



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company VINCENT OIL CORPORATION  
Well HORNBACK #1-15  
Field  
County FORD  
State KANSAS

Company VINCENT OIL CORPORATION  
Well HORNBACK #1-15  
Field  
County FORD State KANSAS

Location: API # : 15-057-20930-0000  
900' FNL & 1735' FWL  
SEC 15 TWP 29S RGE 24W  
Permanent Datum GROUND LEVEL Elevation 2581  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
MEL/SON  
Elevation  
K.B. 2591  
D.F. 2589  
G.L. 2581

|                              |                |           |           |
|------------------------------|----------------|-----------|-----------|
| Date                         | 4/15/14        |           |           |
| Run Number                   | ONE            |           |           |
| Depth Driller                | 5360           |           |           |
| Depth Logger                 | 5359           |           |           |
| Bottom Logged Interval       | 5357           |           |           |
| Top Log Interval             | 0              |           |           |
| Casing Driller               | 8 5/8" @ 841   |           |           |
| Casing Logger                | 641            |           |           |
| Bit Size                     | 7 7/8"         |           |           |
| Type Fluid in Hole           | CHEMICAL MUD   | CHLORIDES | 8,800 PPM |
| Density / Viscosity          | 9.1 / 55       |           |           |
| pH / Fluid Loss              | 10.0 / 9.2     |           |           |
| Source of Sample             | FLOWLINE       |           |           |
| Rm @ Meas. Temp              | 0.85 @ 79F     |           |           |
| Rmt @ Meas. Temp             | 0.64 @ 79F     |           |           |
| Rmc @ Meas. Temp             | 1.02 @ 79F     |           |           |
| Source of Rmf / Rmc          | MEASUREMENT    |           |           |
| Rm @ BHT                     | 0.52 @ 128F    |           |           |
| Time Circulation Stopped     | 2 HOURS        |           |           |
| Time Logger on Bottom        |                |           |           |
| Maximum Recorded Temperature | 128F           |           |           |
| Equipment Number             | 4010           |           |           |
| Location                     | HAYS, KANSAS   |           |           |
| Recorded By                  | JEFF GRONIEWEG |           |           |
| Witnessed By                 | KENLEBLANC     |           |           |

<<< Fold Here >>>

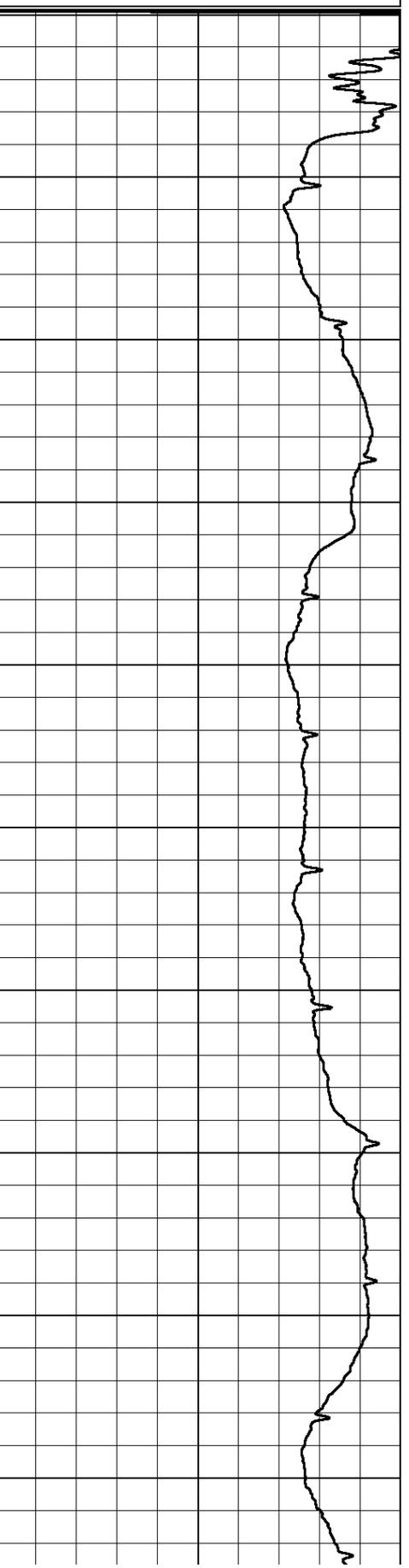
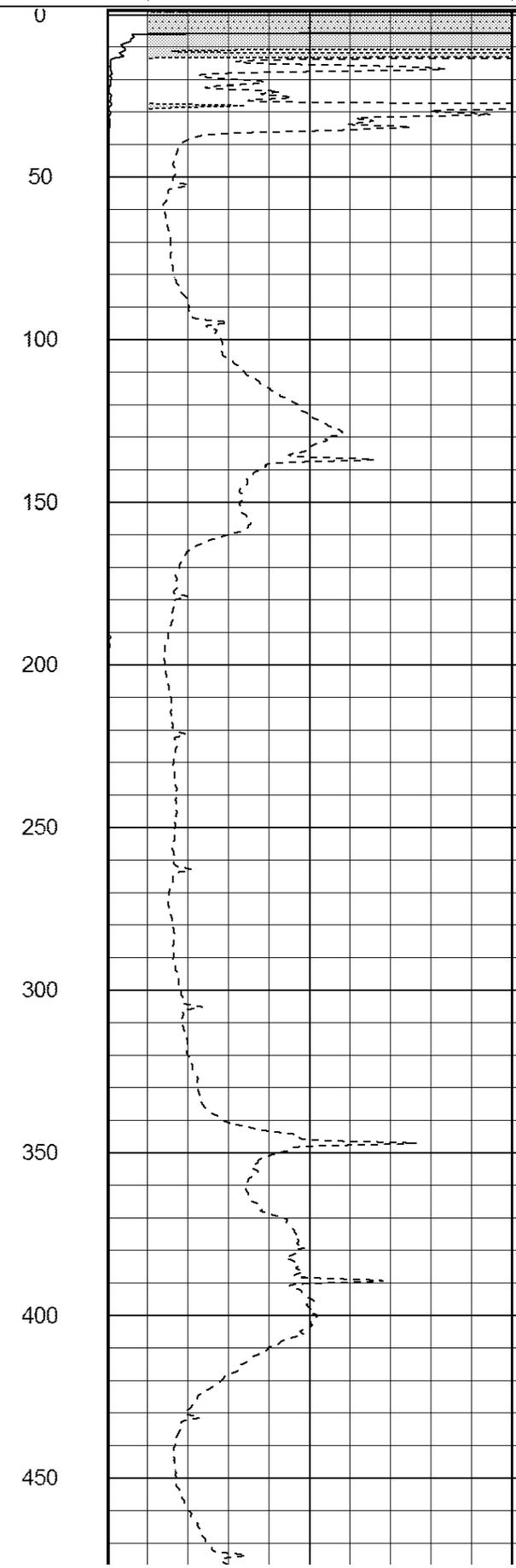
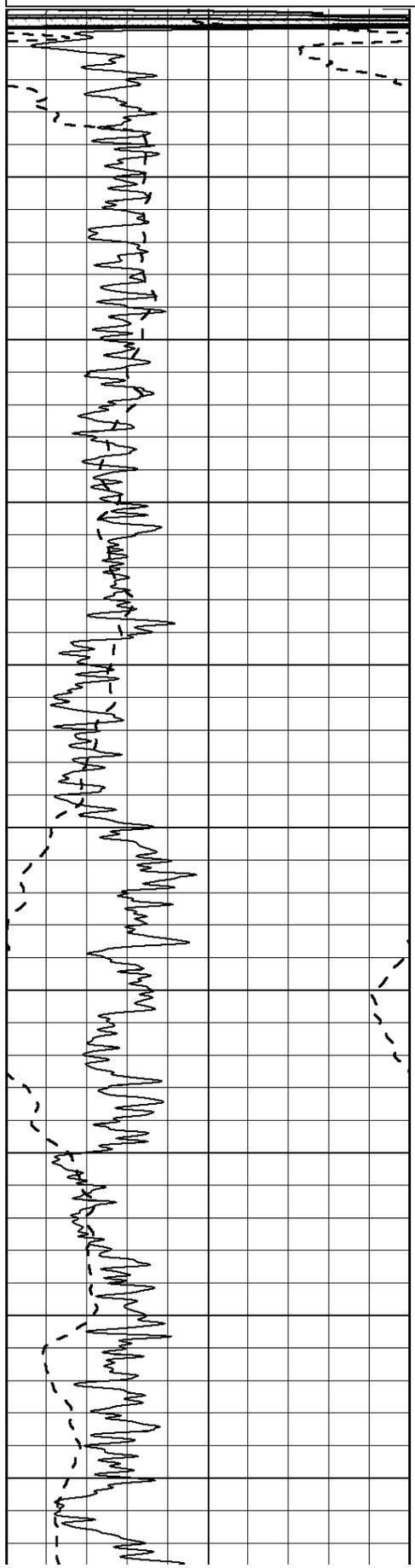
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

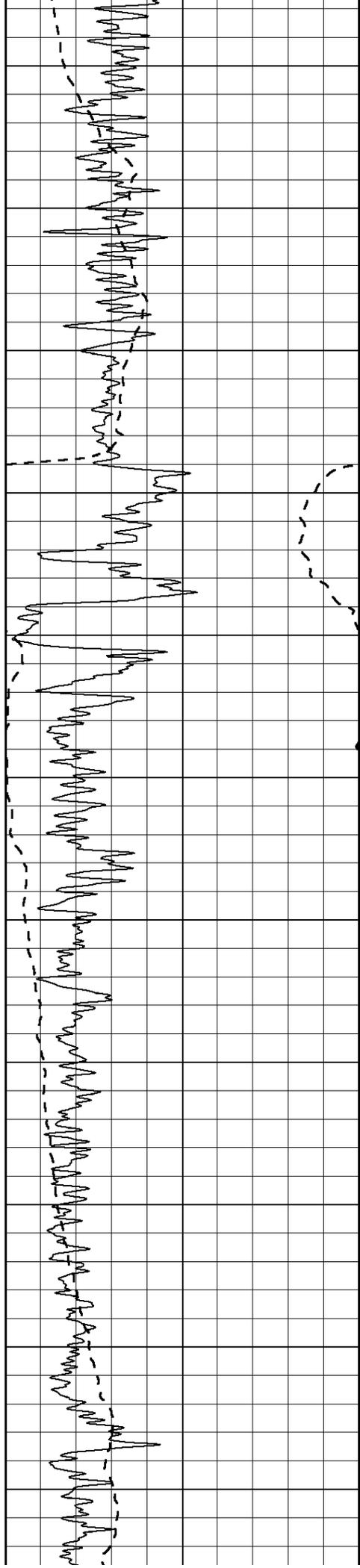
Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395  
DIRECTIONS:  
DODGE CITY, KS - SOUTH TO SADDLE RD - 8 MILES SOUTH TO WINDY RD  
4 1/2 MILES EAST - SOUTH INTO

|      |                  |     |
|------|------------------|-----|
| 0    | Gamma Ray (GAPI) | 150 |
| -100 | SP (mV)          | 100 |

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





500

550

600

650

700

750

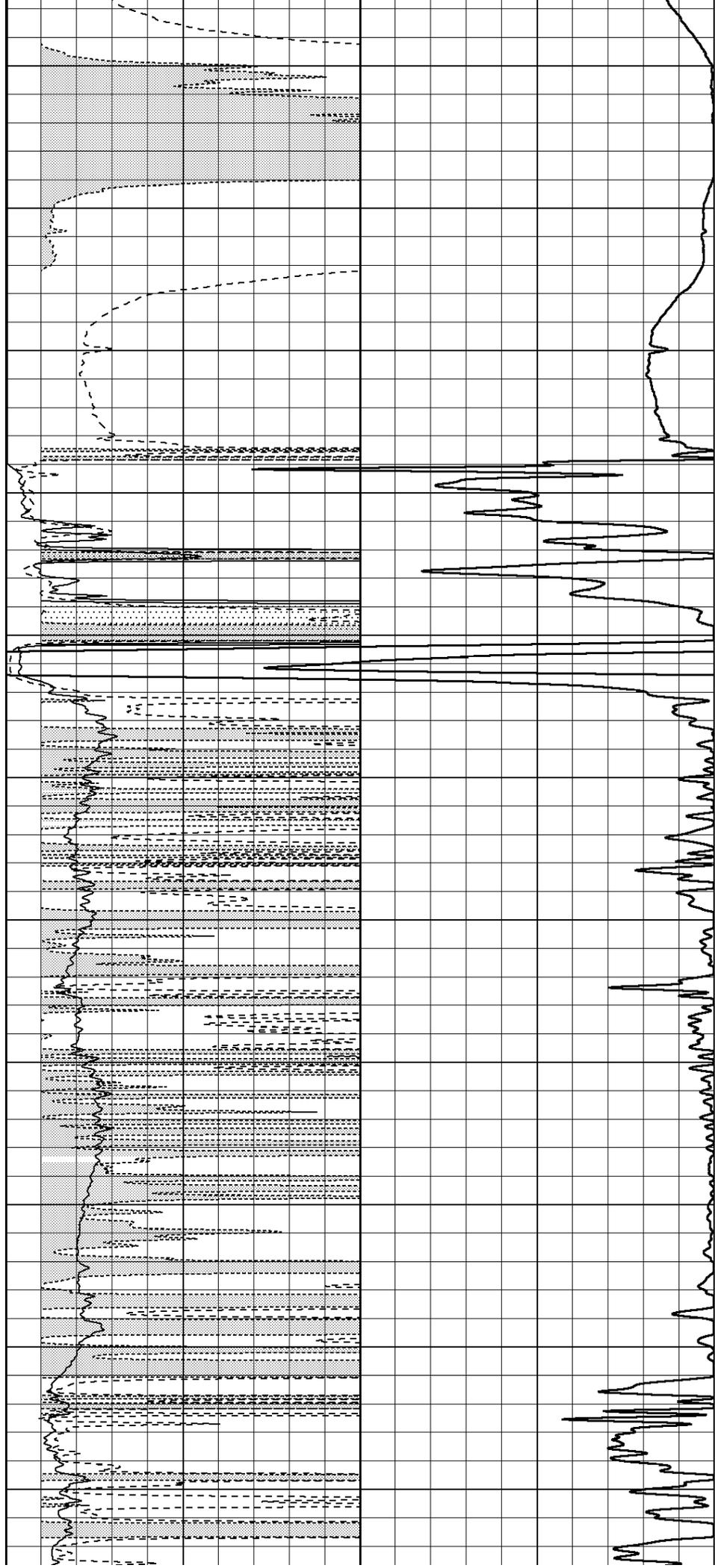
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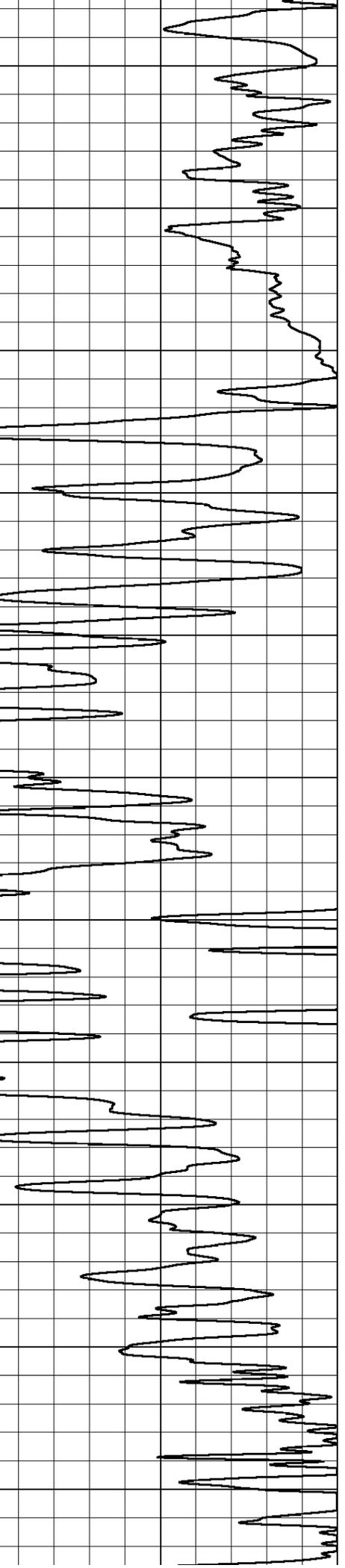
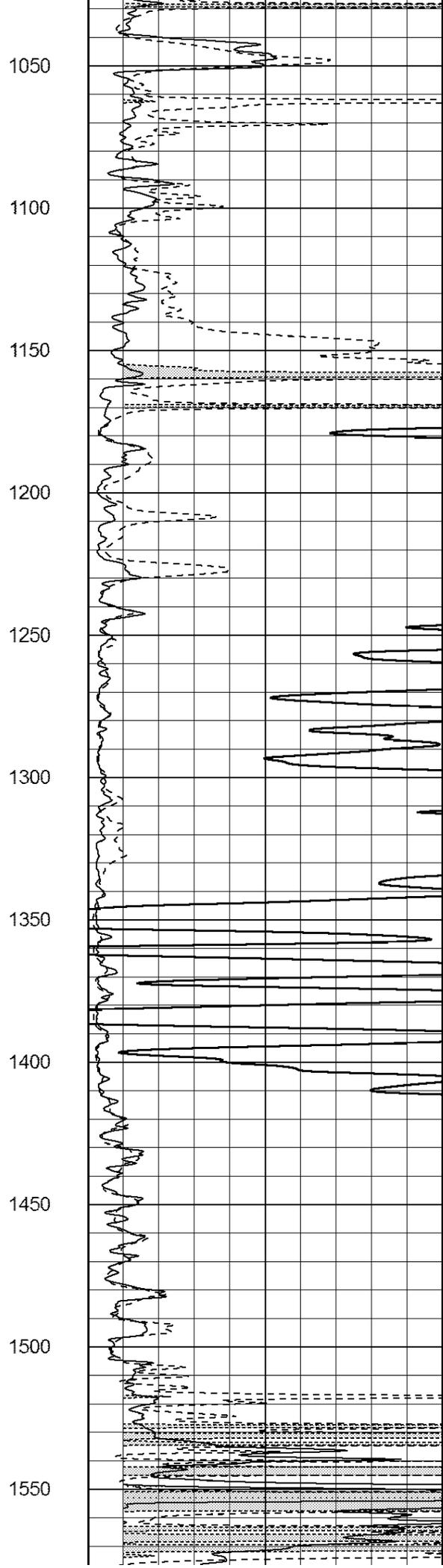
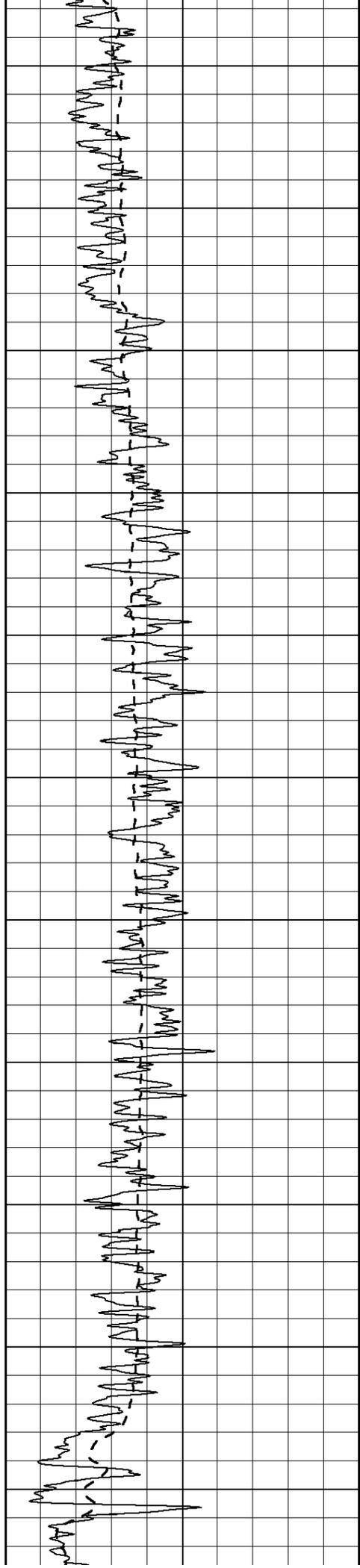
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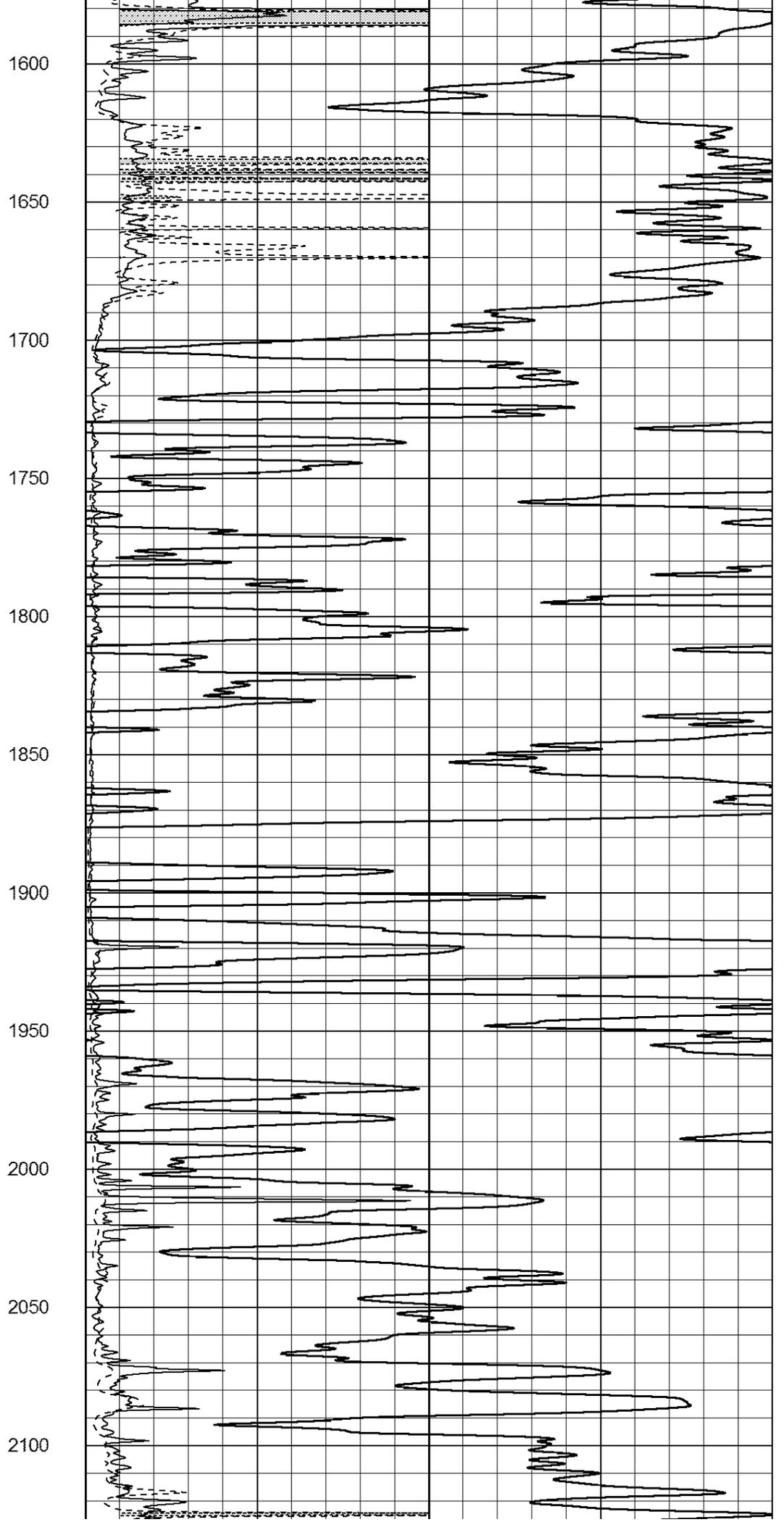
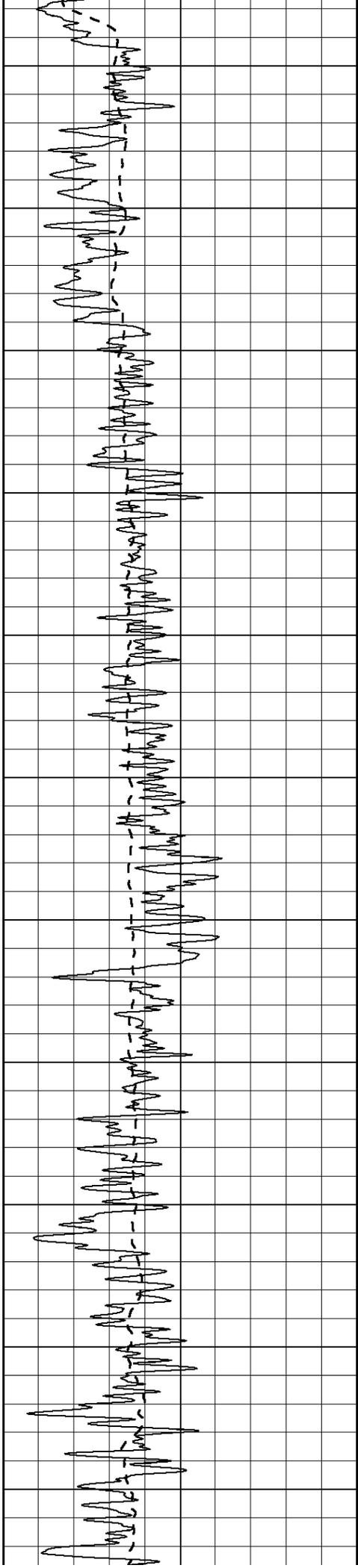
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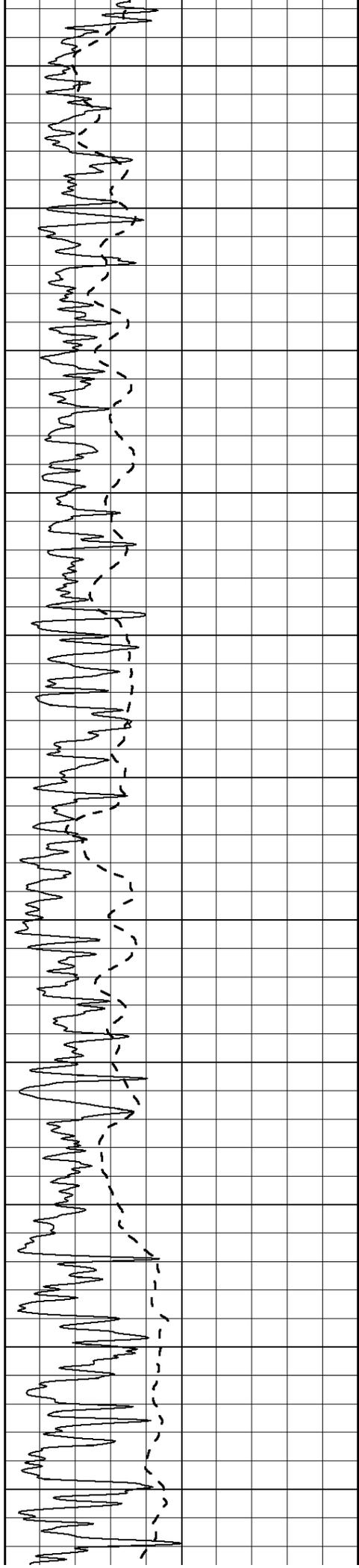
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1000









2150

2200

2250

2300

2350

2400

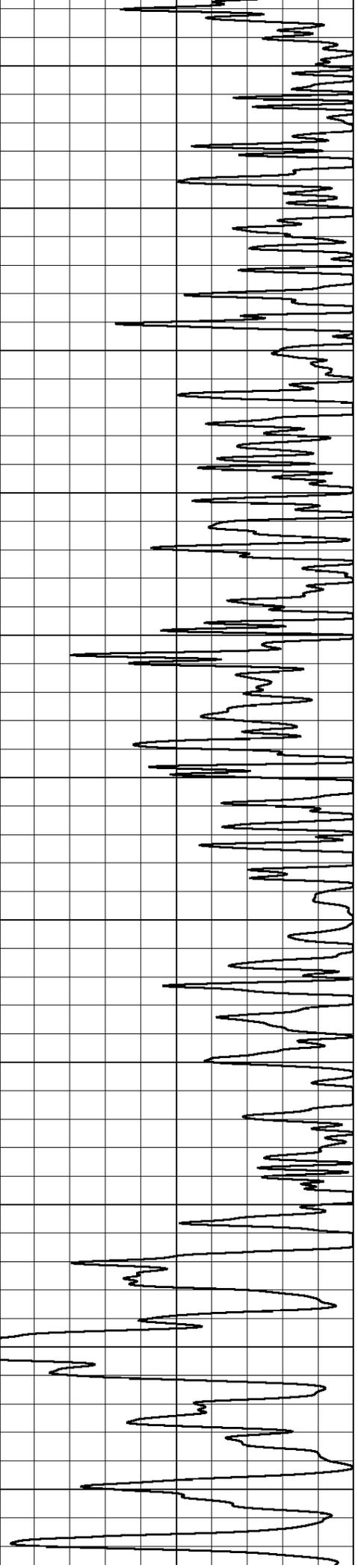
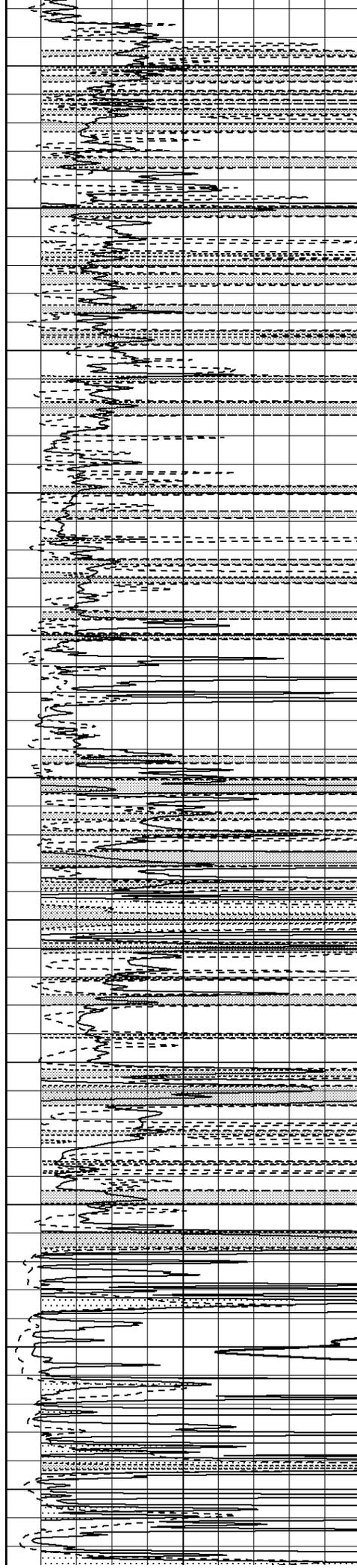
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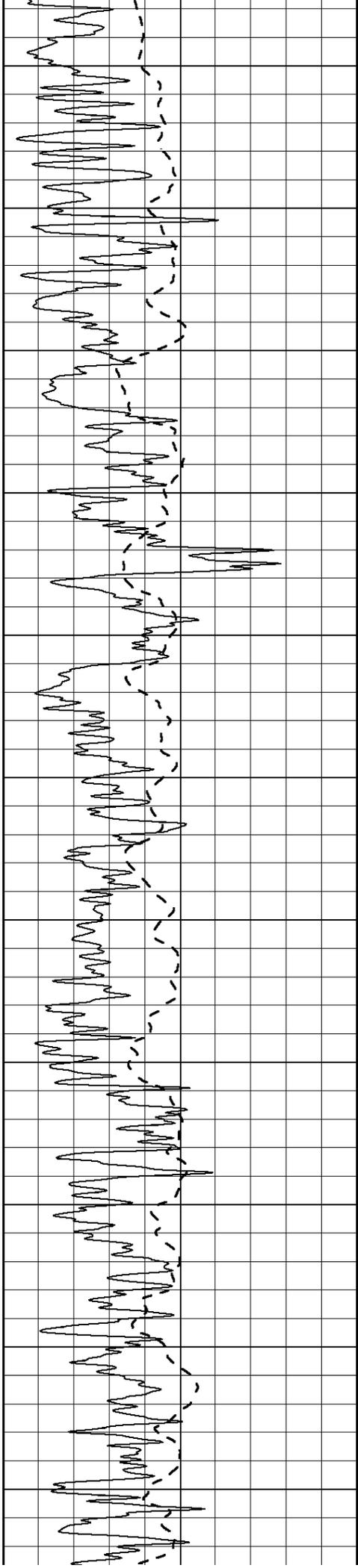
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2550

2600

2650





2700

2750

2800

2850

2900

2950

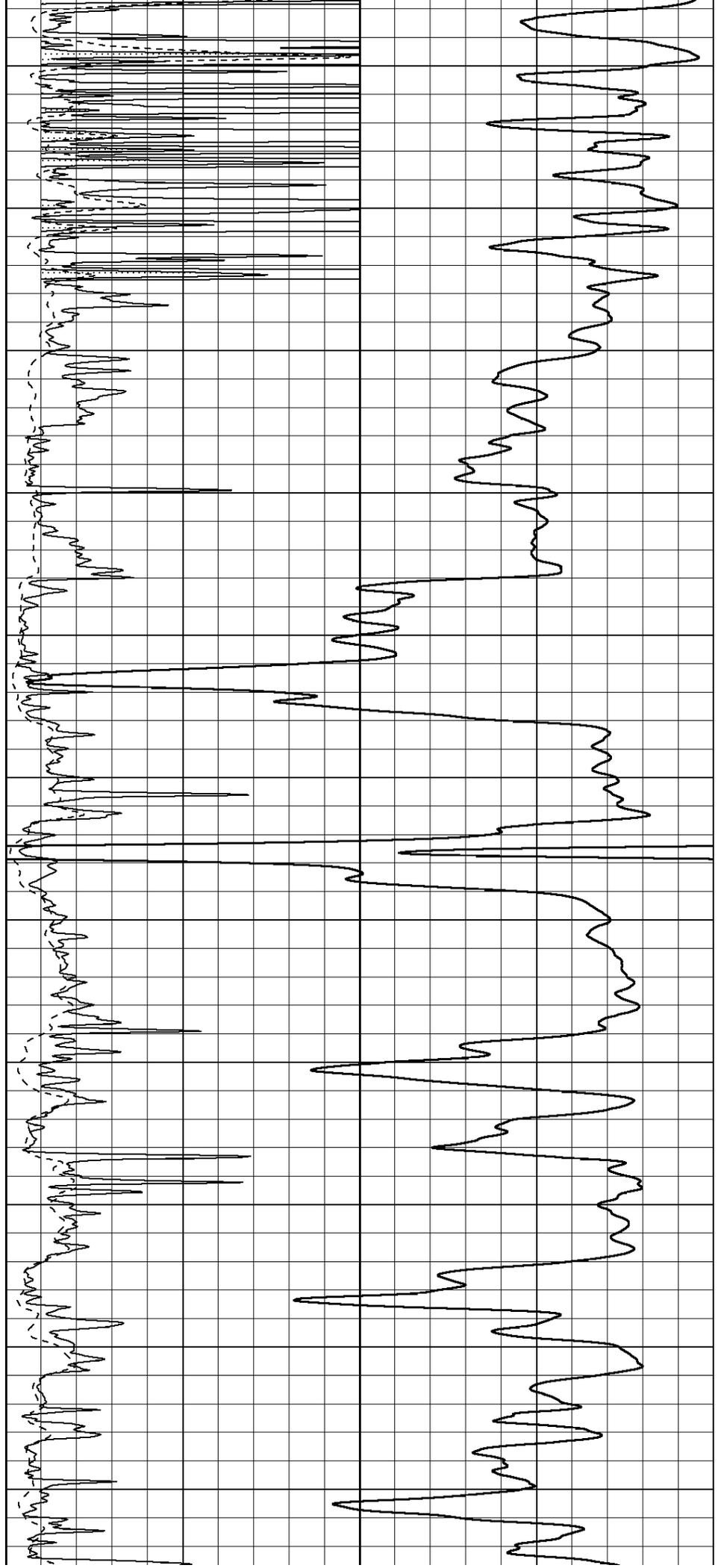
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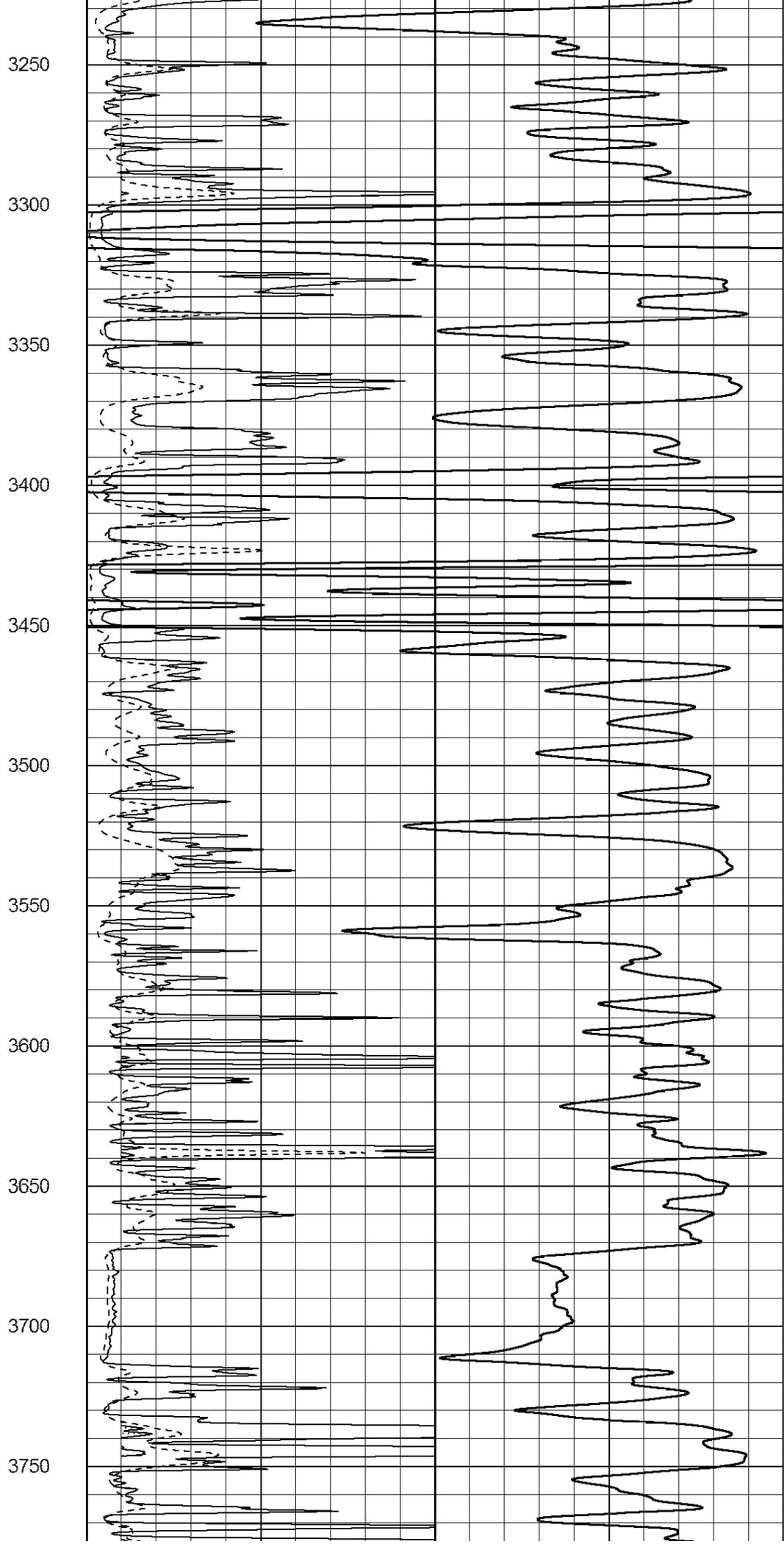
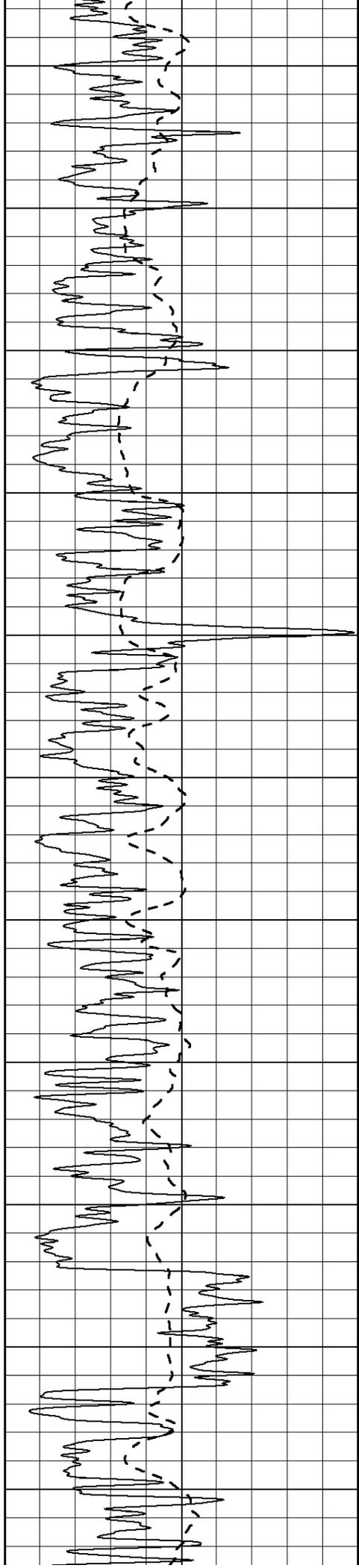
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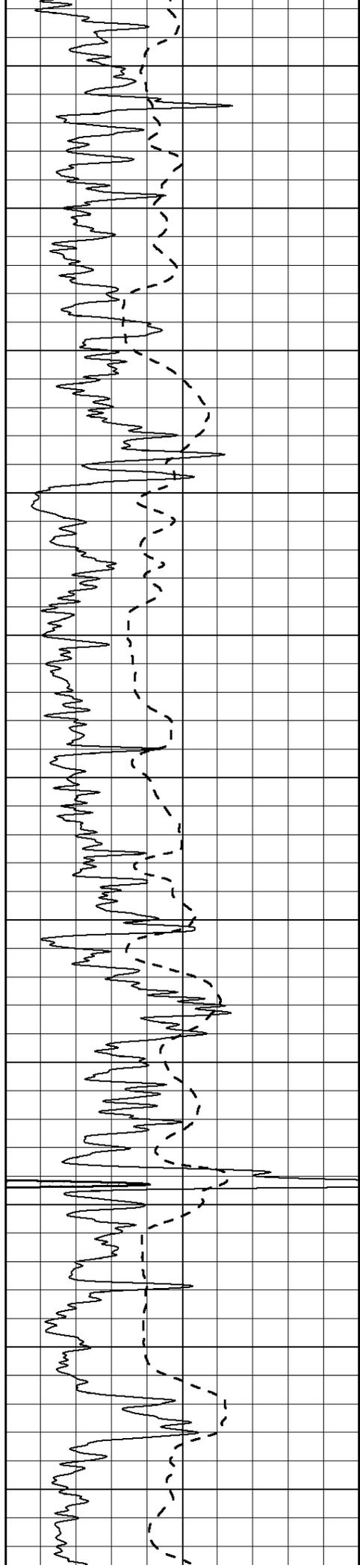
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3150

3200







3800

3850

3900

3950

4000

4050

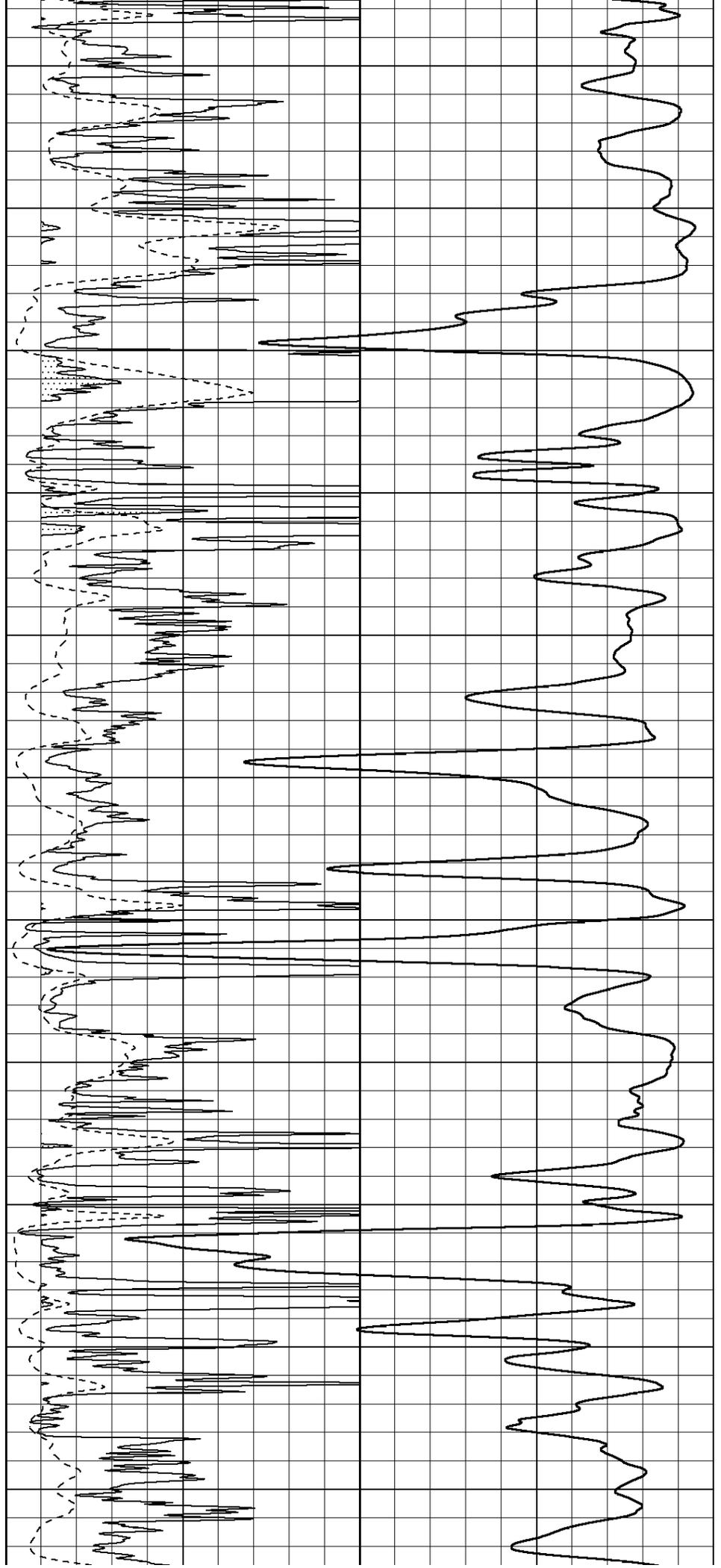
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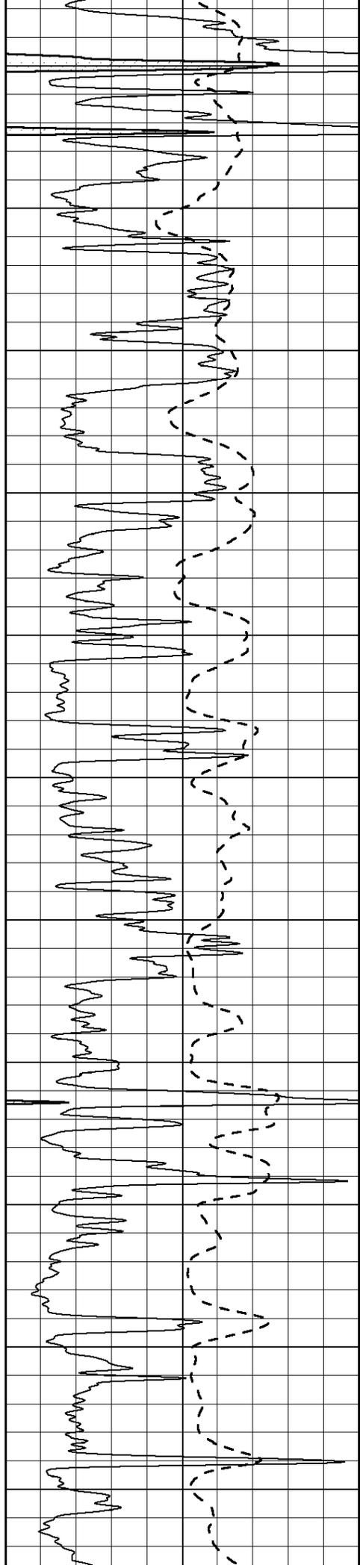
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4200

4250

4300





4350

4400

4450

4500

4550

4600

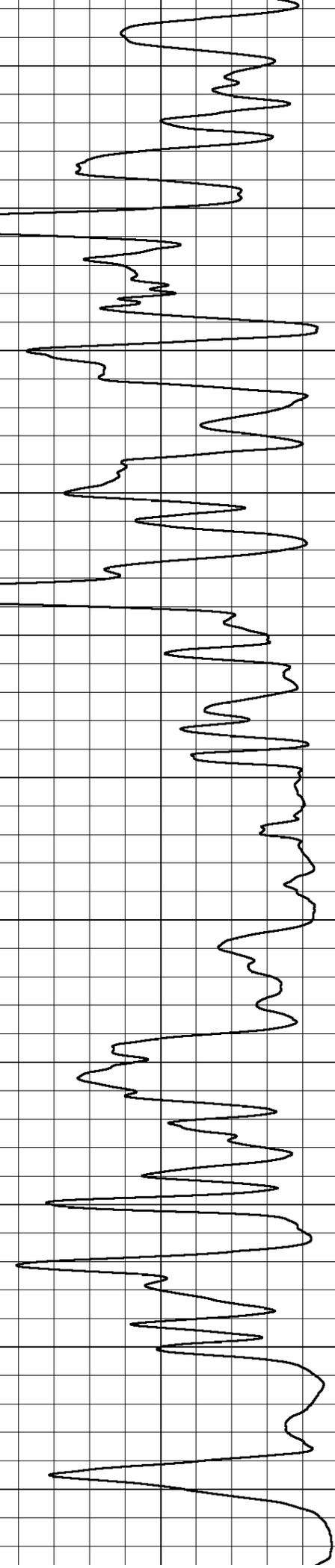
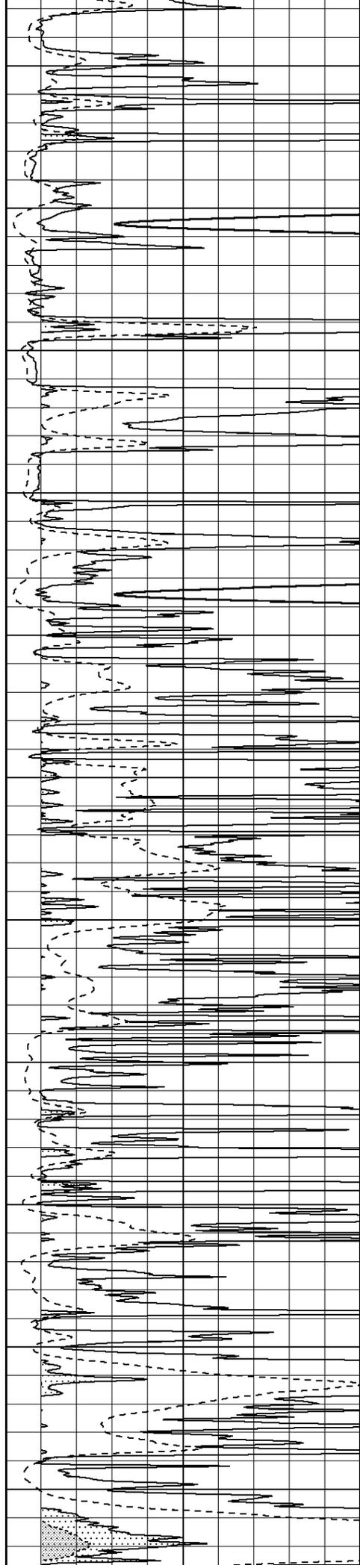
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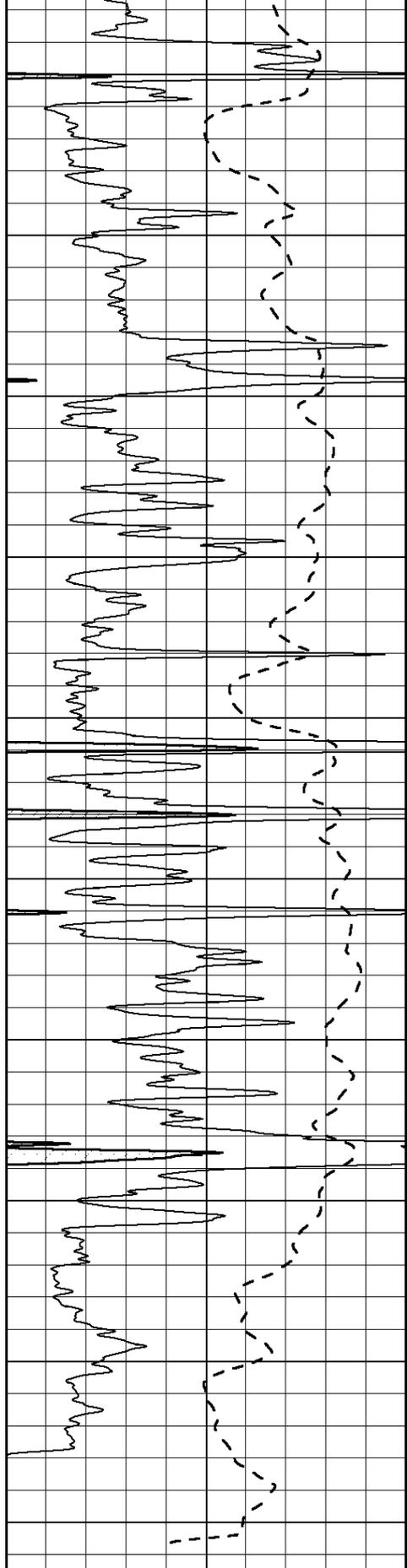
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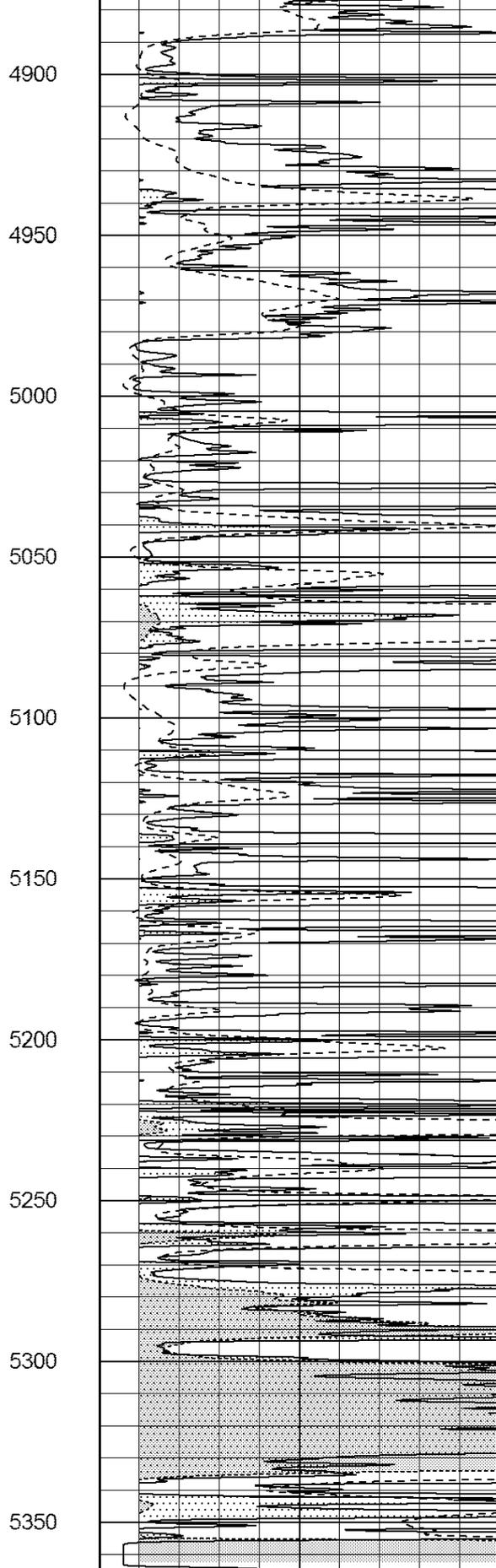
4800

4850





|      |                  |     |
|------|------------------|-----|
| 0    | Gamma Ray (GAPI) | 150 |
| -100 | SP (mV)          | 100 |



|   |              |    |
|---|--------------|----|
| 0 | RLL3 (Ohm-m) | 50 |
| 0 | RILD (Ohm-m) | 50 |



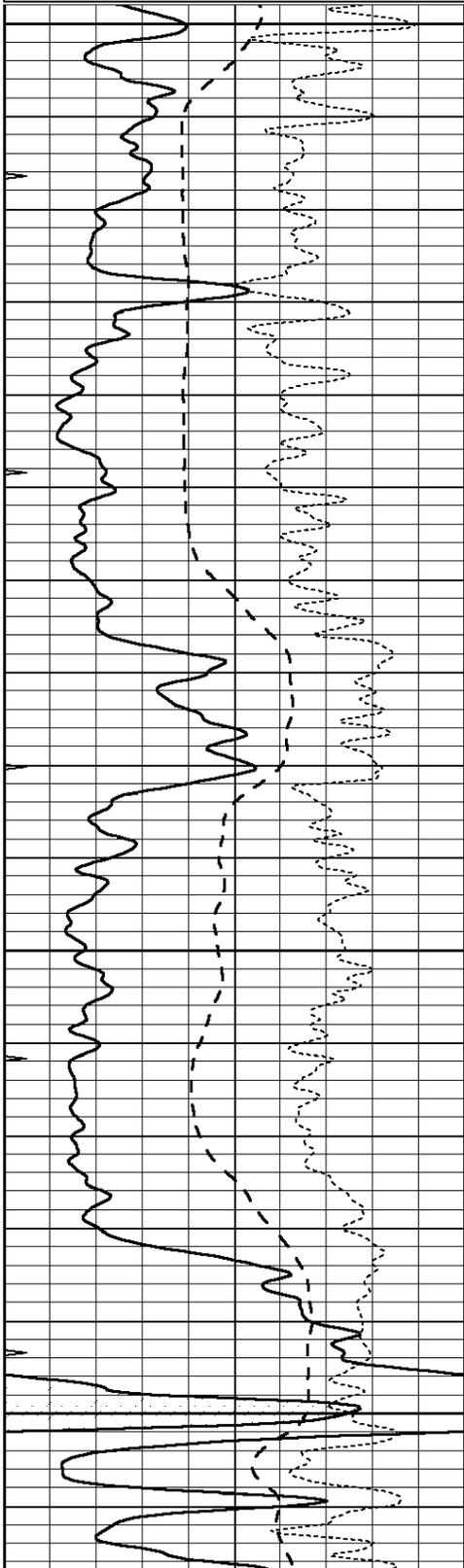
|      |                |   |
|------|----------------|---|
| 1000 | CILDA (mmho/m) | 0 |
|------|----------------|---|

|    |                  |     |
|----|------------------|-----|
| 50 | RILD X10 (Ohm-m) | 500 |
| 50 | RLL3 X10 (Ohm-m) | 500 |

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 Presentation Format: \_dil  
 Dataset Creation: Tue Apr 15 13:09:57 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 |

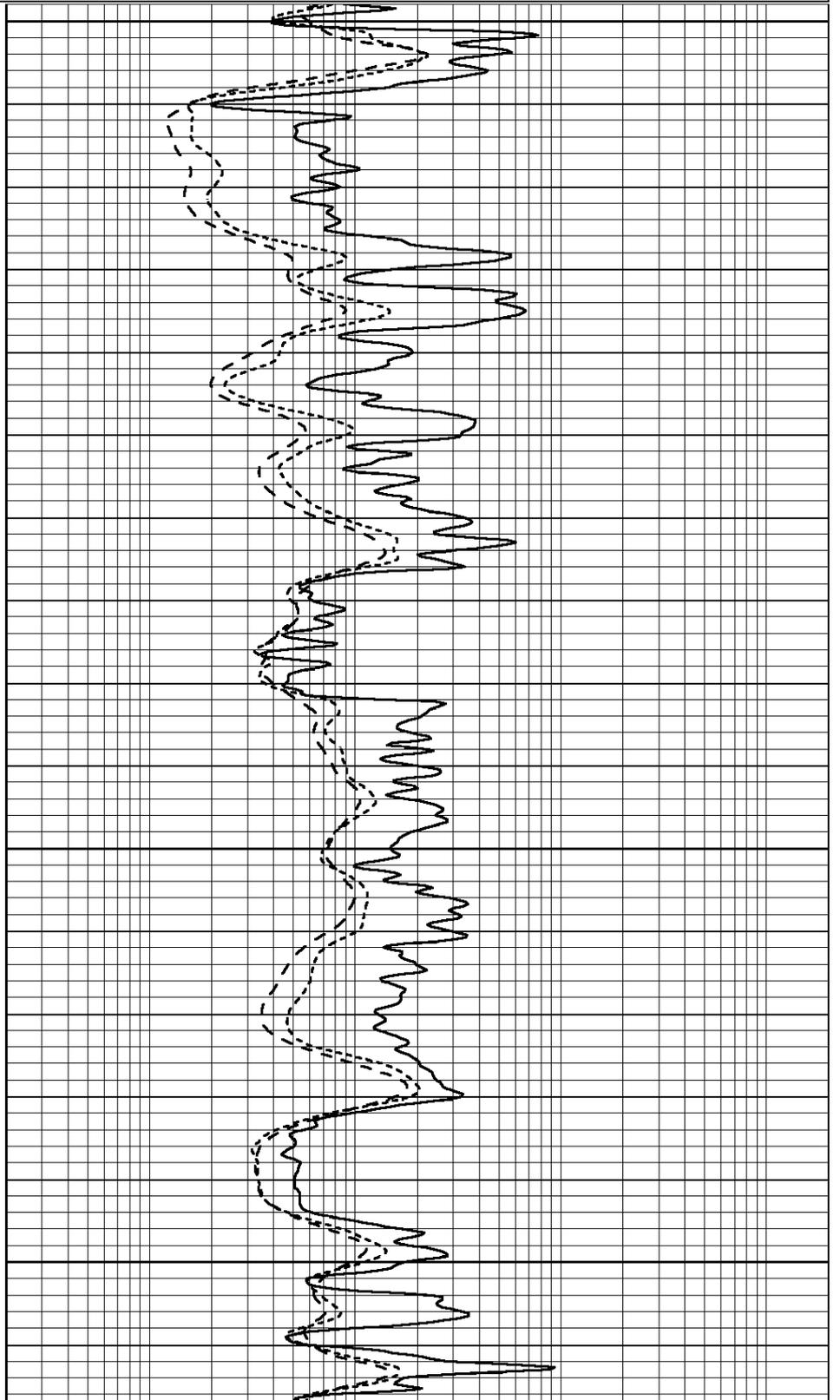


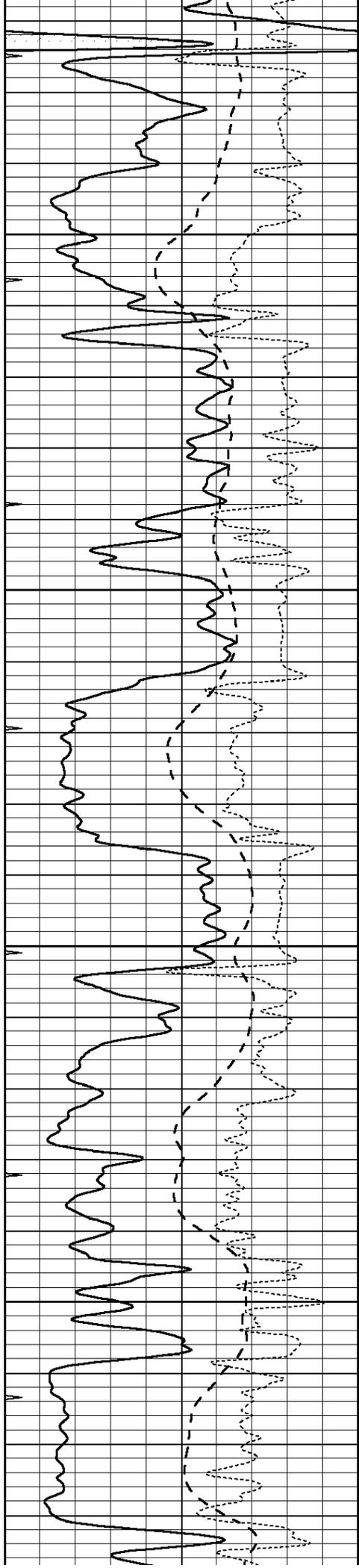
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4250

4300

4350



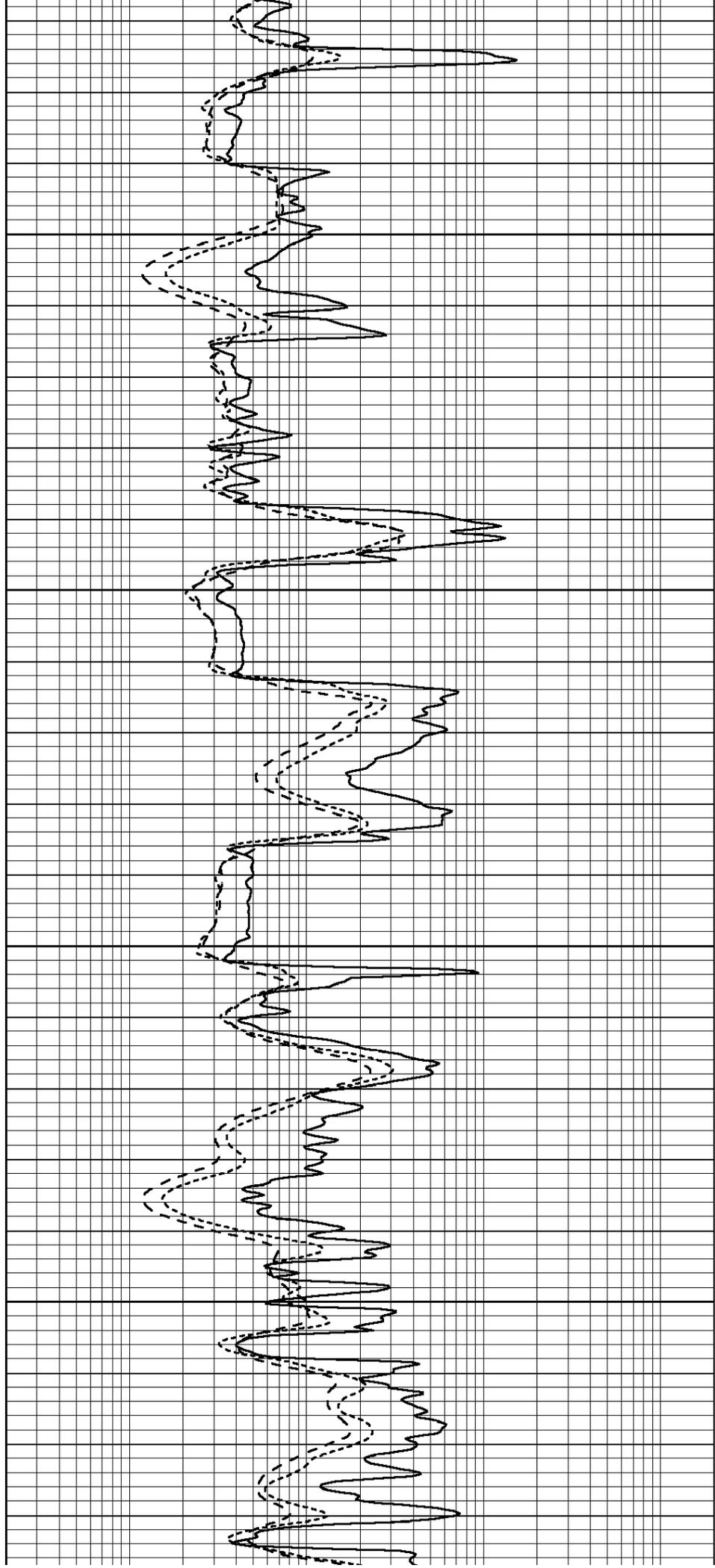


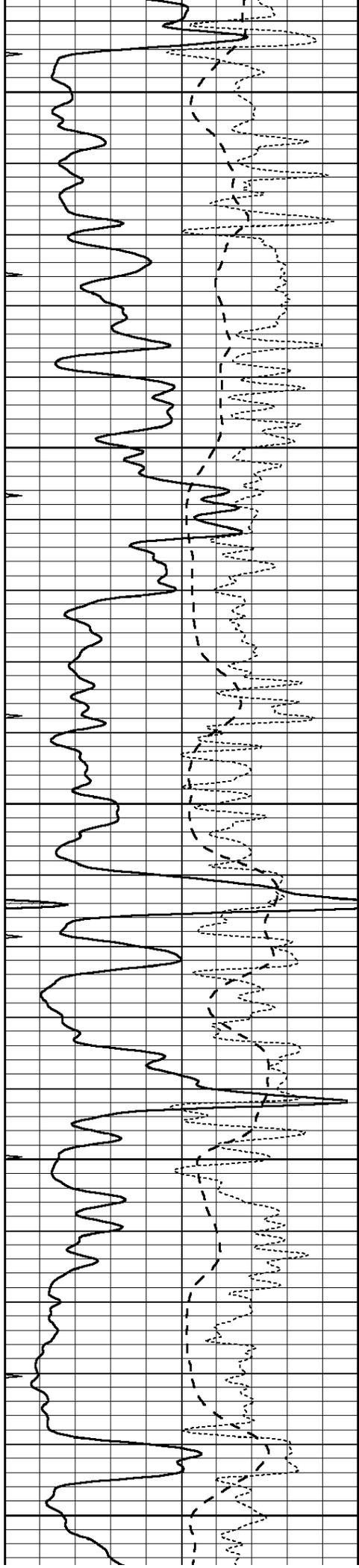
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4450

4500

4550





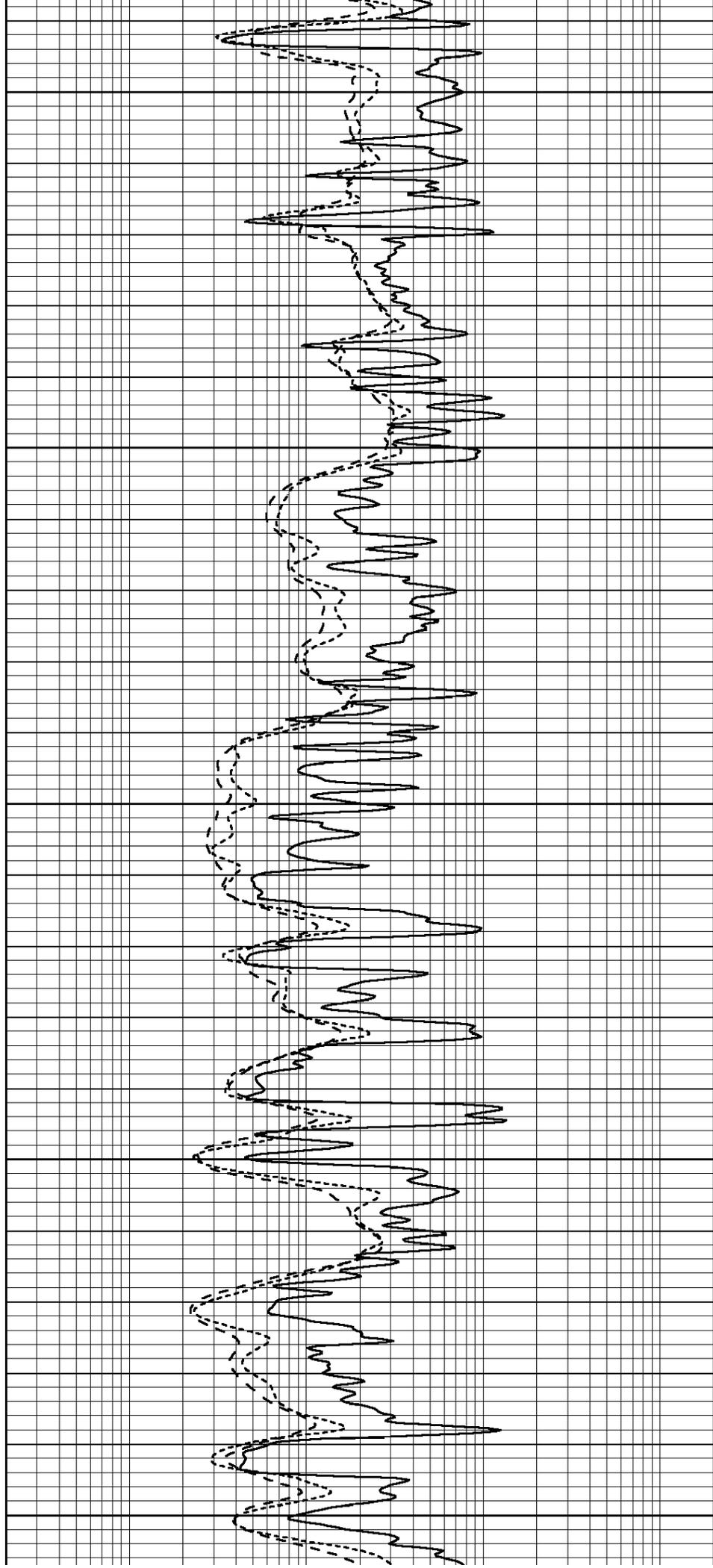
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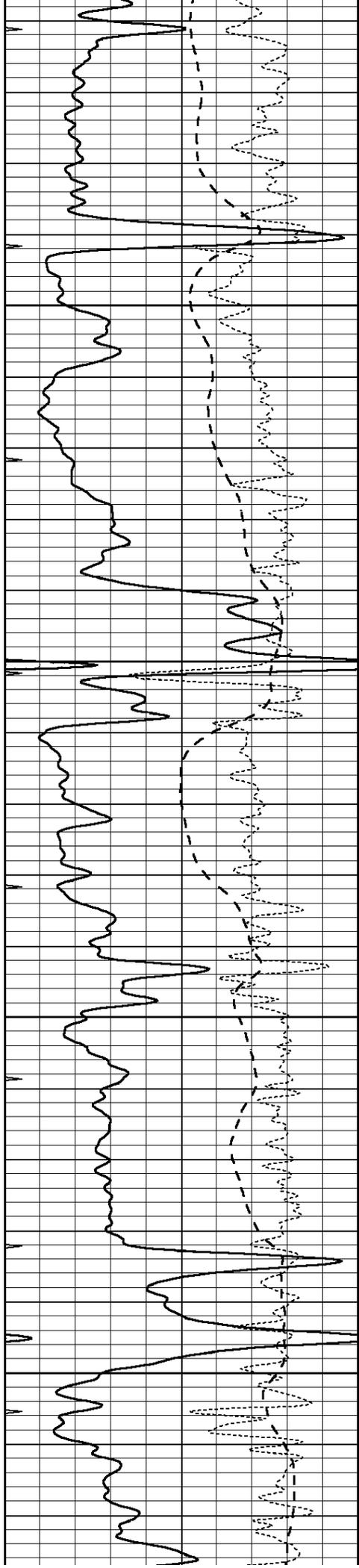
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4700

4750

4800



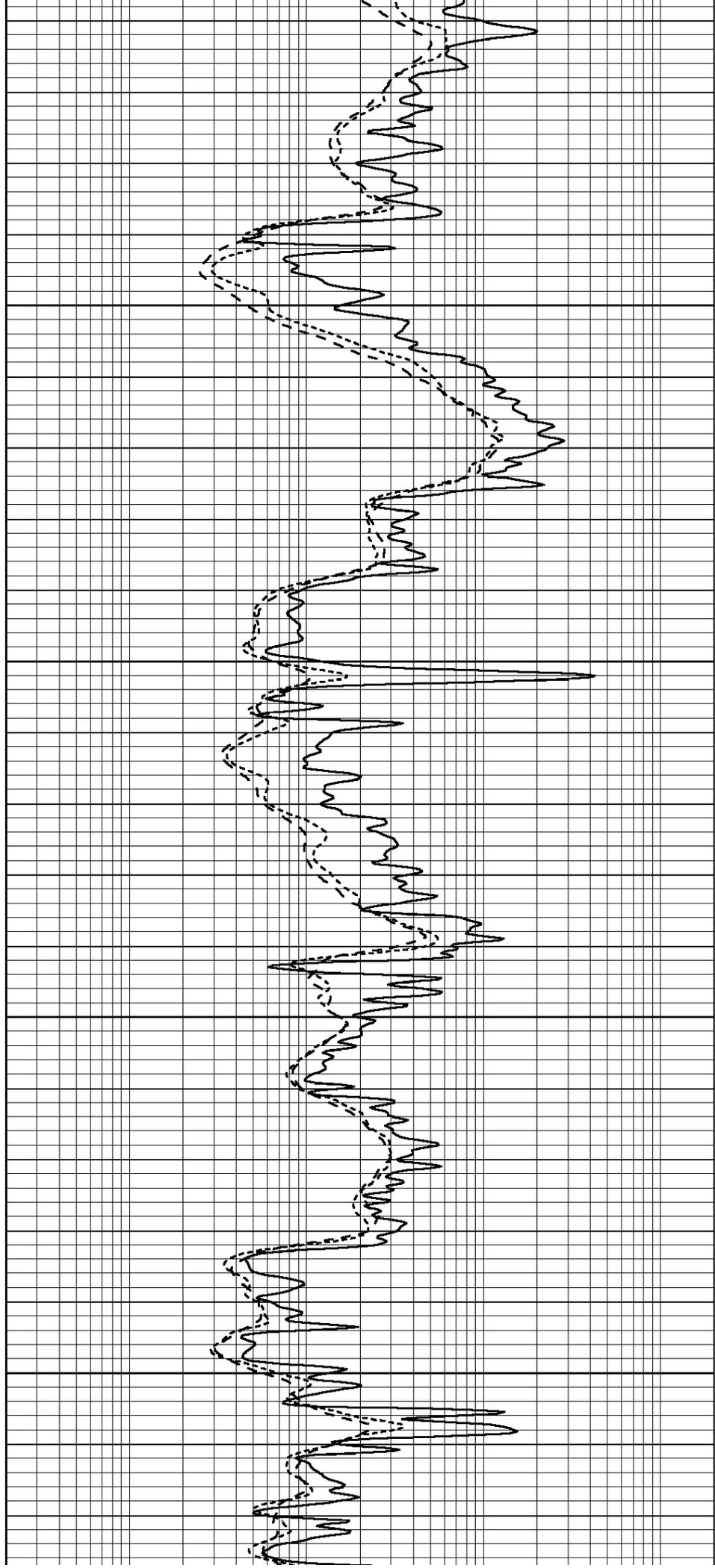


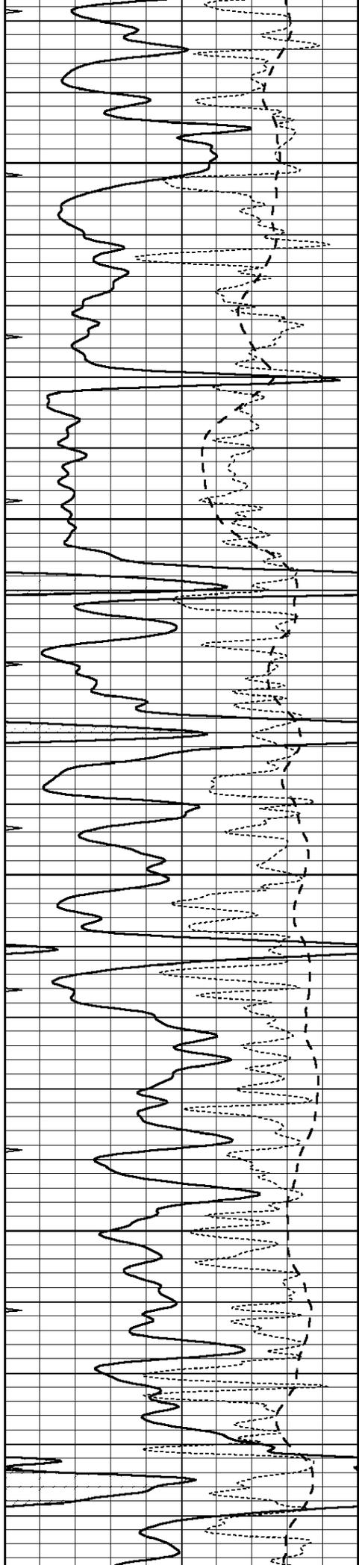
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4900

4950

5000



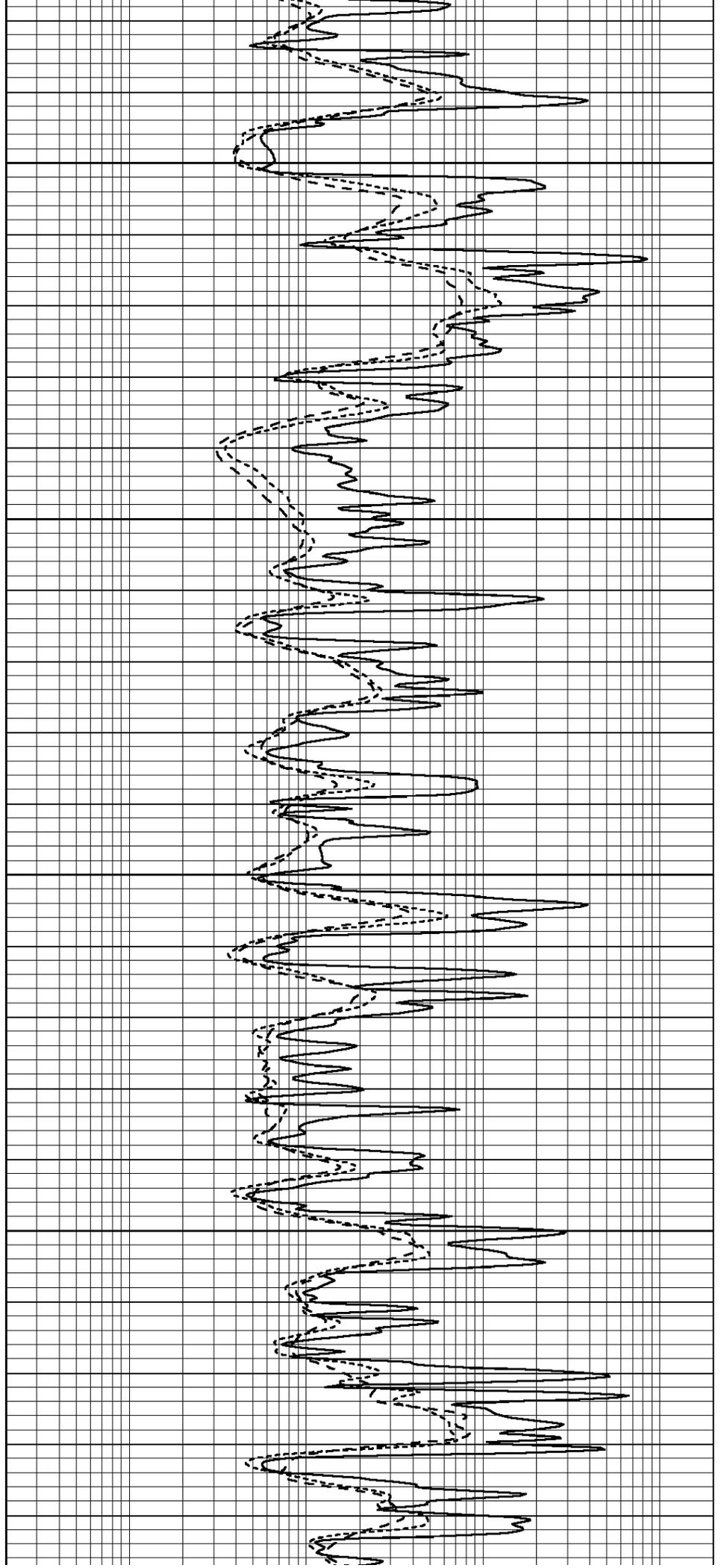


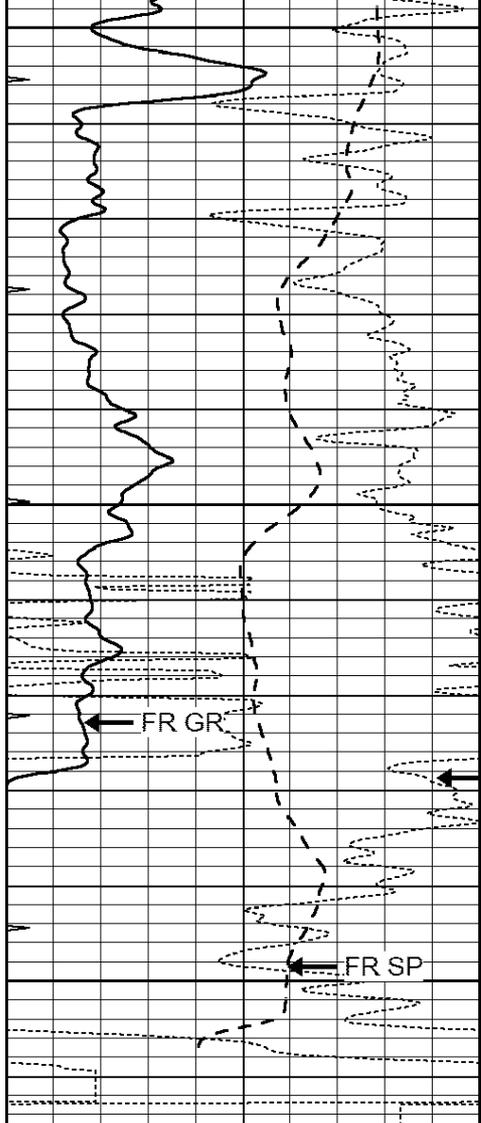
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5100

5150

5200

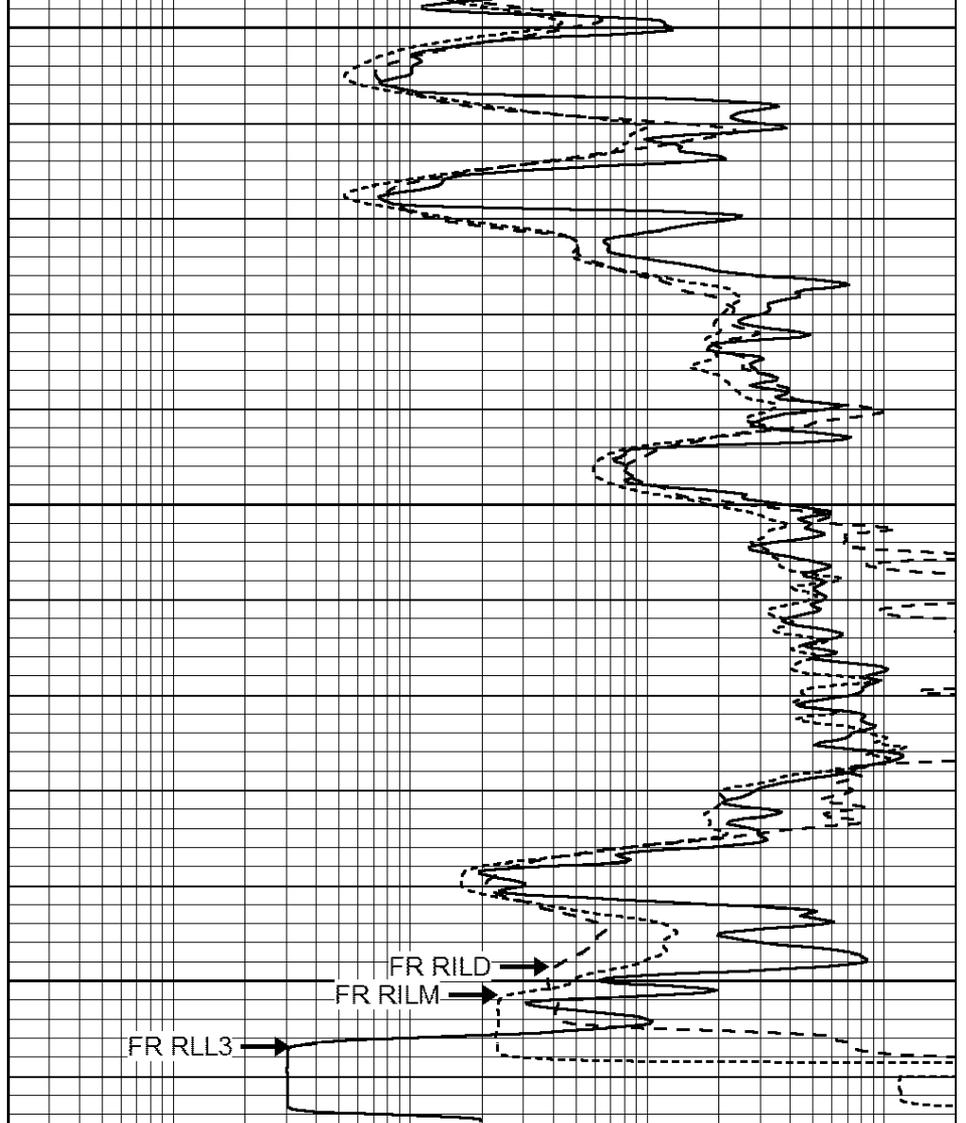




5250  
5300  
5350  
LTD 5359

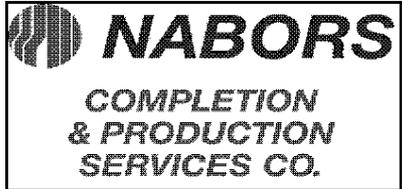
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|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

Rxo/Rt  
FR SP



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

FR RILD  
FR RILM  
FR RLL3

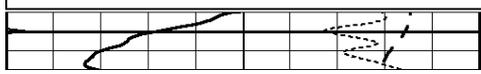


# REPEAT SECTION

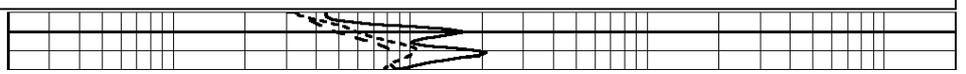
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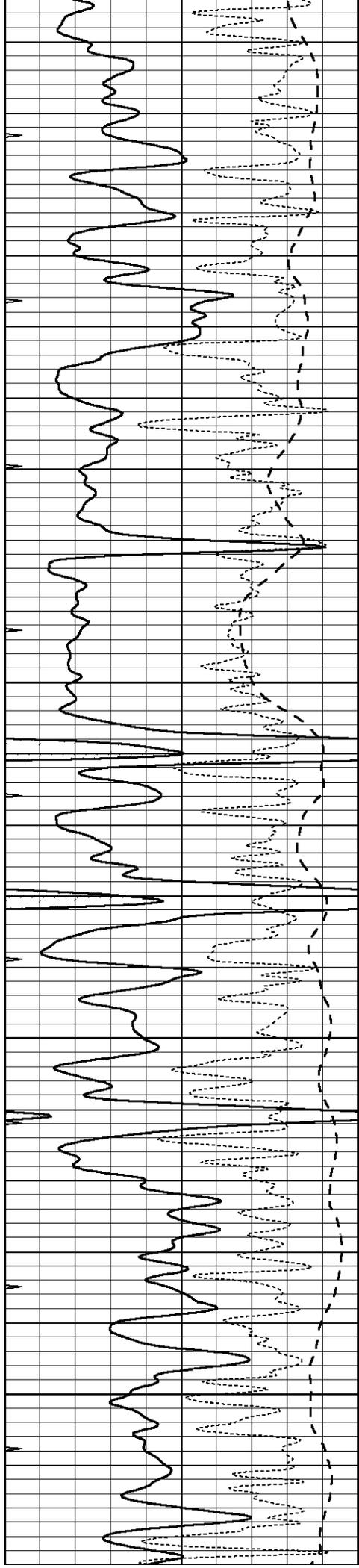
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|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |
| -250 | Rxo/Rt           | 50  |
| 0    | MINMK            | 20  |

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



5000



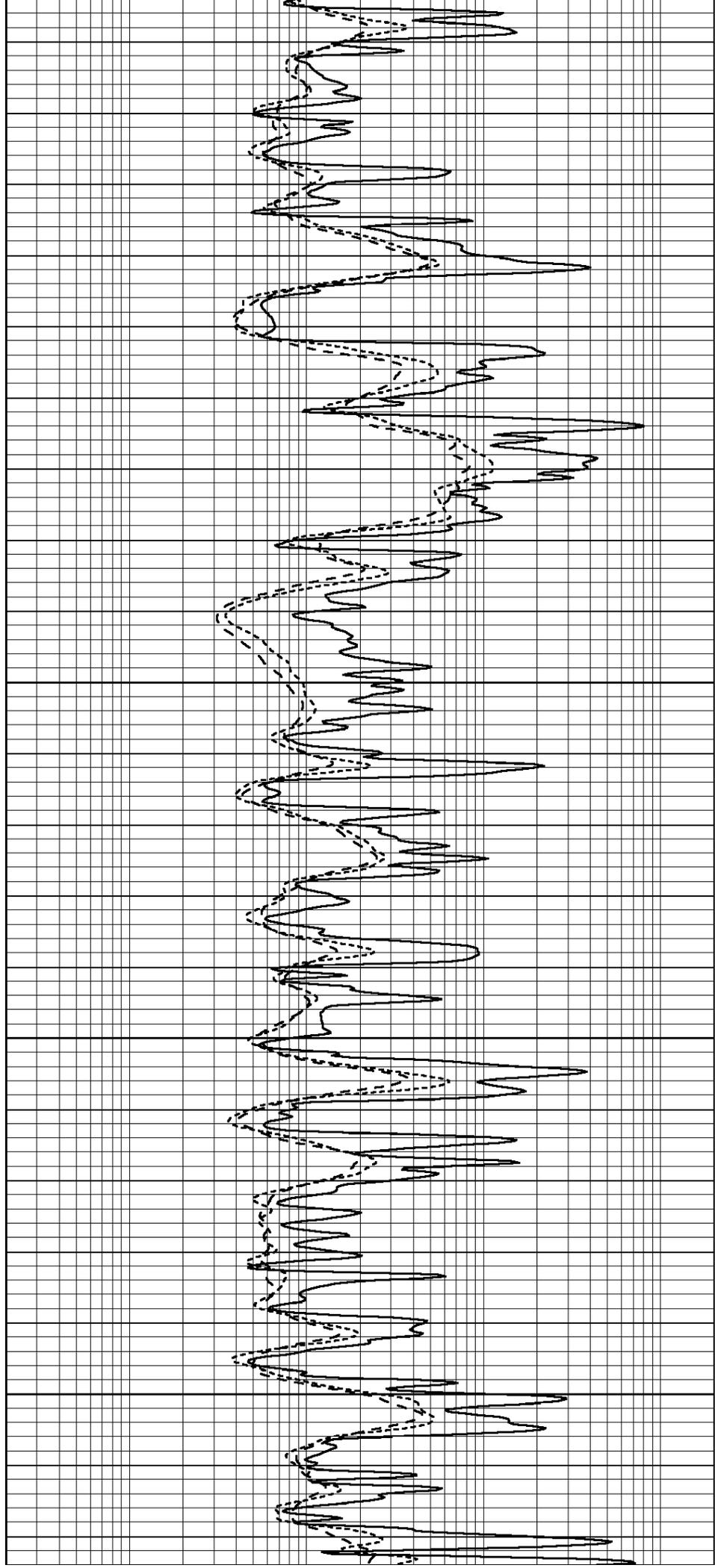


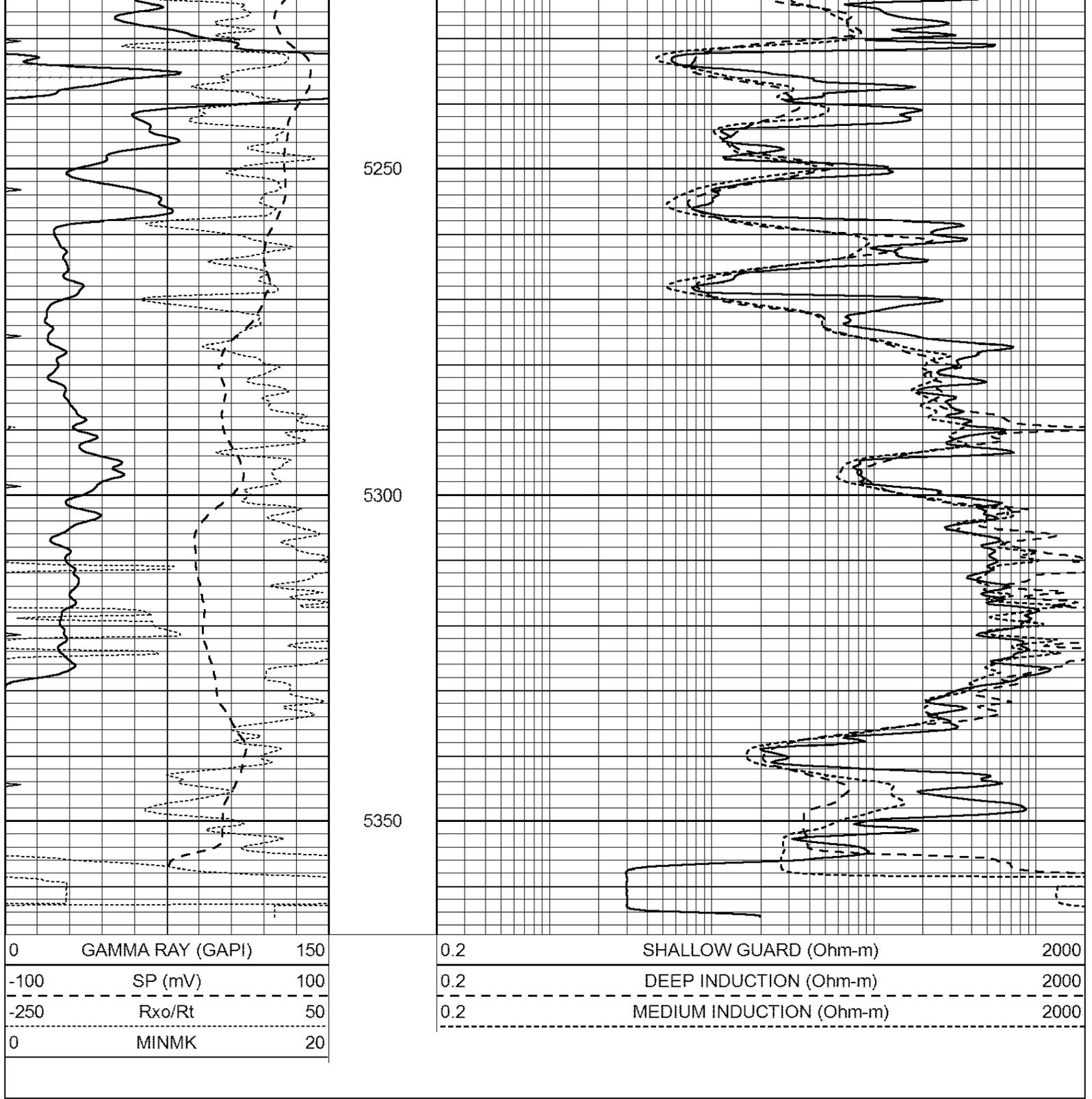
5050

5100

5150

5200





### Calibration Report

Database File: 24226pe.db  
 Dataset Pathname: pass3.3  
 Dataset Creation: Tue Apr 15 15:16:43 2014 by Calc Open-Cased 090629

### Dual Induction Calibration Report

|                                      |                          |
|--------------------------------------|--------------------------|
| Serial-Model:                        | PROBE8-DILG              |
| Surface Cal Performed:               | Fri Aug 01 06:33:19 2008 |
| 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 | 632.616 | -9.730  |
| Medium    | 0.029 | 0.796 | V | 0.000 | 464.000 | mmho/m | 605.049 | -17.680 |
| 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: 001      Model: PRB

| Master Calibration |            | Performed Thu Sep 17 09:57:21 2009 |          |                     |  |  |         |
|--------------------|------------|------------------------------------|----------|---------------------|--|--|---------|
|                    | Background | Magnesium                          | Aluminum | Sandstone           |  |  |         |
| Window 1           | 2056.0     | 9796.8                             | 3673.1   | 10821.3             |  |  | cps     |
| Window 2           | 1920.0     | 8541.1                             | 3303.5   | 9307.2              |  |  | cps     |
| Window 3           | 1563.1     | 4735.7                             | 2212.8   | 5017.5              |  |  | cps     |
| Window 4           | 466.0      | 466.1                              | 465.6    | 471.5               |  |  | cps     |
| Long Space         | 0.0        | 6621.1                             | 1383.5   | 7387.2              |  |  | cps     |
| Short Space        | 2.5        | 2361.7                             | 1523.2   | 2534.0              |  |  | cps     |
| Rho                |            | 1.7100                             | 2.5900   | 1.3800              |  |  | g/cc    |
| Pe                 |            | 0.0000                             | 2.5700   | 1.5500              |  |  |         |
| Rib Angle          | : 44.4     | Rib Slope                          | : 0.978  | Density/Spine Ratio |  |  | : 0.541 |
| Spine Angle        | : 74.4     | Spine Slope                        | : 3.570  | Spine Intercept     |  |  | : -18.9 |

| Before Survey Verification |     | Performed Wed Dec 31 18:00:00 1969 |        |        |        |  |      |
|----------------------------|-----|------------------------------------|--------|--------|--------|--|------|
|                            |     |                                    |        |        |        |  |      |
| Window 1                   | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Window 2                   | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Window 3                   | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Window 4                   | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Long Space                 | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Short Space                | 0.0 | 0.0                                | 0.0    | 0.0    | 0.0    |  | cps  |
| Measured Rho               |     | 0.0000                             | 0.0000 | 0.0000 | 0.0000 |  | g/cc |
| Measured Correction        |     | 0.0000                             | 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: 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: Fri Nov 29 08:34:37 2013

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 276.0 cps

Sensitivity: 0.6035 GAPI/cps