



FILE NO: CH096704	COMPANY WPX ENERGY
API NO: 05103119820000	WELL FEDERAL RGU 44-26-198
	FIELD SULPHUR CREEK
	COUNTY RIO BLANCO
	STATE COLORADO
Ver. 4.01 SEC 26 T1S R98W 44-26-198 H&P 318	LOCATION: SHL: 2460' FNL 905' FEL BHL: 1089' FSL 17' FEL SEC 26 TWP 1S RGE 98W
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	OTHER SERVICES CBL ELEVATIONS: KB 6646 FT DF GL 6622 FT
GL KB KB	ELEVATION 24 FT ABOVE P.D.

DATE	28-May-2015		
RUN	TRIP	1	1
SERVICE ORDER	US096704J		
DEPTH DRILLER	12807 FT		
DEPTH LOGGER	12750 FT		
BOTTOM LOGGED INTERVAL	12740 FT		
TOP LOGGED INTERVAL	7100 FT		
TIME STARTED	11:30		
TIME FINISHED	20:45		
OPERATOR RIG TIME	9:15		
TYPE OF FLUID IN HOLE	WATER		
FLUID DENSITY	NA		
FLUID SALINITY	NA		
FLUID LEVEL	190 FT		
LOGGED CEMENT TOP	NA		
WELLHEAD PRESSURE	0 PSI		
MAXIMUM HOLE DEVIATION	NA		
NOMINAL LOGGING SPEED	80 F/MN		
MAX. RECORDED TEMP.	277 DEGF		
REFERENCE LOG	BAKER HUGHES BOND LOG		
REFERENCE LOG DATE	26-MAY-2015		
EQUIP. NO.	LOCATION	GRAND JCT	
RECORDED BY	W. QUIGLEY		
WITNESSED BY	MR. COLT STEWART		

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
4.5 IN	11.6 LB/F		0 FT	12750 FT

### REMARKS

RUN 1 TRIP 1: ALL DATA ON THIS LOG IS DEPTH SHIFTED AND CORRELATED TO THE GAMMA-RAY CURVE ON BAKER HUGHES BOND LOG DATED 26-MAY-2015

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: 277 DEGF

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES  
CREW: OLSON/MOORE/QUIGLEY  
RIG: H&P 318

## EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	166326	FREE
1	1	TEL/CCL	8248EA	10387150	FREE
1	1	GR	8262XA	10317216	FREE
1	1	RPM	8281EA	10169250	FREE
1	1	RPM	8283PA	10160383	FREE
1	1	RPM	8281FA	10191667	FREE
1	1	TEMP	8255XA	176973	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 Patches: 7

Plotted: Thu May 28 20:09:44 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096704/n353a02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 12428.250 ft BOTTOM DEPTH: 12759.500 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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096704/n353a03.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 7089.500 ft BOTTOM DEPTH: 12532.750 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	7.88	in	"	"
	CASING SIZE	4.50	in	"	"
	MATRIX	SANDSTONE		"	"
	CORRECTION BUFFER	11		"	"

## CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
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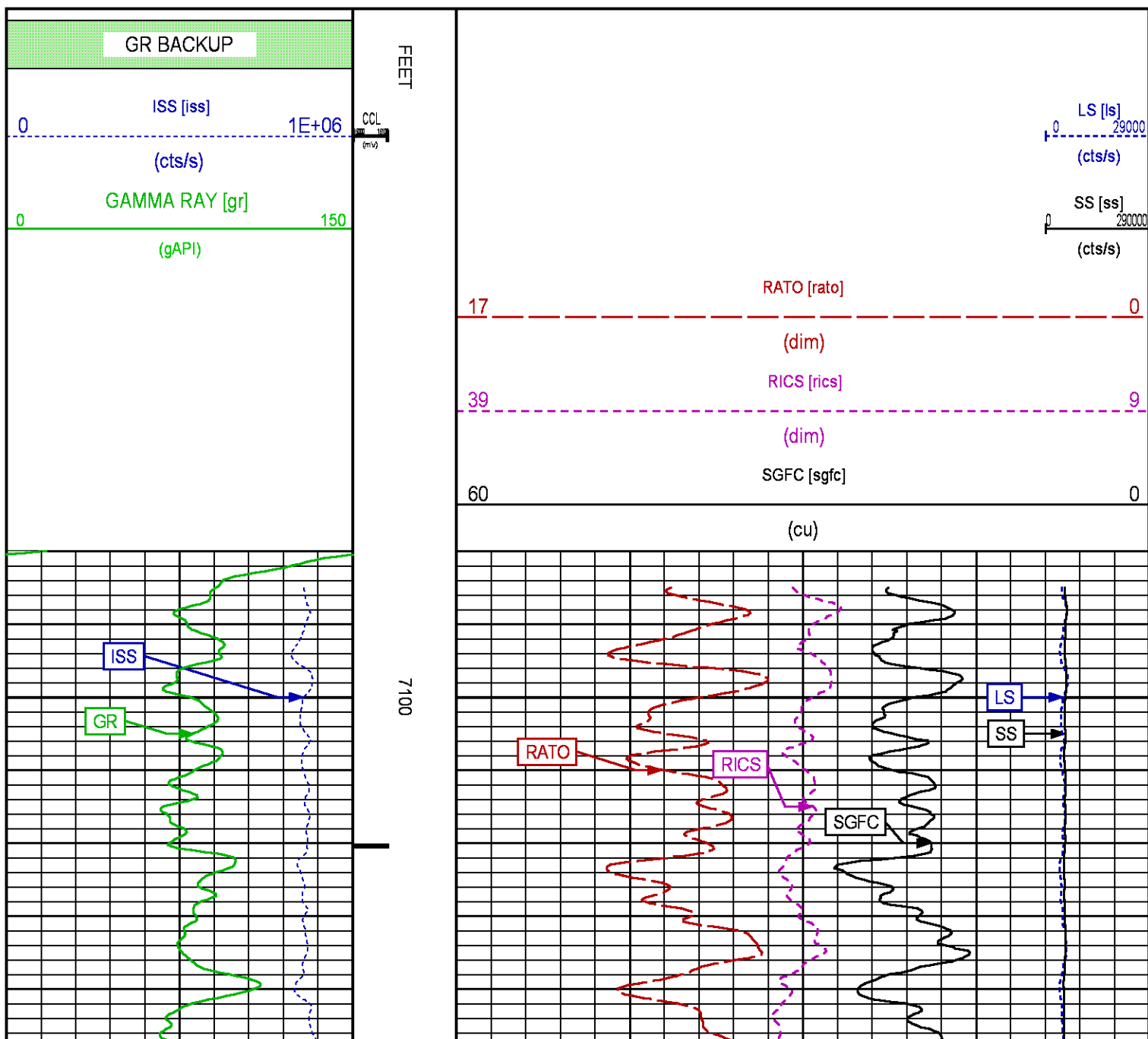
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F1:GR	May 28 14:31:15 2015	GAMMA RAY
F1:ISS	May 28 14:31:15 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 28 14:31:15 2015	LONG SPACE COUNT RATE
F1:RATO	May 28 14:31:15 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 28 14:31:15 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 28 14:31:15 2015	CORRECTED FORMATION SIGMA
F1:SS	May 28 14:31:15 2015	SHORT SPACE COUNT RATE

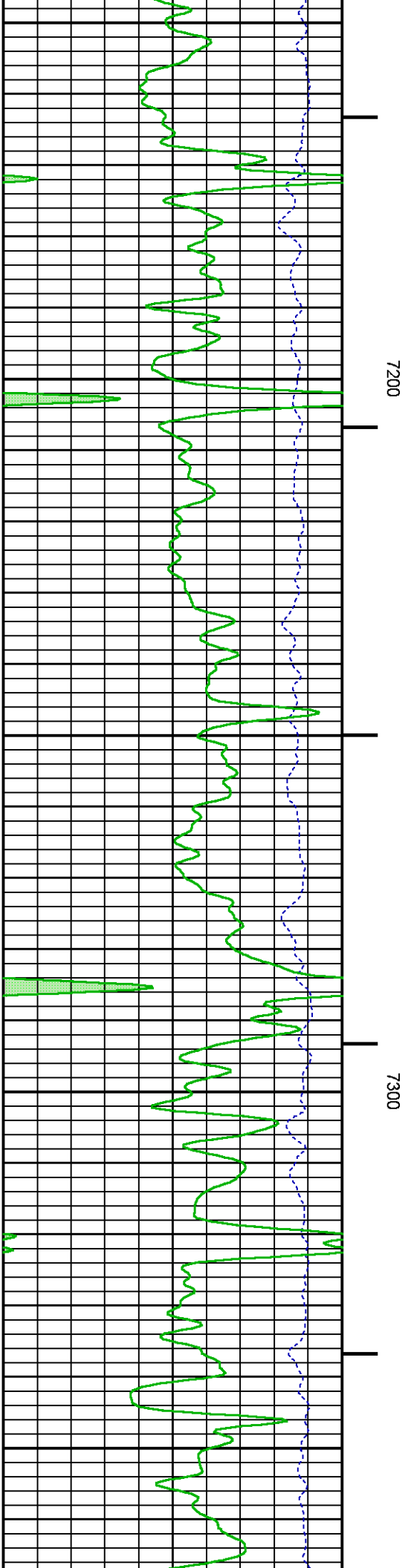
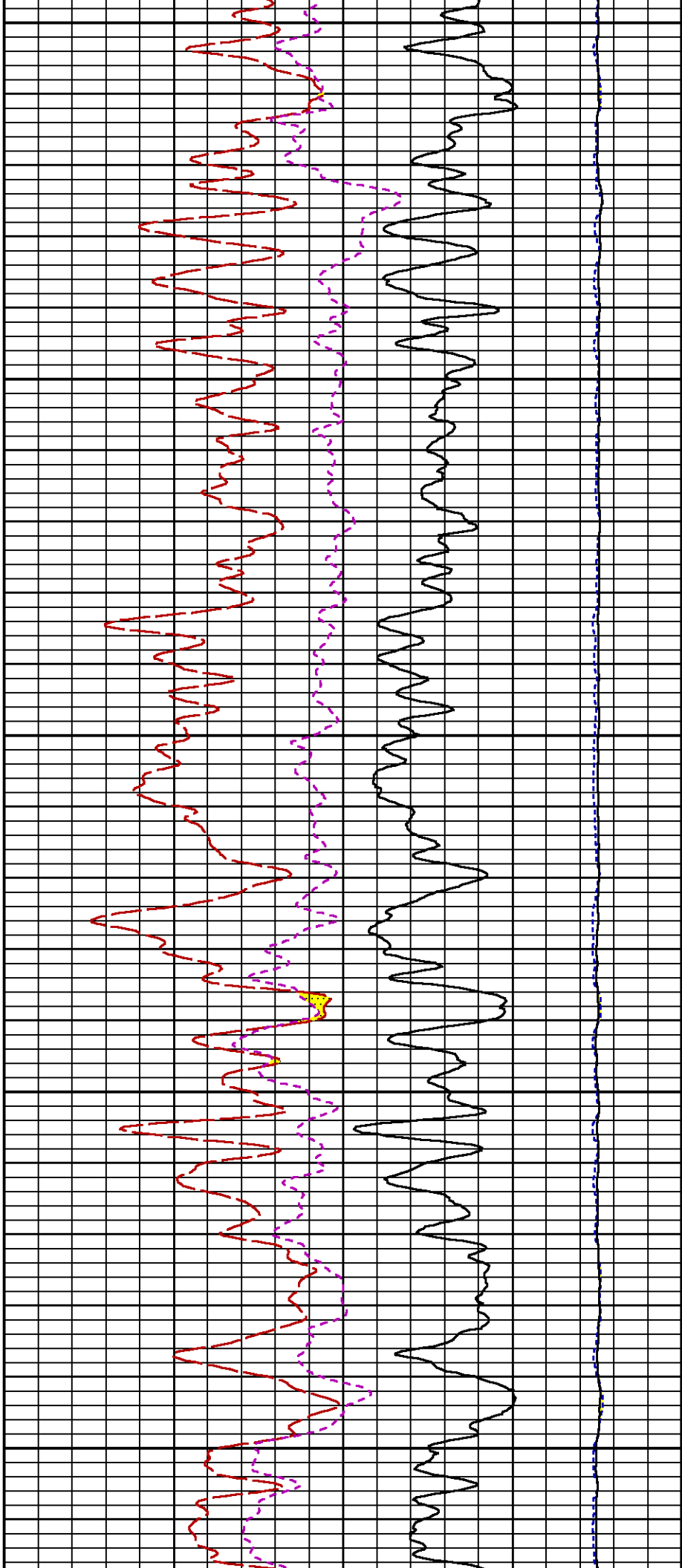
## CURVE MEASURE POINT OFFSET

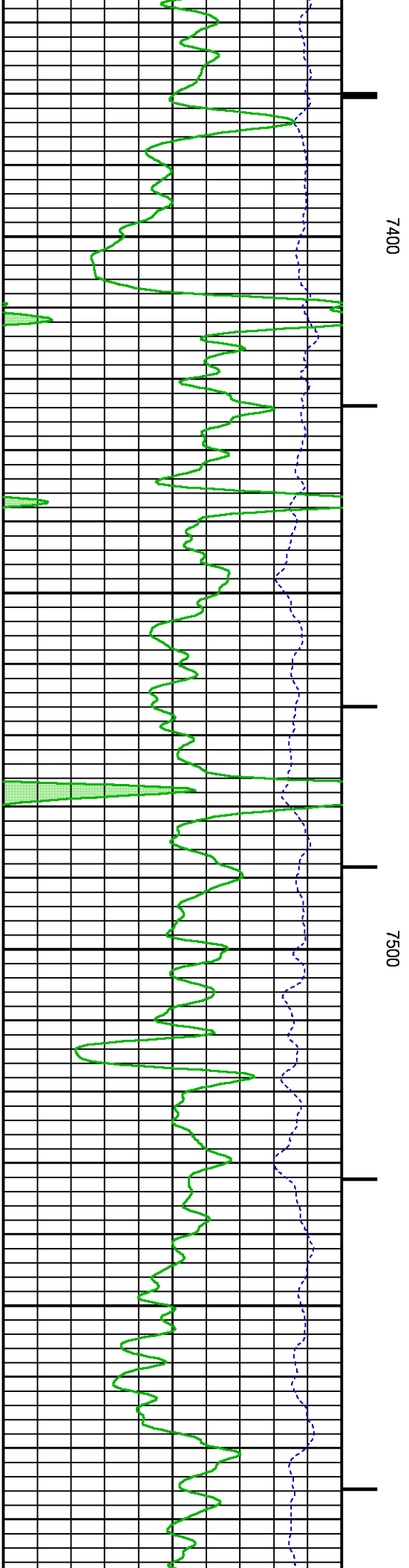
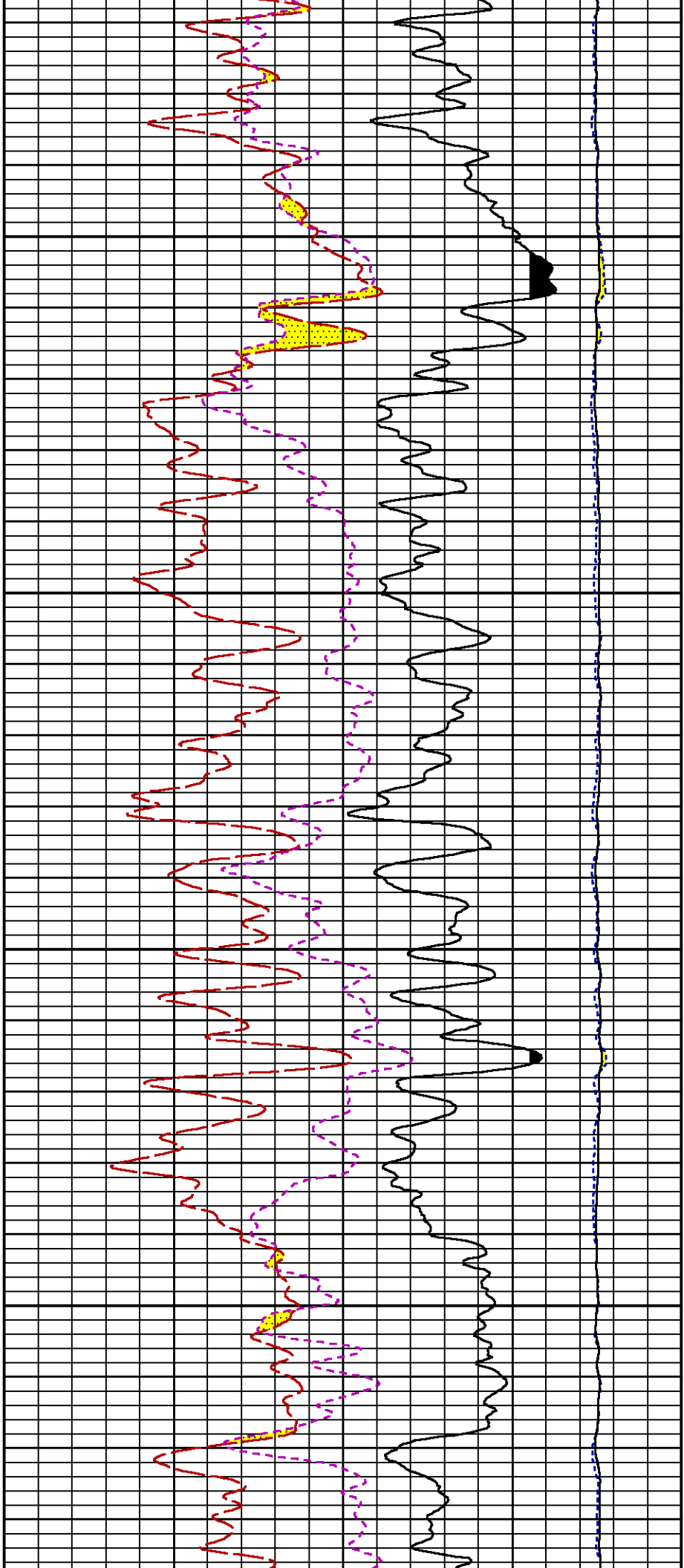
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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GR	23.00	LS	12.75	RICS	12.75	SS	12.75

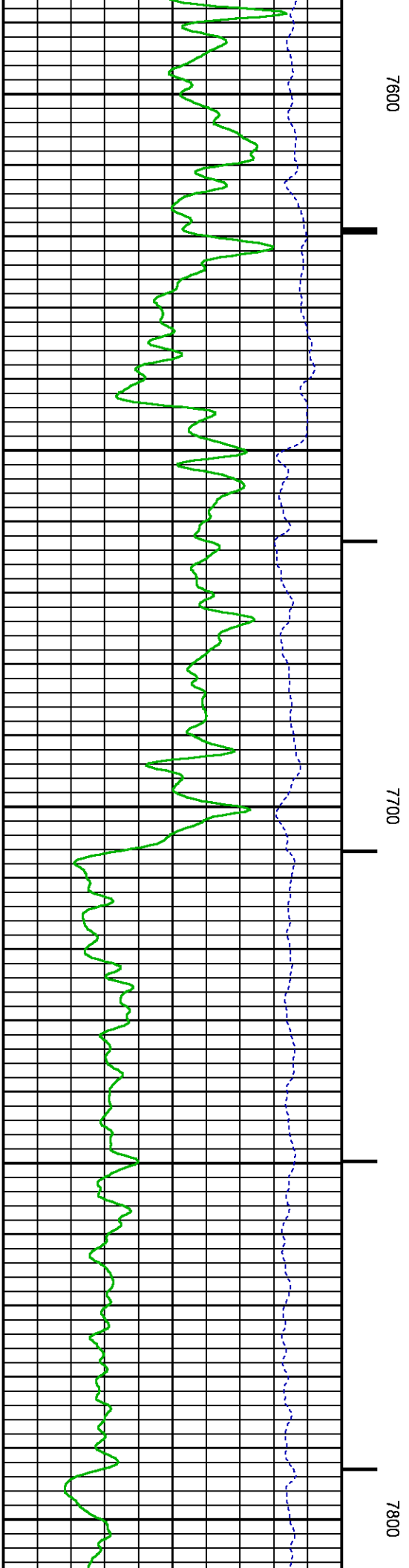
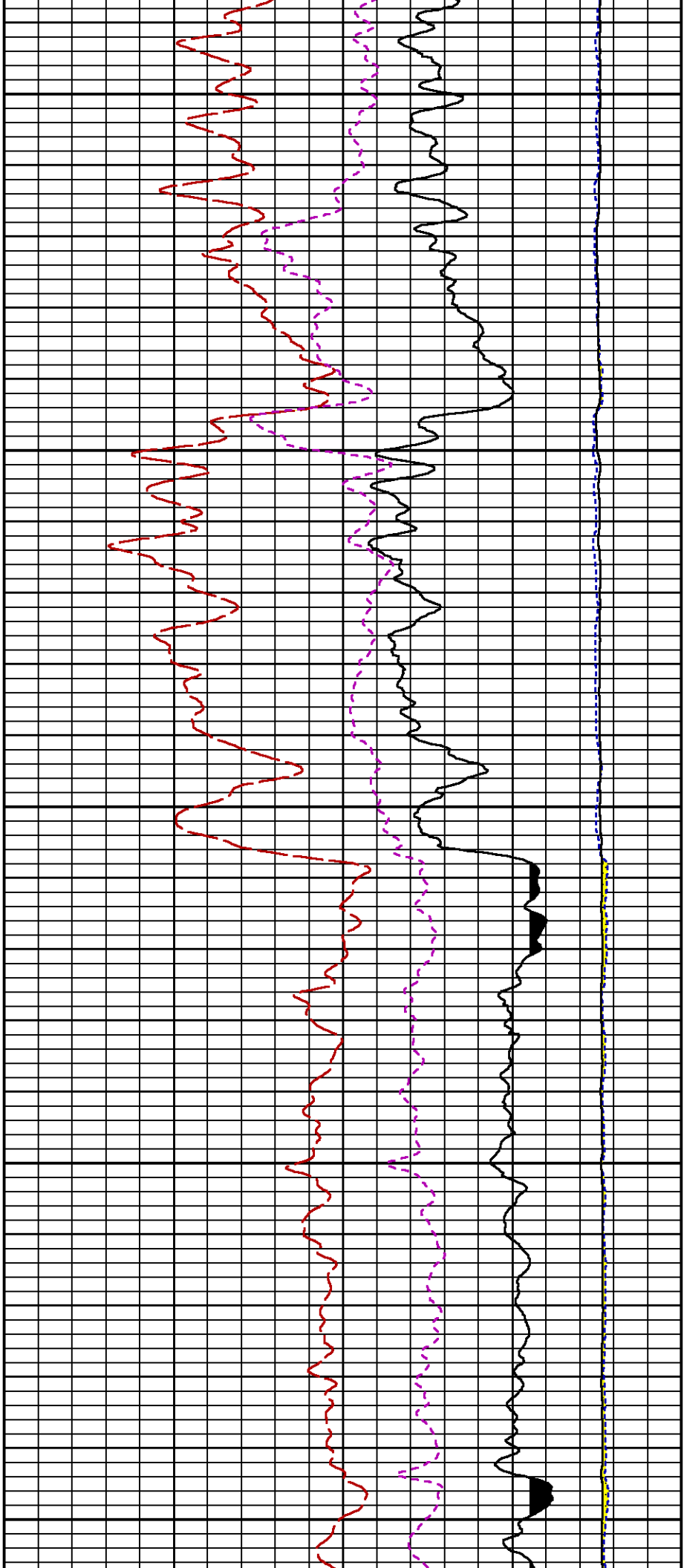
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 Plot Interval : 7080 - 12755.2 Feet

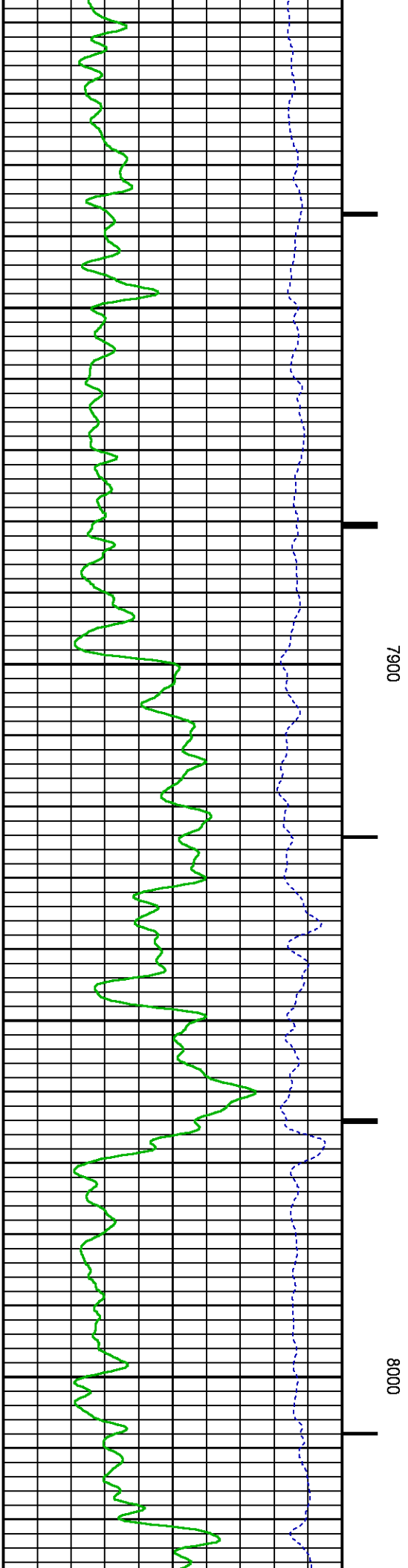
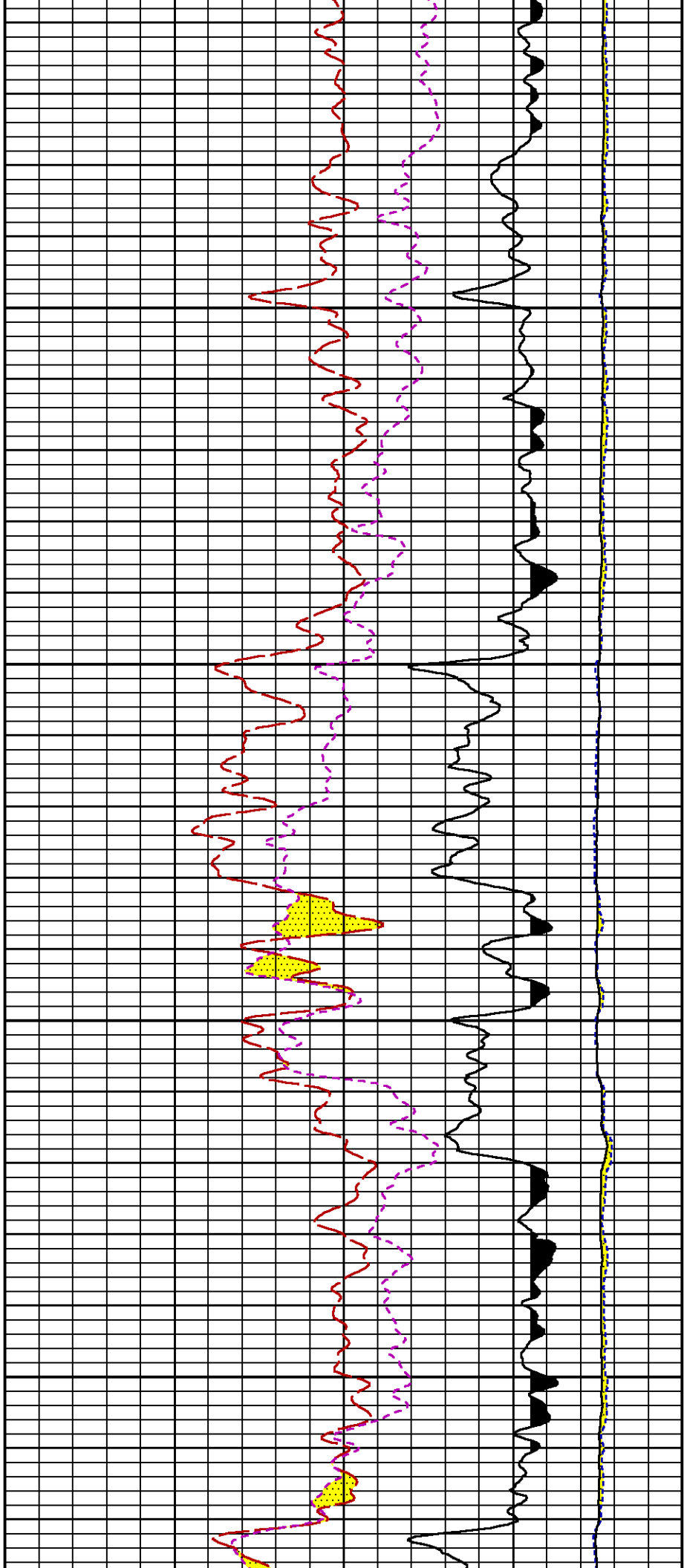
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 Created On : May 26 13:38:57 2015  
 Company : WPX ENERGY  
 Well : FEDERAL RGU 44-26-198  
 Field : SULPHUR CREEK  
 File Interval : 22.5 - 12759.5 Feet  
 OCT : n353a

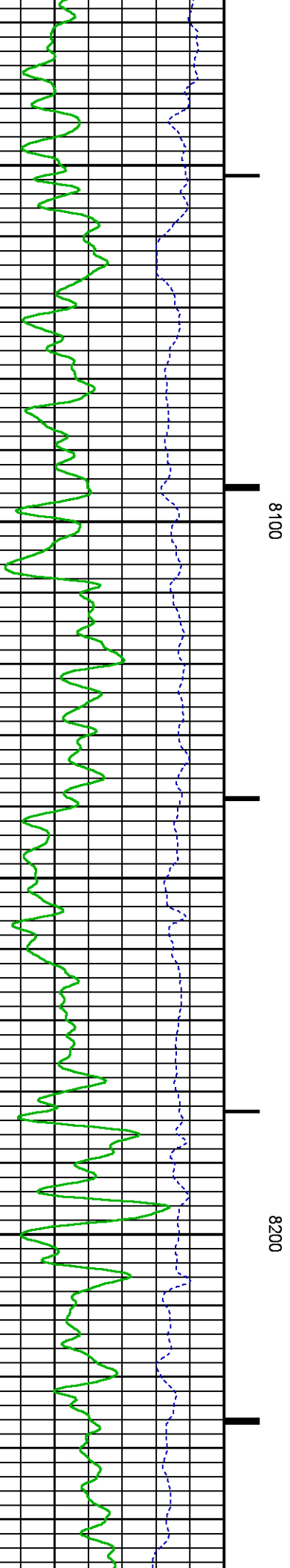
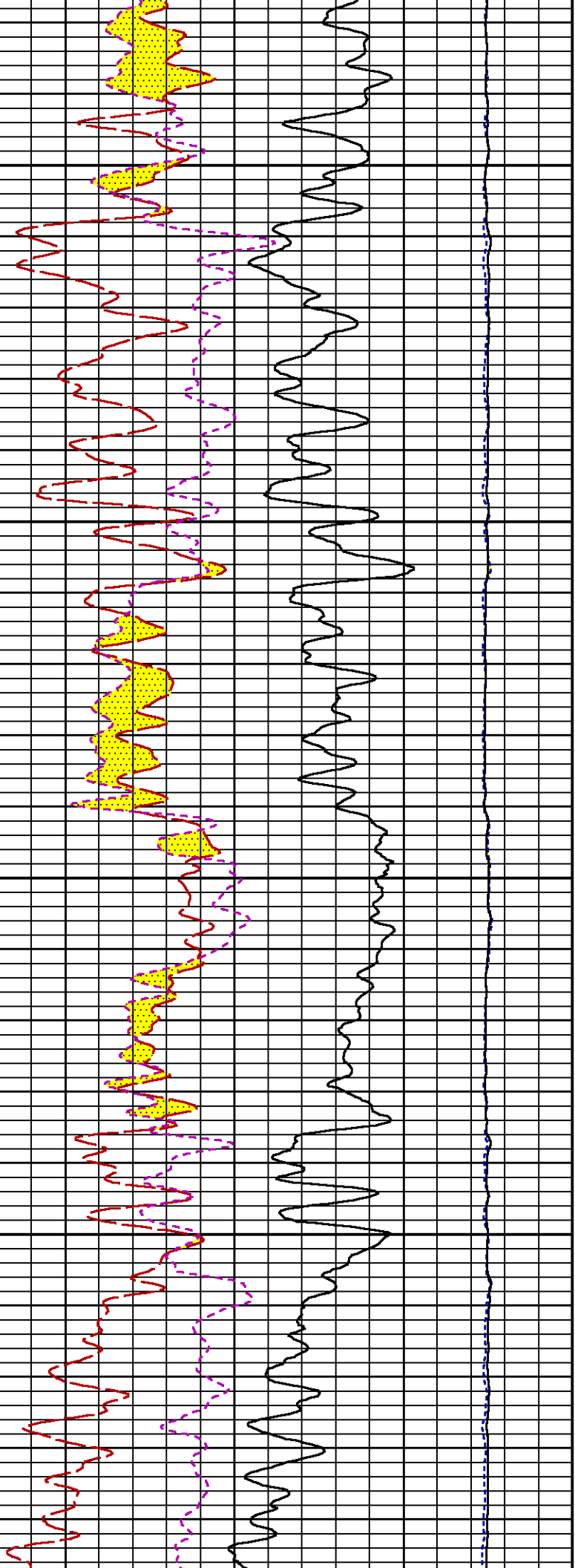




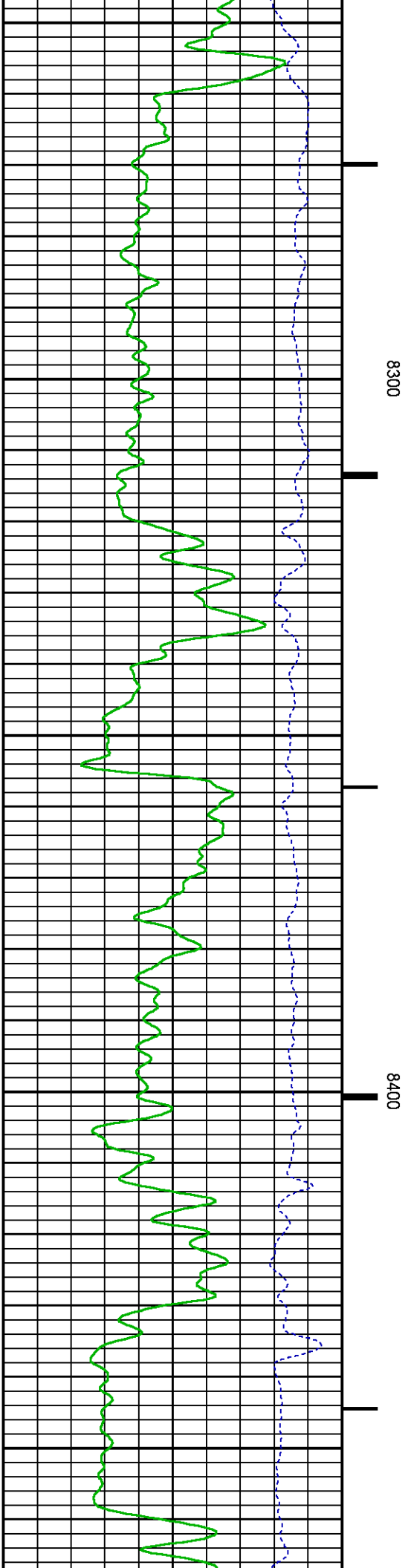
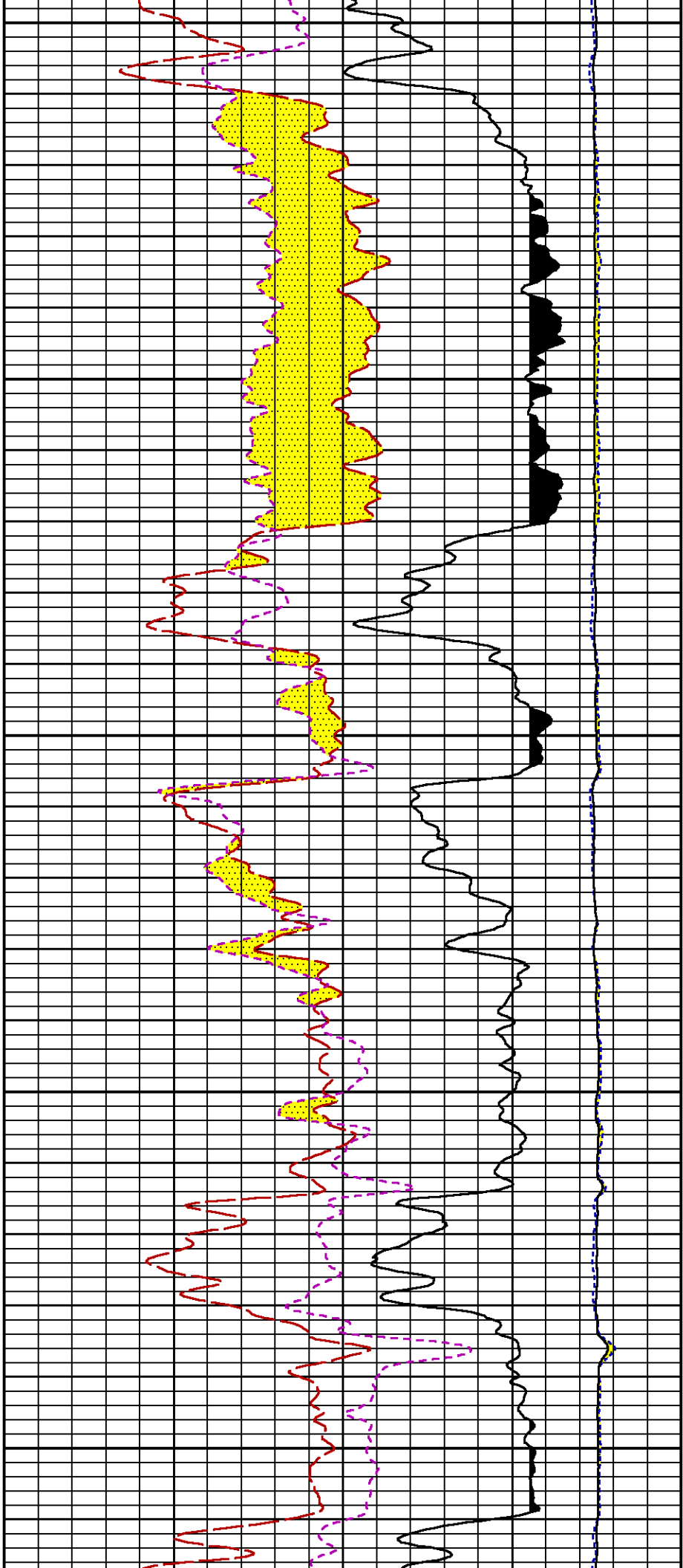






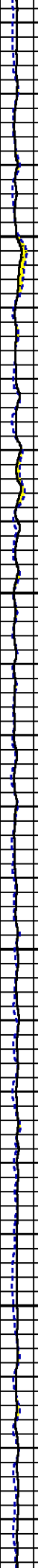
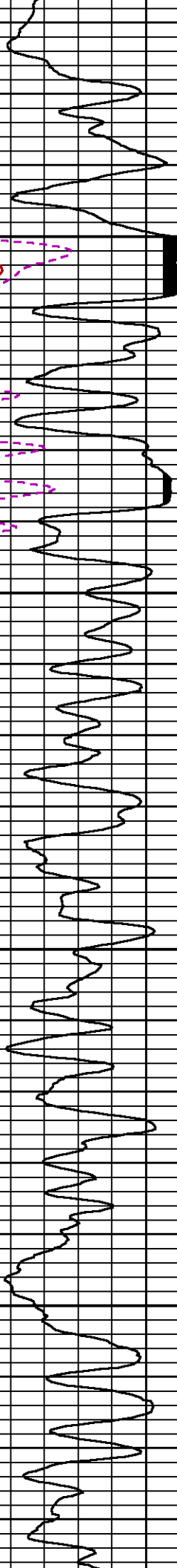
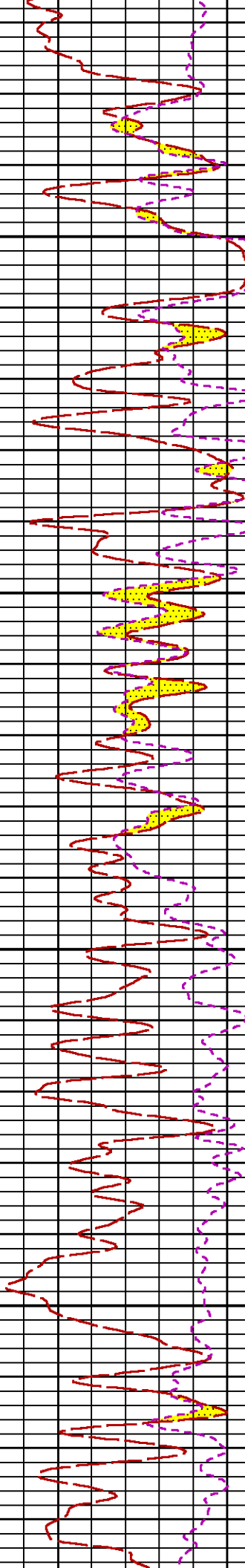
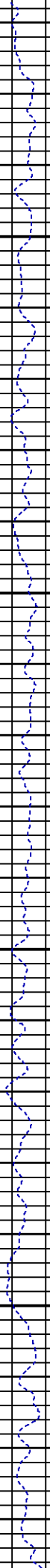
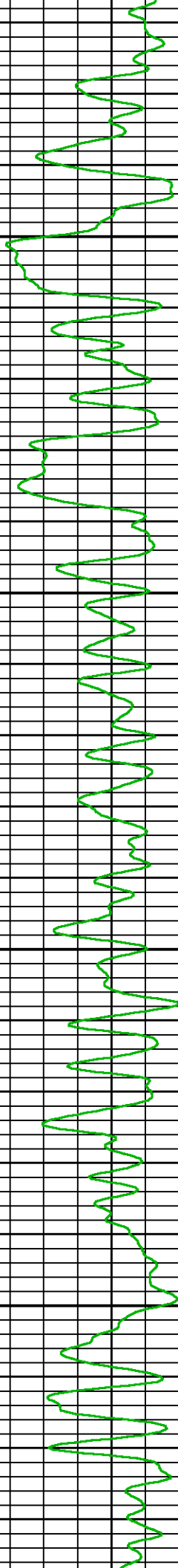






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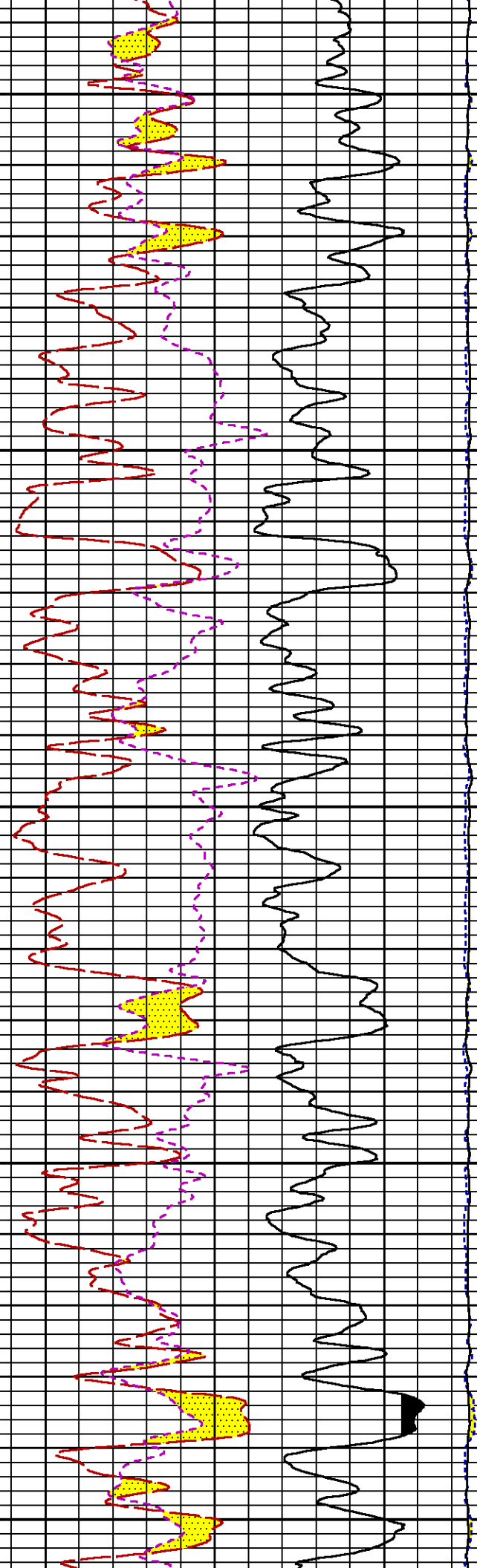
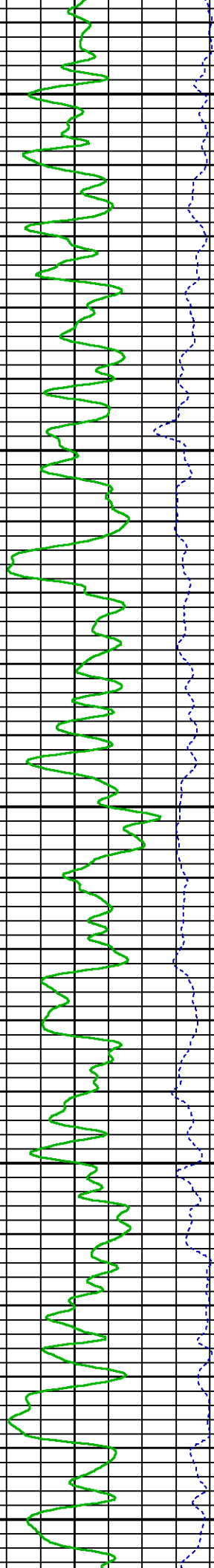
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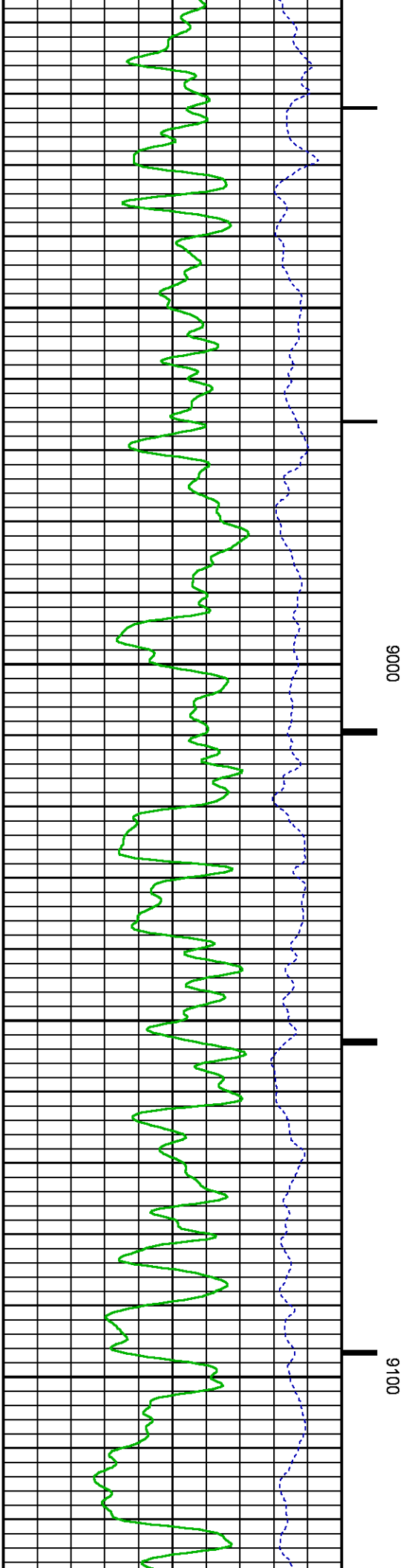
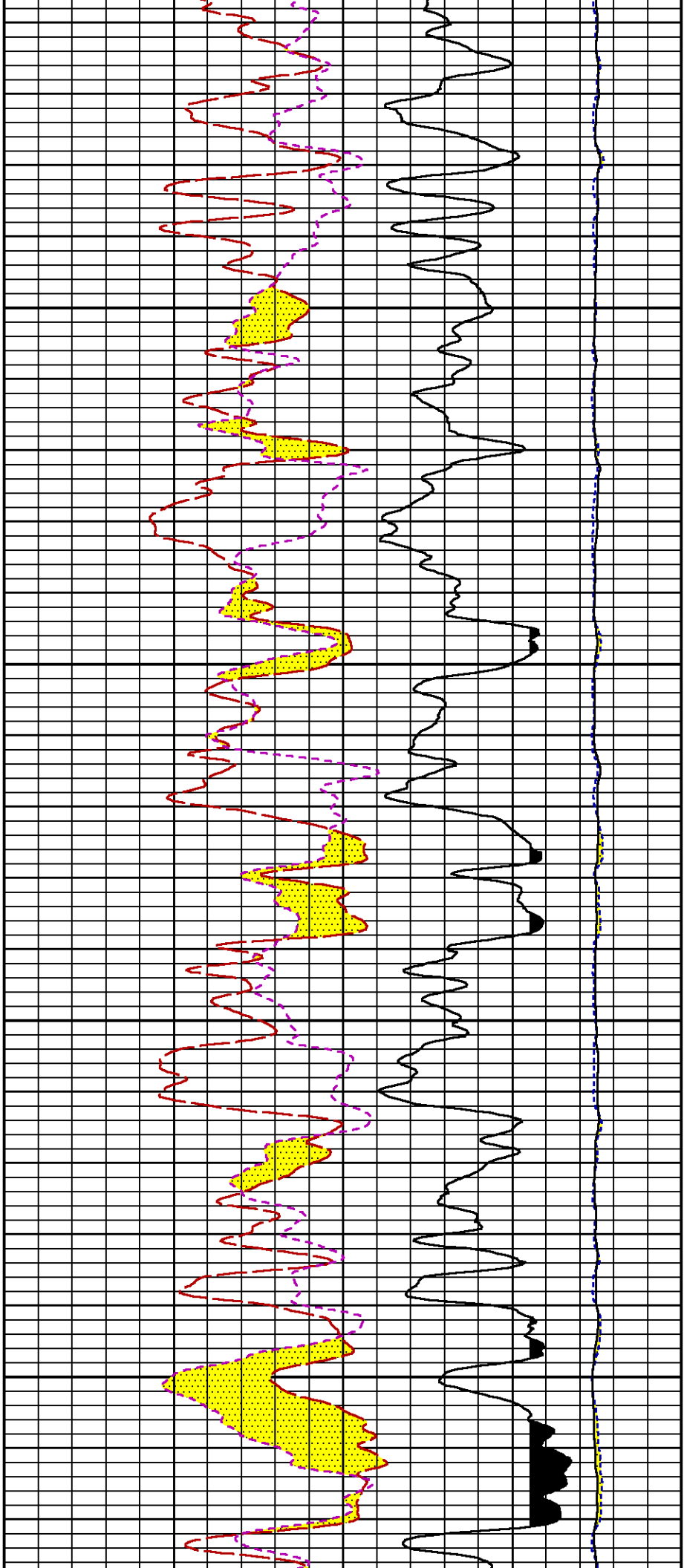


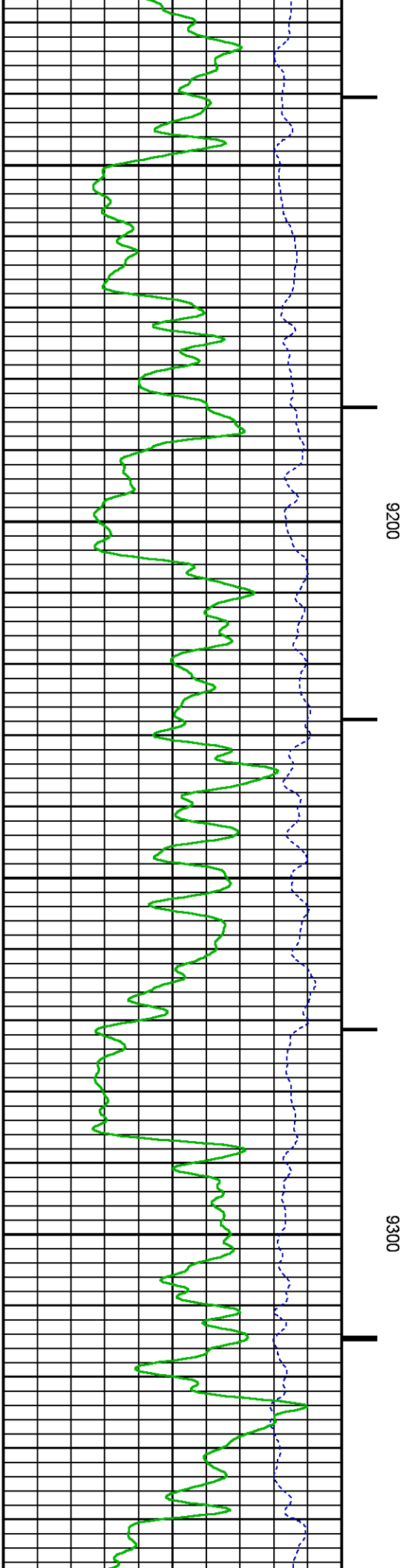
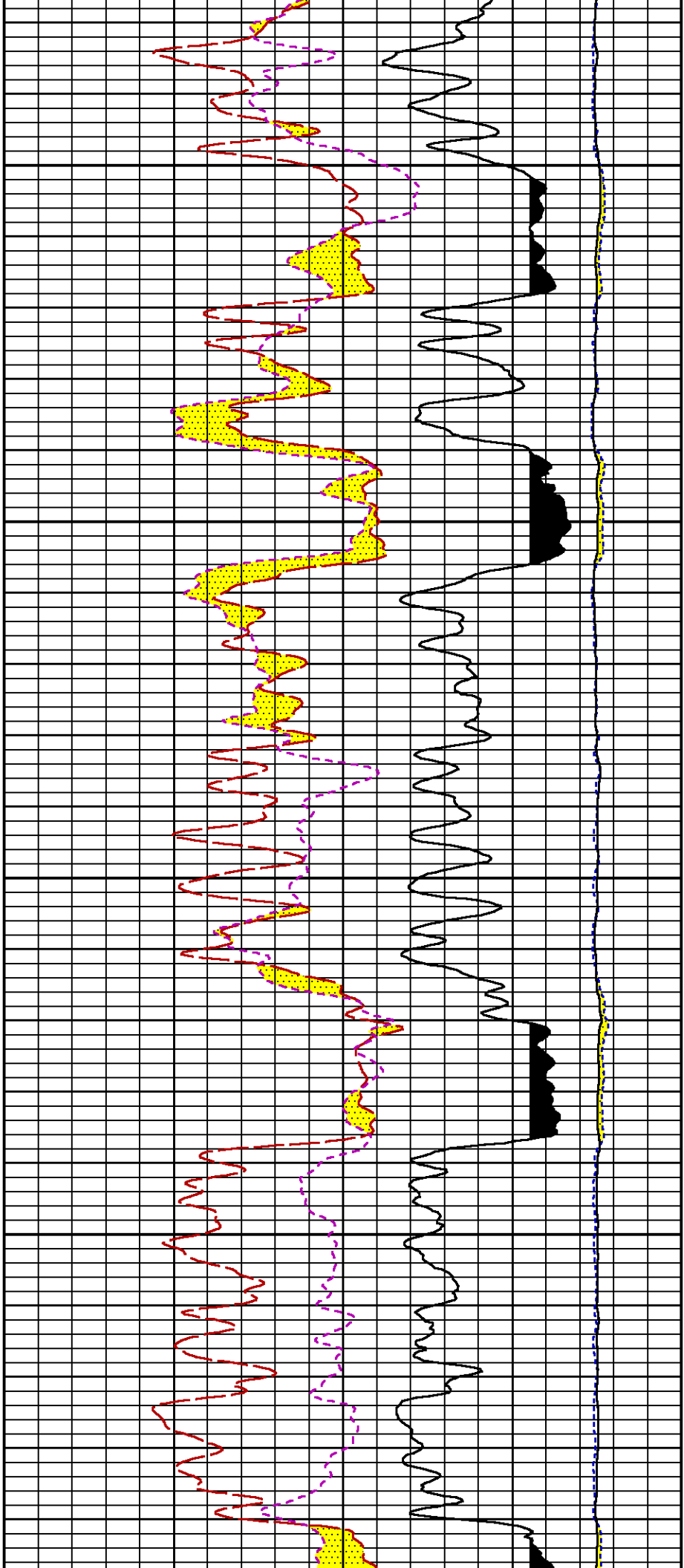
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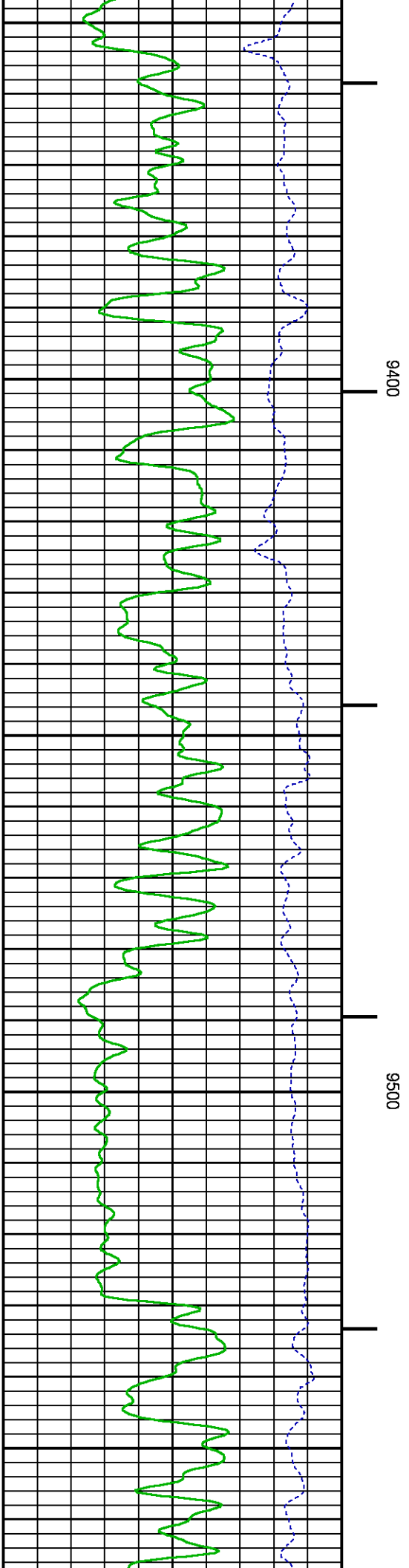
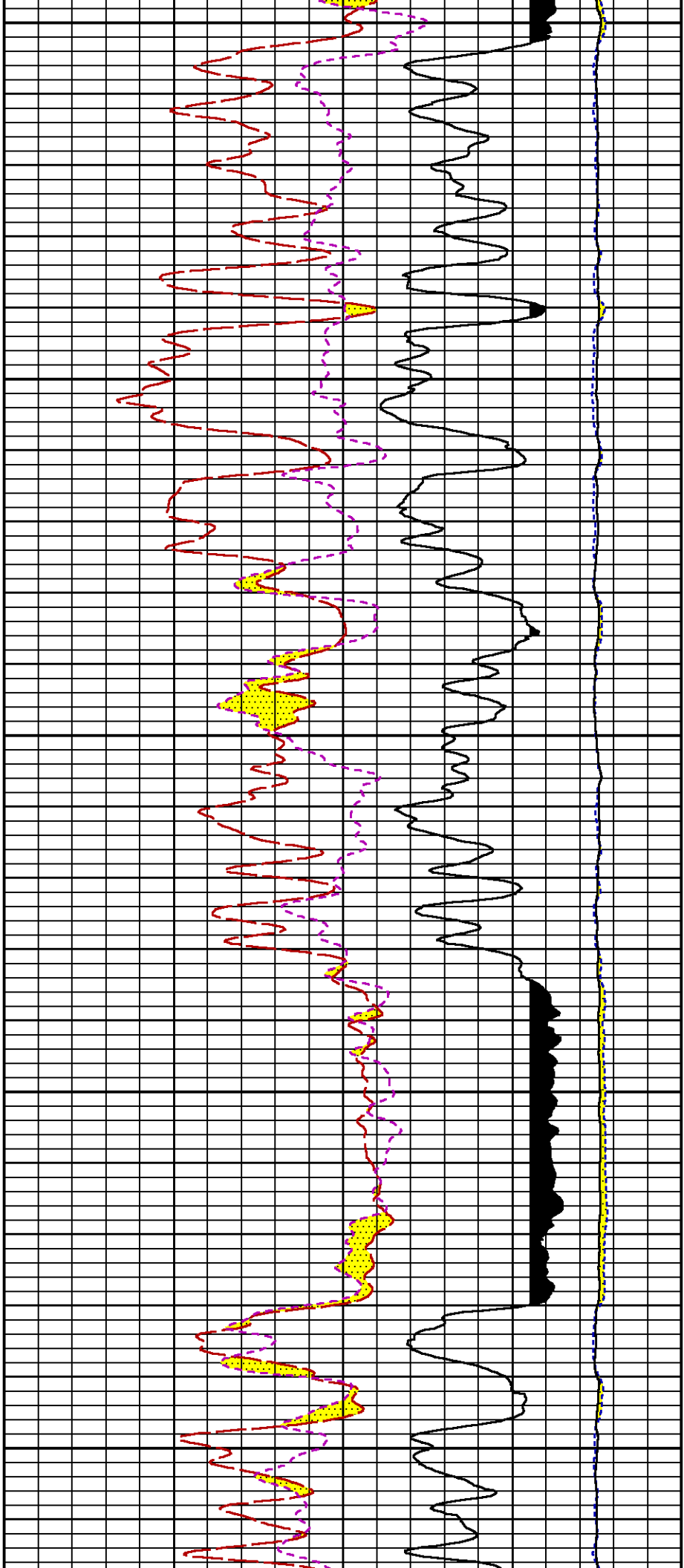
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8900



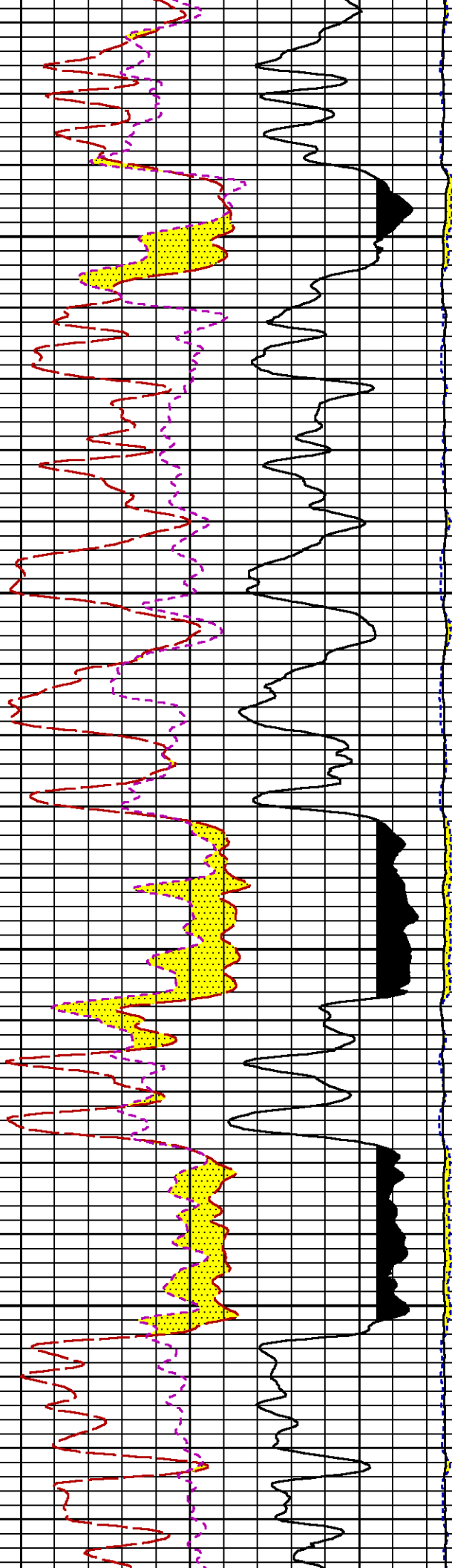
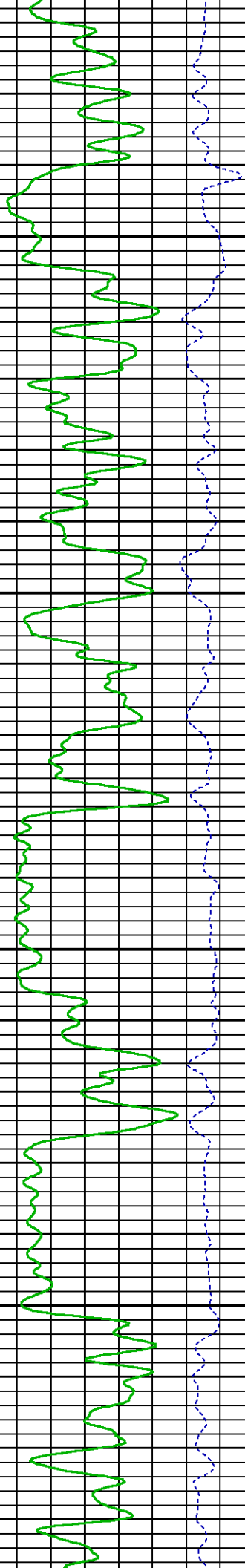


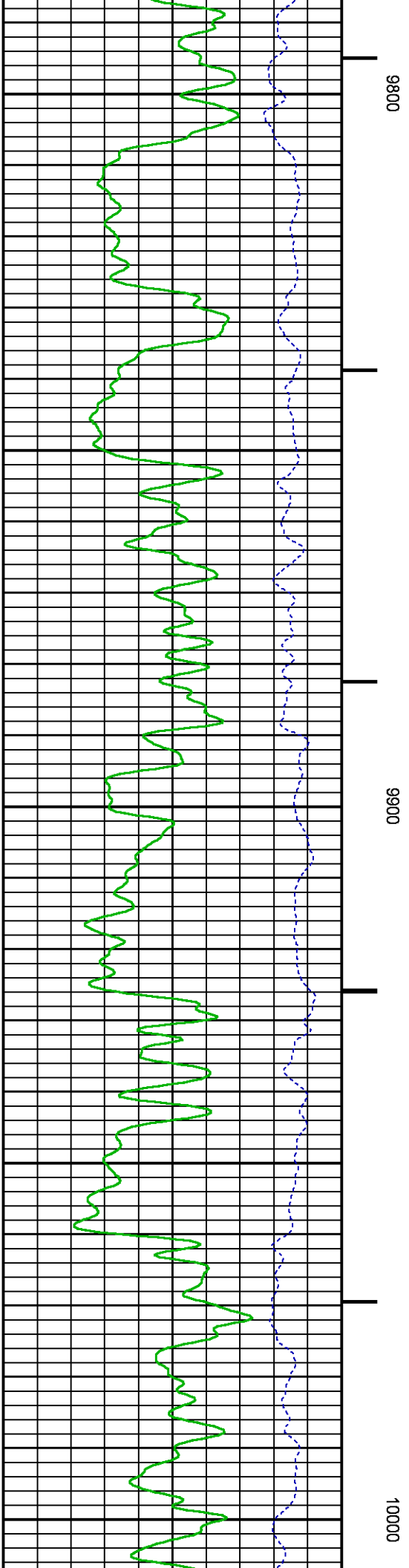
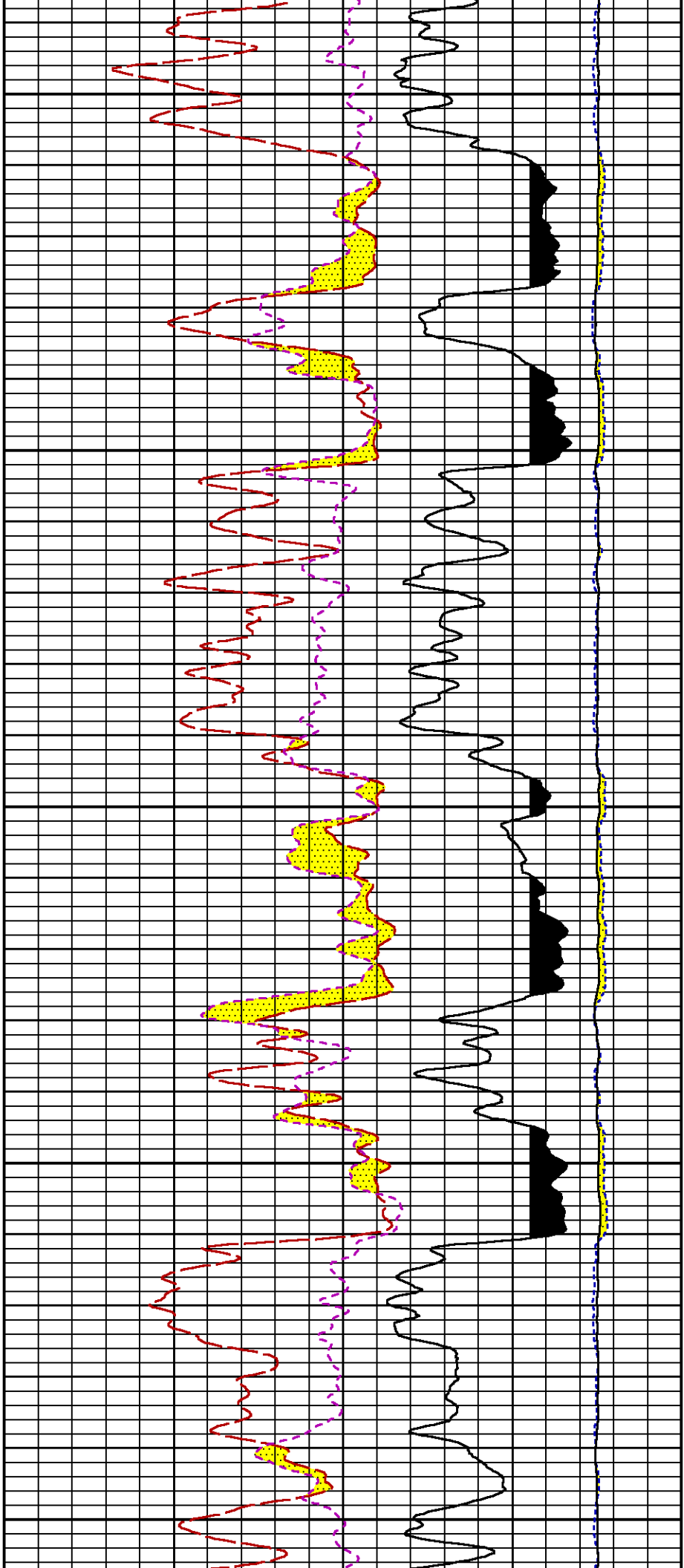




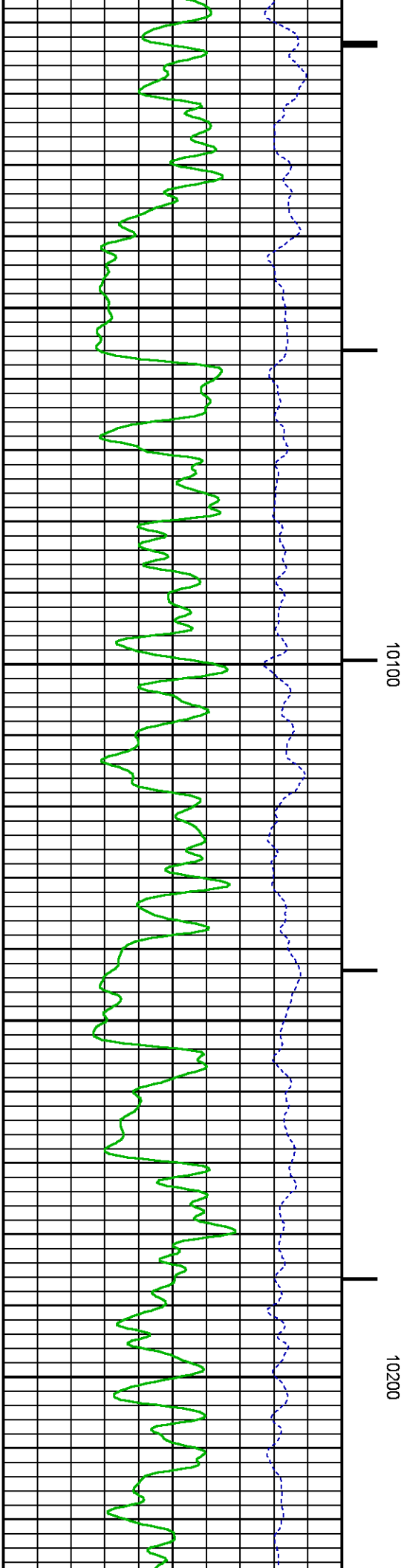
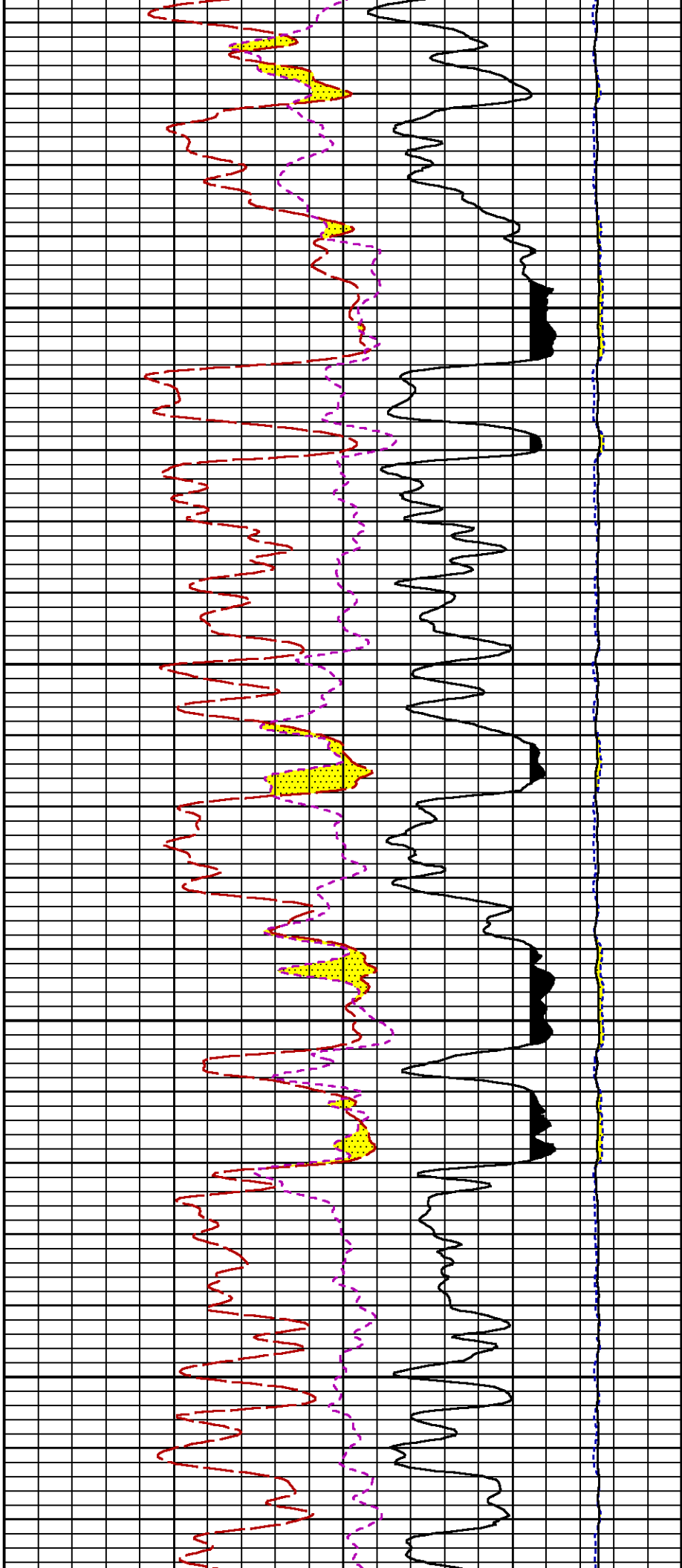
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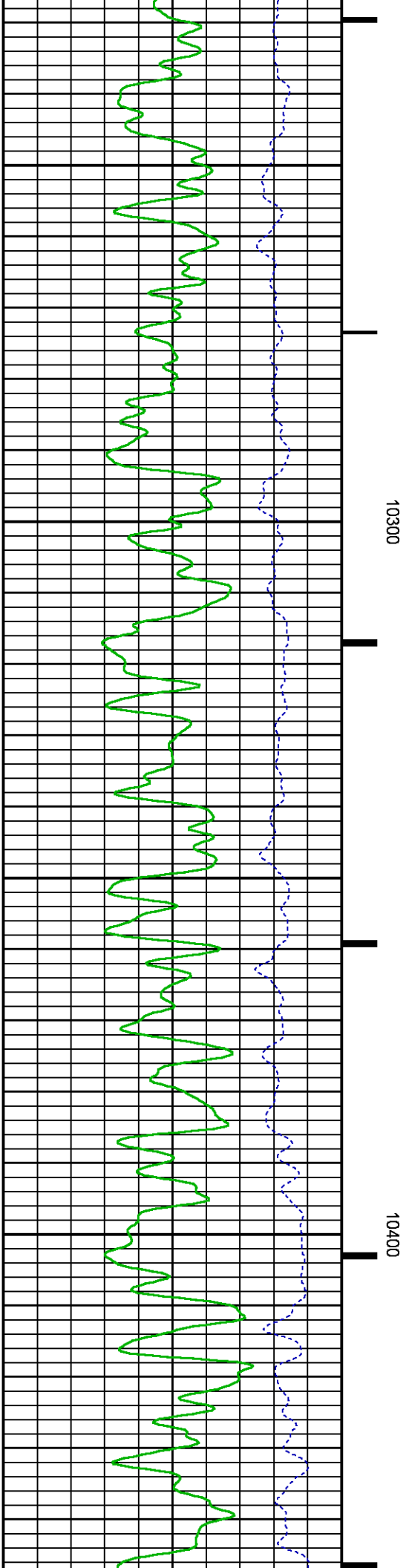
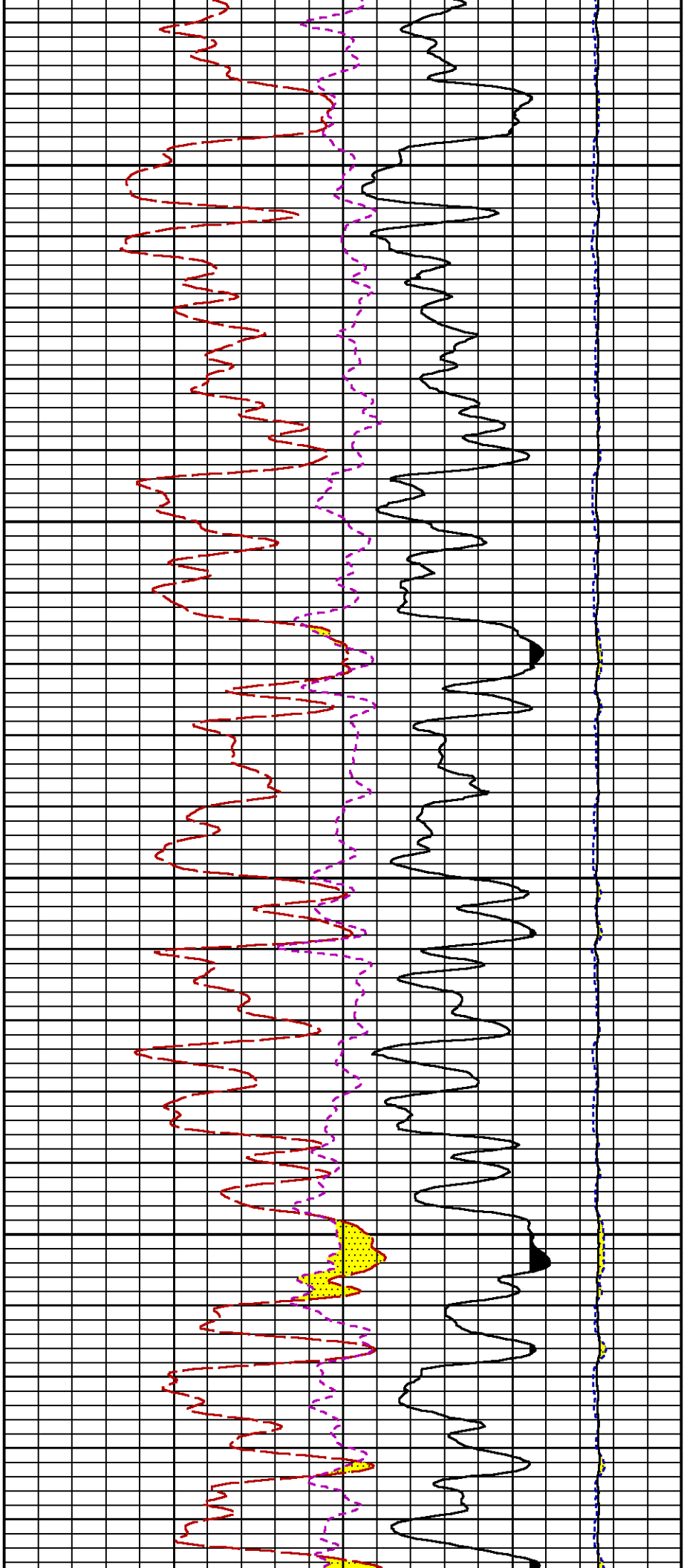
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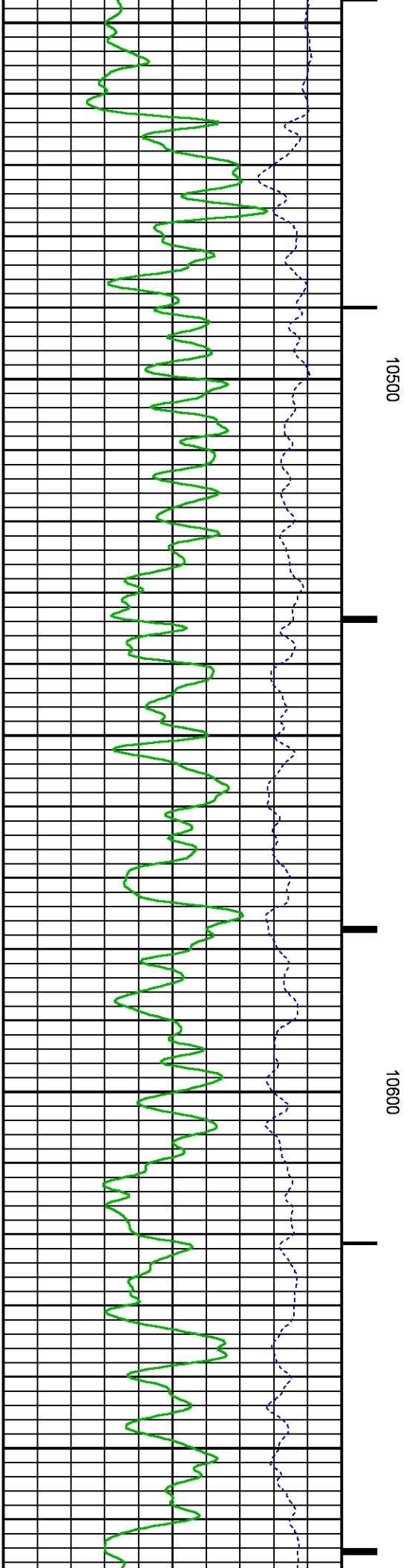
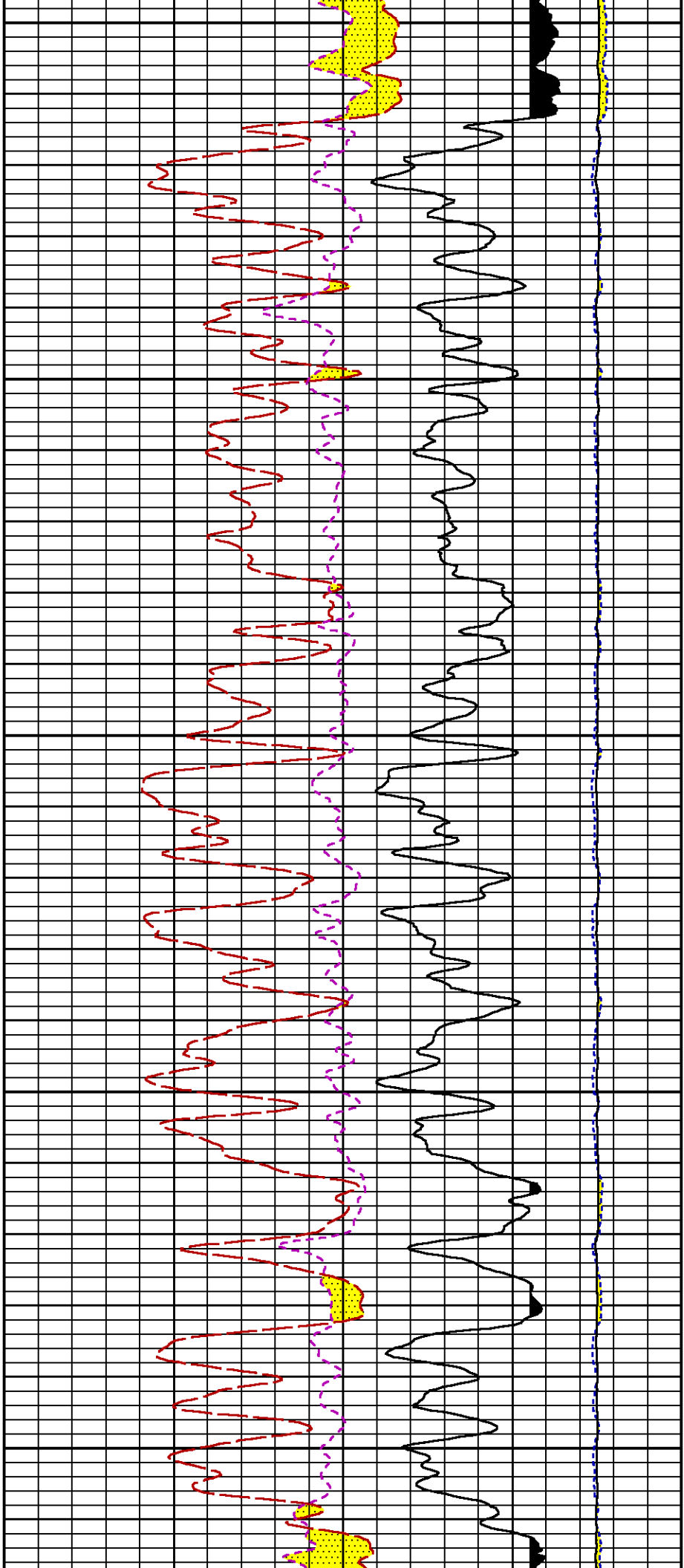


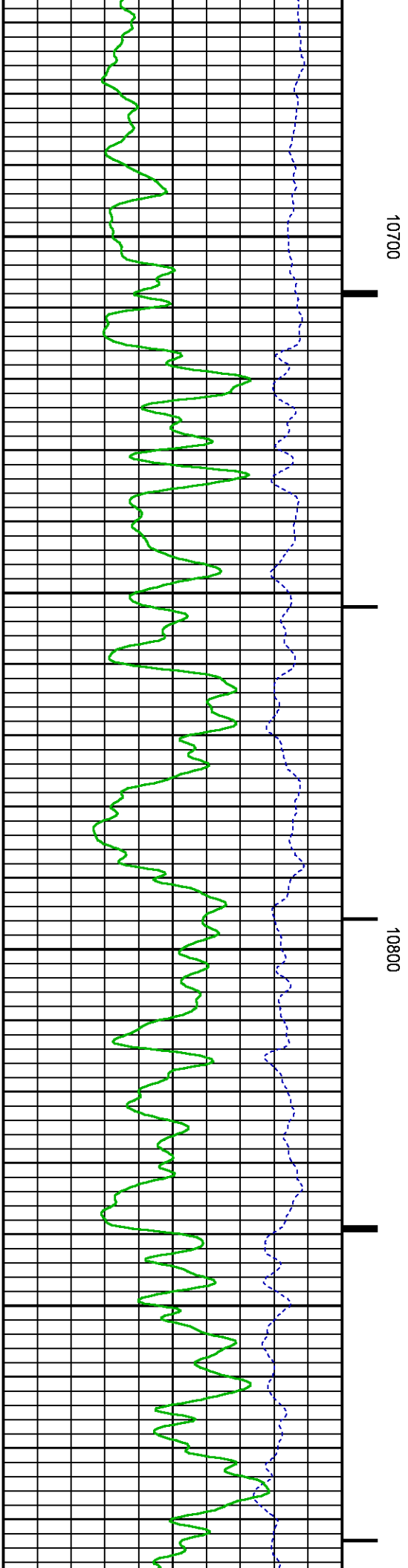
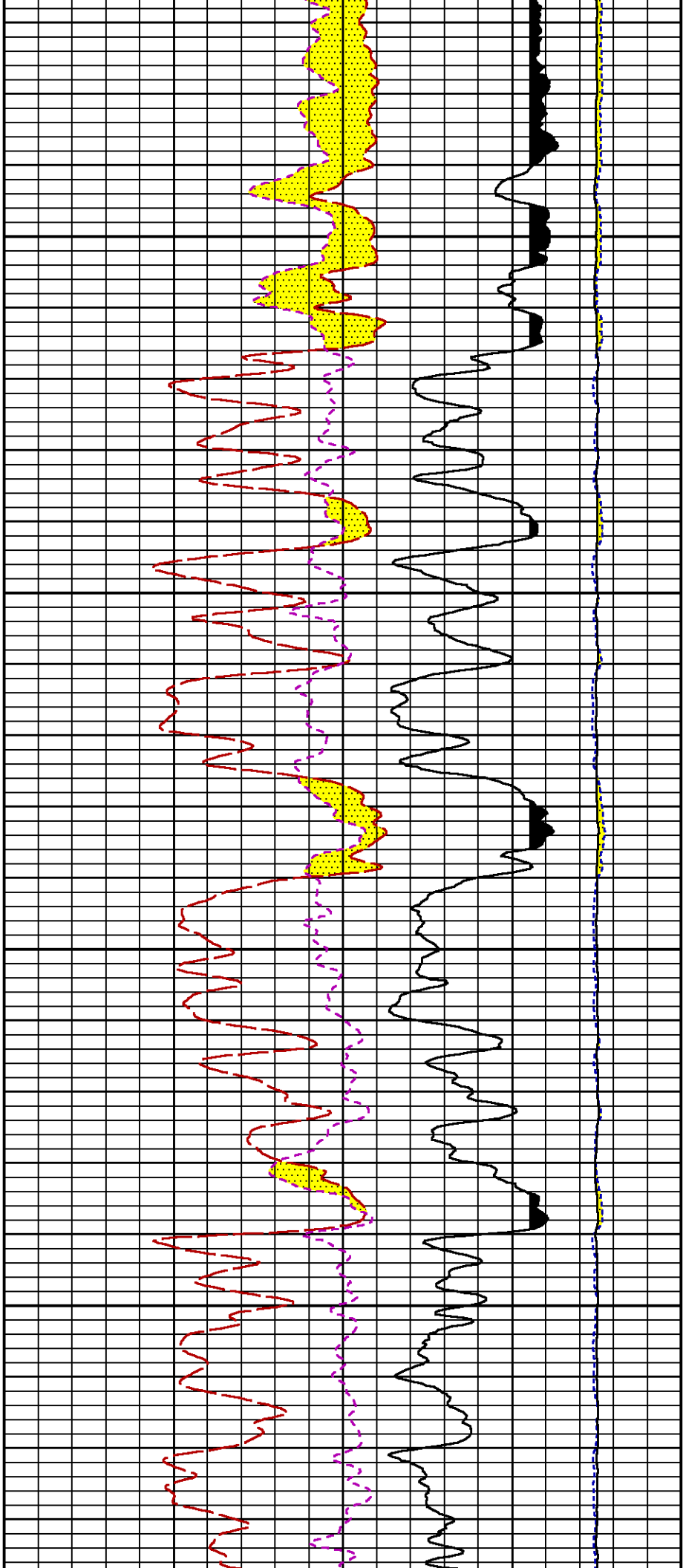


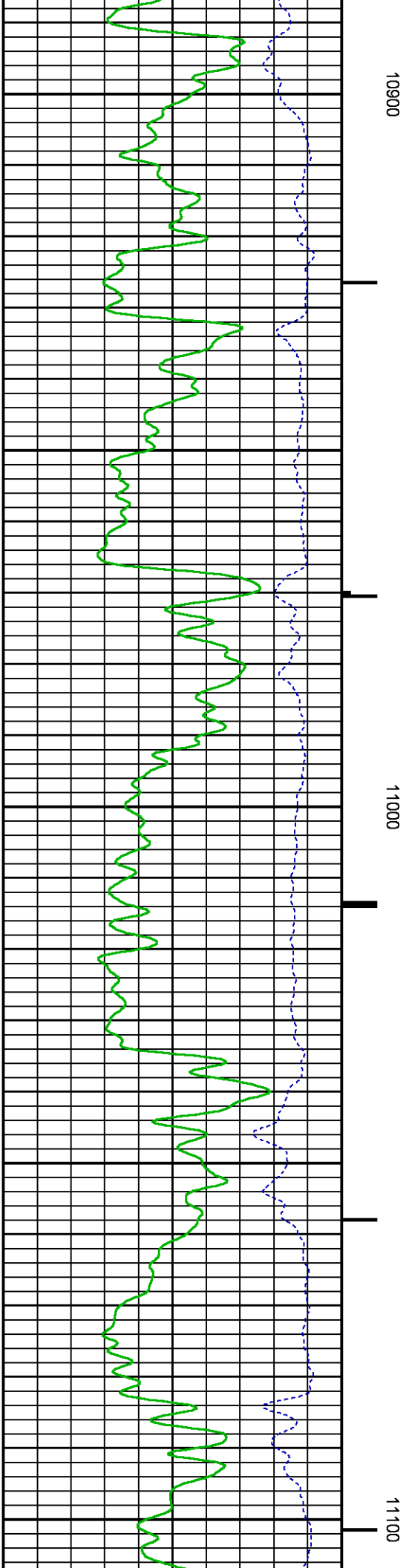
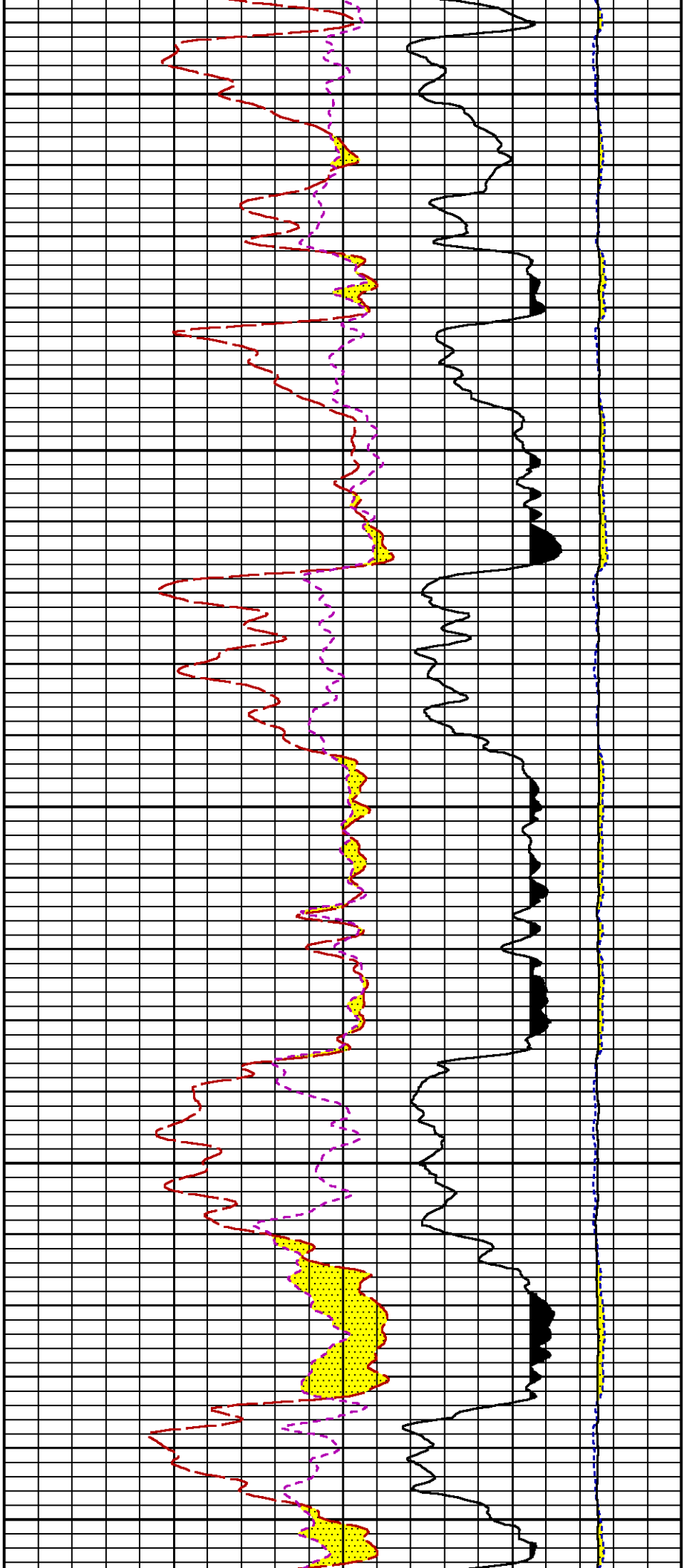


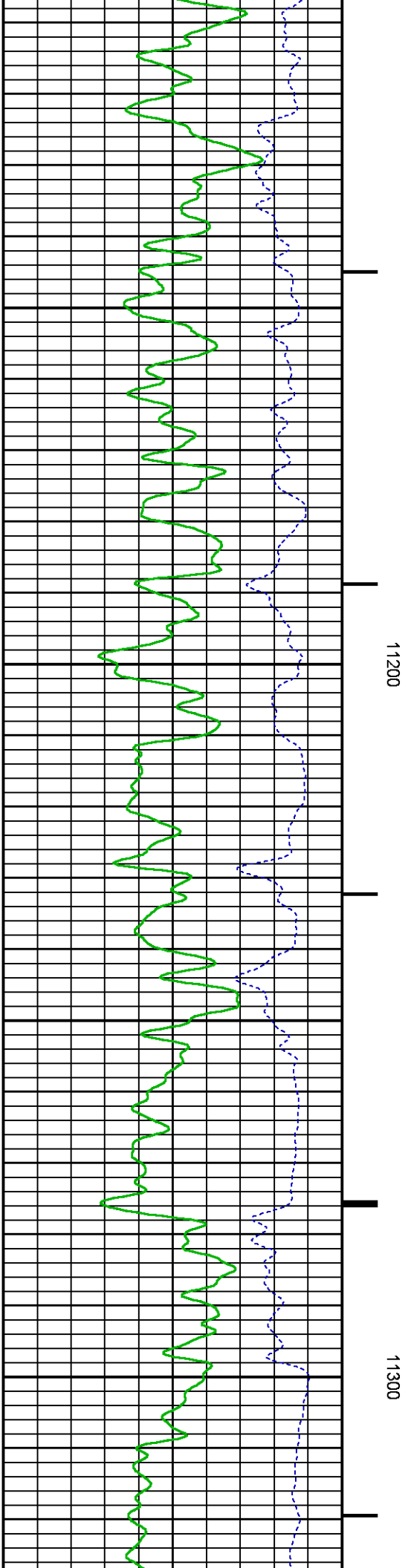
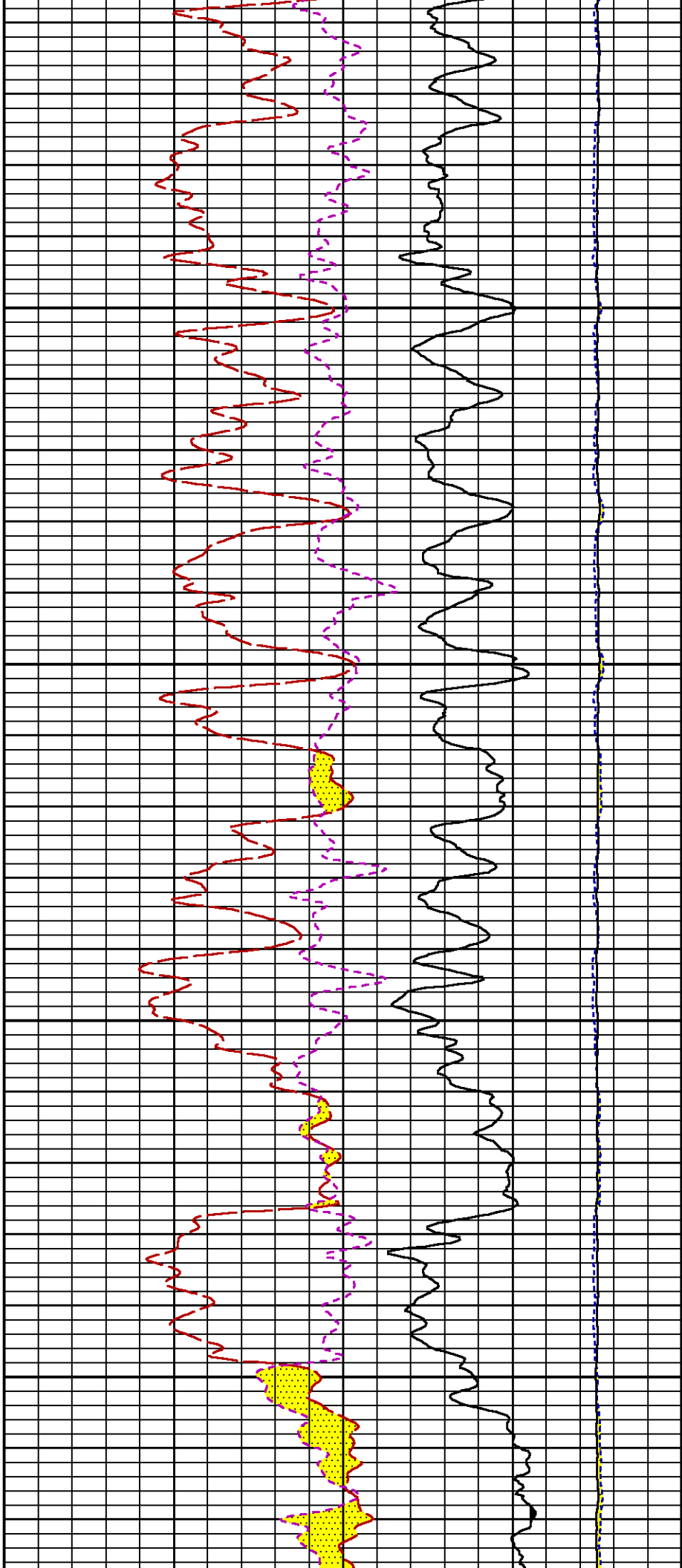


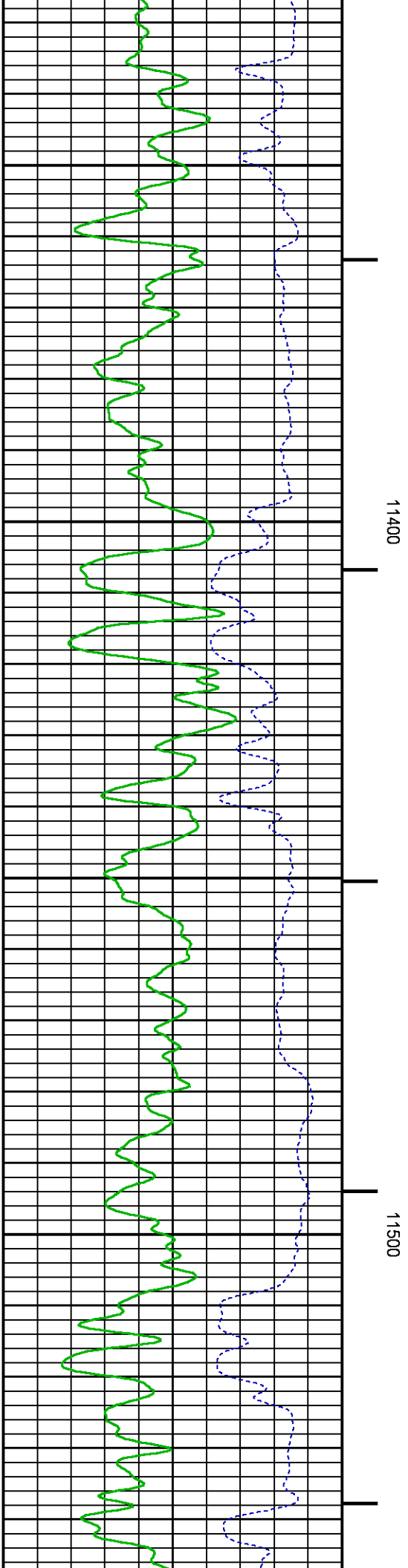
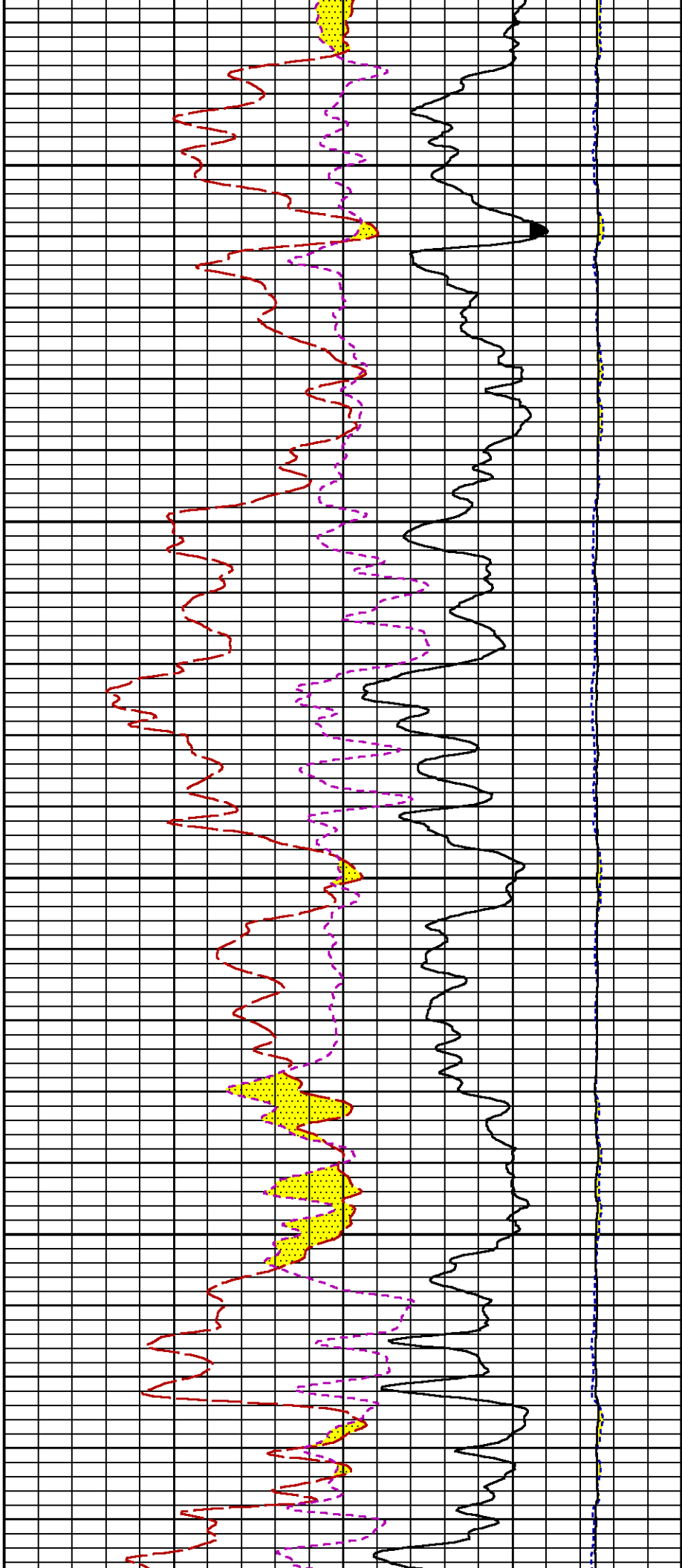


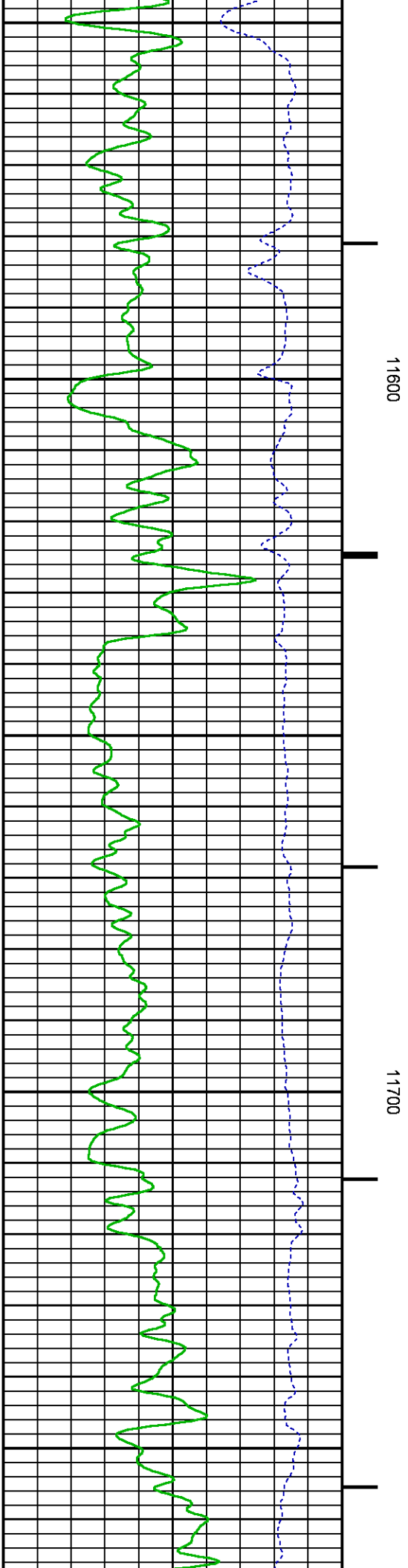
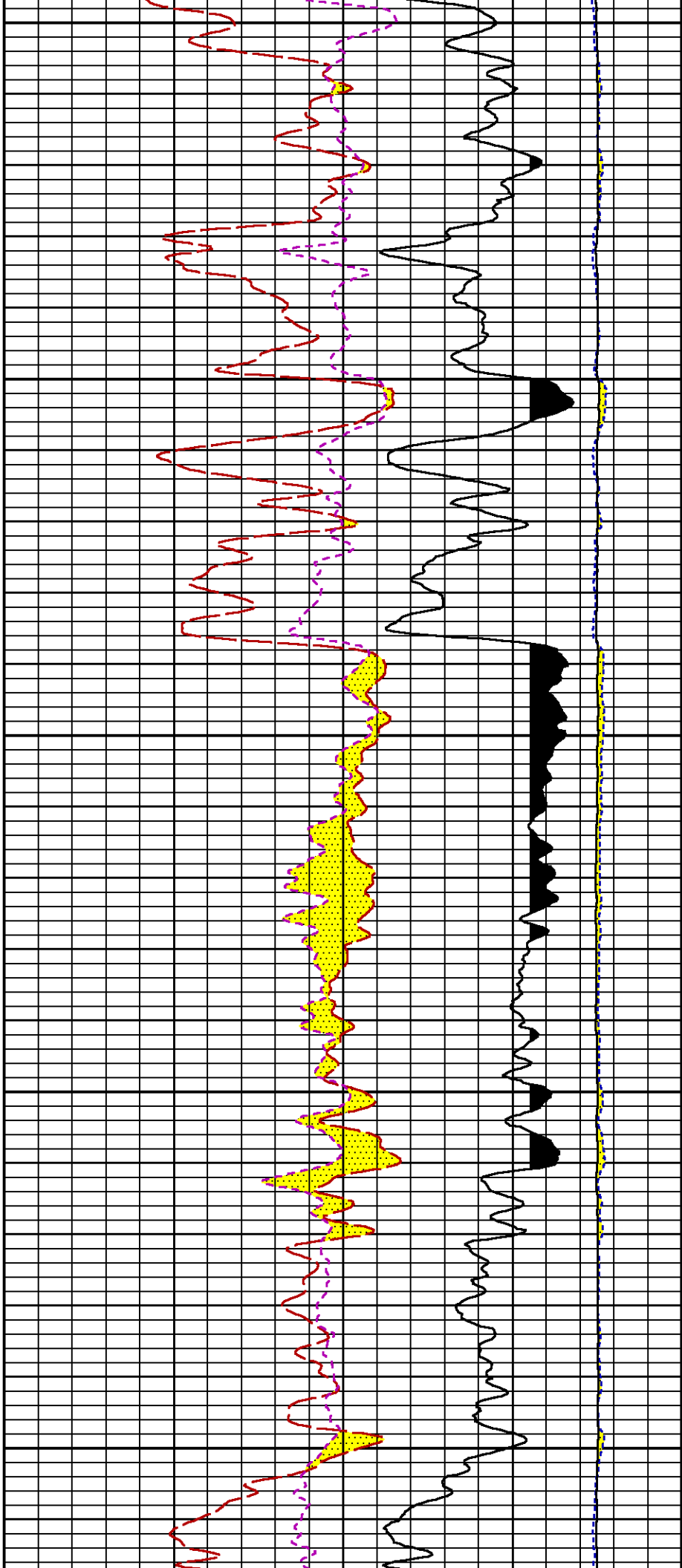




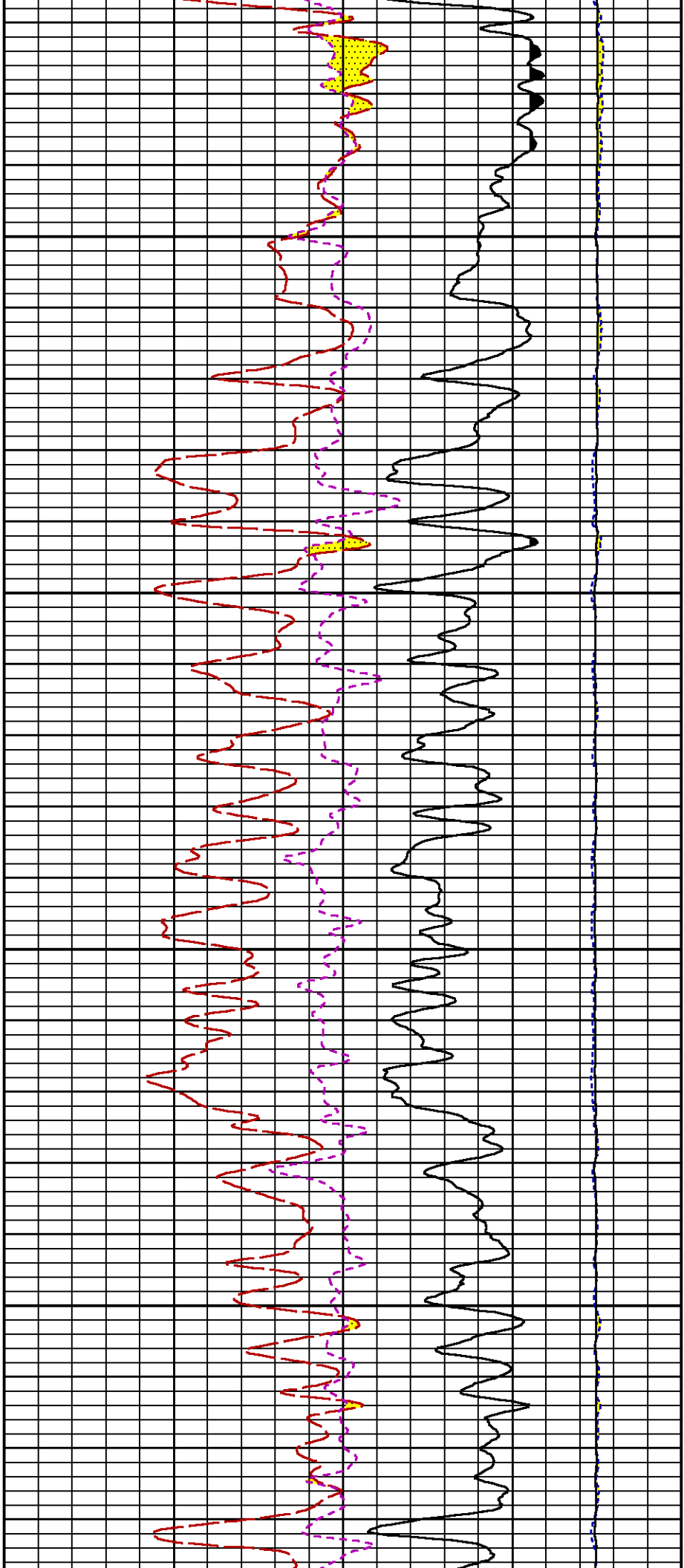






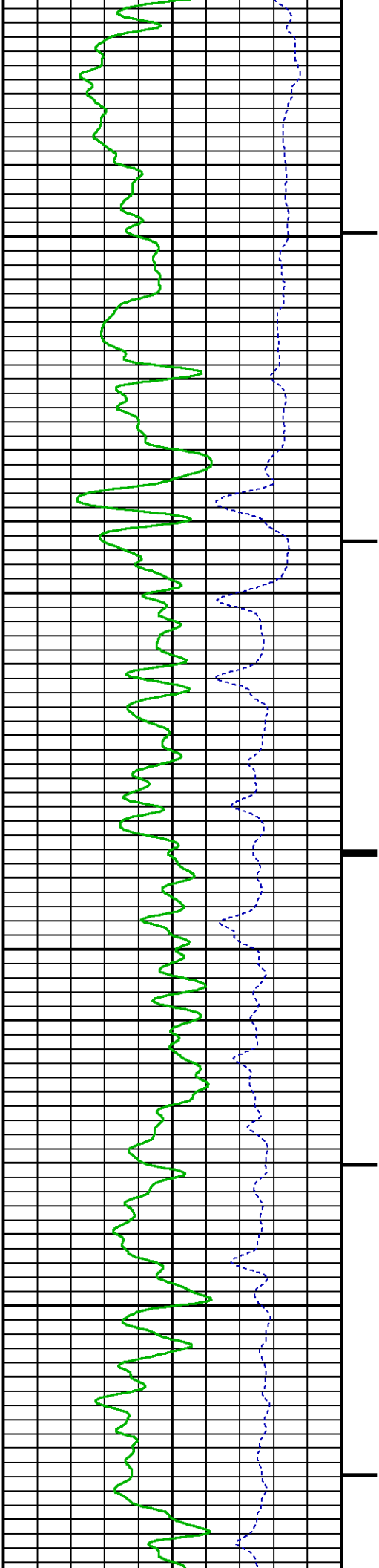


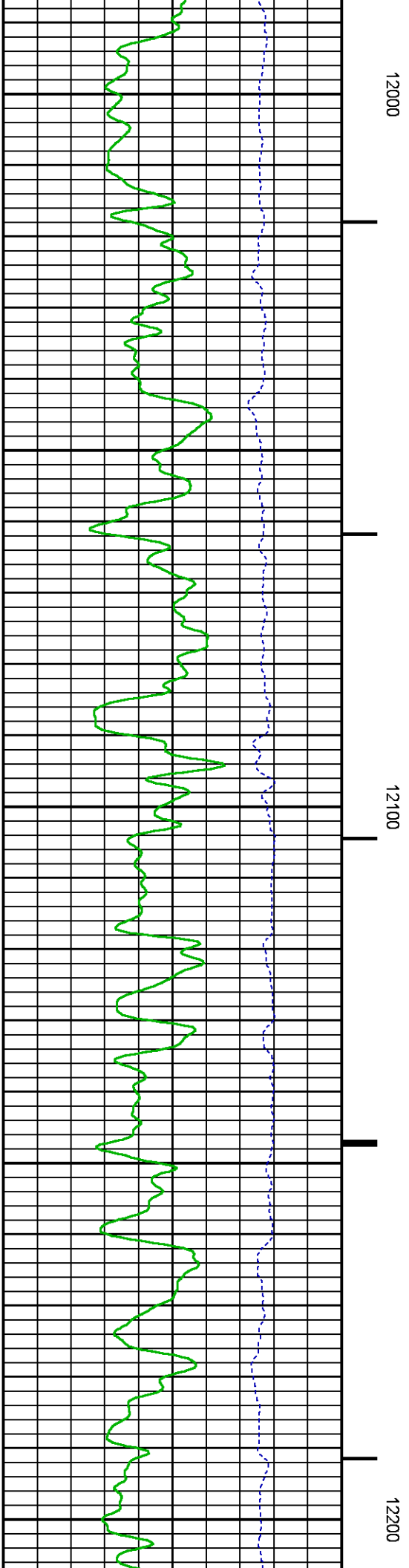
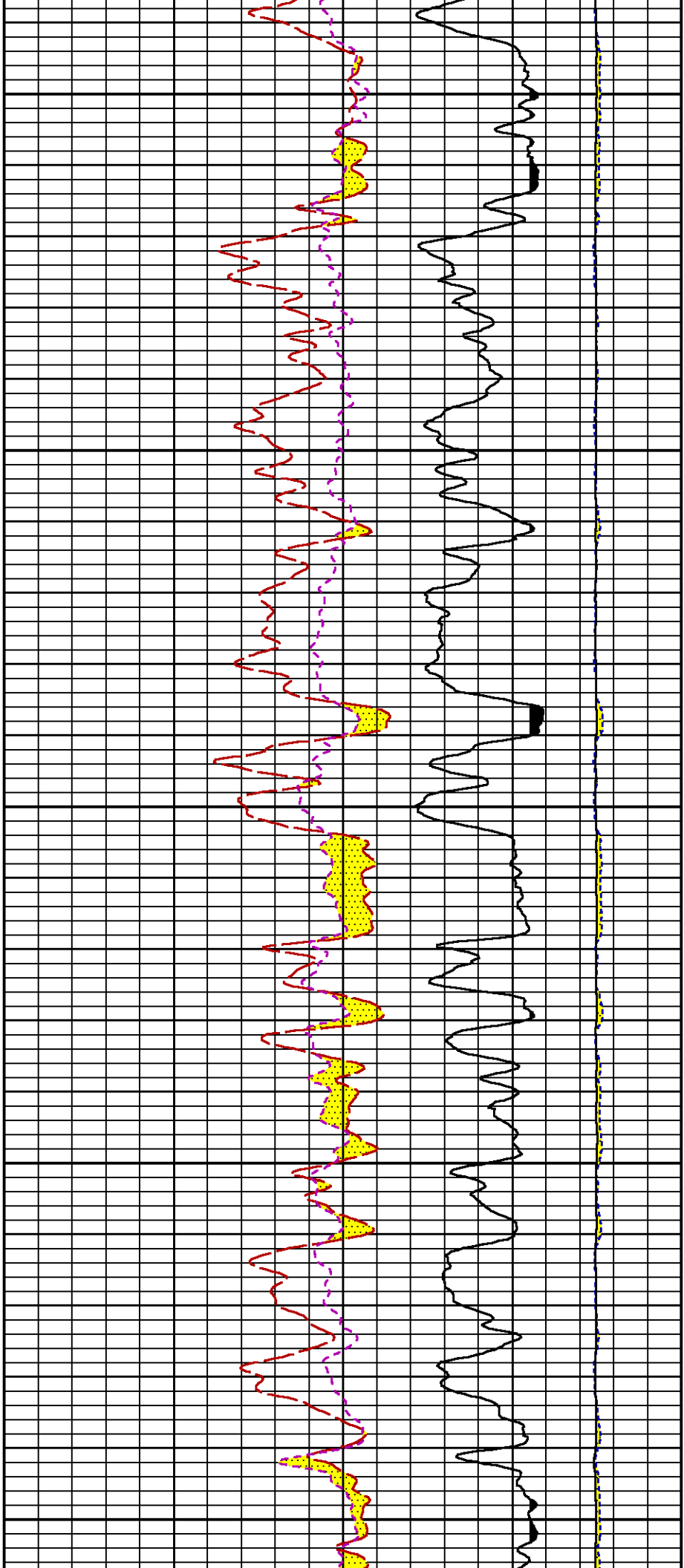


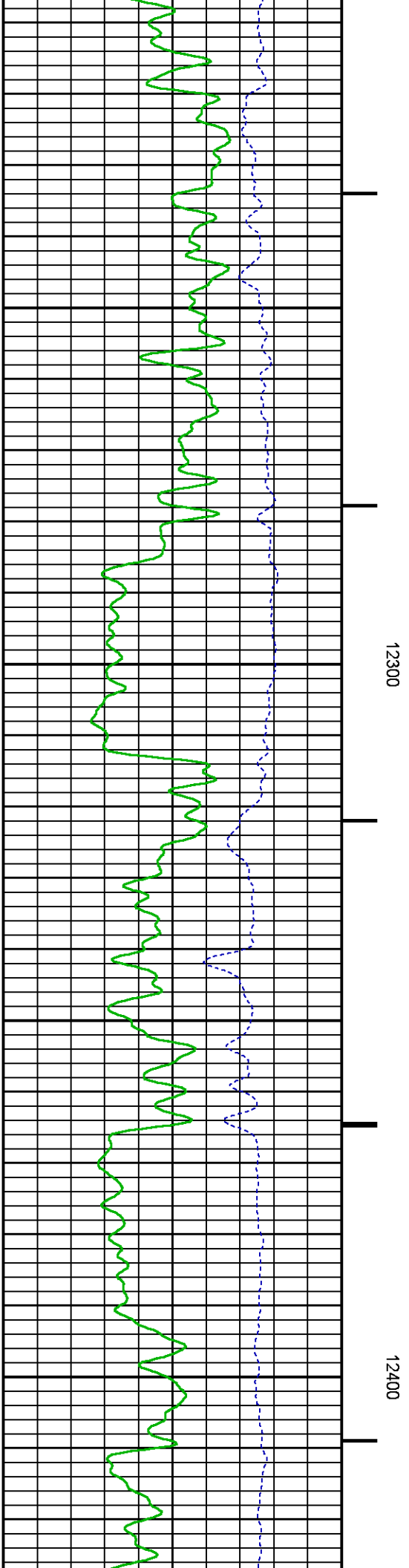
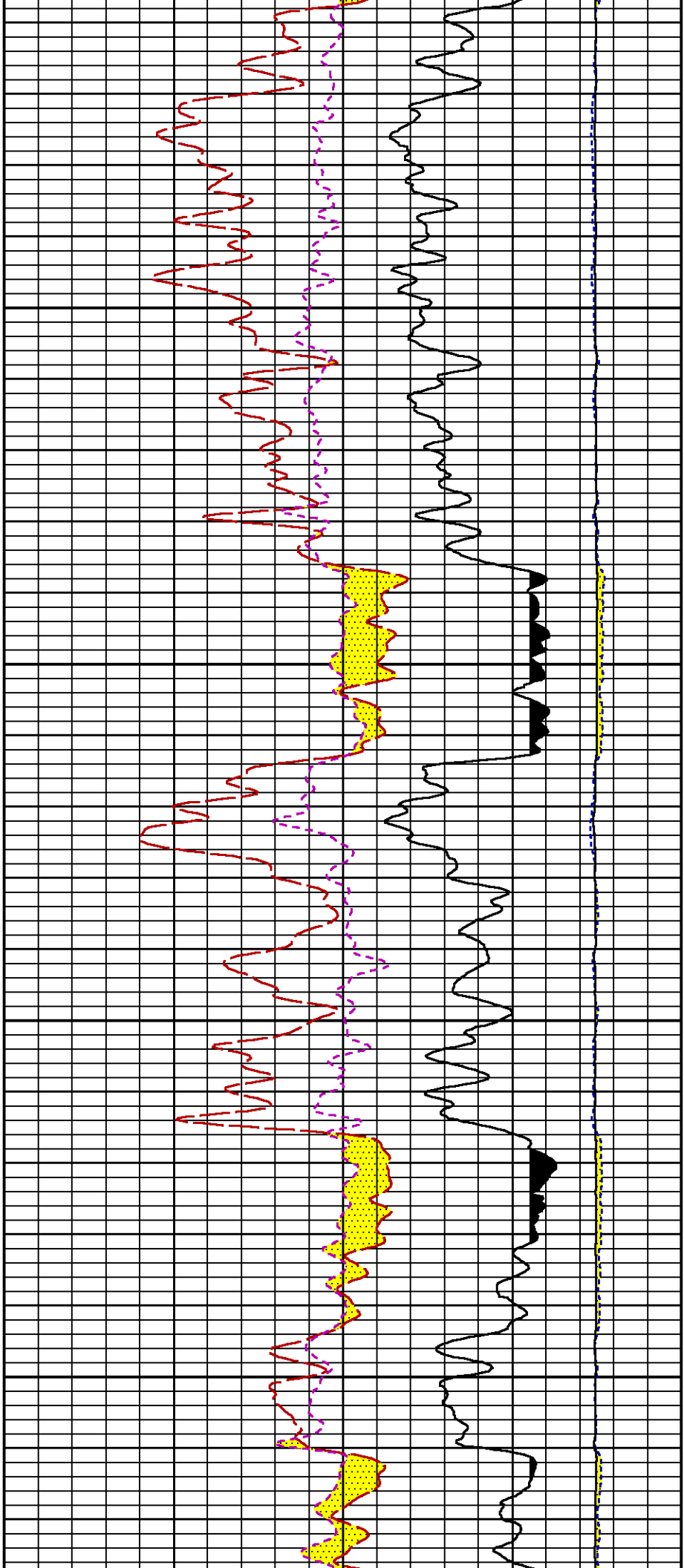


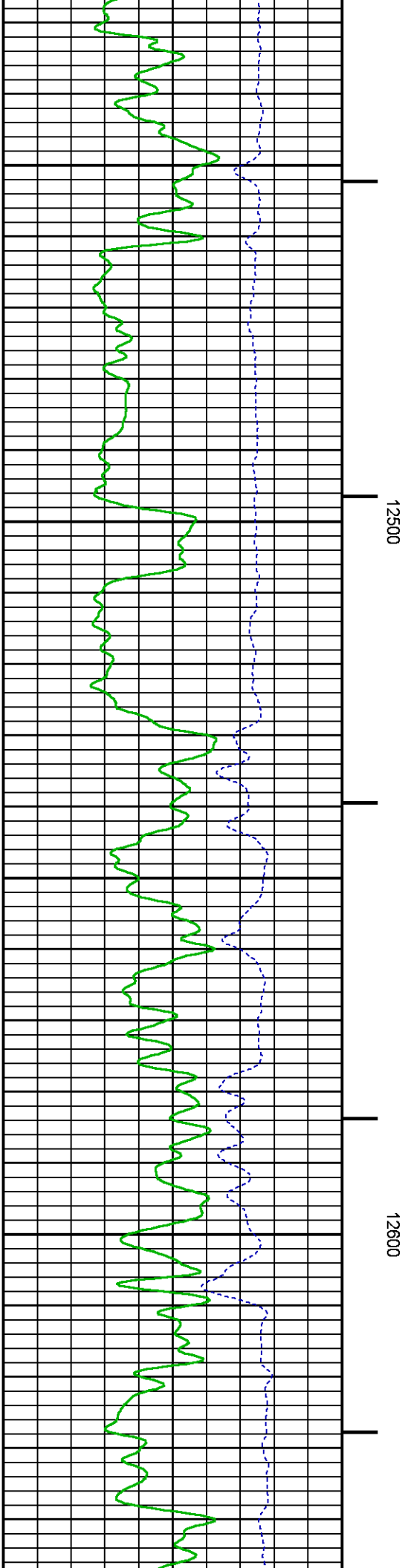
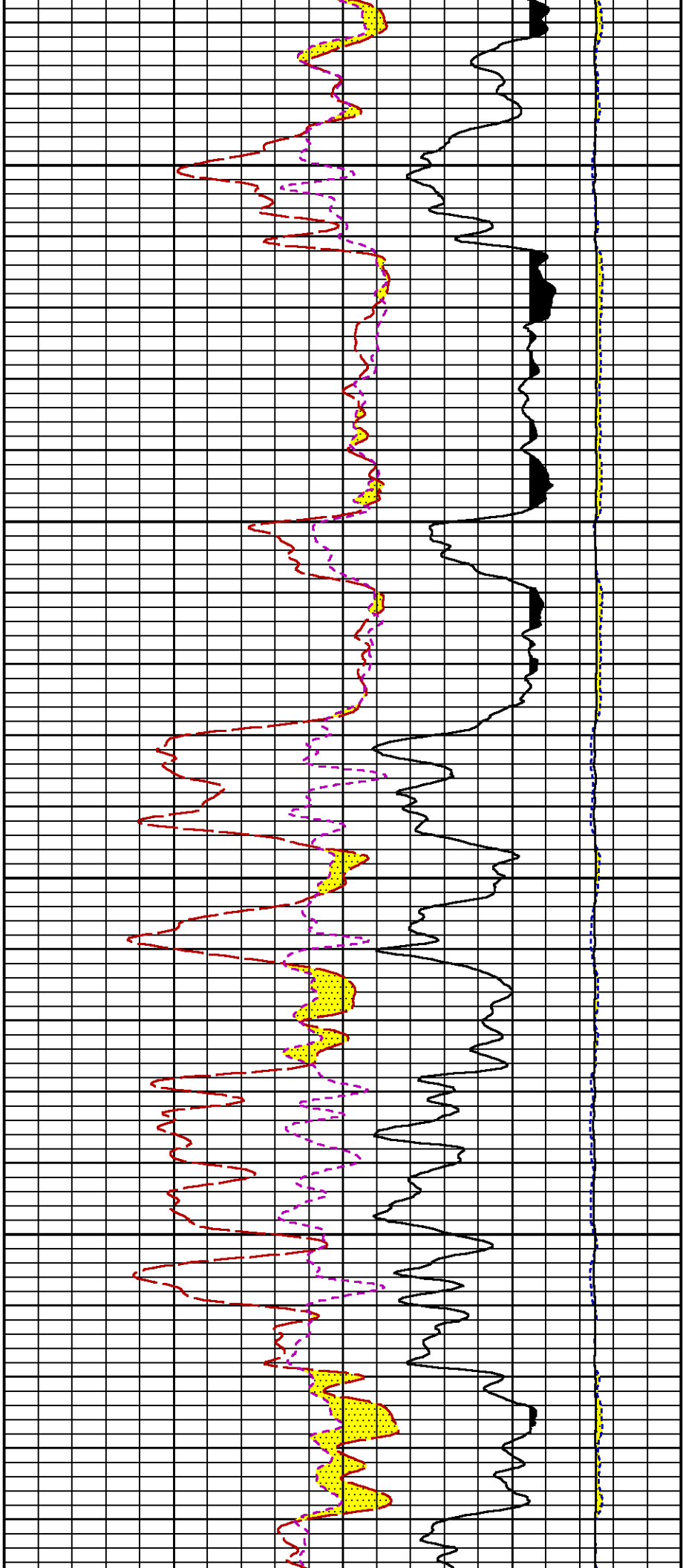
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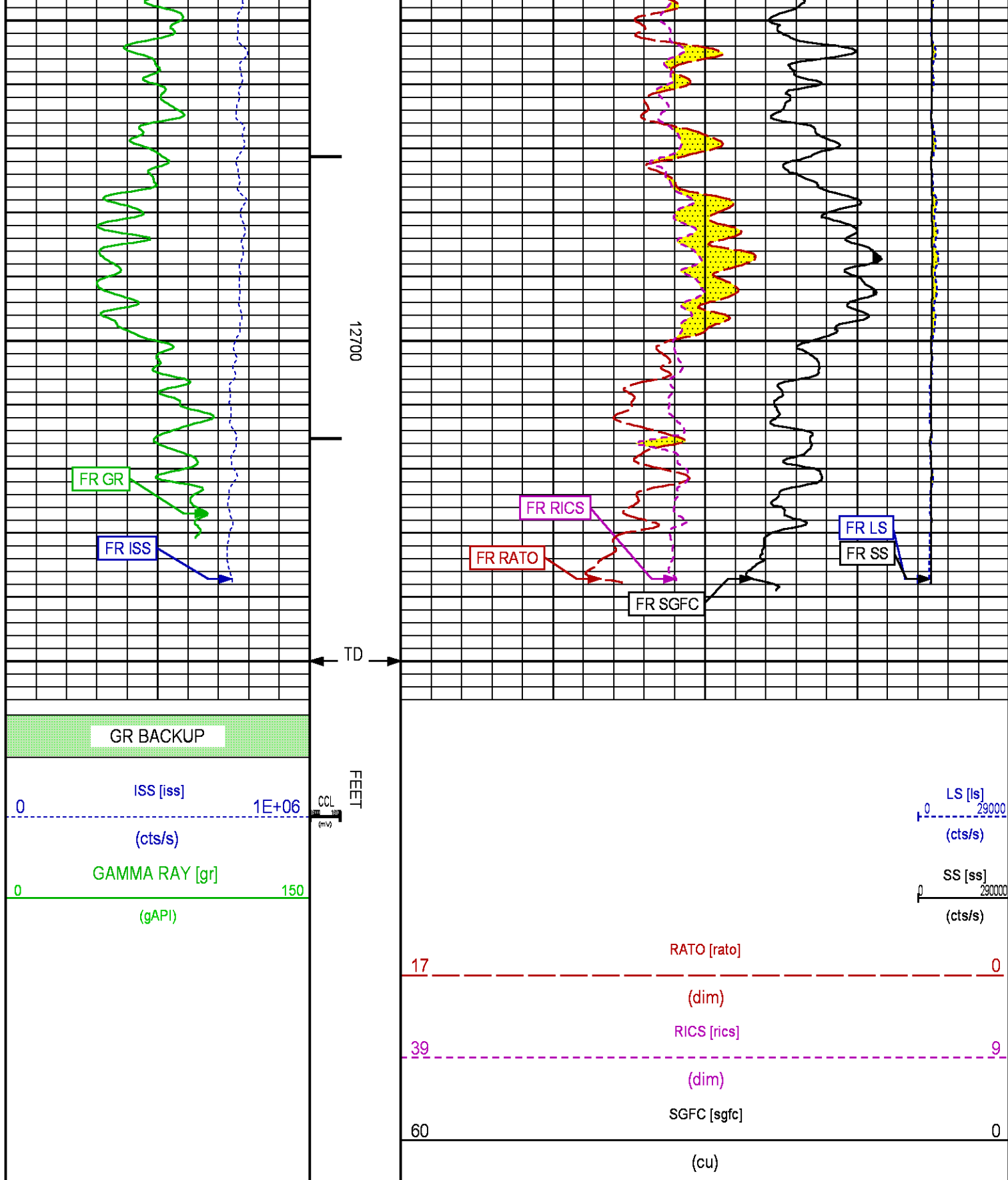
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REPEAT SECTION PNC-3D MODE

Plotted: Thu May 28 20:14:01 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096704/n353a01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 12195.500 ft BOTTOM DEPTH: 12457.250 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	TOP 12448.000
		8.50	in	BOTTOM 12447.250
	CASING SIZE	4.50	in	TOP 12447.250
		7.00	in	BOTTOM 12447.250
	MATRIX	SANDSTONE		TOP BOTTOM
	CORRECTION BUFFER	11		" "

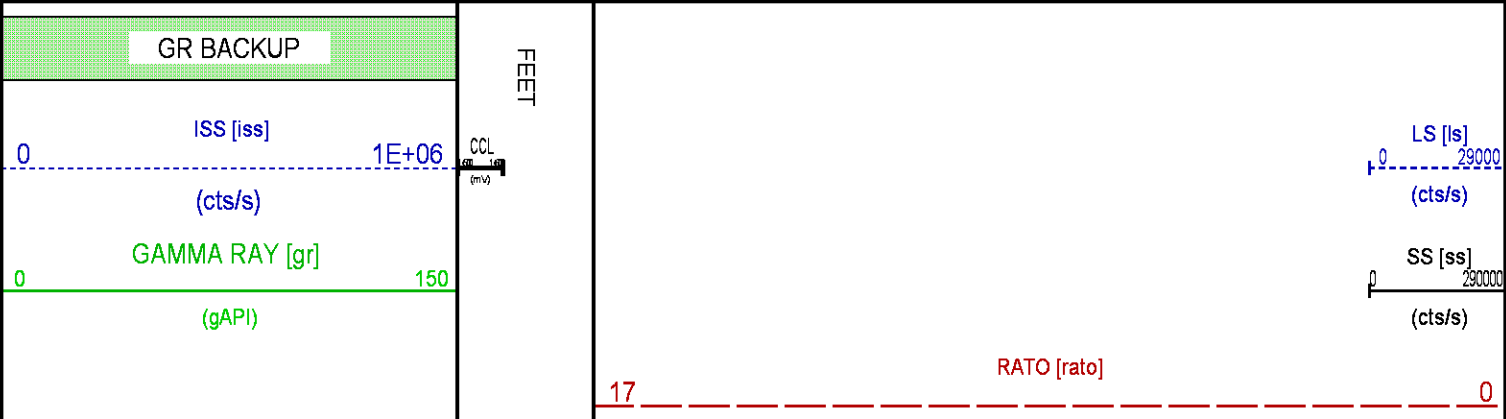
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	May 26 13:17:14 2015	CASING COLLAR LOCATOR
F1:GR	May 26 13:17:14 2015	GAMMA RAY
F1:ISS	May 26 13:17:14 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	May 26 13:17:14 2015	LONG SPACE COUNT RATE
F1:RATO	May 26 13:17:14 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	May 26 13:17:14 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	May 26 13:17:14 2015	CORRECTED FORMATION SIGMA
F1:SS	May 26 13:17:14 2015	SHORT SPACE COUNT RATE

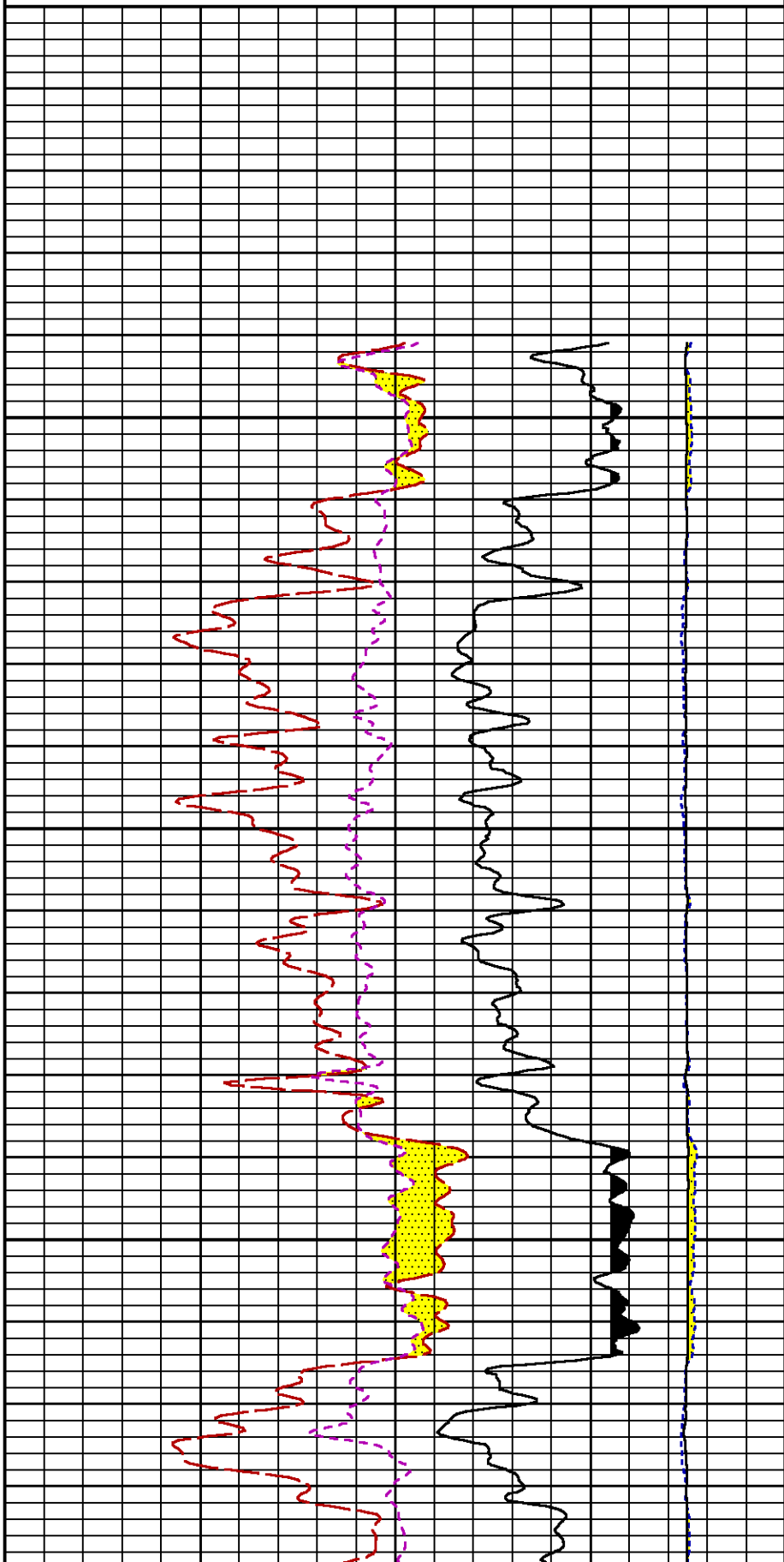
CURVE MEASURE POINT OFFSET

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

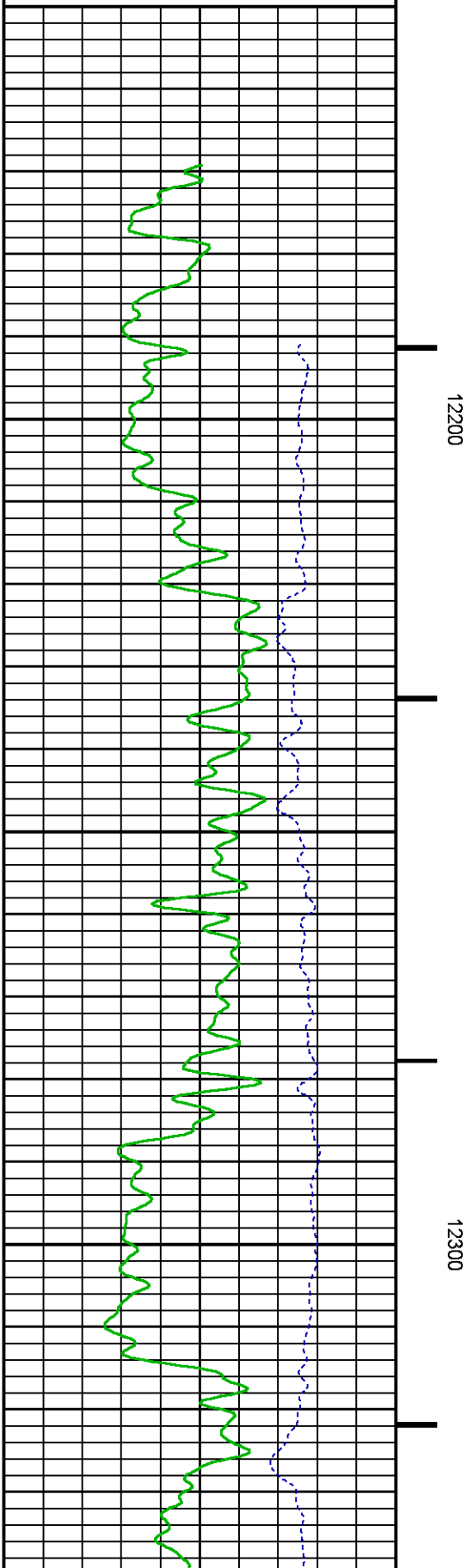
Presentation	: cas6685:/dat1a/CH096704/RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 12150 - 12450 Feet
Data File 1	: F1 : cas6685:/dat1a/CH096704/n353a01_REPEAT.xtf
Created On	: May 26 13:17:14 2015
Company	: WPX ENERGY
Well	: FEDERAL RGU 44-26-198
Field	: SULPHUR CREEK
File Interval	: 22.5 - 12749.2 Feet
OCT	: n353a

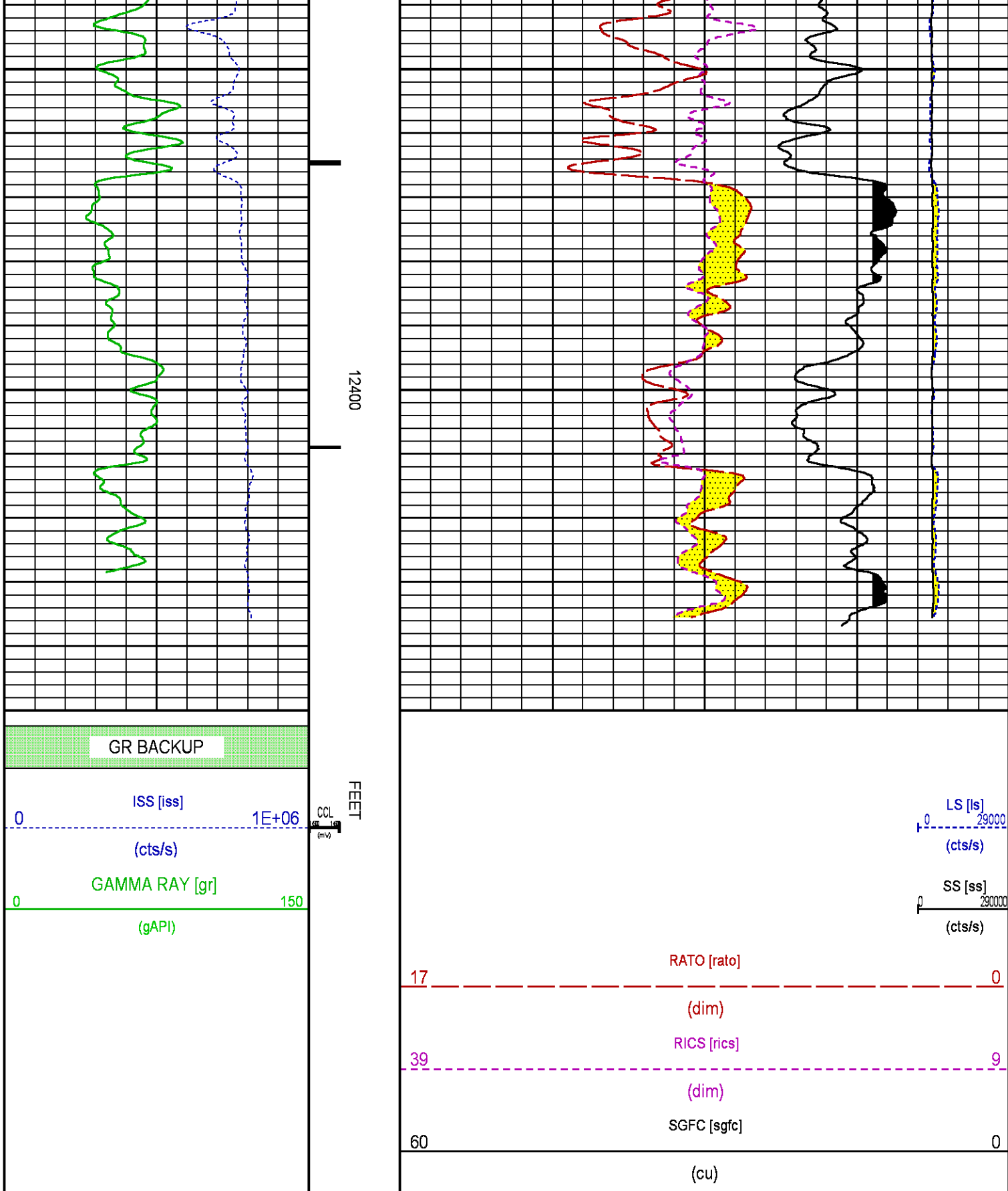


	(dim)	
	RICS [rics]	
39		9
	(dim)	
	SGFC [sgfc]	
60		0
	(cu)	



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





## CALIBRATION / VERIFICATION SUMMARY



## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10317216

DATE/TIME PERFORMED: Fri May 22 13:01:47 2015

UNIT #: 3885TC 6685

CALB JIG #: 4702NK VBA-905

	BACKGROUND	CALBRTR ON	CR DIFF	MULT	BACKGROUND	CALBRTR ON	CALBRTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	63.11	428.60	365.5	0.506	31.95	216.95	185

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10317216

DATE/TIME PERFORMED: Fri May 22 13:04:19 2015

UNIT #: 3885TC 6685

VERI JIG #: 4702NK VBA-905

	BACKGROUND	CALBRTR ON	MULT	BACKGROUND	CALBRTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	62.44	421.13	0.506	31.61	213.17	181.56
						175.00 195.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10160383

DATE/TIME PERFORMED: Tue May 19 15:29:25 2015

UNIT: 3885TC 6685

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10148476

HOURS: 8281AA 402

	ISS	Mtr Vlt	SS Gain	LS Gain	XLS Gain	EA Temp	Sync Delay	RCAL
		(V)				(degF)	(usec)	
Raw Data	804434	125	2323	2249	2212	107	7.0	0.9933
Interpolated	1300000	147	2302	2241	2209			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	804434	6654	1077	155	26.01	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	804434	171606	26724	88664	31555	8341	53649	13358
Fit Quality %		0.837	0.844	0.820	0.825	0.861	0.766	0.863

ISS RBOR RIN RIN13 RICS RATO RTWO RONE

Raw Data	804434	1.43		4.69		30.11		15.00		10.63		3.78		4.02	
		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 %		0.018		0.131		0.147		0.150		0.069		0.054		0.056	
Reduced	1409594	1.43		4.69		30.17		15.01		10.63		3.78		4.02	
		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 176973

DATE/TIME PERFORMED: Thu Jun 19 09:53:23 2014

UNIT #: 3880TA HL6670

	T(0)	T(1)	T(2)	T(3)
Corr Coeff for Temp	-1.889935E+01	1.004280E-01	1.215976E-06	-1.293045E-10

## INSTRUMENT CONFIGURATION

Source File: /dat1a/CH096699/n353a~tdg

### 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

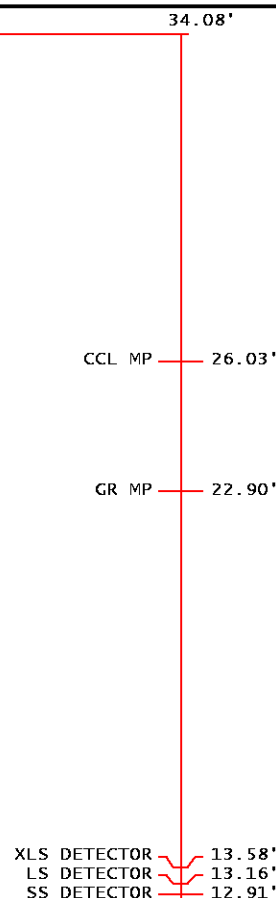
Diameter : 1.70"  
Length : 3.02'  
Weight : 15 lbs  
Series : 8262XA  
Mnemonic : GR  
Measure Point: 0.89': GR MP

### RPM ELECTRONICS

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

### 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

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

WPX ENERGY

WELL

FEDERAL RGU 44-26-198

FIELD

SULPHUR CREEK

COUNTY

RIO BLANCO

STATE COLORADO

LOCATION:

SHL: 2460' FNL 905' FEL

BHL: 1089' FSL 17' FEL

ELEVATIONS:

KB 6646 FT

DF

GL 6622 FT

FILE NO:

CH096704

API NO:

05103119820000

SEC 26 T1S R98W

44-26-198

H&P 318

SEC 26 TWP 1S RGE 98W

DATE 28-May-2015