



FILE NO: CH107933	COMPANY WPX ENERGY	OTHER SERVICES CBL
WELL FEDERAL GM 442-8		
FIELD GRAND VALLEY		
COUNTY GARFIELD	STATE COLORADO	
API NO: 05045225330000		
Ver. 4.06 SEC8 T.7S R.96W PAD: MV 16-9 RIG: H&P 318	LOCATION: SHL: 663FNL 563FWL S9T7SR96W BHL: 2050FNL 323FEL S8T7SR96W SEC 8 TWP 7S RGE 96W	
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	G.L. ELEVATION 6087 FT K.B. 24 FT ABOVE P.D. K.B.	ELEVATIONS: KB 6111 FT DF GL 6087 FT

DATE	19-Jun-2016	
RUN	TRIP	
	2	1
SERVICE ORDER	US107933	
DEPTH DRILLER	6794 FT	
DEPTH LOGGER	6730 FT	
BOTTOM LOGGED INTERVAL	6728 FT	
TOP LOGGED INTERVAL	3600 FT	
TIME STARTED	21:00	
TIME FINISHED	01:00	
OPERATOR RIG TIME	4 HOURS	
TYPE OF FLUID IN HOLE	WATER	
FLUID DENSITY	NA	
FLUID SALINITY	NA	
FLUID LEVEL	50 FT	
LOGGED CEMENT TOP	SEE LOG	
WELLHEAD PRESSURE	0 PSI	
MAXIMUM HOLE DEVIATION	NA	
NOMINAL LOGGING SPEED	10 F/MN	
MAX. RECORDED TEMP.	201 DEGF	
REFERENCE LOG	BAKER HUGHES BOND LOG	
REFERENCE LOG DATE	19-JUN-2016	
EQUIP. NO.	LOCATION	
	HL-6685	GRAND JCT.
RECORDED BY	W. QUIGLEY	
WITNESSED BY	T. RAGSDALE	

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.

BOREHOLE RECORD		
BIT SIZE	FROM	TO

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO

### REMARKS

RUN 2 TRIP 1: ALL DATA ON THIS LOG IS DEPTH SHIFTED AND CORRELATED TO THE GAMMA-RAY CURVE ON BAKER HUGHES BOND LOG DATED 19-JUN-2016

THE DEPTH MATCHING PROCESS CREATES POTENTIAL FOR COLLAR LENGTHS TO VARY FROM THOSE RECORDED ON OTHER CASED HOLE WIRELINE UNITS WITHOUT A GAMMA RAY REFERENCE

BHT = 201 DEGF

SJ = 3732'- 3753'

LOGGED WITH ZERO PSI AT WELLHEAD

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES  
CREW: OLSON/SPENCER/QUIGLEY

## EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10408796	FREE
1	1	TEL/CCL	8248ED	10590814	FREE
1	1	GR	8262XA	10485470	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8281PA	10169251	FREE
1	1	RPM	8281FA	10401926	FREE
1	1	TEMP	8255XA	116341	FREE

## MAIN SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1,36 Patches: 9

Plotted: Mon Jun 20 00:49:26 2016

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH107933/n353hx02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 3599.000 ft BOTTOM DEPTH: 6735.500 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	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

## CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jun 19 21:39:05 2016	CASING COLLAR LOCATOR
F1:GR	Jun 19 21:39:05 2016	GAMMA RAY
F1:ISS	Jun 19 21:39:05 2016	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Jun 19 21:39:05 2016	LONG SPACE COUNT RATE
F1:RATO	Jun 19 21:39:05 2016	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Jun 19 21:39:05 2016	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Jun 19 21:39:05 2016	CORRECTED FORMATION SIGMA
F1:SS	Jun 19 21:39:05 2016	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 : cas6685:/dat1a/CH107933/WPX\_RPM\_MAIN.fvpdf [5"/100' Scale]

Plot Interval : 2572.75 - 6710.25 Feet

Plot Interval : 3572.75 - 6719.25 Feet  
Data File 1 : F1 : cas6685:/dat1a/CH107933/n353hx02\_MAIN.xtf  
Created On : Jun 19 21:39:05 2016  
Company : WPX ENERGY  
Well : FEDERAL GM 442-8  
Field : GRAND VALLEY  
File Interval : 3572 - 6735.5 Feet  
OCT : n353hx

GR BACKUP

FEET

ISS [iss]  
(cts/s)  
GAMMA RAY [gr]  
(gAPI)

0 1E+06

0 150

CCL  
(mV)

3600

GR

ISS

LS [ls]

(cts/s)

SS [ss]

(cts/s)

0 29000

0 290000

RATO [rato]

(dim)

RICS [rics]

(dim)

SGFC [sgfc]

(cu)

17

n

39

9

60

0

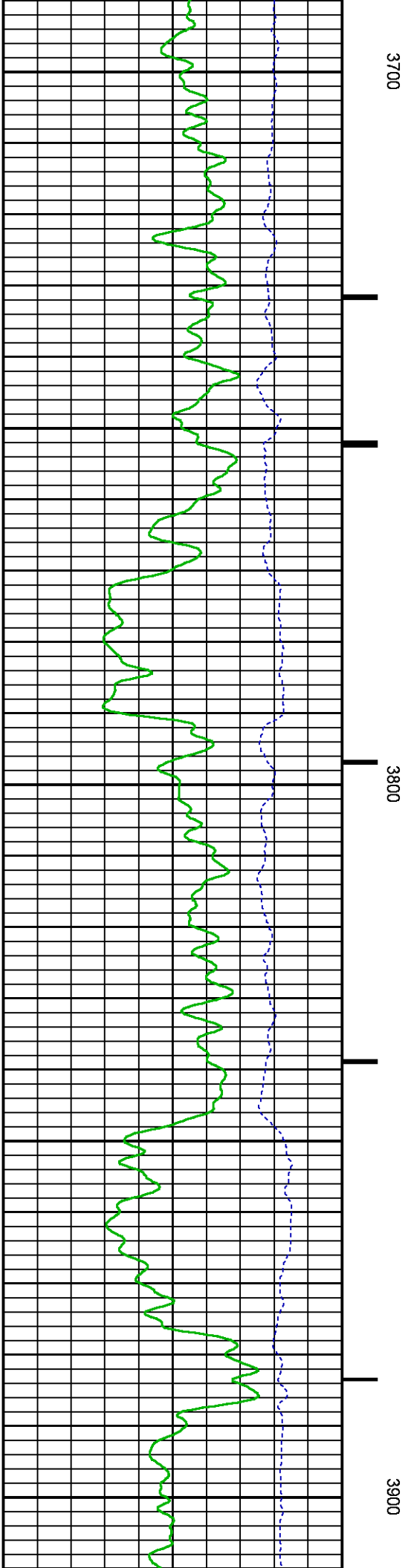
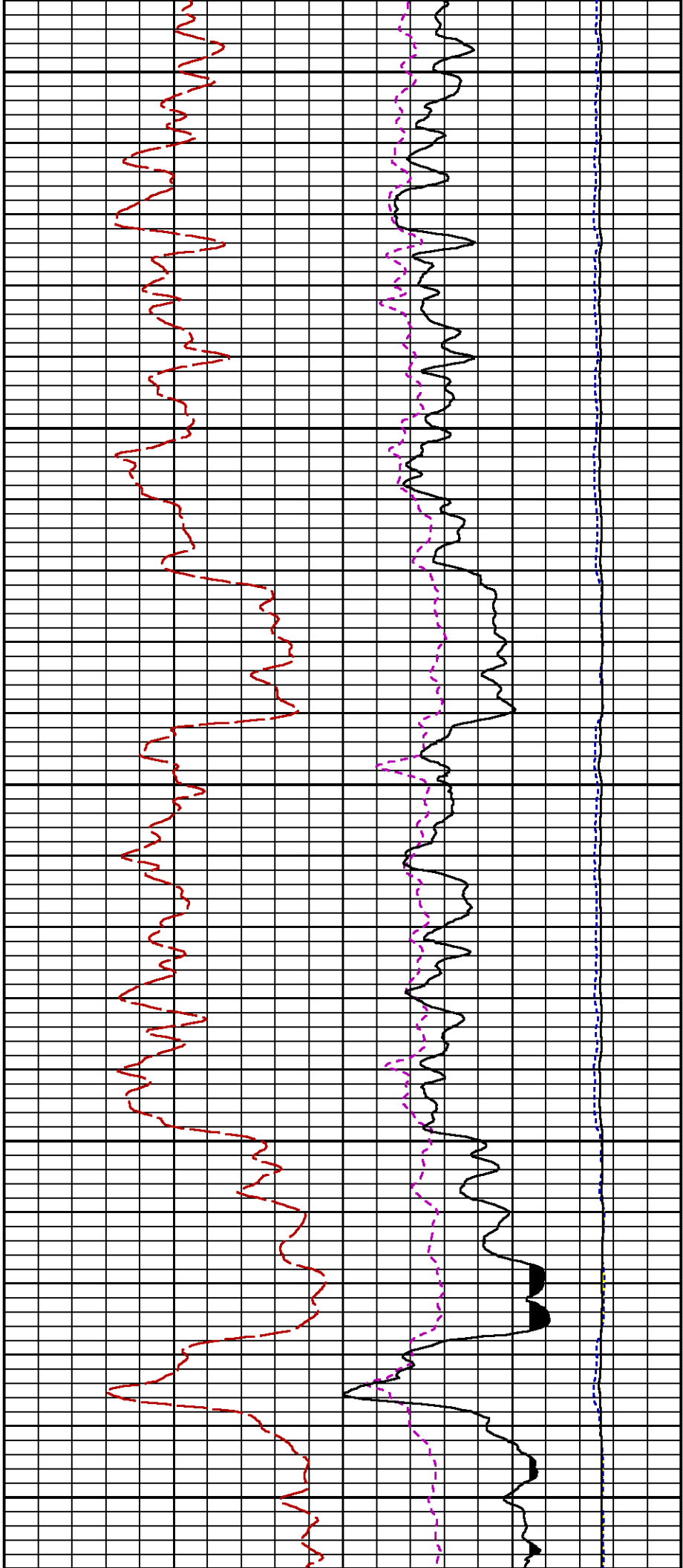
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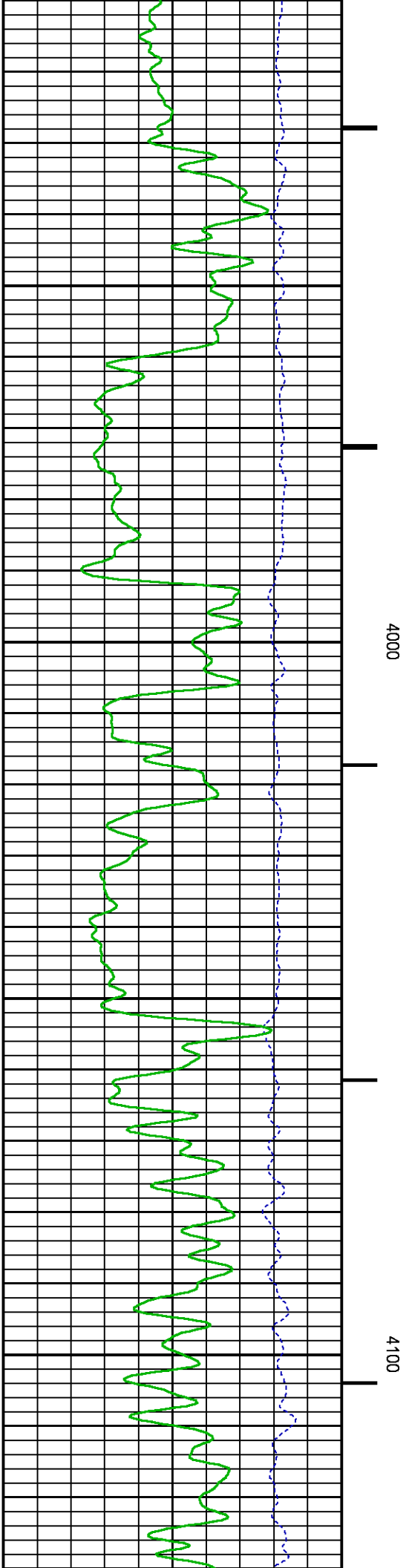
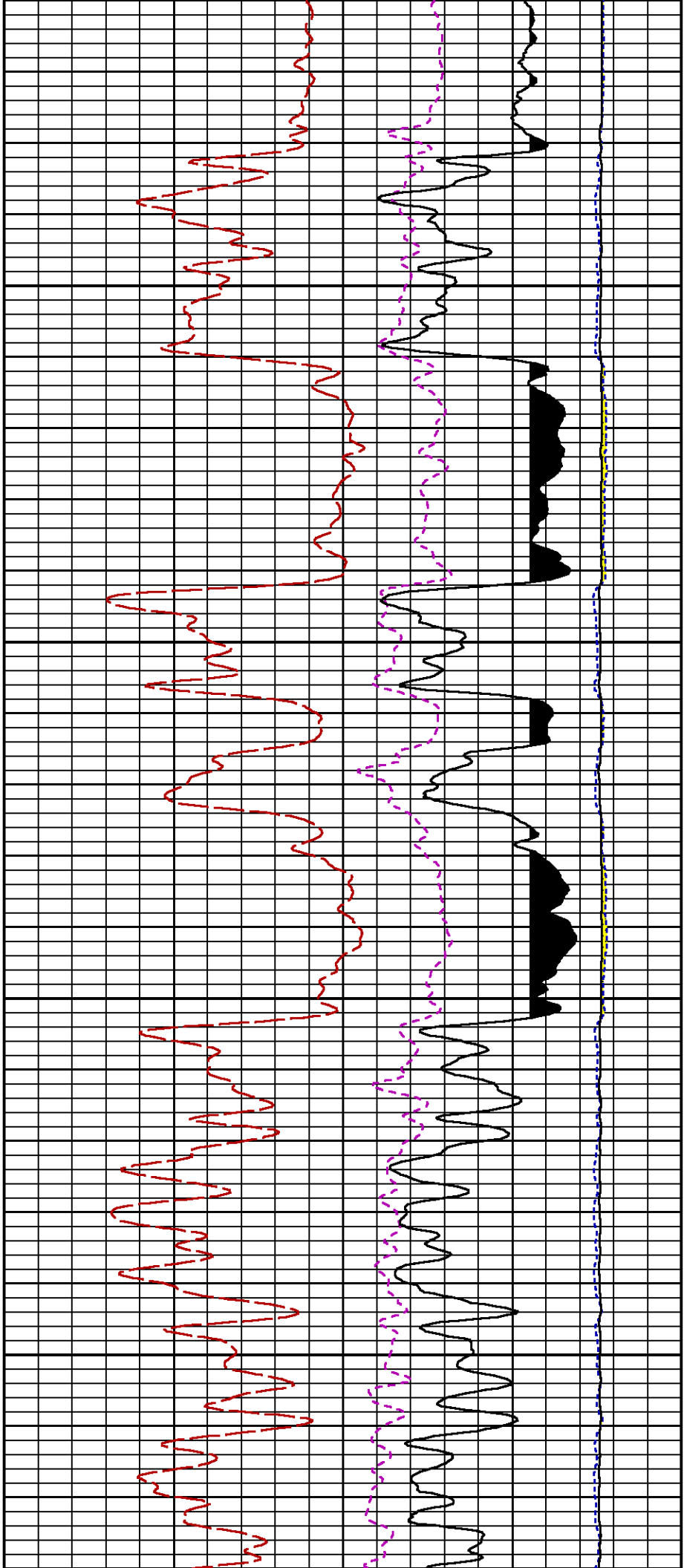
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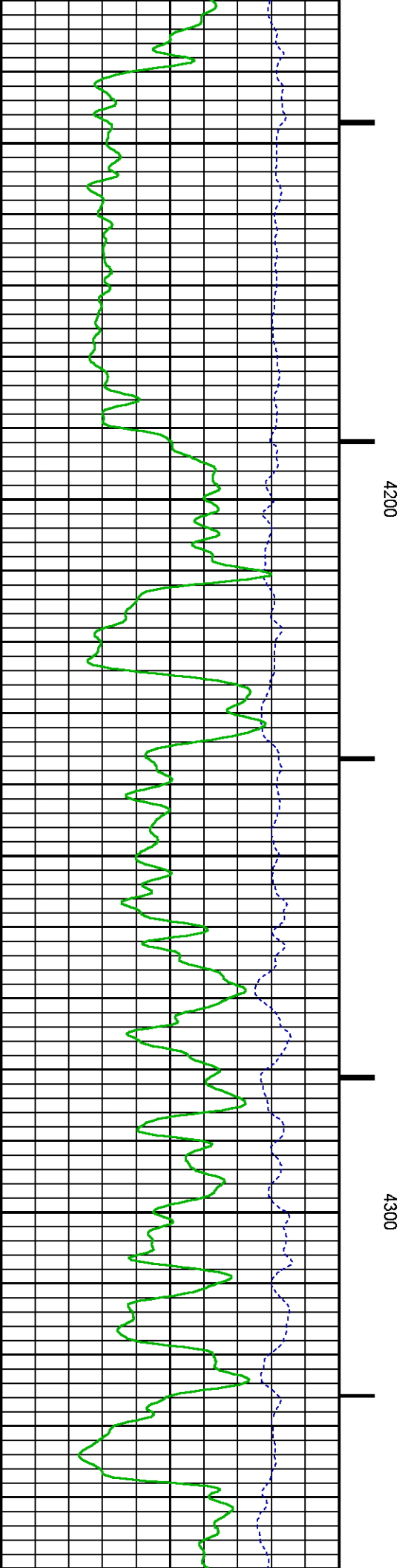
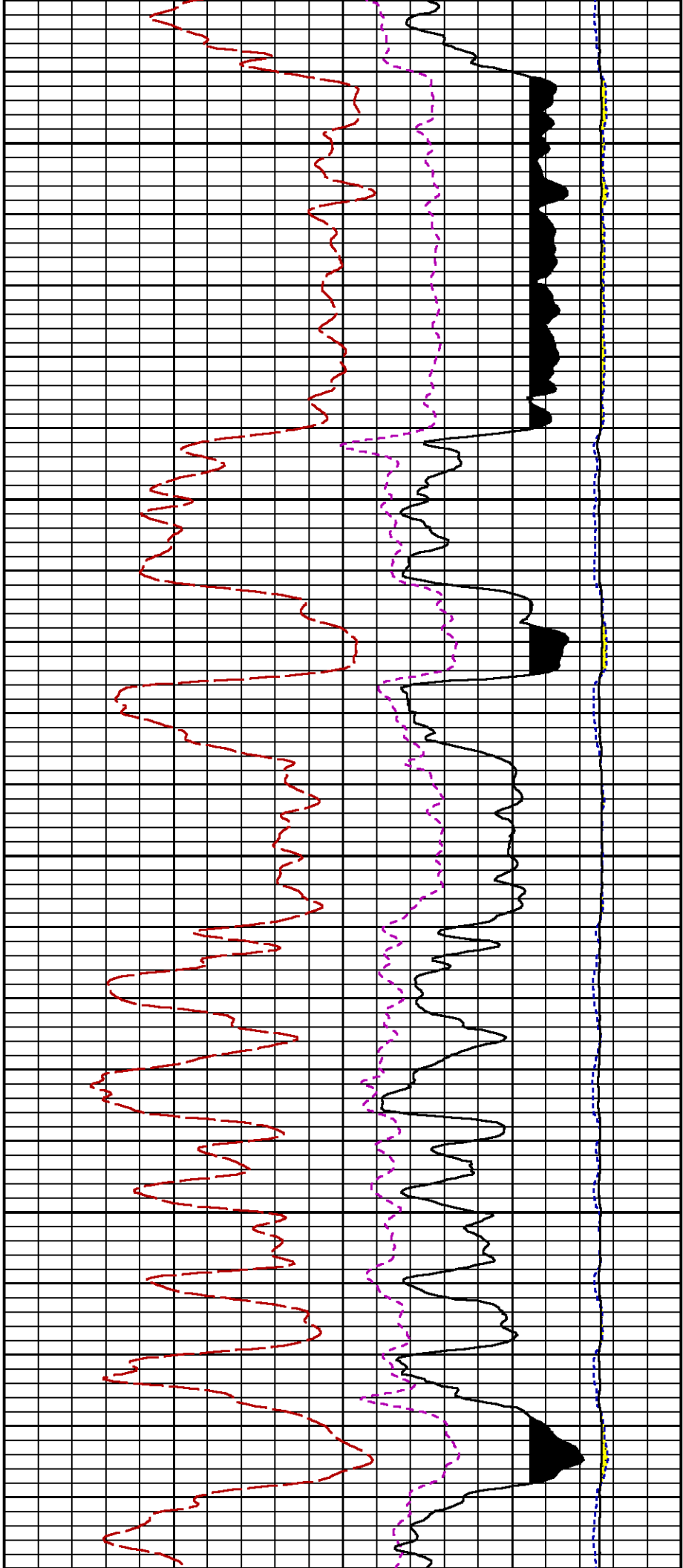
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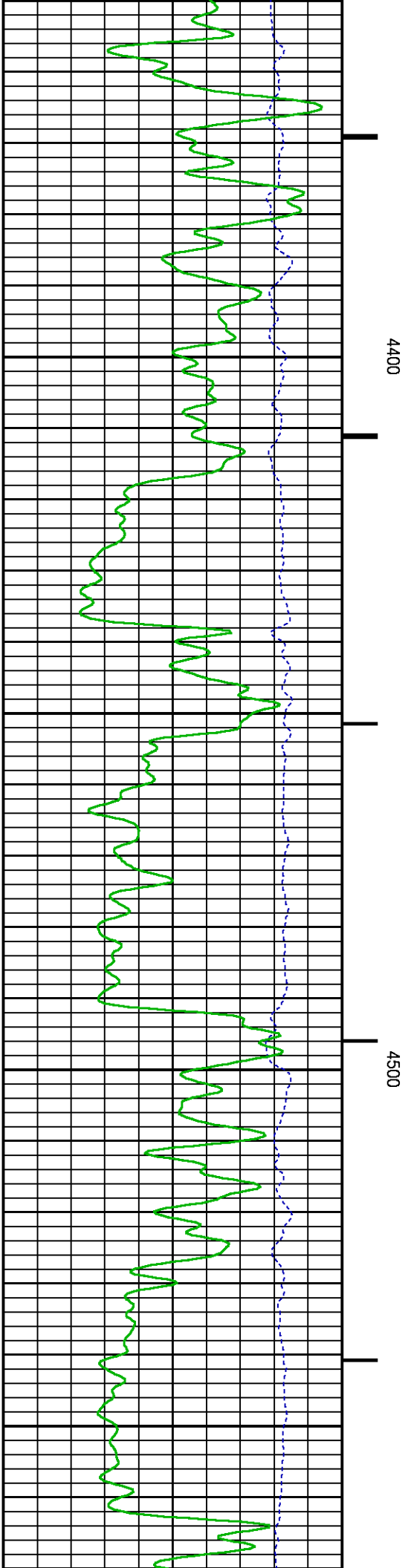
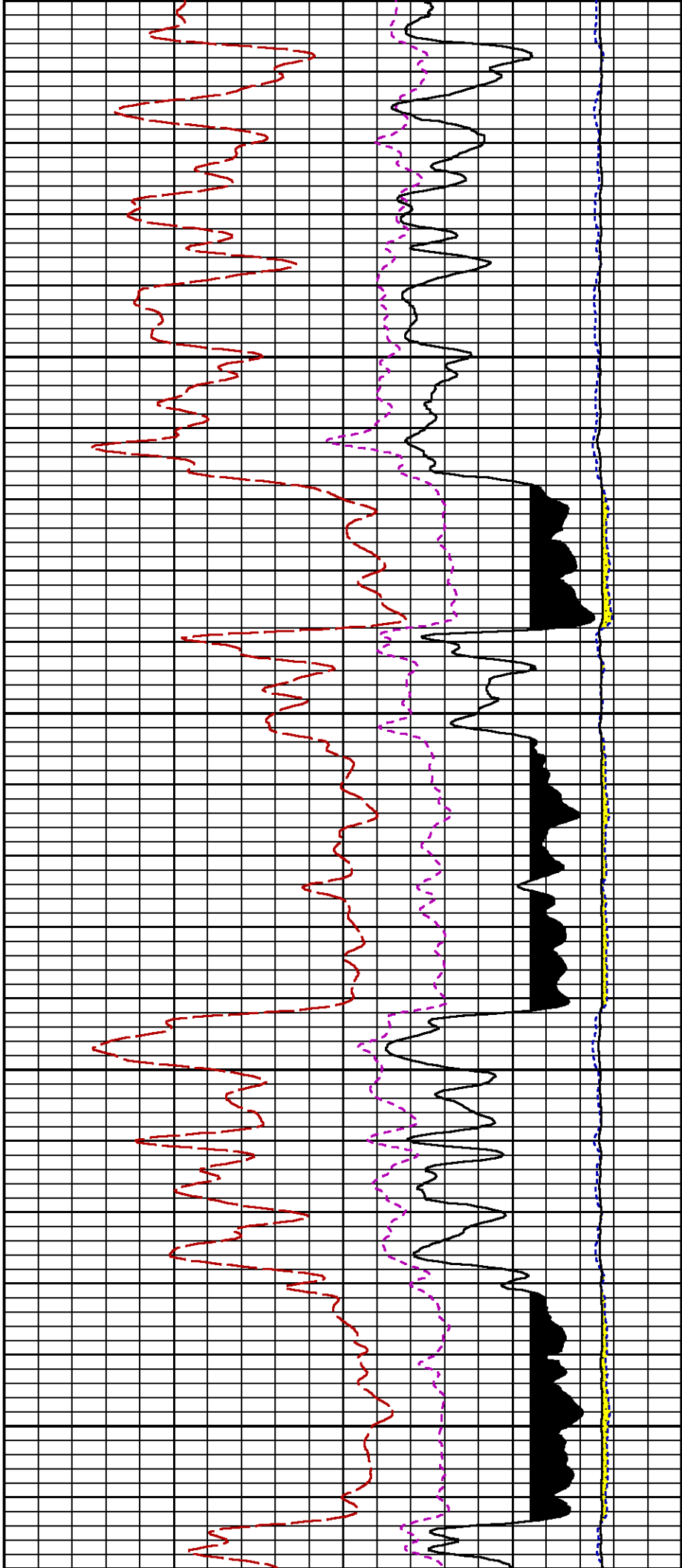
LS

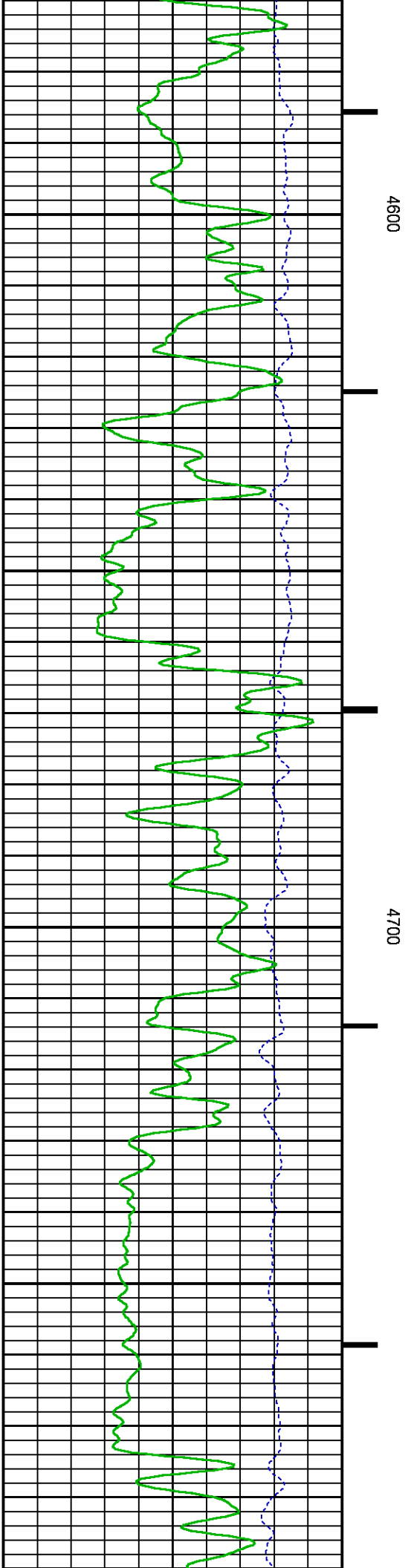
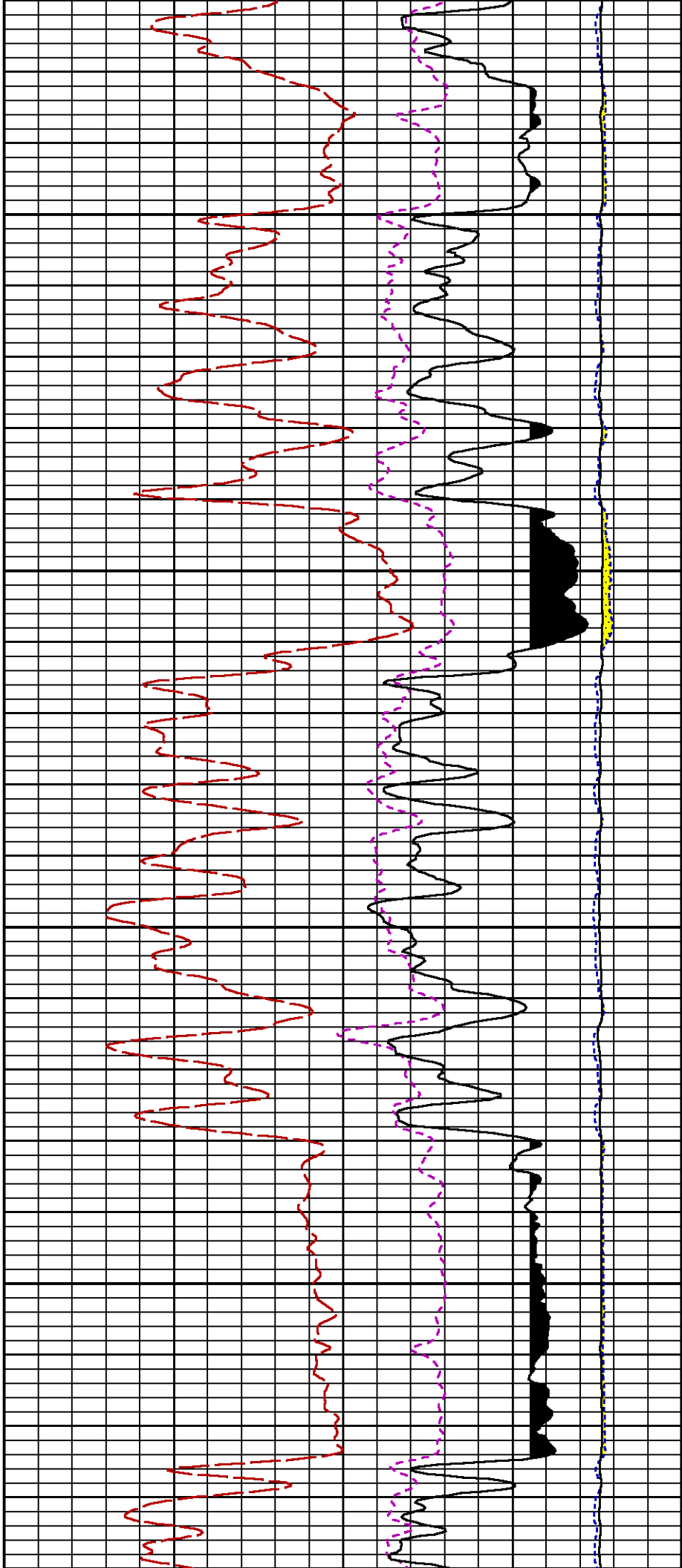
SS



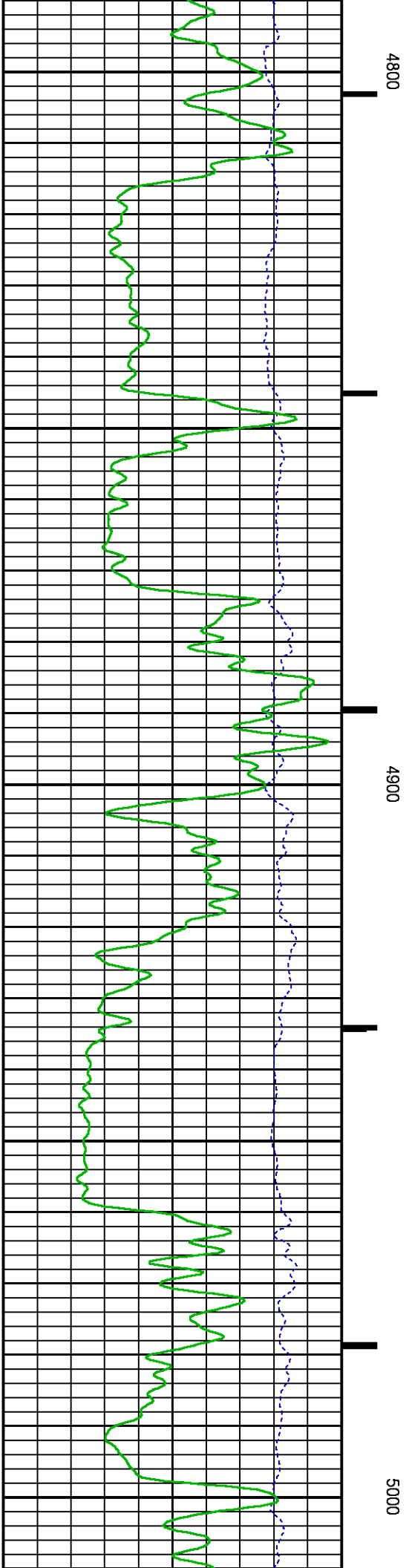
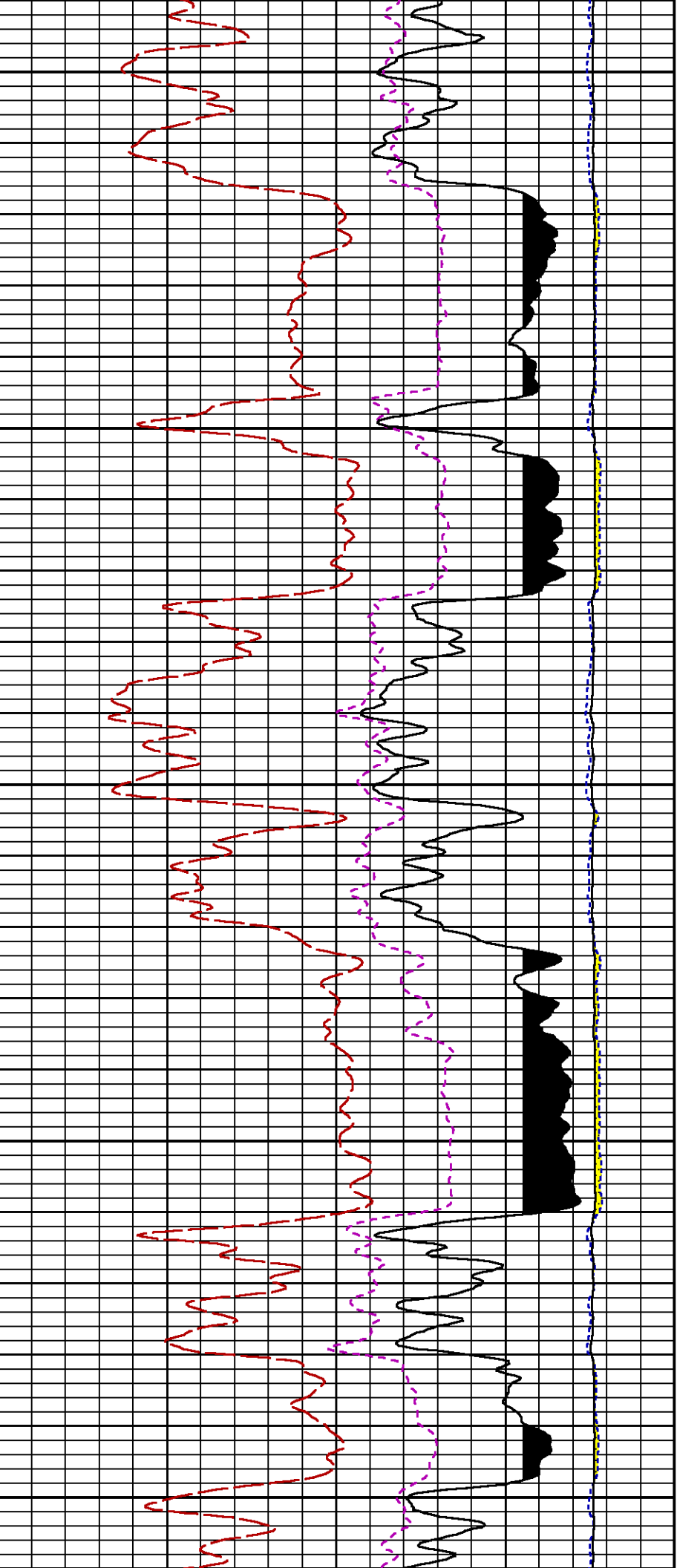


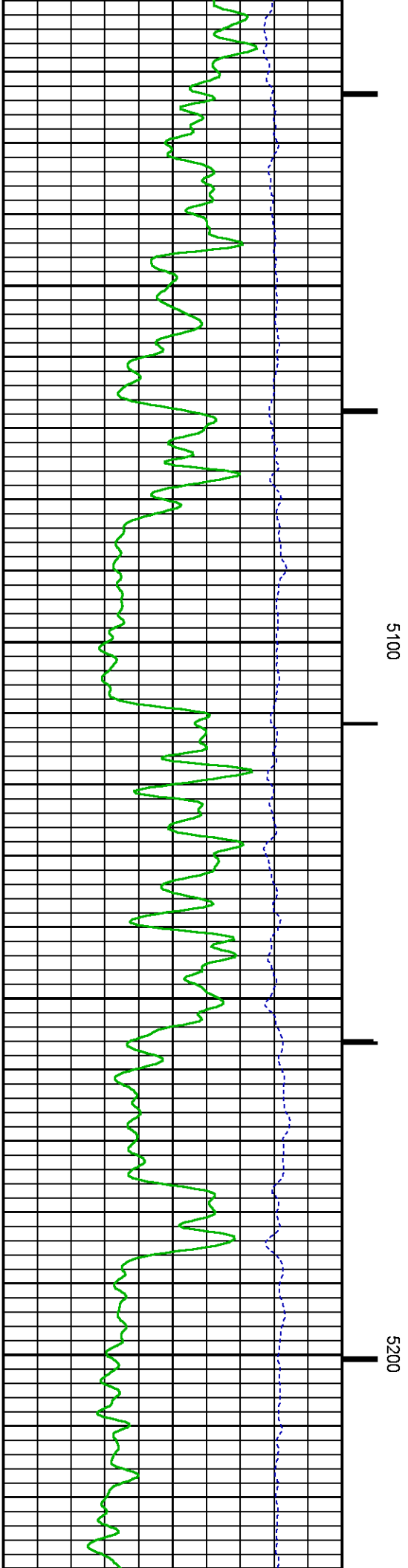
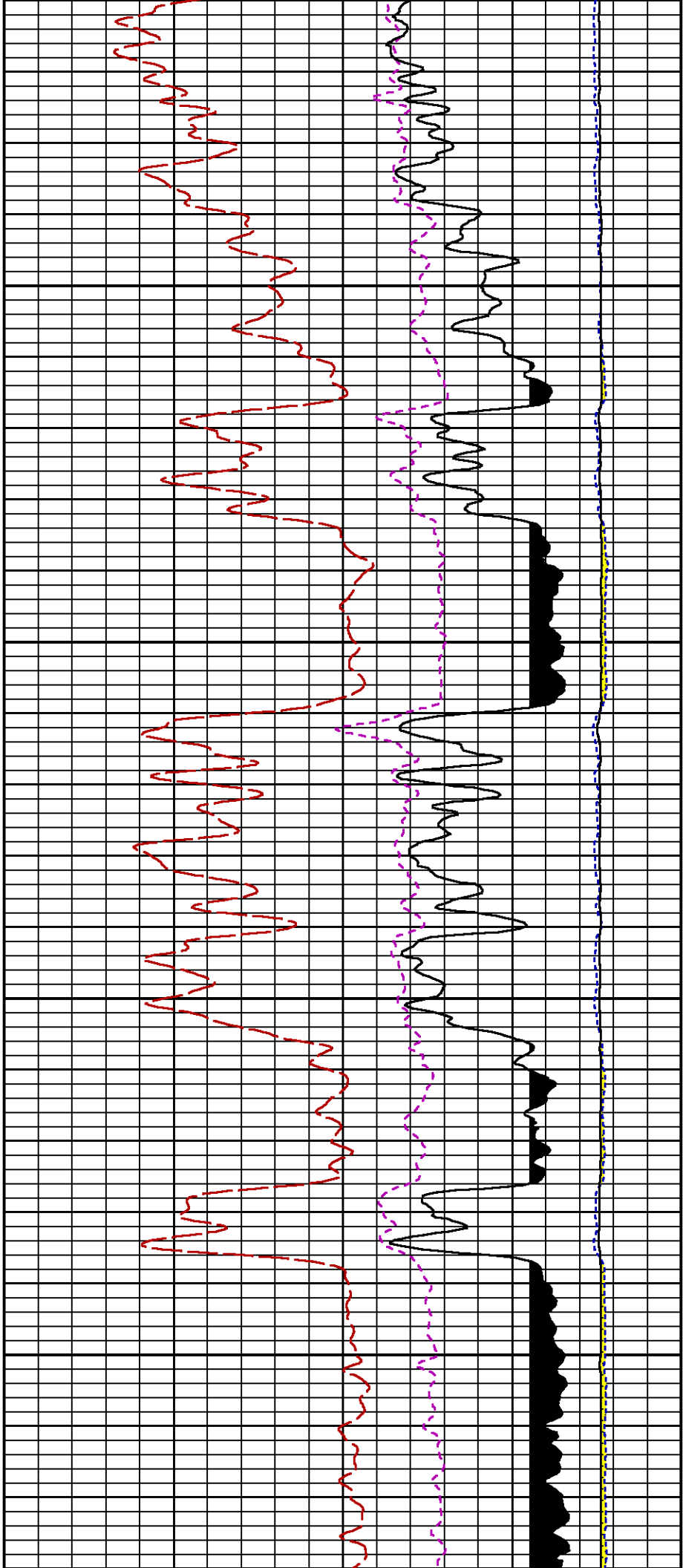


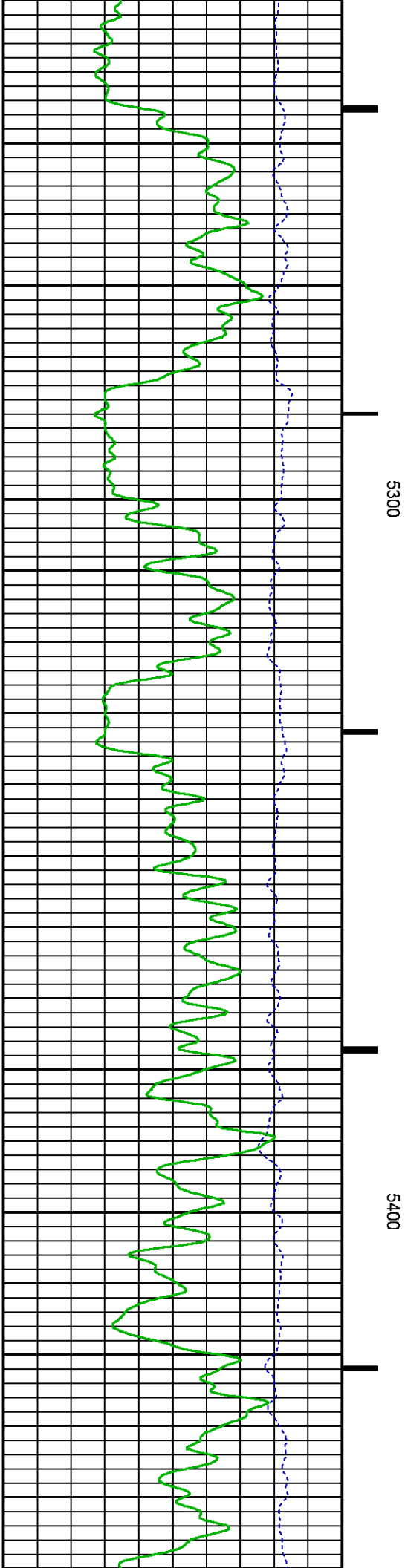
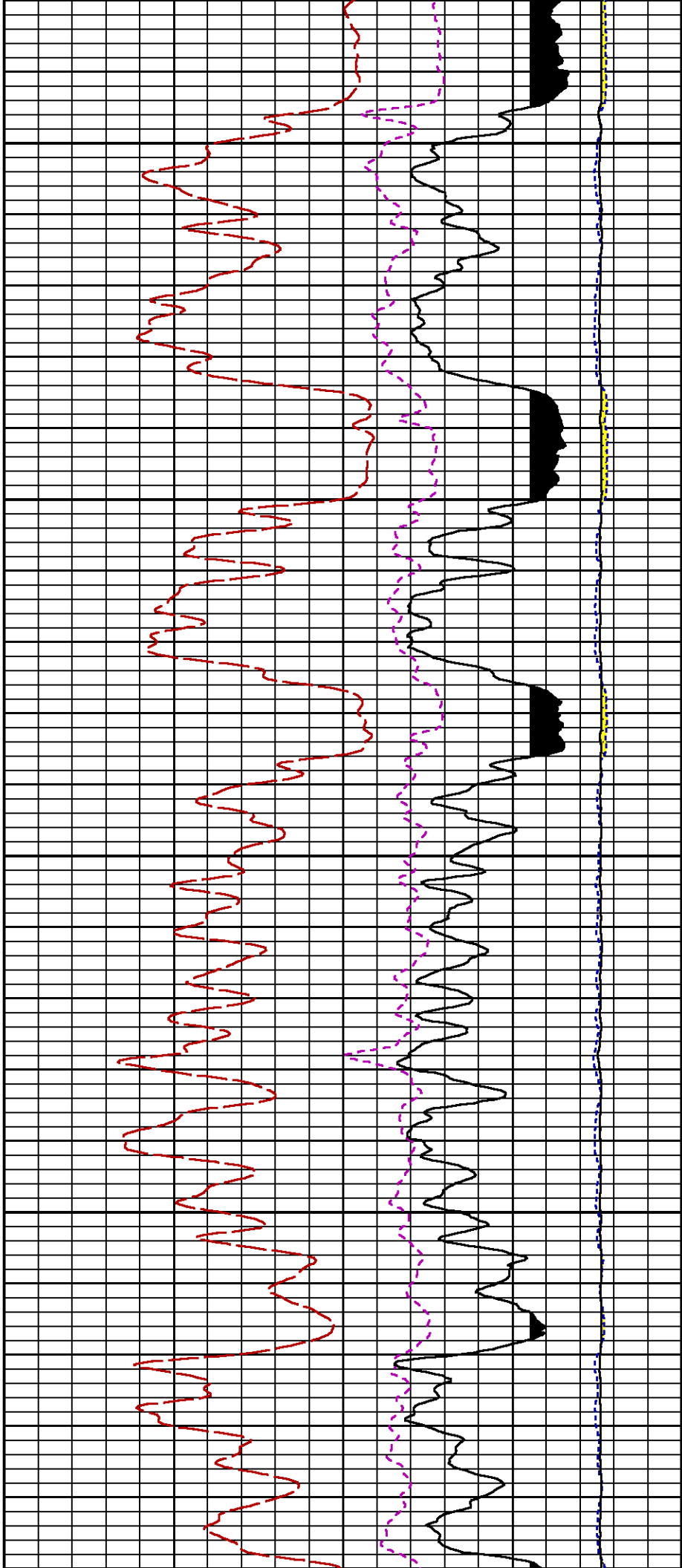


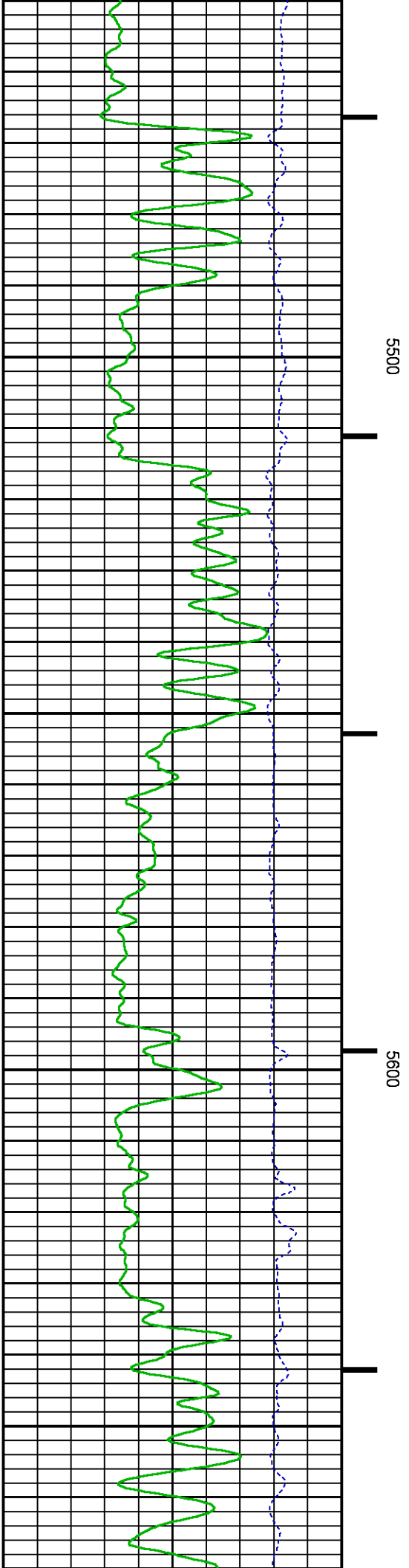
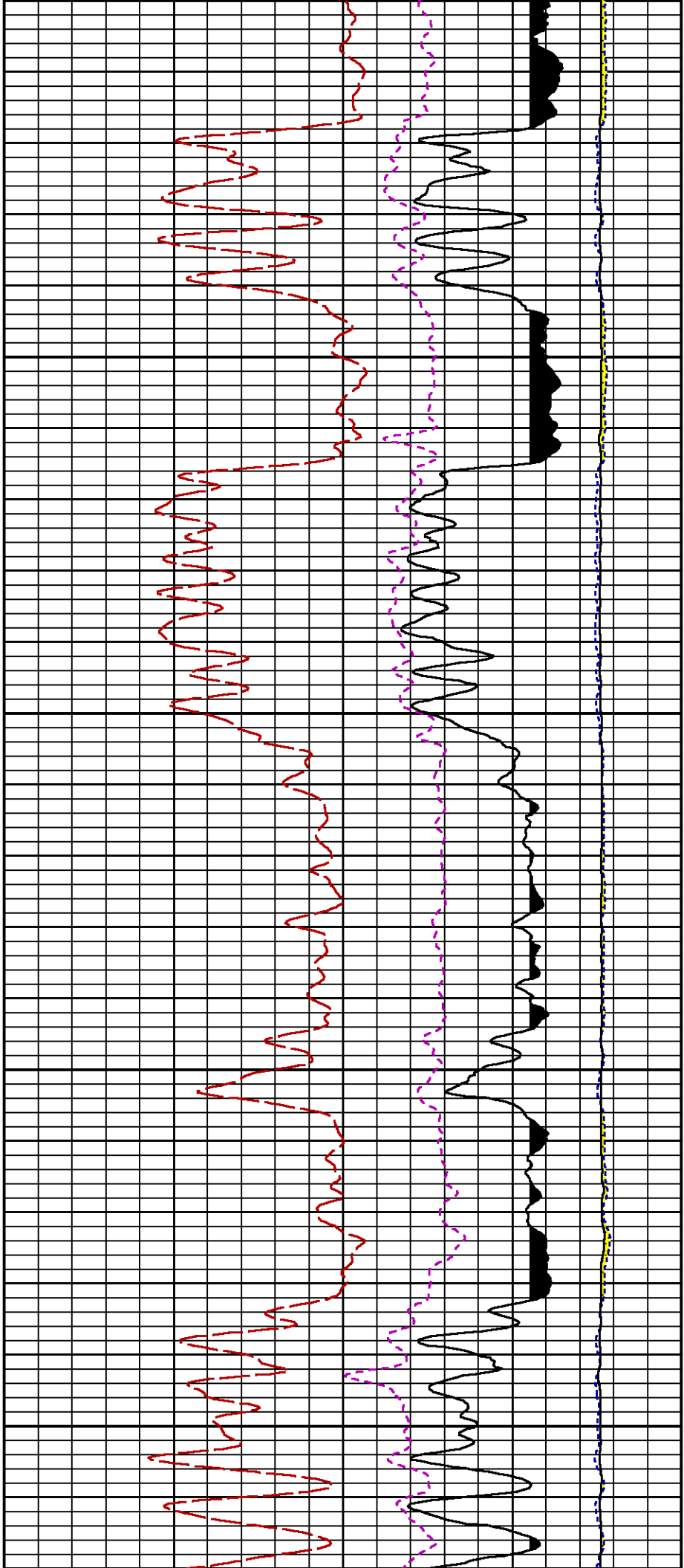


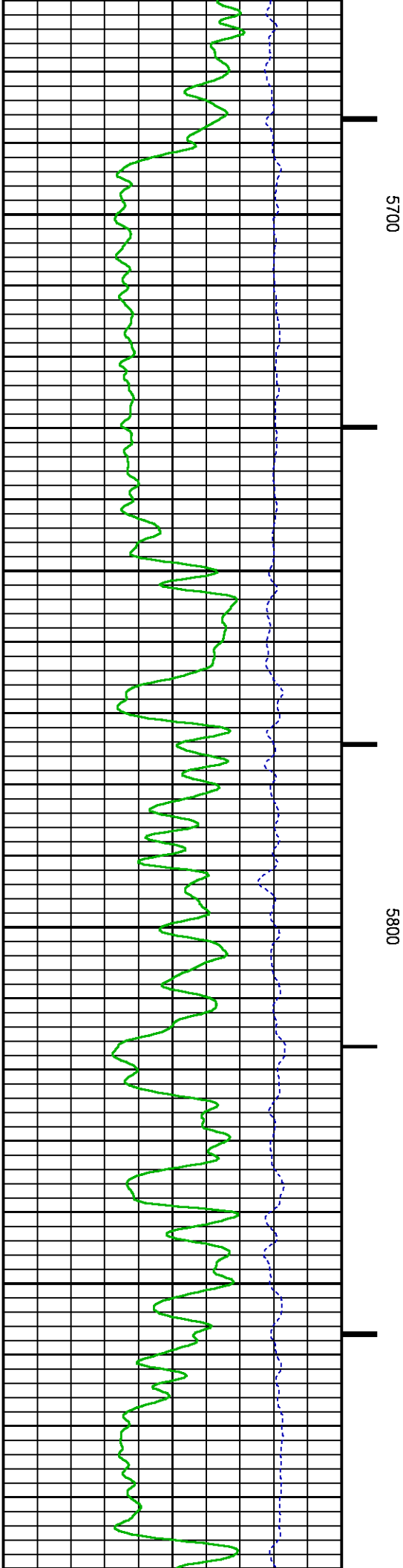
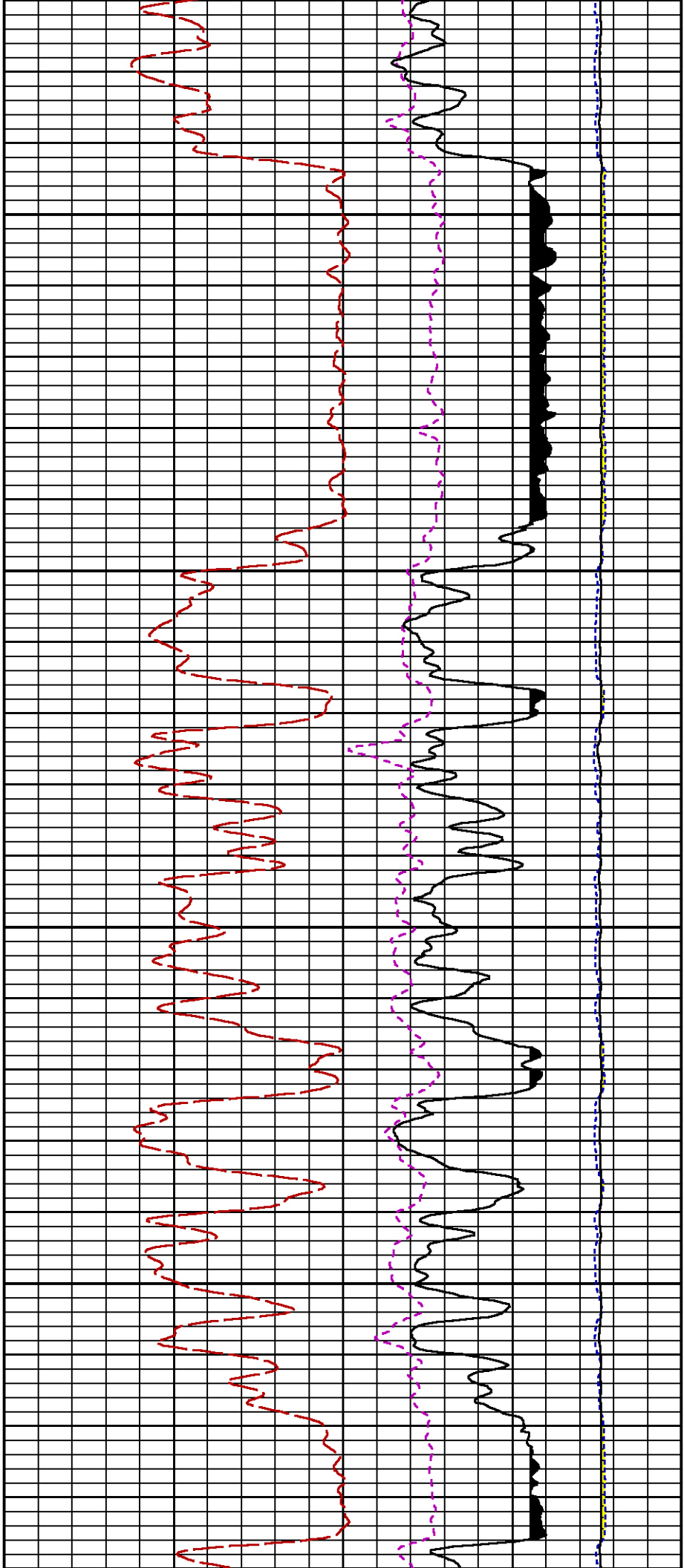


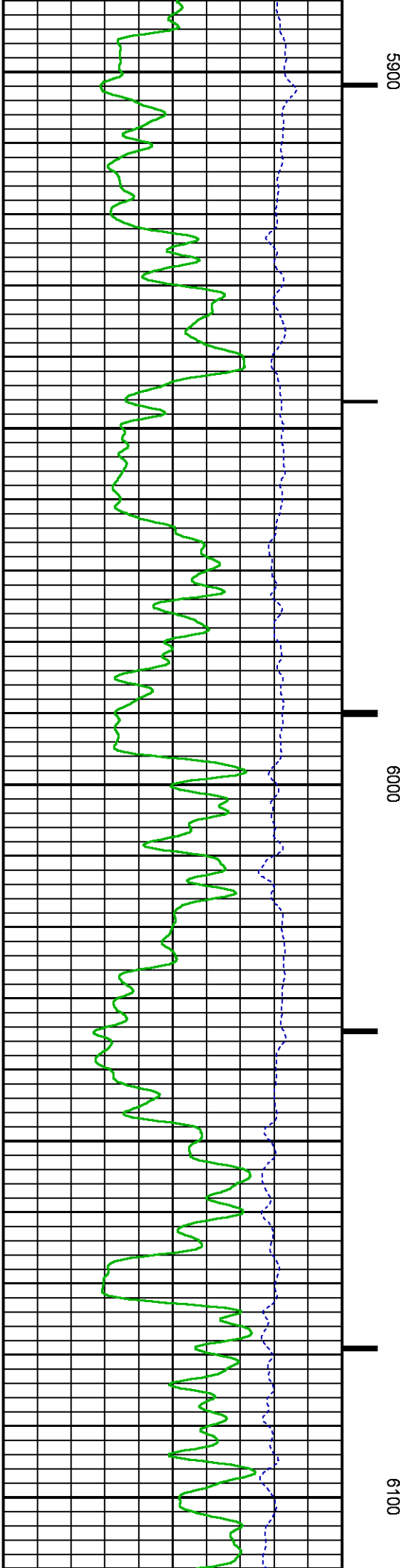
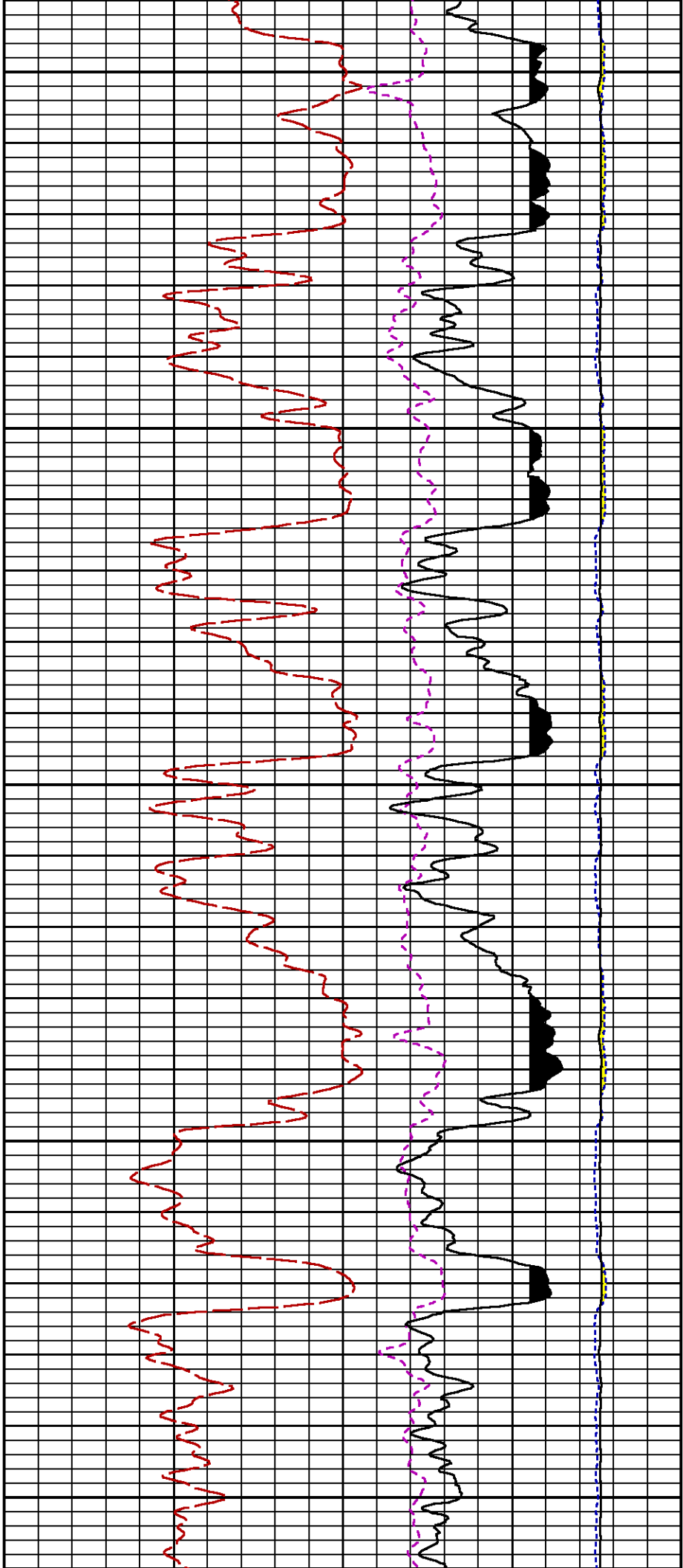


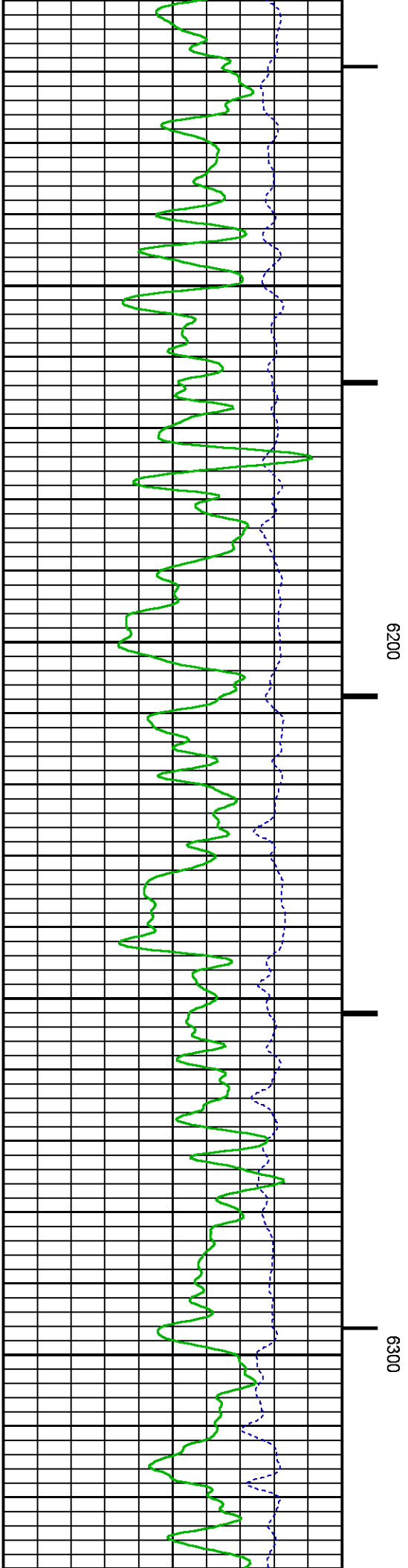
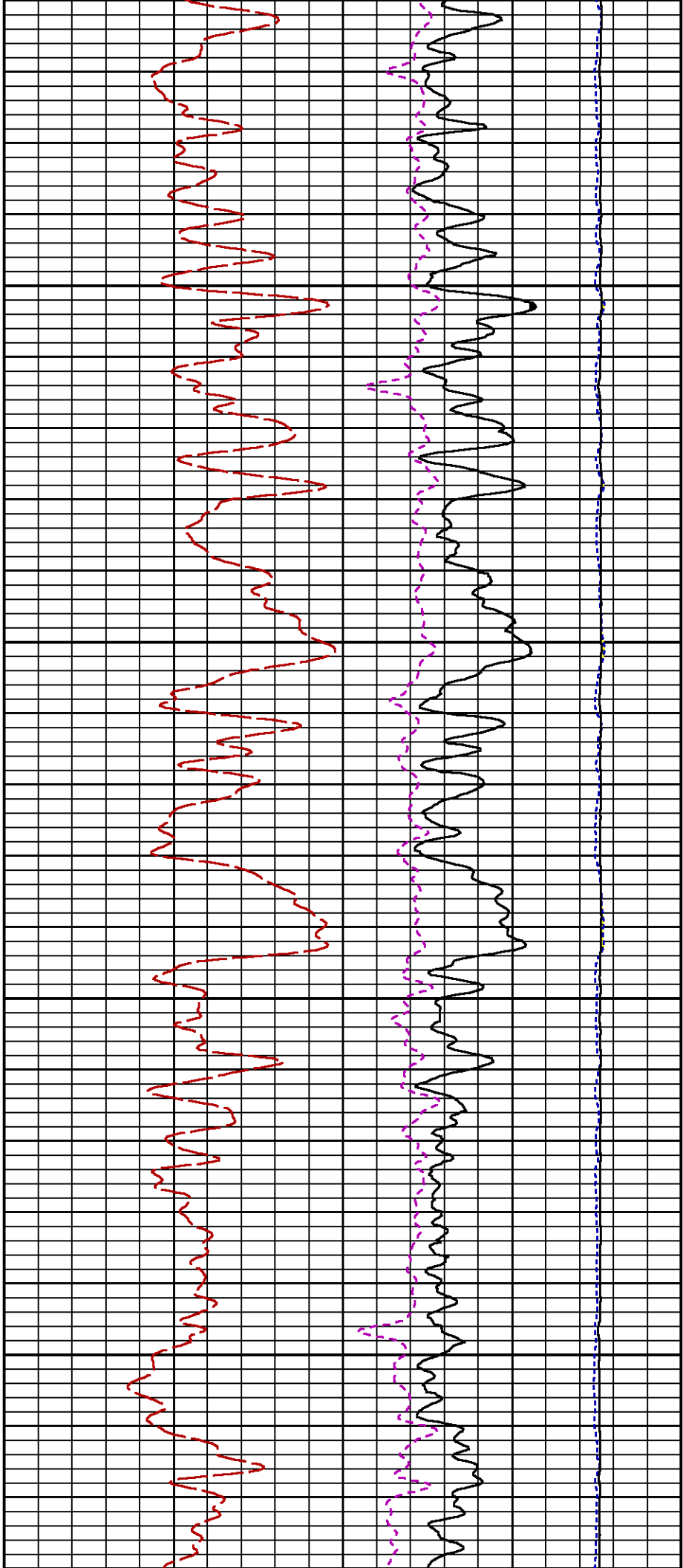


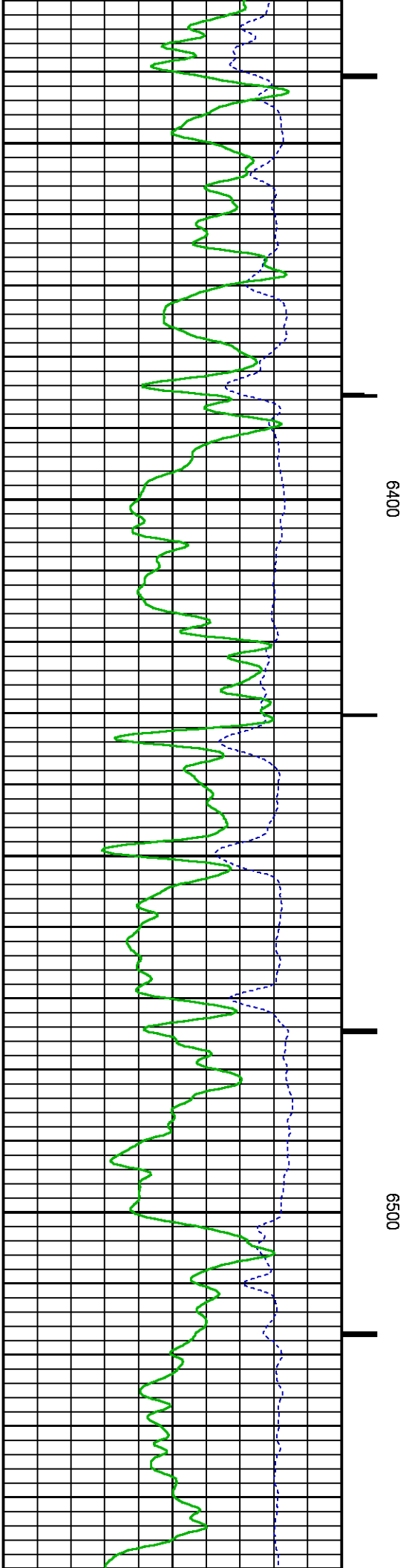
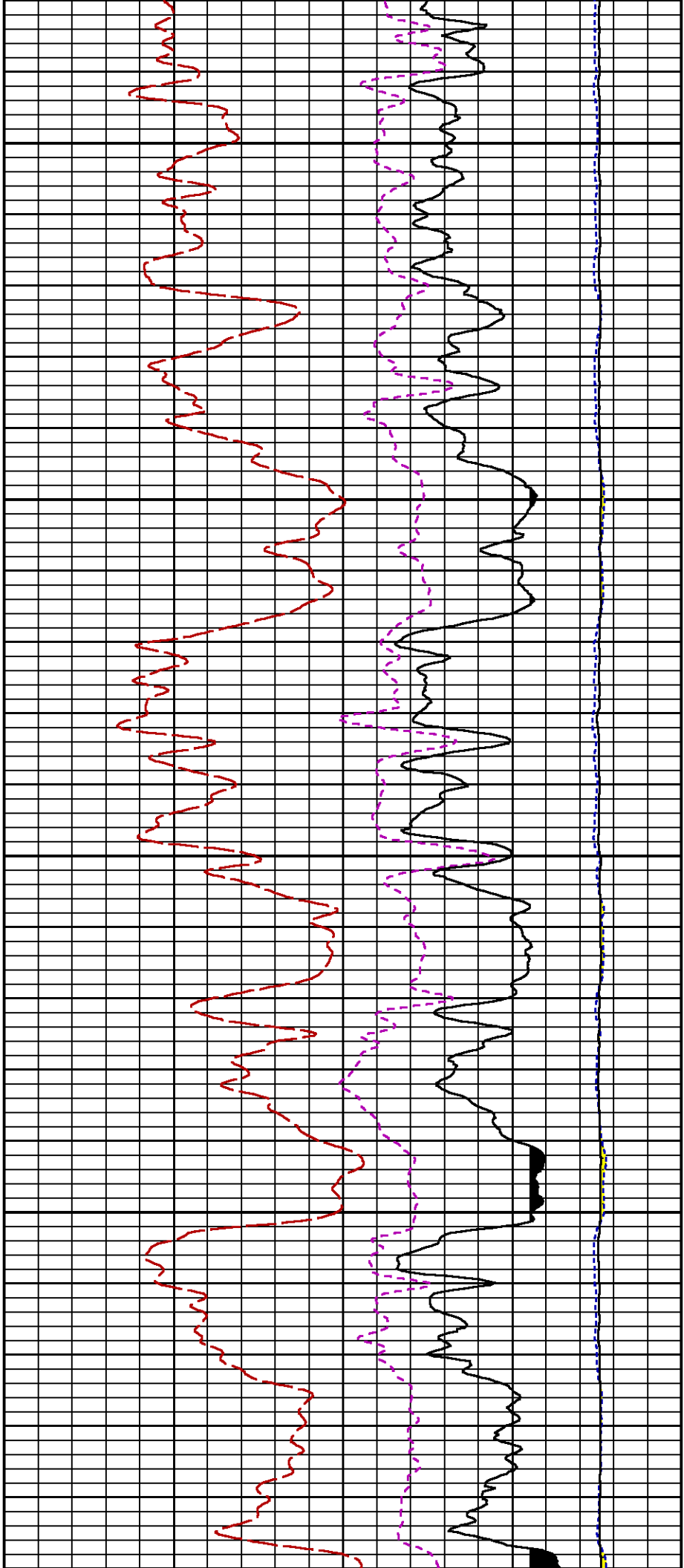




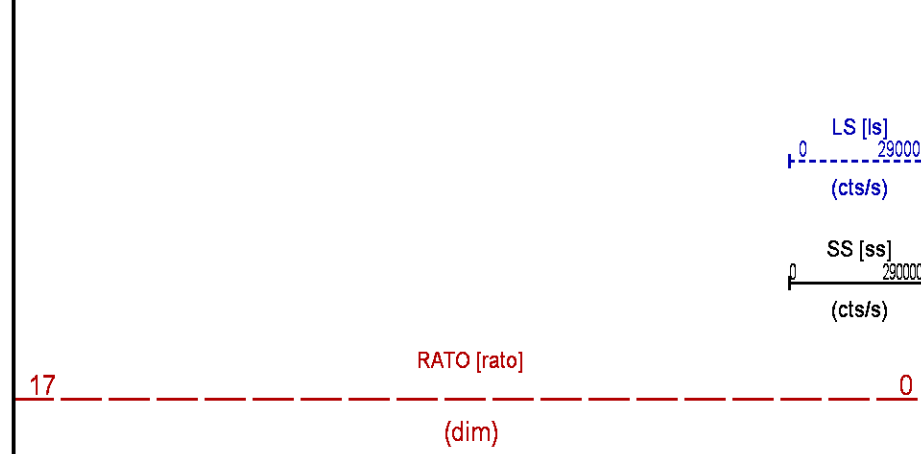
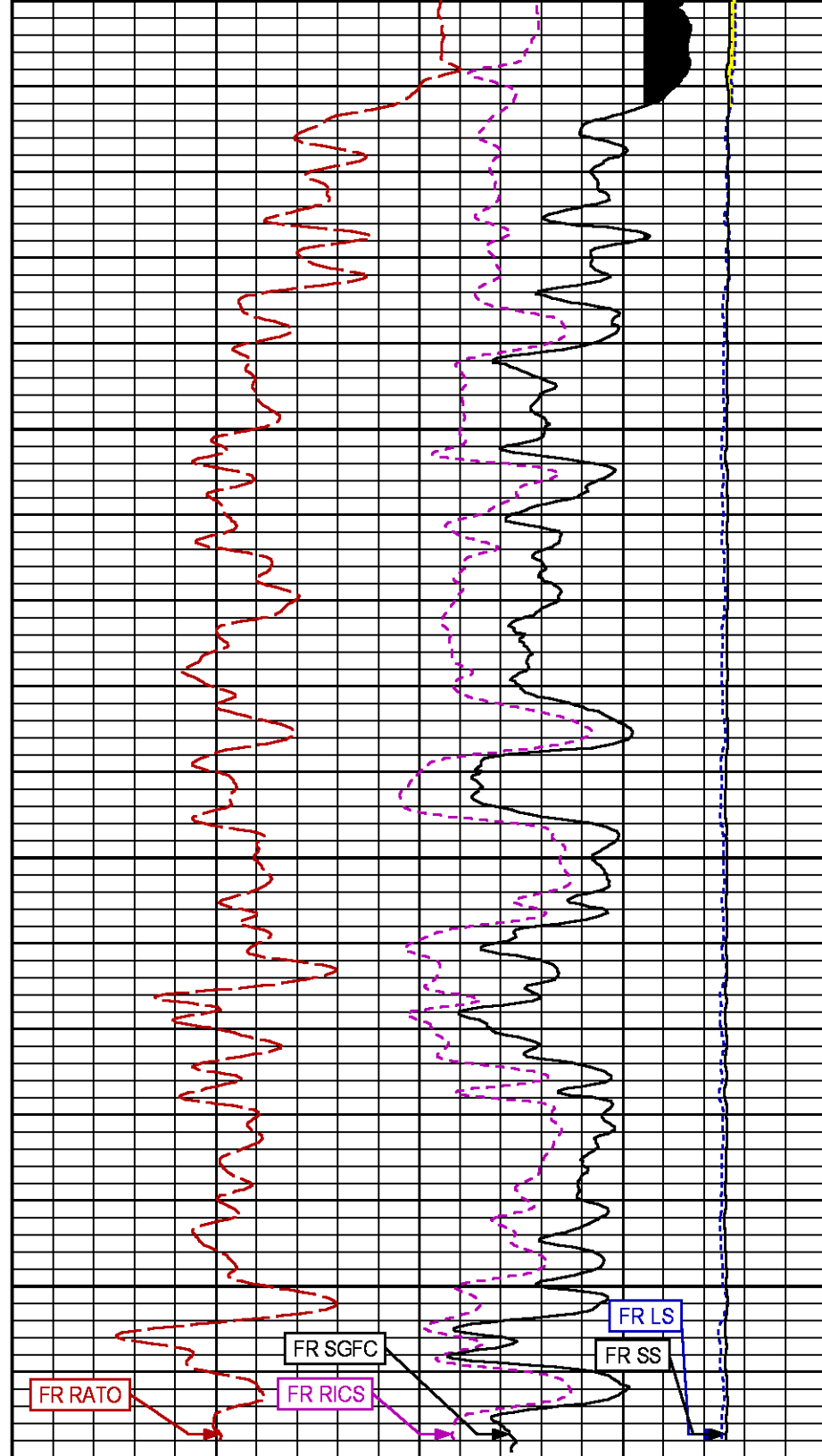
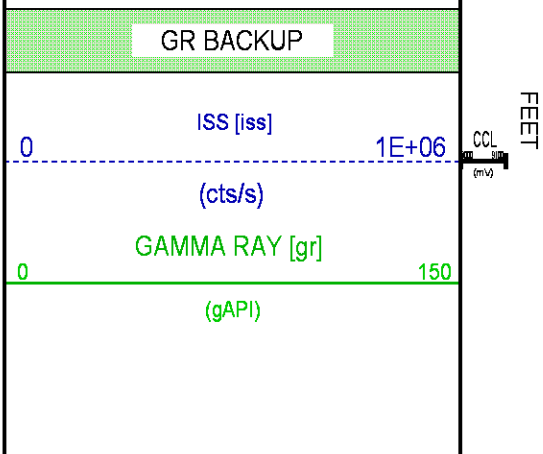
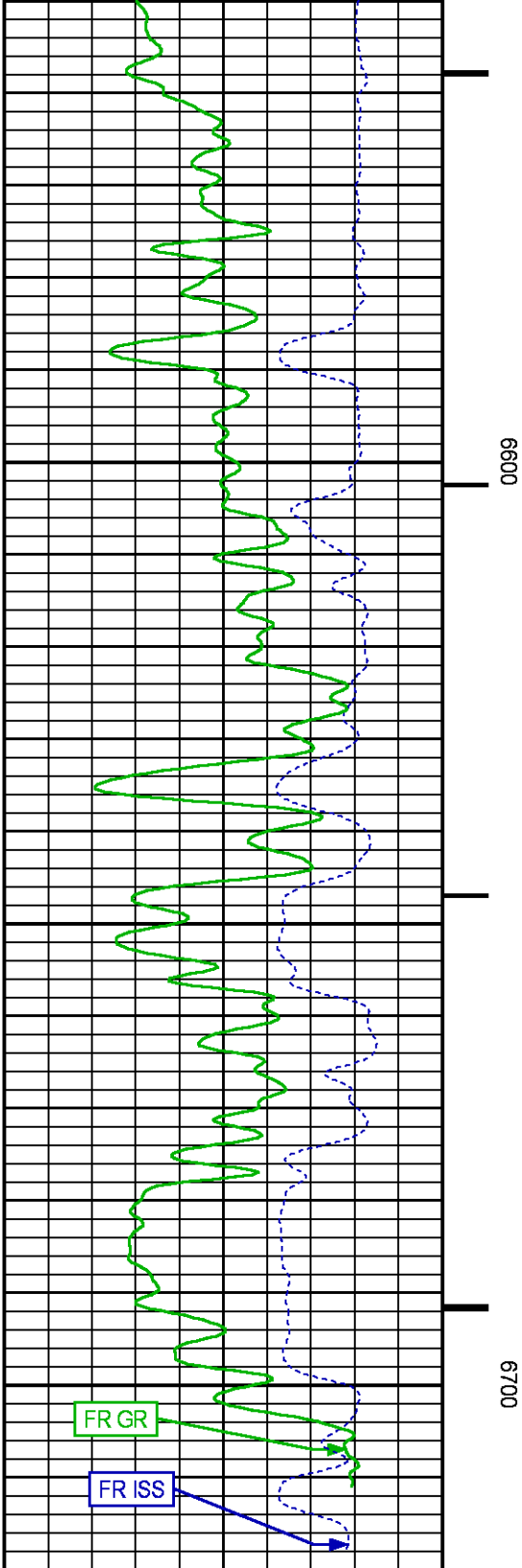












		39	RICS [rics]	9
			(dim)	
		60	SGFC [sgfc]	0
			(cu)	

REPEAT SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
 Updates: 1,36 Patches: 9

Plotted: Sun Jun 19 23:38:34 2016

PARAMETER AND FILTER SUMMARY REPORT					
FILE: /dat1a/CH107933/n353hx01.prm					
LOGGING MODE: DEPTH		DIRECTION: UP			
TOP DEPTH: 6346.750 ft		BOTTOM DEPTH: 6589.750 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	8.75	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Jun 19 21:19:30 2016	CASING COLLAR LOCATOR
F1:GR	Jun 19 21:19:30 2016	GAMMA RAY
F1:ISS	Jun 19 21:19:30 2016	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Jun 19 21:19:30 2016	LONG SPACE COUNT RATE
F1:RATO	Jun 19 21:19:30 2016	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Jun 19 21:19:30 2016	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Jun 19 21:19:30 2016	CORRECTED FORMATION SIGMA
F1:SS	Jun 19 21:19:30 2016	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	: cas6685:/dat1a/CH107933/WPX_RPM_RPT.fvpdf [5"/100' Scale]
Plot Interval	: 6331.25 - 6584 Feet
Data File 1	: F1 : cas6685:/dat1a/CH107933/n353hx01_RPT.xtf
Created On	: Jun 19 21:19:30 2016
Company	: WPX ENERGY
Well	: FEDERAL GM 442-8

Field : GRAND VALLEY  
File Interval : 6330.5 - 6599 Feet  
OCT : n353hx

GR BACKUP

ISS [iss] 1E+06  
(cts/s)  
GAMMA RAY [gr] 150  
(gAPI)

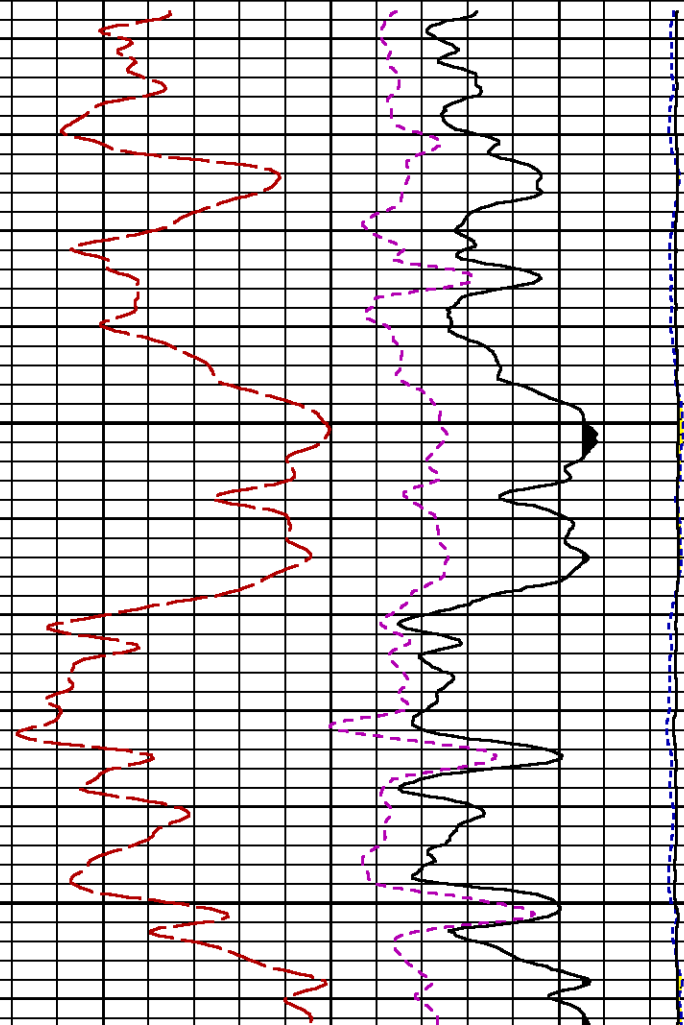
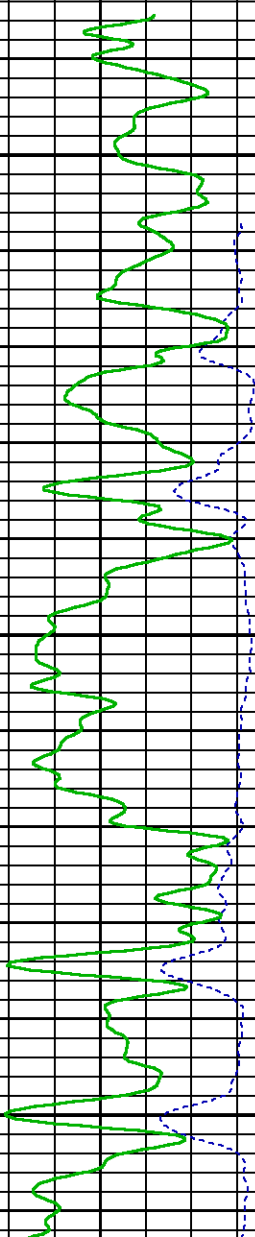
FEET

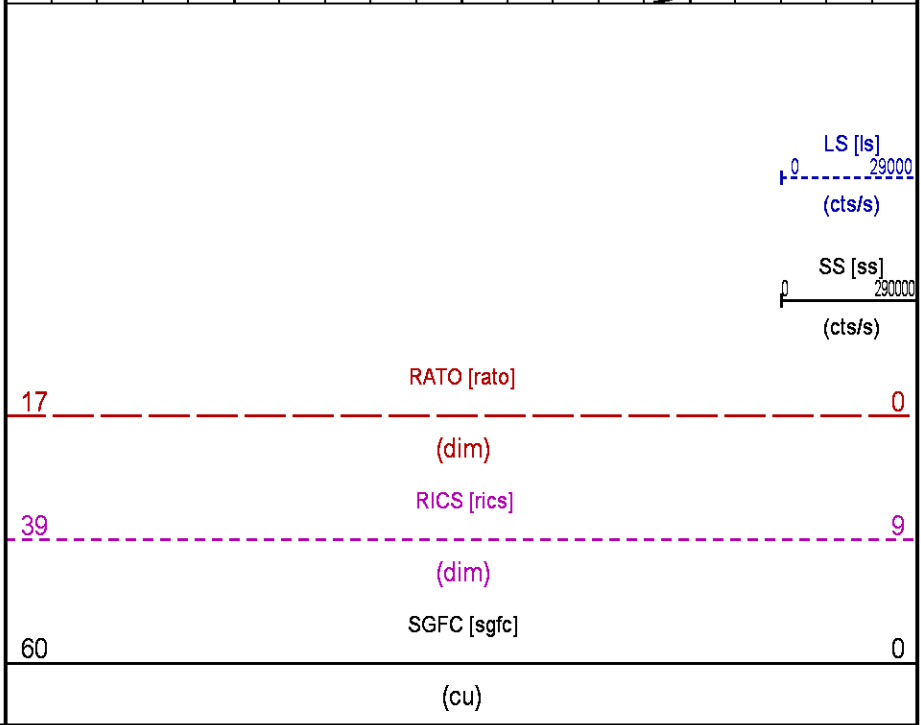
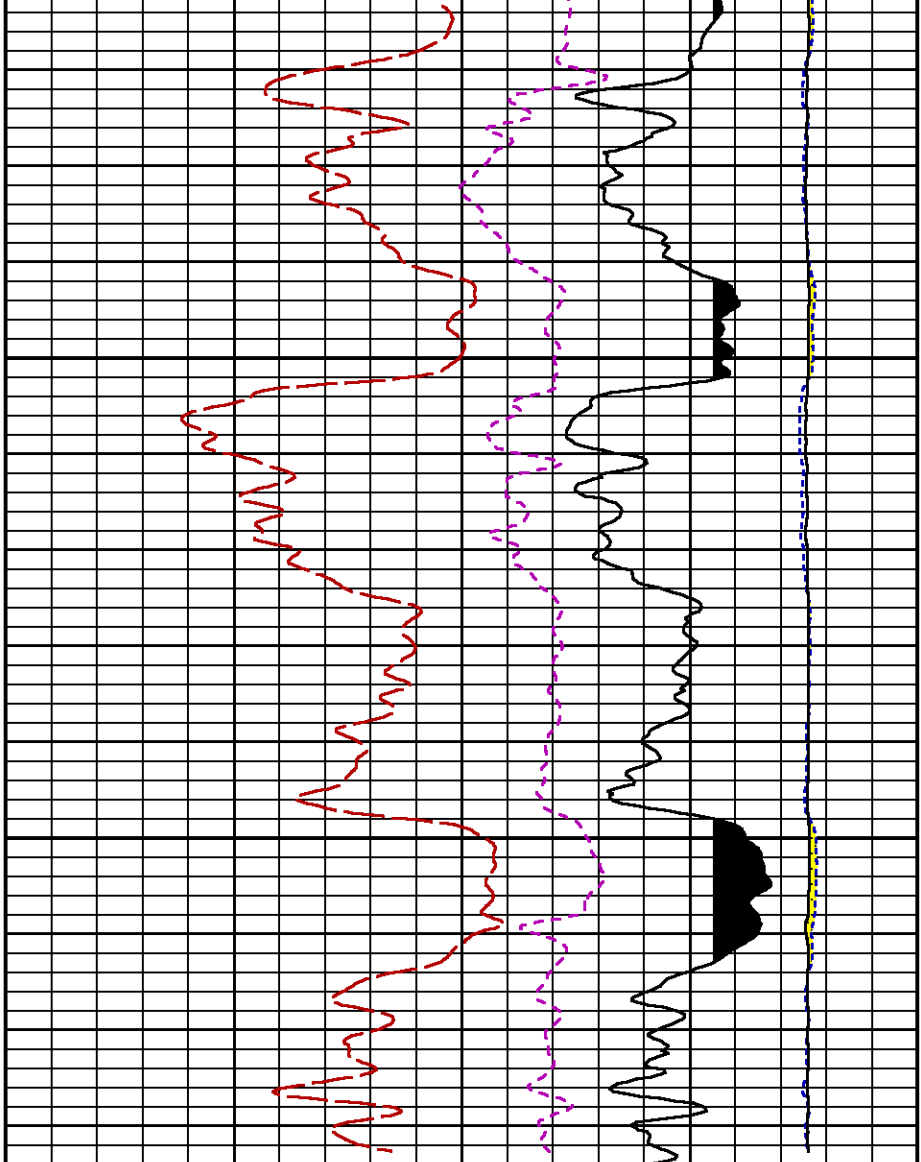
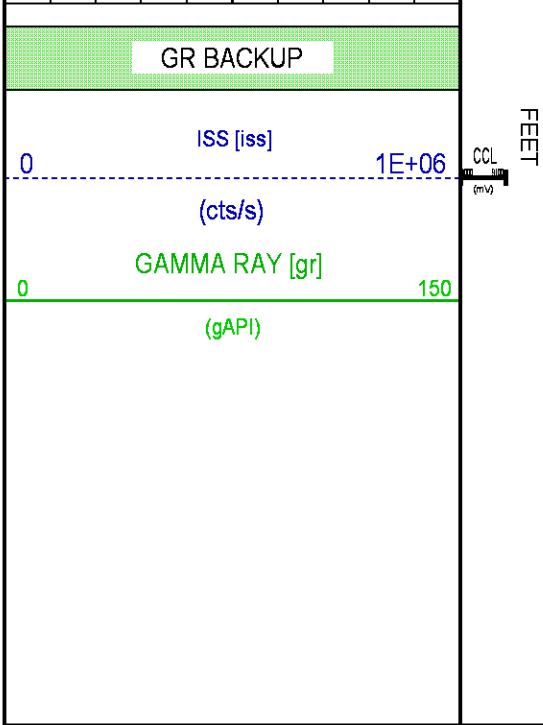
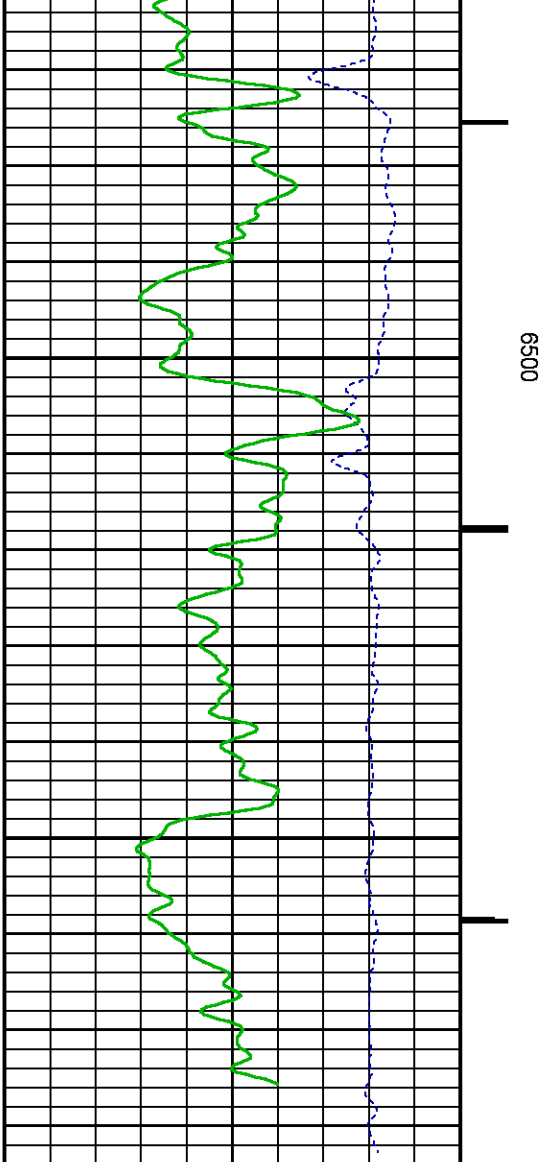
CCL  
(mv)

6400

LS [ls] 29000  
(cts/s)  
SS [ss] 290000  
(cts/s)

RATO [rato] 0  
(dim)  
RICS [rics] 9  
(dim)  
SGFC [sgfc] 0  
(cu)





Source File: /dat1a/CH107933/n353hx.tp1

## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Fri Jun 17 11:22:43 2016

UNIT #: 3885TC 6685

CALB JIG #: 4702NK BA-905

	BACKGROUND	CALBTR ON	CR DIFF	MULT	BACKGROUND	CALBTR ON	CALBTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	106.31	456.42	350.1	0.514	54.66	234.66	180

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470

DATE/TIME PERFORMED: Fri Jun 17 11:24:51 2016

UNIT #: 3885TC 6685

VERI JIG #: 4702NK BA-905

	BACKGROUND	CALBTR ON	MULT	BACKGROUND	CALBTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	104.33	455.69	0.514	53.64	234.28	180.64
						170.00 190.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10169251

DATE/TIME PERFORMED: Fri Jun 17 11:17:30 2016

UNIT: 3885TC 6685

CALIBRATOR: 2437XB GJ\_SHOP

SOURCE: 8281AA 11765055

HOURS: 8281AA 202

	ISS	Mtr Vlt	SS Gain	LS Gain	XLS Gain	EA Temp	Sync Delay	RCAL
		(V)				(degF)	(usec)	
Raw Data	809107	120	2330	2299	2351	132	7.0	0.9797
Interpolated	1300000	140	2308	2293	2348			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	809107	7256	1203	154	25.99	0.15	24.02	0.34
					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	809107	166665	26353	87355	31074	8120	52945	13003
Fit Quality %		0.718	0.914	0.858	0.879	0.823	0.834	0.791

	ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
			ISS/LS	ISS/XS	ISS/CSS	SS/LS	SS2/LS	CSS/CLS
Raw Data	809107	1.43	4.86	30.72	15.28	10.76	3.83	4.07
		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 %		0.093	0.239	0.137	0.092	0.055	0.061	0.073
Reduced	1386218	1.43	4.86	30.72	15.30	10.75	3.83	4.07
		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

## TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 166341

DATE/TIME PERFORMED: Sat Jun 28 11:12:23 2014

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	1.112722E-05	-6.595931E-12	3.011507E-19	-2.270919E-26

## INSTRUMENT CONFIGURATION

Source File: /dat1a/CH107933/n353hx-joe-ldg

### A3 CABLEHEAD

#### PCM POWER SUPPLY

Diameter : 1.70"  
Length : 3.86'  
Weight : 18 lbs  
Series : 8250EA  
Mnemonic : PCM

#### TELEMETRY / CCL

Diameter : 1.70"  
Length : 4.46'  
Weight : 20 lbs  
Series : 8248ED  
Mnemonic : PCM  
Measure Point: 1.00': CCL MP

#### GAMMA RAY

Diameter : 1.70"  
Length : 3.02'  
Weight : 15 lbs  
Series : 8262XA  
Mnemonic : GR  
Measure Point: 0.89': GR MP

#### RPM ELECTRONICS

Diameter : 1.70"  
Length : 4.48'  
Weight : 16 lbs  
Series : 8281EA  
Mnemonic : RPM

34.08'

CCL MP 26.03'

GR MP 22.90'

RPM C DETECTOR SECTION  
 Diameter : 1.70"  
 Length : 9.40'  
 Weight : 41 lbs  
 Series : 8283PA  
 Mnemonic : RPM  
 Measure Point: 5.45': XLS DETECTOR  
 Measure Point: 5.04': LS DETECTOR  
 Measure Point: 4.79': SS DETECTOR

XLS DETECTOR 13.58'  
 LS DETECTOR 13.16'  
 SS DETECTOR 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 0.00'

BULL PLUG 1 11/16

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

	COMPANY <b>WPX ENERGY</b>		FILE NO: <b>CH107933</b>
	WELL <b>FEDERAL GM 442-8</b>		API NO: <b>05045225330000</b>
	FIELD <b>GRAND VALLEY</b>		
	COUNTY <b>GARFIELD</b>	STATE <b>COLORADO</b>	
LOCATION: SHL: 663'FNL 553'FWL S9T7SR96W BHL: 2050'FNL 323'FEL S8T7SR96W		ELEVATIONS: KB 6111 FT DF GL 6087 FT	SEC8 T.7S R.96W PAD: MV 16-9 RIG: H&P 318
SEC <u>8</u> TWP <u>7S</u> RGE <u>96W</u>		DATE <b>19-Jun-2016</b>	