



FILE NO: CH133066	COMPANY LARAMIE ENERGY LLC
API NO: 05077104730000	WELL BRUTON 30-19E
	FIELD VEGA
	COUNTY MESA
	STATE COLORADO

Ver. 4.10	LOCATION: SHL: 2636' FSL & 1854' FEL BHL: 615' FSL & 1175' FEL SEC 30 TWP 9S RGE 93W	OTHER SERVICES RAL
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB	ELEVATION 30 FT 7643 FT ABOVE P.D.	ELEVATIONS: KB 7673 FT DF GL 7643 FT
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DATE	03-Apr-2018	
RUN	1	1
SERVICE ORDER	US133066	
DEPTH DRILLER	8122 FT	
DEPTH LOGGER	8036 FT	
BOTTOM LOGGED INTERVAL	8036 FT	
TOP LOGGED INTERVAL	2618 FT	
TIME STARTED	13:00	
TIME FINISHED	18:30	
OPERATOR RIG TIME	5.5 HOURS	
TYPE OF FLUID IN HOLE	WATER	
FLUID DENSITY	NA	
FLUID SALINITY	NA	
FLUID LEVEL	56 FT	
LOGGED CEMENT TOP	1560 FT	
WELLHEAD PRESSURE	0 PSI	
MAXIMUM HOLE DEVIATION	NA	
NOMINAL LOGGING SPEED	10 FMIN	
MAX. RECORDED TEMP.	230 DEGF	
REFERENCE LOG	BAKER HUGHES RAL	
REFERENCE LOG DATE	03-Apr-2018	
EQUIP. NO.	ML-4291	GRAND JCT.
RECORDED BY	T. NEWELL	
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 RUN PNC-3D MODE

SJ: 6085' - 6104'
SJ: 7184' - 7203'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	11745584	FREE
1	1	TEL/CCL	8248ED	10183585	FREE
1	1	GR	8262XA	10485470	FREE
1	1	RPM	8281EA	10294755	FREE
1	1	RPM	8283PA	10066691	FREE
1	1	RPM	8281FA	10066992	FREE
1	1	TEMP	8255XA	166341	FREE

RPM MAIN PASS G-SAND

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

Patches: 3

Plotted: Tue Apr 3 19:05:55 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_19E/p353h03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2603.500 ft BOTTOM DEPTH: 3244.379 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	7.87	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

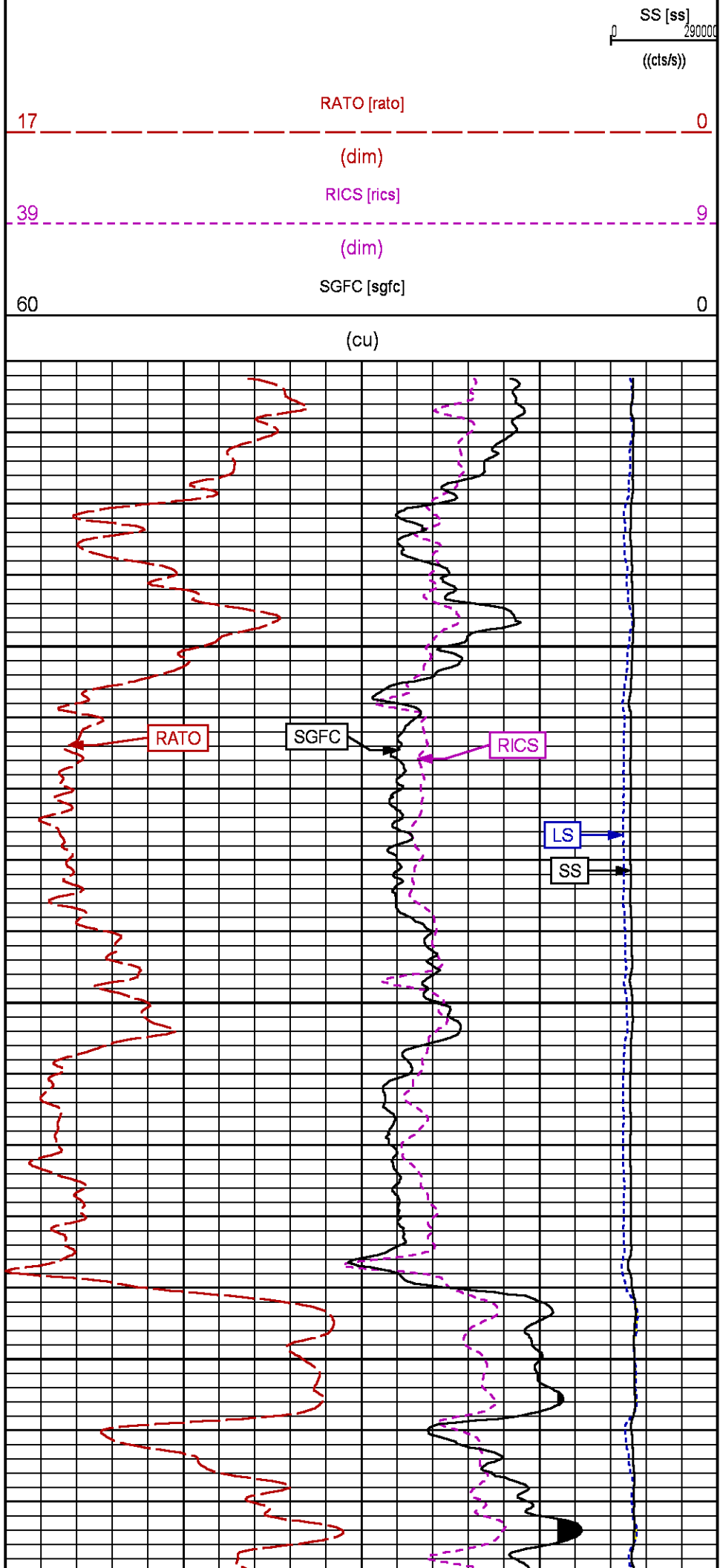
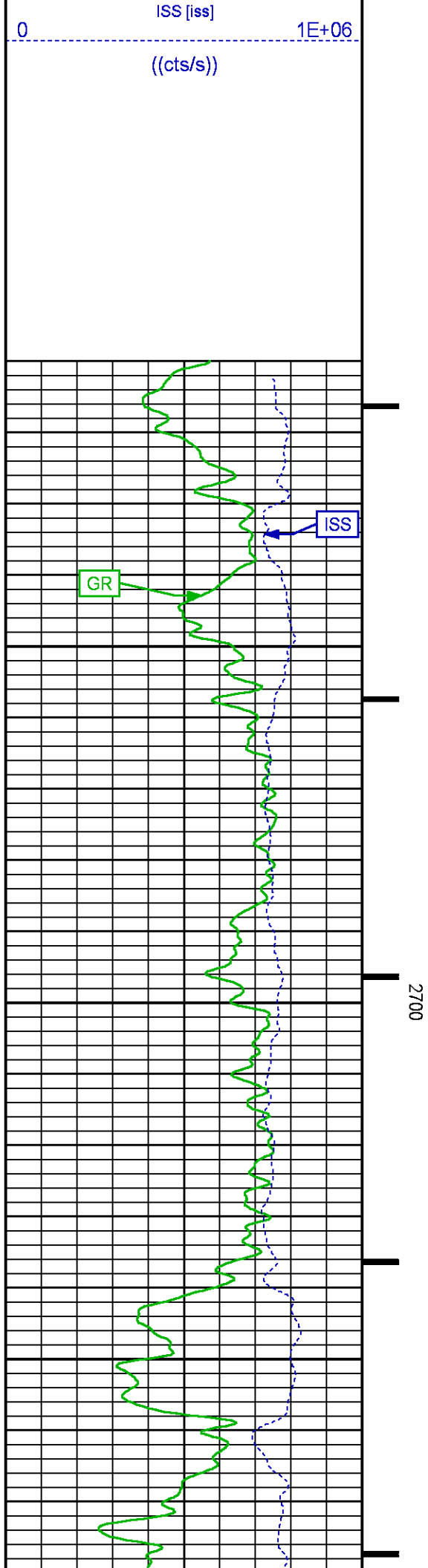
CURVE MEASURE POINT OFFSET

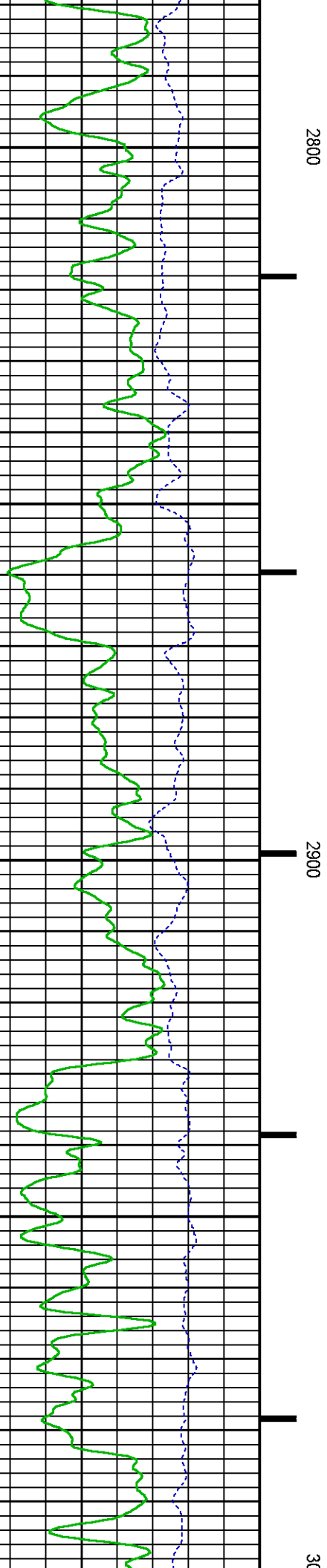
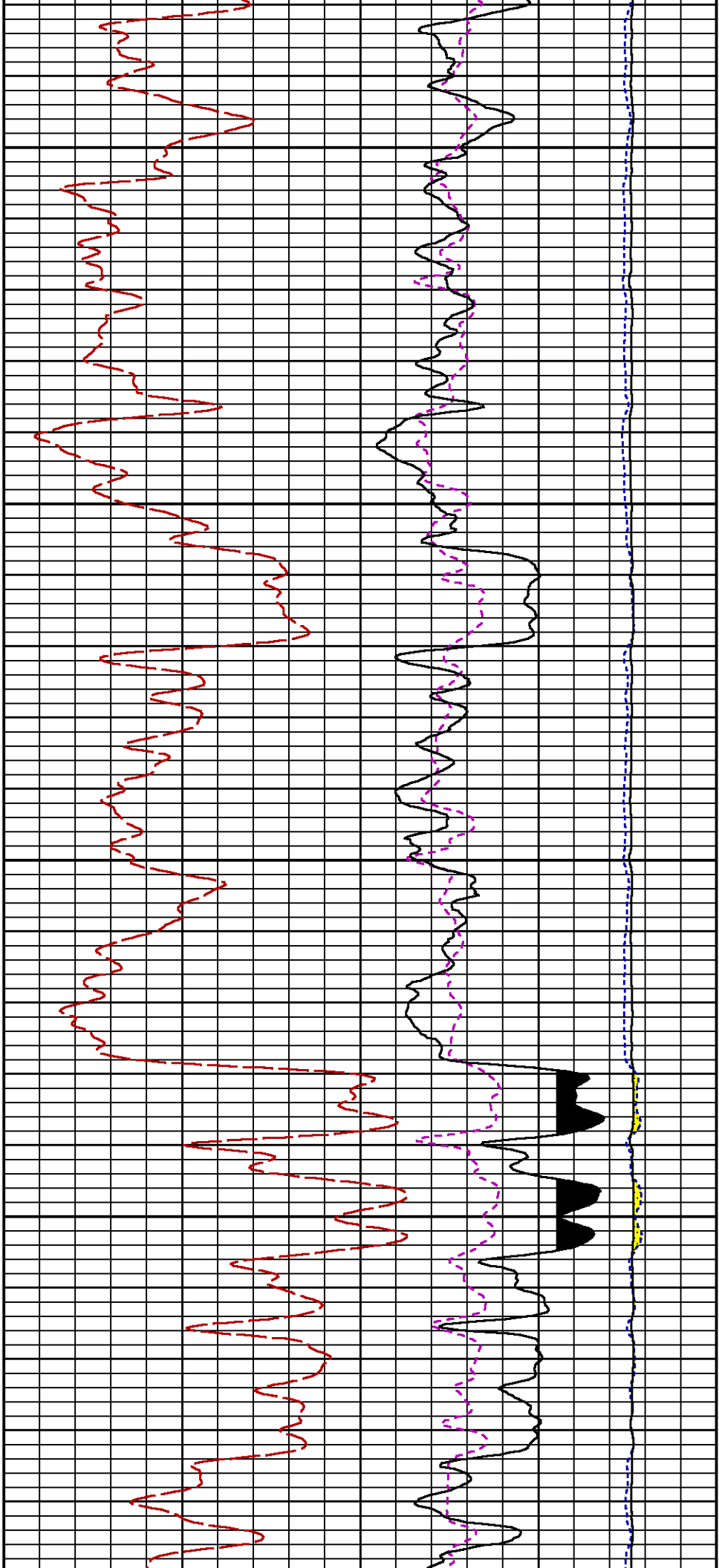
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

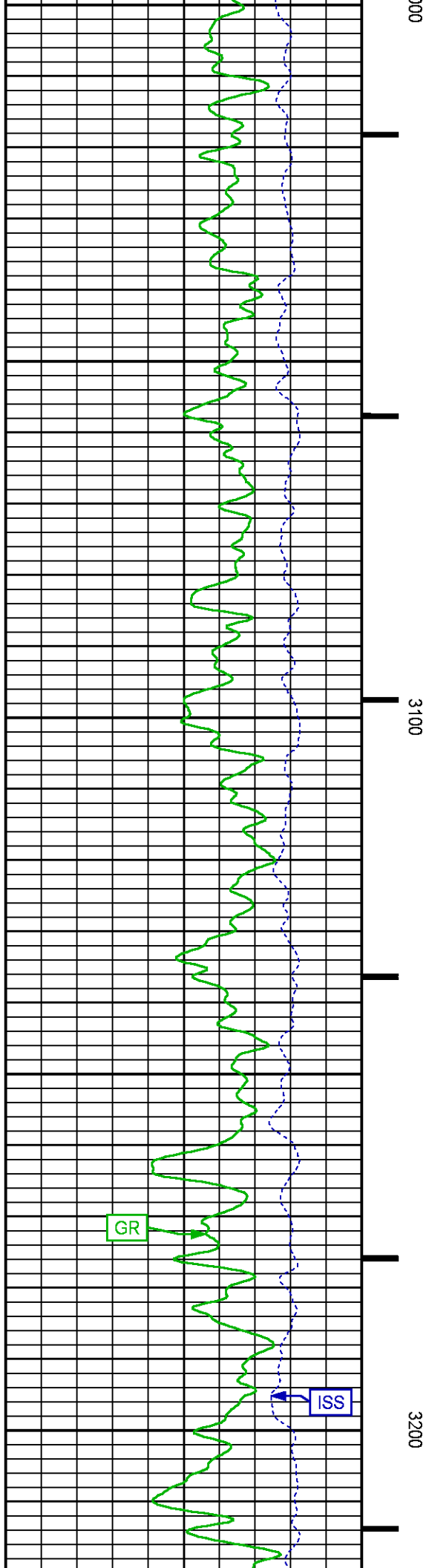
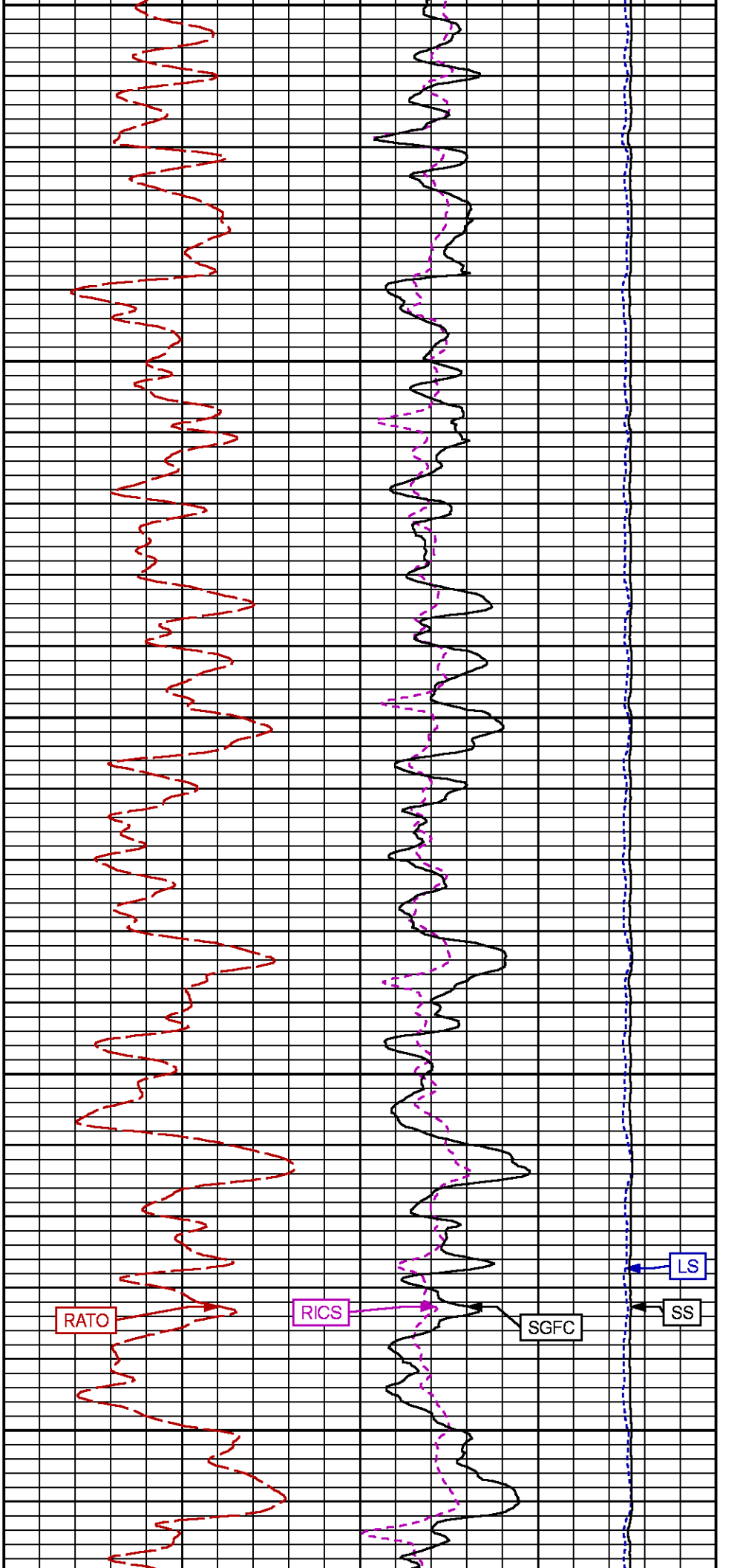
Presentation : SysA:/dat1a/LARAMIE_BRUTON_30_19E/30-19E_RPM_GS.fvpdf [5"/100' Scale]
 Plot Interval : 2610 - 3230 Feet

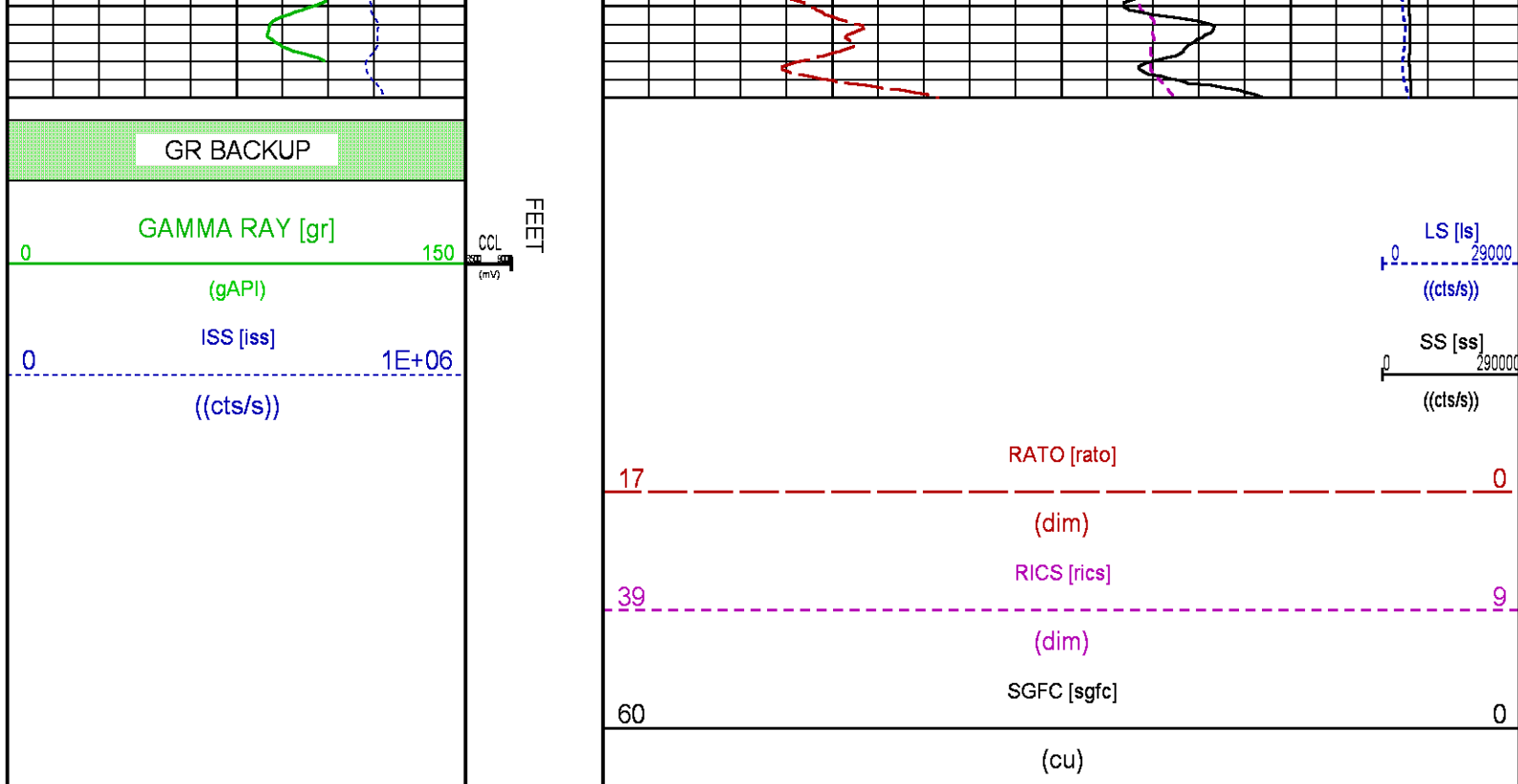
Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_19E/30-19E_RPM_MAIN_GS.xtf
 Created On : N/A
 Company : LARAMIE ENERGY LLC
 Well : BRUTON 30-19E
 Field : VEGA
 File Interval : 2585.75 - 3249.25 Feet
 OCT : p353h











RPM MAIN PASS WILLIAMS FORK

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

Patches: 3

Plotted: Tue Apr 3 18:17:14 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30_19E/p353h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4775.990 ft BOTTOM DEPTH: 8046.816 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	7.87	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

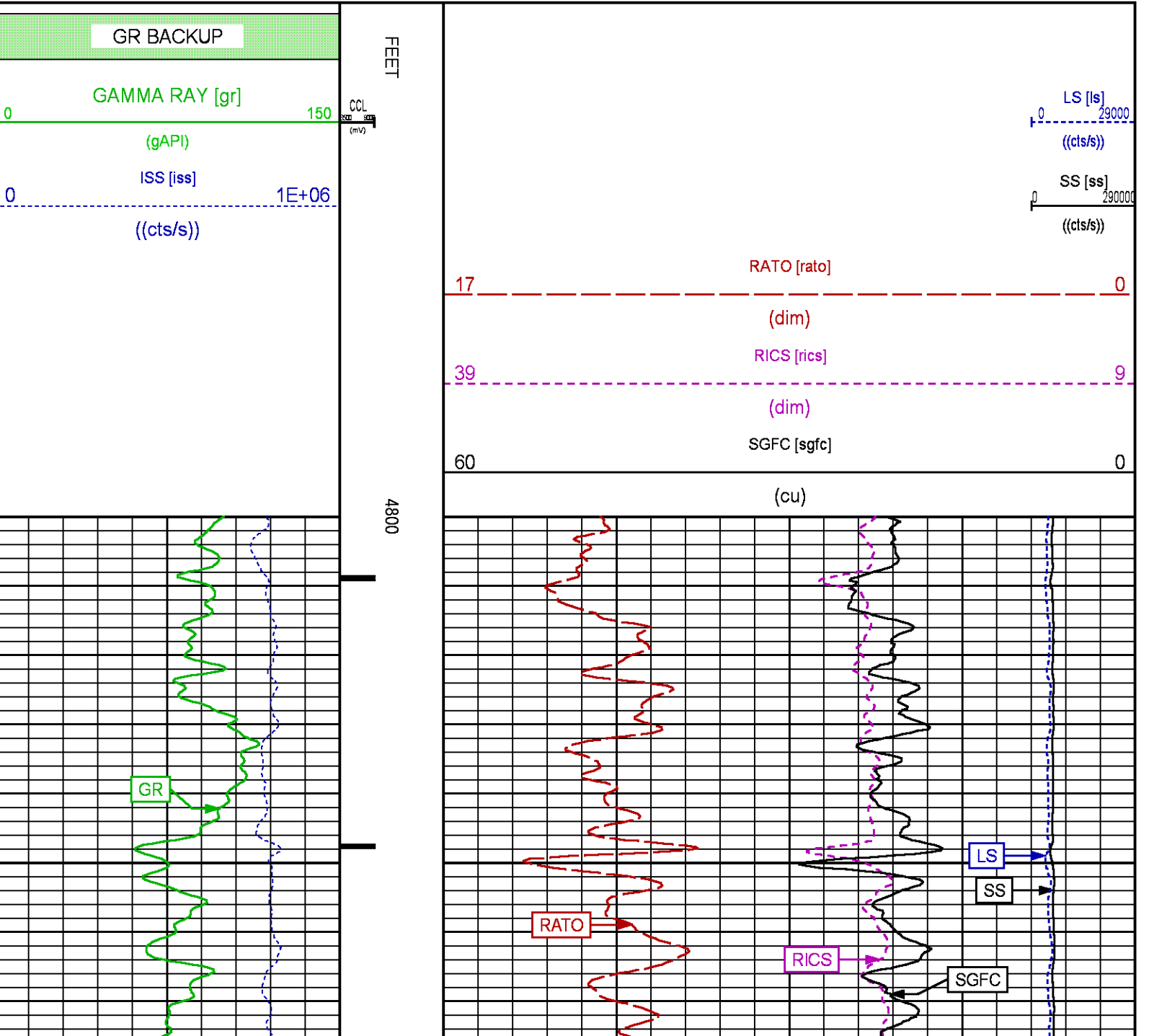
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A	BOREHOLE AND DIFFUSION CORRECTED SIGMA
F1:SS	N/A	SHORT SPACE COUNT RATE

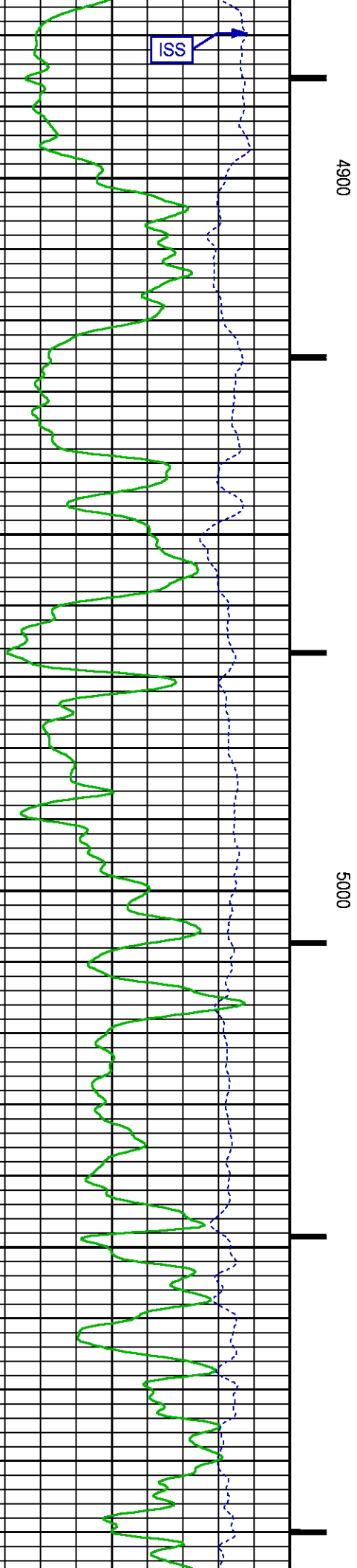
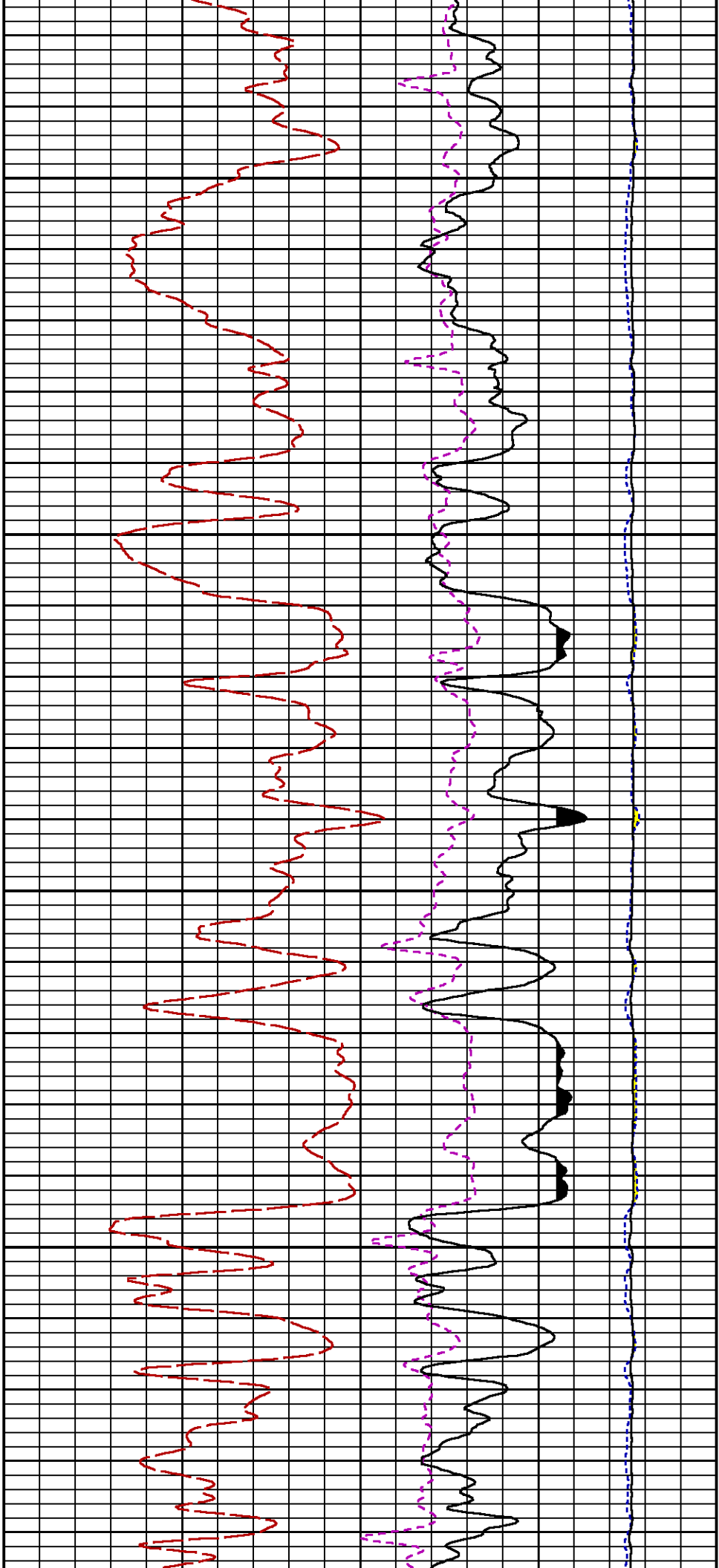
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-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_19E/30-19E_RPM_WF.fvpdf [5"/100' Scale]
Plot Interval : 4800 - 8043.5 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_19E/30-19E_RPM_MAIN_WF.xtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-19E
Field : VEGA
File Interval : 4758.25 - 8052.25 Feet
OCT : p353h

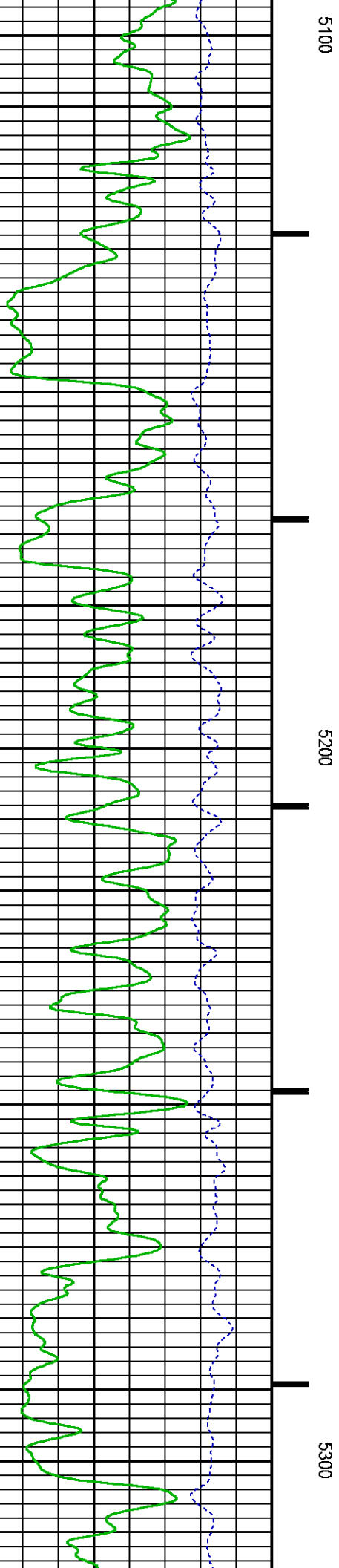
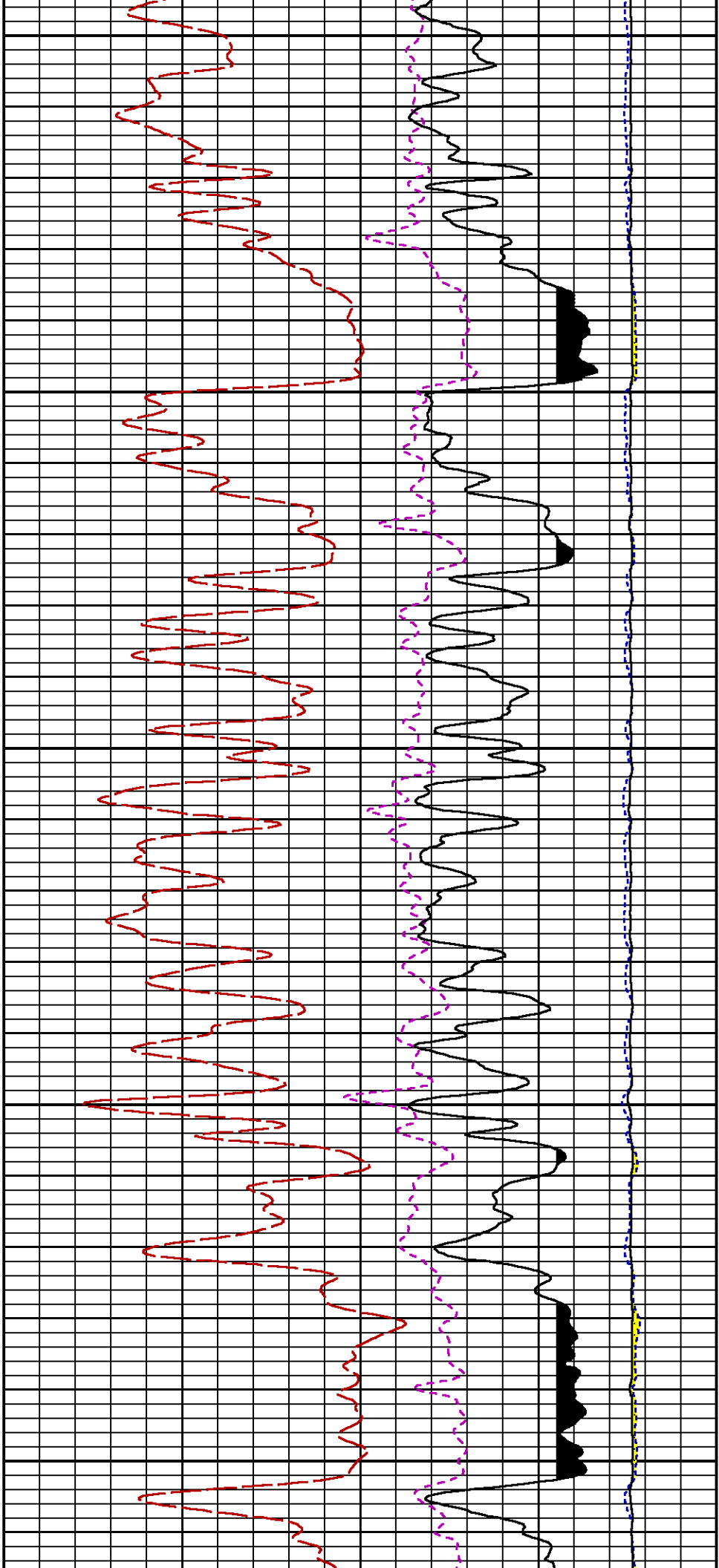


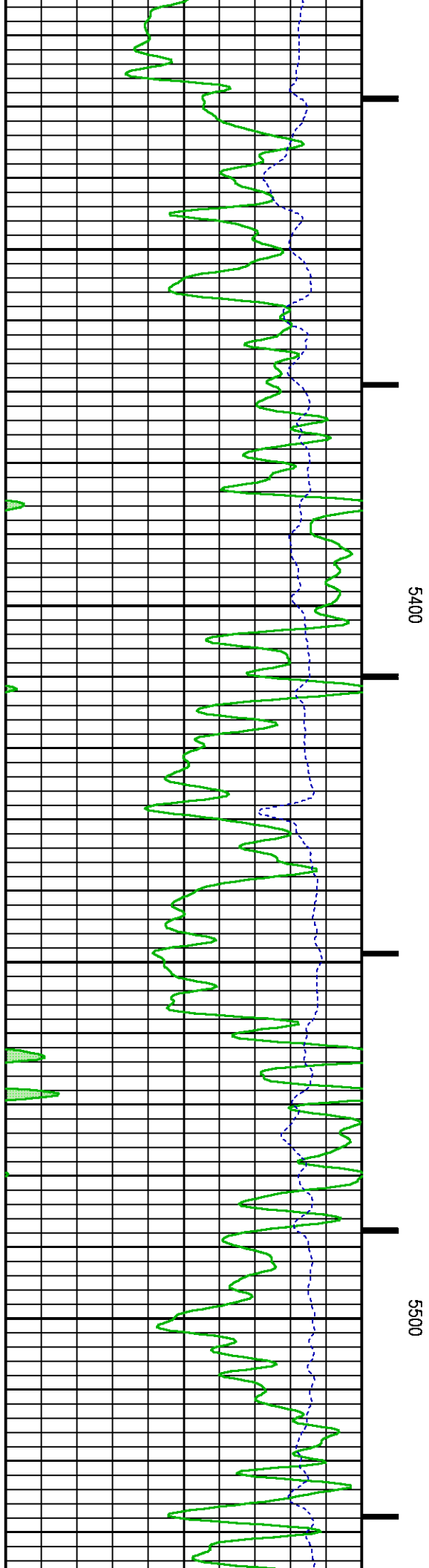
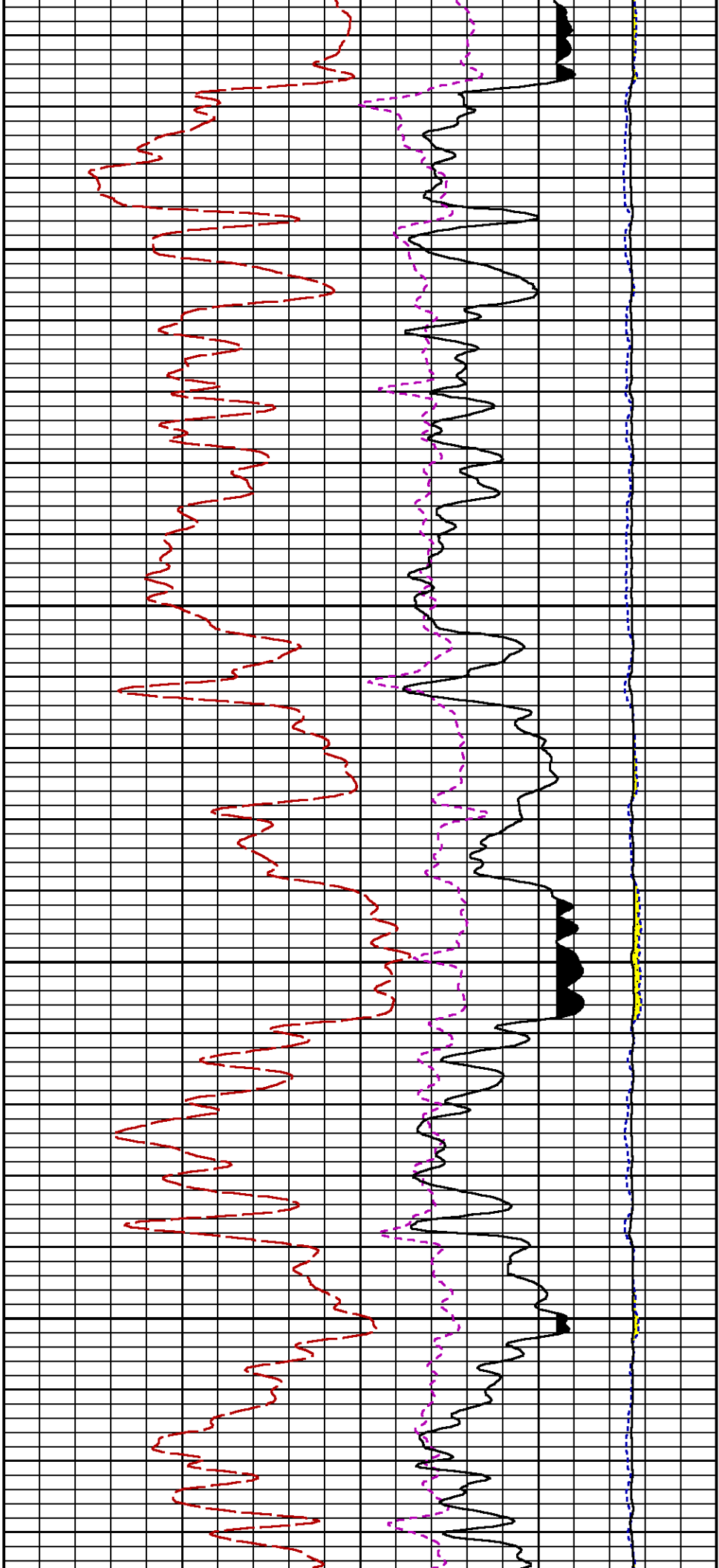


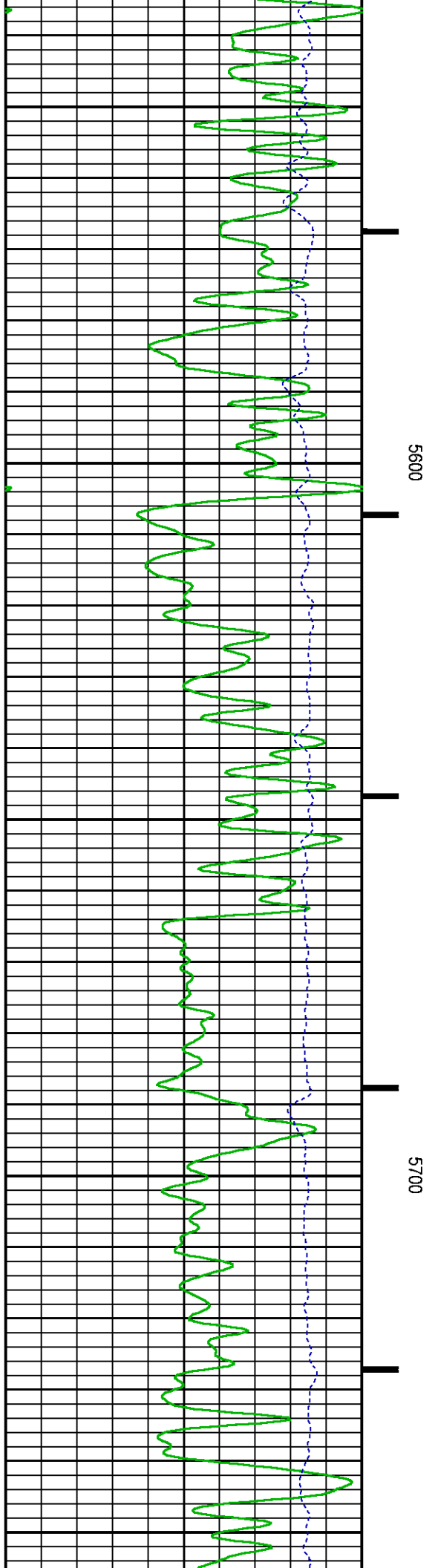
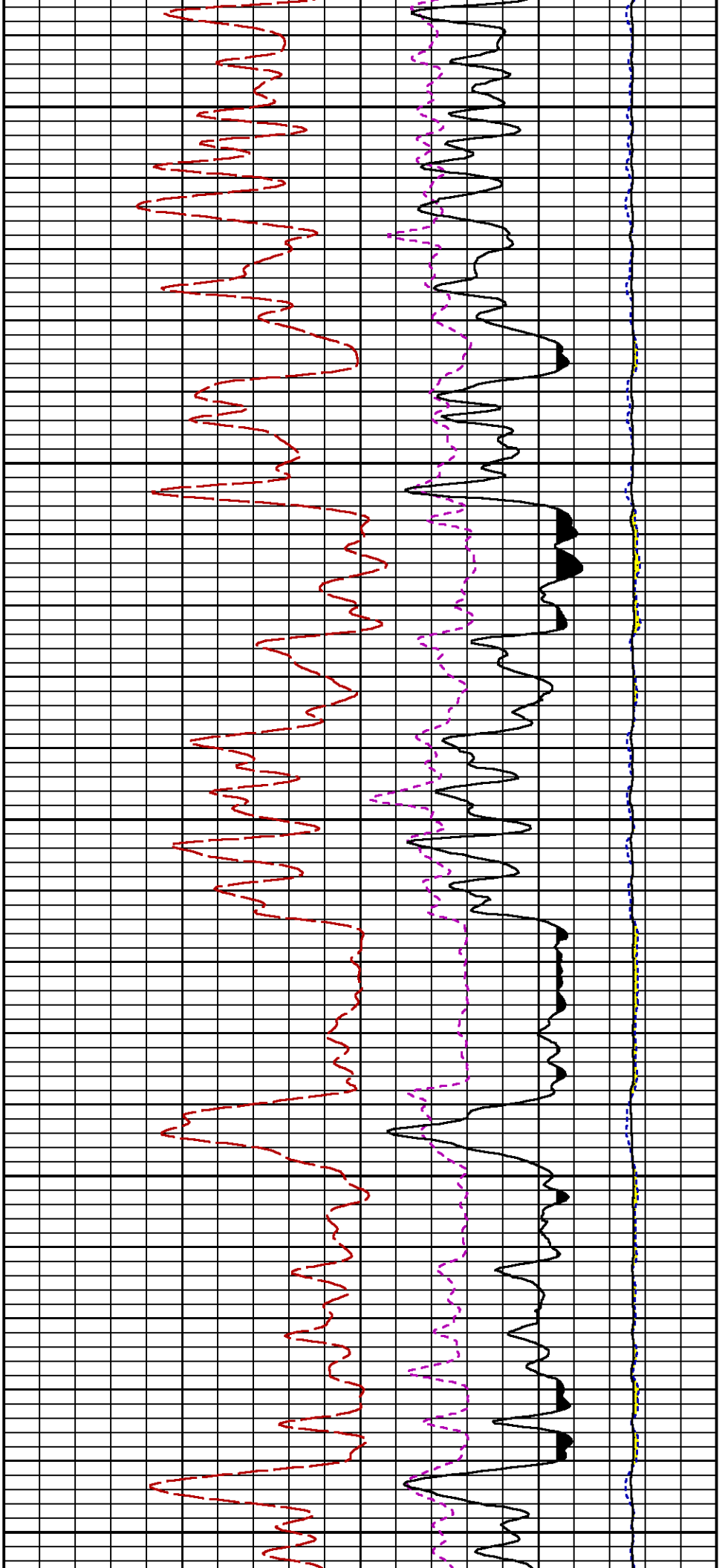
ISS

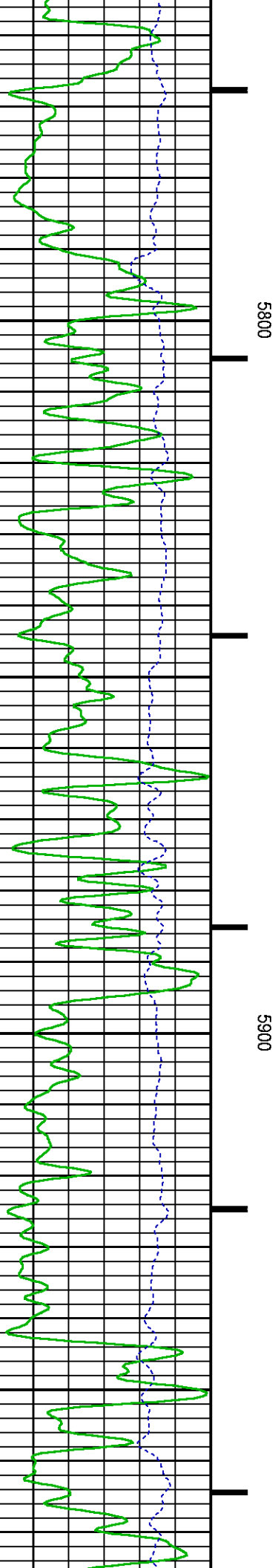
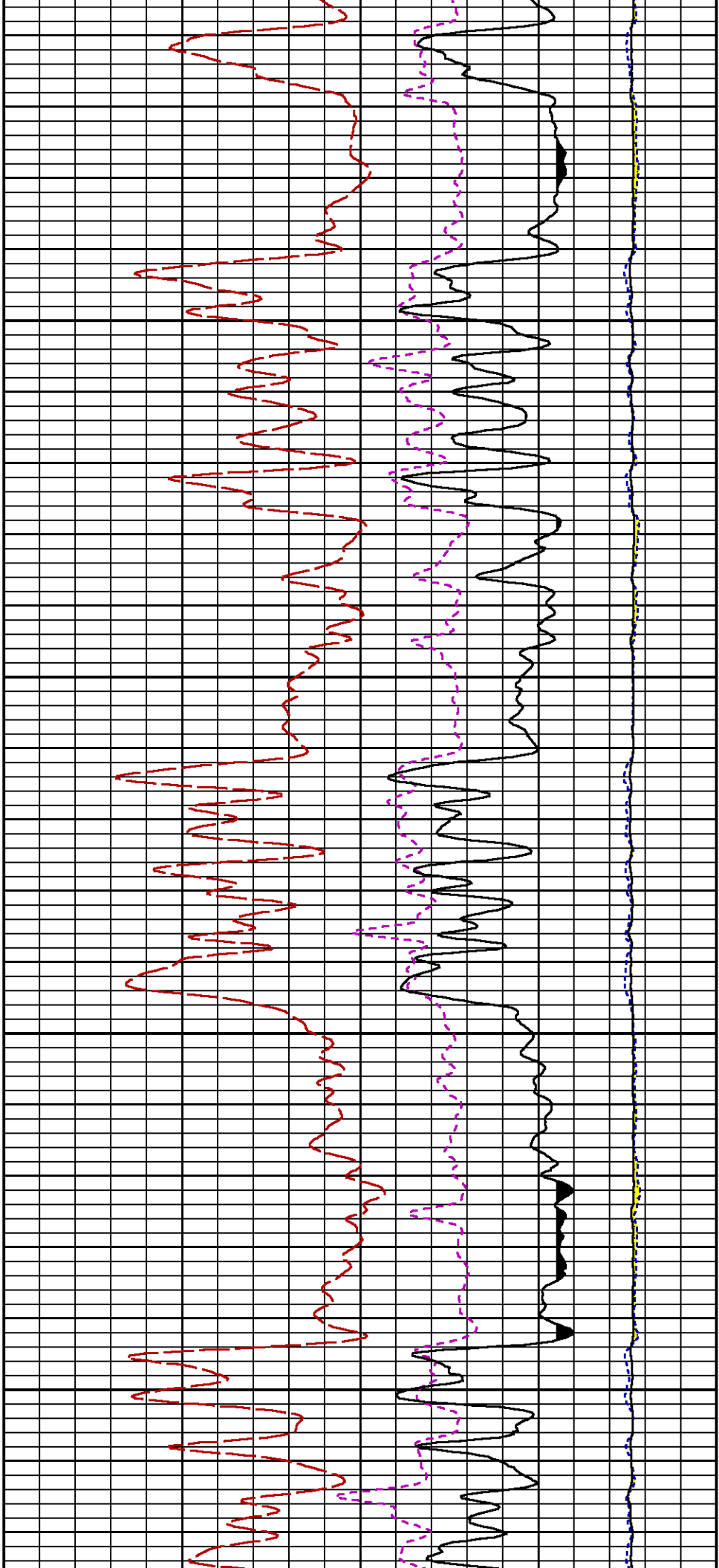
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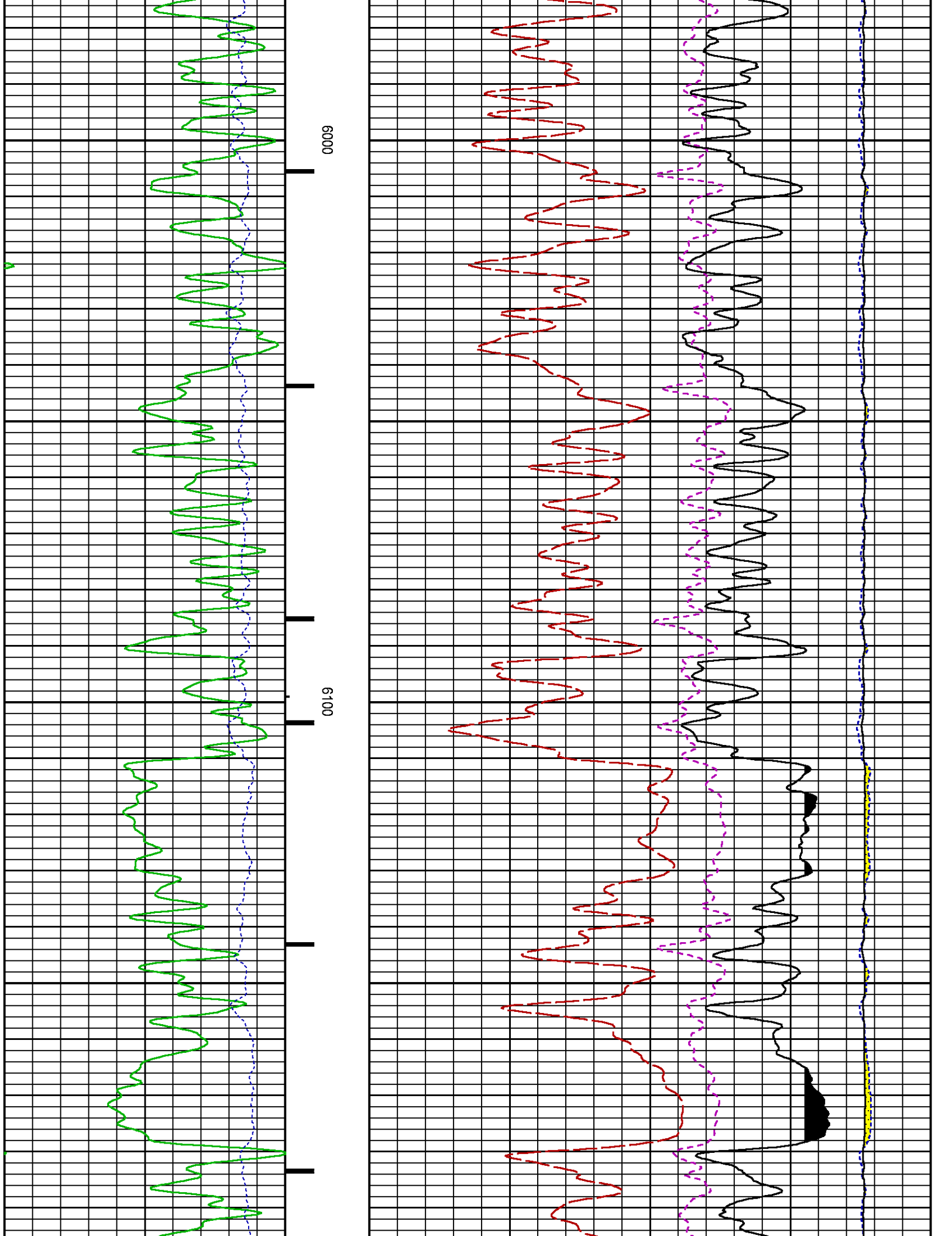
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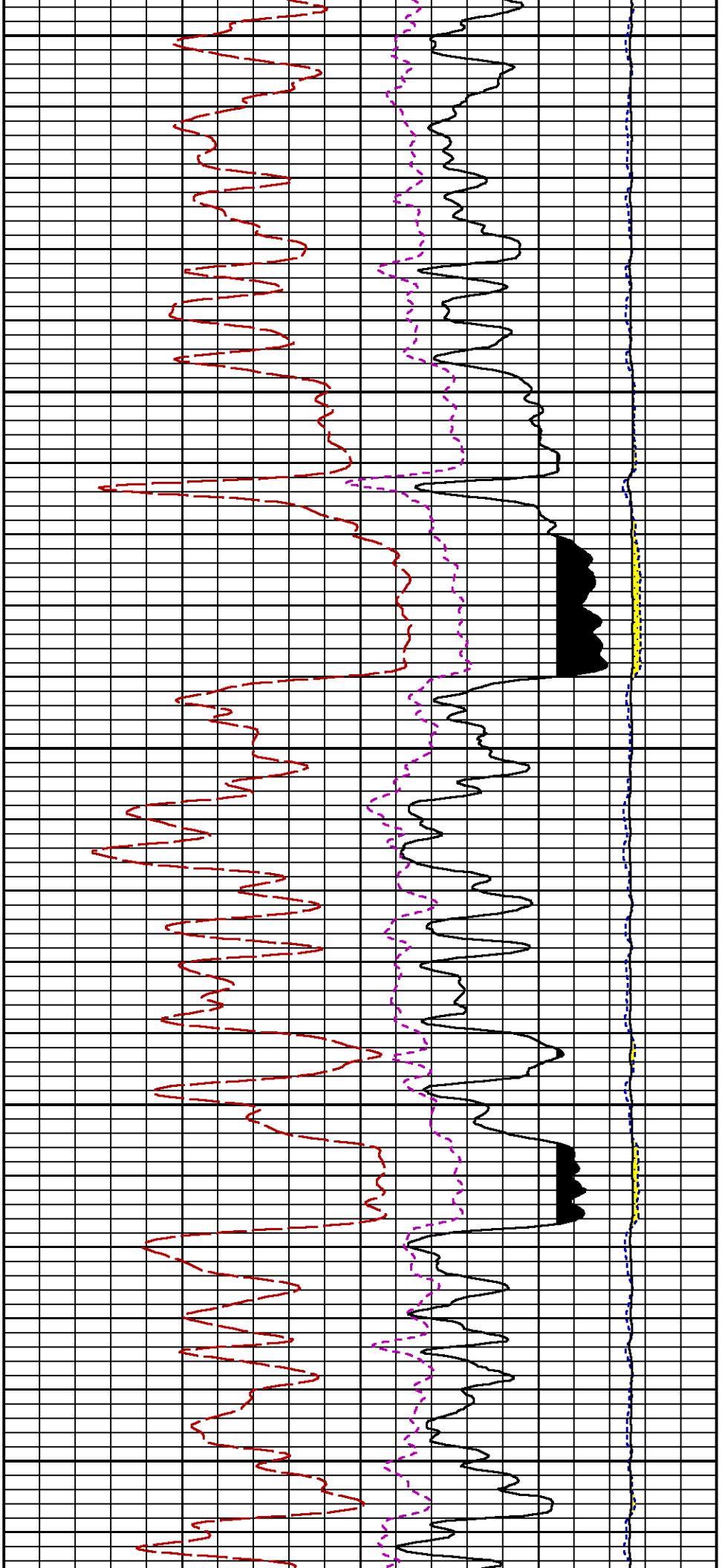








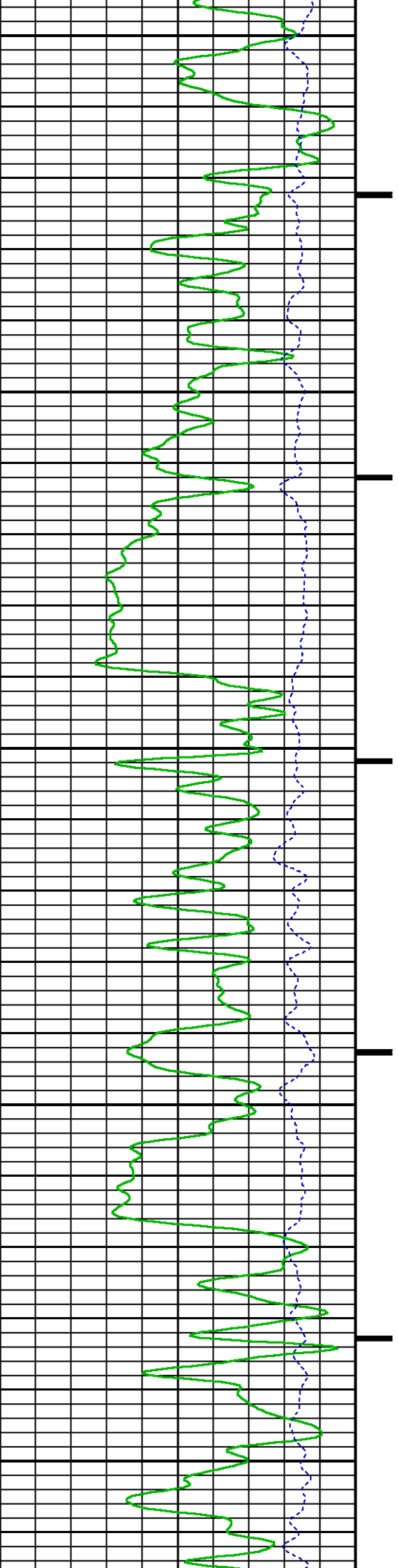


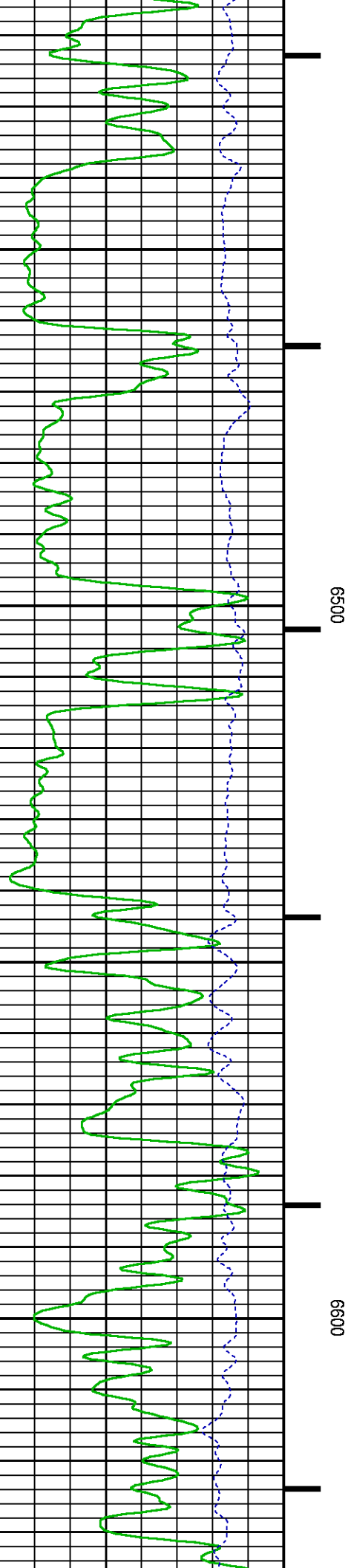
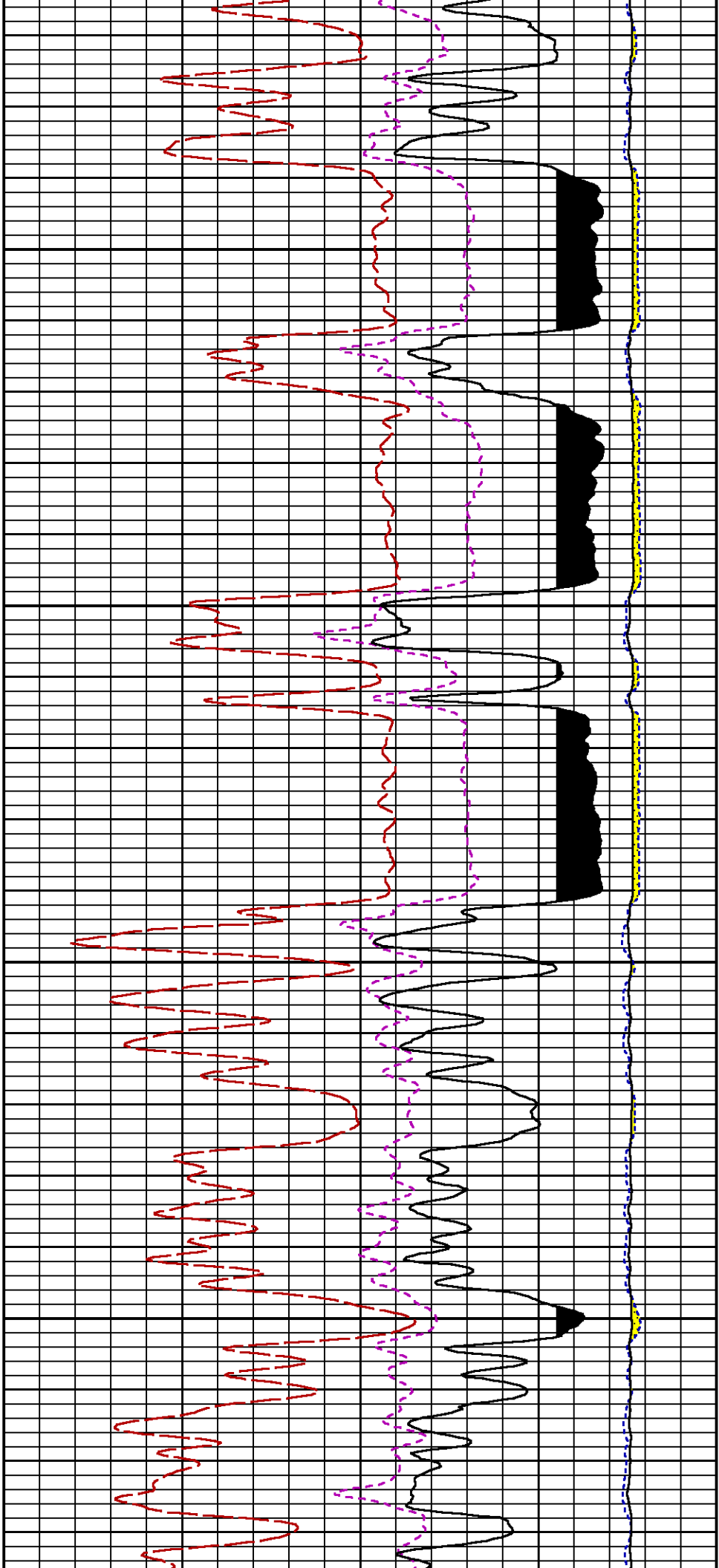


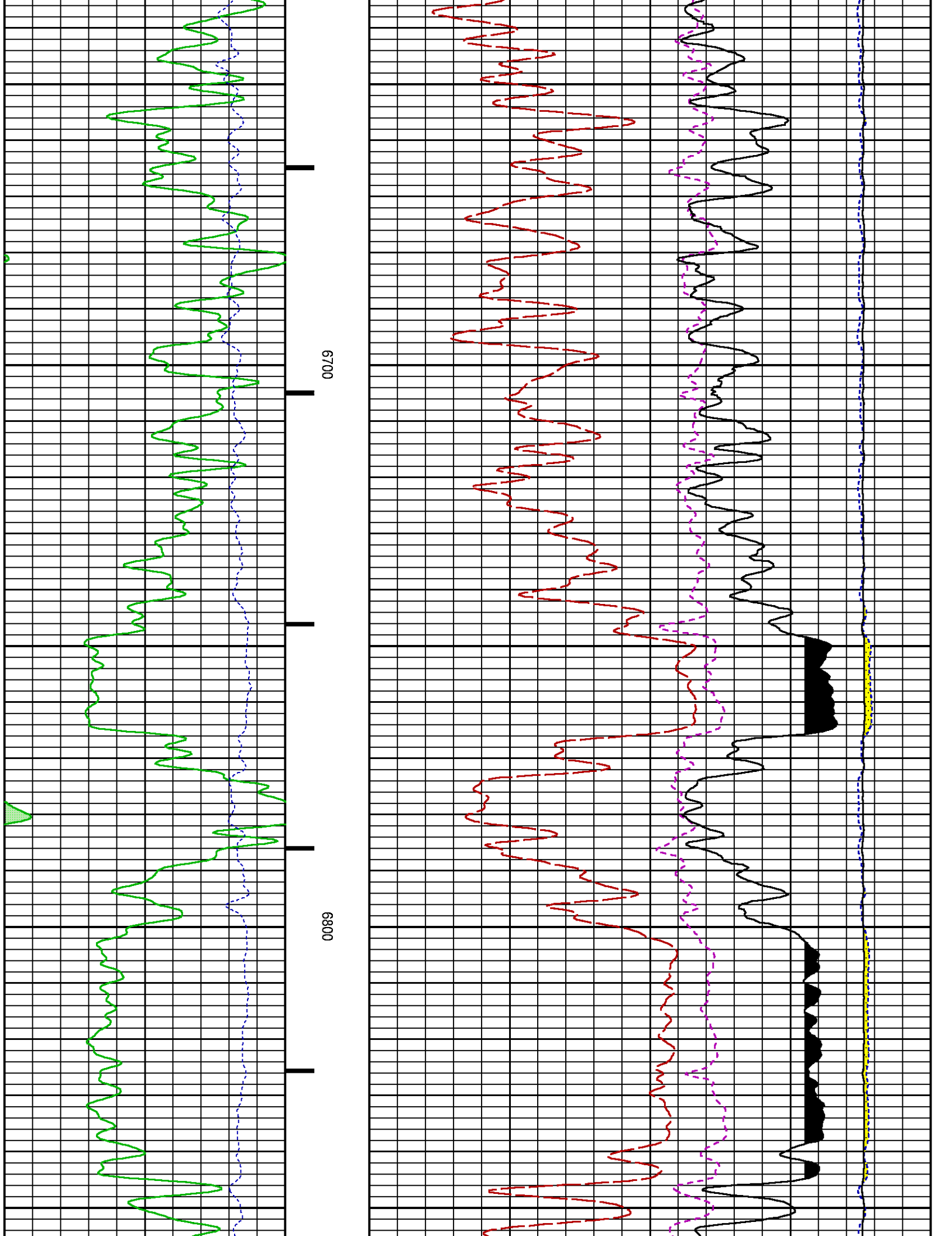
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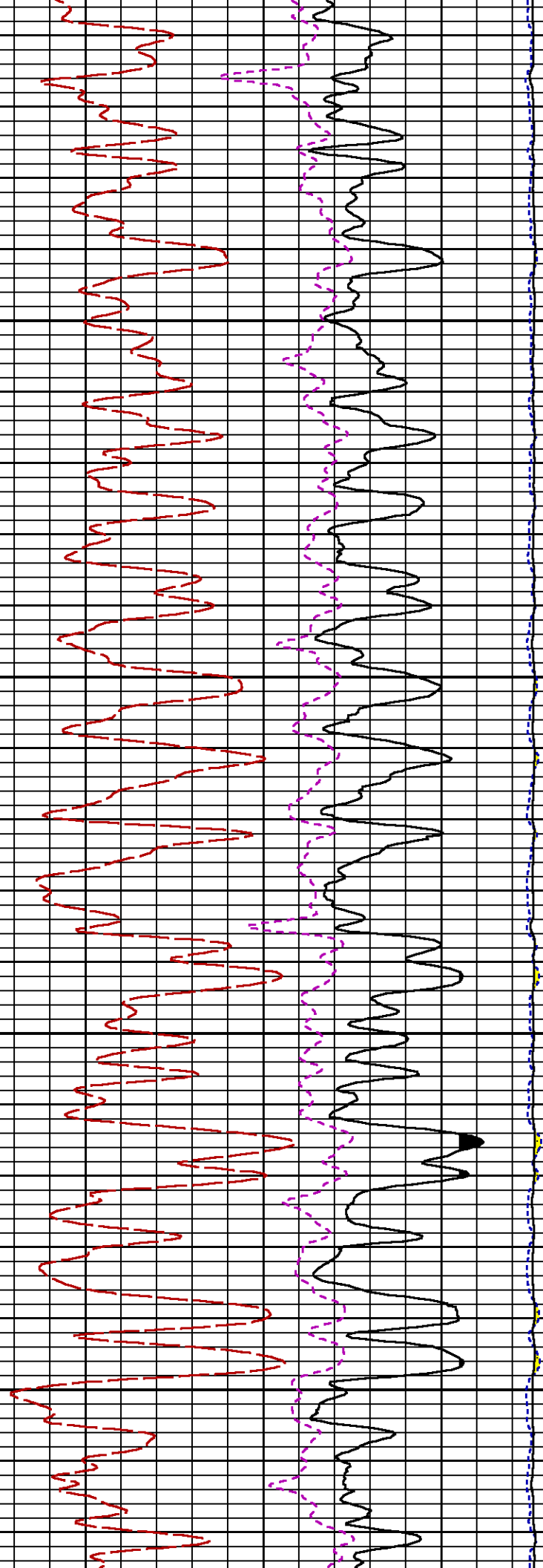
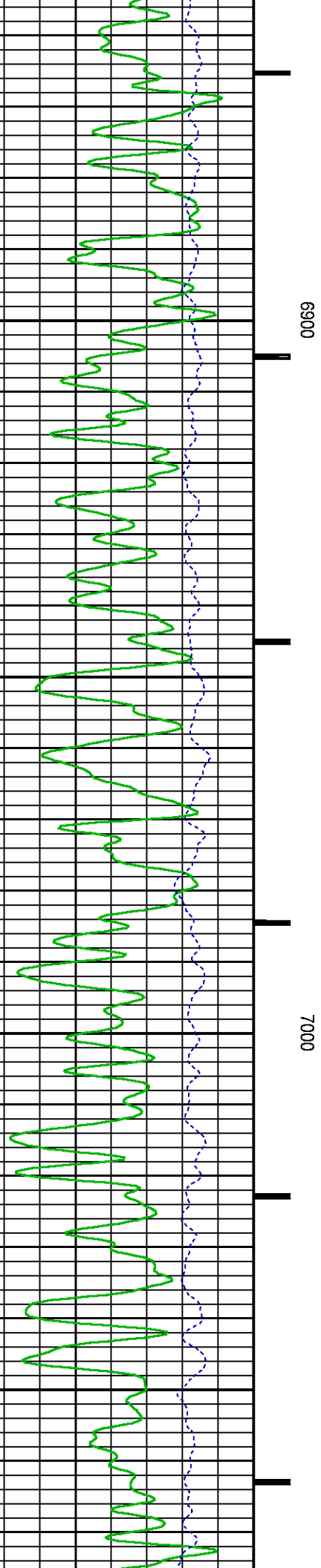
6300

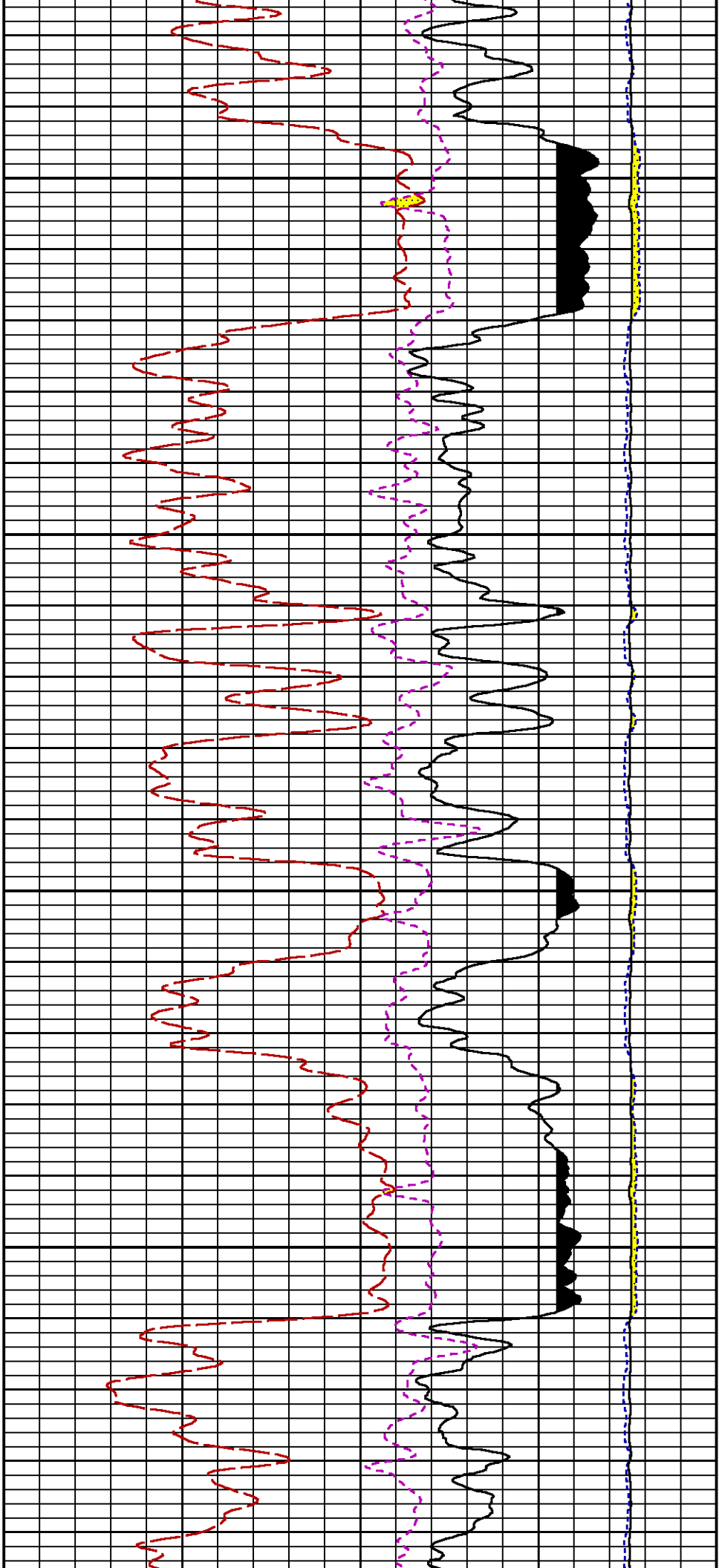
6400





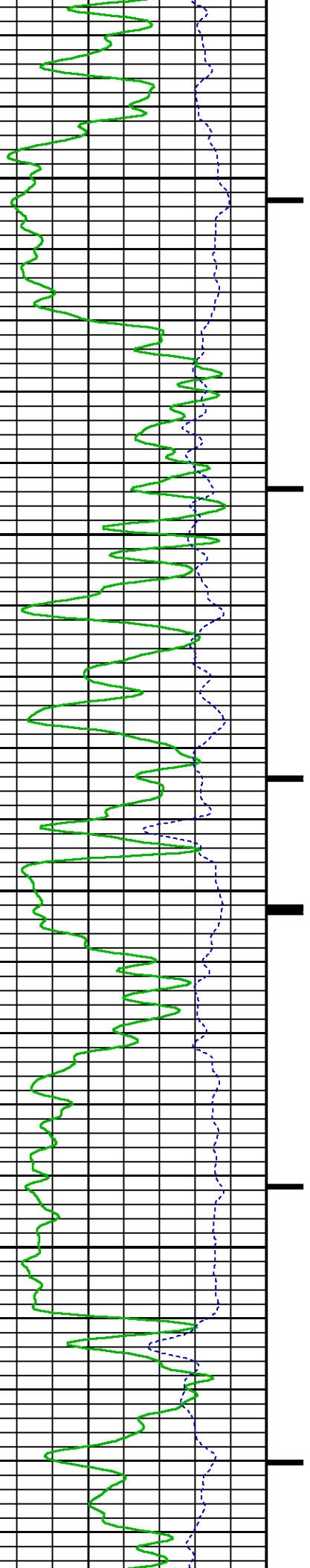


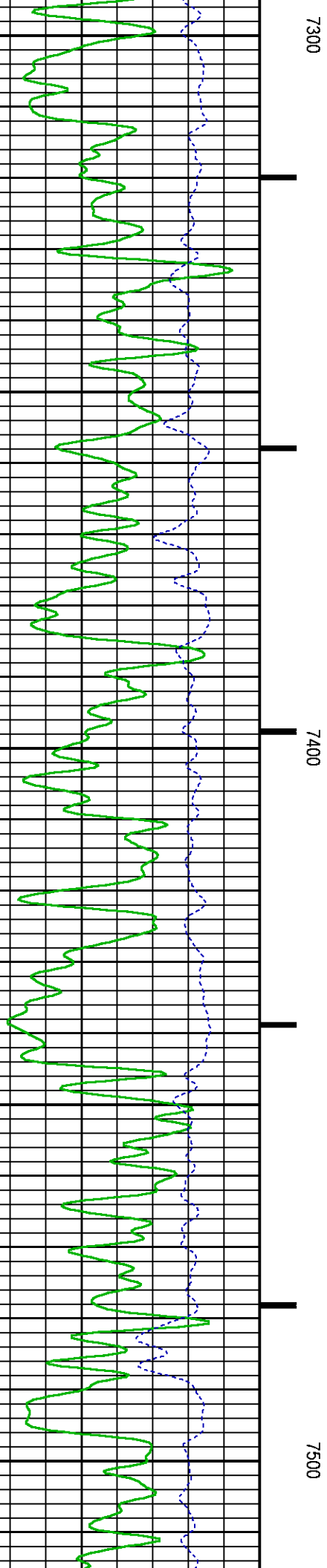
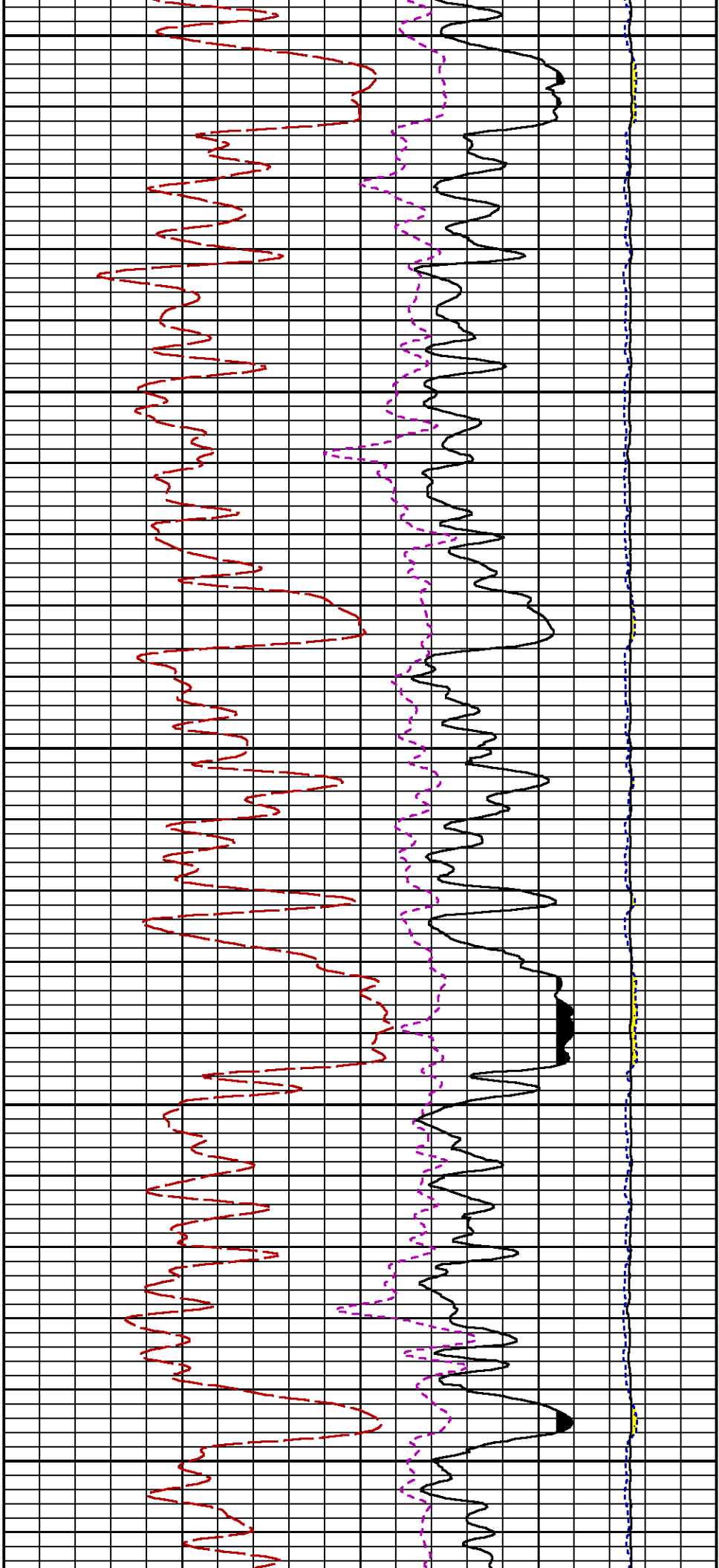


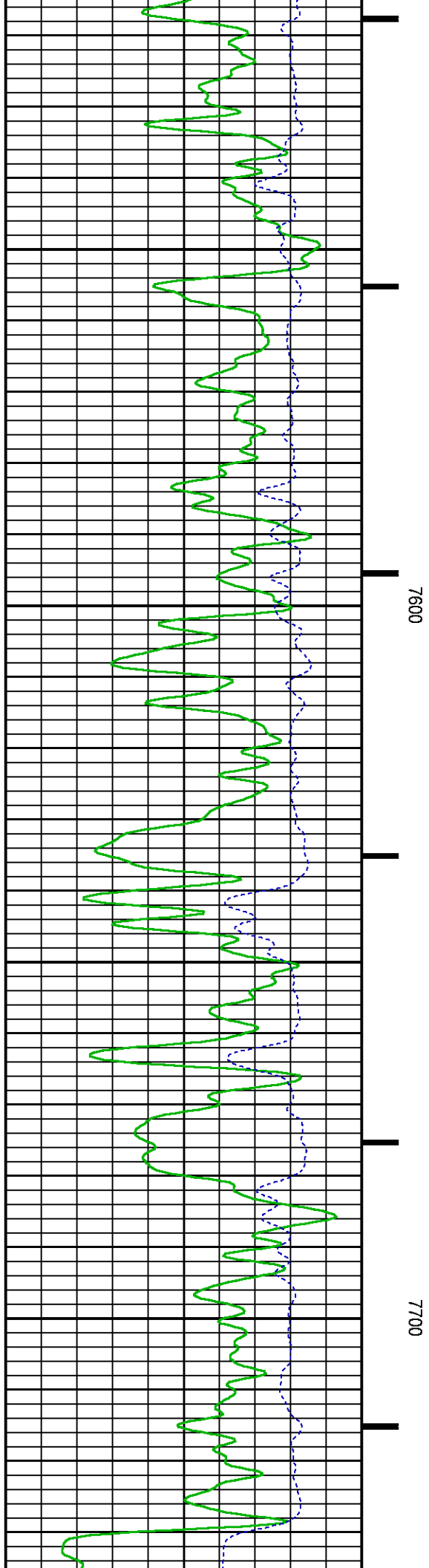
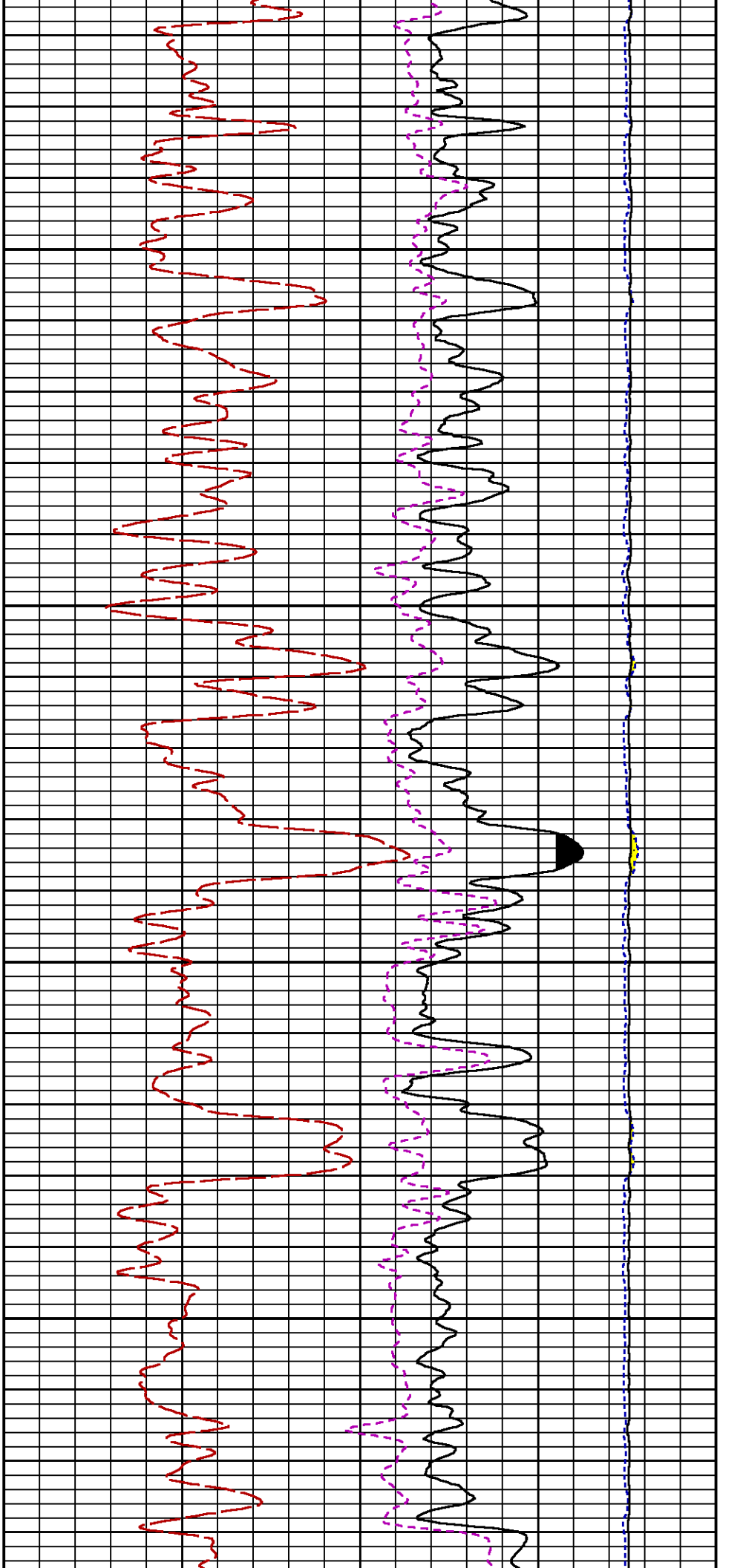


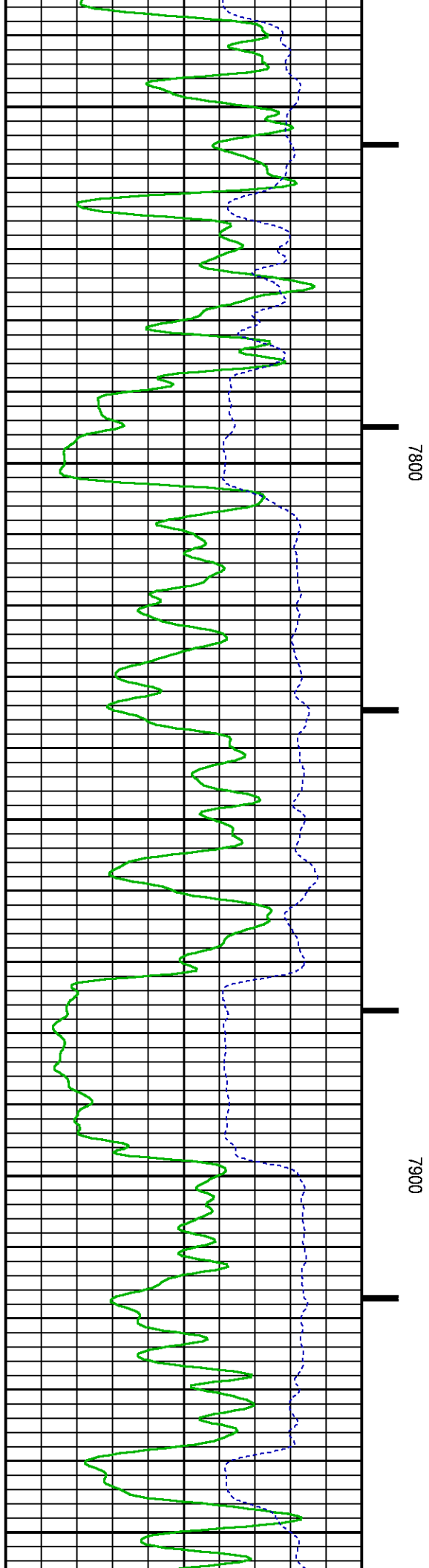
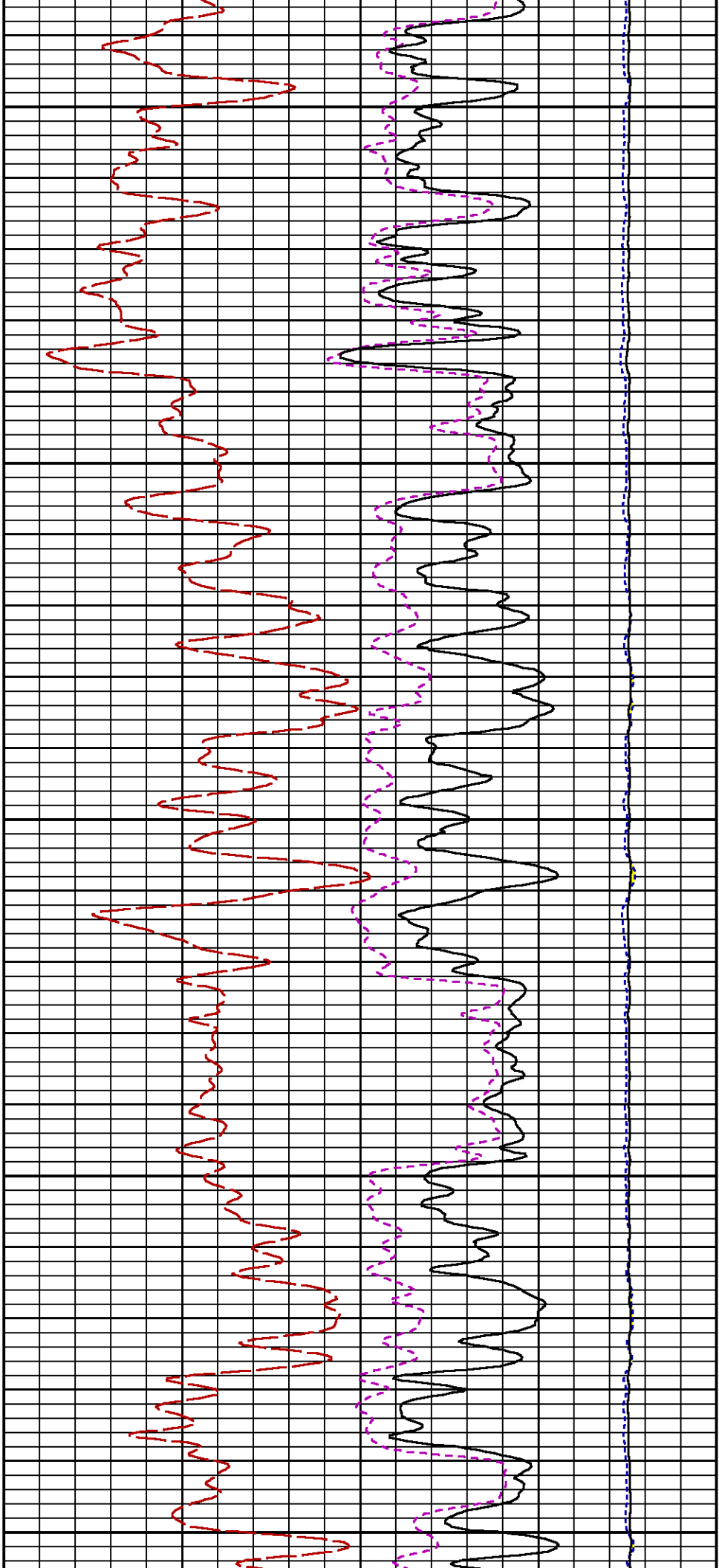
7100

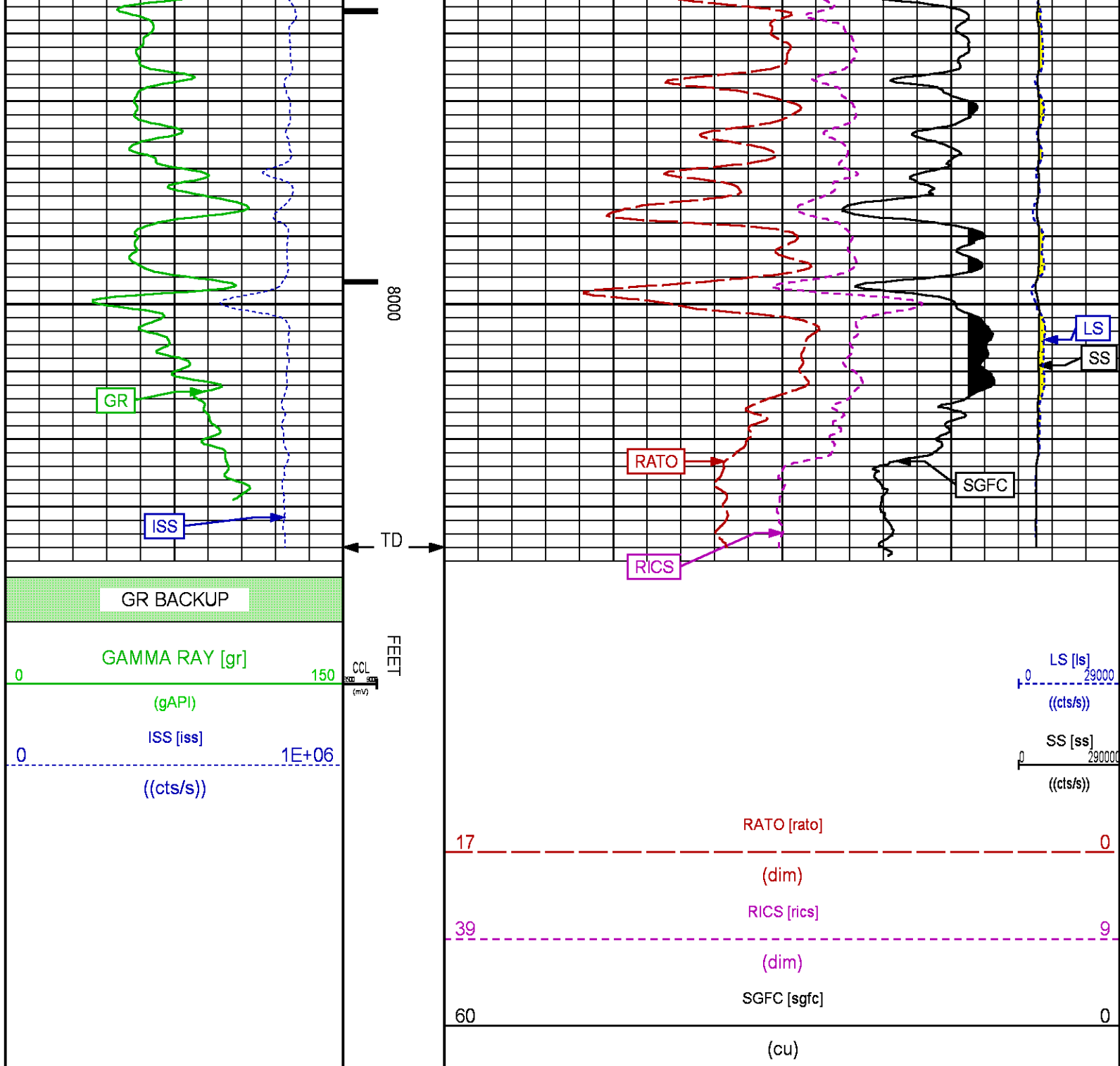
7200











REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 3

Plotted: Tue Apr 3 16:20:31 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE BRITON 30 19E/p353h01.prm

LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5257.238 ft BOTTOM DEPTH: 5496.609 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	7.87	in	"	"
	LARGEST CASING OD	4.50	in	"	"
	MATRIX	SANDSTONE		"	"

CURVE DESCRIPTION REPORT

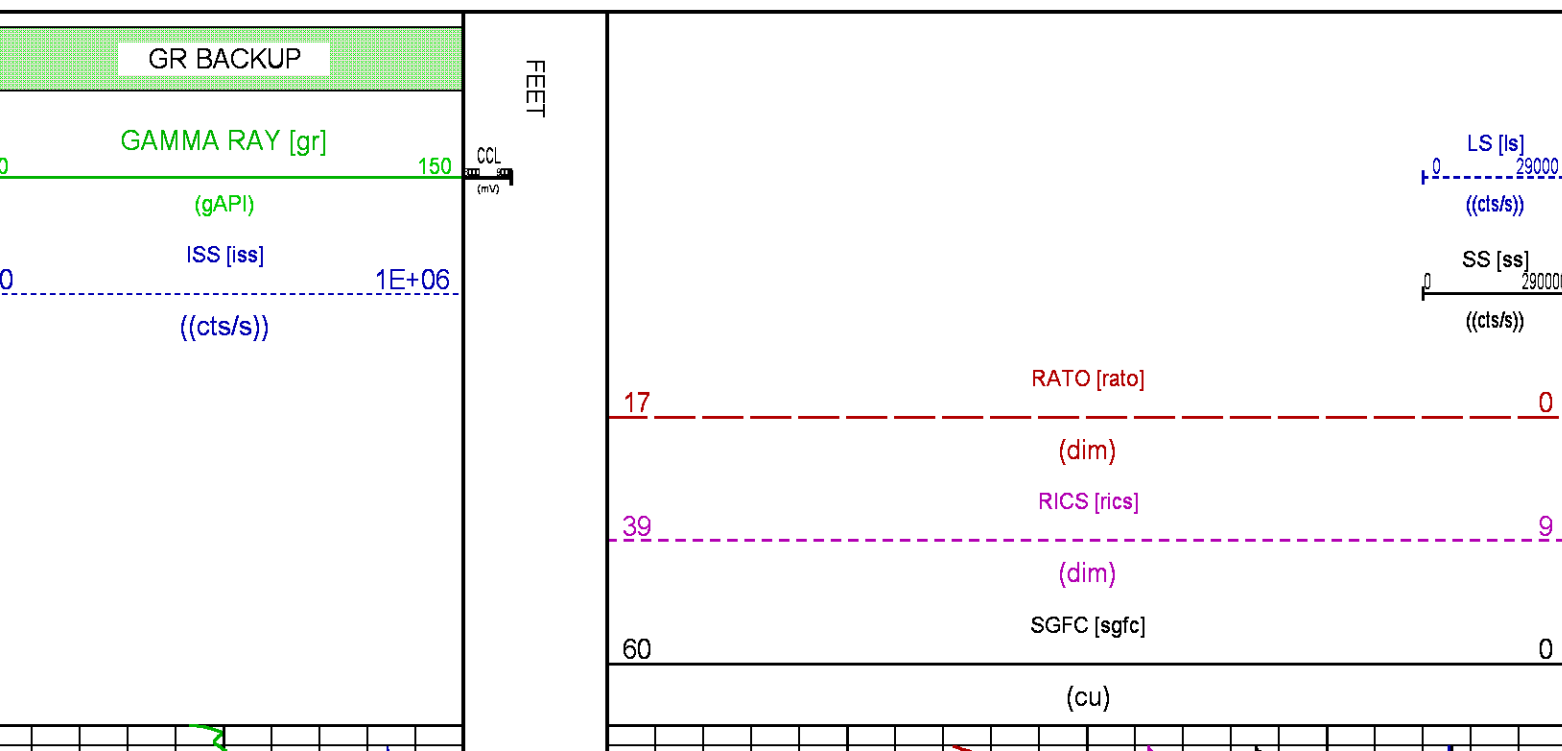
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RATO	N/A	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	N/A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

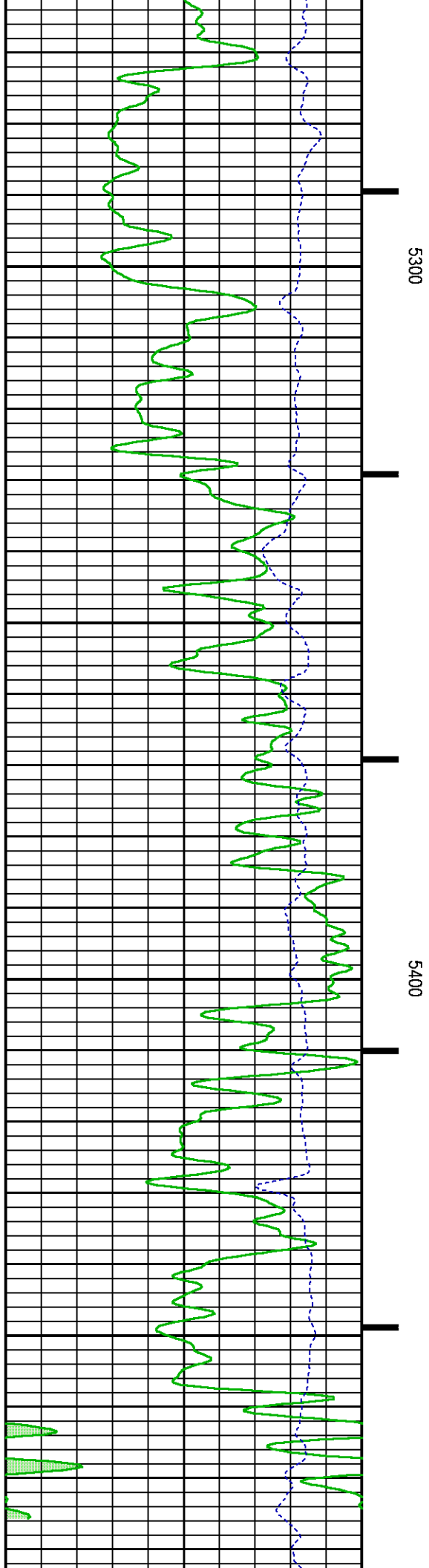
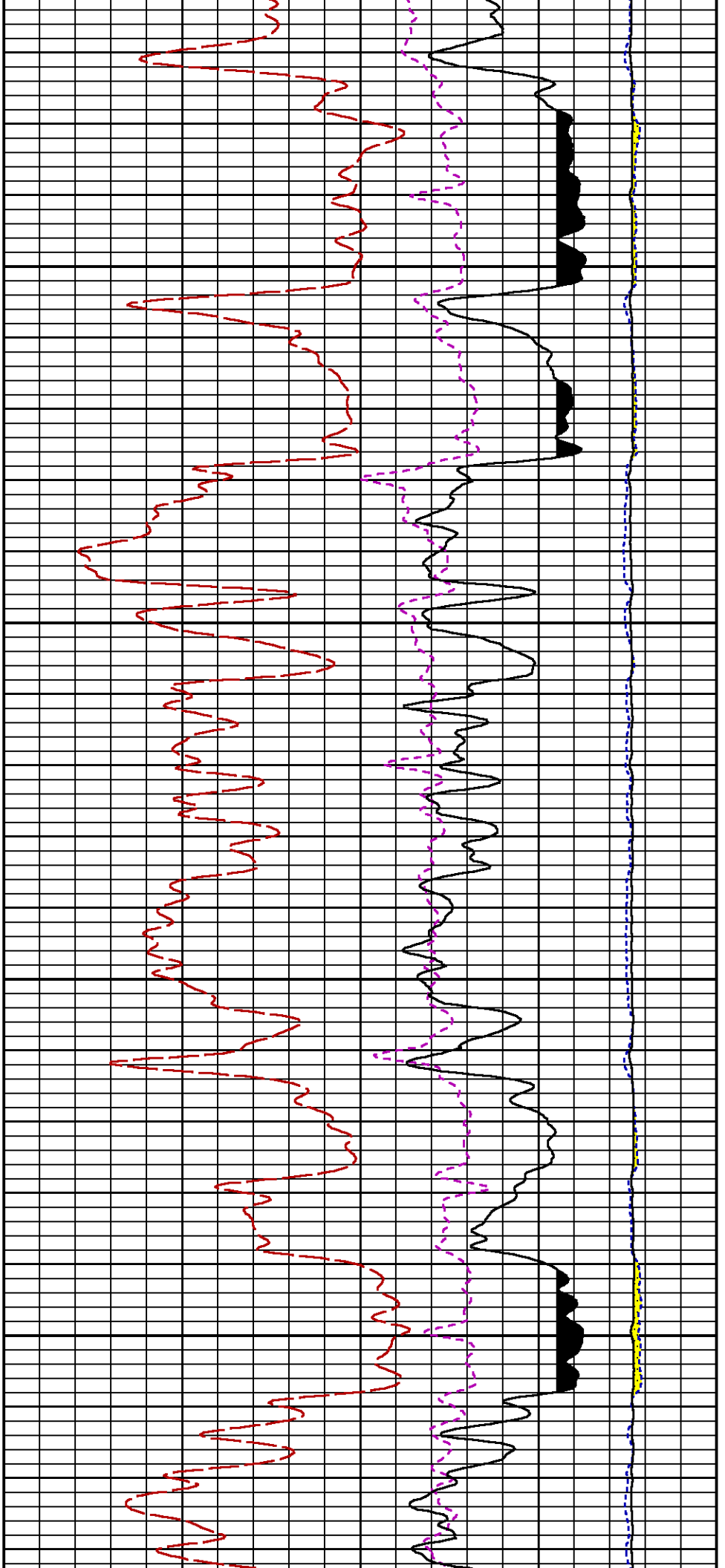
CURVE MEASURE POINT OFFSET

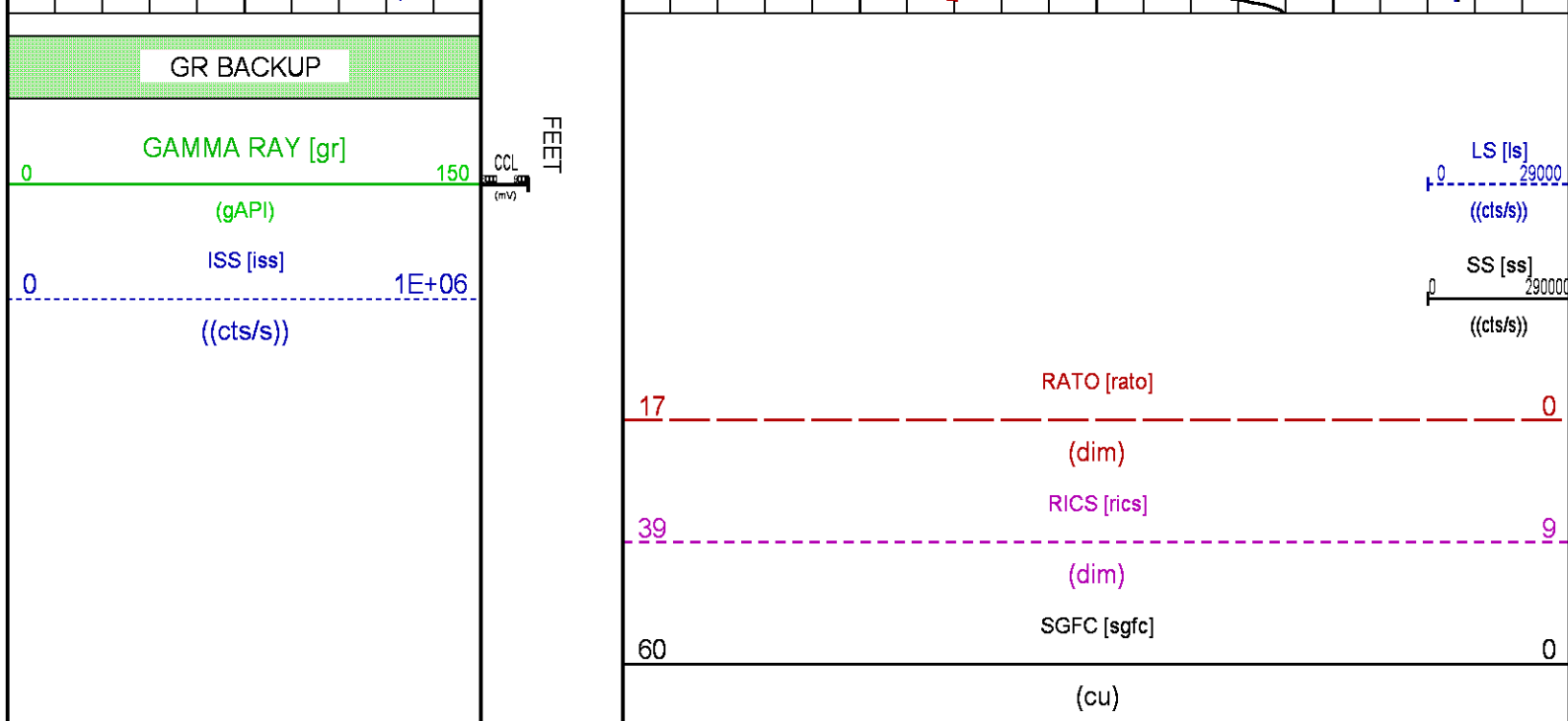
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:/dat1a/LARAMIE_BRUTON_30_19E/30-19E_RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 5260 - 5490.25 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_BRUTON_30_19E/30-19E_RPM_REPEAT.txtf
Created On : N/A
Company : LARAMIE ENERGY LLC
Well : BRUTON 30-19E
Field : VEGA
File Interval : 5235.5 - 5499 Feet
OCT : p353h







CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/LARAMIE_BRUTON_30_19E/p353h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Thu Mar 29 14:35:15 2018

UNIT #: 4352 ML4352

CALB JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	69.67	383.51	313.8	0.589	41.07	226.07	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Thu Mar 29 14:43:59 2018

UNIT #: 4352 ML4352

VERI JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	68.71	390.49	0.589	40.50	230.18	189.68
						175.00 195.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10430258

DATE/TIME PERFORMED: Wed Mar 28 19:08:19 2018

UNIT: 5753XD 111111

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10430258

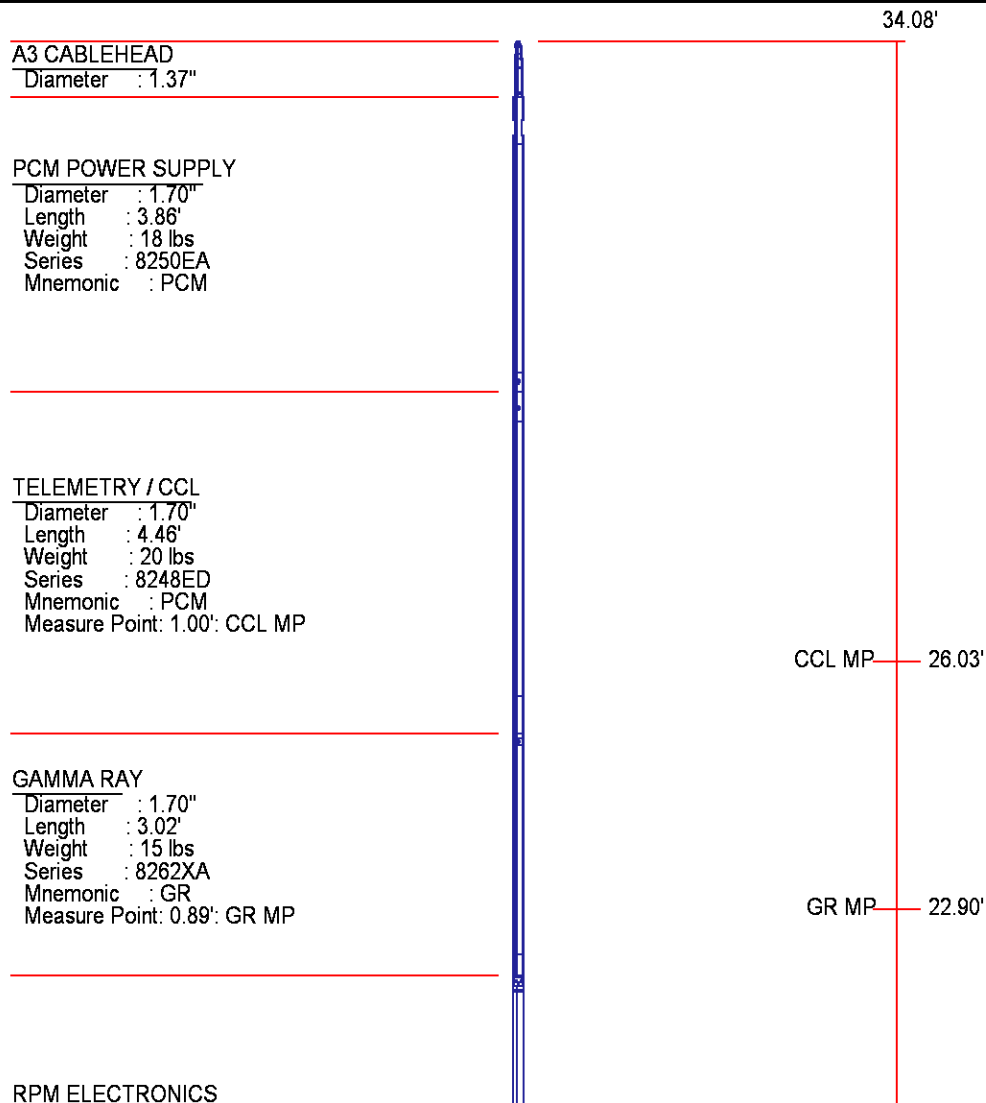
HOURS: 8281AA 19

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	809301	122	2198	2389	2242	108	8.0	0.9715
Interpolated	1300000	143	2176	2381	2236			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	809301	6008	943	130	26.12	0.15	24.24	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	809301	169224	26183	89244	31721	8211	54062	13165
Fit Quality %		0.813	0.977	0.775	0.776	0.762	0.739	0.755
	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
			ISS/ILS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS
Raw Data	809301	1.43	4.78	30.92	14.97	10.87	3.86	4.11
		1.42 1.45	3.55 5.52	22.20 32.70	10.89 16.34	10.06 11.10	3.57 3.95	3.76 4.22
Fit Quality %		0.043	0.140	0.095	0.134	0.015	0.022	0.029
Reduced	1378034	1.43	4.80	31.03	15.01	10.87	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: /dat1a/LARAMIE_NICHOLS_0994_24_06W/RPM-tdg



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

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 1.65'
PRES MP

BULL PLUG 1 11/16

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

0.00'

**BAKER
HUGHES**
a GE company



COMPANY
WELL
FIELD
COUNTY

LARAMIE ENERGY LLC
BRUTON 30-19E
VEGA
MESA

STATE **COLORADO**

FILE NO:

CH133066

API NO:

05077104730000

LOCATION:

SHL: 2636' FSL & 1854' FEL
BHL: 615' FSL & 1175' FEL

ELEVATIONS:

KB 7673 FT
DF
GL 7643 FT



	SEC	<u>30</u>	TWP	<u>9S</u>	RGE	<u>93W</u>	DATE	<u>03-Apr-2018</u>
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