



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

|                              |                          |                            |                                      |
|------------------------------|--------------------------|----------------------------|--------------------------------------|
| Company                      | CAPTIVA II               | Company                    | CAPTIVA II                           |
| Well                         | WARD-COUNTY UNIT #1-3    | Well                       | WARD-COUNTY UNIT #1-3                |
| Field                        | LARNED                   | Field                      | LARNED                               |
| County                       | PAWNEE                   | County                     | PAWNEE                               |
| State                        | KANSAS                   | State                      | KANSAS                               |
| Location:                    |                          | API # : 15-145-21735-00-00 | Other Services<br>CNL/CDL<br>MEL/SON |
| SEC 3 TWP 22S RGE 16W        |                          |                            |                                      |
| Permanent Datum              | GROUND LEVEL             | Elevation                  | 1986                                 |
| Log Measured From            | KELLY BUSHING 13' A.G.L. | K.B. 1999                  |                                      |
| Drilling Measured From       | KELLY BUSHING            | D.F. 1997                  |                                      |
|                              |                          | G.L. 1986                  |                                      |
| Date                         | 11/4/13                  |                            |                                      |
| Run Number                   | ONE                      |                            |                                      |
| Depth Driller                | 4040                     |                            |                                      |
| Depth Logger                 | 4041                     |                            |                                      |
| Bottom Logged Interval       | 4039                     |                            |                                      |
| Top Log Interval             | 3100                     |                            |                                      |
| Casing Driller               | 8 5/8 @ 1021             |                            |                                      |
| Casing Logger                | 1020                     |                            |                                      |
| Bit Size                     | 7.875                    |                            |                                      |
| Type Fluid in Hole           | CHEMICAL MUD             |                            |                                      |
| Density / Viscosity          | 9.3 / 58                 |                            |                                      |
| pH / Fluid Loss              | 9.5 / 7.2                |                            |                                      |
| Source of Sample             | FLOWLINE                 |                            |                                      |
| Rim @ Meas. Temp             | 0.65 @ 60F               |                            |                                      |
| Rmf @ Meas. Temp             | 0.49 @ 60F               |                            |                                      |
| Rmc @ Meas. Temp             | 0.78 @ 60F               |                            |                                      |
| Source of Rmf / Rmc          | MEASURED                 |                            |                                      |
| Rim @ BHT                    | 0.34 @ 116F              |                            |                                      |
| Time Circulation Stopped     | 2 HOURS                  |                            |                                      |
| Time Logger on Bottom        |                          |                            |                                      |
| Maximum Recorded Temperature | 116F                     |                            |                                      |
| Equipment Number             | 860                      |                            |                                      |
| Location                     | HAYS, KS.                |                            |                                      |
| Recorded By                  | IAN MABB                 |                            |                                      |
| Witnessed By                 | JEREMY SCHWARTZ          |                            |                                      |

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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

NABORS COMPLETION & PRODUCTION SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: LARNED, KS. - HWY 56 & 100 AVE - 1 1/2 SOUTH - 1/2 EAST - SOUTH INTO

0 Gamma Ray (GAPI) 150



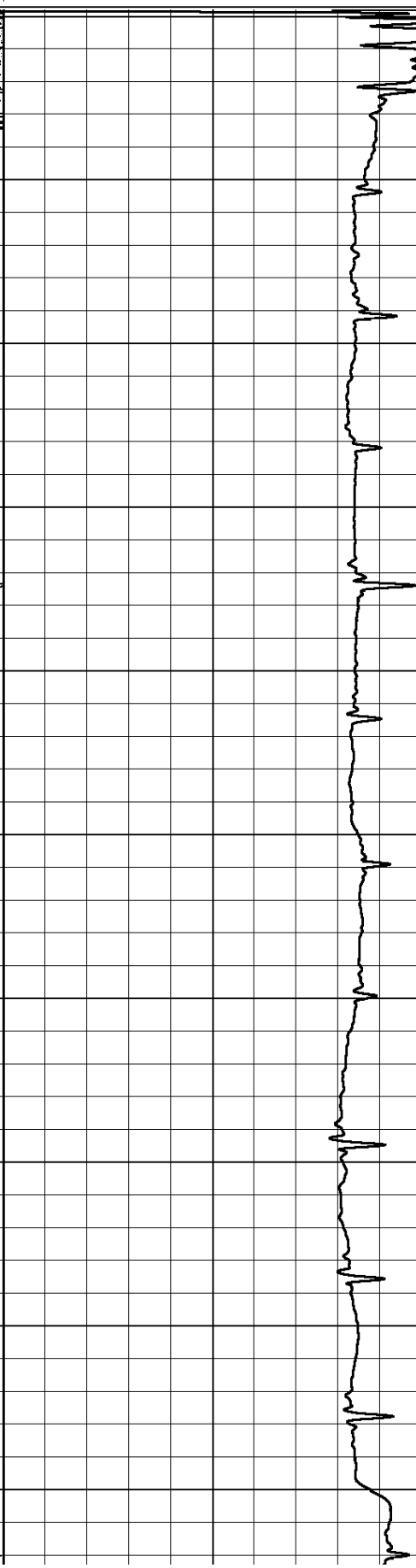
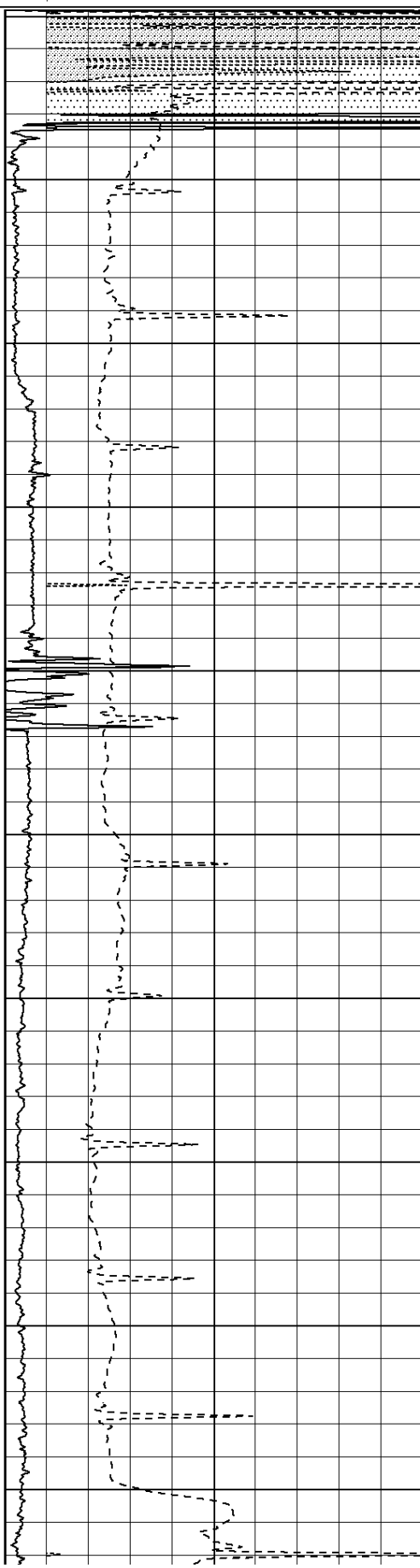
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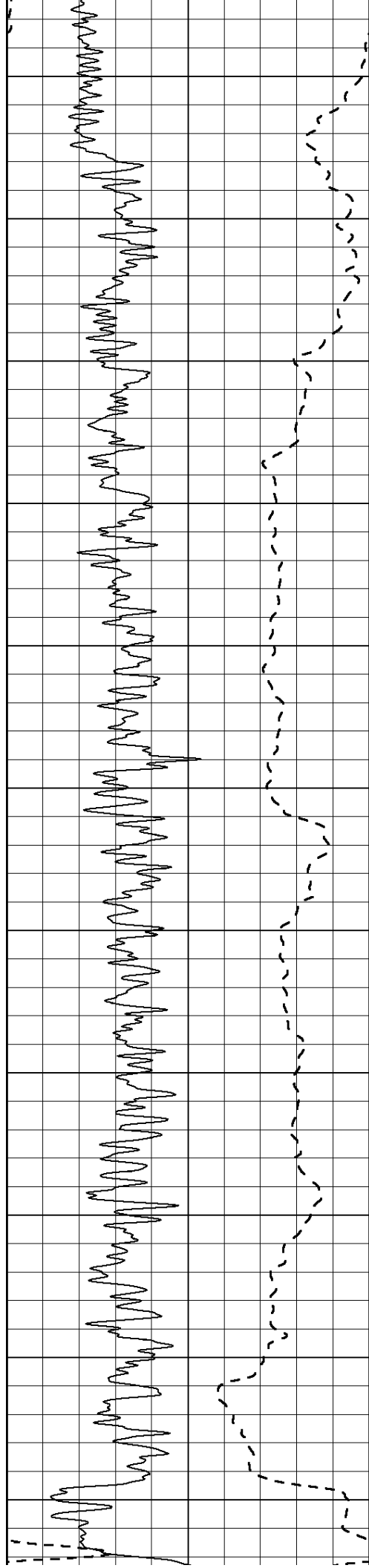
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1000 CILD (mmho/m) 0

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500





500

550

600

650

700

750

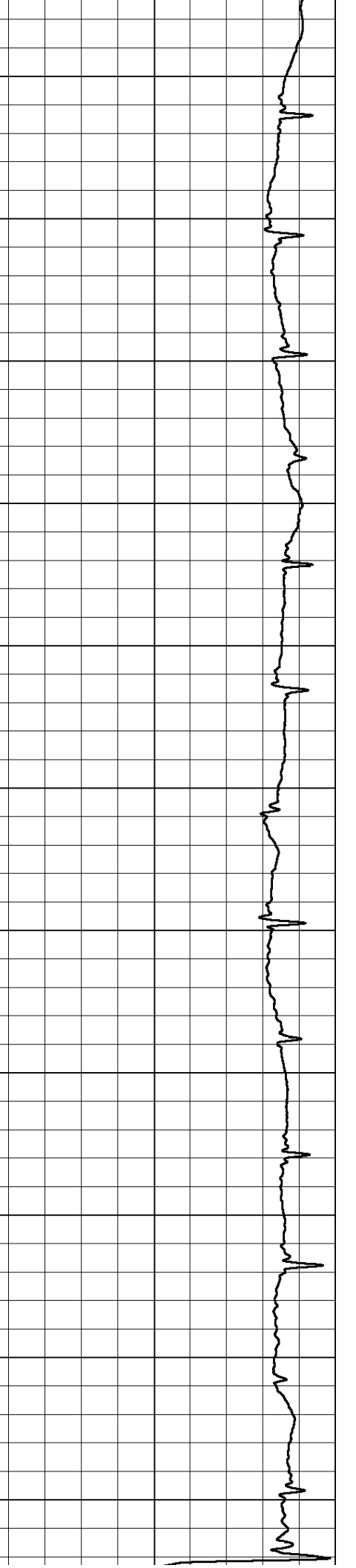
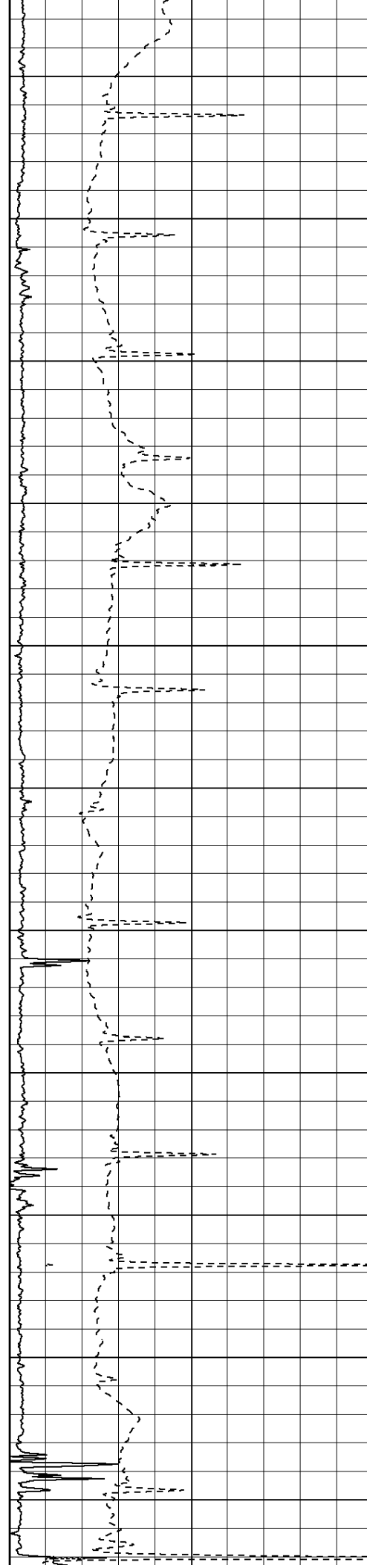
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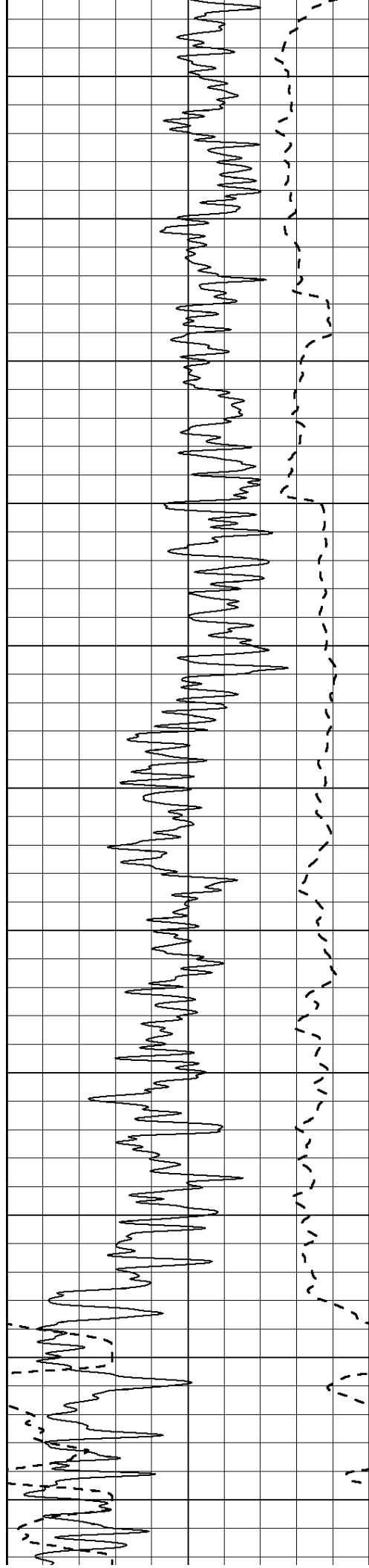
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900

950

1000





1050

1100

1150

1200

1250

1300

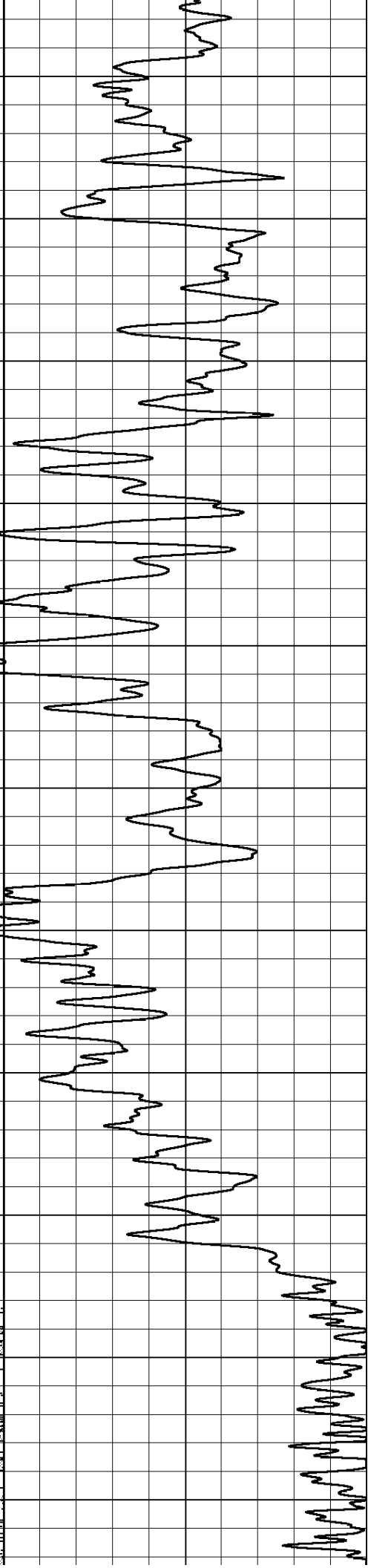
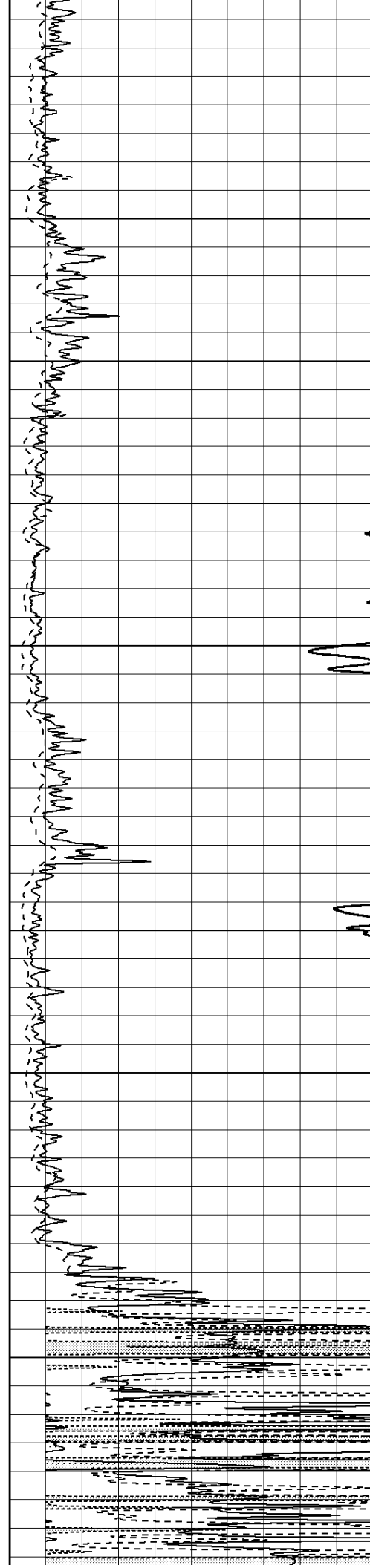
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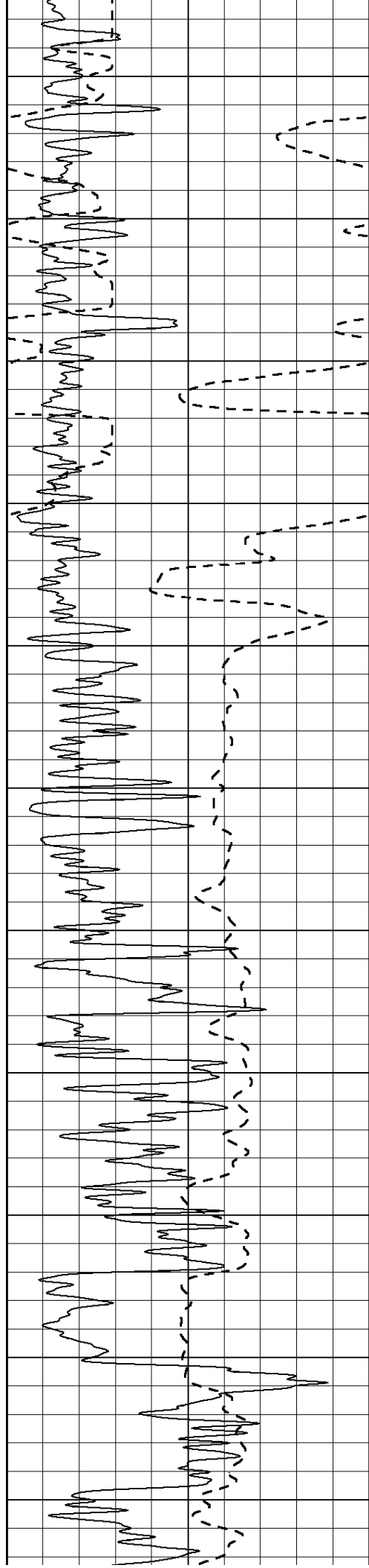
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1450

1500

1550





1600

1650

1700

1750

1800

1850

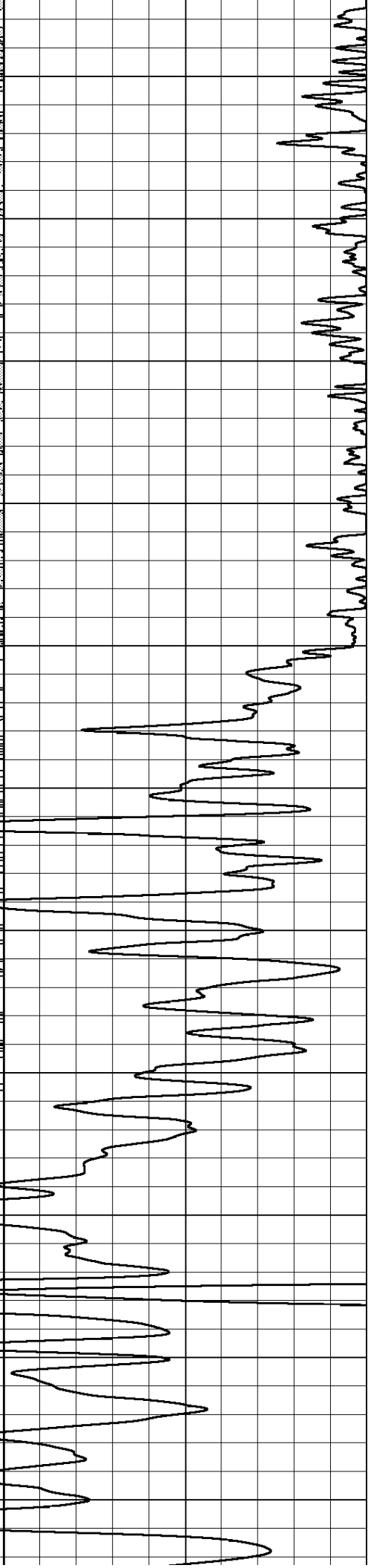
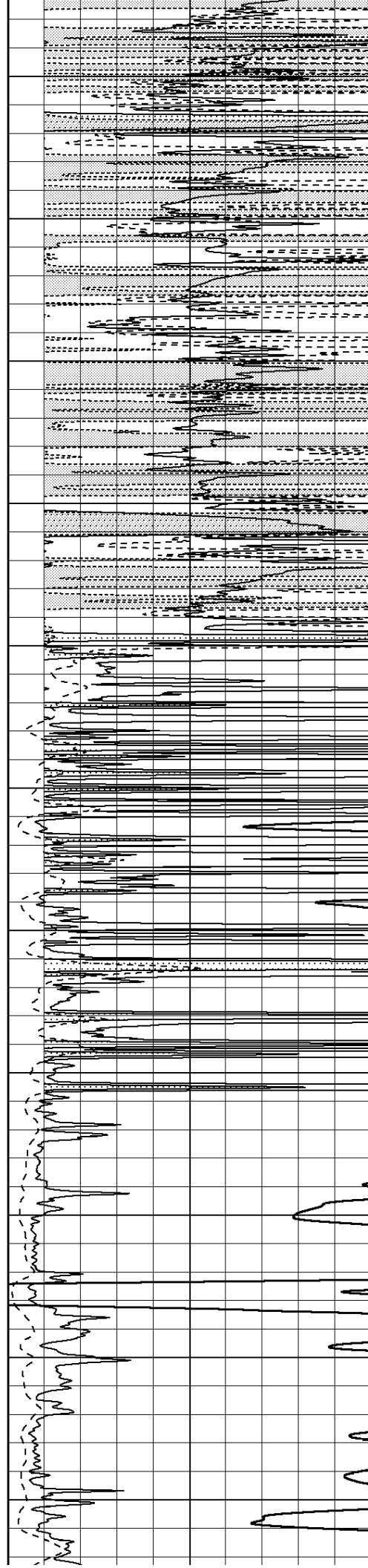
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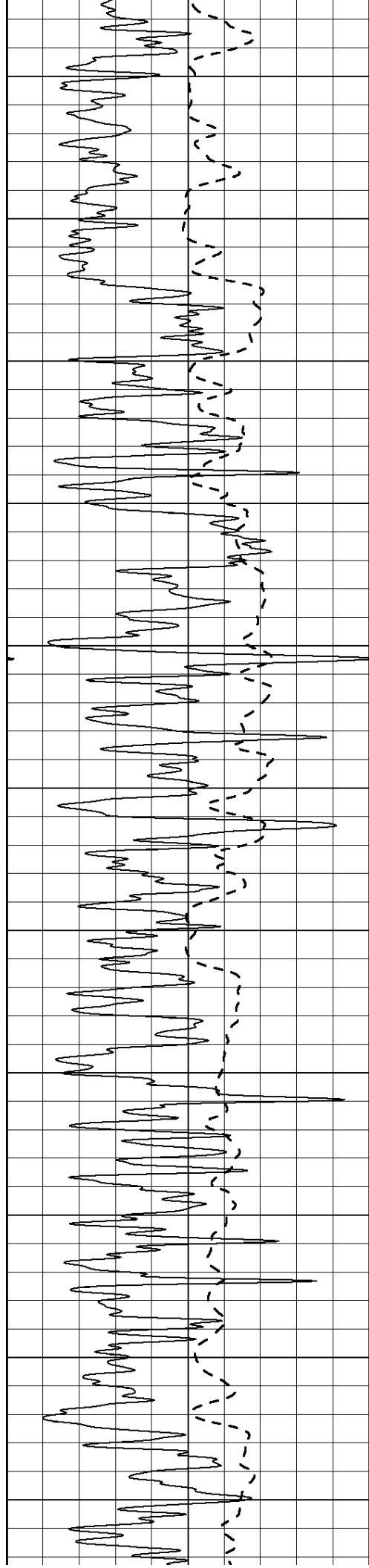
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2000

2050

2100





2150

2200

2250

2300

2350

2400

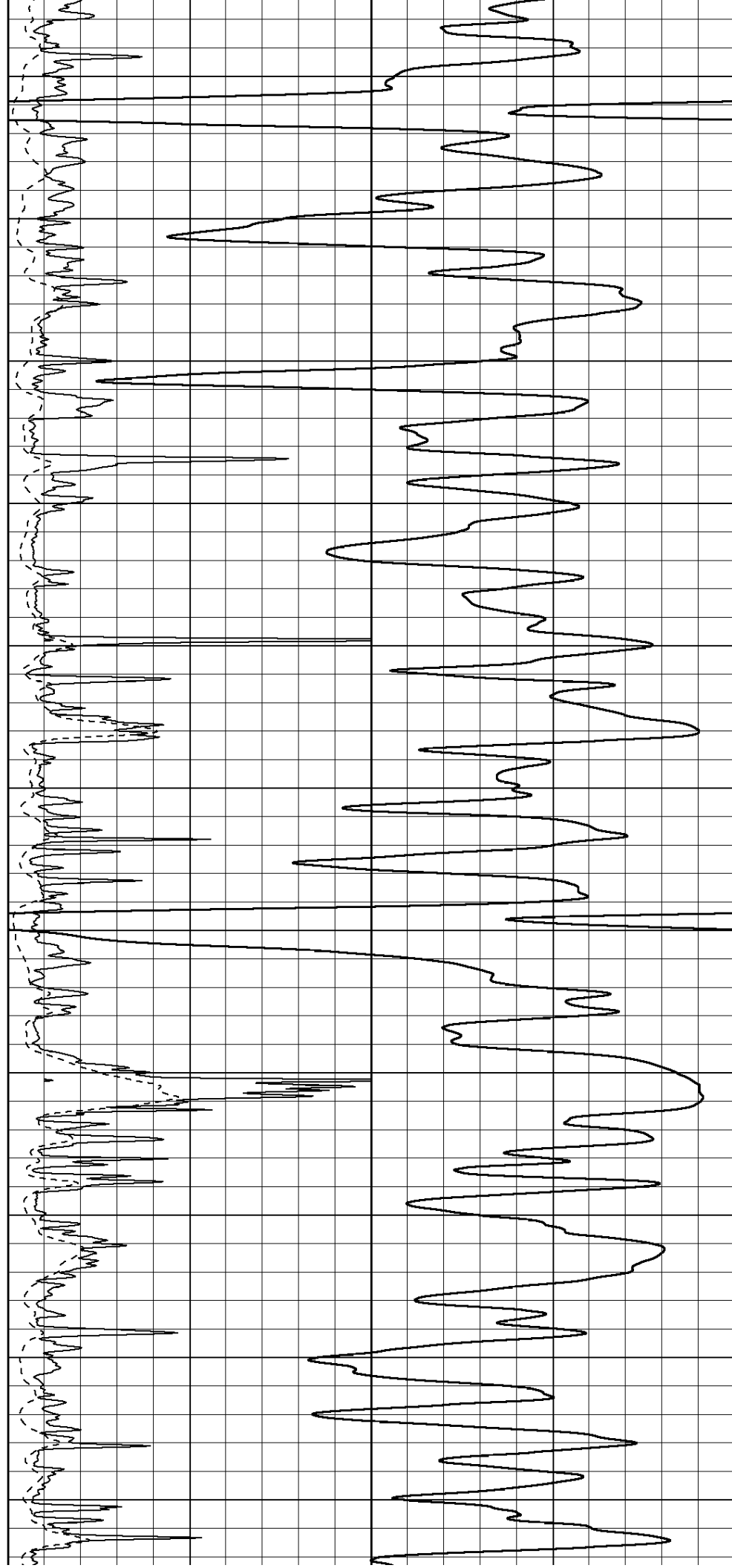
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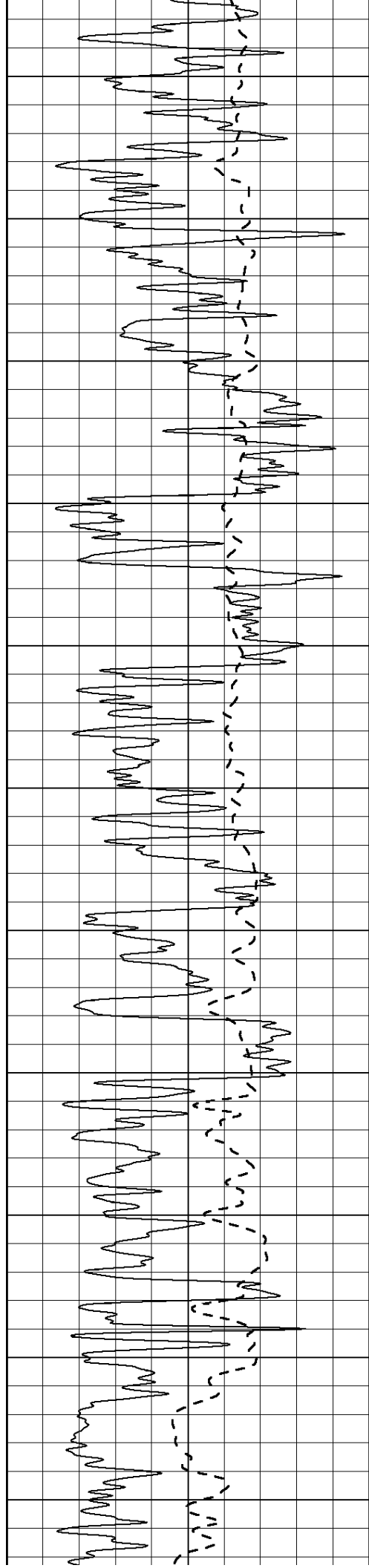
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2550

2600

2650





2700

2750

2800

2850

2900

2950

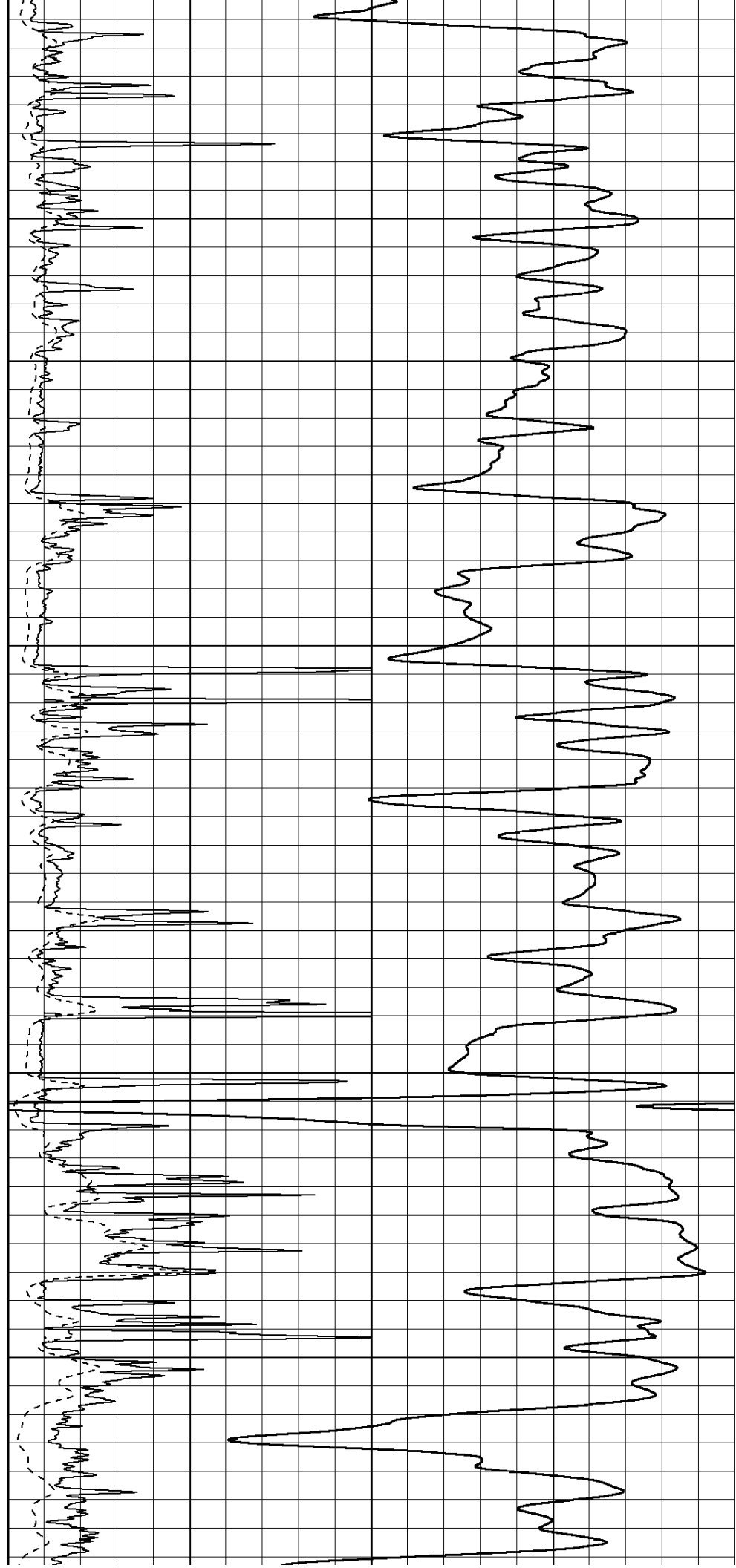
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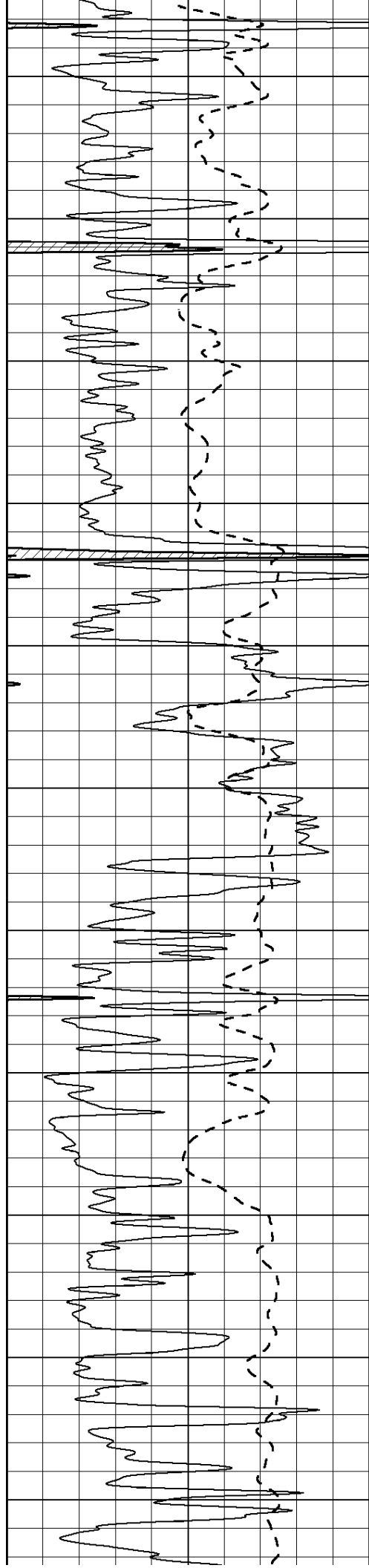
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3100

3150

3200





3250

3300

3350

3400

3450

3500

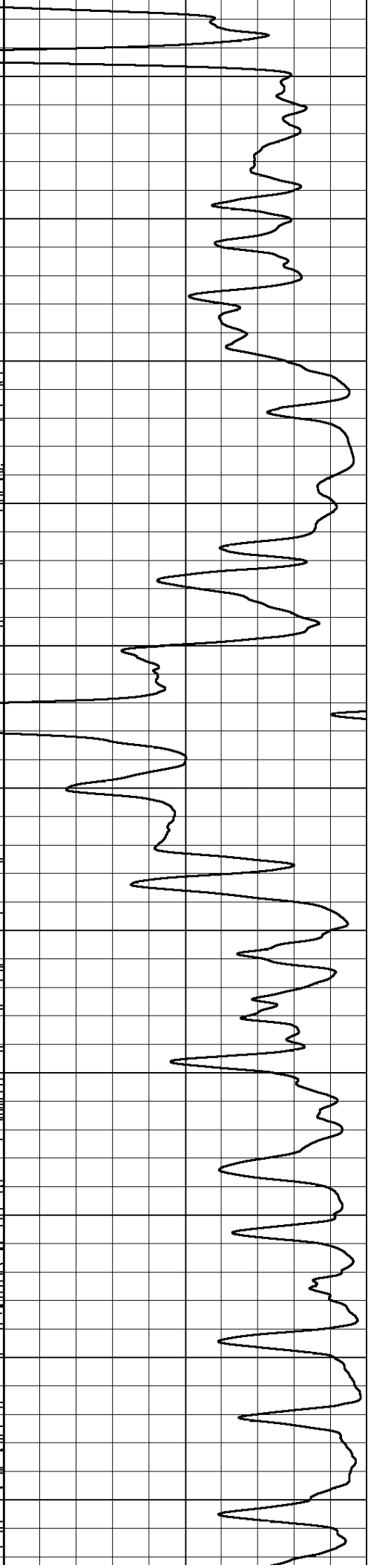
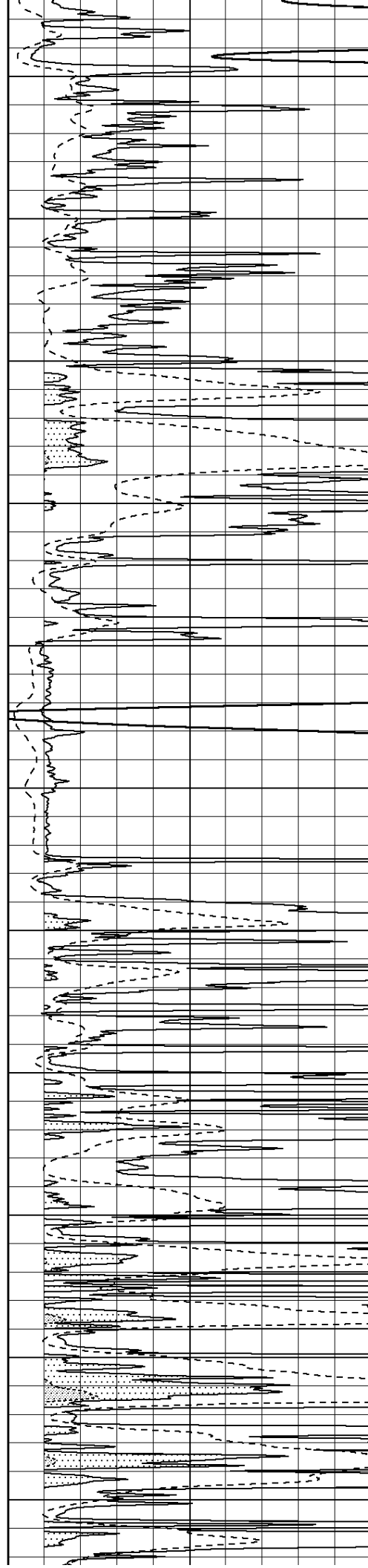
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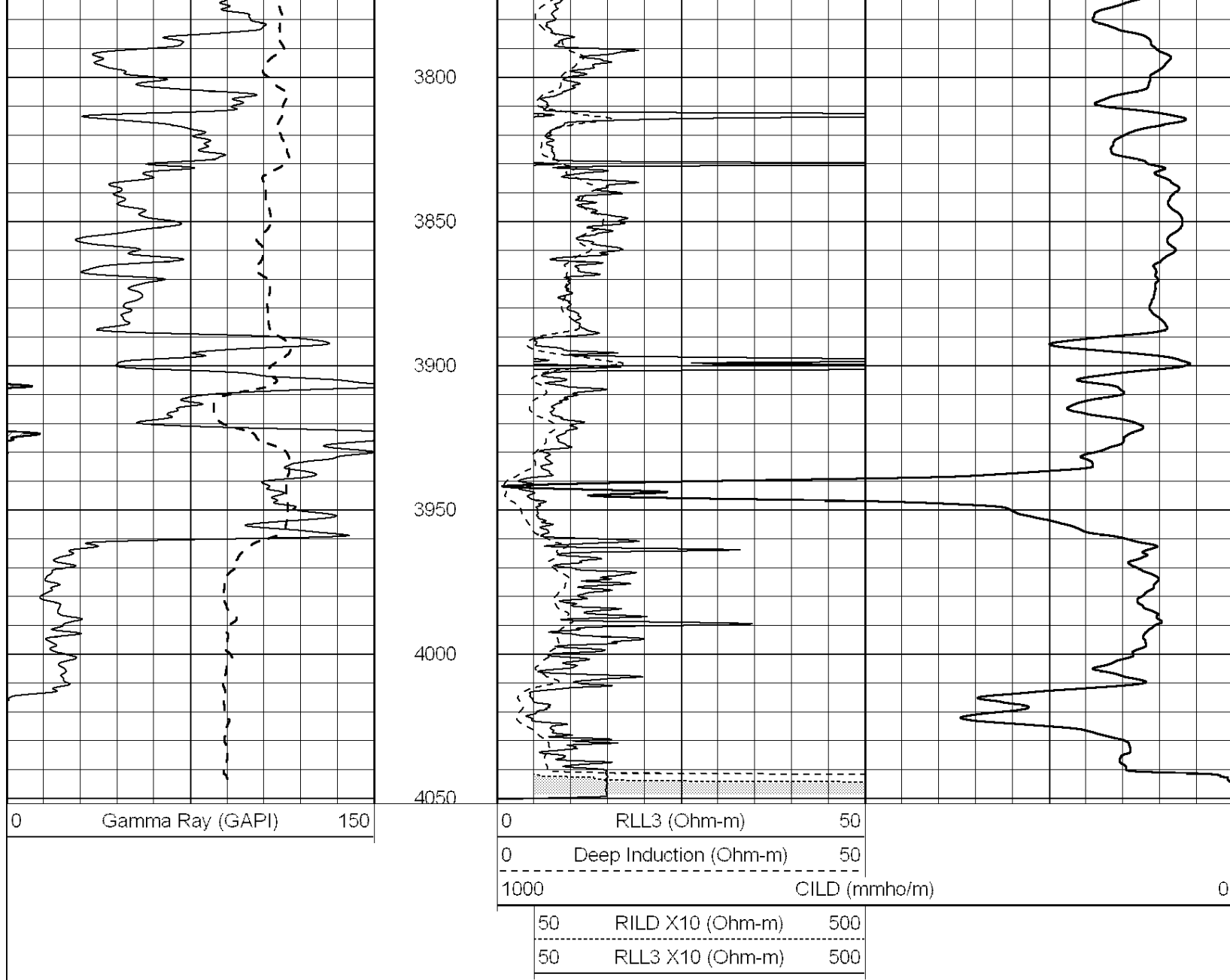
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3650

3700

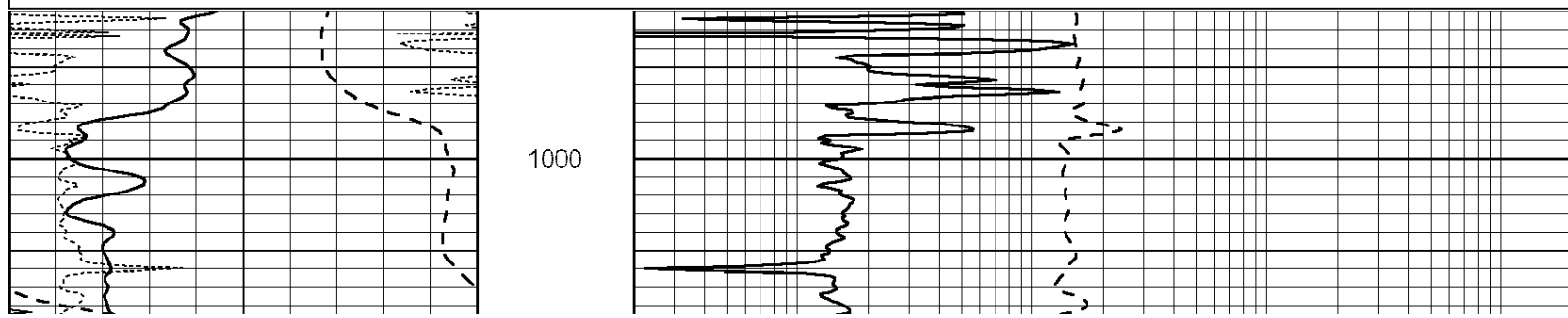
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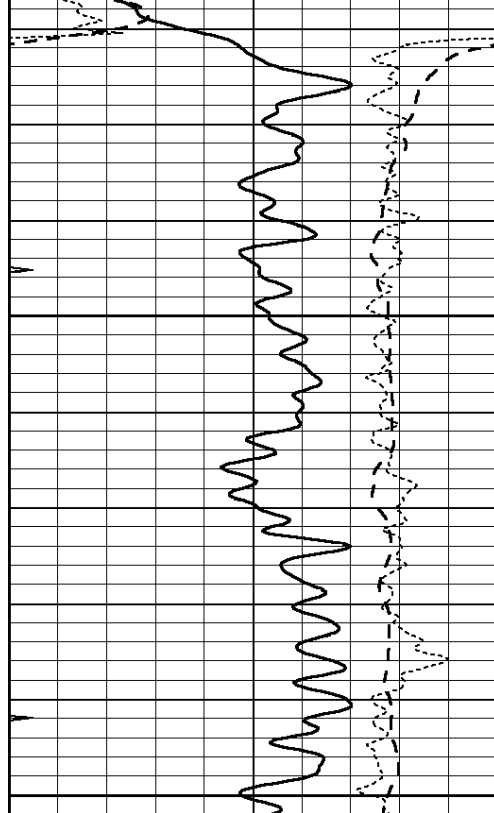




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 Presentation Format: \_dil  
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 Charted by: Depth in Feet scaled 1:240

|      |                  |     |     |                          |      |
|------|------------------|-----|-----|--------------------------|------|
| 0    | GAMMA RAY (GAPI) | 150 | 0.2 | RLL3 (Ohm-m)             | 2000 |
| -100 | SP (mV)          | 100 | 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| -250 | RxoRt            | 50  | 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0    | MINMK            | 20  |     |                          |      |

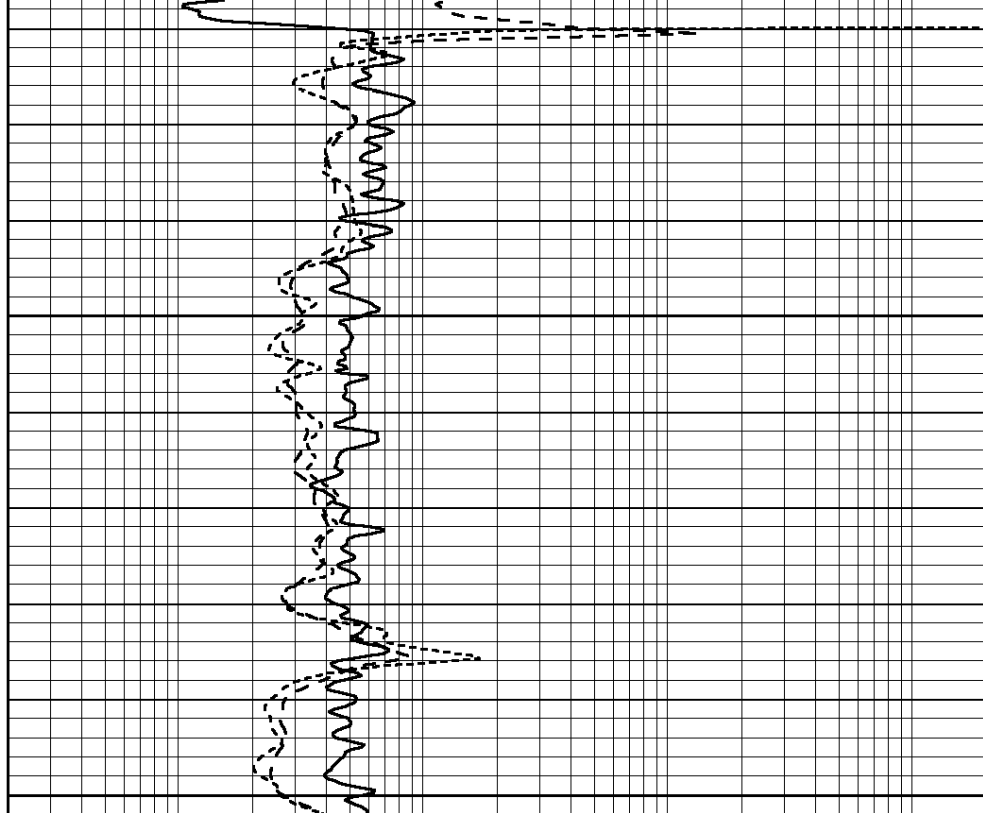




1050

1100

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

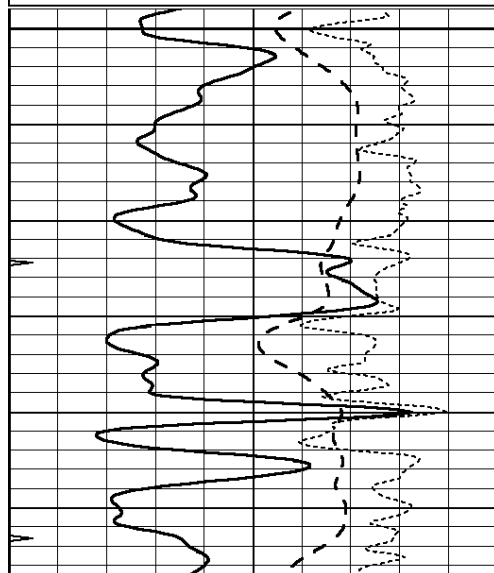


|     |                          |      |
|-----|--------------------------|------|
| 0.2 | RLL3 (Ohm-m)             | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

Database File: 012032ddn.db  
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 Presentation Format: \_dil  
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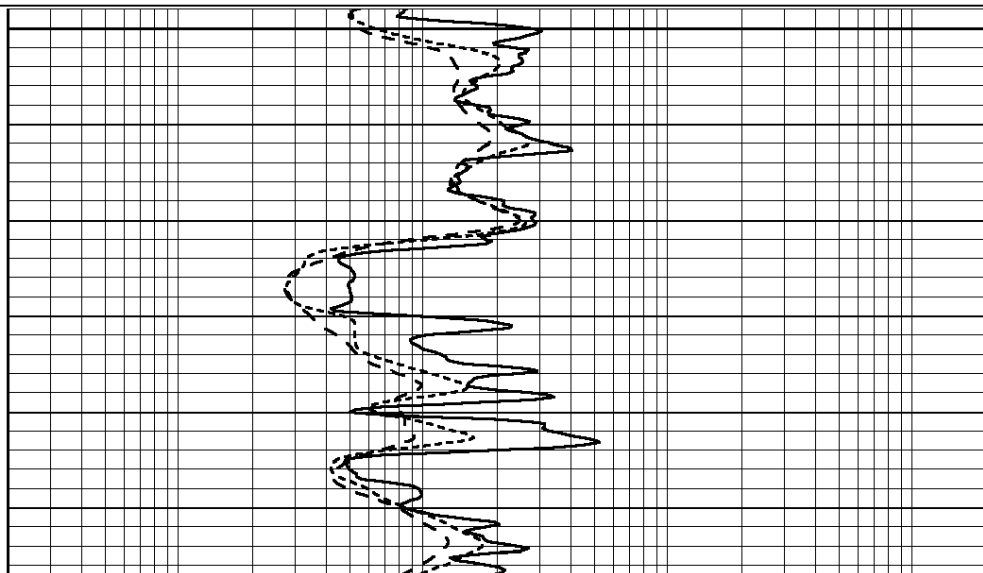
|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | RxoRt            | 50  |
| 0    | MINMK            | 20  |

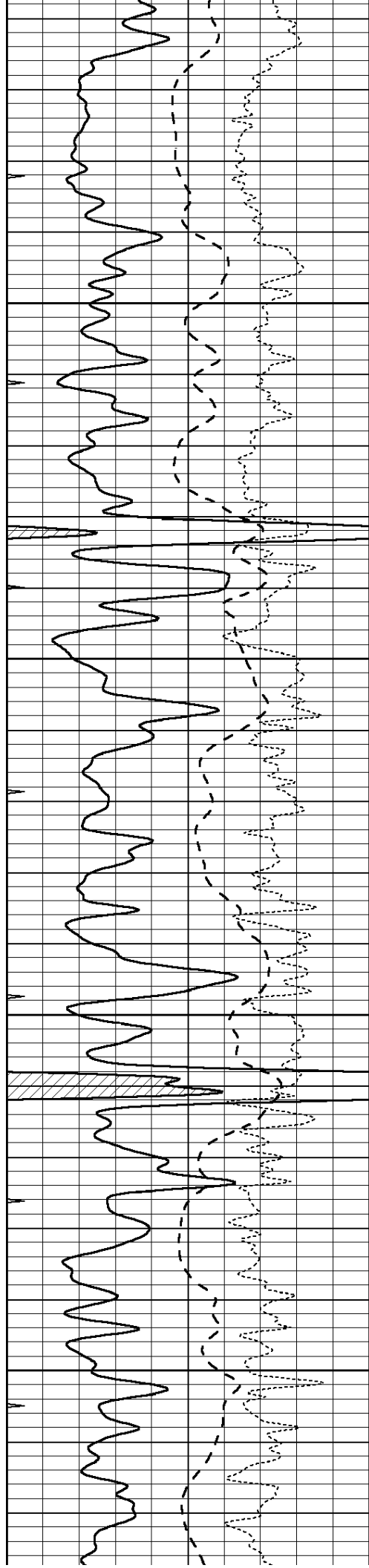
|     |                          |      |
|-----|--------------------------|------|
| 0.2 | RLL3 (Ohm-m)             | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m)   | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



3100

3150



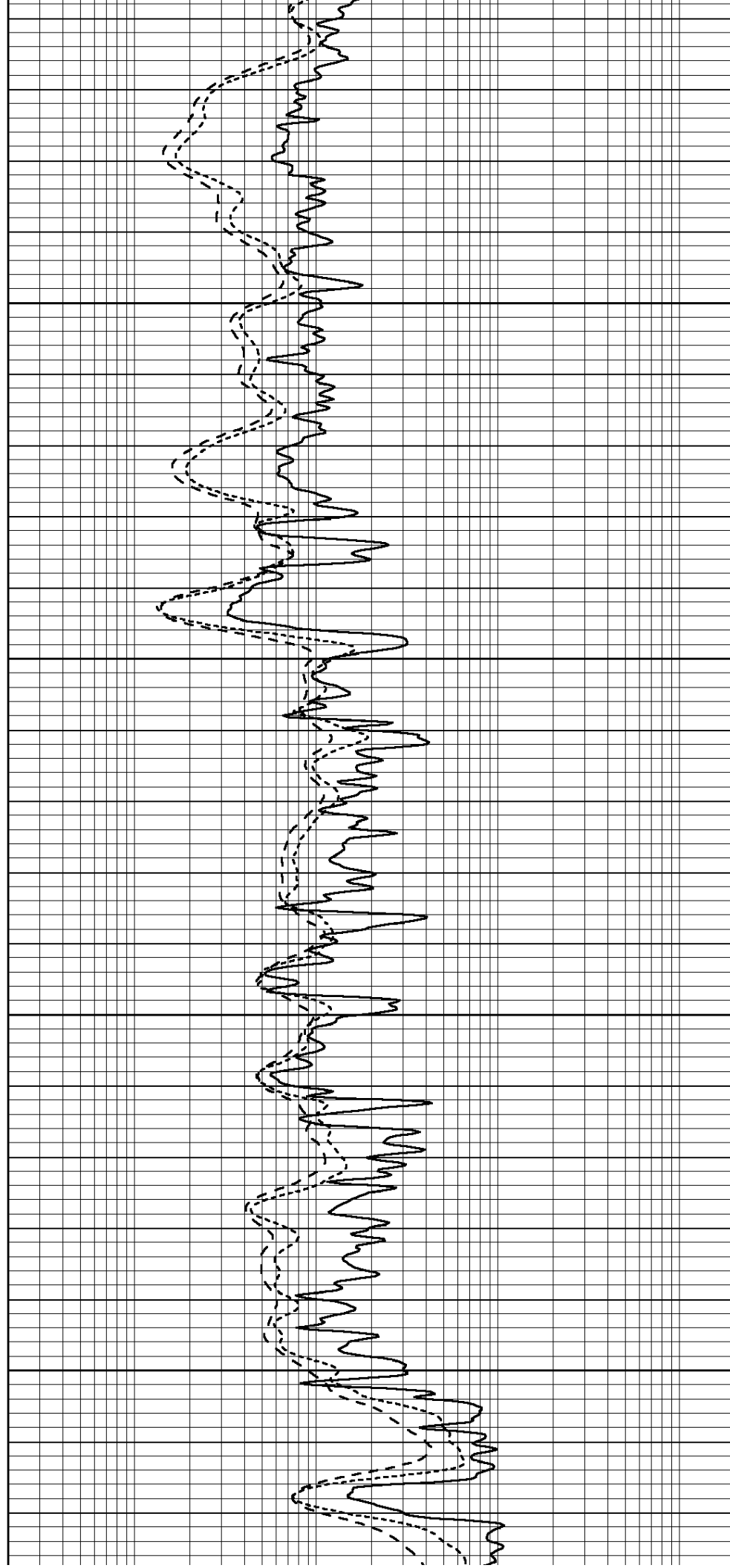


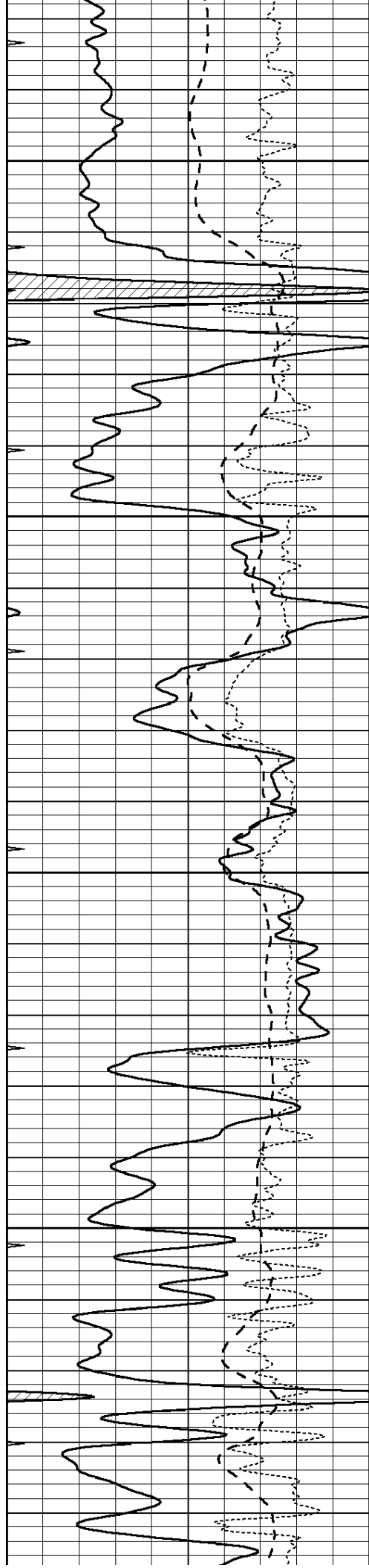
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3250

3300

3350



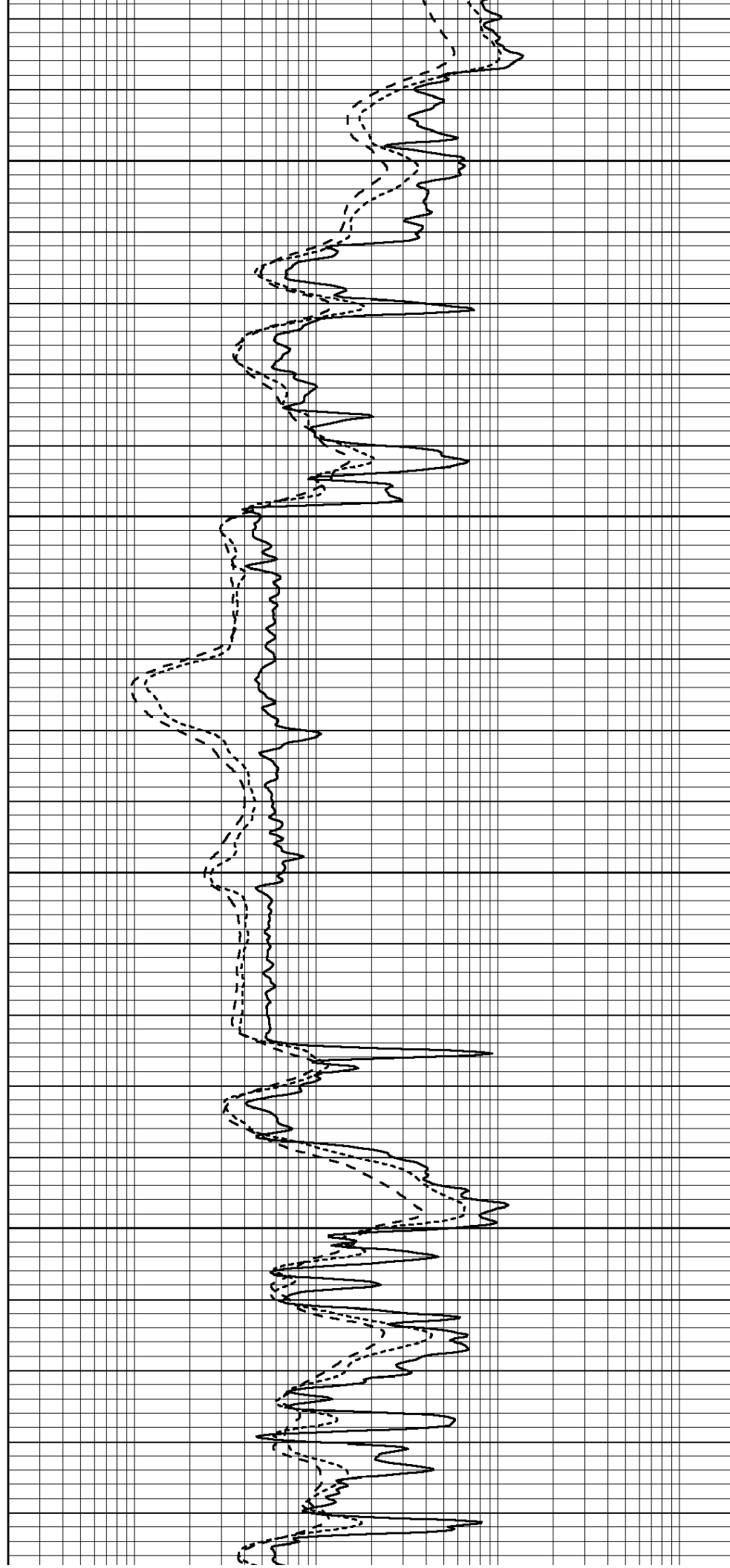


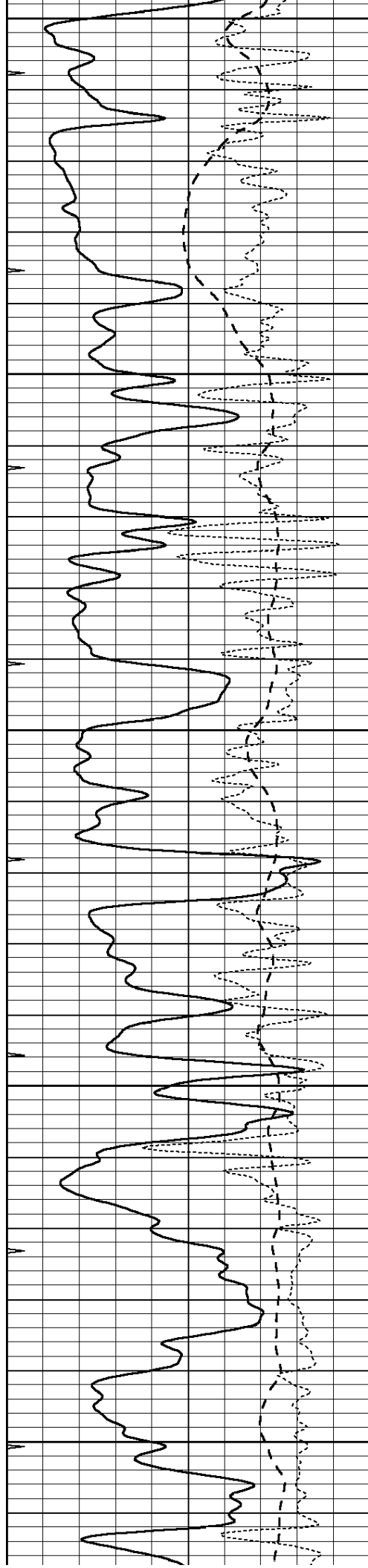
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3450

3500

3550





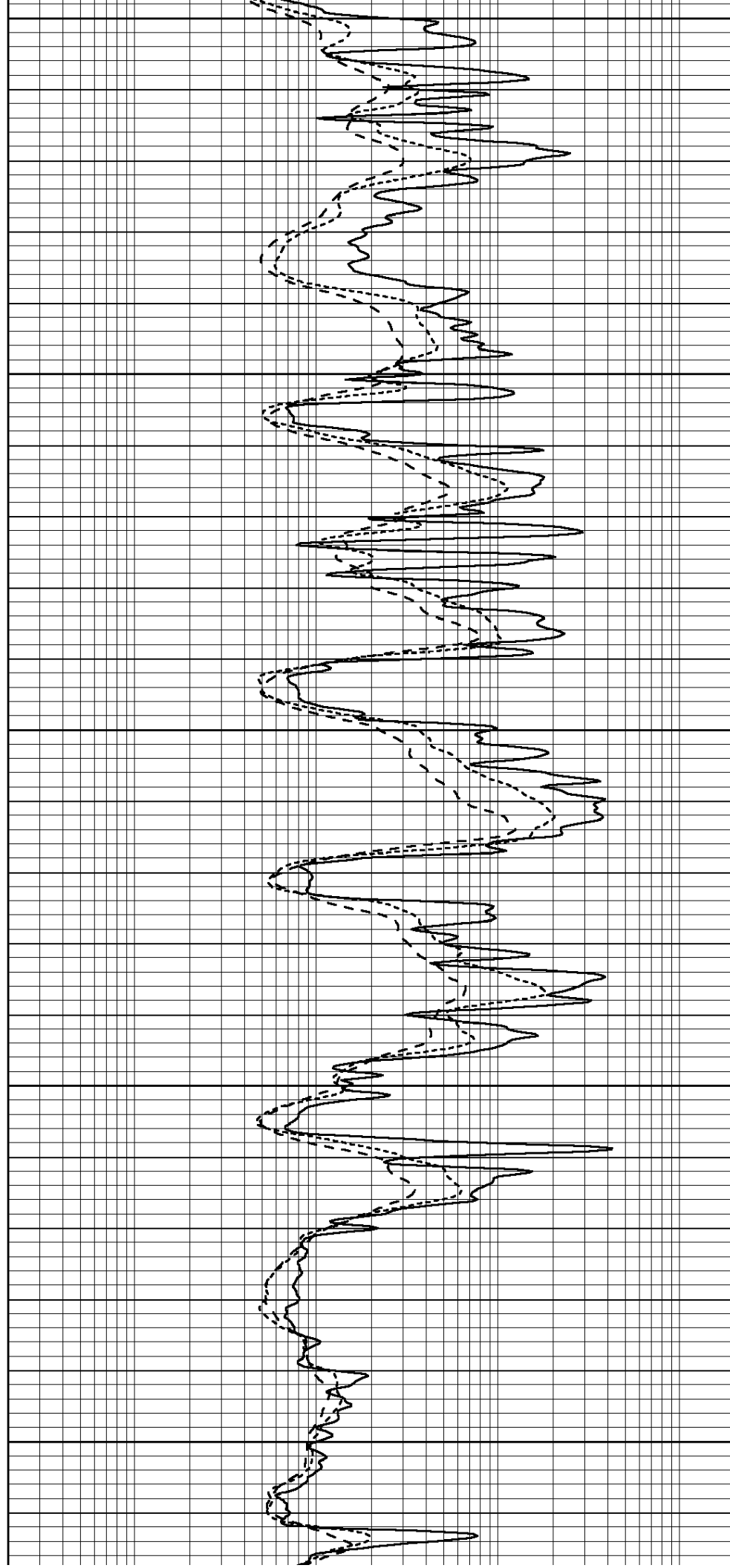
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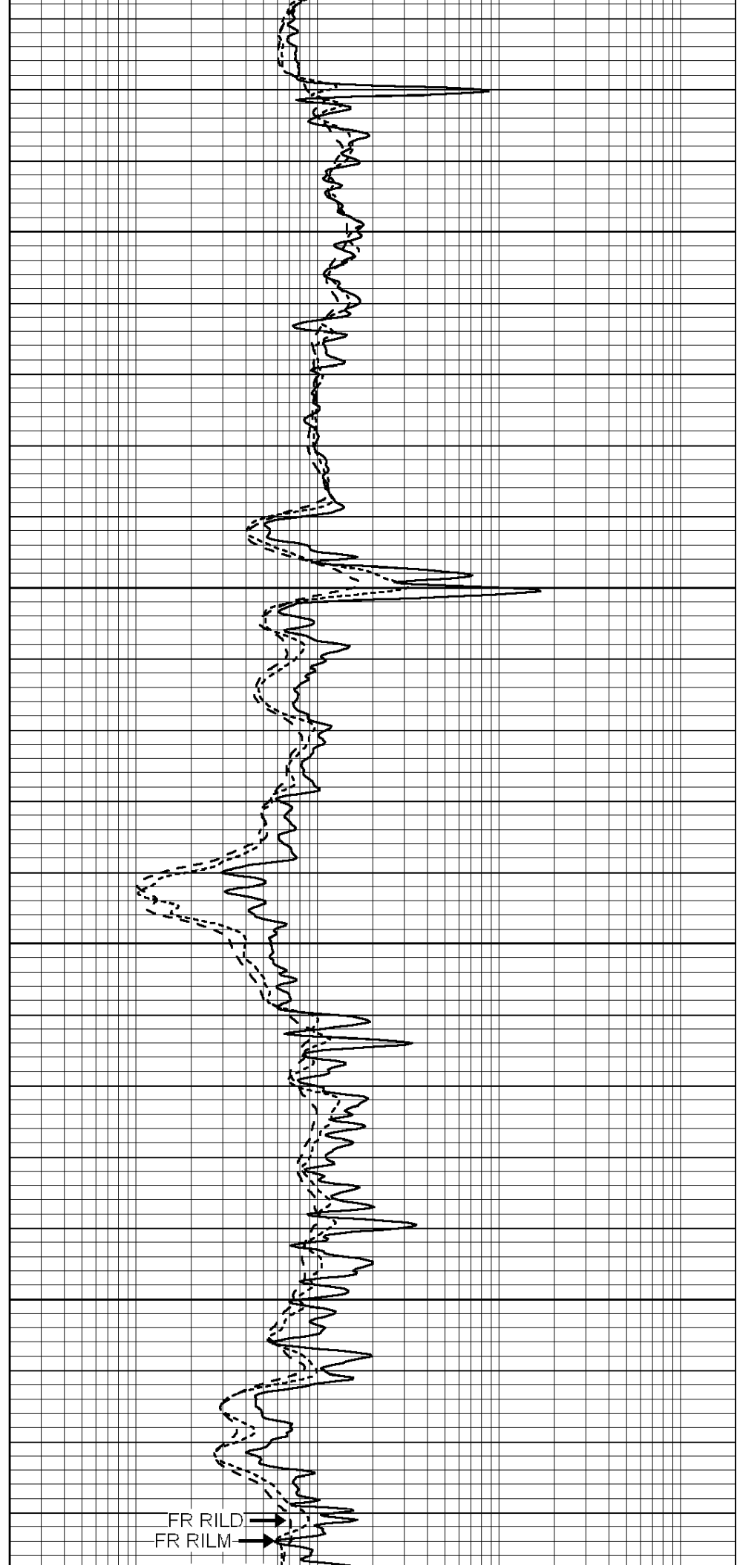
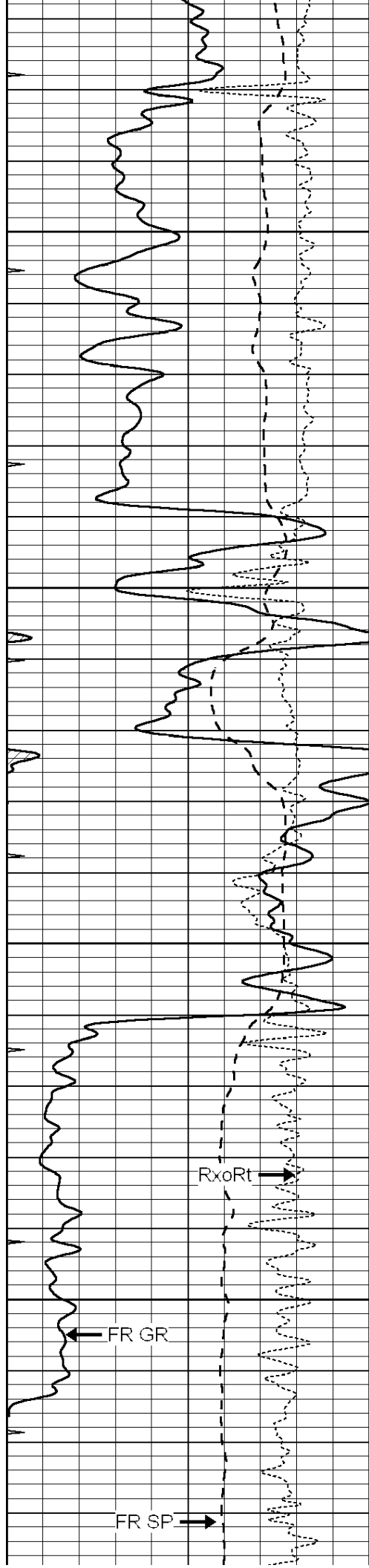
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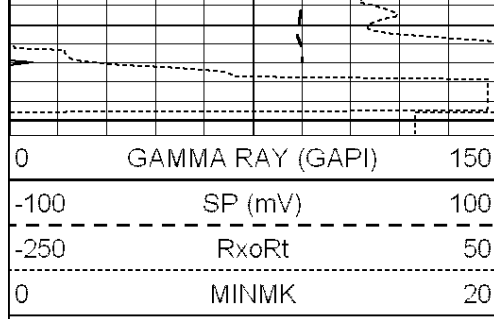
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3750

3800

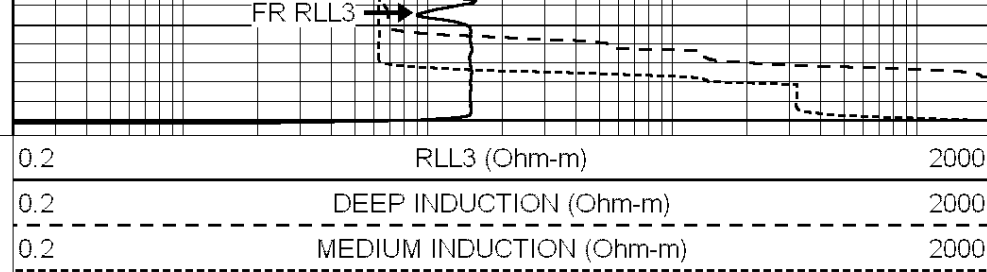






LTD 4041

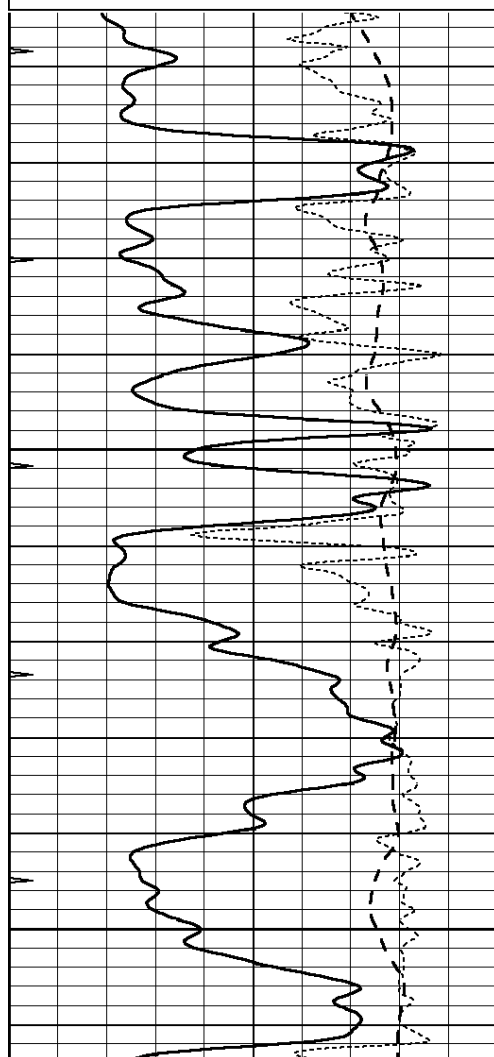
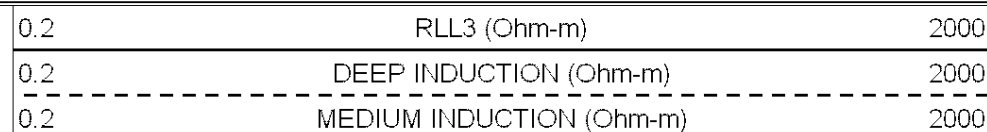
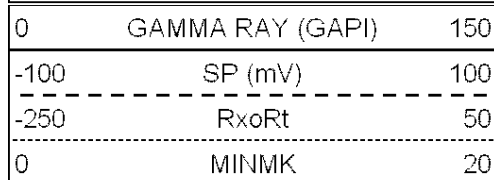
4050



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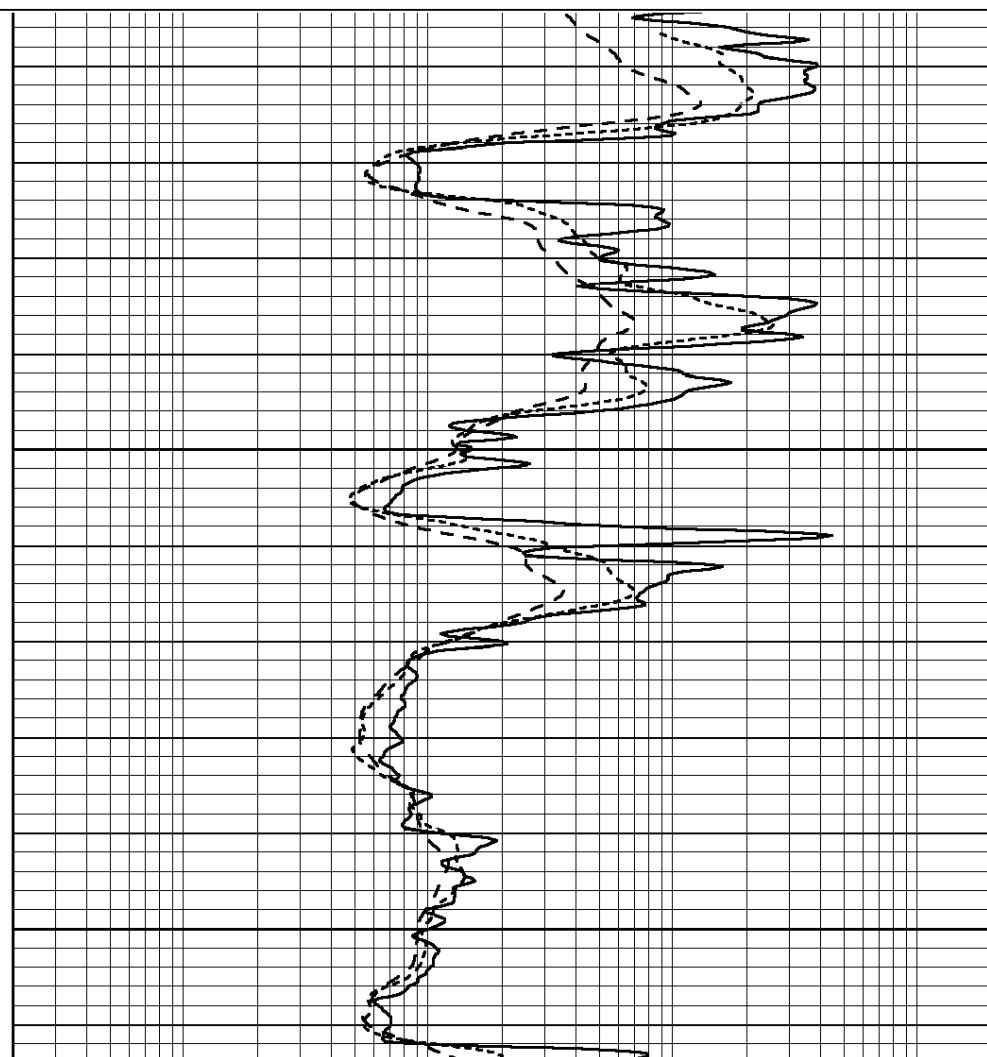
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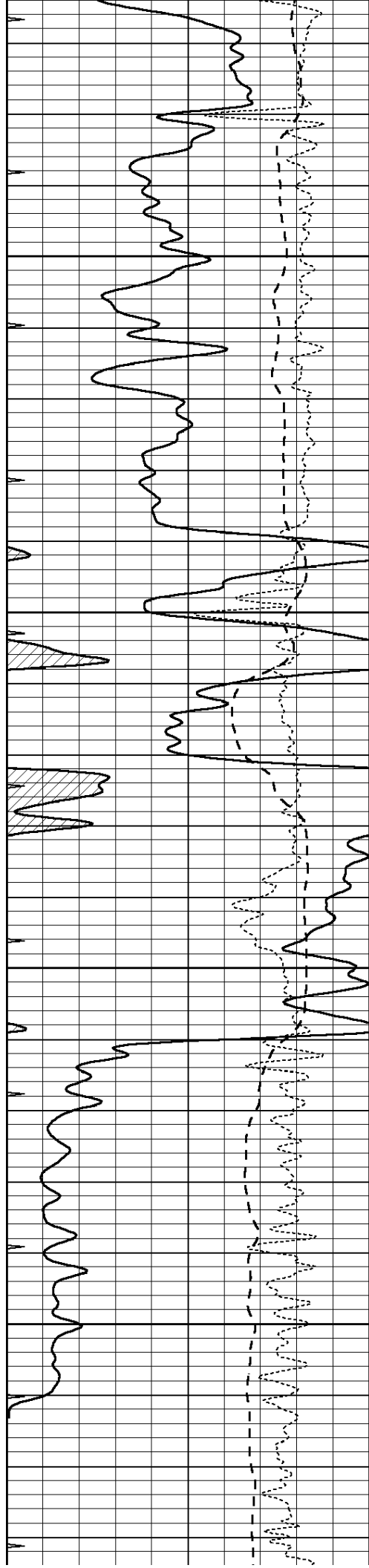
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 Dataset Pathname: pass2.4  
 Presentation Format: \_dil  
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 Charted by: Depth in Feet scaled 1:240



3750

3800



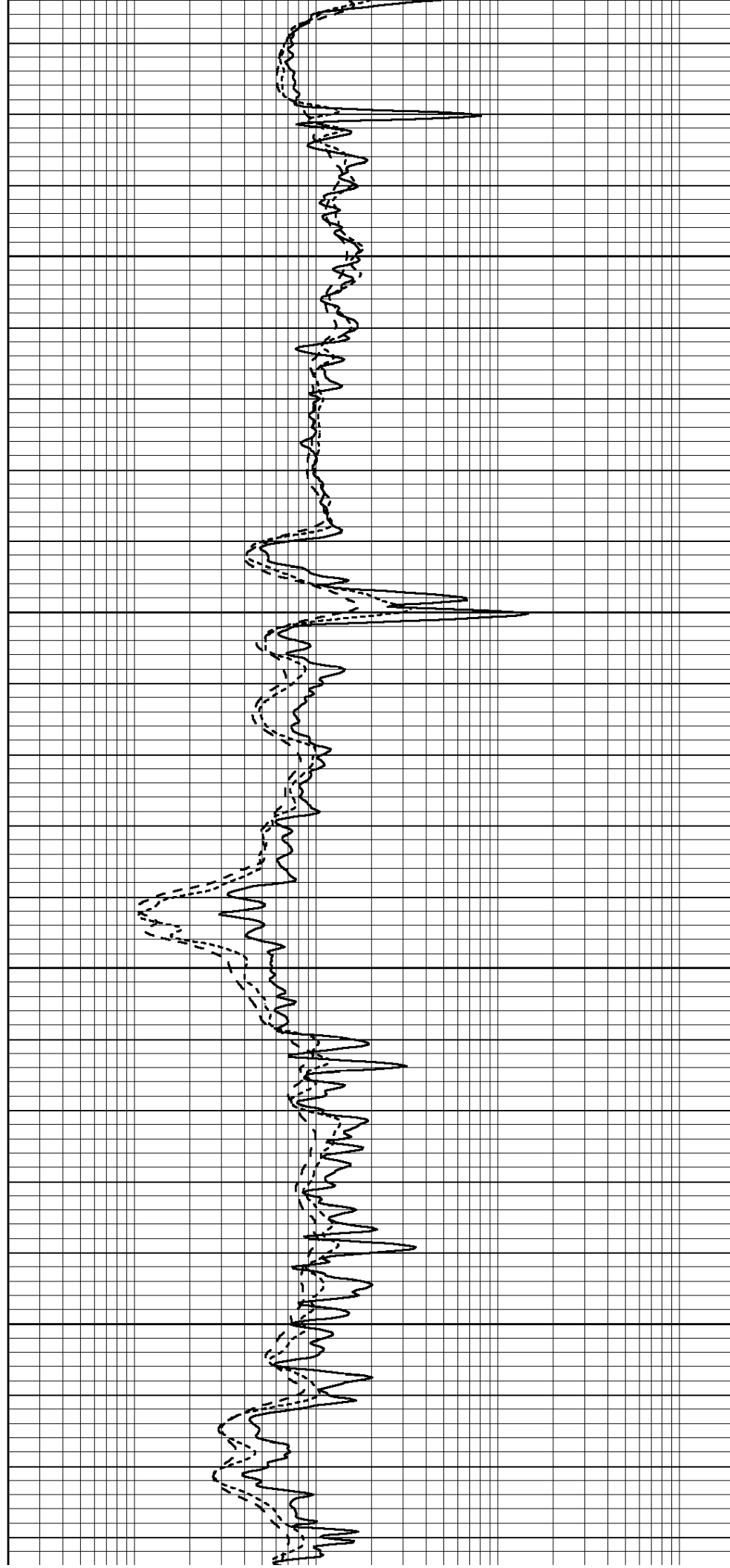


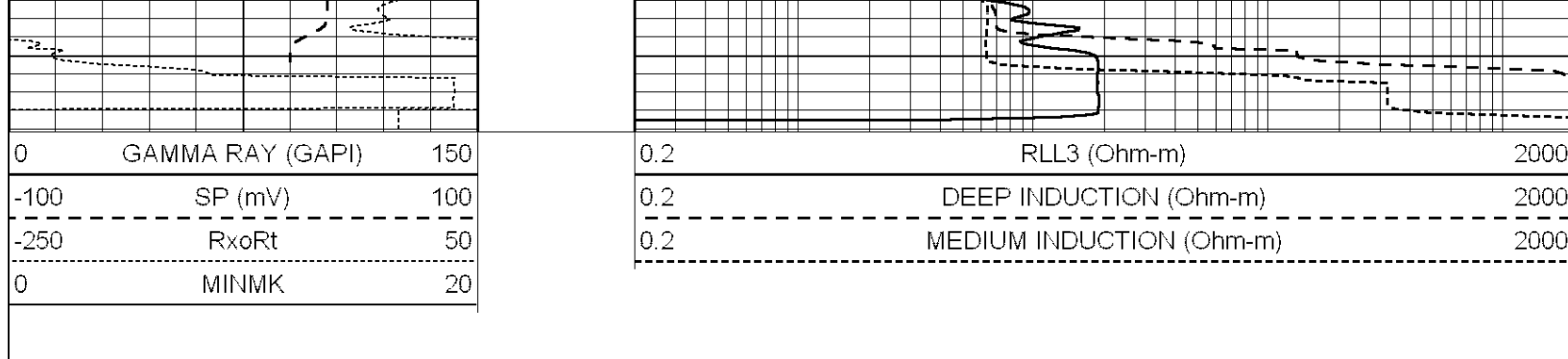
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3900

3950

4000





Calibration Report

Database File: 012032ddn.db  
Dataset Pathname: pass3.4  
Dataset Creation: Tue Nov 05 00:35:06 2013 by Calc Open-Cased 090629

| Dual Induction Calibration Report |       |       |                                       |       |         |         |         |        |
|-----------------------------------|-------|-------|---------------------------------------|-------|---------|---------|---------|--------|
| Serial-Model:<br>Performed:       |       |       | DIL3-GEAR<br>Sun Nov 03 15:42:07 2013 |       |         |         |         |        |
| Readings                          |       |       | References                            |       |         | Results |         |        |
| Loop:                             | Air   | Loop  |                                       | Air   | Loop    |         | m       | b      |
| Deep                              | 0.011 | 0.656 | V                                     | 0.000 | 400.000 | mmho/m  | 480.000 | 4.000  |
| Medium                            | 0.013 | 0.740 | V                                     | 0.000 | 462.500 | mmho/m  | 540.000 | -4.000 |
| Internal:                         | Zero  | Cal   |                                       | Zero  | Cal     |         | m       | b      |
| Deep                              | 0.002 | 0.645 | V                                     | 0.000 | 400.000 | mmho/m  | 560.000 | -1.071 |
| Medium                            | 0.007 | 0.740 | V                                     | 0.000 | 462.500 | mmho/m  | 540.000 | -4.000 |

| Compensated Density Calibration Report |         |      |                             |              |               |     |
|----------------------------------------|---------|------|-----------------------------|--------------|---------------|-----|
| Serial-Model:                          |         |      | GEAR1-GEARHART              |              |               |     |
| Source / Verifier:                     |         |      | 147 / 147                   |              |               |     |
| Master Calibration Performed:          |         |      | Sun Nov 03 15:50:26 2013    |              |               |     |
| Master Calibration                     |         |      |                             |              |               |     |
|                                        | Density |      |                             | Far Detector | Near Detector |     |
| Magnesium                              | 1.710   | g/cc |                             | 1205.77      | 610.74        | cps |
| Aluminum                               | 2.550   | g/cc |                             | 271.21       | 419.72        | cps |
| Spine Angle = 75.89                    |         |      | Density/Spine Ratio = 0.546 |              |               |     |
|                                        | Size    |      |                             | Reading      |               |     |
| Small Ring                             | 8.20    | in   |                             | 4.83         | V             |     |
| Large Ring                             | 14.00   | in   |                             | 7.01         | V             |     |

| Compensated Neutron Calibration Report |  |          |        |        |     |               |
|----------------------------------------|--|----------|--------|--------|-----|---------------|
| Serial Number:                         |  |          | NEU_4I |        |     |               |
| 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        |

Gamma Ray Calibration Report

|                |                          |
|----------------|--------------------------|
| Serial Number: | GR5                      |
| Tool Model:    | OPEN                     |
| Performed:     | Sun Nov 03 15:58:48 2013 |

|                   |     |      |
|-------------------|-----|------|
| Calibrator Value: | 1.0 | GAPI |
|-------------------|-----|------|

|                     |     |     |
|---------------------|-----|-----|
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |

|              |        |          |
|--------------|--------|----------|
| Sensitivity: | 0.9100 | GAPI/cps |
|--------------|--------|----------|