



FILE NO: CH095165	COMPANY WELL FIELD COUNTY	WPX ENERGY WPX ENERGY GM 322-28 GRAND VALLEY GARFIELD	STATE CO
API NO: 05045225010000			

Ver. 3.87 28 GS 96W GM 323-28 PAD H&P 318	LOCATION: SHL: 1555' FSL & 2300' FWL BHL: 1515' FNL & 2479' FWL SEC 28 TWP 6S RGE 96W	OTHER SERVICES BOND LOG
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PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL KB ELEVATION 24 FT 5476 FT ABOVE P.D.	KB DF GL ELEVATIONS: 5500 FT 5476 FT
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DATE	03-Mar-2015
RUN	1
SERVICE ORDER	US095165
DEPTH DRILLER	7440 FT
DEPTH LOGGER	7388 FT
BOTTOM LOGGED INTERVAL	7378 FT
TOP LOGGED INTERVAL	4049 FT
TIME STARTED	11:00
TIME FINISHED	15:30
OPERATOR RIG TIME	4.5 HOURS
TYPE OF FLUID IN HOLE	WATER
FLUID DENSITY	NA
FLUID SALINITY	NA
FLUID LEVEL	51 FT
LOGGED CEMENT TOP	NA
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	NA
NOMINAL LOGGING SPEED	10 FMIN
MAX. RECORDED TEMP.	232 DEGF
REFERENCE LOG	BAKER HUGHES BOND LOG
REFERENCE LOG DATE	03-Mar-2015
EQUIP. NO.	HL-6670
LOCATION	GRAND JCT.
RECORDED BY	NEWELL
WITNESSED BY	KYLE KOHL

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	24 FT	1332 FT
8.75 IN	1332 FT	7446 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN			24 FT	1332 FT
4.5 IN	11.6 LB/F	I-80	24 FT	7446 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 03/MAR/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 2 feet.

Logged in PNC-3D mode.

BHT = 232 degF  
SJ = 3921' - 3943'

## 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	10191667	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 Mar 3 15:05:36 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH095165/n354h02.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 4041.000 ft BOTTOM DEPTH: 7385.000 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	Mar 3 11:33:03 2015	CASING COLLAR LOCATOR
F1:GR	Mar 3 11:33:03 2015	GAMMA RAY
F1:ISS	Mar 3 11:33:03 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Mar 3 11:33:03 2015	LONG SPACE COUNT RATE
F1:RATO	Mar 3 11:33:03 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Mar 3 11:33:03 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Mar 3 11:33:03 2015	CORRECTED FORMATION SIGMA
F1:SS	Mar 3 11:33:03 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/CH095165/322RPM\_MAIN.fvpdf [5"/100' Scale]  
 Plot Interval : 4045 - 7393 Feet

Data File 1 : F1 : HL6670:/dat1a/CH095165/322RPM\_MAIN.xtf  
 Created On : Mar 3 11:33:03 2015  
 Company : WBY ENERGY

Company : WPX ENERGY  
Well : WPX ENERGY GM 322-28  
Field : GRAND VALLEY  
File Interval : 4016.25 - 7385 Feet  
OCT : n354h

GR BACKUP

FEET

ISS [iss]

1E+06

(1)

GAMMA RAY [gr]

150

(gAPI)

CCL  
(m)

LS [ls]

29000

(1)

SS [ss]

290000

(1)

RATO [rato]

17

0

(1)

RICS [rics]

39

9

(1)

SGFC [sgfc]

60

0

(1)

GR

ISS

4100

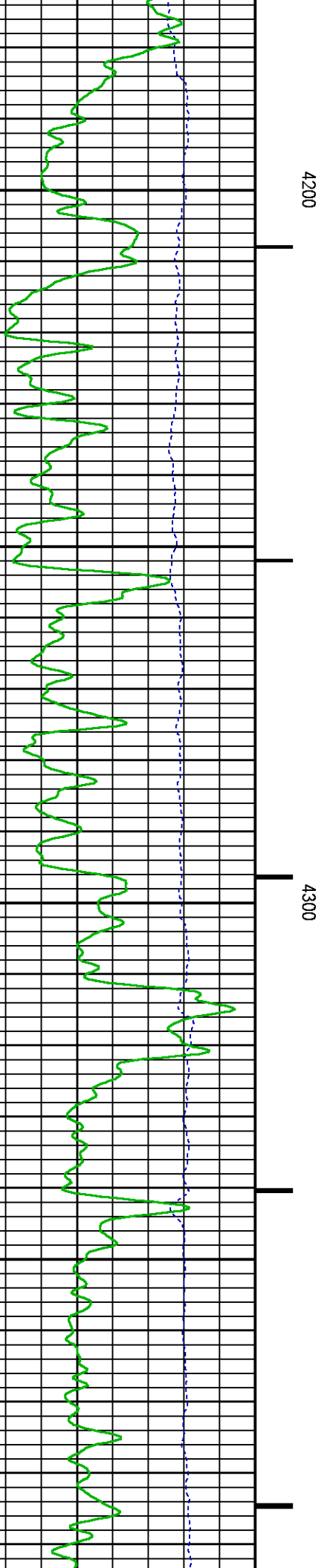
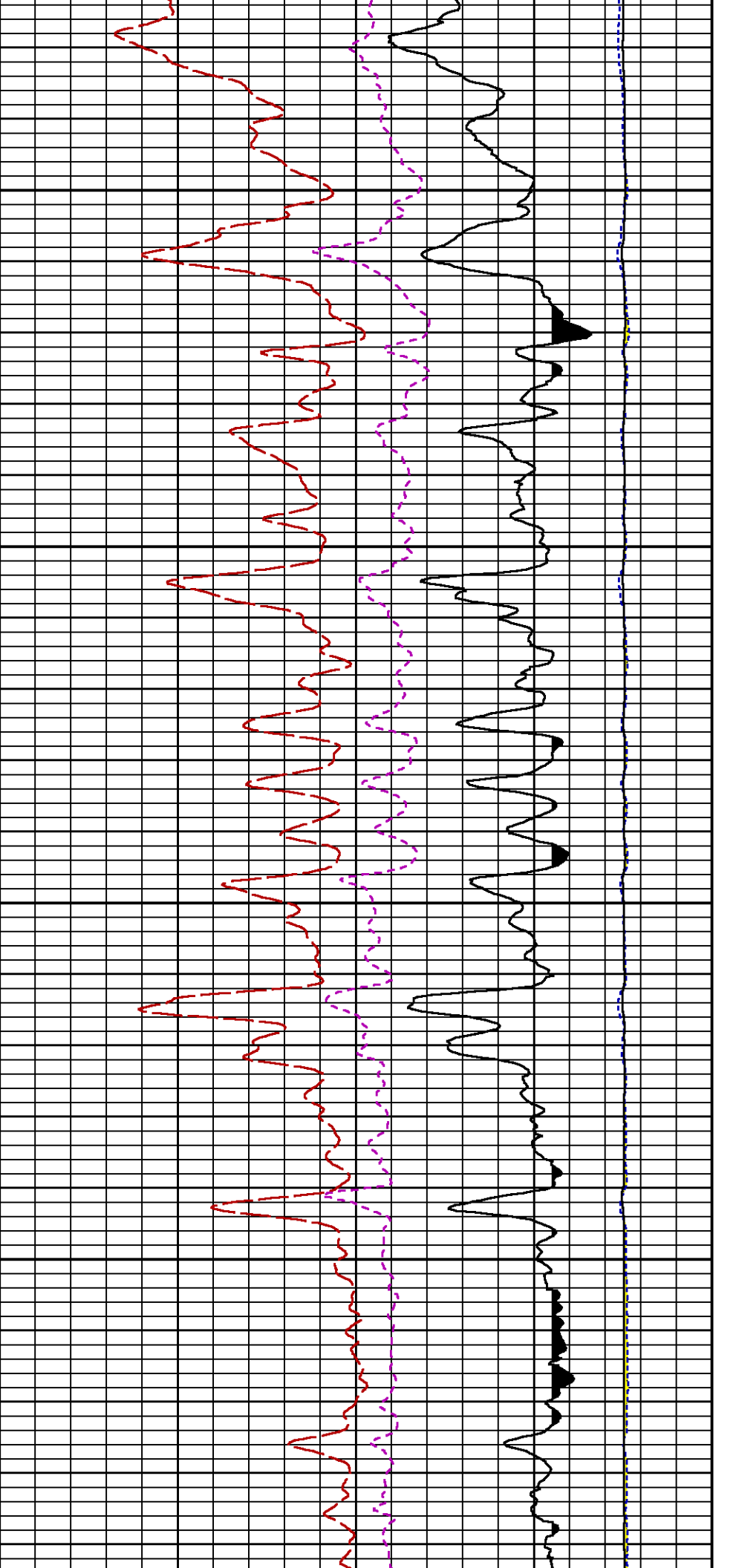
RATO

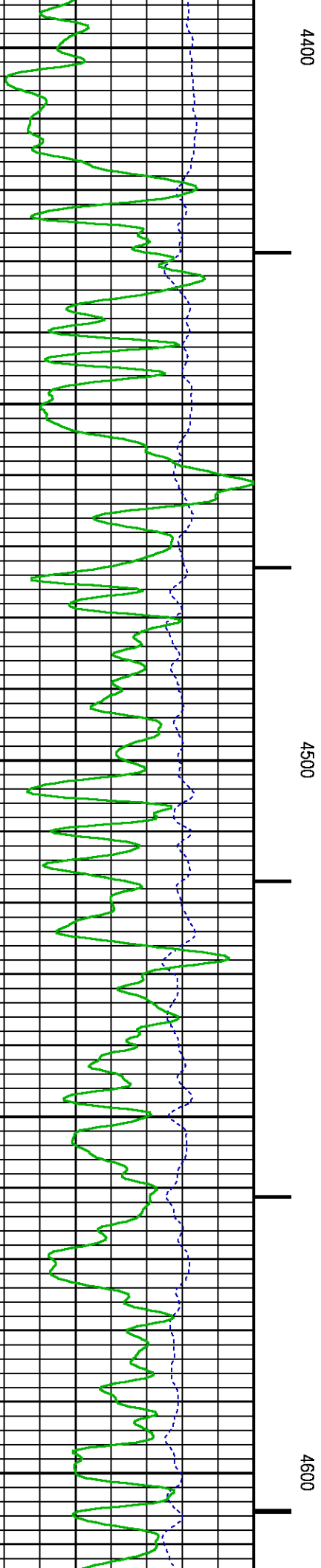
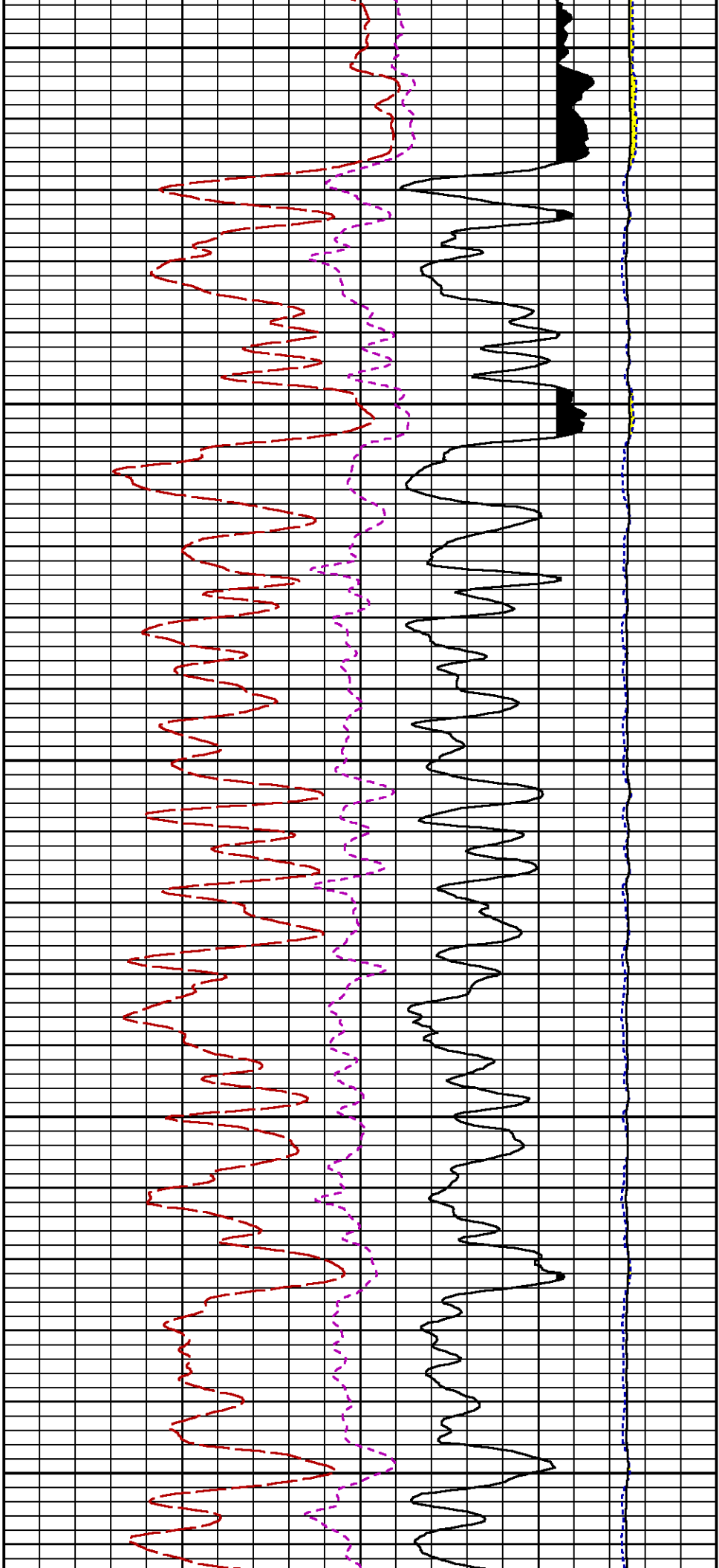
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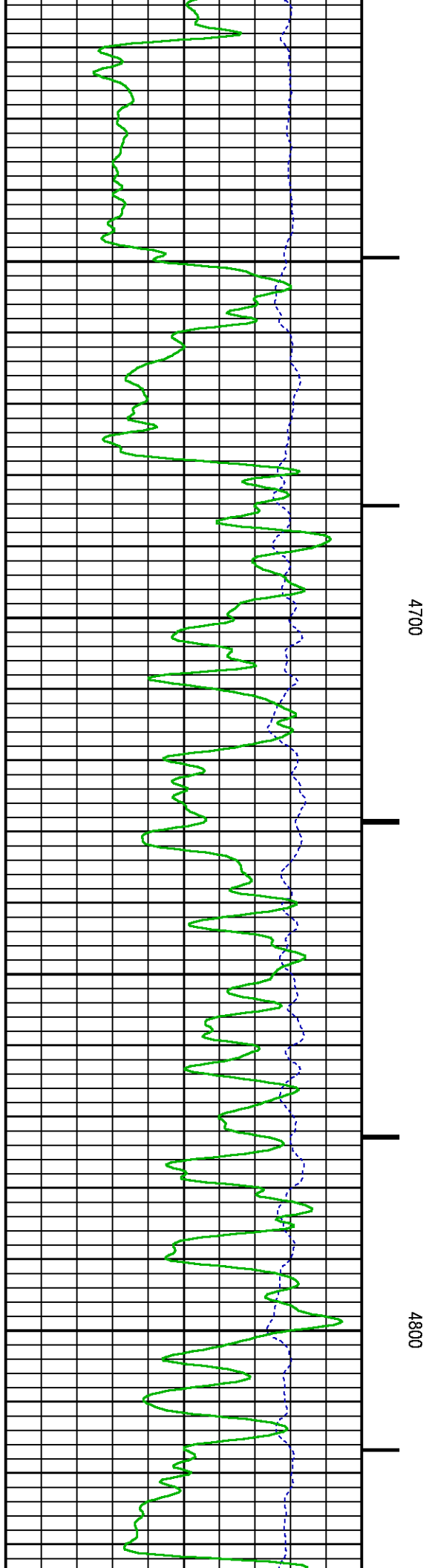
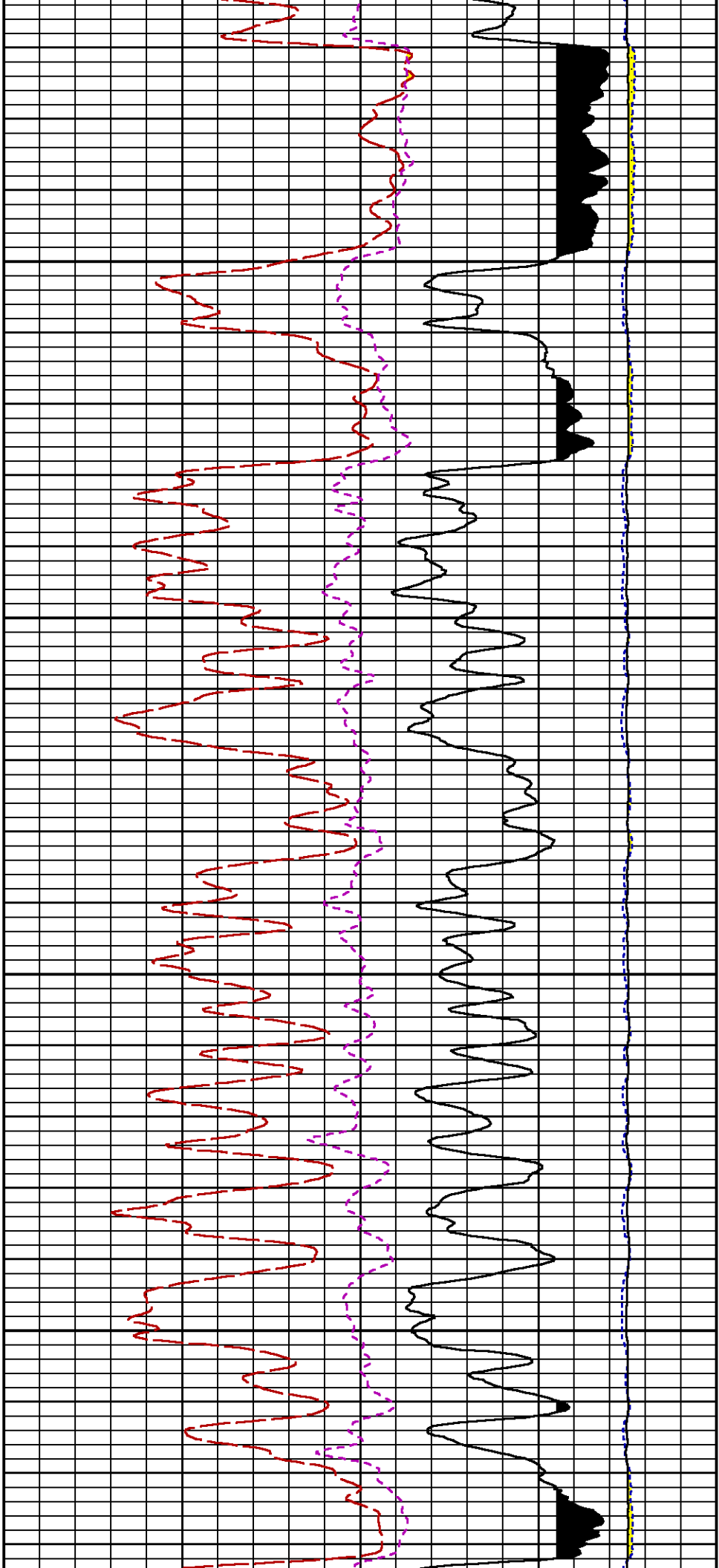
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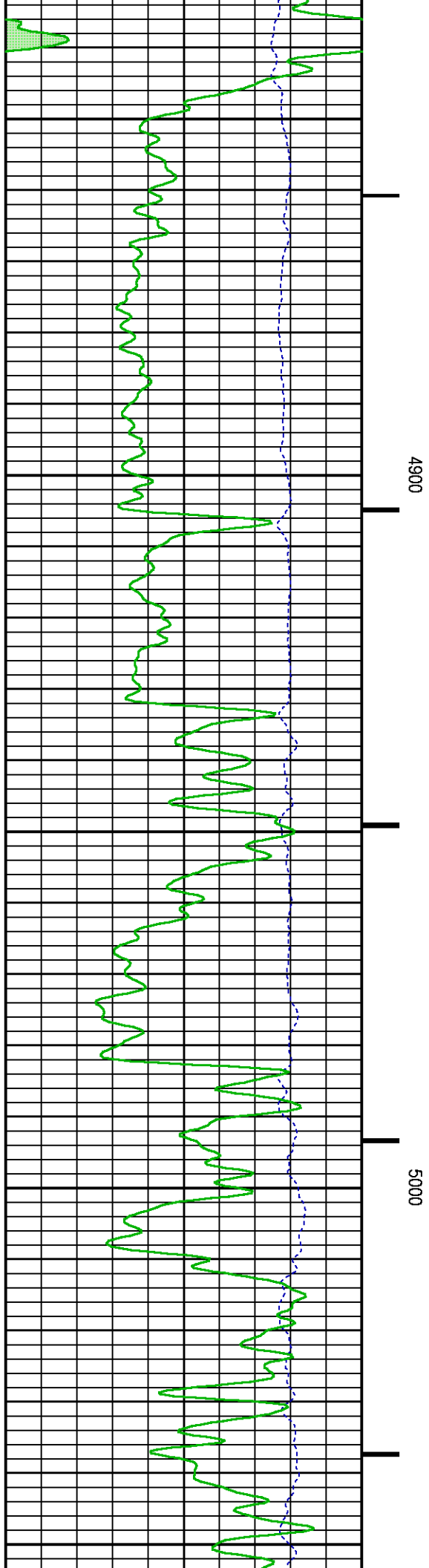
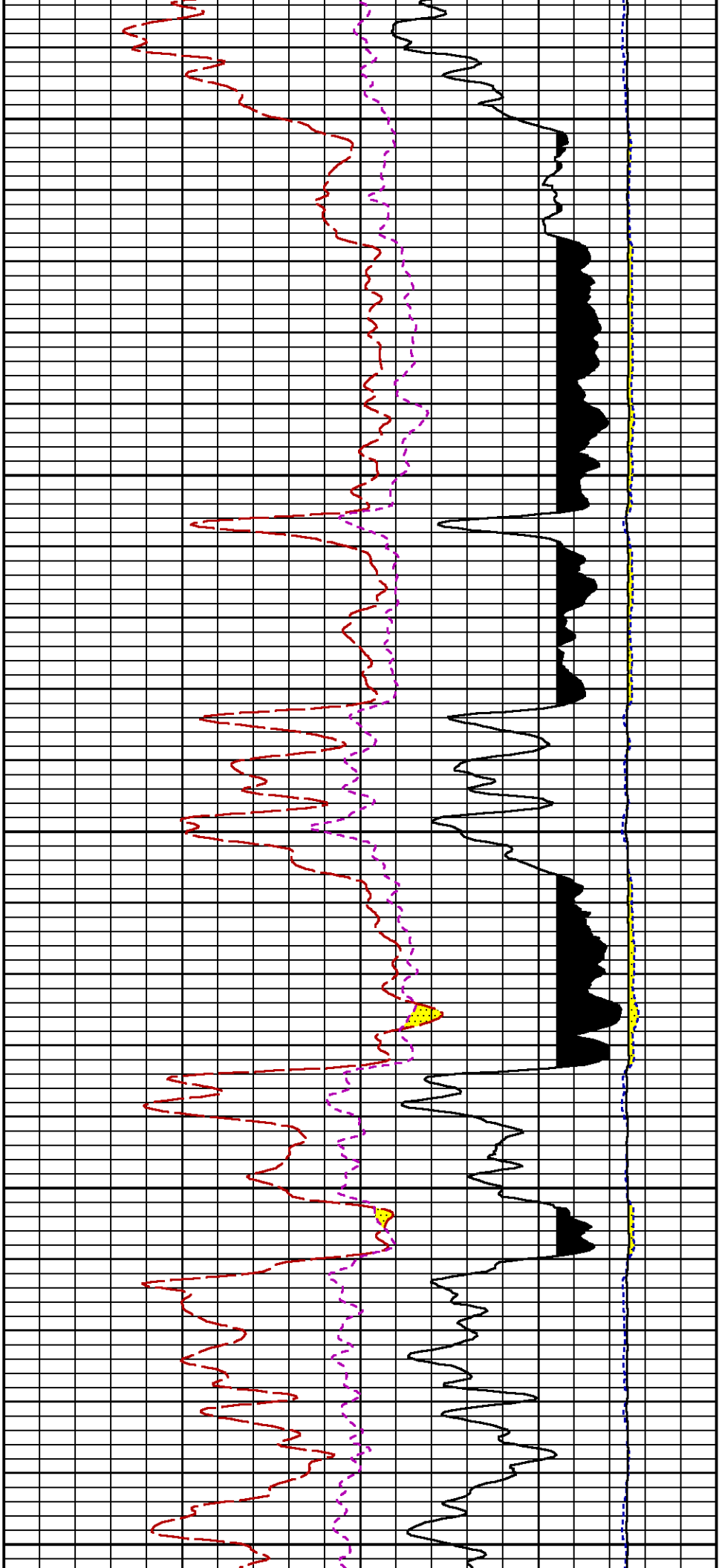
LS

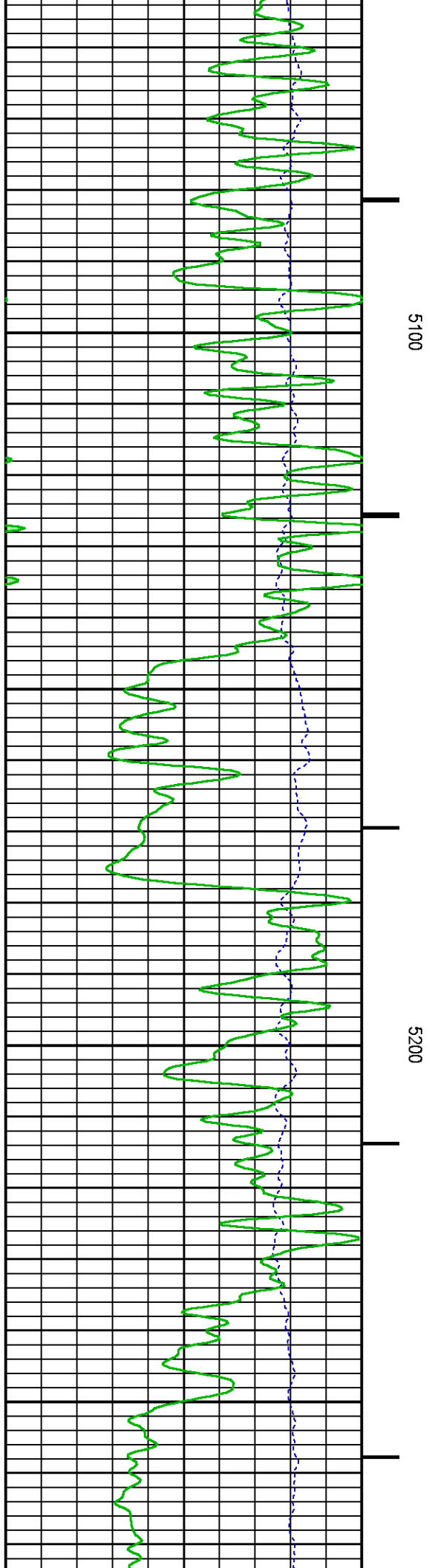
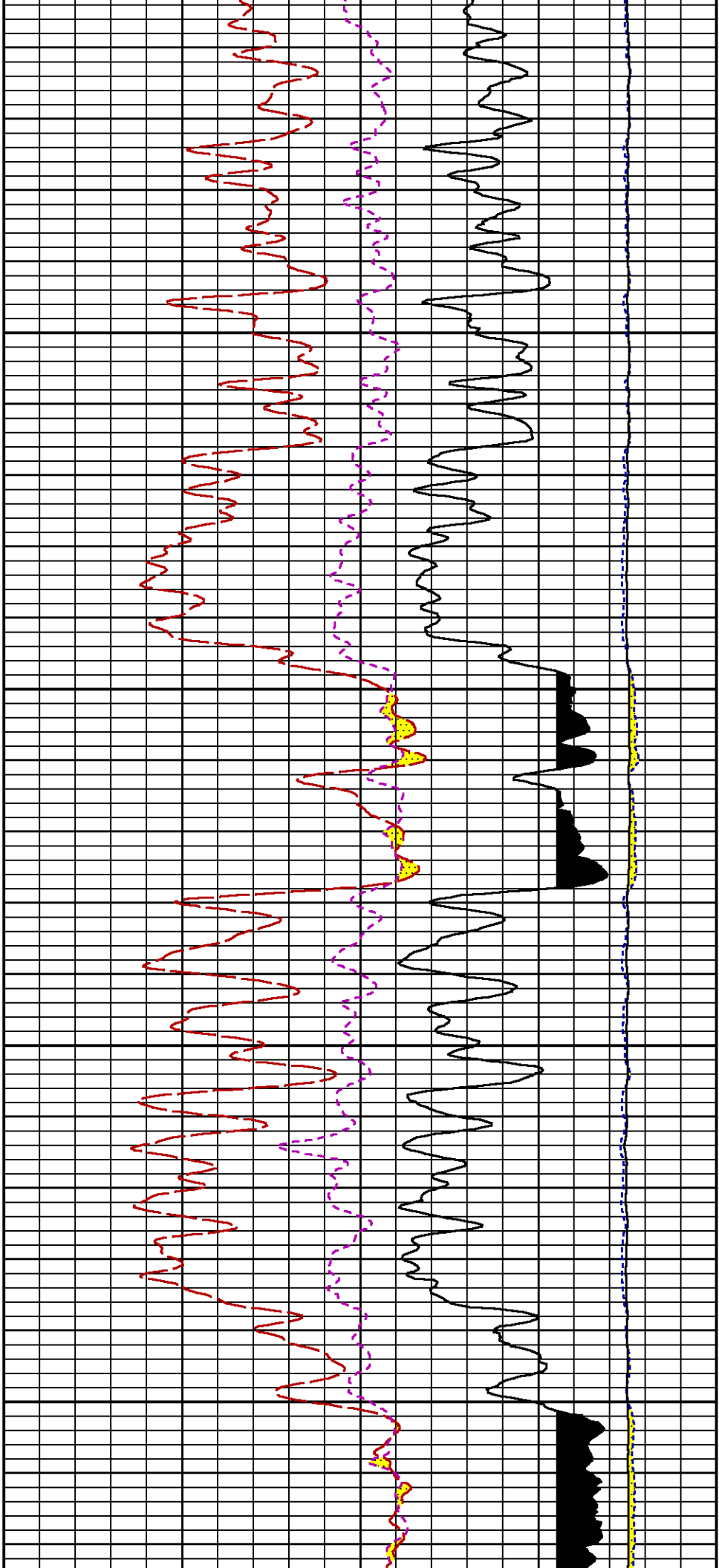
SS



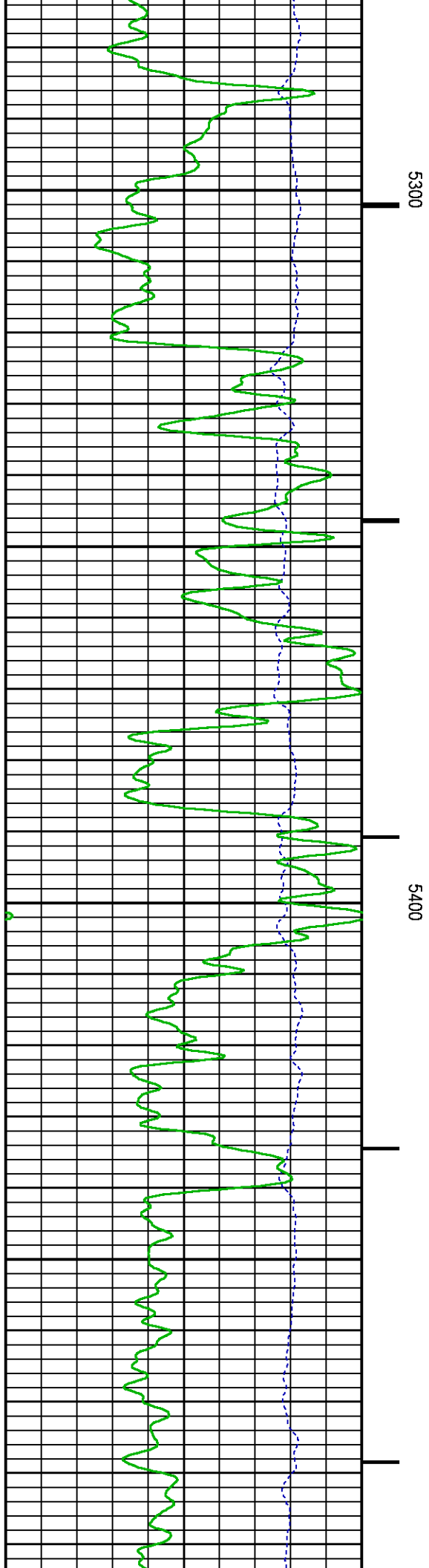
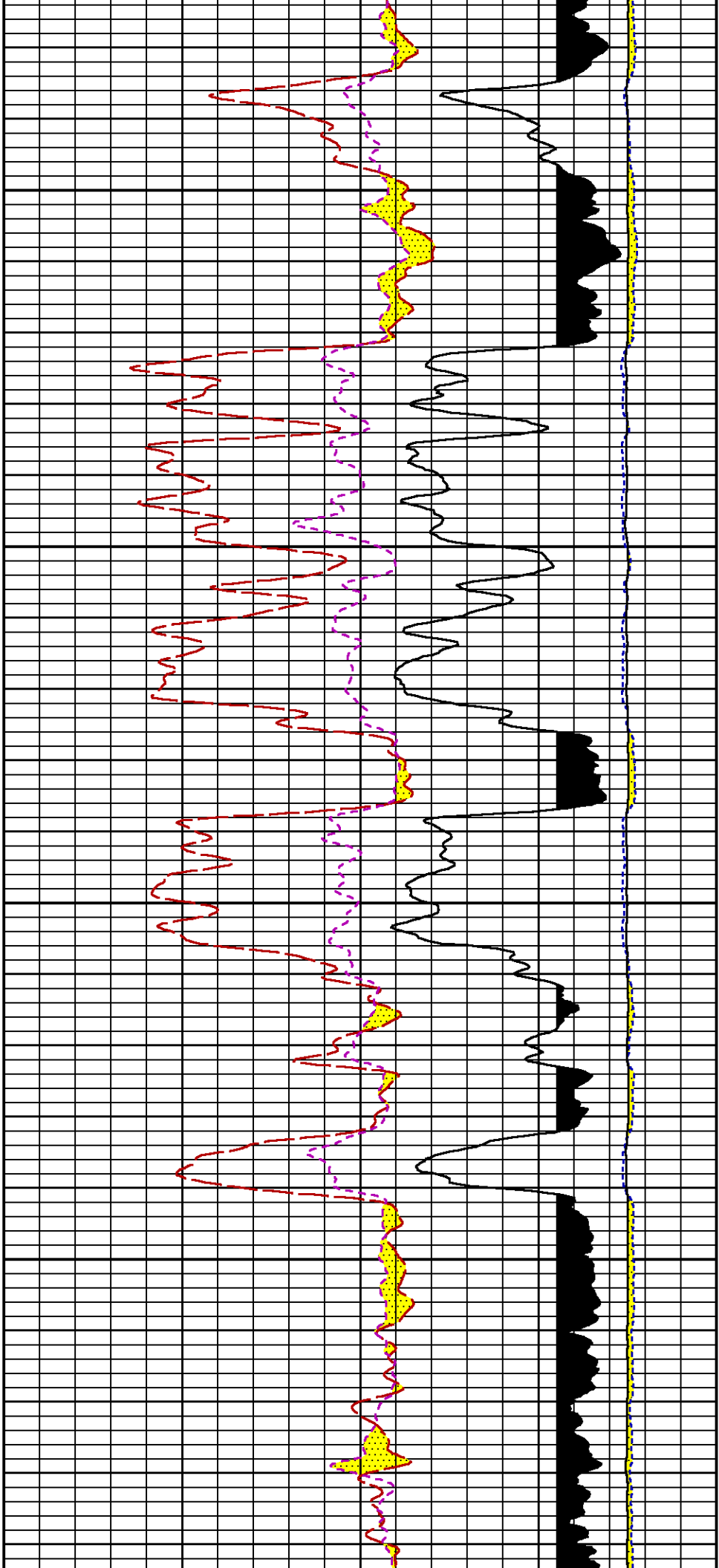


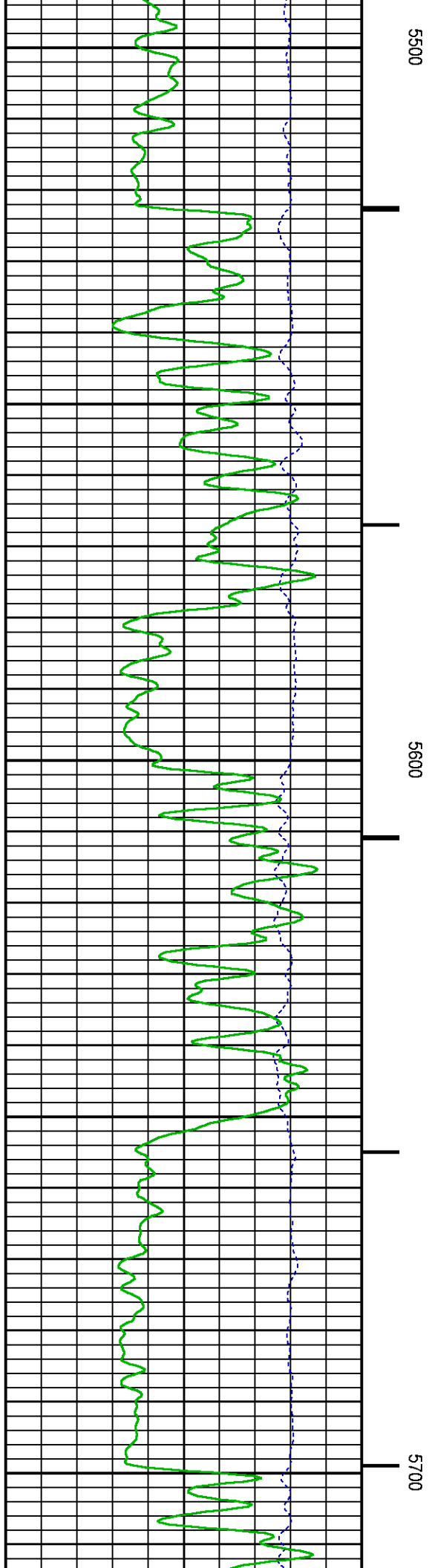
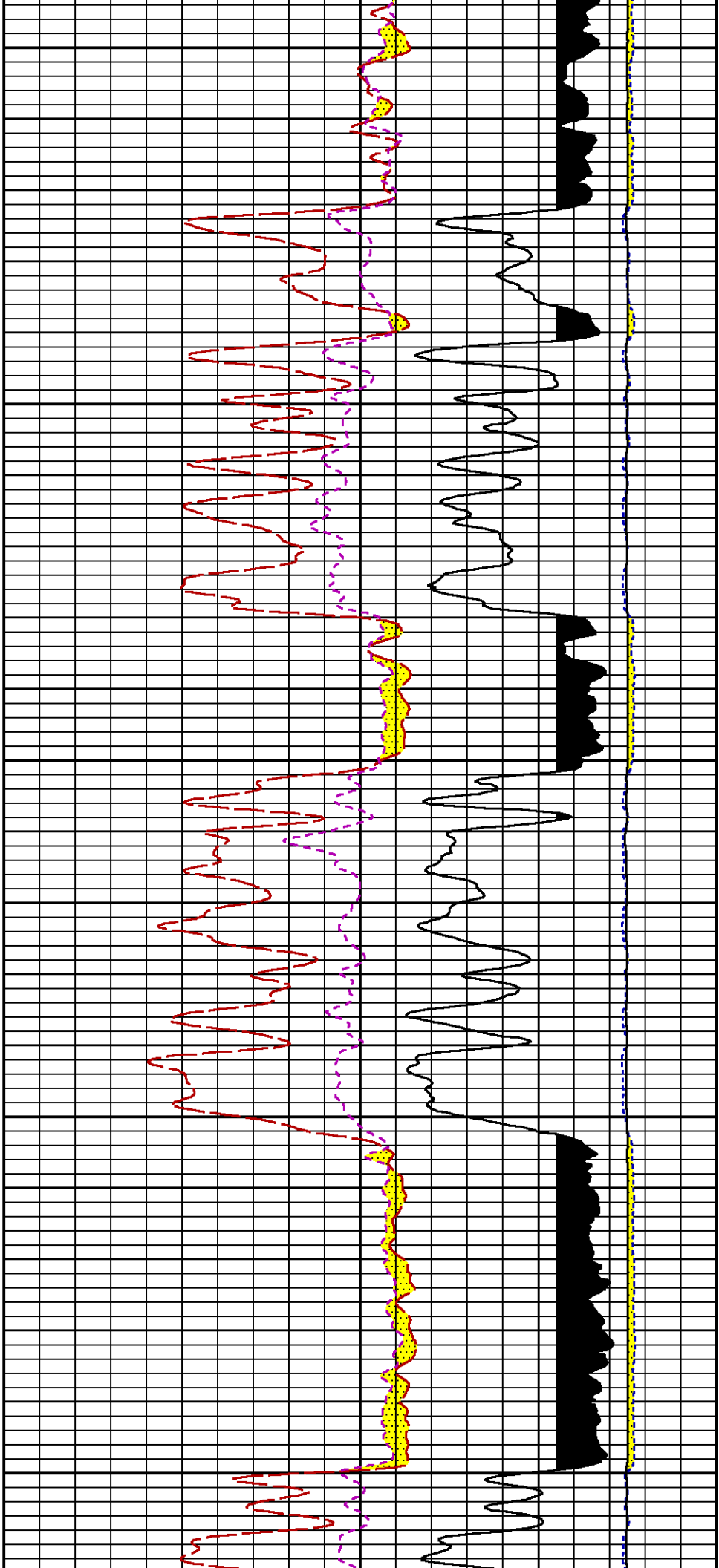


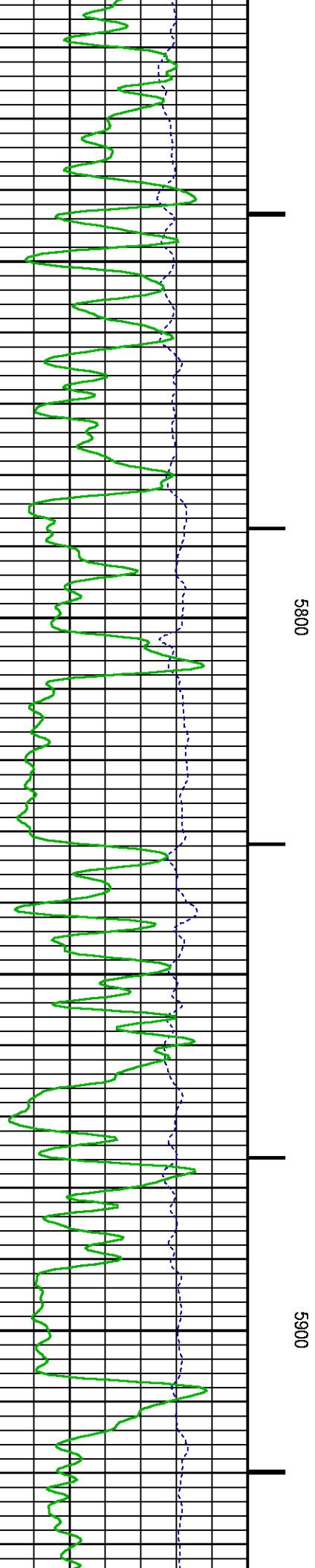
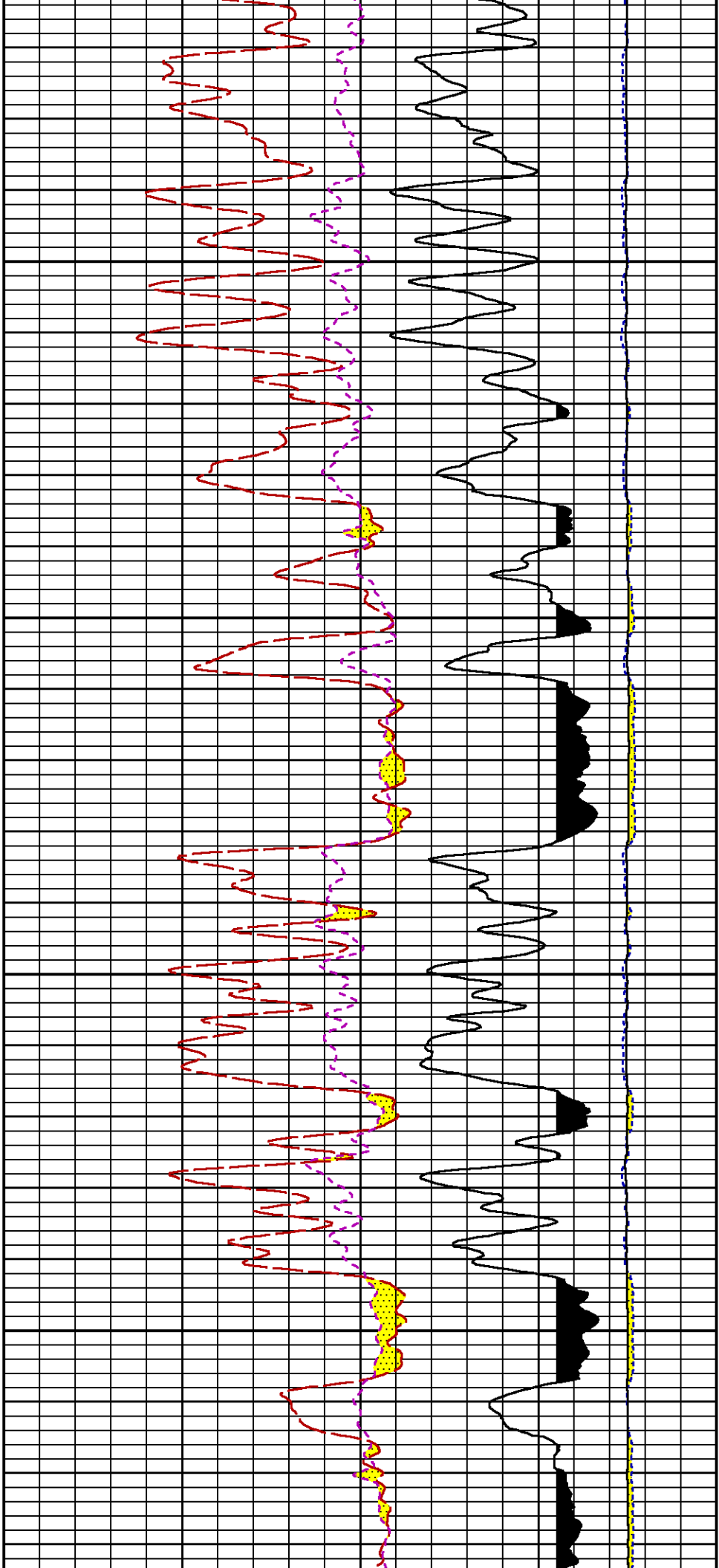


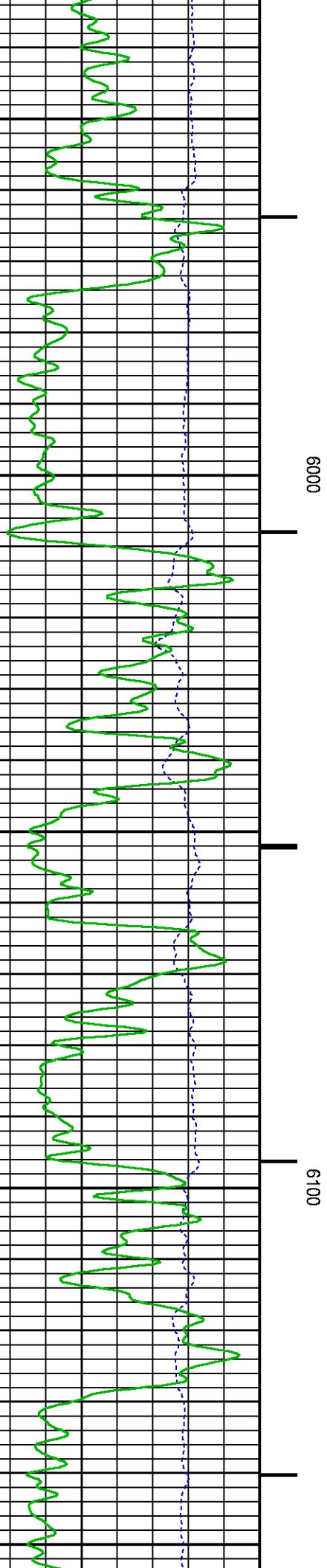
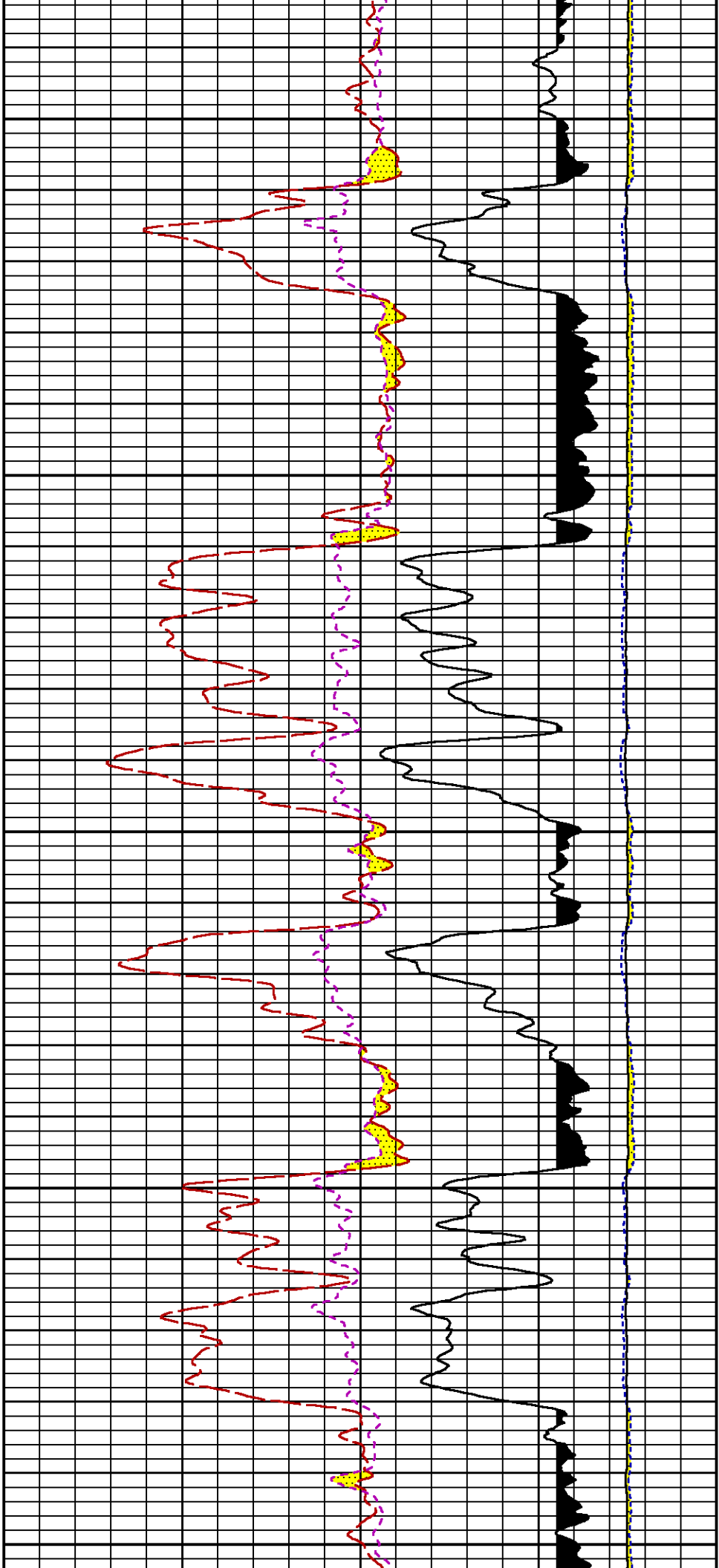


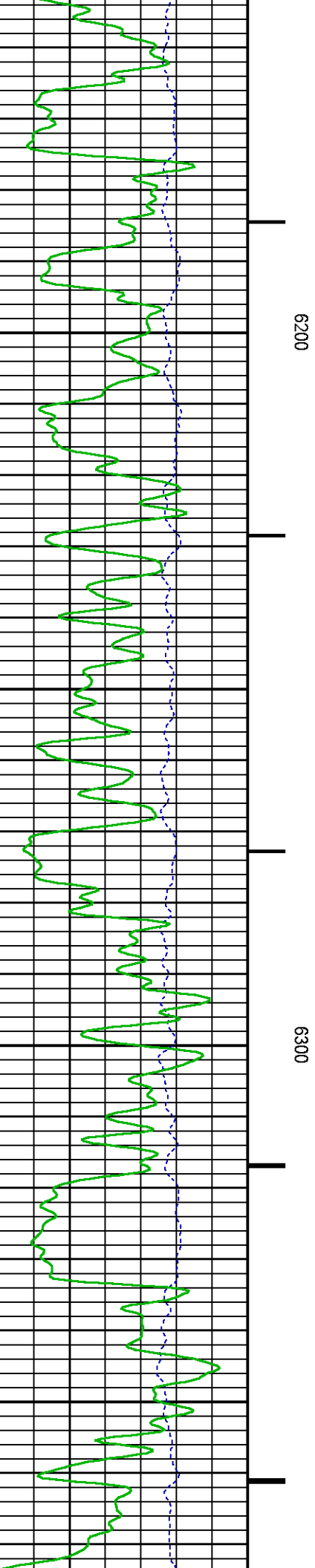
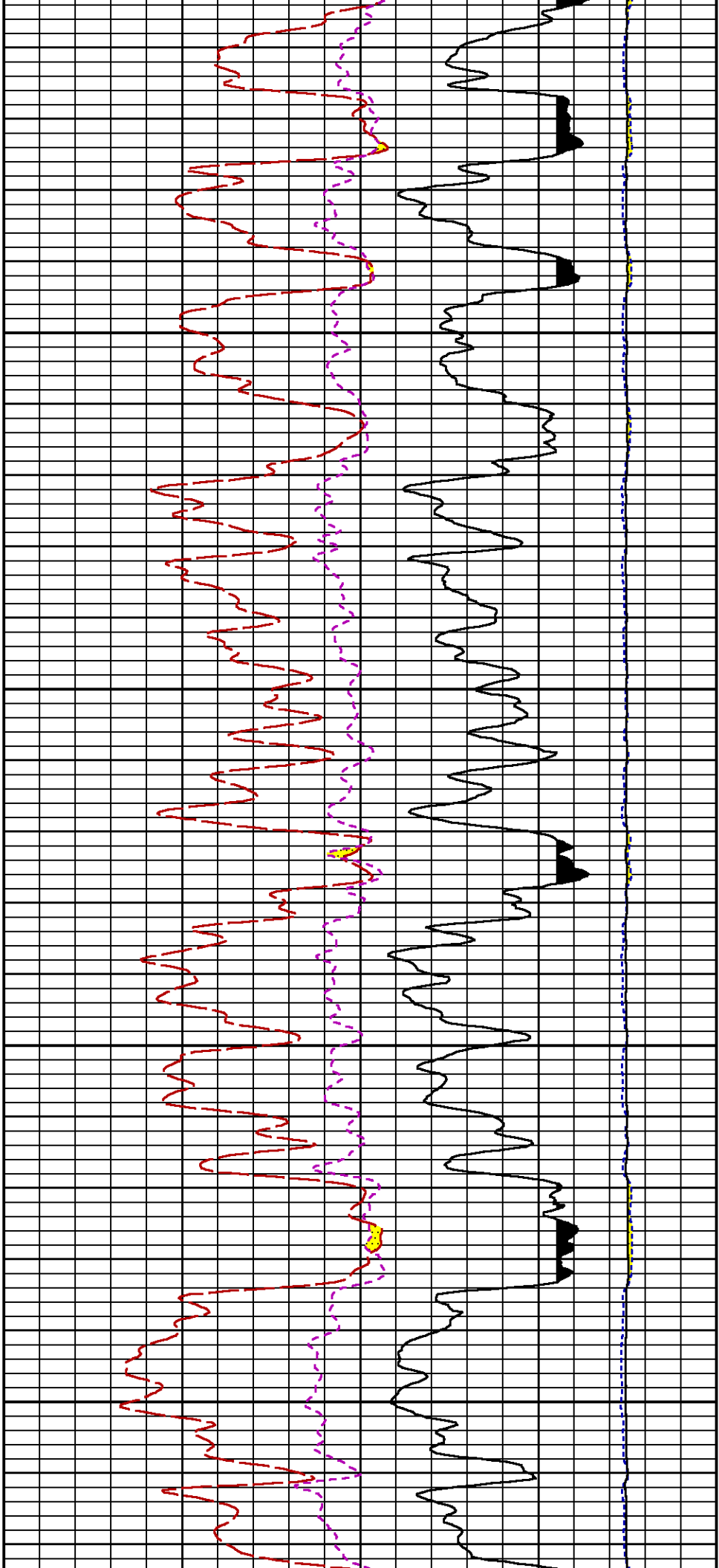


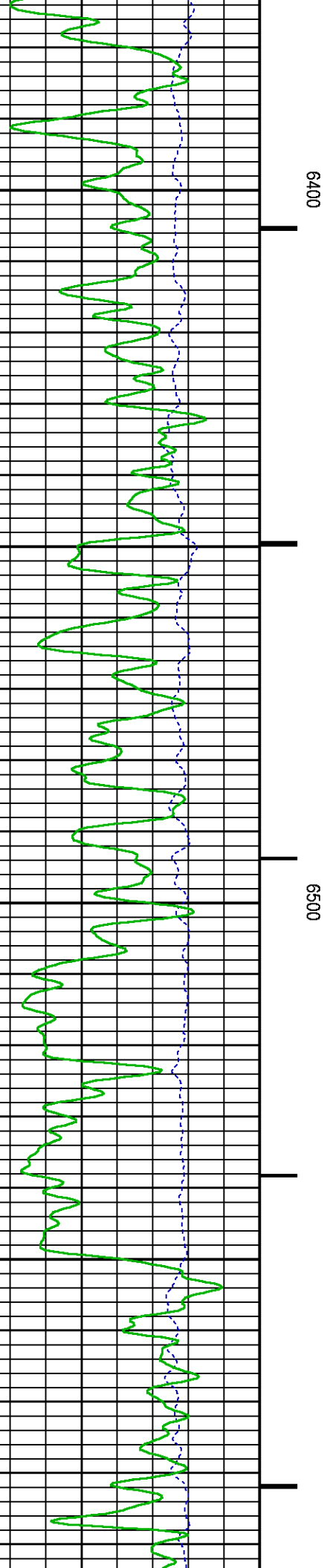
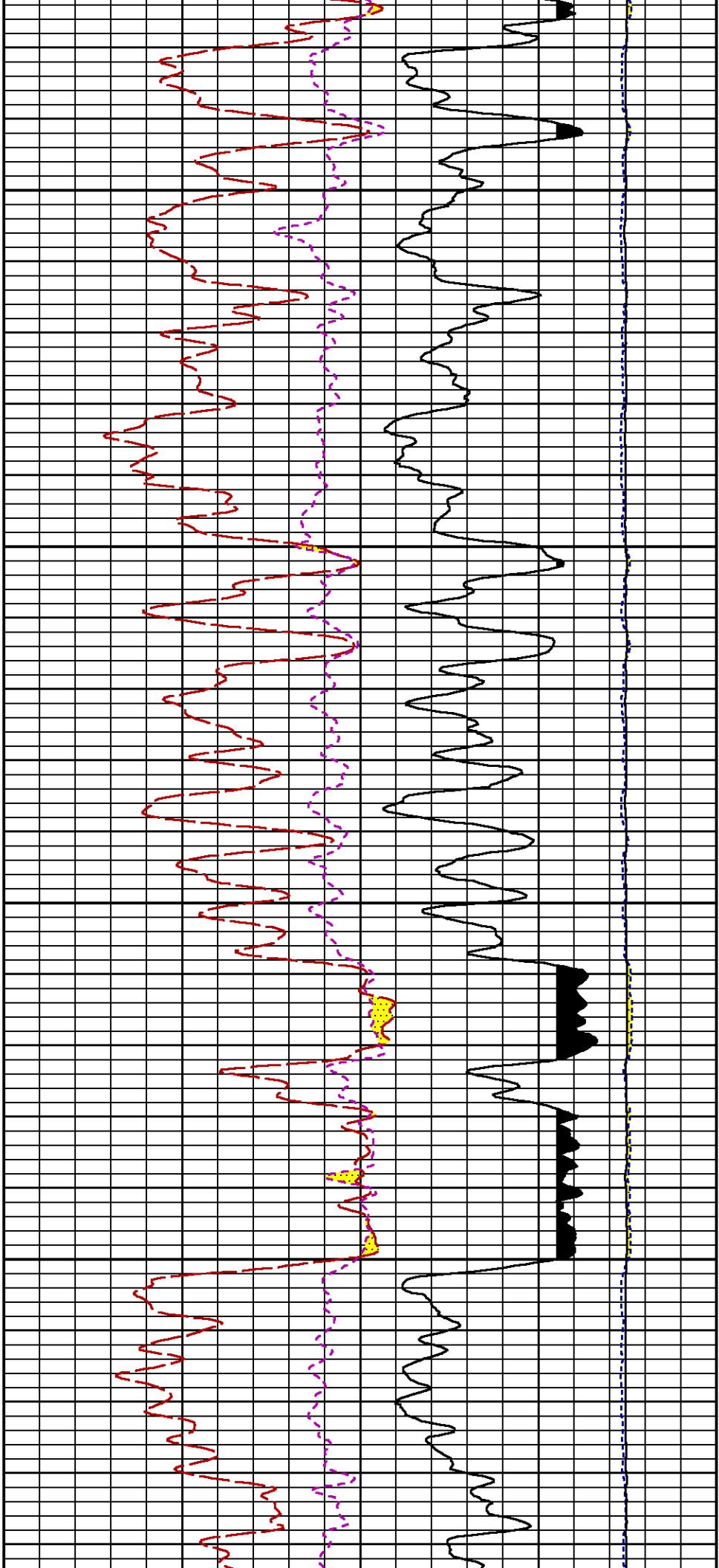


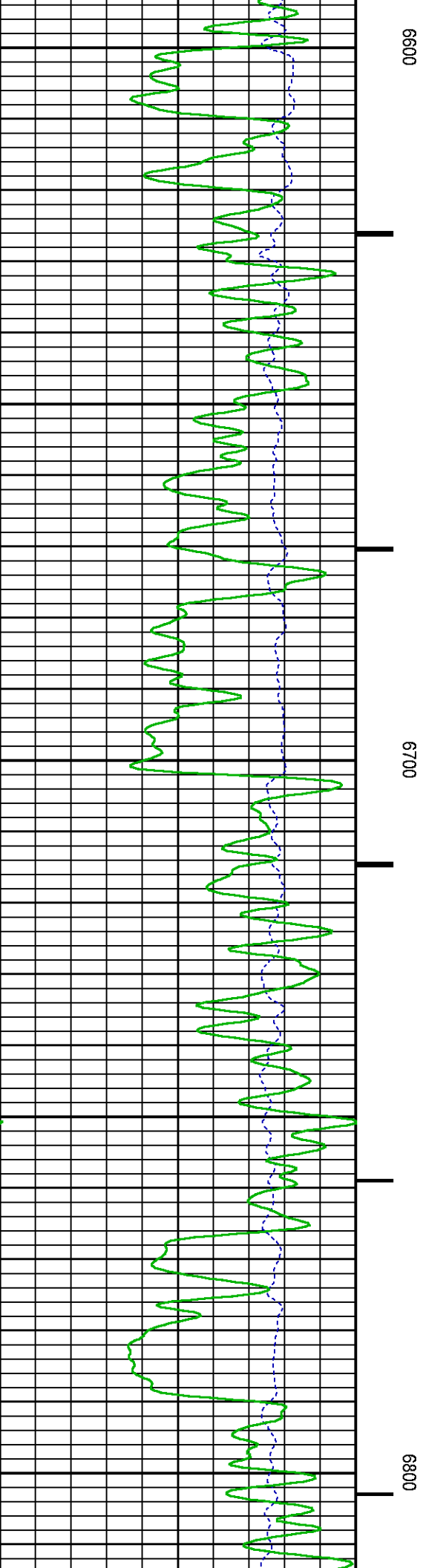
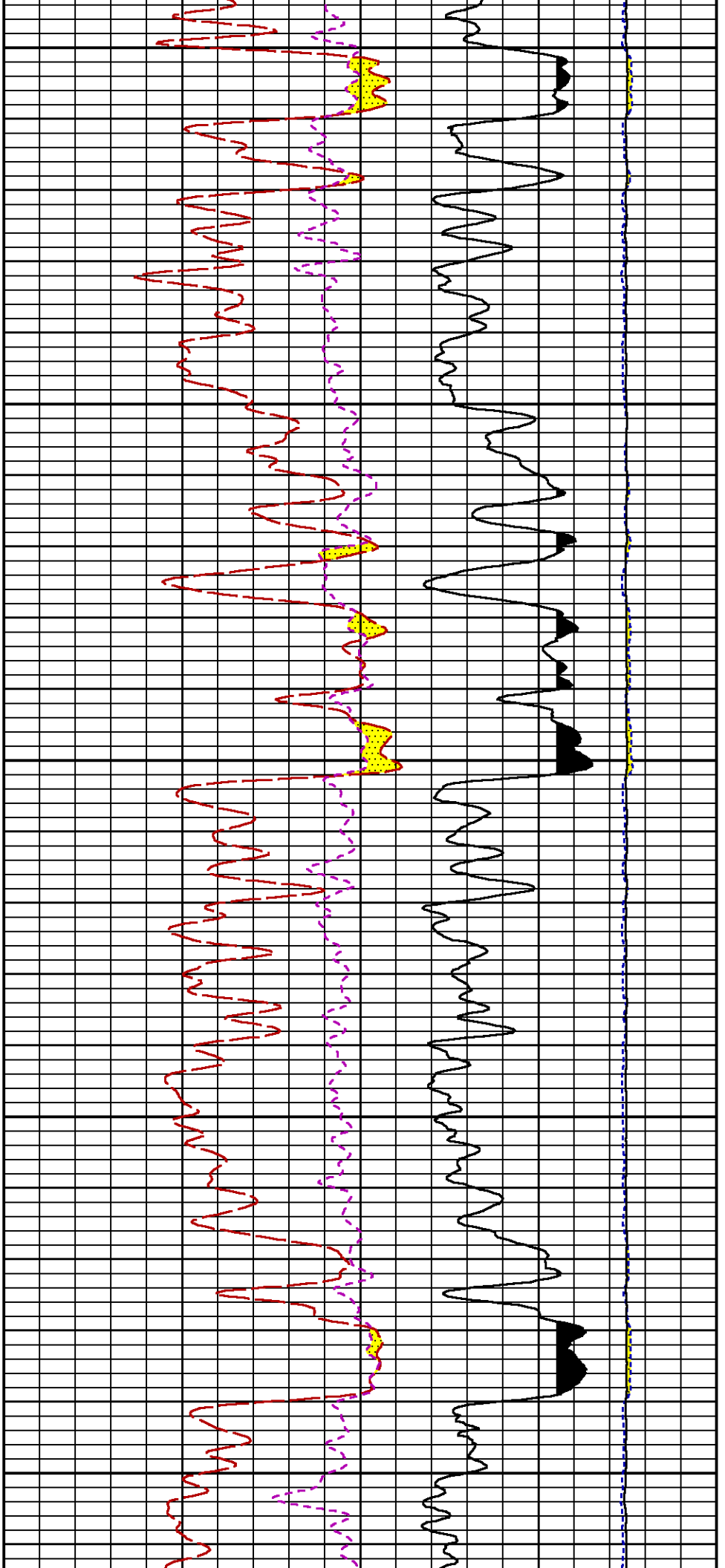


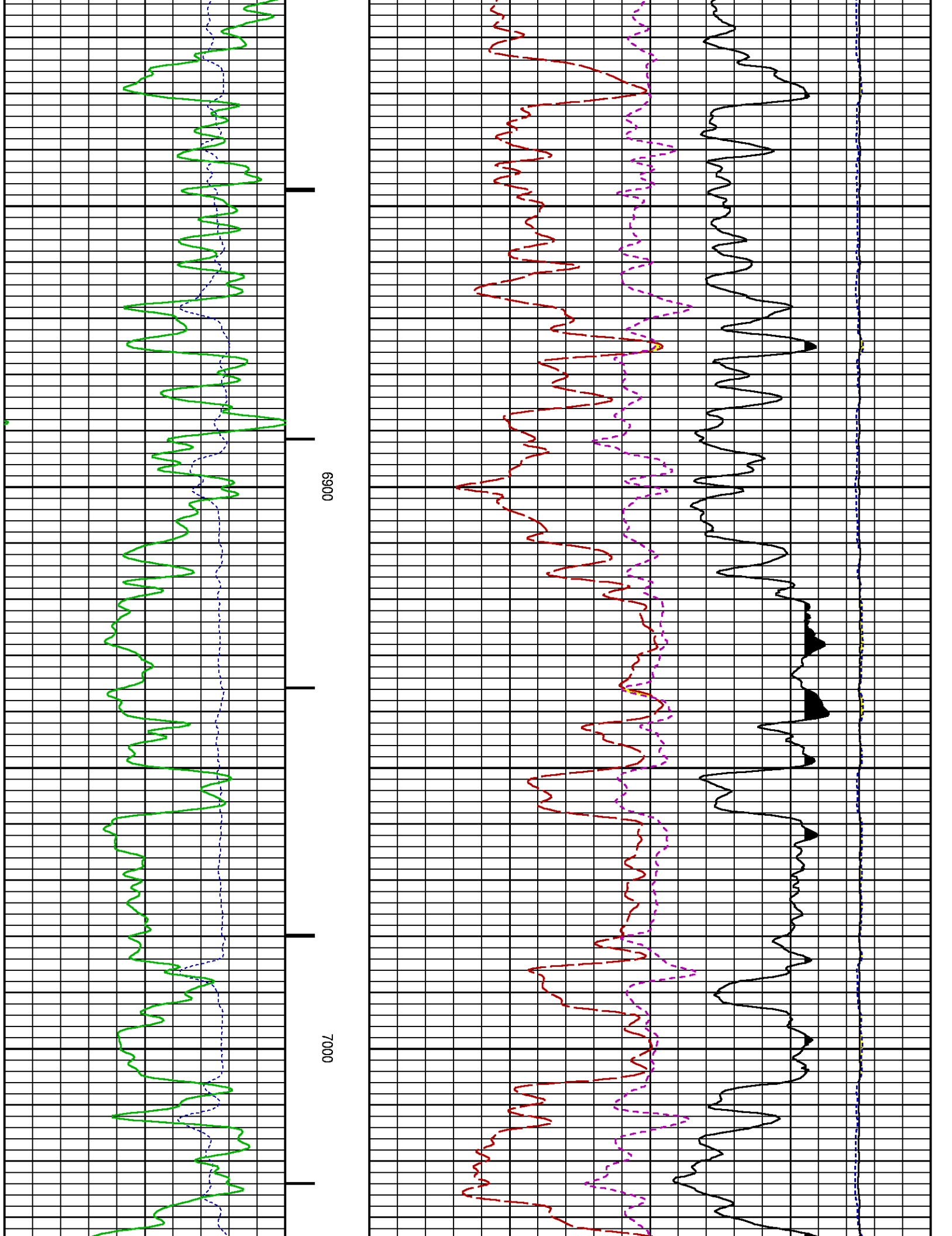




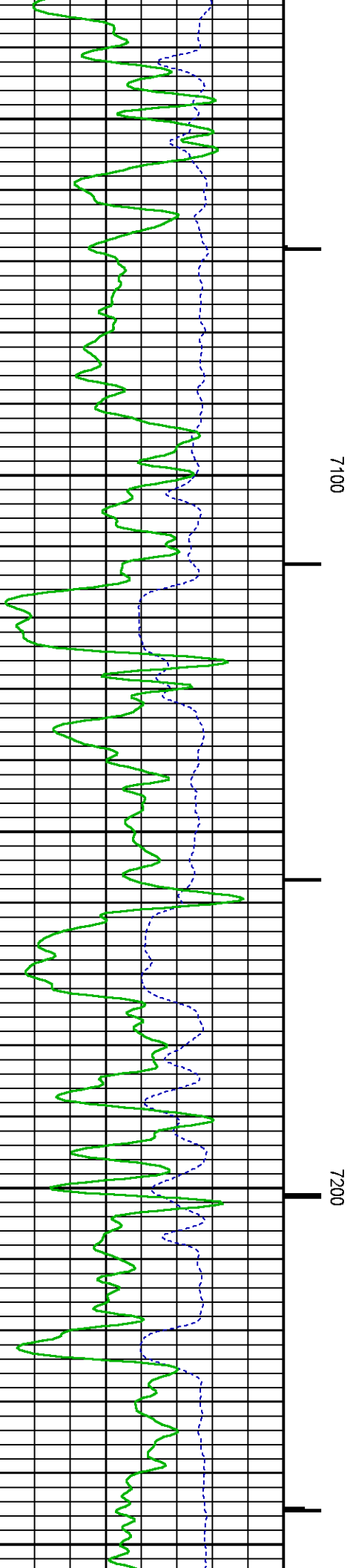
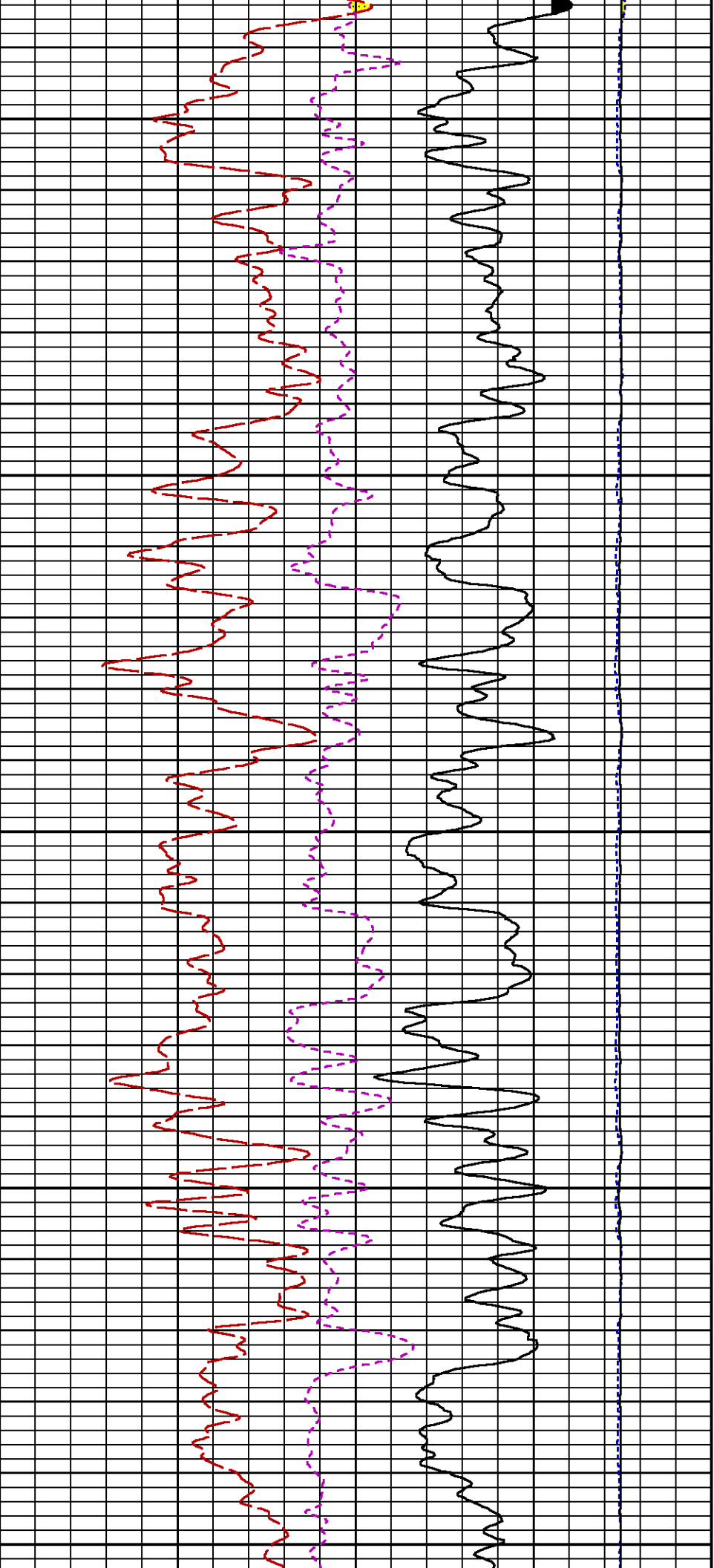


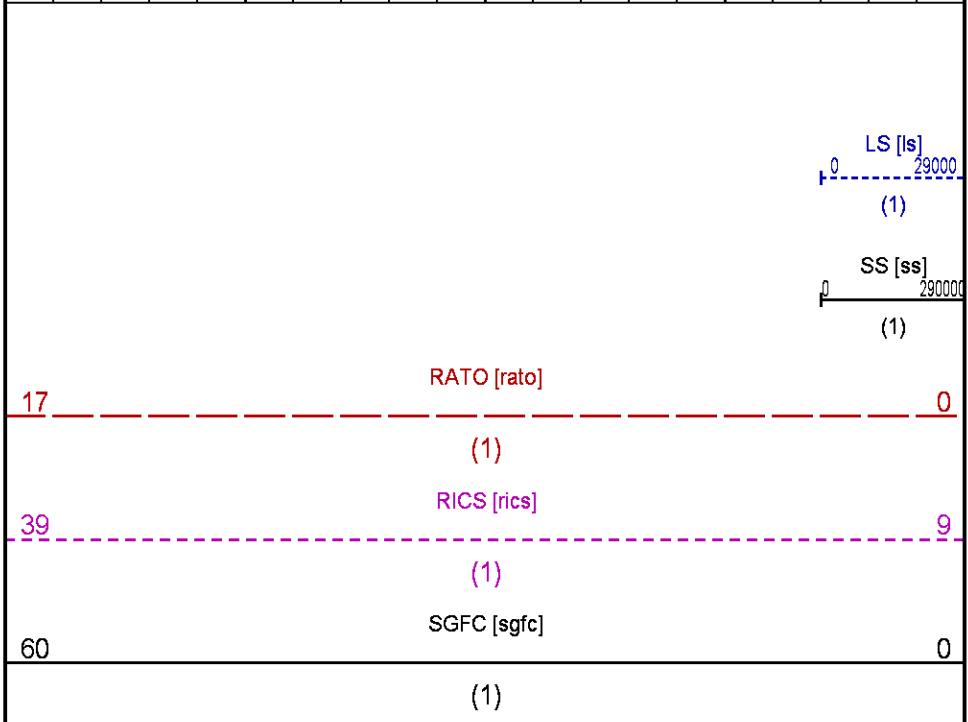
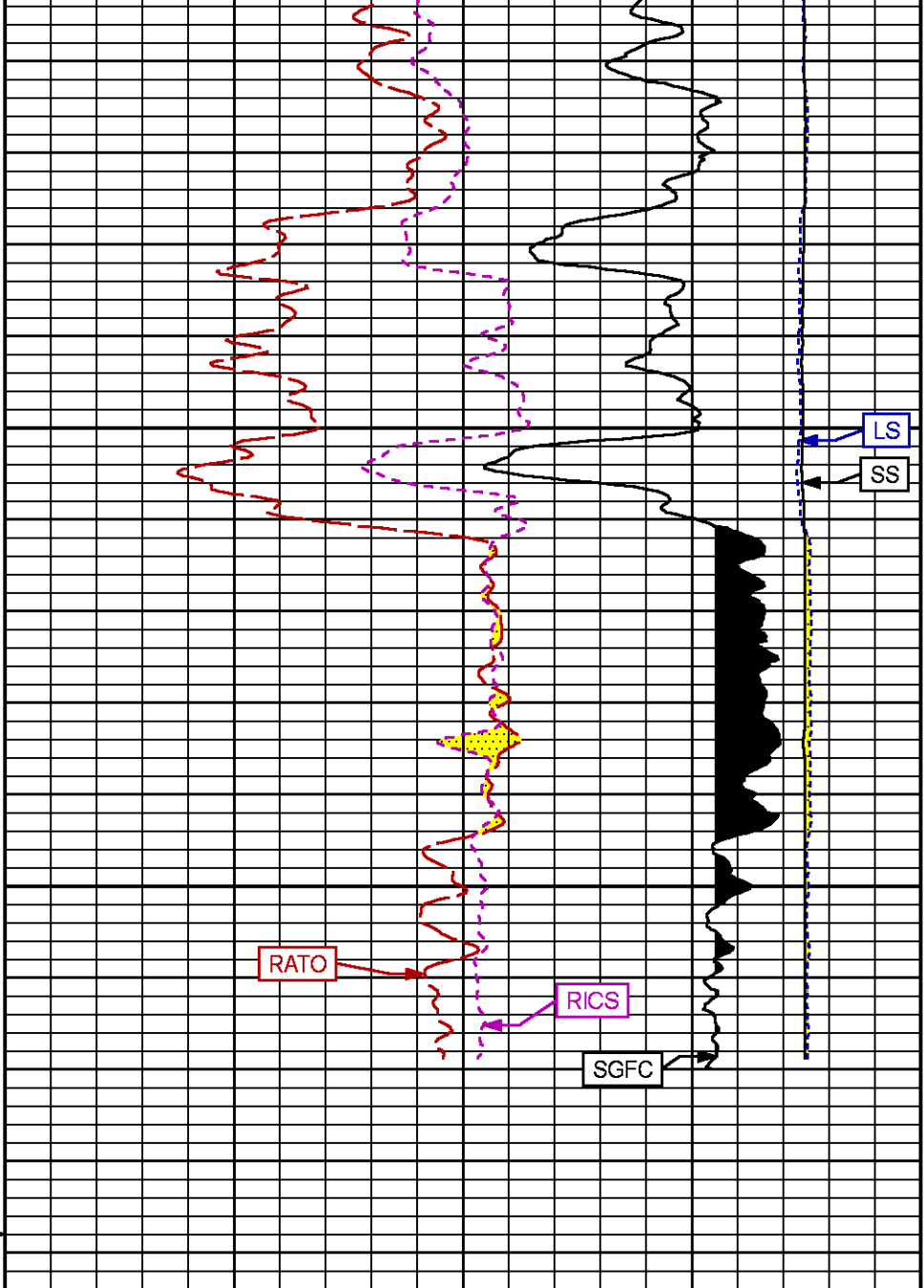
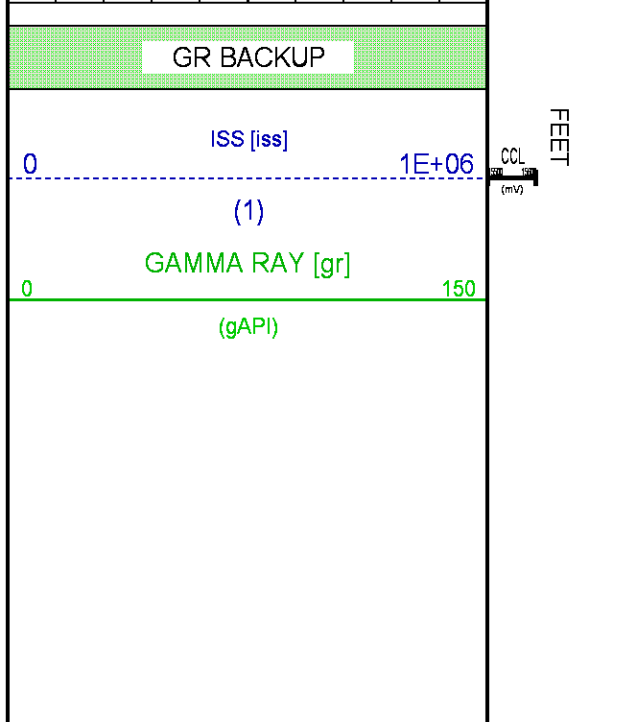
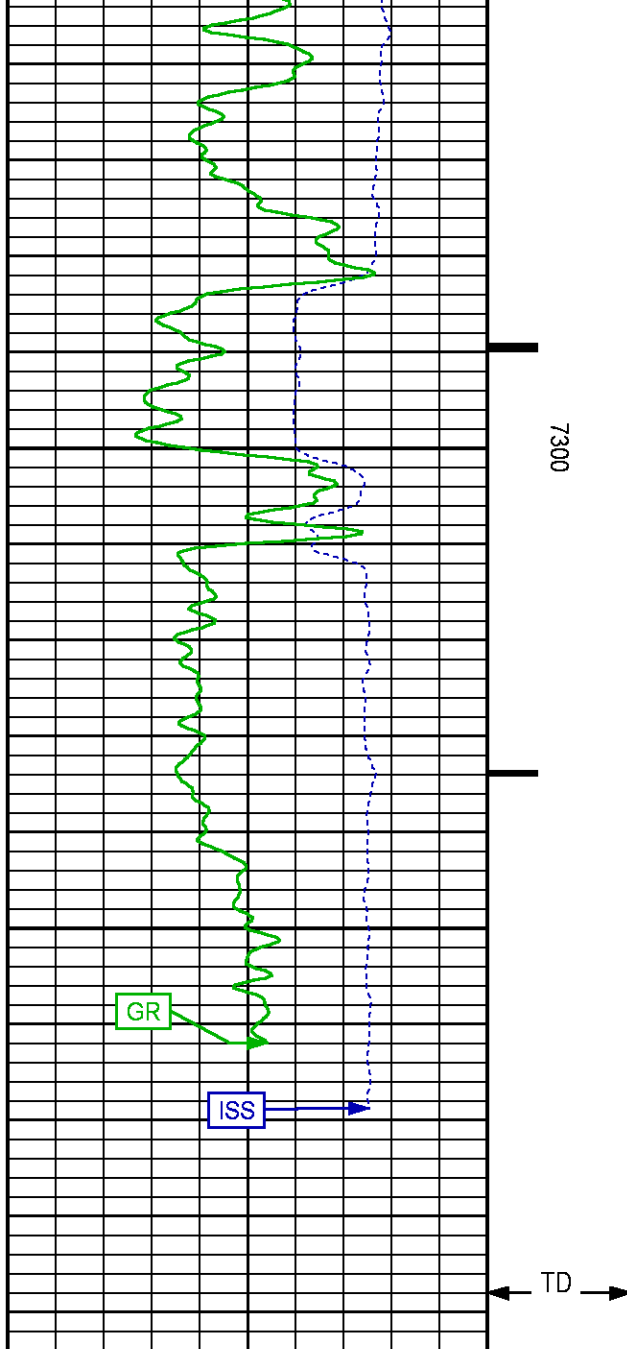












# REPEAT SECTION PNC-3D MODE

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

Updates: 1 Patches: 4

Plotted: Tue Mar 3 15:06:06 2015

## PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH095165/n354h01.prm  
 LOGGING MODE: DEPTH DIRECTION: UP  
 TOP DEPTH: 6554.000 ft BOTTOM DEPTH: 6887.011 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	Mar 3 11:05:07 2015	CASING COLLAR LOCATOR
F1:GR	Mar 3 11:05:07 2015	GAMMA RAY
F1:ISS	Mar 3 11:05:07 2015	INELASTIC SHORT SPACE COUNT RATE
F1:LS	Mar 3 11:05:07 2015	LONG SPACE COUNT RATE
F1:RATO	Mar 3 11:05:07 2015	SHORT/LONG SPACE COUNT RATE RATIO
F1:RICS	Mar 3 11:05:07 2015	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:SGFC	Mar 3 11:05:07 2015	CORRECTED FORMATION SIGMA
F1:SS	Mar 3 11:05:07 2015	SHORT SPACE COUNT RATE

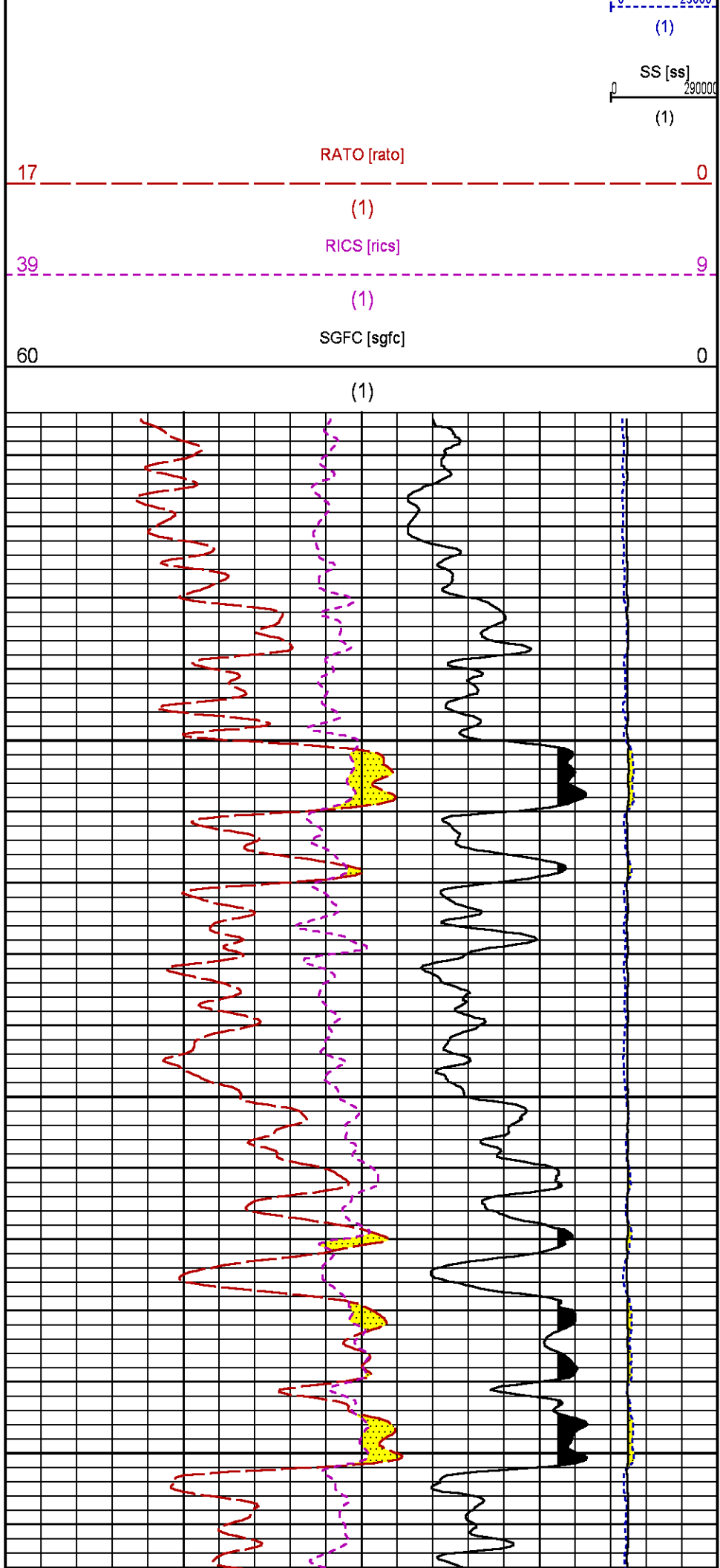
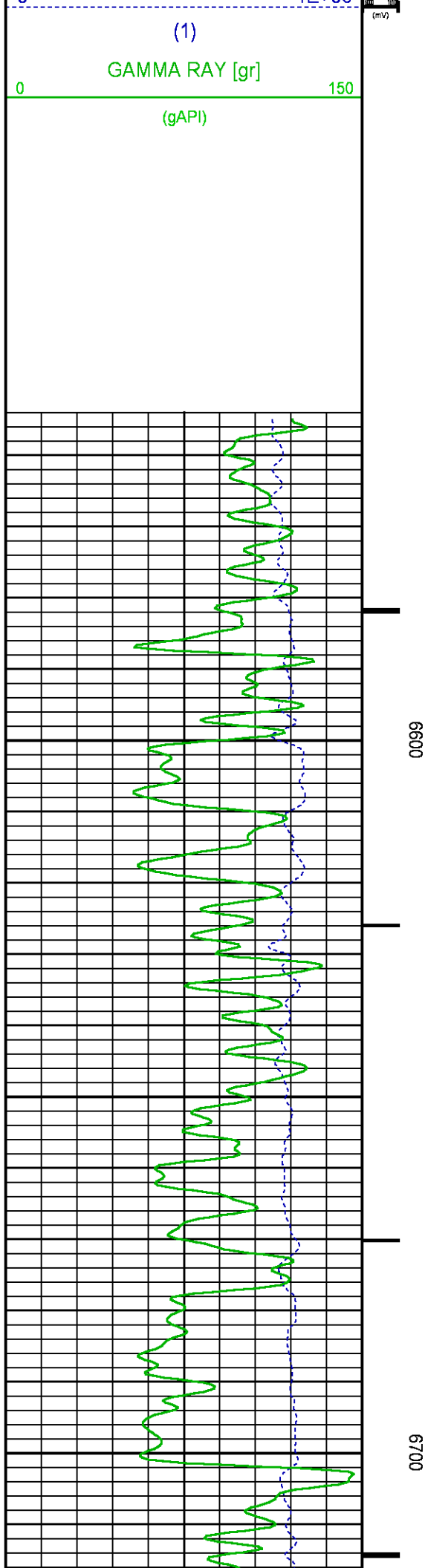
## CURVE MEASURE POINT OFFSET

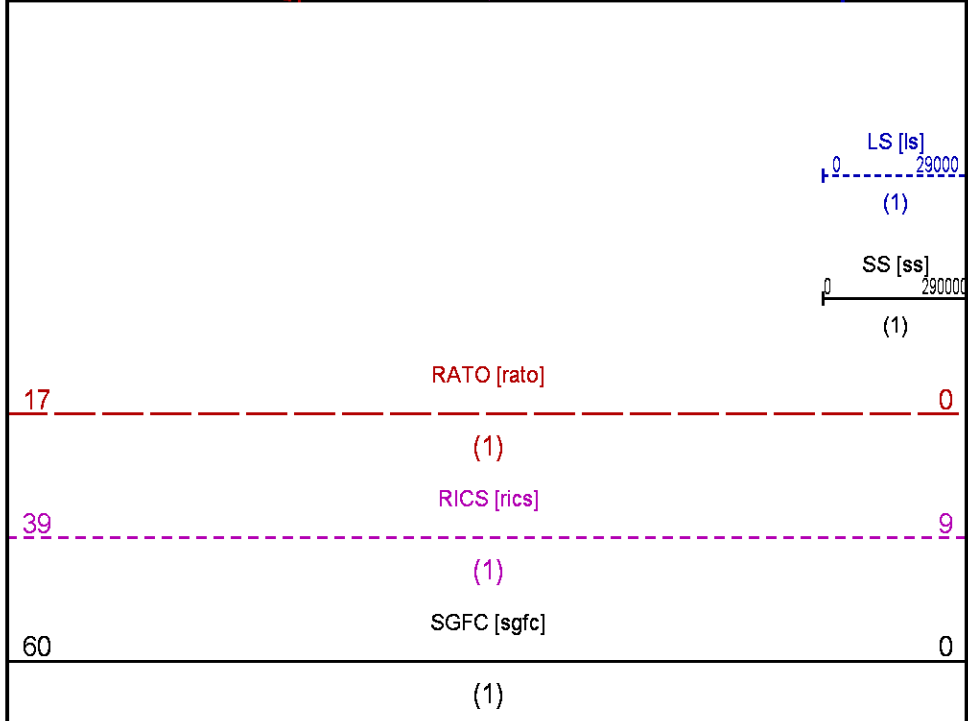
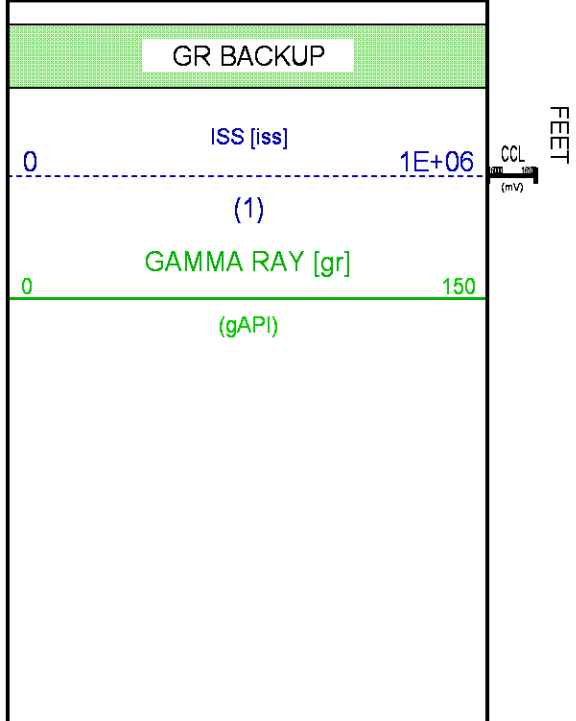
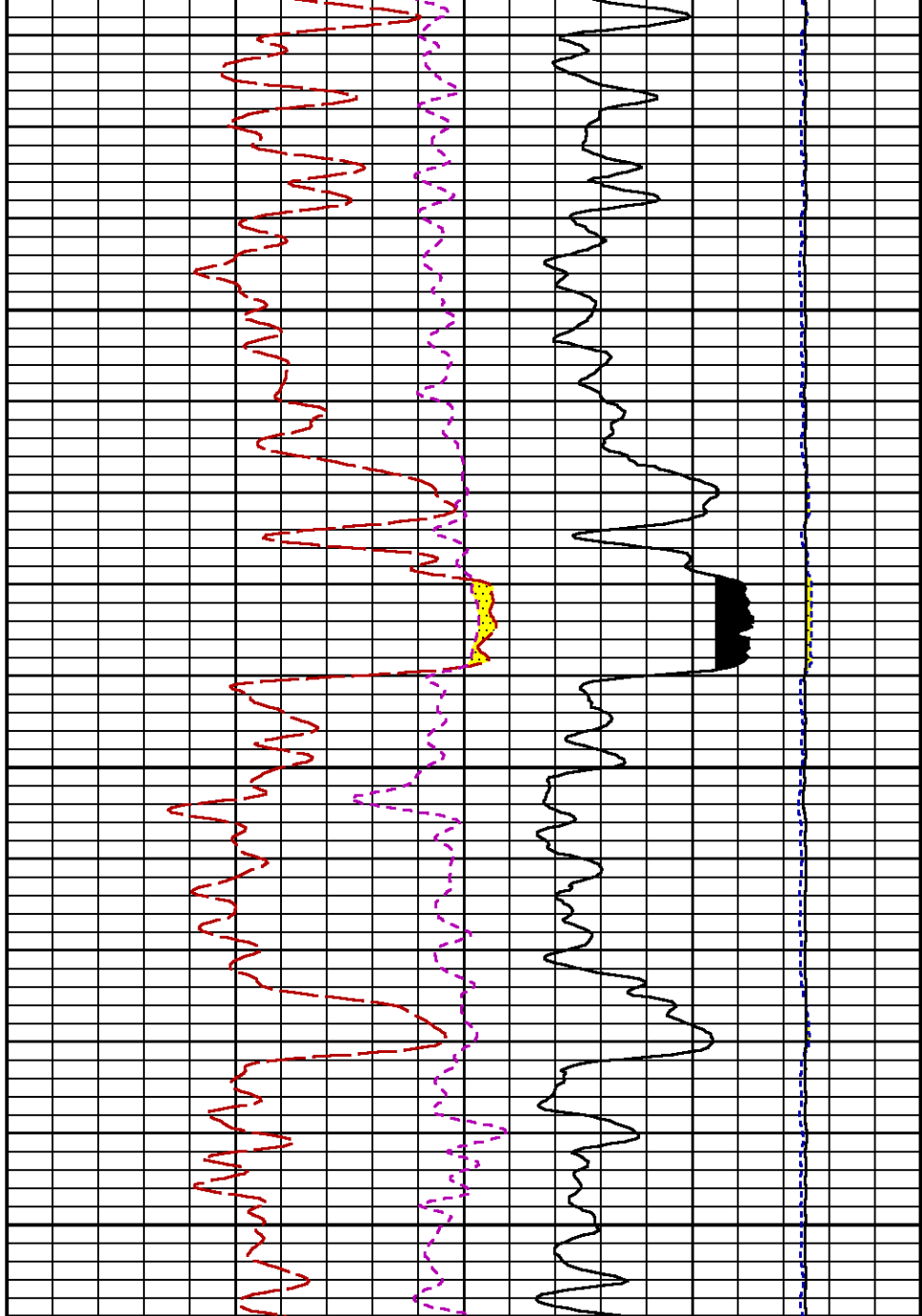
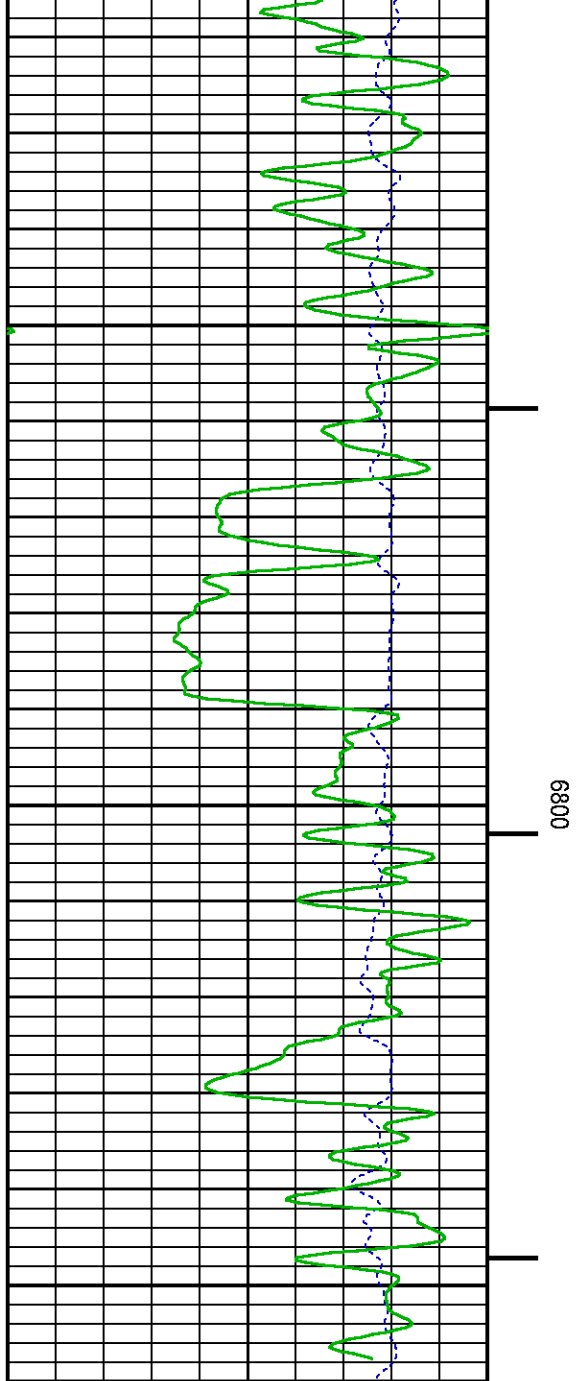
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	25.00	ISS	12.75	RATO	12.75	SGFC	12.75
GR	22.75	LS	12.75	RICS	12.75	SS	12.75

Presentation : HL6670:/dat1a/CH095165/322RPM\_REPEAT.fvpdf [5"/100' Scale]  
 Plot Interval : 6555 - 6860 Feet

Data File 1 : F1 : HL6670:/dat1a/CH095165/322RPM\_REPEAT.xtf  
 Created On : Mar 3 11:05:07 2015  
 Company : WPX ENERGY  
 Well : WPX ENERGY GM 322-28  
 Field : GRAND VALLEY  
 File Interval : 6527 - 6880.75 Feet  
 OCT : n354h







# CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH095165/n354h.tp1

## GR PRIMARY CALIBRATION SUMMARY

TOOL #: 2812LA 11701636      DATE/TIME PERFORMED: Wed Feb 25 15:03:23 2015

UNIT #: 3885TD Z004271      CALB JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	61.84	259.64	197.8	1.062	65.66	275.66	210

## GR PRIMARY VERIFICATION SUMMARY

TOOL #: 2812LA 11701636      DATE/TIME PERFORMED: Wed Feb 25 15:05:41 2015

UNIT #: 3885TD Z004271      VERI JIG #: 4702NK WA-612

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	57.36	255.87	1.062	60.89	271.65	210.75
						200.00    220.00

## RPM\_PNC\_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10169251      DATE/TIME PERFORMED: Wed Feb 25 14:28:15 2015

UNIT: 3885TD Z004271      CALIBRATOR: 2437XB 112674      SOURCE: 8281AA 10220684      HOURS: 8281AA 302

	ISS	Mtr VIts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	802100	124	2324	2307	2316	94	7	0.9833
Interpolated	1300000	146	2307	2304	2316			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	802100	10459	1700	203	26.10	0.15	24.14	0.34
					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	802100	168001	26460	88401	31452	8229	53476	13181
Fit Quality %		0.986	1.244	0.978	0.935	1.035	0.907	1.033

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	802100	1.43	4.77	30.33	15.00	10.75	3.82	4.06
		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 %		0.022	0.024	0.127	0.062	0.078	0.101	0.077
Reduced	1406800	1.43	4.78	30.37	15.00	10.74	3.82	4.06
		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

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/CH095165/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

33.24'

CCL MP 25.19'

GR MP 22.64'

**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'

	<b>COMPANY</b> <u>WPX ENERGY</u>		<b>FILE NO:</b> <u>CH095165</u>
	<b>WELL</b> <u>WPX ENERGY GM 322-28</u>		<b>API NO:</b> <u>05045225010000</u>
	<b>FIELD</b> <u>GRAND VALLEY</u>		
	<b>COUNTY</b> <u>GARFIELD</u>	<b>STATE</b> <u>CO</u>	
<b>LOCATION:</b> SHL: 1555' FSL & 2300' FWL BHL: 1515' FNL & 2479' FWL		<b>ELEVATIONS:</b> KB 5500 FT DF GL 5476 FT	28 6S 96W GM 323-28 PAD H&P 318
<b>SEC</b> <u>28</u> <b>TWP</b> <u>6S</u> <b>RGE</b> <u>96W</u>		<b>DATE</b> <u>03-Mar-2015</u>	



