



RESERVOIR PERFORMANCE MONITOR

FILE NO: CH136727	COMPANY LARAMIE ENERGY LLC
API NO: 05077105410000	WELL GUNDERSON 0994-13-06W
	FIELD VEGA
	COUNTY MESA STATE COLORADO

Ver. 4.10	LOCATION: LAT: 39.273933 N LONG: 107.834853 W SEC 13 TWP 9 S RGE 94 W	OTHER SERVICES RAL
-----------	--	-----------------------

PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL ELEVATION 7272 FT KB 30 FT ABOVE P.D. KB 7272 FT	ELEVATIONS: KB 7302 FT DF GL 7272 FT
---	---	---

DATE	RUN	TRIP		
	2	1		
SERVICE ORDER	US136727			
DEPTH DRILLER	8561 FT			
DEPTH LOGGER	8538 FT			
BOTTOM LOGGED INTERVAL	8538 FT			
TOP LOGGED INTERVAL	2300 FT			
TIME STARTED	13:30			
TIME FINISHED	20:30			
OPERATOR RIG TIME	7 HRS			
TYPE OF FLUID IN HOLE	WATER			
FLUID DENSITY	NA			
FLUID SALINITY	NA			
FLUID LEVEL	70 FT			
LOGGED CEMENT TOP	1556 FT			
WELLHEAD PRESSURE	0 PSI			
MAXIMUM HOLE DEVIATION	NA			
NOMINAL LOGGING SPEED	15 FMIN			
MAX. RECORDED TEMP.	243 DEGF			
REFERENCE LOG	BAKER HUGHES MSLAM			
REFERENCE LOG DATE	07-Mar-2018			
EQUIP. NO.	LOCATION	ML-4291	GRAND JCT.	
RECORDED BY	M. BAUKA			
WITNESSED BY	NA			

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 2 TRIP 1: *2 OPERATIONS IN WELLBORE*

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

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 6266' - 6286'
SJ: 7459' - 7479'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	1	PCM	8250EA	11902197	FREE
2	1	TEL/CCL	8248ED	10408793	FREE
2	1	GR	2812LA	10384613	FREE
2	1	RPM	8281EA	10294755	FREE
2	1	RPM	8283PA	10066691	FREE
2	1	RPM	8281FA	10066992	FREE
2	1	TEMP	8255XA	166341	FREE

RPM MAIN PASS

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

Patches: 4

Plotted: Fri Jun 8 14:24:48 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_GUNDERSON_0994-13-06W/p354h05.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2255.000 ft BOTTOM DEPTH: 2703.317 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	-25.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-22.75	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_GUNDERSON_0994-13-06W/LARAMIE_0994-13-06W_RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 2290 - 8552 Feet

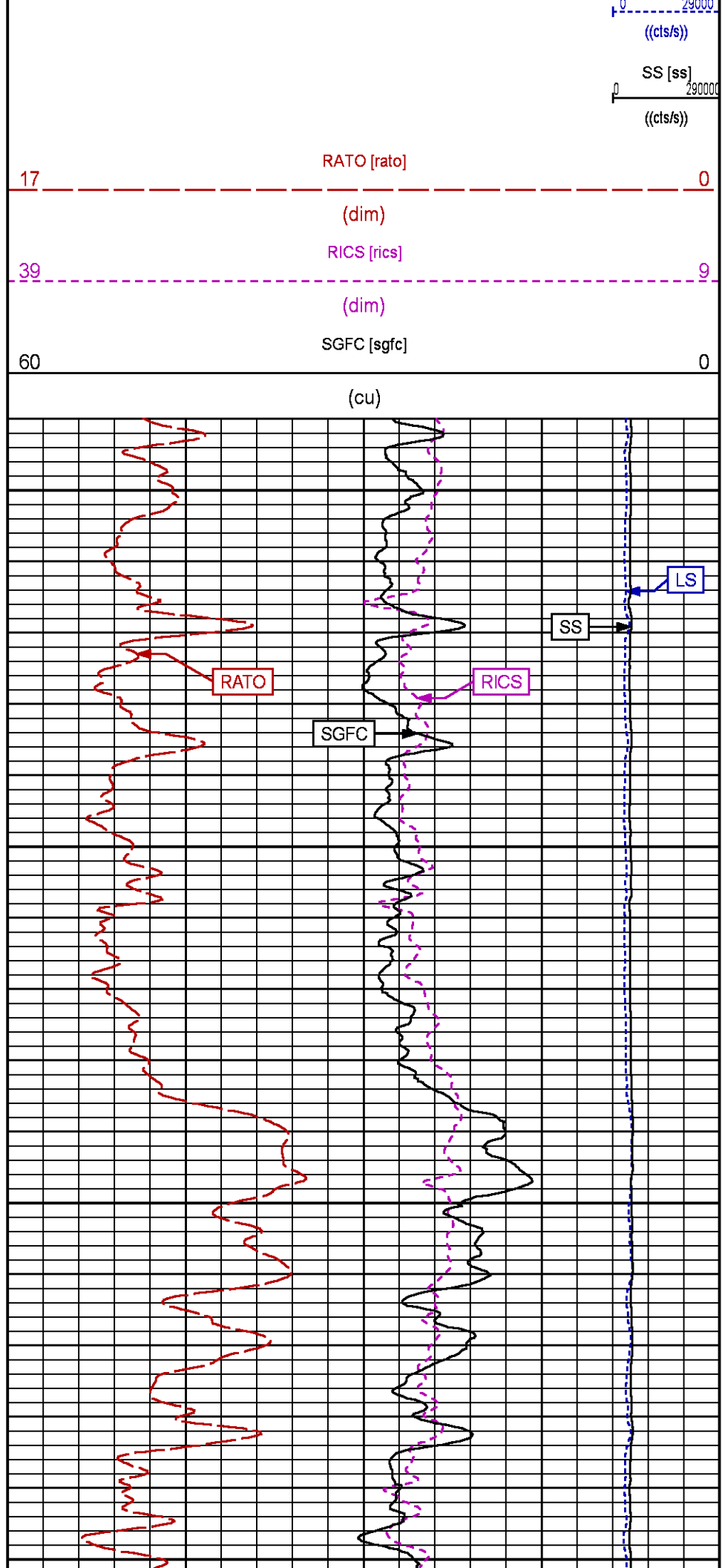
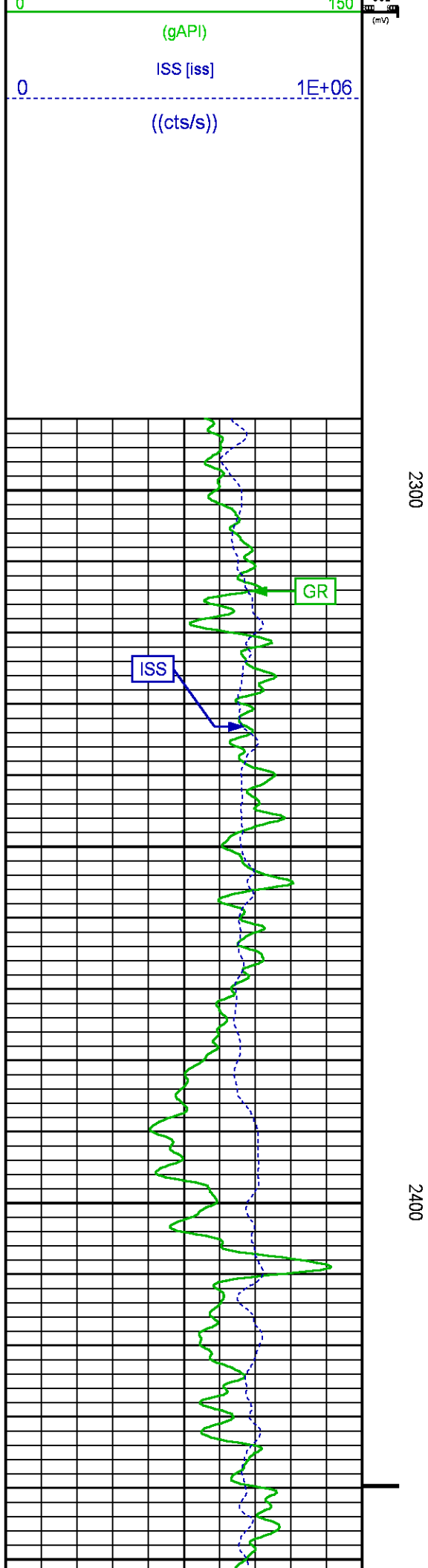
Data File 1 : F1 : SysA:/dat1a/LARAMIE_GUNDERSON_0994-13-06W/LARAMIE_GUNDERSON_0994-13-06W_RPM_MAIN.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : GUNDERSON 0994-13-06W
Field : VEGA
File Interval : 2236.75 - 8552 Feet
OCT : p354h

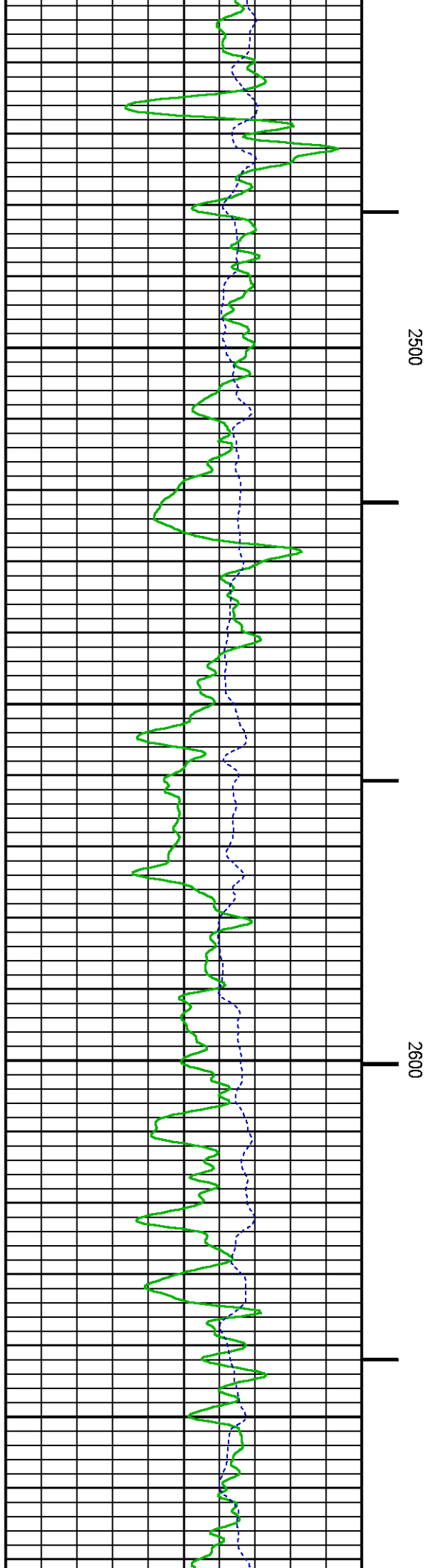
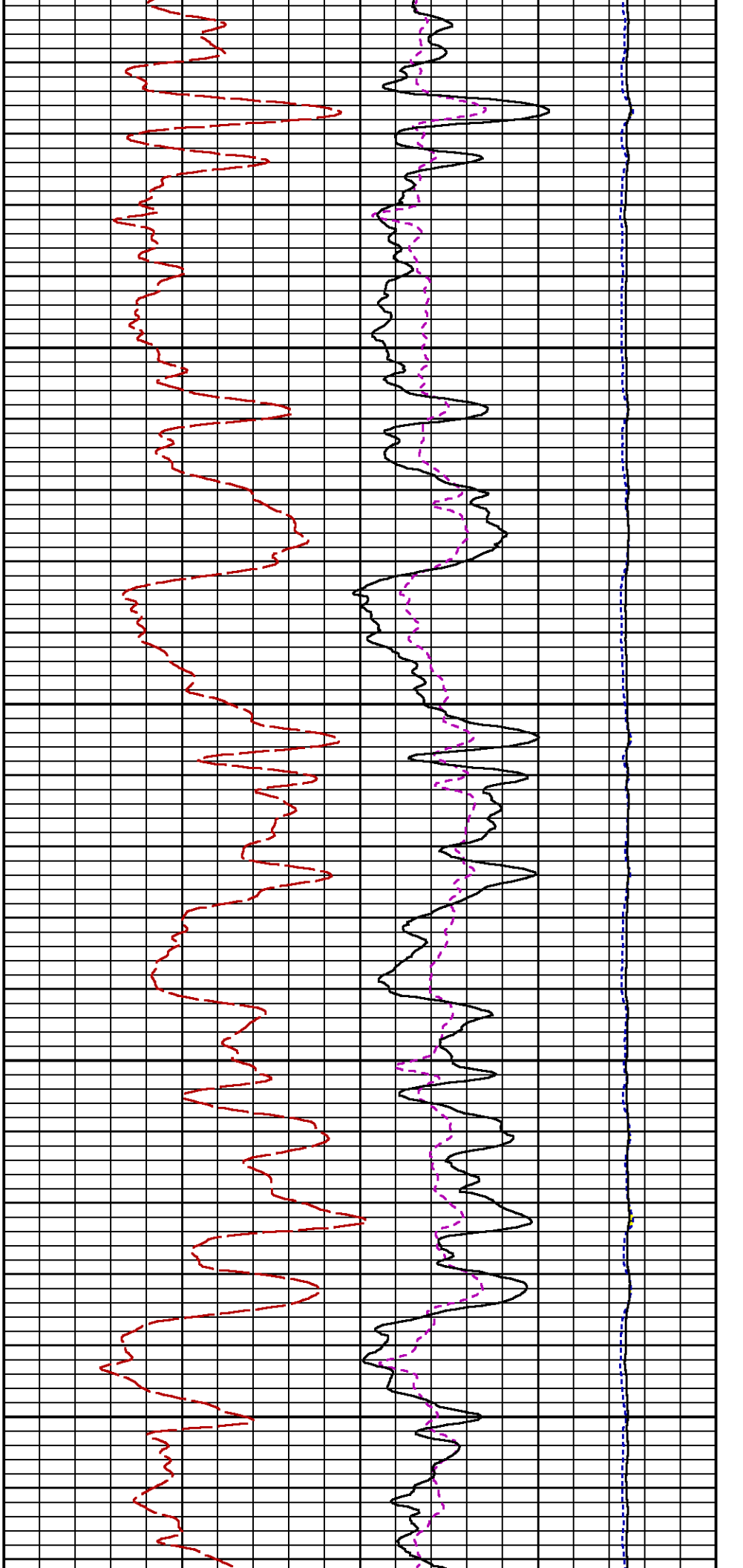
GR BACKUP

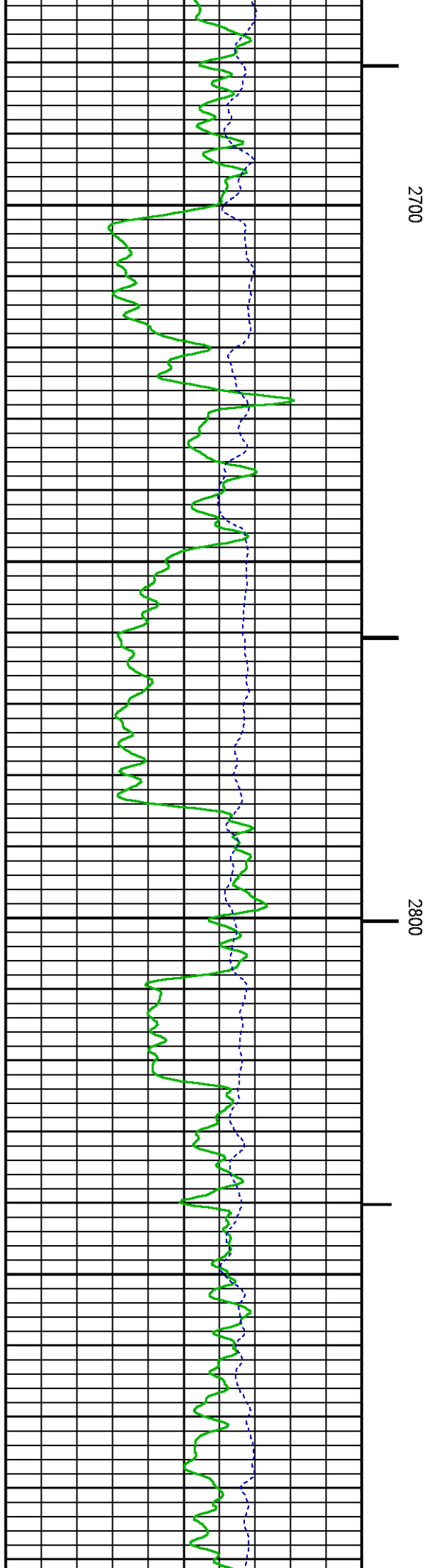
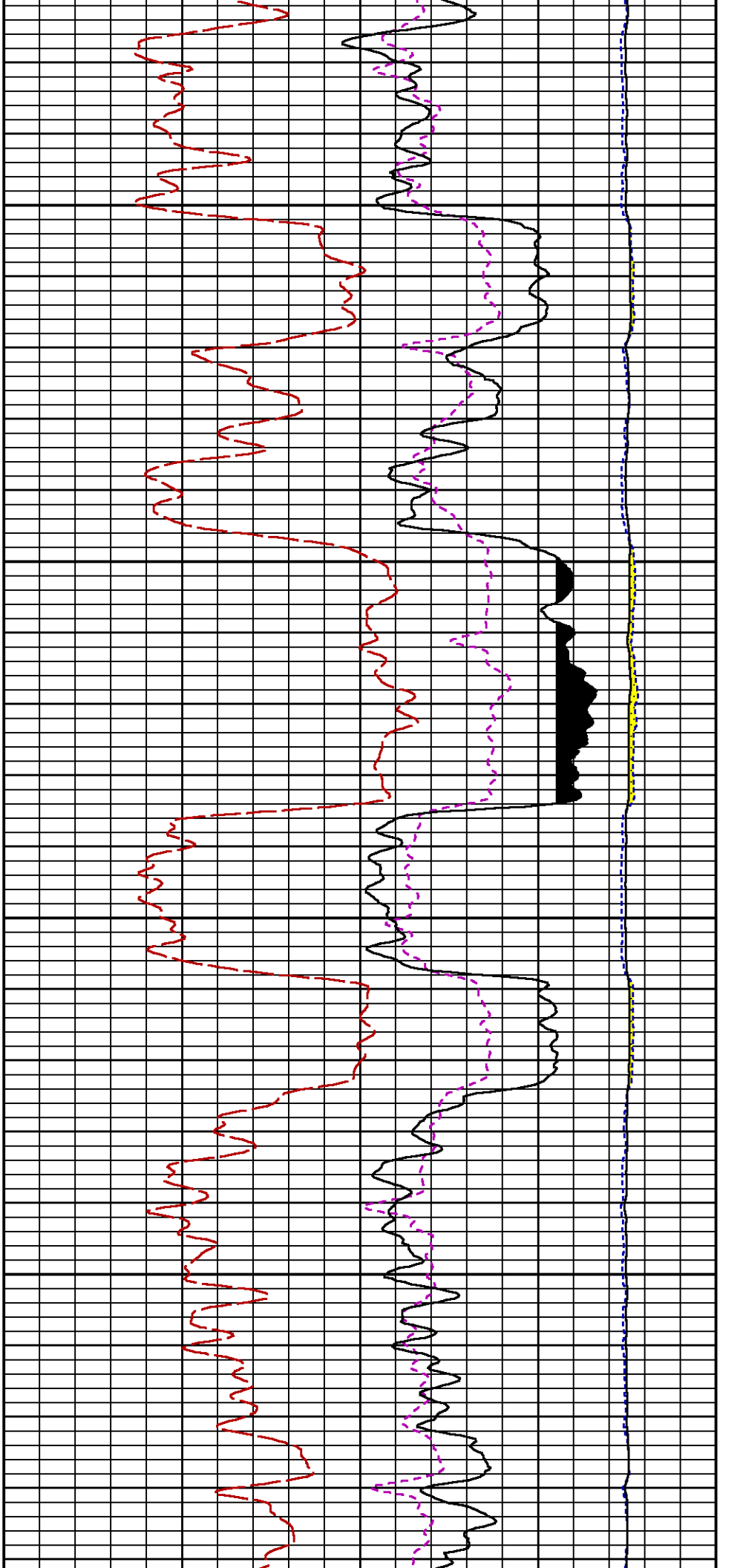
GAMMA RAY [gr]

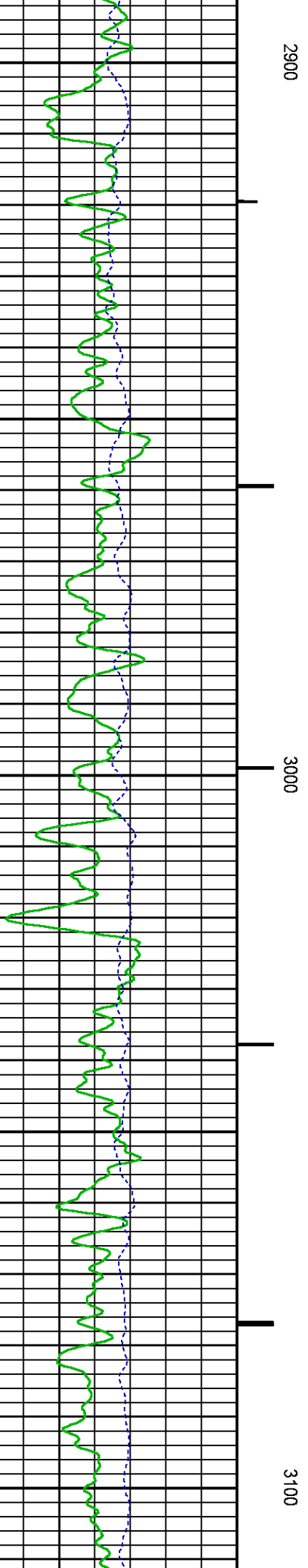
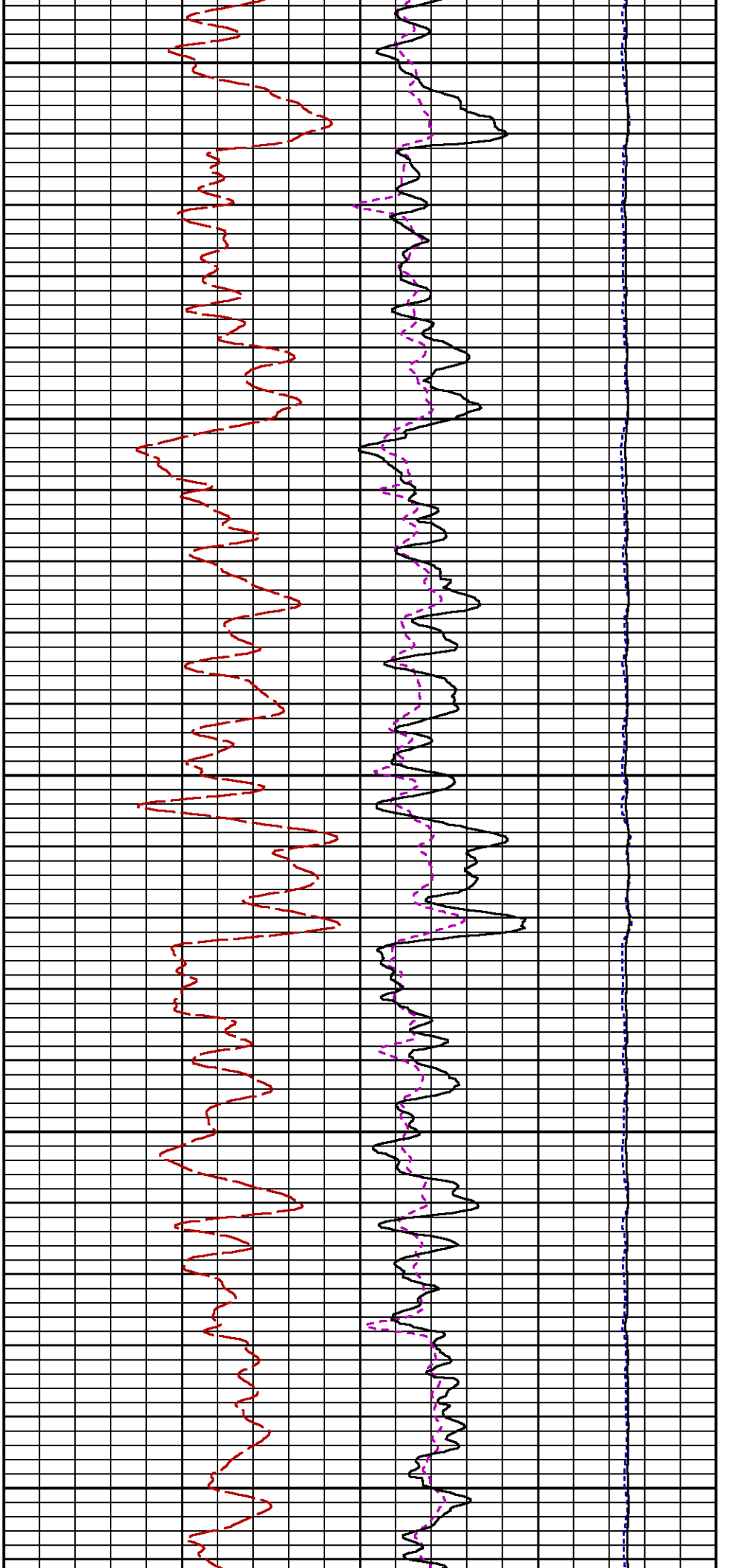
FEET

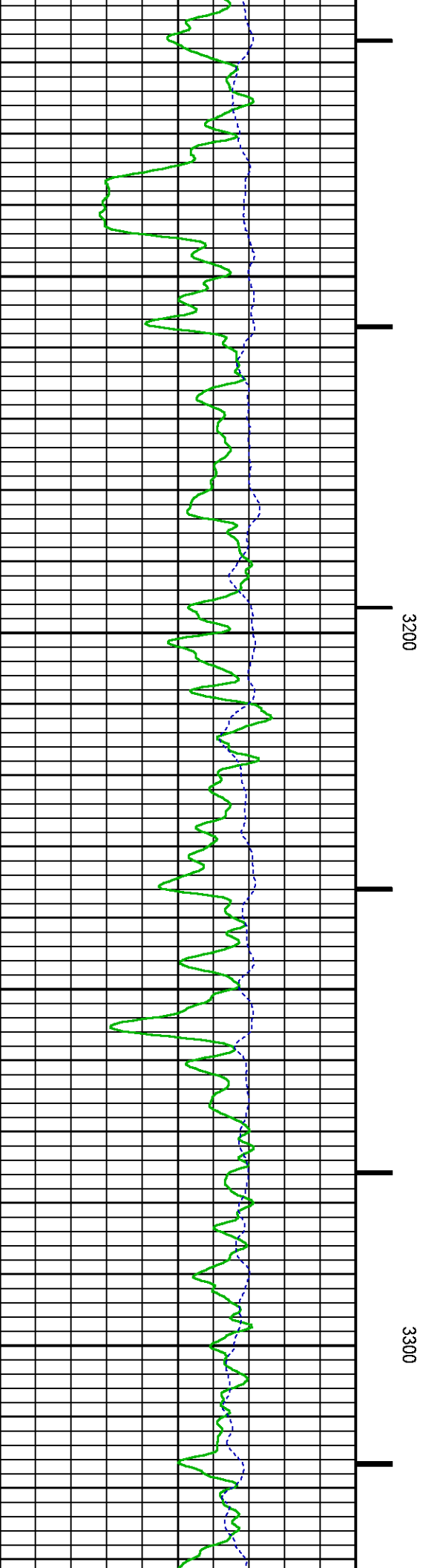
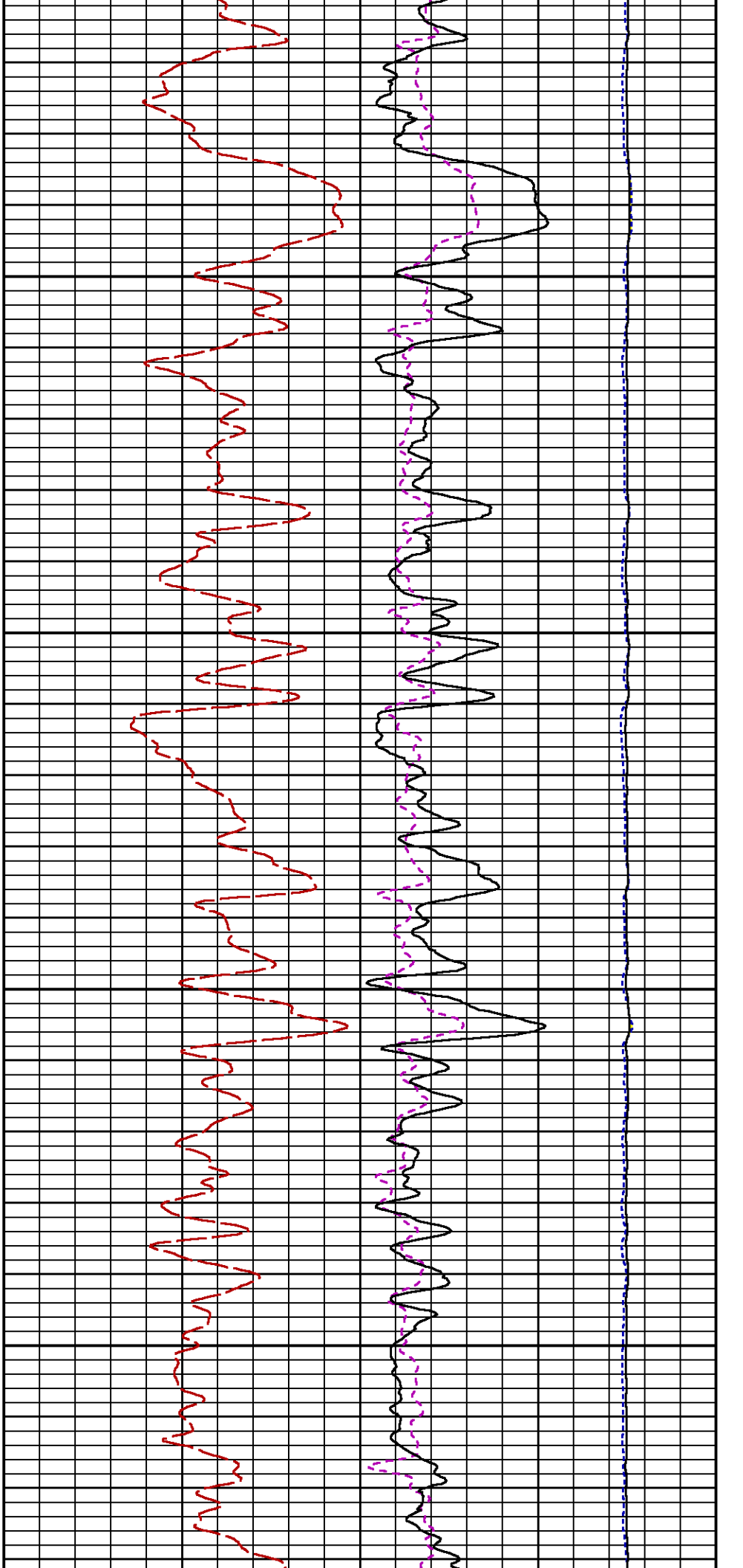
LS [ls]

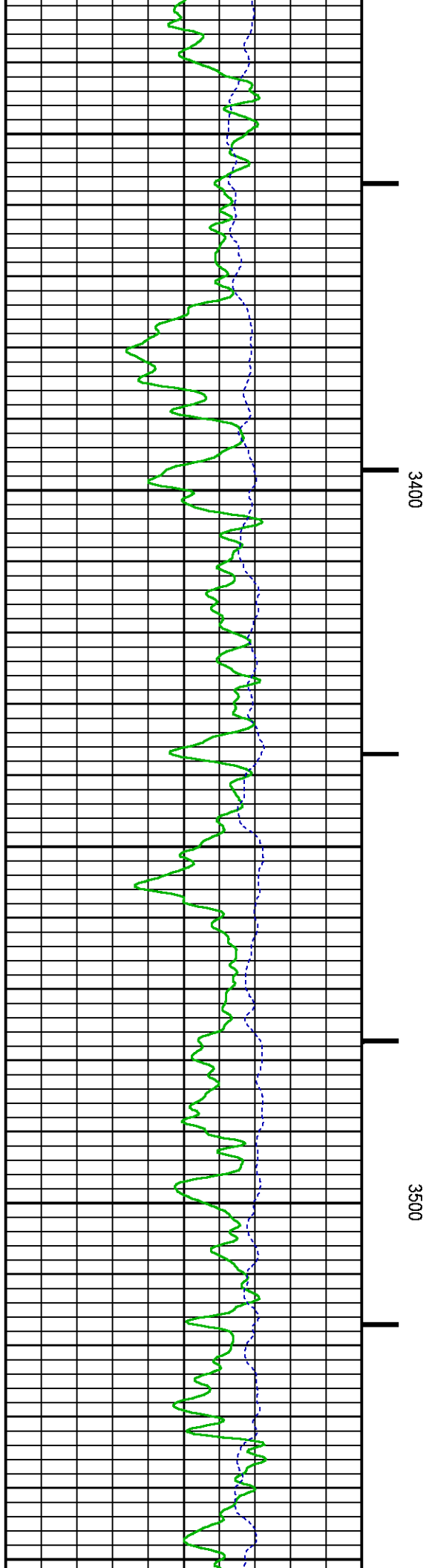
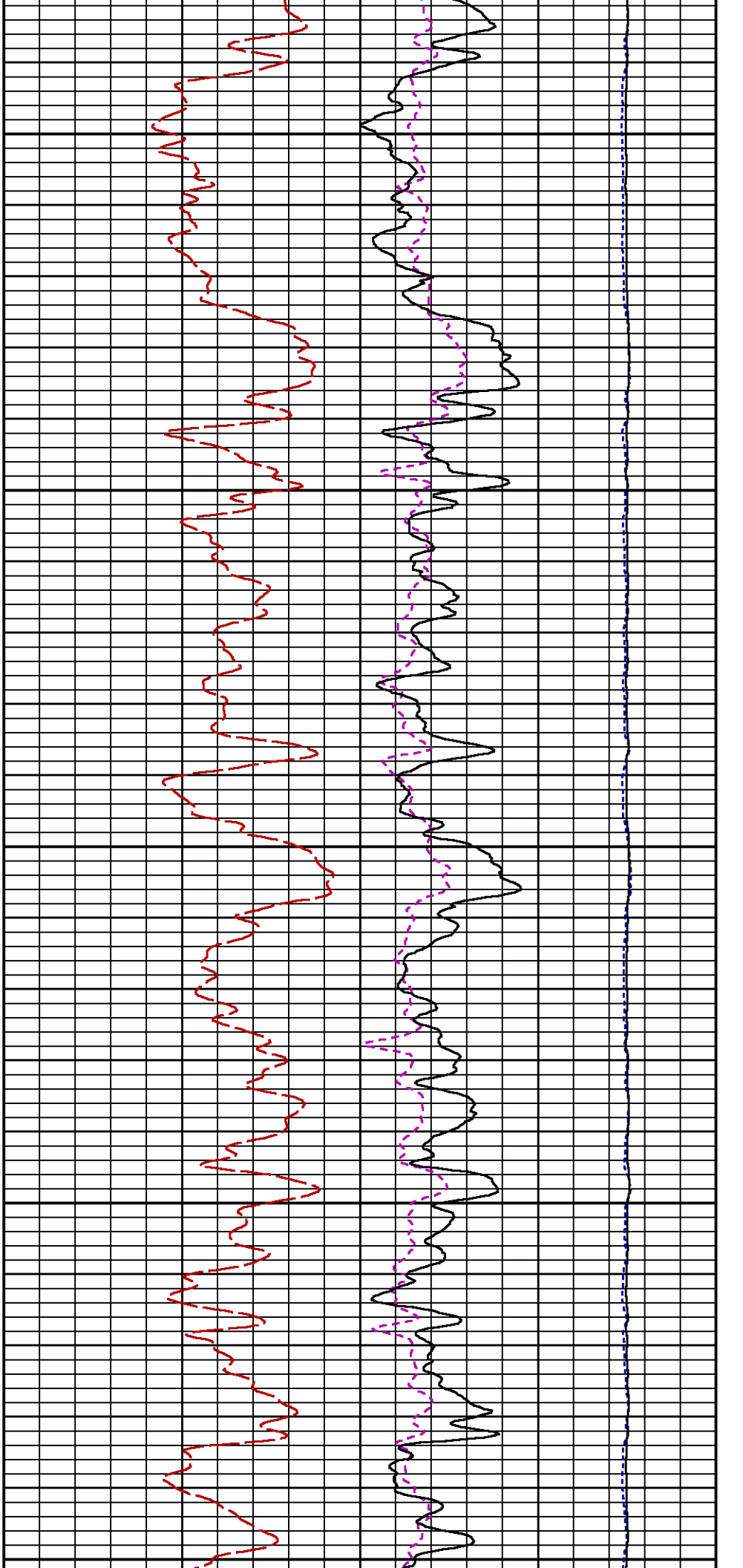


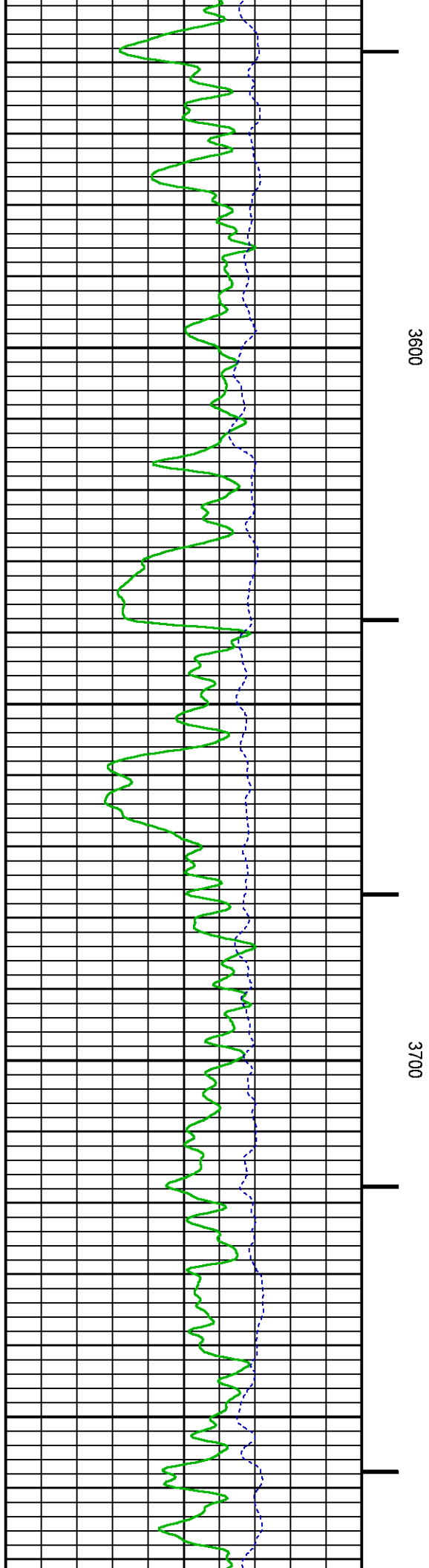
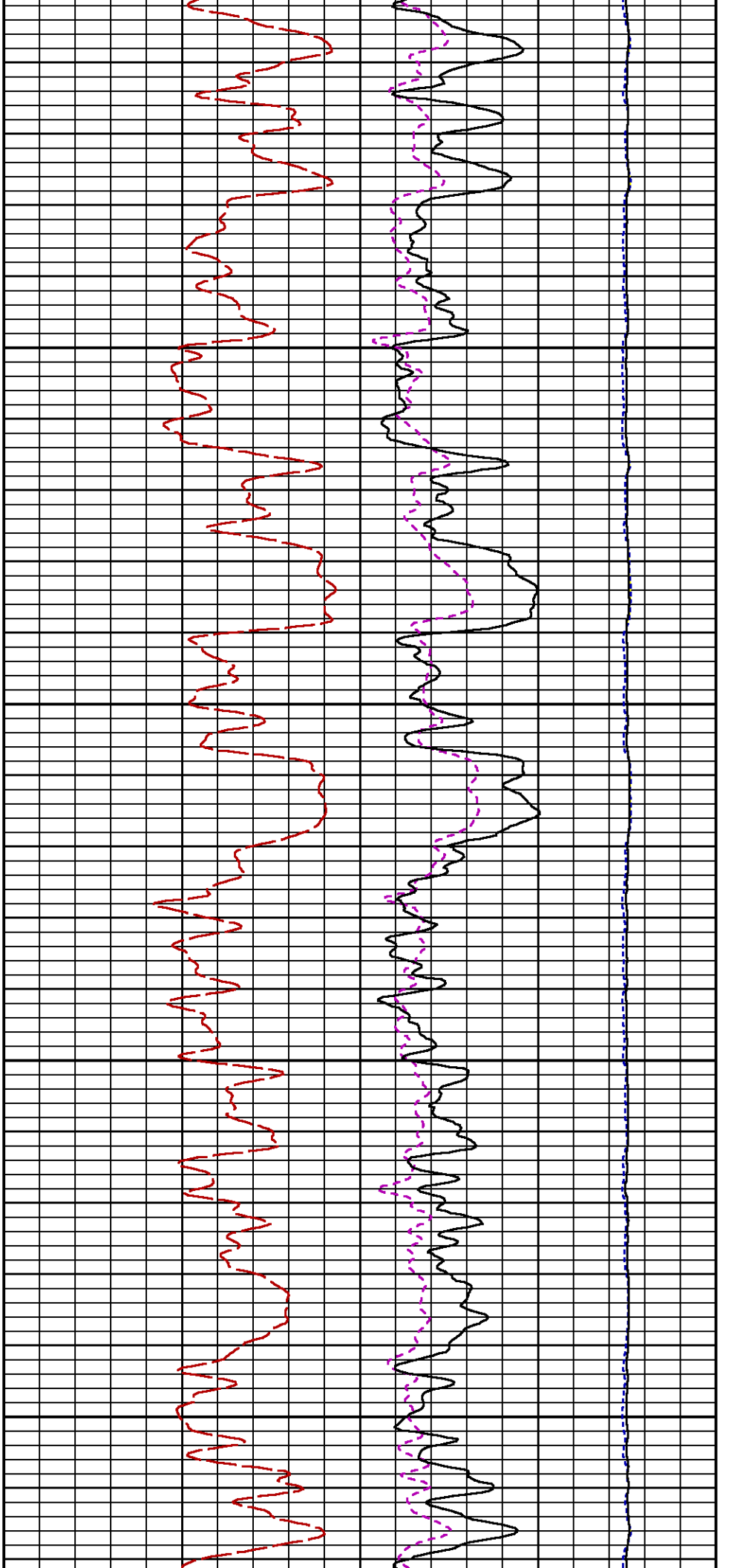


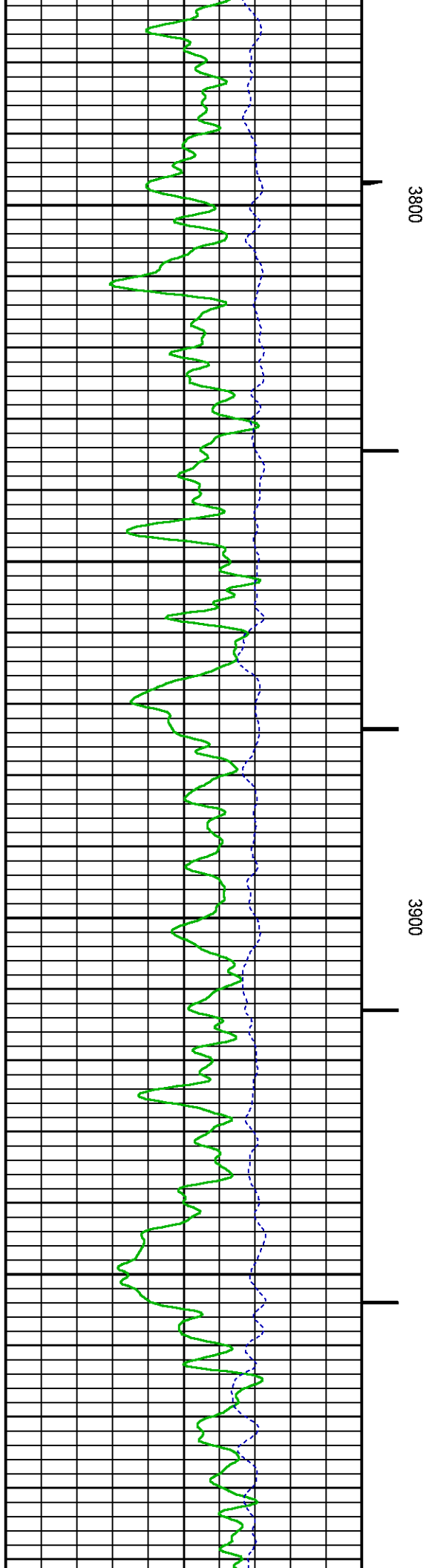
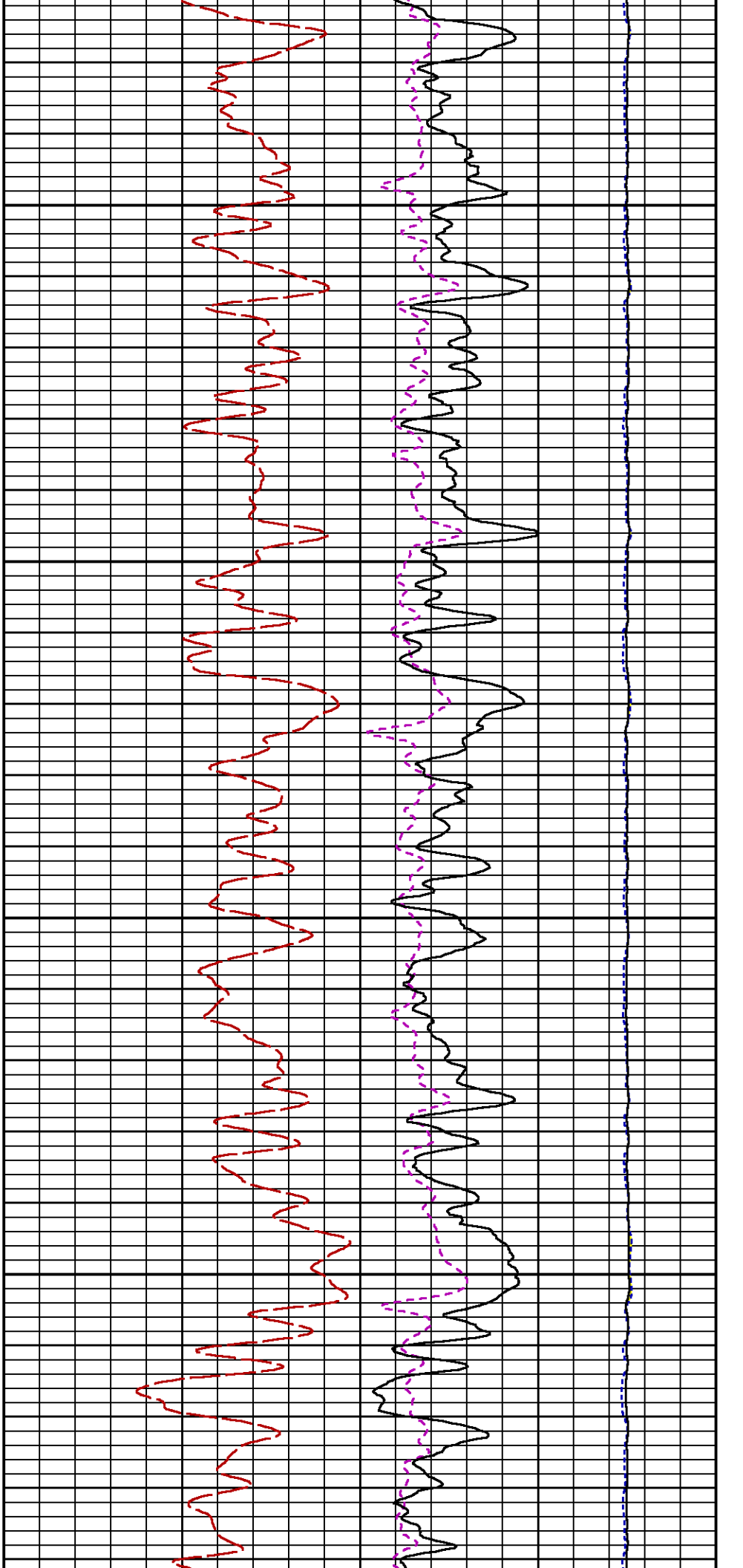


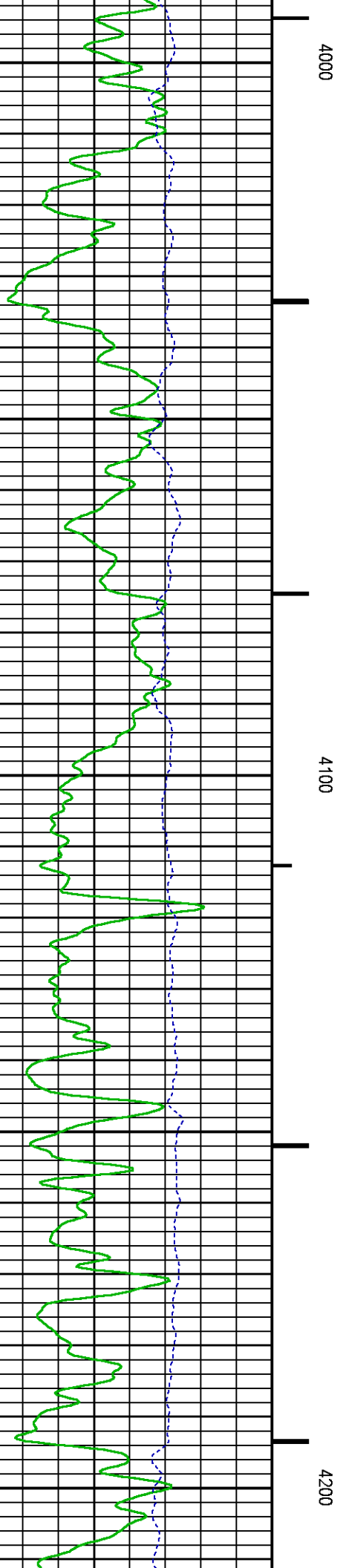
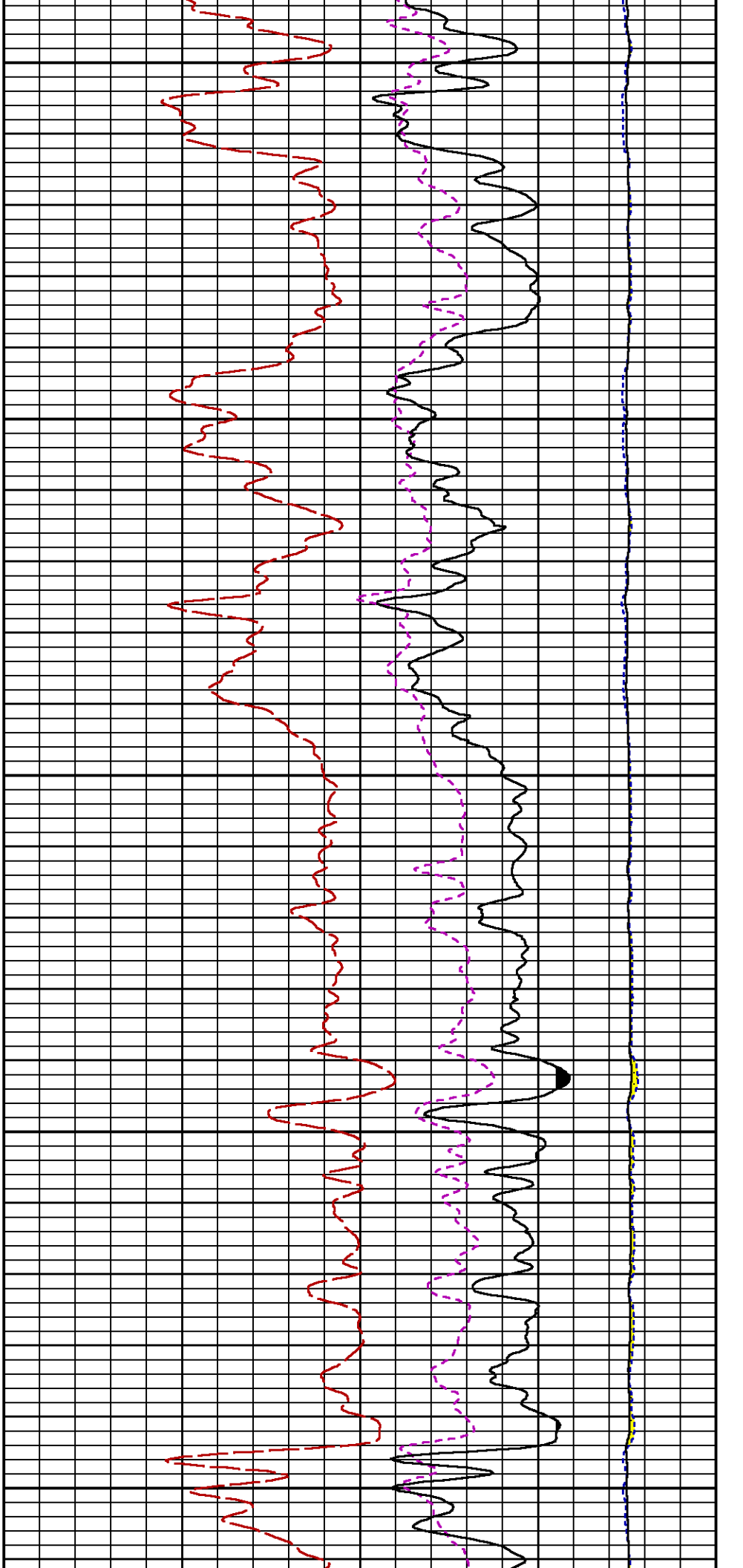


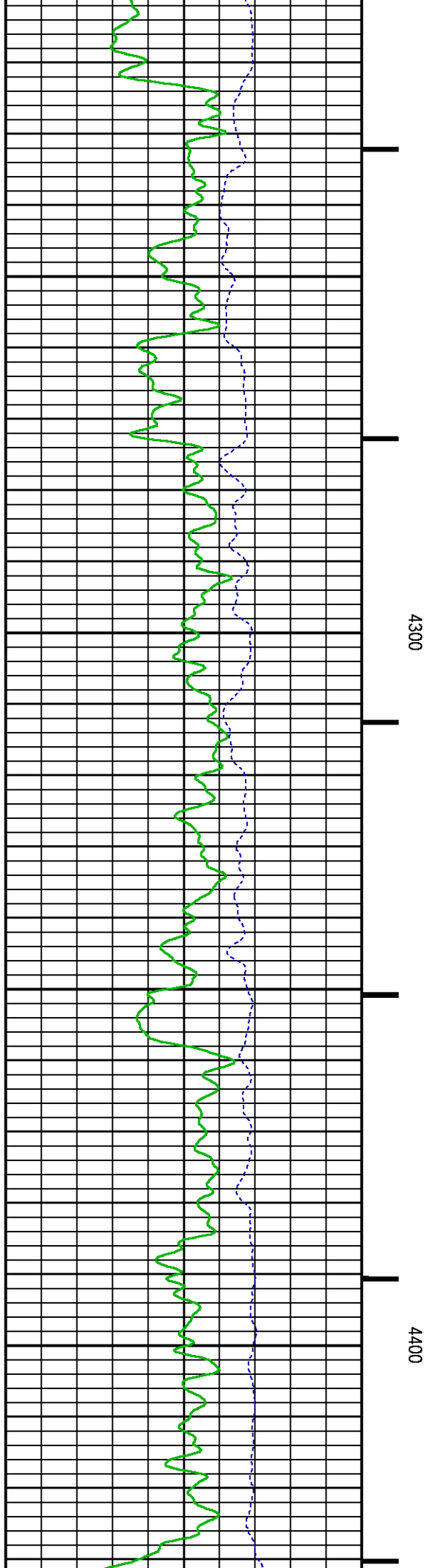
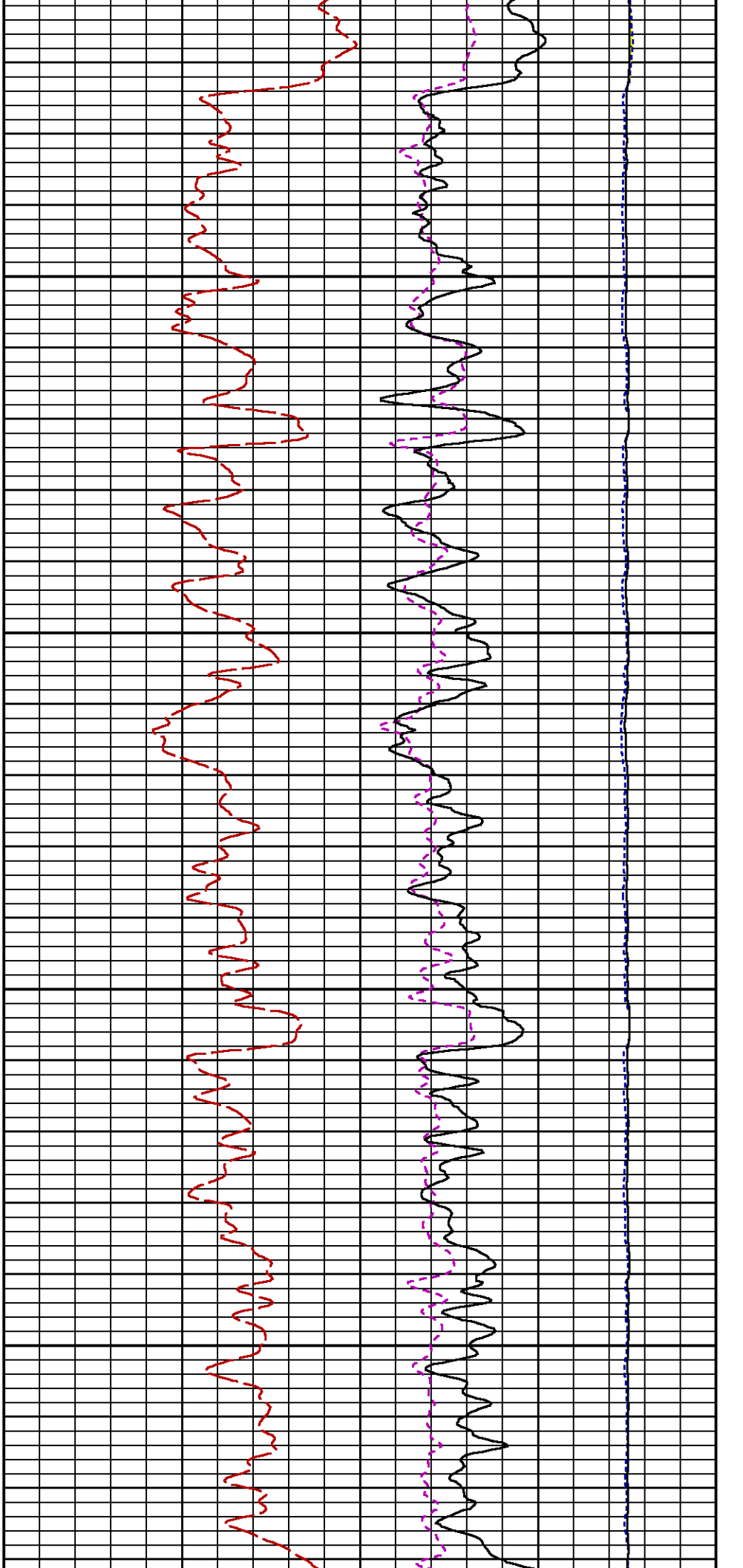


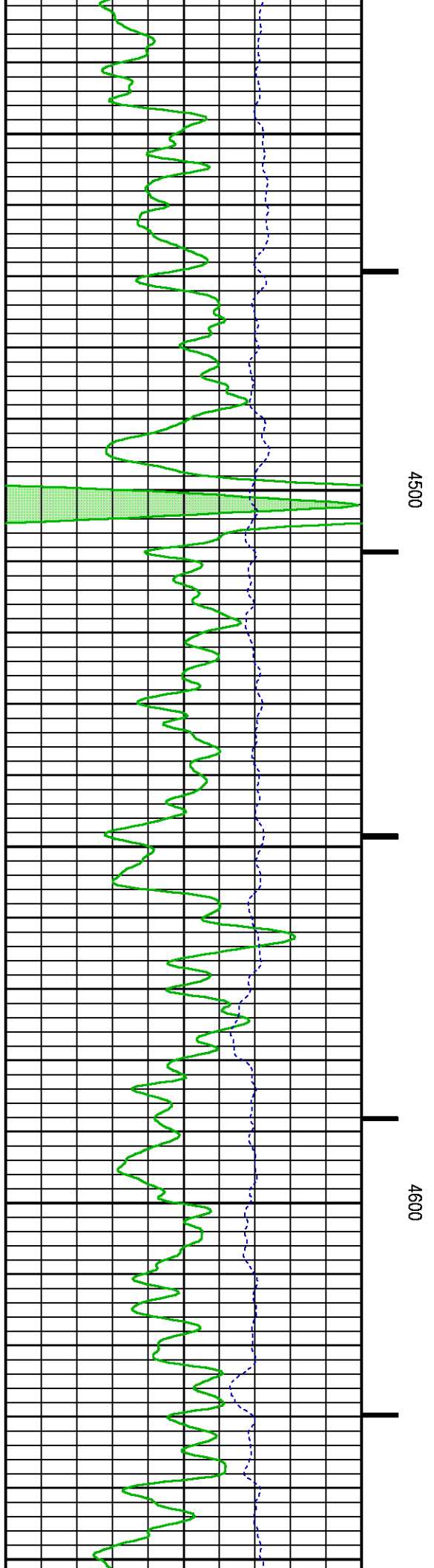
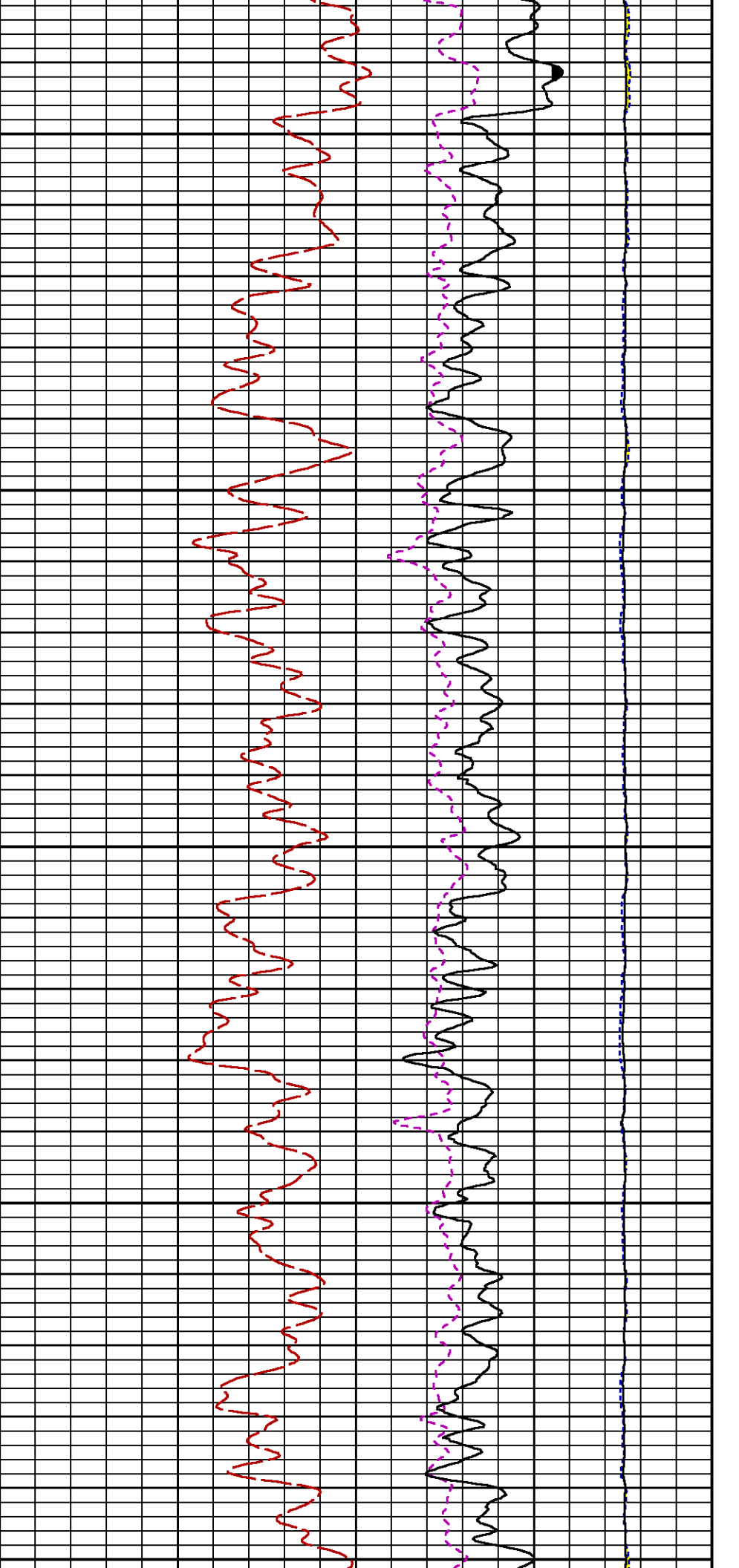


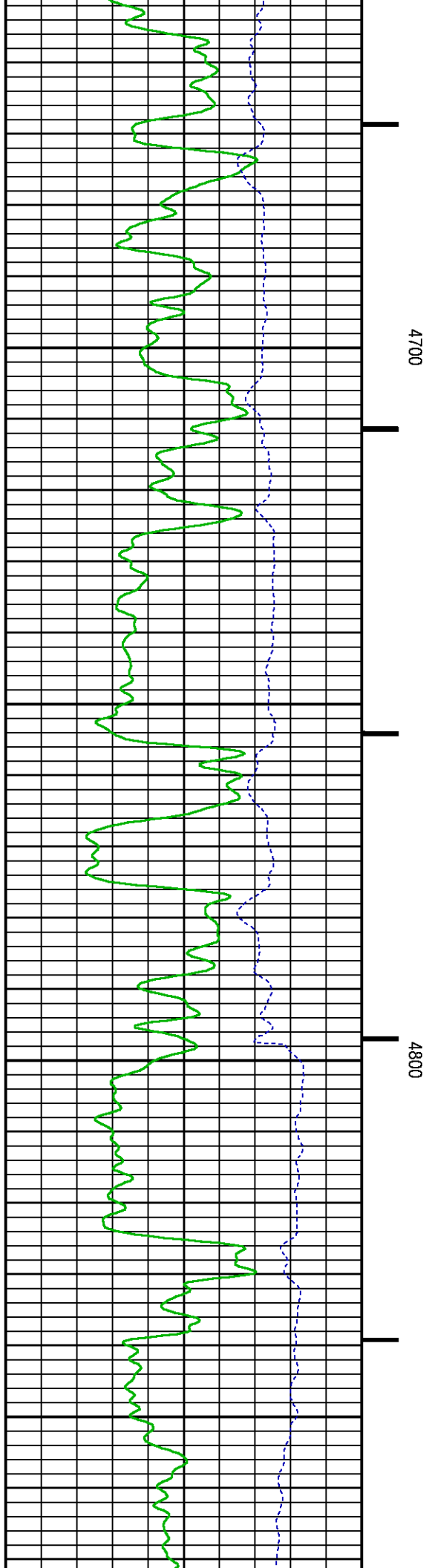
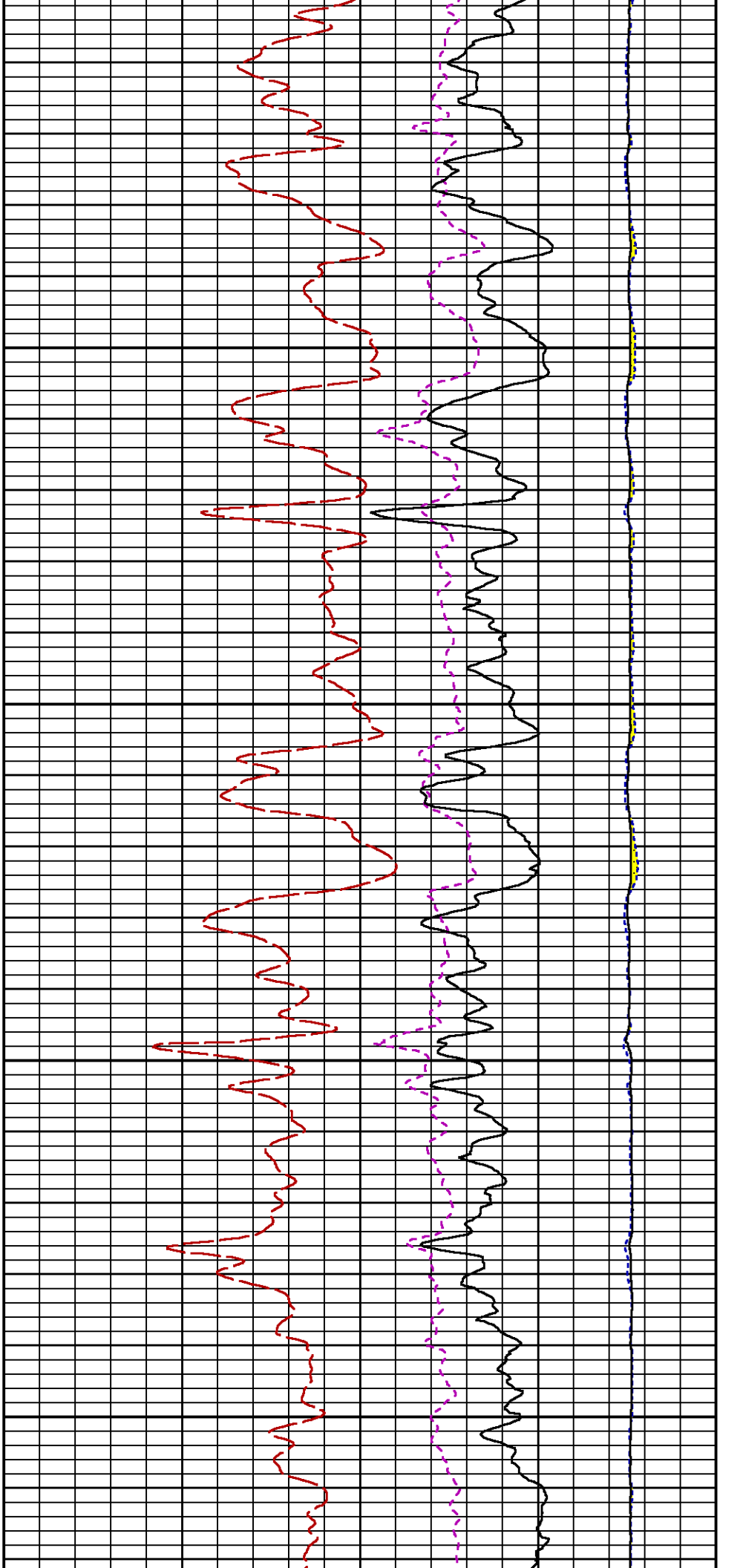


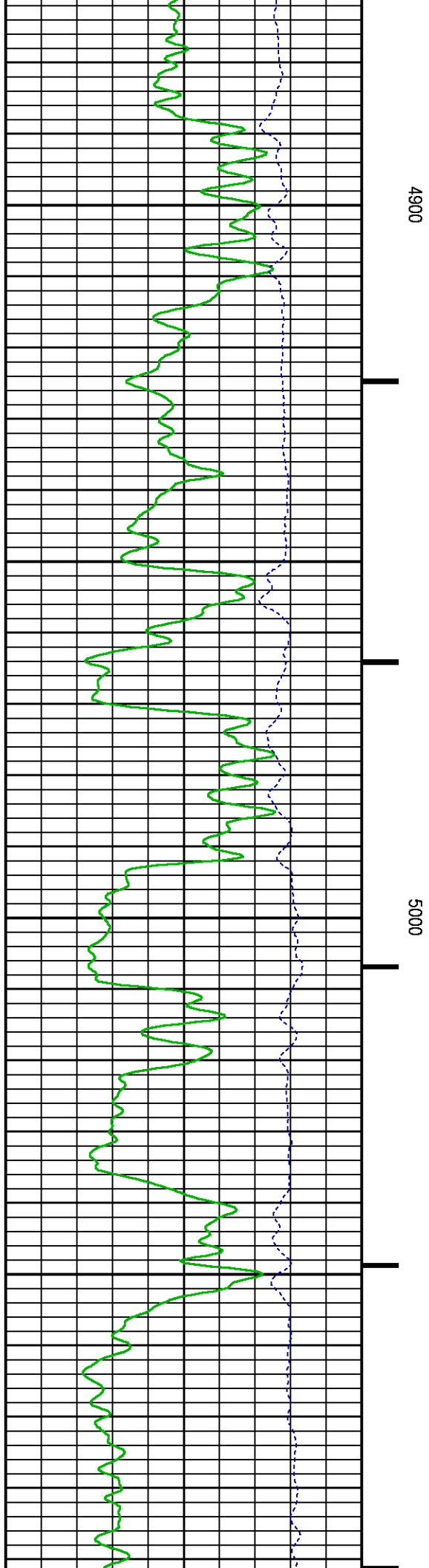
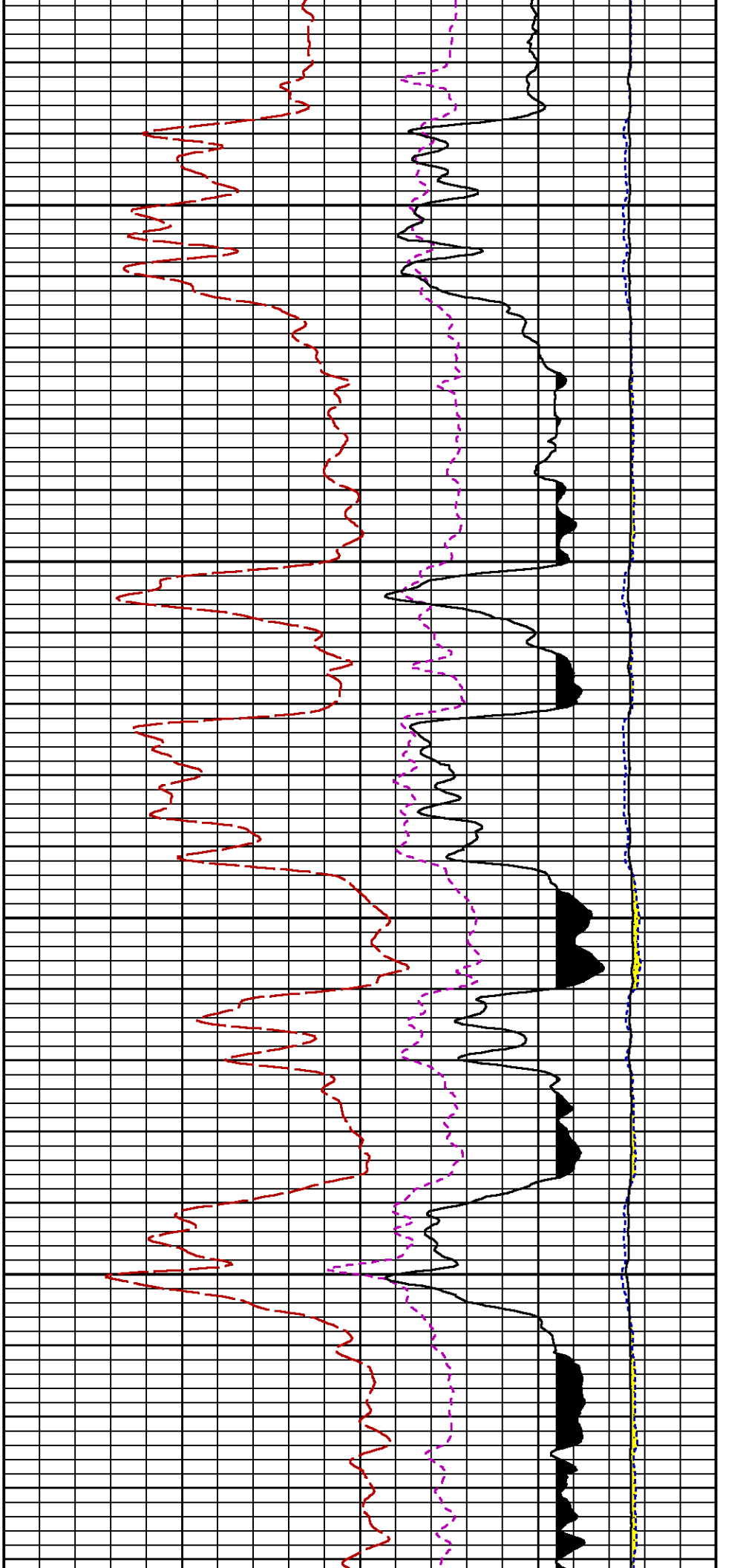


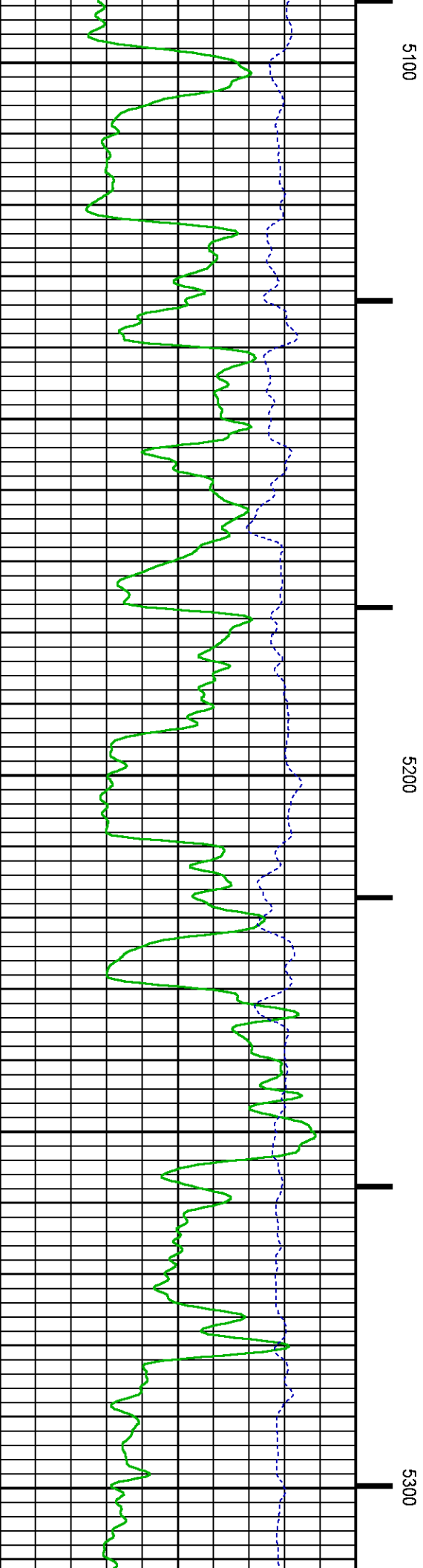
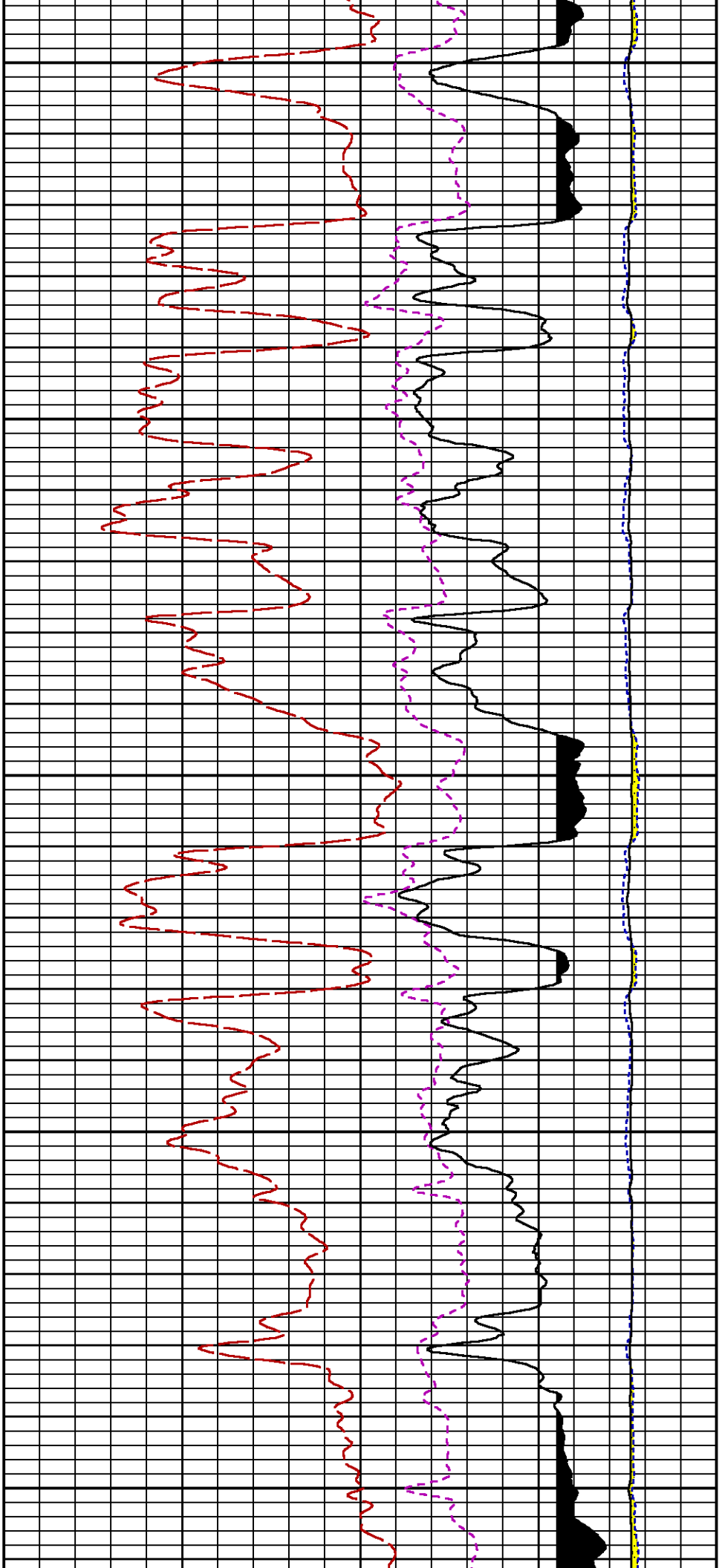


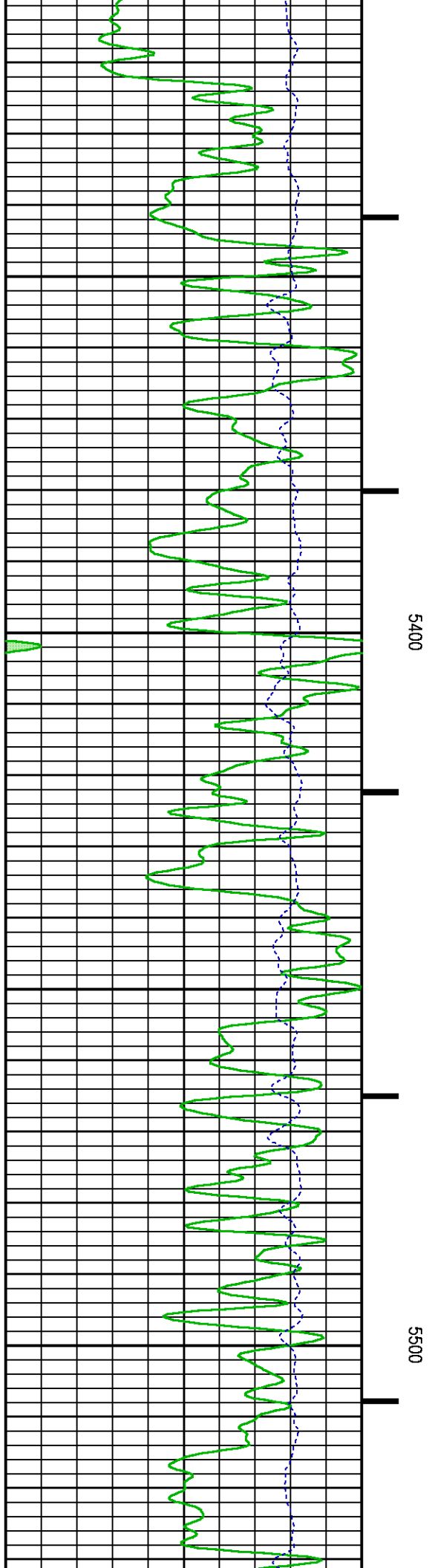
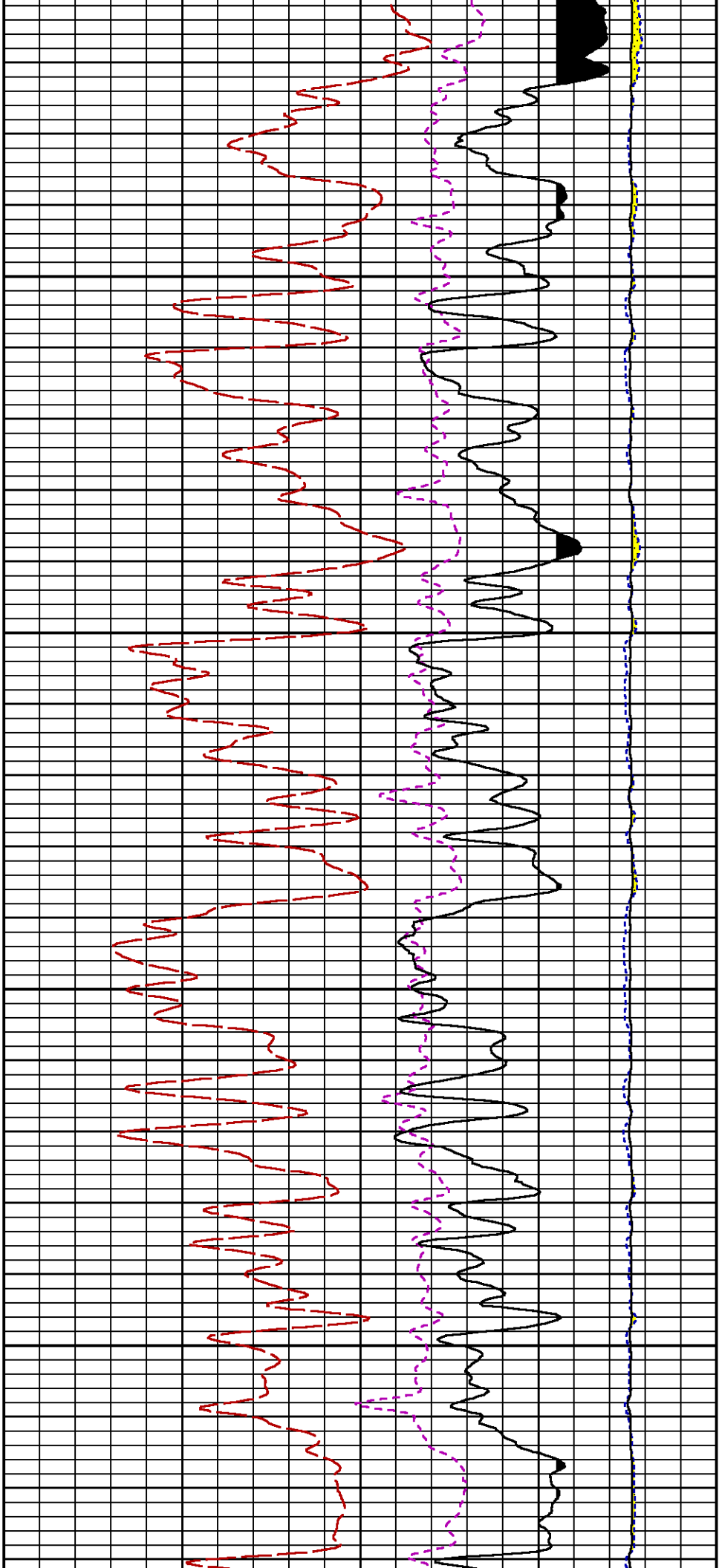


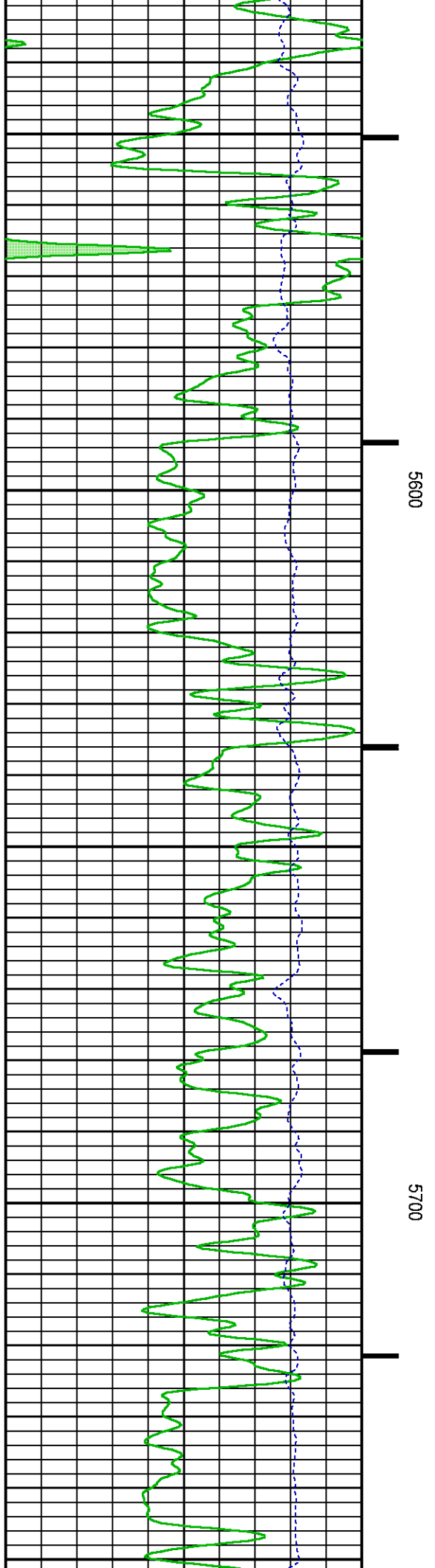
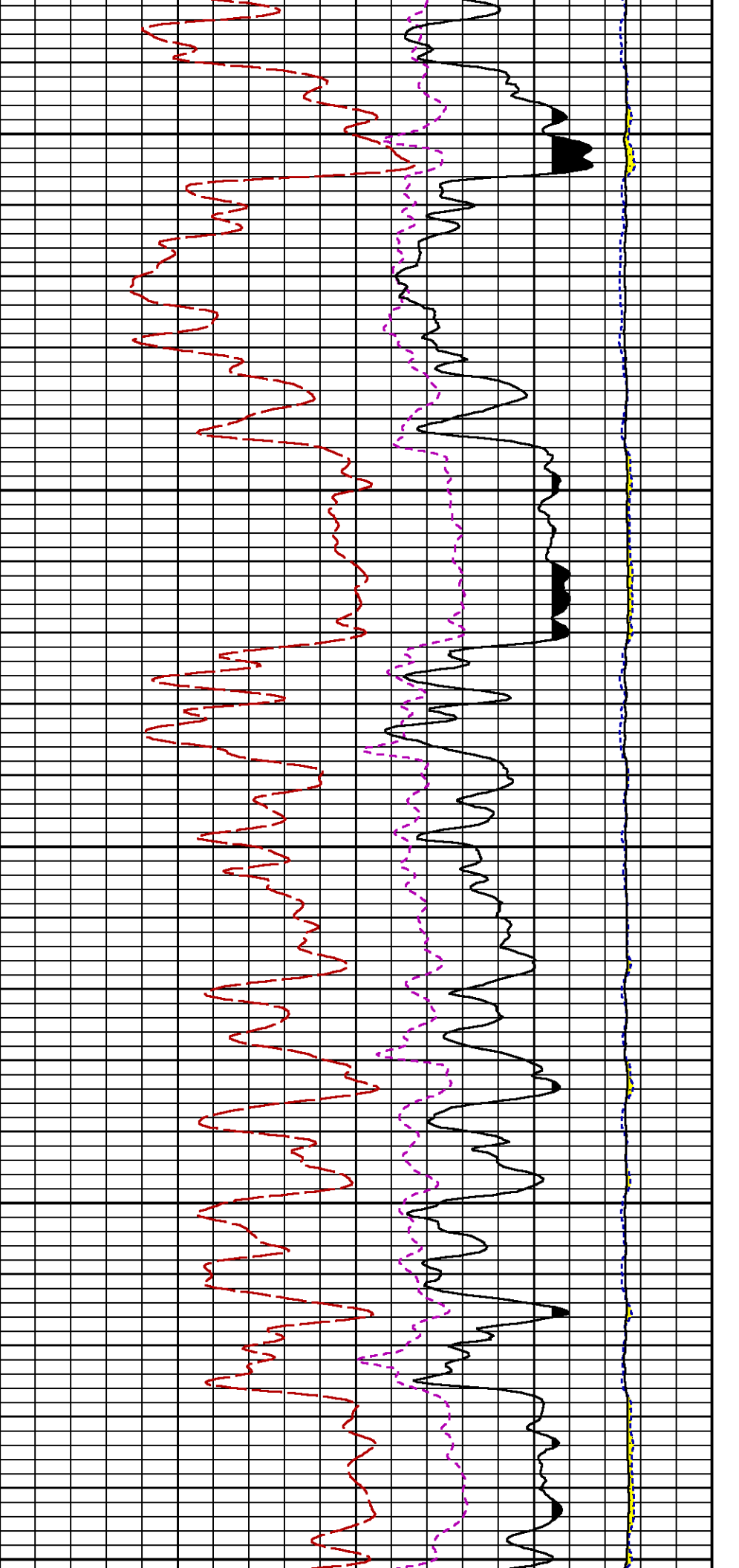


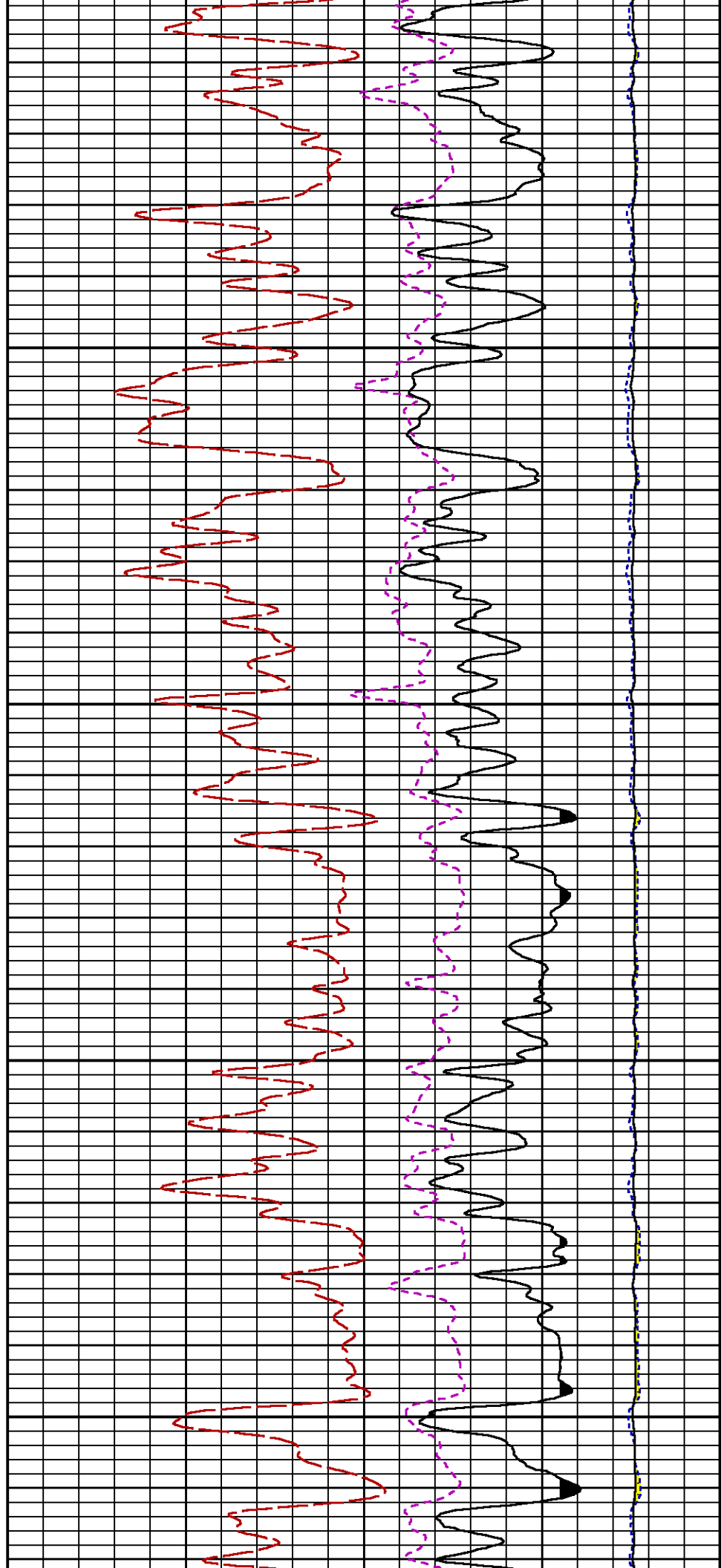
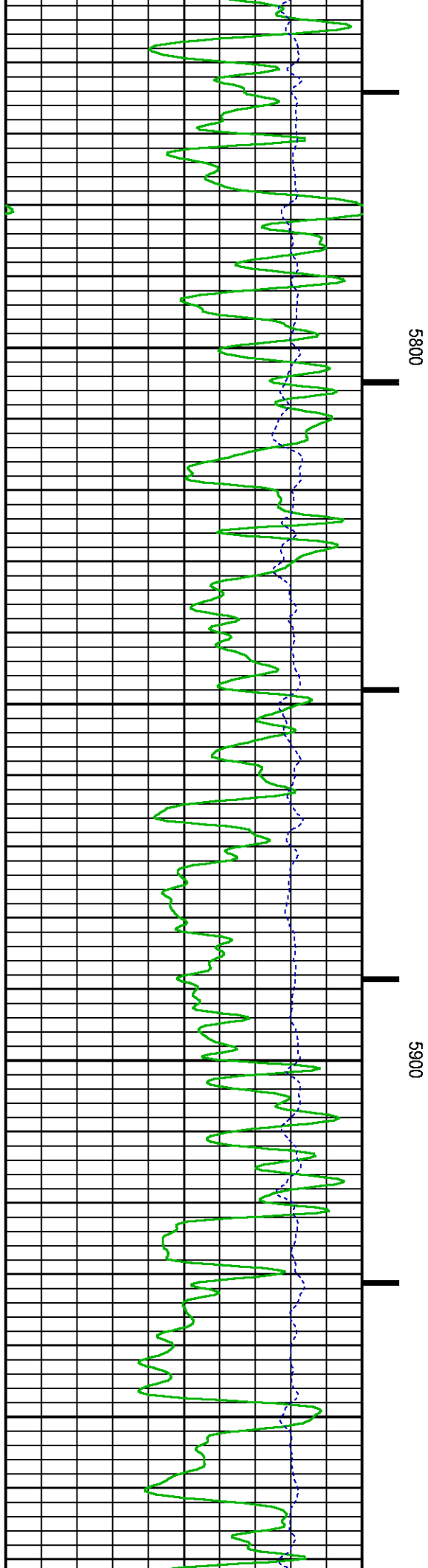


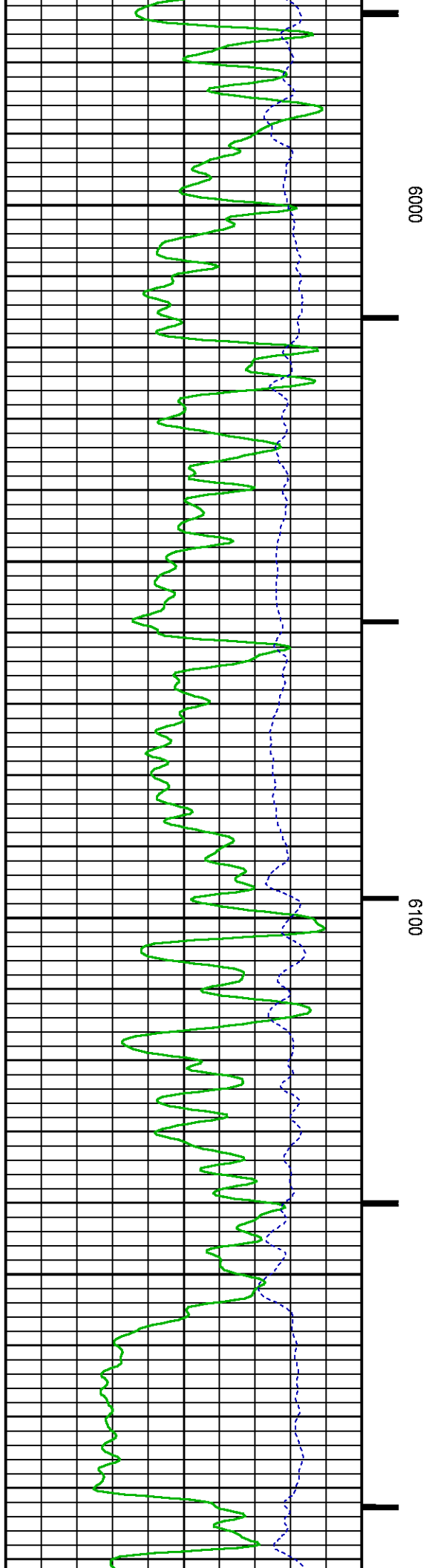
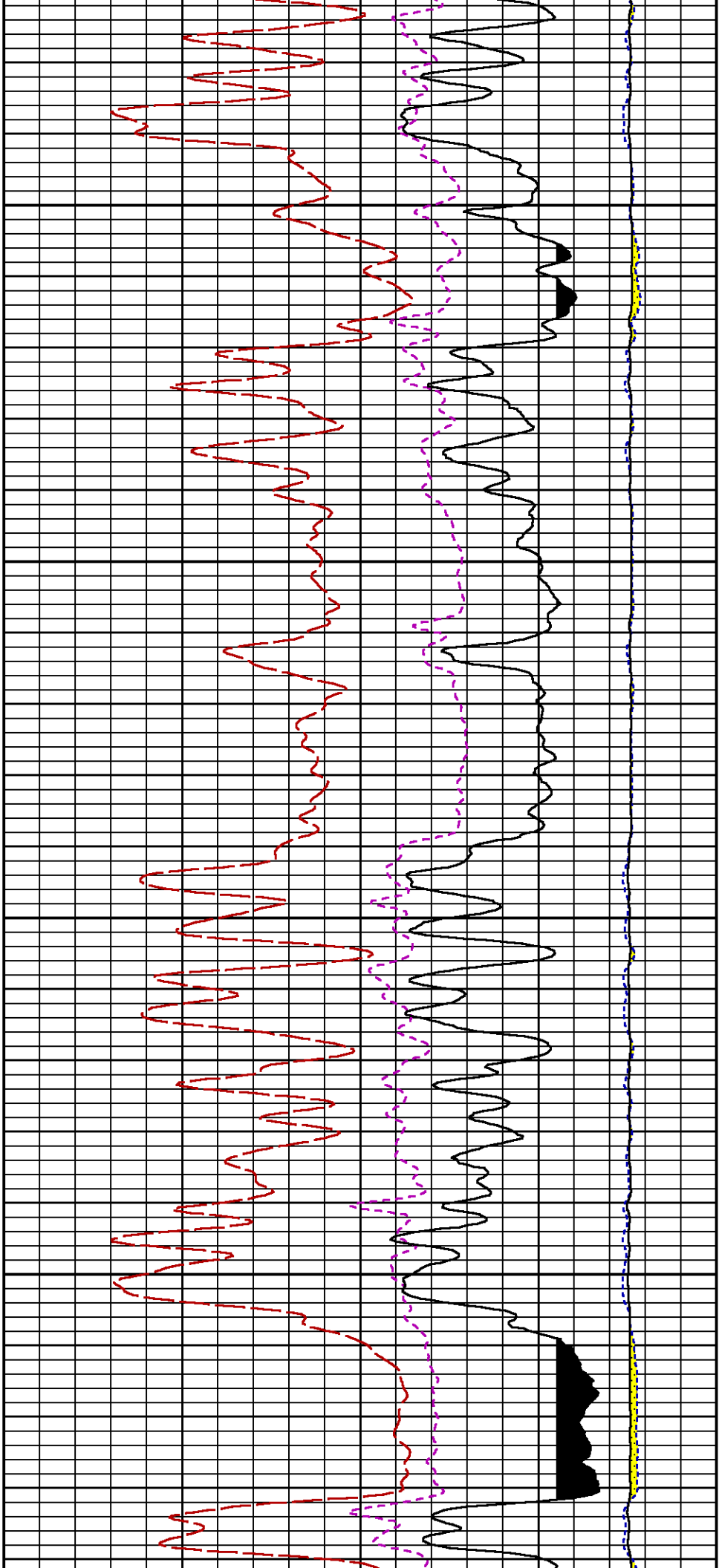


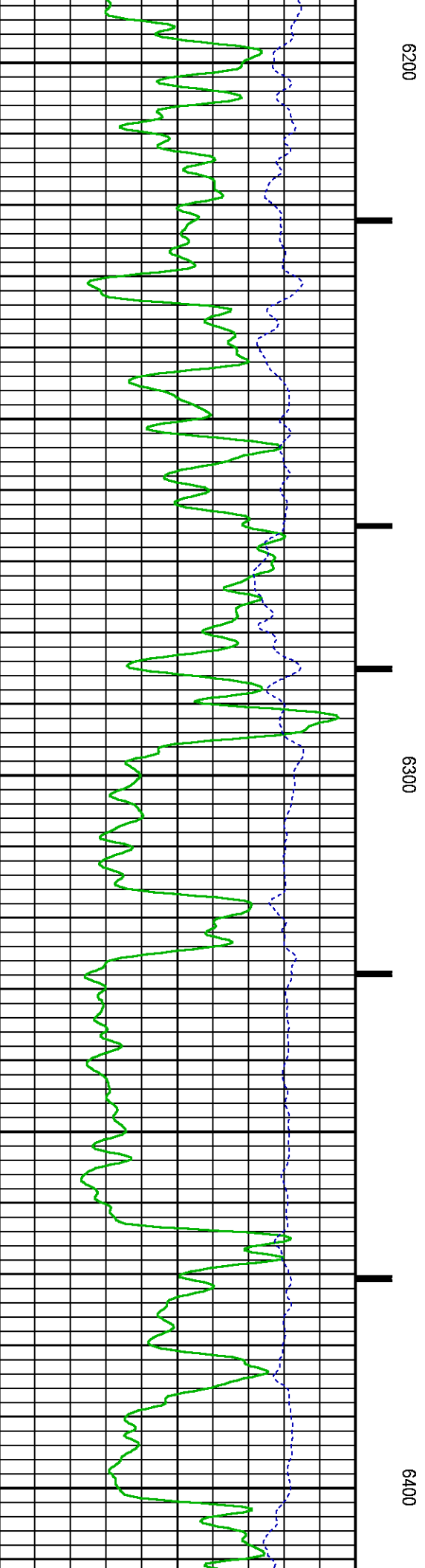
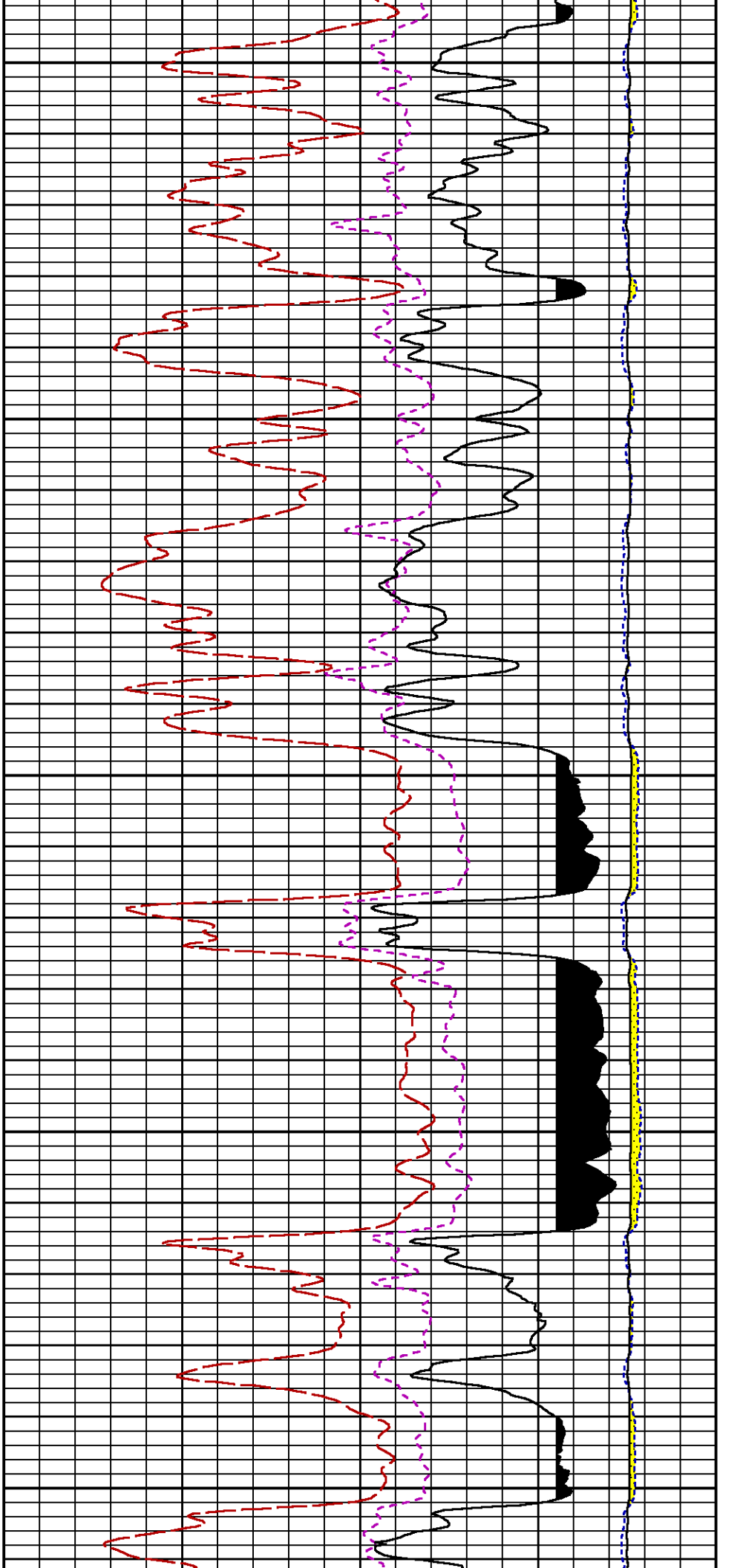


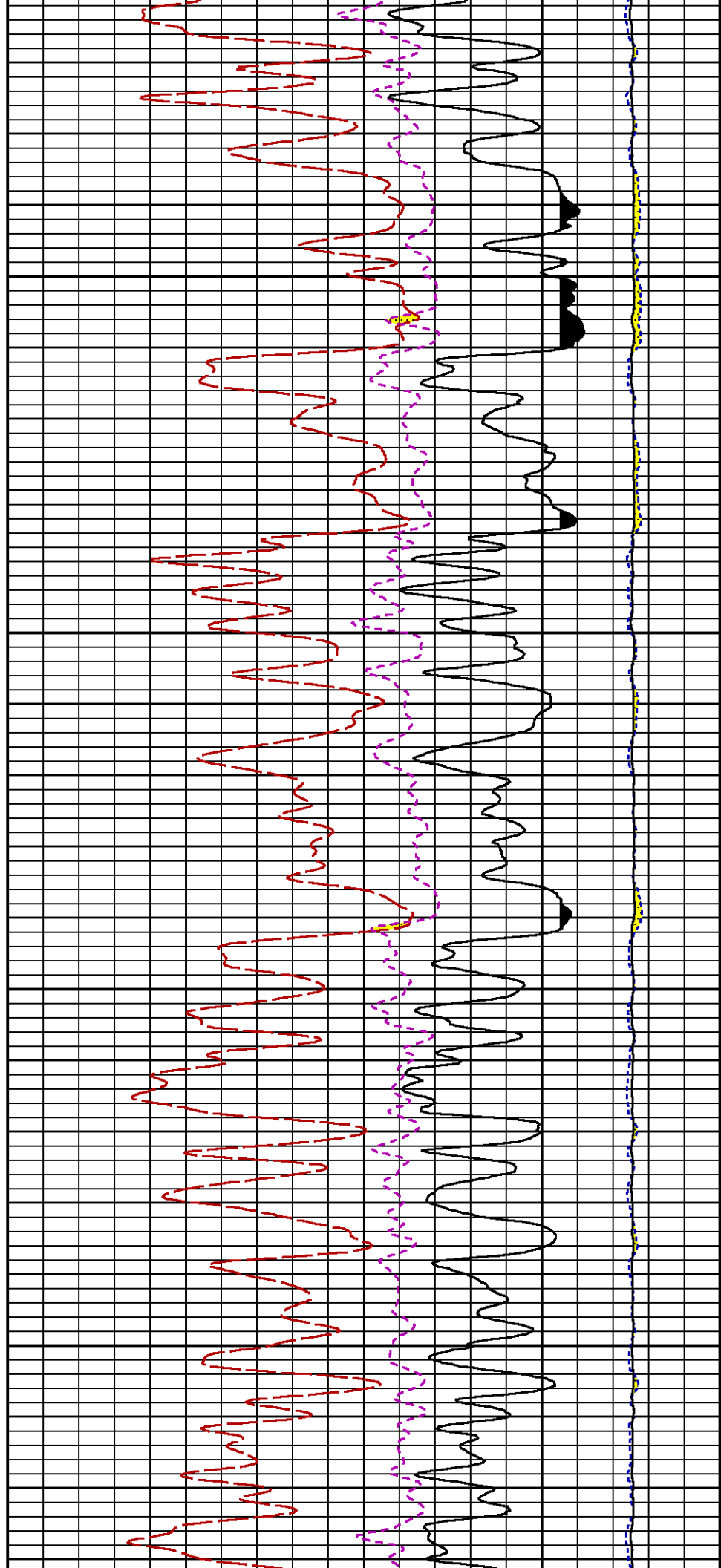
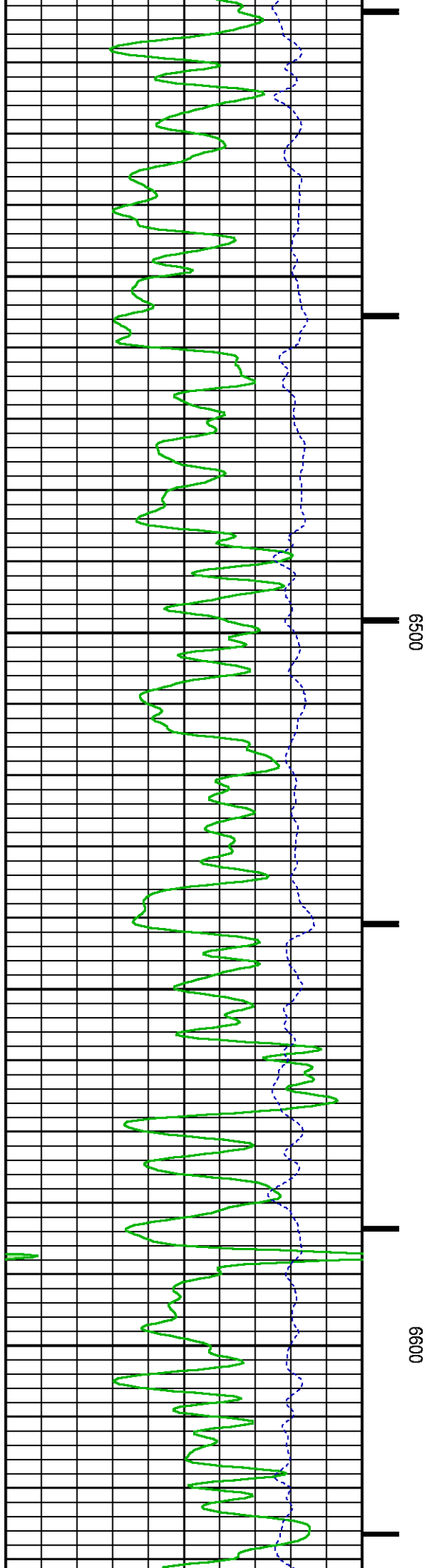


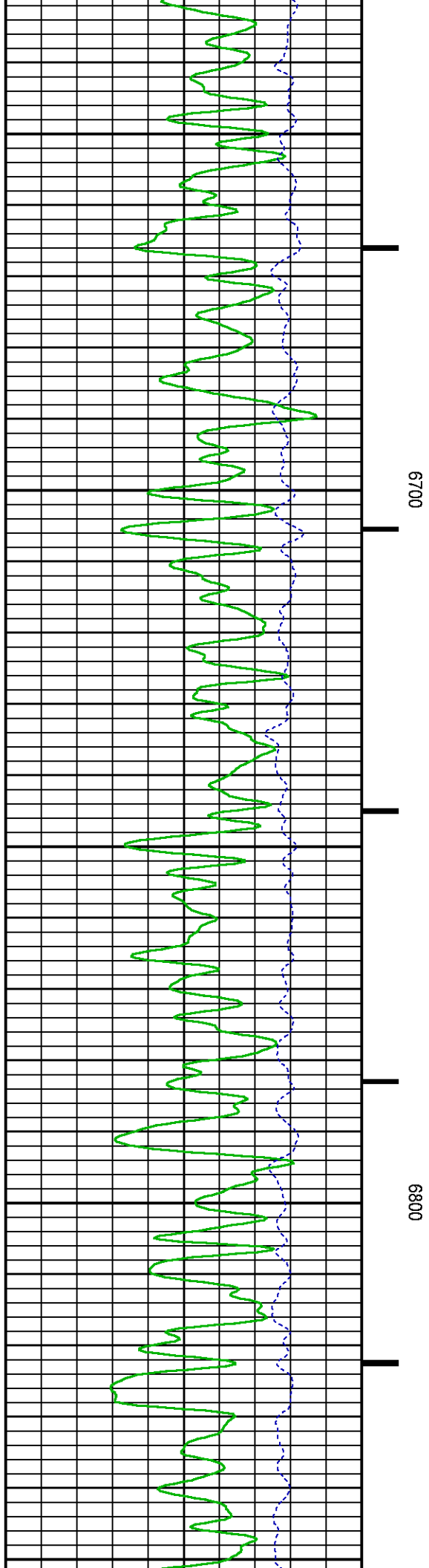
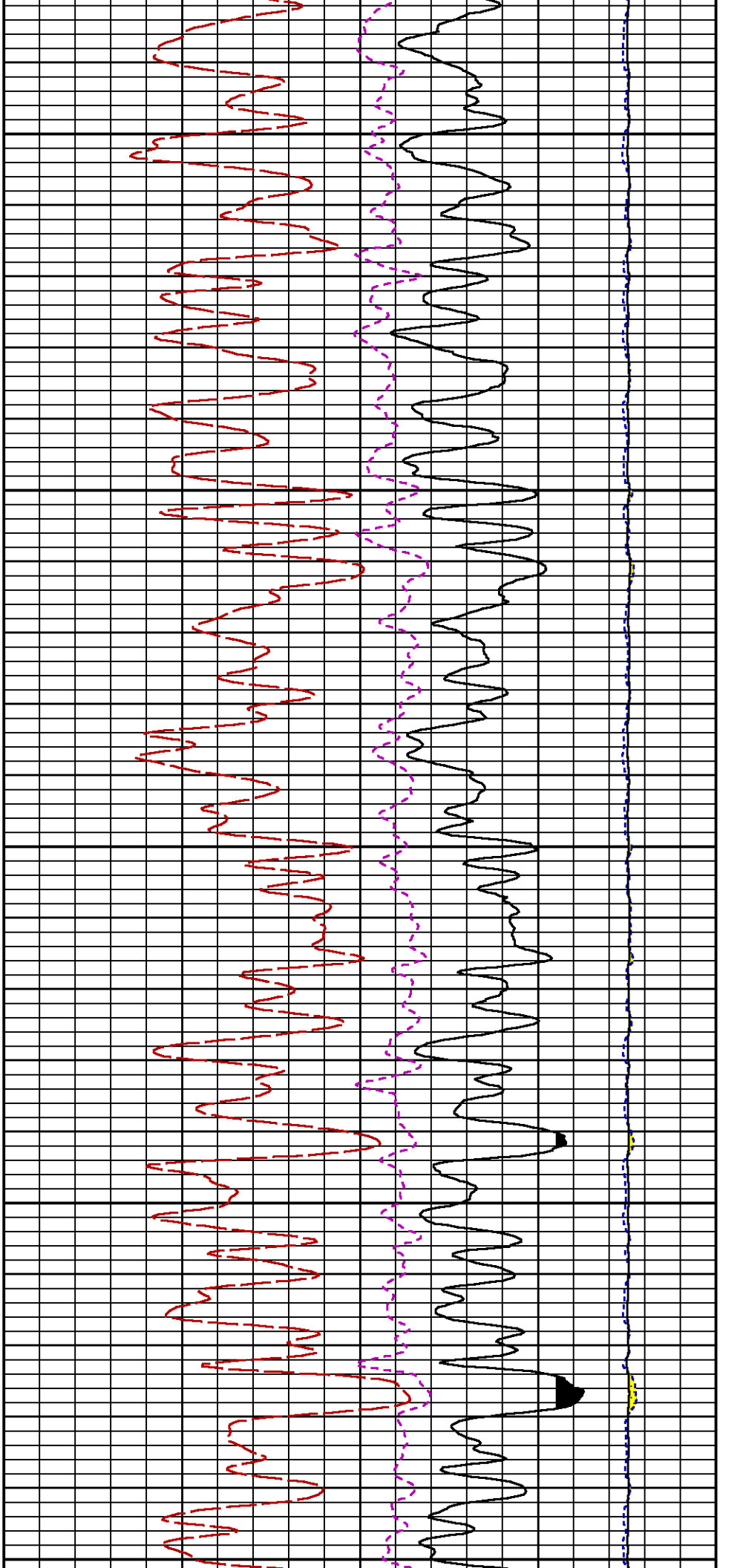


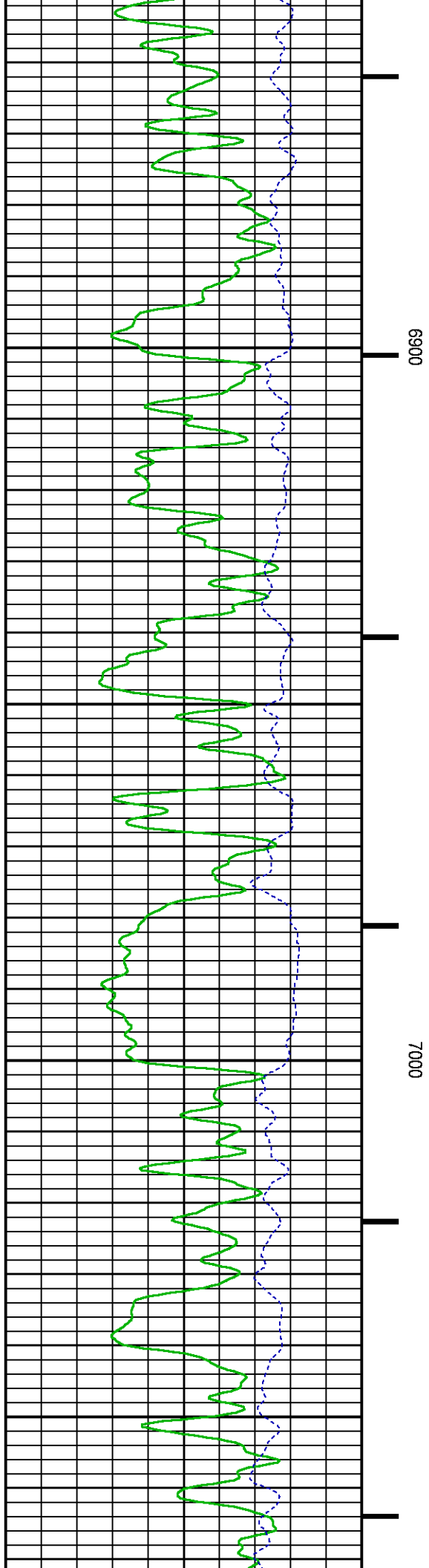
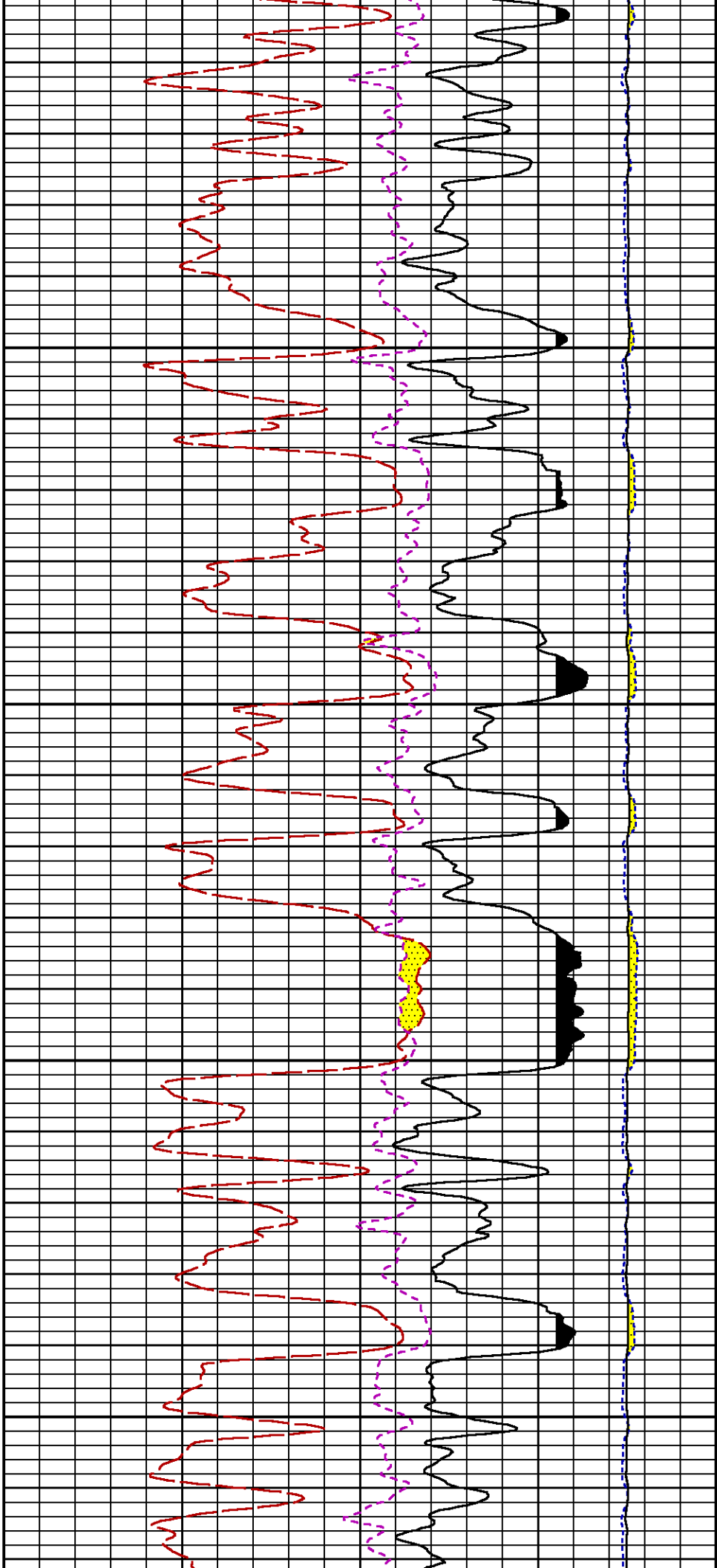


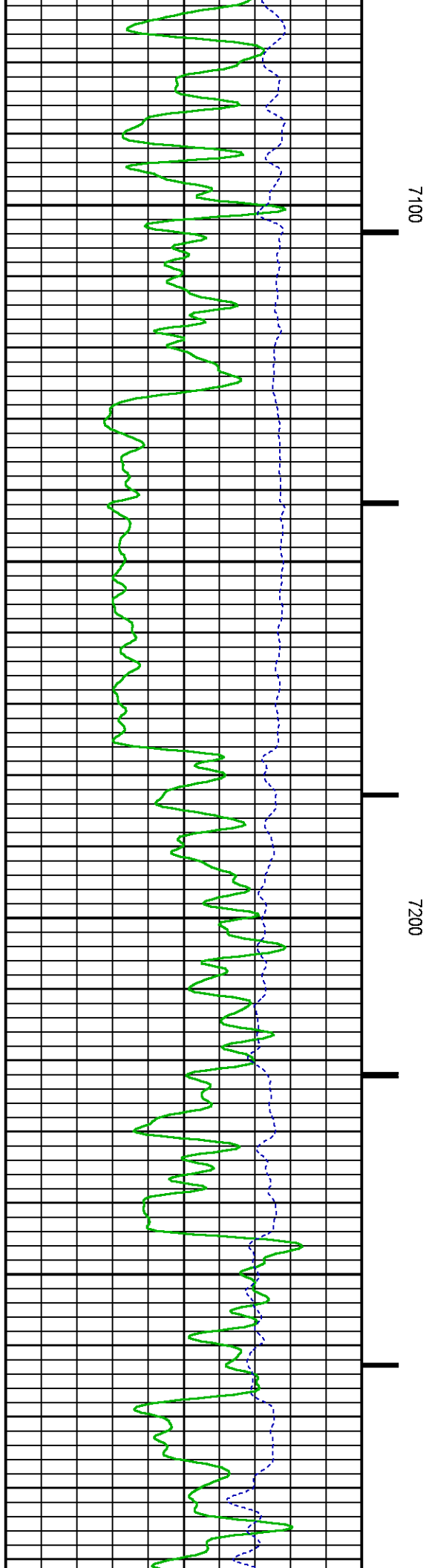
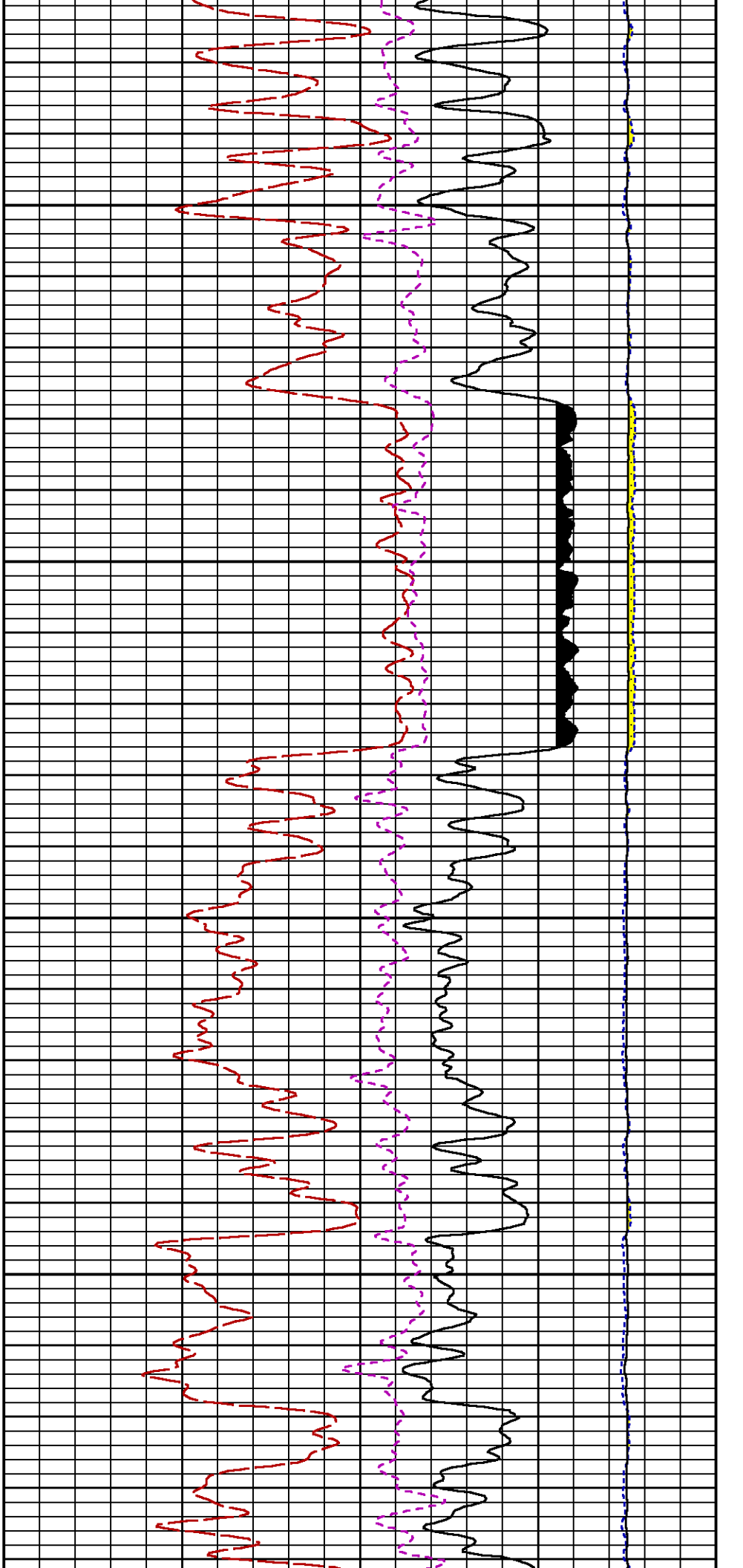


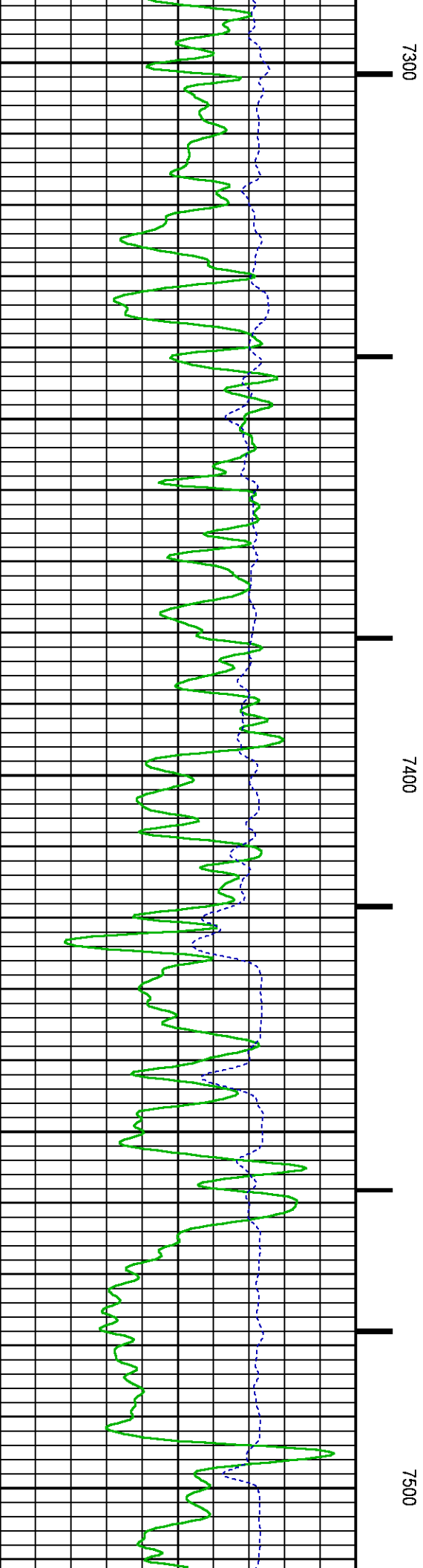
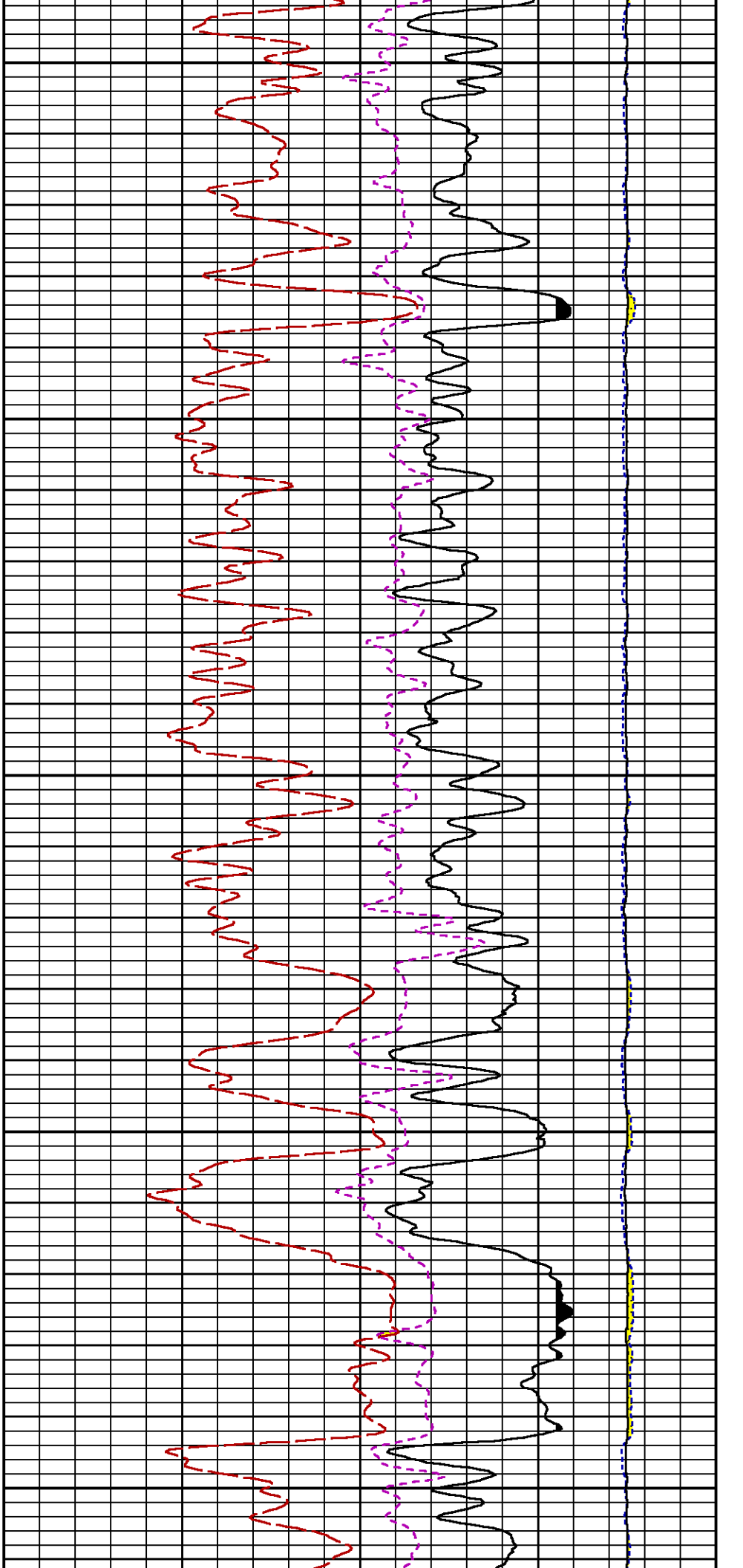


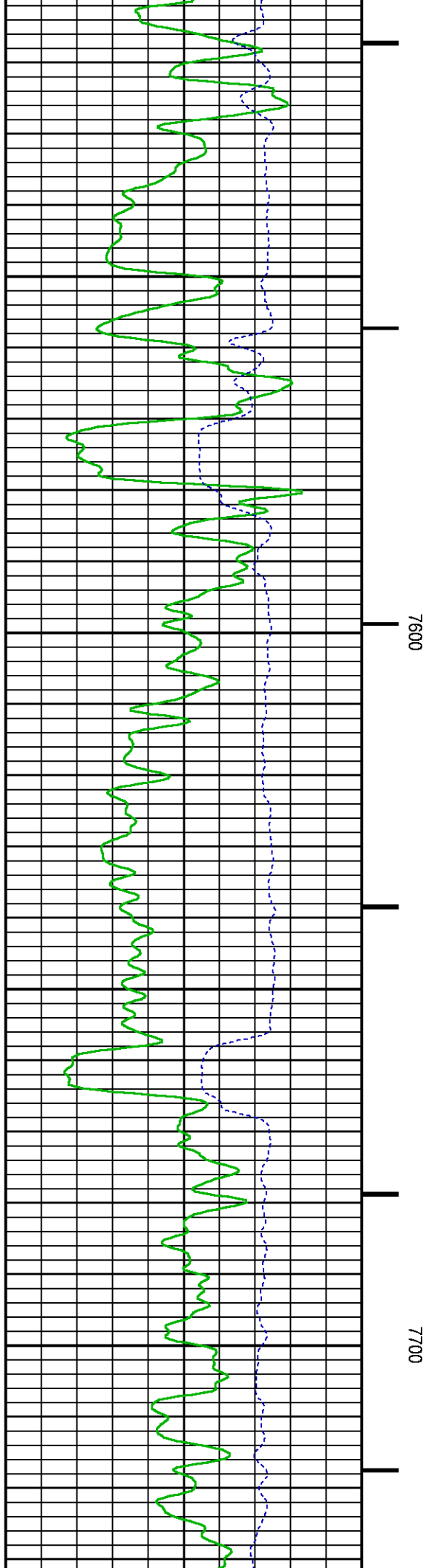
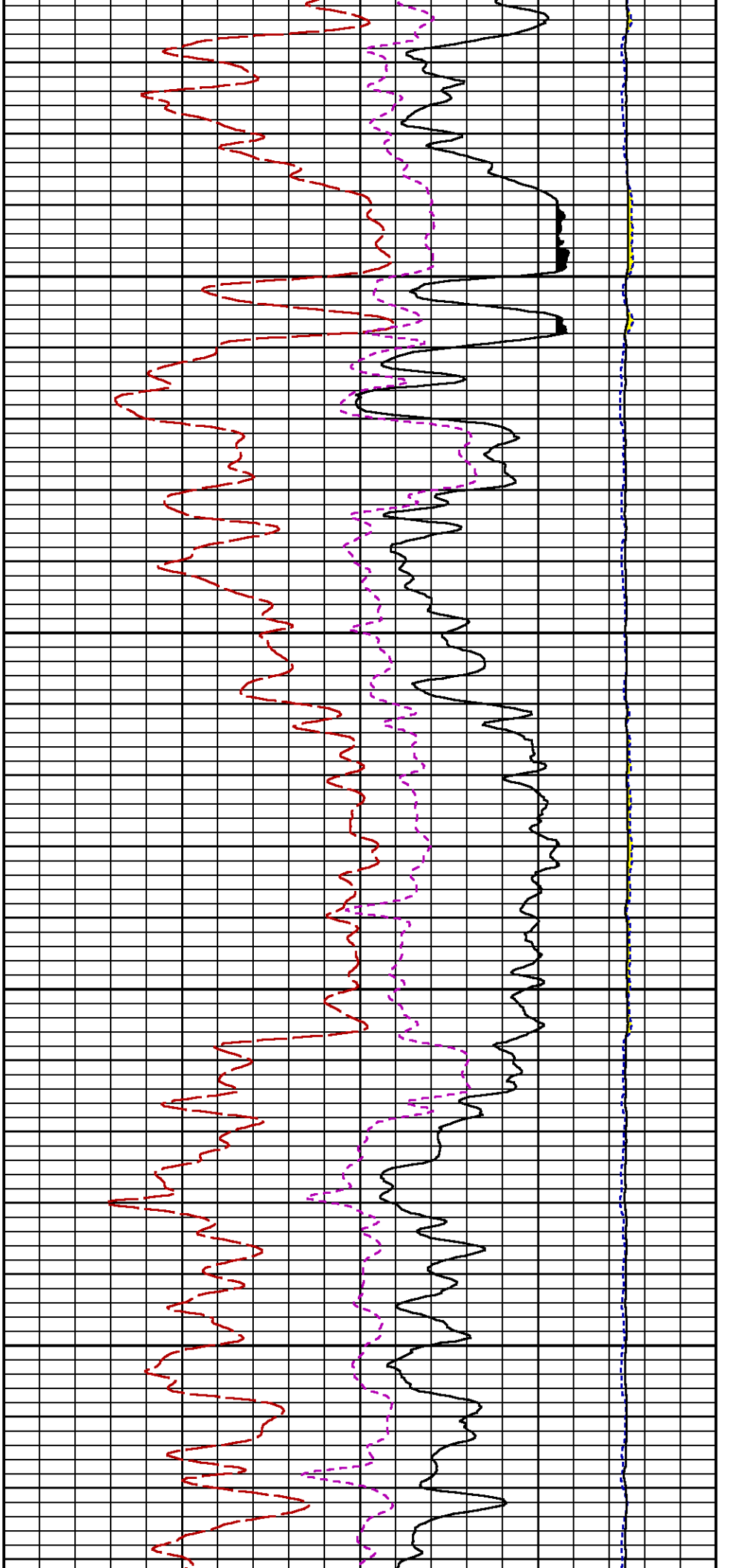


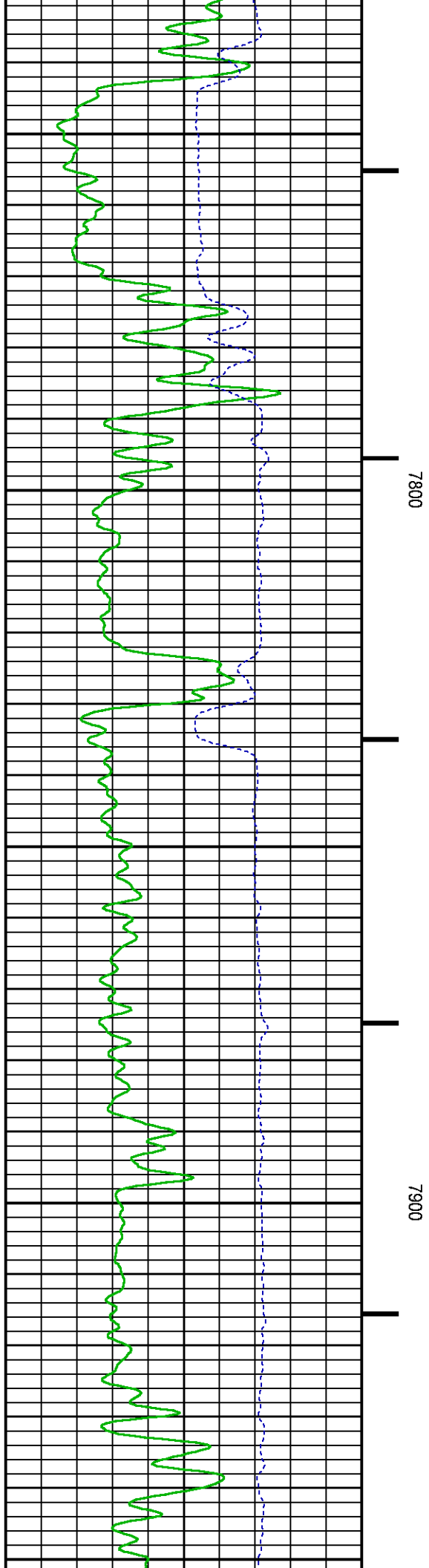
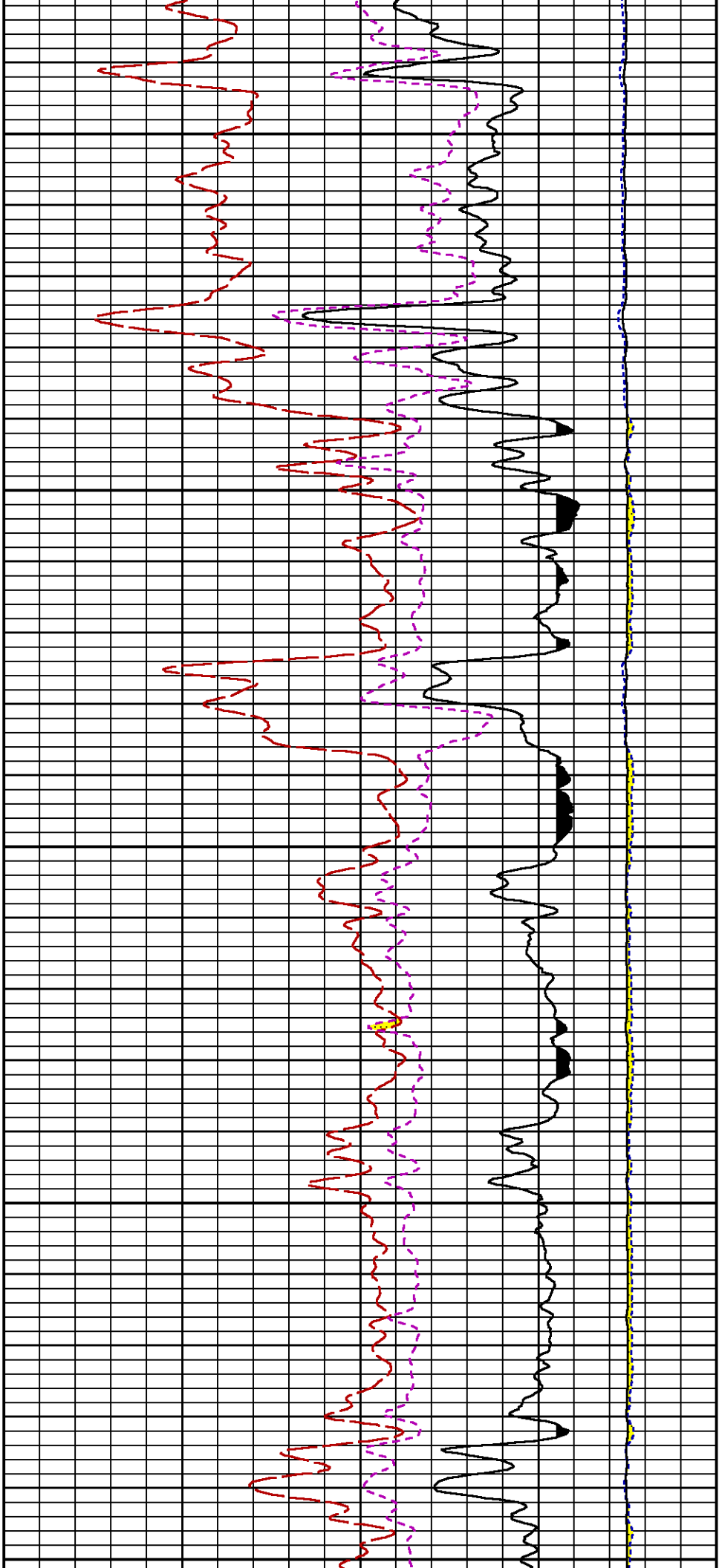


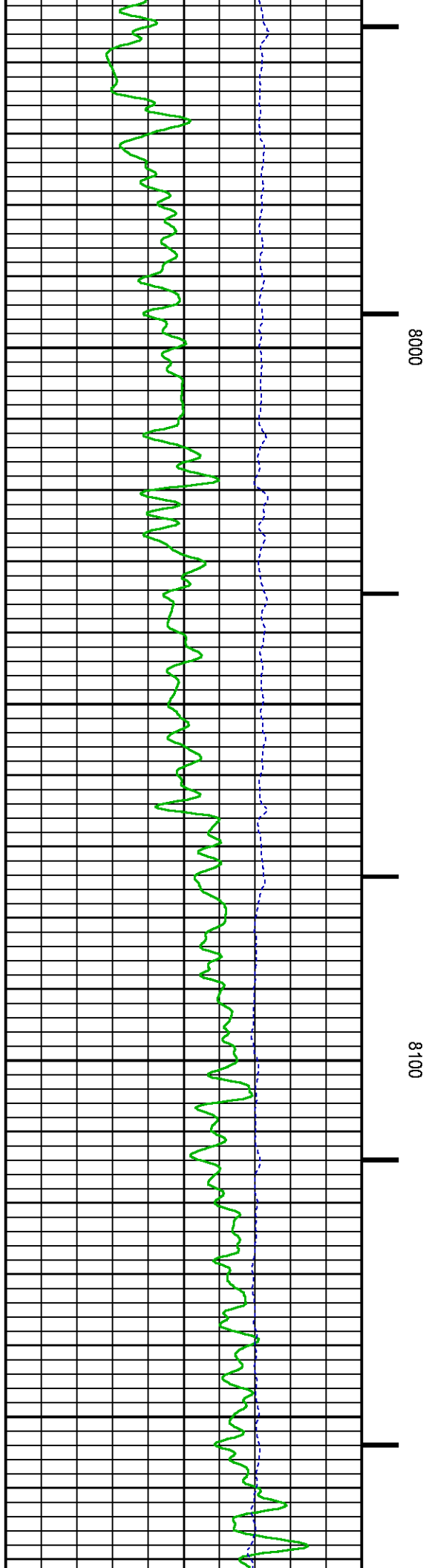
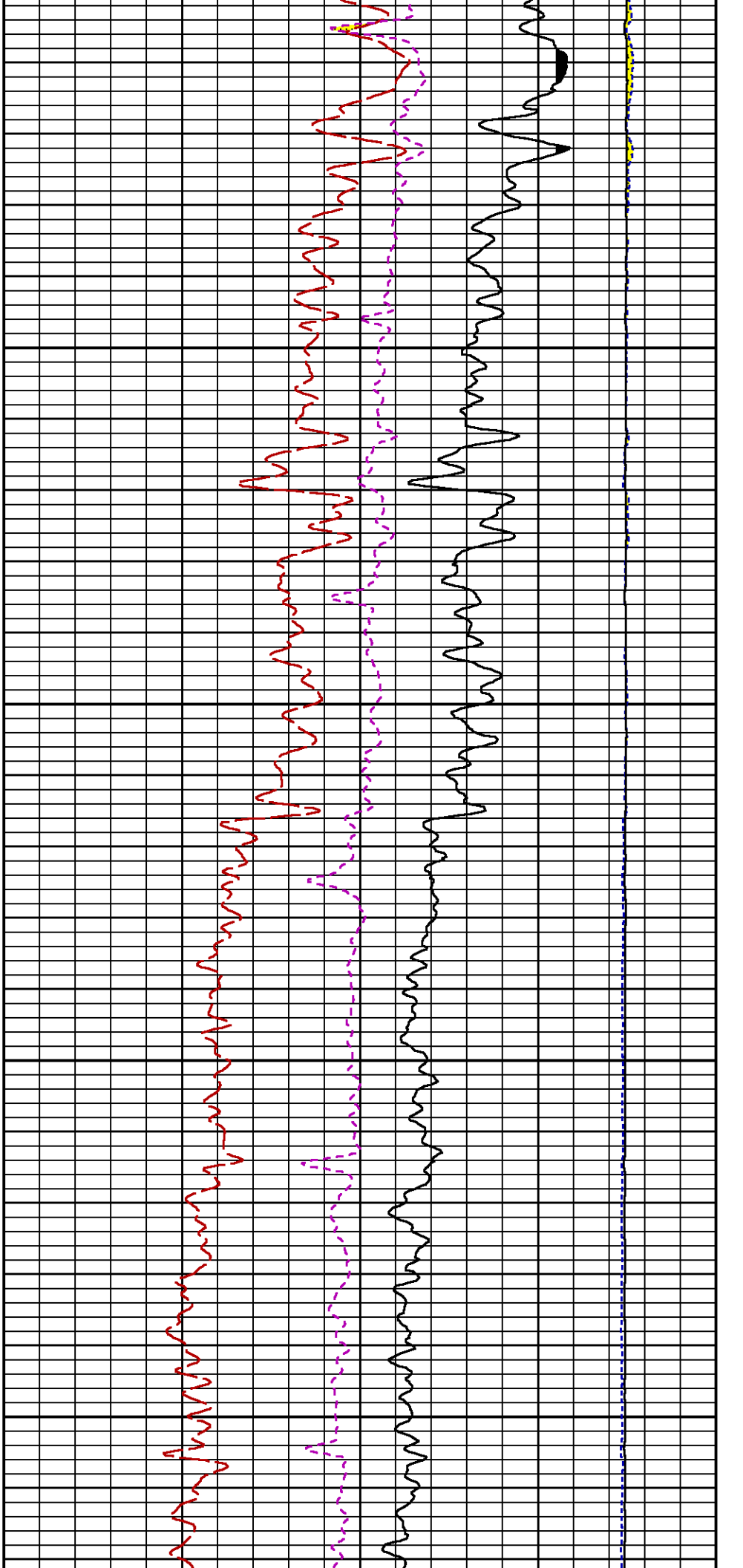


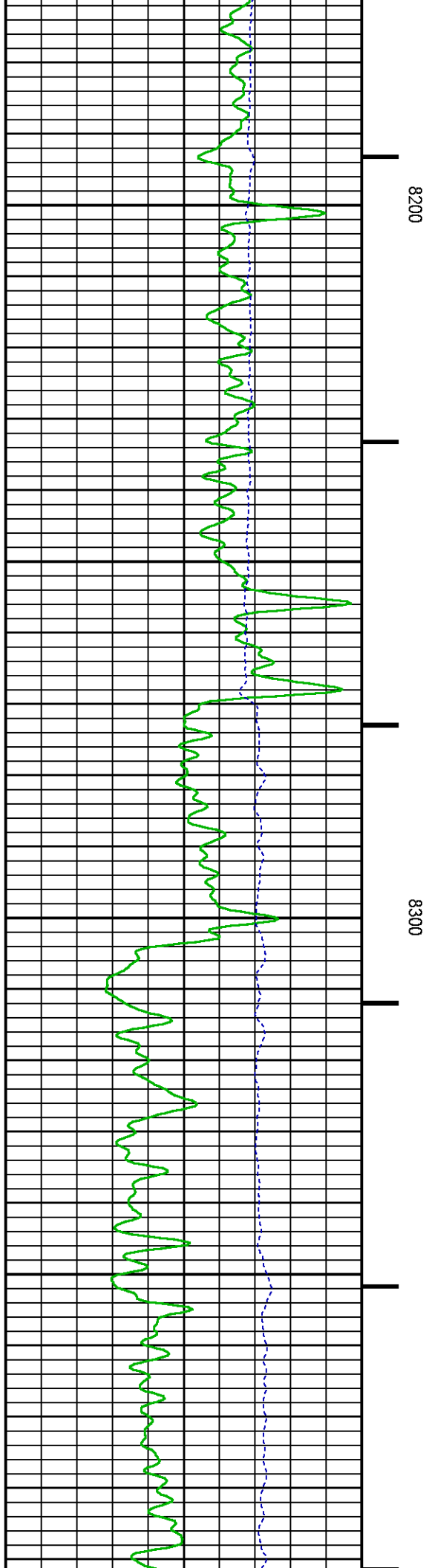
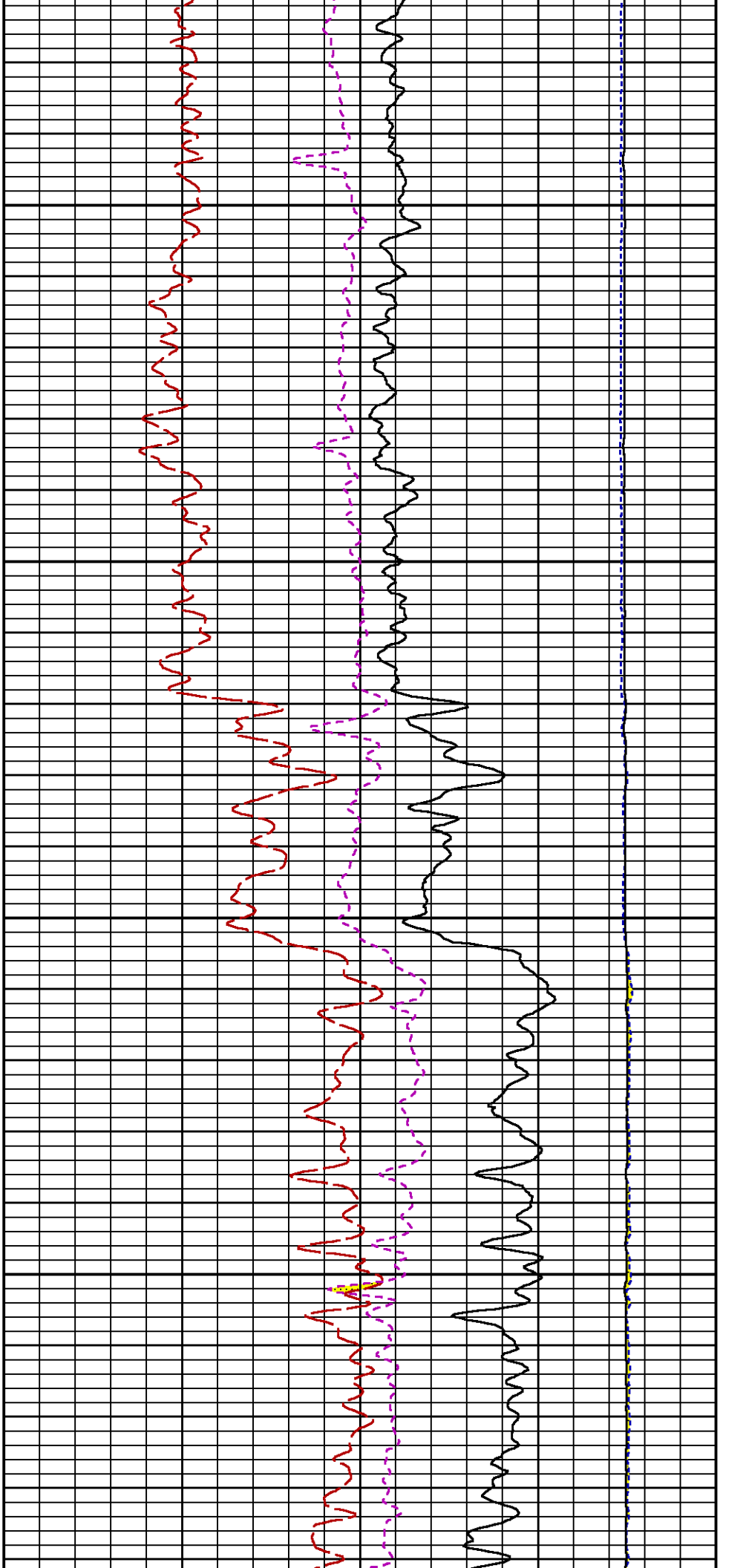


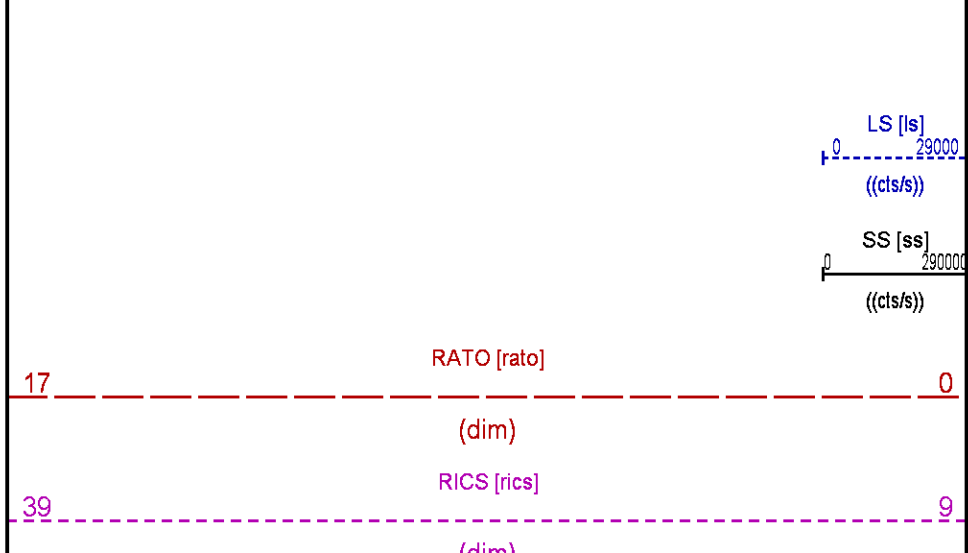
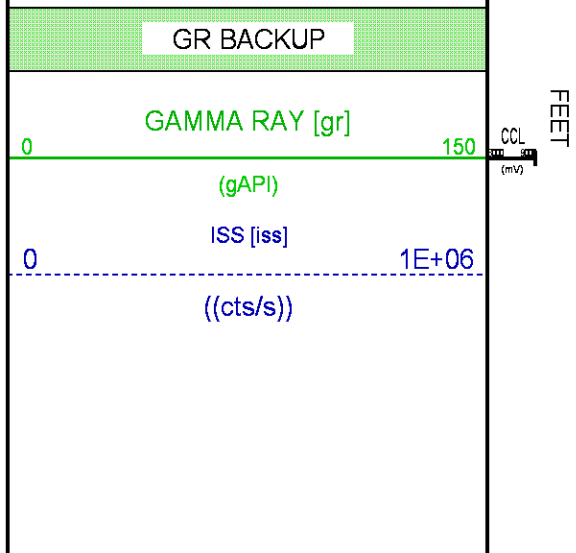
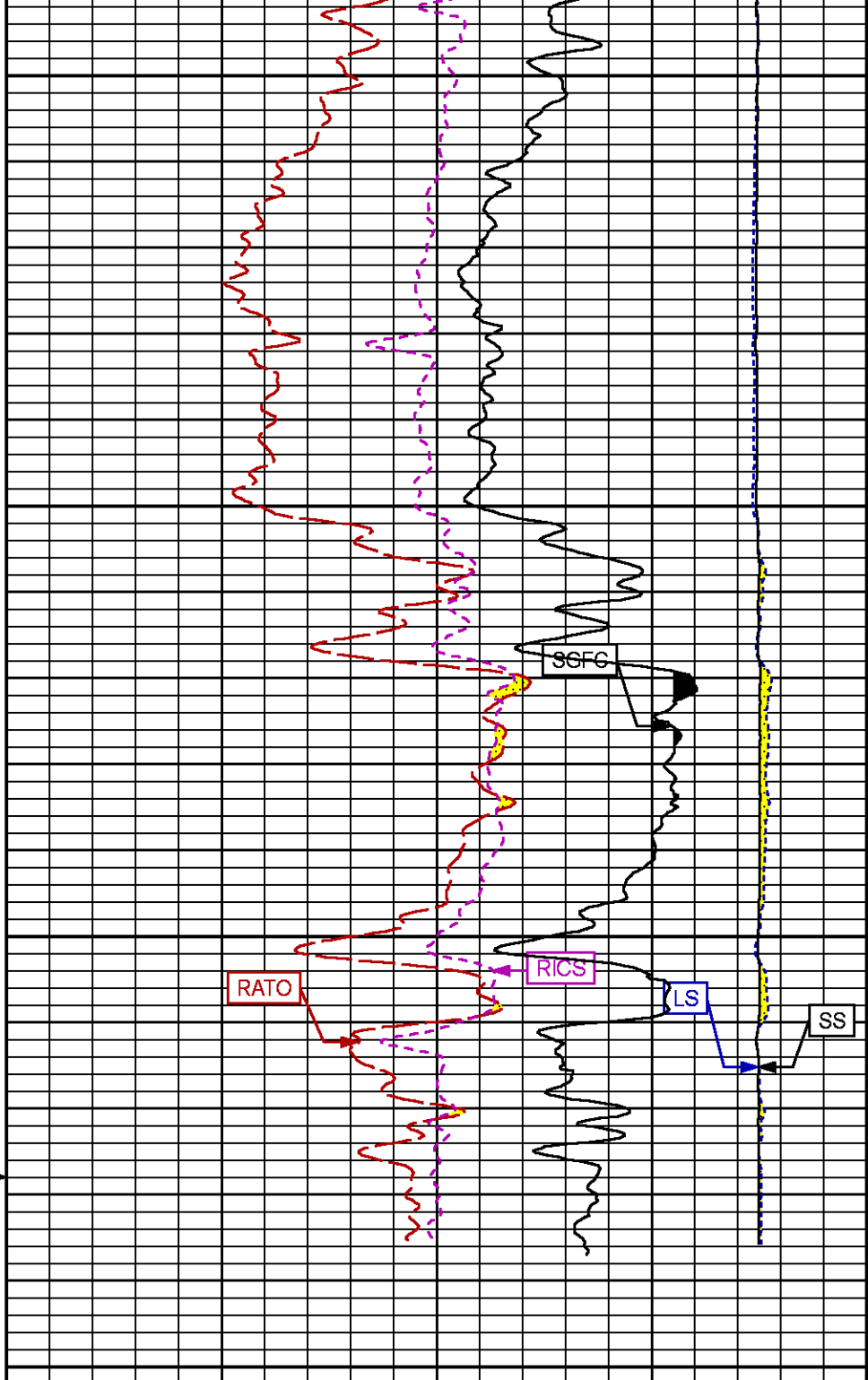
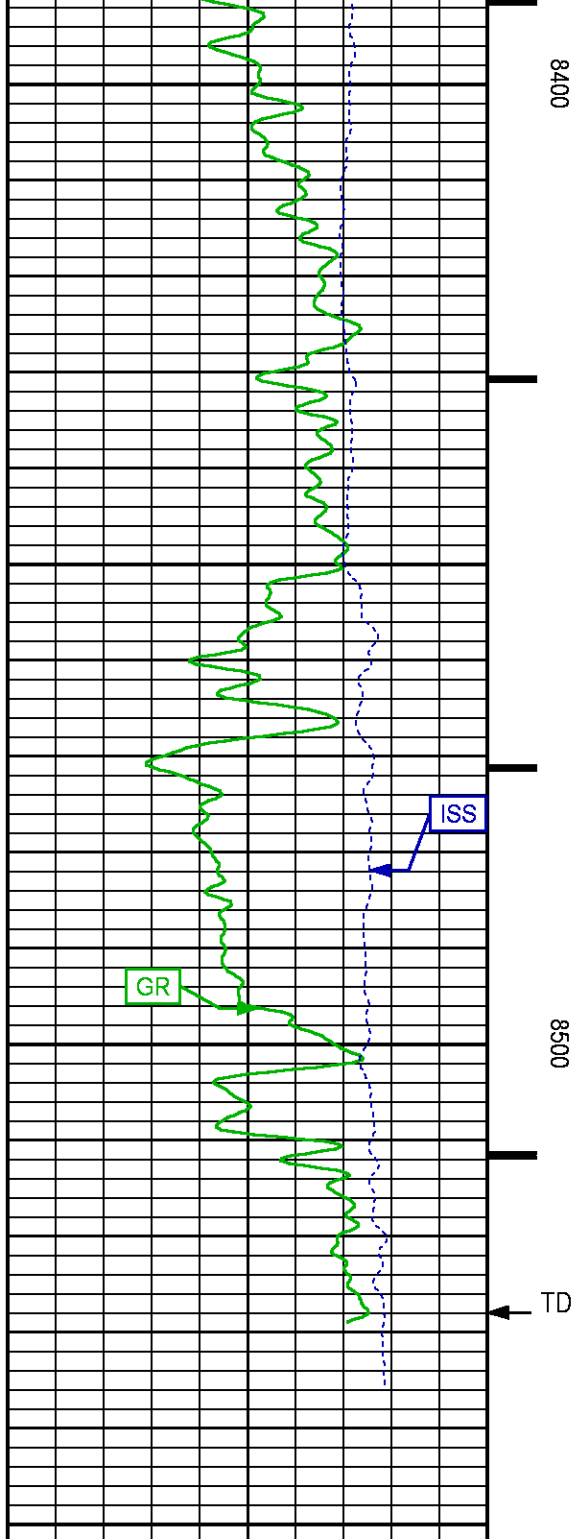












		60	SGFC [sgfc]	0
			(cu)	

REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 4

Plotted: Fri Jun 8 14:20:11 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_GUNDERSON_0994-13-06W/p354h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5263.959 ft BOTTOM DEPTH: 5564.240 ft

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

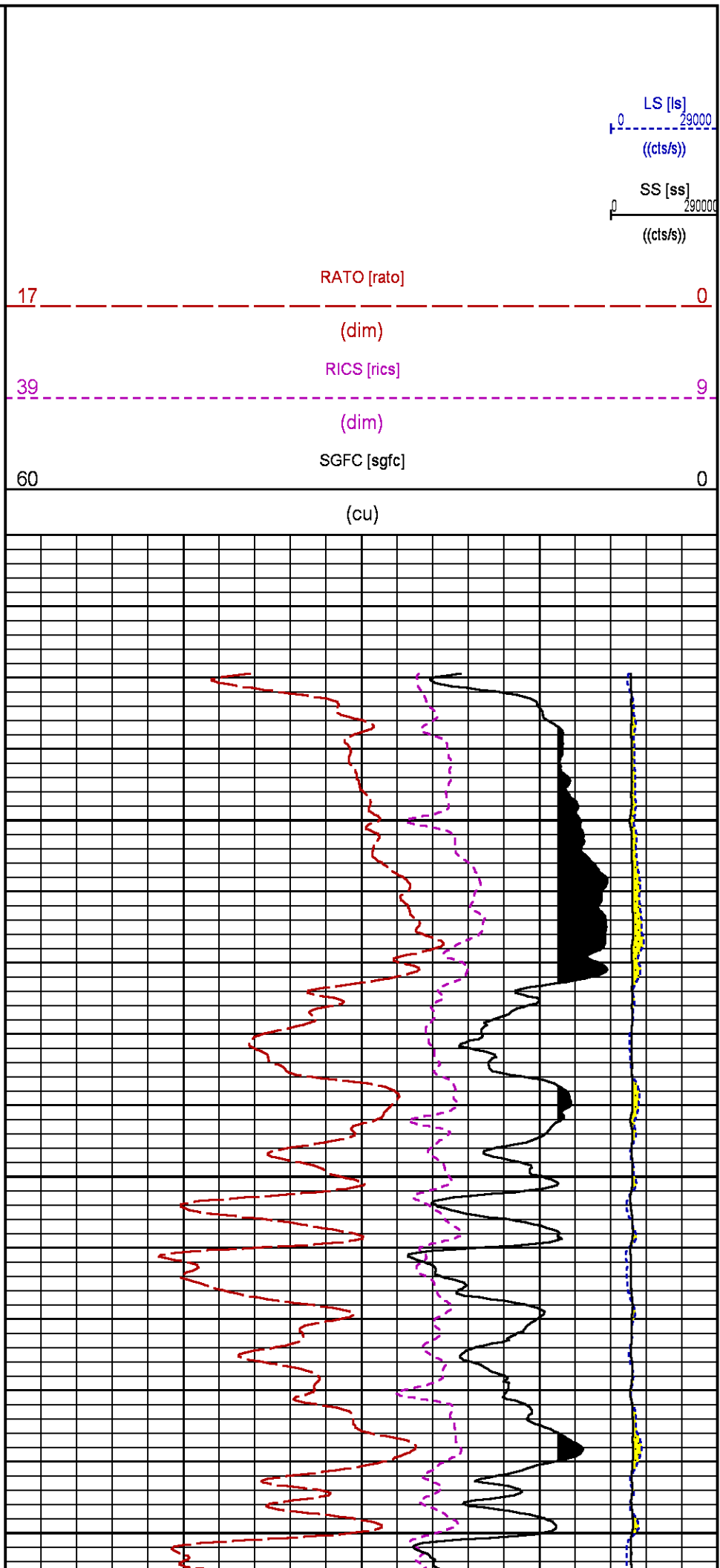
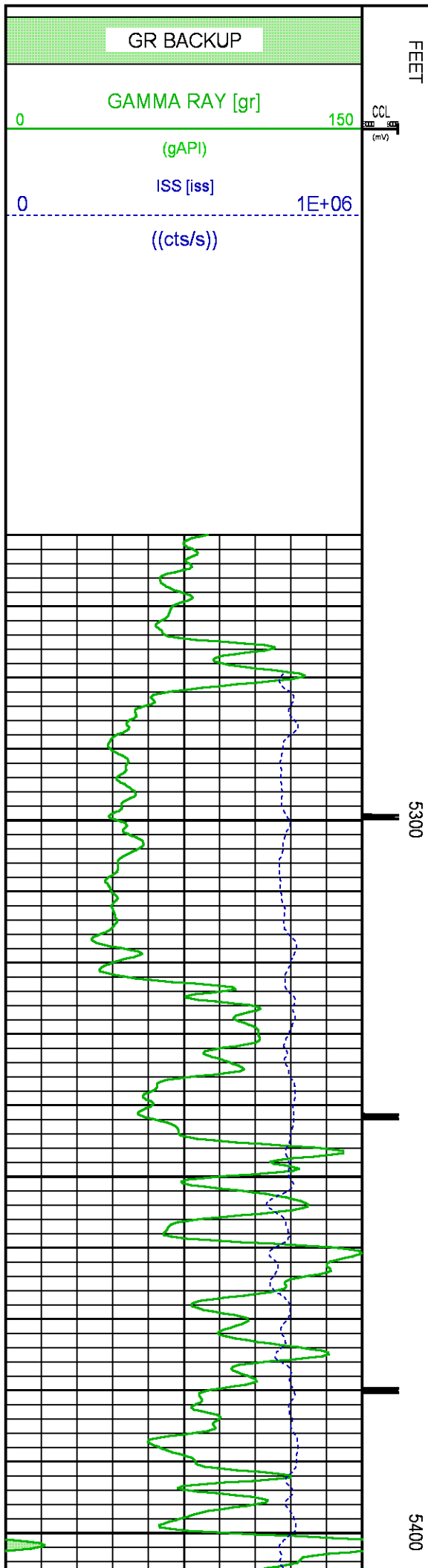
RPM PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	7.87	in	" "
	LARGEST CASING OD	4.50	in	" "
	MATRIX	SANDSTONE		" "

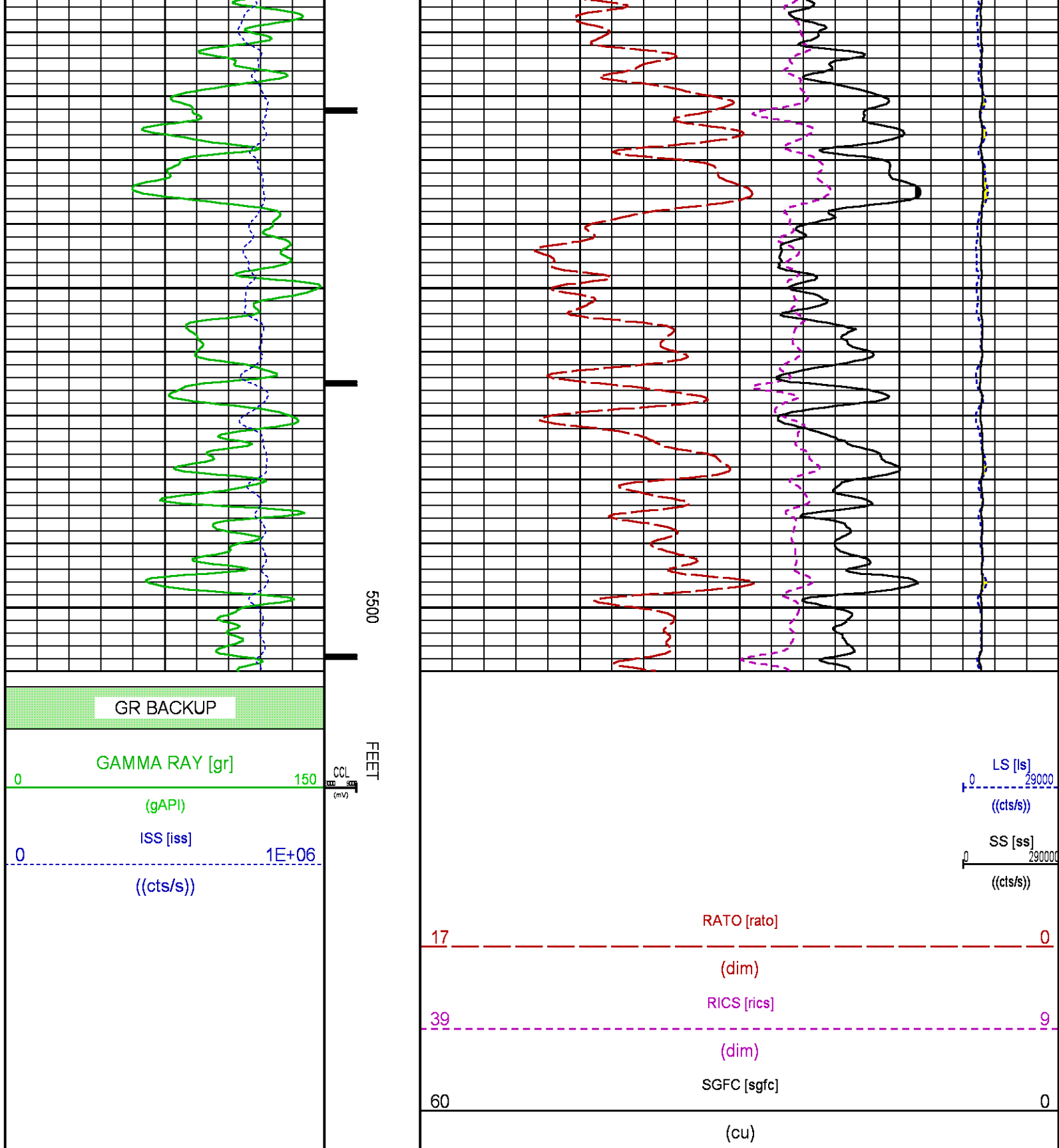
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE 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)
CCL	-25.00	ISS	-12.75	RATO	-12.75
GR	-22.75	LS	-12.75	RICS	-12.75
				SGFC	-12.75
				SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_GUNDERSON_0994-13-06W/LARAMIE_0994-13-06W_RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 5260 - 5510 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_GUNDERSON_0994-13-06W/0994-13-06W_RPM_REPEAT.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : GUNDERSON 0994-13-06W
Field : VEGA
File Interval : 5253.75 - 5575.5 Feet
OCT : p354h





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/LARAMIE_GUNDERSON_0994-13-06W/p354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 10384613

DATE/TIME PERFORMED: Thu Feb 4 09:36:42 2016

UNIT #: 3880TA HL6670

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	61.20	278.44	217.2	0.967	59.16	269.16	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 10384613

DATE/TIME PERFORMED: Thu Feb 4 09:39:26 2016

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	61.38	270.56	0.967	59.33	261.53	202.20
						200.00 220.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10066991

DATE/TIME PERFORMED: Mon May 7 15:09:32 2018

UNIT: 5753XD 111111

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10430258

HOURS: 8281AA 88

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	794247	124	2139	2383	2237	120	8.0	1.0374
Interpolated	1300000	145	2128	2374	2232			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	794247	6835	1065	142	25.87	0.15	24.10	0.32
					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	794247	178007	27088	88699	31638	8729	53712	13968
Fit Quality %		0.926	0.946	0.726	0.765	0.956	0.682	0.966

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	794247	1.43	4.46	29.33	14.79	10.16	3.63	3.85
		1.42 1.45	3.55 5.52	22.20 32.70	10.89 16.34	10.06 11.10	3.57 3.95	3.76 4.22
Fit Quality %		0.119	0.323	0.318	0.028	0.337	0.297	0.353
Reduced	1412538	1.43	4.47	29.36	14.77	10.20	3.64	3.86
		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

33.24'

A3 CABLEHEAD
Diameter : 1.37"

PCM POWER SUPPLY

Diameter : 1.70"
Length : 3.86'
Weight : 18 lbs
Series : 8250EA
Mnemonic : PCM

TELEMETRY / CCL

Diameter : 1.70"
Length : 4.46'
Weight : 20 lbs
Series : 8248EA
Mnemonic : PCM
Measure Point: 1.00': CCL MP

CCL MP — 25.19'

GAMMA RAY, 1 11/16"

Diameter : 1.69"
Length : 2.17'
Weight : 10 lbs
Series : 2812LA
Mnemonic : GR
Measure Point: 0.62': GR MP

GR MP — 22.64'

RPM ELECTRONICS

Diameter : 1.70"
Length : 4.48'
Weight : 16 lbs
Series : 8281EA
Mnemonic : RPM

RPM C DETECTOR SECTION

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

XLS MP — 13.58'

LS MP — 13.16'

SS MP — 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

0.00'

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



COMPANY LARAMIE ENERGY LLC
 WELL GUNDERSON 0994-13-06W
 FIELD VEGA
 COUNTY MESA STATE COLORADO

FILE NO:
CH136727
 API NO:
05077105410000

LOCATION:

LAT: 39.273933 N
 LONG: 107.834853 W

ELEVATIONS:

KB 7302 FT
 DF
 GL 7272 FT

SEC 13 TWP 9 S RGE 94 W

DATE 05-Jun-2018