



**NABORS**

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

|                              |                                      |                     |                       |
|------------------------------|--------------------------------------|---------------------|-----------------------|
| Company                      | MULL DRILLING COMPANY                | Company             | MULL DRILLING COMPANY |
| Well                         | GAYLE #1-2                           | Well                | GAYLE #1-2            |
| Field                        |                                      | Field               |                       |
| County                       | WICHITA                              | County              | WICHITA               |
| State                        | KANSAS                               | State               | KANSAS                |
| Location:                    | API # : 15-203-20285-0000            | Other Services      | CDL/CNL/PE<br>MEL/SON |
| Permanent Datum              | 2690' FSL & 2127' FEL<br>SE SW SW NE | Elevation           |                       |
| Log Measured From            | SEC 2 TWP 16S RGE 38W                | K.B. 3438           |                       |
| Drilling Measured From       | GROUND LEVEL                         | D.F. 3436           |                       |
|                              | KELLY BUSHING 9' A.G.L.              | G.L. 3429           |                       |
| Date                         | 10/1/14                              |                     |                       |
| Run Number                   | ONE                                  |                     |                       |
| Depth Driller                | 5100                                 |                     |                       |
| Depth Logger                 | 5098                                 |                     |                       |
| Bottom Logged Interval       | 5096                                 |                     |                       |
| Top Log Interval             | 00                                   |                     |                       |
| Casing Driller               | 8 5/8" @ 216                         |                     |                       |
| Casing Logger                | 210                                  |                     |                       |
| Bit Size                     | 7.875                                |                     |                       |
| Type Fluid in Hole           | CHEMICAL MUD                         | CHLORIDES 9,000 PPM |                       |
| Density / Viscosity          | 9.3/57                               |                     |                       |
| pH / Fluid Loss              | 8.0/10.4                             |                     |                       |
| Source of Sample             | FLOWLINE                             |                     |                       |
| Rm @ Meas. Temp              | .30 @ 85F                            |                     |                       |
| Rmt @ Meas. Temp             | .23 @ 85F                            |                     |                       |
| Rmc @ Meas. Temp             | .36 @ 85F                            |                     |                       |
| Source of Rmt / Rmc          | MEASURED                             |                     |                       |
| Rm @ BHT                     | .20 @ 126F                           |                     |                       |
| Time Circulation Stopped     | 2 HOURS                              |                     |                       |
| Time Logger on Bottom        |                                      |                     |                       |
| Maximum Recorded Temperature | 126F                                 |                     |                       |
| Equipment Number             | 4010                                 |                     |                       |
| Location                     | HAYS, KS.                            |                     |                       |
| Recorded By                  | JASON CAPPELLUCCI                    |                     |                       |
| Witnessed By                 | STEVE REED                           |                     |                       |

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

NABORS COMPLETION & PRODUCTION SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
LEOTI, KS. - NORTH TO COUNTY LINE RD. A - 6 1/2 WEST - SOUTH INTO

Database File:

26201pe.db

Dataset Pathname:

pass3.3

Presentation Format:

\_dil2

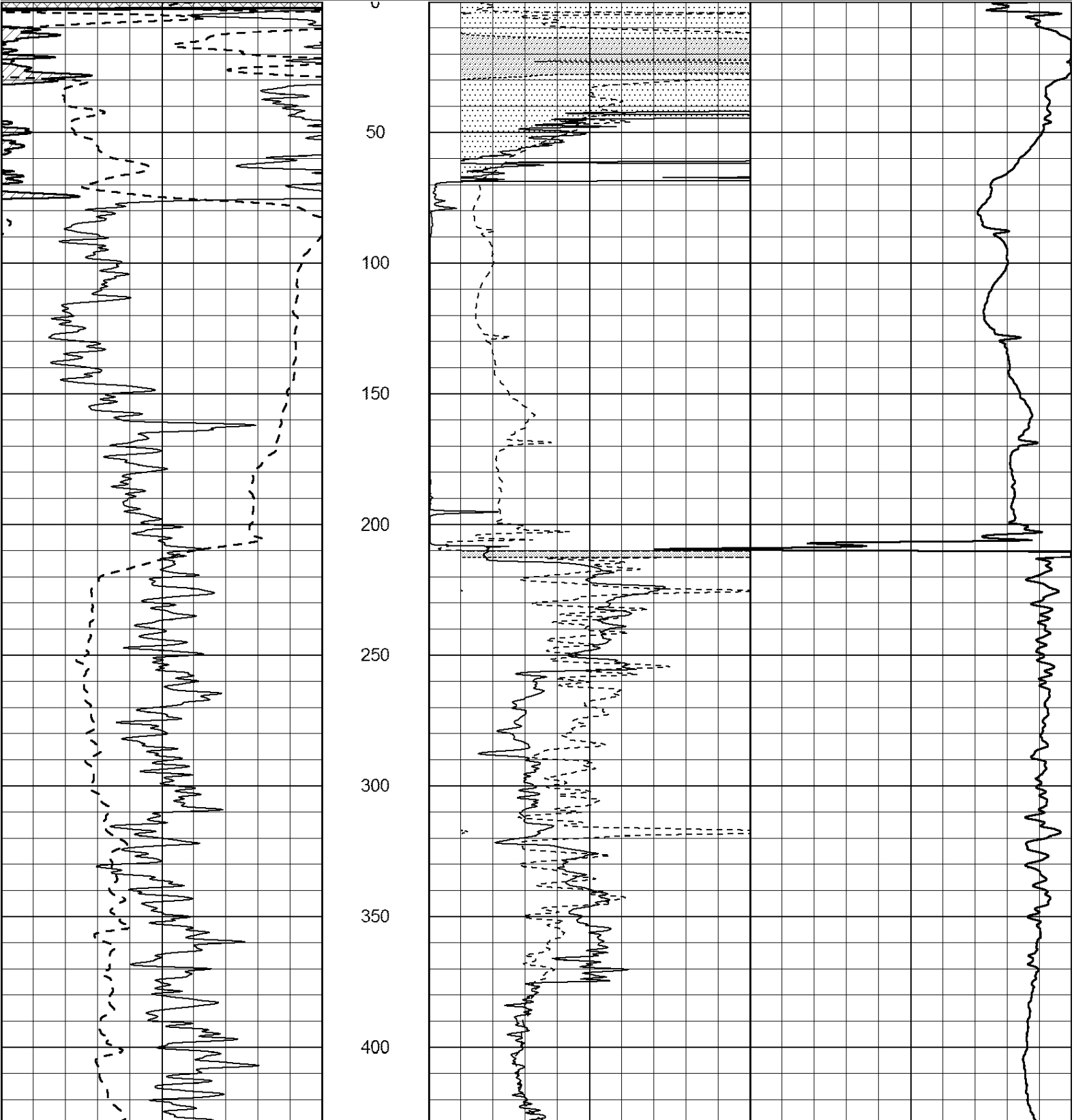
Dataset Creation:

Wed Oct 01 21:30:55 2014 by Calc Open-Cased 090629

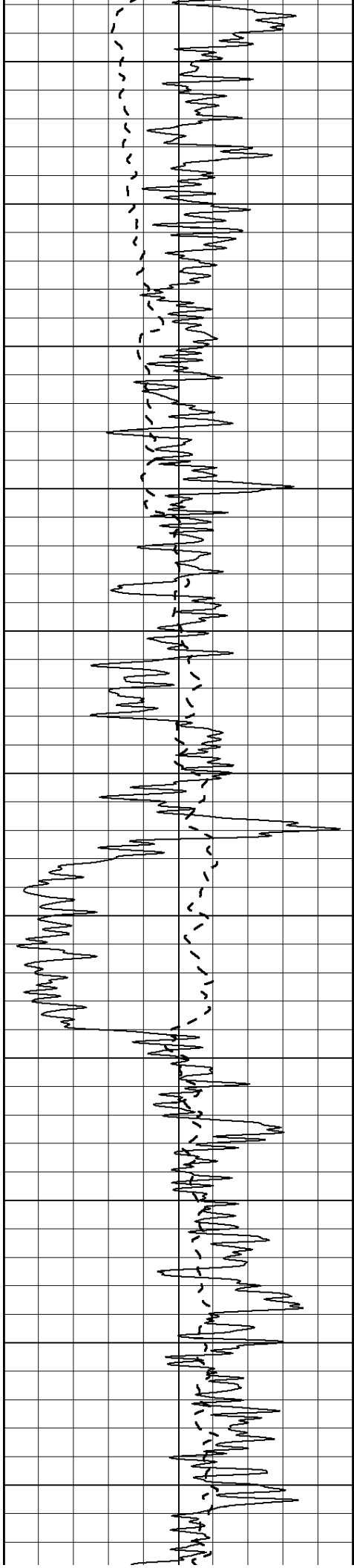
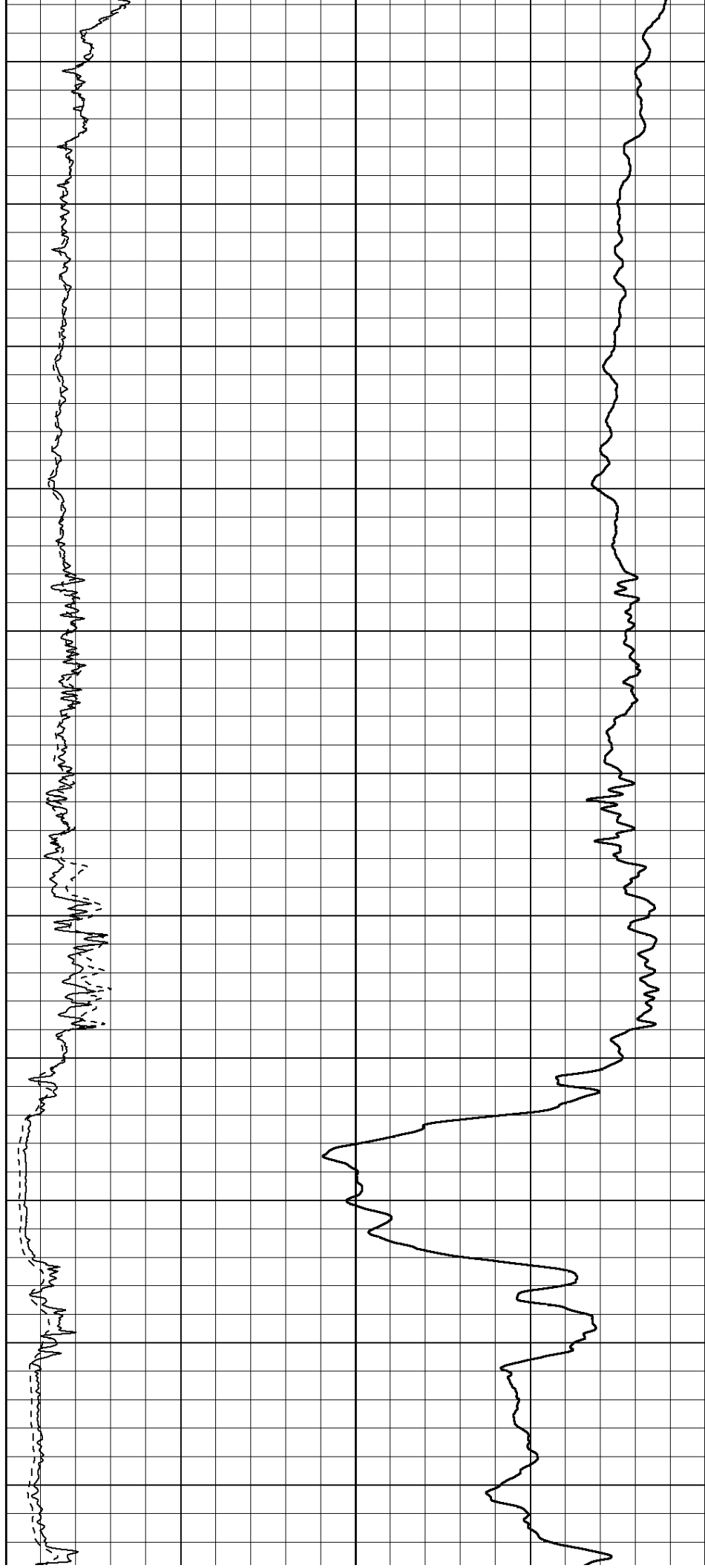
Charted by:

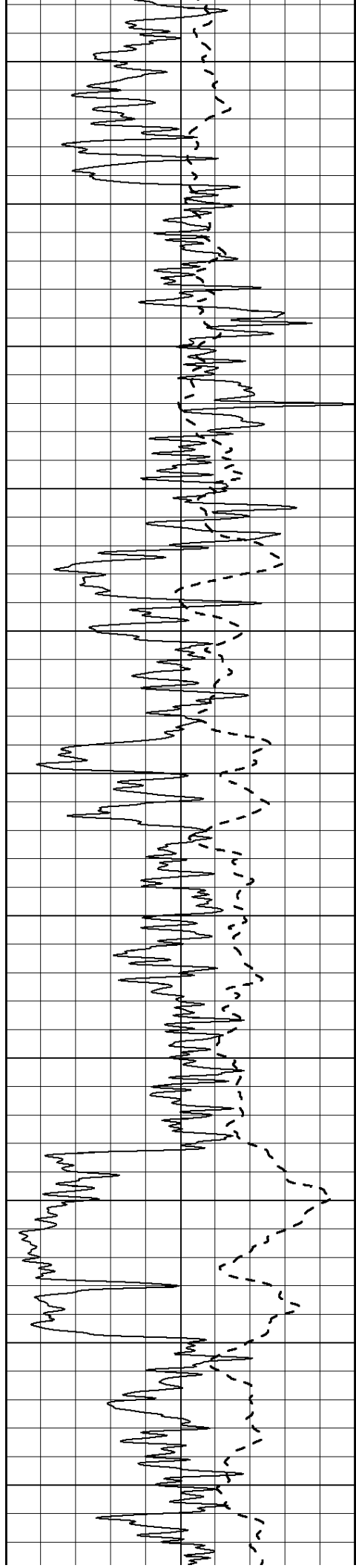
Depth in Feet scaled 1:600

|       |                  |     |      |                  |     |               |
|-------|------------------|-----|------|------------------|-----|---------------|
| 0     | Gamma Ray (GAPI) | 150 | 0    | RLL3 (Ohm-m)     | 50  |               |
| -100  | SP (mV)          | 100 | 0    | RILD (Ohm-m)     | 50  |               |
| ----- |                  |     | 1000 |                  |     | CILD (mmho/m) |
|       |                  |     | 50   | RILD X10 (Ohm-m) | 500 |               |
|       |                  |     | 50   | RLL3 X10 (Ohm-m) | 500 |               |

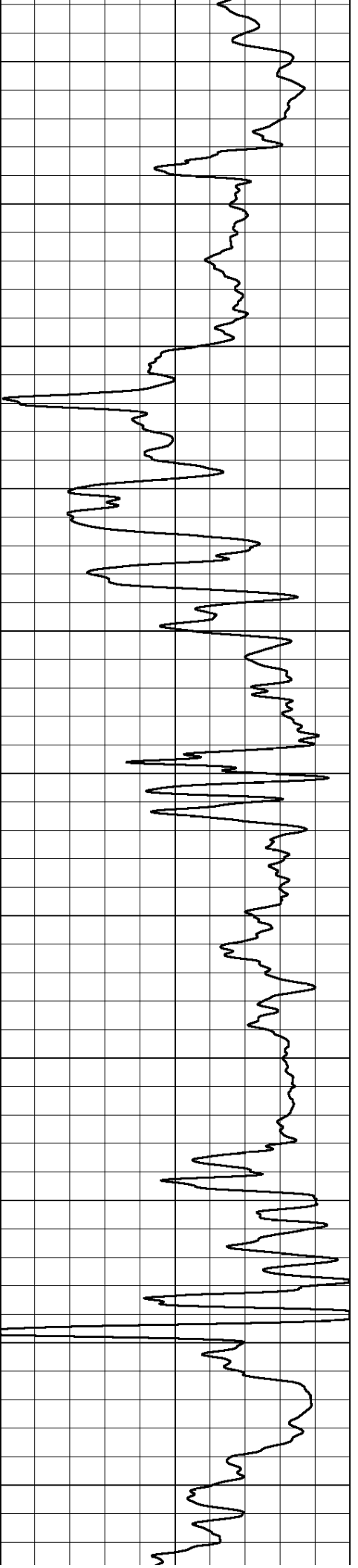
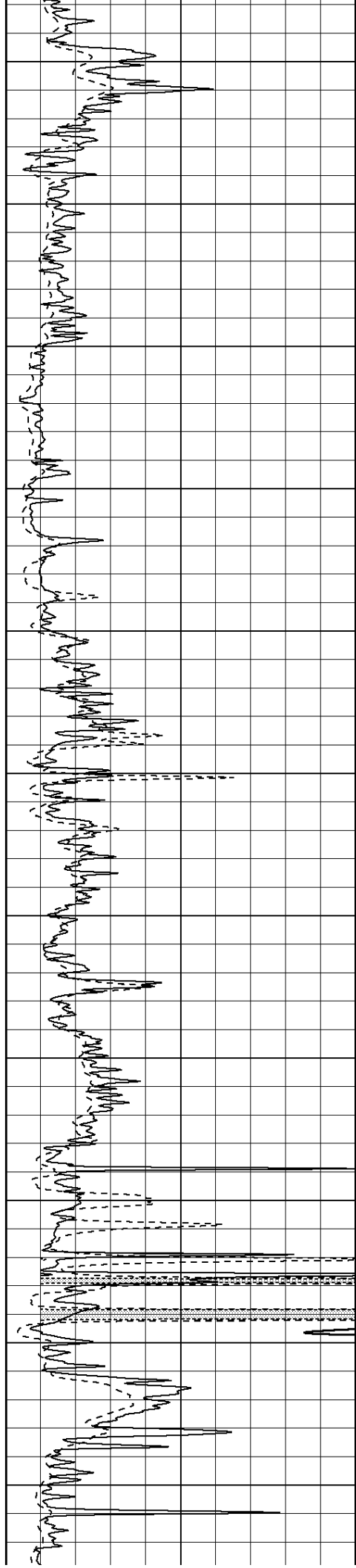


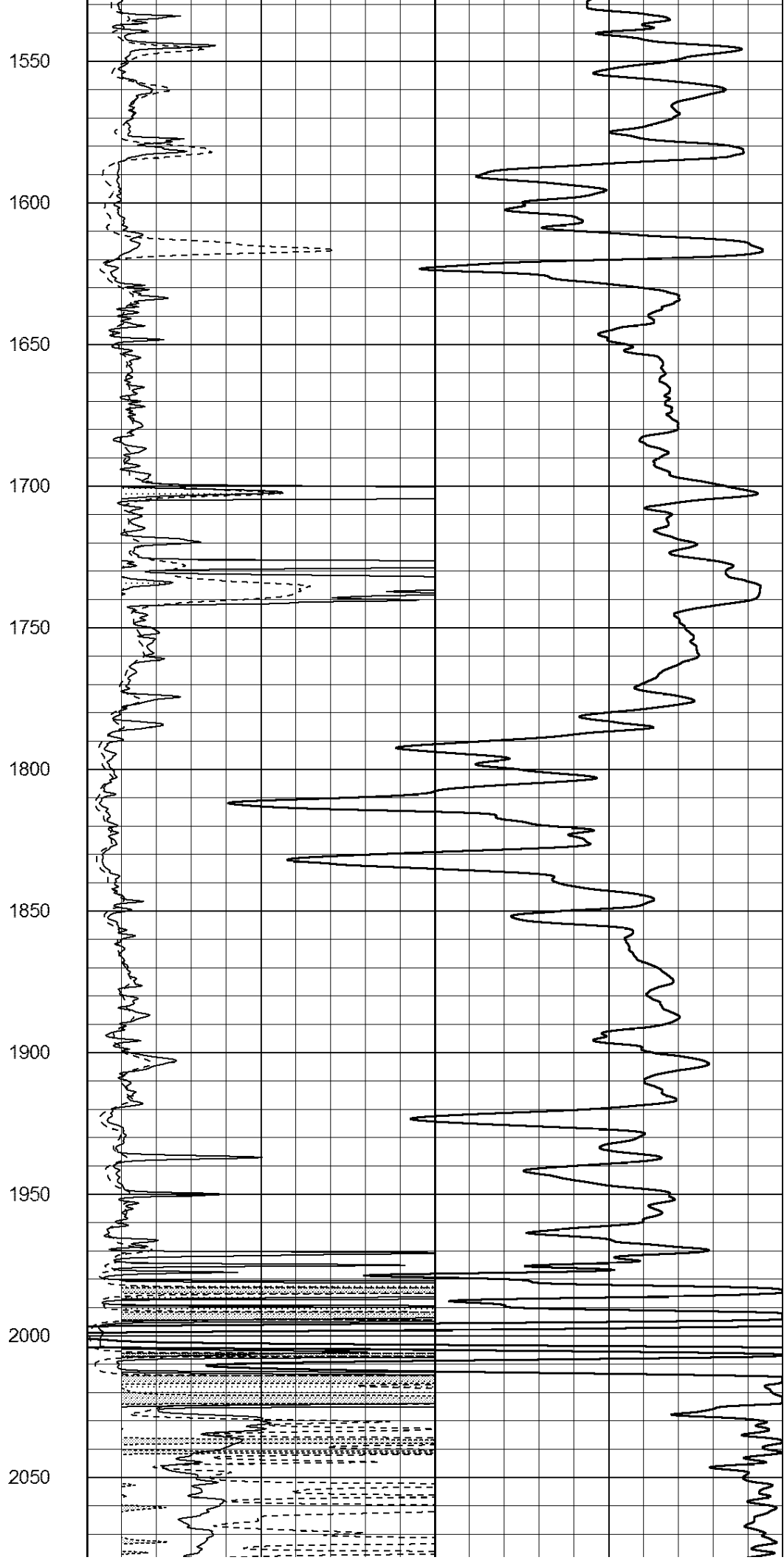
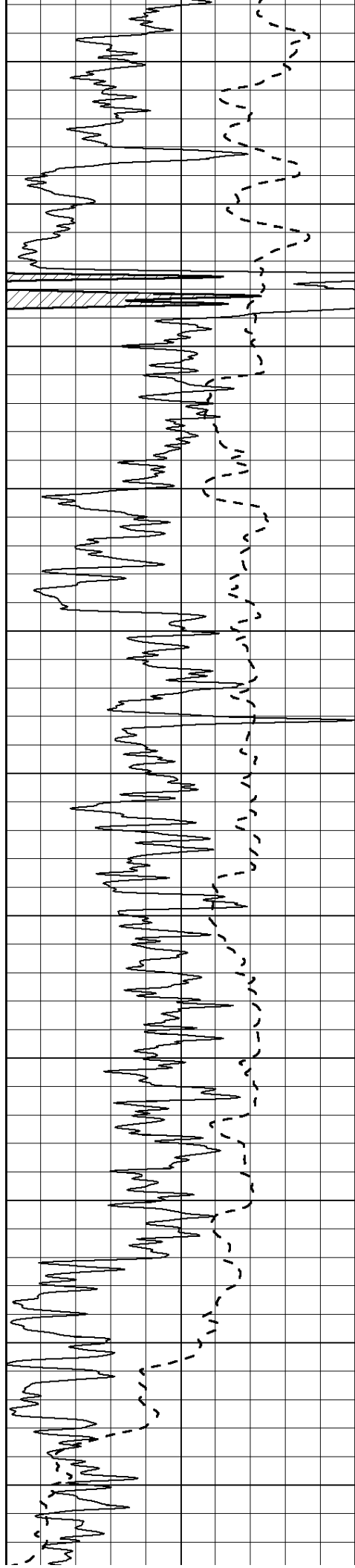
450 500 550 600 650 700 750 800 850 900 950

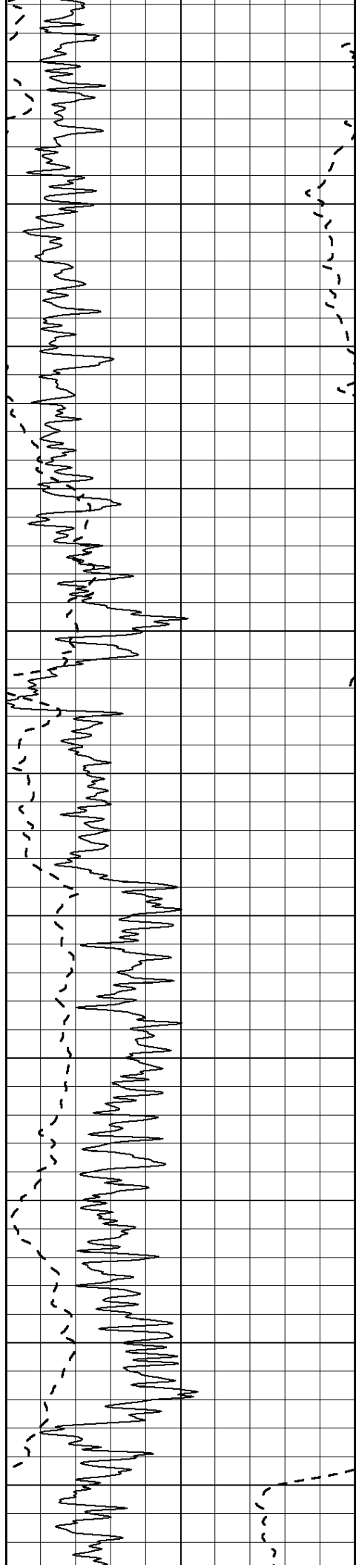




1000  
1050  
1100  
1150  
1200  
1250  
1300  
1350  
1400  
1450  
1500







2100

2150

2200

2250

2300

2350

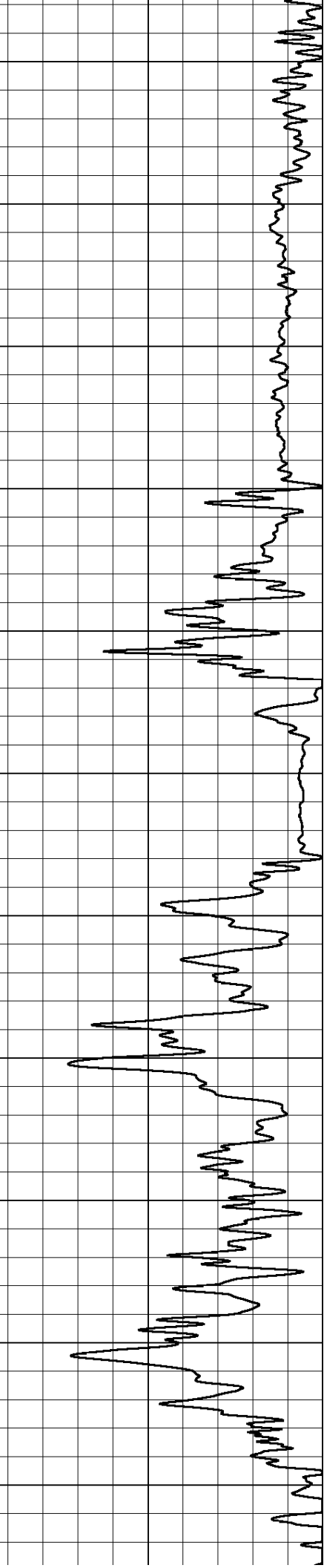
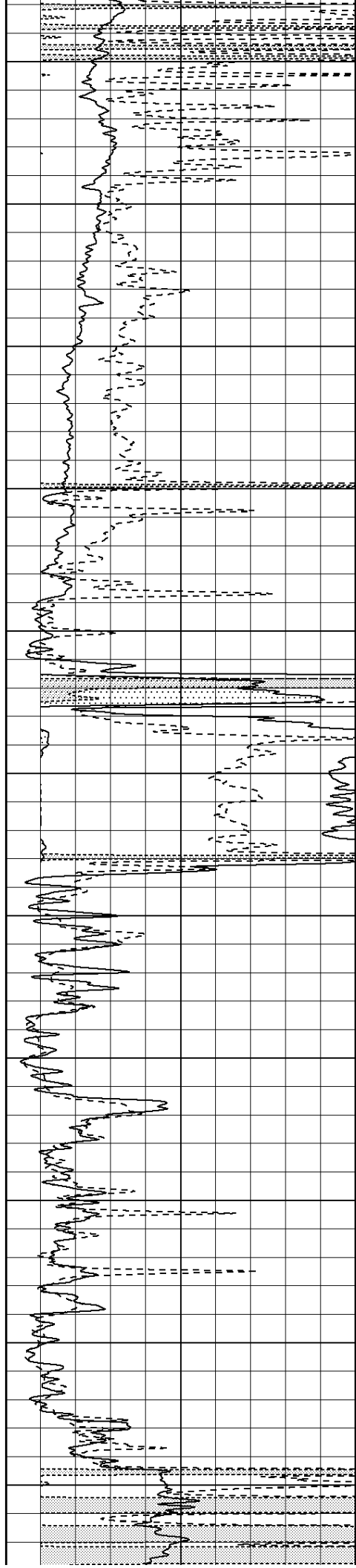
2400

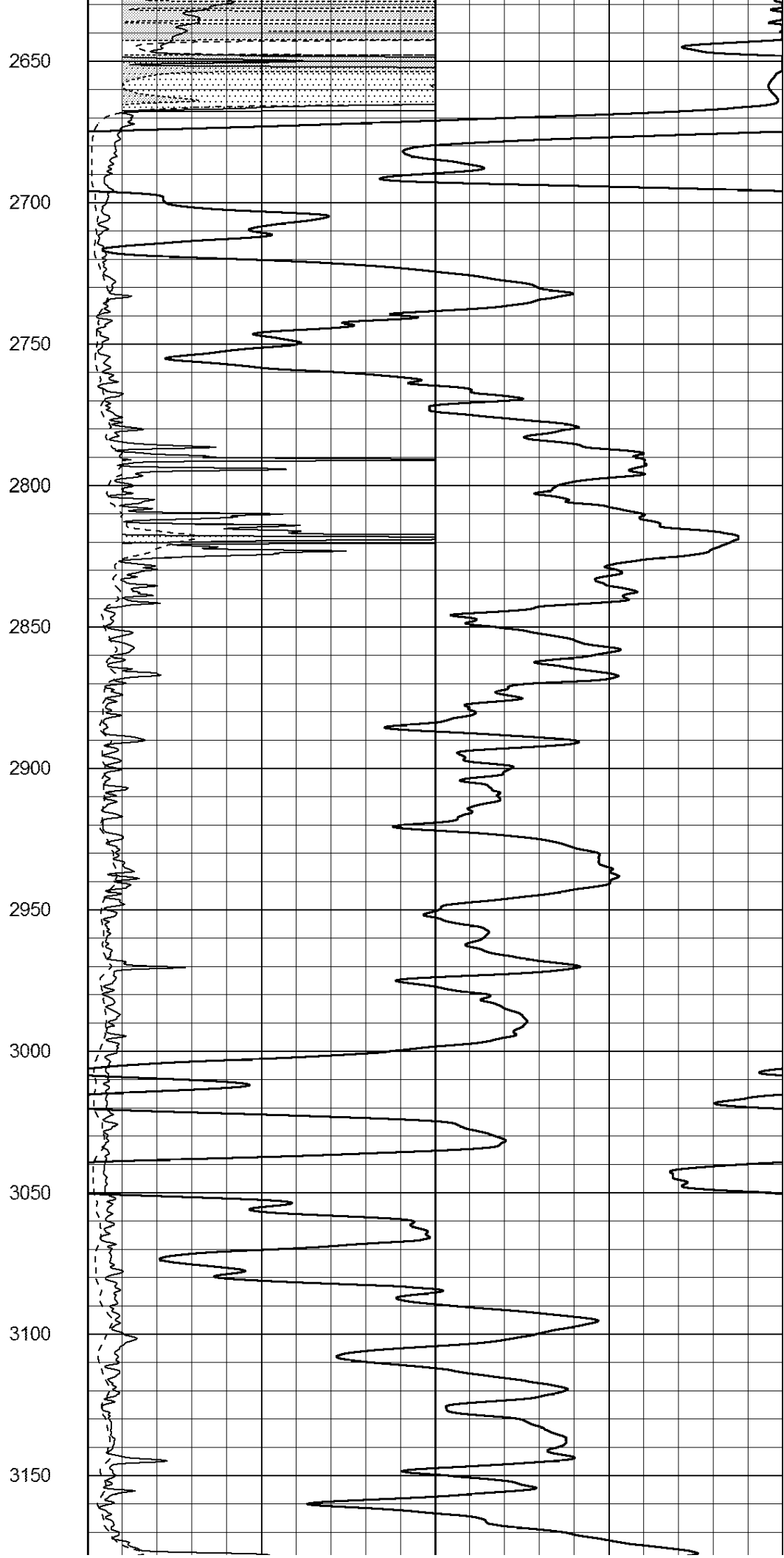
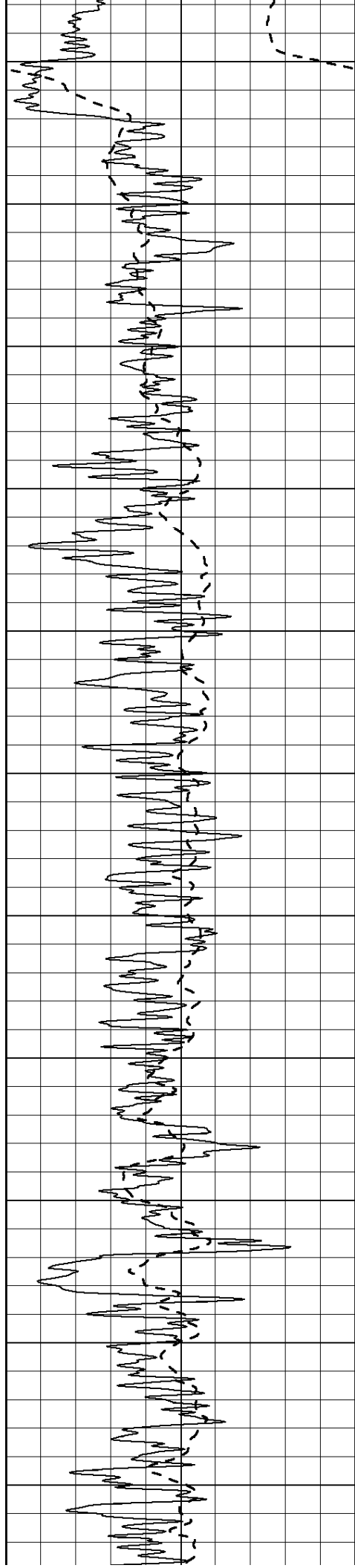
2450

2500

2550

2600





3200

3250

3300

3350

3400

3450

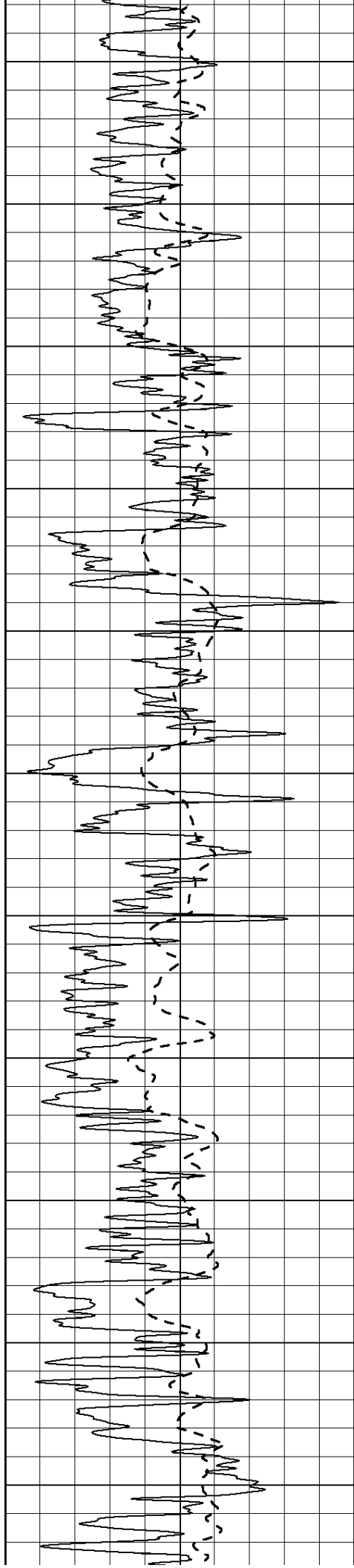
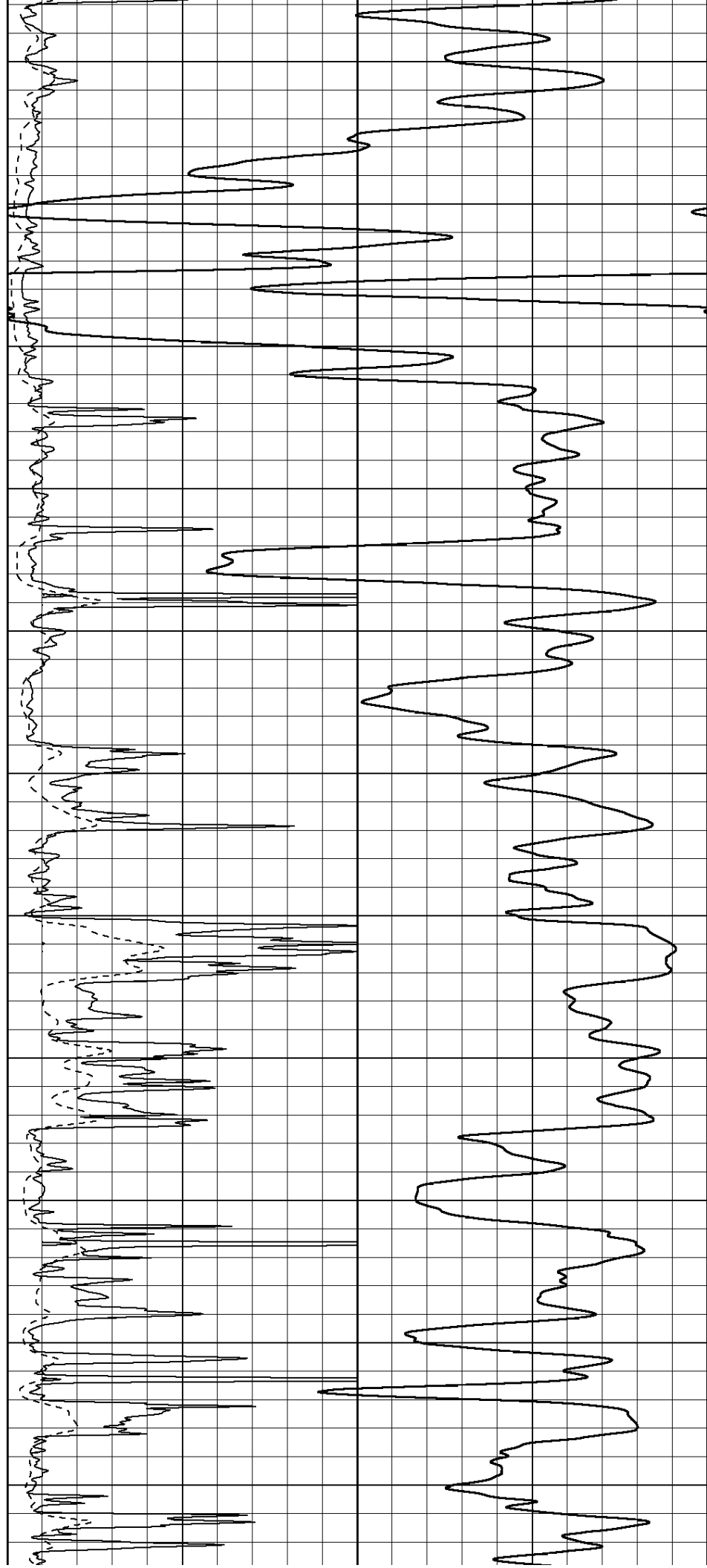
3500

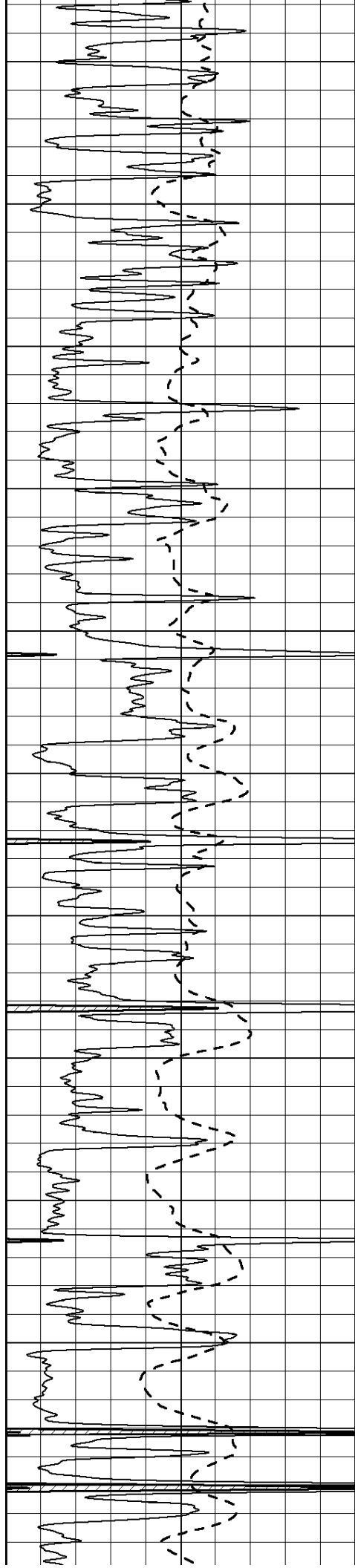
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

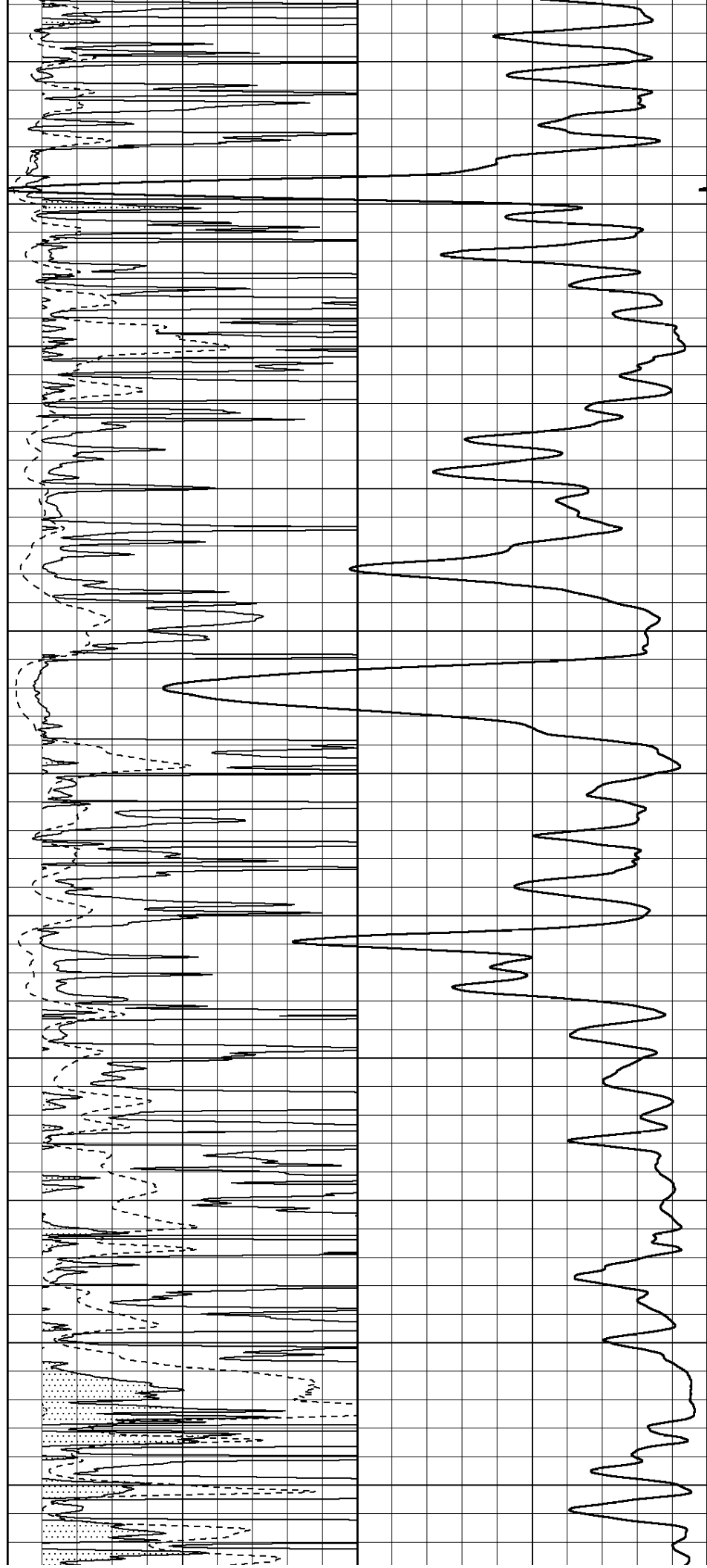
4050

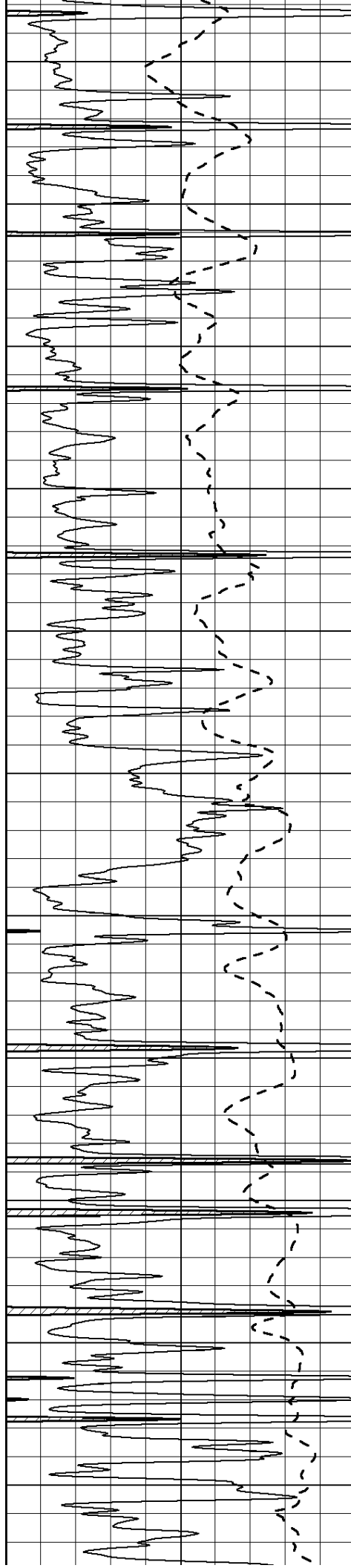
4100

4150

4200

4250





4300

4350

4400

4450

4500

4550

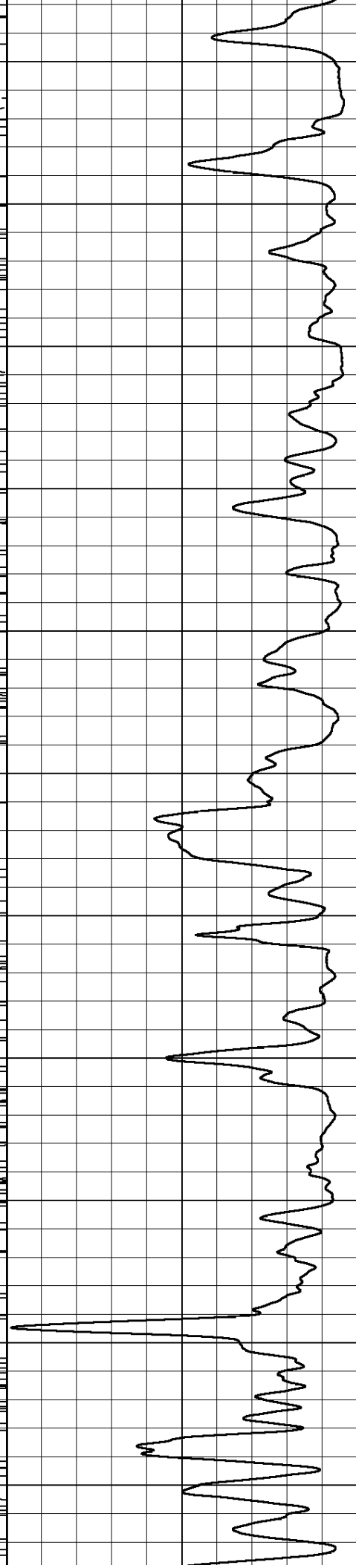
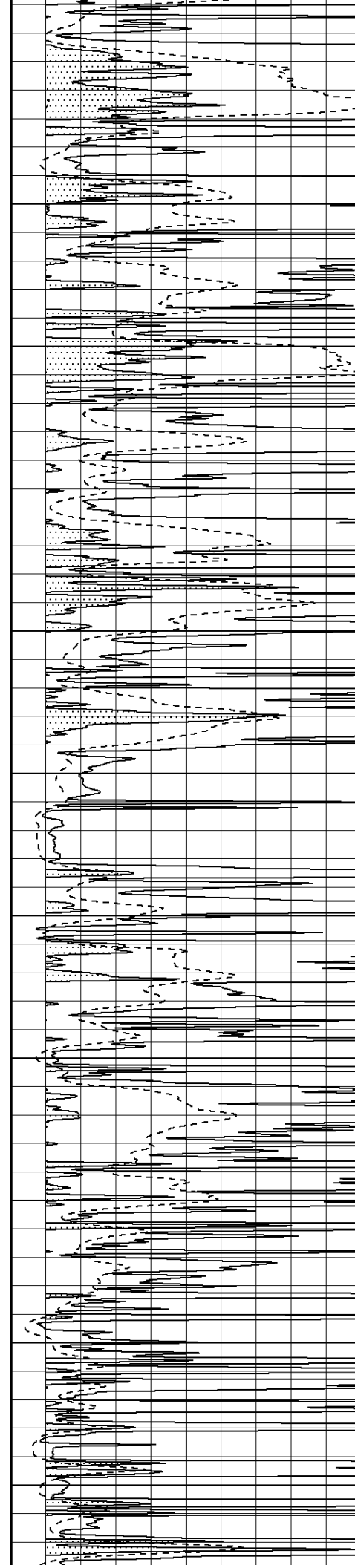
4600

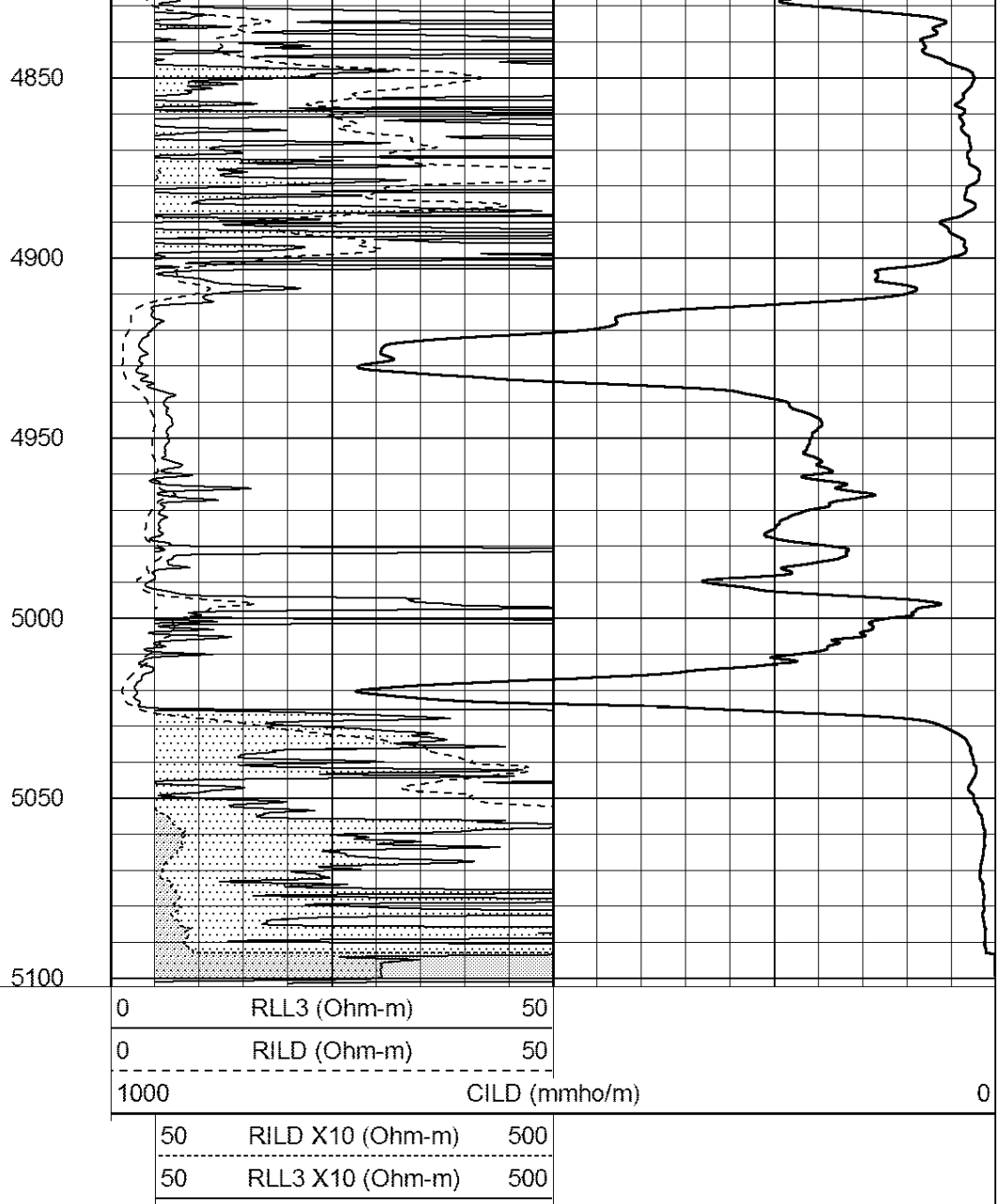
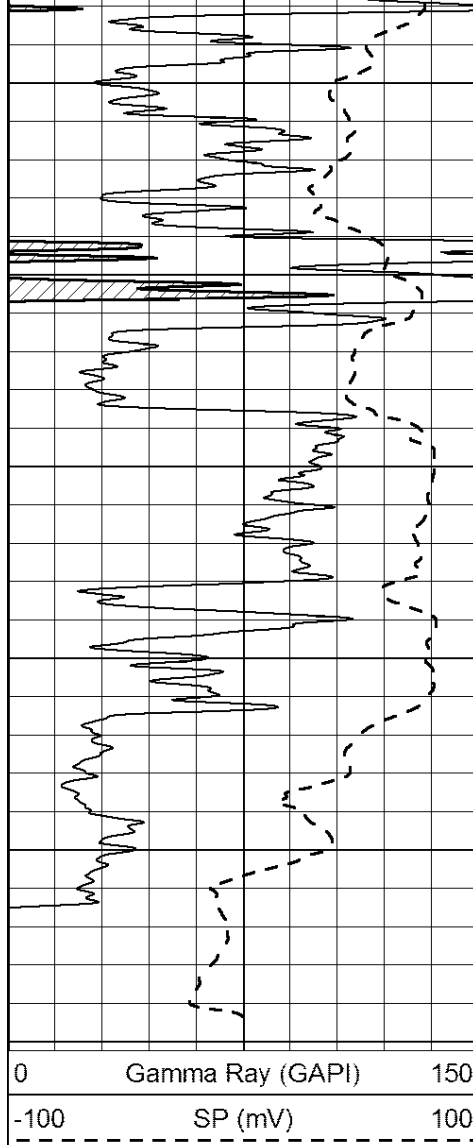
4650

4700

4750

4800





**NABORS**

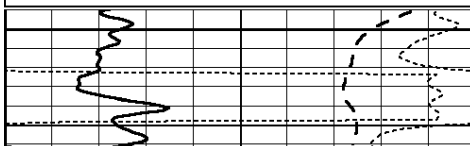
**COMPLETION  
& PRODUCTION  
SERVICES CO.**

# ANHYDRITE

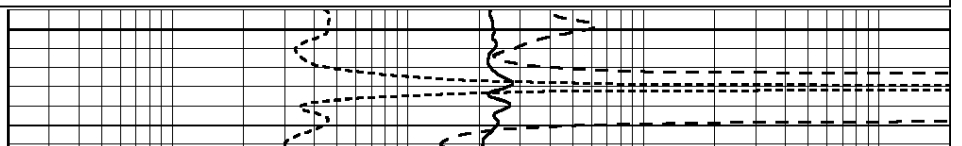
Database File: 26201pe.db  
 Dataset Pathname: pass3.2  
 Presentation Format: \_dil  
 Dataset Creation: Wed Oct 01 20:44:24 2014 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

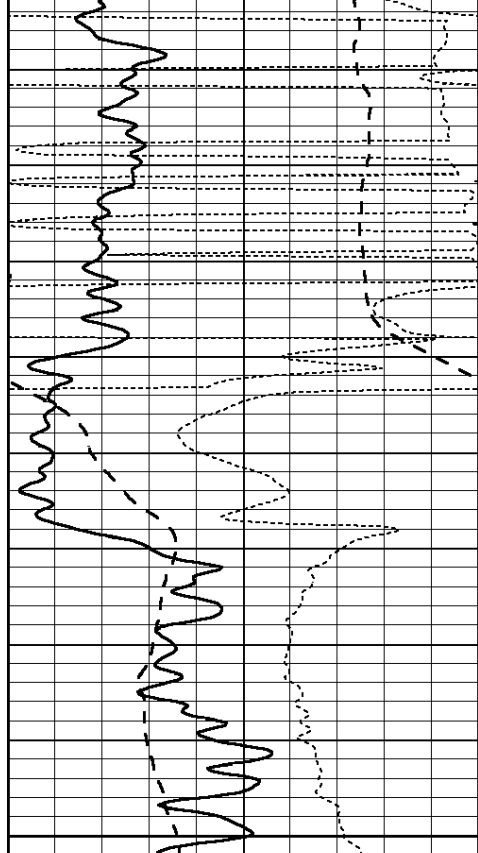
|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



2600

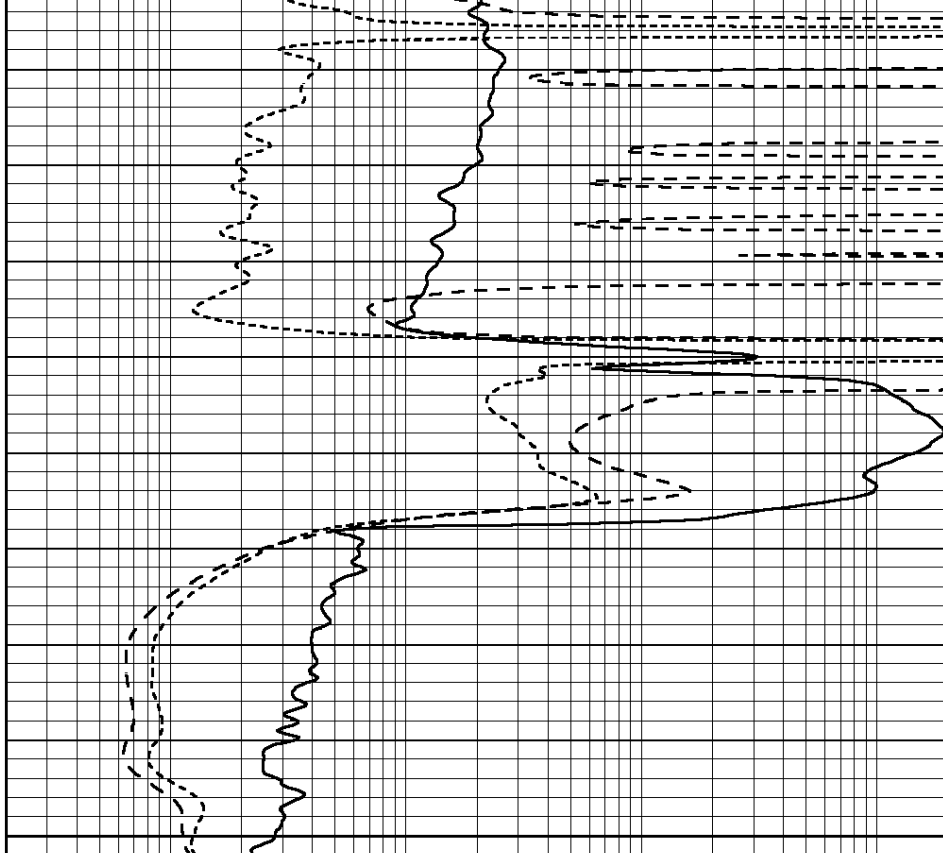




2650

2700

|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |



|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



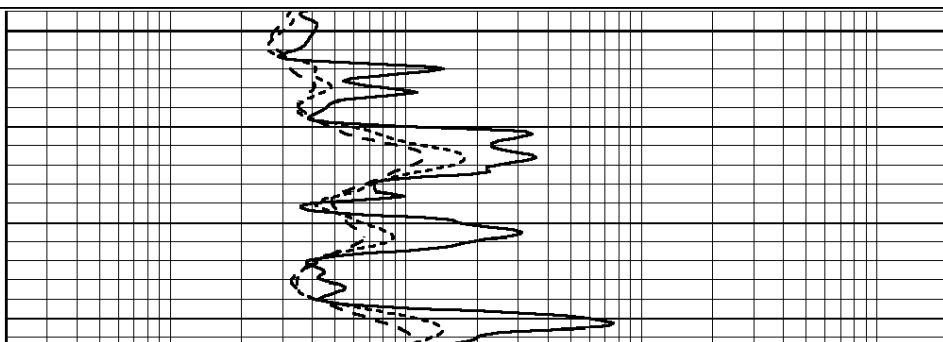
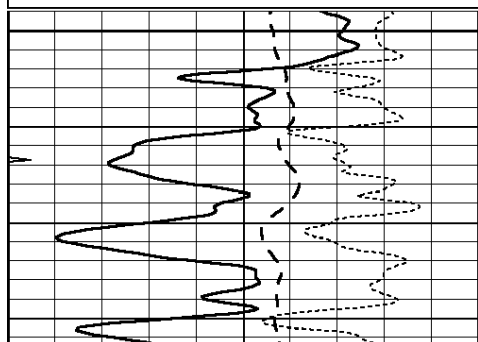
# MAIN SECTION

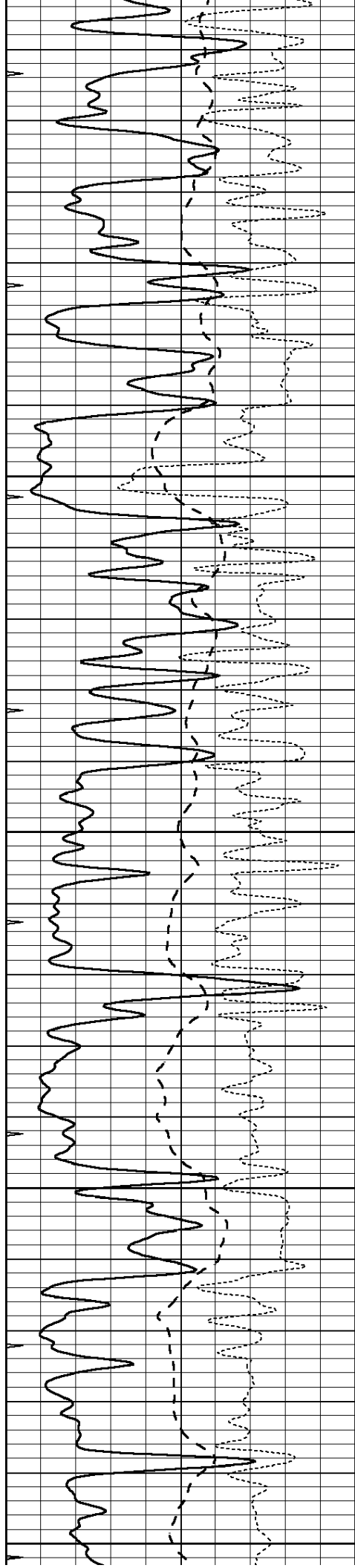
Database File: 26201pe.db  
 Dataset Pathname: pass3.1  
 Presentation Format: \_dil  
 Dataset Creation: Wed Oct 01 20:30:08 2014 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

3700





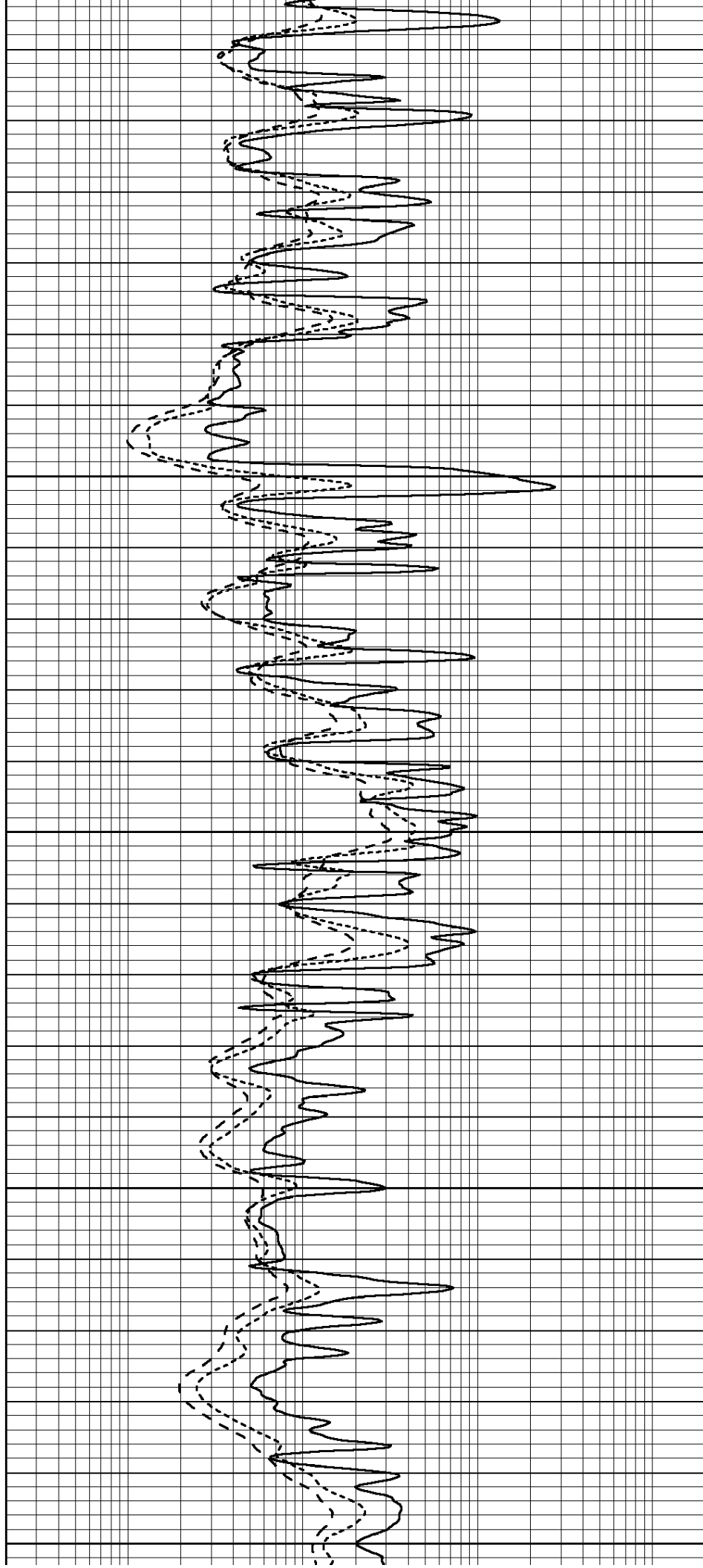
3750

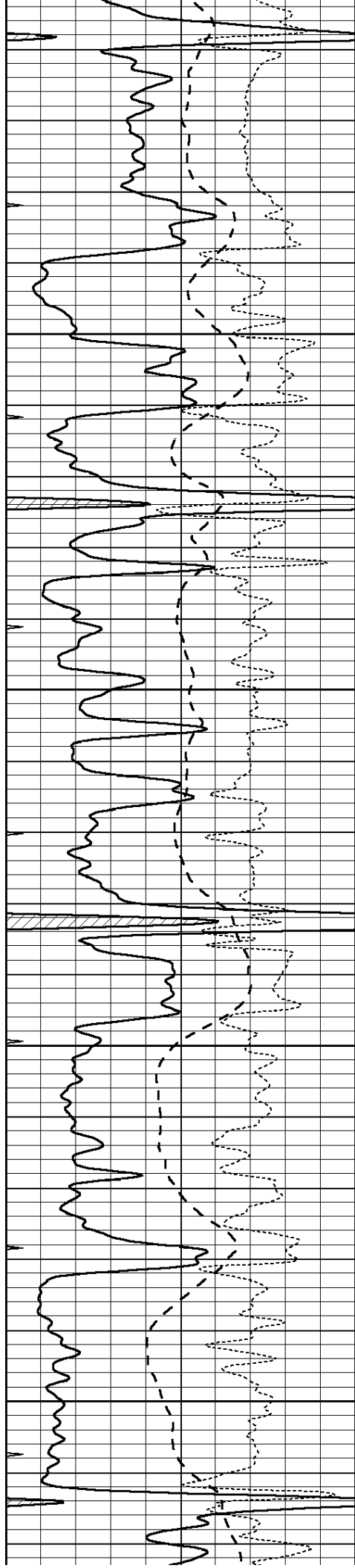
3800

3850

3900

3950



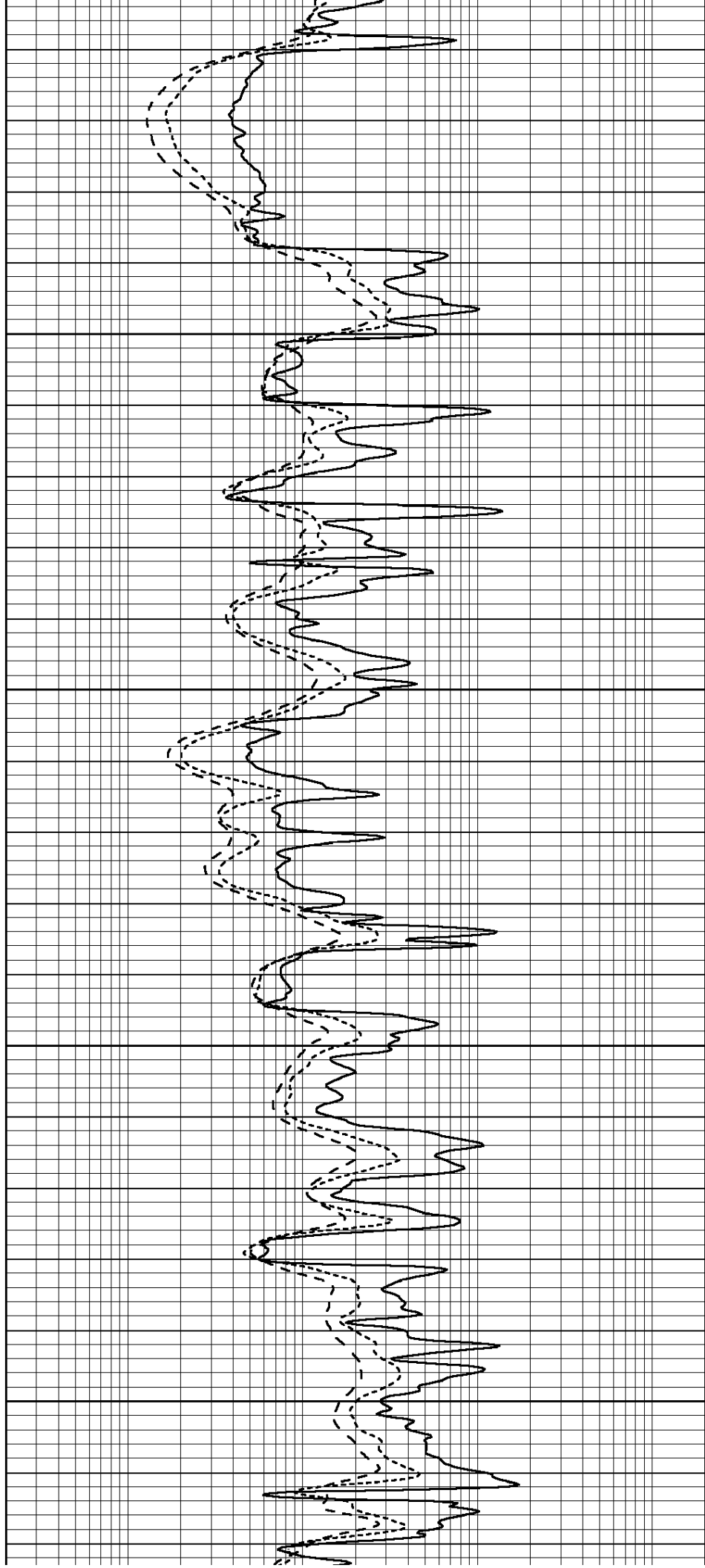


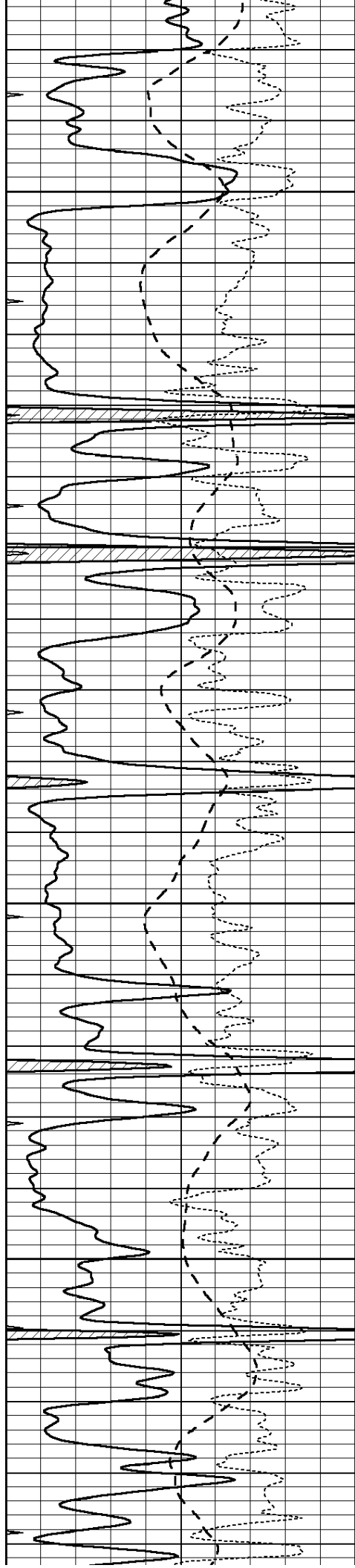
4000

4050

4100

4150



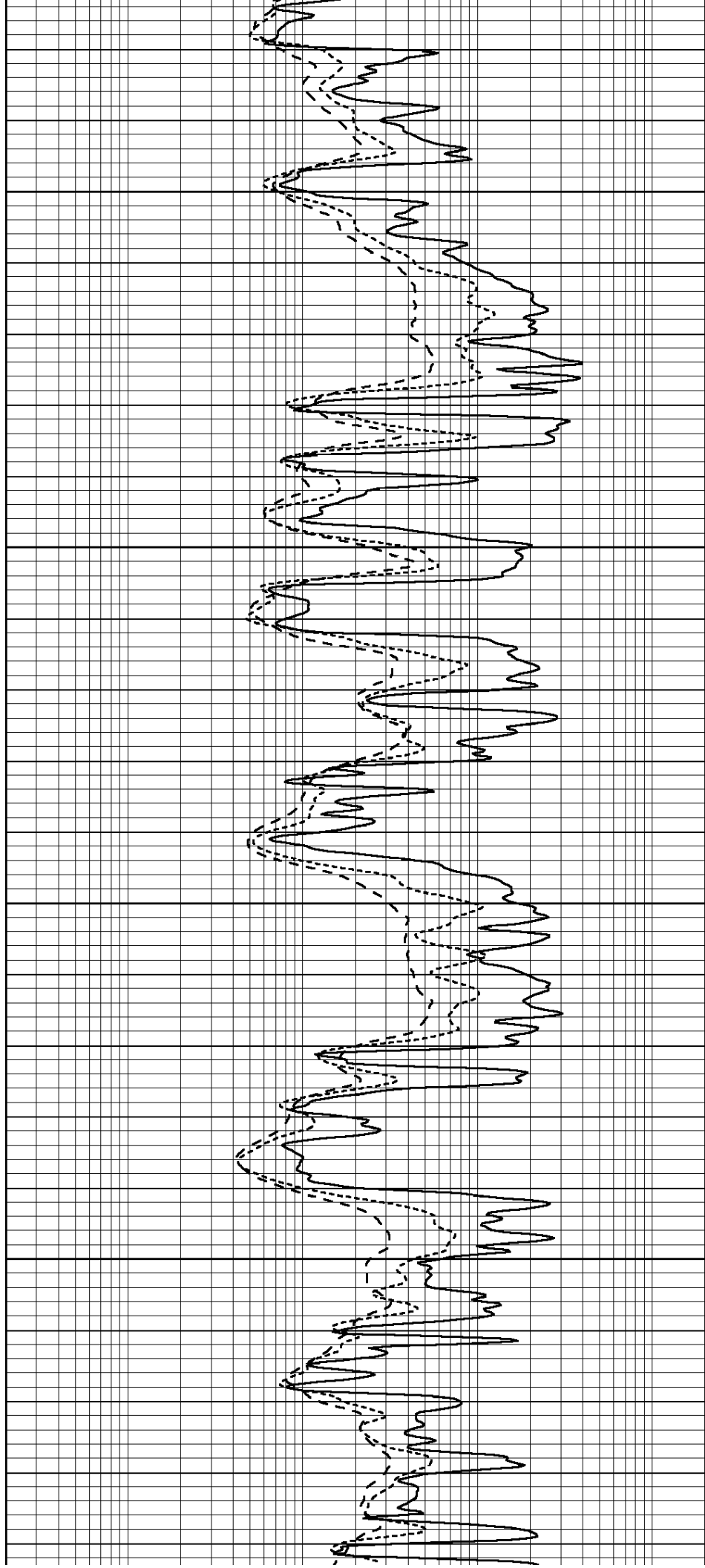


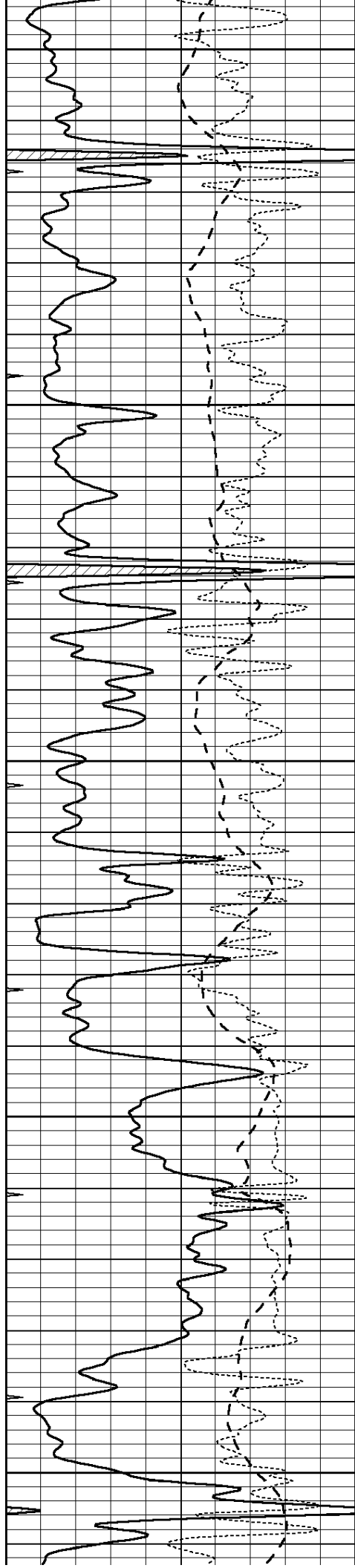
4200

4250

4300

4350





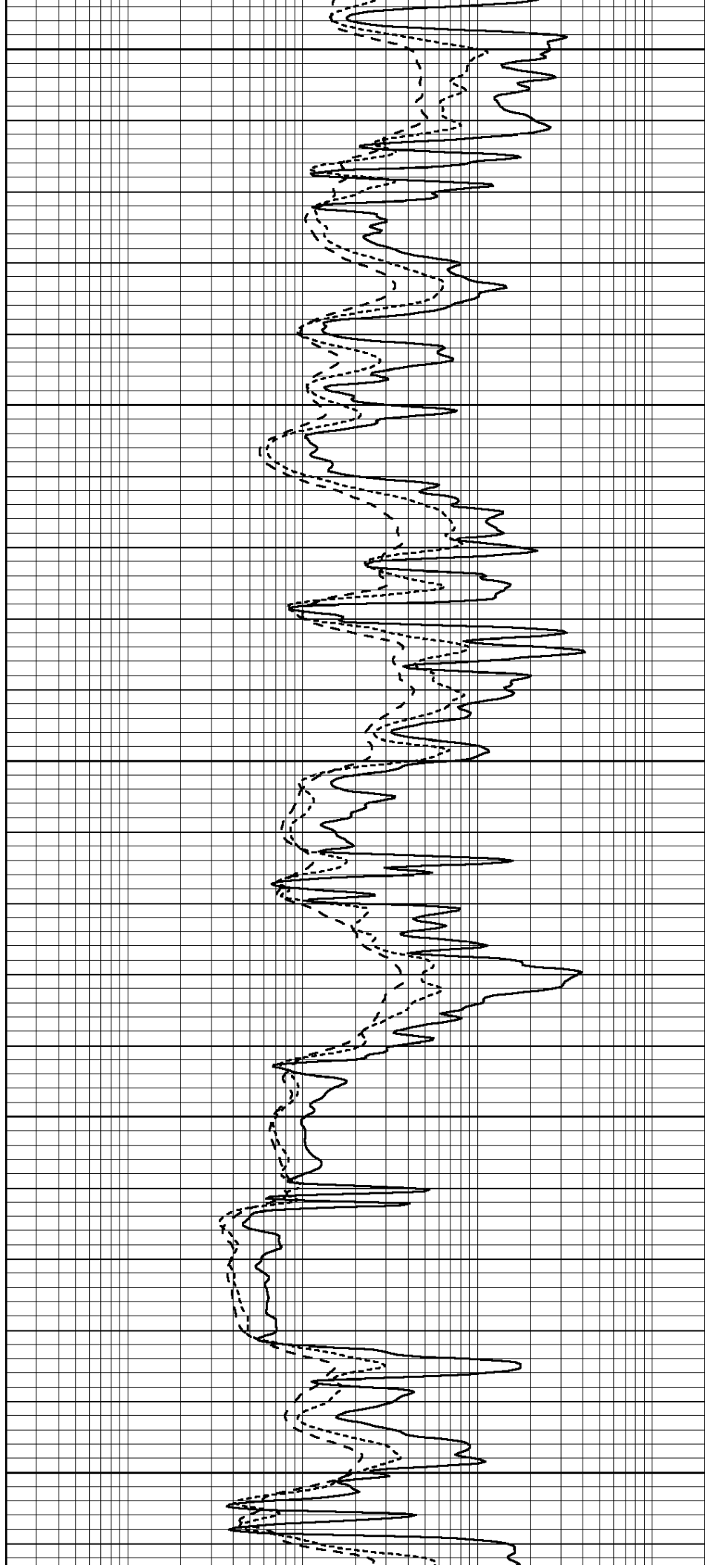
4400

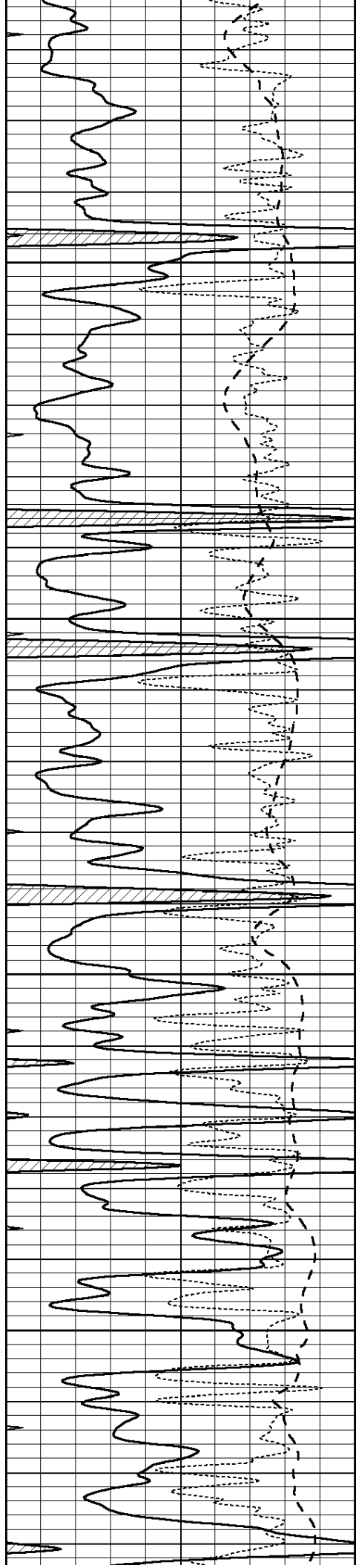
4450

4500

4550

4600



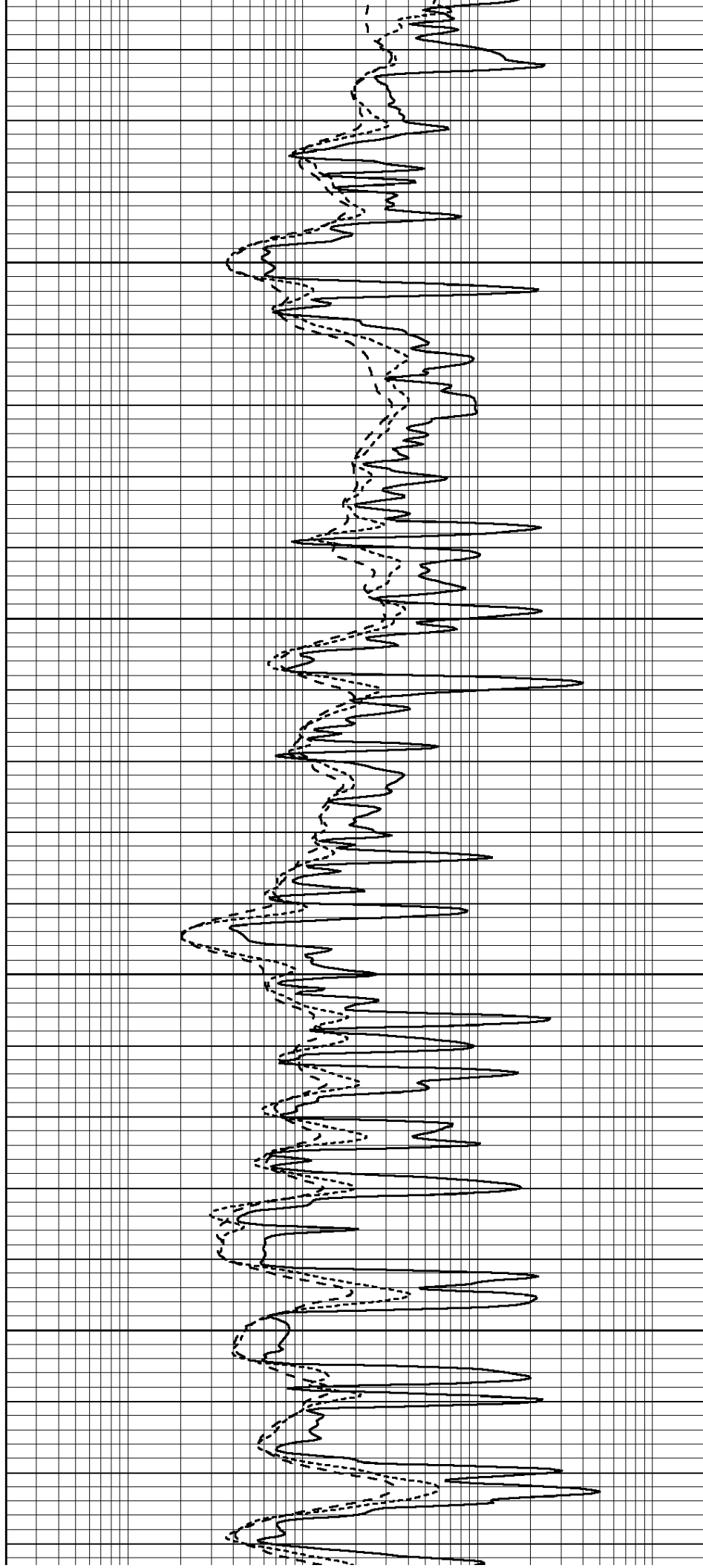


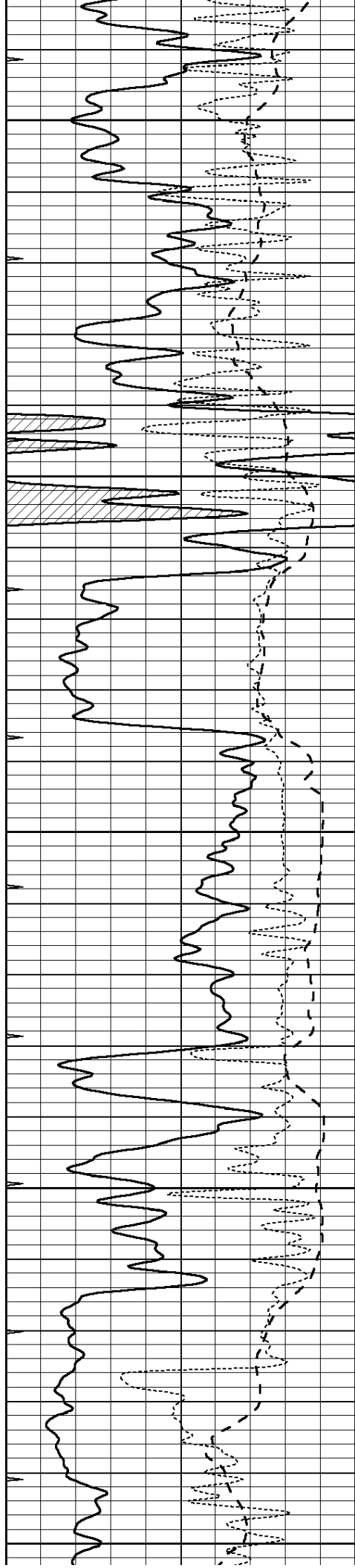
4650

4700

4750

4800





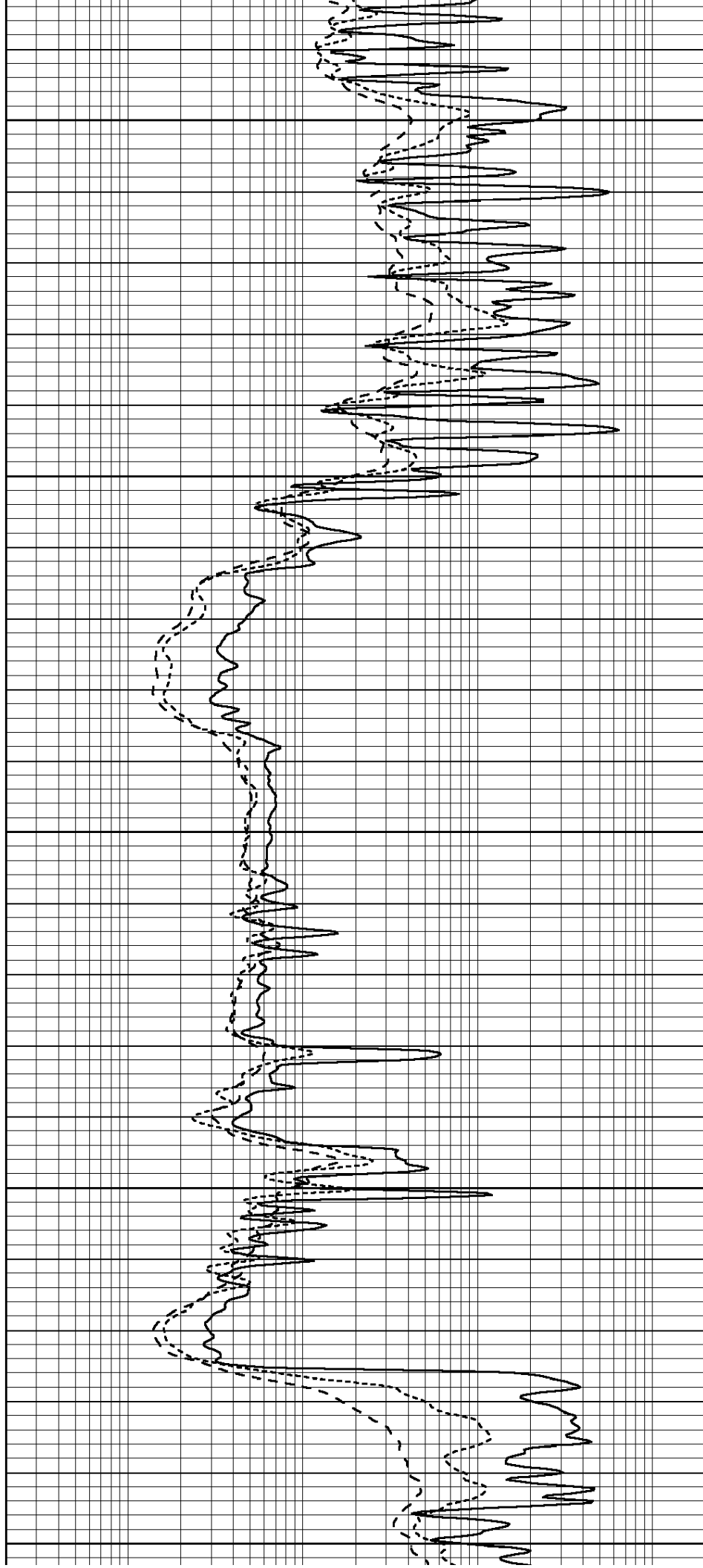
4850

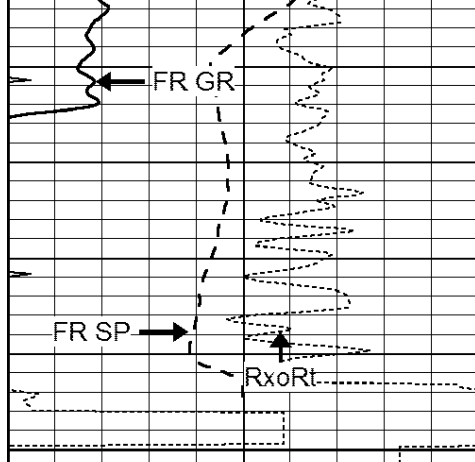
4900

4950

5000

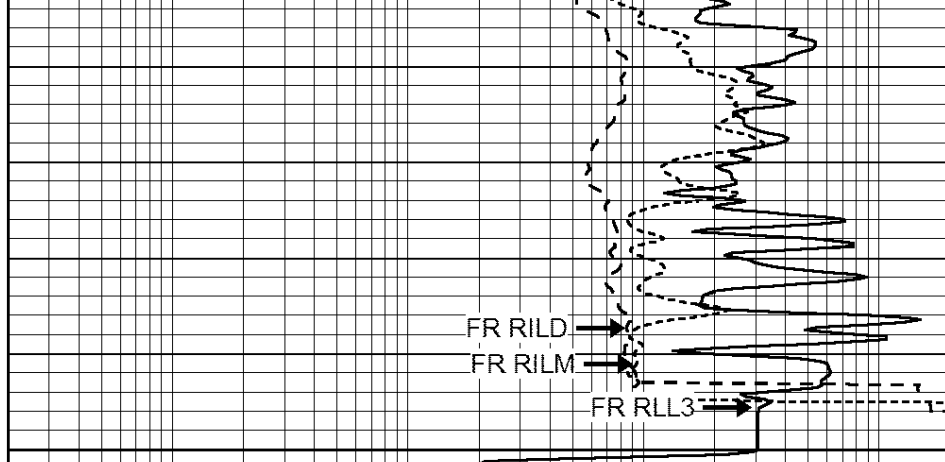
5050





LTD 5098  
5100

|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |



|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

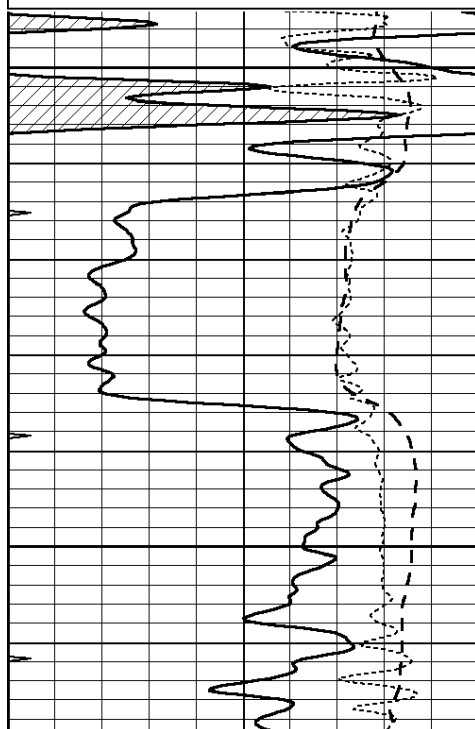


# REPEAT SECTION

Database File: 26201pe.db  
 Dataset Pathname: pass2.1  
 Presentation Format: \_dil  
 Dataset Creation: Wed Oct 01 20:14:27 2014 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

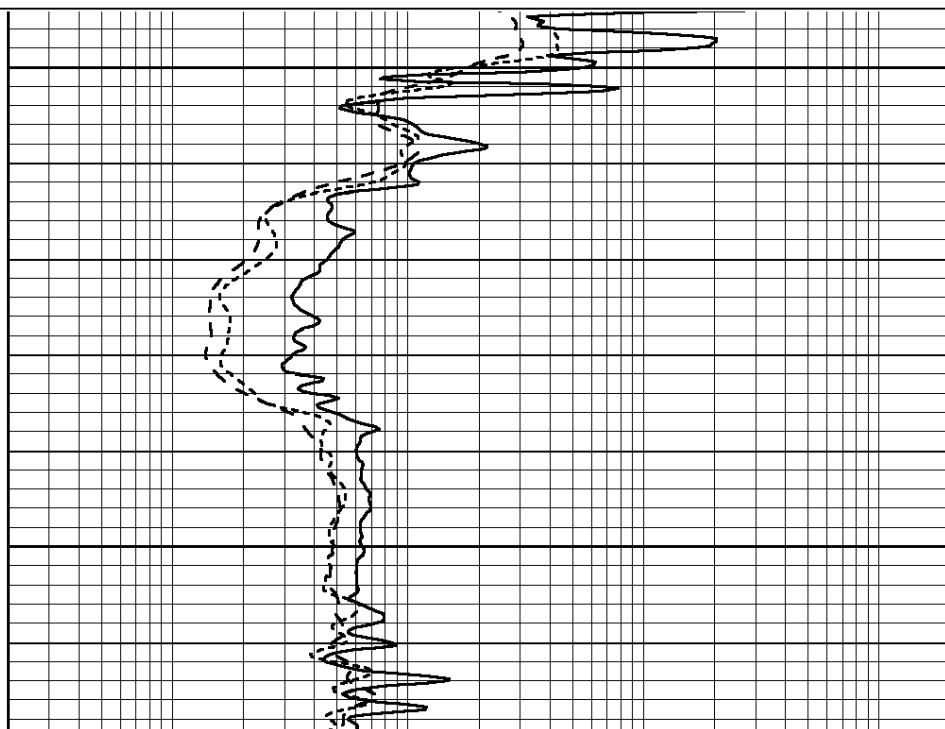
|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

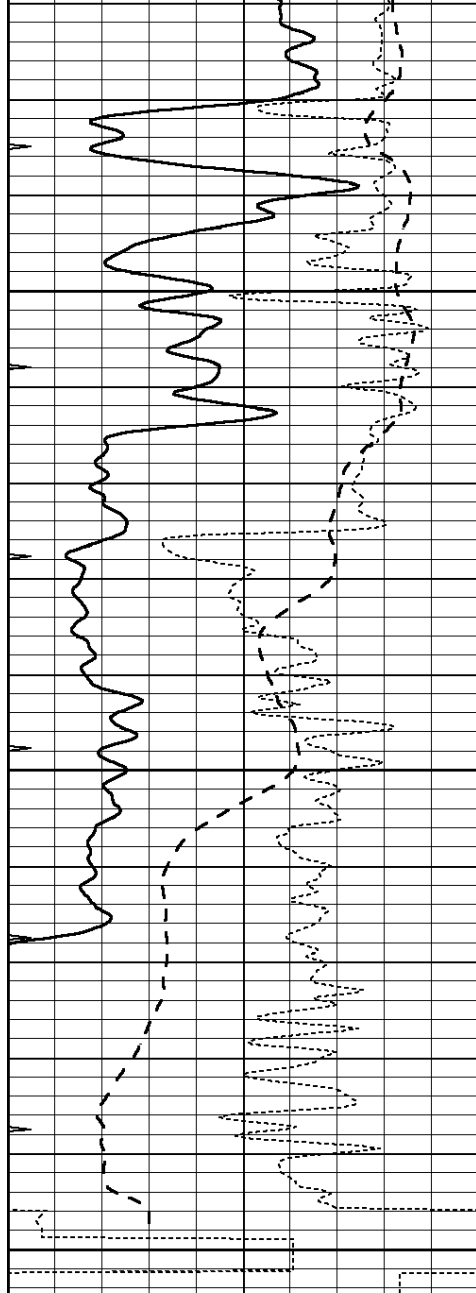
|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



4900

4950



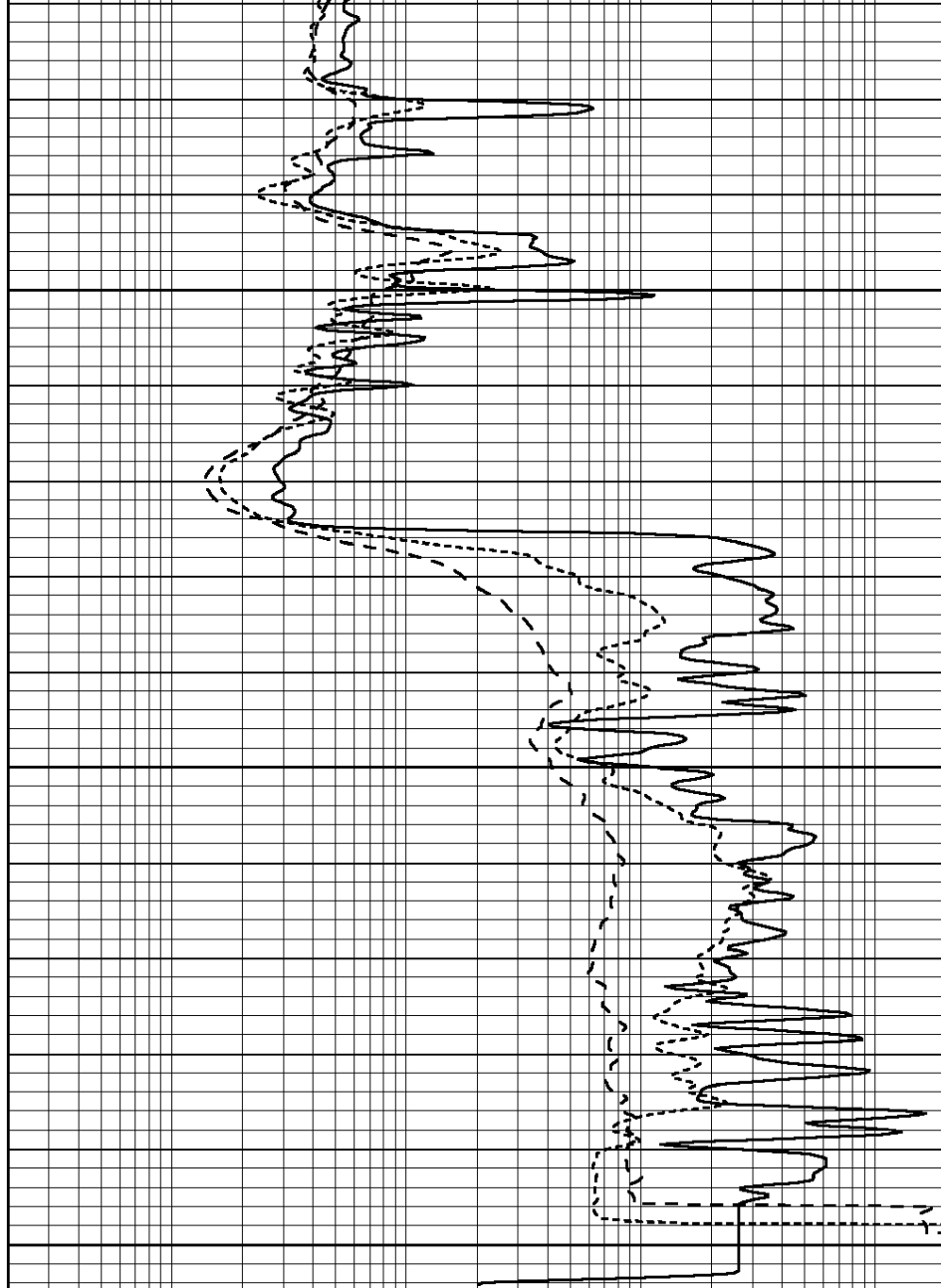


|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

5000

5050

5100



|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

### Calibration Report

Database File: 26201pe.db  
 Dataset Pathname: pass2.1  
 Dataset Creation: Wed Oct 01 20:14:27 2014 by Calc Open-Cased 090629

### Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Sun Aug 17 08:09:53 2014  
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008  
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

### Surface Calibration

#### Readings

#### References

#### Results

Loop:

Air

Loop

Air

Loop

m

b

|                                  |            |             |            |                     |                                    |           |         |         |
|----------------------------------|------------|-------------|------------|---------------------|------------------------------------|-----------|---------|---------|
| Deep                             | 0.015      | 0.648       | V          | 0.000               | 400.000                            | mmho/m    | 620.000 | -2.000  |
| Medium                           | 0.029      | 0.796       | V          | 0.000               | 464.000                            | mmho/m    | 590.000 | -16.000 |
| Internal:                        | Zero       | Cal         |            | Zero                | Cal                                |           | m       | b       |
| Deep                             | 0.017      | 0.657       | V          | 0.000               | 400.000                            | mmho/m    | 625.153 | -10.619 |
| Medium                           | 0.016      | 0.757       | V          | 0.000               | 464.000                            | mmho/m    | 625.992 | -9.739  |
| Downhole Calibration             |            |             |            |                     |                                    |           |         |         |
| Readings                         |            |             | References |                     |                                    | Results   |         |         |
|                                  | Zero       | Cal         |            | Zero                | Cal                                |           | m'      | b'      |
| Deep                             | 0.000      | 0.000       | mmho/m     | 2.011               | 405.777                            | mmho/m    | 1.000   | 0.000   |
| Medium                           | 0.000      | 0.000       | mmho/m     | 7.590               | 503.393                            | mmho/m    | 1.000   | 0.000   |
| LL3                              |            | 7.500       | V          |                     | 1500.000                           | Ohm-m     |         |         |
|                                  |            | 0.000       | V          |                     | 20.000                             | Ohm-m     |         |         |
|                                  |            | -7.200      | V          |                     | 3800.000                           | mmho-m    |         |         |
| After Survey Verification        |            |             |            |                     |                                    |           |         |         |
| Readings                         |            |             | Targets    |                     |                                    | Results   |         |         |
|                                  | Zero       | Cal         |            | Zero                | Cal                                |           | m'      | b'      |
| Deep                             | 0.000      | 0.000       | mmho/m     | 0.000               | 0.000                              | mmho/m    | 0.000   | 0.000   |
| Medium                           | 0.000      | 0.000       | mmho/m     | 0.000               | 0.000                              | mmho/m    | 0.000   | 0.000   |
| LL3                              |            | 1.000       | Ohm-m      |                     | 1.000                              | Ohm-m     |         |         |
|                                  |            | 0.000       | Ohm-m      |                     | 0.000                              | Ohm-m     |         |         |
|                                  |            | 1.000       | mmho-m     |                     | 1.000                              | mmho-m    |         |         |
| Litho Density Calibration Report |            |             |            |                     |                                    |           |         |         |
| Serial: 006                      |            |             |            | Model: PRB          |                                    |           |         |         |
| Master Calibration               |            |             |            |                     | Performed Wed Mar 12 14:26:38 2014 |           |         |         |
|                                  | Background | Magnesium   |            | Aluminum            |                                    | Sandstone |         |         |
| Window 1                         | 1296.6     | 7199.0      |            | 2625.4              |                                    | 7833.2    |         | cps     |
| Window 2                         | 1218.8     | 5956.6      |            | 2257.8              |                                    | 6372.0    |         | cps     |
| Window 3                         | 926.7      | 2990.0      |            | 1318.7              |                                    | 3107.7    |         | cps     |
| Window 4                         | 314.3      | 319.6       |            | 320.3               |                                    | 326.2     |         | cps     |
| Long Space                       | 0.0        | 4737.9      |            | 1039.0              |                                    | 5153.3    |         | cps     |
| Short Space                      | 1.3        | 1655.6      |            | 1074.2              |                                    | 1728.4    |         | cps     |
| Rho                              |            | 1.7100      |            | 2.5960              |                                    | 1.3800    |         | g/cc    |
| Pe                               |            | 0.0000      |            | 2.5700              |                                    | 1.5500    |         |         |
| Rib Angle                        | : 44.1     | Rib Slope   | : 0.969    | Density/Spine Ratio |                                    | : 0.562   |         |         |
| Spine Angle                      | : 74.1     | Spine Slope | : 3.507    | Spine Intercept     |                                    | : -17.5   |         |         |
| Before Survey Verification       |            |             |            |                     | Performed Wed Dec 31 18:00:00 1969 |           |         |         |
|                                  |            |             |            |                     |                                    |           |         |         |
| Window 1                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 2                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 3                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 4                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Long Space                       | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Short Space                      | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Measured Rho                     |            | 0.0000      |            | 0.0000              |                                    | 0.0000    |         | g/cc    |
| Measured Correction              |            | 0.0000      |            | 0.0000              |                                    | 0.0000    |         | g/cc    |
| Measured Pe                      |            |             |            | 0.0000              |                                    | 0.0000    |         |         |
| After Survey Verification        |            |             |            |                     | Performed Wed Dec 31 18:00:00 1969 |           |         |         |
|                                  |            |             |            |                     |                                    |           |         |         |
| Window 1                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 2                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 3                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Window 4                         | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Long Space                       | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Short Space                      | 0.0        | 0.0         |            | 0.0                 |                                    | 0.0       |         | cps     |
| Measured Rho                     |            | 0.0000      |            | 0.0000              |                                    | 0.0000    |         | g/cc    |
| Measured Correction              |            | 0.0000      |            | 0.0000              |                                    | 0.0000    |         | g/cc    |
| Measured Pe                      |            |             |            | 0.0000              |                                    | 0.0000    |         |         |

|                     |     |        |        |        |      |
|---------------------|-----|--------|--------|--------|------|
| Window 1            | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Window 2            | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Window 3            | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Window 4            | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Long Space          | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Short Space         | 0.0 | 0.0    | 0.0    | 0.0    | cps  |
| Measured Rho        |     | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Correction |     | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Pe         |     |        | 0.0000 | 0.0000 |      |

|                                        |
|----------------------------------------|
| Compensated Neutron Calibration Report |
|----------------------------------------|

|                |    |
|----------------|----|
| Serial Number: | 6I |
| Tool Model:    | G  |

|             |             |          |     |        |     |               |
|-------------|-------------|----------|-----|--------|-----|---------------|
| CALIBRATION |             |          |     |        |     |               |
|             | Detector    | Readings |     | Target |     | Normalization |
|             | Short Space | 1.00     | cps | 1.00   | cps | 1.0000        |
|             | Long Space  | 1.00     | cps | 1.00   | cps | 1.0000        |

|                         |             |          |     |          |  |        |
|-------------------------|-------------|----------|-----|----------|--|--------|
| PRE-SURVEY VERIFICATION |             |          |     |          |  |        |
|                         | Detector    | Readings |     | Measured |  | Target |
| 1)                      | Short Space |          | cps |          |  |        |
|                         | Long Space  |          | cps | pu       |  | pu     |
| 2)                      | Short Space |          | cps |          |  |        |
|                         | Long Space  |          | cps | pu       |  |        |
| 3)                      | Short Space |          | cps |          |  |        |
|                         | Long Space  |          | cps | pu       |  |        |

|                          |             |          |     |          |  |        |
|--------------------------|-------------|----------|-----|----------|--|--------|
| POST-SURVEY VERIFICATION |             |          |     |          |  |        |
|                          | Detector    | Readings |     | Measured |  | Target |
| 1)                       | Short Space |          | cps |          |  |        |
|                          | Long Space  |          | cps | pu       |  | pu     |
| 2)                       | Short Space |          | cps |          |  |        |
|                          | Long Space  |          | cps | pu       |  | pu     |
| 3)                       | Short Space |          | cps |          |  |        |
|                          | Long Space  |          | cps | pu       |  | pu     |

|                              |
|------------------------------|
| Gamma Ray Calibration Report |
|------------------------------|

|                     |                          |          |
|---------------------|--------------------------|----------|
| Serial Number:      | GR6                      |          |
| Tool Model:         | OPEN                     |          |
| Performed:          | Sun Aug 17 15:23:09 2014 |          |
| Calibrator Value:   | 150.0                    | GAPI     |
| Background Reading: | 0.0                      | cps      |
| Calibrator Reading: | 276.0                    | cps      |
| Sensitivity:        | 0.7000                   | GAPI/cps |