



# RESERVOIR PERFORMANCE MONITOR

**Baker Atlas**

|                |         |                       |
|----------------|---------|-----------------------|
| File No:       | Company | WPX ENERGY            |
| CH060997       | Well    | FEDERAL RGU 24-25-198 |
| API No:        | Field   | SULPHUR CREEK         |
| 05103118760000 | County  | RIO BLANCO            |
|                | State   | COLORADO              |

|                   |          |   |                |          |
|-------------------|----------|---|----------------|----------|
| 25 1S 98W         | Location | SHL: 342' FSL, 1418' FWL (SESW)<br>BHL: 1235' FSL, 1908' FWL (SESW) | Other Services | BOND LOG |
| RGU 24-25-198 PAD |          |   |                |          |
| CYCLONE 29        |          |   |                |          |
| BS SLOT           | SEC 25   | TWP 15  | RGE 98W        |          |

|                     |               |           |             |            |
|---------------------|---------------|-----------|-------------|------------|
| Permanent Datum     | GL            | Elevation | 6684 ft     | Elevations |
| Log Measured From   | KB            | 21 ft     | Above P. D. | KB 6705 ft |
| Drill Measured From | KELLY BUSHING |           |             | DF         |
|                     |               |           |             | GL 6684 ft |

|                              |                |
|------------------------------|----------------|
| Date                         | 14/SEP/12      |
| Run                          | ONE            |
| Service Order                | 575197         |
| Depth Driller                | 12711 ft       |
| Depth Logger                 | 12620 ft       |
| Bottom Logged Interval       | 12610 ft       |
| Top Logged Interval          | 7400 ft        |
| Time Started                 | 0730           |
| Time Finished                | 1600           |
| Operator Rig Time            | 8.5HRS         |
| Type of Fluid in Hole        | WATER          |
| Fluid Density                | NA             |
| Salinity                     | NA             |
| Fluid Level                  | FULL           |
| Logged Cement Top            | NA             |
| Wellhead Pressure            | 0 psi          |
| Maximum Hole Deviation       | NA             |
| Nominal Logging Speed        | 10 fpm         |
| Maximum Recorded Temperature | 278 degF       |
| Reference Log                | NONE           |
| Reference Log Date           | NA             |
| Equipment No.                | 4271           |
| Location                     | FLOYD RENEAU   |
| Recorded By                  | WAYNE MARCOTTE |
| Witnessed By                 | GRAND JCT      |

- FOLD HERE

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       |
|----------|------|----------|
| 30 In    | 0 ft | 80 ft    |
| 13.5 In  | 0 ft | 3932 ft  |
| 7.825 In | 0 ft | 12711 ft |

| Size     | Weight | Grade | From | To       |
|----------|--------|-------|------|----------|
| 18 In    |        |       | 0 ft | 80 ft    |
| 9.825 In |        |       | 0 ft | 3932 ft  |
| 4.5 In   |        | P-110 | 0 ft | 12711 ft |

**Remarks**

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 9/13/2012 at the client's request.

Logged in PNC-3D mode.

The amount of linear shift is -1.5 feet.

BHT = 278°F

Equipment Data

| Run | Trip | Tool    | Series Number | Serial Number | Position |
|-----|------|---------|---------------|---------------|----------|
| 1   | 1    | RPM     | 8281FA        | 10401926      | FREE     |
| 1   | 1    | RPM     | 8281PA        | 10169251      | FREE     |
| 1   | 1    | RPM     | 8281EA        | 10423671      | FREE     |
| 1   | 1    | GR      | 8262XA        | 10076055      | FREE     |
| 1   | 1    | TEL/CCL | 8248ED        | 10298408      | FREE     |
| 1   | 1    | PCM     | 8250EA        | 10397894      | FREE     |

***MAIN SECTION  
PNC 3-D MODE***

**SPL PROCESSING**

| MEASUREMENT TYPE | PARAMETER     | VALUE          | UNITS | TOP      | BOTTOM    |
|------------------|---------------|----------------|-------|----------|-----------|
| PNC Porosity     | Borehole      | Cased          |       | 7369.993 | 11663.250 |
| PNC Porosity     | Borehole Size | 7.875          | inch  | 7369.993 | 11663.250 |
| PNC Porosity     | Casing Size   | 4.500          | inch  | 7369.993 | 11663.250 |
| PNC Porosity     | Gas Filled    | Non Gas Filled |       | 7369.993 | 11663.250 |
| PNC Porosity     | Matrix        | Sandstone      |       | 7369.993 | 11663.250 |

**DEPTH OFFSETS**  
(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES   |
|--------|--------------|---|
| 8248ED | -15.320      | FLTM  |
| 8248ED | -13.320      | CCL CHV   |
| 8262XA | -10.189      | GR  |
| 8281XA | -0.662       | HVC3Q0 SEQ3 AMA3 AML3 BKK CXS<br>CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS<br>MCS3 MCS3Q0 QCAL3 RGN3 RICK SDA3<br>SDL3 SGA3 SGL3 STA3 XS ASPEC3 |

|        |        |         |         |        |        |        |         |
|--------|--------|---------|---------|--------|--------|--------|---------|
|        |        | AMB3    | AMF3    | CHF3   | IXSC   | IXSN   | RAT023  |
|        |        | RICXC   | RIN13C  | RIN23  | RIN23C | SD3D   | SG3D    |
|        |        | SGB3    | SGF3    | WDTH3  | CXSR   | IXSR   | XSR     |
|        |        | RICXR   |         |        |        |        |         |
| 8281XA | -0.250 | HVC2Q0  | SEQ2    | AMA2   | AMB2   | AMF2   | AML2    |
|        |        | BKL     | CHF2    | CLS    | CPT2Q0 | CPT2Q2 | CPT2Q3  |
|        |        | CPT2Q4  | ET2     | ILS    | LS     | MCS2   | MCS2Q0  |
|        |        | QCAL2   | RGN2    | RICL   | RONE23 | RTW023 | SDA2    |
|        |        | SDL2    | SGA2    | SGB2   | SGF2   | SGK2   | SGL2    |
|        |        | STA2    | ASPEC2  | ILSC   | ILSN   | WDTH2  | RICLC   |
|        |        | CLSR    | ILSR    | LSR    | RICLR  |        |         |
| 8281XA | 0.000  | CPRS    | HVC1Q0  | MV     | SEQ    | SEQ1   | AMA1    |
|        |        | AMB1    | AME1    | AMF1   | AML1   | BKS    | CHF1    |
|        |        | CSS     | CORB    | CORF   | CPT1Q0 | CPT1Q2 | CPT1Q2A |
|        |        | CPT1Q2B | CPT1Q2C | CPT1Q3 | CPT1Q4 | CPT1Q5 | ET1     |
|        |        | G1      | G2      | GE1S   | GE2S   | ISS    | MCS1    |
|        |        | MCS1Q0  | QA1     | QCAL1  | QM1    | RATO   | RATO13  |
|        |        | RBOR    | RGN1    | RICS   | RIN    | RONE   | RPOR    |
|        |        | RTW0    | RIN13   | RONE13 | RTW013 | SALB   | SC1     |
|        |        | SDA1    | SDL1    | SGA1   | SGB1   | SGBC   | SGE1    |
|        |        | SGF1    | SGFC    | SGK1   | SGL1   | SS     | SS2     |
|        |        | STA1    | PD1S    | PD2S   | PD3S   | MD1S   | MD2S    |
|        |        | MD3S    | DG1S    | DG2S   | DG3S   | PD1M   | PD2M    |
|        |        | PD3M    | MD1M    | MD2M   | MD3M   | DG1M   | DG2M    |
|        |        | DG3M    | MVS     | MA     | MVM    | FILV   | IAM     |
|        |        | TA      | PVM     | PVS    | IAS    | SSTAT  | QPD1    |
|        |        | QPD2    | QPD3    | QMD1   | QMD2   | QMD3   | QDG1    |
|        |        | QDG2    | QDG3    | QMA    | QTA    | QFILV  | QMV     |
|        |        | QPV     | QIA     | DERR   | DCNT   | QPK1   | QSA1    |
|        |        | PKS1    | ASPEC1  | HOC    | FE2XC  | ISSC   | RINC    |
|        |        | ISSN    | RDEN    | WDTH1  | RICSC  | CSSR   | G1R     |
|        |        | G2R     | ISSR    | SSR    | SS2R   | RATOR  | RATO13R |
|        |        | RBORR   | RICSR   | RINR   | RIN13R | RONER  | RPORR   |
|        |        | RTWOR   |         |        |        |        |         |
| SYSTEM | 0.000  | TEN     | TTEN    |        |        |        |         |

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

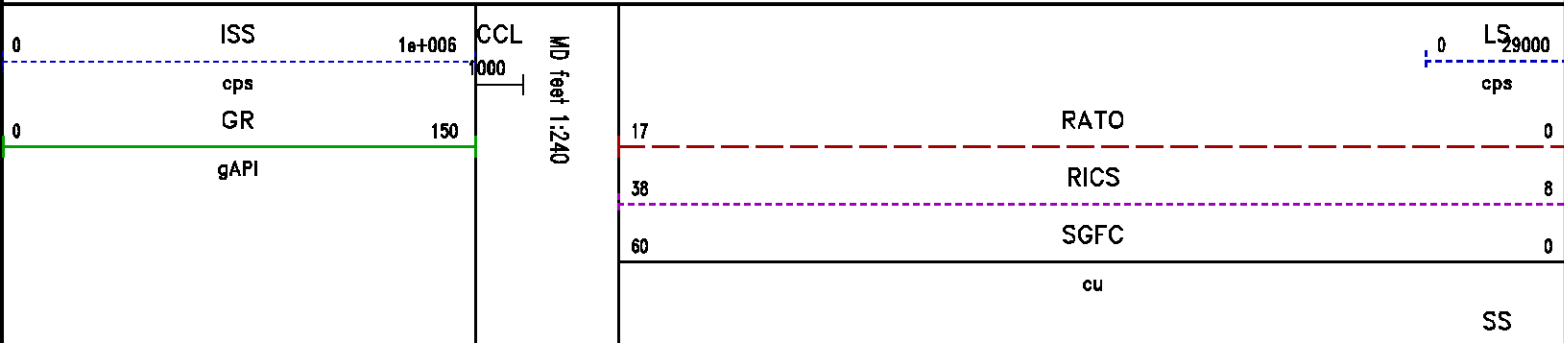
Well : FEDERAL RGU 24-25-198

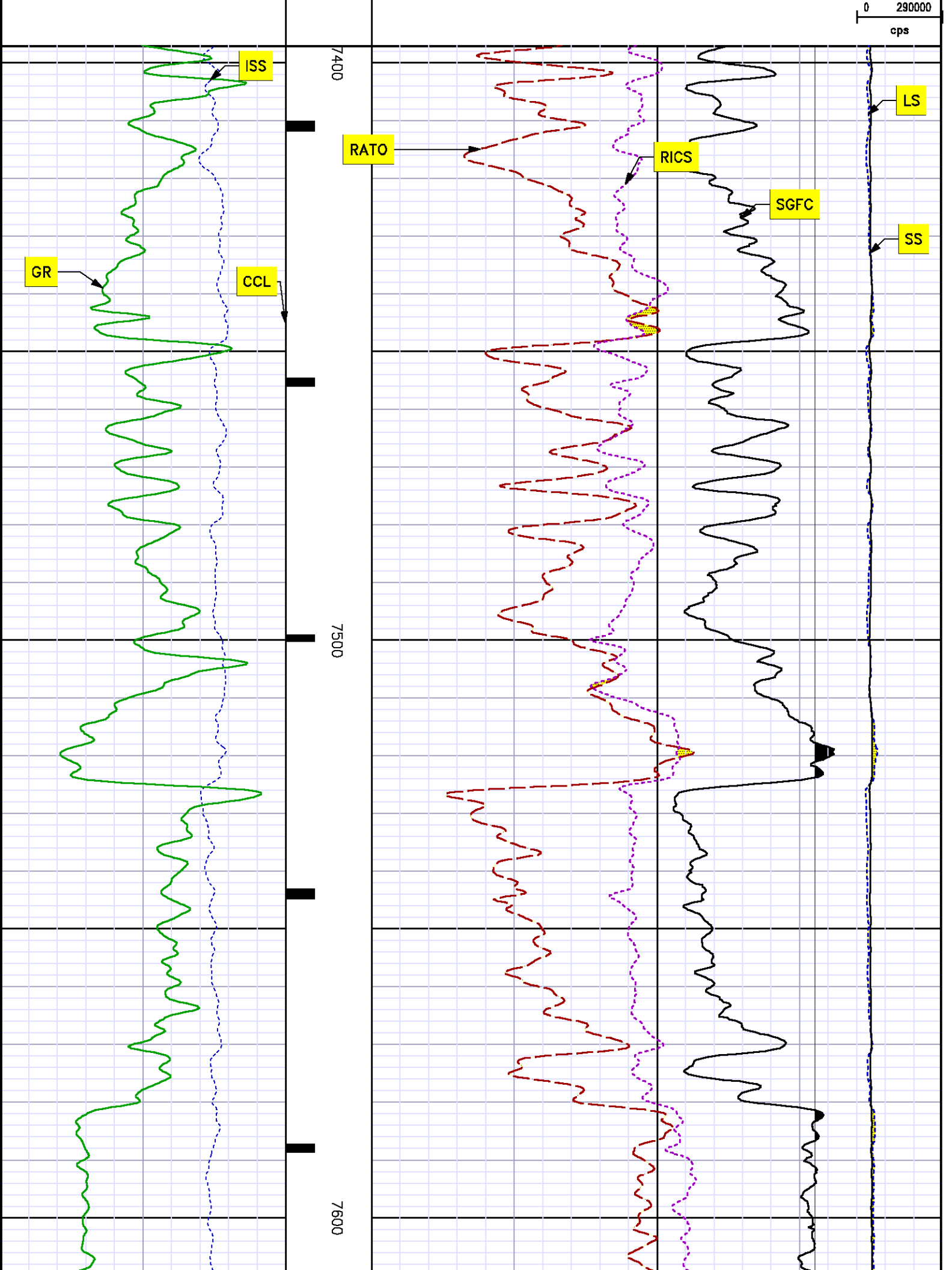
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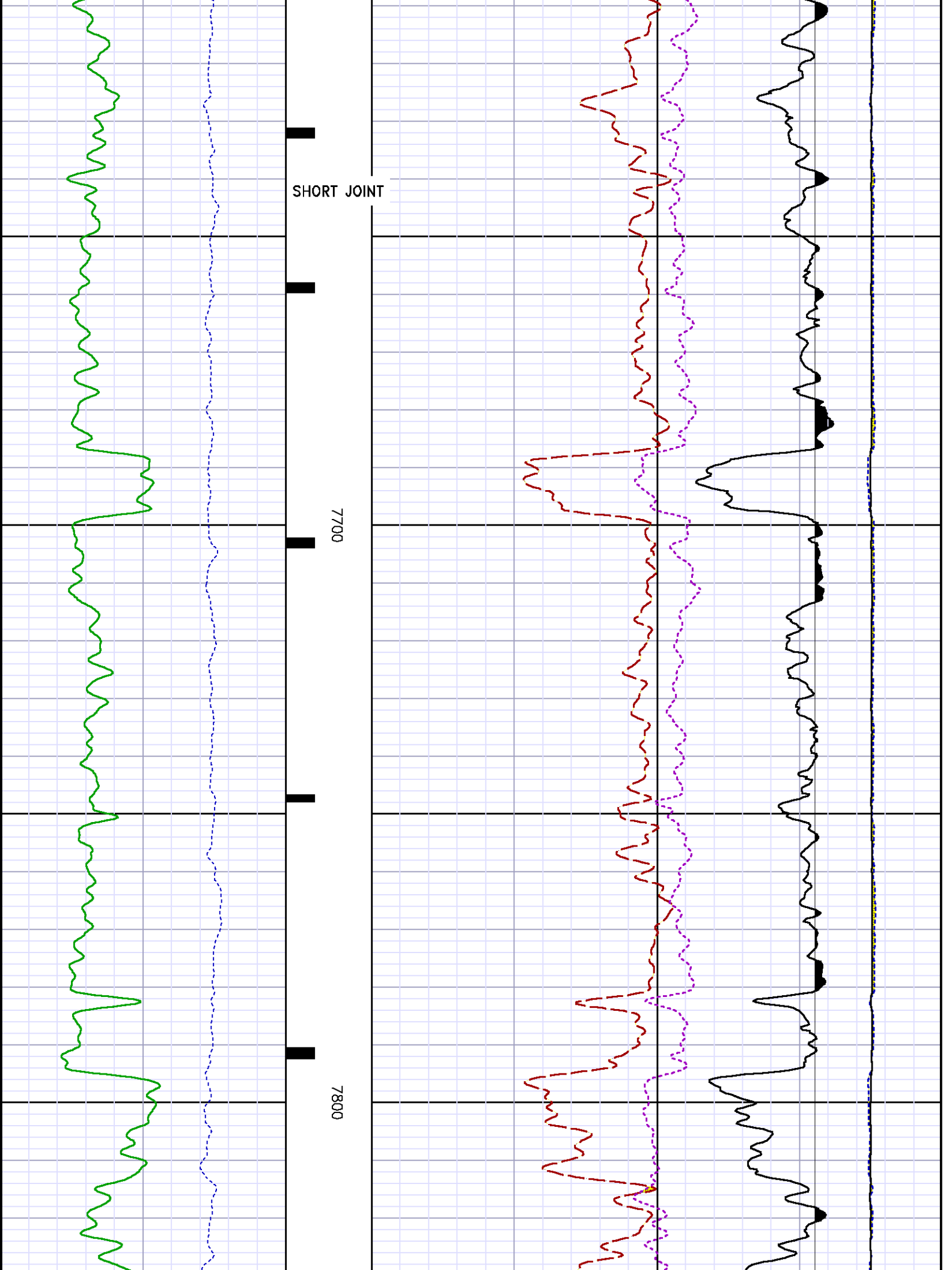
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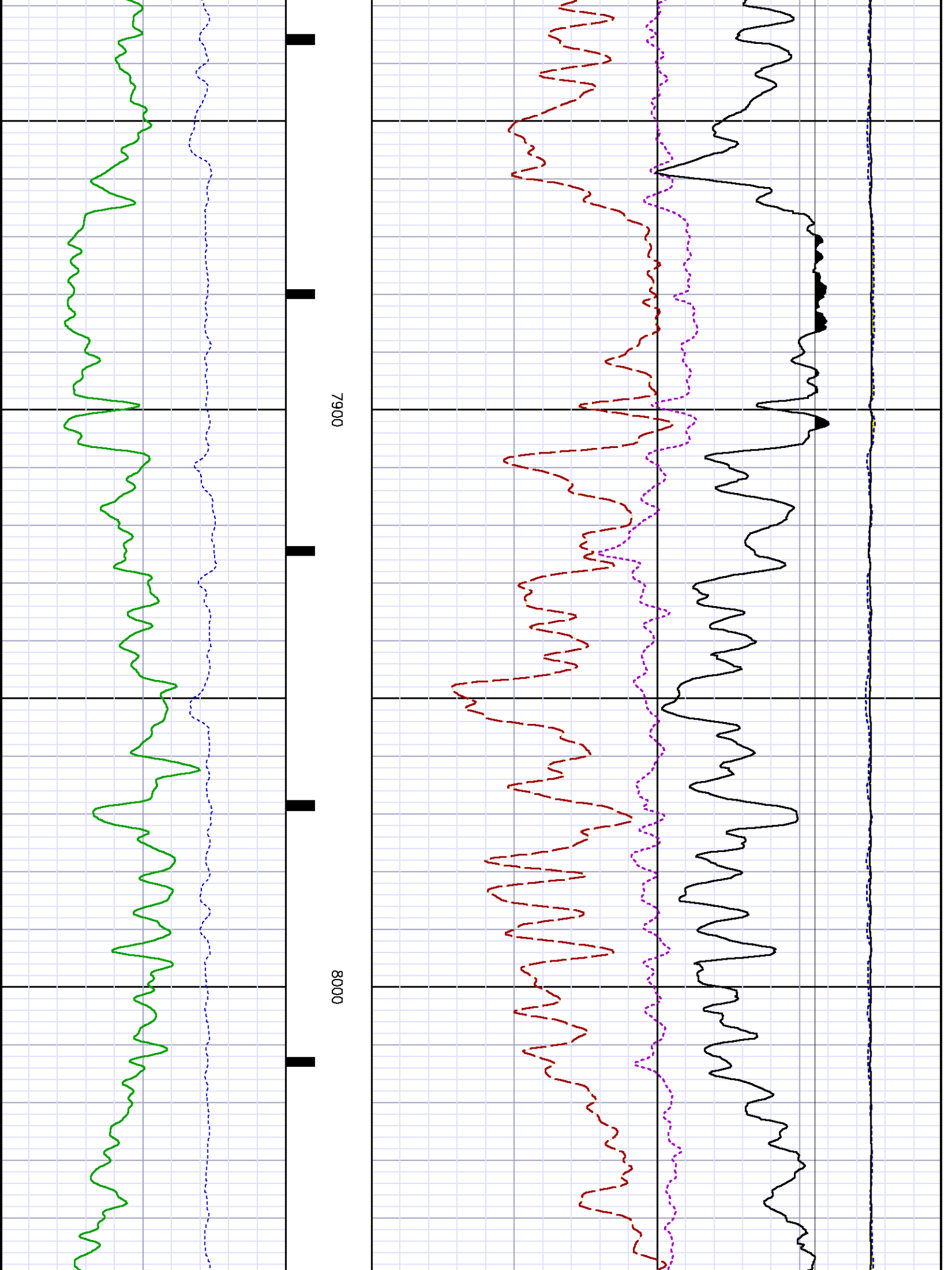
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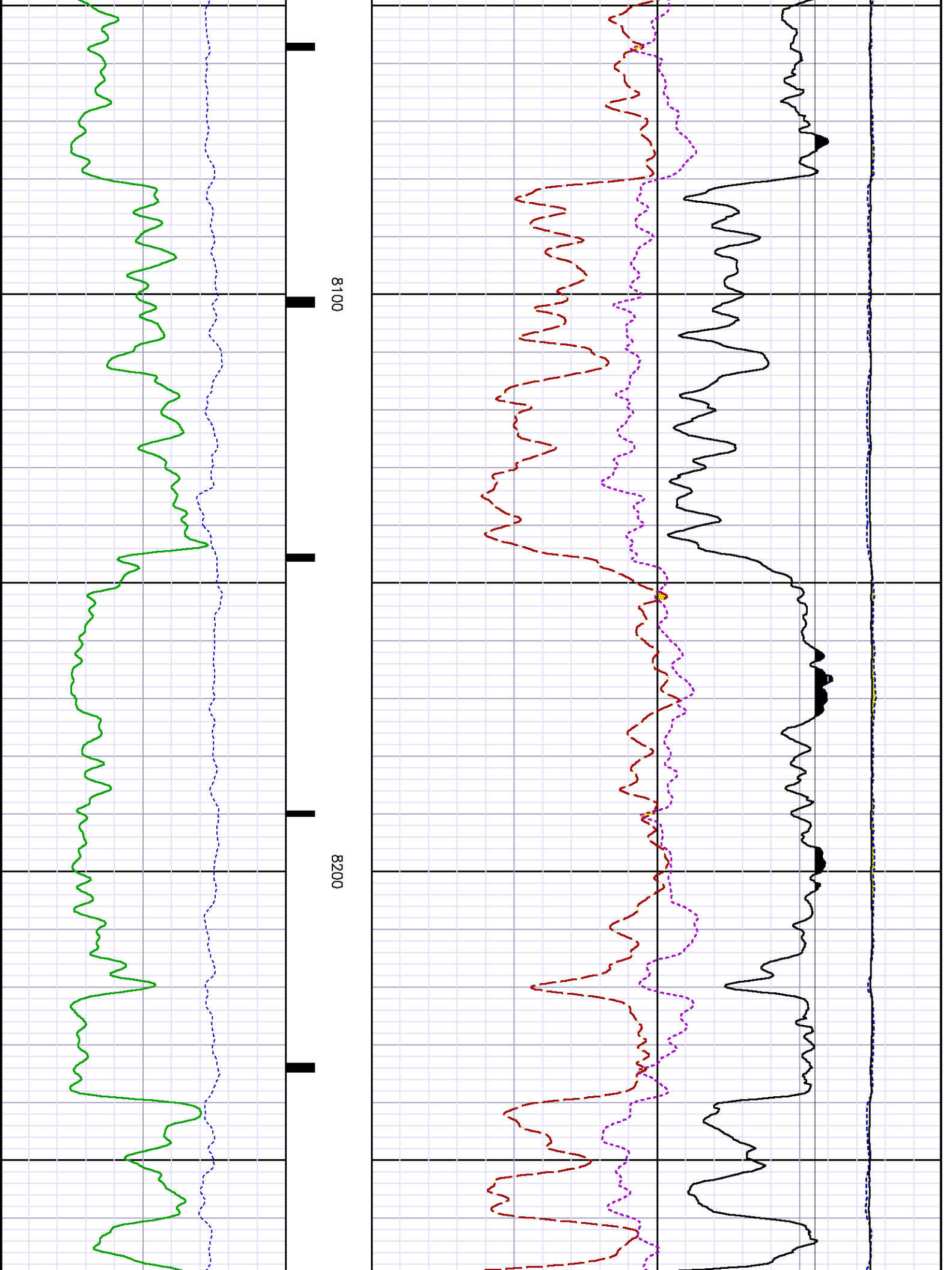
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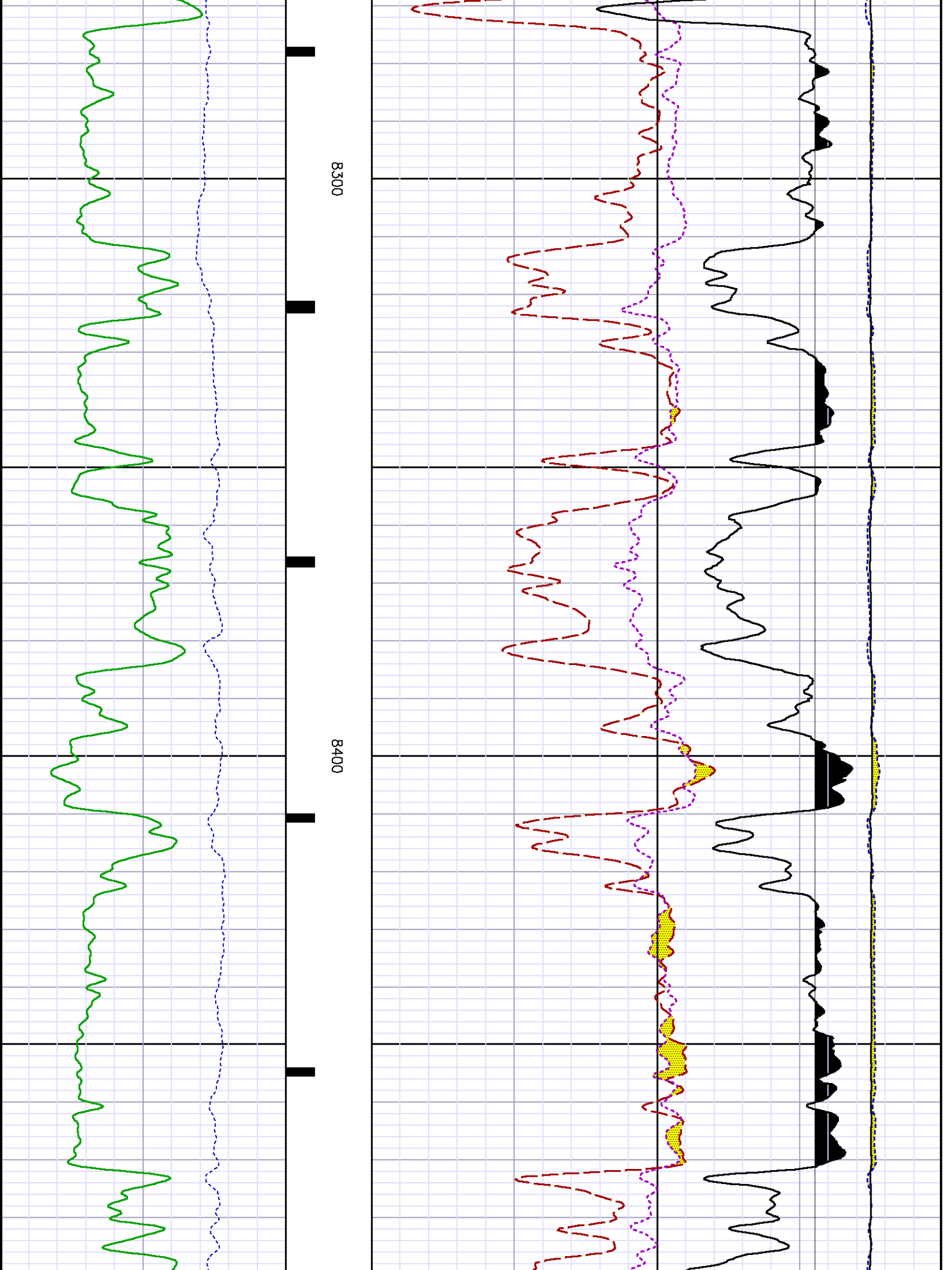


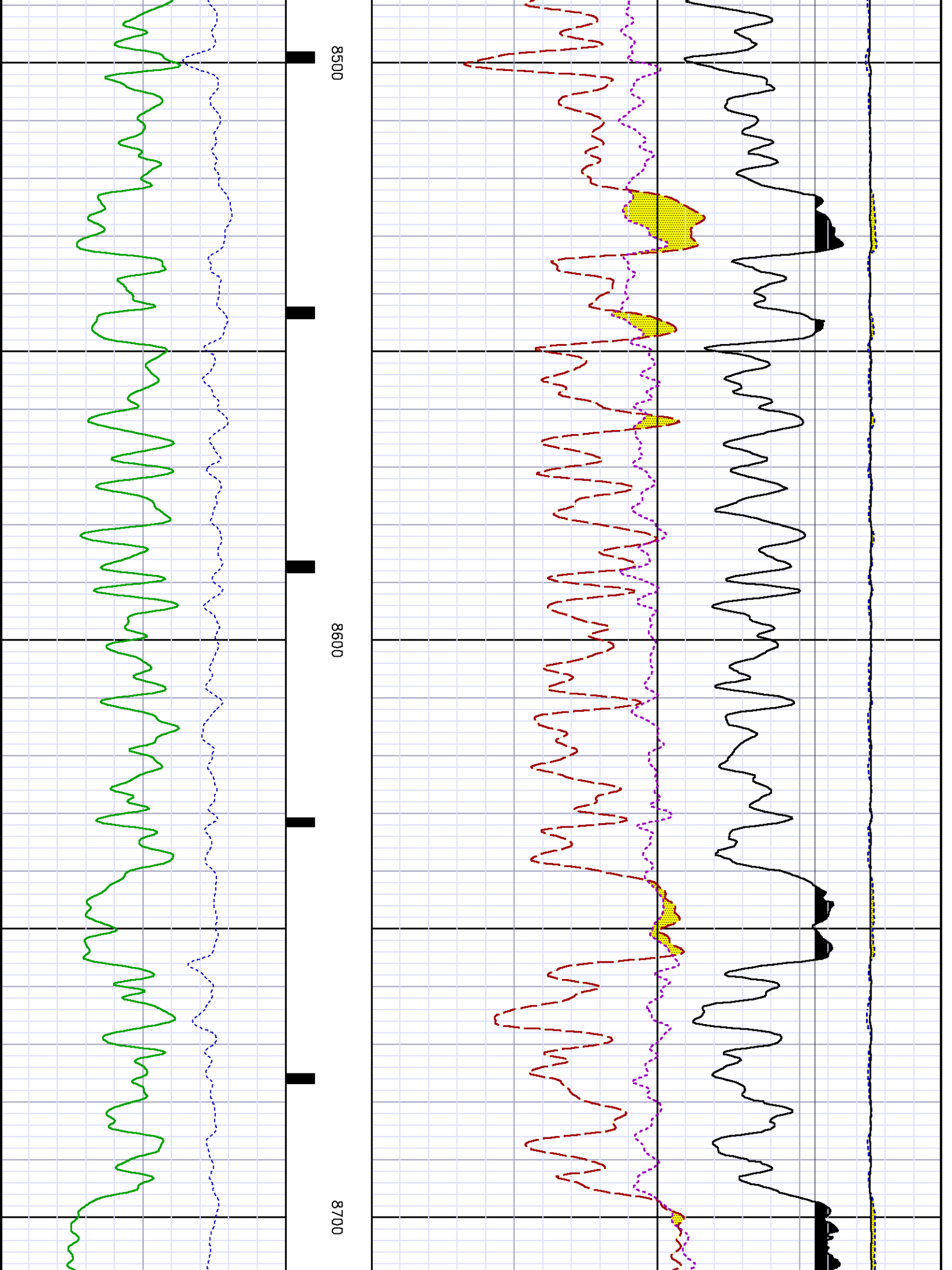


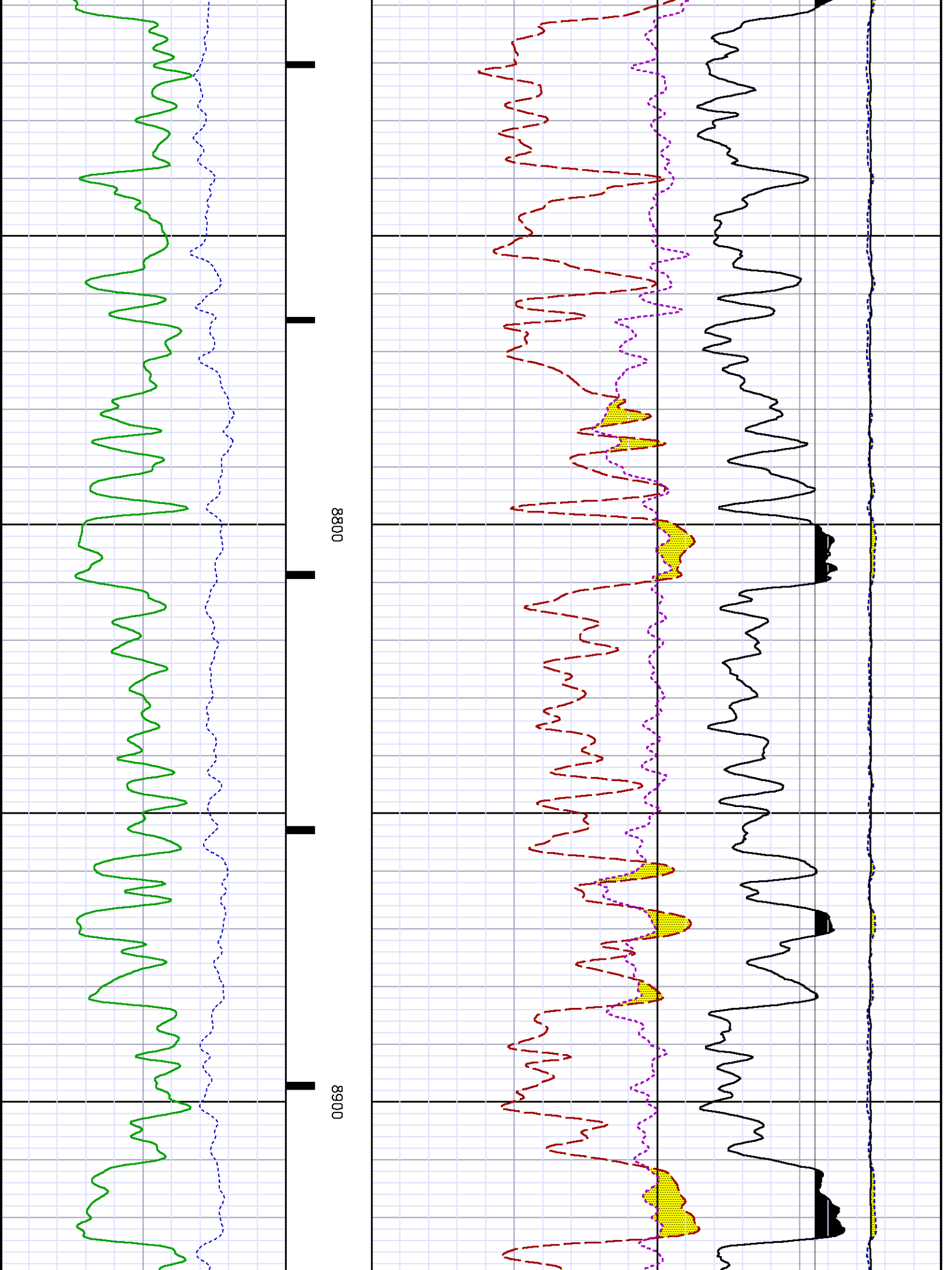


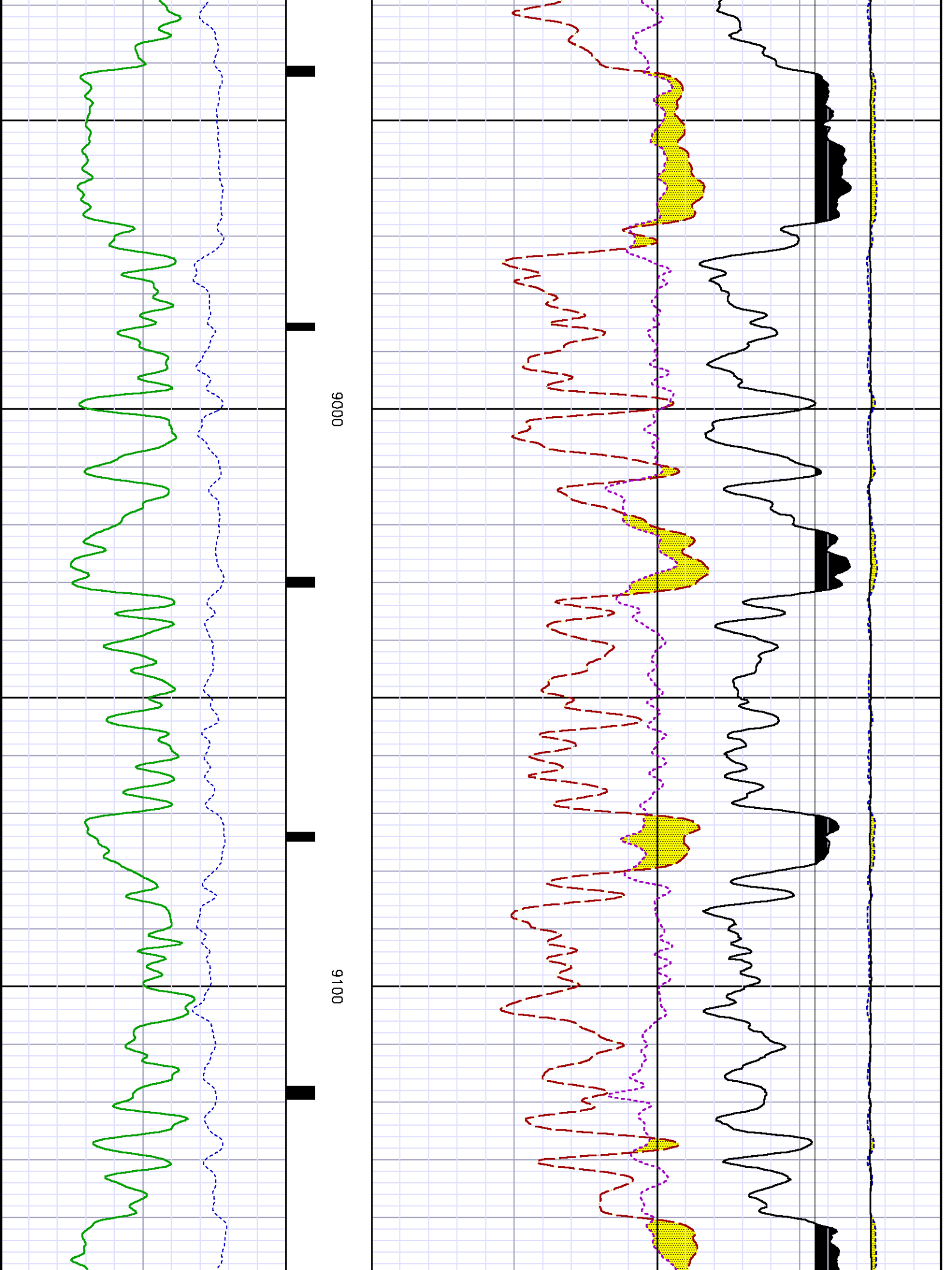


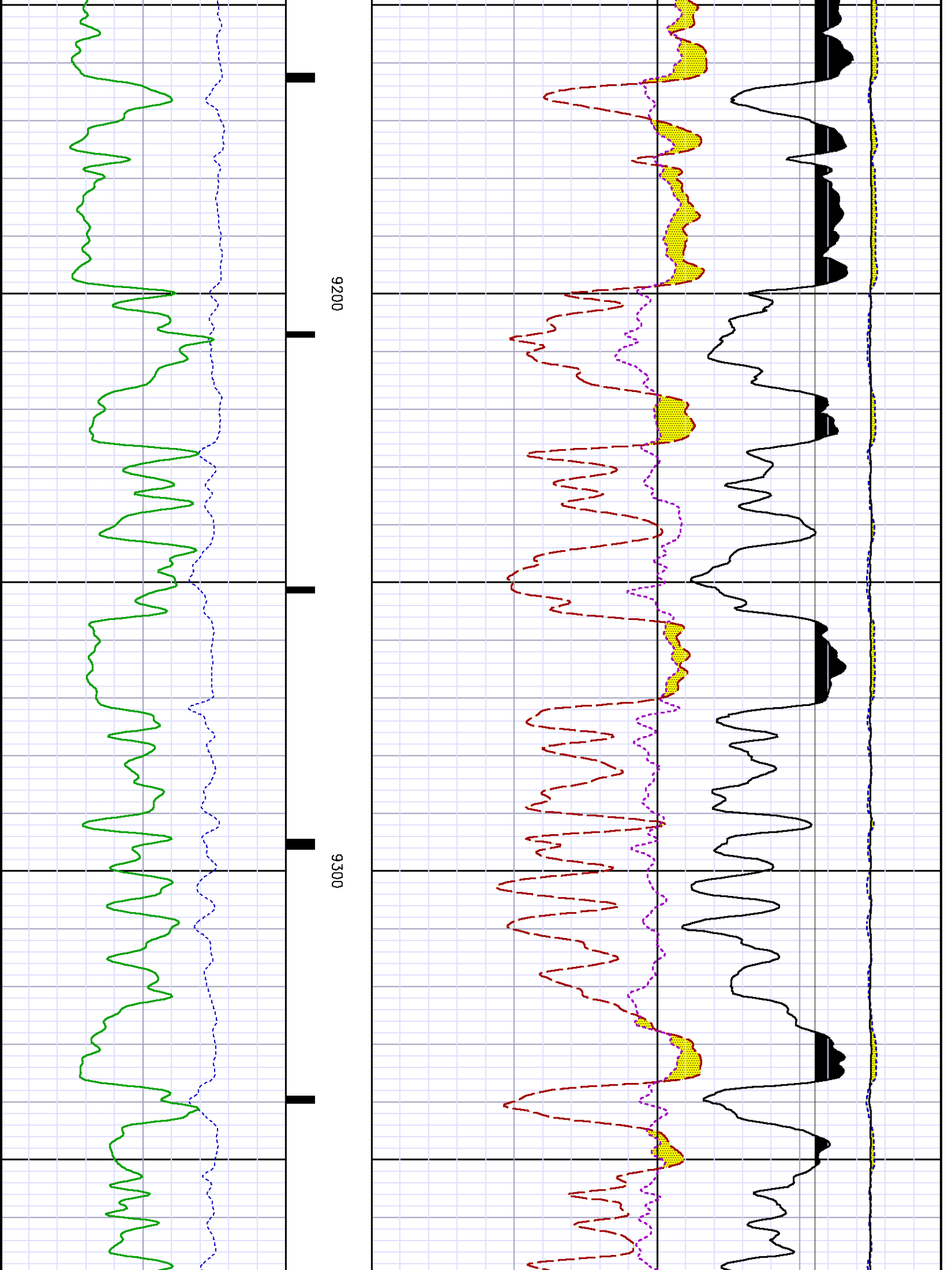


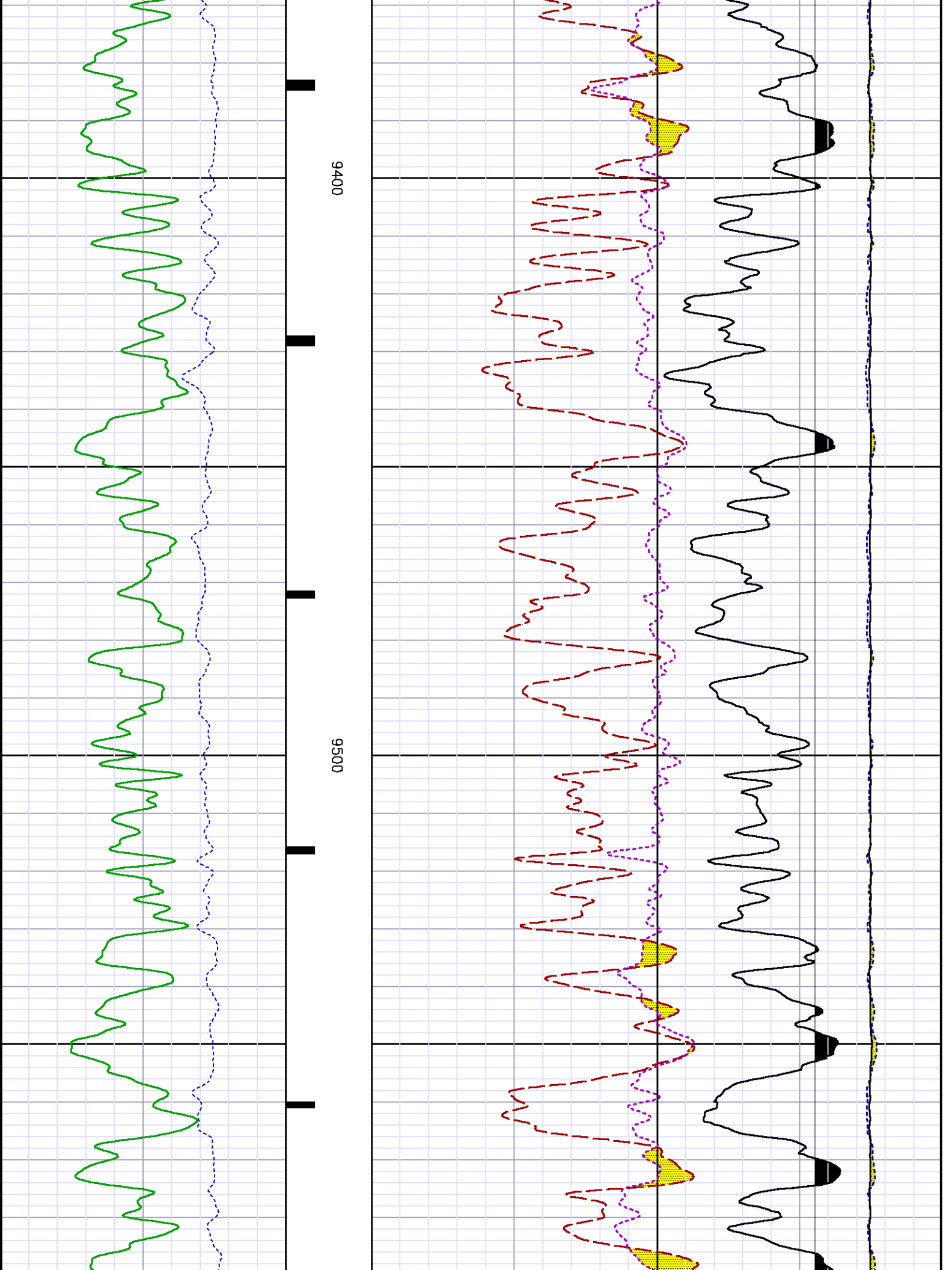


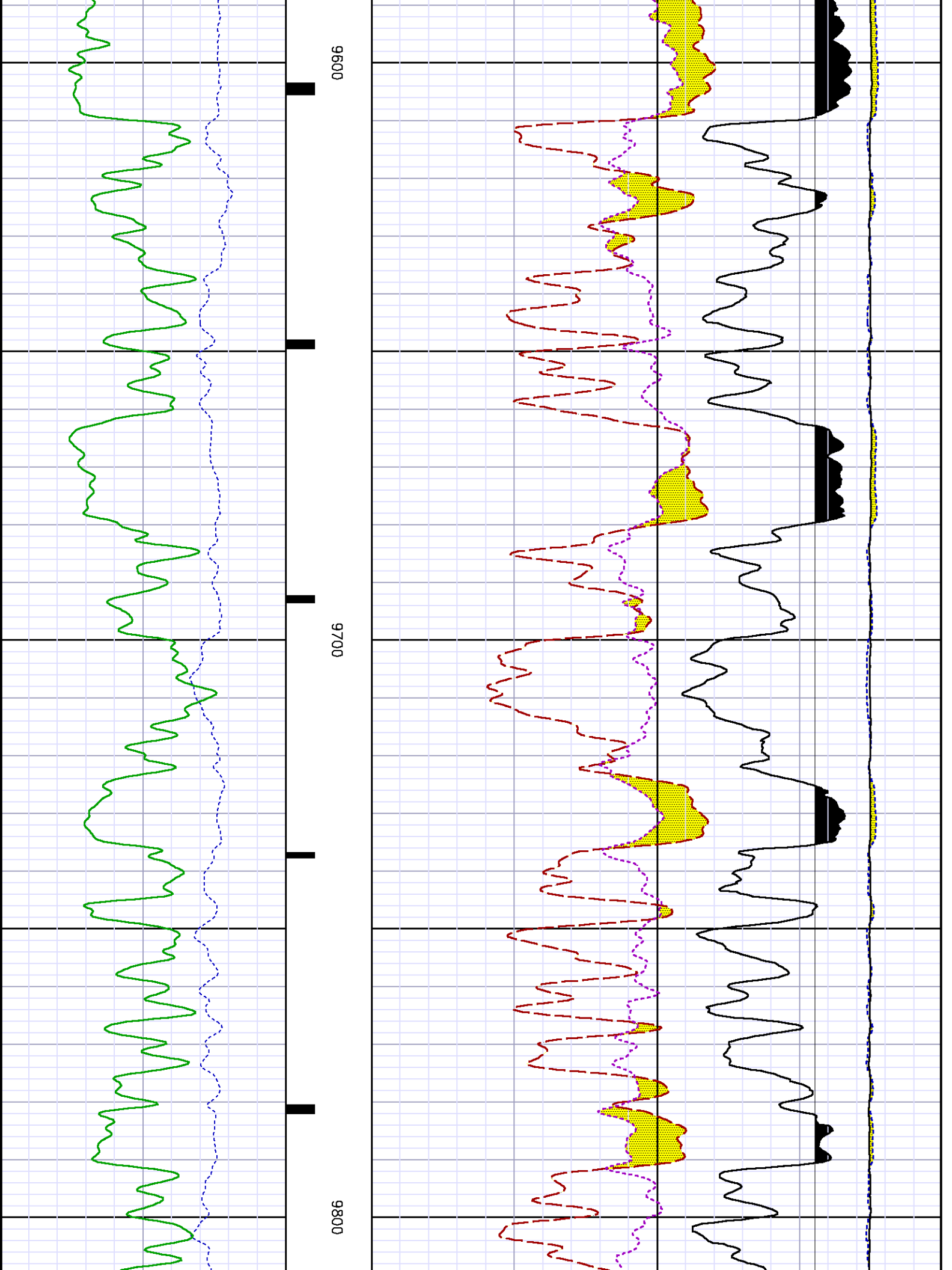


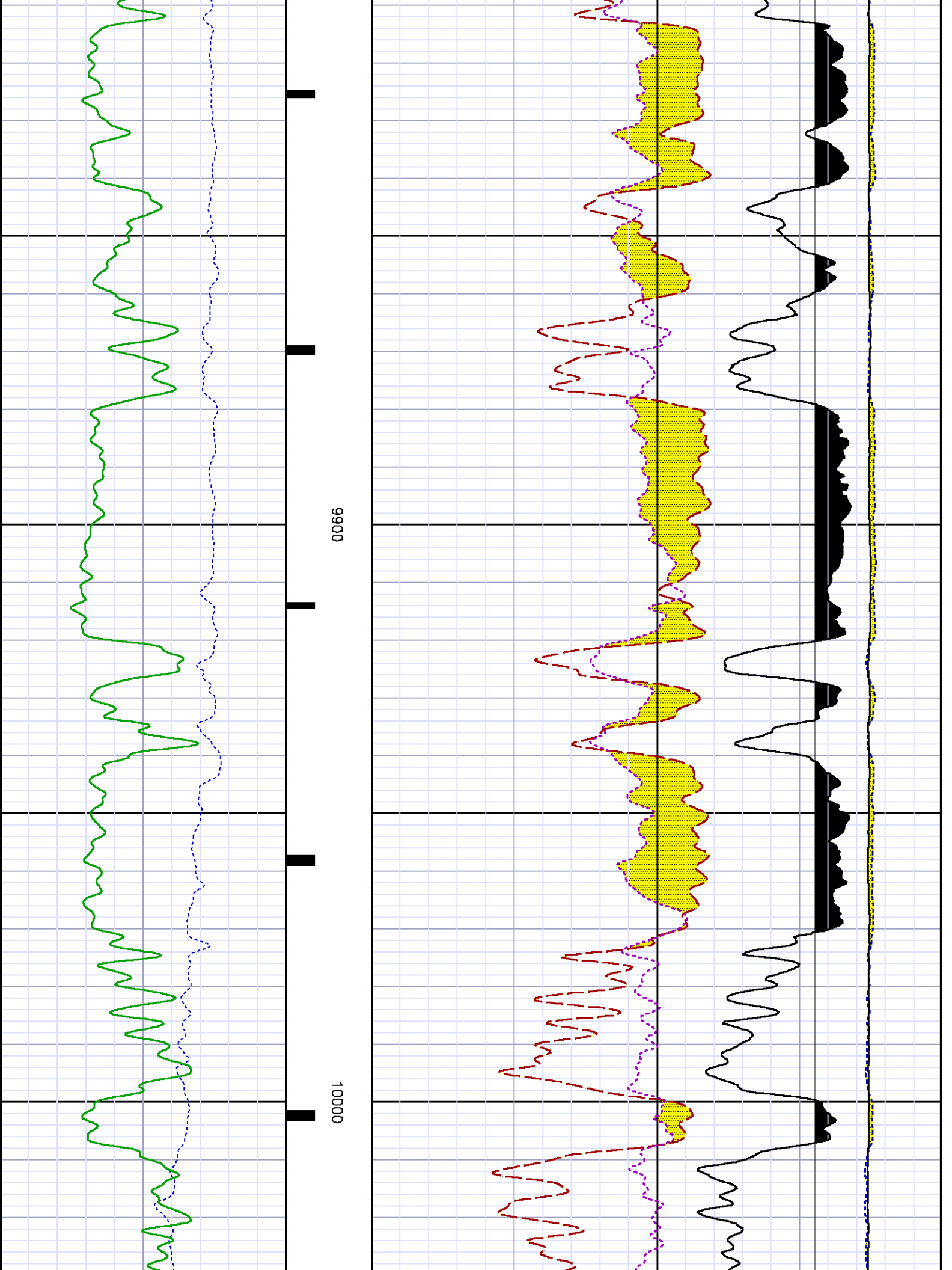


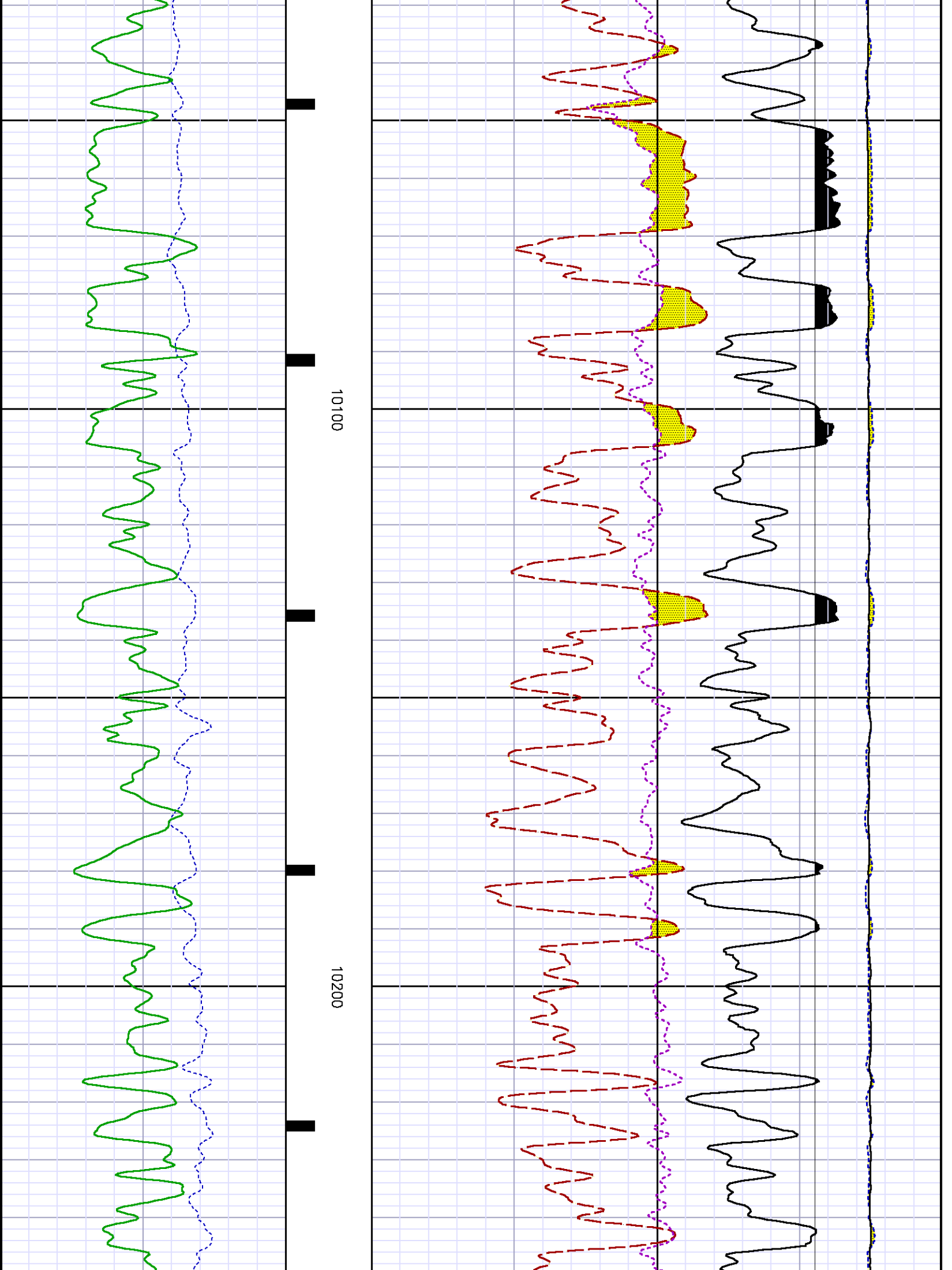


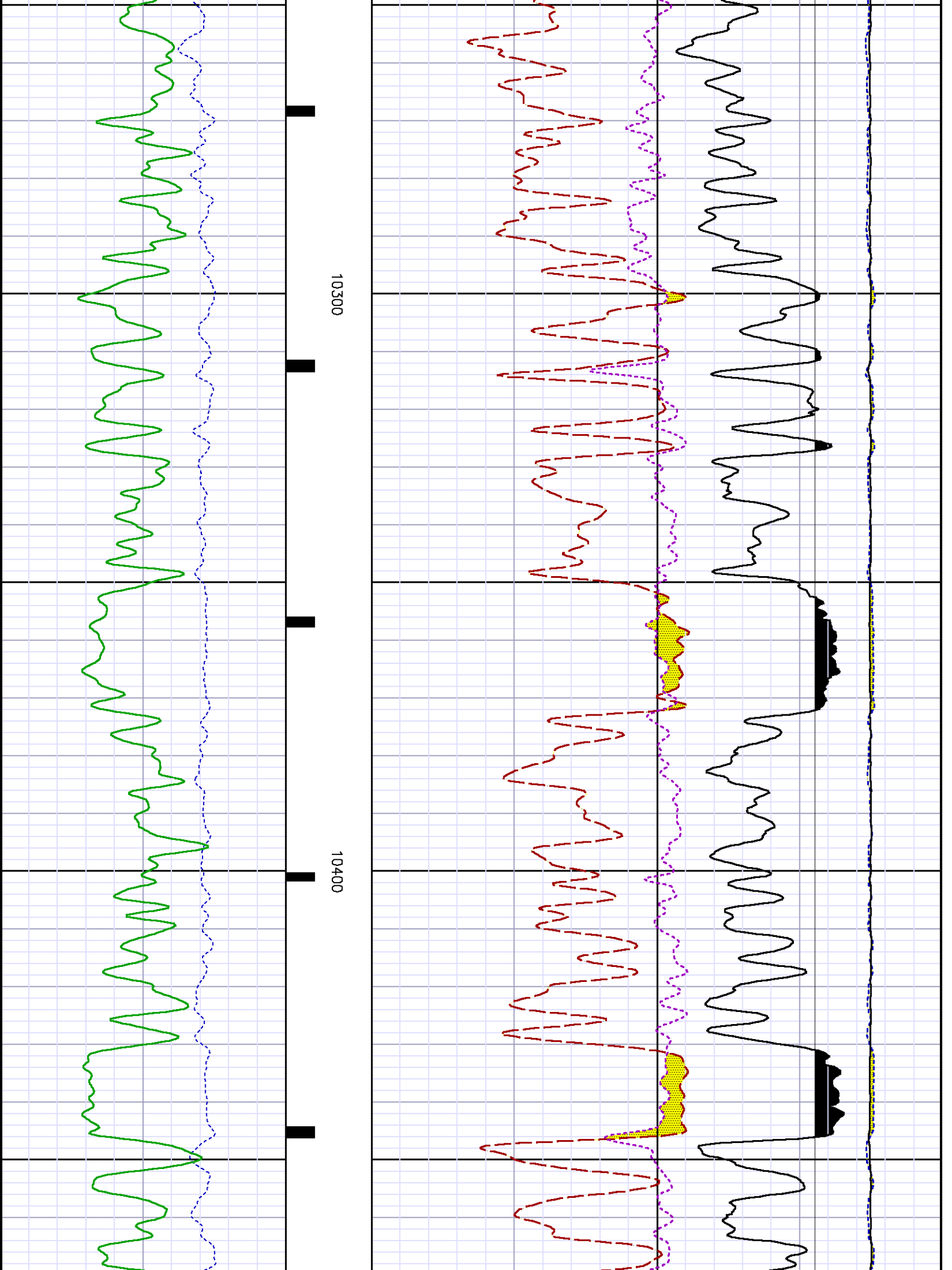


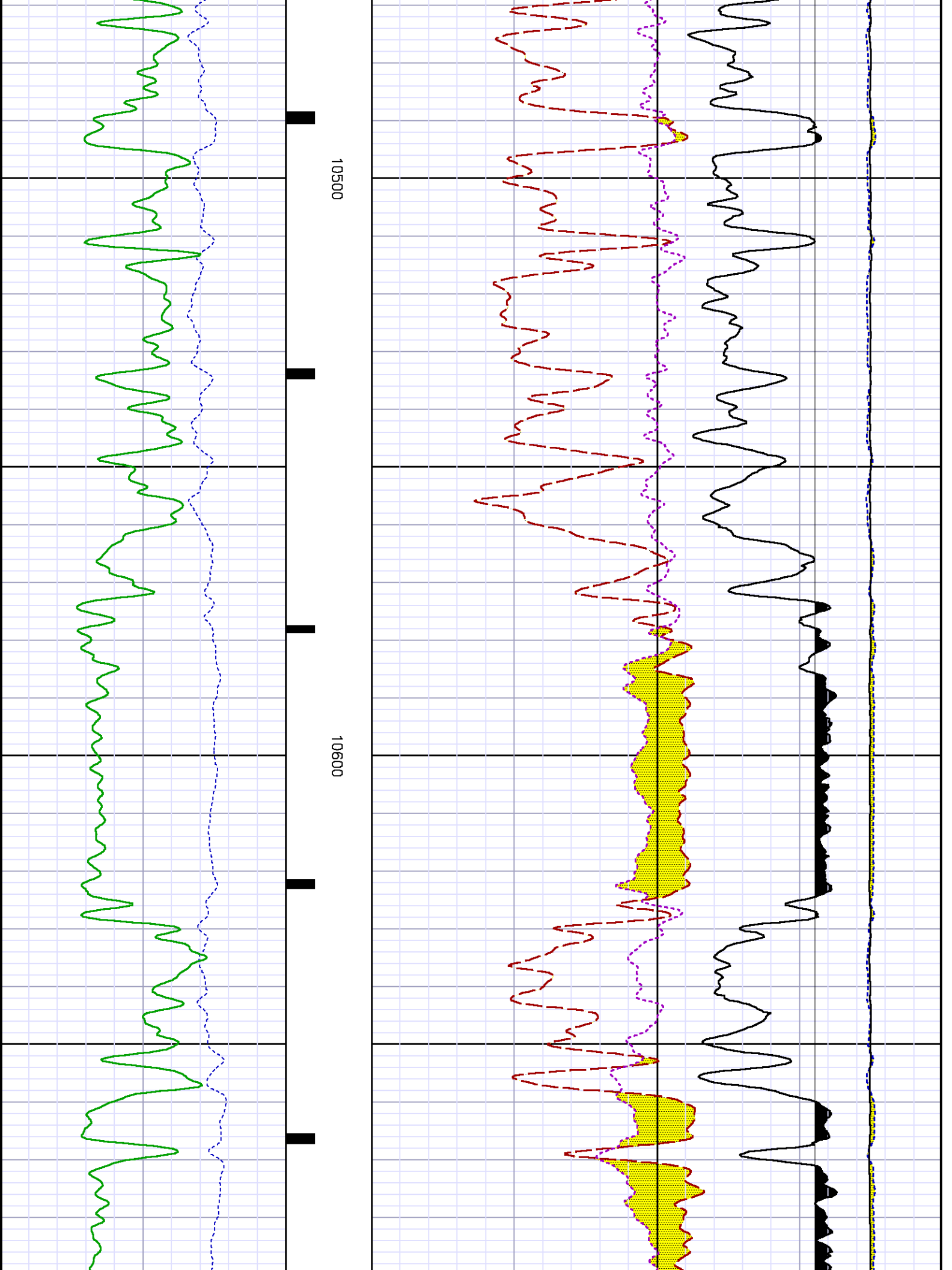


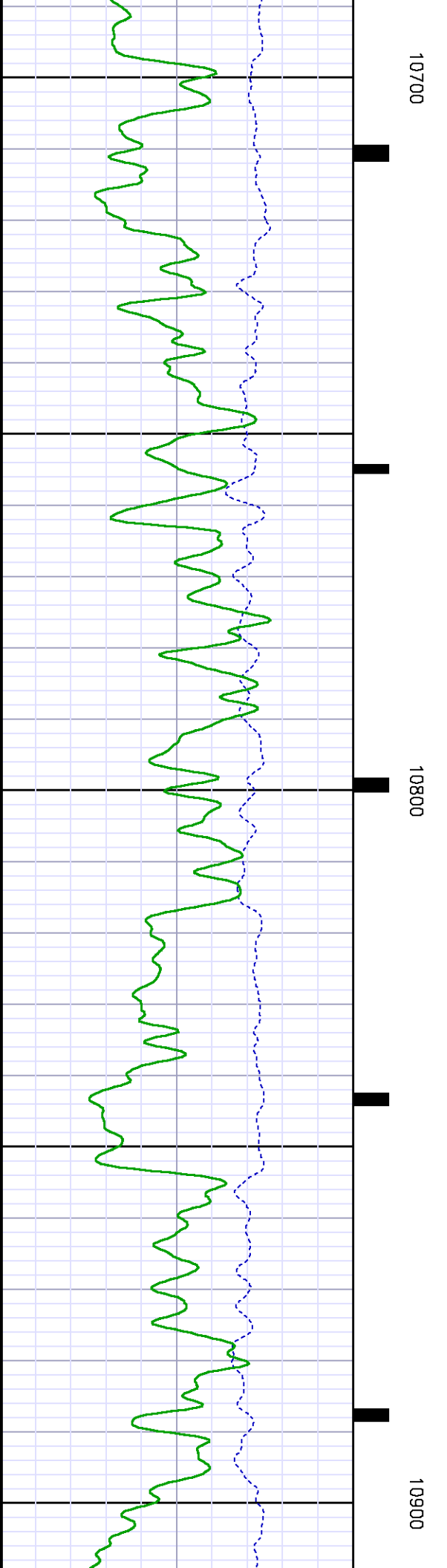
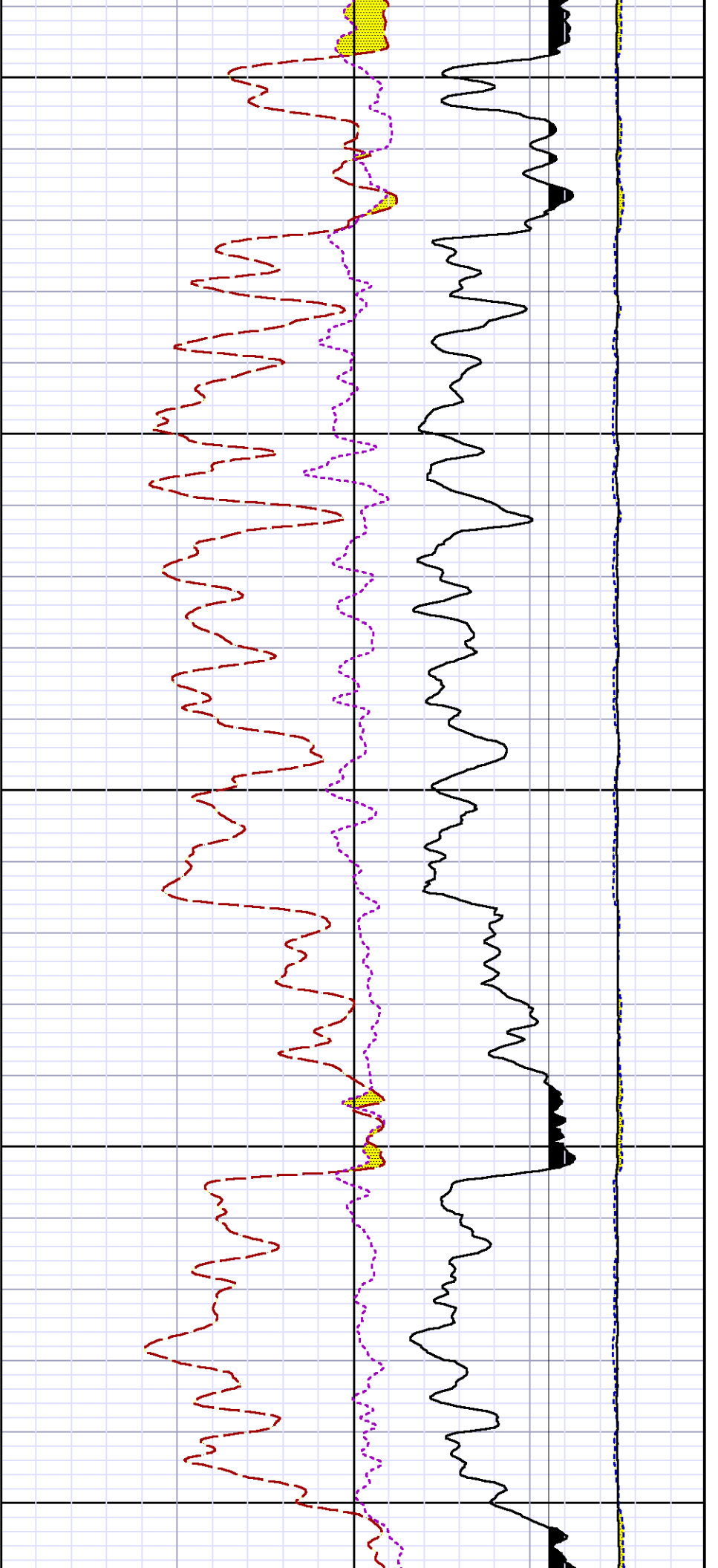


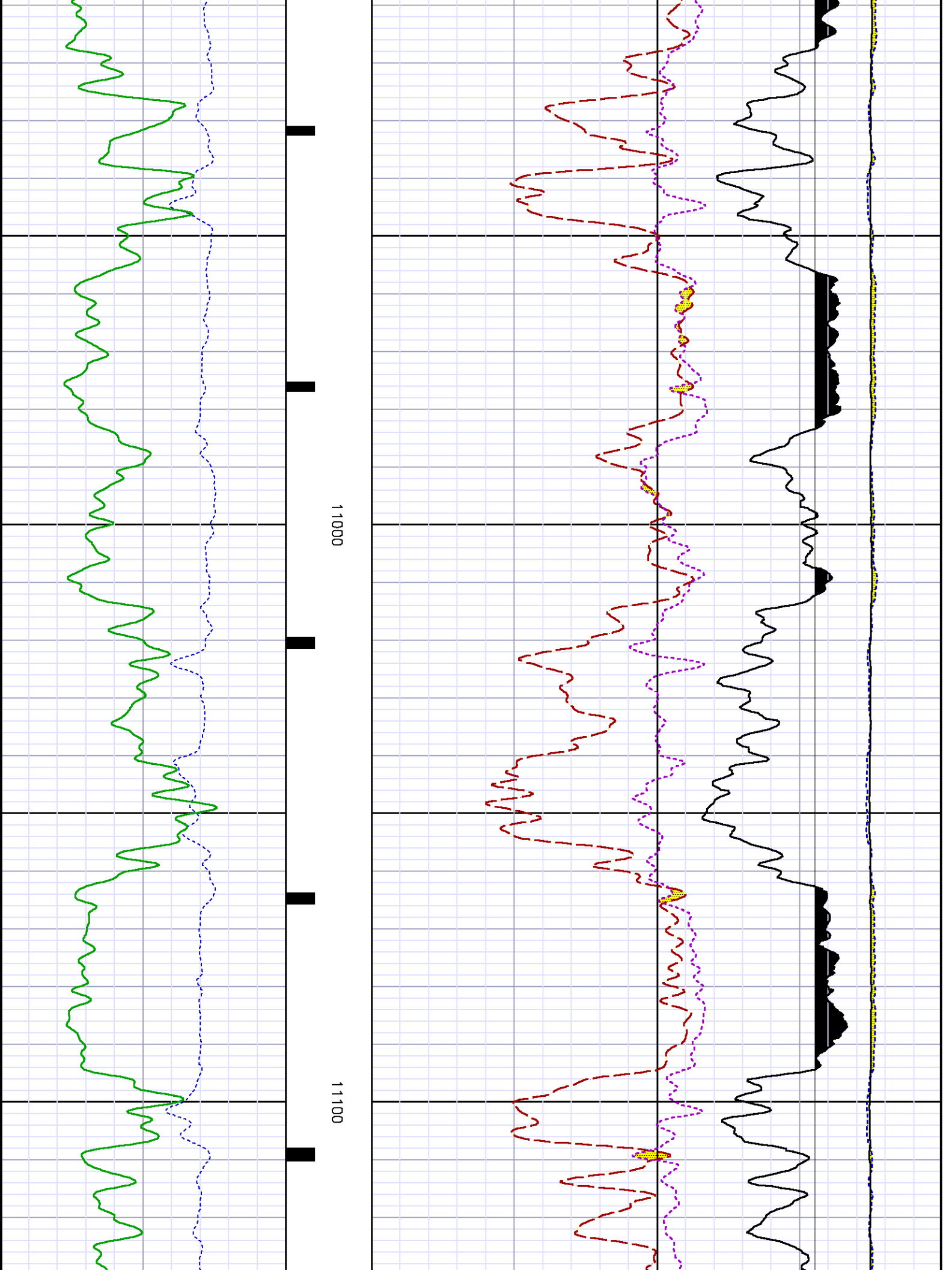


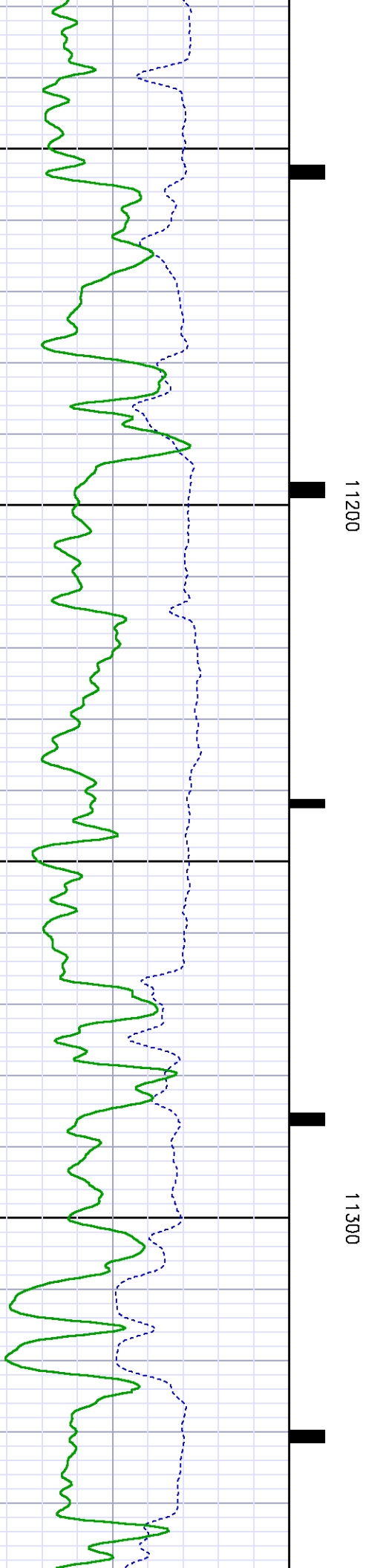
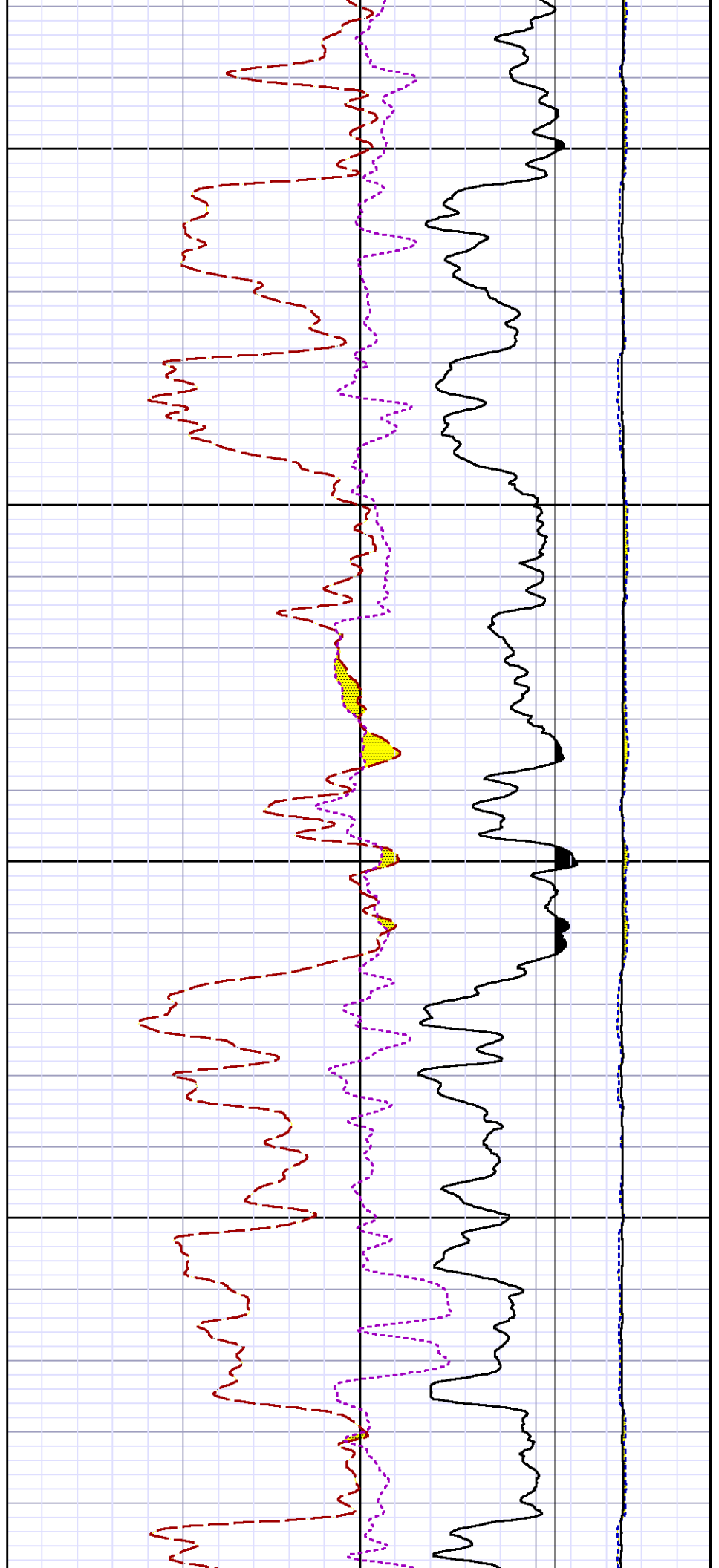


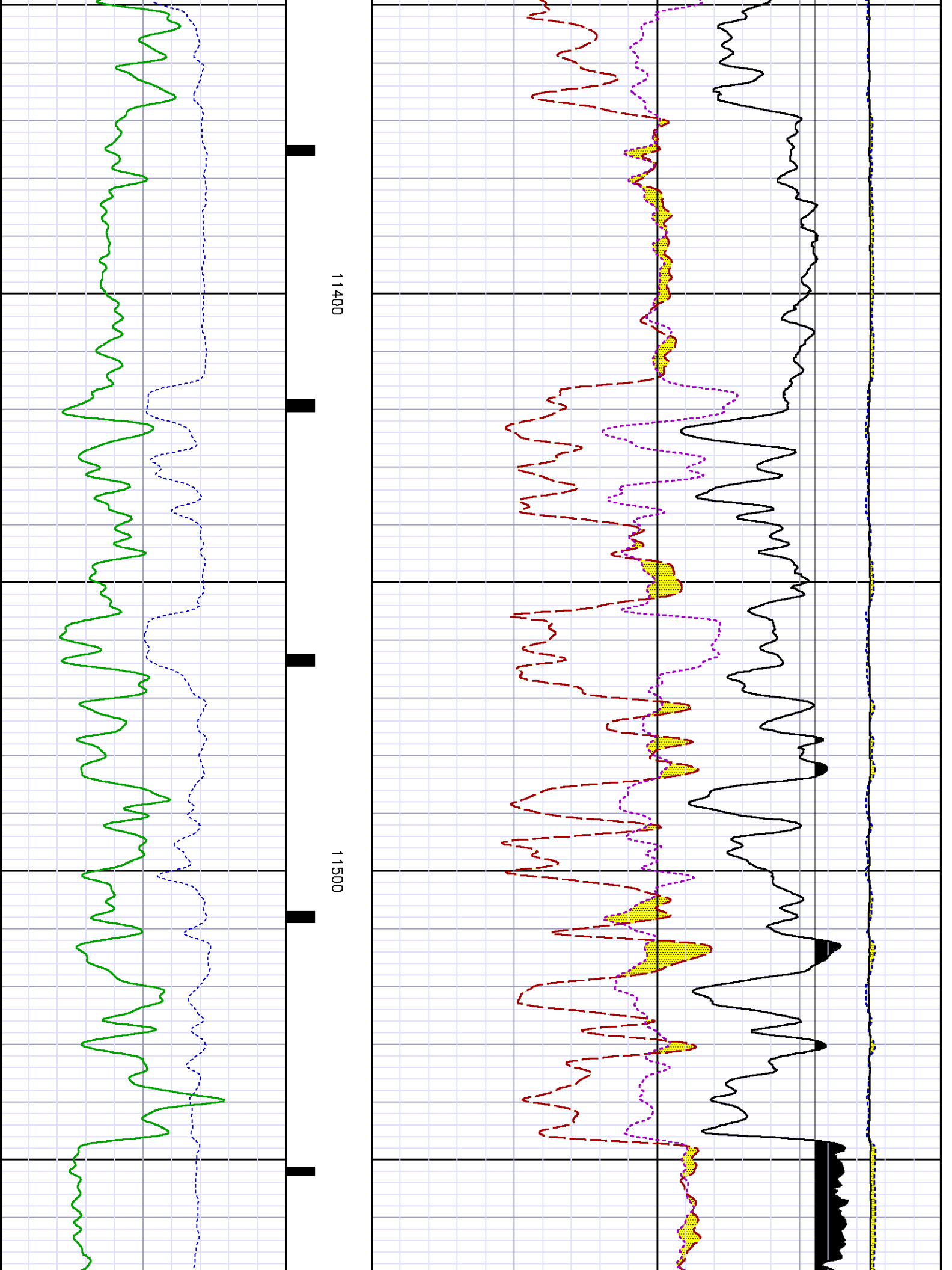


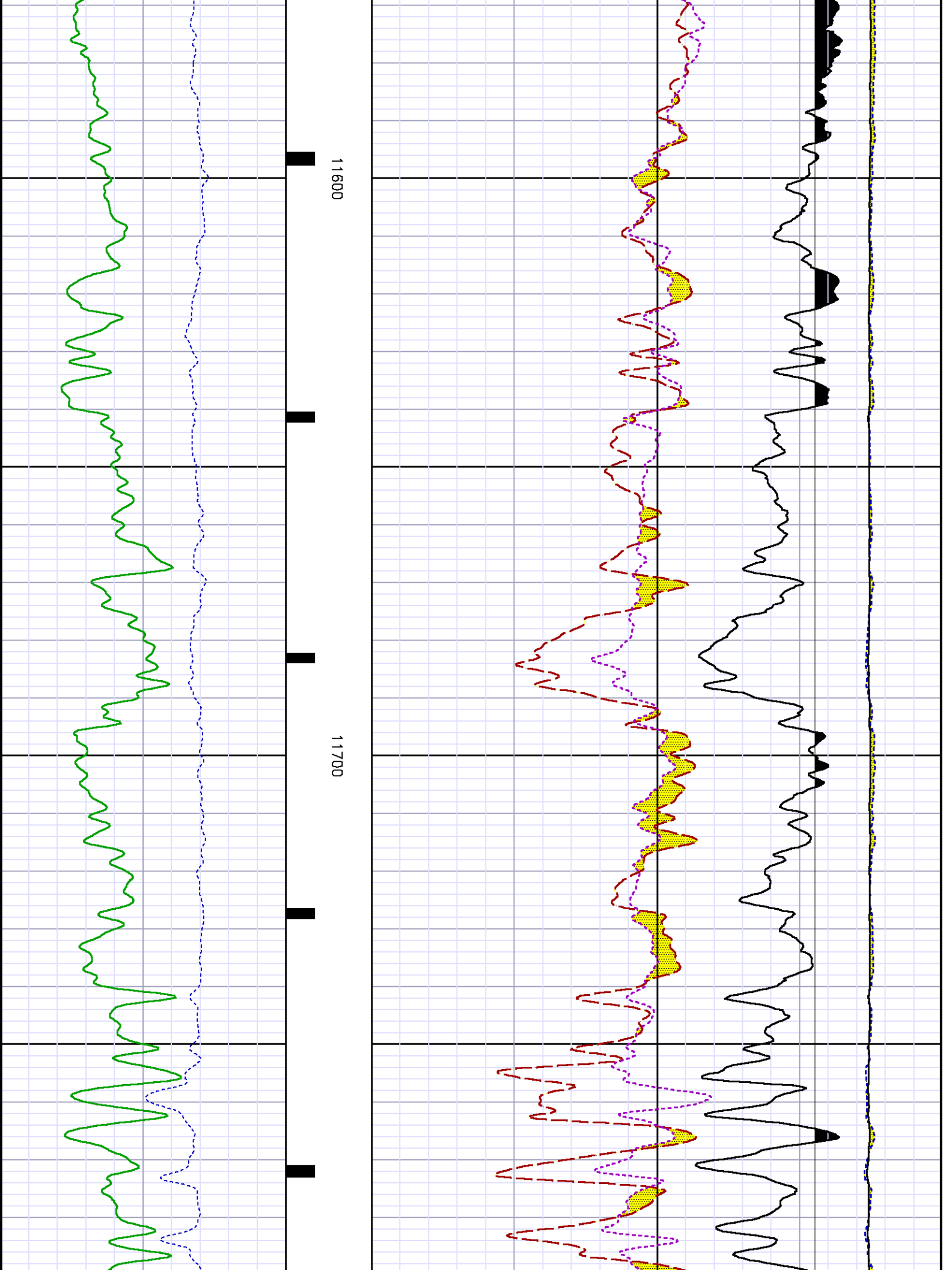


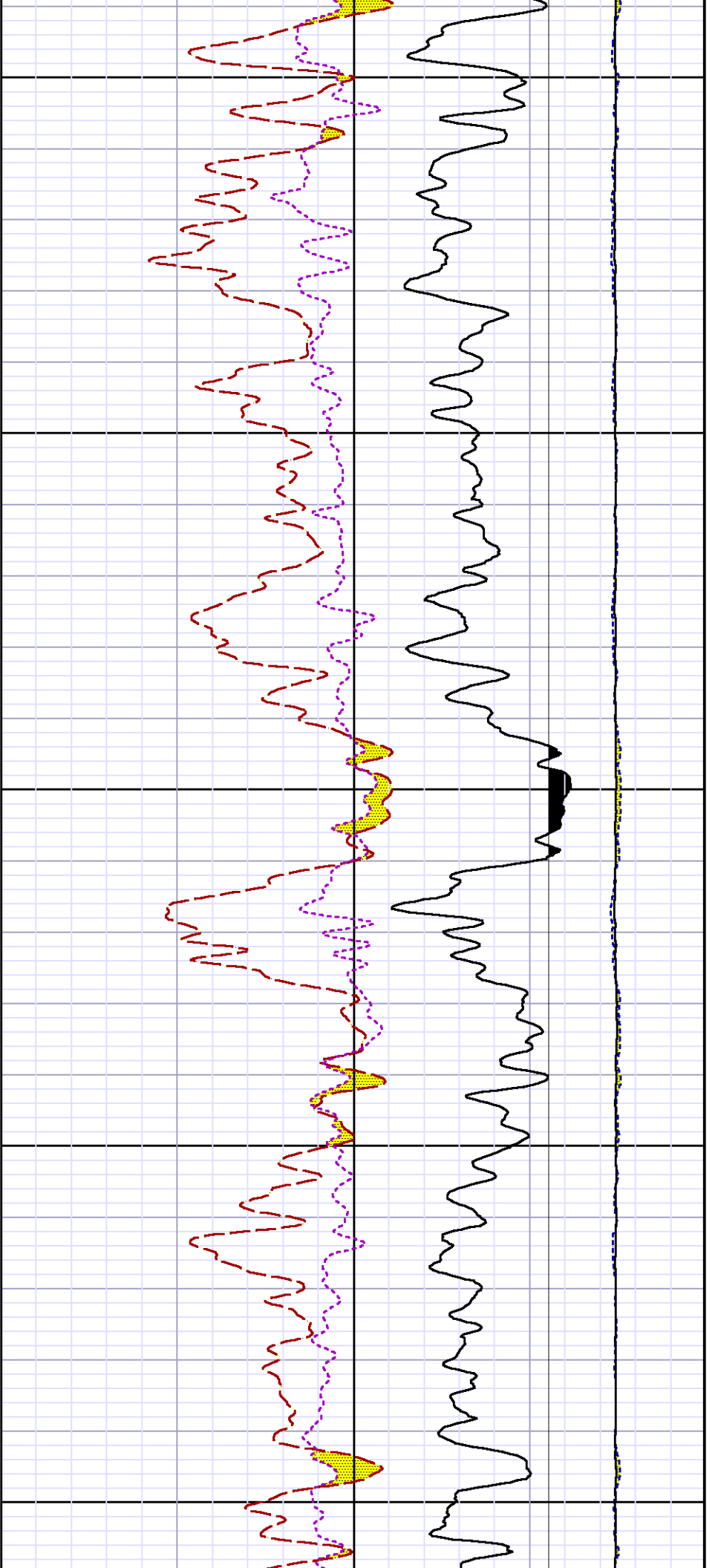








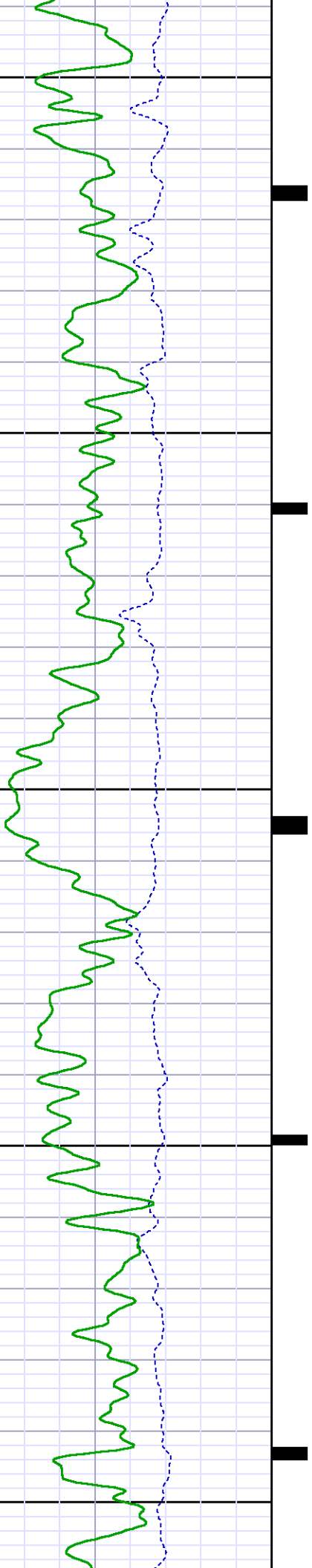


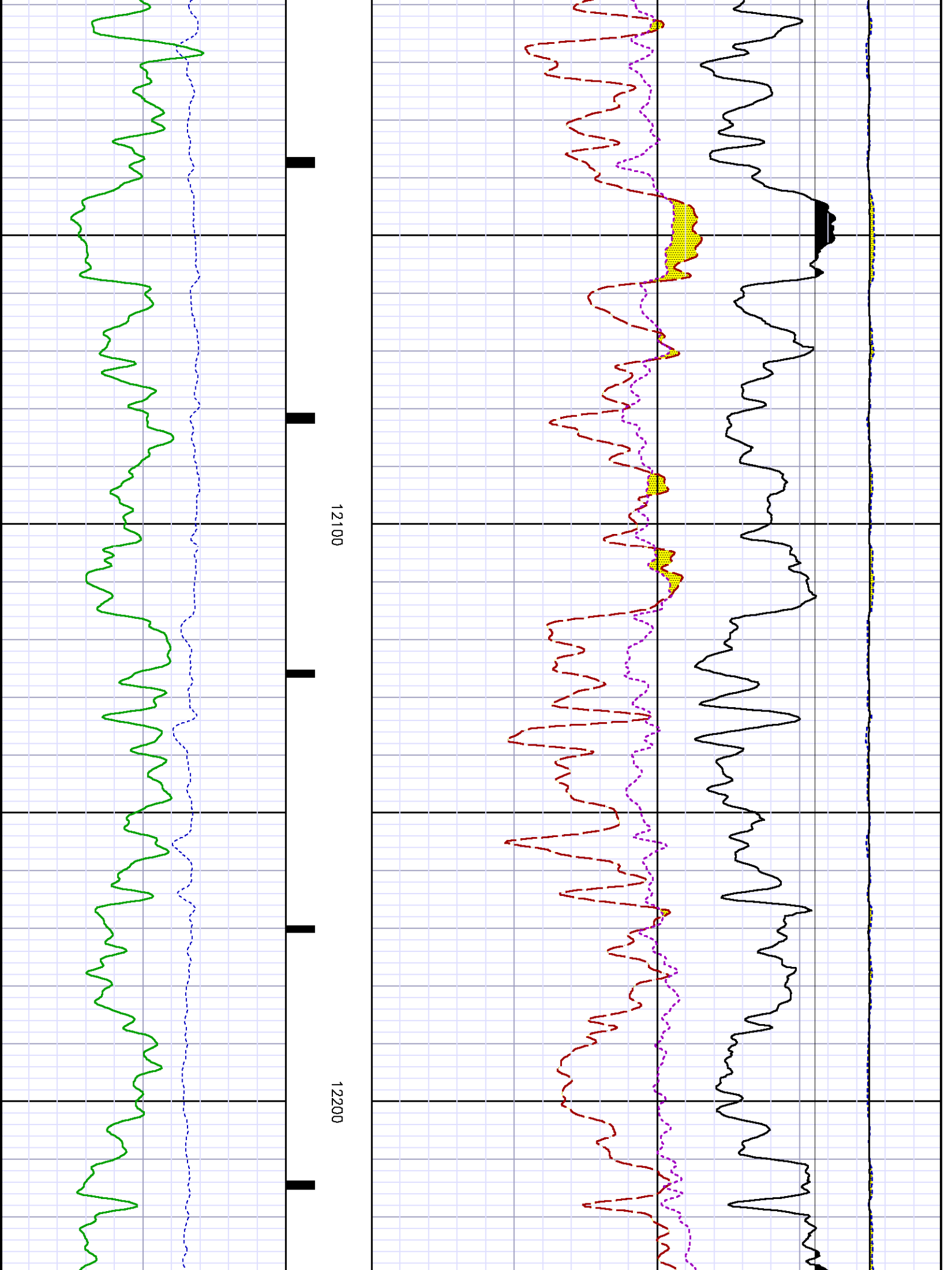


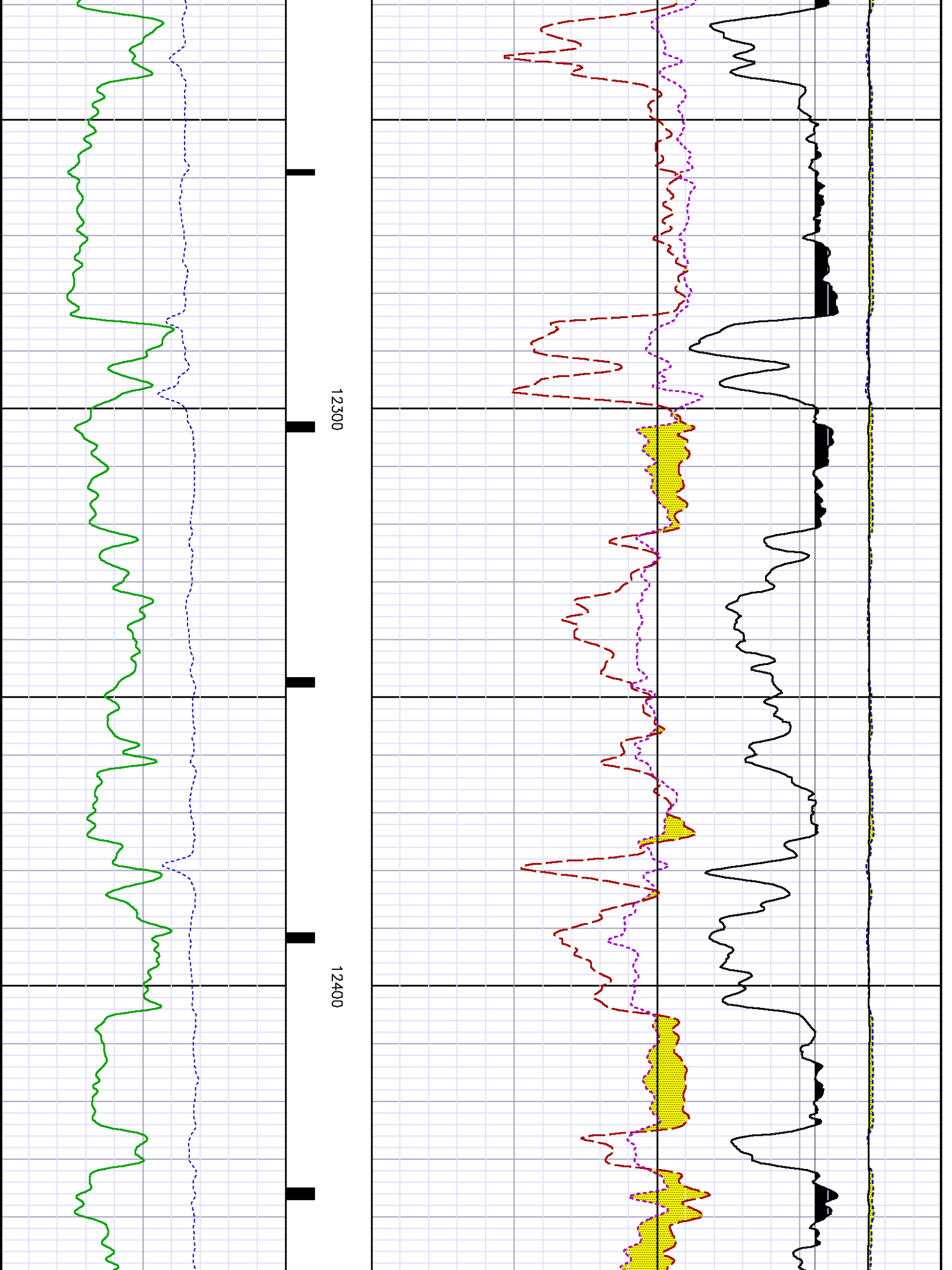
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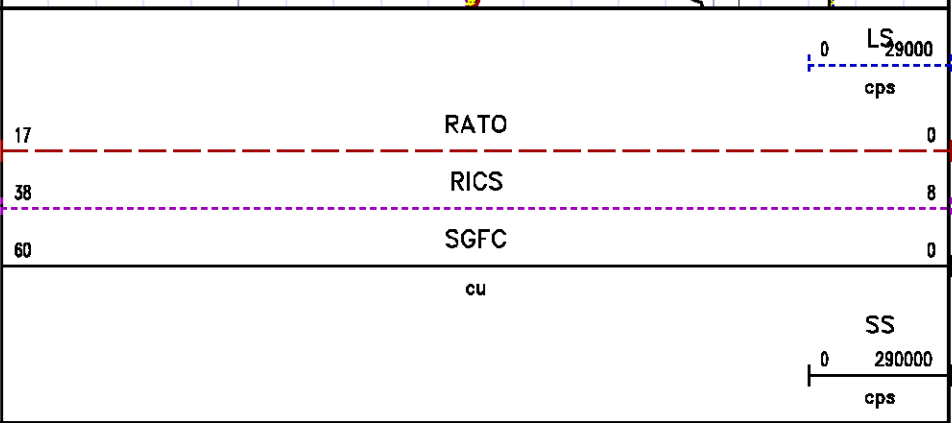
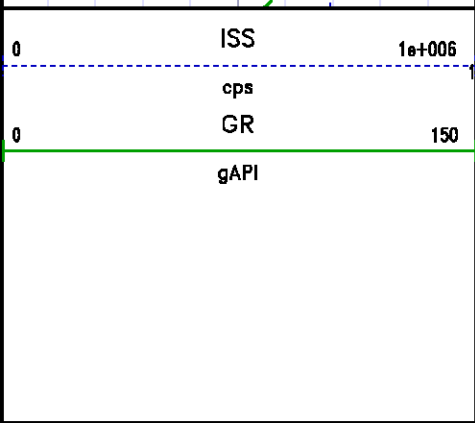
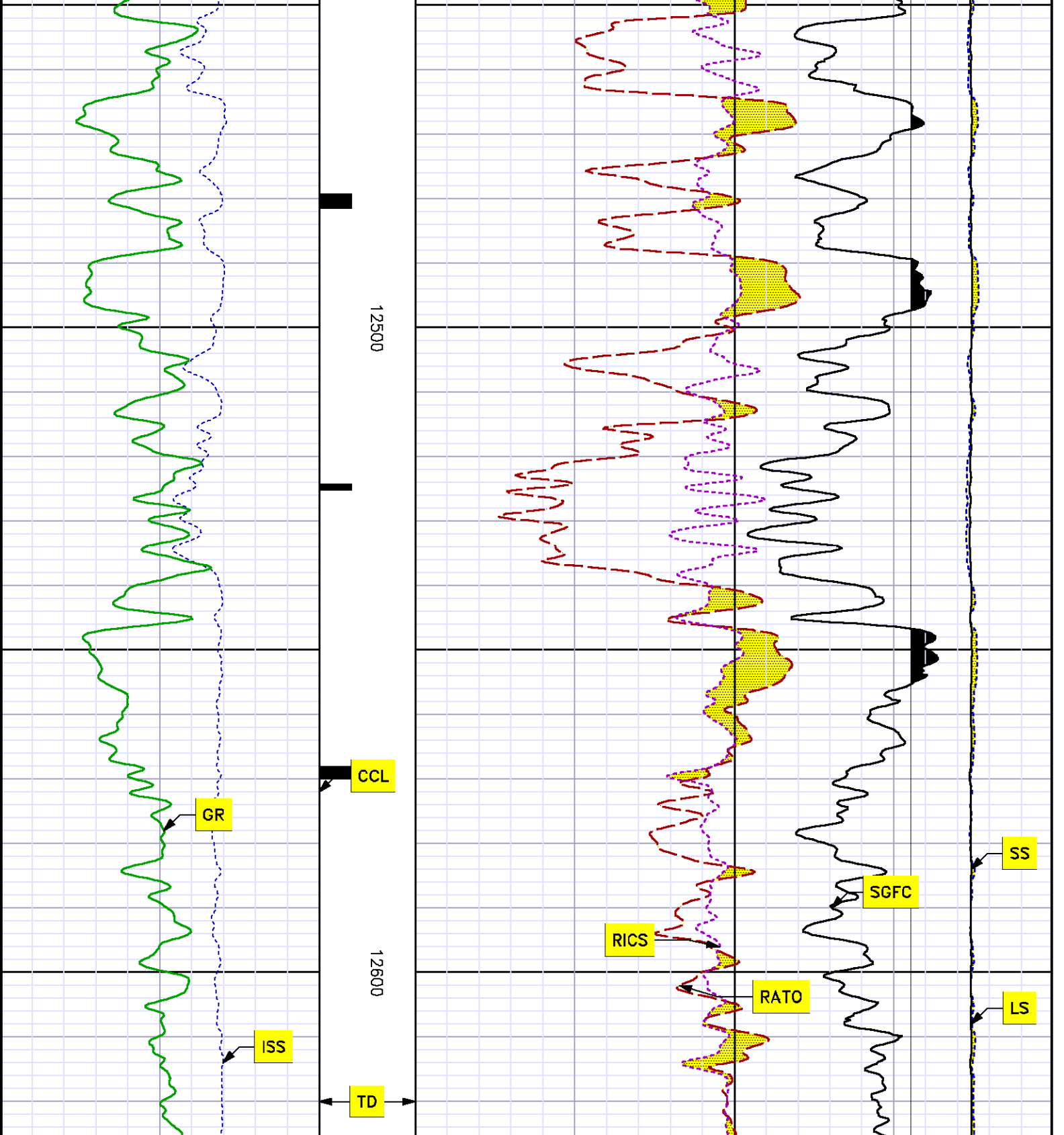
11900

12000









| Track | Value  | Unit |
|-------|--------|------|
| ISS   | 1e+006 | cps  |
| GR    | 150    | gAPI |
| RATO  | 17     | cu   |
| RICS  | 38     | cu   |
| SGFC  | 60     | cu   |
| SS    | 290000 | cps  |
| LS    | 290000 | cps  |

# *REPEAT SECTION*

## *PNC 3-D MODE*

### SPL PROCESSING

| MEASUREMENT TYPE | PARAMETER     | VALUE          | UNITS | TOP       | BOTTOM    |
|------------------|---------------|----------------|-------|-----------|-----------|
| PNC Porosity     | Borehole      | Cased          |       | 11757.530 | 12081.280 |
| PNC Porosity     | Borehole Size | 7.875          | inch  | 11757.530 | 12081.280 |
| PNC Porosity     | Casing Size   | 4.500          | inch  | 11757.530 | 12081.280 |
| PNC Porosity     | Gas Filled    | Non Gas Filled |       | 11757.530 | 12081.280 |
| PNC Porosity     | Matrix        | Sandstone      |       | 11757.530 | 12081.280 |

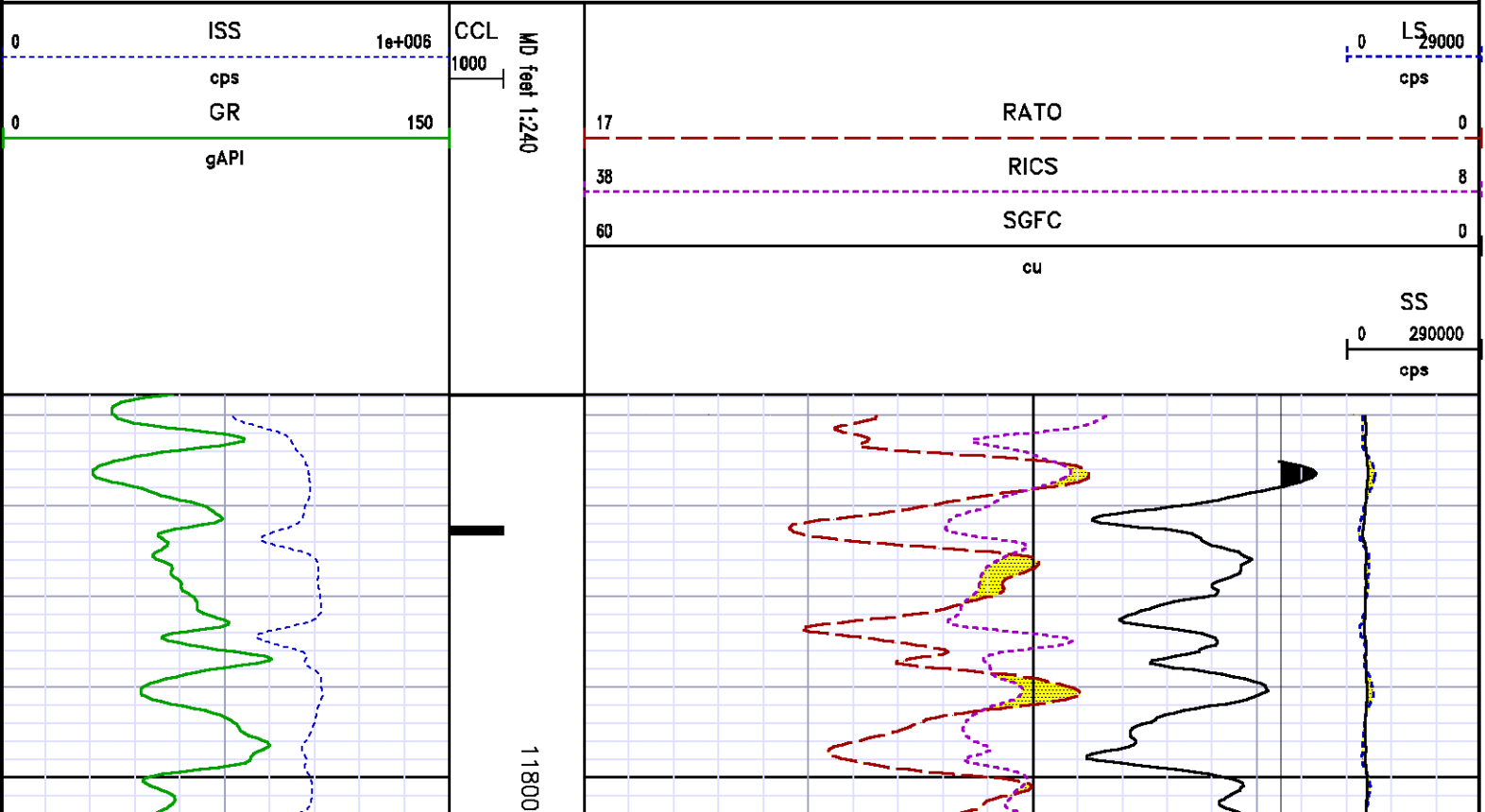
### DEPTH OFFSETS

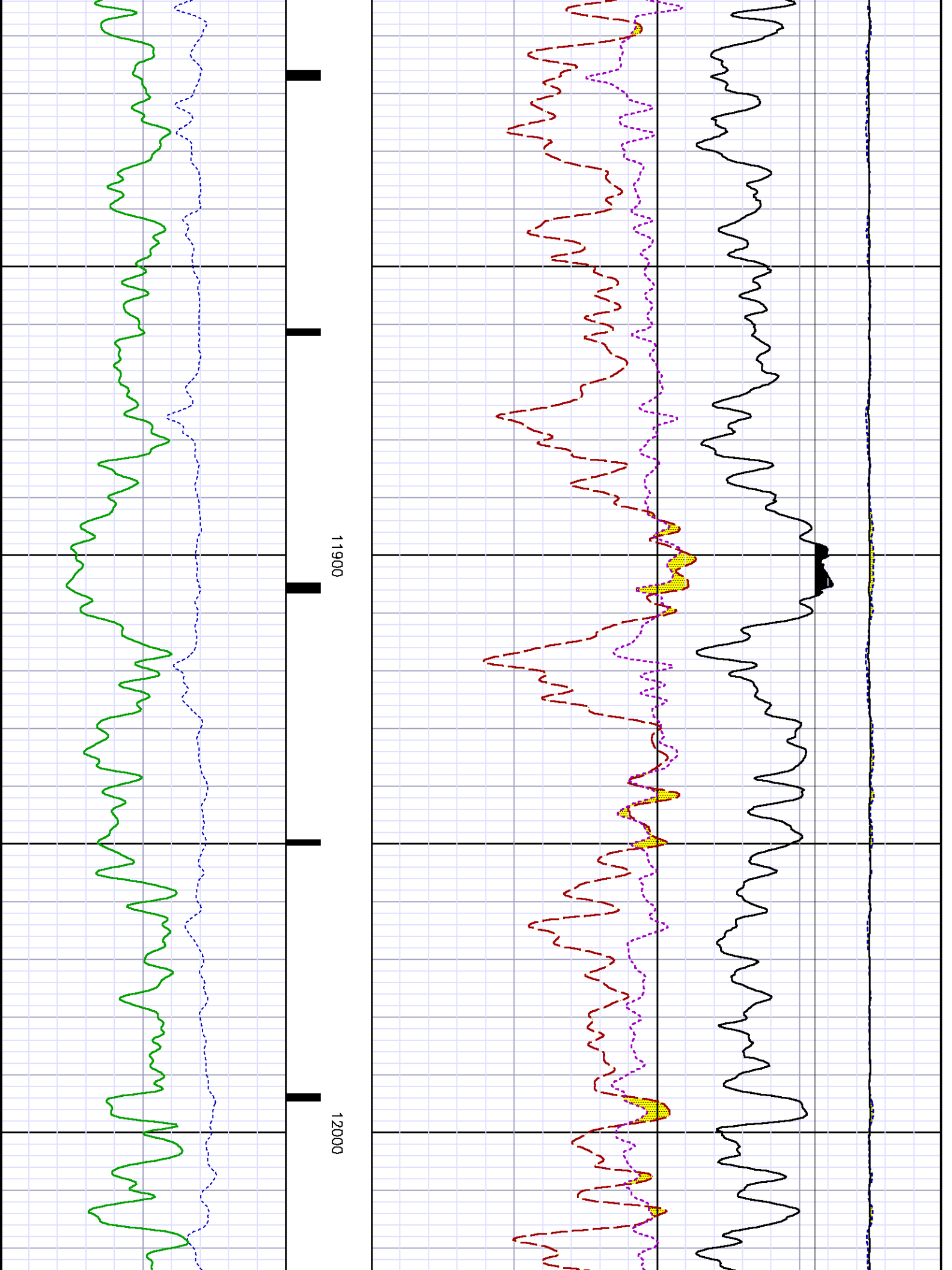
(for Acquired Curves)

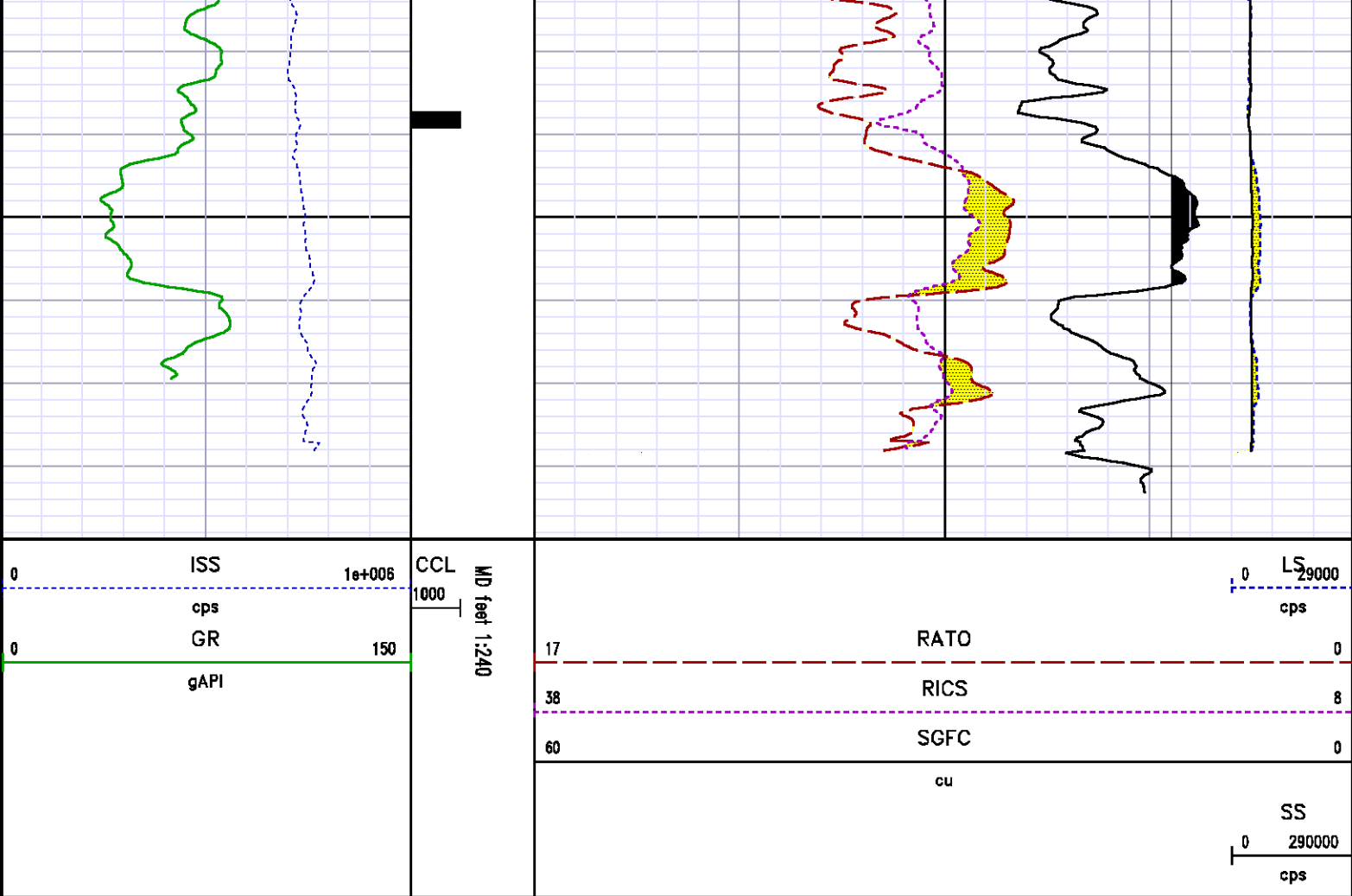
| SERIES | DEPTH OFFSET | ACQUIRED CURVES |        |        |        |        |         |
|--------|--------------|-----------------|--------|--------|--------|--------|---------|
| 8248ED | -15.320      | FLTM            |        |        |        |        |         |
| 8248ED | -13.320      | CCL CHV         |        |        |        |        |         |
| 8262XA | -10.189      | GR              |        |        |        |        |         |
| 8281XA | -0.662       | HVC3Q0          | SEQ3   | AMA3   | AML3   | BKX    | CXS     |
|        |              | CPT3Q0          | CPT3Q2 | CPT3Q3 | CPT3Q4 | ET3    | IXS     |
|        |              | MCS3            | MCS3Q0 | QCAL3  | RGN3   | RICX   | SDA3    |
|        |              | SDL3            | SGA3   | SGL3   | STA3   | XS     | ASPEC3  |
|        |              | AMB3            | AMF3   | CHF3   | IXSC   | IXSN   | RAT023  |
|        |              | RICXC           | RIN13C | RIN23  | RIN23C | SD3D   | SG3D    |
|        |              | SGB3            | SGF3   | WDTH3  | CXSR   | IXSR   | XSR     |
|        |              | RICXR           |        |        |        |        |         |
| 8281XA | -0.250       | HVC2Q0          | SEQ2   | AMA2   | AMB2   | AMF2   | AML2    |
|        |              | BKL             | CHF2   | CLS    | CPT2Q0 | CPT2Q2 | CPT2Q3  |
|        |              | CPT2Q4          | ET2    | ILS    | LS     | MCS2   | MCS2Q0  |
|        |              | QCAL2           | RGN2   | RICL   | RONE23 | RTW023 | SDA2    |
|        |              | SDL2            | SGA2   | SGB2   | SGF2   | SGK2   | SGL2    |
|        |              | STA2            | ASPEC2 | ILSC   | ILSN   | WDTH2  | RICL    |
|        |              | CLSR            | ILSR   | LSR    | RICLR  |        |         |
| 8281XA | 0.000        | CPRS            | HVC1Q0 | MV     | SEQ    | SEQ1   | AMA1    |
|        |              | AMB1            | AME1   | AMF1   | AML1   | BKS    | CHF1    |
|        |              | CSS             | CORB   | CORF   | CPT1Q0 | CPT1Q2 | CPT1Q2A |

|         |         |        |        |        |         |
|---------|---------|--------|--------|--------|---------|
| CPT1Q2B | CPT1Q2C | CPT1Q3 | CPT1Q4 | CPT1Q5 | ET1     |
| G1      | G2      | GE1S   | GE2S   | ISS    | MCS1    |
| MCS1QD  | QA1     | QCAL1  | QM1    | RATO   | RATO13  |
| RBOR    | RGN1    | RICS   | RIN    | RONE   | RPOR    |
| RTWO    | RIN13   | RONE13 | RTWO13 | SALB   | SC1     |
| SDA1    | SDL1    | SGA1   | SGB1   | SGBC   | SGE1    |
| SGF1    | SGFC    | SGK1   | SGL1   | SS     | SS2     |
| STA1    | PD1S    | PD2S   | PD3S   | MD1S   | MD2S    |
| MD3S    | DG1S    | DG2S   | DG3S   | PD1M   | PD2M    |
| PD3M    | MD1M    | MD2M   | MD3M   | DG1M   | DG2M    |
| DG3M    | MVS     | MA     | MVM    | FILV   | IAM     |
| TA      | PVM     | PVS    | IAS    | SSTAT  | QPD1    |
| QPD2    | QPD3    | QMD1   | QMD2   | QMD3   | QDG1    |
| QDG2    | QDG3    | QMA    | QTA    | QFILV  | QMV     |
| QPV     | QIA     | DERR   | DCNT   | QPK1   | QSA1    |
| PKS1    | ASPEC1  | HOC    | FE2XC  | ISSC   | RINC    |
| ISSN    | RDEN    | WDTH1  | RICSC  | CSSR   | G1R     |
| G2R     | ISSR    | SSR    | SS2R   | RATOR  | RATO13R |
| RBORR   | RICSR   | RINR   | RIN13R | RONER  | RPORR   |
| RTWOR   |         |        |        |        |         |
| SYSTEM  | 0.000   | TEN    | TTEN   |        |         |

Created by : RPM9, v5.3.1.0  
 Plotted by : PlotMgr, v5.4.504  
 Company : WPX ENERGY  
 Well : FEDERAL RGU 24-25-198  
 File Name : D:\WELLDATA\WPX Energy\RGU 24-25-198\rpm24\REPEAT.XTF  
 Mode : PlotMgr 5.4.504  
 Interval : 11757.78 - 12088.78 feet UP  
 Created : 9/14/2012 8:36:54 AM







## CALIBRATION SUMMARY

## GAMMA RAY

Calibration File: C:\case\calver\GR\055A7.cal

CALIBRATION SUMMARY

|   |                  |                     |                |                  |                     |                    |
|---|------------------|---------------------|----------------|------------------|---------------------|--------------------|
| DATE/TIME PERFORMED: Fri Aug 17 11:18:12 2012 |                  | TOOL SERIES: 8262XA | ASSET: 055     | SEQ: A7          |                     |                    |
| Calibrator #                                  | Background [cps] | Calibrator On [cps] | Multiplicative | Background [api] | Calibrator On [api] | Differential [api] |
| SHOP JIG                                      | 78.44            | 372.20              | 0.613          | 48.07            | 228.07              | 180.00             |

Verification File: C:\case\calver\GR\055A7.VP

PRIMARY VERIFICATION

|   |  |                     |            |         |
|---|--|---------------------|------------|---------|
| DATE/TIME PERFORMED: Fri Aug 17 11:22:09 2012 |  | TOOL SERIES: 8262XA | ASSET: 055 | SEQ: A7 |
|---|--|---------------------|------------|---------|

|              |            |               |                |            |               |              |
|--------------|------------|---------------|----------------|------------|---------------|--------------|
| Calibrator # | Background | Calibrator On | Multiplicative | Background | Calibrator On | Differential |
|              | [cps]      | [cps]         |                | [api]      | [api]         | [api]        |
| SHOP JIG     | 79.40      | 371.22        | 0.613          | 48.65      | 227.47        | 178.82       |

**PNC**

Calibration File: C:\case\calver\PNC\251AU.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Aug 14 14:45:44 2012 TOOL SERIES: 8281XA ASSET: 251 SEQ: AU

|              |                 |
|--------------|-----------------|
| Calibrator # | Source #        |
| SHOP BAR     | 8281AA 10160601 |

|              | ISS     | Mtr Vlt<br>(V) | SS Gain | LS Gain | XLS Gain | EA Temp<br>(degF) | Sync Delay<br>(usec) | RCAL   |
|--------------|---------|----------------|---------|---------|----------|-------------------|----------------------|--------|
| Raw Data     | 809448  | 131.00         | 2332.00 | 2297.00 | 2312.00  | 109.41            | 7.00                 | 0.9816 |
| Interpolated | 1300000 | 154.72         | 2317.25 | 2288.13 | 2306.94  |                   |                      |        |

|          | ISS    | BKS     | BKL     | BKX    | SGA1        | SDA1      | SGA2        | SDA2      |
|----------|--------|---------|---------|--------|-------------|-----------|-------------|-----------|
| Raw Data | 809448 | 8732.89 | 1414.41 | 174.89 | 25.78       | 0.14      | 24.35       | 0.28      |
|          |        |         |         |        | 25.35 26.40 | 0.00 0.20 | 23.60 24.80 | 0.00 0.40 |

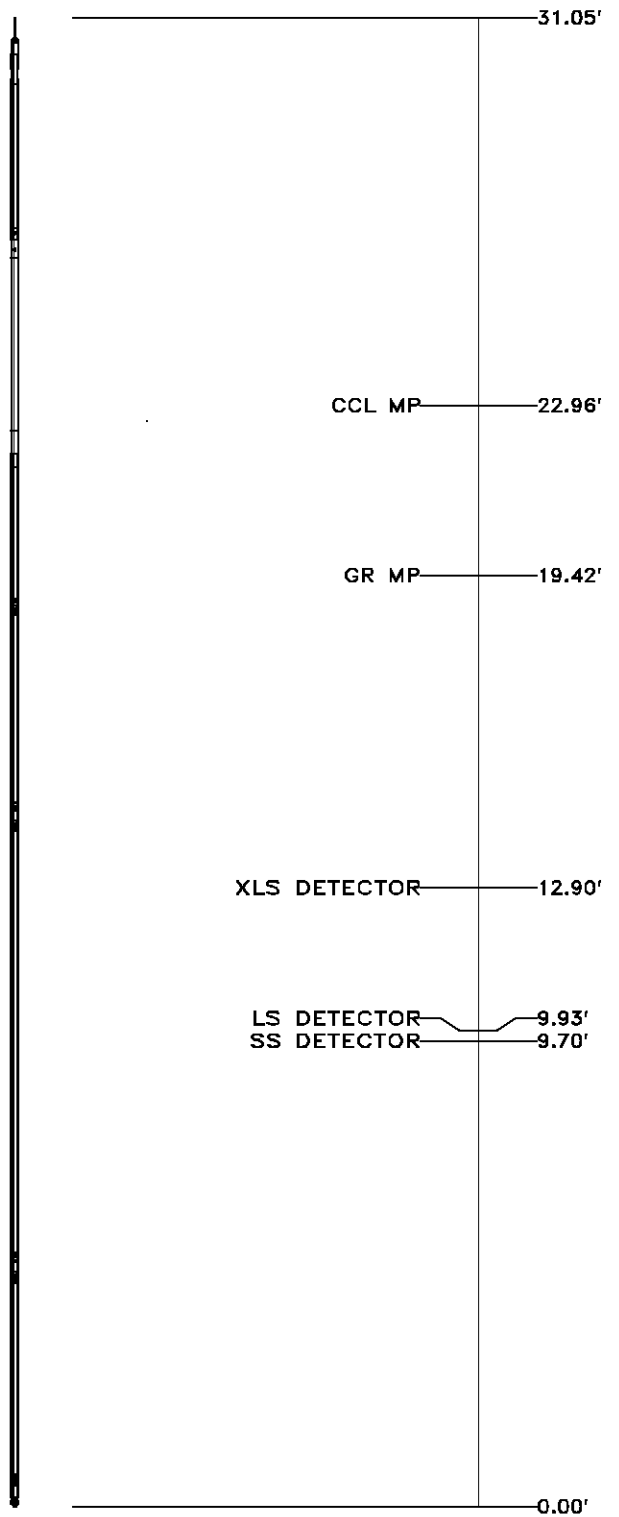
|               | ISS    | ILS       | IXS      | SS       | SS2      | LS      | CSS      | CLS      |
|---------------|--------|-----------|----------|----------|----------|---------|----------|----------|
| Raw Data      | 809448 | 169633.72 | 26388.14 | 89875.07 | 32013.69 | 8372.18 | 54485.84 | 13402.64 |
| Fit Quality % |        | 0.46      | 0.37     | 0.61     | 0.58     | 0.43    | 0.56     | 0.43     |

|               | ISS     | RBOR      | RIN<br>ISS/ILS | RIN13<br>ISS/IXS | RICS<br>ISS/CSS | RATO<br>SS/LS | RTWO<br>SS2/LS | RONE<br>CSS/CLS |
|---------------|---------|-----------|----------------|------------------|-----------------|---------------|----------------|-----------------|
| Raw Data      | 809448  | 1.43      | 4.77           | 30.68            | 14.86           | 10.74         | 3.82           | 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 % |         | 0.04      | 0.27           | 0.32             | 0.18            | 0.07          | 0.04           | 0.06            |
| Reduced       | 1388034 | 1.43      | 4.79           | 30.75            | 14.89           | 10.74         | 3.82           | 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       |

**TOOL DIAGRAM**

|                             |              |
|-----------------------------|--------------|
| <b>OTA SHORT CABLE HEAD</b> |              |
| <b>PCM POWER SUPPLY</b>     |              |
| Series                      | 8250EA       |
| Mnemonic                    | PCM          |
| Diameter                    | 1.70"        |
| Weight                      | 18.00 lb     |
| Length                      | 3.86'        |
| Temp Rating                 | 350.00 °F    |
| <b>TELEMETRY / CCL</b>      |              |
| Series                      | 8248EA       |
| Mnemonic                    | PCM          |
| Diameter                    | 1.70"        |
| Weight                      | 20.00 lb     |
| Length                      | 4.46'        |
| Measure Point               | 1.00' CCL MP |
| Temp Rating                 | 350.00 °F    |
| Press Rating                | 15000.00 PSI |
| <b>GAMMA RAY</b>            |              |
| Series                      | 8262XA       |
| Mnemonic                    | GR           |
| Diameter                    | 1.70"        |
| Weight                      | 15.00 lb     |
| Length                      | 3.17'        |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>RESERVOIR PERFORMANCE MONITOR</b> |                     |
| Series                               | 8281XA              |
| Mnemonic                             | RPM                 |
| Diameter                             | 1.70"               |
| Weight                               | 75.00 lb            |
| Length                               | 18.58'              |
| Measure Point                        | 9.49' SS DETECTOR   |
| Measure Point                        | 9.72' LS DETECTOR   |
| Measure Point                        | 12.69' XLS DETECTOR |
| Temp Rating                          | 350.00 °F           |
| Press Rating                         | 20000.00 PSI        |



Total Length: 31.05'  
 Total Weight: Not Available  
 Max Diameter: 0' 1.70"



Baker Atlas

|         |                       |                |
|---------|-----------------------|----------------|
| Company | WPX ENERGY            |                |
| Well    | FEDERAL RGU 24-25-198 |                |
| Field   | SULPHUR CREEK         |                |
| County  | RIO BLANCO            | State CDLORADO |

|          |                |
|----------|----------------|
| File No: | CH060997       |
| API No:  | 05103118760000 |

CASE

Location

SHL: 342' FSL, 1418' FWL (SESW)

BHL: 1235' FSL, 1908' FWL (SESW)

SEC 25 TWP 15 RGE 98W

Elevations

KB 6705 ft

DF

GL 6684 ft

25 1S 98W

RGU 24-25-198 PAD

CYCLONE 29

B5 SLOT