



FILE NO: CH096029	COMPANY WELL FIELD COUNTY	WPX ENERGY YOUBERG RU 433-7 RULISON GARFIELD	STATE CO
API NO: 05045225130000			

Ver. 4.01 7 7S 93W RU 44-7 PAD NABORS 576	LOCATION: SHL: 1146' FSL & 1193' FEL BHL: 1853' FSL & 2167' FEL SEC 7 TWP 7S RGE 93W	OTHER SERVICES BOND LOG
--	---	----------------------------

PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB KB KB	ELEVATION 7917 FT 26 FT ABOVE P.D.
		ELEVATIONS: KB 7943 FT DF GL 7917 FT

DATE	20-Apr-2015
RUN	1
SERVICE ORDER	US096029
DEPTH DRILLER	10030 FT
DEPTH LOGGER	9992 FT
BOTTOM LOGGED INTERVAL	9982 FT
TOP LOGGED INTERVAL	6023 FT
TIME STARTED	11:00
TIME FINISHED	17:00
OPERATOR RIG TIME	6 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	84 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	251 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	20-Apr-2015
EQUIP. NO.	HL-6670
LOCATION	GRAND JCT.
RECORDED BY	NEWELL
WITNESSED BY	KENT HEIL

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	26 FT	1311 FT
8.75 IN	1311 FT	10084 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			26 FT	1311 FT
4.5 IN	11.6 LB/F	P-110	26 FT	10084 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 20/APR/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 +6 feet.

Logged in PNC-3D mode.

BHT = 251 degF  
SJ = 6821' - 6843'

## 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	10190984	FREE
1	1	RPM	8283PA	10414345	FREE
1	1	RPM	8281FA	10401926	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: 6

Plotted: Mon Apr 20 16:42:52 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096029/n354h02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 6017.250 ft BOTTOM DEPTH: 10001.956 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	Apr 20 12:22:12 2015	CASING COLLAR LOCATOR
F1:GR	Apr 20 12:22:12 2015	GAMMA RAY
F1:ISS	Apr 20 12:22:12 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 20 12:22:12 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 20 12:22:12 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 20 12:22:12 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 20 12:22:12 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 20 12:22:12 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/CH096029/433RPM\_MAIN.fvpdf [5"/100' Scale]  
 Plot Interval : 6020 - 9997 Feet

Data File 1 : F1 : HL6670:/dat1a/CH096029/433RPM\_MAIN.xtf  
 Created On : Apr 20 12:22:12 2015  
 Company : WBY ENERGY

Company : WPA ENERGY  
Well : YOUNBERG RU 433-7  
Field : RULISON  
File Interval : 5992.25 - 9999.75 Feet  
OCT : n354h

GR BACKUP

ISS [iss]

1E+06

(1)

GAMMA RAY [gr]

150

(gAPI)

FEET

CCL  
(m)

6100

GR

ISS

LS [ls]

29000

(1)

SS [ss]

290000

(1)

RATO [rato]

17

0

(1)

RICS [rics]

38

8

(1)

SGFC [sgfc]

60

0

(1)

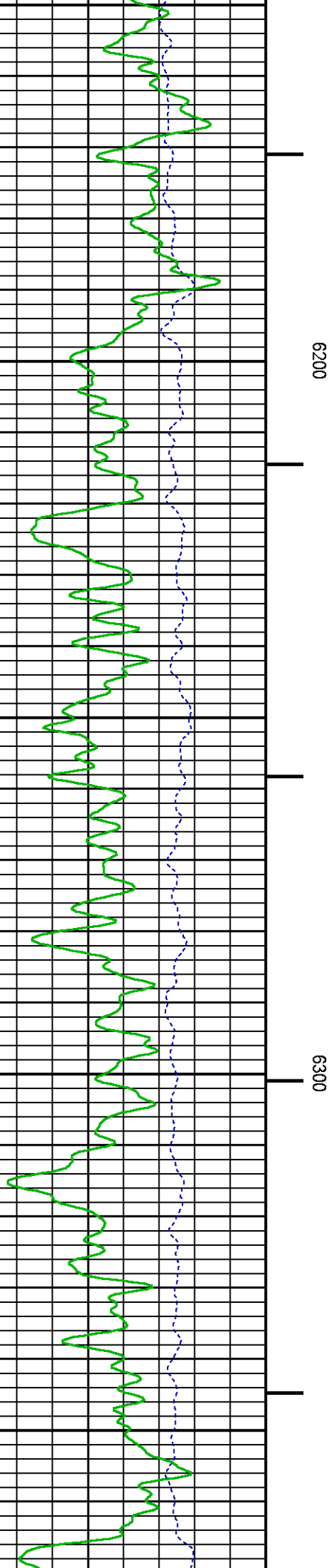
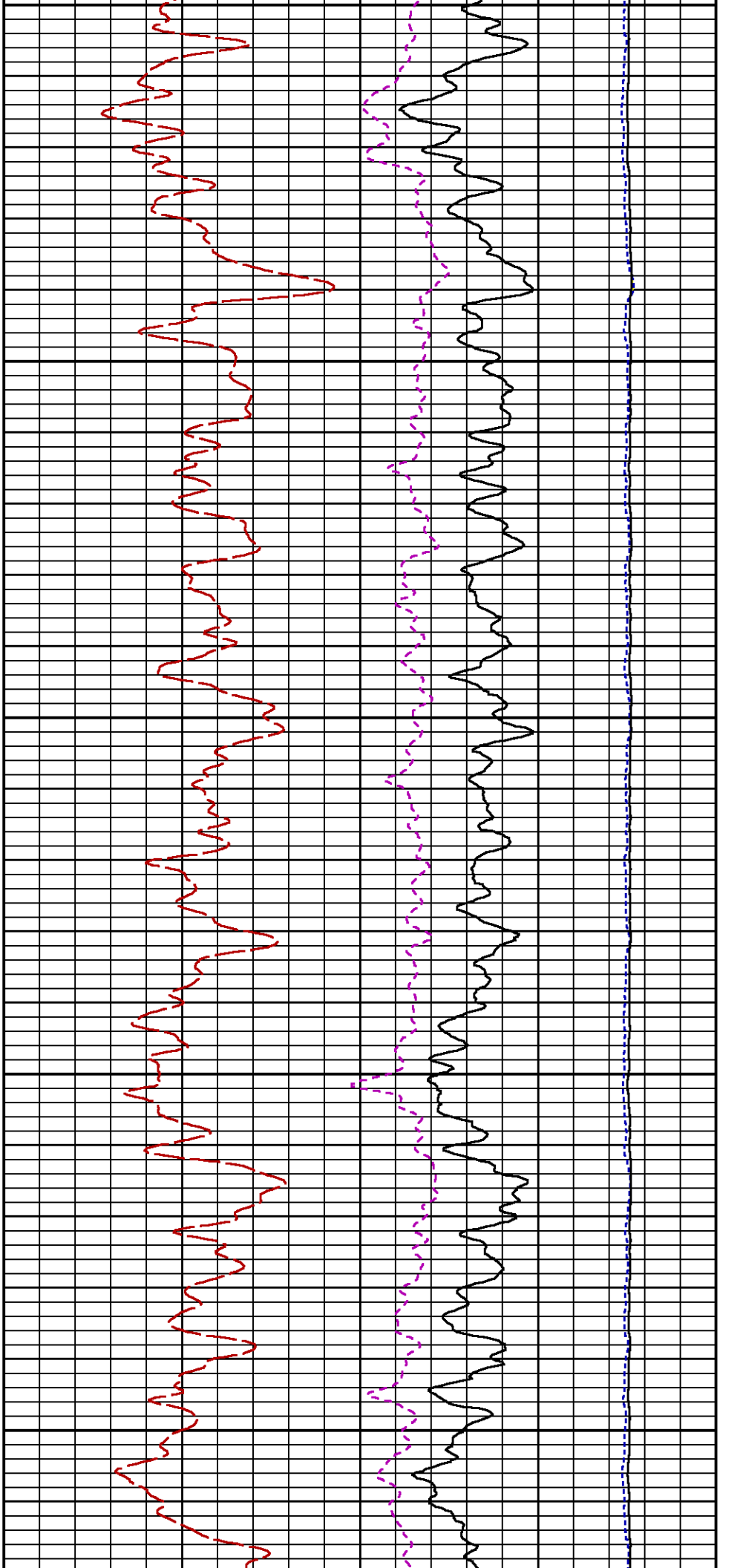
LS

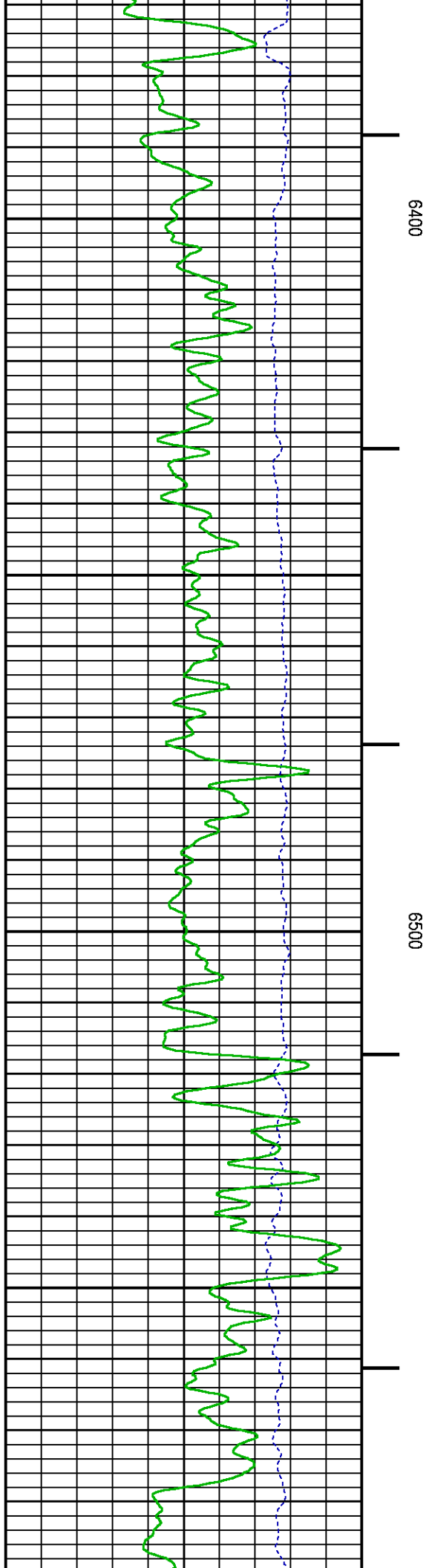
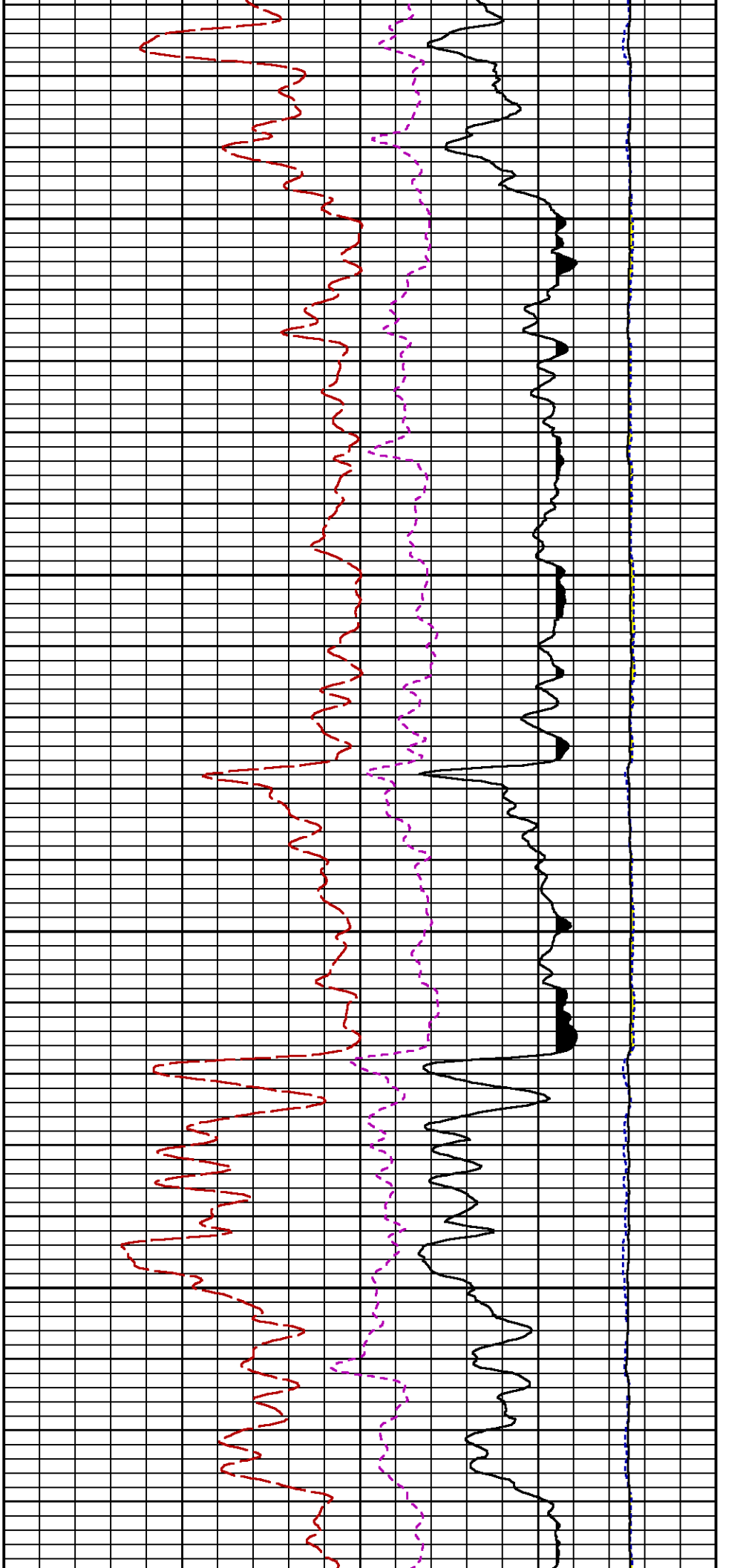
SS

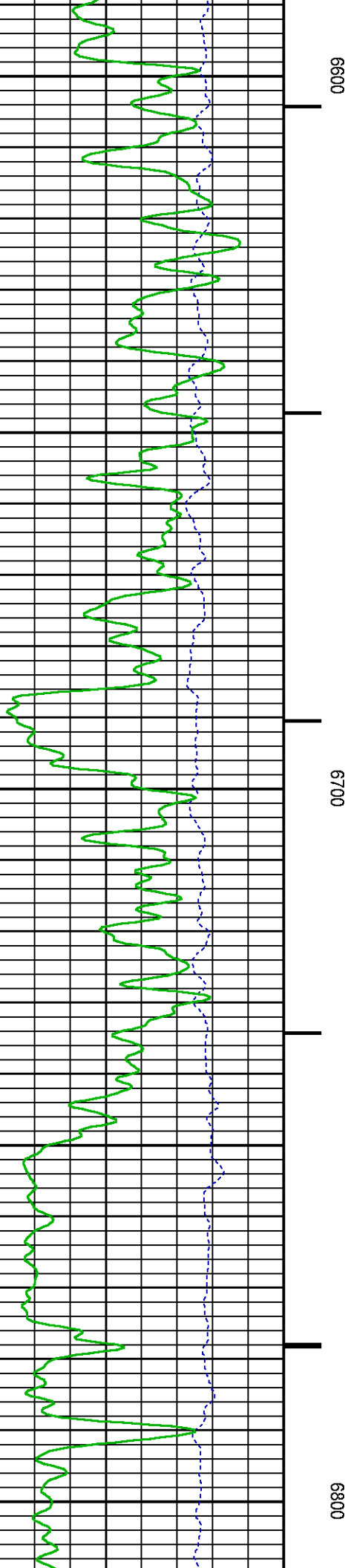
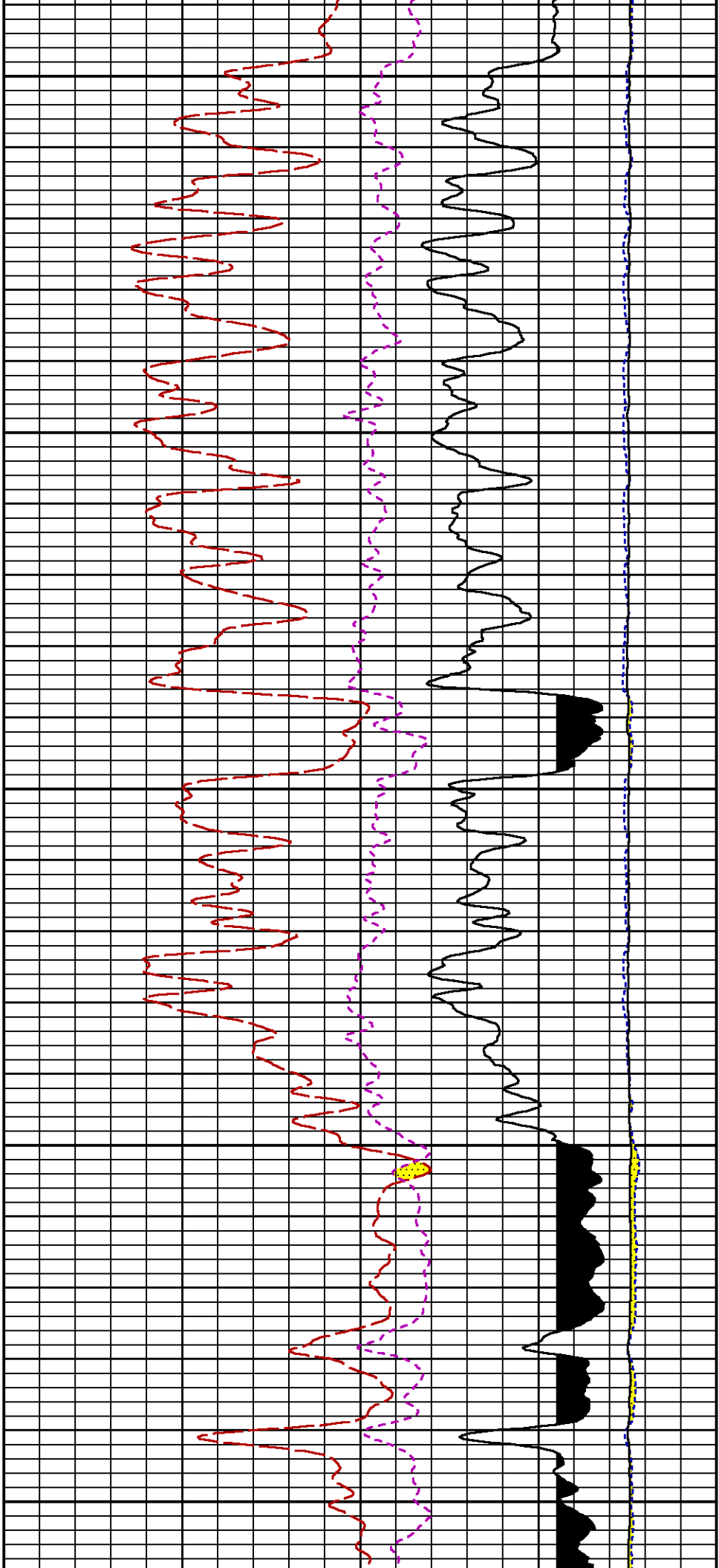
RATO

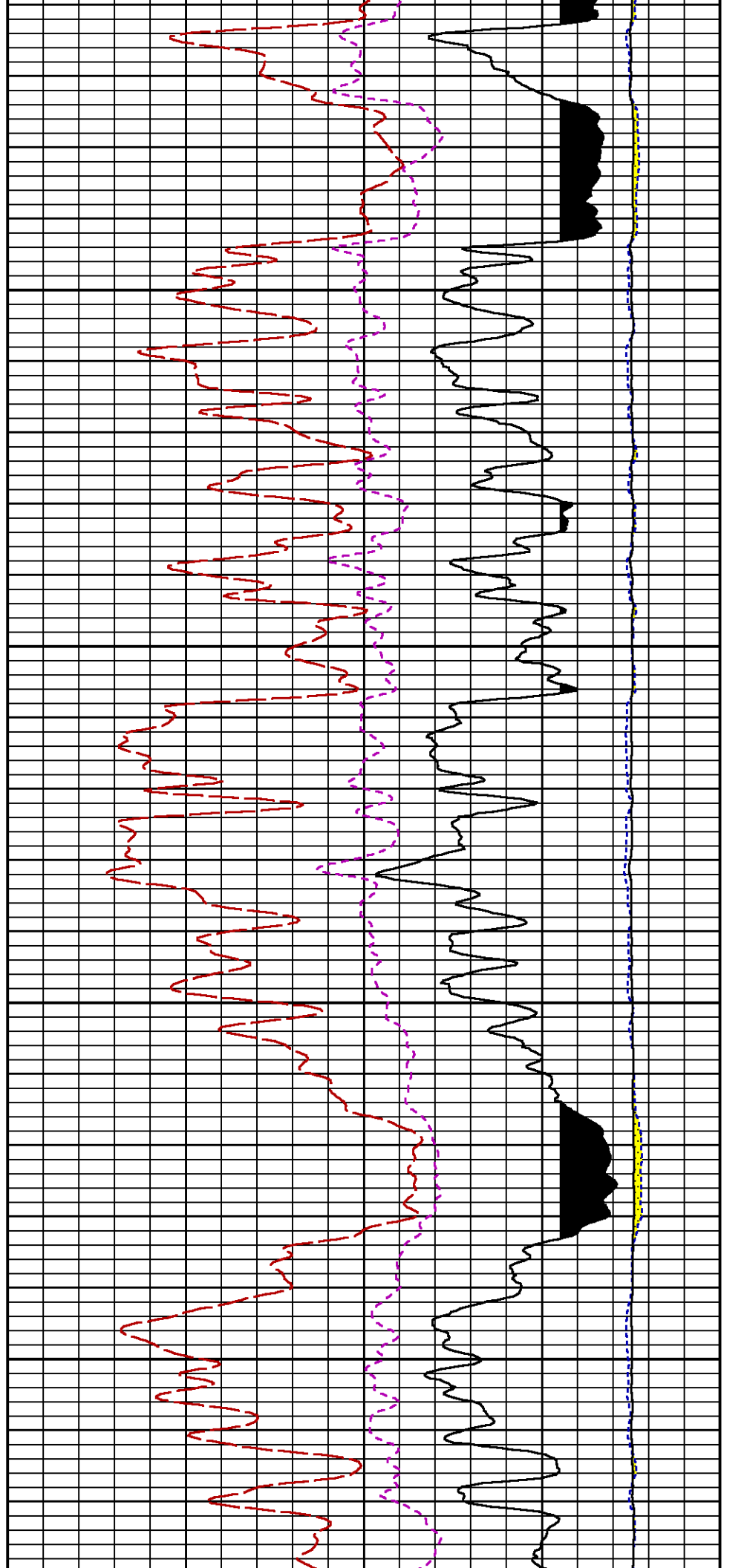
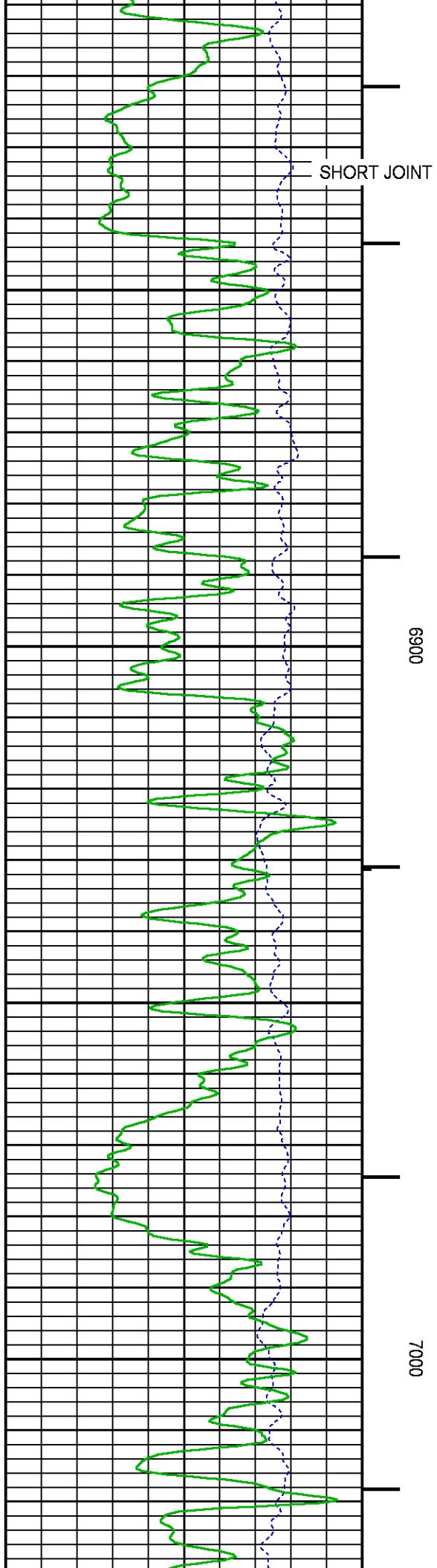
RICS

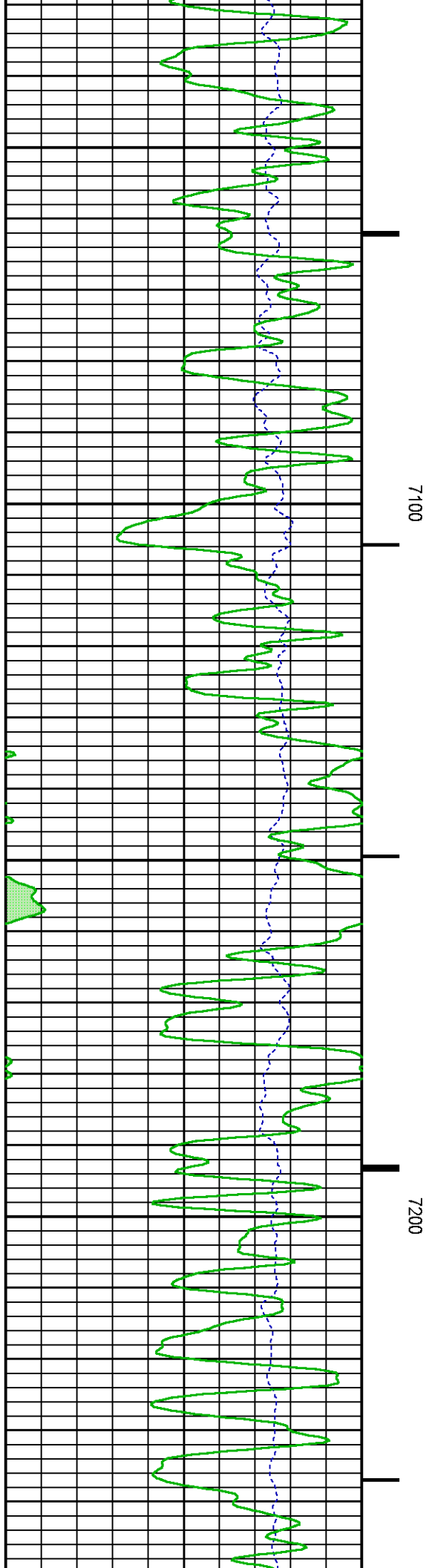
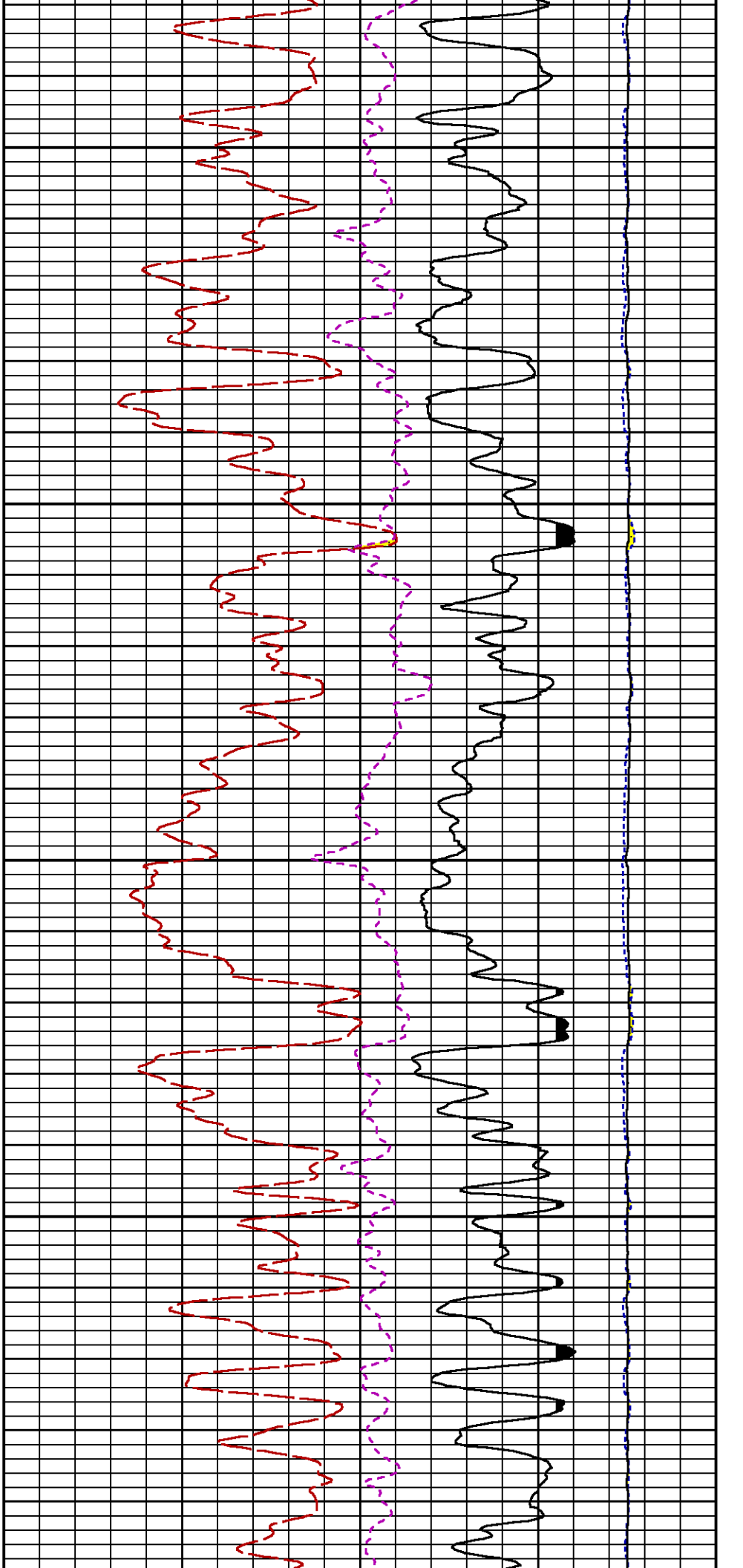
SGFC



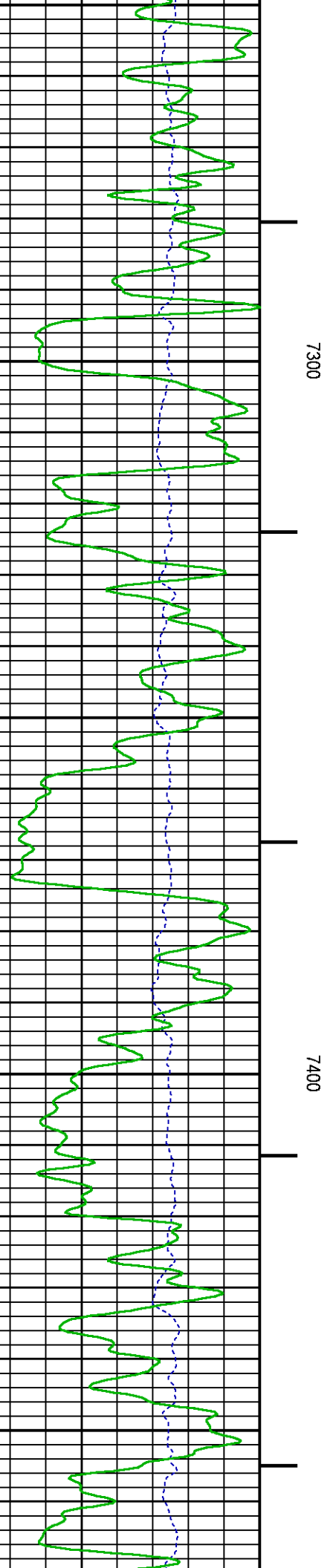
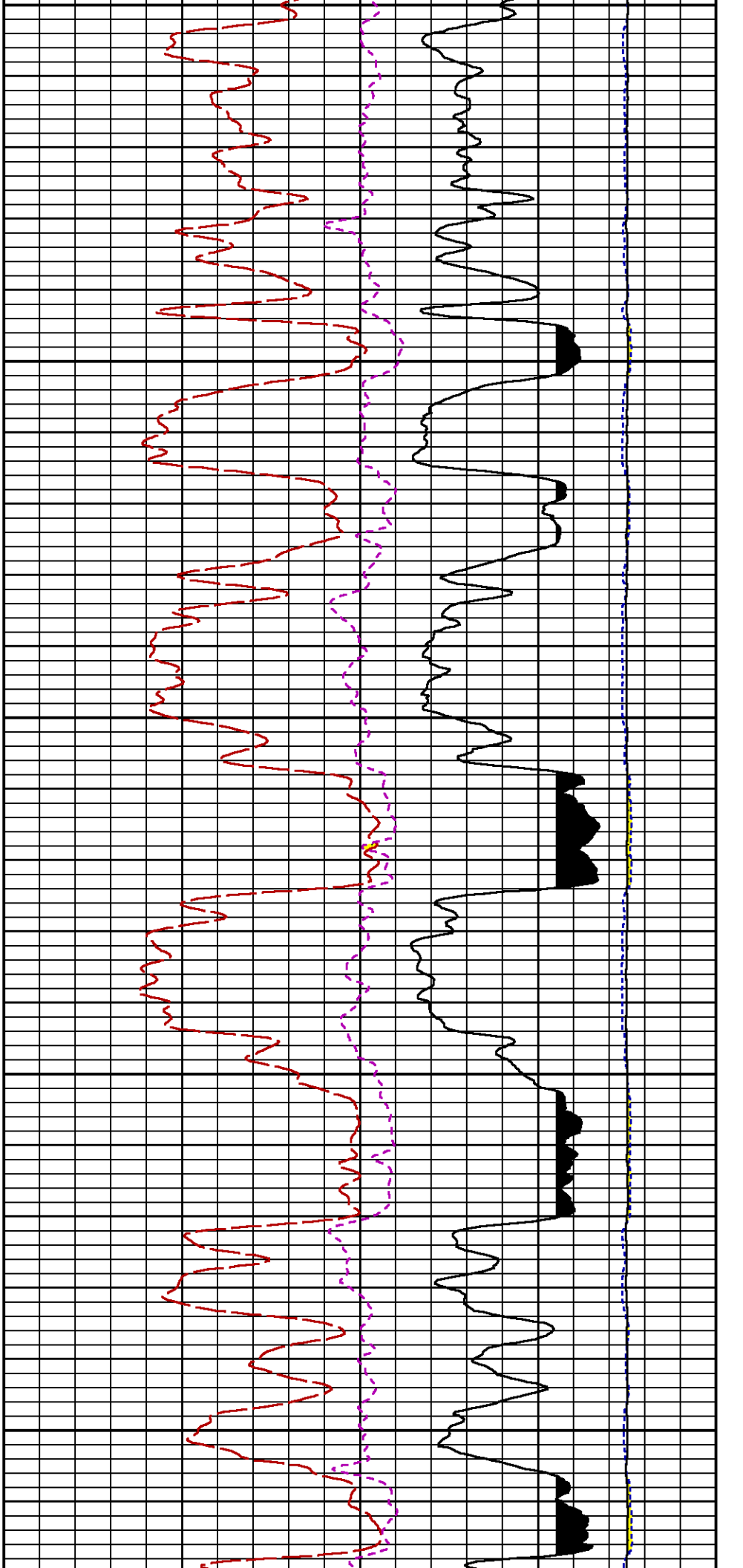


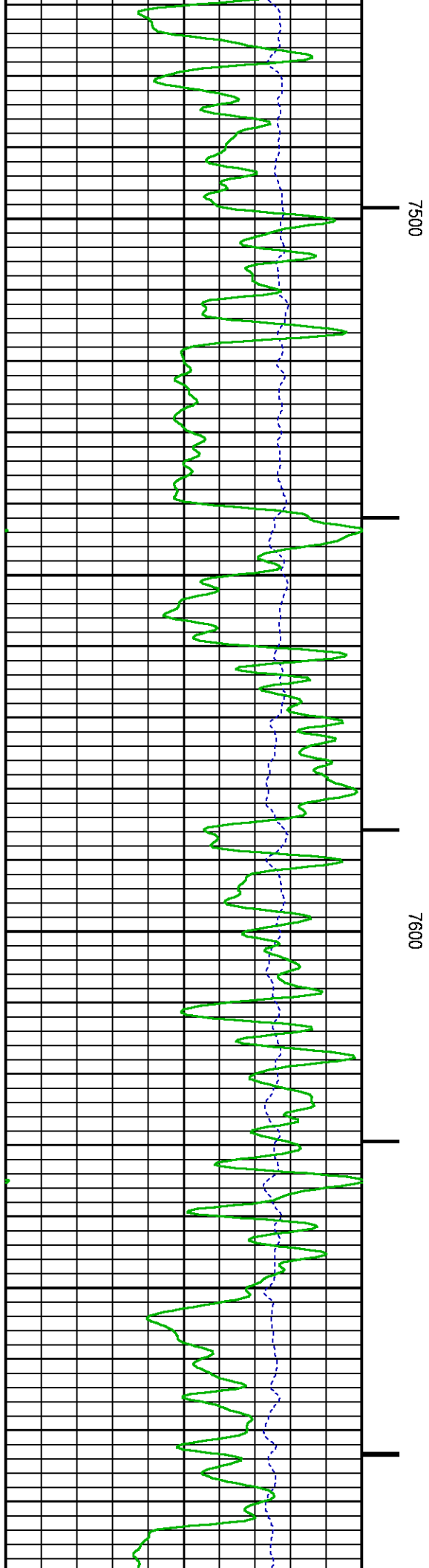
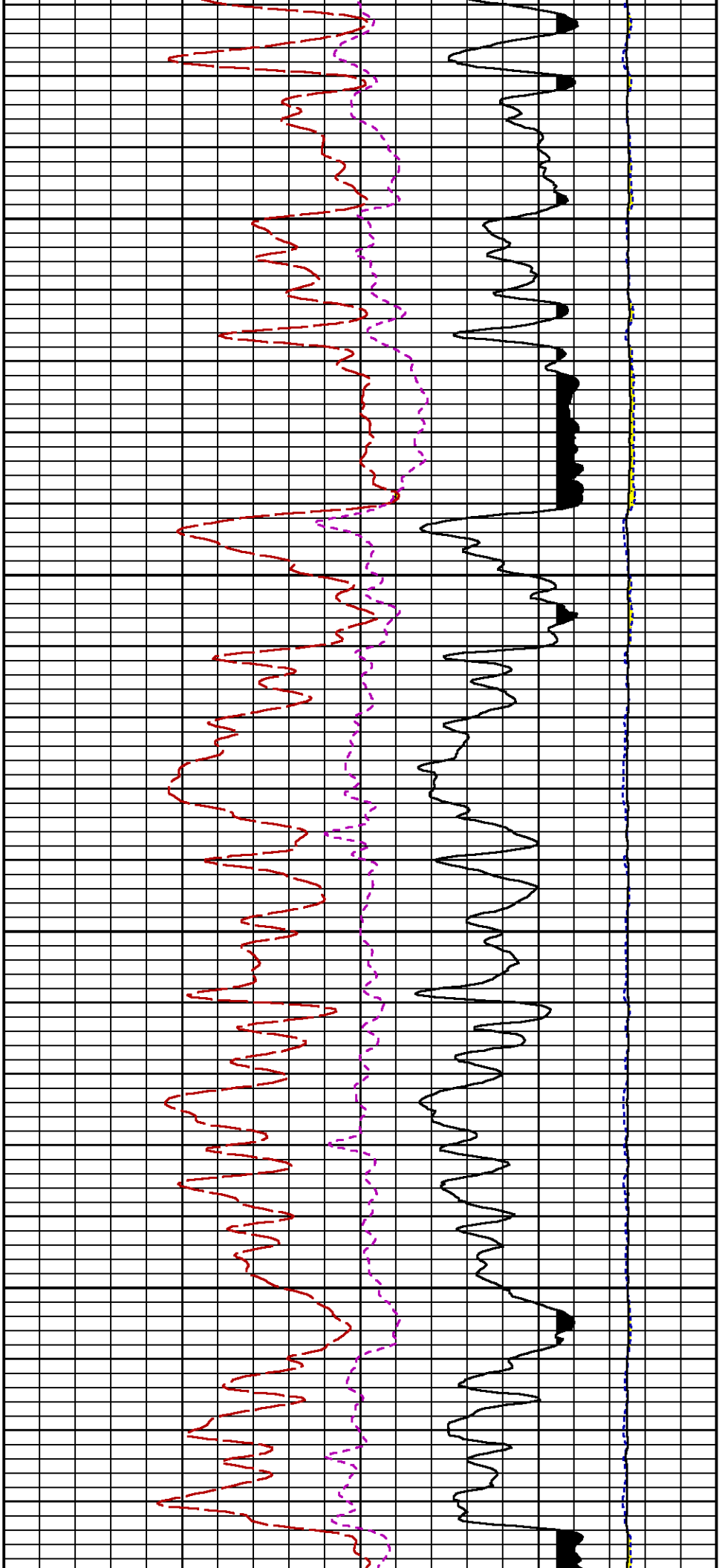


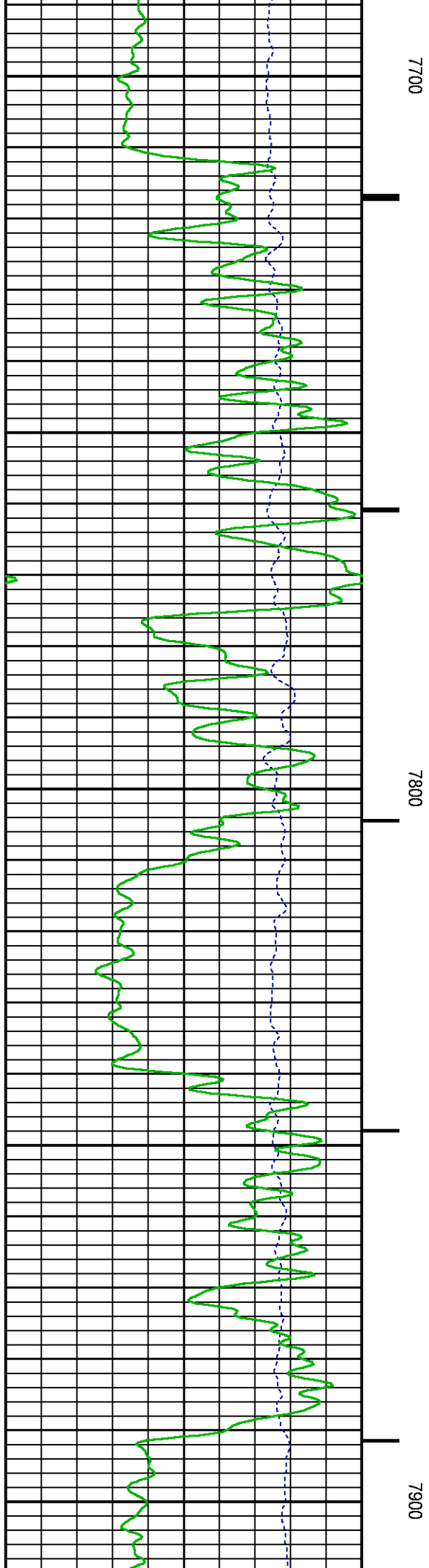
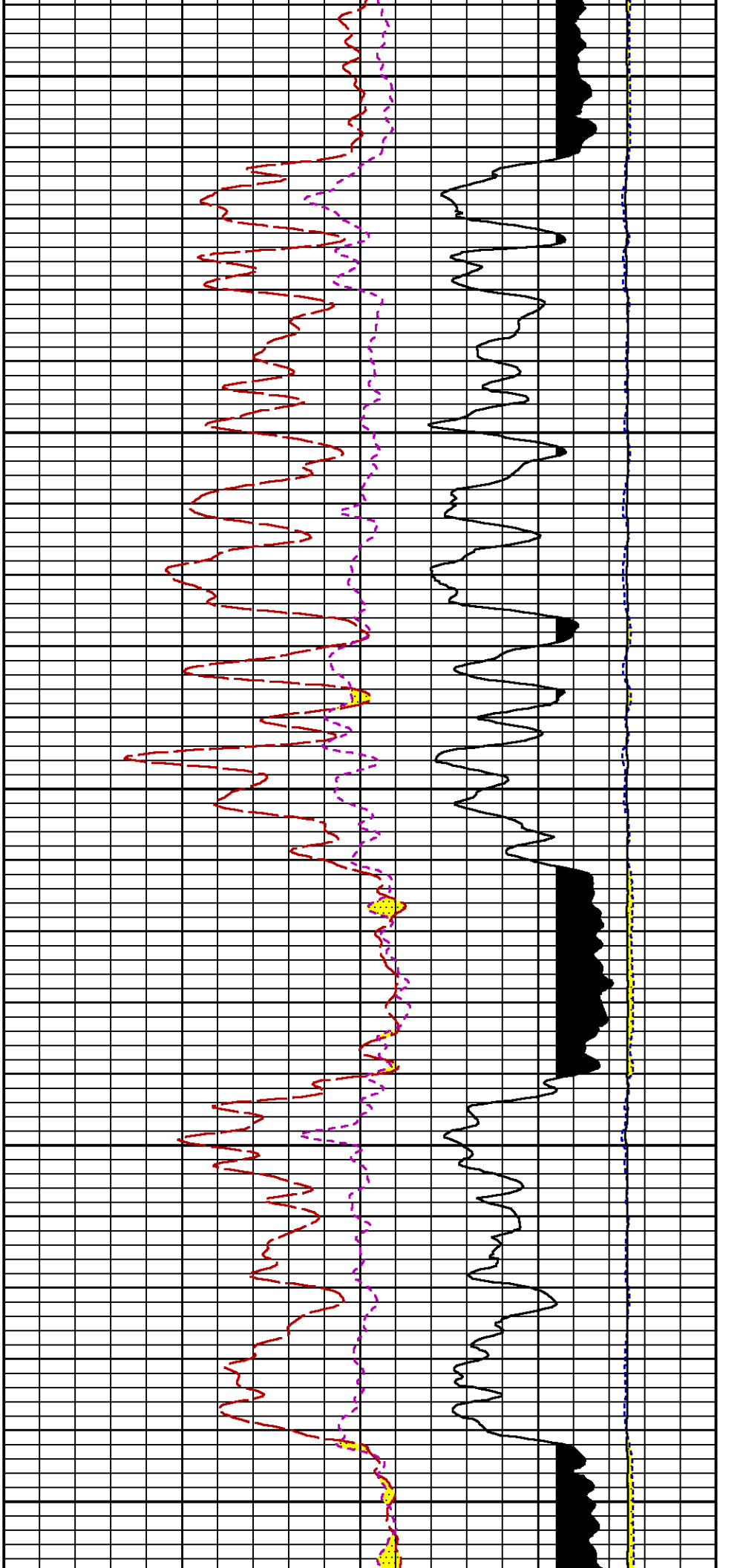


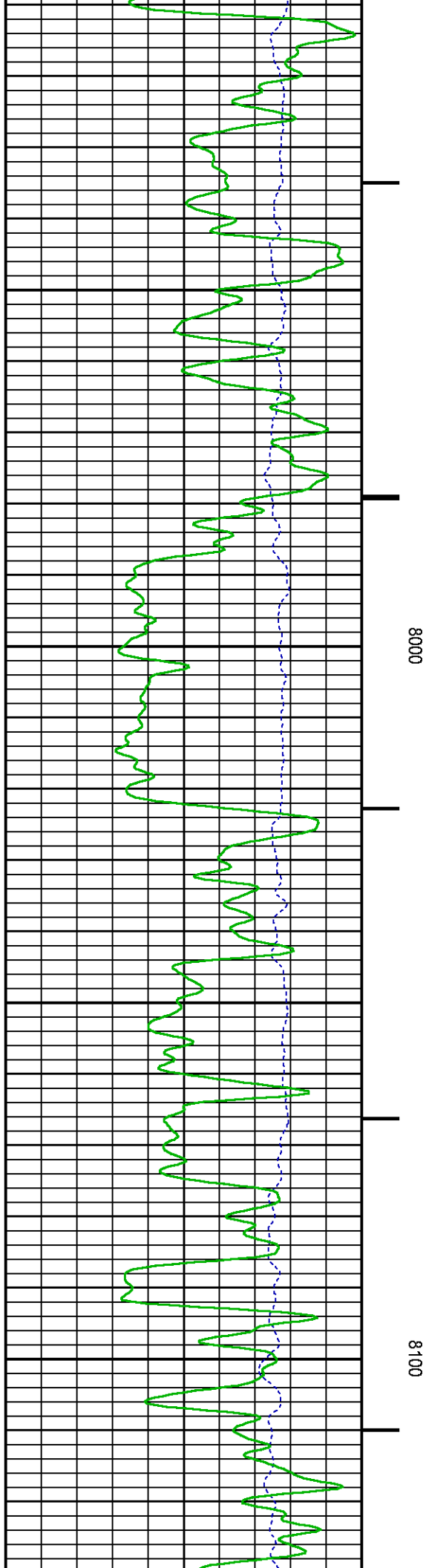
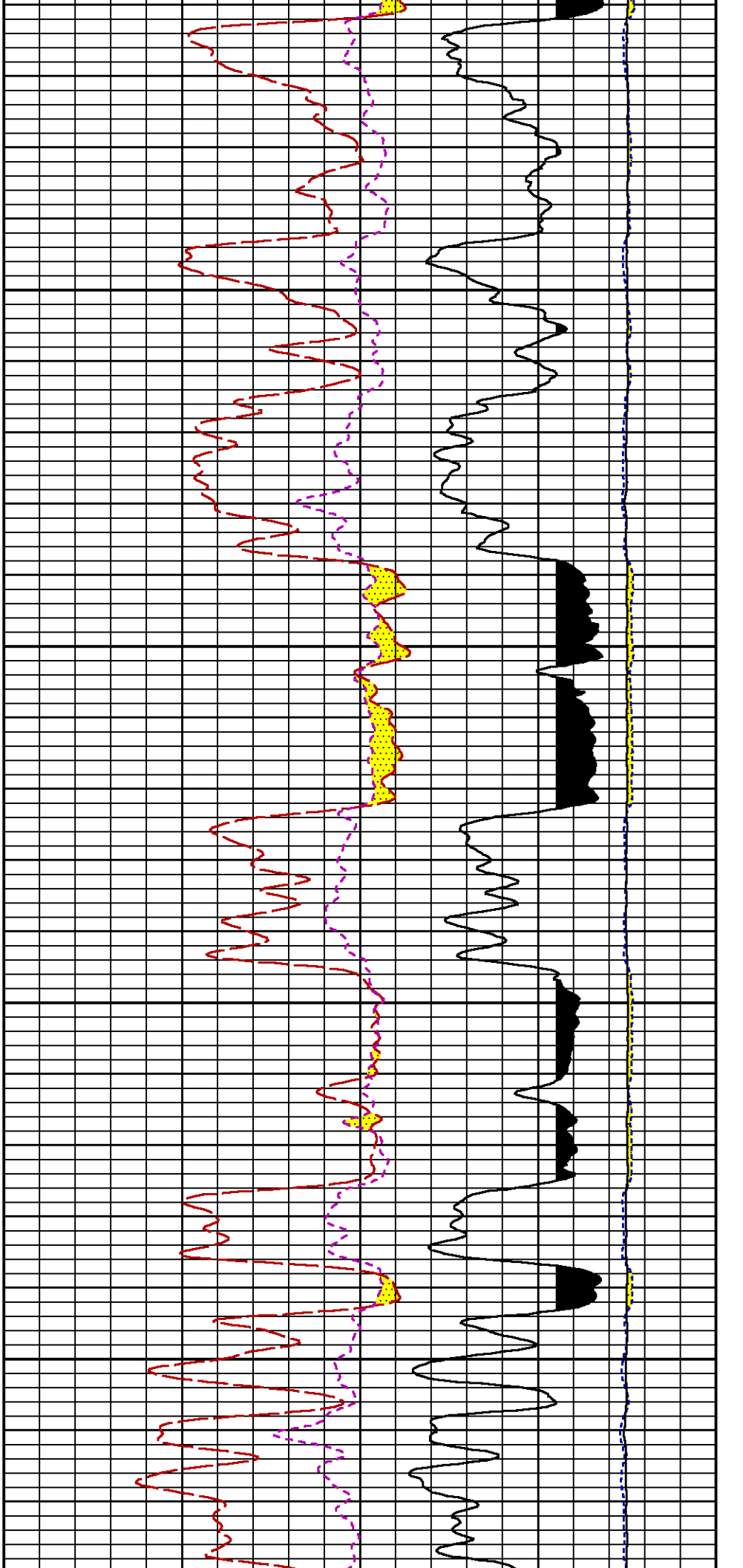


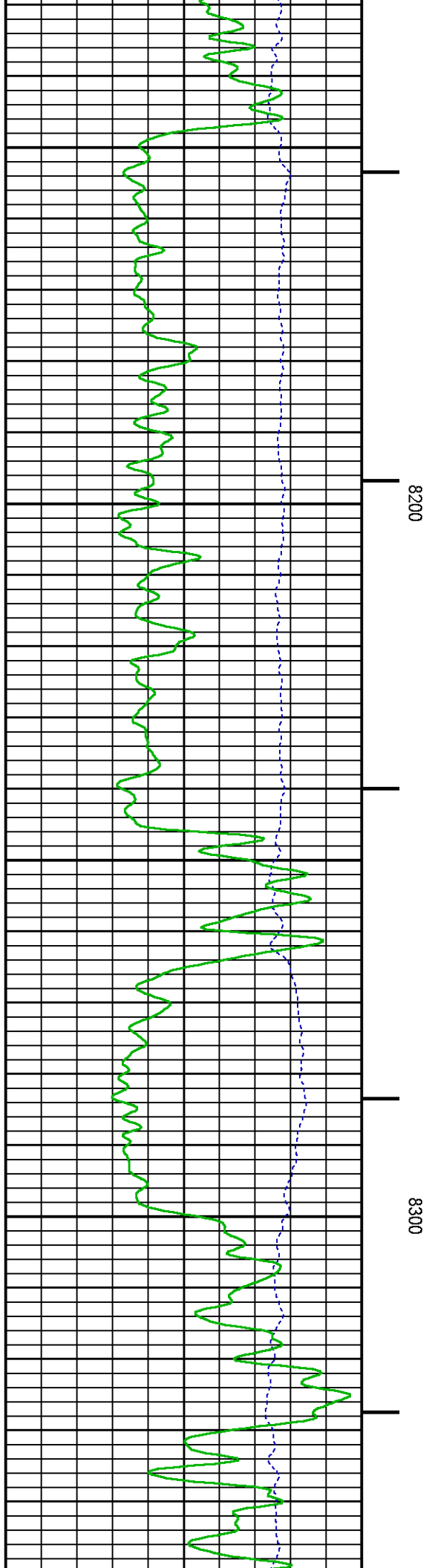
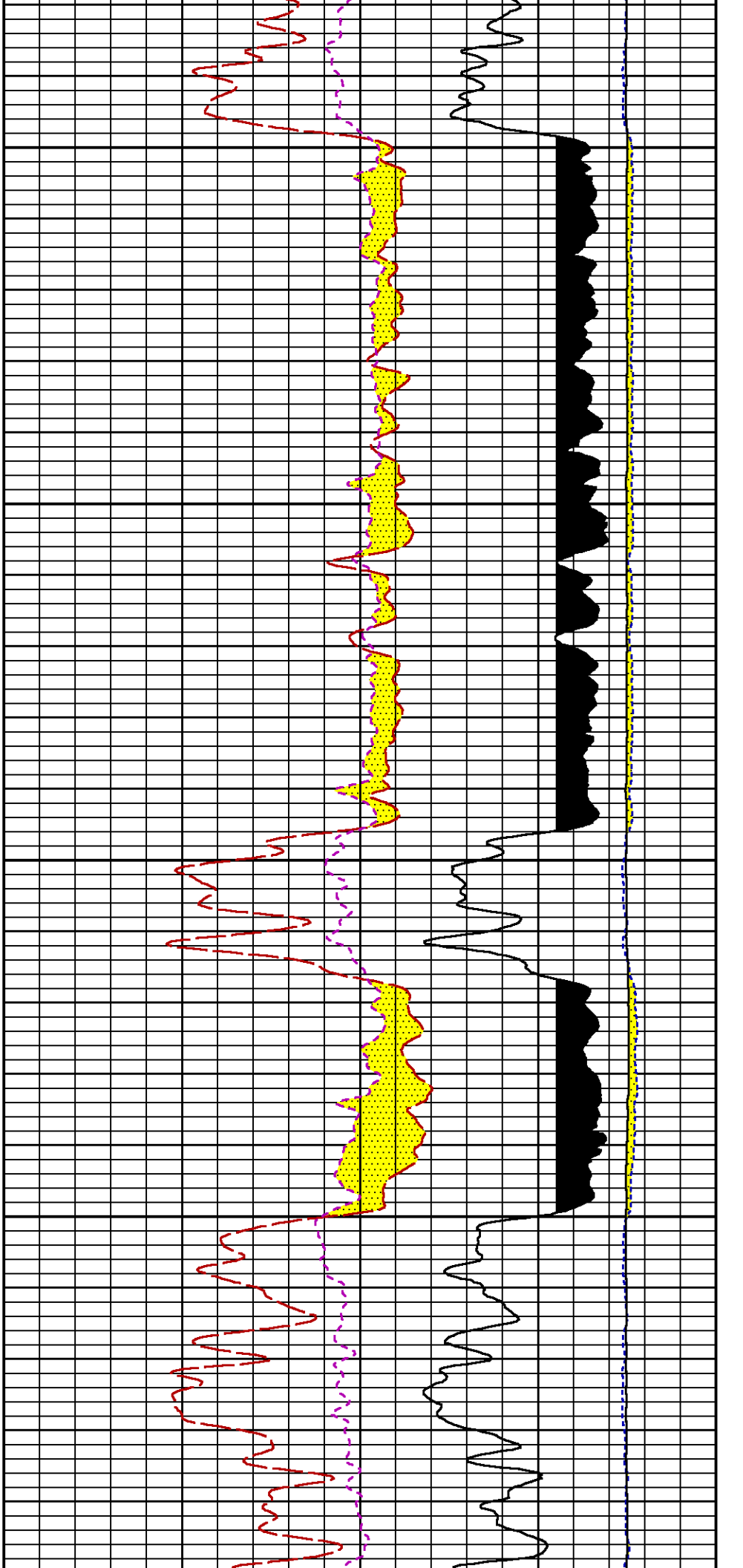


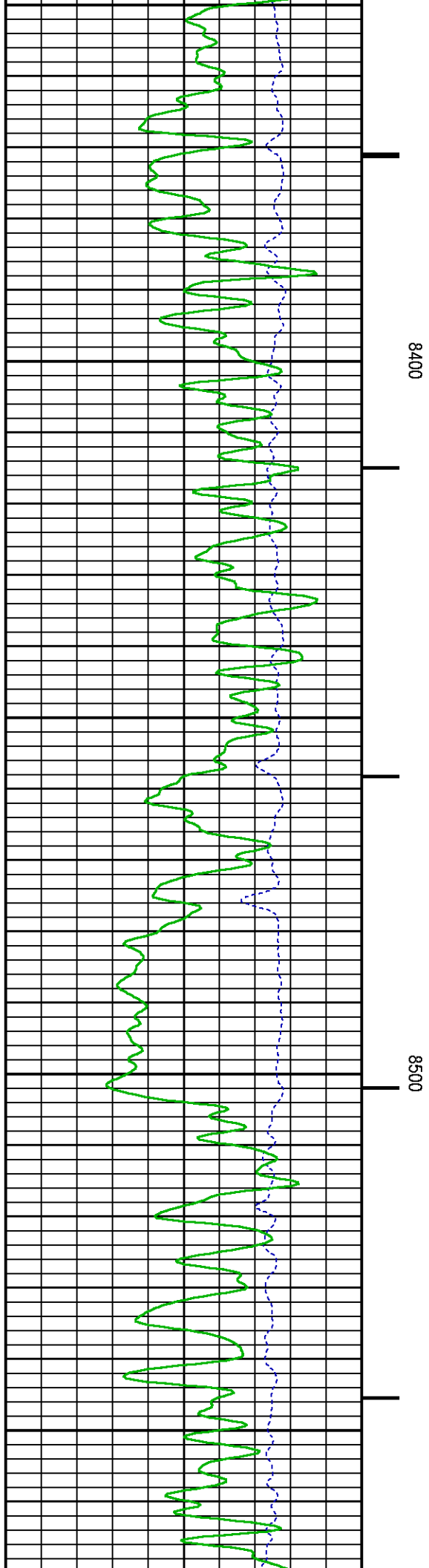
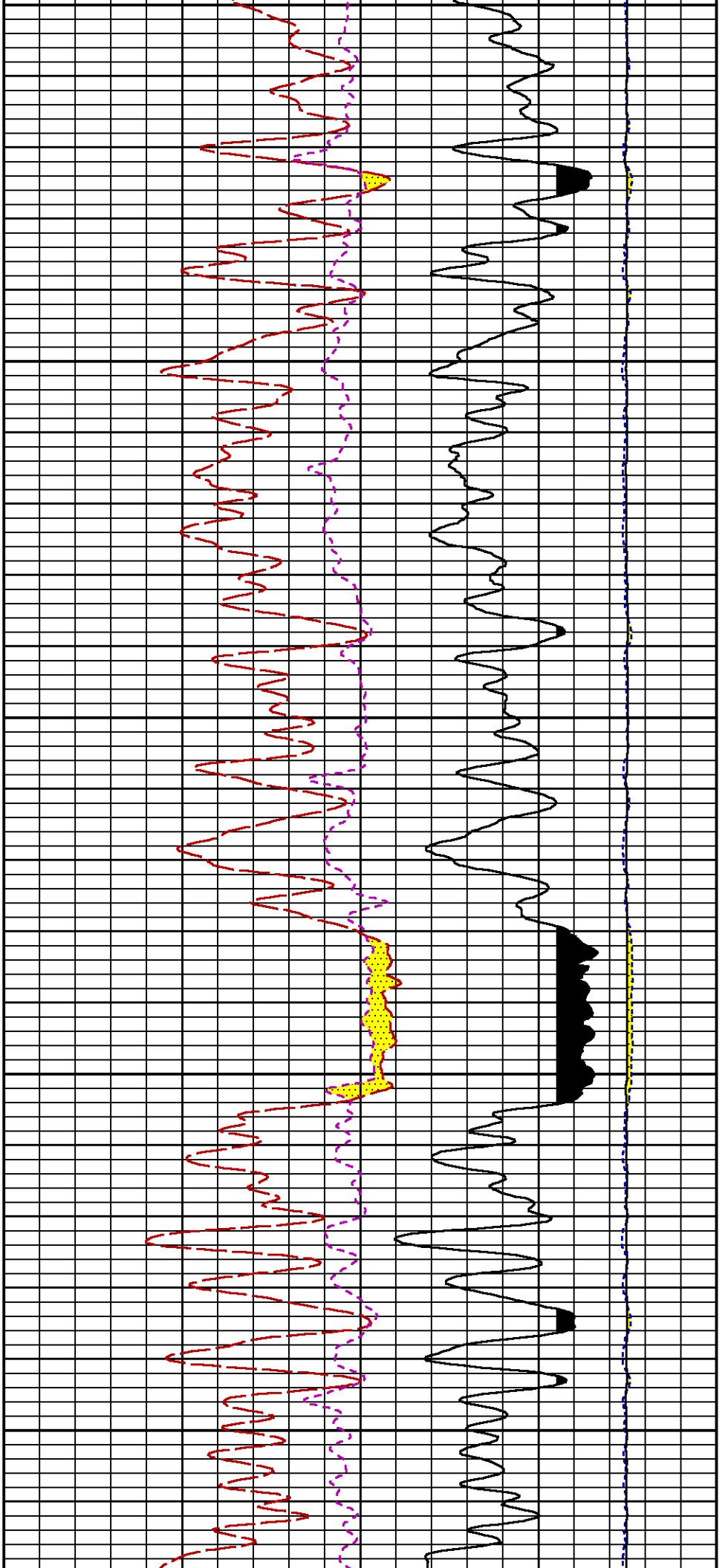


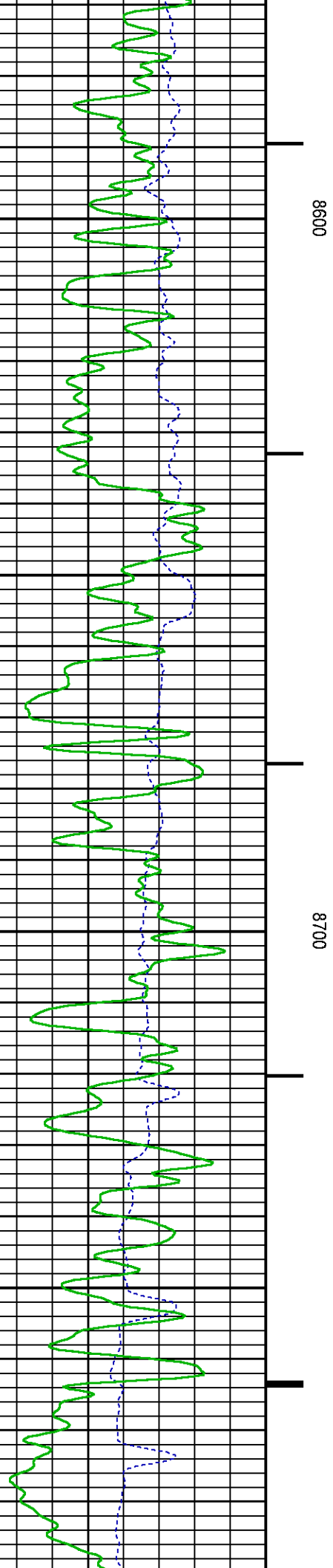
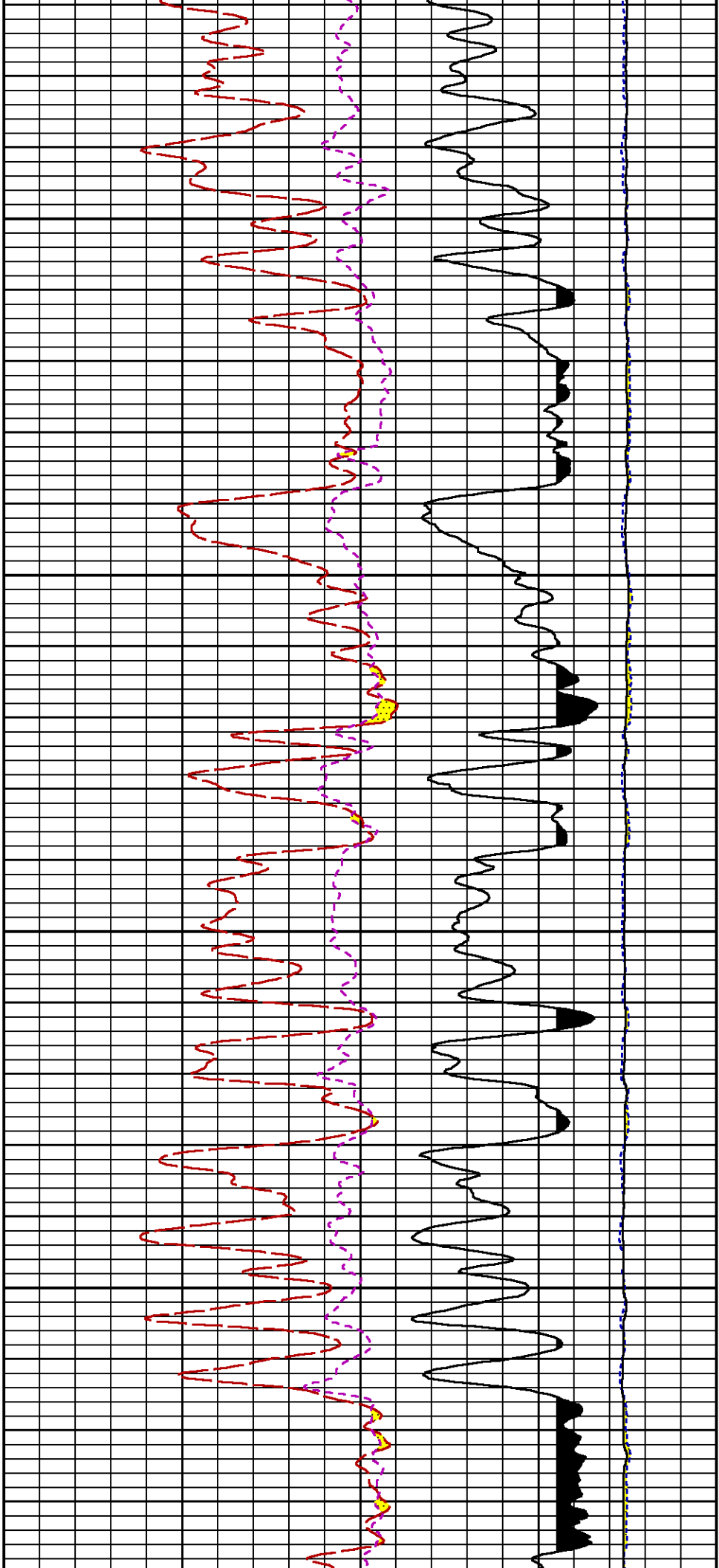


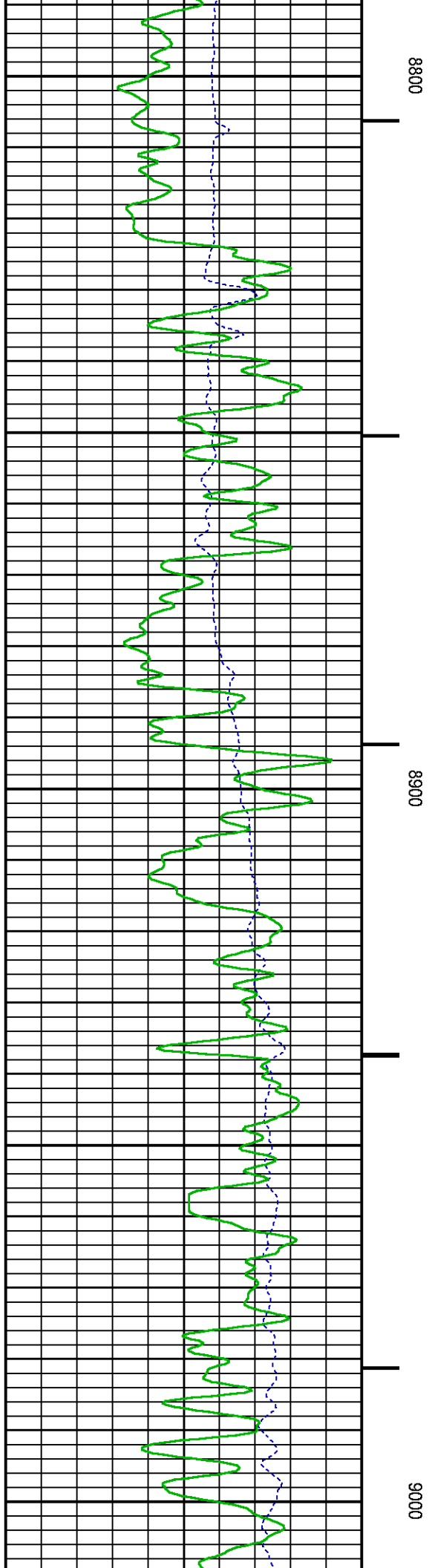
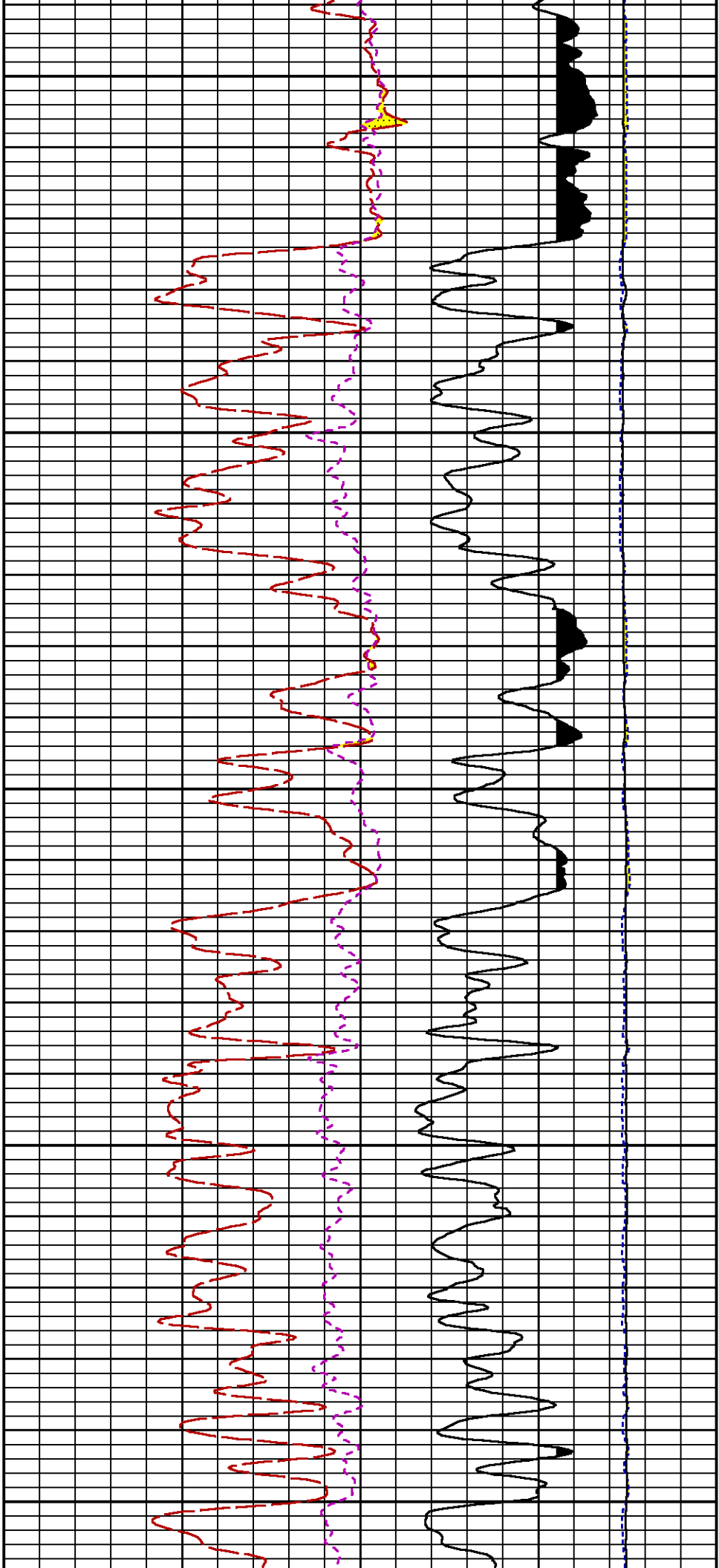




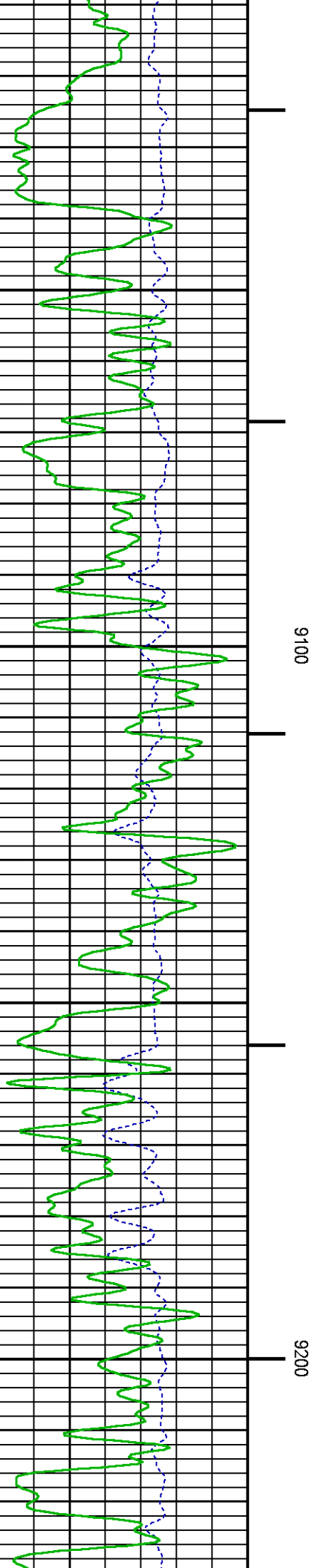
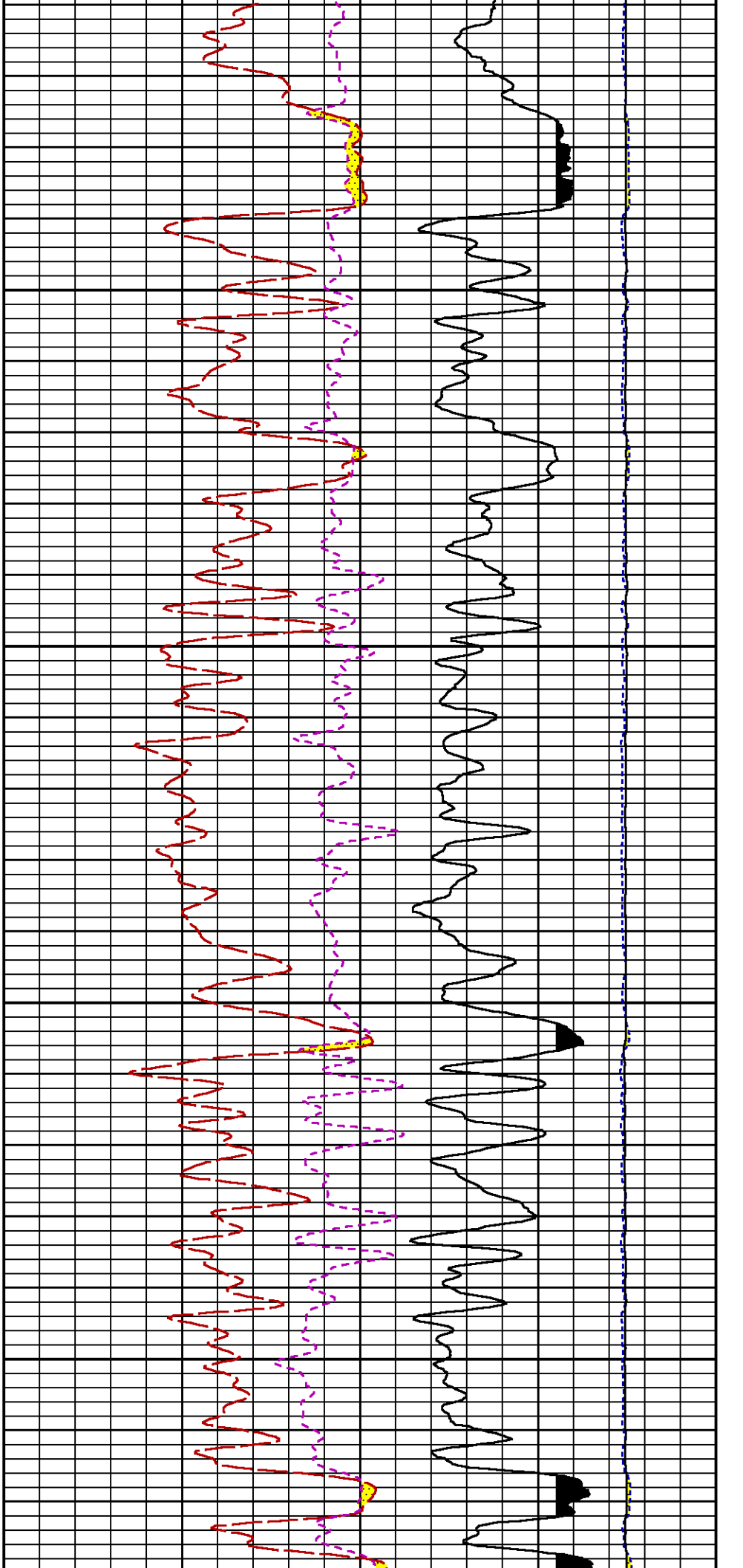


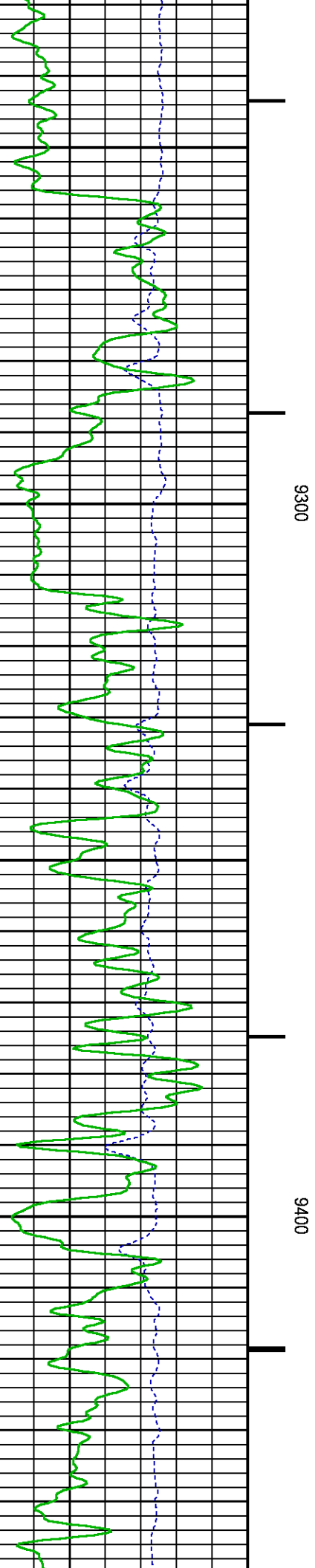
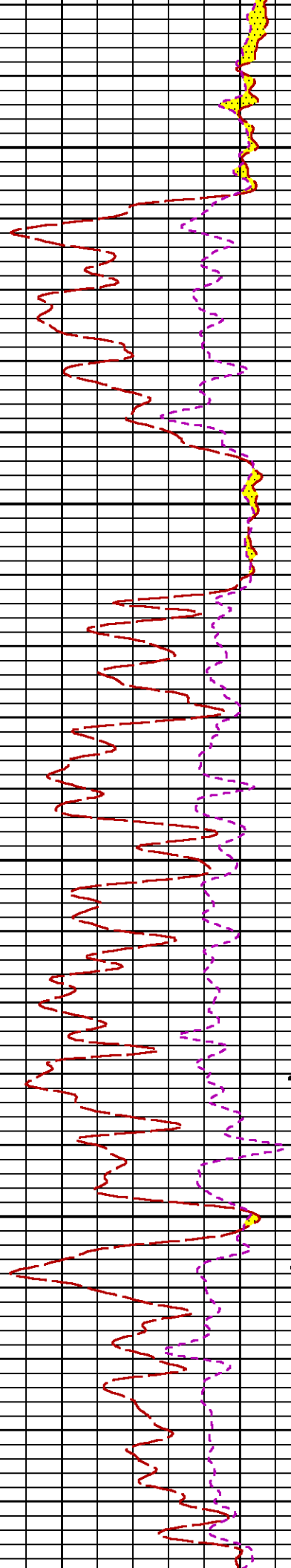
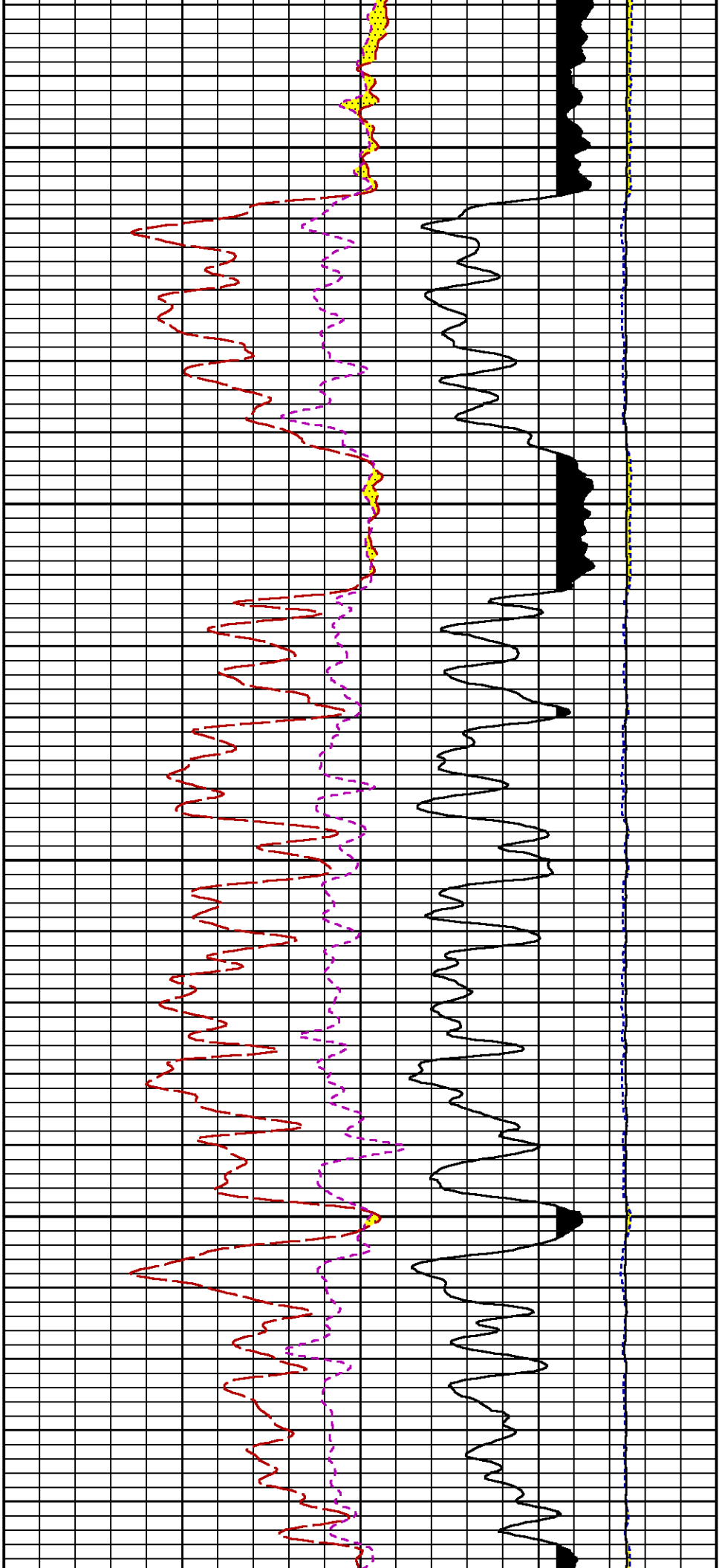






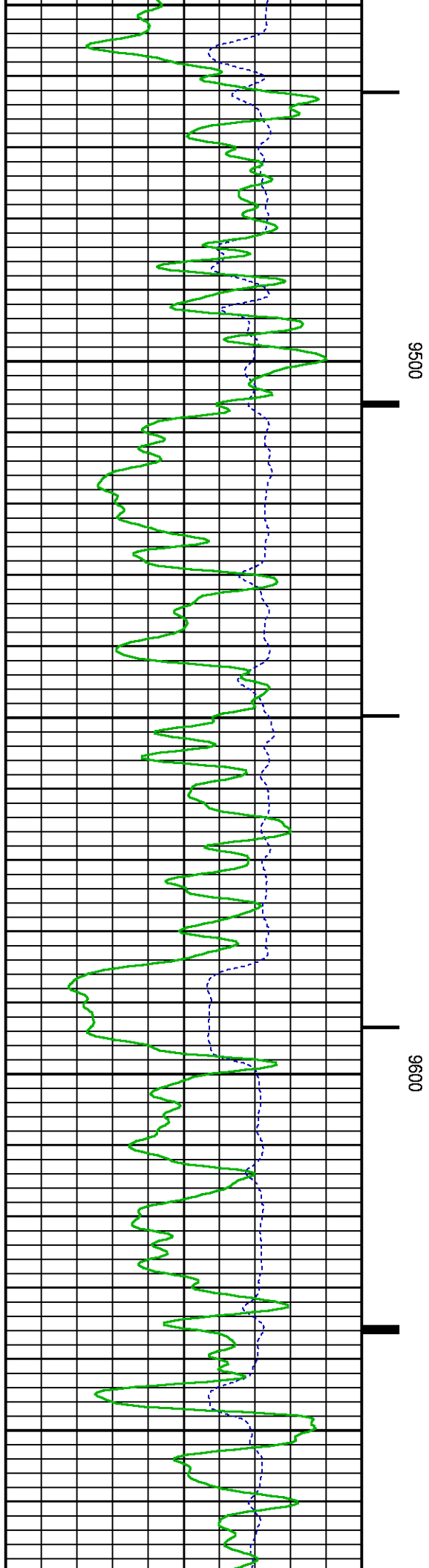
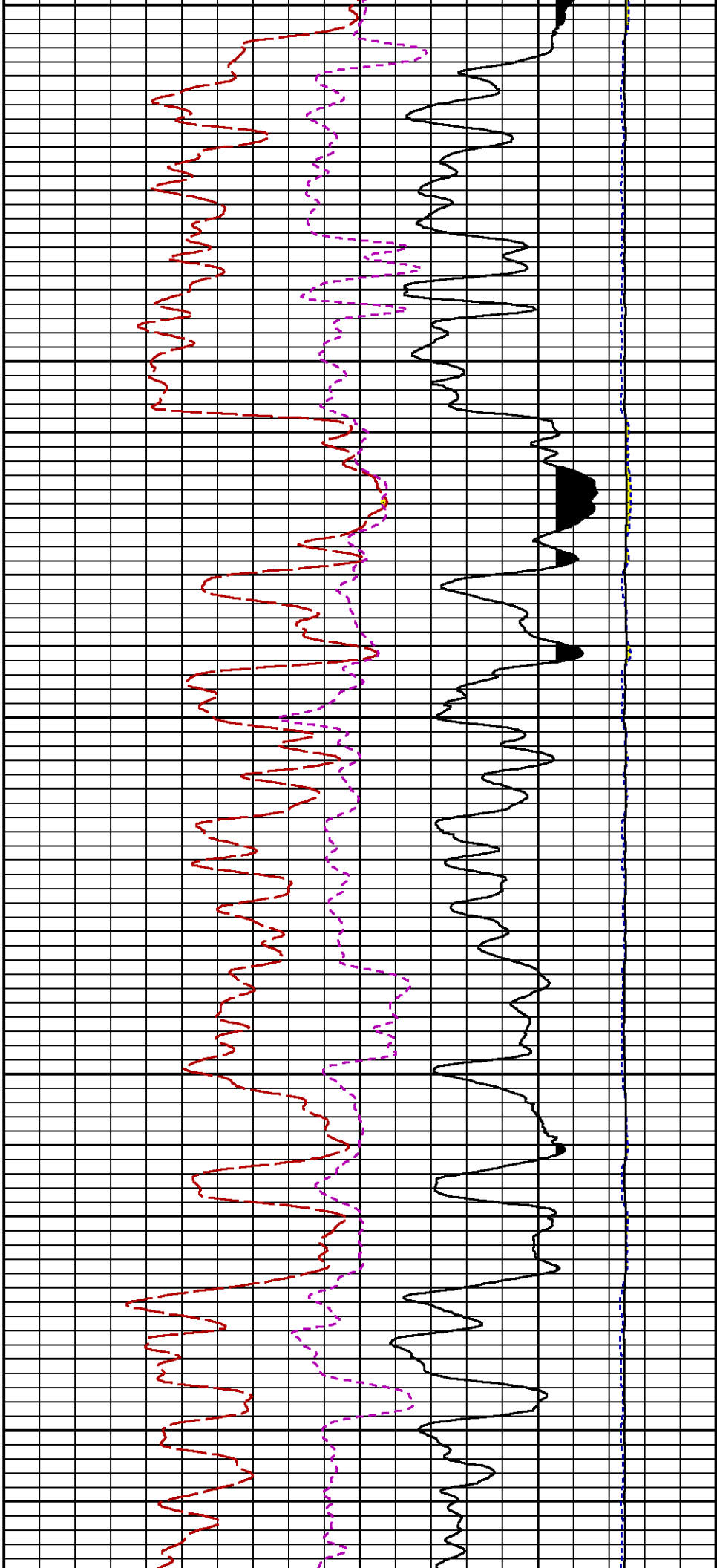


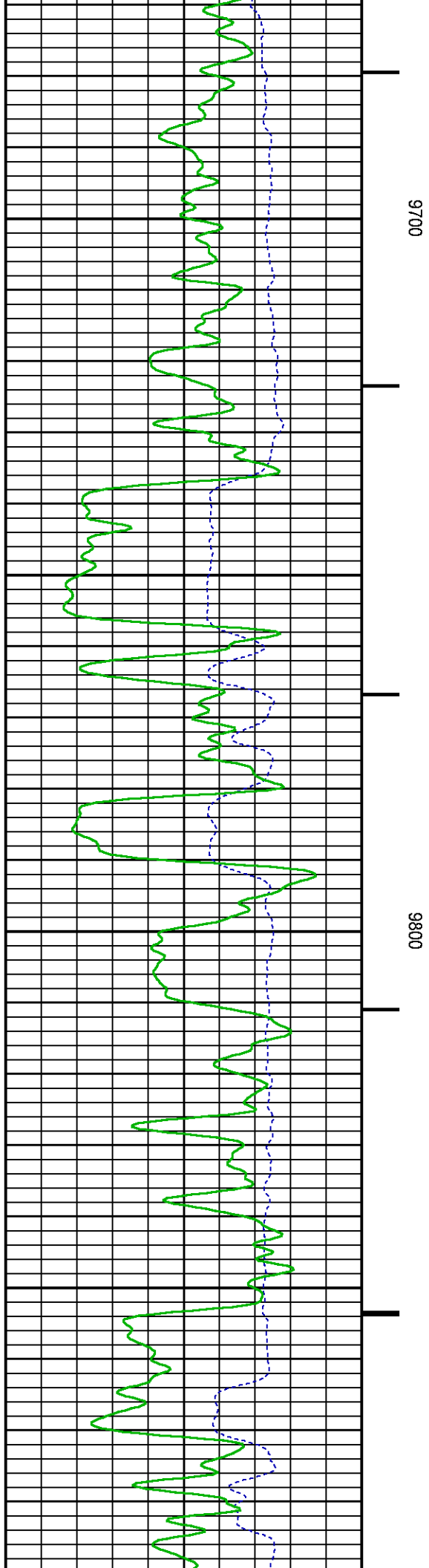
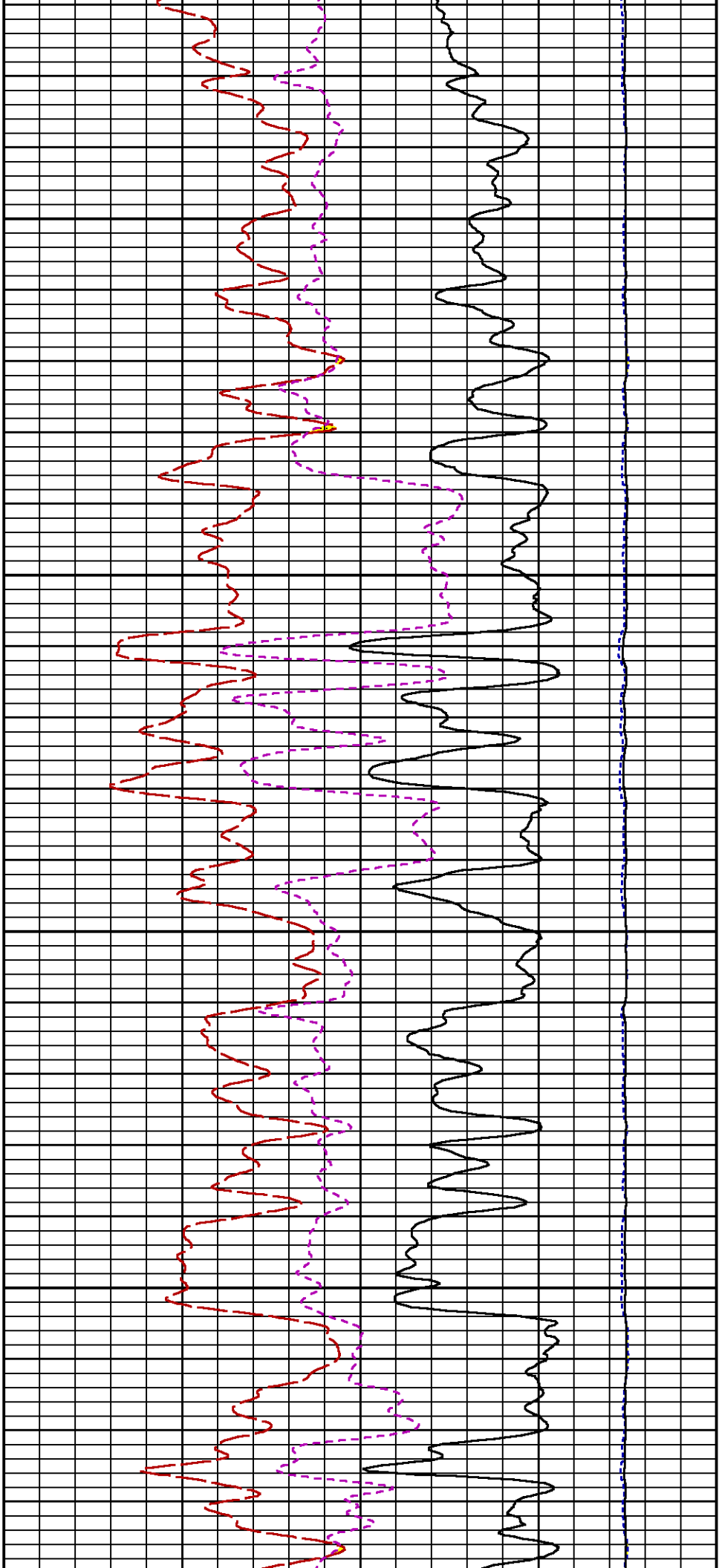


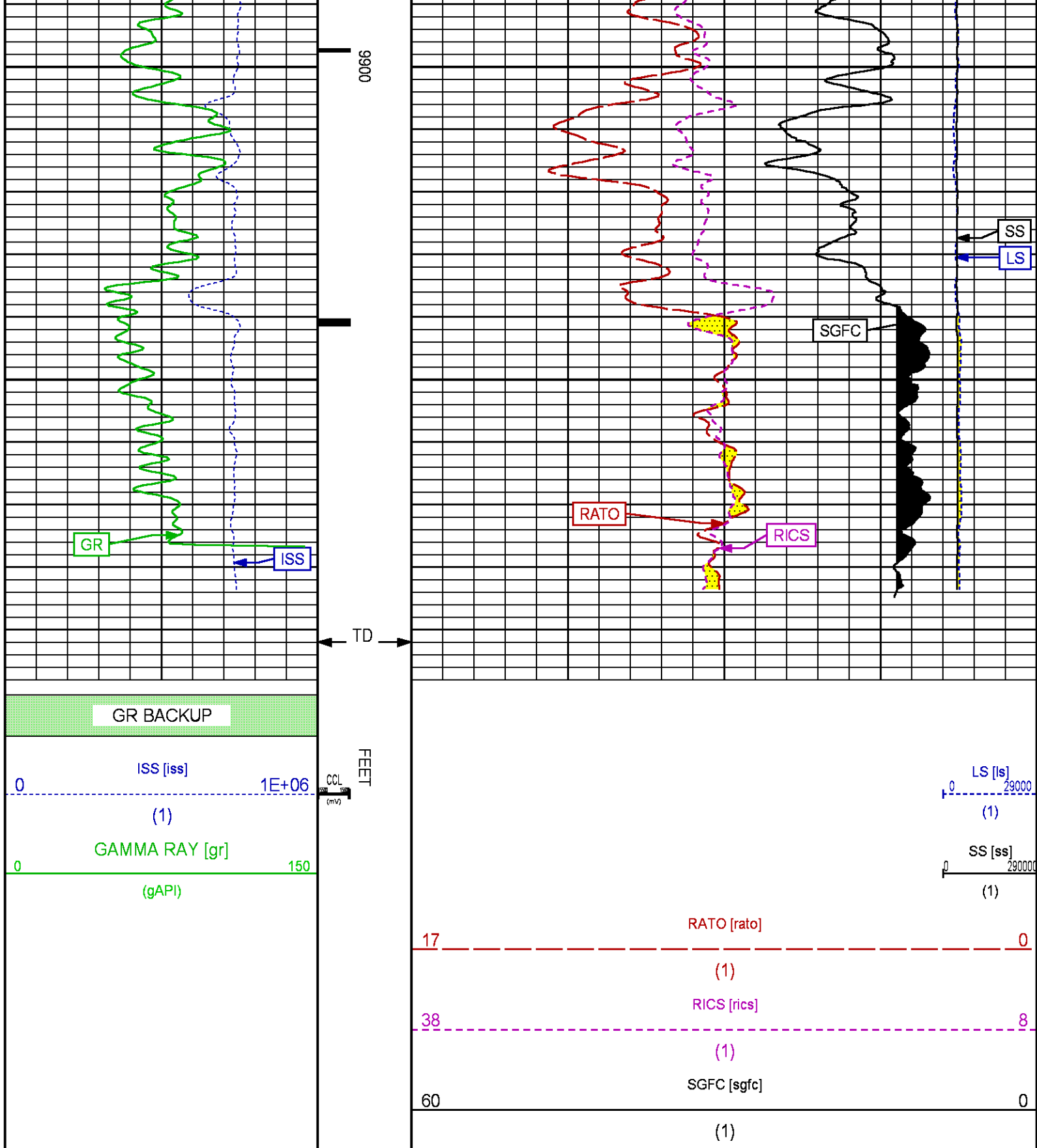


9300

9400







REPEAT SECTION PNC-3D MODE

Plotted: Mon Apr 20 16:43:05 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH096029/n354h01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 9111.750 ft BOTTOM DEPTH: 9470.047 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

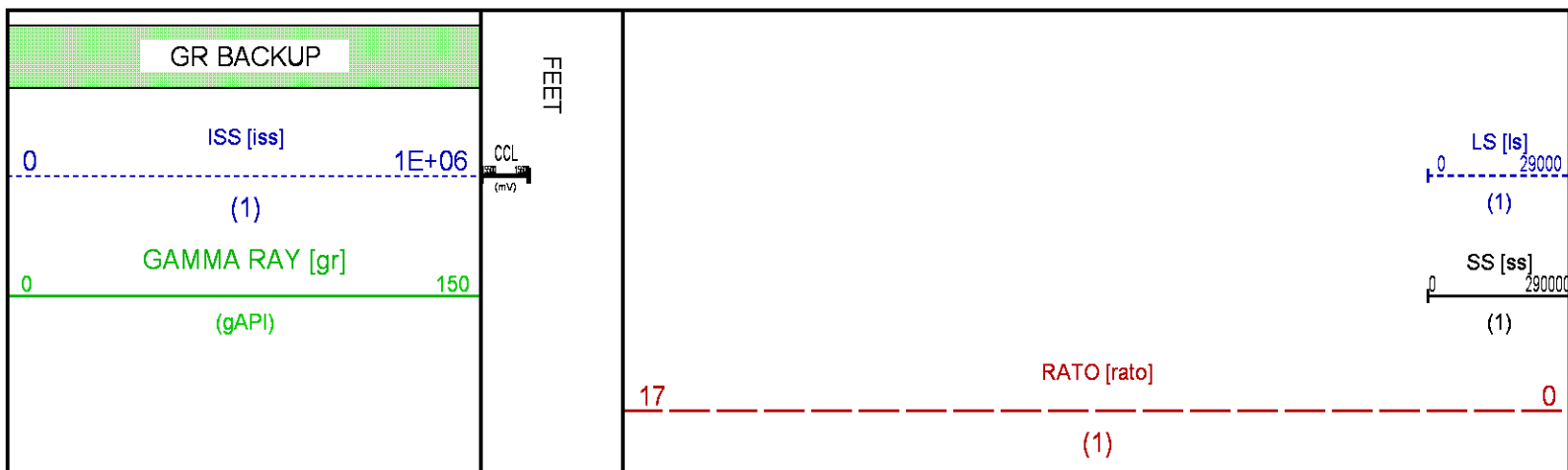
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	Apr 20 11:53:03 2015	CASING COLLAR LOCATOR
F1:GR	Apr 20 11:53:03 2015	GAMMA RAY
F1:ISS	Apr 20 11:53:03 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Apr 20 11:53:03 2015	LONG SPACE COUNT RATE
F1:RATO	Apr 20 11:53:03 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Apr 20 11:53:03 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Apr 20 11:53:03 2015	CORRECTED FORMATION SIGMA
F1:SS	Apr 20 11:53:03 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/CH096029/433RPM\_REPEAT.fvpdf [5"/100' Scale]  
**Plot Interval** : 9140 - 9461 Feet

**Data File 1 : F1 : HL6670:/dat1a/CH096029/433RPM\_REPEAT.xtf**  
**Created On : Apr 20 11:53:03 2015**  
**Company : WPX ENERGY**  
**Well : YOUBERG RU 433-7**  
**Field : RULISON**  
**File Interval : 9094.75 - 9476 Feet**  
**OCT : n354h**



38

RICS [rics]

8

(1)

SGFC [sgfc]

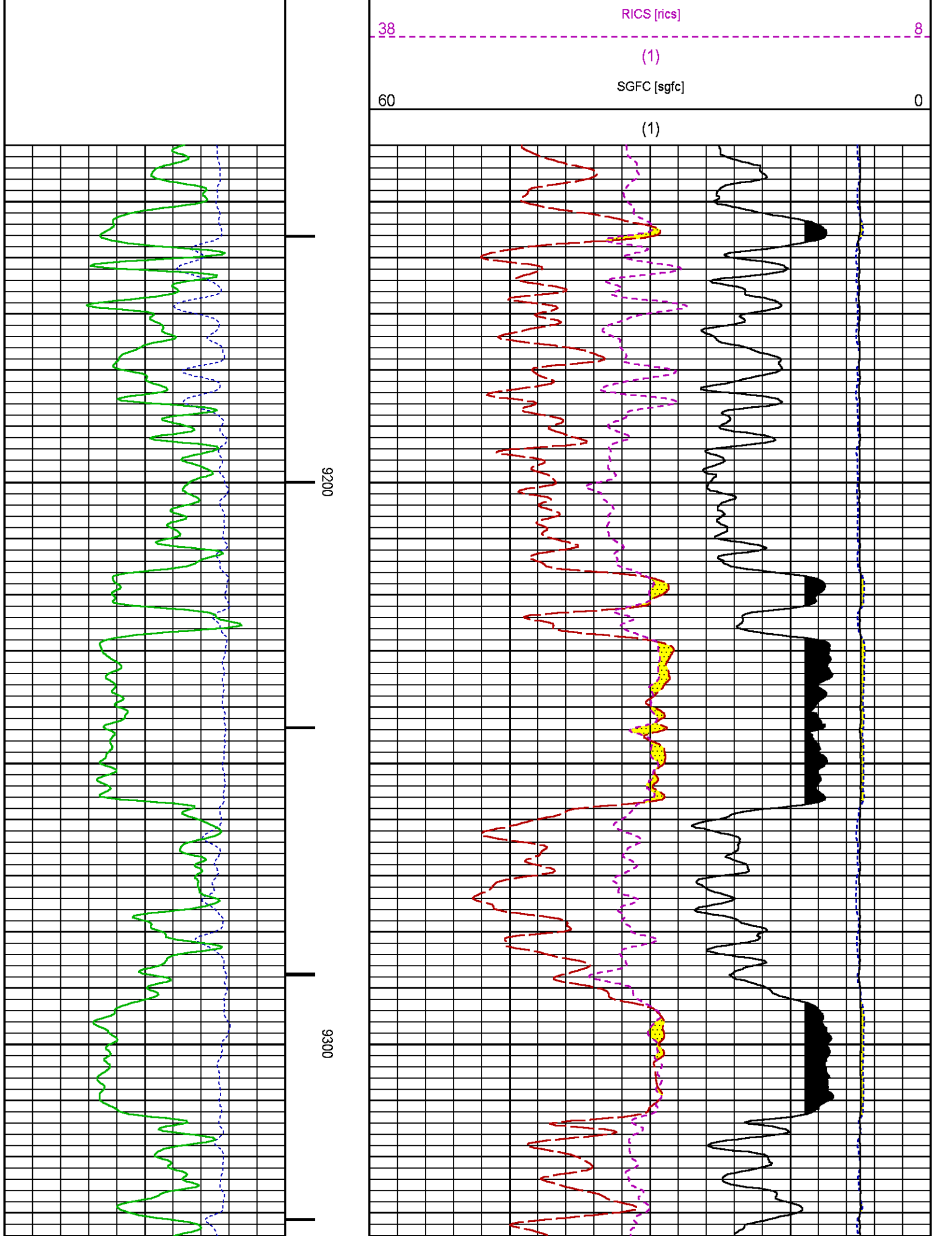
60

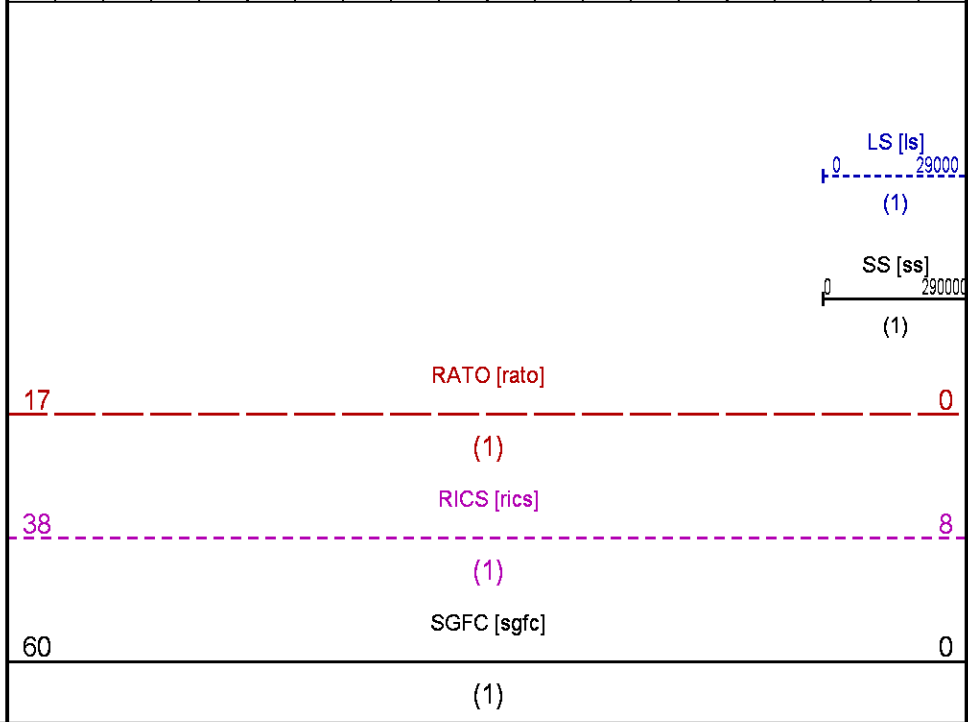
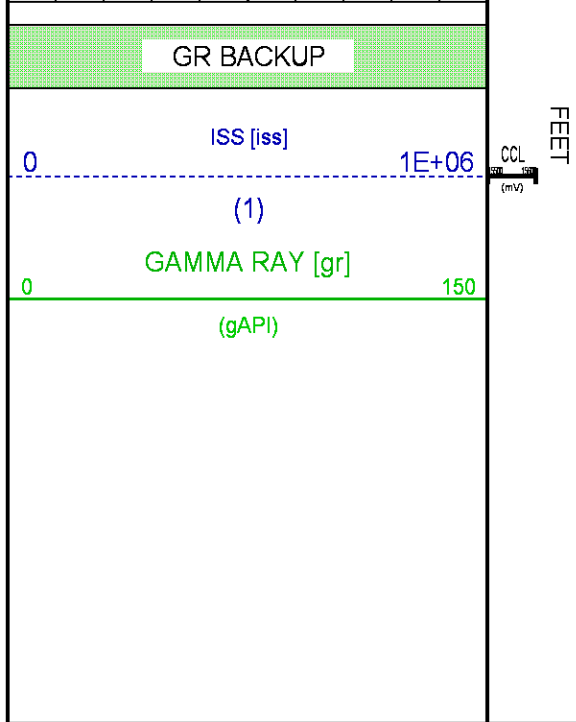
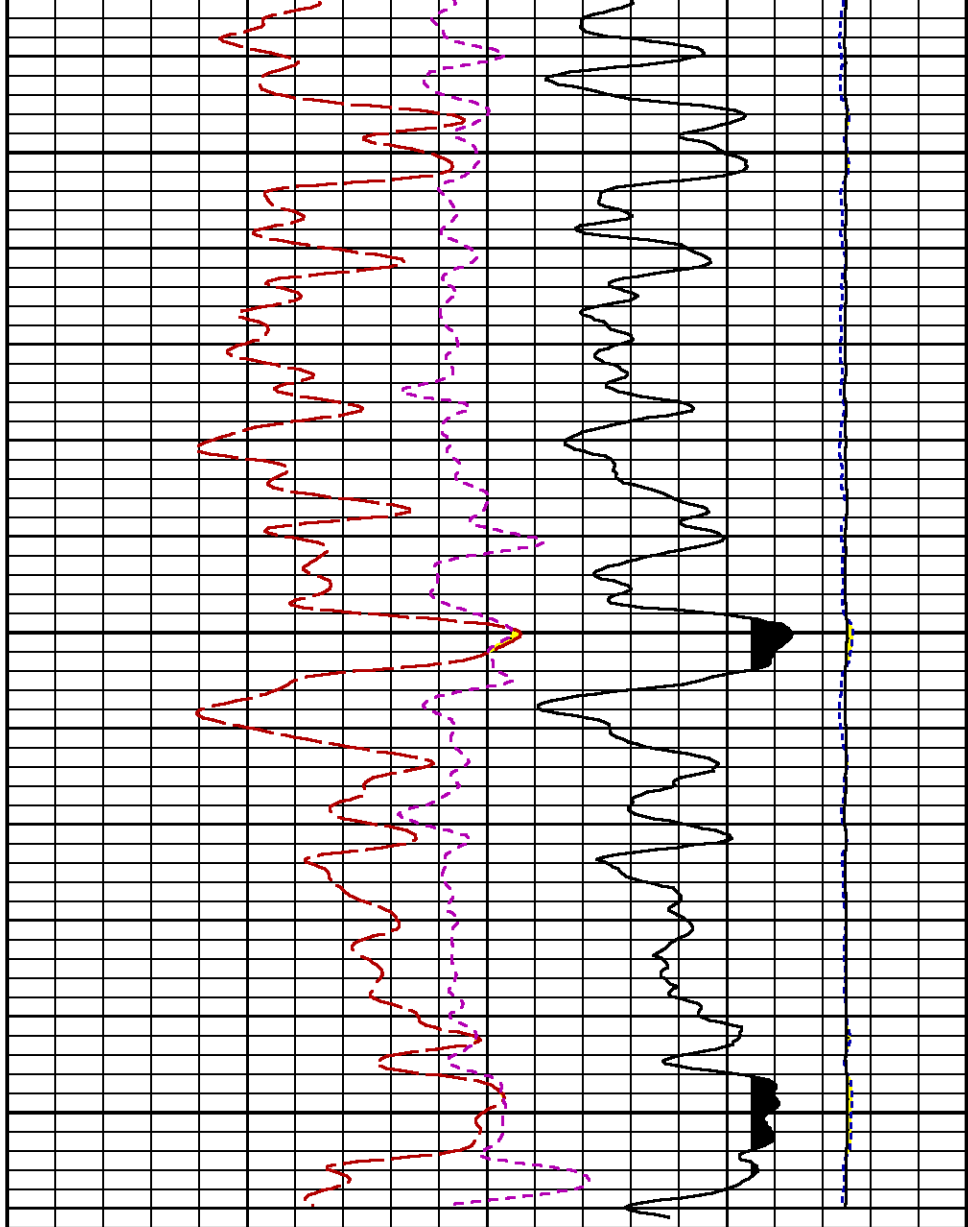
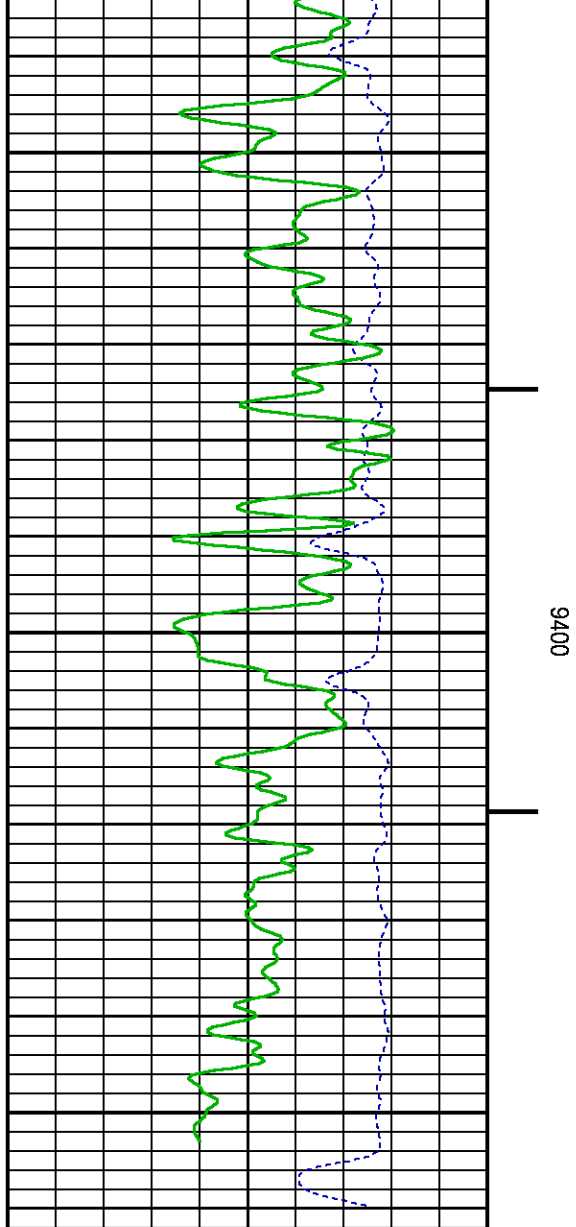
0

(1)

9200

9300







# CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH096029/n354h.tp1

## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11701636

DATE/TIME PERFORMED: Wed Apr 8 10:51:43 2015

UNIT #: 3880TA HL6670

CALB JIG #: 4702NK DA-041

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	62.82	262.44	199.6	1.052	66.09	276.09	210

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11701636

DATE/TIME PERFORMED: Wed Apr 8 10:53:39 2015

UNIT #: 3880TA HL6670

VERI JIG #: 4702NK DA-041

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	61.91	263.02	1.052	65.13	276.70	211.57
						200.00 220.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10414345

DATE/TIME PERFORMED: Mon Mar 30 14:44:41 2015

UNIT: 3880TA HL6670

CALIBRATOR: 2437XB 112674

SOURCE: 8281AA 10160601

HOURS: 8281AA 18

	ISS	Mtr Vits (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	813444	125	2267	2258	2255	104	7	0.9806
Interpolated	1300000	148	2248	2253	2251			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	813444	6376	1024	140	25.99	0.14	24.25	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	813444	172913	26730	91420	32541	8488	55360	13607
Fit Quality %		0.896	0.910	0.837	0.834	0.826	0.760	0.879

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	813444	1.43	4.70	30.44	14.69	10.77	3.84	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 %		0.046	0.209	0.227	0.168	0.126	0.123	0.101
Reduced	1369035	1.43	4.73	30.63	14.77	10.78	3.84	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 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	1.055639E-01	2.143764E-06	-2.782846E-10

## INSTRUMENT CONFIGURATION

Source File: /dat1a/CH096029/RPM-tdg

### 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

### SONDEX GAMMA RAY

Diameter : 1.69"  
Length : 2.17'  
Weight : 10 lbs  
Series : 2812LA  
Mnemonic : GR  
Measure Point: 0.62': 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

33.24'

CCL MP — 25.19'

GR MP — 22.64'

XLS DETECTOR — 13.58'

LS DETECTOR — 13.16'

SS DETECTOR — 12.91'

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  
PRES MP

1.65'

BULL PLUG 1 11/16

0.00'

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

	COMPANY <u>WPX ENERGY</u>		FILE NO: <u>CH096029</u>
	WELL <u>YOUBERG RU 433-7</u>		API NO: <u>05045225130000</u>
	FIELD <u>RULISON</u>	STATE <u>CO</u>	
	COUNTY <u>GARFIELD</u>		
LOCATION: SHL: 1146' FSL & 1193' FEL BHL: 1853' FSL & 2167' FEL		ELEVATIONS: KB 7943 FT DF GL 7917 FT	7 7S 93W RU 44-7 PAD NABORS 576
SEC <u>7</u> TWP <u>7S</u> RGE <u>93W</u>		DATE <u>20-Apr-2015</u>	

