



FILE NO: CH131986	COMPANY LARAMIE ENERGY LLC
API NO: 05077104150000	WELL NICHOLS 0994-24-06W
	FIELD VEGA
	COUNTY MESA STATE COLORADO

Ver. 4.10	LOCATION: SHL: 39.264514 N, 107.830743 W BHL: 39.265727 N, 107.835353 W SEC <u>24</u> TWP <u>9S</u> RGE <u>94W</u>	OTHER SERVICES RAL
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB	ELEVATION 24 FT ABOVE P.D.	ELEVATIONS: KB 7161 FT DF GL 7137 FT
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DATE	25-Jan-2018
RUN	1
TRIP	1
SERVICE ORDER	US131986
DEPTH DRILLER	7456 FT
DEPTH LOGGER	7401 FT
BOTTOM LOGGED INTERVAL	7401 FT
TOP LOGGED INTERVAL	24 FT
TIME STARTED	23:30
TIME FINISHED	7:00
OPERATOR RIG TIME	7.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	46 FT
LOGGED CEMENT TOP	2090 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	234 DEGF
REFERENCE LOG	BAKER HUGHES OPEN HOLE
REFERENCE LOG DATE	13-Dec-2017
EQUIP. NO.	ML-4291
LOCATION	GRAND JCT.
RECORDED BY	T. NEWELL
WITNESSED BY	MATT SETTLES

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.

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELLBORE*

OPERATION 2: RPM/GR/CCL RUN IN PNC-3D MODE

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 5685' - 5707'

SJ: 6562' - 6584'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	11175584	FREE
1	1	TEL/CCL	8248ED	10193585	FREE
1	1	GR	8262 XA	10317216	FREE
1	1	RPM	8281EA	10179238	FREE
1	1	RPM	8283PA	10190200	FREE
1	1	RPM	8281FA	10318654	FREE
1	1	TEMP	8255 XA	11774568	FREE

MAIN PASS PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Thu Jan 25 07:53:05 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_NICHOLS_0994_24_06W/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2193.250 ft BOTTOM DEPTH: 7429.157 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	7.87	in	" "
	LARGEST CASING OD	4.50	in	" "
	MATRIX	SANDSTONE		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	SHORT SPACE COUNT RATE

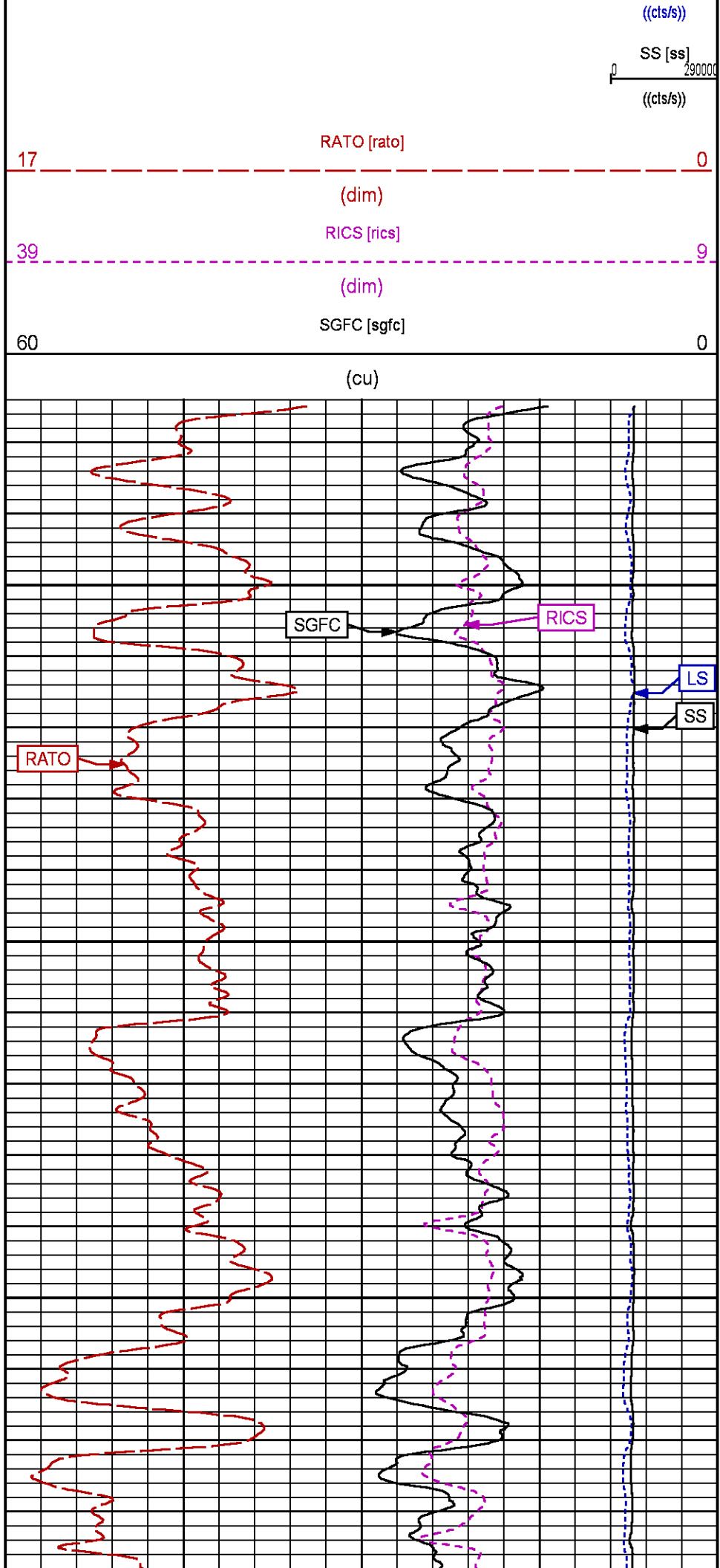
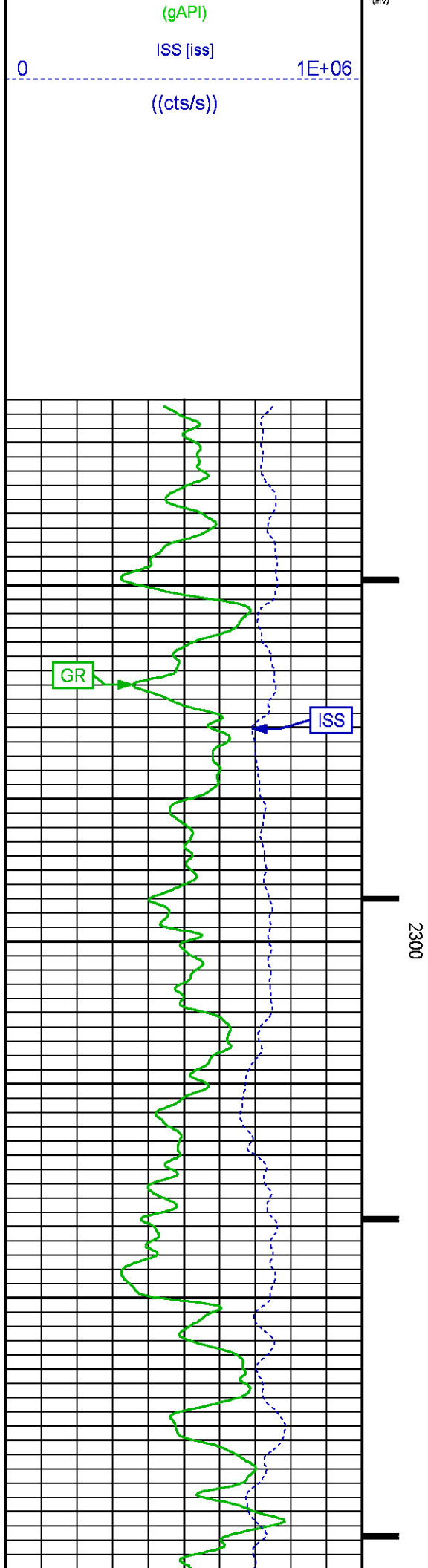
CURVE MEASURE POINT OFFSET

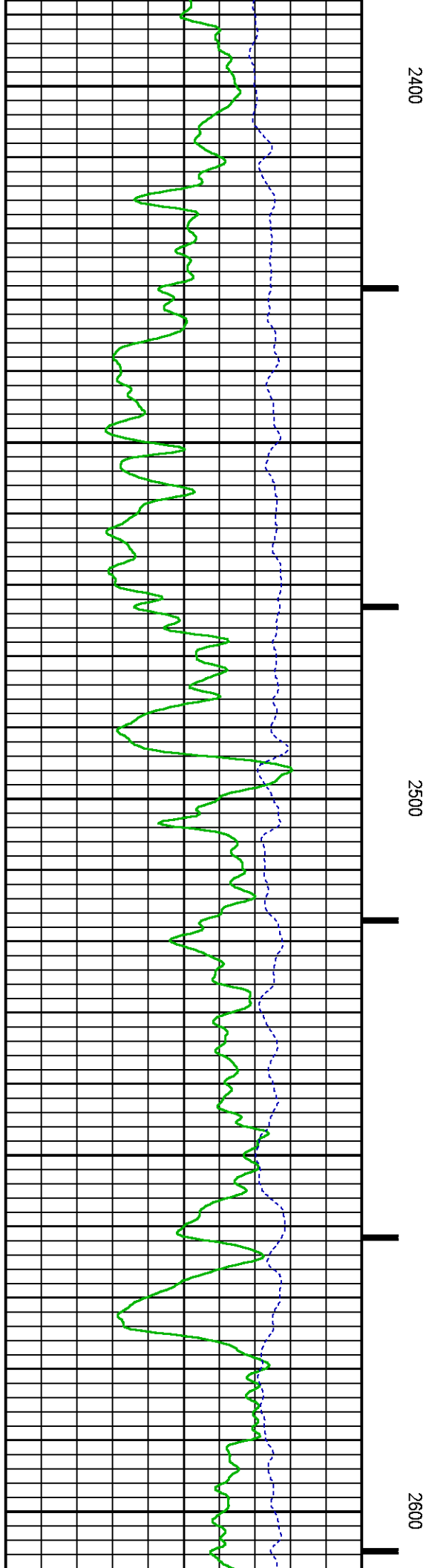
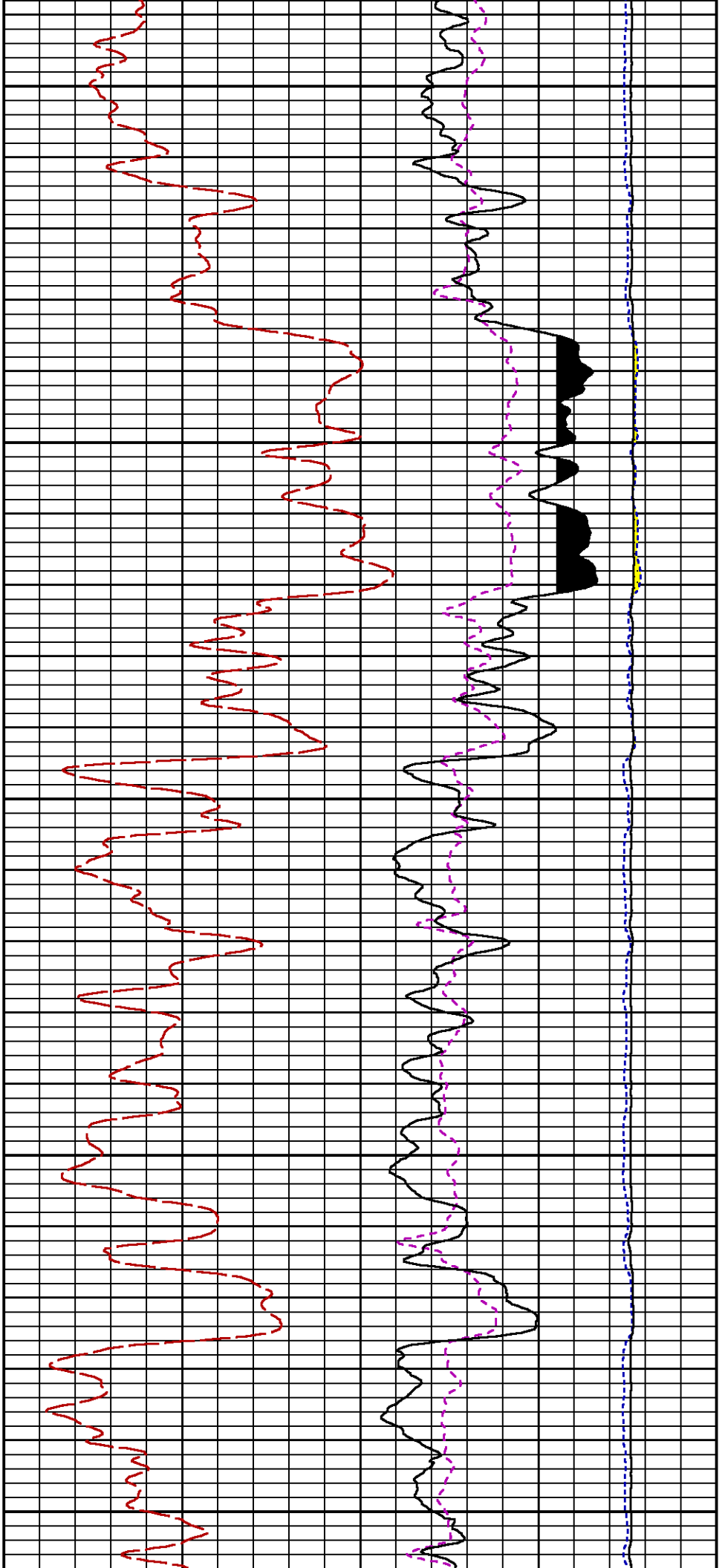
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

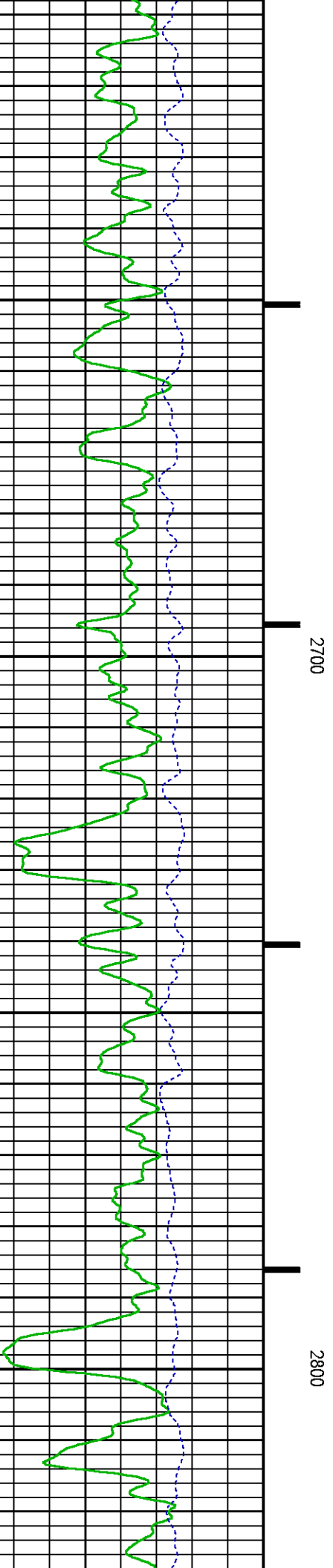
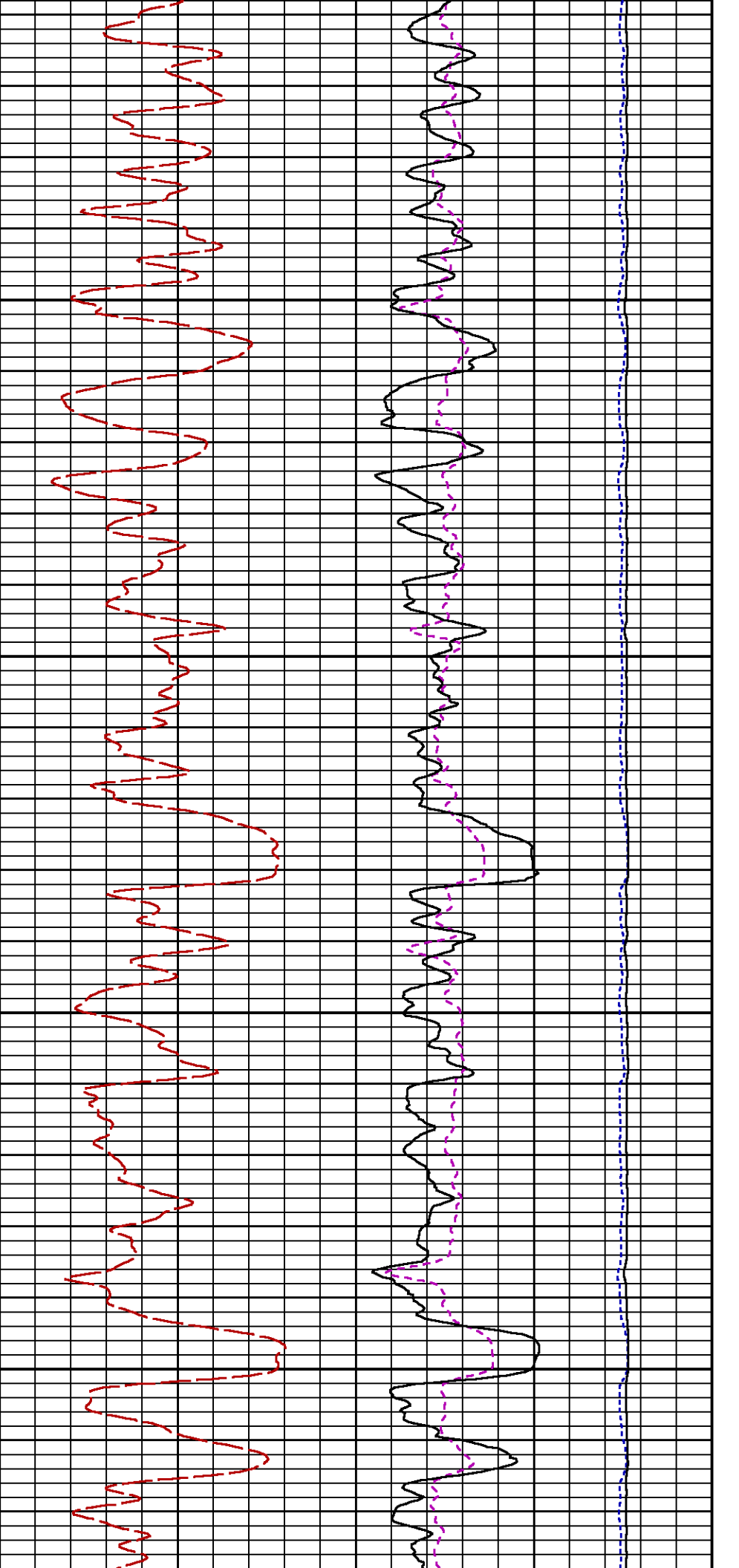
Presentation : SysA:/dat1a/LARAMIE_NICHOLS_0994_24_06W/24-06W_RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 2225 - 7420 Feet

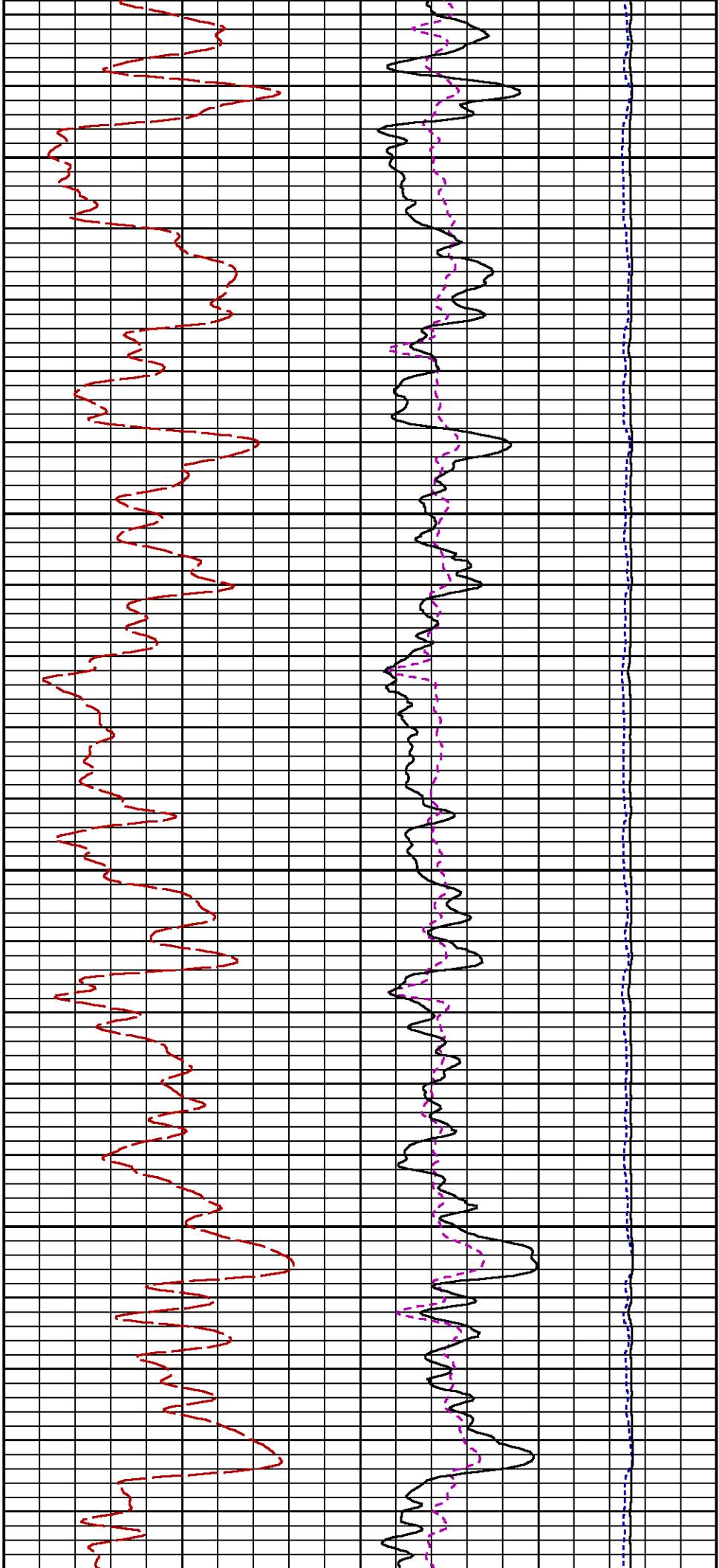
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Created On : N/A
Company : LARAMIE ENERGY
Well : NICHOLS-0994-24-06W
Field : VEGA
File Interval : 2174.5 - 7434.5 Feet
OCT : p353h





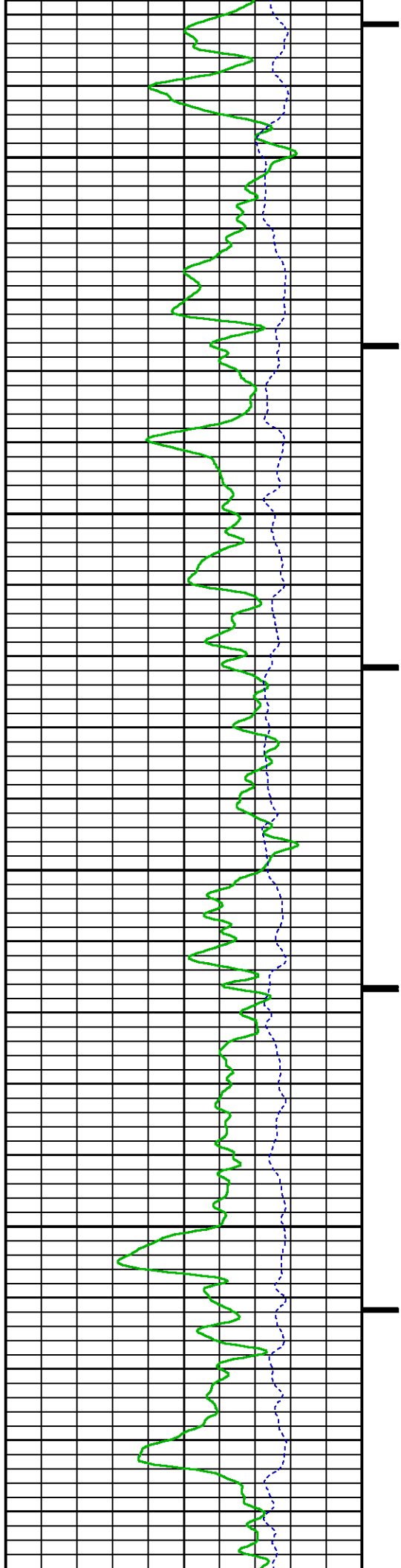


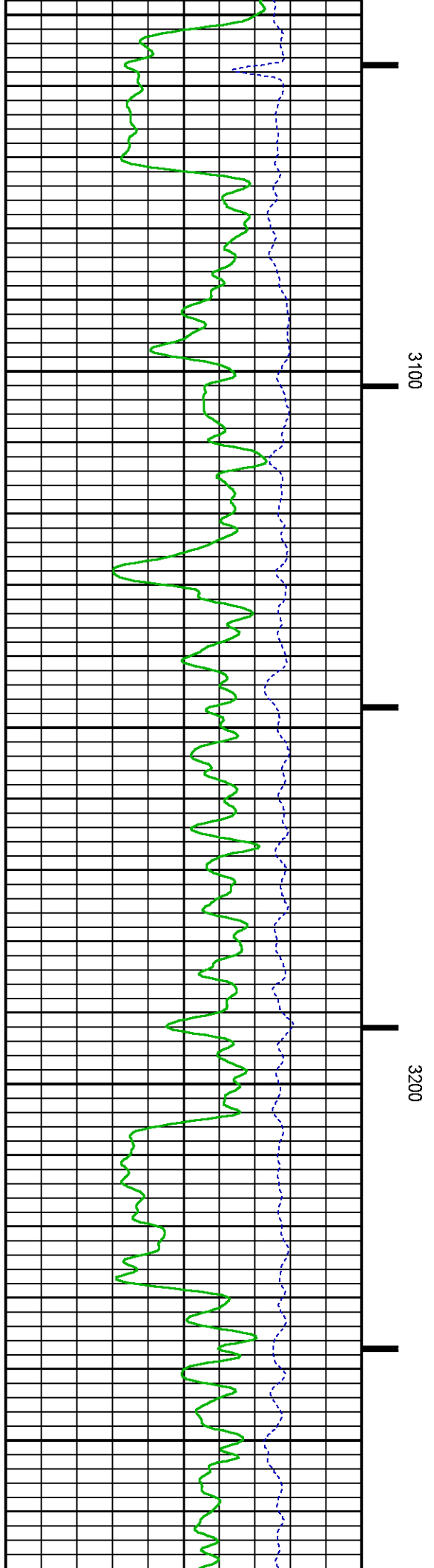
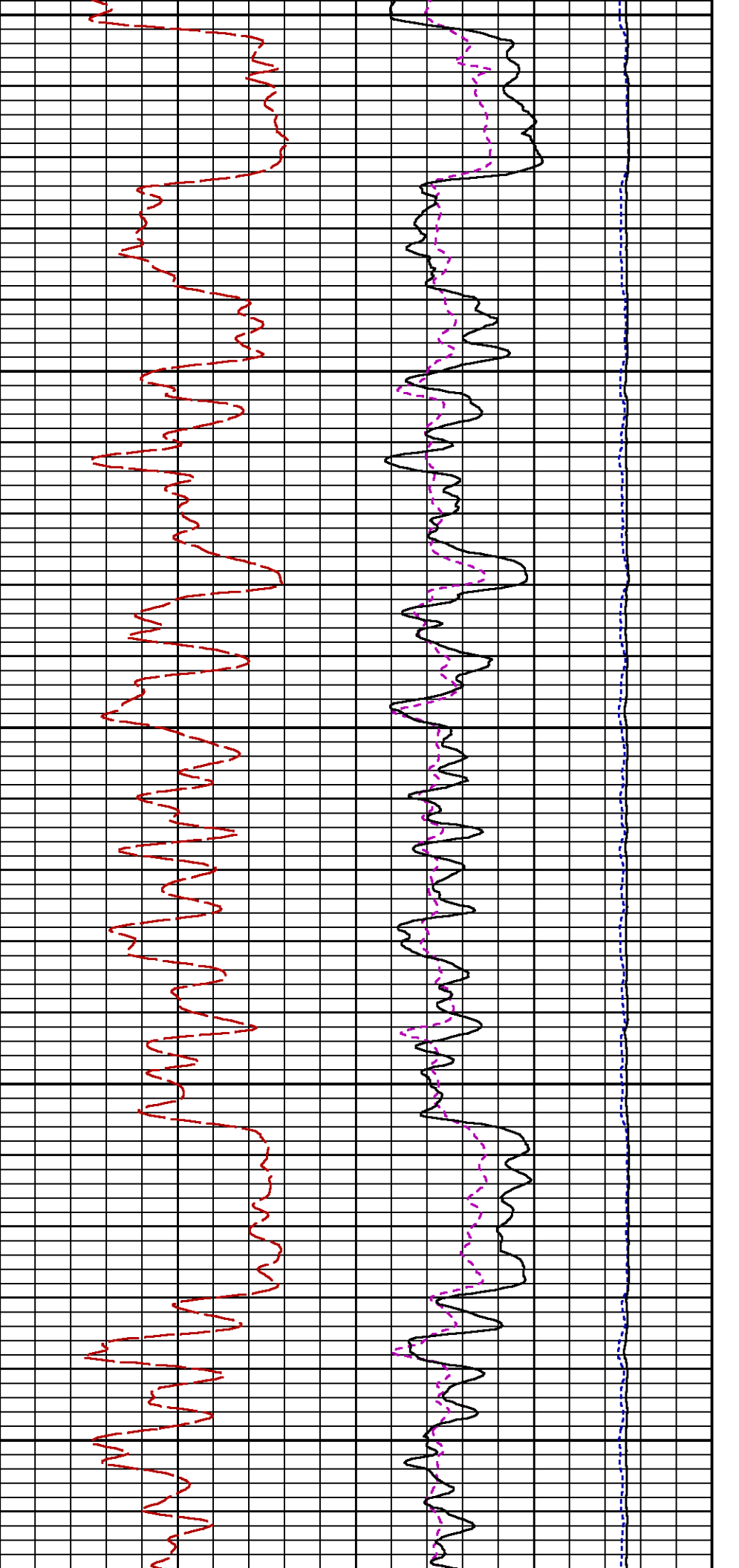


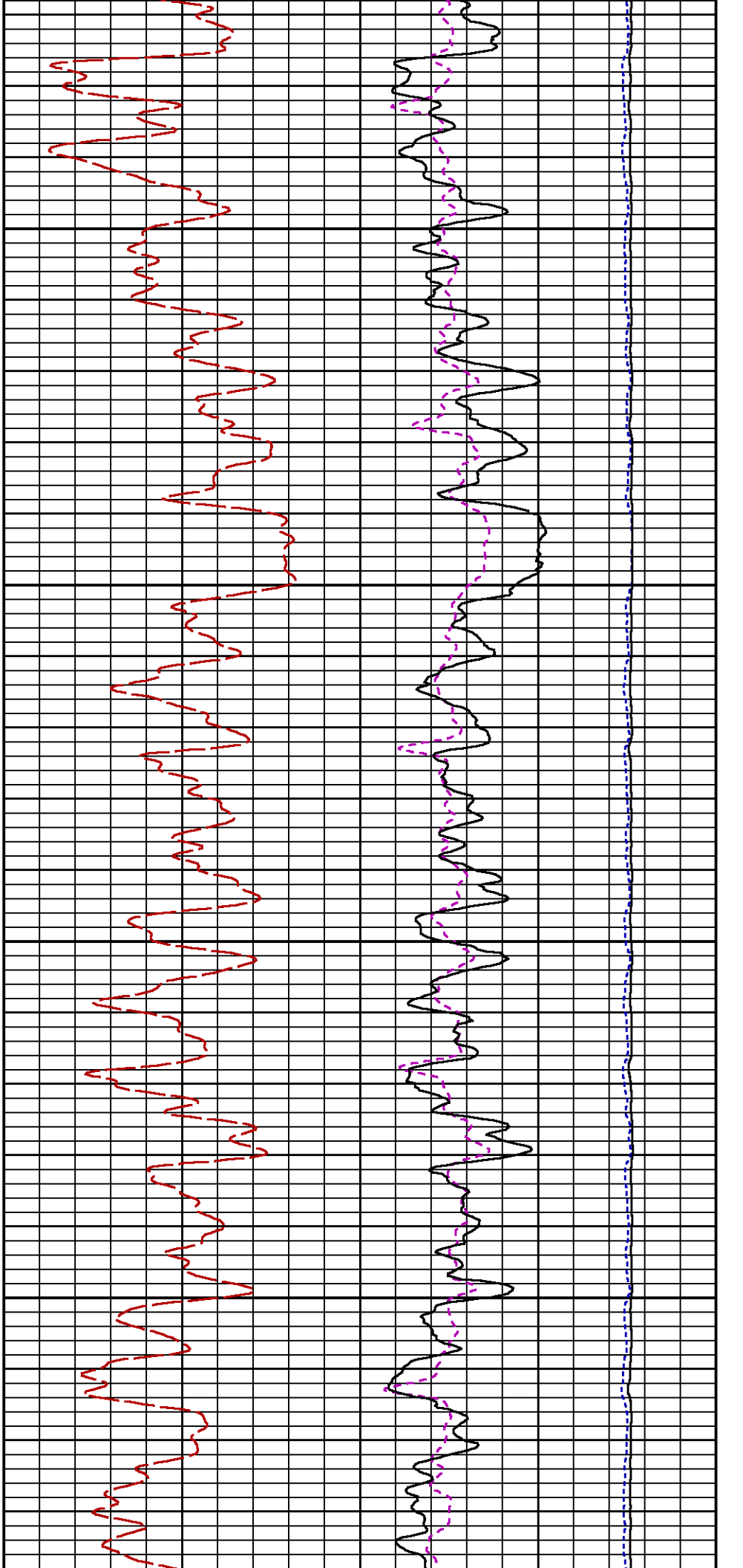


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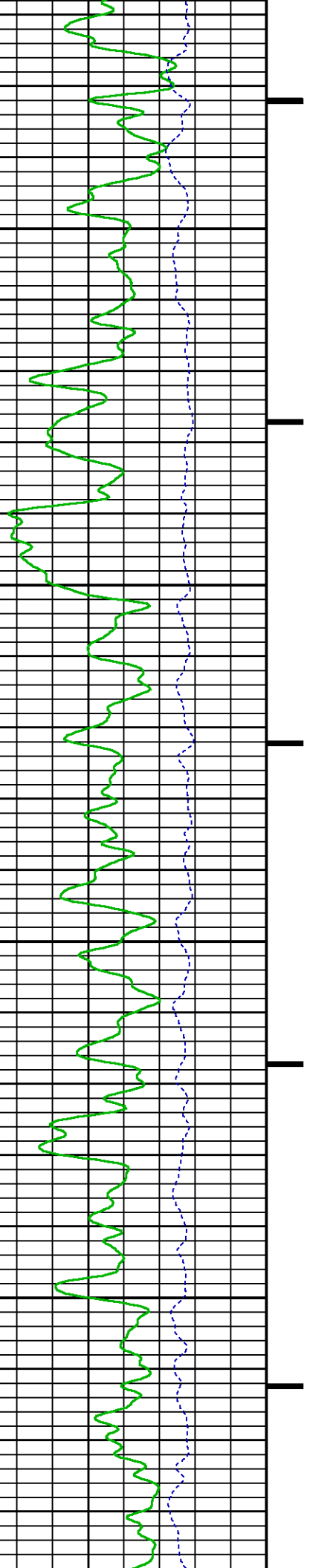


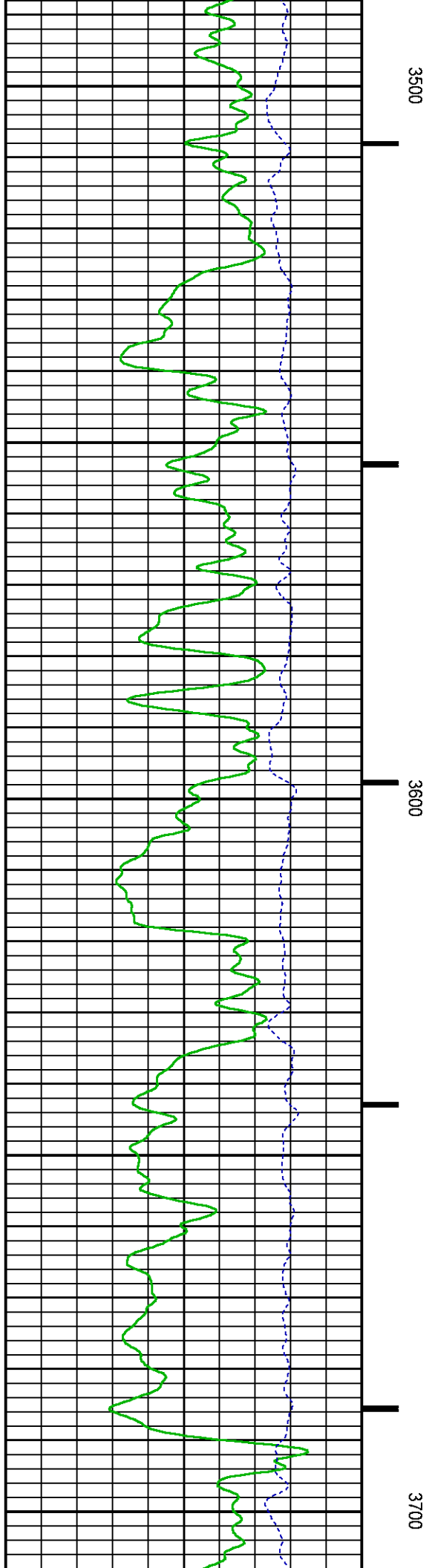
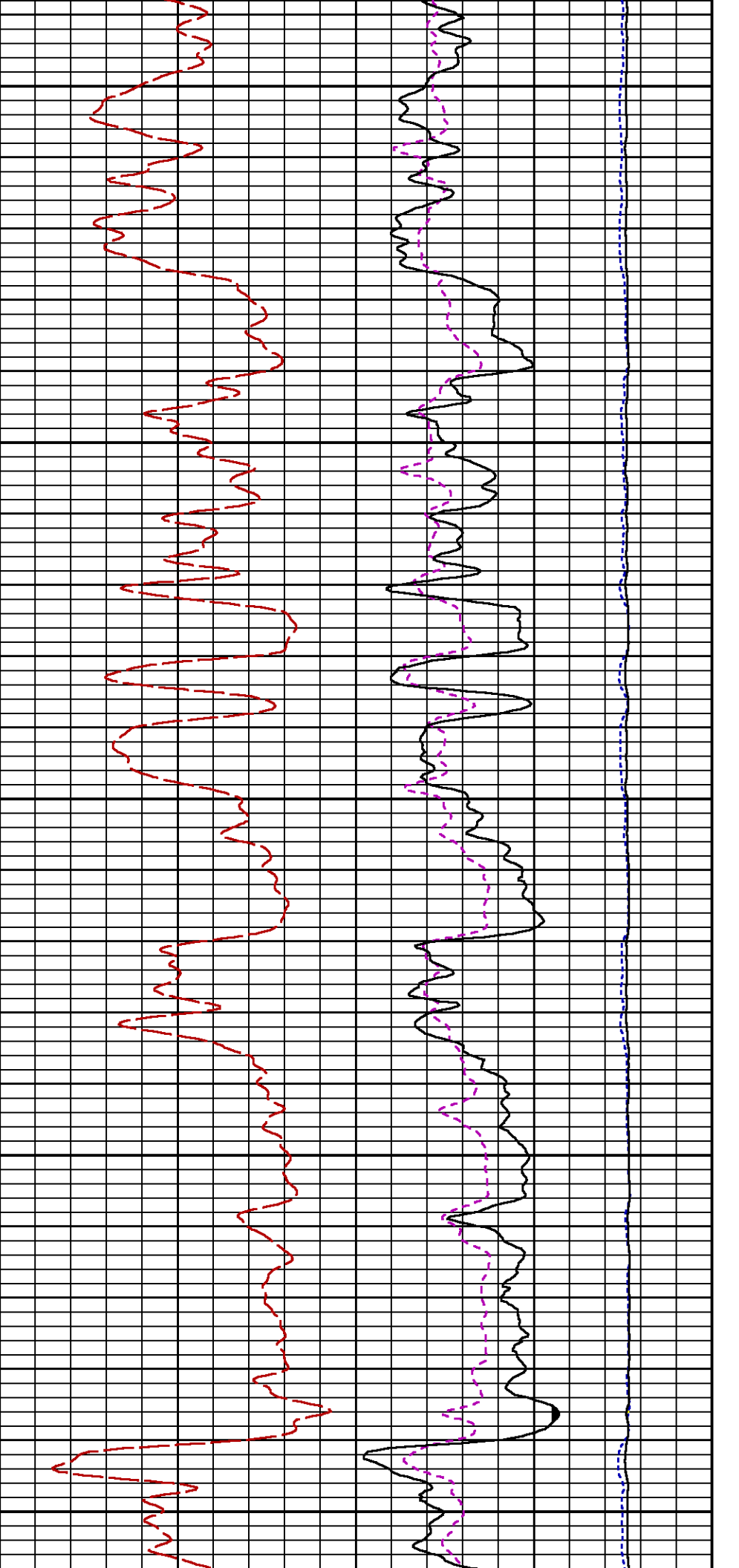


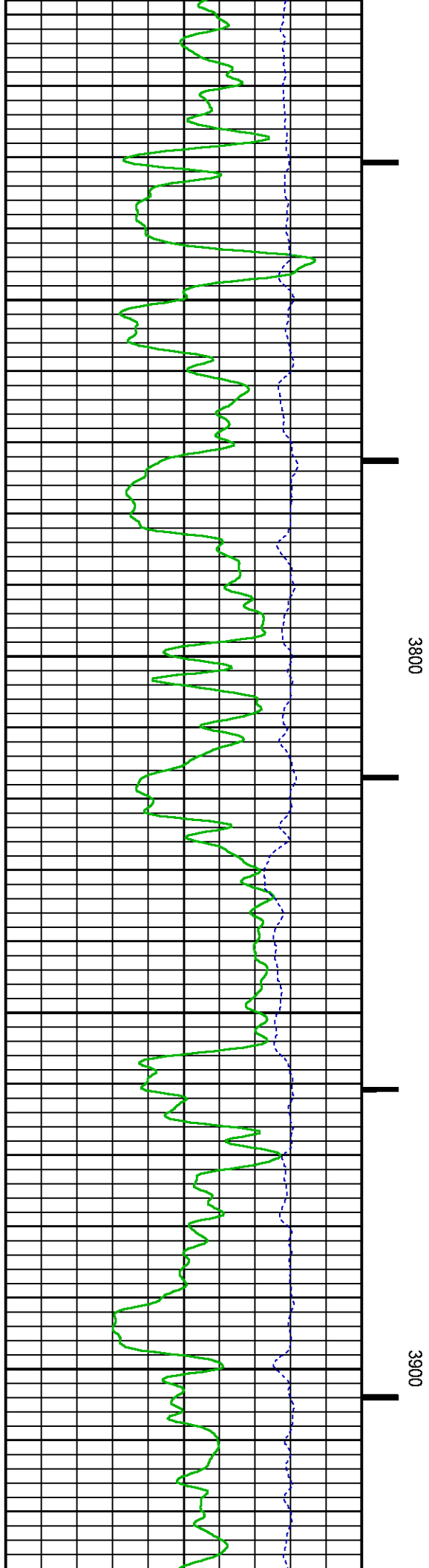
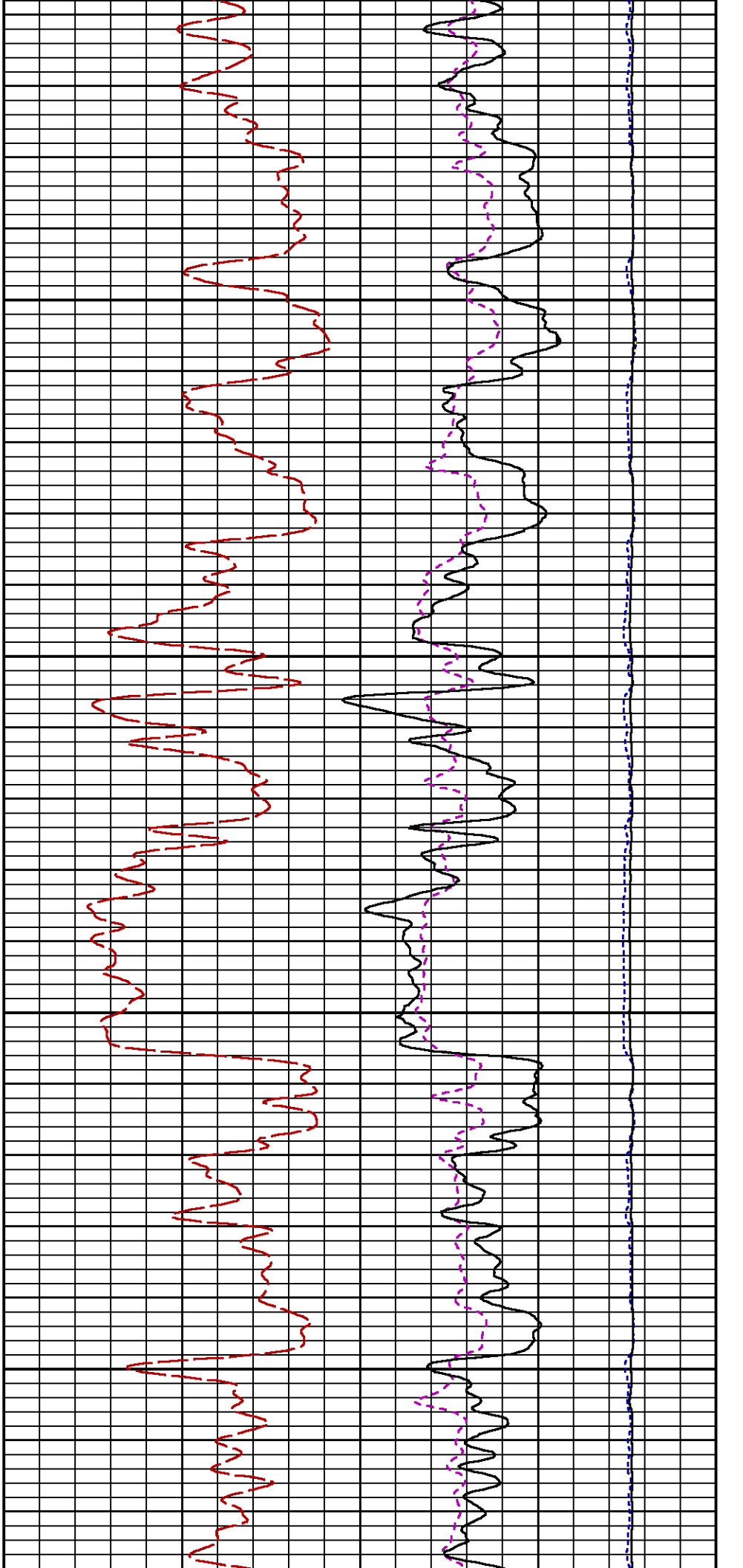


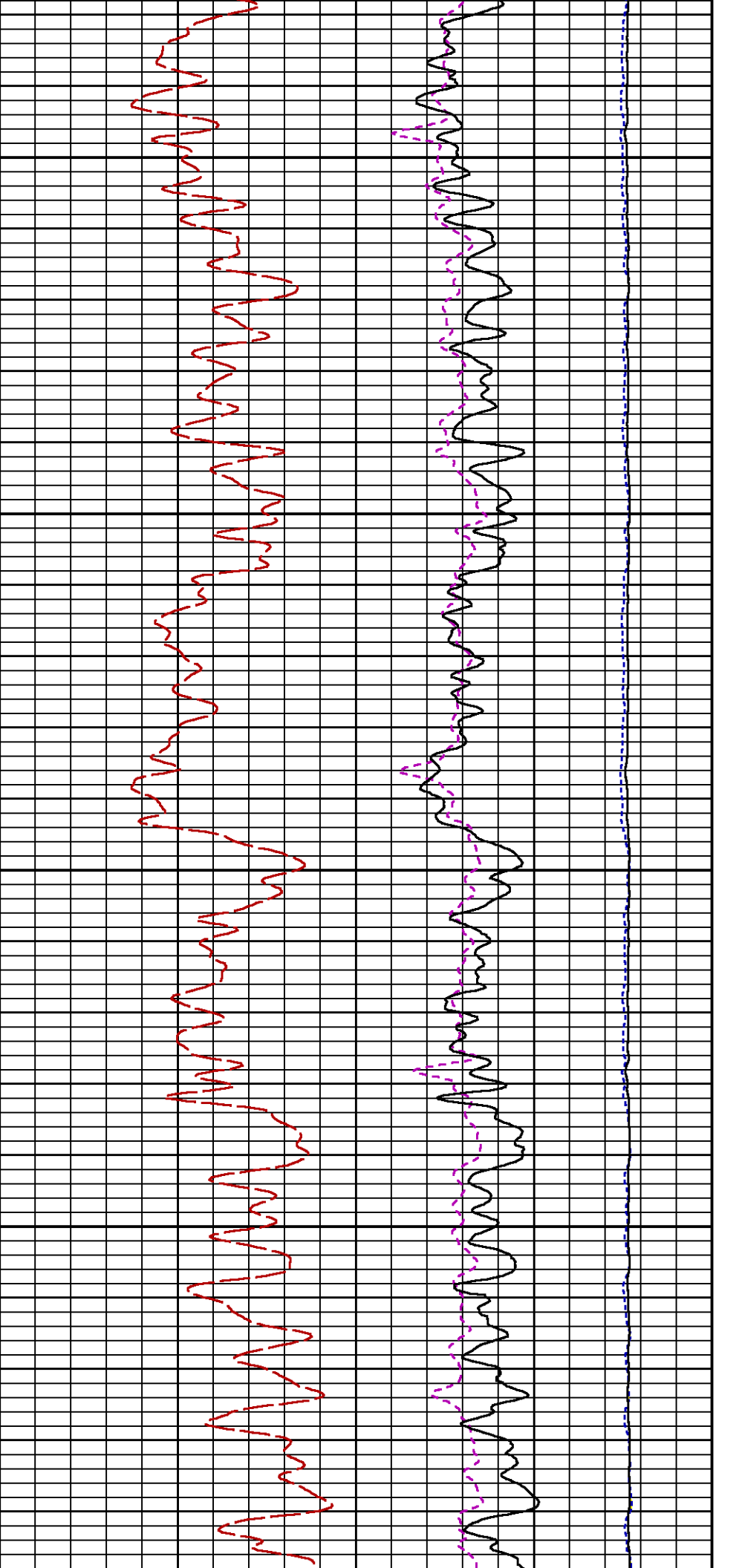
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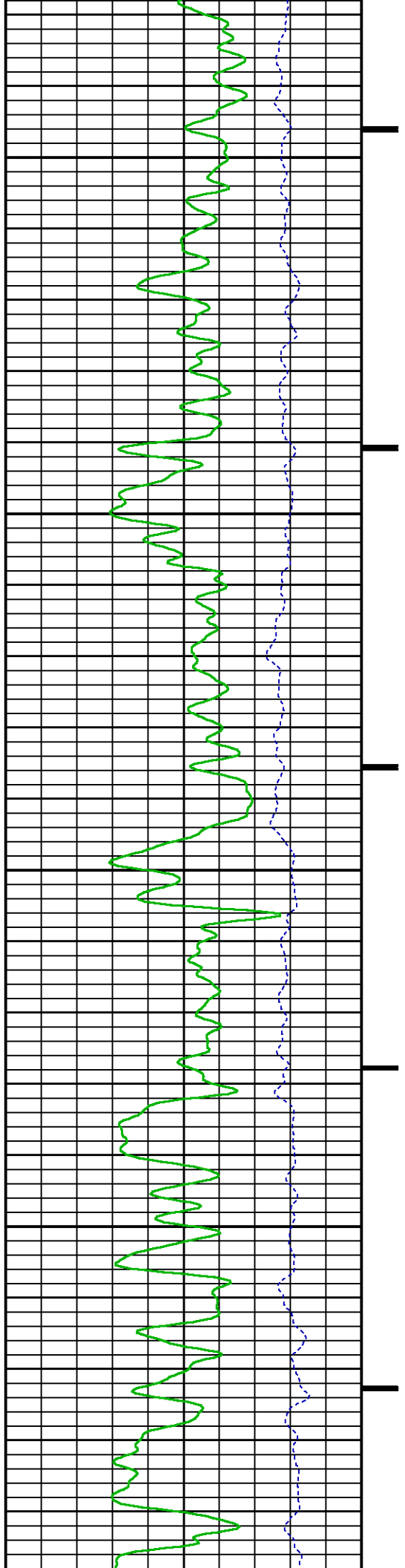


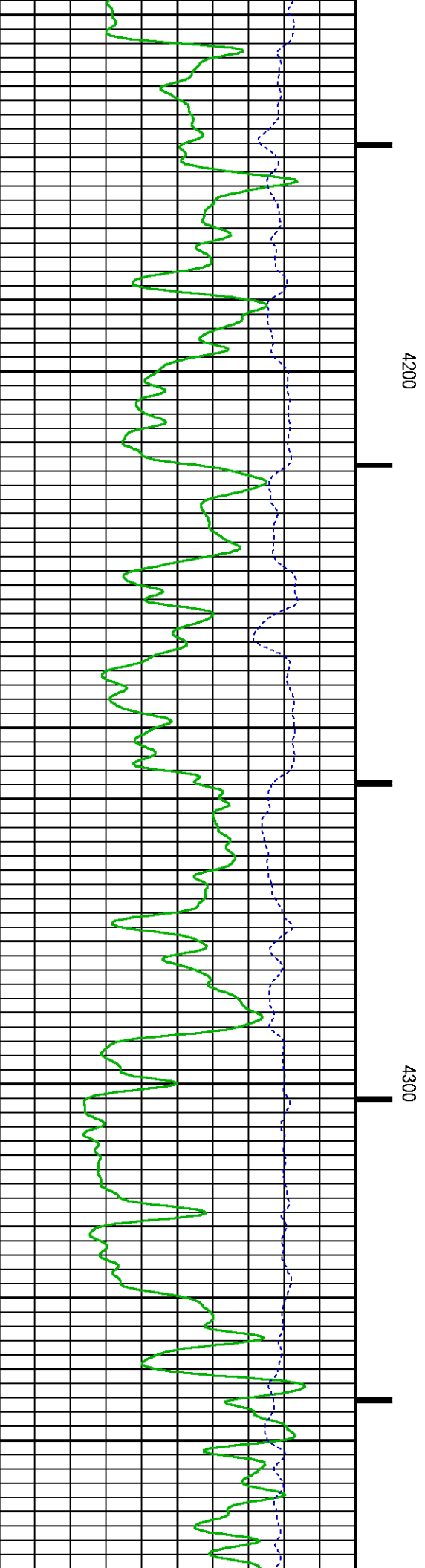
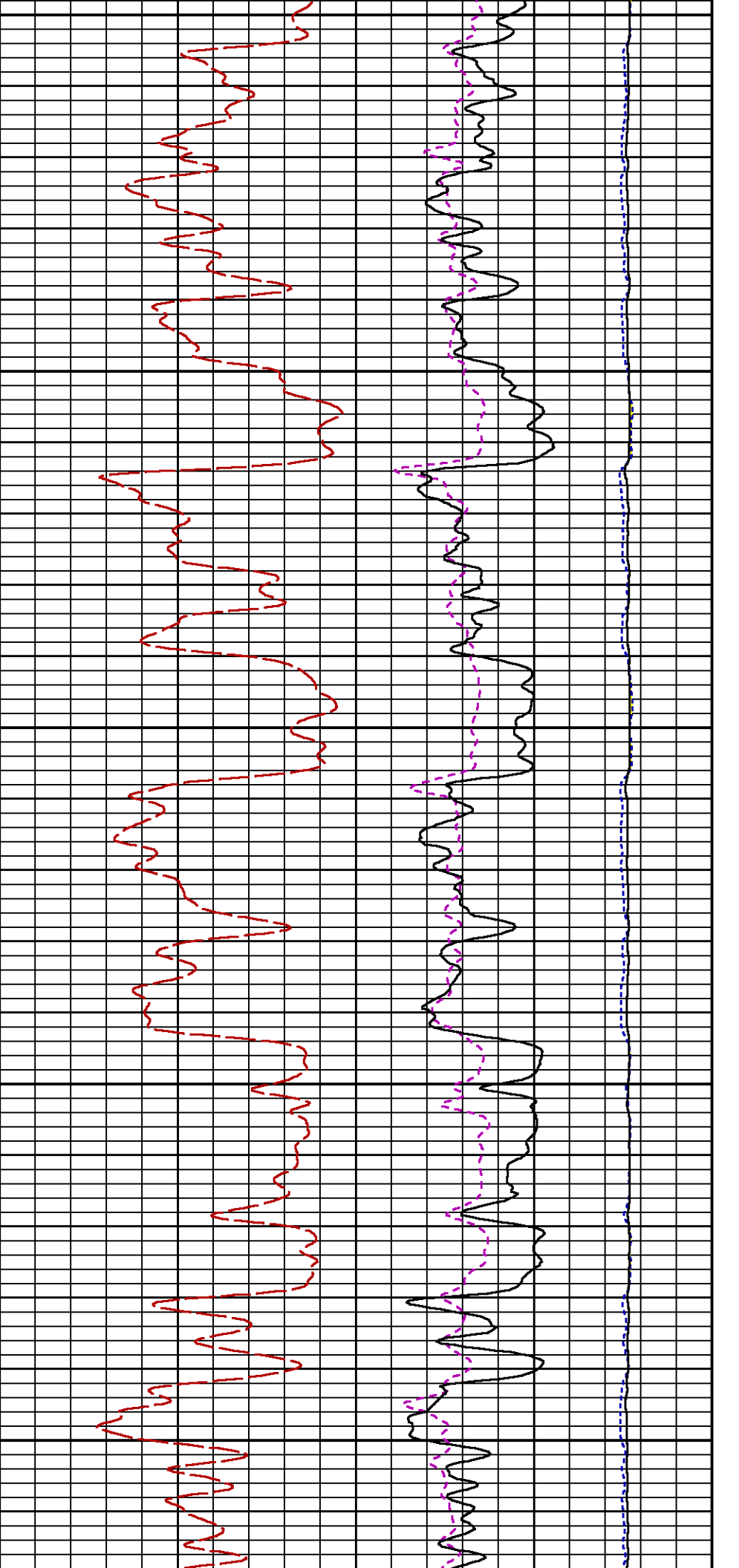


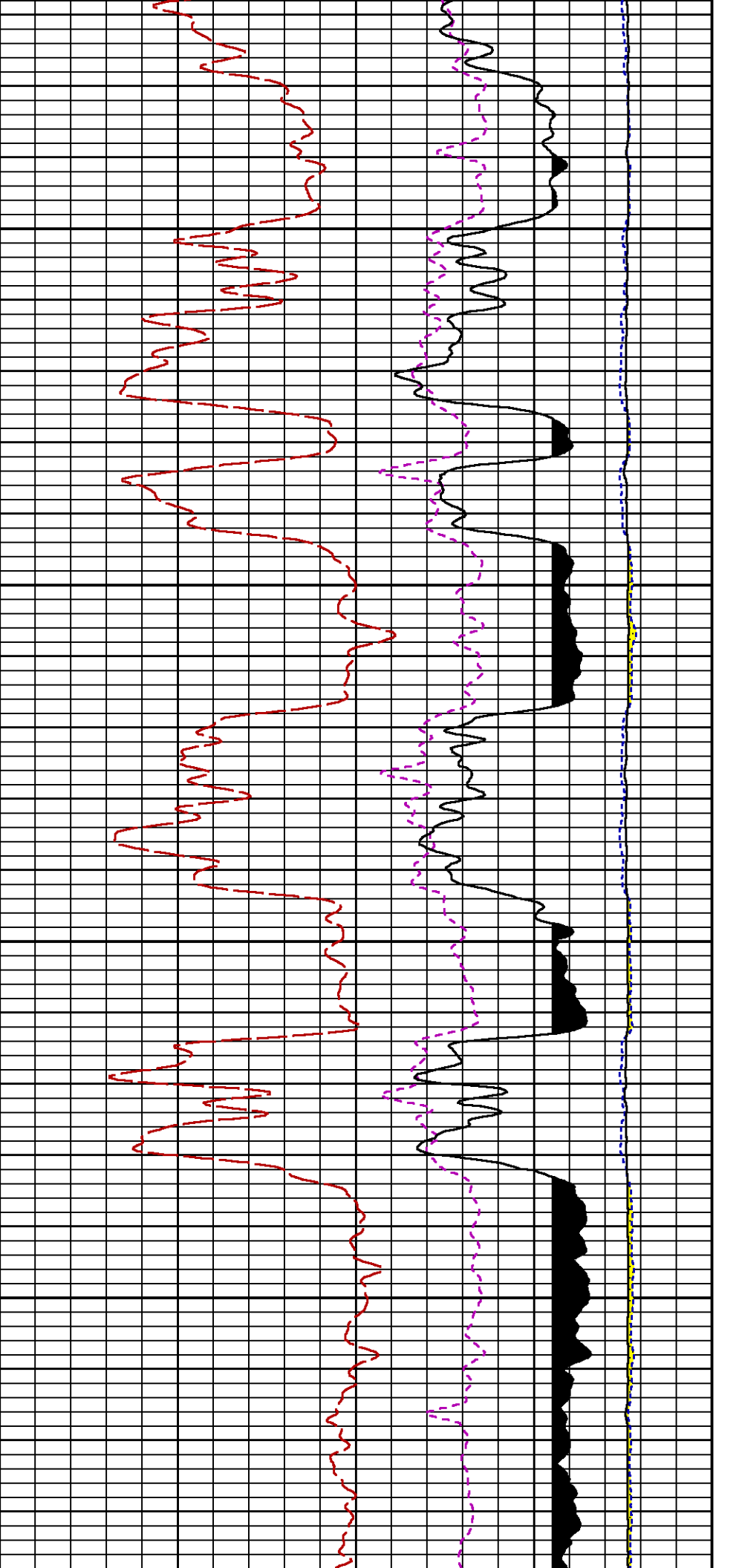


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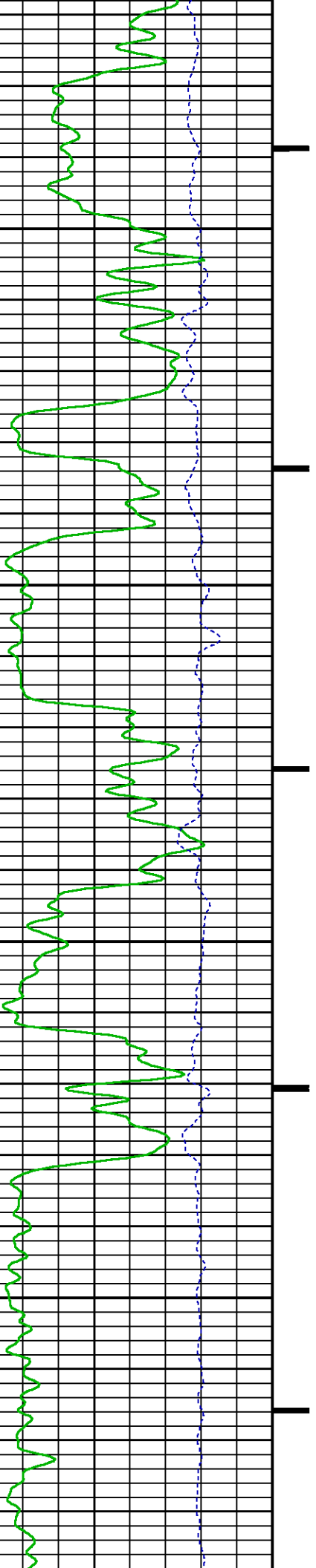


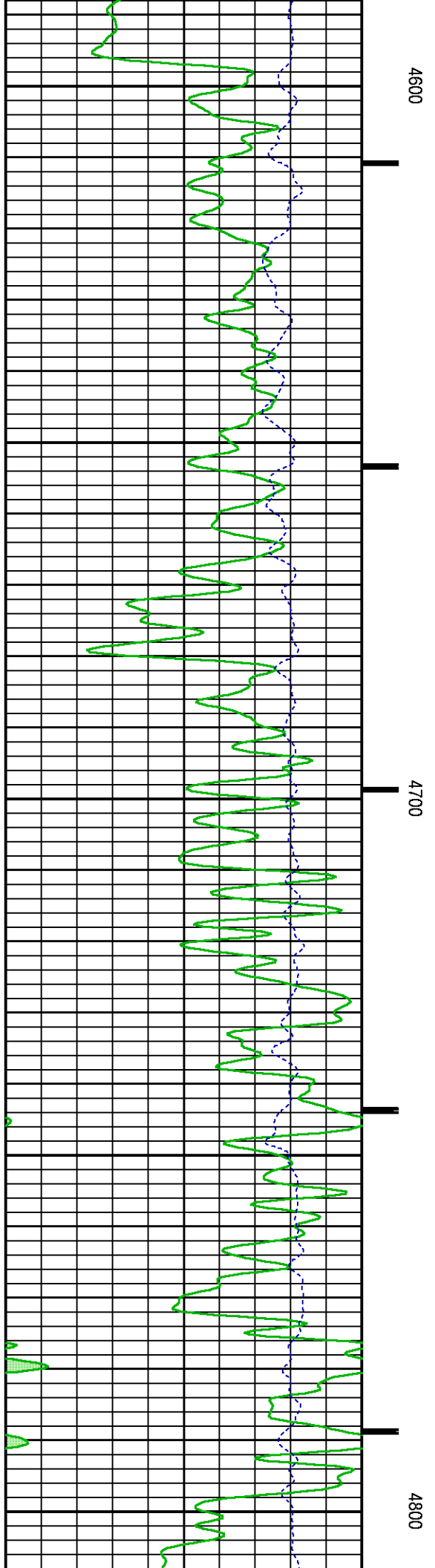
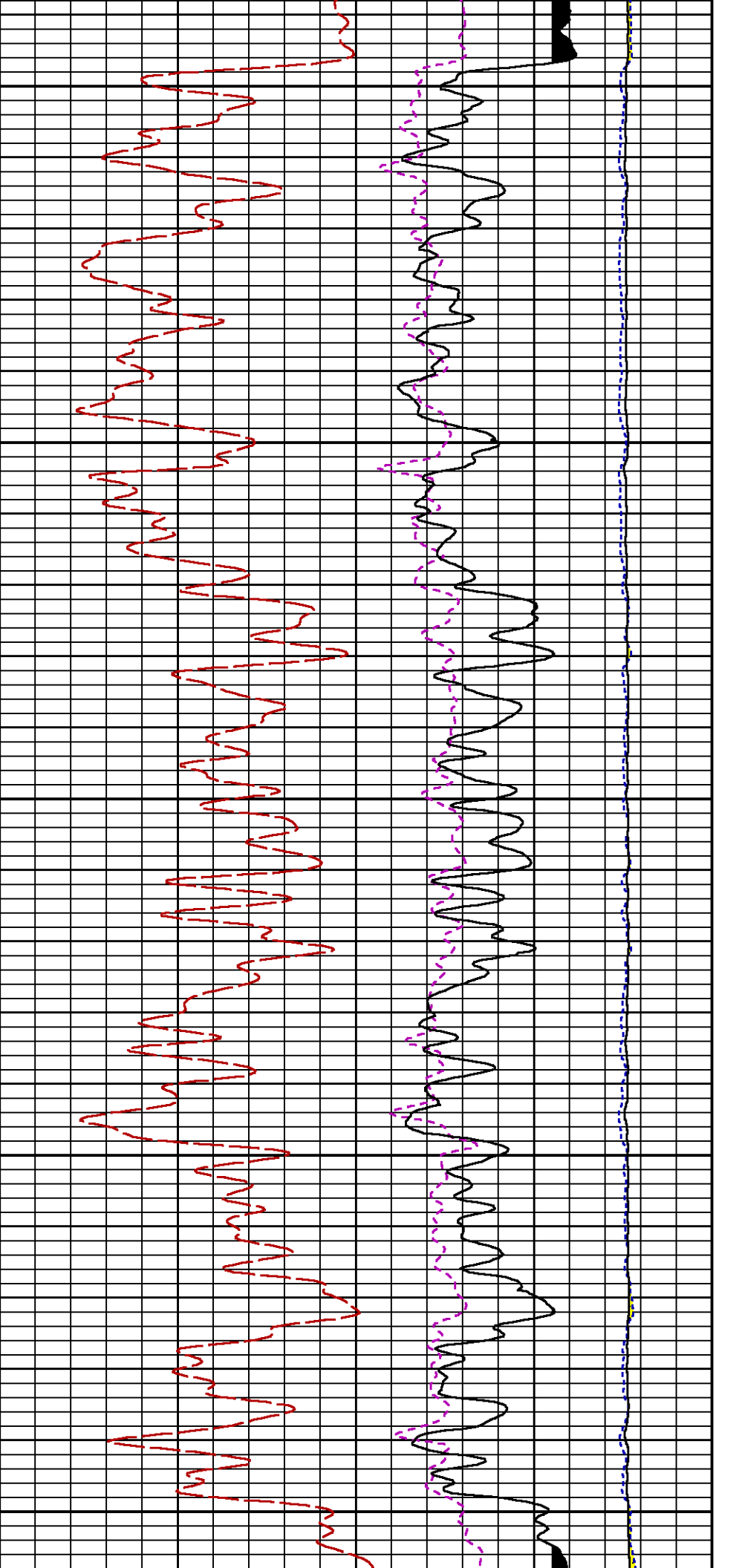


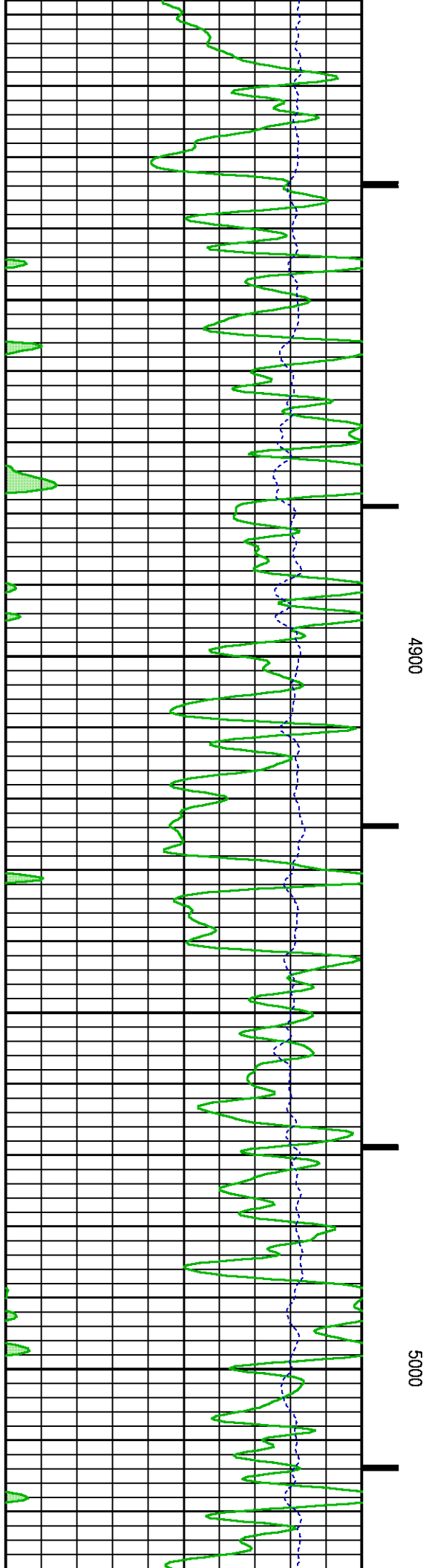
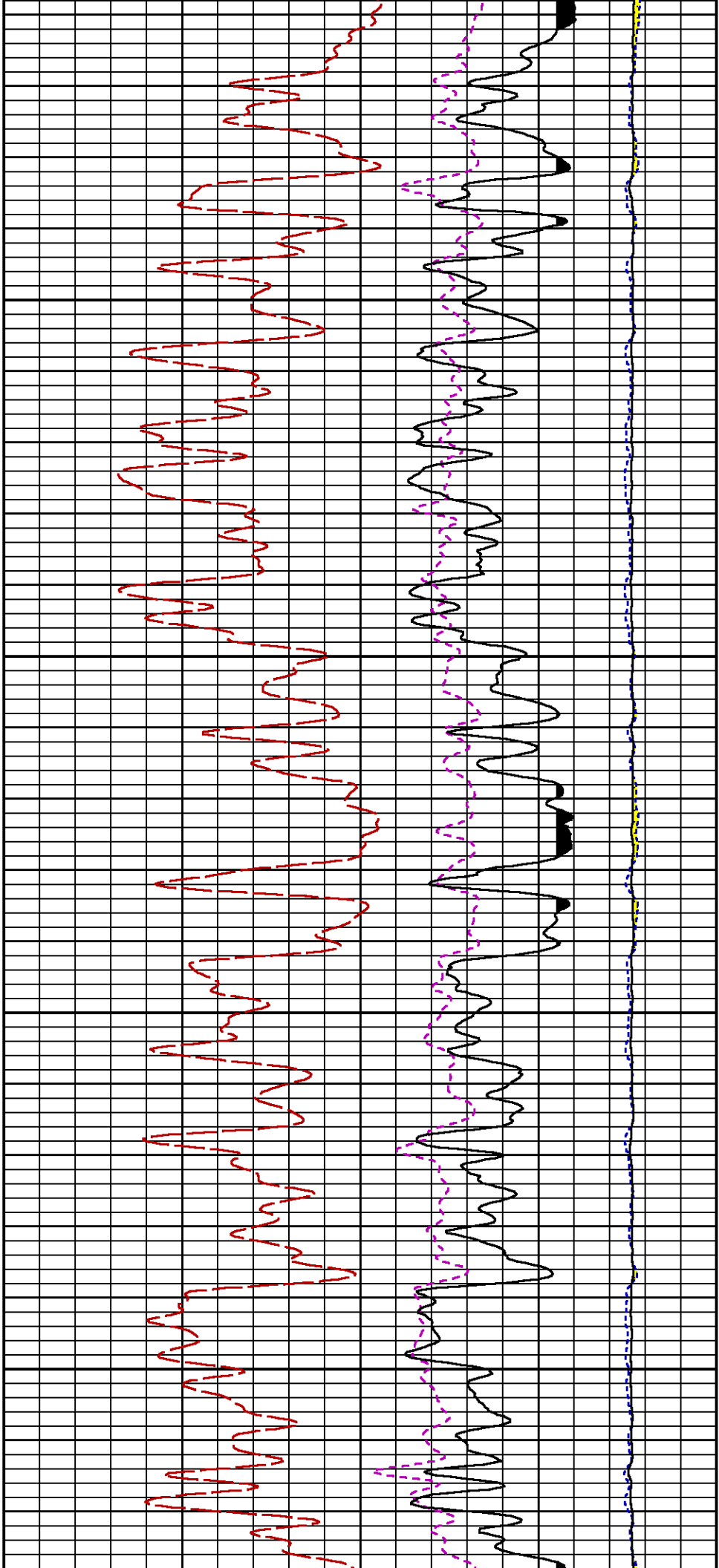


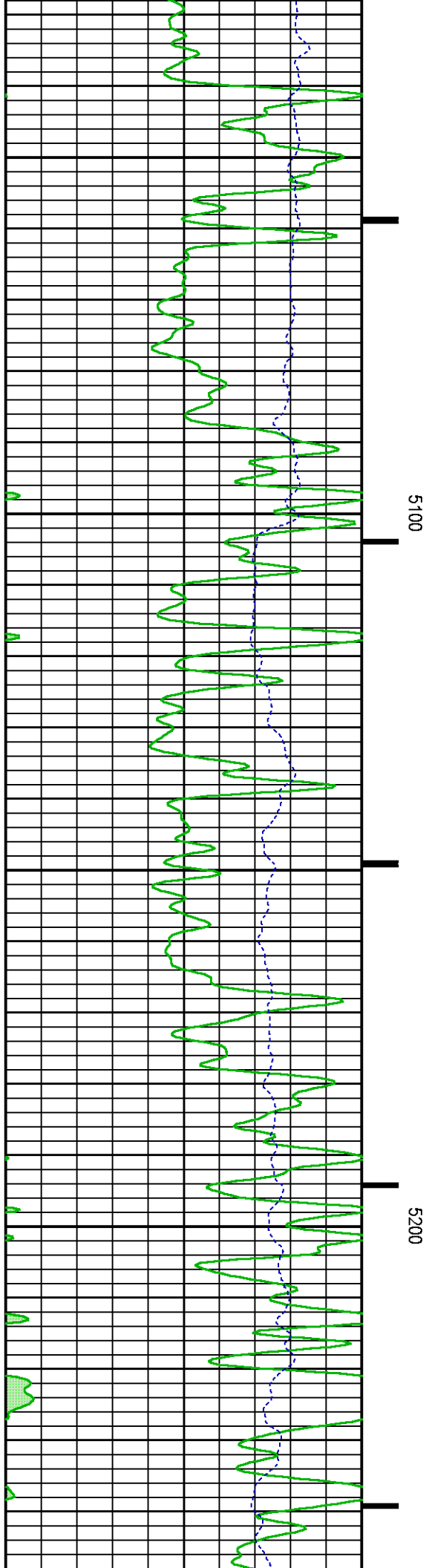
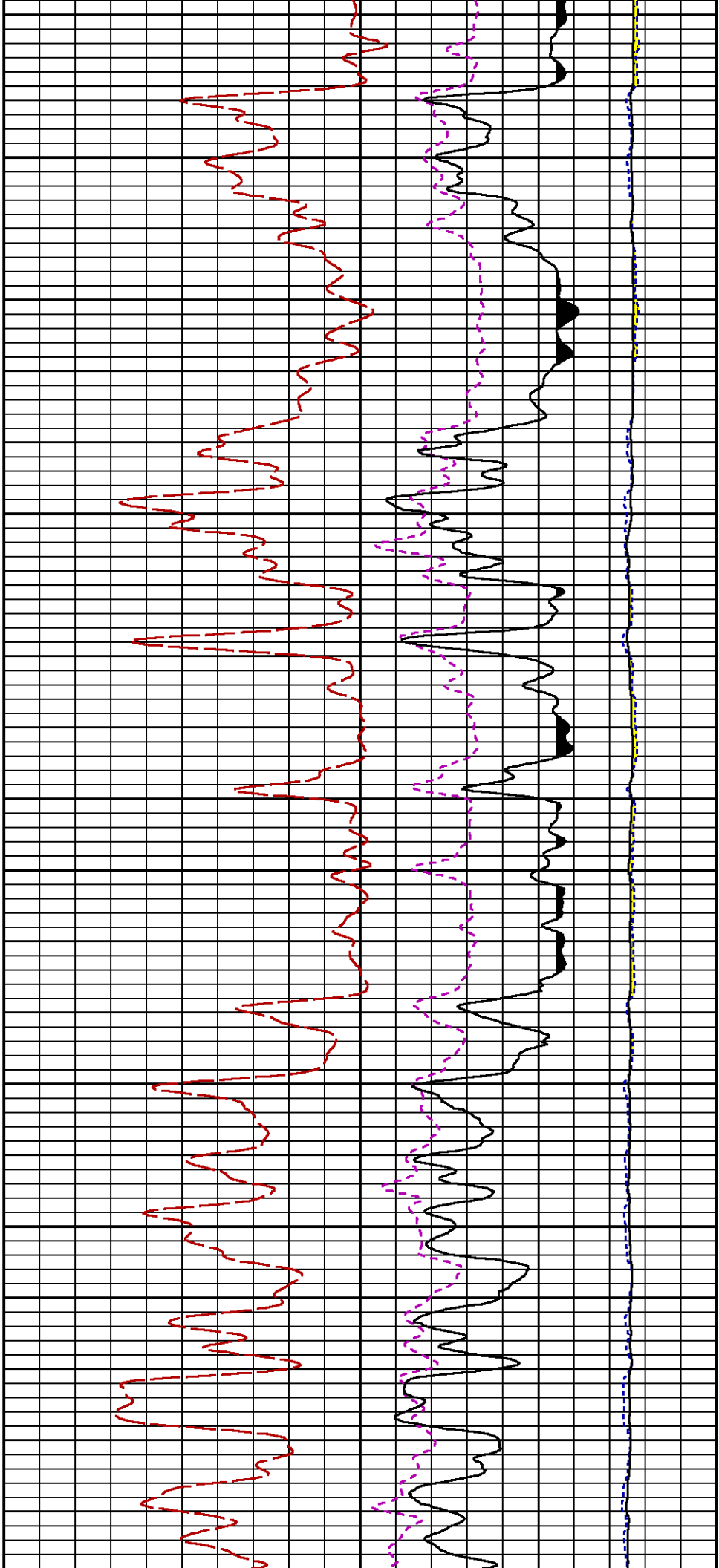
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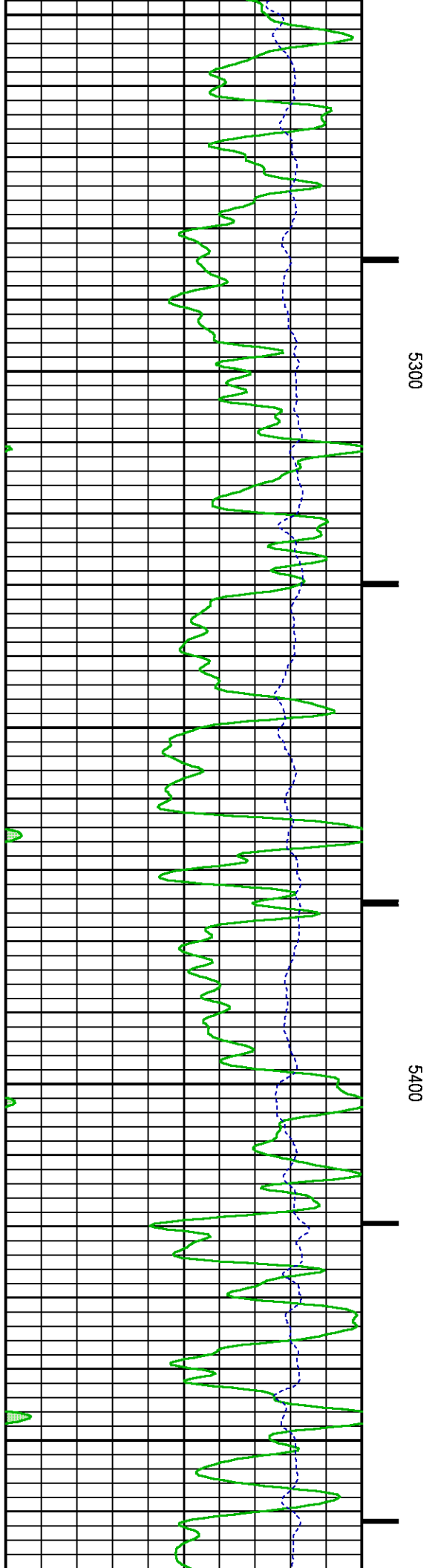
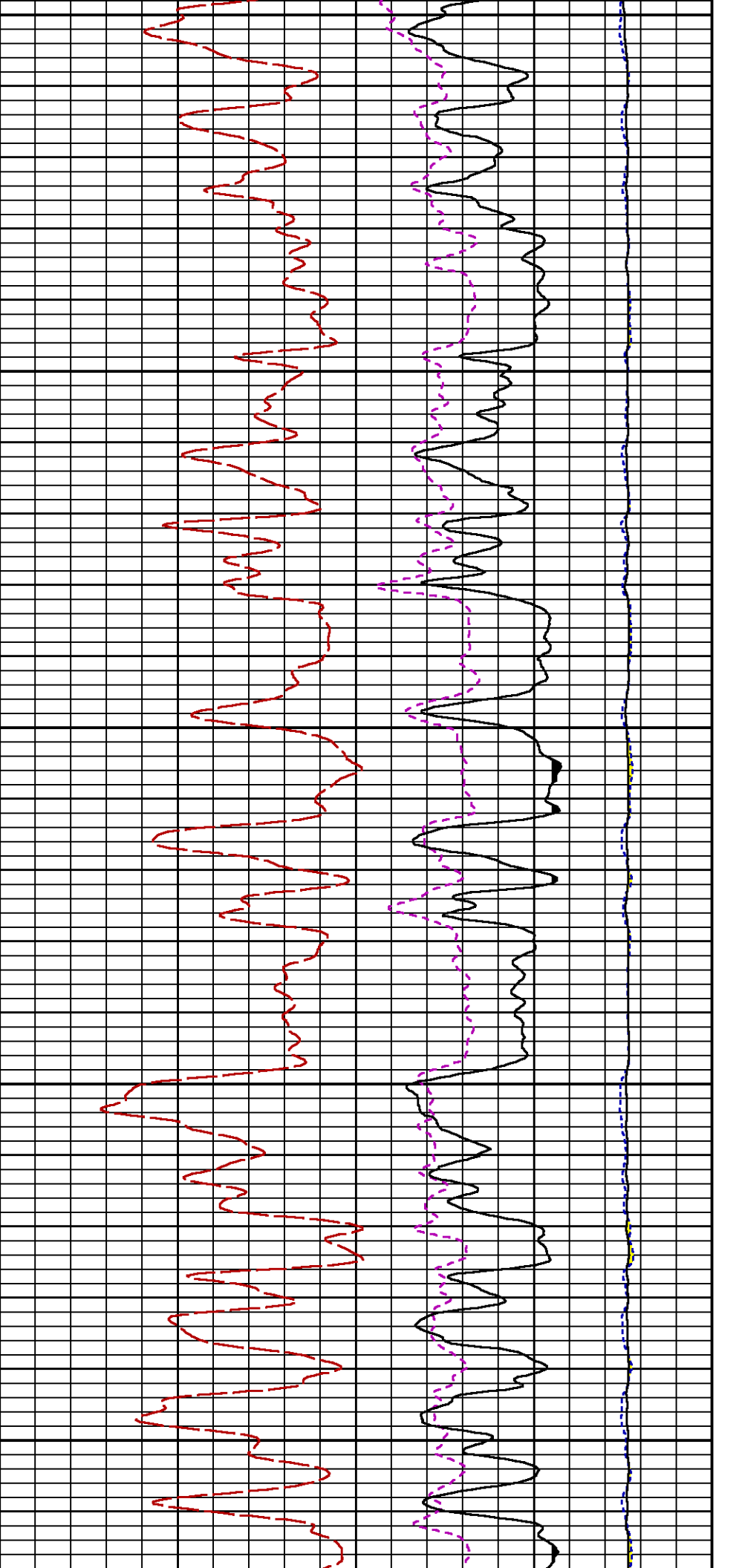
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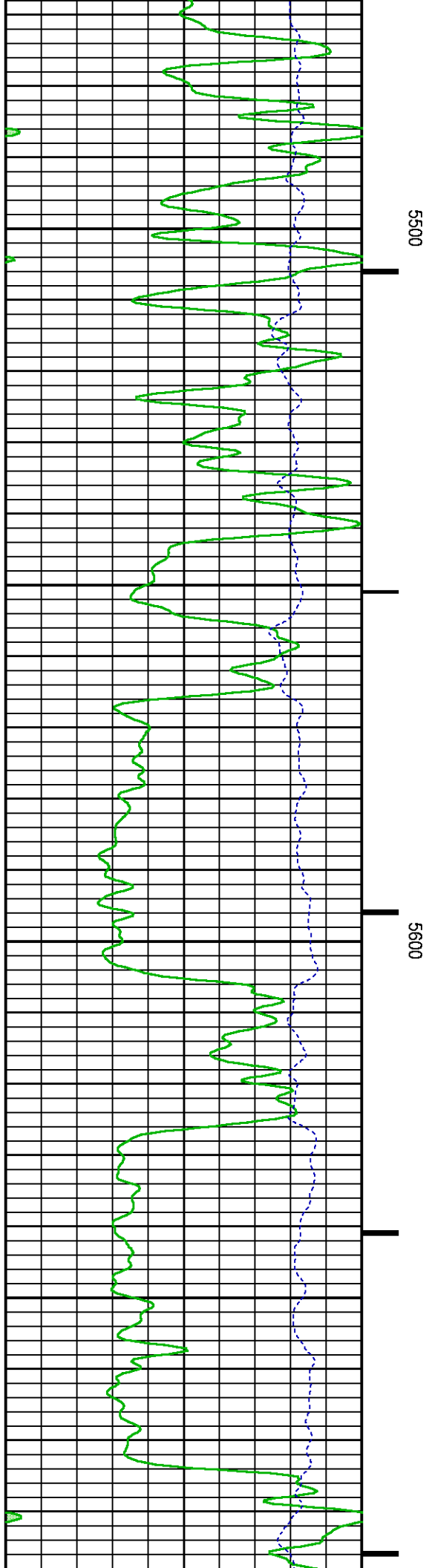
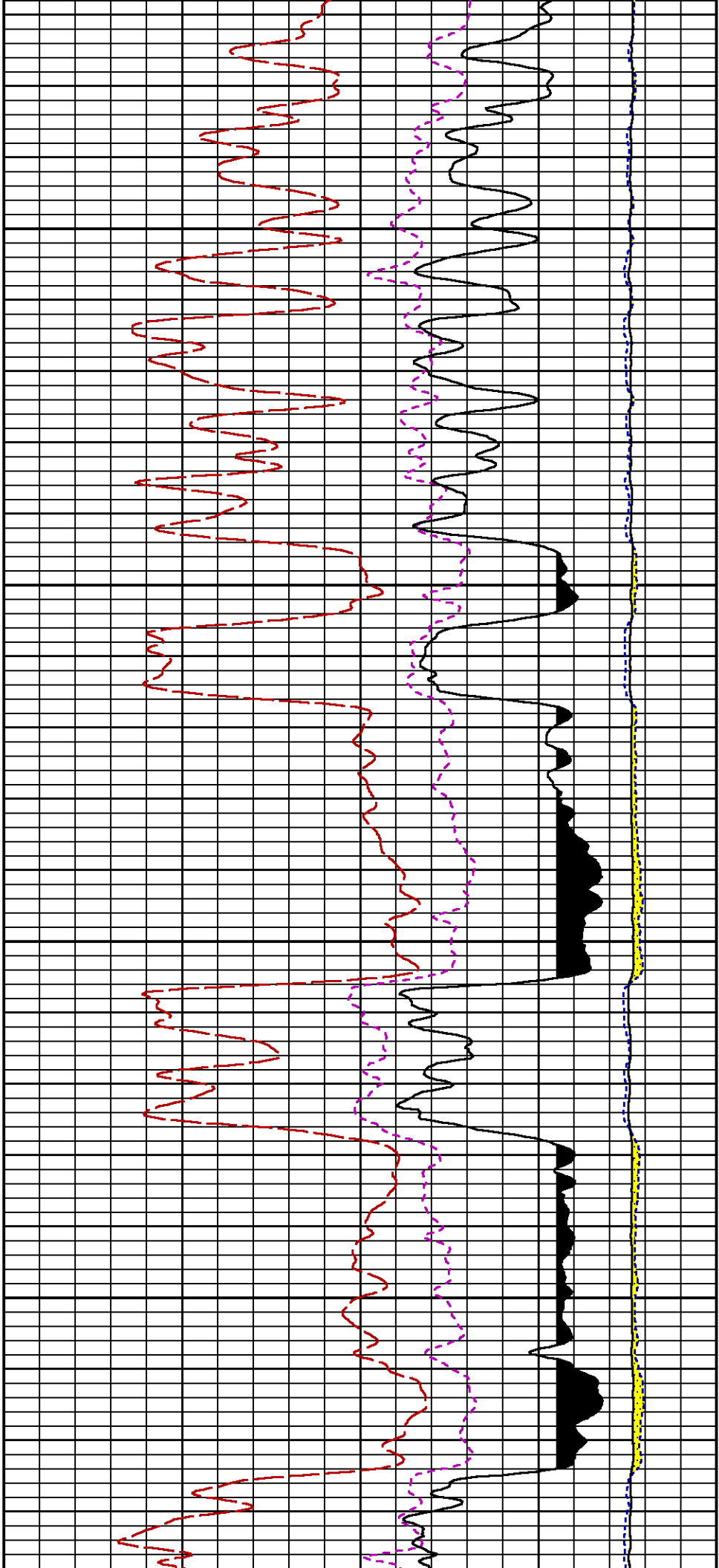


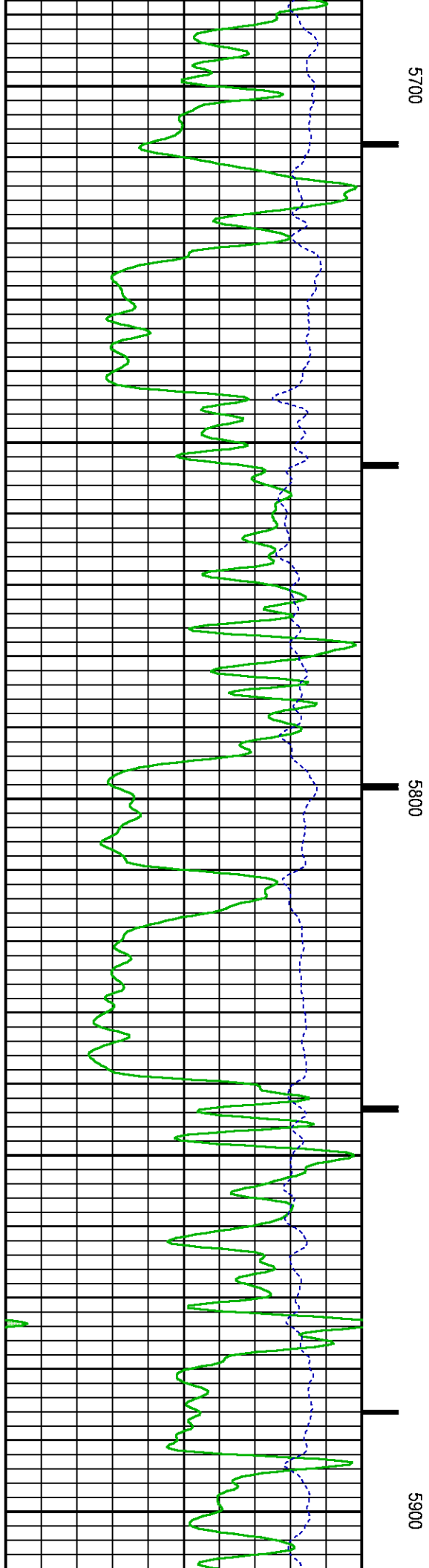
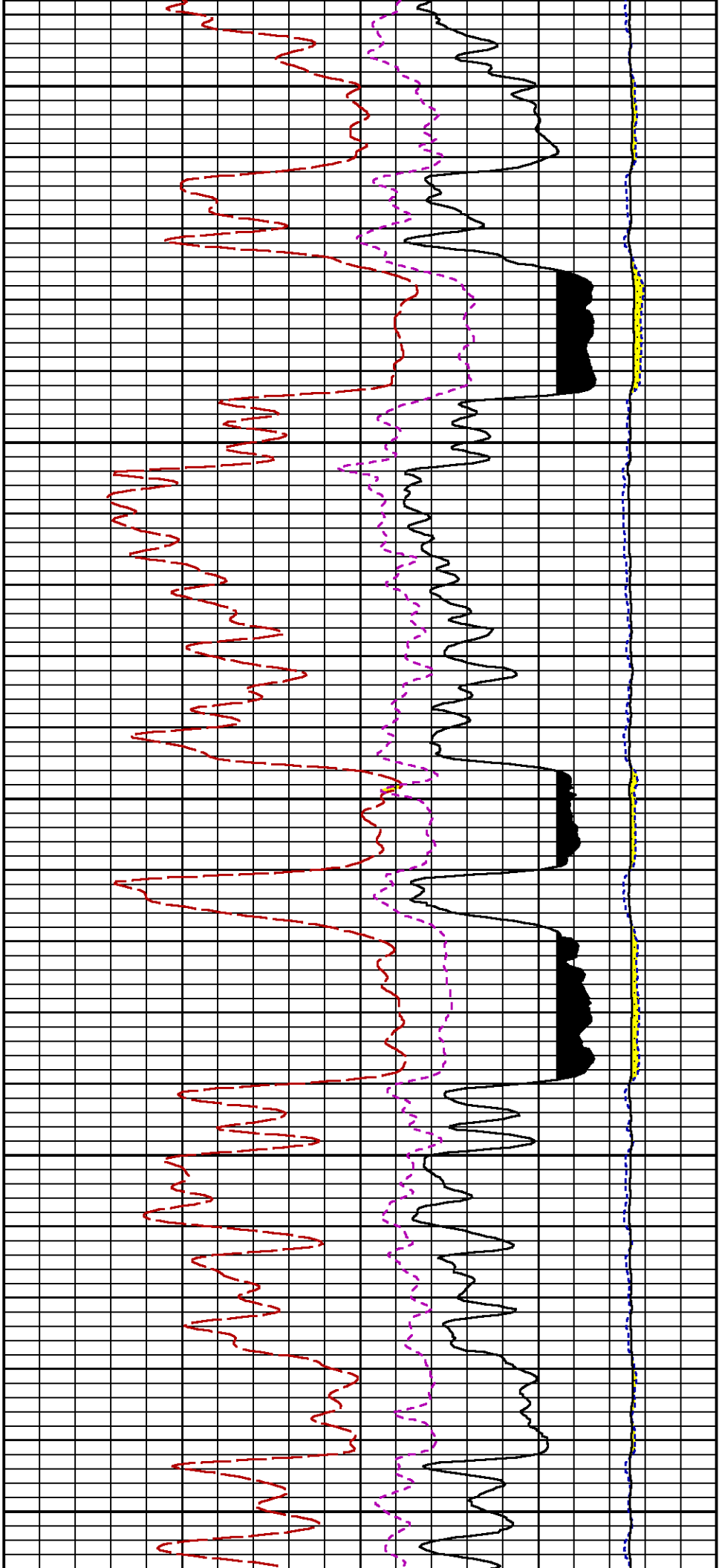


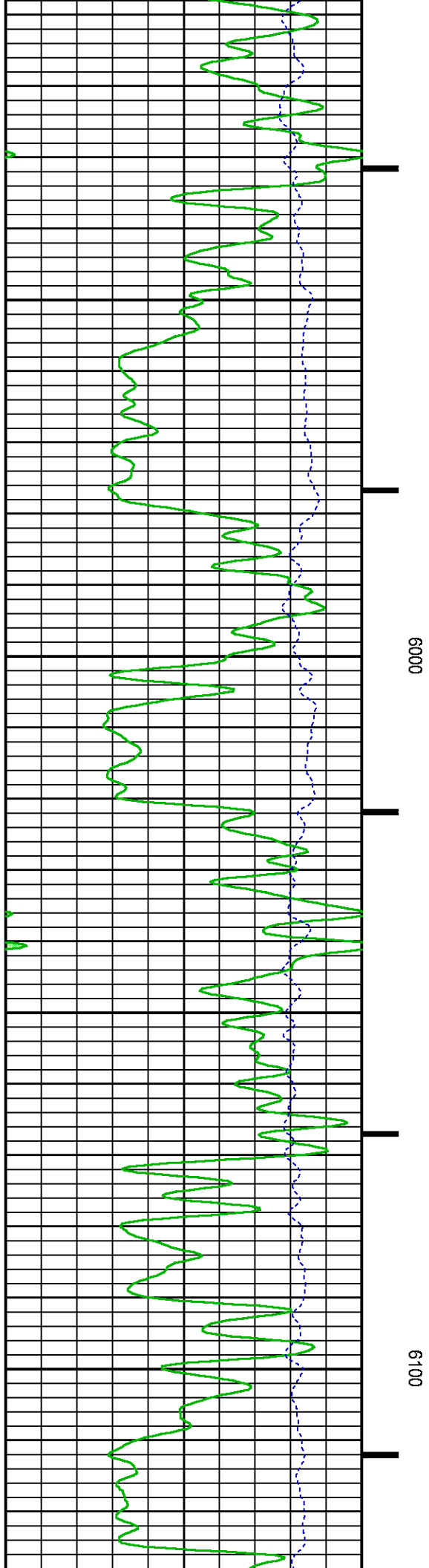
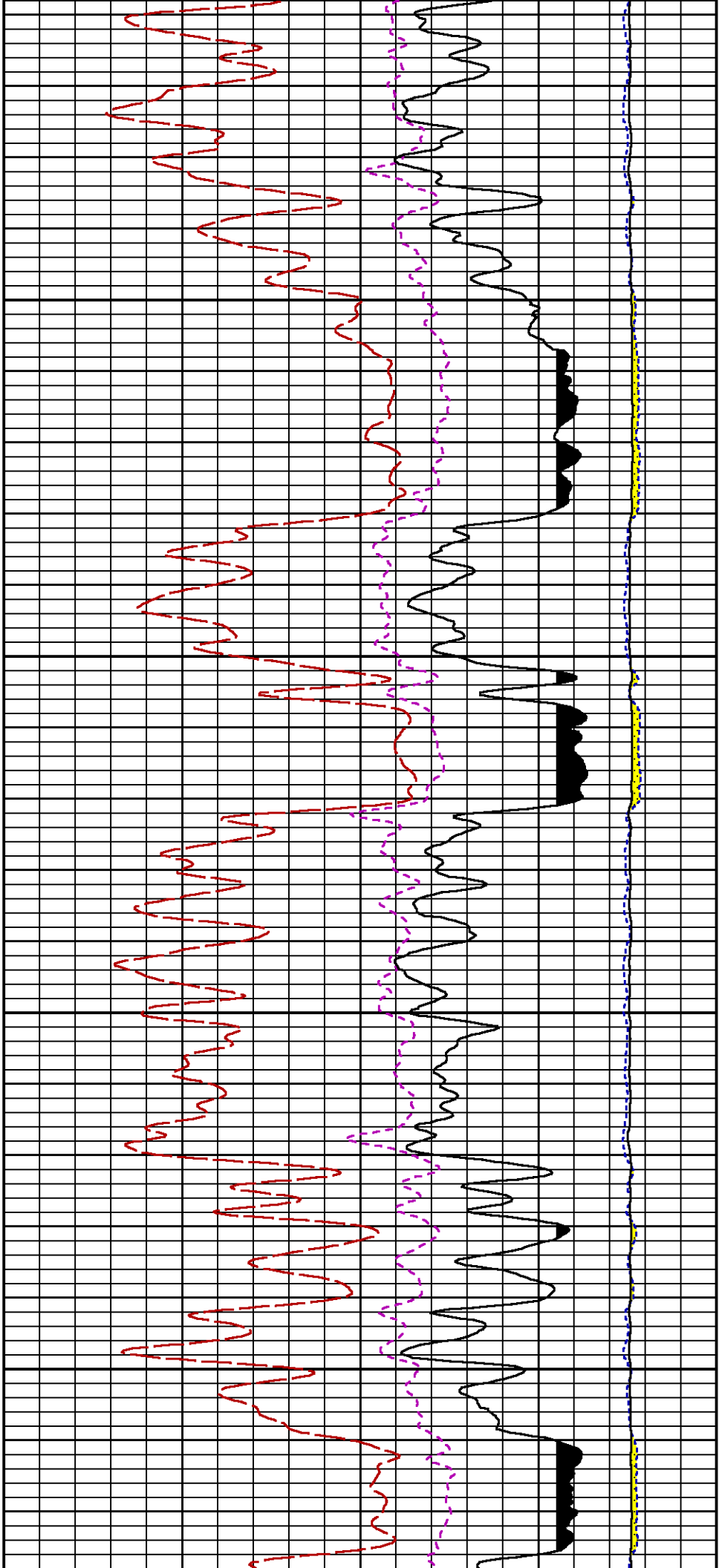


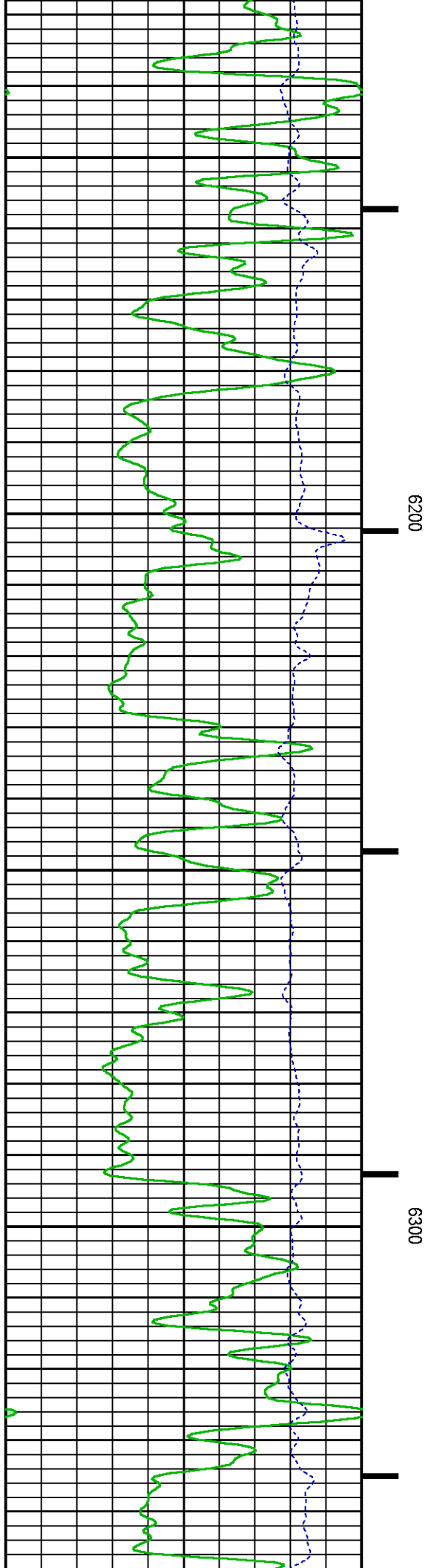
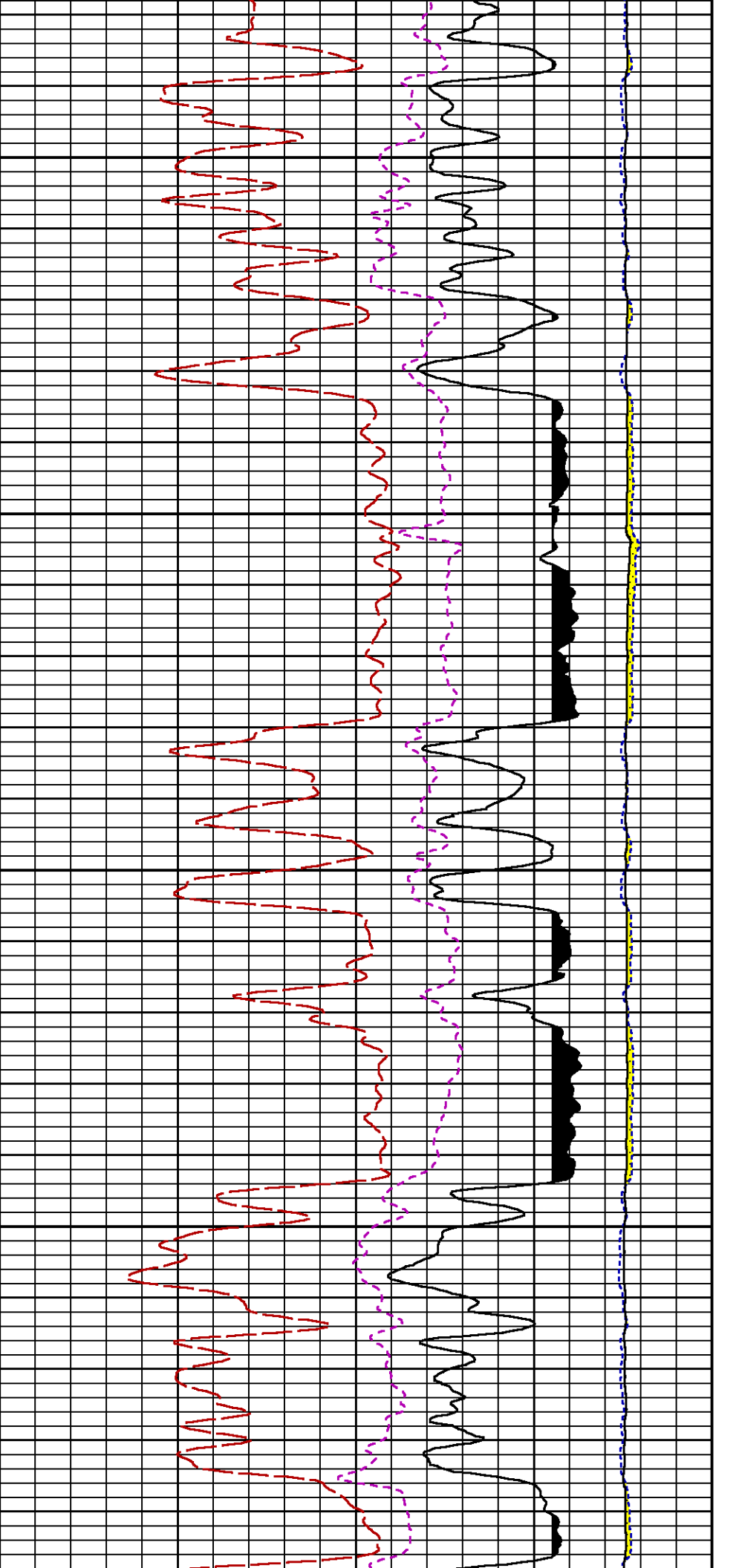


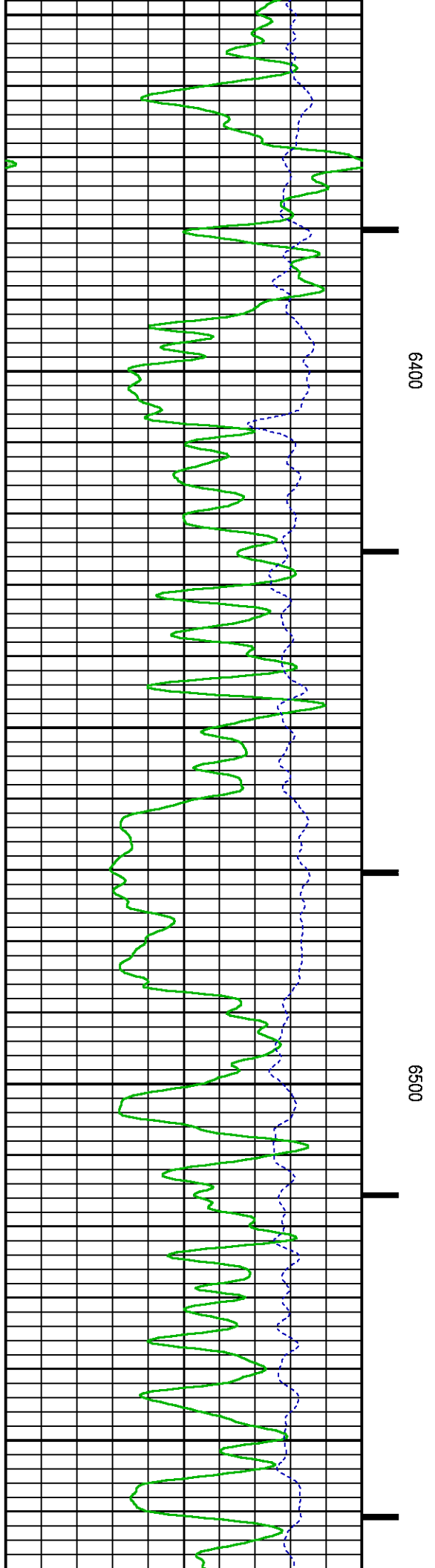
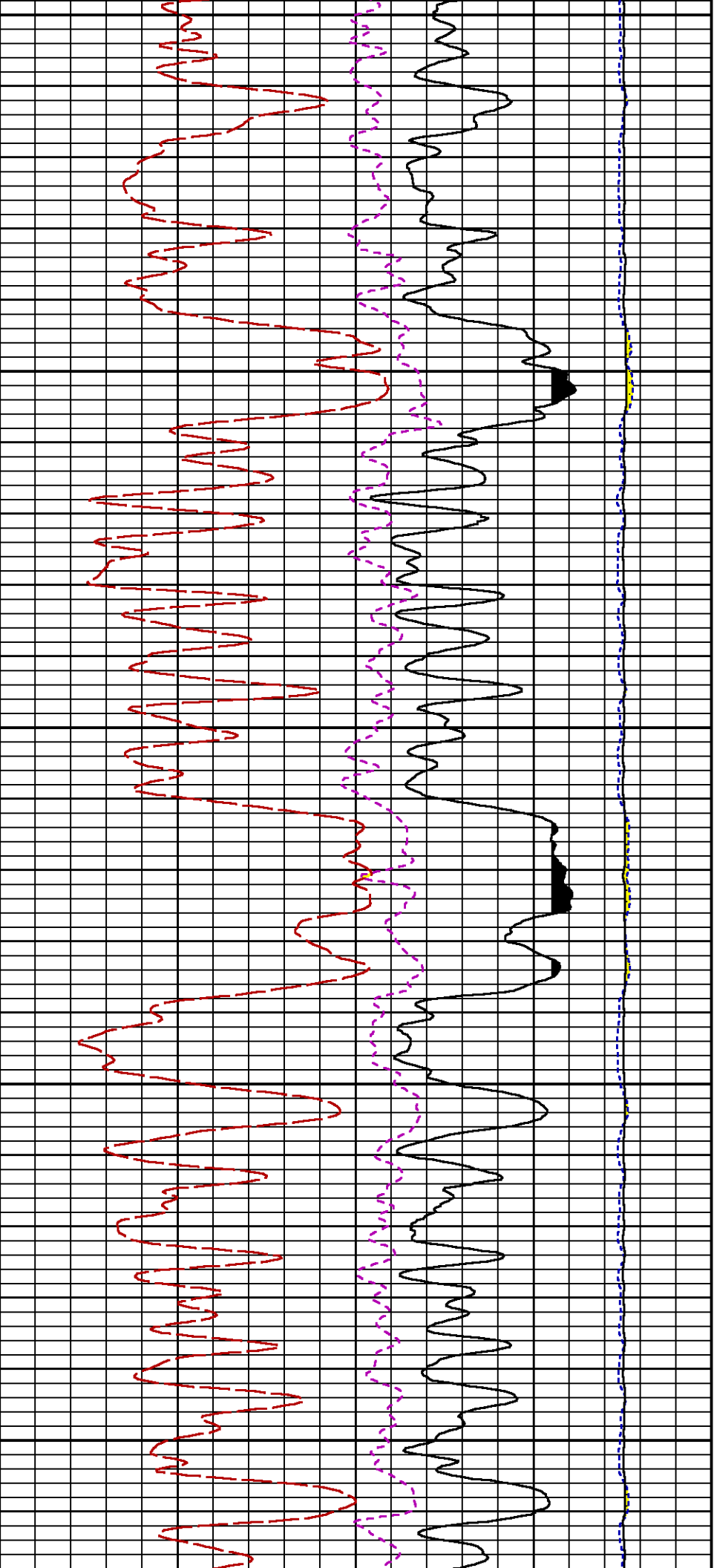


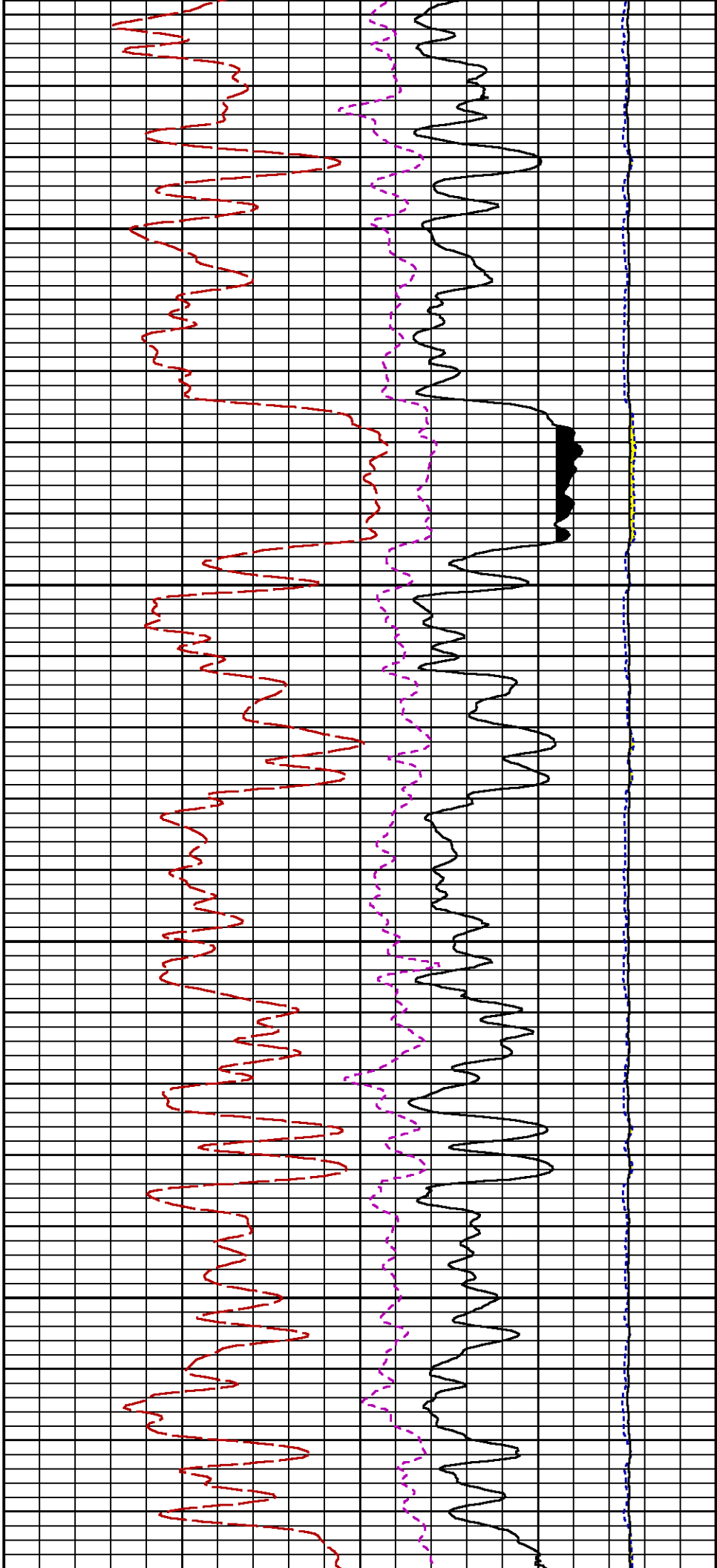






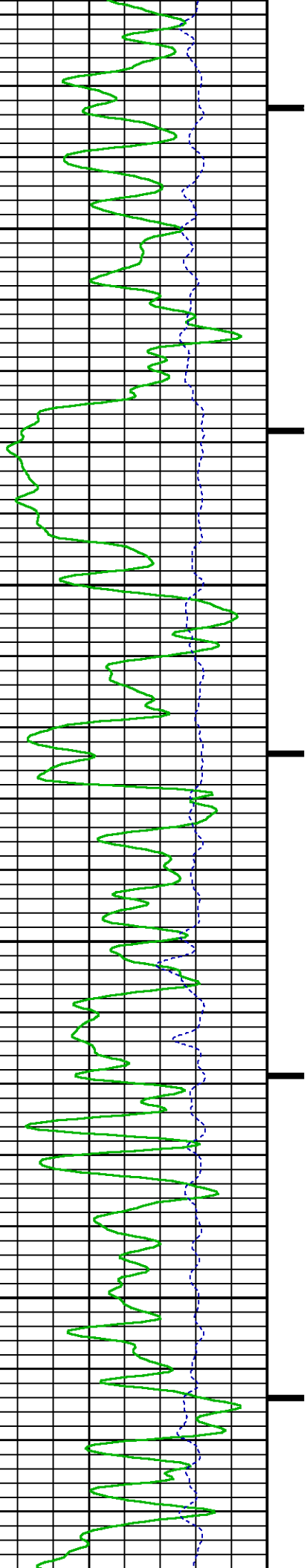


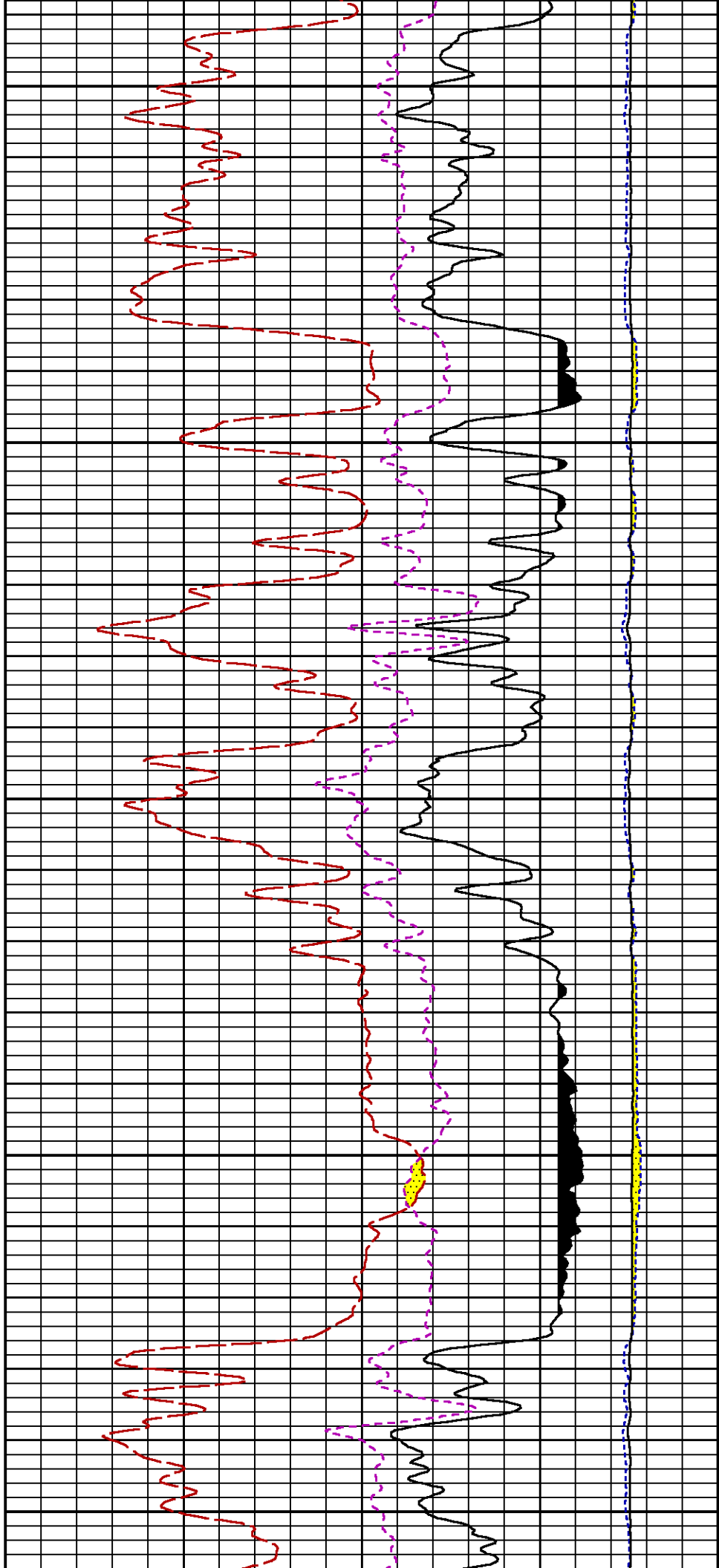
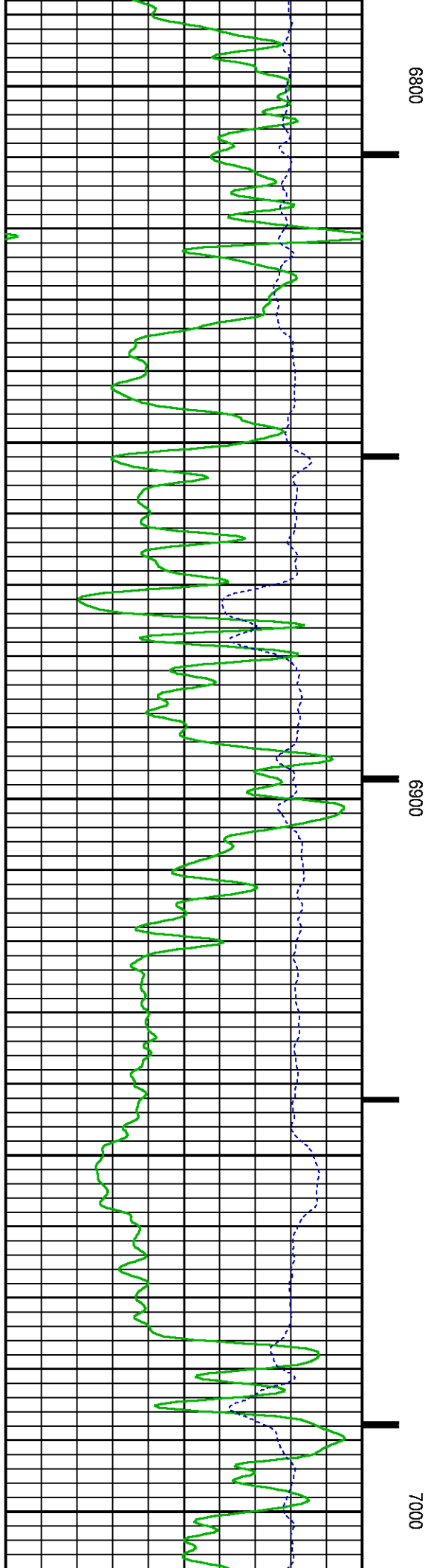


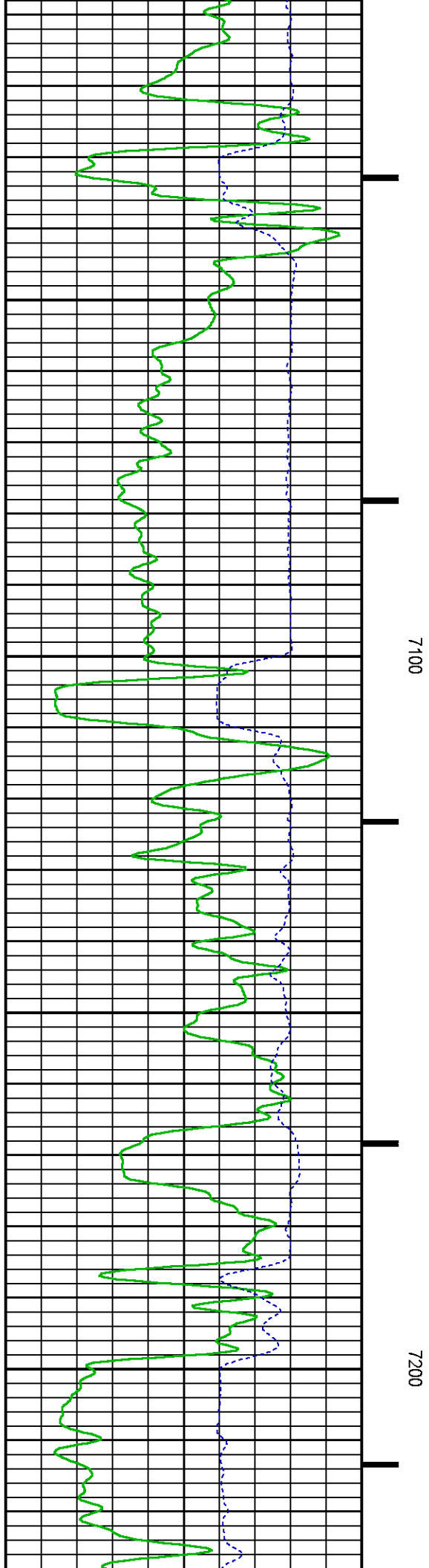
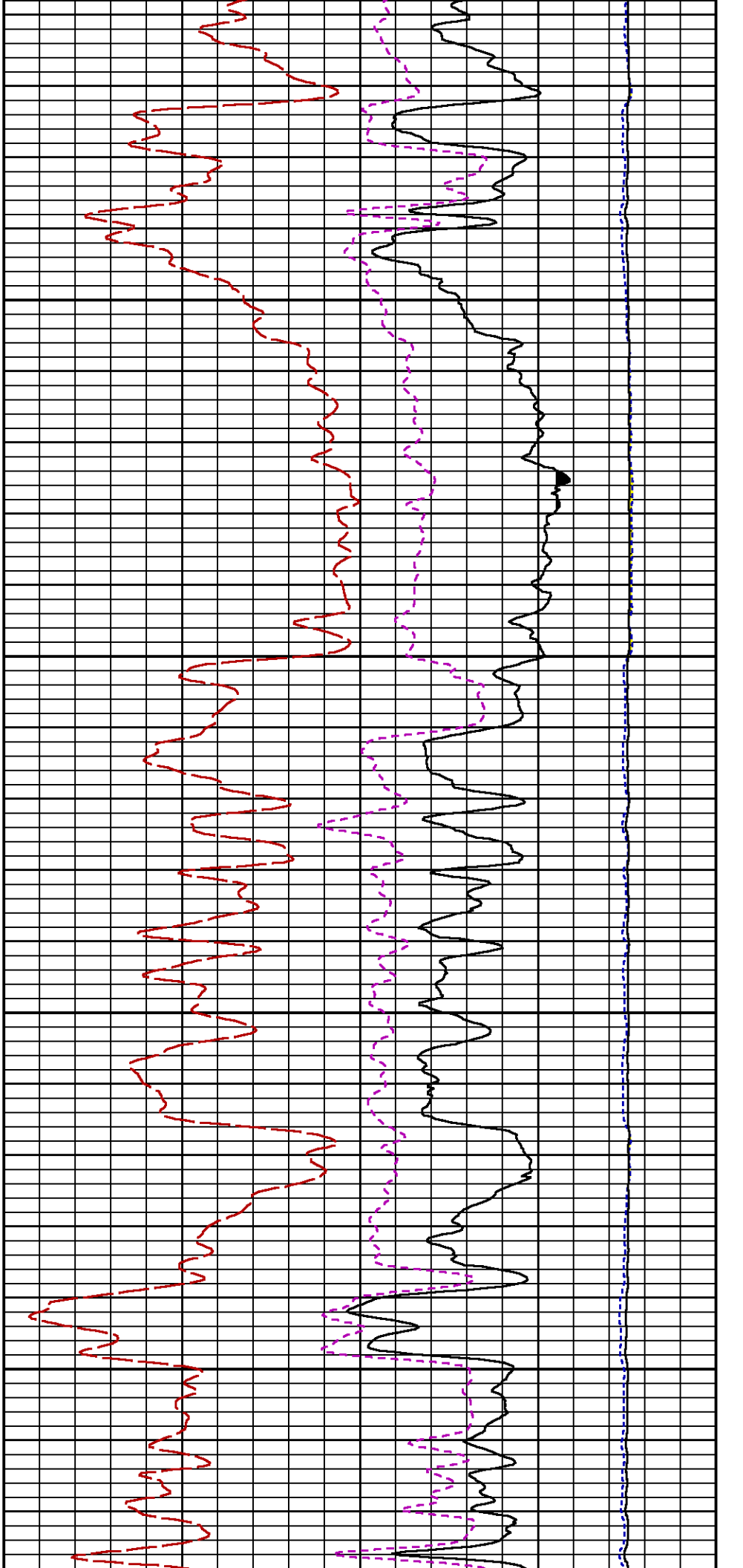


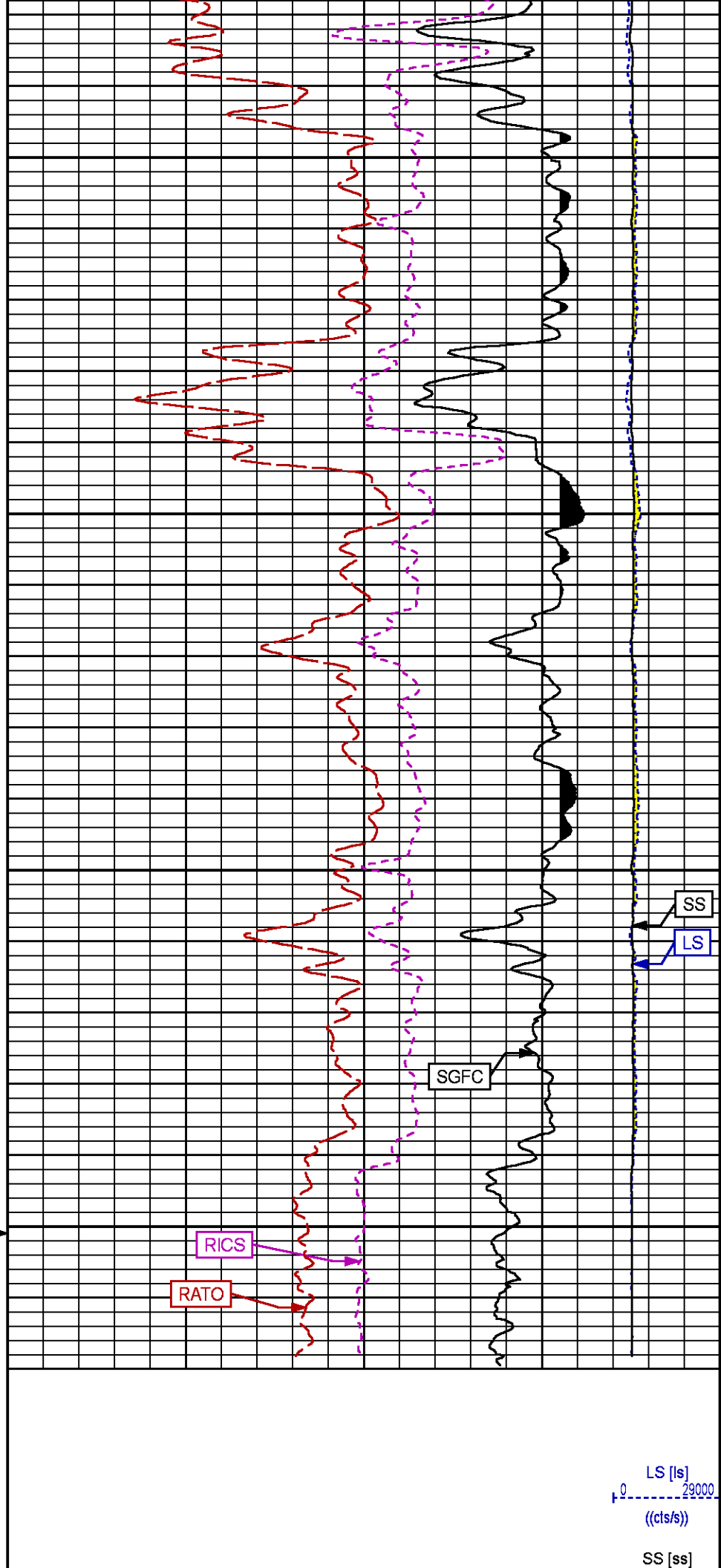
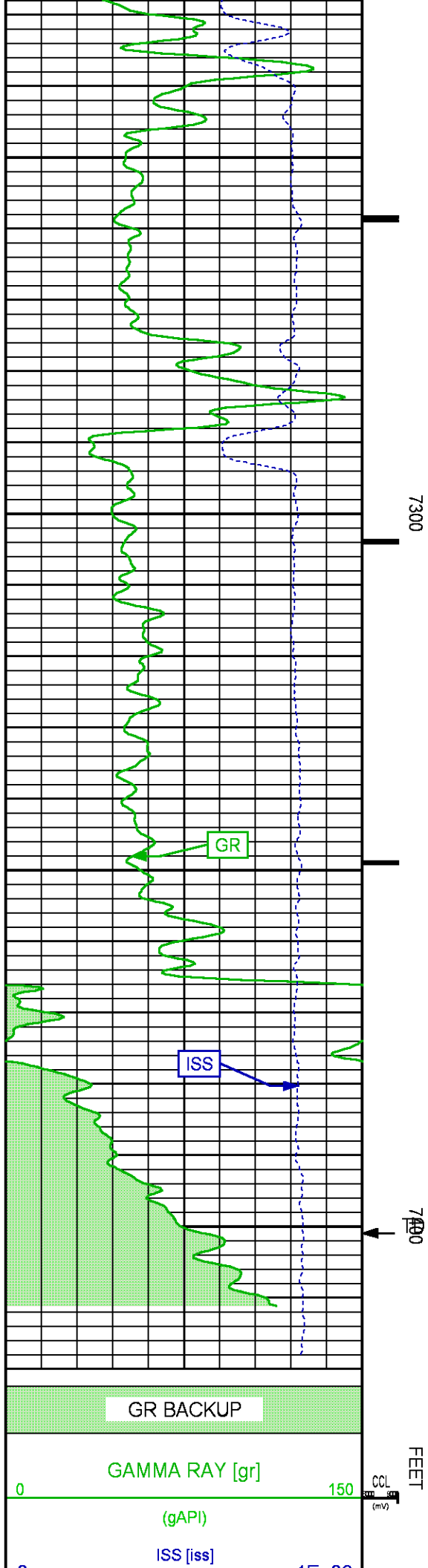
6600

6700









0 1E+06 ((cts/s))		0 290000 ((cts/s))	
		RATO [rato]	
		17	0
		(dim)	
		RICS [rics]	
		39	9
		(dim)	
		SGFC [sgfc]	
60		0	
(cu)			

REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Thu Jan 25 07:54:10 2018

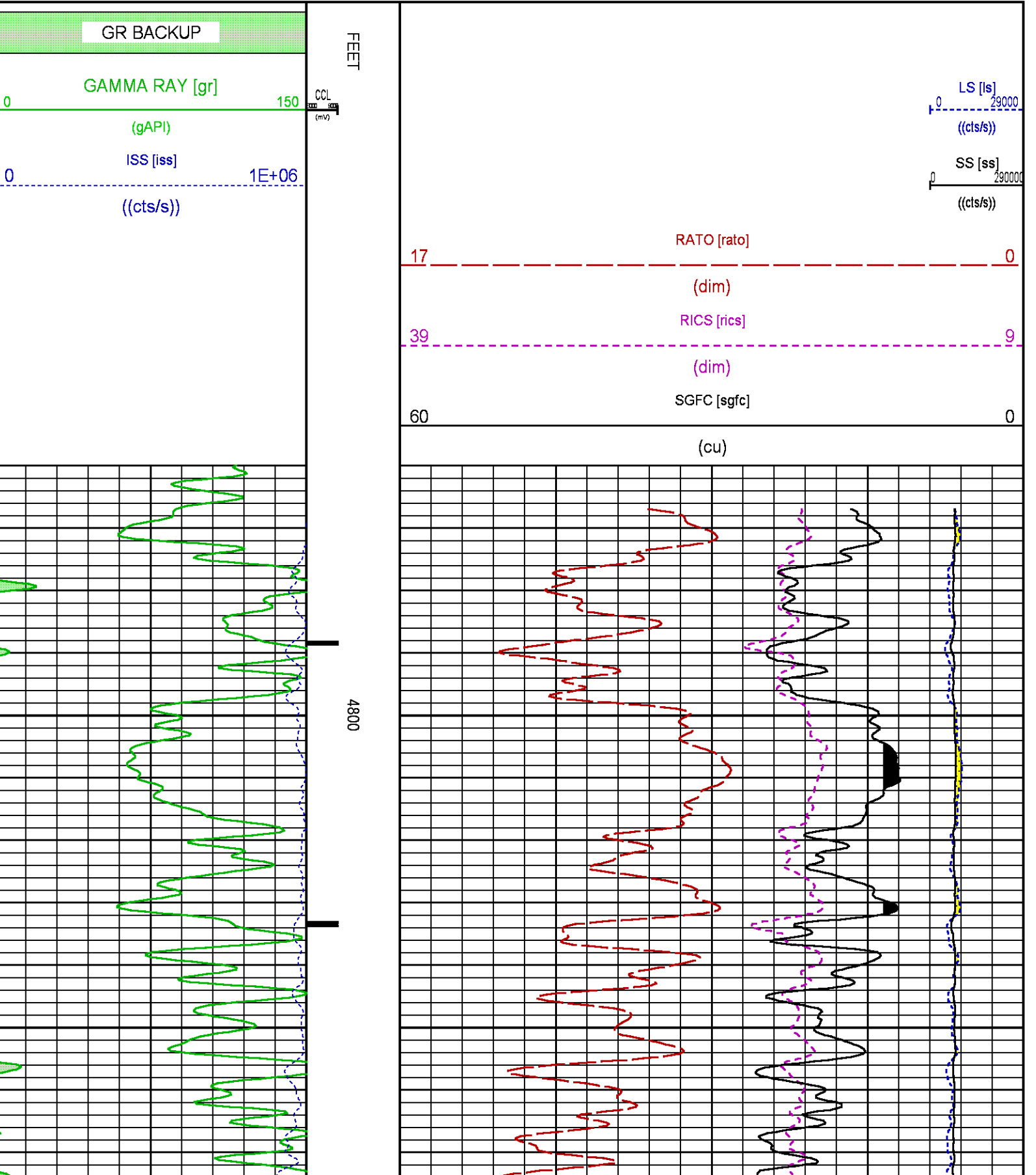
PARAMETER AND FILTER SUMMARY REPORT					
FILE: /dat1a/LARAMIE_NICHOLS_0994_24_06W/p353hR01.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 4767.000 ft BOTTOM DEPTH: 4996.358 ft					
SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
RPM PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	7.88	in	"	"
	LARGEST CASING OD	4.50	in	"	"
	MATRIX	SANDSTONE		"	"

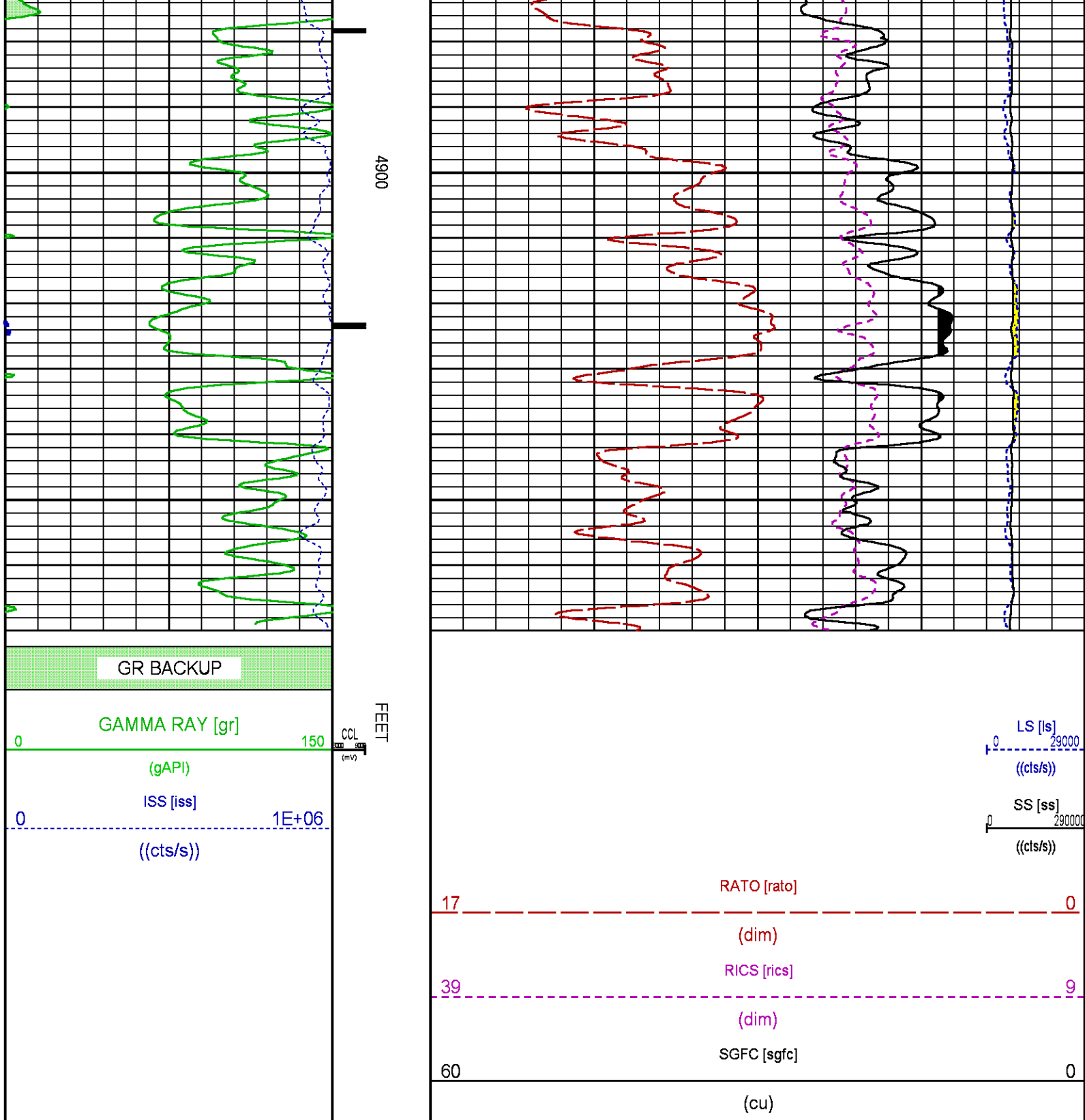
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_NICHOLS_0994_24_06W/24-06W_RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 4760 - 4970 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_NICHOLS_0994_24_06W/24-06W_RPM_REPEAT.xtf
Created On : N/A
Company : LARAMIE ENERGY
Well : NICHOLS-0994-24-06W
Field : VEGA
File Interval : 4740.25 - 4993.5 Feet
OCT : p353h





CALIBRATION / VERIFICATION SUMMARY

Source File: Adata1at.ARAMIE_NICHOLS_0994_24_08Vtp353h1p1

GR PRIMARY CALIBRATION SUMMARY						
TOOL #: 8262XA 10317216		DATE/TIME PERFORMED: Sat Jan 20 08:55:31 2018				
UNIT #: 4352 ML4352		CALB JIG #: 4702NKDA_228				
	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)
GR	58.42	336.96	278.5	0.664	38.80	223.80
						185

GR PRIMARY VERIFICATION SUMMARY

TOOL #:

8262XA10317216

DATE/TIME PERFORMED:

Sat Jan 20 08:58:00 2018

UNIT #:

4352 ML4352

VERI JIG #:

4702NKNDA_228

BACKGROUND CALBRTR ON

MULT

BACKGROUND CALBRTR ON

DIFF.

(cts/s)

(cts/s)

(gAPI)

(gAPI)

GR

59.02

336.93

0.664

39.20

223.79

184.59

175.00

190.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL:

8283PA10190200

DATE/TIME PERFORMED:

Sat Jan 20 11:23:45 2018

UNIT:

3882TD HL6728

CALIBRATOR:

2437XB 120052

SOURCE:

8281AA10408960

HOURS:

8281AA 98

ISS

Mr Vits

SS Gain

LS Gain

XLS Gain

EA Temp

Sync Delay

RGAL

(V)

(degF)

(uSec)

Raw Data

809388

126

2266

2230

2285

93

9.5

0.9606

Interpolated

1300000

153

2243

2224

2277

ISS

BKS

BKL

BKX

SGA1

SDA1

SGA2

SDA2

Raw Data

809388

7357

1127

150

26.22

0.14

24.24

0.31

25.35

26.40

0.00

0.00

23.90

24.90

0.00

0.00

ISS

ILS

IXS

SS

SS2

LS

CSS

CLS

Raw Data

809388

175615

27609

96901

34428

8787

58424

14068

Fit Quality %

1.010

1.290

1.259

1.256

1.310

1.081

1.352

ISS

RBOR

RIN

RIN13

RIGS

RATO

RTWO

RONE

ISSALS

ISSXLS

ISS/CSS

SSALS

SS2LS

CSS/CLS

Raw Data

809388

1.43

4.61

29.33

13.85

11.03

3.92

4.15

1.42

1.45

3.95

5.92

22.00

32.70

10.99

16.39

10.06

11.10

3.59

3.96

3.76

4.22

Fit Quality %

0.057

0.296

0.312

0.307

0.010

0.041

0.063

Reduced

1401166

1.43

4.62

29.41

13.90

11.03

3.92

4.16

1.42

1.45

4.33

5.92

22.00

32.70

10.99

16.39

10.06

11.10

3.59

3.96

3.76

4.22

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #:

8255XA11774568

DATE/TIME PERFORMED:

Wed May 14 12:39:45 2014

UNIT #:

3880TA HL6670

T(0)

T(1)

T(2)

T(3)

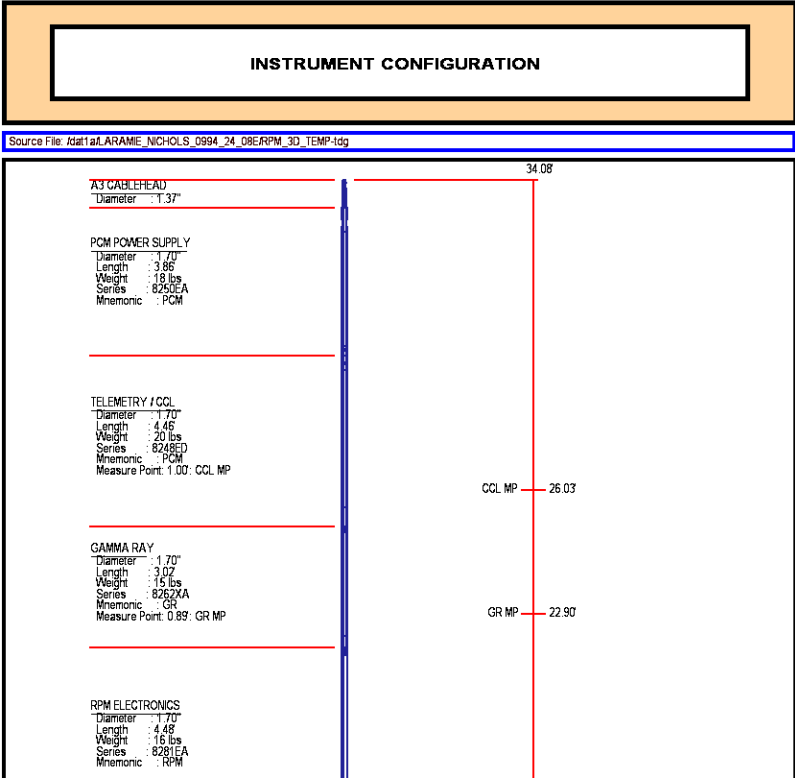
Corr Coeff for Temp

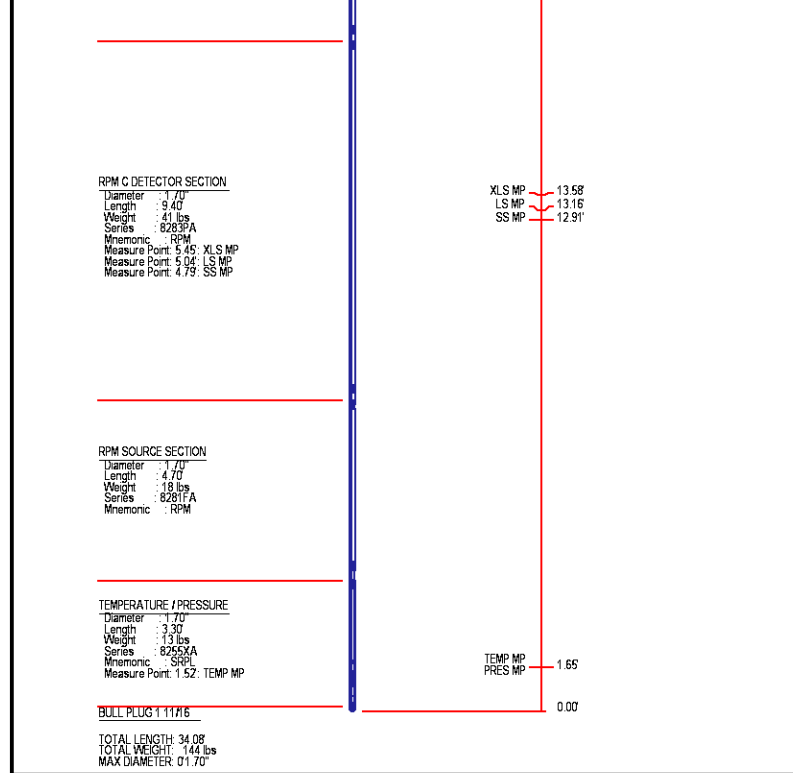
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1.055639E-01

2.143764E-06

-2.782846E-10





COMPANY <u>LARAMIE ENERGY LLC</u> WELL <u>NICHOLS 0994-24-06W</u> FIELD <u>VEGA</u> COUNTY <u>MESA</u> STATE <u>COLORADO</u>	FILE NO: <u>CH131986</u> API NO: <u>05077104150000</u>	
	LOCATION: SHL: 39.264514 N, 107.830743 W BHL: 39.265727 N, 107.835353 W SEC <u>24</u> TWP <u>9S</u> RGE <u>94W</u>	ELEVATIONS: KB 7161 FT DF GL 7137 FT DATE 25-Jan-2018