



FILE NO: CH105821
 COMPANY: WPX ENERGY
 WELL: FEDERAL RU 32-8
 FIELD: RULISON
 COUNTY: GARFIELD STATE: COLORADO
 API NO: 05045227970000

Ver. 4.06
 SEC8 T.7S. R.93W
 RU 21-8 PAD
 RIG: H&P 318
 LOCATION:
 SHL: 646' FNL & 1900' FWL
 BHL: 1593' FNL & 1423' FEL
 SEC 8 TWP 7S RGE 93W
 OTHER SERVICES: RAL

PERMANENT DATUM: G.L. ELEVATION 7736 FT
 LOG MEASURED FROM: K.B. 24 FT ABOVE P.D.
 DRILL. MEAS. FROM: K.B.
 ELEVATIONS:
 KB 7760 FT
 DF
 GL 7736 FT

| | | |
|------------------------|-----------------------|---|
| DATE | 19-Feb-2016 | |
| RUN | TRIP | 1 |
| SERVICE ORDER | US106821J | |
| DEPTH DRILLER | 10330 FT | |
| DEPTH LOGGER | 10250 FT | |
| BOTTOM LOGGED INTERVAL | 10247 FT | |
| TOP LOGGED INTERVAL | 0 FT | |
| TIME STARTED | 22:30 | |
| TIME FINISHED | 04:00 | |
| OPERATOR RIG TIME | 5.5 | |
| TYPE OF FLUID IN HOLE | WATER | |
| FLUID DENSITY | NA | |
| FLUID SALINITY | NA | |
| FLUID LEVEL | NA | |
| LOGGED CEMENT TOP | NA | |
| WELLHEAD PRESSURE | 0 PSI | |
| MAXIMUM HOLE DEVIATION | NA | |
| NOMINAL LOGGING SPEED | 10 FMIN | |
| MAX. RECORDED TEMP. | 244 DEGF | |
| REFERENCE LOG | BAKER HUGHES BOND LOG | |
| REFERENCE LOG DATE | 19-FEB-2016 | |
| EQUIP. NO. | LOCATION | |
| HL-6685 | GRAND JCT. | |
| RECORDED BY | SPENCER | |
| WITNESSED BY | MR. BEAUDE OAKS | |

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.

| BIT SIZE | FROM | TO |
|----------|---------|----------|
| 13.5 IN | 0 FT | 1200 FT |
| 8.75 IN | 1200 FT | 10330 FT |

| SIZE | WEIGHT | GRADE | FROM | TO |
|----------|-----------|-------|------|----------|
| 9.625 IN | | | 0 FT | 1200 FT |
| 4.5 IN | 11.6 LB/F | P-110 | 0 FT | 10330 FT |

REMARKS

RUN 1 TRIP 1: ALL DATA ON THIS LOG HAVE BEEN SHIFTED TO MATCH THE DEPTH OF THE BAKER HUGHES BOND LOG DATED 19-FEB-2016.

AMOUNT OF LINEAR SHIFT IS +17.5 FEET

BHT = 244 DEGF

SJ = 6305' - 6328'

THANKS FOR CHOOSING BAKER HUGHES WIRELINE CREW: COATE / SPENCE

EQUIPMENT DATA

| RUN | TRIP | TOOL | SERIES NO. | SERIAL NO. | POSITION |
|-----|------|---------|------------|------------|----------|
| 1 | 1 | PCM | 8250EA | 10408796 | FREE |
| 1 | 1 | TEL/CCL | 8248ED | 10590814 | FREE |
| 1 | 1 | GR | 8262XA | 10485470 | FREE |
| 1 | 1 | RPM | 8281EA | 10273848 | FREE |
| 1 | 1 | RPM | 8281PA | 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: 9

Plotted: Sat Feb 20 03:46:37 2016

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH105821/n353hx02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 6098.750 ft BOTTOM DEPTH: 10259.000 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

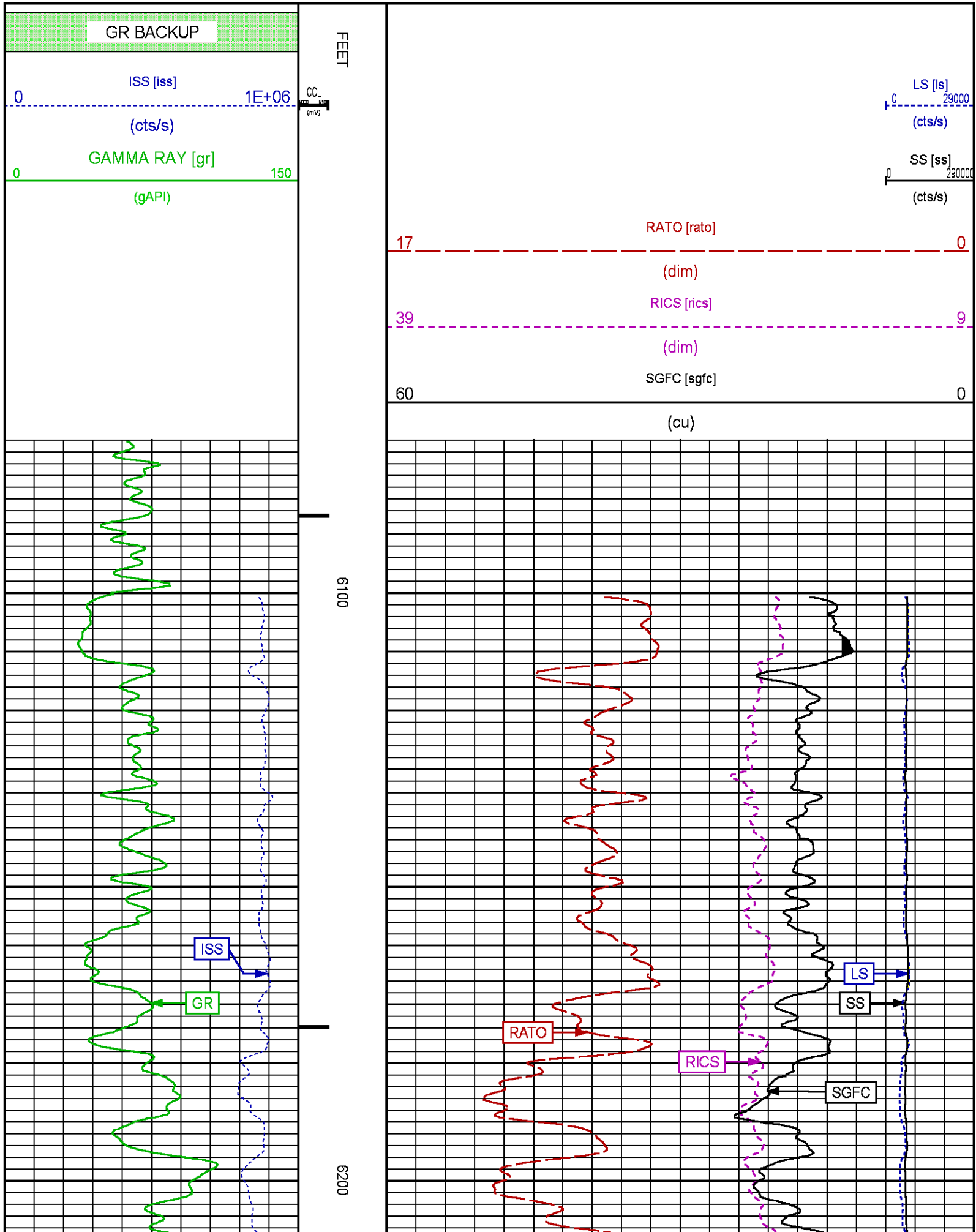
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|----------------------|---|
| F1:CCL | Feb 19 23:32:11 2016 | CASING COLLAR LOCATOR |
| F1:GR | Feb 19 23:32:11 2016 | GAMMA RAY |
| F1:ISS | Feb 19 23:32:11 2016 | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | Feb 19 23:32:11 2016 | LONG SPACE COUNT RATE |
| F1:RATO | Feb 19 23:32:11 2016 | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | Feb 19 23:32:11 2016 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | Feb 19 23:32:11 2016 | CORRECTED FORMATION SIGMA |
| F1:SS | Feb 19 23:32:11 2016 | SHORT SPACE COUNT RATE |

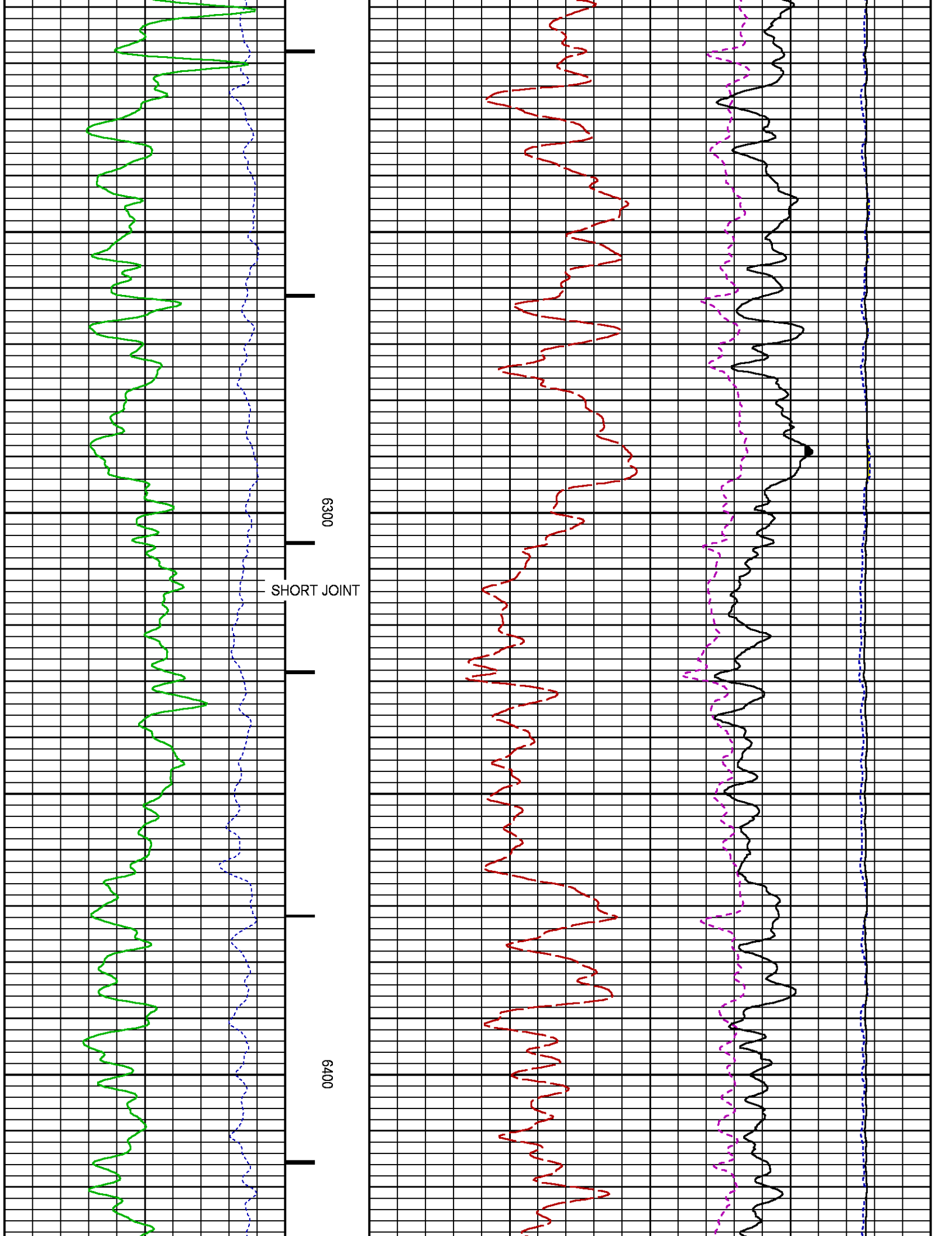
CURVE MEASURE POINT OFFSET

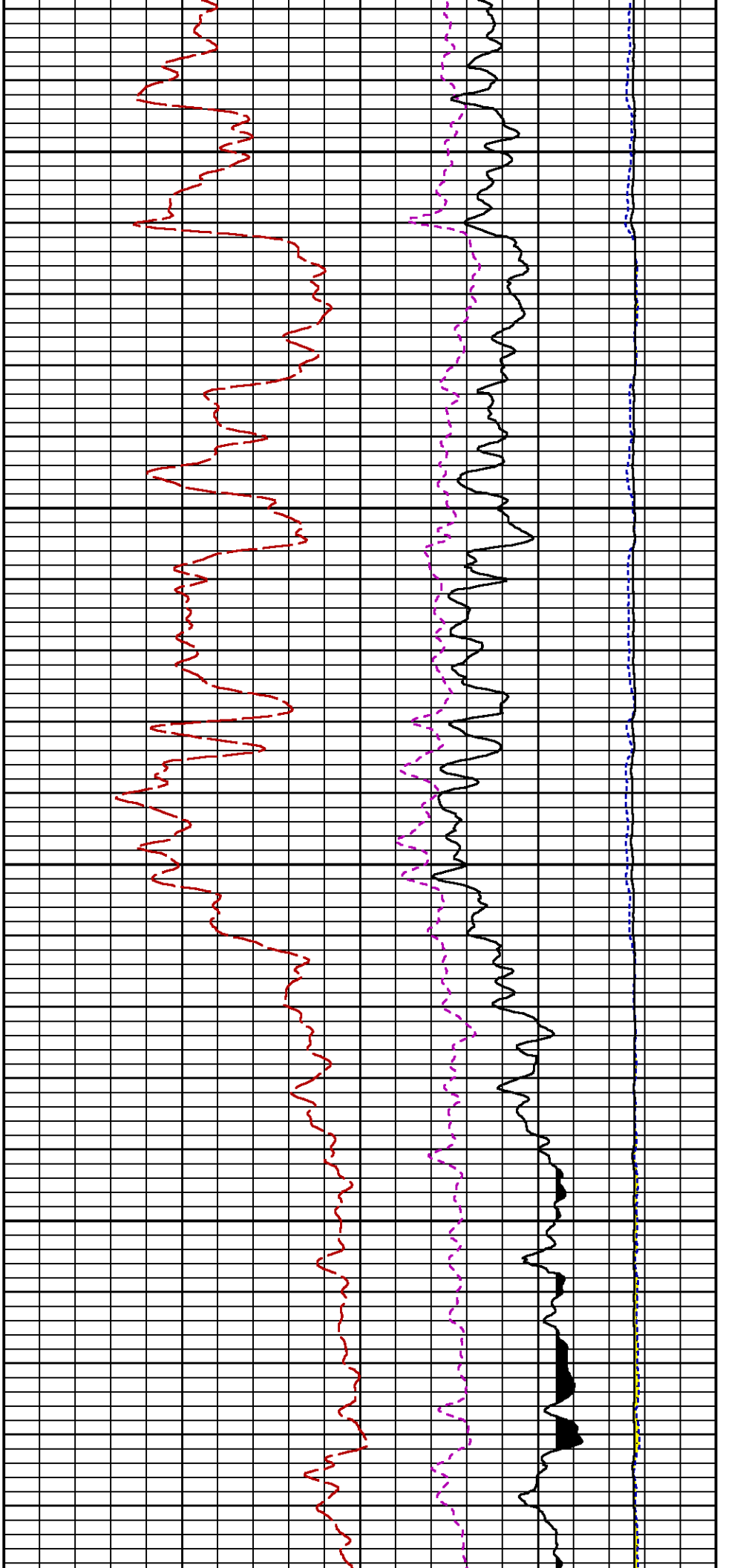
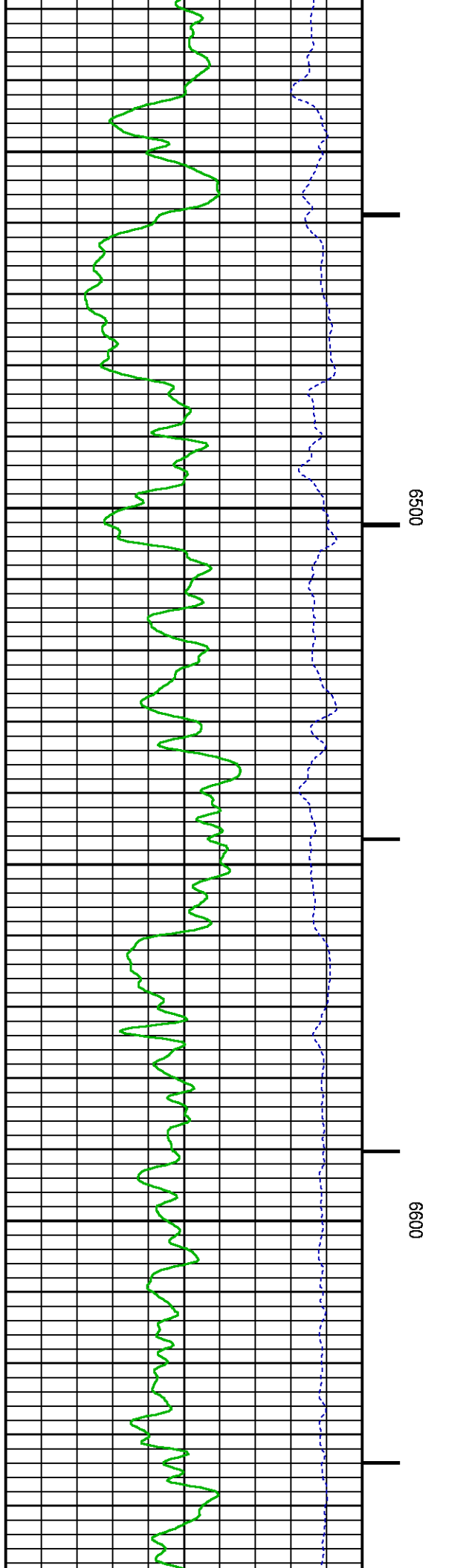
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CCL | 26.00 | ISS | 12.75 | RATO | 12.75 | SGFC | 12.75 |
| GR | 23.00 | LS | 12.75 | RICS | 12.75 | SS | 12.75 |

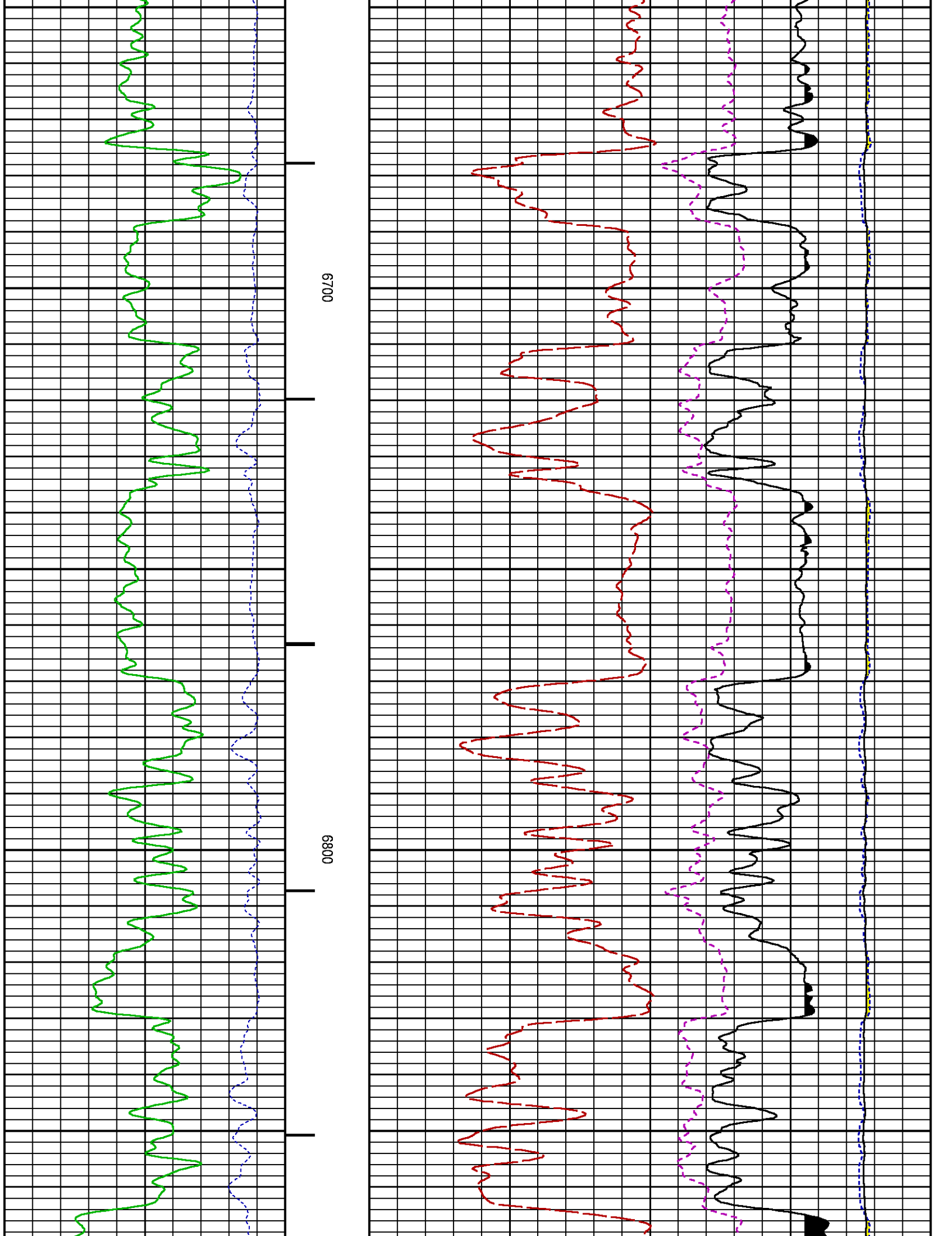
Presentation : cas6685:/dat1a/CH105821/RPM_MAIN.fvpdf [5"/100' Scale]
 Plot Interval : 6074.25 - 10261 Feet

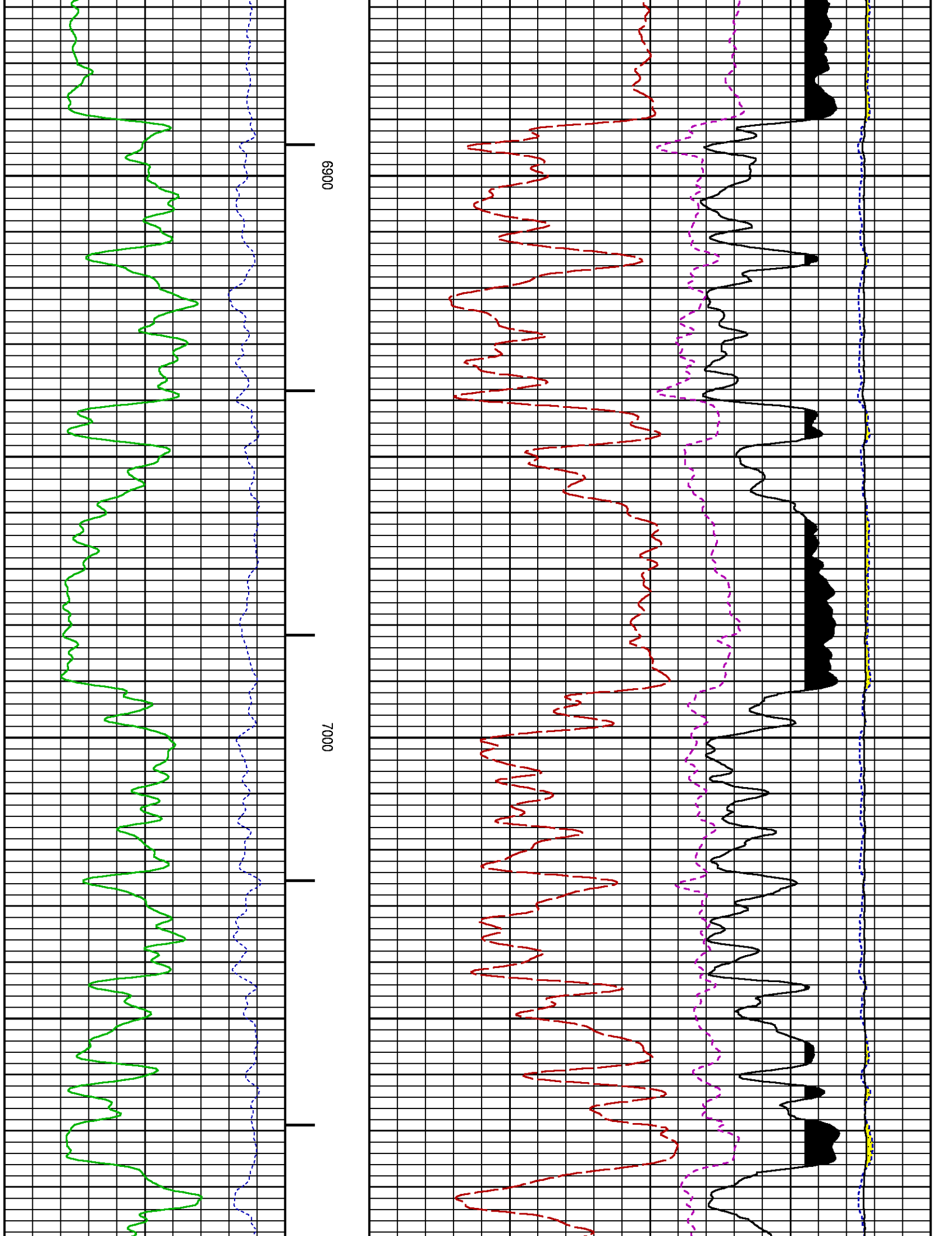
Data File 1 : F1 : cas6685:/dat1a/CH105821/main.xtf
 Created On : Feb 19 23:32:11 2016
 Company : WPX ENERGY
 Well : FEDEARL RU 32-8
 Field : DUNLISON

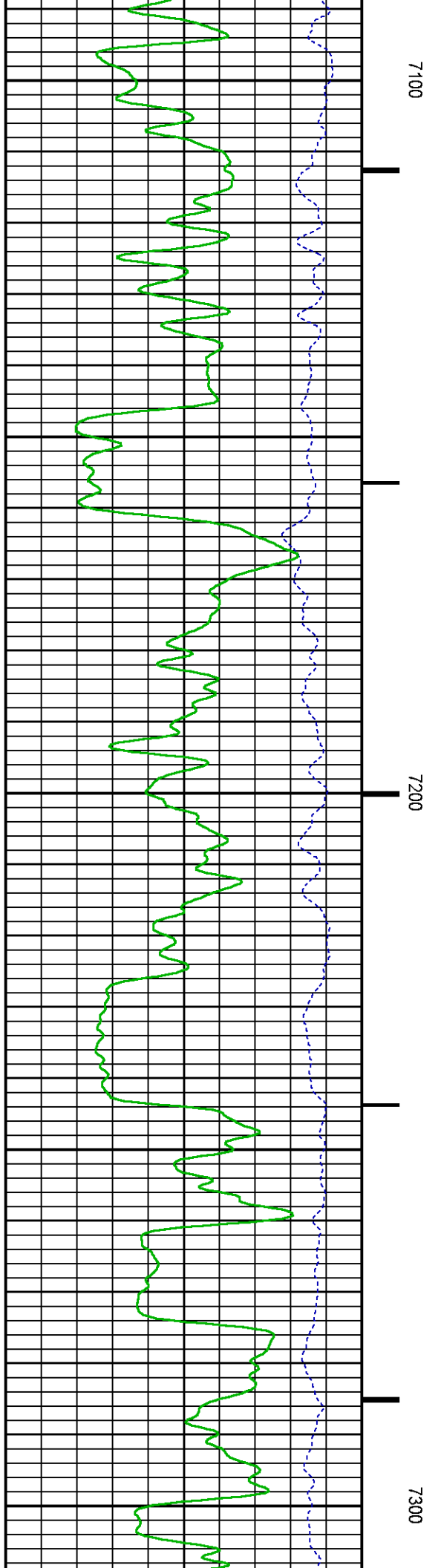
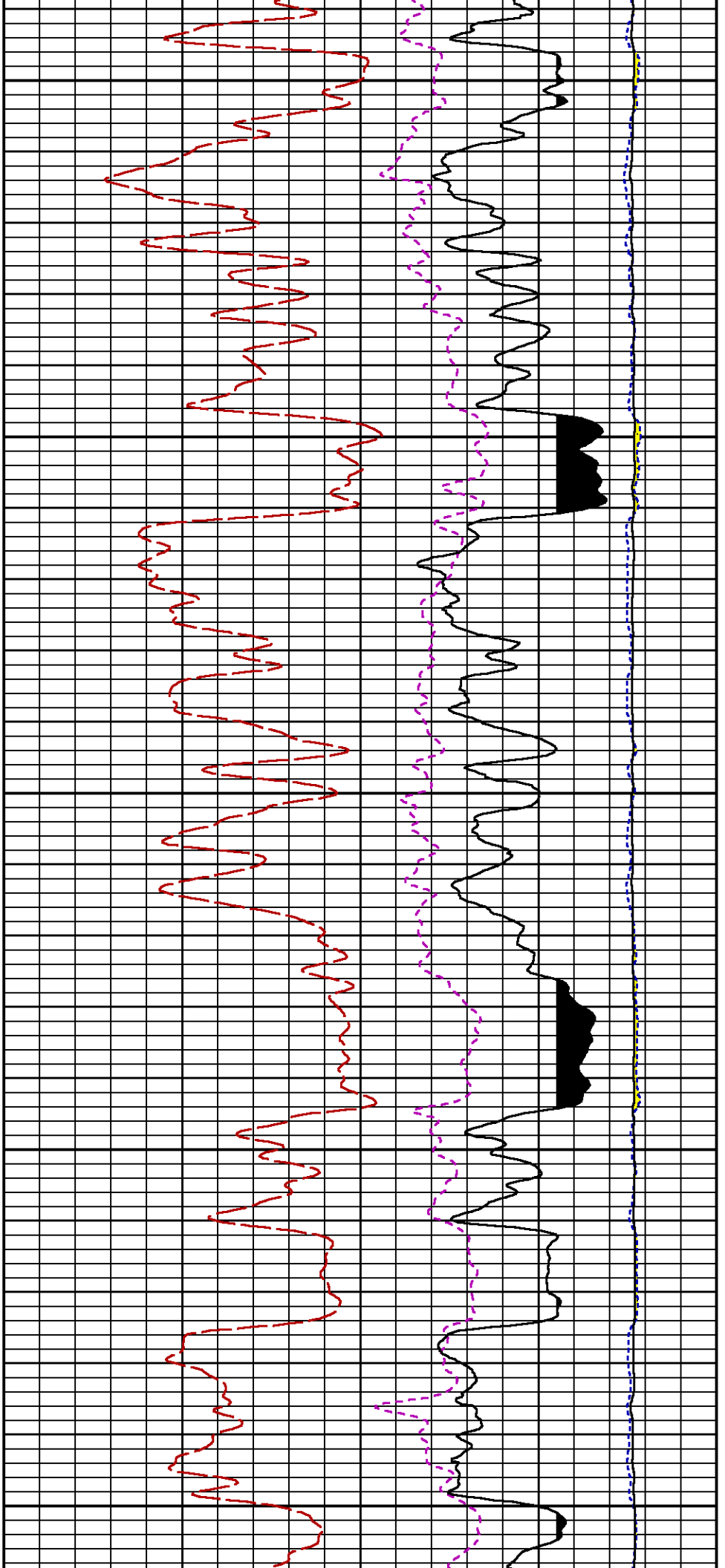


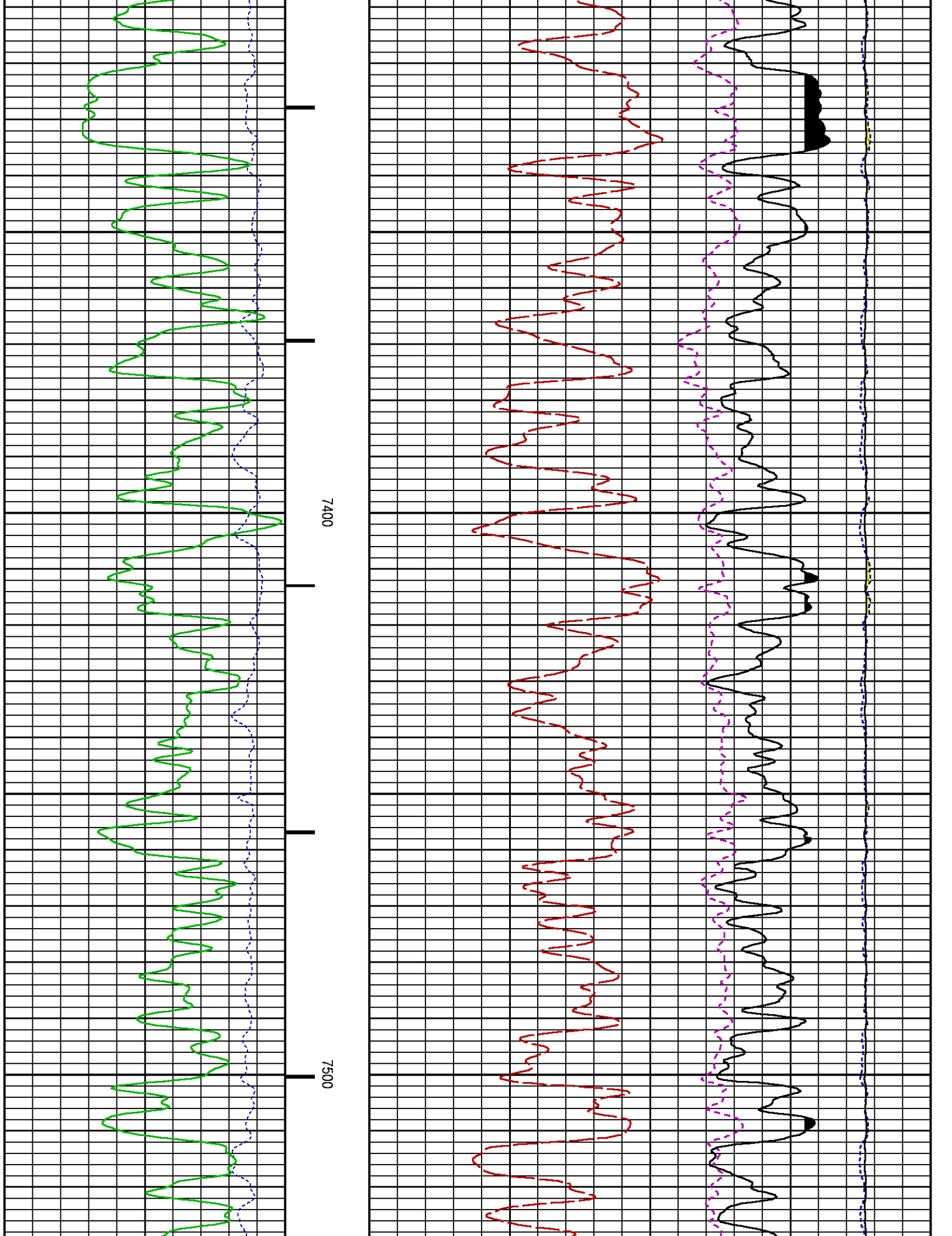


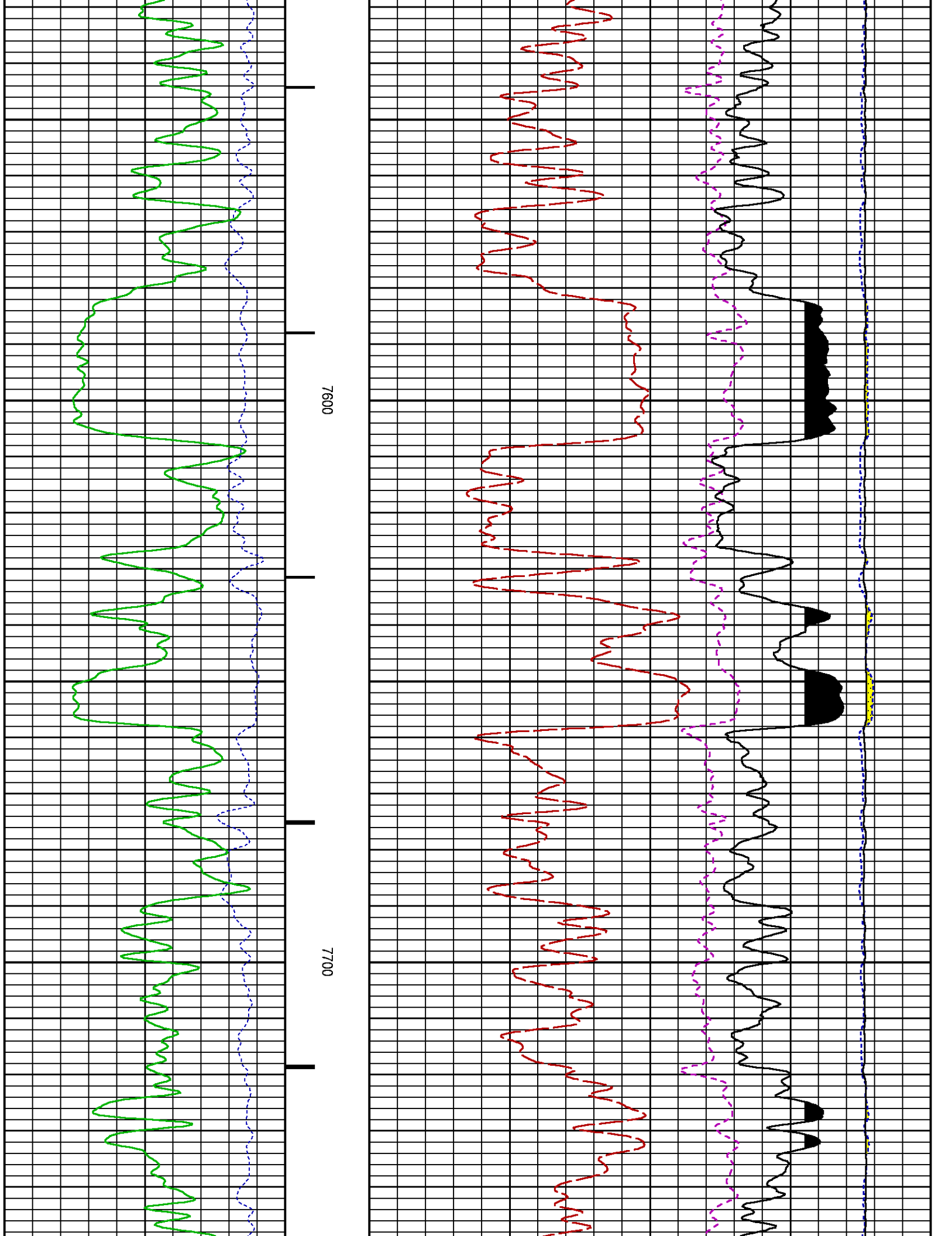


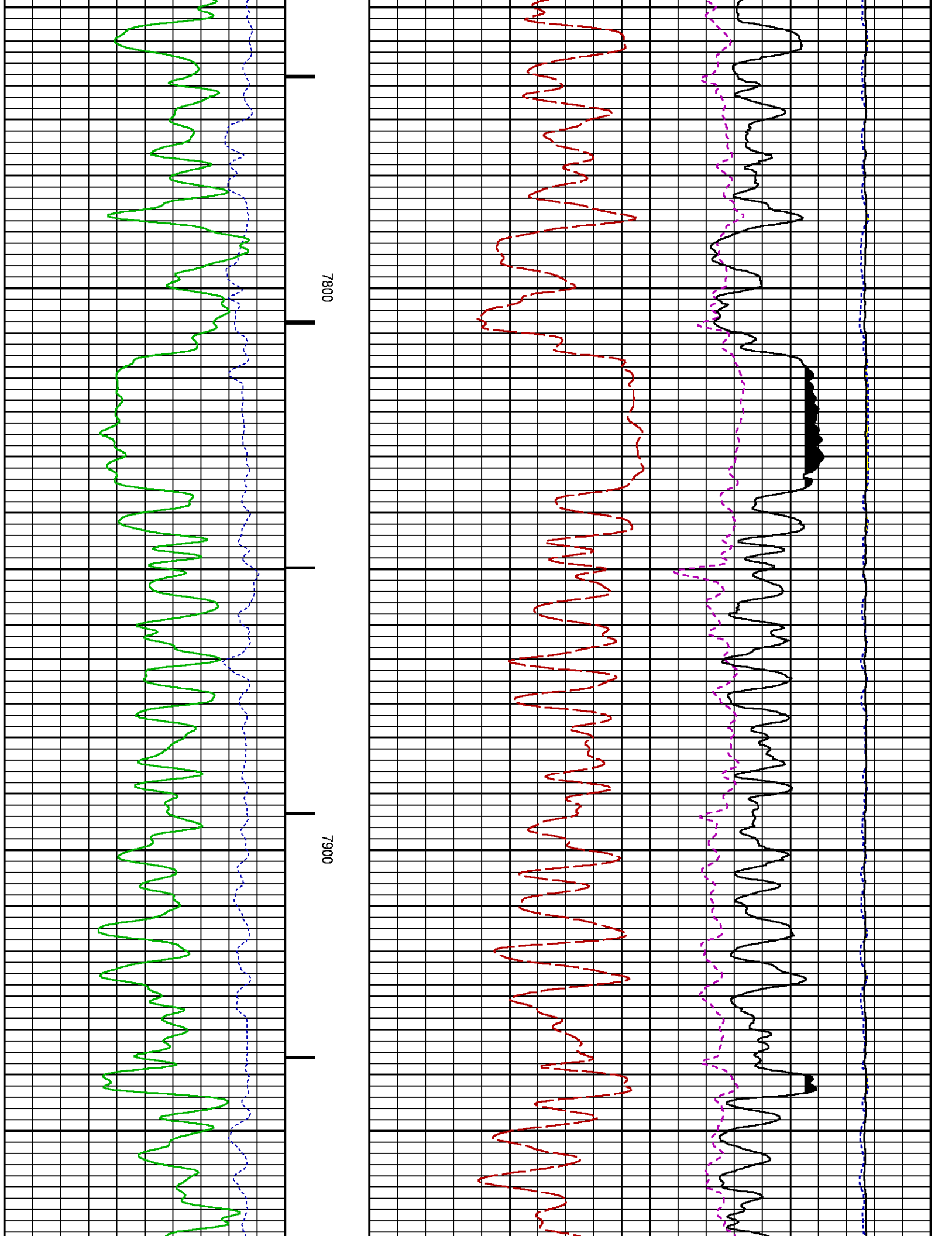


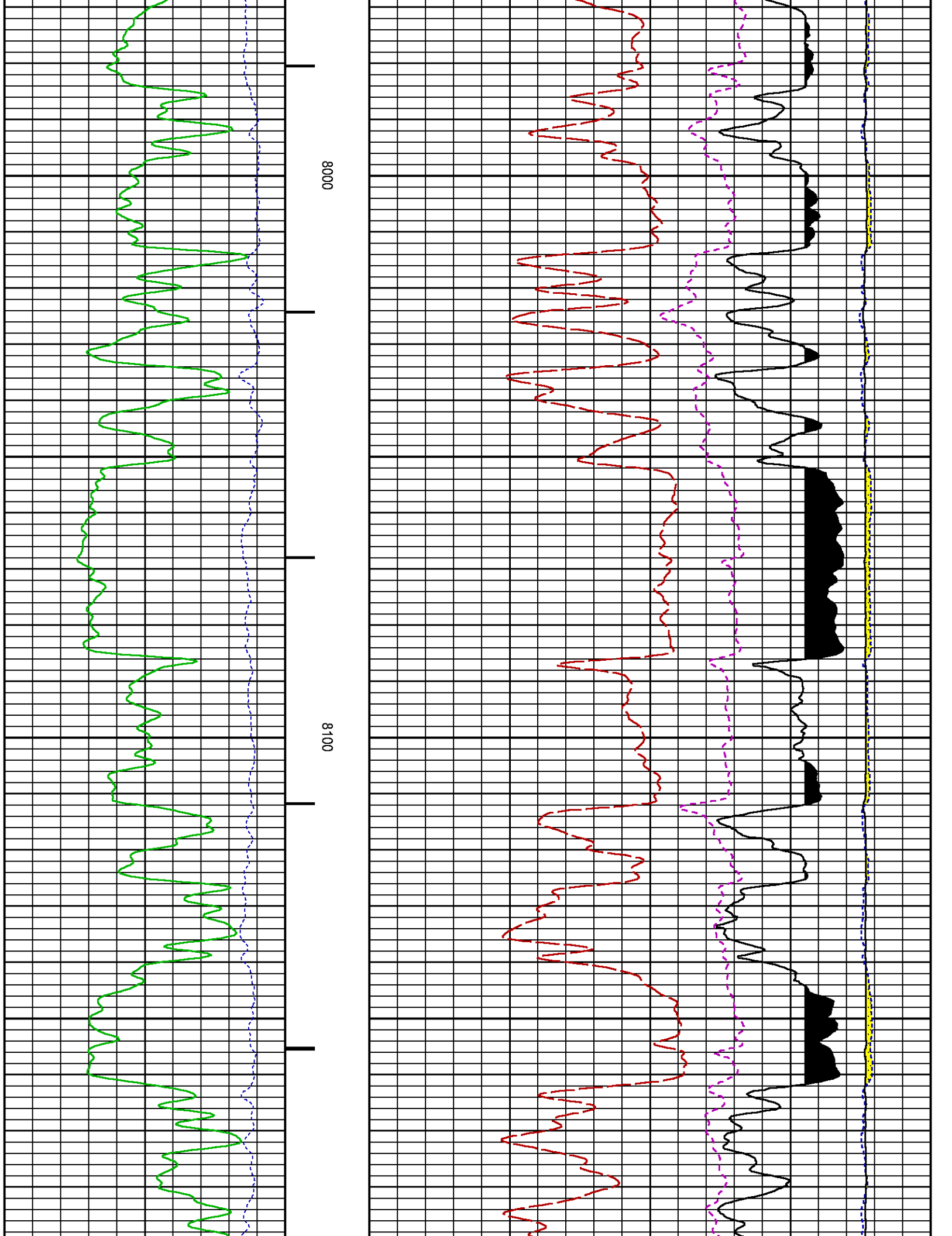


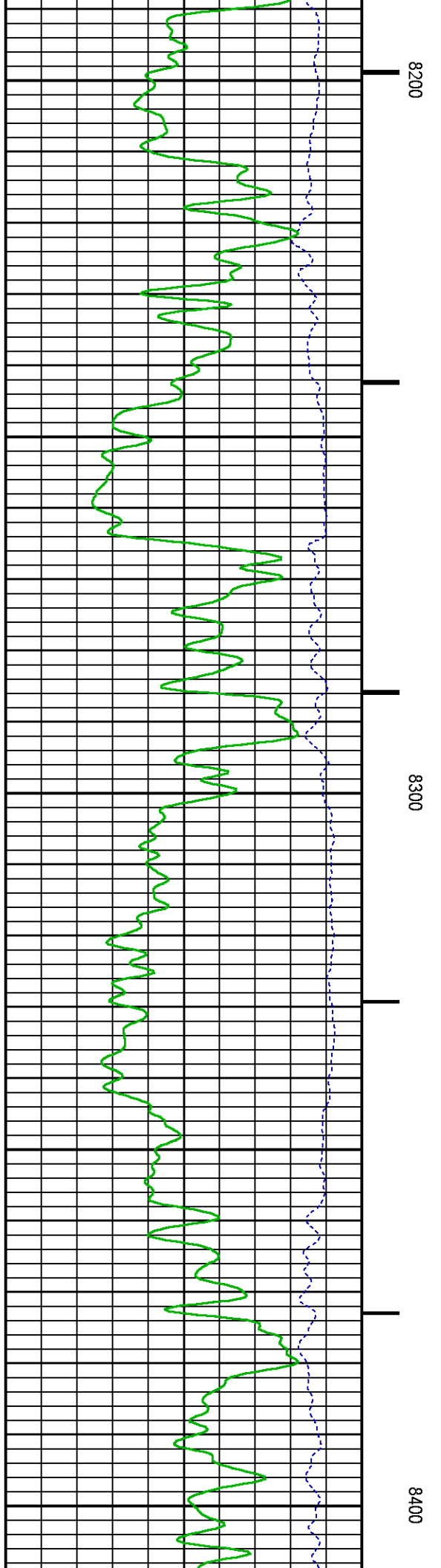
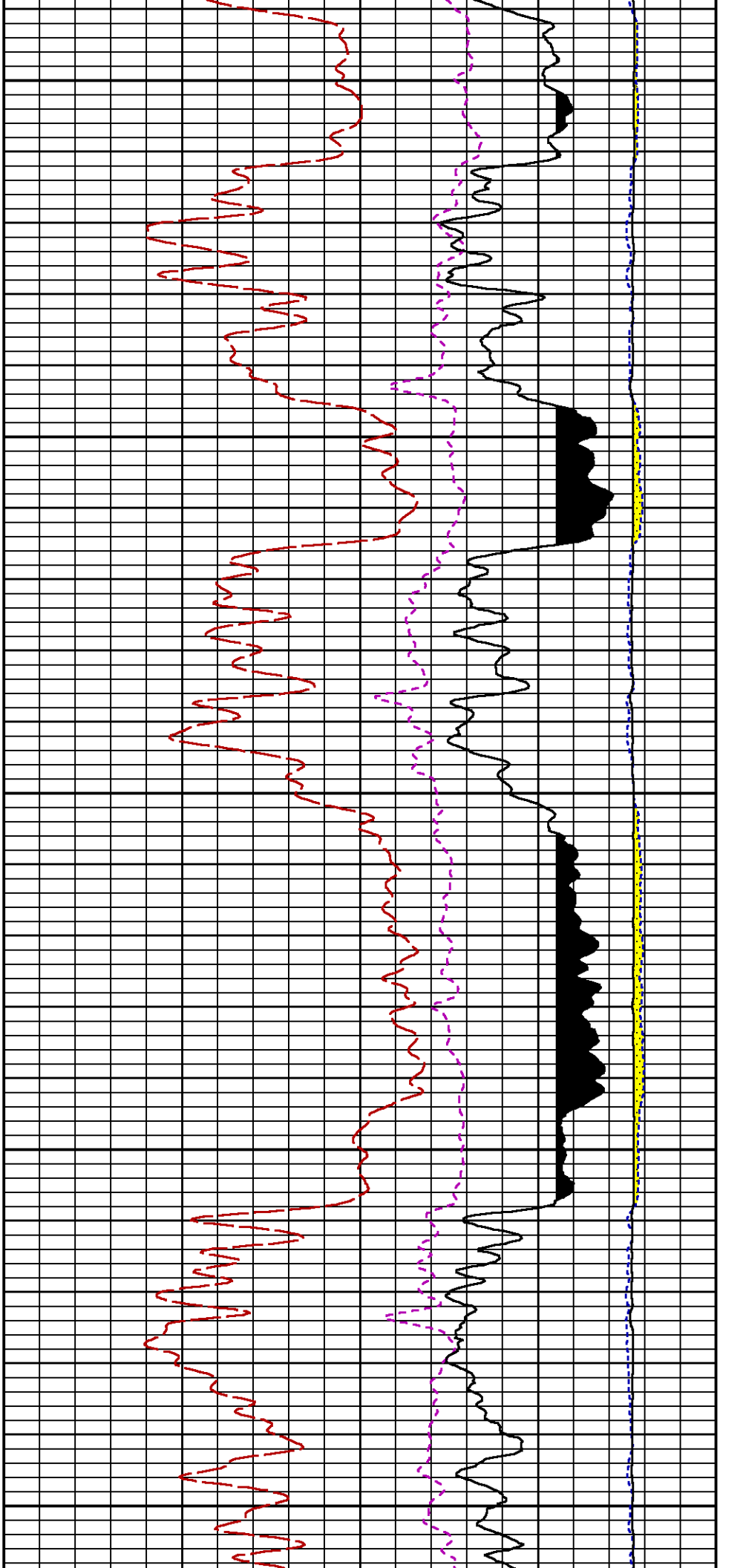


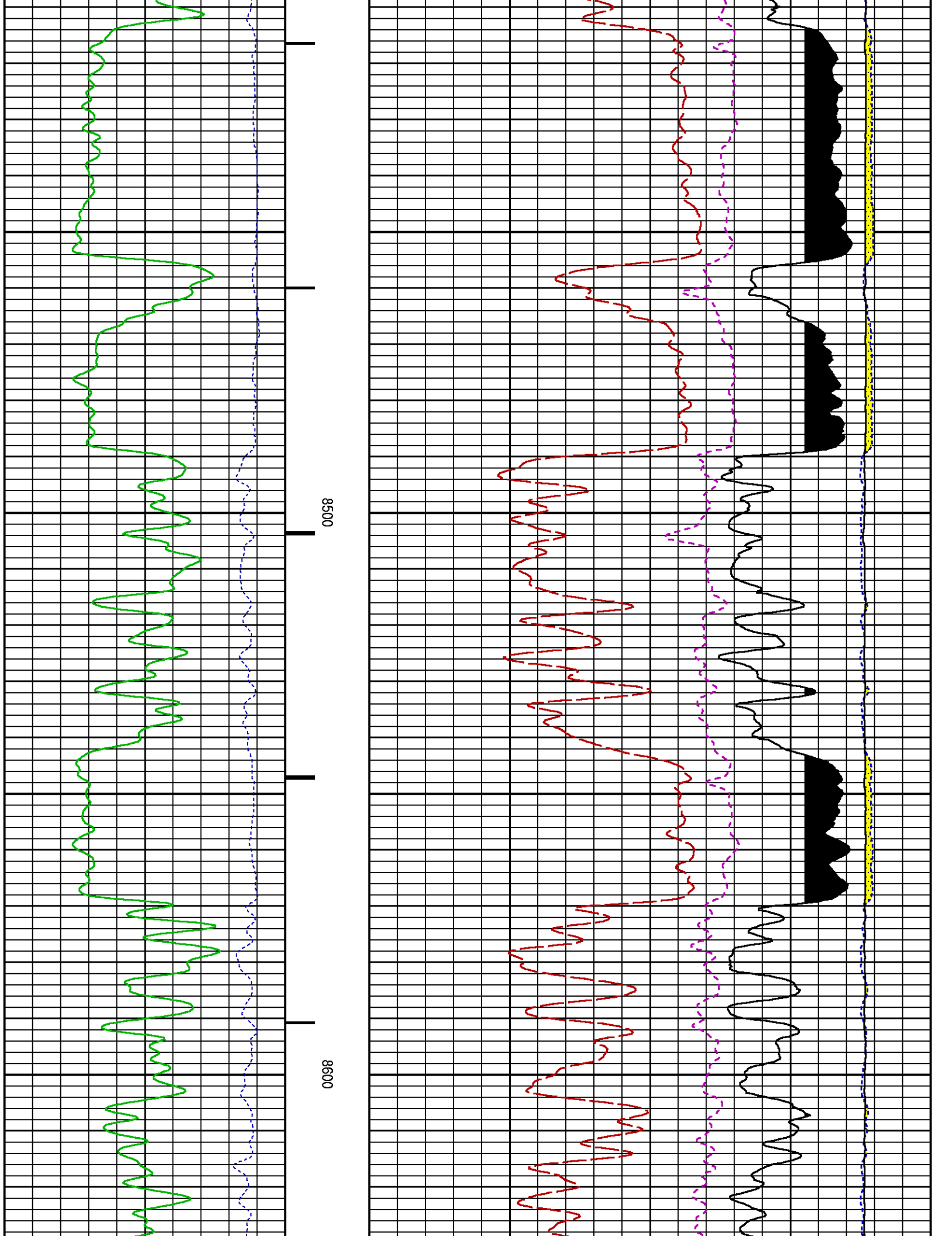


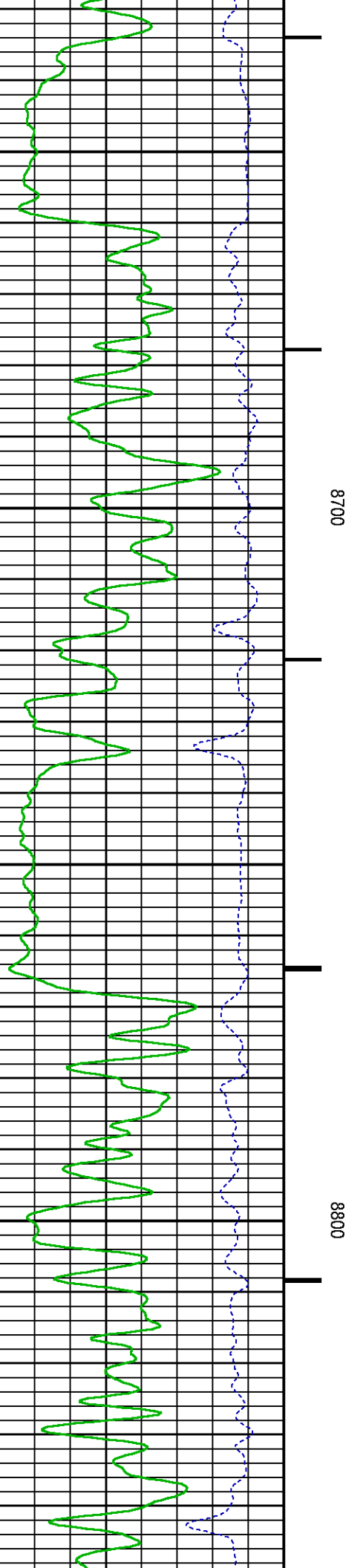
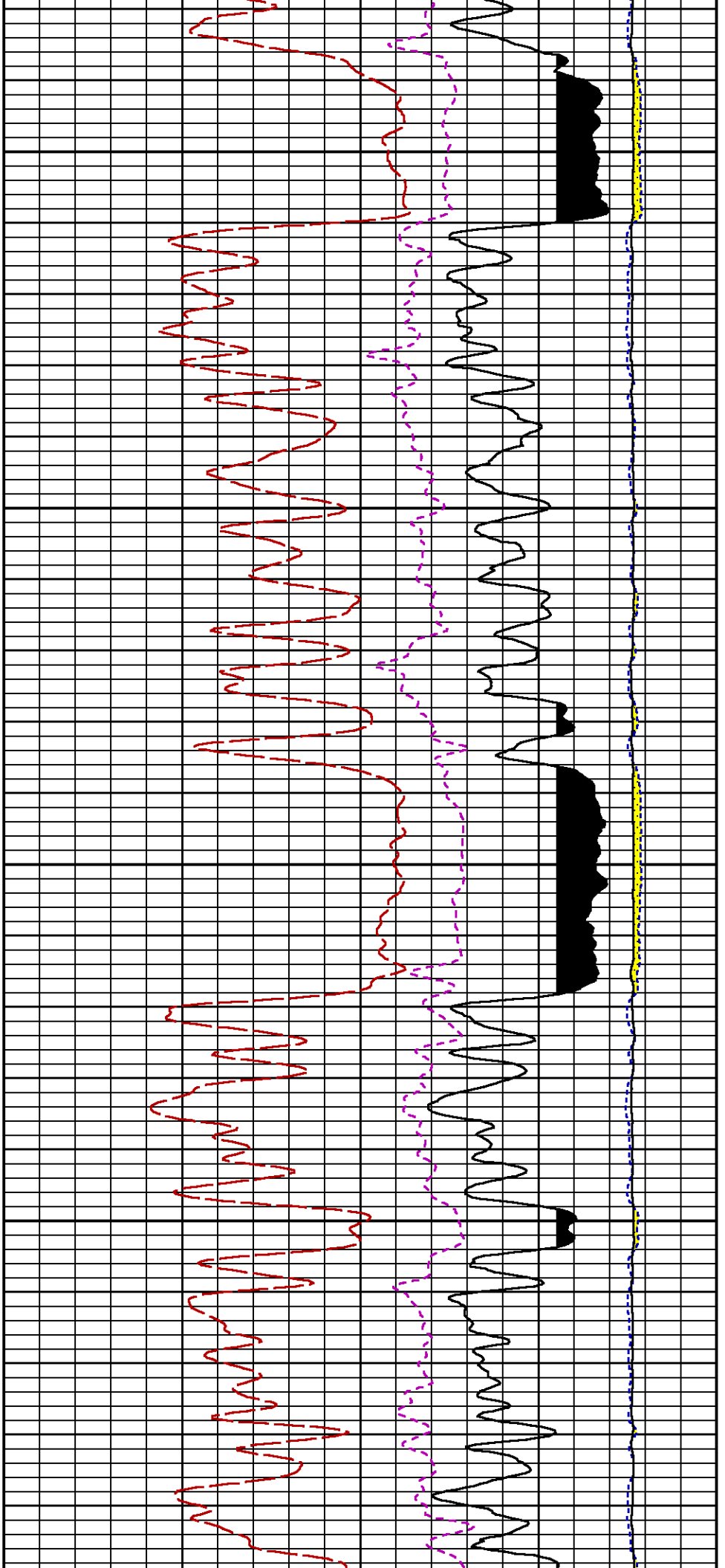


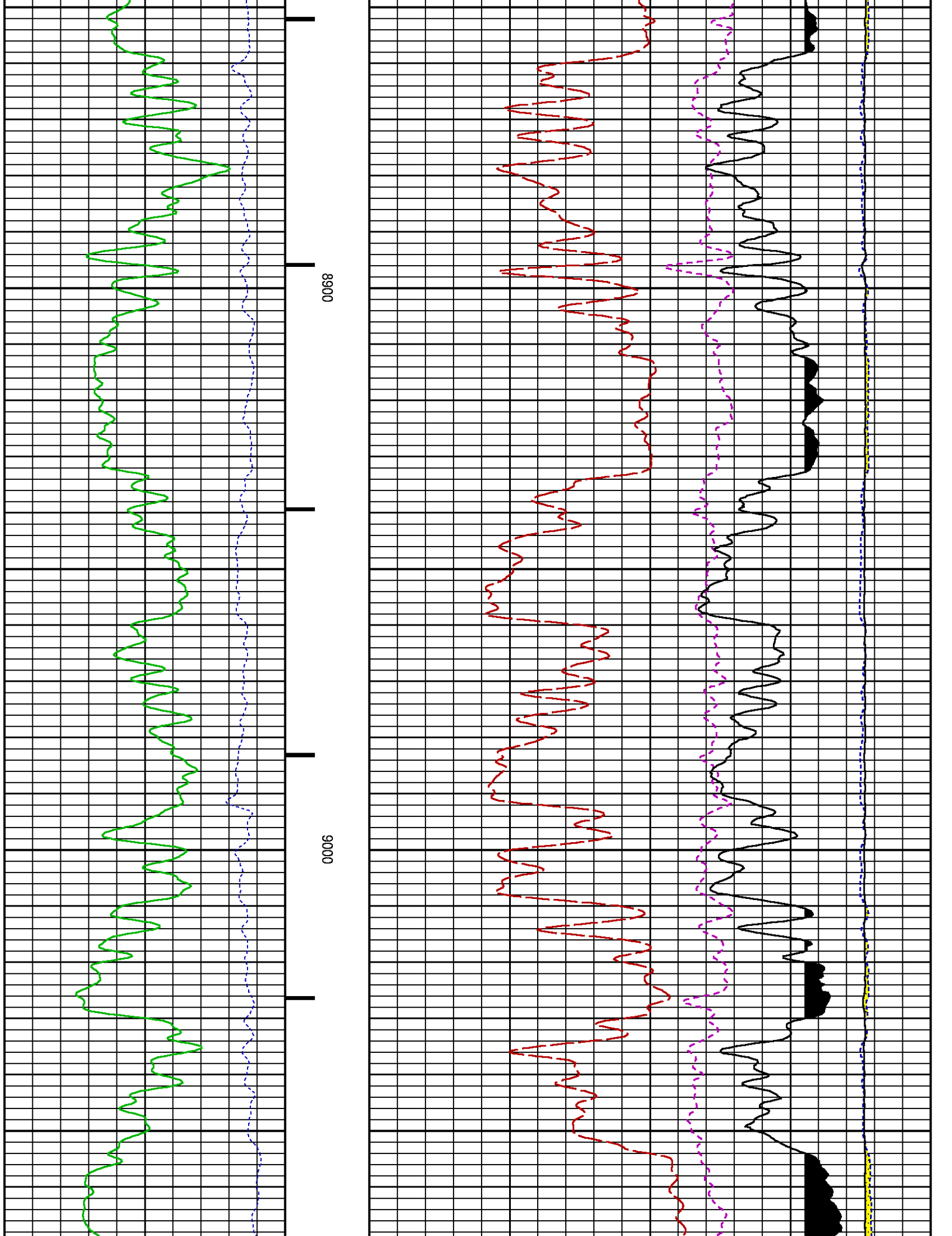


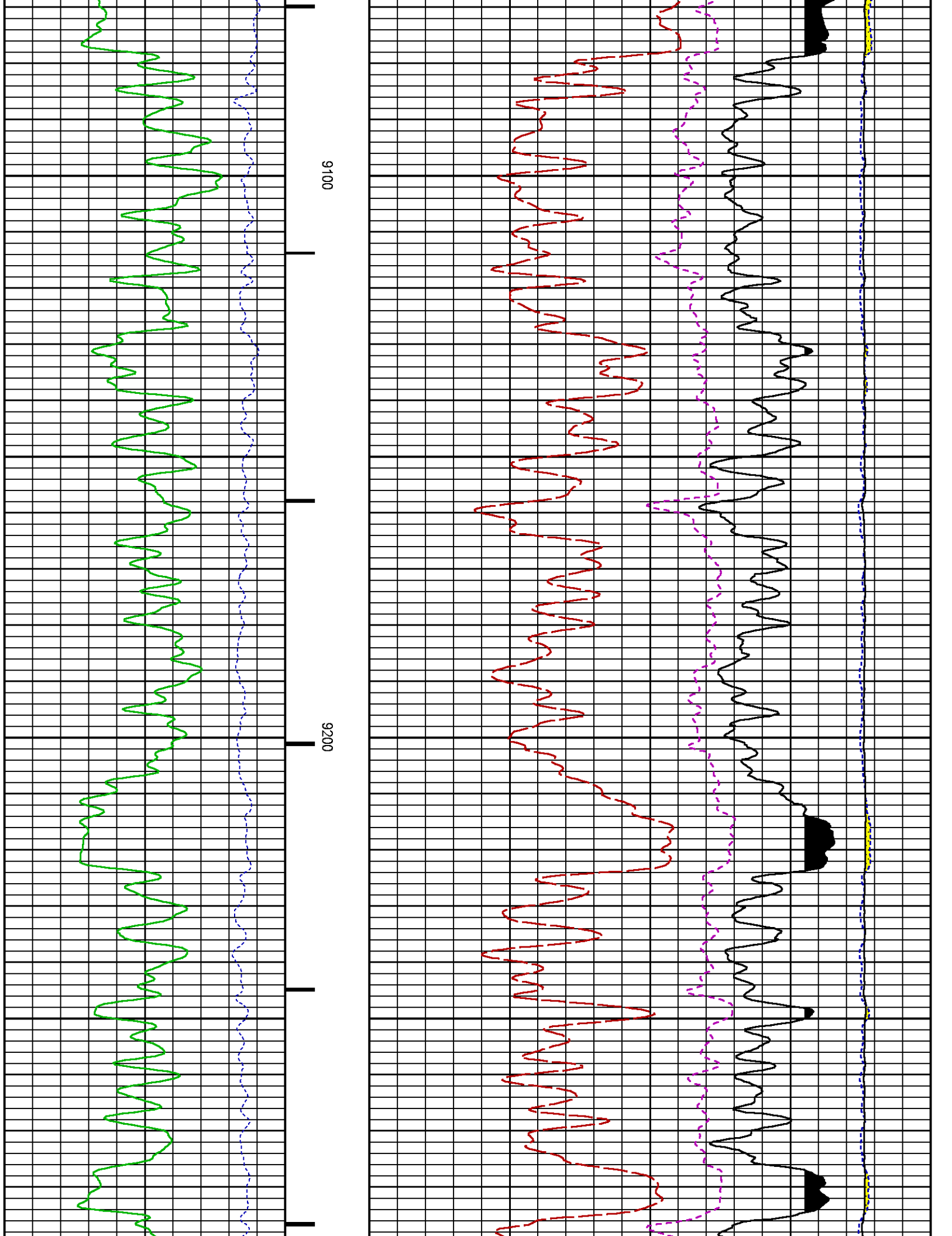


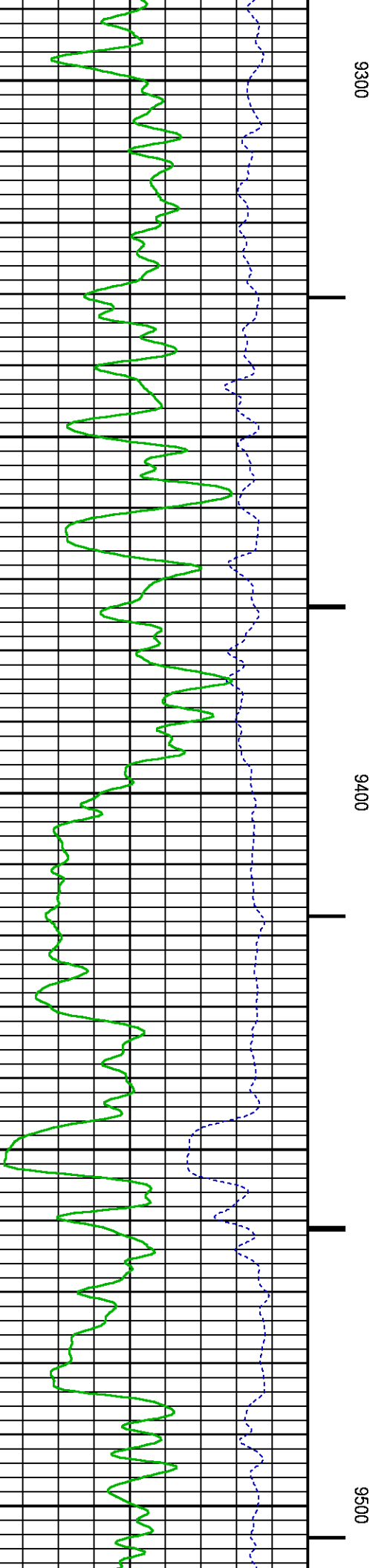
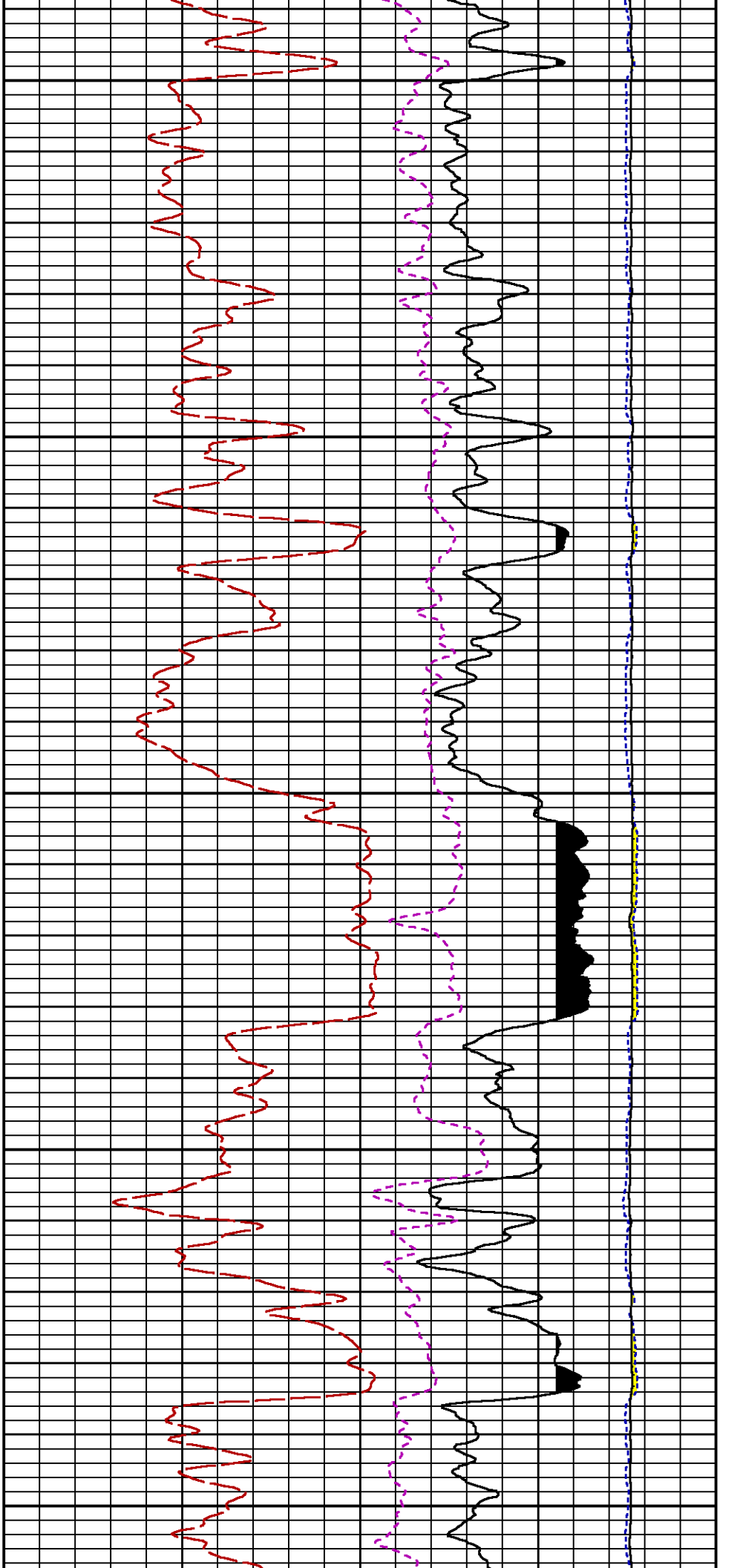


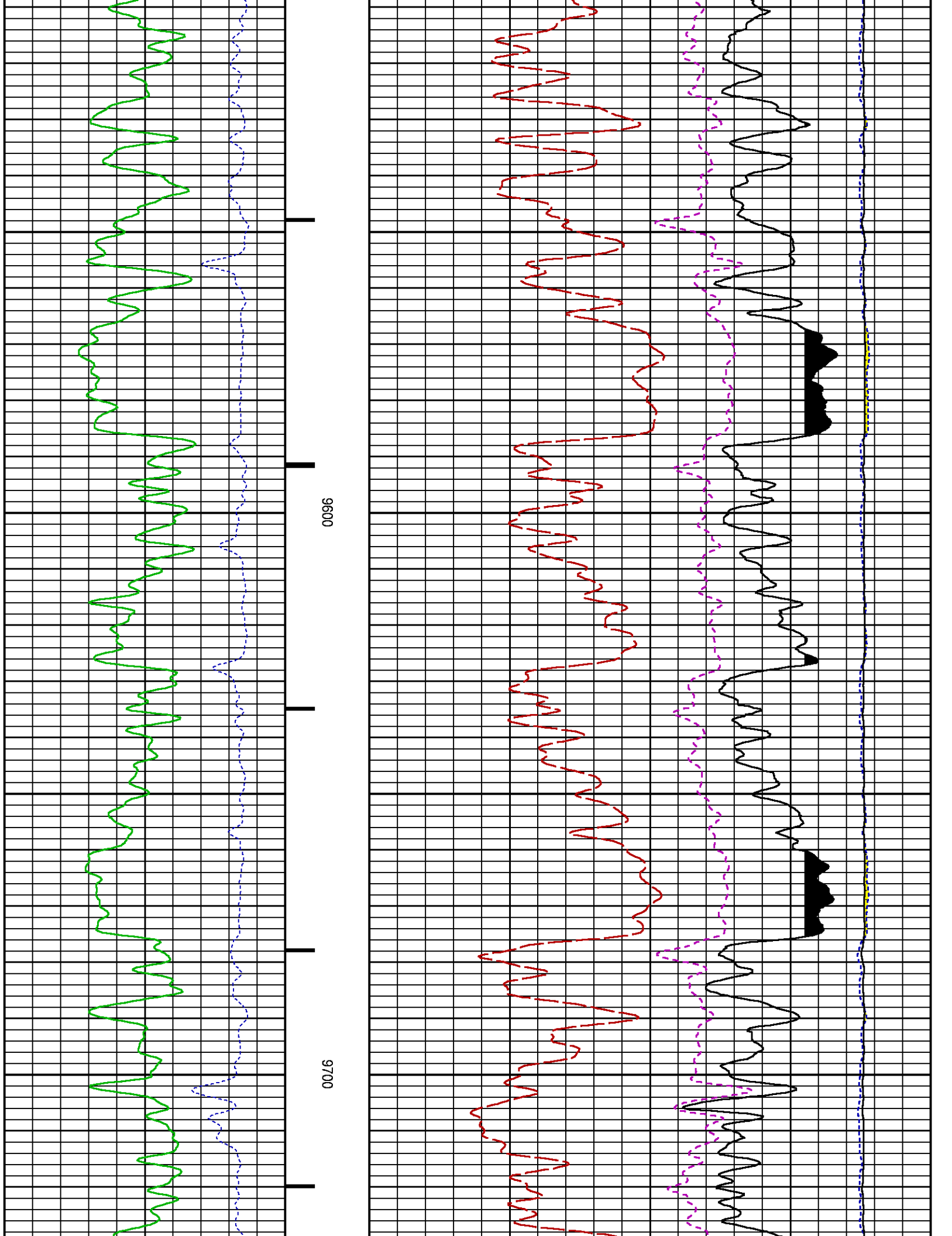


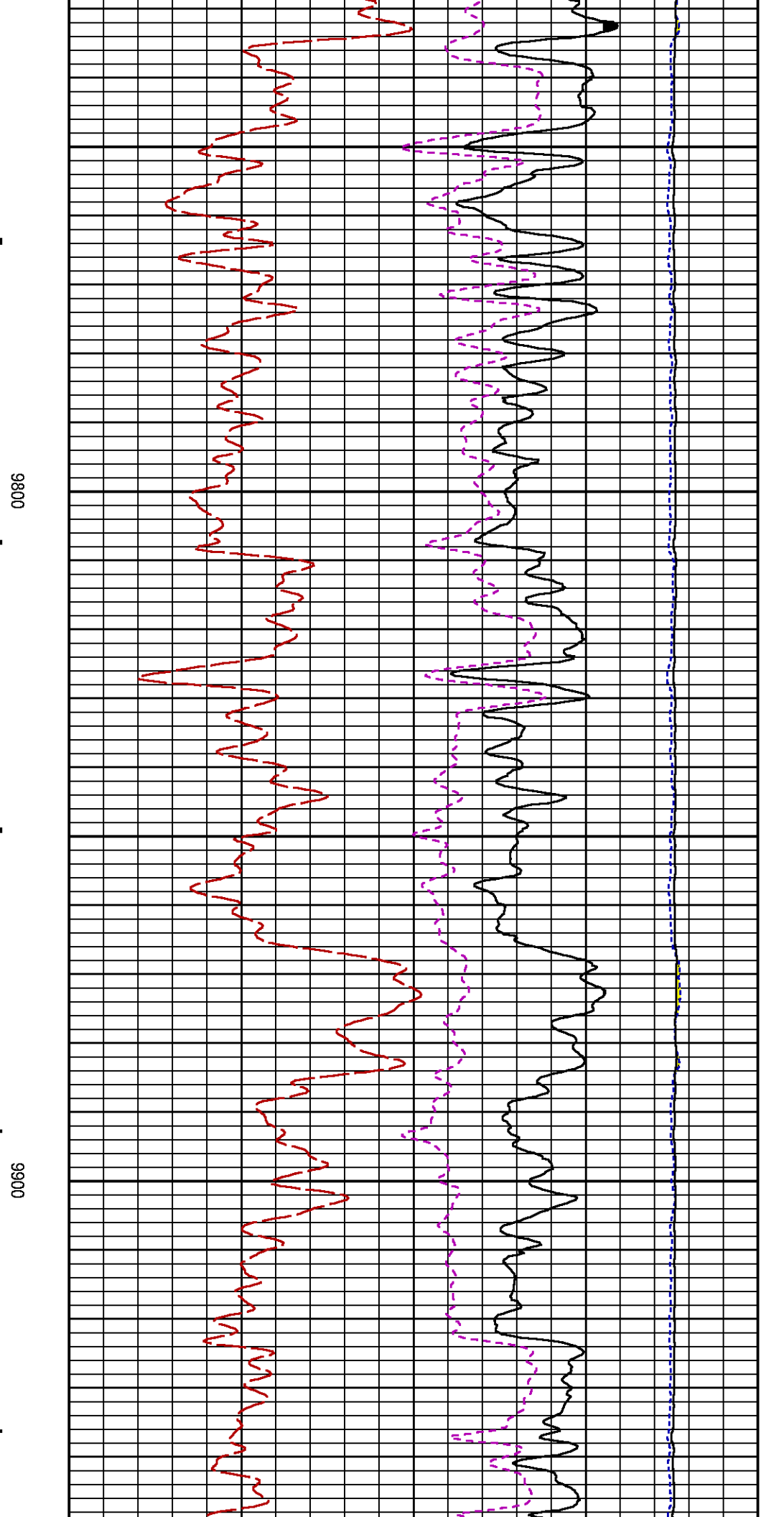
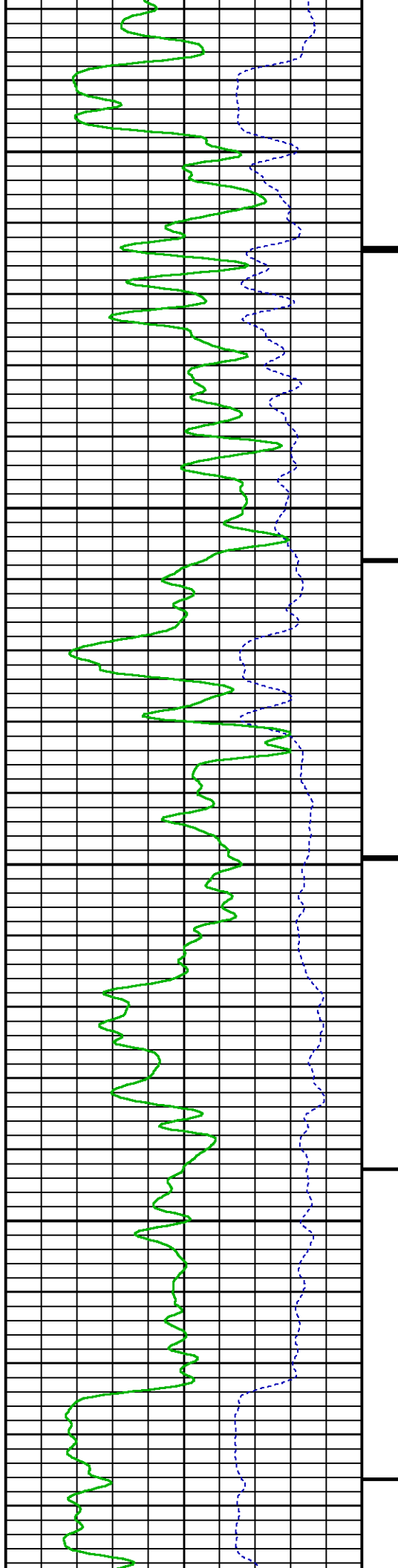


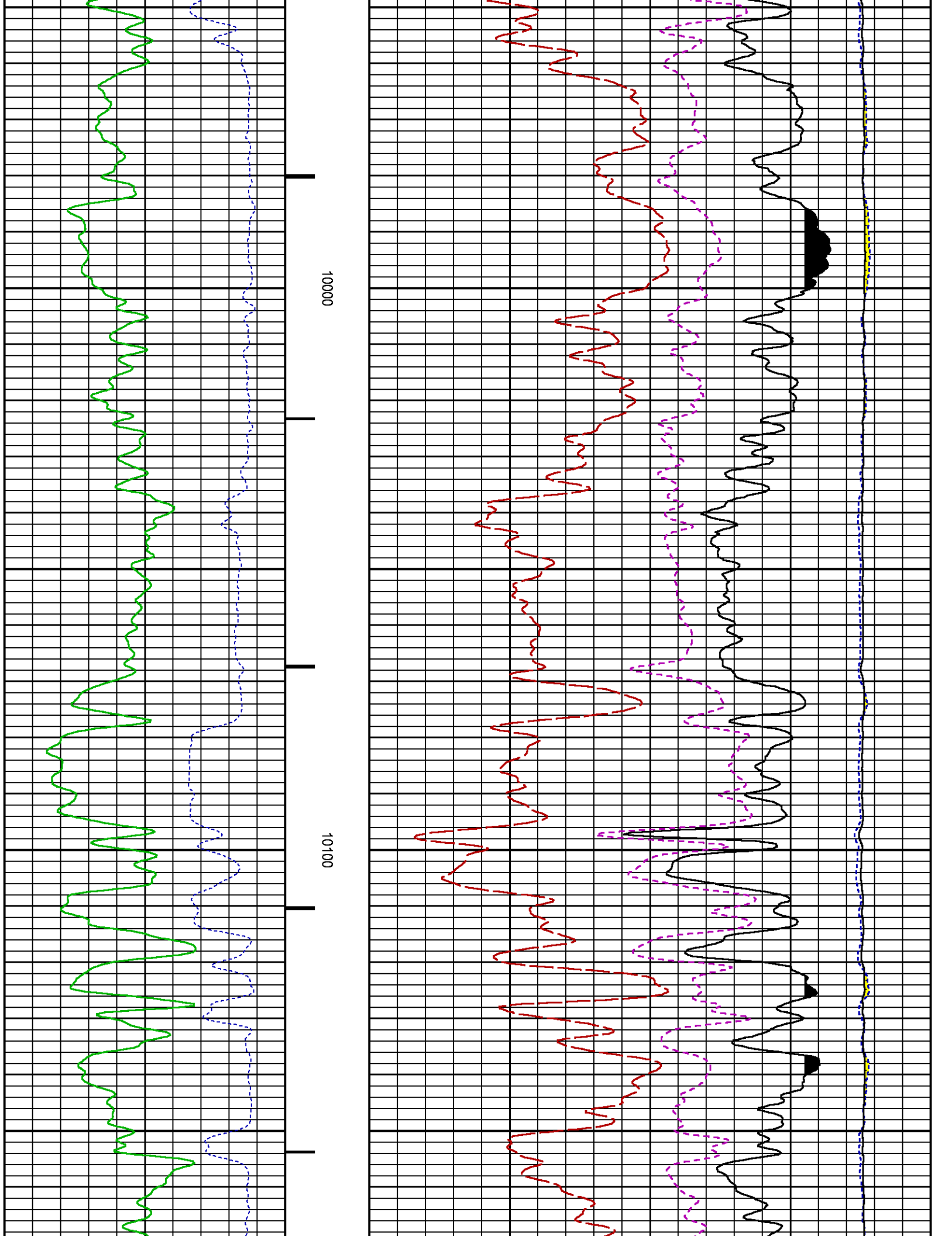


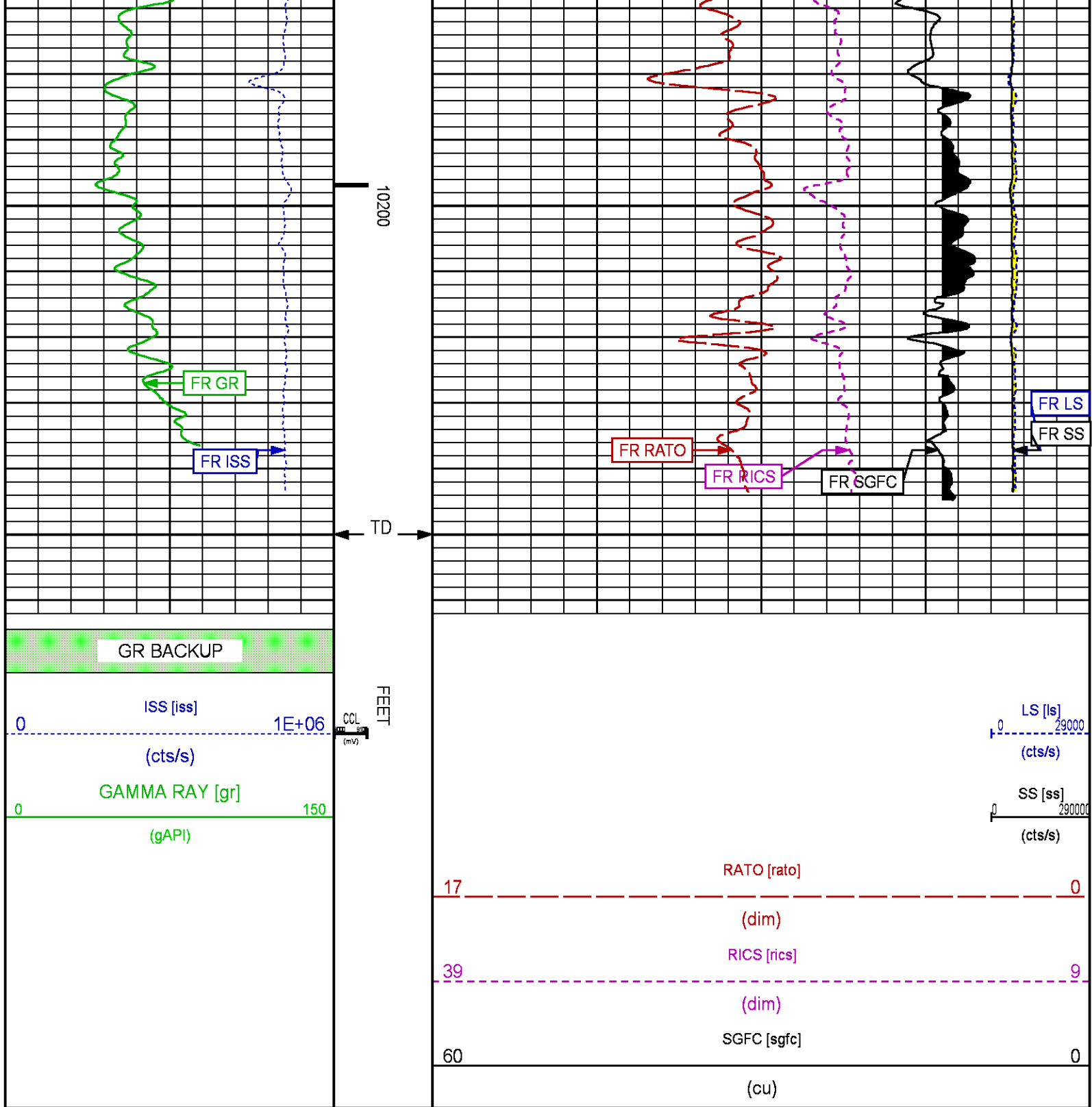












REPEAT SECTION PNC-3D MODE

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CH105821/n353hx01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 9577.250 ft BOTTOM DEPTH: 9813.000 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

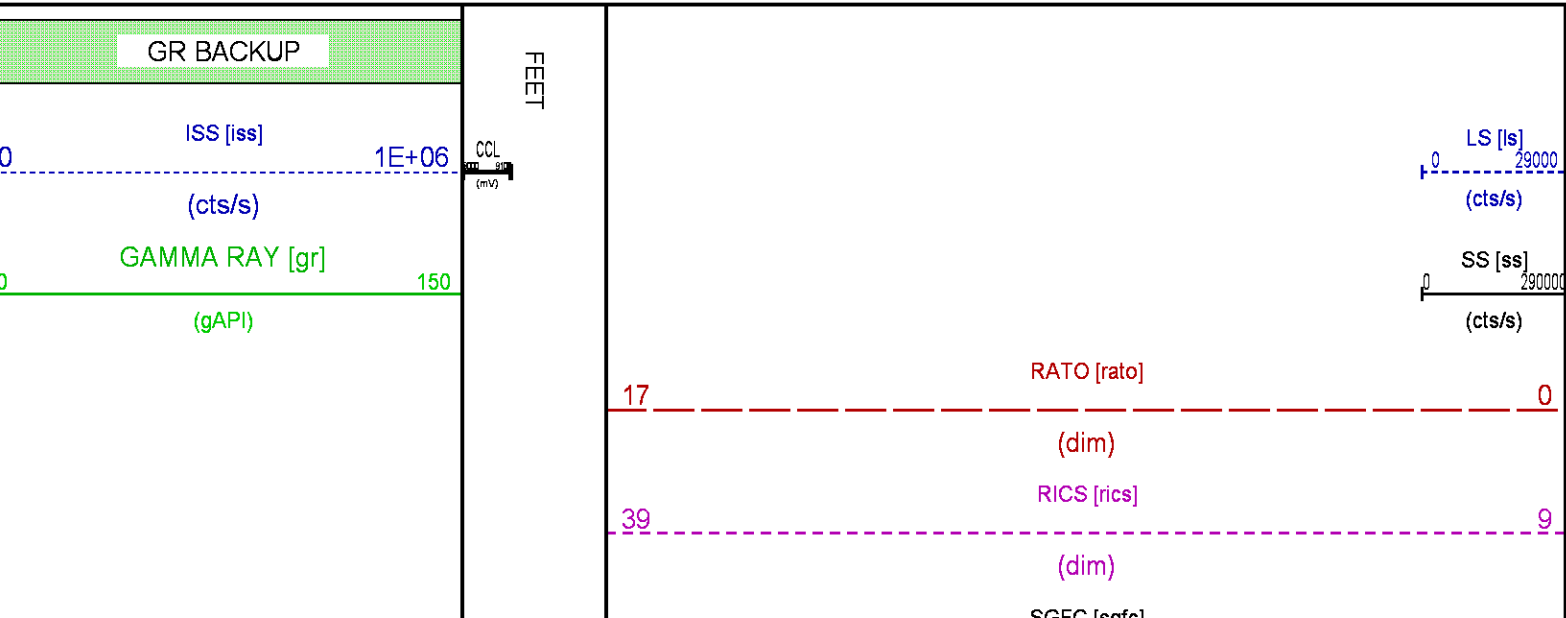
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|----------------------|---|
| F1:CCL | Feb 19 23:13:53 2016 | CASING COLLAR LOCATOR |
| F1:GR | Feb 19 23:13:53 2016 | GAMMA RAY |
| F1:ISS | Feb 19 23:13:53 2016 | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | Feb 19 23:13:53 2016 | LONG SPACE COUNT RATE |
| F1:RATO | Feb 19 23:13:53 2016 | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | Feb 19 23:13:53 2016 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | Feb 19 23:13:53 2016 | CORRECTED FORMATION SIGMA |
| F1:SS | Feb 19 23:13:53 2016 | SHORT SPACE COUNT RATE |

CURVE MEASURE POINT OFFSET

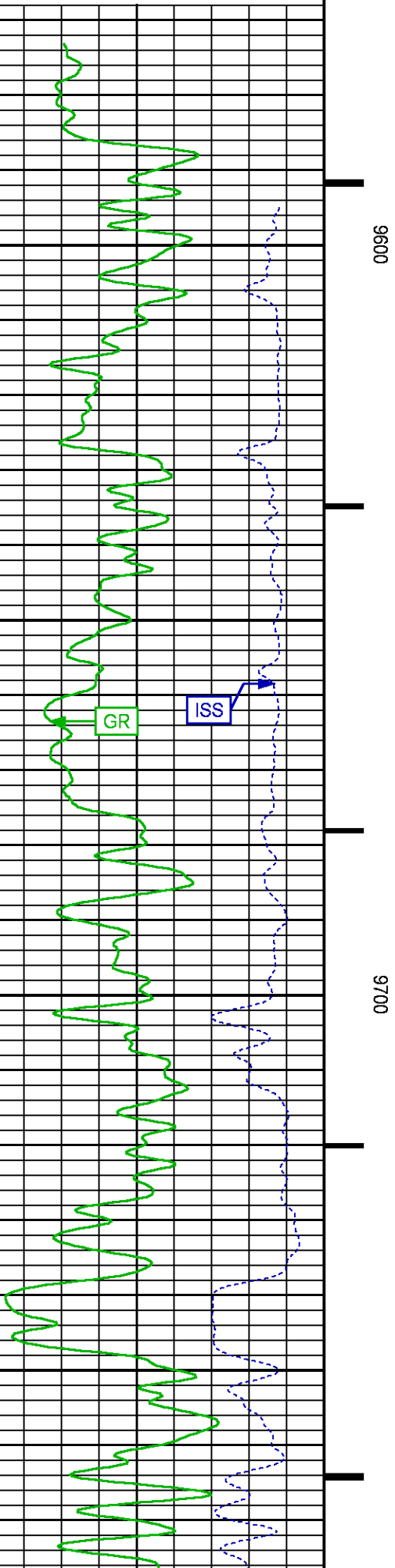
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CCL | 26.00 | ISS | 12.75 | RATO | 12.75 | SGFC | 12.75 |
| GR | 23.00 | LS | 12.75 | RICS | 12.75 | SS | 12.75 |

Presentation : cas6685:/dat1a/CH105821/RPM_RPT.fvpdf [5"/100' Scale]
Plot Interval : 9568.5 - 9814.25 Feet

Data File 1 : F1 : cas6685:/dat1a/CH105821/repeat.xtf
Created On : Feb 19 23:13:53 2016
Company : WPX ENERGY
Well : FEDEARL RU 32-8
Field : RULISON
File Interval : 9550.25 - 9830.5 Feet
OCT : n353hx



(cu)

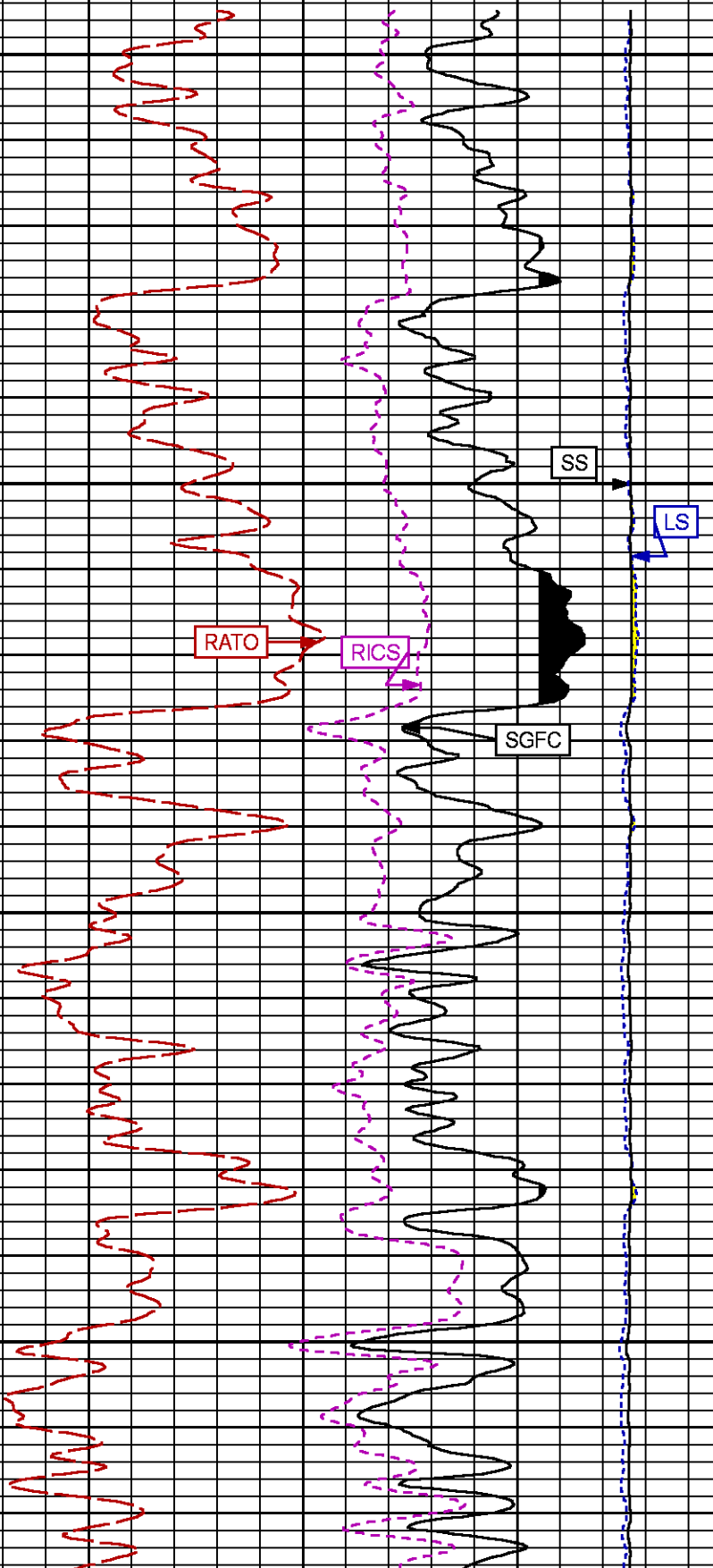


9600

9700

GR

ISS



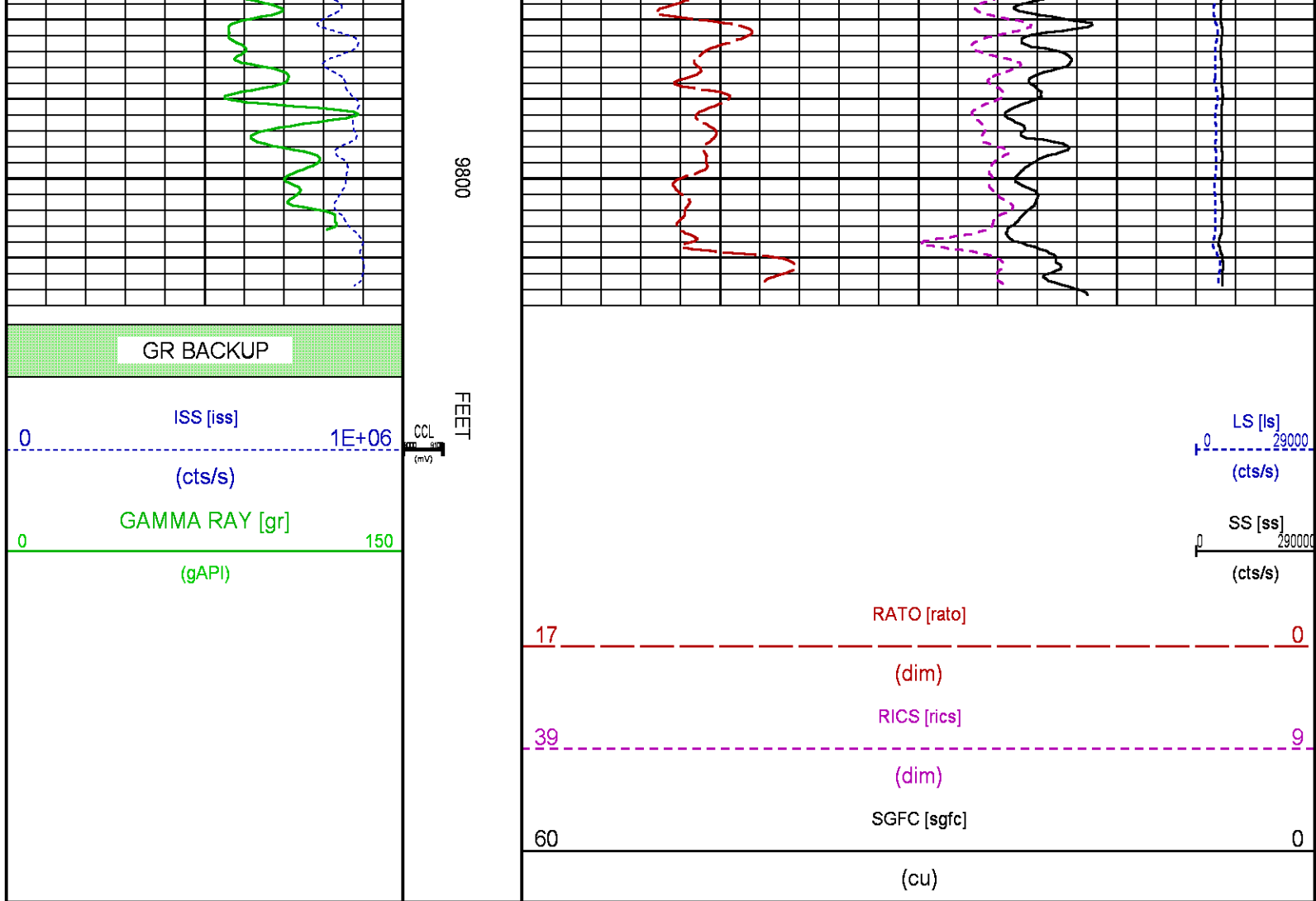
RATO

RICS

SGFC

SS

LS



CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/CH105821/n353hx.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 8262XA 10485470 DATE/TIME PERFORMED: Fri Feb 19 11:58:11 2016
 UNIT #: 3885TD MI4230 CALB JIG #: 4702NK BA-856

| | BACKGROUND (cts/s) | CALBRTR ON (cts/s) | CR DIFF (cts/s) | MULT | BACKGROUND (gAPI) | CALBRTR ON (gAPI) | CALBRTR (gAPI) |
|----|-----------------------|-----------------------|--------------------|-------|----------------------|----------------------|-------------------|
| GR | 106.20 | 451.82 | 345.6 | 0.521 | 55.31 | 235.31 | 180 |

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 8262XA 10485470 DATE/TIME PERFORMED: Fri Feb 19 12:01:19 2016
 UNIT #: 3885TD MI4230 VERI JIG #: 4702NK BA-856

| | BACKGROUND (cts/s) | CALBRTR ON (cts/s) | MULT | BACKGROUND (gAPI) | CALBRTR ON (gAPI) | DIFF. (gAPI) |
|----|-----------------------|-----------------------|-------|----------------------|----------------------|------------------|
| GR | 106.11 | 449.09 | 0.521 | 55.26 | 233.89 | 178.62 |
| | | | | | | 170.00 190.00 |

RPM_PNC_3D PRIMARY CALIBRATION SUMMARY

TOOL: 8283PA 10169251

DATE/TIME PERFORMED: Fri Feb 19 11:53:57 2016

UNIT: 3885TD MI4230

CALIBRATOR: 2437XB GJ_SHOP

SOURCE: 8281AA 11765055

HOURS: 8281AA 129

| | ISS | Mtr Vits (V) | SS Gain | LS Gain | XLS Gain | EA Temp (degF) | Sync Delay (usec) | RCAL |
|--------------|---|---|--|--|--|---|---|--|
| Raw Data | 808799 | 121 | 2323 | 2310 | 2316 | 122 | 7.0 | 0.9766 |
| Interpolated | 1300000 | 142 | 2301 | 2301 | 2311 | | | |

| | ISS | BKS | BKL | BKX | SGA1 | SDA1 | SGA2 | SDA2 |
|----------|--|--|--|---|---|---|---|---|
| Raw Data | 808799 | 7929 | 1296 | 163 | 26.09 | 0.15 | 24.20 | 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 | 808799 | 169212 | 26330 | 89116 | 31701 | 8255 | 53960 | 13211 |
| Fit Quality % | | 1.349 | 1.240 | 1.211 | 1.174 | 1.373 | 1.111 | 1.370 |

| | ISS | RBOR | RIN ISS/ILS | RIN13 ISS/IXS | RICS ISS/CSS | RATO SS/LS | RTWO SS2/LS | RONE CSS/CLS |
|---------------|---|---|---|---|---|---|---|---|
| Raw Data | 808799 | 1.43 | 4.78 | 30.73 | 14.99 | 10.80 | 3.84 | 4.09 |
| | | 1.42 1.45 | 3.55 5.52 | 22.20 32.70 | 10.89 16.34 | 10.06 11.10 | 3.57 3.95 | 3.76 4.22 |
| Fit Quality % | | 0.114 | 0.041 | 0.027 | 0.132 | 0.131 | 0.153 | 0.156 |
| Reduced | 1400298 | 1.43 | 4.79 | 30.81 | 15.01 | 10.80 | 3.84 | 4.09 |
| | | 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

34.08'

A3 CABLEHEAD

PCM POWER SUPPLY

Diameter : 1.70"
 Length : 3.86'
 Weight : 18 lbs
 Series : 8250EA
 Mnemonic : PCM

TELEMETRY / CCL



Source File: /dat1a/CH105821/n353hx~joe-tdg

Diameter : 1.70"
 Length : 4.46'
 Weight : 20 lbs
 Series : 8248ED
 Mnemonic : PCM
 Measure Point: 1.00': CCL MP

CCL MP 26.03'

GAMMA RAY

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

GR MP 22.90'

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

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: 34.08'
 TOTAL WEIGHT: 144 lbs
 MAX DIAMETER: 0'1.70'



COMPANY WPX ENERGY
WELL FEDERAL RU 32-8
FIELD RULISON
COUNTY GARFIELD **STATE** COLORADO

FILE NO:
CH105821
API NO:
05045227970000

LOCATION:
 SHL: 646' FNL & 1900' FWL

ELEVATIONS:
 KB 7760 FT

SEC8 T.7S R.93W
RU 21-8 PAD
FIG. 1102 010



BHL: 1593' FNL & 1423' FEL

DF
GL 7736 FT

RIG: H&P 318

SEC 8 TWP 7S RGE 93W

DATE 19-Feb-2016