



FILE NO:	COMPANY
WELL	LARAMIE ENERGY LLC
FIELD	BRUTON 30-11W
COUNTY	VEGA
	MESA
	STATE COLORADO

Ver. 4.10	LOCATION:	OTHER SERVICES
SHL: 39.252572 N; 107.814333 W		RAL
BHL: 39.248133 N; 107.816289 W		
SEC 30	TWP 9S	RGE 93W

PERMANENT DATUM	GL	ELEVATION	7504 FT
LOG MEASURED FROM	KB	30 FT	ABOVE P.D.
DRILL. MEAS. FROM	KB		

ELEVATIONS:
KB 7534 FT
DF 7533 FT
GL 7504 FT

DATE	RUN	TRIP	
02-Jan-2018	1	2	
SERVICE ORDER	US130079		
DEPTH DRILLER	7835 FT		
DEPTH LOGGER	7757 FT		
BOTTOM LOGGED INTERVAL	7757 FT		
TOP LOGGED INTERVAL	2353 FT		
TIME STARTED	8:00		
TIME FINISHED	15:00		
OPERATOR RIG TIME	7 HRS		
TYPE OF FLUID IN HOLE	FRESH WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	55 FT		
LOGGED CEMENT TOP	777 FT		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	10 FMIN		
MAX. RECORDED TEMP.	235 DEGF		
REFERENCE LOG	NA		
REFERENCE LOG DATE	NA		
EQUIP. NO.	LOCATION	ML-4291	
RECORDED BY	C.OFFELT	GRAND JUNCT	
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 2: *2 OPERATIONS IN WELLBORE*

OPERATION 2: GR/CCL/RPM/TEMP

LOGGED WITH 0 PSI ON WELLHEAD

SJ: 6985' - 7006'

SJ: 5891' - 5913'

CREW: M. MENTZER, J. PENA, A. SHAHNOOSHI

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	2	TELEMETRY	8248 EA/8250 ED	111745584/10193585	FREE
1	2	GR	8262 XA	10485470	FREE
1	2	RPM ELEC	8281 EA	10309421	FREE
1	2	RPM	8283 PA/8281 FA	10414345/10460082	FREE
1	2	TEMP	8255 XA	120516	FREE

MAIN PASS GRAND SANDS PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 2

Plotted: Tue Jan 2 15:13:06 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_11W/p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2348.250 ft BOTTOM DEPTH: 3002.250 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		"	"

CURVE DESCRIPTION REPORT

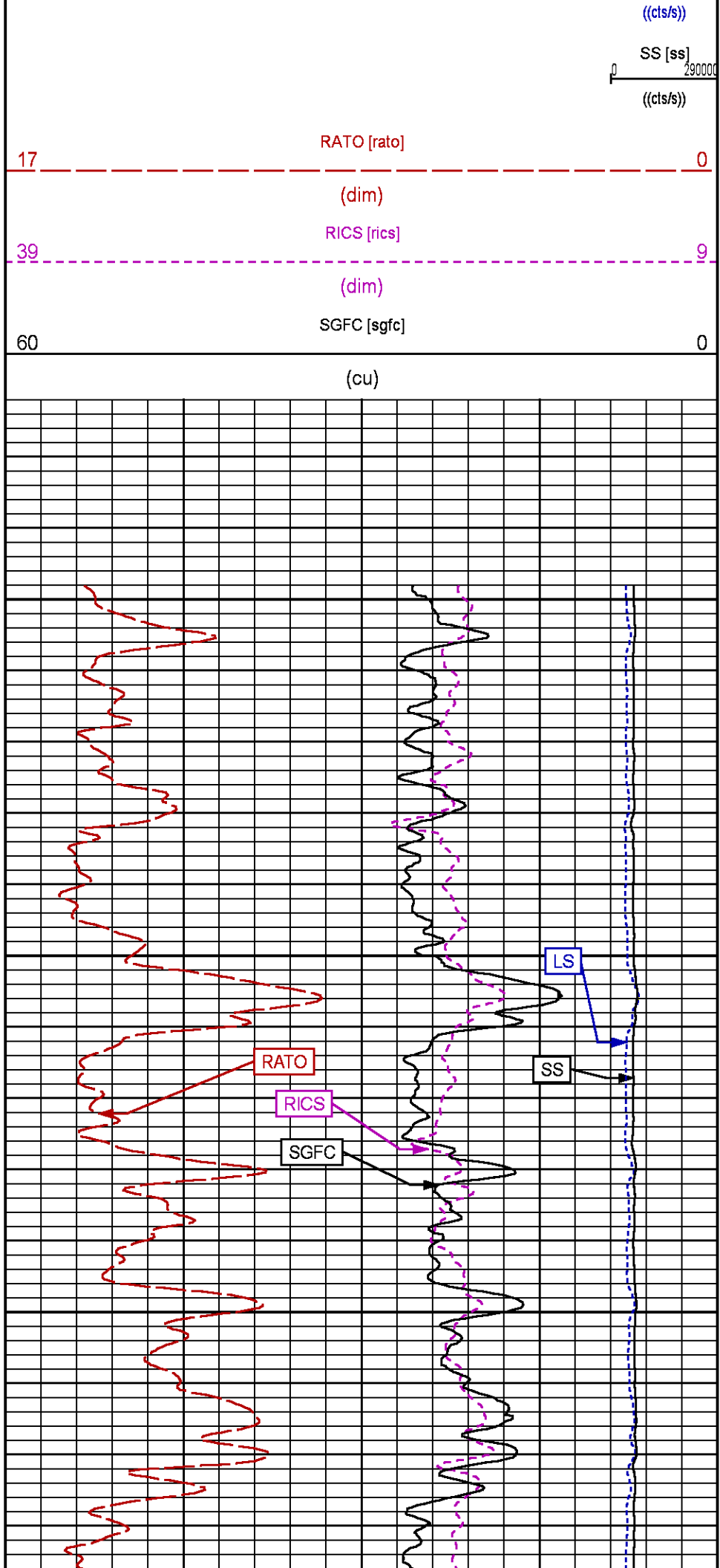
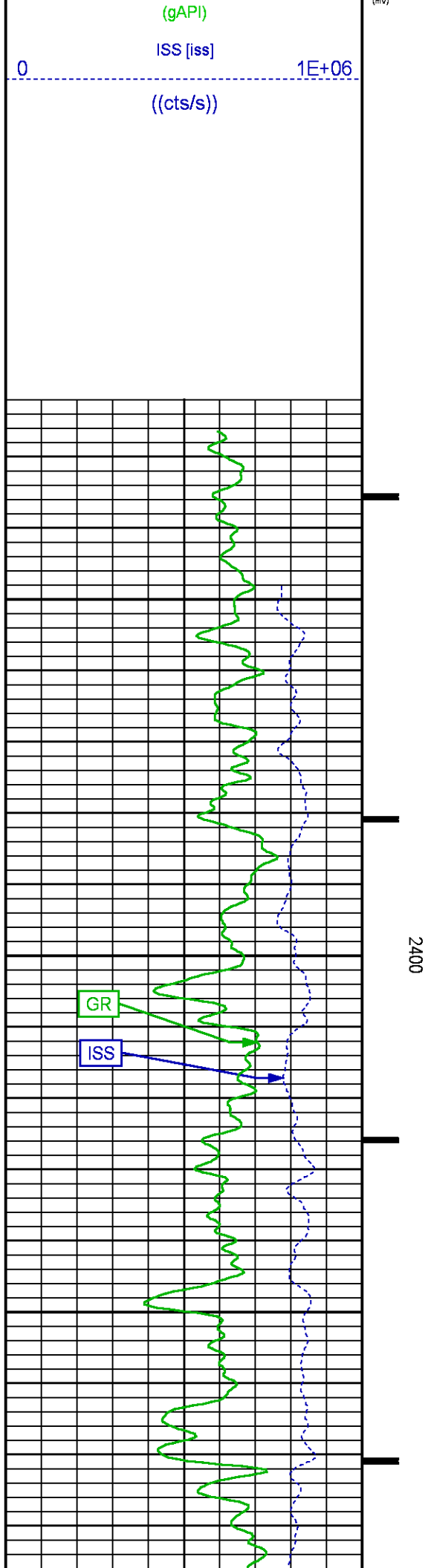
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

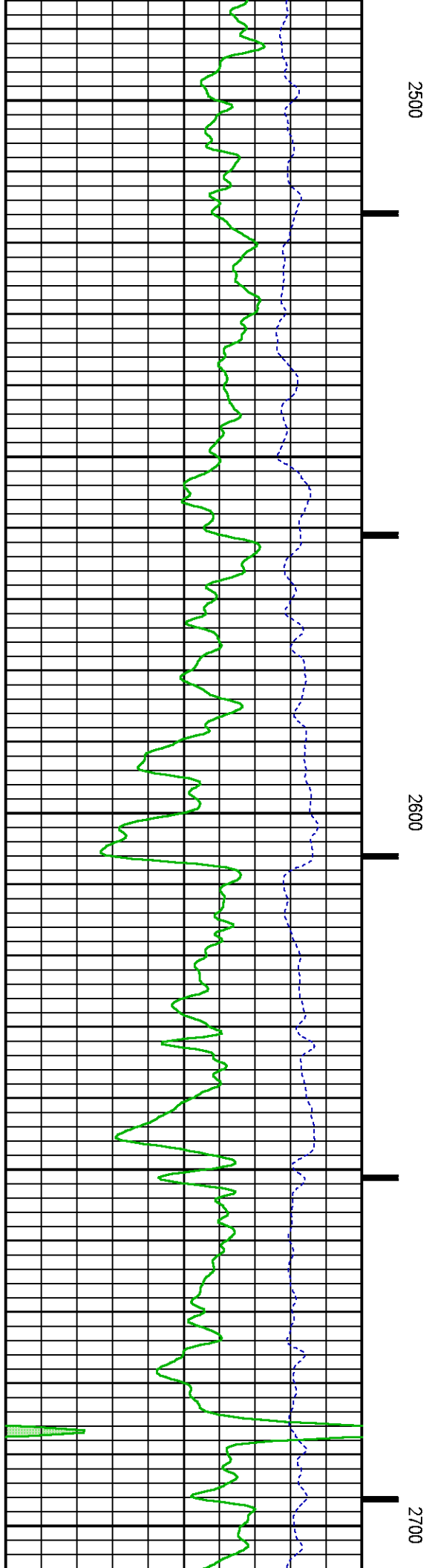
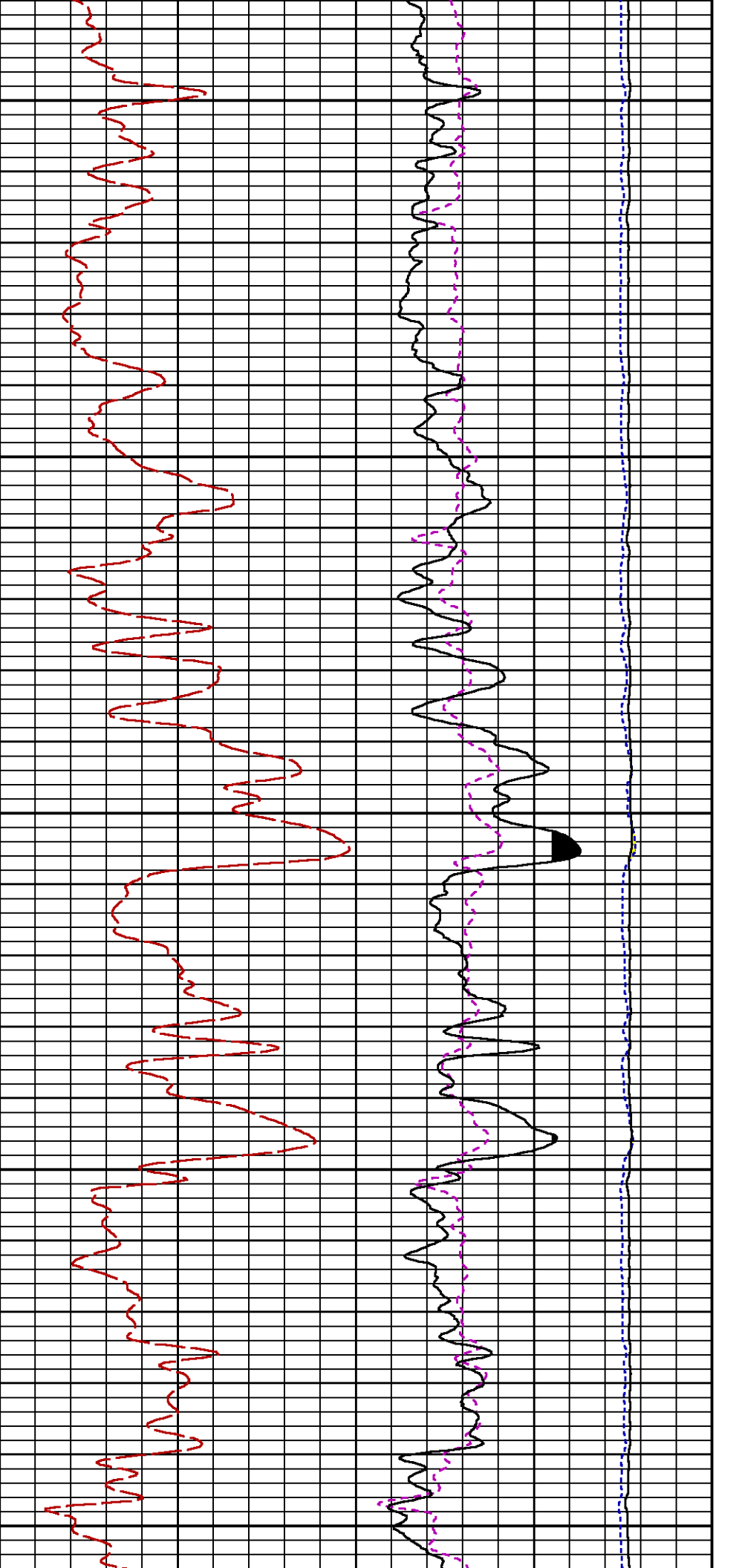
CURVE MEASURE POINT OFFSET

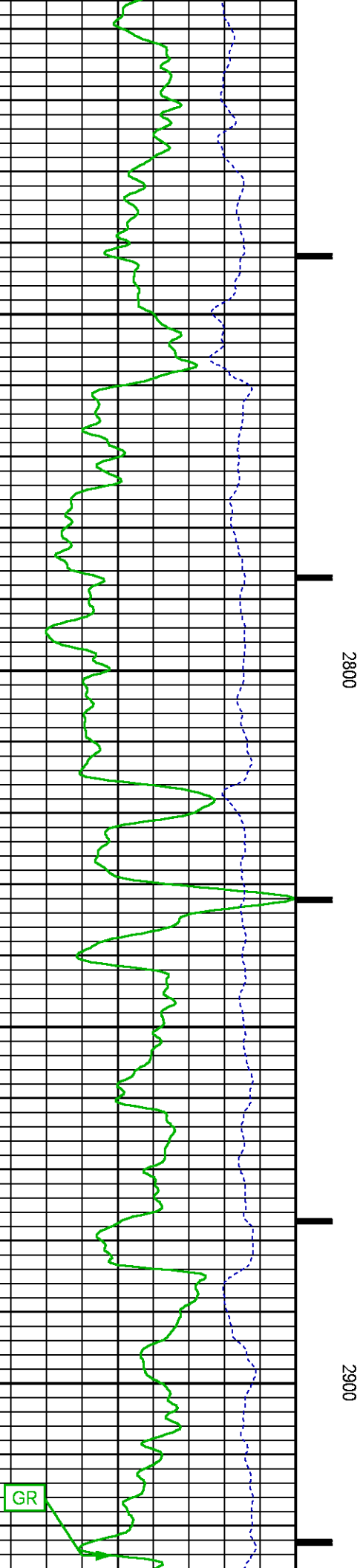
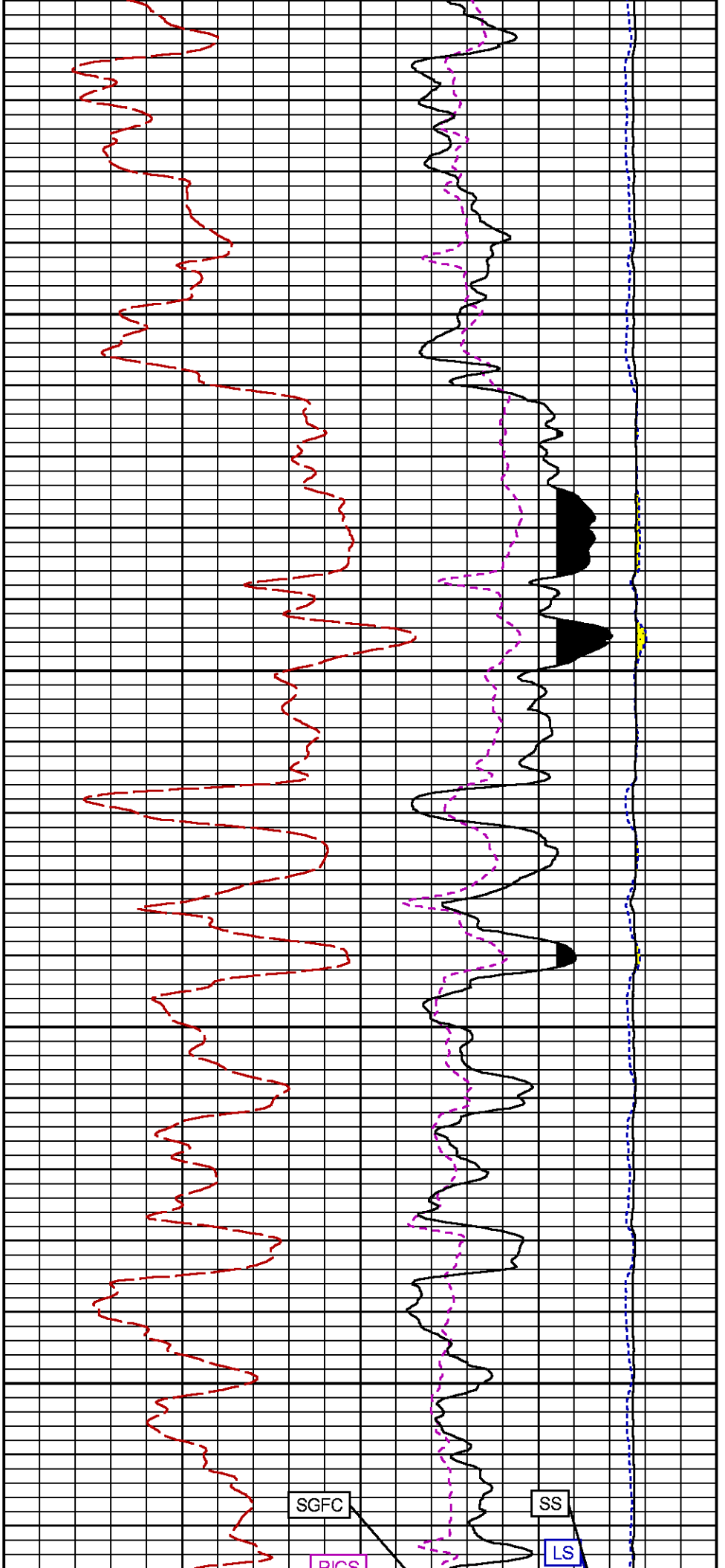
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

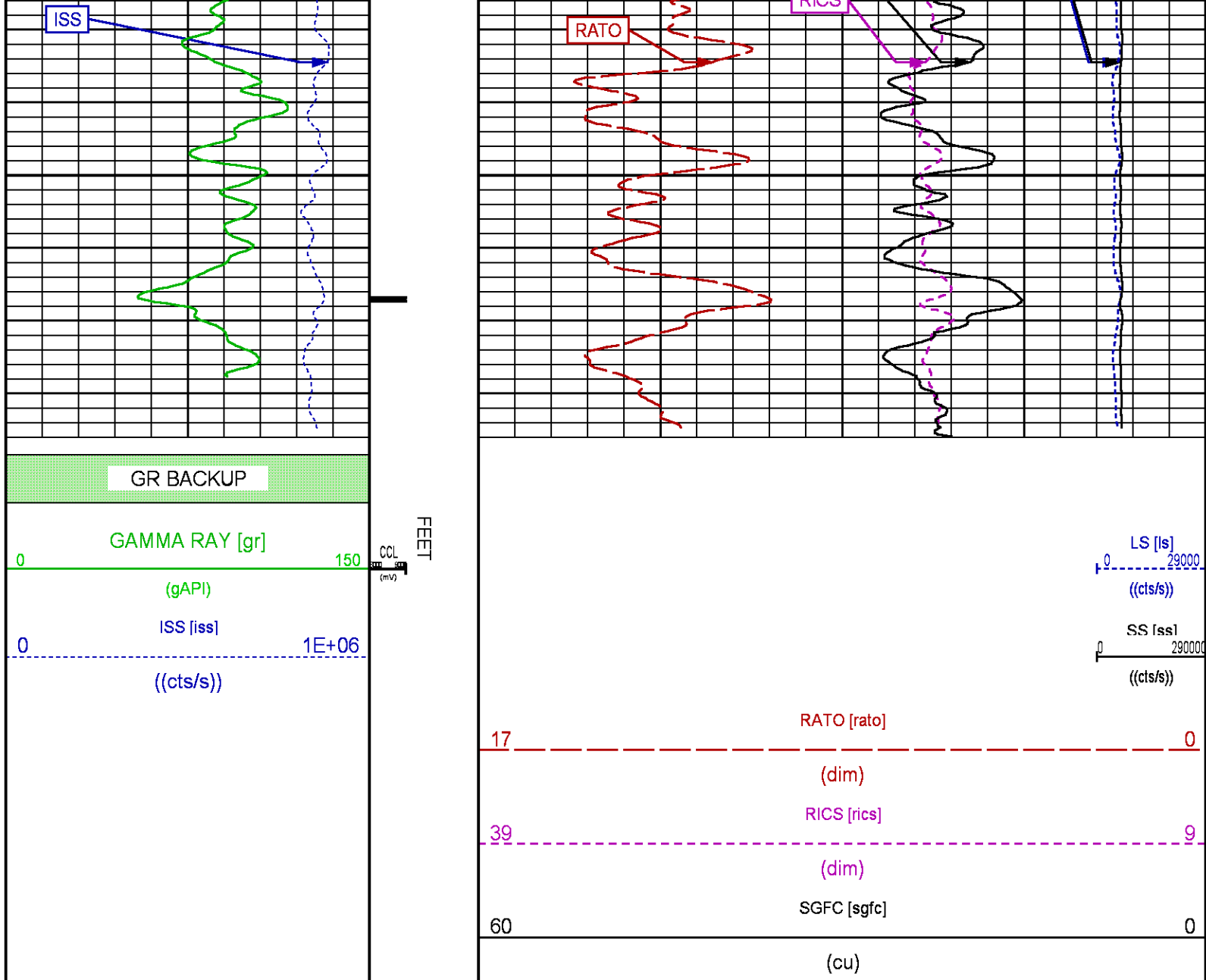
Presentation	: SysA:/dat1a/LARAMIE_BRUTON_30_11W/LARAMIE_RPM+01-MAIN-RPM_MN_GS_30_11W-5.fvpdf [5"/100' Scale]
Plot Interval	: 2322.25 - 2992.25 Feet
Data File 1	: F1 : SysA:/dat1a/LARAMIE_BRUTON_30_11W/RPM_MN_GS_30_11W.xtf
Created On	: N/A
Company	: LARAMIE ENERGY LLC
Well	: BRUTON 30-11W
Field	: VEGA
File Interval	: 2321.5 - 3002.25 Feet
OCT	: p353h











MAIN PASS WILLIAMS FORK PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Tue Jan 2 14:14:47 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_11W/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4513.250 ft BOTTOM DEPTH: 7765.750 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	8.50	in	"	"
	LARGEST CASING OD	7.00	in	"	"
	MATRIX	SANDSTONE		"	"

CURVE DESCRIPTION REPORT

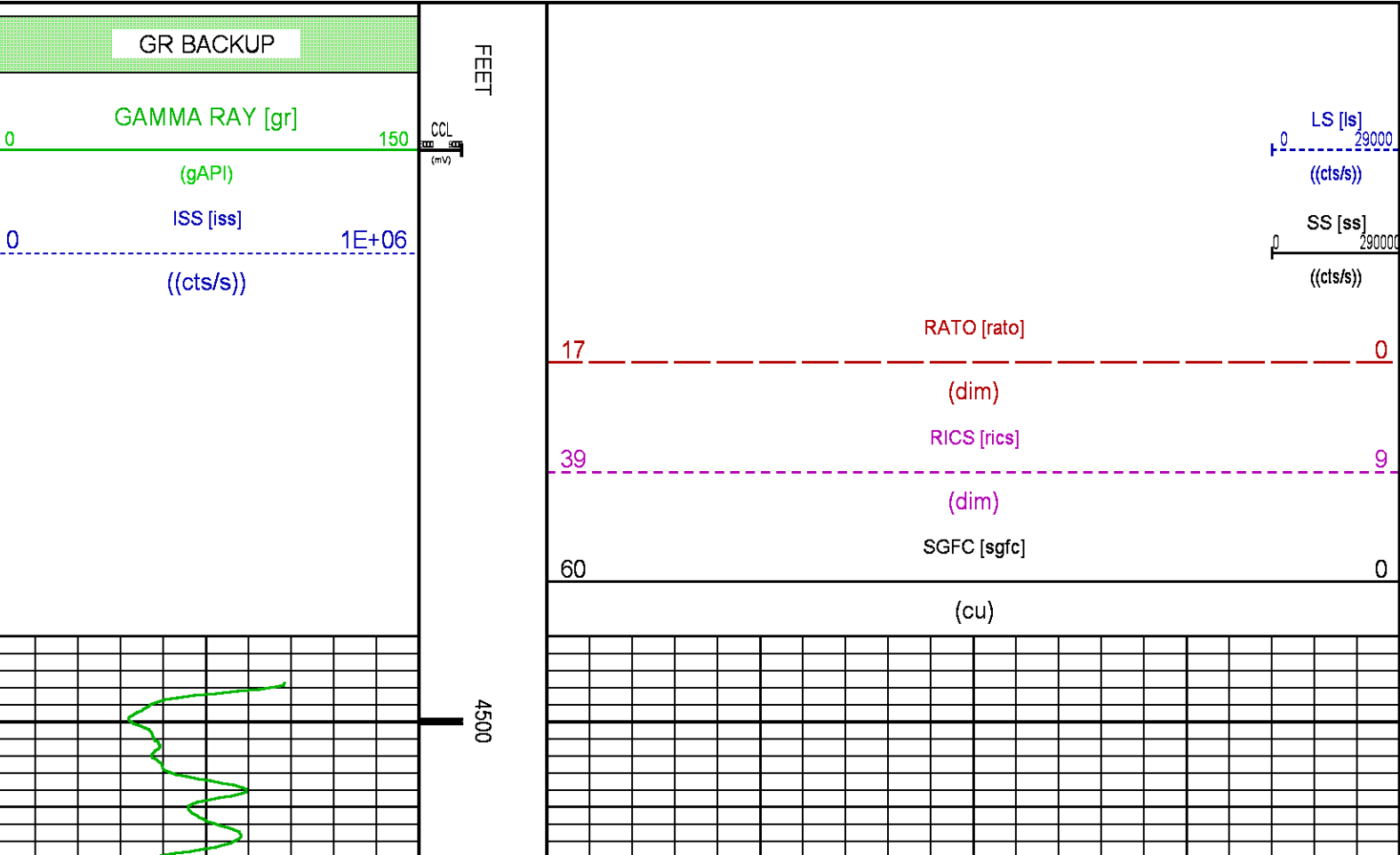
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	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	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_BRUTON_30_11W/LARAMIE_RPM+01-MAIN-RPM_MN_WF_30_11W-5.fvpdf [5"/100' Scale]
Plot Interval : 4491.25 - 7759.75 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_11W/RPM_MN_WF_30_11W.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-11W
Field : VEGA
File Interval : 4490.5 - 7768.5 Feet
OCT : p353h



4600

4700

GR

ISS

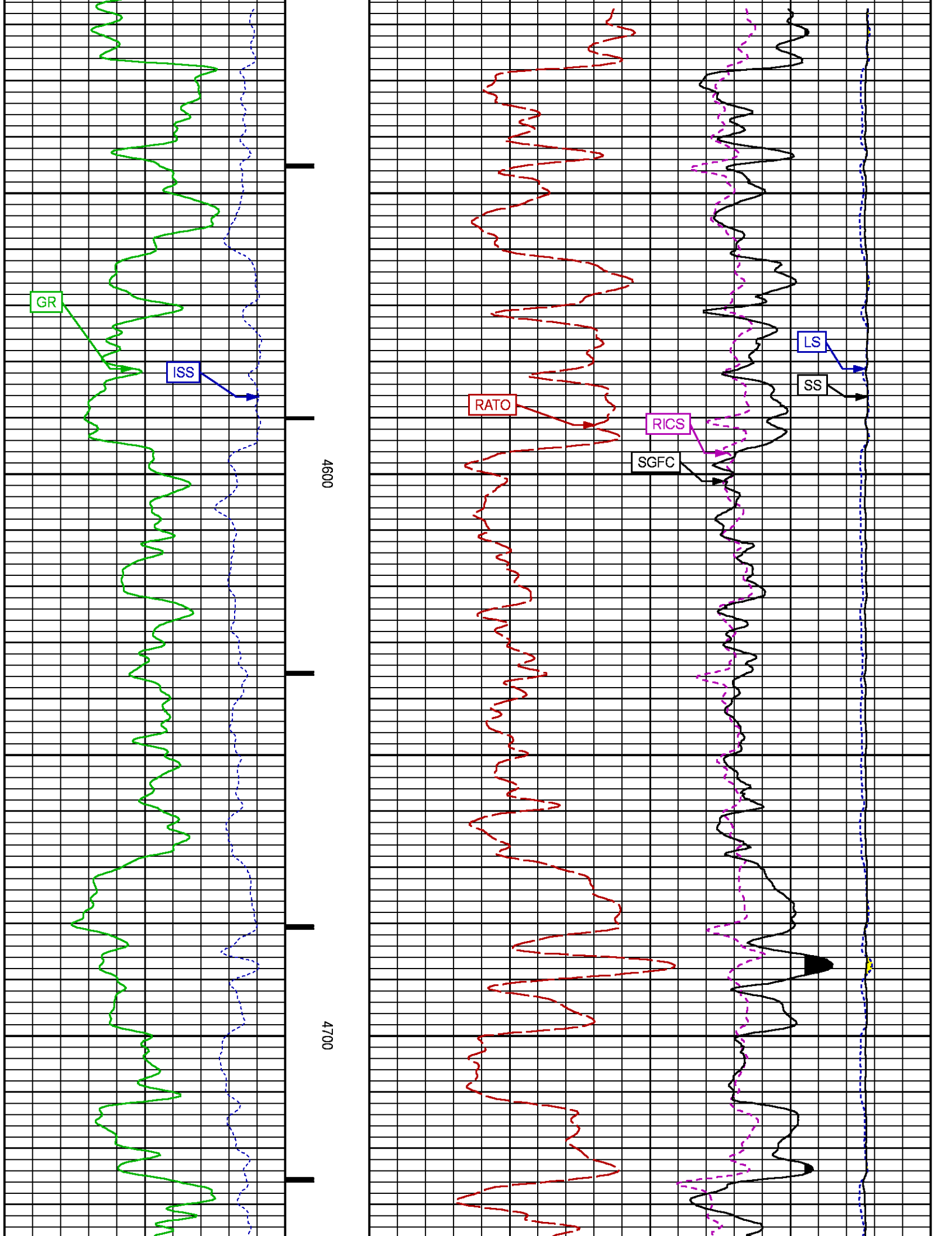
RATO

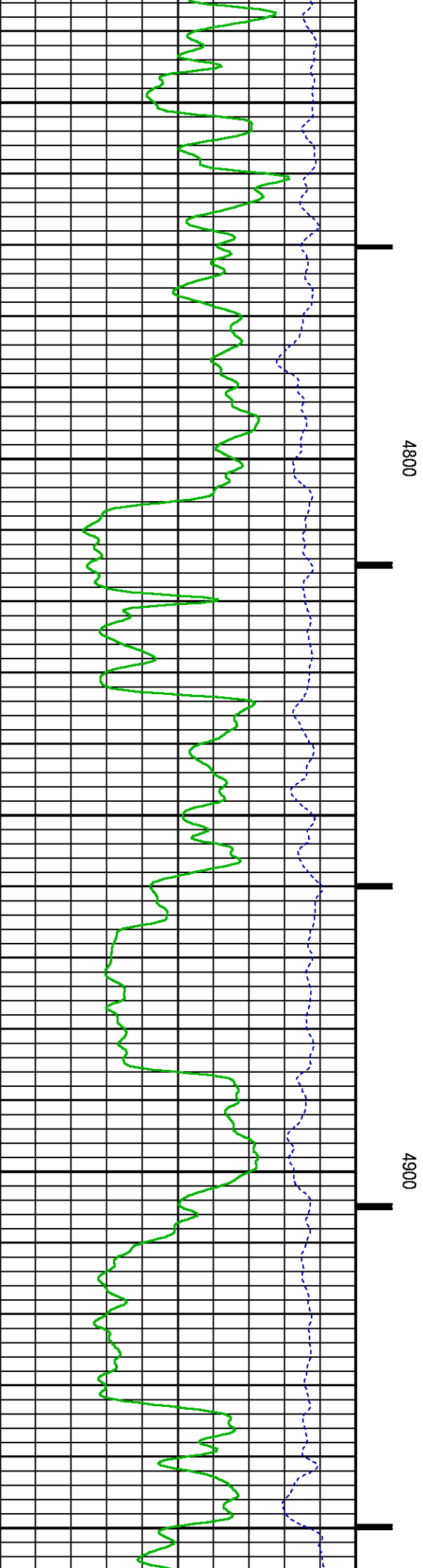
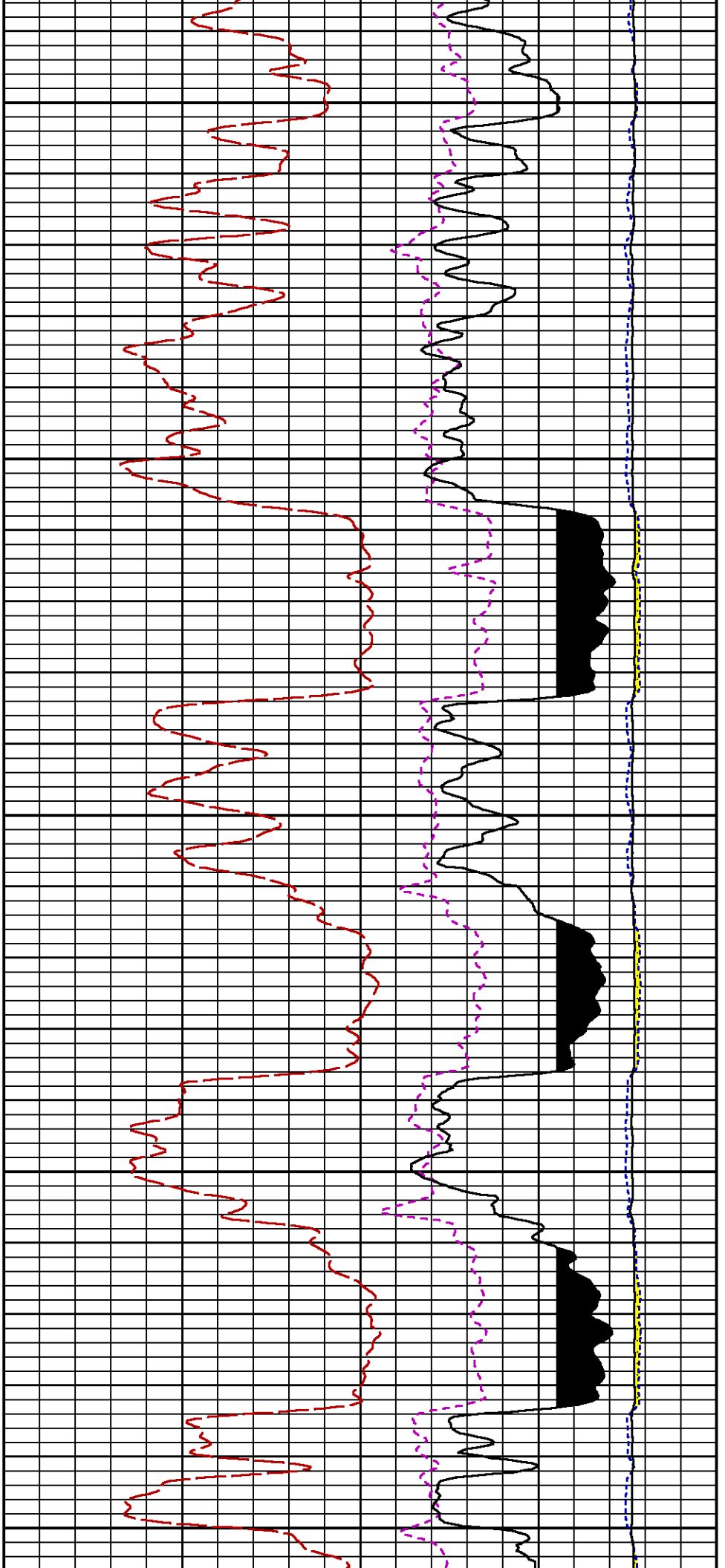
RICS

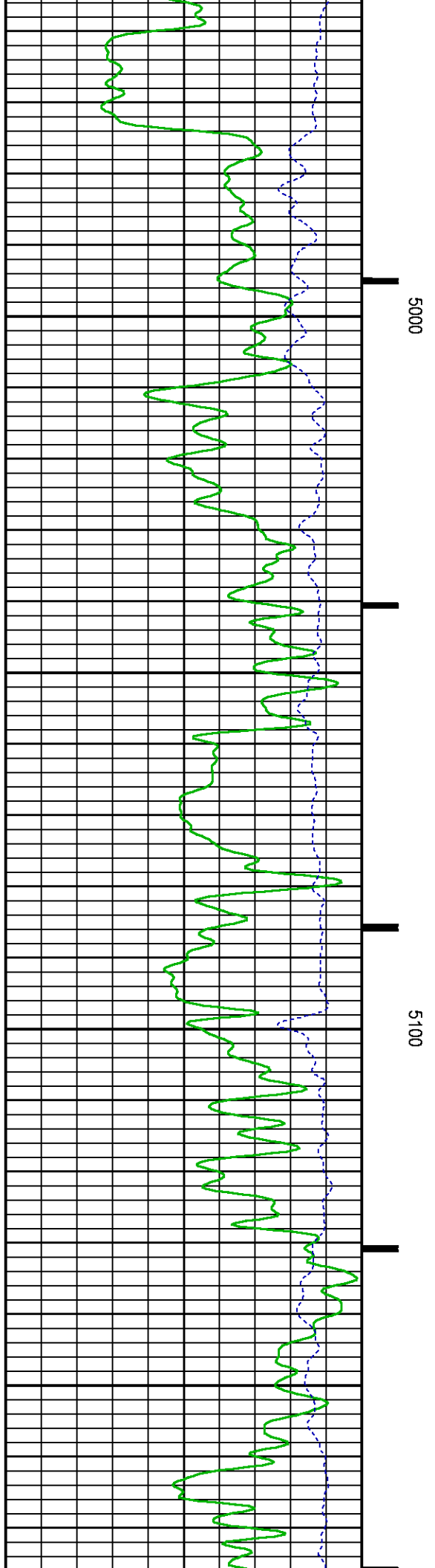
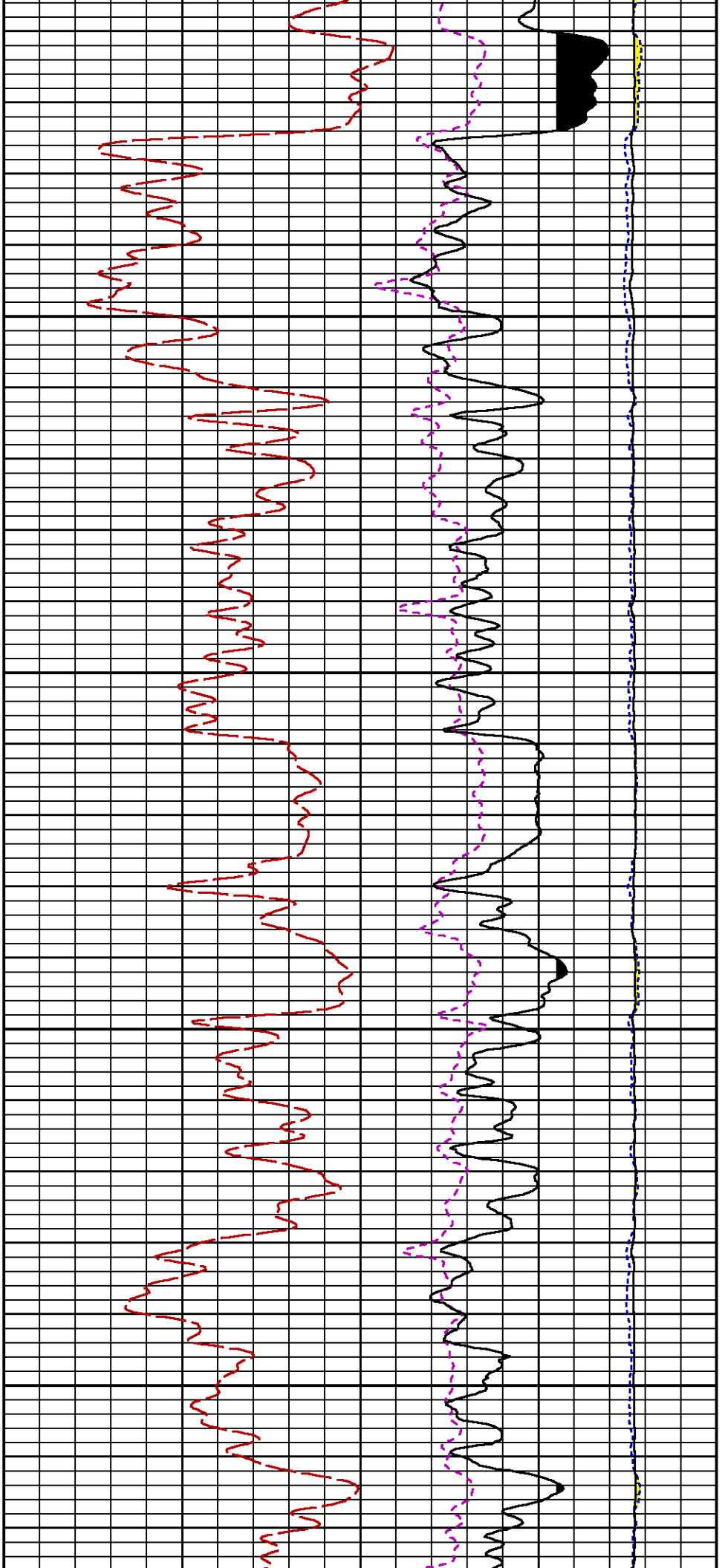
SGFC

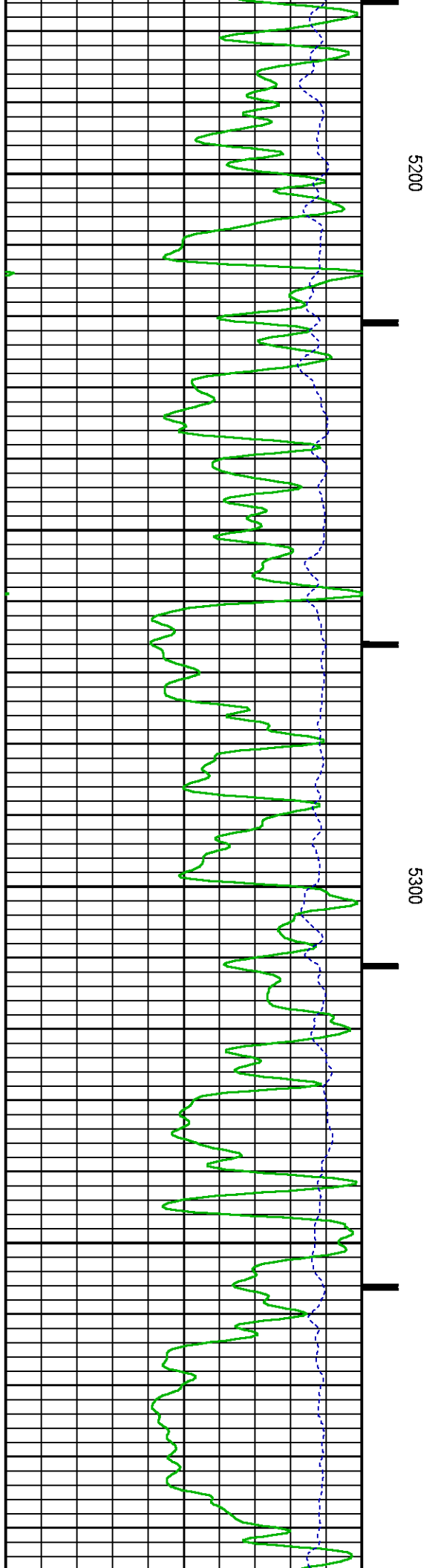
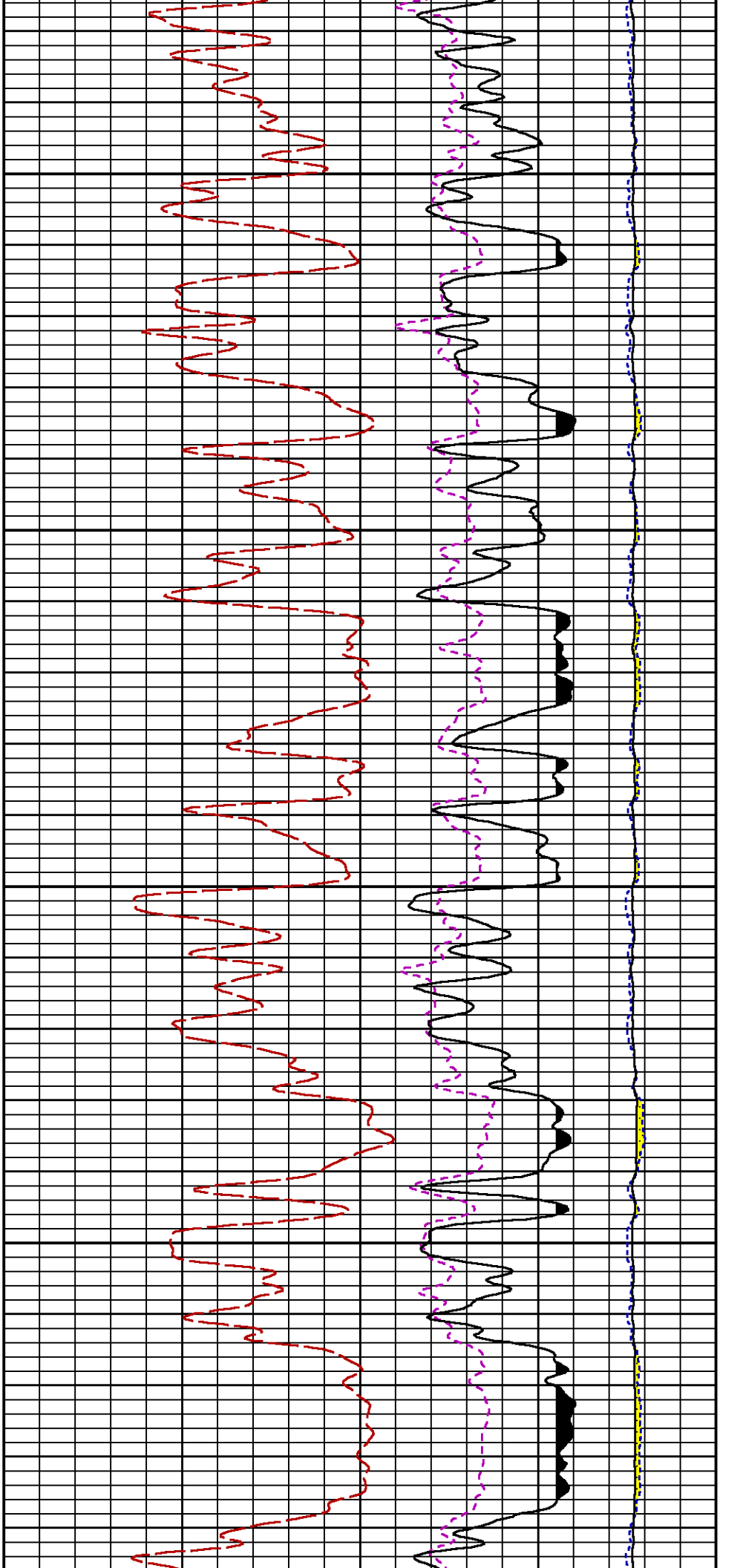
LS

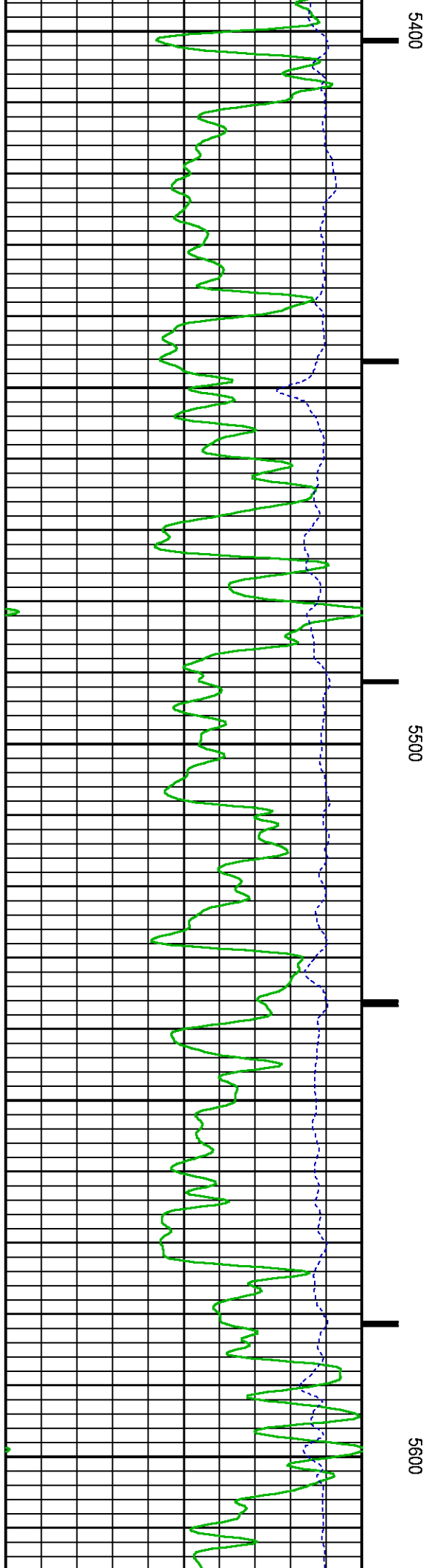
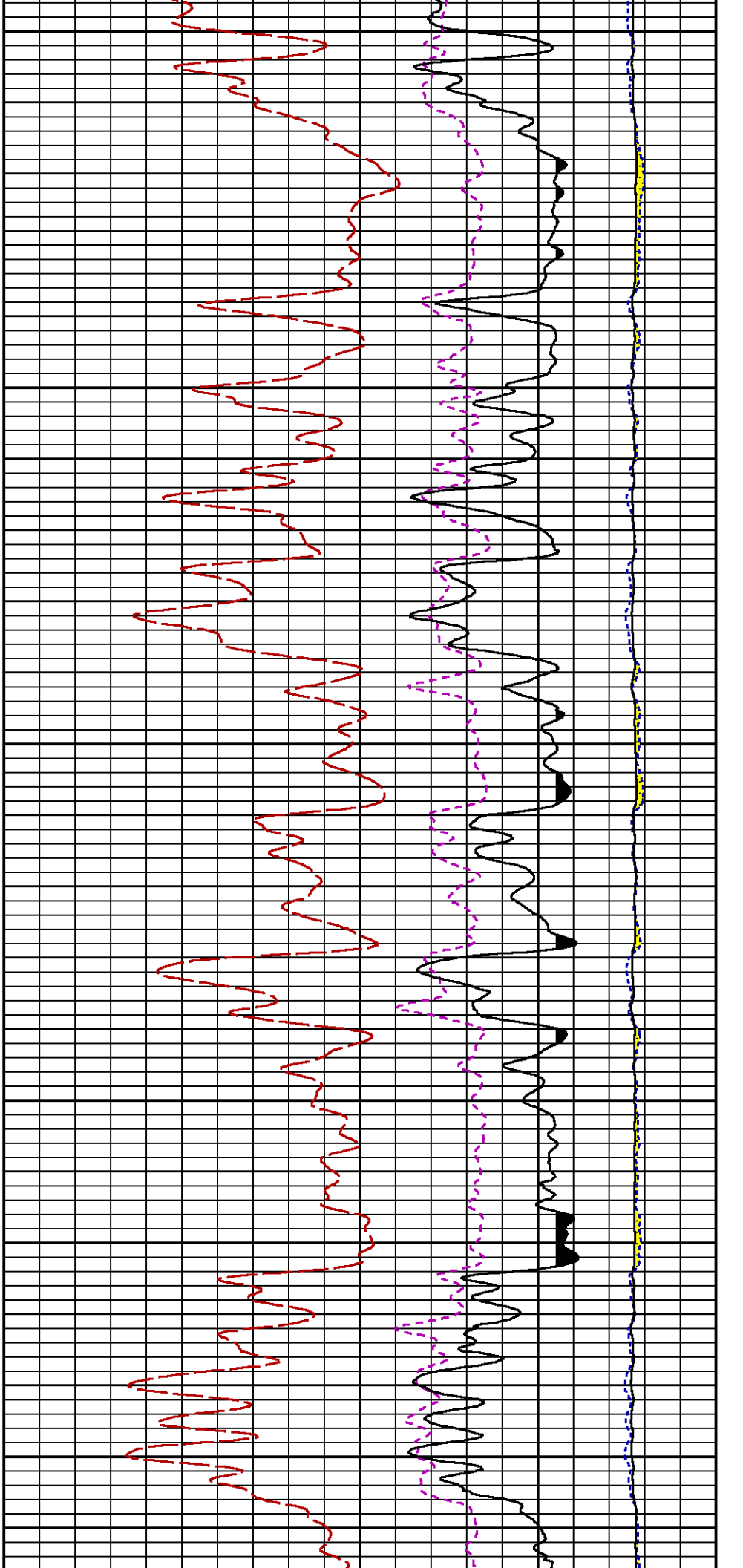
SS

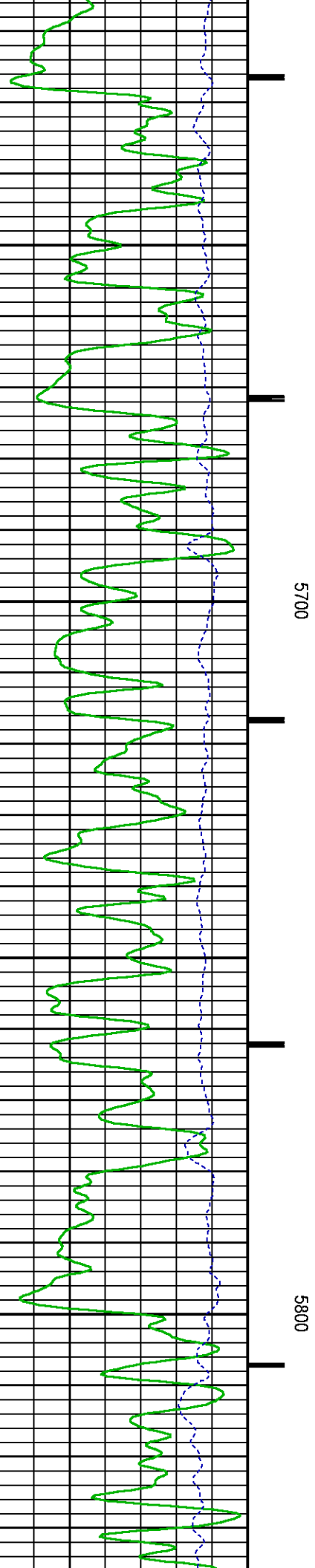
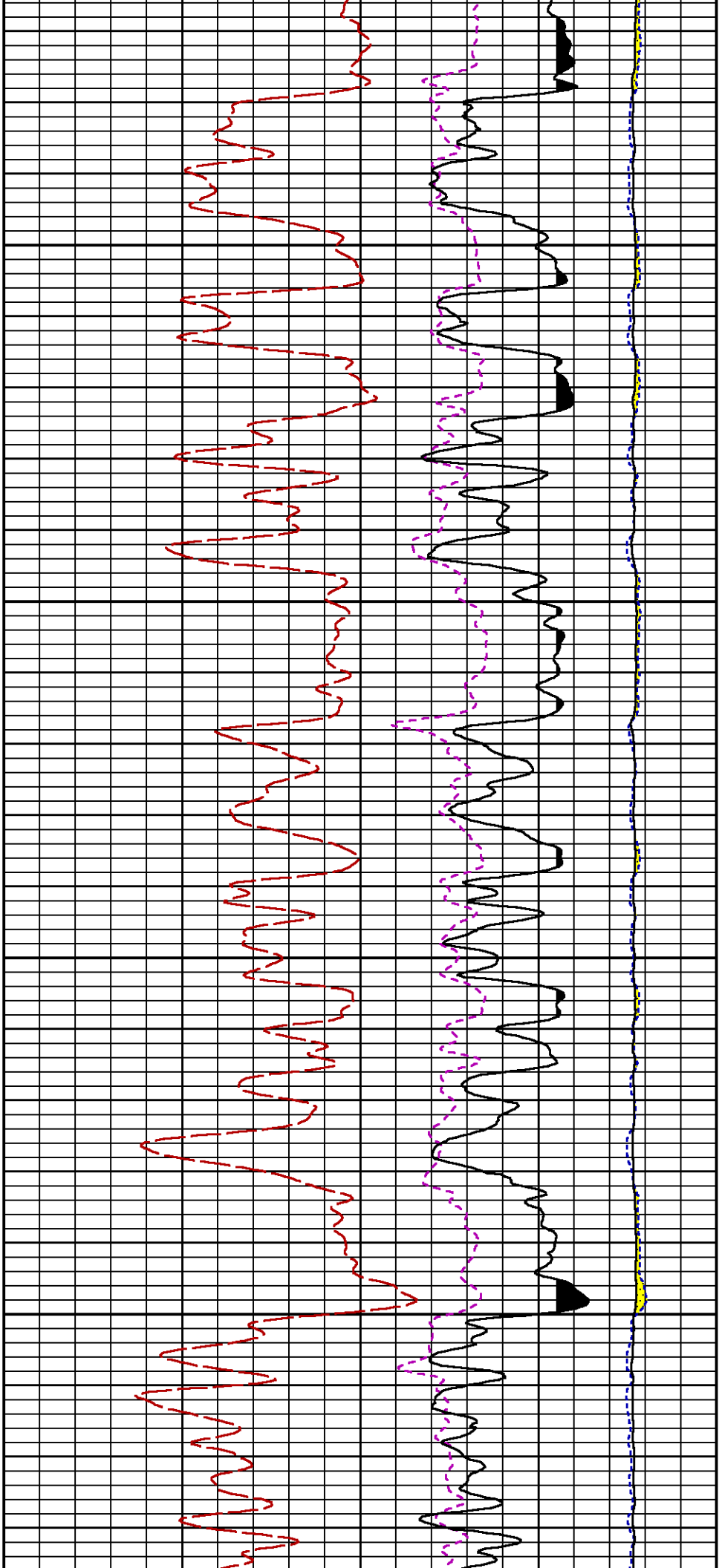


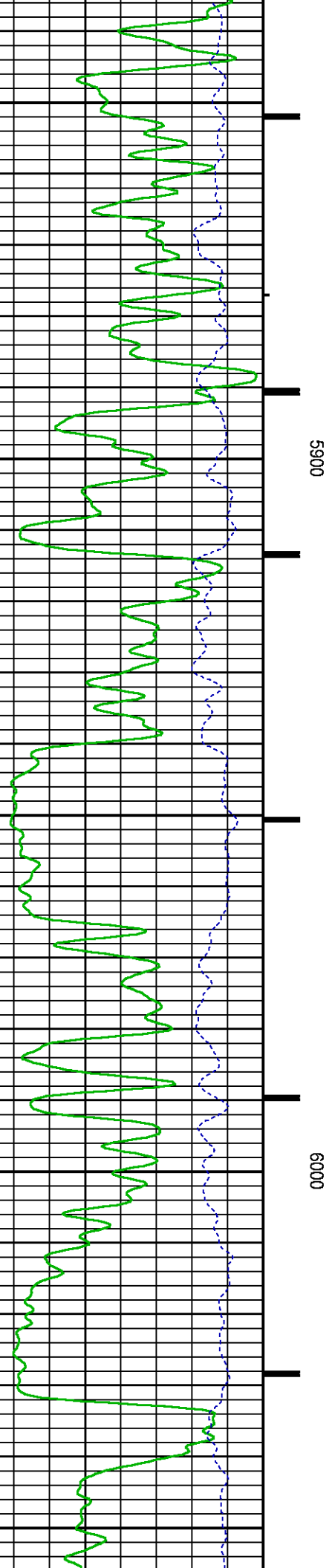
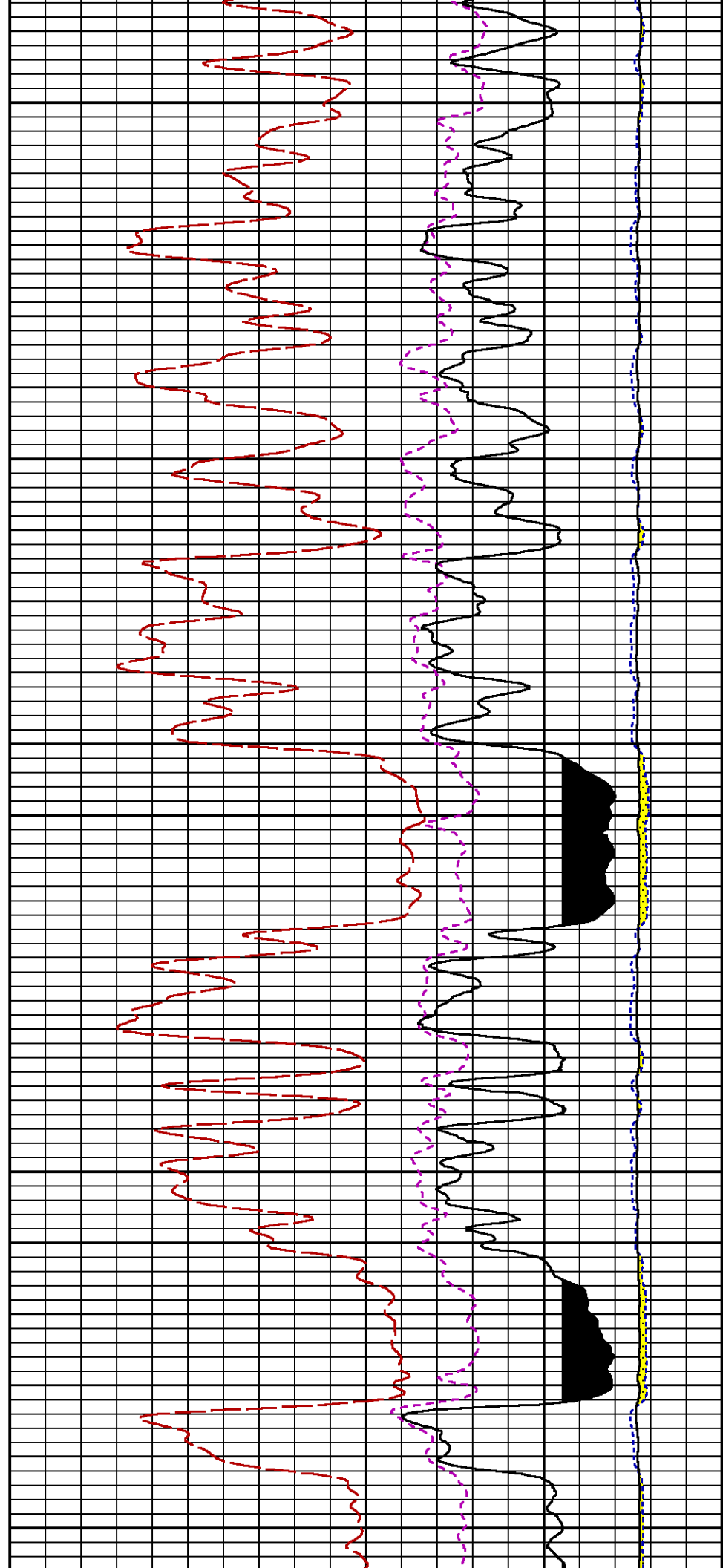


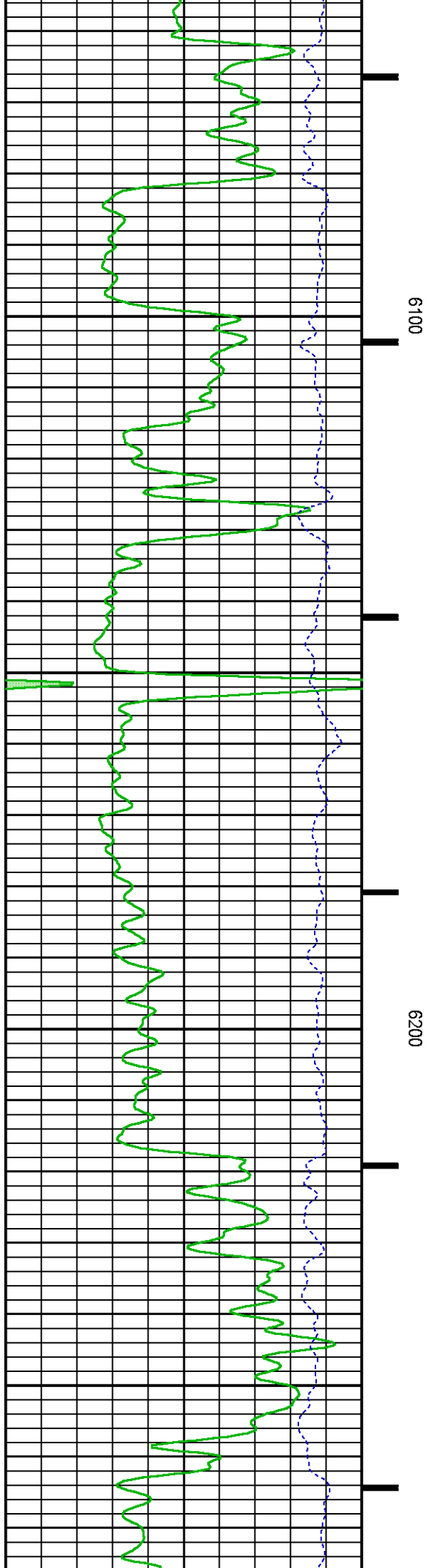
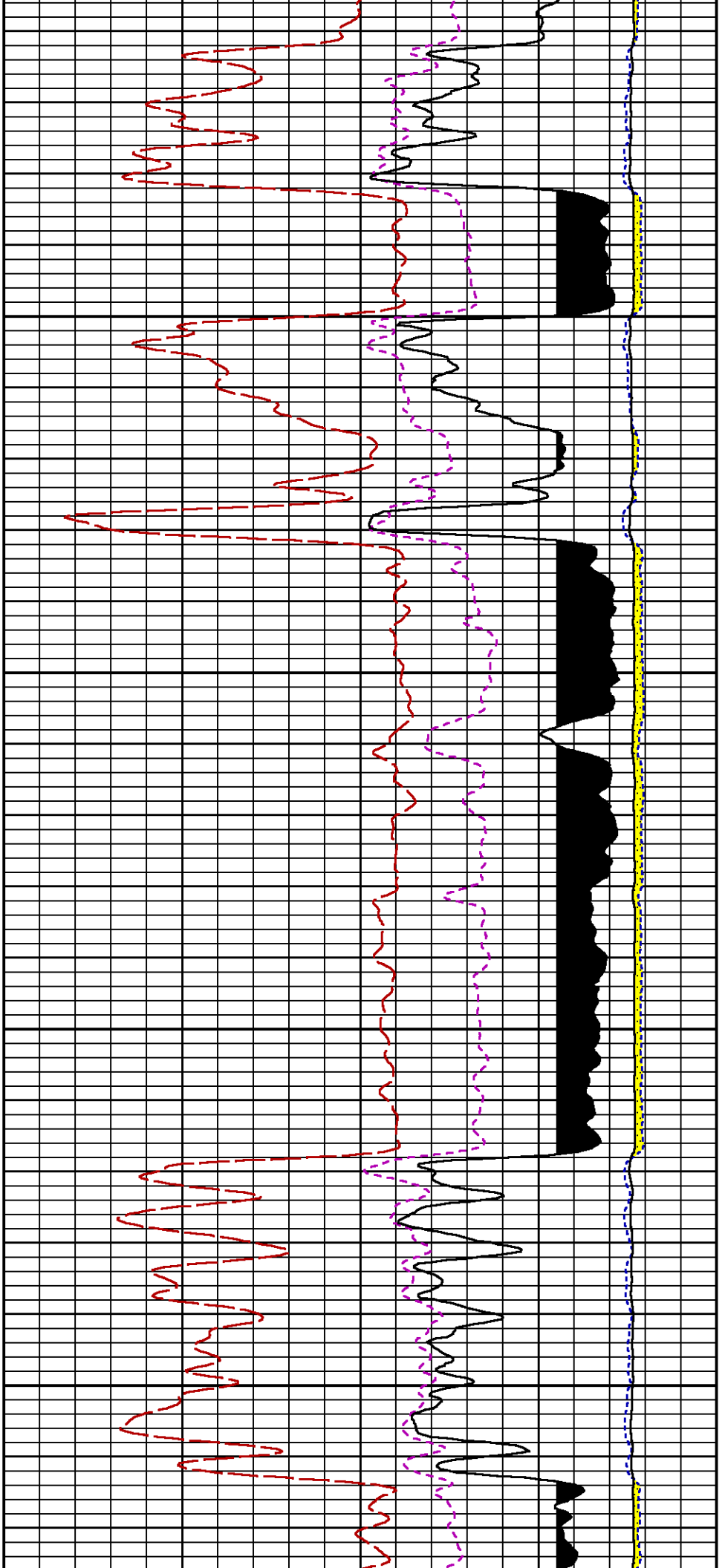


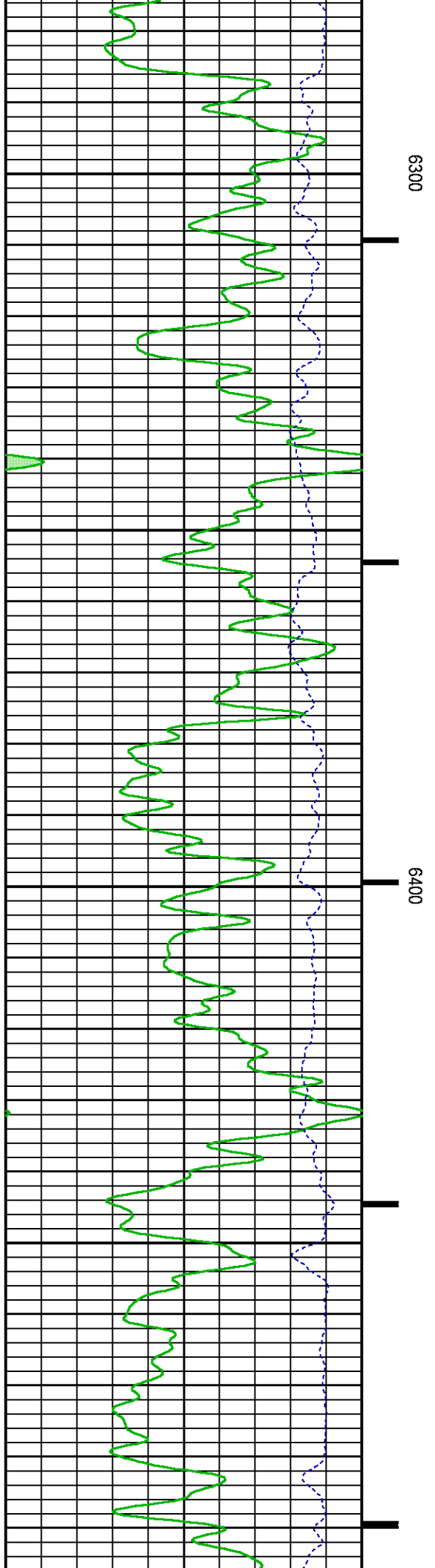
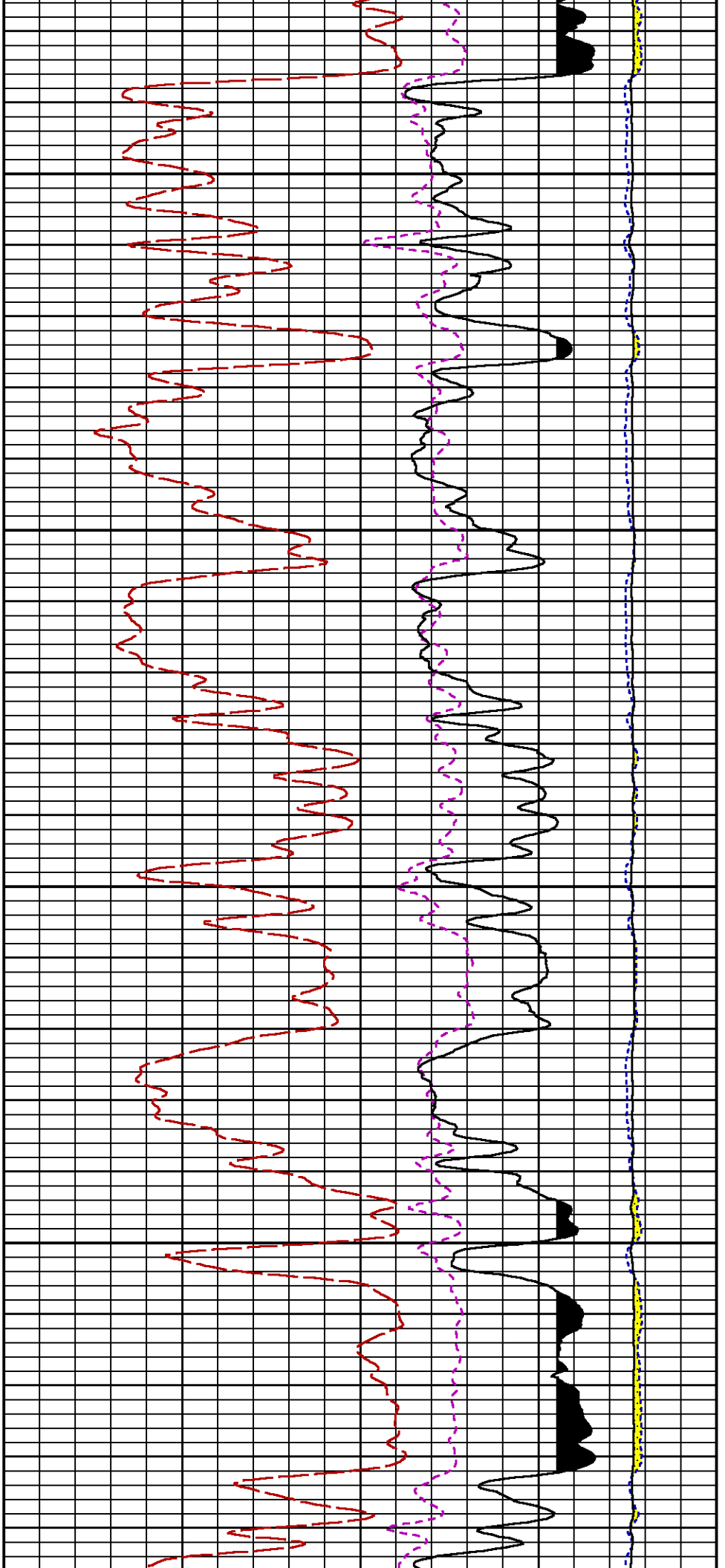


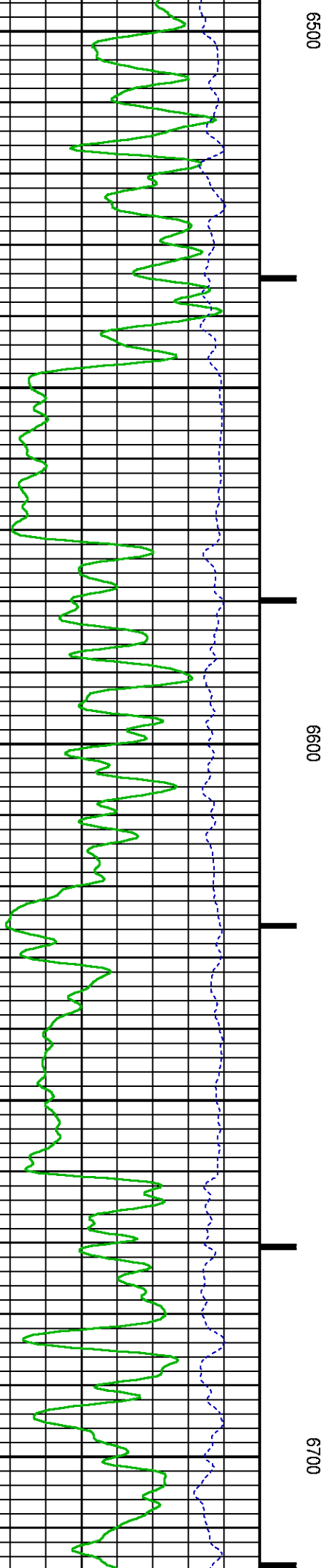
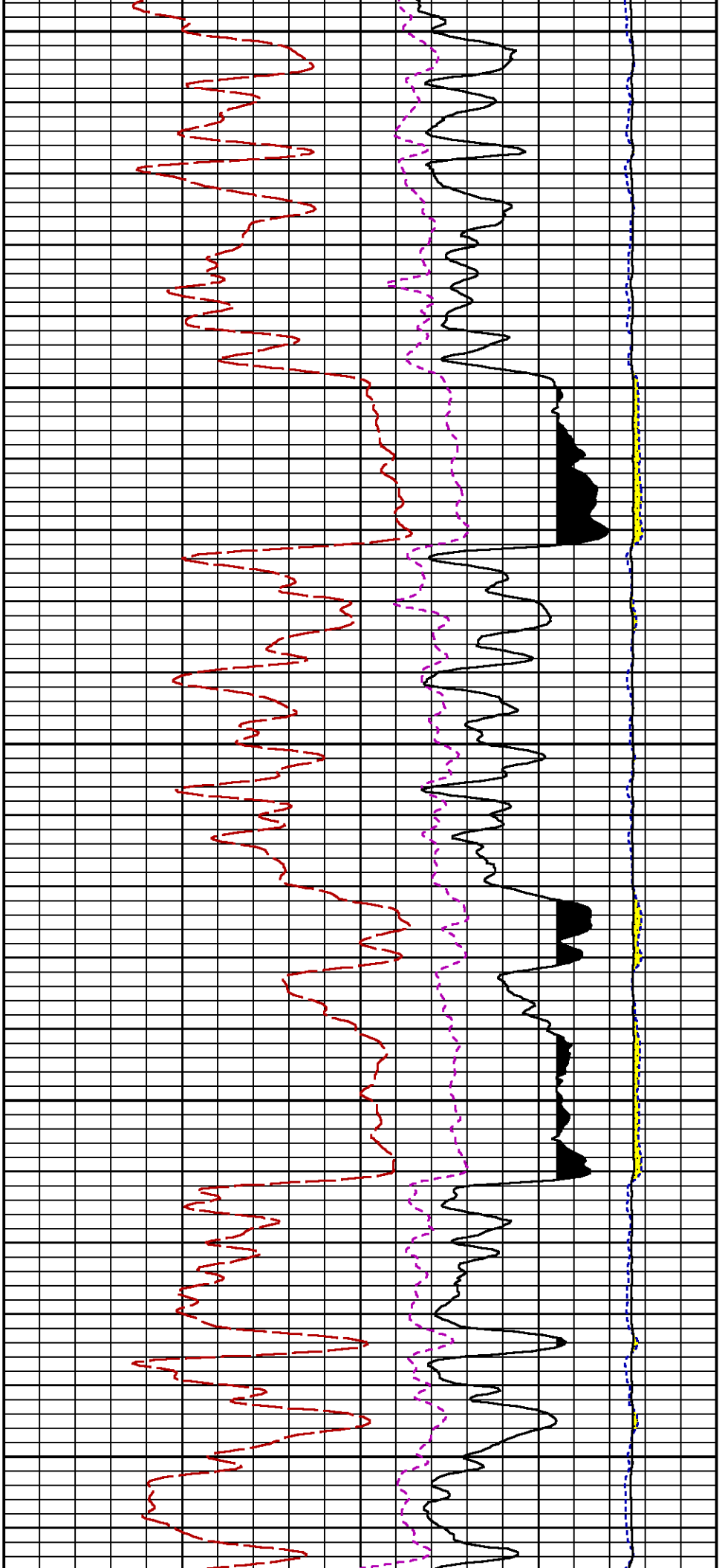


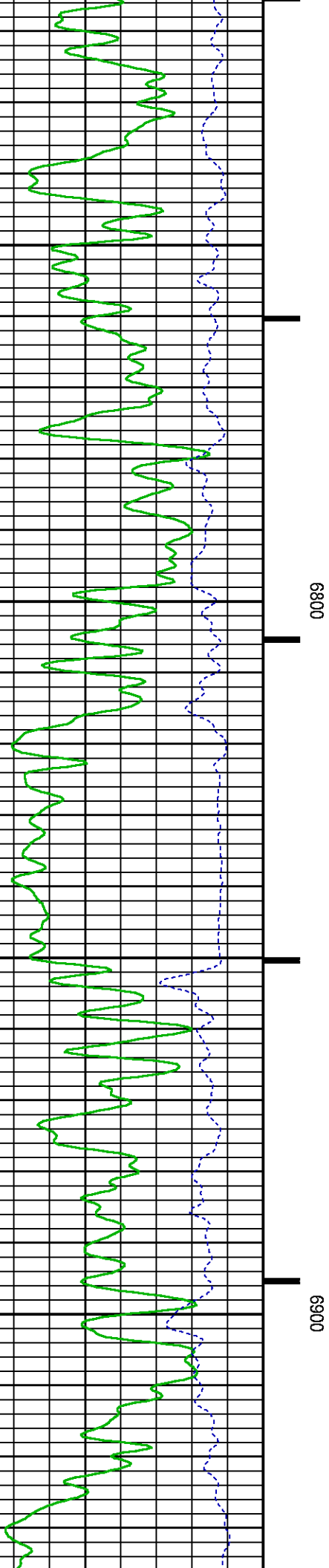
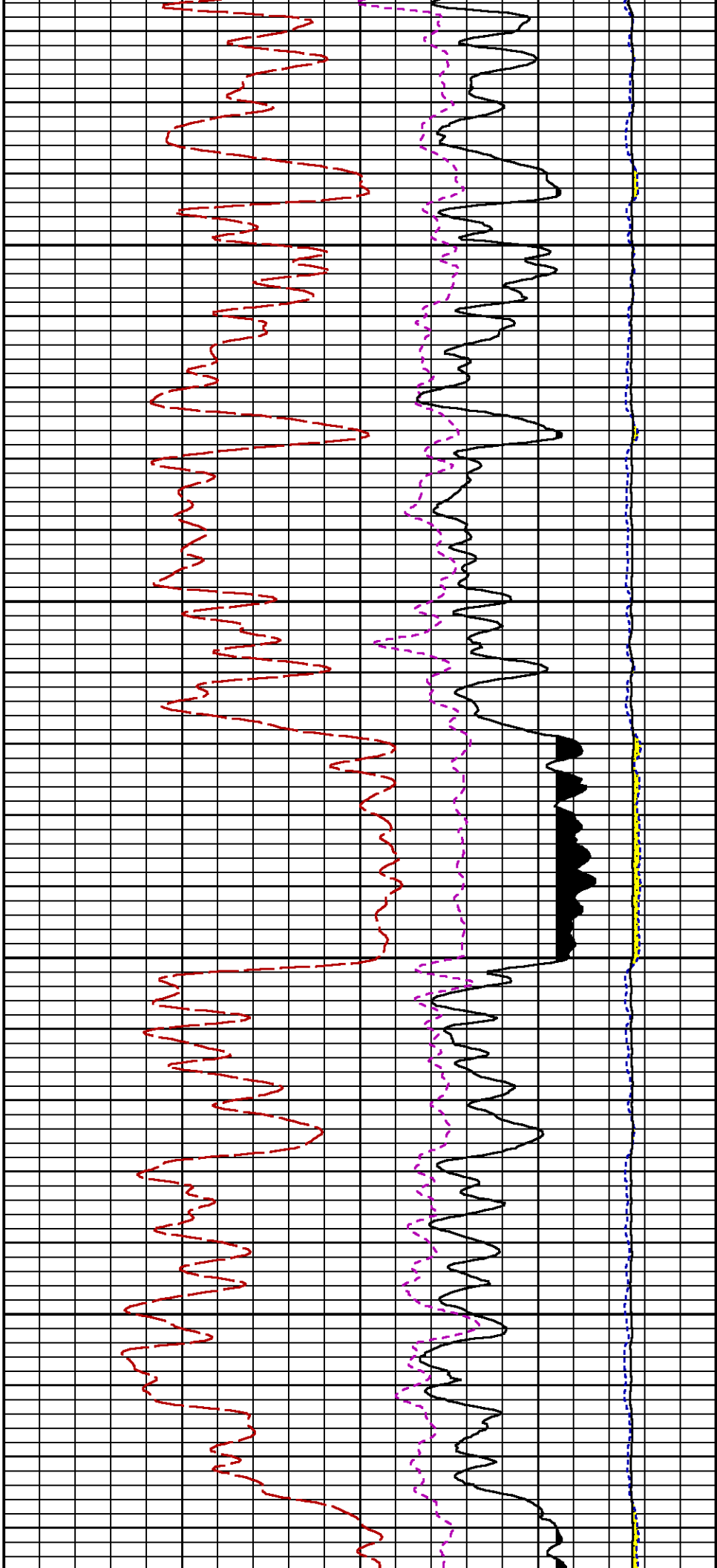


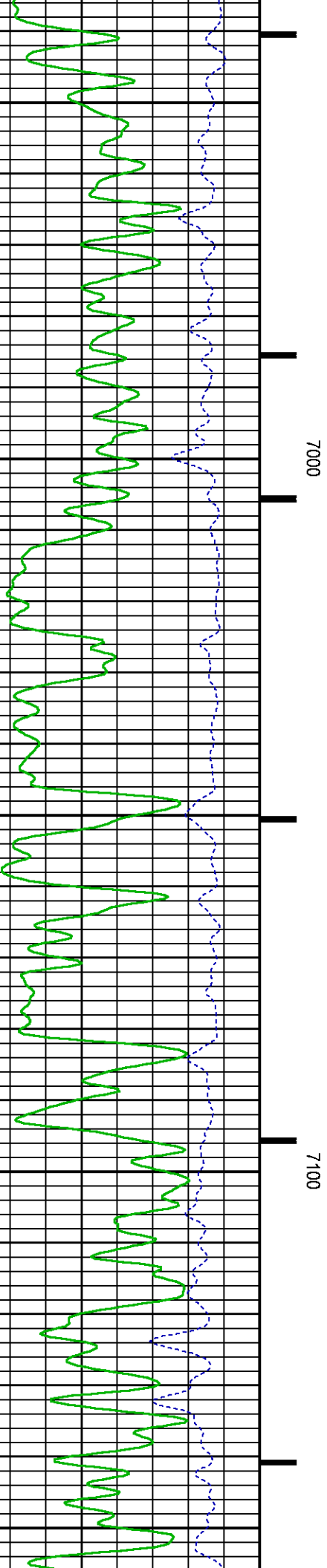
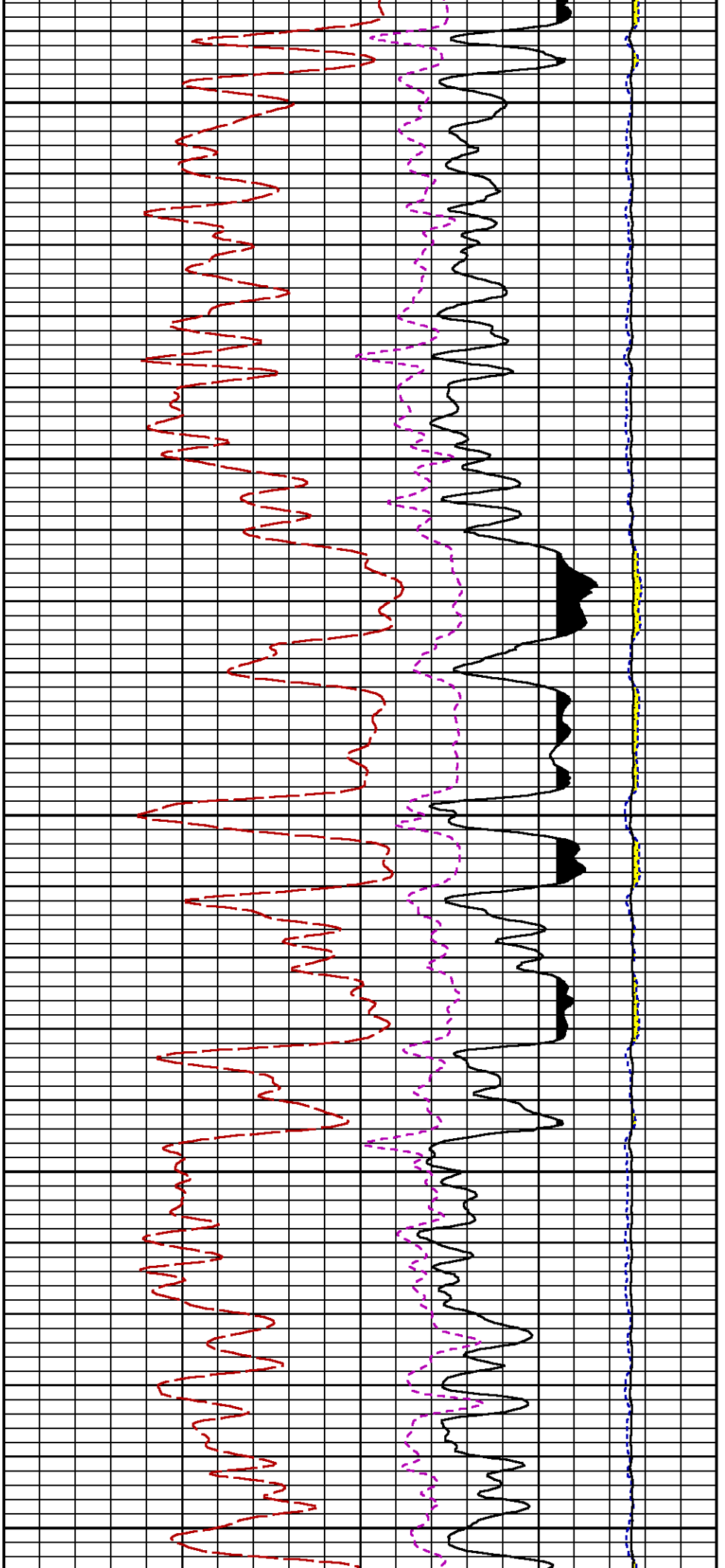


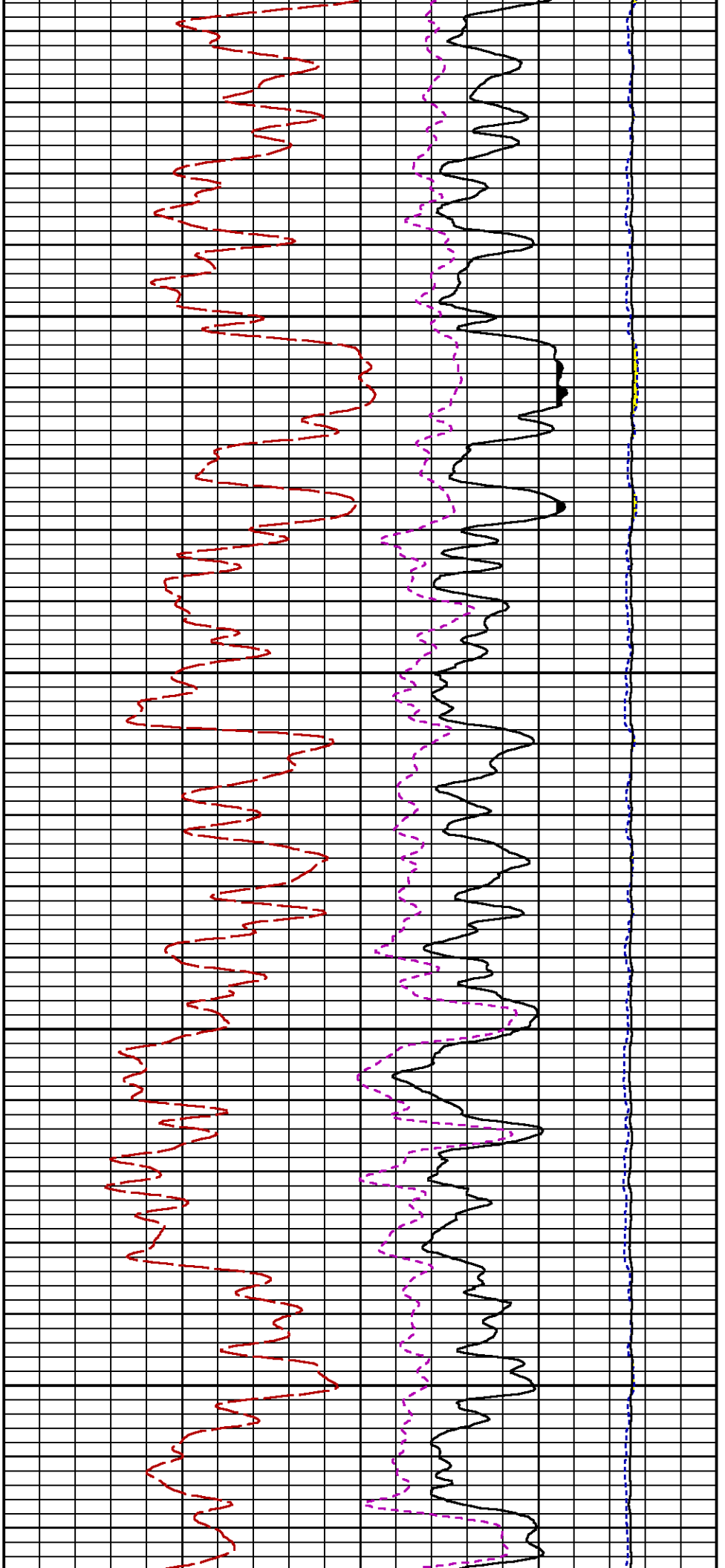






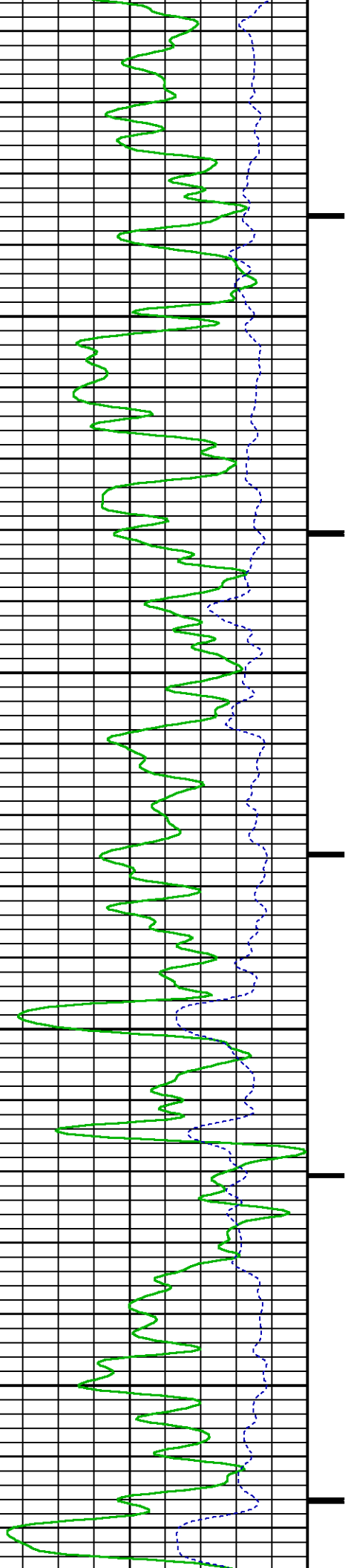


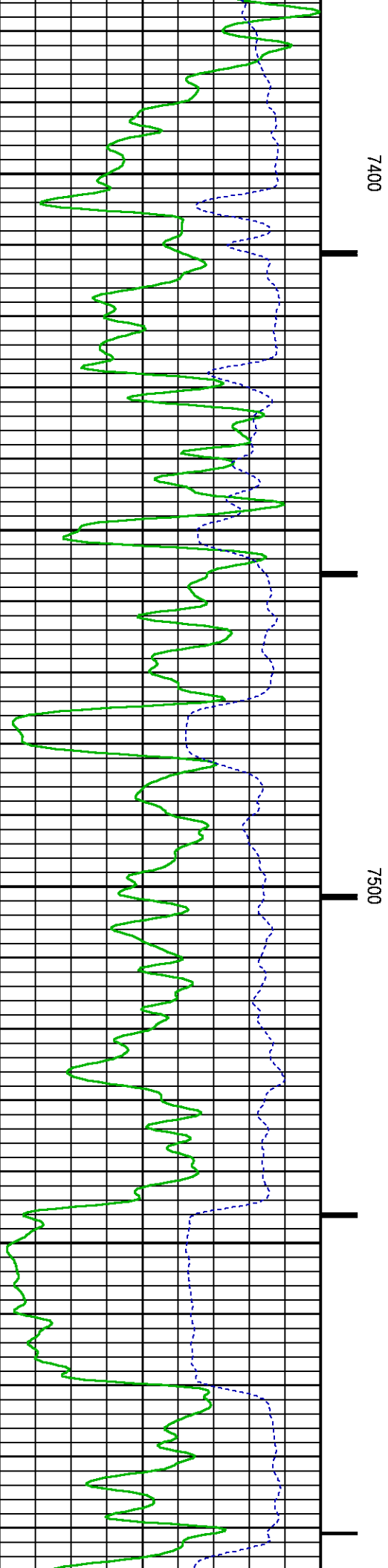
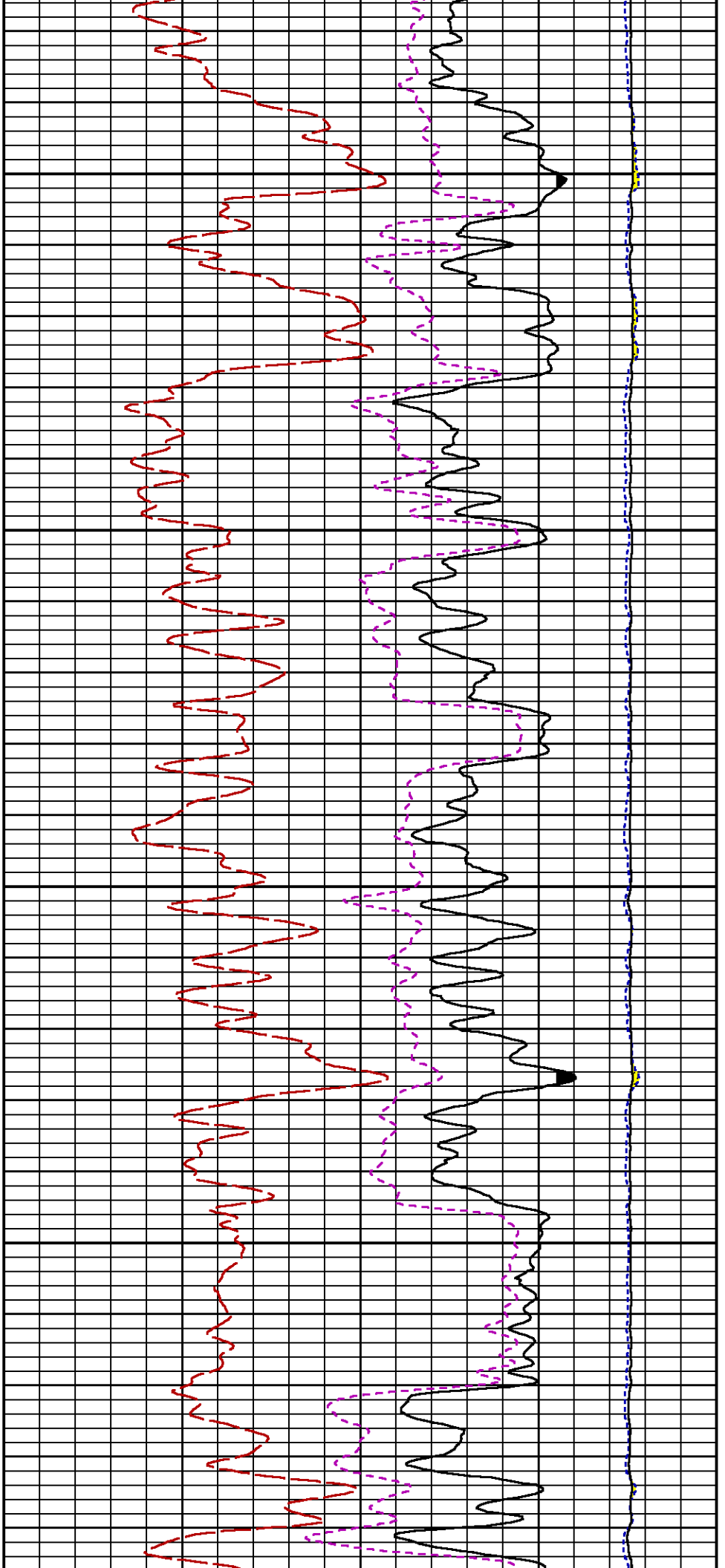


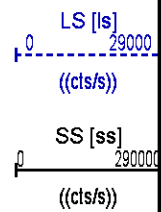
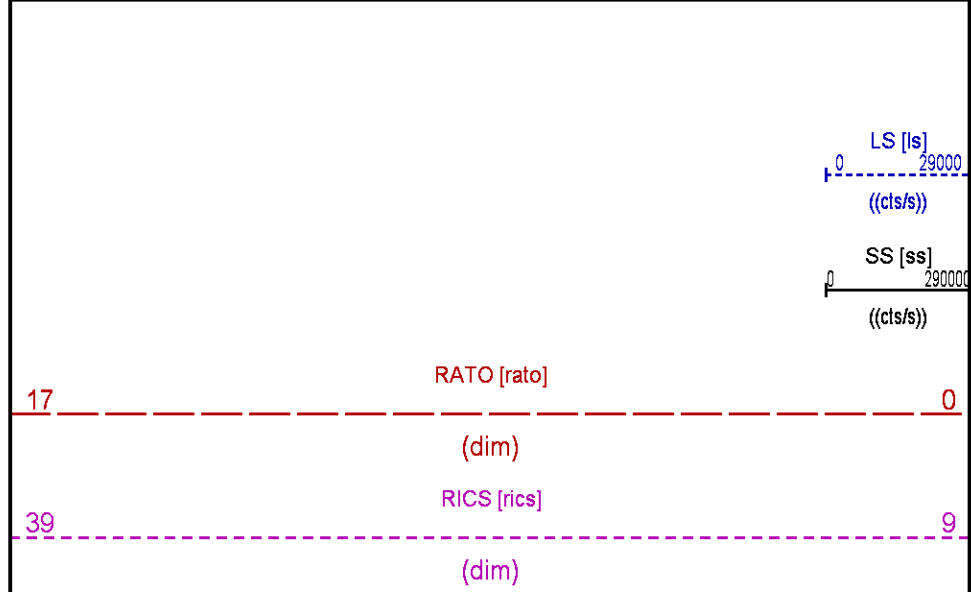
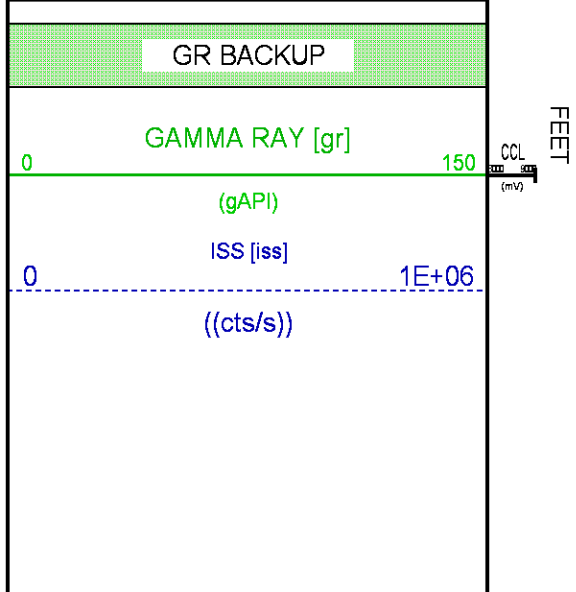
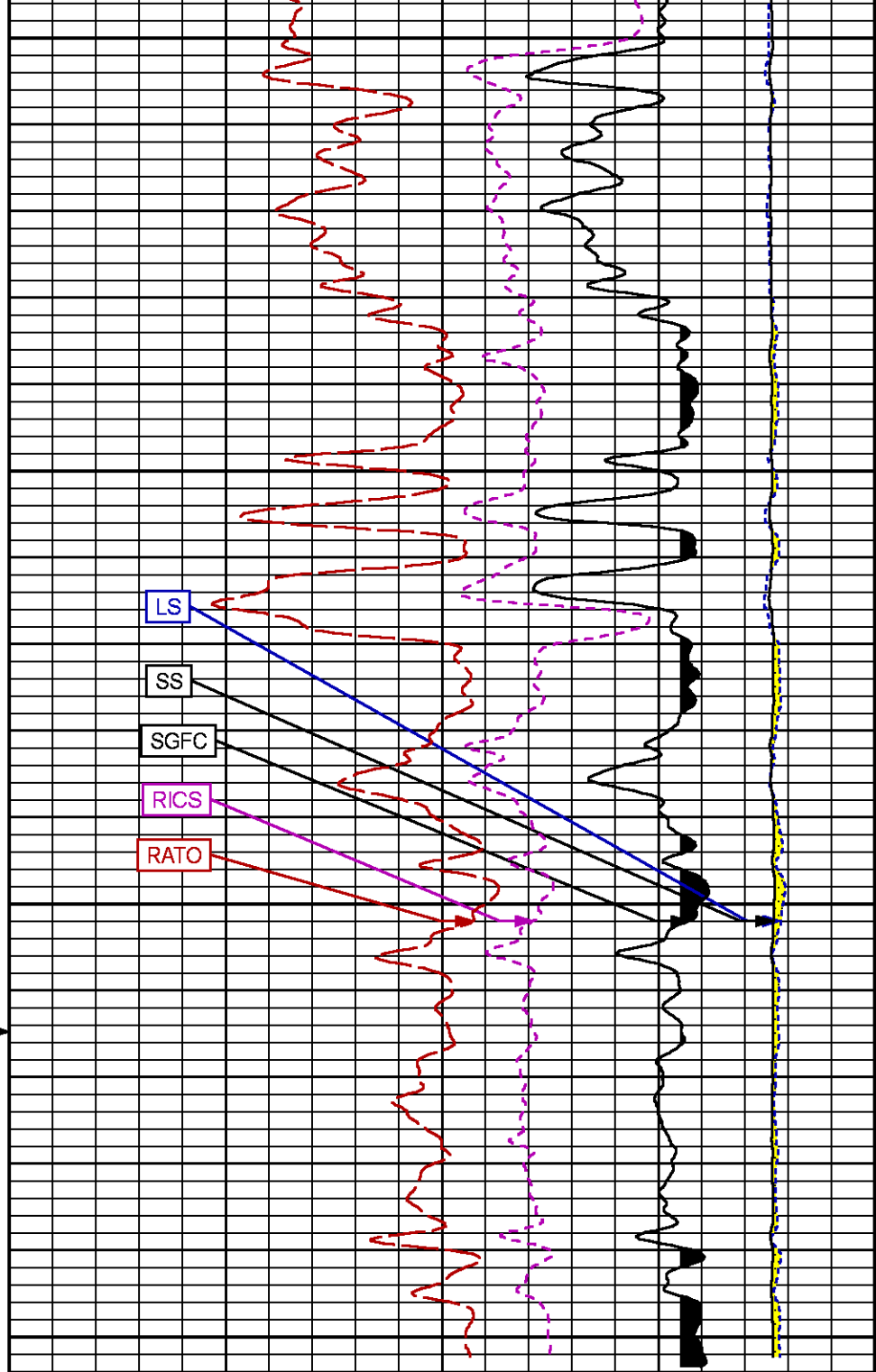
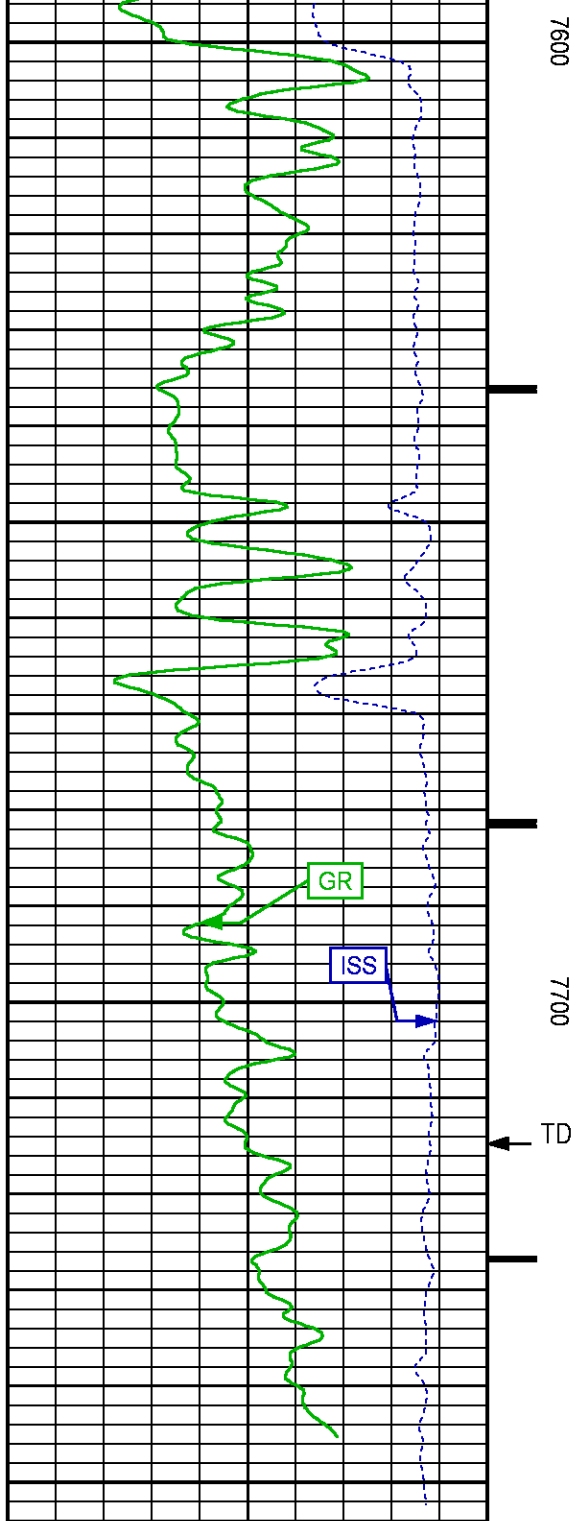


7200

7300







60

SGFC [sgfc]

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(cu)

REPEAT PASS PNC 3D MODE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 2

Plotted: Tue Jan 2 14:13:37 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_11W/p353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4824.250 ft BOTTOM DEPTH: 5049.250 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		" "

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	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_BRUTON_30_11W/LARAMIE_RPM+01-REPEAT-RPM_RPT_30_11W-5.fvpdf [5"/100" Scale]
Plot Interval : 4807.25 - 5048.25 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_11W/RPM_RPT_30_11W.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-11W
Field : VEGA
File Interval : 4806.5 - 5057 Feet
OCT : p353h

GR BACKUP

GAMMA RAY [gr]

(gAPI)

ISS [iss]

((cts/s))

FEET

CCL
(mV)

4900

LS [ls]

((cts/s))

SS [ss]

((cts/s))

RATO [rato]

(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)

17

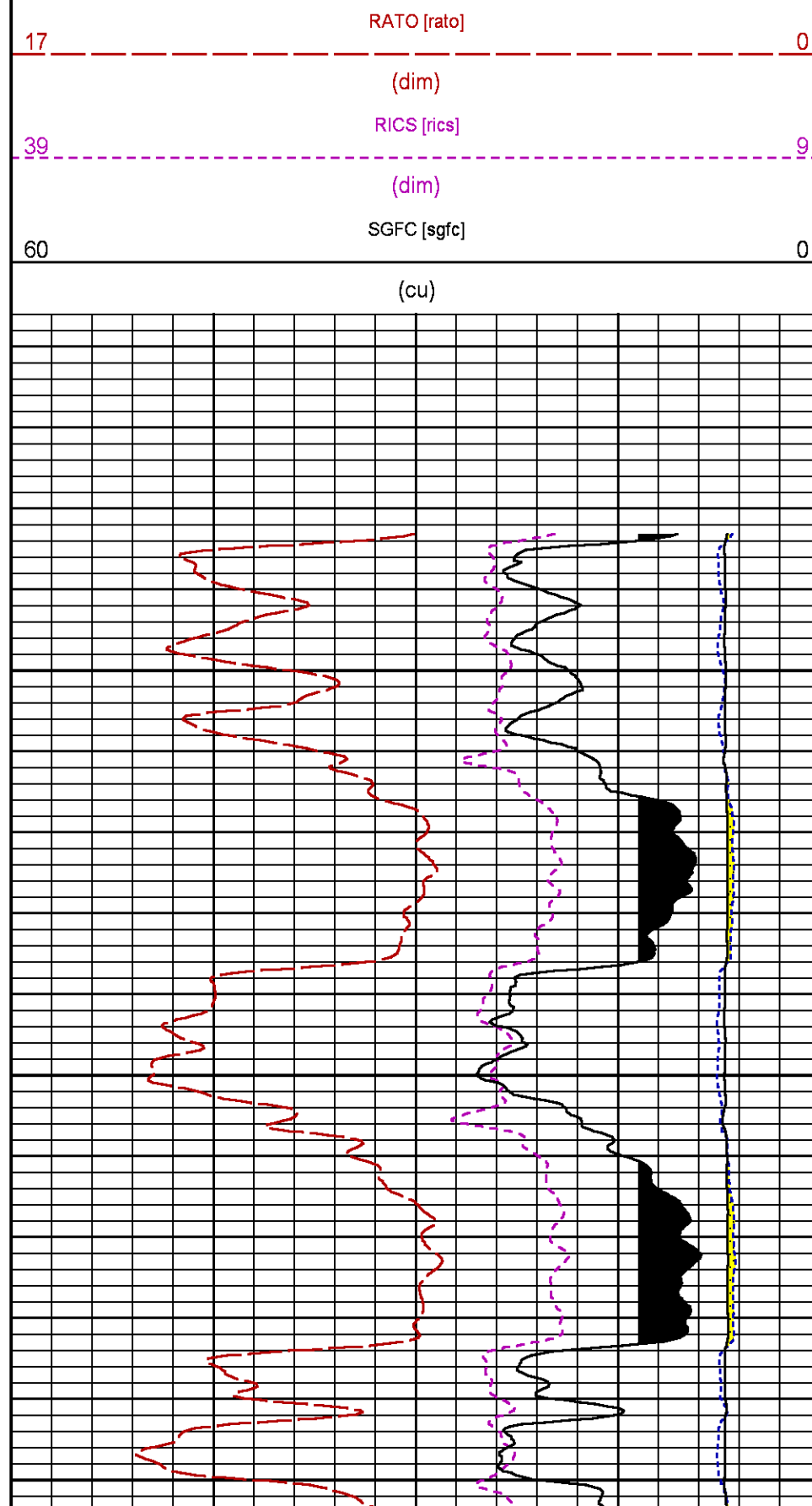
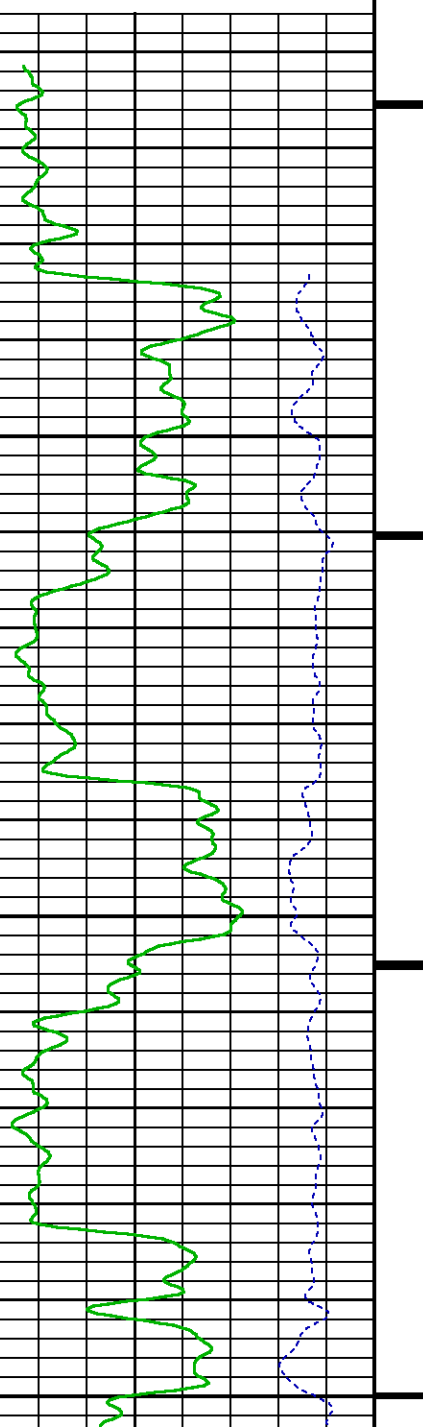
0

39

9

60

0



TOOL #: 8262XA10485470

DATE/TIME PERFORMED: Fri Nov 17 17:13:21 2017

UNIT #: 3882TD HL6728

VERI JIG #: 4702NK DA_228

	BACKGROUND	CALBRTR ON	MULT	BACKGROUND	CALBRTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	78.38	398.71	0.568	44.54	226.60	182.06
						195.00 196.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA10414345

DATE/TIME PERFORMED: Thu Dec 28 18:02:36 2017

UNIT: 5753XD111111

CALIBRATOR: 2437XB112674

SOURCE: 8281AA10160601

HOURS: 8281AA840

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usac)	RCAL
Raw Data	808833	130	2387	2282	2253	95	8.5	0.9765
Interpolated	1300000	155	2365	2274	2250			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	808833	6847	1095	147	26.05	0.14	24.32	0.32
					26.36 26.40	0.00 0.00	23.60 24.60	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	808833	172301	26599	91332	32499	8448	55319	13542
Fit Quality %		0.787	0.856	0.853	0.872	0.785	0.770	0.802

	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONC
			ISSALS	ISSAXS	ISS/CSS	SSLS	SS2LS	CSS/CLS
Raw Data	808833	1.43	4.69	30.42	14.62	10.82	3.85	4.09
		1.42 1.45	5.00 5.02	29.20 30.10	10.90 16.34	10.06 11.10	3.59 3.66	3.76 4.22
Fit Quality %		0.054	0.222	0.257	0.193	0.055	0.078	0.040
Reduced	1395903	1.43	4.71	30.45	14.66	10.81	3.84	4.08
		1.42 1.45	5.39 5.02	29.10 30.10	10.10 16.34	10.06 11.10	3.59 3.66	3.76 4.22

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA120516

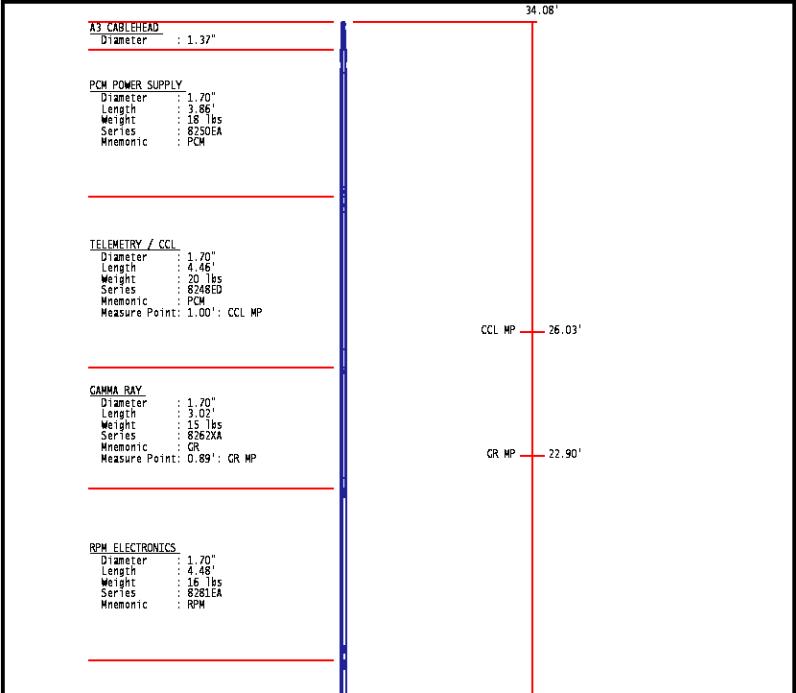
DATE/TIME PERFORMED: Mon Jul 11 10:30:57 2016

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-1.840167E+01	1.009373E-01	3.960064E-06	-4.985002E-10

INSTRUMENT CONFIGURATION

Source File: \data\at\ARAME_BRUTON_3D_12W\RPM_3D_TEMP-1dg



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

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 : 3.50"
Weight : 13 lbs
Series : 8255AA
Mnemonic : SPT
Measure Point: 1.52': TEMP MP

TEMP MP : 1.65'
PRES MP :

BULL PLUG 1 11/16

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

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY
WELL
FIELD
COUNTY

LARAMIE ENERGY LLC
BRUTON 30-11W
VEGA
MESA

STATE **COLORADO**

FILE NO:

API NO:

05077104470000

LOCATION:

SHL: 39.252572 N; 107.814333 W
BHL: 39.248133 N; 107.816289 W

SEC **30** **TWP** **9S** **RGE** **93W**

ELEVATIONS:

KB **7534 FT**
DF **7533 FT**
GL **7504 FT**

DATE **02-Jan-2018**