



| | | | |
|---------------------------|------------------------------------|--|-------------|
| FILE NO: CH094451 | COMPANY WELL FIELD COUNTY | WPX ENERGY WPX ENERGY GM 432-28 GRAND VALLEY GARFIELD | STATE CO |
| API NO: 05045225050000 | | | |

| | | |
|--|--|----------------------------|
| Ver. 3.87 28 GS 96W GM 323-28 PAD H&P 318 | LOCATION: SHL: 1530' FSL & 2329' FWL BHL: 2279' FNL & 1690' FEL SEC 28 TWP 6S RGE 96W | OTHER SERVICES BOND LOG |
|--|--|----------------------------|

| | | | |
|---|----------------------|---|---|
| PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM | GL KB KB GL | ELEVATION 24 FT 5476 FT ABOVE P.D. | ELEVATIONS: KB 5500 FT DF GL 5476 FT |
|---|----------------------|---|---|

| | |
|------------------------|-----------------------|
| DATE | 28-Feb-2015 |
| RUN | 1 |
| SERVICE ORDER | US094451 |
| DEPTH DRILLER | 7271 FT |
| DEPTH LOGGER | 7204 FT |
| BOTTOM LOGGED INTERVAL | 7194 FT |
| TOP LOGGED INTERVAL | 24 FT |
| TIME STARTED | 11:00 |
| TIME FINISHED | 16:00 |
| OPERATOR RIG TIME | 5 HOURS |
| TYPE OF FLUID IN HOLE | WATER |
| FLUID DENSITY | NA |
| FLUID SALINITY | NA |
| FLUID LEVEL | 50 FT |
| LOGGED CEMENT TOP | NA |
| WELLHEAD PRESSURE | 0 PSI |
| MAXIMUM HOLE DEVIATION | NA |
| NOMINAL LOGGING SPEED | 10 FMIN |
| MAX. RECORDED TEMP. | 230 DEGF |
| REFERENCE LOG | BAKER HUGHES BOND LOG |
| REFERENCE LOG DATE | 28-Feb-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 | 1740 FT |
| 8.75 IN | 1740 FT | 7323 FT |

| CASING RECORD | | | | |
|---------------|-----------|-------|-------|---------|
| SIZE | WEIGHT | GRADE | FROM | TO |
| 9.625 IN | | | 24 FT | 1740 FT |
| 4.5 IN | 11.6 LB/F | I-80 | 24 FT | 7323 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 28/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 2 feet.

Logged in PNC-3D mode.

BHT = 230 degF
SJ = 3881' - 3902'

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: Sat Feb 28 15:22:23 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH094451/n354h02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3912.750 ft BOTTOM DEPTH: 7199.852 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 28 11:49:56 2015 | CASING COLLAR LOCATOR |
| F1:GR | Feb 28 11:49:56 2015 | GAMMA RAY |
| F1:ISS | Feb 28 11:49:56 2015 | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | Feb 28 11:49:56 2015 | LONG SPACE COUNT RATE |
| F1:RATO | Feb 28 11:49:56 2015 | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | Feb 28 11:49:56 2015 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | Feb 28 11:49:56 2015 | CORRECTED FORMATION SIGMA |
| F1:SS | Feb 28 11:49:56 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/CH094451/432RPM_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 3915 - 7209 Feet

Data File 1 : F1 : HL6670:/dat1a/CH094451/432RPM_MAIN.xtf
Created On : Feb 28 11:49:56 2015
Company : WBY ENERGY

Company : WPX ENERGY
Well : WPX ENERGY GM 432-28
Field : GRAND VALLEY
File Interval : 3888 - 7198 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

RATO

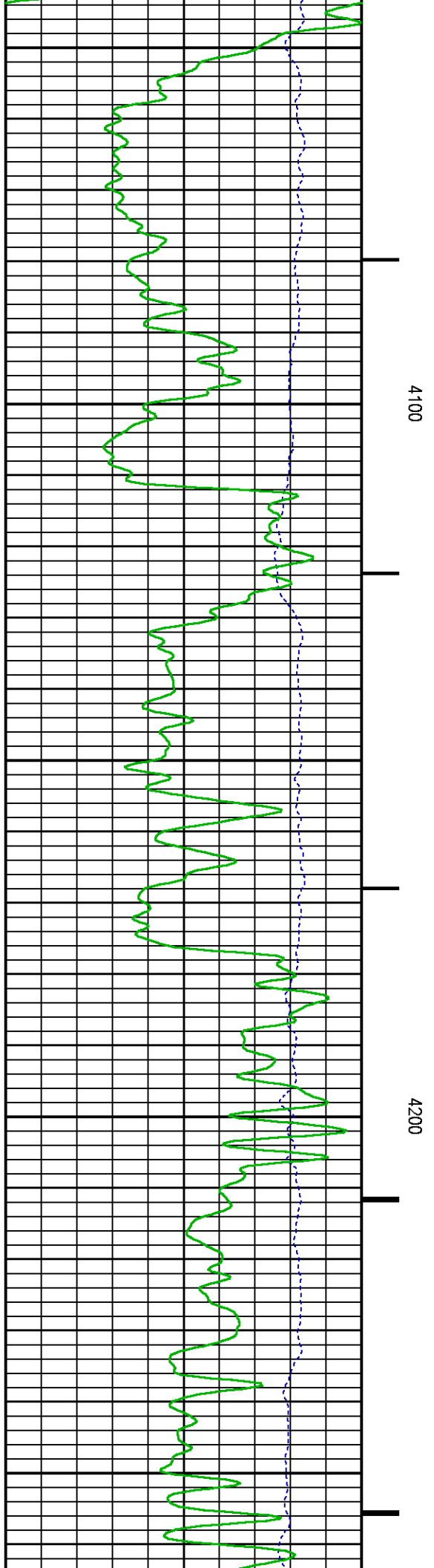
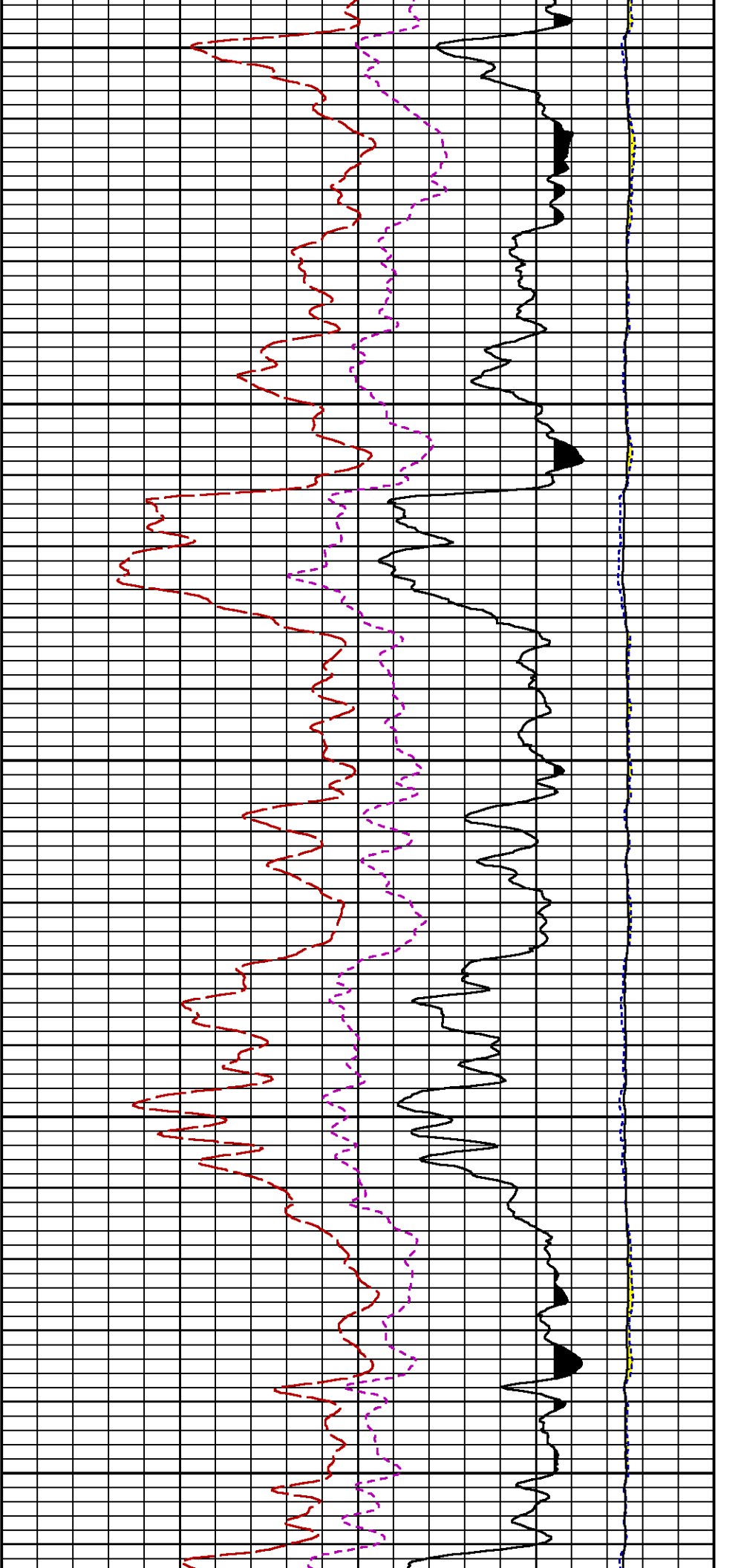
RICS

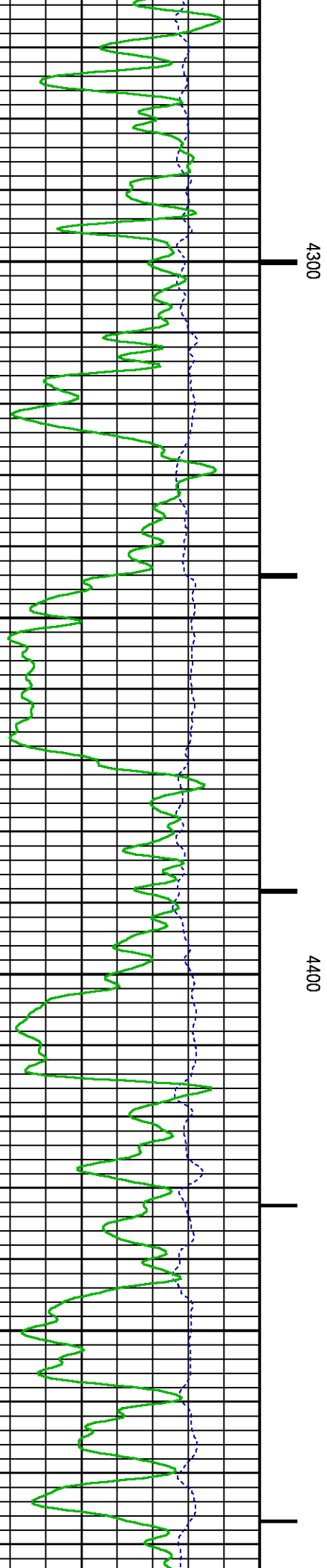
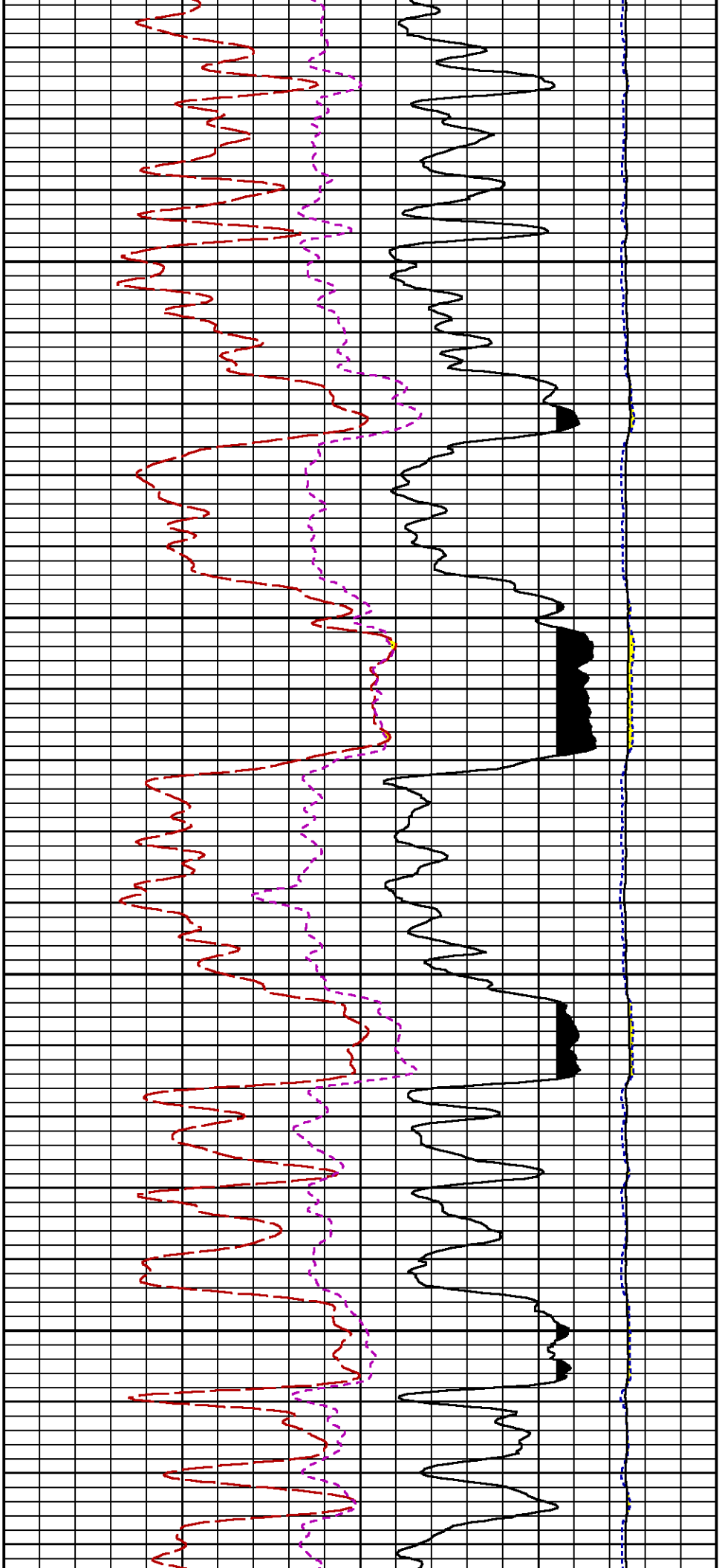
SGFC

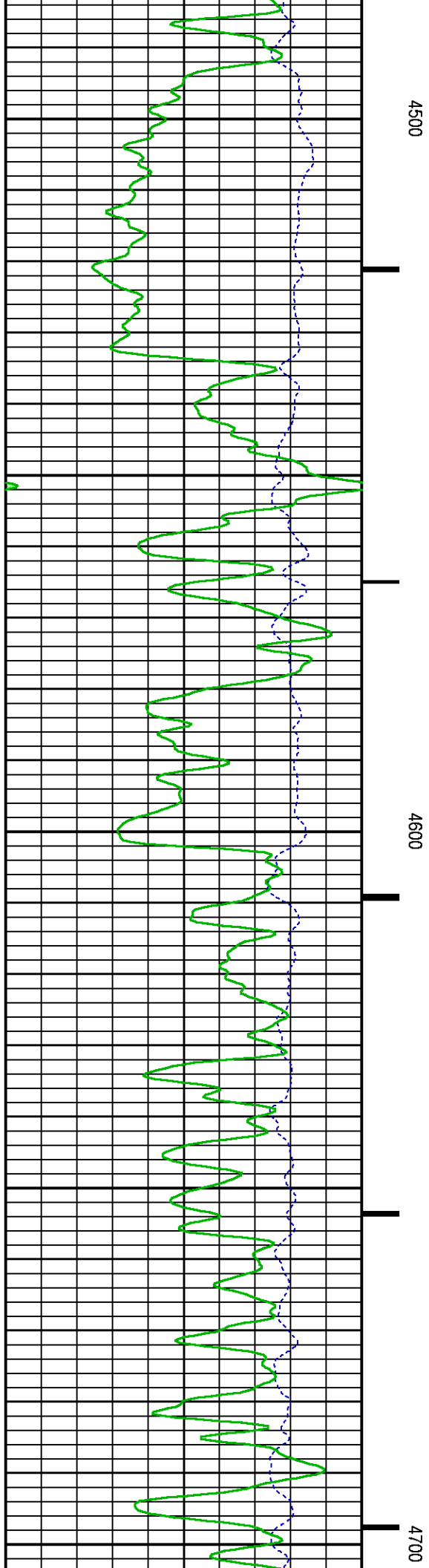
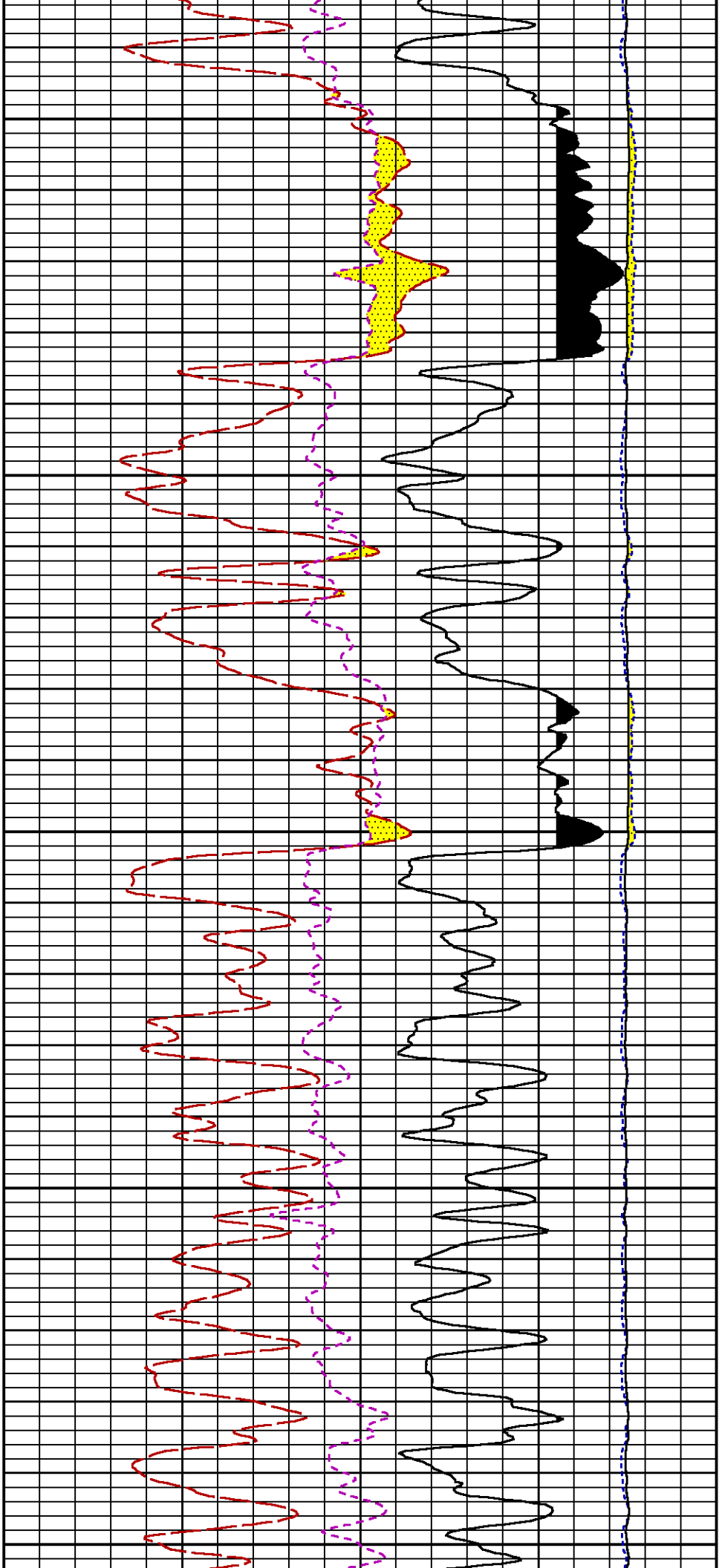
LS

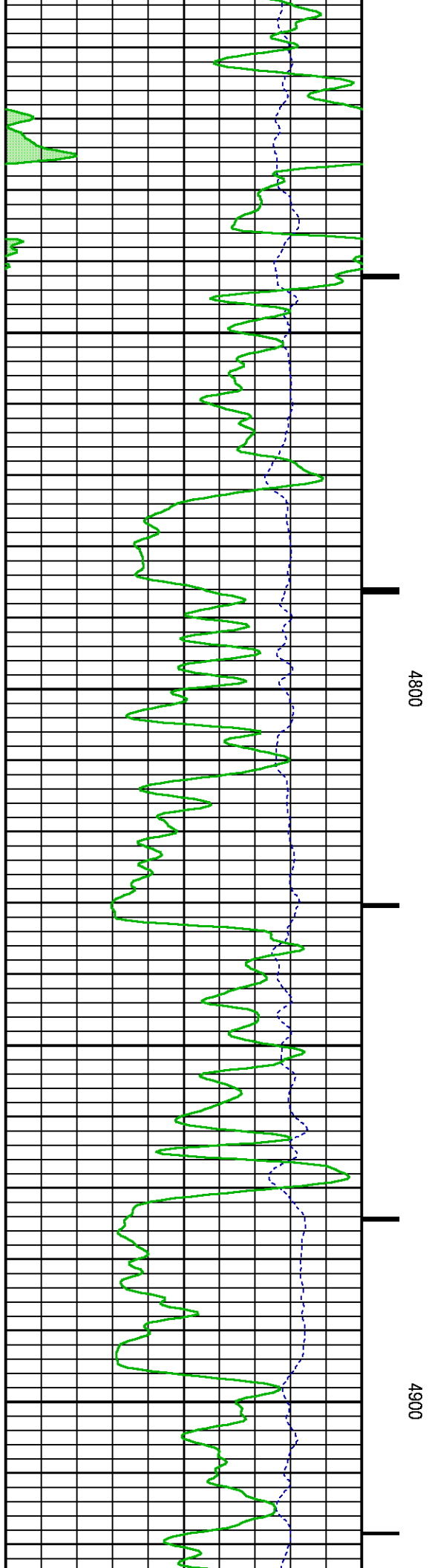
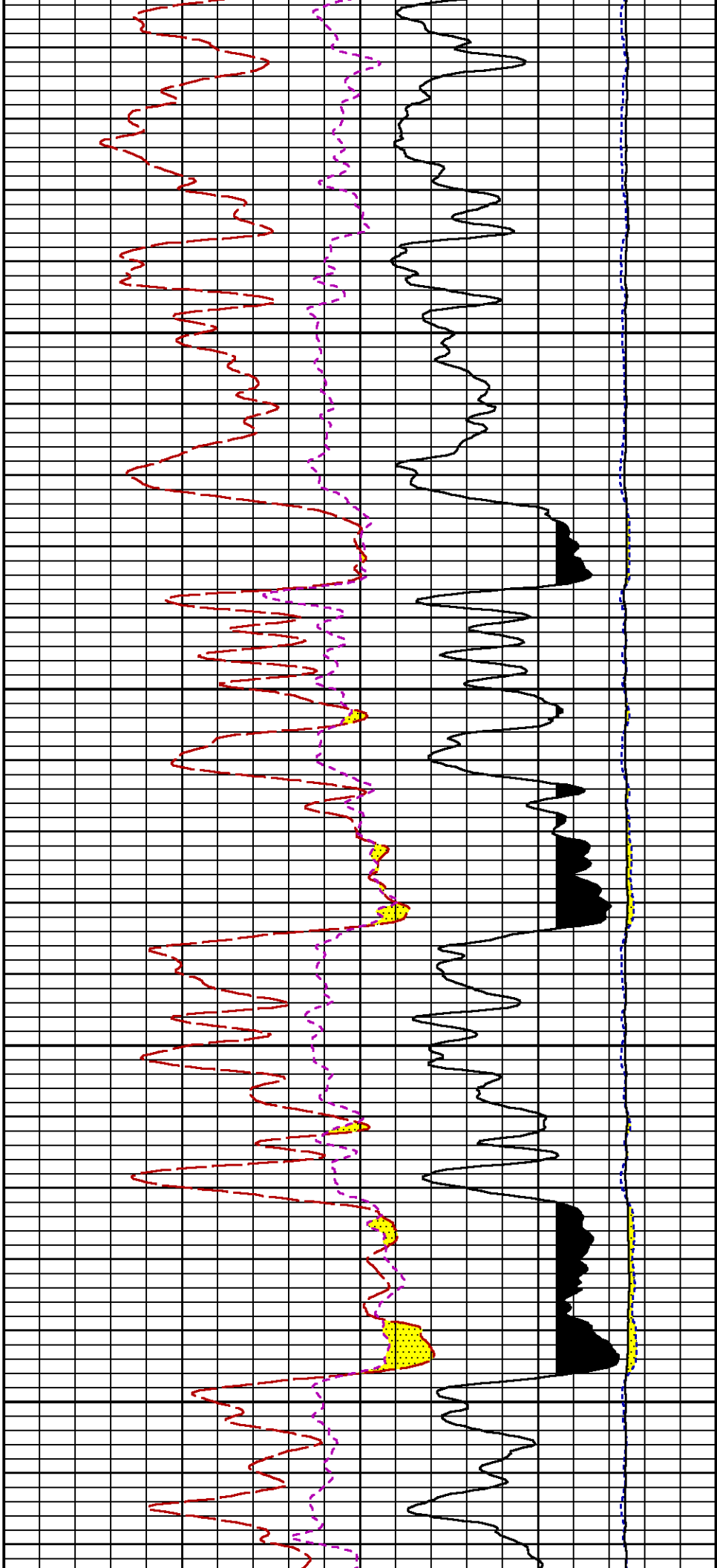
SS

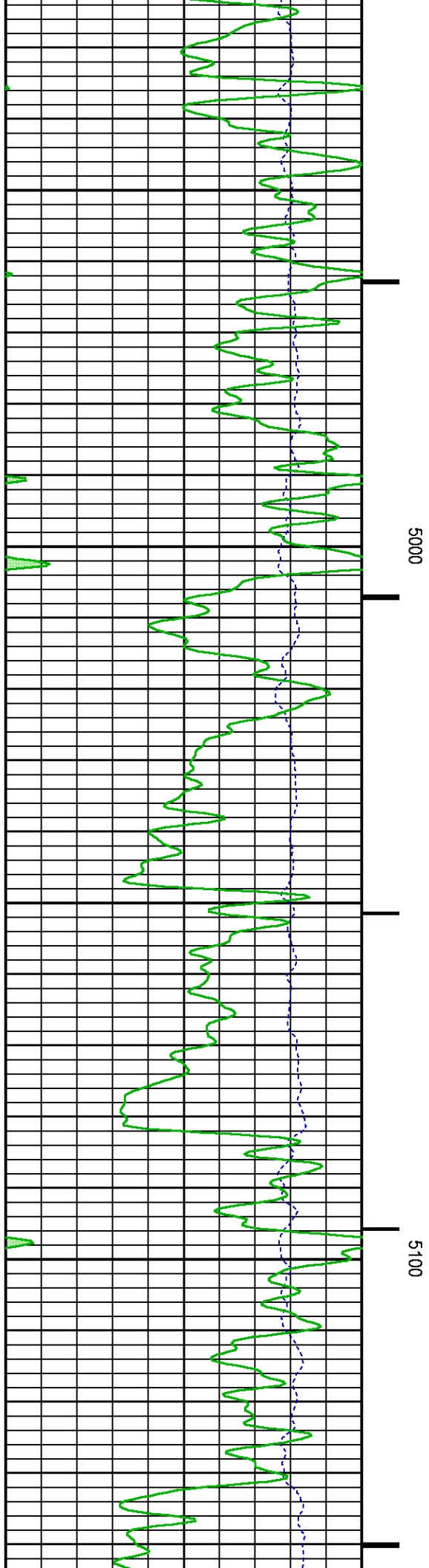
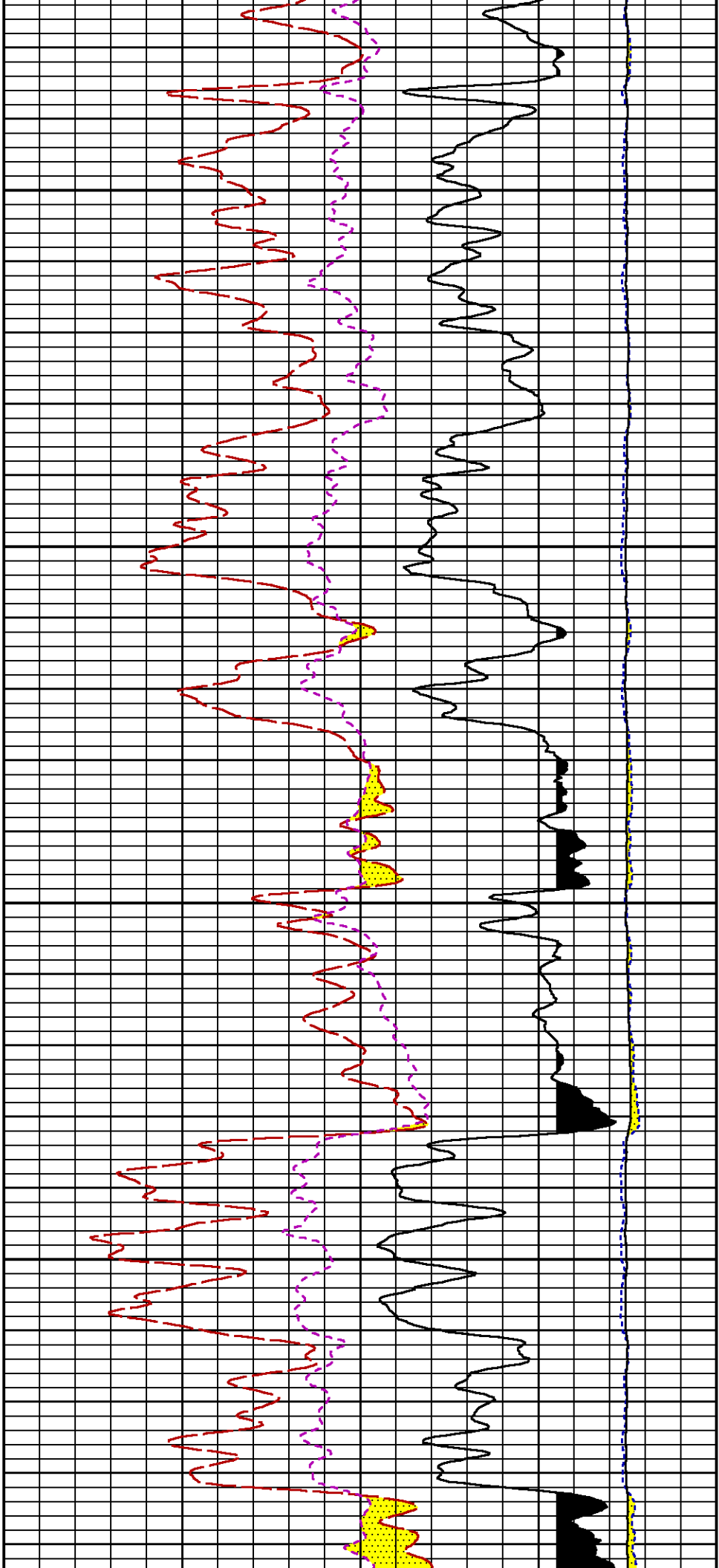
4000

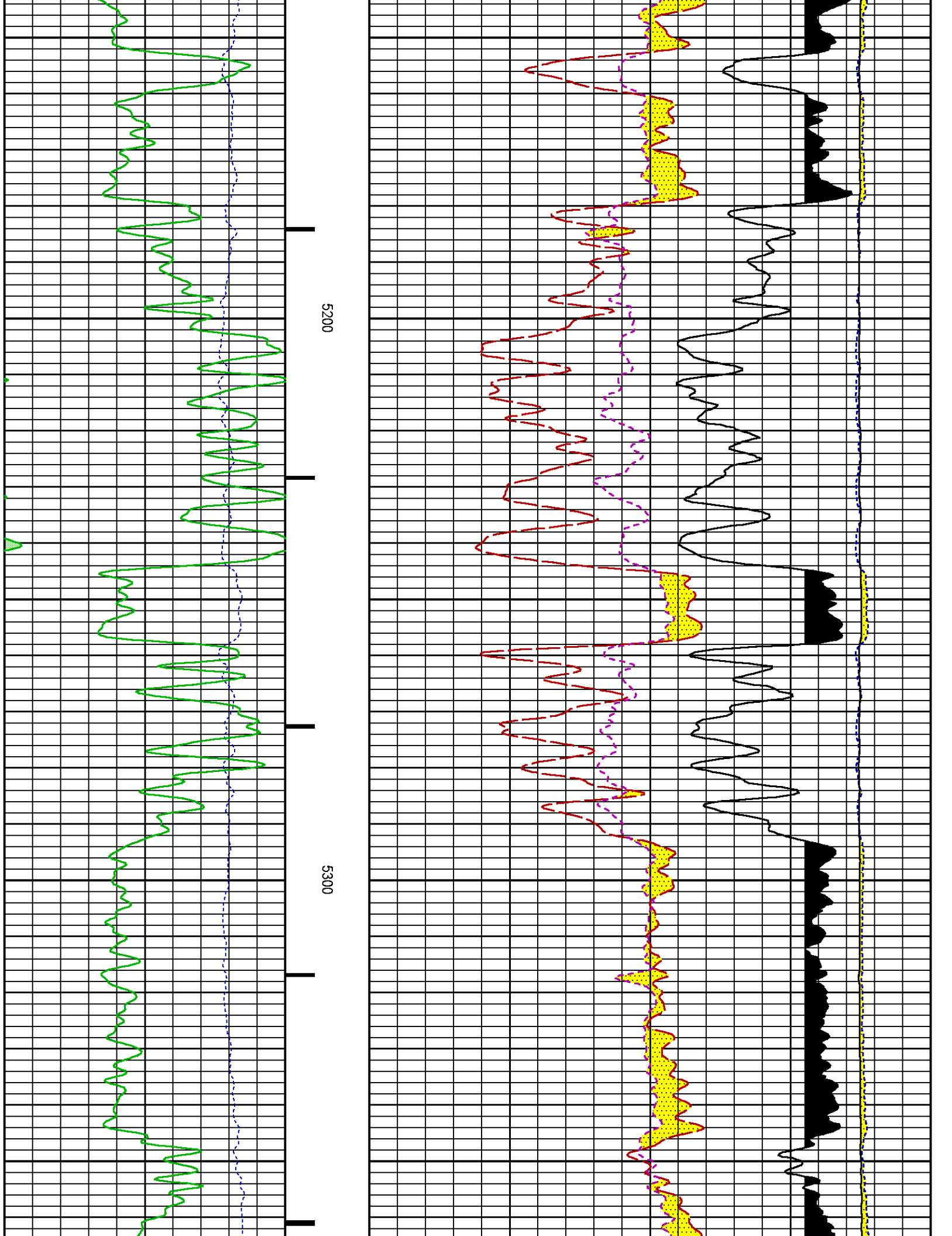


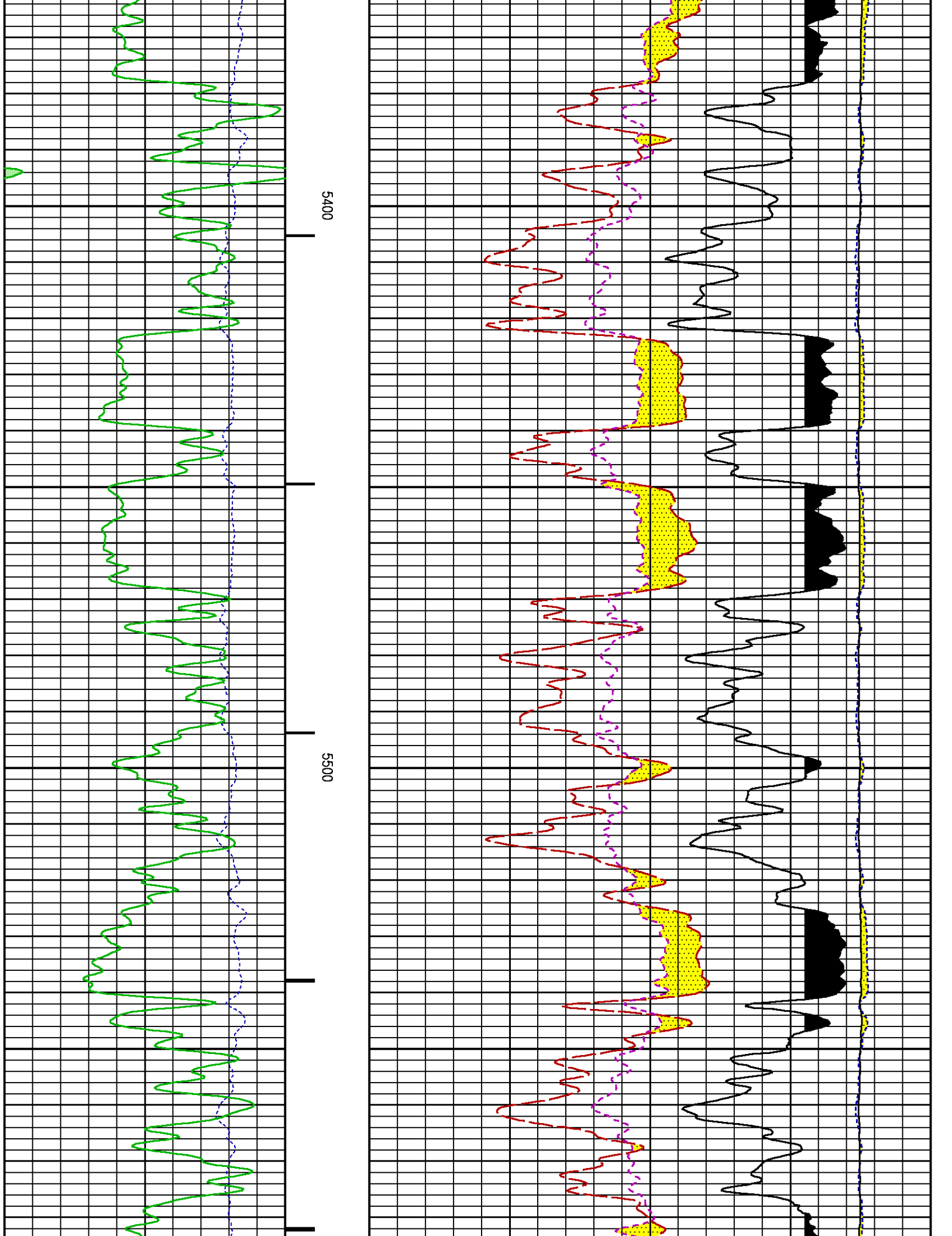


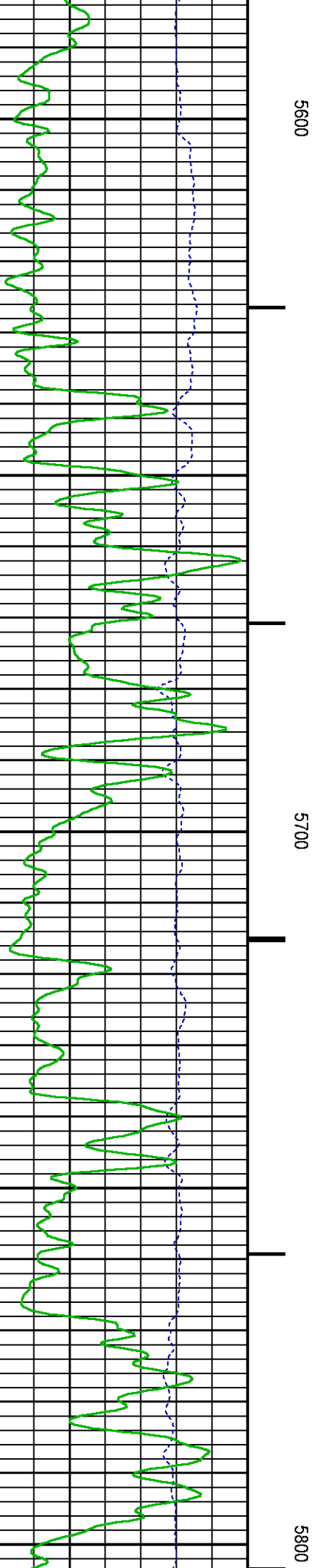
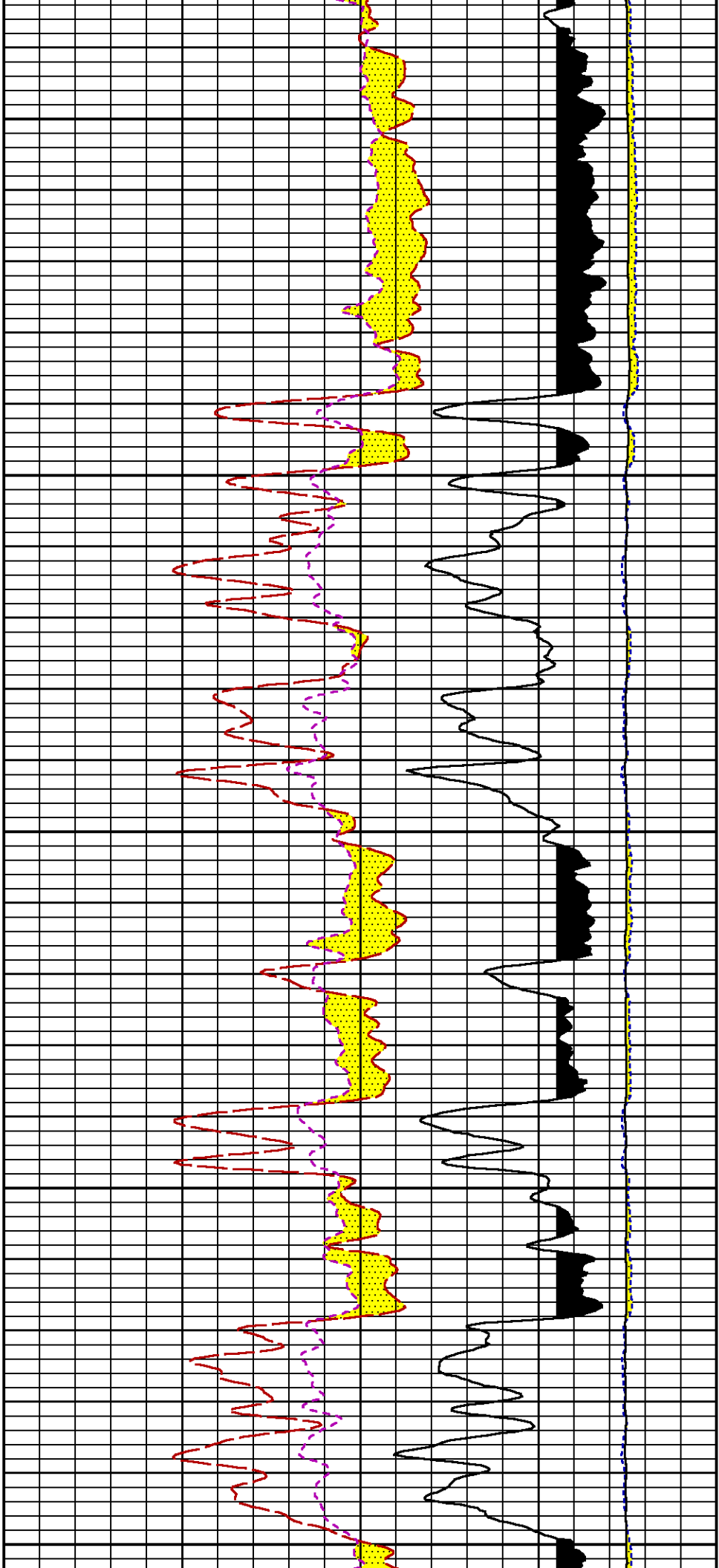


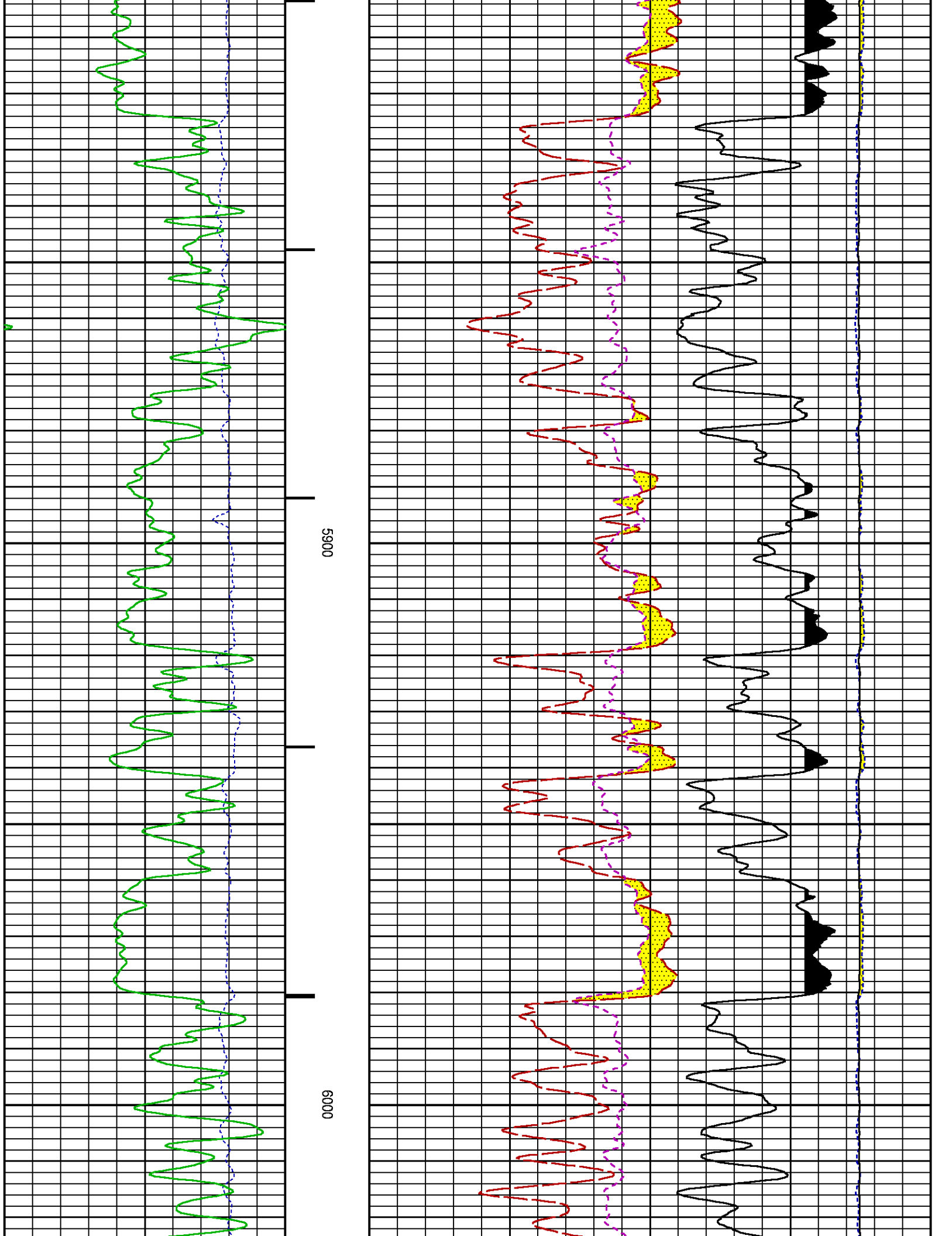


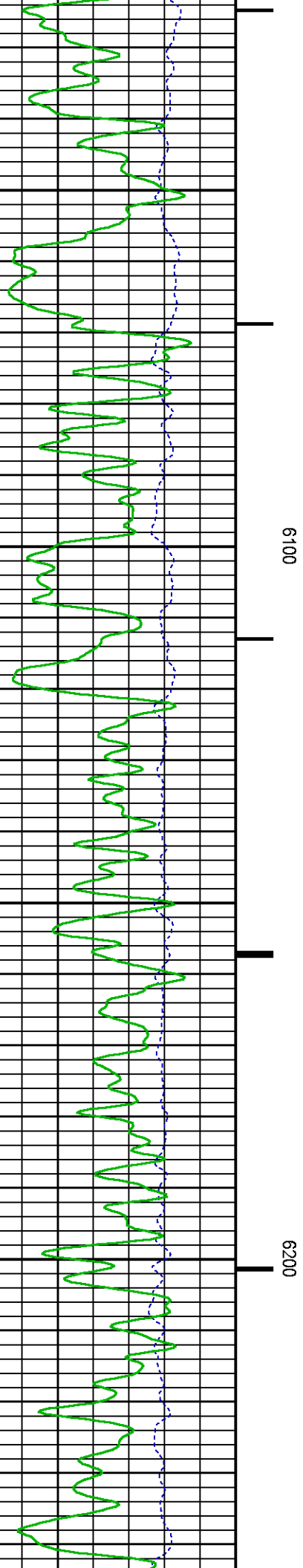
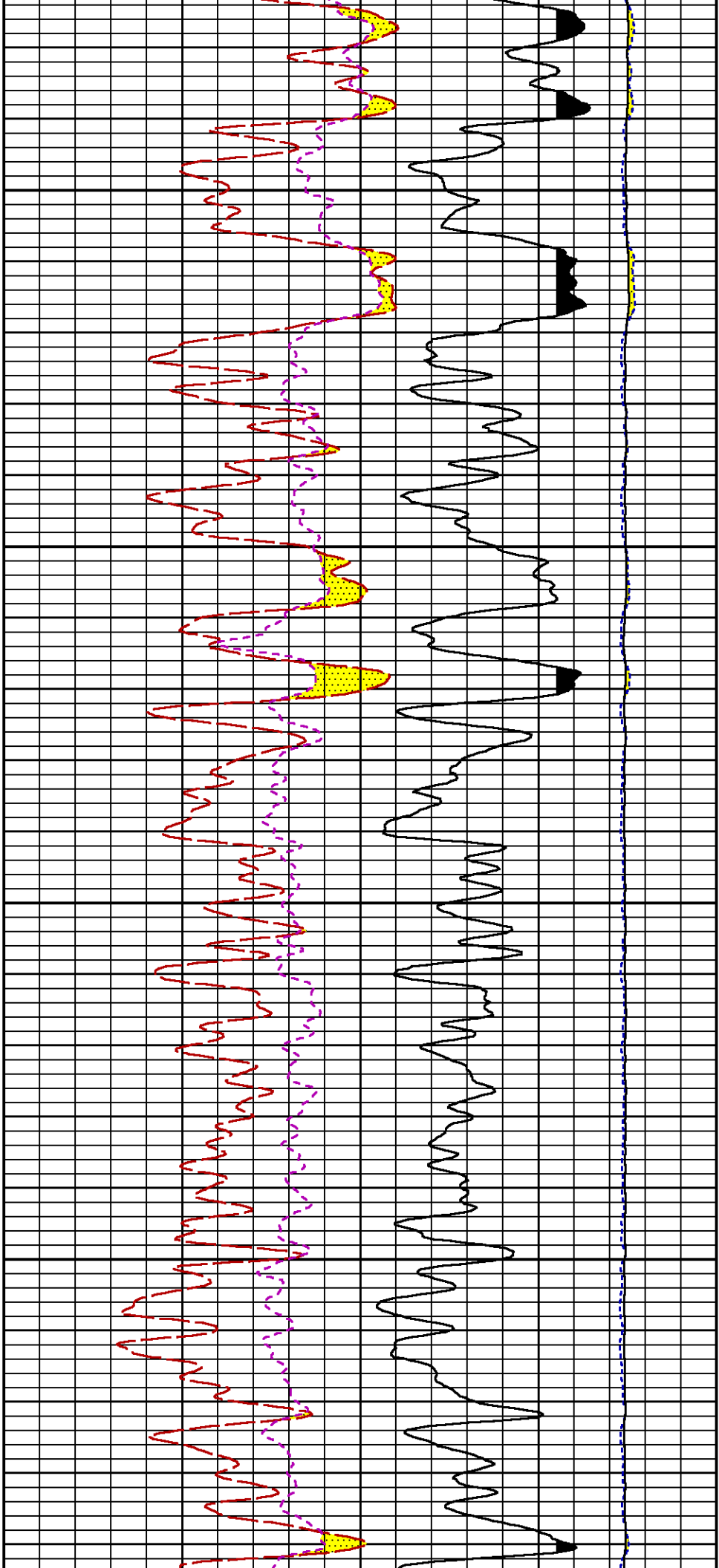


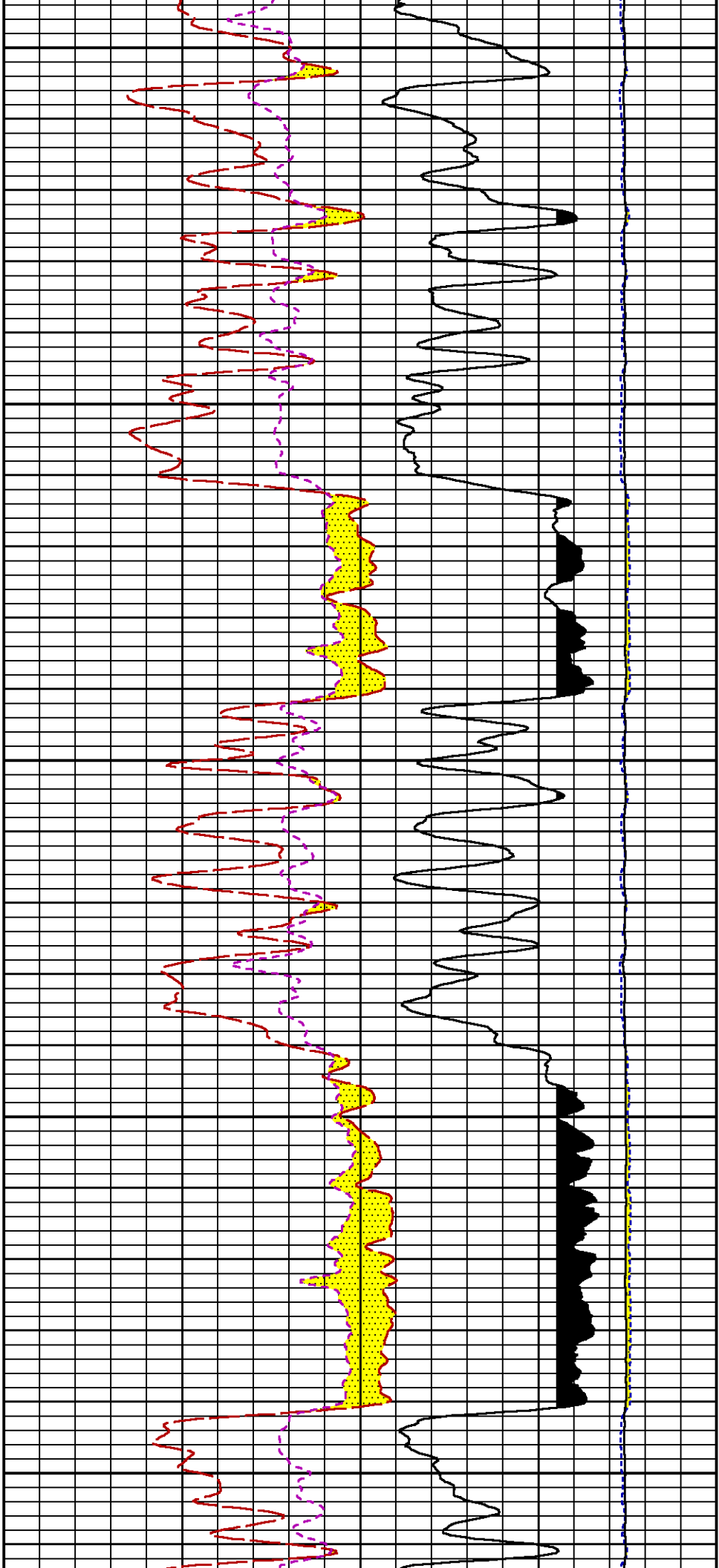






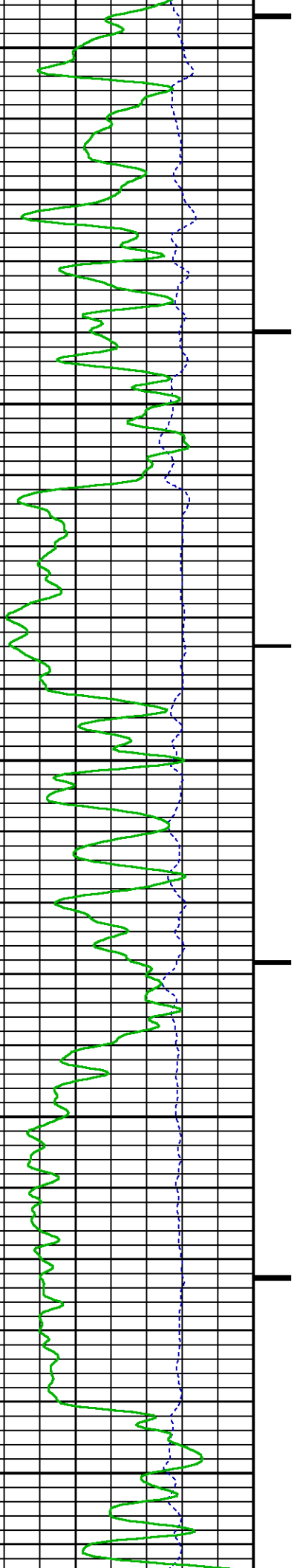


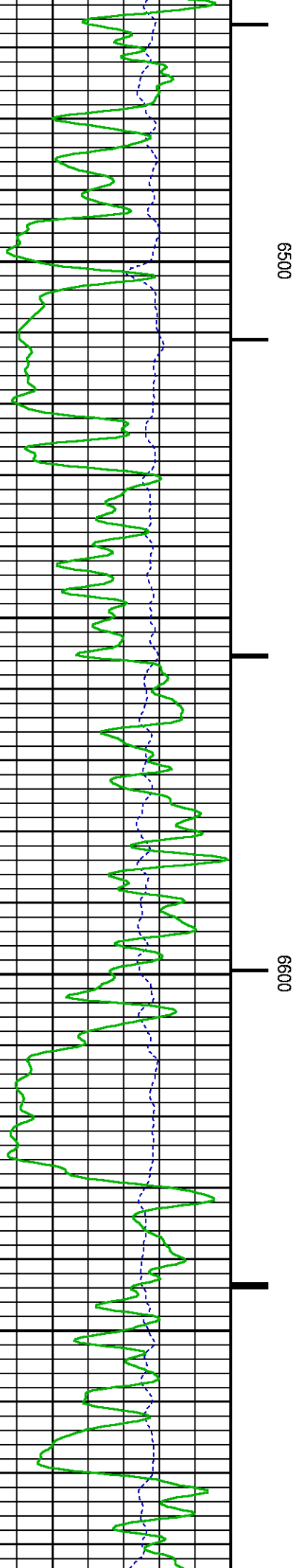
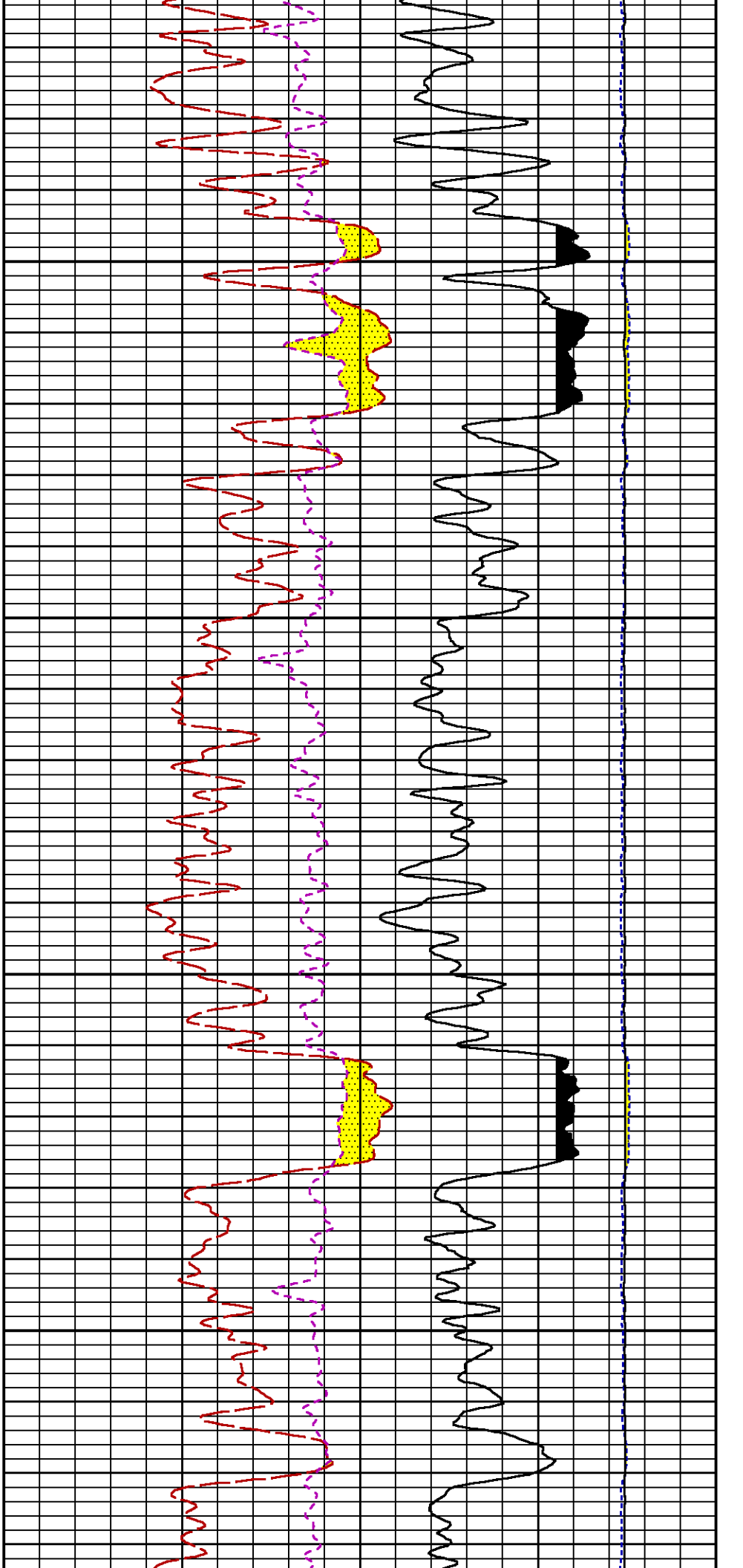


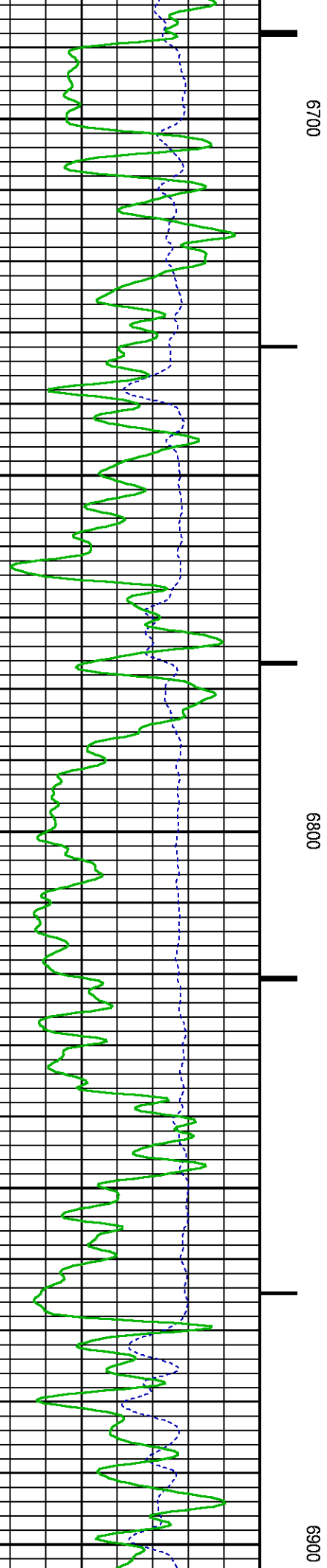
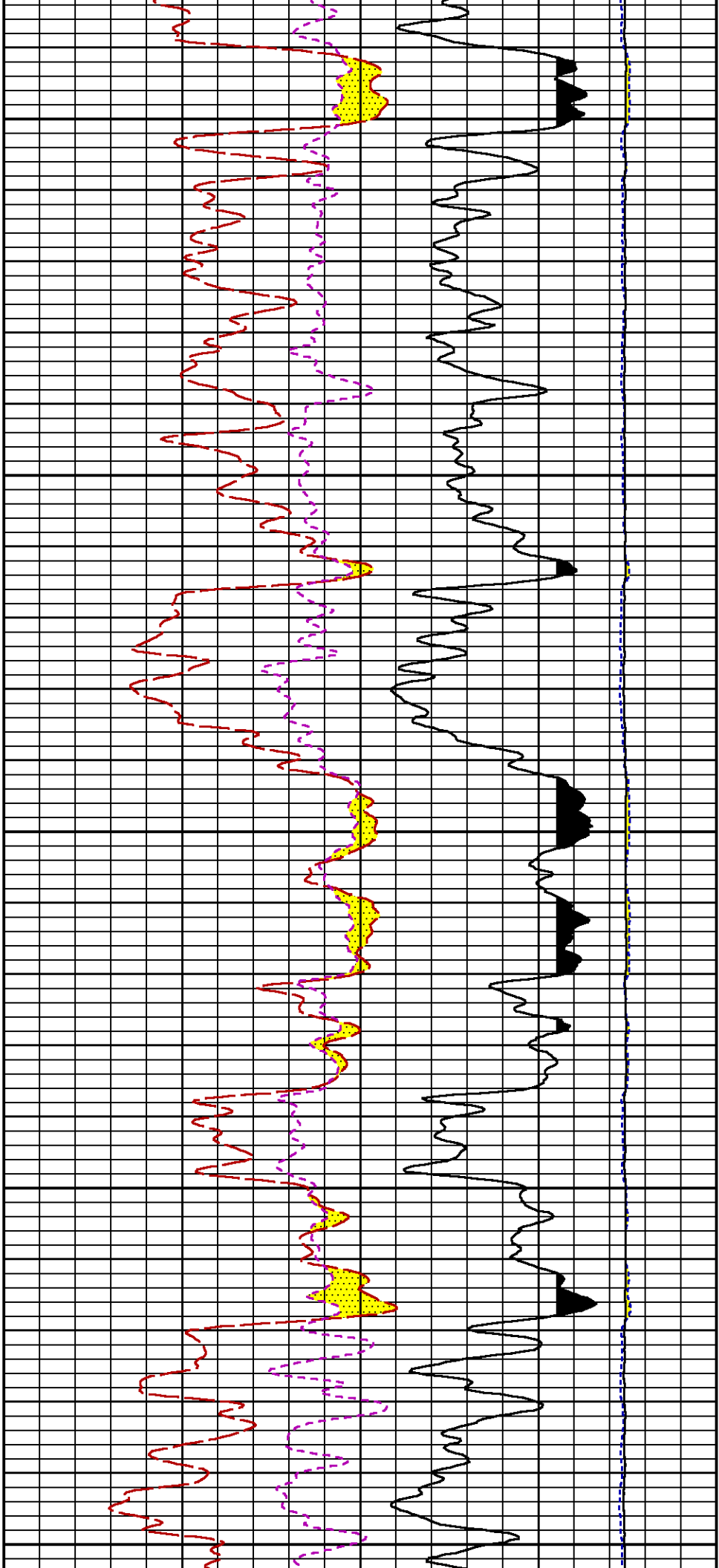


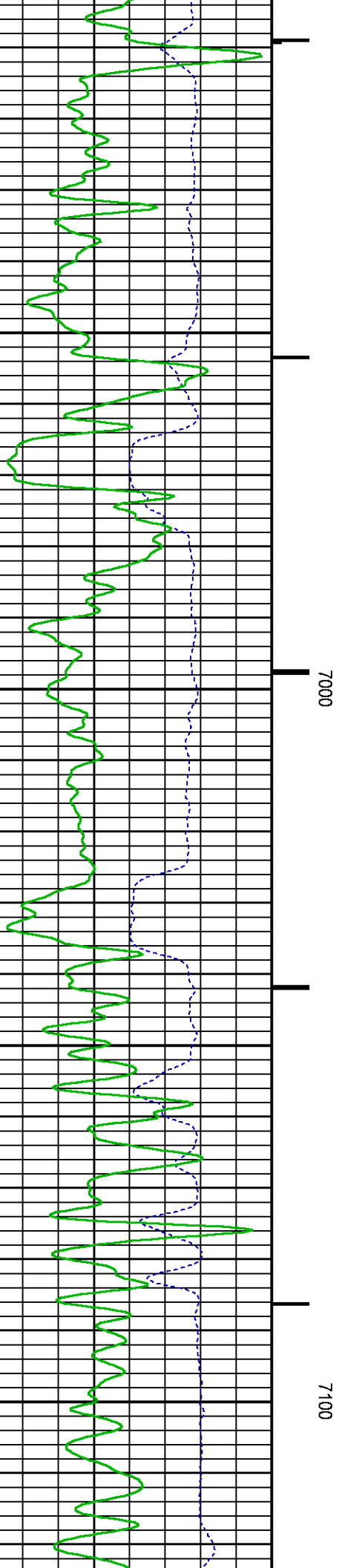
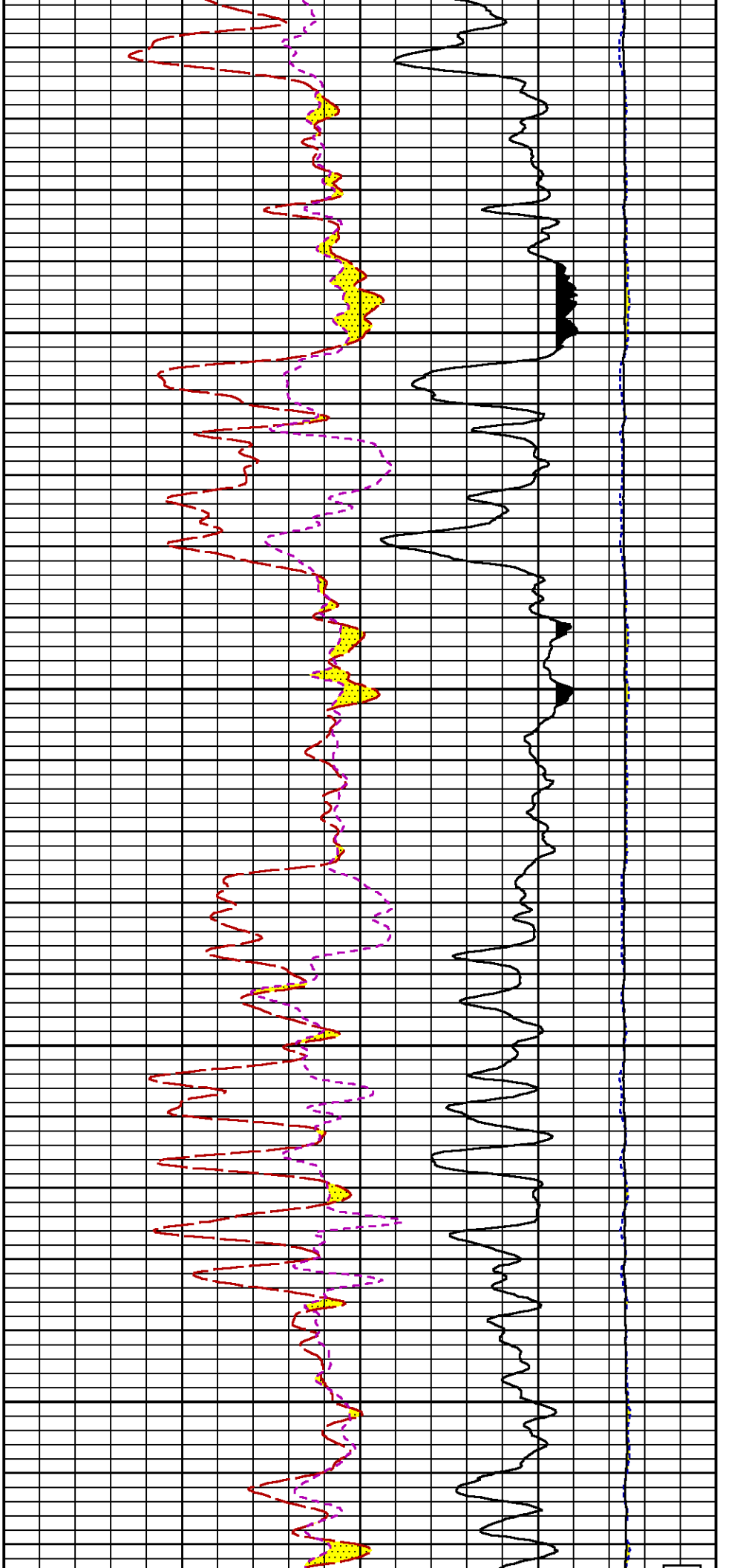
6300

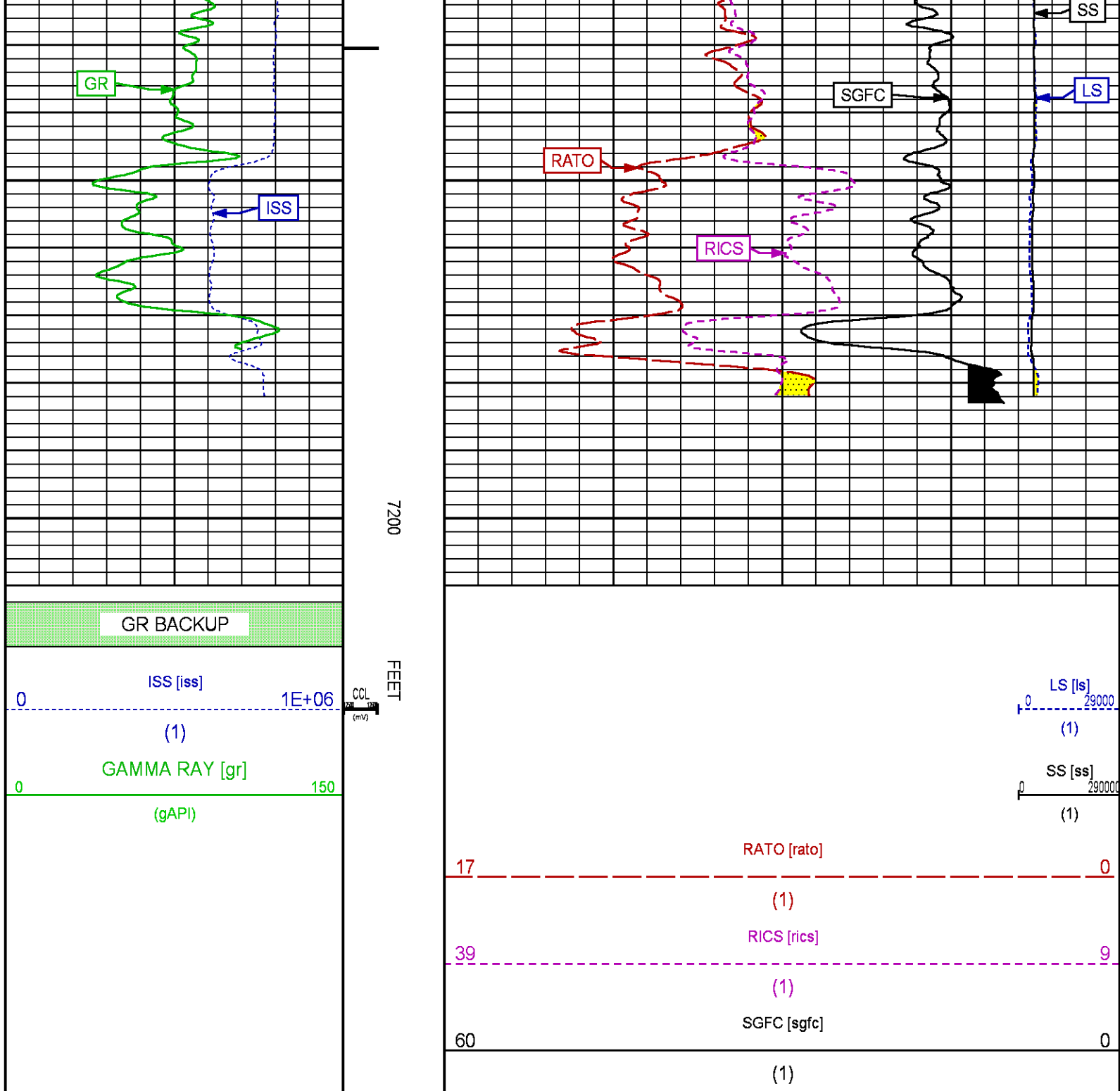
6400











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: Sat Feb 28 15:23:01 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH094451/n354h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 6377.000 ft BOTTOM DEPTH: 6702.750 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 | 8.75 | in | " " |
| | CASING SIZE | 4.50 | in | " " |
| | MATRIX | SANDSTONE | | " " |
| | CORRECTION BUFFER | 11 | | " " |

CURVE DESCRIPTION REPORT

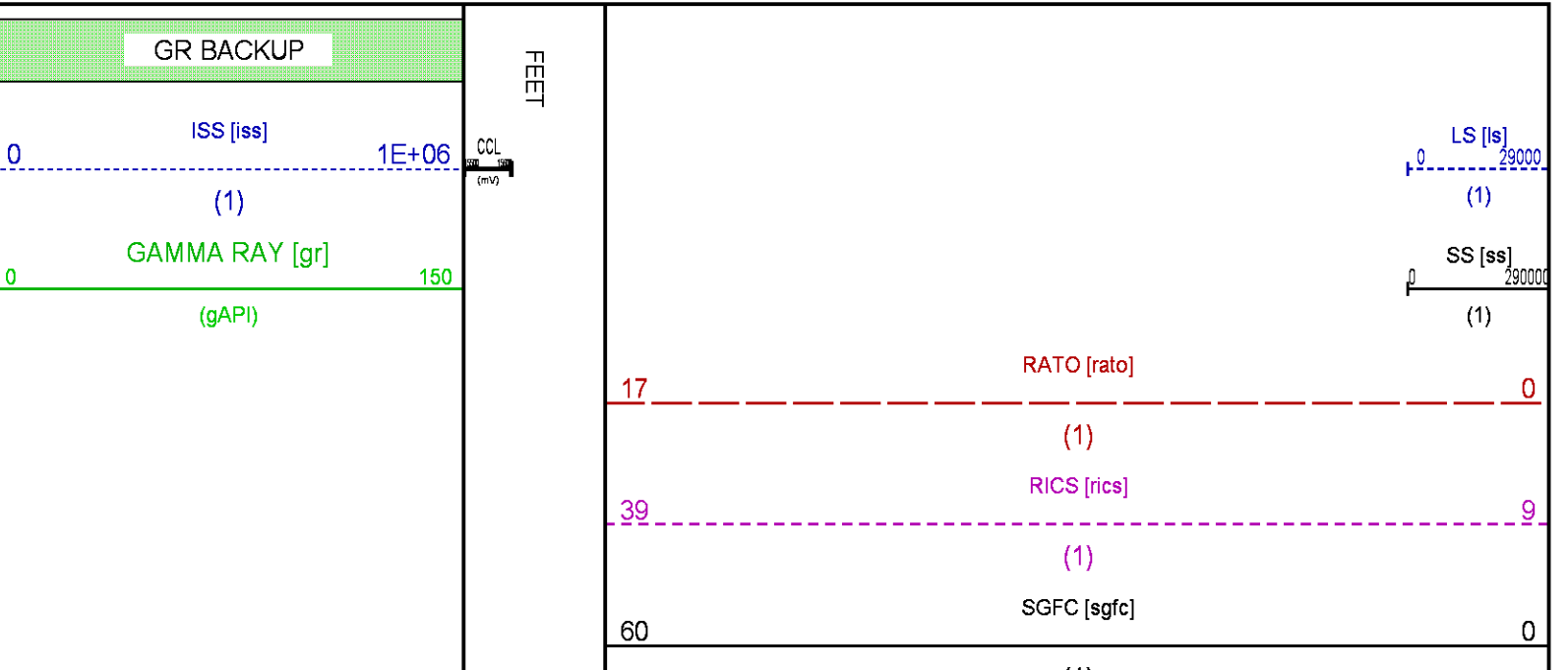
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|----------------------|---|
| F1:CCL | Feb 28 11:21:31 2015 | CASING COLLAR LOCATOR |
| F1:GR | Feb 28 11:21:31 2015 | GAMMA RAY |
| F1:ISS | Feb 28 11:21:31 2015 | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | Feb 28 11:21:31 2015 | LONG SPACE COUNT RATE |
| F1:RATO | Feb 28 11:21:31 2015 | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | Feb 28 11:21:31 2015 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | Feb 28 11:21:31 2015 | CORRECTED FORMATION SIGMA |
| F1:SS | Feb 28 11:21:31 2015 | SHORT SPACE COUNT RATE |

CURVE MEASURE POINT OFFSET

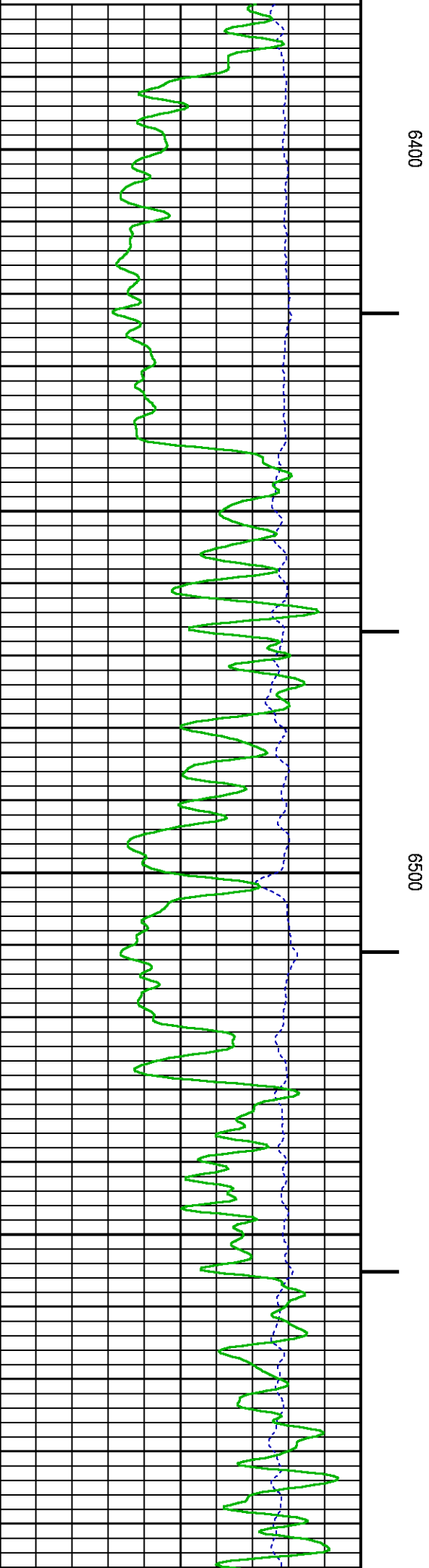
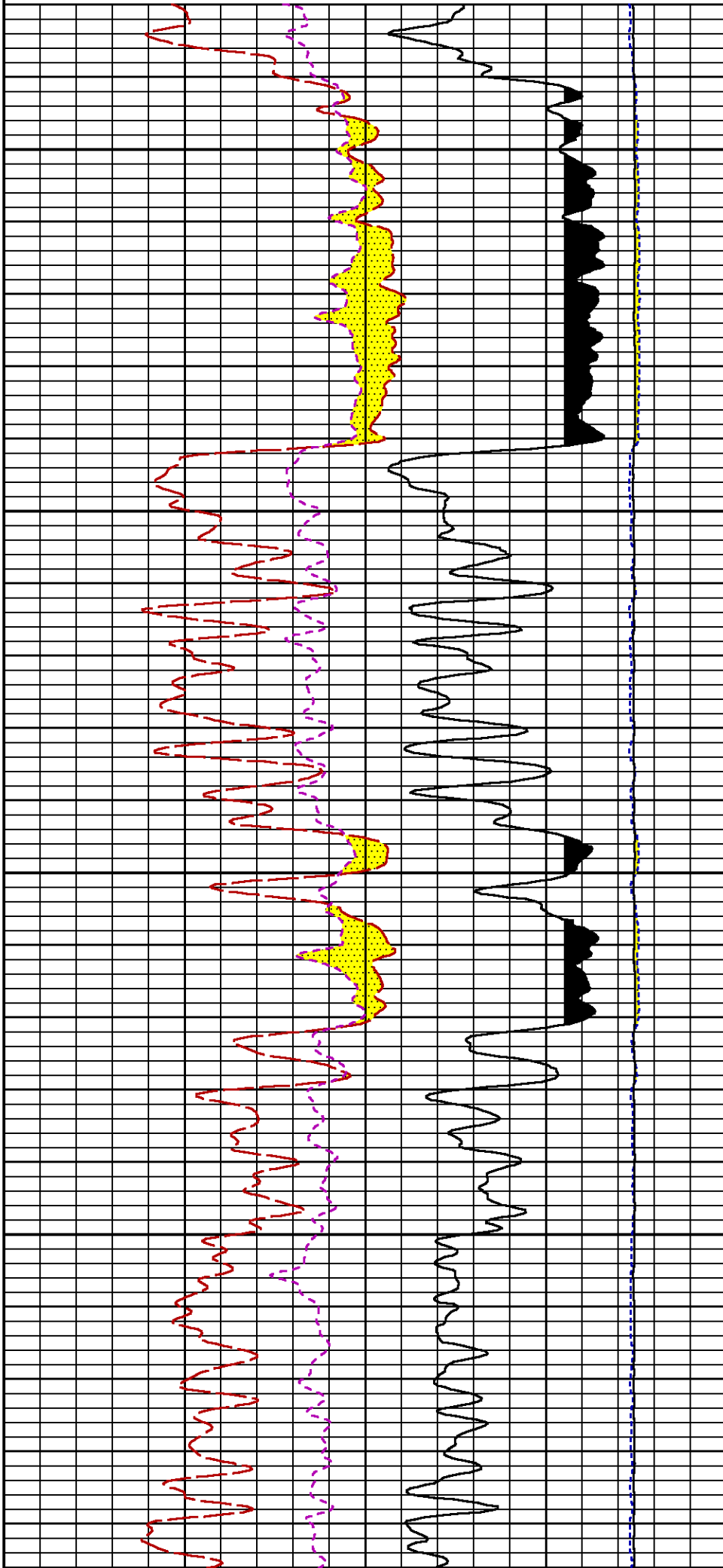
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CCL | 25.00 | ISS | 12.75 | RATO | 12.75 | SGFC | 12.75 |
| GR | 22.75 | LS | 12.75 | RICS | 12.75 | SS | 12.75 |

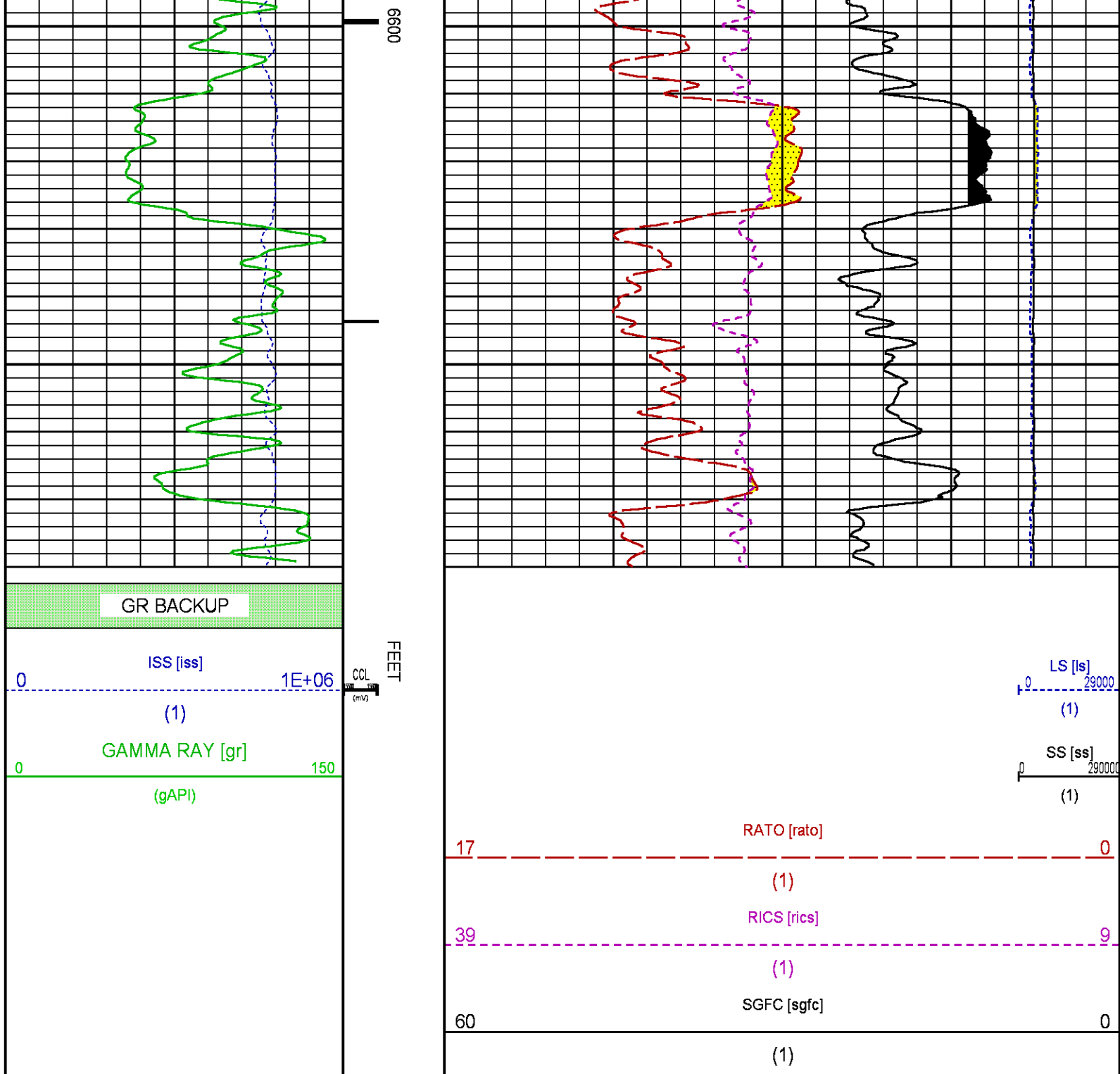
Presentation : HL6670:/dat1a/CH094451/432RPM_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 6380 - 6680 Feet

Data File 1 : F1 : HL6670:/dat1a/CH094451/432RPM_REPEAT.xtf
Created On : Feb 28 11:21:31 2015
Company : WPX ENERGY
Well : WPX ENERGY GM 432-28
Field : GRAND VALLEY
File Interval : 6352 - 6702.25 Feet
OCT : n354h



(1)





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH094451/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

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

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
Series : 8283PA
Mnemonic : RPM
Measure Point: 5.45': XLS DETECTOR
Measure Point: 5.04': LS DETECTOR
Measure Point: 4.79': SS DETECTOR

33.24'

CCL MP 25.19'

GR MP 22.64'

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
PRES MP

1.65'

BULL PLUG 1 11/16

0.00'

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



BAKER

COMPANY
WELL
FIELD

WPX ENERGY
WPX ENERGY GM 432-28
GRAND VALLEY

FILE NO:
CH094451

API NO:



| | | | |
|----------------------------|---------------------|-------------|-----------------------|
| FIELD | <u>GRAND VALLEY</u> | APPRO. | |
| COUNTY | <u>GARFIELD</u> | STATE | <u>CO</u> |
| | | | <u>05045225050000</u> |
| LOCATION: | | ELEVATIONS: | |
| SHL: 1530' FSL & 2329' FWL | | KB 5500 FT | 28 6S 96W |
| BHL: 2279' FNL & 1690' FEL | | DF | GM 323-28 PAD |
| | | GL 5476 FT | H&P 318 |
| SEC | <u>28</u> | TWP | <u>6S</u> |
| | | RGE | <u>96W</u> |
| | | DATE | <u>28-Feb-2015</u> |