



RESERVOIR PERFORMANCE MONITOR

Baker Atlas

File No: **Company** **WPX ENERGY**

CH082308 **Well** **SAVAGE RWF 24-25**

API No: **Field** **RULISON**

05045219790000 **County** **GARFIELD** **State** **COLORADO**

Location

25 6S 94W

SHL: 1999' FSL & 2305' FWL

RWF 23-25 PAD

BHL: 751' FSL & 2616' FEL (SWSE)

NABORS 677

SEC 25 **TWP** 6S **RGE** 94W

Other Services

BOND LOG

Permanent Datum

GL **Elevation** 6096 ft

Log Measured From

KB **Elevations** KB 6122 ft

Drill Measured From

KELLY BUSHING DF 6096 ft

Date 01/FEB/14

Run ONE

Service Order US62E099

Depth Driller 8644 ft

Depth Logger 8608 ft

Bottom Logged Interval 8598 ft

Top Logged Interval 4449 ft

Time Started 0730

Time Finished 1330

Operator Rig Time 6 HRS

Type of Fluid in Hole WATER

Fluid Density NA

Salinity NA

Fluid Level 70 ft

Logged Cement Top NA

Wellhead Pressure 0 psi

Maximum Hole Deviation NA

Nominal Logging Speed 10 fpm

Maximum Recorded Temperature 233 degF

Reference Log Date 31/JAN/14

Equipment No. 4271

Location GRAND JCT

Recorded By FLOYD RENEAU

Witnessed By BOB CADY

- 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 | 1112 ft |
| 8.75 in | 1112 ft | 8644 ft |

Casing Record

| Size | Weight | Grade | From | To |
|----------|-------------|-------|------|---------|
| 9.625 in | | | 0 ft | 1112 ft |
| 4.5 in | 11.6 lbm/ft | I-80 | 0 ft | 8644 ft |

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 1/31/2014 at the client's request.

The amount of linear shift is 8 feet.

Logged in PNC-3D mode.

BHT = 233°F

SJ = 5118'-5142'

| Equipment Data | | | | | |
|----------------|------|---------|---------------|---------------|----------|
| Run | Trip | Tool | Series Number | Serial Number | Position |
| 1 | 1 | TEMP | 8255XA | Z176973 | FREE |
| 1 | 1 | RPM | 8281FA | 10401926 | FREE |
| 1 | 1 | RPM | 8281PA | 10160383 | FREE |
| 1 | 1 | RPM | 8281EA | 10273848 | FREE |
| 1 | 1 | GR | 2812LA | 10274385 | FREE |
| 1 | 1 | TEL/CCL | 8248EA | Z120493 | FREE |
| 1 | 1 | PCM | 8250EA | 10314363 | FREE |

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | TOP | BOTTOM |
|------------------|--------------------------|----------------|-------|----------|----------|
| PNC Porosity | Borehole | Cased | | 4429.750 | 8618.566 |
| PNC Porosity | Borehole Size | 8.750 | inch | 4429.750 | 8618.566 |
| PNC Porosity | Casing Size | 4.500 | inch | 4429.750 | 8618.566 |
| PNC Porosity | Gas Filled | Non Gas Filled | | 4429.750 | 8618.566 |
| PNC Porosity | Matrix | Sandstone | | 4429.750 | 8618.566 |
| TPS Pressure | Temperature Corr. Source | Fixed (72.00) | degF | 4429.750 | 8618.566 |

DEPTH OFFSETS
(for Acquired Curves)

| SERIES | DEPTH OFFSET | ACQUIRED CURVES |
|--------|--------------|--|
| 8248EA | -26.519 | FLTM |
| 8248EA | -24.519 | CCL CHV |
| 2812LA | -21.969 | GR |
| 8281XA | -12.702 | HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 |

8281XA

-12.291

SDL3 SGA3 SGL3 STA3 XS ASPEC3
AMB3 AMF3 CHF3 IXSC IXSN RATO23
RICXC RIN13C RIN23 RIN23C SD3D SG3D
SGB3 SGF3 WDT3 CXSR IXSR XSR
RICXR

HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2
BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3
CPT2Q4 ET2 ILS LS MCS2 MCS2Q0
QCAL2 RGN2 RICL RONE23 RTWO23 SDA2
SDL2 SGA2 SGB2 SGF2 SGK2 SGL2
STA2 ASPEC2 ILSC ILSN WDT2 RICLC
CLSR ILSR LSR RICLR

8281XA

-12.041

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
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 H0C FE2XC ISSC RINC
ISSN RDEN WDT1 RICSC CSSR G1R
G2R ISSR SSR SS2R RATOR RATO13R
RBORR RICSR RINR RIN13R RONE RPORR
RTWOR

8255XA

-0.792

PTFS PTMS

8255XA

-0.775

SPF1 SPFQ TSCP TSDP

8255XA

0.000

DTEM TEMP TNF

SYSTEM

0.000

TEN TTEN

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : SAVAGE RWF 24-25

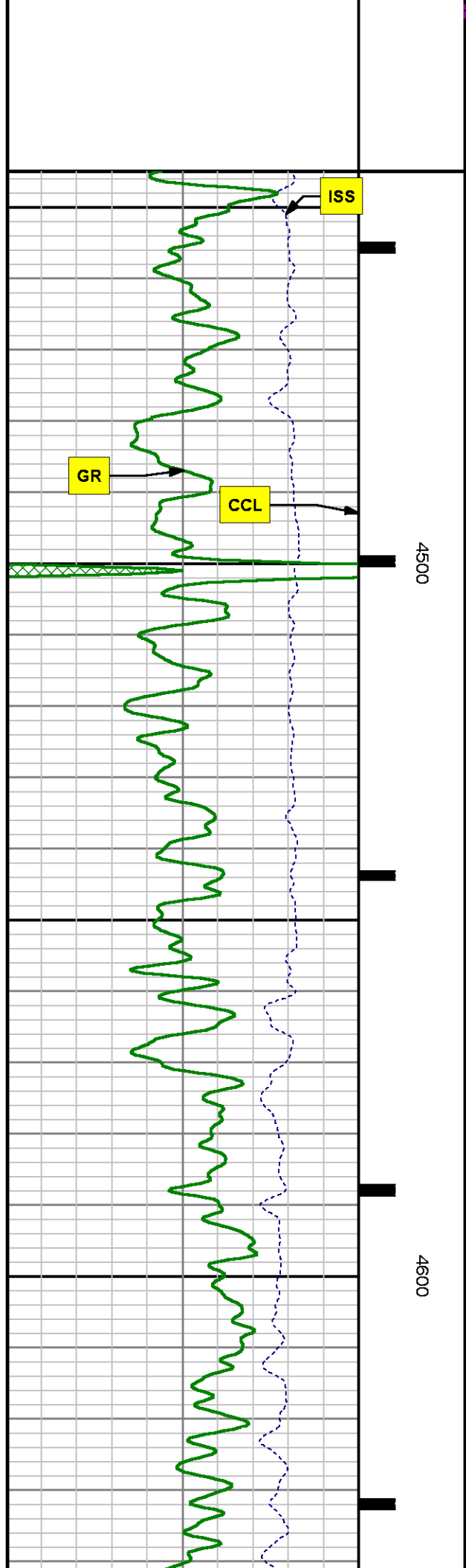
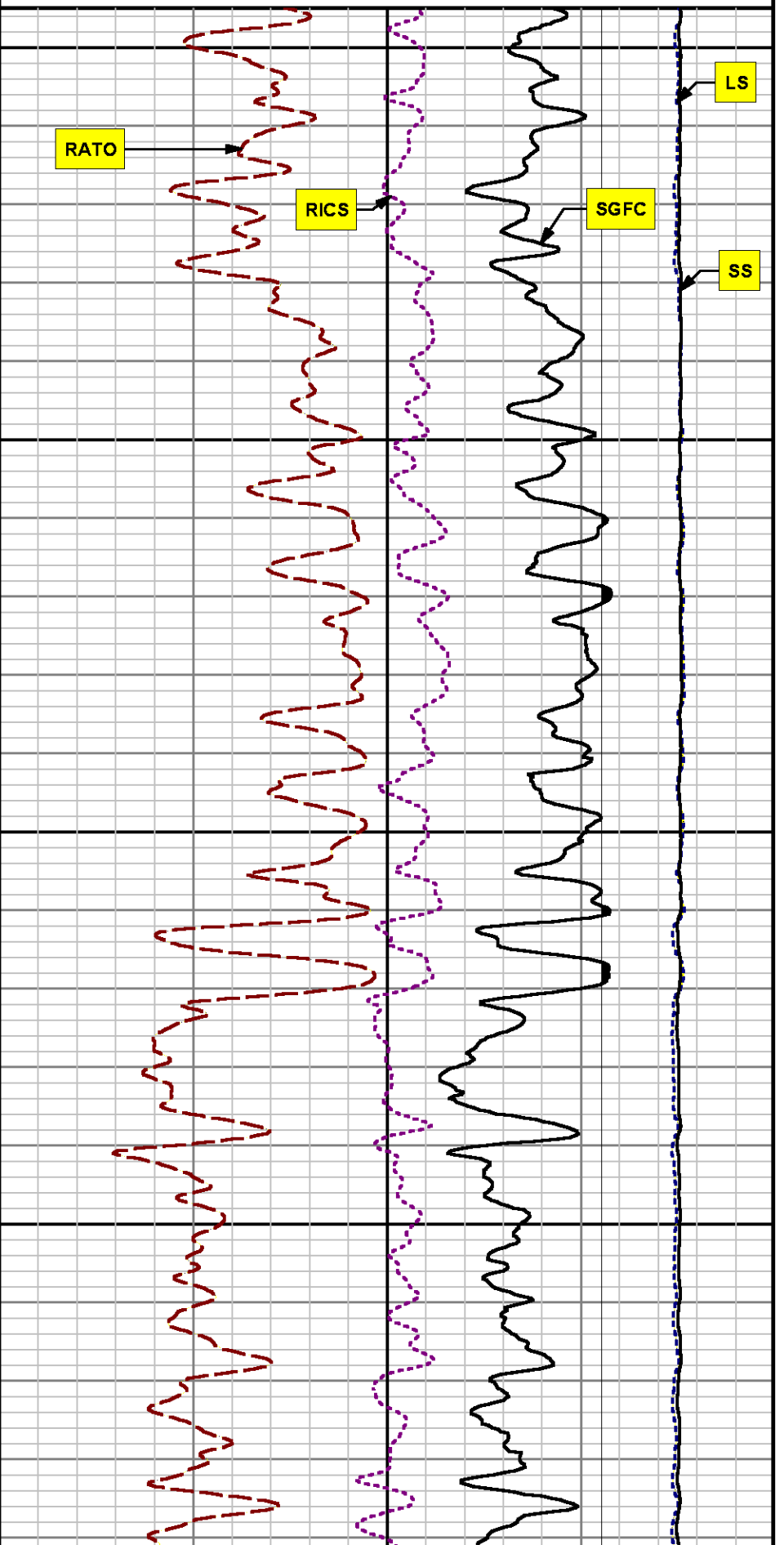
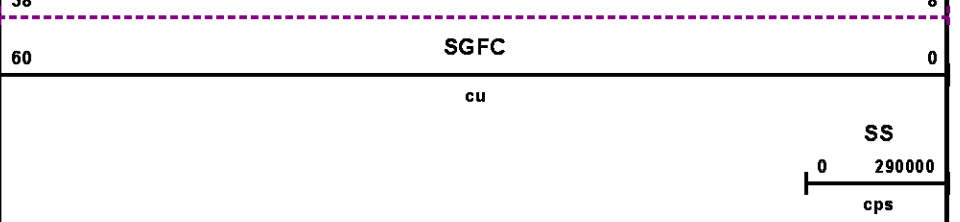
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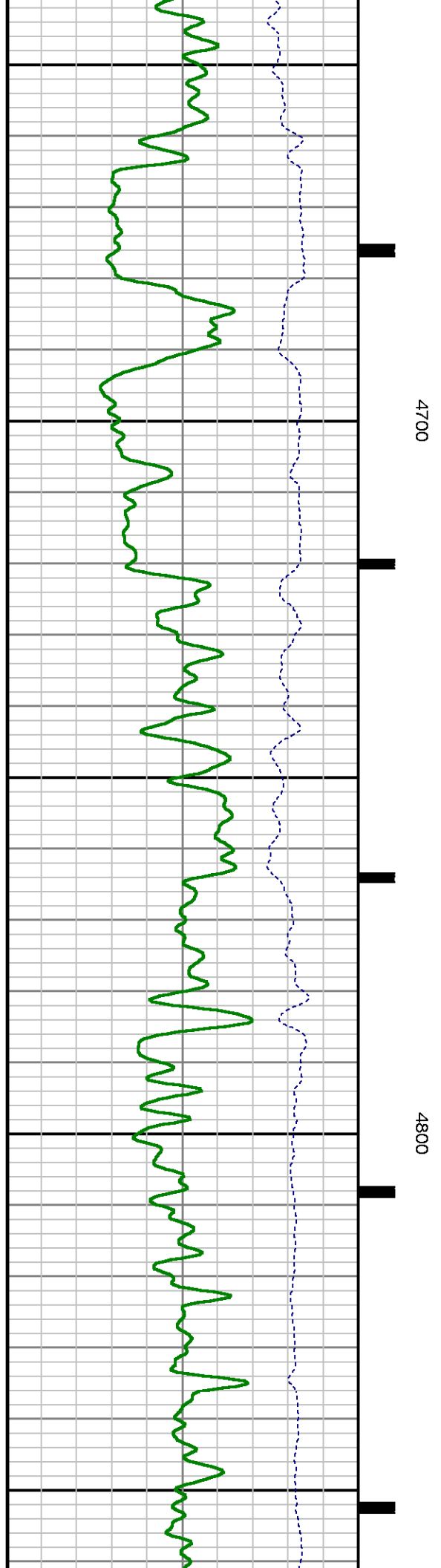
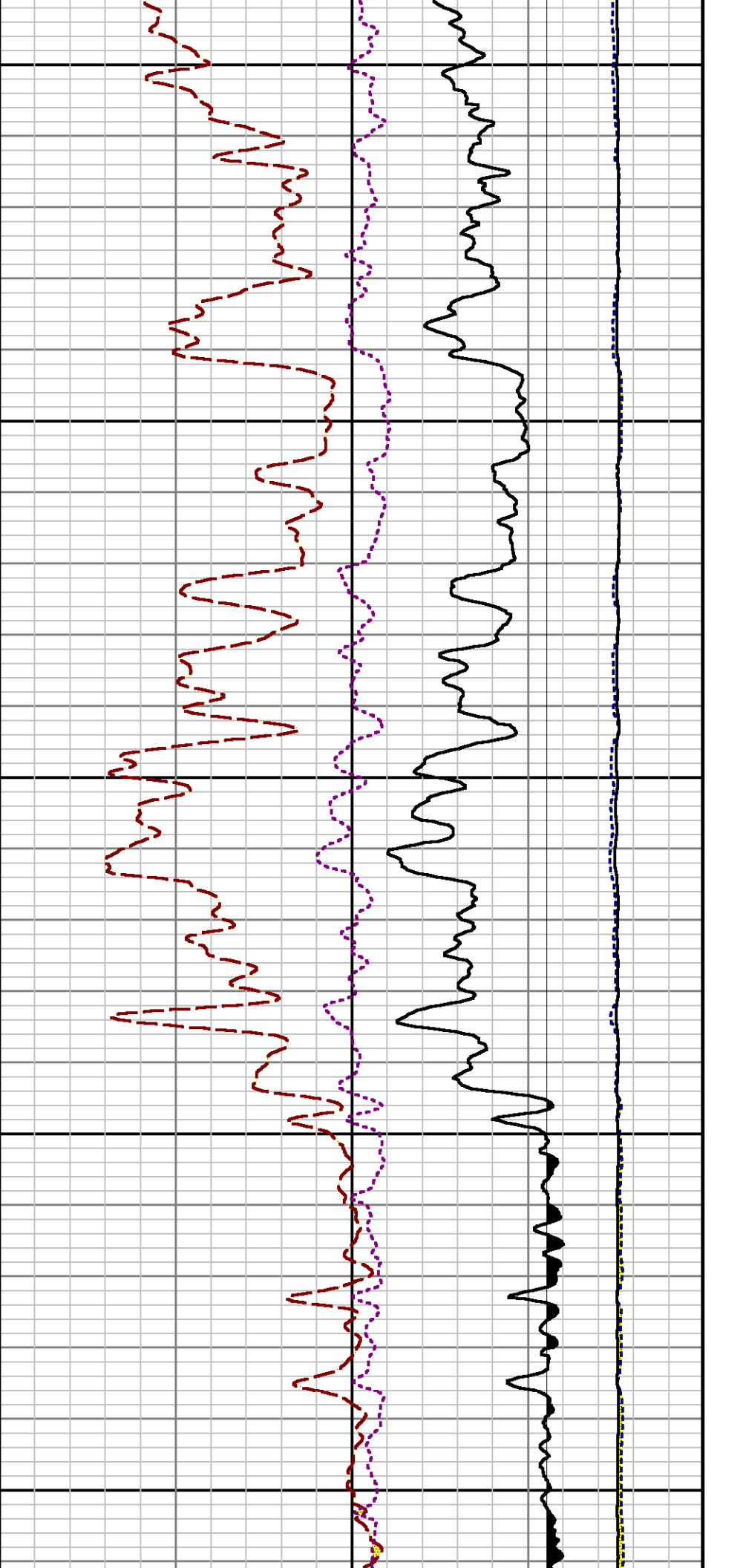
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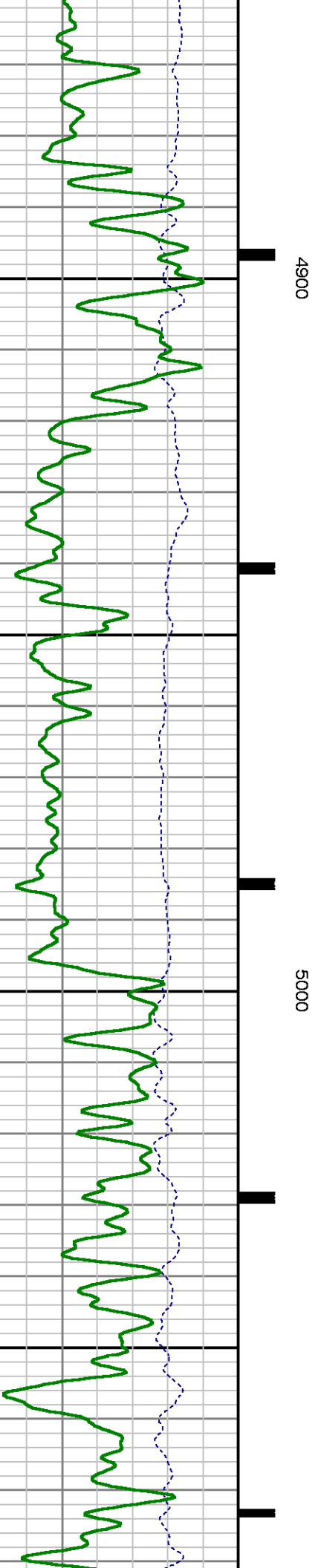
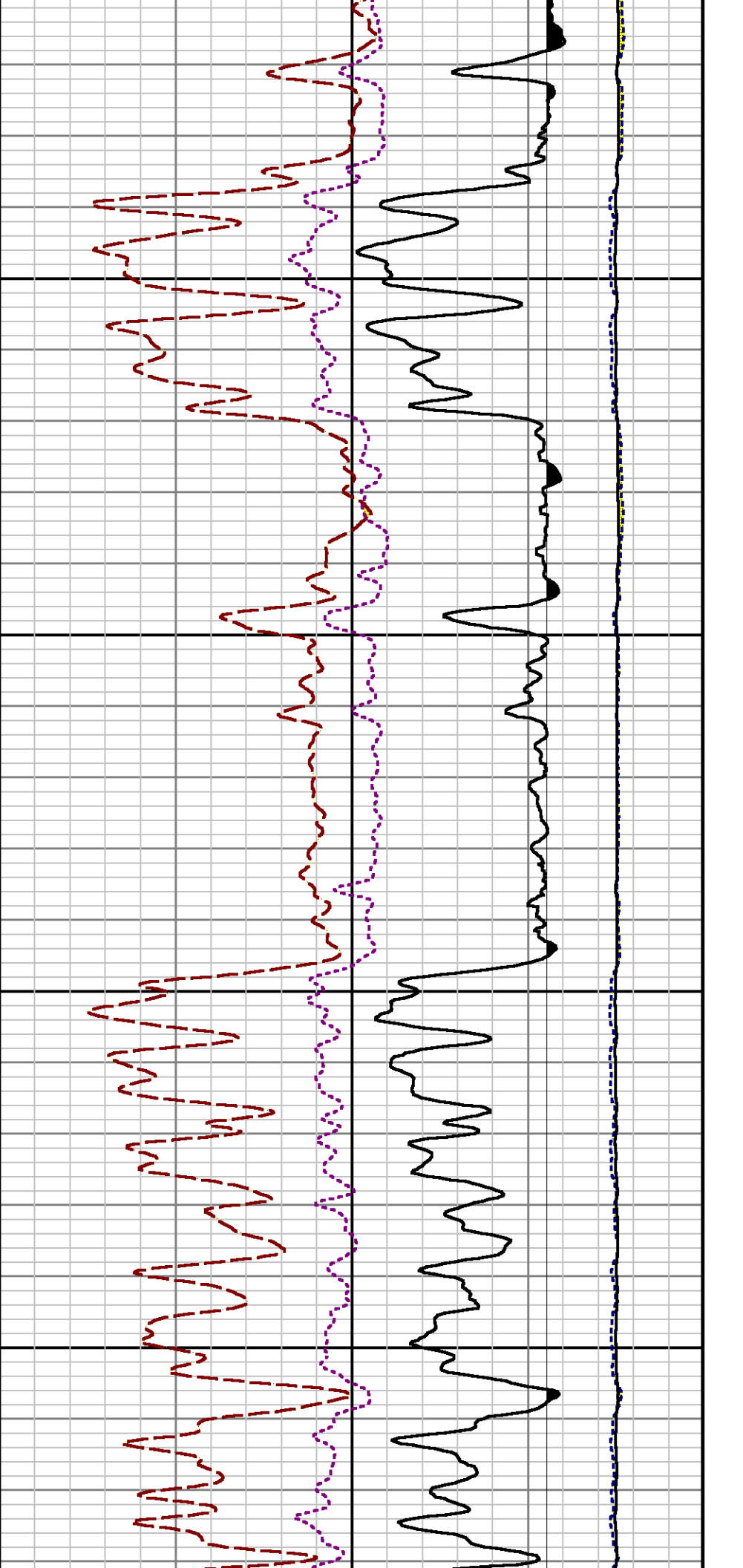
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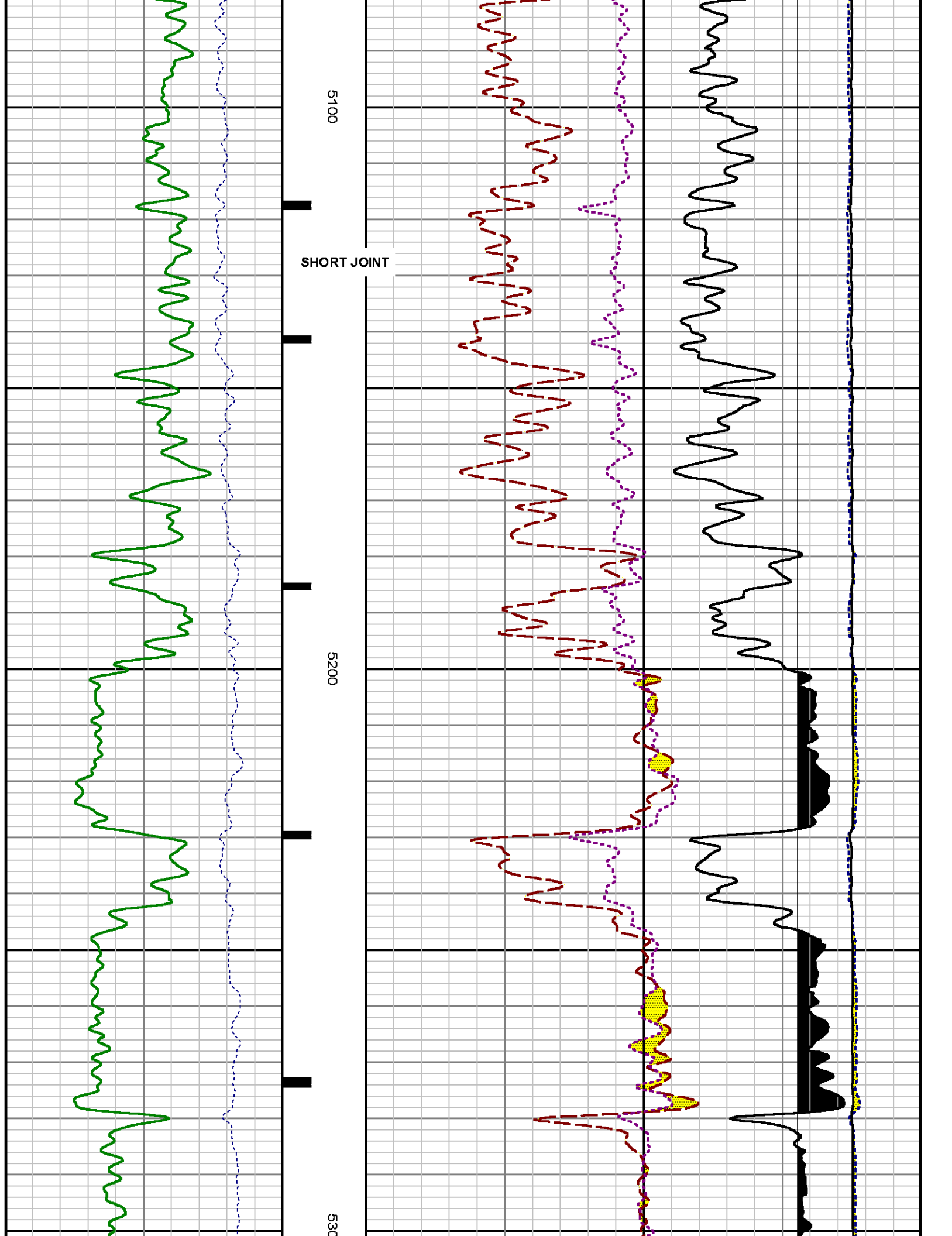
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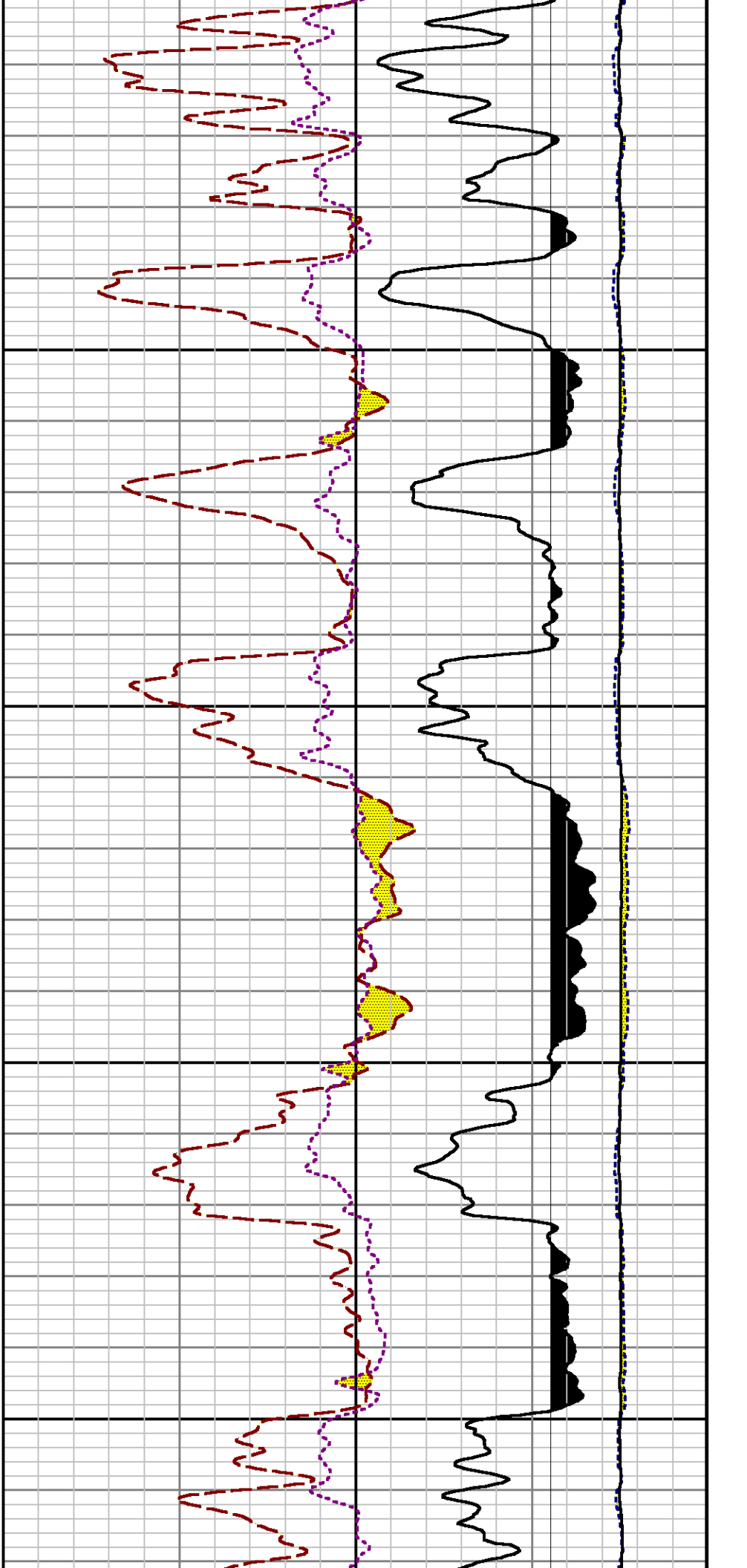








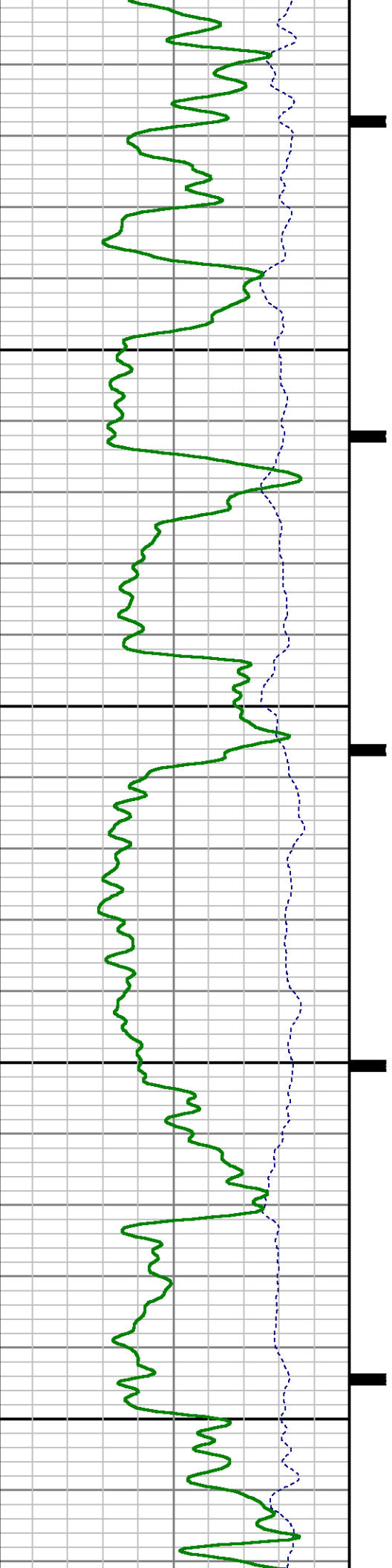


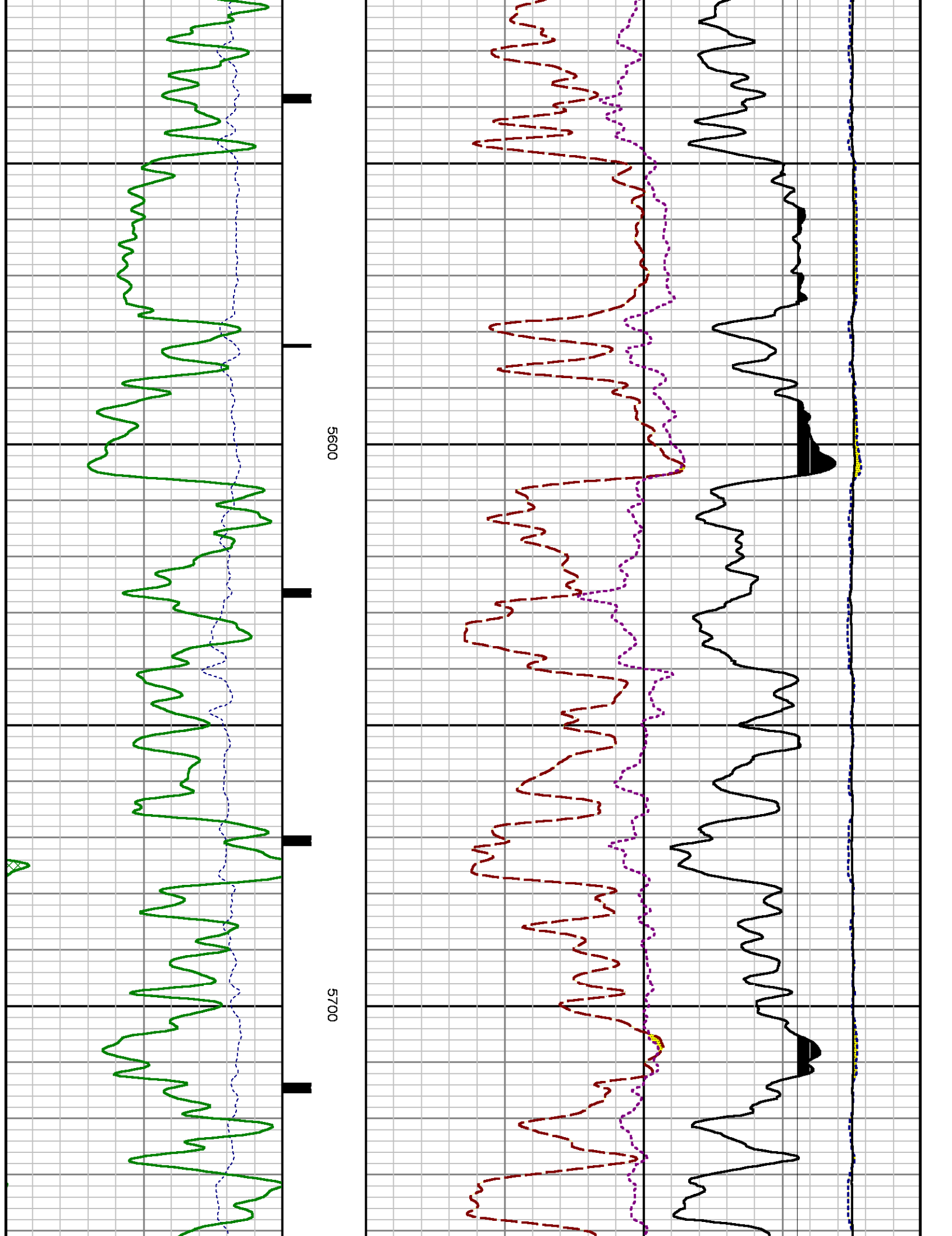


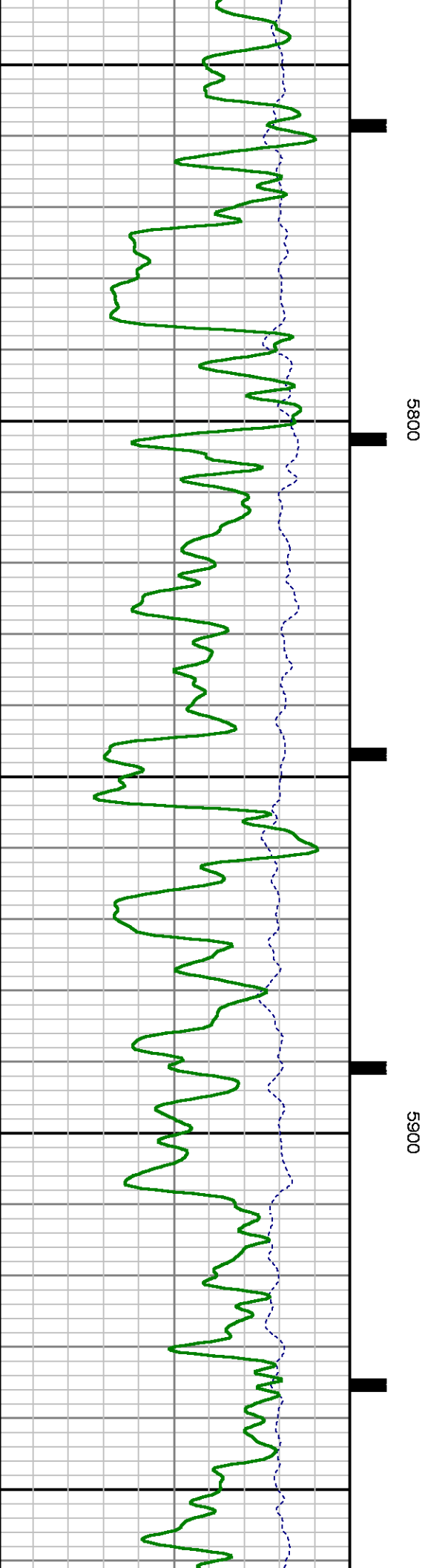
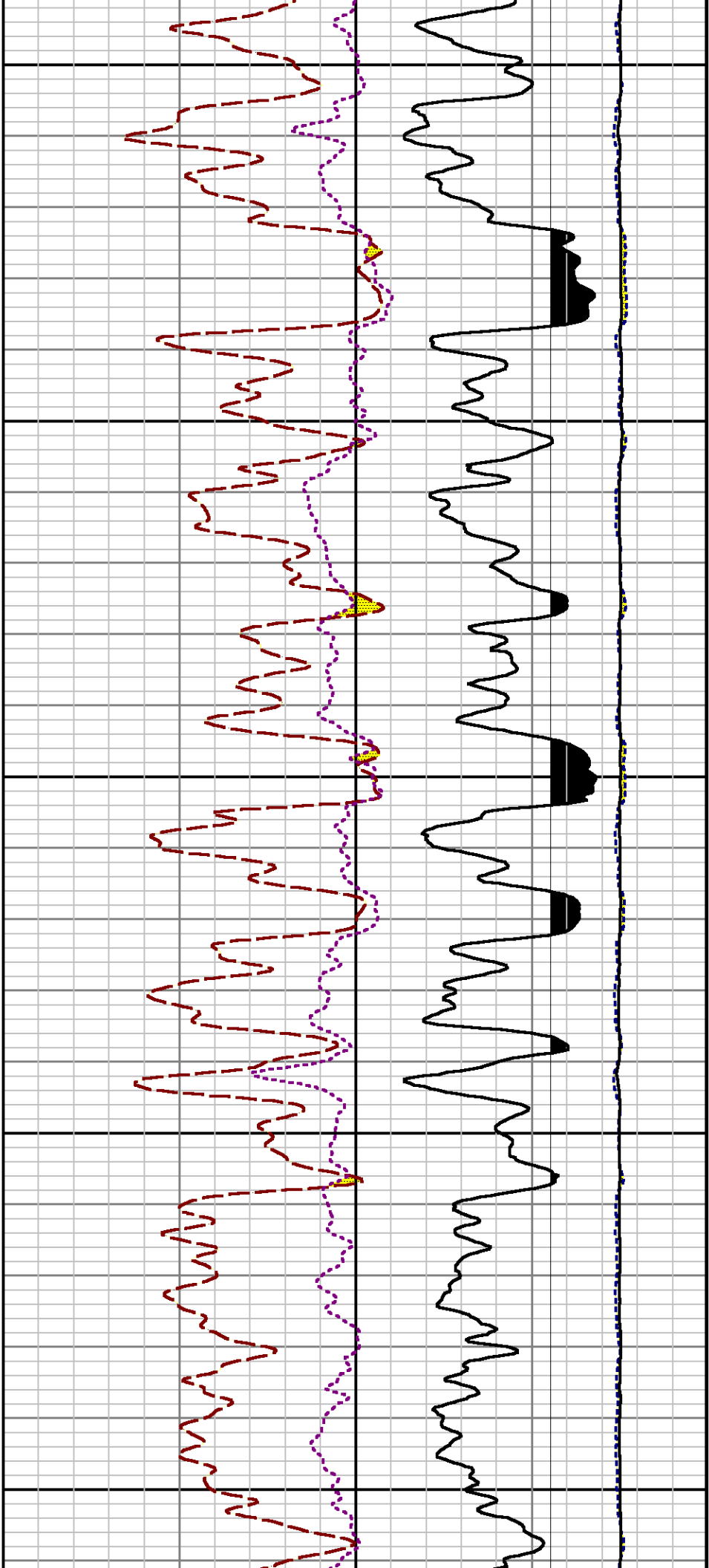
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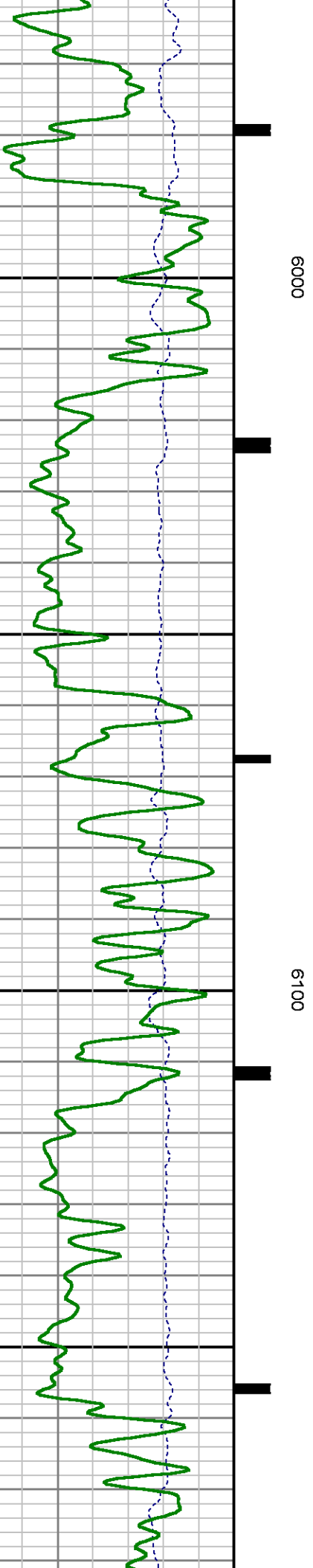
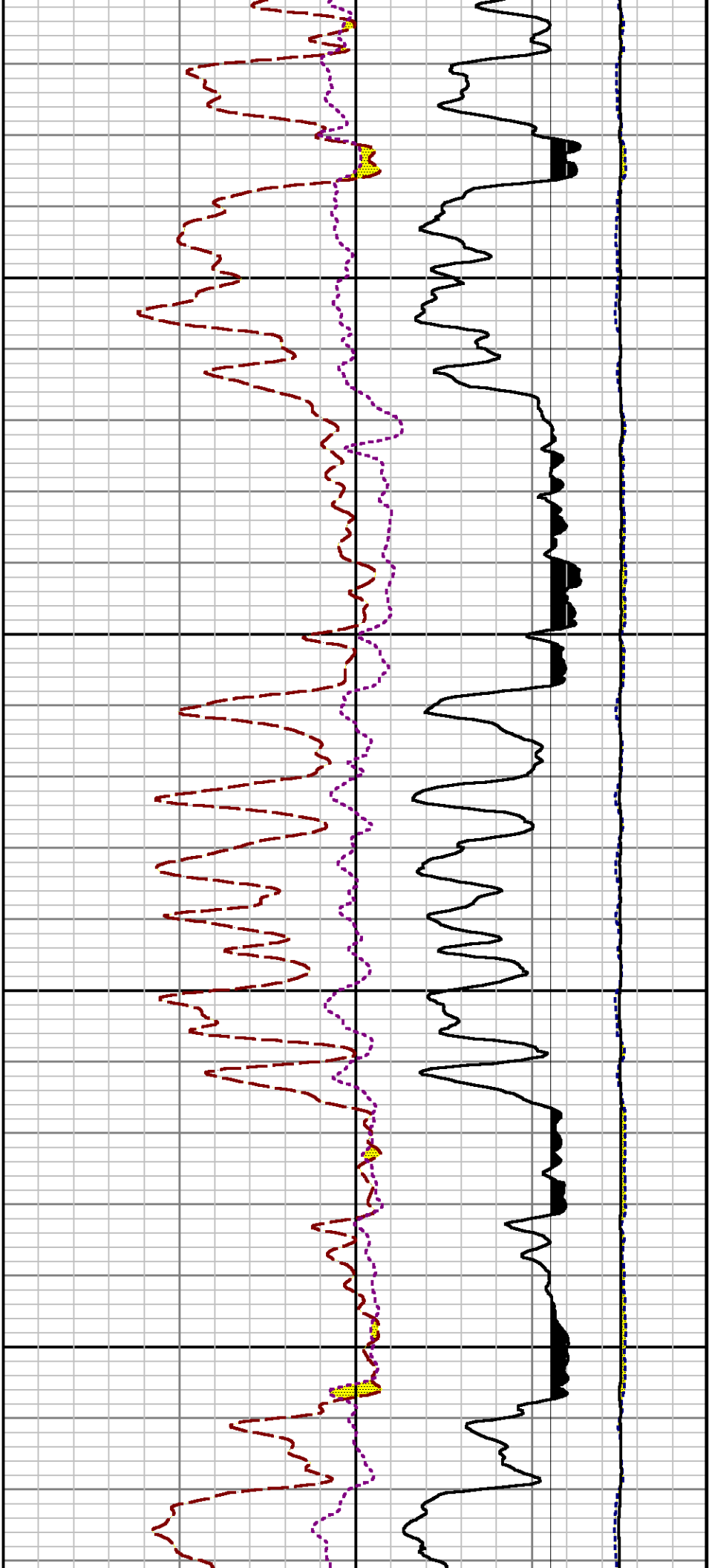
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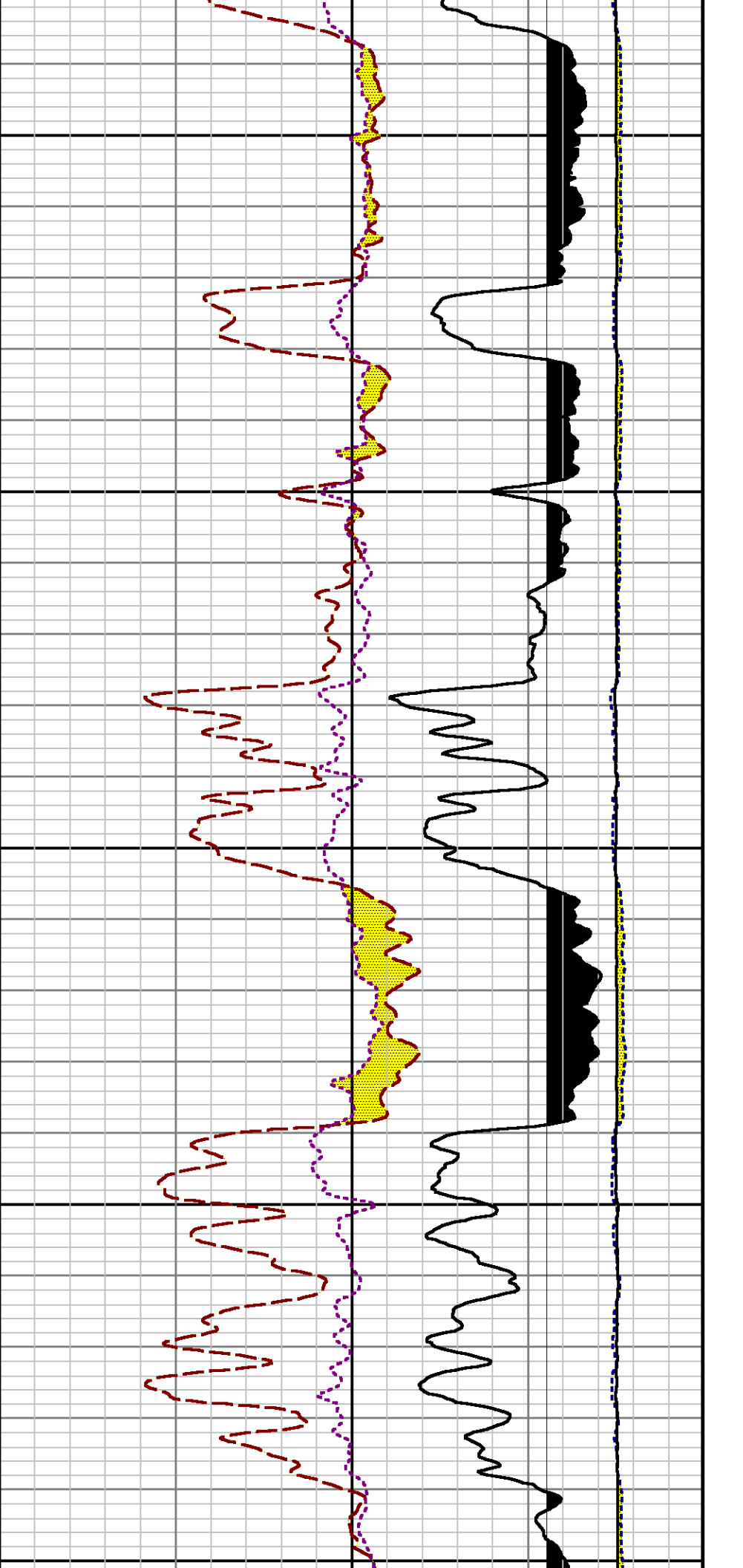
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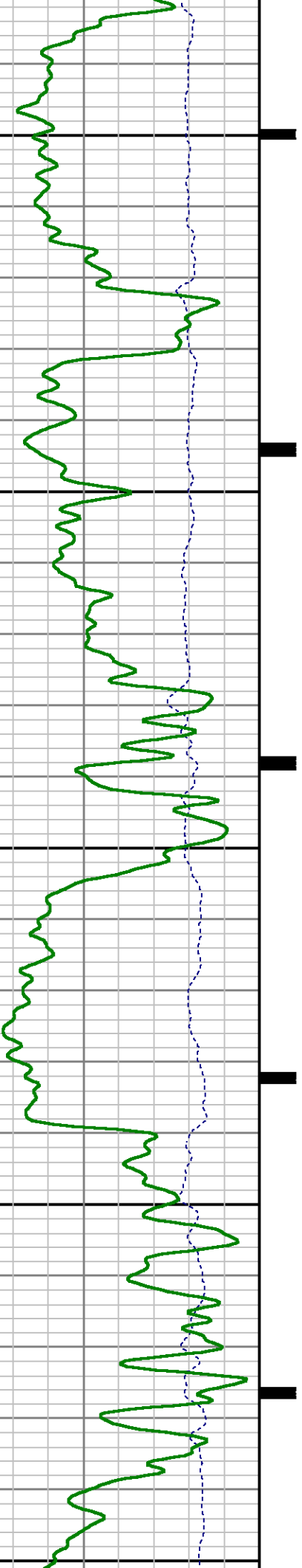


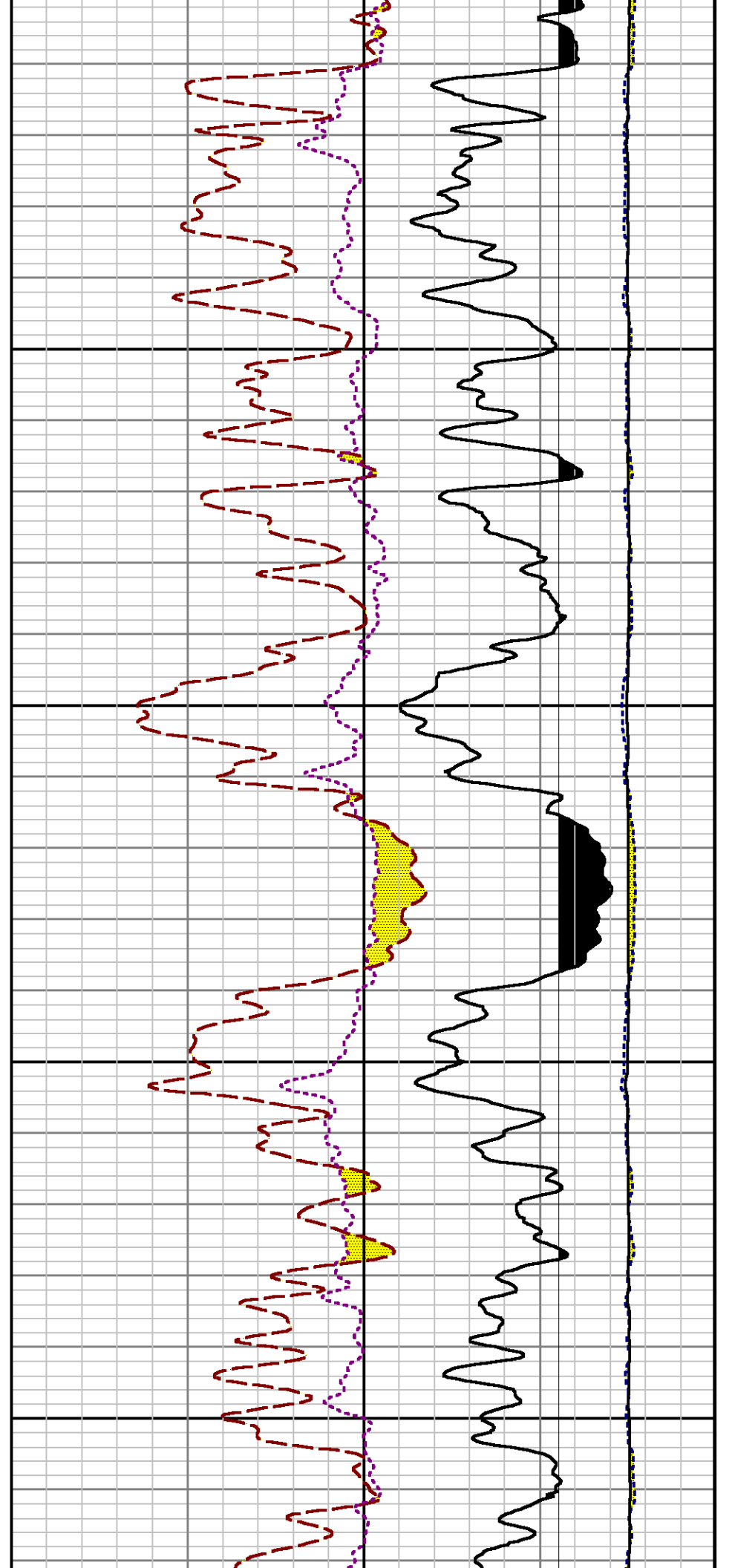
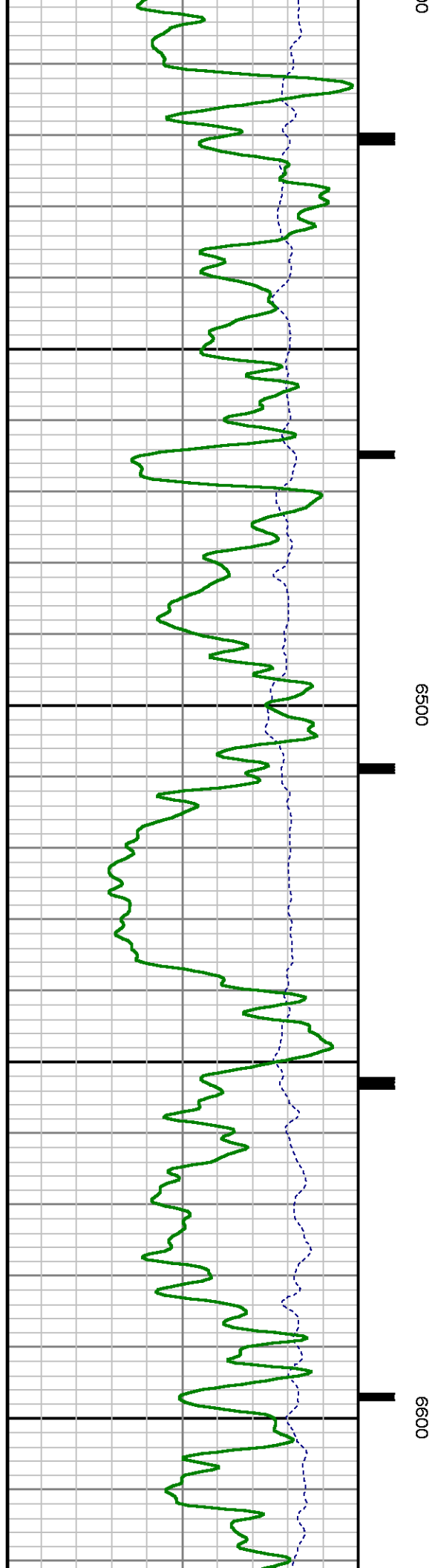


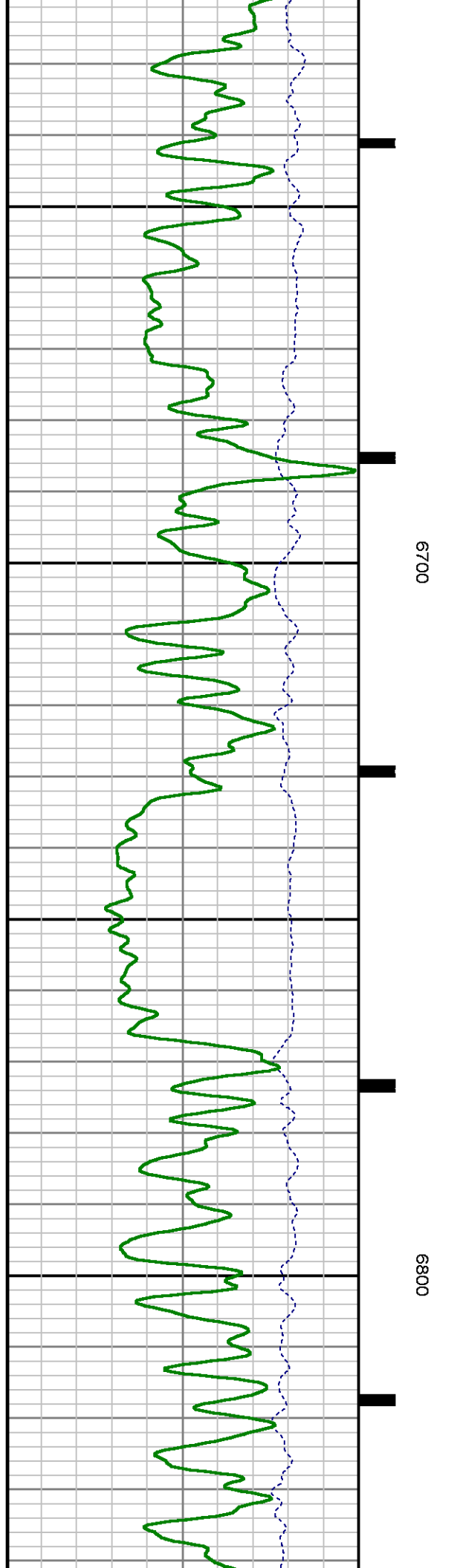
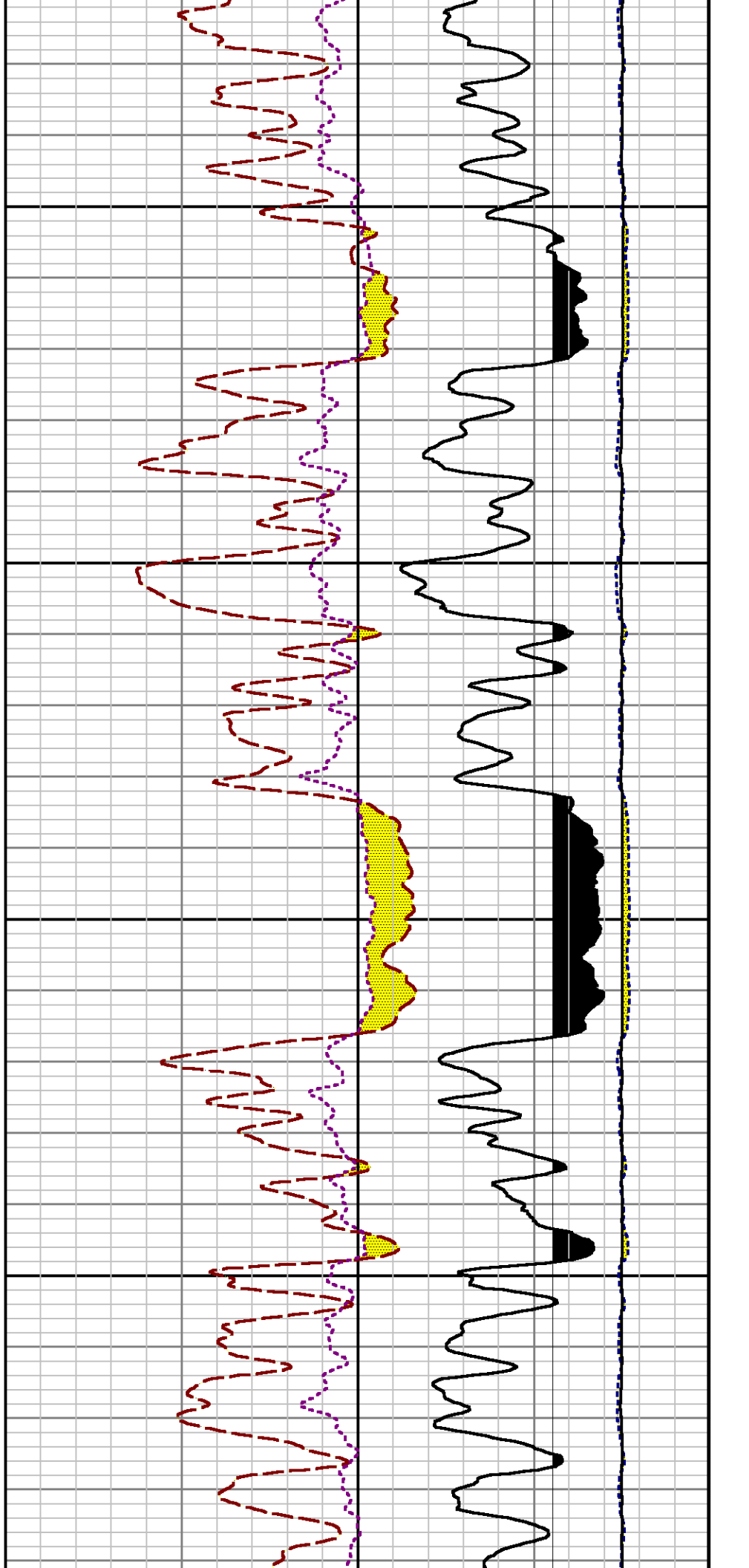
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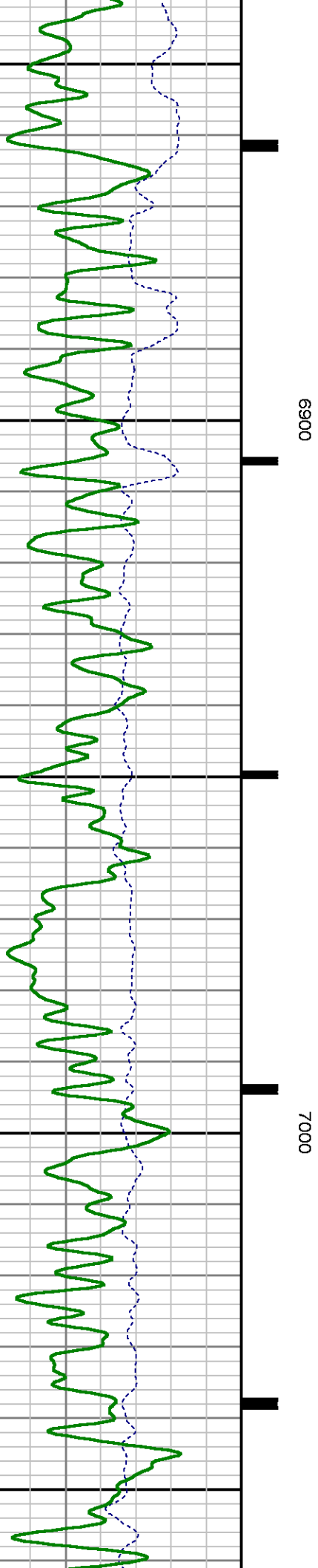
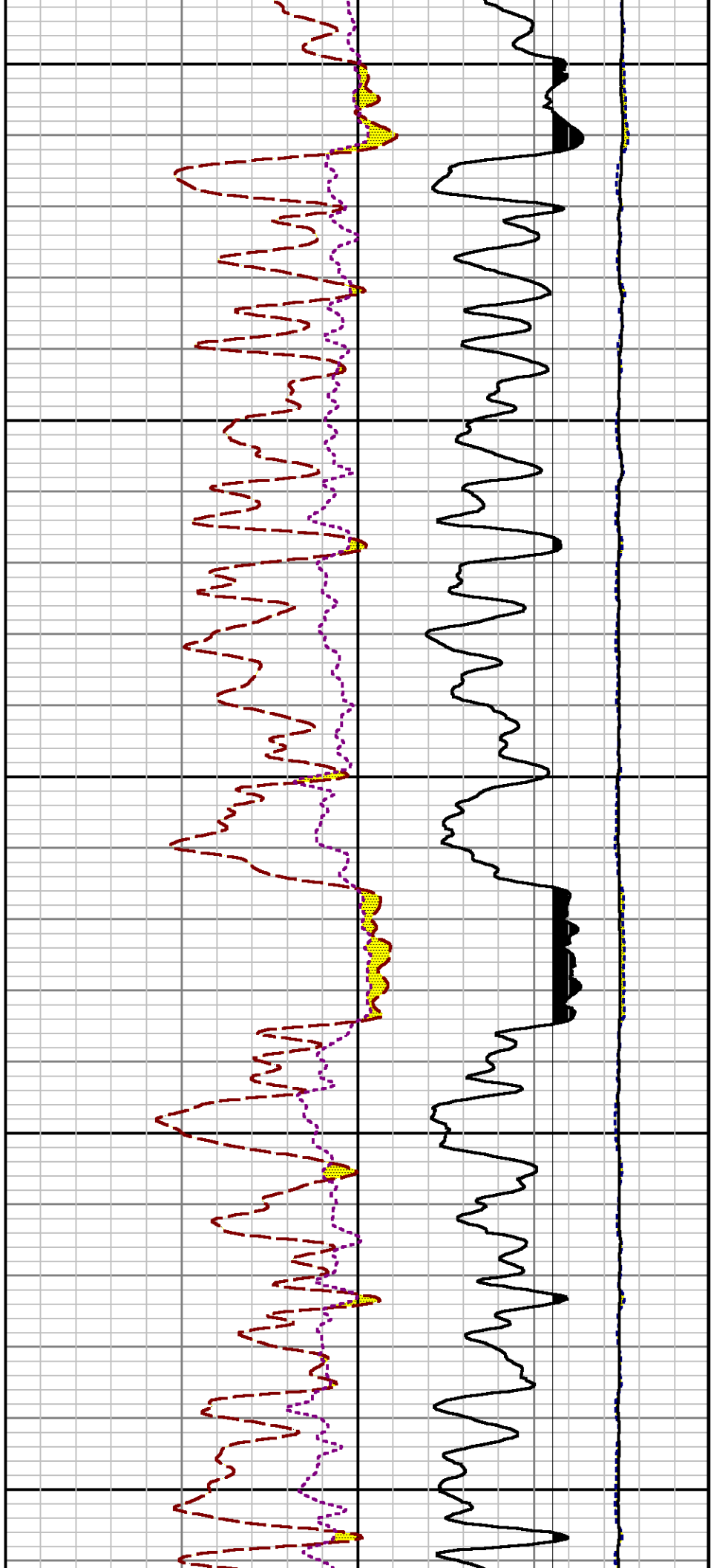
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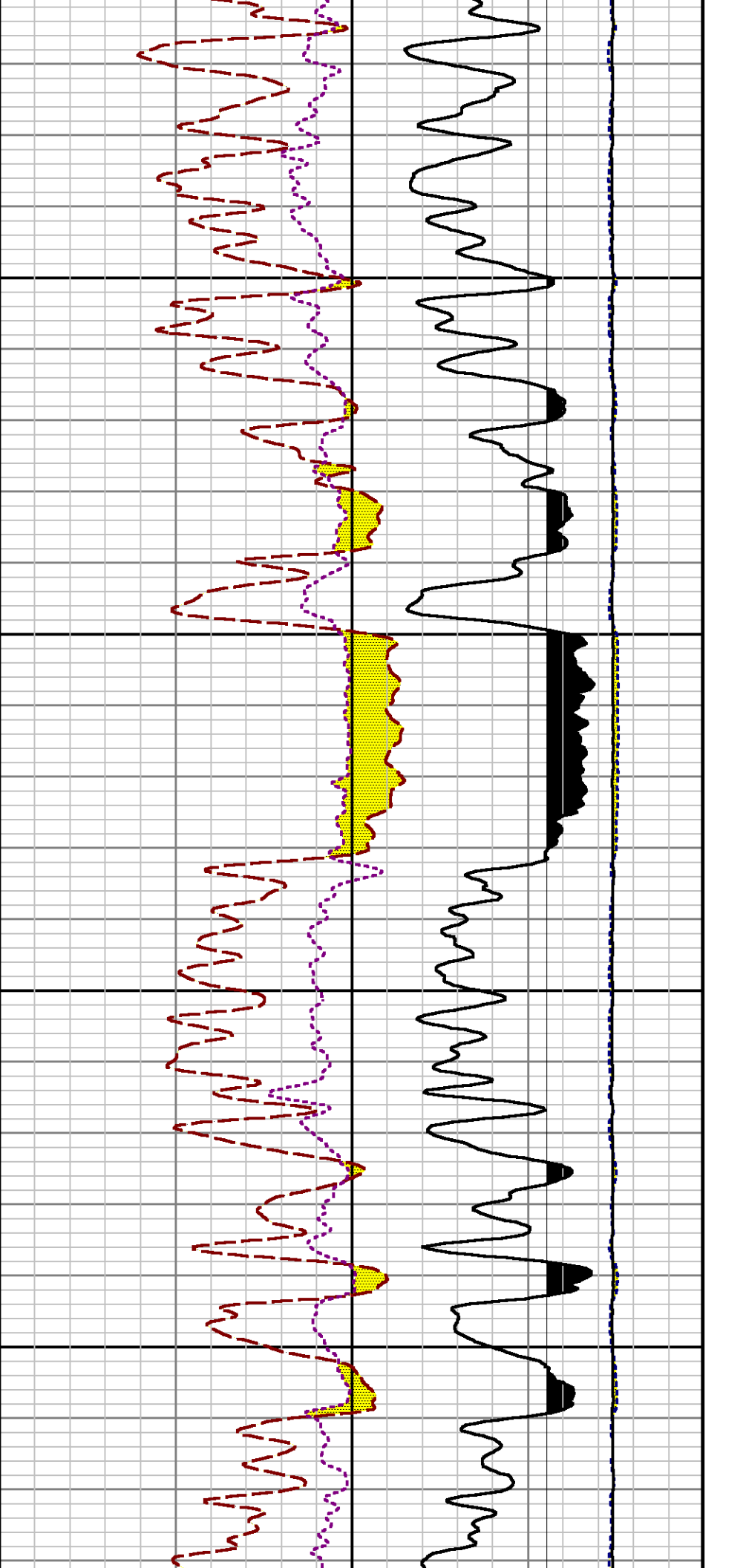
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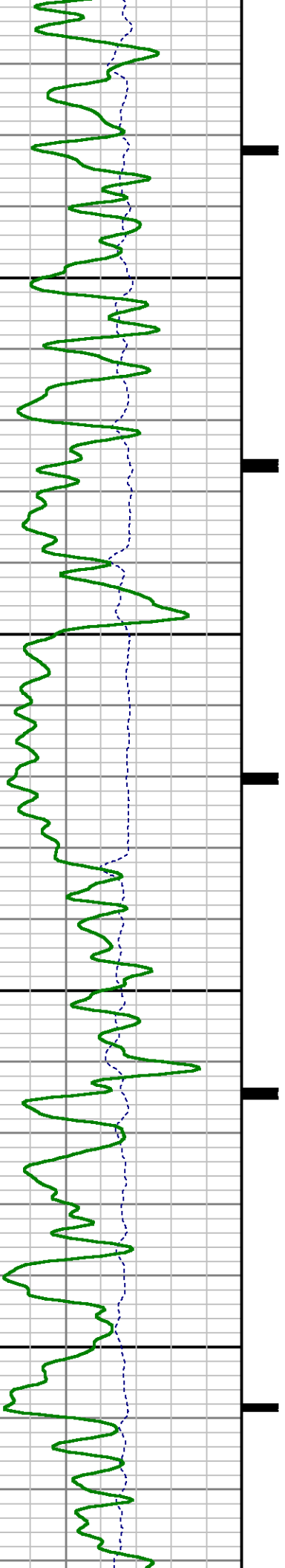


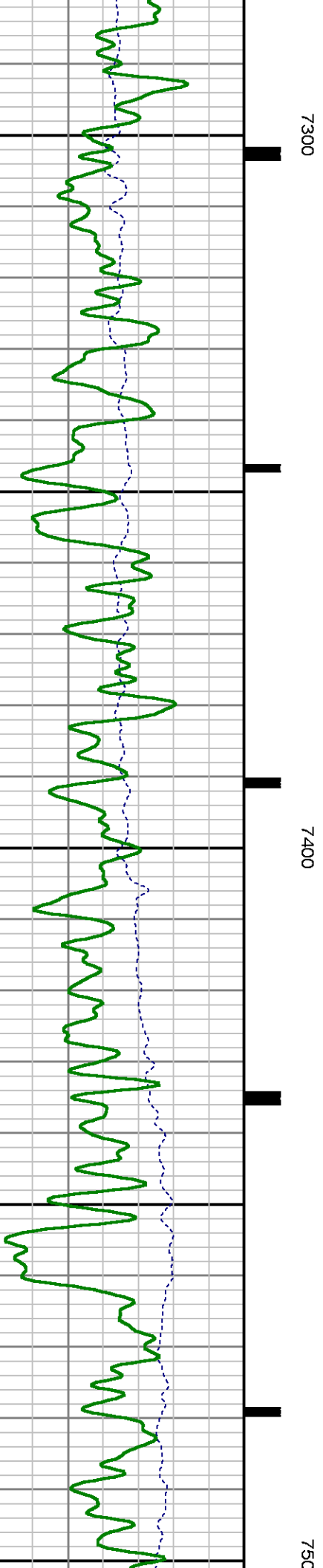
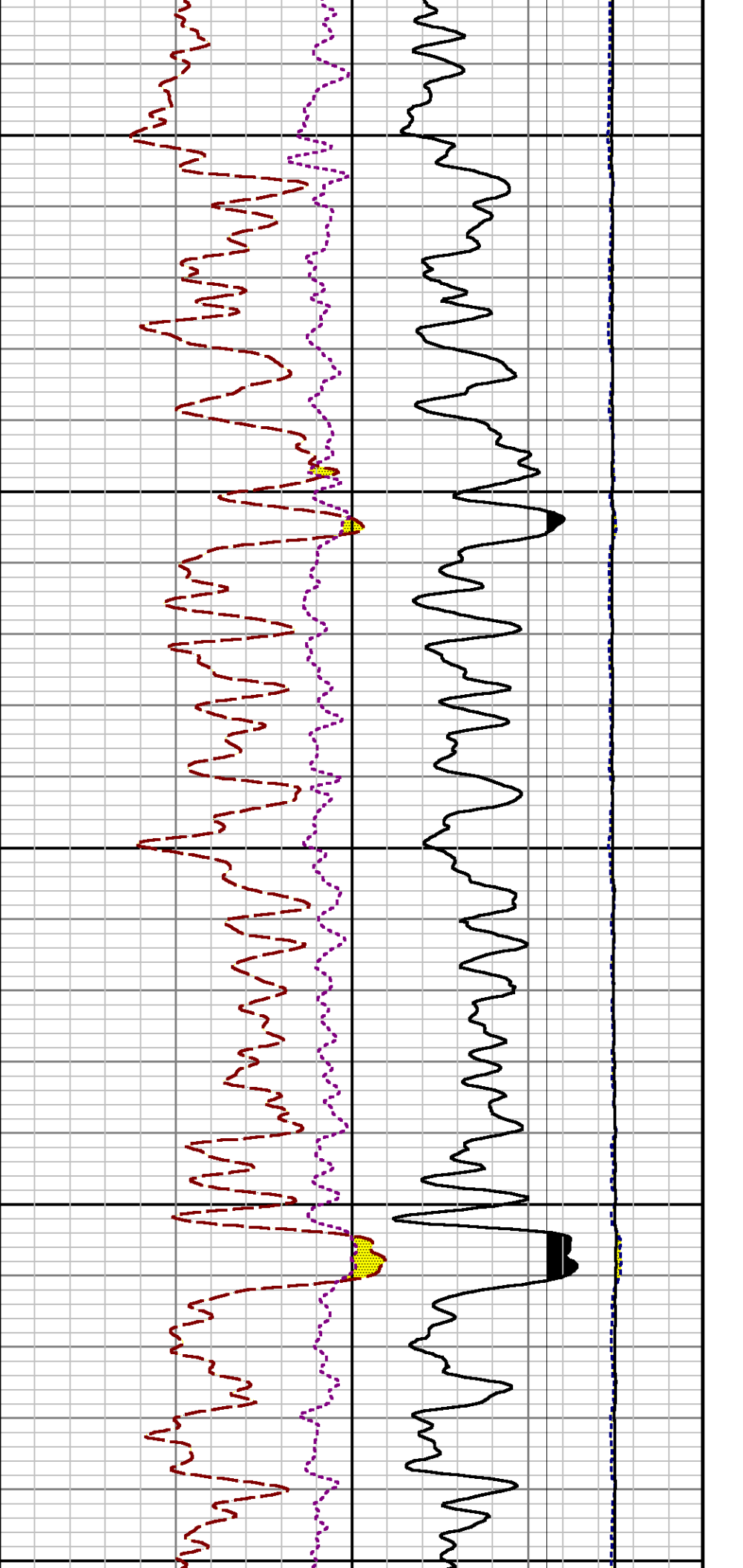


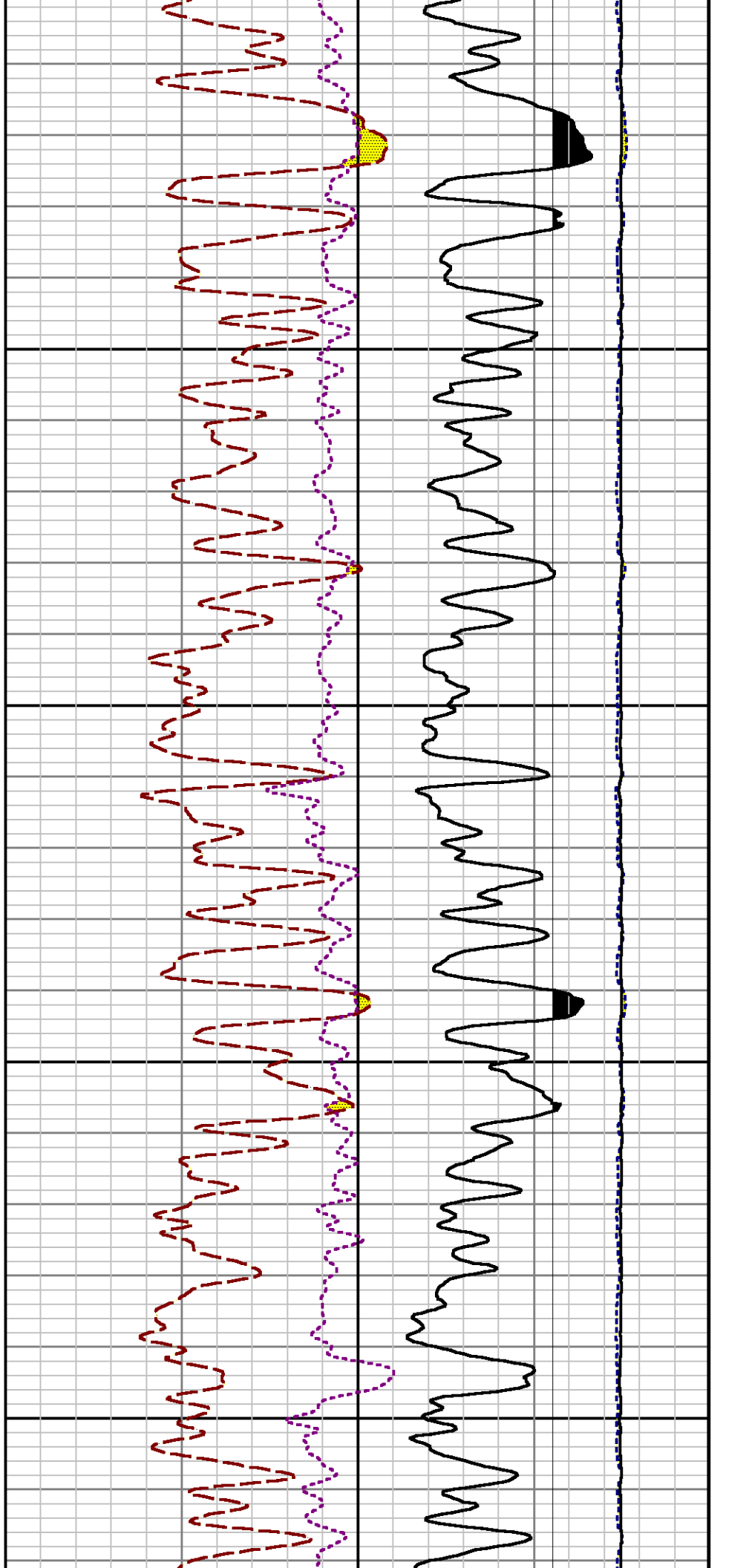


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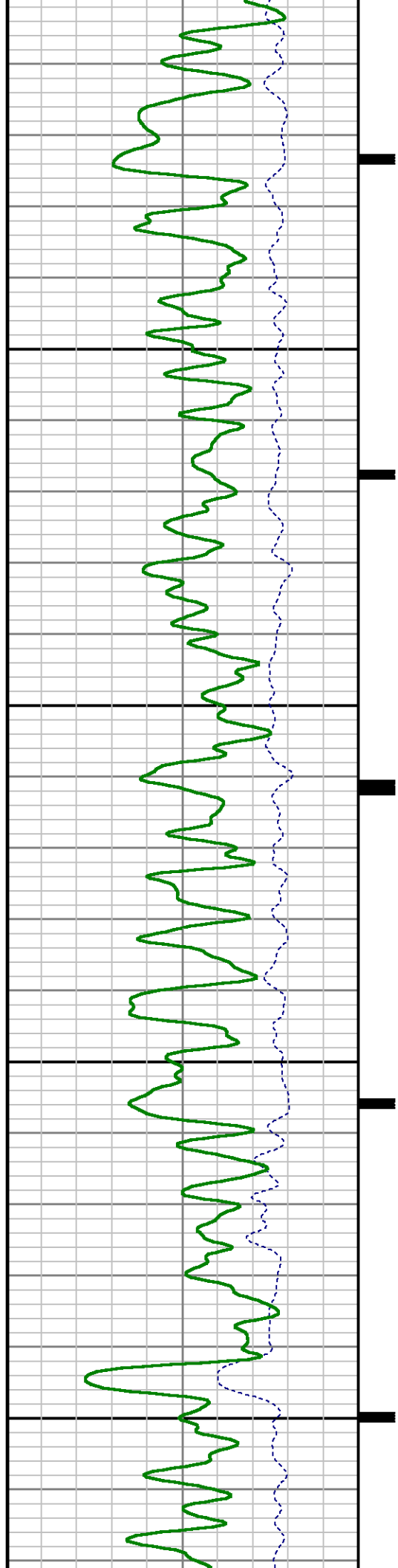


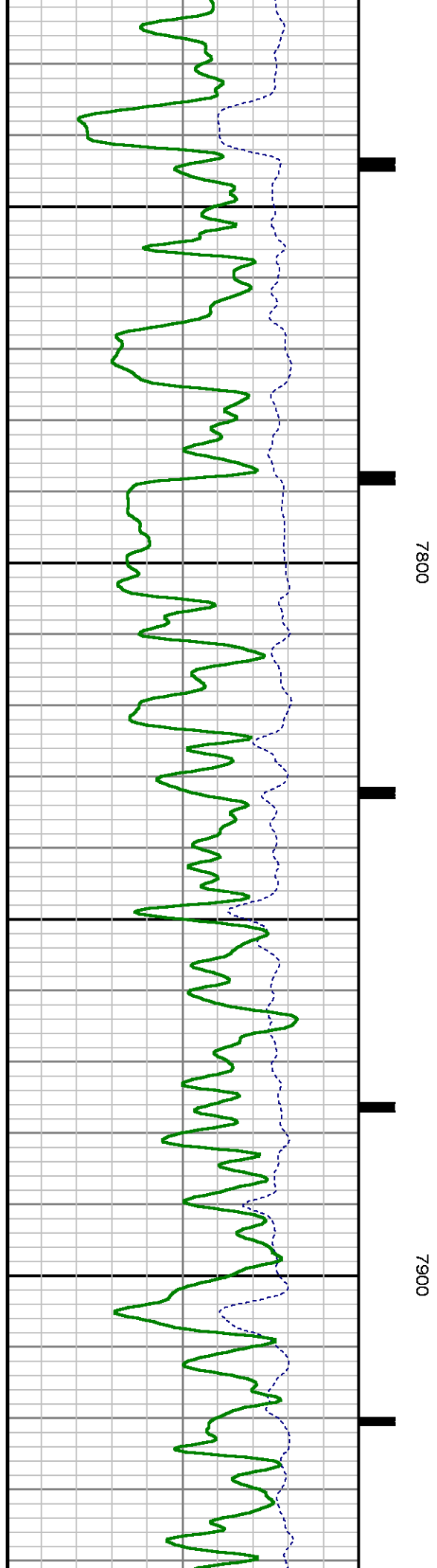
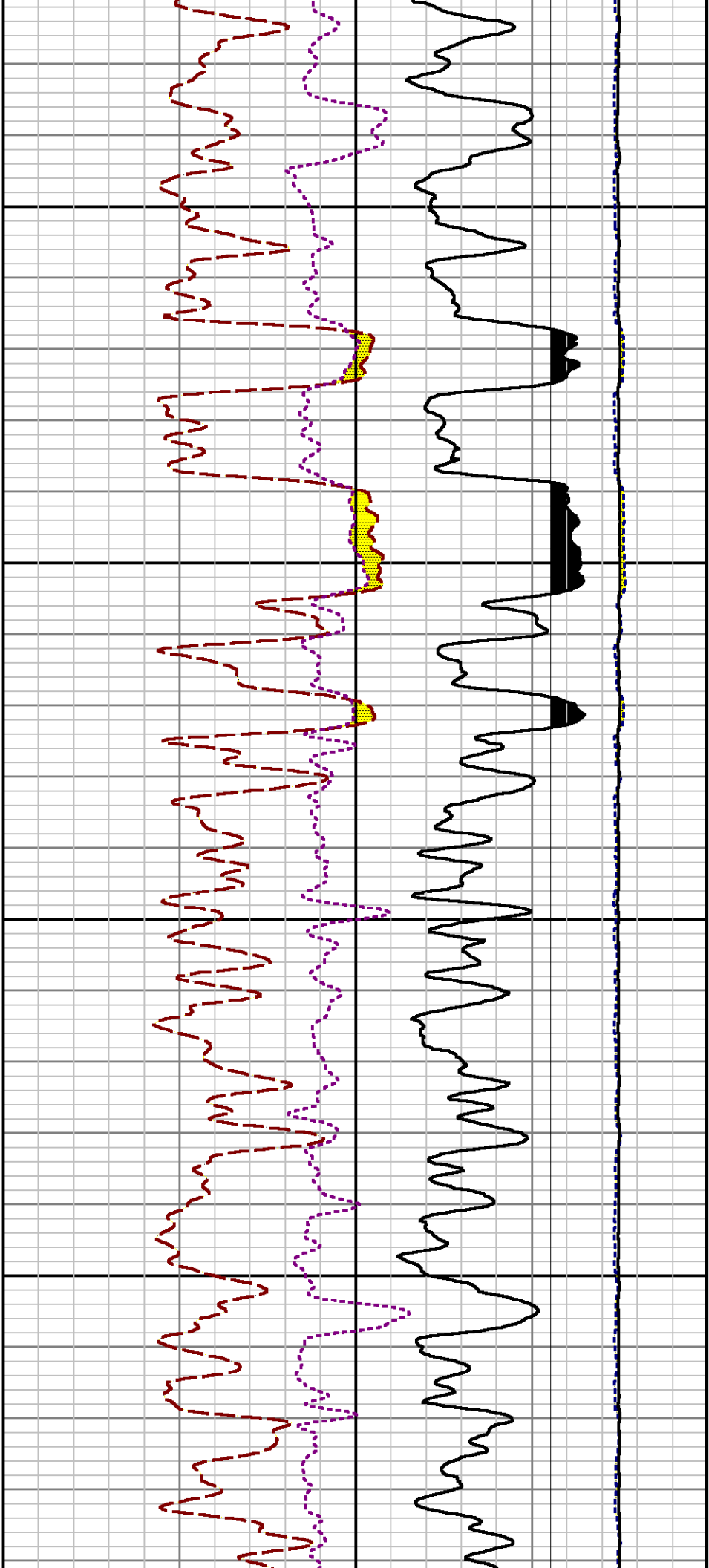


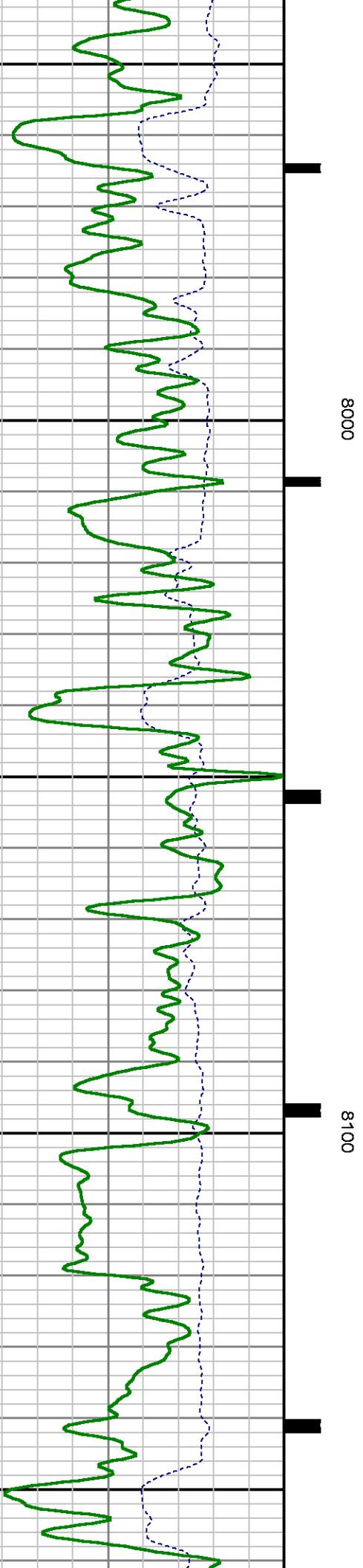
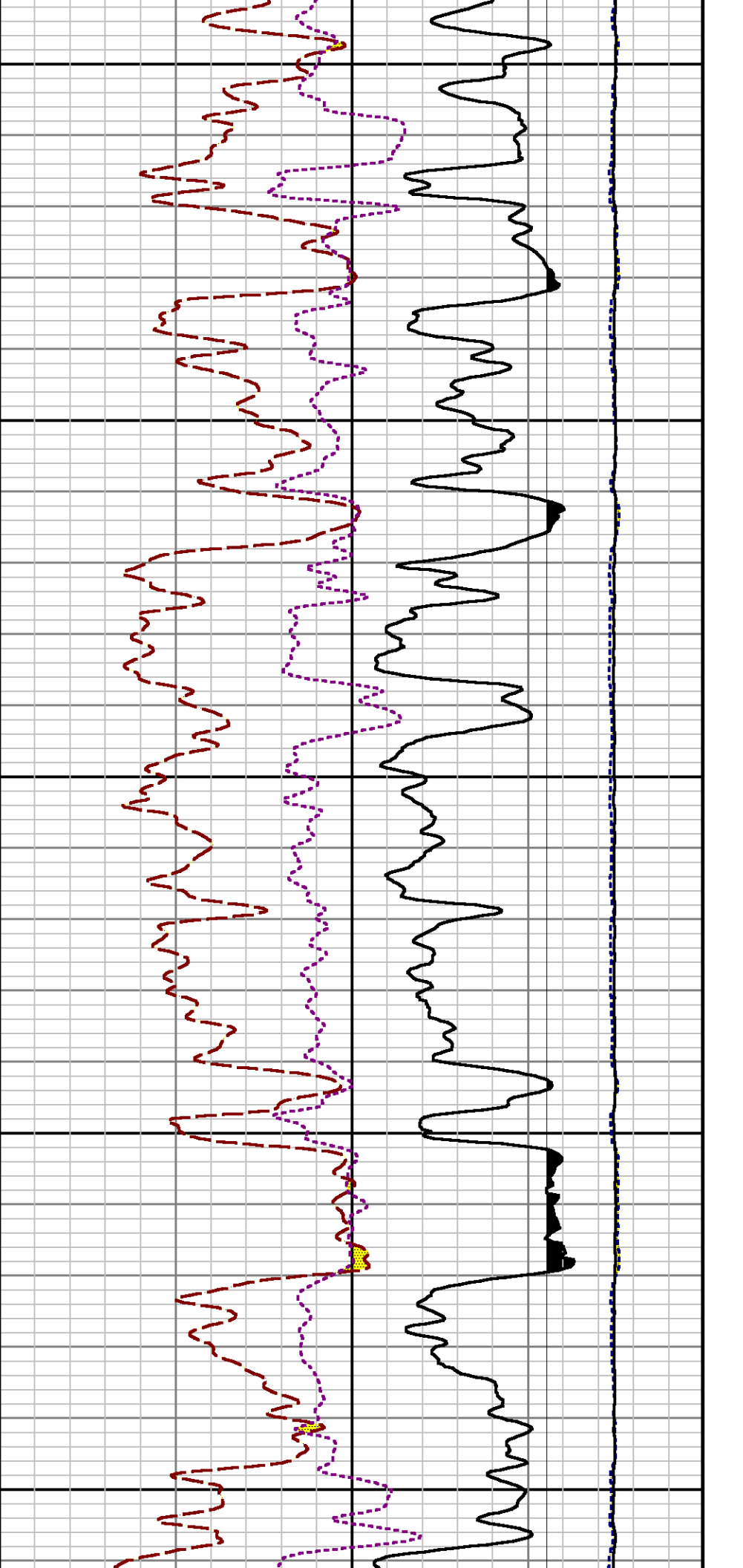


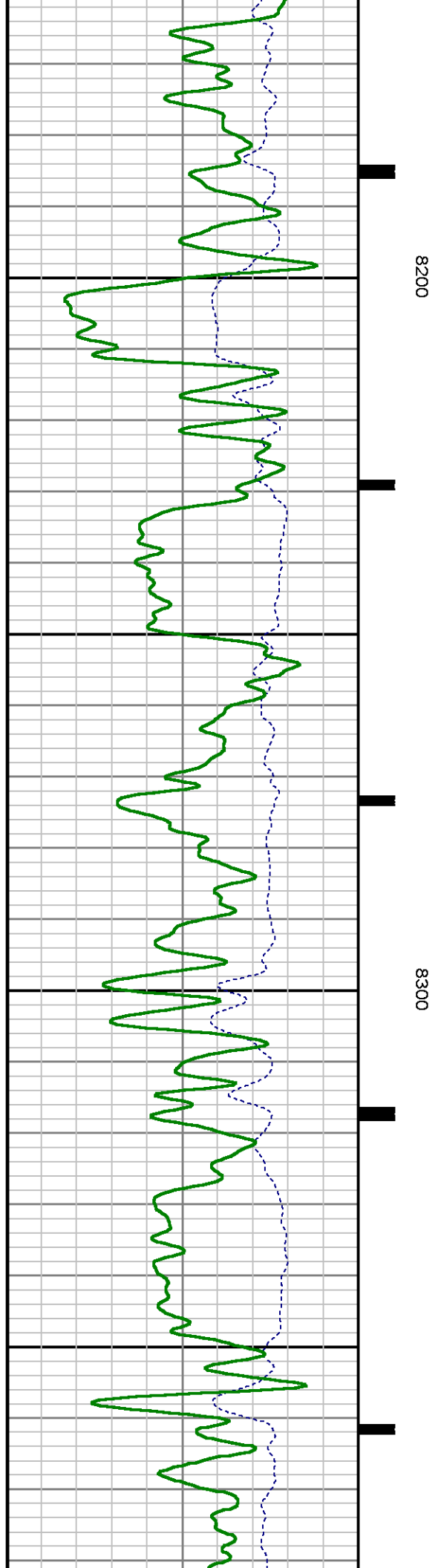
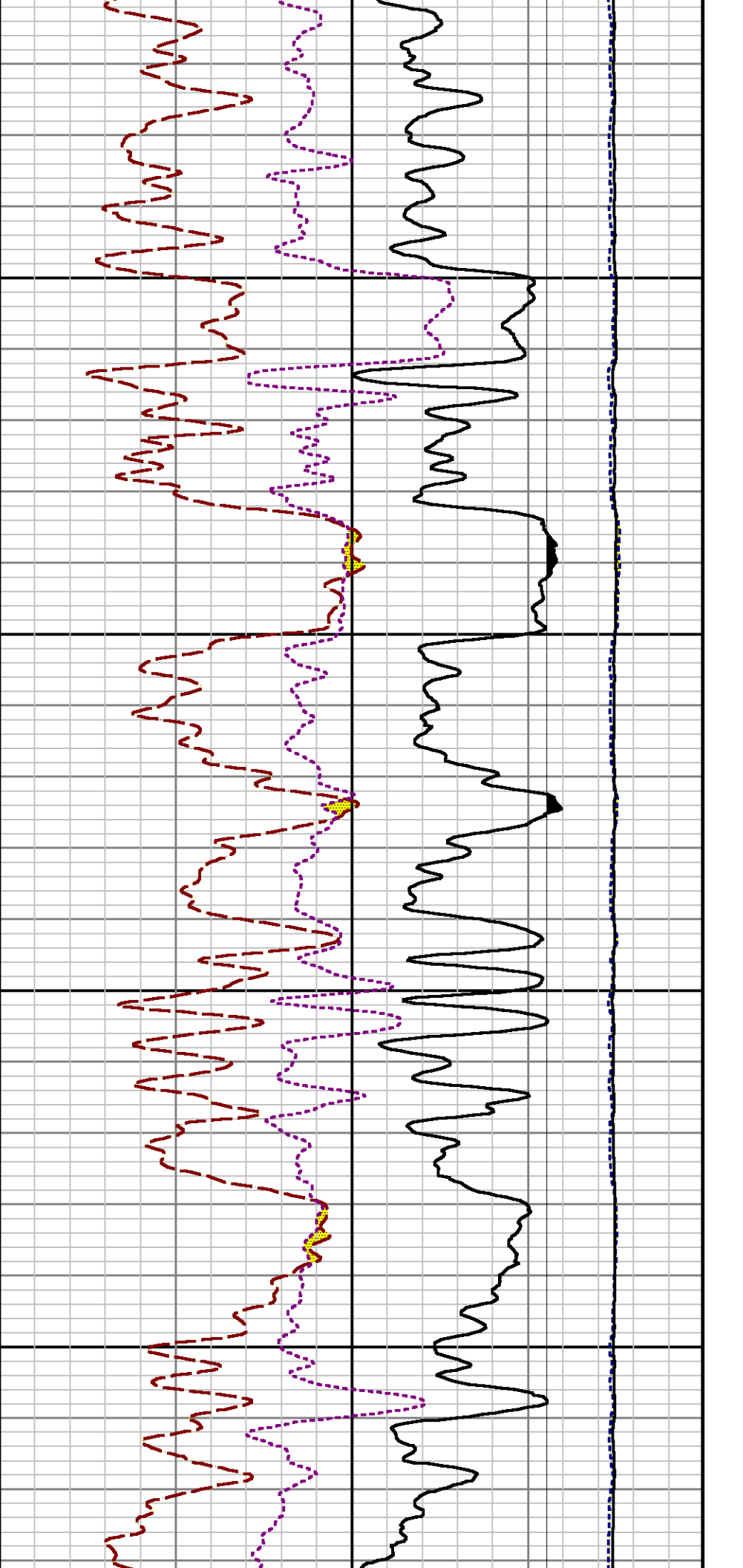
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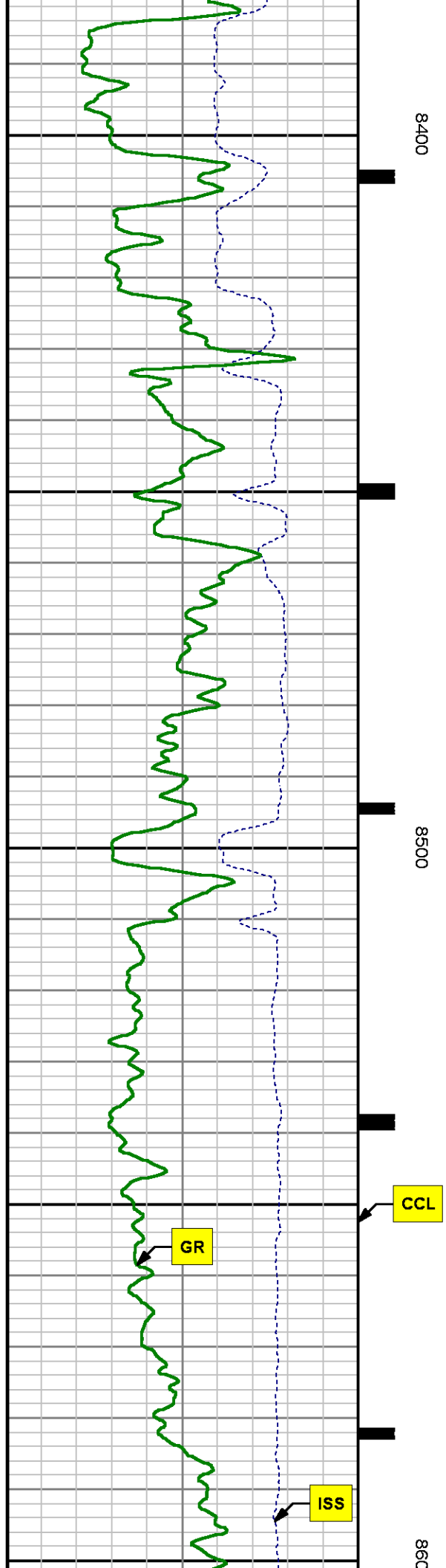
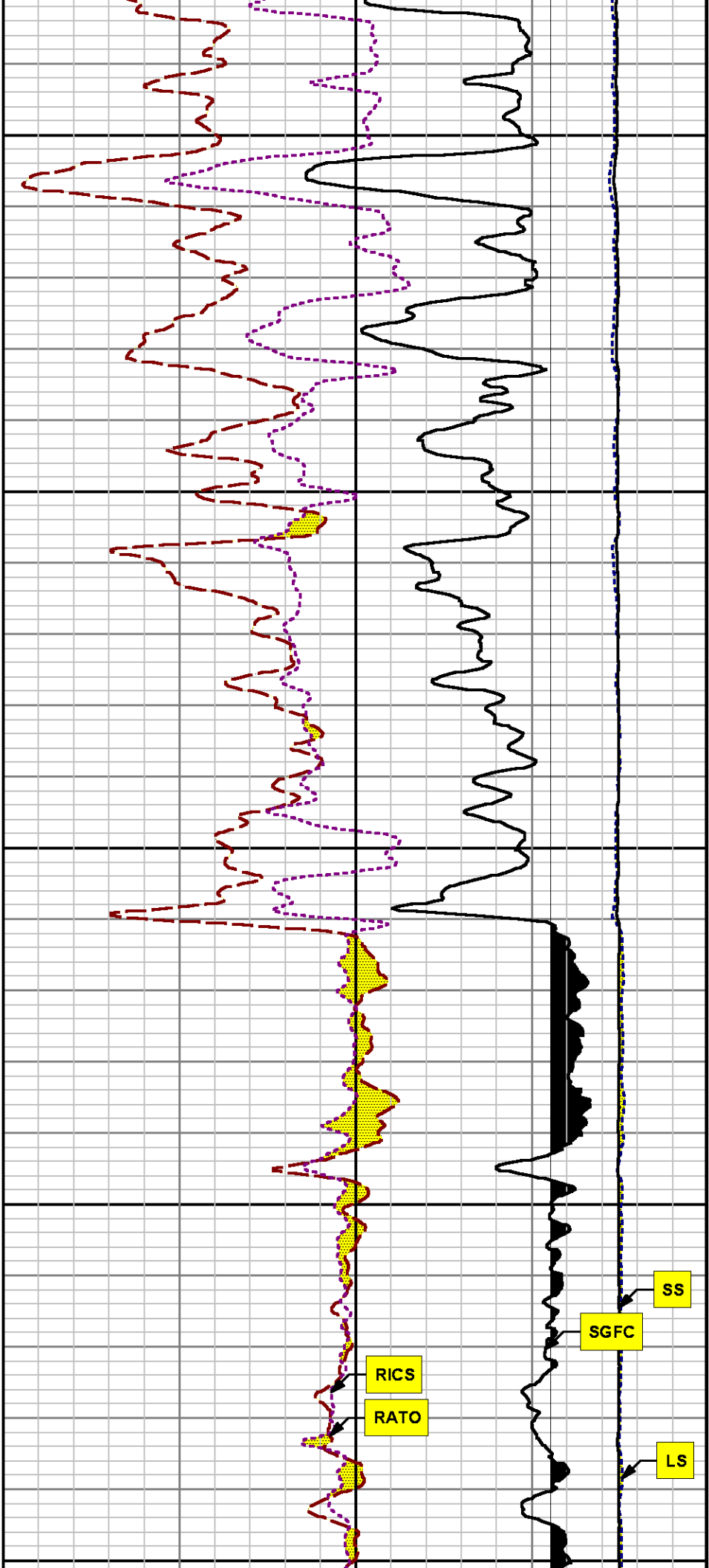
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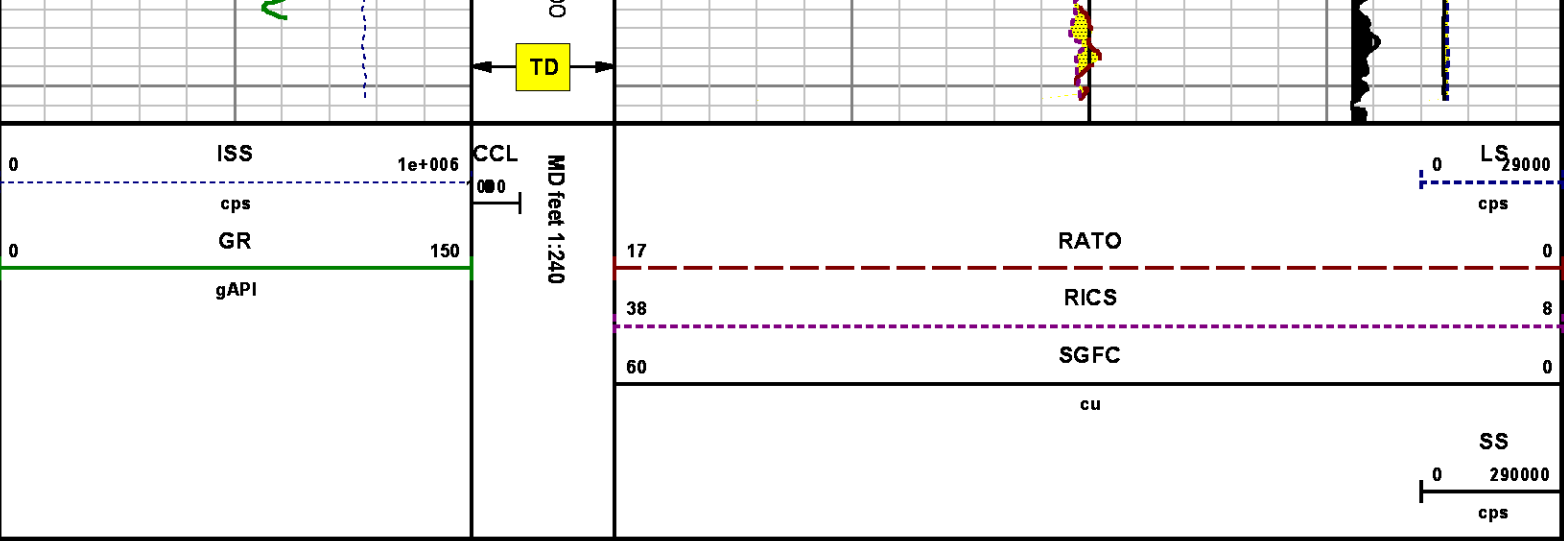












*REPEAT SECTION
PNC 3-D MODE*

SPL PROCESSING

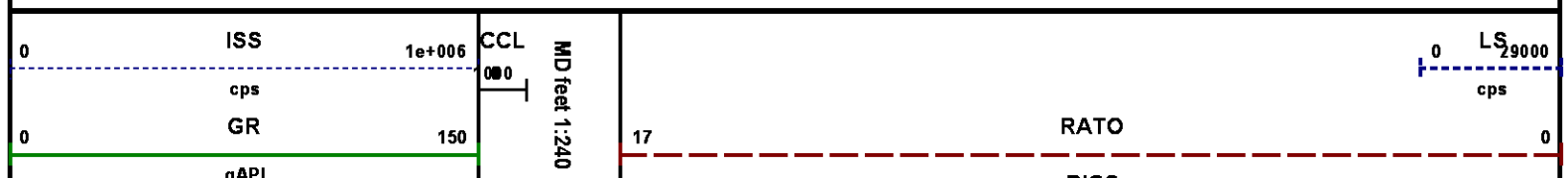
| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | TOP | BOTTOM |
|------------------|--------------------------|----------------|-------|----------|----------|
| PNC Porosity | Borehole | Cased | | 7806.595 | 8130.310 |
| PNC Porosity | Borehole Size | 8.750 | inch | 7806.595 | 8130.310 |
| PNC Porosity | Casing Size | 4.500 | inch | 7806.595 | 8130.310 |
| PNC Porosity | Gas Filled | Non Gas Filled | | 7806.595 | 8130.310 |
| PNC Porosity | Matrix | Sandstone | | 7806.595 | 8130.310 |
| TPS Pressure | Temperature Corr. Source | Fixed (72.00) | degF | 7806.595 | 8130.310 |

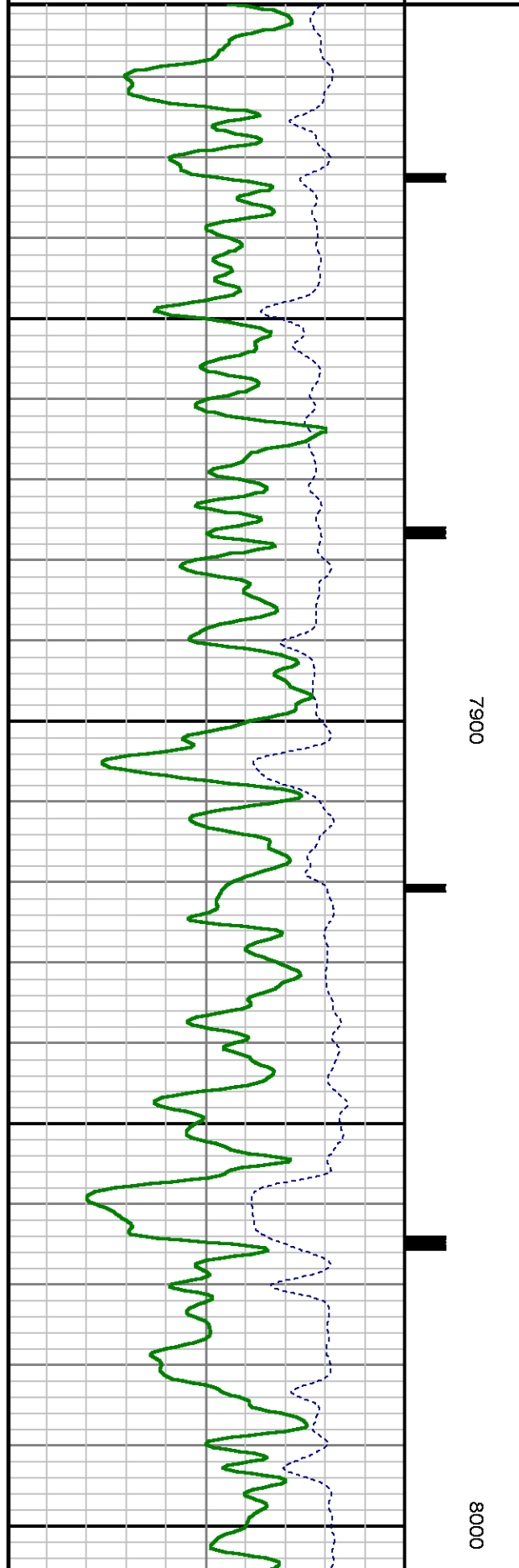
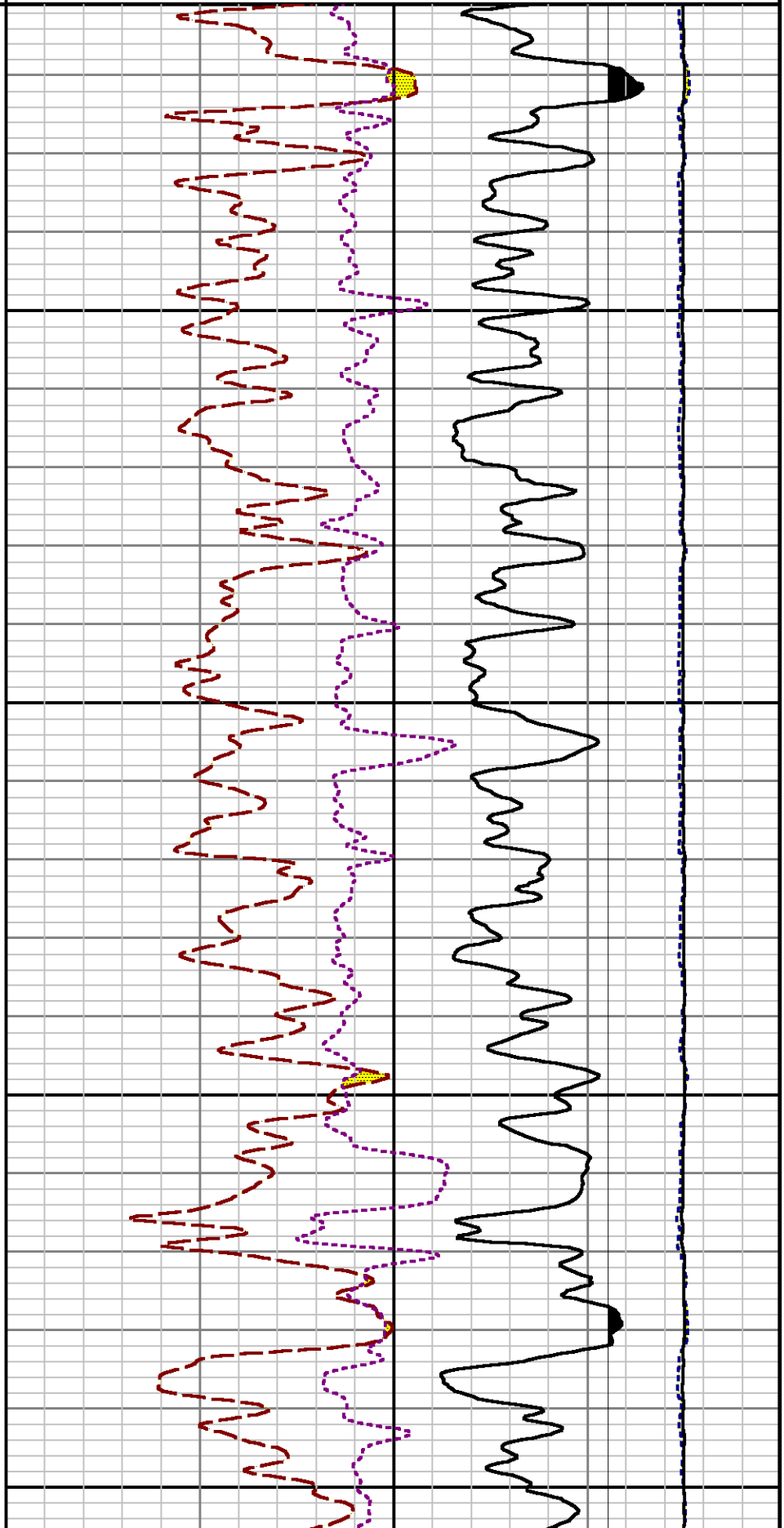
DEPTH OFFSETS
(for Acquired Curves)

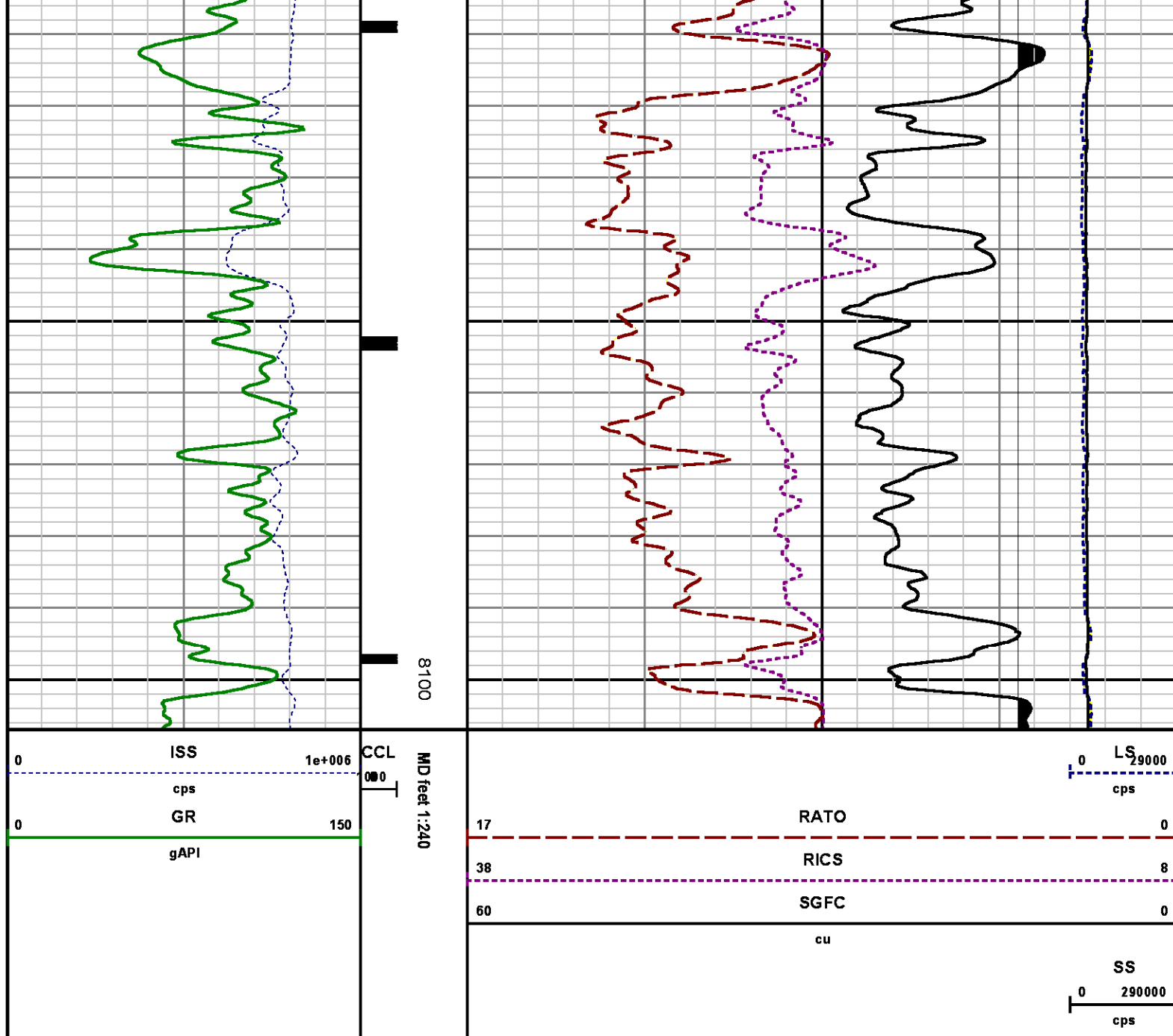
| SERIES | DEPTH OFFSET | ACQUIRED CURVES |
|--------|--------------|--|
| 8248EA | -26.519 | FLTM |
| 8248EA | -24.519 | CCL CHV |
| 2812LA | -21.969 | GR |
| 8281XA | -12.702 | HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 |

| | | | | | | | |
|--------|---------|---------|---------|--------|--------|--------|---------|
| | | SDL3 | SGA3 | SGL3 | STA3 | XS | ASPEC3 |
| | | AMB3 | AMF3 | CHF3 | IXSC | IXSN | RATO23 |
| | | RICXC | RIN13C | RIN23 | RIN23C | SD3D | SG3D |
| | | SGB3 | SGF3 | WDTH3 | CXSR | IXSR | XSR |
| | | RICXR | | | | | |
| 8281XA | -12.291 | HVC2Q0 | SEQ2 | AMA2 | AMB2 | AMF2 | AML2 |
| | | BKL | CHF2 | CLS | CPT2Q0 | CPT2Q2 | CPT2Q3 |
| | | CPT2Q4 | ET2 | ILS | LS | MCS2 | MCS2Q0 |
| | | QCAL2 | RGN2 | RICL | RONE23 | RTWO23 | SDA2 |
| | | SDL2 | SGA2 | SGB2 | SGF2 | SGK2 | SGL2 |
| | | STA2 | ASPEC2 | ILSC | ILSN | WDTH2 | RICLC |
| | | CLSR | ILSR | LSR | RICLR | | |
| 8281XA | -12.041 | 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 |
| | | 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 | H0C | FE2XC | ISSC | RINC |
| | | ISSN | RDEN | WDTH1 | RICSC | CSSR | G1R |
| | | G2R | ISSR | SSR | SS2R | RATOR | RATO13R |
| | | RBORR | RICSR | RINR | RIN13R | RONER | RPORR |
| | | RTWOR | | | | | |
| 8255XA | -0.792 | PTFS | PTMS | | | | |
| 8255XA | -0.775 | SPF1 | SPFQ | TSCP | TSDP | | |
| 8255XA | 0.000 | DTEM | TEMP | TNF | | | |
| SYSTEM | 0.000 | TEN | TTEN | | | | |

Created by : RPM9, v5.3.1.0
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : SAVAGE RWF 24-25
File Name : d:\well\data\wpx\rwf 24-25\24rpm\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 7811.00 - 8107.00 feet UP
Created : 2/1/2014 8:16:34 AM







CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\385J9.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jan 09 15:25:11 2014

TOOL SERIES: 28121A

ASSET:

385

SEQ: 19

| Calibrator # | | Background | Calibrator On | Multiplicative | | Background | Calibrator On | Differential |
|--------------|-------|------------|---------------|----------------|--|------------|---------------|--------------|
| | | [cps] | [cps] | | | [api] | [api] | [api] |
| S2K | WA612 | 62.82 | 283.64 | 0.951 | | 59.74 | 269.74 | 210.00 |

Verification File: C:\case\calver\GR\385J9.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Thu Jan 09 15:29:10 2014 TOOL SERIES: 2812LA ASSET: 385 SEQ: J9

| Calibrator # | | Background | Calibrator On | Multiplicative | | Background | Calibrator On | Differential |
|--------------|-------|------------|---------------|----------------|--|------------|---------------|--------------|
| | | [cps] | [cps] | | | [api] | [api] | [api] |
| S2K | WA612 | 63.02 | 280.18 | 0.951 | | 59.93 | 266.45 | 206.51 |

TEMPERATURE

Calibration File: C:\case\calver\TEMP\17697330.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: DEC 30 2013 14:00 TOOL SERIES: 8255XA ASSET: 176973 SEQ: 30

| | T(0) | T(1) | T(2) | T(3) | T(4) | T(5) |
|--------------|----------------|---------------|---------------|----------------|---------------|---------------|
| Coefficients | -1.950580e+001 | 1.007993e-001 | 9.960555e-007 | -1.008402e-010 | 0.000000e+000 | 0.000000e+000 |

PNC

Calibration File: C:\case\calver\PNC\383J7.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jan 17 14:45:45 2014 TOOL SERIES: 8281XA ASSET: 383 SEQ: J7

Calibrator #

gj shop

Source #

8281AA 10160601

| | ISS | Mtr Vltz (V) | SS Gain | LS Gain | XLS Gain | EA Temp (degF) | Sync Delay (usec) | RCAL |
|--------------|---------|-----------------|---------|---------|----------|-------------------|----------------------|--------|
| Raw Data | 813732 | 129.00 | 2186.00 | 2253.00 | 2214.00 | 102.25 | 7.00 | 0.9976 |
| Interpolated | 1300000 | 152.88 | 2183.97 | 2239.94 | 2207.92 | | | |

| | ISS | BKS | BKL | BKX | SGA1 | SDA1 | SGA2 | SDA2 |
|----------|--------|---------|---------|--------|-------------|-----------|-------------|-----------|
| Raw Data | 813732 | 6611.93 | 1055.83 | 146.56 | 25.82 | 0.14 | 24.39 | 0.27 |
| | | | | | 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 | 813732 | 178243.73 | 27579.47 | 92675.66 | 32979.46 | 8738.46 | 56027.18 | 14002.62 |
| Fit Quality % | | 0.47 | 0.52 | 0.93 | 0.91 | 0.54 | 0.86 | 0.52 |

| | ISS | RBOR | | RIN ISS/ILS | | RIN13 ISS/IXS | | RICS ISS/CSS | | RATO SS/LS | | RTWO SS2/LS | | RONE CSS/CLS | |
|---------------|---------|------|------|----------------|------|------------------|-------|-----------------|-------|---------------|-------|----------------|------|-----------------|------|
| Raw Data | 813732 | 1.43 | | 4.57 | | 29.51 | | 14.52 | | 10.61 | | 3.77 | | 4.00 | |
| | | 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 % | | 0.07 | | 0.27 | | 0.24 | | 0.14 | | 0.24 | | 0.23 | | 0.21 | |
| Reduced | 1403031 | 1.43 | | 4.59 | | 29.68 | | 14.59 | | 10.62 | | 3.78 | | 4.00 | |
| | | 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

OTA SHORT CABLE HEAD

PCM POWER SUPPLY

| | |
|-------------|-----------|
| Series | 8250EA |
| Mnemonic | PCM |
| Diameter | 1.70" |
| Weight | 18.00 lb |
| Length | 3.86' |
| Temp Rating | 350.00 °F |

TELEMETRY / CCL

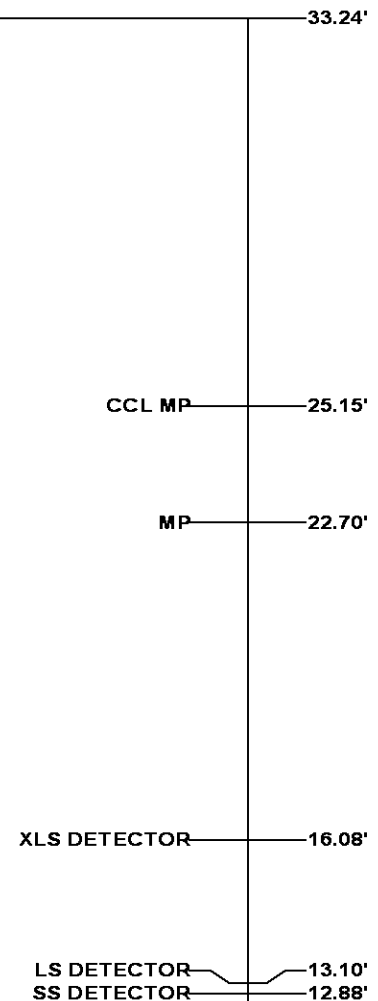
| | |
|---------------|--------------|
| Series | 8248EA |
| Mnemonic | PCM |
| Diameter | 1.70" |
| Weight | 20.00 lb |
| Length | 4.46' |
| Measure Point | 1.00' CCL MP |
| Temp Rating | 350.00 °F |
| Press Rating | 15000.00 PSI |

SONDEX GAMMA RAY

| | |
|----------|--------|
| Series | 2812LA |
| Mnemonic | SNDX |
| Diameter | 1.69" |

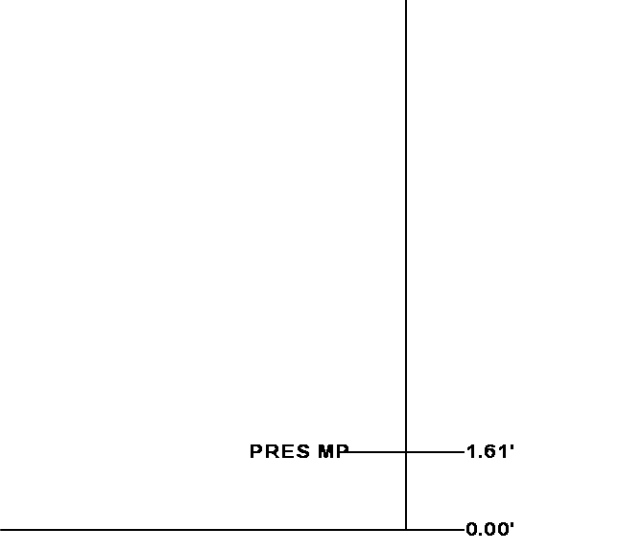
RESERVOIR PERFORMANCE MONITOR

| | |
|---------------|---------------------|
| 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 |




| | |
|--------------|--------------|
| Temp Rating | 350.00 °F |
| Press Rating | 20000.00 PSI |

| TEMPERATURE / PRESSURE | |
|------------------------|----------|
| Series | 8255XA |
| Mnemonic | SRPL |
| Diameter | 1.70" |
| Weight | 13.00 lb |
| Length | 3.30' |



Total Length: 33.24'
Total Weight: Not Available
Max Diameter: 0' 1.70"

| | | |
|--|--|---|
| <div>  <div> <div>BAKER</div> <div>HUGHES</div> </div> </div> <div> <div>Baker Atlas</div> <div>CASE</div> </div> | <div>Company</div> <div>WPX ENERGY</div> | <div>File No:</div> <div>CH082308</div> |
| | <div>Well</div> <div>SAVAGE RWF 24-25</div> | <div>API No:</div> <div>05045219790000</div> |
| | <div>Field</div> <div>RULISON</div> | |
| | <div>County</div> <div>GARFIELD</div> | <div>State</div> <div>COLORADO</div> |
| | <div>Location</div> <div>SHL: 1595' FSL & 2305' FWL</div> <div>BHL: 751' FSL & 2616' FEL (SWSE)</div> <div>SEC 25 TWP 6S RGE 94W</div> | <div>Elevations</div> <div>KB 6122 ft</div> <div>DF</div> <div>GL 6096 ft</div> <div>25 6S 94W</div> <div>RWF 23-25 PAD</div> <div>NABORS 577</div> |