



FILE NO: CH093661	COMPANY WPX ENERGY
API NO: 05045200390000	WELL MEAD RWF 32-23
	FIELD RULISON
	COUNTY GARFIELD
	STATE CO

Version 23 6S 94W RWF 43-23 PAD NABORS 577	LOCATION: SHL: 2303' FNL & 256' FEL BHL: 1660' FNL & 1877' FEL SEC 23 TWP 6S RGE 94W	OTHER SERVICES BOND LOG
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB ELEVATION 26 FT ABOVE P.D. KB GL	ELEVATIONS: KB 5625 FT DF GL 5599 FT
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DATE		20-Dec-2014			
RUN	TRIP	1	1		
SERVICE ORDER	US093661				
DEPTH DRILLER	8702 FT				
DEPTH LOGGER	8676 FT				
BOTTOM LOGGED INTERVAL	8666 FT				
TOP LOGGED INTERVAL	4514 FT				
TIME STARTED	7:30				
TIME FINISHED	16:30				
OPERATOR RIG TIME	9 HOURS				
TYPE OF FLUID IN HOLE	WATER				
FLUID DENSITY	NA				
FLUID SALINITY	NA				
FLUID LEVEL	71 FT				
LOGGED CEMENT TOP	NA				
WELLHEAD PRESSURE	0 PSI				
MAXIMUM HOLE DEVIATION	NA				
NOMINAL LOGGING SPEED	10 F/MIN				
MAX. RECORDED TEMP.	241 DEGF				
REFERENCE LOG	BAKER HUGHES BOND LOG				
REFERENCE LOG DATE	19-Dec-2014				
EQUIP. NO.	LOCATION	4271	GRAND JCT.		
RECORDED BY	P. EDWARDS				
WITNESSED BY	BOB CADY				

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
13.5 IN	0 FT	1252 FT
8.75 IN	1252 FT	8729 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			0 FT	1252 FT
4.5 IN	11.6 LB/F	I-80	0 FT	8729 FT

REMARKS
RUN 1 TRIP 1: All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 12/20/2014 at the client's request.
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
The amount of linear shift is 3 feet.
Logged in PNC-3D mode.
BHT = 241 degF SJ = 5202' - 5226'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10397894	FREE
1	1	TEL/CCL	8248ED	10296408	FREE
1	1	GR	2812LA	10274382	FREE
1	1	RPM	8281EA	10423671	FREE
1	1	RPM	8283PA	10585555	FREE
1	1	RPM	8281FA	10460082	FREE
1	1	TEMP	8255XA	Z120516	FREE

MAIN SECTION PNC-3D MODE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Updates: 46 Patches: 5

Plotted: Sat Dec 20 16:35:36 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\093561\0354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 6932.750 ft BOTTOM DEPTH: 8670.750 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		"	"

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\093561\0354h04.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 4500.000 ft BOTTOM DEPTH: 7098.000 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 CURVE DESCRIPTION

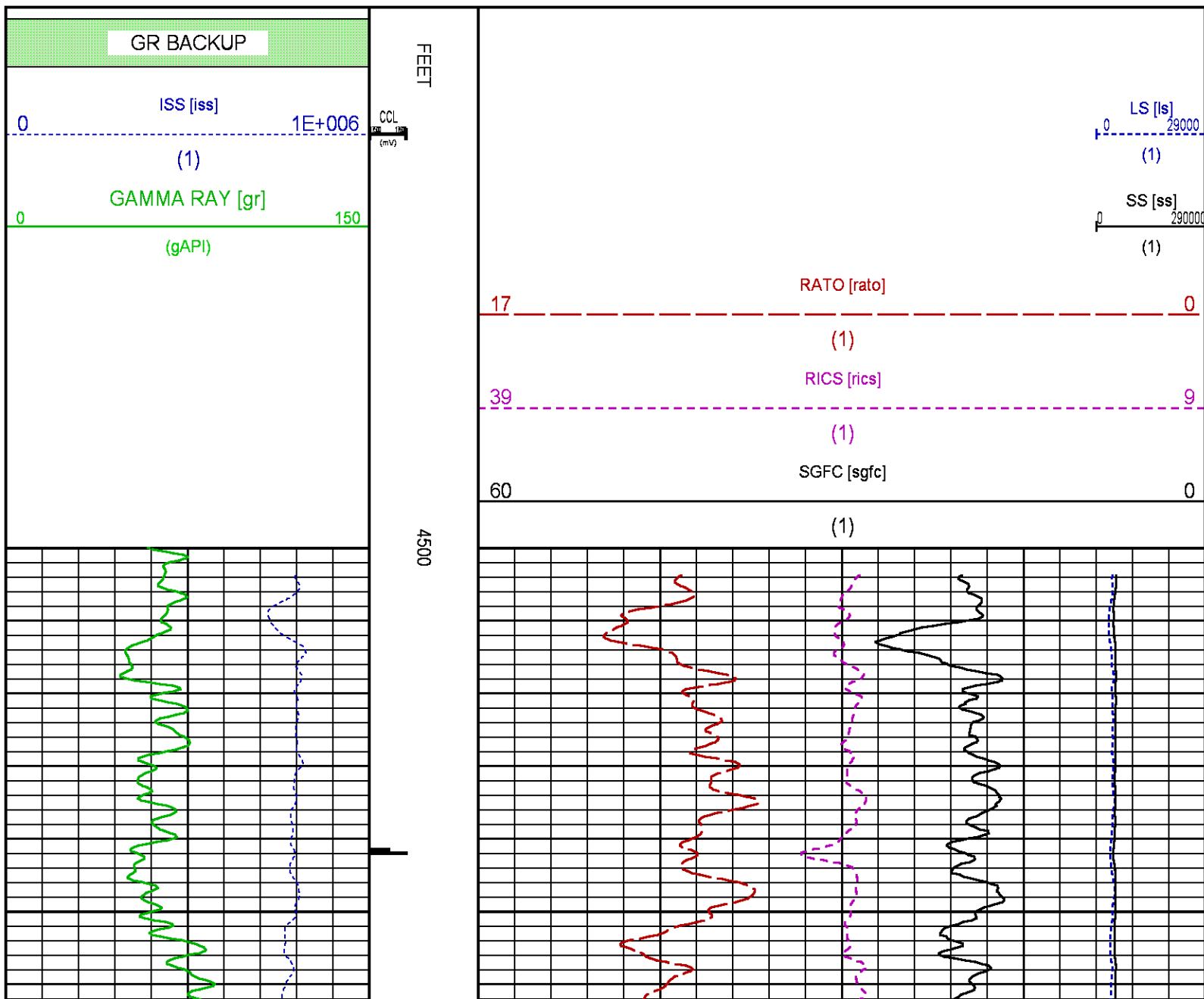
F1:CCL	Dec 20 13:24:08 2014	CASING COLLAR LOCATOR
F1:GR	Dec 20 13:24:08 2014	GAMMA RAY
F1:ISS	Dec 20 13:24:08 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 20 13:24:08 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 20 13:24:08 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 20 13:24:08 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 20 13:24:08 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 20 13:24:08 2014	SHORT SPACE COUNT RATE

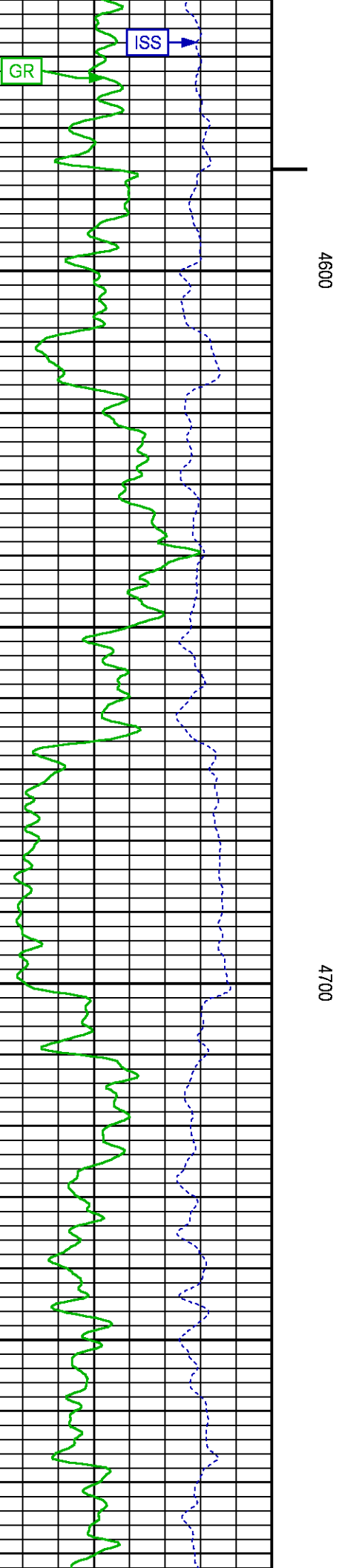
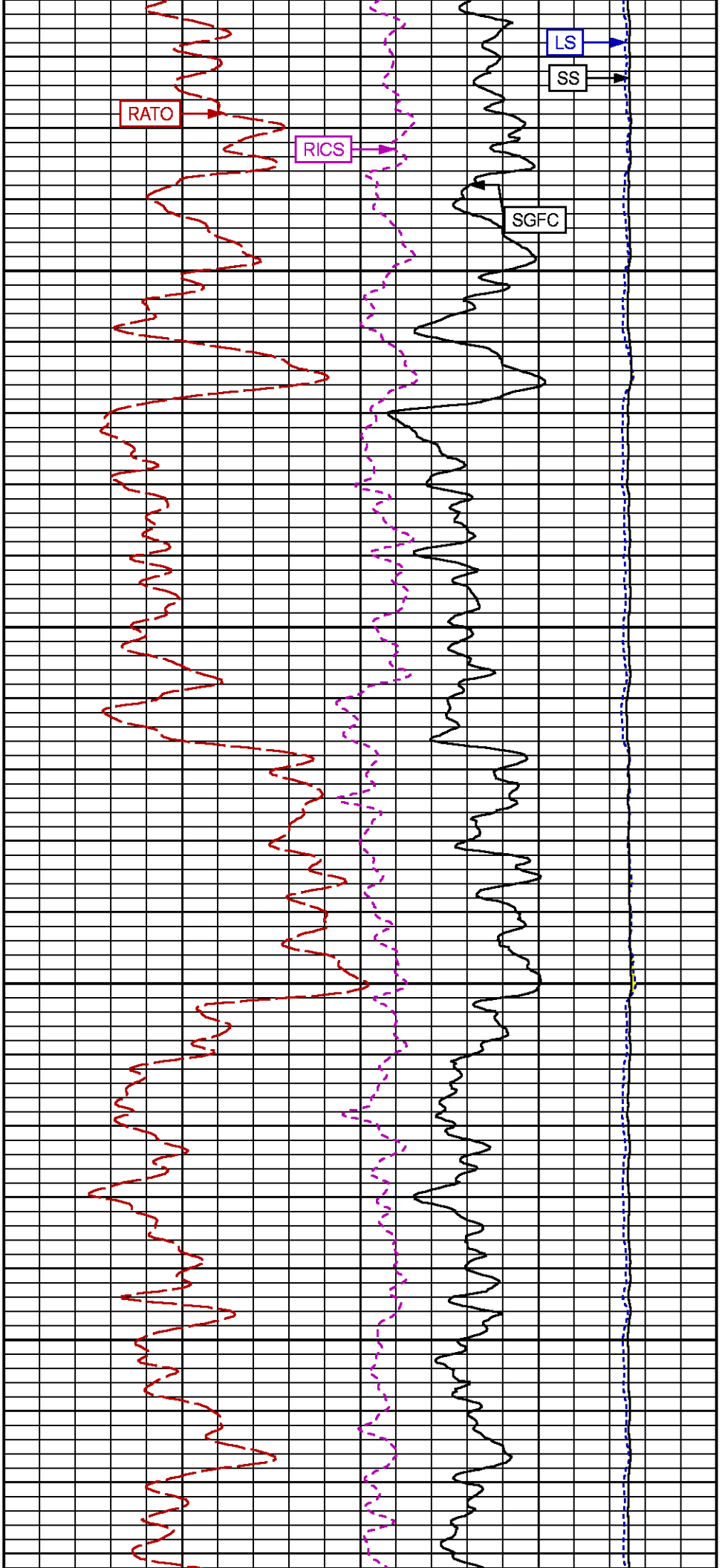
CURVE MEASURE POINT OFFSET

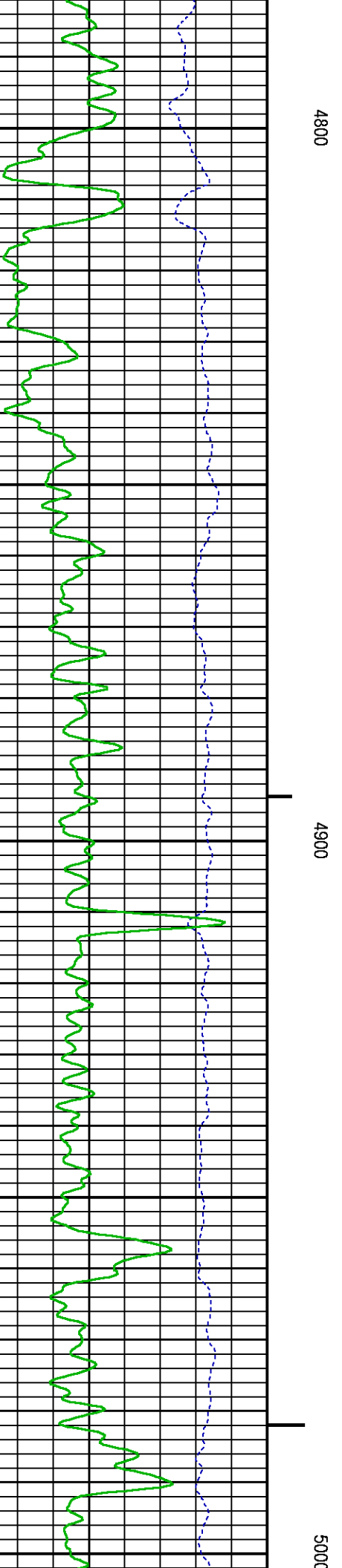
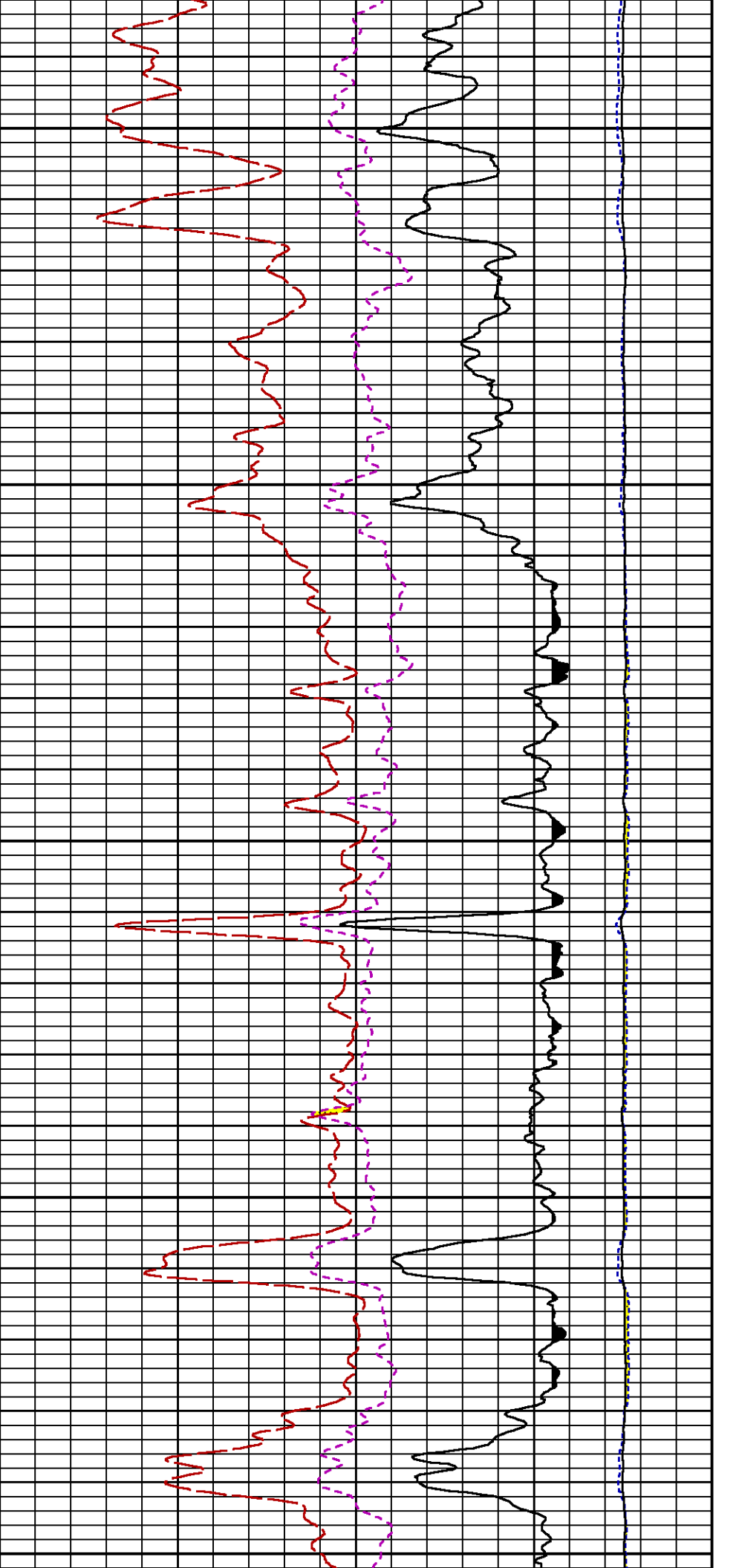
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

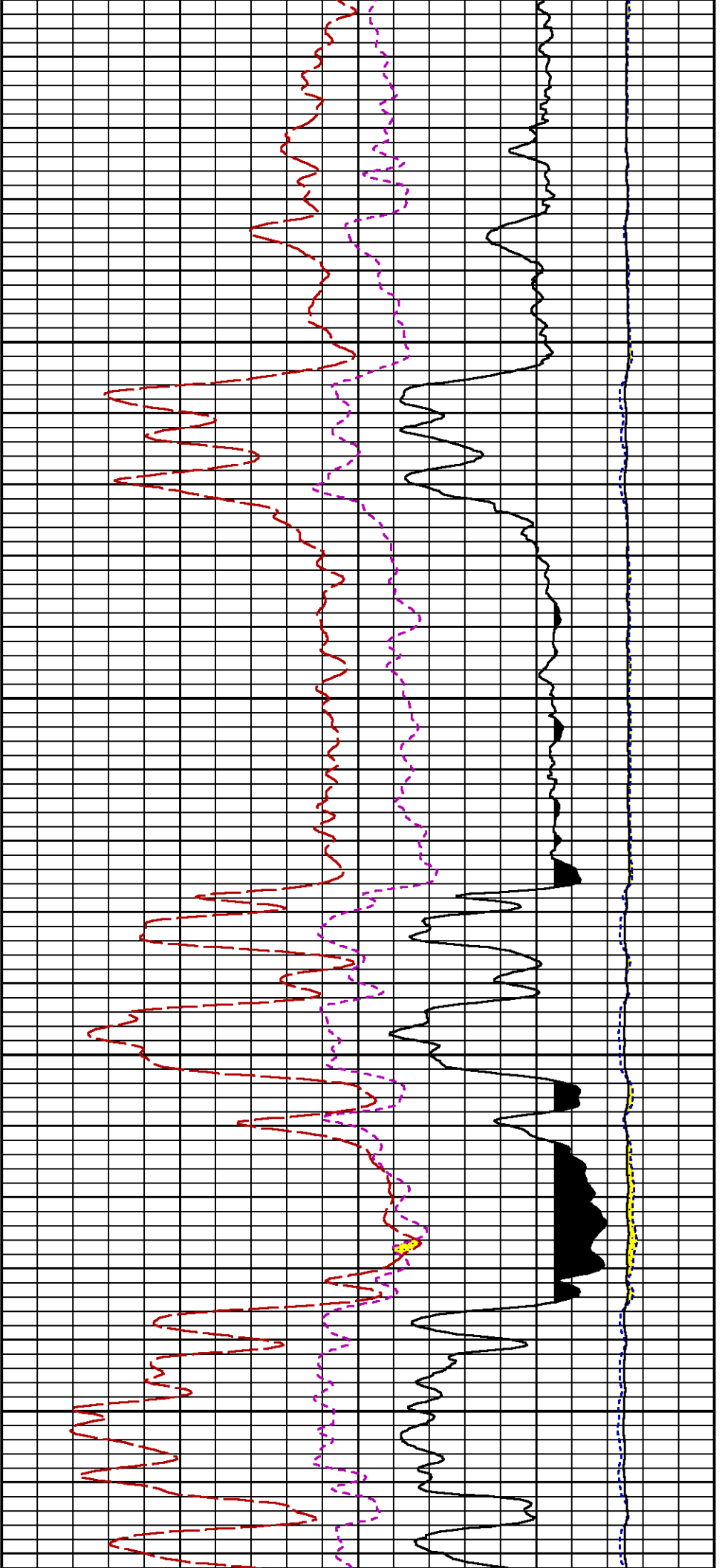
Presentation : BHUGHES-06627:C:\dat1a\093561\32RPM_SPLICE.fvpdf [5"/100' Scale]
 Plot Interval : 4500 - 8681 Feet

Data File 1 : F1 : BHUGHES-06627:C:\dat1a\093561\32_RPM_SPLICE.xtf
 Created On : Dec 20 09:07:55 2014
 Company : WPX ENERGY
 Well : MEAD RWF 32-23
 Field : RULISON
 File Interval : 30.25 - 8671.25 Feet
 OCT : n354h



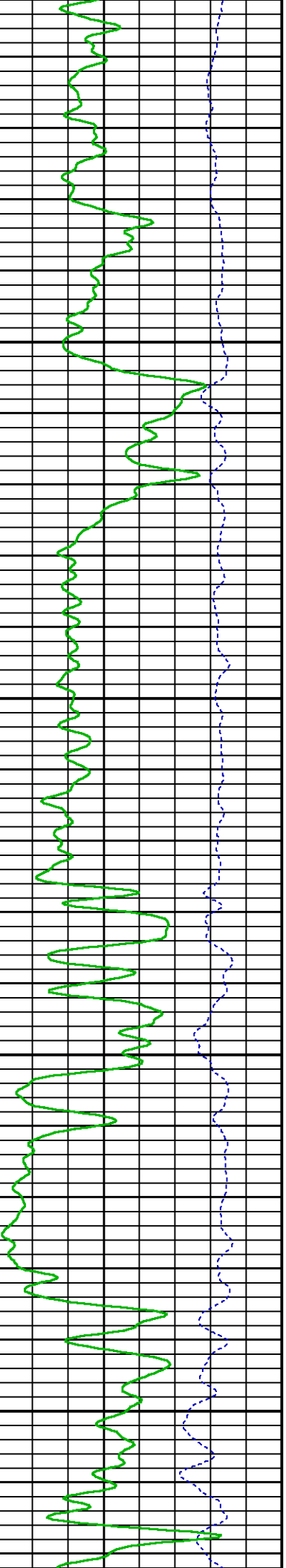


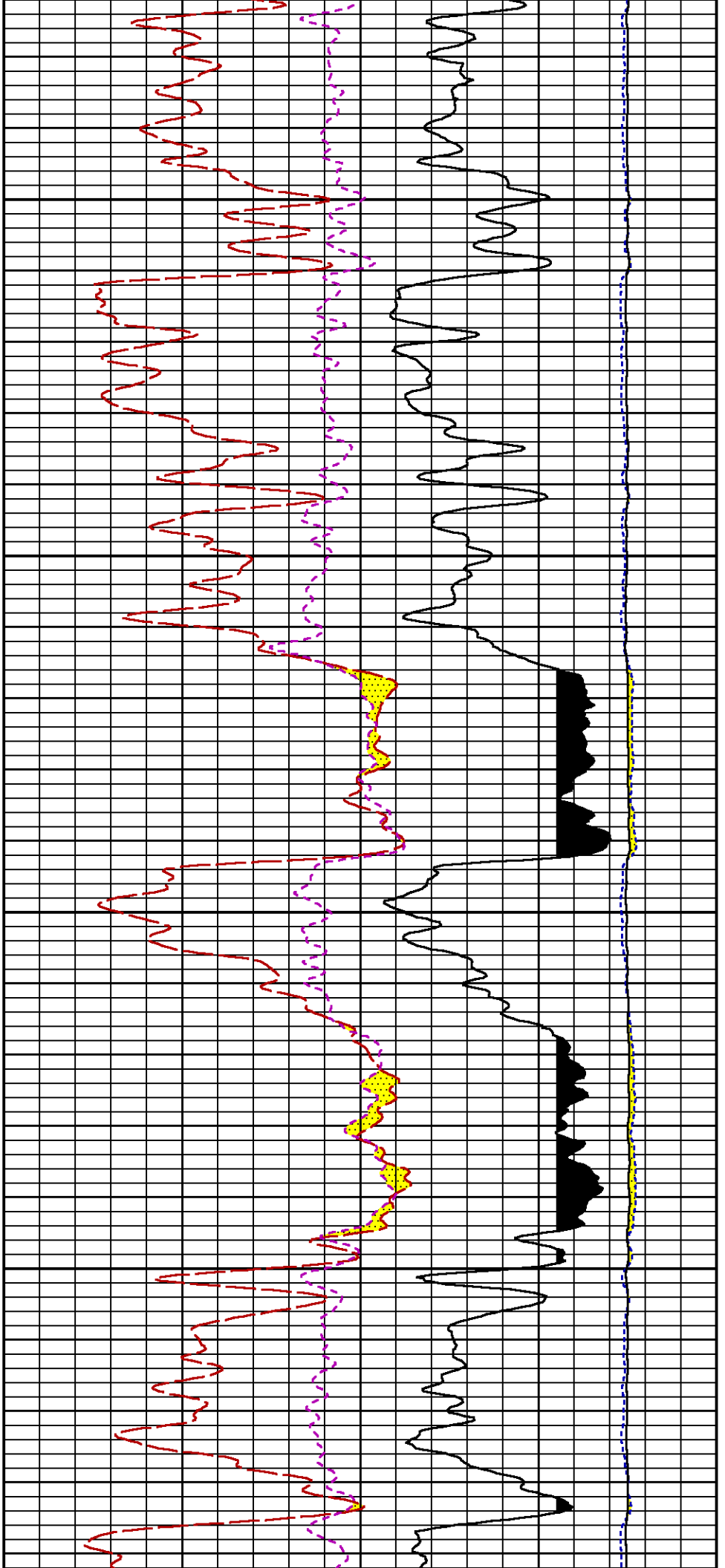




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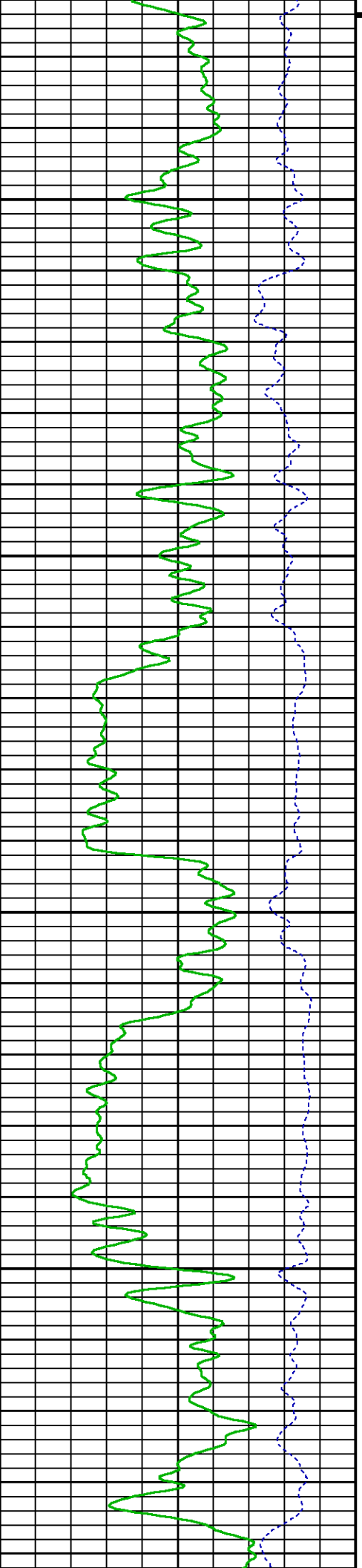
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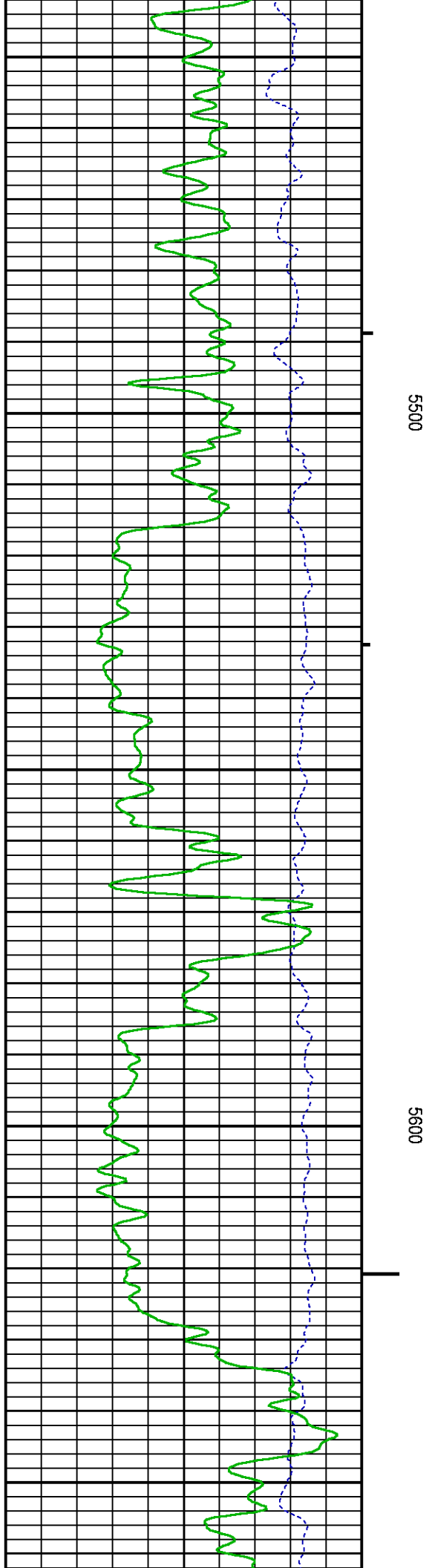
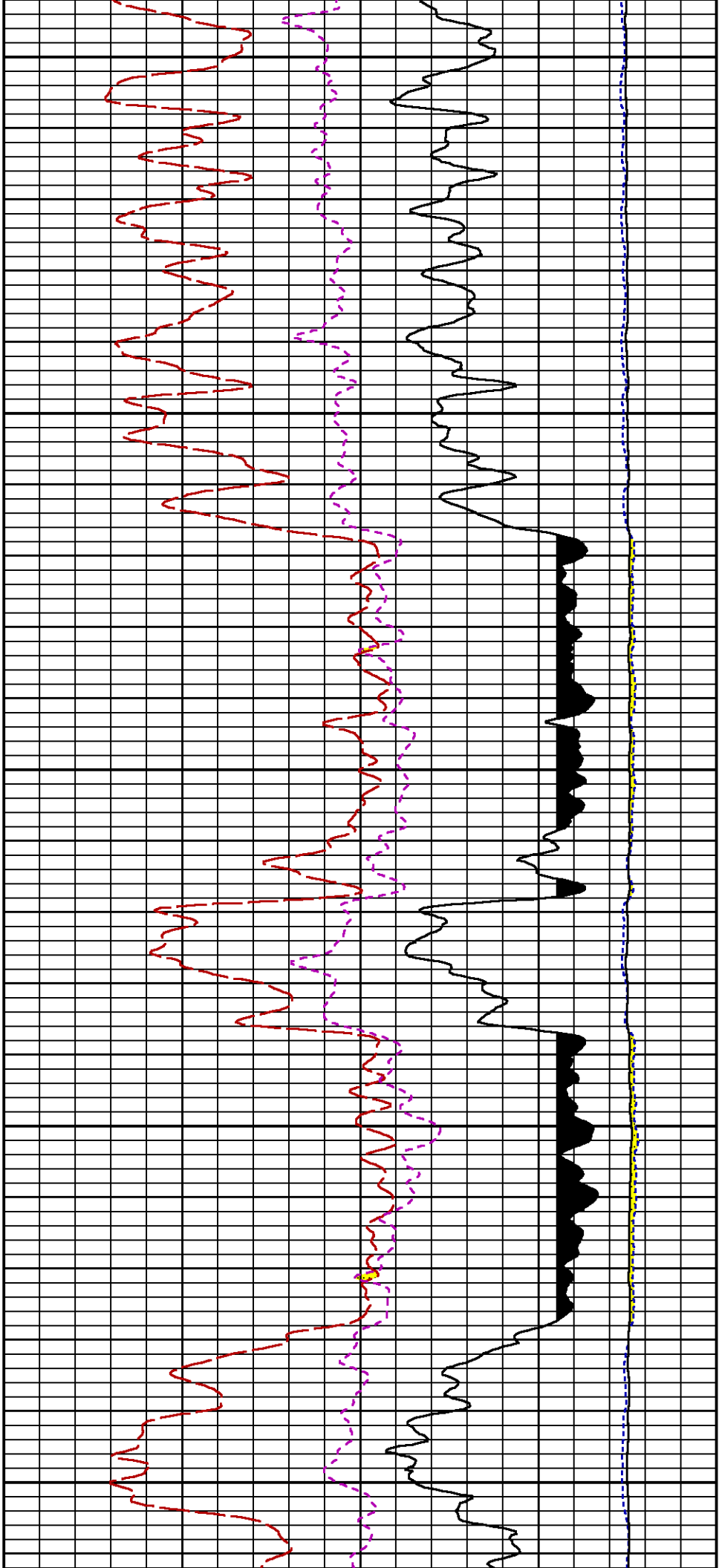


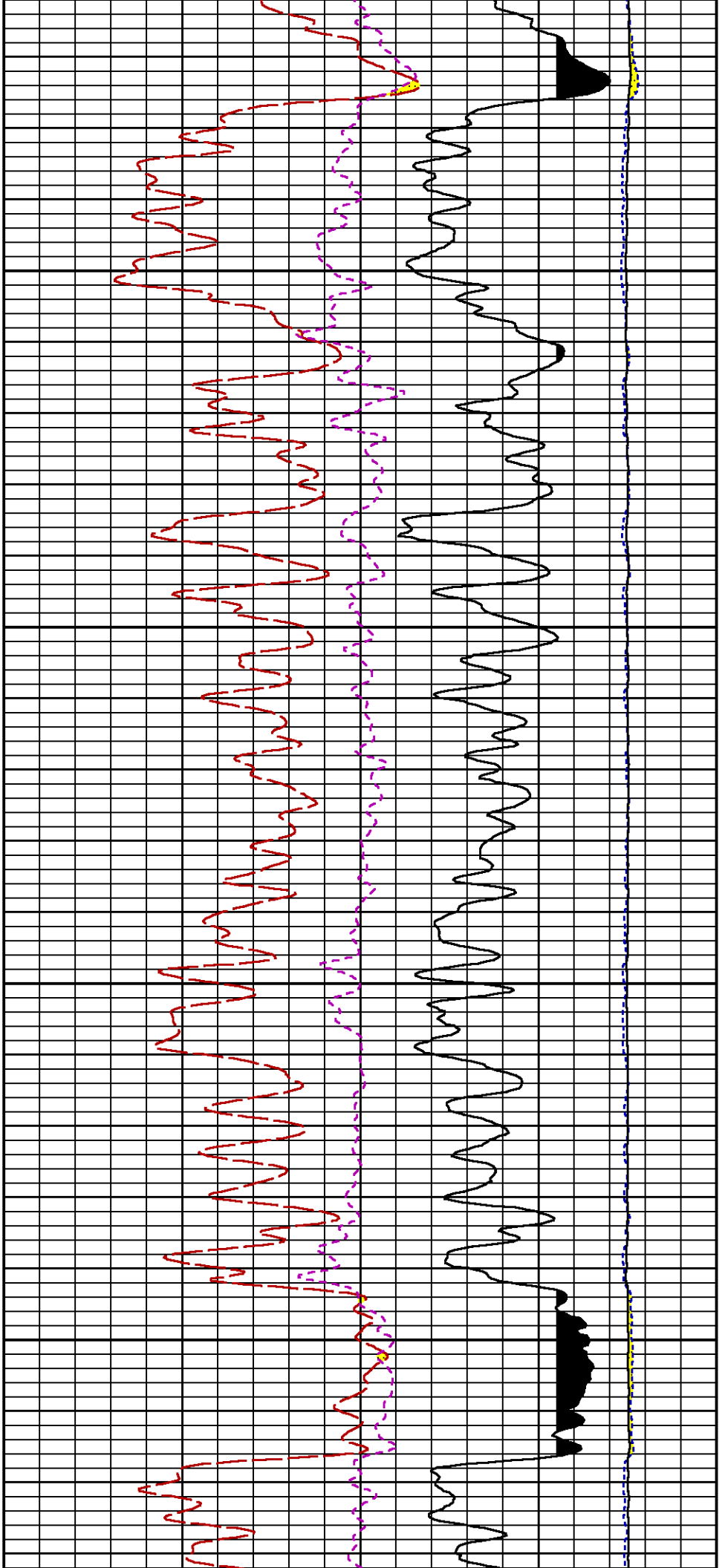


5300

5400

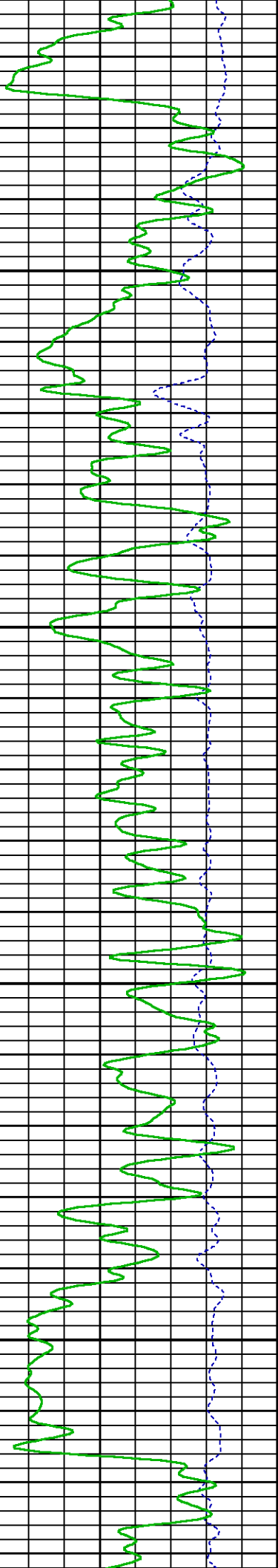


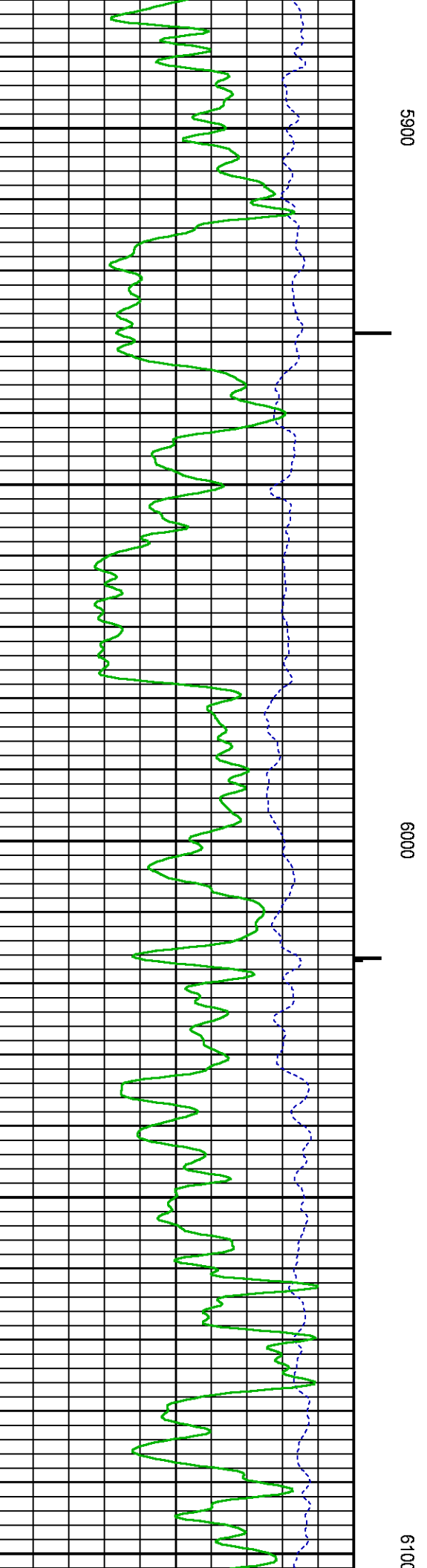
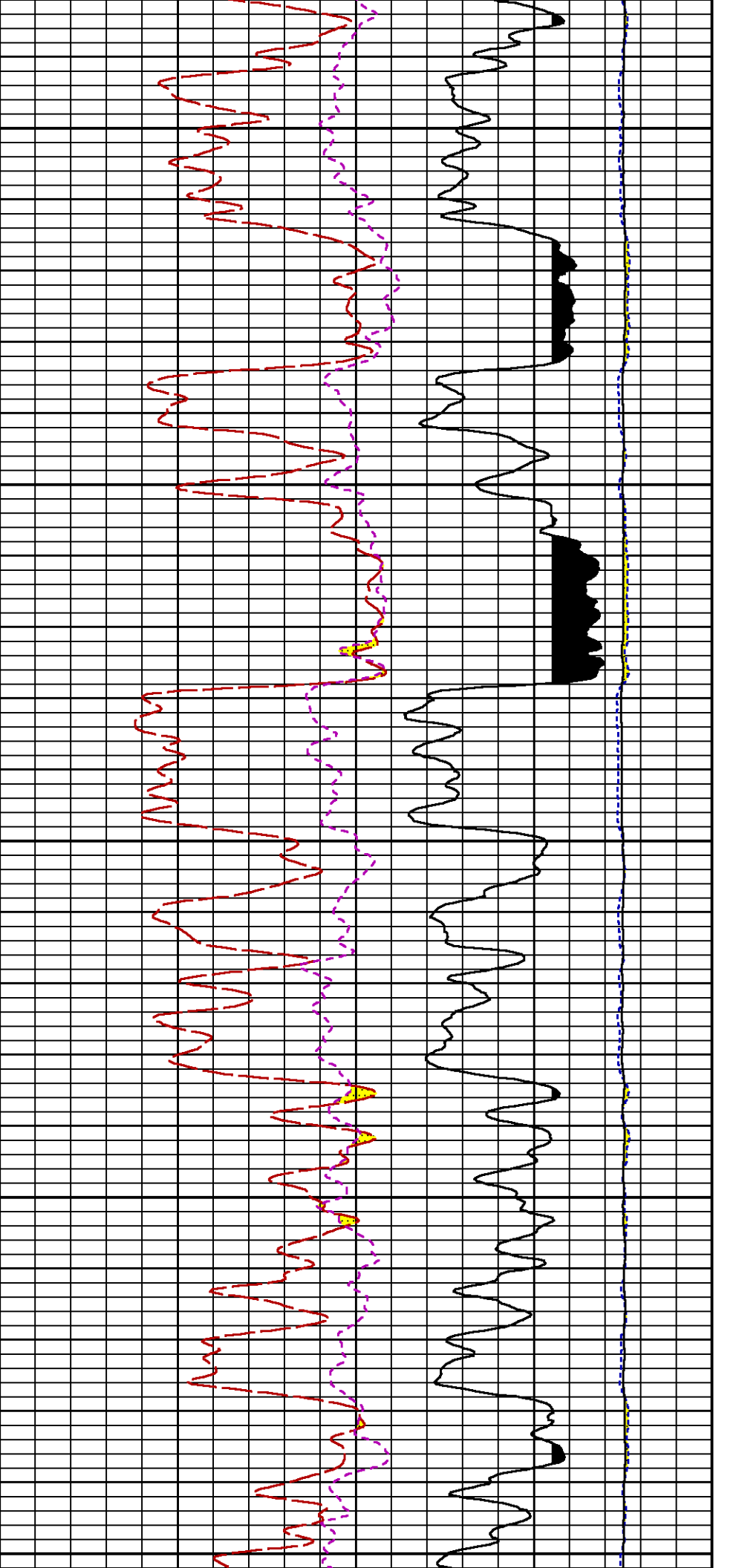


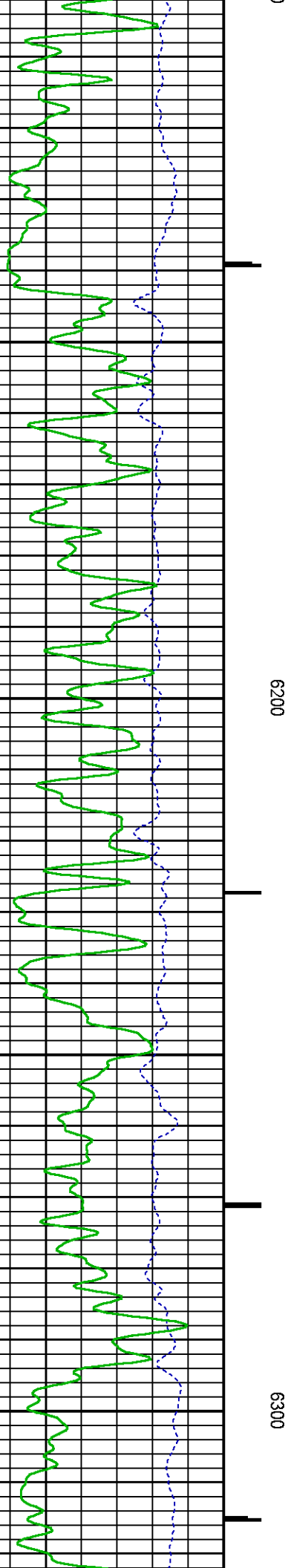
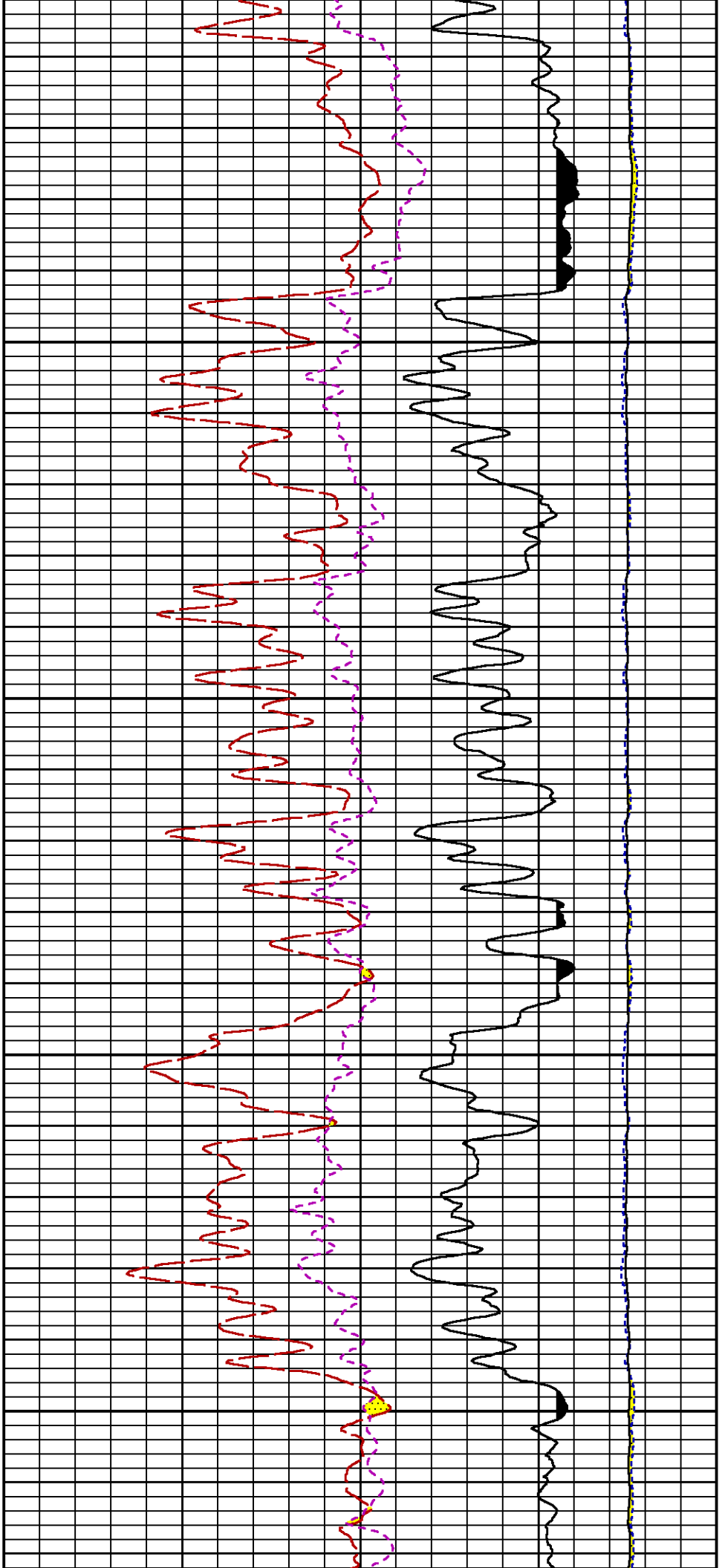


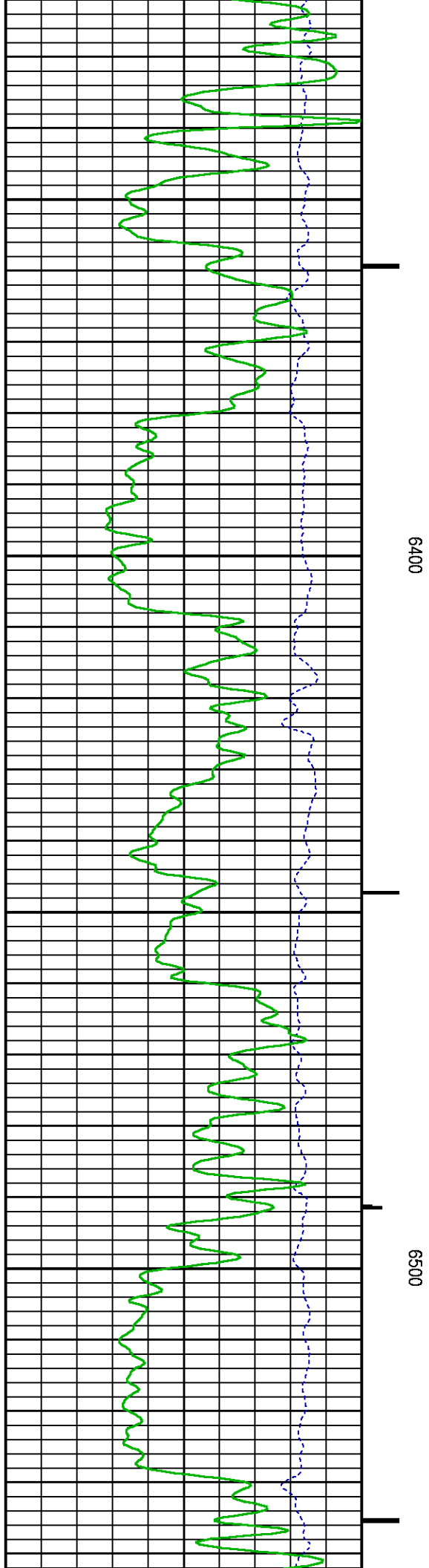
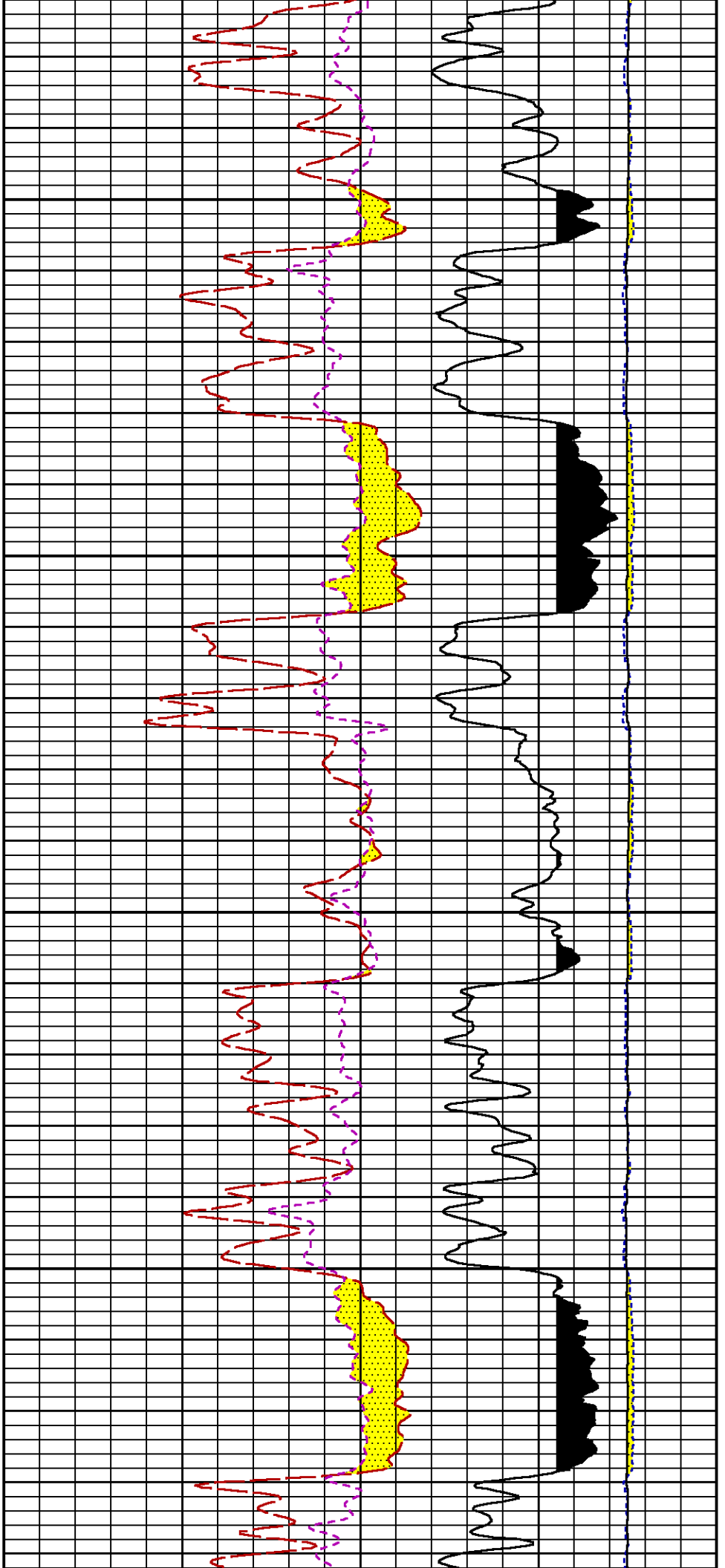
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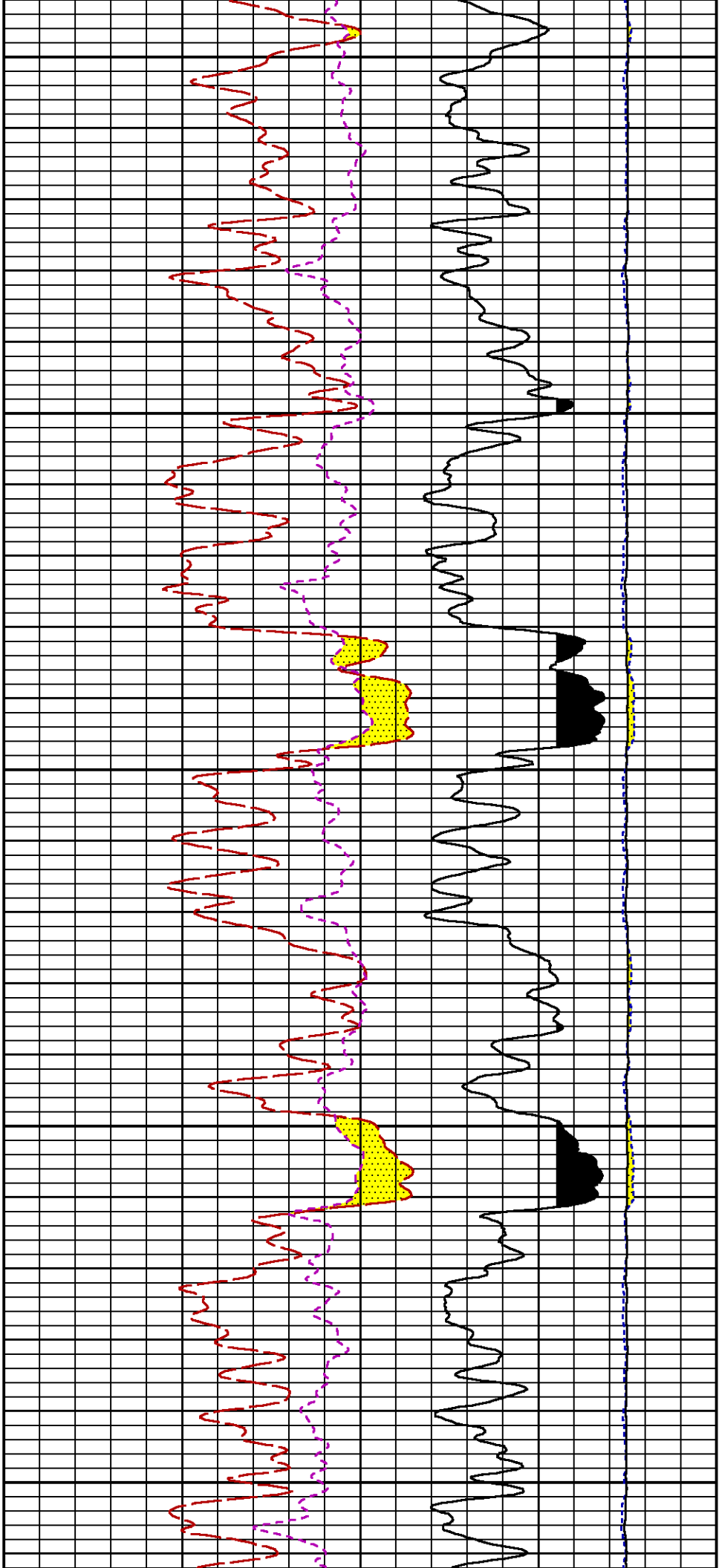
5800





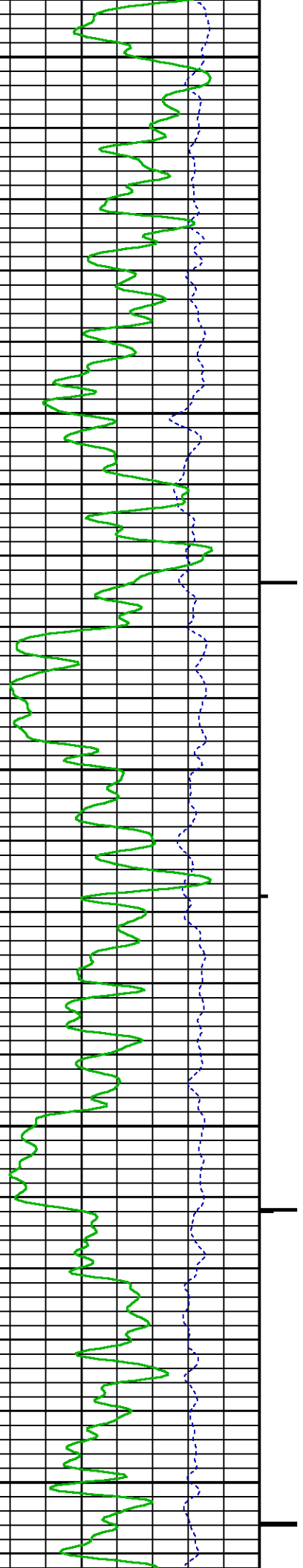


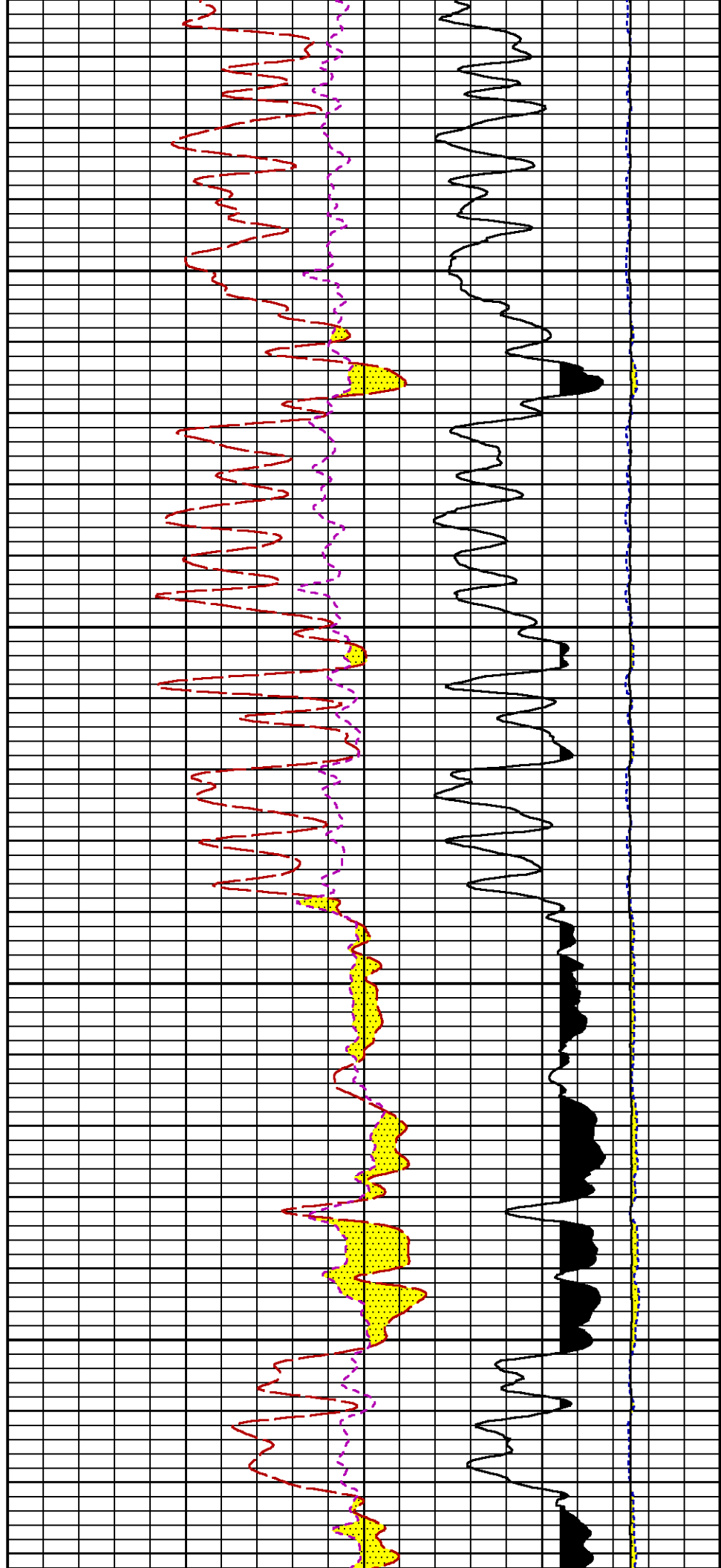
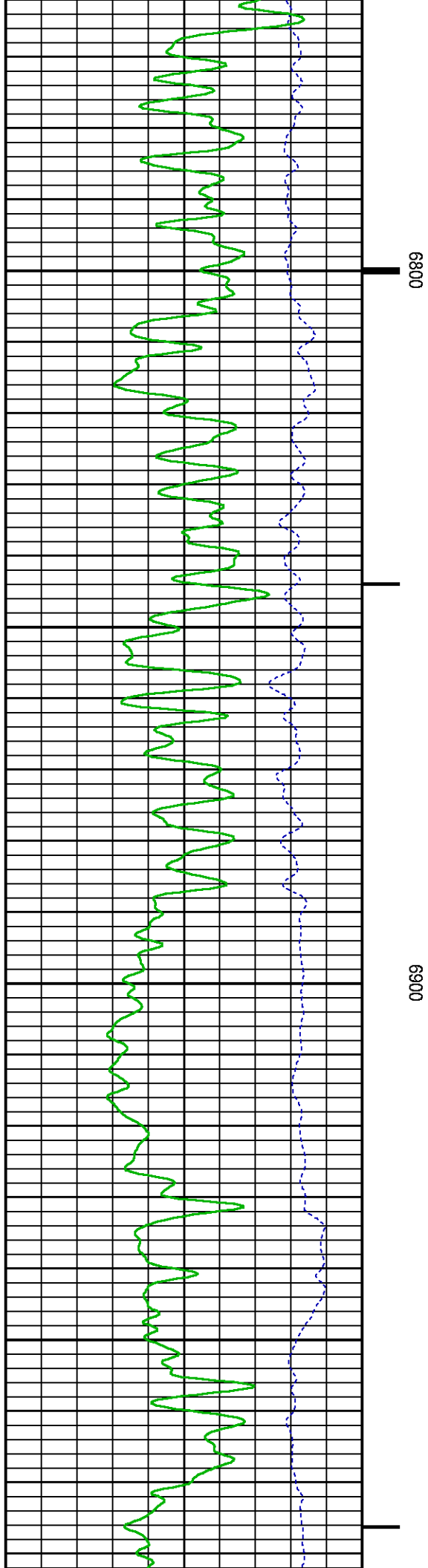


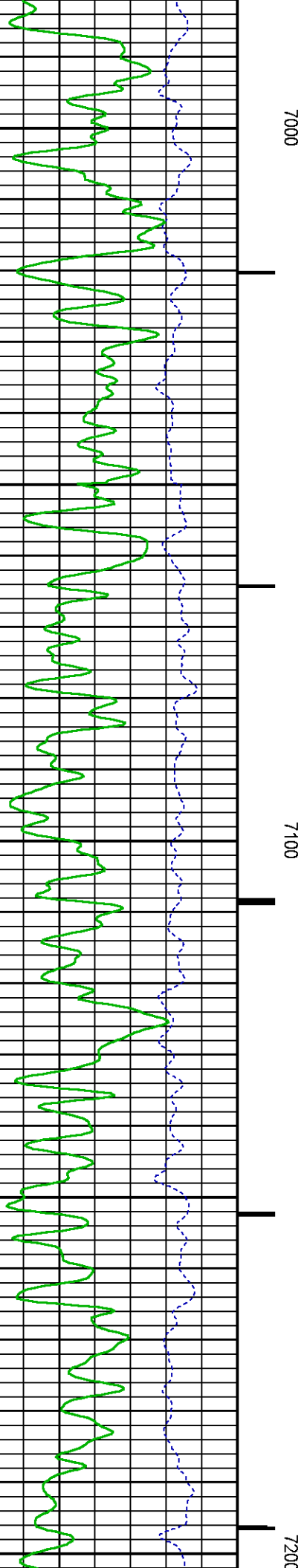
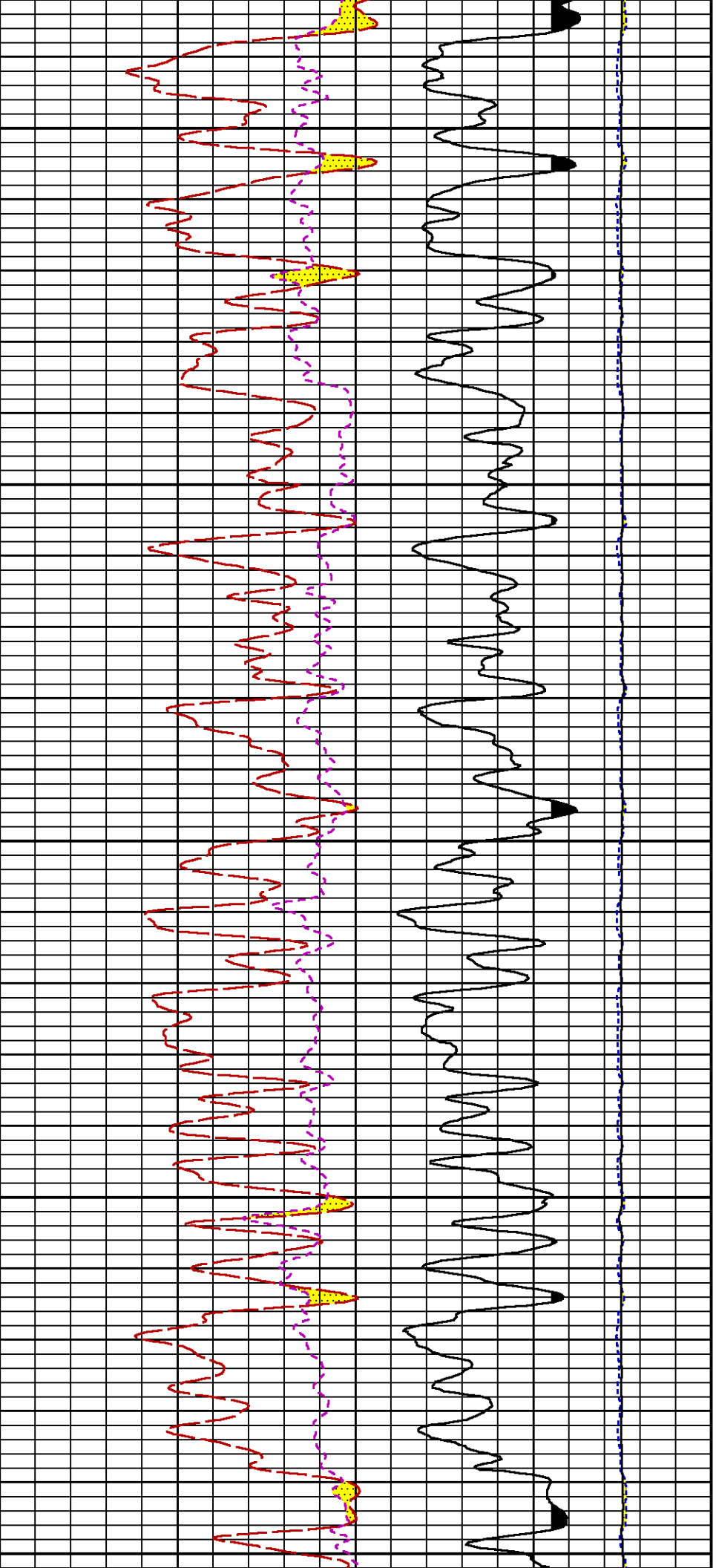


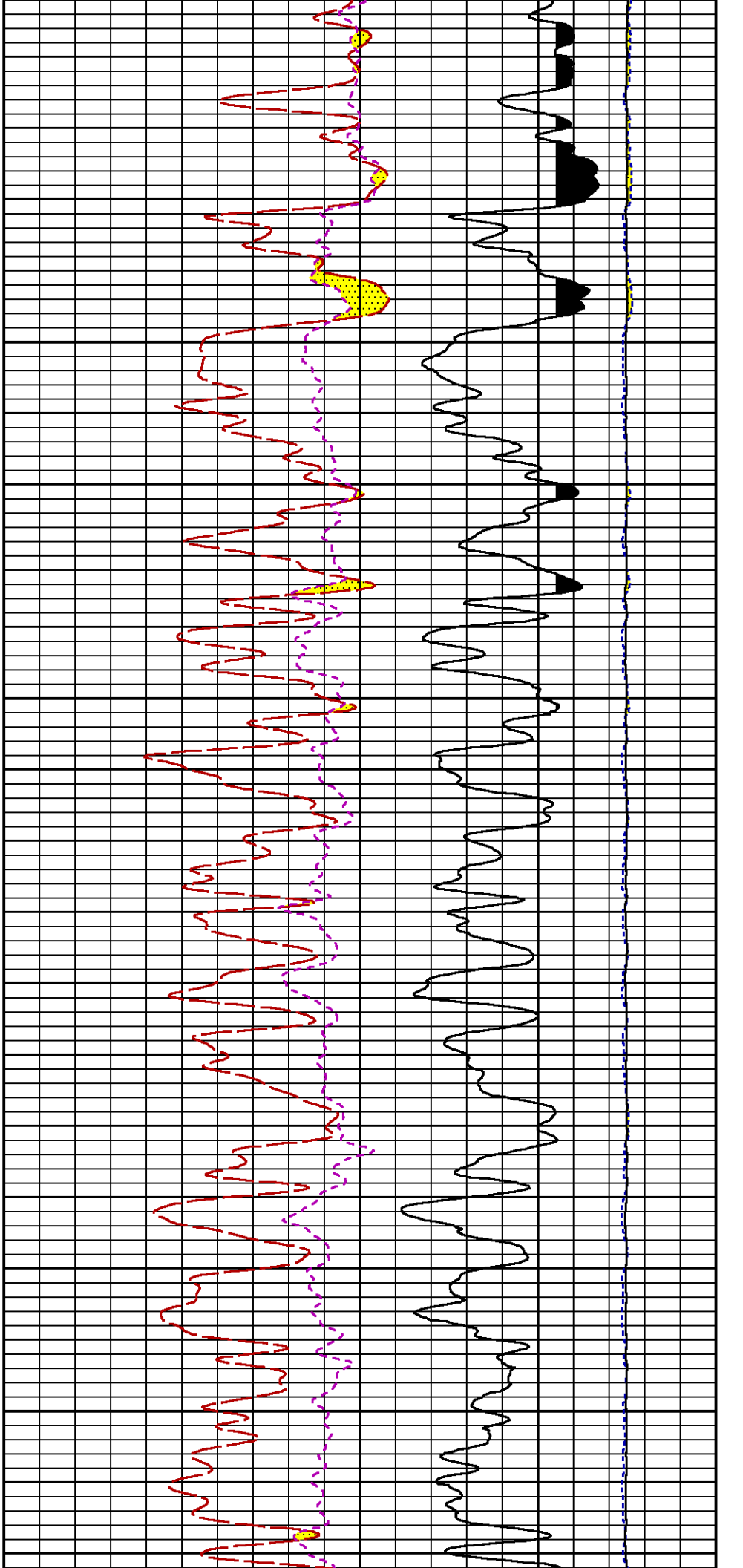
6600

6700



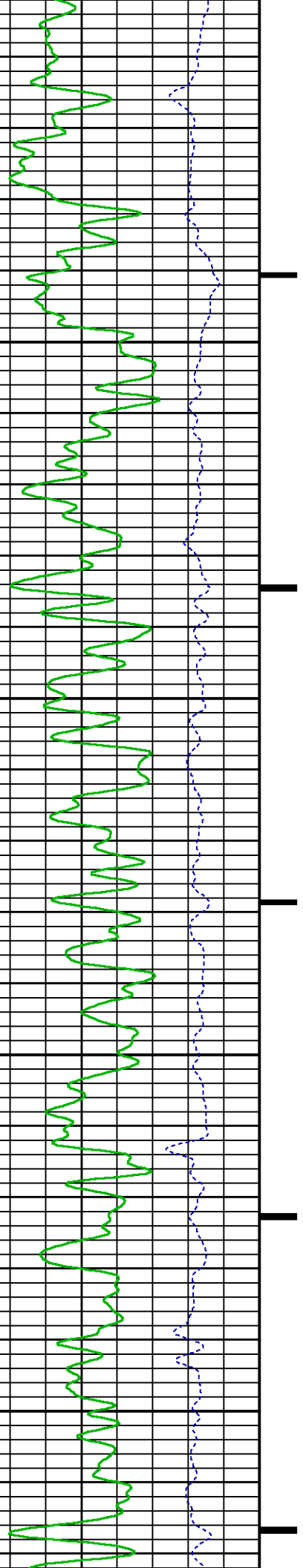


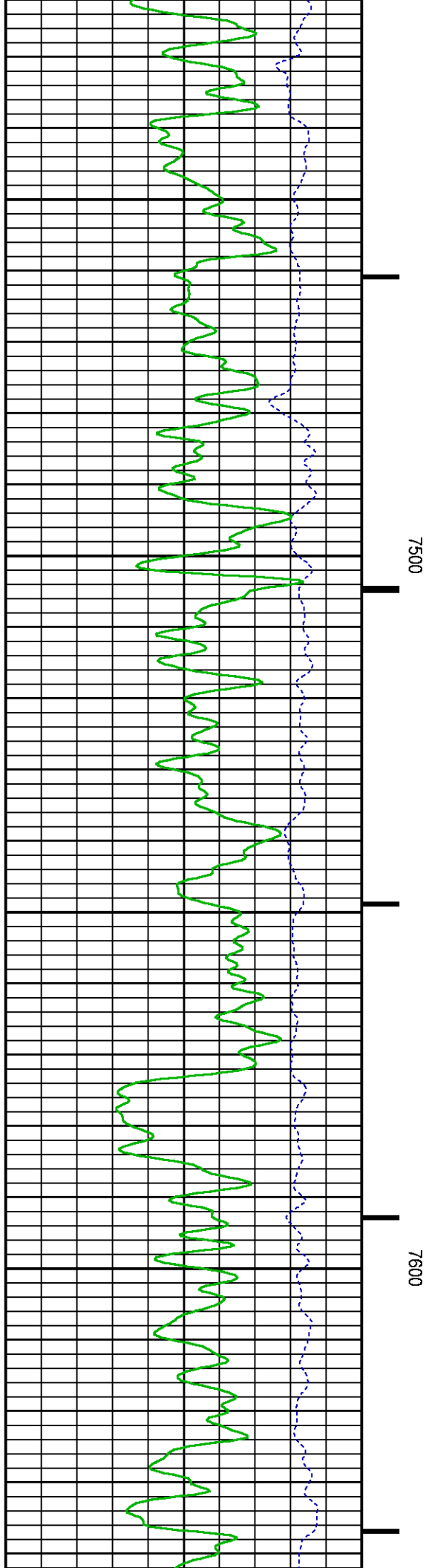
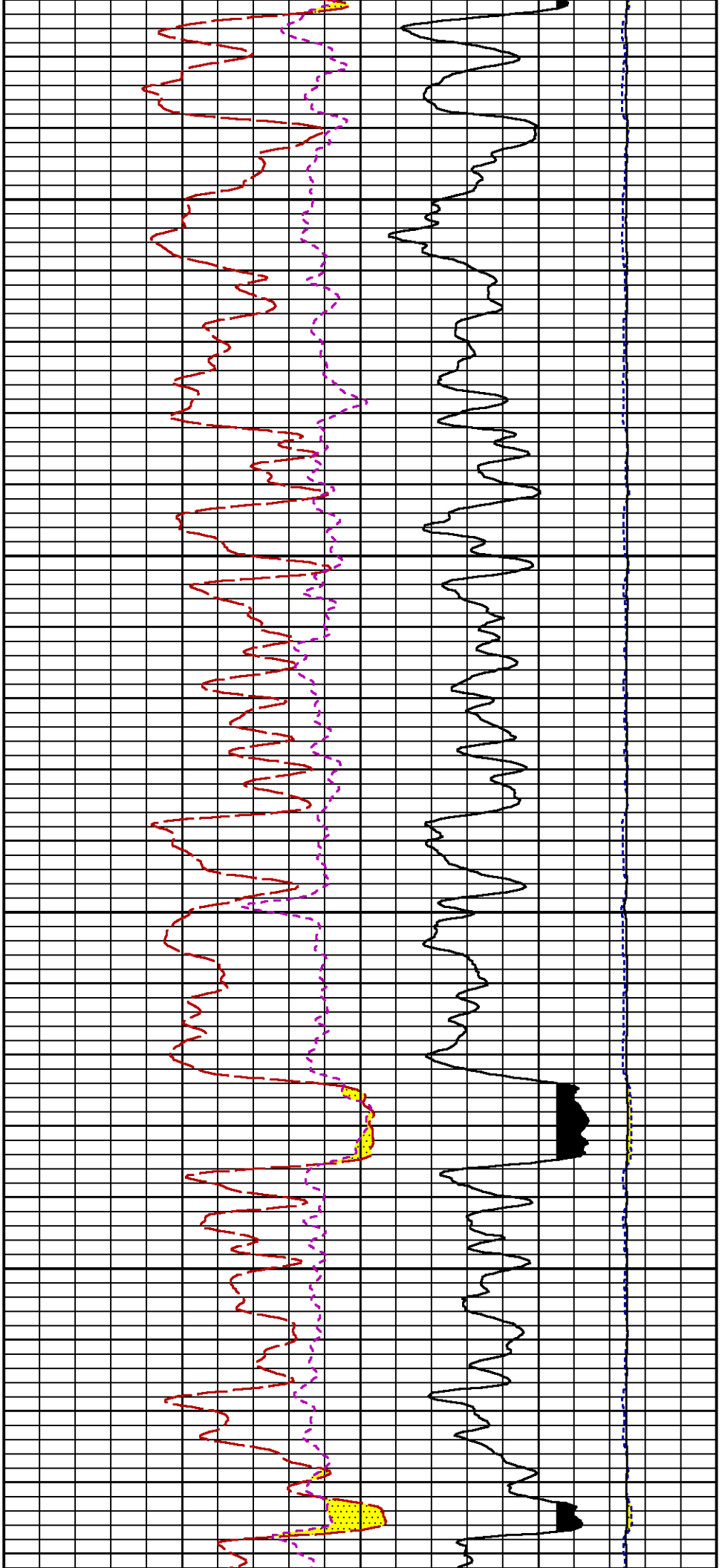


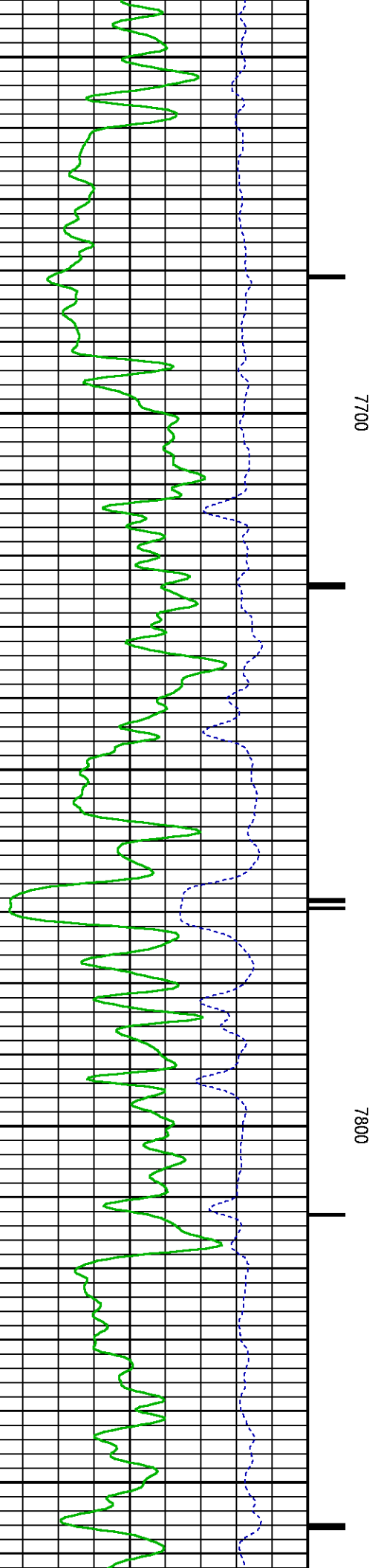
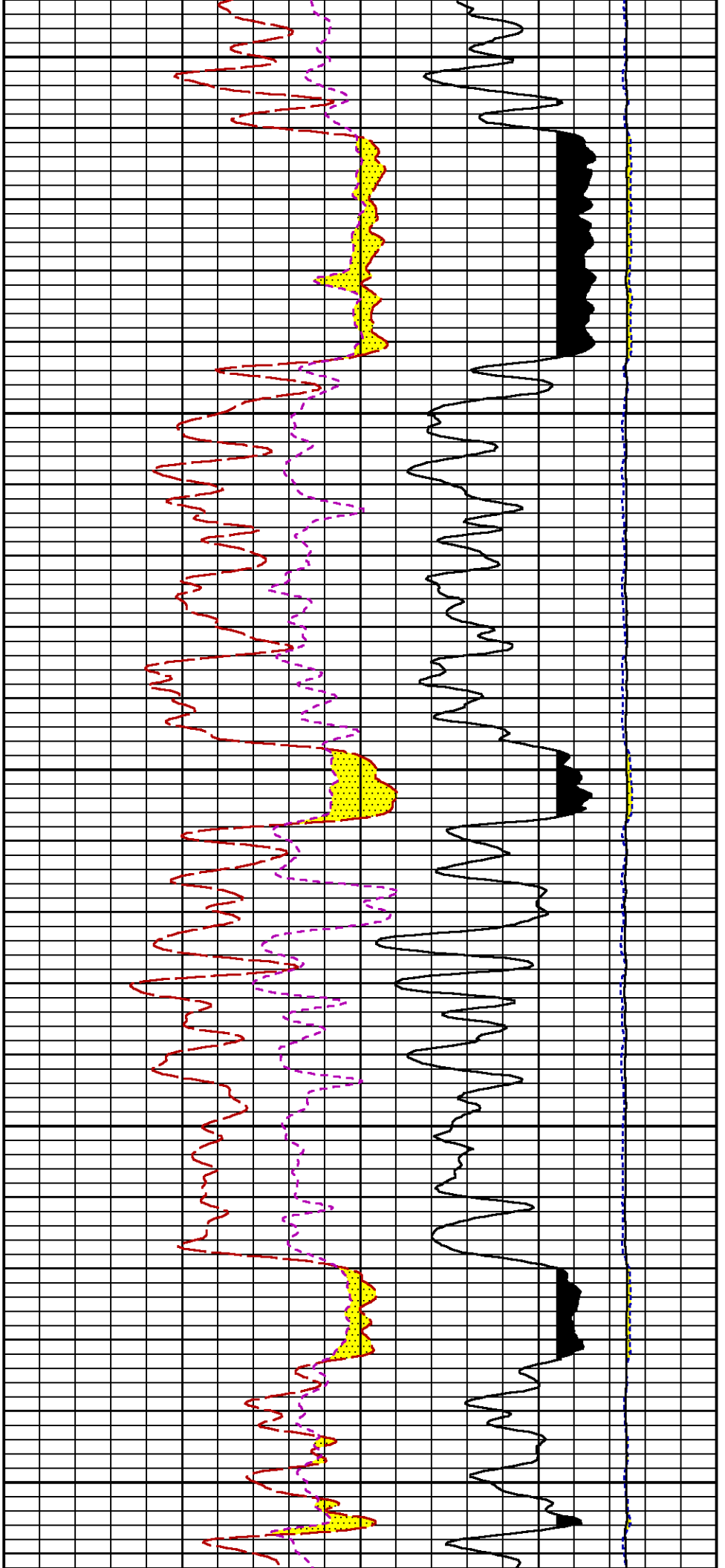


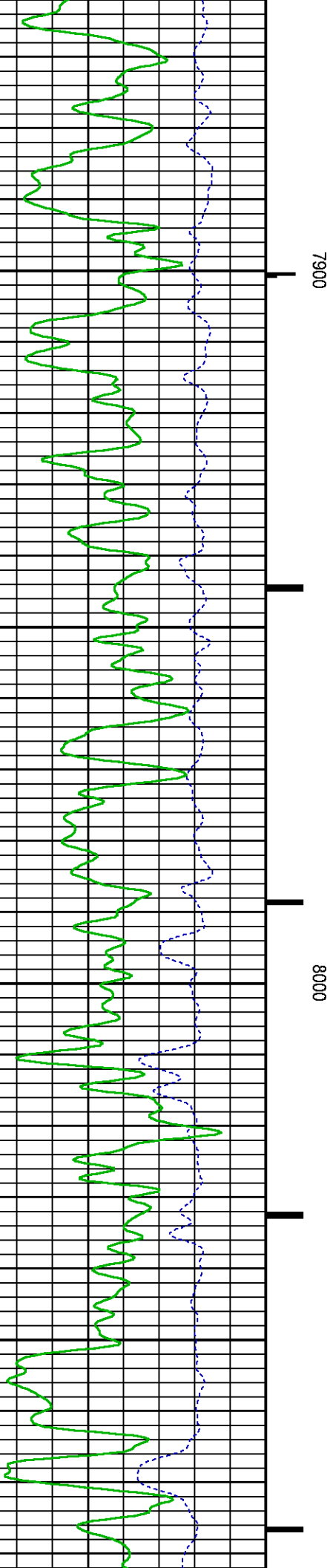
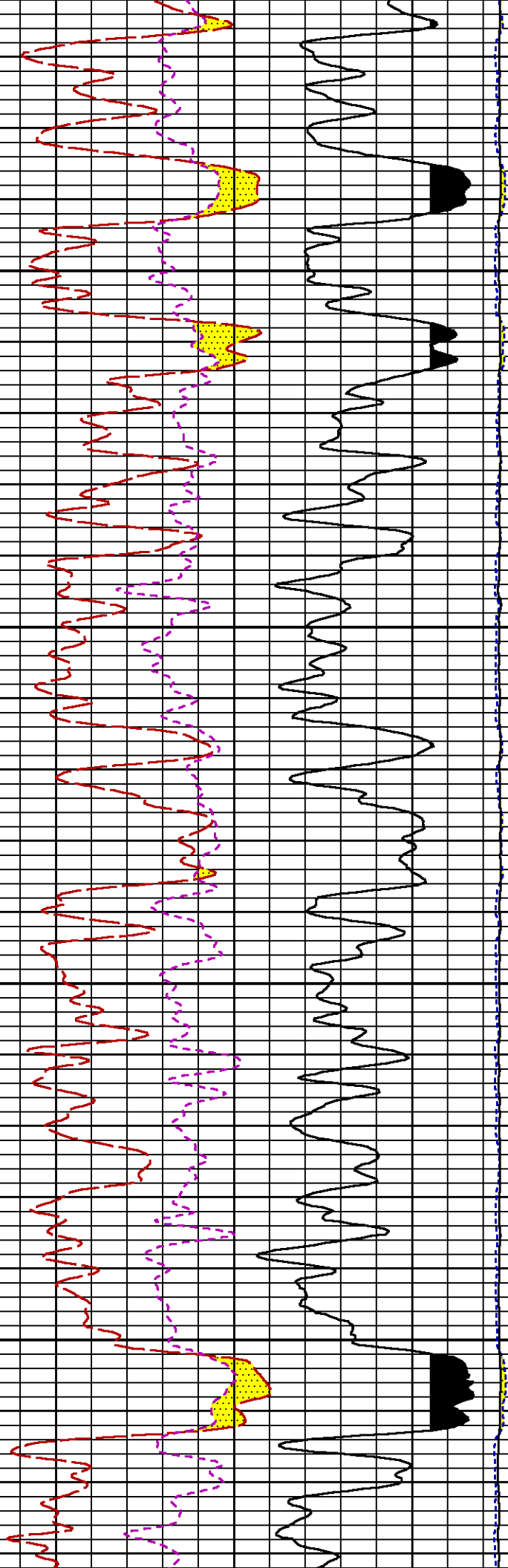
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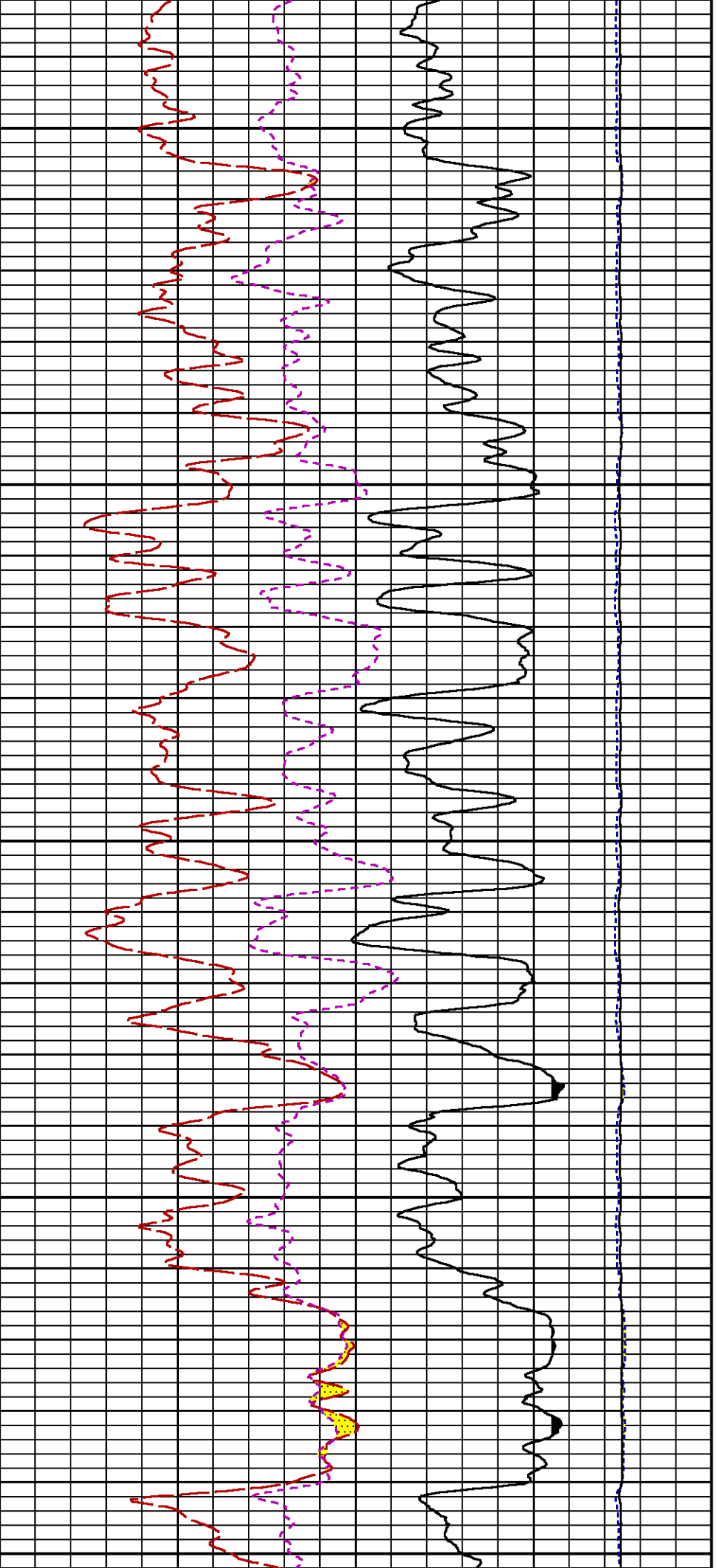
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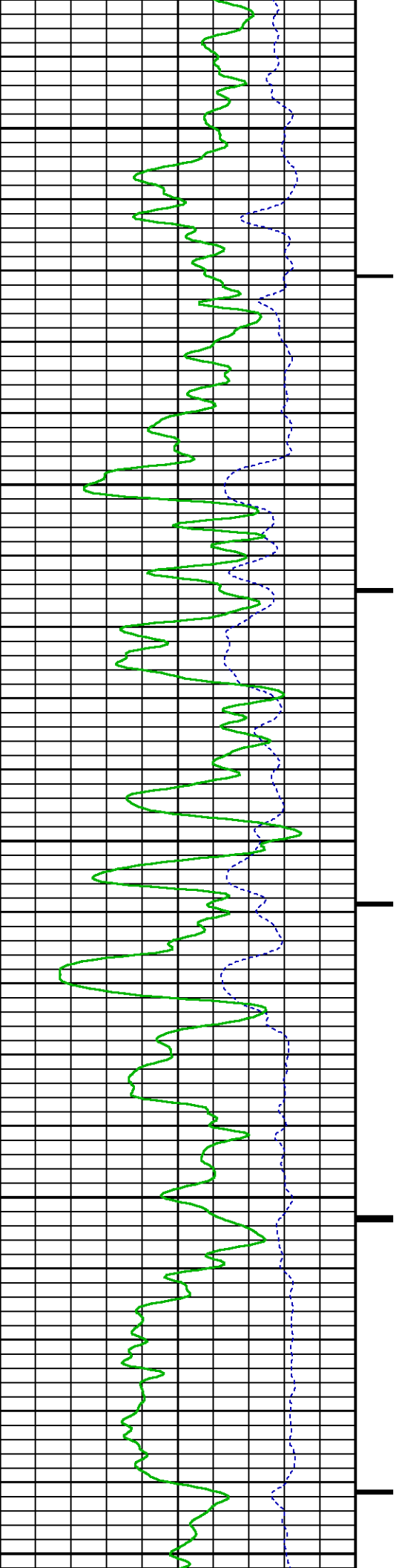


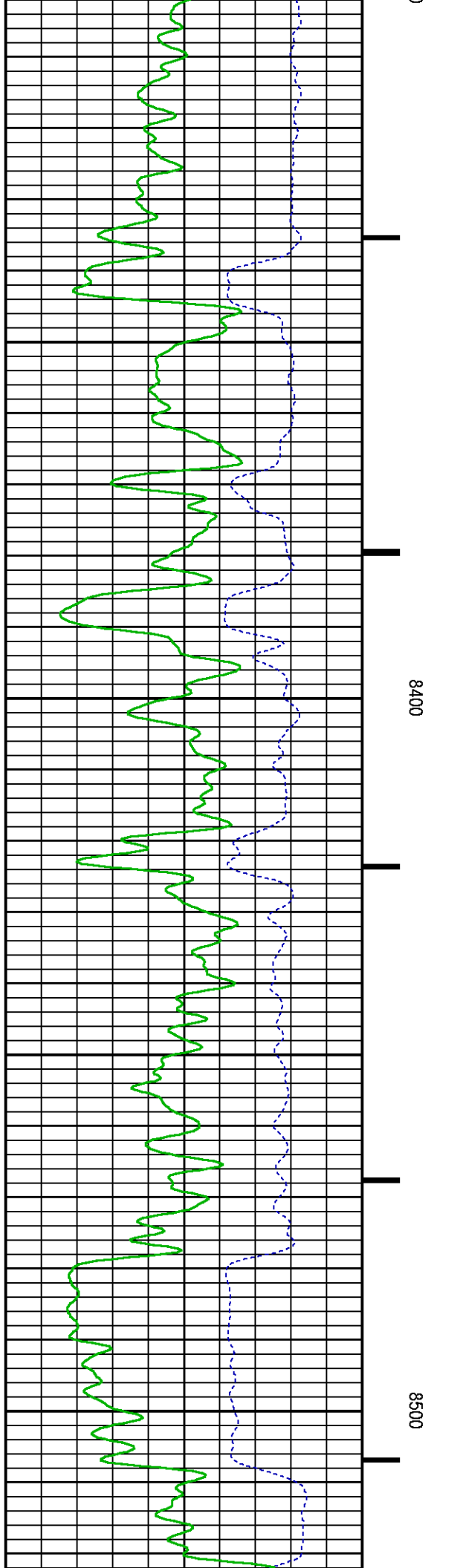
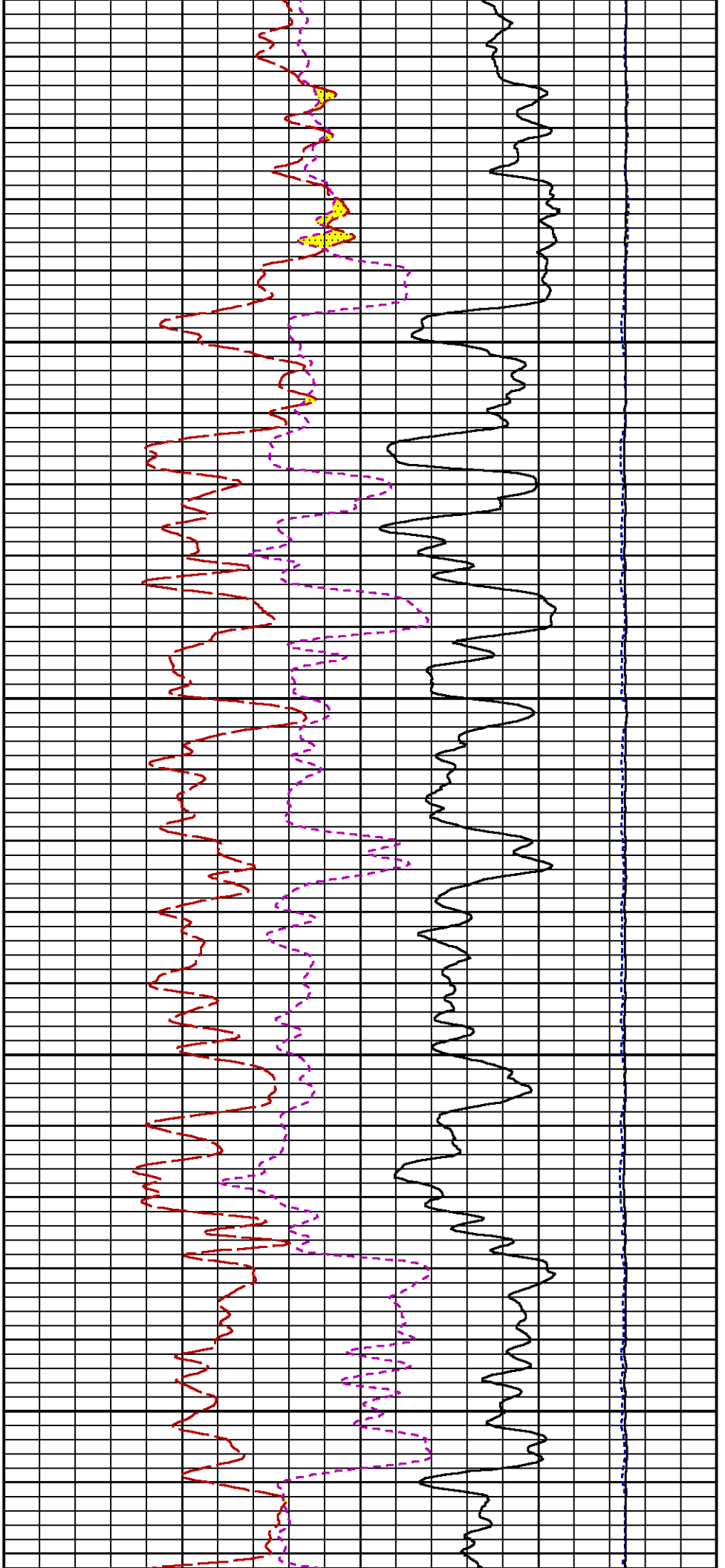


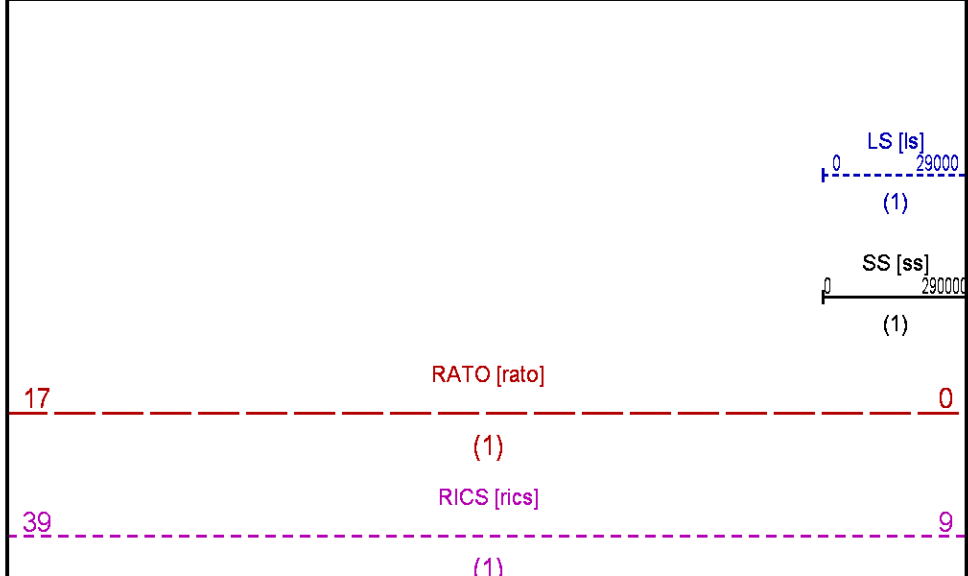
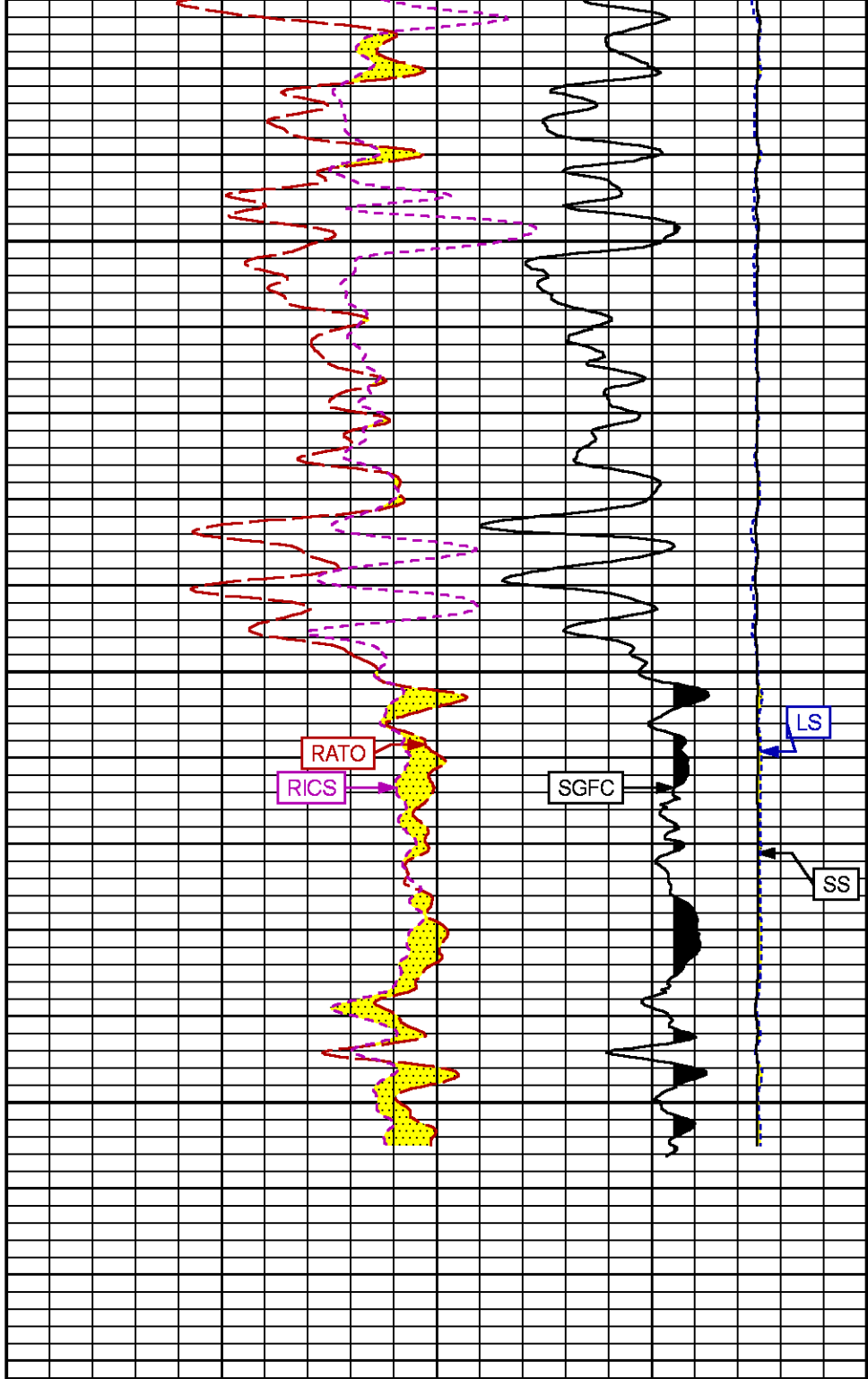
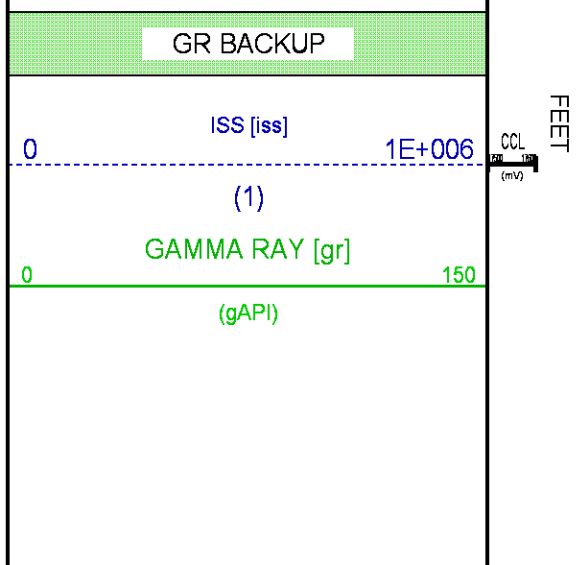
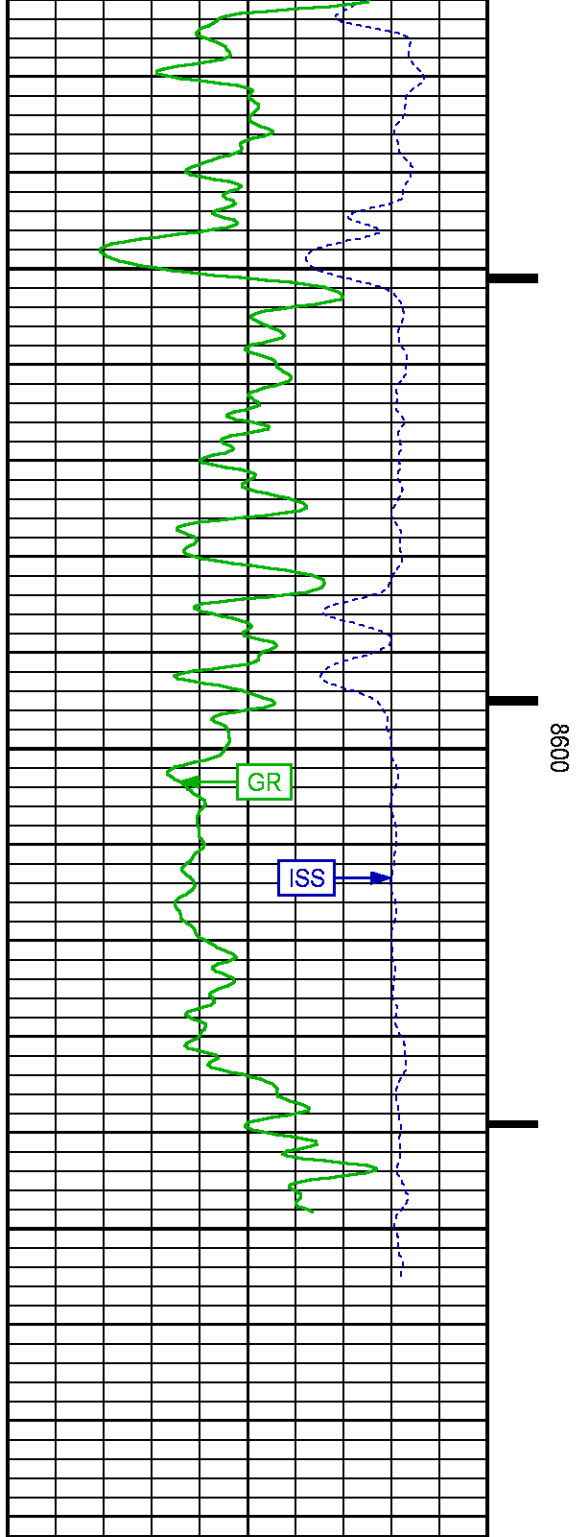
8100

8200

8300







60

SGFC [sgfc]

0

(1)

REPEAT SECTION PNC-3D MODE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Updates: 46 Patches: 5

Plotted: Sat Dec 20 16:38:02 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\093561\32RPM_REPEAT.fvpdf
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7720.000 ft BOTTOM DEPTH: 8101.000 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	Dec 20 08:38:07 2014	CASING COLLAR LOCATOR
F1:GR	Dec 20 08:38:07 2014	GAMMA RAY
F1:ISS	Dec 20 08:38:07 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 20 08:38:07 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 20 08:38:07 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 20 08:38:07 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 20 08:38:07 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 20 08:38:07 2014	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation : BHUGHES-06627:C:\dat1a\093561\32RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 7774.75 - 8164.75 Feet

Data File 1 : F1 : BHUGHES-06627:C:\dat1a\093561\32_RPM_REPEAT.xtf
Created On : Dec 20 08:38:07 2014
Company : WPX ENERGY
Well : MEAD RWF 32-23
Field : RULISON
File Interval : 7774 - 8179.75 Feet
OCT : n354h

GR BACKUP

ISS [iss]

0 1E+006

(1)

GAMMA RAY [gr]

0 150

(gAPI)

FEET

CCL
(mV)

7800

7900

LS [ls]

0 29000

(1)

SS [ss]

0 29000

(1)

RATO [rato]

17 0

(1)

RICS [rics]

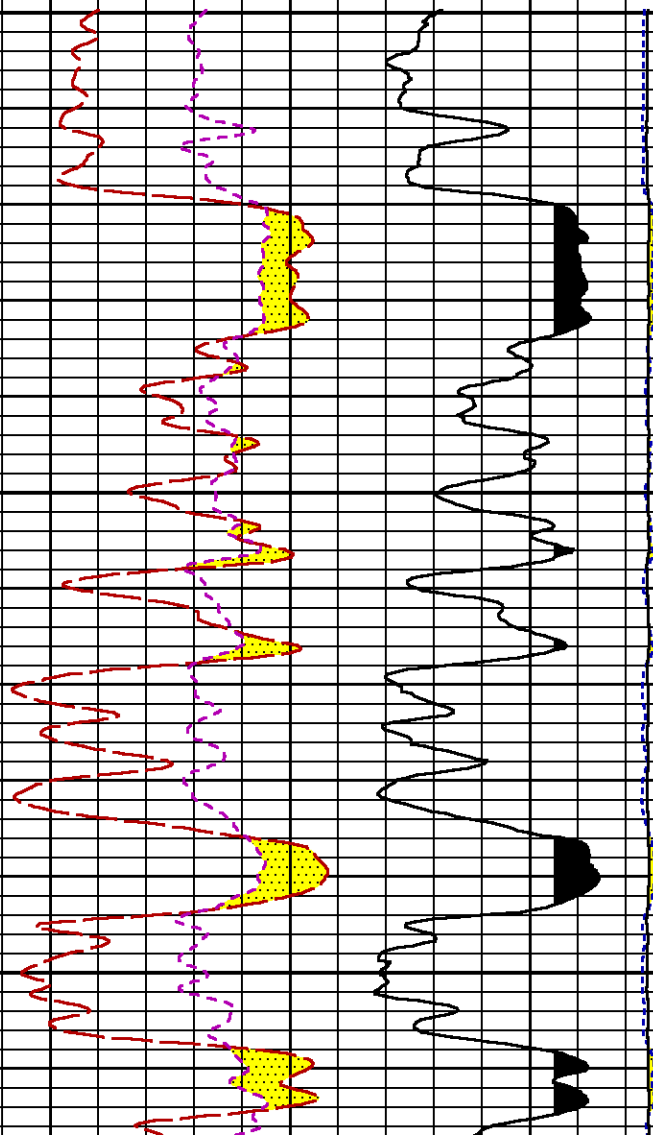
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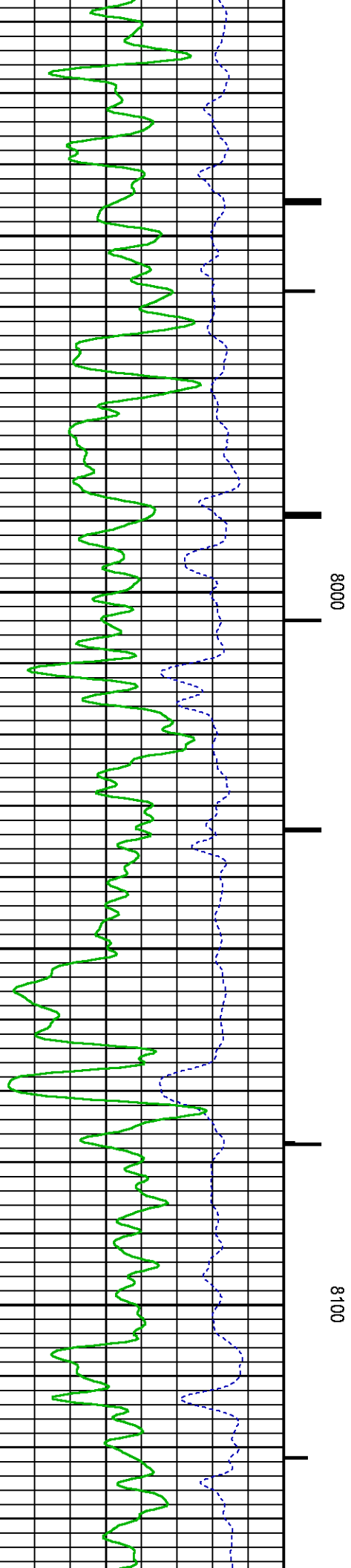
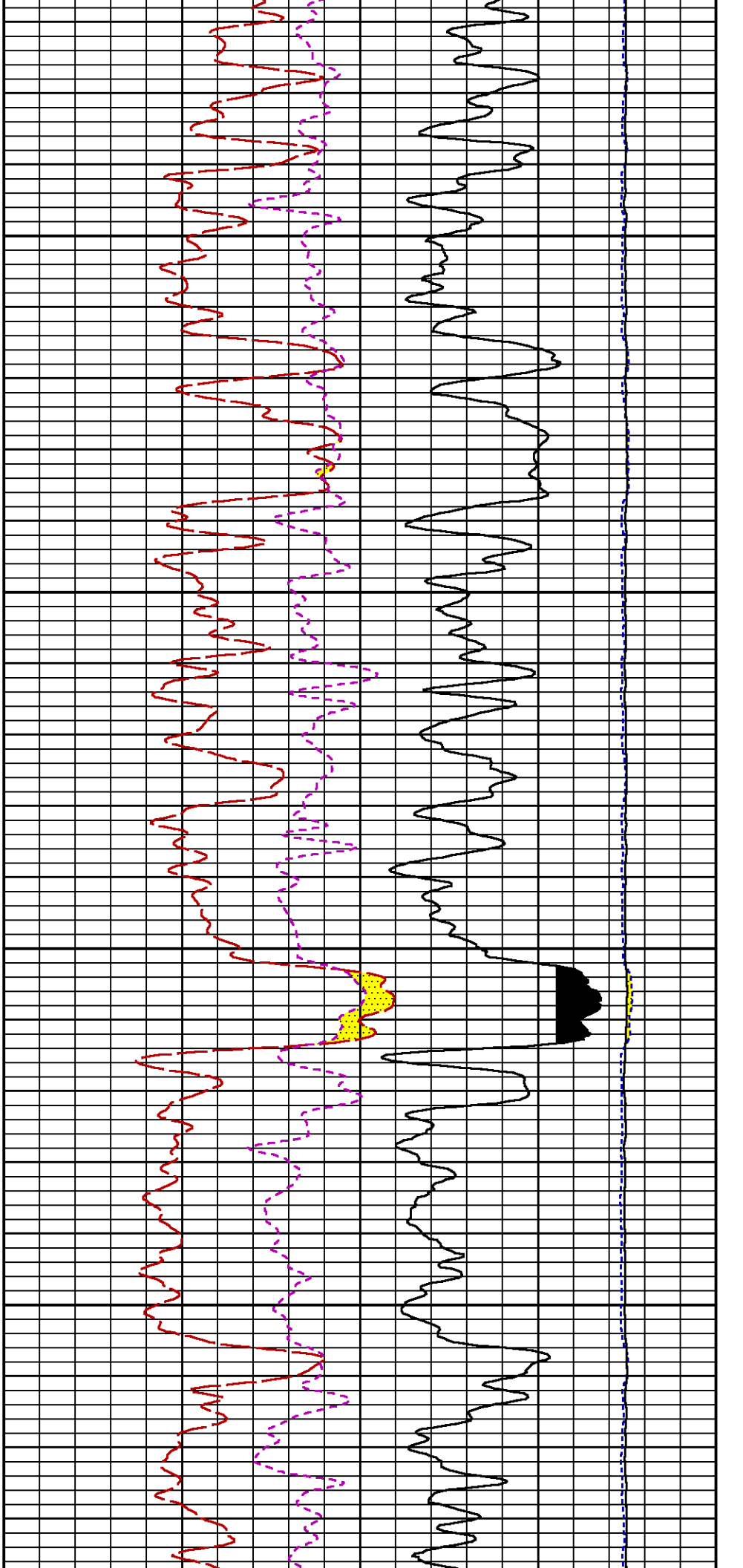
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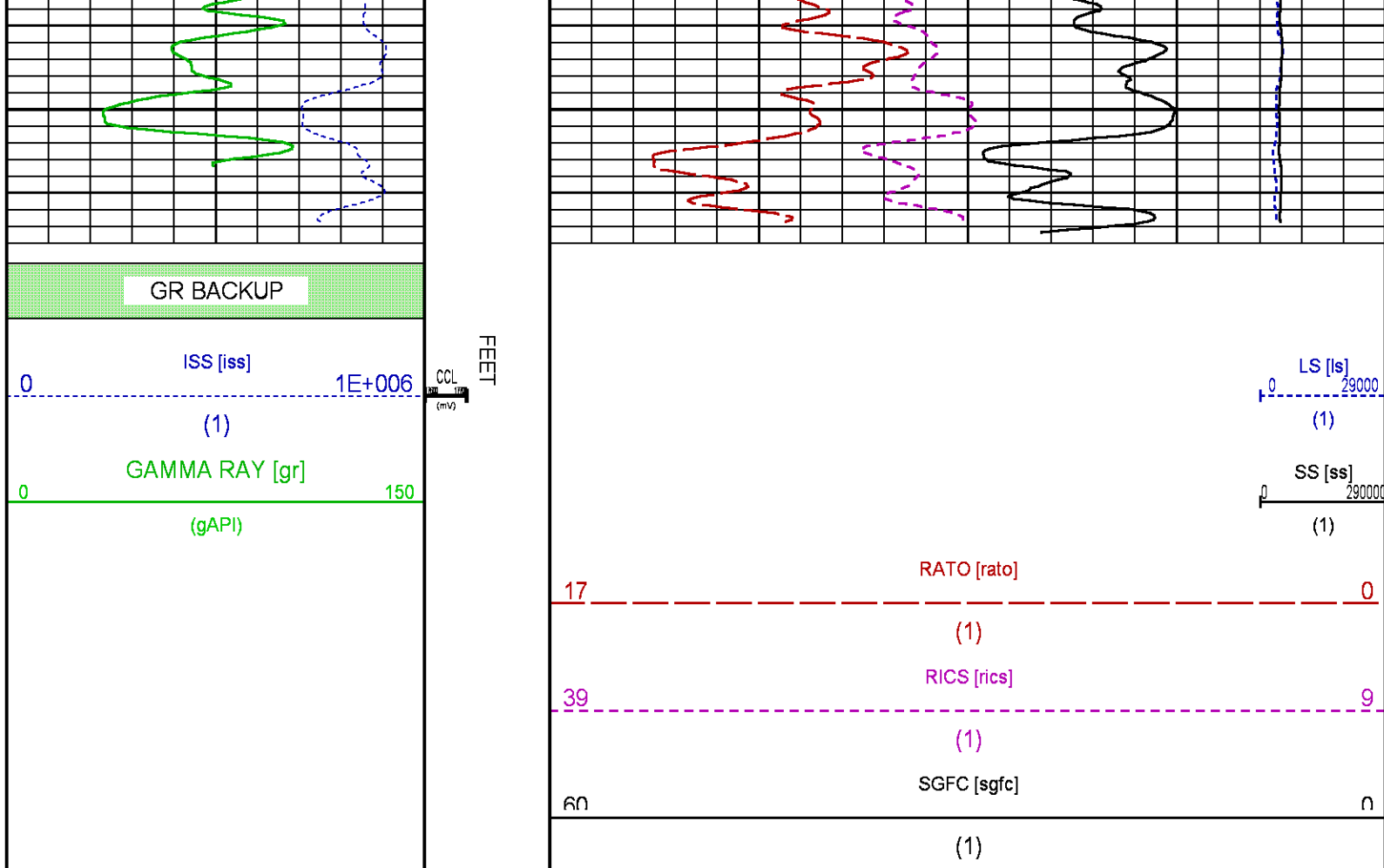
SGFC [sgfc]

60 0

(1)







CALIBRATION / VERIFICATION SUMMARY

Source File: F:\MEAD 32-23\093561\354h.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #:		2812LA 10274382		DATE/TIME PERFORMED:		Tue Dec 09 14:04:49 2014	
UNIT #:		3885TD Z004271		CALB JIG #:		4702NK WA-612	
	BACKGROUND	CALBRTR ON	CR DIFF	MULT	BACKGROUND	CALBRTR ON	CALBRTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	61.18	268.02	206.8	1.015	62.11	272.11	210

GR PRIMARY VERIFICATION SUMMARY

TOOL #:		2812LA 10274382		DATE/TIME PERFORMED:		Tue Dec 09 14:07:05 2014						
UNIT #:		3885TD Z004271		VERI JIG #:		4702NK WA-612						
BACKGROUND		CALBRTR ON		MULT		BACKGROUND		CALBRTR ON		DIFF.		
(cts/s)		(cts/s)				(gAPI)		(gAPI)		(gAPI)		
GR	63.11		273.93		1.015		64.07		278.11		214.04	
											200.00 220.00	

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10585555

DATE/TIME PERFORMED:

Tue Dec 09 13:08:21 2014

UNIT: 3885TD Z004271

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 11765054

HOURS: 8281AA 670

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	801712	124	2342	2286	2235	111	7	0.9721
Interpolated	1300000	147	2317	2281	2228			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	801712	6404	989	140	26.08	0.15	24.23	0.33
					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	801712	170477	26574	89502	31836	8242	54189	13205
Fit Quality %		0.952	0.776	0.752	0.741	1.017	0.683	0.990

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	801712	1.43	4.70	30.18	14.80	10.86	3.86	4.10
		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 %		0.051	0.164	0.223	0.184	0.174	0.189	0.168
Reduced	1392560	1.43	4.71	30.20	14.80	10.88	3.87	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

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #: 8255XA 120516

DATE/TIME PERFORMED: Tue Nov 18 15:59:55 2014

UNIT #: 2570LE 4271

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-8.673169E+00	9.576065E-02	6.395448E-06	-9.461013E-10

INSTRUMENT CONFIGURATION

33.24'

A3 CABLEHEAD

Diameter : 1.37"

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

CCL MP — 25.19'

SONDEX GAMMA RAY

Diameter : 1.69"
Length : 2.17'
Weight : 11 lbs
Series : 2812LA
Mnemonic : GR
Measure Point: 0.63': GR MP

GR MP — 22.64'

RPM ELECTRONICS

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 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: 33.24'
TOTAL WEIGHT: 140 lbs
MAX DIAMETER: 0'1.70"

	COMPANY <u>WPX ENERGY</u>		FILE NO: <u>CH093561</u>
	WELL <u>MEAD RWF 32-23</u>		API NO: <u>05045200390000</u>
	FIELD <u>RULISON</u>		
	COUNTY <u>GARFIELD</u>	STATE <u>CO</u>	
LOCATION: SHL: 2303' FNL & 256' FEL BHL: 1660' FNL & 1877' FEL		ELEVATIONS: KB 5625 FT DF GL 5599 FT	23 6S 94W RWF 43-23 PAD NABORS 577
SEC <u>23</u> TWP <u>6S</u> RGE <u>94W</u>		DATE <u>20-Dec-2014</u>	