



FILE NO:	CH091655
API NO:	05103119740000
COMPANY	WPX ENERGY
WELL	FEDERAL RGU 31-26-198
FIELD	SULPHUR CREEK
COUNTY	RIO BLANCO
STATE	COLORADO

Version	LOCATION:	OTHER SERVICES
26 1S 98W	SHL: 1025' FSL & 663' FEL (23 1S 98W)	
RGU 43-23-198 PA	BHL: 287' FNL & 1863' FEL (26 1S 98W)	
AZTEC 1000	SEC 26 TWP 1S RGE 98W	

PERMANENT DATUM	GL	ELEVATION	6567 FT
LOG MEASURED FROM	KB	25 FT	ABOVE P.D.
DRILL MEAS. FROM	KELLY BUSHING		
		ELEVATIONS:	
		KB	6592 FT
		DF	
		GL	6567 FT

DATE	16-Dec-2014
RUN	1
TRIP	1
SERVICE ORDER	US091655
DEPTH DRILLER	12715 FT
DEPTH LOGGER	12662 FT
BOTTOM LOGGED INTERVAL	12656 FT
TOP LOGGED INTERVAL	7400 FT
TIME STARTED	1000
TIME FINISHED	1730
OPERATOR RIG TIME	7.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
LOGGED CEMENT TOP	87 FT
WELLHEAD PRESSURE	NA
MAXIMUM HOLE DEVIATION	0 PSI
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	287 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	12-Dec-2014
EQUIP. NO.	4271
LOCATION	GRAND JCT
RECORDED BY	FLOYD RENEAU
WITNESSED BY	DUSTIN WELSH

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
30 IN	25 FT	80 FT
13.5 IN	80 FT	3898 FT
7.875 IN	3898 FT	12715 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
18 IN			25 FT	80 FT
9.625 IN			25 FT	3898 FT
4.5 IN	11.6 LB/F	P-110	25 FT	12715 FT

CEMENTING DATA								
JOB TYPE	FROM	TO	TIME	DATE	CEMENT TYPE	DENSITY	VOLUME	ADDITIVES

PERFORATION RECORD						
PERFORATION TYPE	POSITION	PHASING	SPACING	DENSITY	FROM	TO

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 12/12/2014 at the client's request.

Logged in PNC-3D mode.

The amount of linear shift is -5.5

BHT = 287 degF

SJ = 7410'-7433'

Thanks you for choosing Baker-Hughes.

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8248ED	Z166326	FREE
1	1	TEL/CCL	8250EA	10387150	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
Patches: 5

Plotted: Wed Dec 17 09:26:32 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: D:\dat1a\091655\354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7381.250 ft BOTTOM DEPTH: 12675.000 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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 16 17:11:23 2014	CASING COLLAR LOCATOR
F1:GR	Dec 16 17:11:25 2014	GAMMA RAY
F1:ISS	Dec 16 17:11:25 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 16 17:11:25 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 16 17:11:25 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 16 17:11:25 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 16 17:11:25 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 16 17:11:25 2014	SHORT SPACE COUNT RATE

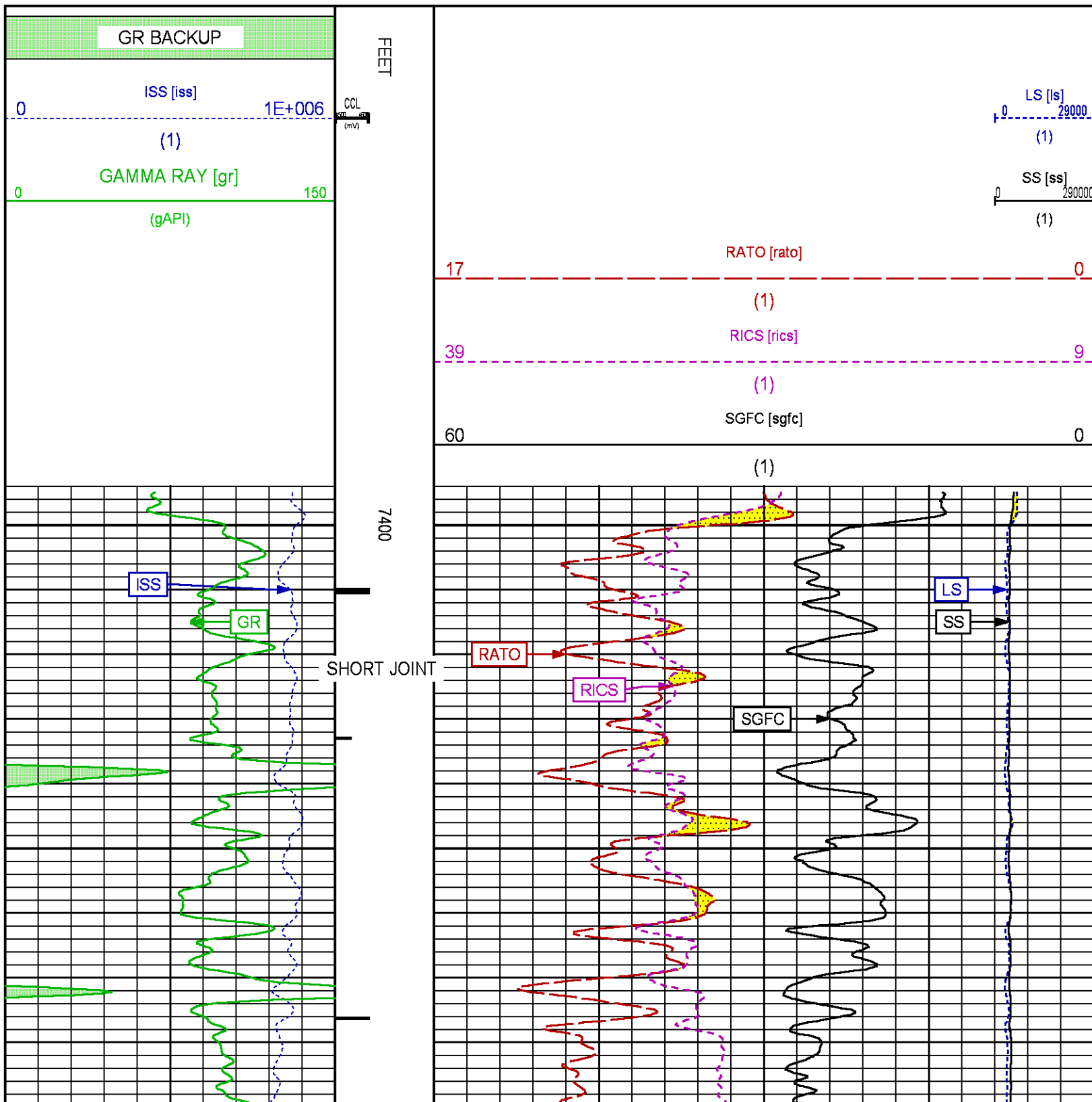
CURVE MEASURE POINT CHECK

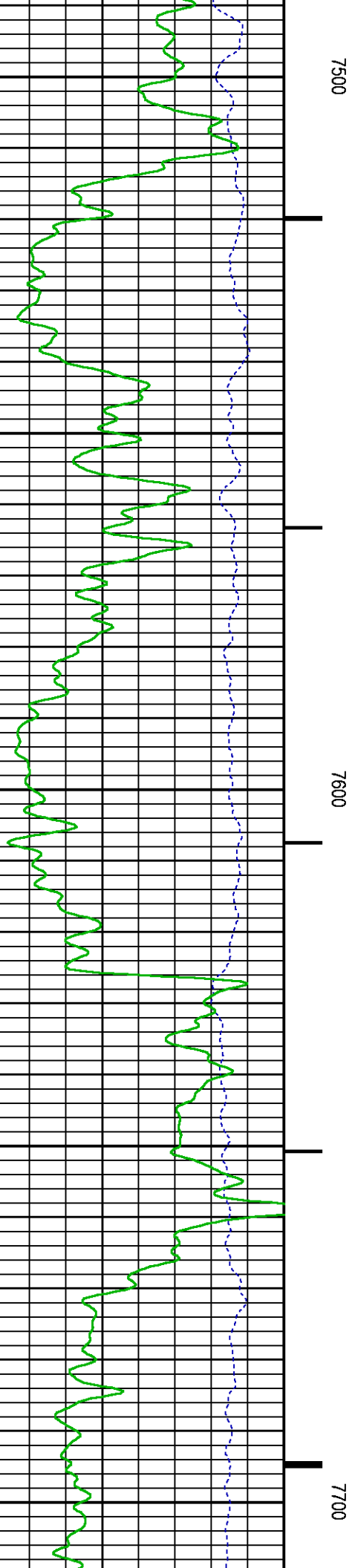
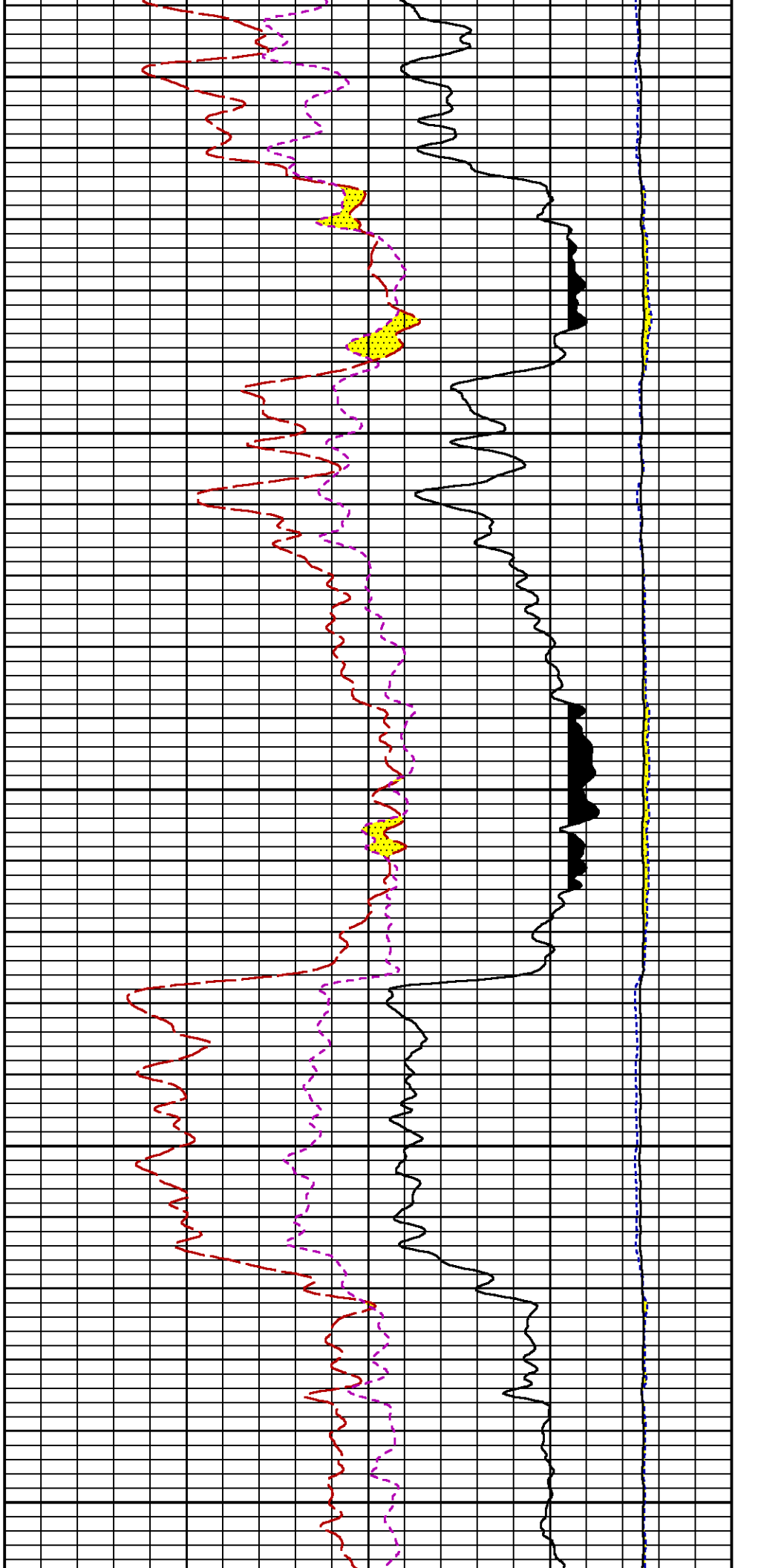
CURVE MEASURE POINT OFFSET

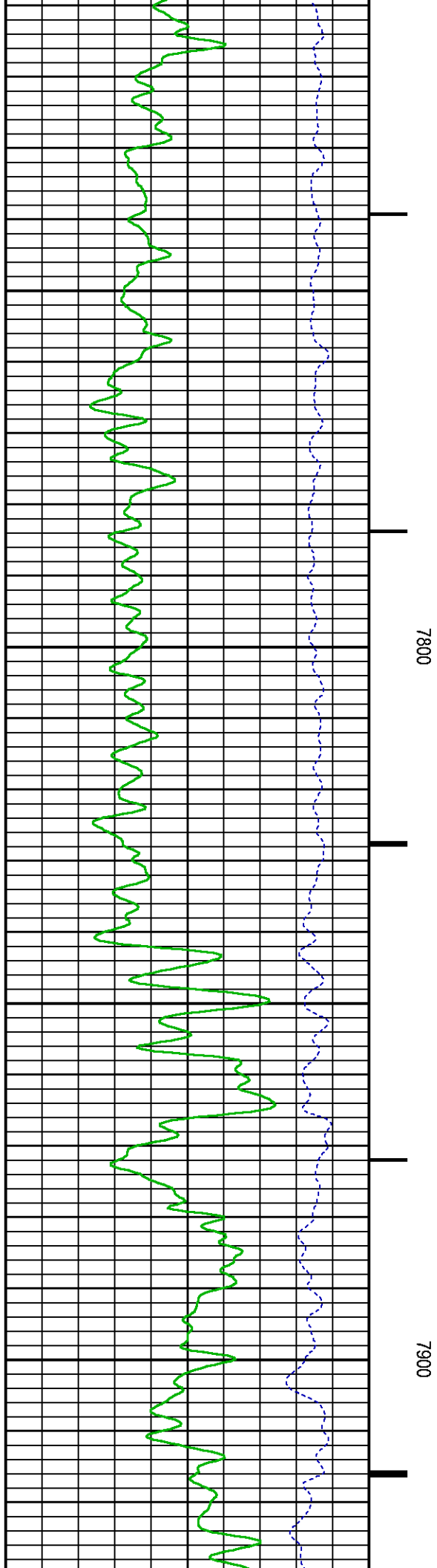
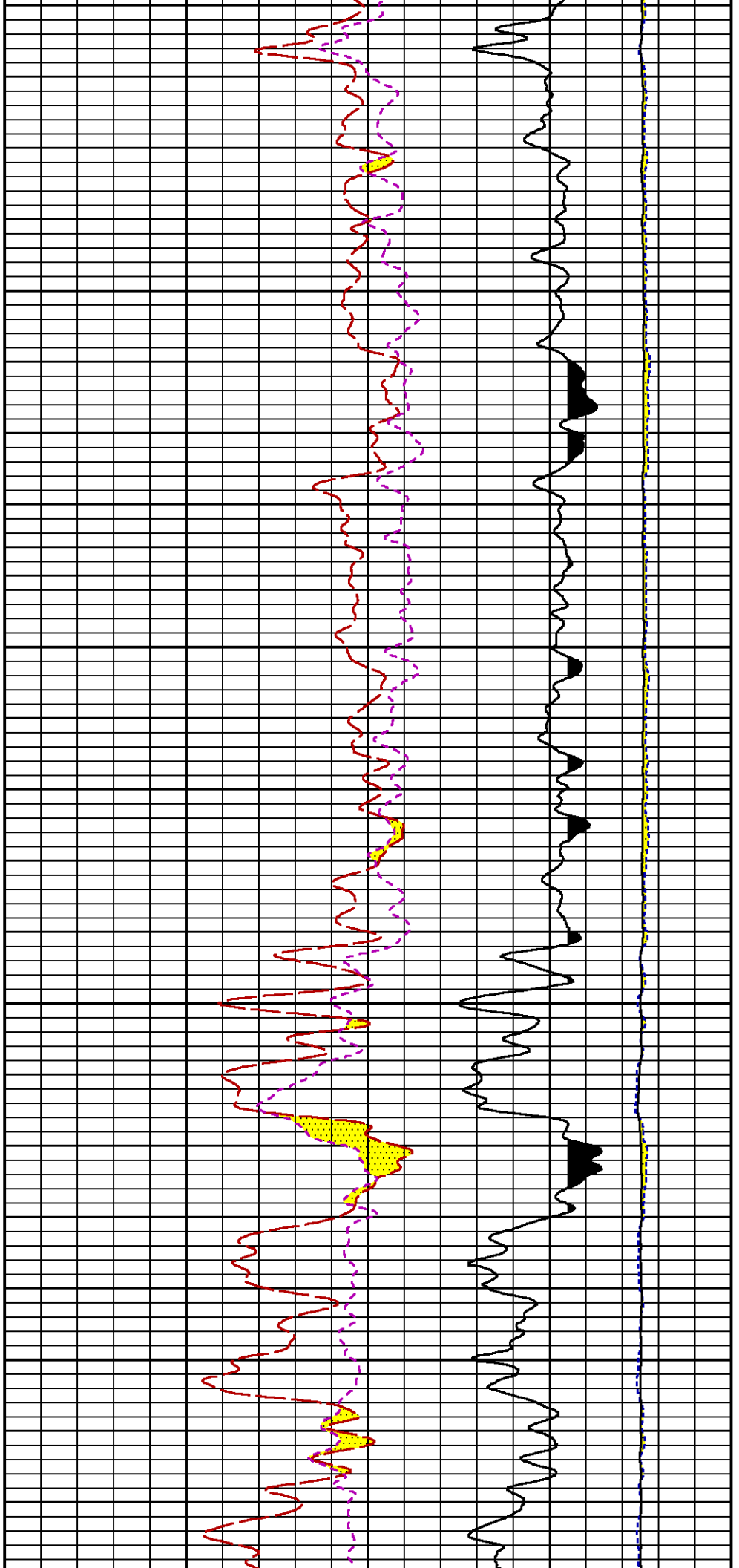
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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GR	22.75	LS	12.75	RICS	12.75	SS	12.75

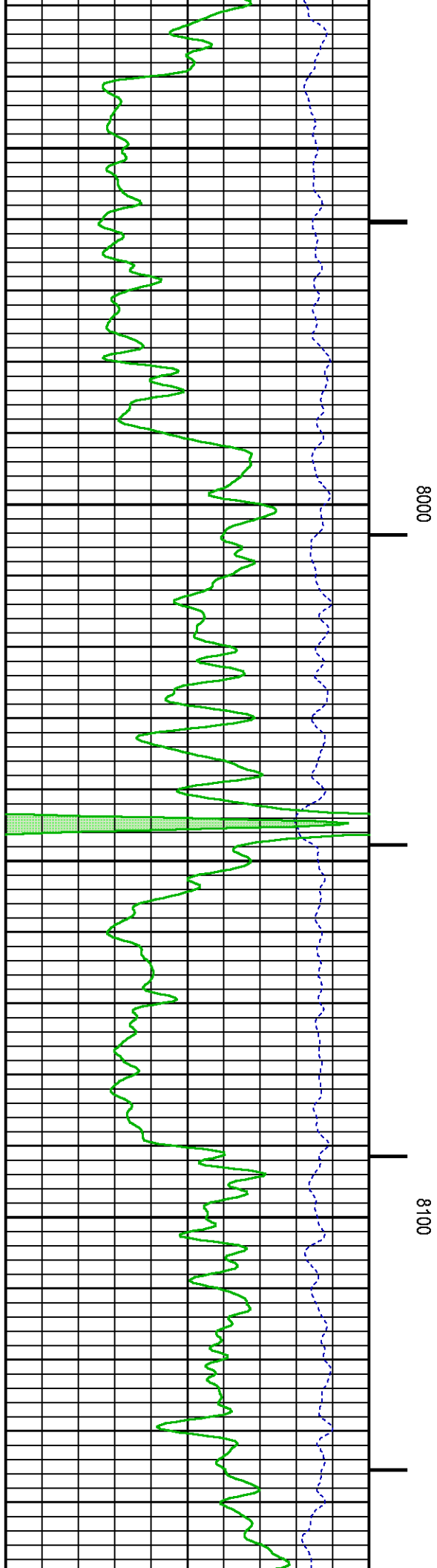
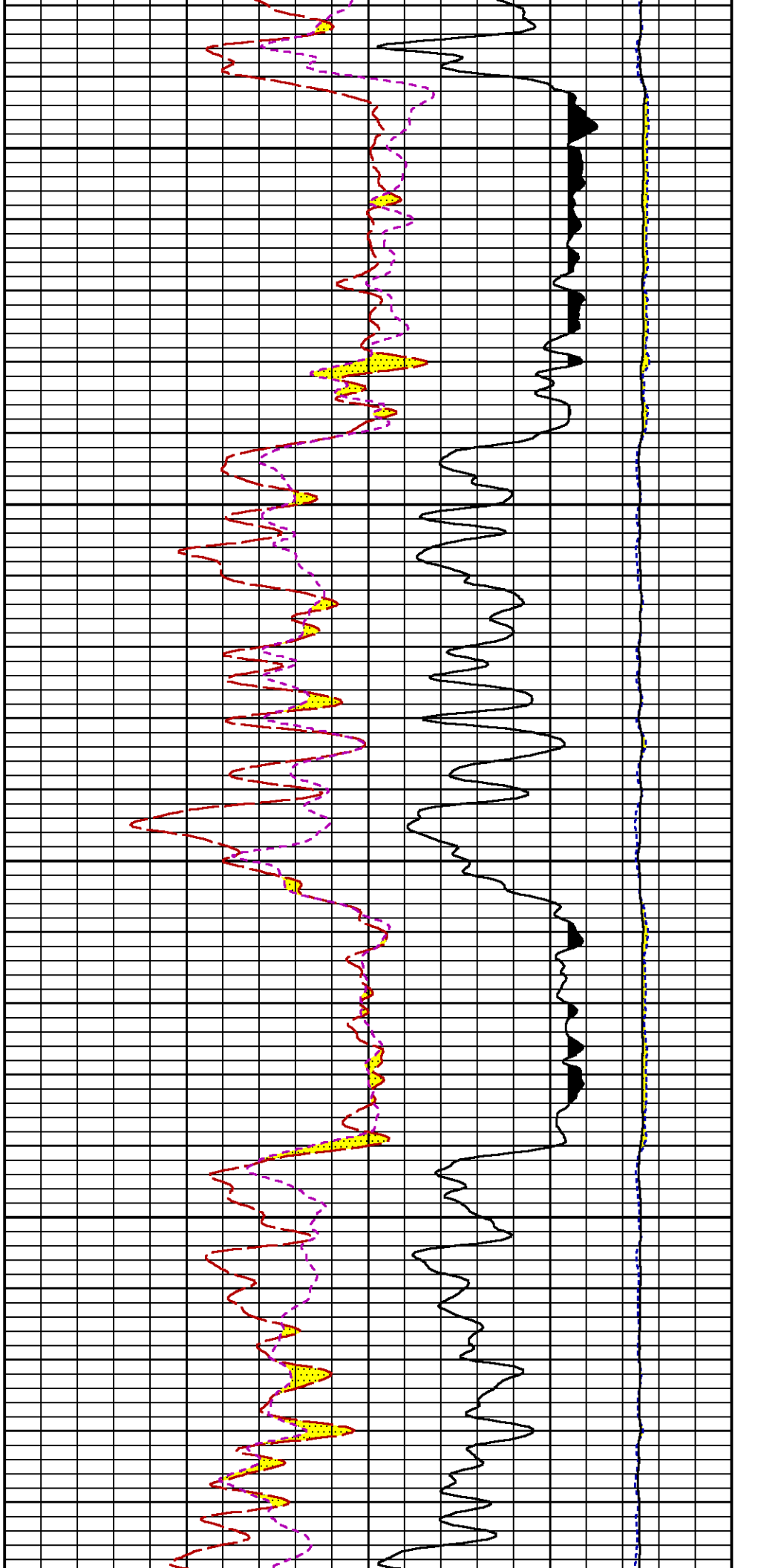
Presentation : BHI9YQMTY1:D:\dat1a\091655\31RPM_MAIN.fvpdf [5"/100" Scale]
Plot Interval : 7395 - 12665 Feet

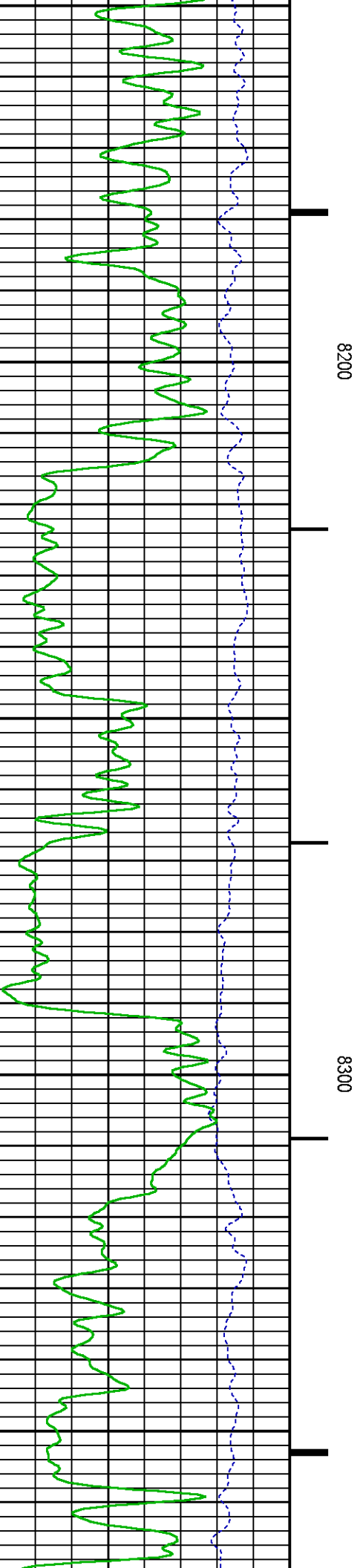
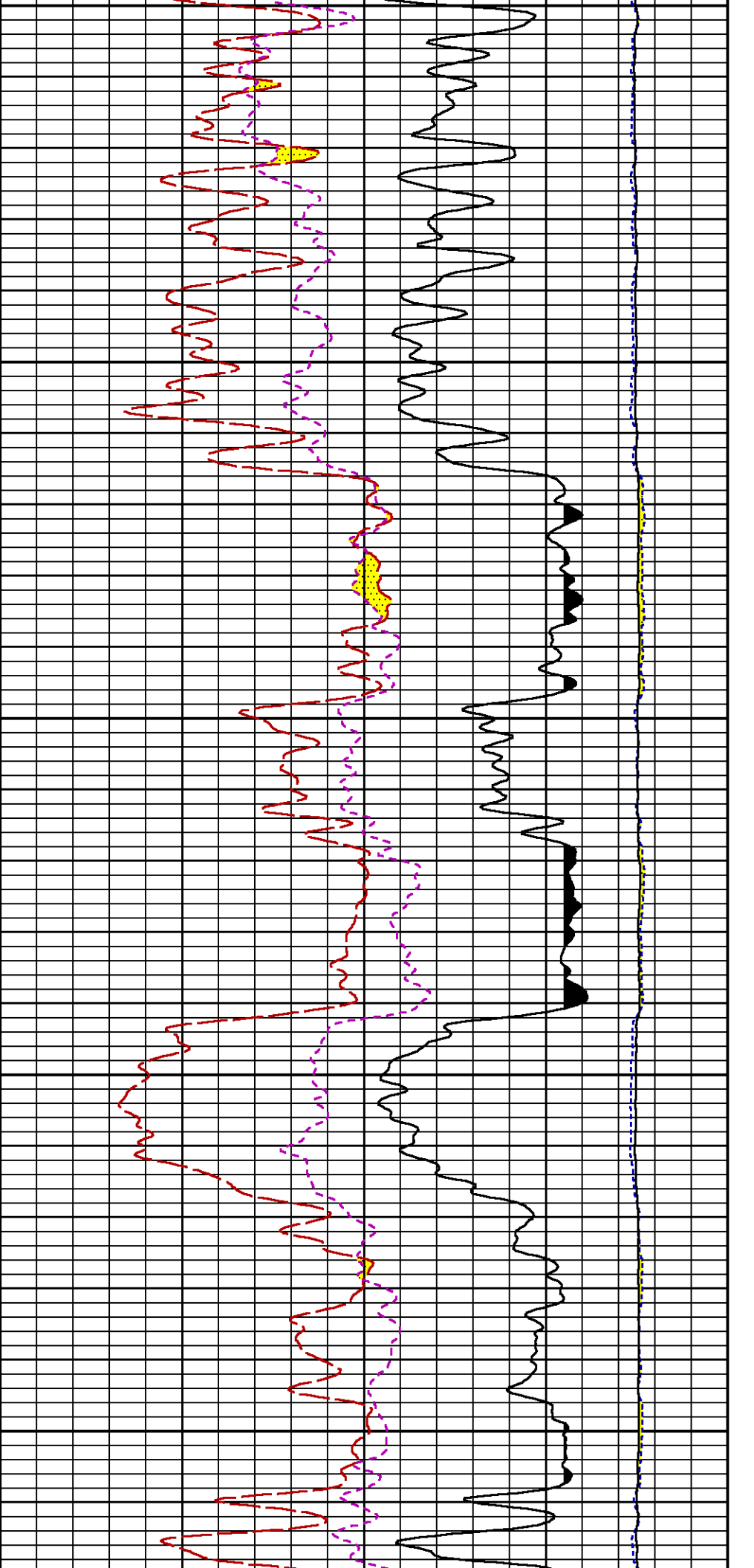
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Created On : Dec 16 17:11:23 2014
Company : WPX ENERGY
Well : FEDERAL RGU 31-26-198
Field : SULPHUR CREEK
File Interval : 15.75 - 12671.5 Feet
OCT : n354h

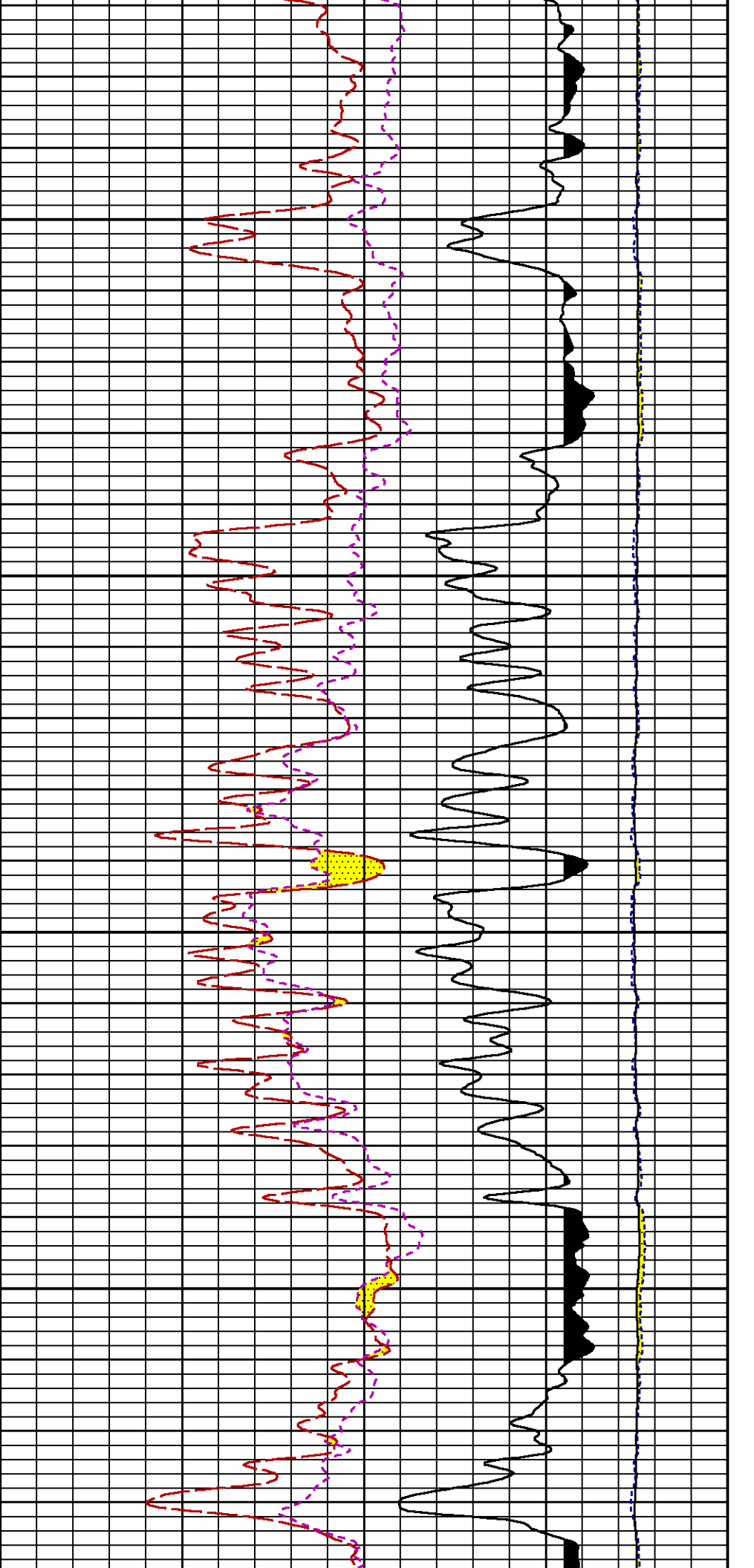






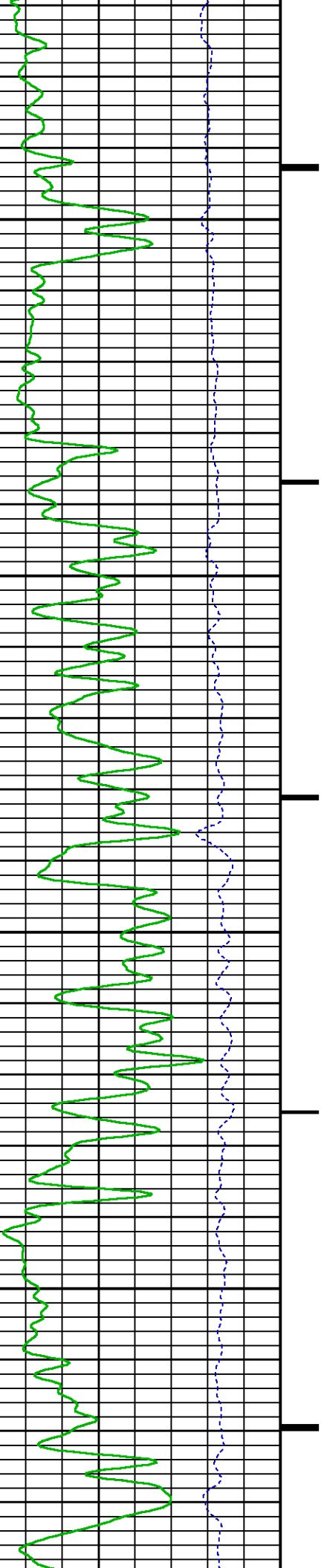


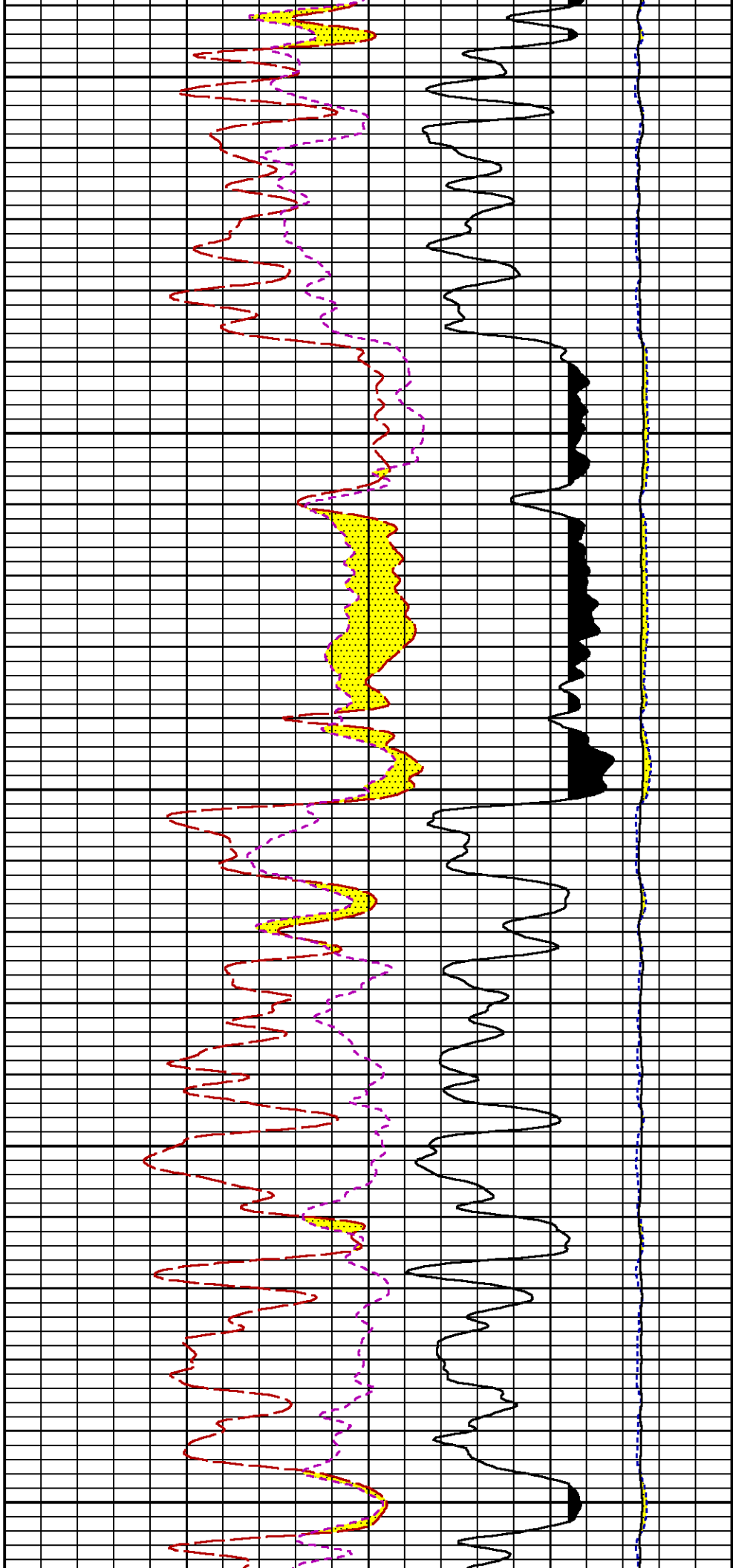




8400

8500

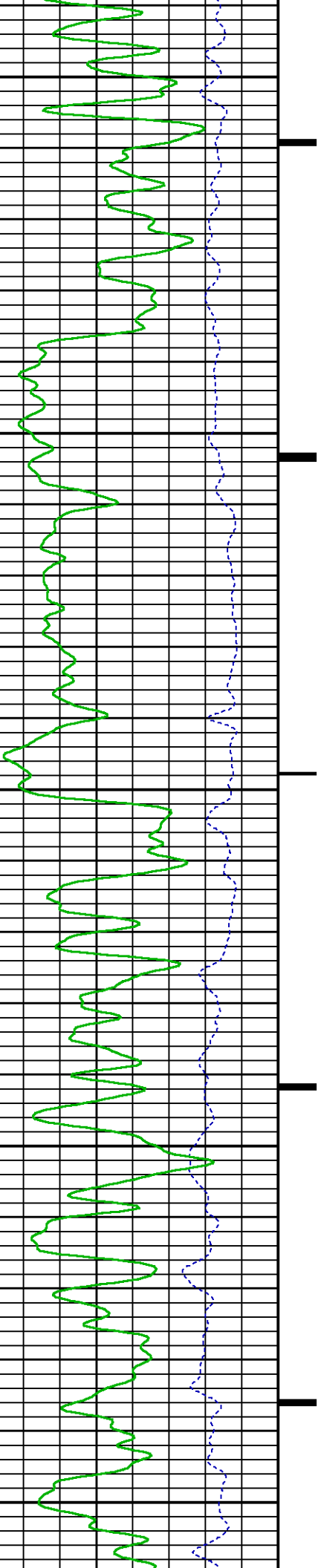


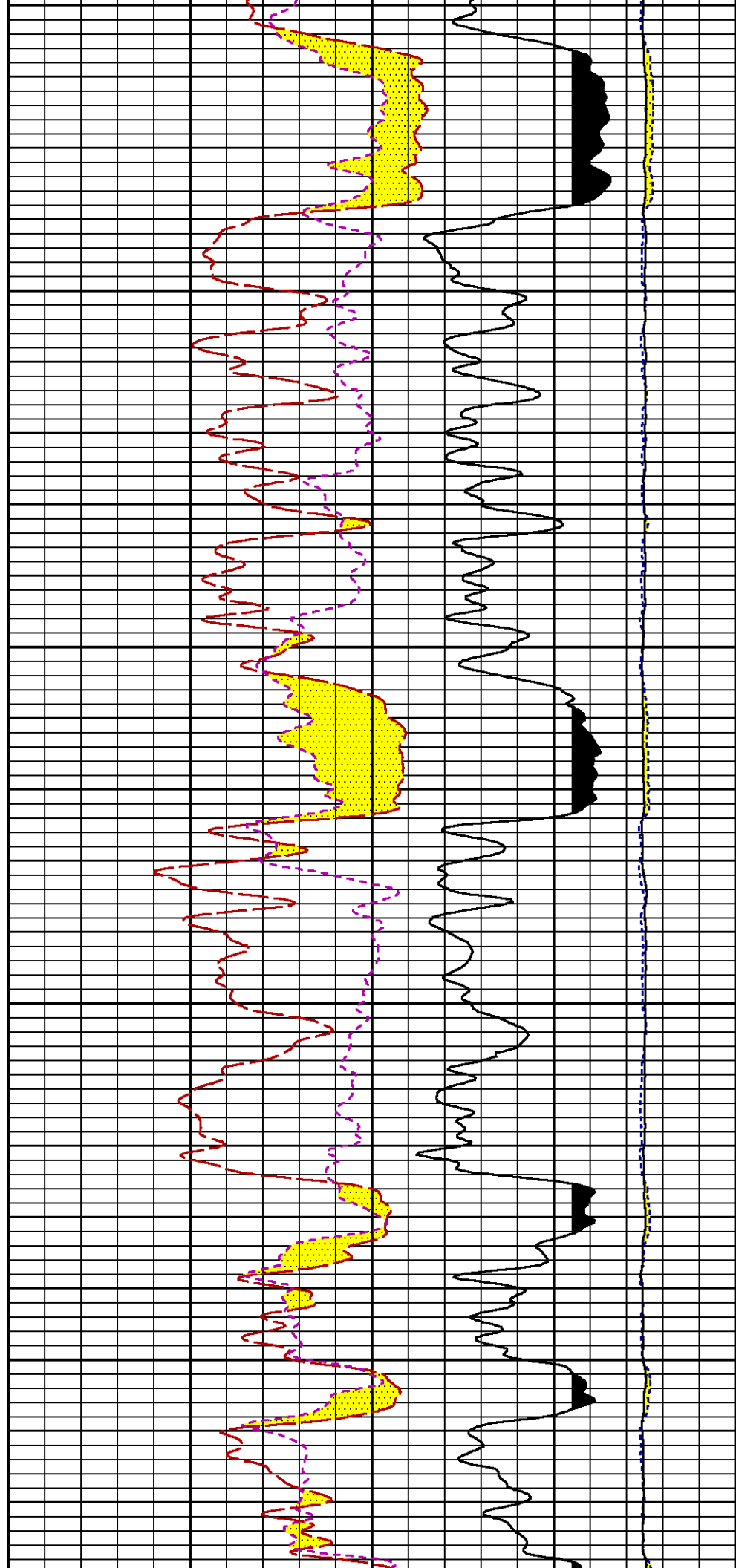
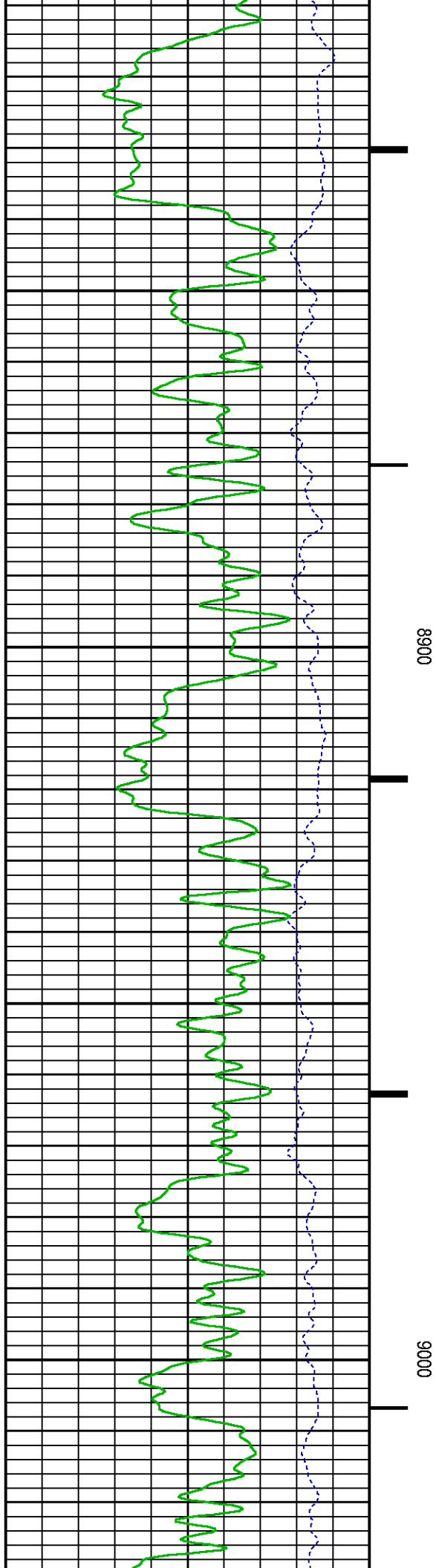


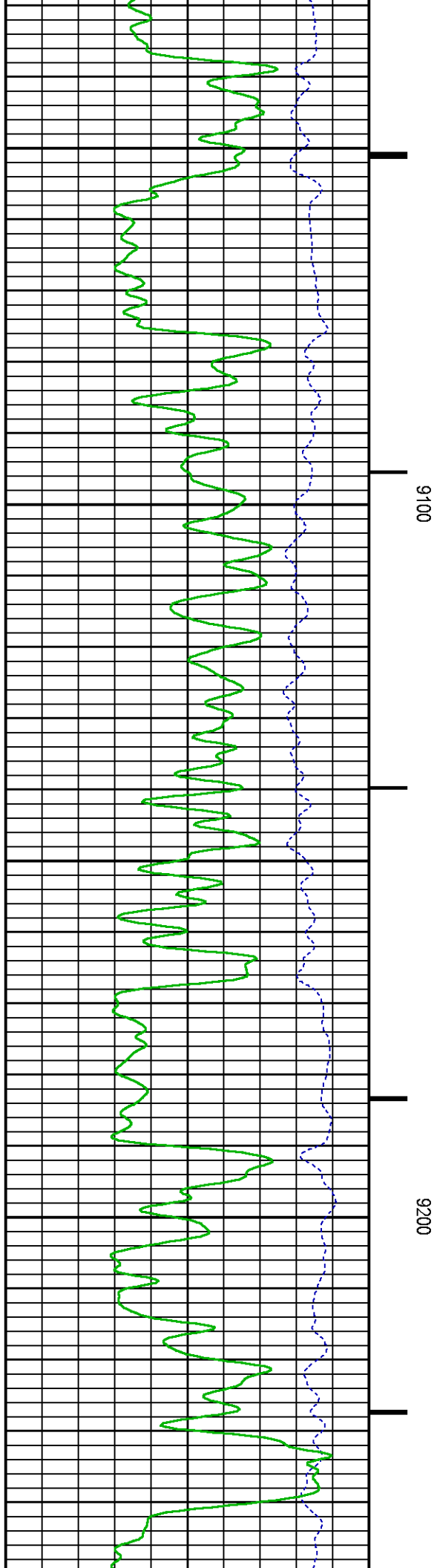
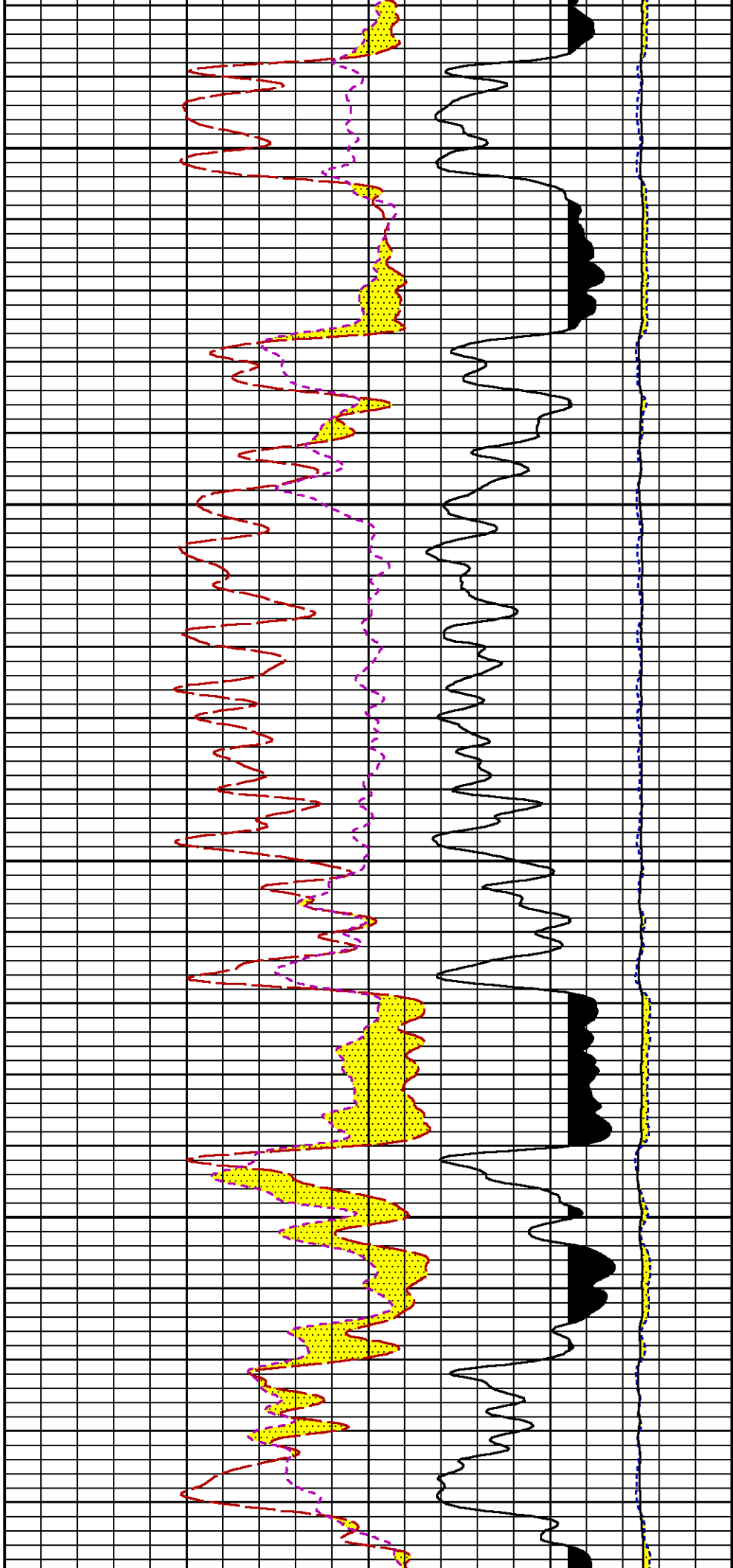
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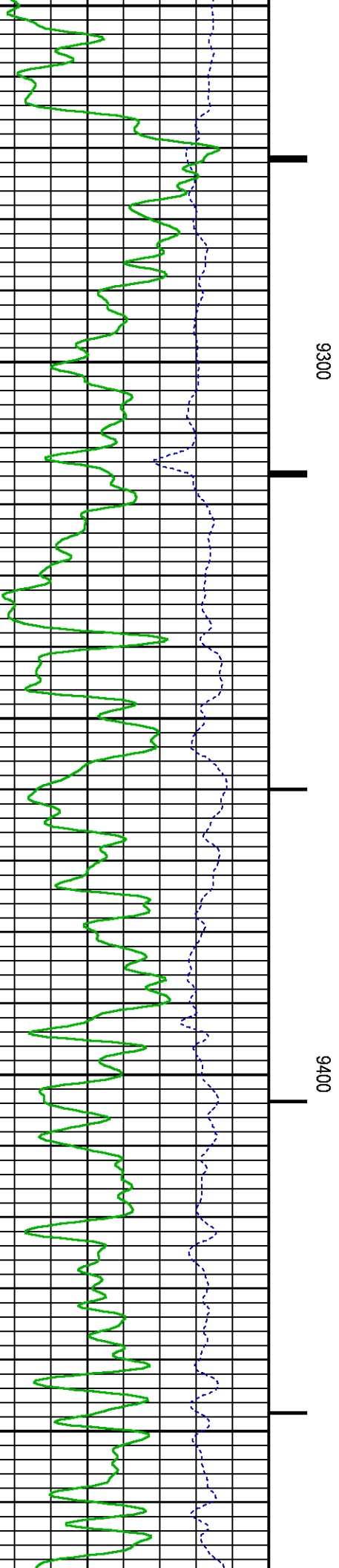
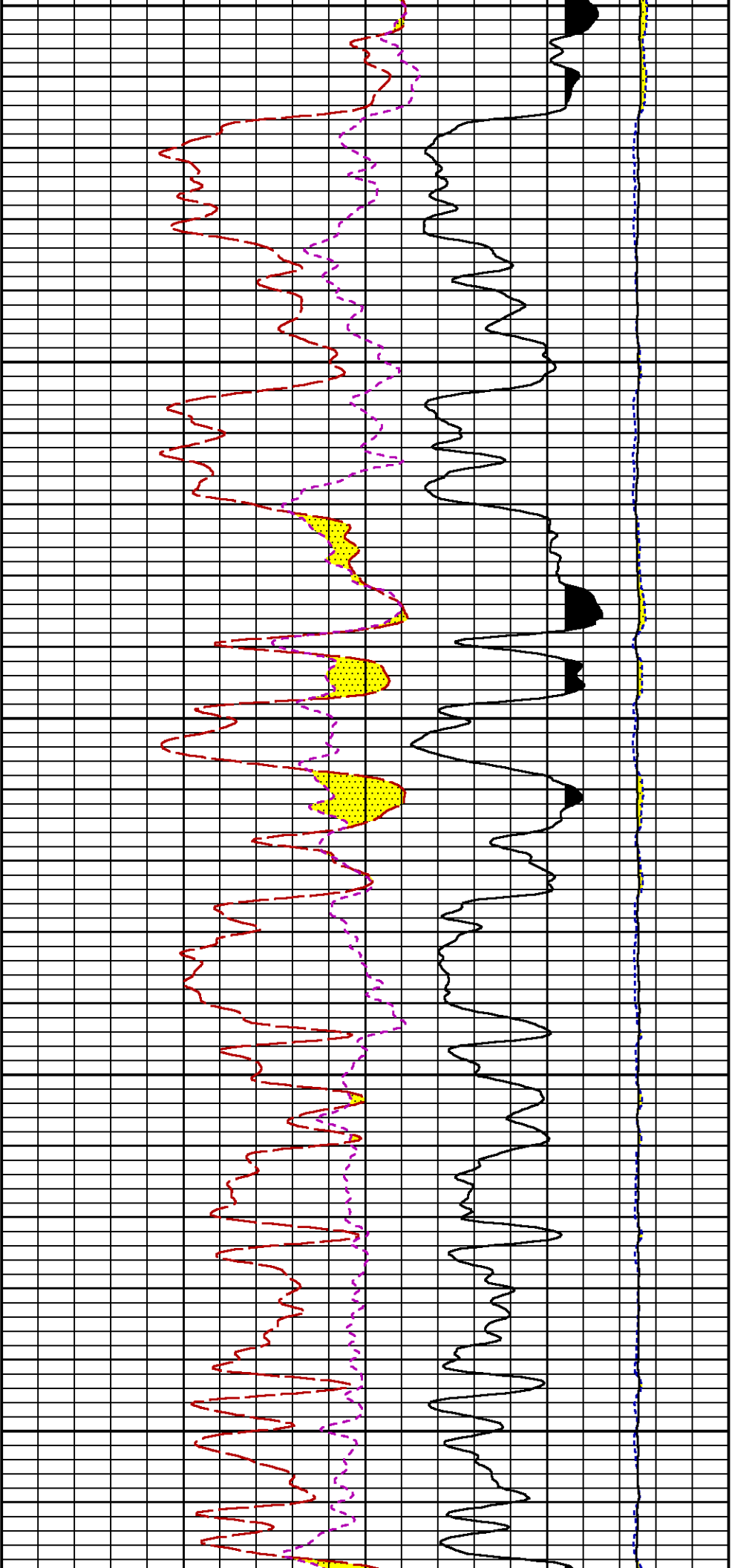
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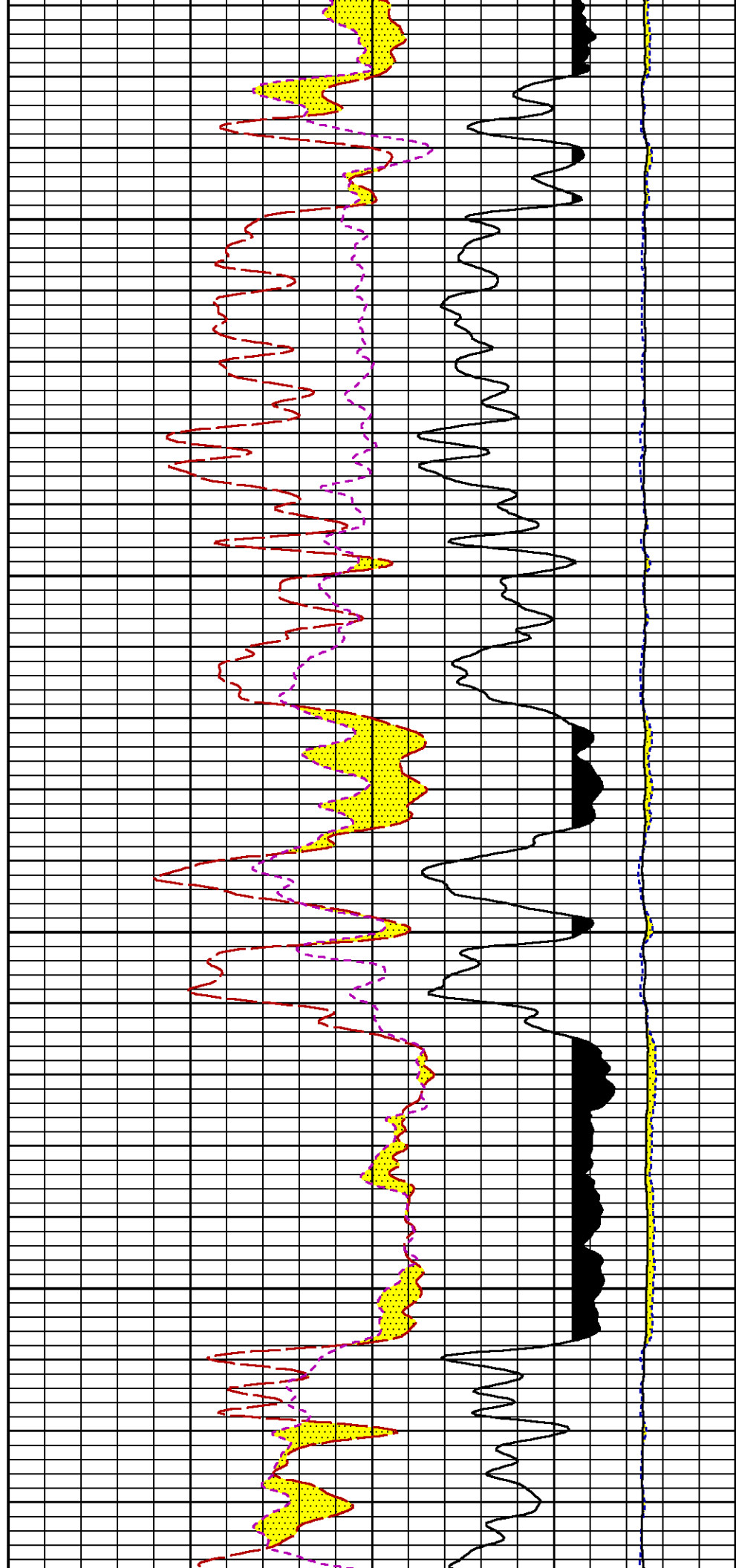
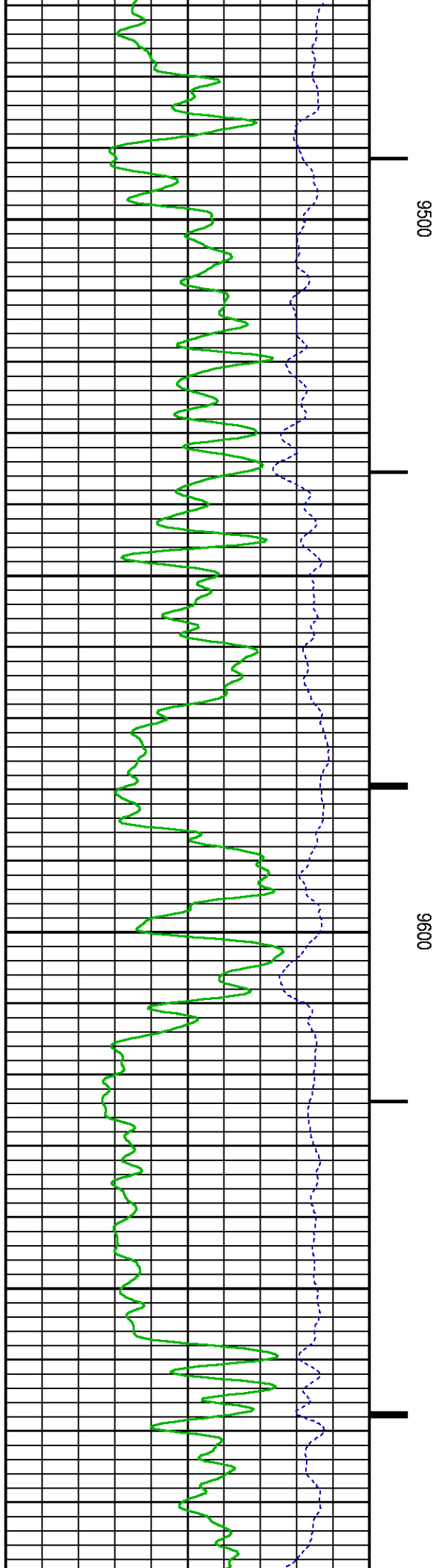
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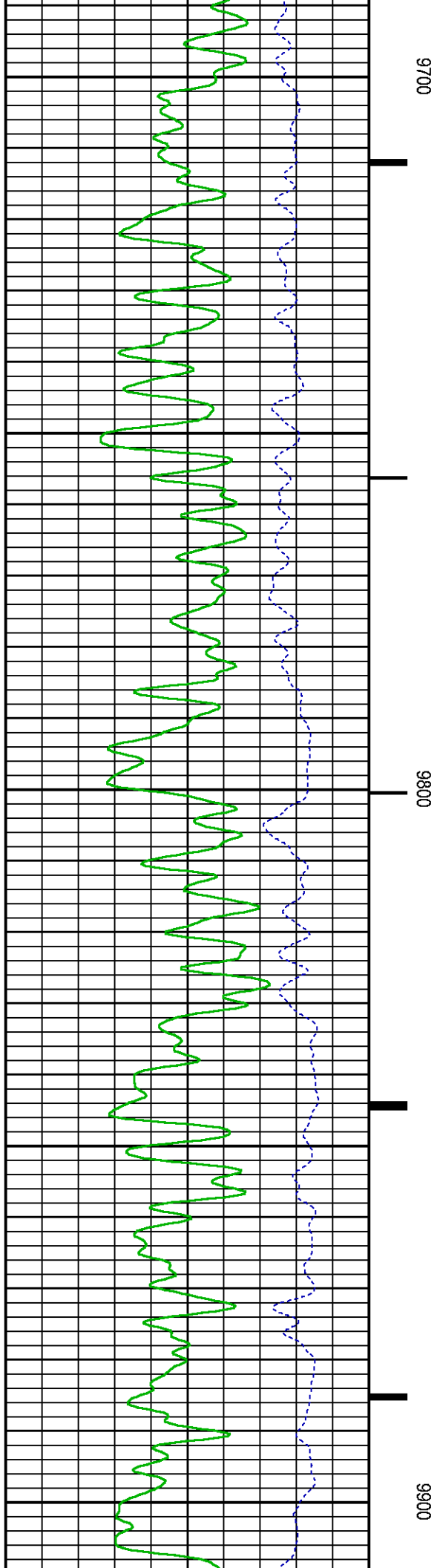
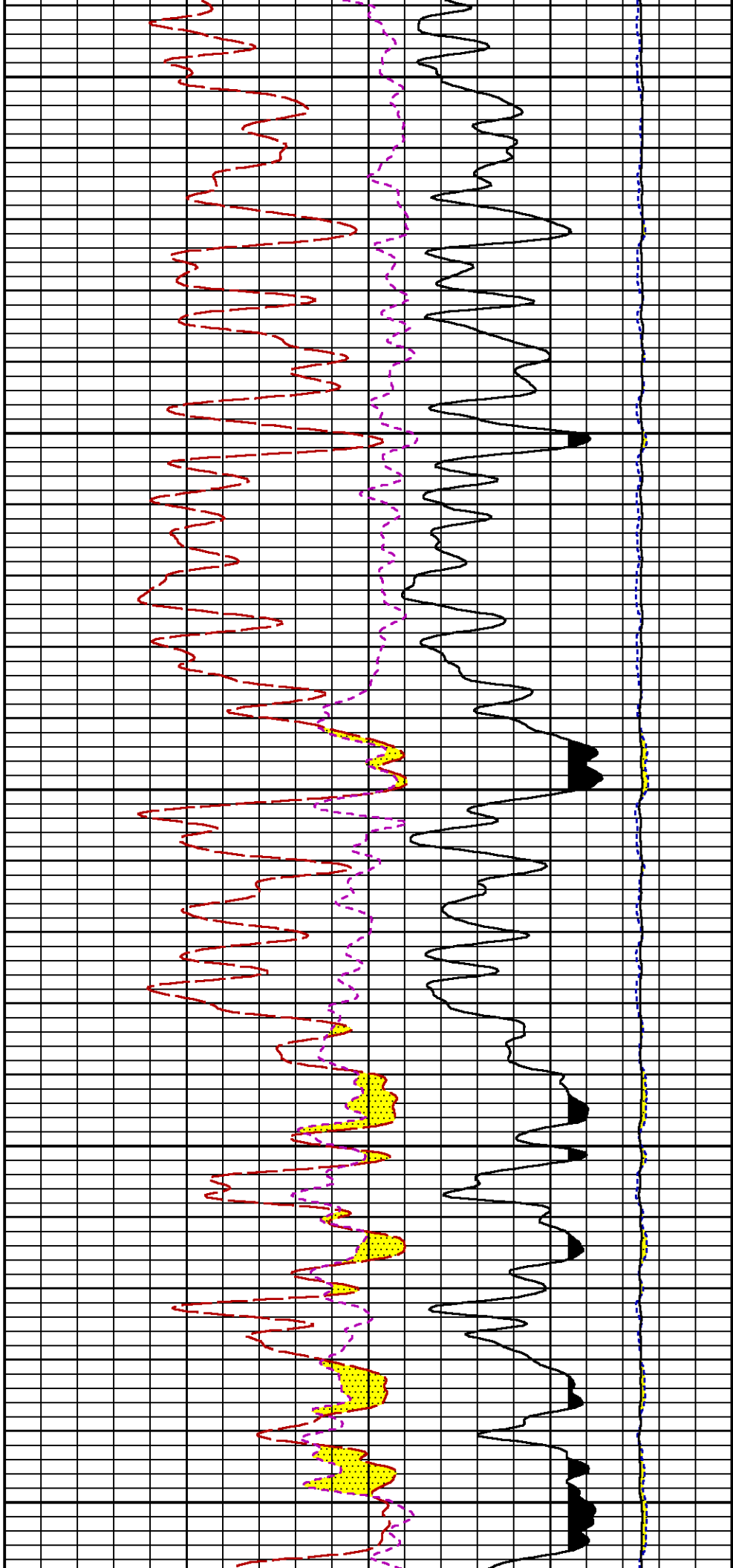


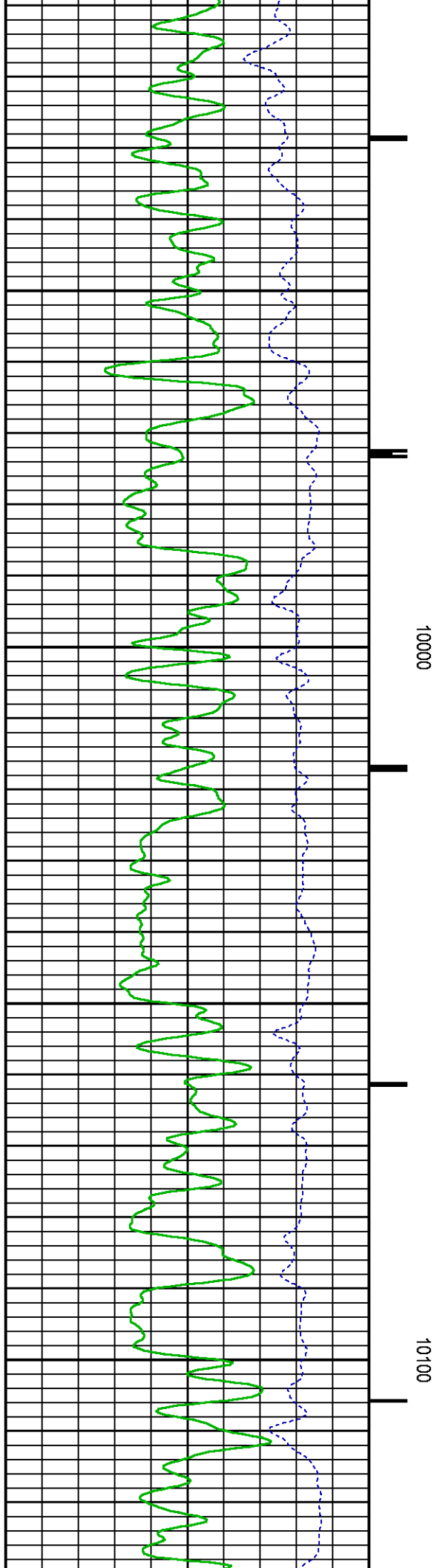
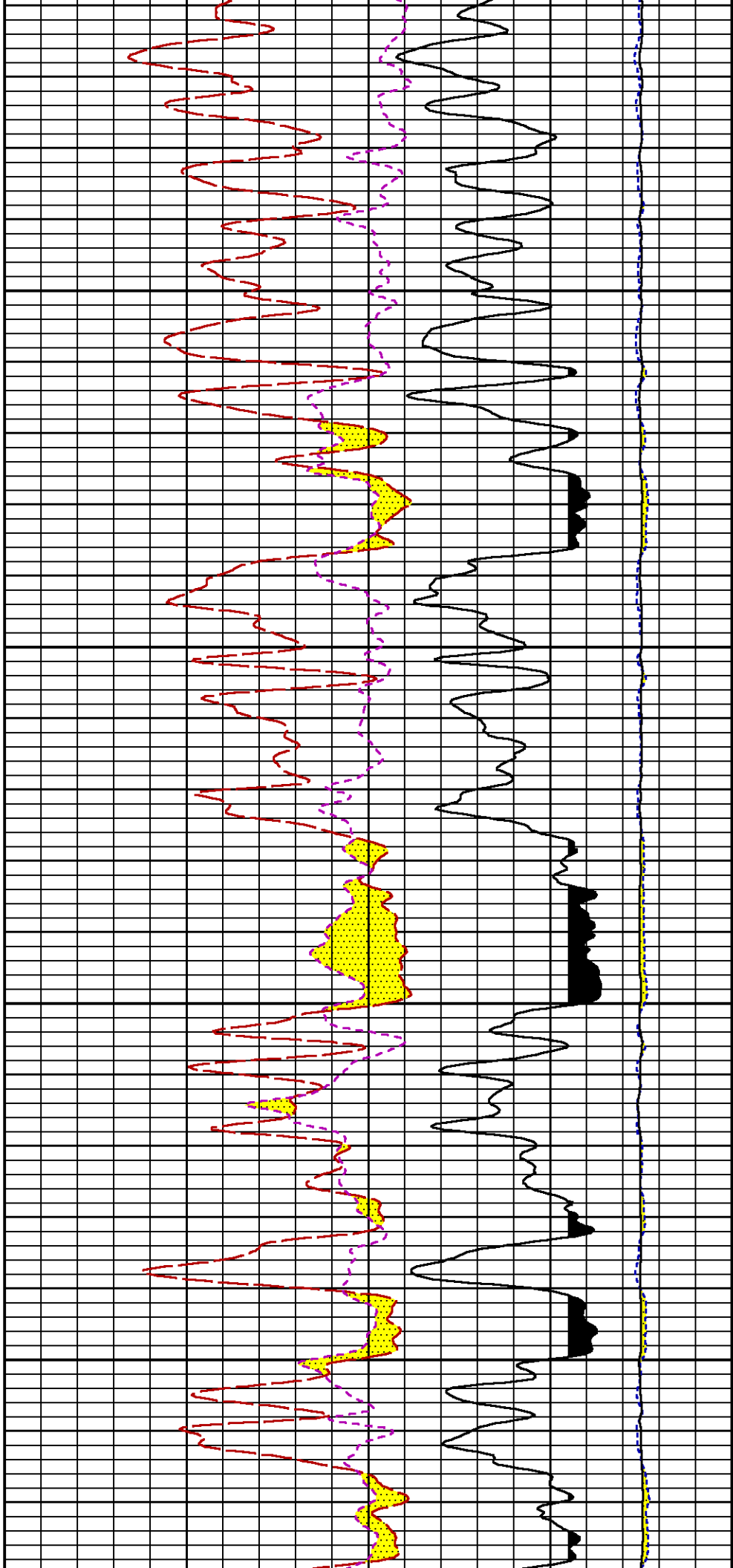


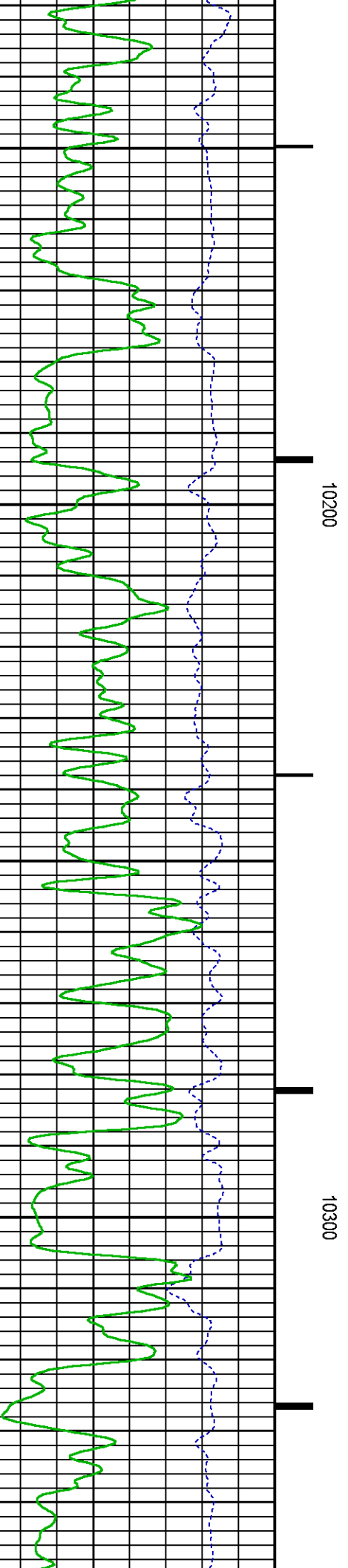
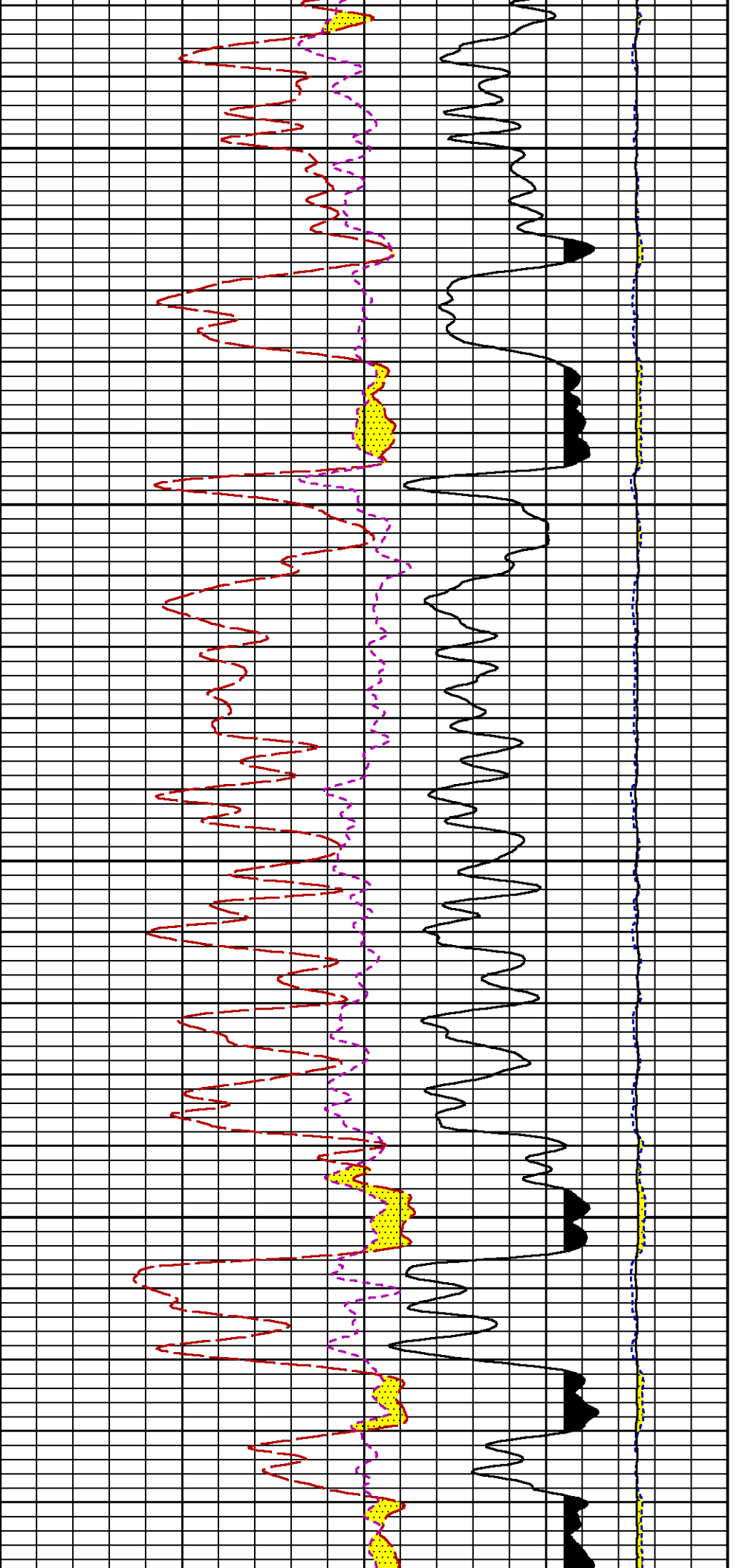


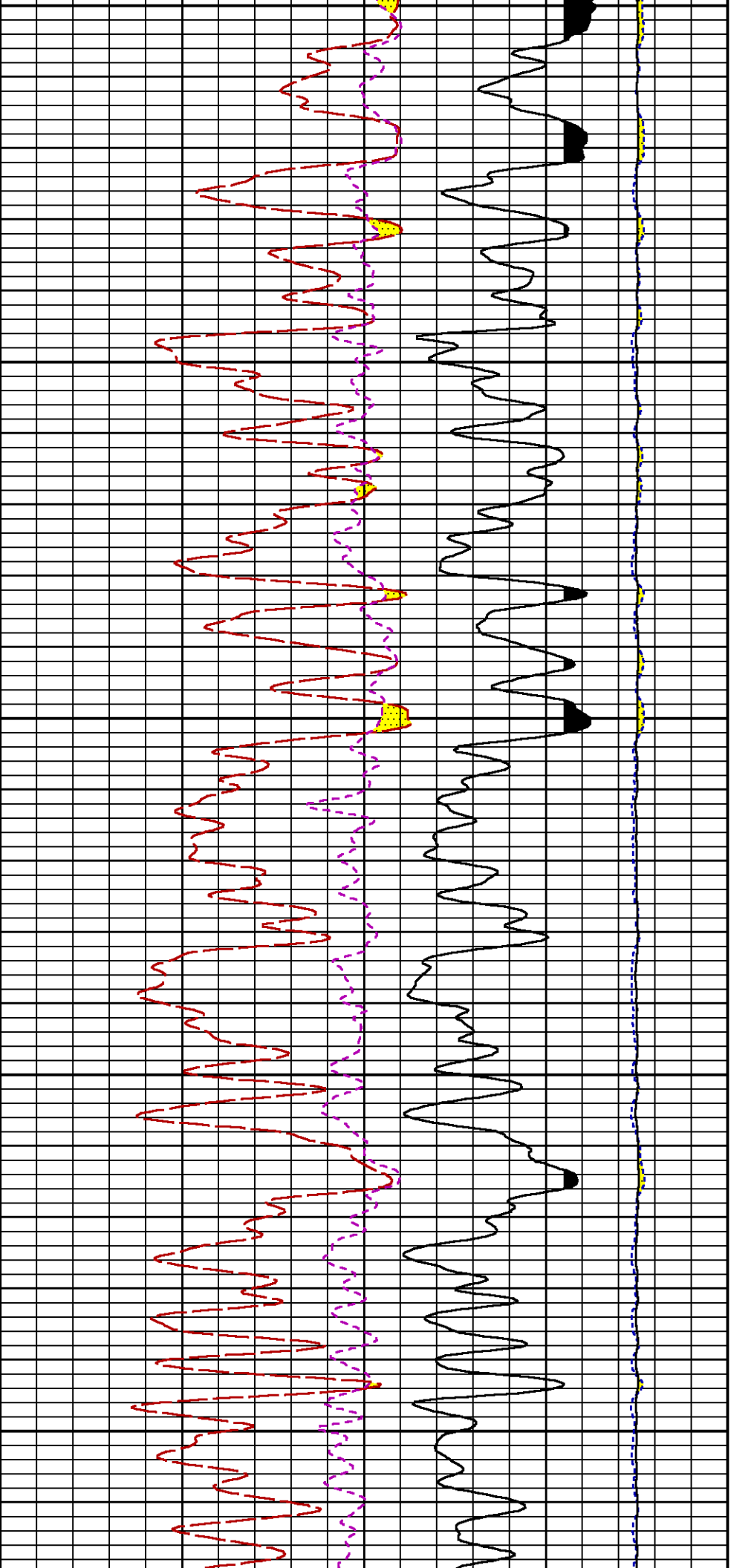






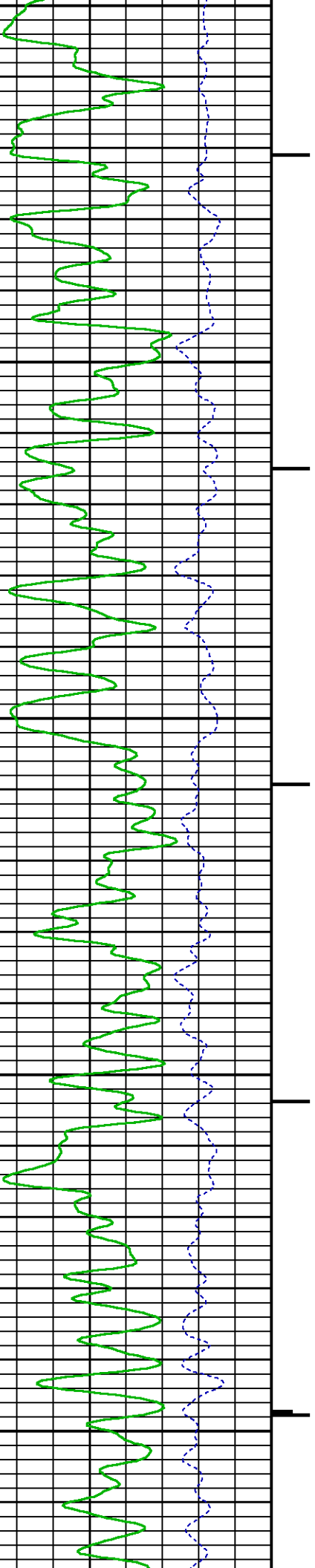


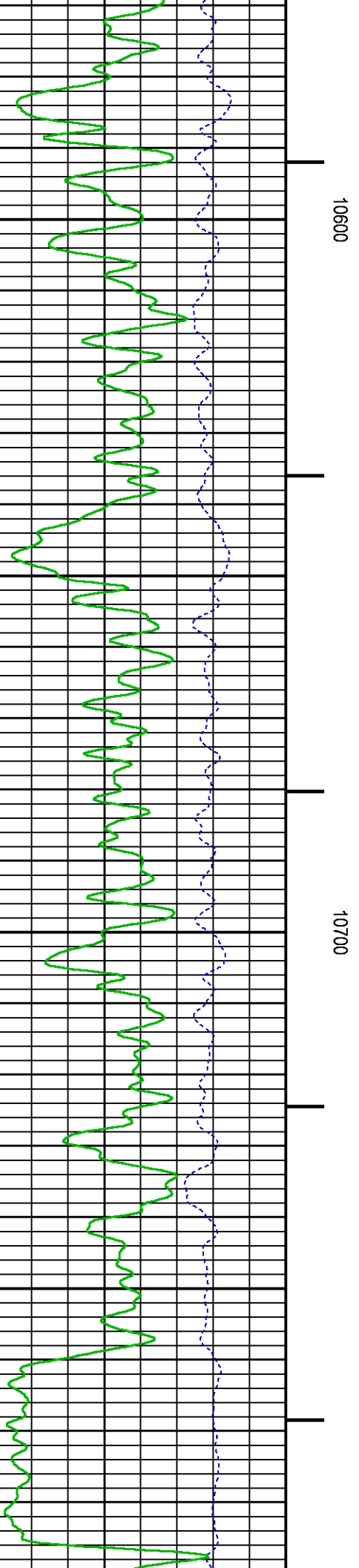
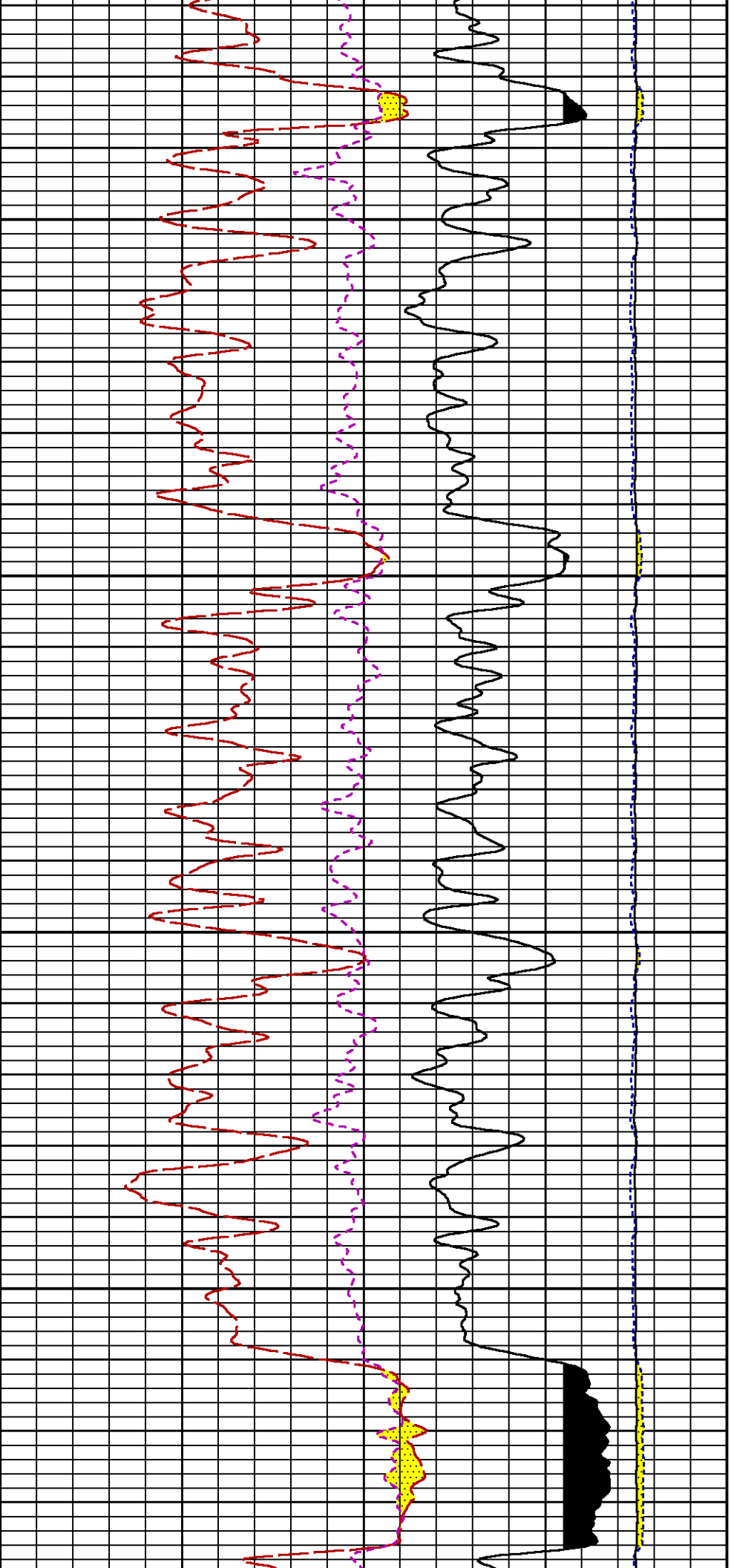


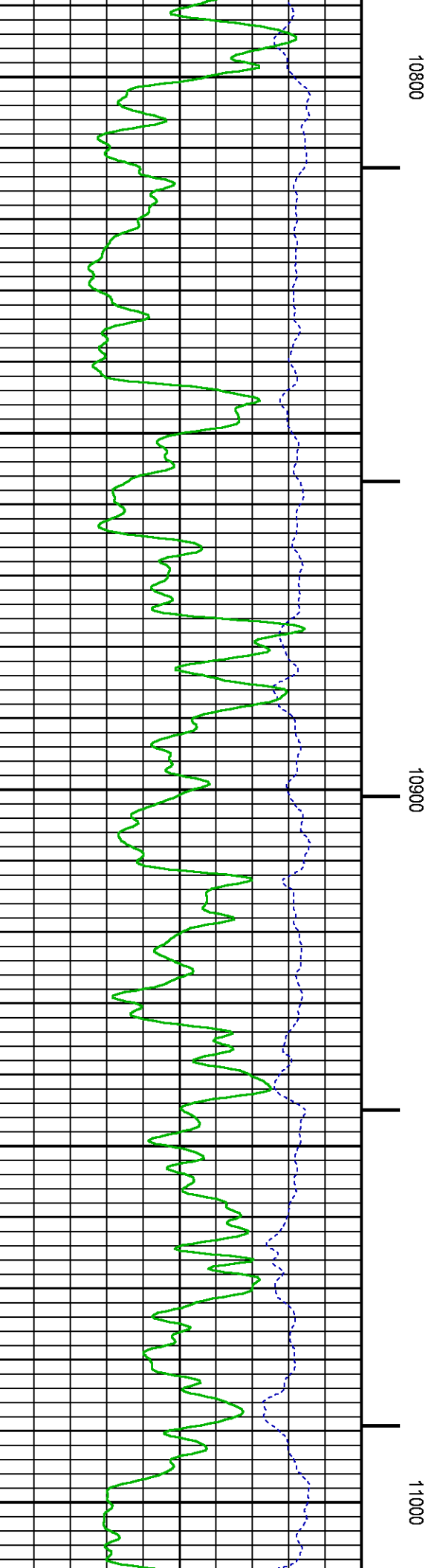
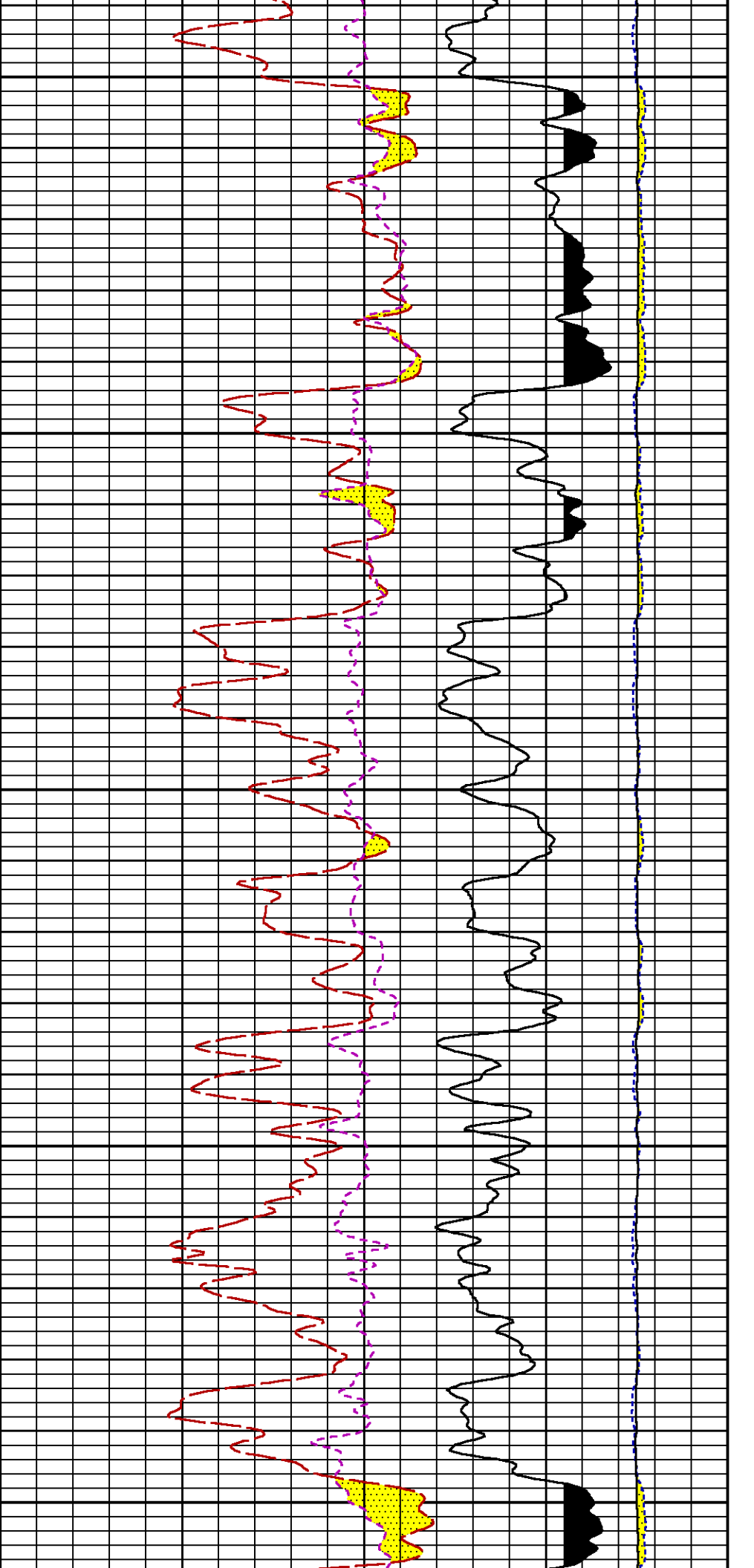


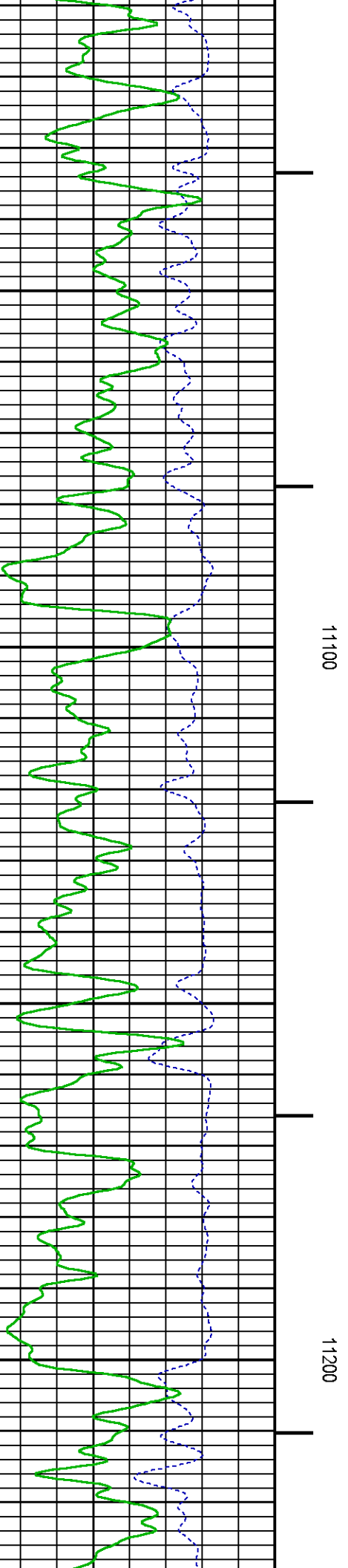
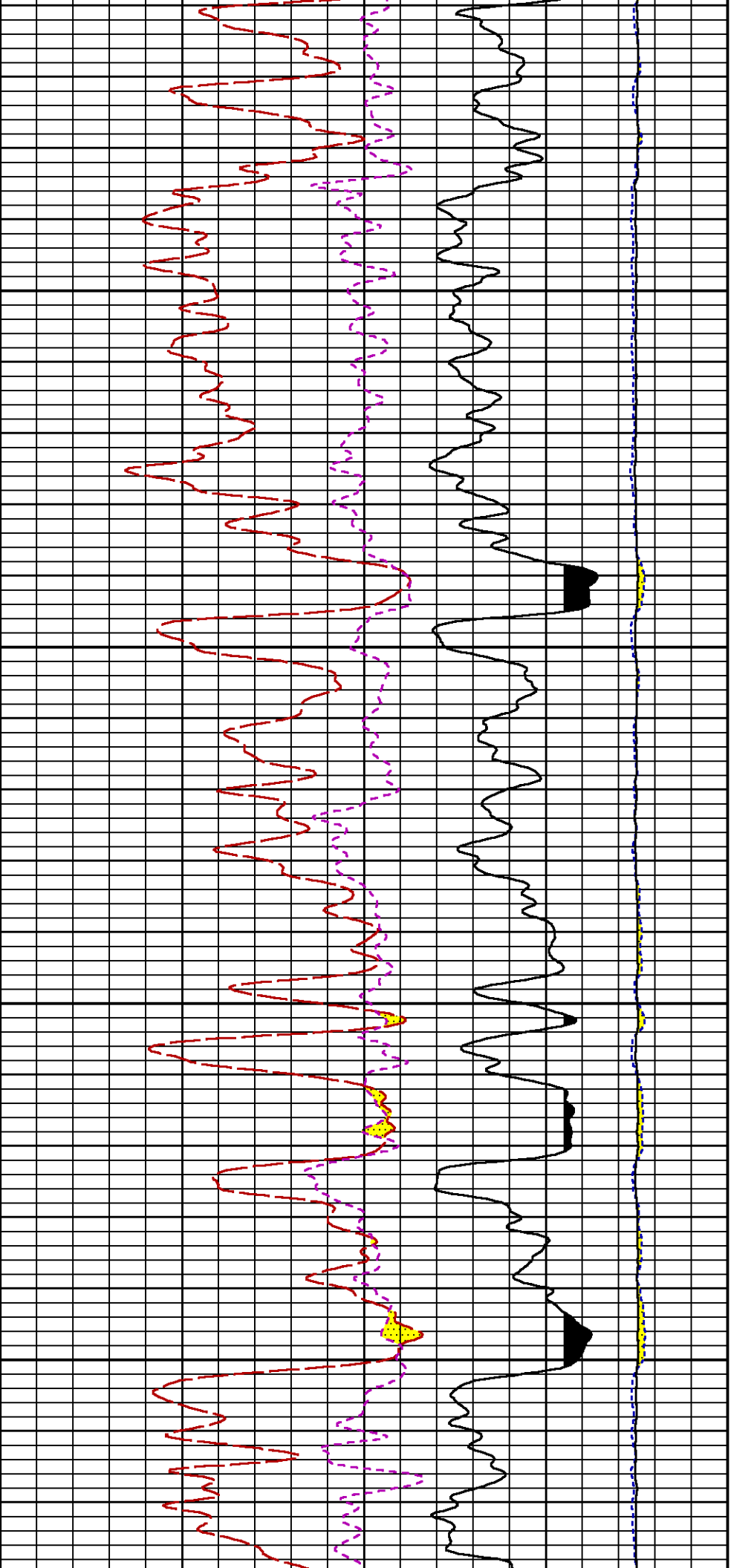
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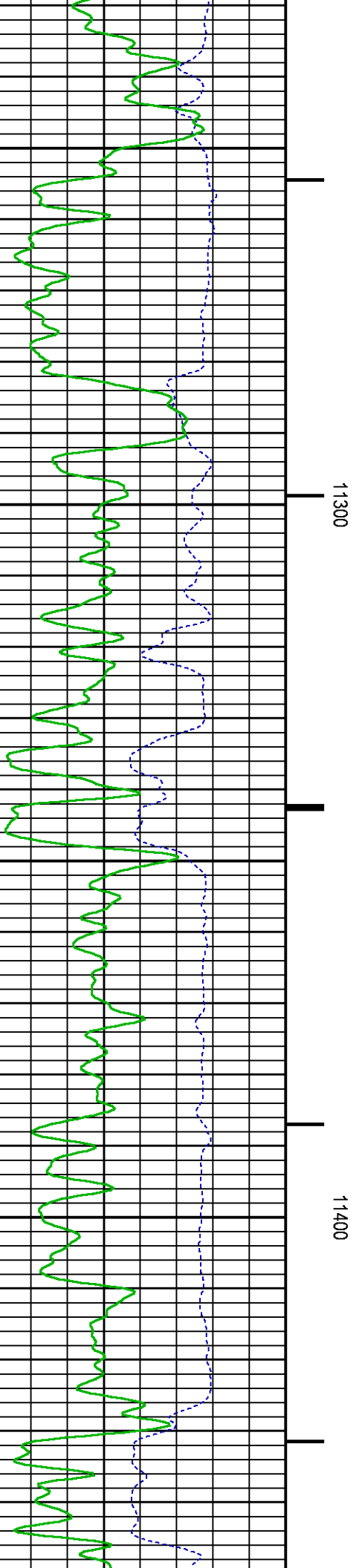
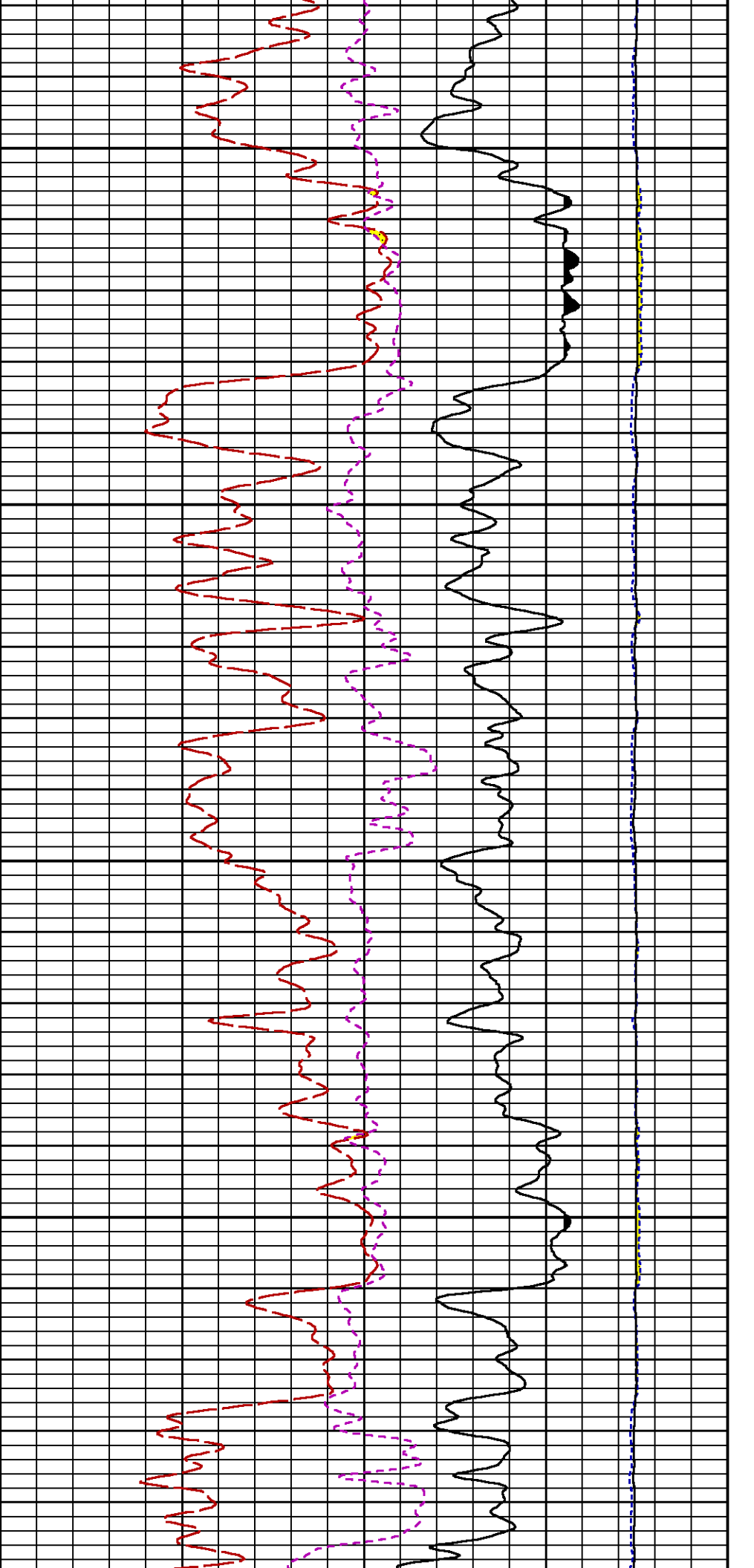
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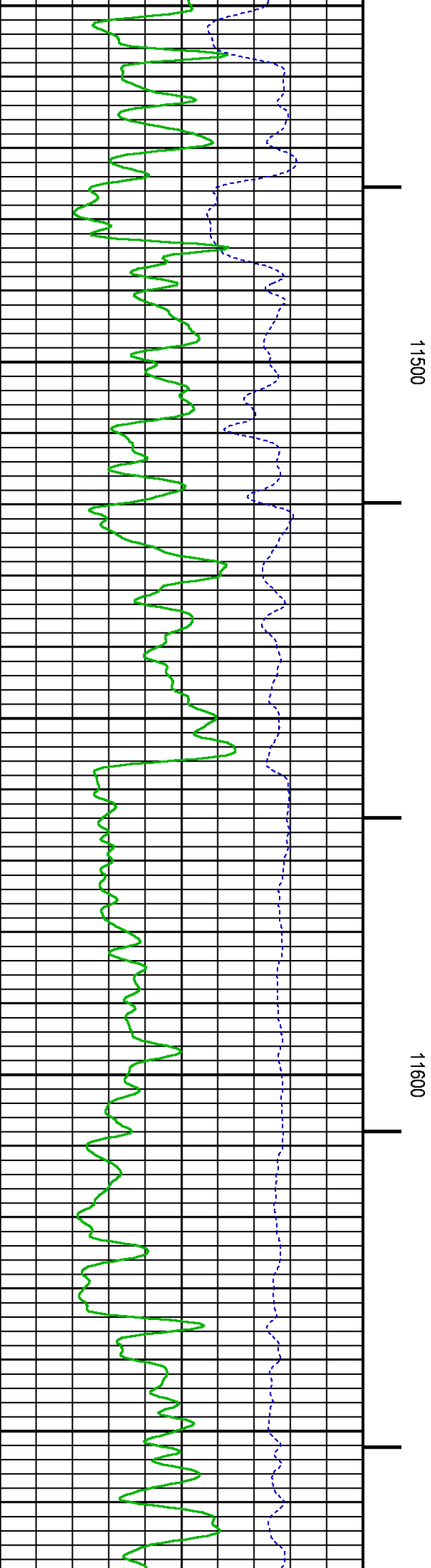
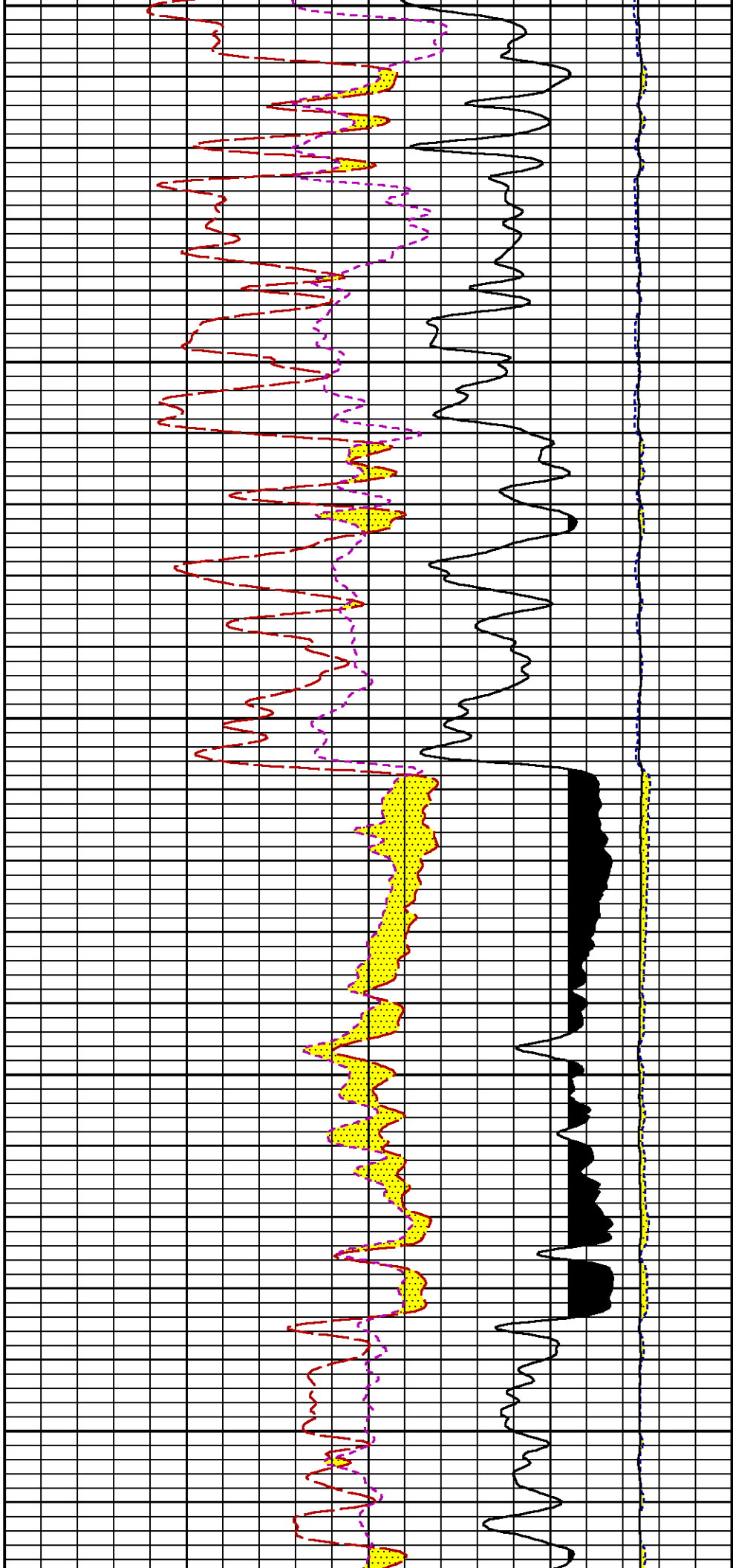


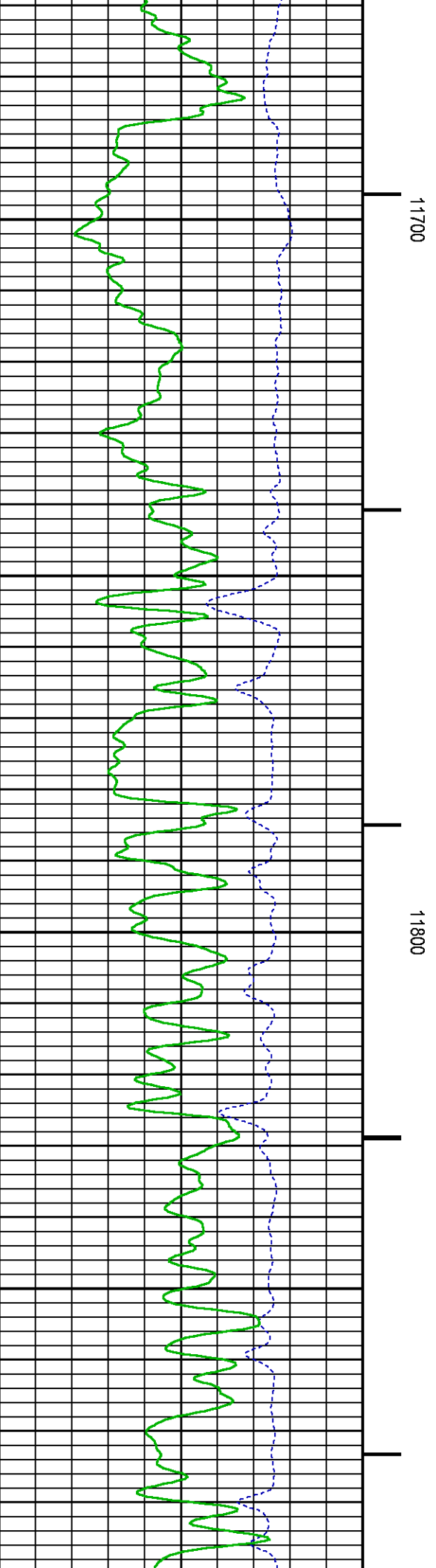
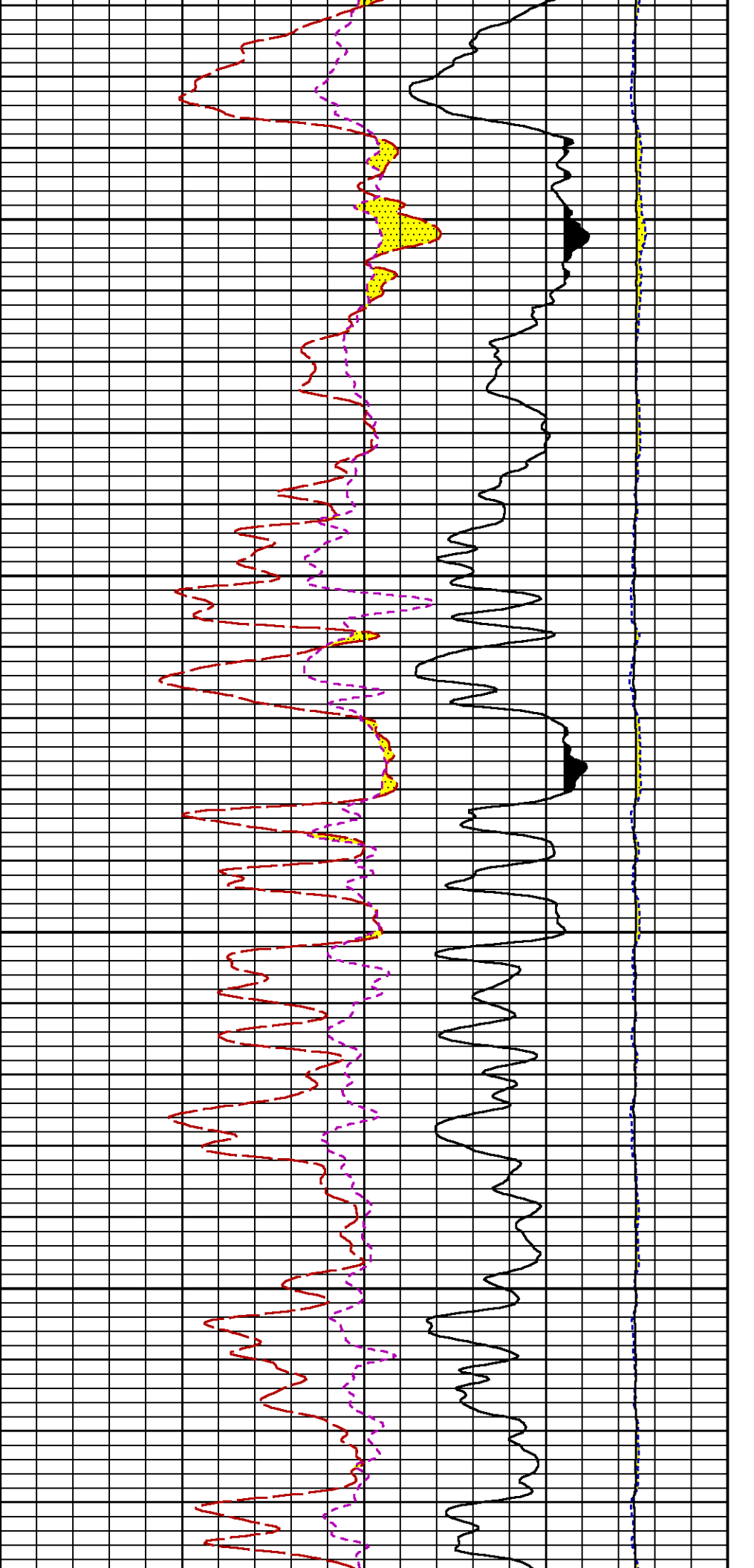


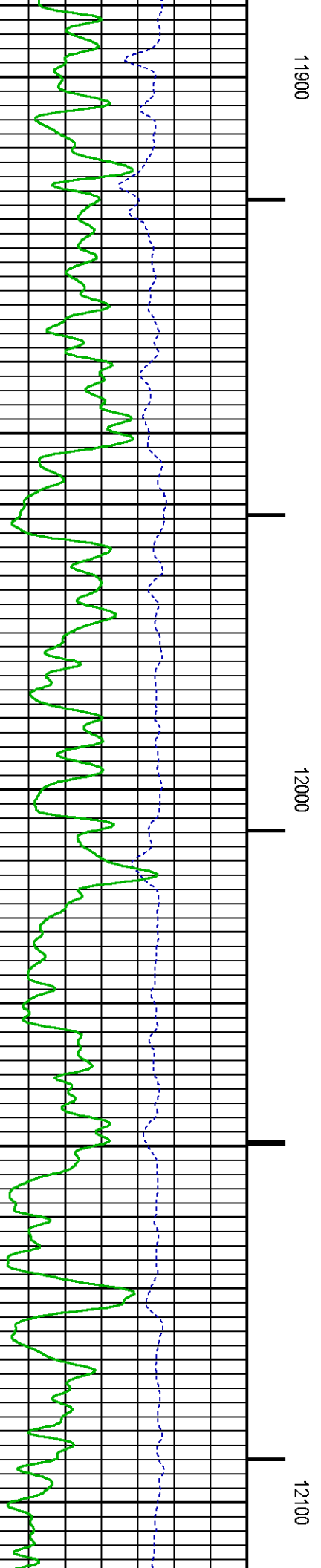
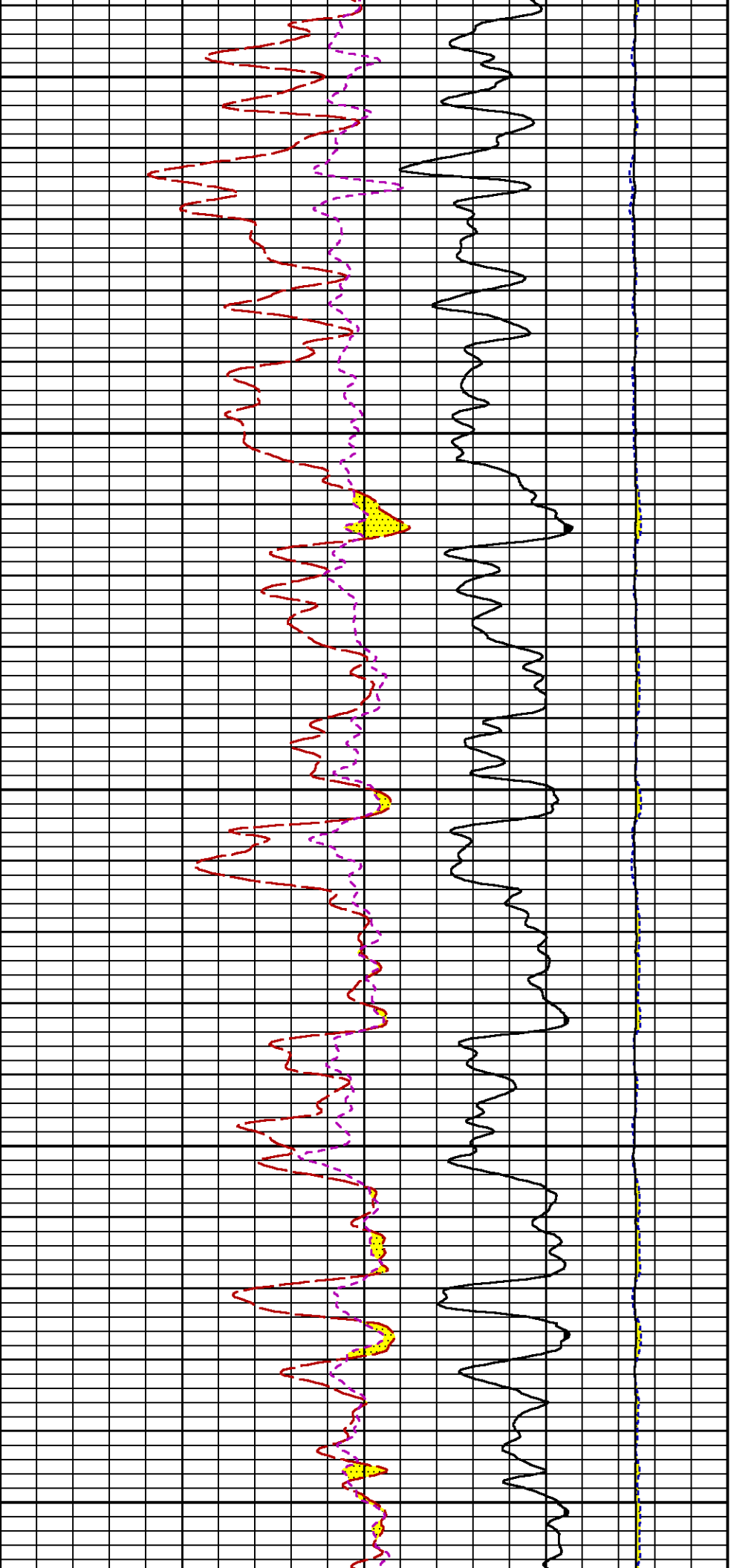


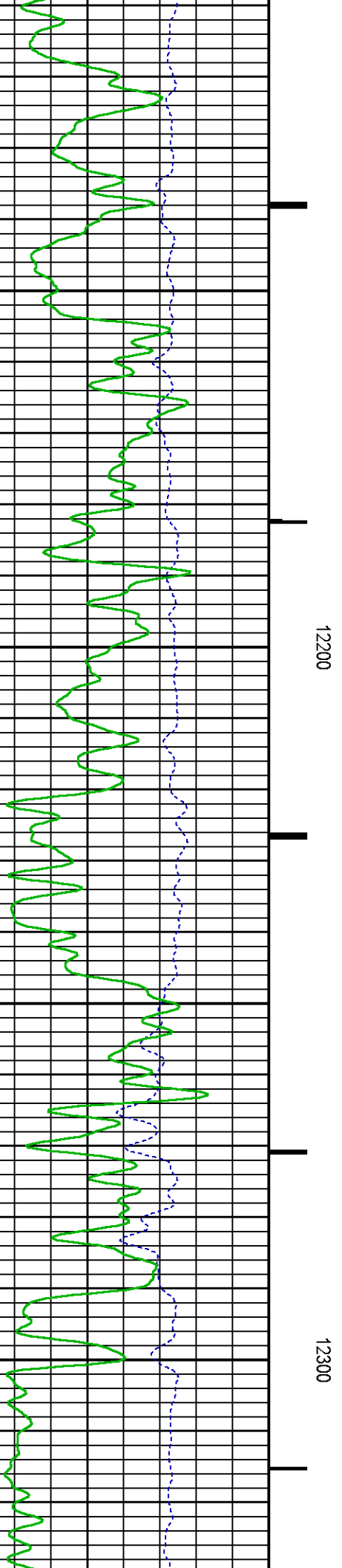
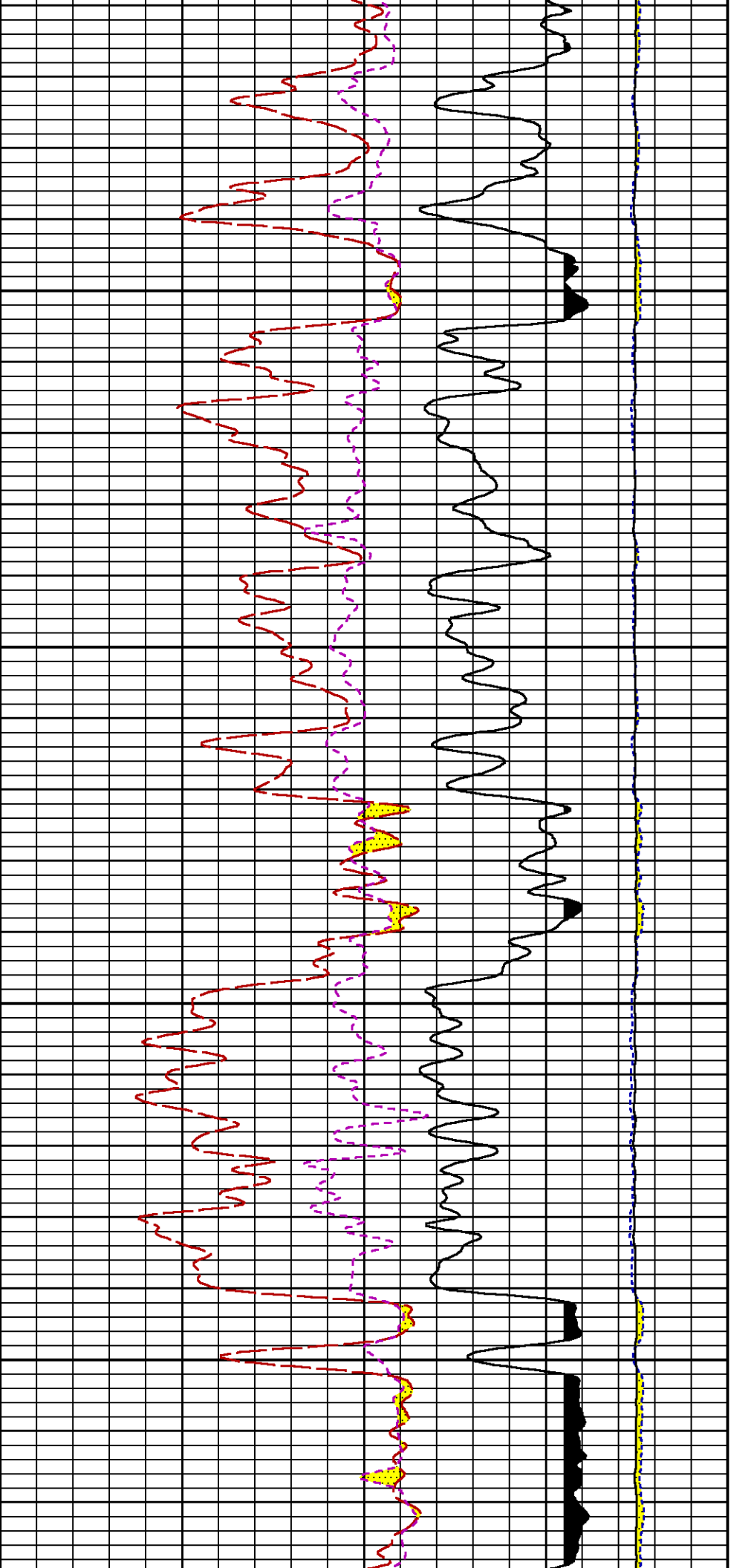


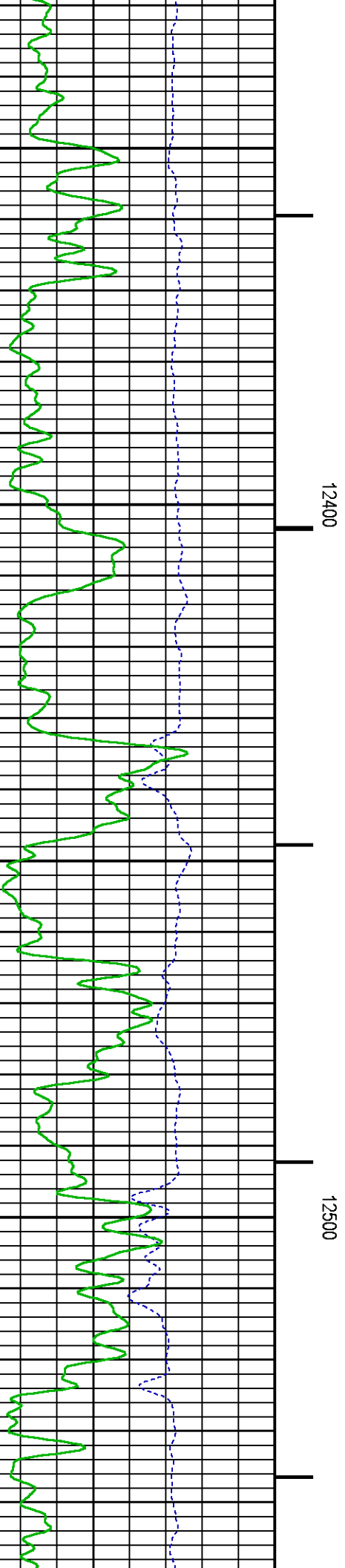
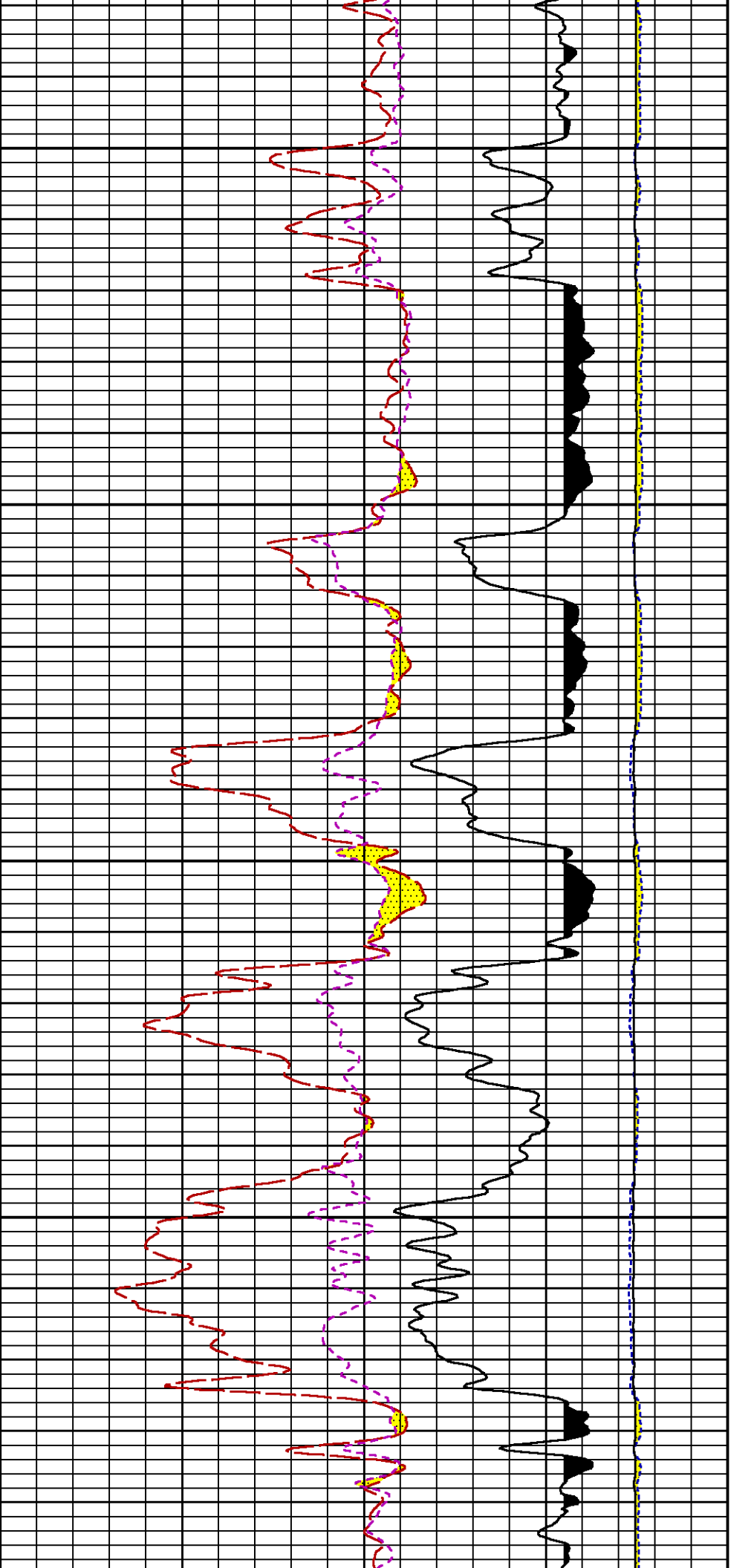


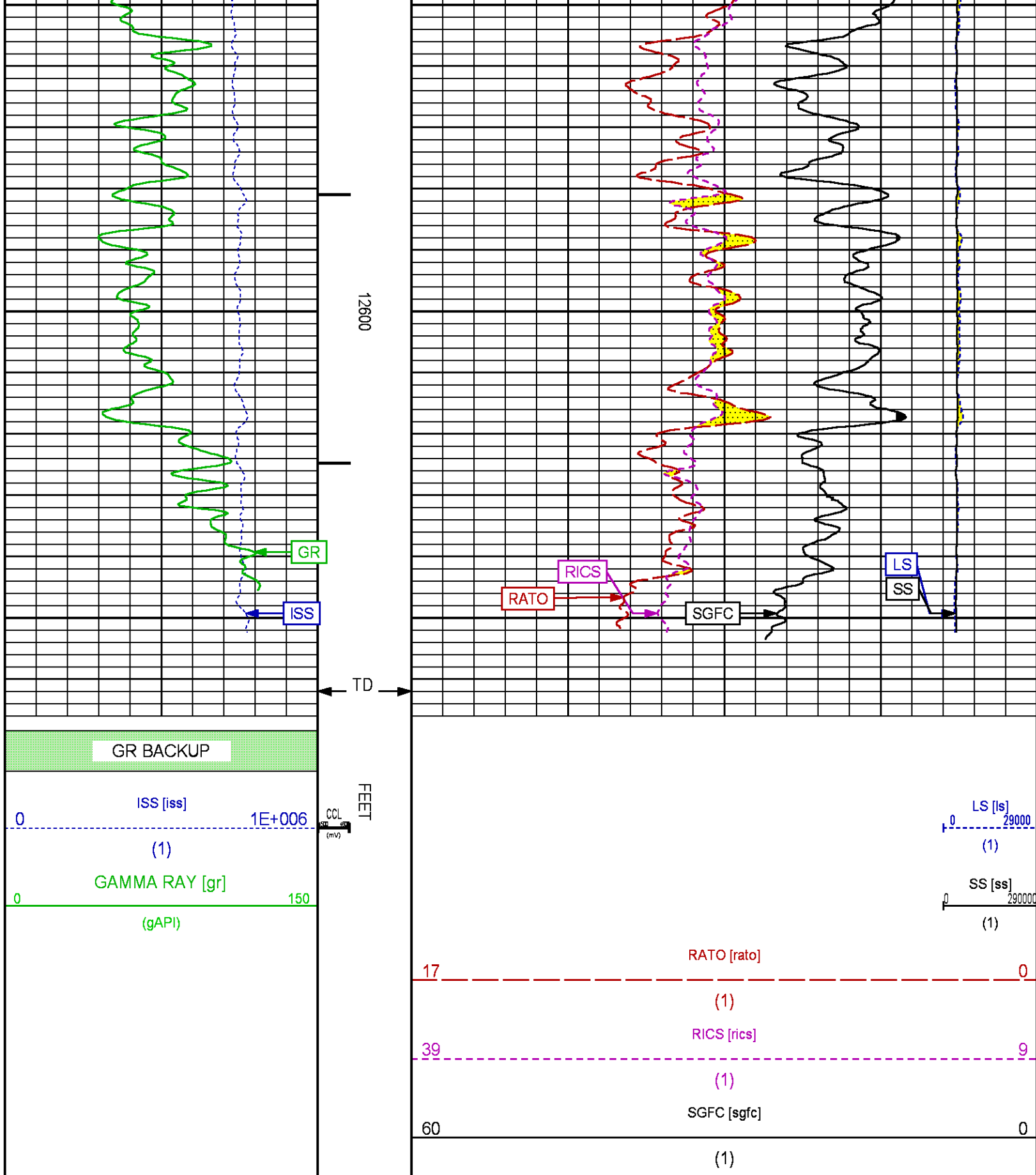












REPEAT SECTION PNC-3D MODE

Plotted: Tue Dec 16 15:33:47 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\091655\354h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 11810.250 ft BOTTOM DEPTH: 12161.000 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	7.88	in	" "
	CASING SIZE	4.50	in	" "
	MATRIX	SANDSTONE		" "
	CORRECTION BUFFER	11		" "

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Dec 16 10:53:14 2014	CASING COLLAR LOCATOR
F1:GR	Dec 16 10:53:14 2014	GAMMA RAY
F1:ISS	Dec 16 10:53:14 2014	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Dec 16 10:53:14 2014	LONG SPACE COUNT RATE
F1:RATO	Dec 16 10:53:14 2014	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Dec 16 10:53:14 2014	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Dec 16 10:53:14 2014	CORRECTED FORMATION SIGMA
F1:SS	Dec 16 10:53:14 2014	SHORT SPACE COUNT RATE

CURVE MEASURE POINT OFFSET

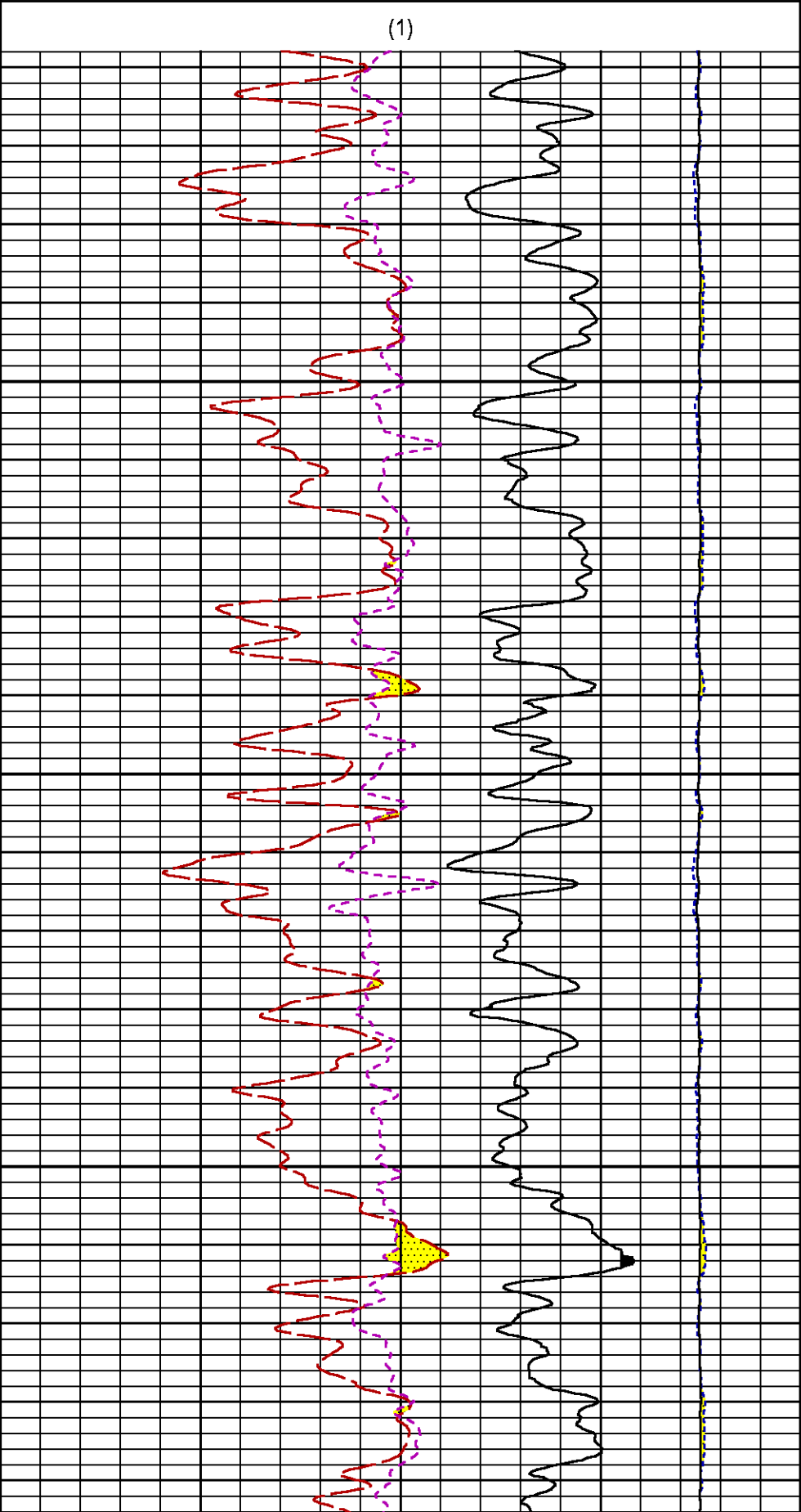
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation : BHUGHES-06627:C:\dat1a\091655\31RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 11808 - 12108 Feet

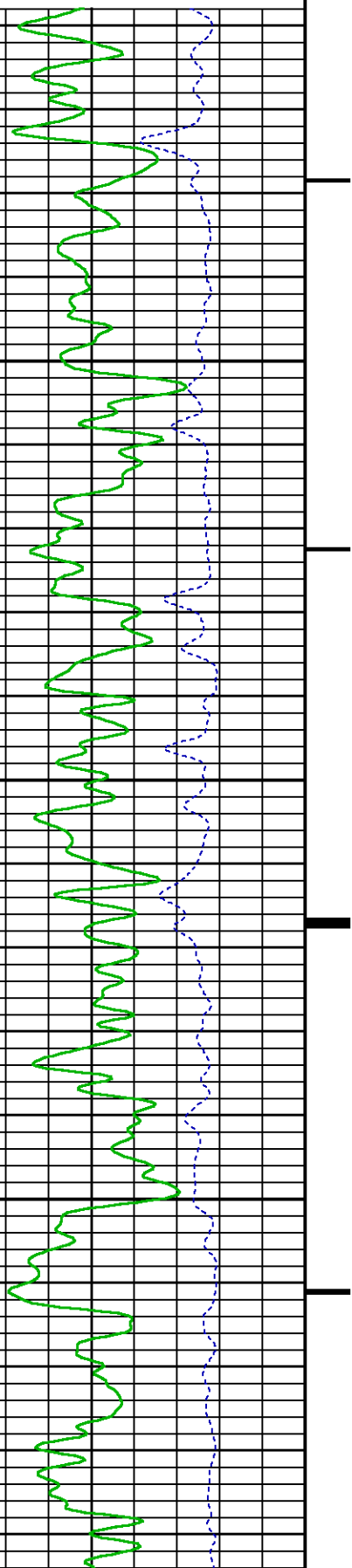
Data File 1 : F1 : BHUGHES-06627:C:\dat1a\091655\31RPM_REPEAT.xtf
Created On : Dec 16 10:53:14 2014
Company : WPX ENERGY
Well : FEDERAL RGU 31-26-198
Field : SULPHUR CREEK
File Interval : 11783 - 12159 Feet
OCT : n354h

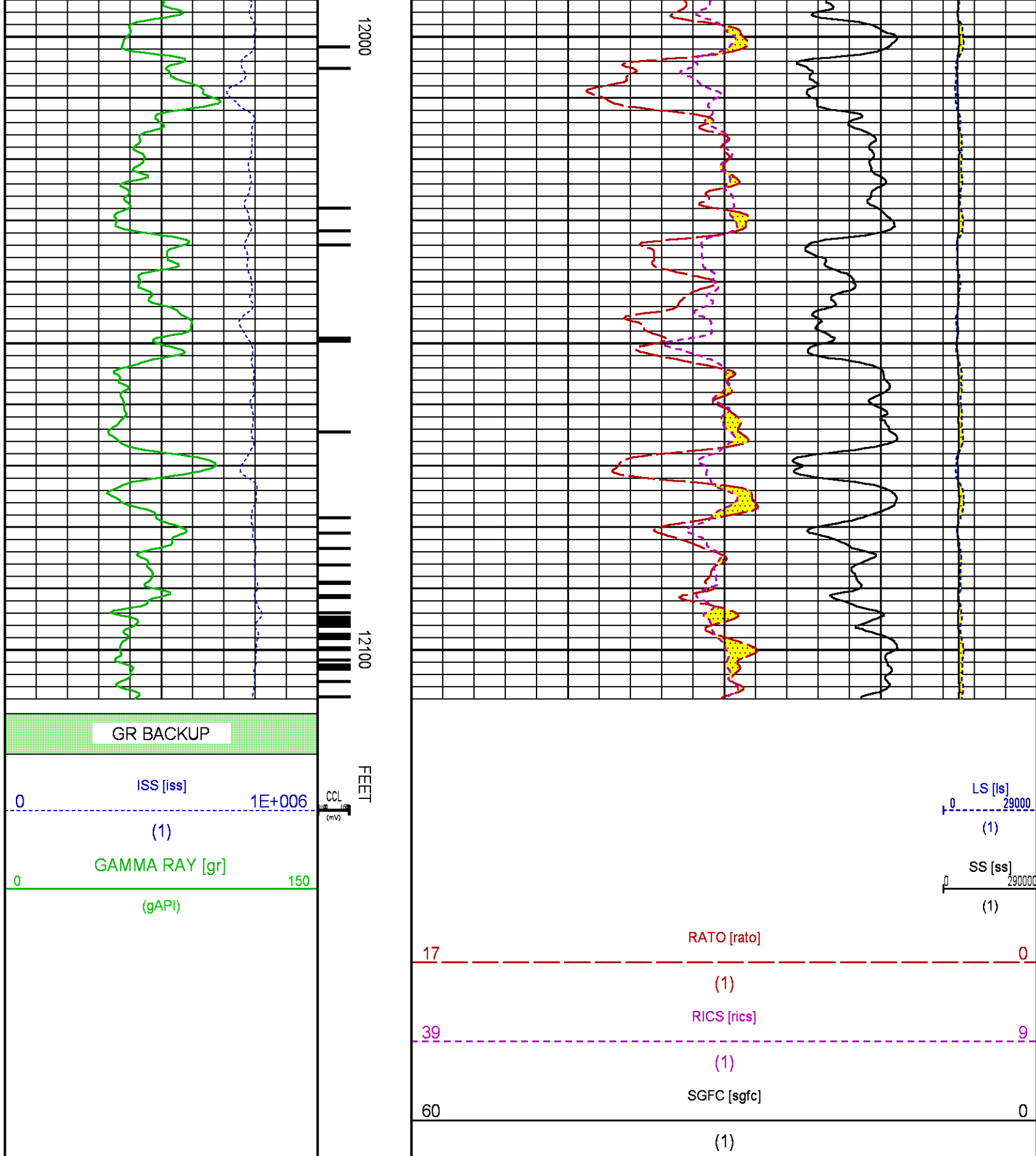


17	(1)	0
	RICS [rics]	
39	(1)	9
	SGFC [sgfc]	
60		0



11900





CALIBRATION / VERIFICATION SUMMARY

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

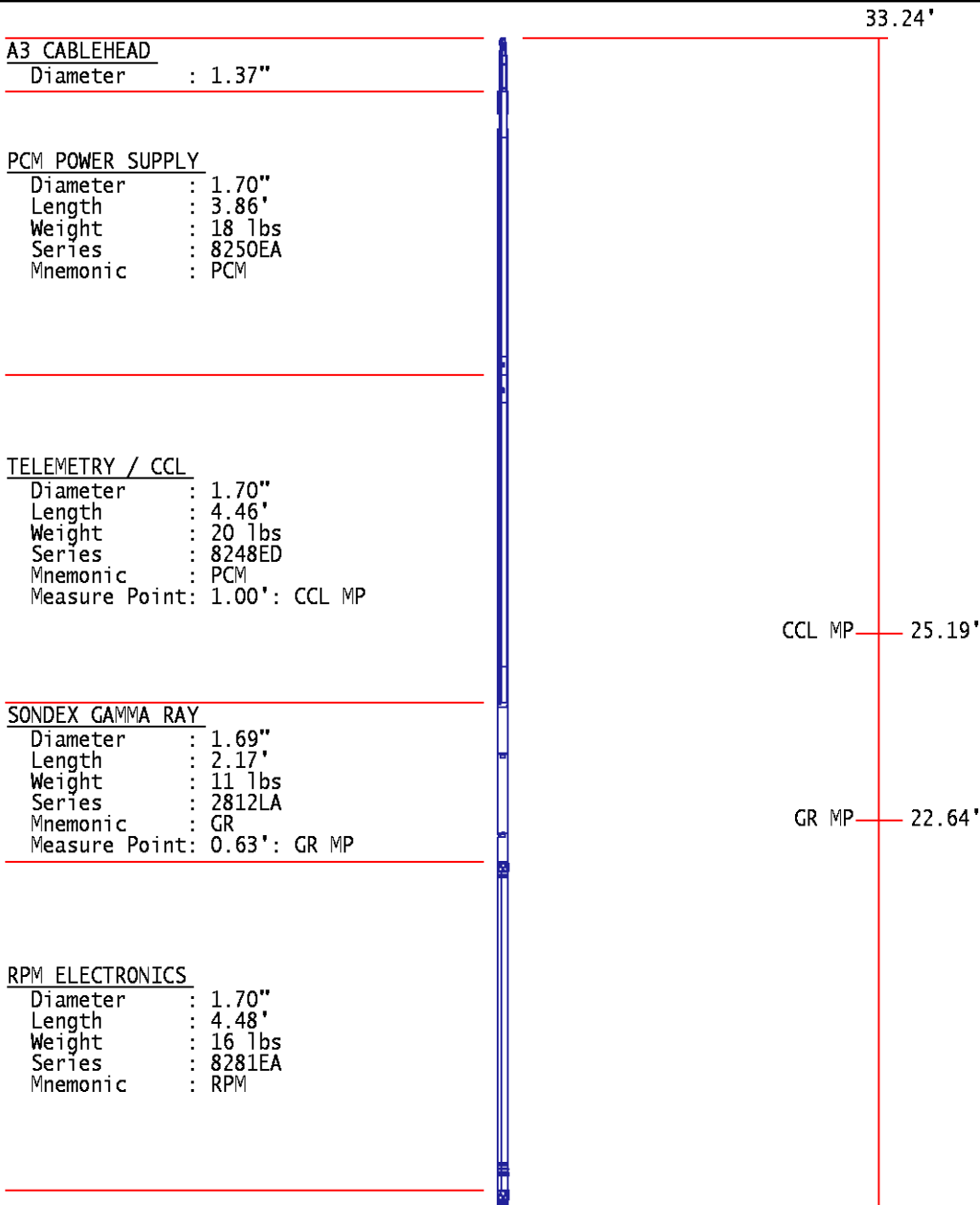
	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	801712	6404	989	140	26.08	0.15	24.23	0.33
					25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	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	RIN13	RICS	RATO	RTWO	RONE
			ISS/LS	ISS/IXS	ISS/CSS	SS/LS	SS2/LS	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

INSTRUMENT CONFIGURATION

Source File: D:\dat1a\091655\m354h~GR2812LA-tdg.meta



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

BULL PLUG 1 11/16

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

0.00'

	COMPANY	WPX ENRGY		FILE NO:	
	WELL	FEDERAL RGU 31-26-198		CH091655	
	FIELD	SULPHUR CREEK		API NO:	
	COUNTY	RIO BLANCO	STATE	COLORADO	05103119740000
LOCATION:		ELEVATIONS:		26 1S 98W	
SHL: 1025' FSL & 663' FEL (23 1S 98W)		KB 6592 FT		RGU 43-23-198 PA	
BHL: 287' FNL & 1863' FEL (26 1S 98W)		DF		AZTEC 1000	
GL 6567 FT		DATE		16-Dec-2014	
SEC 26 TWP 1S RGE 98W					