



FILE NO:

COMPANY

Laramie

WELL

Bruton 30-04E

API NO:

FIELD

Vega

05077104620000

COUNTY

MESA

STATE COLORADO

Version

LOCATION:

SHL: LAT:39.2526639N;LONG:107.8142667
BHL: LAT:39.2528550N;LONG:107.8069120

OTHER SERVICES

SEC

30

TWP

T9S

RGE

93W

RAL

PERMANENT DATUM

GL

ELEVATION

7512 FT

LOG MEASURED FROM

KB

30 FT

ABOVE P.D.

DRILL. MEAS. FROM

KB

ELEVATIONS:

KB 7542 FT

DF 7541 FT

GL 7512 FT

DATE

5-NOV-2017

RUN

TRIP

1

2

SERVICE ORDER

129606

DEPTH DRILLER

8132 FT

DEPTH LOGGER

8026 FT

BOTTOM LOGGED INTERVAL

8026 FT

TOP LOGGED INTERVAL

2490 FT

TIME STARTED

8:00

TIME FINISHED

14:00

OPERATOR RIG TIME

6 HRS

TYPE OF FLUID IN HOLE

FRESH WATER

FLUID DENSITY

NA

FLUID SALINITY

NA

FLUID LEVEL

56 FT

LOGGED CEMENT TOP

964 FT

WELLHEAD PRESSURE

0 PSI

MAXIMUM HOLE DEVIATION

NA

NOMINAL LOGGING SPEED

15 FMIN

MAX. RECORDED TEMP.

234 DEGF

REFERENCE LOG

NA

REFERENCE LOG DATE

NA

EQUIP. NO.

HL6670

LOCATION

WOODWARD

RECORDED BY

C.COFFELT

WITNESSED BY

CHUCK MALLARY

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 2: *2 OPERATIONS IN WELLBORE*

OPERATION 2: RPM/GR/CCL RUN IN COMBINATION

LOGGED WITH 0 PSI ON WELLHEAD

SJ:7131'- 7152'

SJ: 6110'- 6132'

CREW: M.MENTZER,K.REED

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	2	TELEMETRY	8250 EA/ 8248 ED	12151903/12211009	FREE
1	2	GR	8262 XA	10317216	FREE
1	2	RPM ELEC	8281 EA	10309421	FREE
1	2	RPM	8283 PA/8281 FA	10414345/10401926	FREE

RPM PNC3D MAIN PASS G-SAND

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 1

Plotted: Sun Nov 05 14:36:58 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_30_04E1\p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2483.750 ft BOTTOM DEPTH: 3110.250 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	8.50	in	" "
	LARGEST CASING OD	7.00	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

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	-22.50	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.50	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation	: BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\
	LARAMIE_RPM_PNC3D+RPM_MN_04E_GS.fvpdf [5"/100' Scale]
Plot Interval	: 2464.5 - 3107 Feet
Data File 1	: F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\RPM_MN_04E_GS.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: Bruton 30-04E
Field	: vega
File Interval	: 2463.75 - 3112.5 Feet
OCT	: p353h

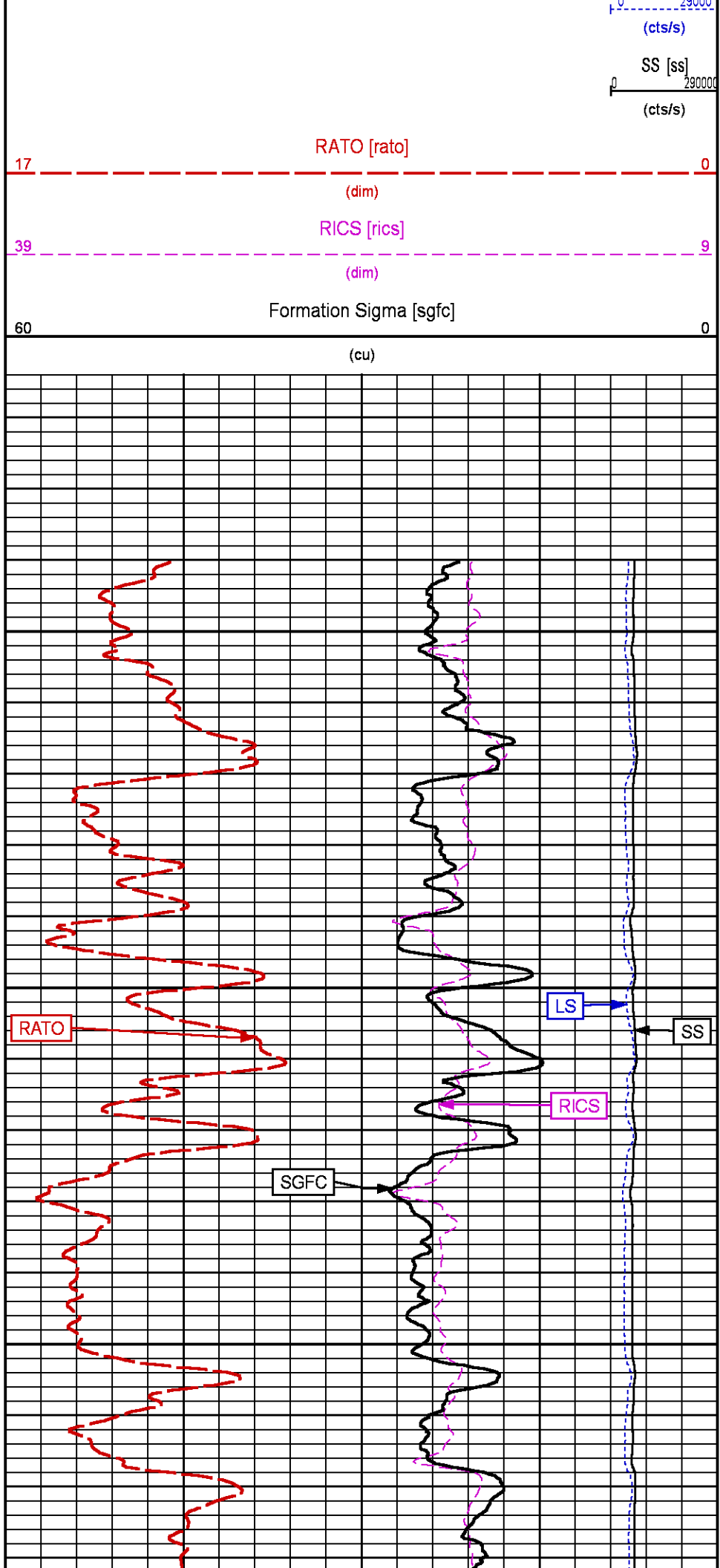
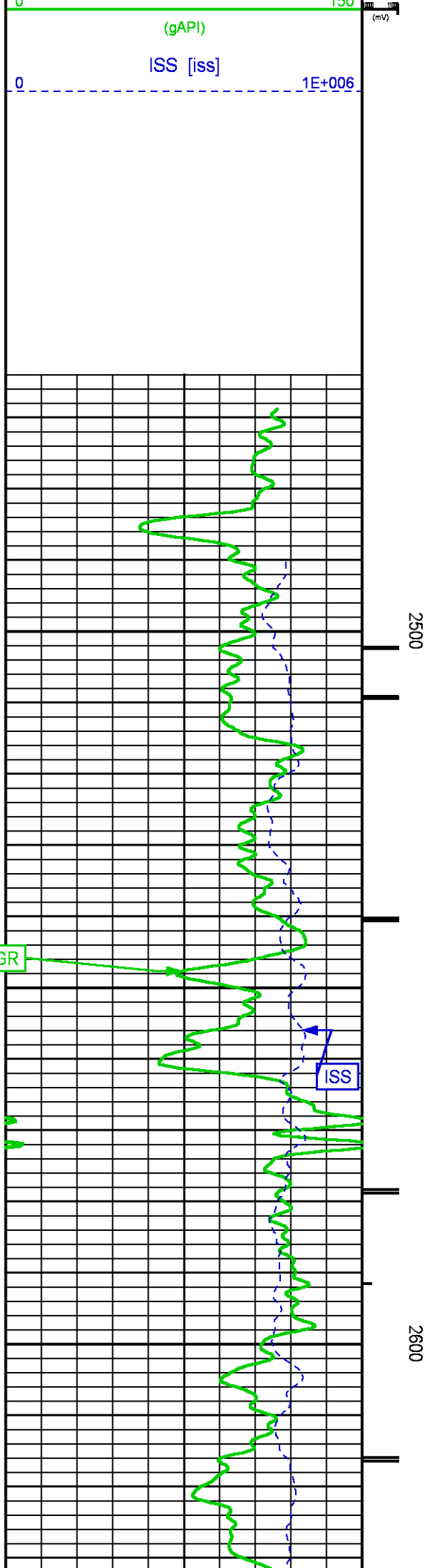
GR BACKUP

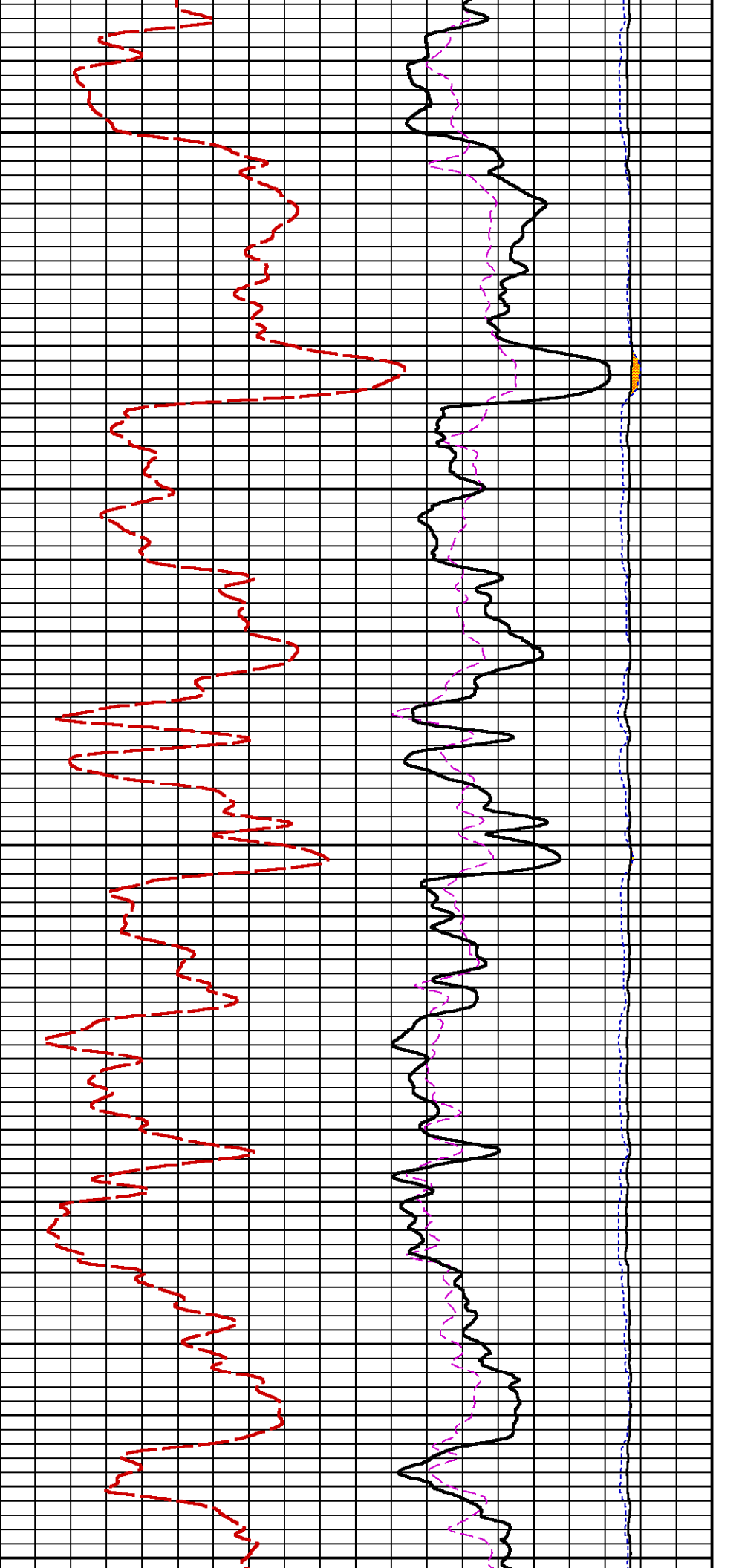
GAMMA RAY [gr]

FEET

CCL

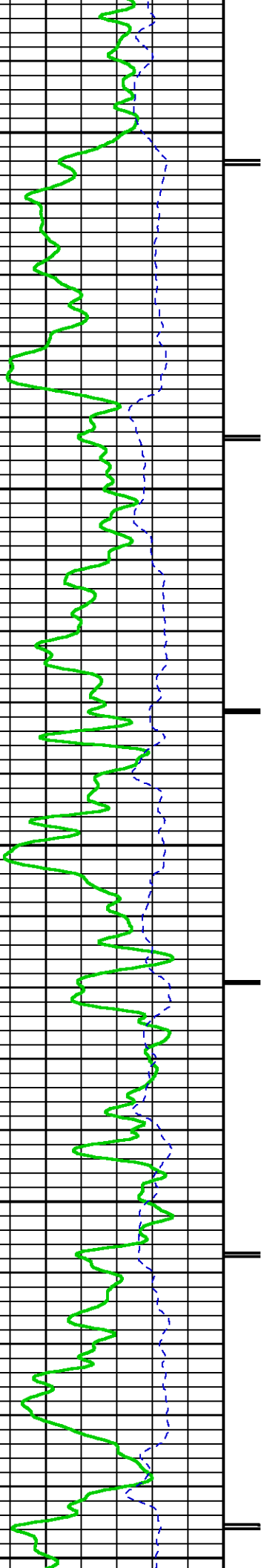
LS [ls]

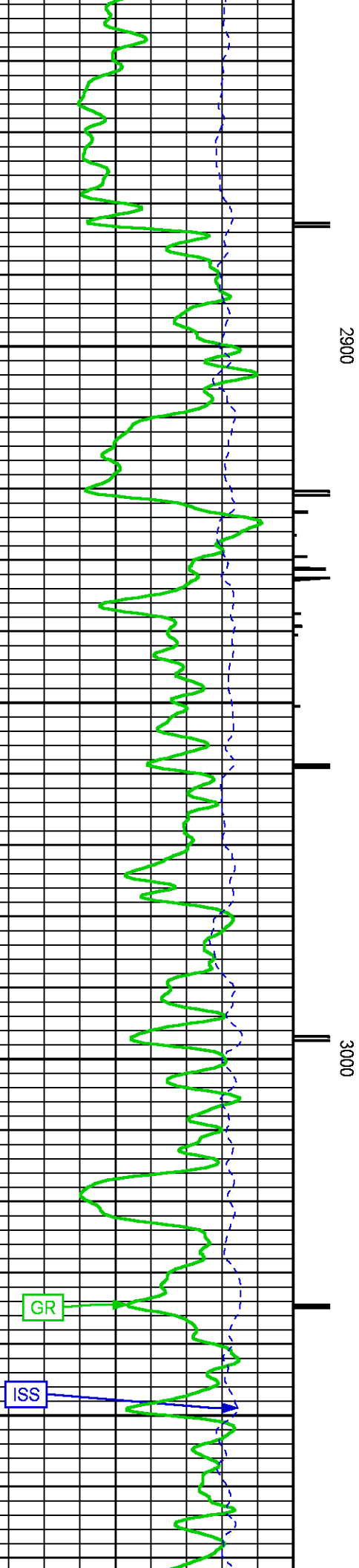
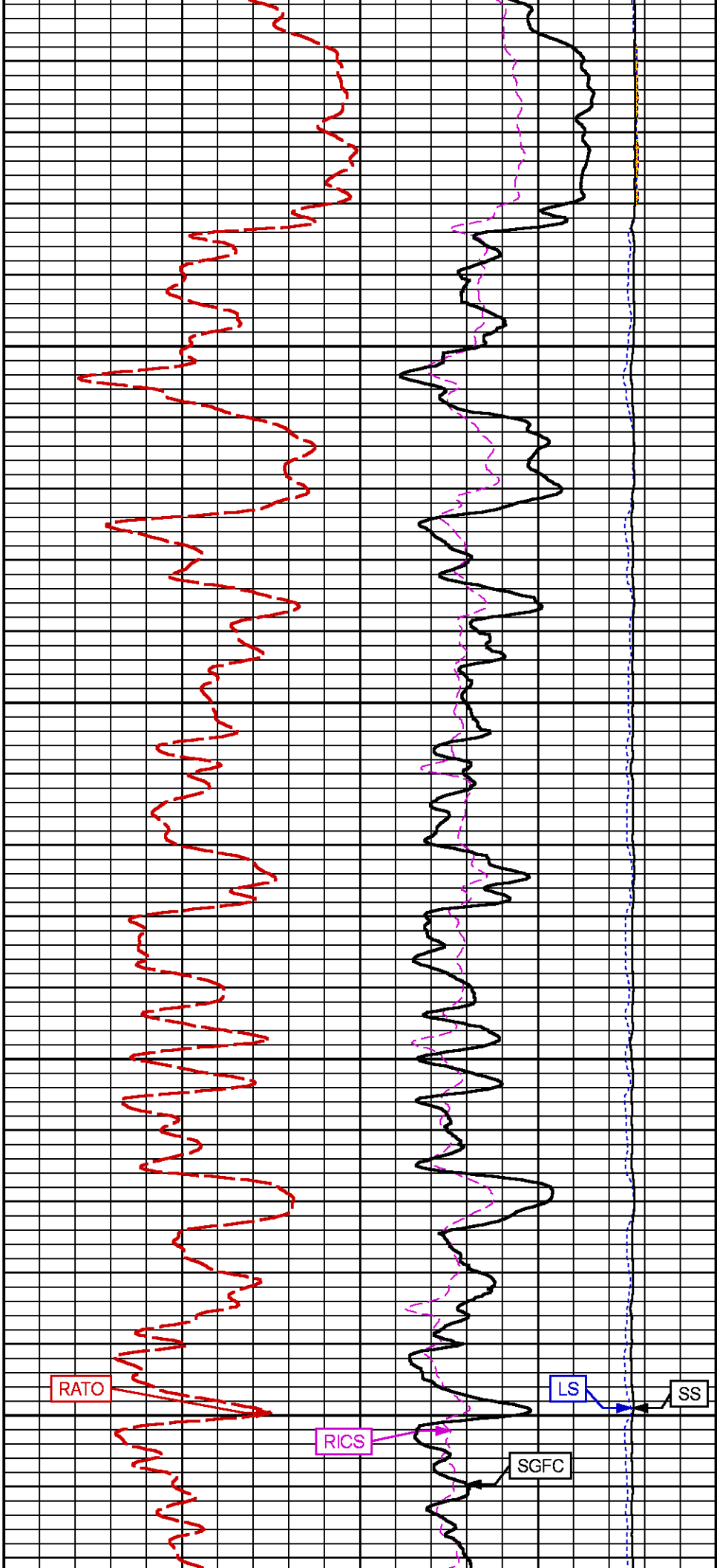


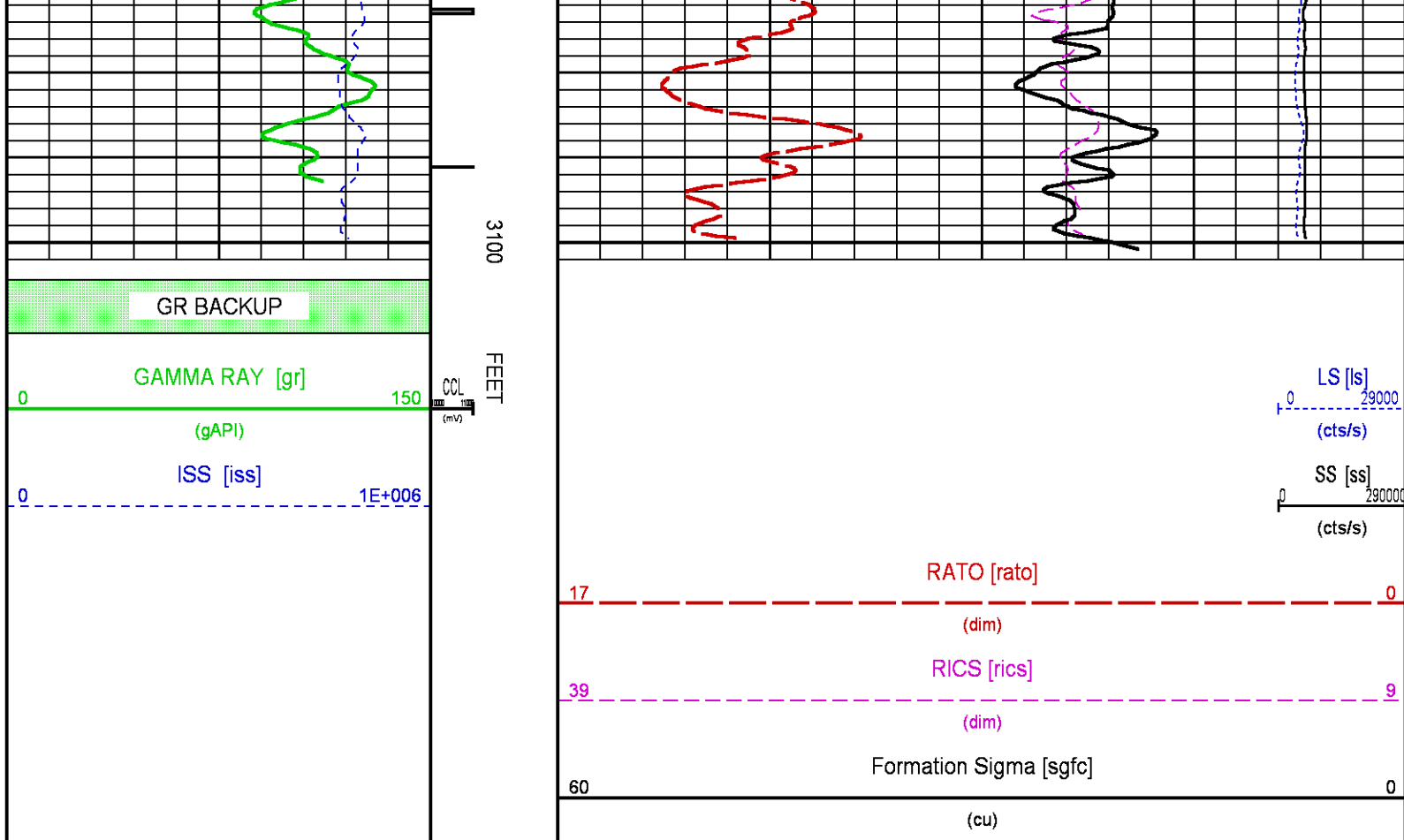


2700

2800







RPM PNC3D MAIN PASS WILLIAMS FORK

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 1

Plotted: Sun Nov 05 14:39:30 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_30_04E1\p353h02.prm
LOGGING MODE: DEPTH 4342.750 ft DIRECTION: UP
TOP DEPTH: 4342.750 ft BOTTOM DEPTH: 8061.000 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	8.50	in	" "
	LARGEST CASING OD	7.00	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

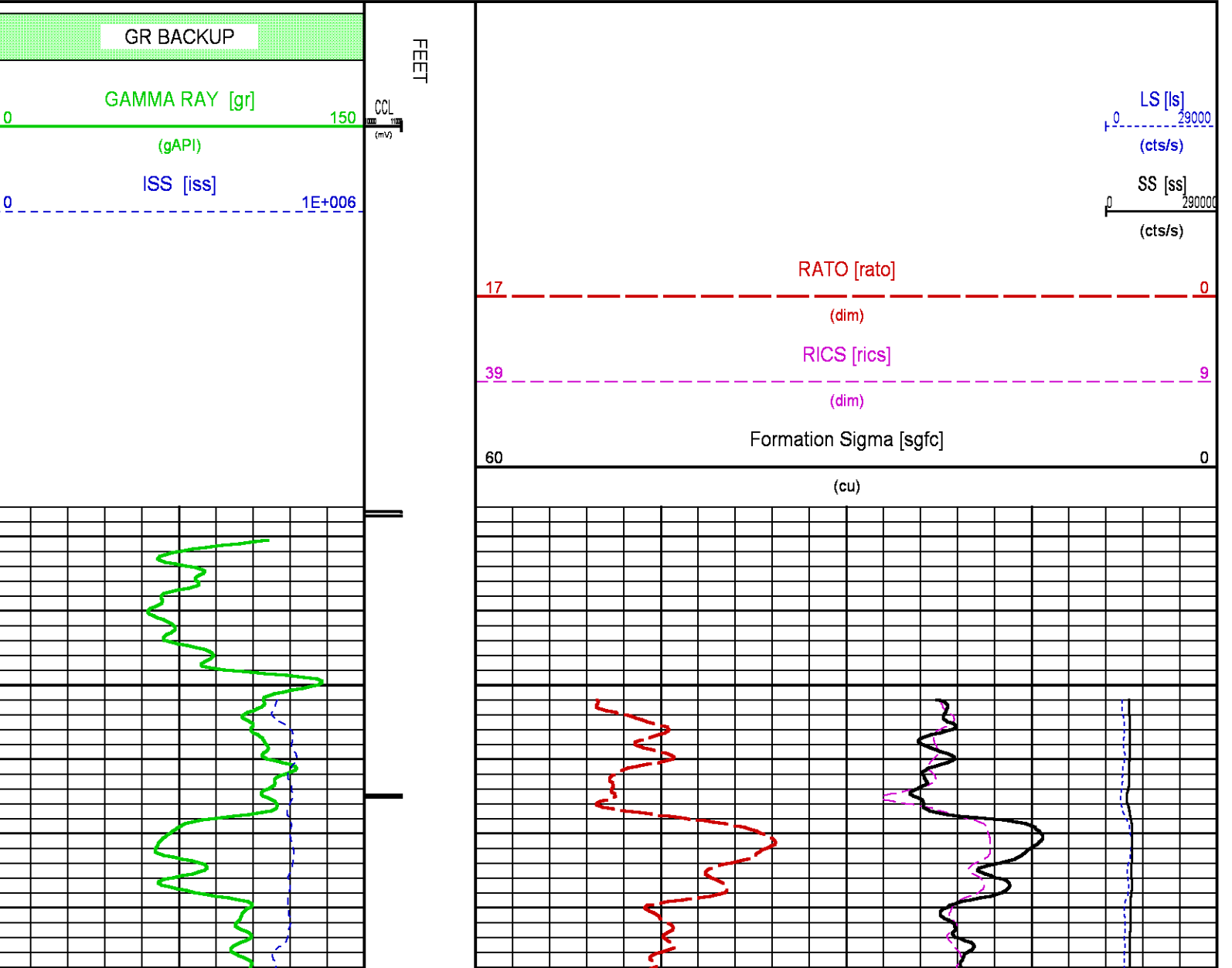
CURVE DESCRIPTION REPORT

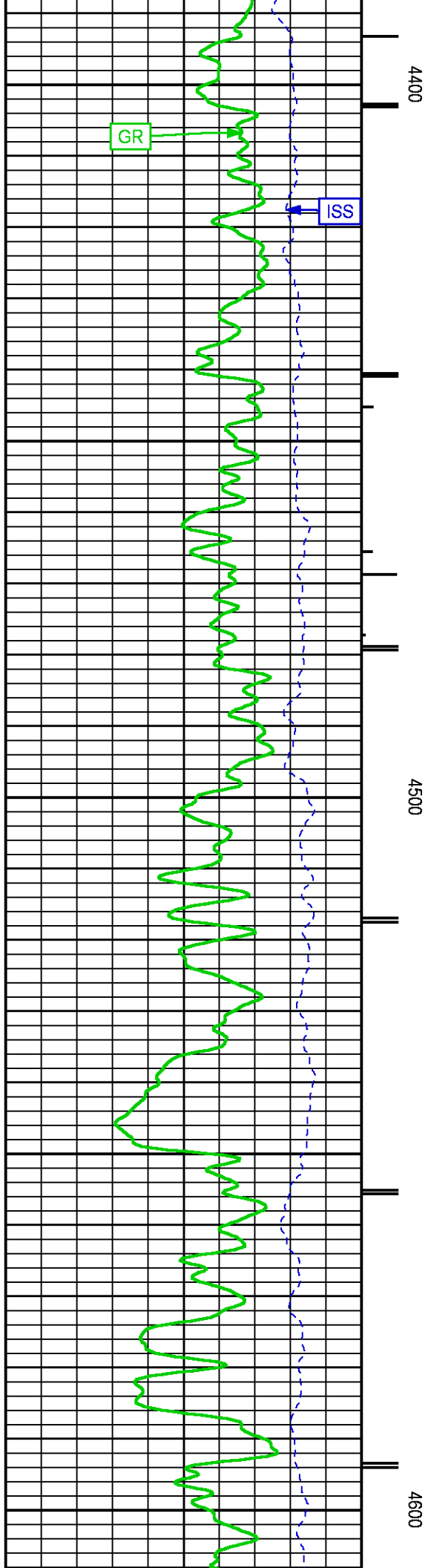
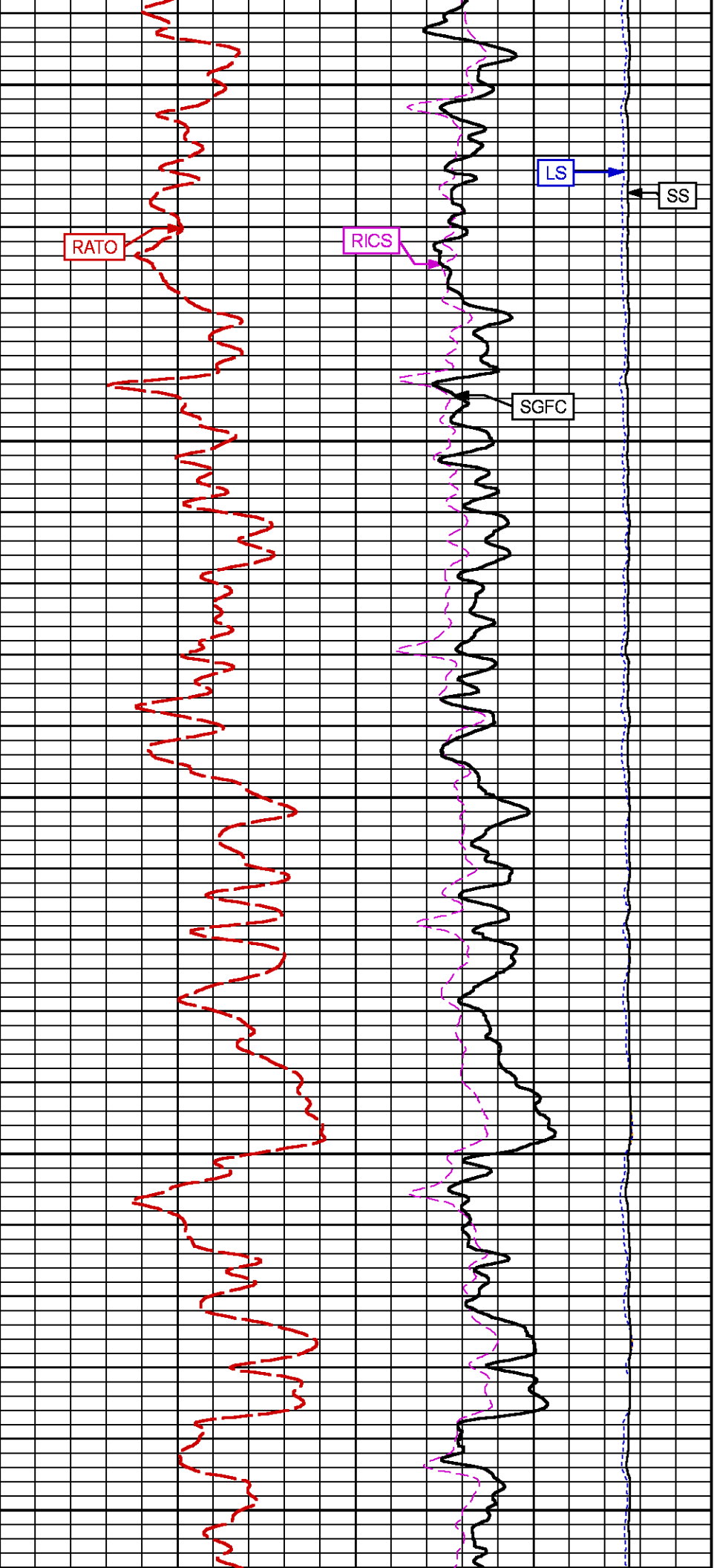
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

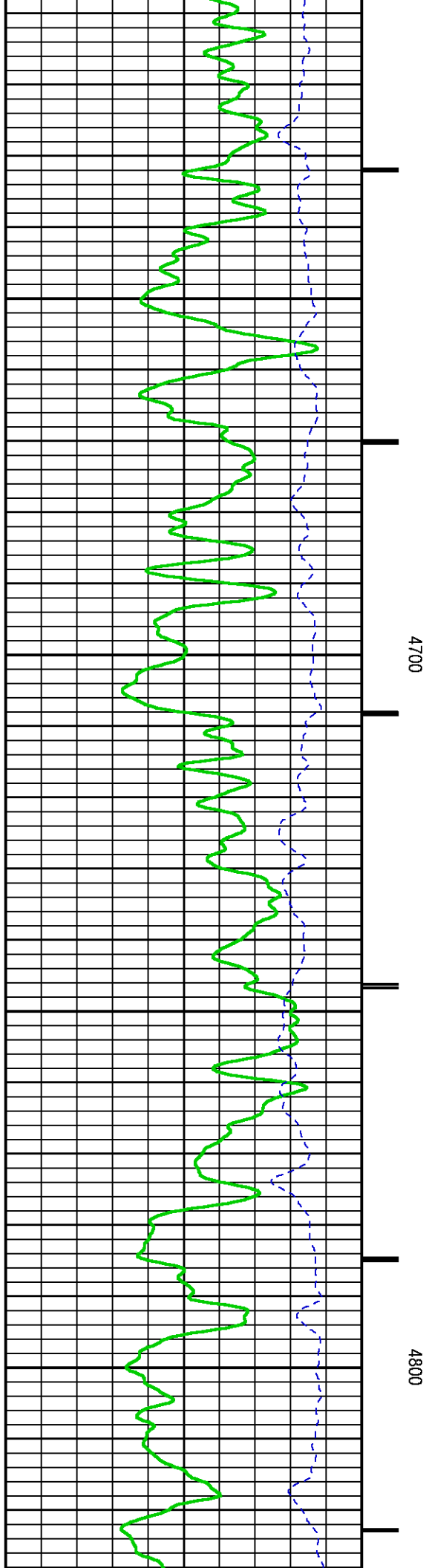
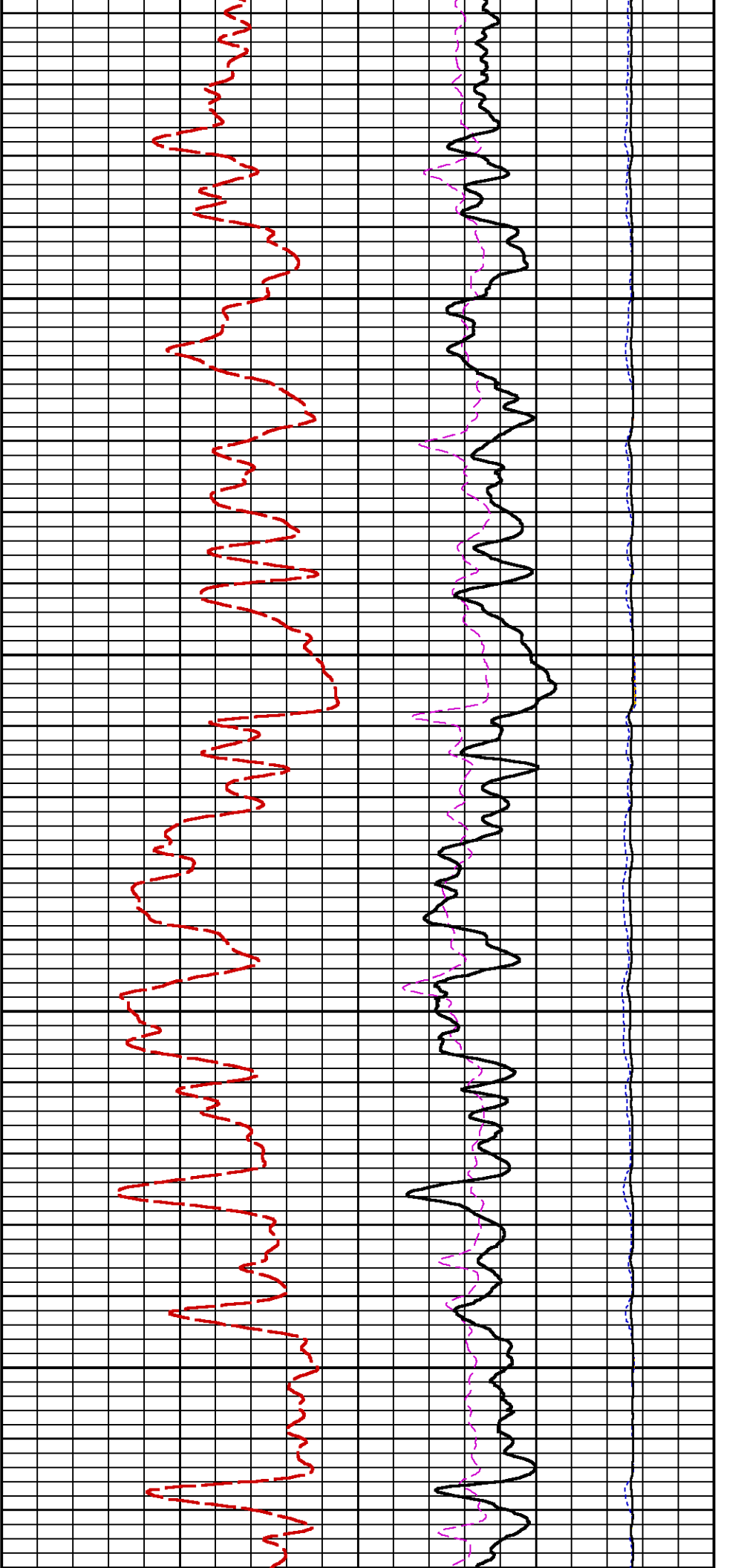
CURVE MEASURE POINT OFFSET

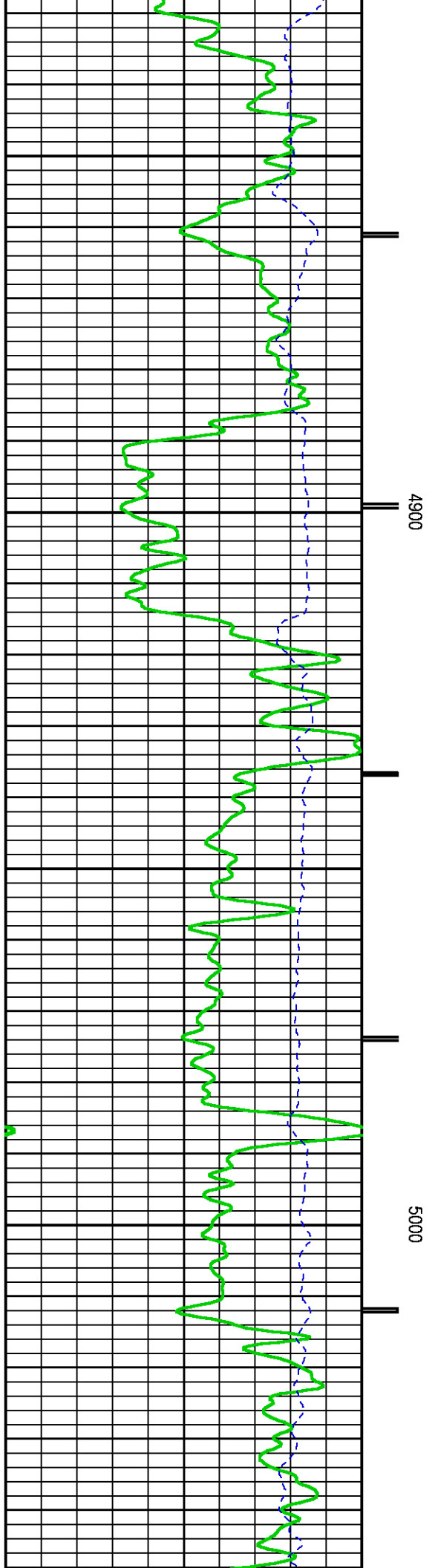
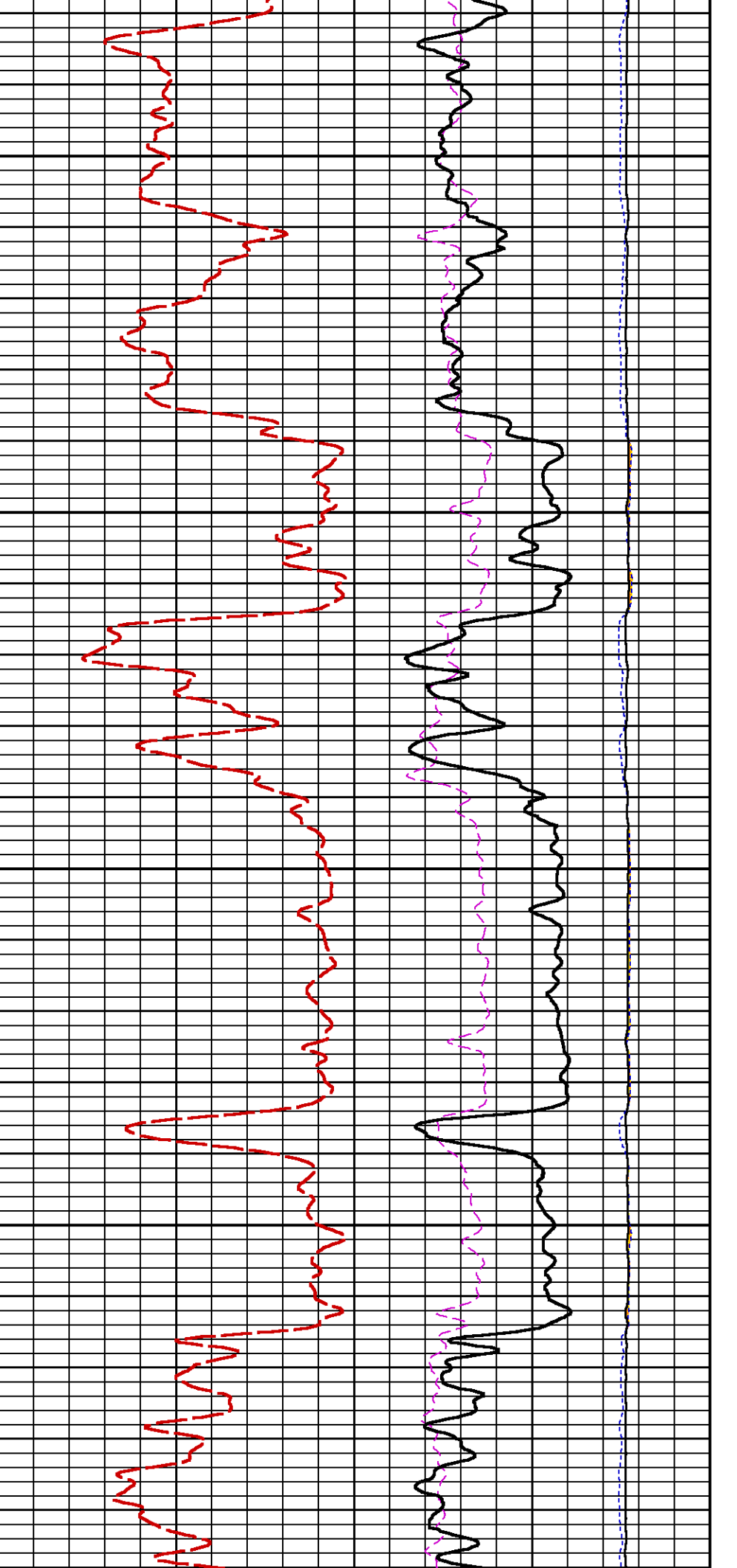
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-22.50	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.50	LS	-9.50	RICS	-9.50	SS	-9.50

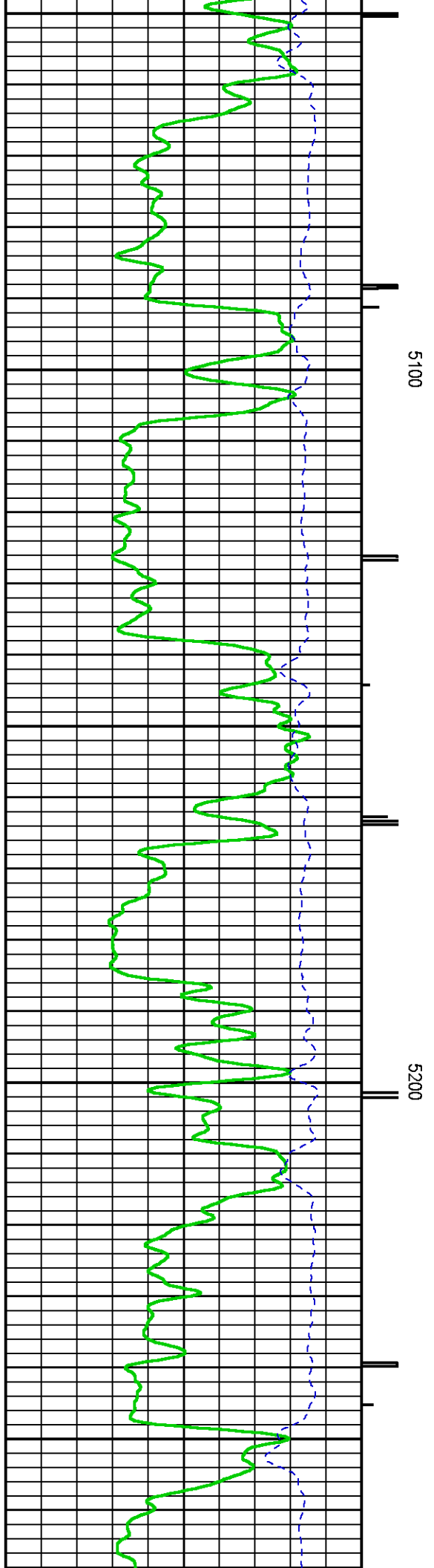
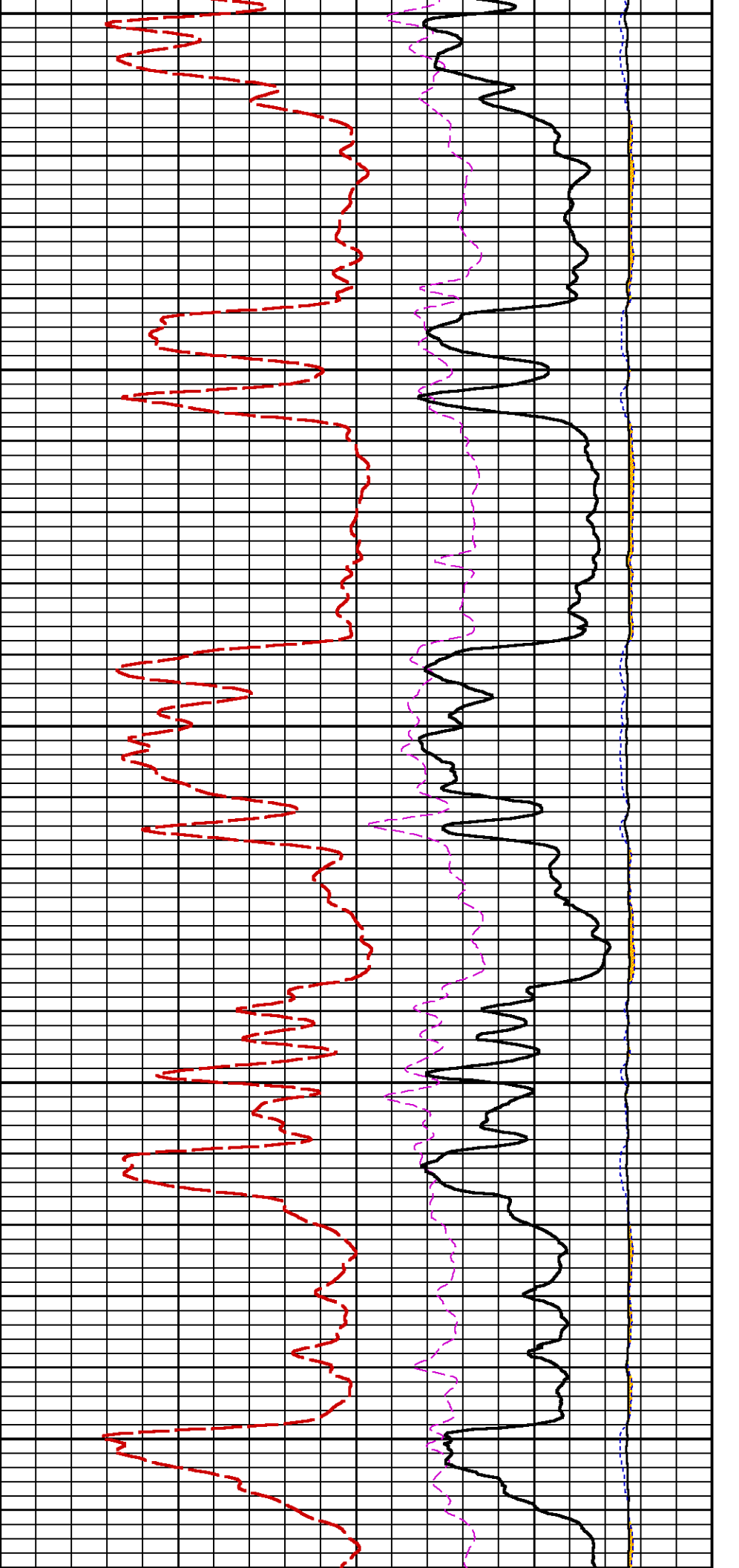
Presentation	: BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\LARAMIE_RPM_PNC3D+RPM_MN_04E_WF.fvpdf [5"/100' Scale]
Plot Interval	: 4320.25 - 8054.25 Feet
Data File 1	: F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\RPM_MN_04E_WF.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: Bruton 30-04E
Field	: vega
File Interval	: 4319.5 - 8061 Feet
OCT	: p353h

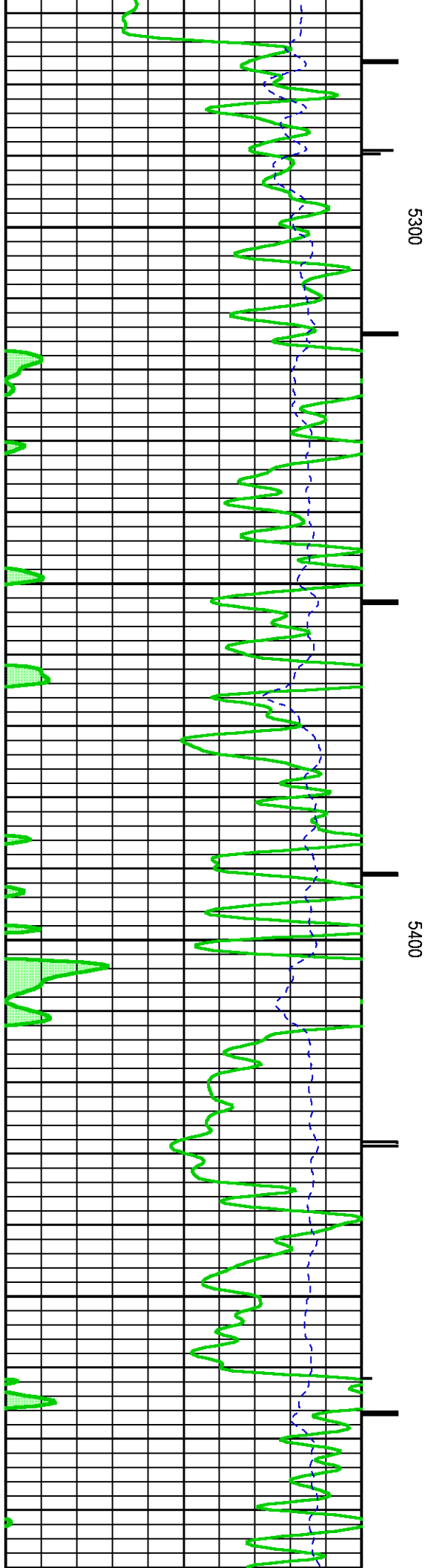
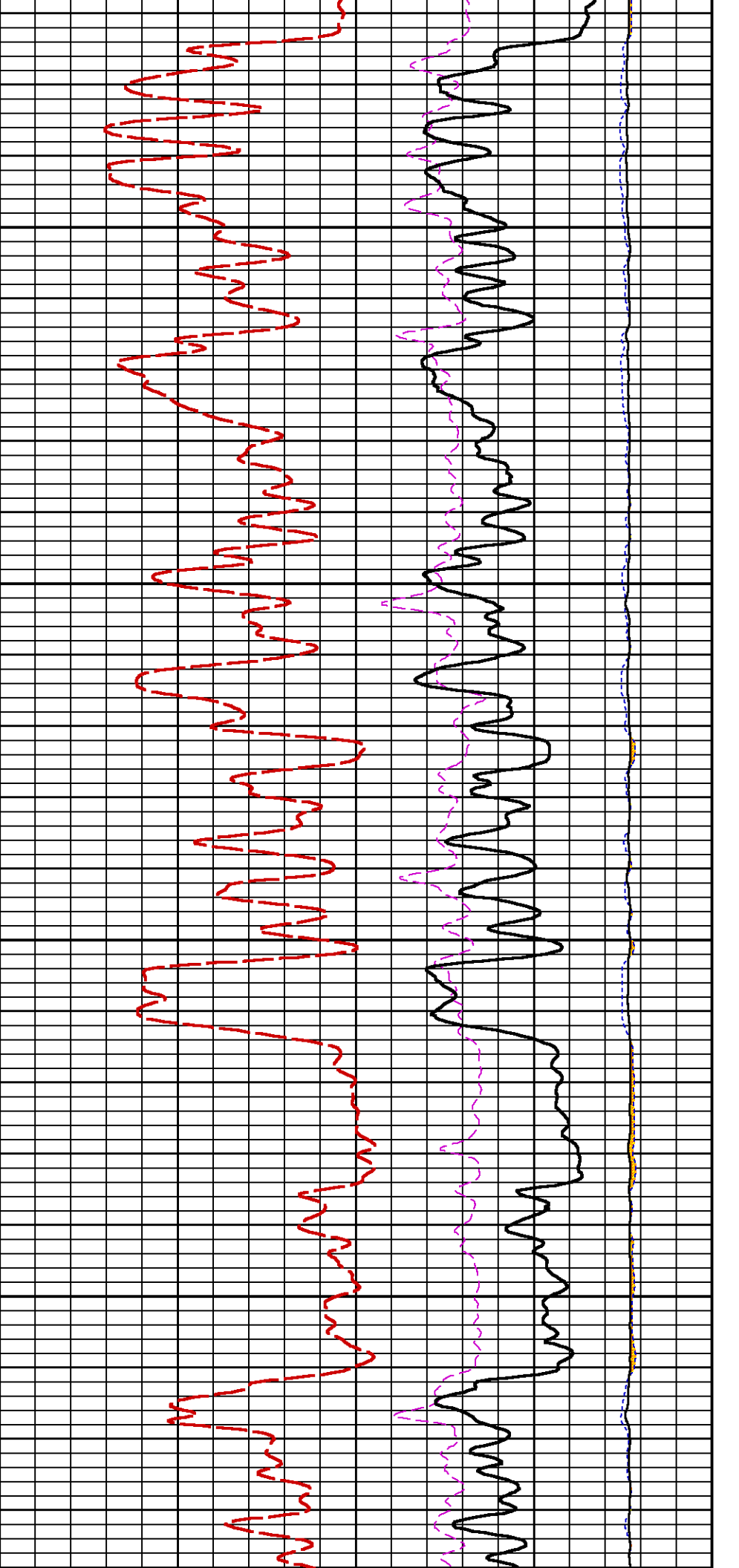


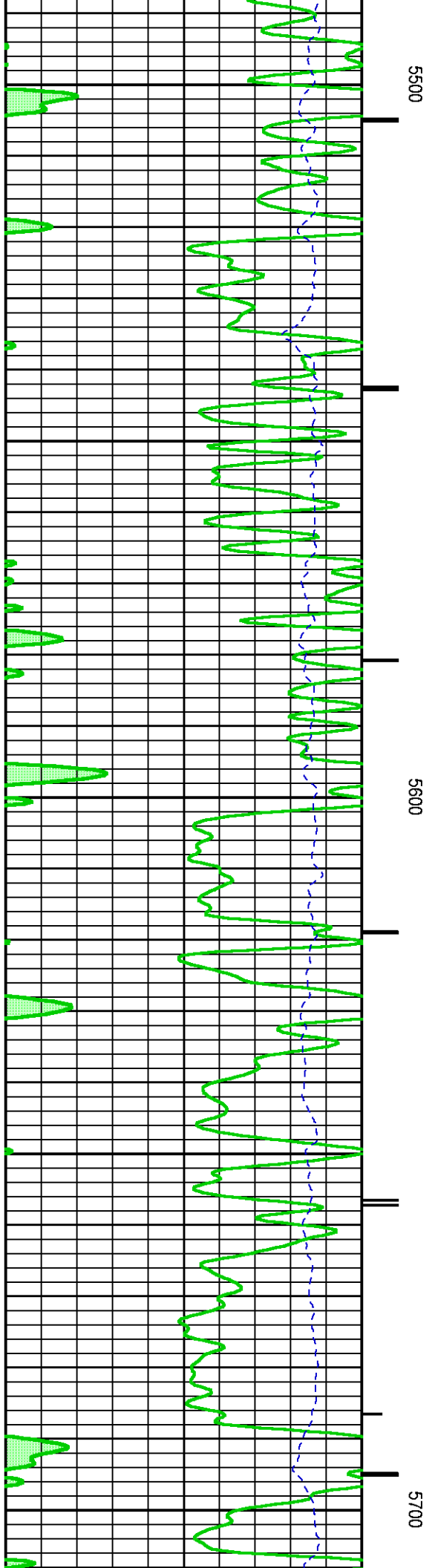
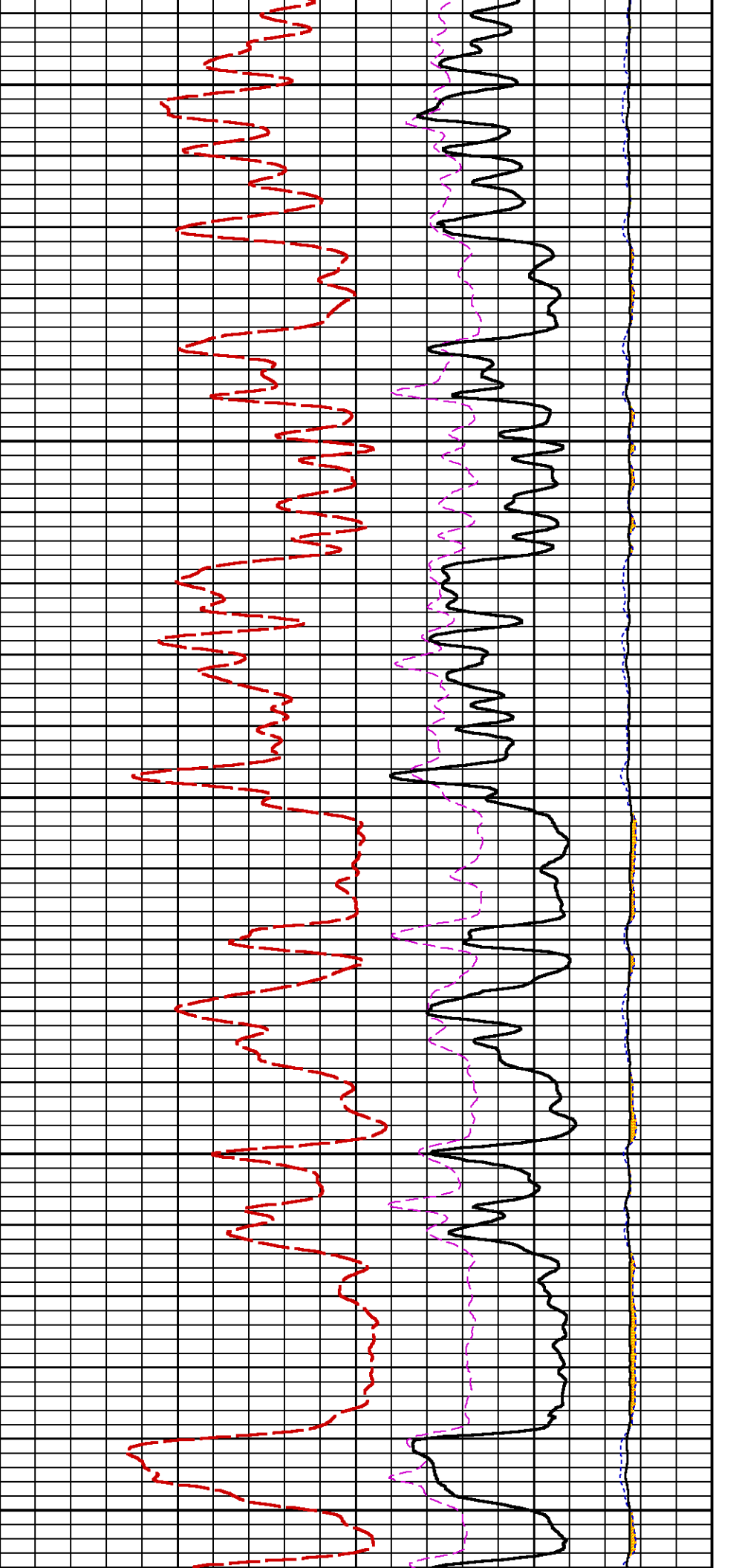


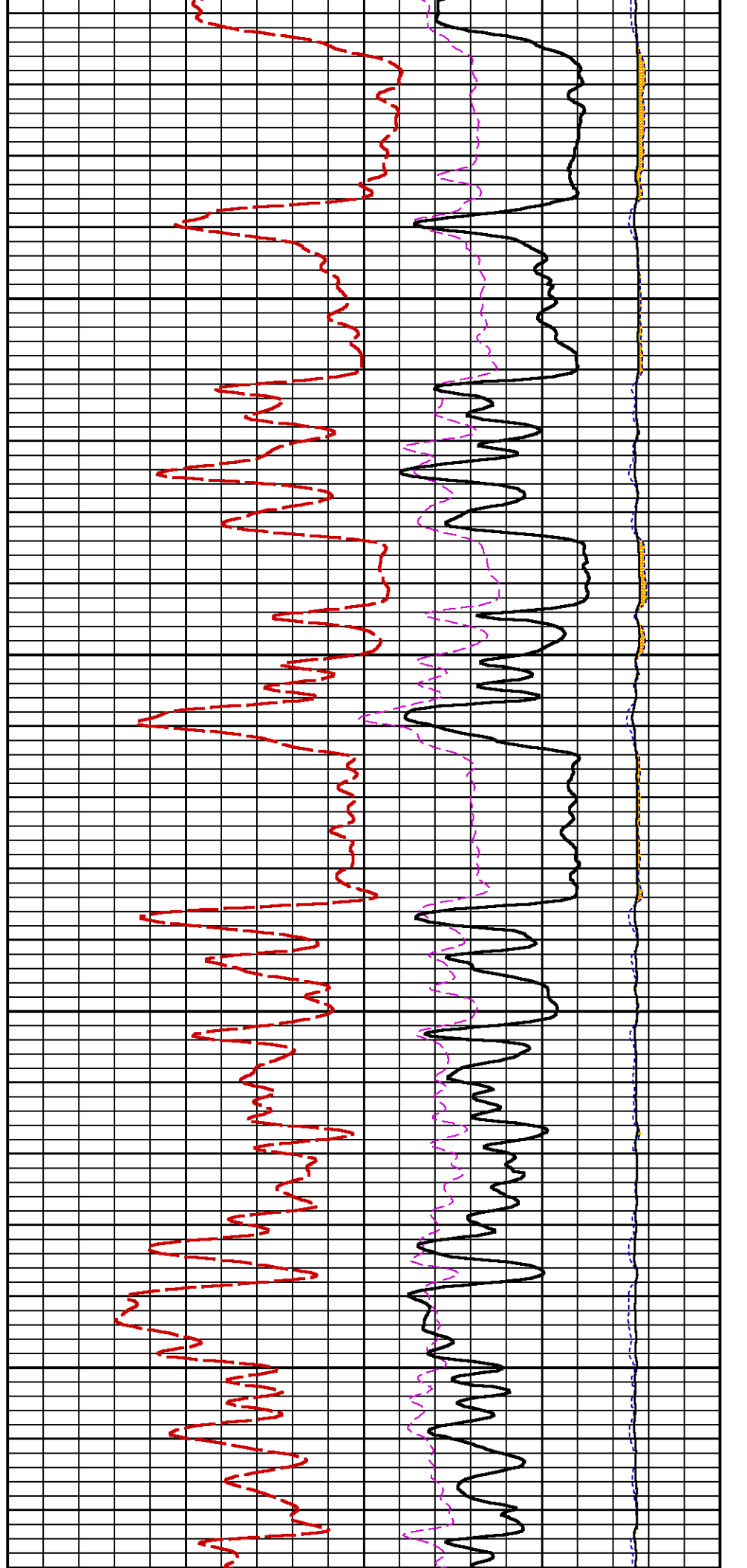
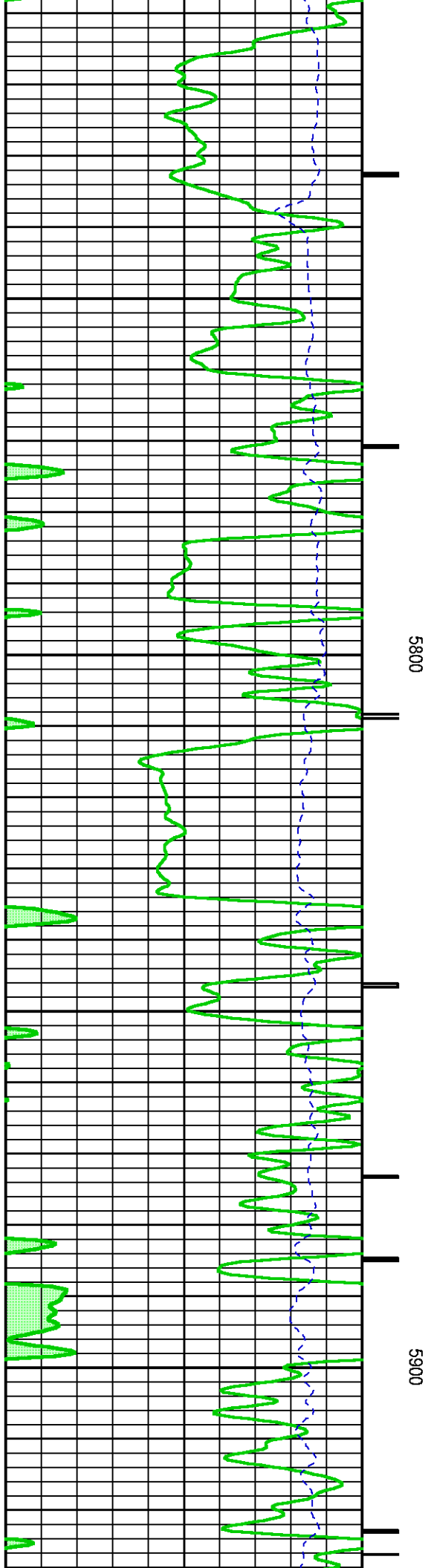


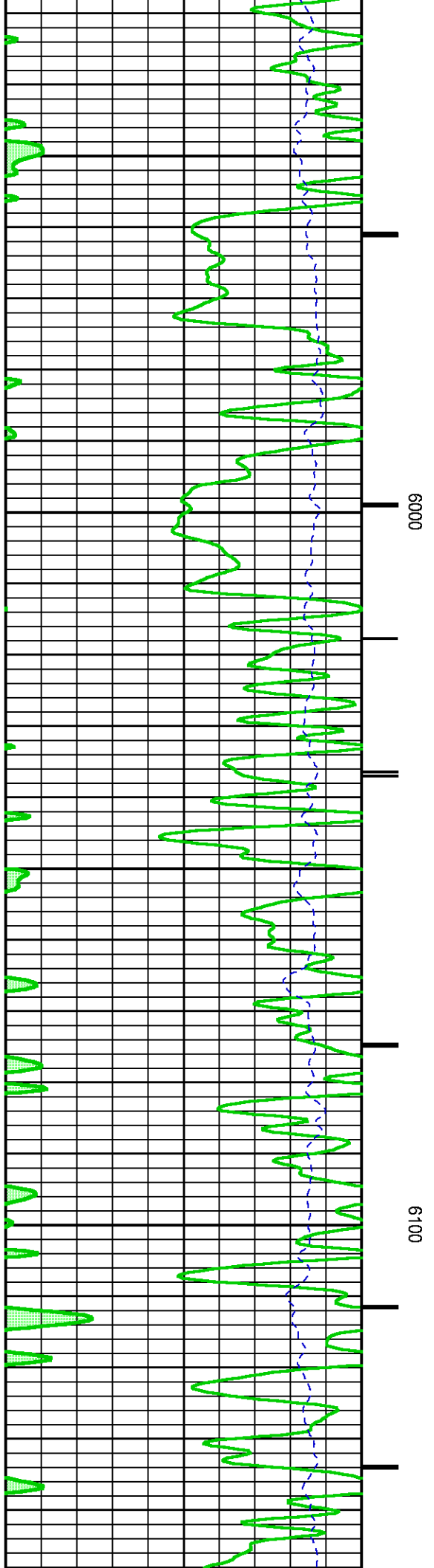
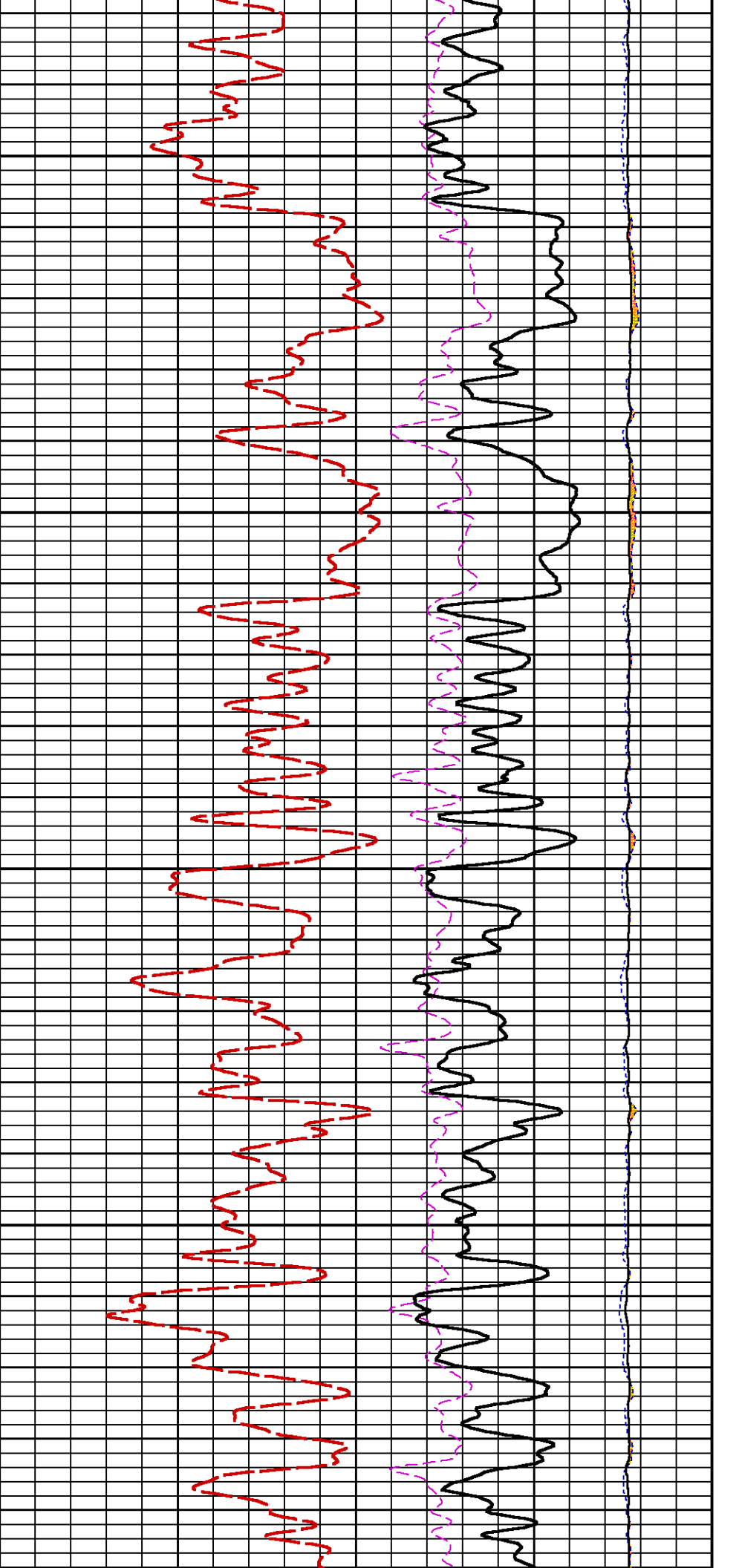


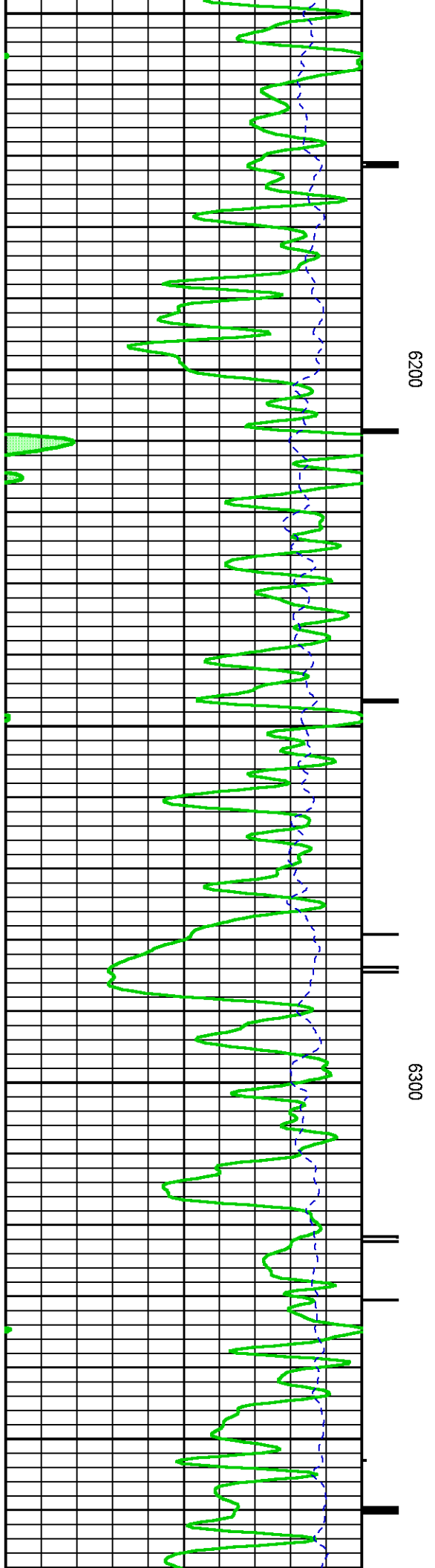
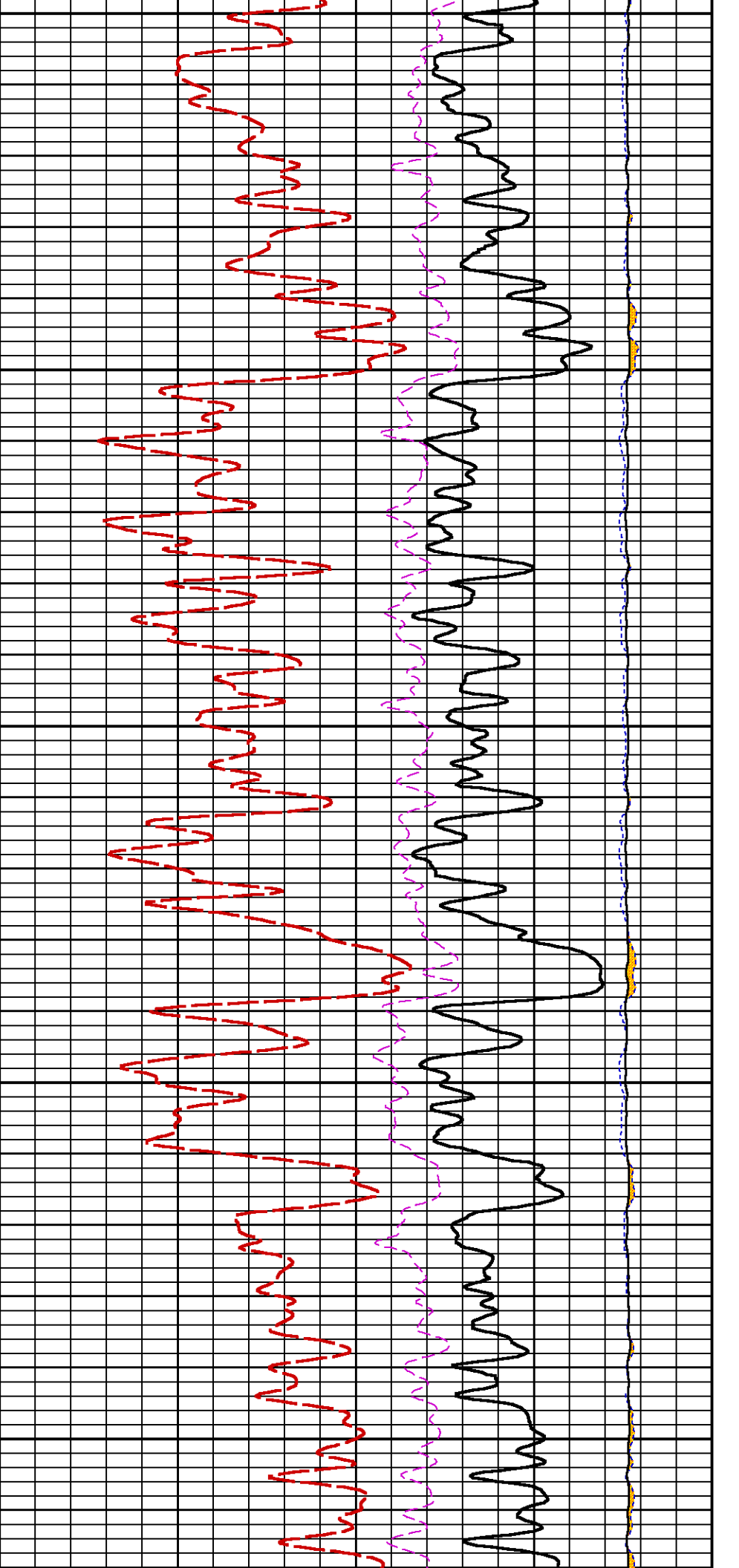


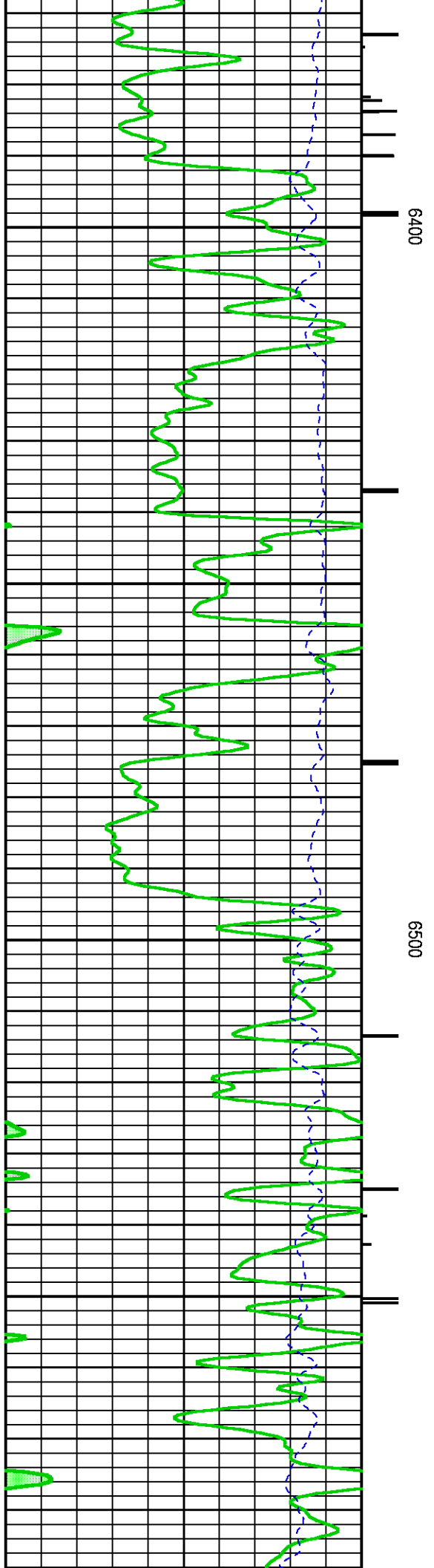
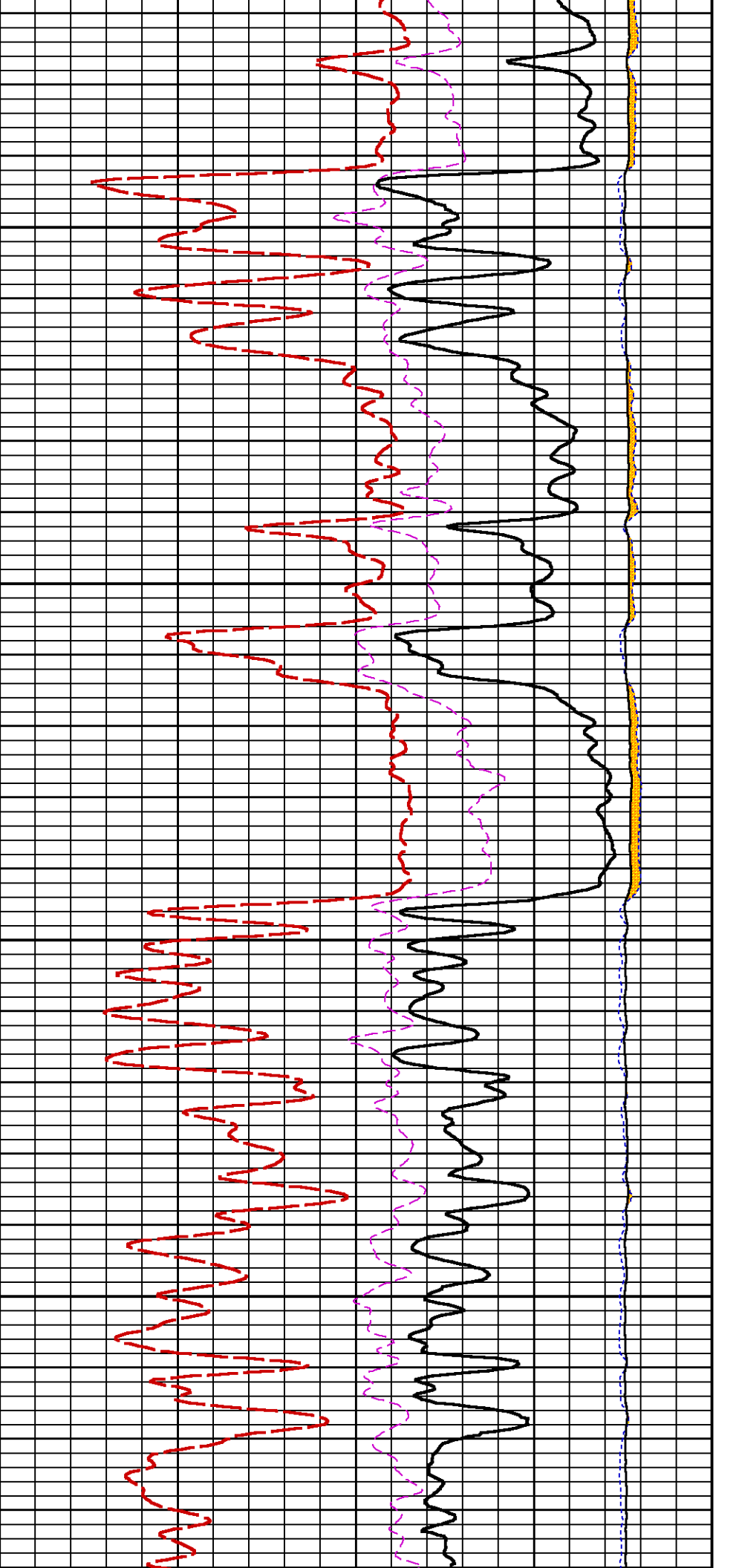


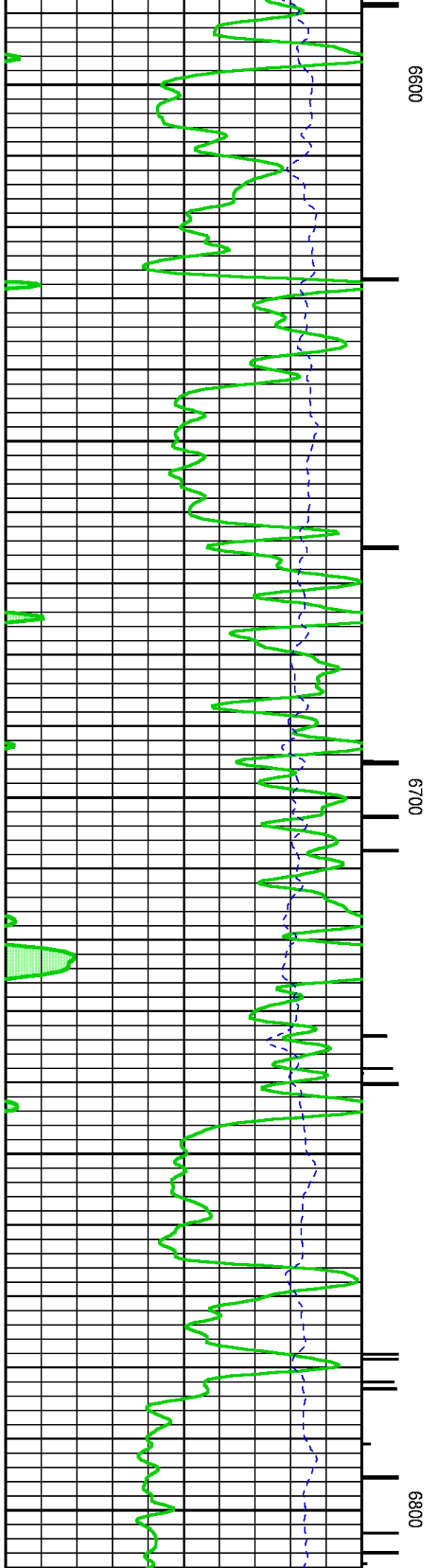
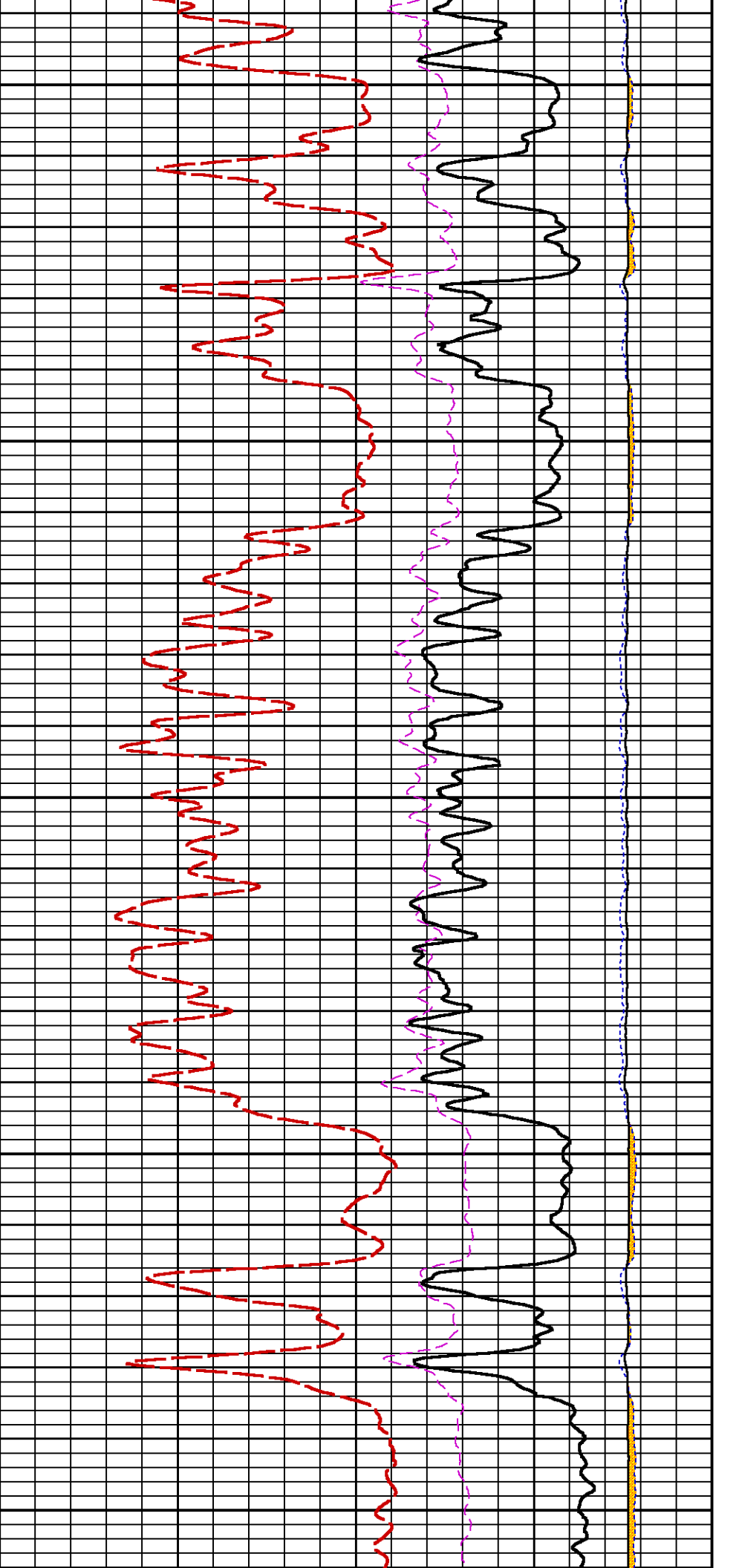


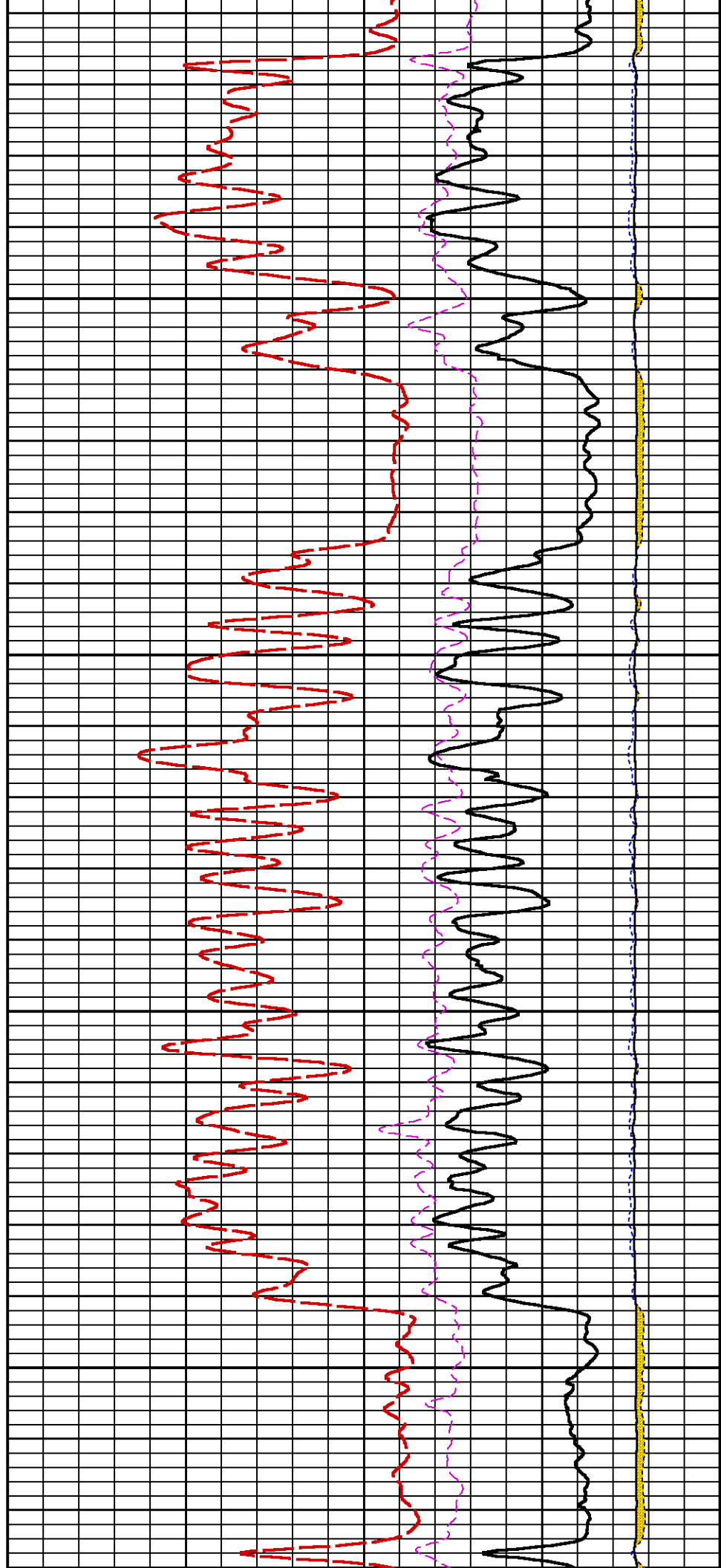
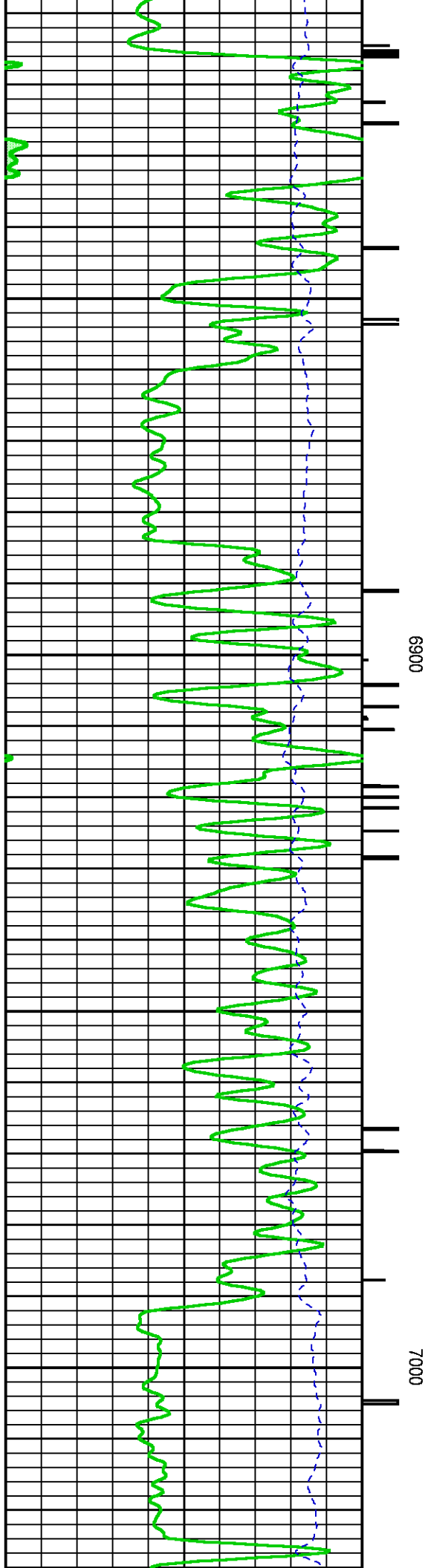


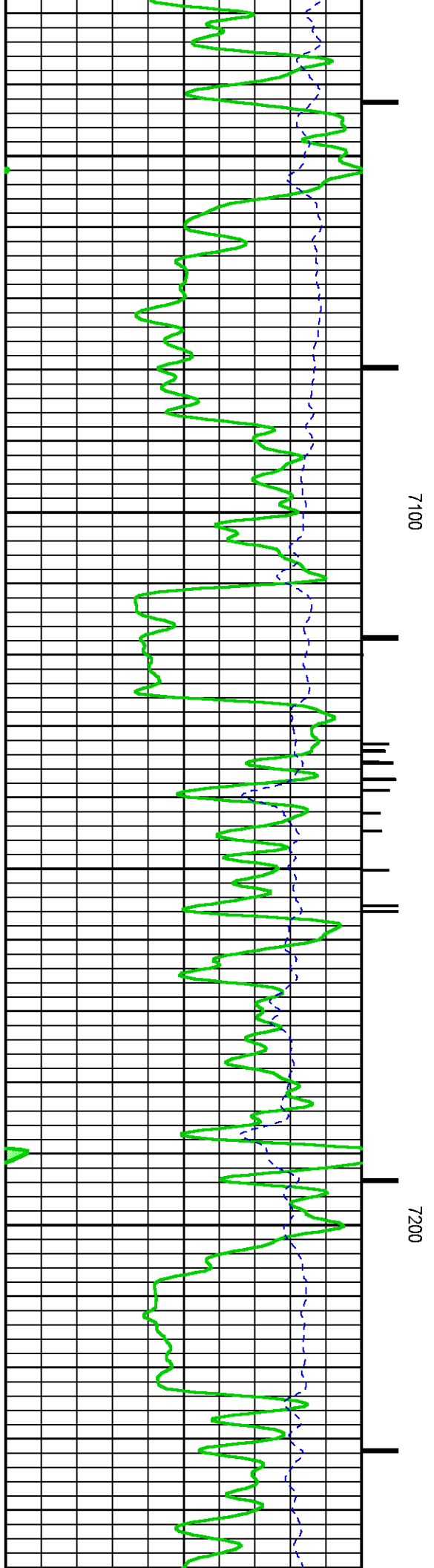
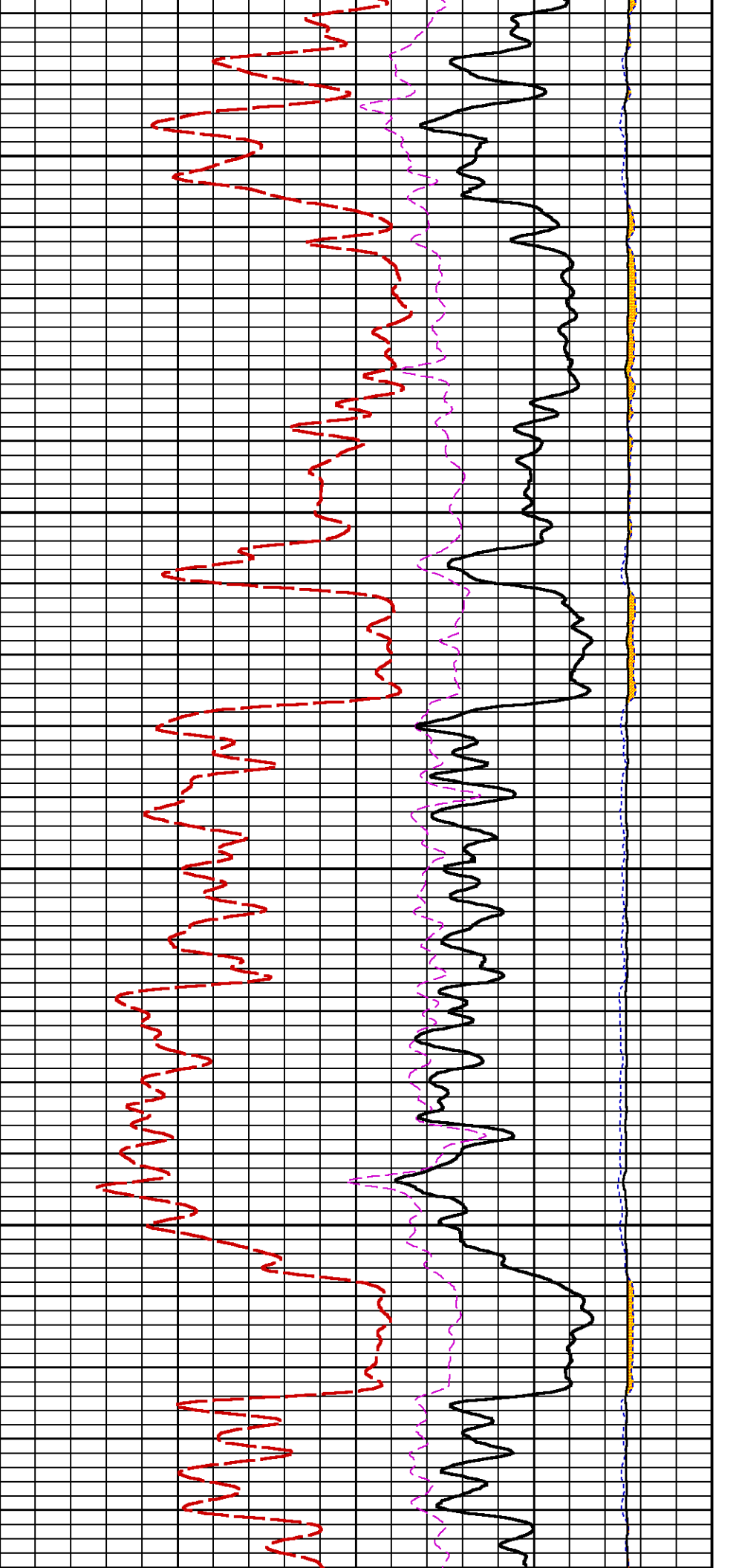


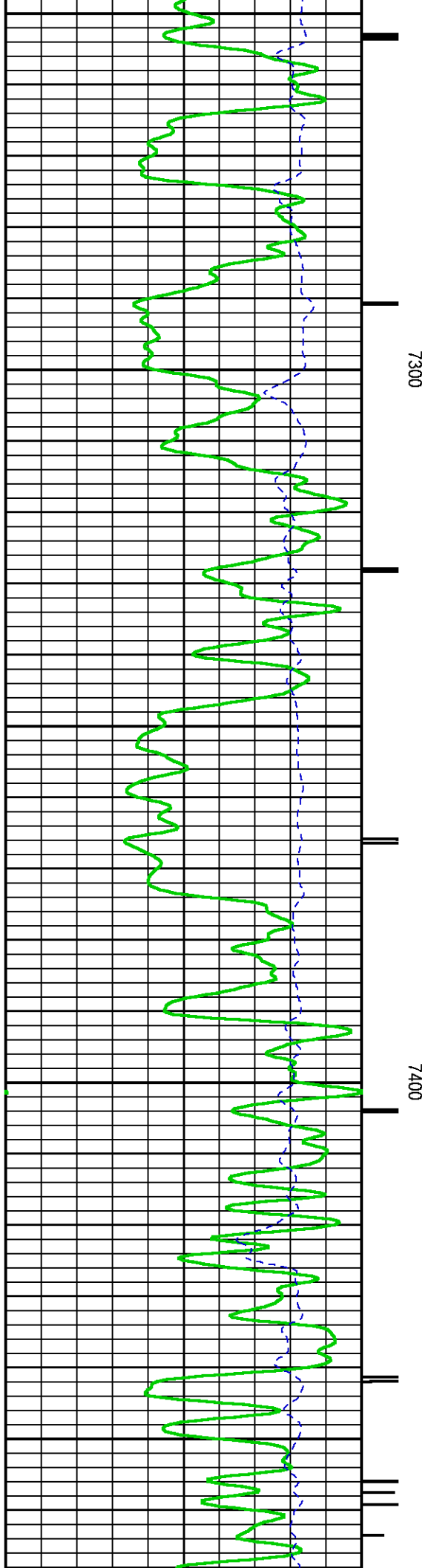
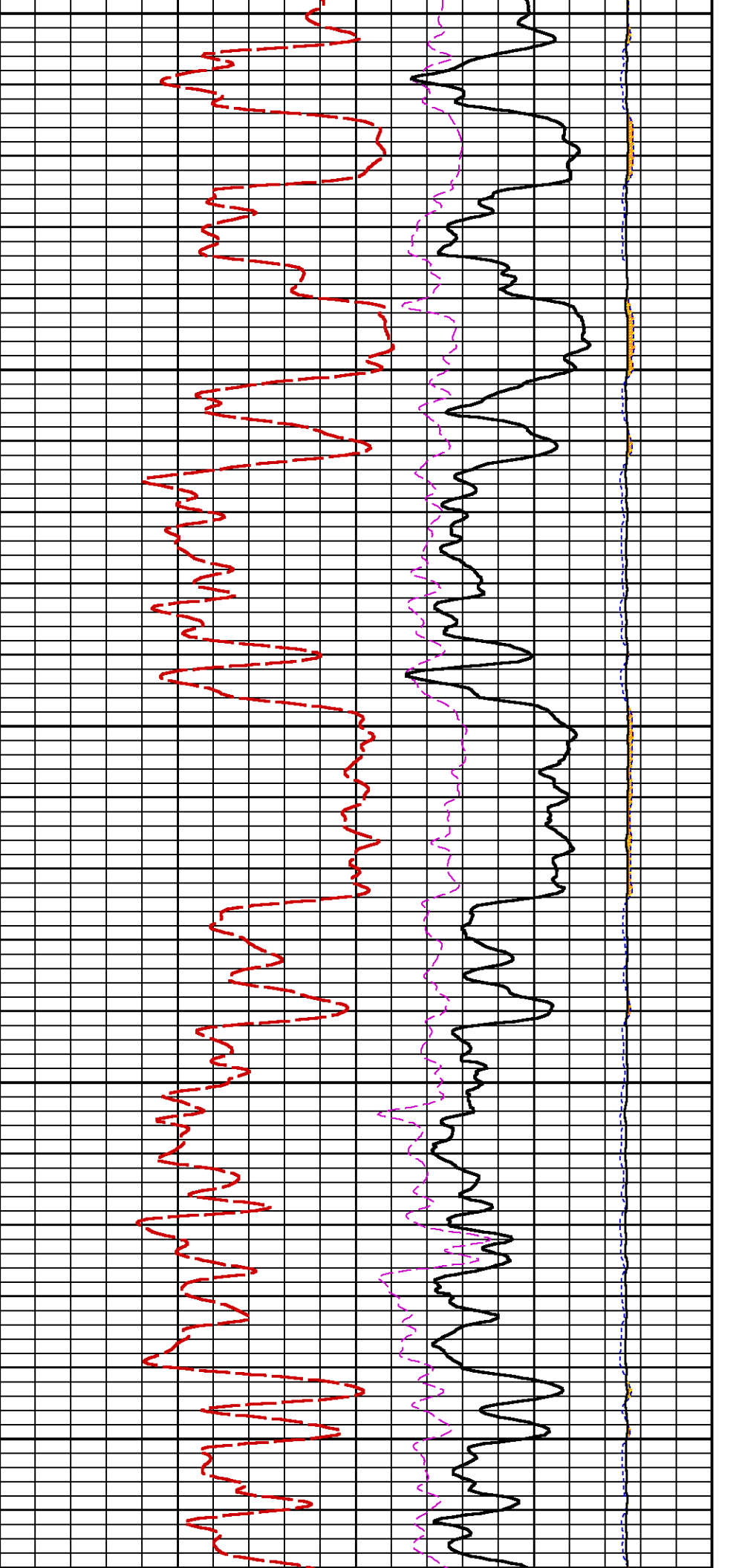


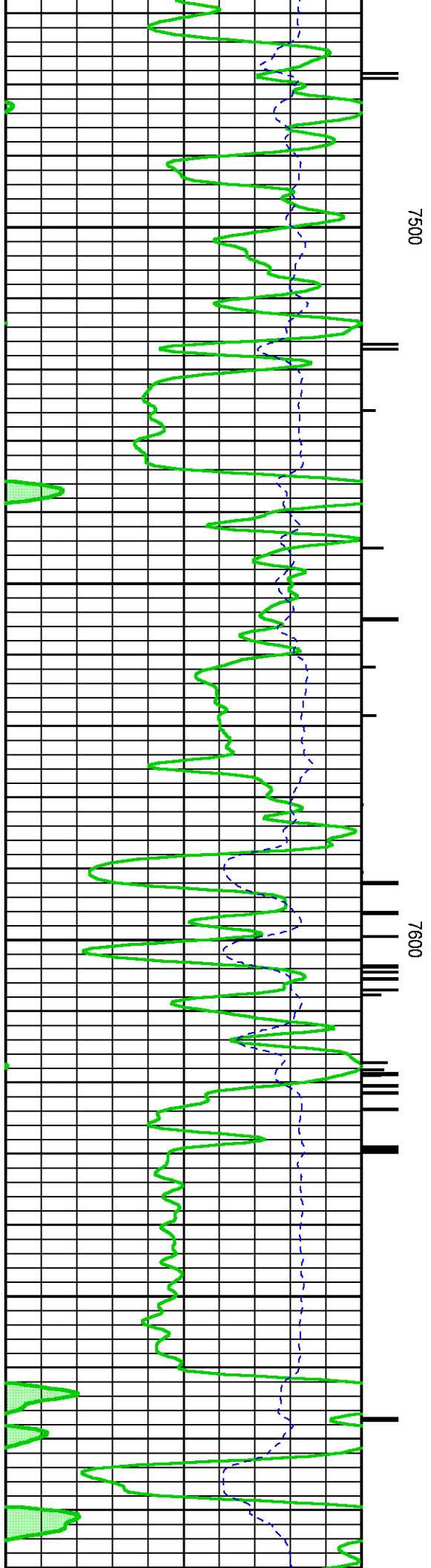
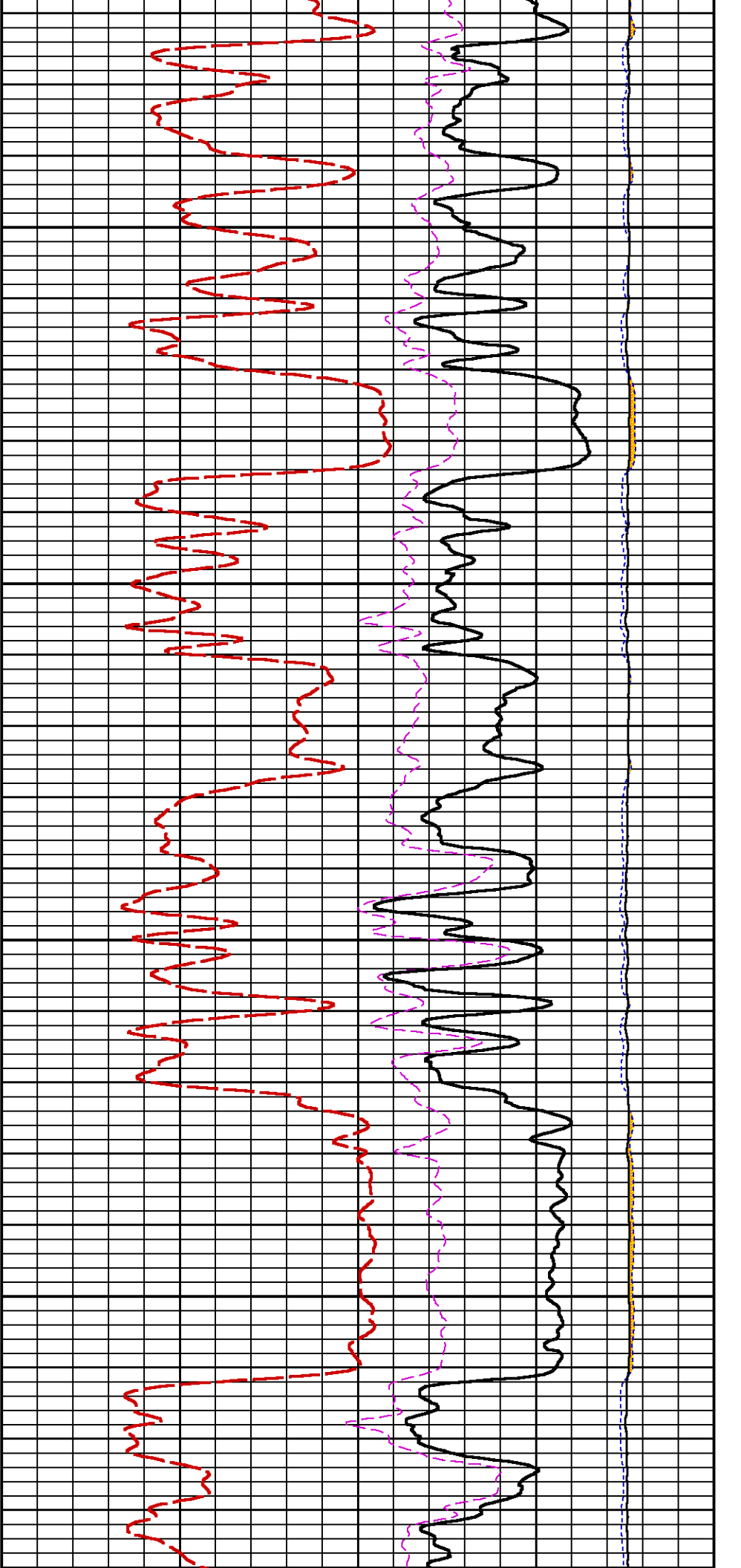


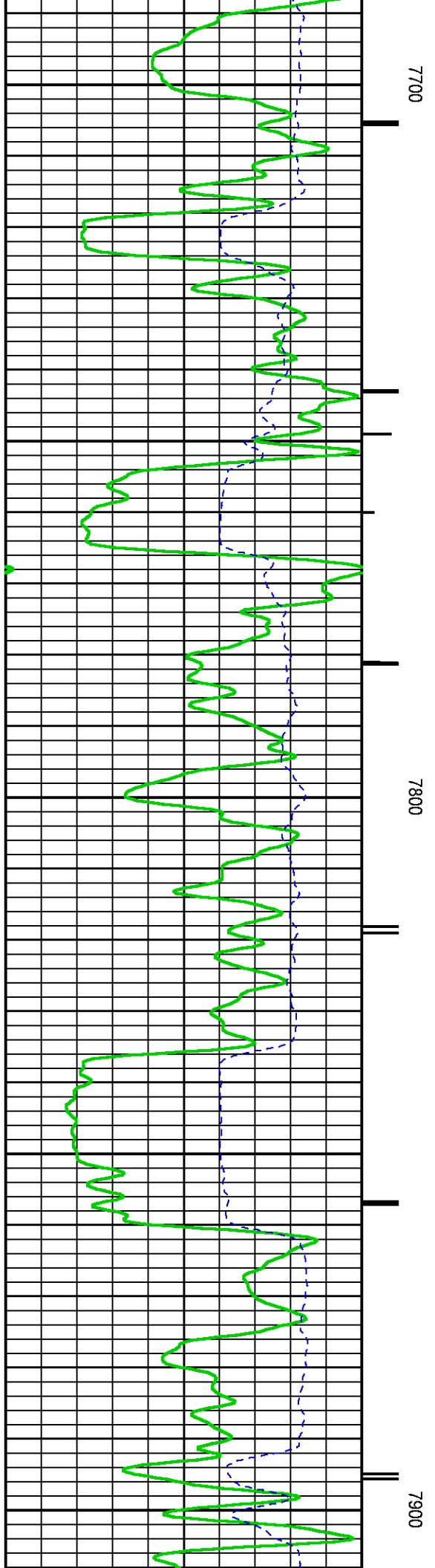
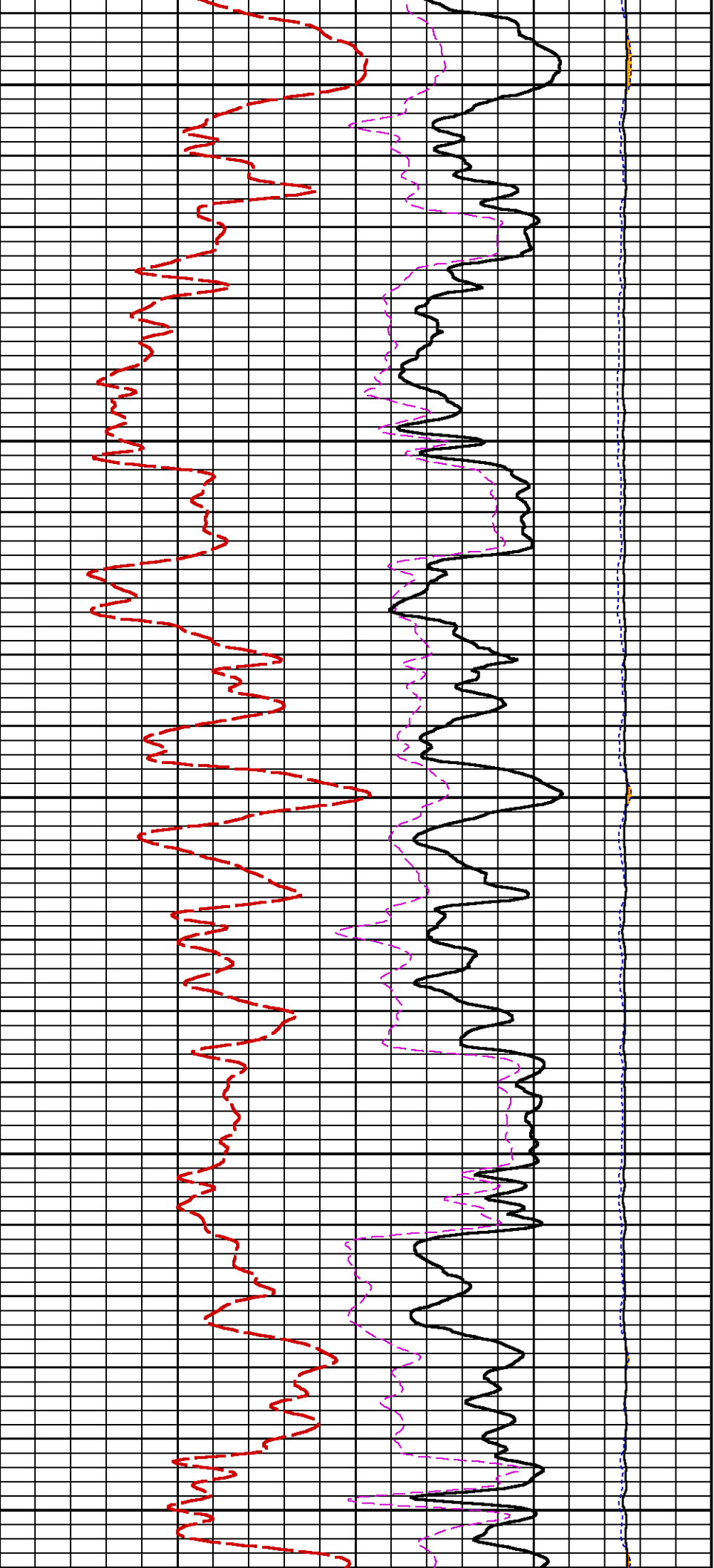


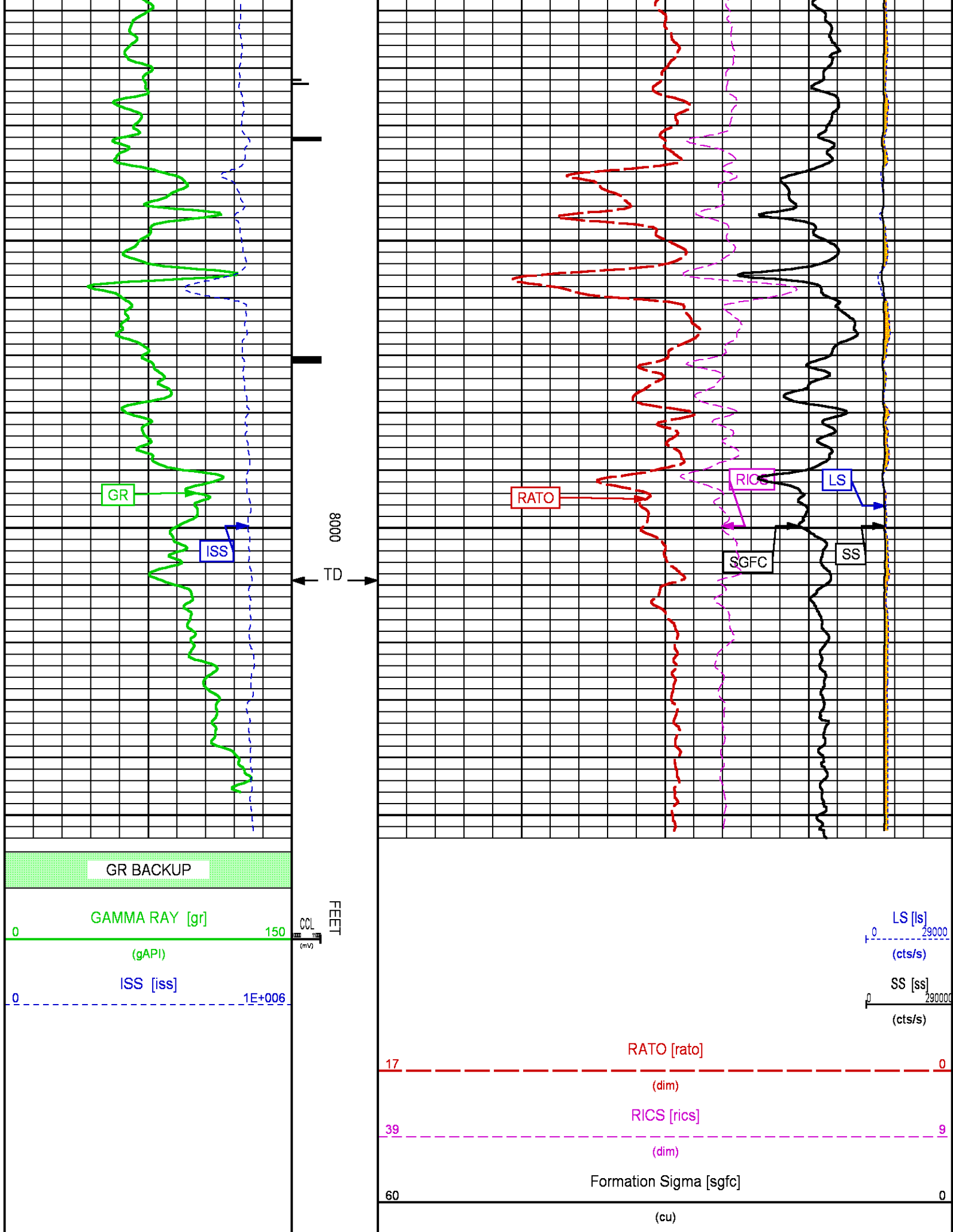












RPM REPEAT PASS 0PSI

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 1

Plotted: Sun Nov 05 09:22:14 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_30_04E1\p353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4842.500 ft BOTTOM DEPTH: 5085.250 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	8.50	in	" "
	LARGEST CASING OD	7.00	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

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

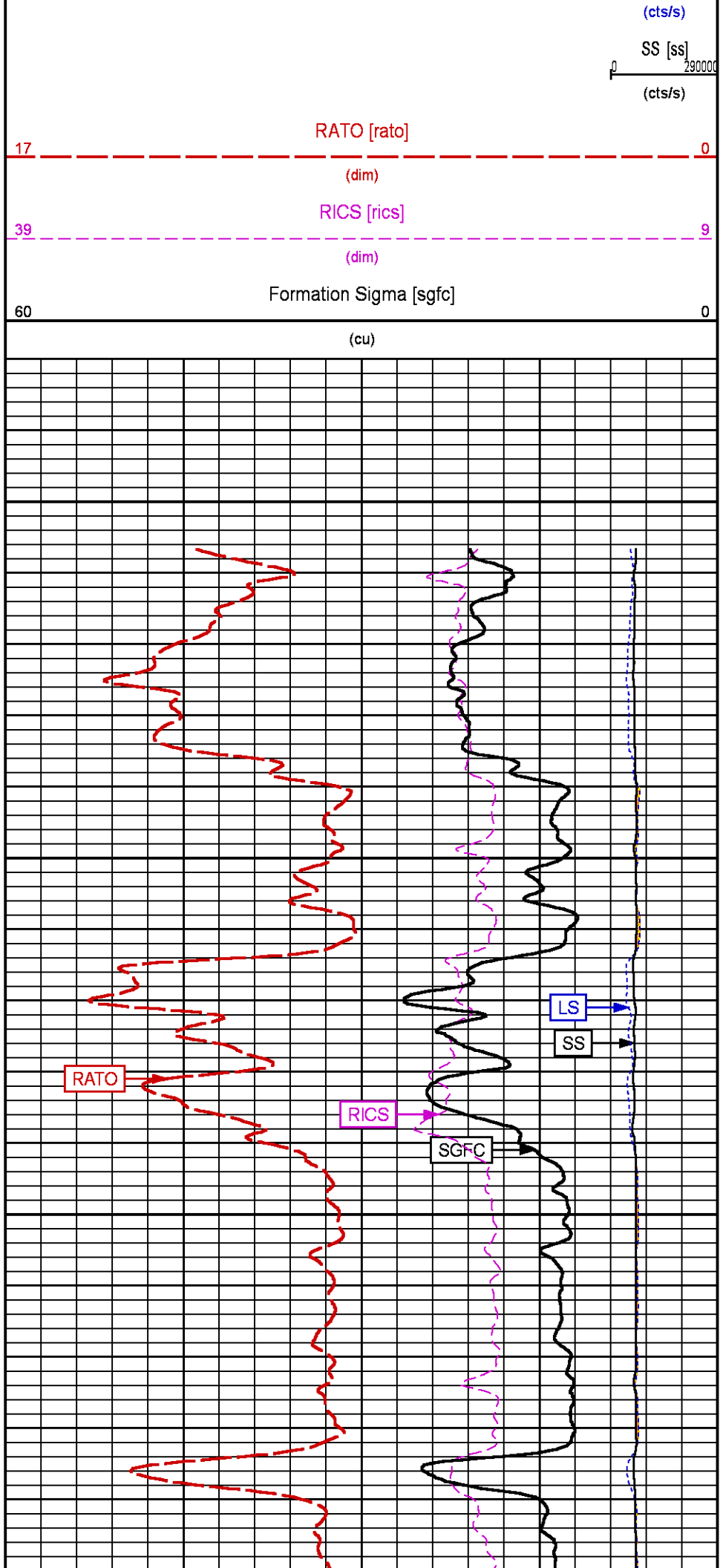
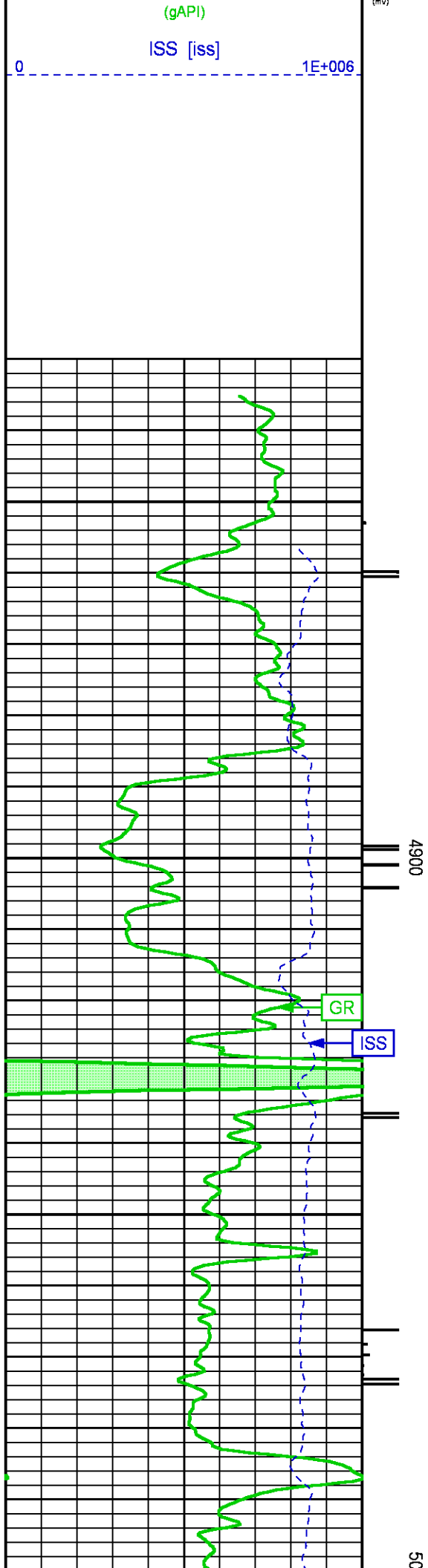
CURVE MEASURE POINT OFFSET

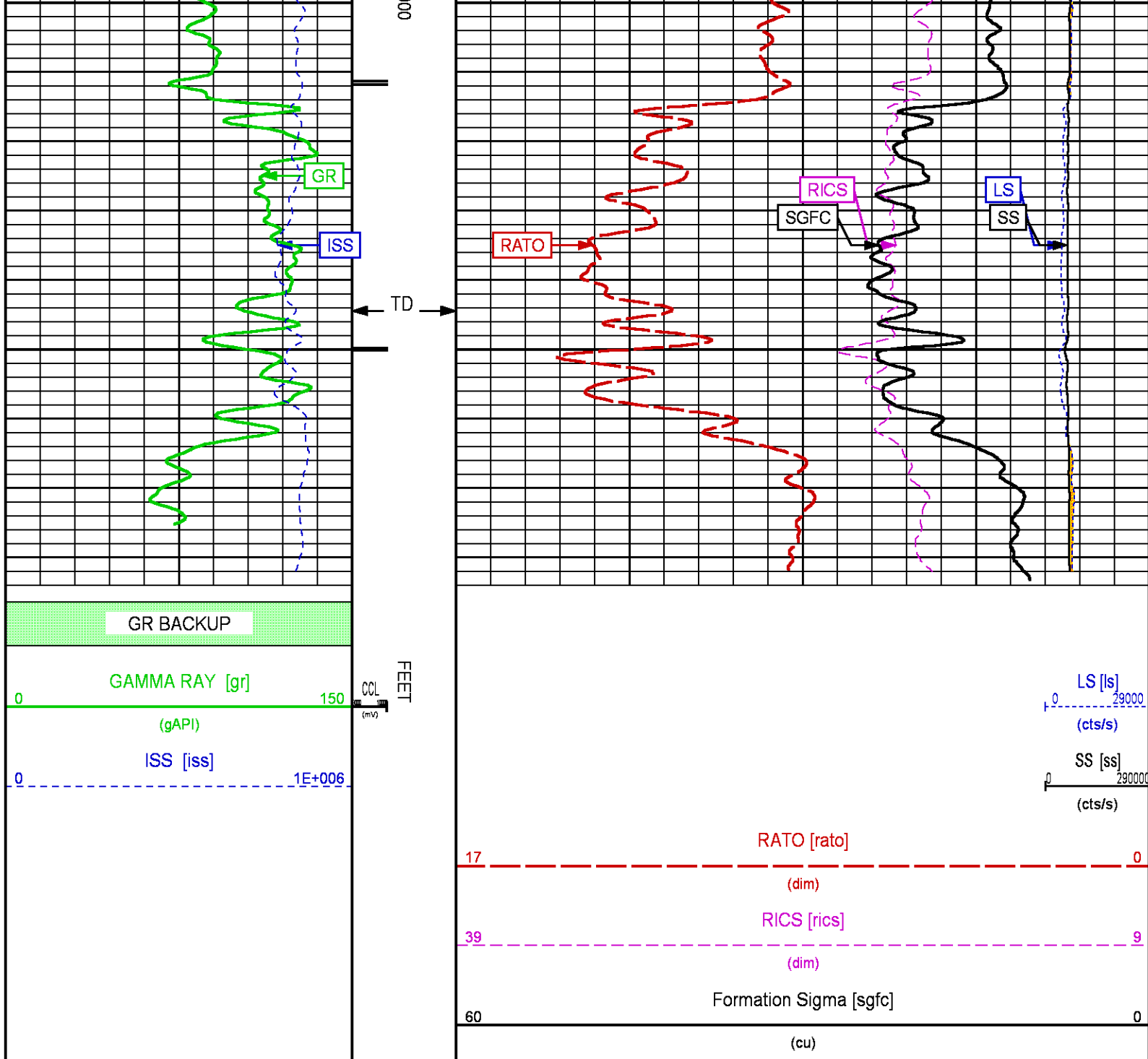
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-22.50	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.50	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\LARAMIE_RPM_PNC3D+RPM_RPT_04E.fvpdf [5"/100' Scale]
Plot Interval : 4831 - 5089.5 Feet

Data File 1 : F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_30_04E1\RPM_RPT_04E.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : Bruton 30-04E
Field : vega
File Interval : 4830.25 - 5095 Feet
OCT : p353h







CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\LARAMIE_BRUTON_30_05Wp353h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10317216

DATE/TIME PERFORMED: Fri Sep 15 15:24:07 2017

UNIT #: 3882TD HL6728

CALB JIG #: 4702NK DA 228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	87.33	336.09	248.8	0.744	64.95	249.95	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10317216 DATE/TIME PERFORMED: Fri Sep 15 15:26:03 2017

UNIT #: 3882TD HL6728 VERI JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	88.13	330.78	0.744	65.54	246.00	180.46
						175.00 195.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10414345 DATE/TIME PERFORMED: Thu Jul 13 12:34:15 2017

UNIT: 3882TD HL6728 CALIBRATOR: 2437XB 120057 SOURCE: 8281AA 10160601 HOURS: 8281AA 704

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	790765	126	2358	2261	2241	134	10.0	0.9777

Interpolated	1300000	148	2343	2251	2237
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	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	790765	6044	978	134	26.03	0.15	24.25	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	790765	160255	24559	87267	31045	8098	53011	12993
Fit Quality %		0.611	0.587	0.523	0.528	0.538	0.527	0.577

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	790765	1.44	4.93	32.21	14.92	10.78	3.84	4.08
		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 %		0.047	0.027	0.046	0.063	0.079	0.082	0.072
Reduced	1372844	1.44	4.93	32.15	14.90	10.77	3.83	4.08
		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: C:\dat1a\LARAMIE_BRUTON_30_05WRPM_PNC3D-tdg.meta

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 : 8248ED
Mnemonic : PCM
Measure Point: 1.00': CCL MP

GAMMA RAY

Diameter : 1.70"
Length : 3.02'
Weight : 15 lbs
Series : 8262XA
Mnemonic : GR
Measure Point: 0.89': GR MP

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

30.78'

CCL MP 22.73'

GR MP 19.59'

XLS DETECTOR 10.27'

LS DETECTOR 9.86'

SS DETECTOR 9.61'

Design : 8283PA
Series : 8283PA
Mnemonic : RPM
Measure Point: 5.45': XLS DETECTOR
Measure Point: 5.04': LS DETECTOR
Measure Point: 4.79': SS DETECTOR

SS DETECTOR 5.04'

RPM SOURCE SECTION

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

BULL PLUG 1 11/16

0.00'

TOTAL LENGTH: 30.78'
TOTAL WEIGHT: 131 lbs
MAX DIAMETER: 0'1.70"

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY

Laramie

WELL

Bruton 30-04E

FIELD

vega

COUNTY

MESA

STATE COLORADO

FILE NO:

API NO:

05077104620000

LOCATION:

SHL: LAT:39.2526639N;LONG:107.8142667

BHL: LAT:39.2528550N;LONG:107.8069120

ELEVATIONS:

KB 7542 FT

DF 7541 FT

GL 7512 FT

SEC 30 TWP T9S RGE 93W

DATE 5-NOV-2017