



|                |         |                  |
|----------------|---------|------------------|
| FILE NO:       | COMPANY | LARAMIE ENERGY   |
| API NO:        | WELL    | GUNDERSON 20-04W |
| 05077103370000 | FIELD   | VEGA             |
|                | COUNTY  | MESA             |
|                | STATE   | COLORADO         |

|           |                                       |                |
|-----------|---------------------------------------|----------------|
| Ver. 4.06 | LOCATION:                             | OTHER SERVICES |
|           | SHL: LAT:39.266919N; LONG:107.795317W | RAL            |
|           | BHL: LAT:39.267151N; LONG:107.797721W |                |
|           | SEC 20 TWP 9S RGE 93W                 |                |

|                   |    |             |            |
|-------------------|----|-------------|------------|
| PERMANENT DATUM   | GL | ELEVATION   | 7144 FT    |
| LOG MEASURED FROM | KB | 30 FT       | ABOVE P.D. |
| DRILL. MEAS. FROM | KB |             |            |
|                   |    | ELEVATIONS: |            |
|                   |    | KB          | 7174 FT    |
|                   |    | DF          | 7173 FT    |
|                   |    | GL          | 7144 FT    |

|                        |                   |
|------------------------|-------------------|
| DATE                   | 21-JUL-2017       |
| RUN                    | 2                 |
| SERVICE ORDER          | US125133          |
| DEPTH DRILLER          | 7480 FT           |
| DEPTH LOGGER           | 7430 FT           |
| BOTTOM LOGGED INTERVAL | 7430 FT           |
| TOP LOGGED INTERVAL    | 2162 FT           |
| TIME STARTED           | 13:30             |
| TIME FINISHED          | 20:30             |
| OPERATOR RIG TIME      | 7 HRS             |
| TYPE OF FLUID IN HOLE  | WATER             |
| FLUID DENSITY          | NA                |
| FLUID SALINITY         | NA                |
| FLUID LEVEL            | 55 FT             |
| LOGGED CEMENT TOP      | 1057 FT           |
| WELLHEAD PRESSURE      | 0 PSI             |
| MAXIMUM HOLE DEVIATION | NA                |
| NOMINAL LOGGING SPEED  | 15 FMN            |
| MAX. RECORDED TEMP.    | 242 DEGF          |
| REFERENCE LOG          | BAKER OPEN HOLE   |
| REFERENCE LOG DATE     | 21-JUN-2017       |
| EQUIP. NO.             | HL-6670           |
| LOCATION               | WOODWARD          |
| RECORDED BY            | M.MENTZER         |
| WITNESSED BY           | MR. CHUCK MALLARY |

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.

### REMARKS

RUN 2 TRIP 2: \*2 OPERATION IN WELL\*

\*\*OPERATION 2: RPM/GR/CCL RUN IN COMBINATION\*\*

LOGGED WITH 0 PSI ON WELLHEAD

BHT: 242 DEGF

SJ: 5655' - 5678'

SJ: 6610' - 6631'

CREW: J.PENA, D.HUTCHISON

### EQUIPMENT DATA

| RUN | TRIP | TOOL      | SERIES NO.      | SERIAL NO.        | POSITION |
|-----|------|-----------|-----------------|-------------------|----------|
| 2   | 2    | TELEMETRY | 8250 EA/8248 ED | 10154470/1908681  | FREE     |
| 2   | 2    | GAMMA RAY | 8262 XA         | 10485470          | FREE     |
| 2   | 2    | RPM ELEC  | 8281 EA         | 10389421          | FREE     |
| 2   | 2    | RPM       | 8283 PA/8281 FA | 10414345/10401926 | FREE     |

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1 Patches: 9

Plotted: Fri Jul 21 20:54:56 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LAREME\_GUNDERSON\_20\_04W/RPM\_PNC3D02.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 2148.000 ft BOTTOM DEPTH: 7437.500 ft

| SYMMETRIC FILTER |           |            |       |               |
|------------------|-----------|------------|-------|---------------|
| MEASUREMENT TYPE | PARAMETER | VALUE      | UNITS | INTERVAL (ft) |
| GR               | FILTER () | medium (1) |       | TOP BOTTOM    |

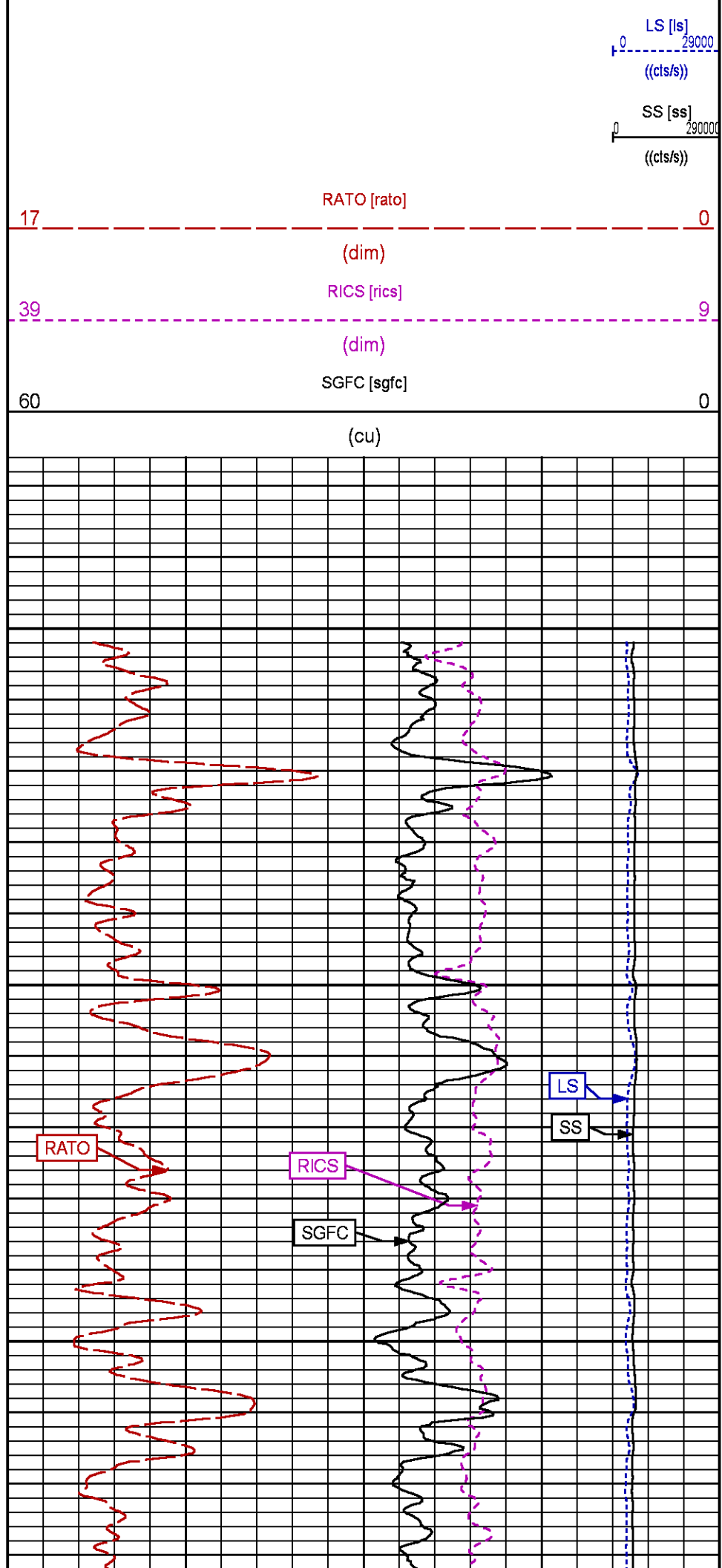
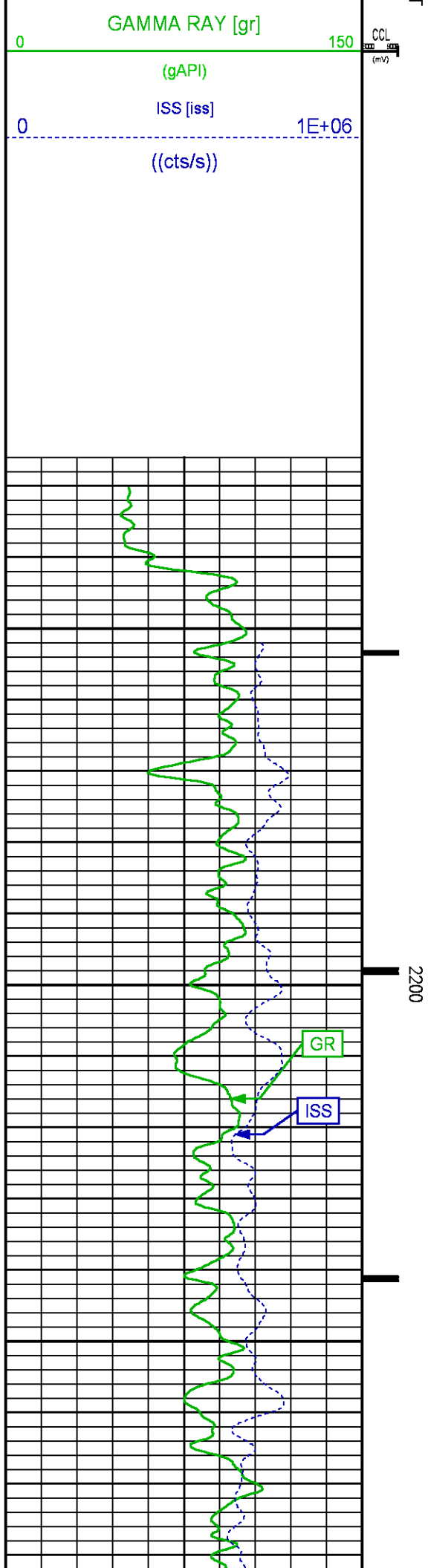
| RPM PROCESSING   |                   |            |       |               |
|------------------|-------------------|------------|-------|---------------|
| MEASUREMENT TYPE | PARAMETER         | VALUE      | UNITS | INTERVAL (ft) |
| PNC Parameters   | BOREHOLE CONTENTS | FLUID      |       | TOP BOTTOM    |
|                  | OPEN/CASED HOLE   | CASED HOLE |       | " "           |
|                  | BOREHOLE SIZE     | 7.88       | in    | " "           |
|                  | CASING SIZE       | 4.50       | in    | " "           |
|                  | MATRIX            | SANDSTONE  |       | " "           |
|                  | CORRECTION BUFFER | 11         |       | " "           |

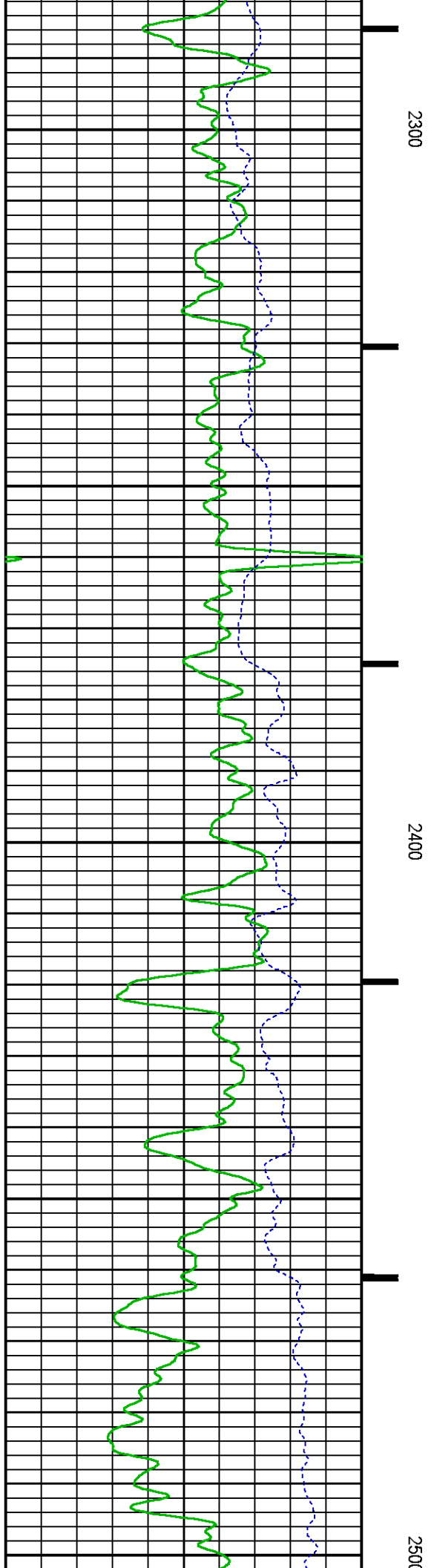
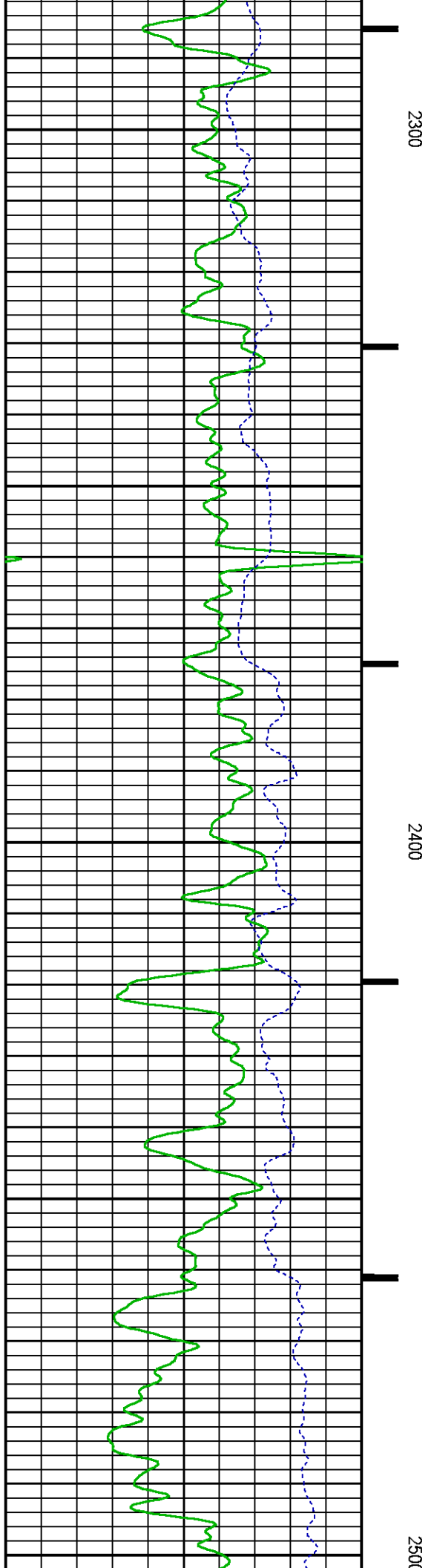
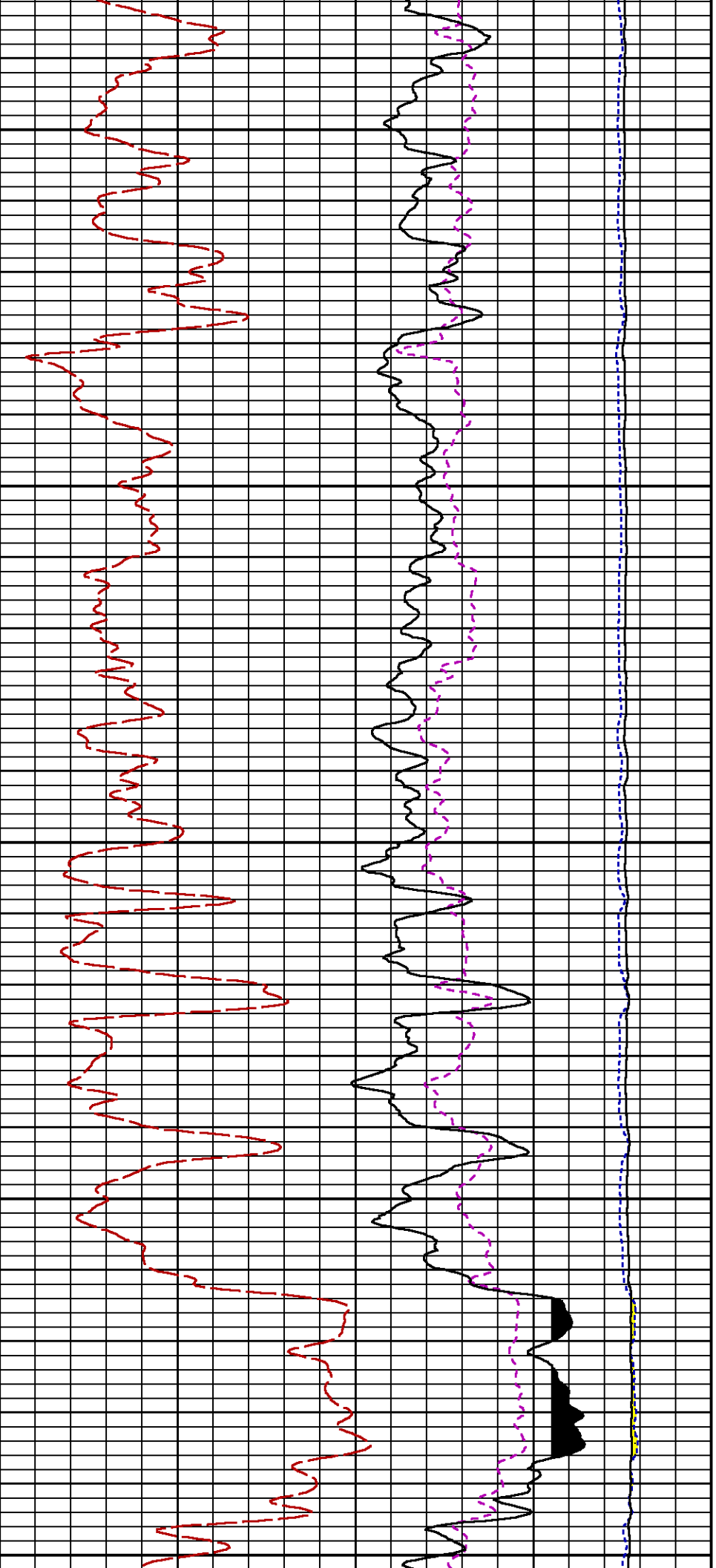
| CURVE DESCRIPTION REPORT |                      |   |
|--------------------------|----------------------|---|
| CURVE NAME               | CREATION DATE        | CURVE DESCRIPTION   |
| F1:CCL                   | Jul 21 15:16:32 2017 | CASING COLLAR LOCATOR                                       |
| F1:GR                    | Jul 21 15:16:32 2017 | GAMMA RAY   |
| F1:ISS                   | Jul 21 15:16:32 2017 | INELASTIC SHORT SPACE COUNT RATE                            |
| F1:LS                    | Jul 21 15:16:32 2017 | LONG SPACE COUNT RATE                                       |
| F1:RATO                  | Jul 21 15:16:32 2017 | SHORT/LONG SPACE COUNT RATE RATIO                           |
| F1:RICS                  | Jul 21 15:16:32 2017 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC                  | Jul 21 15:16:32 2017 | CORRECTED FORMATION SIGMA                                   |
| F1:SS                    | Jul 21 15:16:32 2017 | SHORT SPACE COUNT RATE                                      |

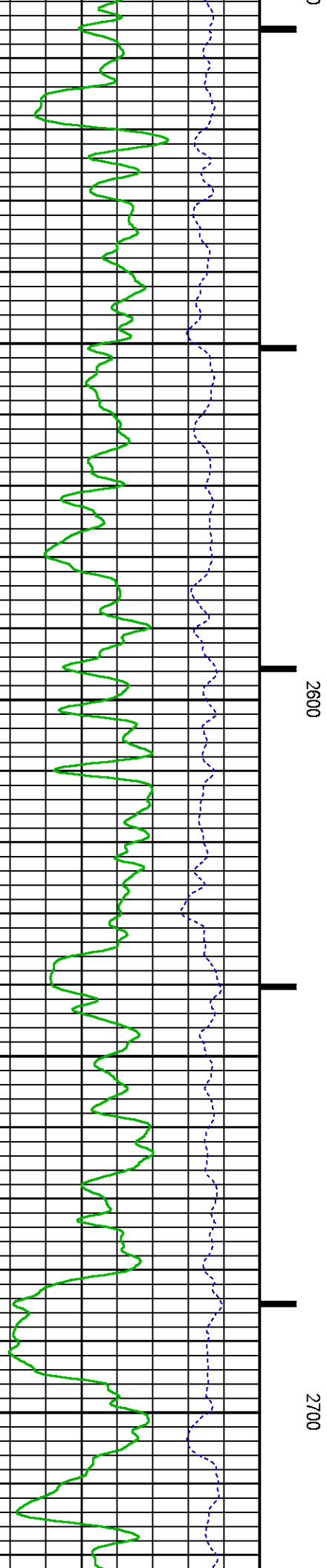
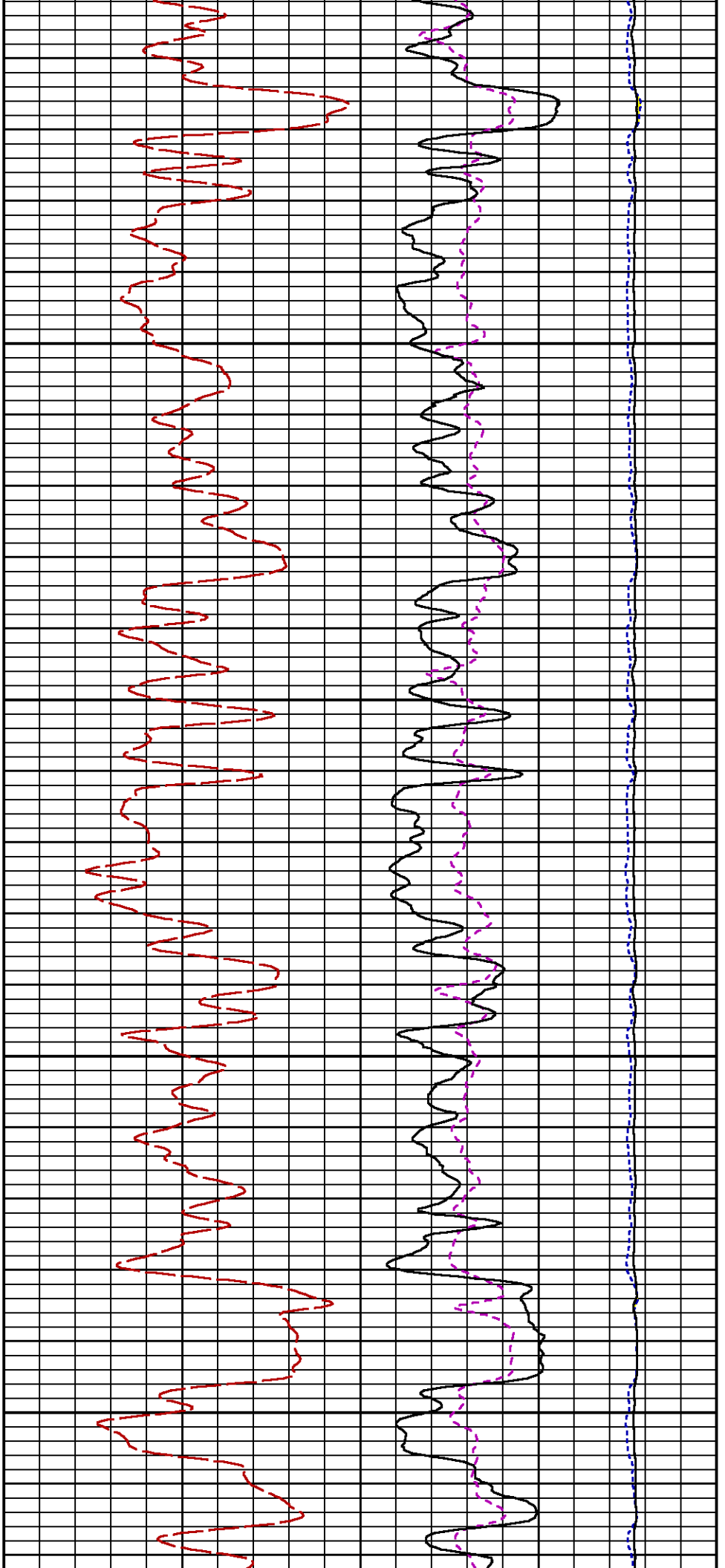
| CURVE MEASURE POINT OFFSET |             |       |             |       |             |       |             |
|----------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CURVE                      | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (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       |

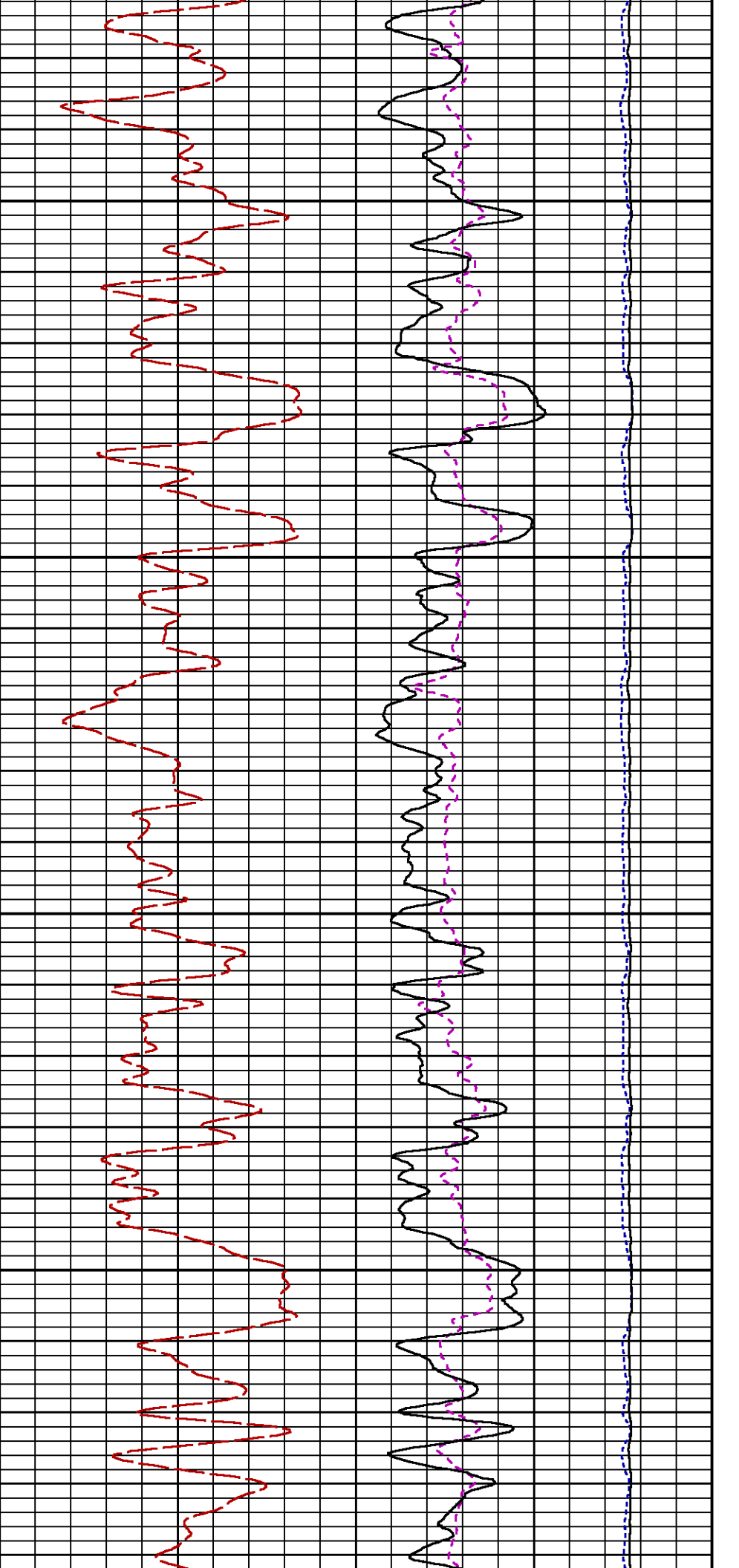
Presentation : cpu100:rpm\_pnc3d+01-MAIN-GUNDERSON\_20\_04W\_RPM\_MN-5.fvpdf [5"/100' Scale]  
Plot Interval : 2126 - 7431.5 Feet

Data File 1 : F1 : cpu100:/dat1a/LAREME\_GUNDERSON\_20\_04W/GUNDERSON\_20\_04W\_RPM\_MN.xtf  
Created On : Jul 21 15:16:32 2017  
Company : LARAMIE ENERGY  
Well : GUNDERSON 20-04W  
Field : VEGA  
File Interval : 2125.25 - 7440.25 Feet  
OCT : RPM\_PNC3



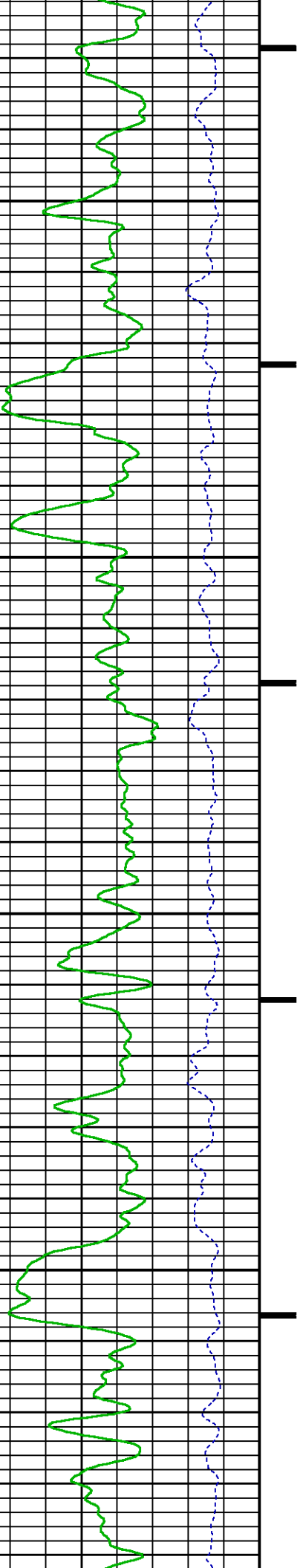


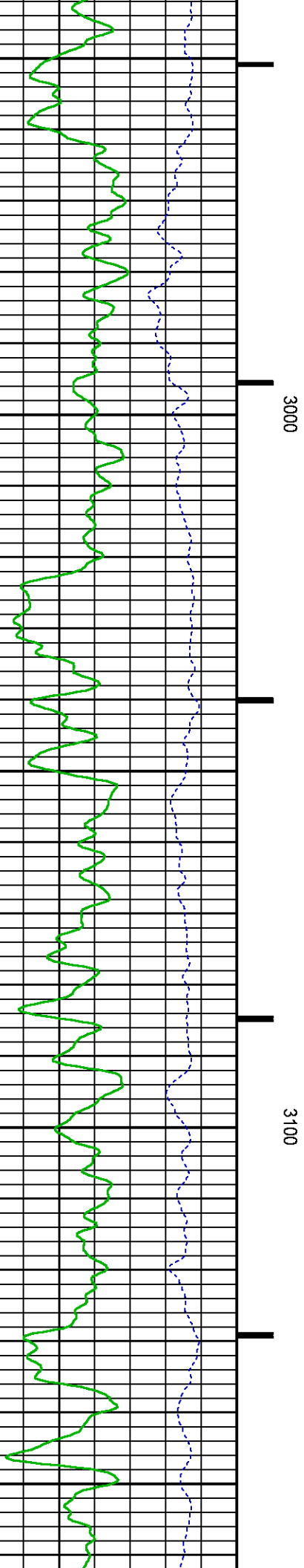
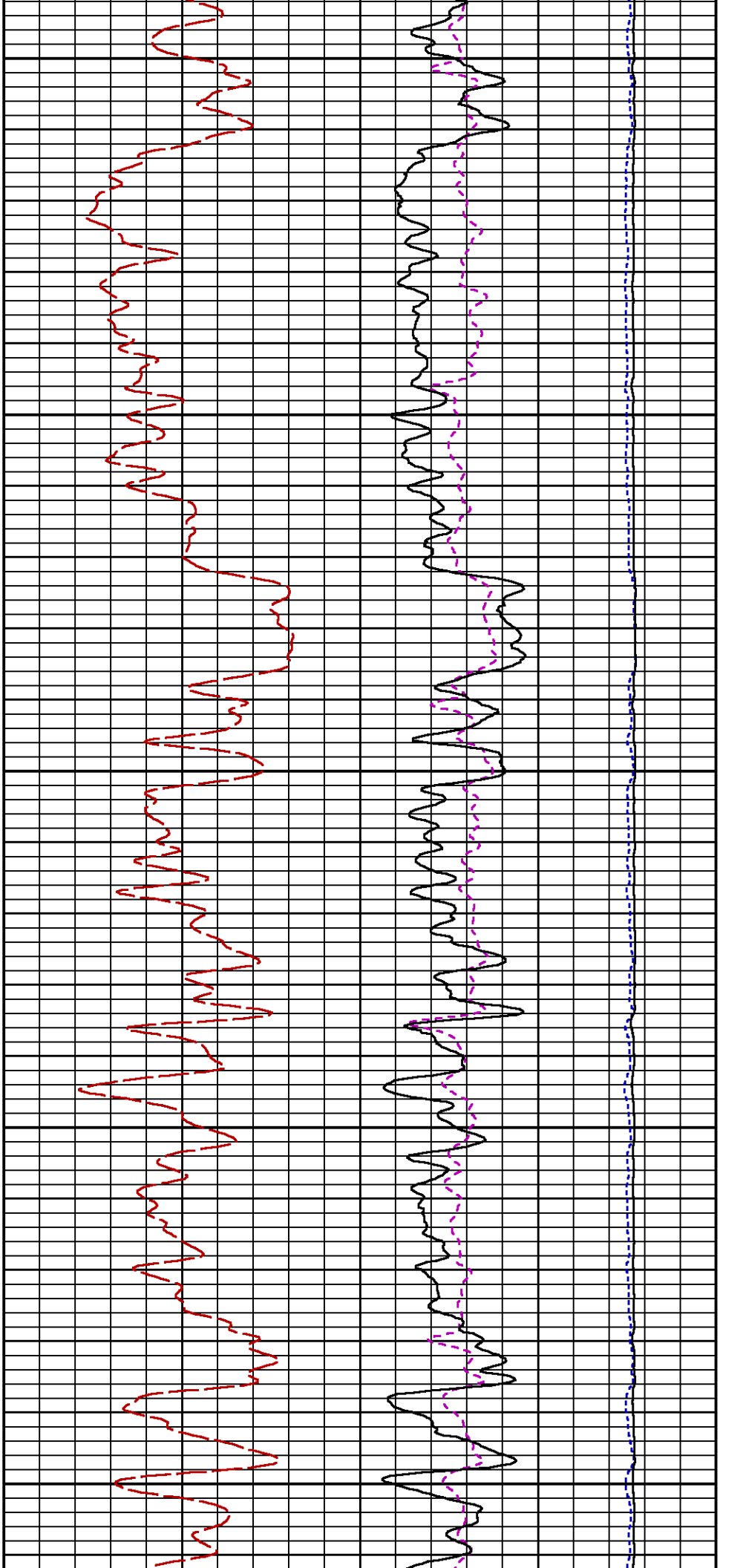


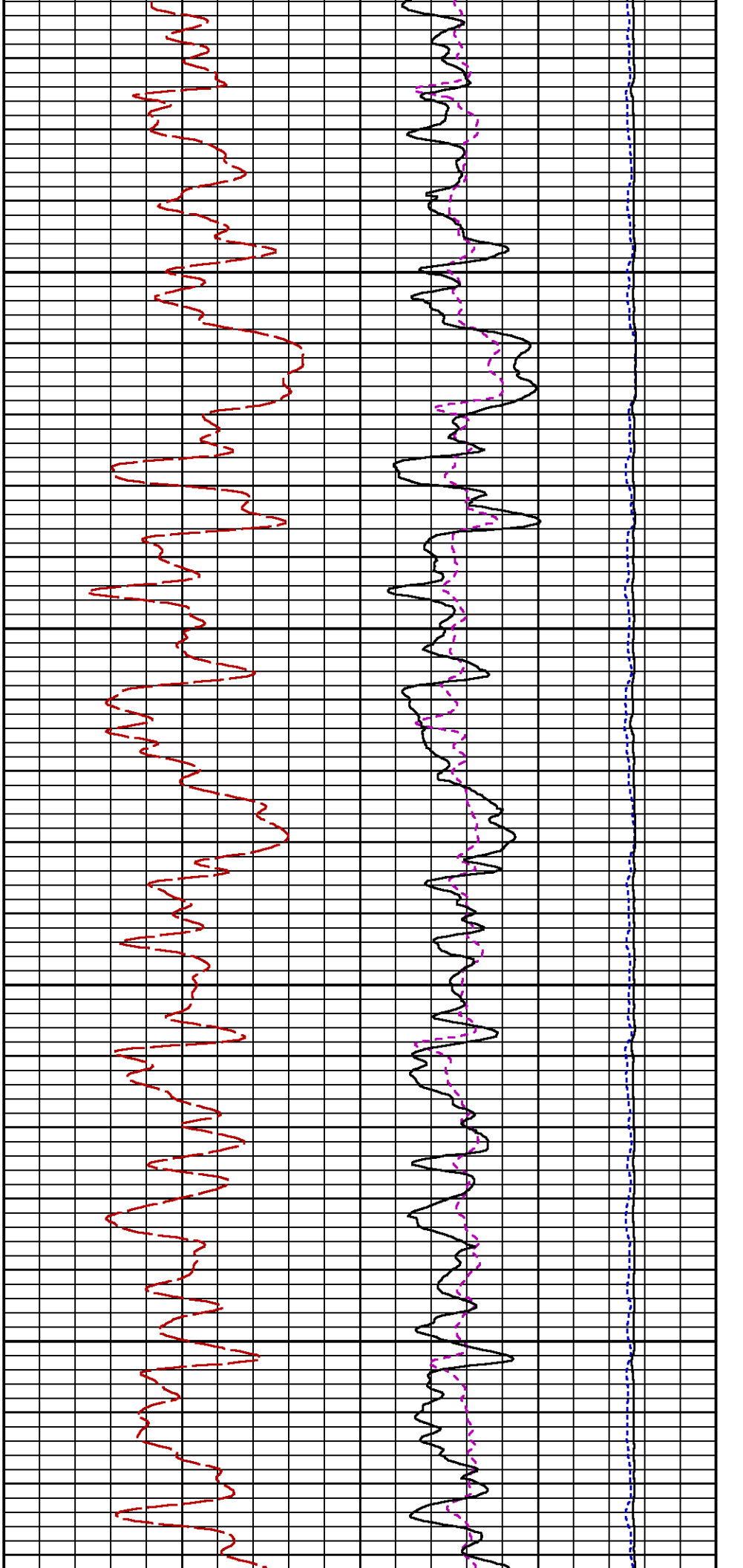


2800

2900

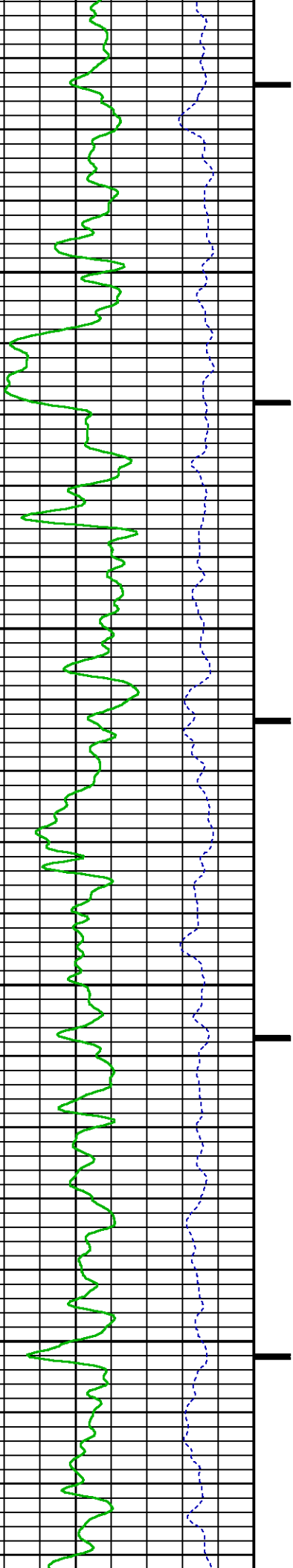




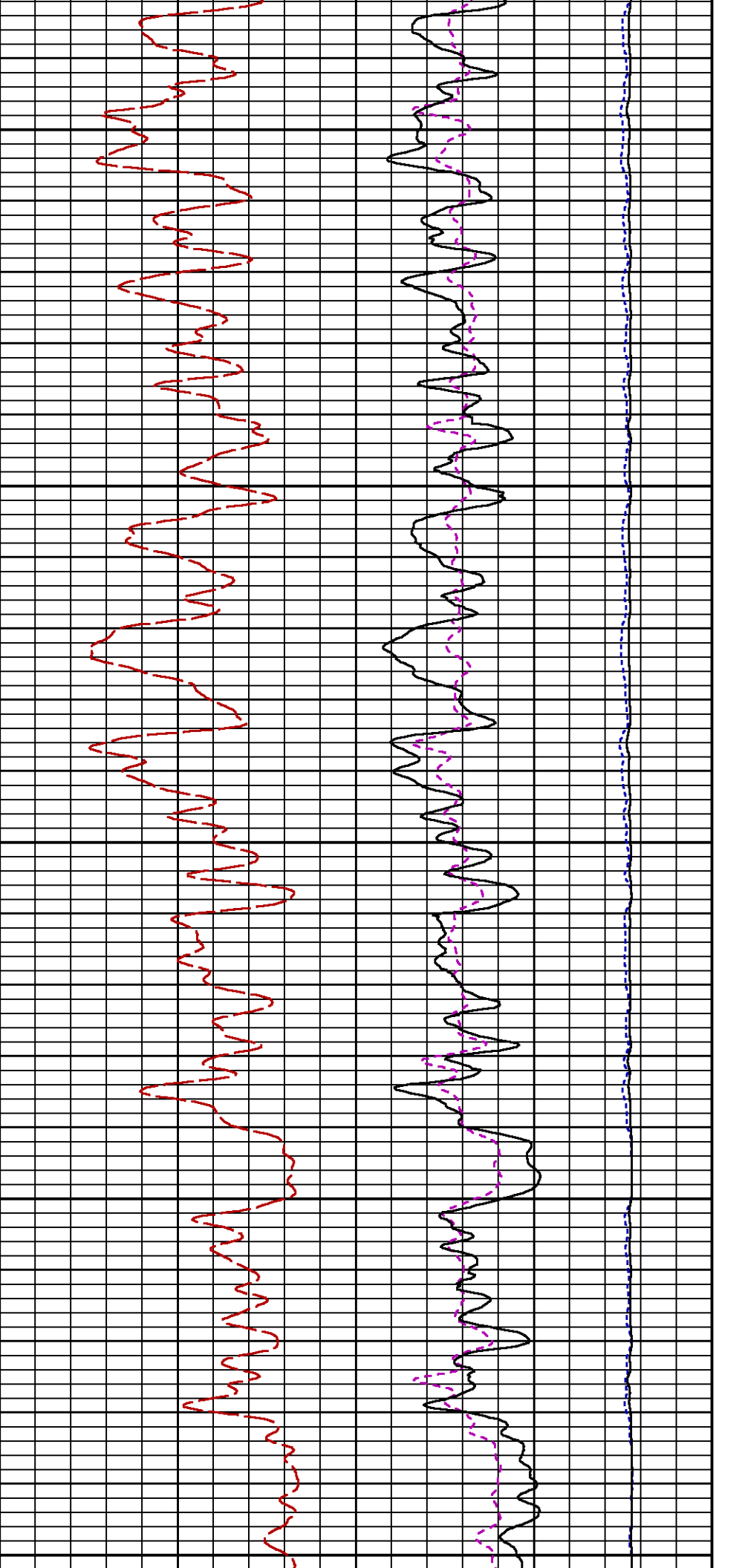


3200

3300



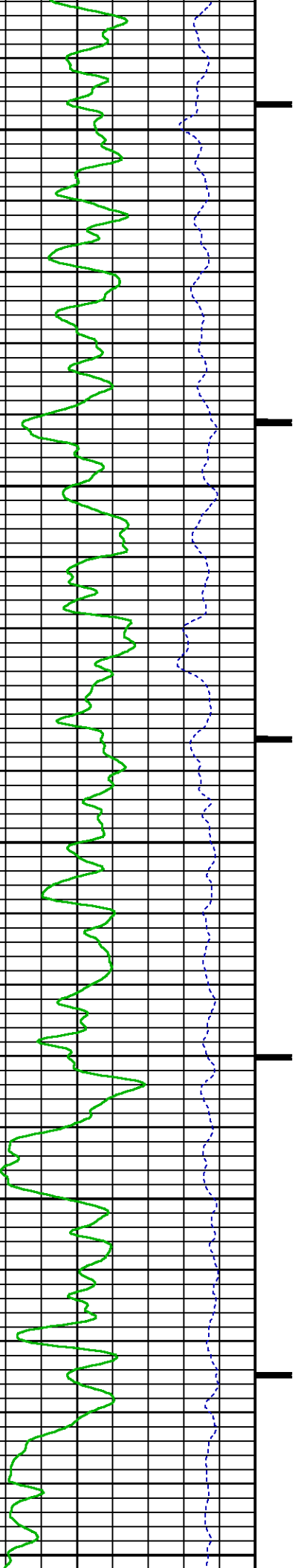


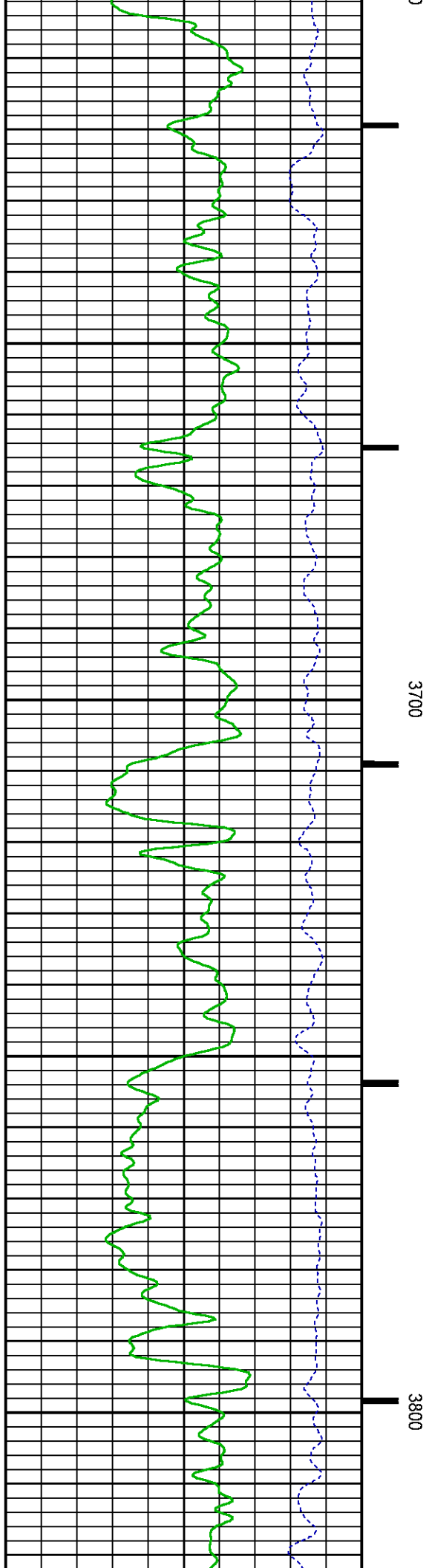
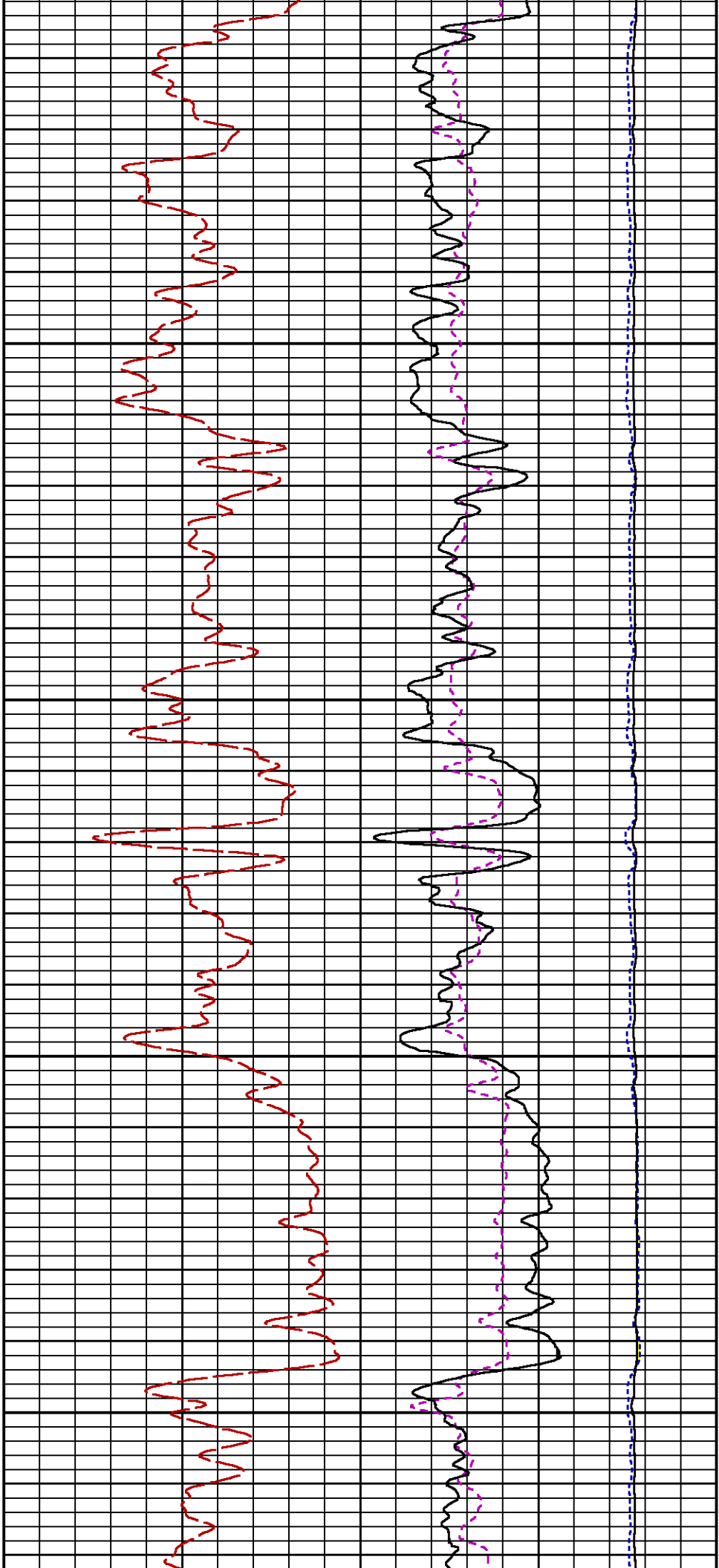


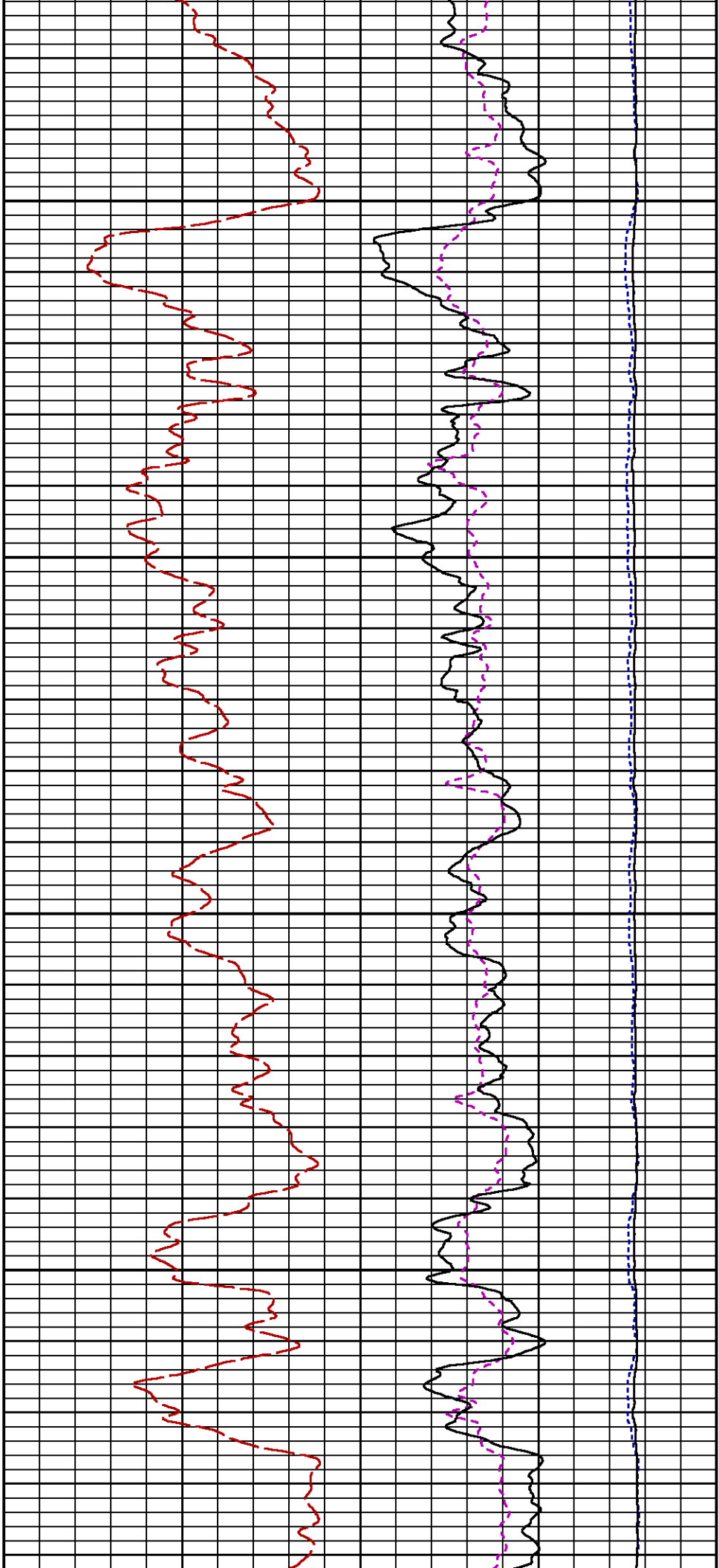
3400

3500

3600

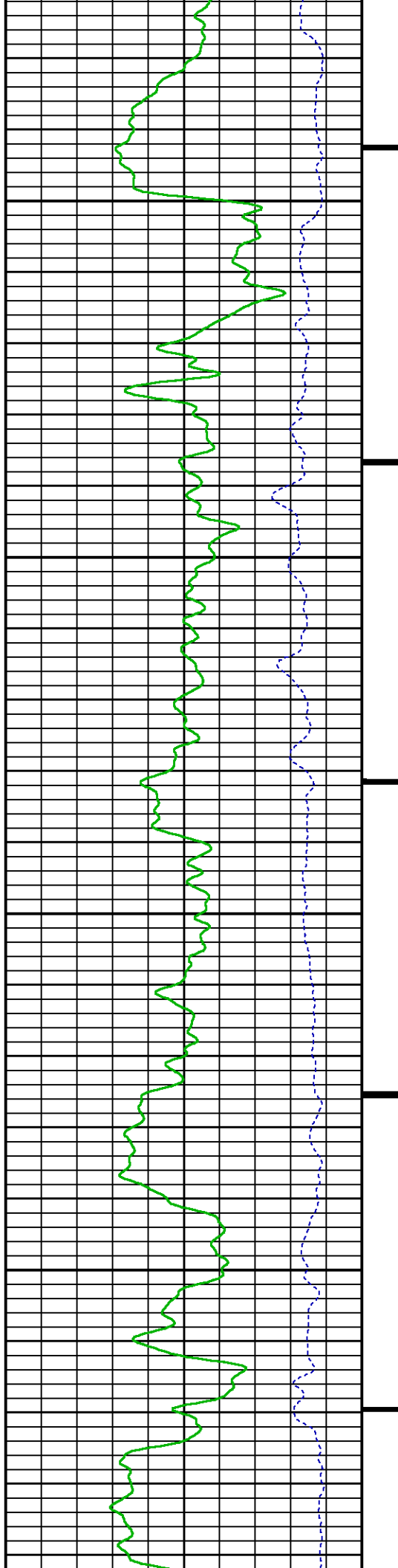


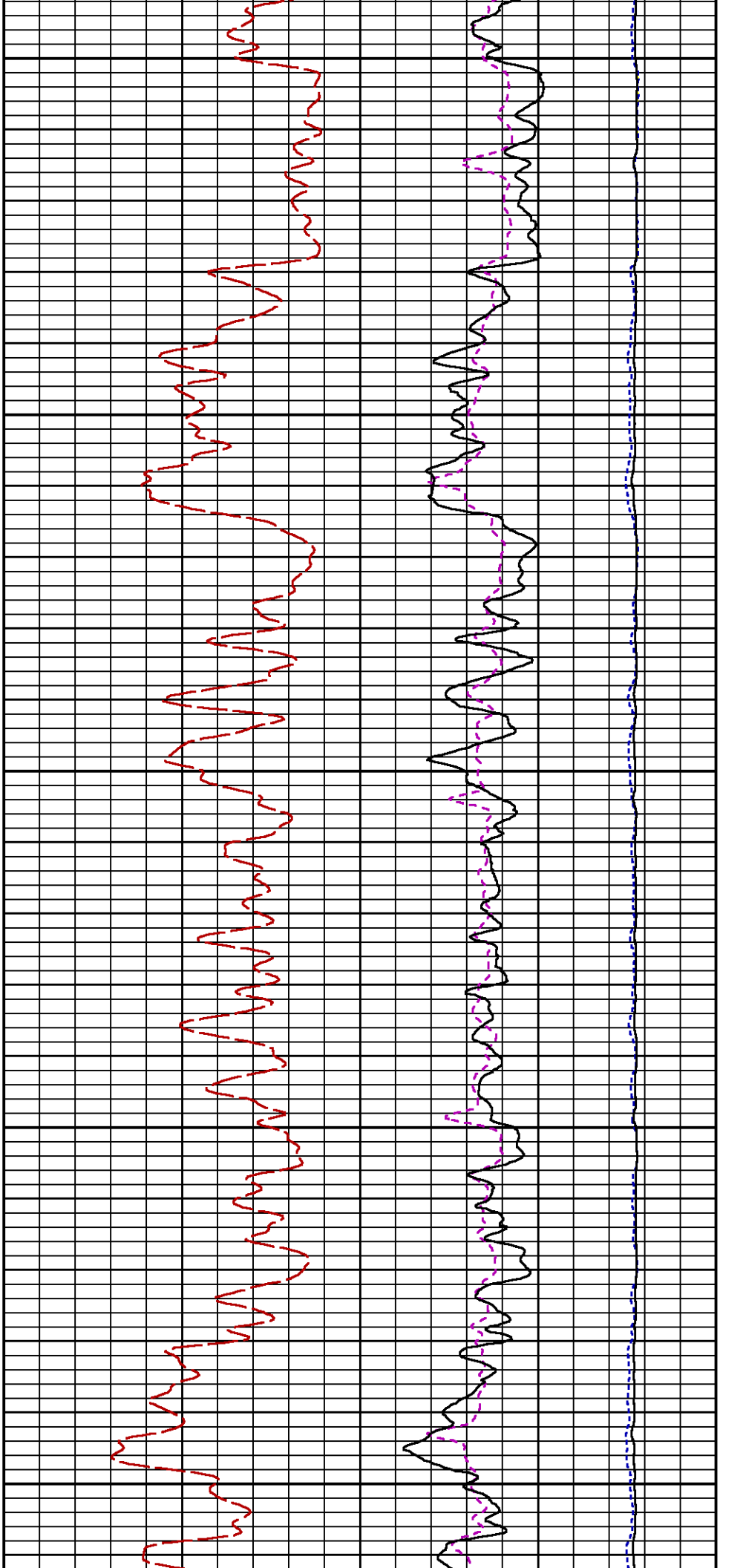




3900

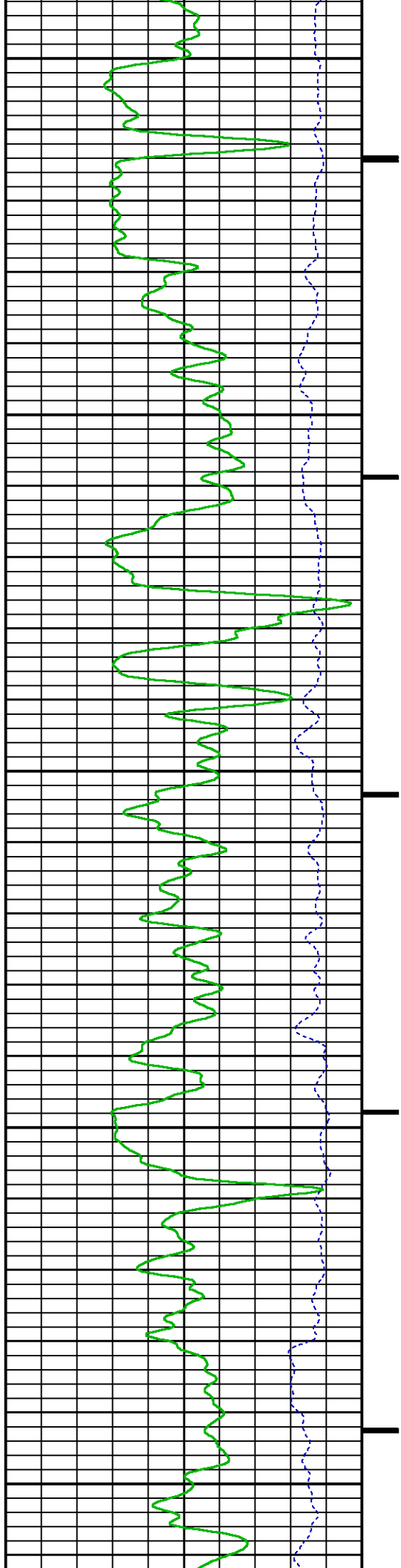
4000

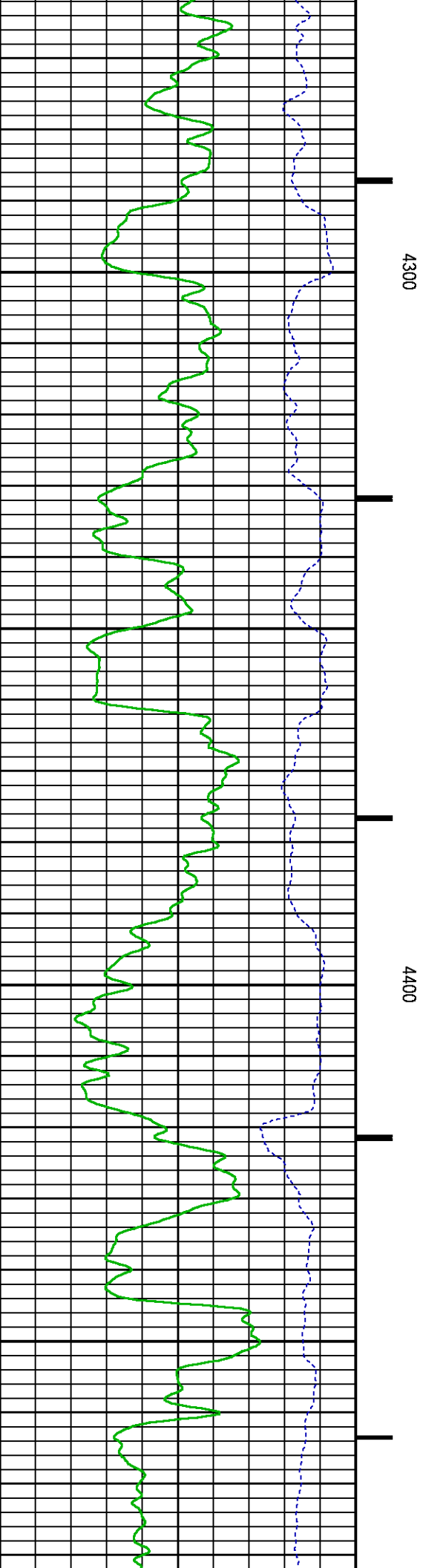
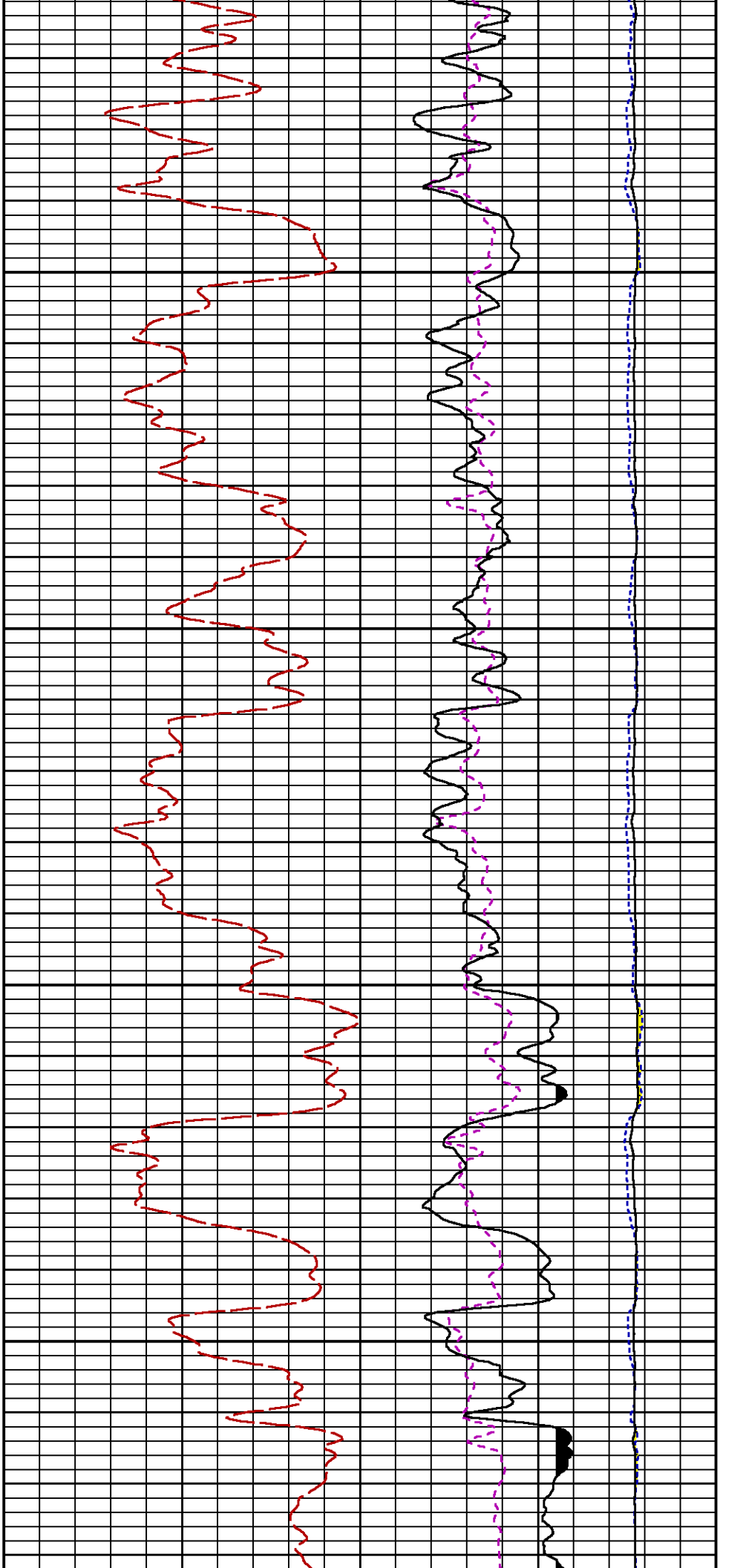


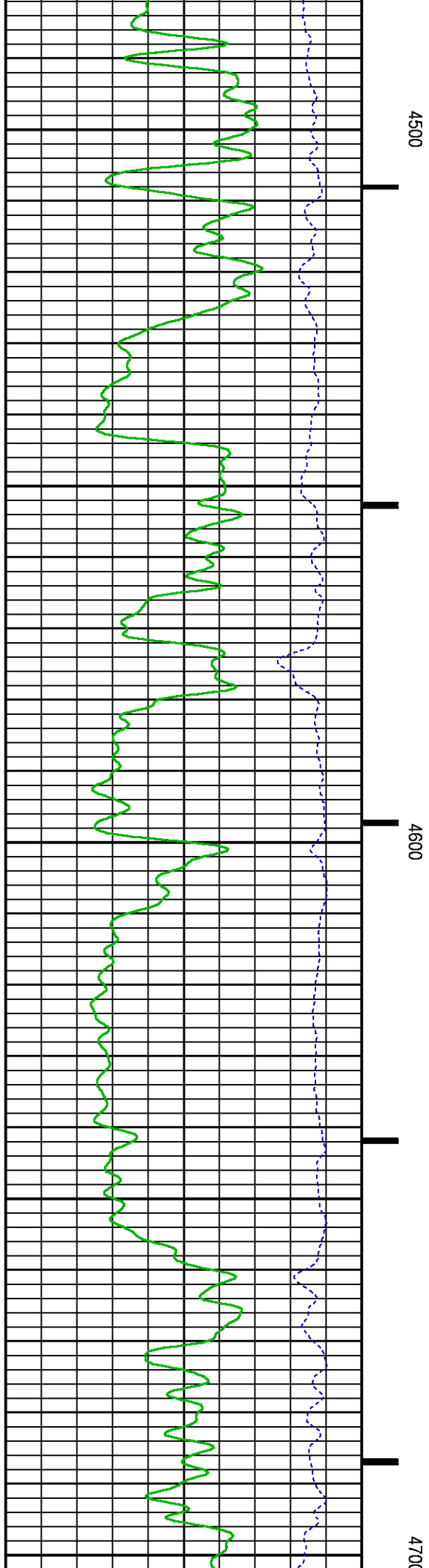
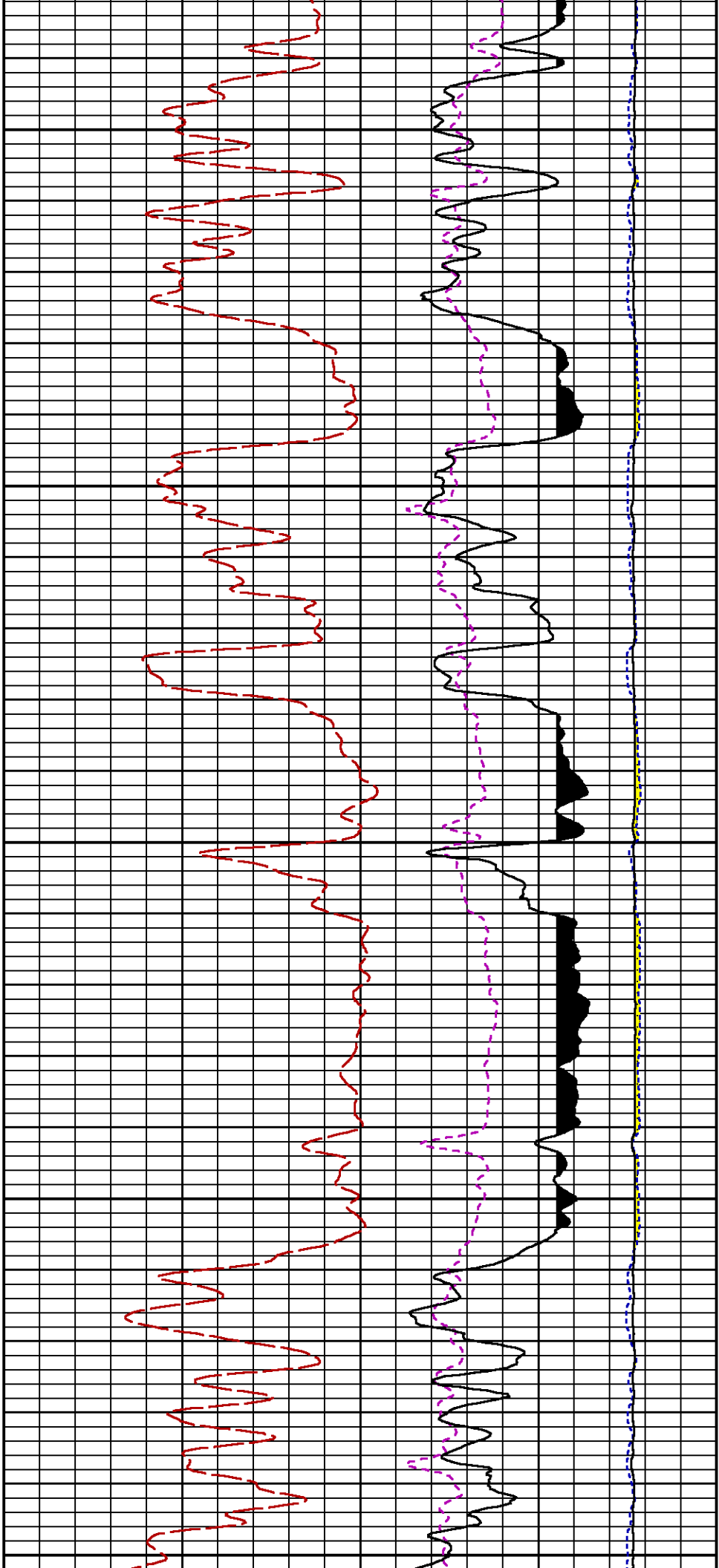


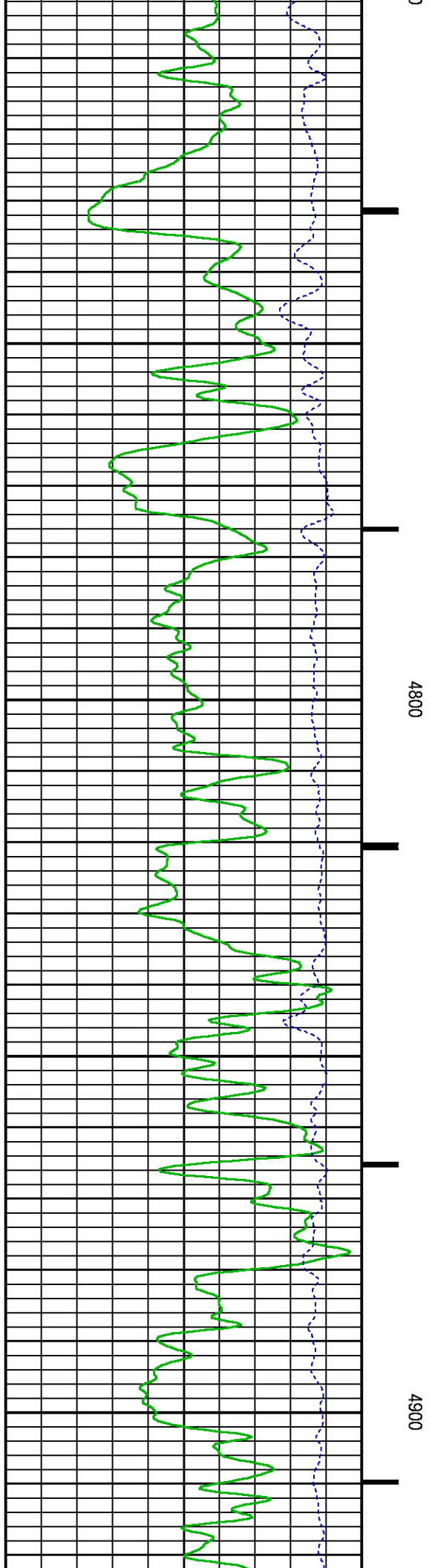
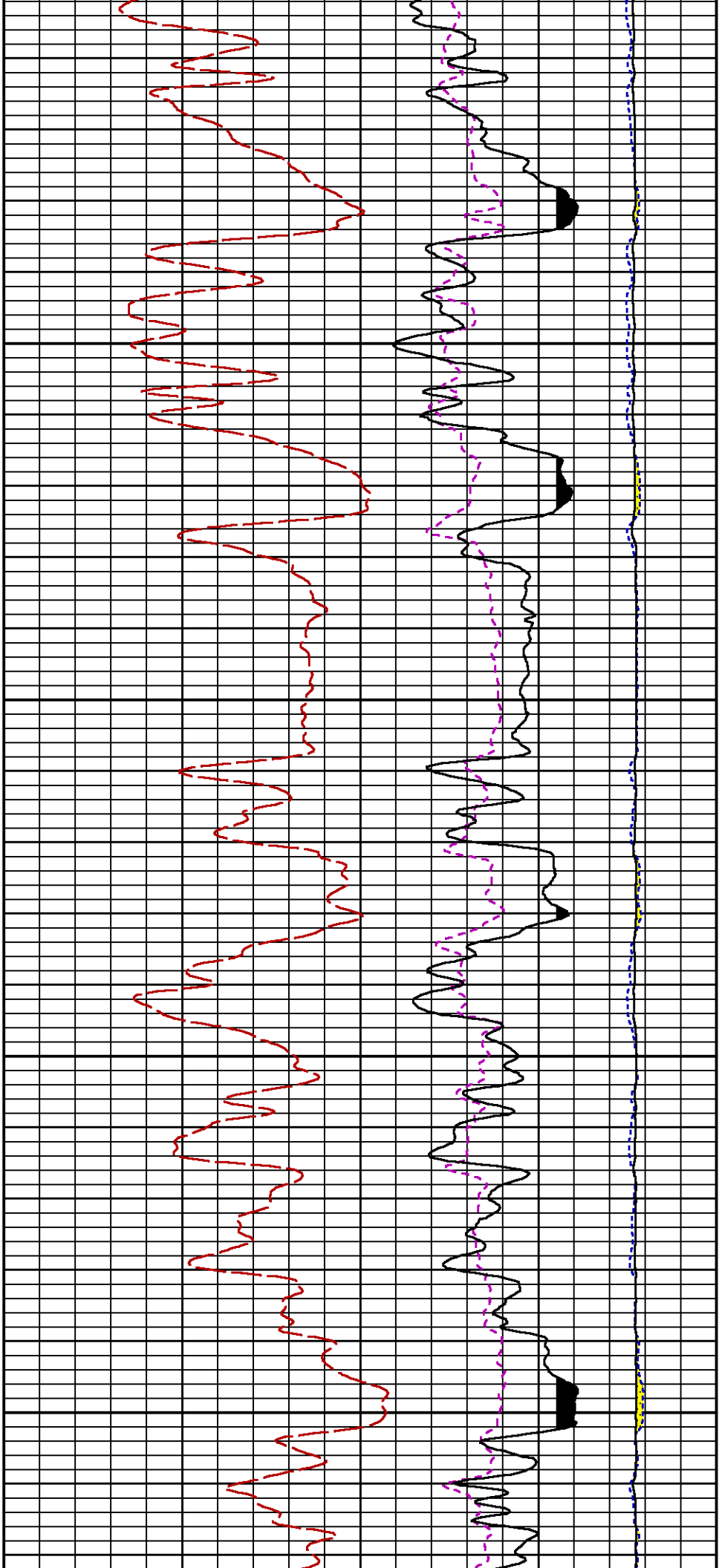
4100

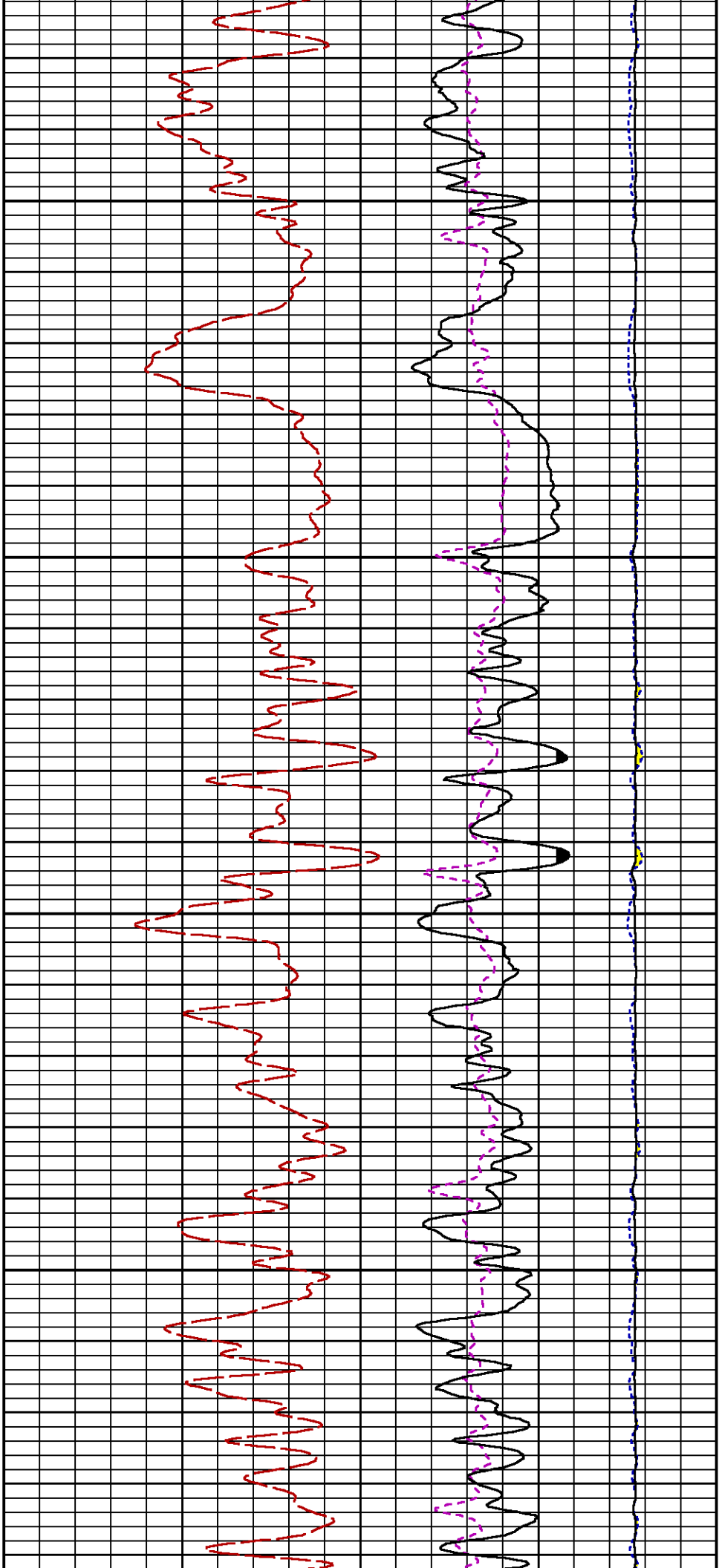
4200





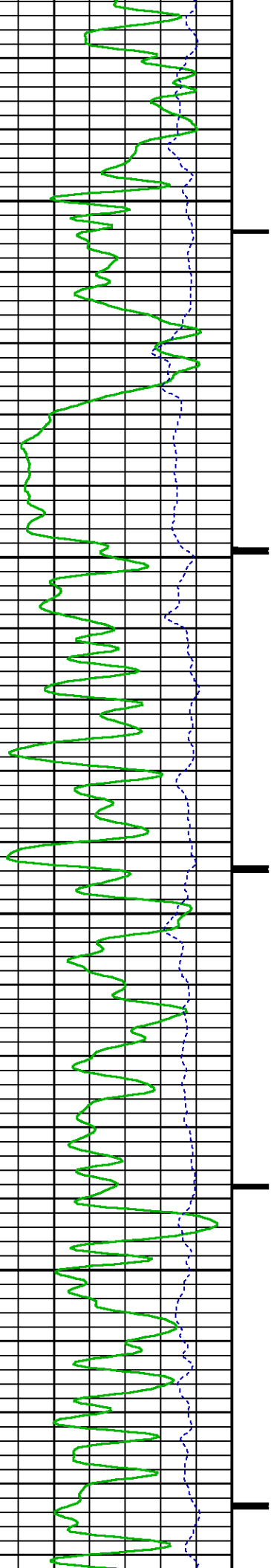




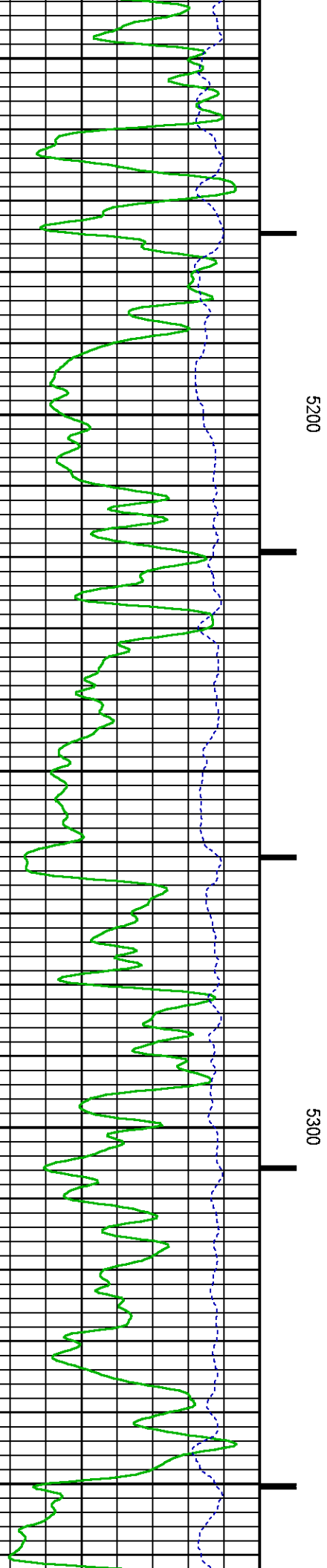
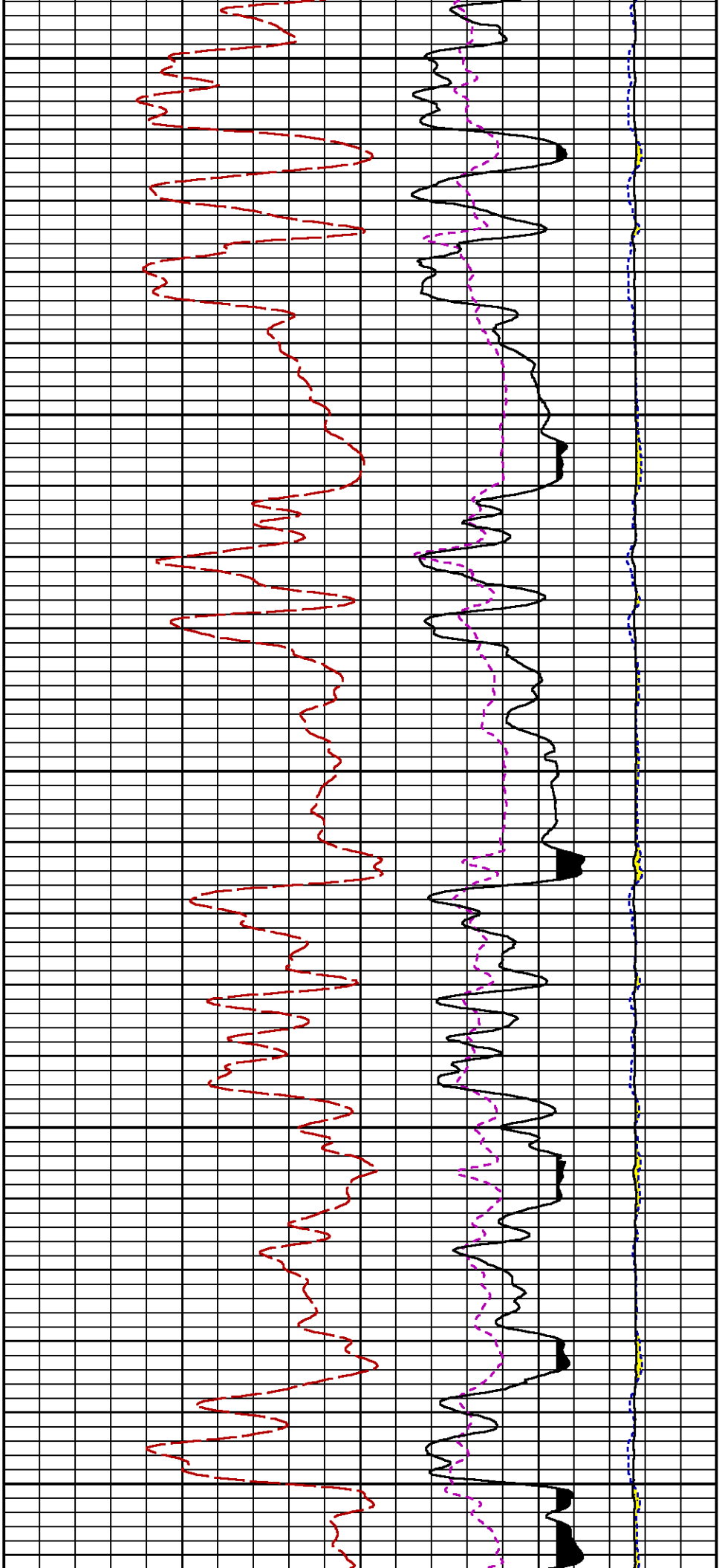


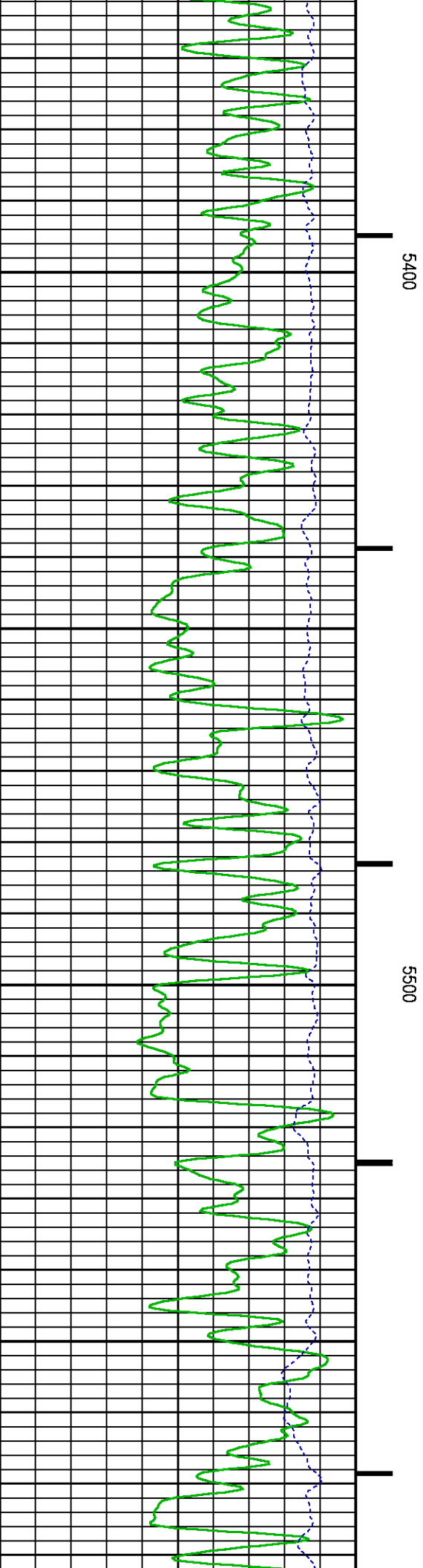
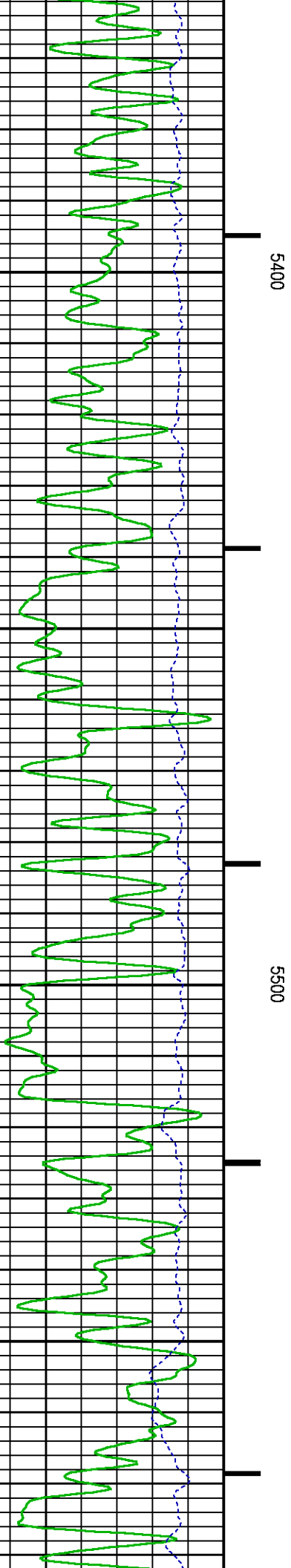
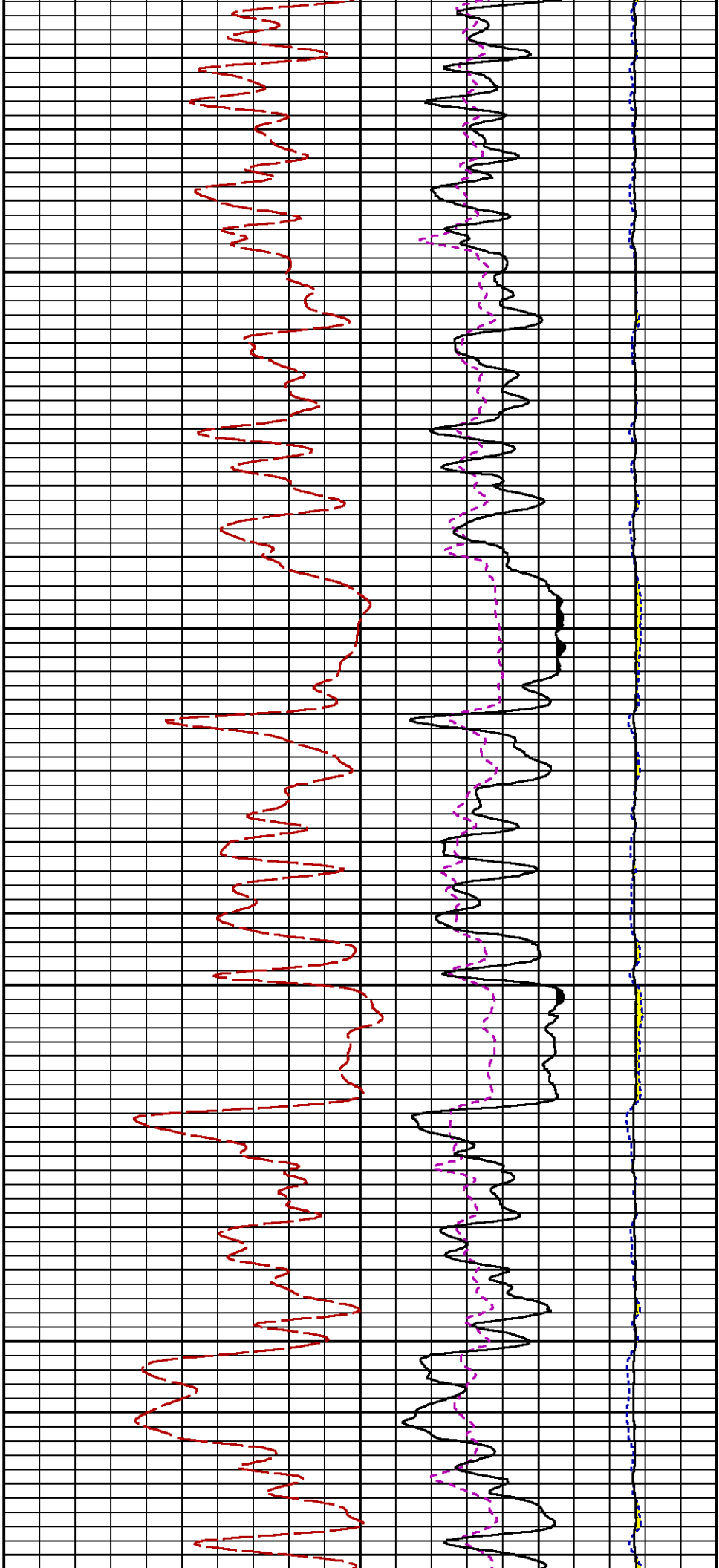
5000

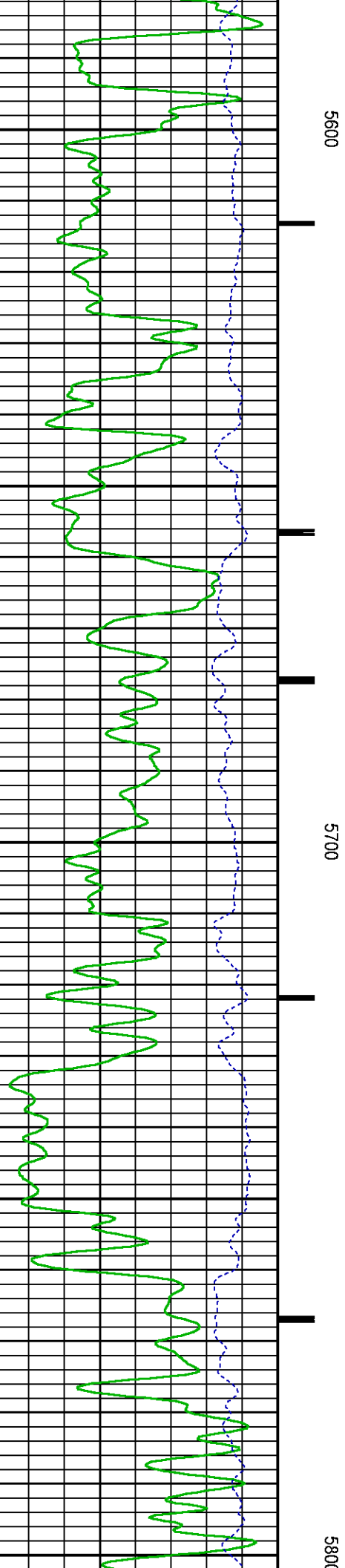
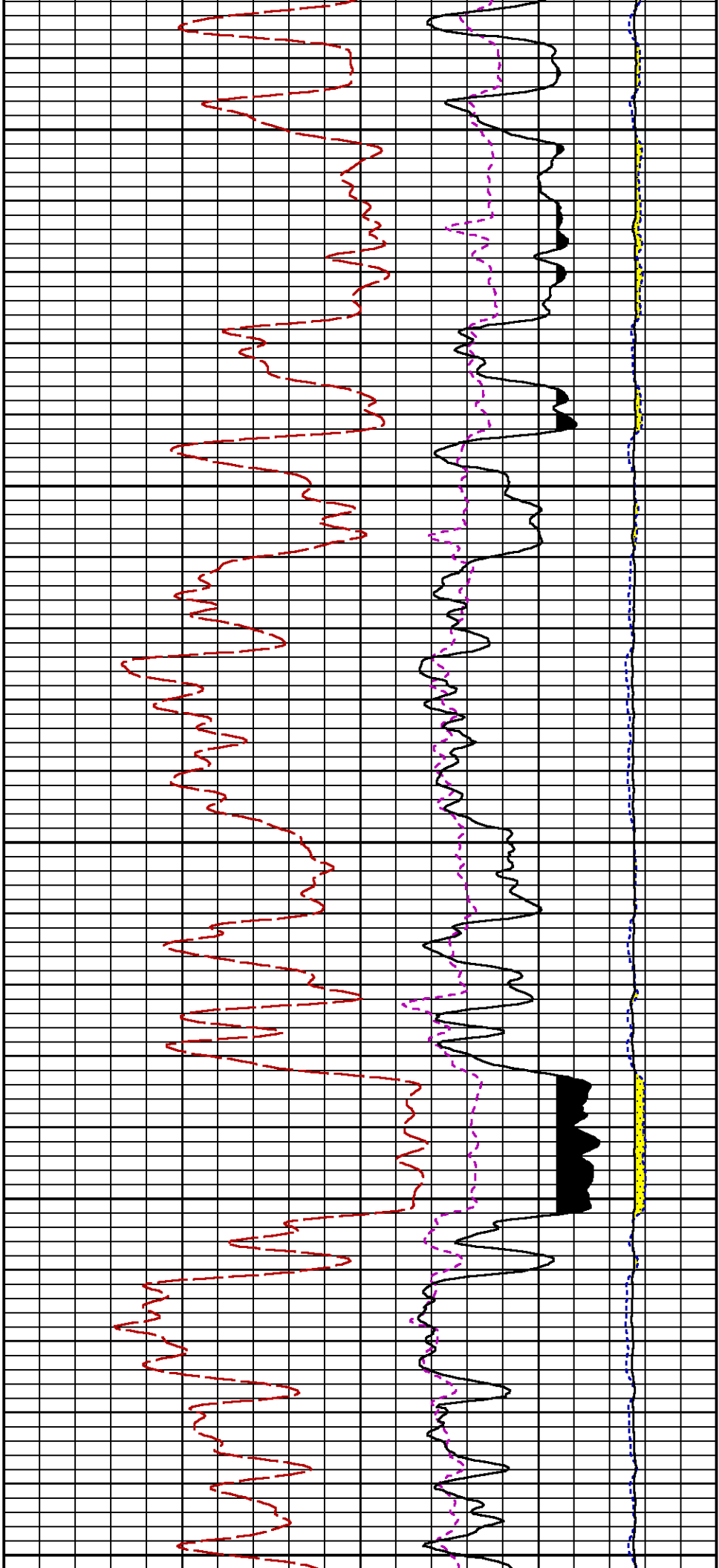
5100

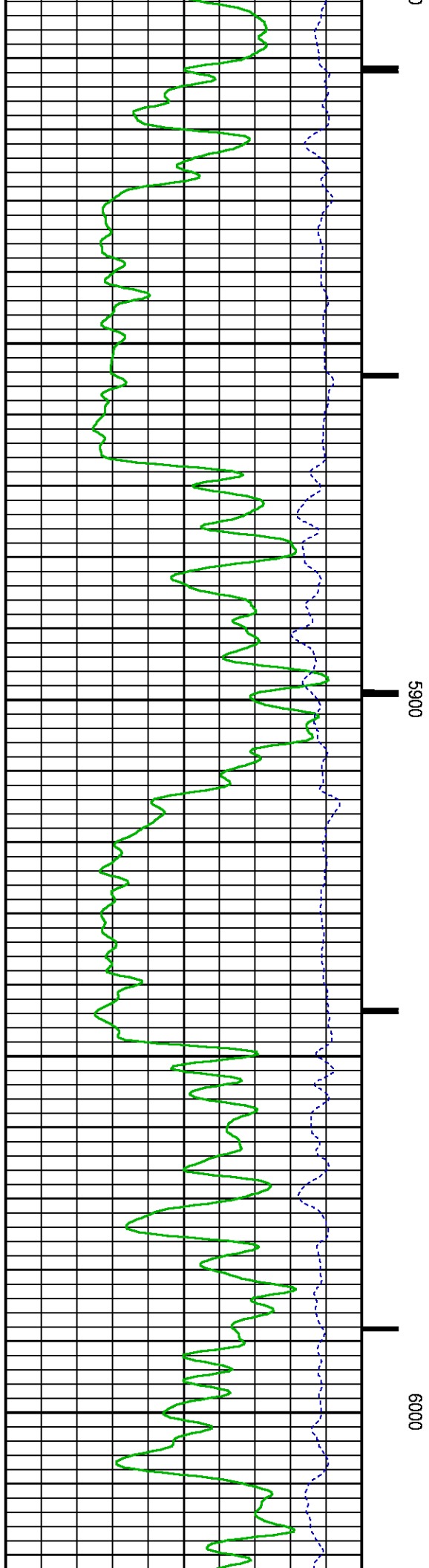
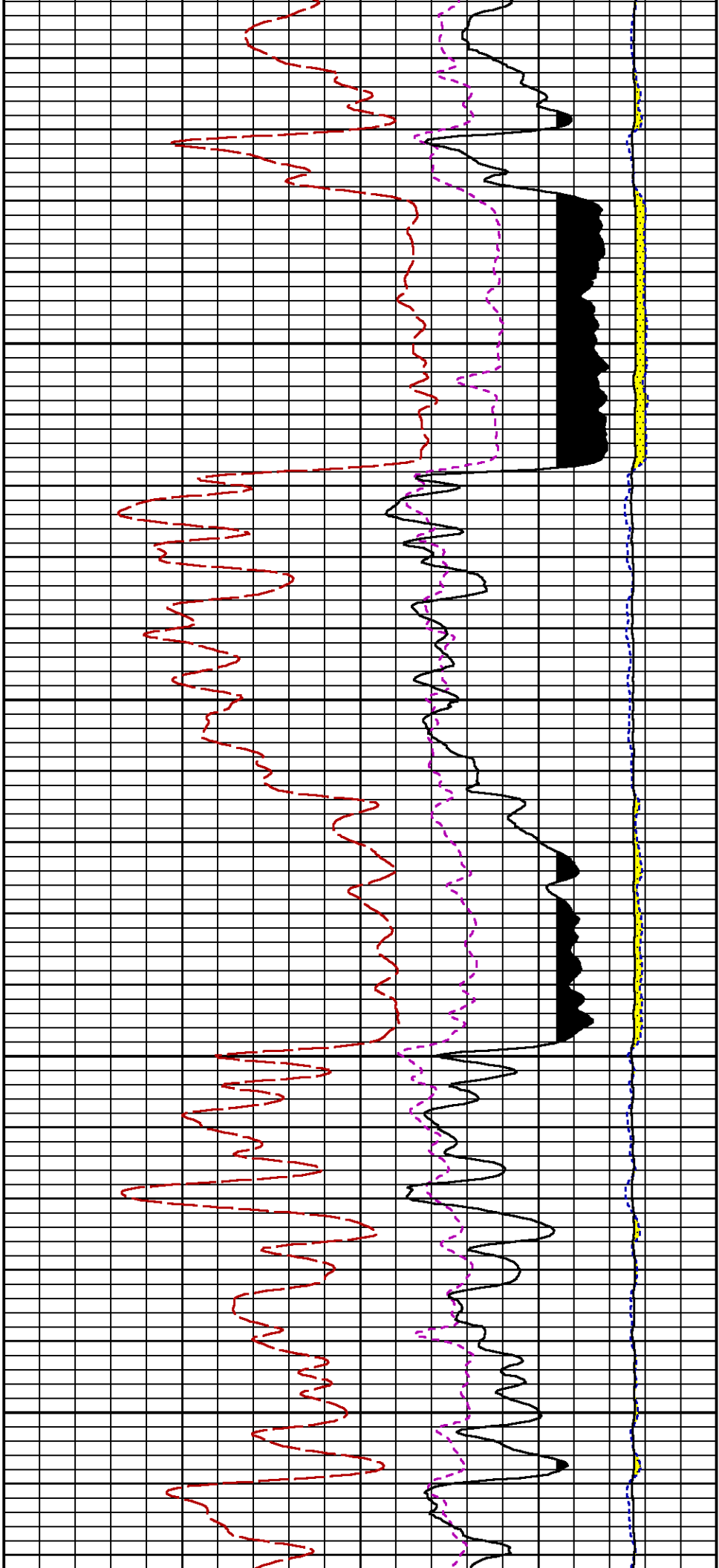


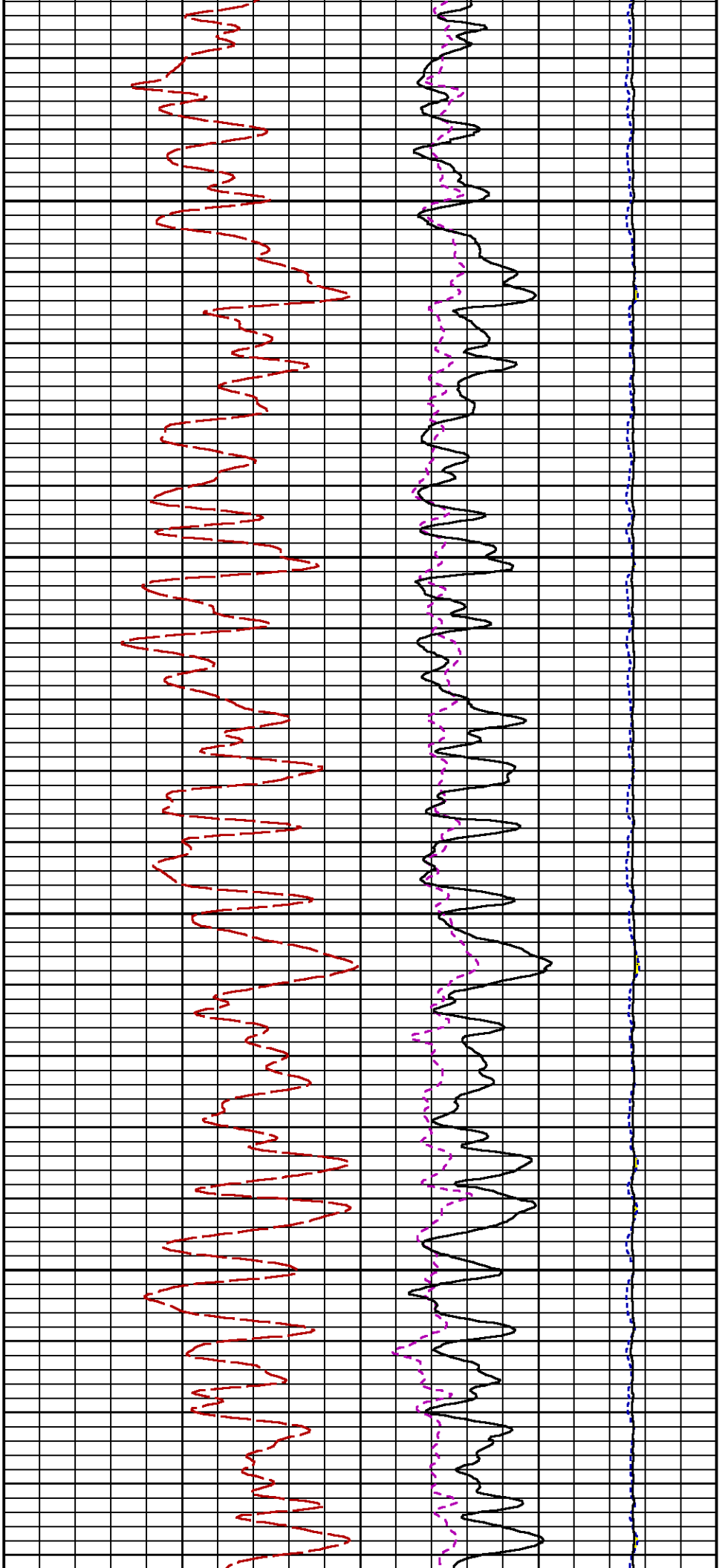






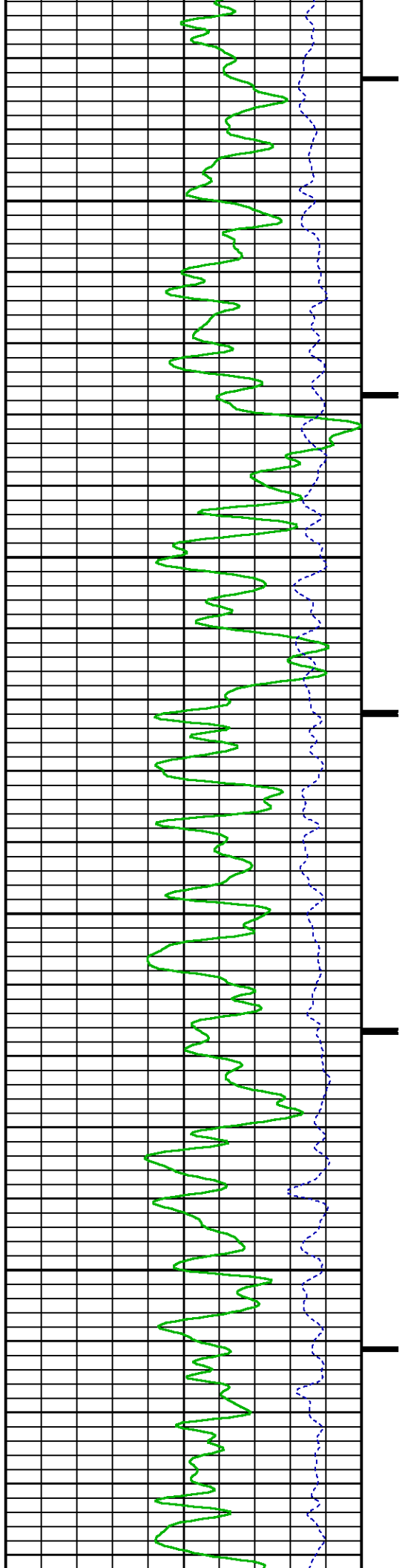


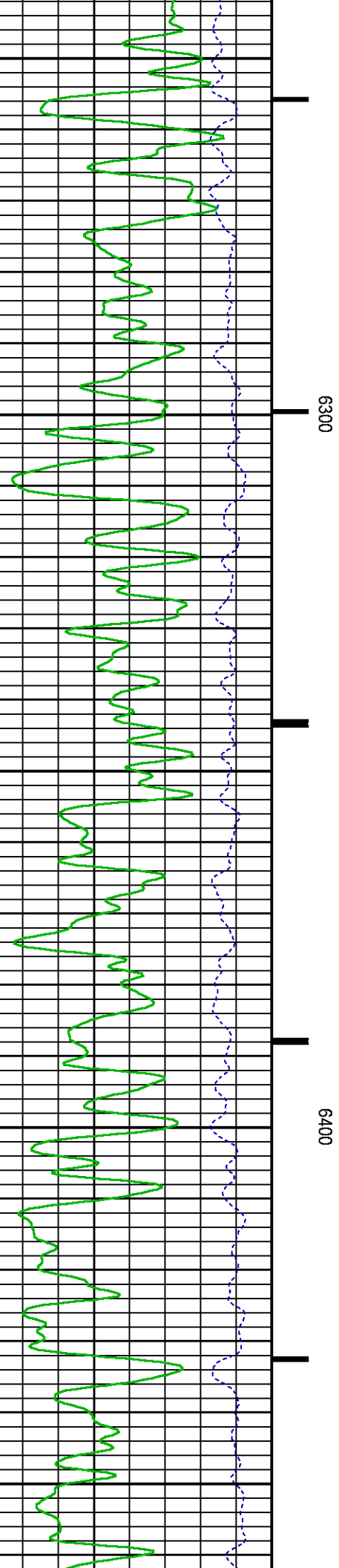
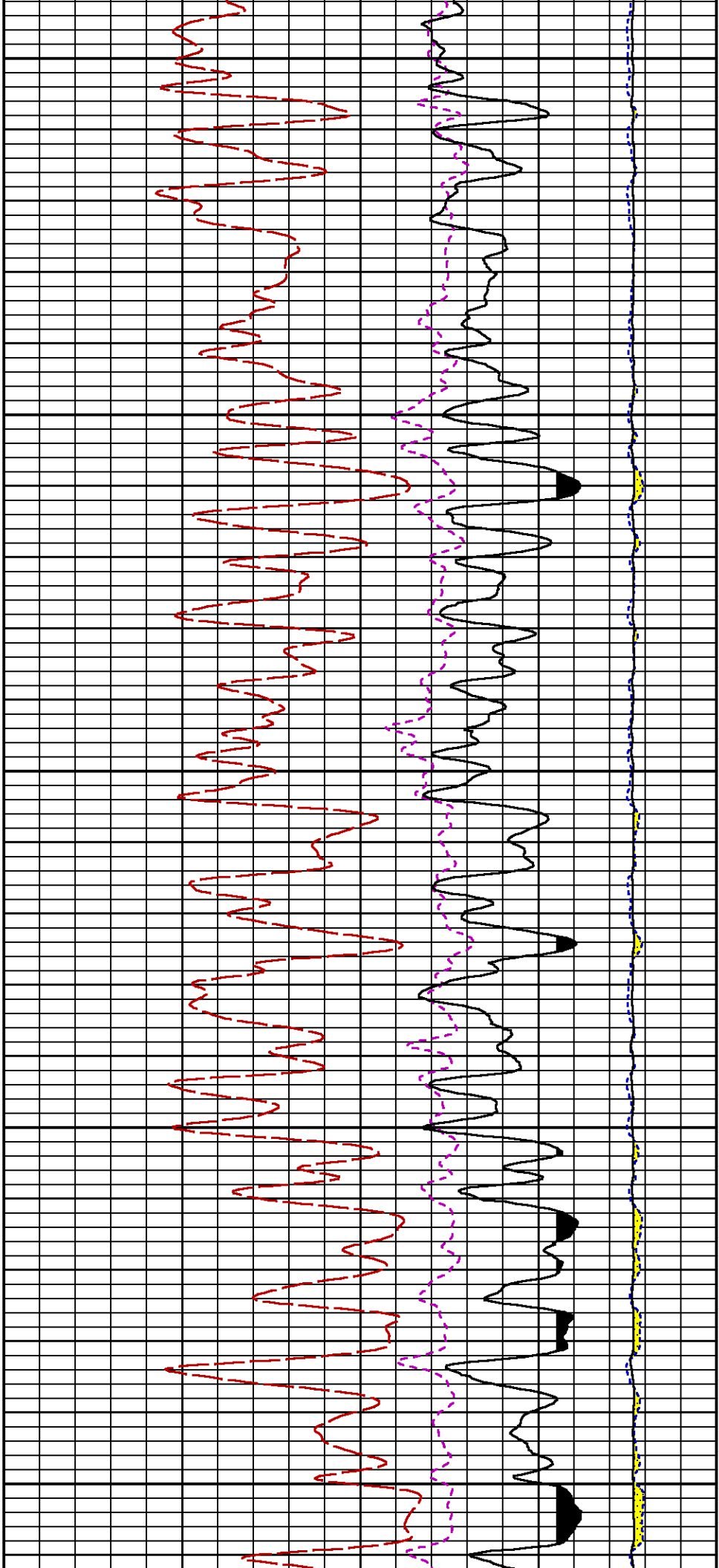


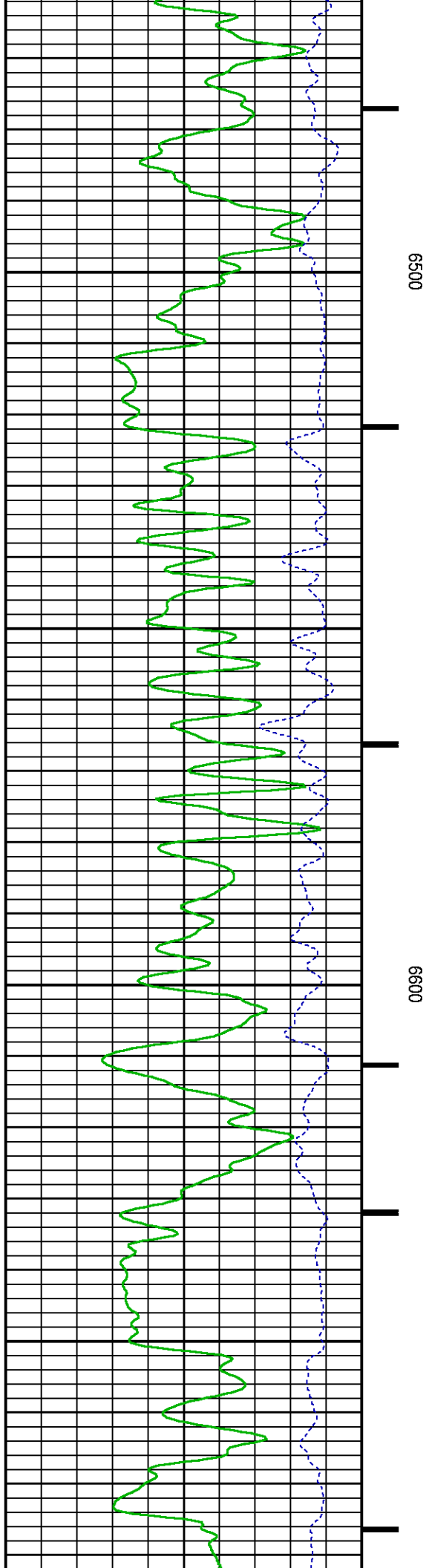
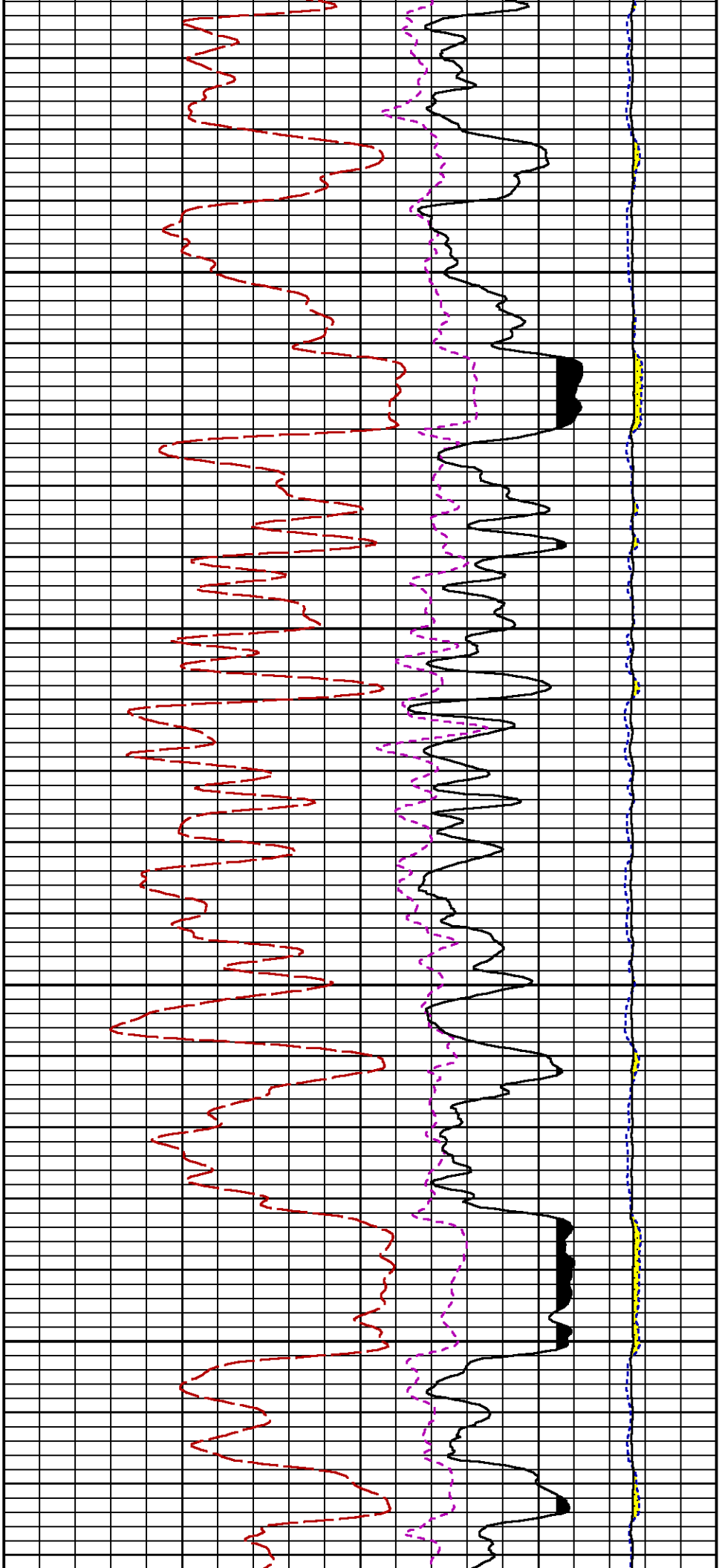


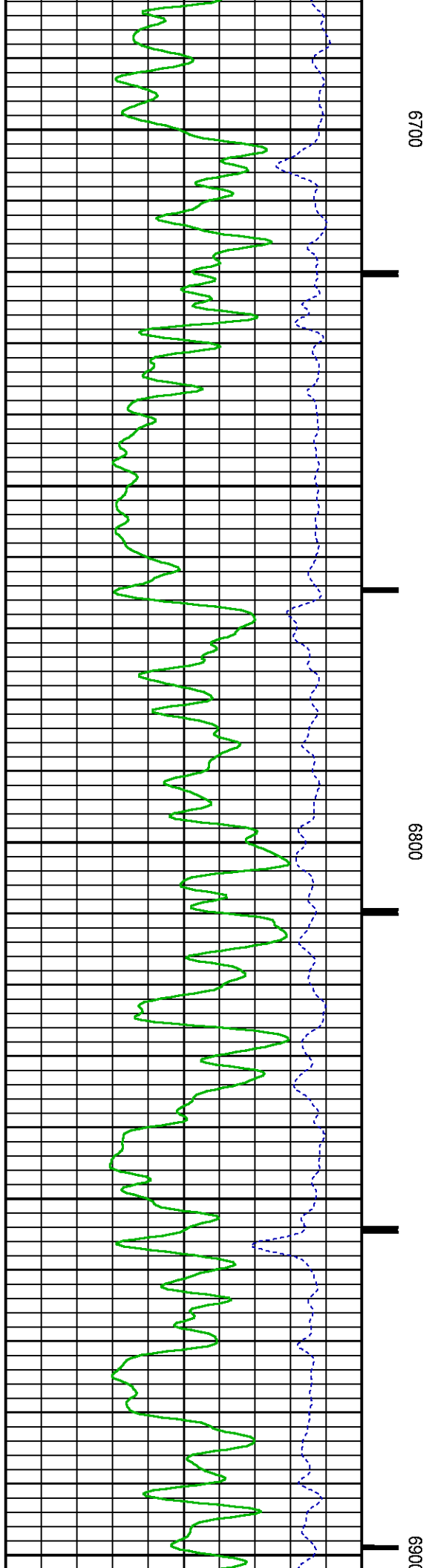
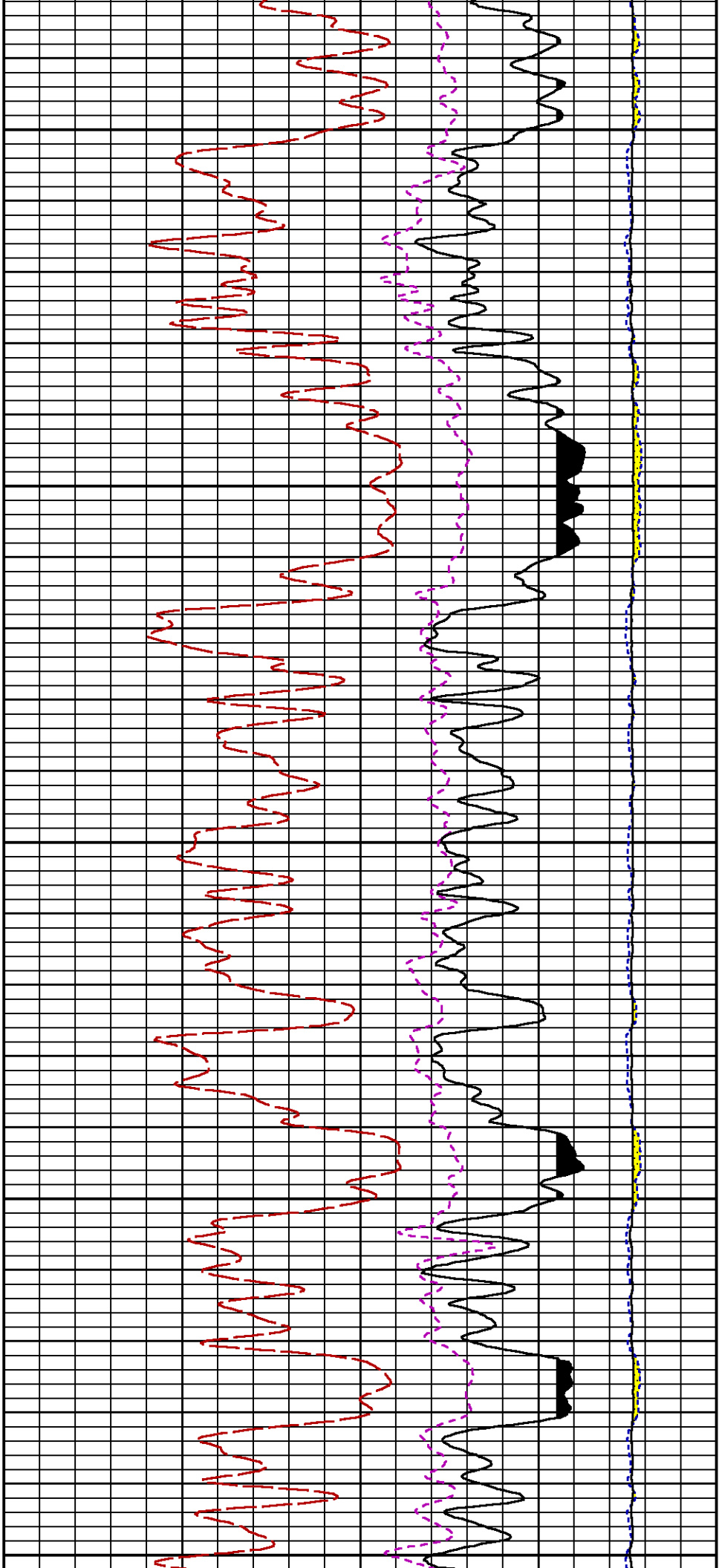
6100

6200

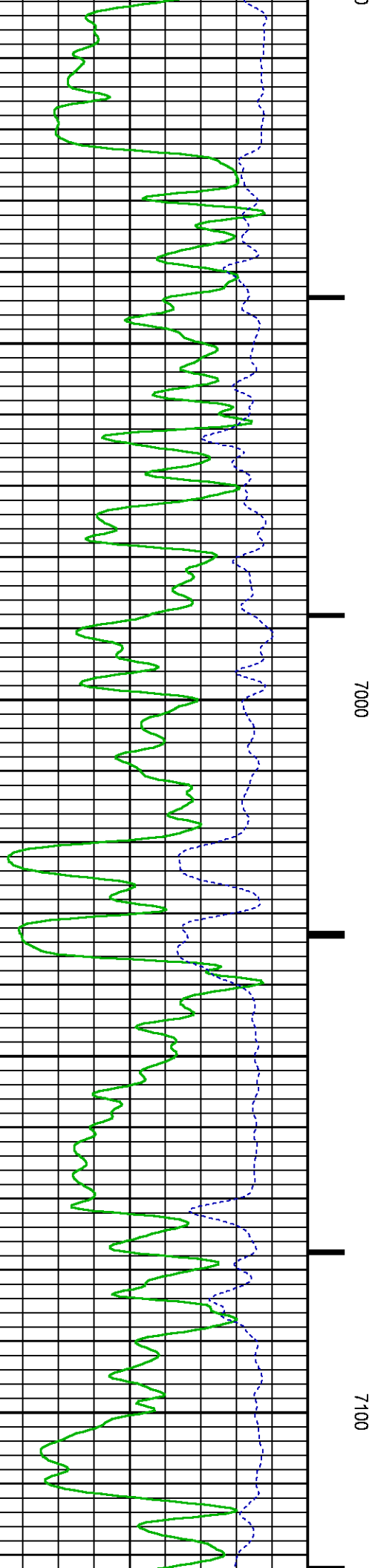
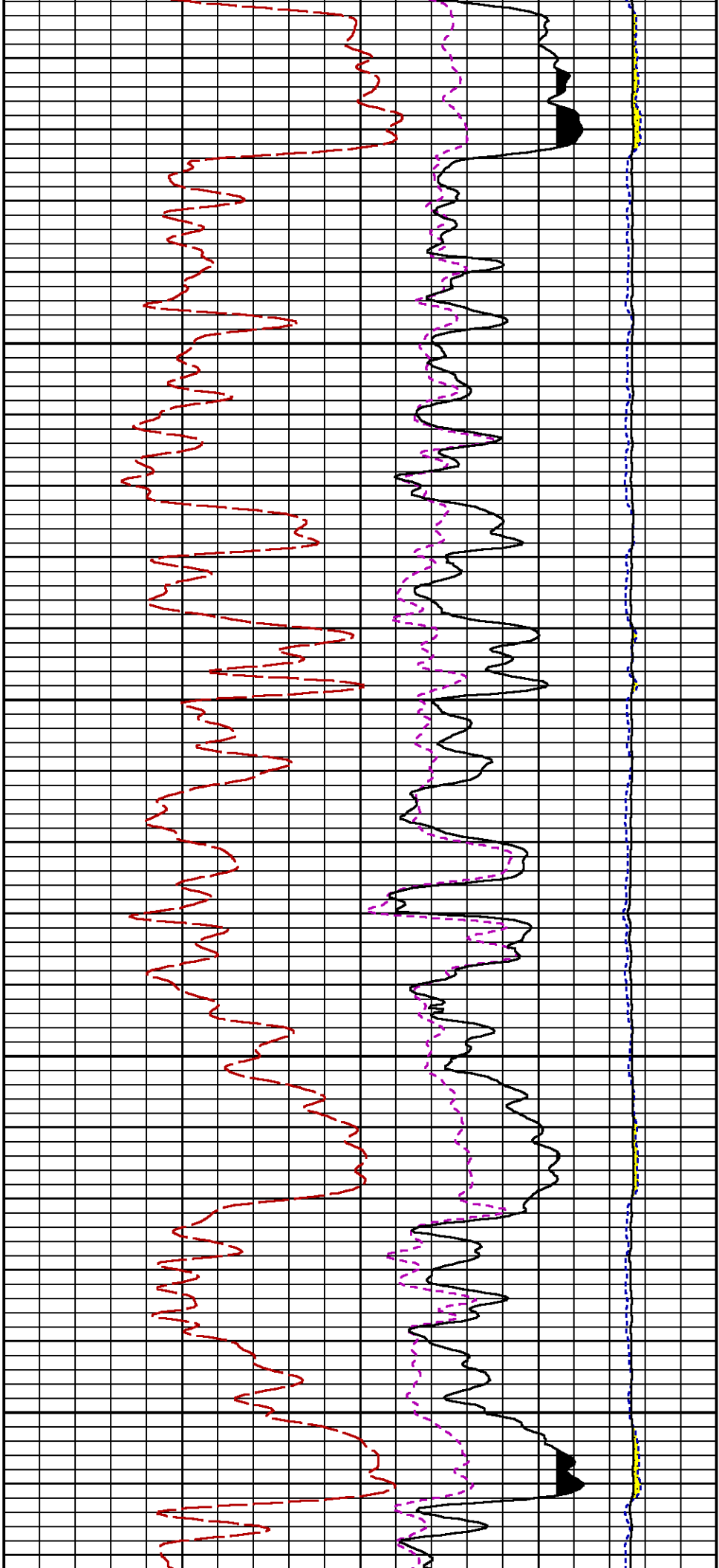


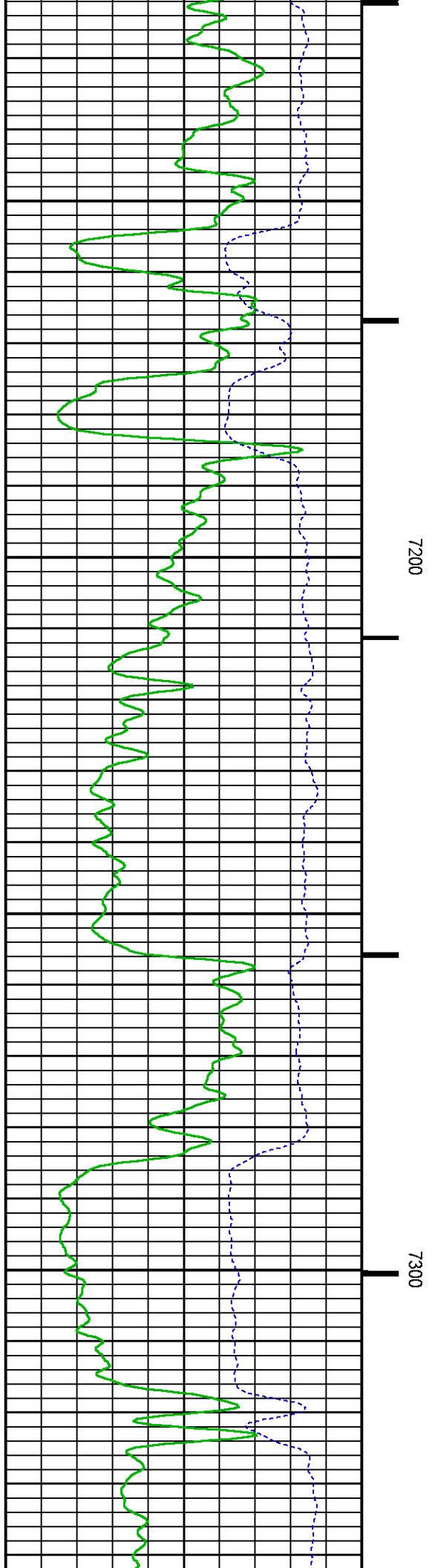
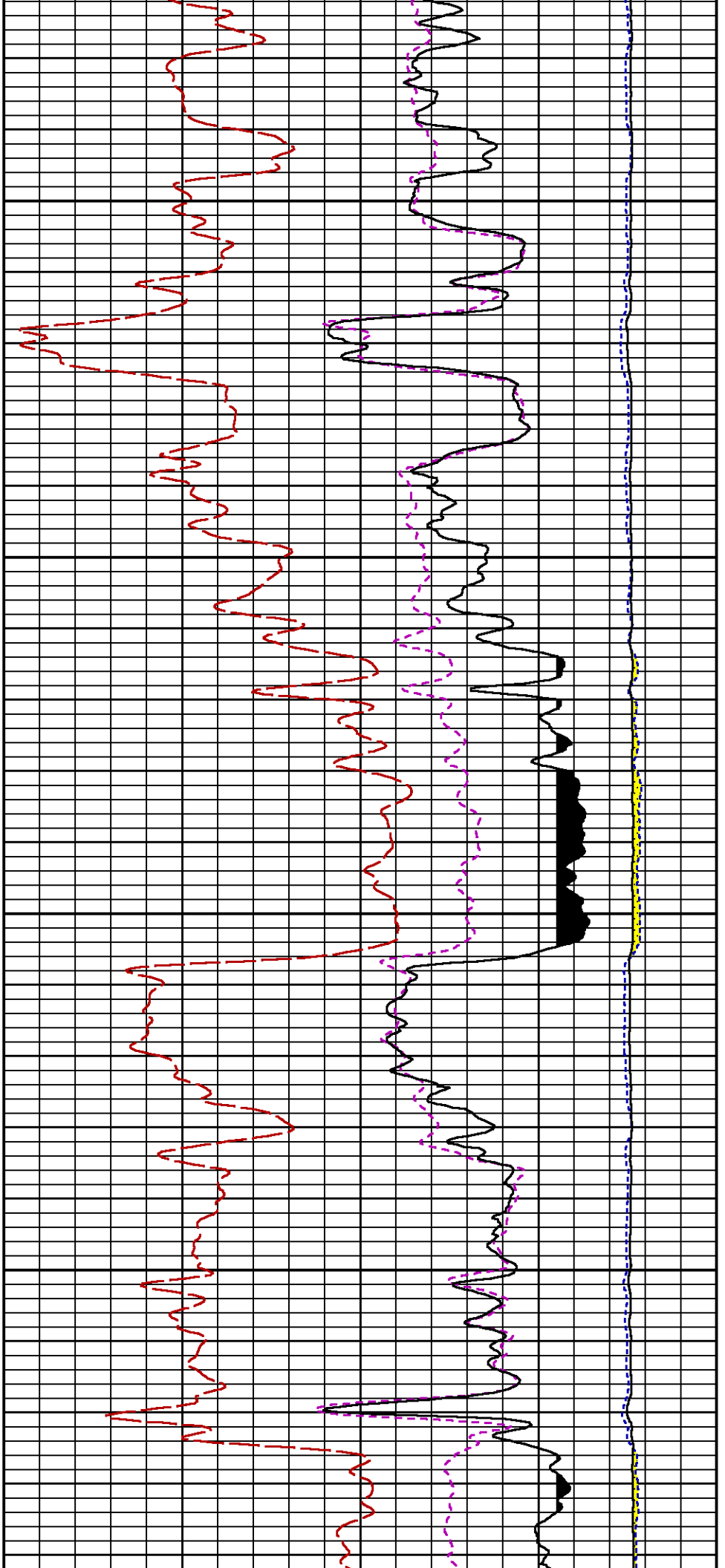


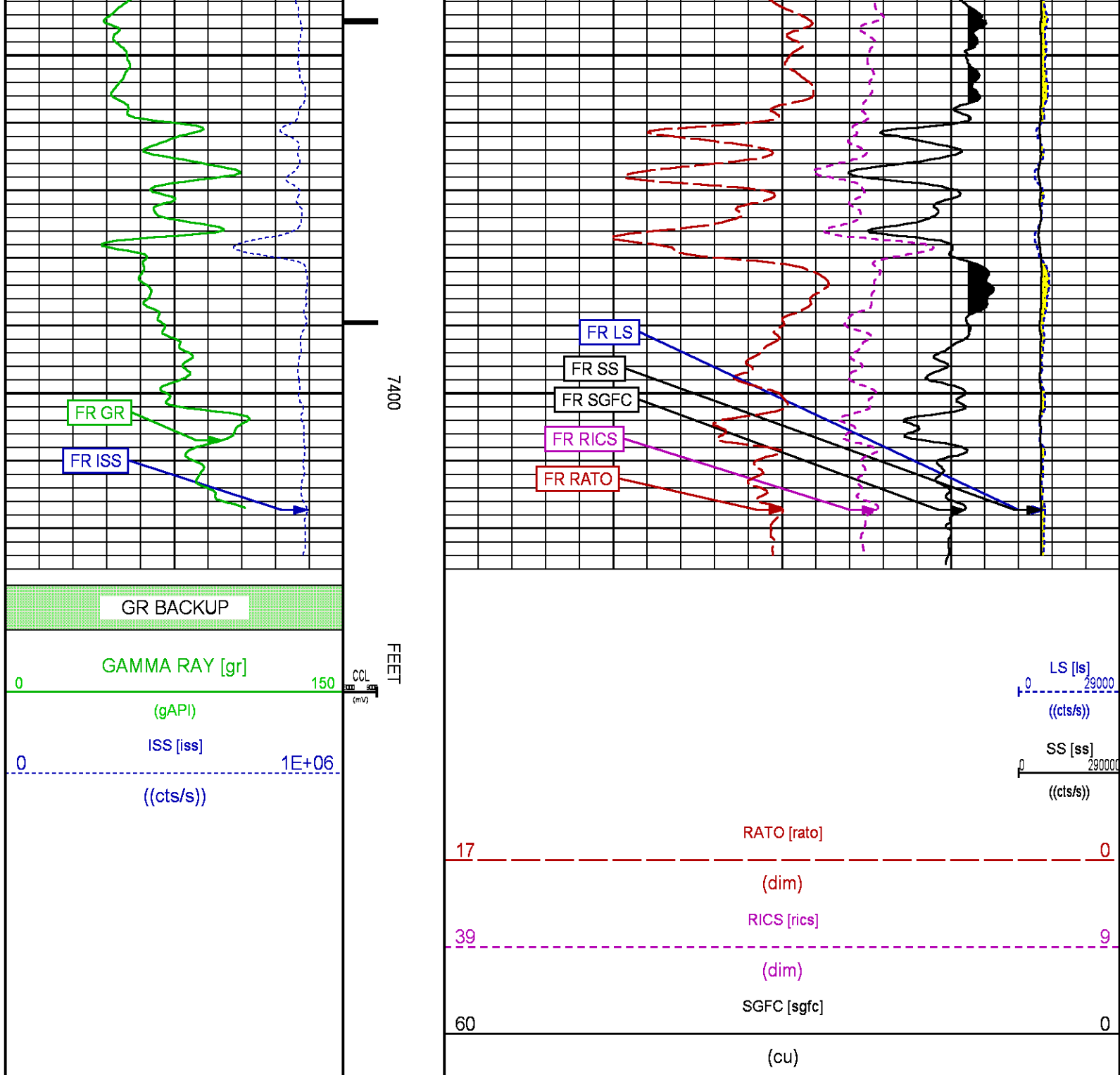












REPEAT SECTION PNC-3D MODE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013  
Updates: 1 Patches: 9

Plotted: Fri Jul 21 15:18:14 2017

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LAREME\_GUNDERSON\_20\_04W/RPM\_PNC3D01.prm  
LOGGING MODE: DEPTH DIRECTION: UP  
TOP DEPTH: 5283.250 ft BOTTOM DEPTH: 5558.883 ft

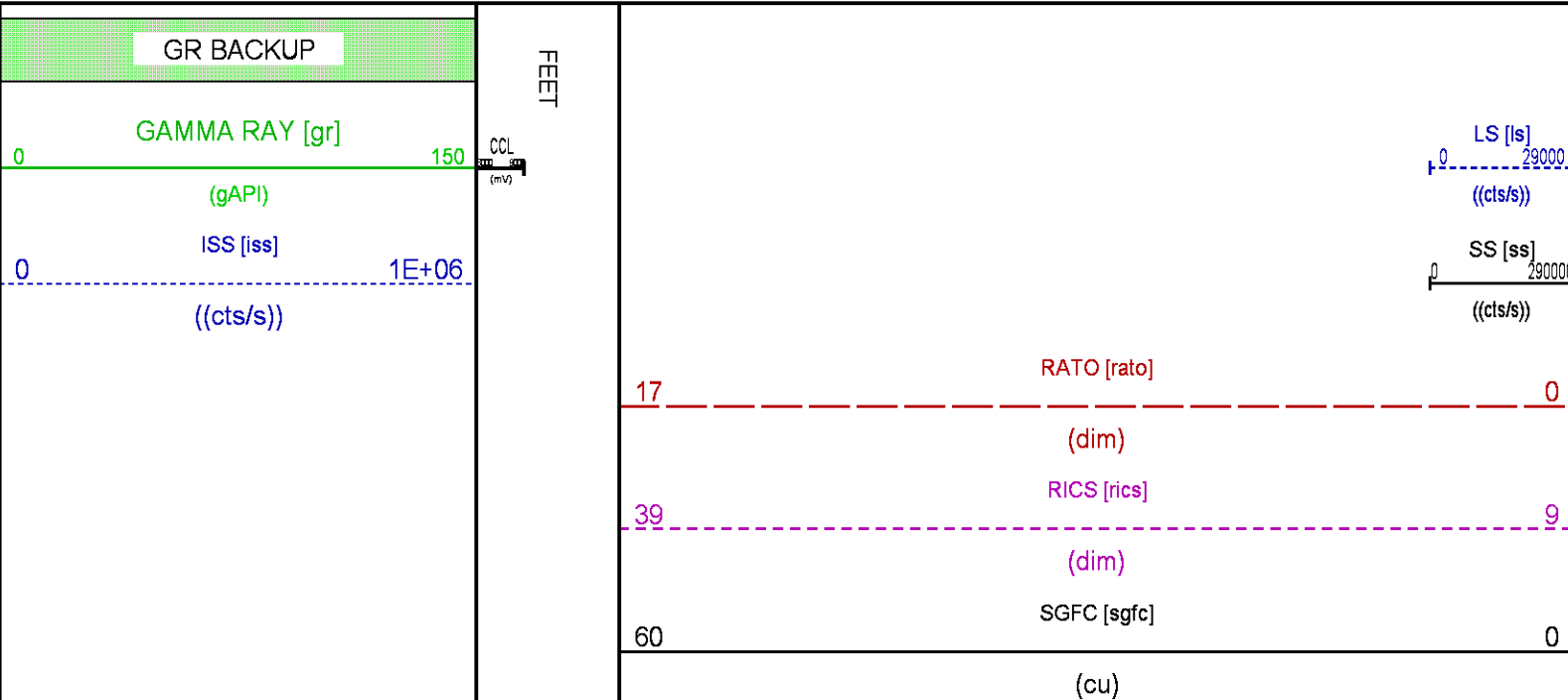
| SYMMETRIC FILTER |            |            |       |               |
|------------------|------------|------------|-------|---------------|
| MEASUREMENT TYPE | PARAMETER  | VALUE      | UNITS | INTERVAL (ft) |
| GR               | FILTER ( ) | medium (1) |       | TOP<br>BOTTOM |

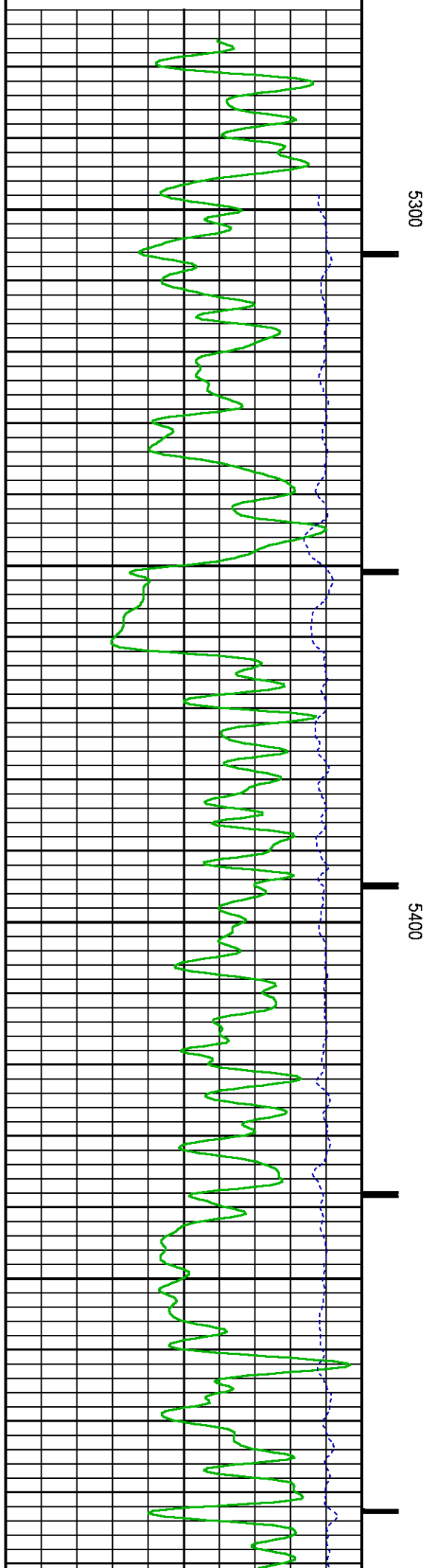
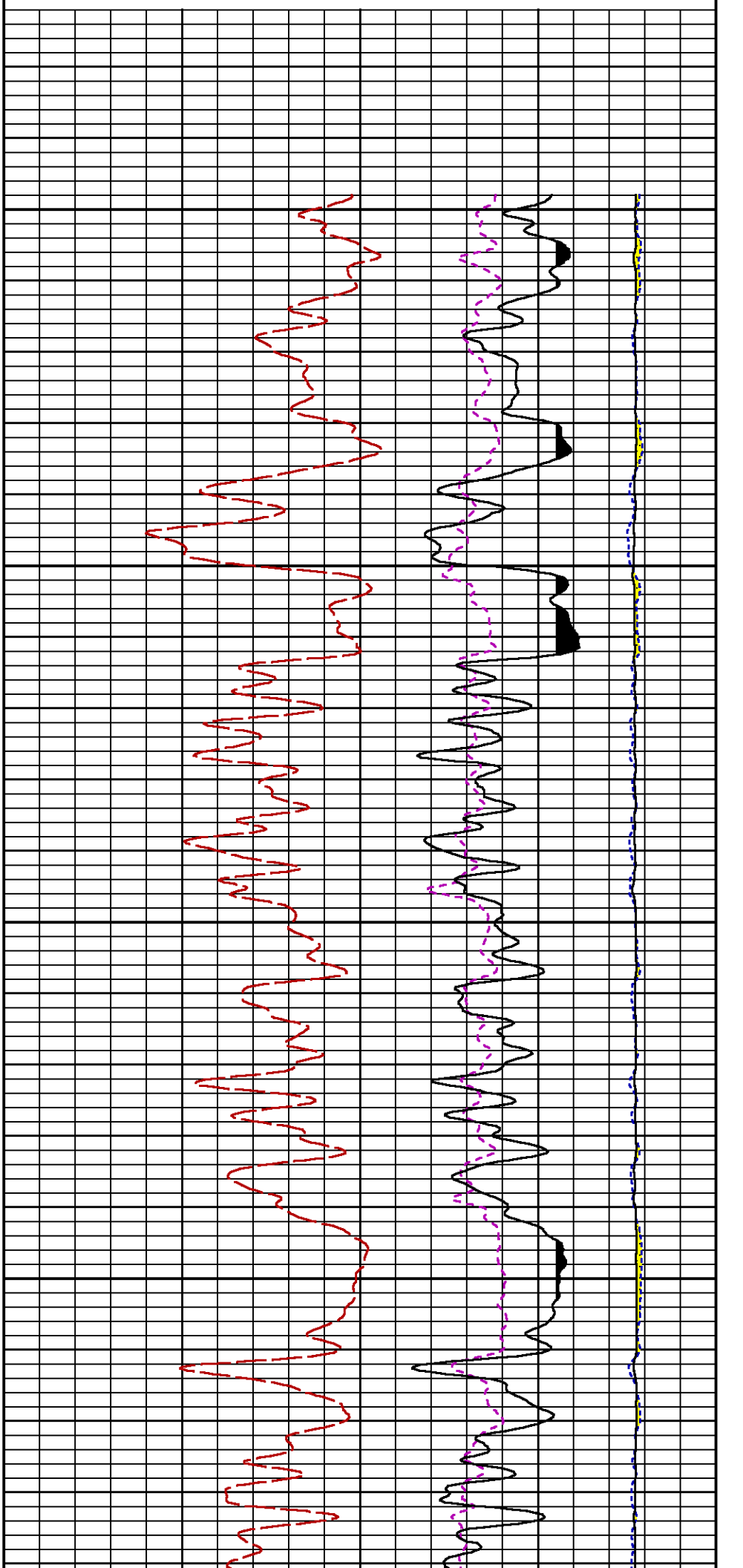
| RPM PROCESSING   |                   |            |       |               |
|------------------|-------------------|------------|-------|---------------|
| MEASUREMENT TYPE | PARAMETER         | VALUE      | UNITS | INTERVAL (ft) |
| PNC Parameters   | BOREHOLE CONTENTS | FLUID      |       | TOP<br>BOTTOM |
|                  | OPEN/CASED HOLE   | CASED HOLE |       | "<br>"        |
|                  | BOREHOLE SIZE     | 7.88       | in    | "<br>"        |
|                  | CASING SIZE       | 4.50       | in    | "<br>"        |
|                  | MATRIX            | SANDSTONE  |       | "<br>"        |
|                  | CORRECTION BUFFER | 11         |       | "<br>"        |

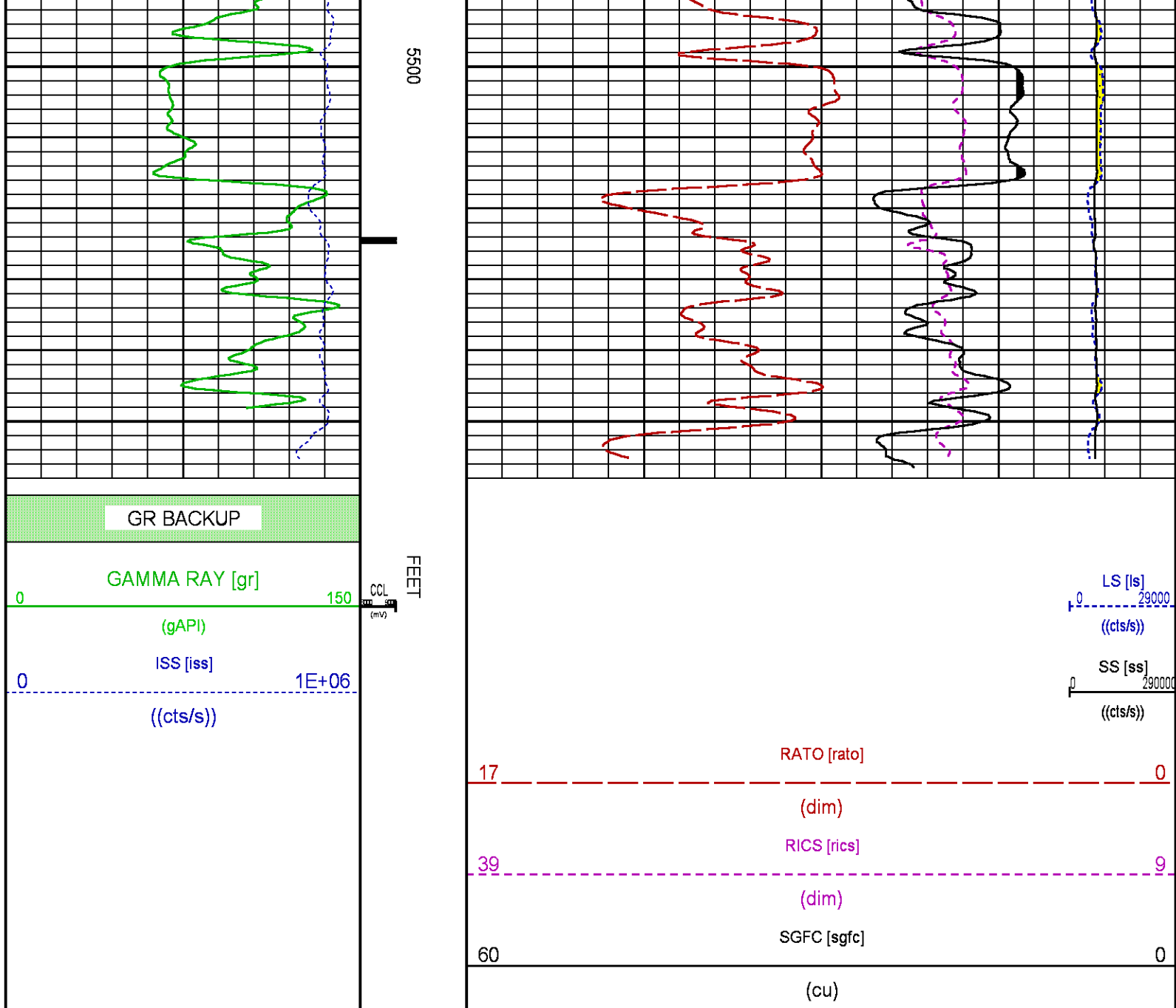
| CURVE DESCRIPTION REPORT |                      |   |
|--------------------------|----------------------|---|
| CURVE NAME               | CREATION DATE        | CURVE DESCRIPTION   |
| F1:CCL                   | Jul 21 14:50:19 2017 | CASING COLLAR LOCATOR                                       |
| F1:GR                    | Jul 21 14:50:19 2017 | GAMMA RAY   |
| F1:ISS                   | Jul 21 14:50:19 2017 | INELASTIC SHORT SPACE COUNT RATE                            |
| F1:LS                    | Jul 21 14:50:19 2017 | LONG SPACE COUNT RATE                                       |
| F1:RATO                  | Jul 21 14:50:19 2017 | SHORT/LONG SPACE COUNT RATE RATIO                           |
| F1:RICS                  | Jul 21 14:50:19 2017 | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC                  | Jul 21 14:50:19 2017 | CORRECTED FORMATION SIGMA                                   |
| F1:SS                    | Jul 21 14:50:19 2017 | 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  | : cpu100:rpm_pnc3d+01-REPEAT-GUNDERSON_20_04W_RPM_RPT-5.fvpdf [5"/100' Scale] |
| Plot Interval | : 5272 - 5562.75 Feet   |
| Data File 1   | : F1 : cpu100:/dat1a/LAREME_GUNDERSON_20_04W/GUNDERSON_20_04W_RPM_RPT.xtf     |
| Created On    | : Jul 21 14:50:19 2017  |
| Company       | : LARAMIE ENERGY  |
| Well          | : GUNDERSON 20-04W  |
| Field         | : VEGA  |
| File Interval | : 5271.25 - 5571.5 Feet   |
| OCT           | : RPM_PNC3  |







### CALIBRATION / VERIFICATION SUMMARY

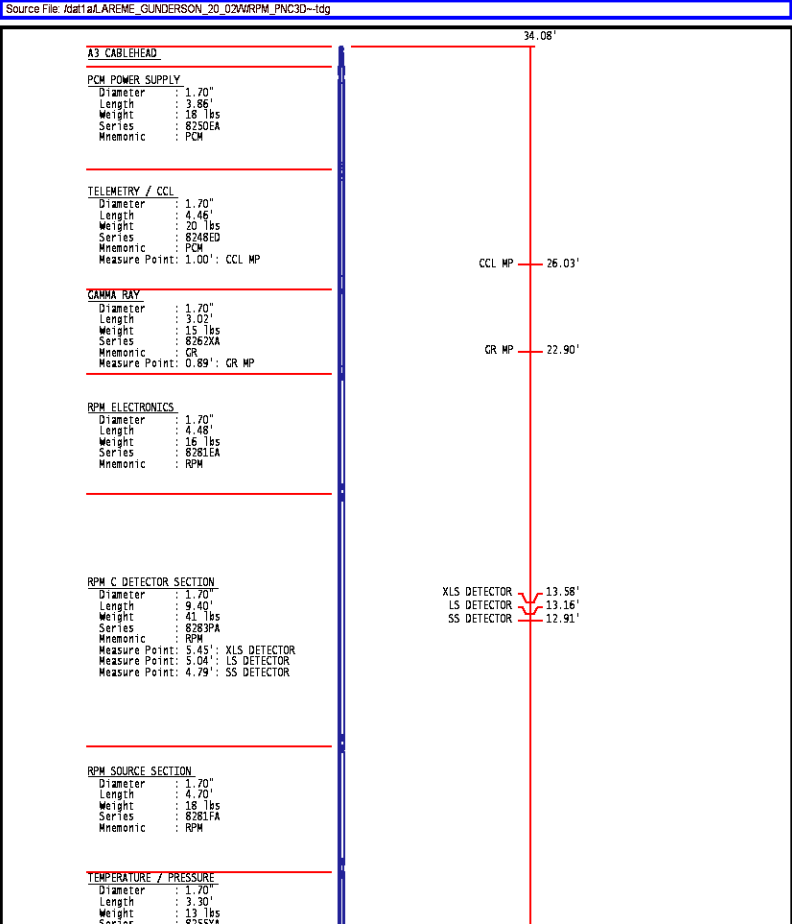
Source File: Adat1aLAREME\_GUNDERSON\_20\_04WRPM\_PNC3D1p1

| GR PRIMARY CALIBRATION SUMMARY  |                       |                       |                    |                      |                          |                      |
|---------------------------------|-----------------------|-----------------------|--------------------|----------------------|--------------------------|----------------------|
| TOOL #:                         | 8262XA10485470        |                       |                    | DATE/TIME PERFORMED: | Tue Jan 17 13:32:11 2017 |                      |
| UNIT #:                         | 3882ML ML4352         |                       |                    | CALB JIG #:          | 4702NKA DA_228           |                      |
|                                 | BACKGROUND<br>(cts/s) | CALBRTR ON<br>(cts/s) | GR DIFF<br>(cts/s) | MULT                 | BACKGROUND<br>(gAPI)     | CALBRTR ON<br>(gAPI) |
| GR                              | 63.76                 | 399.13                | 335.4              | 0.552                | 35.17                    | 220.17               |
|                                 |                       |                       |                    |                      | 185                      |                      |
| GR PRIMARY VERIFICATION SUMMARY |                       |                       |                    |                      |                          |                      |
| TOOL #:                         | 8262XA10485470        |                       |                    | DATE/TIME PERFORMED: | Tue Jan 17 13:34:45 2017 |                      |
| UNIT #:                         | 3882ML ML4352         |                       |                    | VERI JIG #:          | 4702NKA DA_228           |                      |
|                                 | BACKGROUND<br>(cts/s) | CALBRTR ON<br>(cts/s) | MULT               | BACKGROUND<br>(gAPI) | CALBRTR ON<br>(gAPI)     | DIFF.<br>(gAPI)      |
| GR                              | 63.44                 | 394.18                | 0.552              | 35.00                | 217.44                   | 182.44               |
|                                 |                       |                       |                    |                      | 1195.00                  | 196.00               |


| RPM_PNC_3D PRIMARY CALIBRATION SUMMARY |                           |                         |   |             |             |                |                   |           |
|--|---------------------------|-------------------------|---|-------------|-------------|----------------|-------------------|-----------|
| TOOL: 8283PA10414345                   |                           |                         | DATE/TIME PERFORMED: Thu Jul 13 12:34:15 2017 |             |             |                |                   |           |
| UNIT: 3882TD HL6728                    | CALIBRATOR: 2437XB 120057 | SOURCE: 8281AA 10160601 | HOURS: 8281AA 704                             |             |             |                |                   |           |
|  | ISS                       | Mtr Vits (V)            | SS Gain                                       | LS Gain     | XLS Gain    | EA Temp (degF) | Sync Delay (usec) | RCAL      |
| Raw Data                               | 790764                    | 126                     | 2358  | 2261        | 2241        | 134            | 10.0              | 0.9777    |
| Interpolated                           | 1300000                   | 148                     | 2343  | 2251        | 2237        |                |                   |           |
|  | ISS                       | BKS                     | BKL   | BKX         | SGA1        | SDA1           | SGA2              | SDA2      |
| Raw Data                               | 790764                    | 6044                    | 978   | 134         | 26.03       | 0.15           | 24.25             | 0.33      |
|  |                           |                         |   |             | 26.36 26.40 | 0.00 0.00      | 23.40 24.00       | 0.00 0.40 |
|  | ISS                       | ILS                     | IXS   | SS          | SS2         | LS             | CSS               | CLS       |
| Raw Data                               | 790764                    | 160255                  | 24559   | 87267       | 31044       | 8098           | 53011             | 12993     |
| Fit Quality %                          |                           | 0.611                   | 0.587   | 0.523       | 0.528       | 0.538          | 0.527             | 0.577     |
|  | ISS                       | RBOR                    | RIN   | RIN13       | RICS        | RATO           | RTWO              | RONE      |
|  |                           |                         | ISSALS  | ISSAXS      | ISS/CSS     | SSALS          | SS2ALS            | CSS/CLS   |
| Raw Data                               | 790764                    | 1.44                    | 4.93  | 32.21       | 14.92       | 10.78          | 3.84              | 4.08      |
|  |                           | 1.42 1.45               | 3.92 5.92                                     | 22.20 32.10 | 10.96 16.34 | 10.06 11.10    | 3.59 3.96         | 3.76 4.22 |
| Fit Quality %                          |                           | 0.047                   | 0.027   | 0.046       | 0.063       | 0.079          | 0.082             | 0.072     |
| Reduced                                | 1372844                   | 1.44                    | 4.93  | 32.15       | 14.90       | 10.77          | 3.83              | 4.08      |
|  |                           | 1.42 1.45               | 3.93 5.92                                     | 21.40 32.10 | 10.10 16.34 | 10.06 11.10    | 3.59 3.96         | 3.76 4.22 |

| TPSETEMP PRIMARY CALIBRATION SUMMARY |               |                          |              |               |
|--------------------------------------|---------------|--------------------------|--------------|---------------|
| TOOL #:                              |               | DATE/TIME PERFORMED:     |              |               |
| 8255XA120516                         |               | Mon Jul 11 10:30:57 2016 |              |               |
| UNIT #:                              |               | 3880TA HL6670            |              |               |
|                                      | T(0)          | T(1)                     | T(2)         | T(3)          |
| Corr Coeff for Temp                  | -1.840167E+01 | 1.009373E-01             | 3.960064E-06 | -4.985002E-10 |

INSTRUMENT CONFIGURATION



|                       |       |         |       |
|-----------------------|-------|---------|-------|
| Series                | SRPL  | TEMP MP | 1.65' |
| Mnemonic              | SRPL  | PRES MP | 0.00' |
| Measure Point         | 1.52' | TEMP MP |       |
| BULL PLUG 1 11/16     |       |         |       |
| TOTAL LENGTH: 34.08'  |       |         |       |
| TOTAL WEIGHT: 144 lbs |       |         |       |
| MAX DIAMETER: 0'1.70" |       |         |       |

|  |                                      |  |                                      |
|--|--------------------------------------|--|--------------------------------------|
|   | <b>COMPANY</b> <u>LARAMIE ENERGY</u> |  | <b>FILE NO:</b> _____                |
|  | <b>WELL</b> <u>GUNDERSON 20-04W</u>  |  | <b>API NO:</b> _____                 |
|  | <b>FIELD</b> <u>VEGA</u>             |  | <b>API NO:</b> <u>05077103370000</u> |
|  | <b>COUNTY</b> <u>MESA</u>            | <b>STATE</b> <u>COLORADO</u>                                     |                                      |
| <b>LOCATION:</b><br><br>SHL: LAT:39.266919N; LONG:107.795317W<br><br>BHL: LAT:39.267151N; LONG:107.797721W<br>SEC <u>20</u> TWP <u>9S</u> RGE <u>93W</u> |                                      | <b>ELEVATIONS:</b><br><br>KB 7174 FT<br>DF 7173 FT<br>GL 7144 FT |                                      |
|  |                                      | <b>DATE</b> <u>21-JUL-2017</u>                                   |                                      |