

**NABORS****COMPLETION  
& PRODUCTION  
SERVICES CO.****DUAL INDUCTION  
LOG**

|                                     |                         |                                           |      |
|-------------------------------------|-------------------------|-------------------------------------------|------|
| Company VALHALLA WXPLORATION, LLC.  |                         | Company VALHALLA EXPLORATION, LLC.        |      |
| Well BARCLAY #1-3                   |                         | Well BARCLAY #1-3                         |      |
| Field PRITCHARD                     |                         | Field PRITCHARD                           |      |
| County STAFFORD                     |                         | County STAFFORD                           |      |
| State KANSAS                        |                         | State KANSAS                              |      |
| Location: API # : 15-185-23846-0000 |                         | Other Services<br>CDL/CNL/PE<br>MEL/SONIC |      |
| SEC 3 TWP 21S RGE 14W               |                         | Elevation                                 |      |
| Permanent Datum                     | GROUND LEVEL            | Elevation                                 | 1923 |
| Log Measured From                   | KELLY BUSHING 8' A.G.L. |                                           |      |
| Drilling Measured From              | KELLY BUSHING           |                                           |      |
| Date                                | 1/9/14                  |                                           |      |
| Run Number                          | ONE                     |                                           |      |
| Depth Driller                       | 3760                    |                                           |      |
| Depth Logger                        | 3761                    |                                           |      |
| Bottom Logged Interval              | 3759                    |                                           |      |
| Top Log Interval                    | 00                      |                                           |      |
| Casing Driller                      | 8 5/8"@825'             |                                           |      |
| Casing Logger                       | 824                     |                                           |      |
| Bit Size                            | 7 7/8"                  |                                           |      |
| Type Fluid in Hole                  | CHEMICAL MUD            | CHLORIDES 5,800 PPM                       |      |
| Density / Viscosity                 | 9.2/56                  |                                           |      |
| pH / Fluid Loss                     | 11.0/7.6                |                                           |      |
| Source of Sample                    | FLOWLINE                |                                           |      |
| Rin @ Meas. Temp                    | .670@62F                |                                           |      |
| Rinf @ Meas. Temp                   | .503@62F                |                                           |      |
| Rinc @ Meas. Temp                   | .804@62F                |                                           |      |
| Source of Rinf / Rinc               | MEASUREMENT             |                                           |      |
| Rin @ BHT                           | .364@114F               |                                           |      |
| Time Circulation Stopped            | 2 HOURS                 |                                           |      |
| Time Logger on Bottom               | 6:15 A.M.               |                                           |      |
| Maximum Recorded Temperature        | 114F                    |                                           |      |
| Equipment Number                    | 4854                    |                                           |      |
| Location                            | HAYS, KANSAS            |                                           |      |
| Recorded By                         | JEFF LUEBBERS           |                                           |      |
| Witnessed By                        | DEREK PATTERSON         |                                           |      |

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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

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395  
DIRECTIONS

GREAT BEND, KS., 7S. ON HWY 281 TO (STAFFORD COUNTY LINE) 6W. ON "RD. 70", S. INTO

**NABORS****COMPLETION  
& PRODUCTION****MAIN SECTION**

Database File:

22232pe.db

Dataset Pathname:

pass3.4

Presentation Format:

dil2

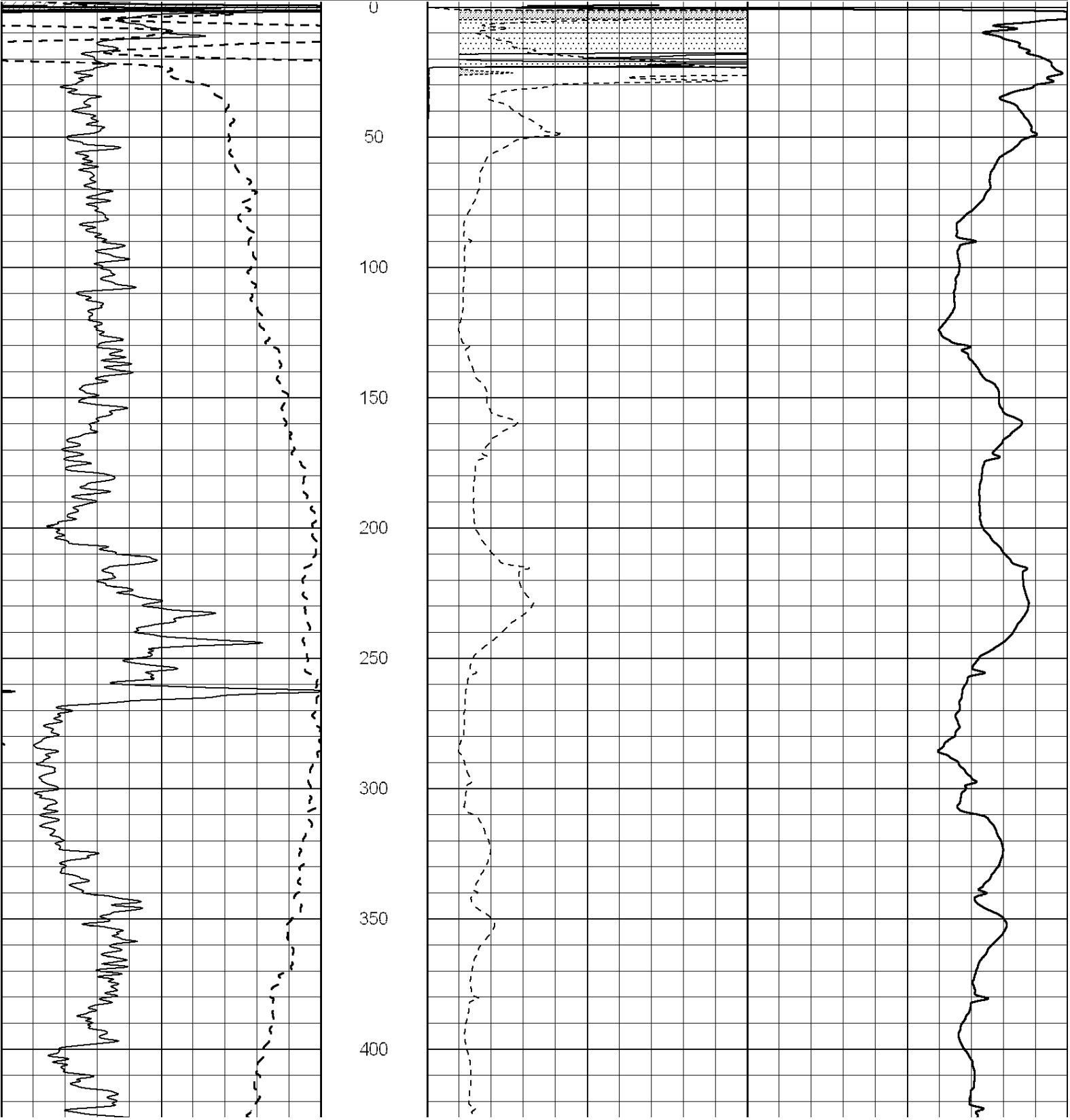
Dataset Creation:

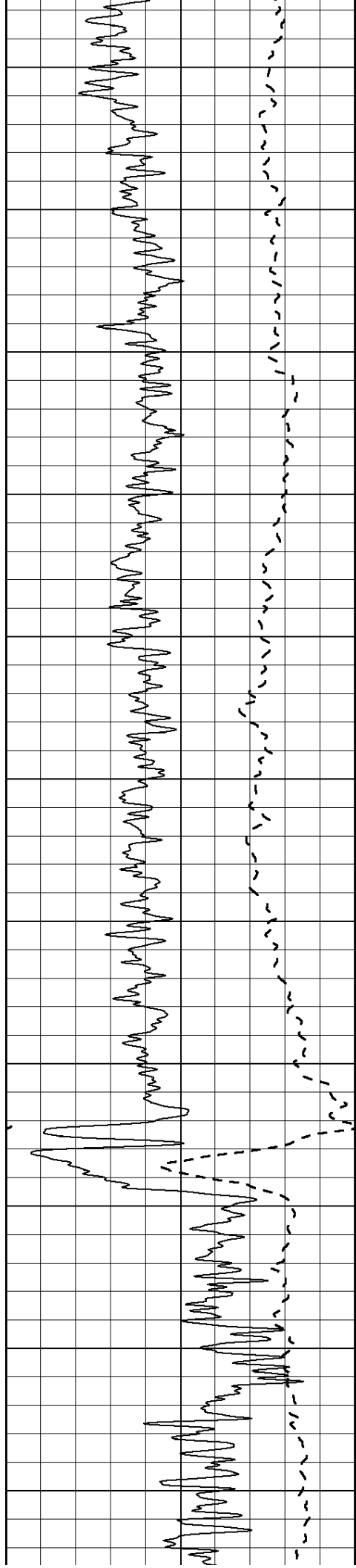
Thu Jan 09 07:31:47 2014

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  |
| ----- |                  |     | CILD (mmho/m) |                  |     |
|       |                  |     | 1000          |                  | 0   |
|       |                  |     | 50            | RILD X10 (Ohm-m) | 500 |
|       |                  |     | 50            | RLL3 X10 (Ohm-m) | 500 |





450

500

550

600

650

700

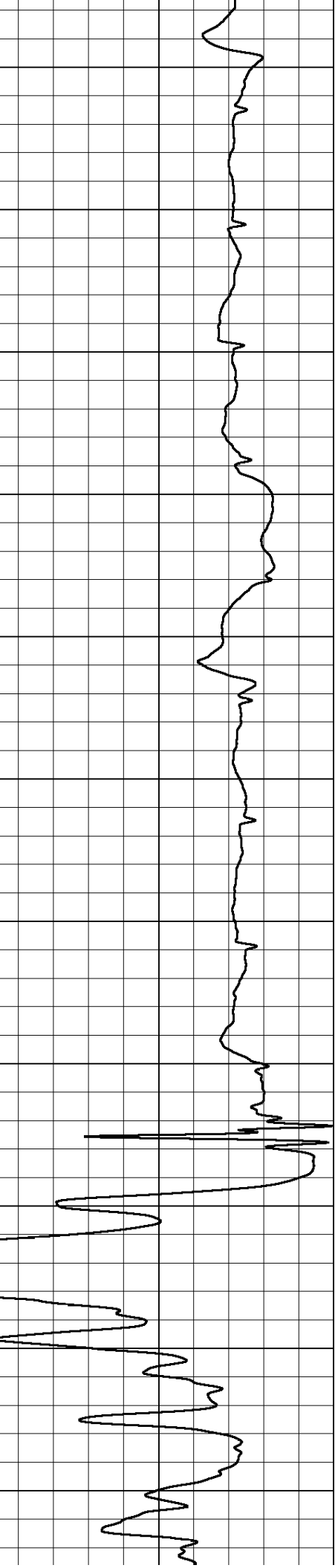
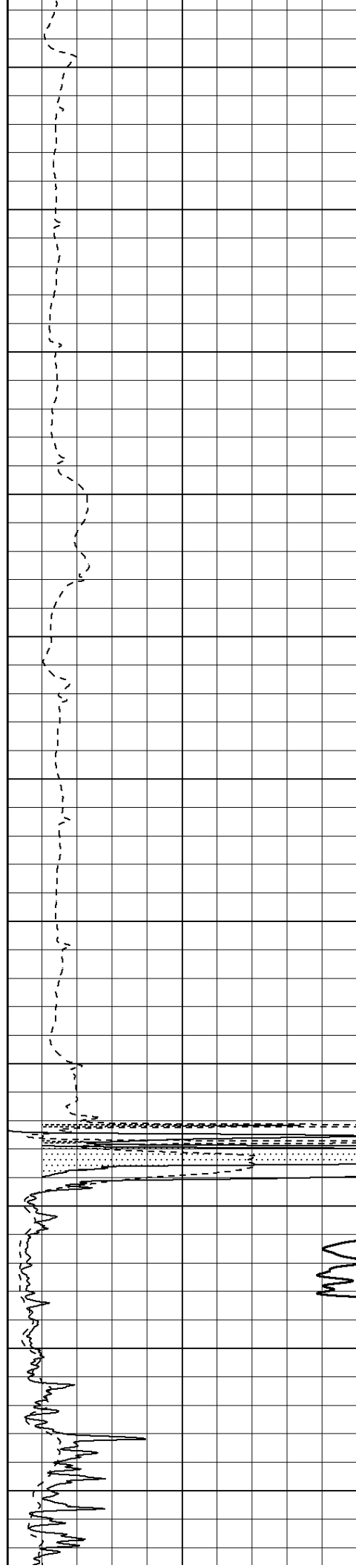
750

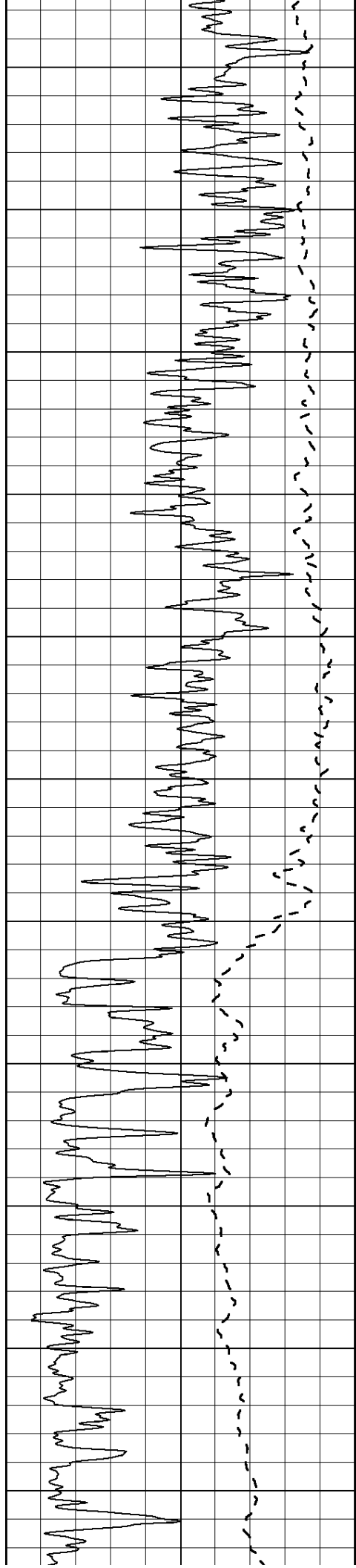
800

850

900

950





1000

1050

1100

1150

1200

1250

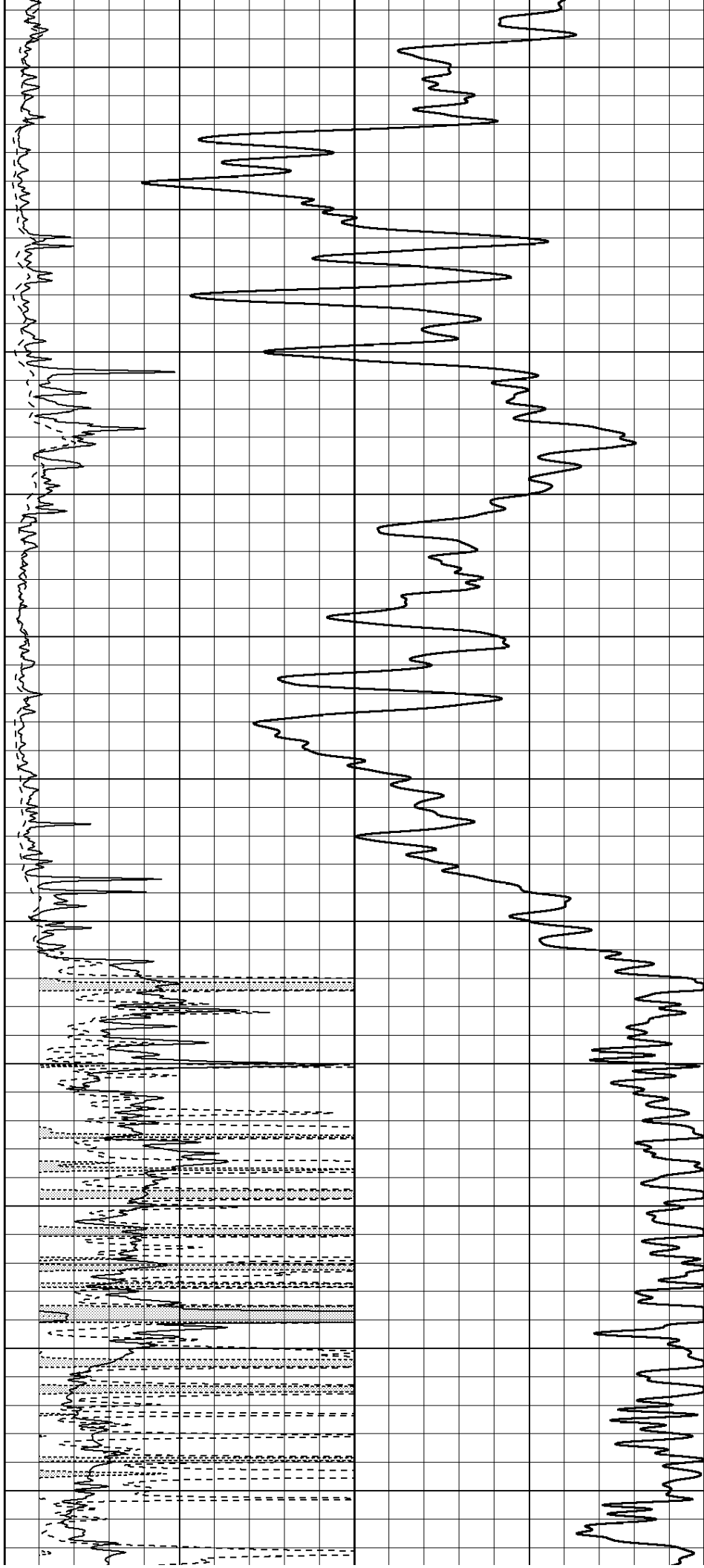
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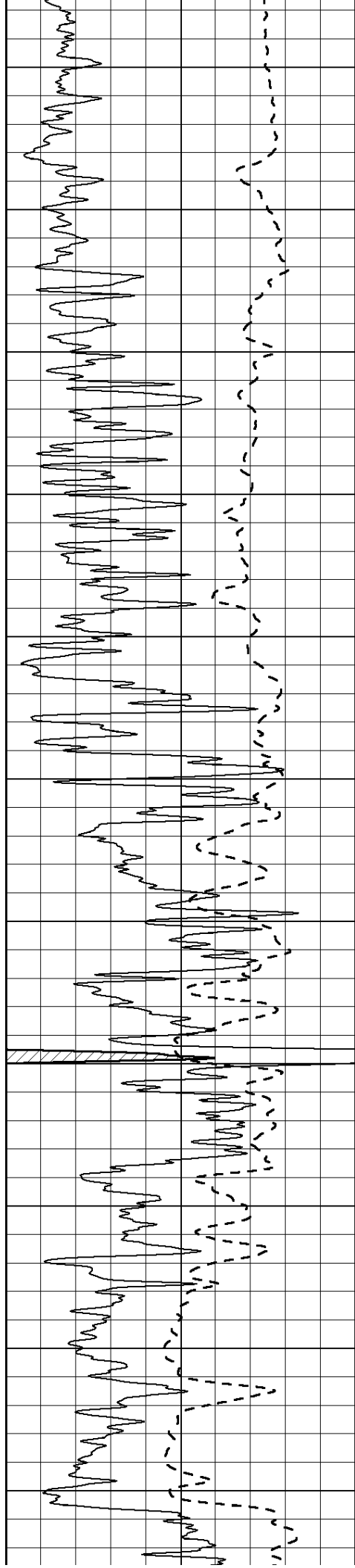
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1400

1450

1500





1550

1600

1650

1700

1750

1800

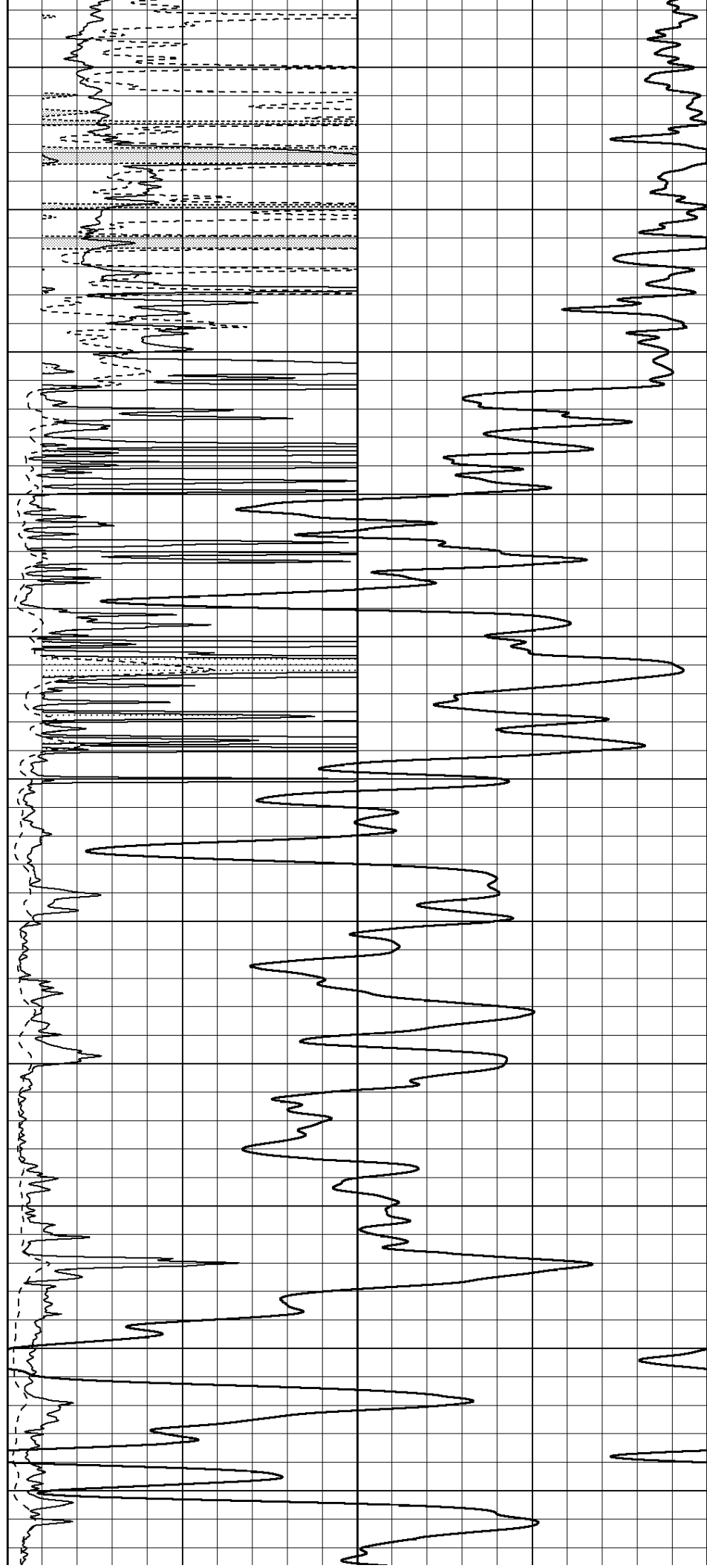
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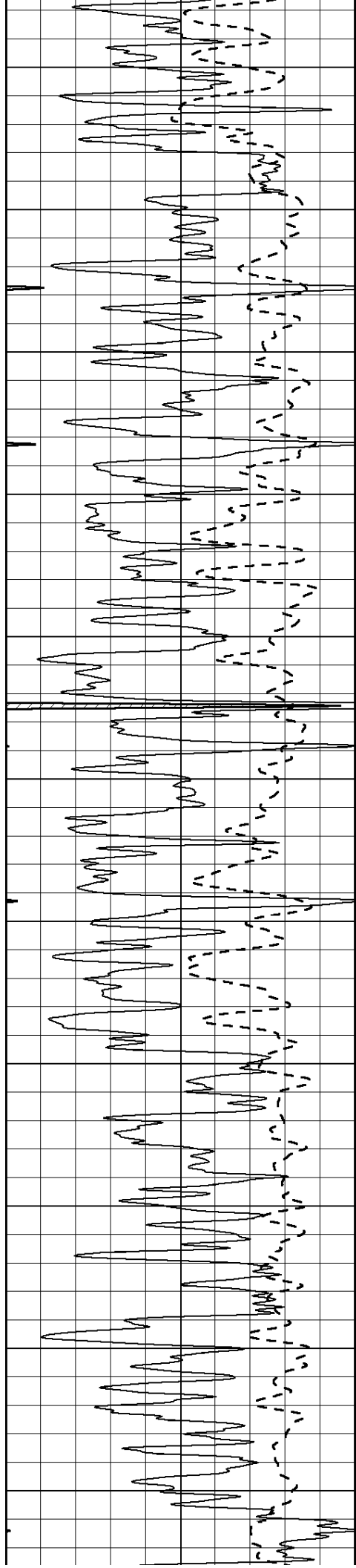
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

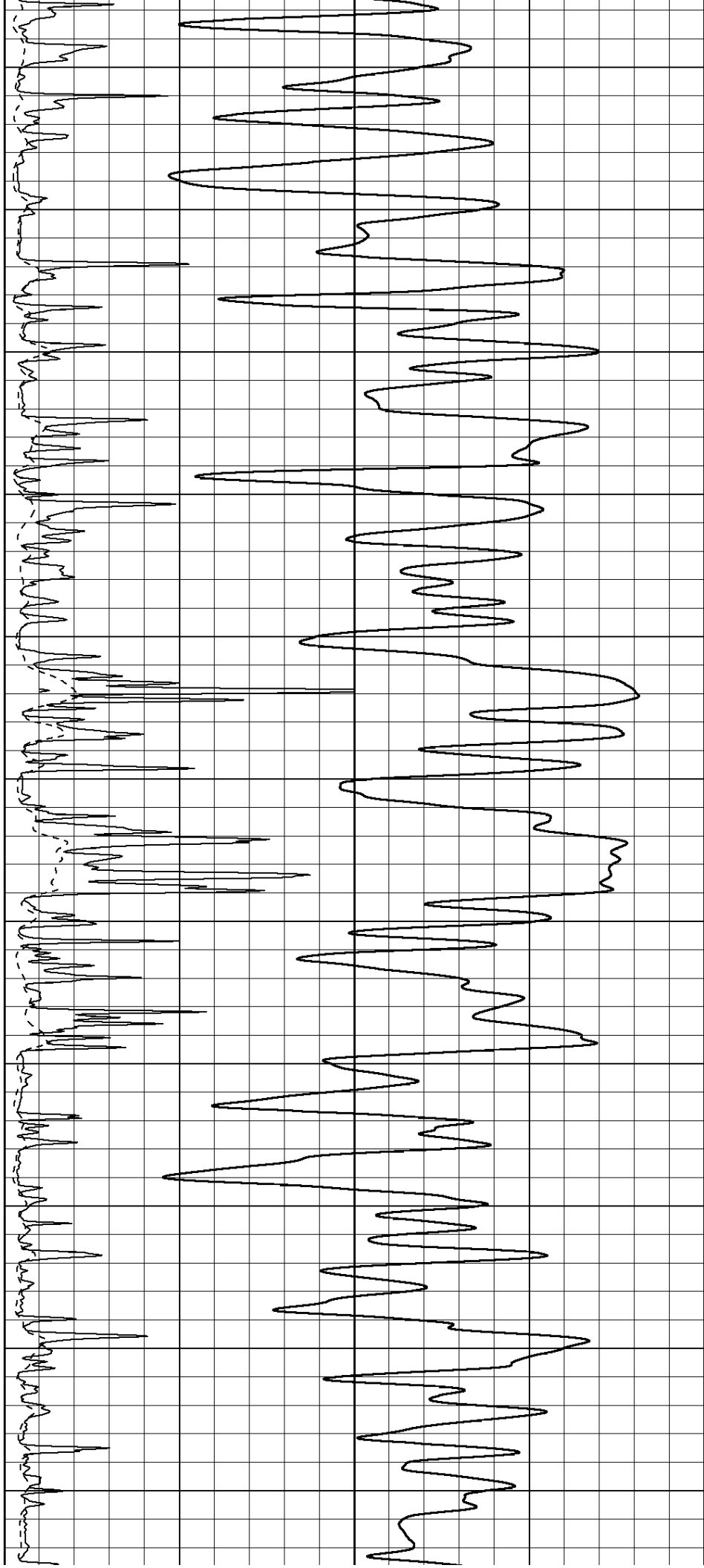
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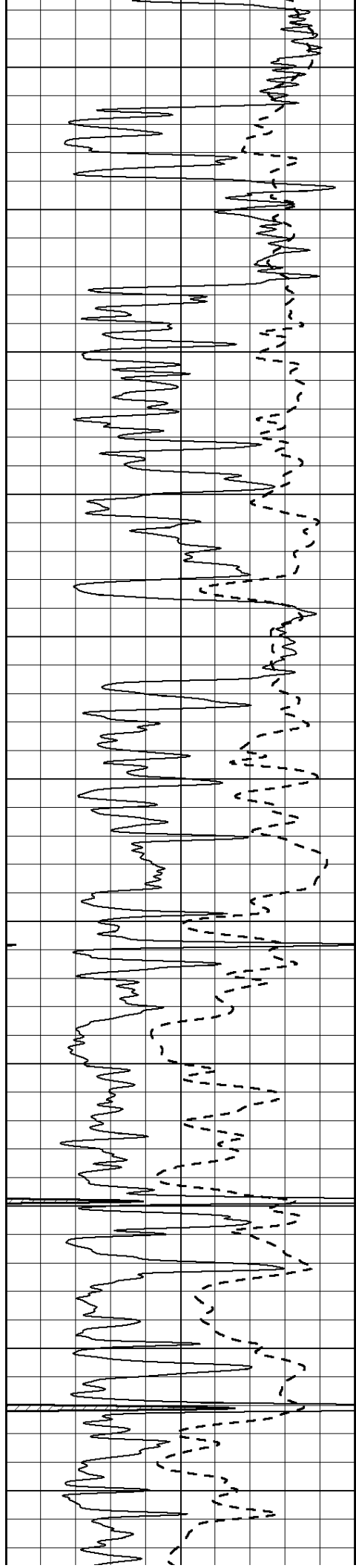
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

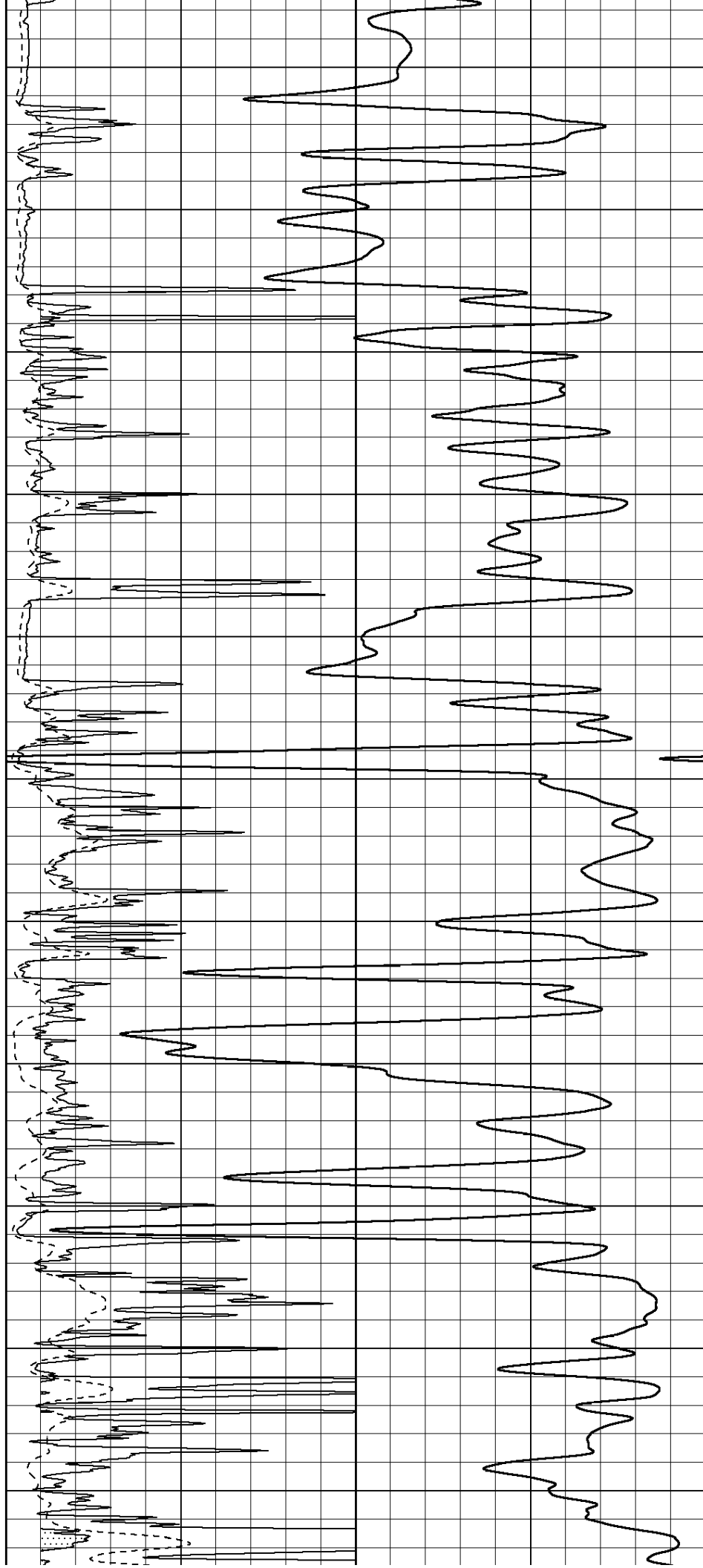
2950

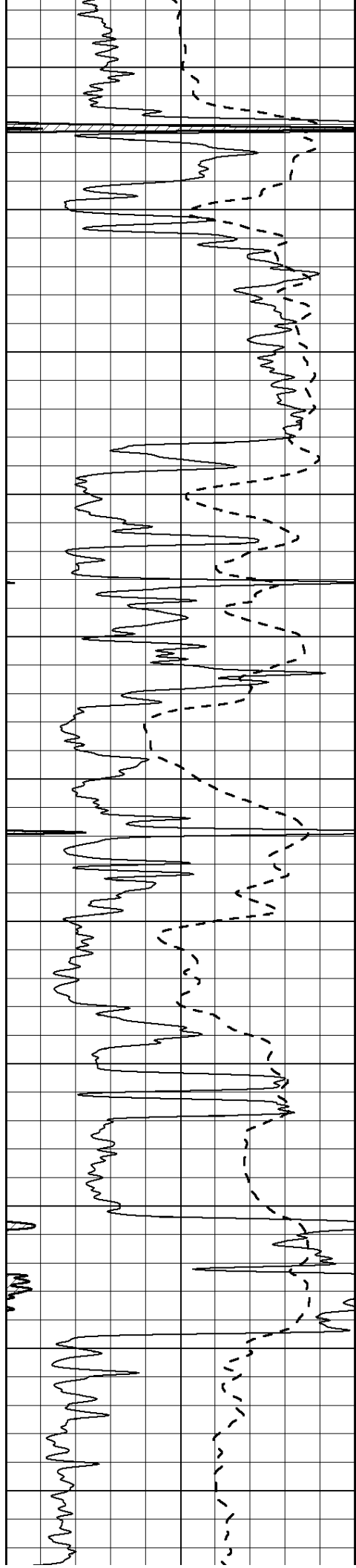
3000

3050

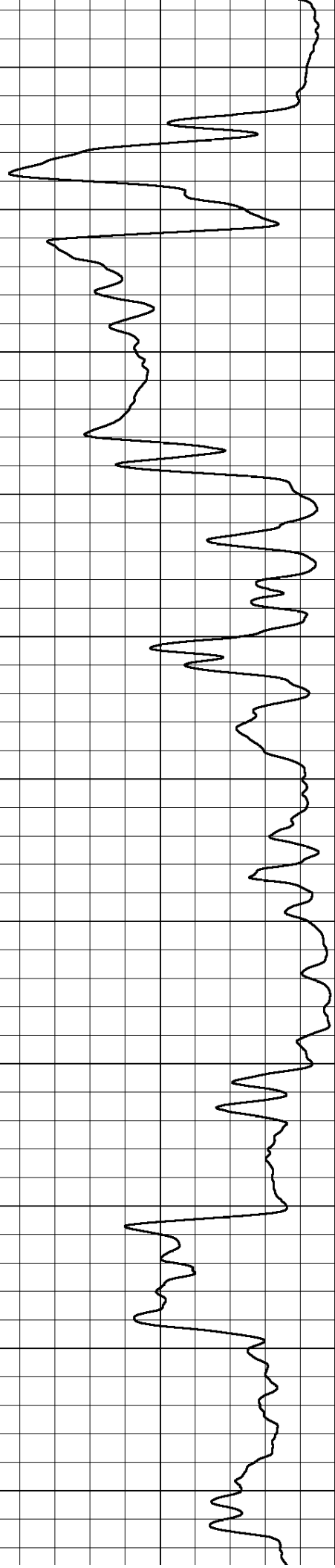
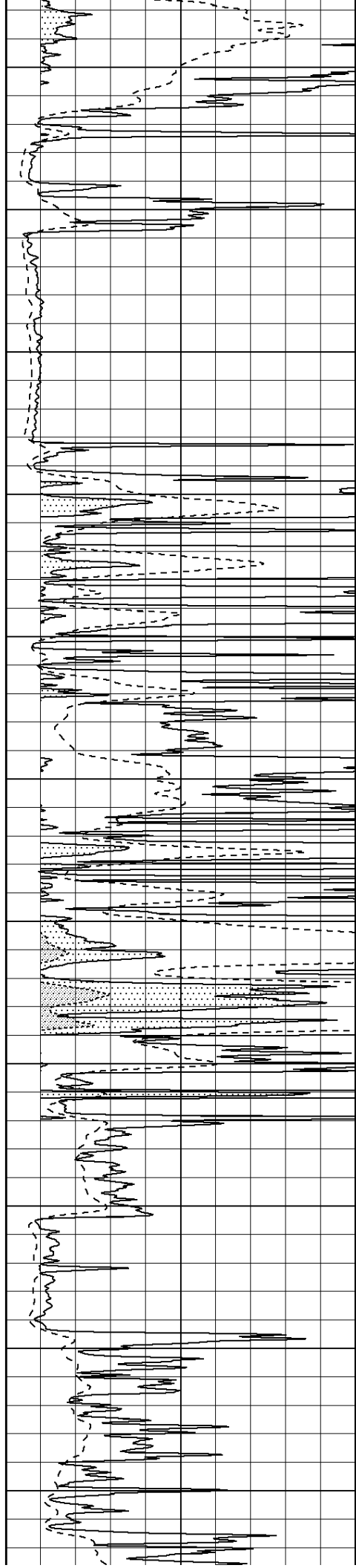
3100

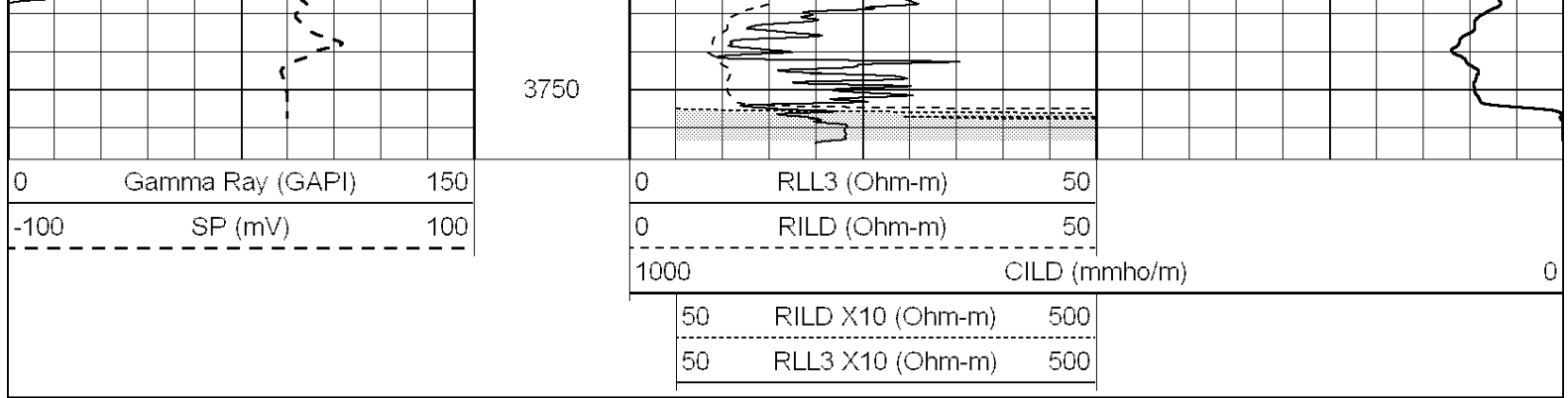
3150





3200  
3250  
3300  
3350  
3400  
3450  
3500  
3550  
3600  
3650  
3700

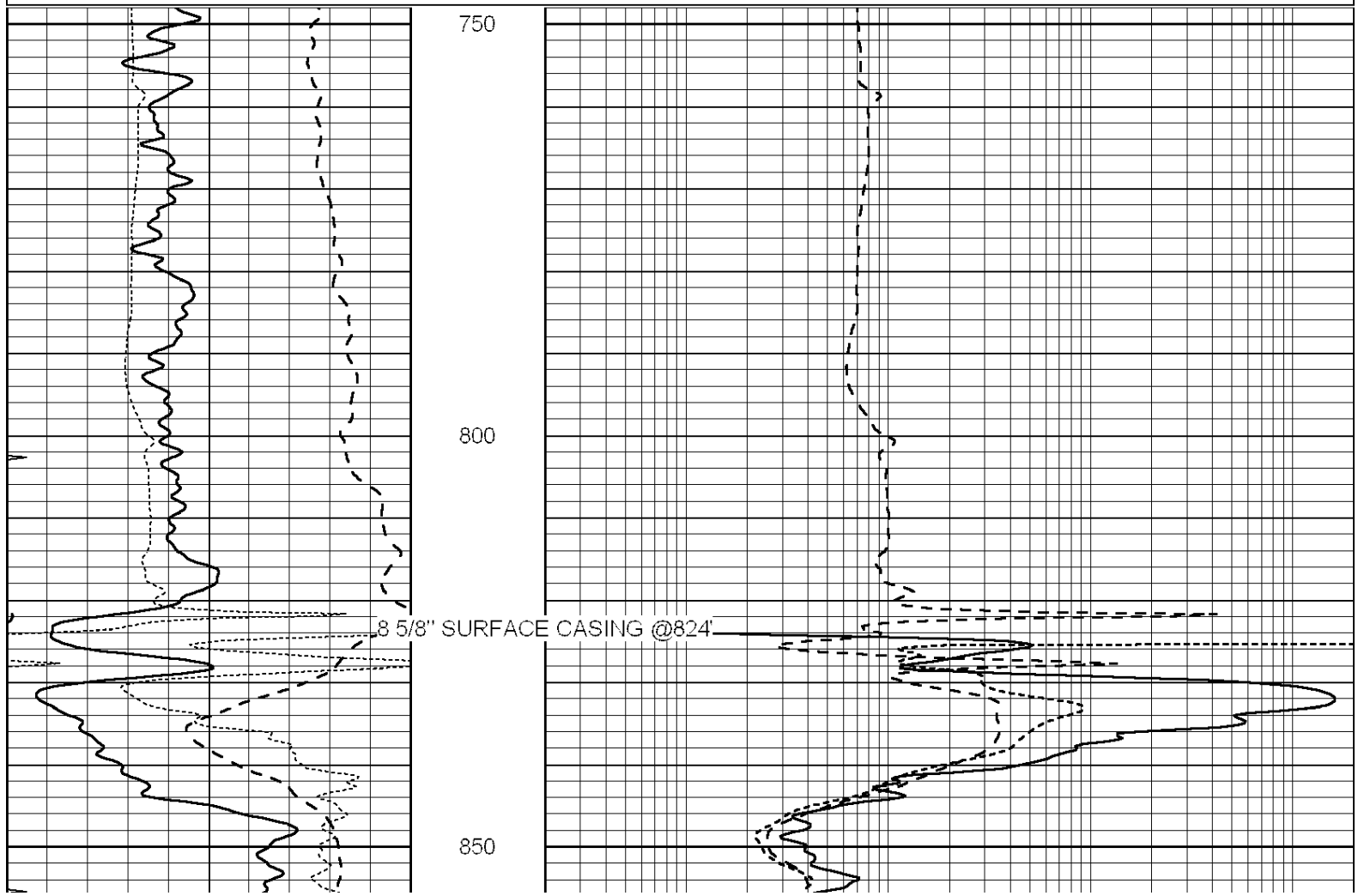




# ANHYDRITE

Database File: 22232pe.db  
 Dataset Pathname: pass3.5  
 Presentation Format: \_dil  
 Dataset Creation: Thu Jan 09 07:32:43 2014  
 Charted by: Depth in Feet scaled 1:240

|      |                  |     |     |                          |      |
|------|------------------|-----|-----|--------------------------|------|
| 0    | GAMMA RAY (GAPI) | 150 | 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| -100 | SP (mV)          | 100 | 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| -250 | Rxo/Rt           | 50  | 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0    | MINMK            | 20  |     |                          |      |



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



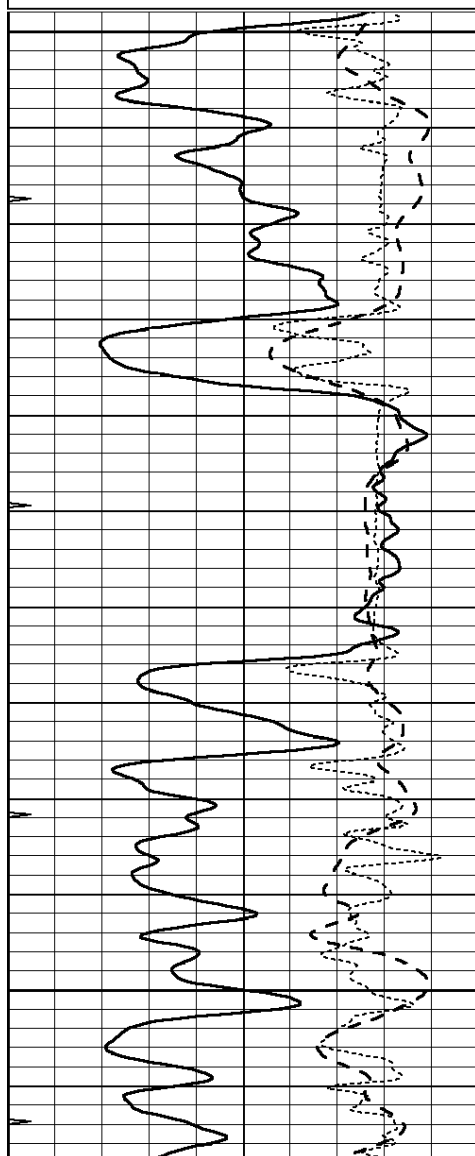
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SERVICES CO.**

# MAIN SECTION

Database File: 22232pe.db  
Dataset Pathname: pass3.4  
Presentation Format: dil  
Dataset Creation: Thu Jan 09 07:31:47 2014  
Charted by: Depth in Feet scaled 1:240

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

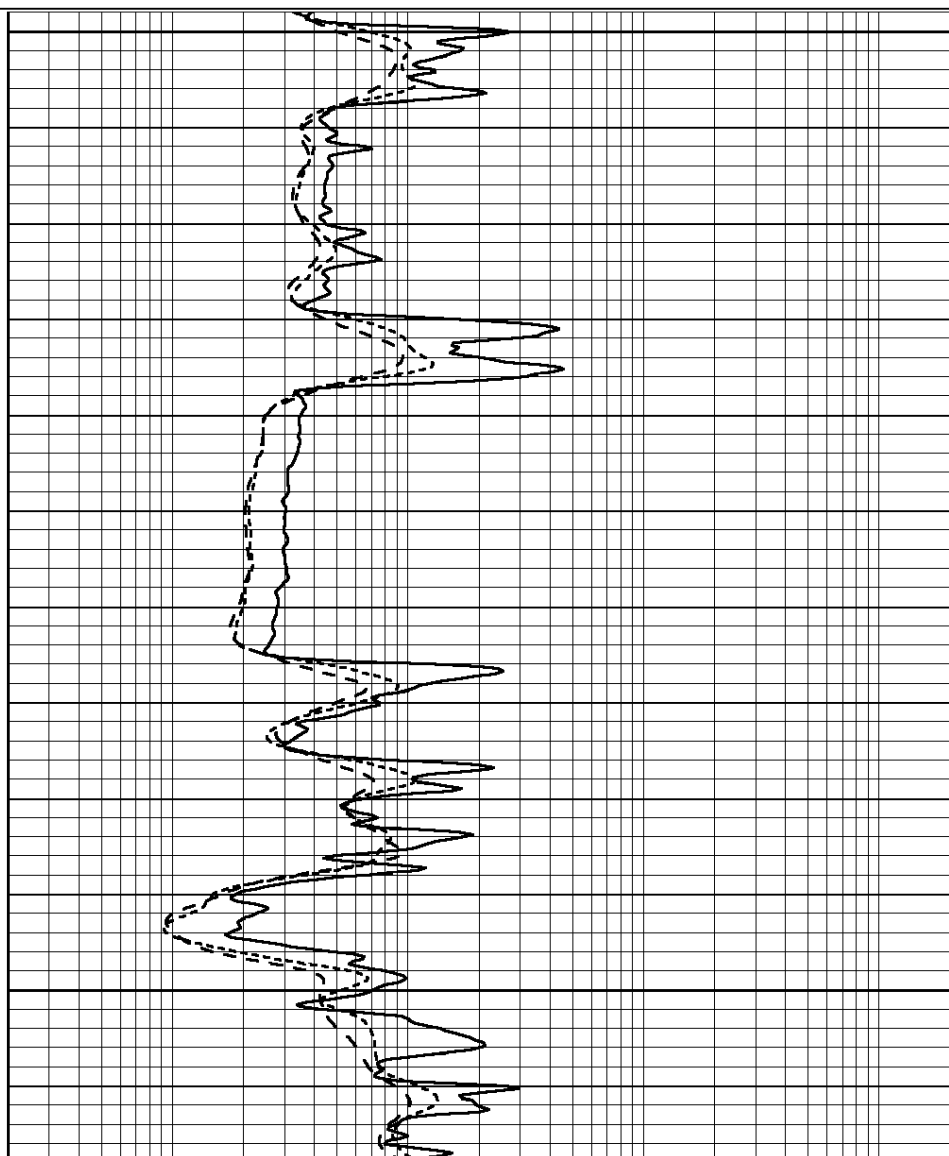
|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

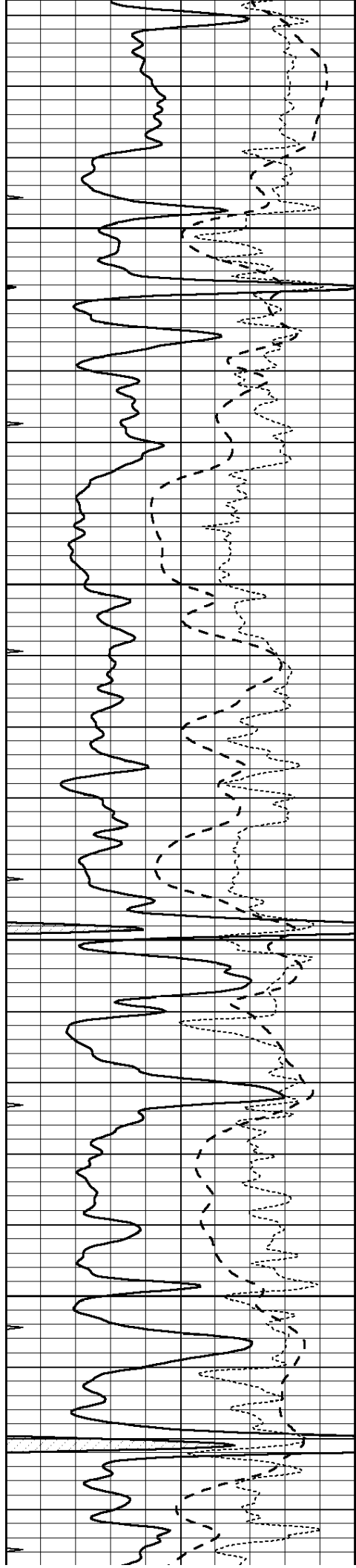


2800

2850

2900



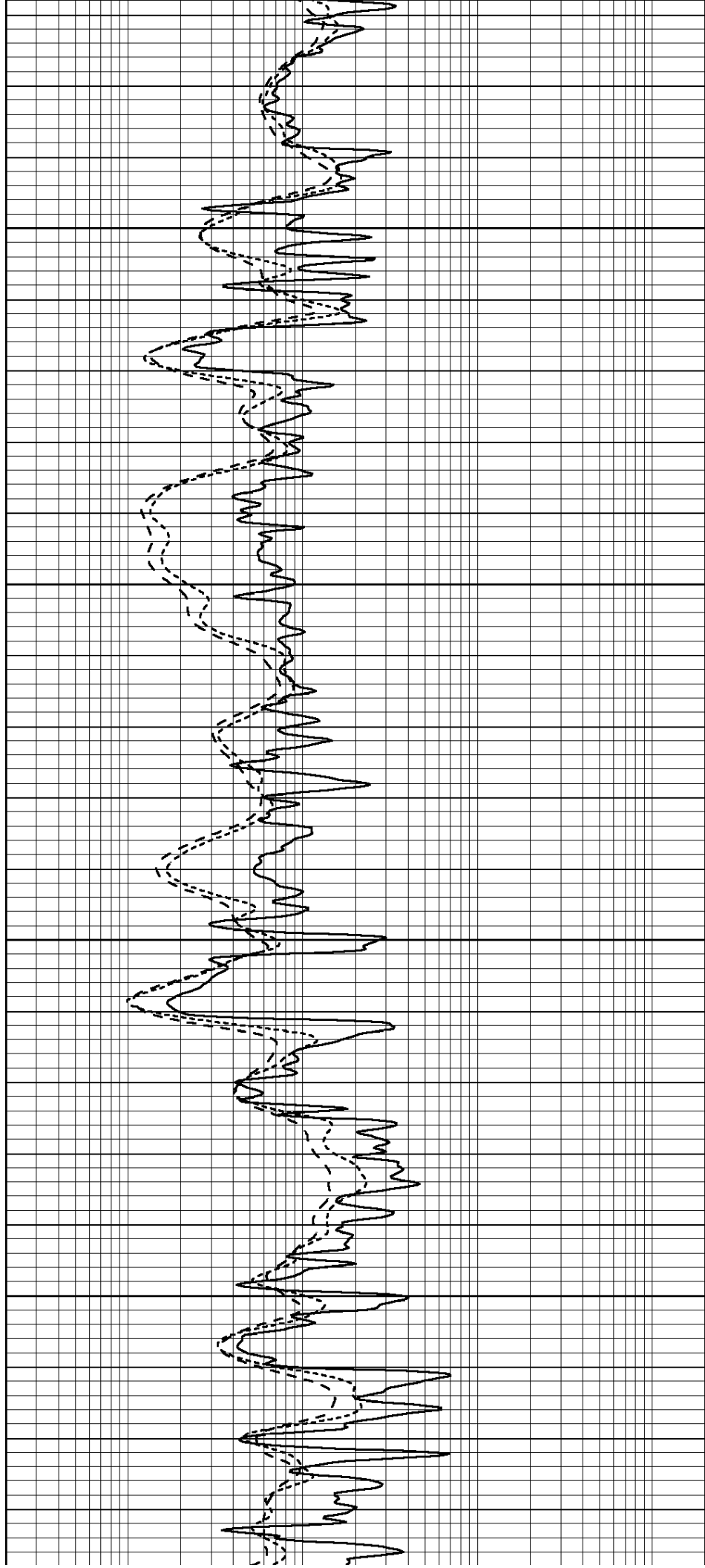


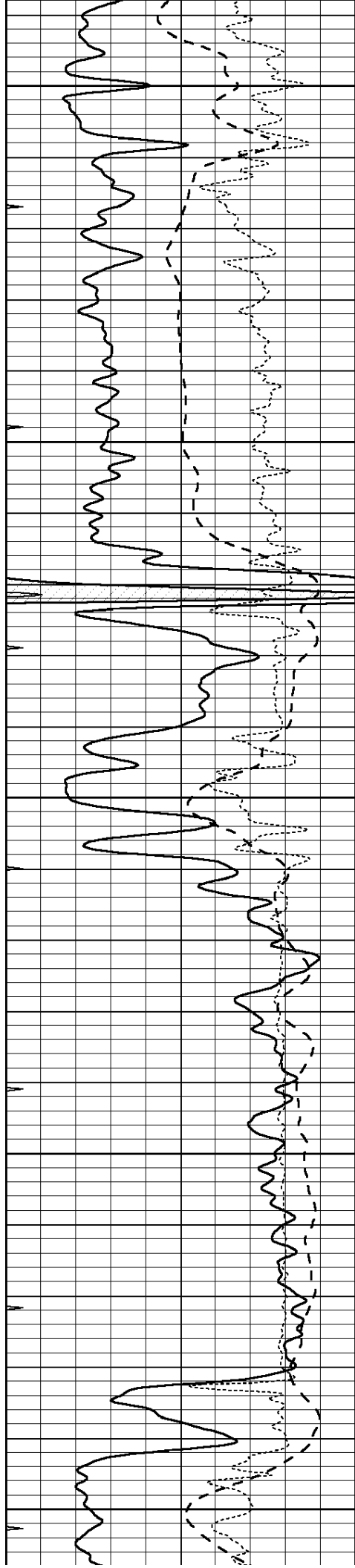
2950

3000

3050

3100





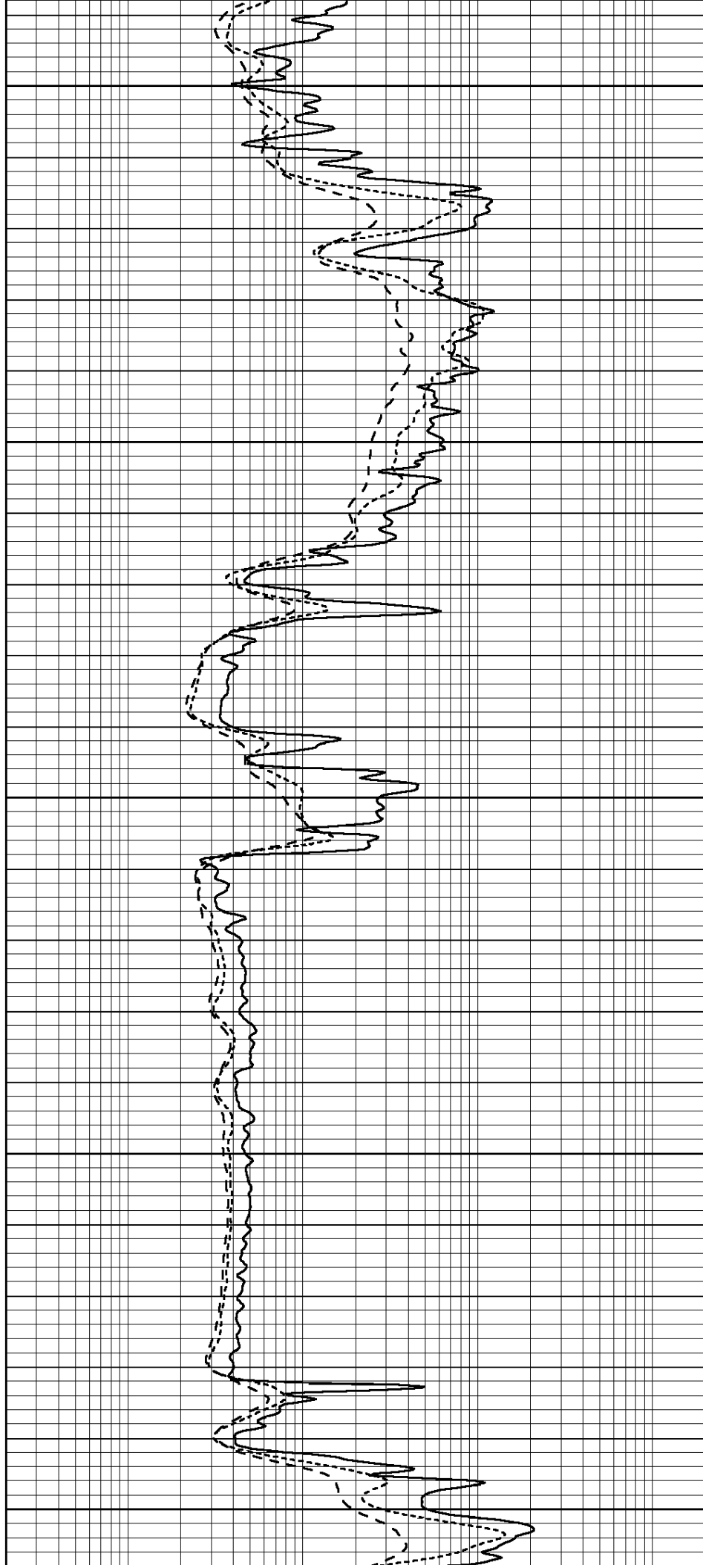
3150

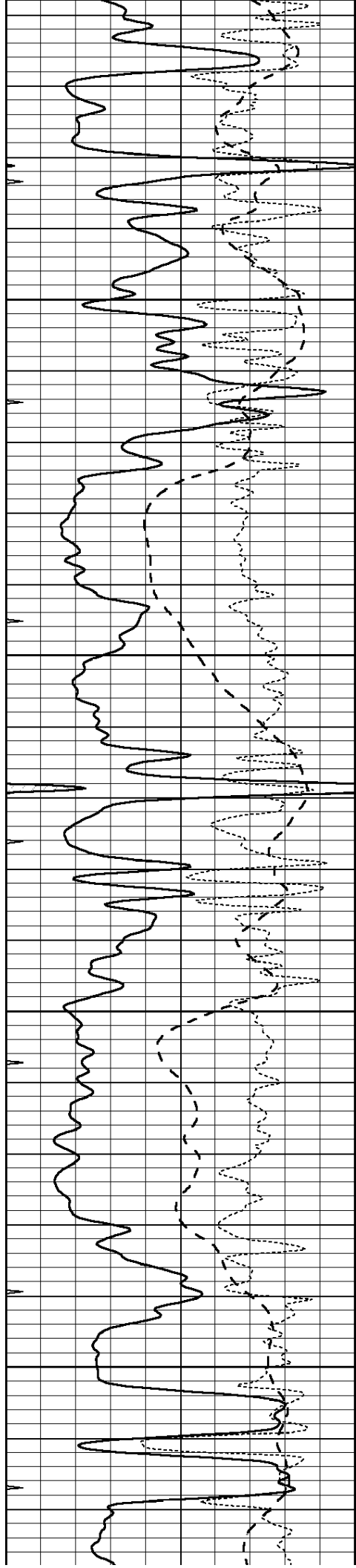
3200

3250

3300

3350



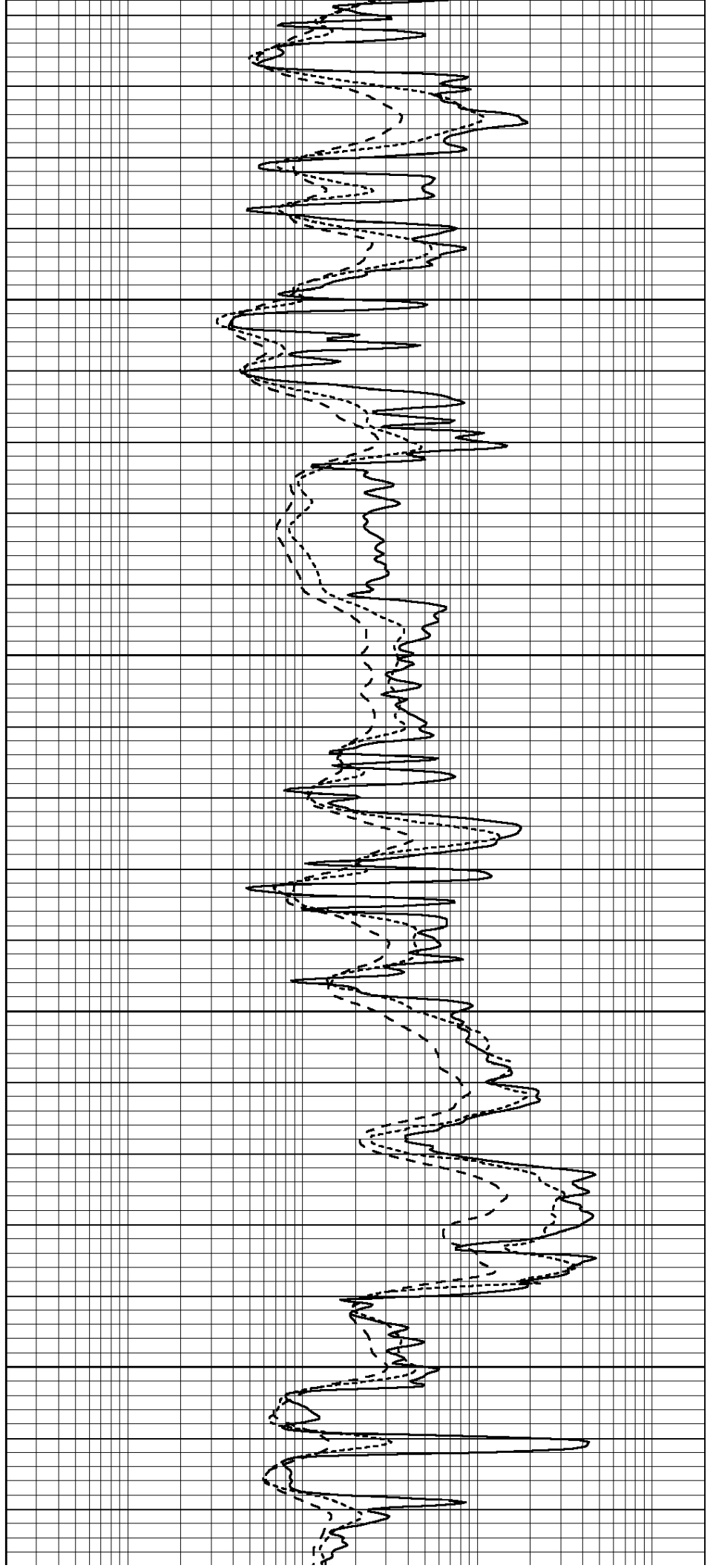


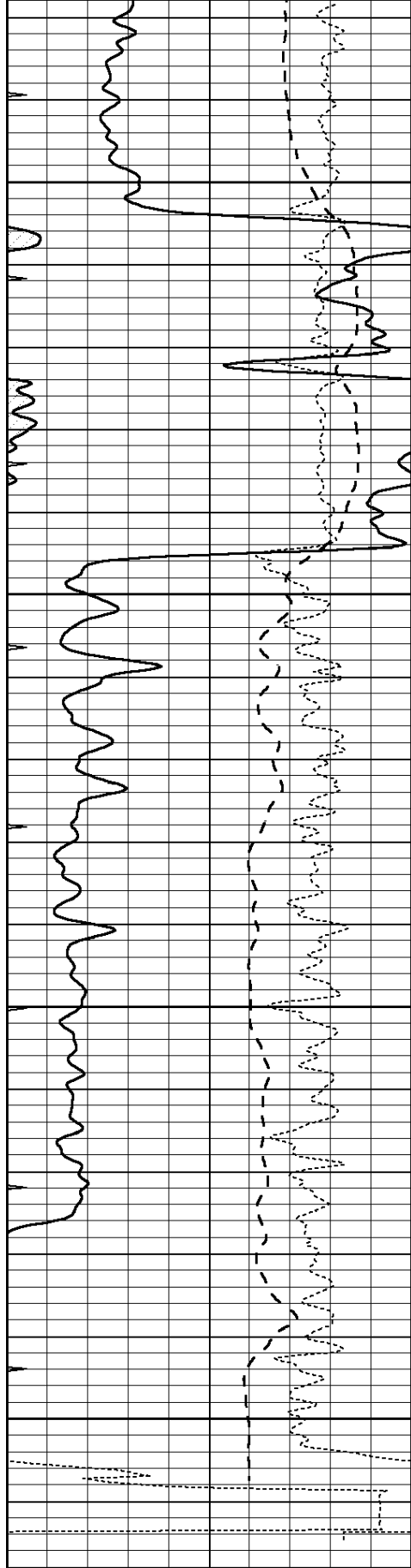
3400

3450

3500

3550





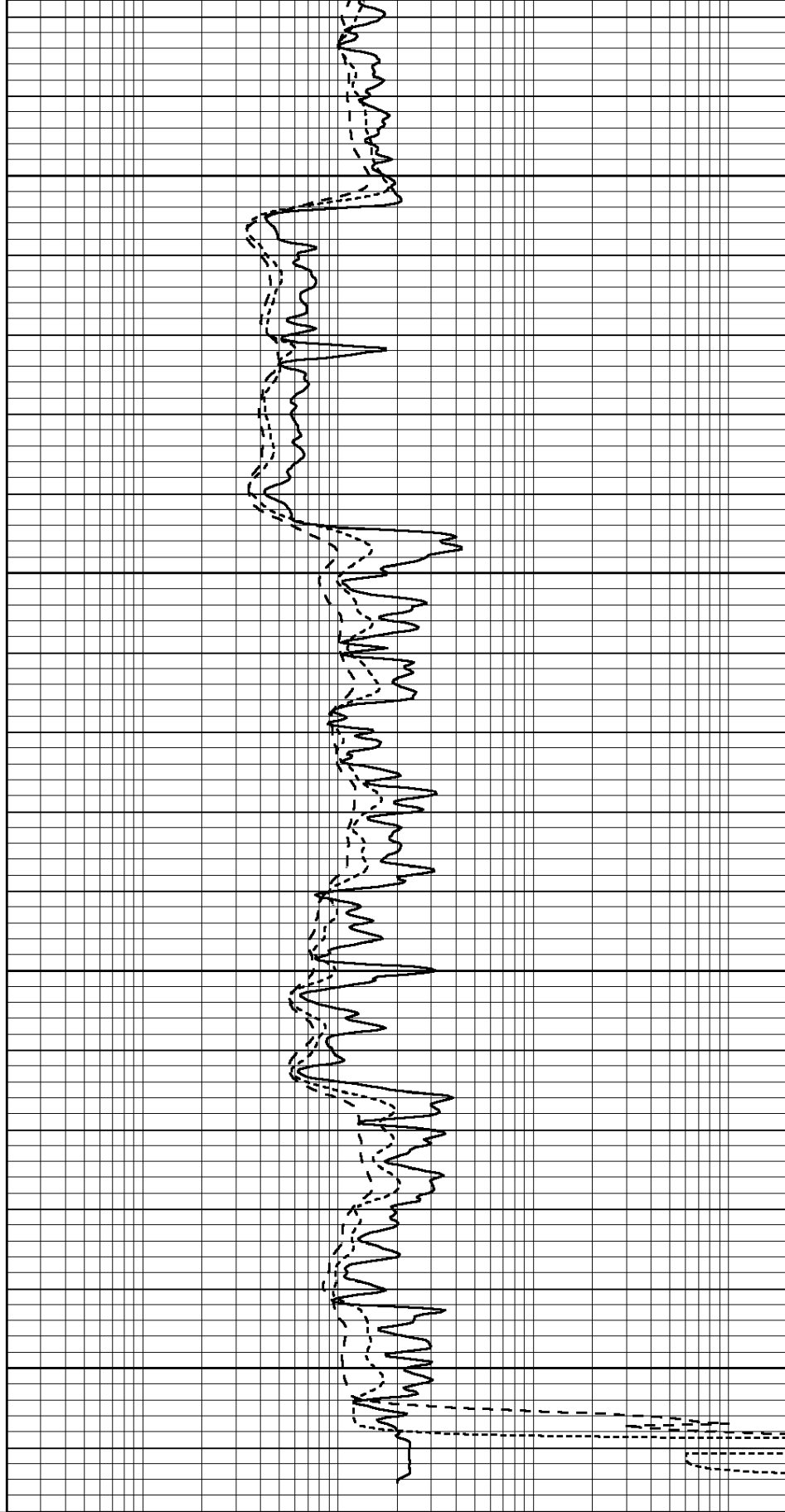
|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

3600

3650

3700

3750



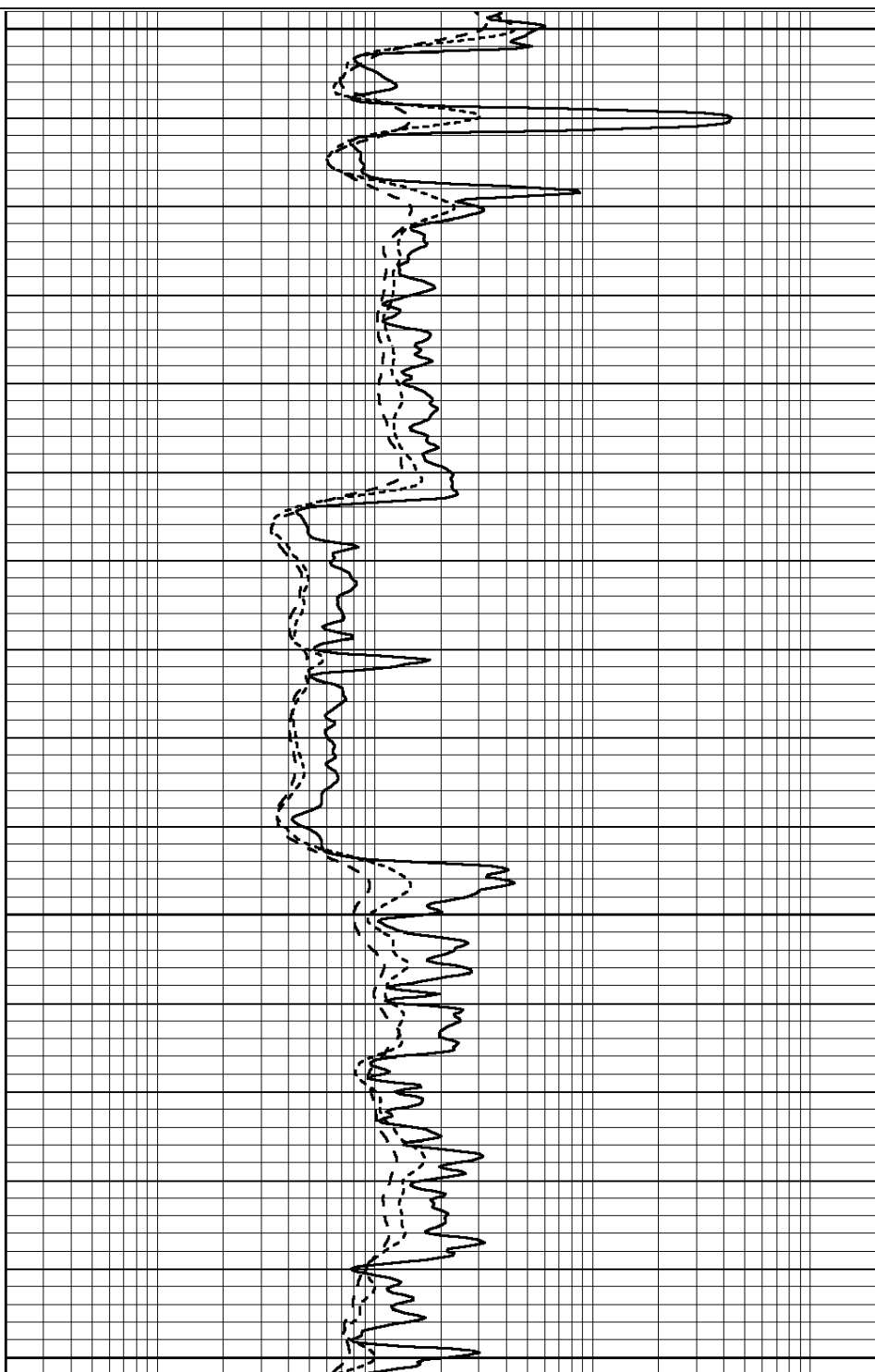
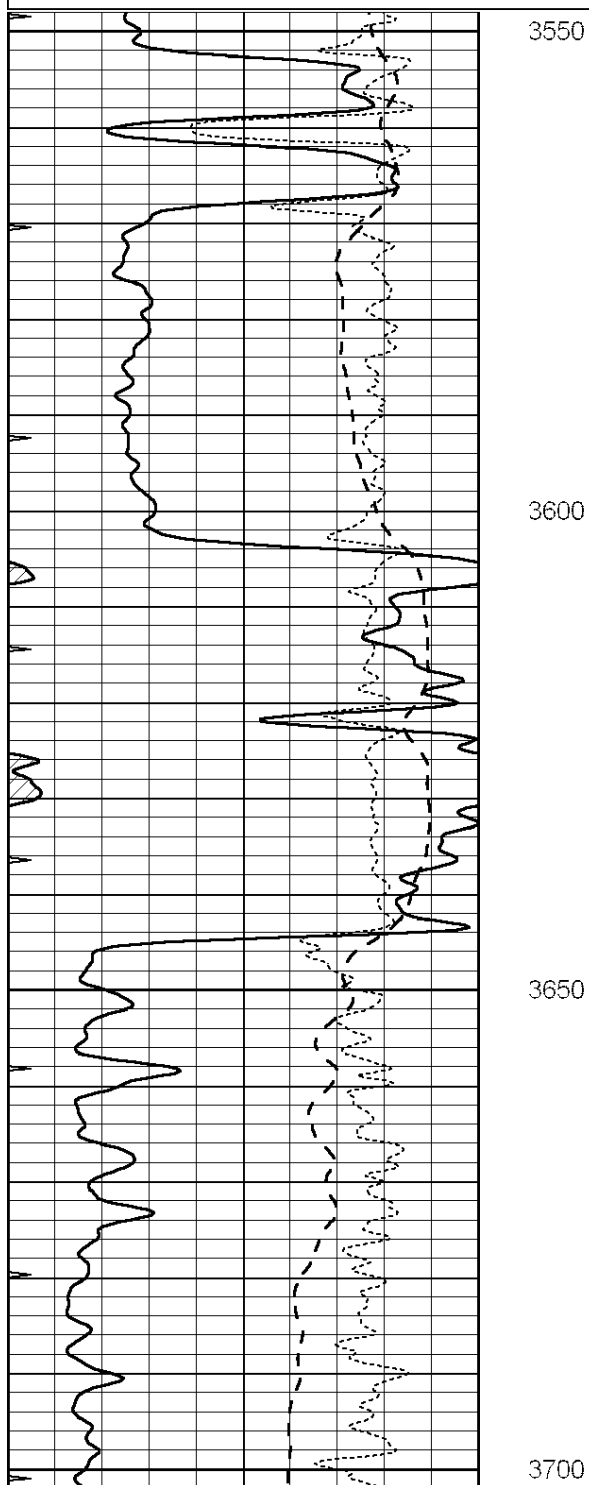
|     |                          |      |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m)    | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

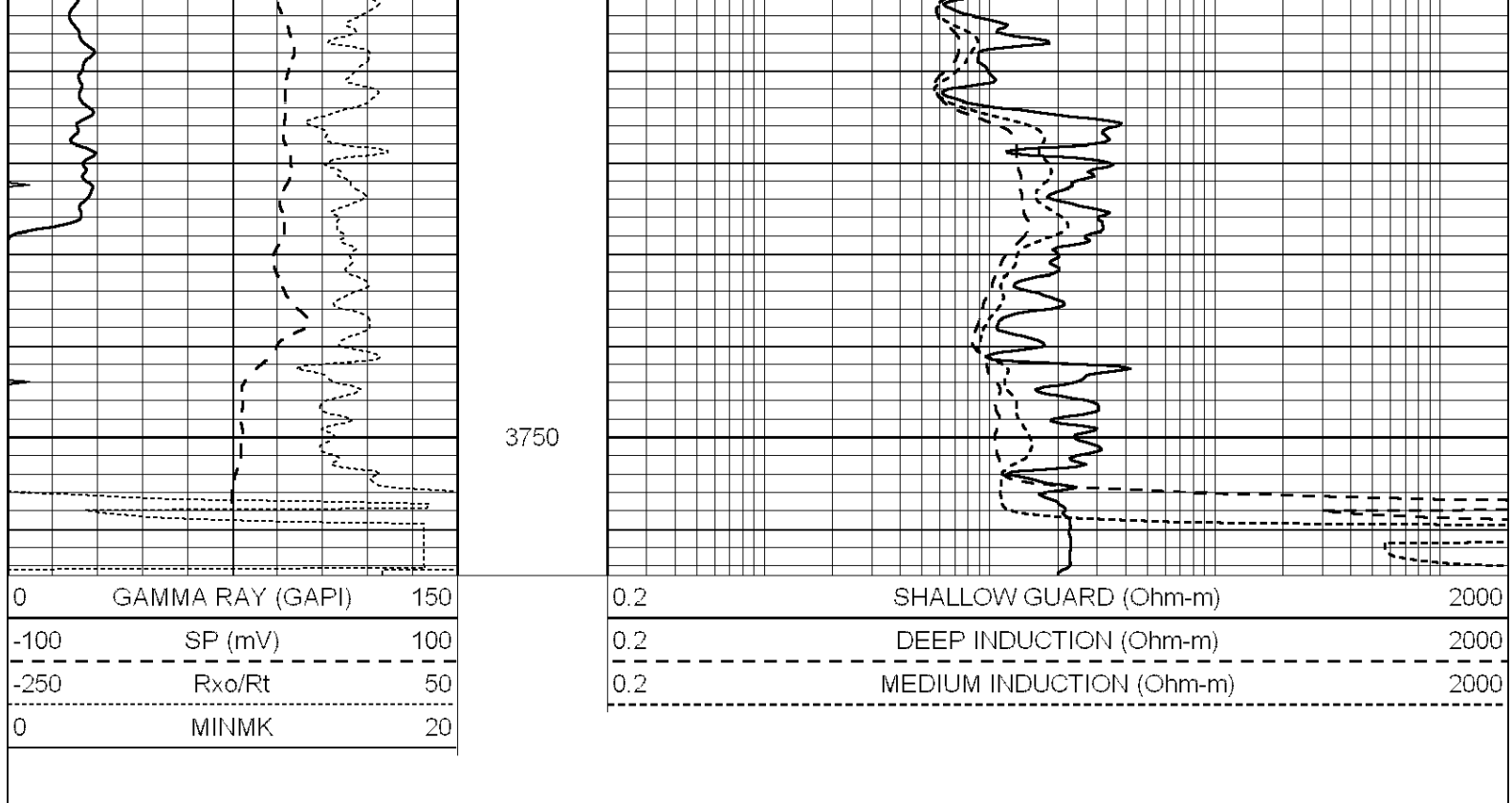
# REPEAT SECTION

Database File: 22232pe.db  
 Dataset Pathname: pass2.1  
 Presentation Format: \_dil  
 Dataset Creation: Thu Jan 09 06:18:59 2014 by Calc SOC 120430  
 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 |





### Calibration Report

Database File: 22232pe.db  
 Dataset Pathname: pass3.4  
 Dataset Creation: Thu Jan 09 07:31:47 2014

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Wed Jan 08 16:39:24 2014  
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008  
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

#### Surface Calibration

| Readings  |        |       |   | References |         |        | Results |         |
|-----------|--------|-------|---|------------|---------|--------|---------|---------|
| Loop:     | Air    | Loop  |   | Air        | Loop    |        | m       | b       |
| Deep      | -0.014 | 0.629 | V | 0.000      | 400.000 | mmho/m | 650.000 | -3.000  |
| Medium    | 0.039  | 0.728 | V | 0.000      | 464.000 | mmho/m | 640.000 | -15.000 |
| Internal: | Zero   | Cal   |   | Zero       | Cal     |        | m       | b       |
| Deep      | 0.011  | 0.610 | V | 0.000      | 400.000 | mmho/m | 667.135 | -7.256  |
| Medium    | 0.005  | 0.712 | V | 0.000      | 464.000 | mmho/m | 655.677 | -3.102  |

#### Downhole Calibration

| Readings |       |        |        | References |          |        | Results |       |
|----------|-------|--------|--------|------------|----------|--------|---------|-------|
|          | Zero  | Cal    |        | Zero       | Cal      |        | m'      | b'    |
| Deep     | 0.000 | 0.000  | mmho/m | 14.508     | 388.384  | mmho/m | 1.000   | 0.000 |
| Medium   | 0.000 | 0.000  | mmho/m | 166.367    | 504.400  | mmho/m | 1.000   | 0.000 |
| LL3      |       | 7.500  | V      |            | 1400.000 | Ohm-m  |         |       |
|          |       | 0.000  | V      |            | 20.000   | Ohm-m  |         |       |
|          |       | -7.200 | V      |            | 4000.000 | mmho-m |         |       |

#### After Survey Verification

| Readings |      |     |  | Targets |     |  | Results |    |
|----------|------|-----|--|---------|-----|--|---------|----|
|          | Zero | Cal |  | Zero    | Cal |  | m'      | b' |

|        |       |       |        |       |       |        |       |       |
|--------|-------|-------|--------|-------|-------|--------|-------|-------|
|        | Zero  | Cal   |        | Zero  | Cal   |        | mm    | g     |
| 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: 004N      Model: PRB

|                    |            |             |                                    |                     |  |  |         |  |
|--------------------|------------|-------------|------------------------------------|---------------------|--|--|---------|--|
| Master Calibration |            |             | Performed Mon Jun 03 09:36:56 2013 |                     |  |  |         |  |
|                    | Background | Magnesium   | Aluminum                           | Sandstone           |  |  |         |  |
| Window 1           | 1417.6     | 10391.4     | 3464.6                             | 11537.5             |  |  | cps     |  |
| Window 2           | 1295.0     | 8959.7      | 3050.1                             | 9816.4              |  |  | cps     |  |
| Window 3           | 1105.1     | 5464.2      | 2051.0                             | 5838.8              |  |  | cps     |  |
| Window 4           | 315.0      | 317.7       | 312.9                              | 319.8               |  |  | cps     |  |
| Long Space         | 0.0        | 7664.6      | 1755.0                             | 8521.3              |  |  | cps     |  |
| Short Space        | 1.8        | 1582.4      | 1040.8                             | 1699.4              |  |  | cps     |  |
| Rho                |            | 1.7100      | 2.5900                             | 1.3800              |  |  | g/cc    |  |
| Pe                 |            | 0.0000      | 2.5700                             | 1.5500              |  |  |         |  |
| Rib Angle          | : 44.1     | Rib Slope   | : 0.970                            | Density/Spine Ratio |  |  | : 0.574 |  |
| Spine Angle        | : 74.1     | Spine Slope | : 3.519                            | Spine Intercept     |  |  | : -17.0 |  |

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

Compensated Neutron Calibration Report

|                |        |
|----------------|--------|
| Serial Number: | 070808 |
| Tool Model:    | Probe  |

|                         |          |          |        |  |
|-------------------------|----------|----------|--------|--|
| PRE-SURVEY VERIFICATION |          |          |        |  |
| Detector                | Readings | Measured | Target |  |
| Short Space             | cps      |          |        |  |
| Long Space              | cps      | pu       | pu     |  |

| POST-SURVEY VERIFICATION     |                          |          |        |
|------------------------------|--------------------------|----------|--------|
| Detector                     | Readings                 | Measured | Target |
| Short Space                  | cps                      |          |        |
| Long Space                   | cps                      | pu       | pu     |
| Gamma Ray Calibration Report |                          |          |        |
| Serial Number:               | 070559                   |          |        |
| Tool Model:                  | OPEN_GR                  |          |        |
| Performed:                   | Thu Dec 19 09:01:02 2013 |          |        |
| Calibrator Value:            | 1.0                      | GAPI     |        |
| Background Reading:          | 0.0                      | cps      |        |
| Calibrator Reading:          | 1.0                      | cps      |        |
| Sensitivity:                 | 0.2800                   | GAPI/cps |        |