



FILE NO: CH094745	COMPANY WELL FIELD COUNTY	WPX ENERGY YOUBERG RU 431-7 RULISON GARFIELD	STATE CO
API NO: 05045223460000			

Ver. 3.87 7 7S 93W RU 42-7 PAD NABORS 574	LOCATION: SHL: 2452' FNL & 379' FEL BHL: 1052' FNL & 1164' FEL SEC 7 TWP 7S RGE 93W	OTHER SERVICES BOND LOG
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB GL	ELEVATION 26 FT ABOVE P.D. 7737 FT 7763 FT 7737 FT
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DATE	10-Feb-2015
RUN	1
SERVICE ORDER	US094745
DEPTH DRILLER	10040 FT
DEPTH LOGGER	10002 FT
BOTTOM LOGGED INTERVAL	9992 FT
TOP LOGGED INTERVAL	5967 FT
TIME STARTED	11:30
TIME FINISHED	17:30
OPERATOR RIG TIME	6 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	88 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	249 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	10-Feb-2015
EQUIP. NO.	HL-6670
LOCATION	GRAND JCT.
RECORDED BY	NEWELL
WITNESSED BY	TED VONFELDT

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	1118 FT
8.75 IN	1118 FT	10058 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			0 FT	1118 FT
4.5 IN	11.6 LB/F	P-110	0 FT	10058 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 10/FEB/2015 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 4 feet.

Logged in PNC-3D mode.

BHT = 249 degF  
SJ = 6627' - 6649'

**EQUIPMENT DATA**

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	PCM	8250EA	10586851	FREE
1	1	TEL/CCL	8248ED	10460262	FREE
1	1	GR	2812LA	11701636	FREE
1	1	RPM	8281EA	10273848	FREE
1	1	RPM	8283PA	10169251	FREE
1	1	RPM	8281FA	10238007	FREE
1	1	TEMP	8255XA	11774568	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: 4

Plotted: Tue Feb 10 17:09:15 2015

**PARAMETER AND FILTER SUMMARY REPORT**

FILE: /dat1a/CH094745/n354h02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 5963.750 ft BOTTOM DEPTH: 10006.280 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	Feb 10 12:52:40 2015	CASING COLLAR LOCATOR
F1:GR	Feb 10 12:52:40 2015	GAMMA RAY
F1:ISS	Feb 10 12:52:40 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Feb 10 12:52:40 2015	LONG SPACE COUNT RATE
F1:RATO	Feb 10 12:52:40 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Feb 10 12:52:40 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Feb 10 12:52:40 2015	CORRECTED FORMATION SIGMA
F1:SS	Feb 10 12:52:40 2015	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 : HL6670:/dat1a/CH094745/431RPM\_MAIN.fvpdf [5"/100' Scale]  
Plot Interval : 5965 - 10007 Feet

Data File 1 : F1 : HL6670:/dat1a/CH094745/431RPM\_MAIN.xtf  
Created On : Feb 10 12:52:40 2015  
Company : WBY ENERGY

Company : WPA ENERGY  
Well : YUBERG RU 431-7  
Field : RULISON  
File Interval : 5938.25 - 10002.2 Feet  
OCT : n354h

GR BACKUP

FEET

ISS [iss]

1E+06

(1)

GAMMA RAY [gr]

150

(gAPI)

CCL  
(m)

0009

ISS

GR

LS [ls]

29000

(1)

SS [ss]

290000

(1)

RATO [rato]

17

0

(1)

RICS [rics]

39

9

(1)

SGFC [sgfc]

60

0

(1)

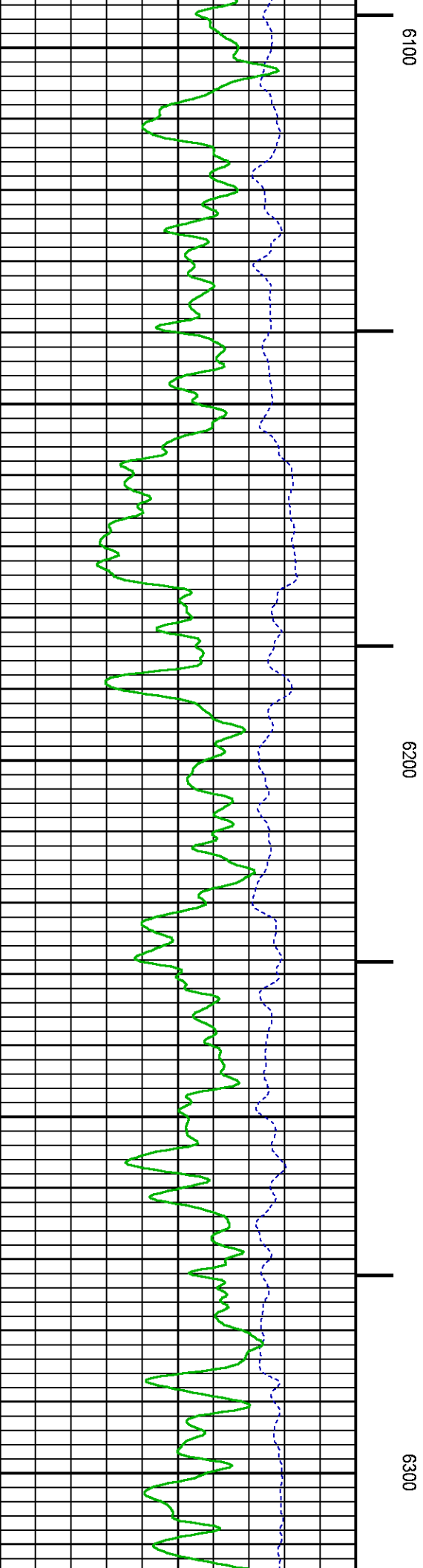
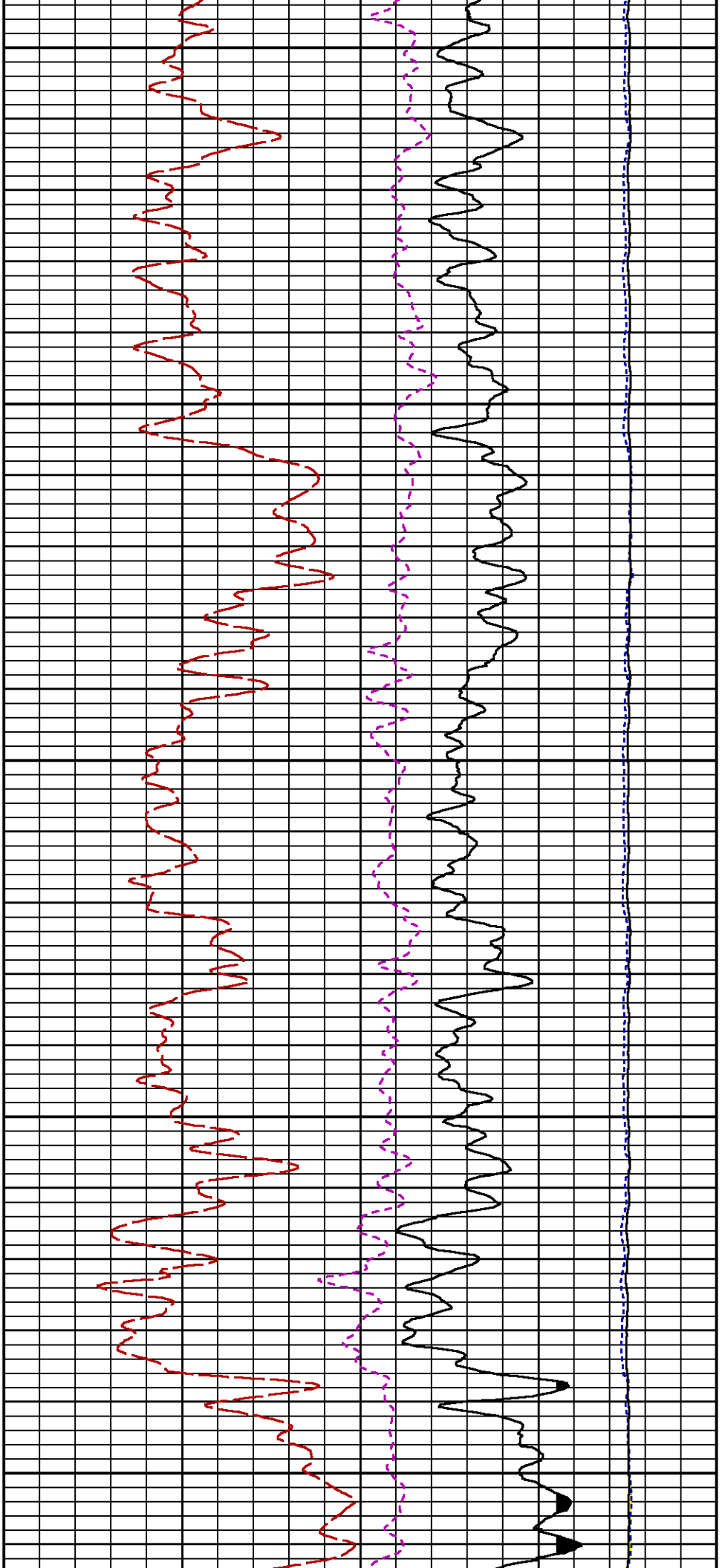
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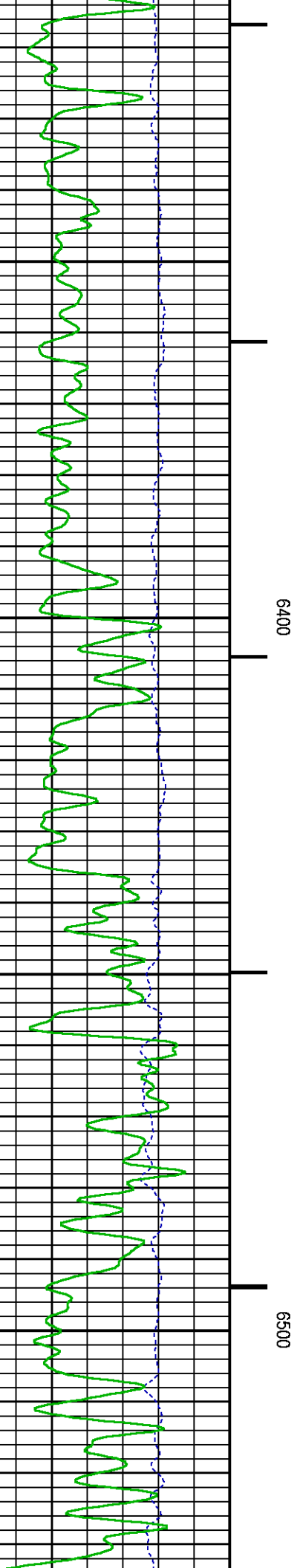
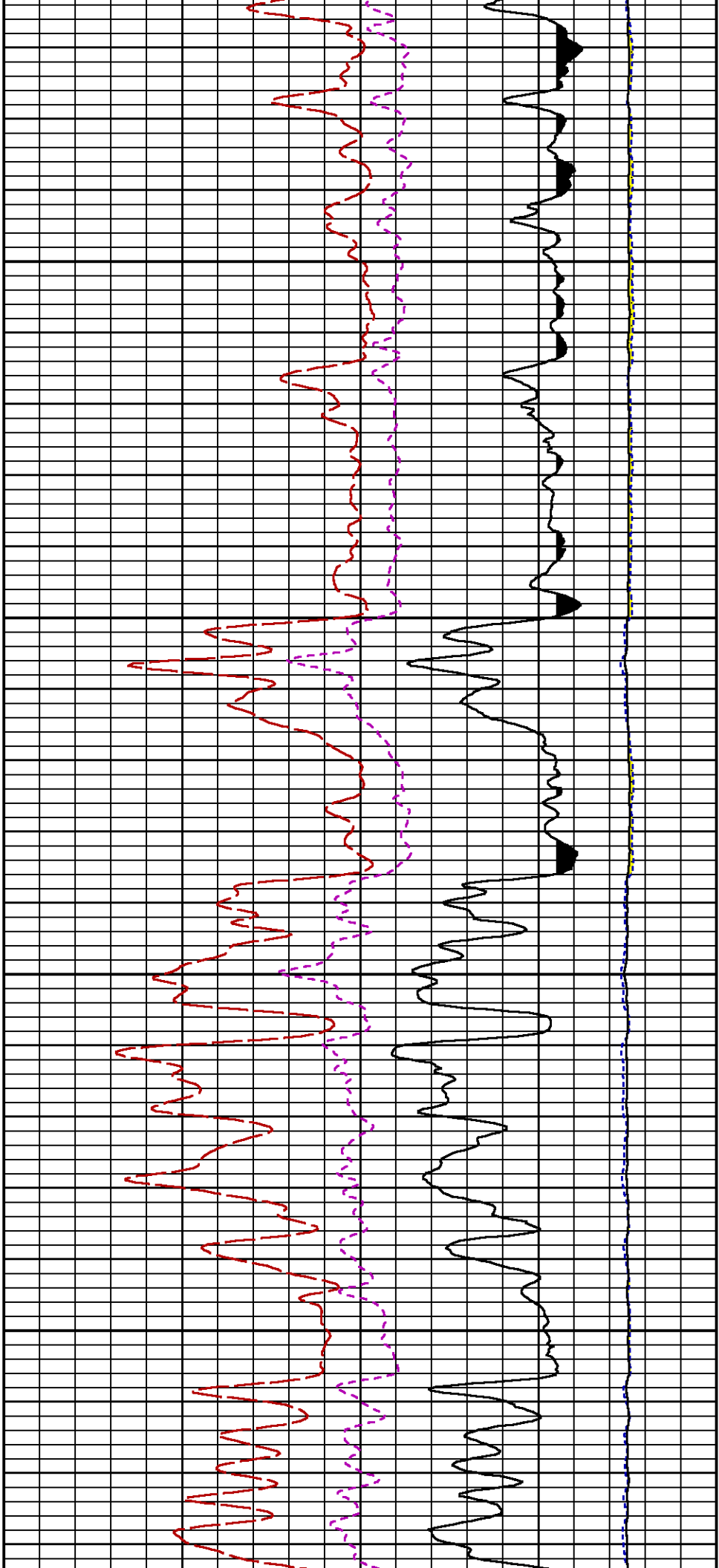
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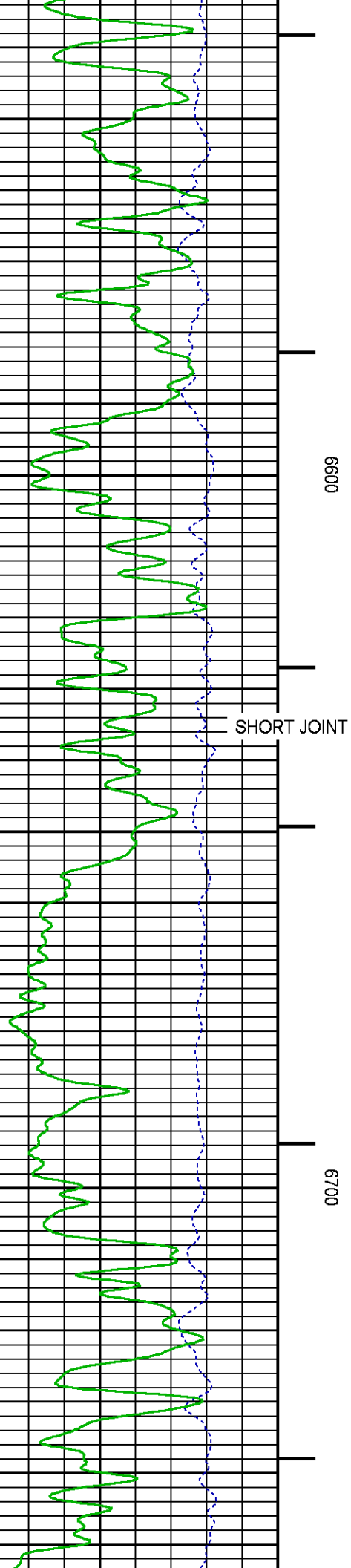
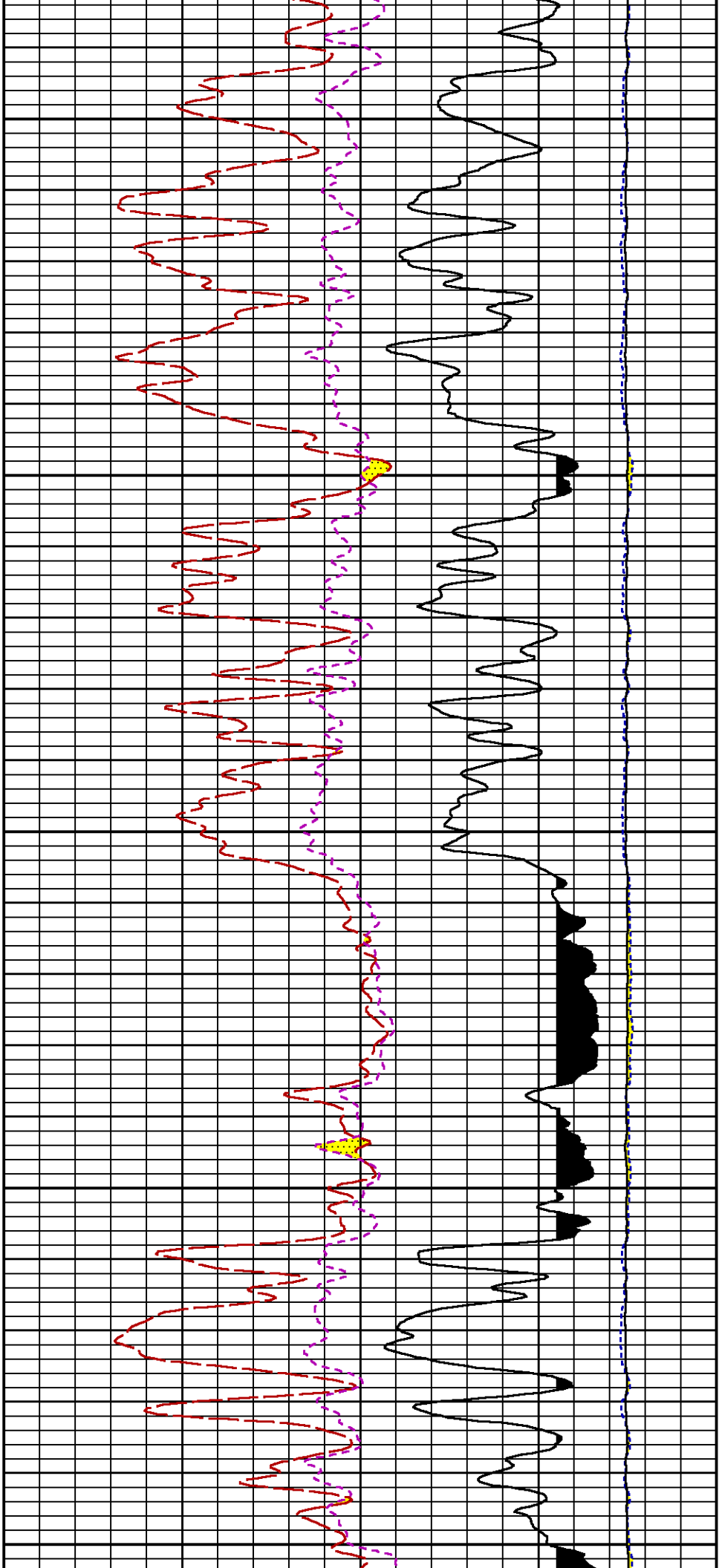
SGFC

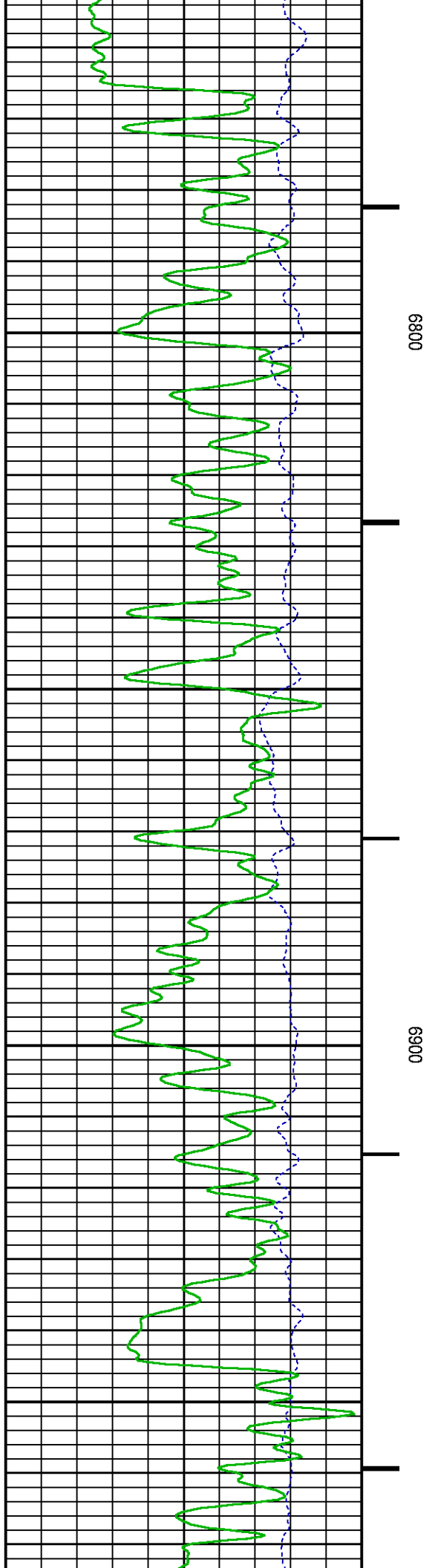
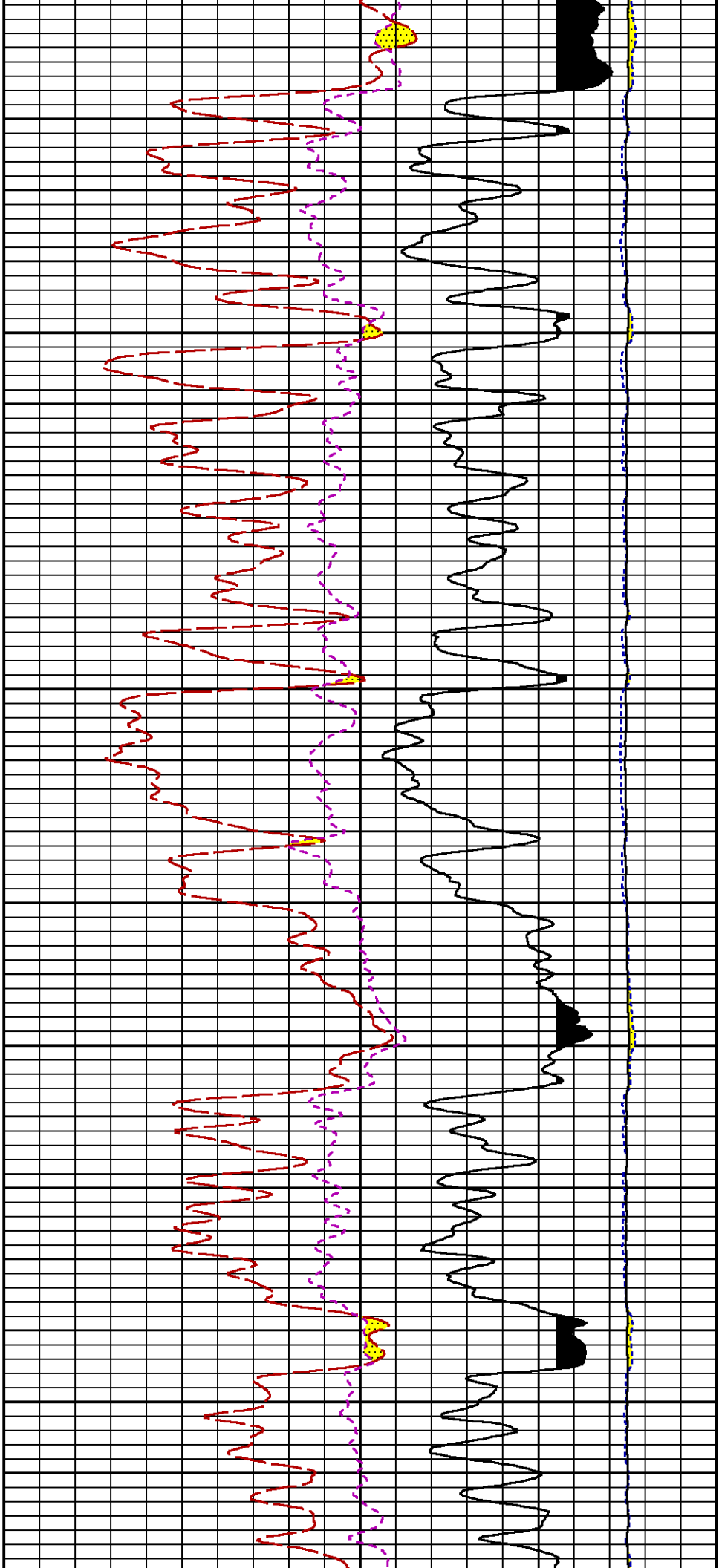
LS

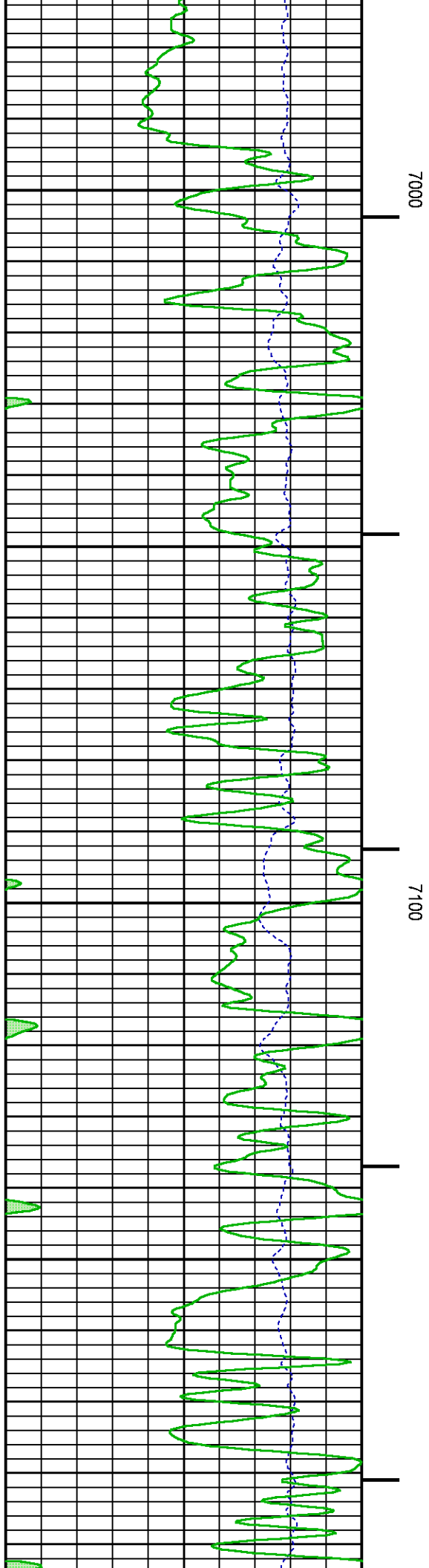
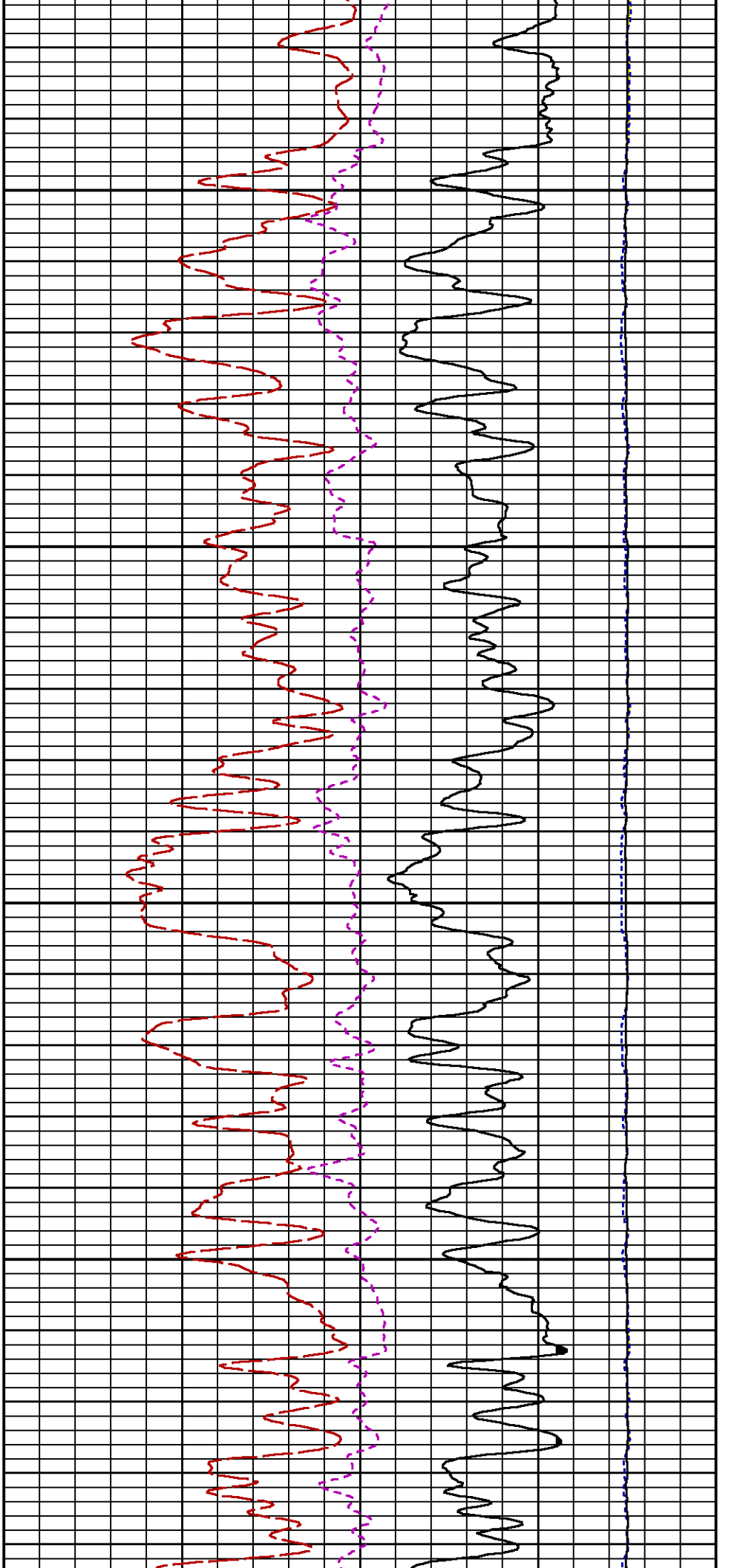
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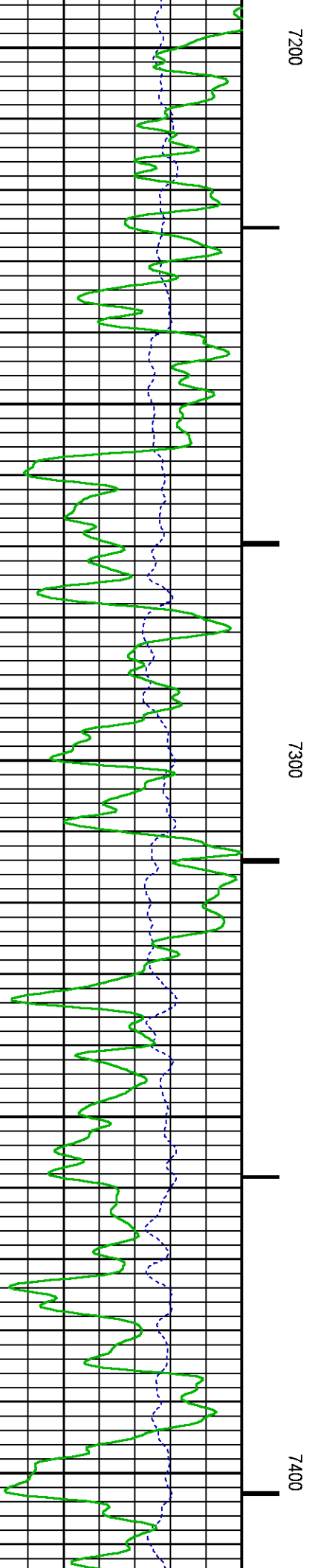
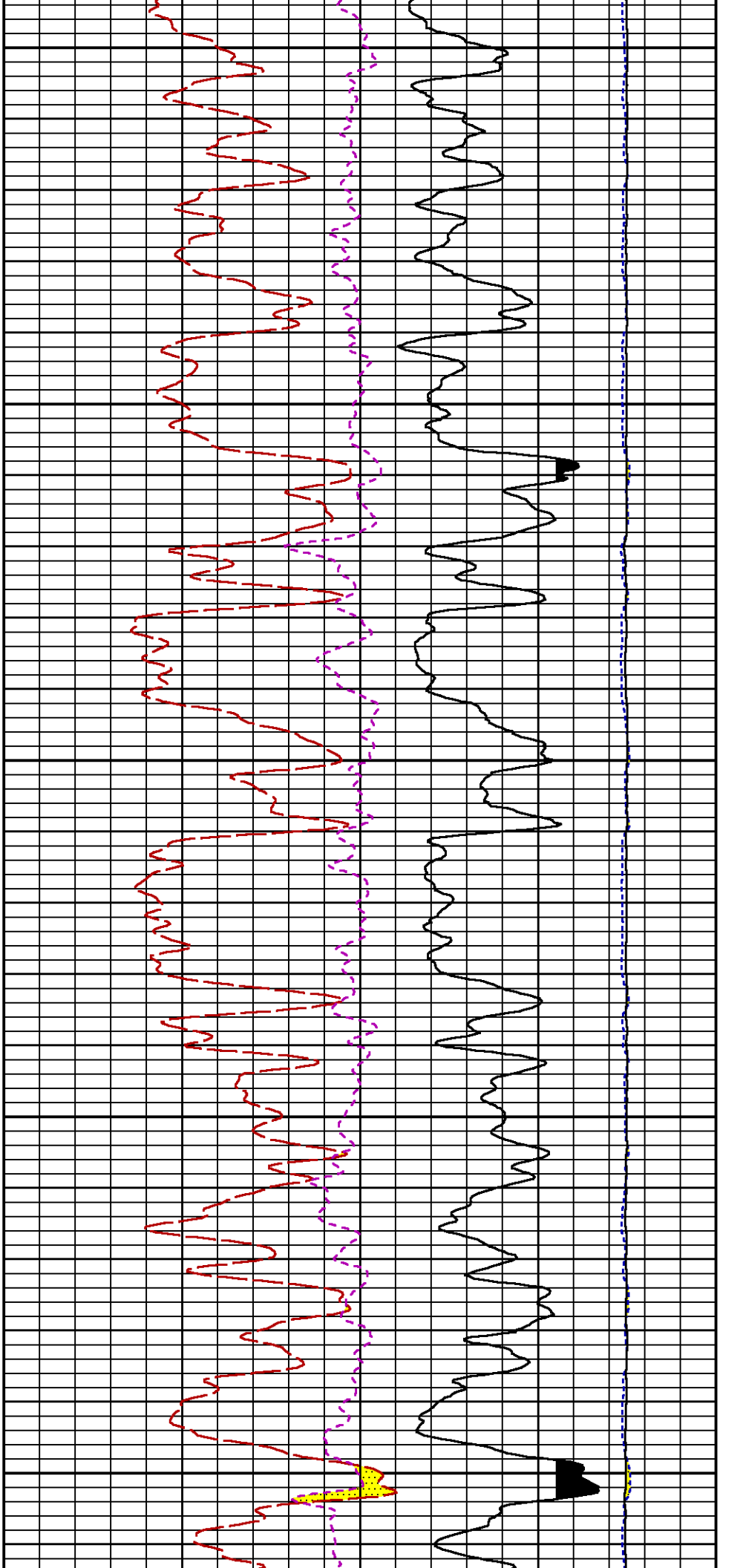


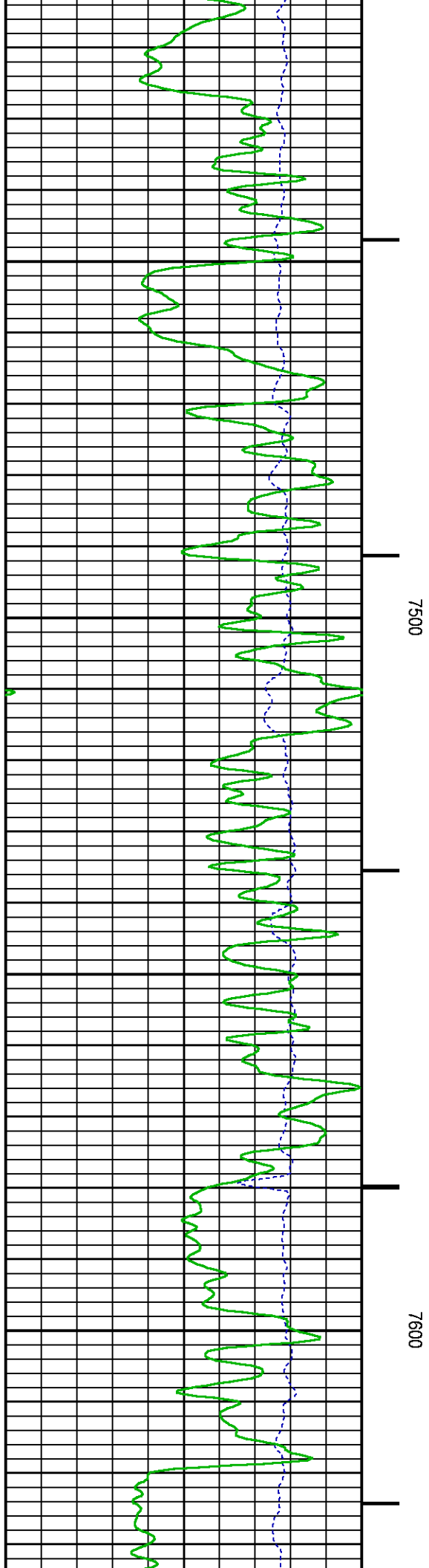
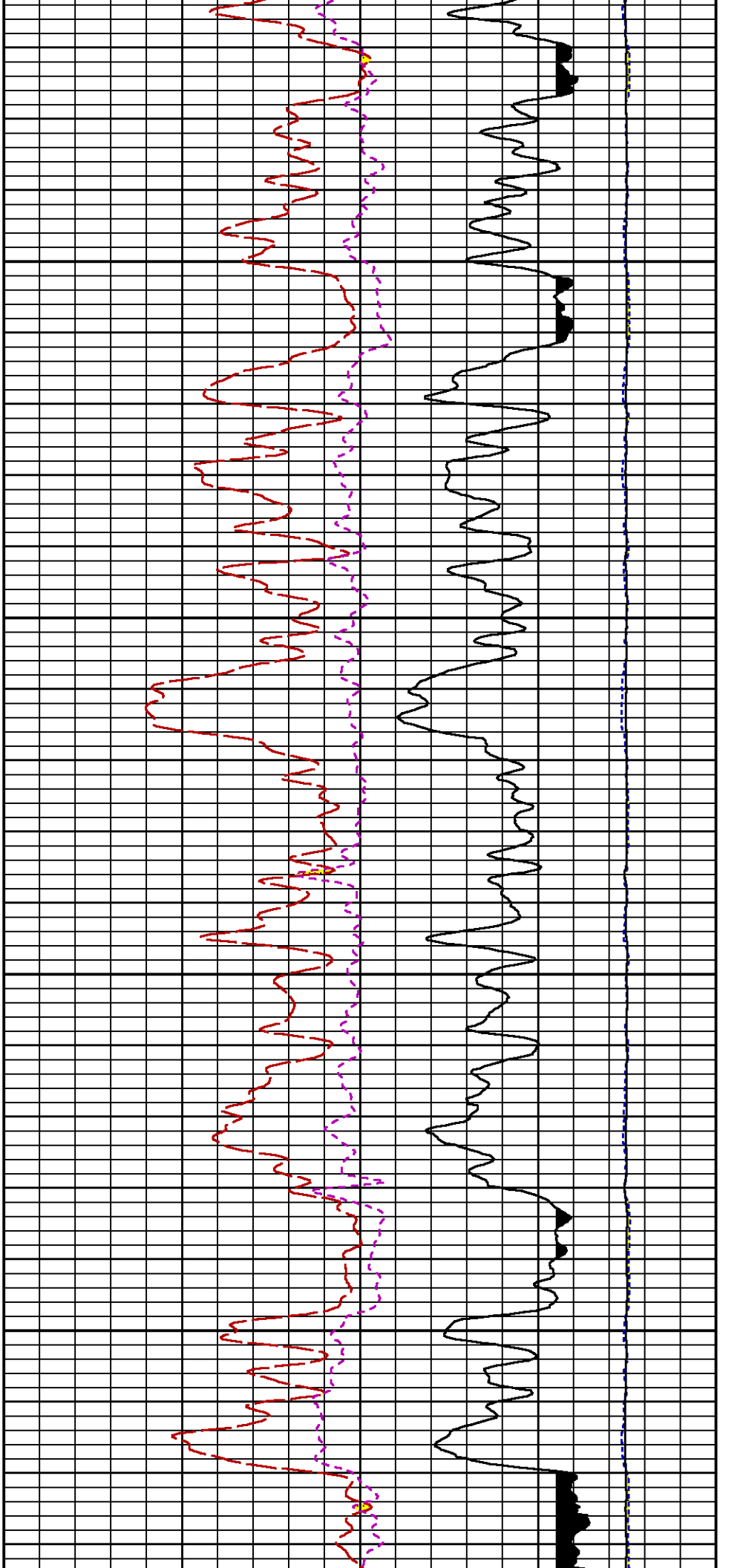


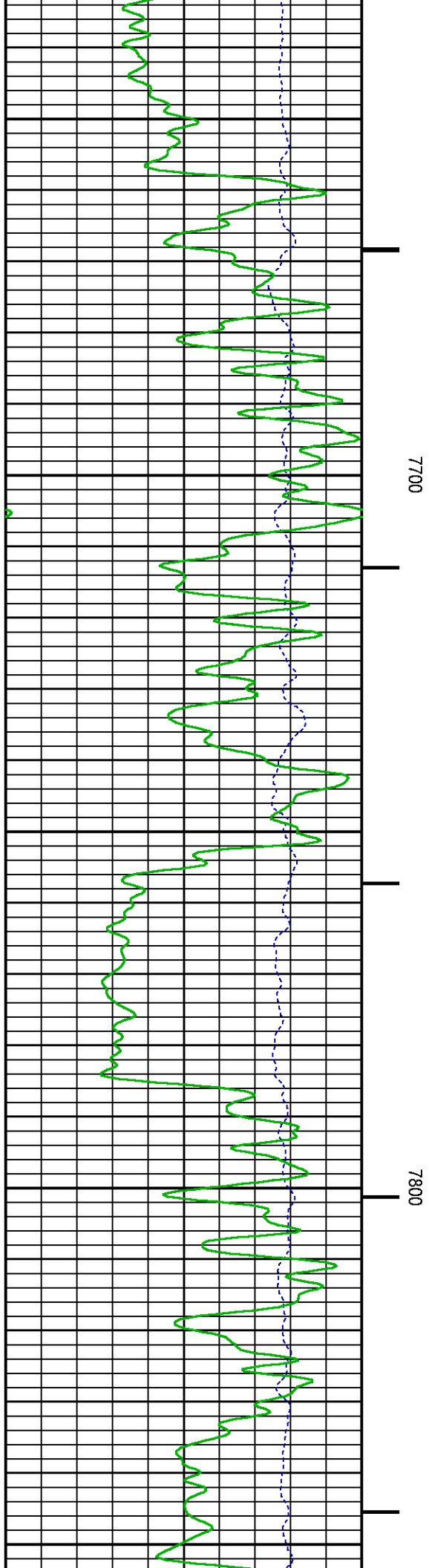
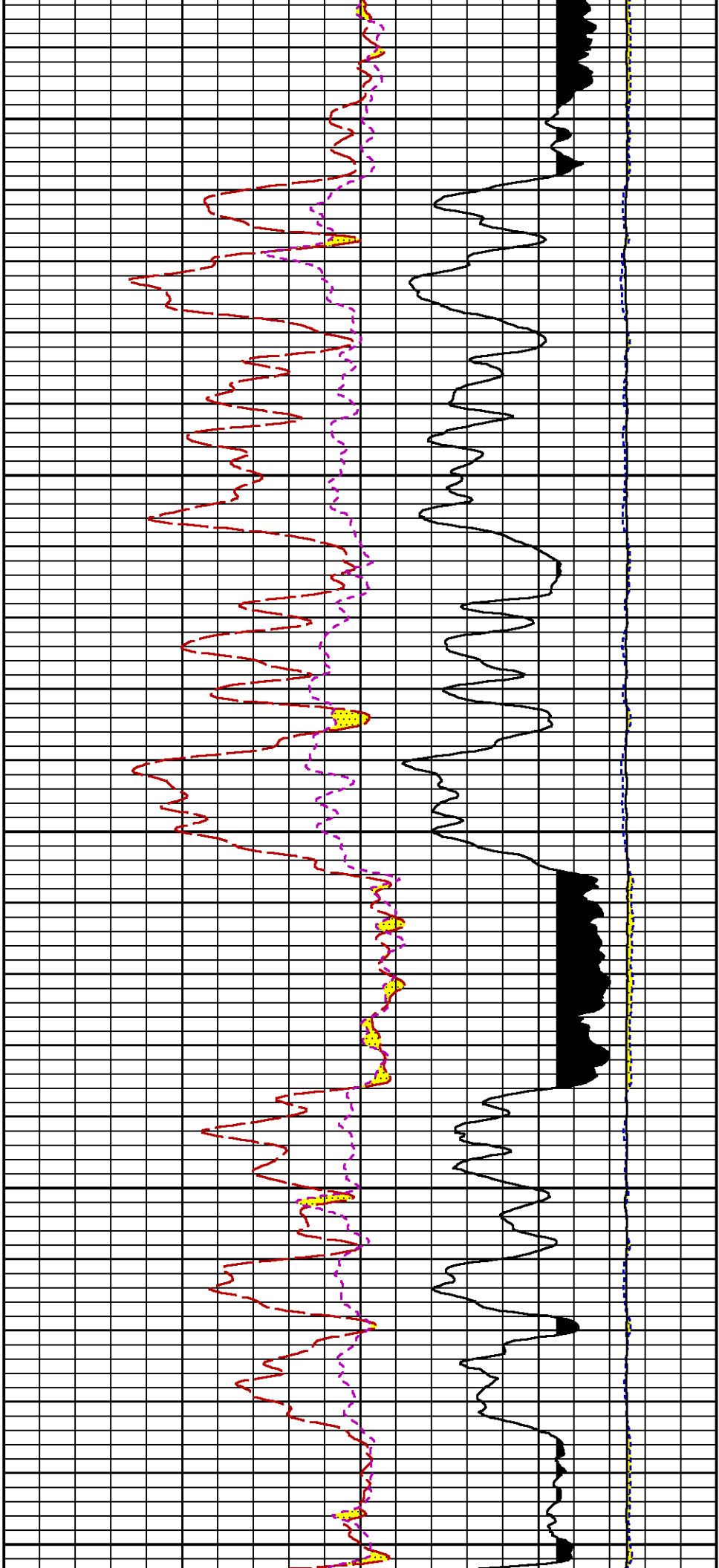


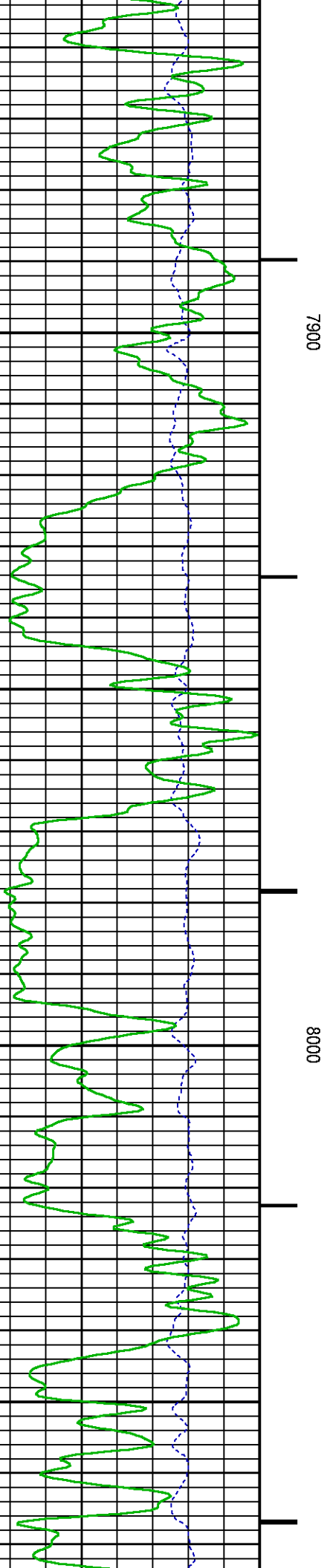
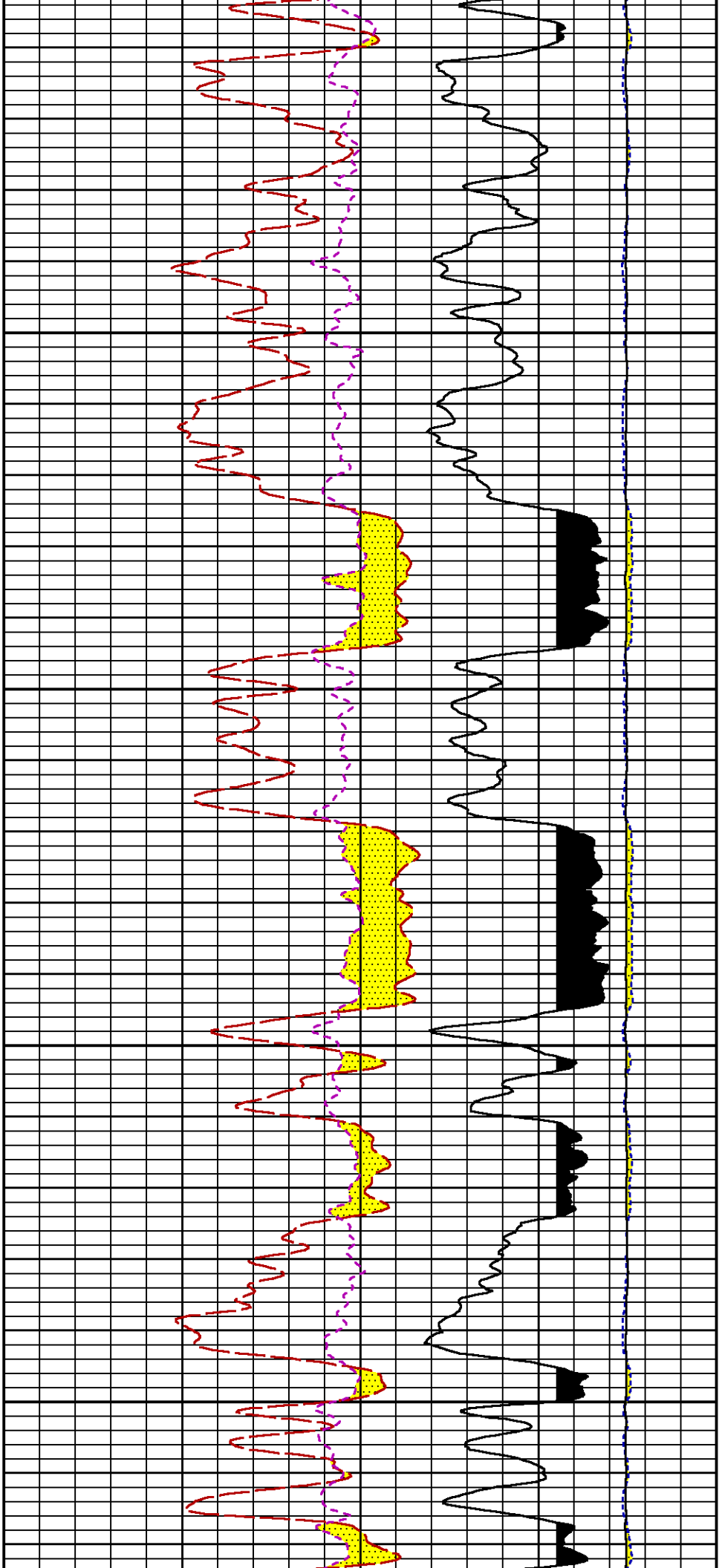


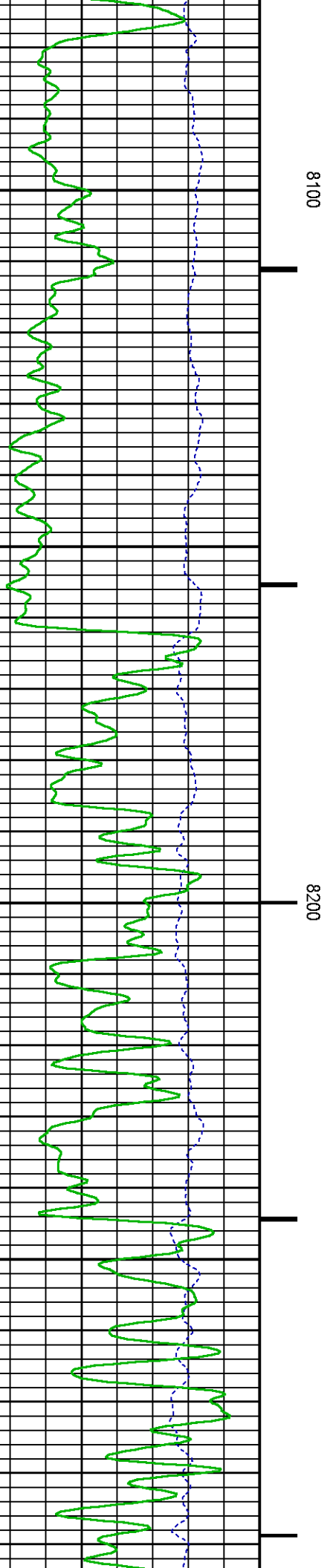
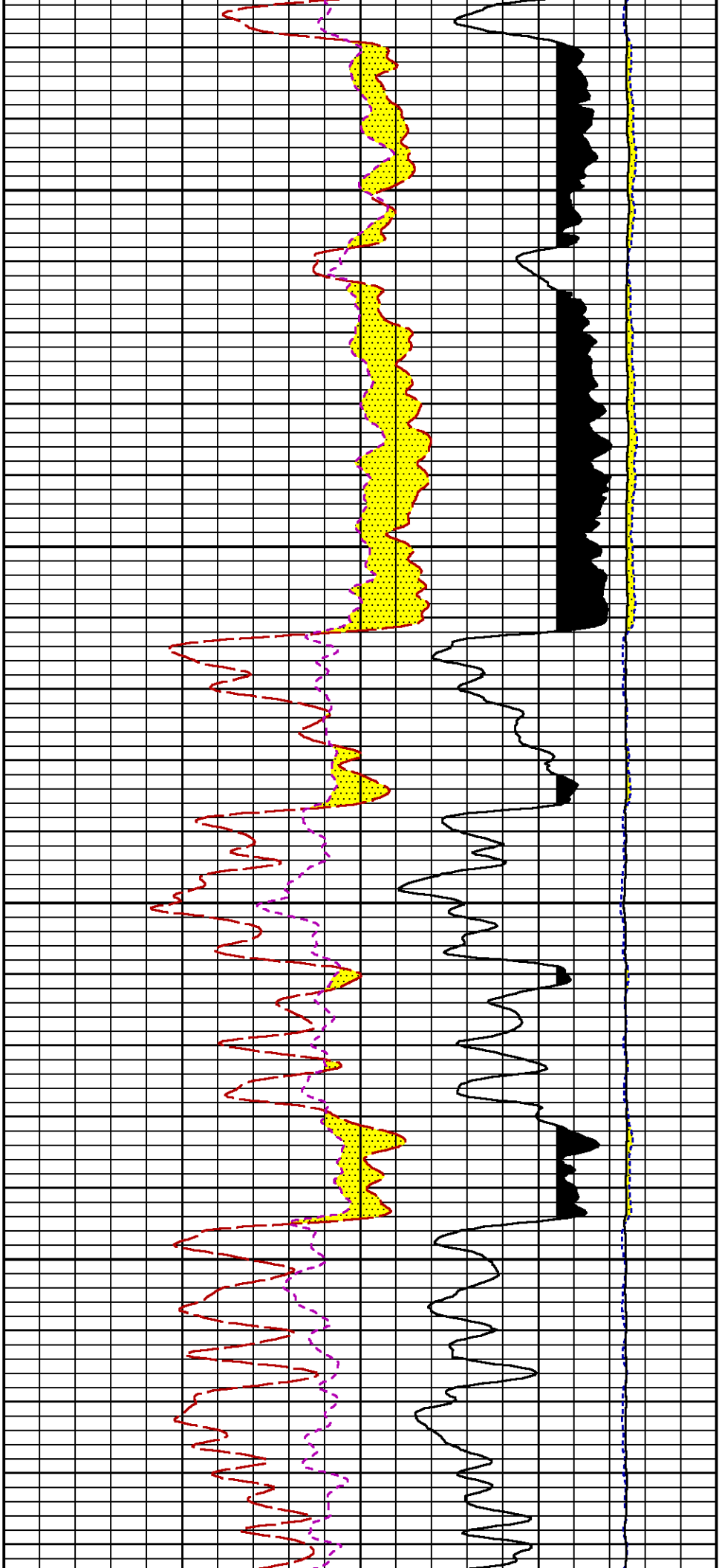


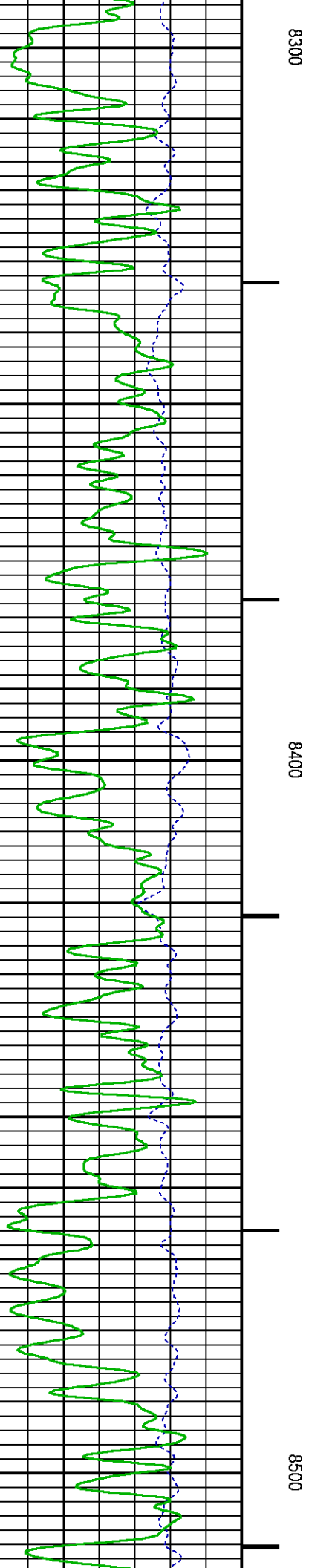
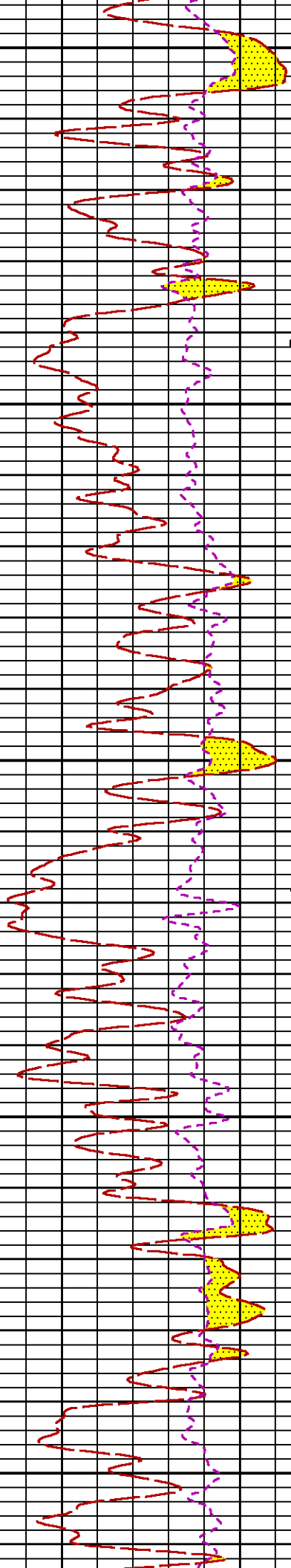
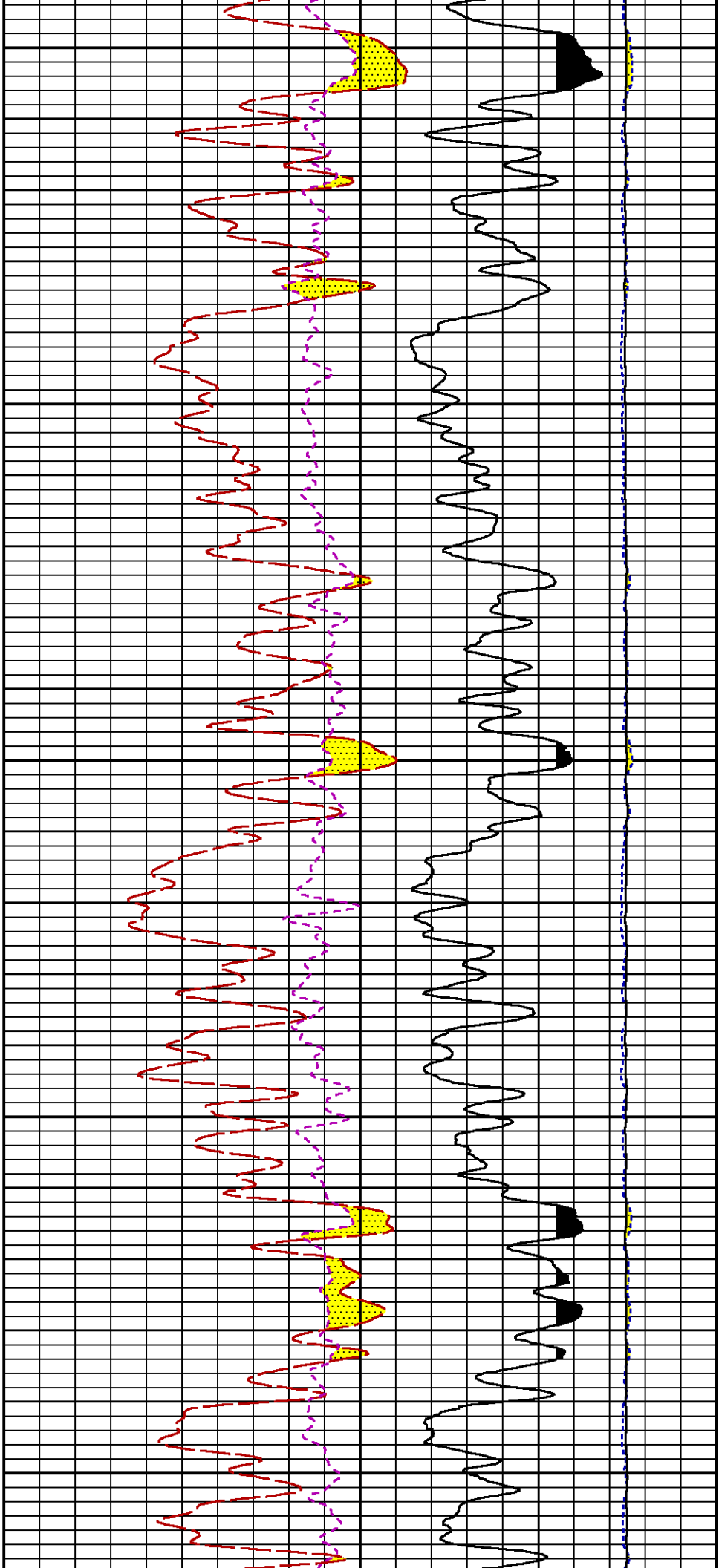








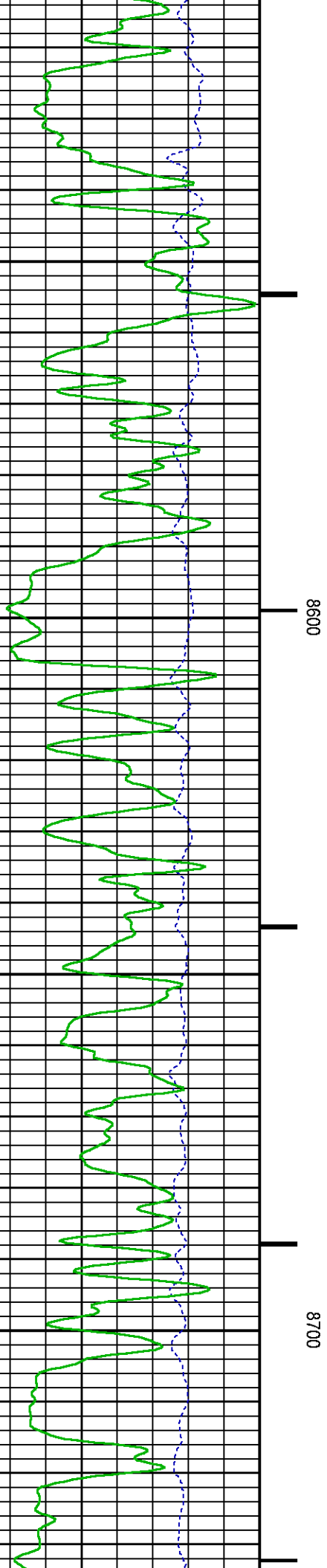
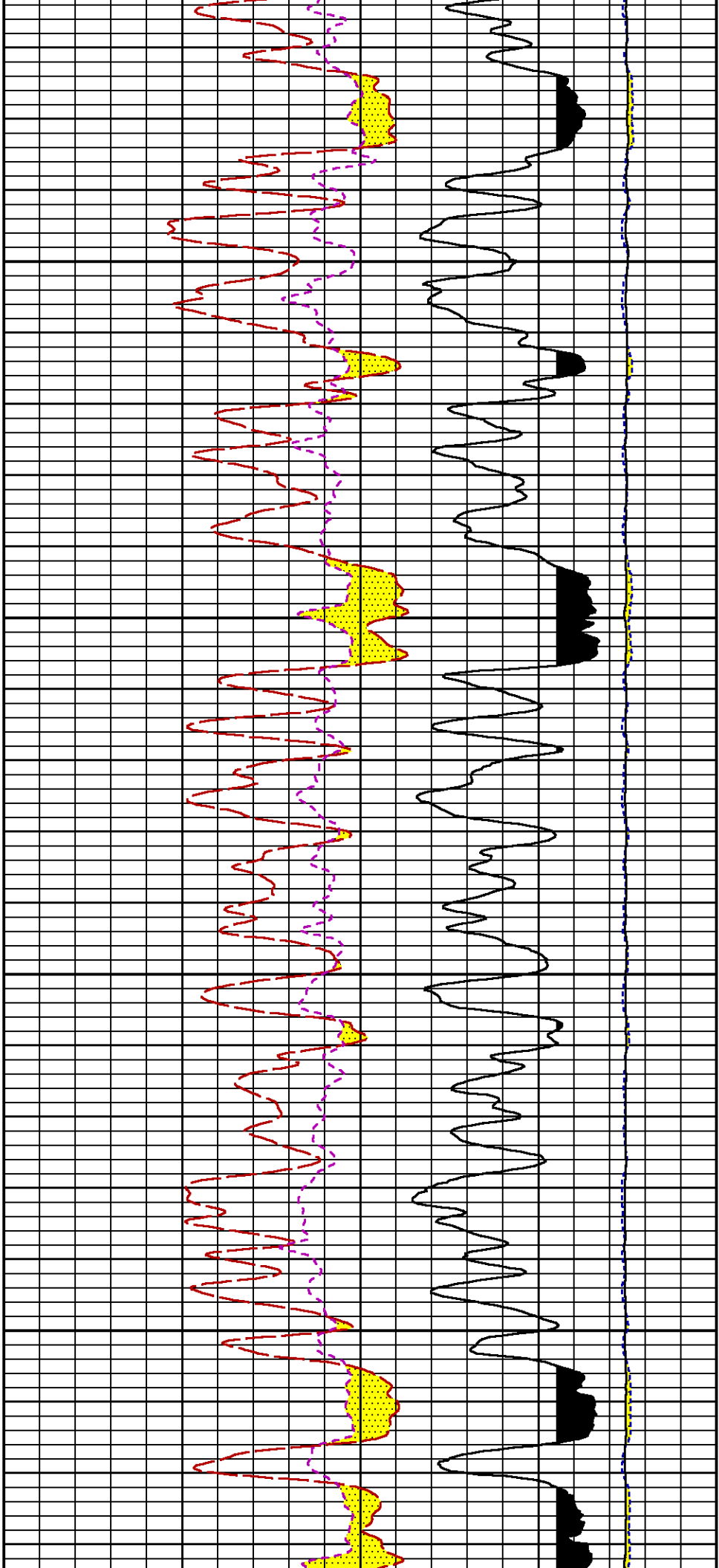


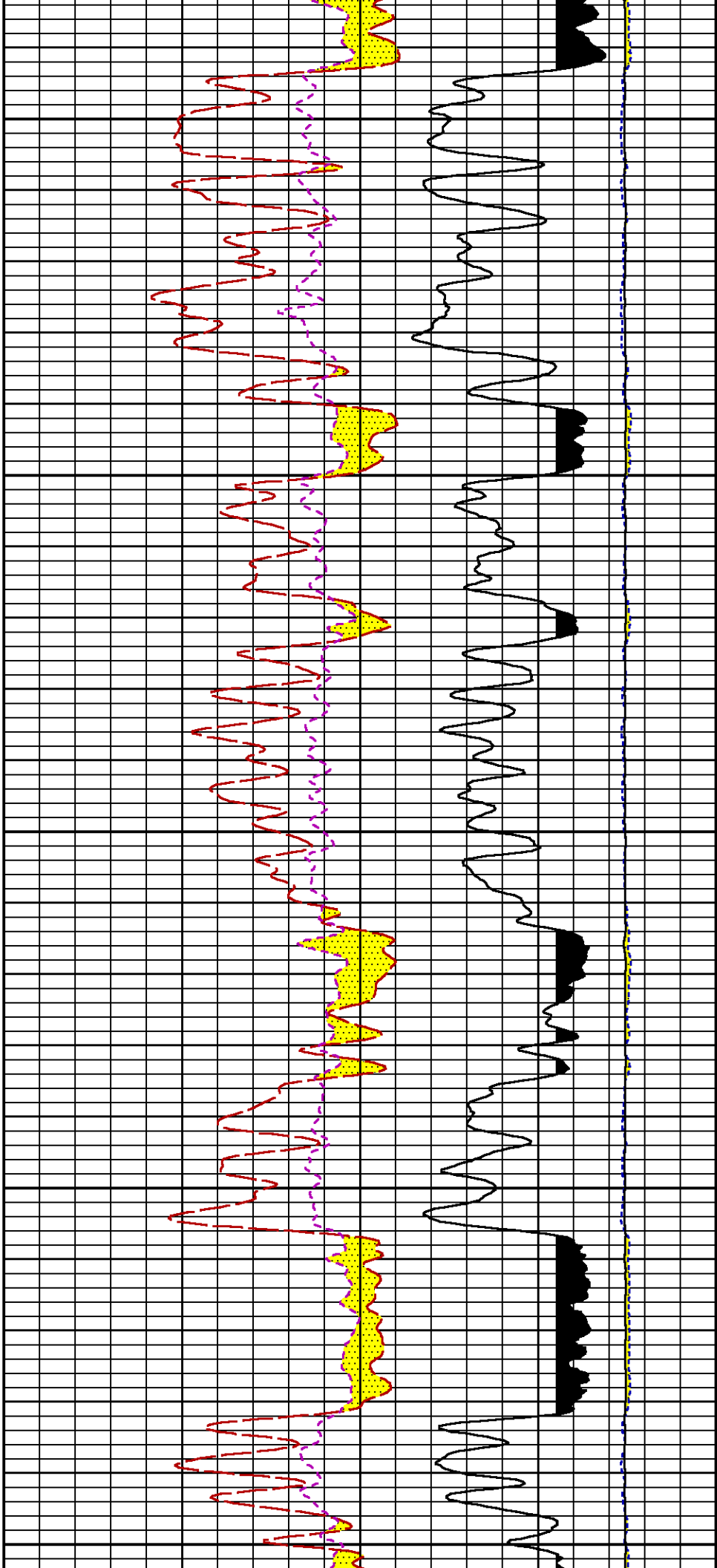


8300

8400

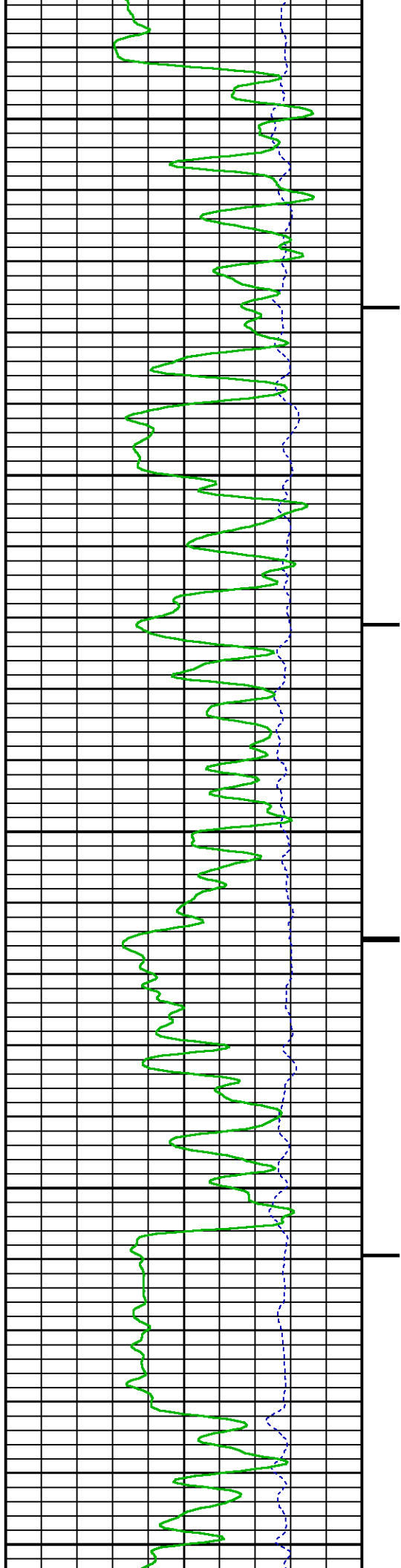
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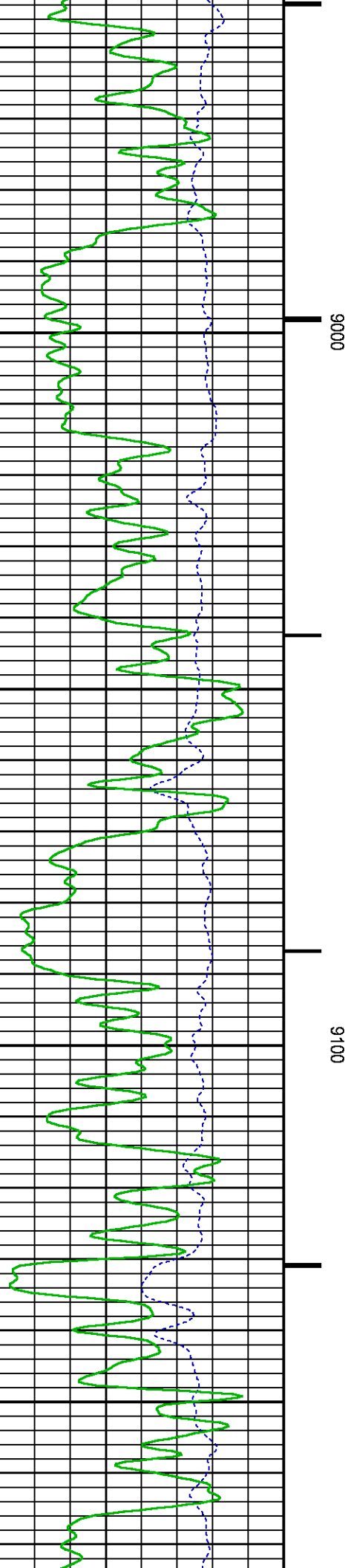
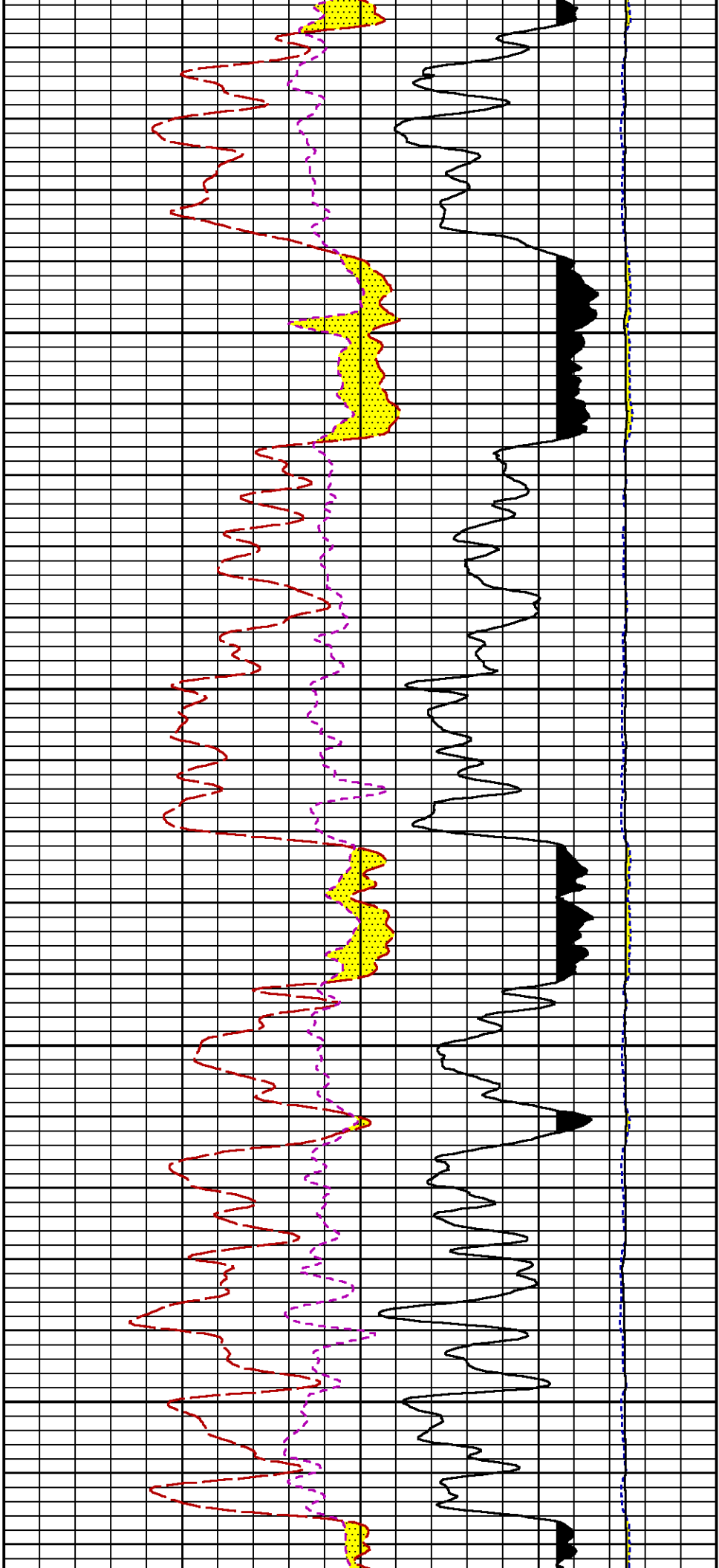


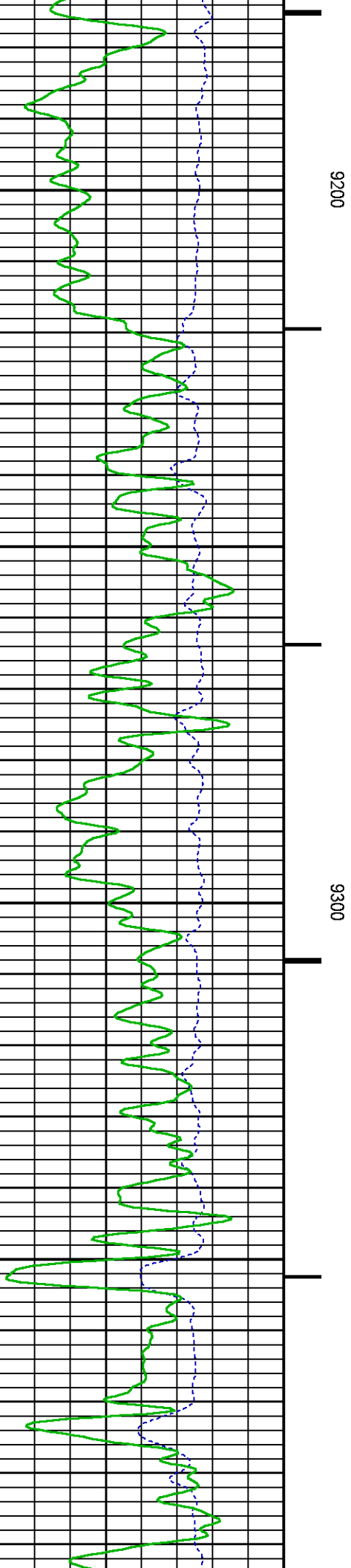
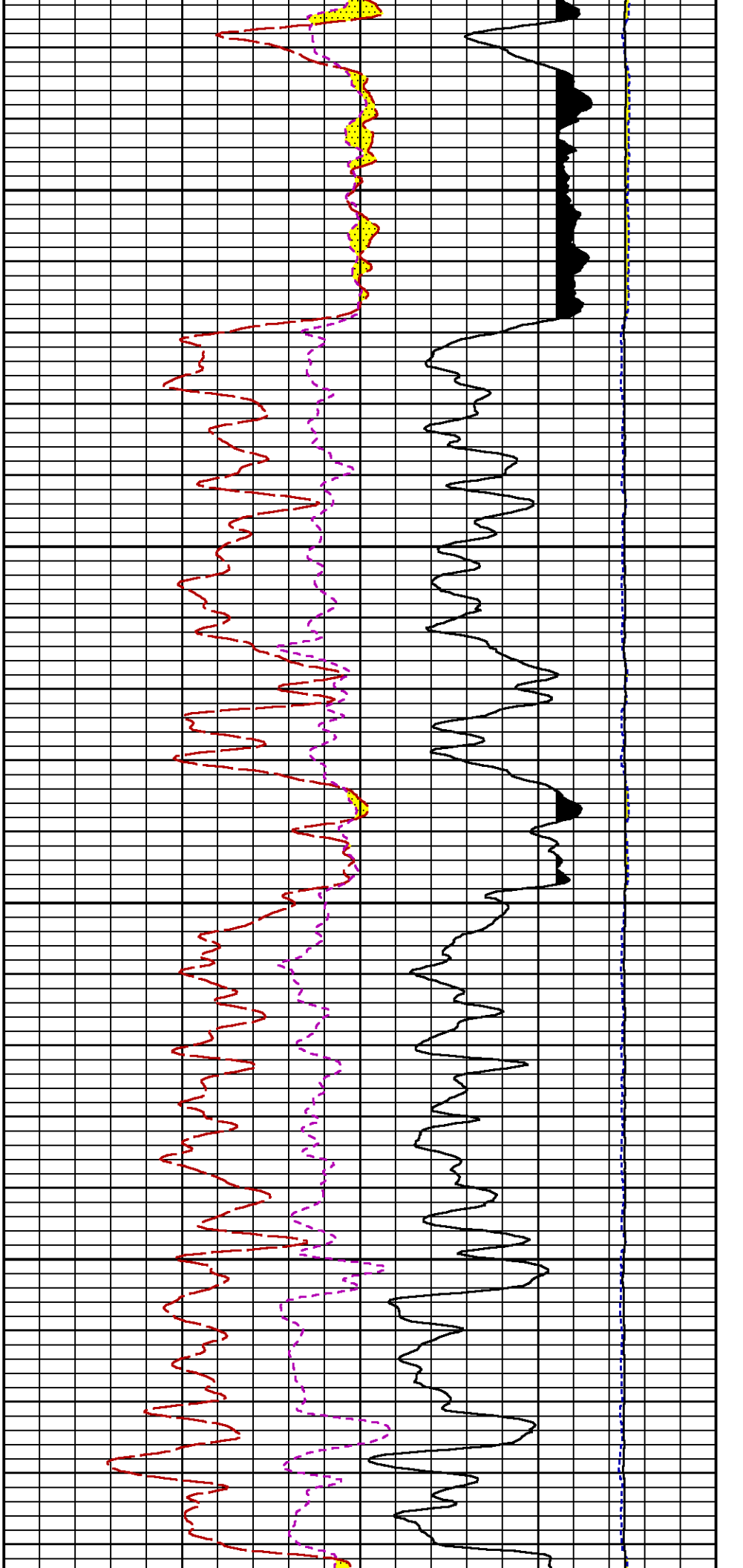
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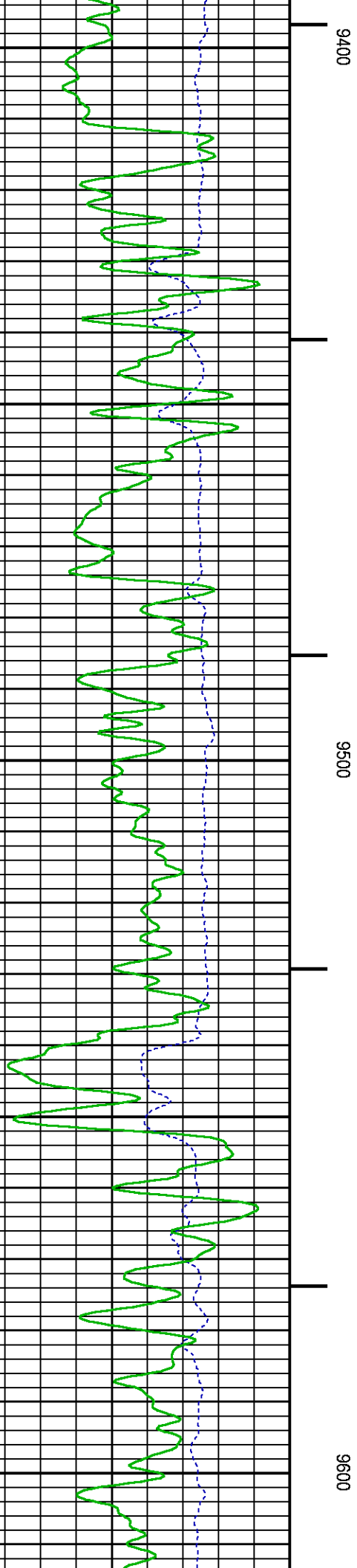
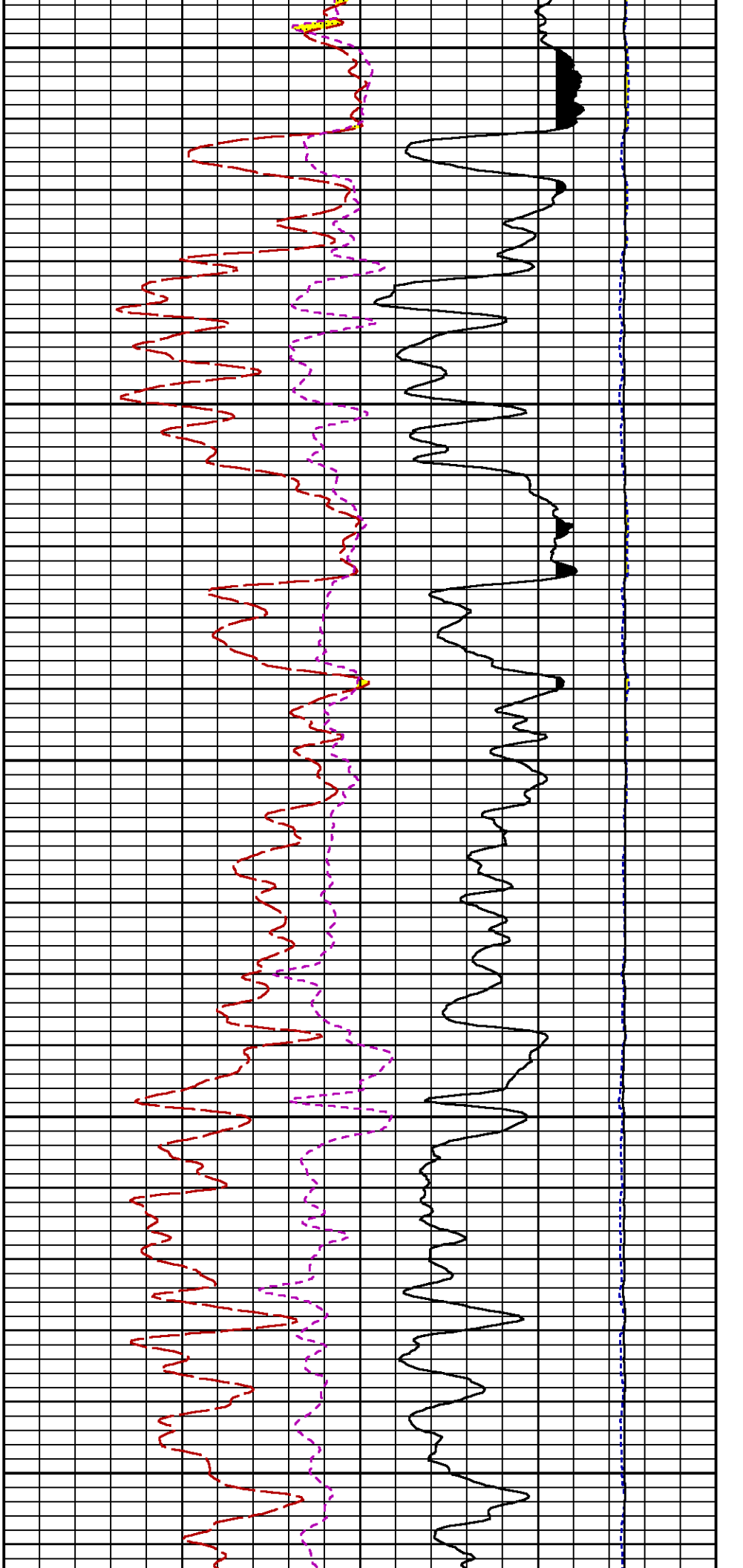
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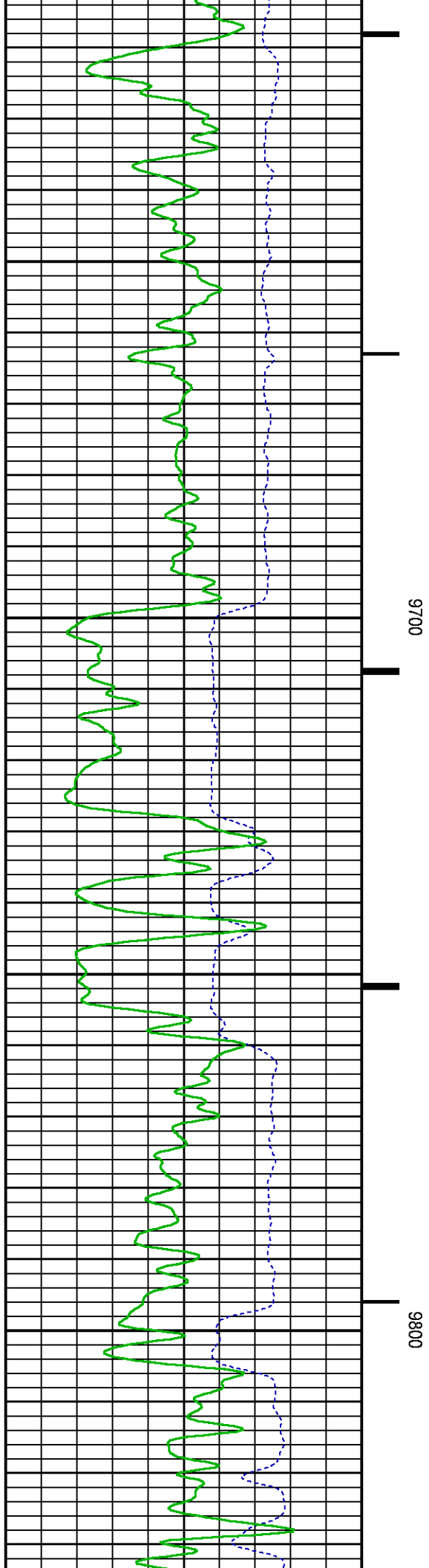
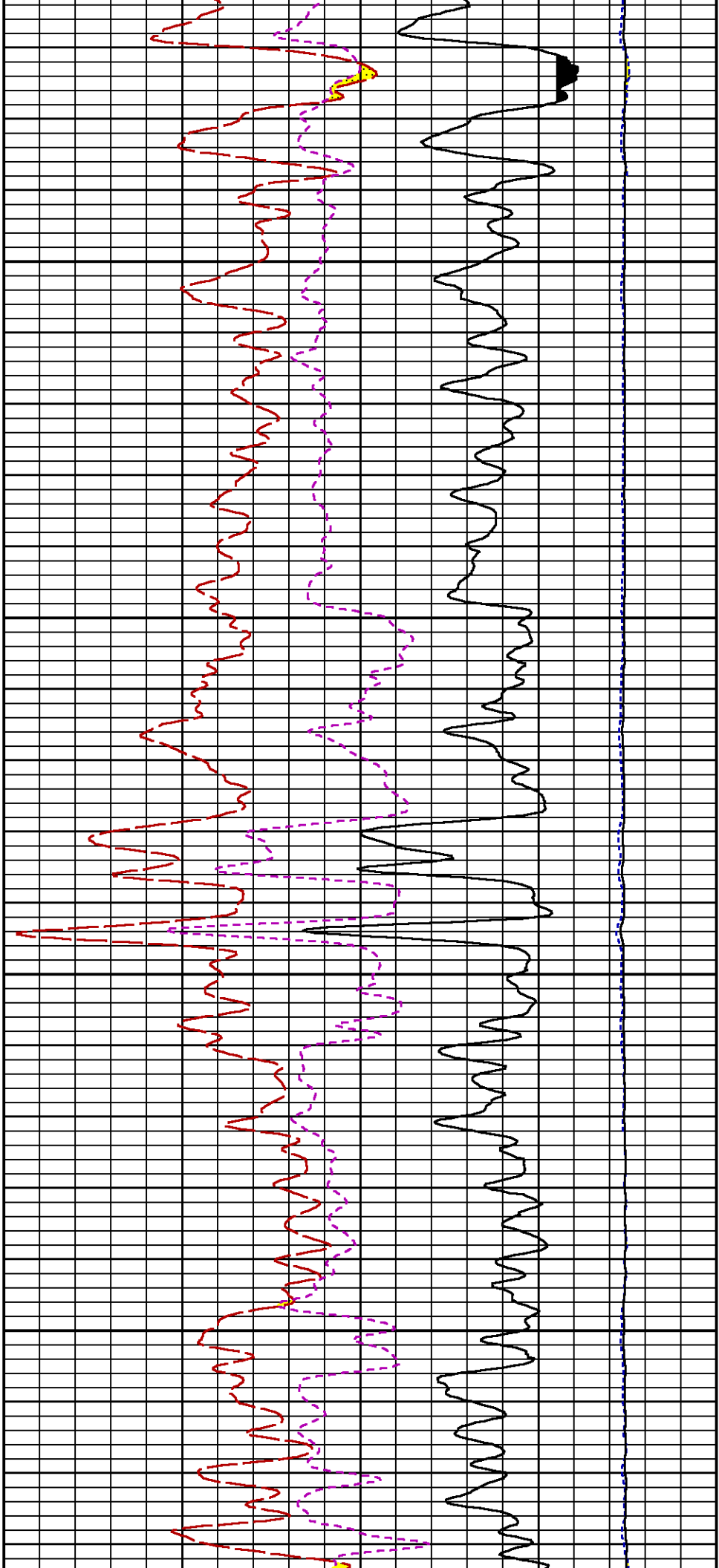


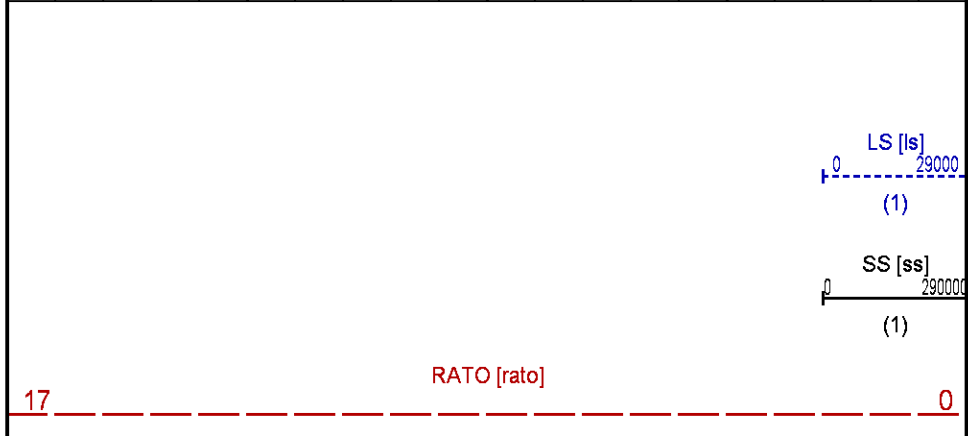
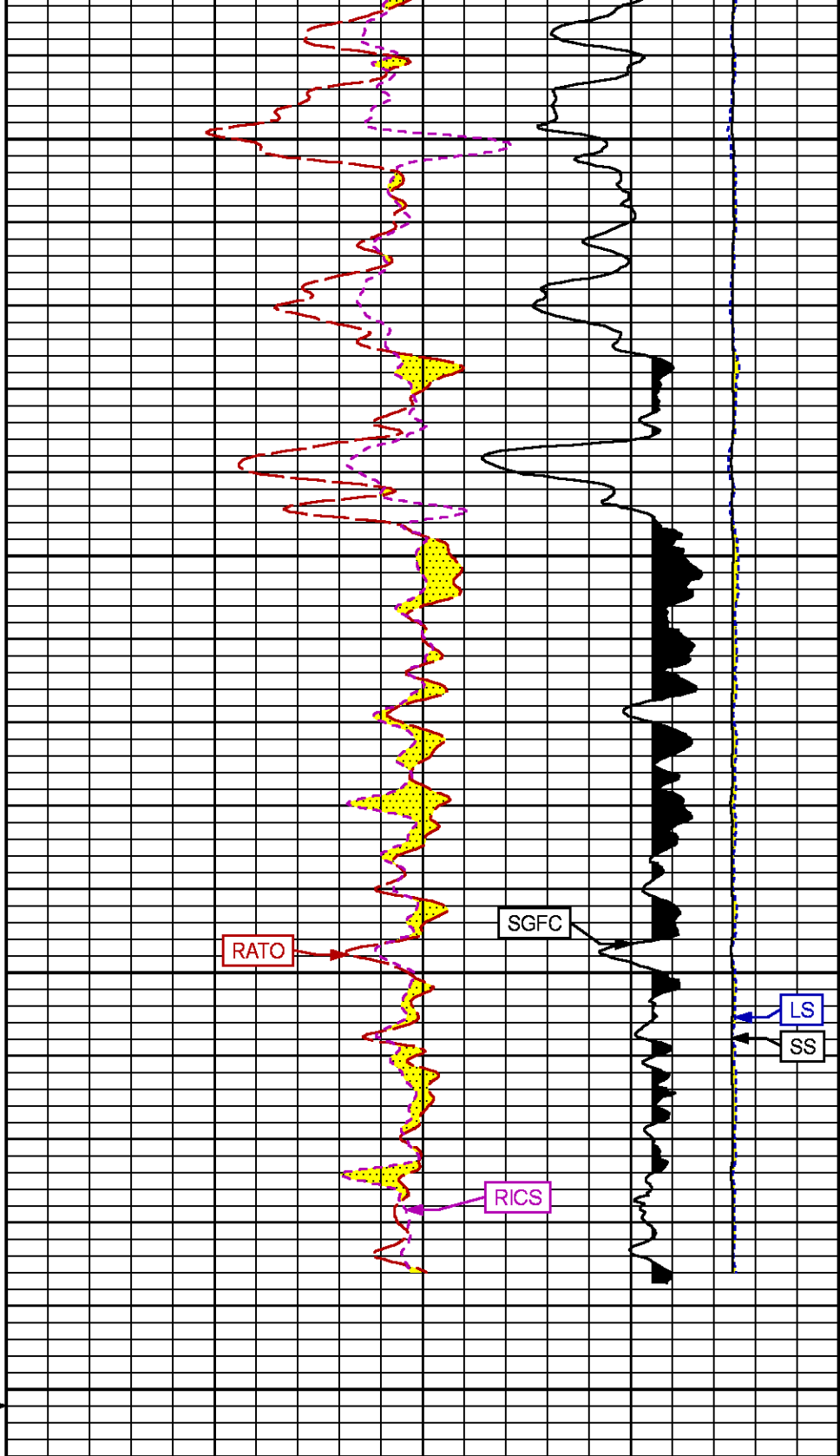
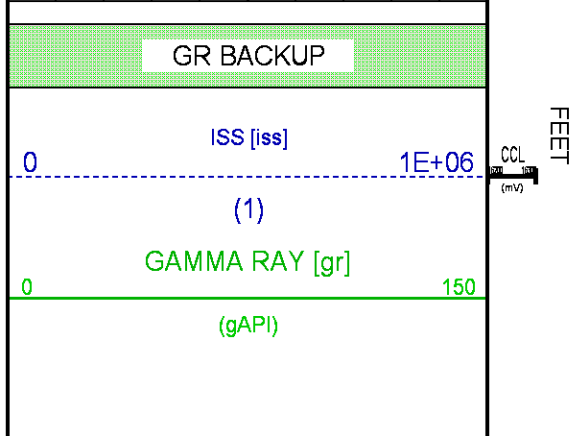
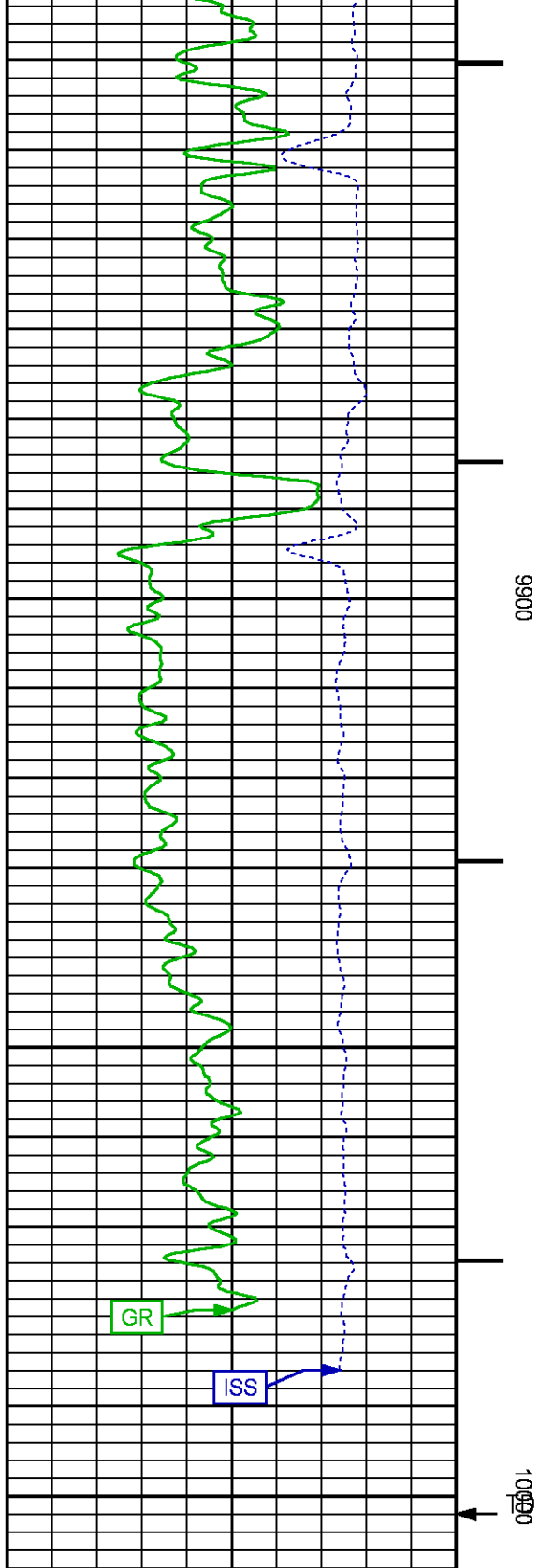












		(1)
		RICS [rics]
	39	9
		(1)
		SGFC [sgfc]
	60	0
		(1)

## REPEAT SECTION PNC-3D MODE

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

Updates: 1 Patches: 4

Plotted: Tue Feb 10 17:10:04 2015

### PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH094745/n354h01.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 9174.750 ft BOTTOM DEPTH: 9504.500 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	Feb 10 12:22:54 2015	CASING COLLAR LOCATOR
F1:GR	Feb 10 12:22:54 2015	GAMMA RAY
F1:ISS	Feb 10 12:22:54 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Feb 10 12:22:54 2015	LONG SPACE COUNT RATE
F1:RATO	Feb 10 12:22:54 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Feb 10 12:22:54 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Feb 10 12:22:54 2015	CORRECTED FORMATION SIGMA
F1:SS	Feb 10 12:22:54 2015	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 : HL6670:/dat1a/CH094745/431RPM\_REPEAT.fvpdf [5"/100' Scale]  
 Plot Interval : 9170 - 9480 Feet

Data File 1 : F1 : HL6670:/dat1a/CH094745/431RPM\_REPEAT.xtf  
 Created On : Feb 10 12:22:54 2015

Company : WPX ENERGY  
Well : YOUNBERG RU 431-7  
Field : RULISON  
File Interval : 9145.25 - 9499.75 Feet  
OCT : n354h

GR BACKUP

ISS [iss]

(1)

GAMMA RAY [gr]

(gAPI)

FEET

CCL  
(mV)

9200

9

LS [ls]

(1)

SS [ss]

(1)

RATO [rato]

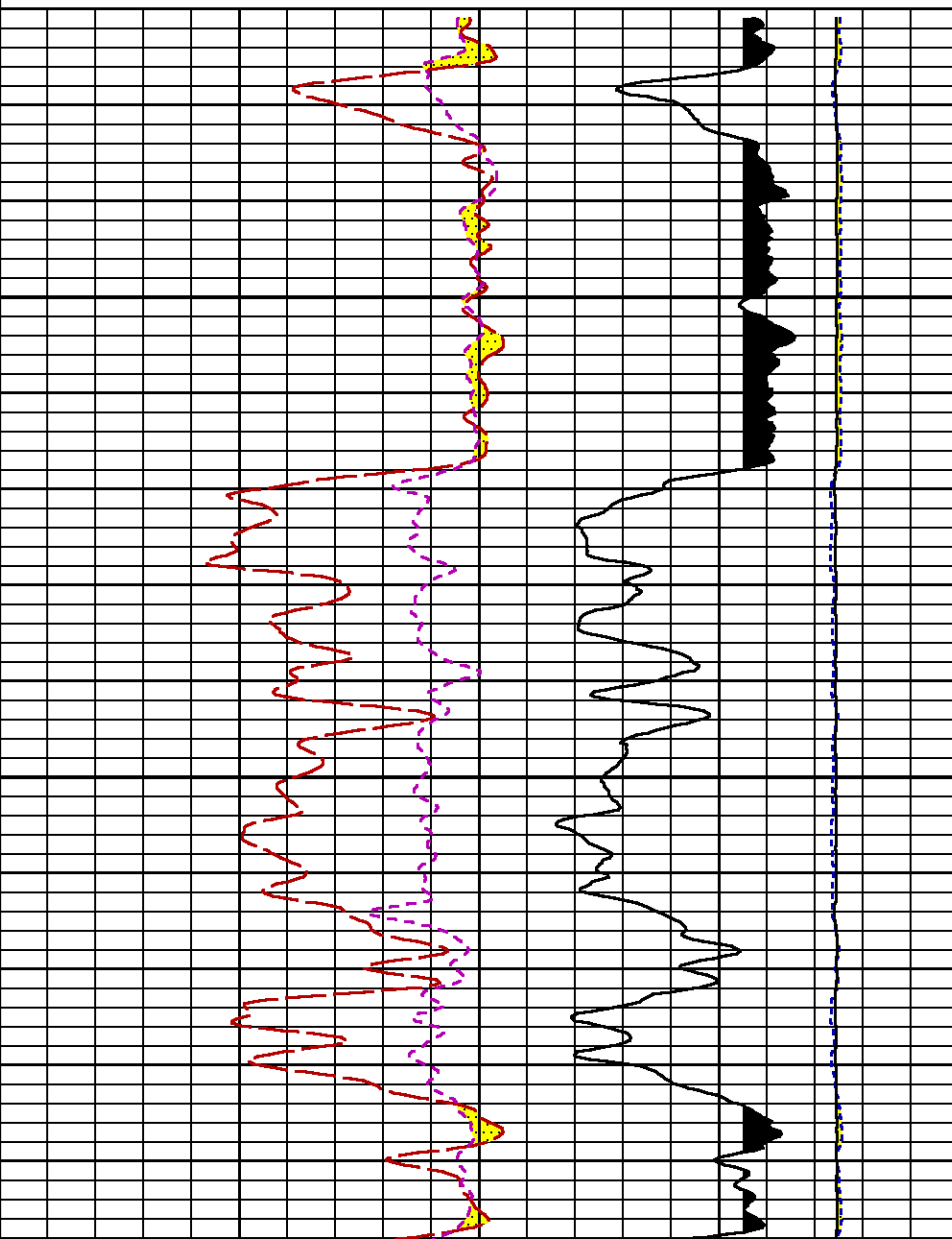
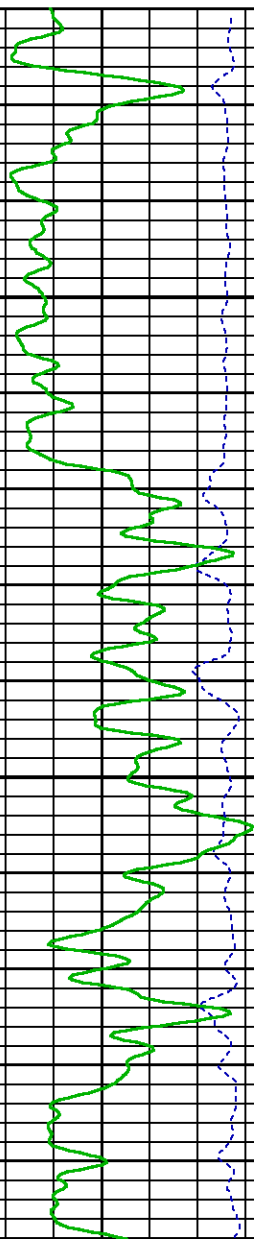
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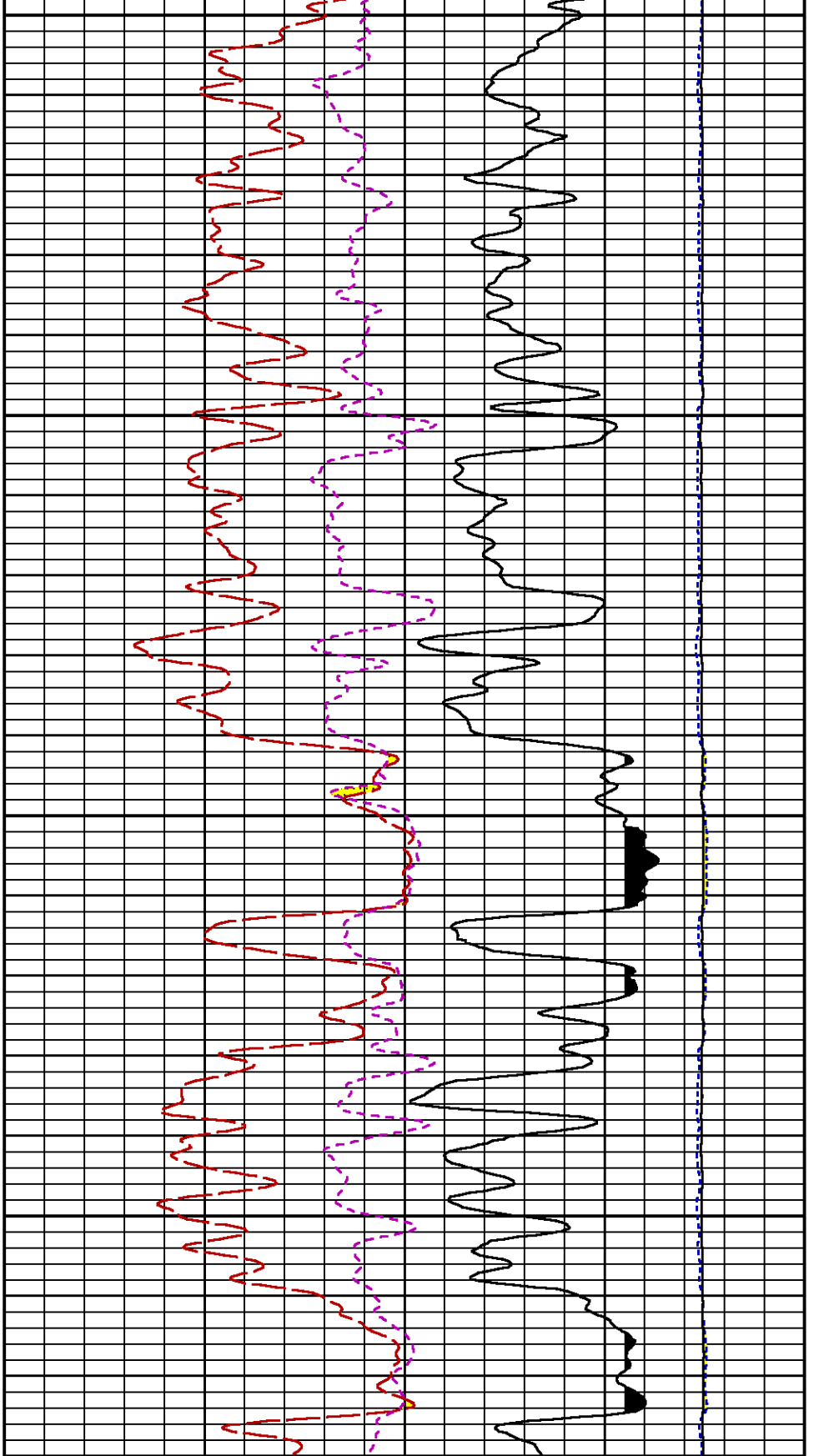
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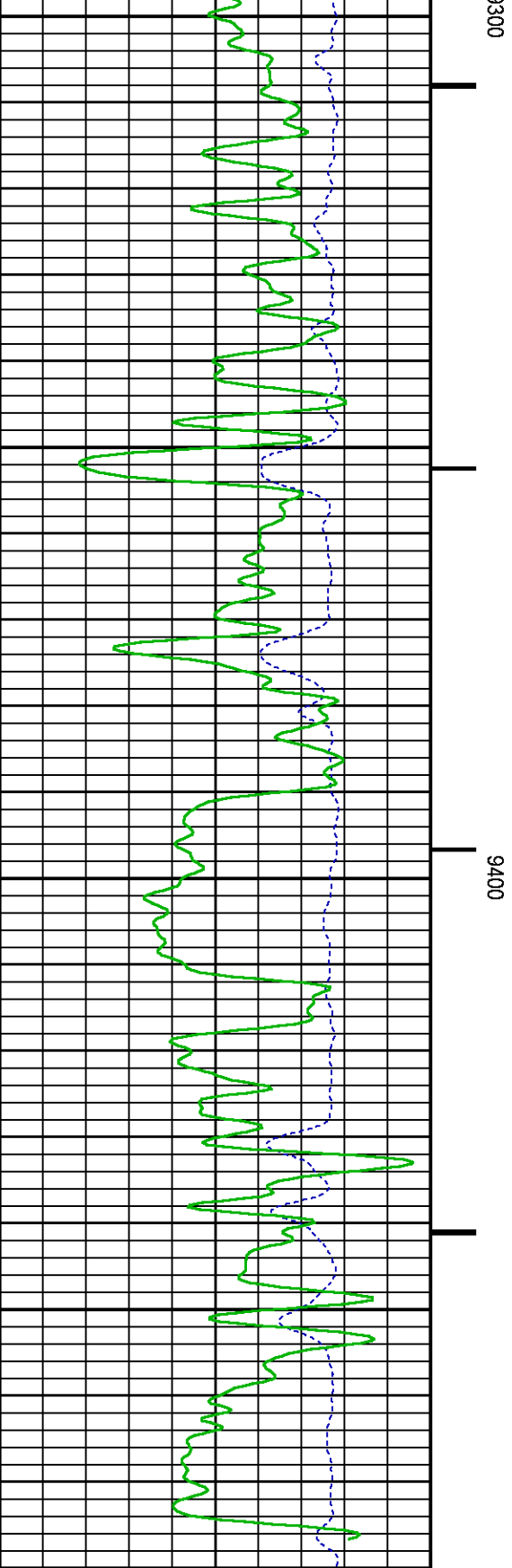
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(1)





LS [ls]  
 0 29000  
 (1)  
 SS [ss]  
 0 29000  
 (1)



GR BACKUP  
 ISS [iss]  
 0 1E+06  
 (1)  
 GAMMA RAY [gr]  
 0 150  
 (gAPI)

300

9400

FEET



## CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH094745/n354h.tp1

## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11701636 DATE/TIME PERFORMED: Tue Jan 27 10:08:15 2015

UNIT #: 3880TA HL6670 CALB JIG #: 4702NK DA-041

	BACKGROUND	CALBTR ON	CR DIFF	MULT	BACKGROUND	CALBTR ON	CALBTR
	(cts/s)	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	67.64	269.00	201.4	1.043	70.55	280.55	210

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11701636 DATE/TIME PERFORMED: Tue Jan 27 10:10:48 2015

UNIT #: 3880TA HL6670 VERI JIG #: 4702NK DA-041

	BACKGROUND	CALBRTR ON	MULT	BACKGROUND	CALBRTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	67.49	265.24	1.043	70.39	276.63	206.25
						200.00 220.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10169251 DATE/TIME PERFORMED: Tue Jan 27 10:04:14 2015  
UNIT: 3880TA HL6670 CALIBRATOR: 2437XB 112674 SOURCE: 8281AA 10220684 HOURS: 8281AA 268

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	803394	122	2321	2309	2329	93	7	0.9803
Interpolated	1300000	146	2297	2301	2324			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	803394	7751	1281	156	26.03	0.15	24.25	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	803394	169527	26361	88858	31643	8252	53759	13211
Fit Quality %		1.273	1.202	1.268	1.285	1.237	1.182	1.269

ISS	RBOR	RIN	RIN13	RICS	RATO	RTWO	RONE
ISS/ISS	RBOR/RBOR	RIN/RIN	RIN13/RIN13	RICS/RICS	RATO/RATO	RTWO/RTWO	RONE/RONE

Raw Data	803394	ISS/LS 1.43 1.42 1.45	ISS/RS 4.74 3.55 5.52	ISS/CS 30.49 22.20 32.70	SS/LS 14.95 10.99 16.34	SS/RS 10.77 10.06 11.10	SS/CS 3.84 3.57 3.95	CS/LS 4.07 3.76 4.22
Fit Quality %		0.044	0.072	0.089	0.025	0.185	0.202	0.178
Reduced	1409820	1.43 1.42 1.45	4.74 4.33 5.52	30.55 27.60 32.70	14.96 13.70 16.34	10.74 10.06 11.10	3.82 3.57 3.95	4.06 3.76 4.22

TPSETEMP PRIMARY CALIBRATION SUMMARY

TOOL #:

8255XA 11774568

DATE/TIME PERFORMED:

Wed May 14 12:39:45 2014

UNIT #:

3880TA HL6670

T(0)

T(1)

T(2)

T(3)

Corr Coeff for Temp

-9.274653E+00

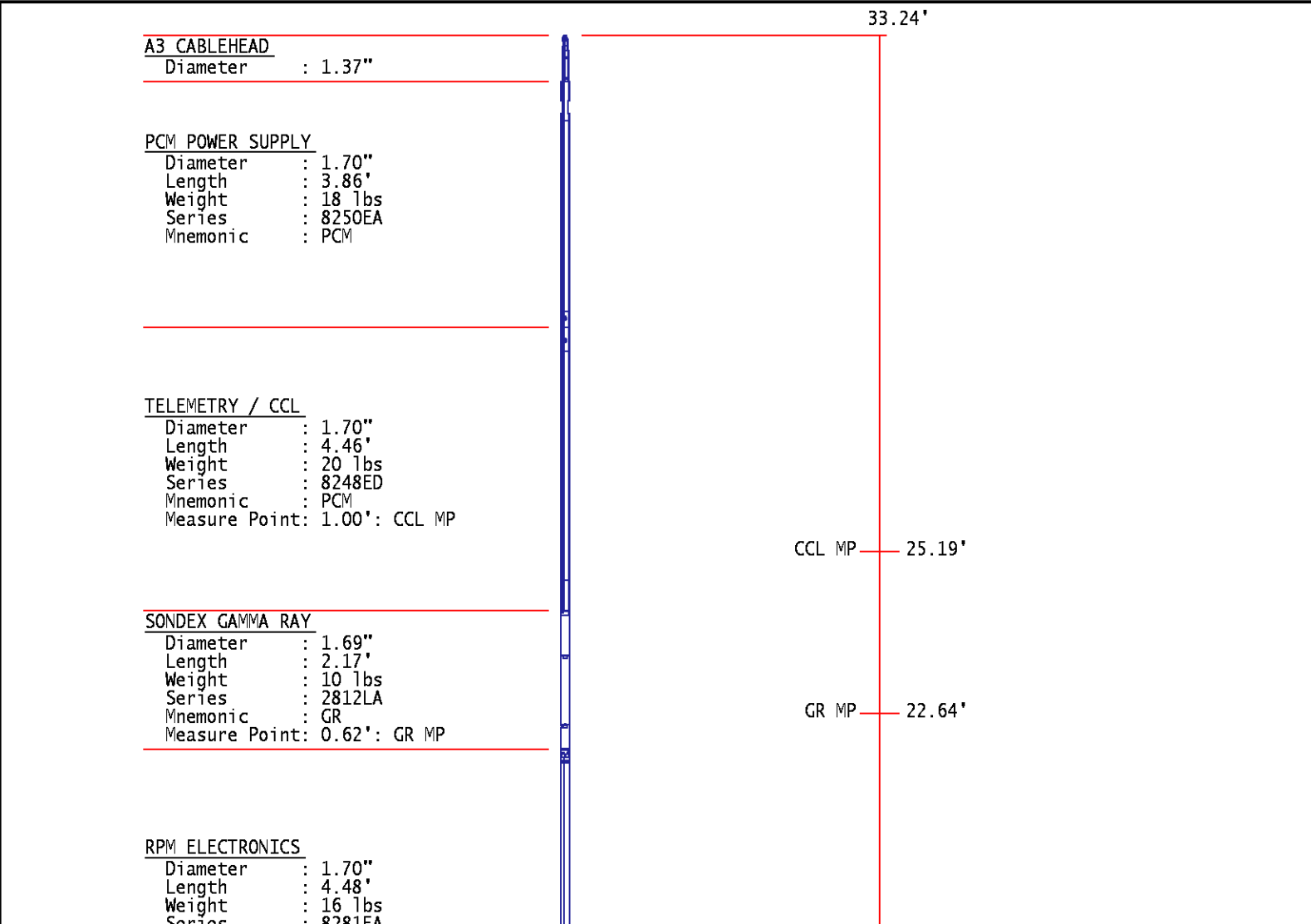
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2.143764E-06

-2.782846E-10

INSTRUMENT CONFIGURATION

Source File: /dat1a/CH094745/RPM-tdg



Series : 8281LA  
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

#### BULL PLUG 1 11/16

0.00'

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

	<b>COMPANY</b> <u>WPX ENERGY</u>		<b>FILE NO:</b> <u>CH094745</u>
	<b>WELL</b> <u>YOUBERG RU 431-7</u>		<b>API NO:</b> <u>05045223460000</u>
	<b>FIELD</b> <u>RULISON</u>		
	<b>COUNTY</b> <u>GARFIELD</u>	<b>STATE</b> <u>CO</u>	
<b>LOCATION:</b> SHL: 2452' FNL & 379' FEL BHL: 1052' FNL & 1164' FEL		<b>ELEVATIONS:</b> KB 7763 FT DF GL 7737 FT	7 7S 93W RU 42-7 PAD NABORS 574
<b>SEC</b> <u>7</u> <b>TWP</b> <u>7S</u> <b>RGE</b> <u>93W</u>		<b>DATE</b> <u>10-Feb-2015</u>	