



FILE NO: CH096028	COMPANY WELL FIELD COUNTY	WPX ENERGY YOUBERG RU 344-7 RULISON GARFIELD	STATE CO
API NO: 0504522530000			

Ver. 4.01 7 7S 93W RU 44-7 PAD NABORS 576	LOCATION: SHL: 1141' FSL & 1183' FEL BHL: 664' FSL & 666' FEL SEC 7 TWP 7S RGE 93W	OTHER SERVICES BOND LOG
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB GL	ELEVATION 7917 FT 26 FT ABOVE P.D.
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DATE	22-Apr-2015
RUN	1
SERVICE ORDER	US096028
DEPTH DRILLER	9940 FT
DEPTH LOGGER	9907 FT
BOTTOM LOGGED INTERVAL	9897 FT
TOP LOGGED INTERVAL	5856 FT
TIME STARTED	11:30
TIME FINISHED	18:00
OPERATOR RIG TIME	6.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	83 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	252 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	22-Apr-2015
EQUIP. NO.	HL-6670
LOCATION	NEWELL
RECORDED BY	KENT HEIL
WITNESSED BY	

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	26 FT	1304 FT
8.75 IN	1304 FT	9940 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			26 FT	1304 FT
4.5 IN	11.6 LB/F	P-110	26 FT	9940 FT

REMARKS

RUN 1 TRIP 1: All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 22/APR/2015 at the client's request.

The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

The amount of linear shift is -1 foot.

Logged in PNC-3D mode.

BHT = 252 degF
SJ = 6466' - 6489'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10586851	FREE
1	1	TEL/CCL	8248ED	10460262	FREE
1	1	GR	8262XA	10485470	FREE
1	1	RPM	8281EA	10190984	FREE
1	1	RPM	8283PA	10414345	FREE
1	1	RPM	8281FA	10401926	FREE
1	1	TEMP	8255XA	11774568	FREE

MAIN SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 6

Plotted: Wed Apr 22 17:56:12 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096028/n353h02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 5847.000 ft BOTTOM DEPTH: 9928.990 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	8.75	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Apr 22 13:32:32 2015	CASING COLLAR LOCATOR
F1:GR	Apr 22 13:32:32 2015	GAMMA RAY
F1:ISS	Apr 22 13:32:32 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 22 13:32:32 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 22 13:32:32 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 22 13:32:32 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 22 13:32:32 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 22 13:32:32 2015	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 : HL6670:/dat1a/CH096028/344RPM_MAIN.fvpdf [5"/100' Scale]
 Plot Interval : 5850 - 9912 Feet

Data File 1 : F1 : HL6670:/dat1a/CH096028/344RPM_MAIN.xtf
 Created On : Apr 22 13:32:32 2015
 Company : WDX ENERGY

Company : WPA ENERGY
Well : YUBERG RU 344-7
Field : RULISON
File Interval : 5820.75 - 9927 Feet
OCT : n353h

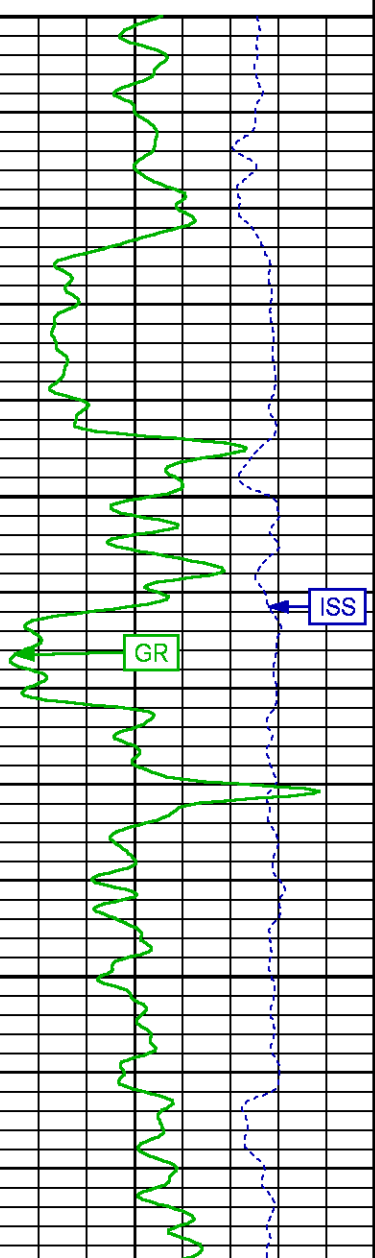
GR BACKUP

ISS [iss] 0 1E+06 (1)
GAMMA RAY [gr] 0 150 (gAPI)

FEET

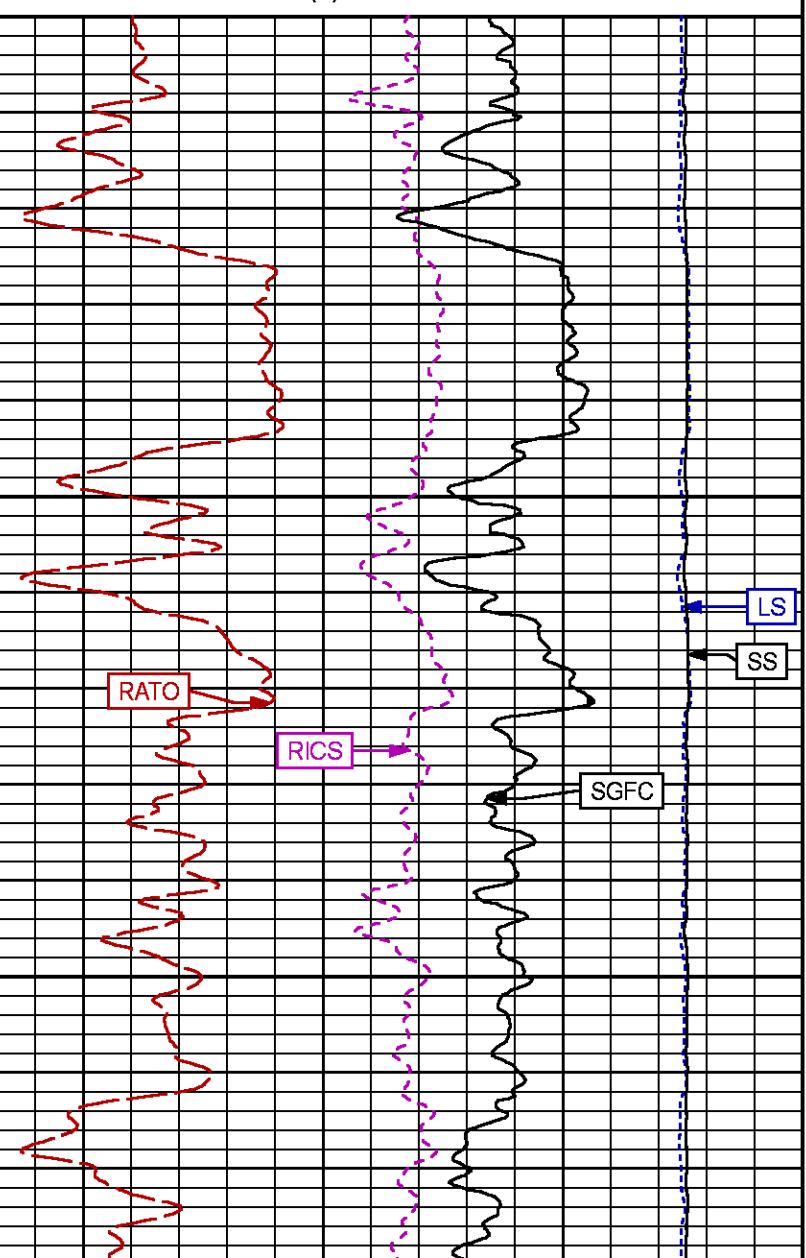
CCL

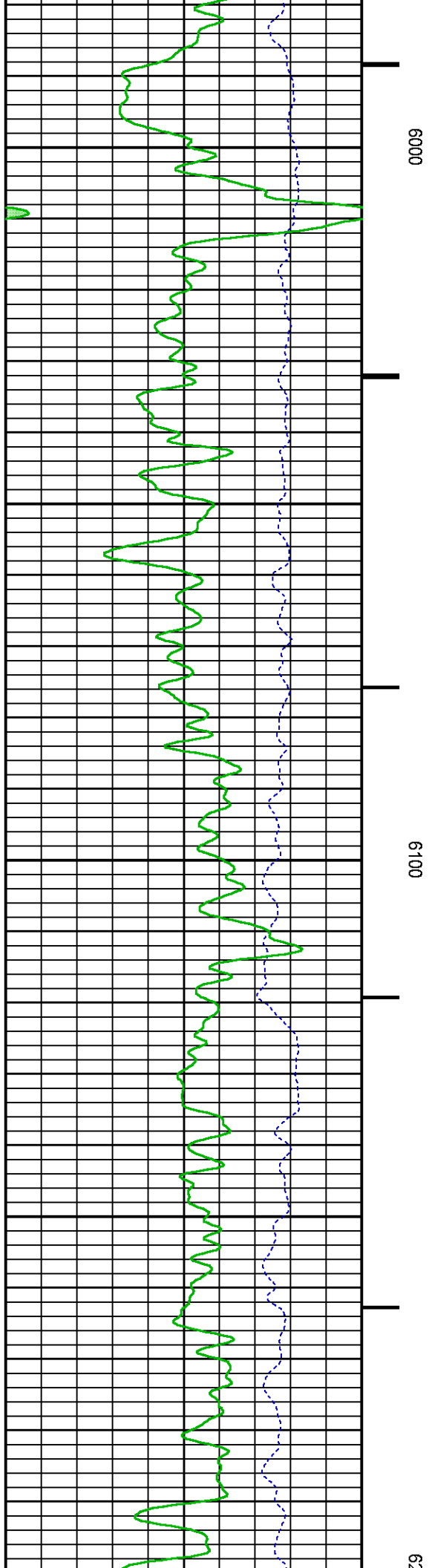
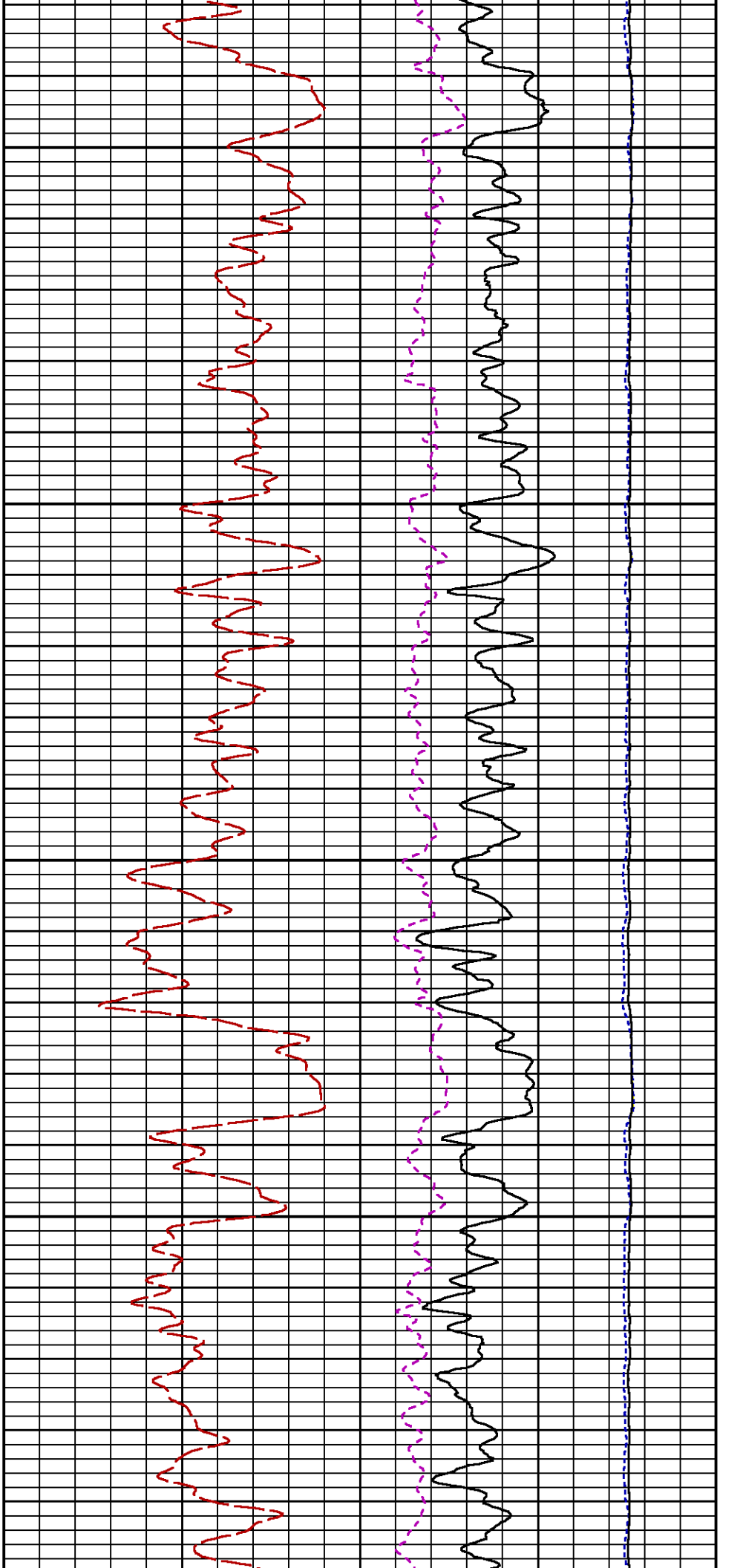
5900

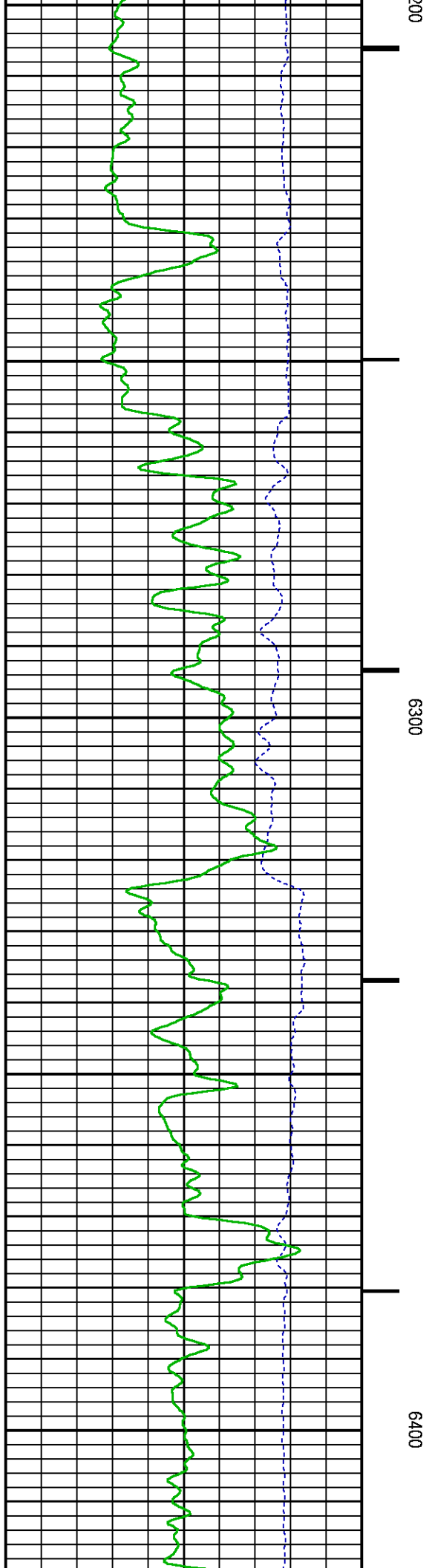
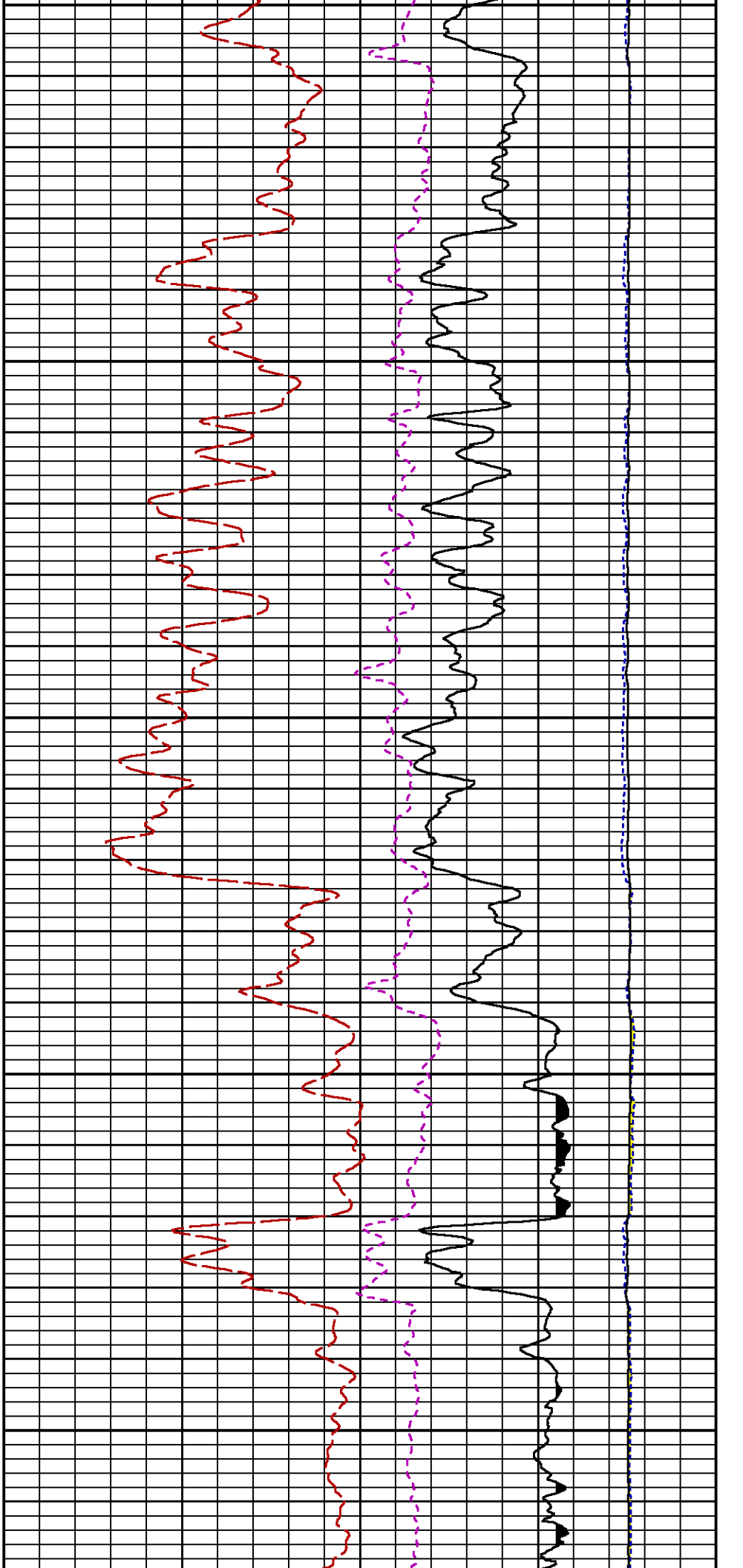


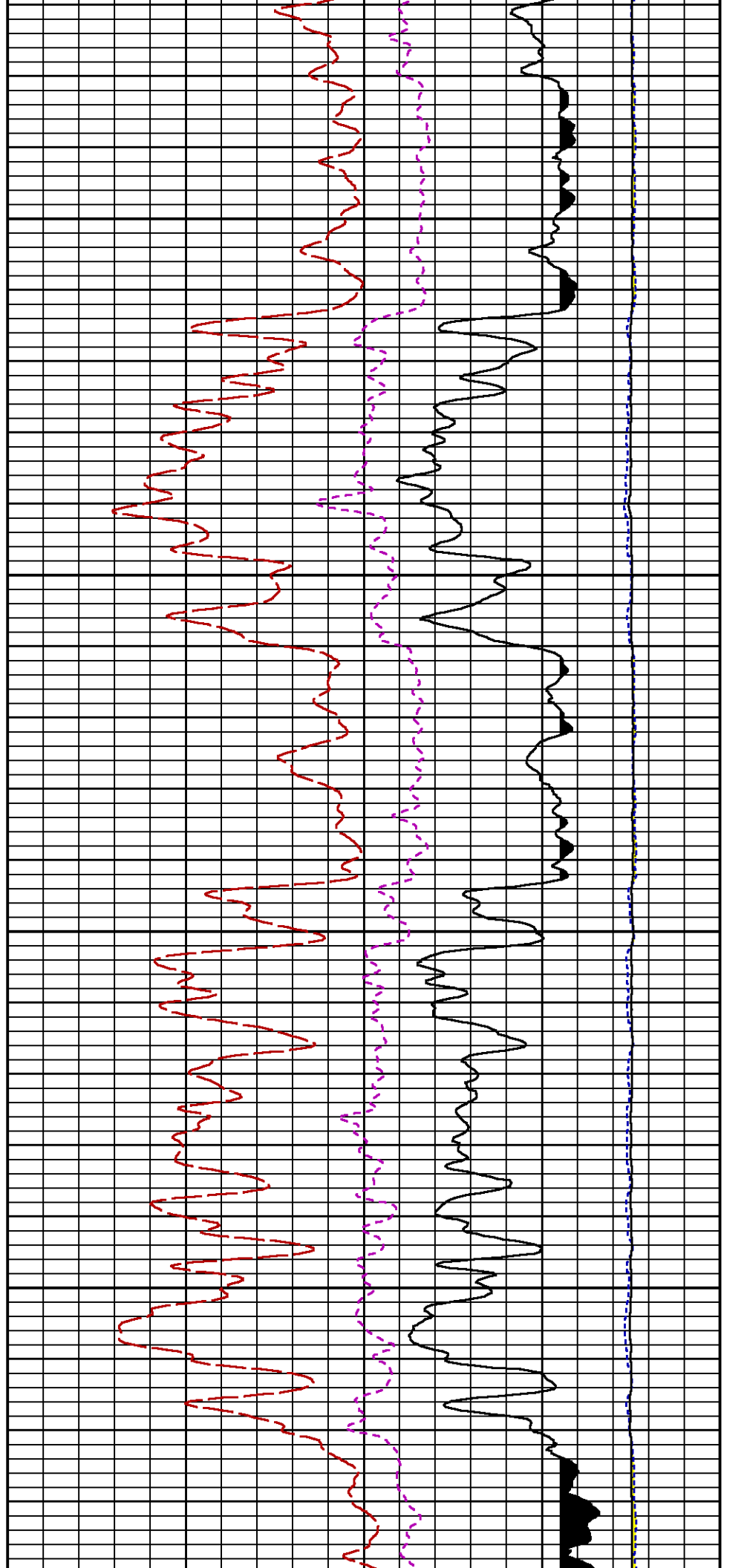
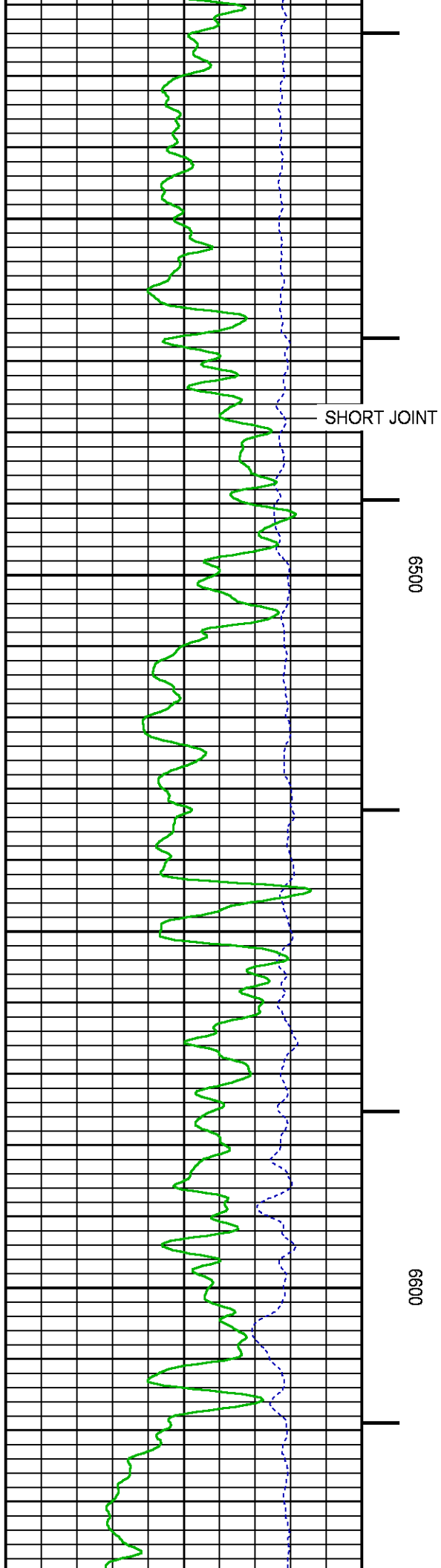
LS [ls] 0 29000 (1)
SS [ss] 0 29000 (1)

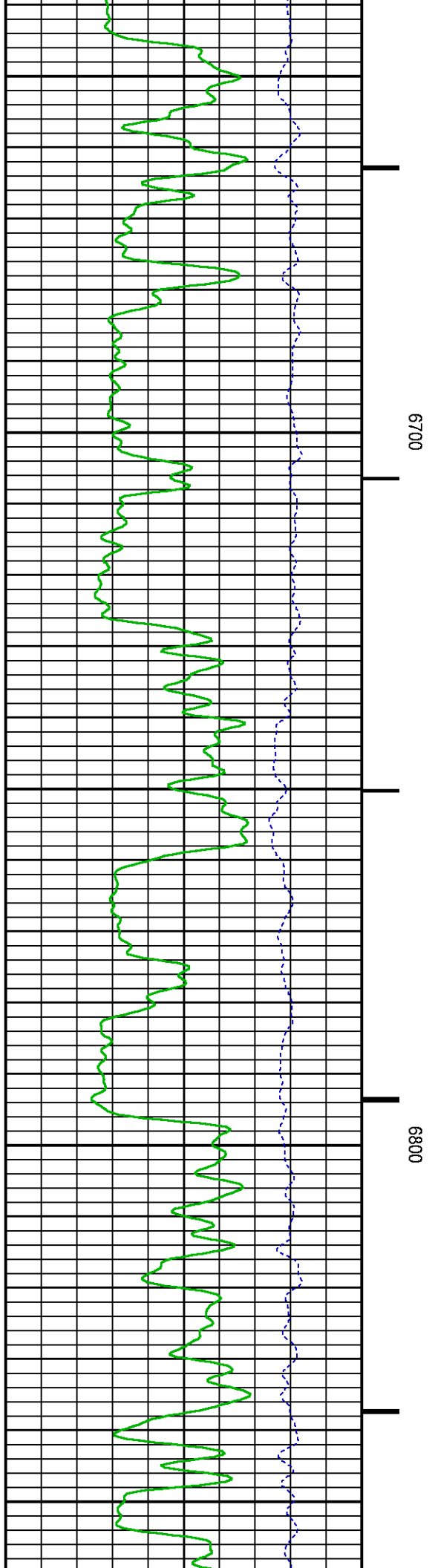
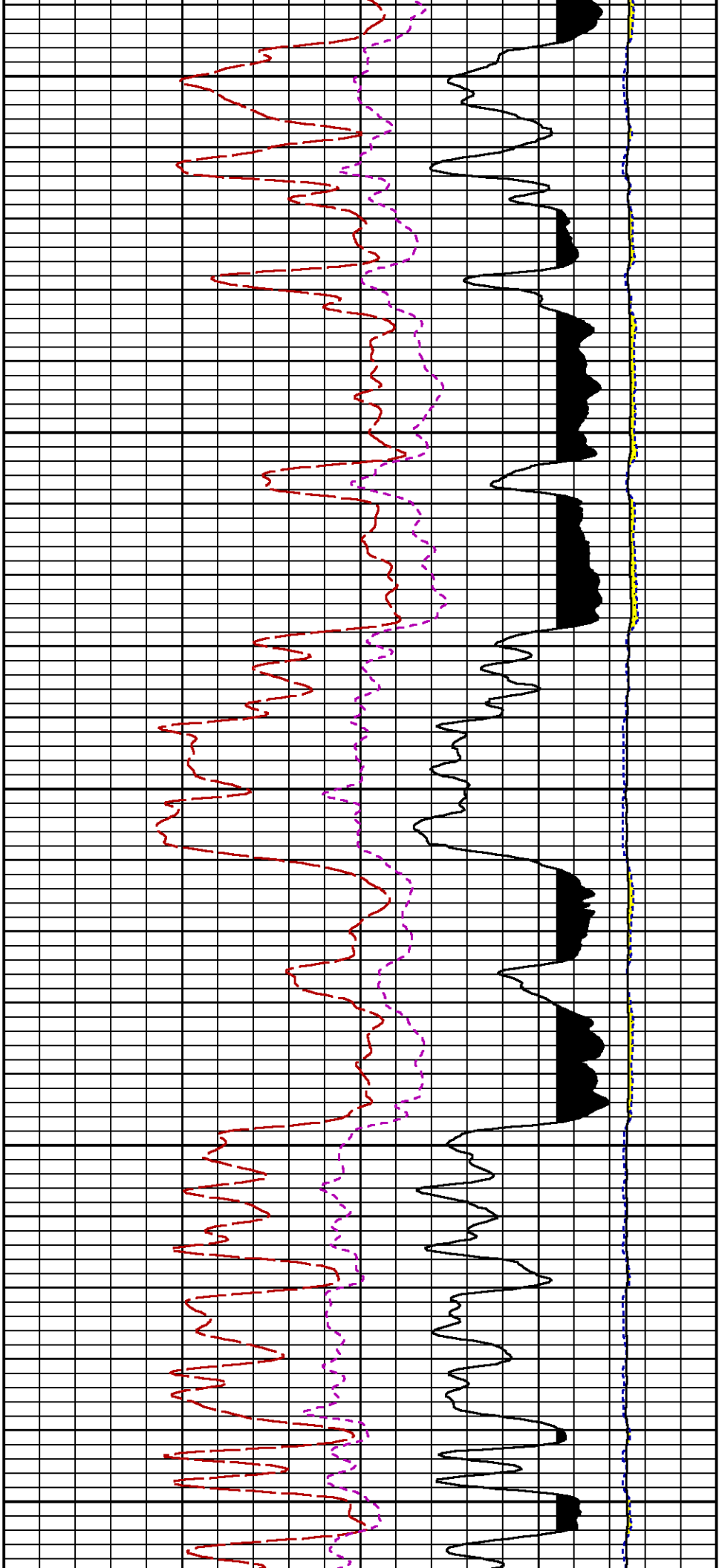
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RICS [rics] 39 9 (1)
SGFC [sgfc] 60 0 (1)

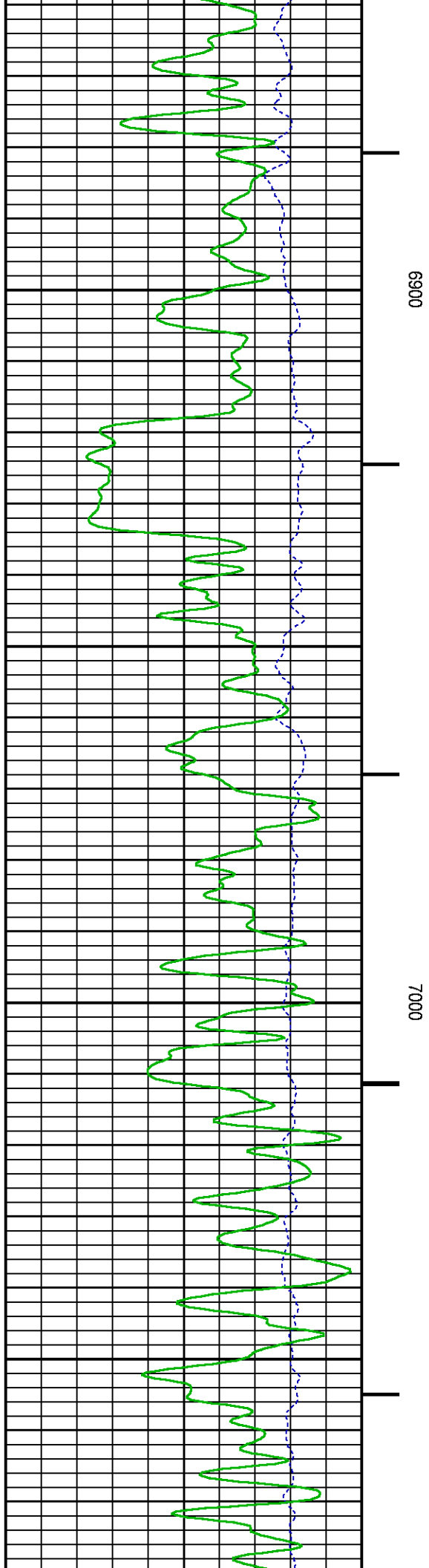
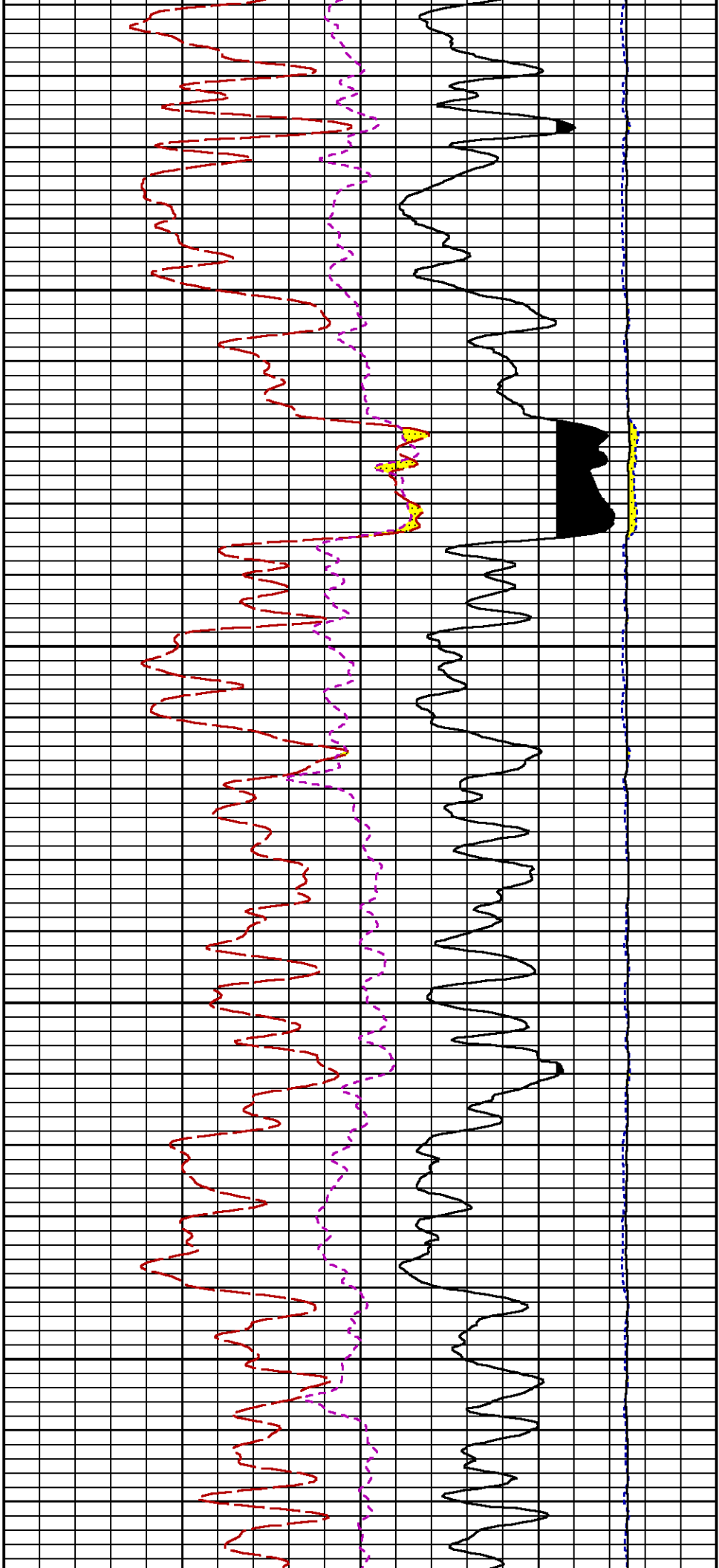


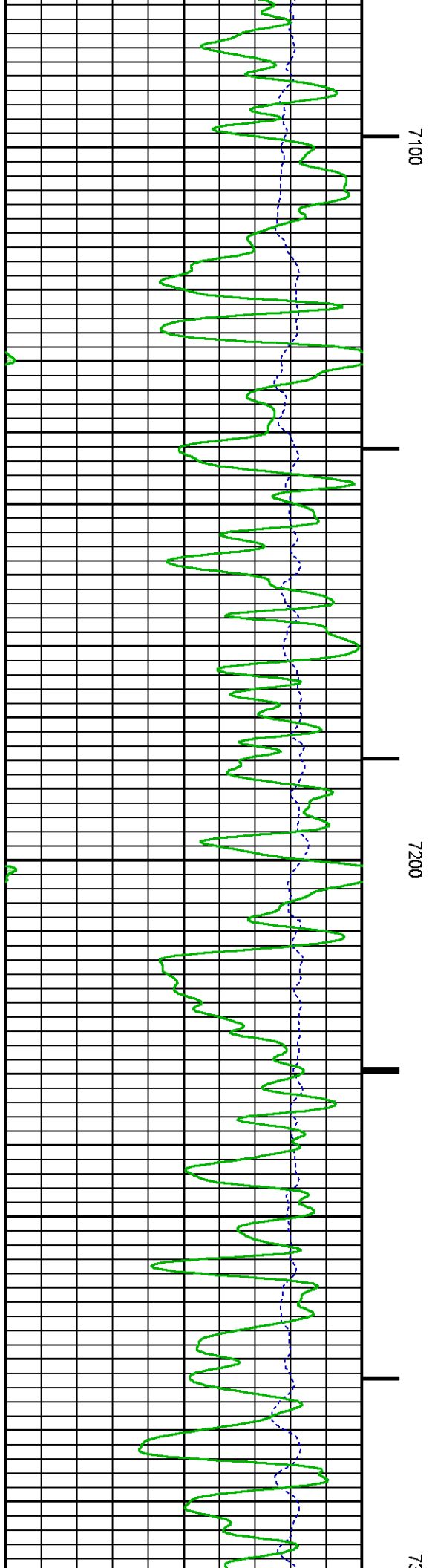
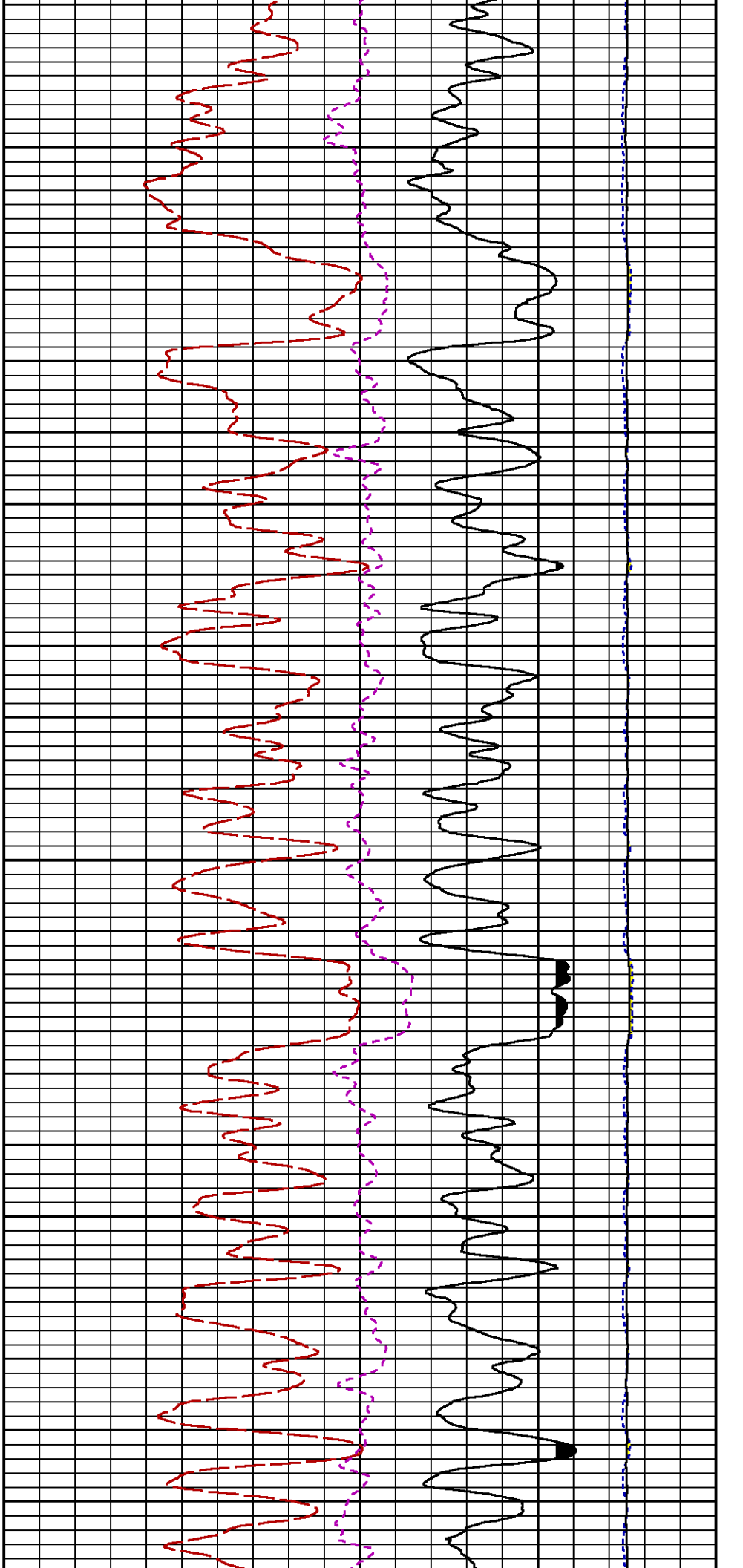


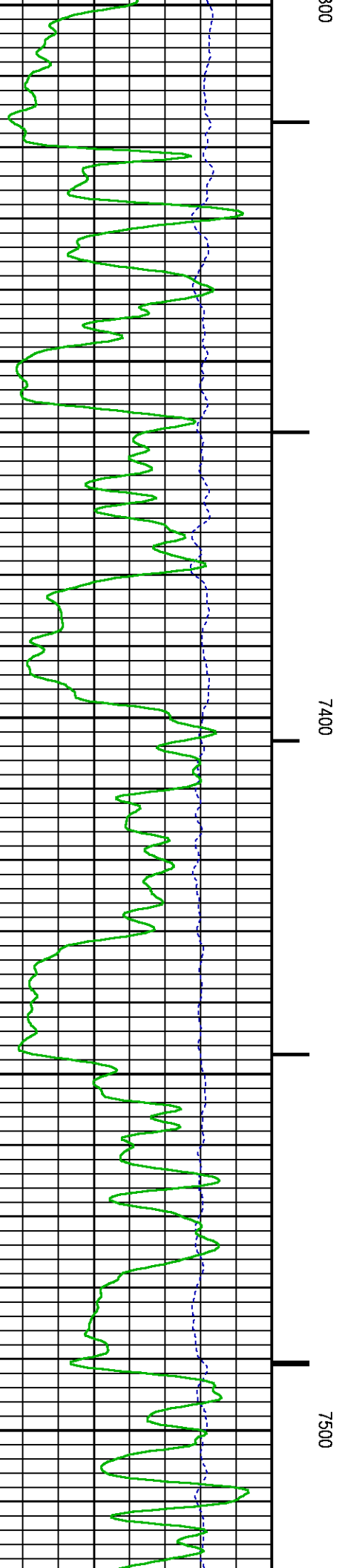
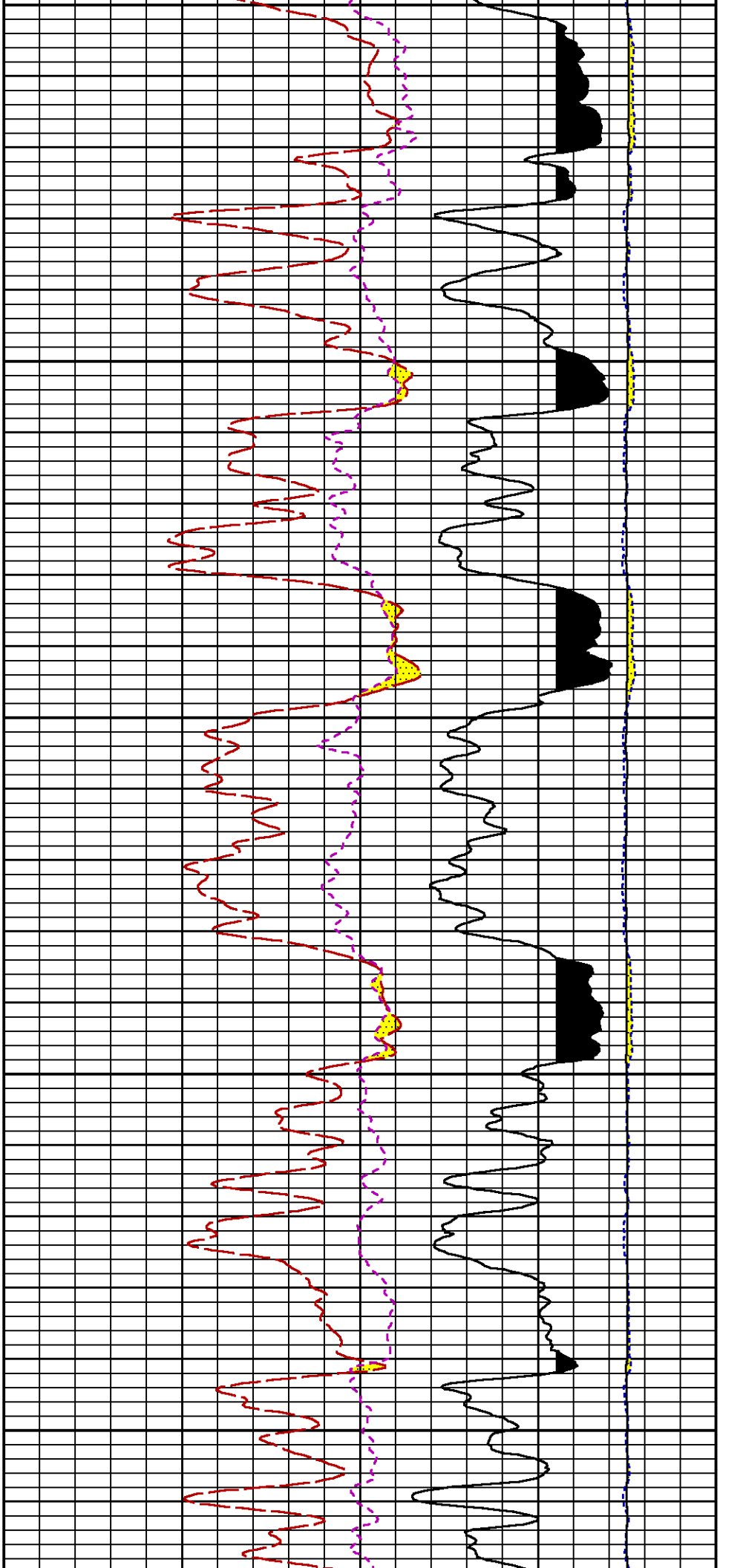


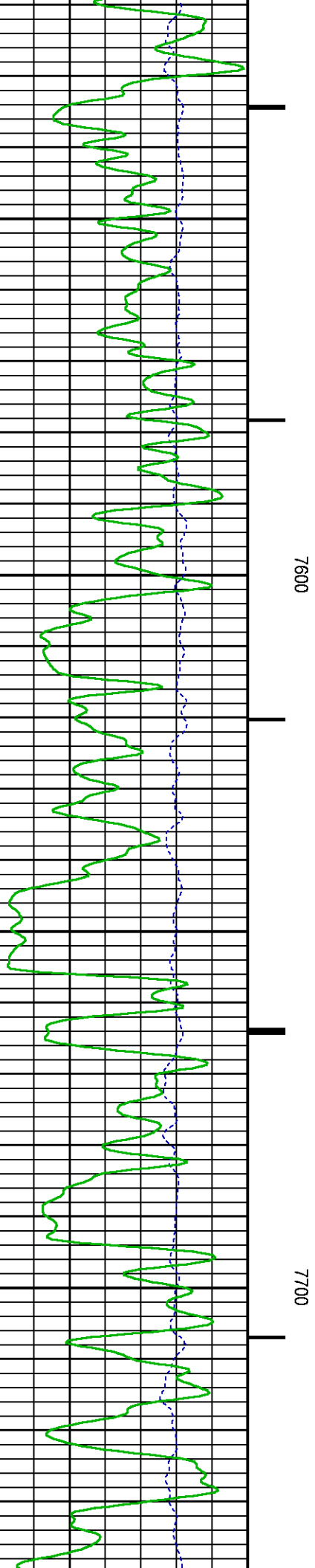
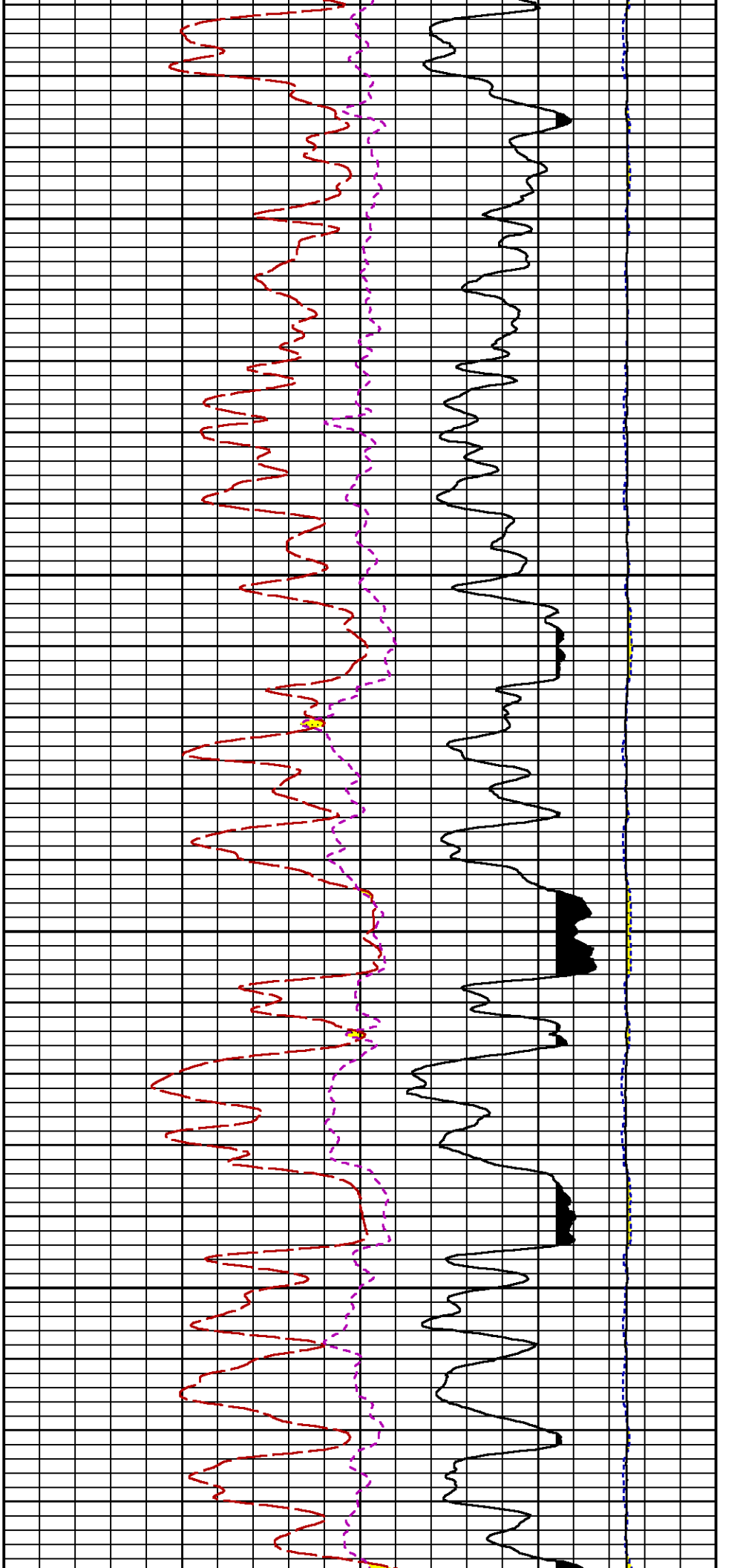


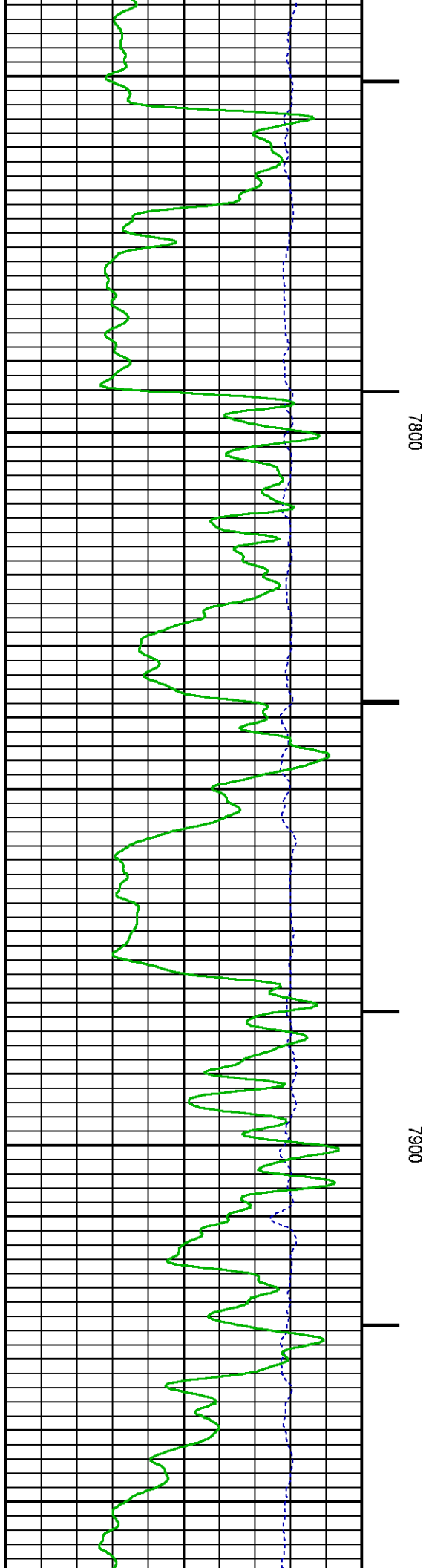
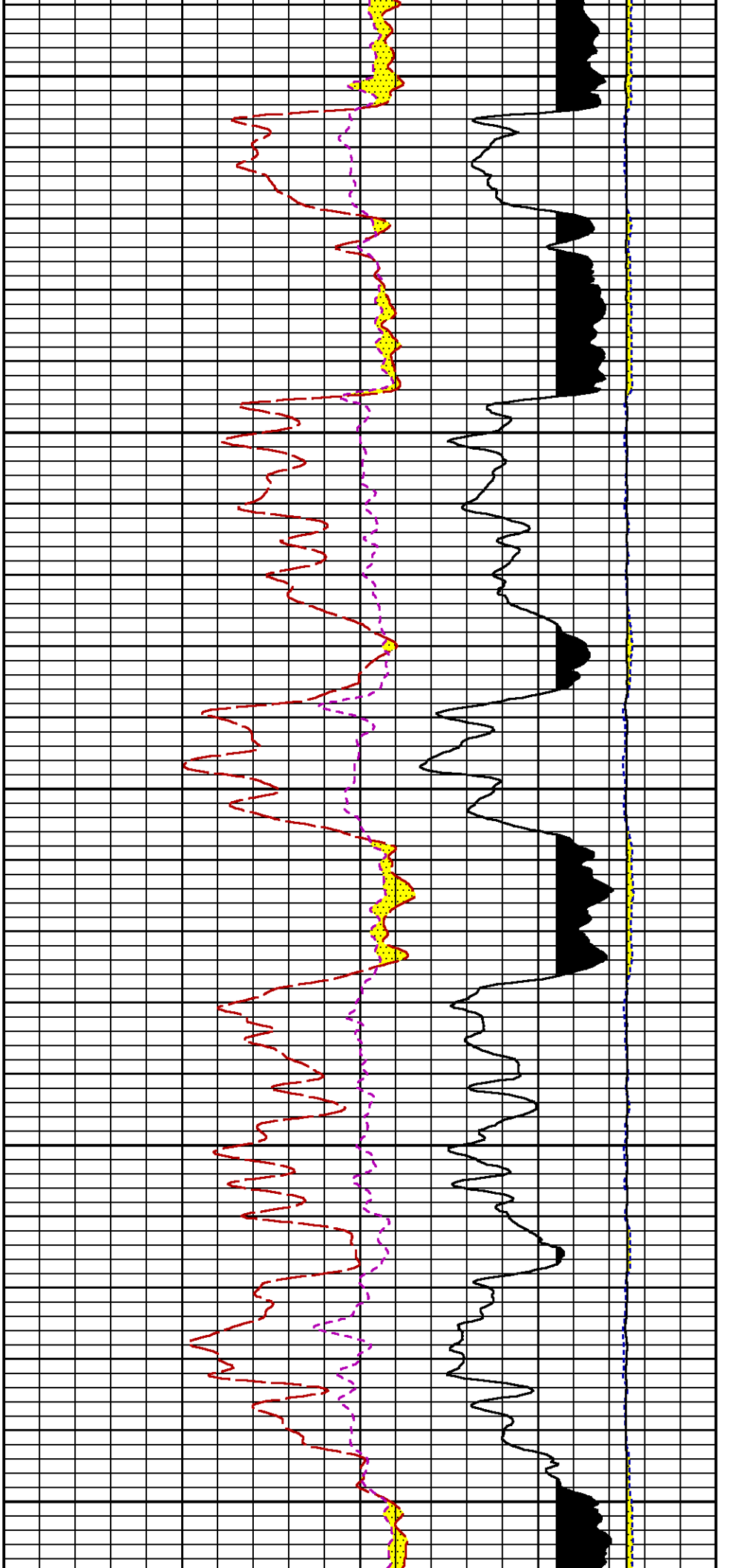


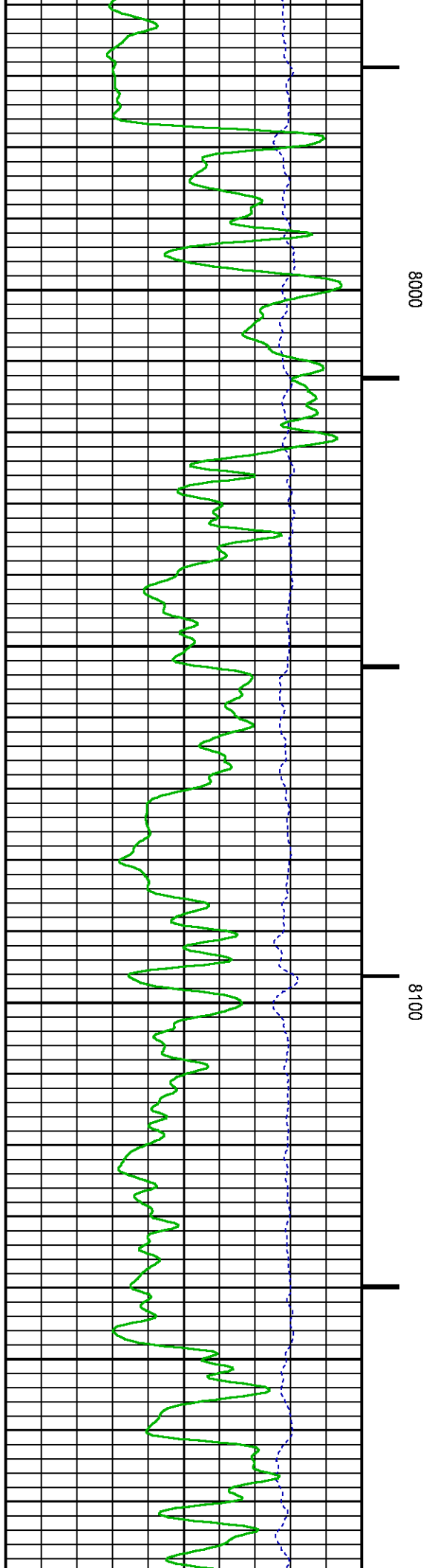
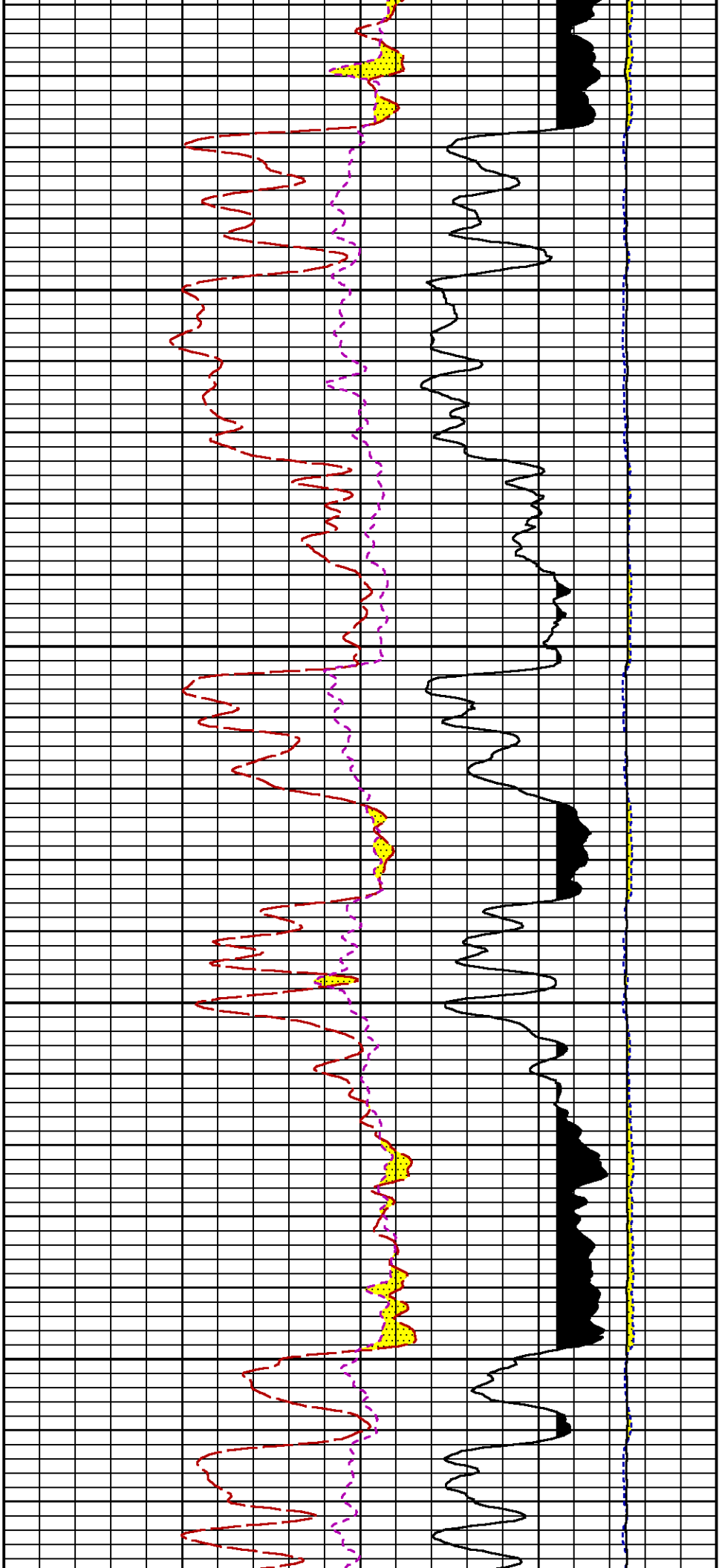


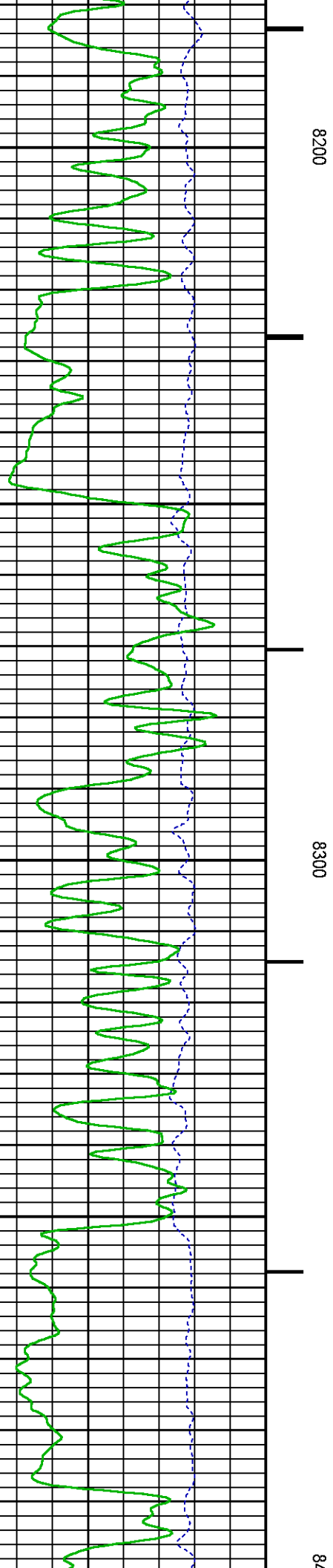
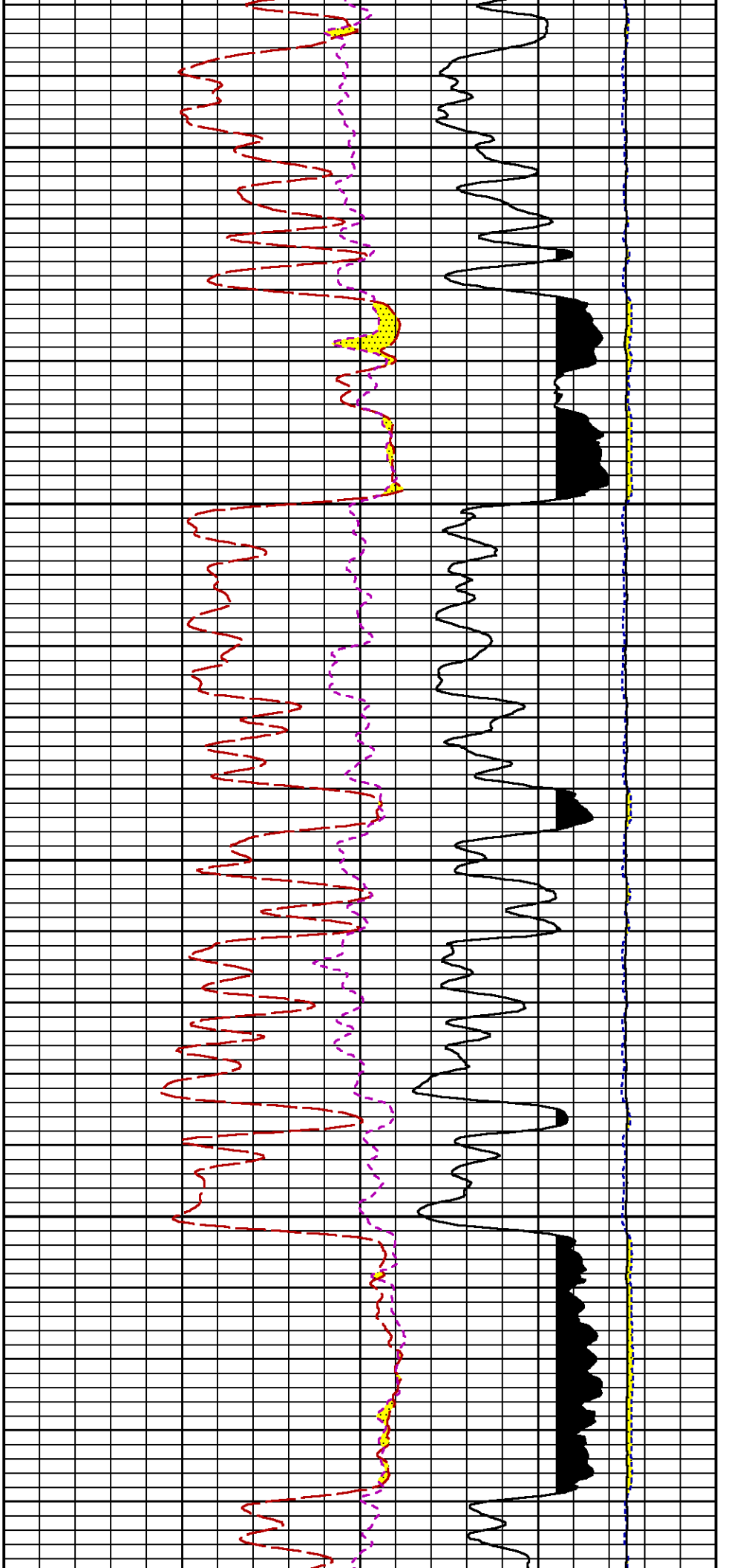








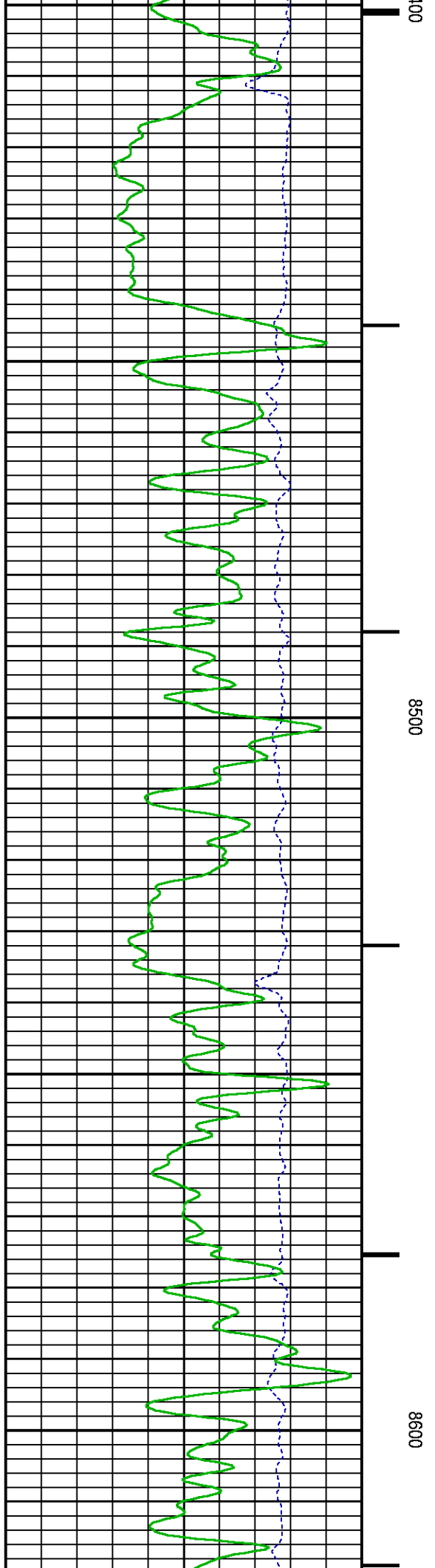
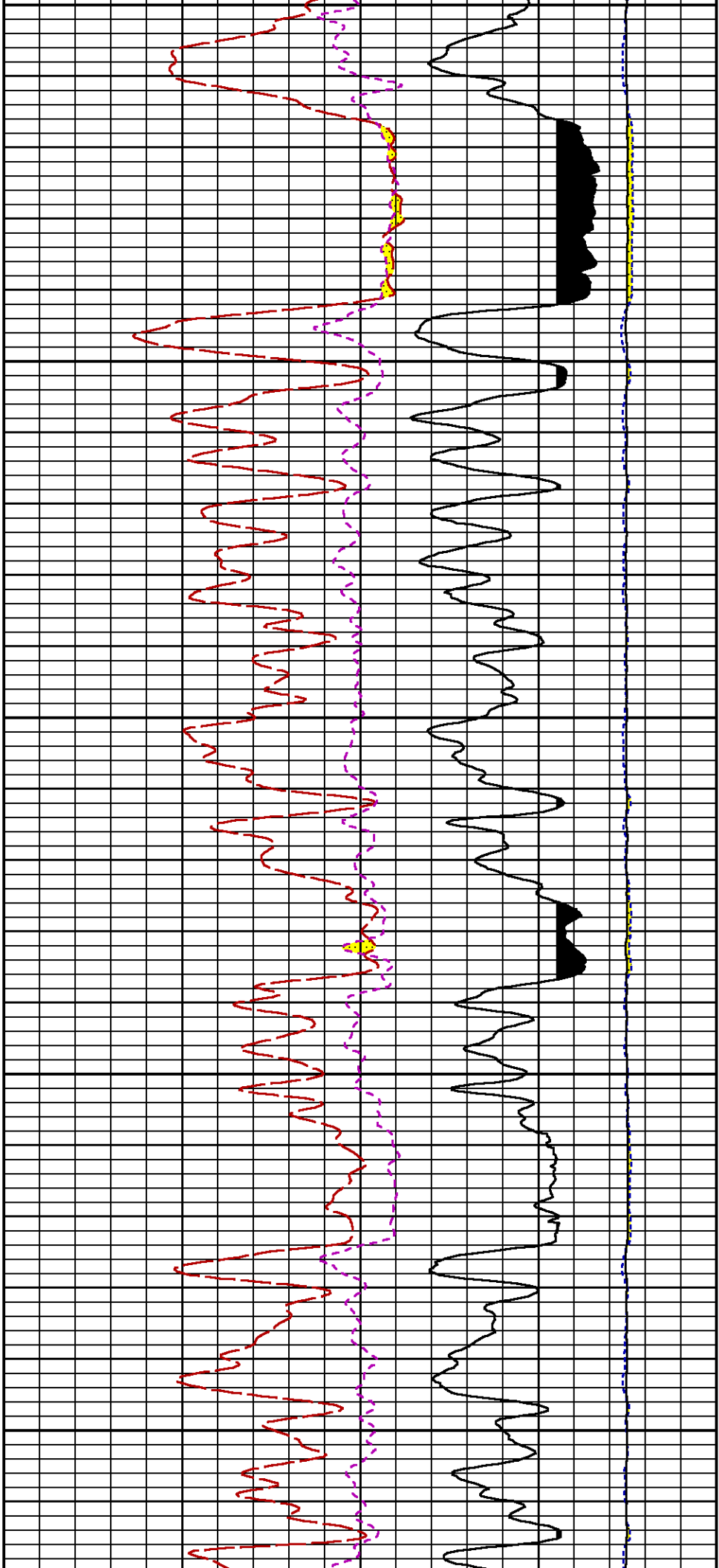


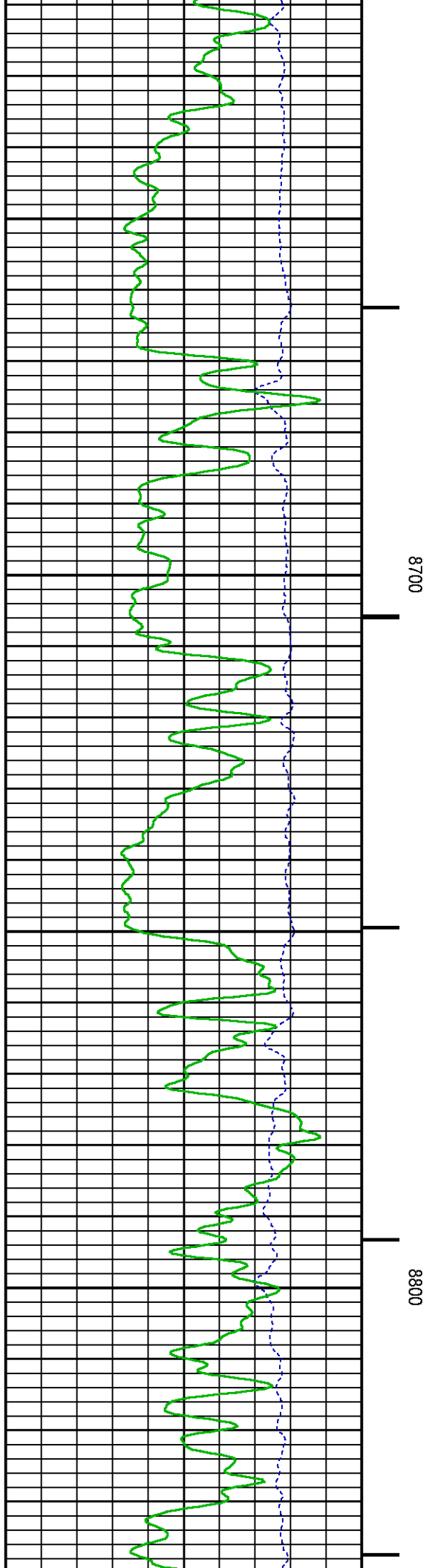
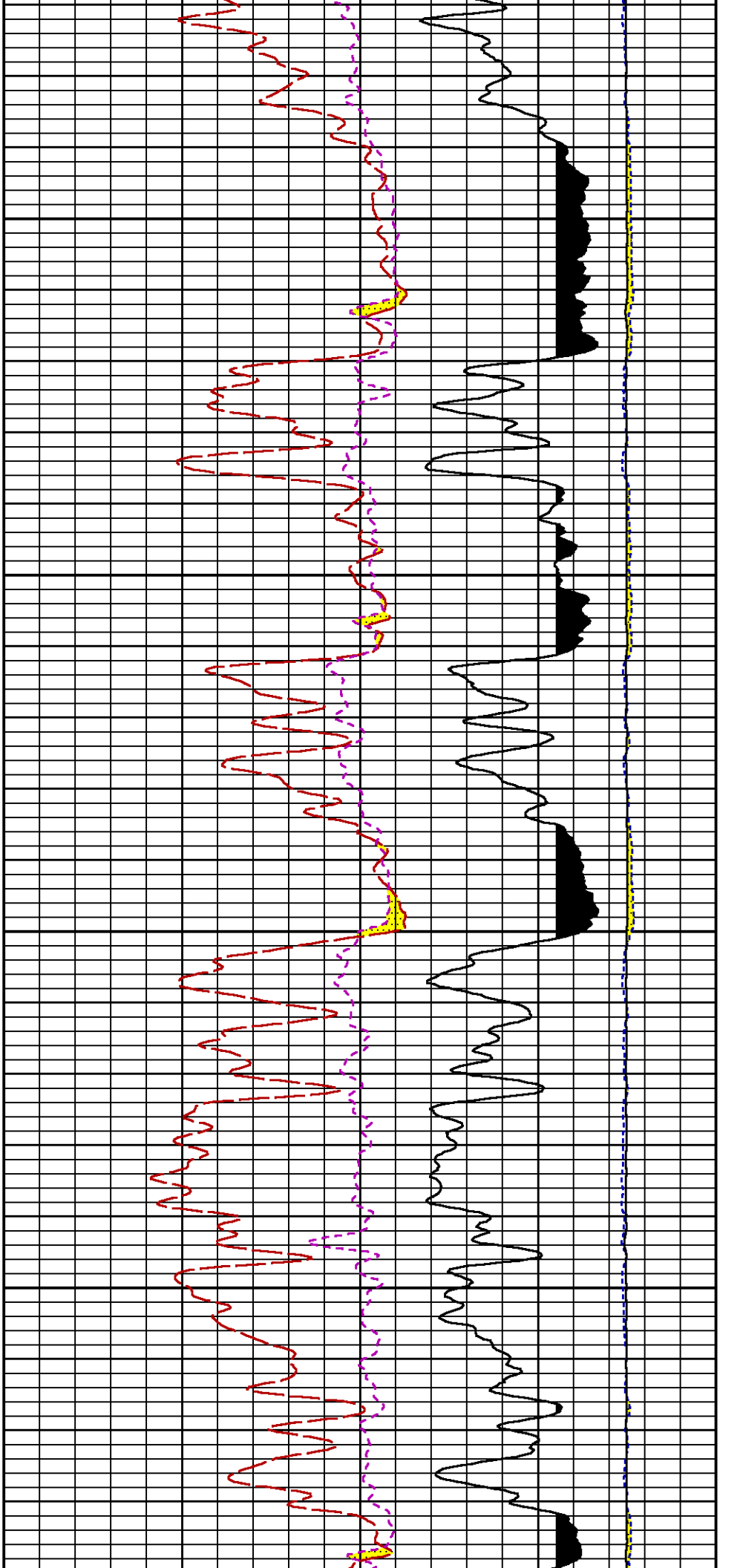


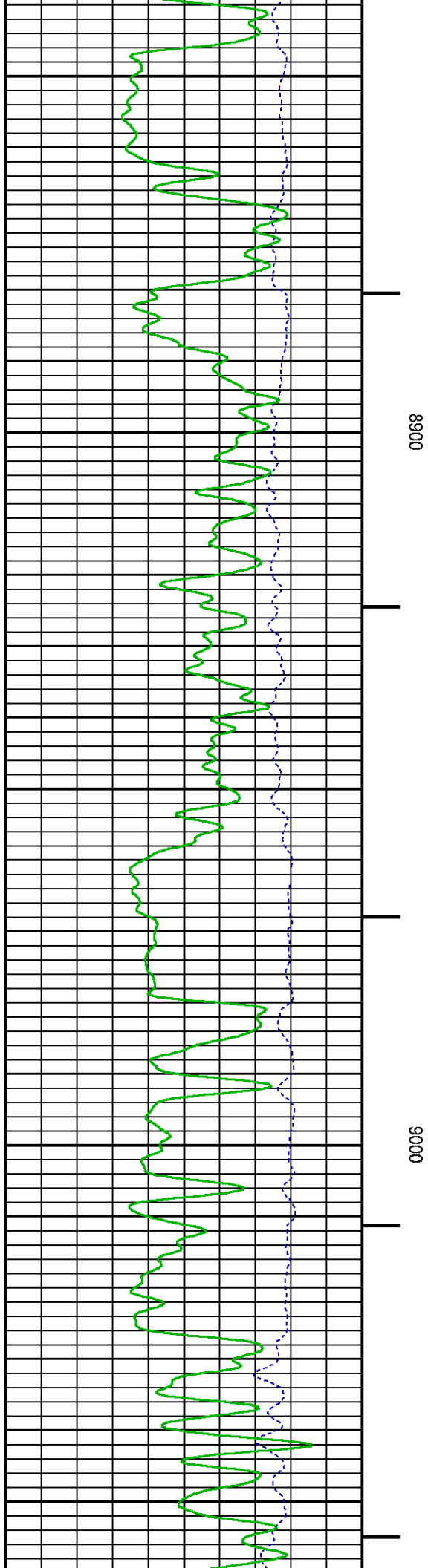
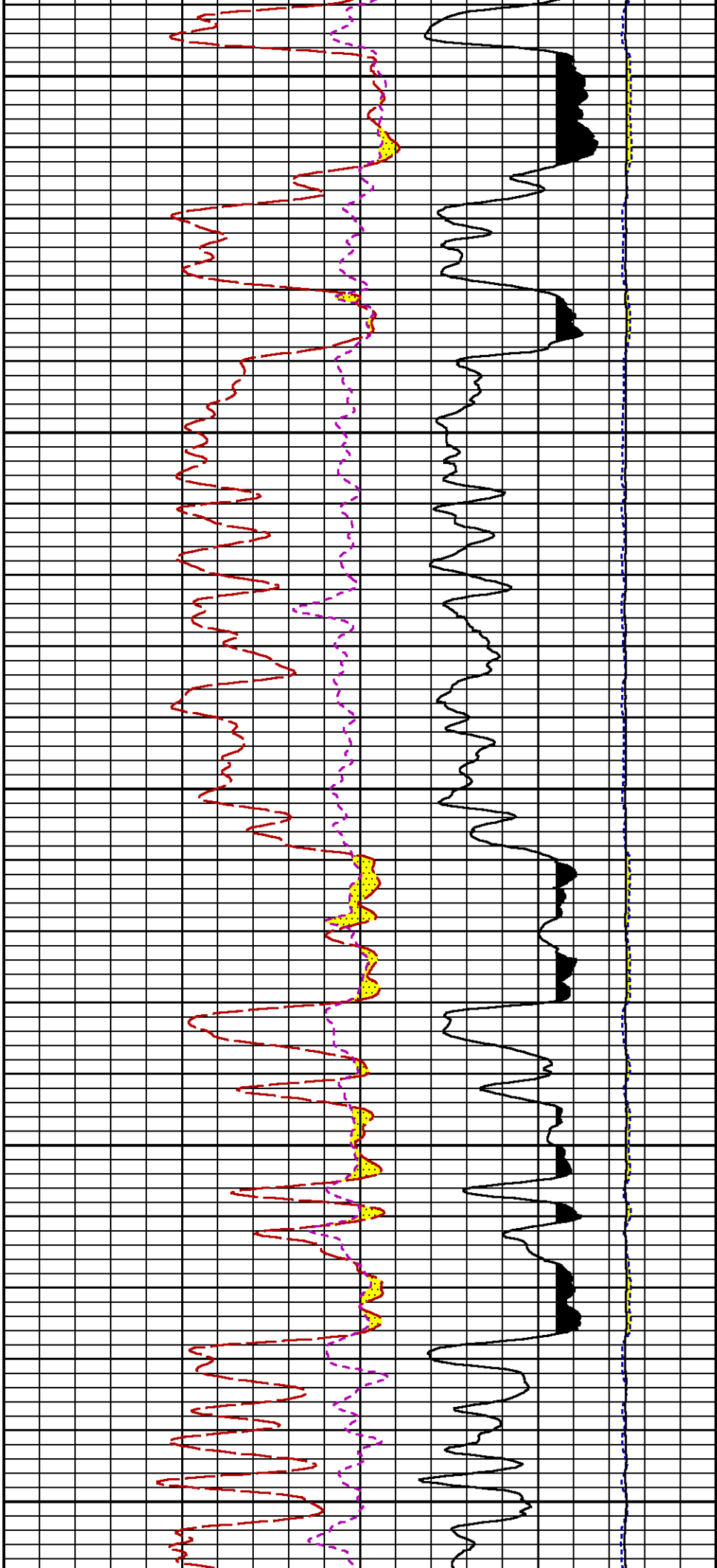
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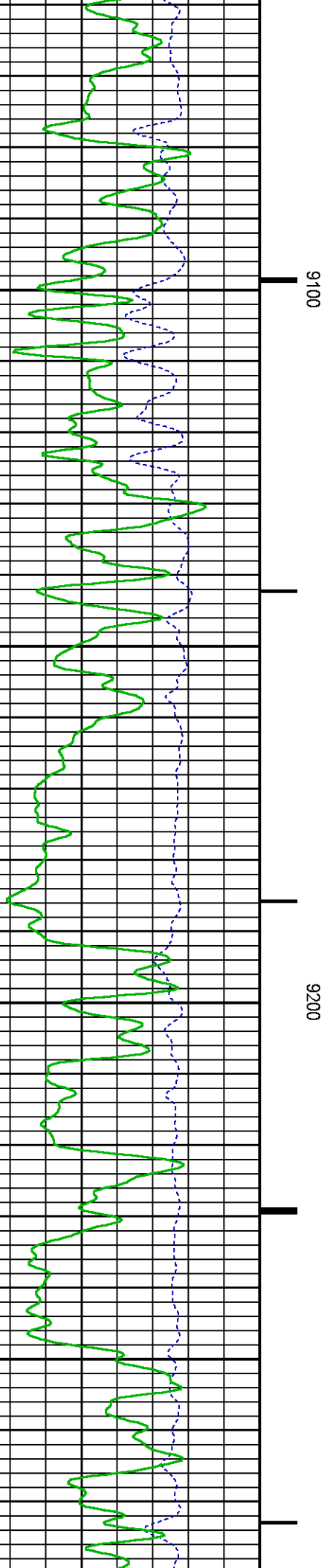
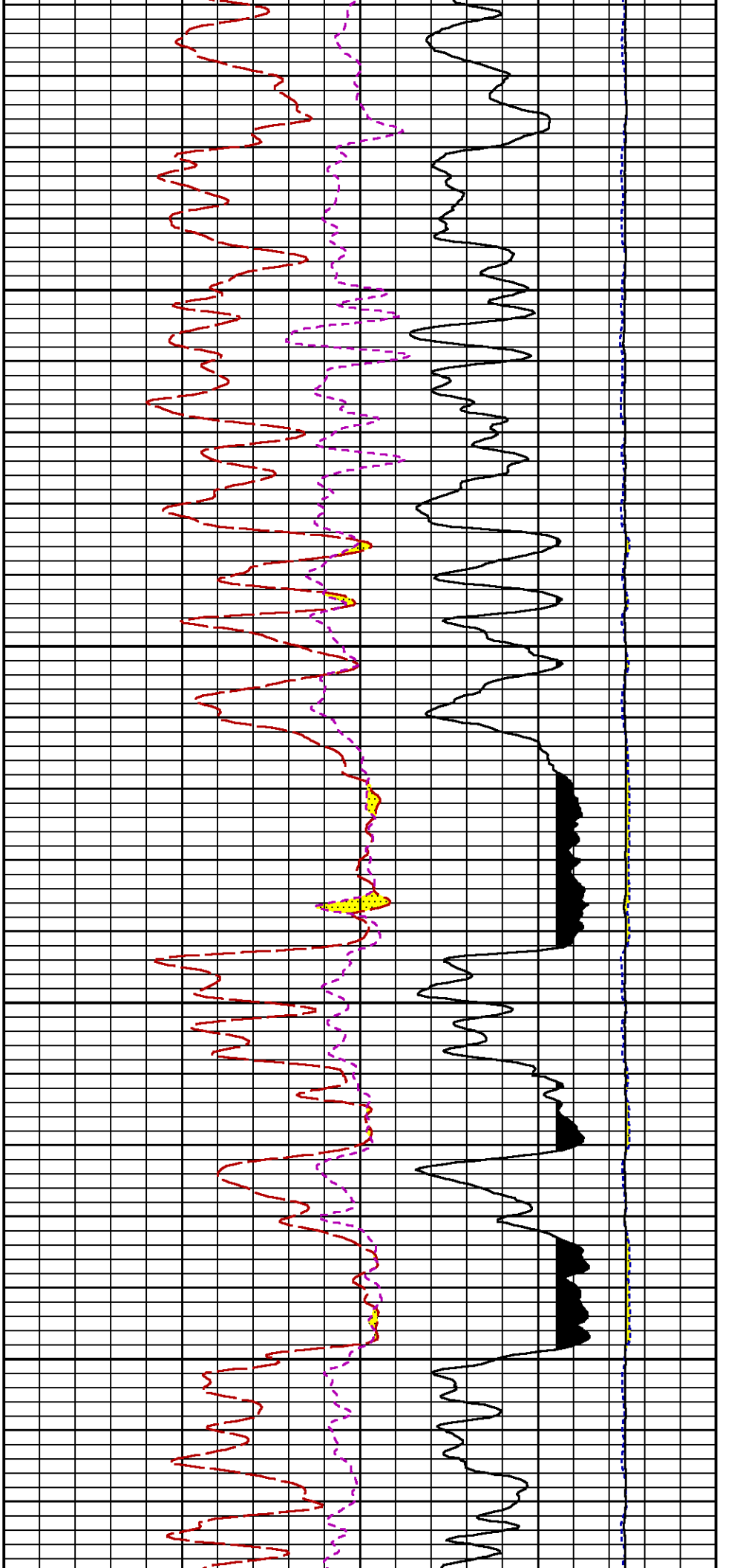
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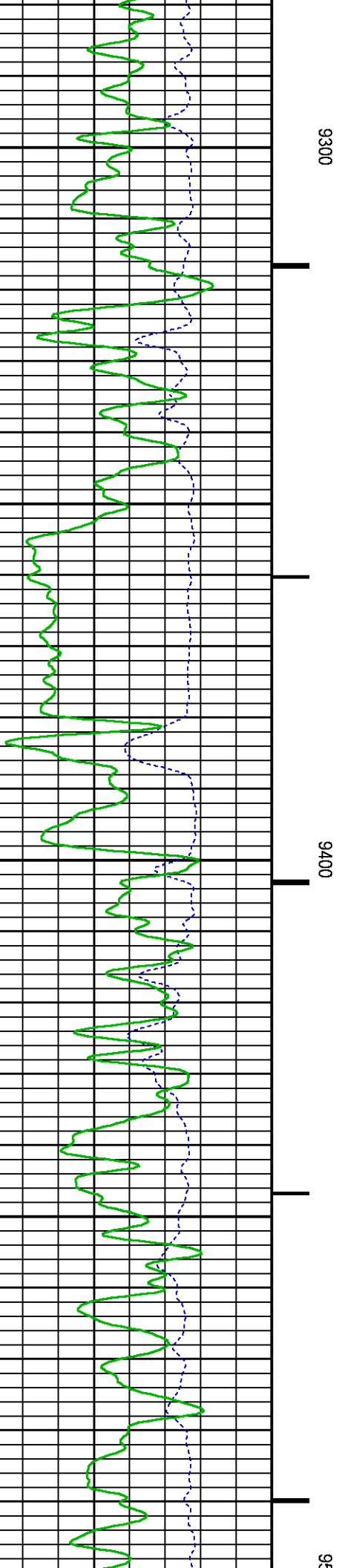
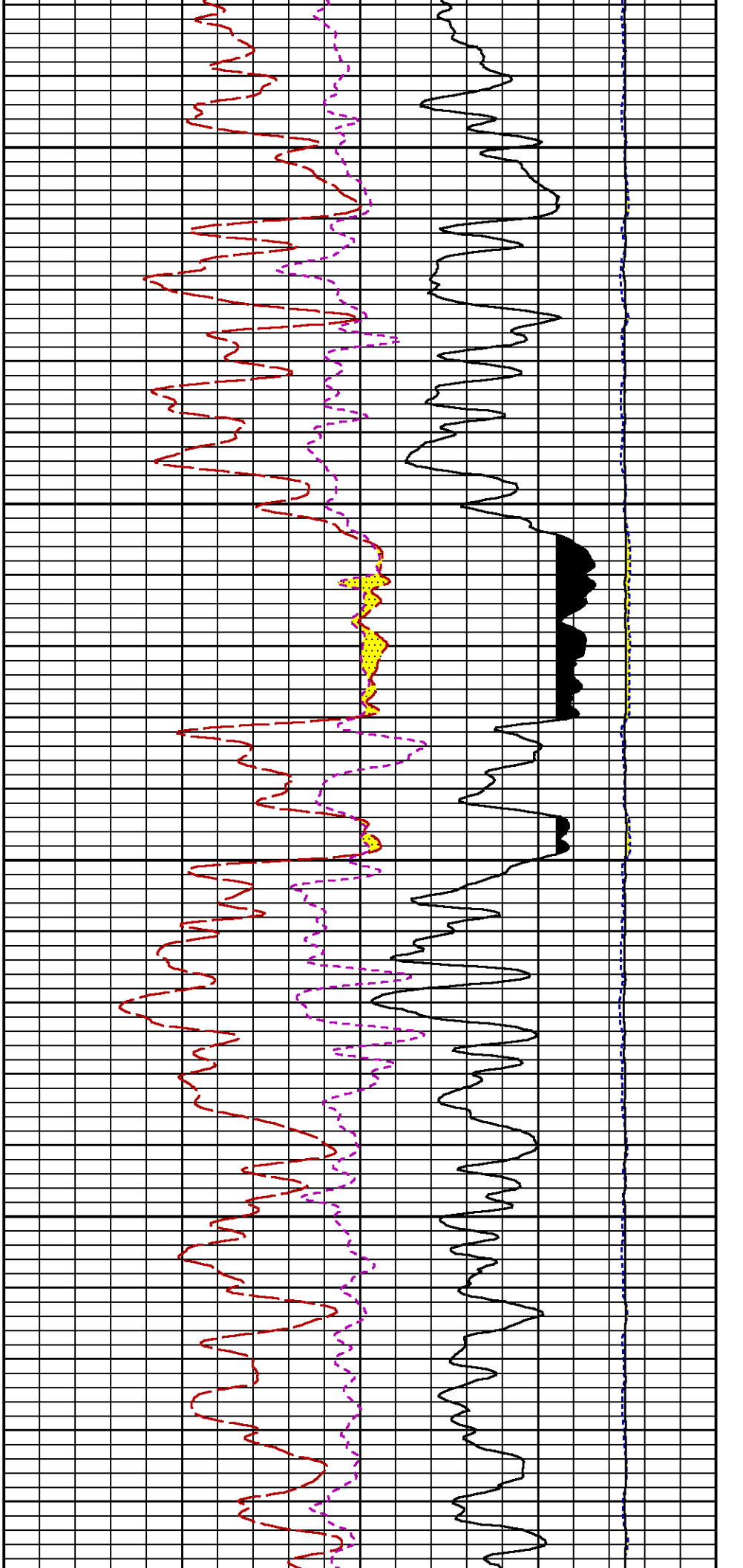
84

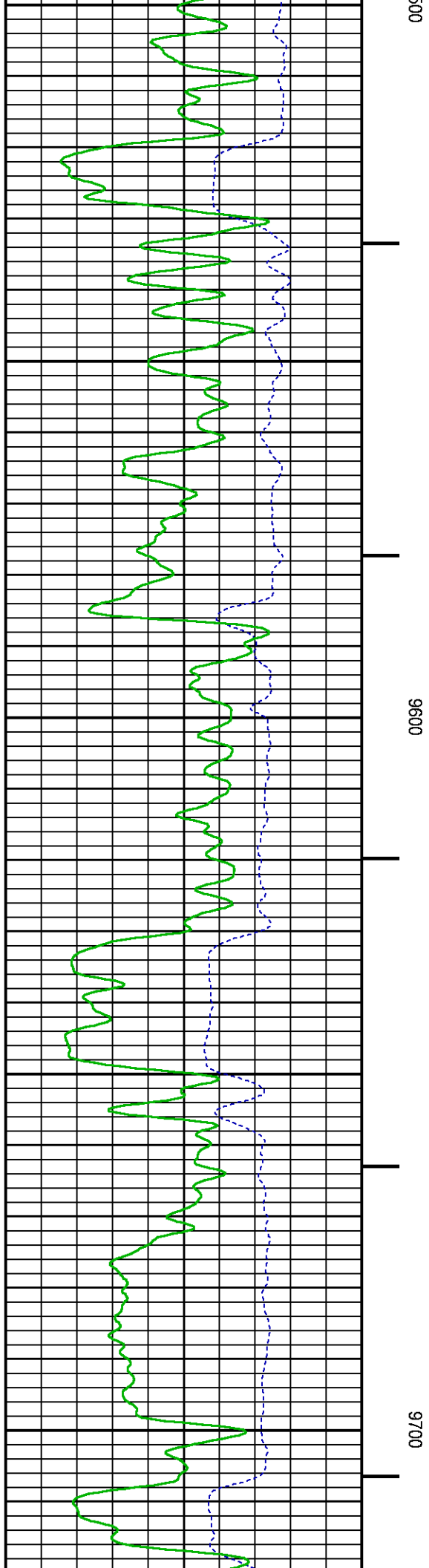
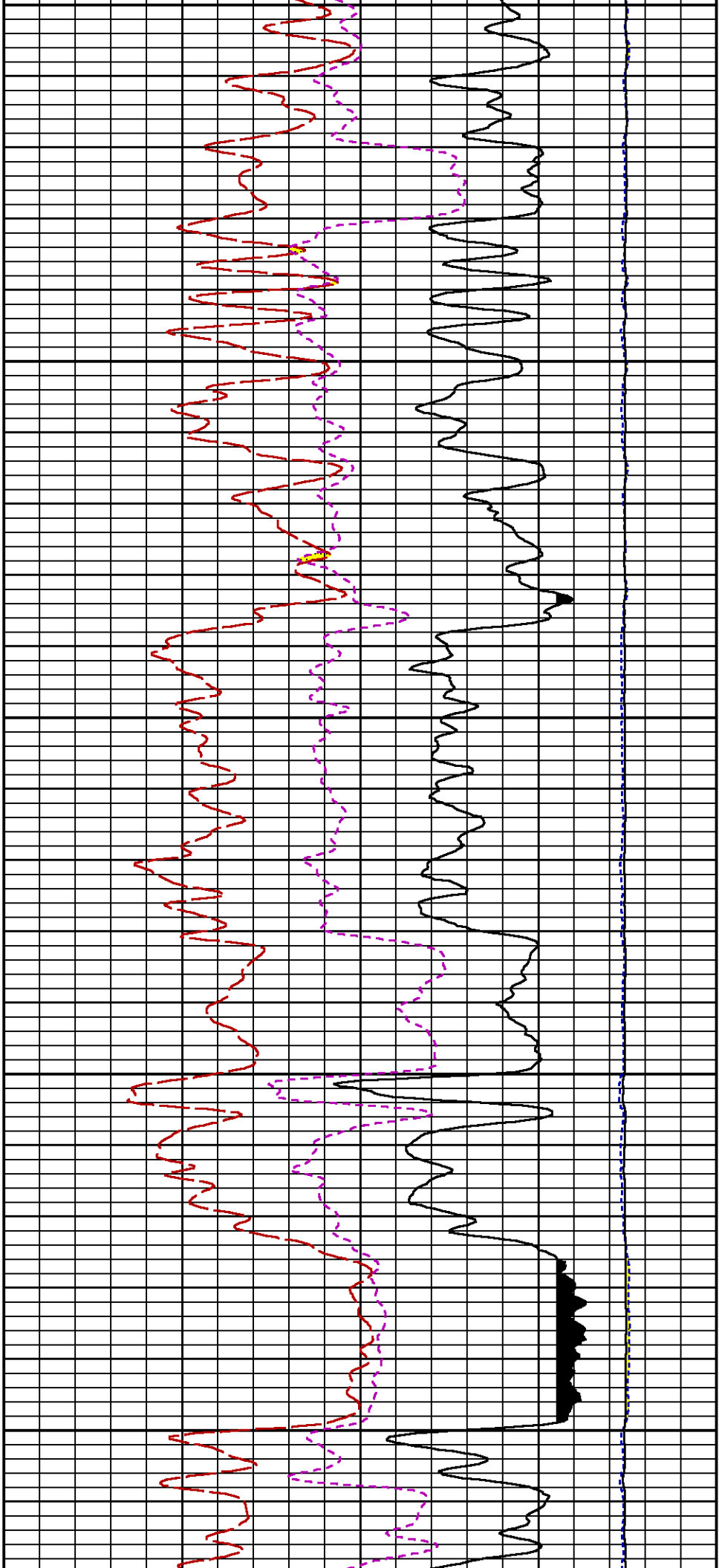












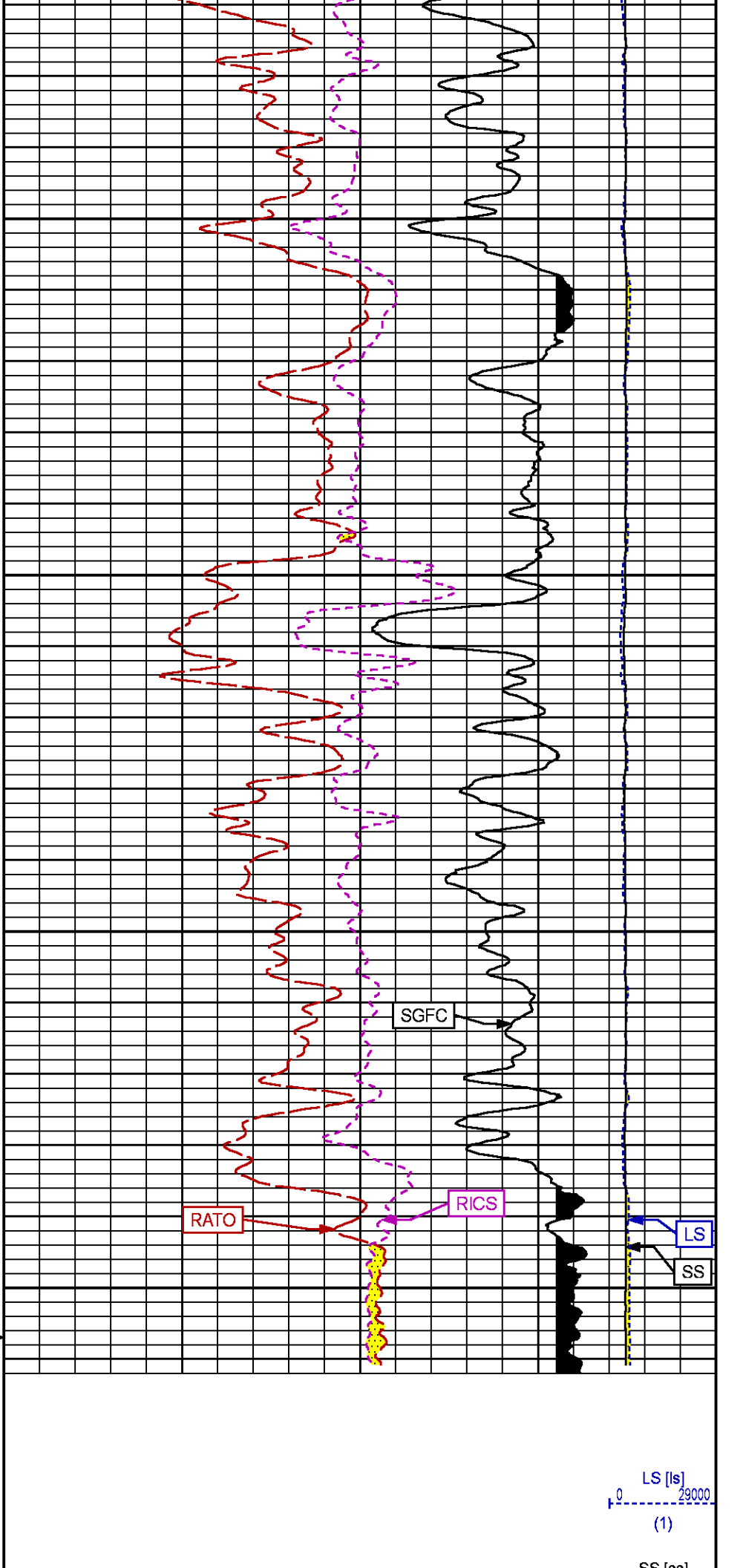
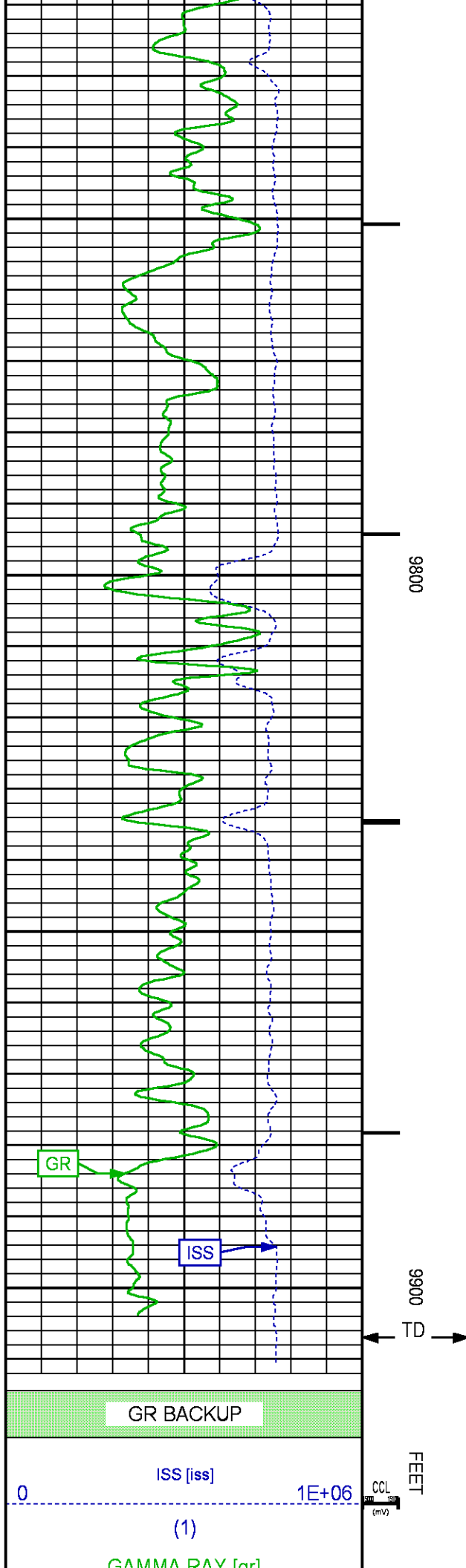


Diagram illustrating the data flow from the gAPI to the SGFC:

- The gAPI (green box) outputs data to the RATE [rato] (red dashed line), RICS [rics] (purple dashed line), and SGFC [sgfc] (black solid line).
- The RATE [rato] output is 17, the RICS [rics] output is 39, and the SGFC [sgfc] output is 60.
- The RATE [rato] output is also labeled (1).
- The RICS [rics] output is also labeled (1).
- The SGFC [sgfc] output is also labeled (1).

REPEAT SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 6

Plotted: Wed Apr 22 17:56:21 2015

PARAMETER AND FILTER SUMMARY REPORT					
FILE:	/dat1a/CH096028/n353h01.prm				
LOGGING MODE:	DEPTH	DIRECTION:	UP		
TOP DEPTH:	9097.250 ft	BOTTOM DEPTH:	9429.000 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	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Apr 22 13:06:58 2015	CASING COLLAR LOCATOR
F1:GR	Apr 22 13:06:58 2015	GAMMA RAY
F1:ISS	Apr 22 13:06:58 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 22 13:06:58 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 22 13:06:58 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 22 13:06:58 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 22 13:06:58 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 22 13:06:58 2015	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 : HL6670:/dat1a/CH096028/344RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 9100 - 9400 Feet

Data File 1 : F1 : HL6670:/dat1a/CH096028/344RPM_REPEAT.xtf
Created On : Apr 22 13:06:58 2015
Company : WPX ENERGY
Well : YUBERG RU 344-7
Field : RULISON
File Interval : 9069.5 - 9427 Feet
OCT : n353h

GR BACKUP

ISS [iss]

0 1E+06

(1)

GAMMA RAY [gr]

0 150

(gAPI)

FEET

CCL
(mV)

9100

9200

LS [ls]

0 29000

(1)

SS [ss]

0 290000

(1)

RATO [rato]

17

0

(1)

RICS [rics]

39

9

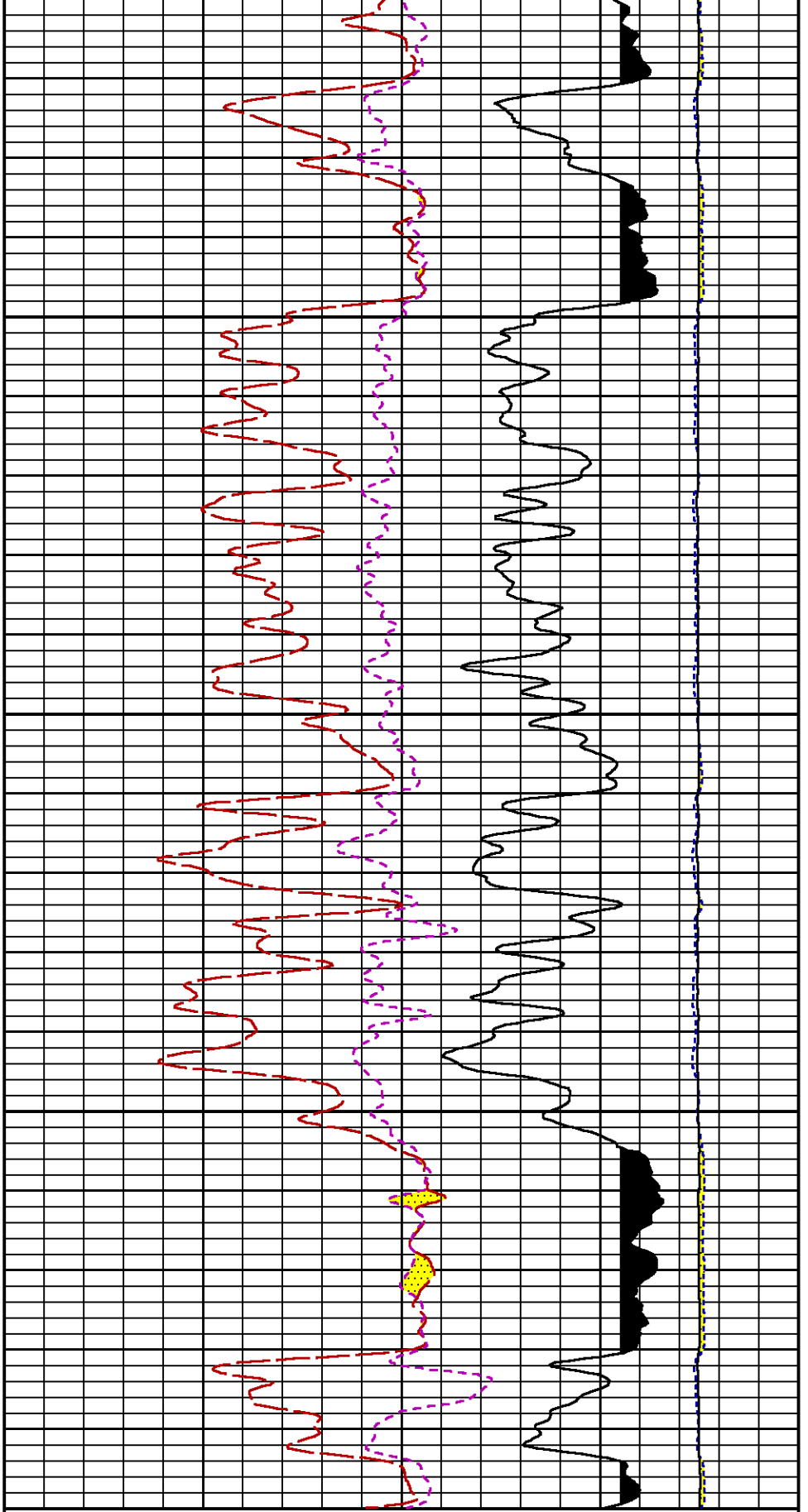
(1)

SGFC [sgfc]

60

0

(1)



9300

9400

FEET

CCL
(mV)

GR BACKUP

ISS [iss]

1E+06

(1)

GAMMA RAY [gr]

150

LS [ls]

29000

(1)

SS [ss]

29000

(gAPI)

(1)

RATO [rato]

17

0

(1)

RICS [rics]

39

9

(1)

SGFC [sgfc]

60

0

(1)

CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH096028/n353h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Sat Apr 11 17:37:20 2015

UNIT #: 3880TA HL6670

CALB JIG #: 4702NK DA-041

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	107.51	431.53	324.0	0.571	61.38	246.38	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Sat Apr 11 17:39:23 2015

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK DA-041

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	105.78	435.11	0.571	60.39	248.43	188.03
						175.00 195.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10414345

DATE/TIME PERFORMED: Mon Mar 30 14:44:41 2015

UNIT: 3880TA HL6670

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10160601

HOURS: 8281AA 18

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	813444	125	2267	2258	2255	104	7	0.9806
Interpolated	1300000	148	2248	2253	2251			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	813444	6376	1024	140	25.99	0.14	24.25	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	813444	172913	26730	91420	32541	8488	55360	13607
Fit Quality %		0.896	0.910	0.837	0.834	0.826	0.760	0.879

	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
			ISS/ILS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS
Raw Data	813444	1.43	4.70	30.44	14.69	10.77	3.84	4.07
		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 %		0.046	0.209	0.227	0.168	0.126	0.123	0.101
Reduced	1369035	1.43	4.73	30.63	14.77	10.78	3.84	4.07
		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

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 11774568

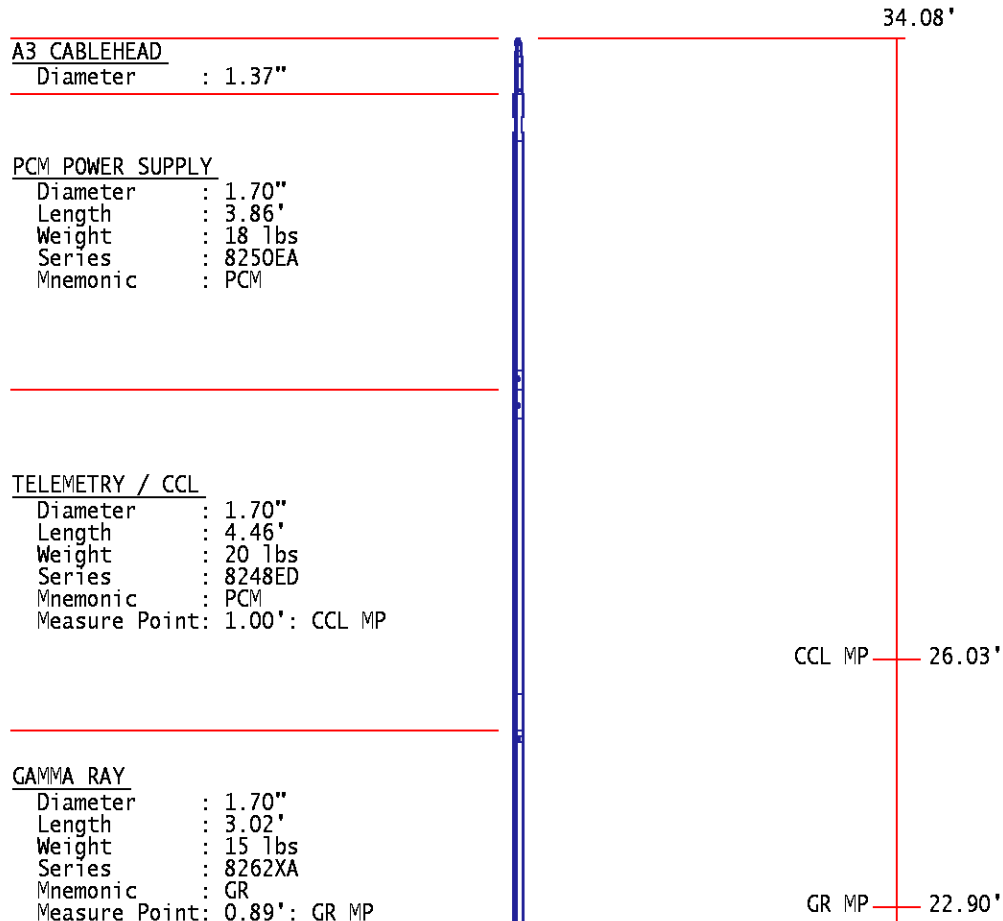
DATE/TIME PERFORMED: Wed May 14 12:39:45 2014

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-9.274653E+00	1.055639E-01	2.143764E-06	-2.782846E-10

INSTRUMENT CONFIGURATION

Source File: /dat1a/CH096028/344RPM-tdg



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 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

0.00'

TOTAL LENGTH: 34.08'
TOTAL WEIGHT: 144 lbs
MAX DIAMETER: 0'1.70"



COMPANY
WELL
FIELD
COUNTY

WPX ENERGY
YOUBERG RU 344-7
RULISON
GARFIELD

STATE CO

LOCATION:

SHL: 1141' FSL & 1183' FEL

ELEVATIONS:

KB 7943 FT

FILE NO:

CH096028

API NO:

05045225230000

7 7S 93W

RU 44-7 PAD

NADORS 576



BHL: 664' FSL & 666' FEL

DF

NABORS 5/6

GL 7917 FT

SEC 7 TWP 7S RGE 93W

DATE 22-Apr-2015