



# RESERVOIR PERFORMANCE MONITOR

Baker Atlas

|   |  |  |                   |
|---|--|--|-------------------|
| File No:<br>CH075714  | Company<br>Well<br>Field<br>County   | WPX ENERGY<br>STRAIT SG 432-22<br>GRAND VALLEY<br>GARFIELD | State<br>COLORADO |
| API No:<br>05045217370000                                   |  |  |                   |
| 22 7S 96W<br>SG 42-22<br>CYCLONE 17                         | Location<br>SHL: 1495' FNL & 202' FEL SEC:22<br>BHL: 1401' FNL & 1552' FEL SEC:22<br>SEC 22 TWP 7S RGE 96W | Other Services<br>N/A                                      |                   |
| Permanent Datum<br>Log Measured From<br>Drill Measured From | G.L. _____ Elevation 5222 ft<br>K.B. _____ 22 ft Above P. D.<br>KELLY BUSHING                              | Elevations<br>KB 5244 ft<br>DF<br>GL 5222 ft               |                   |

|                              |                  |                |
|------------------------------|------------------|----------------|
| Date                         | 15/AUG/13        |                |
| Run                          | ONE              |                |
| Service Order                | B24A75           |                |
| Depth Driller                | 5694 ft          |                |
| Depth Logger                 | 5694 ft          |                |
| Bottom Logged Interval       | 5684 ft          |                |
| Top Logged Interval          | 2600 ft          |                |
| Time Started                 | 11:30            |                |
| Time Finished                | 17:00            |                |
| Operator Rig Time            | 5.5 HRS          |                |
| Type of Fluid in Hole        | WATER            |                |
| Fluid Density                | N/A              |                |
| Salinity                     | N/A              |                |
| Fluid Level                  | FULL             |                |
| Logged Cement Top            | N/A              |                |
| Wellhead Pressure            | 0 psi            |                |
| Maximum Hole Deviation       | N/A              |                |
| Nominal Logging Speed        | 10 fpm           |                |
| Maximum Recorded Temperature | 188 degF         |                |
| Reference Log                | N/A              |                |
| Reference Log Date           | N/A              |                |
| Equipment No.                | 4271             | GRAND JUNCTION |
| Recorded By                  | U. KINSEL        | 9712           |
| Witnessed By                 | MR. DUSTIN WELSH | GRAND JUNCTION |

- 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.

| Borehole Record |      |         |
|-----------------|------|---------|
| Bit Size        | From | To      |
| 13.5 In         | 0 ft | 1118 ft |
| 8.75 In         | 0 ft | 5731 ft |

| Casing Record |             |       |      |         |
|---------------|-------------|-------|------|---------|
| Size          | Weight      | Grade | From | To      |
| 9.625 In      | N/A         | N/A   | 0 ft | 1074 ft |
| 4.5 In        | 11.6 lbm/ft | 1-80  | 0 ft | 5894 ft |

|                            |
|----------------------------|
| Remarks                    |
| SHORT JOINT: 3560' - 3585' |
| BHT: 188 degF              |
| LOG DONE IN PNC 3D MODE    |

| Equipment Data |      |           |               |               |          |
|----------------|------|-----------|---------------|---------------|----------|
| Run            | Trip | Tool      | Series Number | Serial Number | Position |
| 1              | 1    | RPM       | 8281FA        | 10307727      | FREE     |
| 1              | 1    | RPM       | 8281PA        | 10585555      | FREE     |
| 1              | 1    | RPM       | 8281EA        | 10190984      | FREE     |
| 1              | 1    | GAMMA RAY | 8262XY        | 10485470      | FREE     |
| 1              | 1    | TEL/CCL   | 8248EA        | 10296408      | FREE     |
| 1              | 1    | PCM       | 8250EA        | 10397894      | FREE     |

**MAIN LOG**  
**PNC 3D MODE**

## SPL PROCESSING

| MEASUREMENT TYPE | PARAMETER     | VALUE          | UNITS | TOP      | BOTTOM   |
|------------------|---------------|----------------|-------|----------|----------|
| PNC Porosity     | Borehole      | Cased          |       | 2581.066 | 5696.785 |
| PNC Porosity     | Borehole Size | 8.750          | inch  | 2581.066 | 5696.785 |
| PNC Porosity     | Casing Size   | 4.500          | inch  | 2581.066 | 5696.785 |
| PNC Porosity     | Gas Filled    | Non Gas Filled |       | 2581.066 | 5696.785 |
| PNC Porosity     | Matrix        | Sandstone      |       | 2581.066 | 5696.785 |

## DEPTH OFFSETS

(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |        |        |        |      |        |
|--------|--------------|-----------------|--------|--------|--------|------|--------|
| 8248EA | -15.320      | FLTM            |        |        |        |      |        |
| 8248EA | -13.320      | CCL             | CHV    |        |        |      |        |
| 8262XY | -10.189      | GR4             |        |        |        |      |        |
| 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

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

RAT0

RAT013

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

MM

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

RAT013R

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

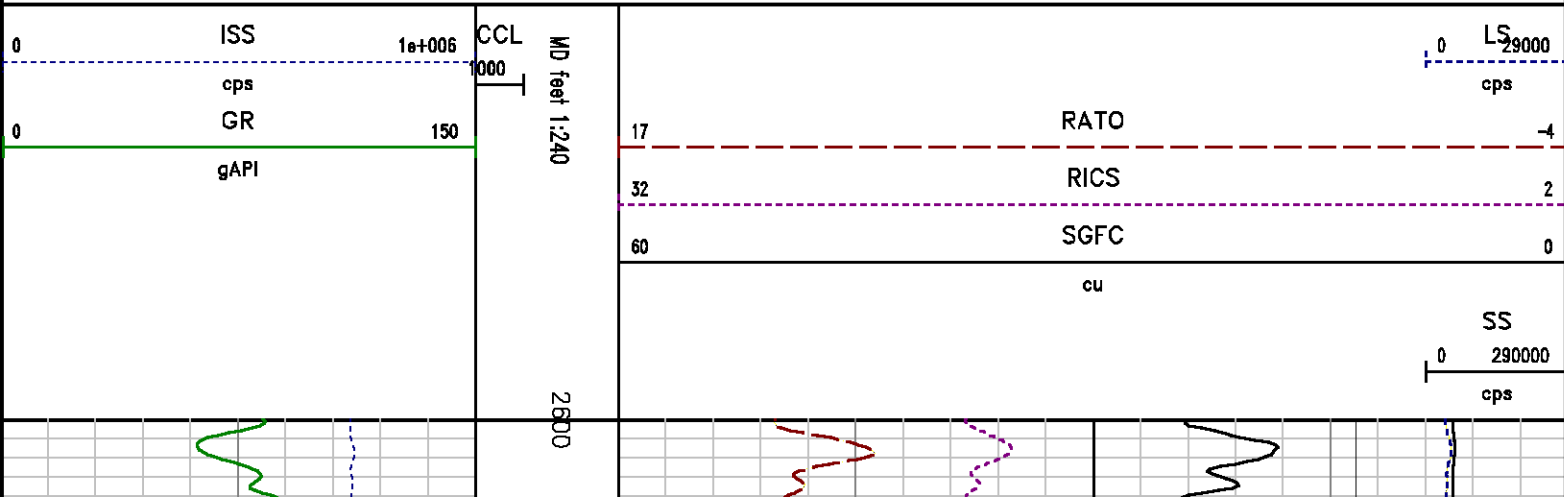
Well : STRAIT SG 432-22

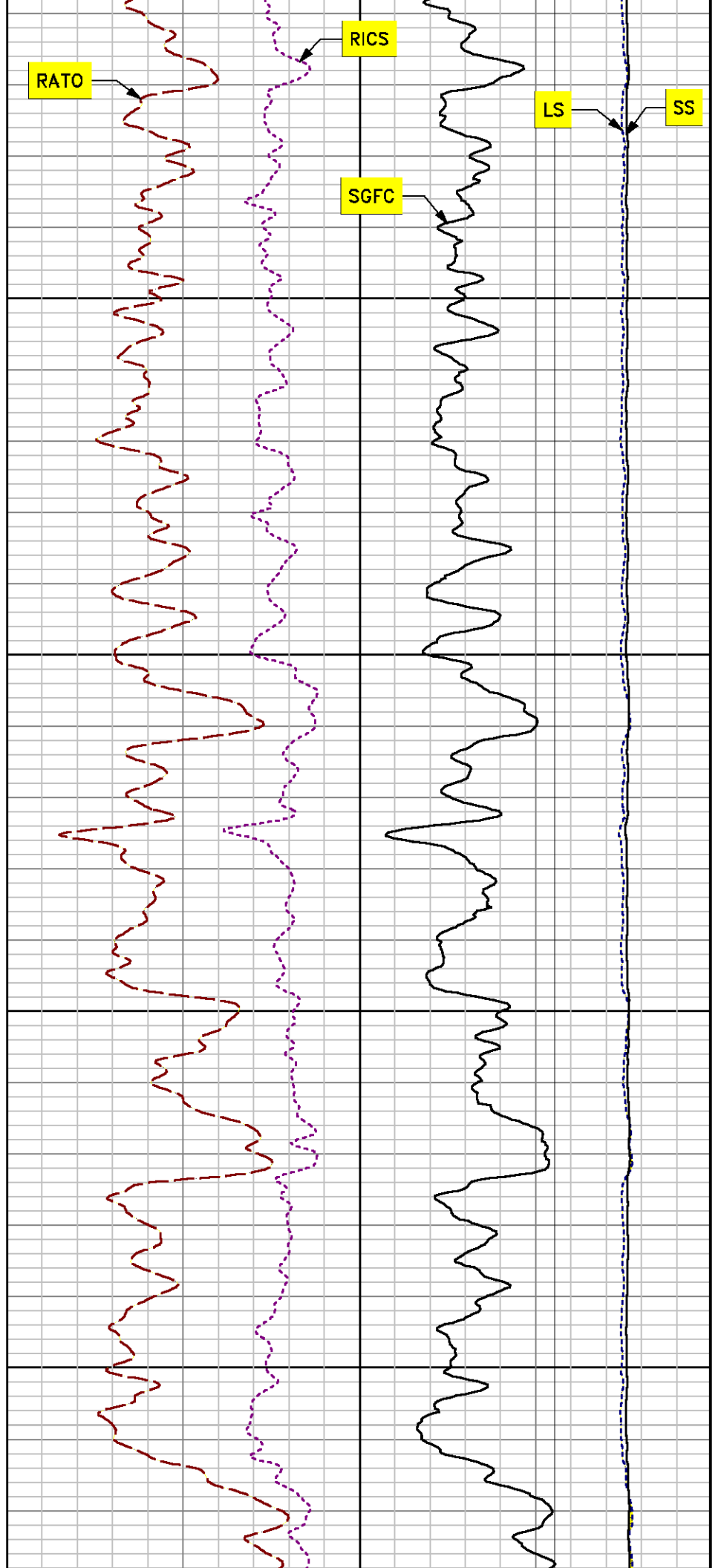
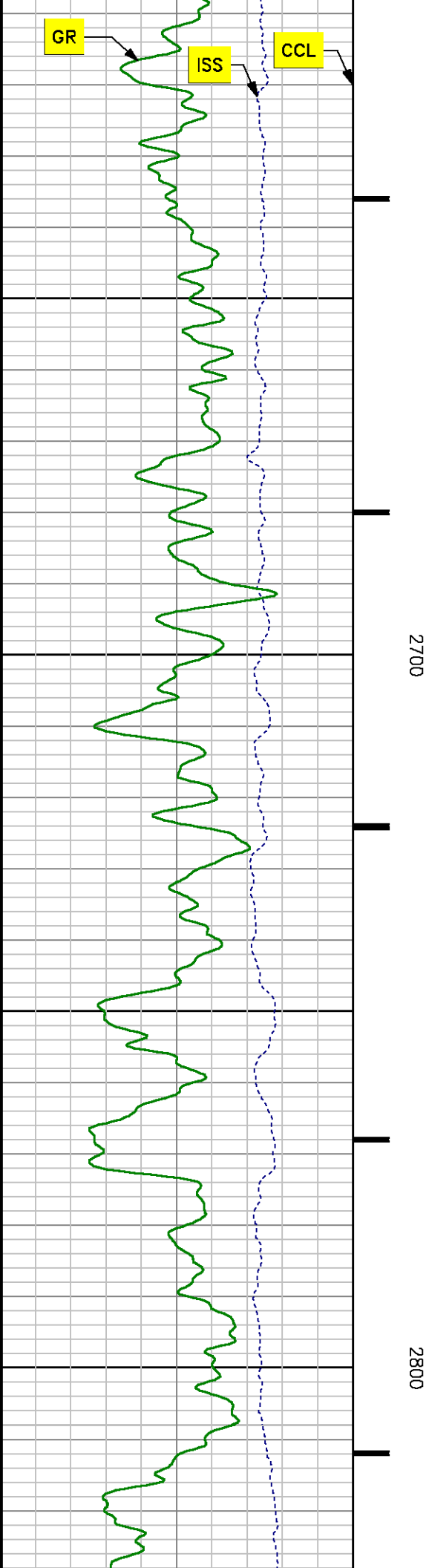
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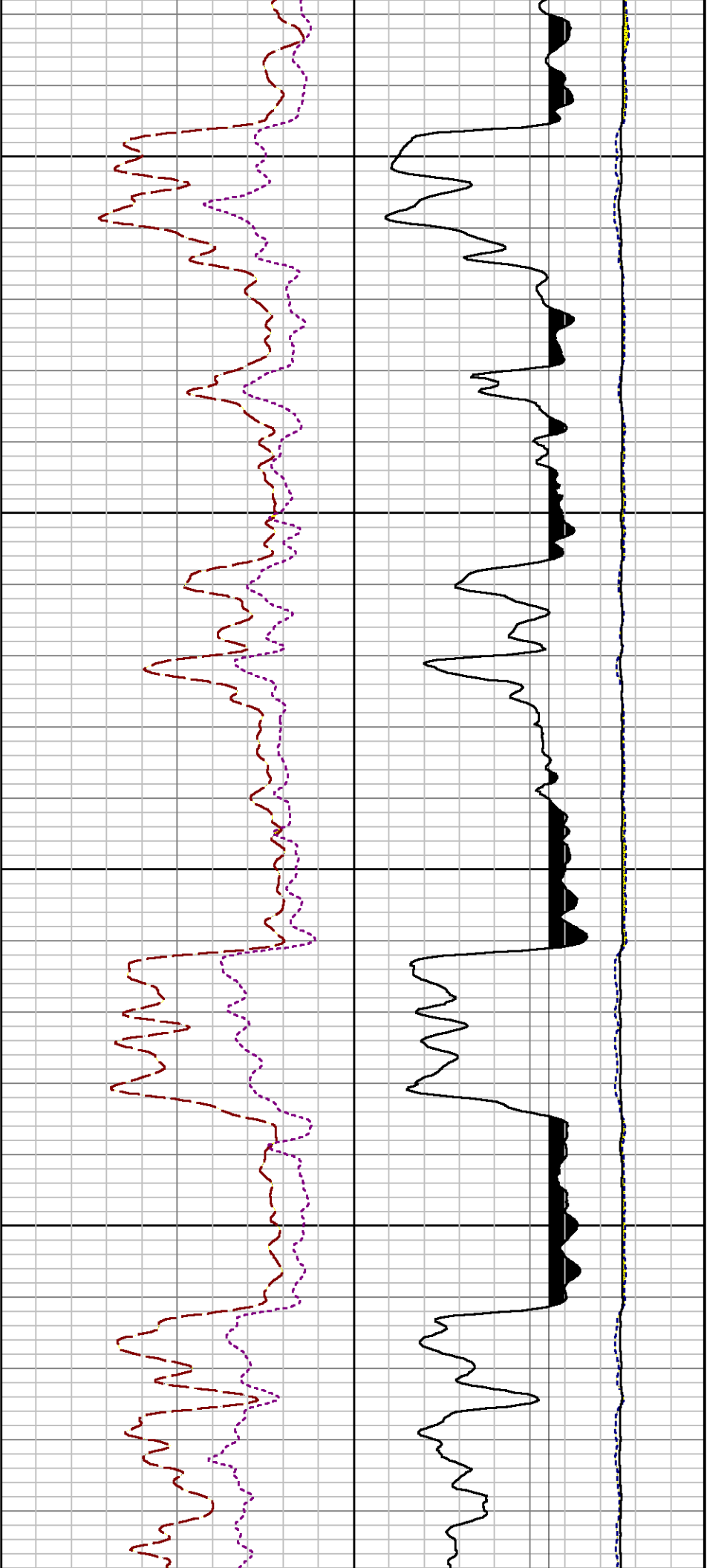
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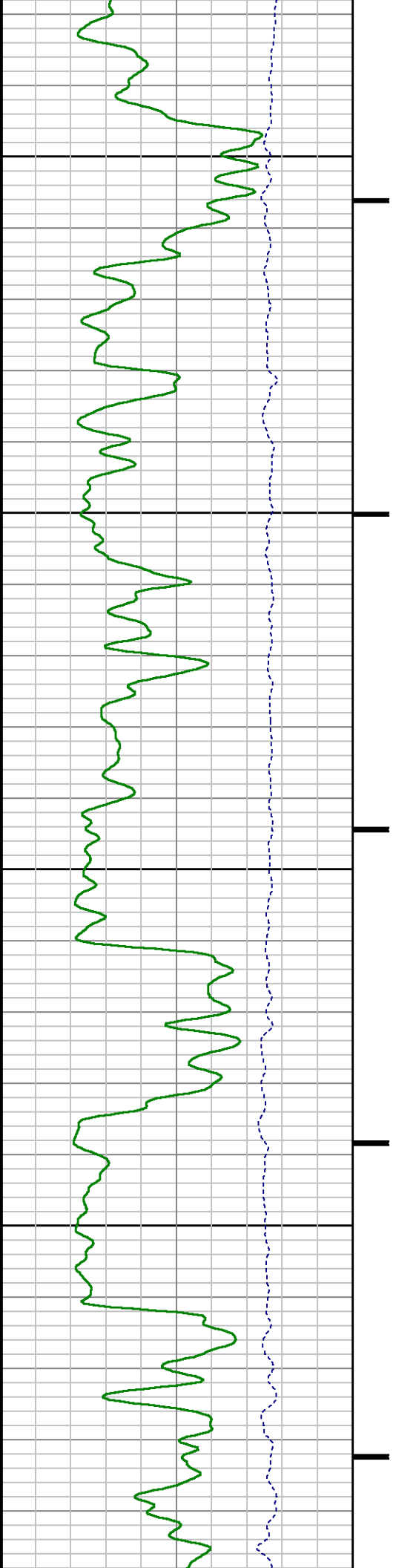


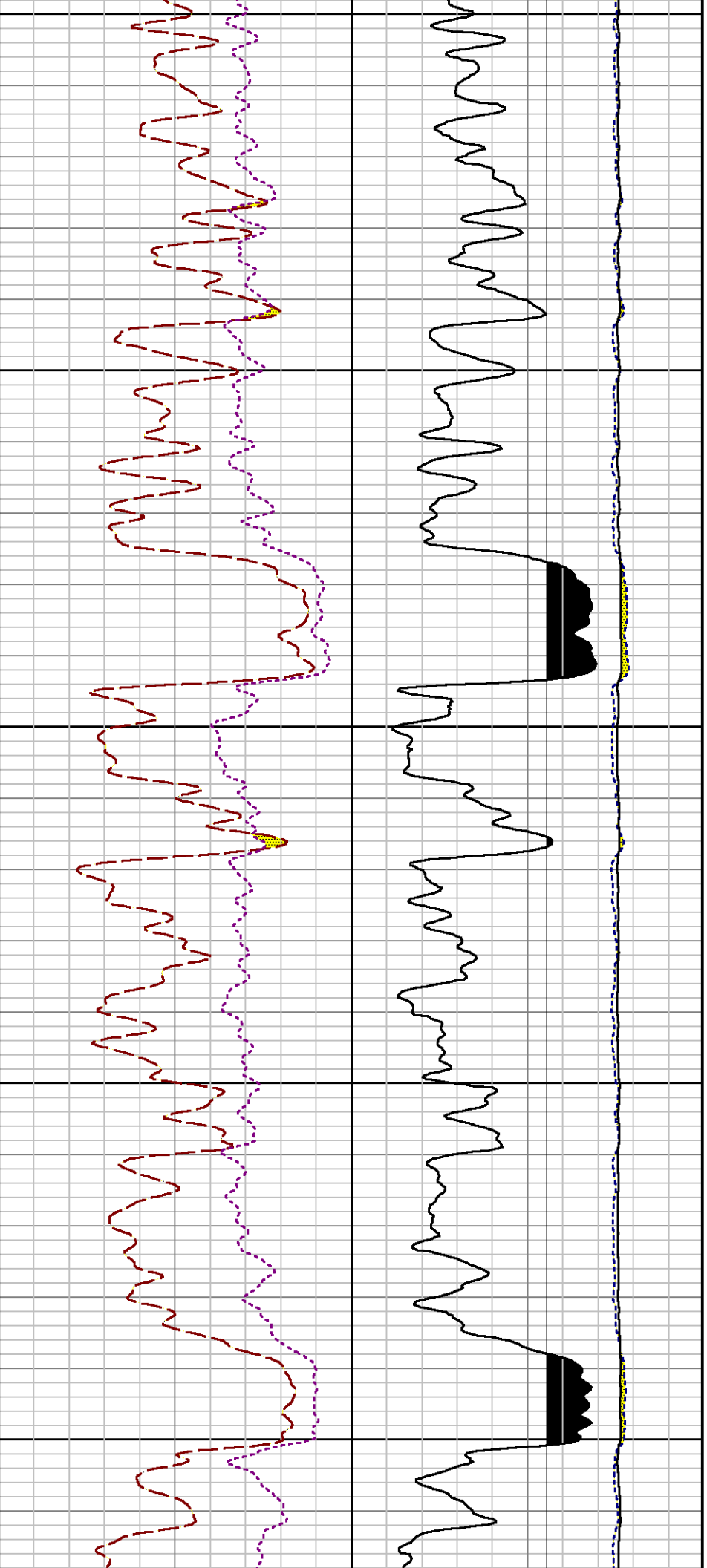




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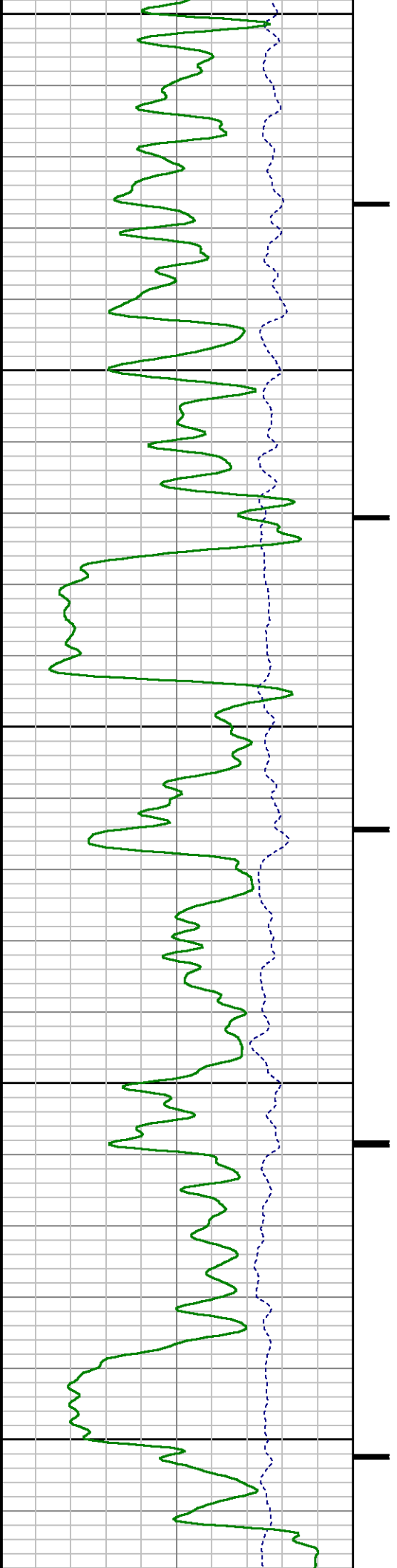
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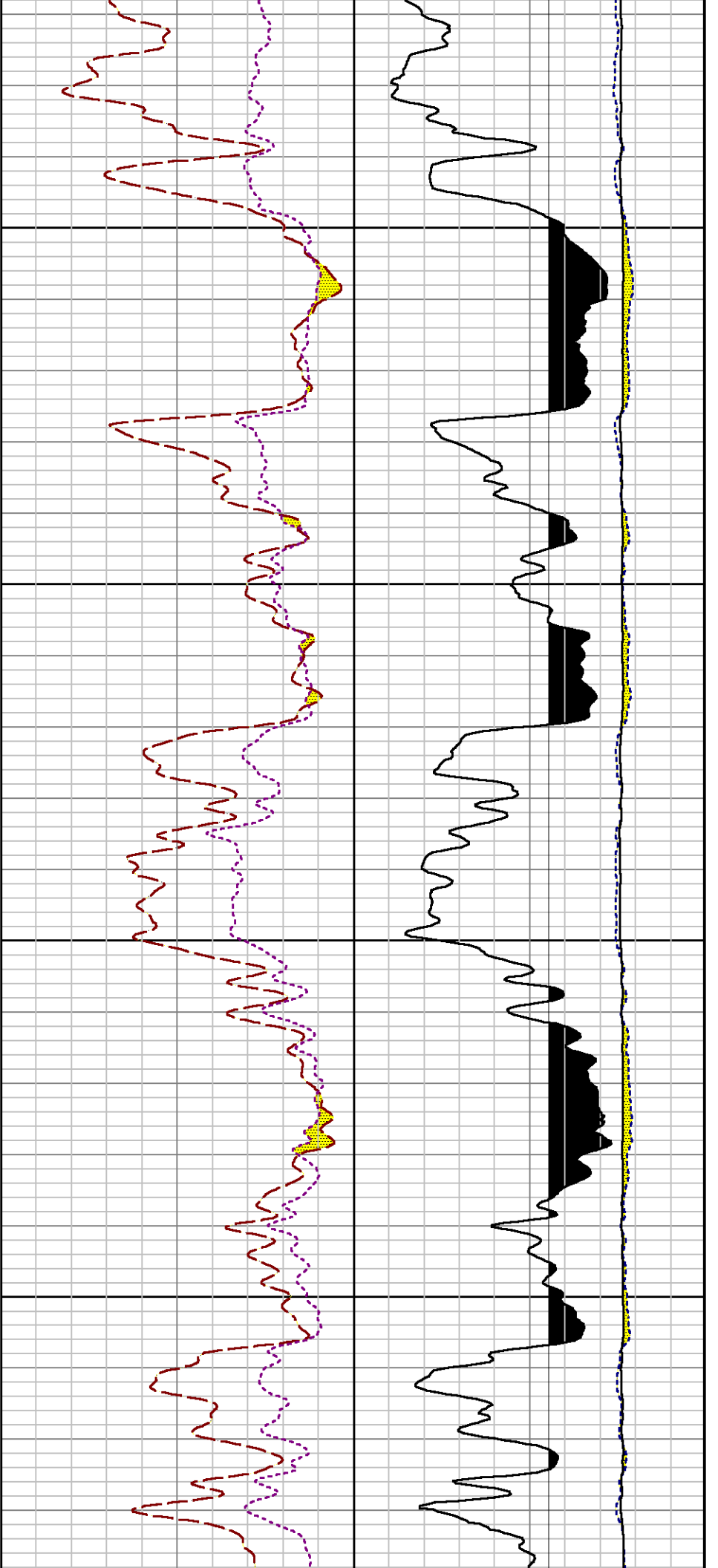




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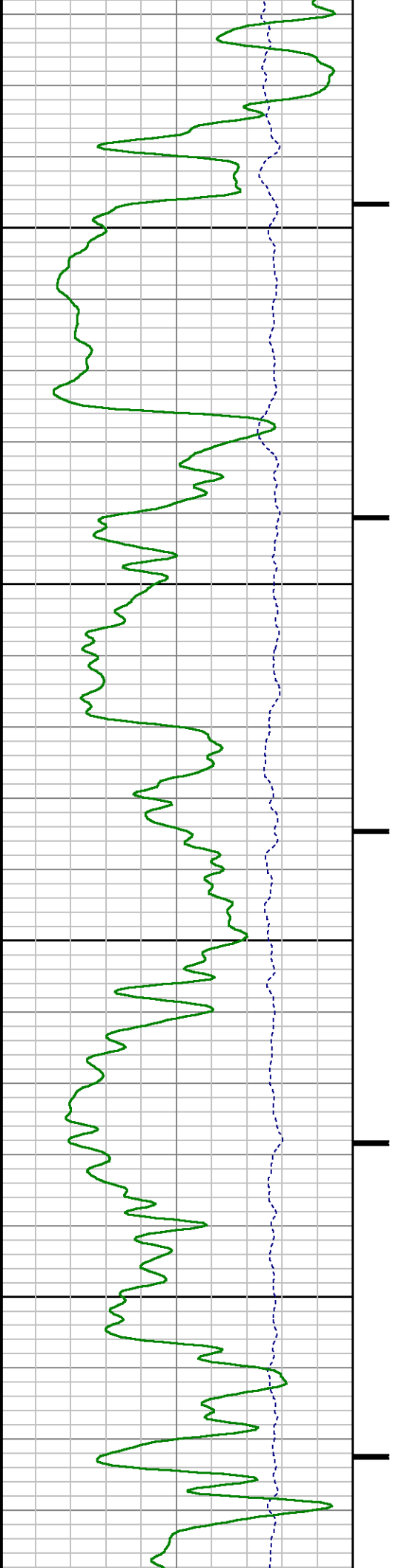
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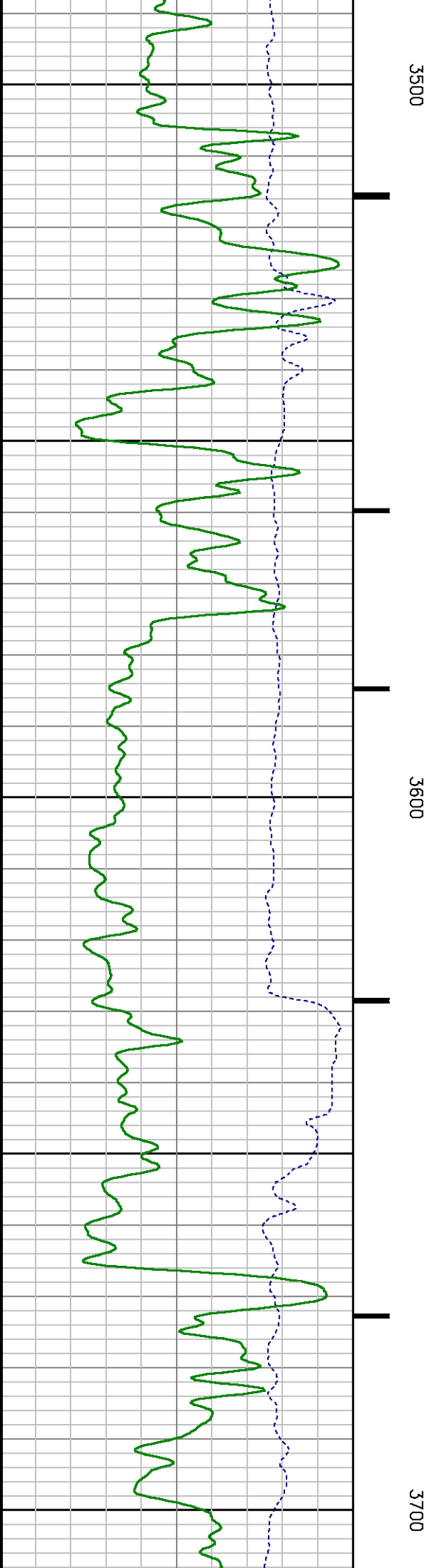
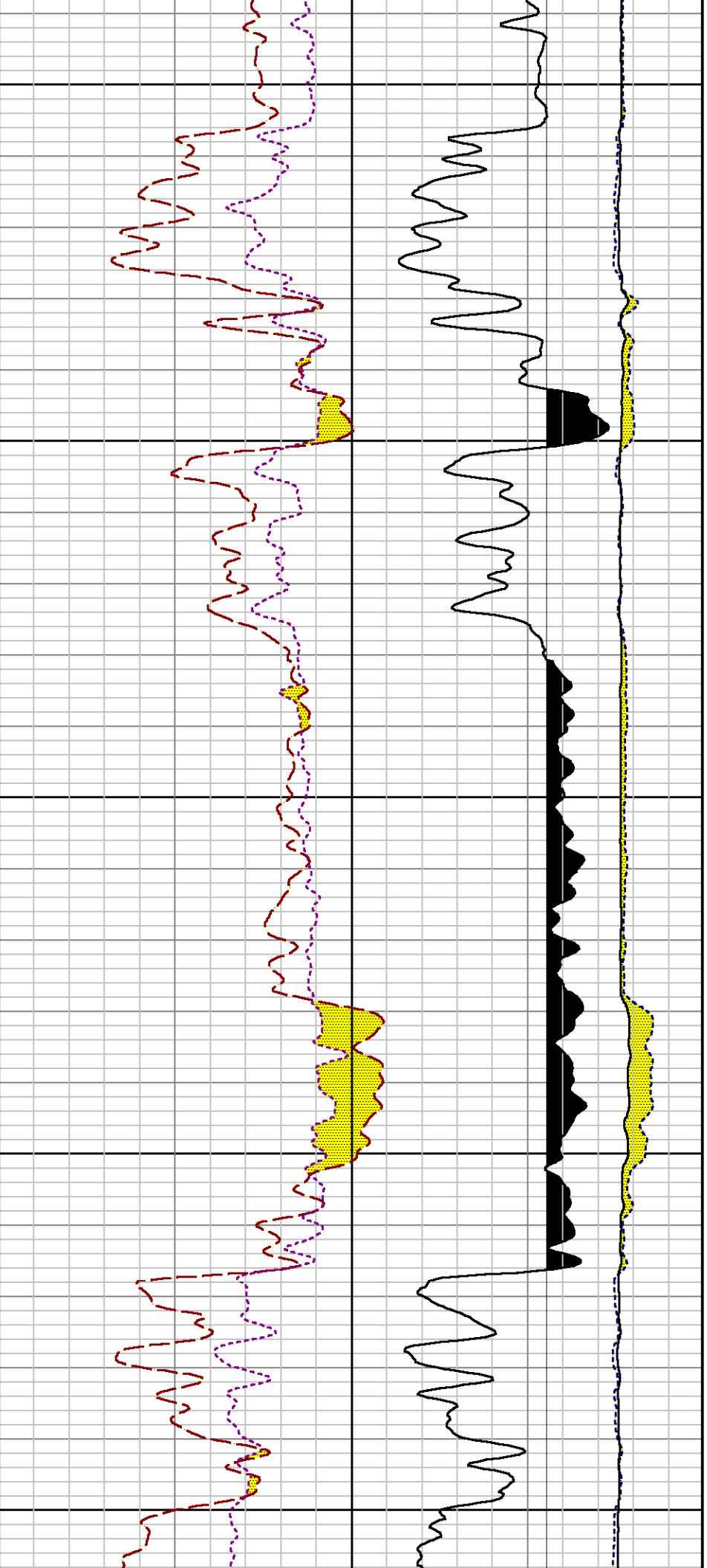




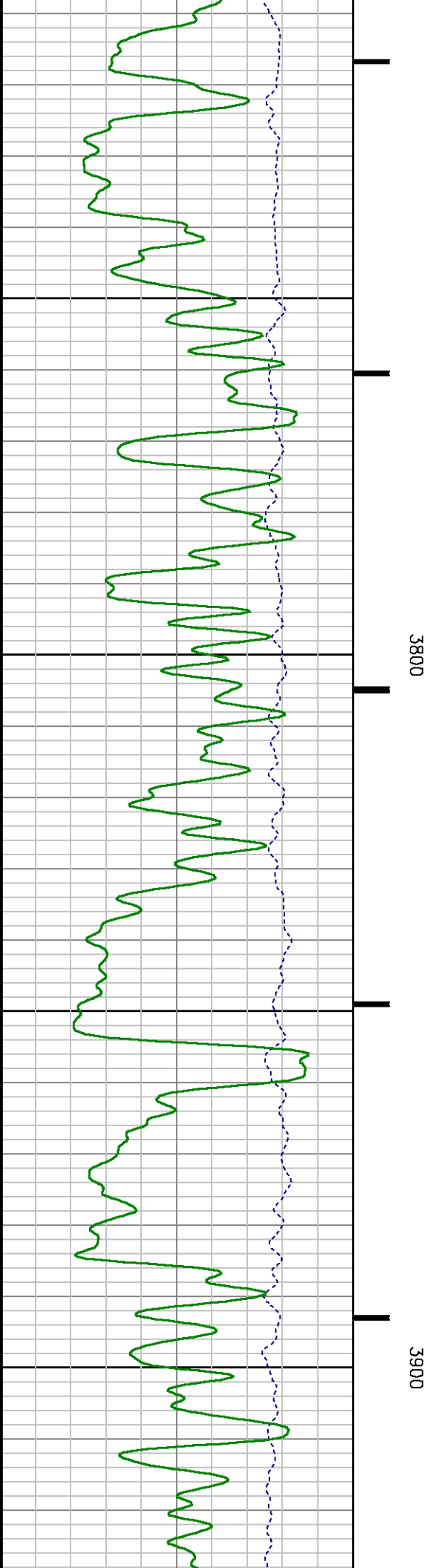
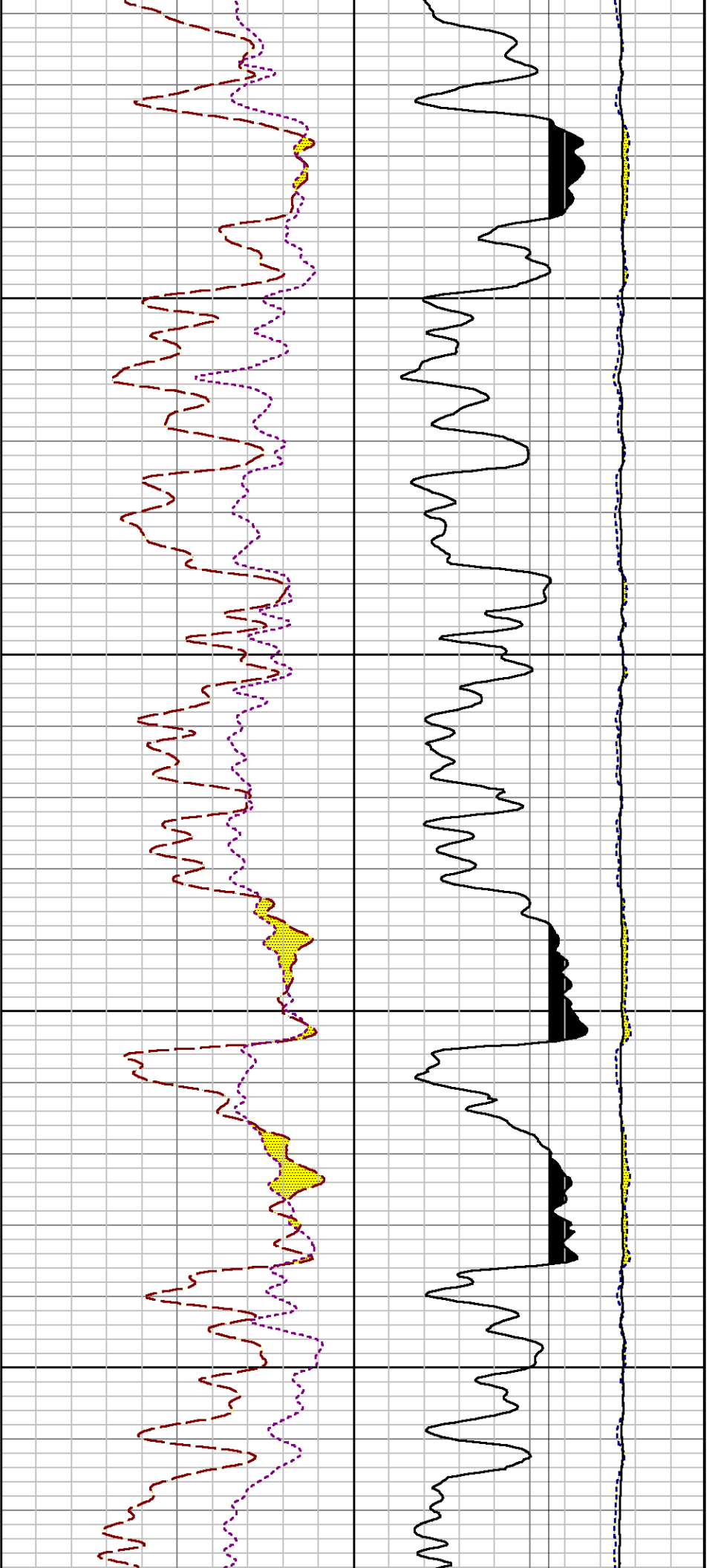
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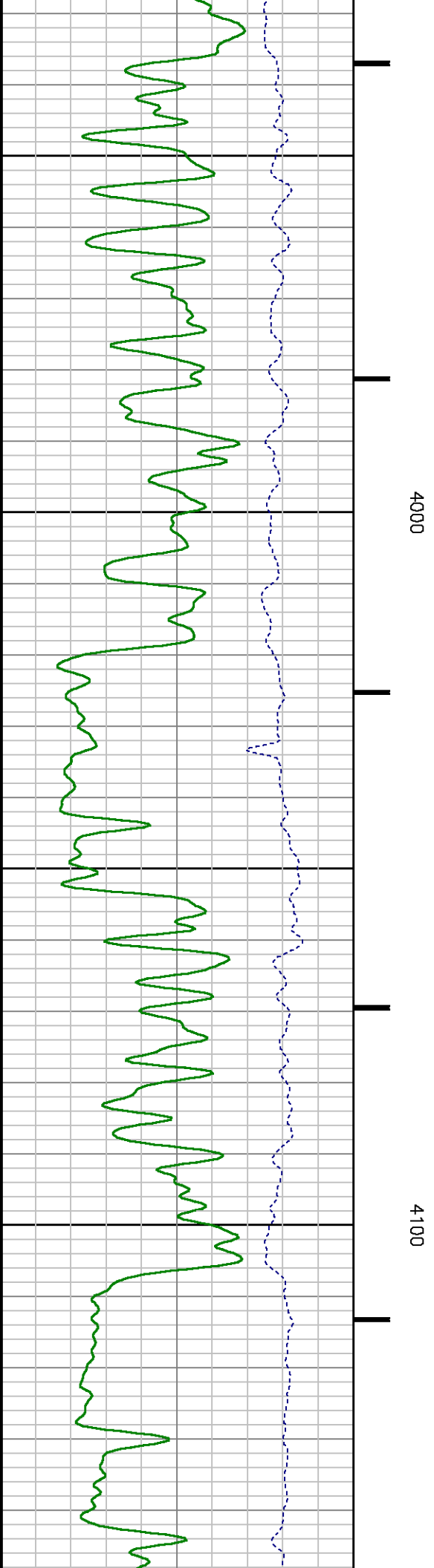
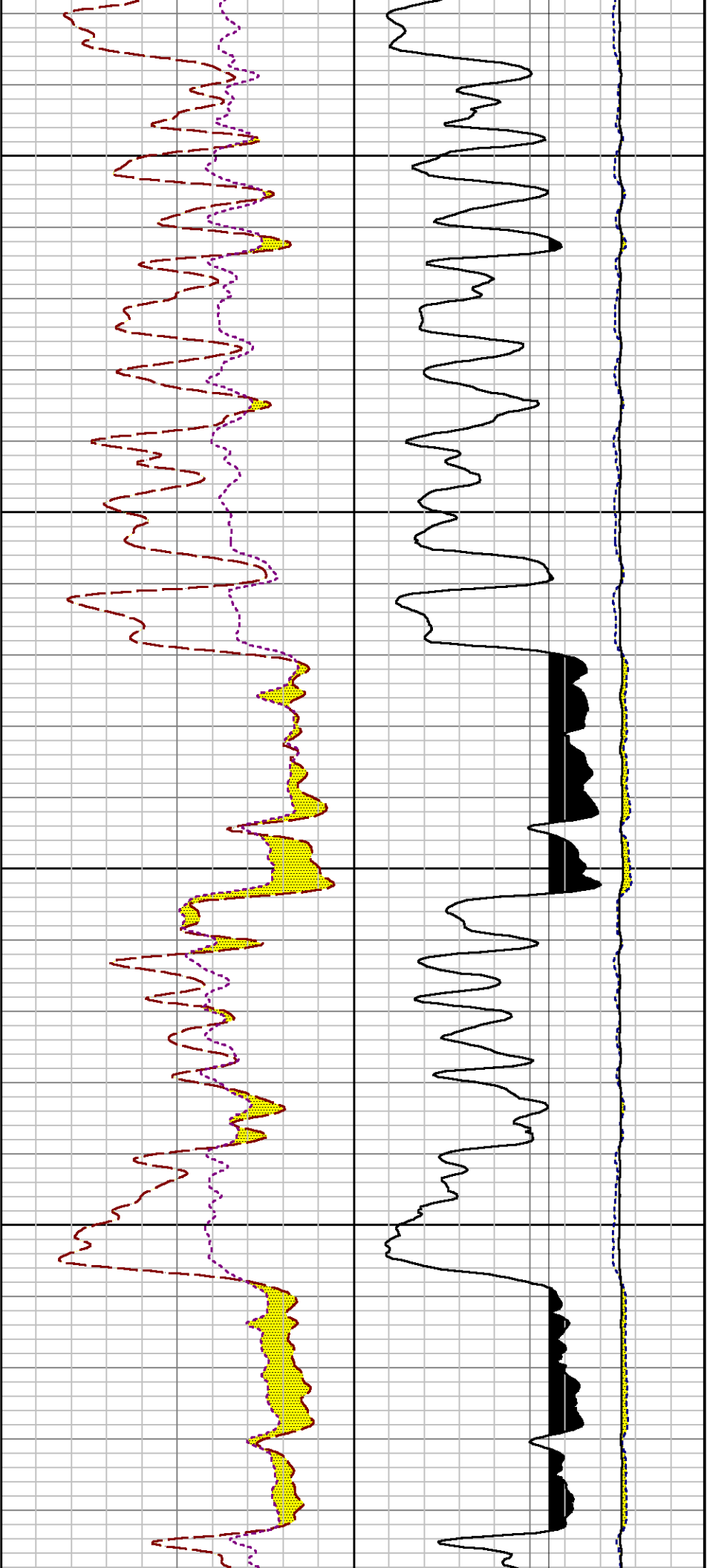
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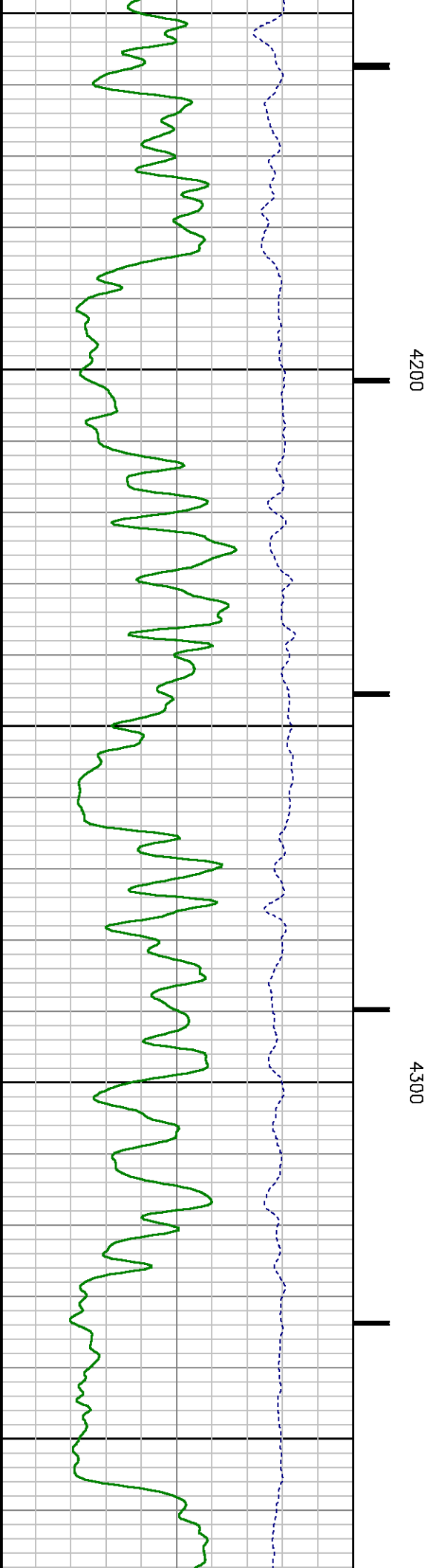
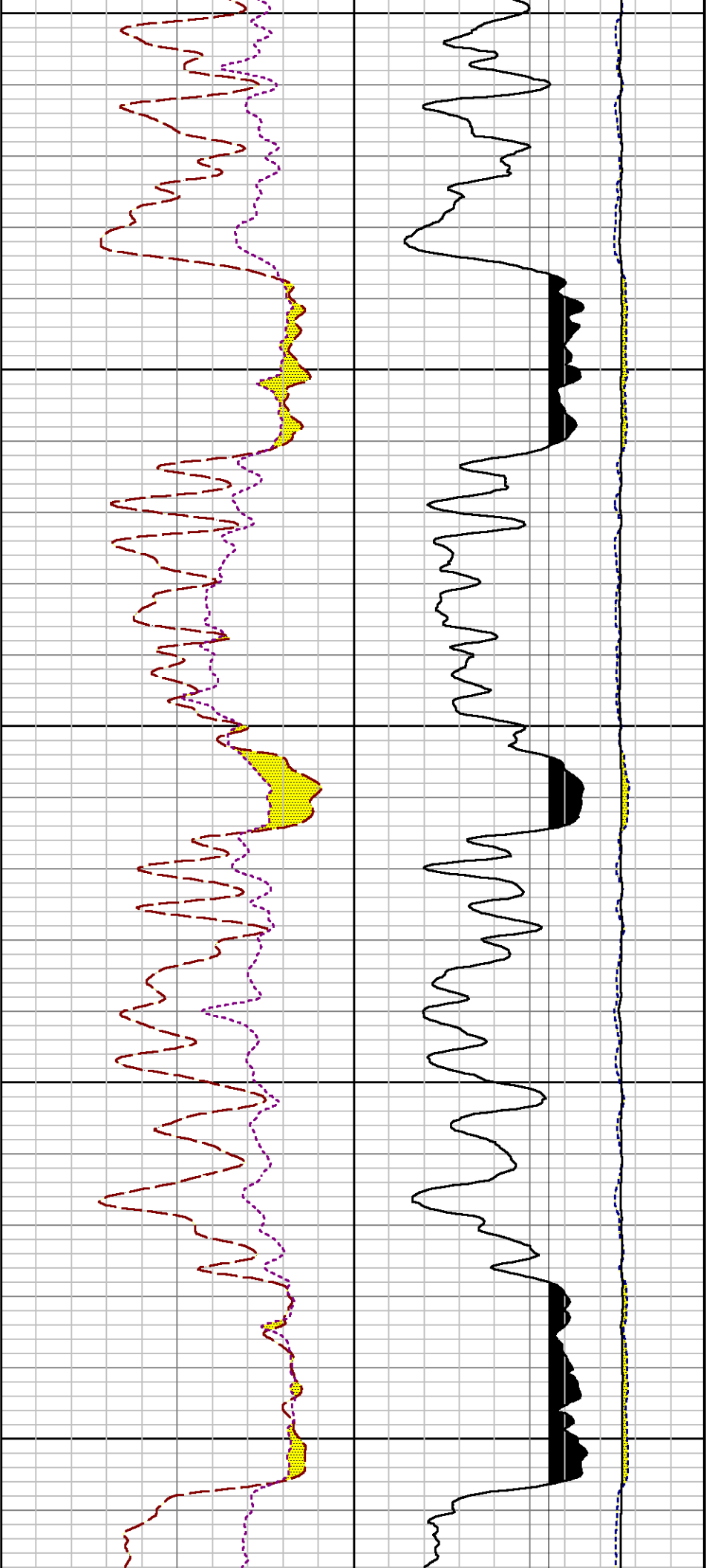


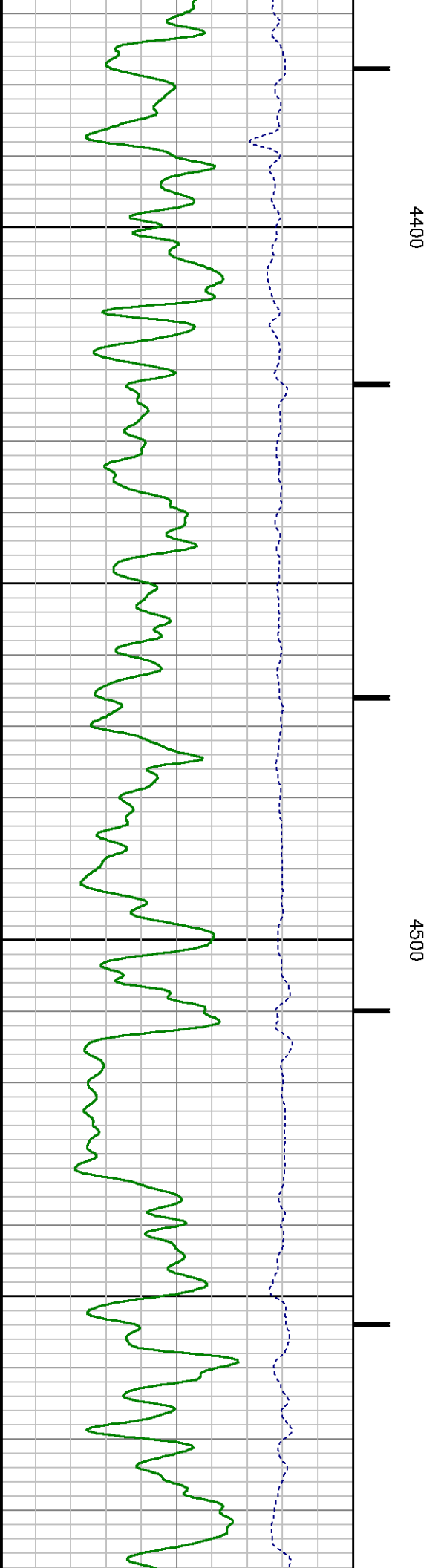
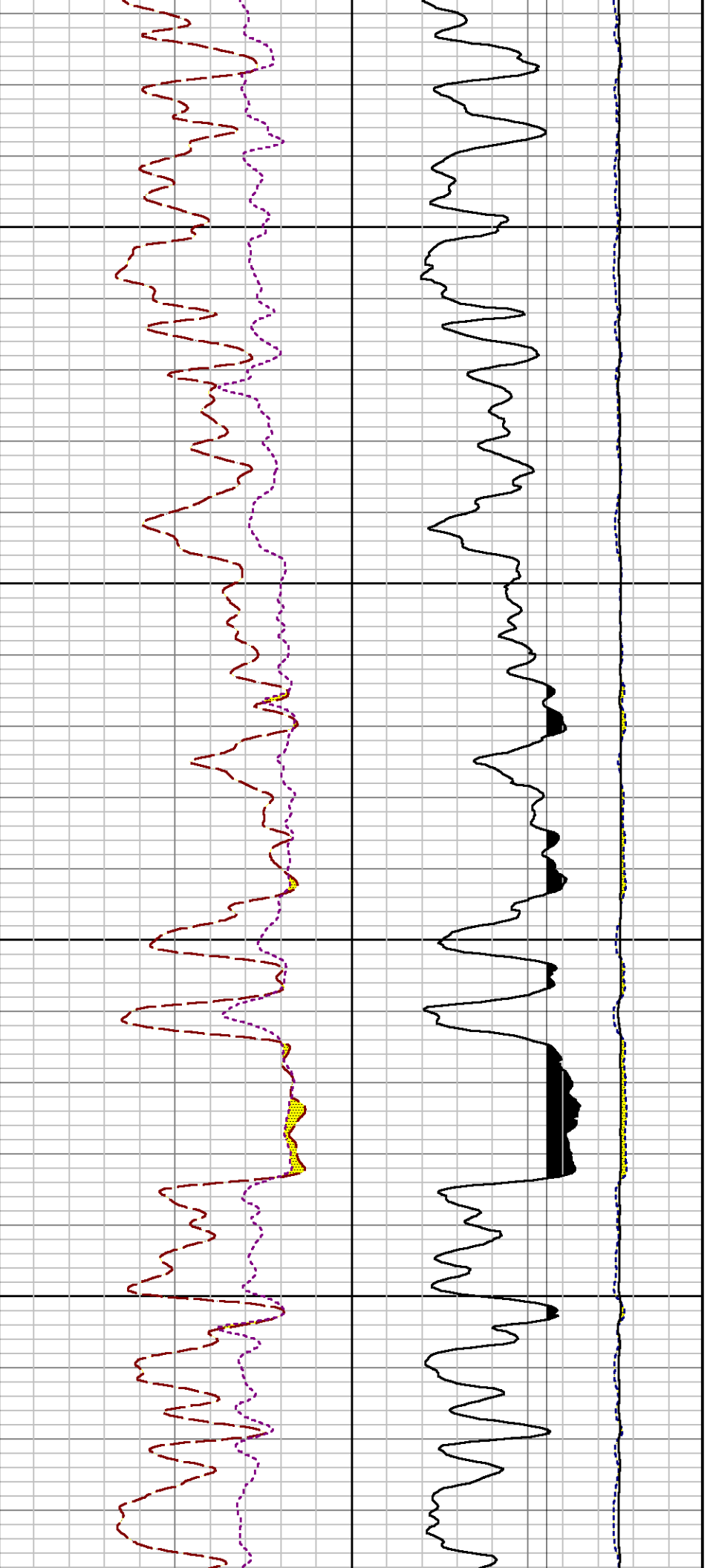


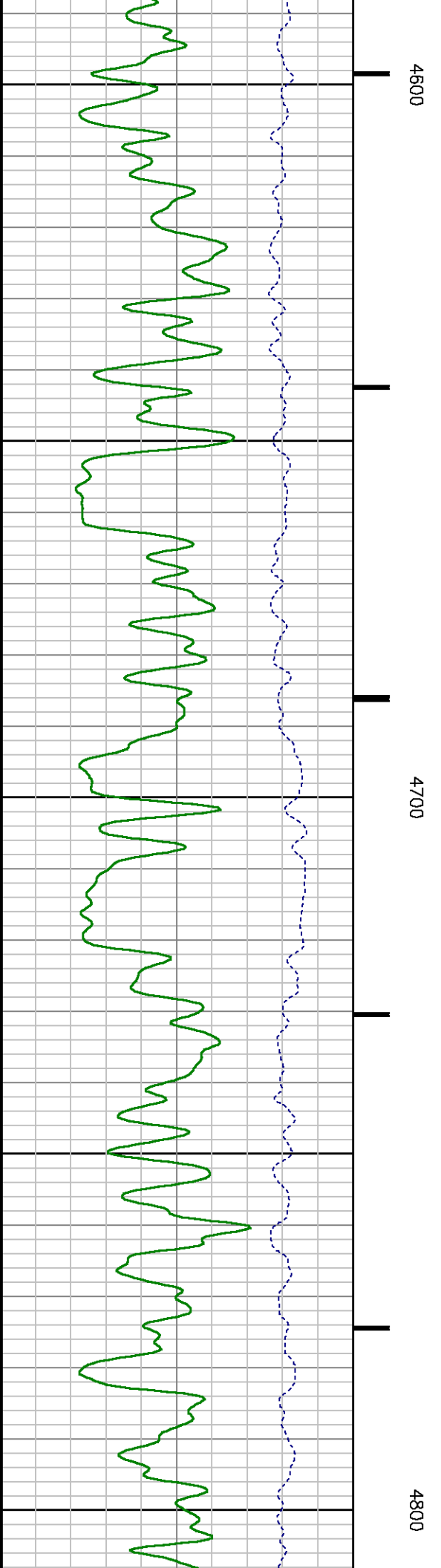
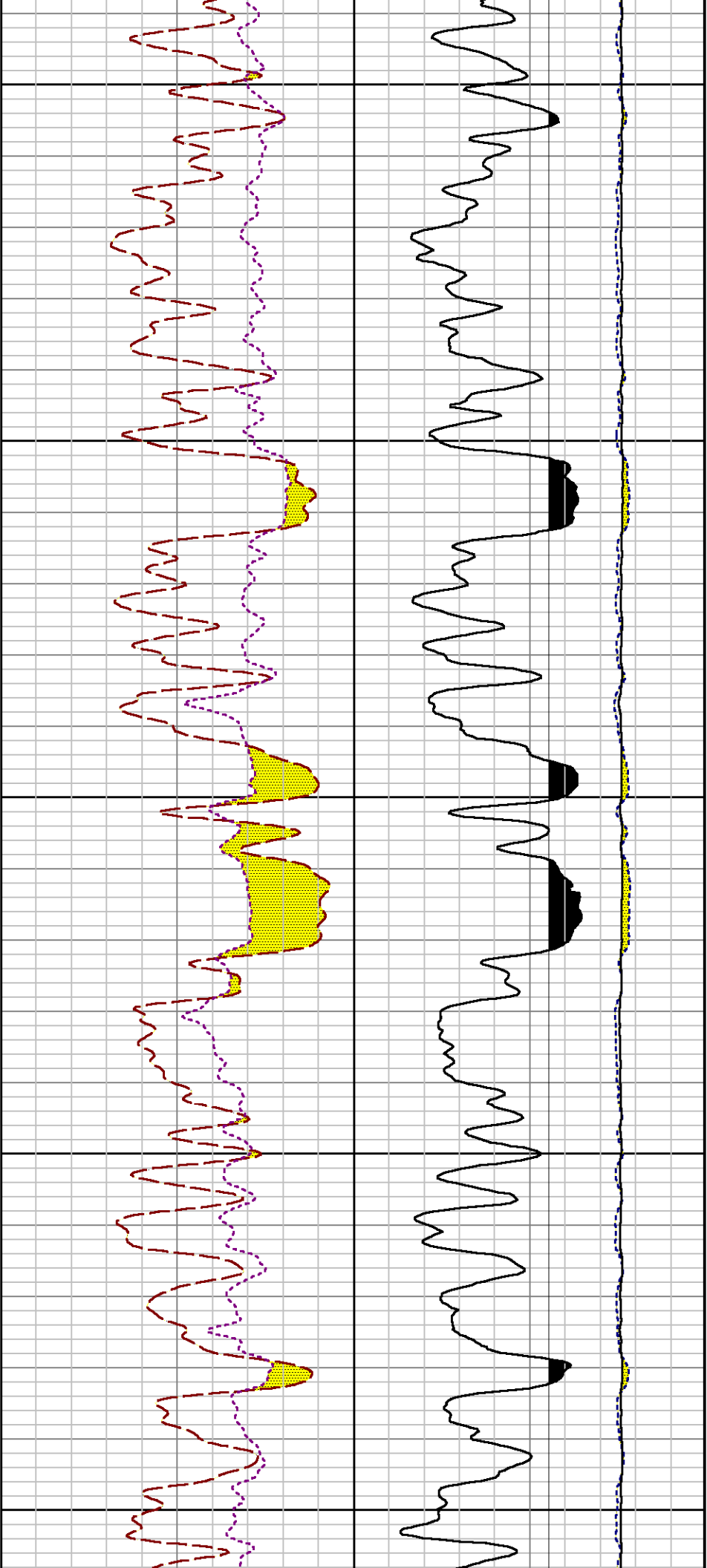


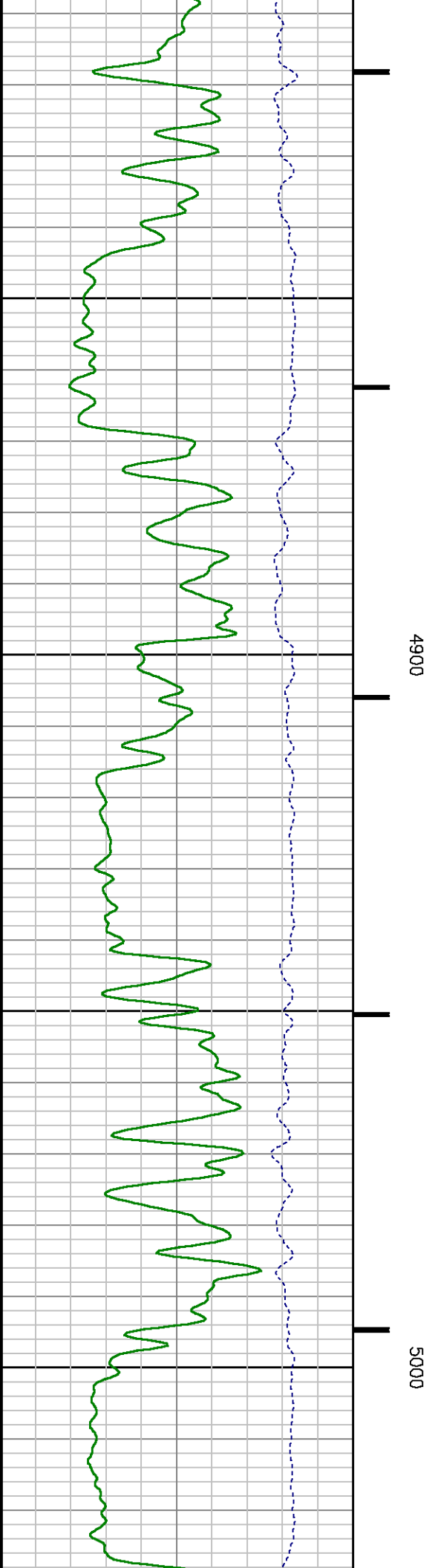
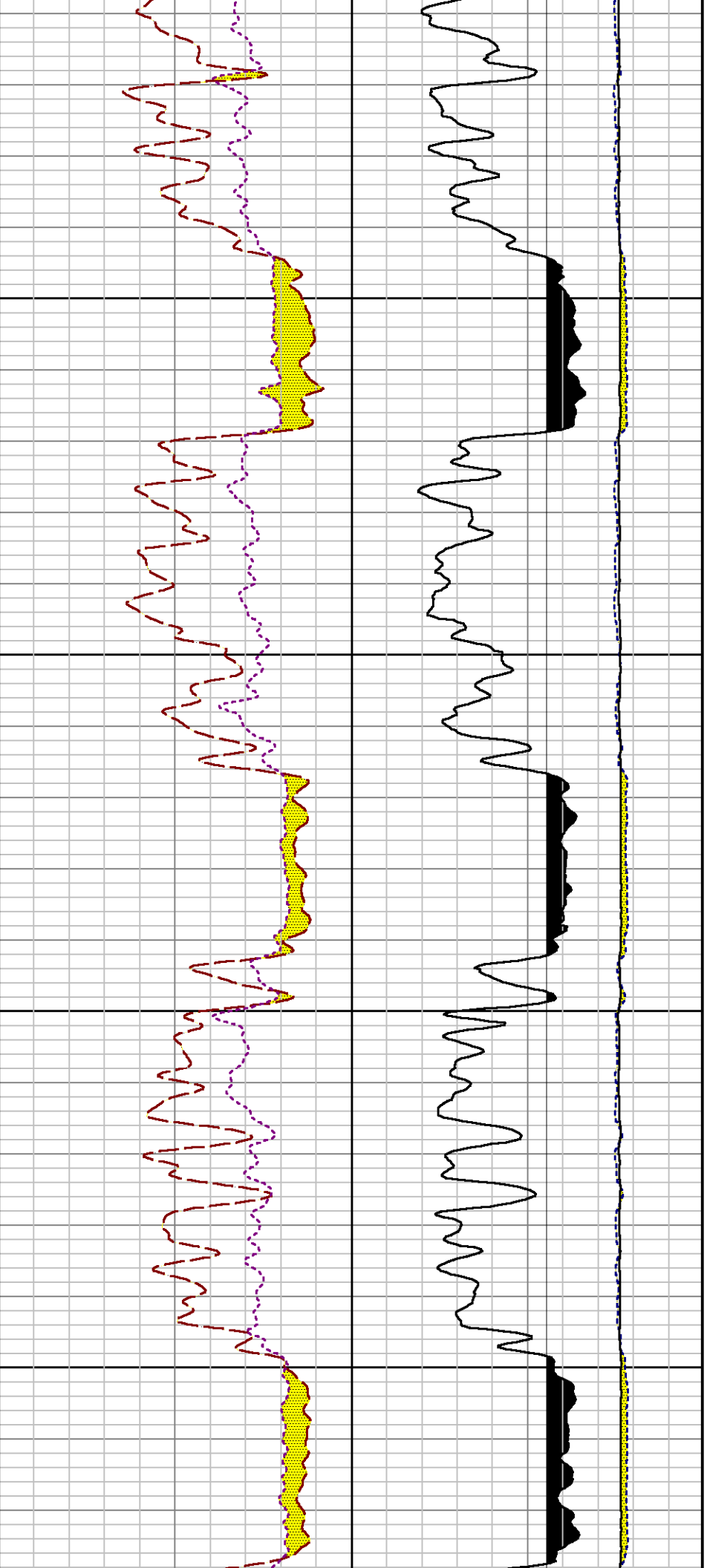


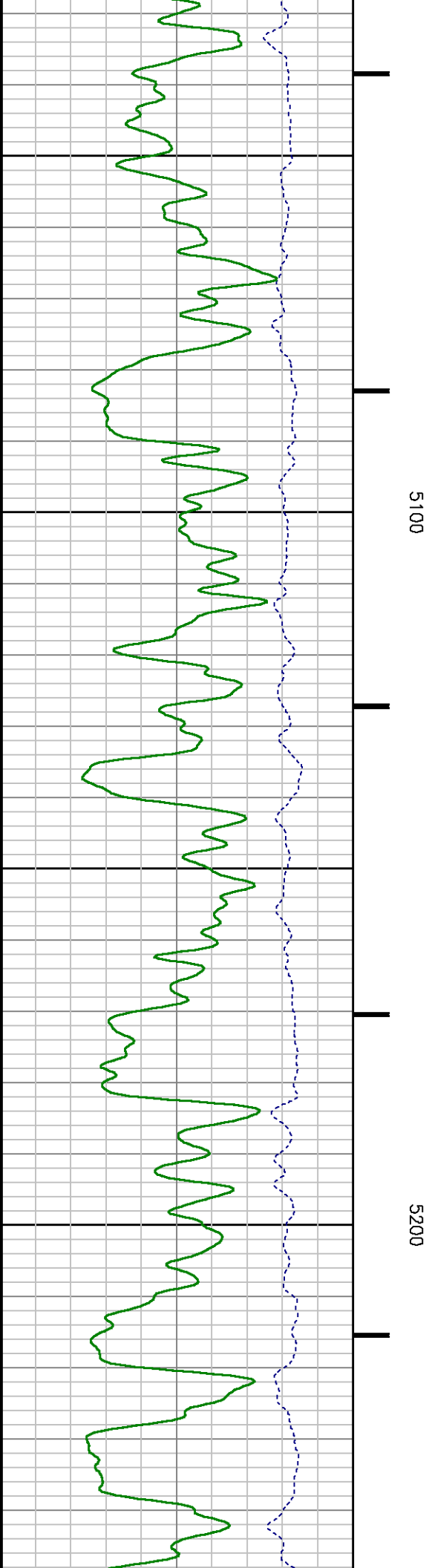
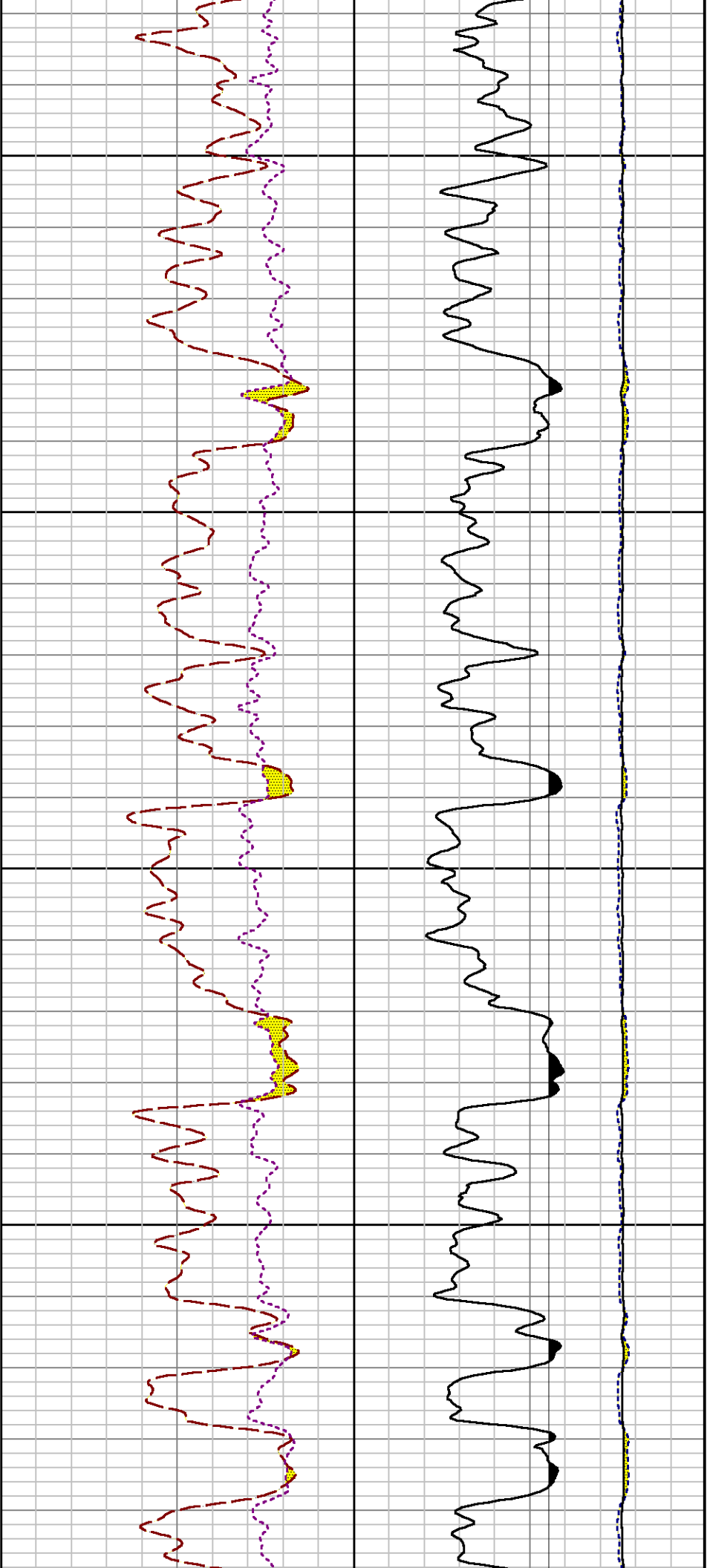


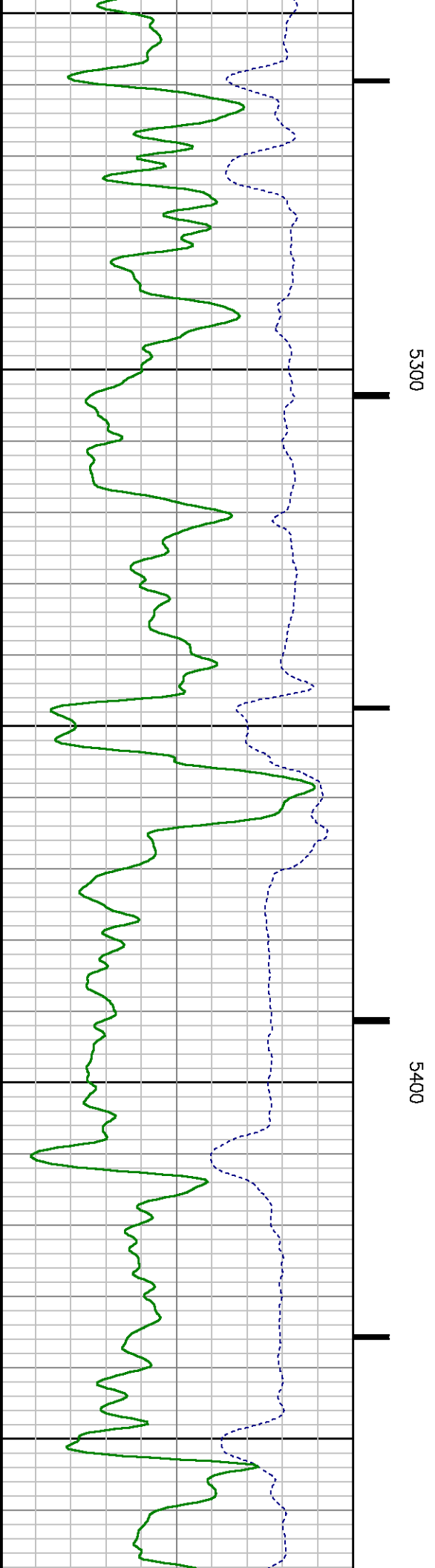
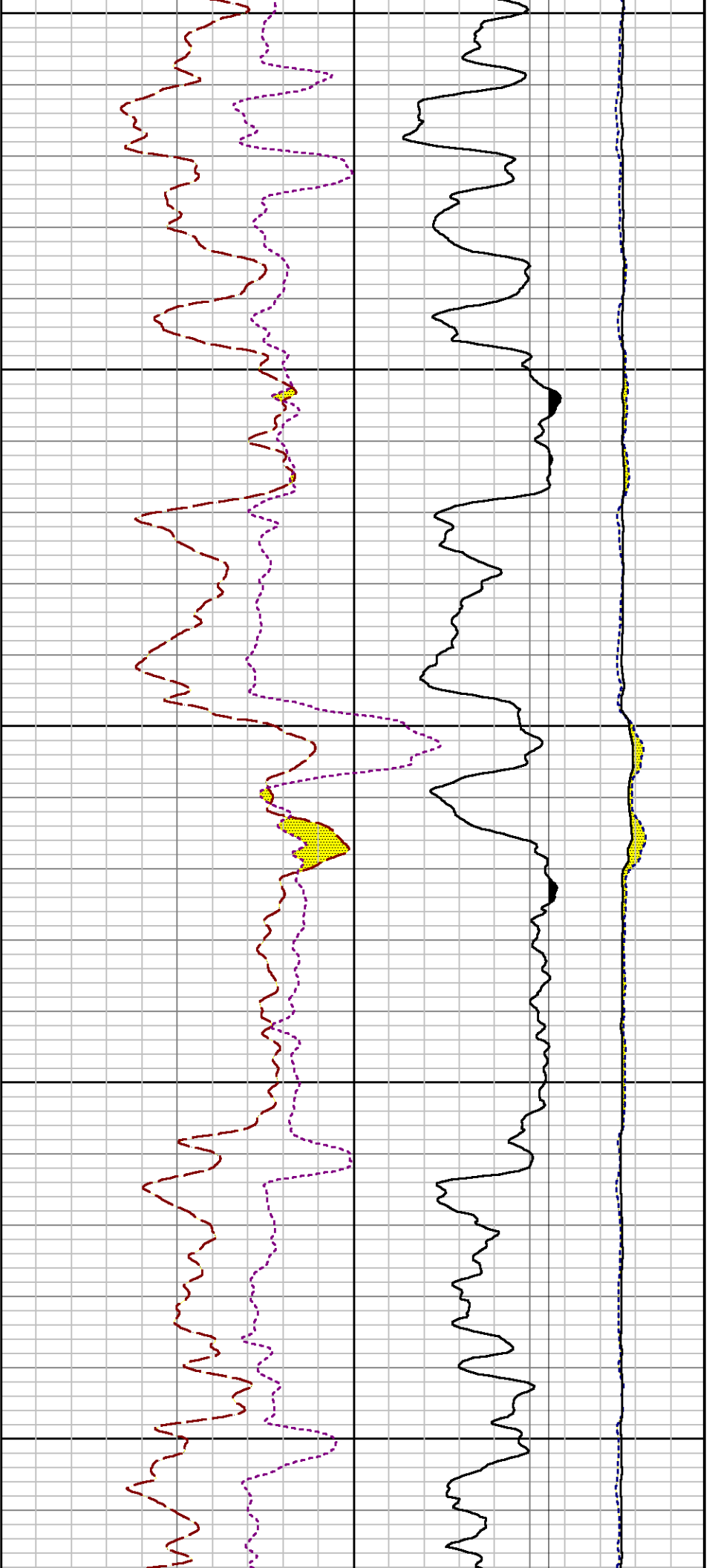




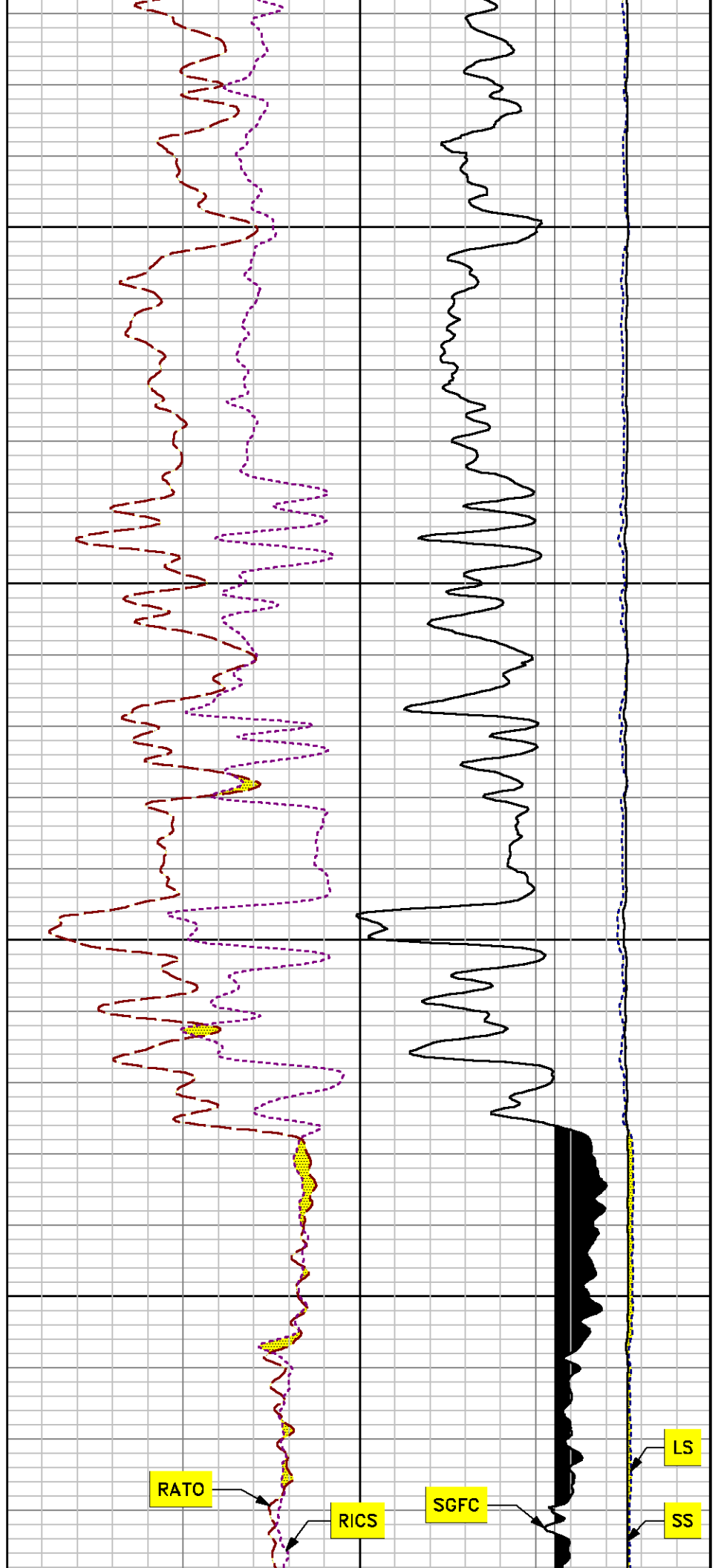
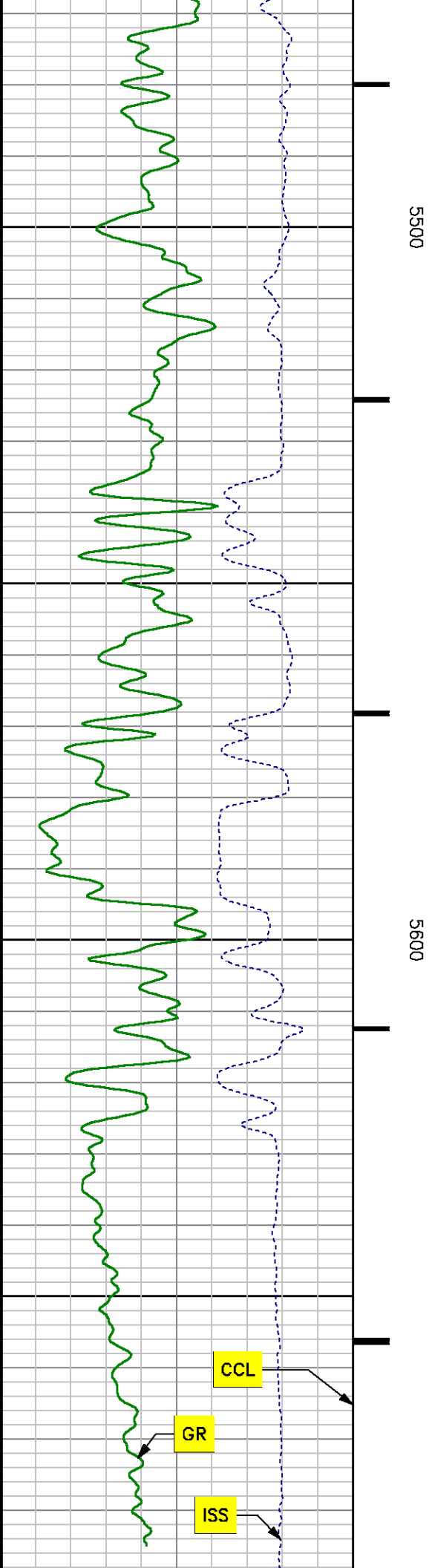


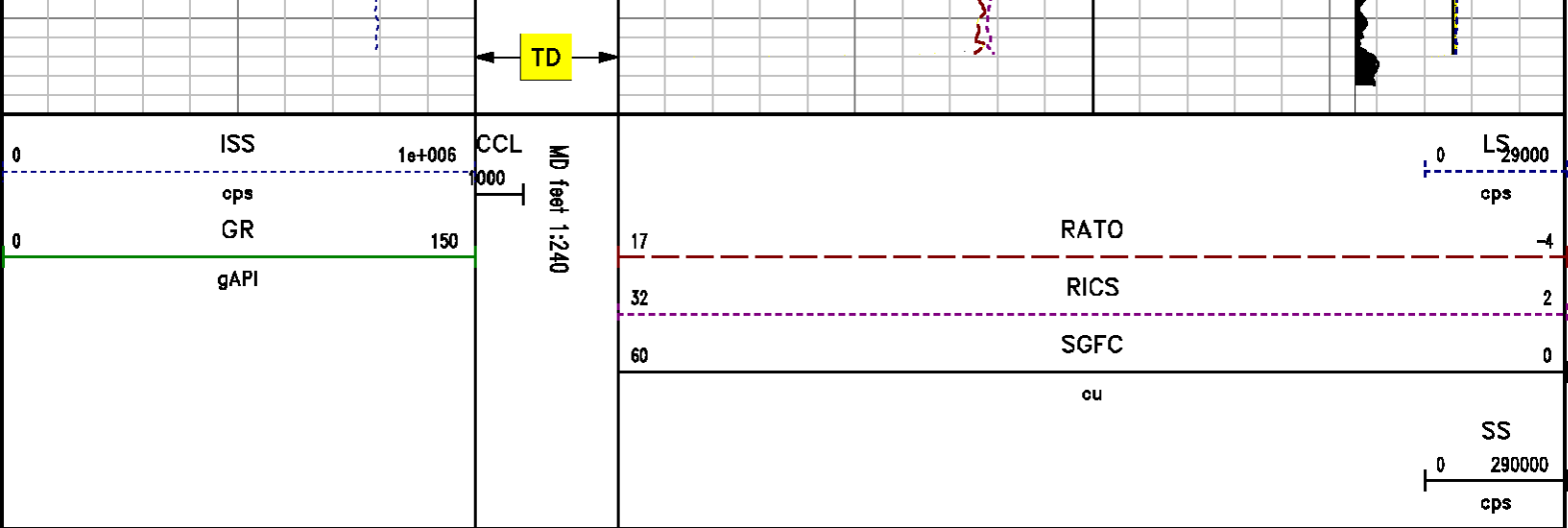












## REPEAT LOG PNC 3D MODE

### SPL PROCESSING

| MEASUREMENT TYPE | PARAMETER     | VALUE          | UNITS | TOP      | BOTTOM   |
|------------------|---------------|----------------|-------|----------|----------|
| PNC Porosity     | Borehole      | Cased          |       | 4889.750 | 5193.500 |
| PNC Porosity     | Borehole Size | 8.750          | inch  | 4889.750 | 5193.500 |
| PNC Porosity     | Casing Size   | 4.500          | inch  | 4889.750 | 5193.500 |
| PNC Porosity     | Gas Filled    | Non Gas Filled |       | 4889.750 | 5193.500 |
| PNC Porosity     | Matrix        | Sandstone      |       | 4889.750 | 5193.500 |

### DEPTH OFFSETS (for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |        |        |        |      |        |
|--------|--------------|-----------------|--------|--------|--------|------|--------|
| 8248EA | -15.320      | FLTM            |        |        |        |      |        |
| 8248EA | -13.320      | CCL             | CHV    |        |        |      |        |
| 8262XY | -10.189      | GR4             |        |        |        |      |        |
| 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  | 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    | RAT0   | RAT013  |
|        |        | 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  | RAT013R |
|        |        | 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

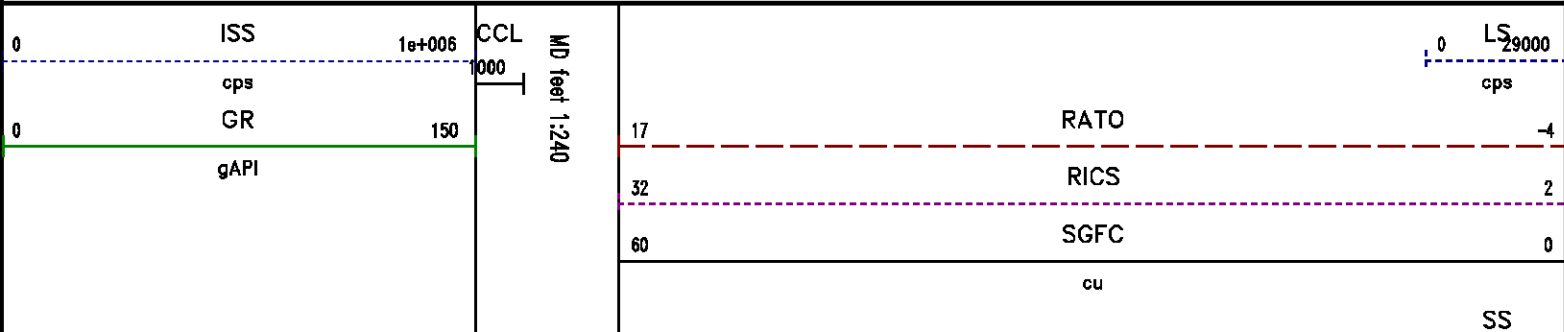
Well : STRAIT SG 432-22

File Name : d:\welldata\432rpm\repeat.xtf

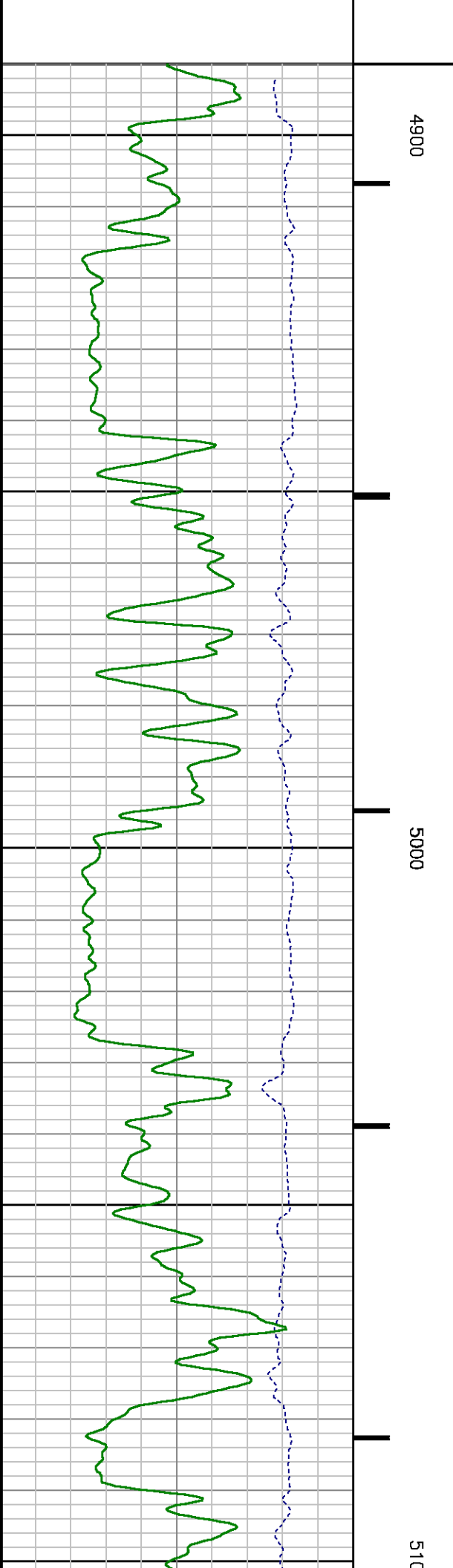
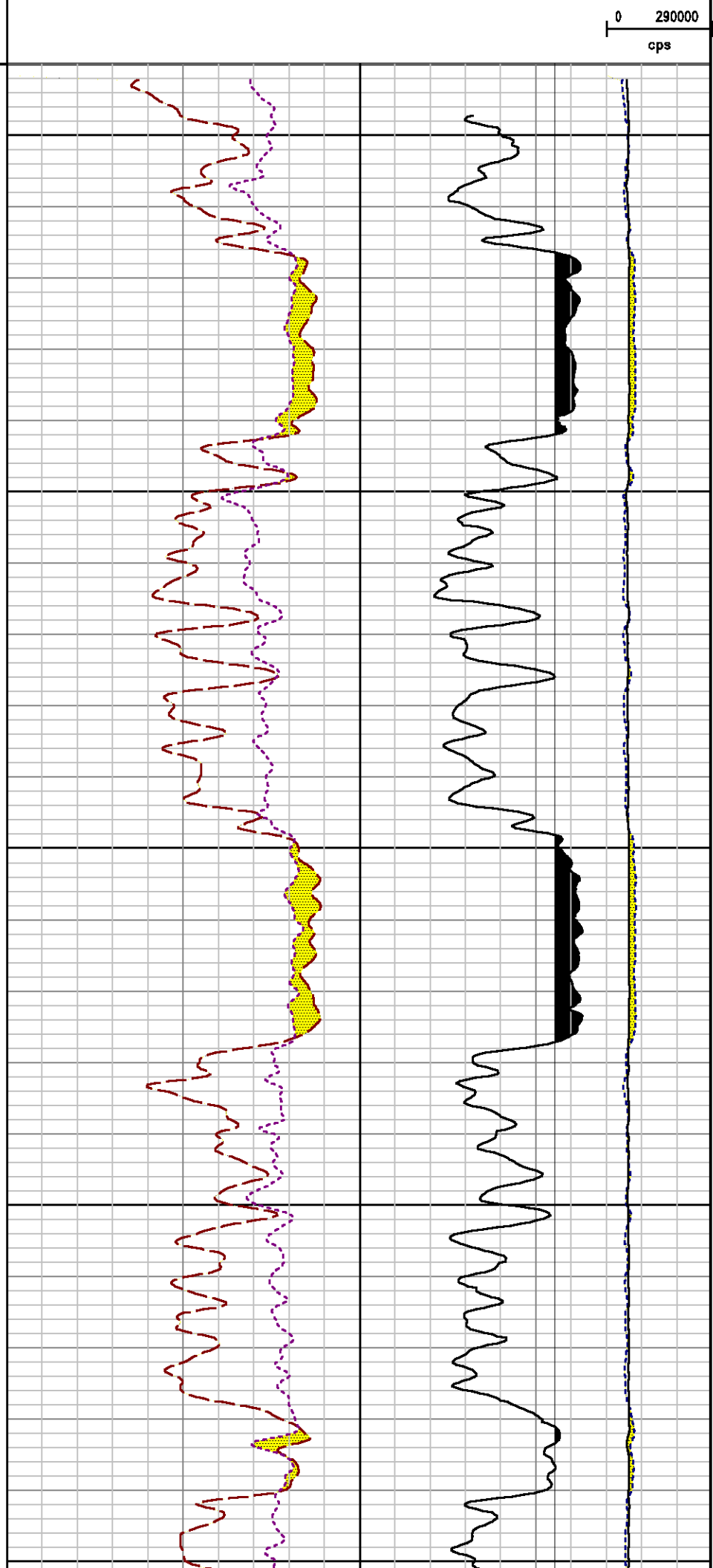
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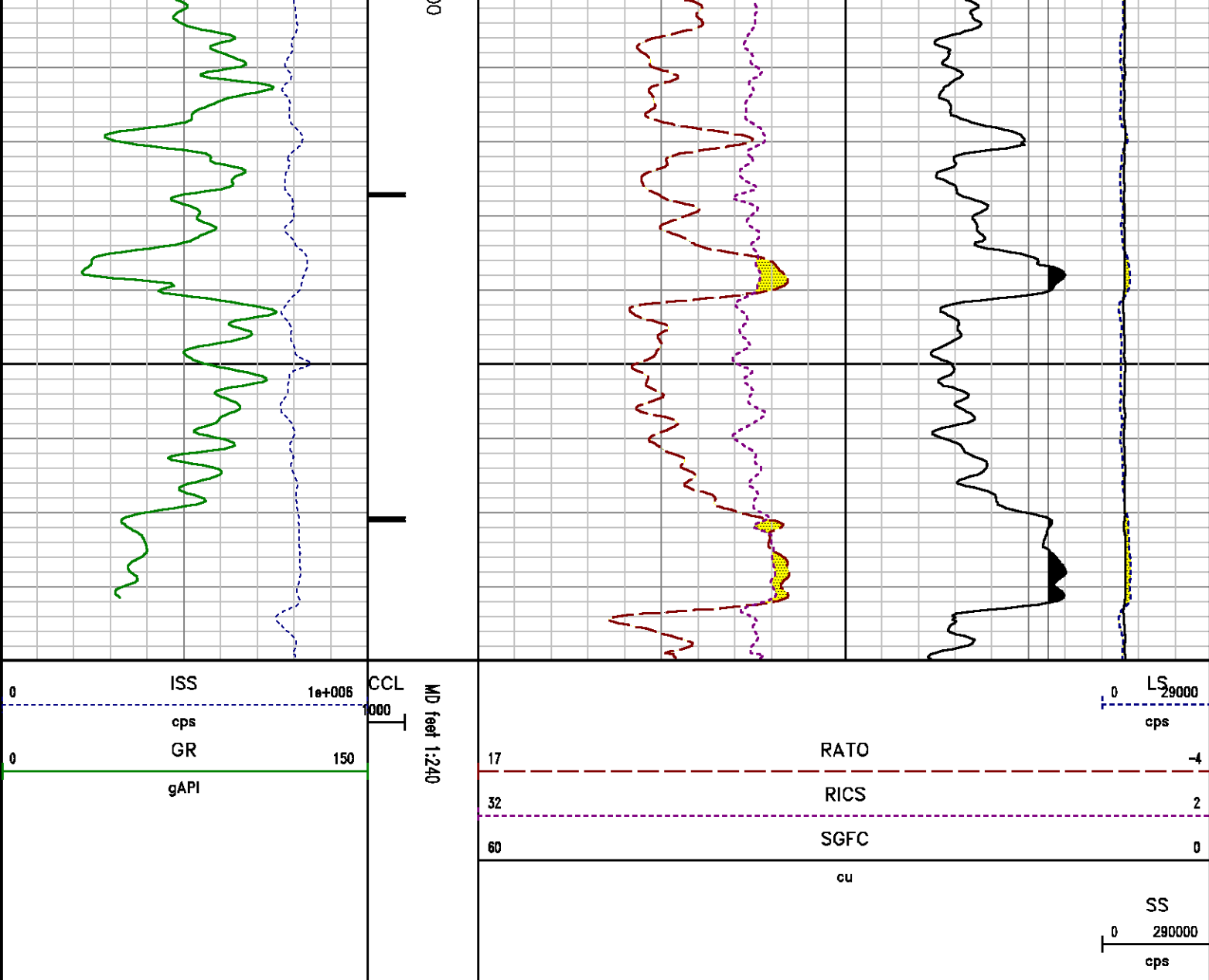
Interval : 4890.00 - 5190.00 feet UP

Created : 8/15/2013 11:57:51 AM



290000  
cps





## CALIBRATION SUMMARY

PNC

Calibration File: C:\case\calver\PNC\555J6.cal

### PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 26 12:55:08 2013 TOOL SERIES: 8281XA ASSET: 555 SEQ: J6

Calibrator #

shop barrel

Source #

8281AA 11765054

|              | ISS     | Mtr VIts<br>(V) | SS Gain | LS Gain | XLS Gain | EA Temp<br>(degF) | Sync Delay<br>(usec) | RCAL   |
|--------------|---------|-----------------|---------|---------|----------|-------------------|----------------------|--------|
| Raw Data     | 817093  | 121.00          | 2316.00 | 2261.00 | 2222.00  | 111.81            | 7.00                 | 0.9843 |
| Interpolated | 1300000 | 139.01          | 2298.19 | 2258.70 | 2216.67  |                   |                      |        |

|          | ISS    | BKS     | BKL    | BKX    | SGA1        | SDA1      | SGA2        | SDA2      |
|----------|--------|---------|--------|--------|-------------|-----------|-------------|-----------|
| Raw Data | 817093 | 6192.69 | 983.08 | 141.84 | 25.77       | 0.14      | 24.27       | 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      | 817093 | 171203.97 | 26411.91 | 88977.66 | 31679.46 | 8262.92 | 53839.95 | 13229.47 |
| Fit Quality % |        | 0.24      | 0.41     | 0.56     | 0.56     | 0.17    | 0.55     | 0.22     |

|               | 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      | 817093  | 1.44      | 4.77           | 30.94            | 15.18           | 10.77         | 3.83           | 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 % |         | 0.08      | 0.28           | 0.17             | 0.09            | 0.28          | 0.28           | 0.23            |
| Reduced       | 1382706 | 1.43      | 4.78           | 31.03            | 15.23           | 10.73         | 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       |

## GAMMA RAY (GR4)

Calibration File: C:\case\calver\GR\470J9.cal

### CALIBRATION SUMMARY

|                      |                          |                        |                |                     |                        |                       |    |
|----------------------|--------------------------|------------------------|----------------|---------------------|------------------------|-----------------------|----|
| DATE/TIME PERFORMED: | Fri Jul 19 08:23:22 2013 | TOOL SERIES:           | 8262XY         | ASSET:              | 470                    | SEQ:                  | J9 |
| Calibrator #         | Background<br>[cps]      | Calibrator On<br>[cps] | Multiplicative | Background<br>[api] | Calibrator On<br>[api] | Differential<br>[api] |    |
| S2K JIG              | 119.20                   | 447.27                 | 0.549          | 65.40               | 245.40                 | 180.00                |    |

Verification File: C:\case\calver\GR\470J9.VP

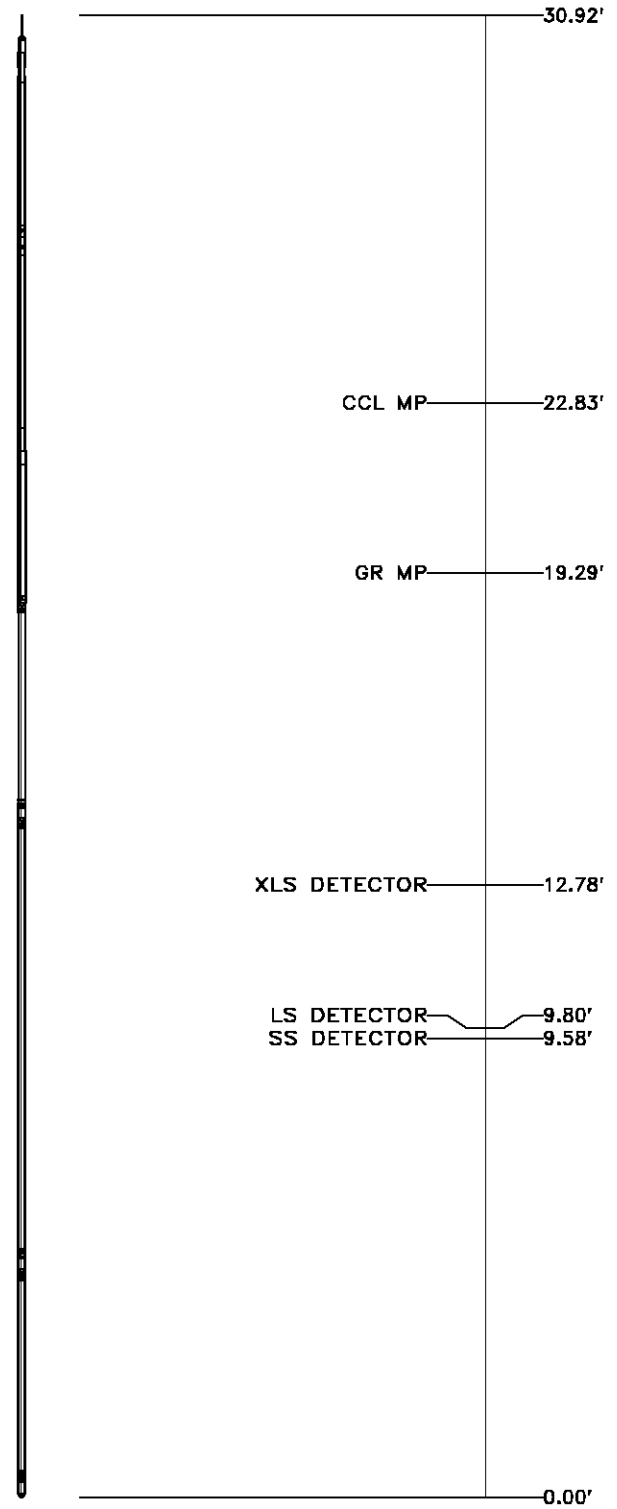
### PRIMARY VERIFICATION

|                      |                          |                        |                |                     |                        |                       |    |
|----------------------|--------------------------|------------------------|----------------|---------------------|------------------------|-----------------------|----|
| DATE/TIME PERFORMED: | Fri Jul 19 08:26:05 2013 | TOOL SERIES:           | 8262XY         | ASSET:              | 470                    | SEQ:                  | J9 |
| Calibrator #         | Background<br>[cps]      | Calibrator On<br>[cps] | Multiplicative | Background<br>[api] | Calibrator On<br>[api] | Differential<br>[api] |    |
| S2K JIG              | 117.27                   | 449.96                 | 0.549          | 64.34               | 246.88                 | 182.54                |    |

# 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: 30.92'  
 Total Weight: Not Available  
 Max Diameter: 0' 1.70"



Baker Atlas



|         |                  |       |          |
|---------|------------------|-------|----------|
| Company | WPX ENERGY       |       |          |
| Well    | STRAIT SG 432-22 |       |          |
| Field   | GRAND VALLEY     |       |          |
| County  | GARFIELD         | State | COLORADO |

|          |                |
|----------|----------------|
| File No: | CH075714       |
| API No:  | 05045217570000 |

Location

SHL: 1495' FNL & 282' FEL SEC:22  
BHL: 1401' FNL & 1552' FEL SEC:22

Elevations

KB 5244 ft  
DF  
GL 5222 ft

22 7S 96W  
SG 42-22  
CYCLONE 17

SEC 22 TWP 7S RGE 96W