



FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	BRUTON 19-04E
05077104280000	FIELD	VEGA
	COUNTY	MESA
		STATE COLORADO
Version	LOCATION:	OTHER SERVICES
	SHL: LAT:39.262830N; LONG:107.815107W	RAL
	BHL: LAT:39.267147N; LONG:107.806900W	
	SEC 19 TWP 9S RGE 93W	
PERMANENT DATUM	GL	ELEVATION 7262 FT
LOG MEASURED FROM	KB	24 FT ABOVE P.D.
DRILL. MEAS. FROM	KB	ELEVATIONS: KB 7286 FT DF 7286 FT GL 7262 FT

DATE	26-OCT-2017
RUN	1
TRIP	1
SERVICE ORDER	US128845
DEPTH DRILLER	8410 FT
DEPTH LOGGER	8218 FT
BOTTOM LOGGED INTERVAL	8218 FT
TOP LOGGED INTERVAL	2470 FT
TIME STARTED	12:00
TIME FINISHED	18:00
OPERATOR RIG TIME	6 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	50 FT
LOGGED CEMENT TOP	2509 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	15 FMIN
MAX. RECORDED TEMP.	238 DEGF
REFERENCE LOG	RALGR BAKER
REFERENCE LOG DATE	26-OCT-2017
EQUIP. NO.	HL-6670
LOCATION	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

RUN 1 TRIP 1: *2 OPERATIONS IN WELL*

OPERATION 2: RPM/GR/CCL RUN FREE

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 7410' - 7432'
SJ: 6424' - 6432'

CREW: C.GOLOBY , J.PENA

EQUIPMENT DATA				
RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.
2	1	TELEMETRY	8250EA/8248EA	12151903/12211009
2	1	GAMMA RAY	2812LA	11781299
2	1	RPM	8281EA	10273848
2	1	RPM	8283PA	10322619
2	1	RPM	8281FA	10238007
				POSITION
				FREE
				FREE
				FREE
				FREE
				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: Thu Oct 26 18:04:42 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\BRUTON_19_04E\RPM3D103.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2466.123 ft BOTTOM DEPTH: 3093.219 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_04E\BRUTON_19_04E_RPM_GSAND.fvpdf [5"/100' Scale]
Plot Interval : 2452 - 3091.5 Feet

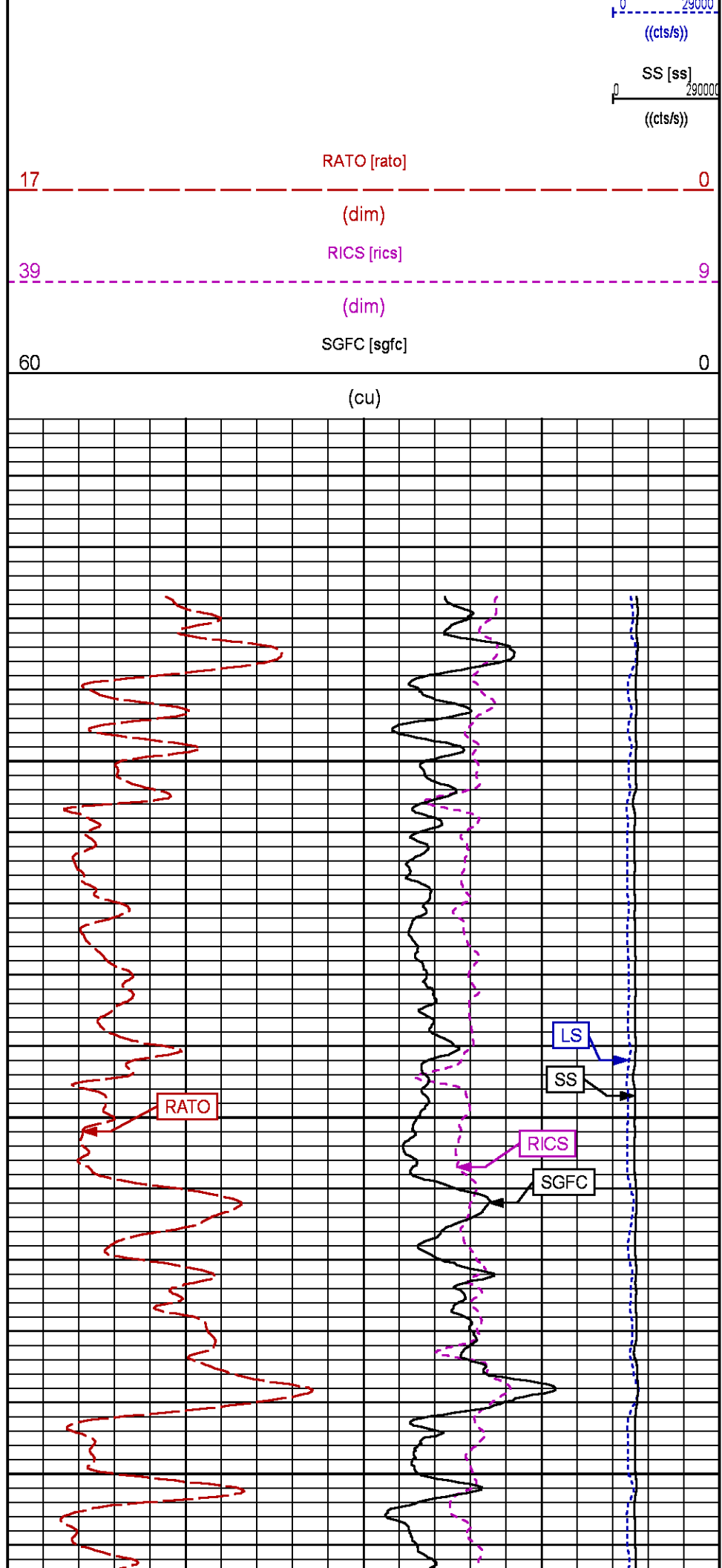
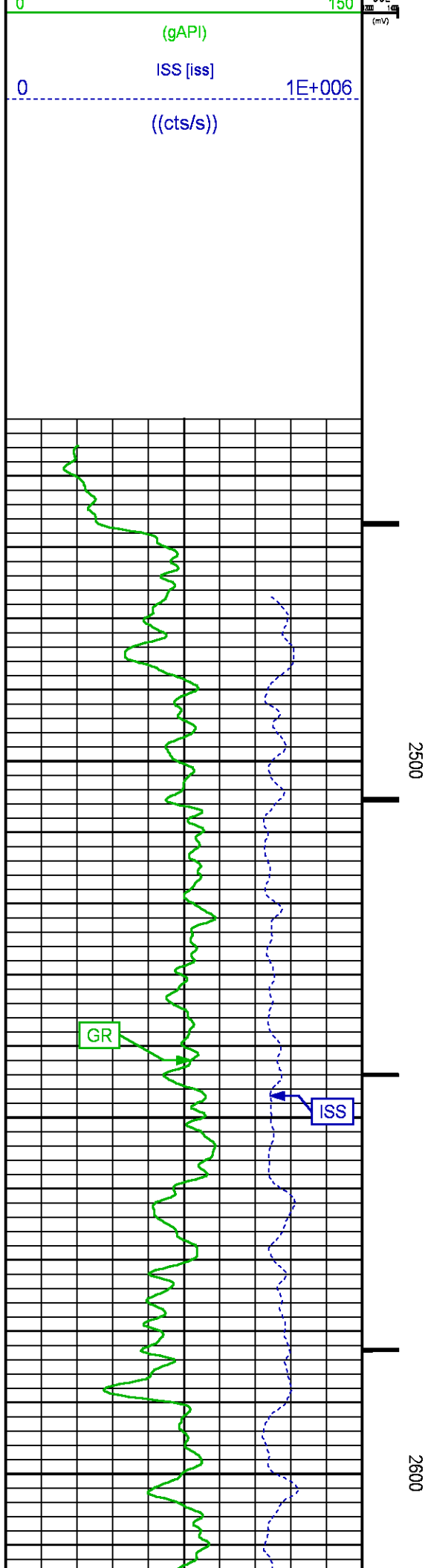
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Company : LARAMIE ENERGY II LLC
Well : BRUTON 19-04E
Field : VEGA
File Interval : 2451.25 - 3097 Feet
OCT : RPM3D1

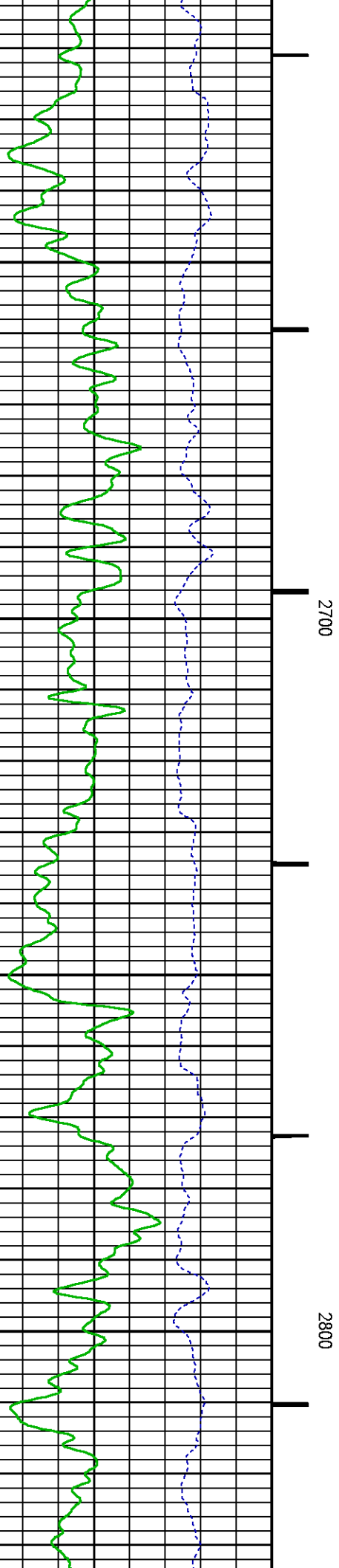
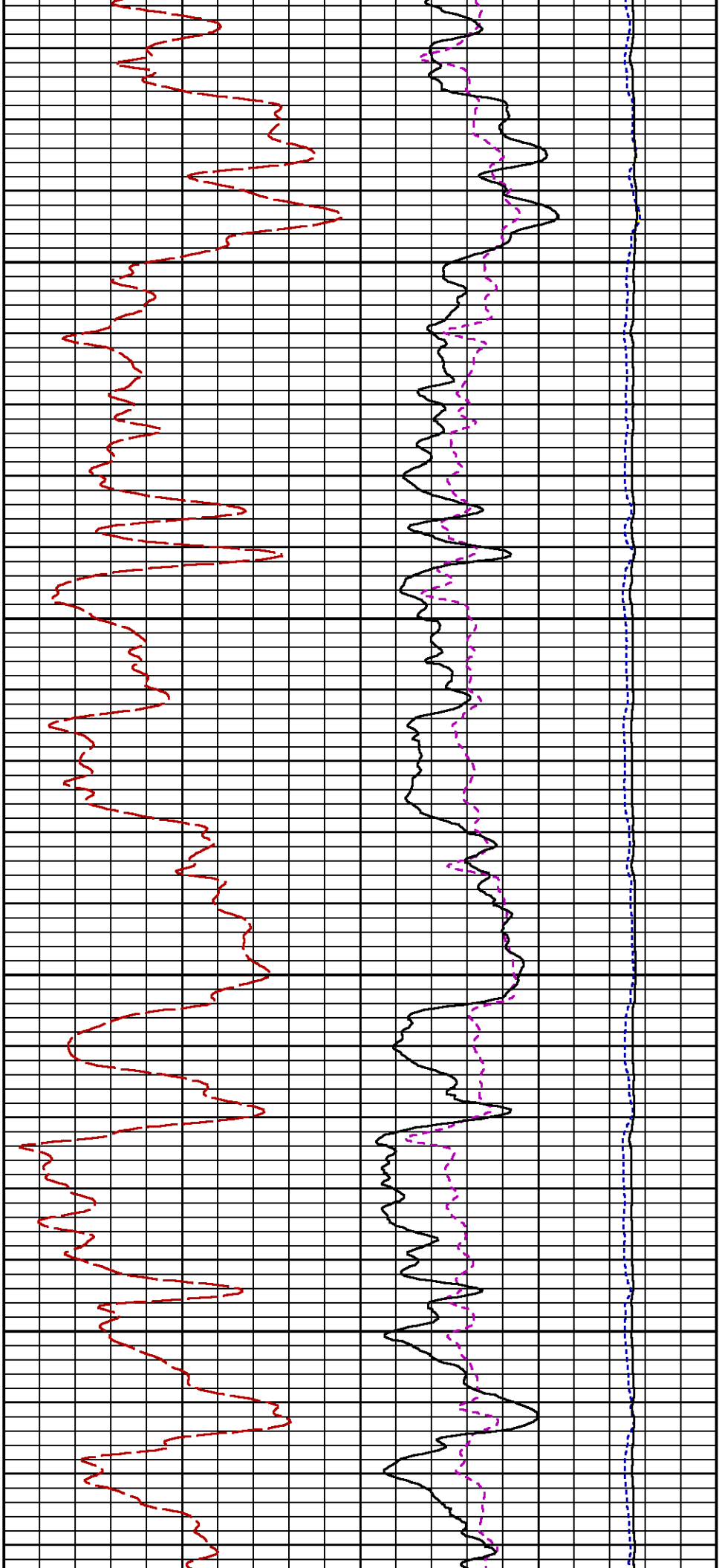
GR BACKUP

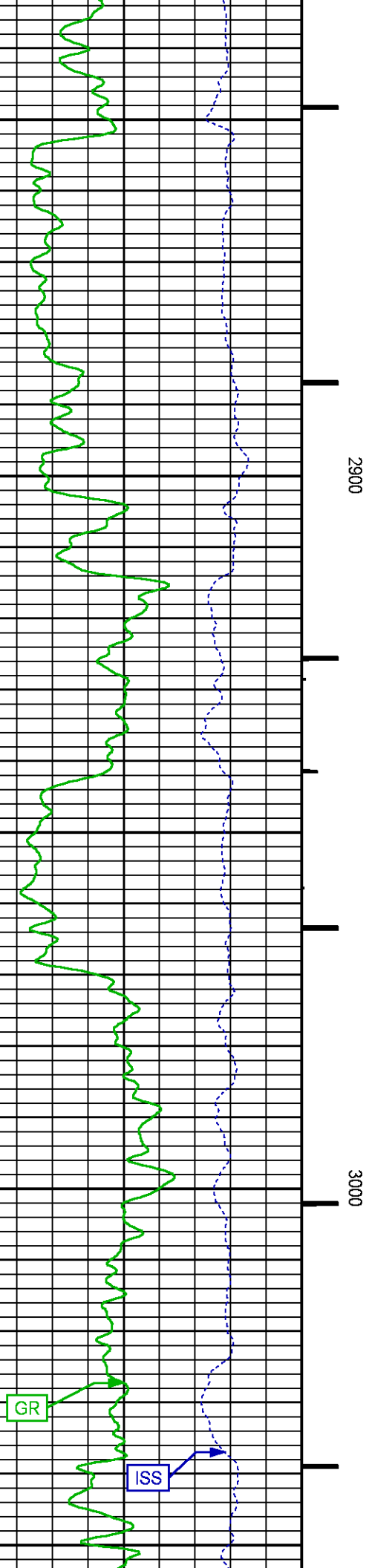
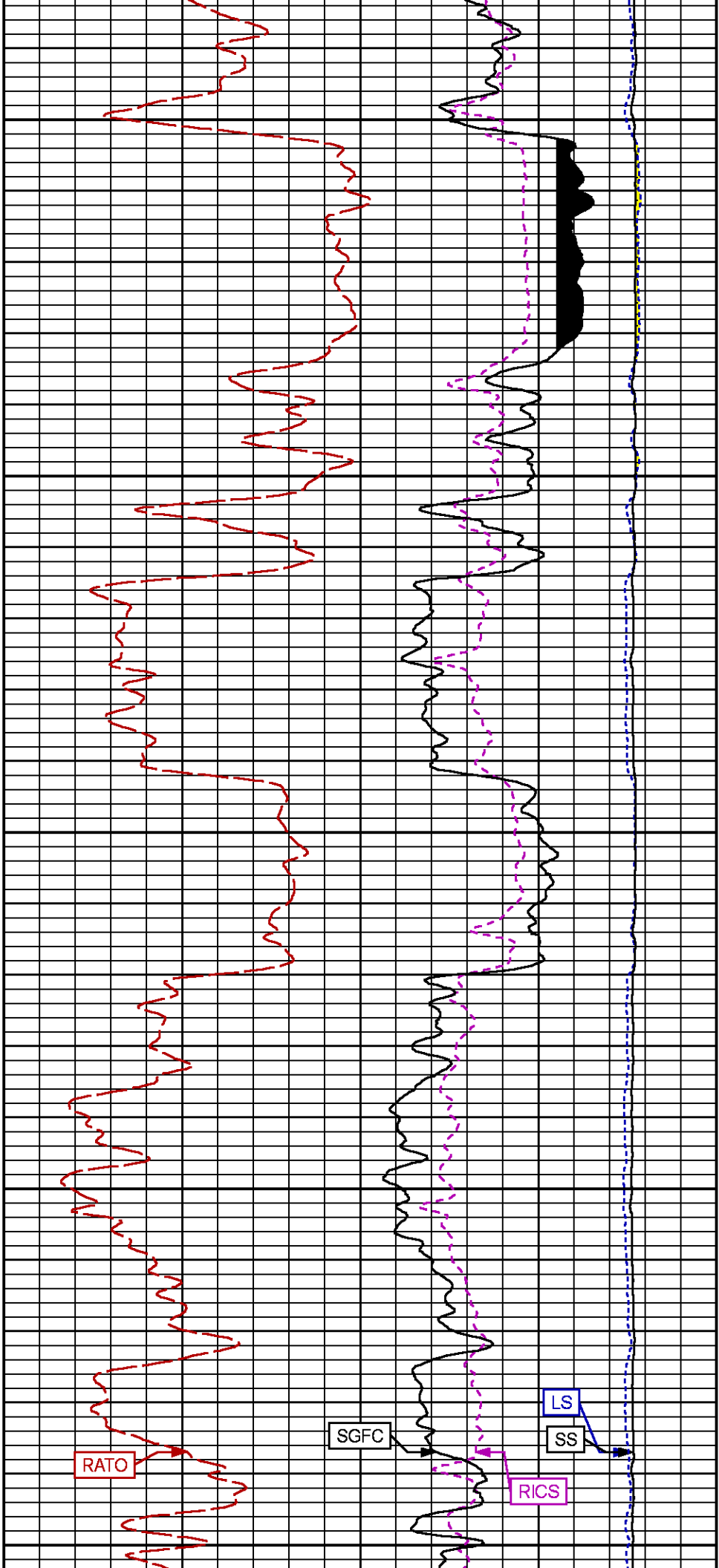
FEET

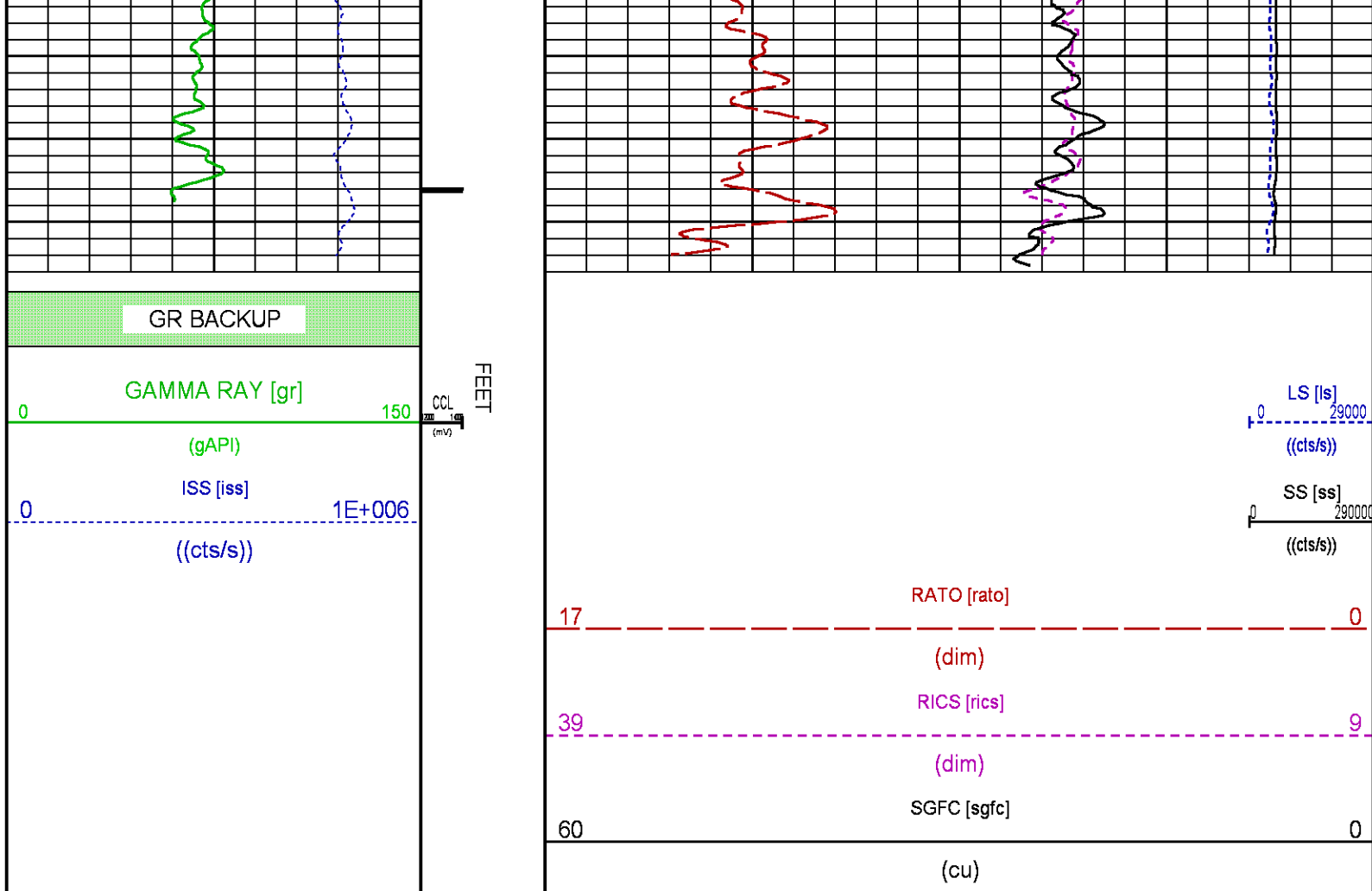
GAMMA RAY [gr]

LS [ls]









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: Thu Oct 26 17:24:23 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\BRUTON_19_04\VRPM3D102.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4505.500 ft BOTTOM DEPTH: 8236.928 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

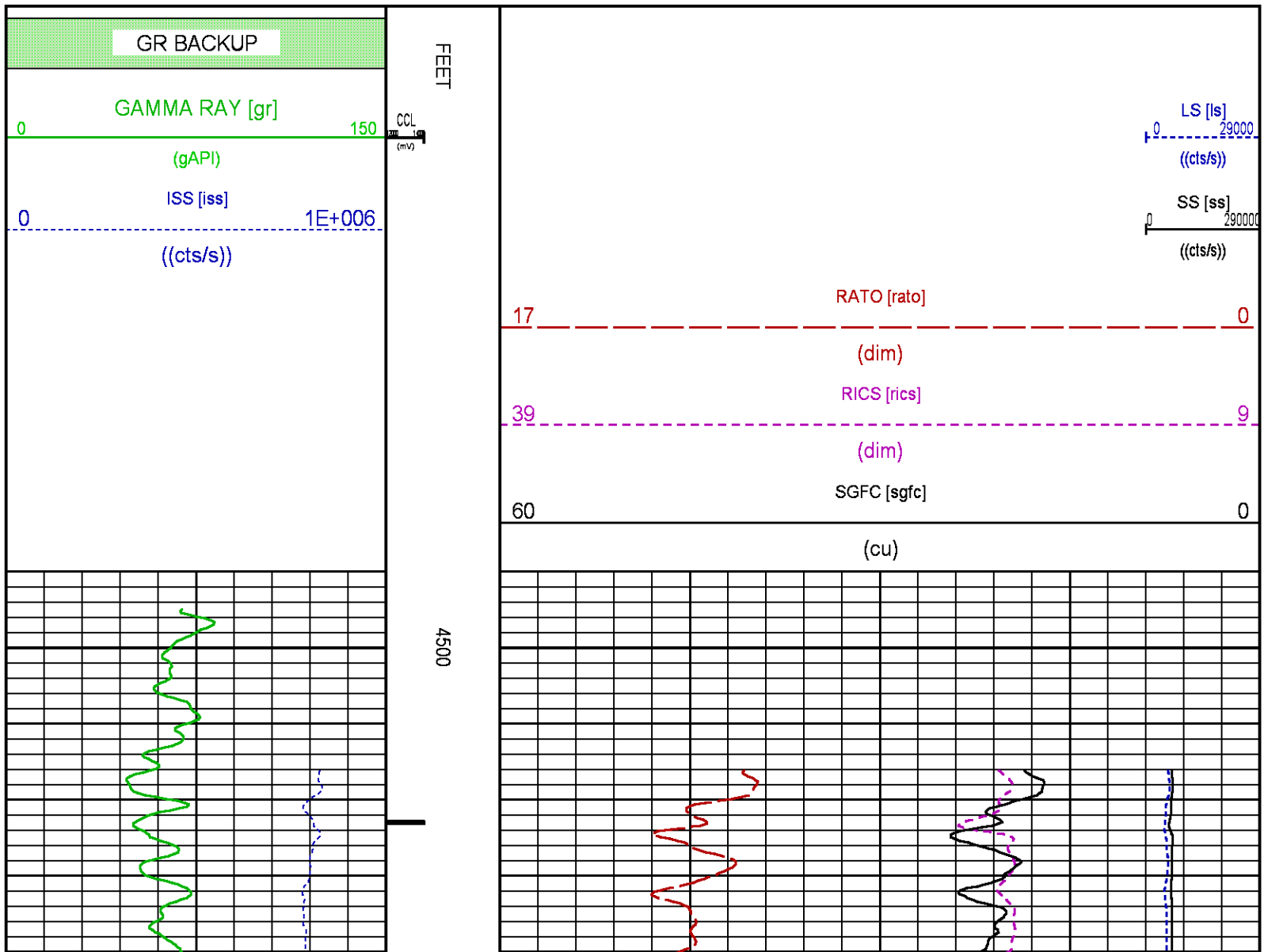
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS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

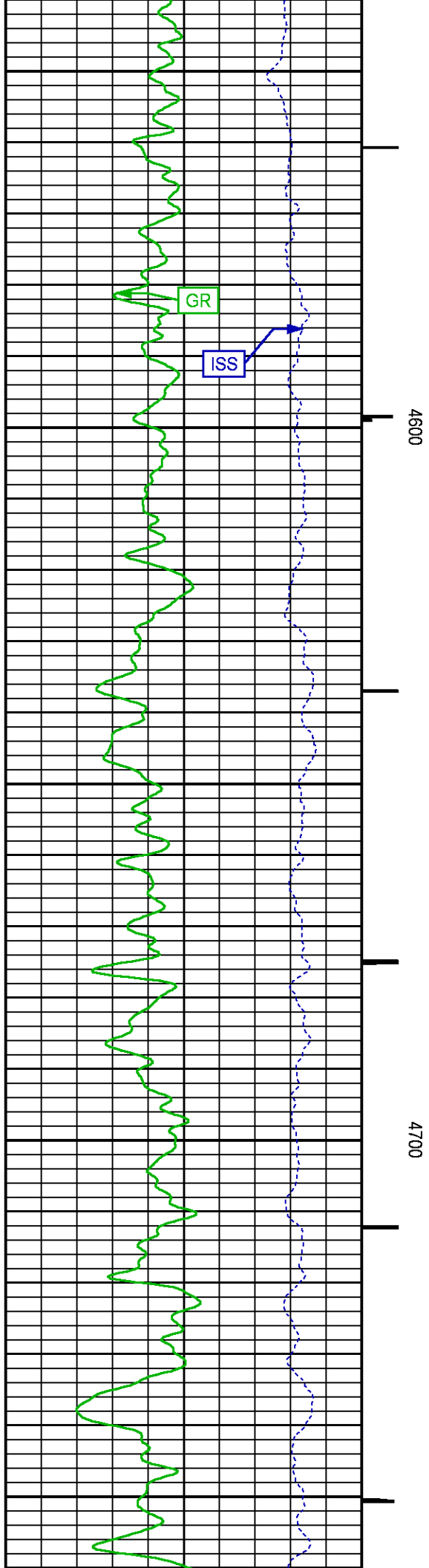
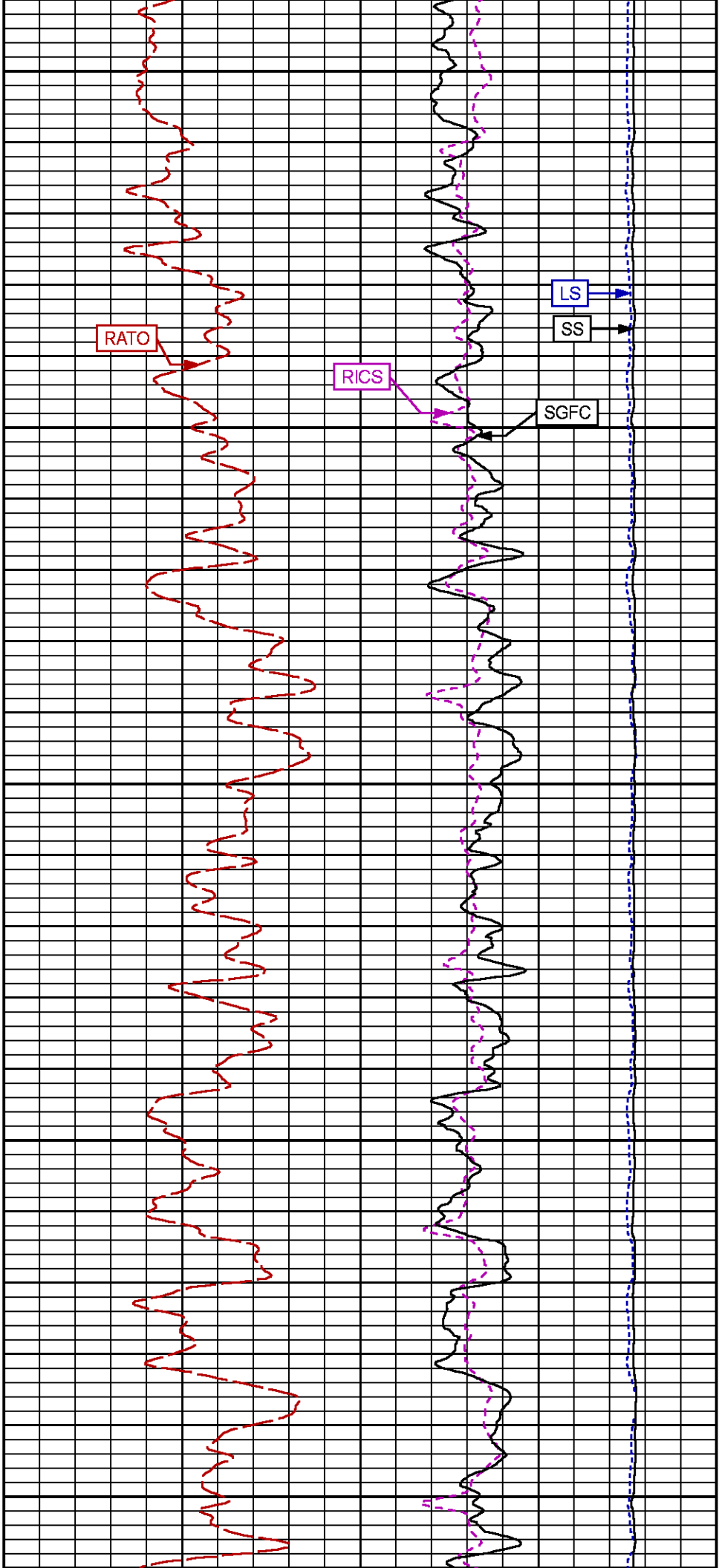
CURVE MEASURE POINT OFFSET

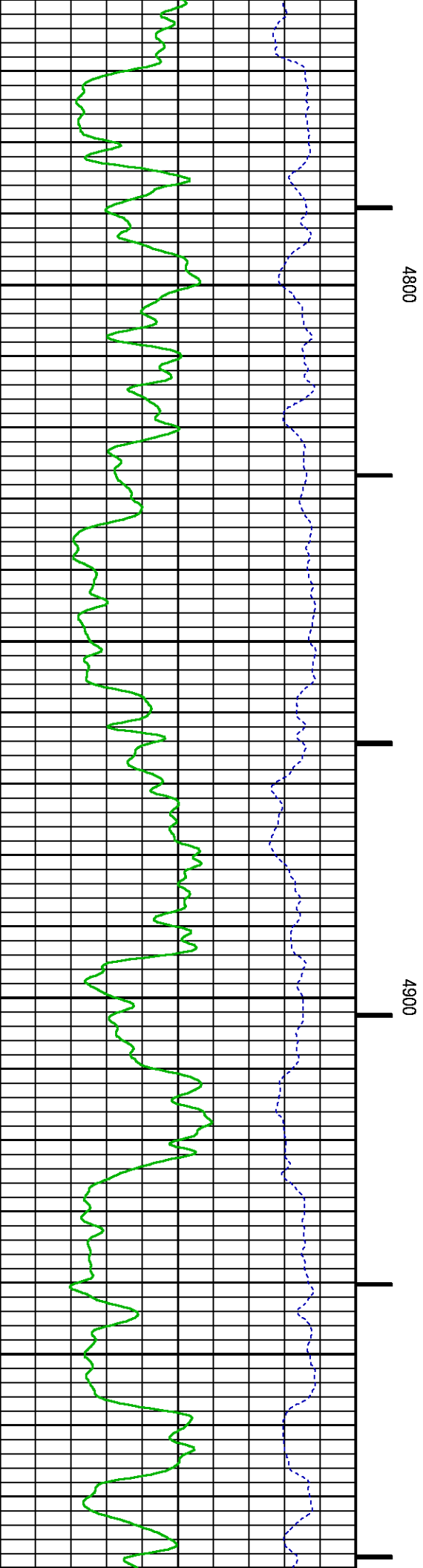
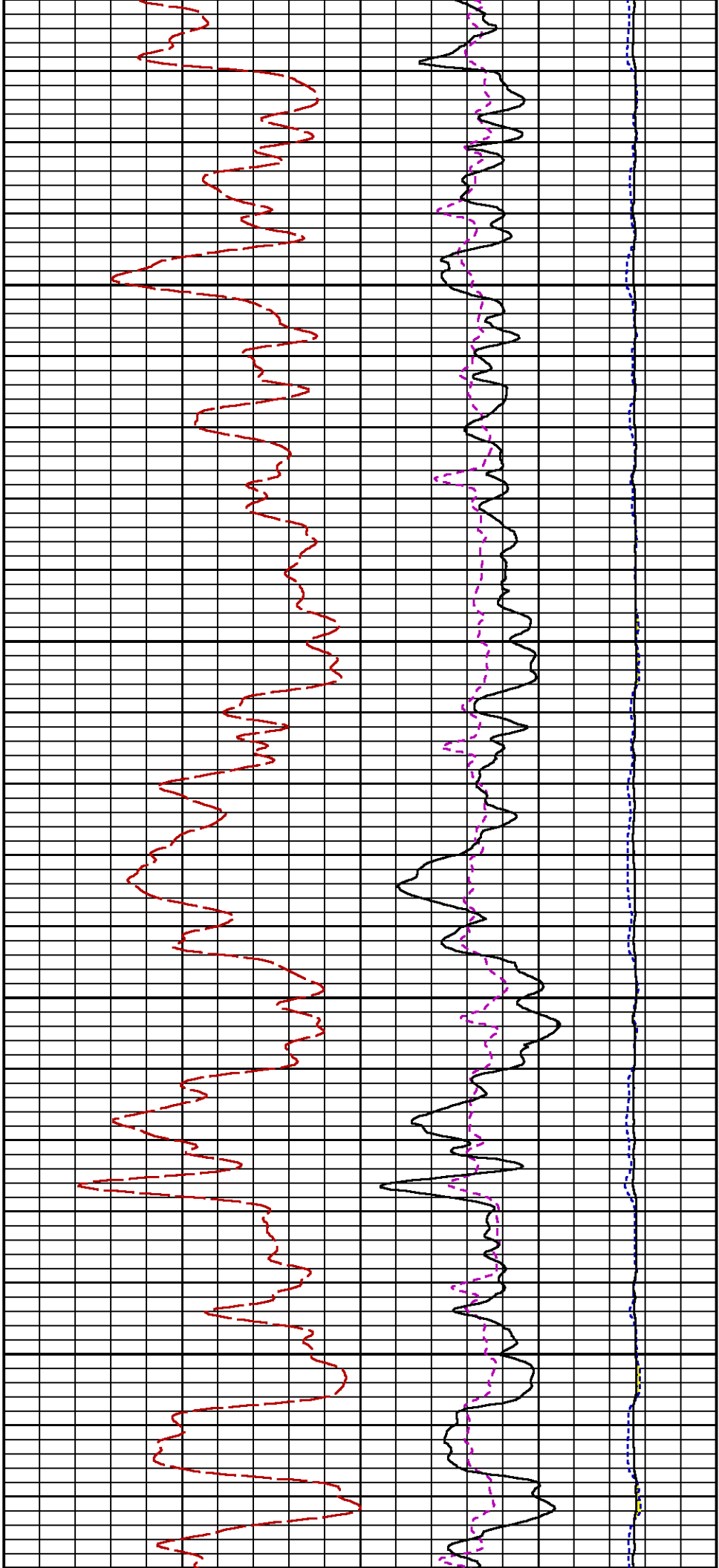
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-21.75	ISS	-9.50	RATO	-9.50	SGFC	-9.50
GR	-19.25	LS	-9.50	RICS	-9.50	SS	-9.50

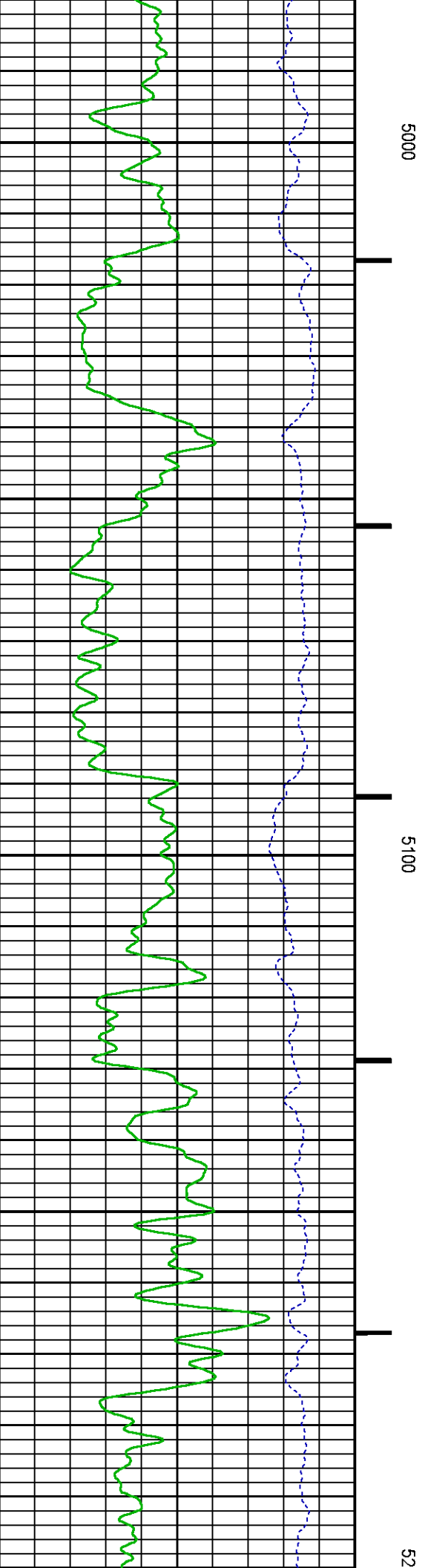
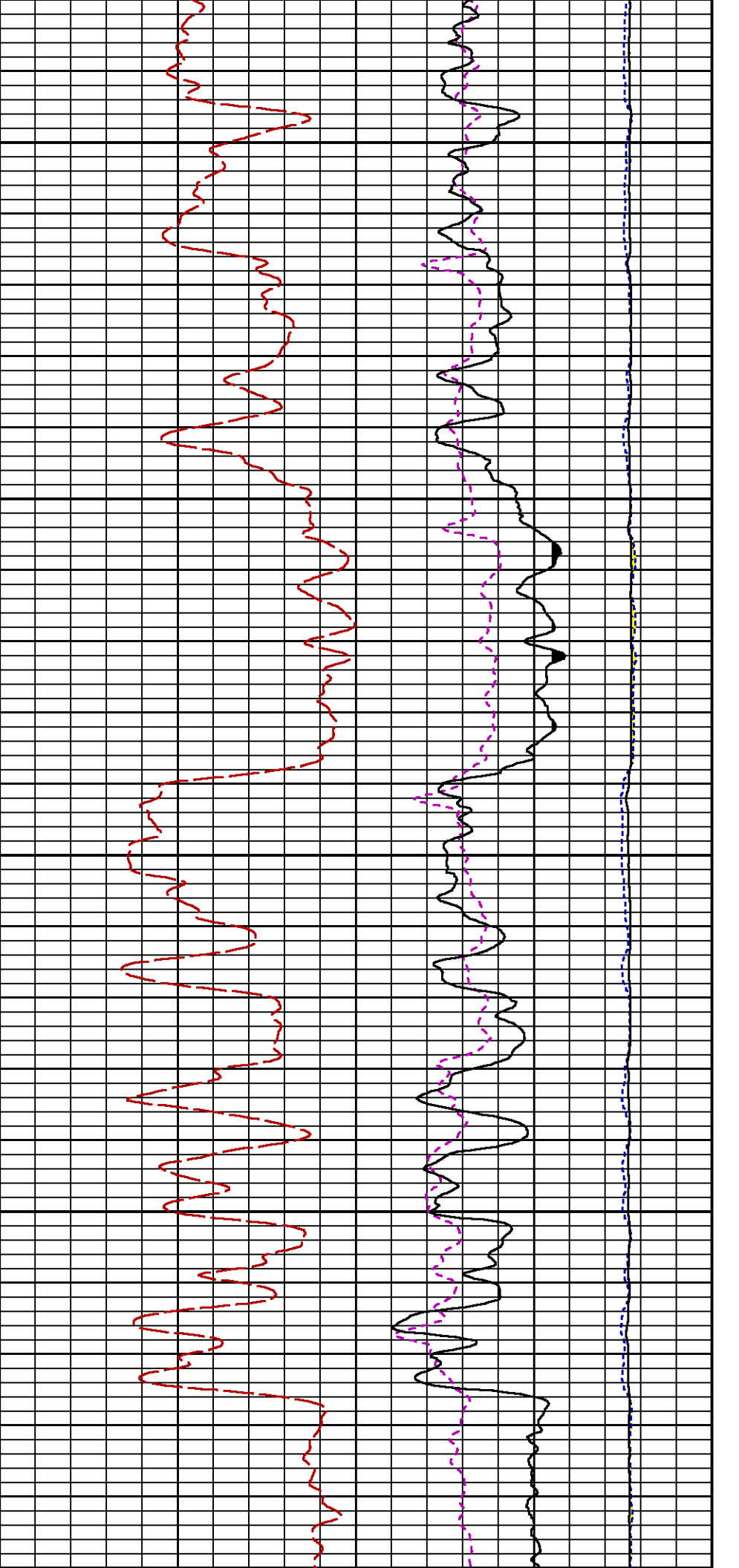
Presentation : BHI78FR4H2:C:\dat1a\BRUTON_19_04E\BRUTON_19_04E_RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 4491.25 - 8237.25 Feet

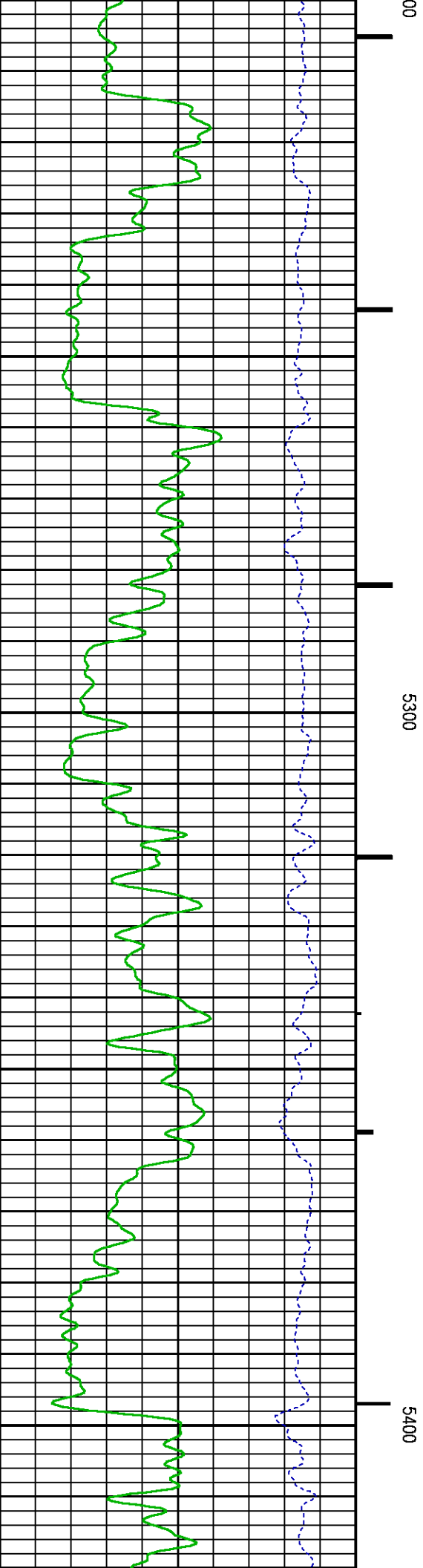
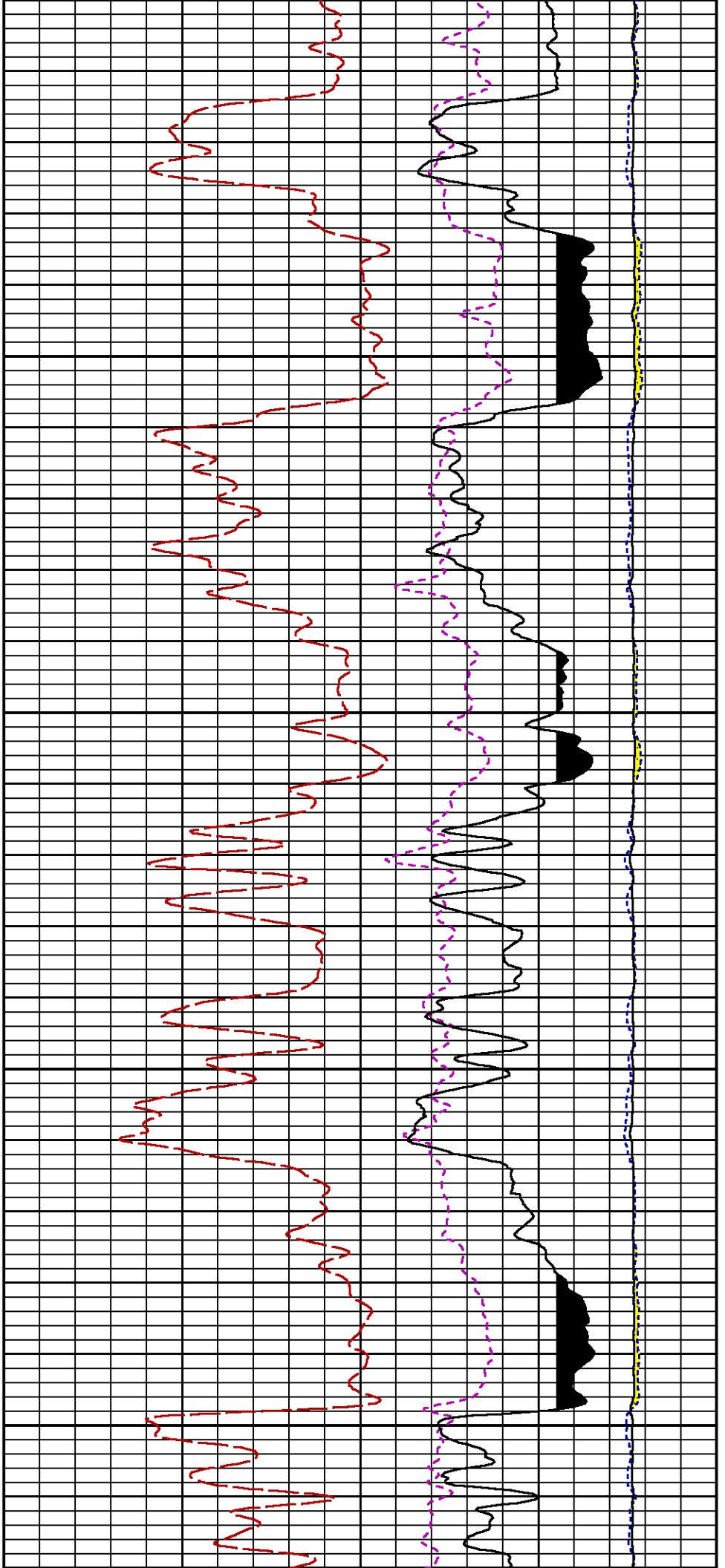
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Created On : N/A
Company : LARAMIE ENERGY II LLC
Well : BRUTON 19-04E
Field : VEGA
File Interval : 4490.5 - 8242.75 Feet
OCT : RPM3D1

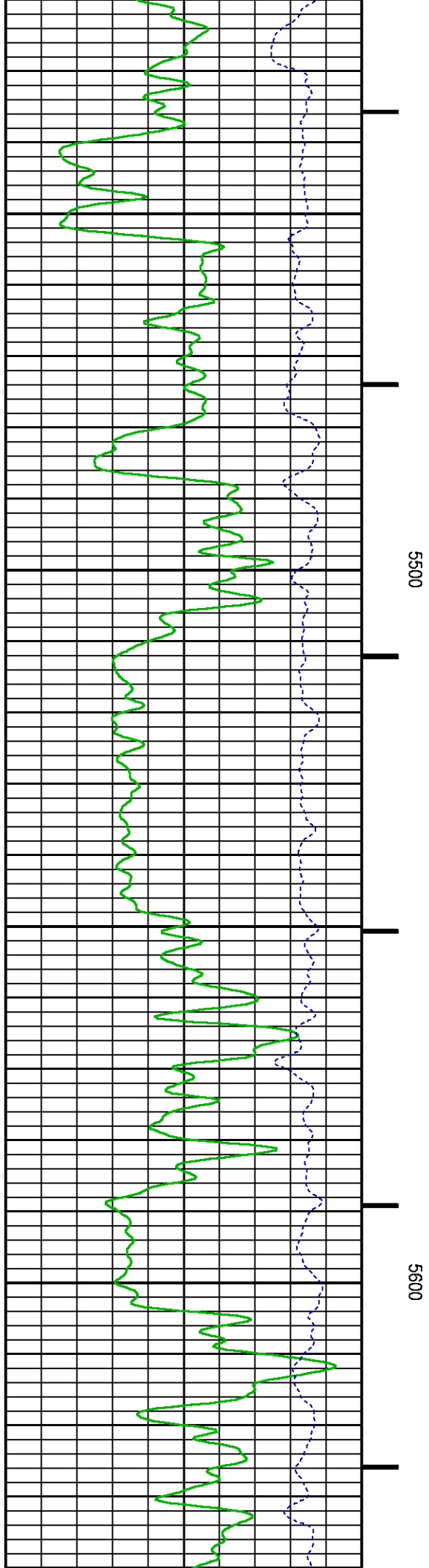
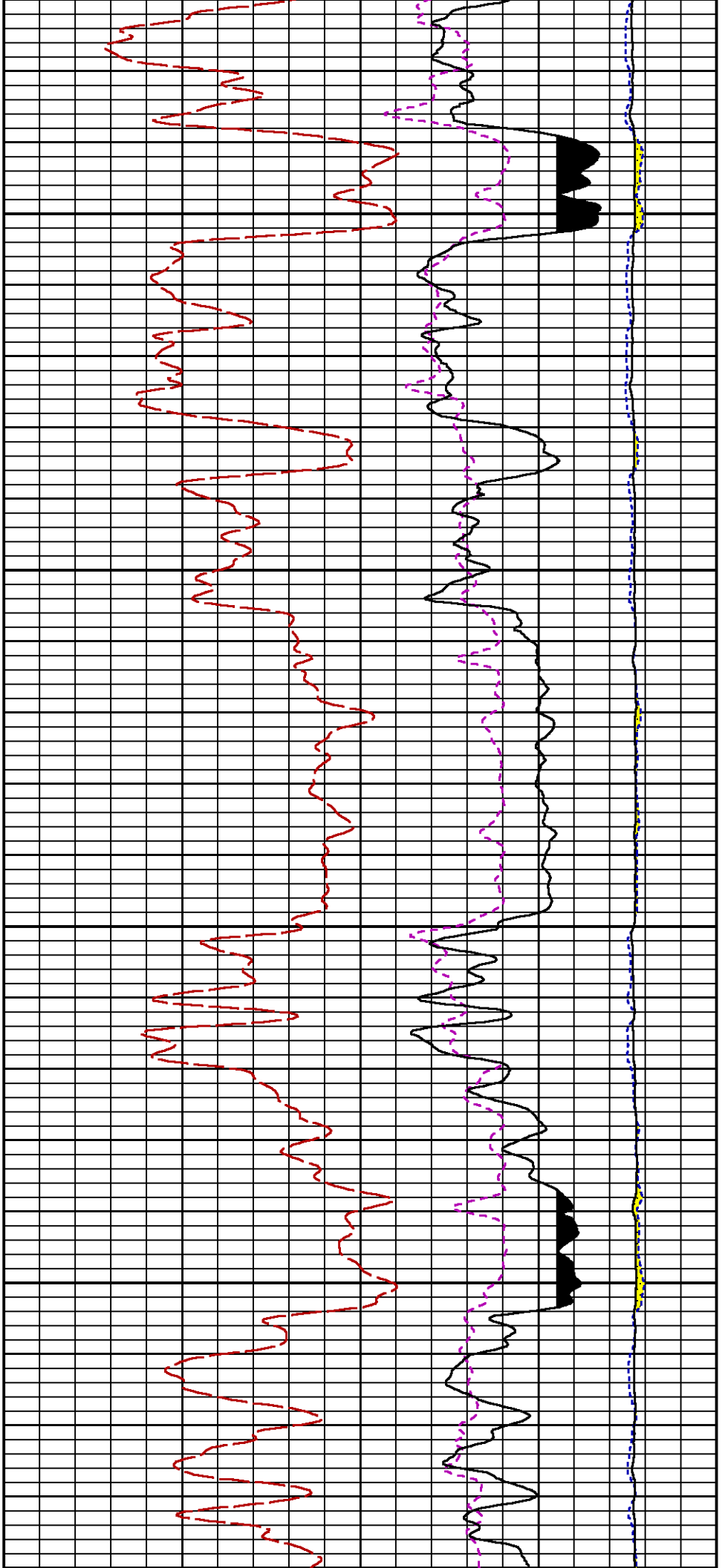


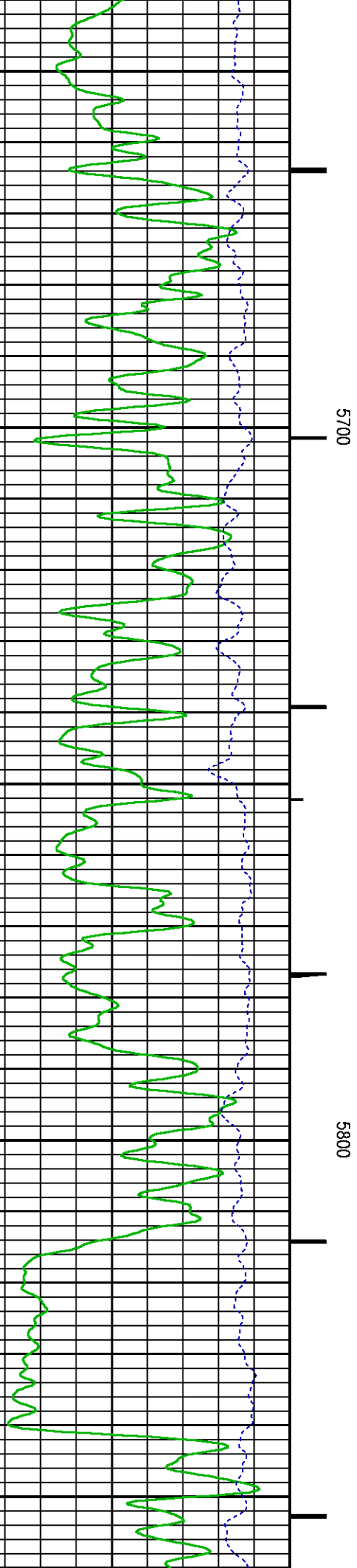
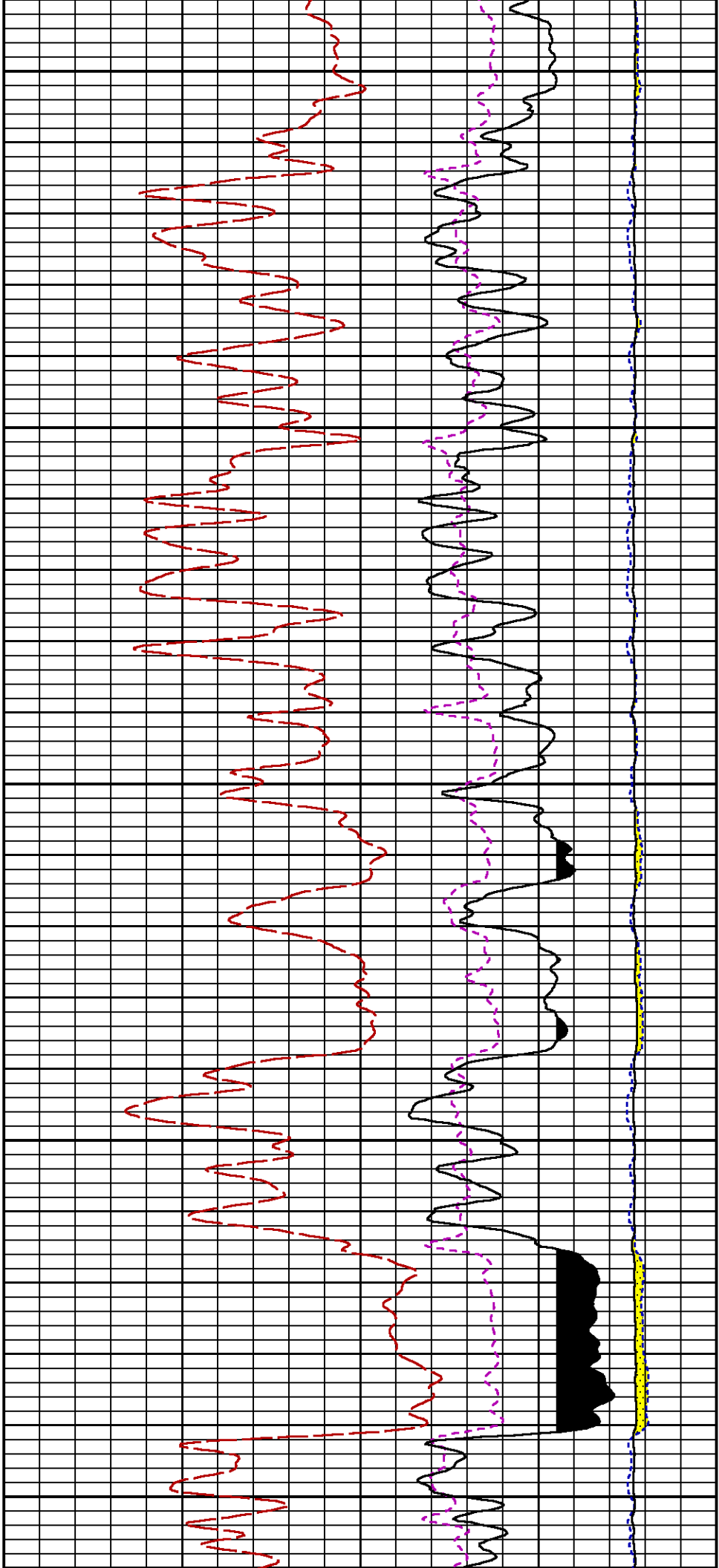


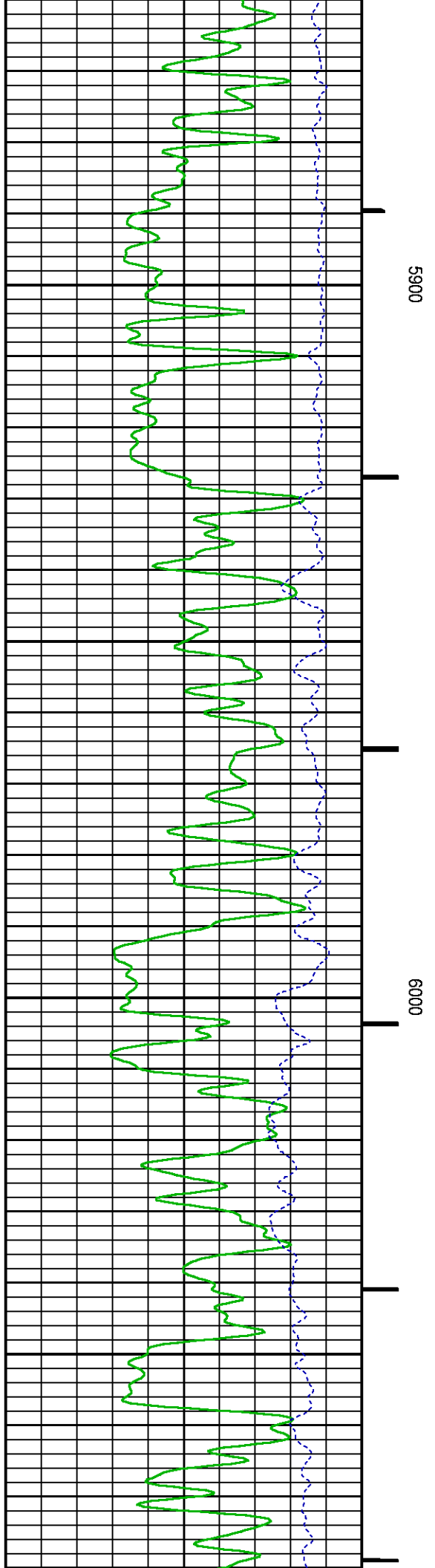
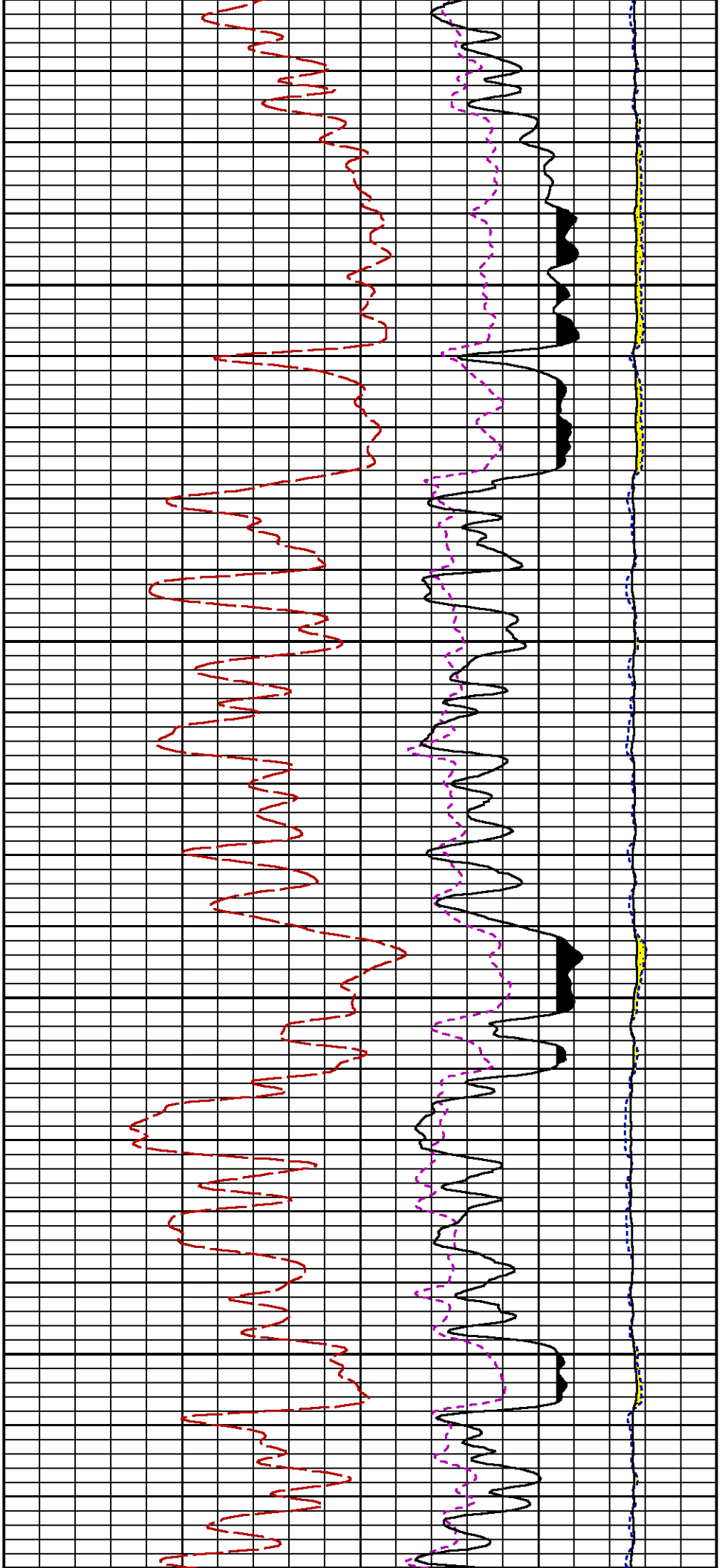


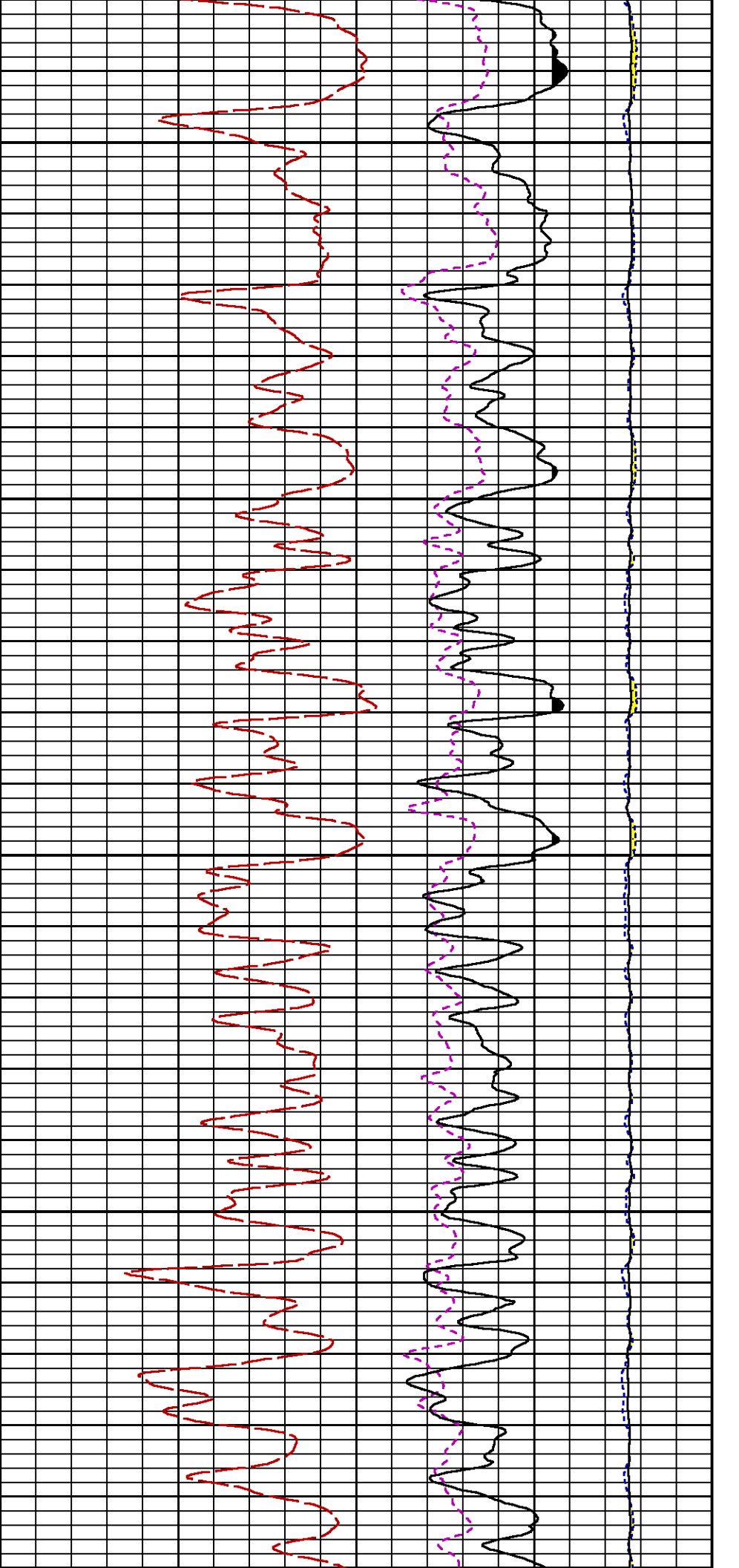








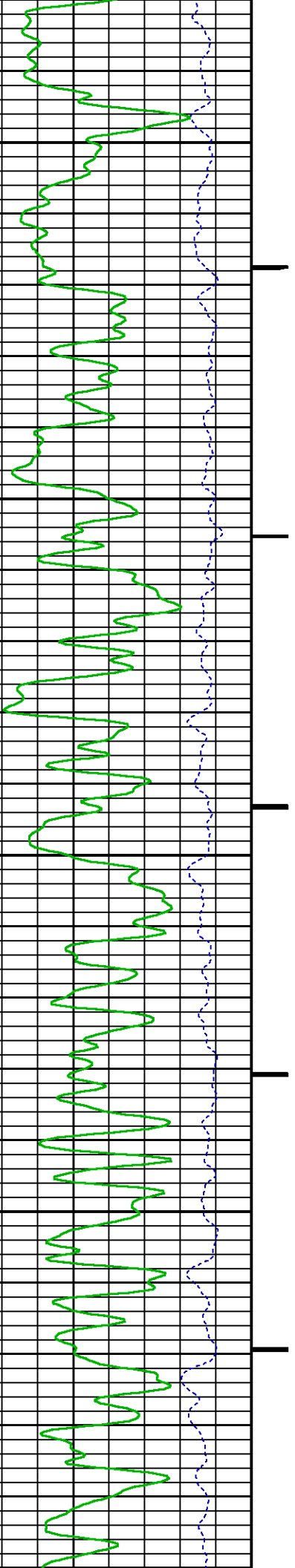


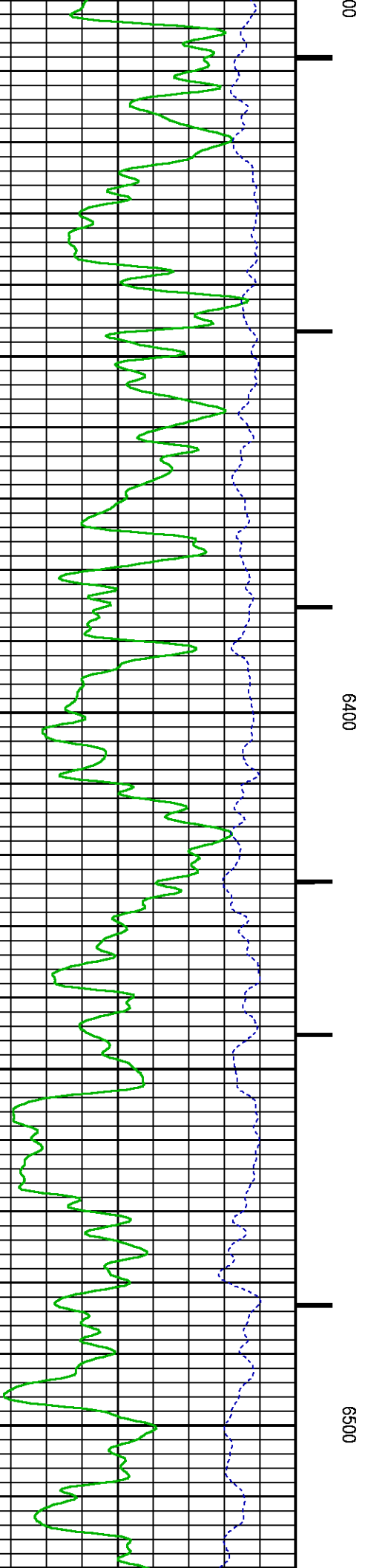
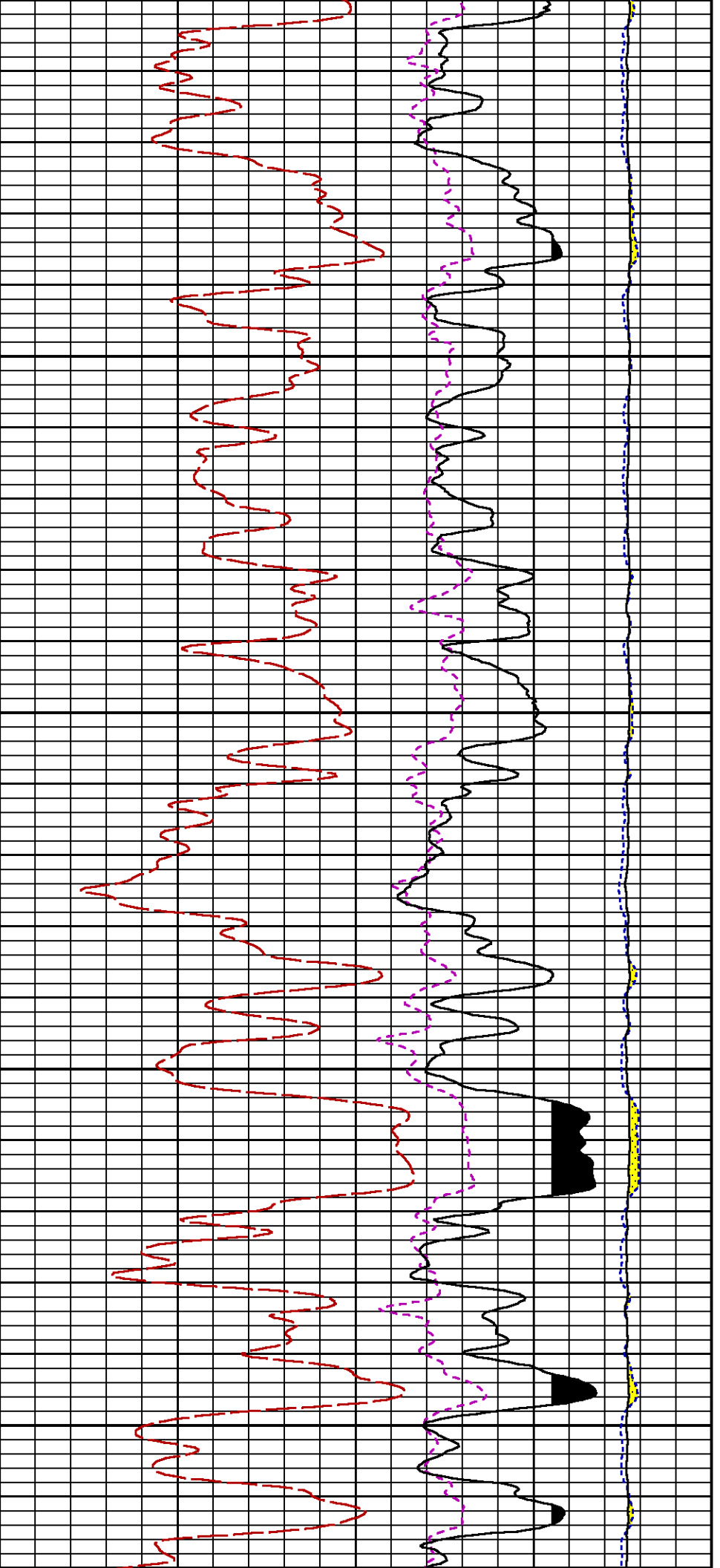


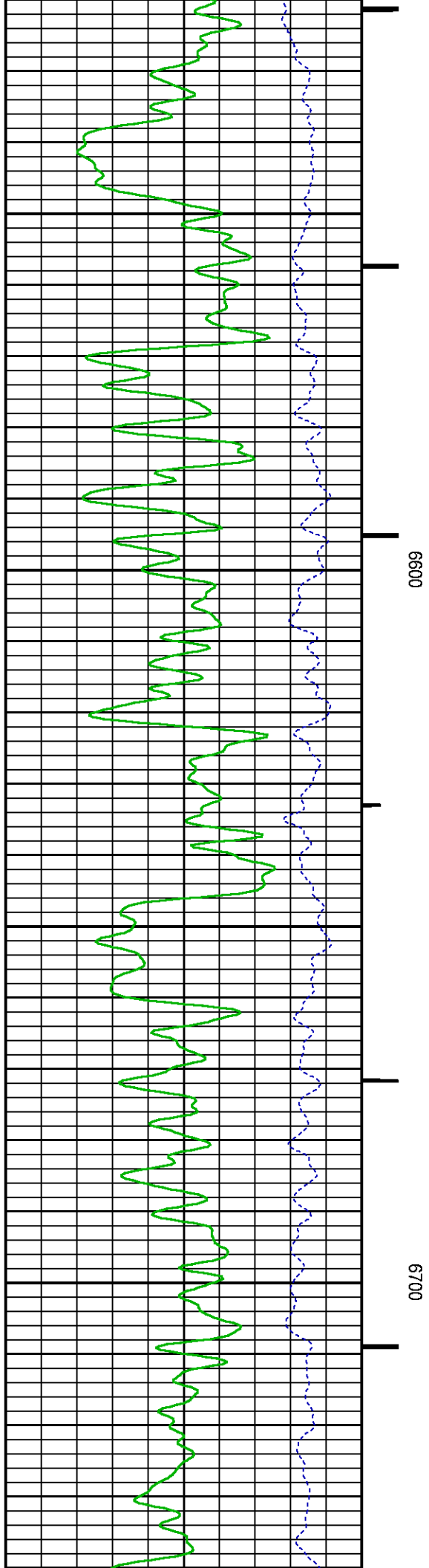
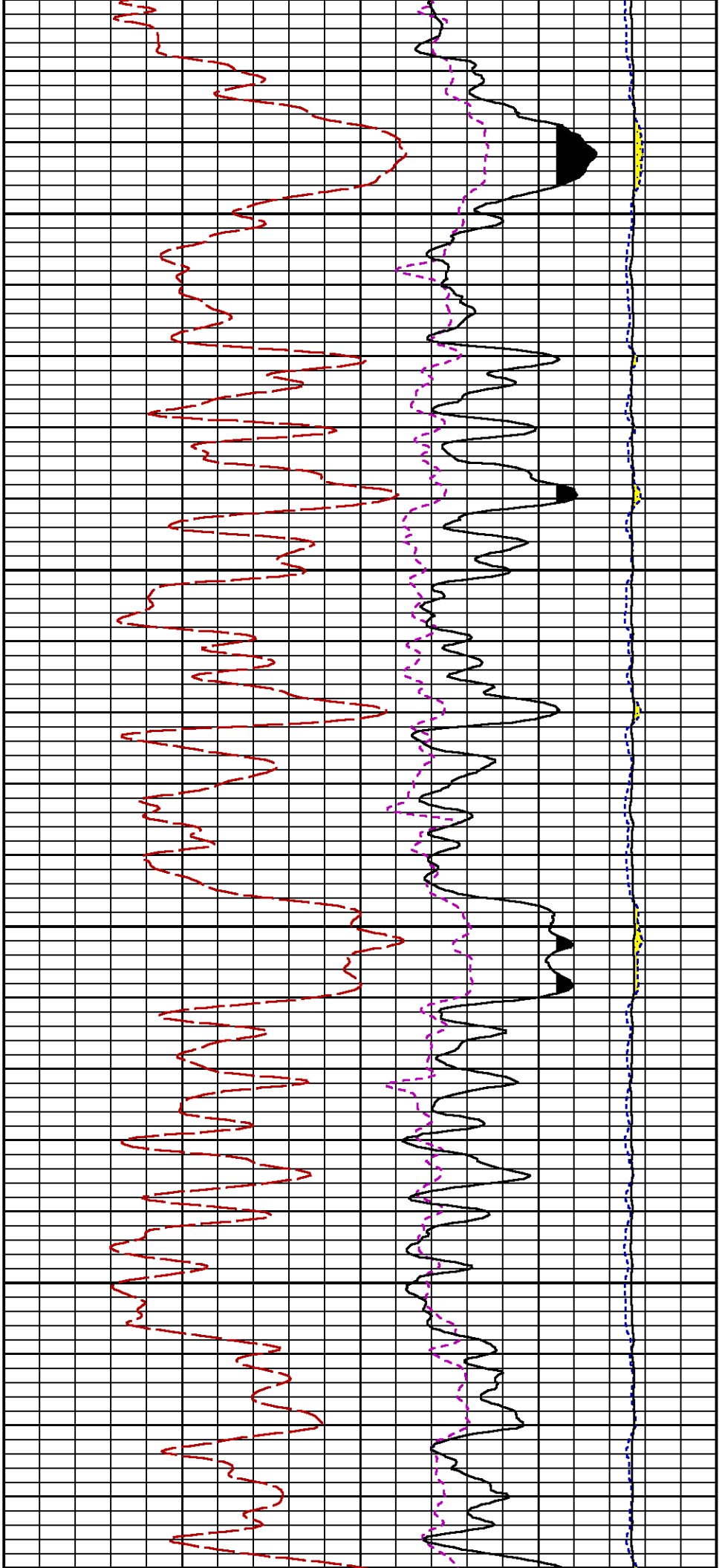
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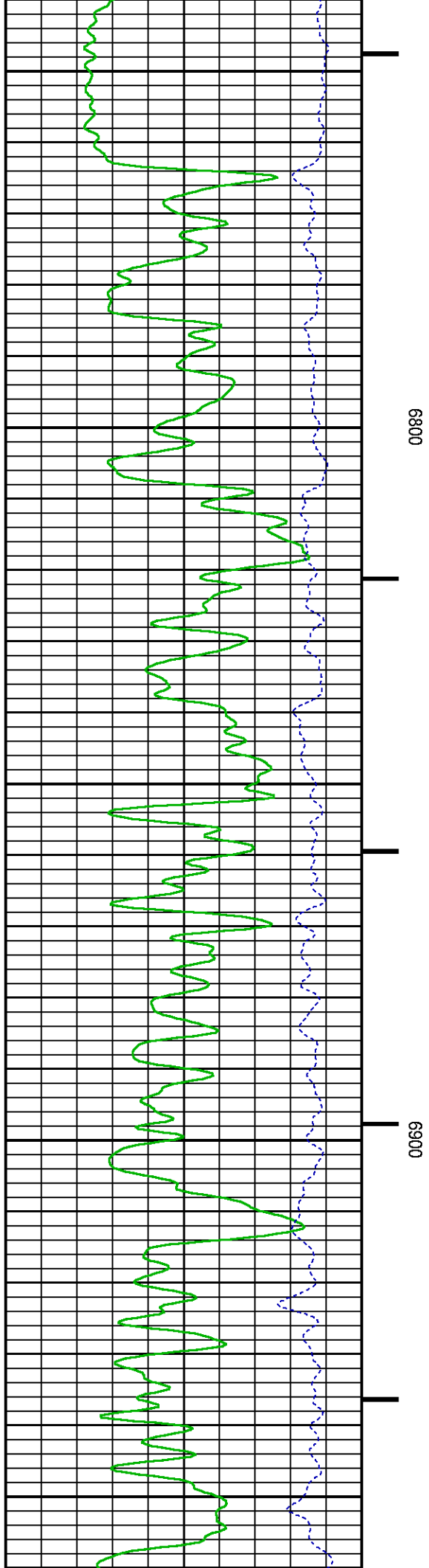
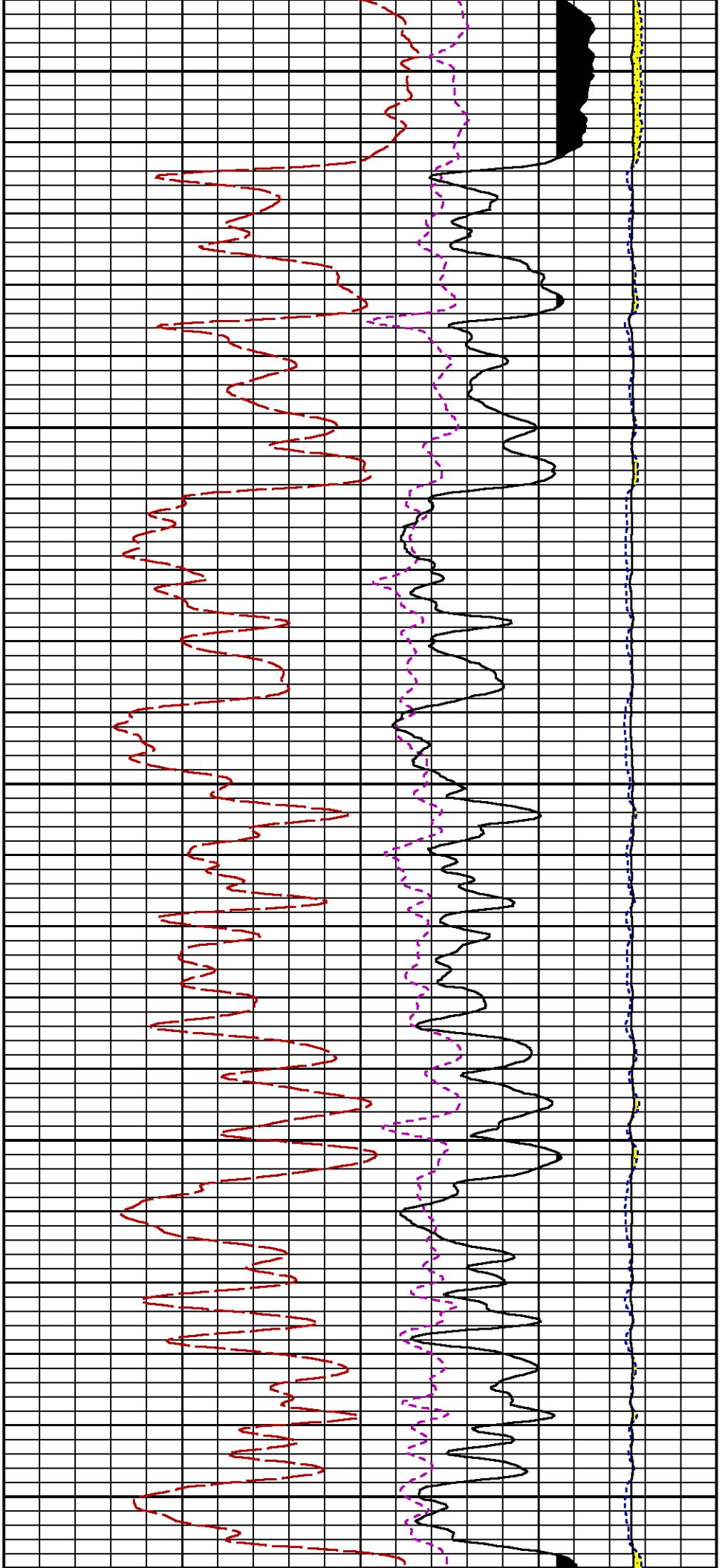
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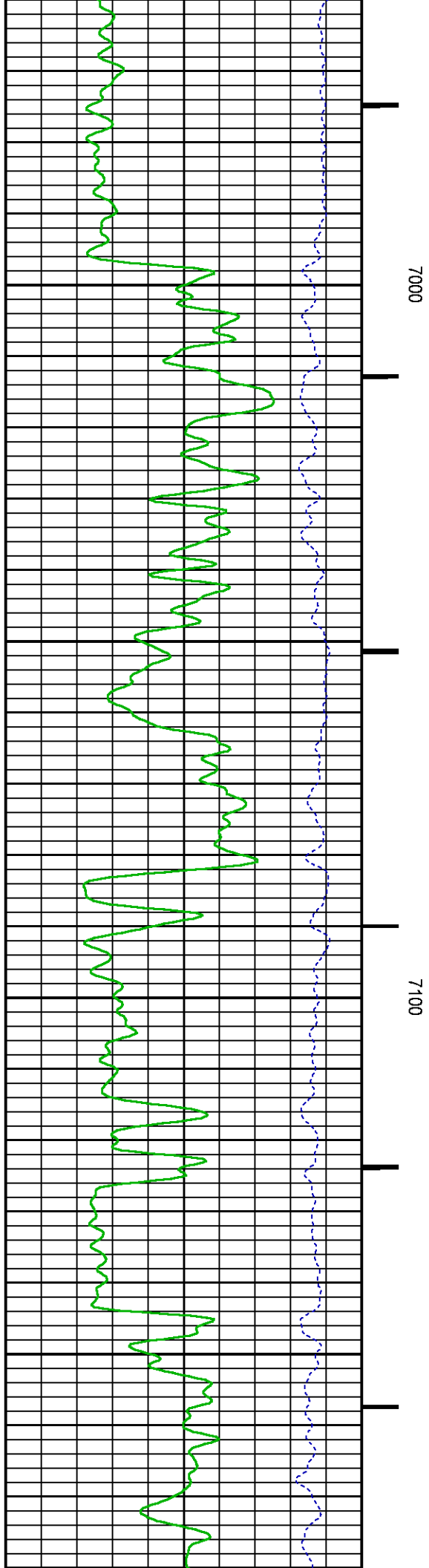
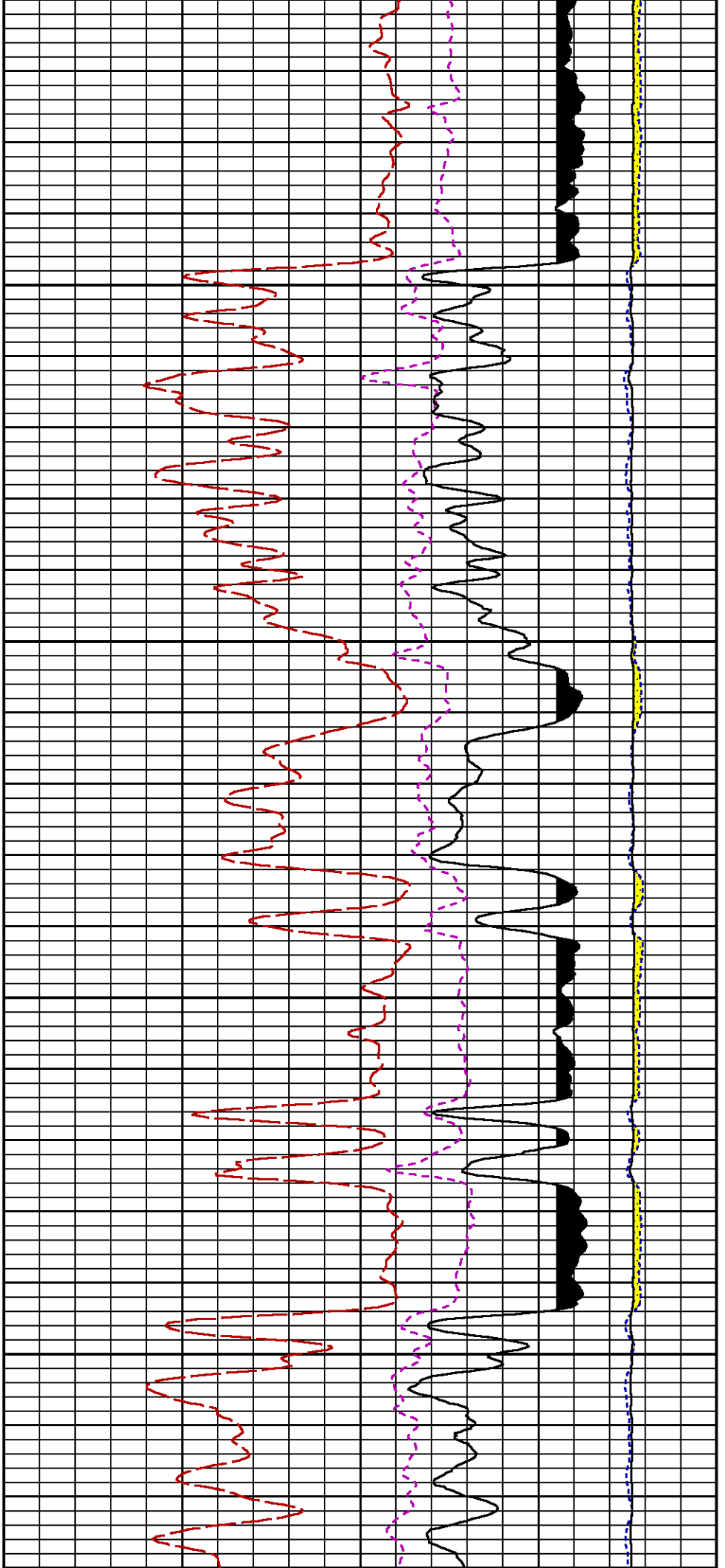
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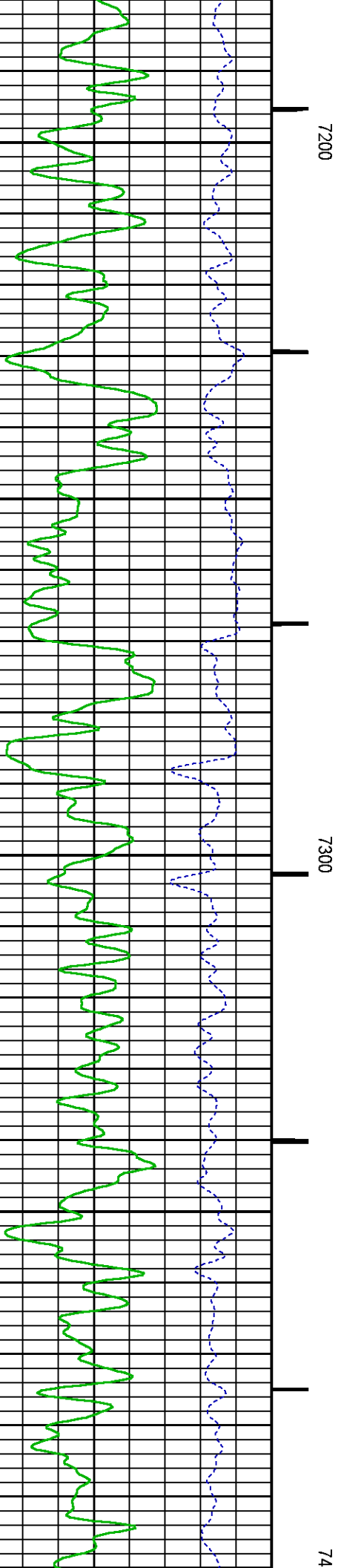
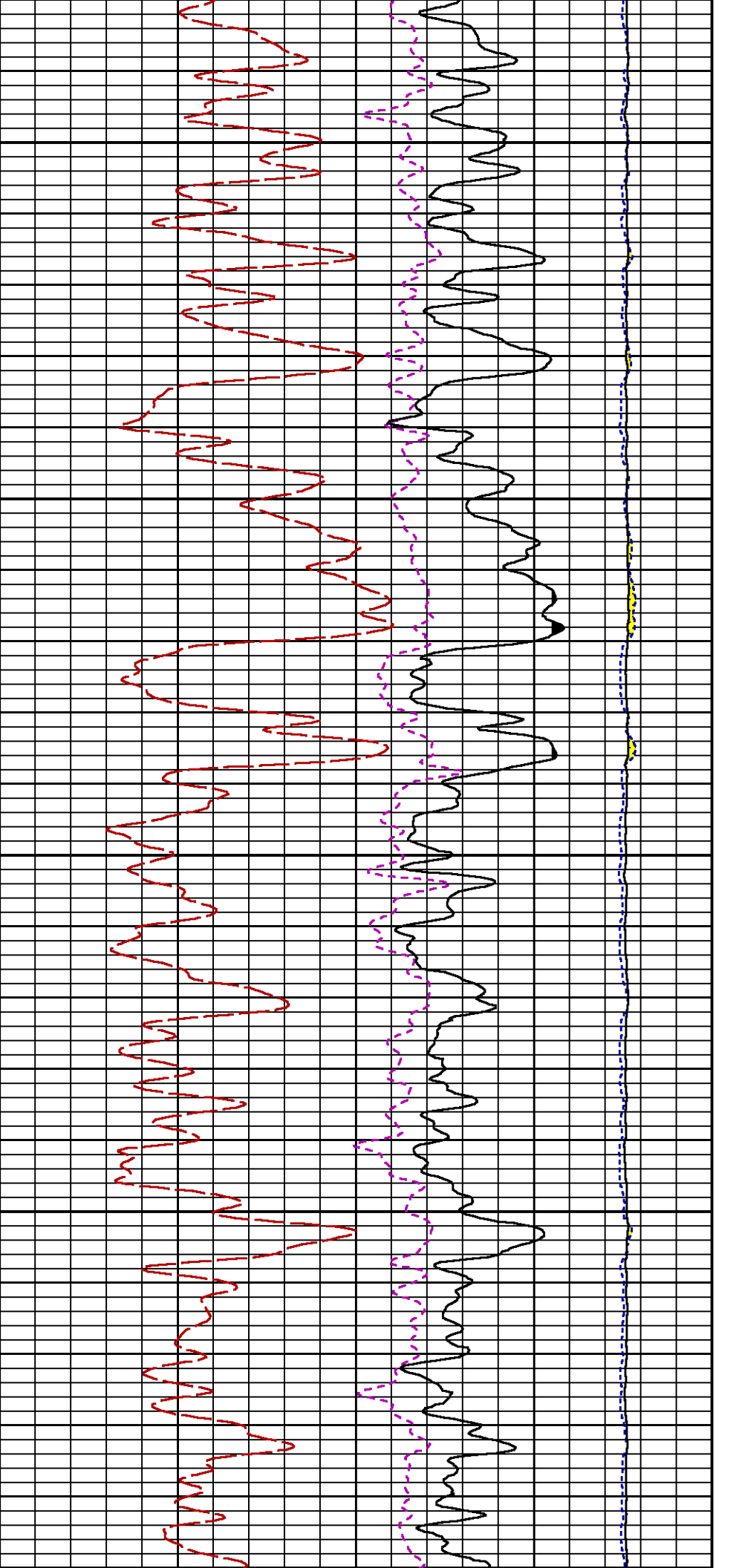


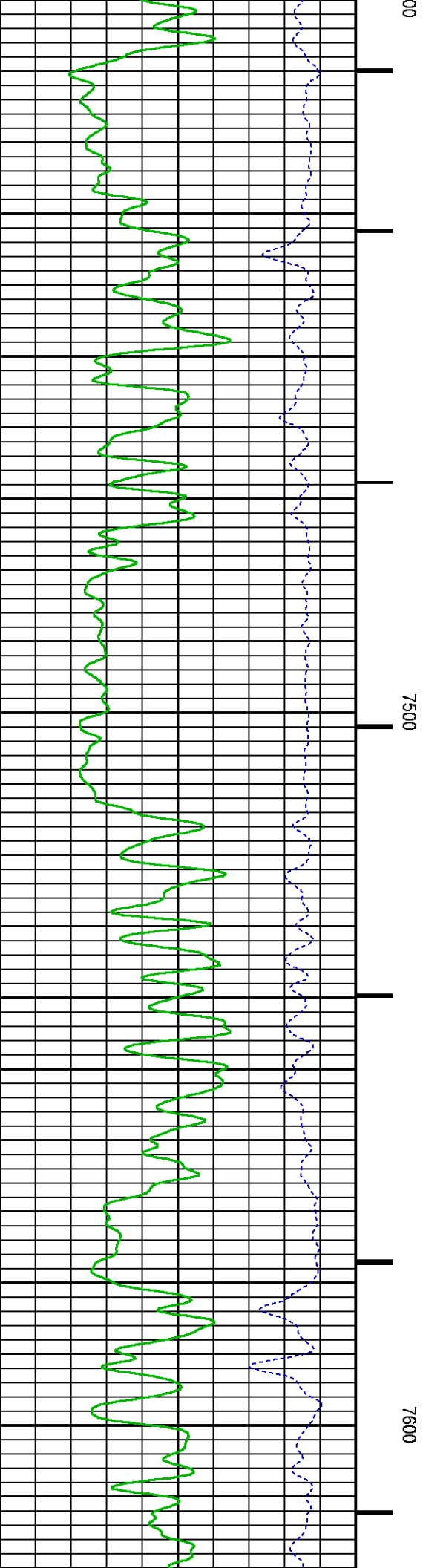
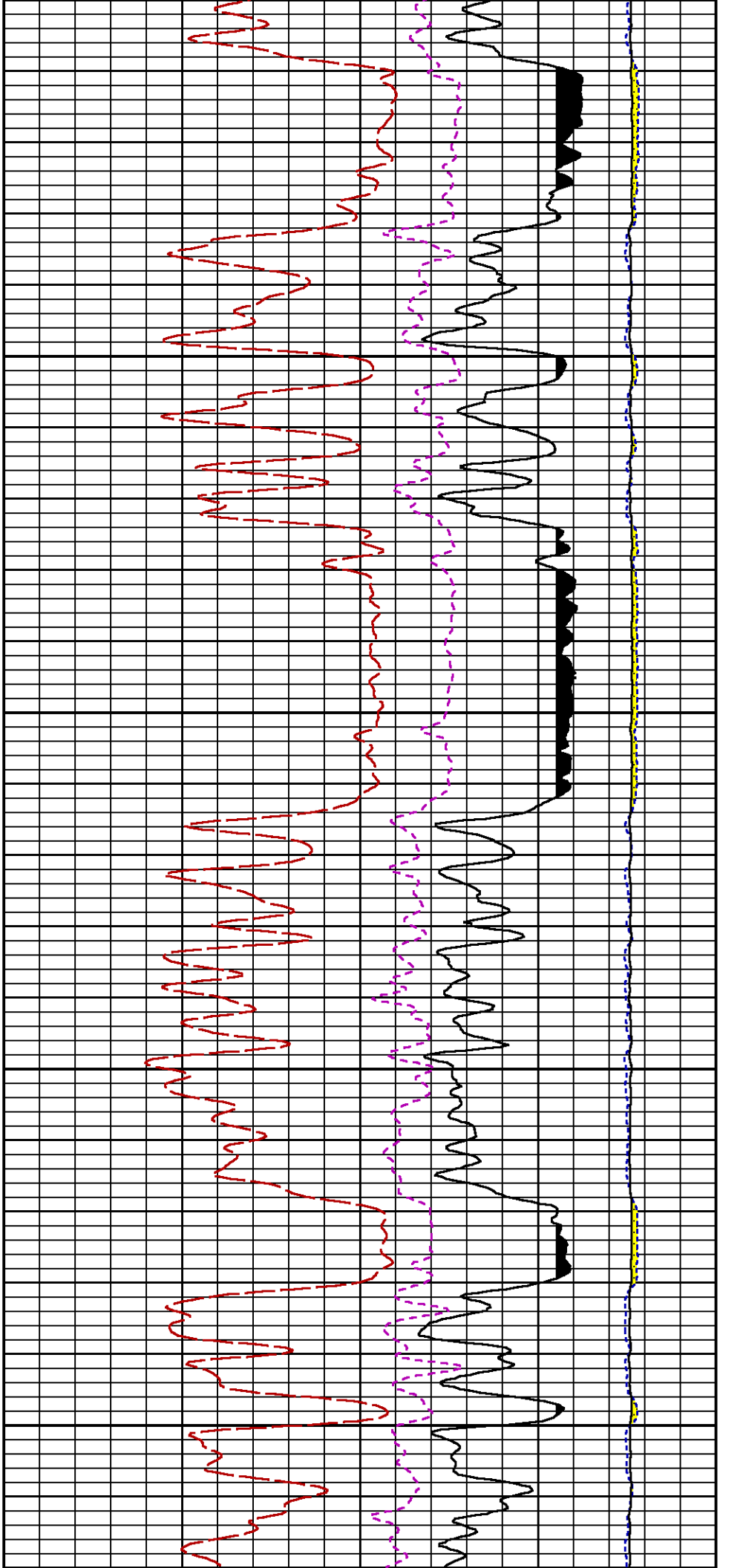


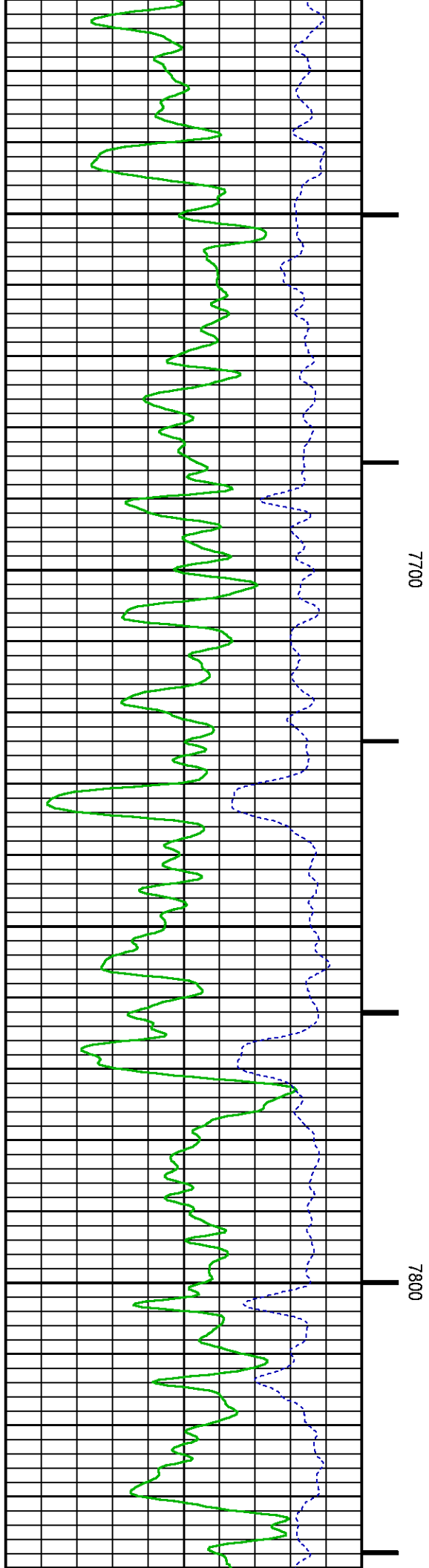
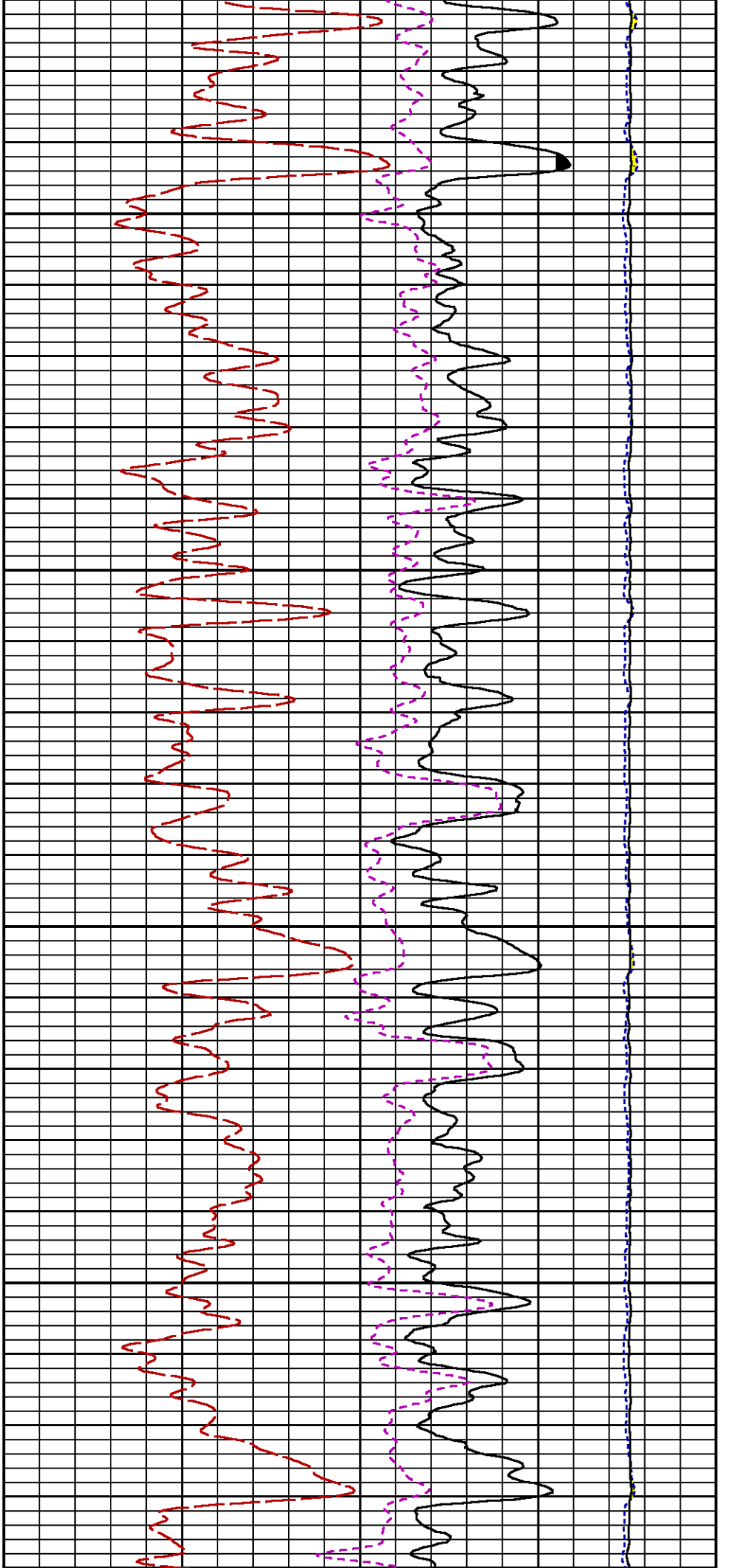


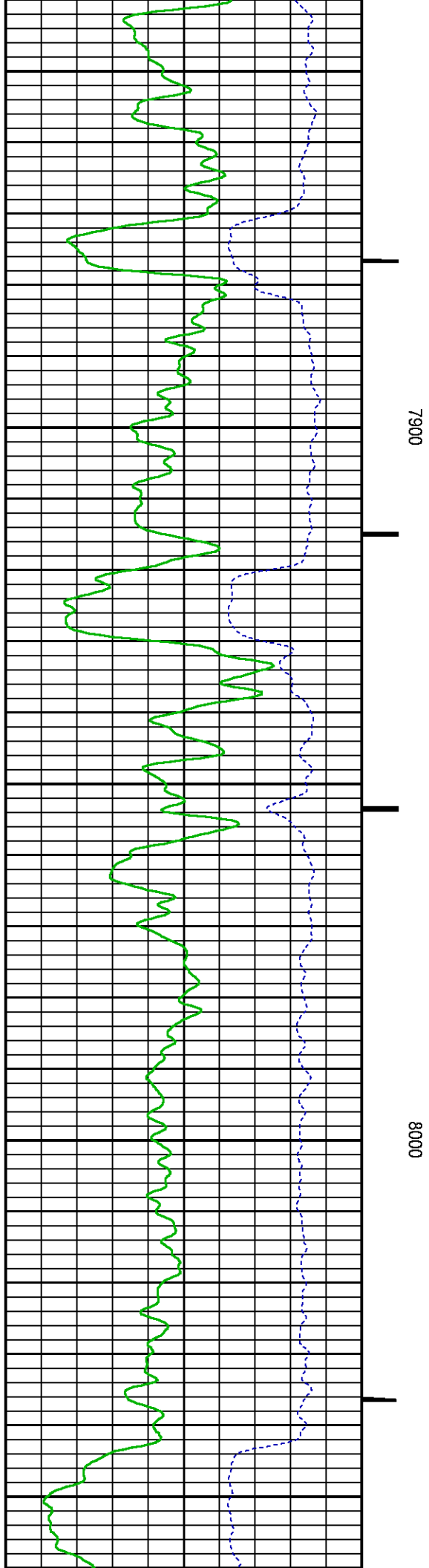
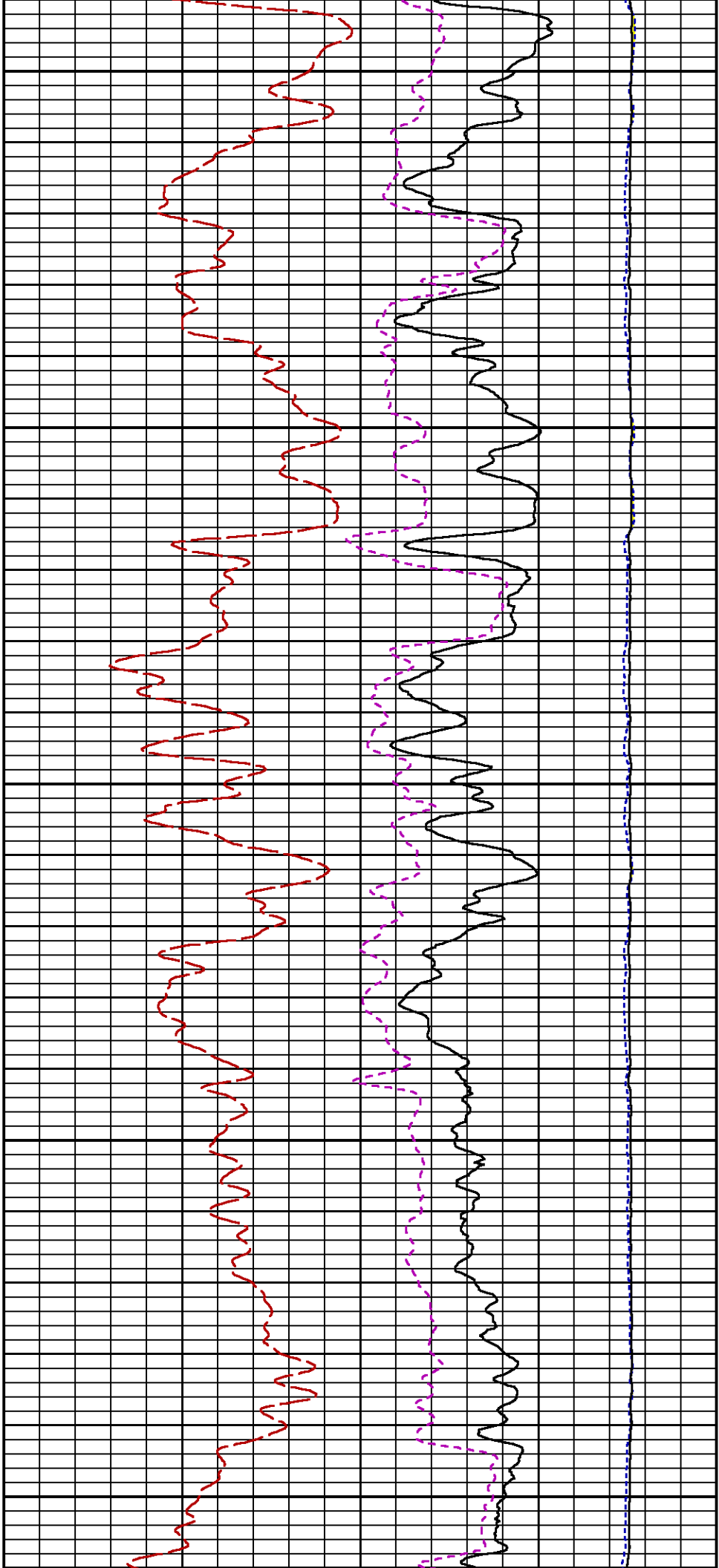


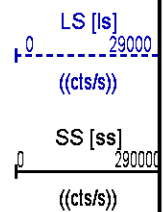
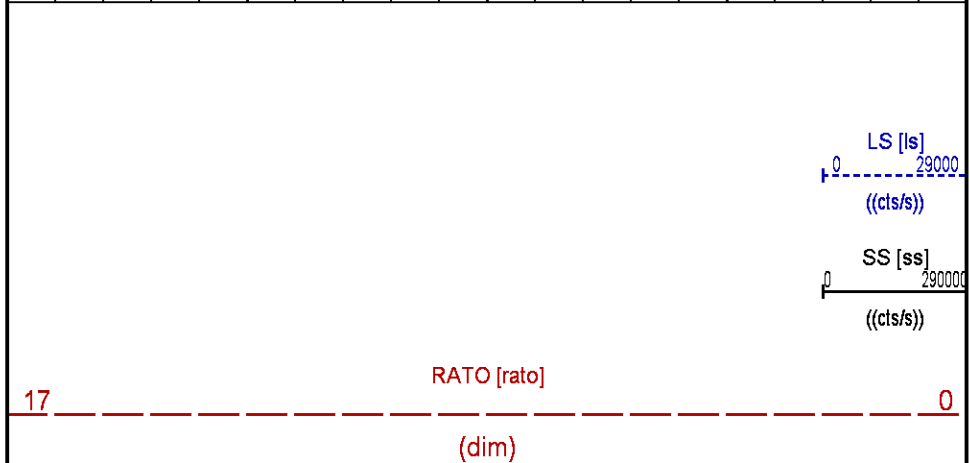
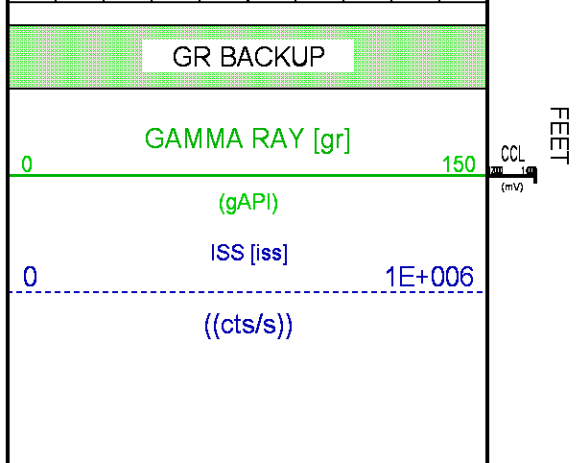
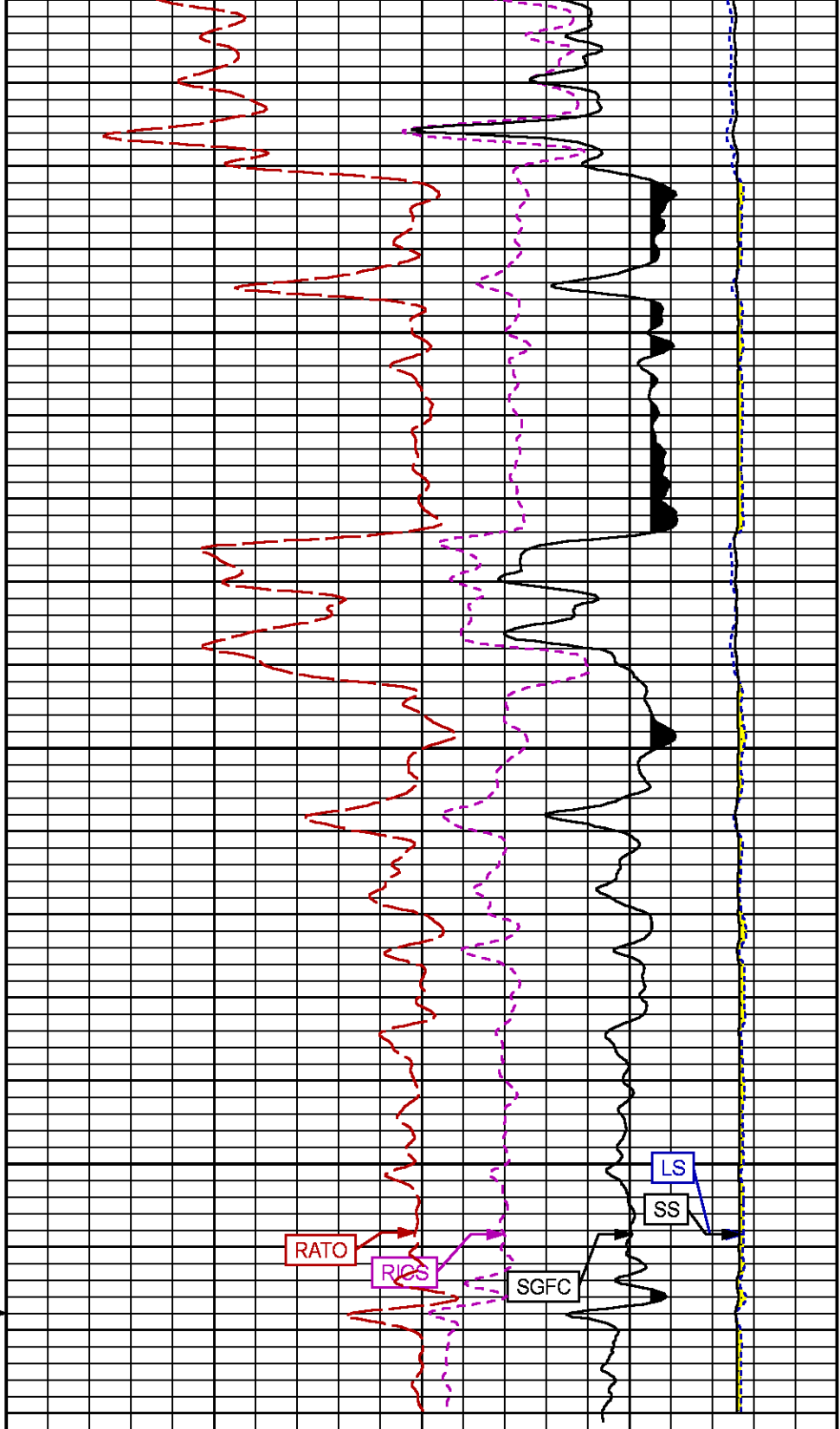
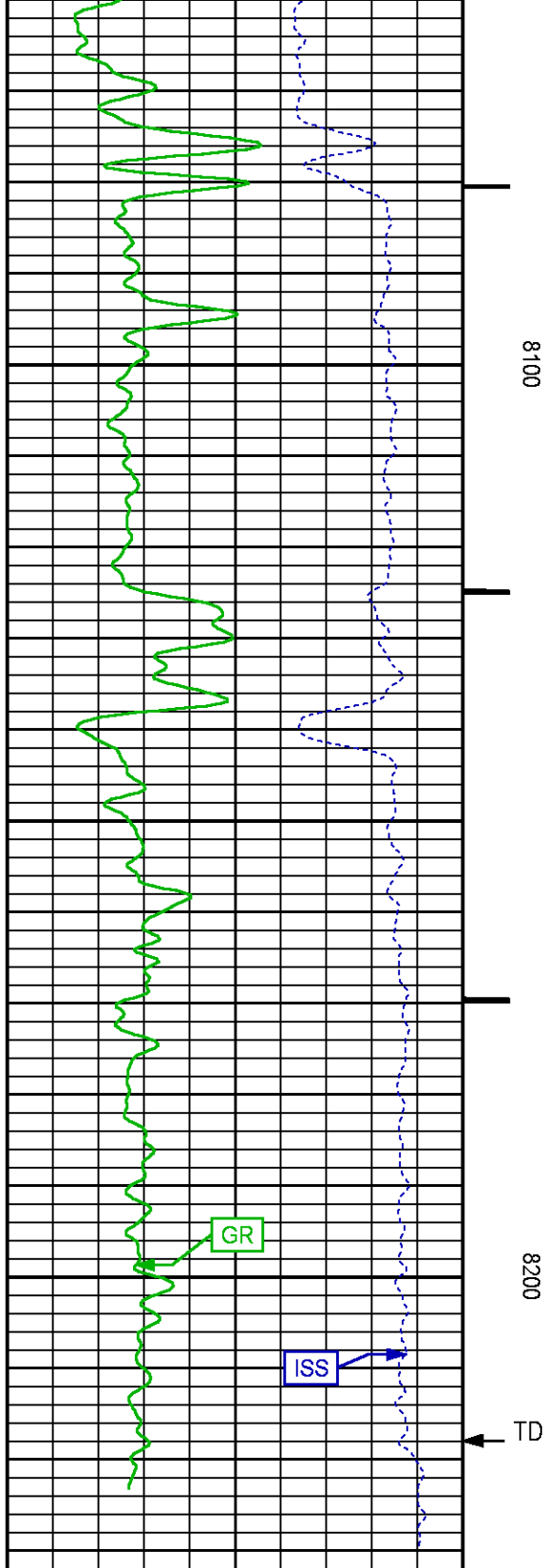












		RICS [rics]	9
39		(dim)	
		SGFC [sgfc]	0
60		(cu)	

REPEAT 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: Thu Oct 26 13:57:53 2017

PARAMETER AND FILTER SUMMARY REPORT							
FILE:		C:\dat1a\BRUTON_19_04E\RPM3D101.prm					
LOGGING MODE:		DEPTH		DIRECTION: UP			
TOP DEPTH:		7809.155 ft		BOTTOM DEPTH: 8042.489 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
<div>Presentation : BHI78FR4H2:C:\dat1a\BRUTON_19_04E\BRUTON_19_04E_RPM_RPT.fvpdf [5"/100' Scale]</div> <div>Plot Interval : 7793.25 - 8037.25 Feet</div> <div>Data File 1 : F1 : BHI78FR4H2:C:\dat1a\BRUTON_19_04E\BRUTON_19_04E_RPM_RPT.xtf</div> <div>Created On : N/A</div> <div>Company : LARAMIE ENERGY II LLC</div>							

Well : BRUTON 19-04E
Field : VEGA
File Interval : 7792.5 - 8042.75 Feet
OCT : RPM3D1

GR BACKUP

GAMMA RAY [gr]

(gAPI)

ISS [iss]

((cts/s))

FEET

CCL
(m)

7800

7900

RATO [rato]

(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)

LS [ls]

((cts/s))

SS [ss]

((cts/s))

17

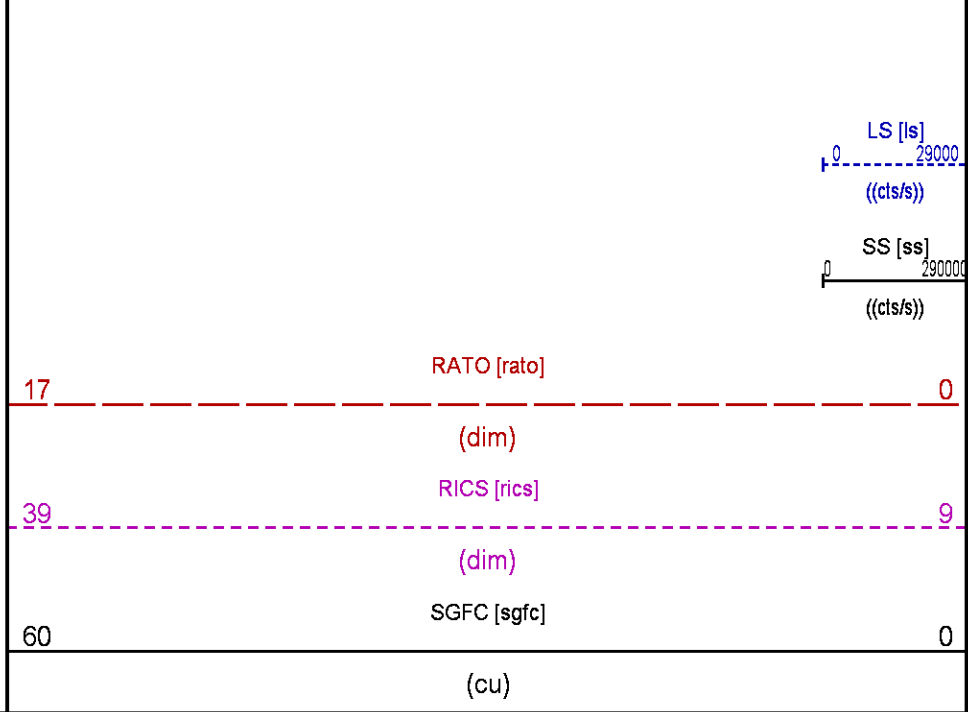
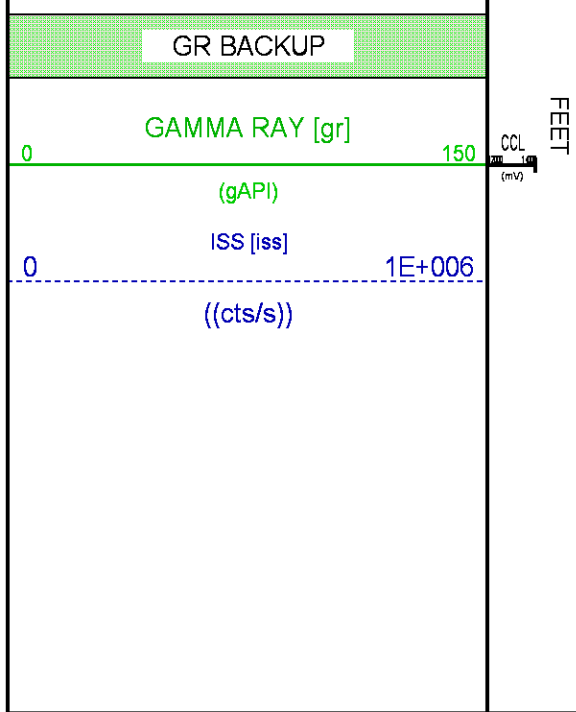
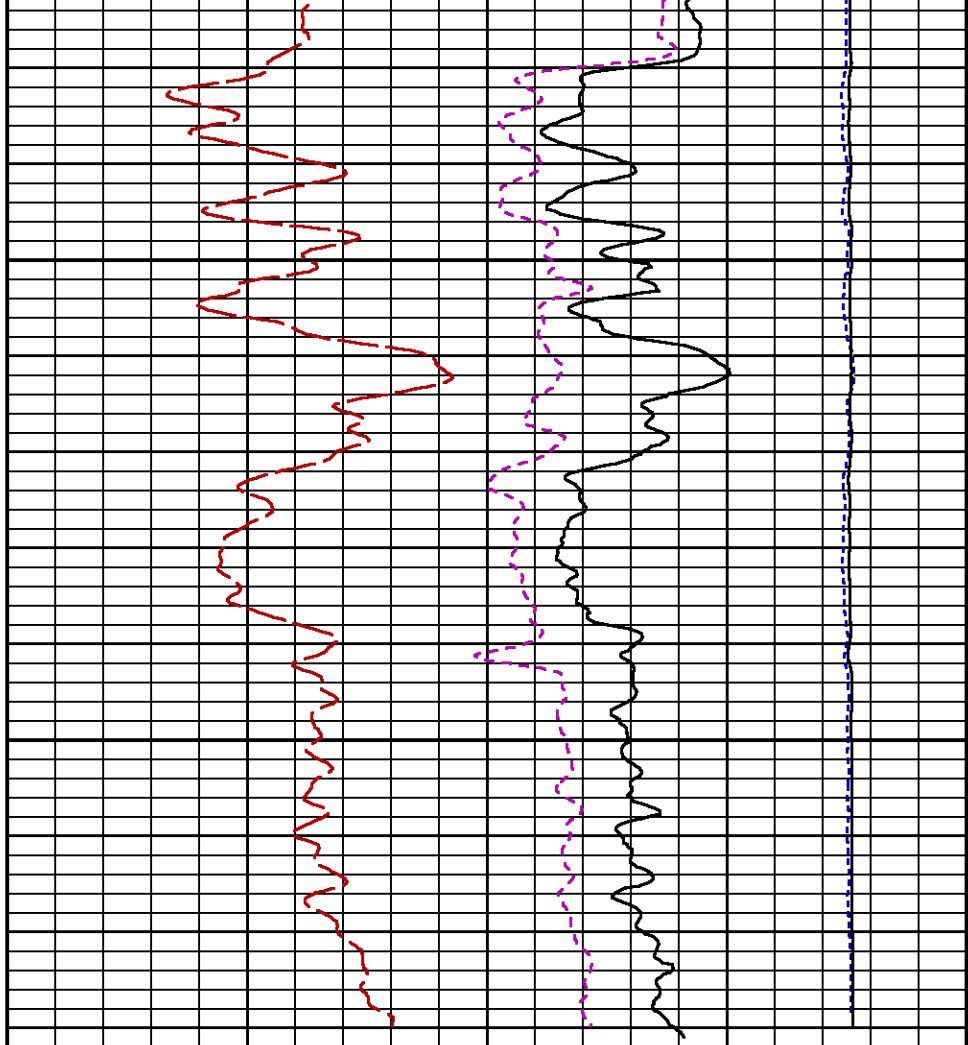
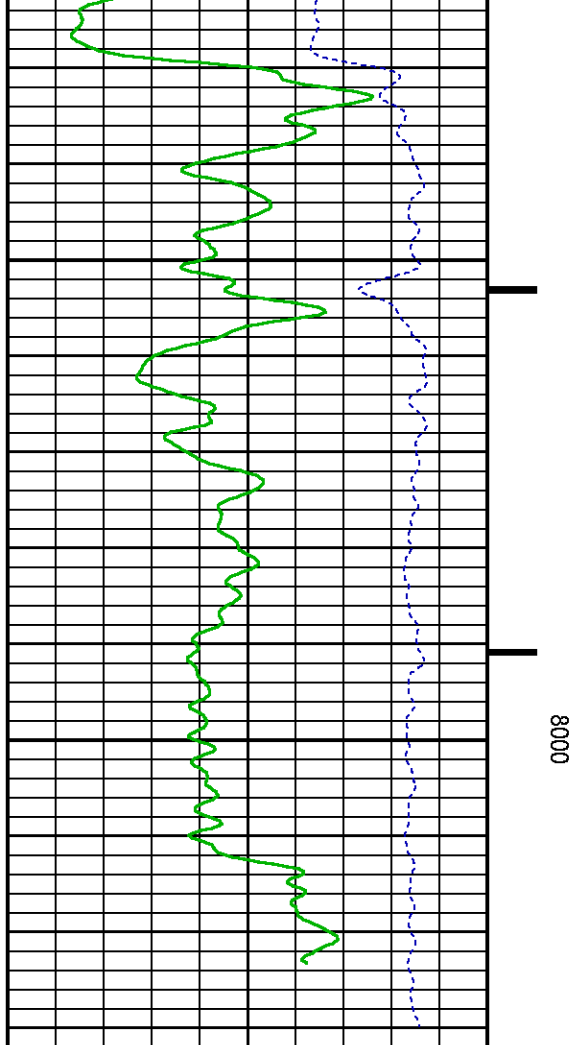
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39

9

60

0



CALIBRATION / VERIFICATION SUMMARY

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

RIN13

RICS

RATO

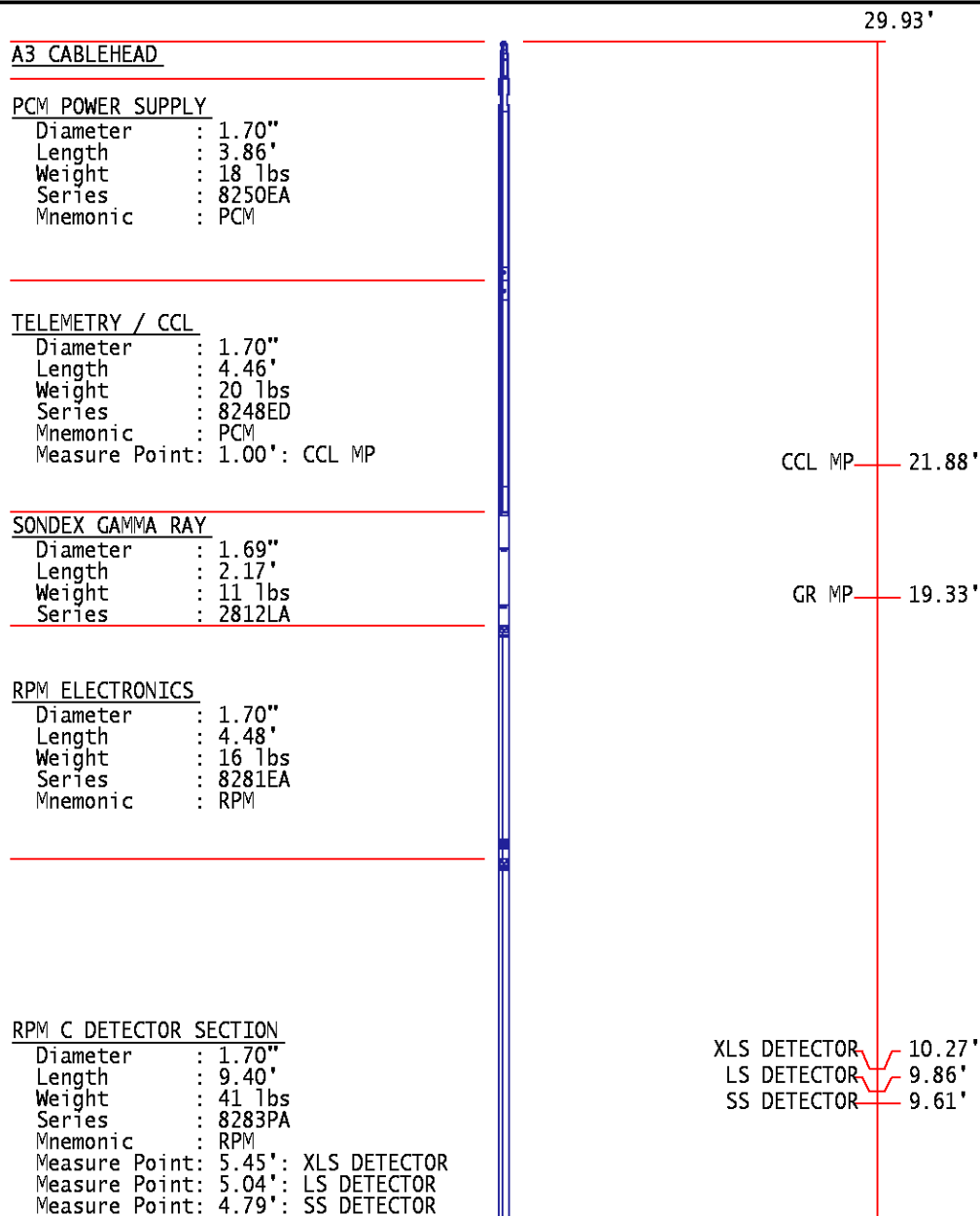
RTWO

RONE

		ISS/LS		ISS/IXS		ISS/CSS		SS/LS		SS2/LS		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\VRPM3D1~tdg.meta



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

**BAKER
HUGHES**
a GE company



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

FILE NO:

API NO:

05077104280000

LOCATION:

SHL: LAT:39.262830N;LONG:107.815107W

BHL: LAT:39.267147N;LONG:107.806900W

SEC 19 TWP 9S RGE 93W

ELEVATIONS:

KB 7286 FT

DF 7286 FT

GL 7262 FT

DATE

26-OCT-2017



