



FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	BRUTON 19-04W
05077104370000	FIELD	VEGA
	COUNTY	MESA
	STATE	COLORADO
Version	LOCATION:	OTHER SERVICES
	SHL: LAT:39.262825N;LONG:107.815142W	RAL
	BHL: LAT:39.267166N;LONG:107.816226W	
	SEC 19 TWP 9S RGE 93W	
PERMANENT DATUM	GL	ELEVATION
LOG MEASURED FROM	KB	24 FT ABOVE P.D.
DRILL. MEAS. FROM	KB	ELEVATIONS:
		KB 7286 FT
		DF 7286 FT
		GL 7262 FT

DATE		27-OCT-2017			
RUN	TRIP	2	1		
SERVICE ORDER		US128844			
DEPTH DRILLER		7778 FT			
DEPTH LOGGER		7677 FT			
BOTTOM LOGGED INTERVAL		7677 FT			
TOP LOGGED INTERVAL		2080 FT			
TIME STARTED		07:00			
TIME FINISHED		13:30			
OPERATOR RIG TIME		6.5 HOURS			
TYPE OF FLUID IN HOLE		WATER			
FLUID DENSITY		NA			
FLUID SALINITY		NA			
FLUID LEVEL		50 FT			
LOGGED CEMENT TOP		1870 FT			
WELLHEAD PRESSURE		0 PSI			
MAXIMUM HOLE DEVIATION		NA			
NOMINAL LOGGING SPEED		15 F/MIN			
MAX. RECORDED TEMP.		235 DEGF			
REFERENCE LOG		BAKER GR/RAL			
REFERENCE LOG DATE		26-OCT-2017			
EQUIP. NO.	LOCATION	HL-6670	WOODWARD		
RECORDED BY		S.YASSA			
WITNESSED BY		MR. 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

RUN2 TRIP 1: *2 OPERATIONS IN WELL*

**OPERATION 2: RPM/GR/CCL RUN FREE*

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 6854' - 6876'

SJ: 5852' - 5874'

CREW: C.GOLOBY , J.PENA

EQUIPMENT DATA					
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	1	TELEMETRY	8250EA/8248EA	12151903/12211009	FREE
2	1	GAMMA RAY	2812LA	11781299	FREE
2	1	RPM	8281EA	10273848	FREE
2	1	RPM	8283PA	10322619	FREE
2	1	RPM	8281FA	10238007	FREE

G-SAND SECTION PNC 3D MODE

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

Plotted: Fri Oct 27 14:37:30 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\BRUTON_19_04\WBRPM3D106.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2076.115 ft BOTTOM DEPTH: 2709.438 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		"	"
	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	-21.75	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.25	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation : BHI78FR4H2:C:\dat1a\BRUTON_19_04\WBRUTON_19_04W_RPM_GSAND.fvpdf [5"/100" Scale]
Plot Interval : 2057 - 2702.75 Feet

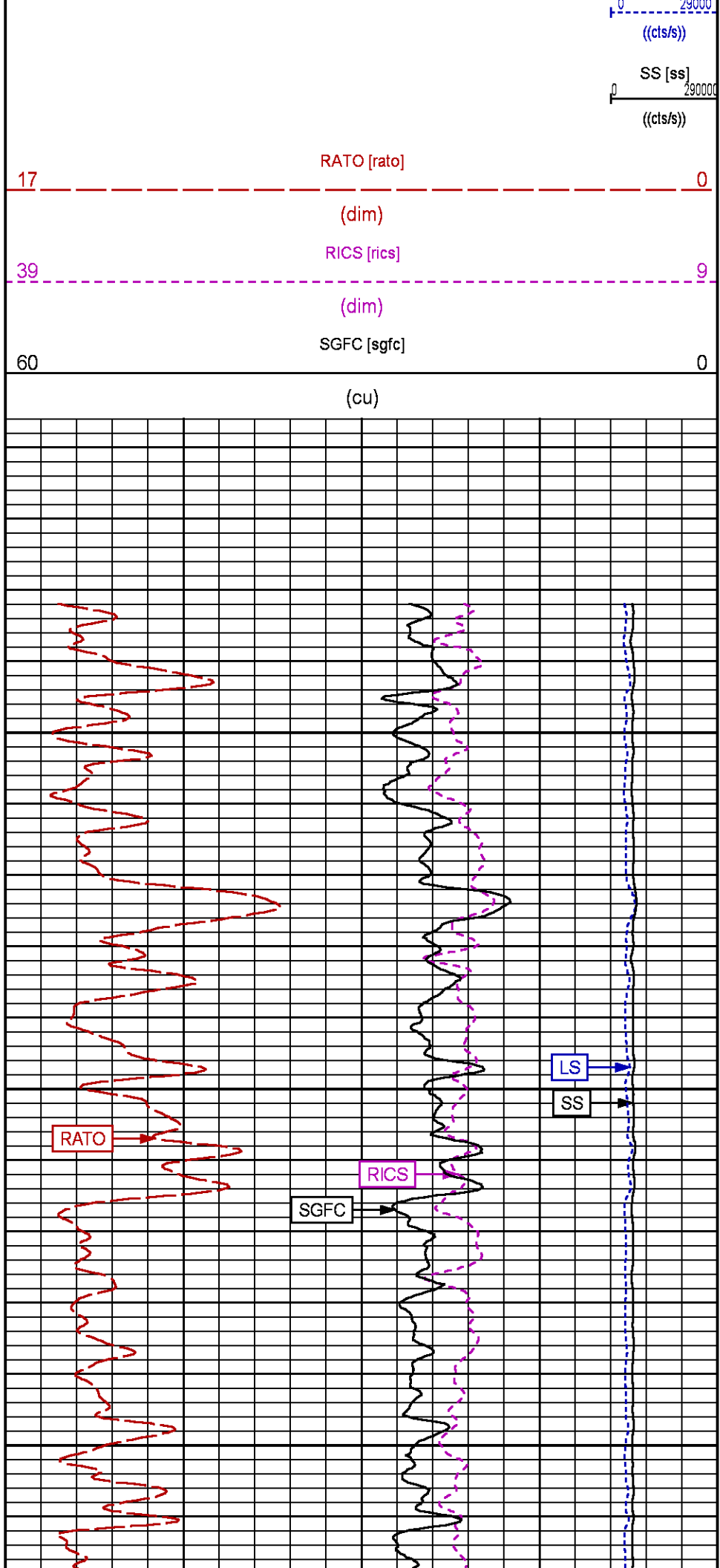
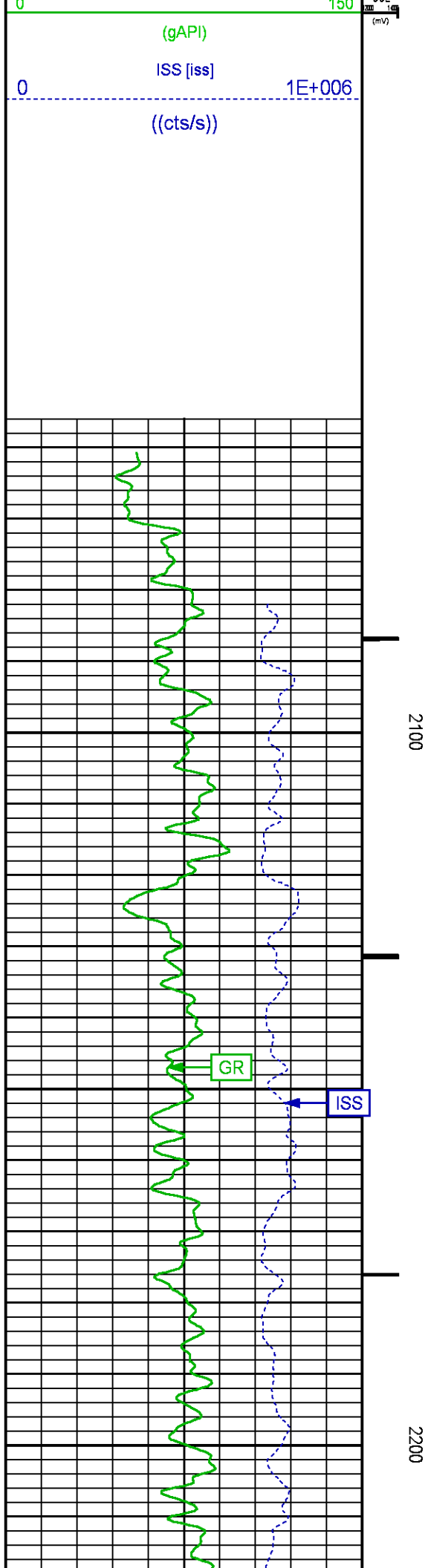
Data File 1 : F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_04\WBRUTON_19_04W_RPM_GSAND.xtf
Created On : N/A
Company : LARAMIE ENERGY II LLC
Well : BRUTON 19-04W
Field : VEGA
File Interval : 2056.25 - 2708.25 Feet
OCT : RPM3D1

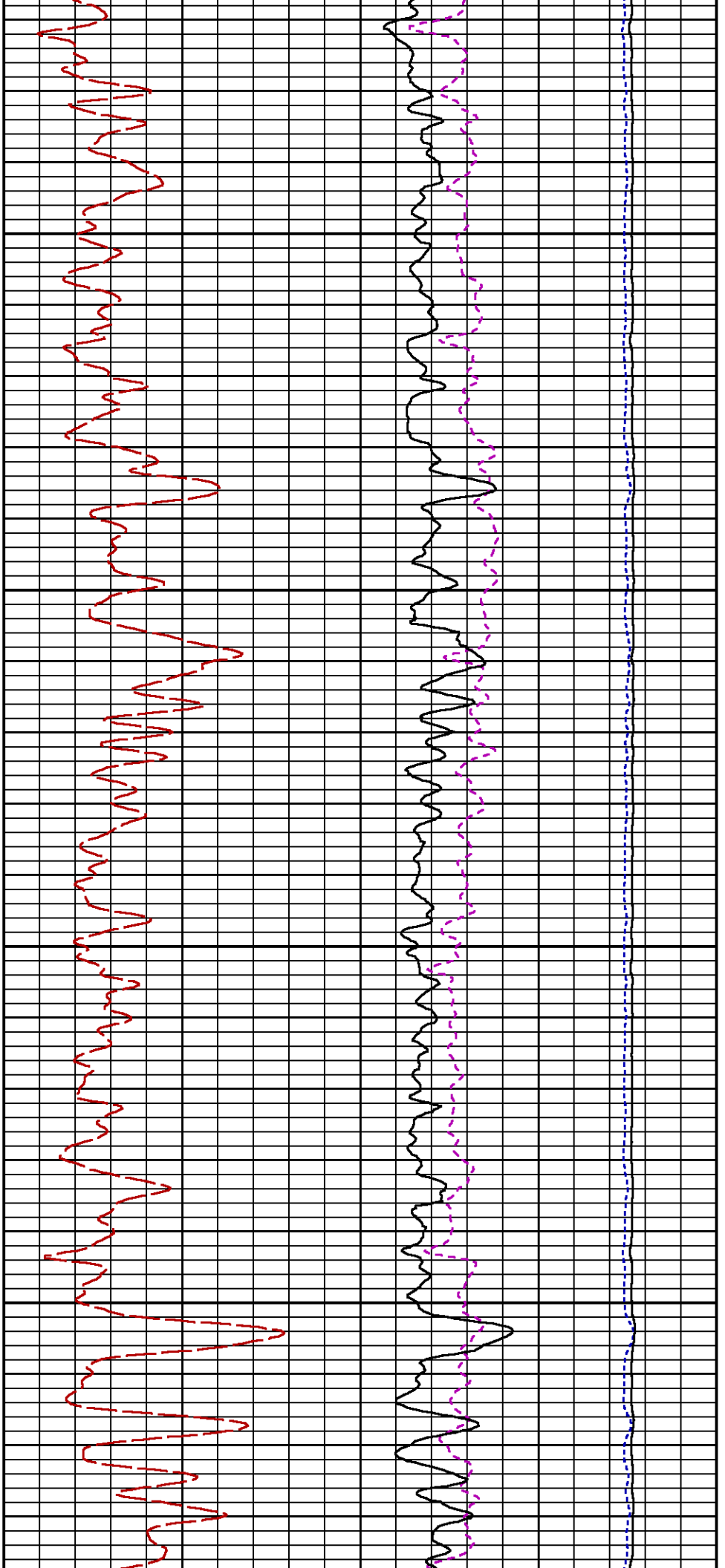
GR BACKUP

GAMMA RAY [gr]

FEET

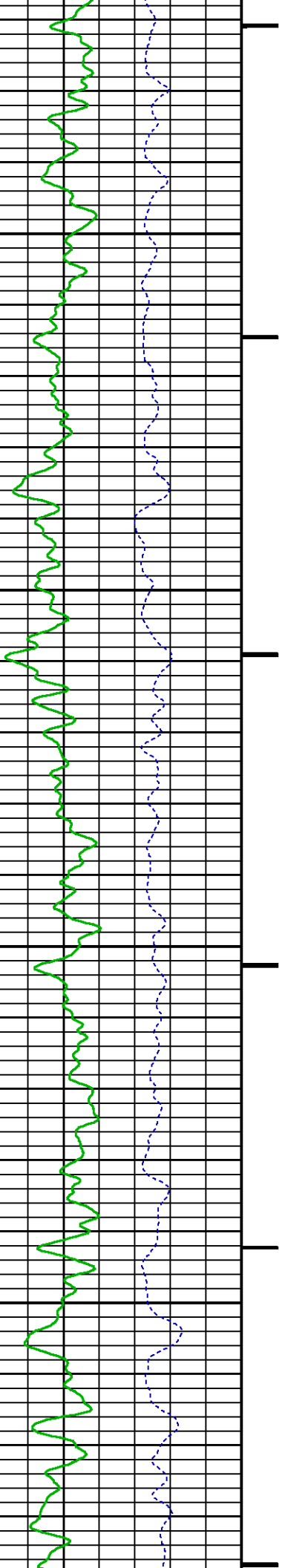
LS [ls]

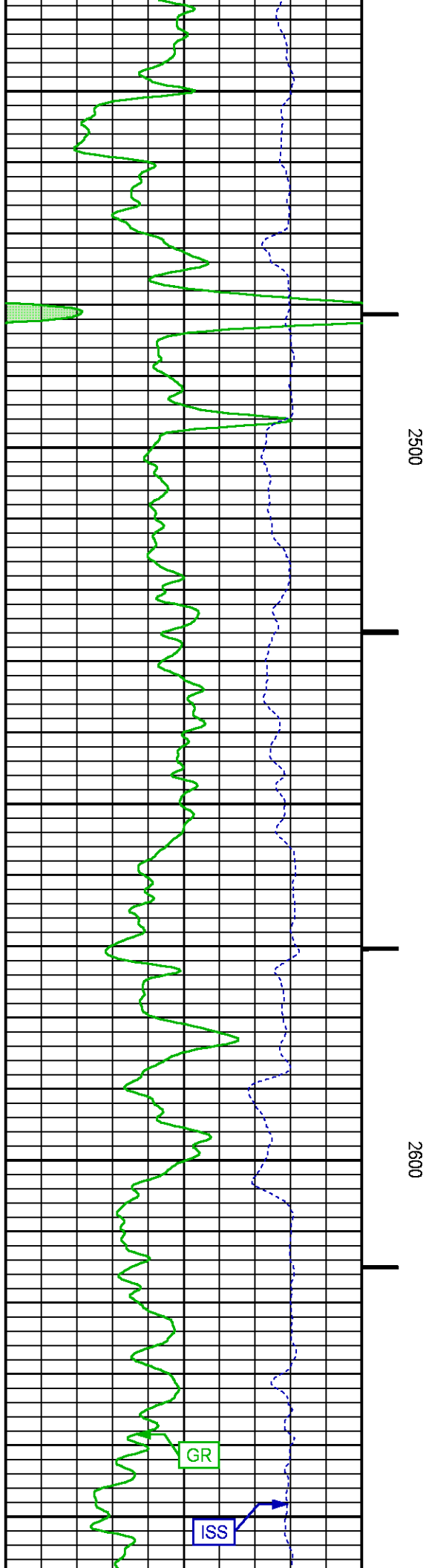
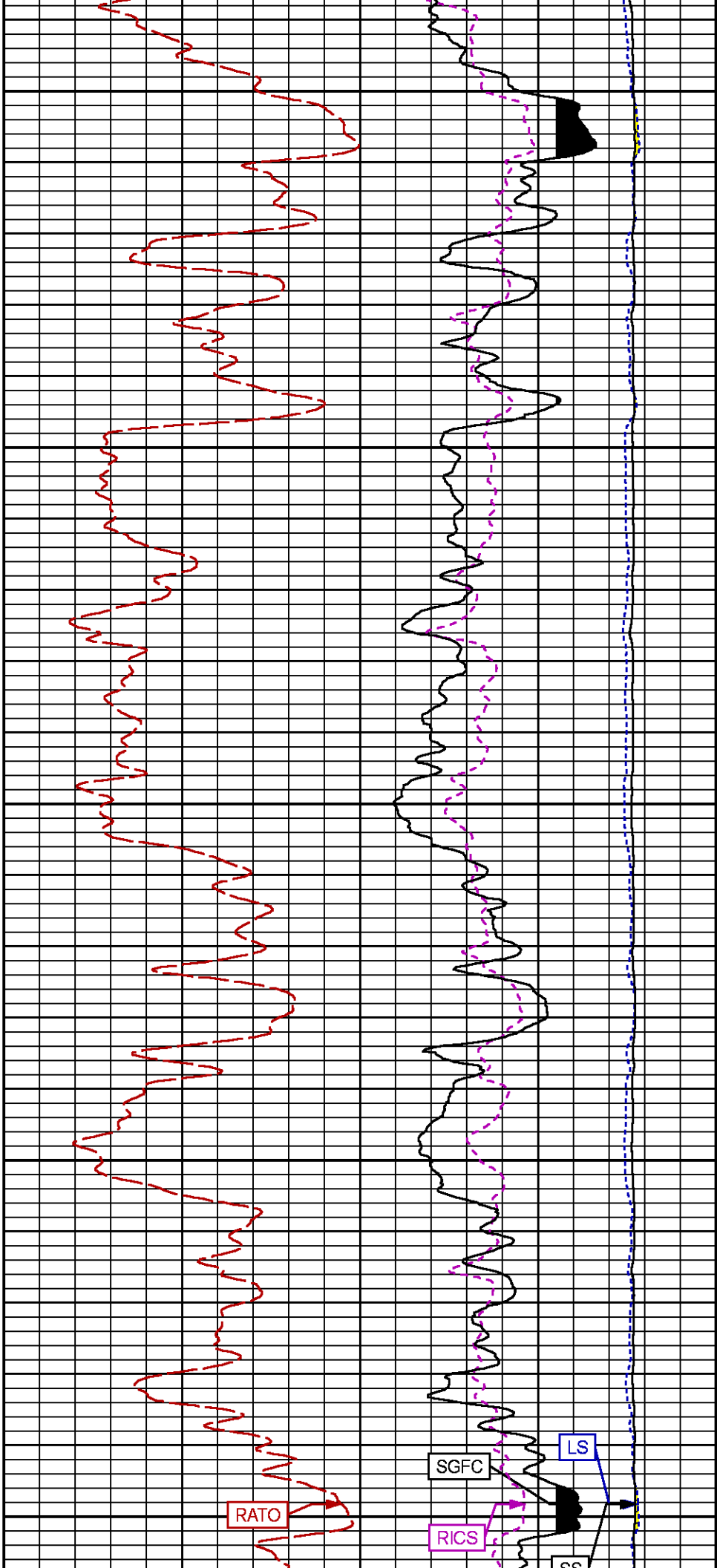


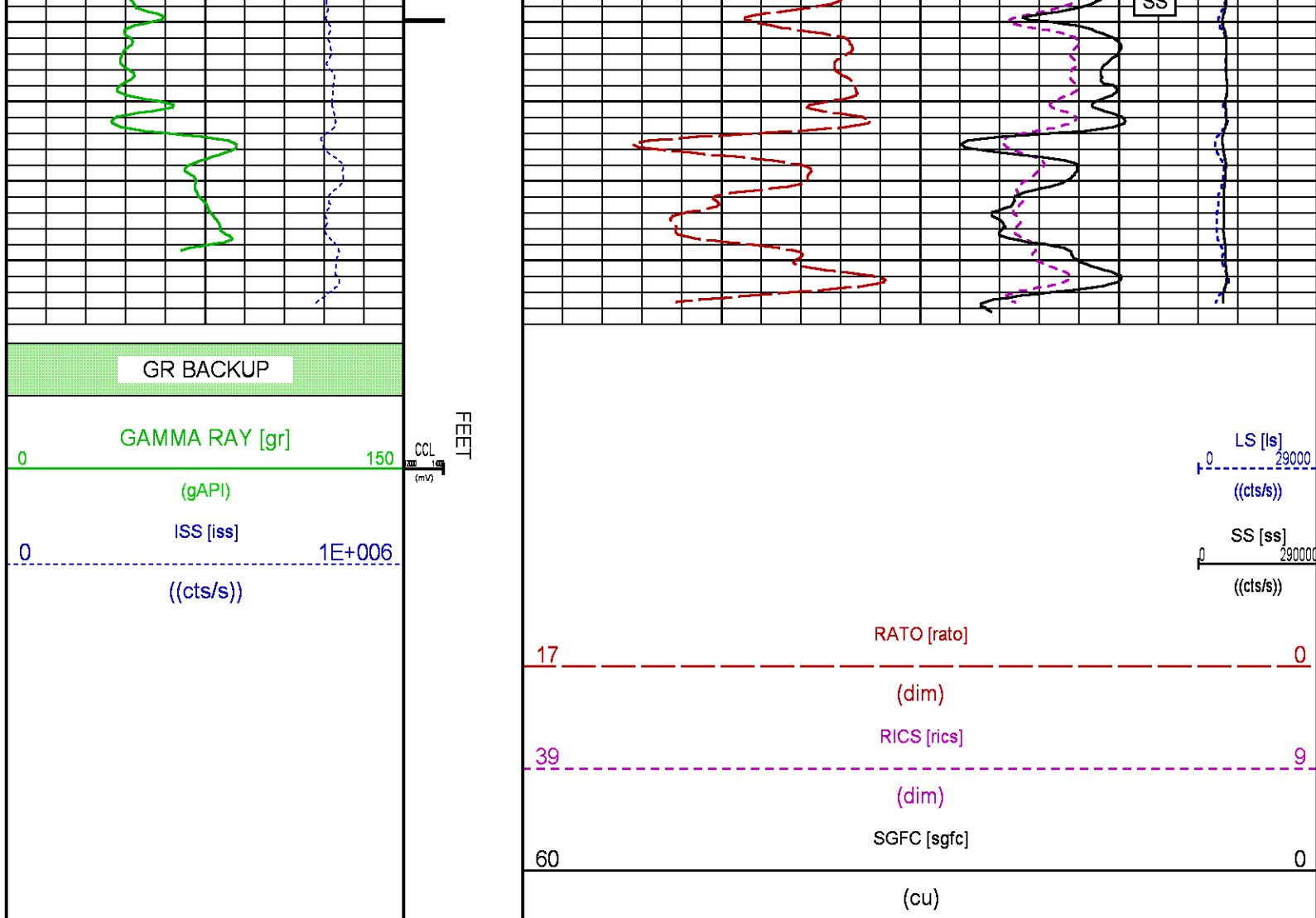


2300

2400







MAIN PASS PNC-3D MODE

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

Plotted: Fri Oct 27 14:00:12 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\BRUTON_19_04\WRPM3D105.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4055.421 ft BOTTOM DEPTH: 7683.632 ft

SYMMETRIC FILTER

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

RPM PROCESSING

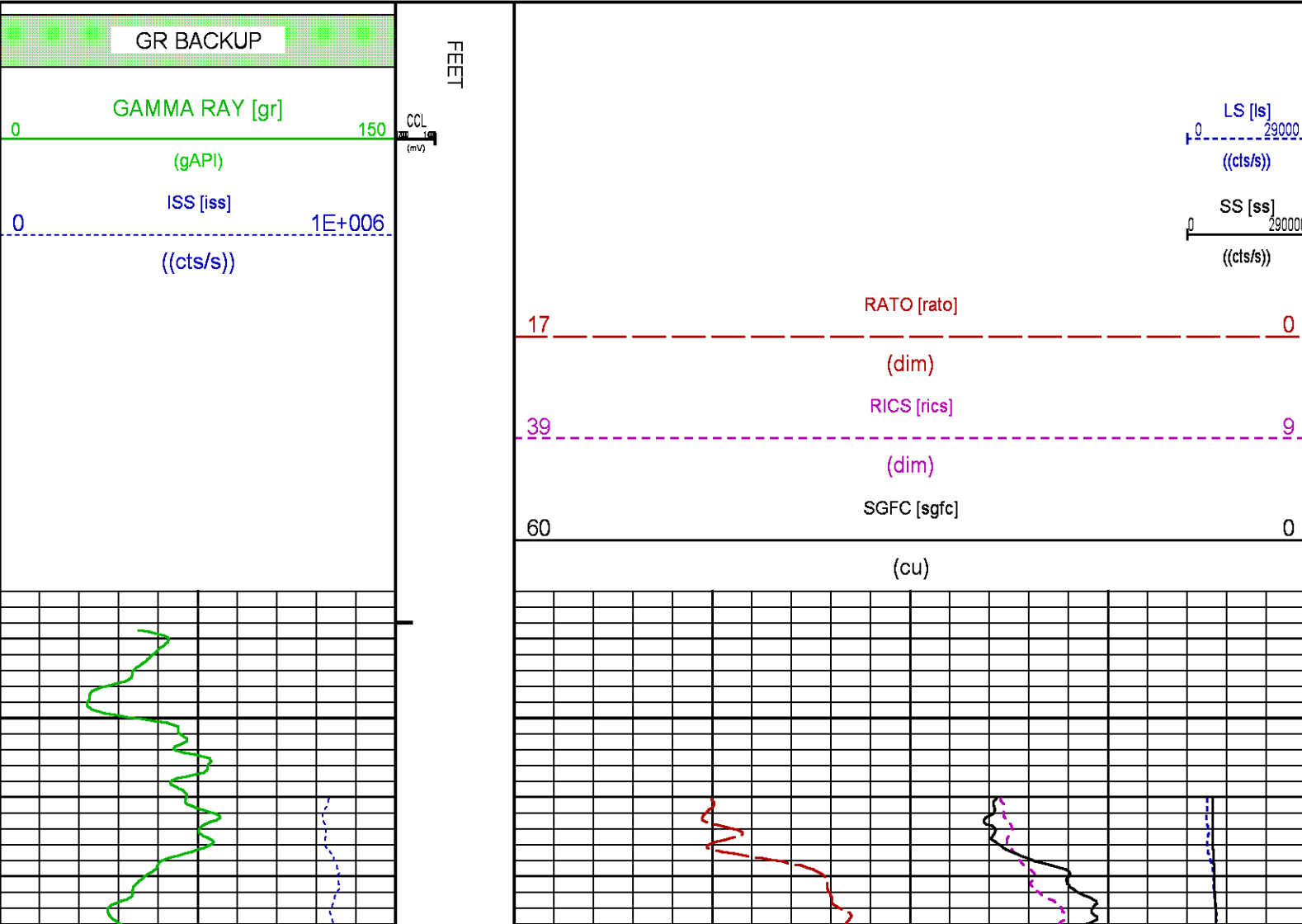
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP BOTTOM
	OPEN/CASED HOLE	CASED HOLE		" "
	BOREHOLE SIZE	7.88	in	" "

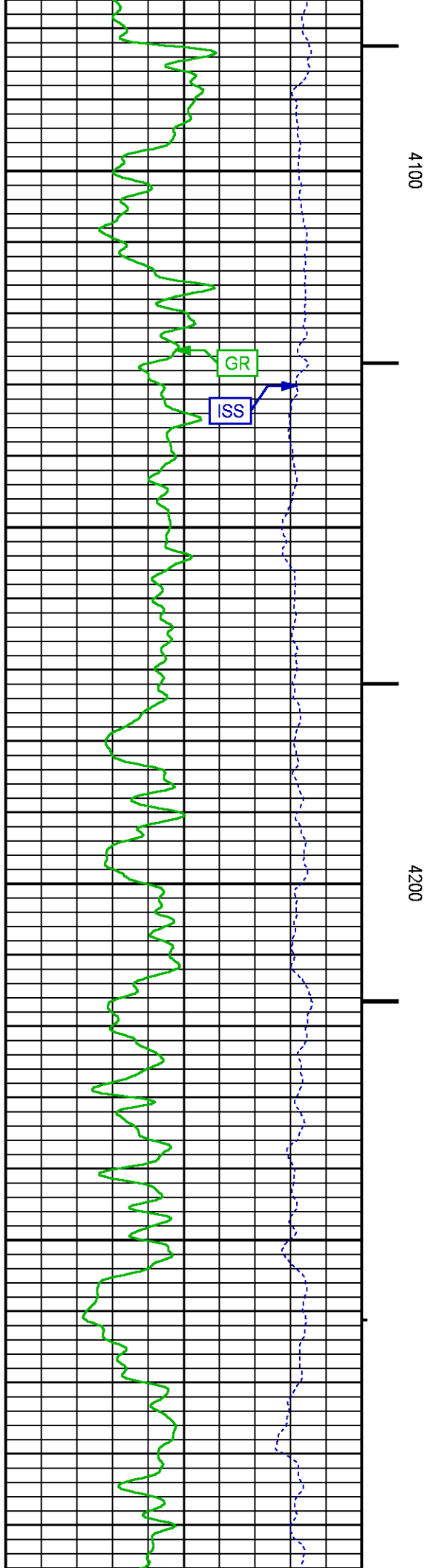
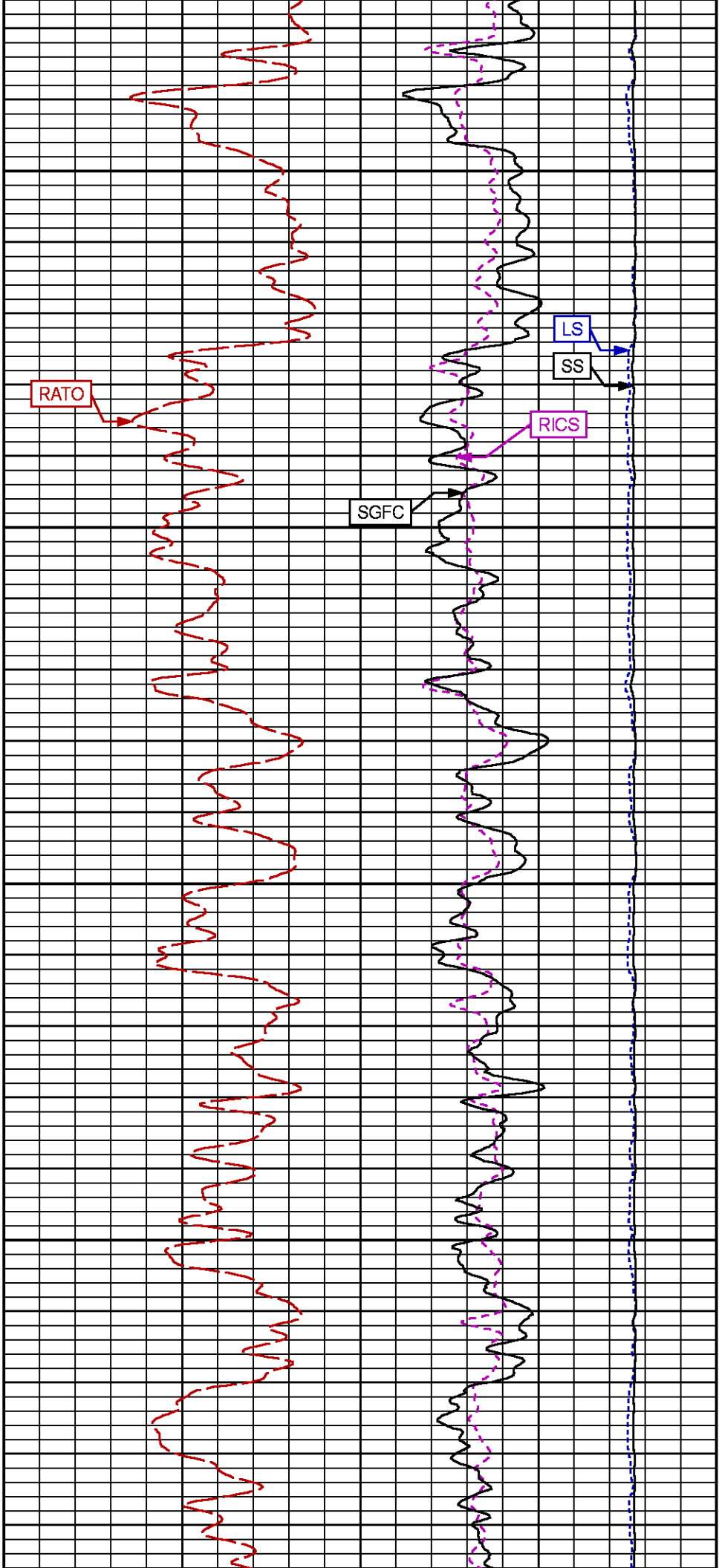
LARGEST CASING OD	4.50	in	"	"
MATRIX	SANDSTONE		"	"
CORRECTION BUFFER	11		"	"

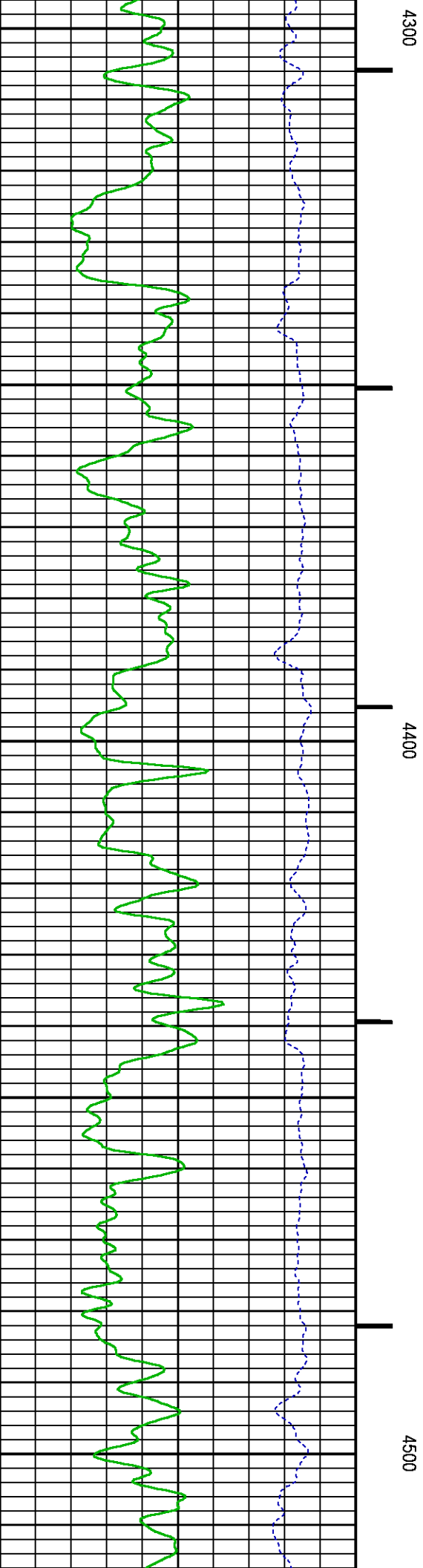
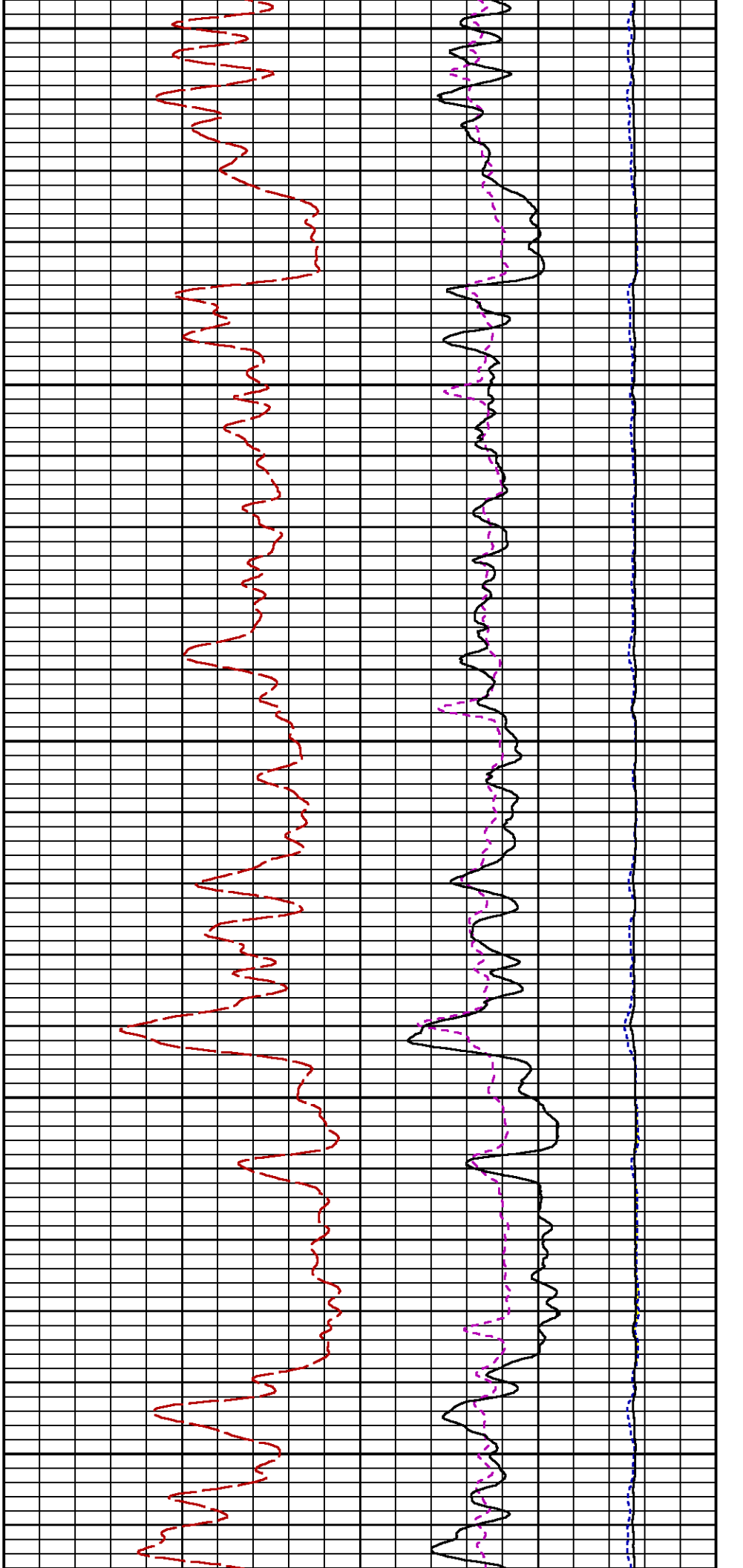
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE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

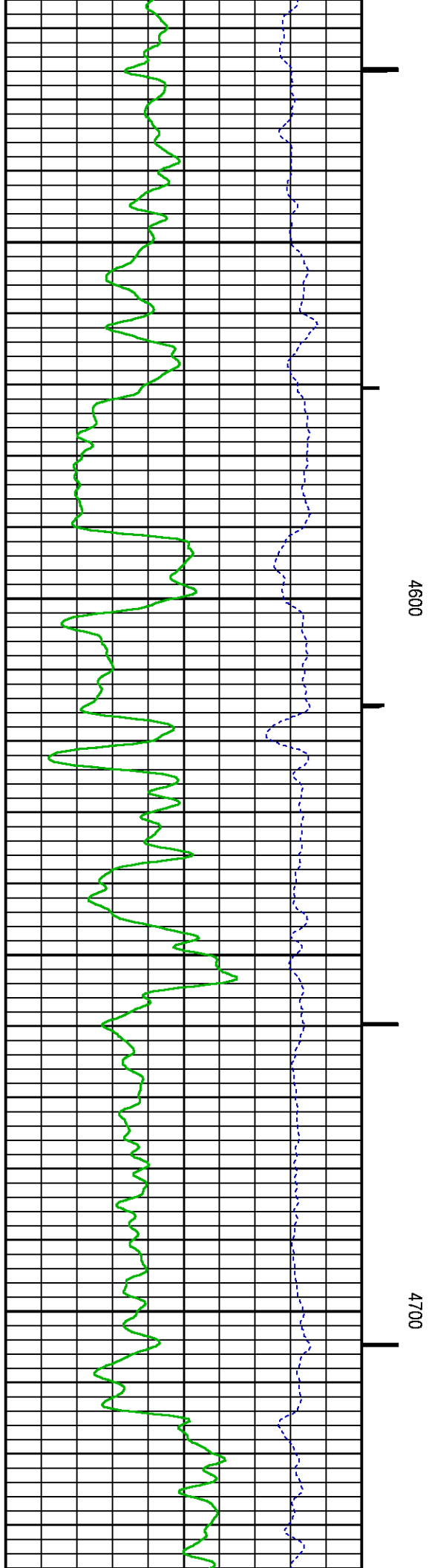
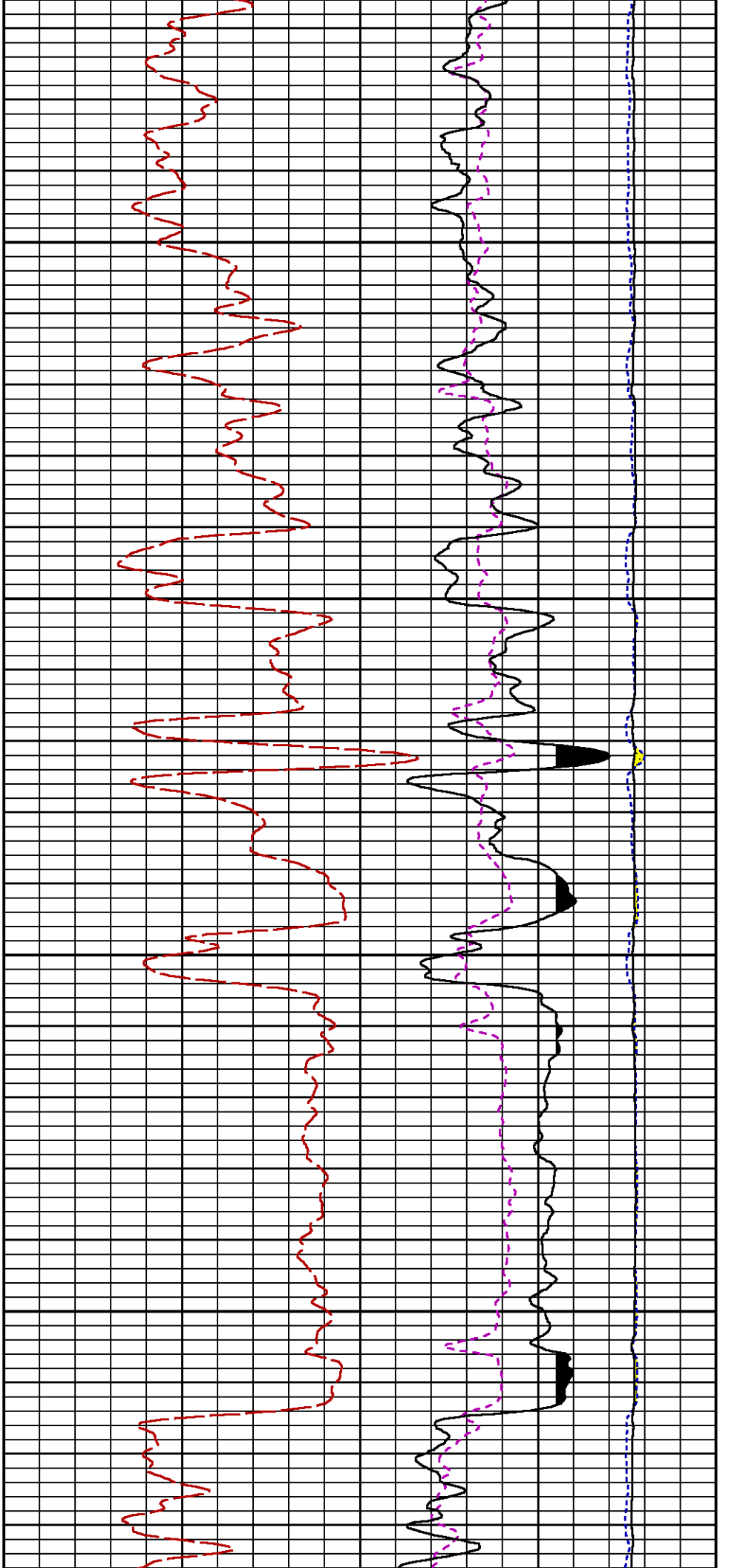
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-21.75	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.25	LS	-9.50	RICS	-9.50	SS	-9.50

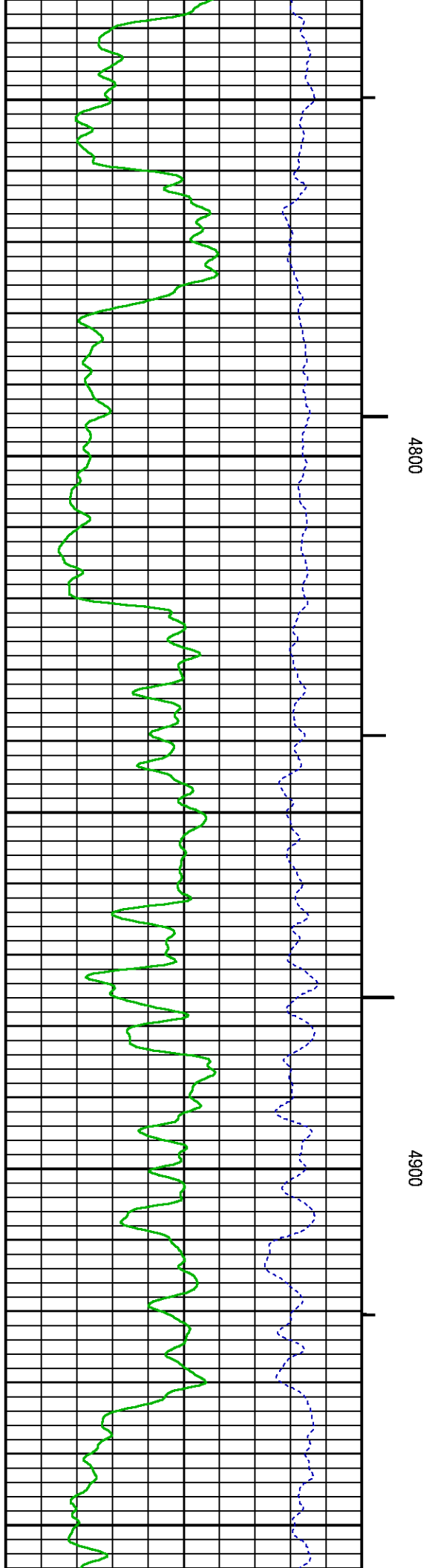
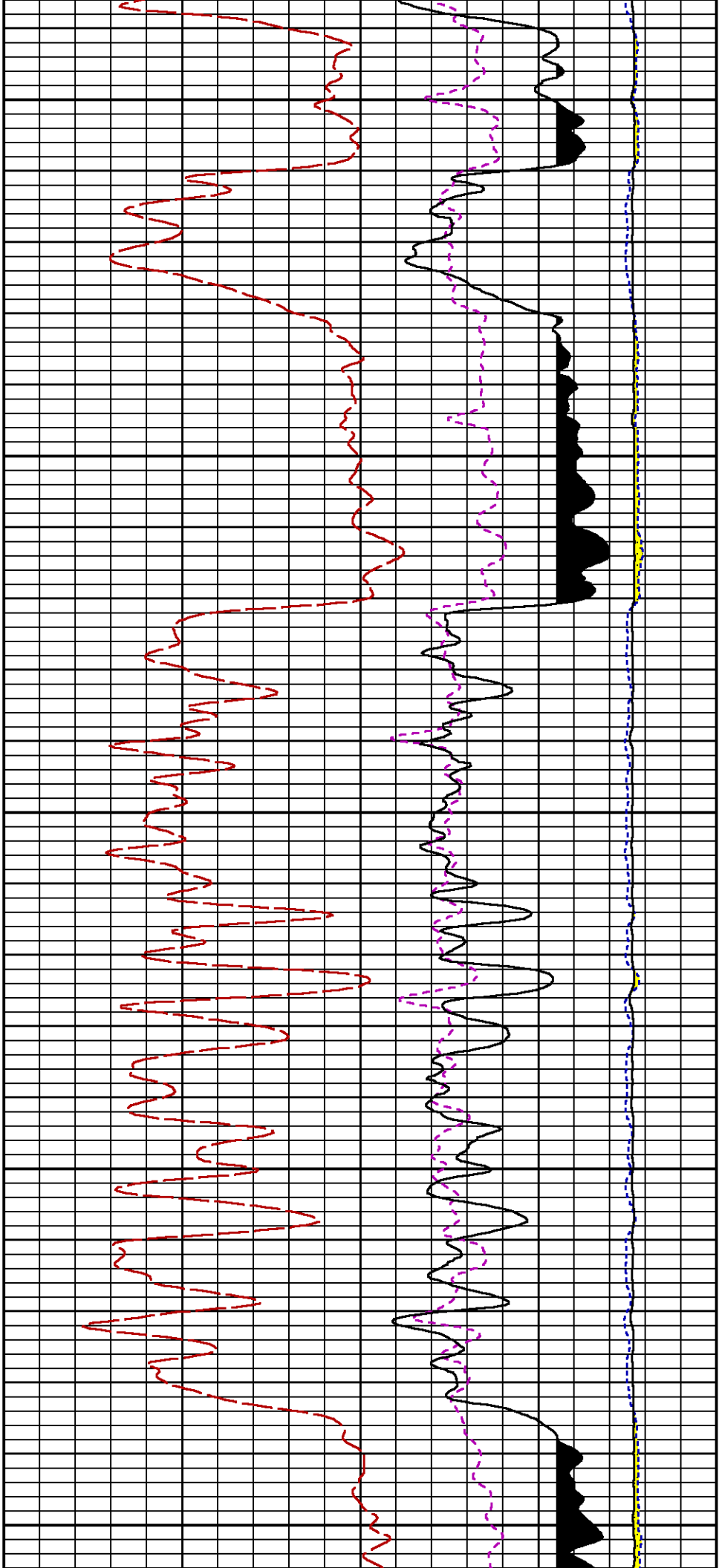
Presentation	: BHI78FR4H2:C:\dat1a\BRUTON_19_04W\BRUTON_19_04W_RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval	: 4035.25 - 7685 Feet
Data File 1	: F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_04W\BRUTON_19_04W_RPM_MAIN.xtf
Created On	: N/A
Company	: LARAMIE ENERGY II LLC
Well	: BRUTON 19-04W
Field	: VEGA
File Interval	: 4034.5 - 7681 Feet
OCT	: RPM3D1

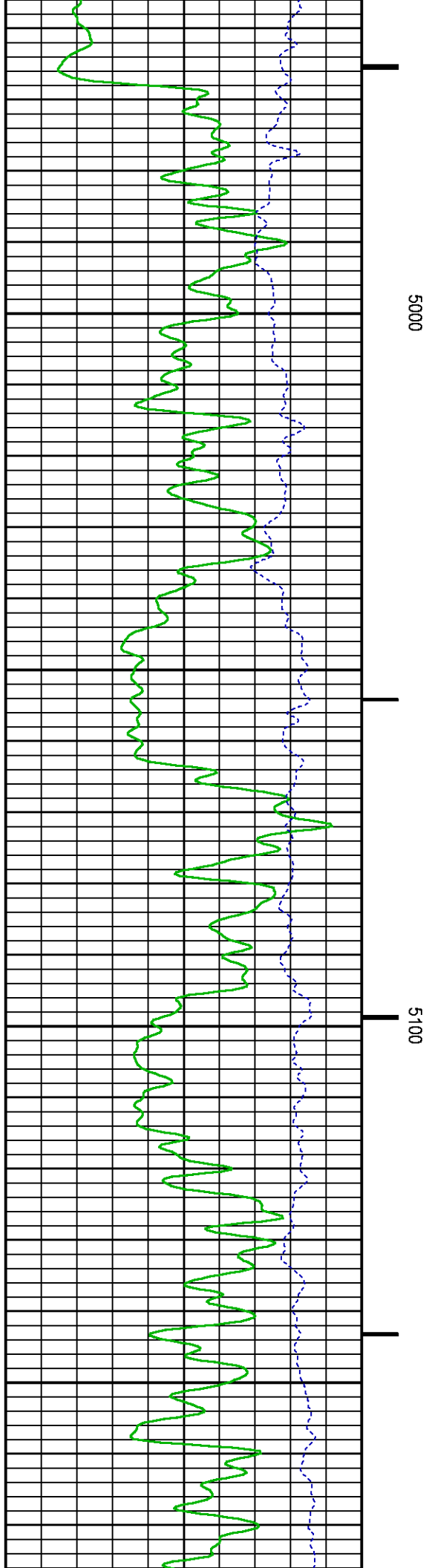
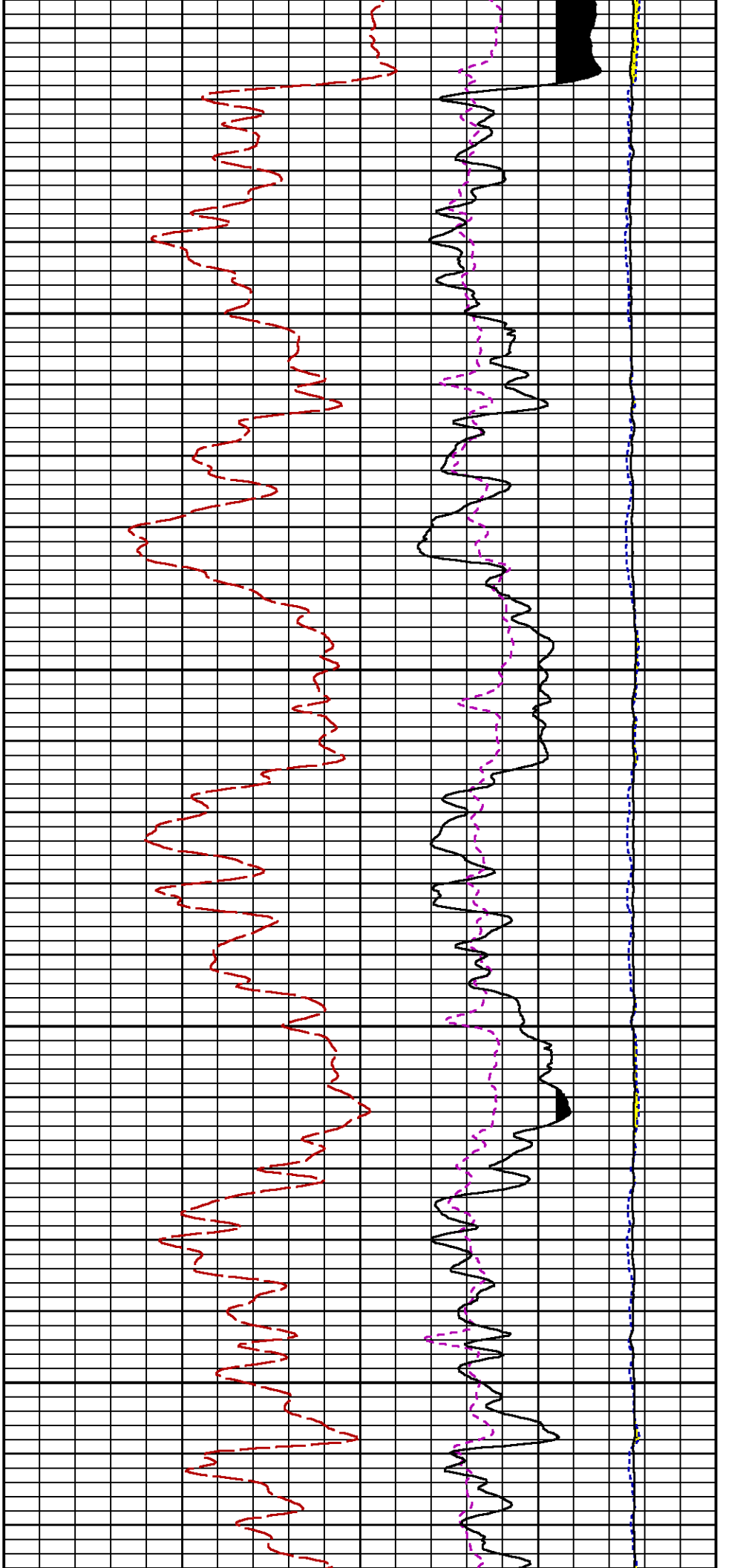


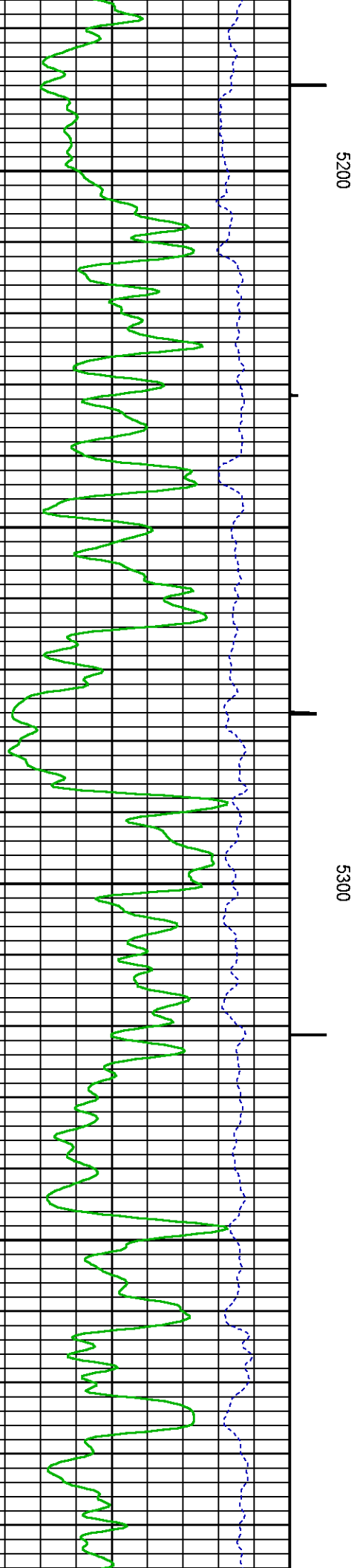
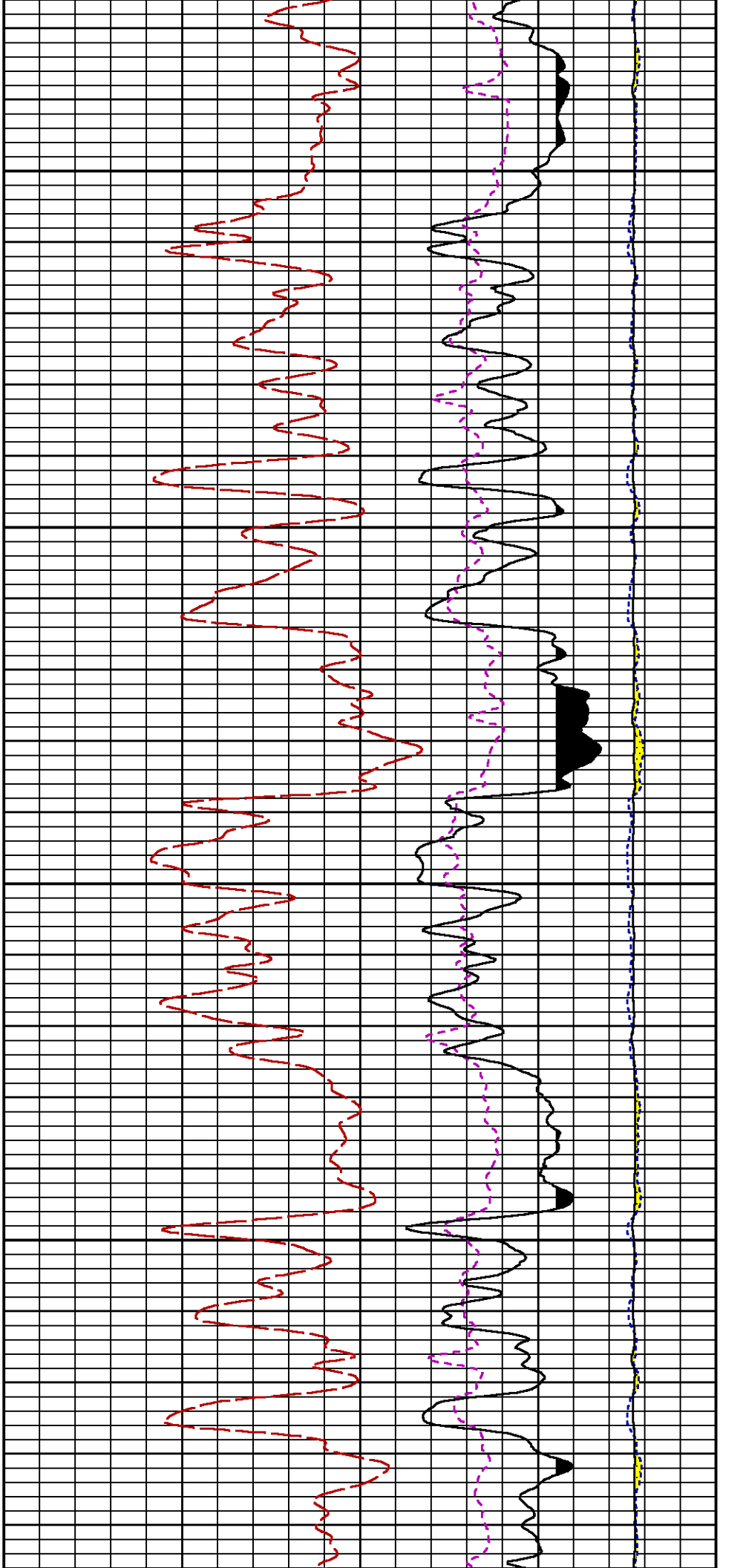


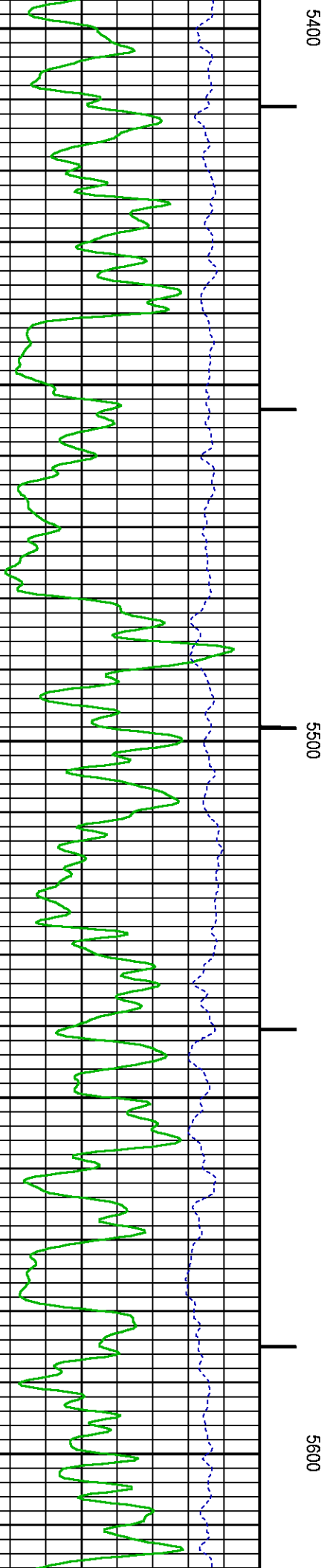
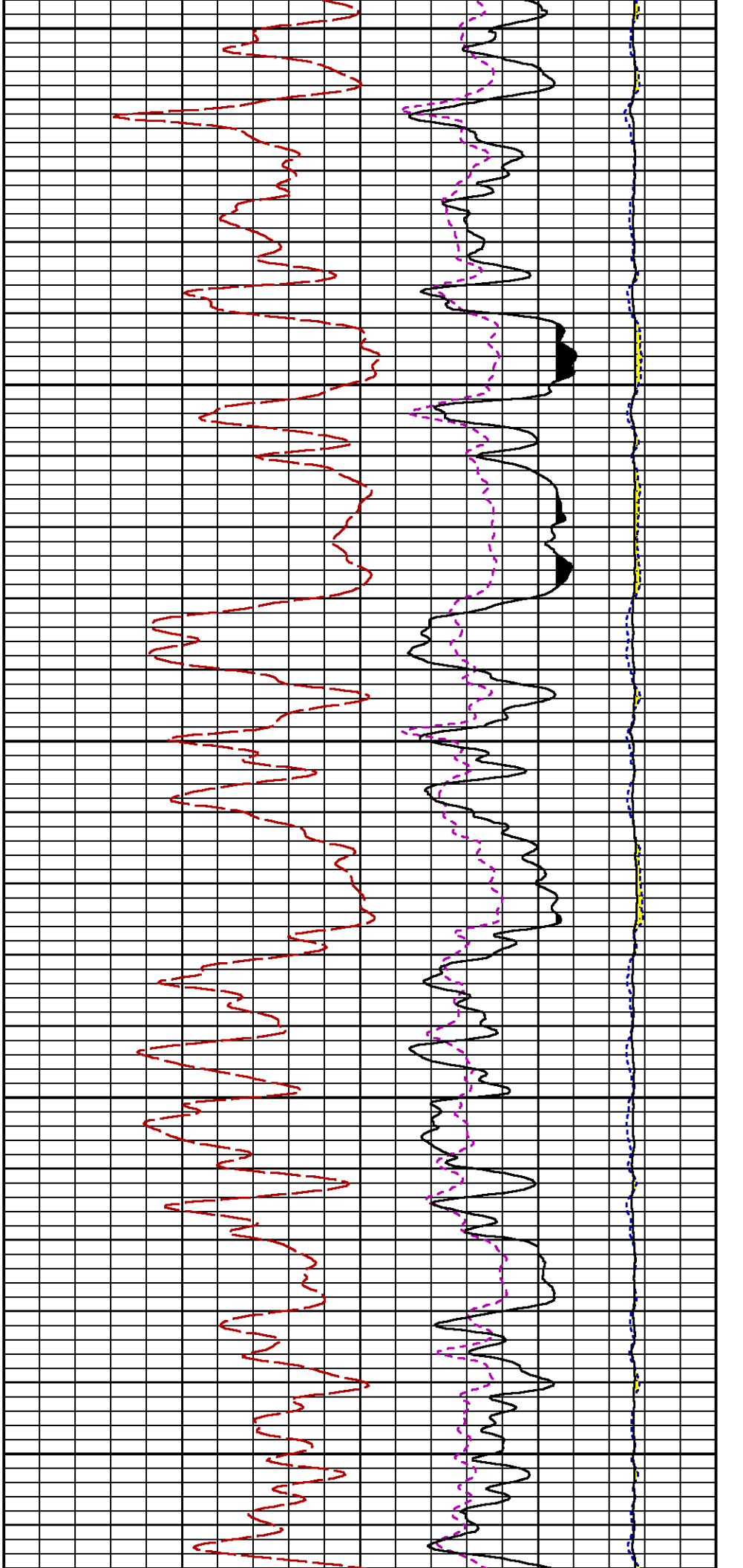


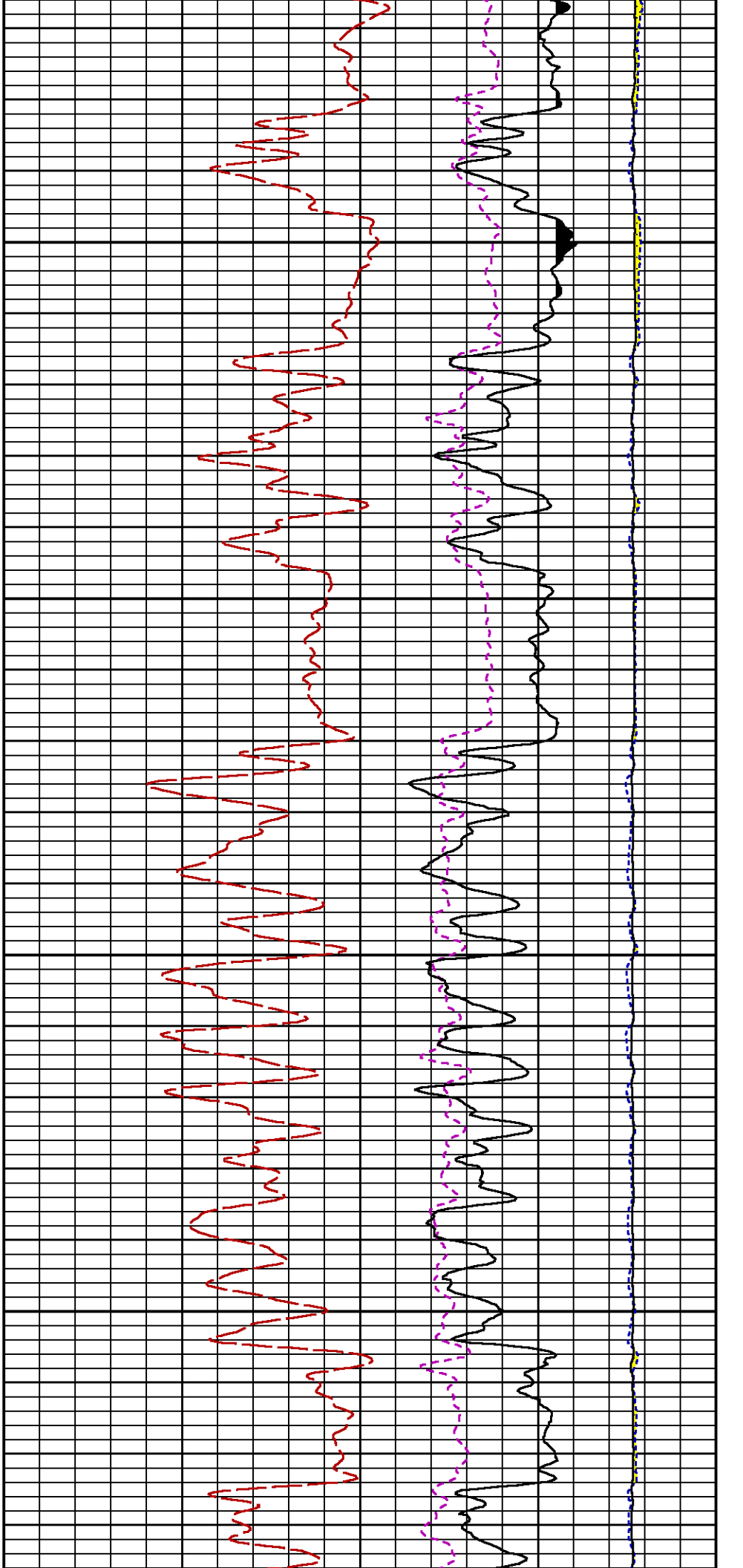






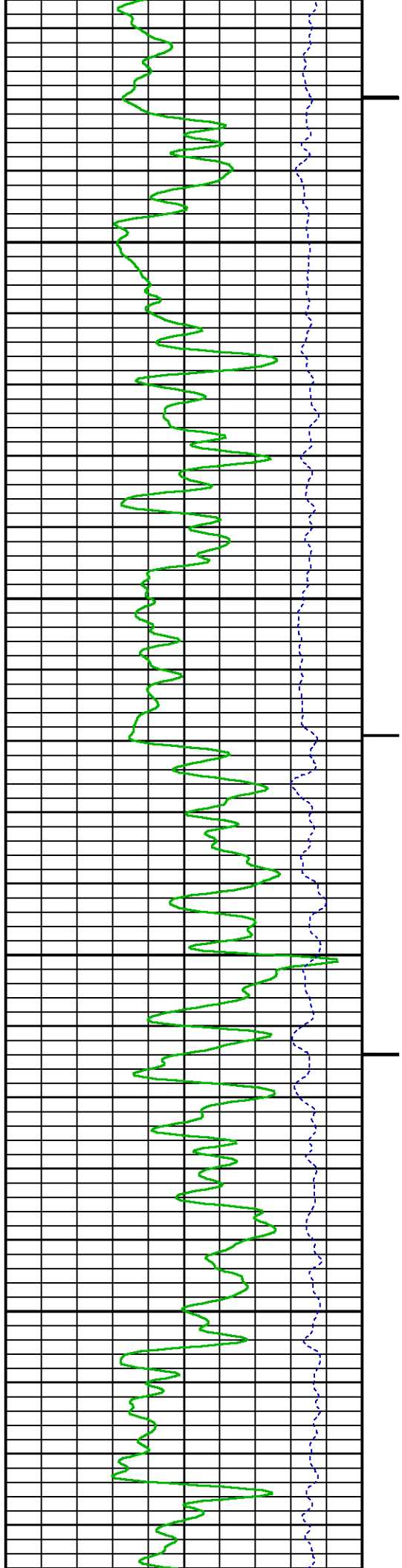


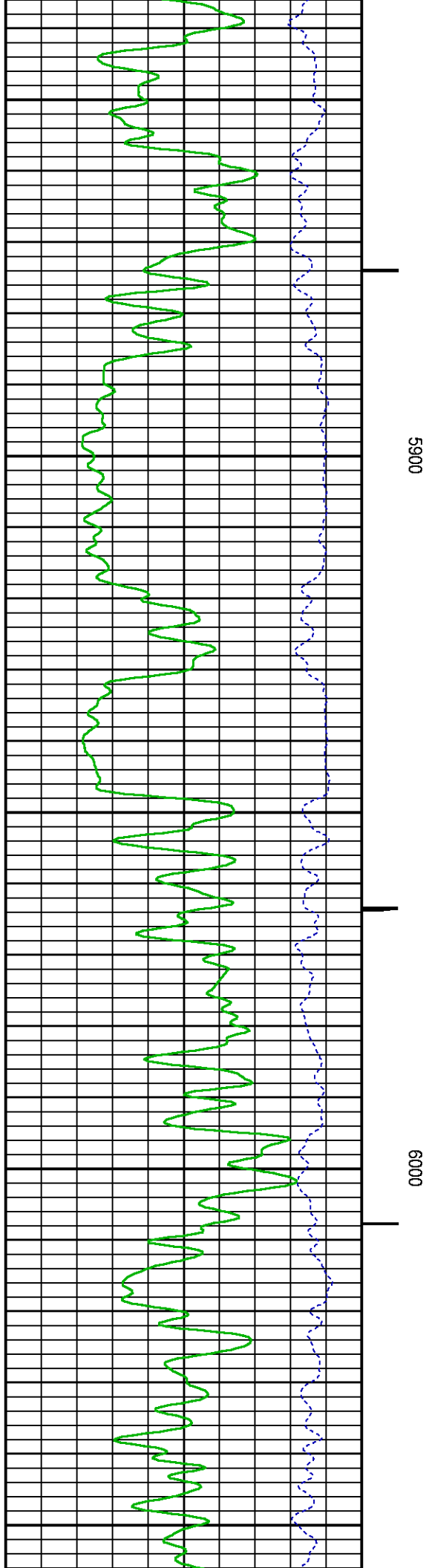
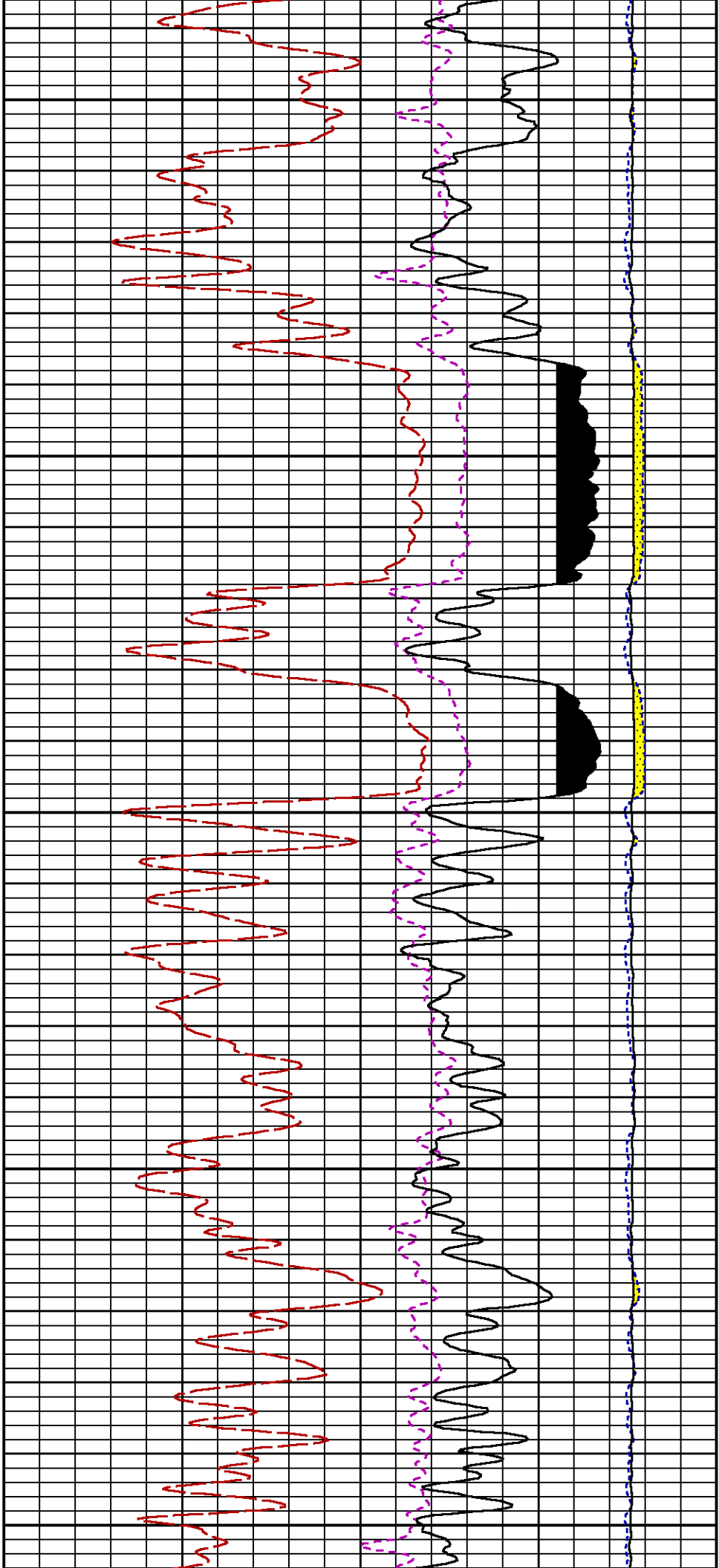


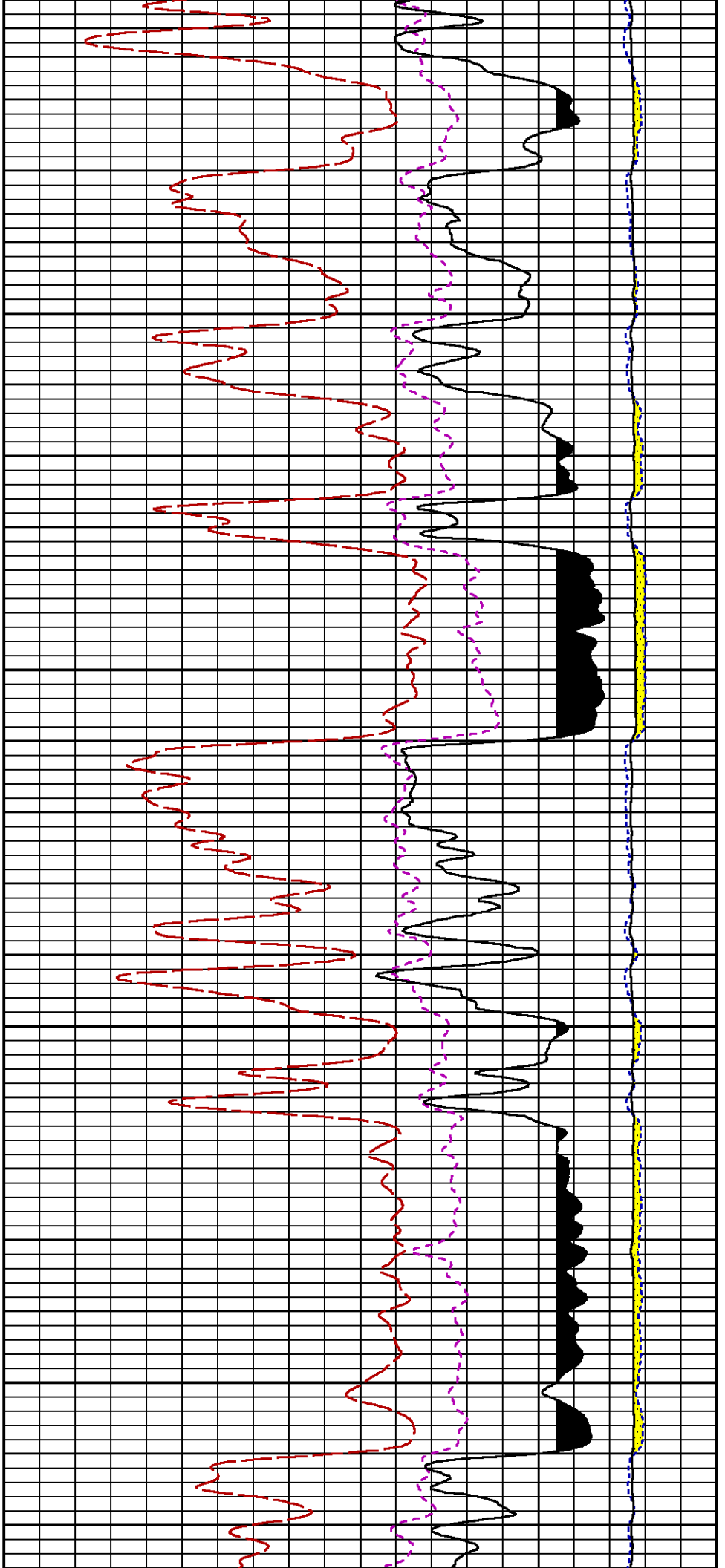


5700

5800

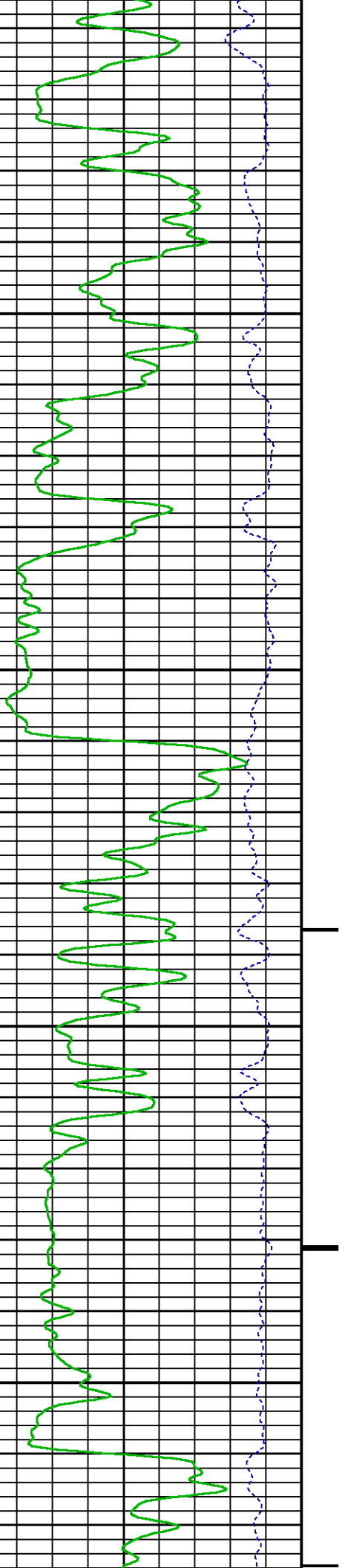


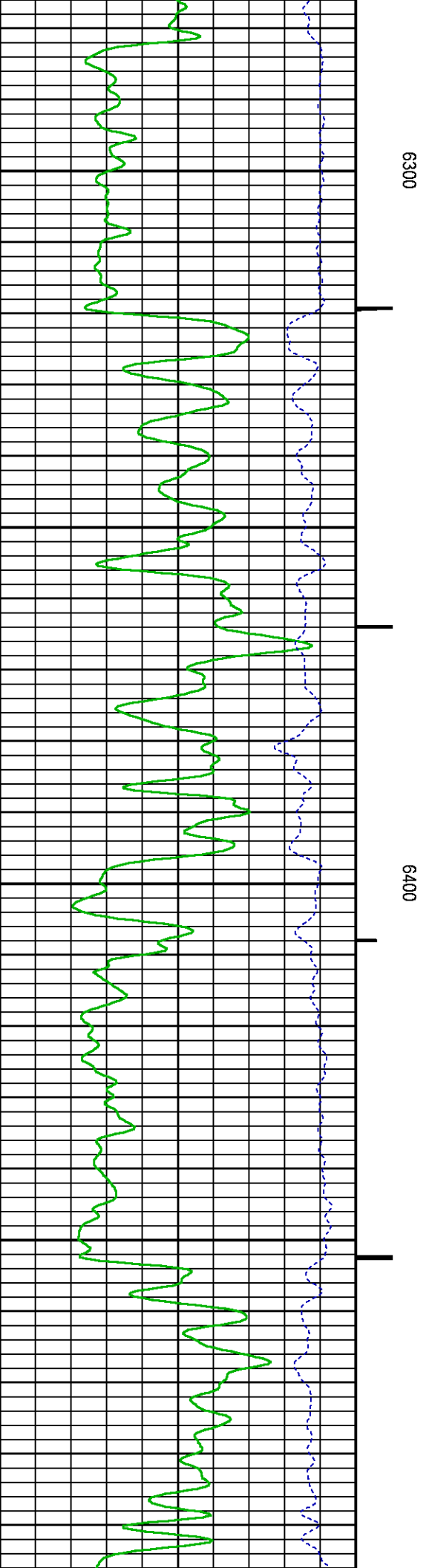
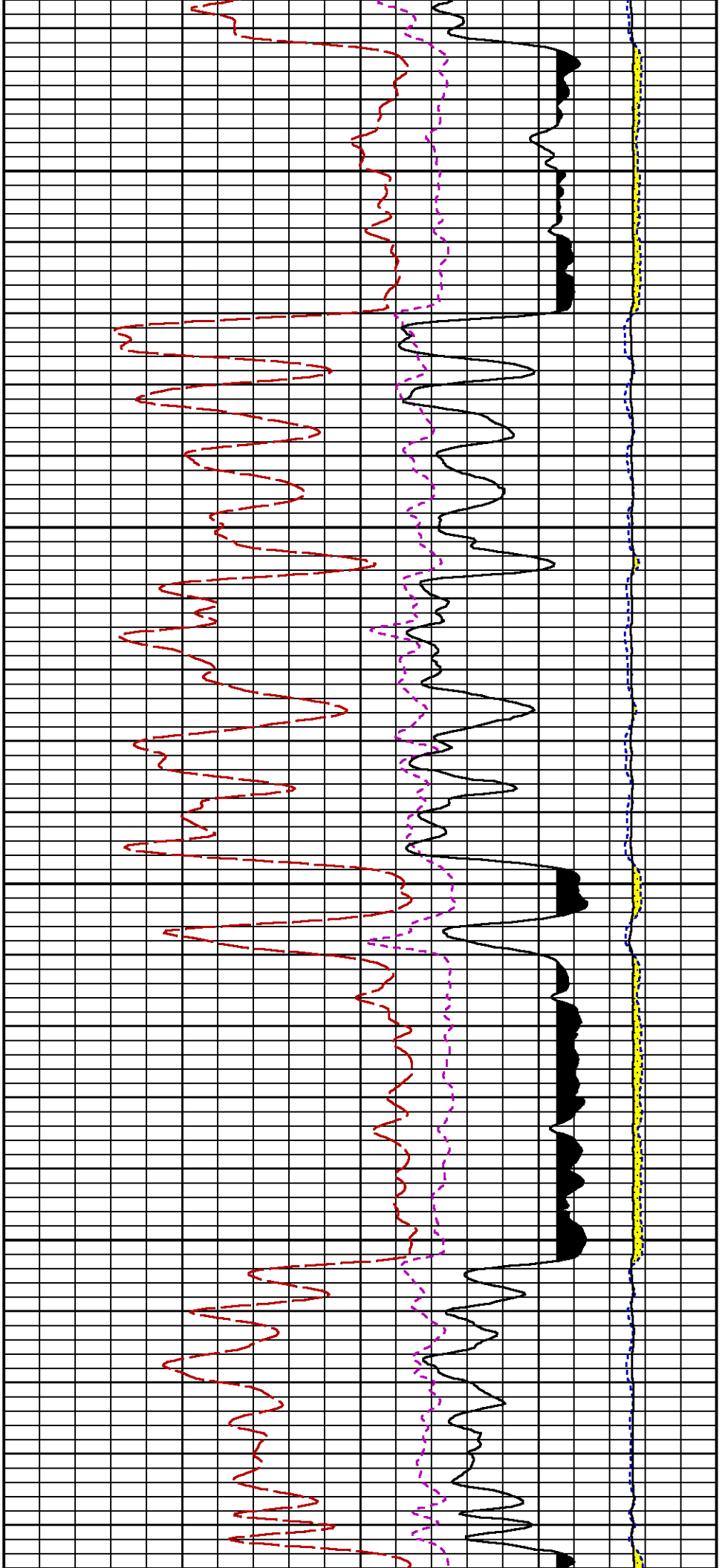


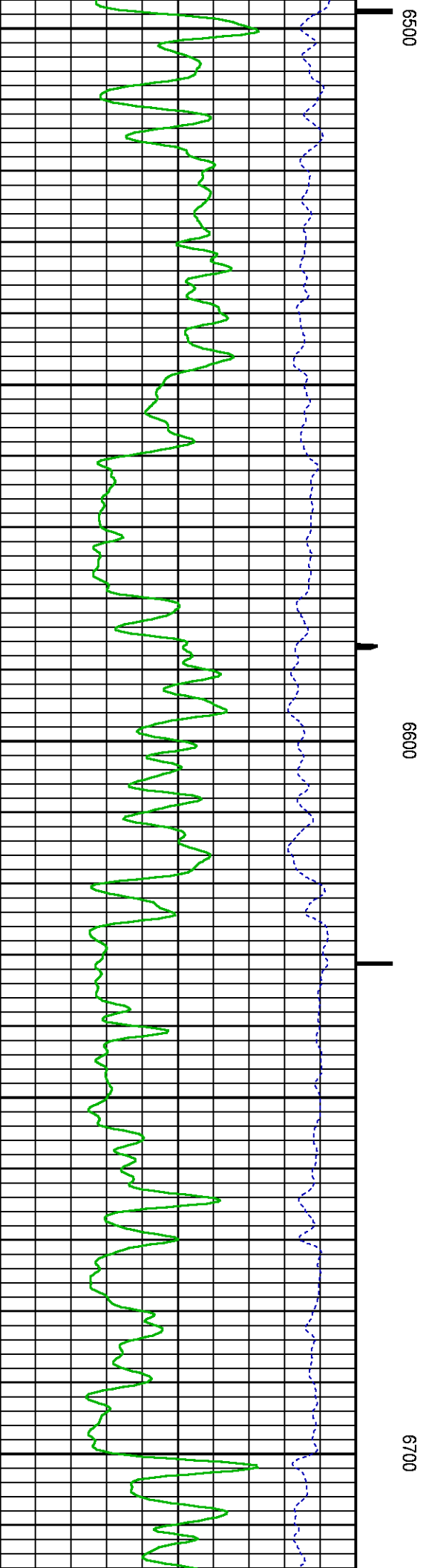
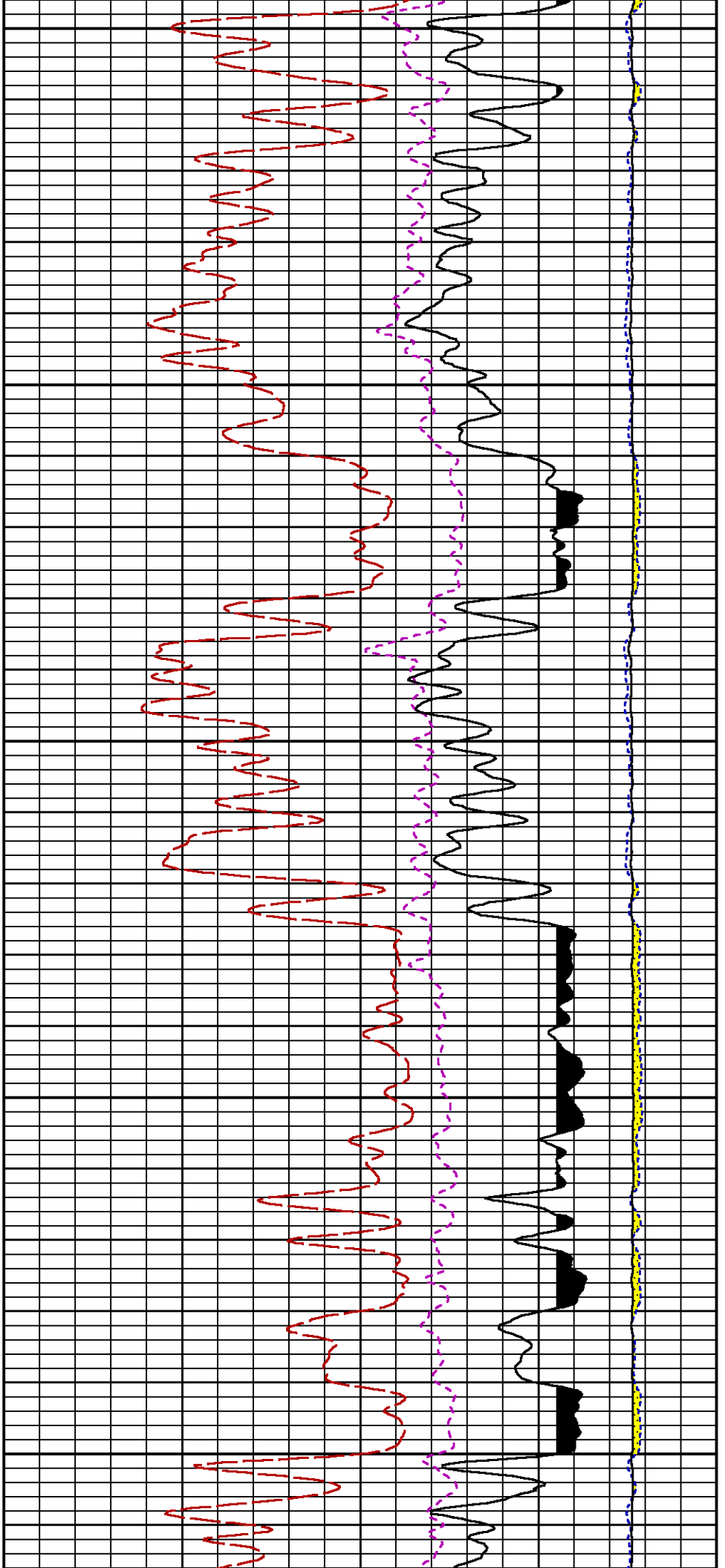


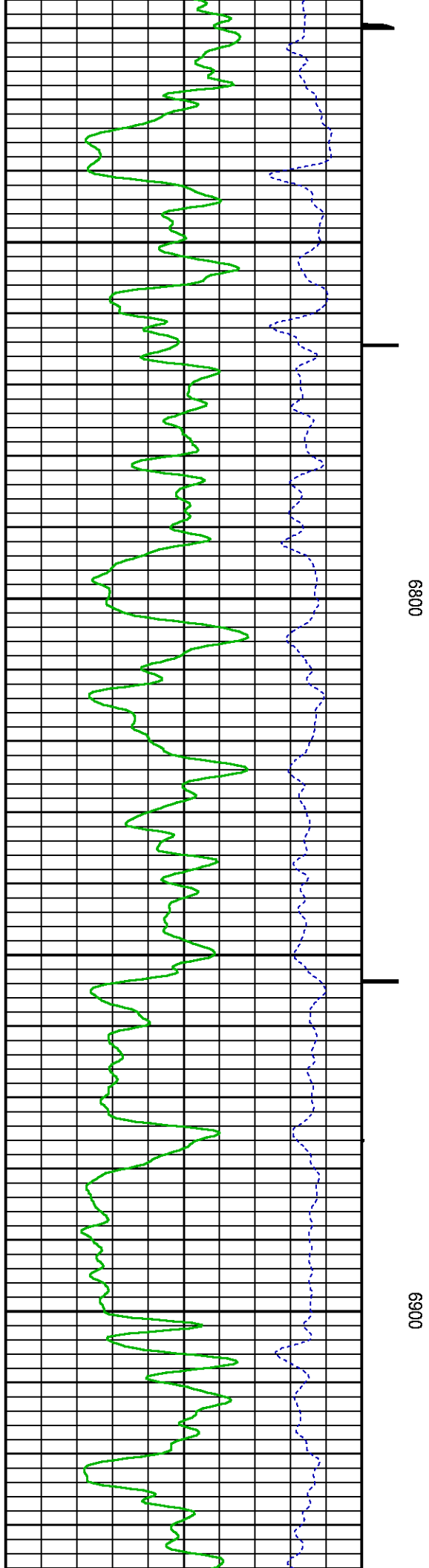
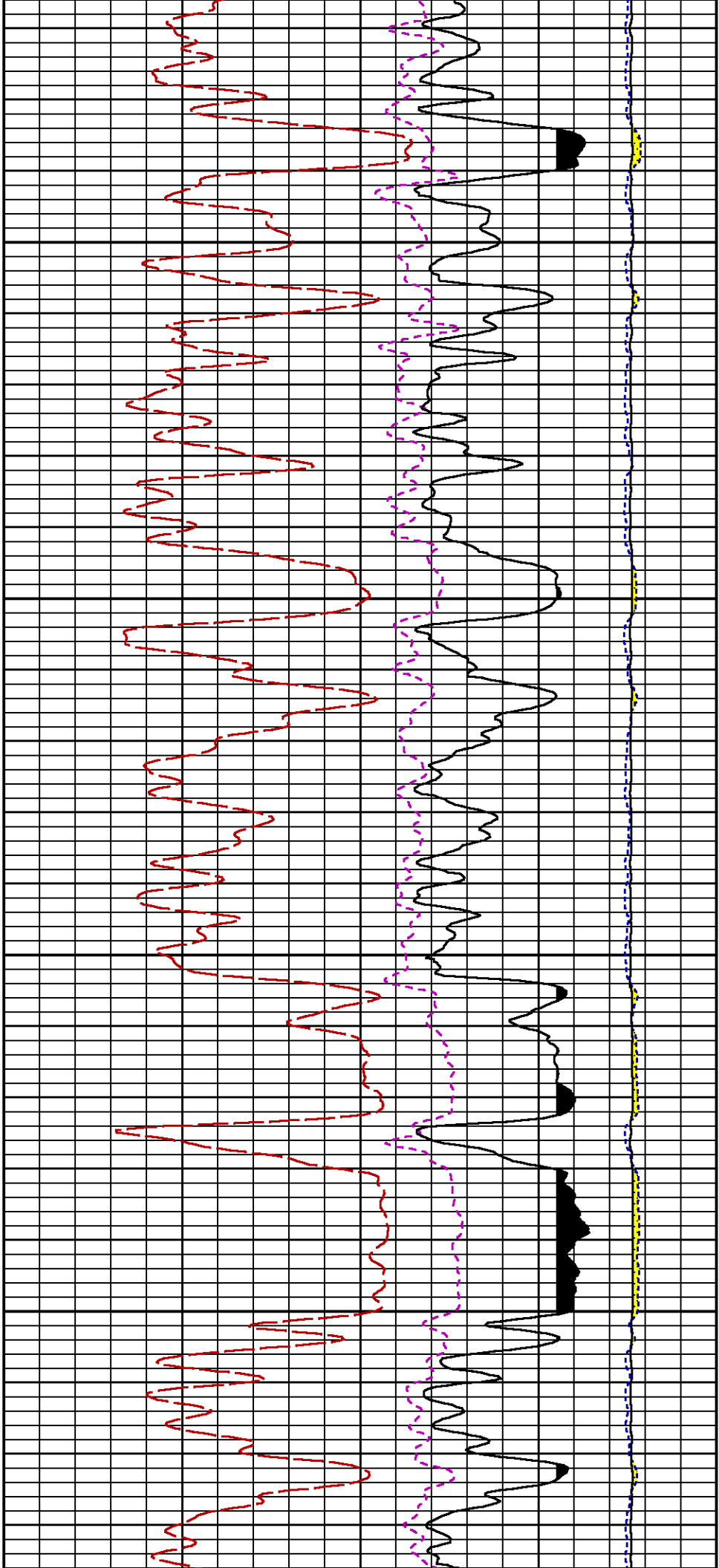
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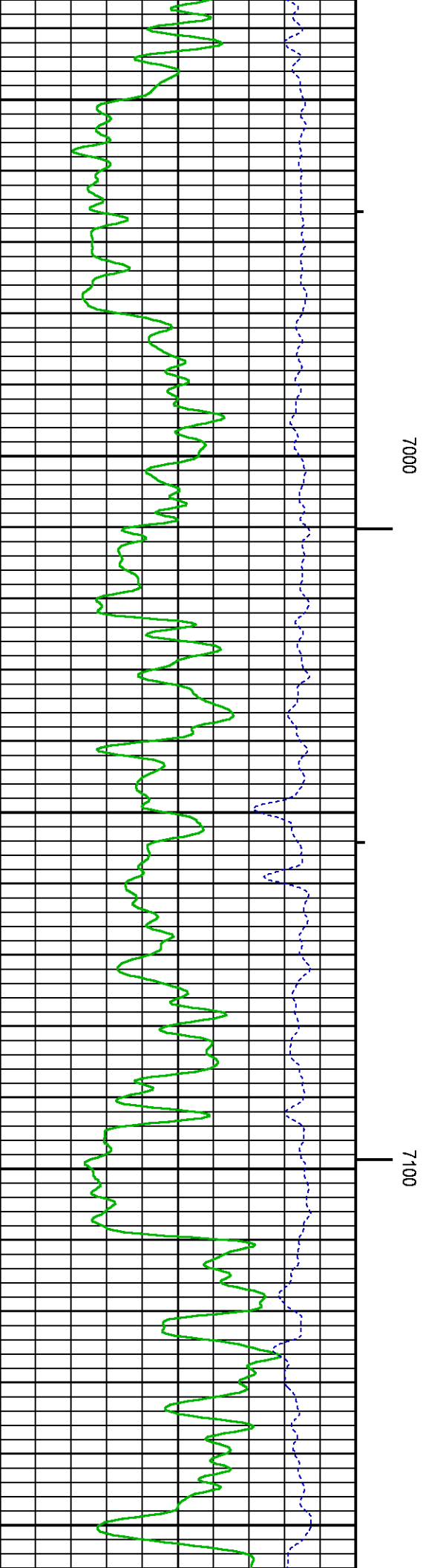
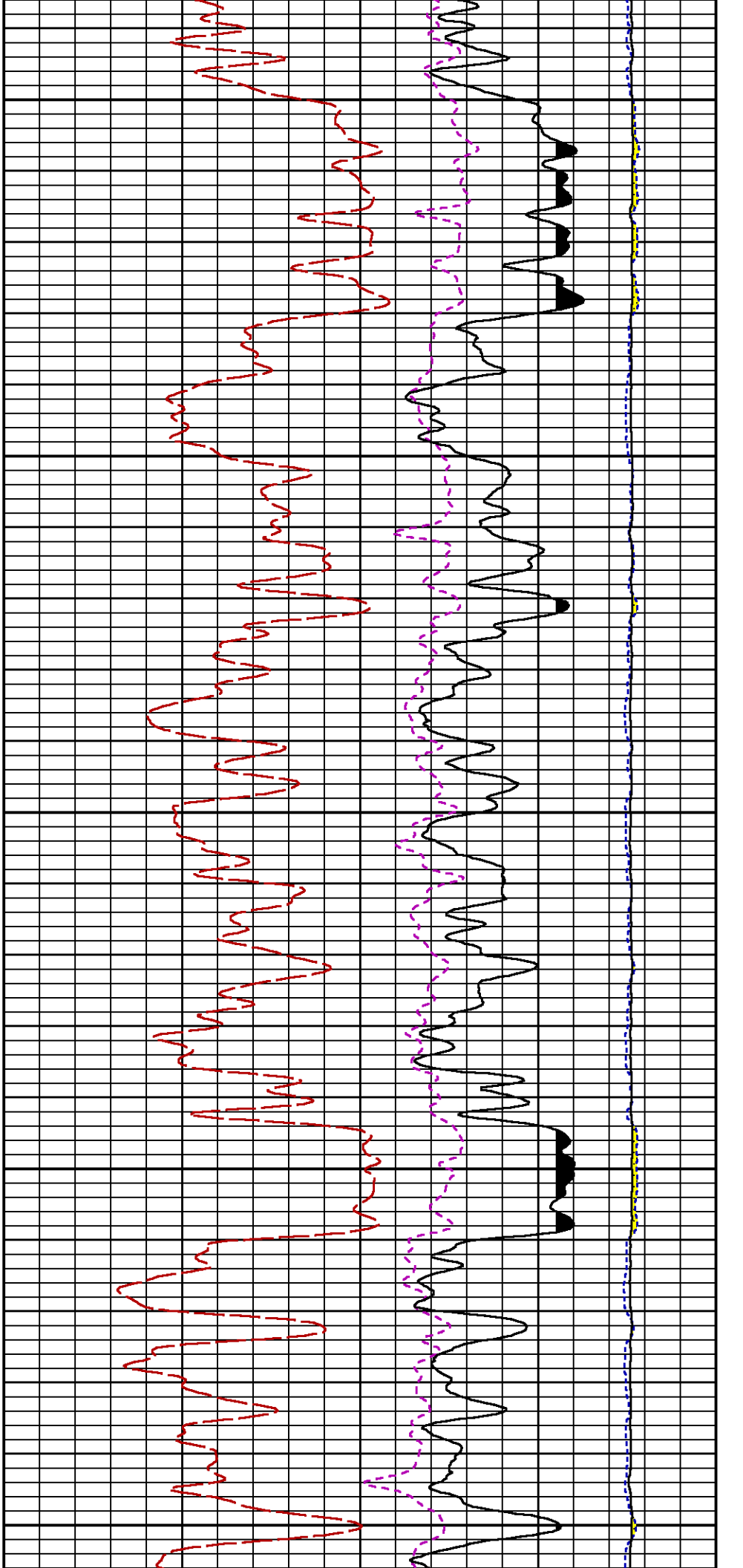
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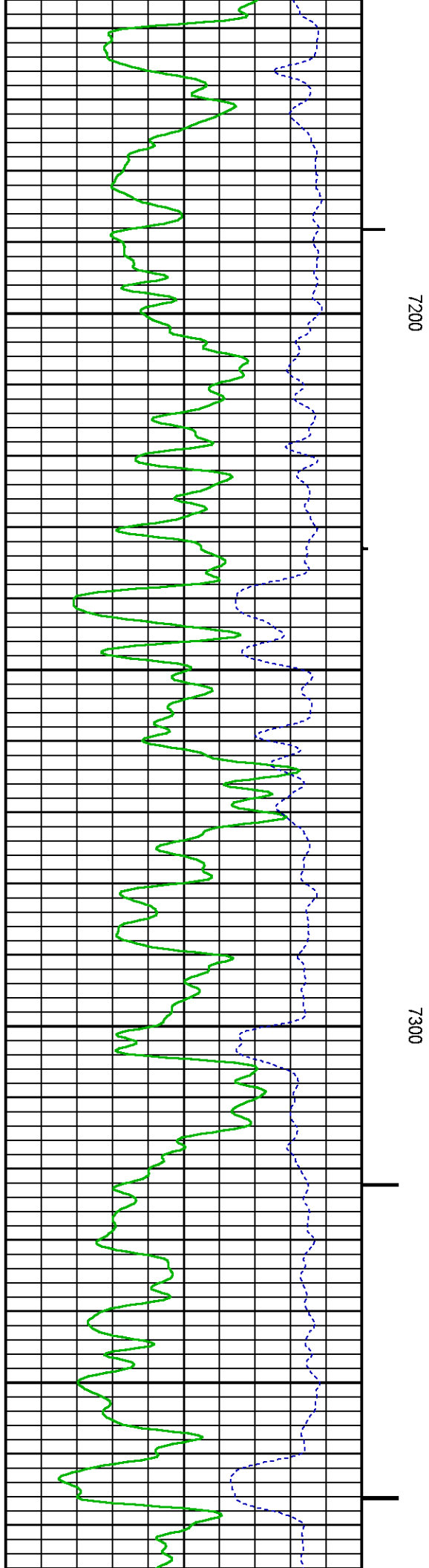
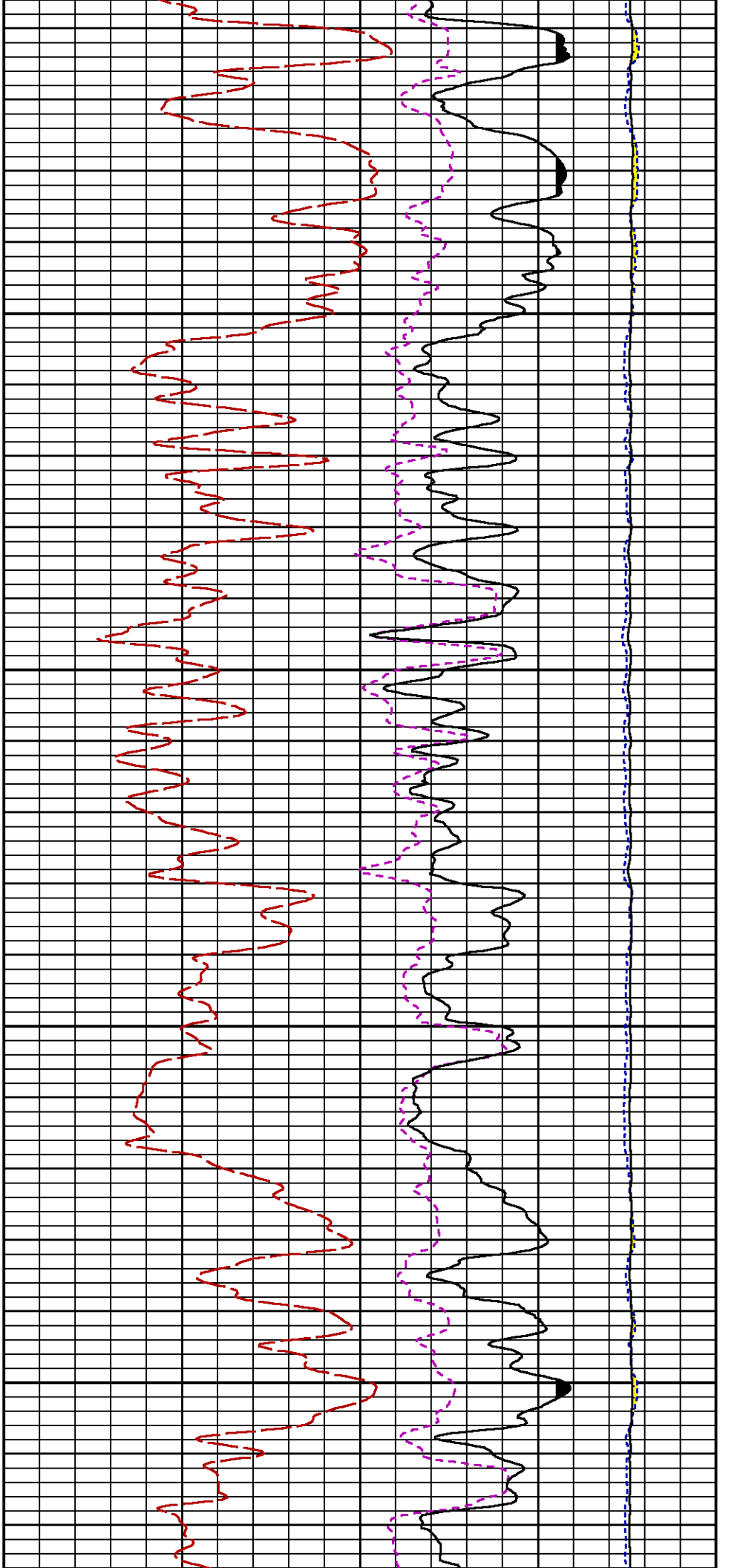


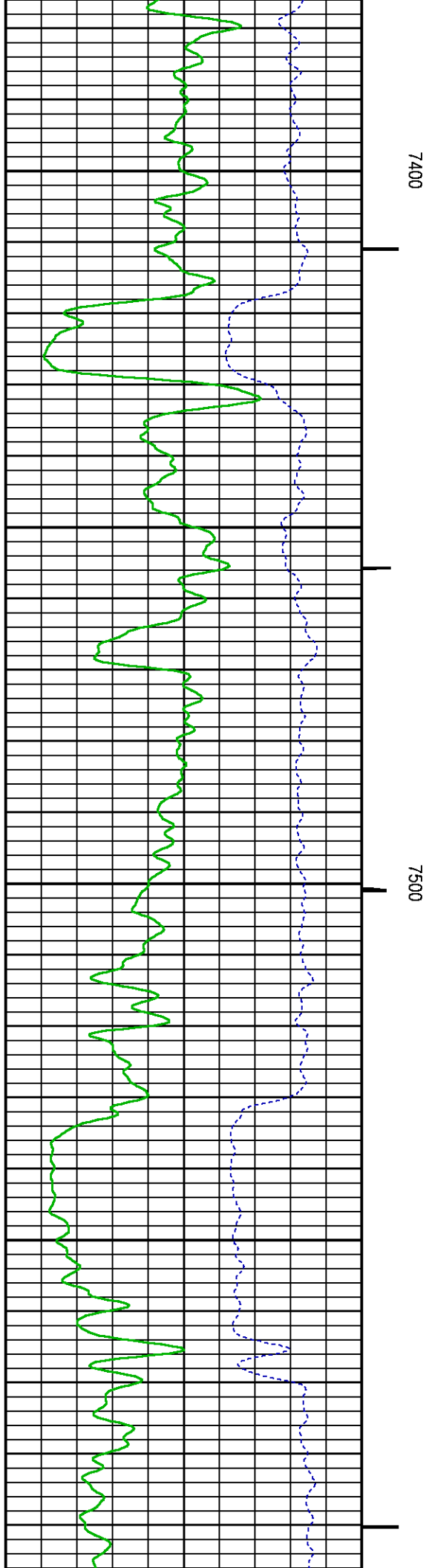
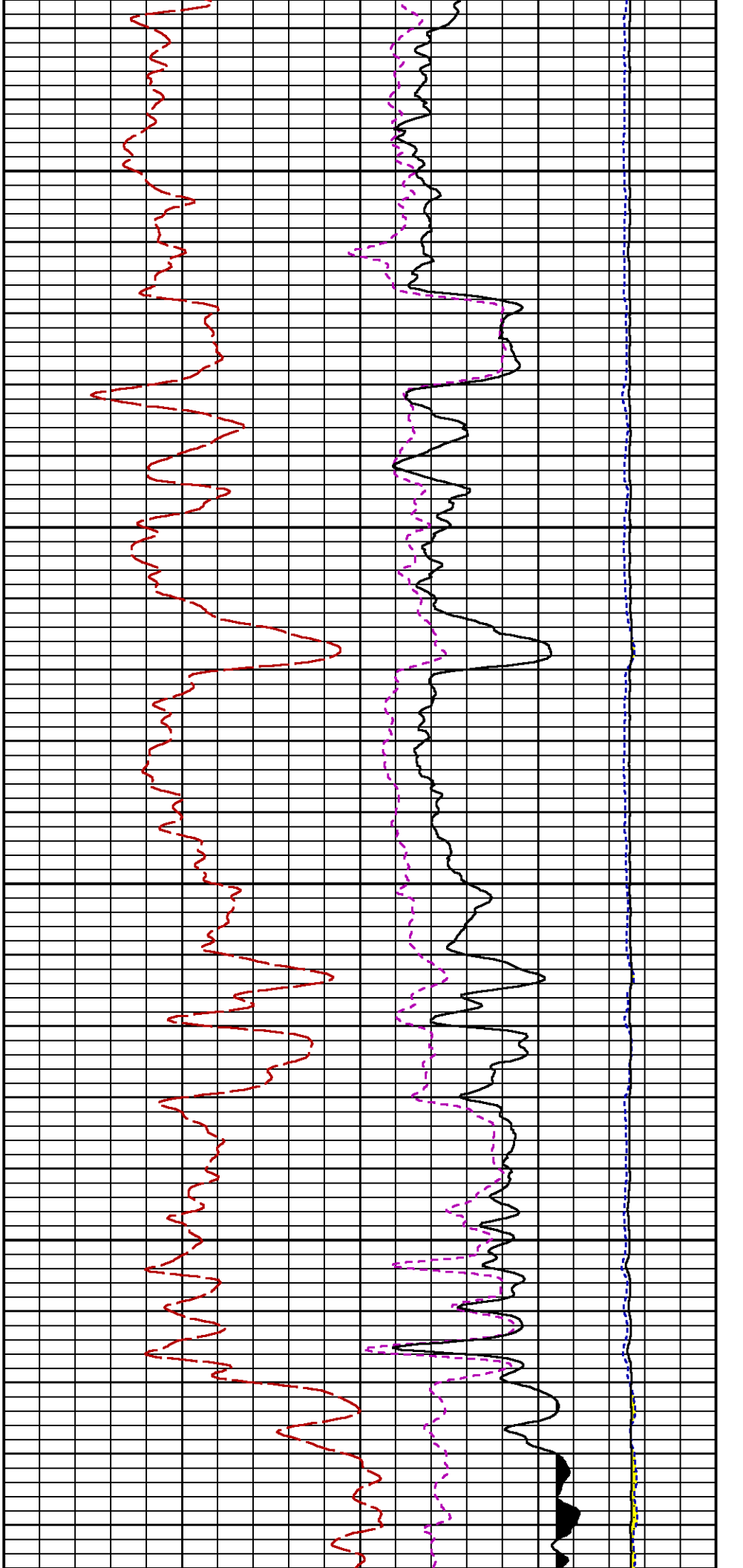


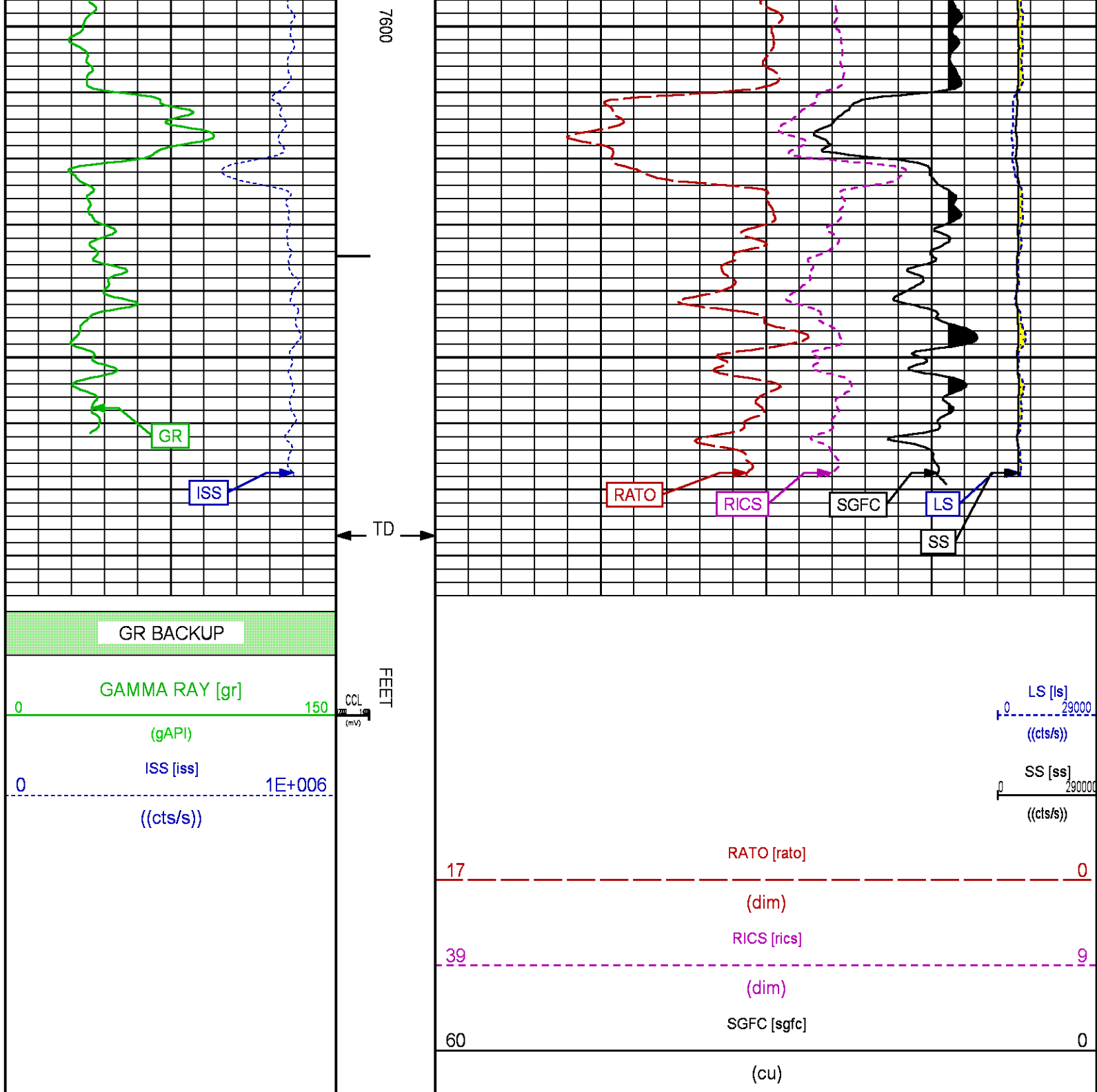












REPEAT PASS PNC-3D MODE

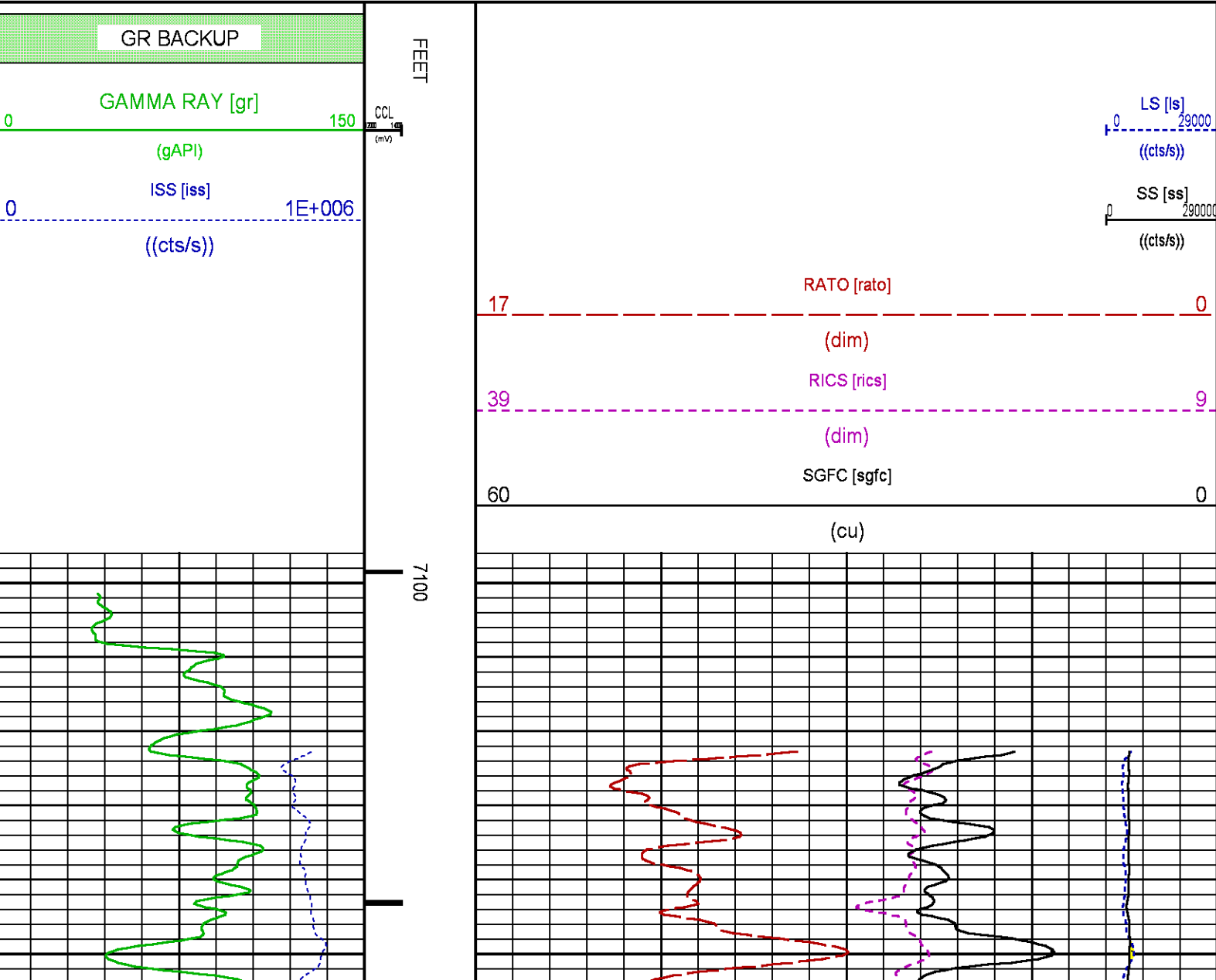
CURVE DESCRIPTION REPORT

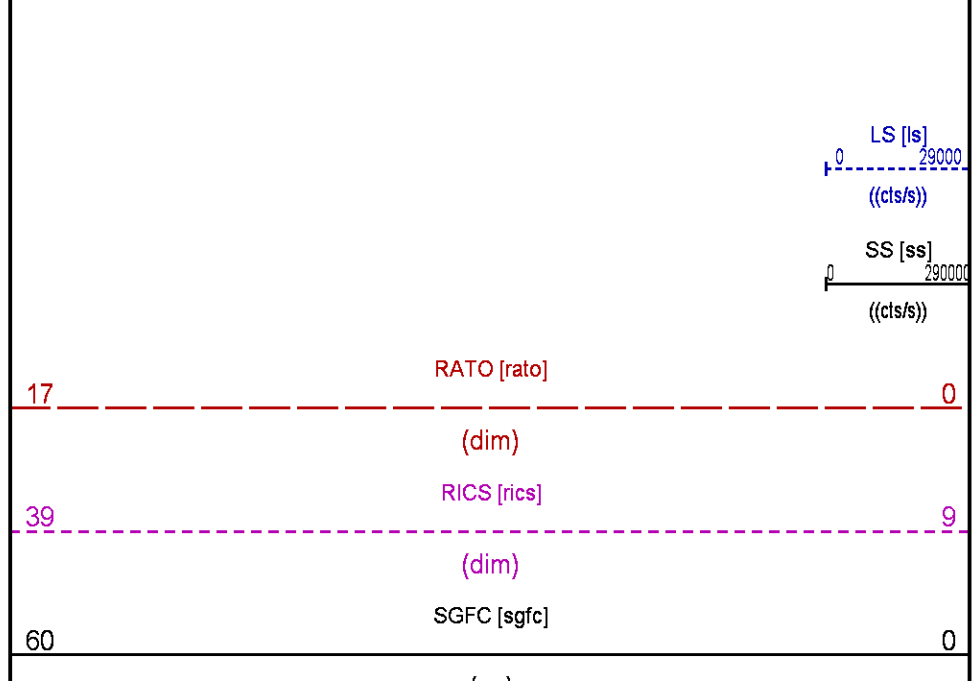
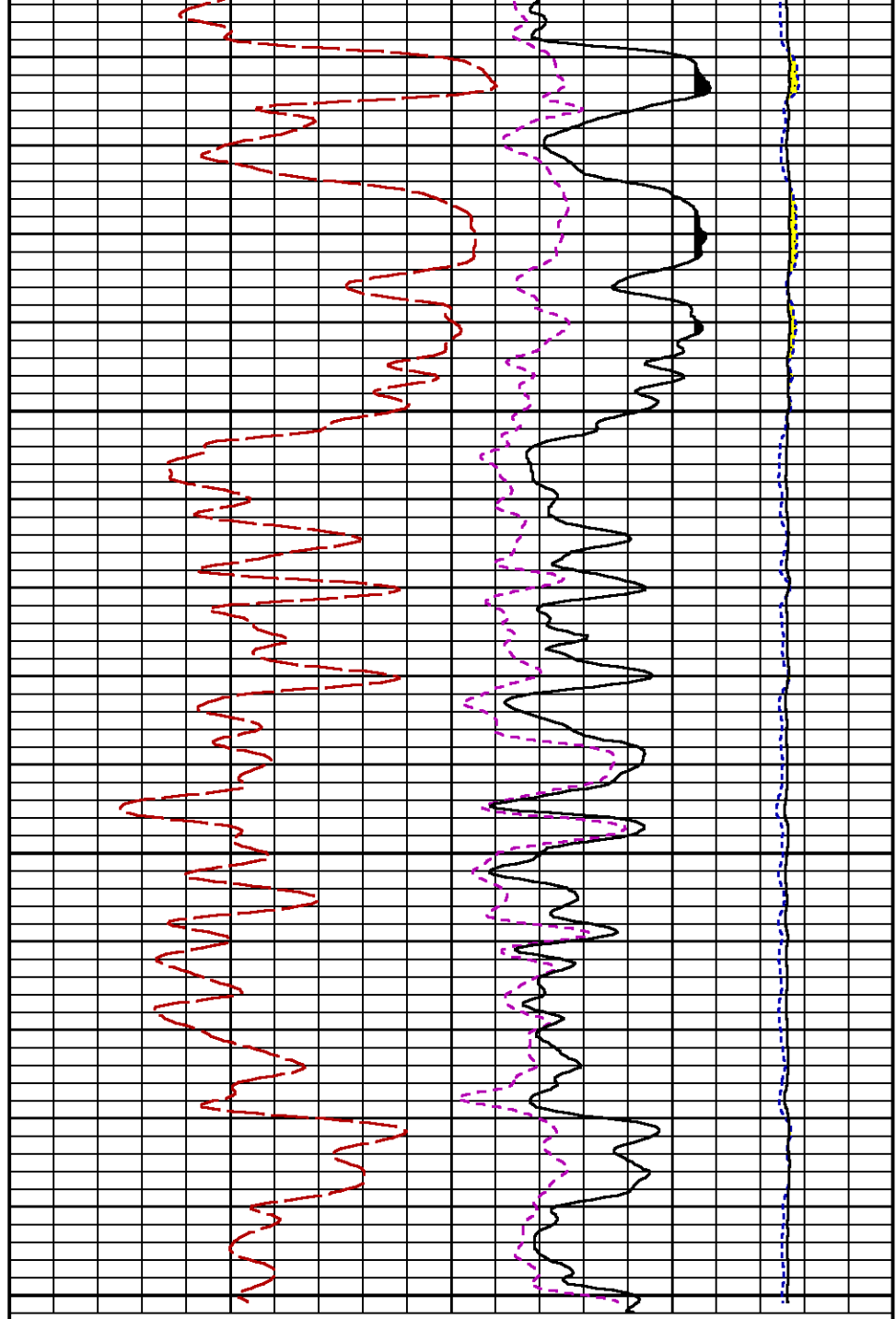
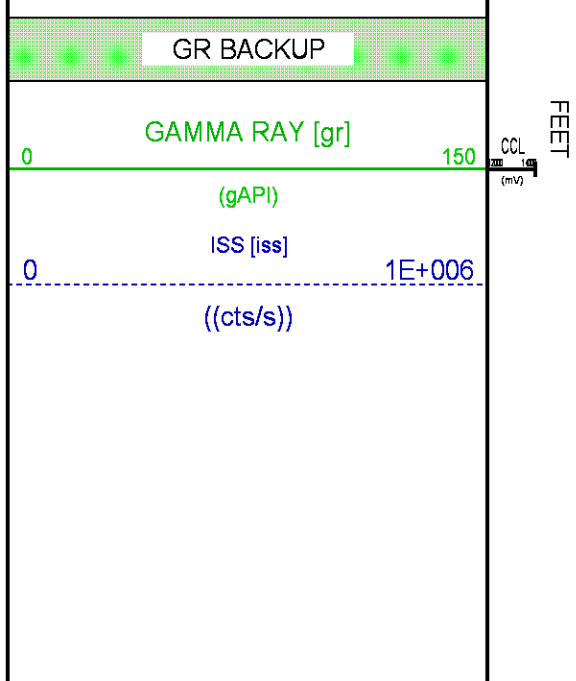
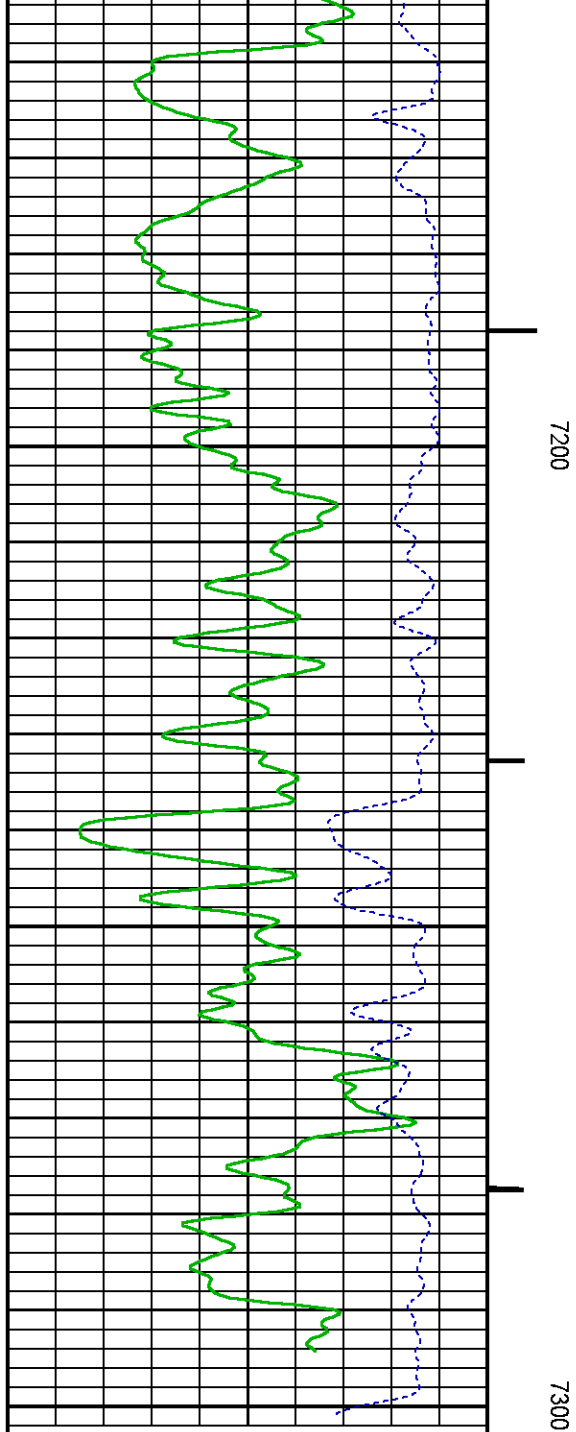
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	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	-21.75	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.25	LS	-9.50	RICS	-9.50	SS	-9.50

Presentation	: BHI78FR4H2:C:\dat1a\BRUTON_19_04W\BRUTON_19_04W_RPM_RPT.fvpdf [5"/100' Scale]
Plot Interval	: 7097.75 - 7308.25 Feet
Data File 1	: F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_04W\BRUTON_19_04W_RPM_RPT.xtf
Created On	: N/A
Company	: LARAMIE ENERGY II LLC
Well	: BRUTON 19-04W
Field	: VEGA
File Interval	: 7097 - 7313.75 Feet
OCT	: RPM3D1





CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\BRUTON_19_04\WRPM3D1.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11946804

DATE/TIME PERFORMED: Sun Oct 19 14:02:43 2014

UNIT #: 3882TD HL6756

CALB JIG #: 4702NK DA-491

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	22.56	207.89	185.3	0.809	18.26	168.26	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11946804

DATE/TIME PERFORMED: Sun Oct 19 14:05:10 2014

UNIT #: 3882TD HL6756

VERI JIG #: 4702NK DA-491

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	23.42	203.87	0.809	18.96	165.00	146.04
						140.00 160.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10322619

DATE/TIME PERFORMED: Thu Jul 13 11:23:55 2017

UNIT: 3882TD HL6728

CALIBRATOR: 2437XB 120057

SOURCE: 8281AA 10220684

HOURS: 8281AA 8

	ISS	Mtr Vlt (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	813723	126	2224	2172	2143	131	9.0	0.9718
Interpolated	1300000	146	2209	2166	2140			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	813723	5787	918	134	25.92	0.15	23.93	0.32

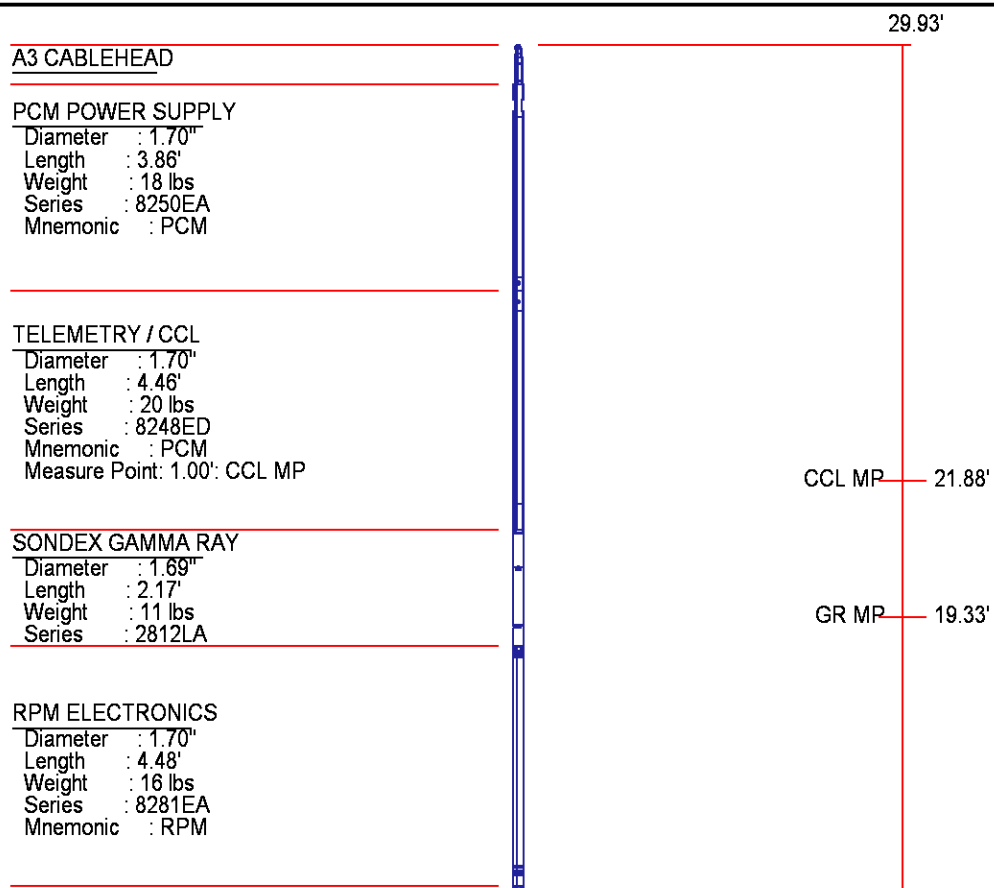
25.35 26.40 0.00 0.20 23.60 24.80 0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	813723	165485	25318	89785	31988	8302	54497	13275
Fit Quality %		0.438	0.183	0.362	0.406	0.457	0.395	0.481

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	813723	1.44	4.92	32.16	14.93	10.82	3.85	4.11
		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 %		0.025	0.019	0.383	0.030	0.090	0.055	0.066
Reduced	1296078	1.44	4.93	32.11	14.98	10.82	3.86	4.11
		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\BRUTON_19_04\WRPM3D1~tdg.meta



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 10.27'
LS DETECTOR 9.86'
SS DETECTOR 9.61'

RPM SOURCE SECTION

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

BULL PLUG 1 11/16

TOTAL LENGTH: 29.93'
TOTAL WEIGHT: 127 lbs
MAX DIAMETER: 0'1.70"

0.00'

**BAKER
HUGHES**
a GE company



COMPANY LARAMIE ENERGY
WELL BRUTON 19-04W
FIELD VEGA
COUNTY MESA **STATE** COLORADO

FILE NO:

API NO:

05077104370000

LOCATION:

SHL: LAT:39.262825N;LONG:107.815142W

BHL: LAT:39.267166N;LONG:107.816226W

SEC 19 **TWP** 9S **RGE** 93W

ELEVATIONS:

KB 7286 FT

DF 7286 FT

GL 7262 FT

DATE 27-OCT-2017