



RESERVOIR PERFORMANCE MONITOR

FILE NO:

API NO:
05077104180000

COMPANY
WELL
FIELD
COUNTY

LARAMIE ENERGY II LLC
NICHOLS 0994-24-01W
VEGA
MESA

STATE
COLORADO

Ver. 4.10

LOCATION:

SHL 1786 FNL 2789 FEL
BHL 118 FNL 1539 FEL

SEC 24 TWP 9S RGE 94W

OTHER SERVICES
RAL

PERMANENT DATUM
LOG MEASURED FROM
DRILL. MEAS. FROM

GL ELEVATION 7137 FT
KB 24 FT ABOVE P.D.
KB

ELEVATIONS:
KB 7161 FT
DF
GL 7137 FT

DATE	15-Mar-2018
RUN	2
TRIP	1
SERVICE ORDER	US133006J
DEPTH DRILLER	7759 FT
DEPTH LOGGER	7670 FT
BOTTOM LOGGED INTERVAL	7669 FT
TOP LOGGED INTERVAL	2373 FT
TIME STARTED	15:00
TIME FINISHED	21:00
OPERATOR RIG TIME	LOGGER
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	50 FT
LOGGED CEMENT TOP	2140 FT
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	17 FMIN
MAX. RECORDED TEMP.	226 DEGF
REFERENCE LOG	NA
REFERENCE LOG DATE	NA
EQUIP. NO.	4291
LOCATION	R. ZUNIGA
GRAND JCT	
RECORDED BY	NA
WITNESSED BY	

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 2 TRIP 1: GR/CCL/RPM/TEMP RUN IN COMBINATION

LOGGED WITH 0 PSI AT WELLHEAD

SJ: 5965-5984
SJ: 6860-6878

CREW: R. ZUNIGA, J. PENA, A. SHAHNOOSHI

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
2	1	TELEMETRY	8250 EA/8248 ED	10185091/10323398	FREE
2	1	GR	8262 XA	10317216	FREE
2	1	RPM ELEC	8281 EA	10190985	FREE
2	1	RPM	8283 PA/8281 FA	10068031/10076673	FREE
2	1	TEMP	8255 XA	166341	FREE

G-SAND PNC 3D MODE

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

Patches: 3

Plotted: Thu Mar 15 22:07:55 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_NICHOLS_0994-24-01W/p353h04.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 2308.735 ft BOTTOM DEPTH: 3059.891 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

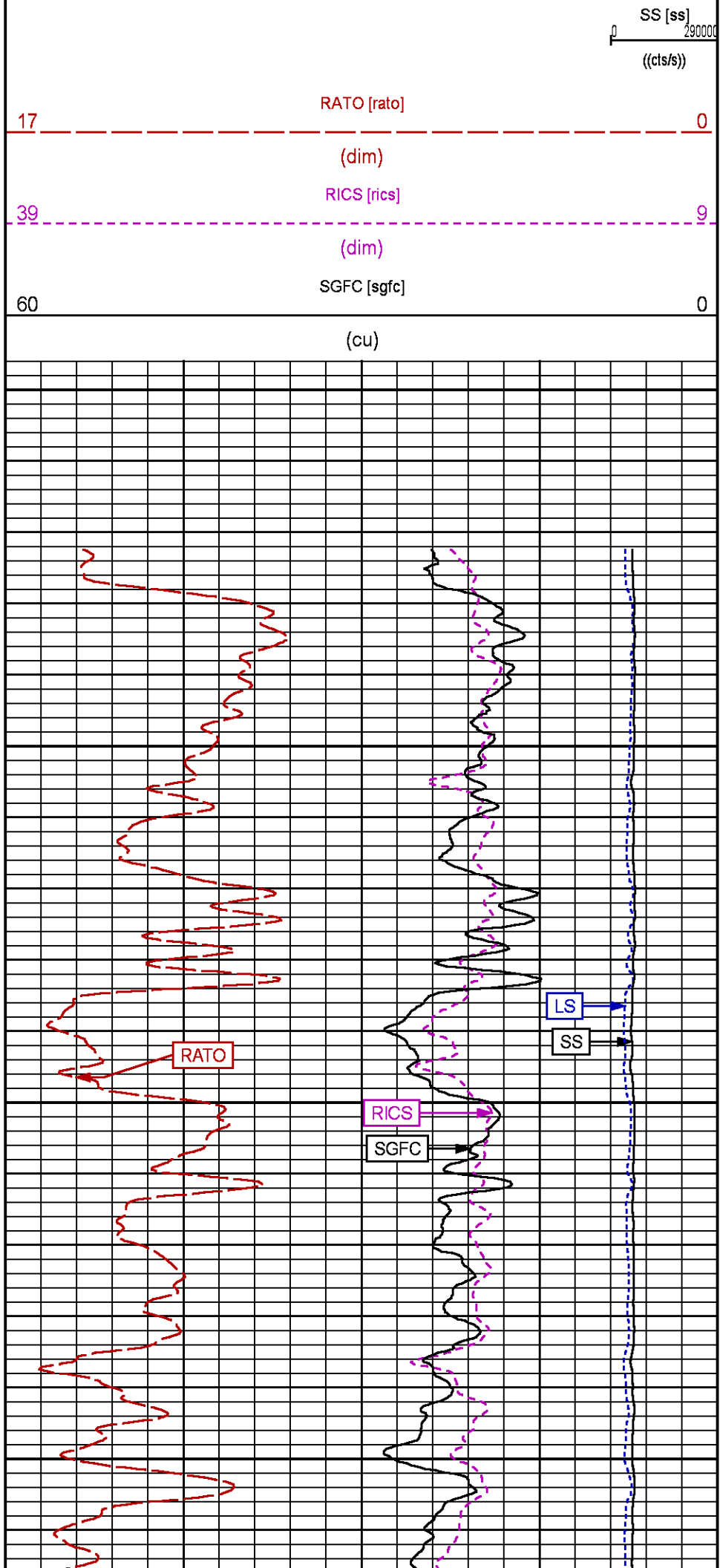
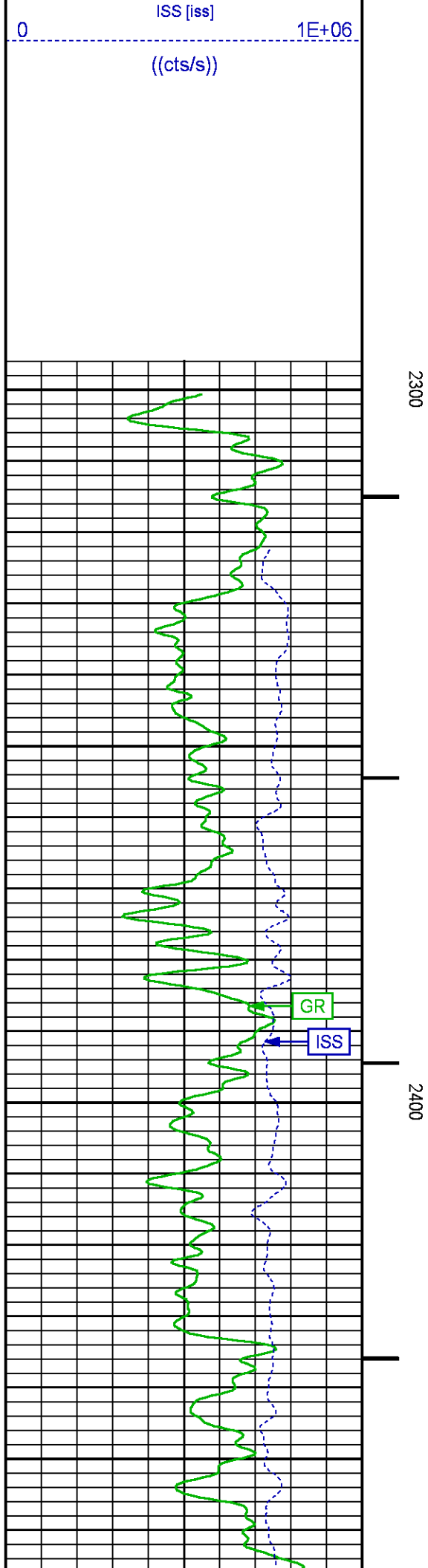
CURVE MEASURE POINT OFFSET

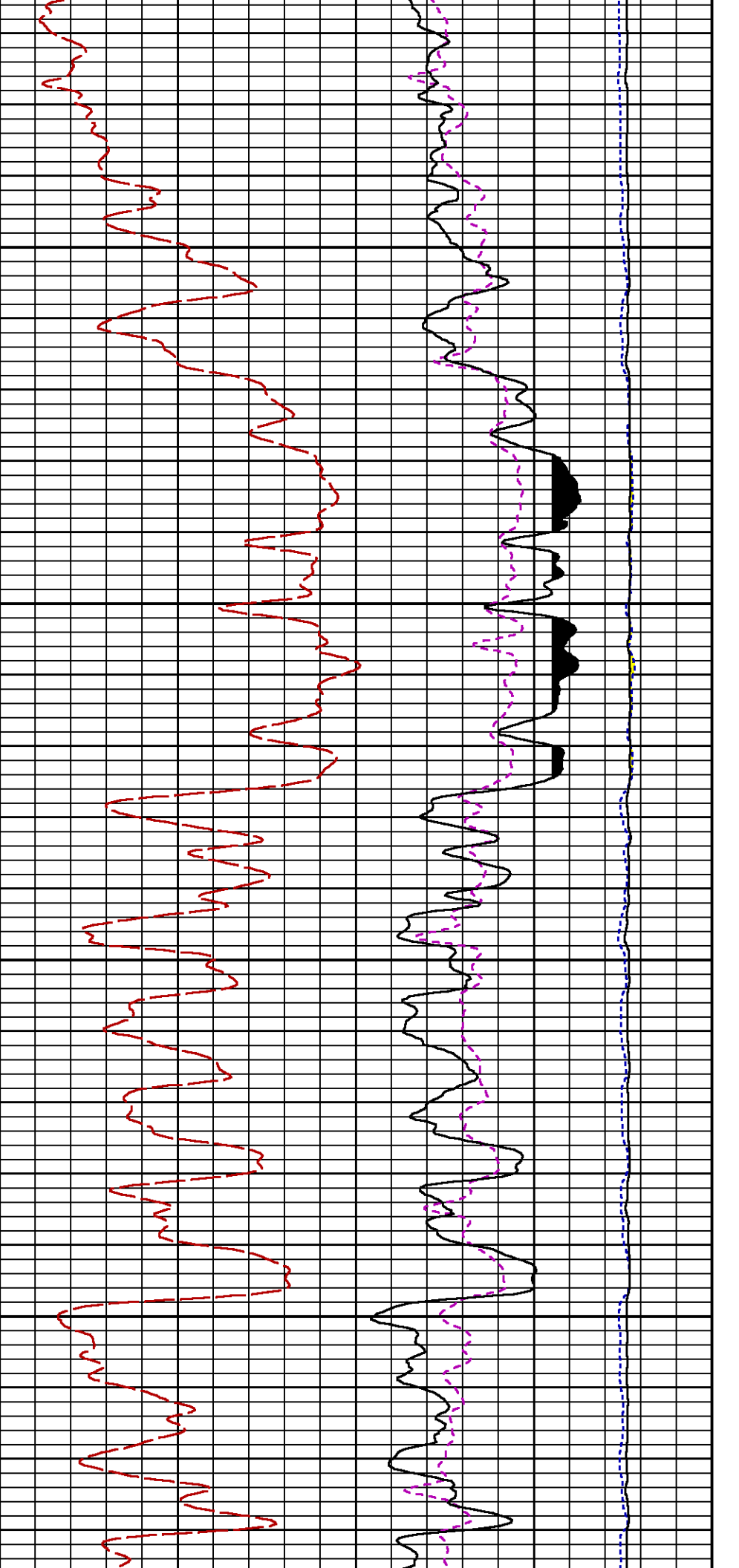
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

Presentation : SysA:LARAMIE_RPM_GS.fvpdf [5"/100' Scale]
Plot Interval : 2296.5 - 3070.25 Feet

Data File 1 : F1 : SysA:/dat1a/LARAMIE_NICHOLS_0994-24-01W/RPM_GS.xtf
Created On : N/A
Company : LARAMIE ENERGY II LLC
Well : NICHOLS 0994-24-01W
Field : VEGA
File Interval : 2296.5 - 3071.75 Feet
OCT : p353h

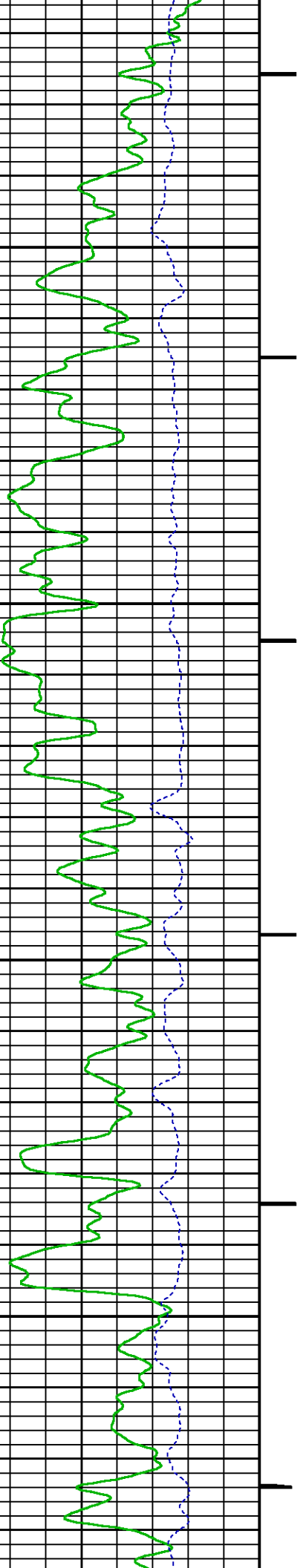


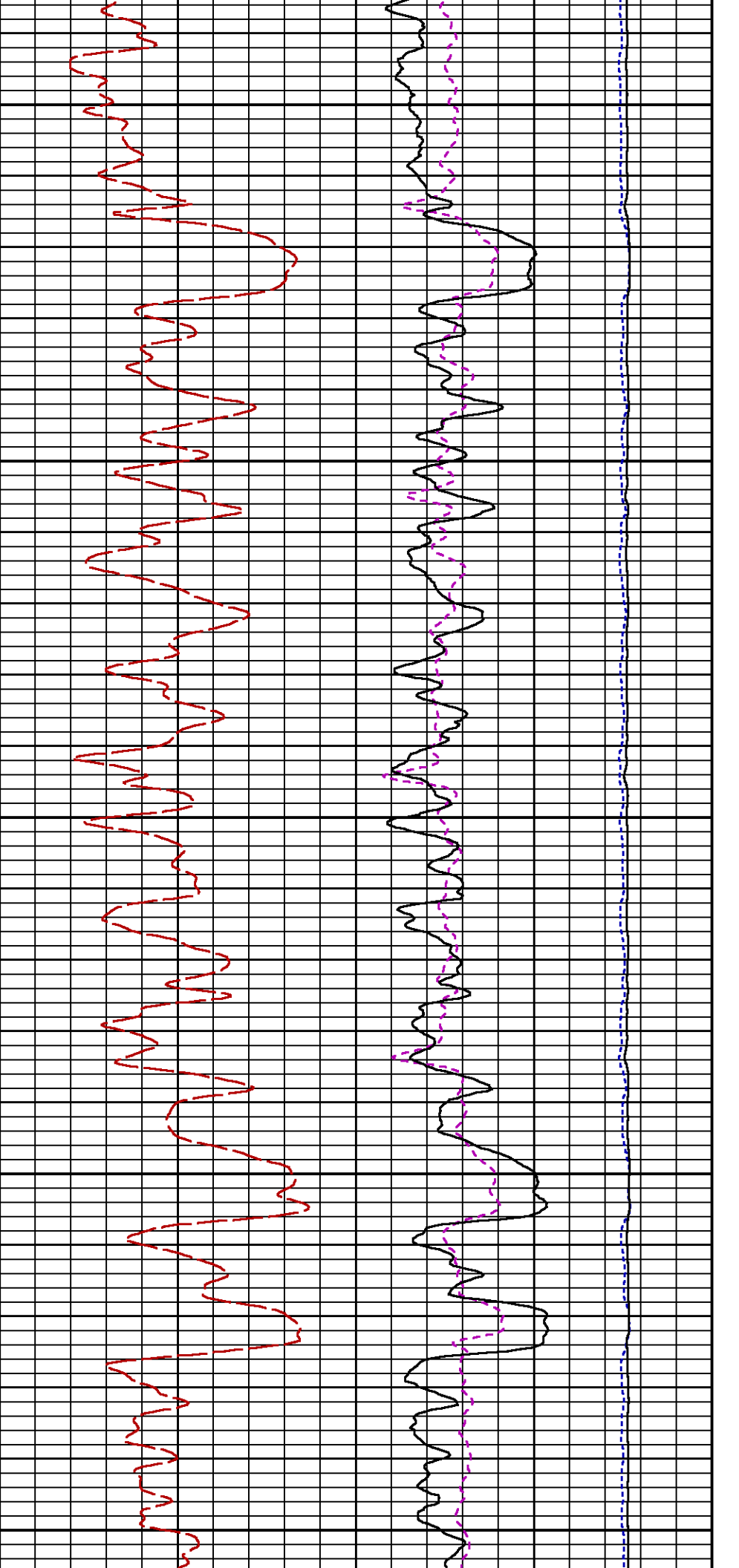




2500

2600

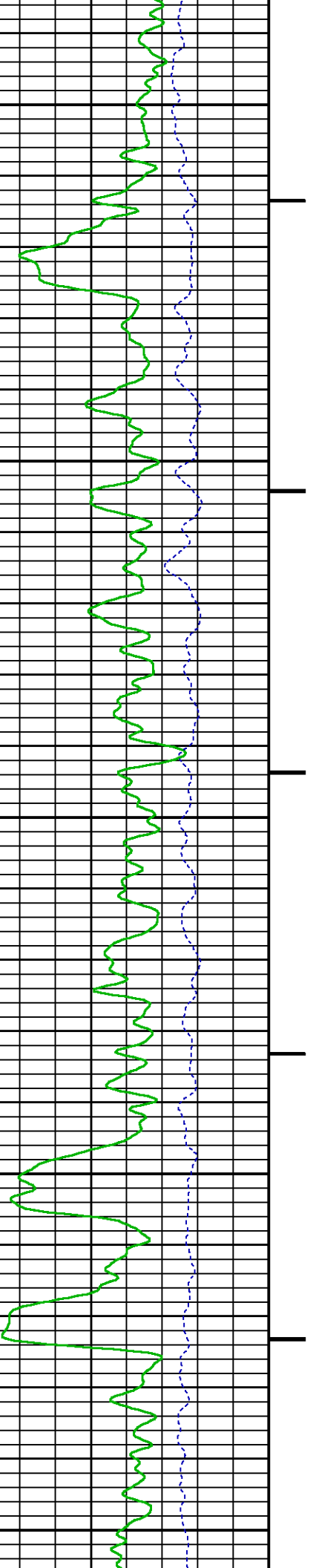


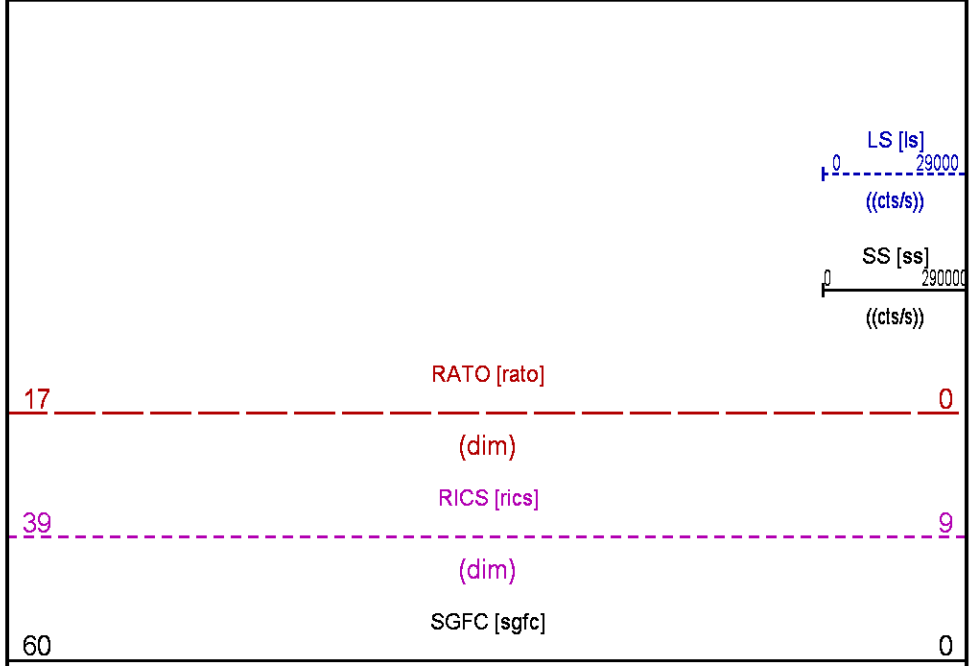
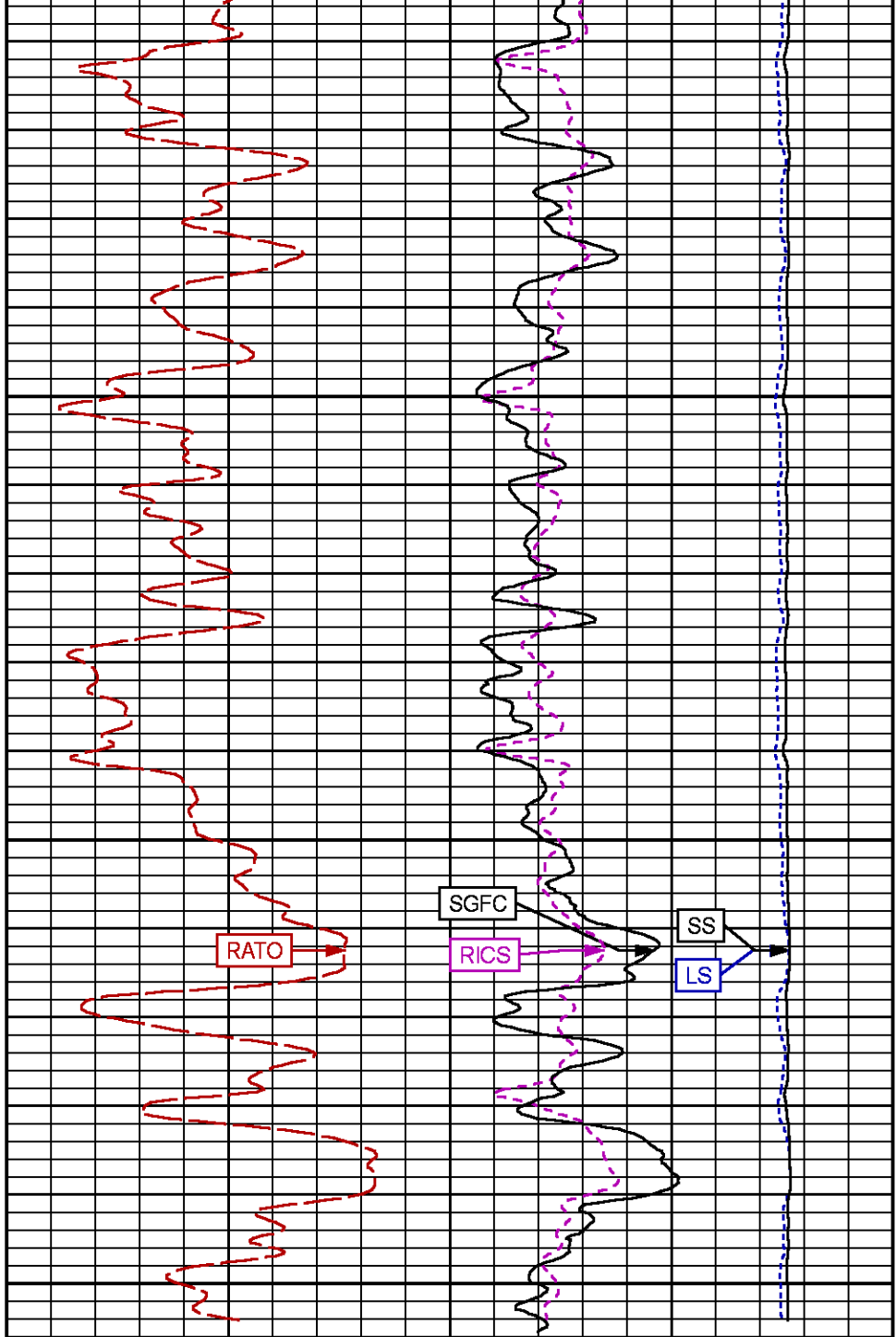
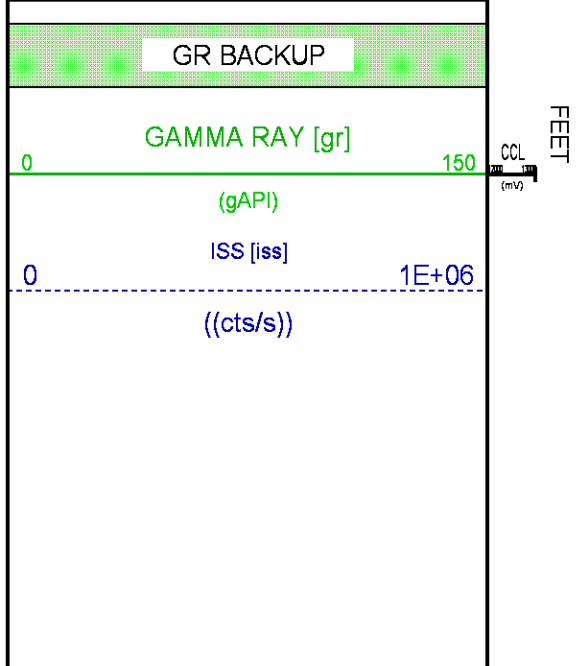
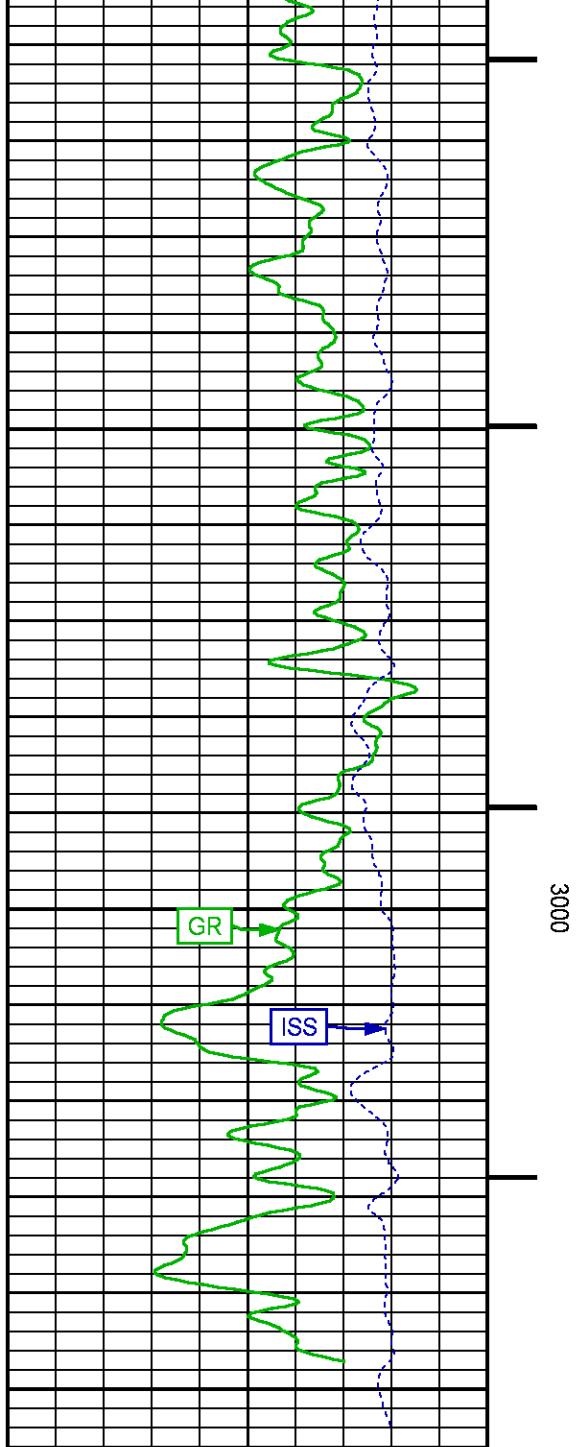


2700

2800

2900





WILLIAMS FORK PNC 3D MODE

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

Plotted: Thu Mar 15 21:27:04 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_NICHOLS_0994-24-01W/p353h03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4382.500 ft BOTTOM DEPTH: 6483.601 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
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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

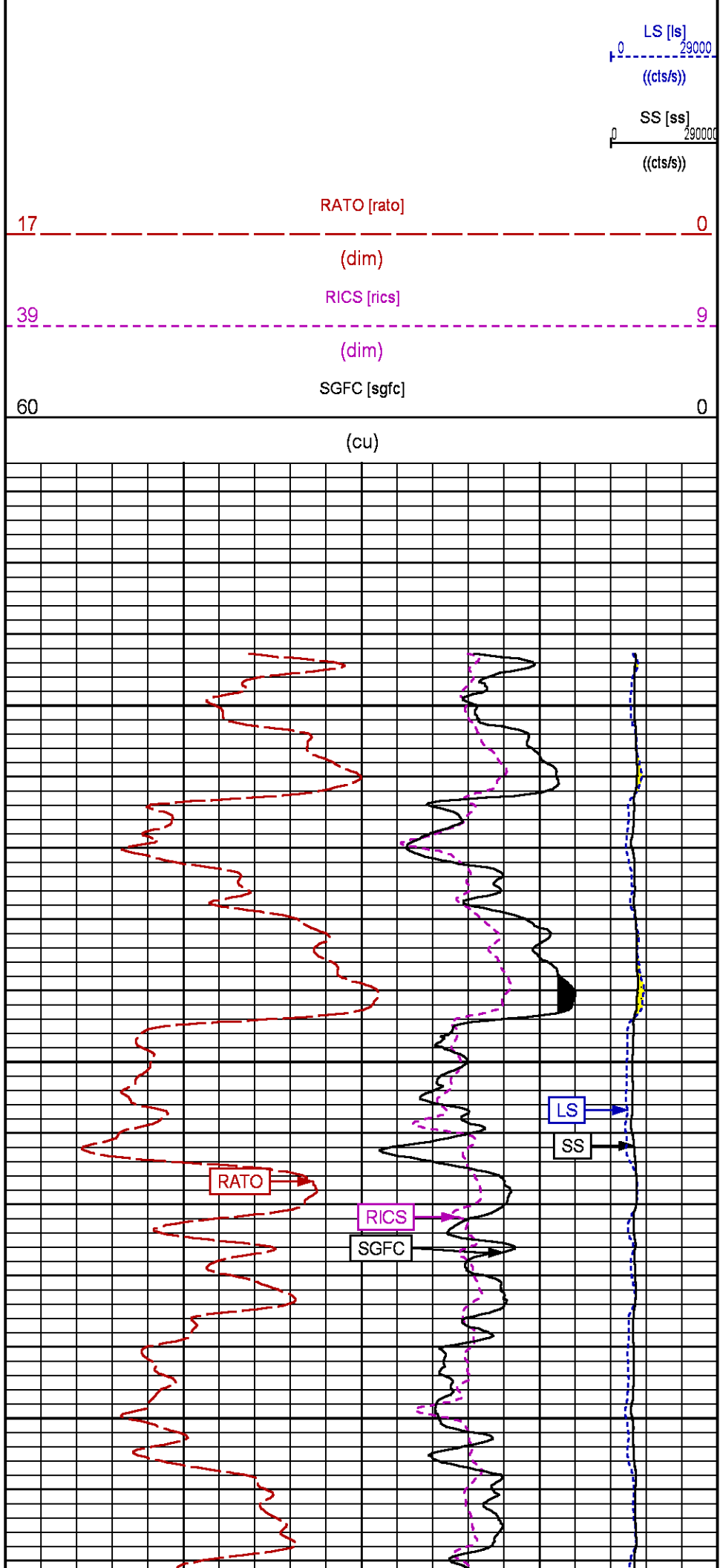
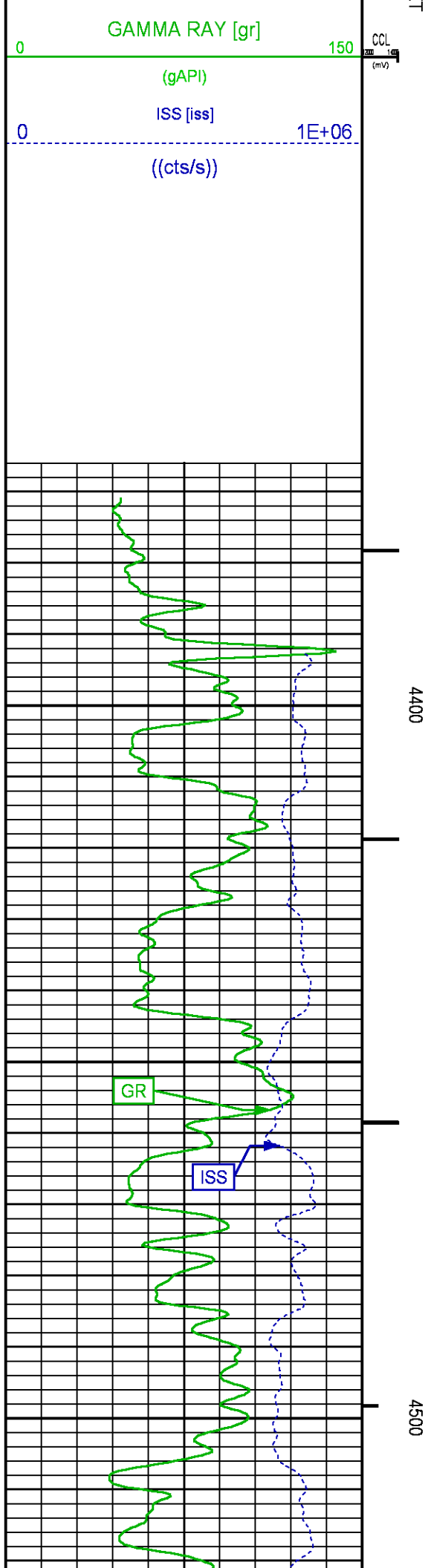
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-26.00	ISS	-12.75	RATO	-12.75	SGFC	-12.75
GR	-23.00	LS	-12.75	RICS	-12.75	SS	-12.75

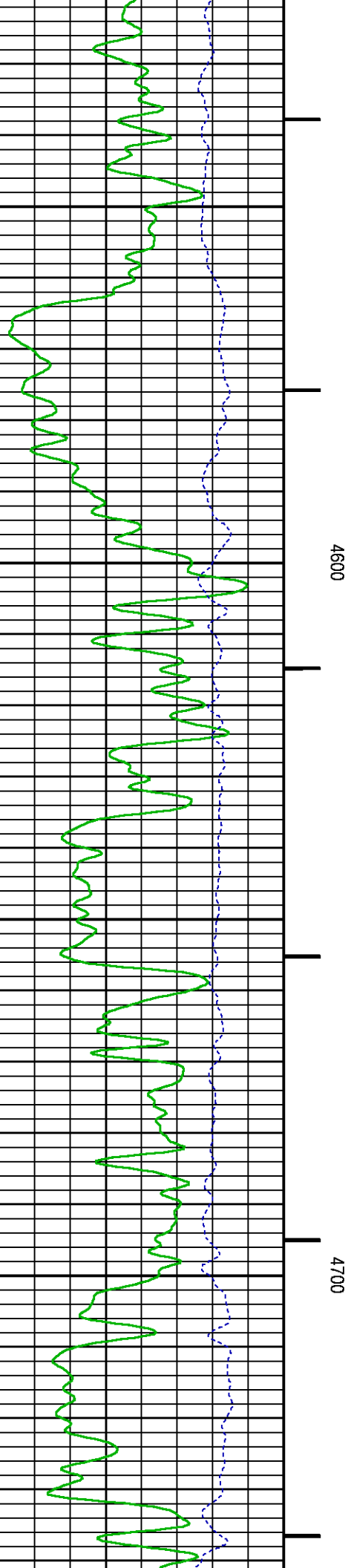
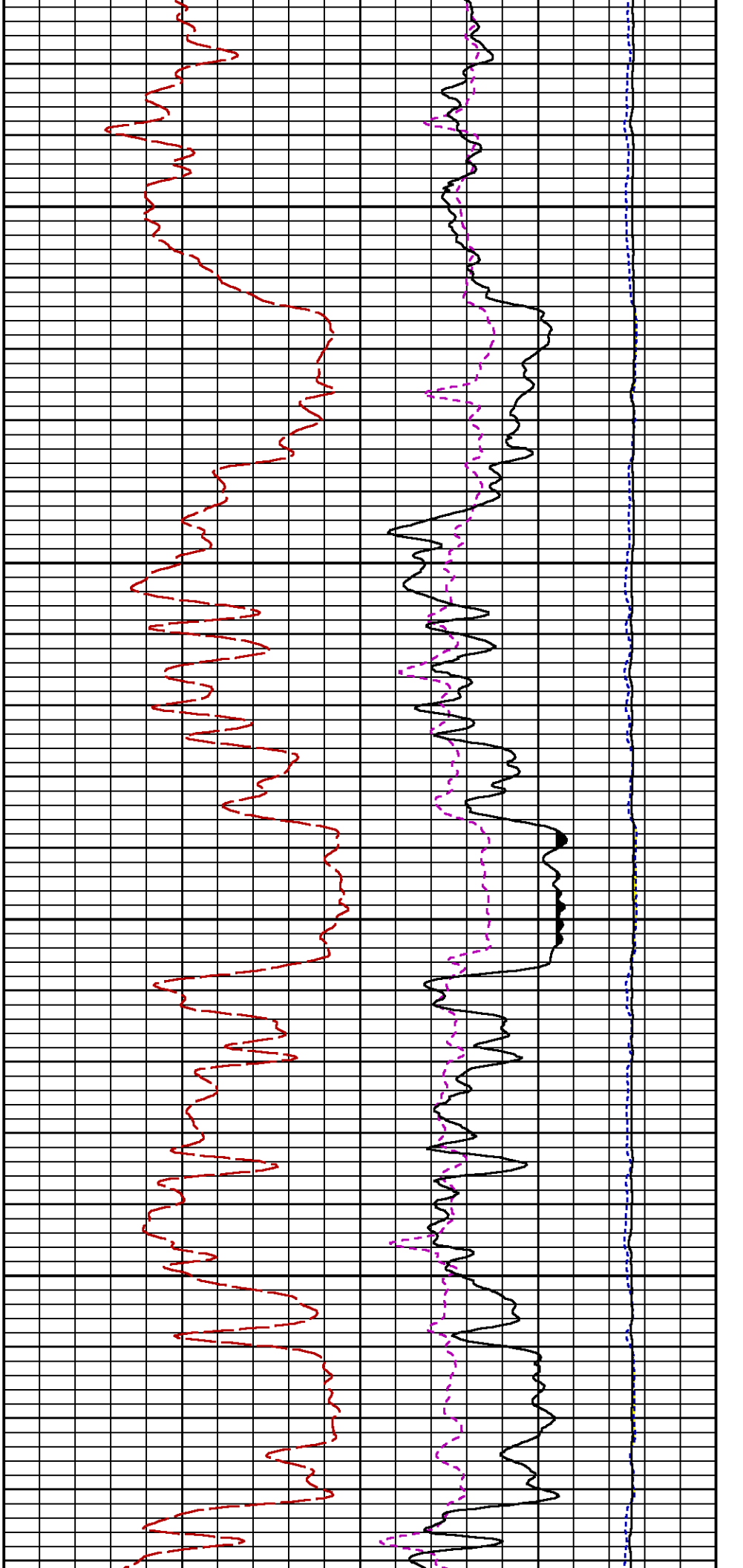
Presentation : SysA:LARAMIE_RPM_WF.fvpdf [5"/100' Scale]
Plot Interval : 4366.75 - 7677 Feet

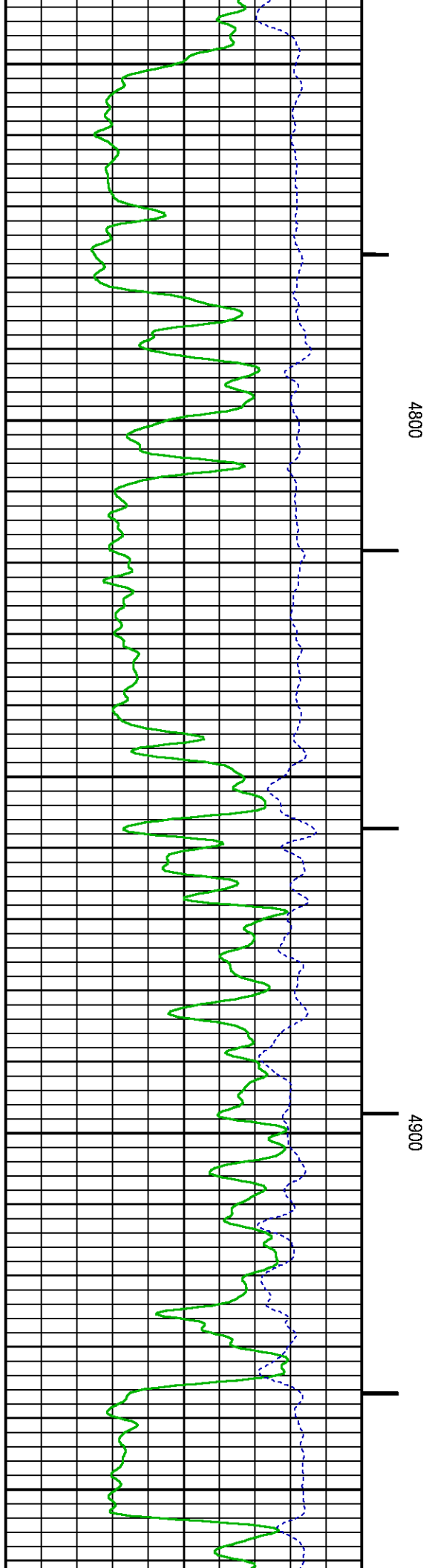
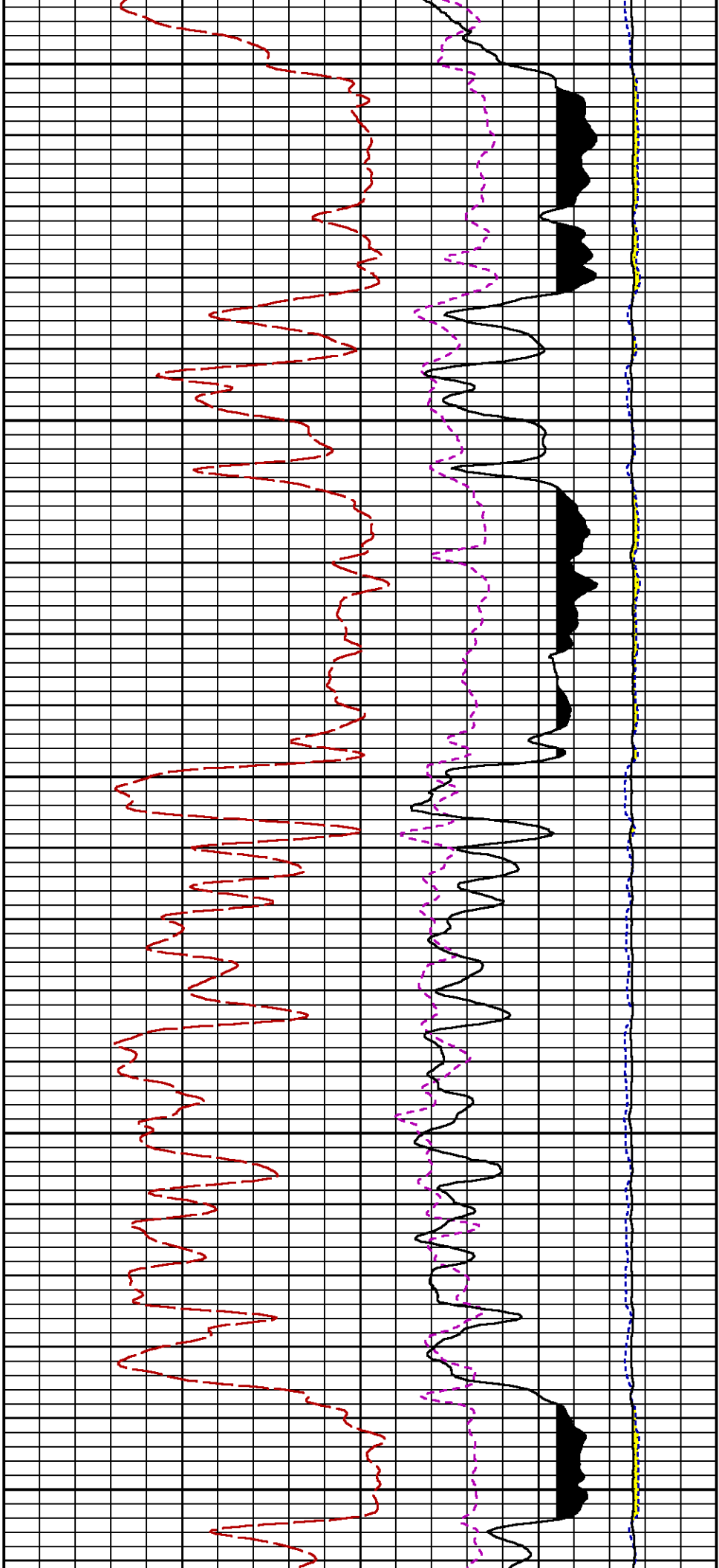
Data File 1 : F1 : SysA:/dat1a/LARAMIE_NICHOLS_0994-24-01W/RPM_WF.xtf
Created On : N/A
Company : LARAMIE ENERGY II LLC
Well : NICHOLS 0994-24-01W
Field : VEGA
File Interval : 4357 - 7677 Feet
OCT : 0353h

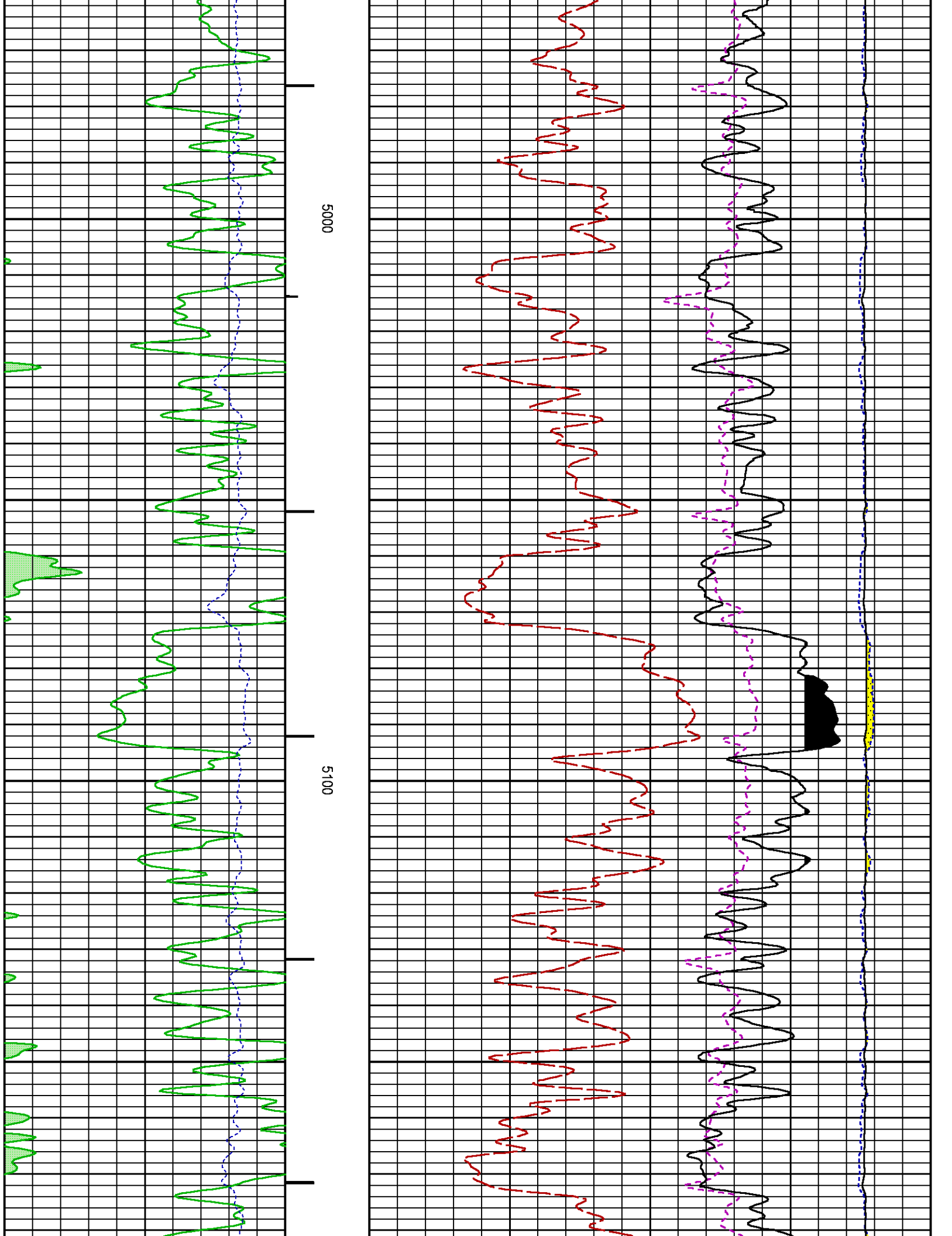
GR BACKUP

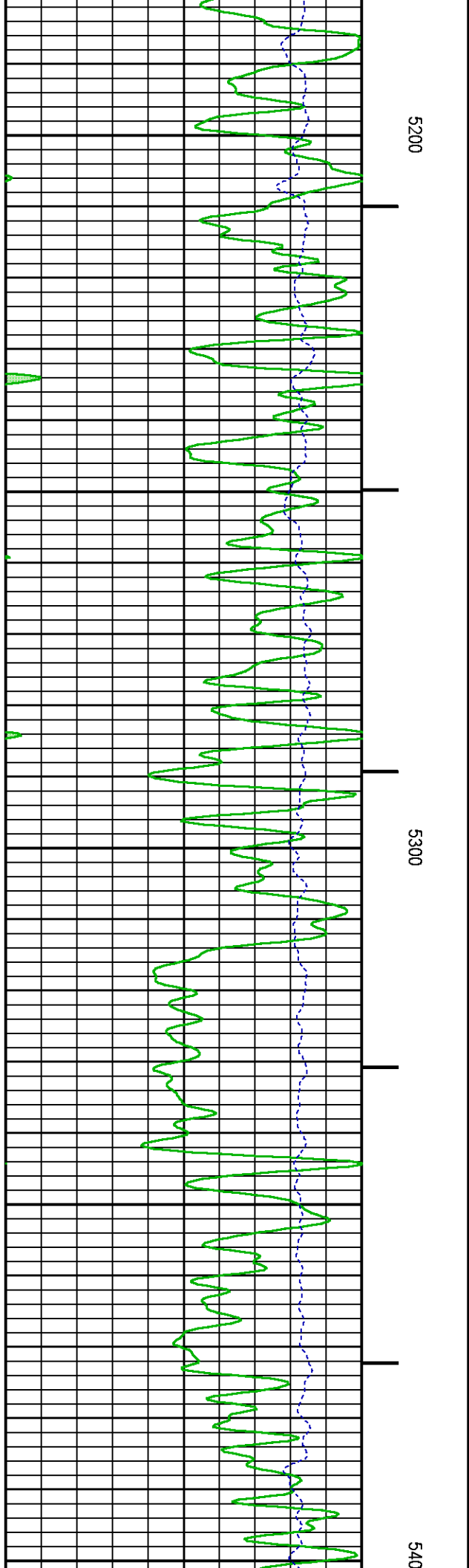
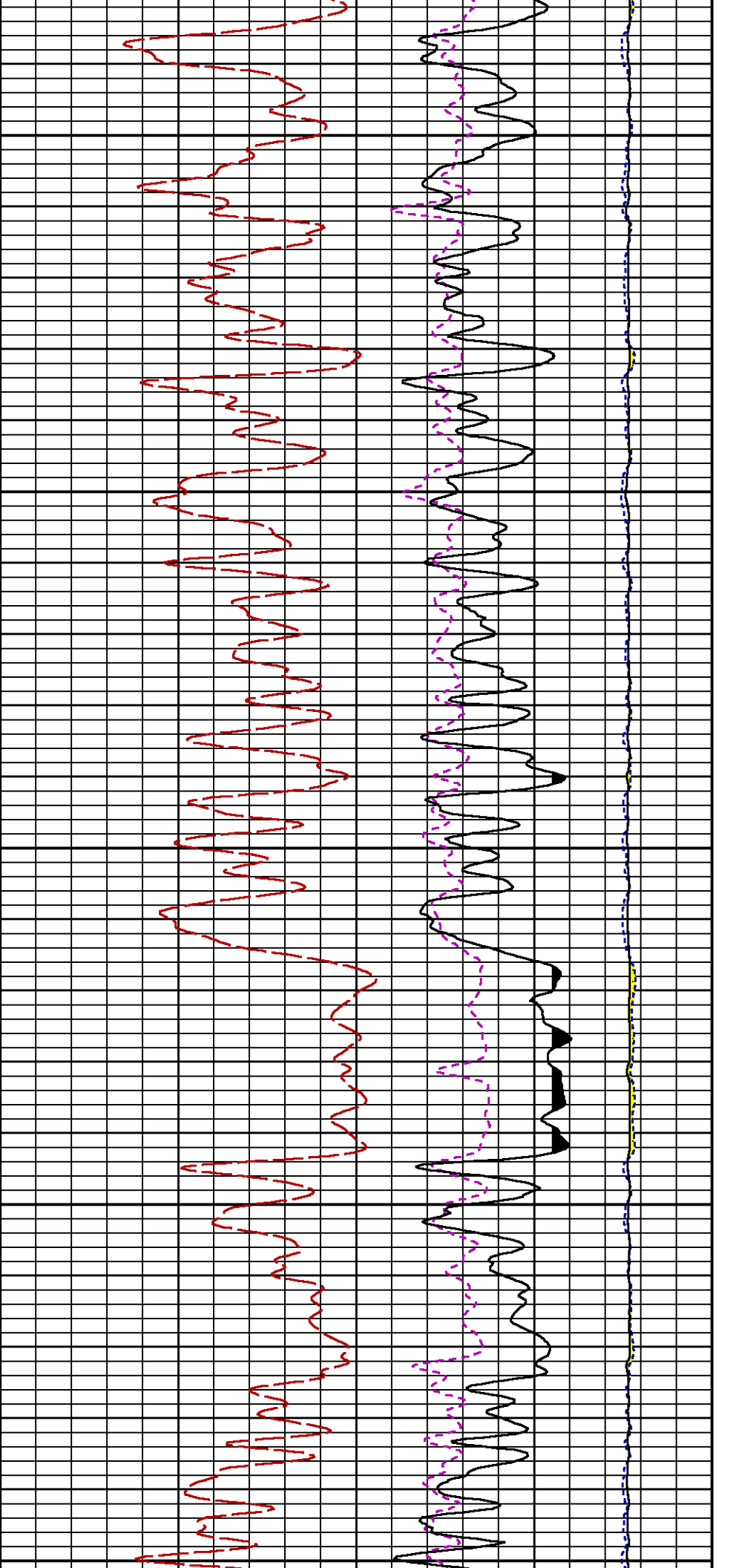
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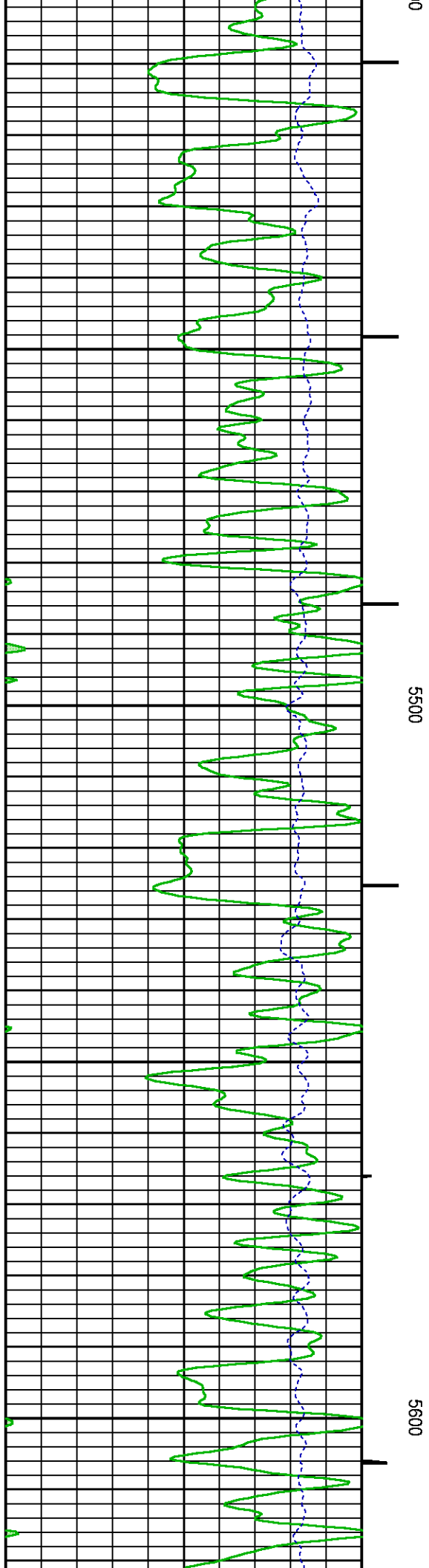
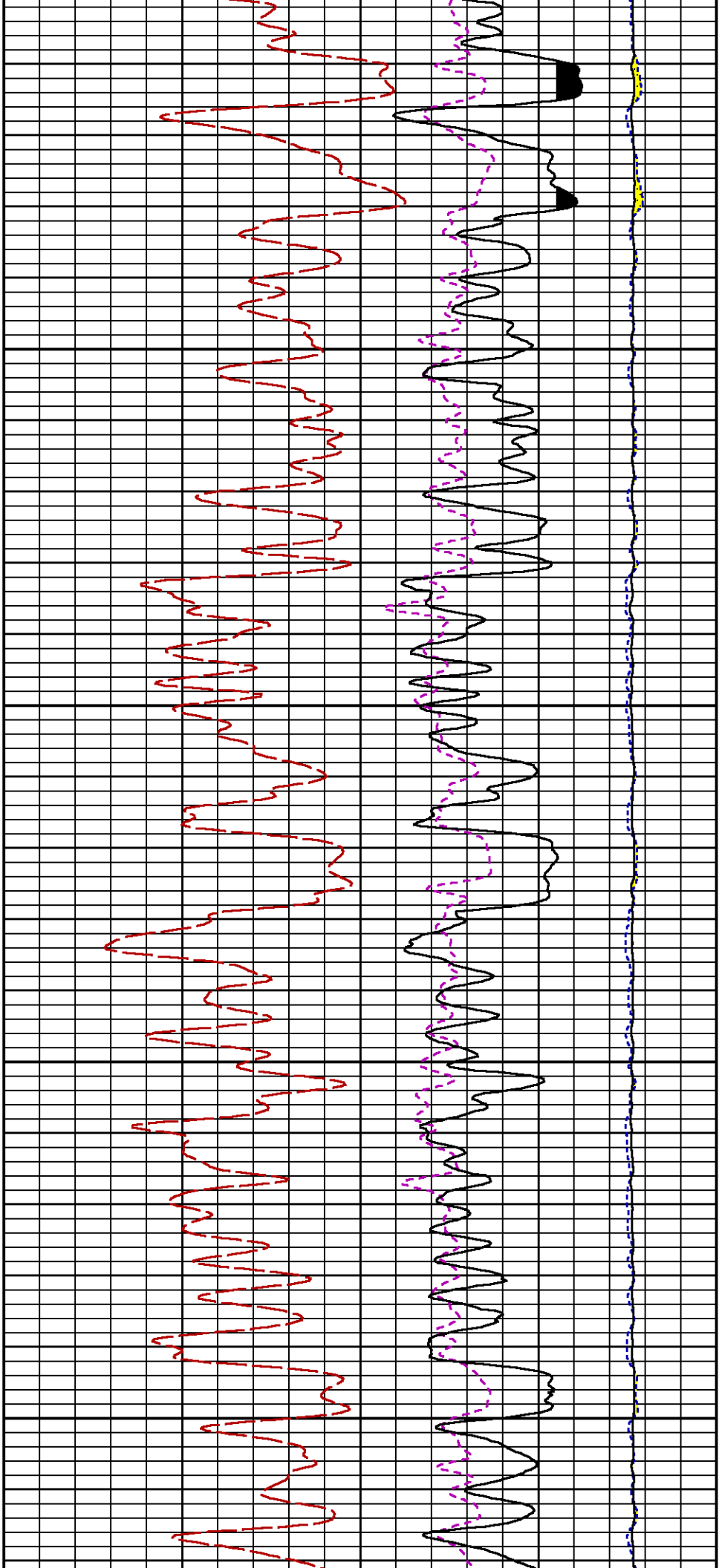


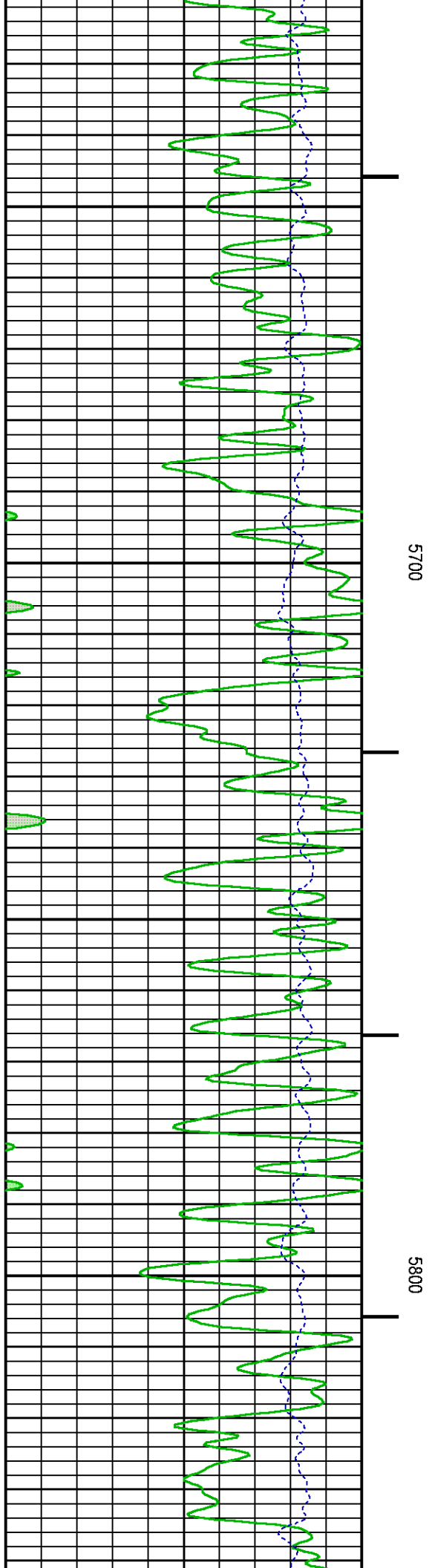
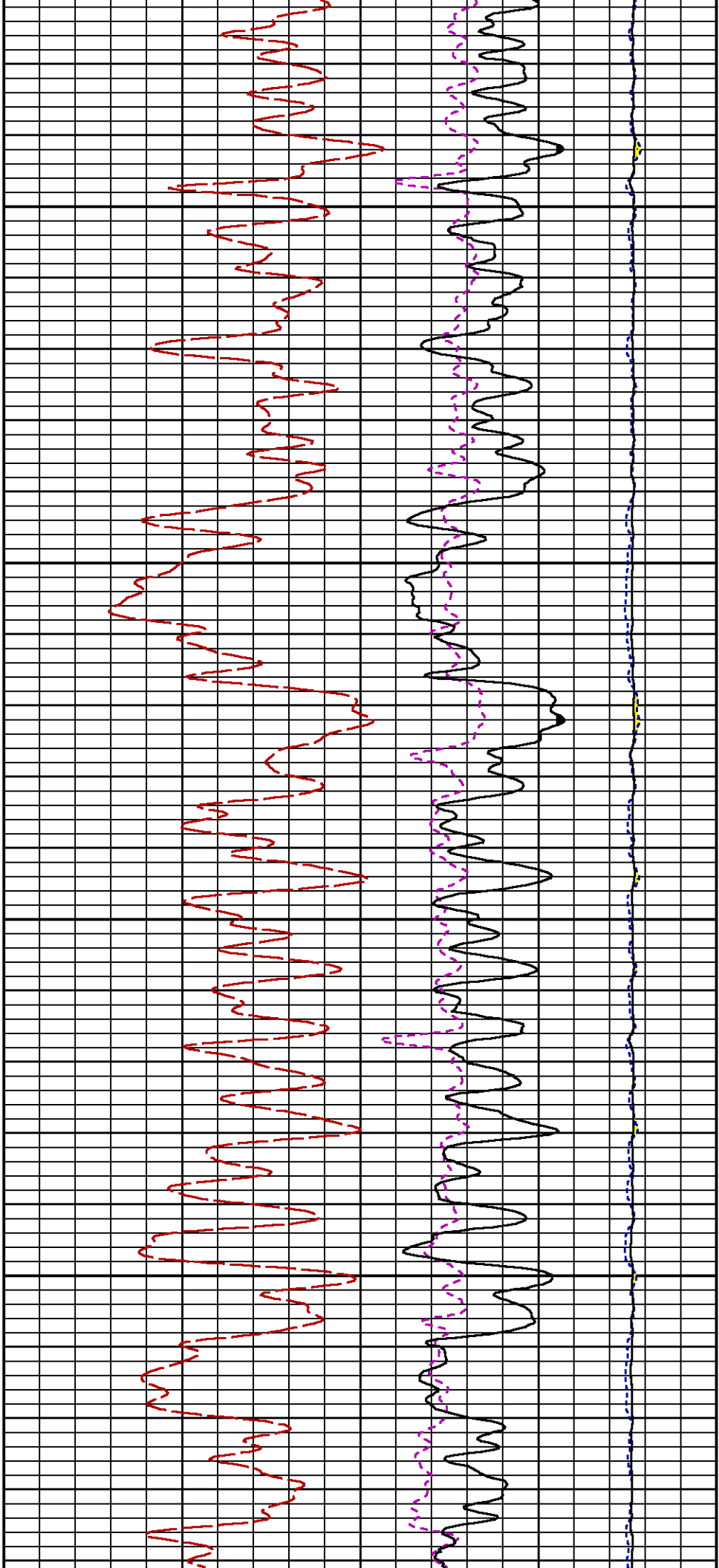


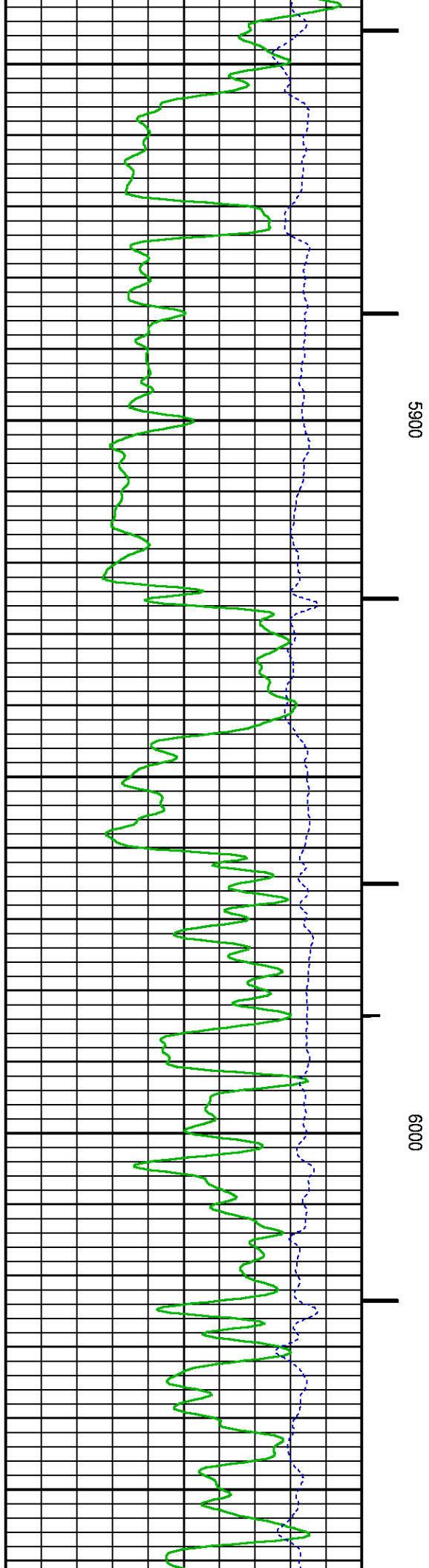
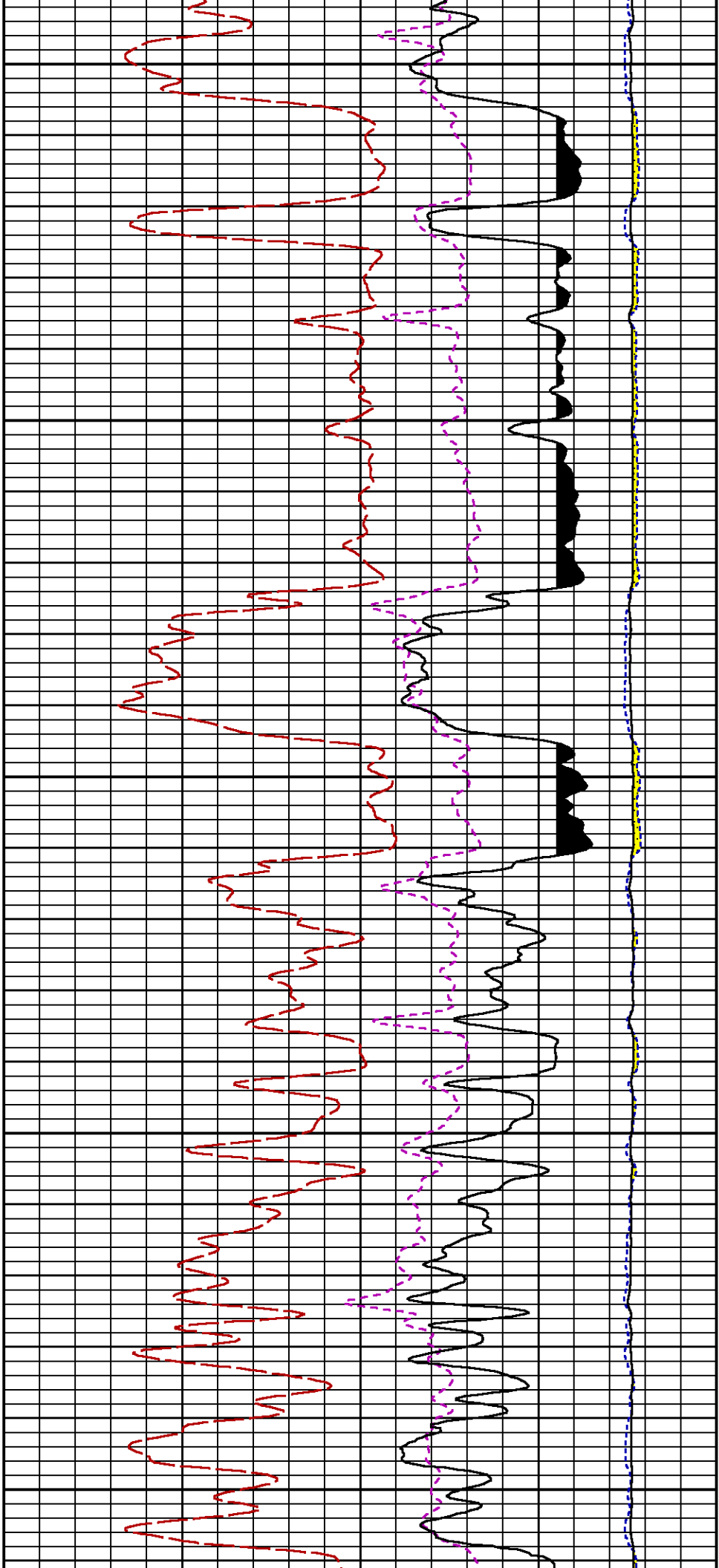


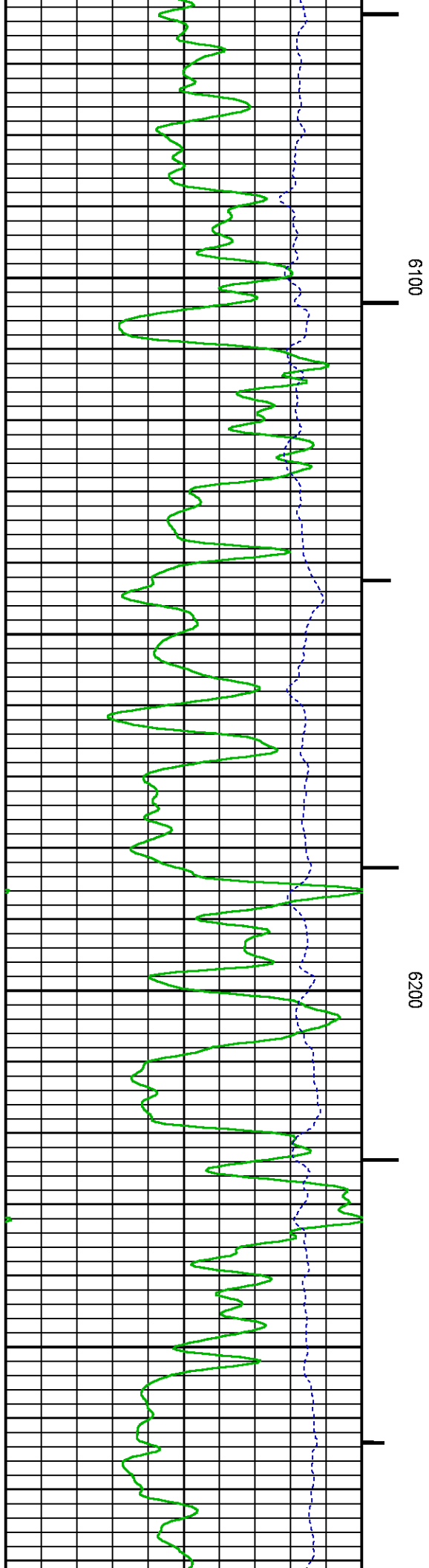
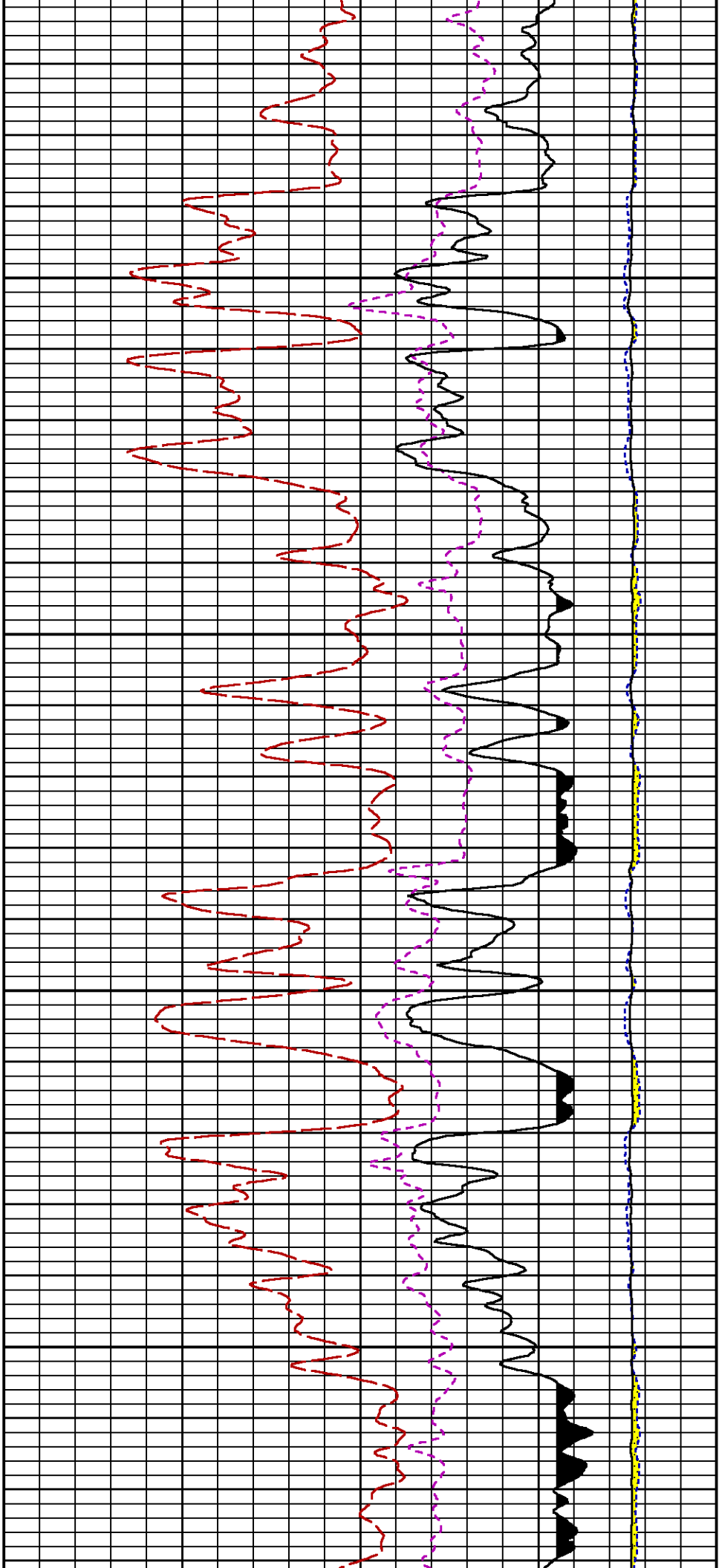


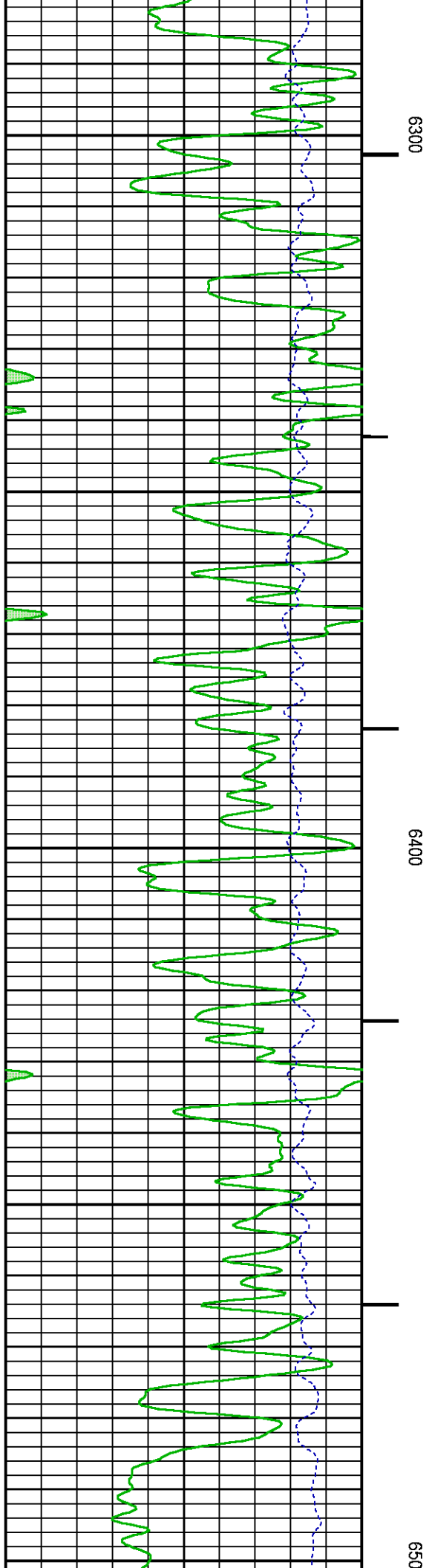
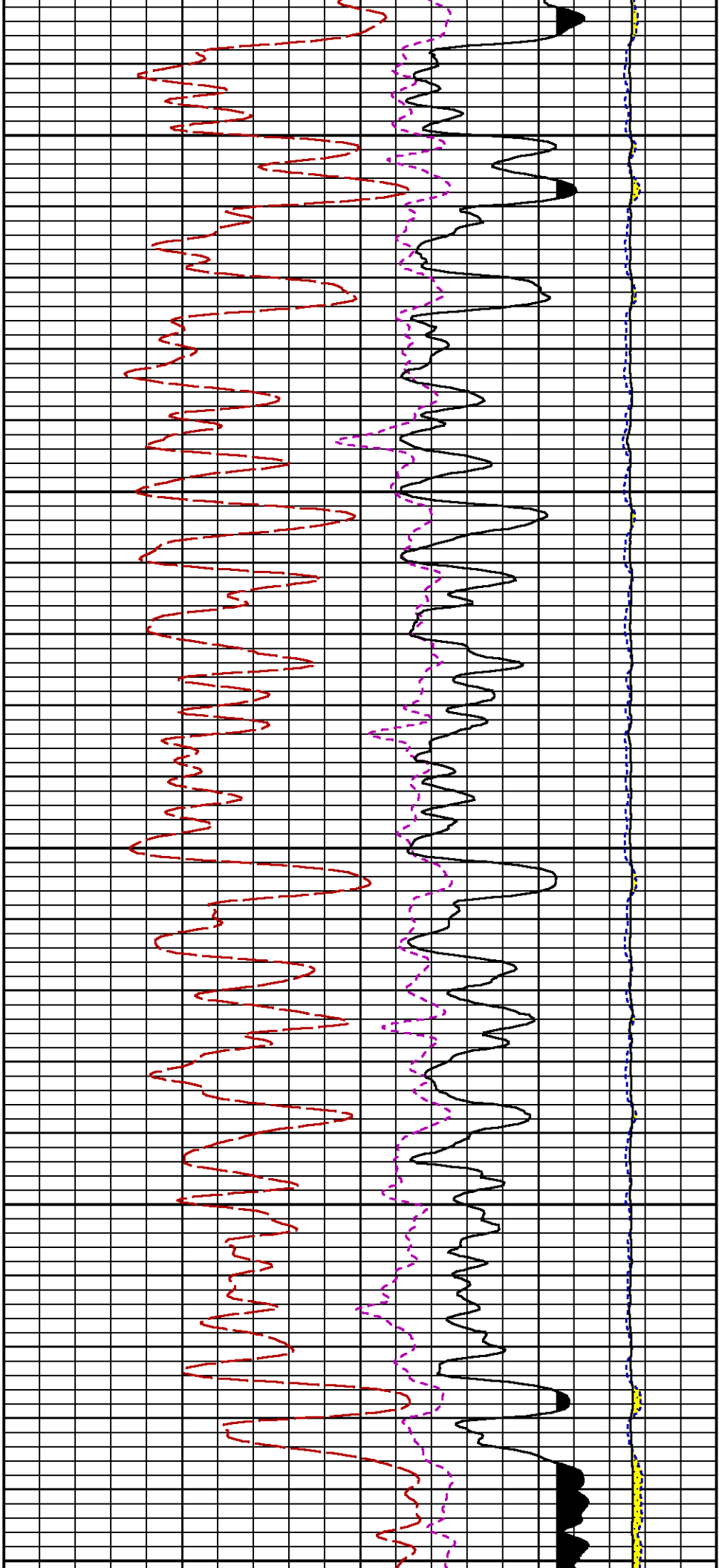


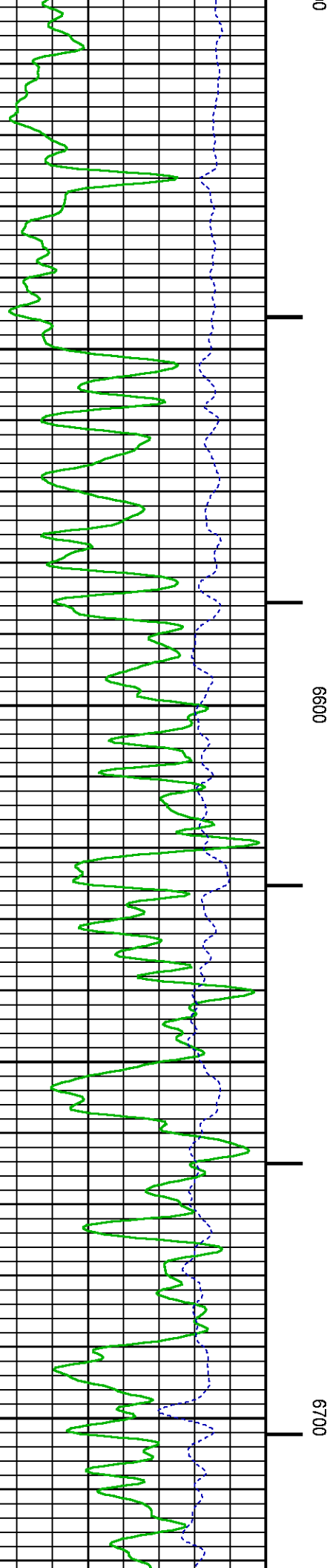
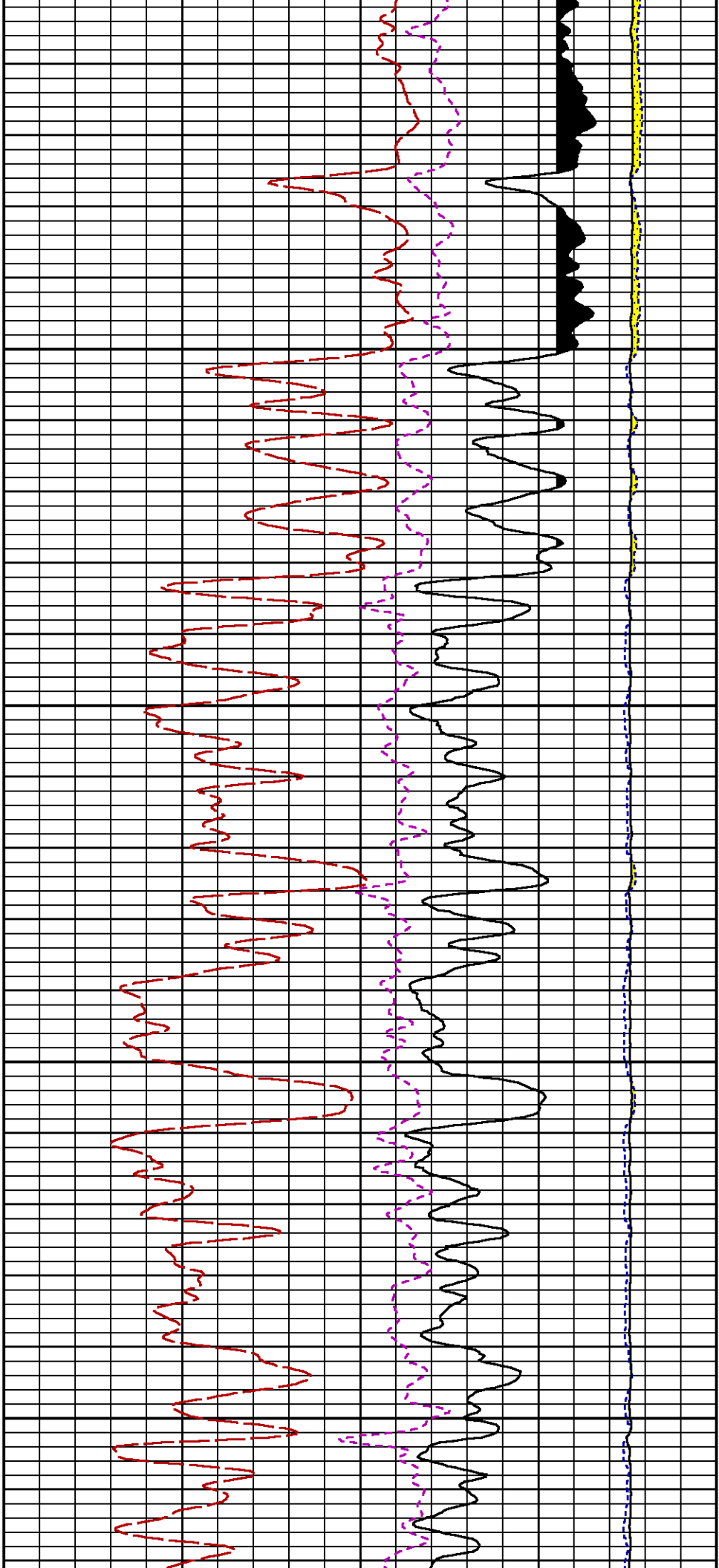


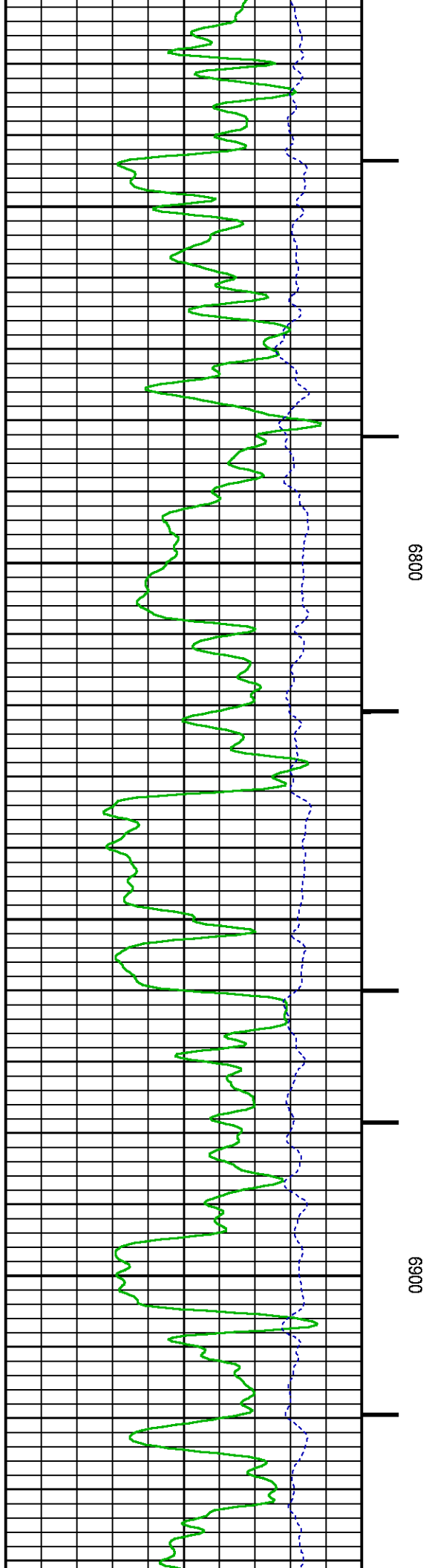
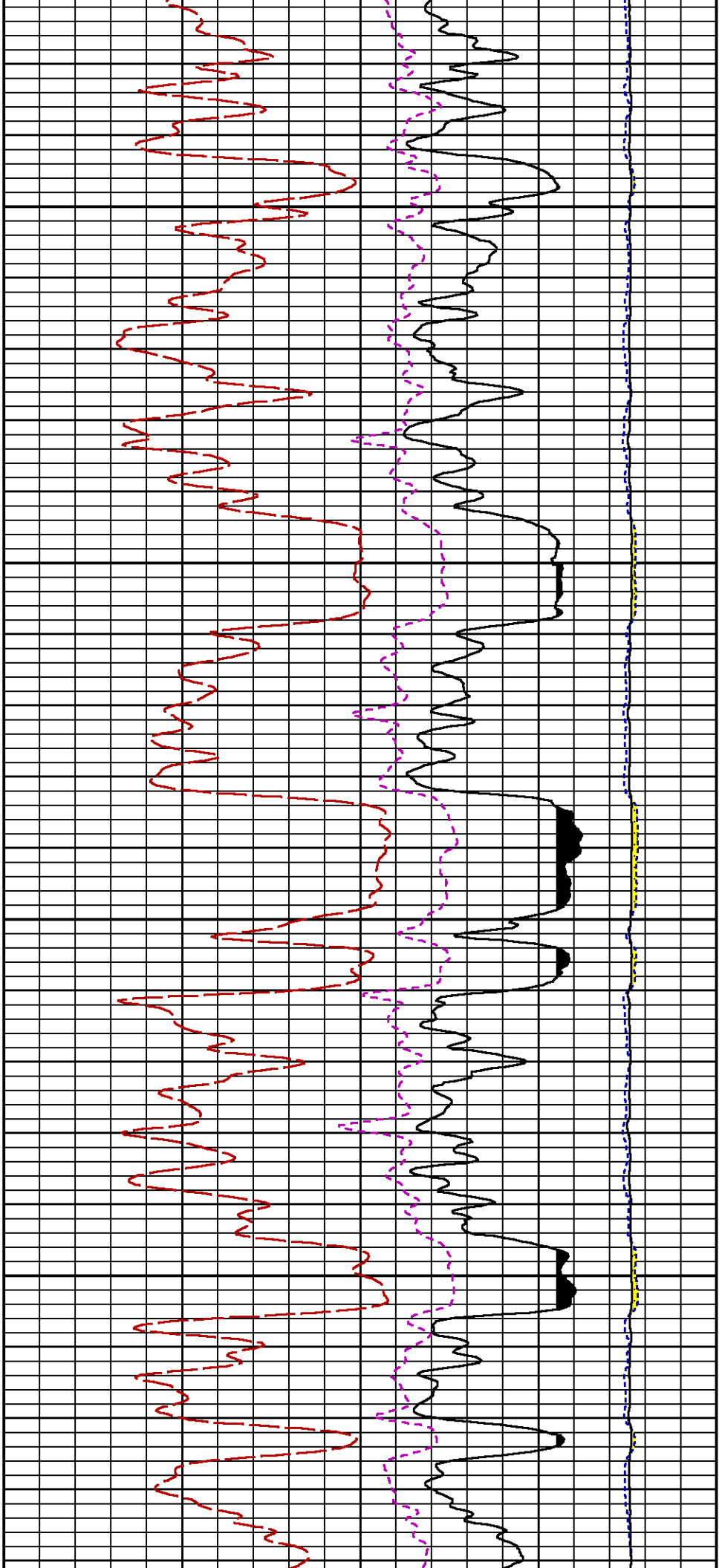


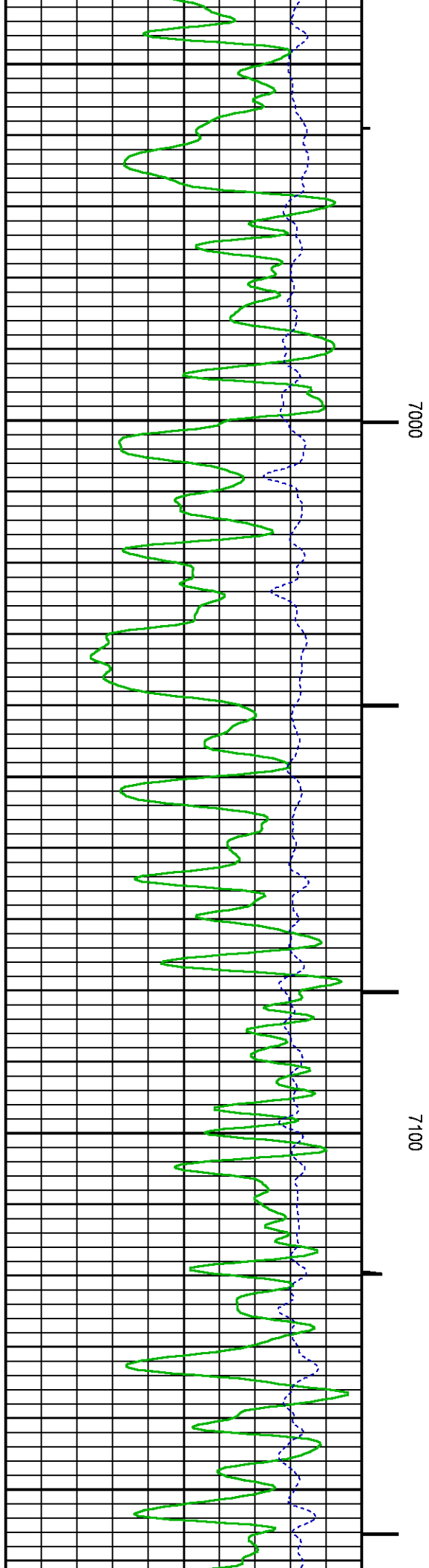
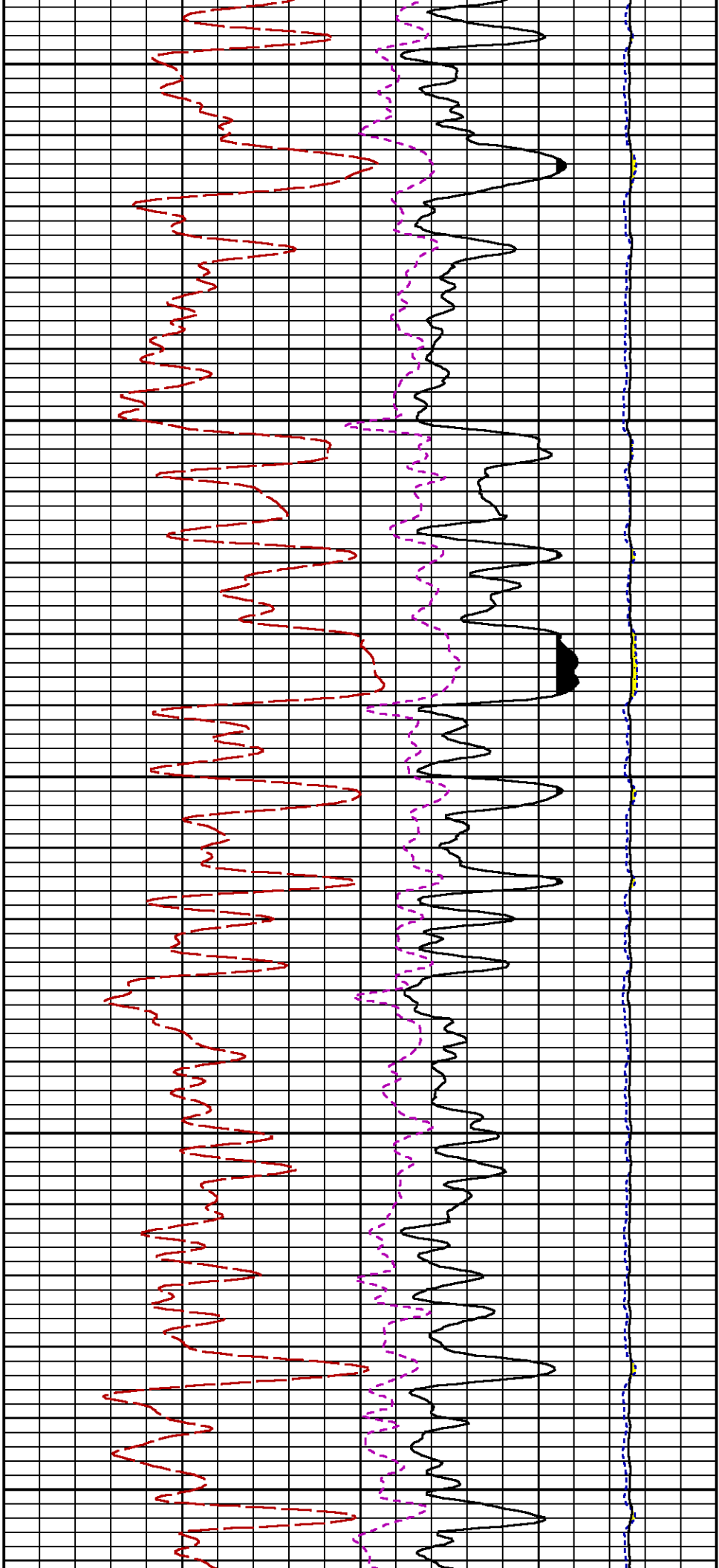


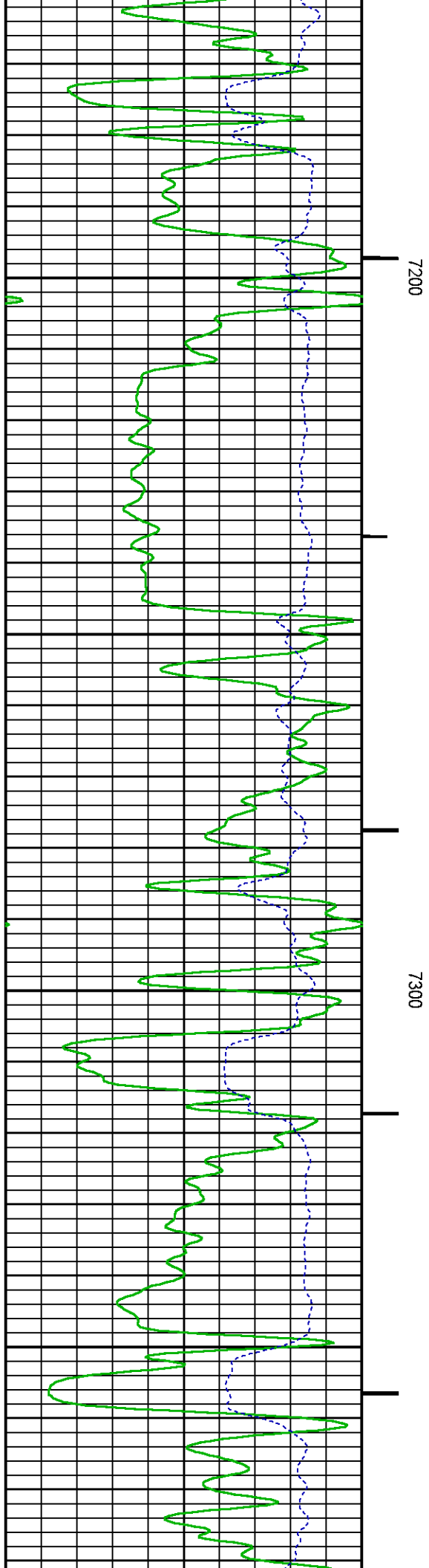
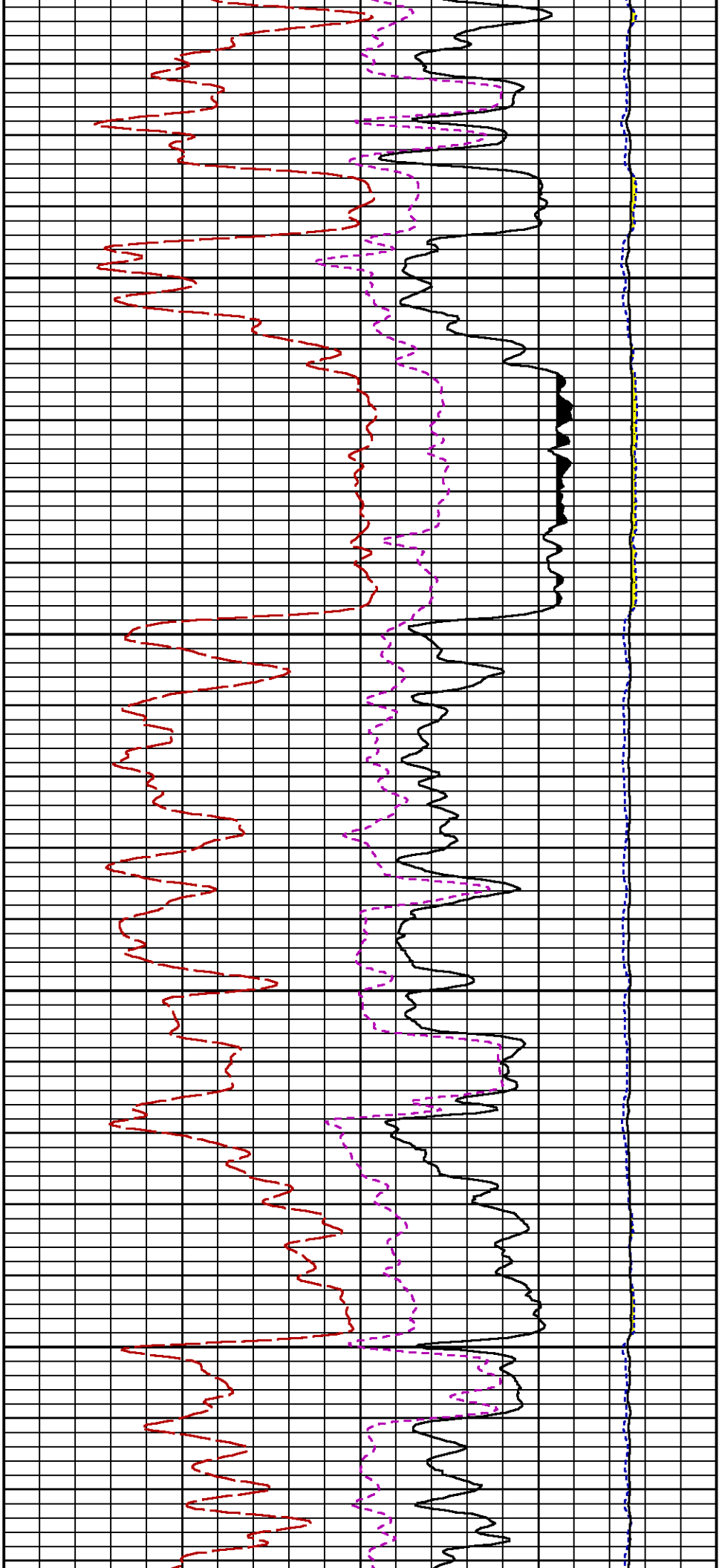


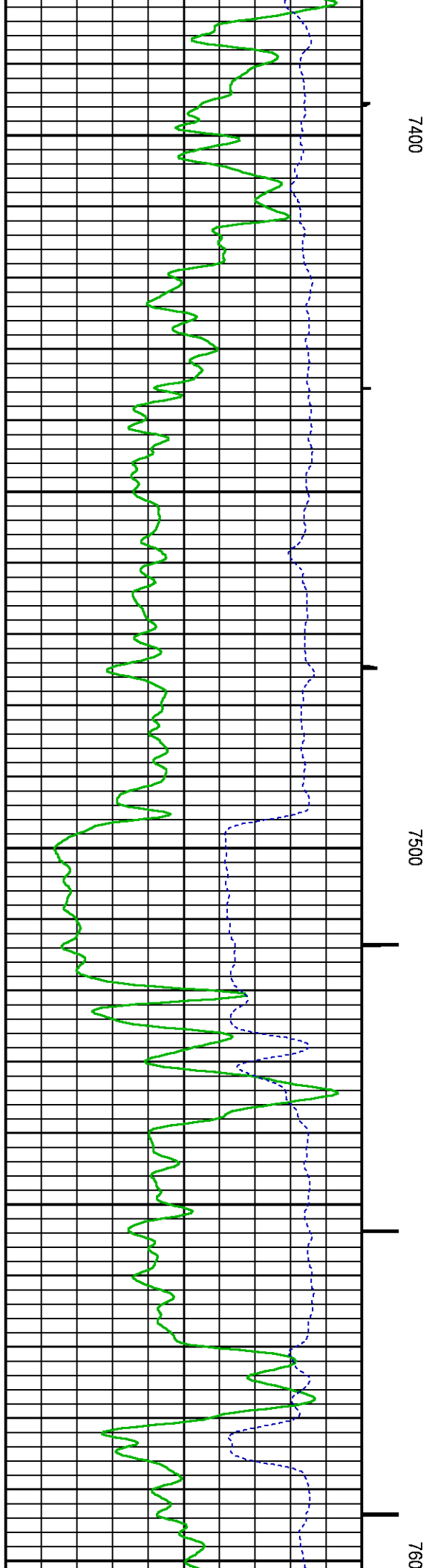
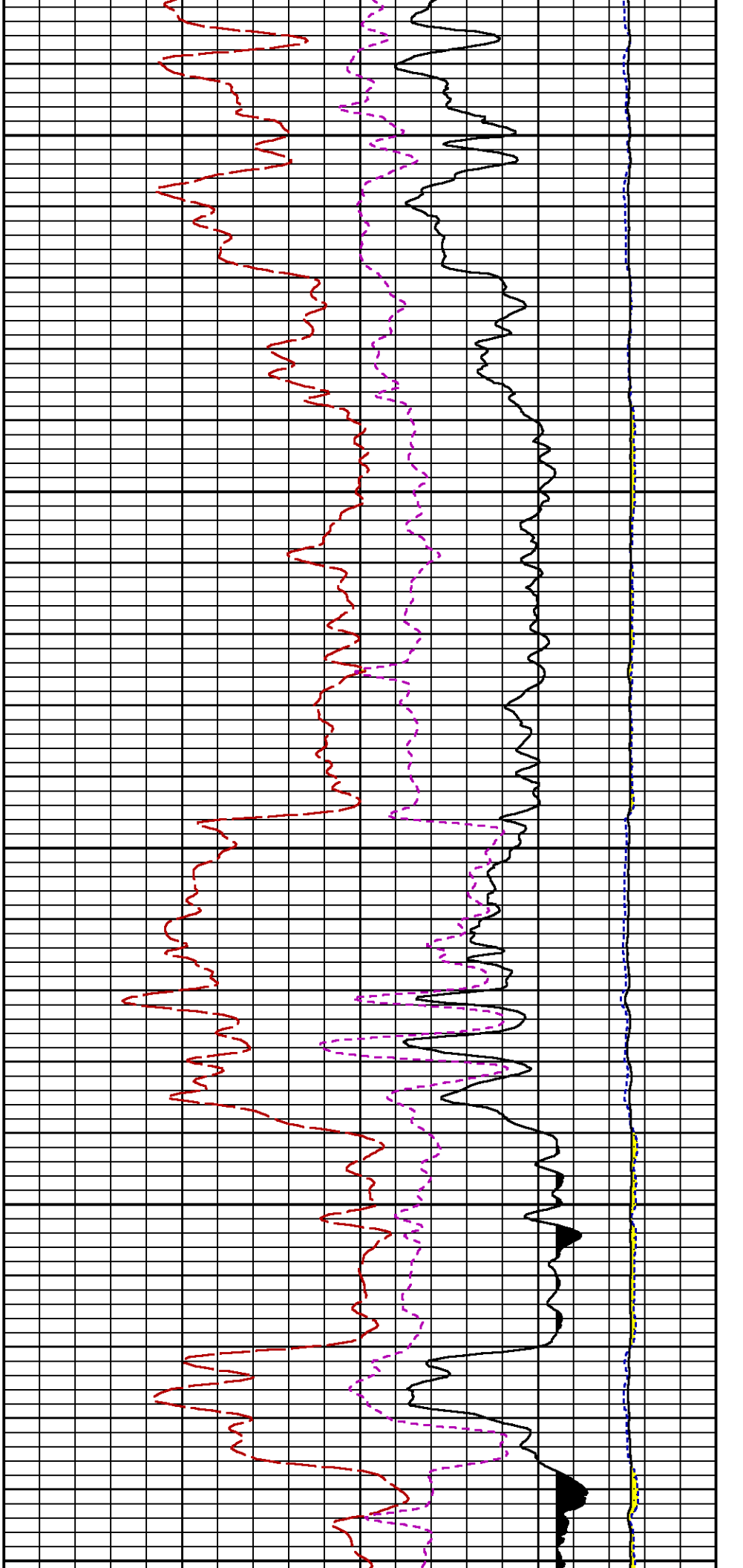


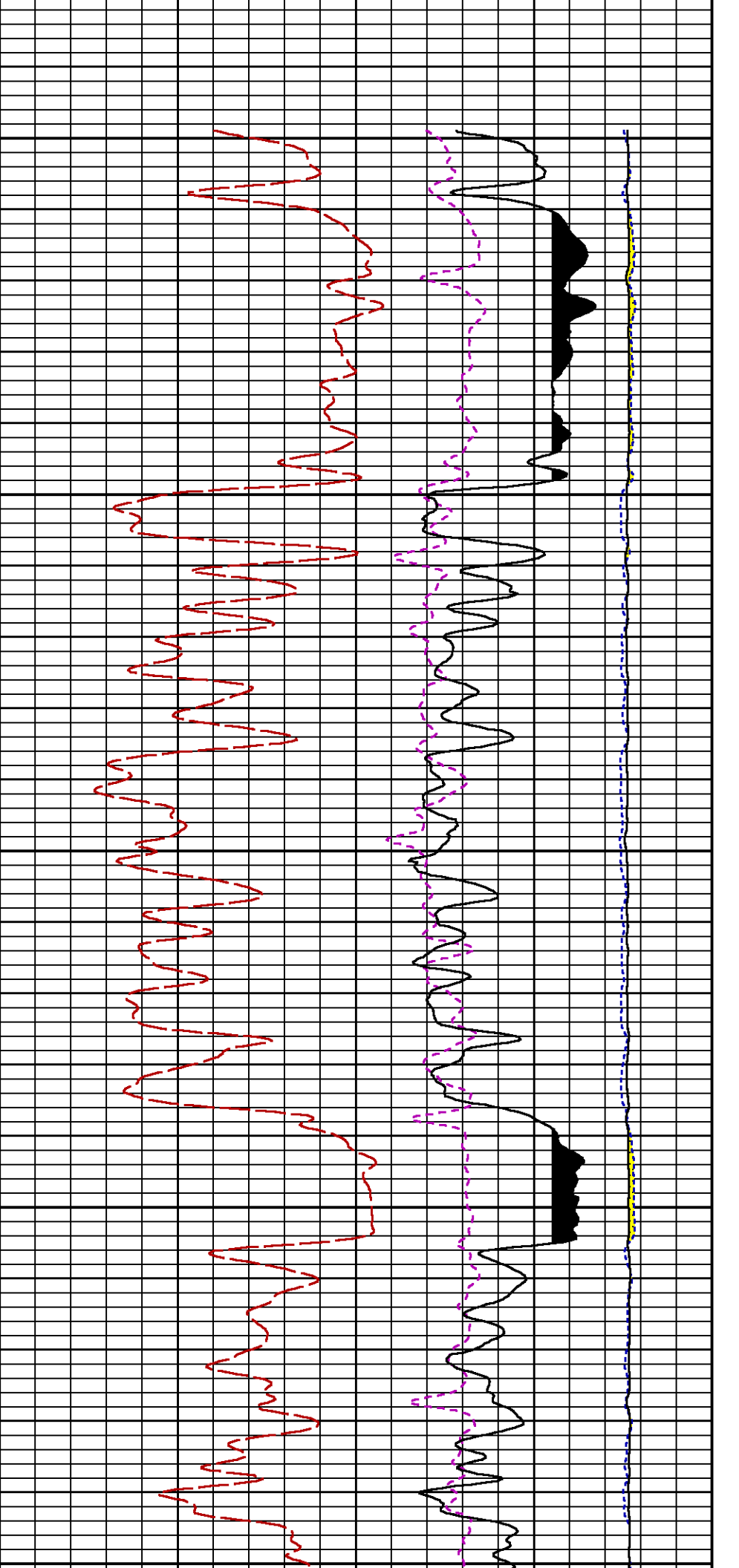








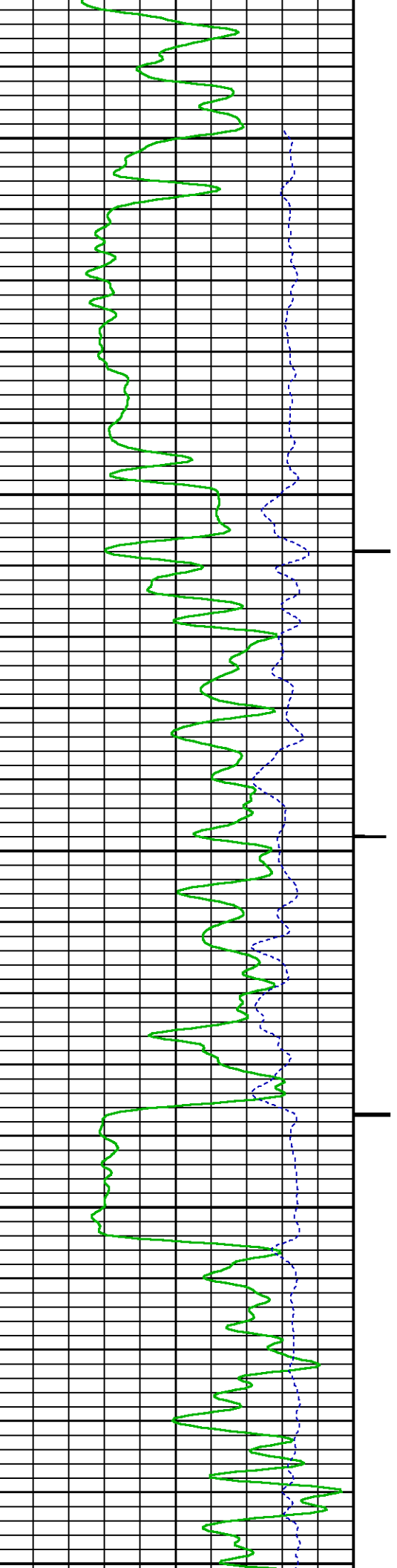


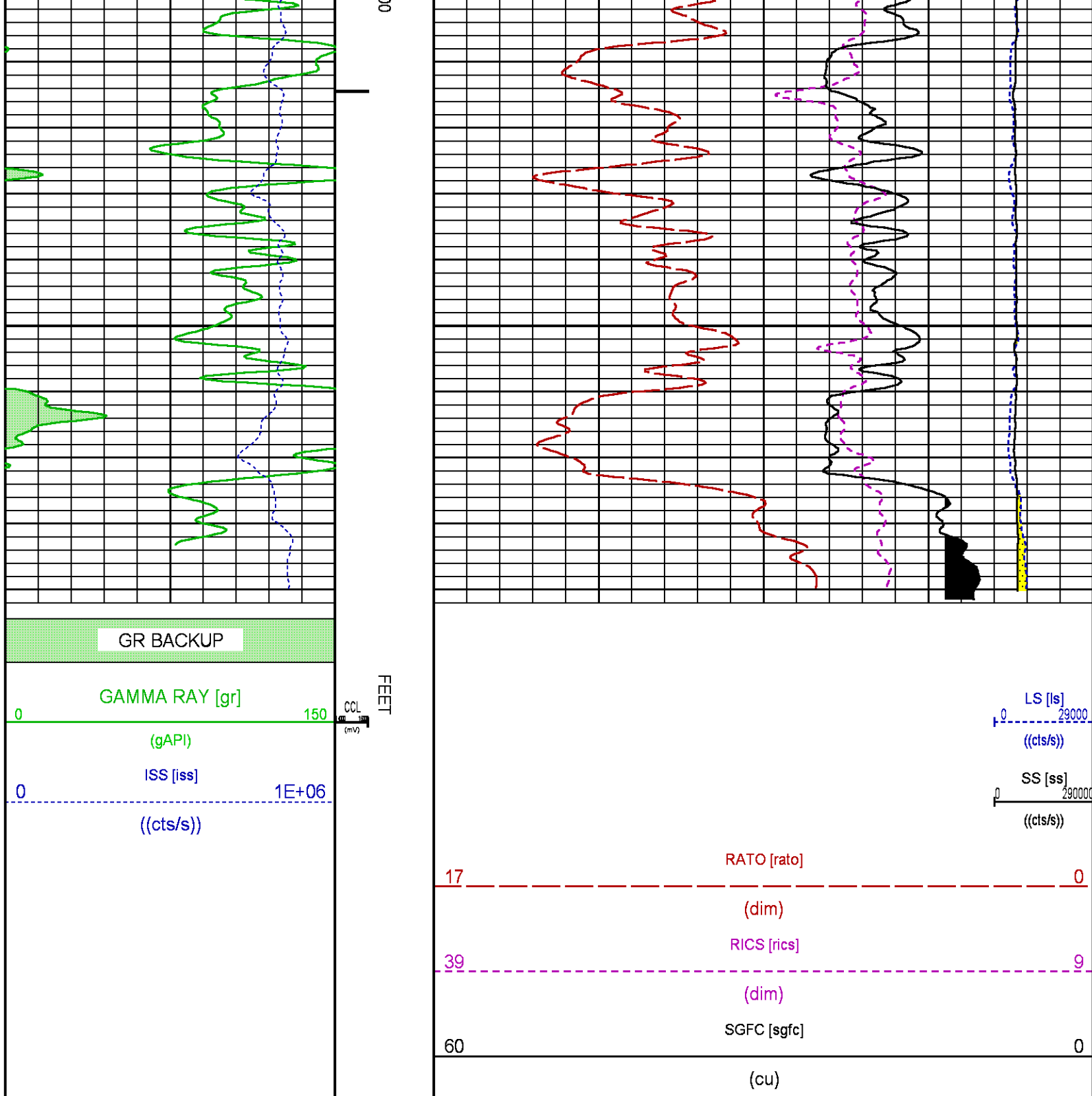


4800

4900

5000





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/LARAMIE_NICHOLS_0994-24-01W/p353h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10317216

DATE/TIME PERFORMED: Sat Jan 20 08:55:31 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	58.42	336.96	278.5	0.664	38.80	223.80	185

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10317216

DATE/TIME PERFORMED: Sat Jan 20 08:58:00 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	59.02	336.93	0.664	39.20	223.79	184.59
						176.00 195.00

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10068031

DATE/TIME PERFORMED: Wed Mar 14 13:45:44 2018

UNIT: 5753XD 111111

CALIBRATOR: 2437XB GJSHOP

SOURCE: 8281AA 10047980

HOURS: 8281AA 15

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	813743	121	2165	2166	2262	97	7.0	0.9725
Interpolated	1300000	145	2147	2163	2258			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	813743	7003	1117	196	26.03	0.14	24.15	0.33
					26.36 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	813743	172980	26637	92035	32769	8474	55643	13564
Fit Quality %		1.011	1.146	1.038	1.006	1.007	0.931	1.038

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	813743	1.43	4.70	30.56	14.63	10.86	3.87	4.10
		1.42 1.46	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 %		0.029	0.211	0.232	0.204	0.020	0.025	0.038
Reduced	1395444	1.43	4.72	30.61	14.67	10.86	3.87	4.10
		1.42 1.46	4.33 5.52	27.60 32.70	13.70 16.34	10.06 11.10	3.57 3.95	3.76 4.22

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 166341

DATE/TIME PERFORMED: Fri Feb 9 11:57:12 2018

UNIT #: 5753XD 111111

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-1.865216E+01	1.008290E-01	4.283274E-07	1.750012E-11

TPSITEEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 166341

DATE/TIME PERFORMED: Fri Feb 9 11:58:25 2018

UNIT #: 5753XD 111111

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Ptfis	-1.279033E+01	1.023596E-01	3.753687E-06	-5.745945E-10

TPSPRES PRIMARY CALIBRATION SUMMARY

GAUGE #: 8255XA 166341

DATE/TIME PERFORMED: Fri Feb 9 12:15:25 2018

UNIT #: 5753XD 111111

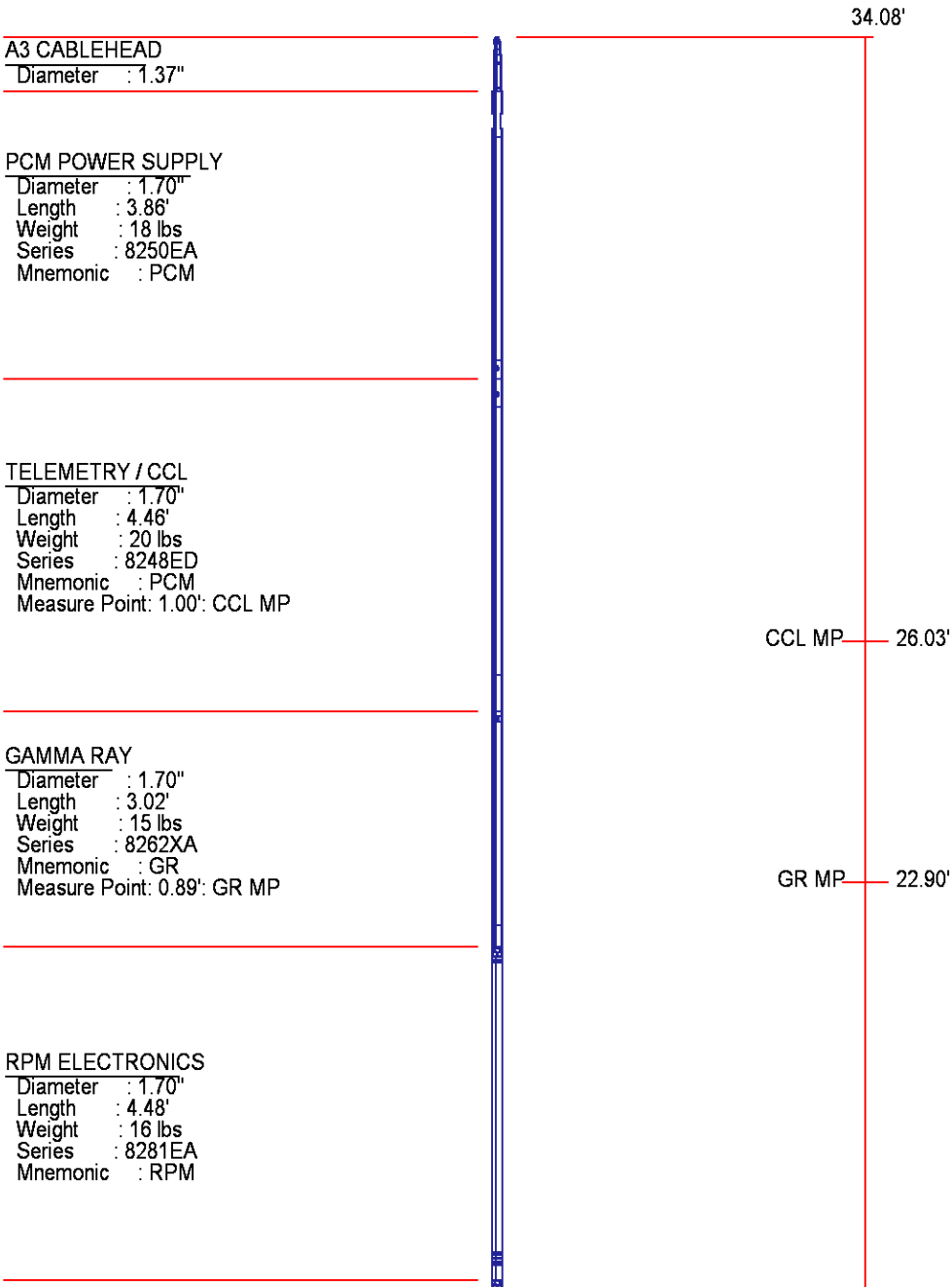
	Temp	G	H	I	J
0		5.404341E+05	2.856945E+02	7.421320E-05	1.963967E-09

1	-2.525705E+02	2.896840E-02	7.709446E-07	-2.834983E-11
2	1.575603E+00	-2.390996E-04	-3.902487E-09	1.790438E-13
3	-3.156464E-03	5.410310E-07	6.600155E-12	-3.329160E-16
4	4.037484E-16	2.188692E-19	-8.807789E-24	3.671191E-26

Coef Test	200.0	5.276924E+05	2.862524E+02	1.251039E-04	7.924253E-10
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INSTRUMENT CONFIGURATION

Source File: /dat1a/LARAMIE_NICHOLS_0994-24-01W/p353h~-tdg



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'



COMPANY

LARAMIE ENERGY II LLC

WELL

NICHOLS 0994-24-01W

FIELD

VEGA

COUNTY

MESA

STATE

COLORADO

FILE NO:

API NO:

05077104180000

LOCATION:

SHL 1786 FNL 2789 FEL
BHL 118 FNL 1539 FEL

ELEVATIONS:

KB 7161 FT

DF

GL 7137 FT

SEC 24

TWP 9S

RGE 94W

DATE

15-Mar-2018

