



FILE NO:	COMPANY
API NO: 05077104470000	LARAMIE ENERGY LLC BRUTON 30-11W VEGA MESA STATE COLORADO

Ver. 4.10	LOCATION: SHL: 39.252572 N; 107.814333 W BHL: 39.248133 N; 107.816289 W SEC 30 TWP 9S RGE 93W	OTHER SERVICES RAL
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PERMANENT DATUM	GL	ELEVATION	7504 FT	ELEVATIONS: KB 7534 FT DF 7533 FT GL 7504 FT
LOG MEASURED FROM	KB	30 FT	ABOVE P.D.	
DRILL. MEAS. FROM	KB			

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	GRAND JUNCT
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 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

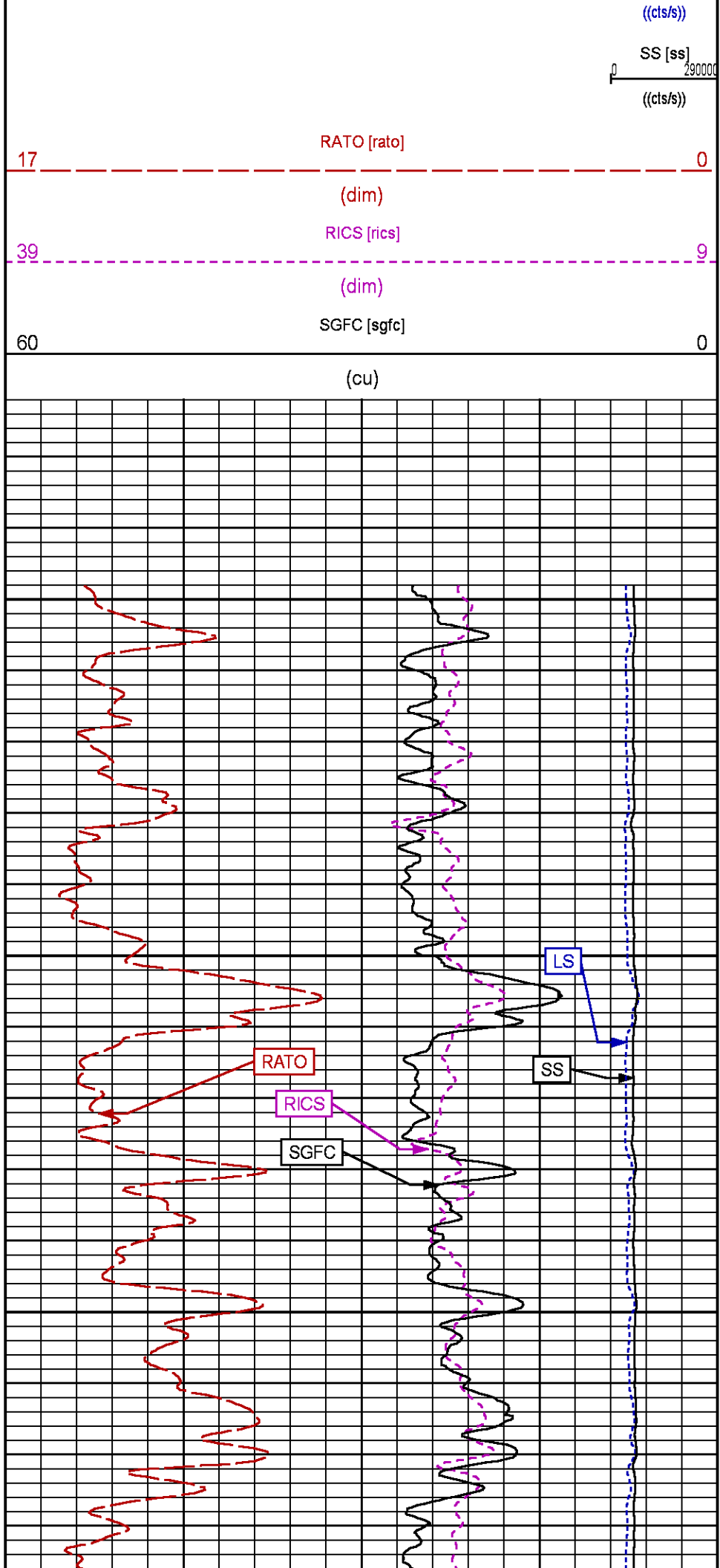
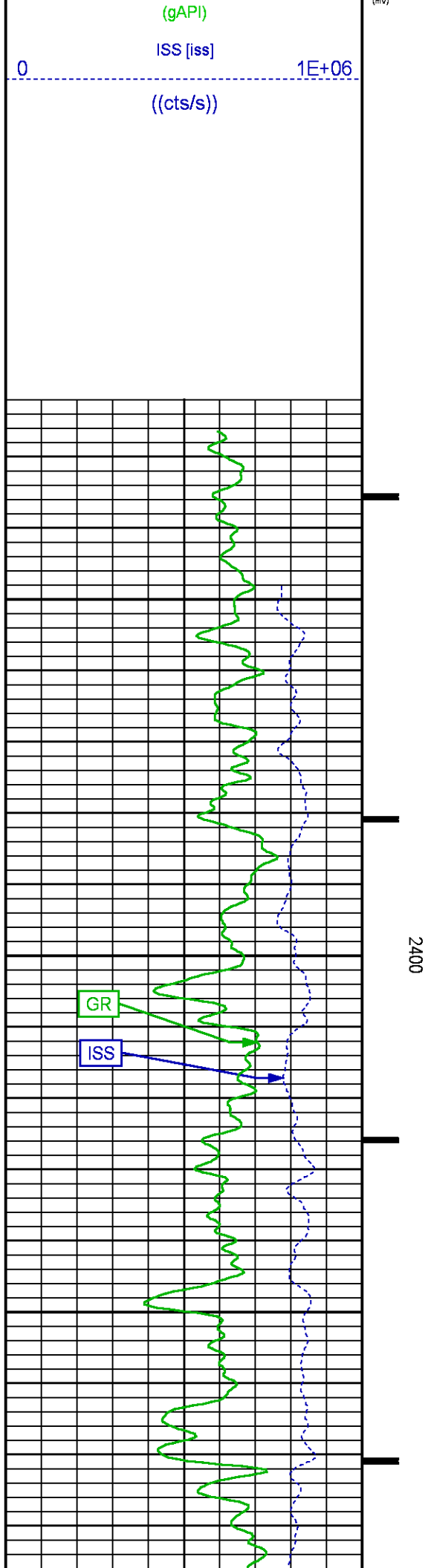
GR BACKUP

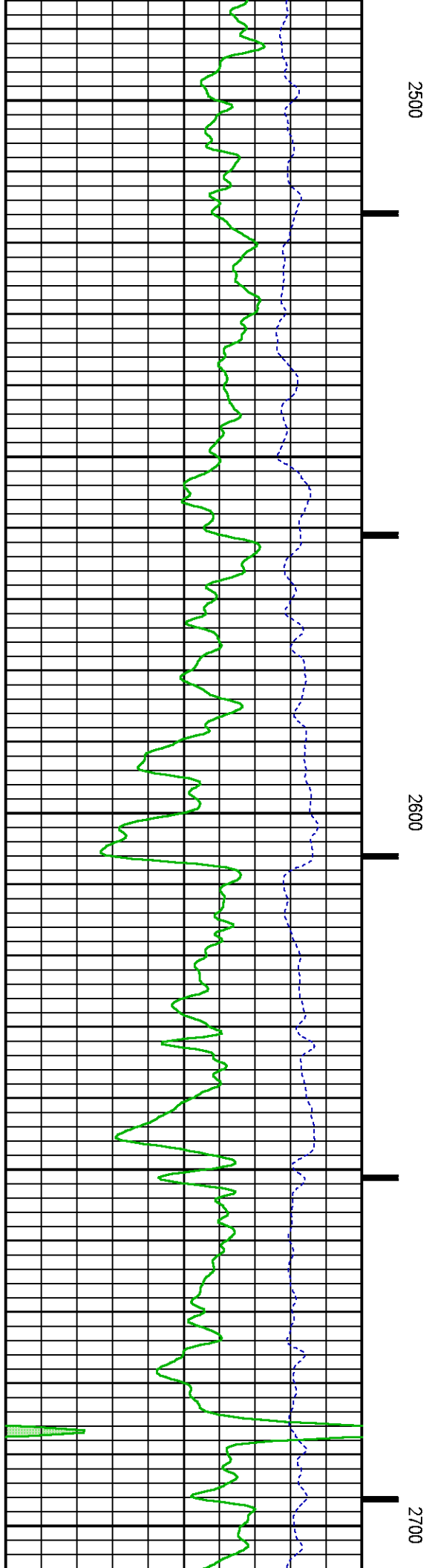
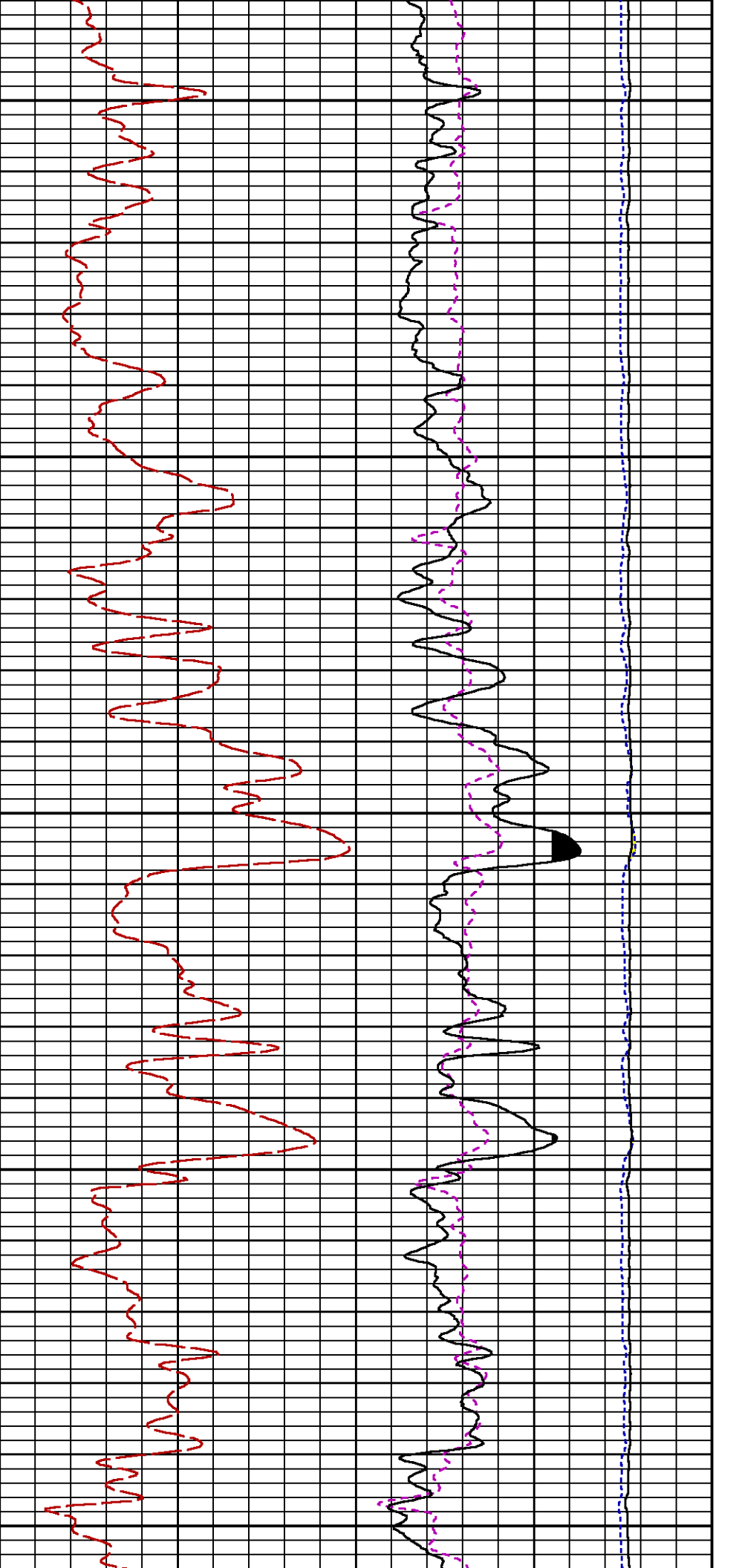
GAMMA RAY [gr]

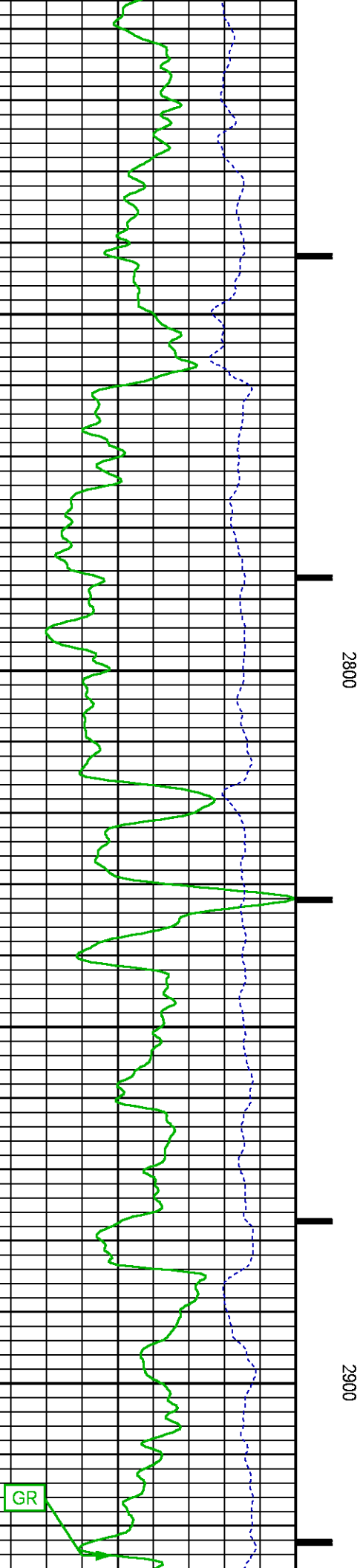
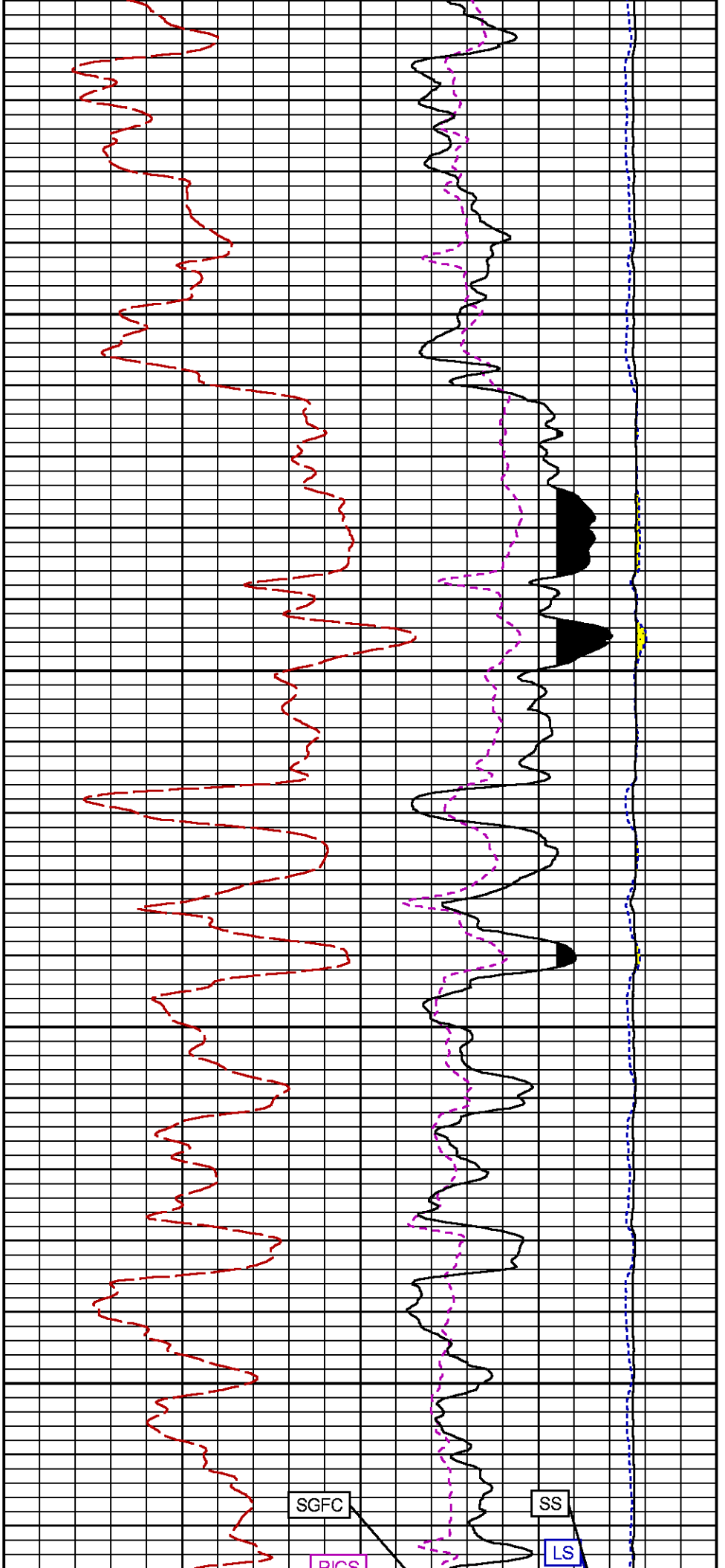
FEET

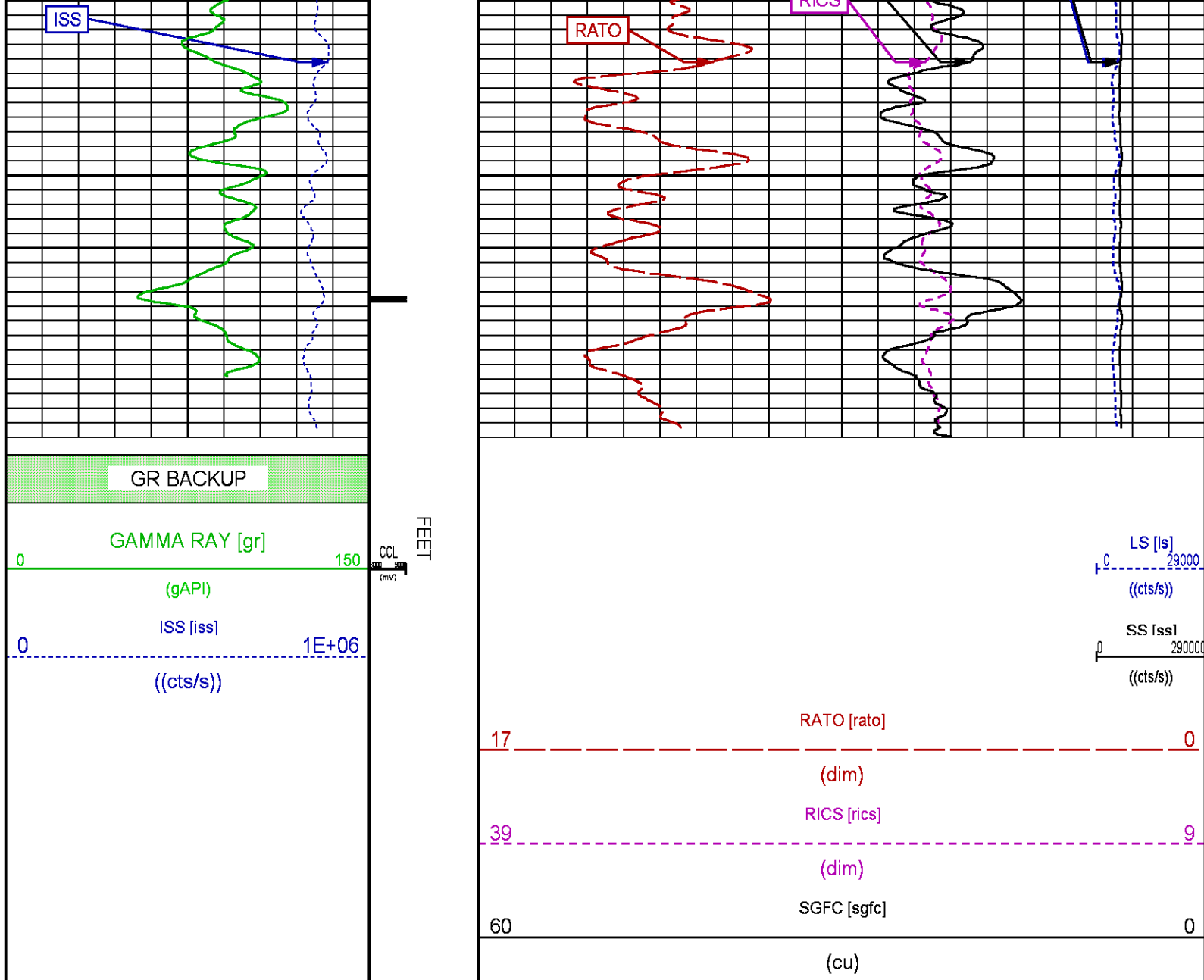
LS [ls]

29000









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

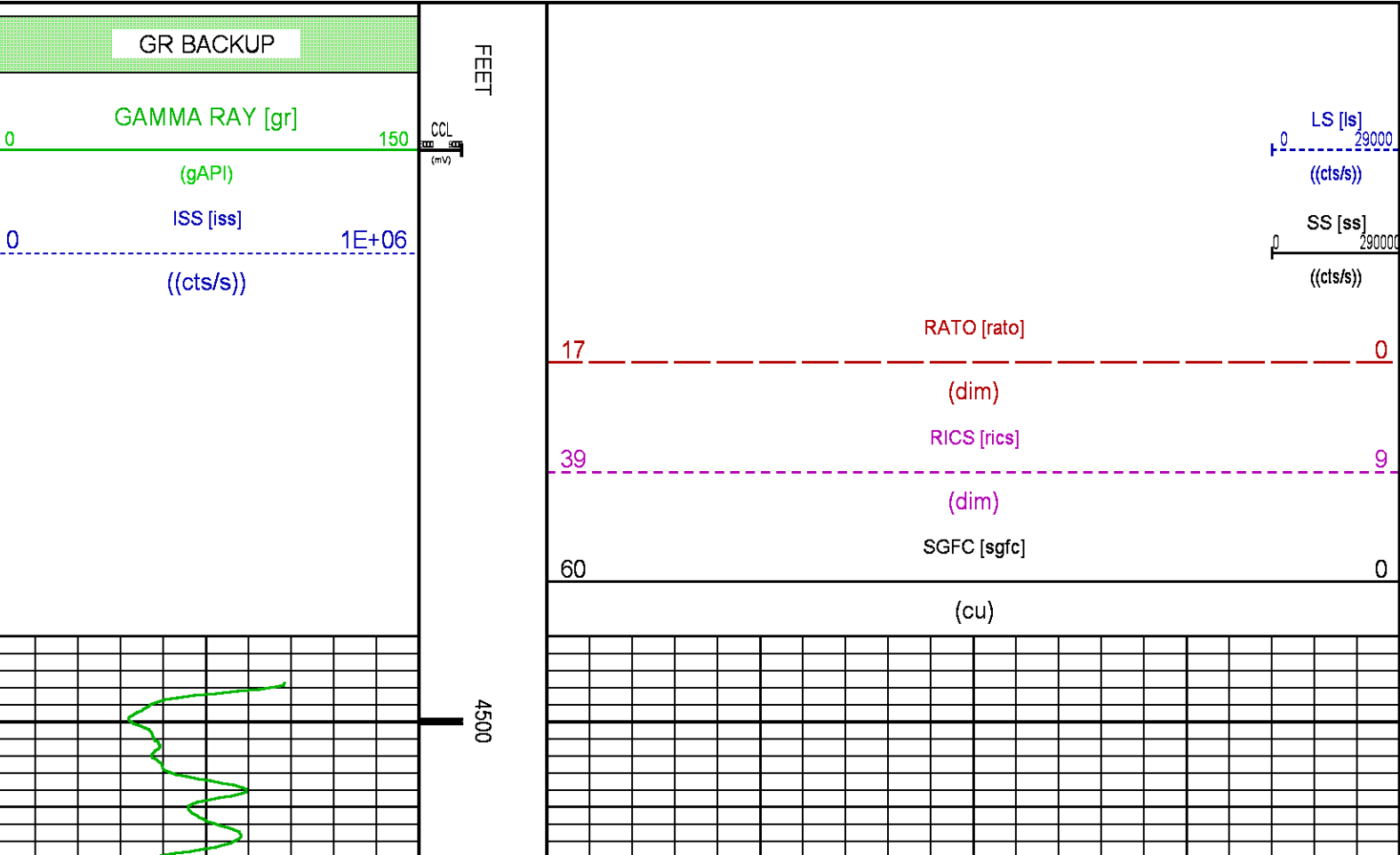
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

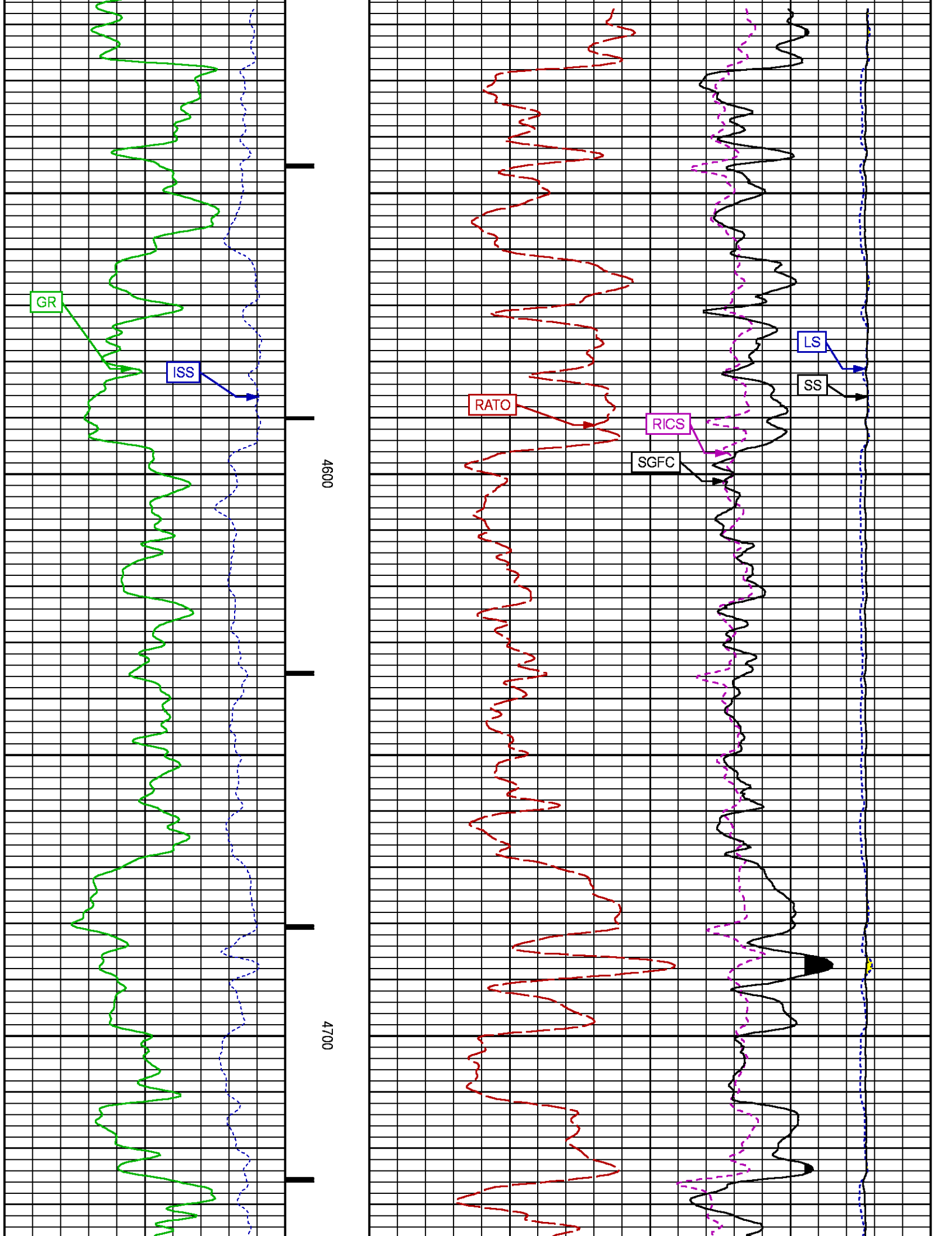
RATO

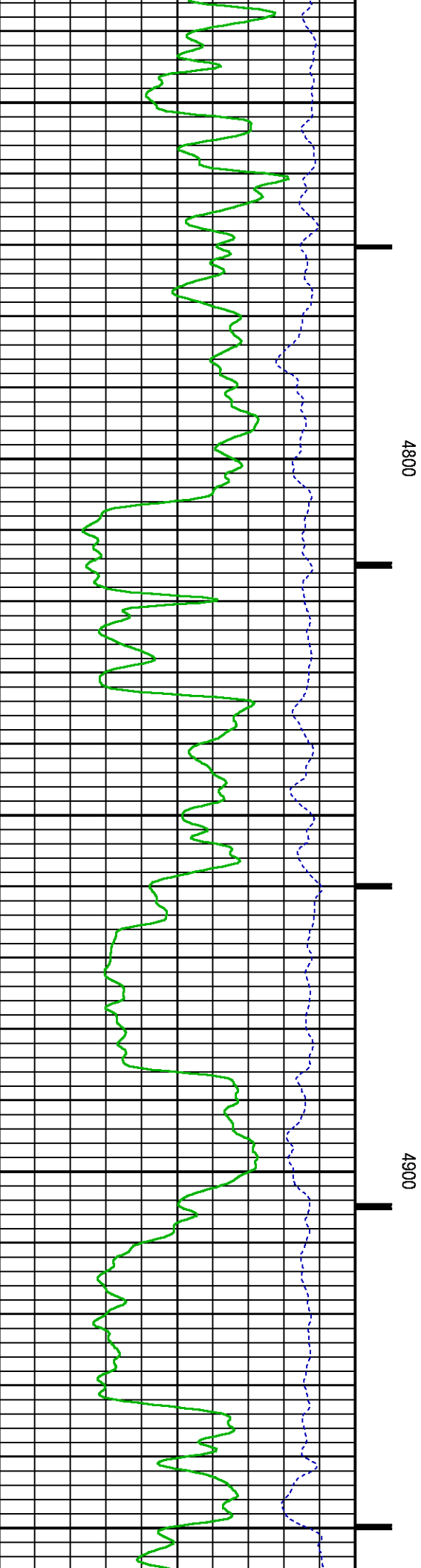
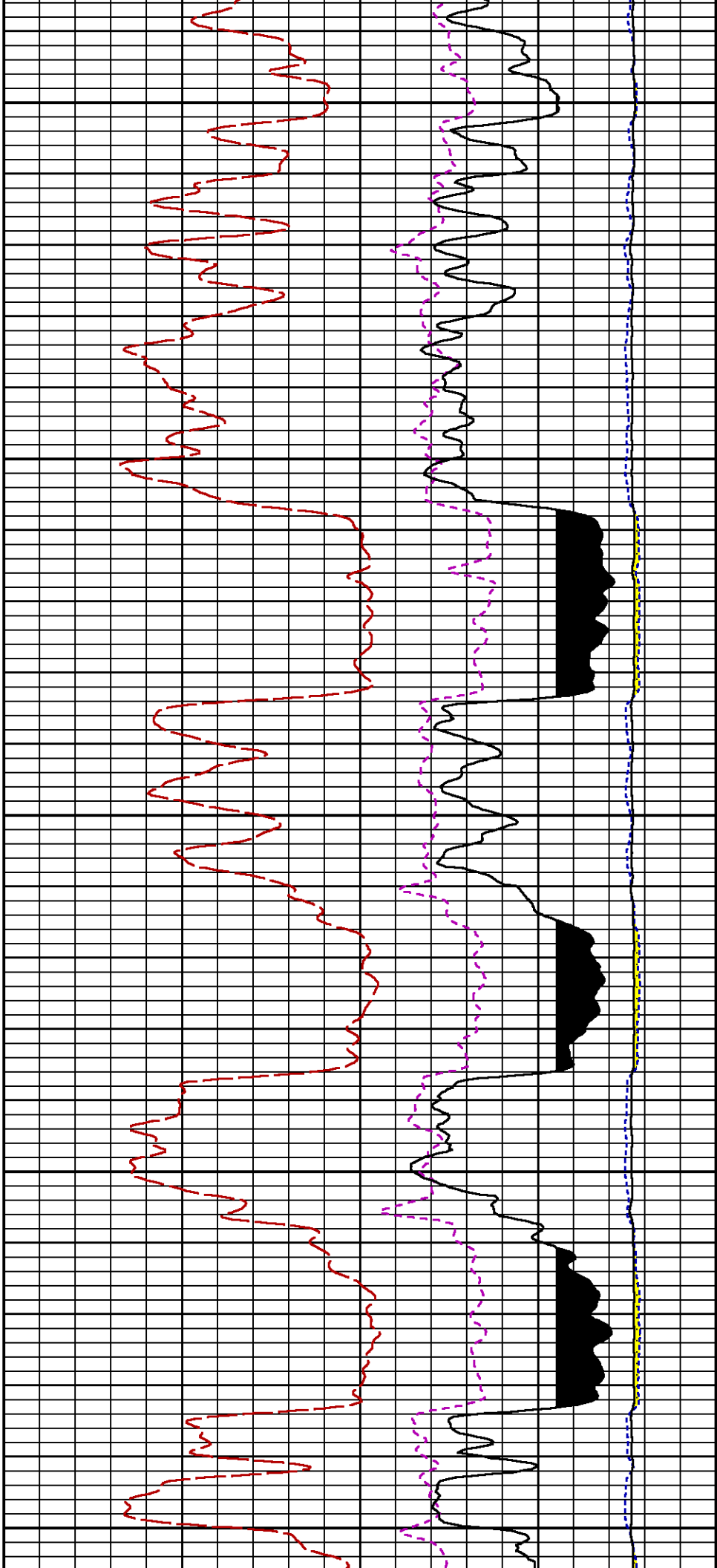
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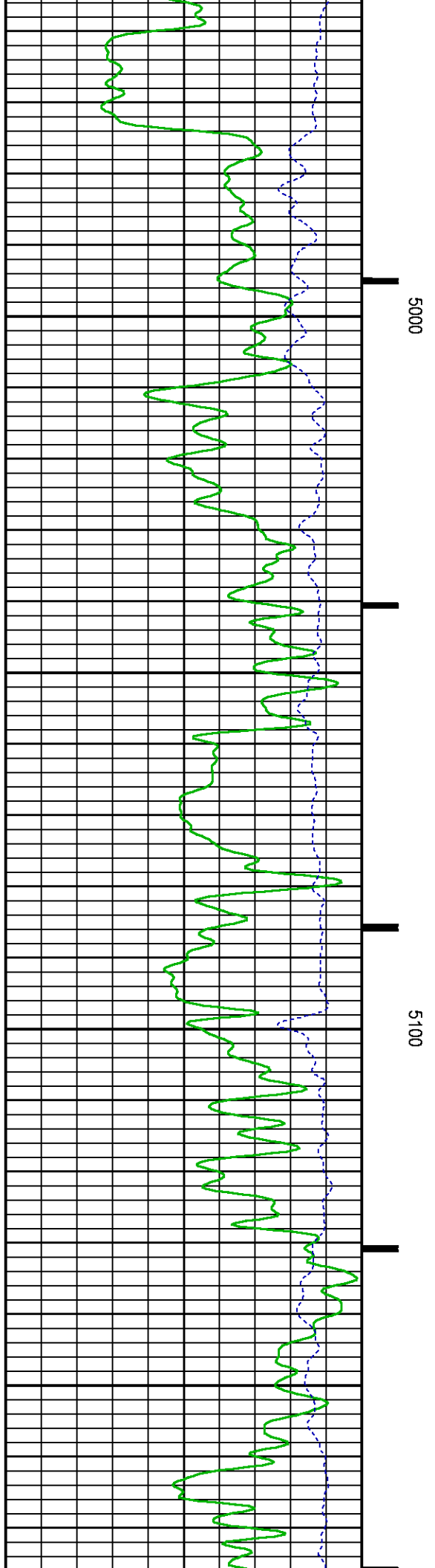
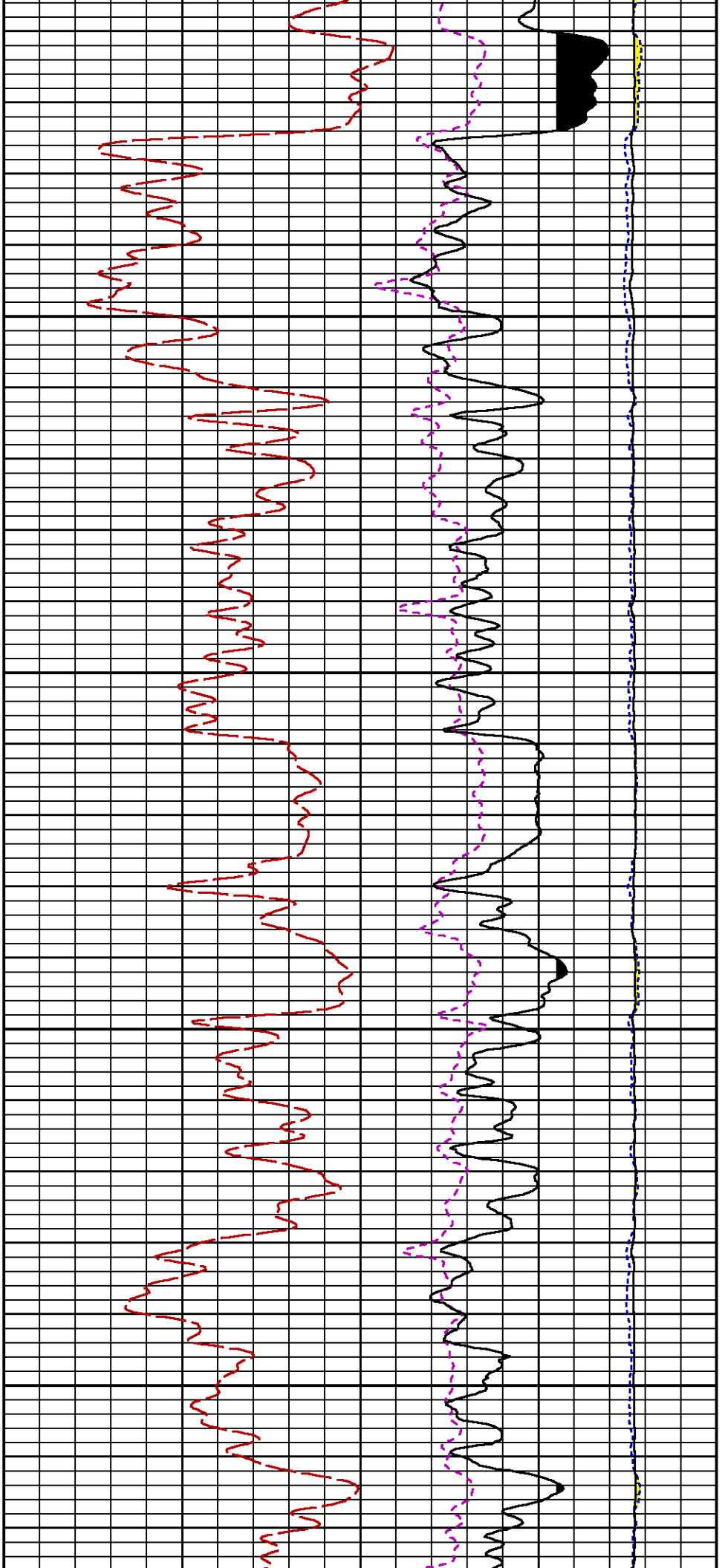
SGFC

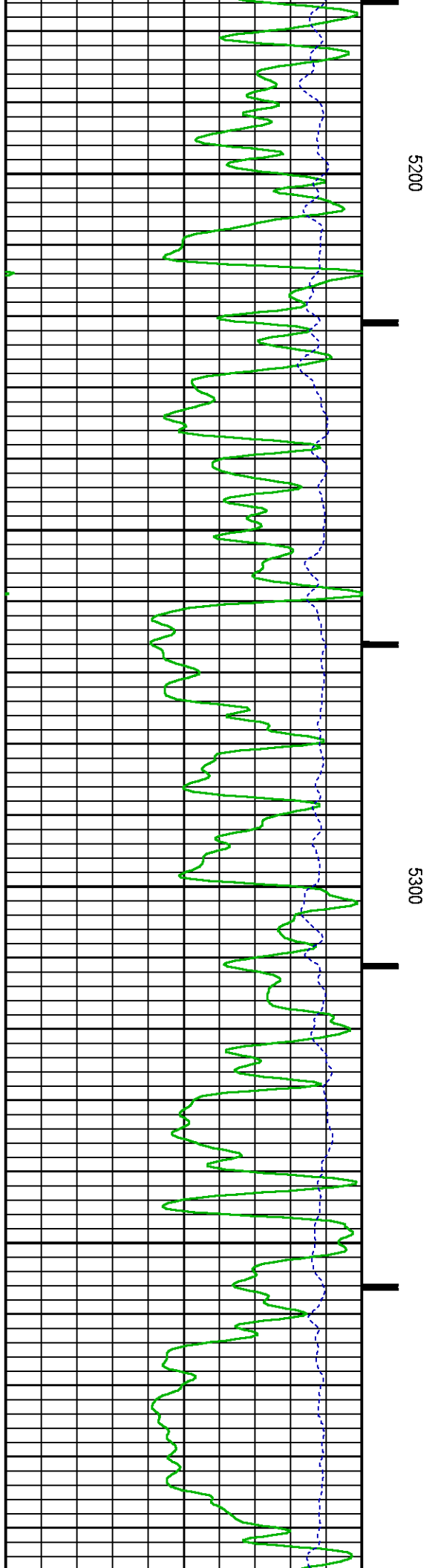
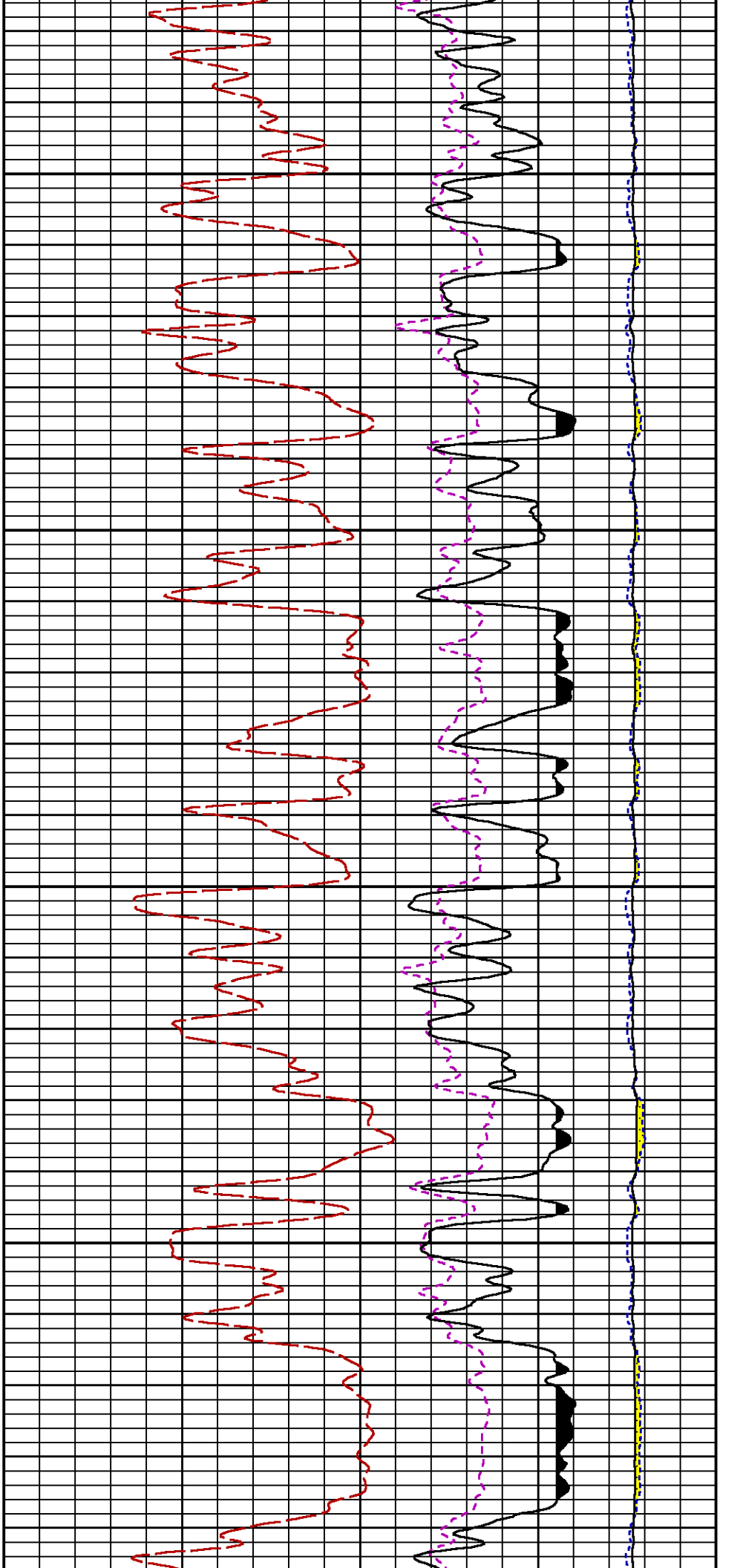
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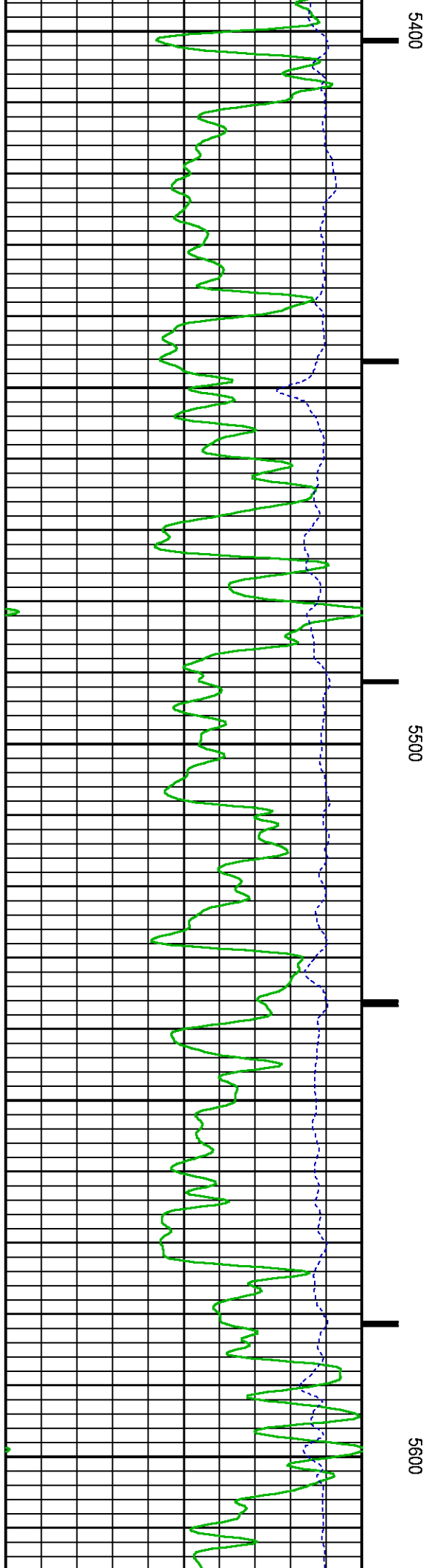
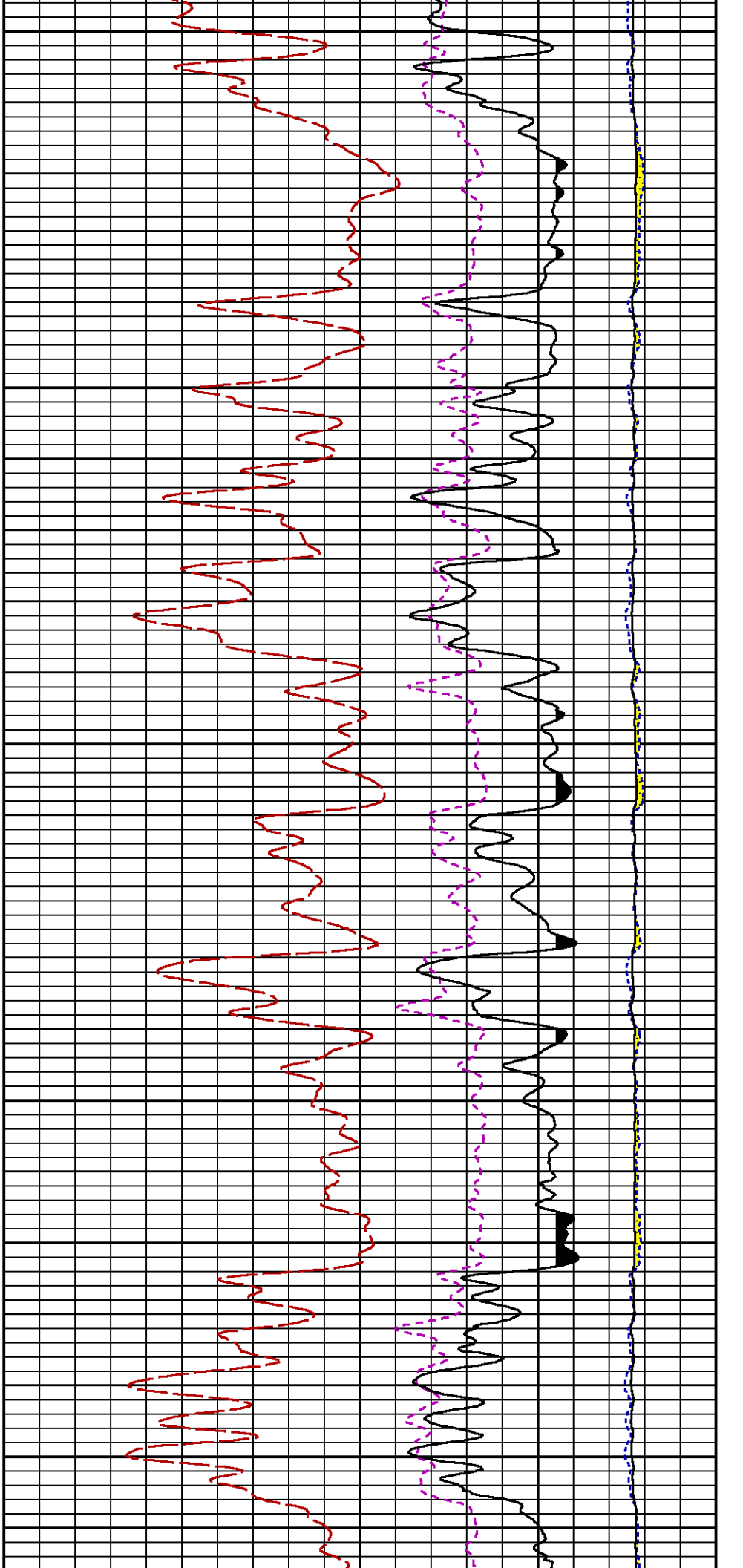
SS

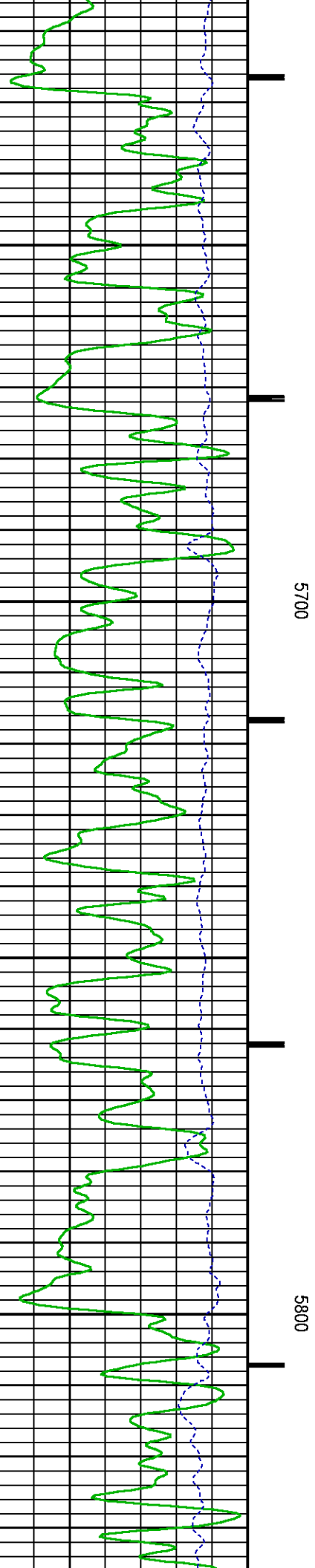
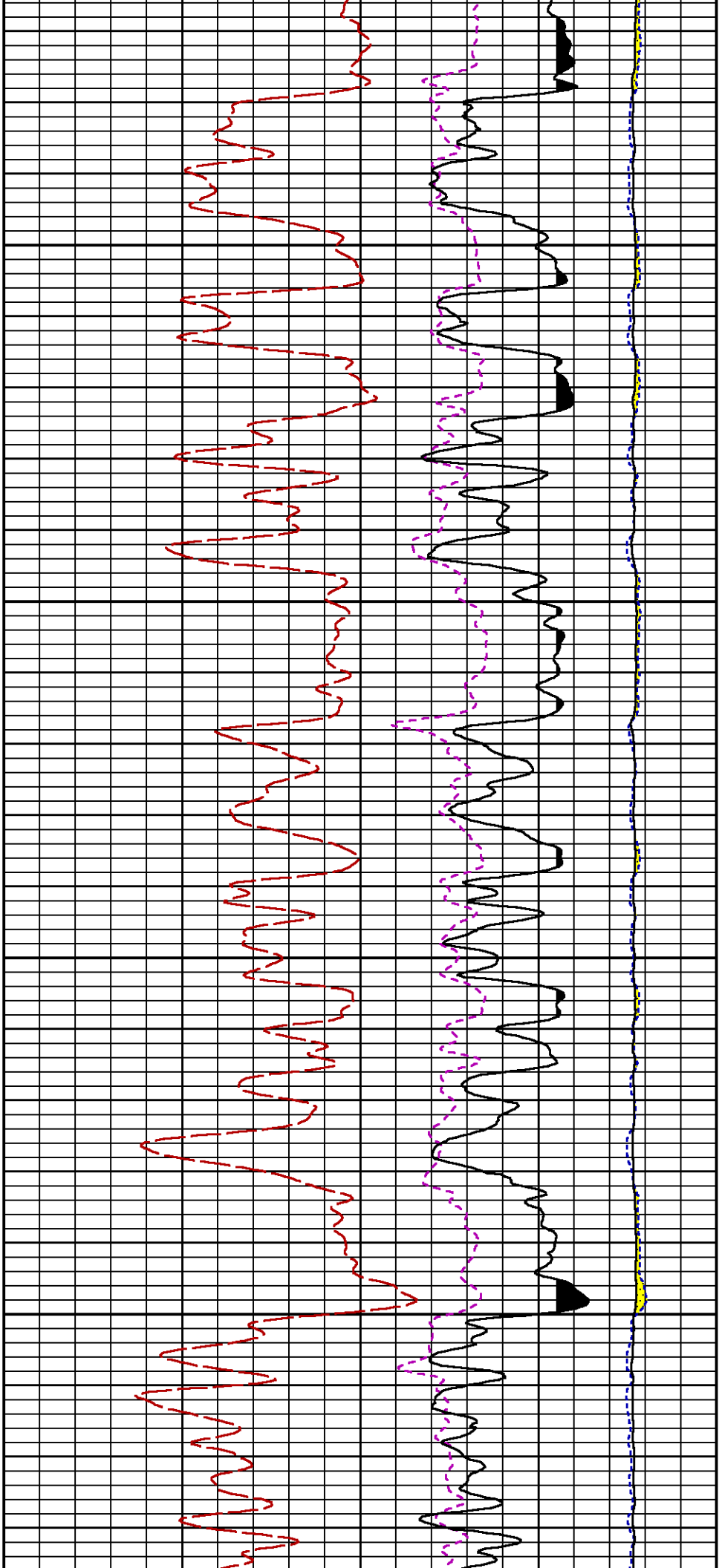


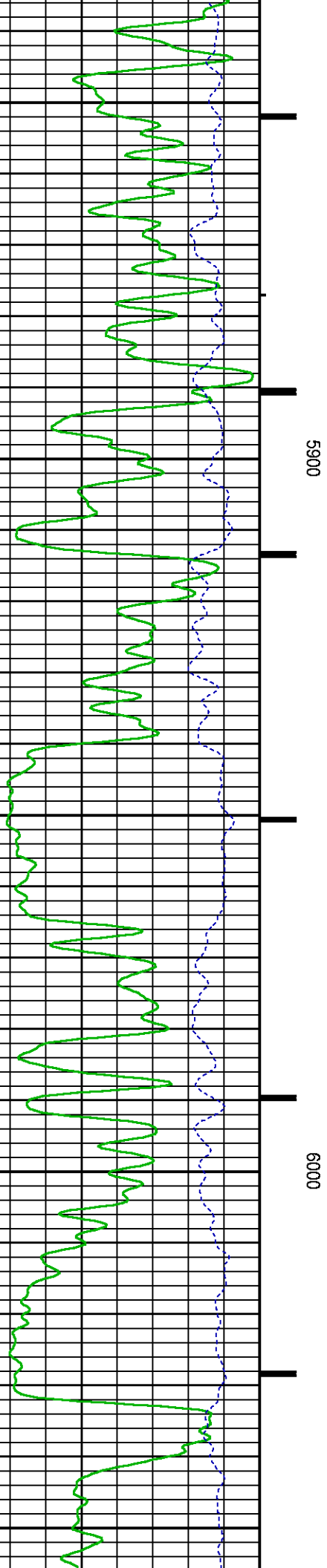
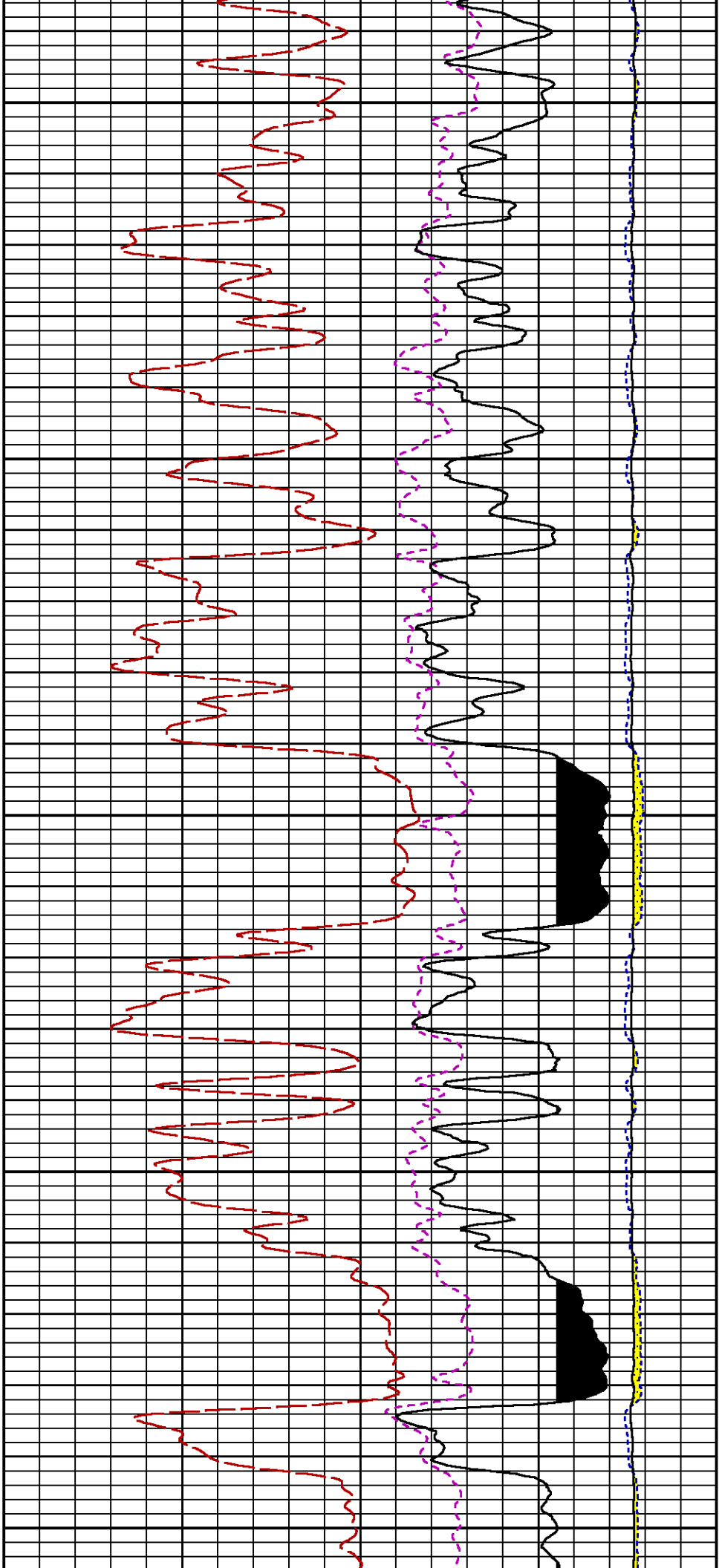


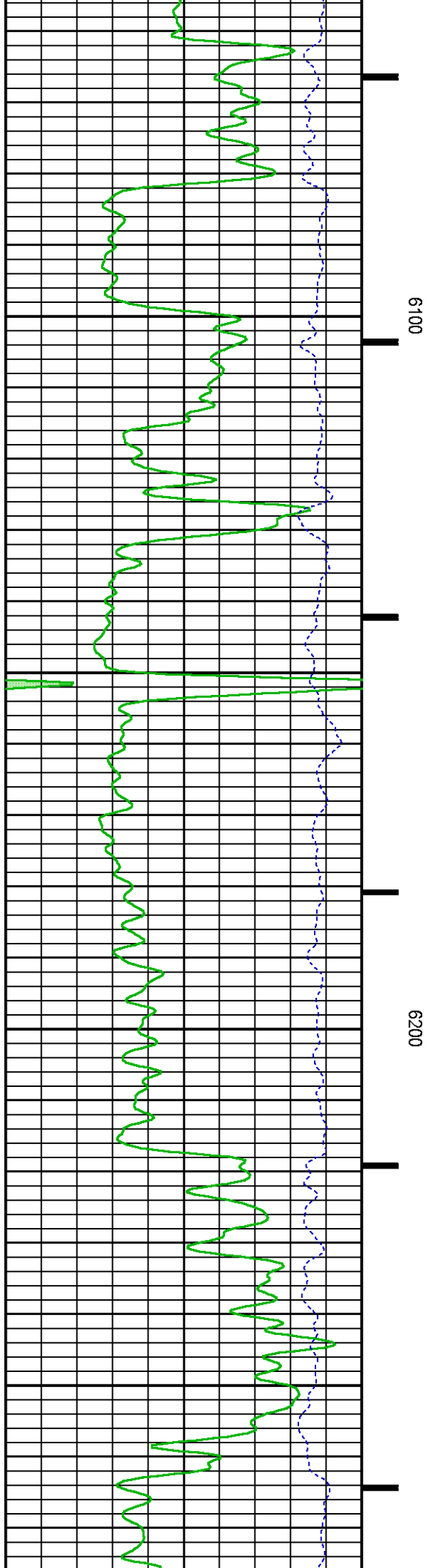
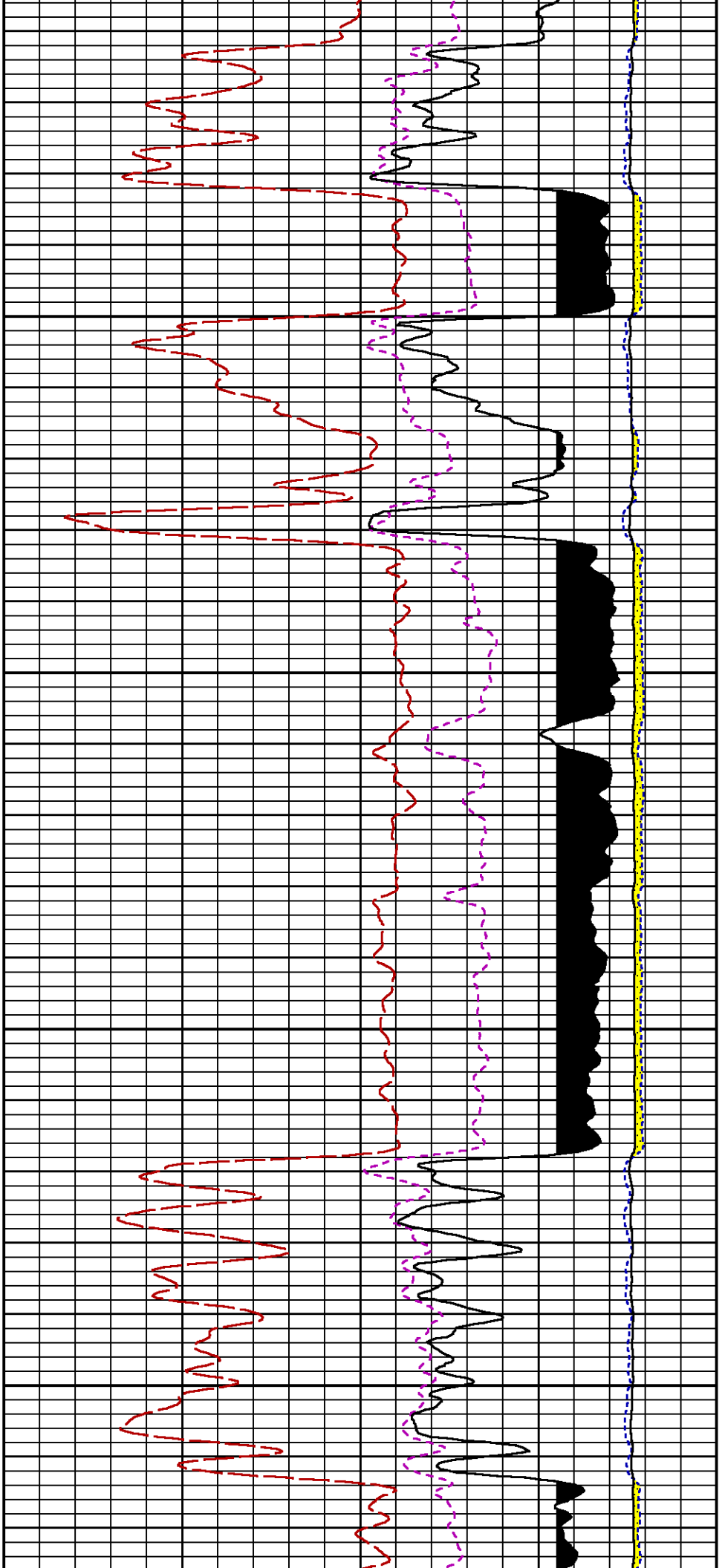


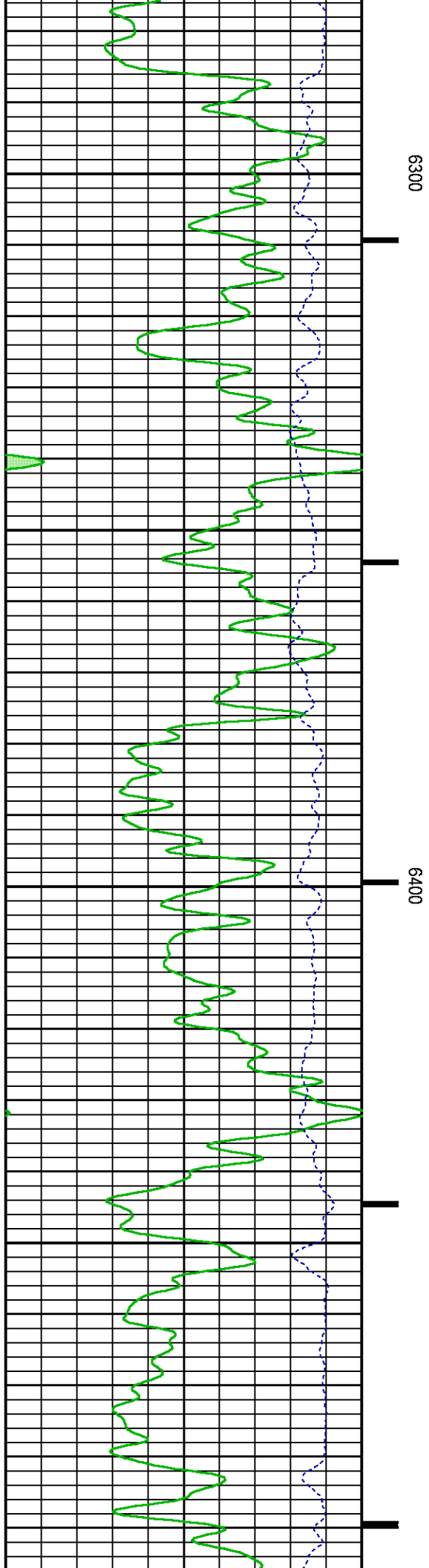
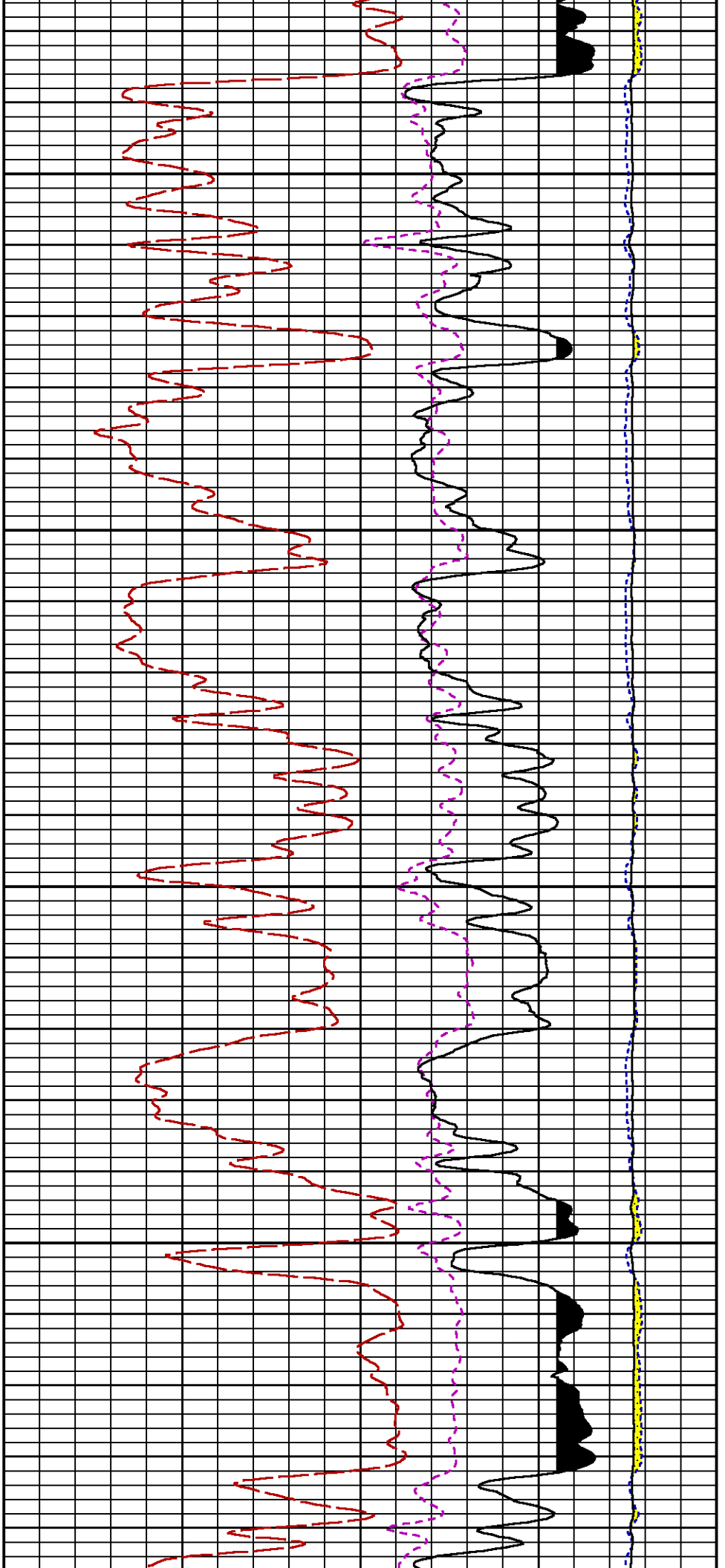


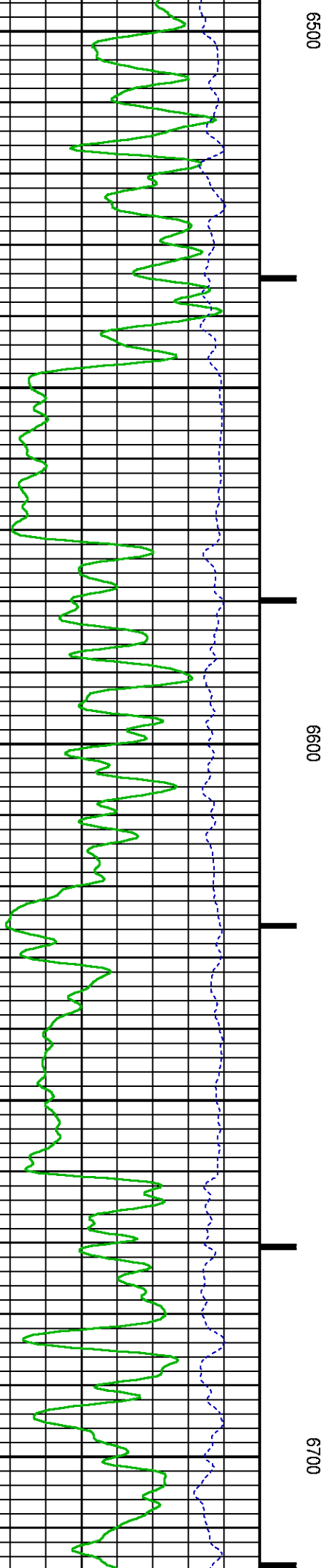
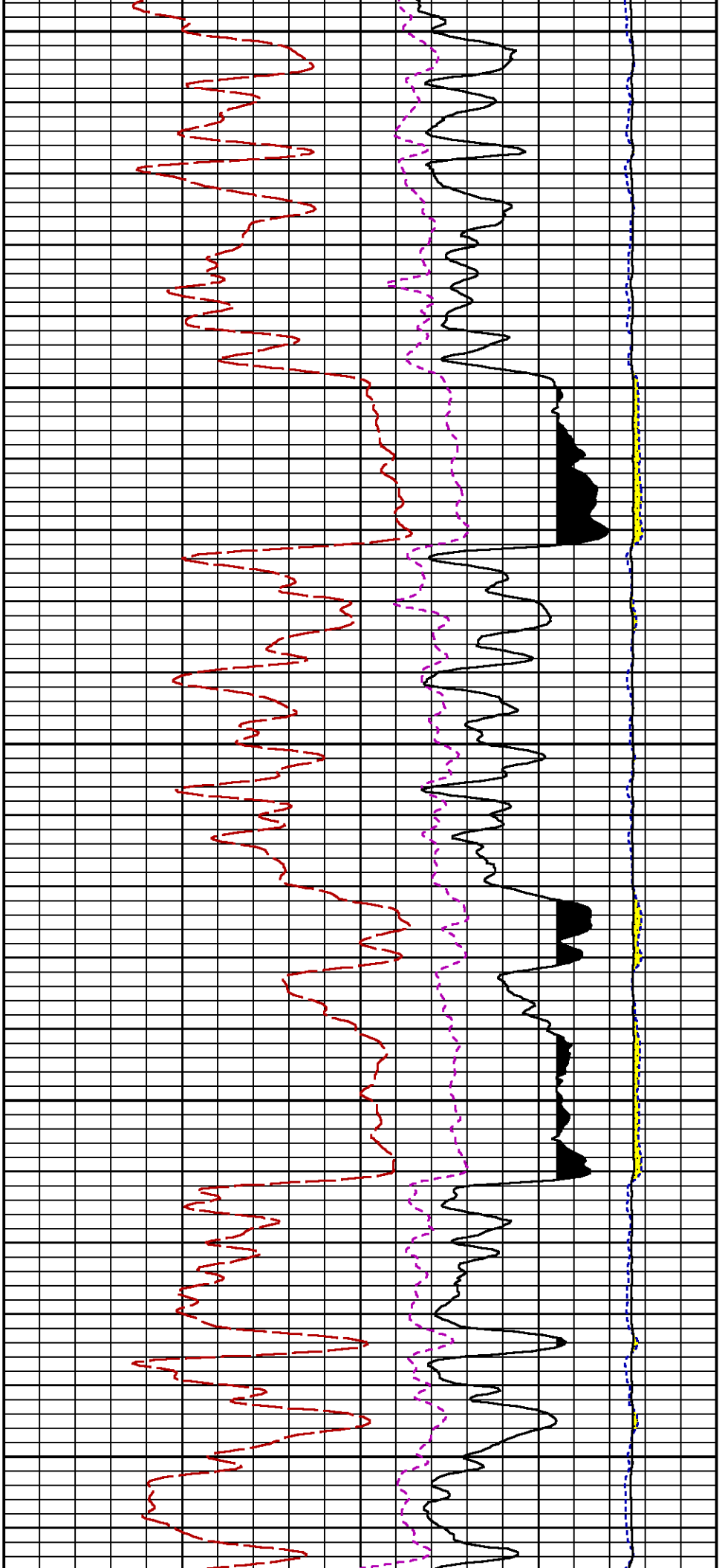


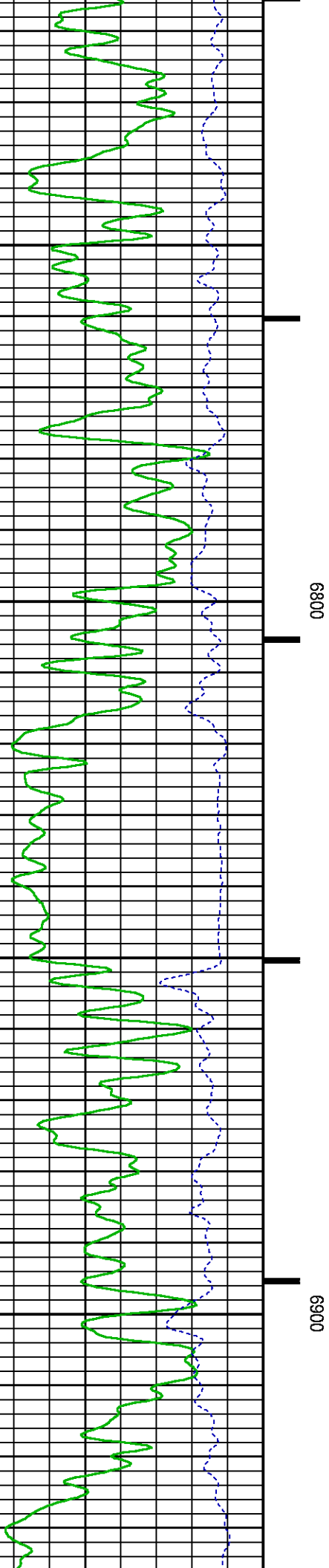
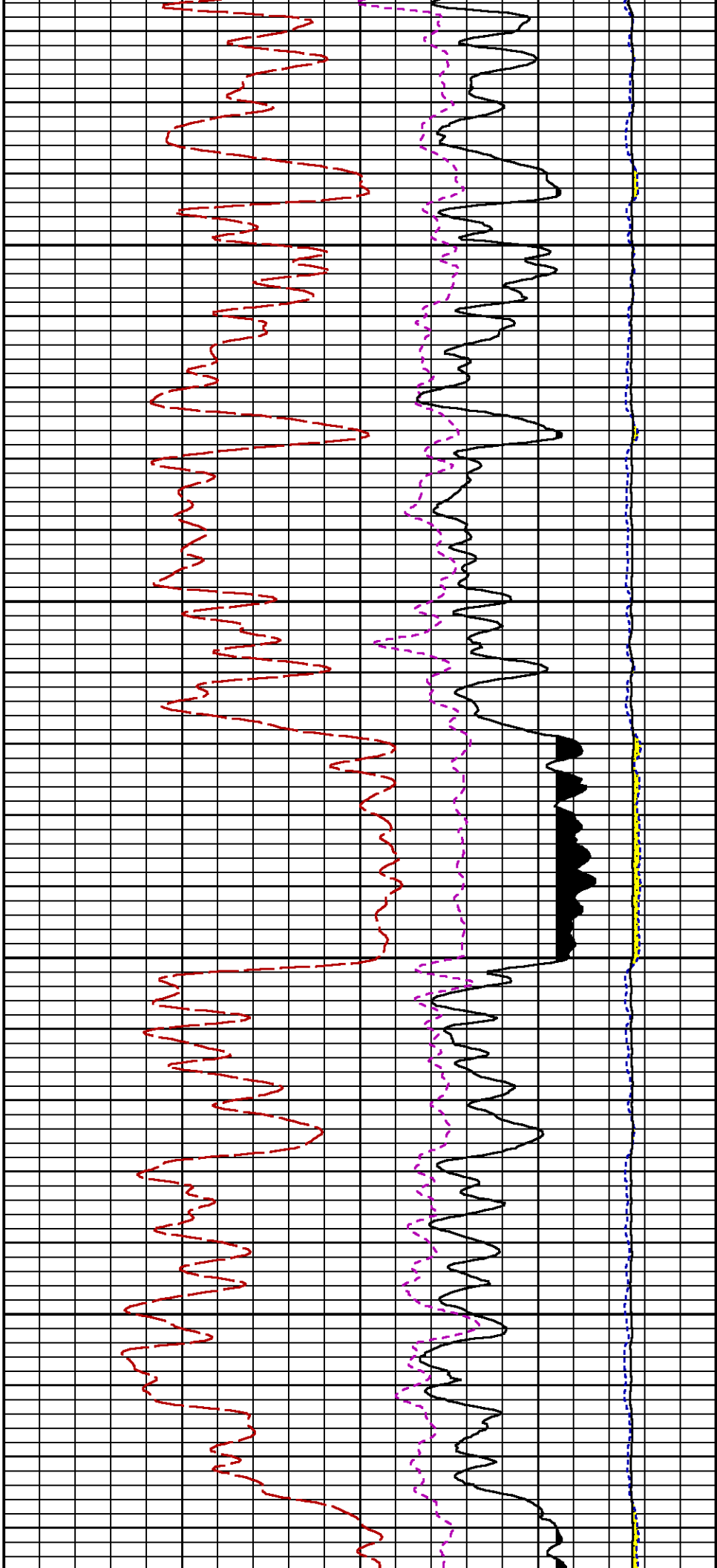


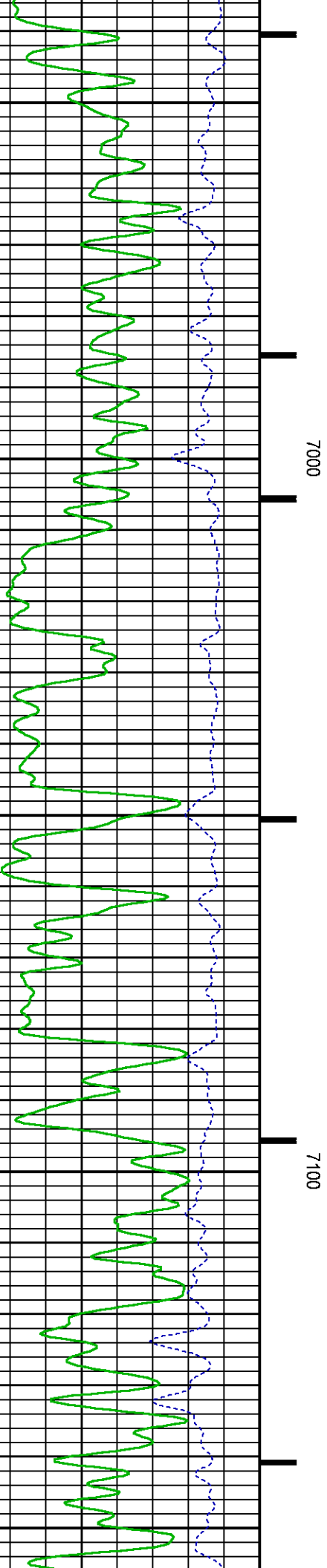
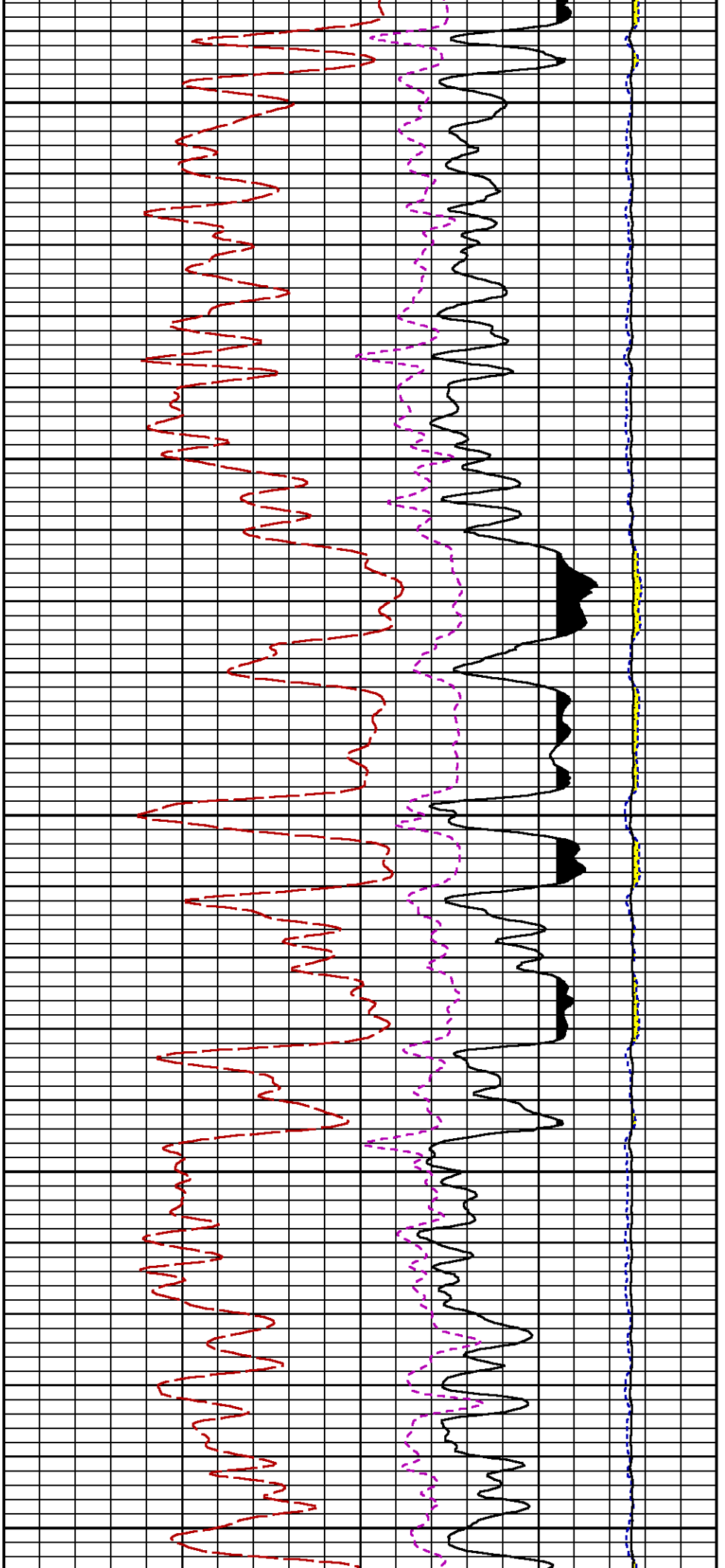


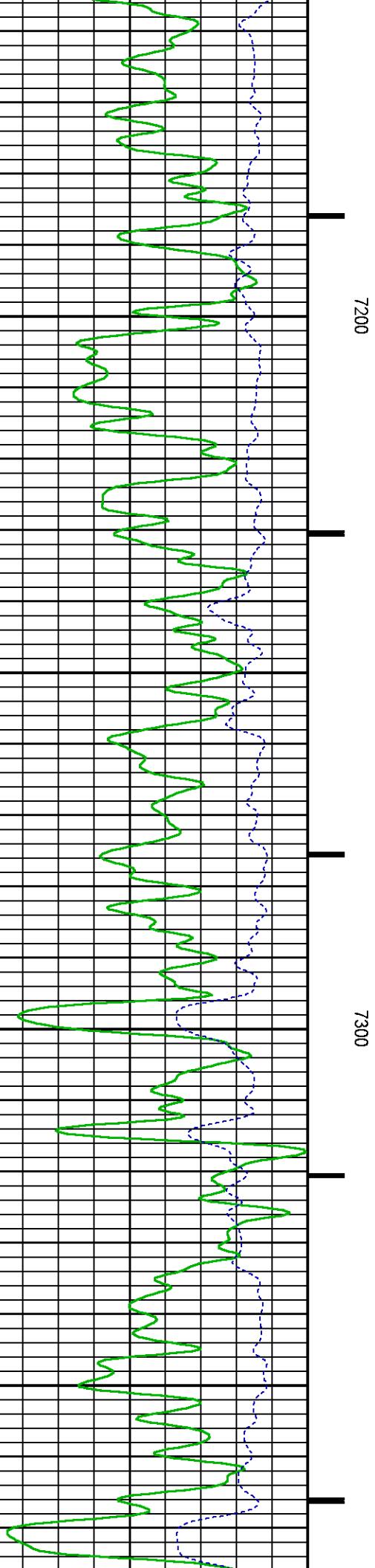
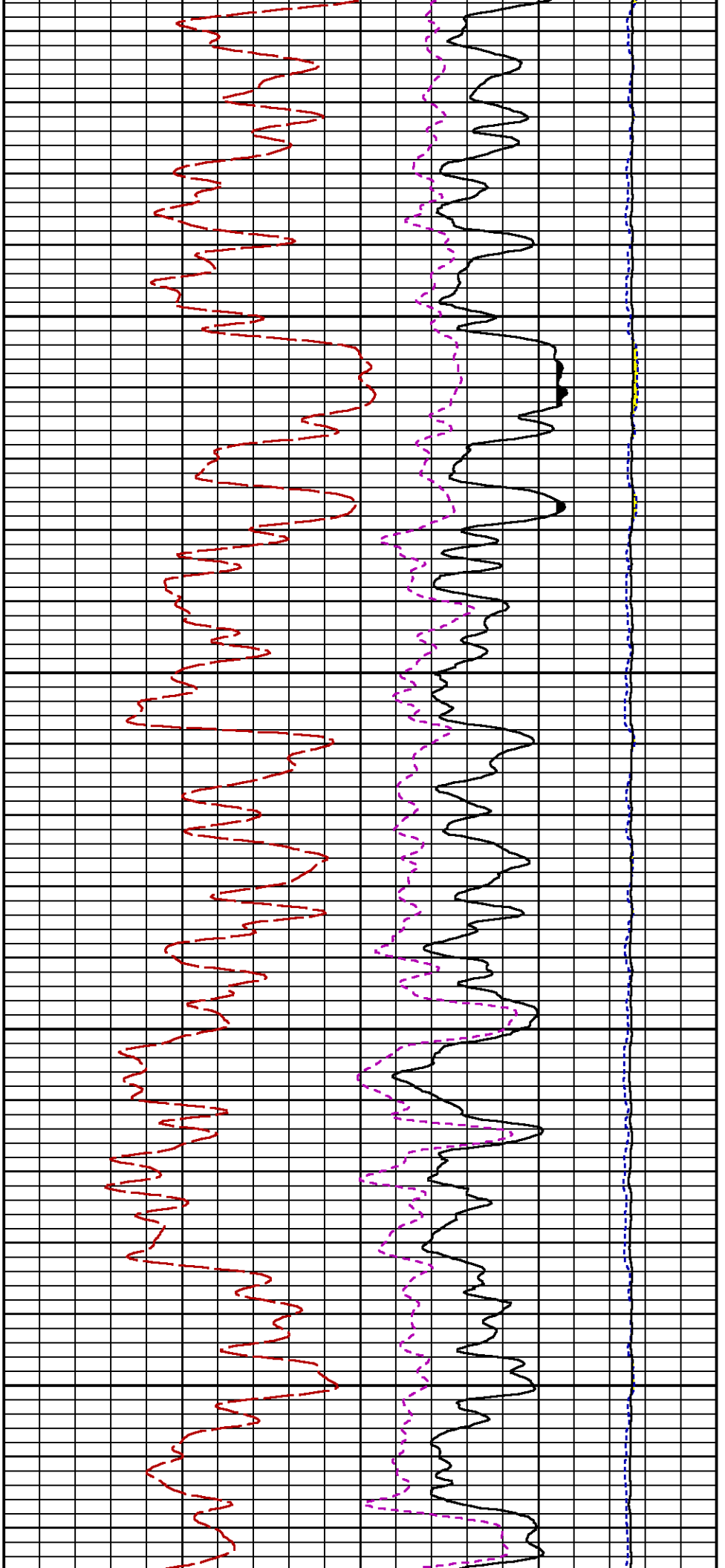


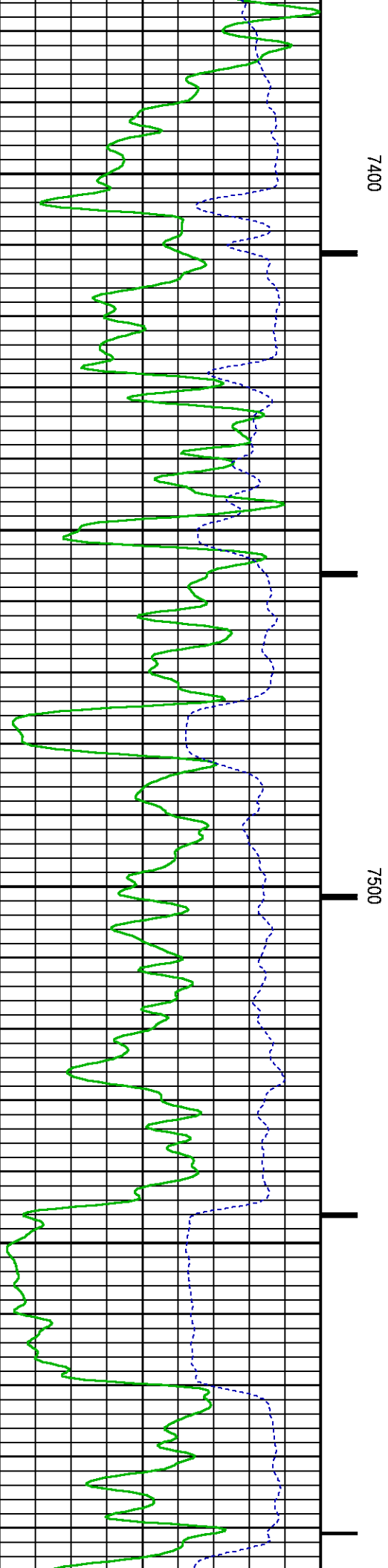
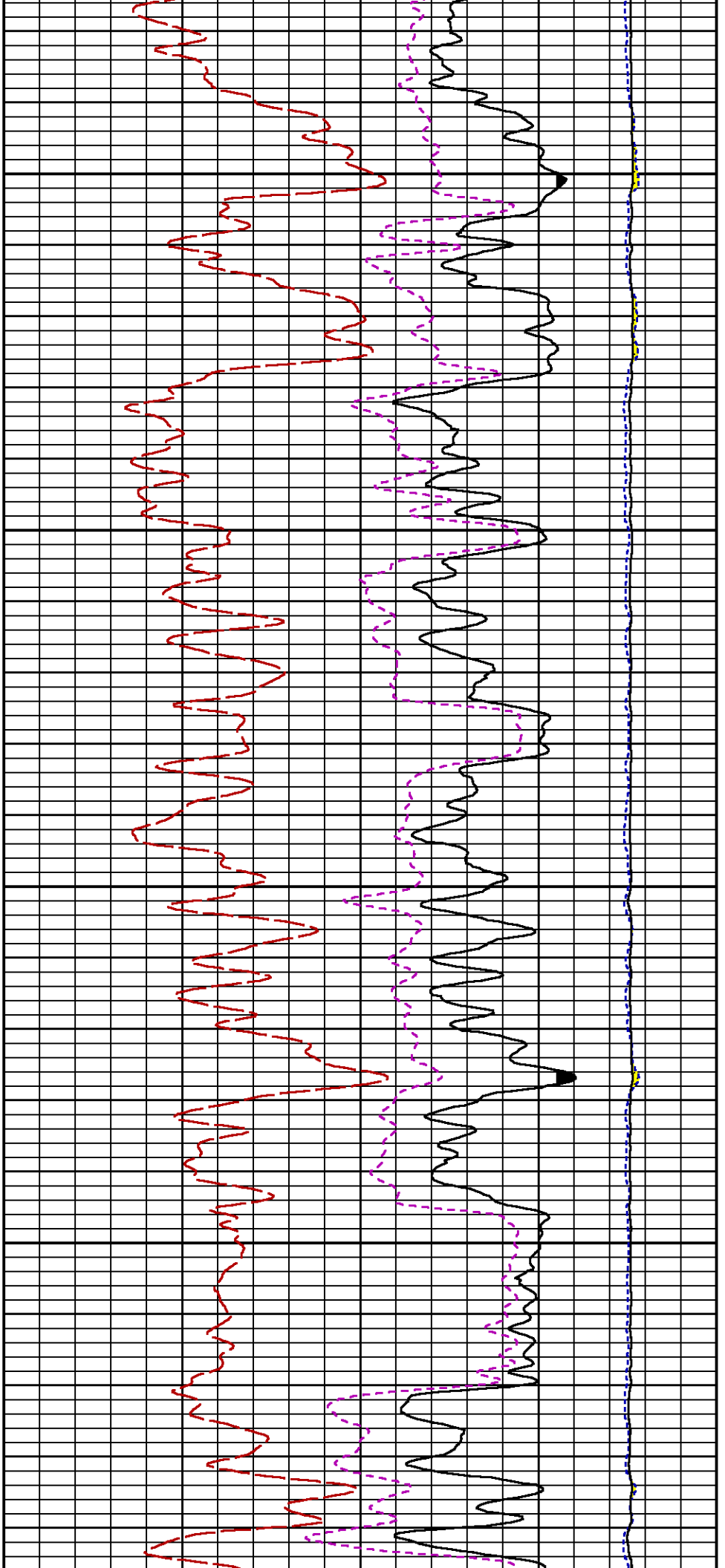


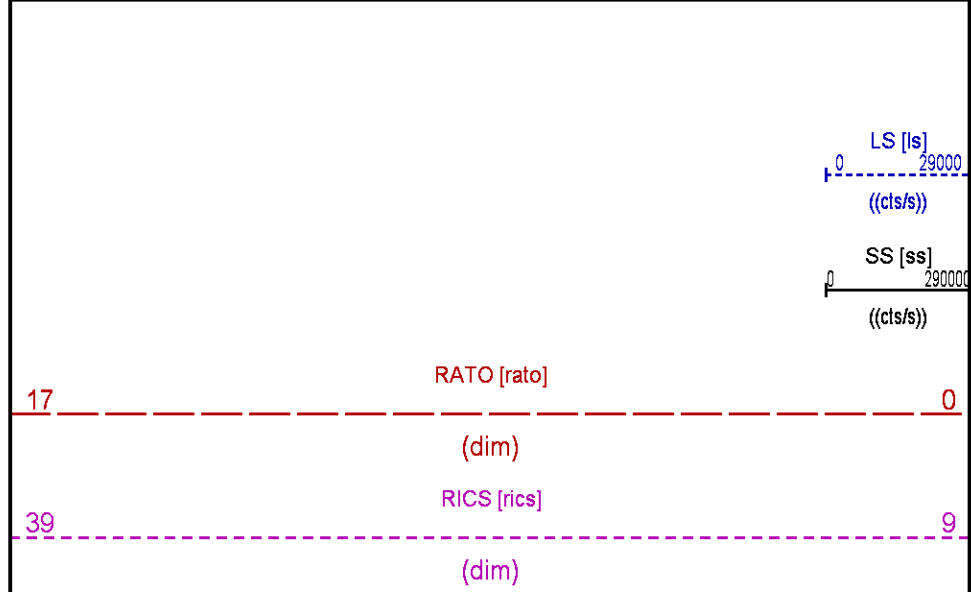
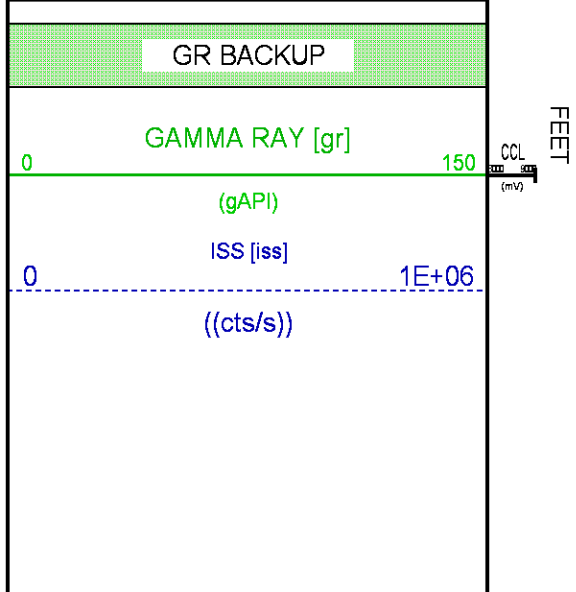
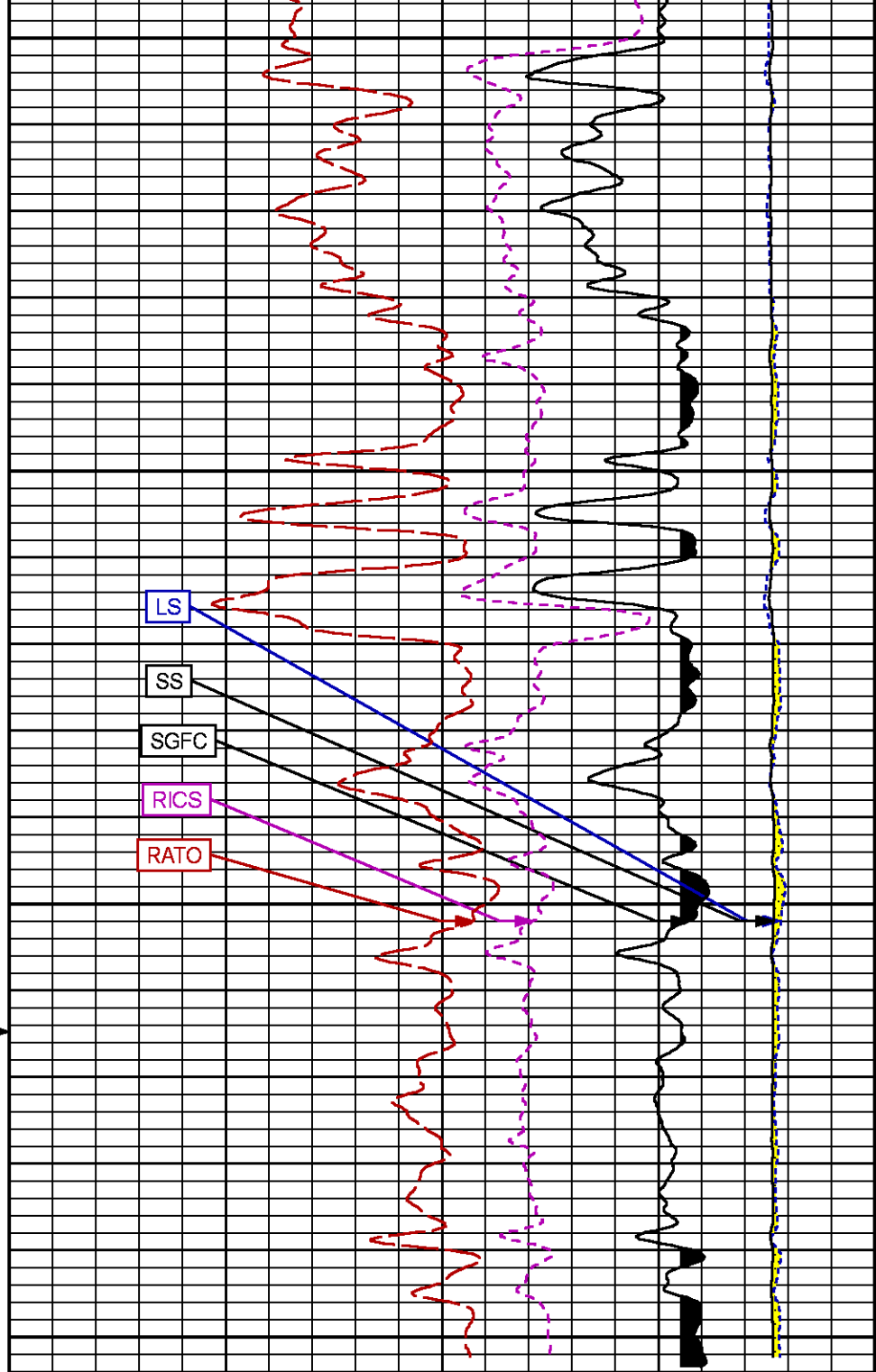
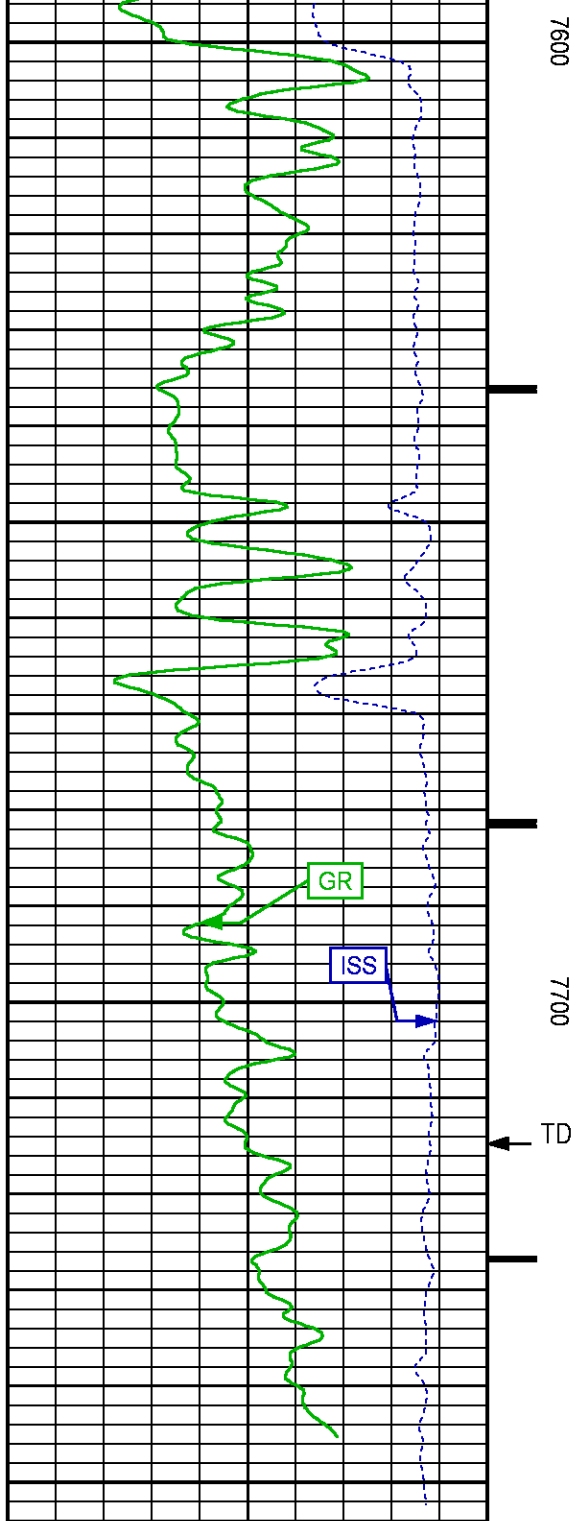












60

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]

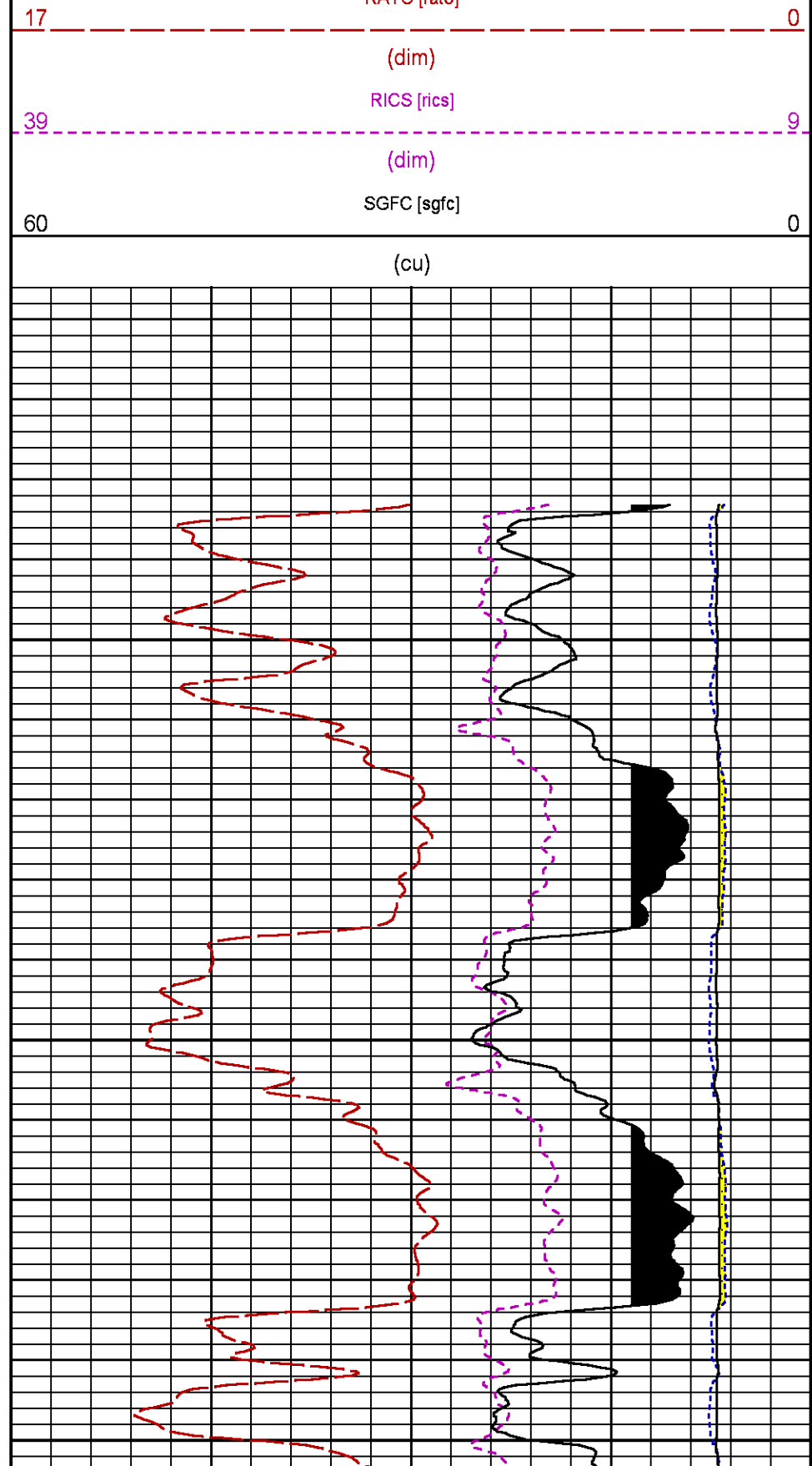
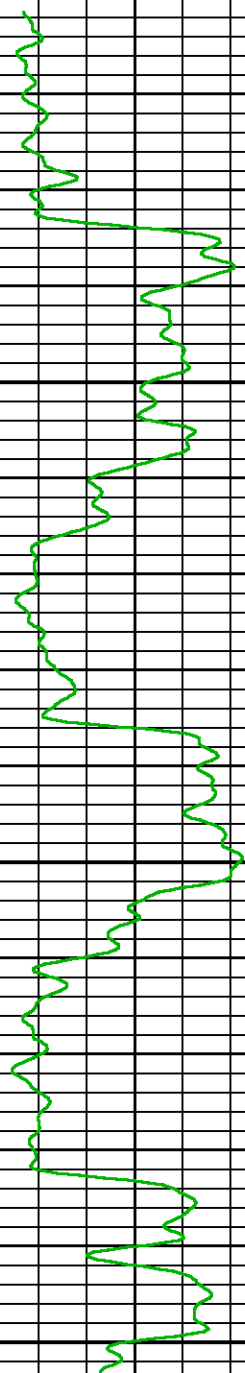
(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)



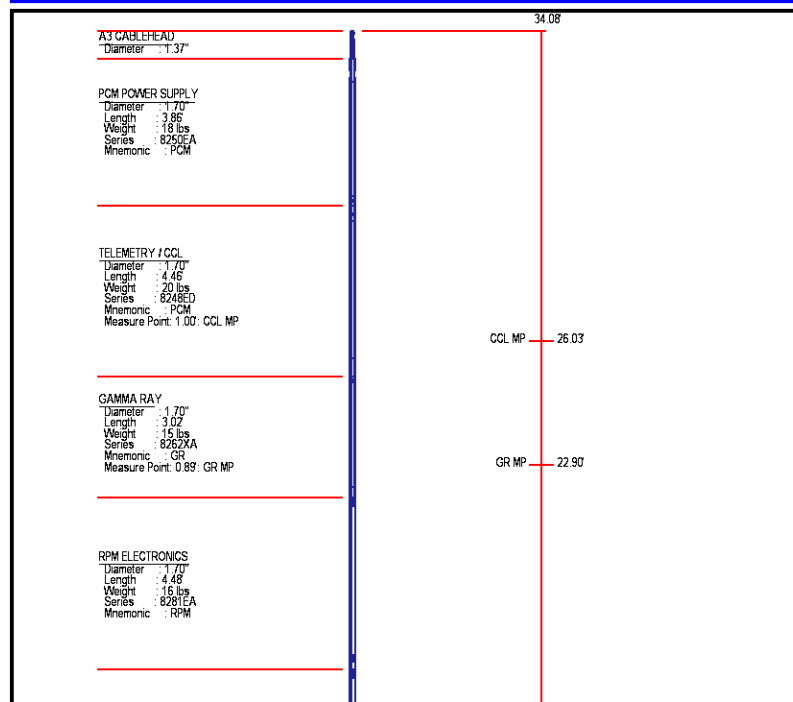
TOOL #:	8262XA10485470	DATE/TIME PERFORMED:	Fri Nov 17 17:13:21 2017			
UNIT #:	3882TD HL6728	VERI JIG #:	4702NK DA_228			
BACKGROUND CALBRTR ON	MULT	BACKGROUND CALBRTR ON	DIFF.			
(cts/s)	(cts/s)	(gAPI)	(gAPI)			
GR	78.38	398.71	0.568	44.54	226.60	182.06
						195.00 196.00

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	RONE	
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	10.00 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	5.00 5.02	29.10 30.10	10.10 16.34	10.00 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: \dat1a\ARAME_BRUTON_3D_12W\RPM_3D_TEMP.tdg



RPM C DETECTOR SECTION

Diameter : 1.70
Length : 9.40
Weight : 41 lbs
Series : 8283FA
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 : 3.30
Weight : 13 lbs
Series : 8255XA
Mnemonic : SRP
Measure Point: 1.52: TEMP MP

TEMP MP : 1.65
PRES MP : 0.00

BULL PLUG 1117/5

TOTAL LENGTH: 34.08
TOTAL WEIGHT: 144 lbs
MAX DIAMETER: 01.70

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY LARAMIE ENERGY LLC
WELL BRUTON 30-11W
FIELD VEGA
COUNTY MESA **STATE** COLORADO

FILE NO:

API NO:

05077104470000

LOCATION:

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

ELEVATIONS:

KB 7534 FT
DF 7533 FT
GL 7504 FT

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

DATE 02-Jan-2018