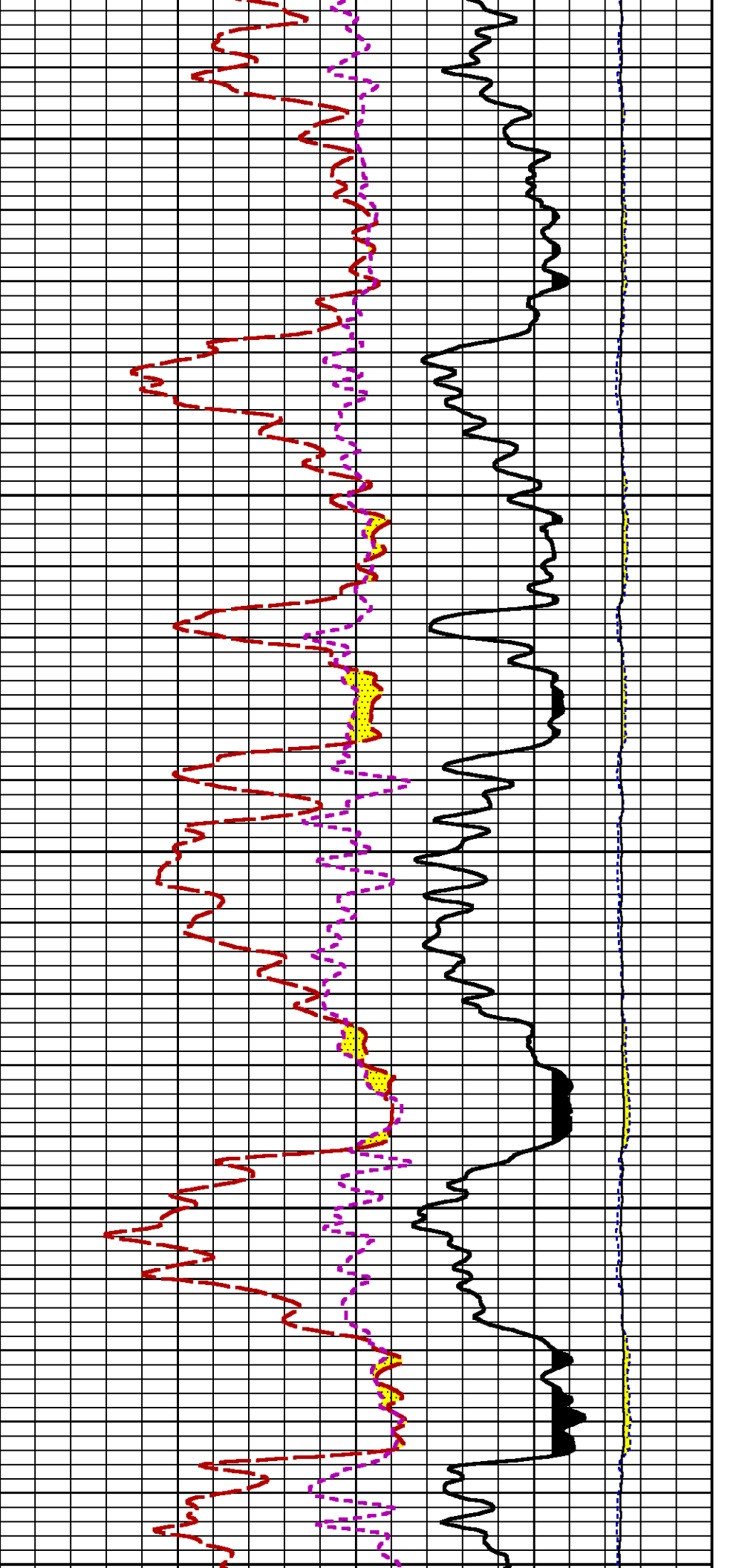








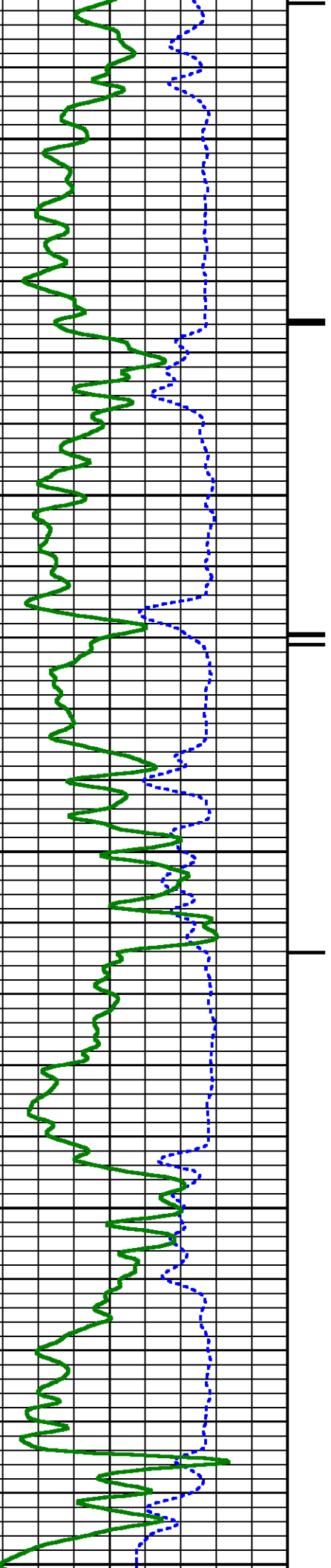


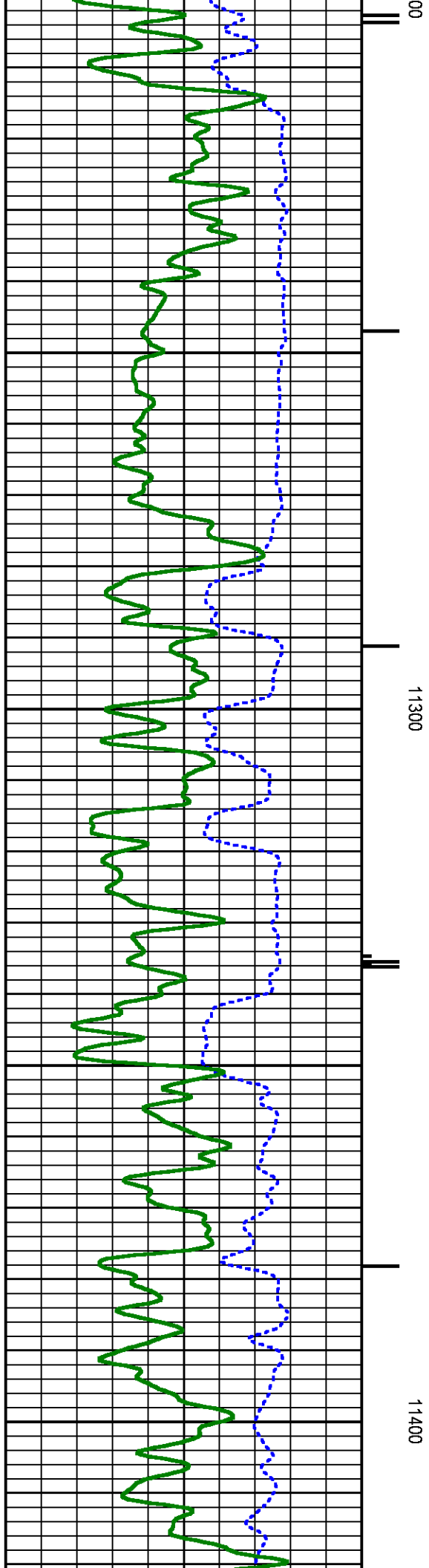
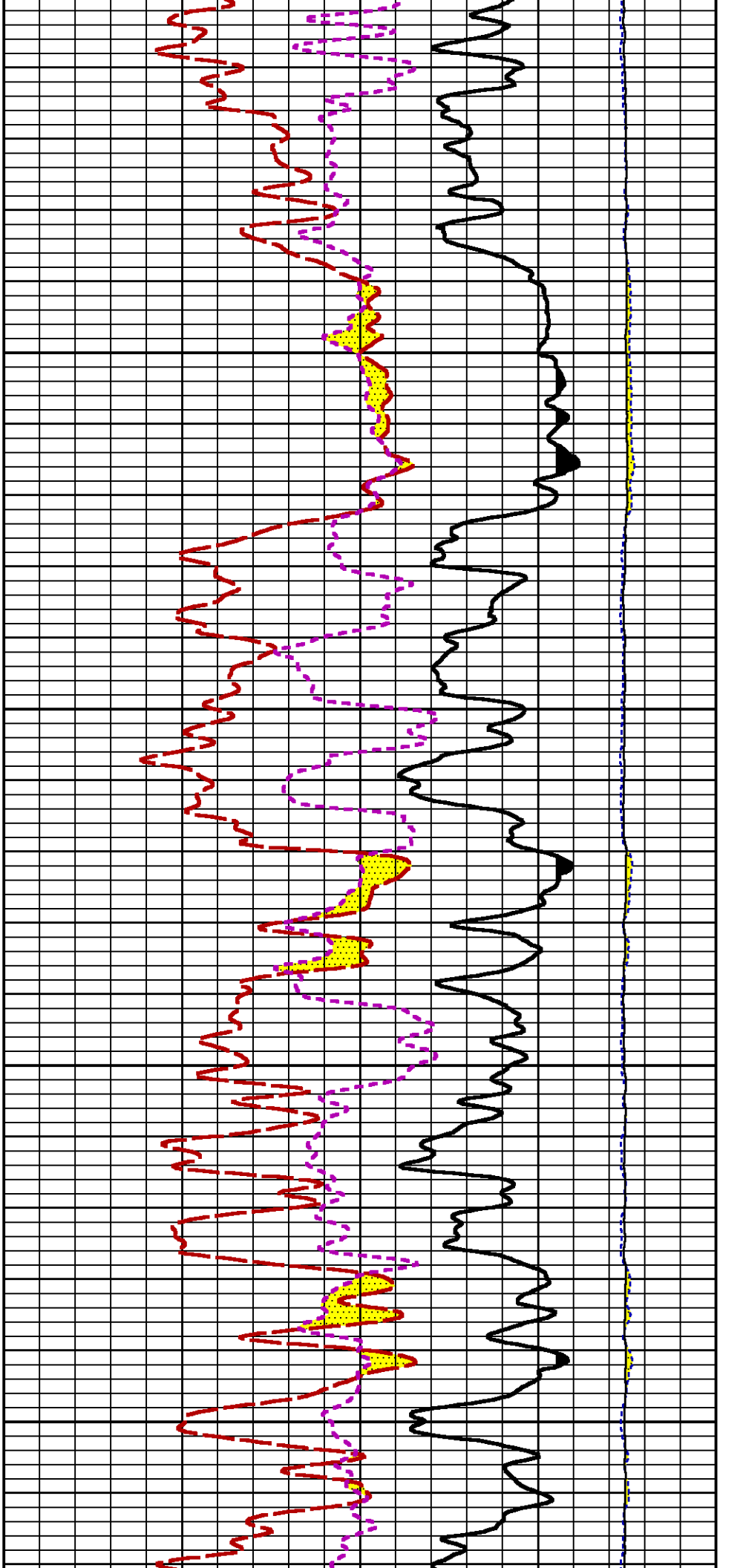


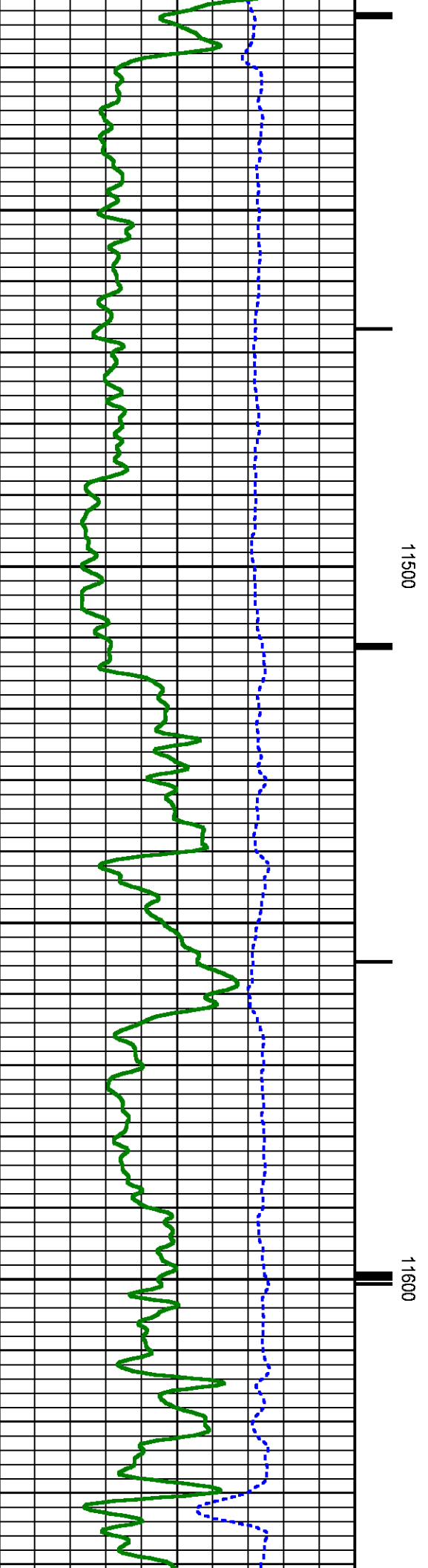
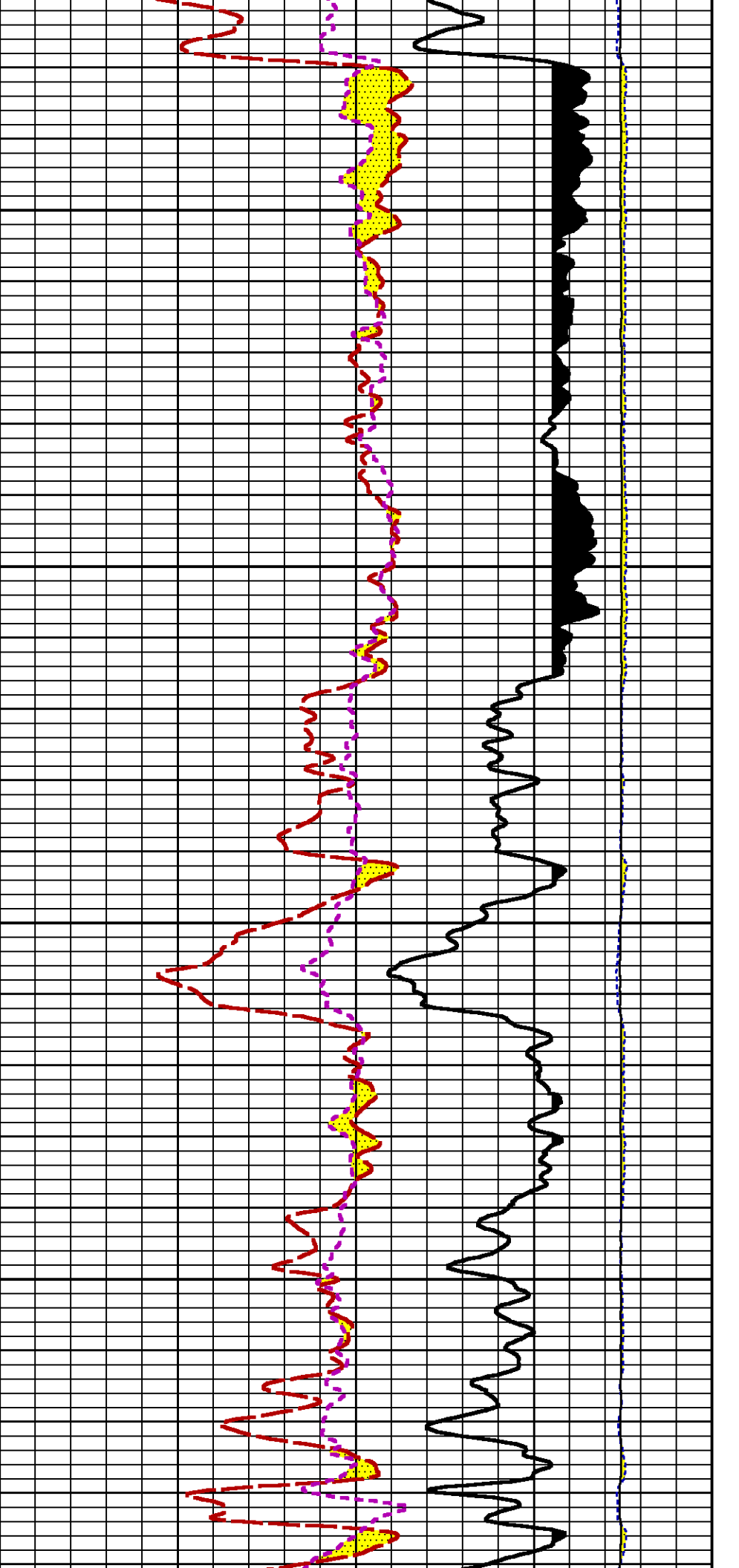
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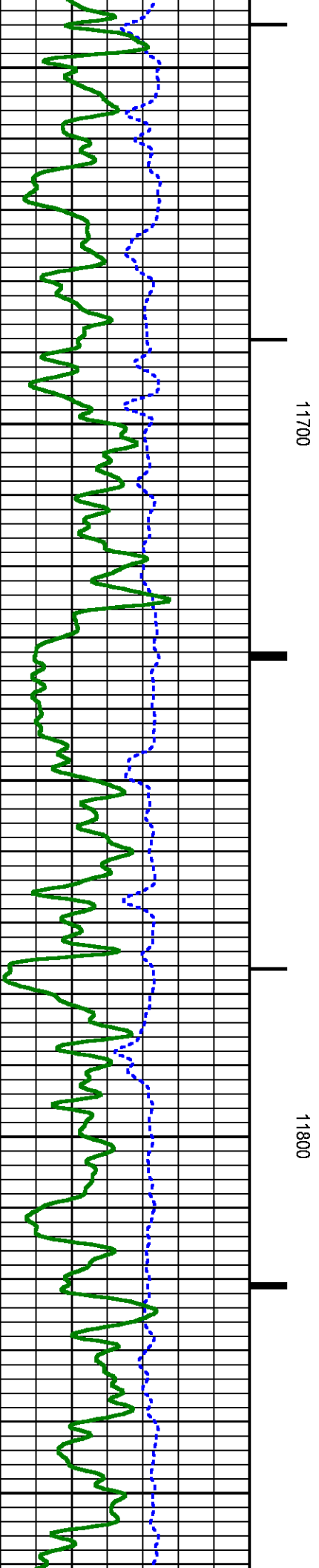
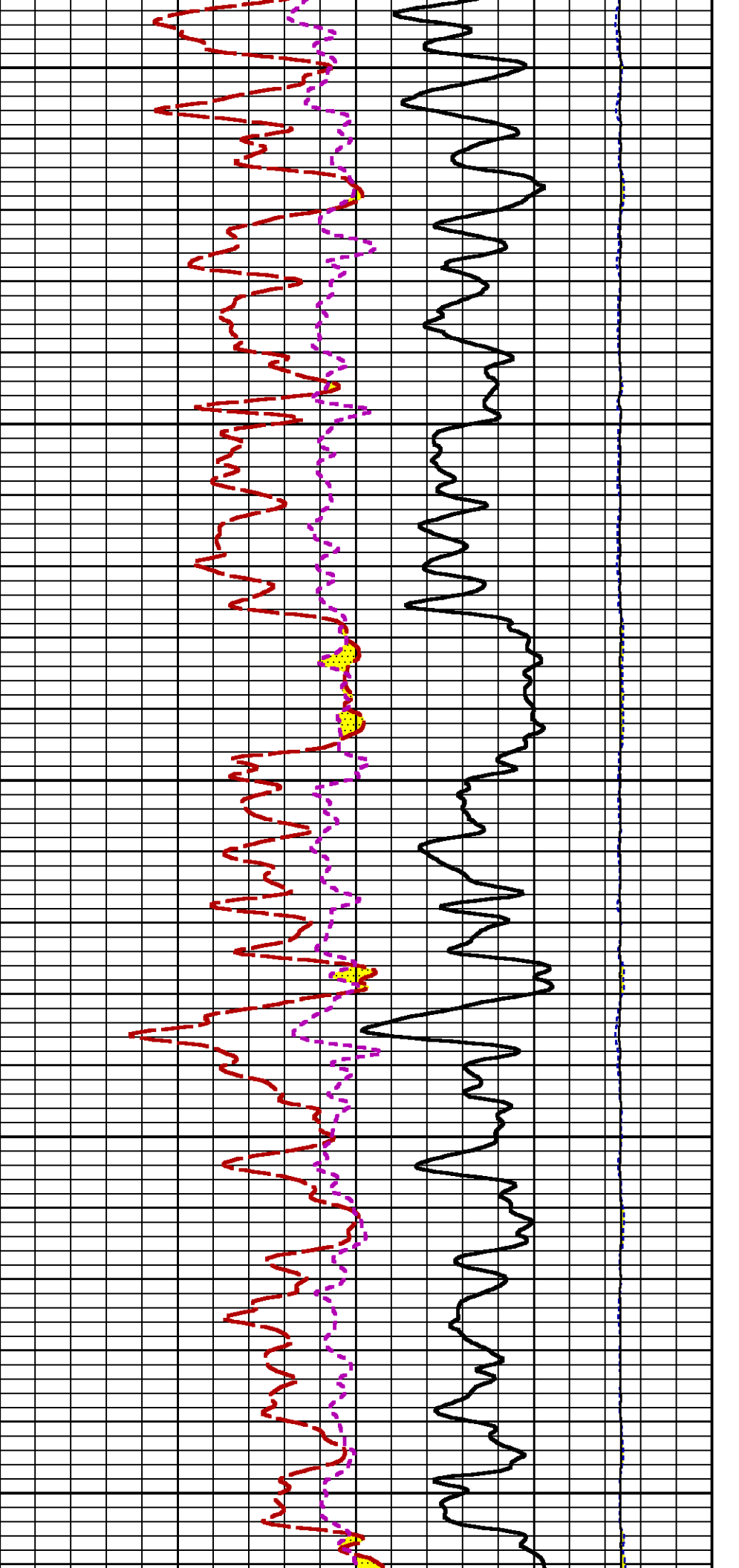
11100

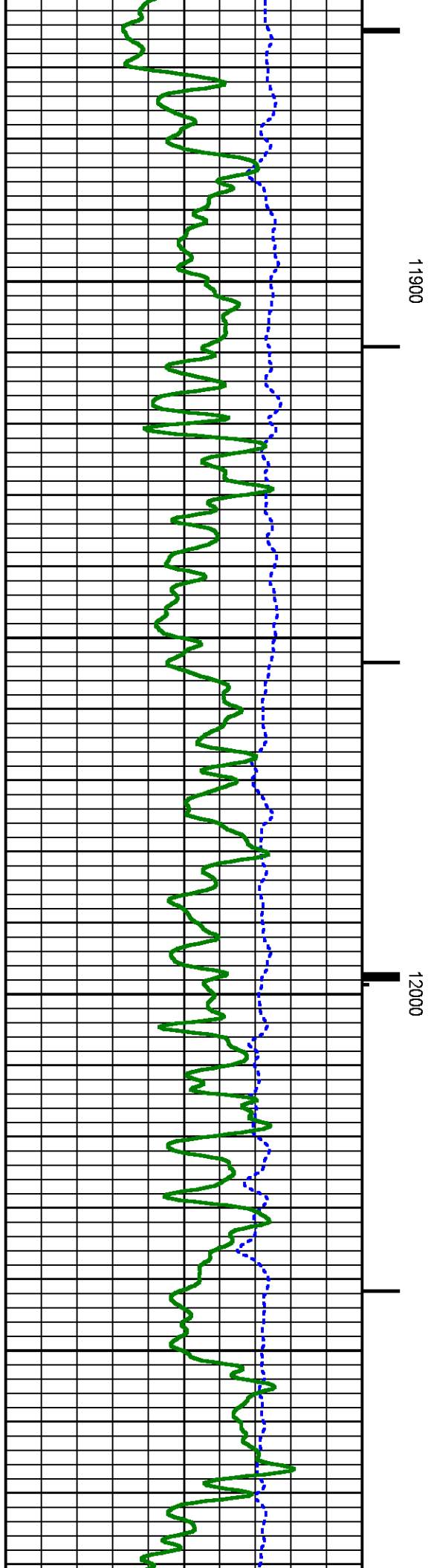
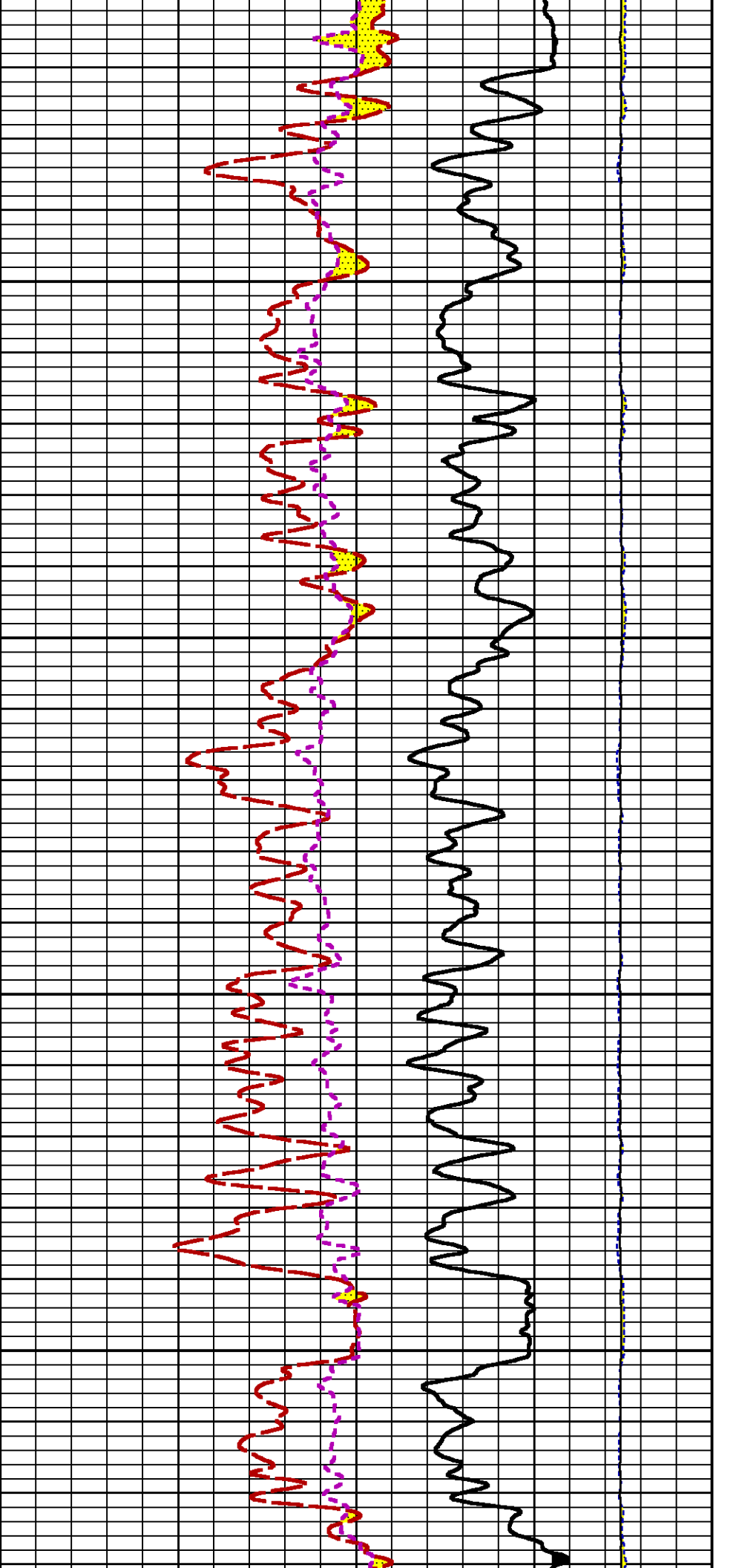
112



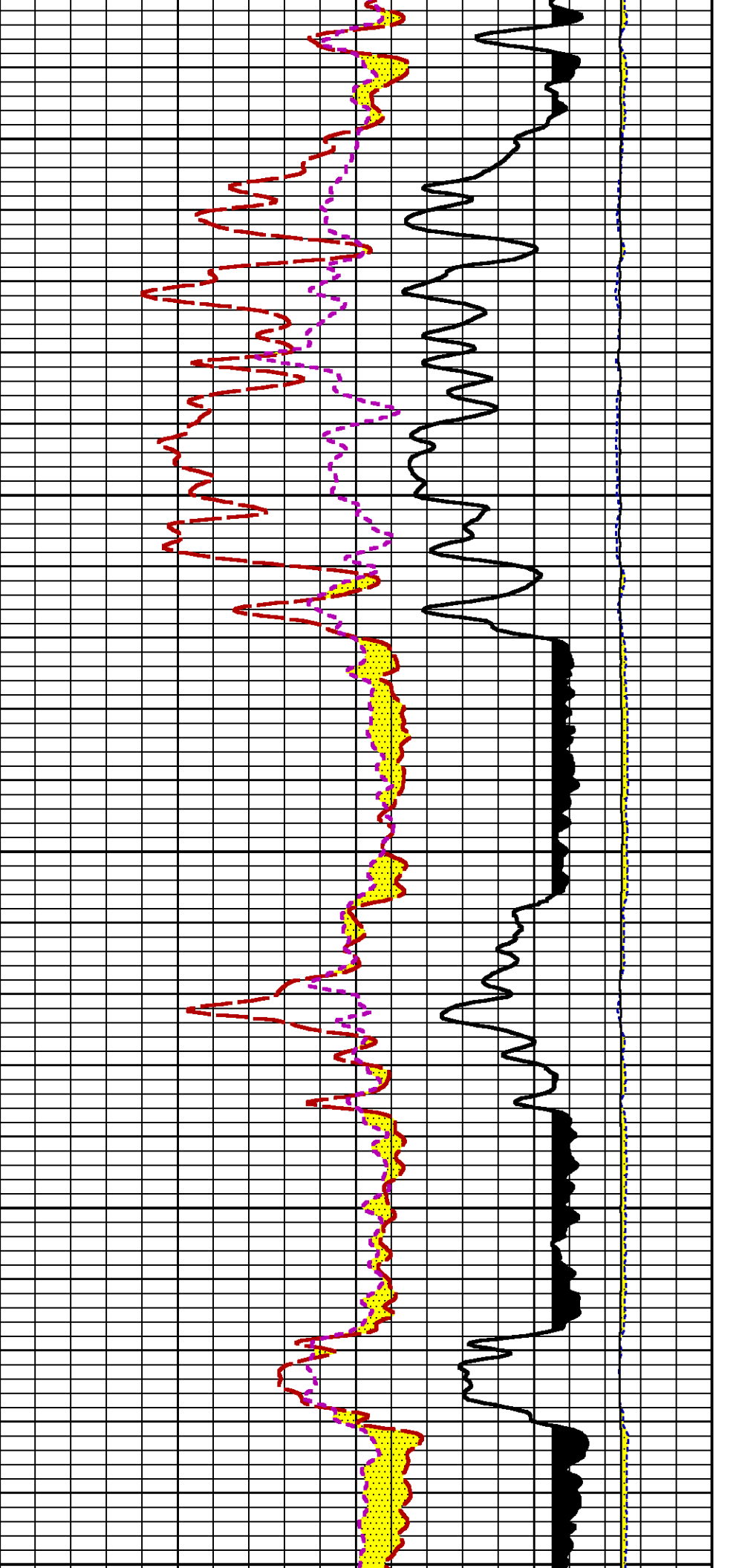








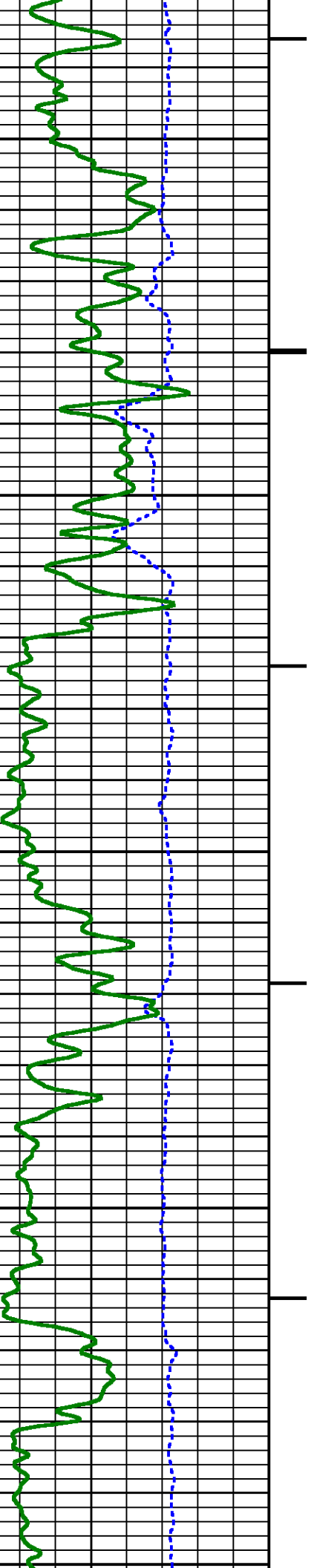


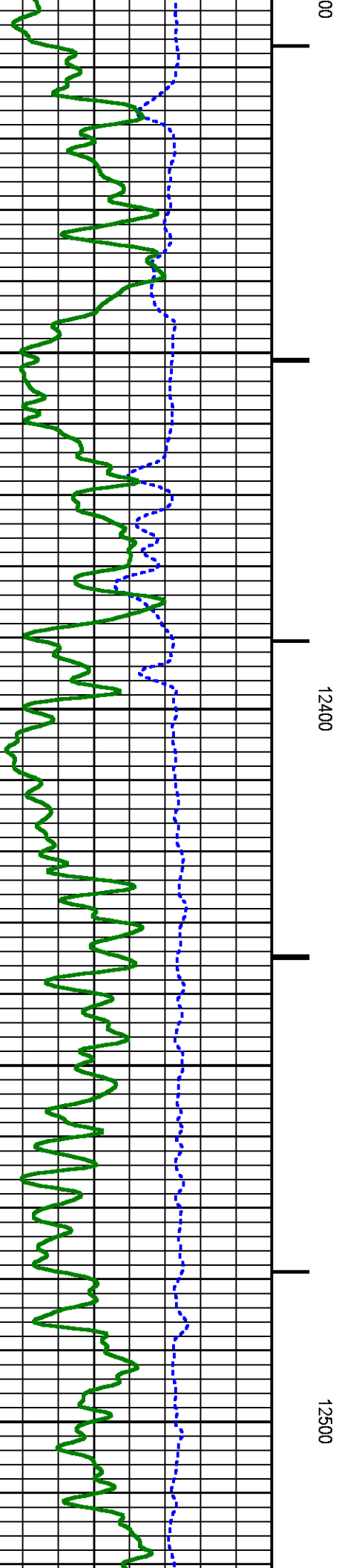
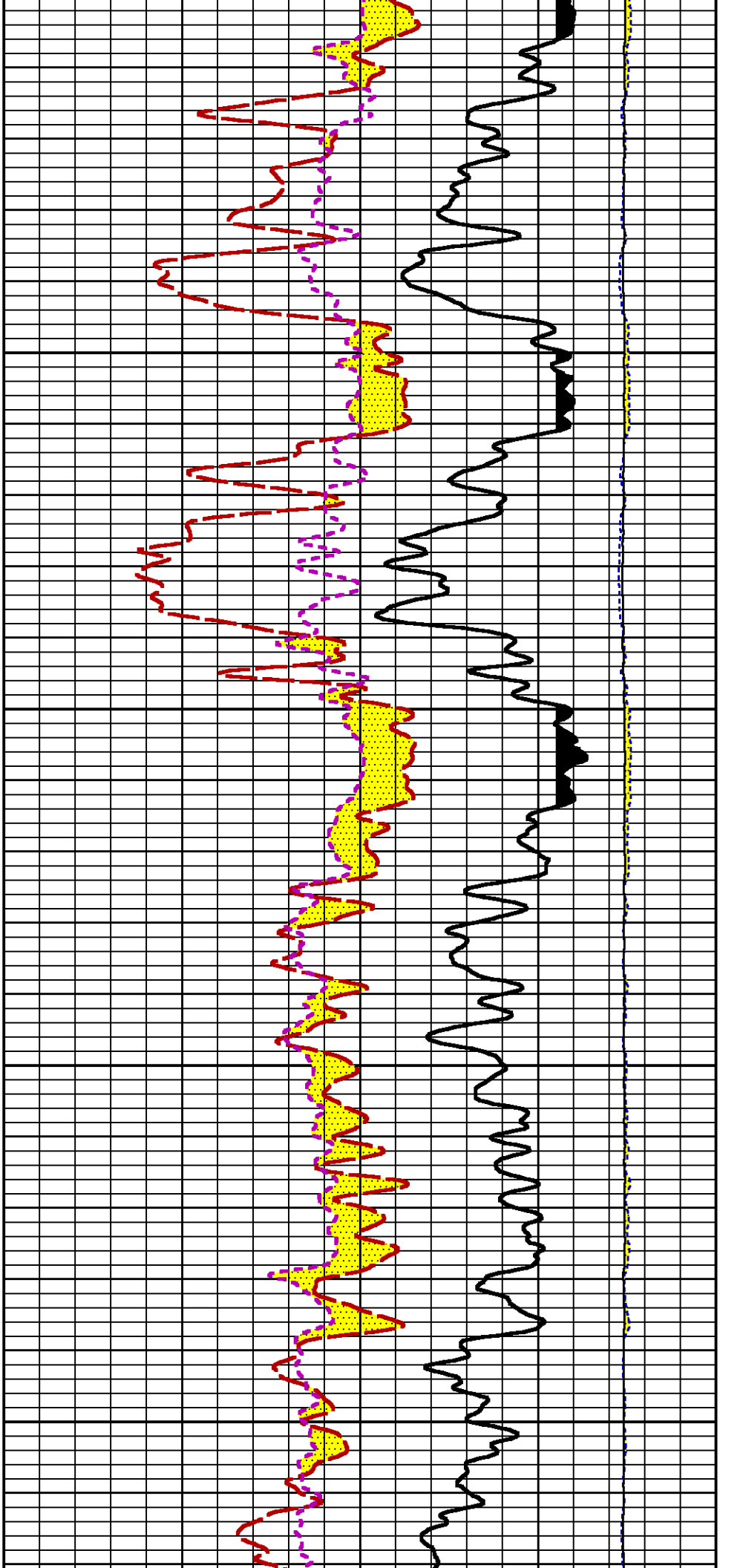


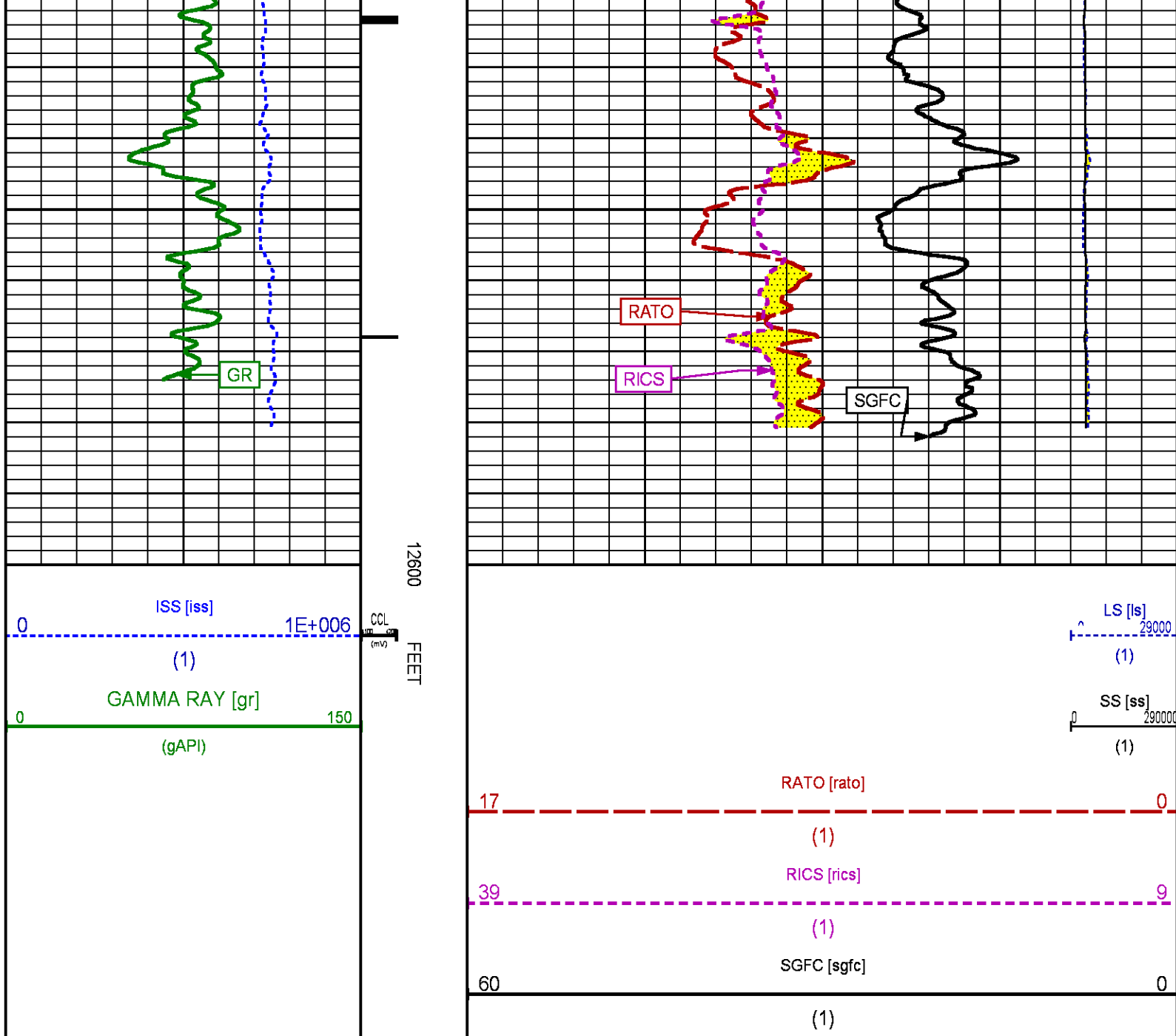
12100

12200

123







REPEAT SECTION PNC-3D MODE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014  
Patches: 5

Plotted: Sun Dec 14 20:03:26 2014

### PARAMETER AND FILTER SUMMARY REPORT

FILE: D:\dat1a\092551\354h01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 11688.750 ft BOTTOM DEPTH: 12040.000 ft

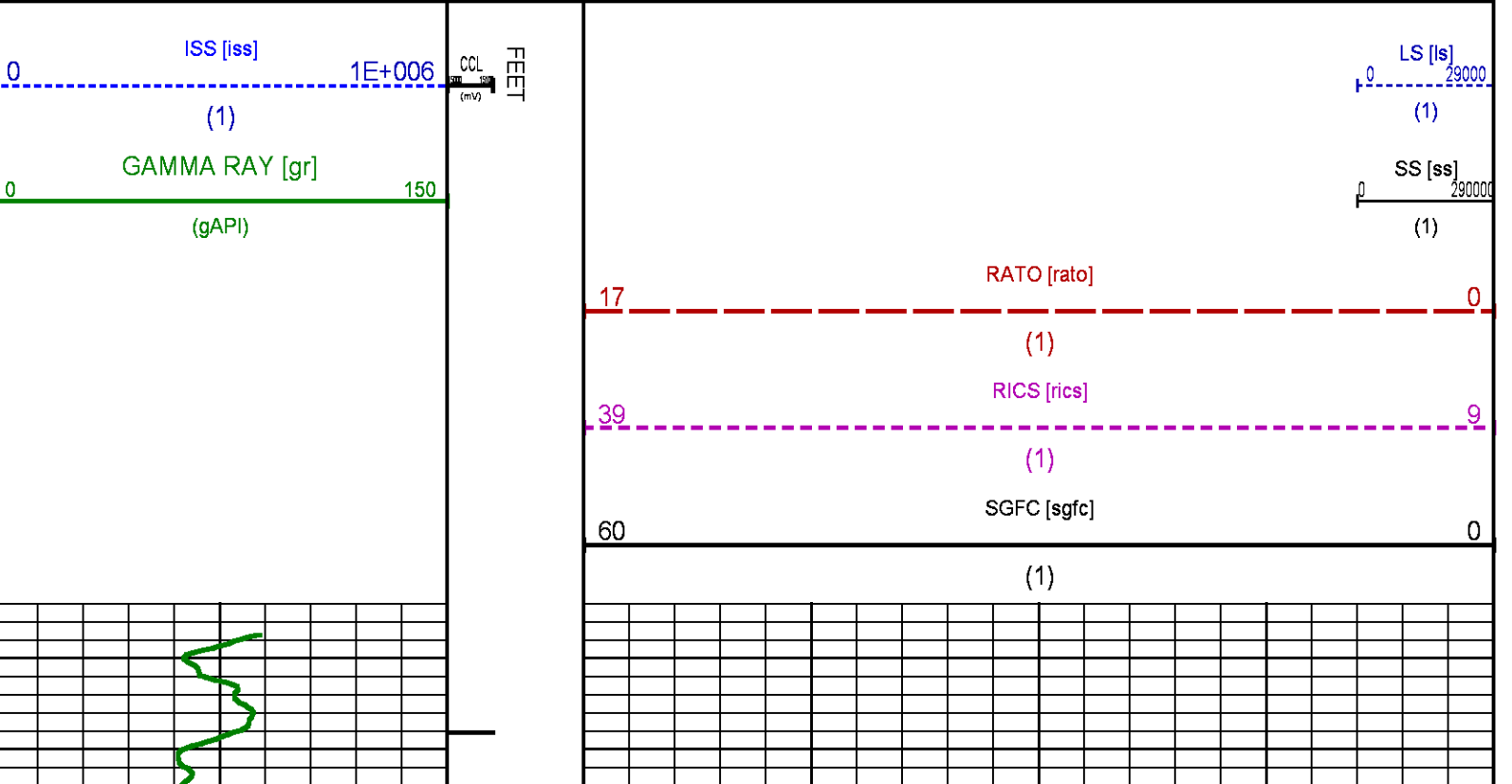
SYMMETRIC FILTER

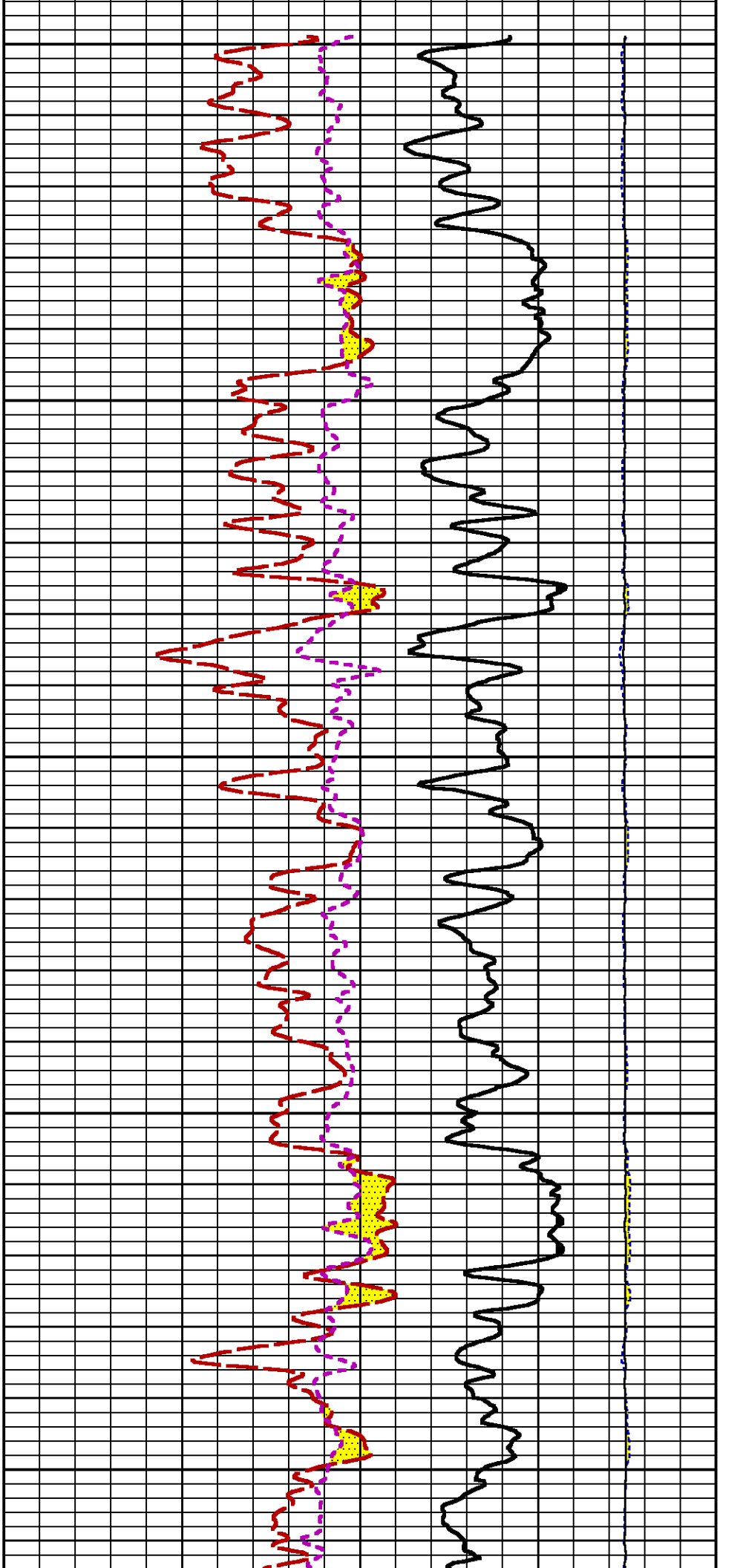
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ( )	medium (1)		TOP	BOTTOM
RPM PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	7.88	in	"	"
	CASING SIZE	4.54	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 13 10:37:14 2014	CASING COLLAR LOCATOR
F1:GR	Dec 13 10:37:14 2014	GAMMA RAY
F1:ISS	Dec 13 10:37:14 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 13 10:37:14 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 13 10:37:14 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 13 10:37:14 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 13 10:37:14 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 13 10:37:14 2014	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation	: BHI9YQMTY1:D:\dat1a\092551\444_RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 11674 - 12034 Feet
Data File 1	: F1 : BHI9YQMTY1:D:\dat1a\092551\444RPM_REPEAT.xtf
Created On	: Dec 13 10:37:14 2014
Company	: WPX ENERGY
Well	: FEDERAL RGU 444-23-198
Field	: SULPHUR CREEK
File Interval	: 11674 - 12050.3 Feet
OCT	: n354h

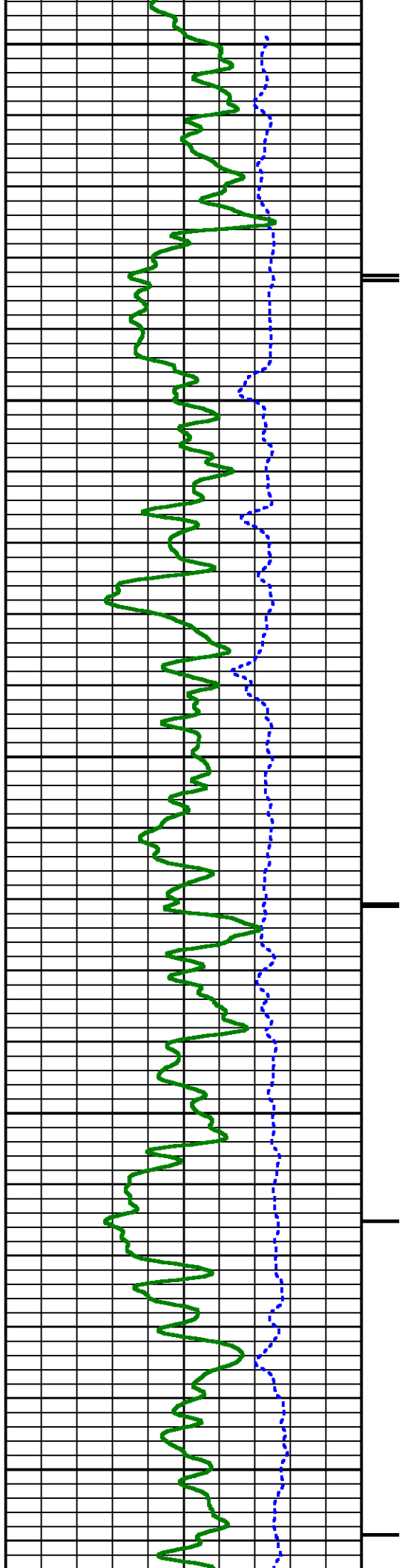


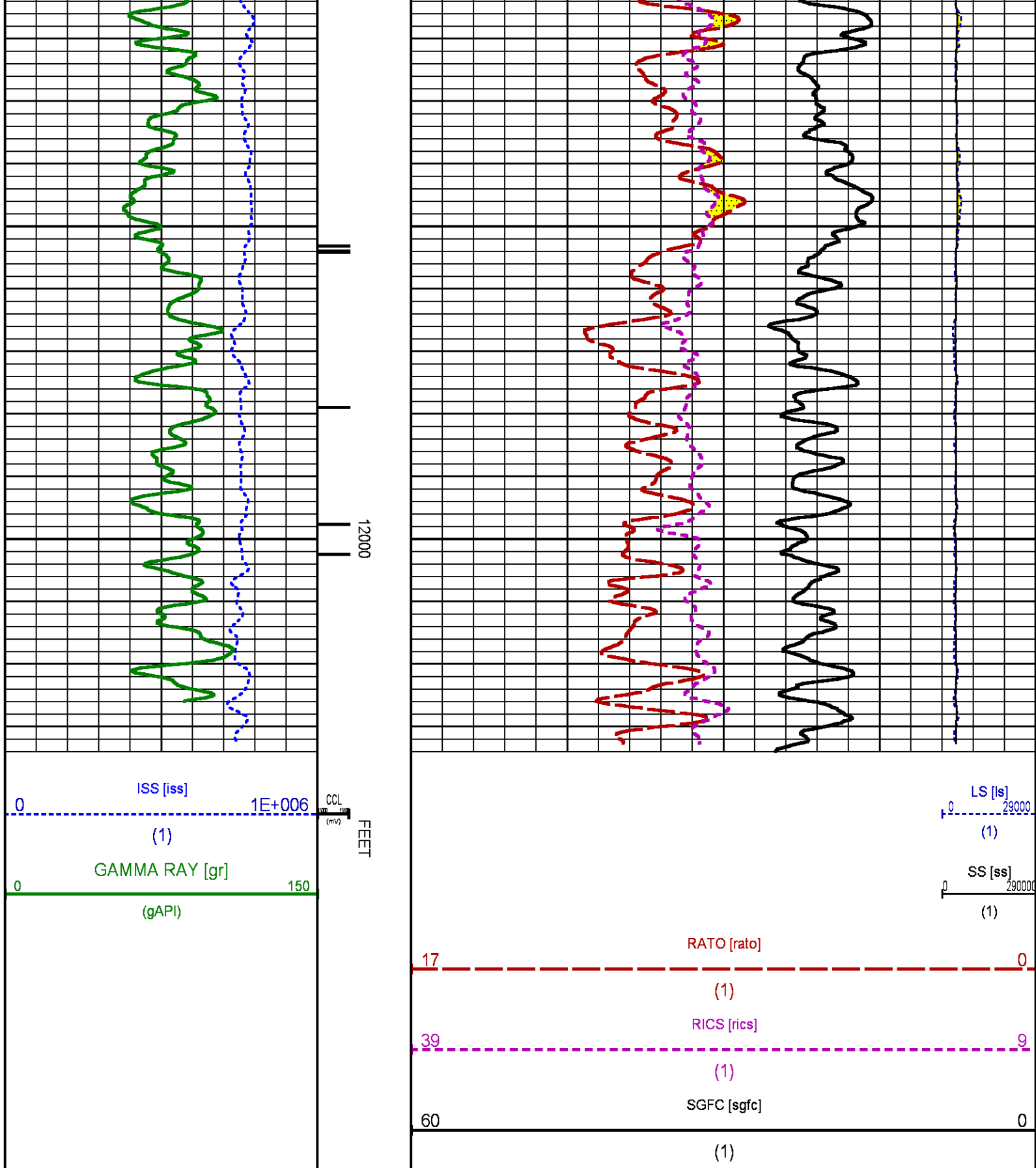


11700

11800

11900





## CALIBRATION / VERIFICATION SUMMARY

GR PRIMARY CALIBRATION SUMMARY

TOOL #:

2812LA 10274382

DATE/TIME PERFORMED:

Tue Dec 09 14:04:49 2014

UNIT #:

3885TD Z004271

CALB JIG #:

4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	61.18	268.02	206.8	1.015	62.11	272.11	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #:

2812LA 10274382

DATE/TIME PERFORMED:

Tue Dec 09 14:07:05 2014

UNIT #:

3885TD Z004271

VERI JIG #:

4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	63.11	273.93	1.015	64.07	278.11	214.04
						200.00 220.00

RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL:

8283PA 10585555

DATE/TIME PERFORMED:

Tue Dec 09 13:08:21 2014

UNIT:

3885TD Z004271

CALIBRATOR:

2437XB 112674

SOURCE:

8281AA 11765054

HOURS:

8281AA 670

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	801712	124	2342	2286	2235	111	7	0.9721
Interpolated	1300000	147	2317	2281	2228			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	801712	6404	989	140	26.08	0.15	24.23	0.33
					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	801712	170477	26574	89502	31836	8242	54189	13205
Fit Quality %		0.952	0.776	0.752	0.741	1.017	0.683	0.990

ISS

PROP

FIN

FIN12

P100

P100

P100

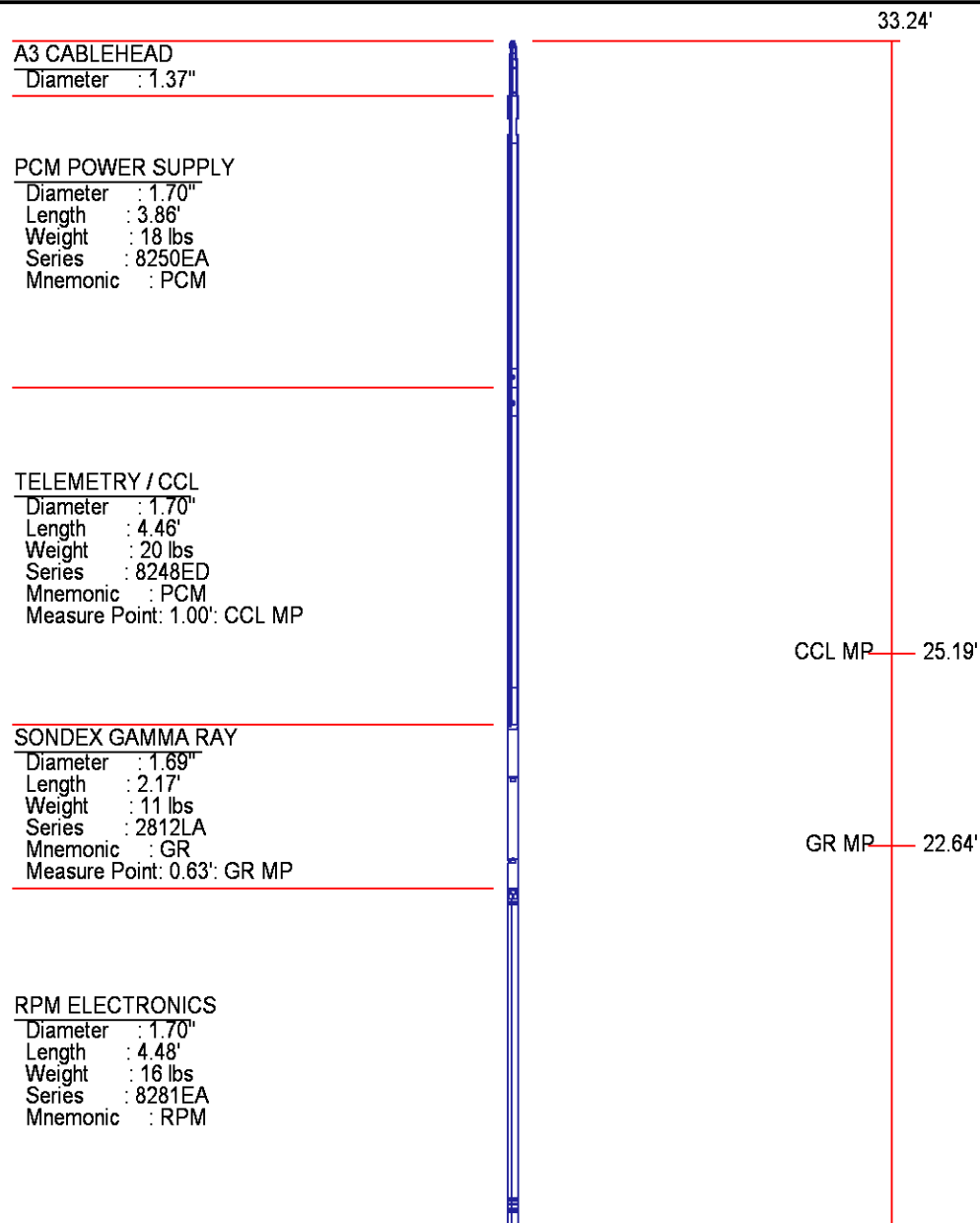
P100

P100

	ISS	RBOR	RIN	RINT3	RICS	RATU	RTWO	RONE
			ISS/LS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS
Raw Data	801712	1.43	4.70	30.18	14.80	10.86	3.86	4.10
		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 %		0.051	0.164	0.223	0.184	0.174	0.189	0.168
Reduced	1392560	1.43	4.71	30.20	14.80	10.88	3.87	4.11
		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

## INSTRUMENT CONFIGURATION

Source File: D:\dat1a\092551\m354h~GR2812LA-tdg.meta





RPM C DETECTOR SECTION

Diameter : 1.70"  
Length : 9.40'  
Weight : 41 lbs  
Series : 8283PA  
Mnemonic : RPM  
Measure Point: 5.45': XLS DETECTOR  
Measure Point: 5.04': LS DETECTOR  
Measure Point: 4.79': SS DETECTOR

XLS DETECTOR 13.58'  
LS DETECTOR 13.16'  
SS DETECTOR 12.91'

RPM SOURCE SECTION

Diameter : 1.70"  
Length : 4.70'  
Weight : 18 lbs  
Series : 8281FA  
Mnemonic : RPM

TEMPERATURE / PRESSURE


Diameter : 1.70"  
Length : 3.30'  
Weight : 13 lbs  
Series : 8255XA  
Mnemonic : SRPL  
Measure Point: 1.52': TEMP MP

TEMP MP 1.65'  
PRES MP

BULL PLUG 1 11/16

TOTAL LENGTH: 33.24'  
TOTAL WEIGHT: 140 lbs  
MAX DIAMETER: 0'1.70"

0.00'

	COMPANY	WPX ENRGY		FILE NO:	
	WELL	FEDERAL RGU 444-23-198			CH092551
	FIELD	SULPHUR CREEK		API NO:	
	COUNTY	RIO BLANCO	STATE	COLORADO	05103121390000
LOCATION:		ELEVATIONS:		23 1S 98W	
SHL: 1028' FSL & 645' FEL		KB 6592 FT		RGU 43-23-198 PA	
BHL: 477' FSL & 631' FEL		DF		AZTEC 1000	
GL 6567 FT		DATE		12-Dec-2014	
SEC 23 TWP 1S RGE 98W					