



RESERVOIR PERFORMANCE MONITOR

FILE NO:

COMPANY

LARAMIE ENERGY

API NO:

WELL

BRUTON 19-06W

05077104260000

FIELD

VEGA

Version

COUNTY

MESA

STATE COLORADO

LOCATION:

SHL: 39.262765N;107.815129W
BHL:39.265826N;107.816592W

OTHER SERVICES

SEC 19 TWP 9S RGE 93W

RAL

PERMANENT DATUM

GL

ELEVATION

7262 FT

LOG MEASURED FROM

KB

24 FT

ABOVE P.D.

DRILL. MEAS. FROM

KB

ELEVATIONS:

KB 7286 FT

DF 7285 FT

GL 7262 FT

DATE

04-Dec-2017

RUN

TRIP

1

1

SERVICE ORDER

US130063

DEPTH DRILLER

7656 FT

DEPTH LOGGER

7526 FT

BOTTOM LOGGED INTERVAL

7526 FT

TOP LOGGED INTERVAL

2234 FT

TIME STARTED

8:30

TIME FINISHED

16:00

OPERATOR RIG TIME

7.5 HRS

TYPE OF FLUID IN HOLE

FRESHWATER

FLUID DENSITY

NA

FLUID SALINITY

NA

FLUID LEVEL

30 FT

LOGGED CEMENT TOP

1484 FT

WELLHEAD PRESSURE

0 PSI

MAXIMUM HOLE DEVIATION

NA

NOMINAL LOGGING SPEED

10 FMIN

MAX. RECORDED TEMP.

236 DEGF

REFERENCE LOG

BAKER HUGHES BOND LOG

REFERENCE LOG DATE

3-DEC-2017

EQUIP. NO.

6670HL

LOCATION

WOODWARD

RECORDED BY

C.COFFELT

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 1 TRIP 1: *2 OPERATIONS IN WELLBORE*

OPERATION 2: RPM/GR/CCL RAN IN COMBINATION

LOGGED WITH 0 PSI ON WELLHEAD

SJ:5669-5691

SJ:6672-6694

CREW: J.PENA,C.BAYNE,A.SHAHNOOSHI,T.NEWELL

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	2	TELEMETRY	8250 EA/ 8248 ED	11745584/10193585	FREE
1	2	GR	8262 XA	10196540	FREE
1	2	RPM	8281 EA	1088726	FREE
1	2	RPM	8283 PA	10184883	FREE
1	2	RPM	8281FA	10315572	FREE
1	2	TEMP	8255XA	120516	FREE

RPM MAIN PASS GRAND SANDS

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 2

Plotted: Mon Dec 04 17:58:02 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_19_06W\p353h04.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2214.000 ft BOTTOM DEPTH: 2850.840 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

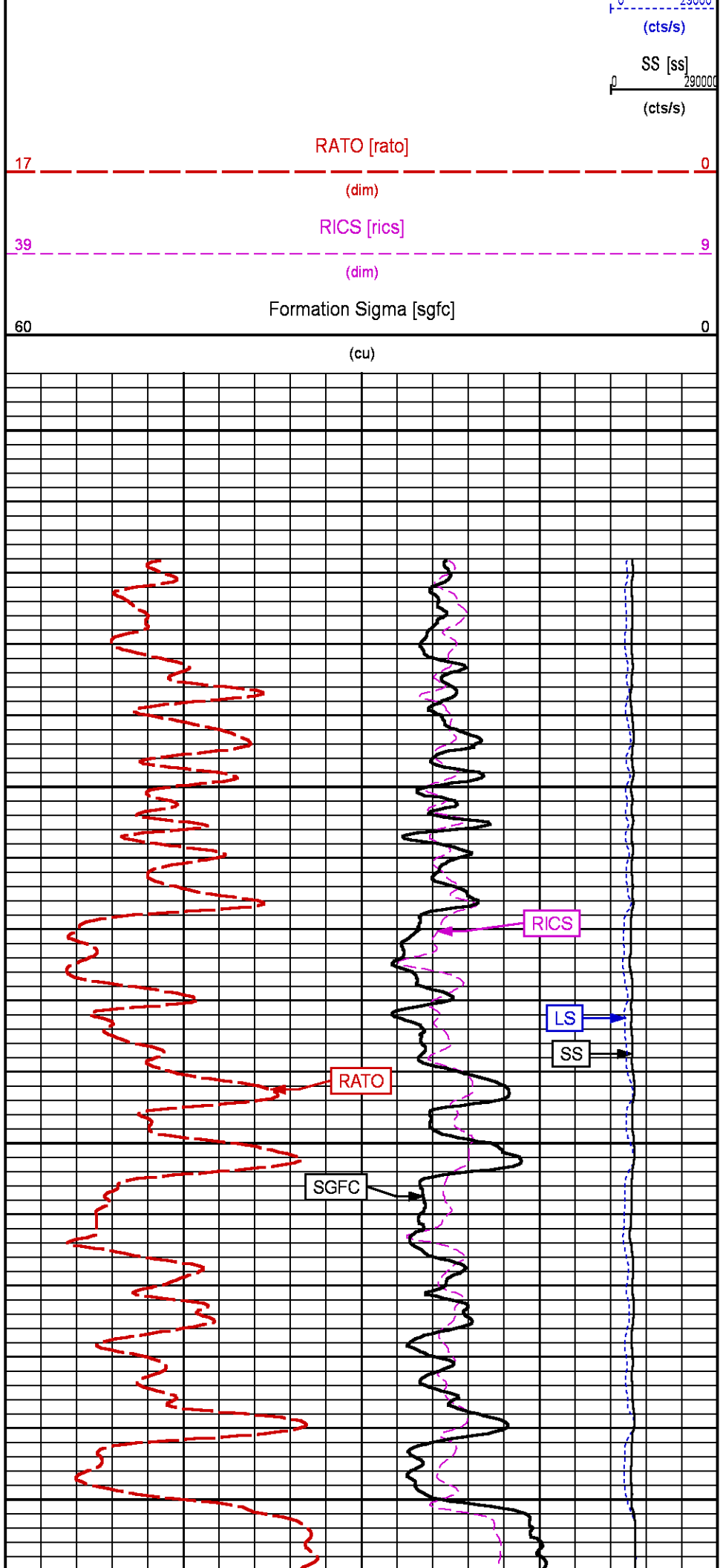
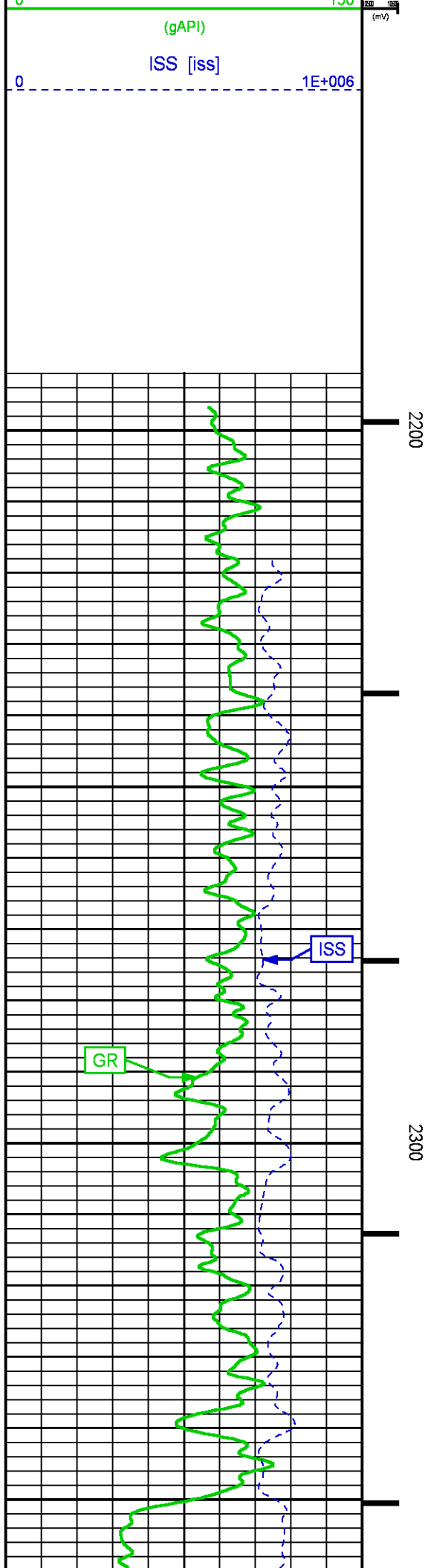
CURVE MEASURE POINT OFFSET

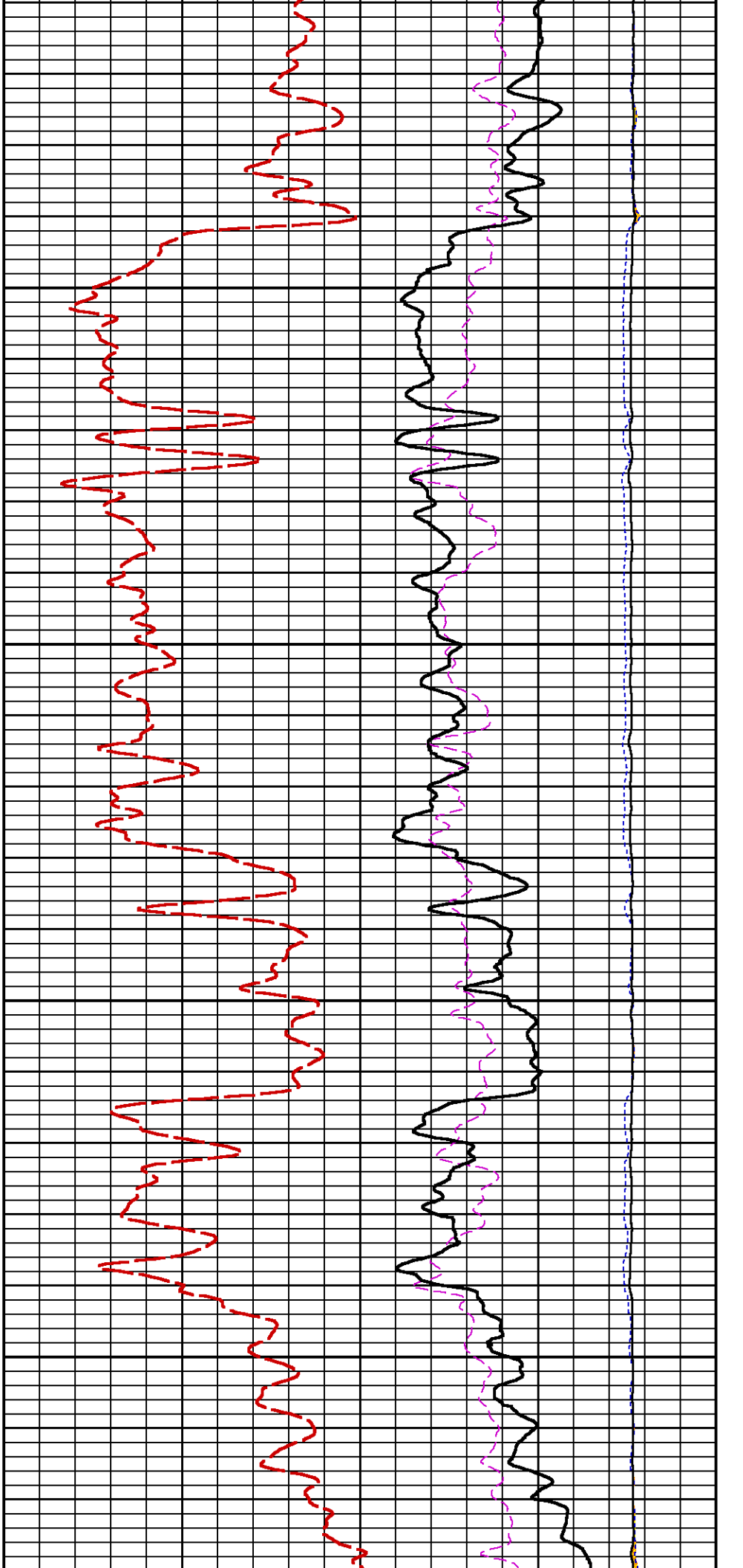
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-22.50	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.50	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\LARAMIE_RPM_MN_06W_GS.fvpdf [5"/100' Scale]
Plot Interval : 2192.5 - 2842 Feet

Data File 1 : F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\RPM_MN_06W_GS.xtf
Created On : N/A
Company : LARAMIE ENERGY
Well : BRUTON 19-06W
Field : VEGA
File Interval : 2191.75 - 2847.75 Feet
OCT : p353h

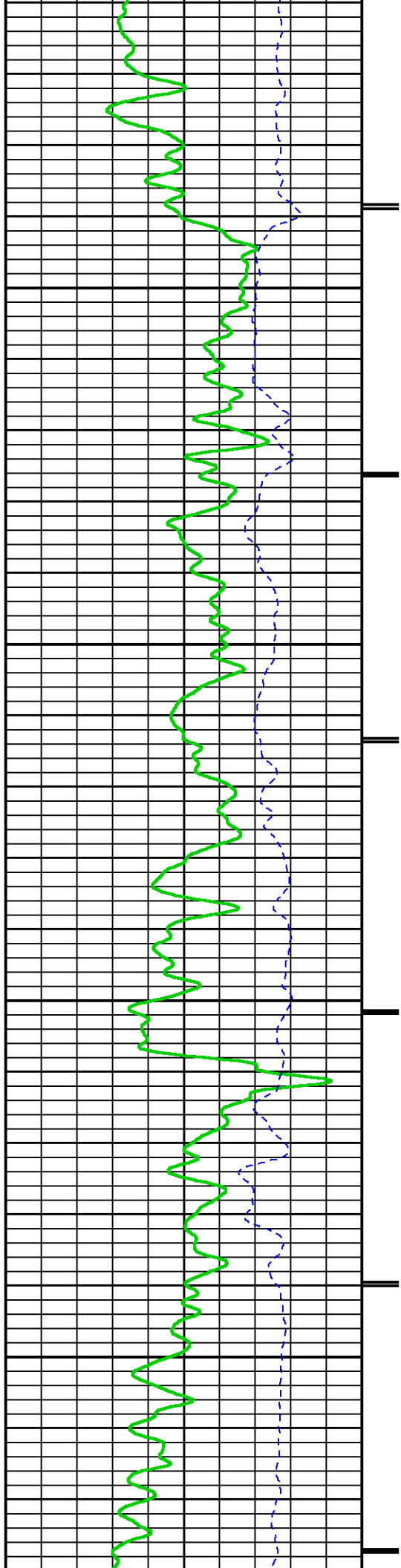


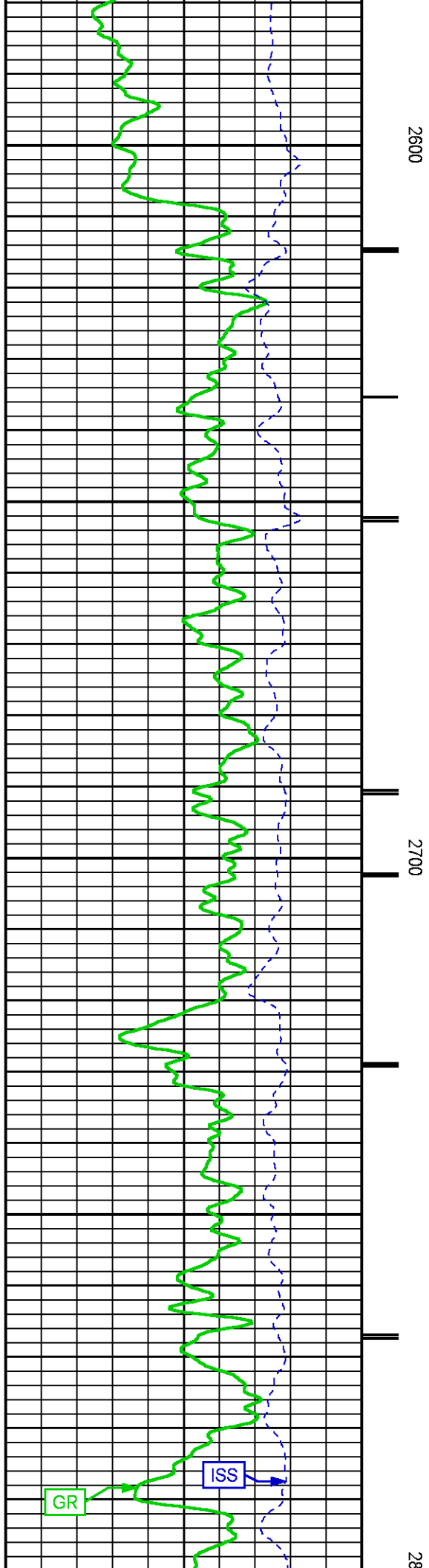
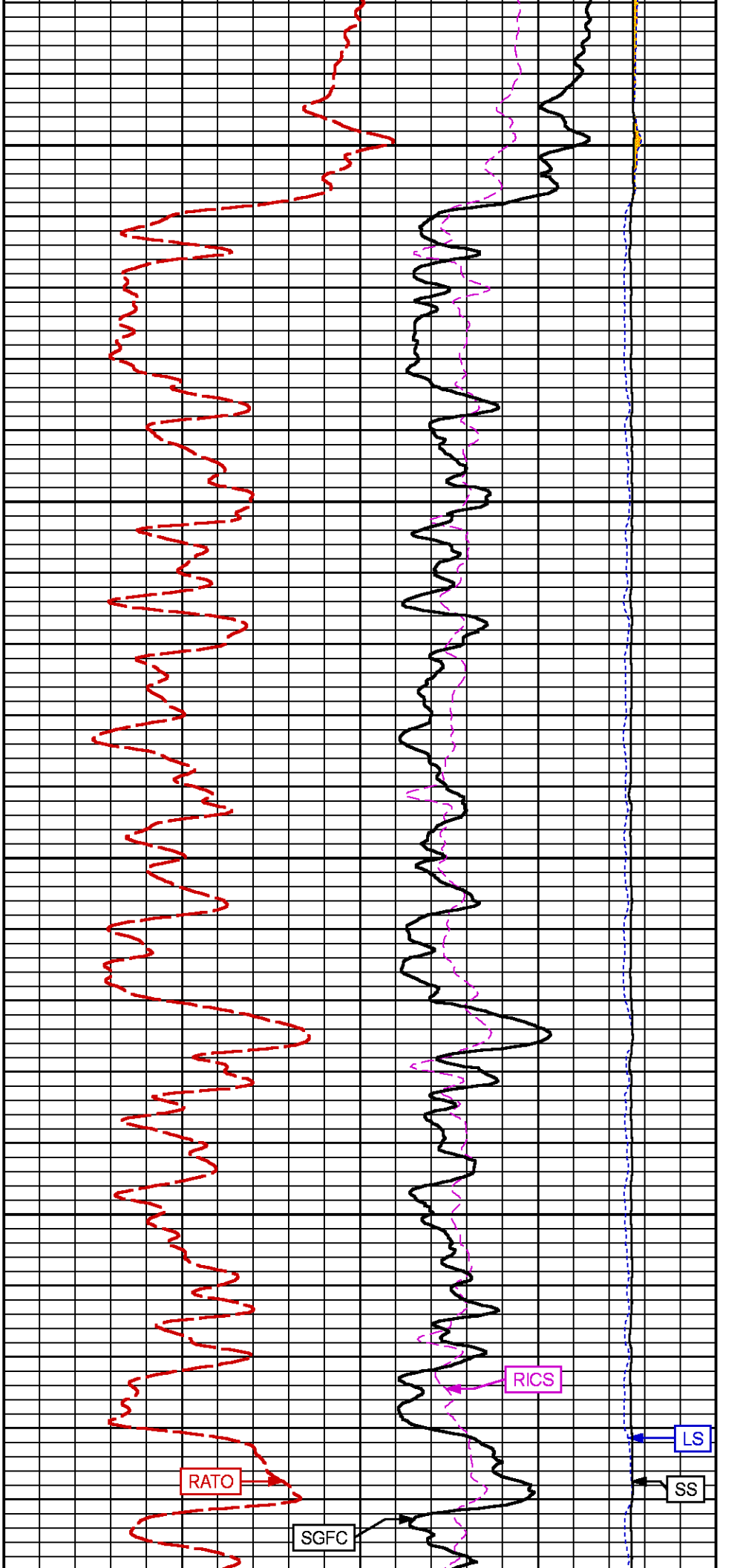


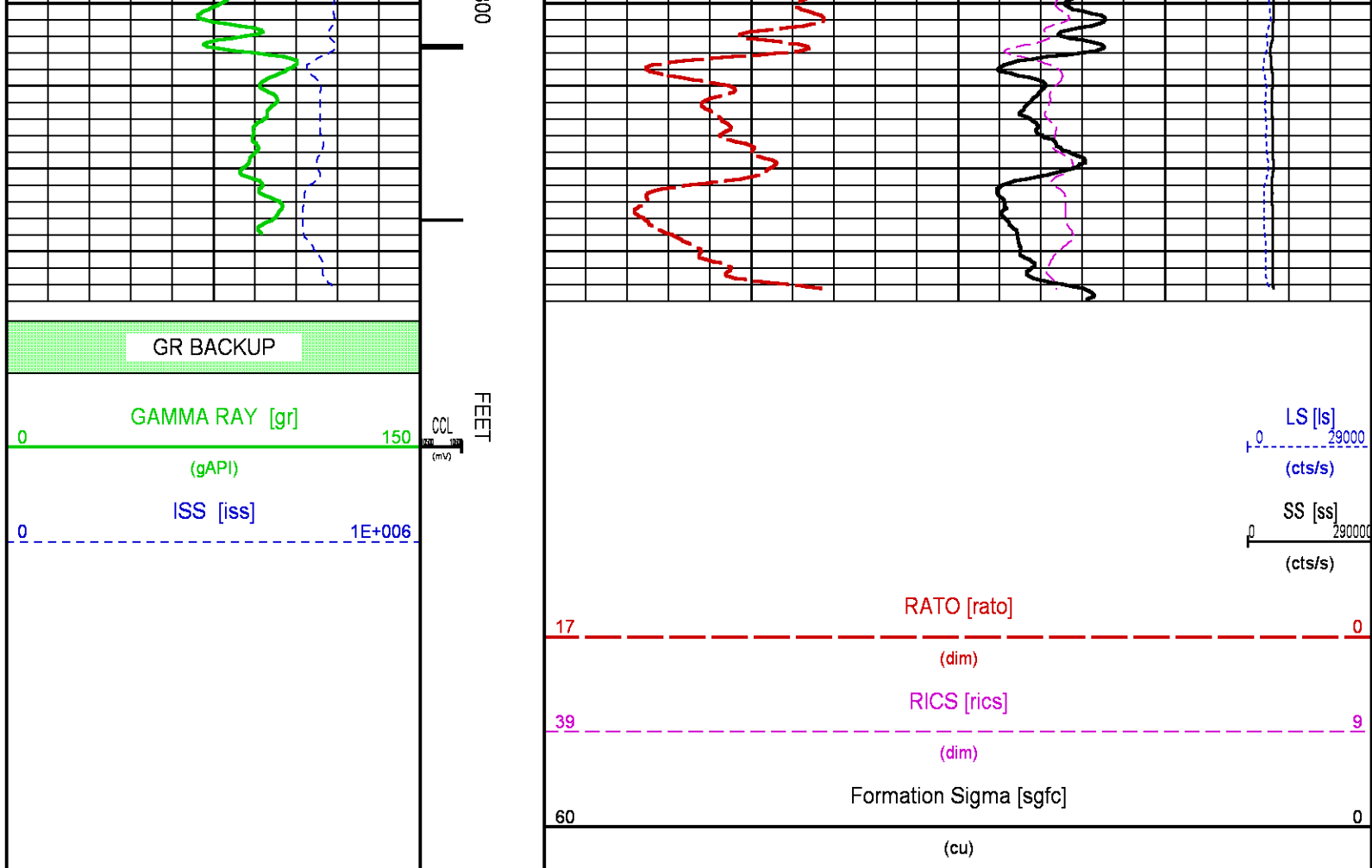


2400

2500







RPM 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: 2

Plotted: Mon Dec 04 17:54:09 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_19_06W\p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5083.250 ft BOTTOM DEPTH: 7532.750 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		" "

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_19_06W\p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4316.152 ft BOTTOM DEPTH: 5276.729 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

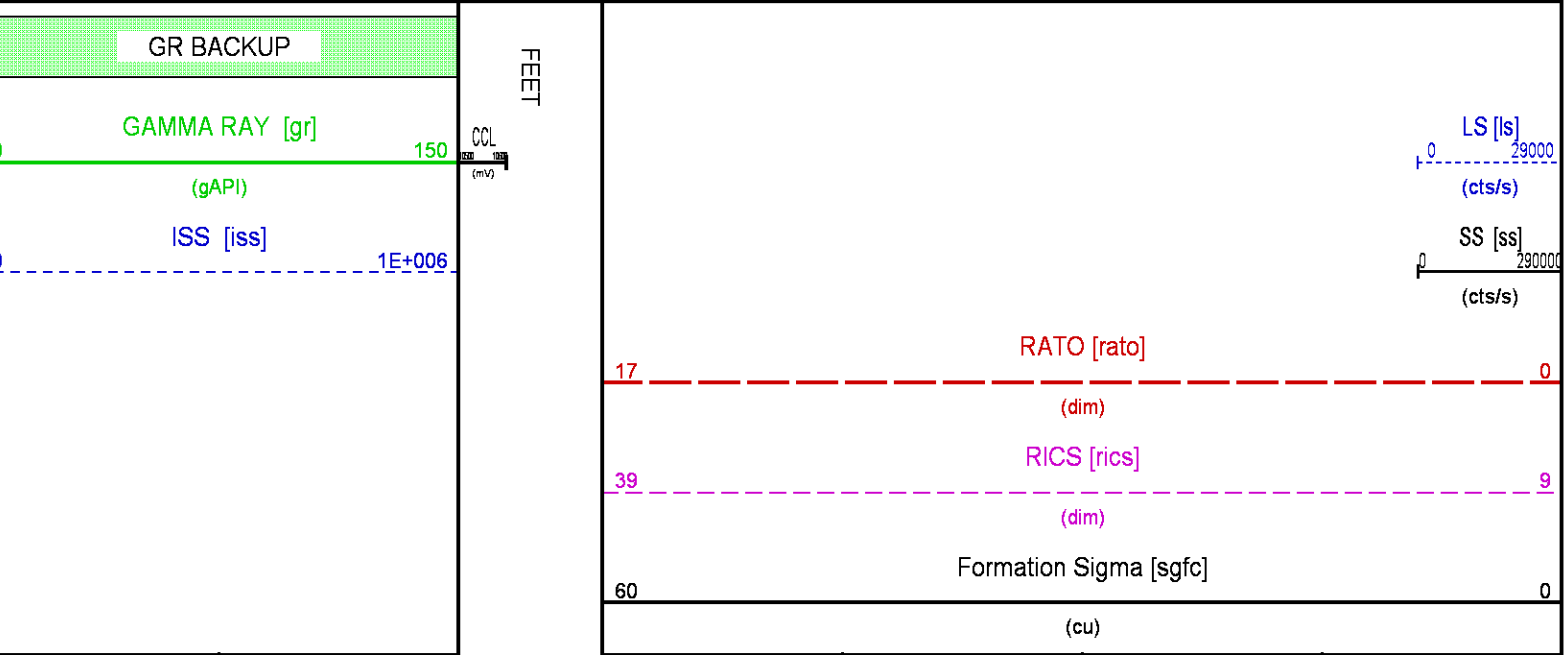
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

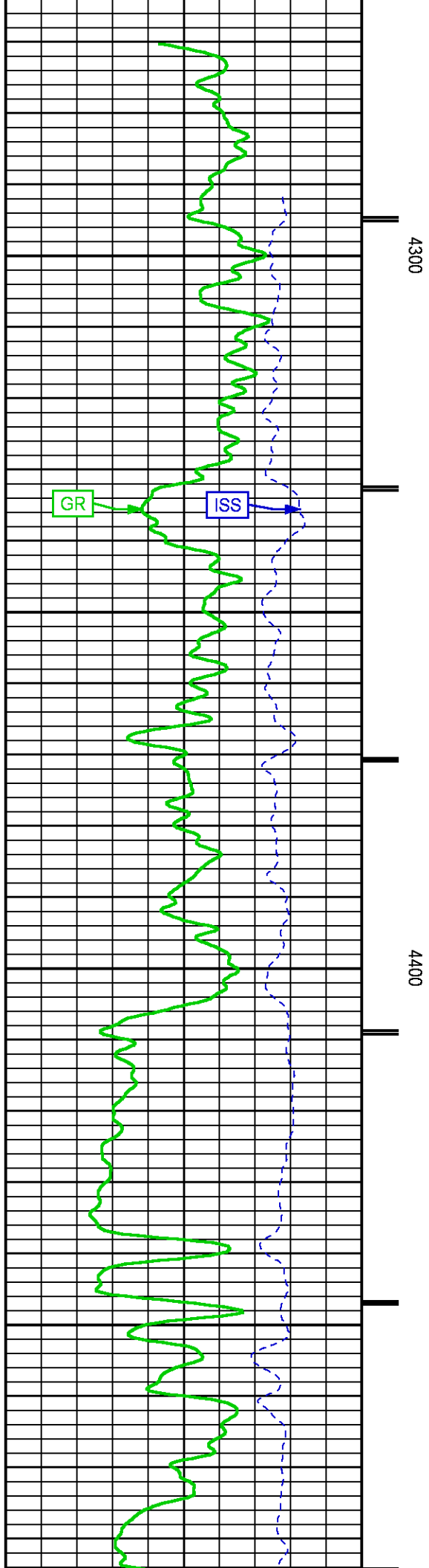
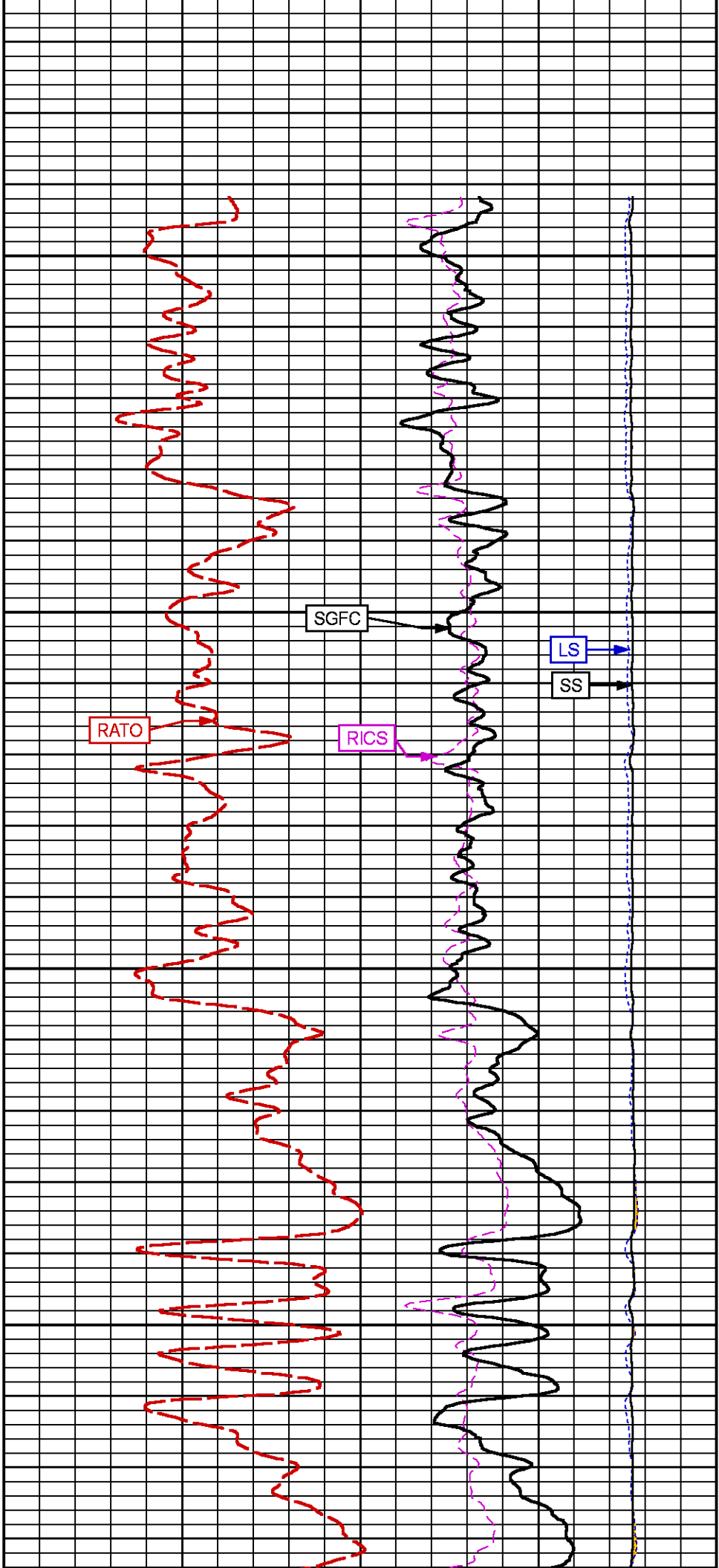
CURVE MEASURE POINT OFFSET

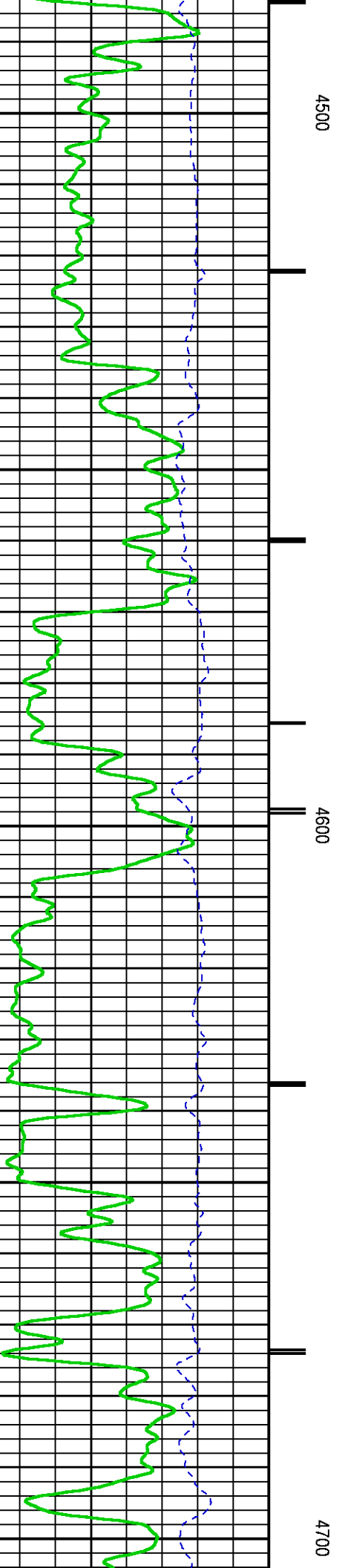
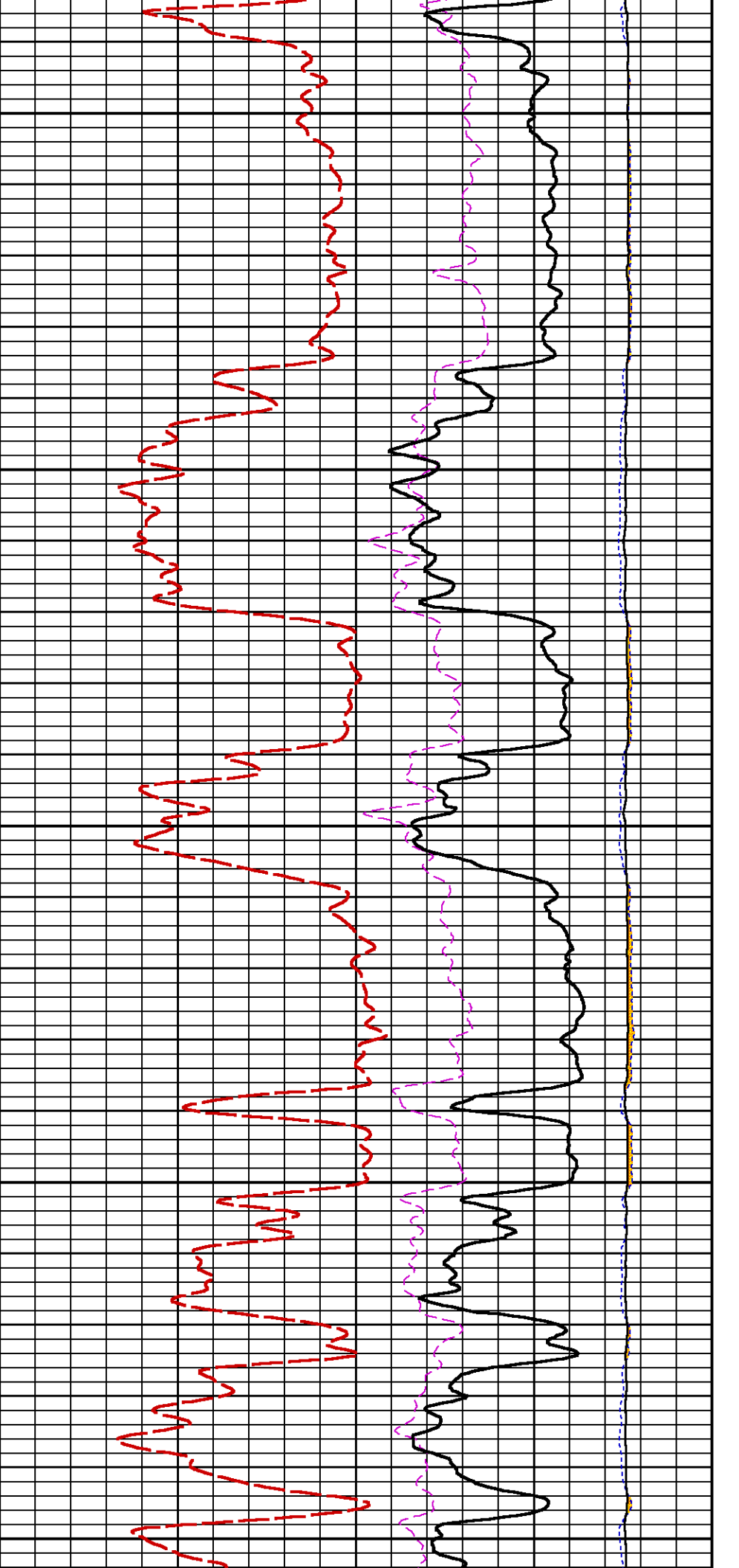
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-22.50	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.50	LS	-9.50	RICS	-9.50	SS	-9.50

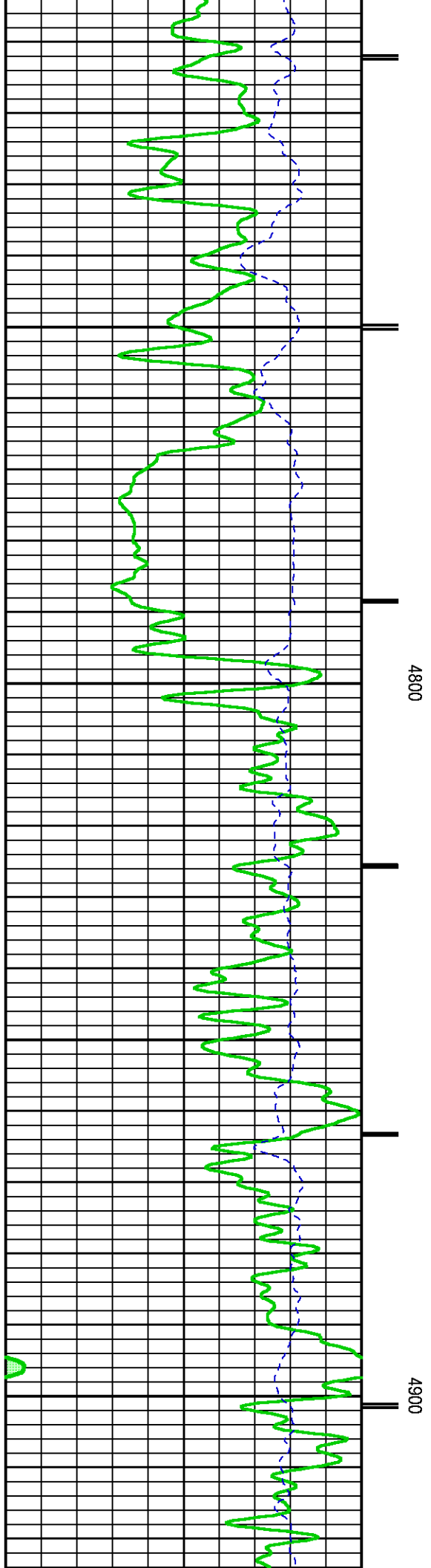
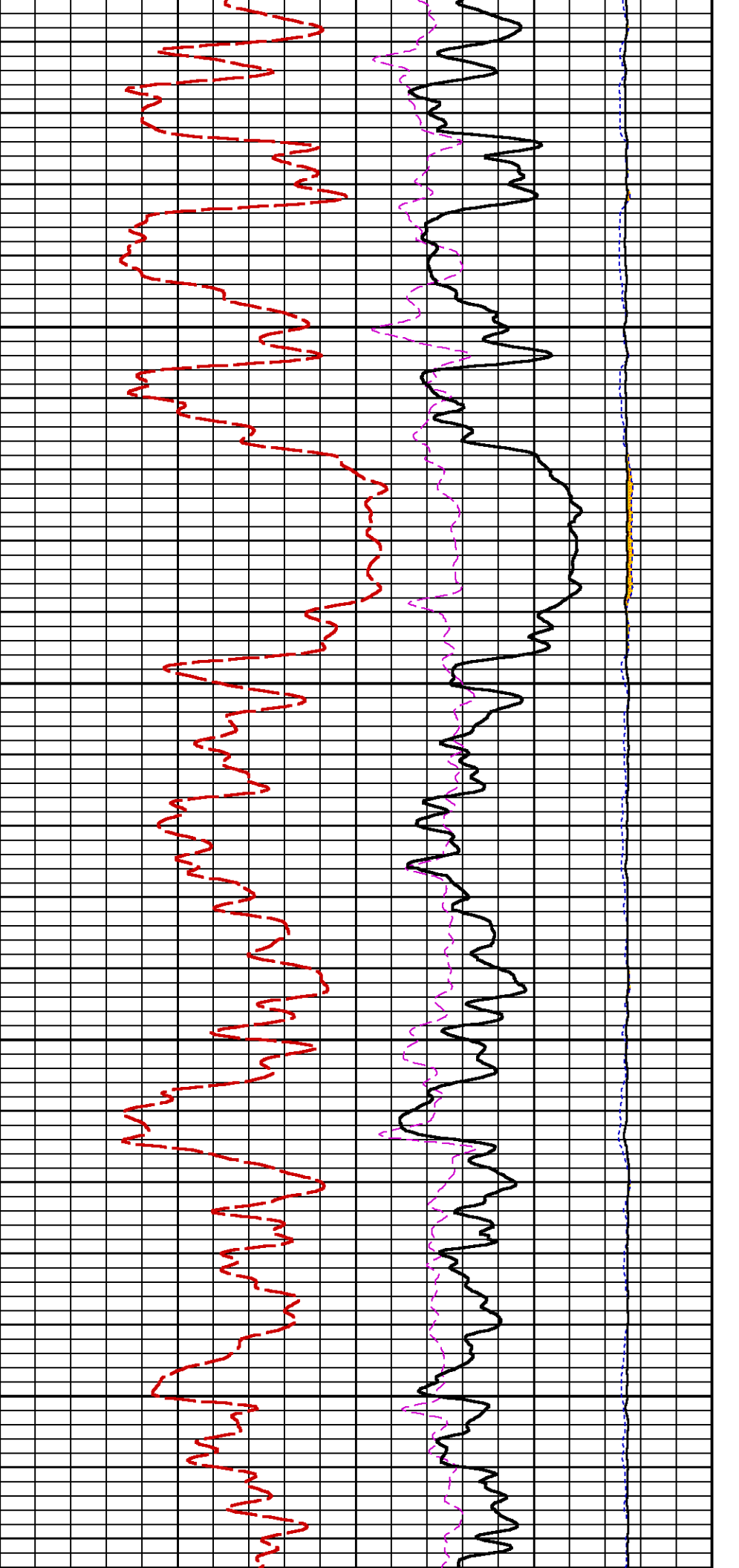
Presentation : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\LARAMIE_RPM_MN_WF_06W.fvpdf [5"/100' Scale]
Plot Interval : 4265.25 - 7492.5 Feet

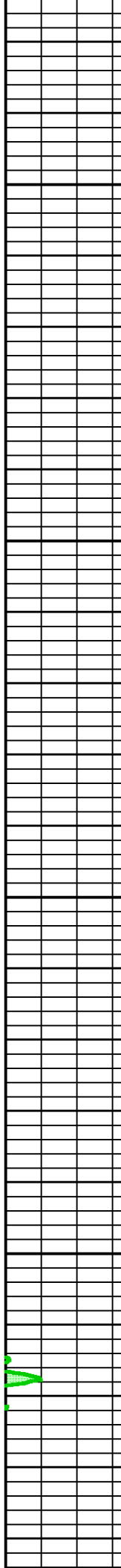
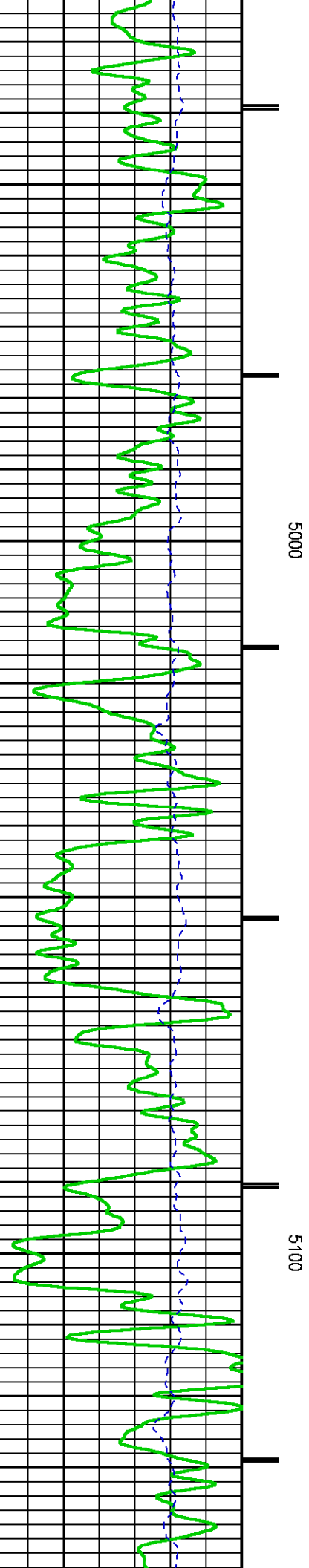
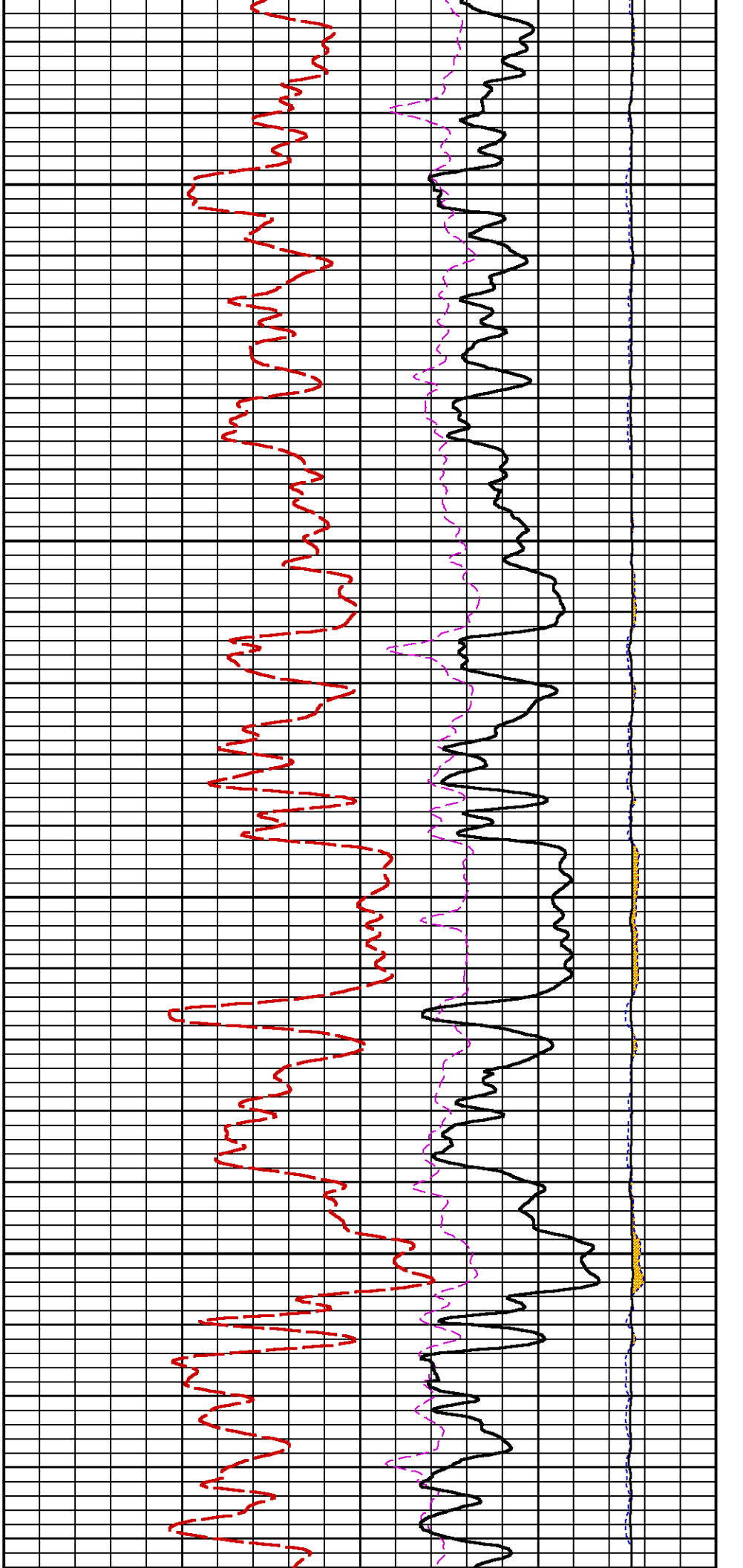
Data File 1 : F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\RPM_MN_WF_06W.xtf
Created On : N/A
Company : LARAMIE ENERGY
Well : BRUTON 19-06W
Field : VEGA
File Interval : 4265.25 - 7534.5 Feet
OCT : p353h

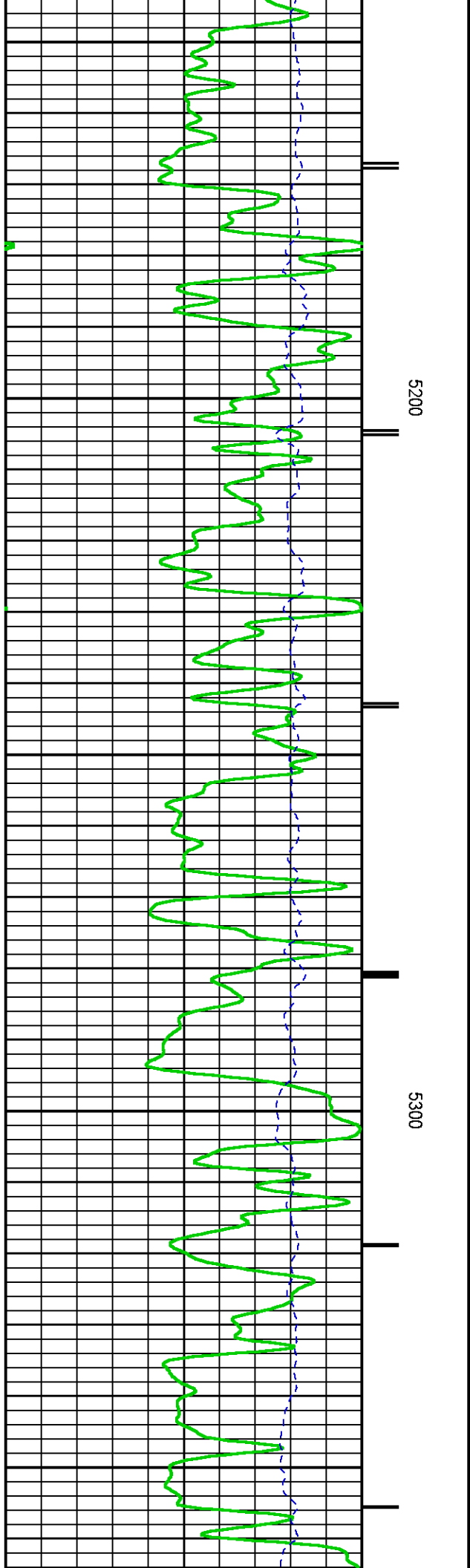
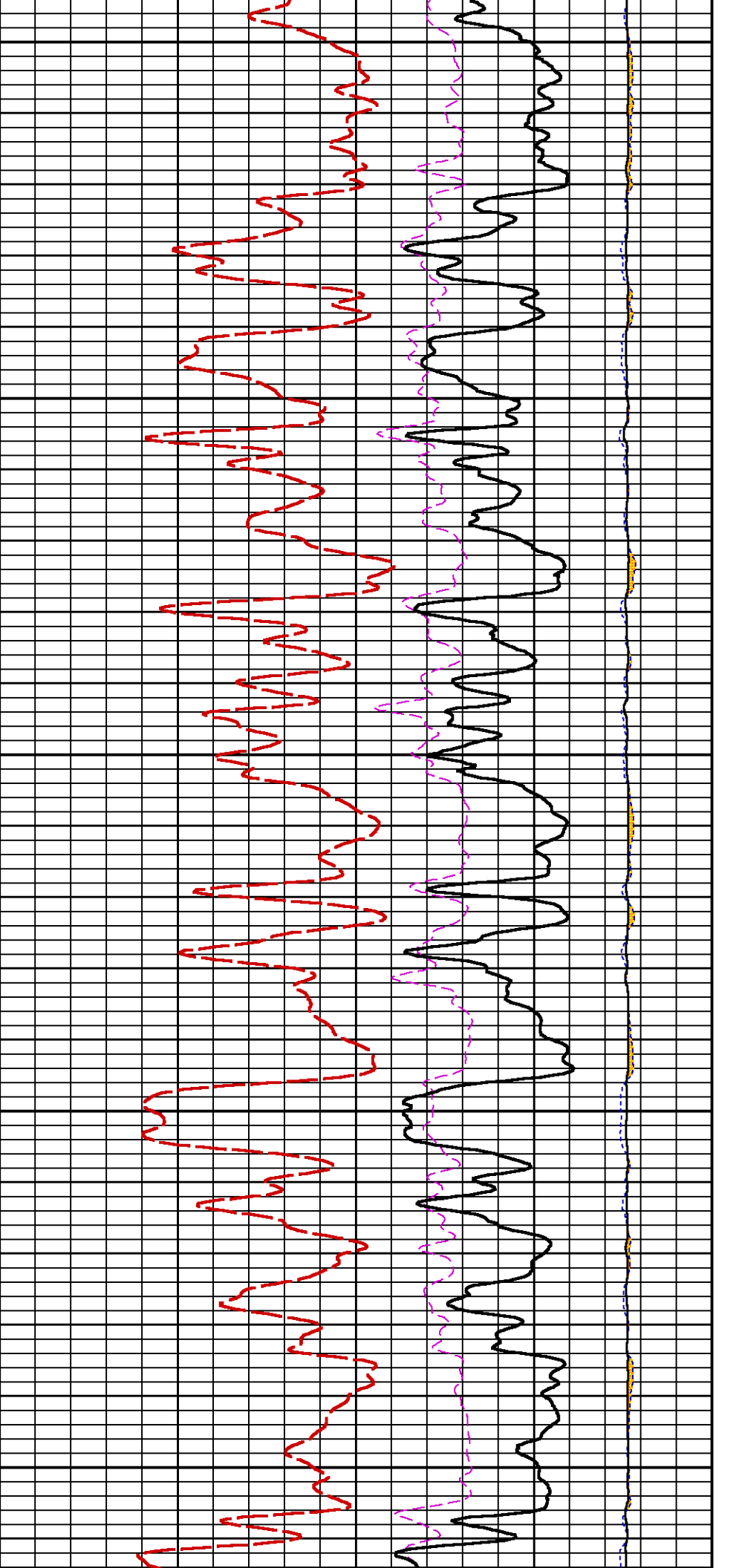


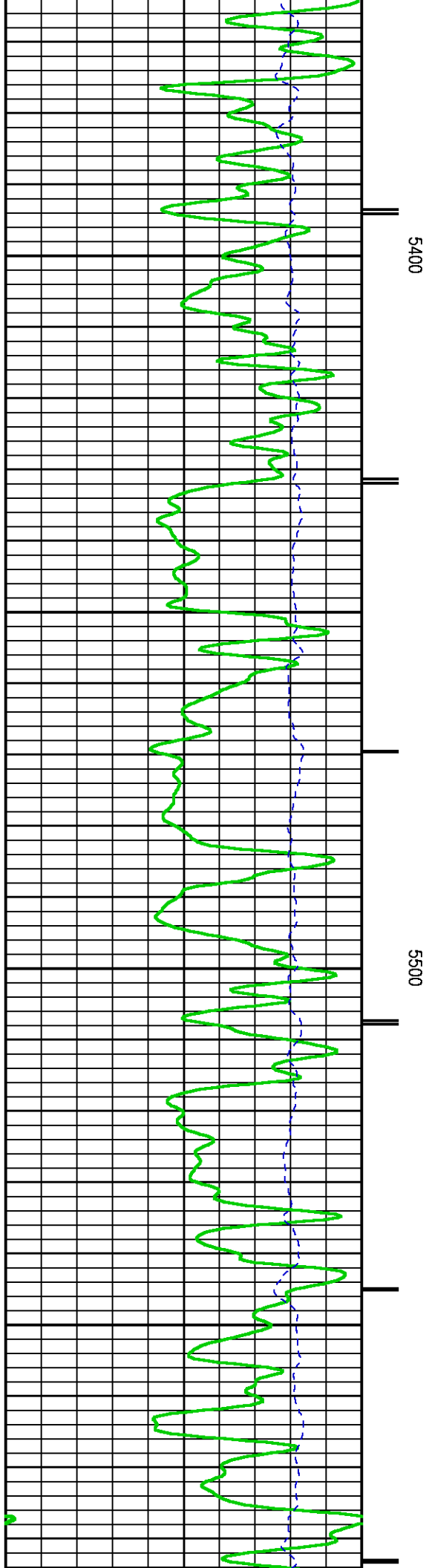
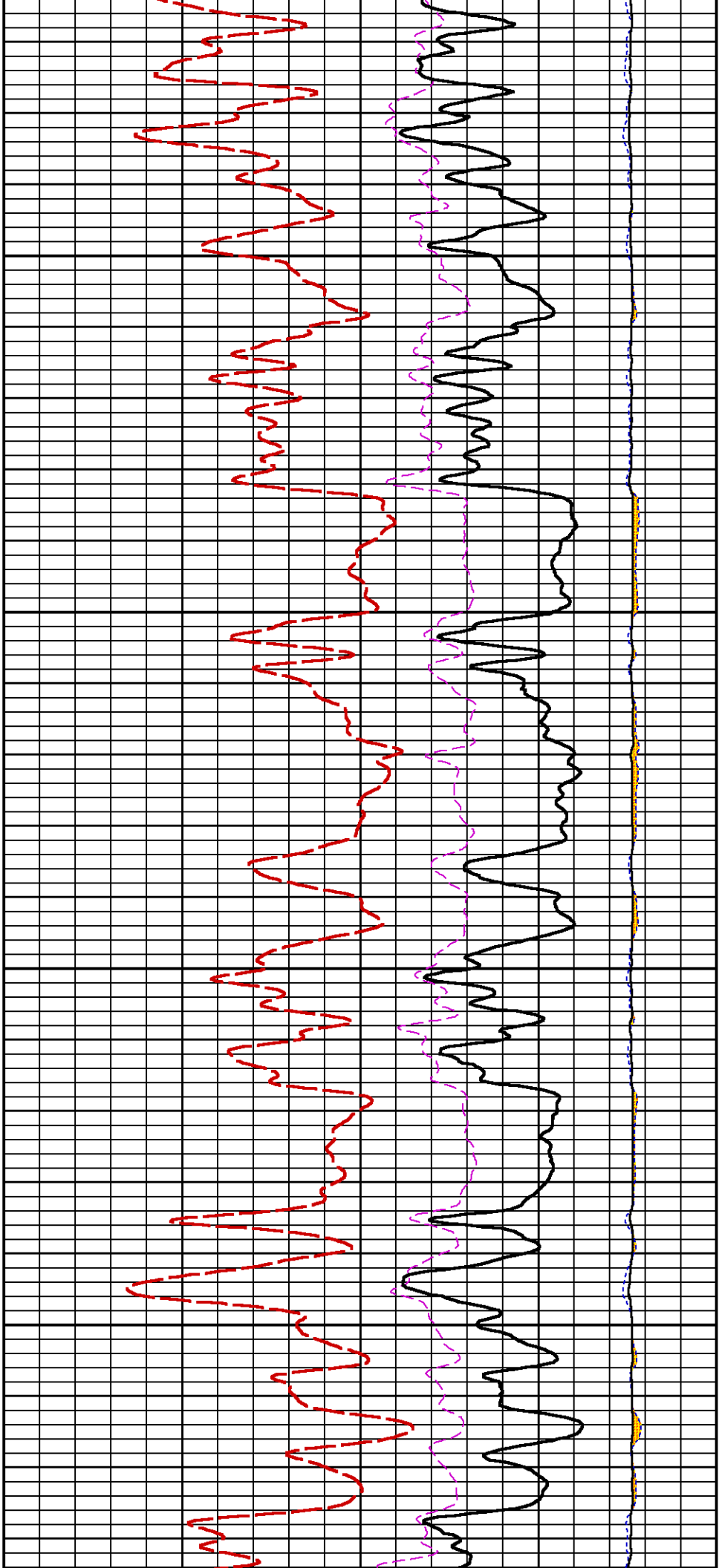


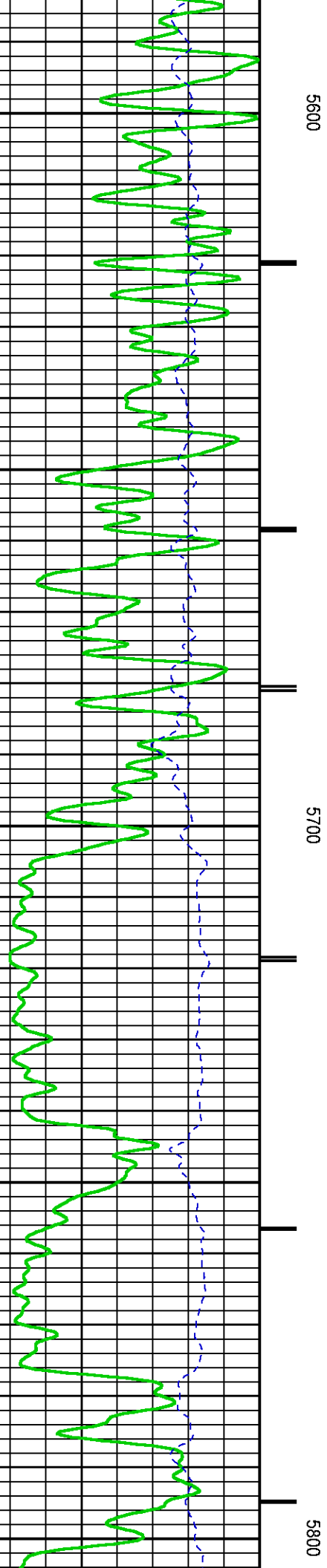
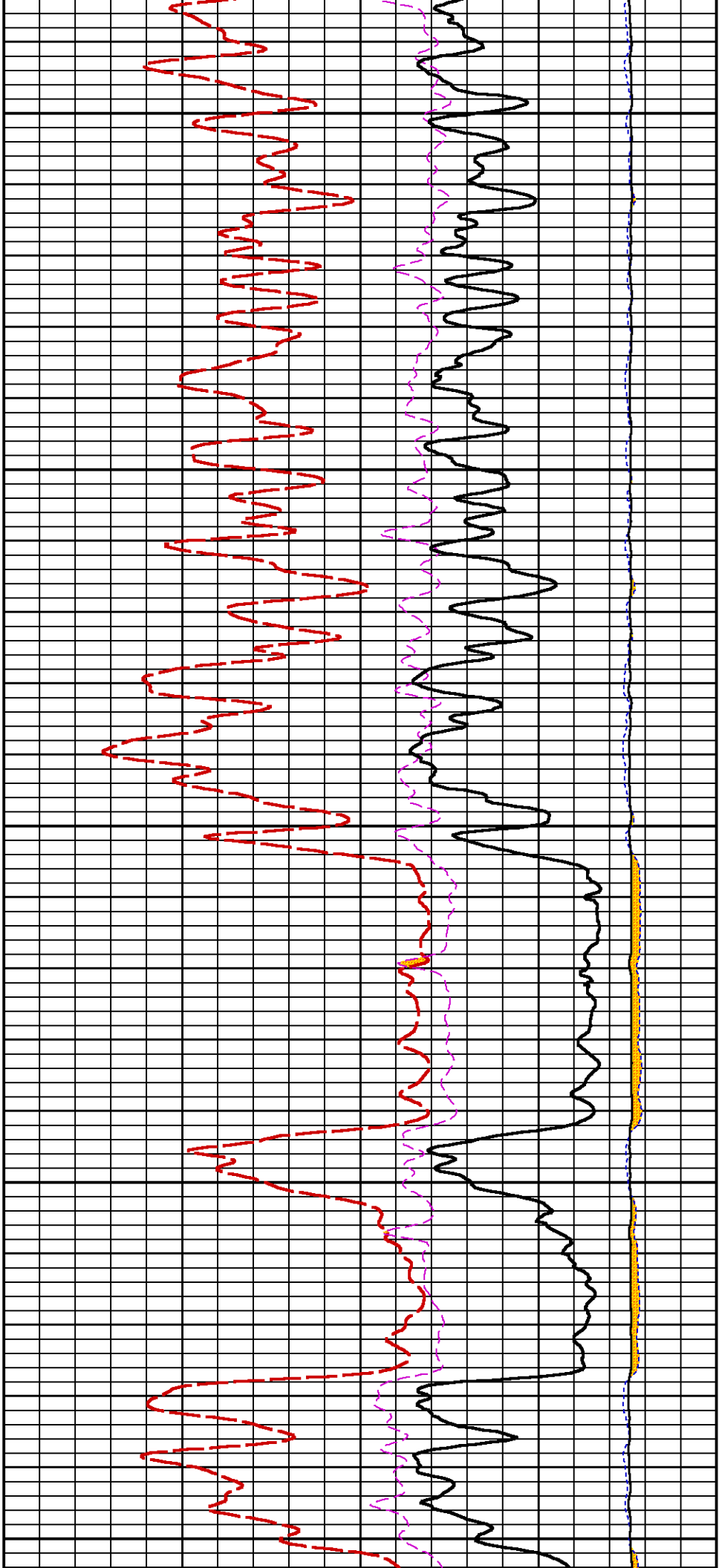


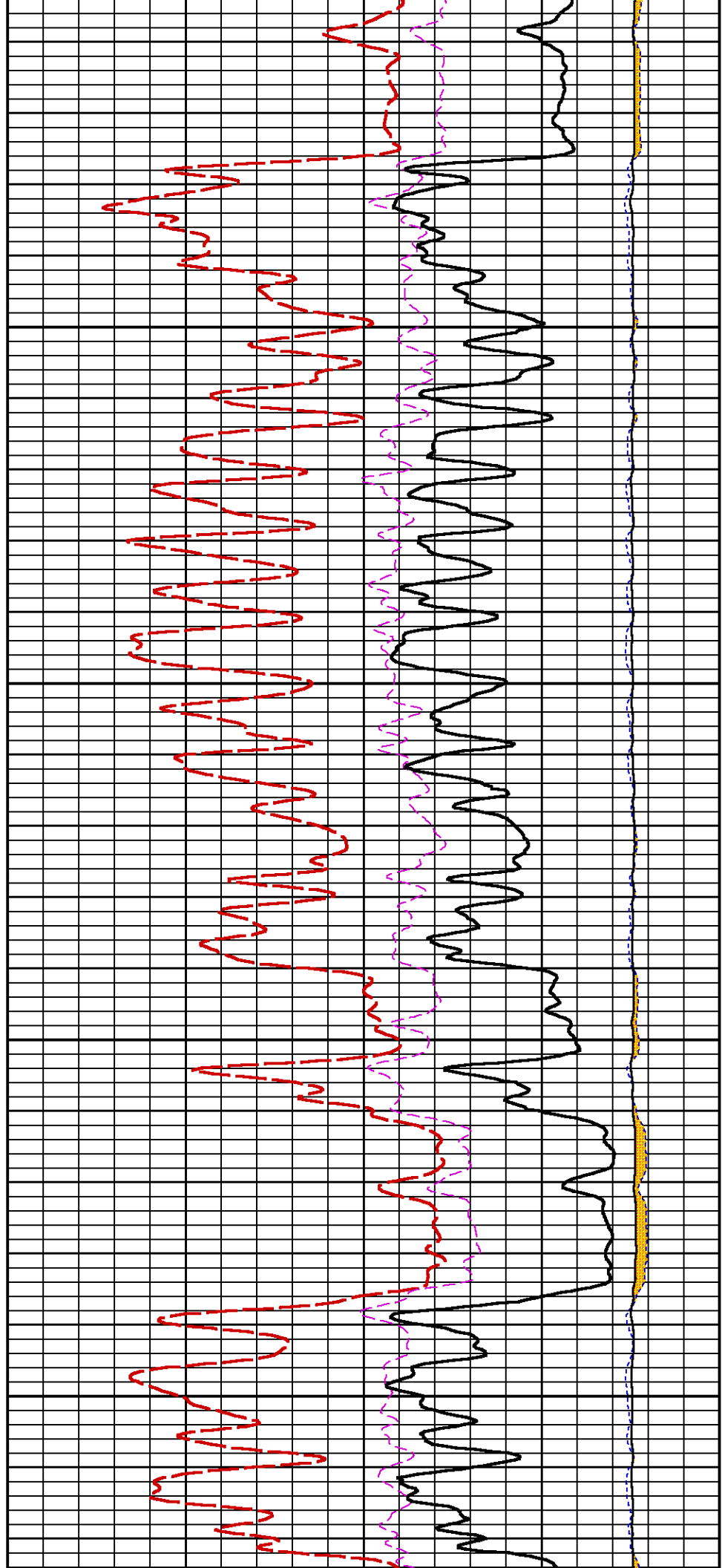
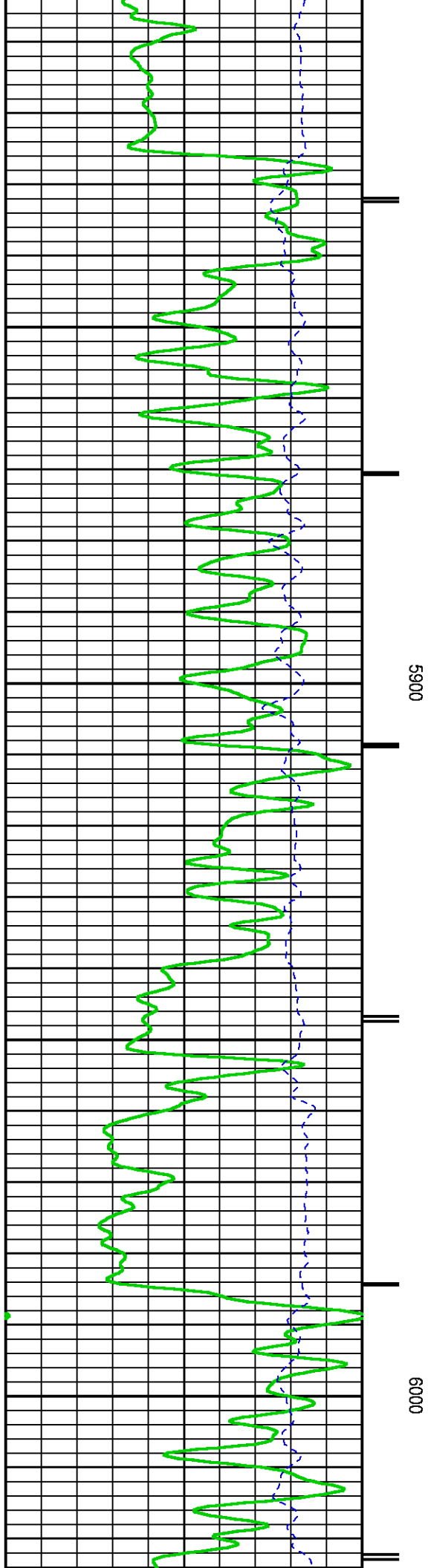


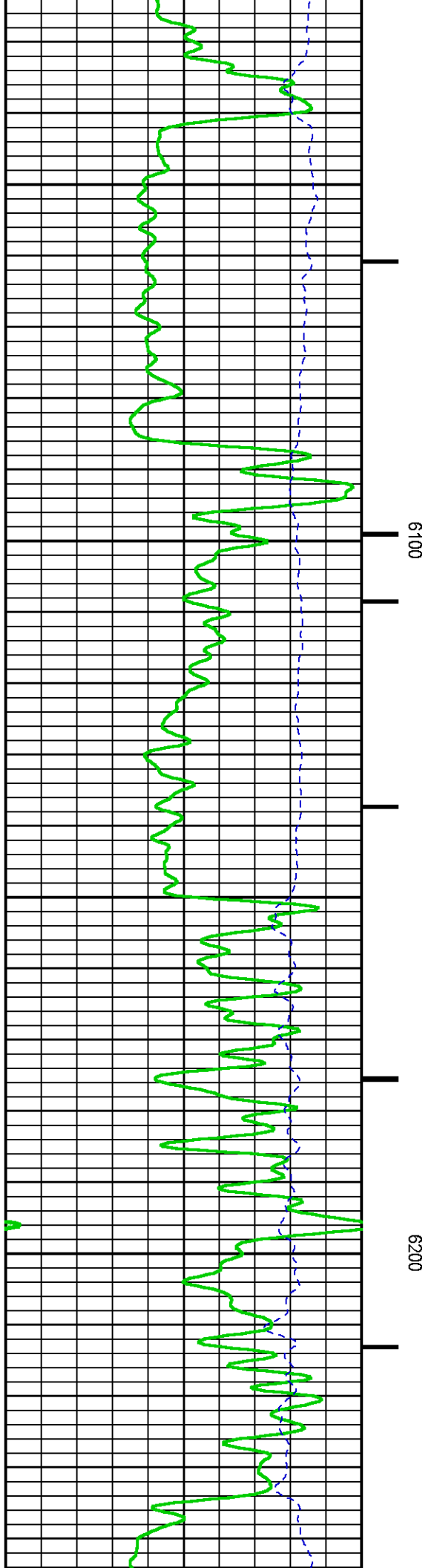
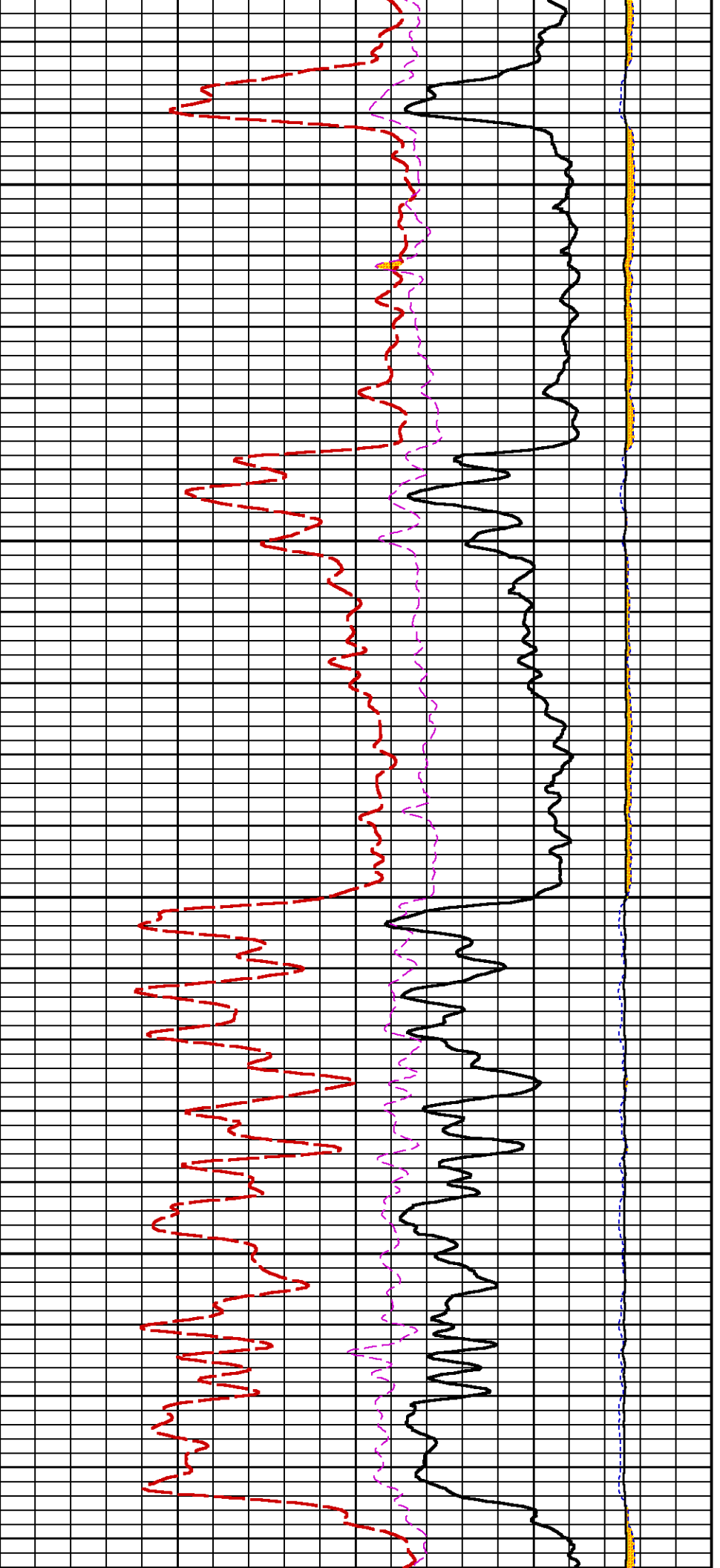


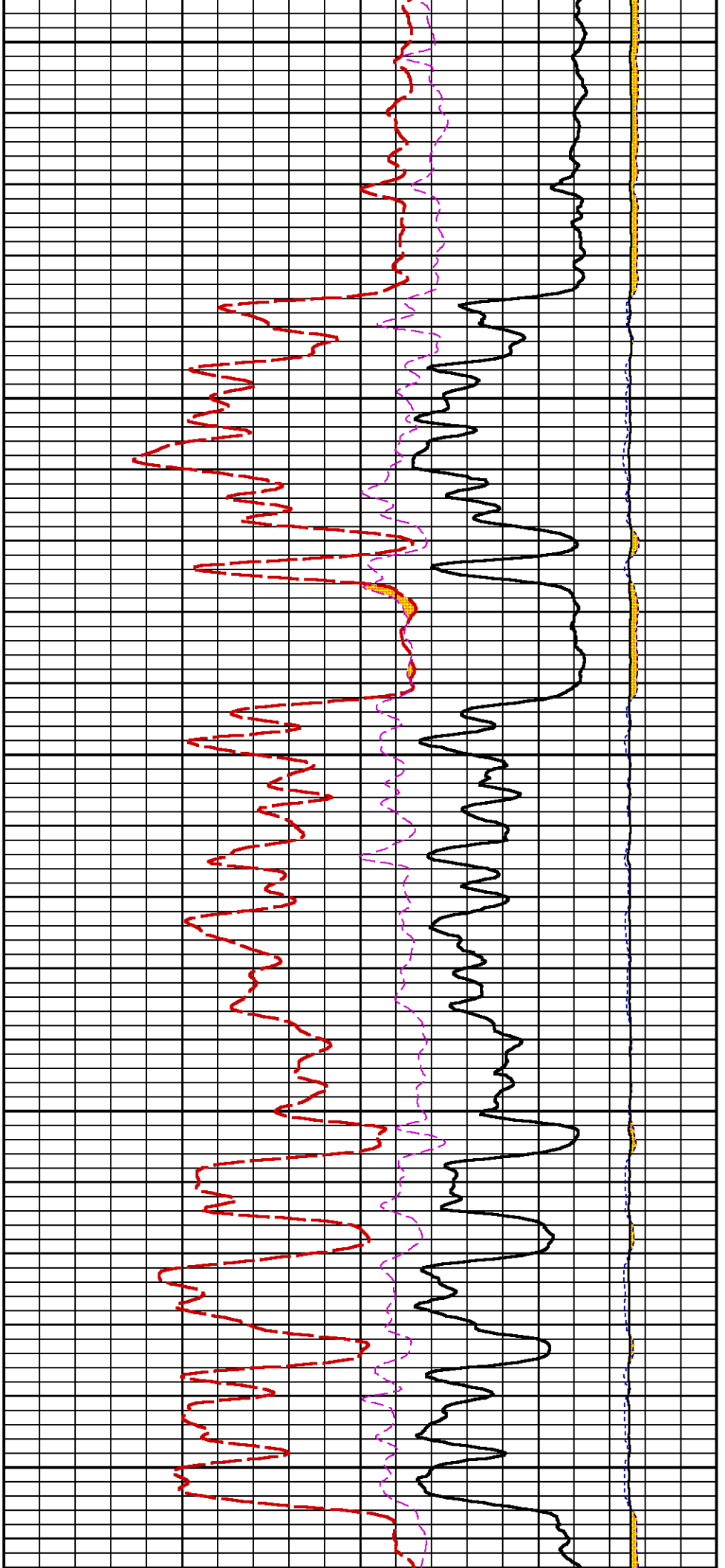






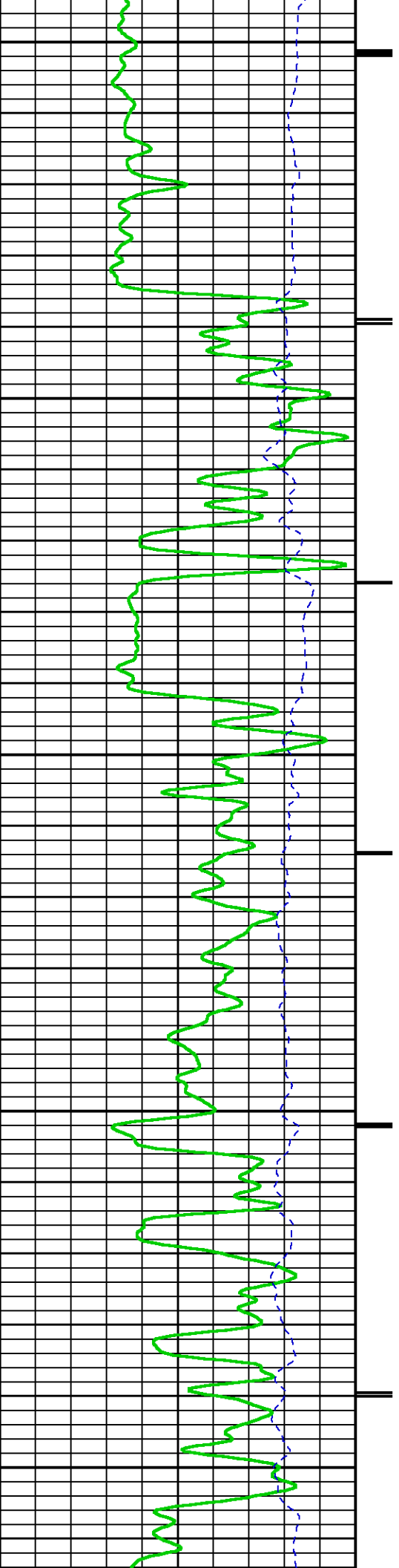


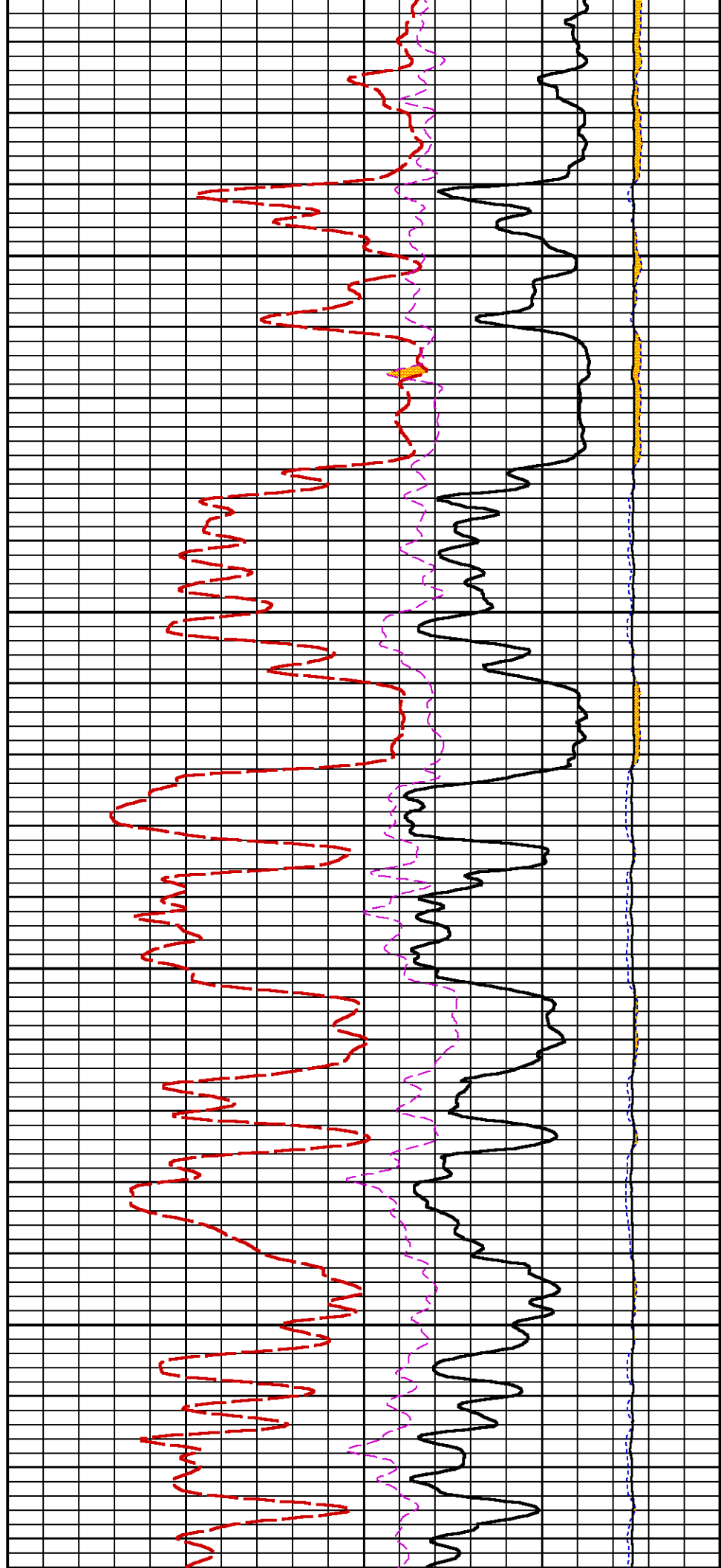
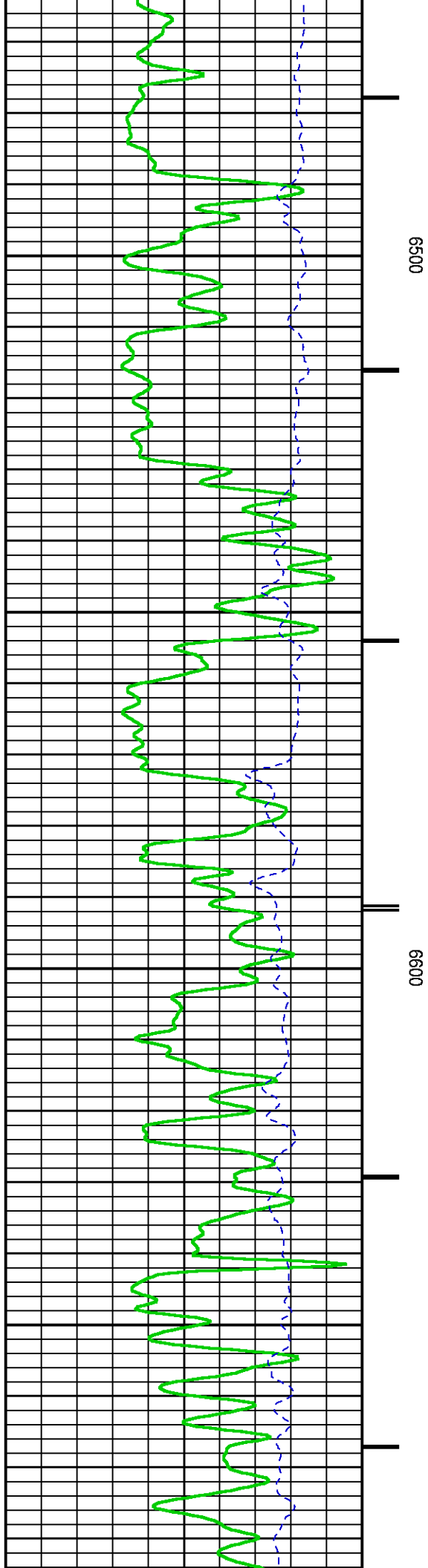


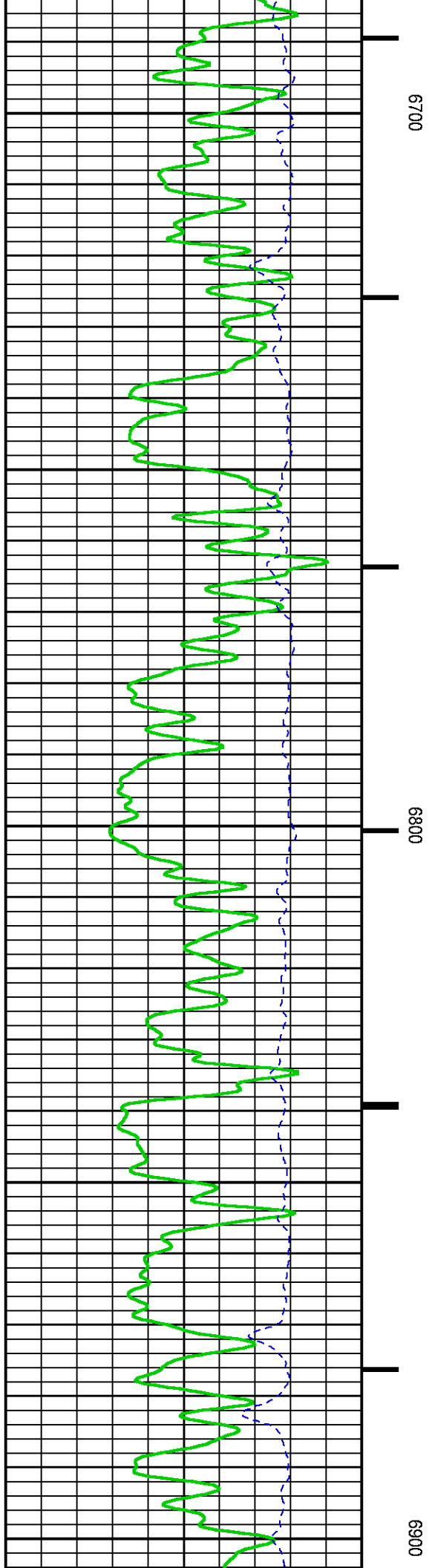
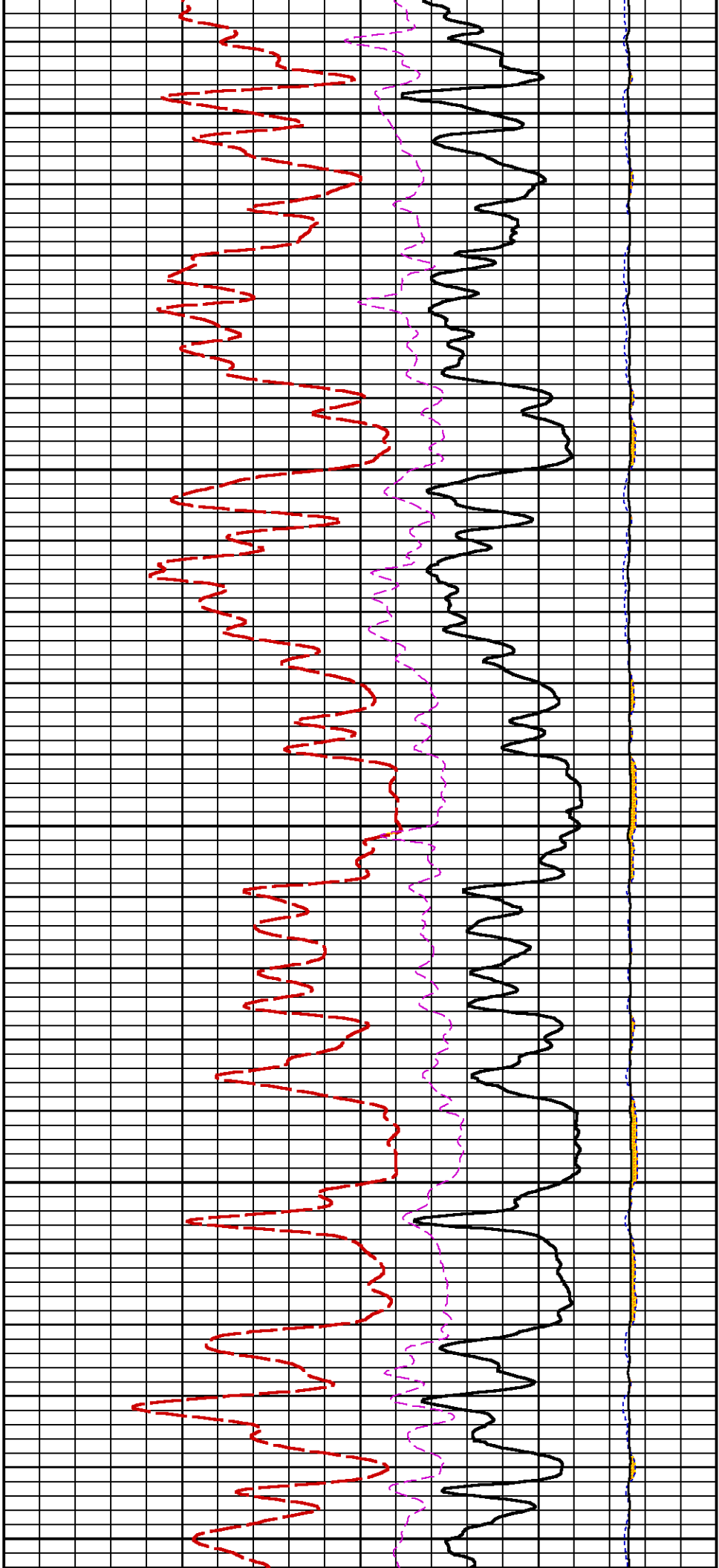


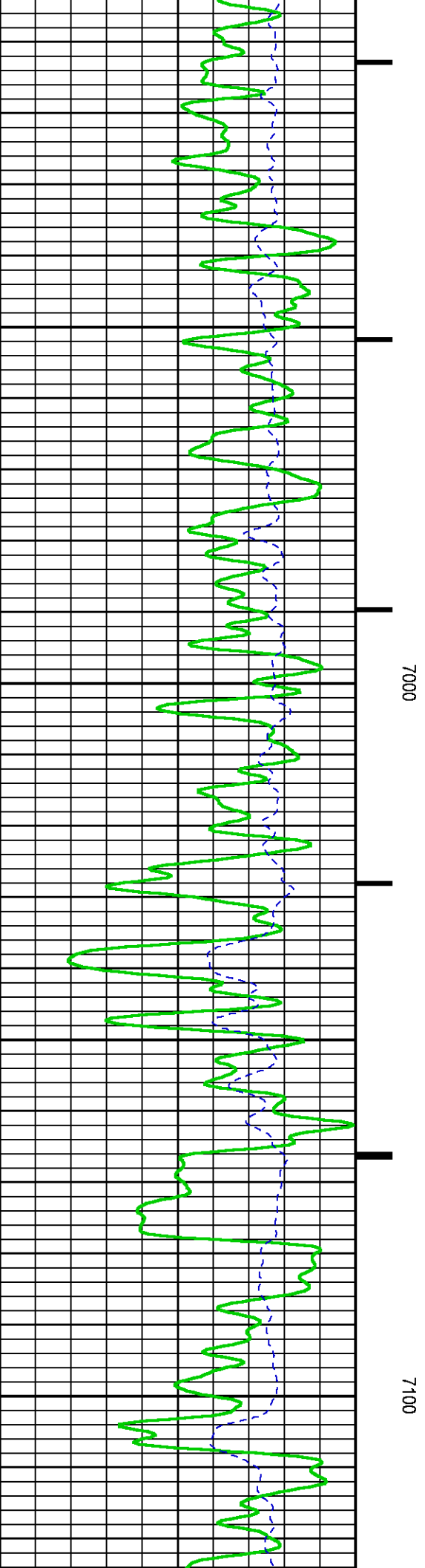
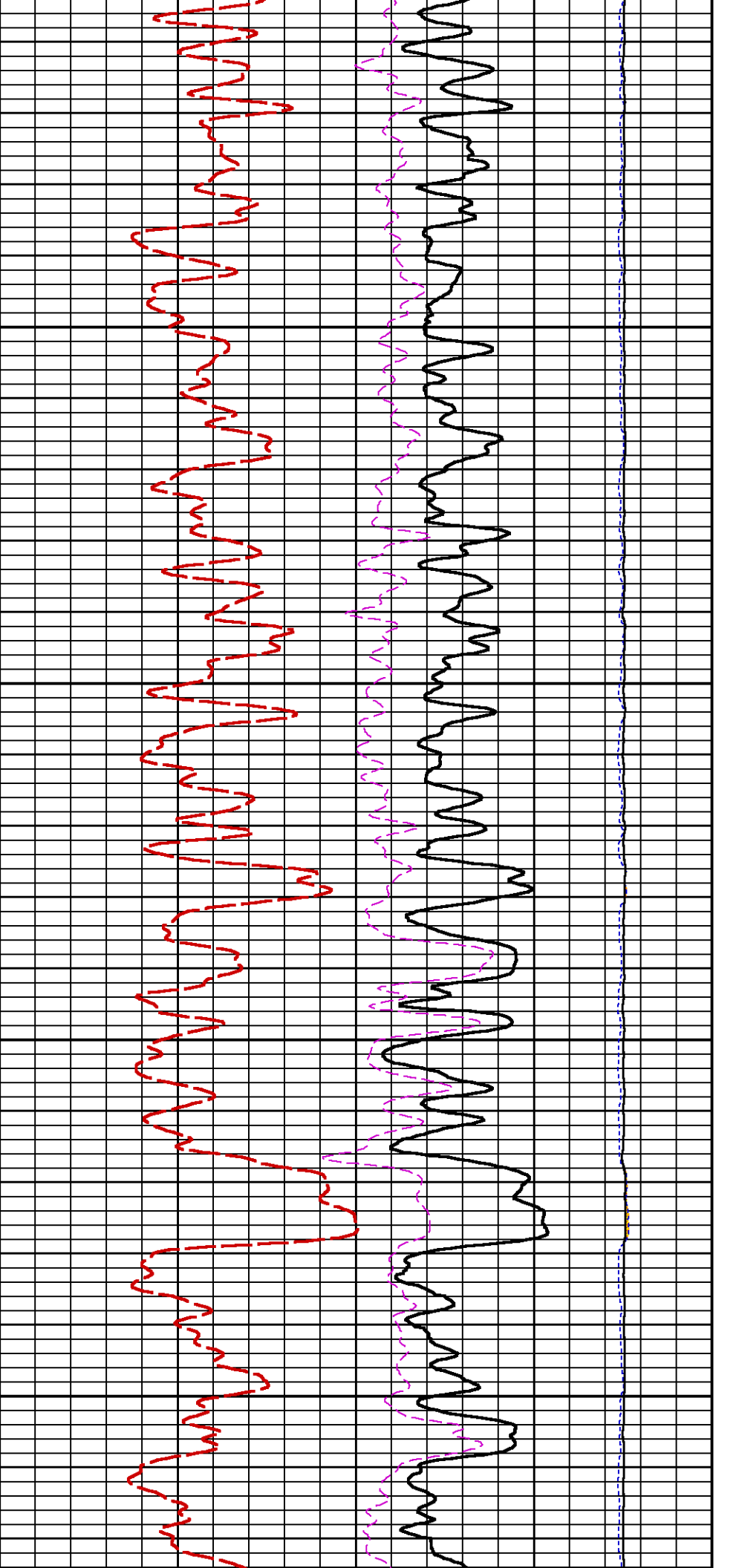
6300

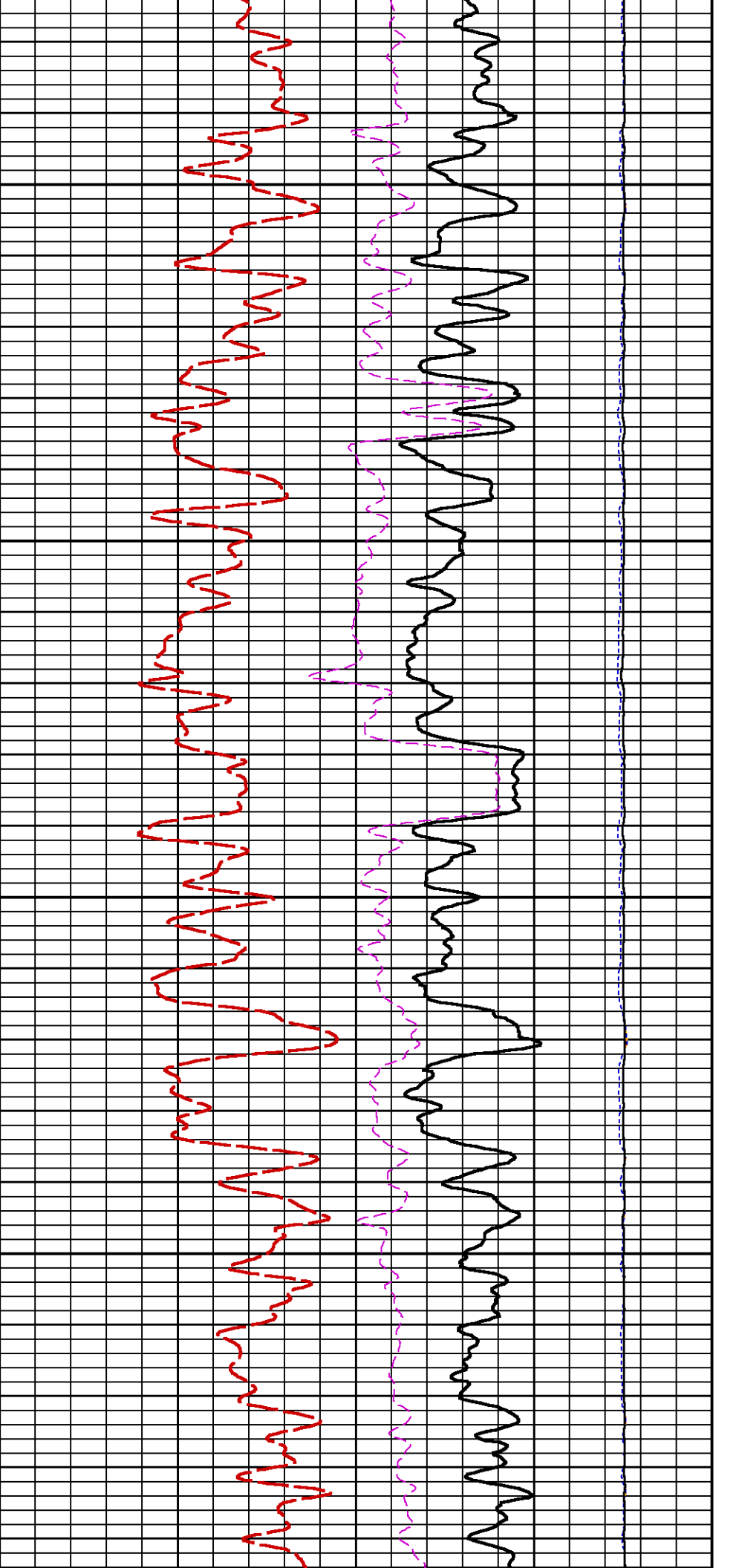
6400





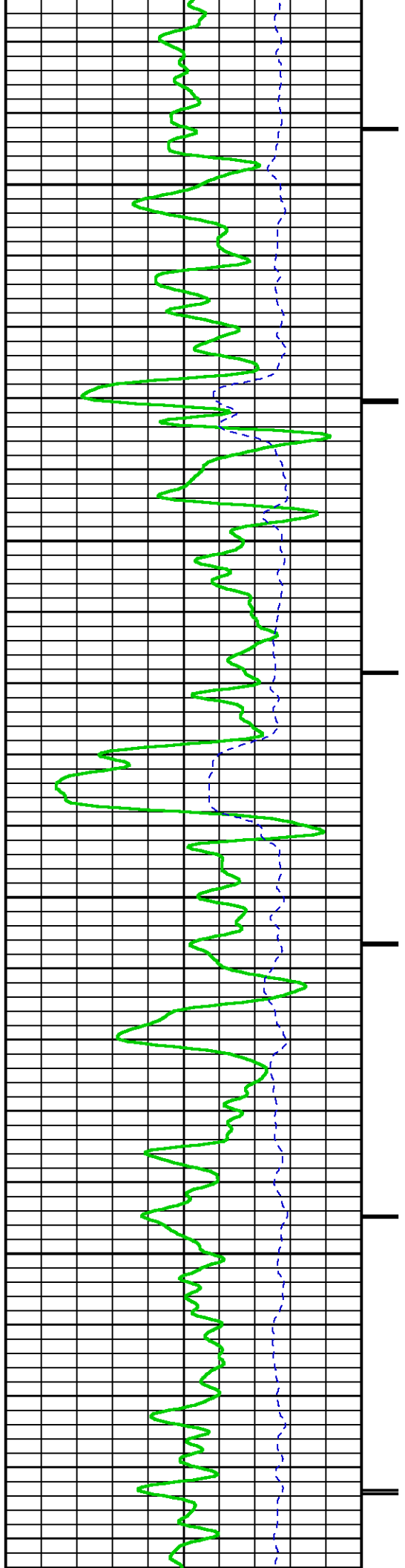


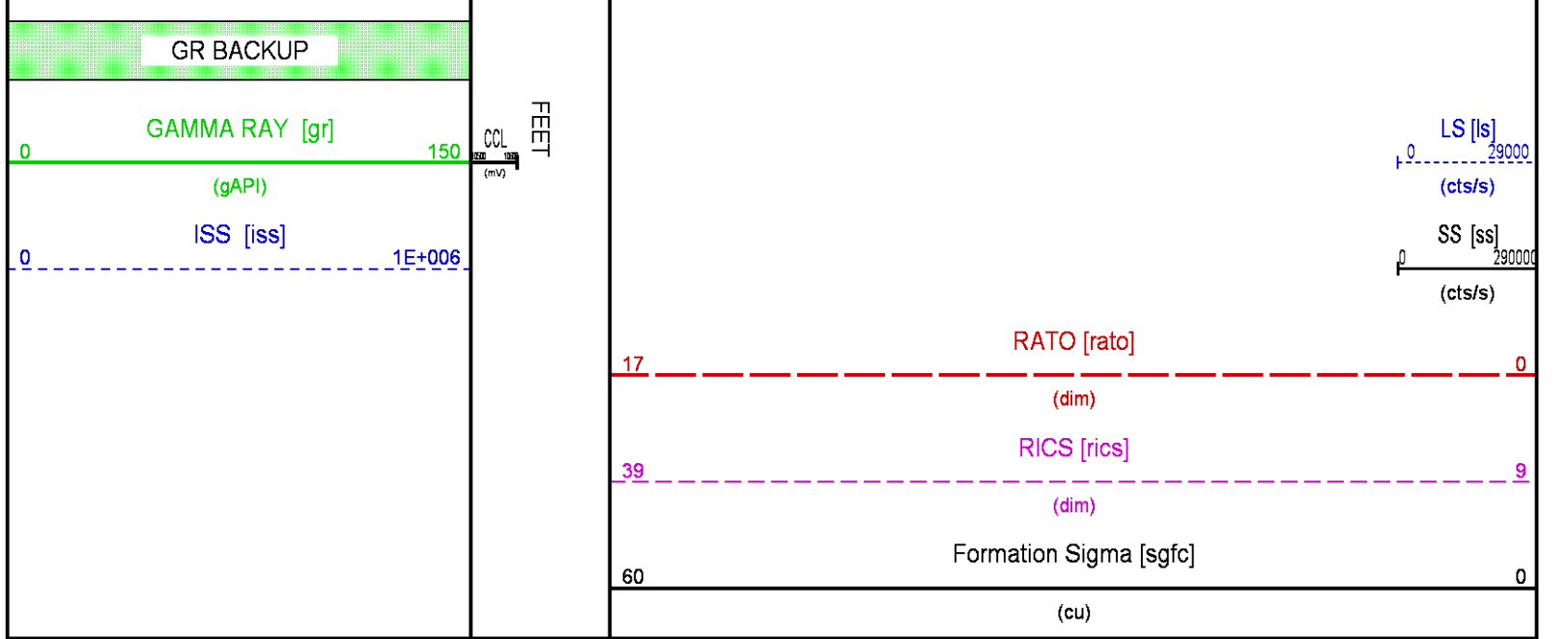
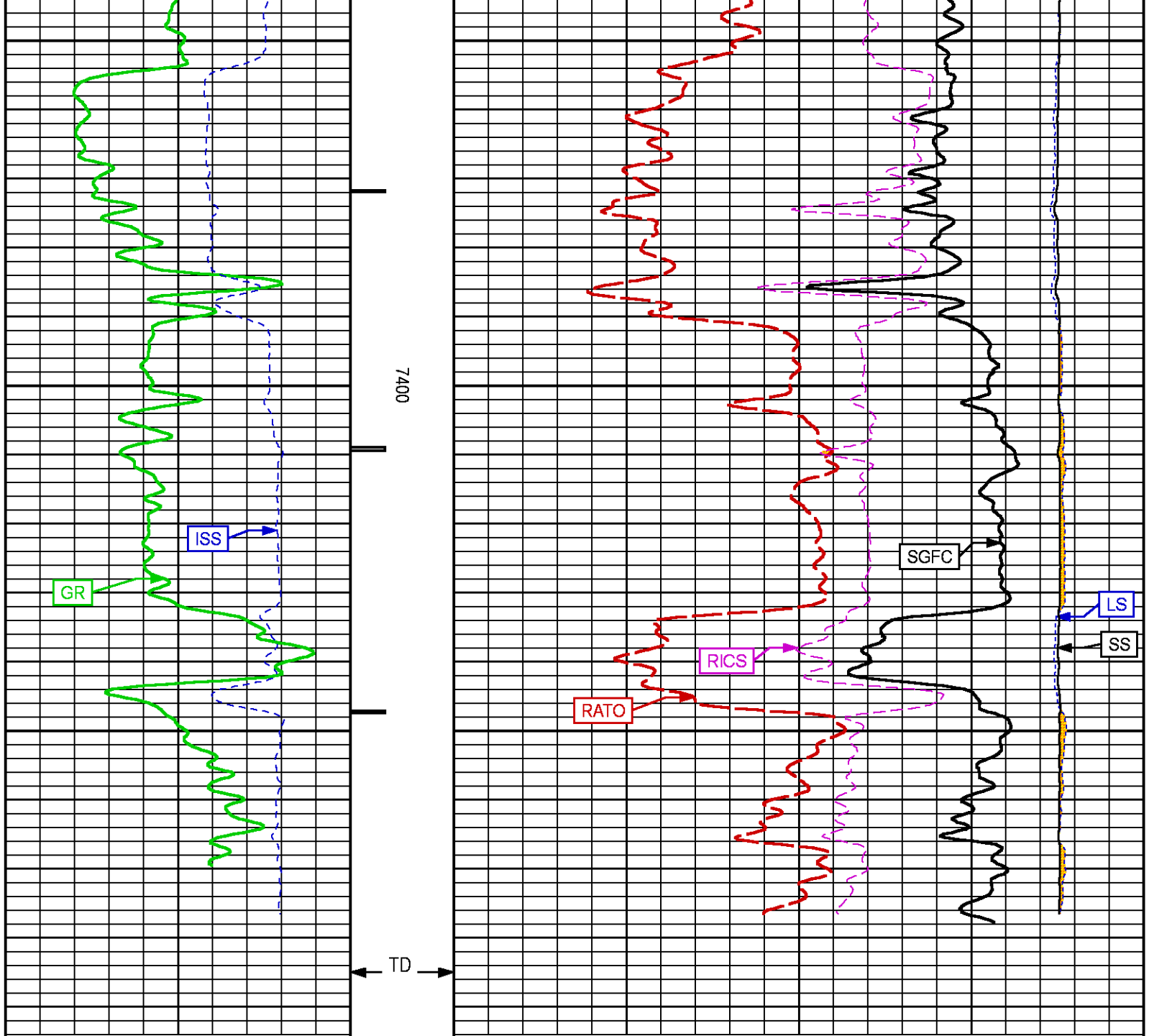




7200

7300





RPM REPEAT

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 2

Plotted: Mon Dec 04 10:28:35 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\LARAMIE_BRUTON_19_06W\p353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4769.500 ft BOTTOM DEPTH: 4996.750 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

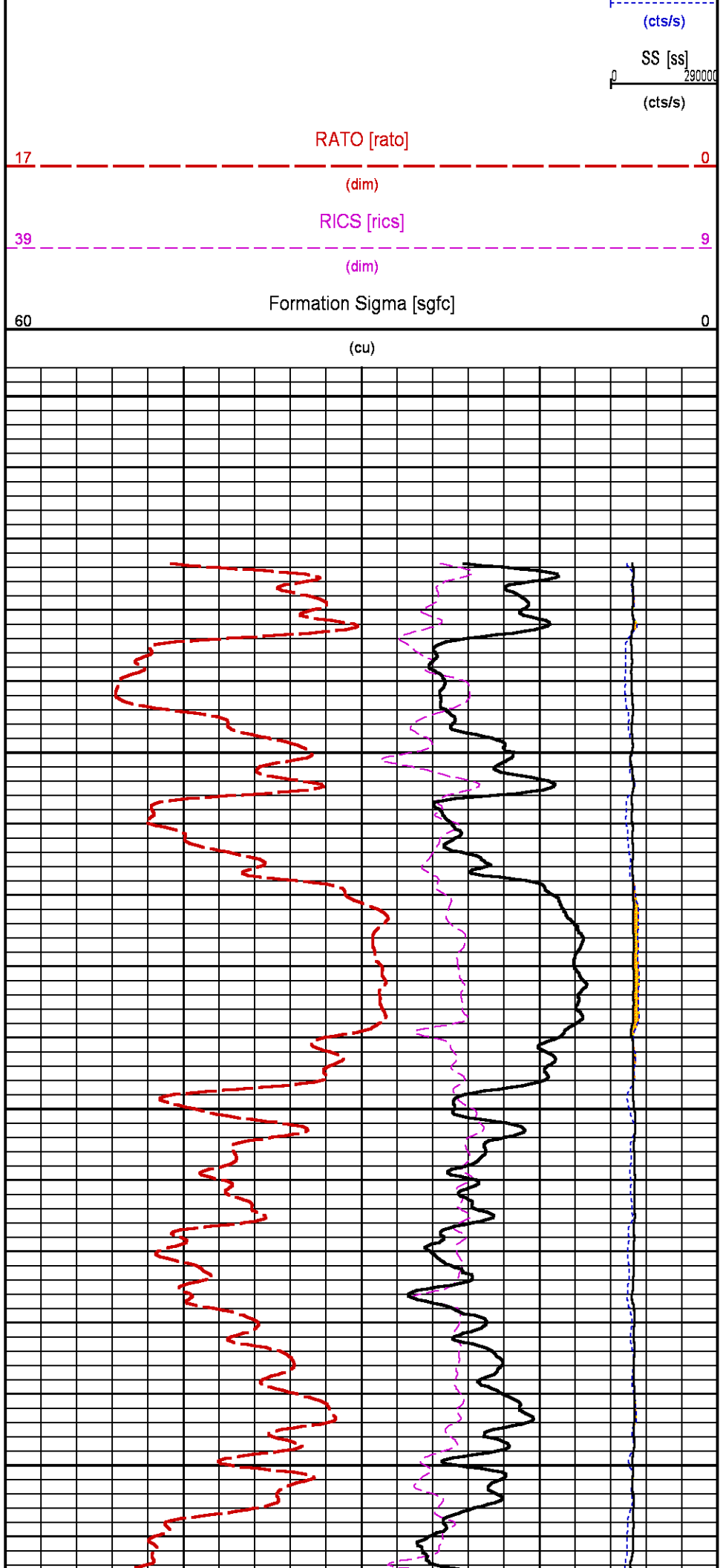
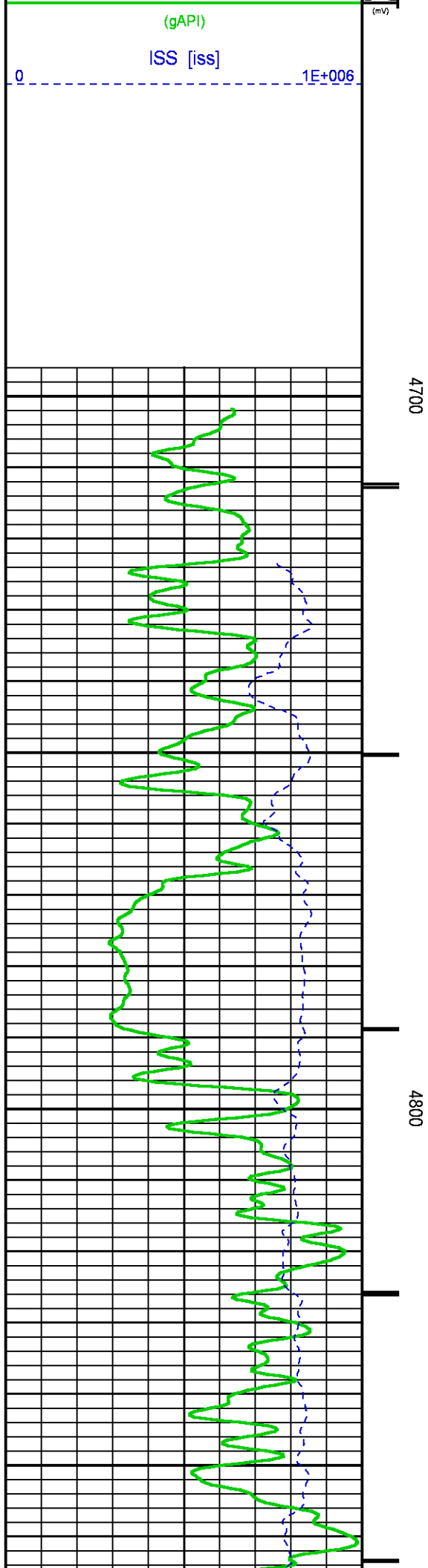
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-22.75	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.75	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\LARAMIE_RPM_PNC3D+RPM_RPT_06W.fvpdf [5"/100' Scale]
Plot Interval : 4746.5 - 4990 Feet

Data File 1 : F1 : BHIH2LZZF2:C:\dat1a\LARAMIE_BRUTON_19_06W\RPM_RPT_06W.xtf
Created On : N/A
Company : LARAMIE ENERGY
Well : BRUTON 19-06W
Field : VEGA
File Interval : 4745.75 - 4998.5 Feet
OCT : p353h





GR	70.96	367.73	296.8	0.623	44.23	229.23	185
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GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10196540

DATE/TIME PERFORMED: Fri Nov 17 17:23:04 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	72.02	371.78	0.623	44.90	231.75	186.86
						175.00 195.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10184883

DATE/TIME PERFORMED: Thu Jul 13 15:06:49 2017

UNIT: 3882TD HL6728

CALIBRATOR: 2437XB 120057

SOURCE: 8281AA 10160595

HOURS: 8281AA 228

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	807240	123	2232	2259	2285	137	9.0	0.9874
Interpolated	1300000	146	2216	2251	2283			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	807240	6543	1352	236	25.88	0.15	24.03	0.34
					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	807240	164687	25336	86104	30690	8086	52299	12945
Fit Quality %		0.492	0.443	0.487	0.490	0.506	0.462	0.494

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	807240	1.44	4.90	31.88	15.44	10.65	3.80	4.04
		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 %		0.052	0.128	0.117	0.144	0.021	0.011	0.031
Reduced	1232261	1.44	4.91	31.91	15.45	10.65	3.80	4.04
		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_19_08\WRPM-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: 1.17': 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

Series : 8283PA

Mnemonic : RPM

Measure Point: 5.45': XLS MP

Measure Point: 5.04': LS MP

Measure Point: 4.79': SS MP

34.08'

CCL MP 26.03'

GR MP 23.18'

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
PRES MP

1.65'

BULL PLUG 1 11/16

0.00'

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

BAKER
HUGHES
a GE company



ECLIPS

COMPANY

LARAMIE ENERGY

WELL

BRUTON 19-06W

FIELD

VEGA

COUNTY

MESA

STATE COLORADO

FILE NO:

API NO:

05077104260000

LOCATION:

SHL: 39.262765N;107.815129W
BHL:39.265826N;107.816592W

ELEVATIONS:

KB 7286 FT
DF 7285 FT
GL 7262 FT

SEC 19 TWP 9S RGE 93W

DATE 04-Dec-2017