



## DUAL INDUCTION LOG

|                                                 |                |                                 |  |
|-------------------------------------------------|----------------|---------------------------------|--|
| Company H & D EXPLORATION, LLC.                 |                | Company H & D EXPLORATION, LLC. |  |
| Well DEBES UNIT #1                              |                | Well DEBES UNIT #1              |  |
| Field UNNAMED                                   |                | Field UNNAMED                   |  |
| County STAFFORD                                 |                | County STAFFORD                 |  |
| State KANSAS                                    |                | State KANSAS                    |  |
| Location: API # : 15-185-24145-0000             |                | Other Services                  |  |
| Permanent Datum SEC 27 TWP 25S RGE 11W          |                | CDL/CNL                         |  |
| Log Measured From GROUND LEVEL Elevation 1834   |                | MEL                             |  |
| Drilling Measured From KELLY BUSHING 10' A.G.L. |                | Elevation                       |  |
|                                                 |                | K.B. 1844                       |  |
|                                                 |                | D.F. 1842                       |  |
|                                                 |                | G.L. 1834                       |  |
| Date 8/1/23                                     | Run Number ONE |                                 |  |
| Depth Driller                                   | 4135           |                                 |  |
| Depth Logger                                    | 4134           |                                 |  |
| Bottom Logged Interval                          | 4132           |                                 |  |
| Top Log Interval                                | 00             |                                 |  |
| Casing Driller                                  | 8 5/8 @ 647    |                                 |  |
| Casing Logger                                   | 647            |                                 |  |
| Bit Size                                        | 7 7/8          |                                 |  |
| Type Fluid in Hole                              | CHEMICAL MUD   | CHLORIDES 8,000 PPM             |  |
| Density / Viscosity                             | 9.6+161        |                                 |  |
| pH / Fluid Loss                                 | 10.0/9.8       |                                 |  |
| Source of Sample                                | FLOWLINE       |                                 |  |
| Rm @ Meas. Temp                                 | .900 @ 78F     |                                 |  |
| Rmt @ Meas. Temp                                | .675 @ 78F     |                                 |  |
| Rmc @ Meas. Temp                                | 1.08 @ 78F     |                                 |  |
| Source of Rmf / Rmc                             | MEASUREMENT    |                                 |  |
| Rm @ BHT                                        | .600 @ 117F    |                                 |  |
| Time Circulation Stopped                        | 2 HOURS        |                                 |  |
| Time Logger on Bottom                           | 9:00 P.M.      |                                 |  |
| Maximum Recorded Temperature                    | 117F           |                                 |  |
| Equipment Number                                | 8916           |                                 |  |
| Location                                        | HAYS, KANSAS   |                                 |  |
| Recorded By                                     | COLE ROBBEN    |                                 |  |
| Witnessed By                                    | JIM MUSGROVE   |                                 |  |

<<< Fold Here >>>

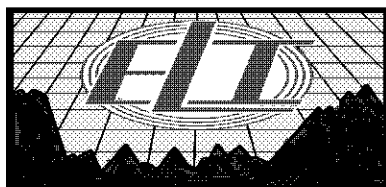
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395

### DIRECTIONS:

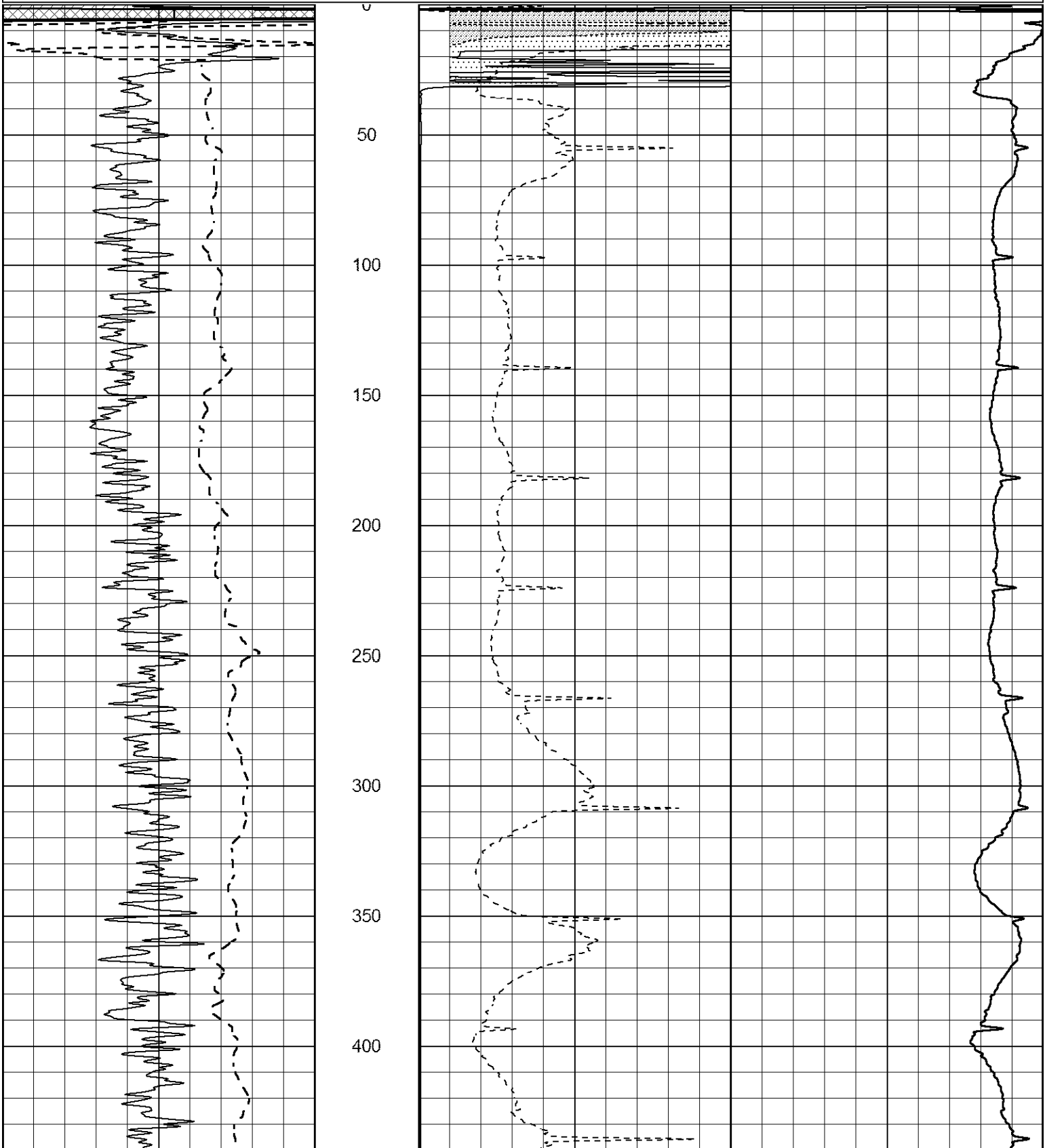
FROM STAFFORD, KANSAS GO SOUTH 6 MILES TO ROAD 60, 4 MILES EAST TO 120TH AVE,  
1 1/8 MILE SOUTH PAST ROAD 70, EAST INTO

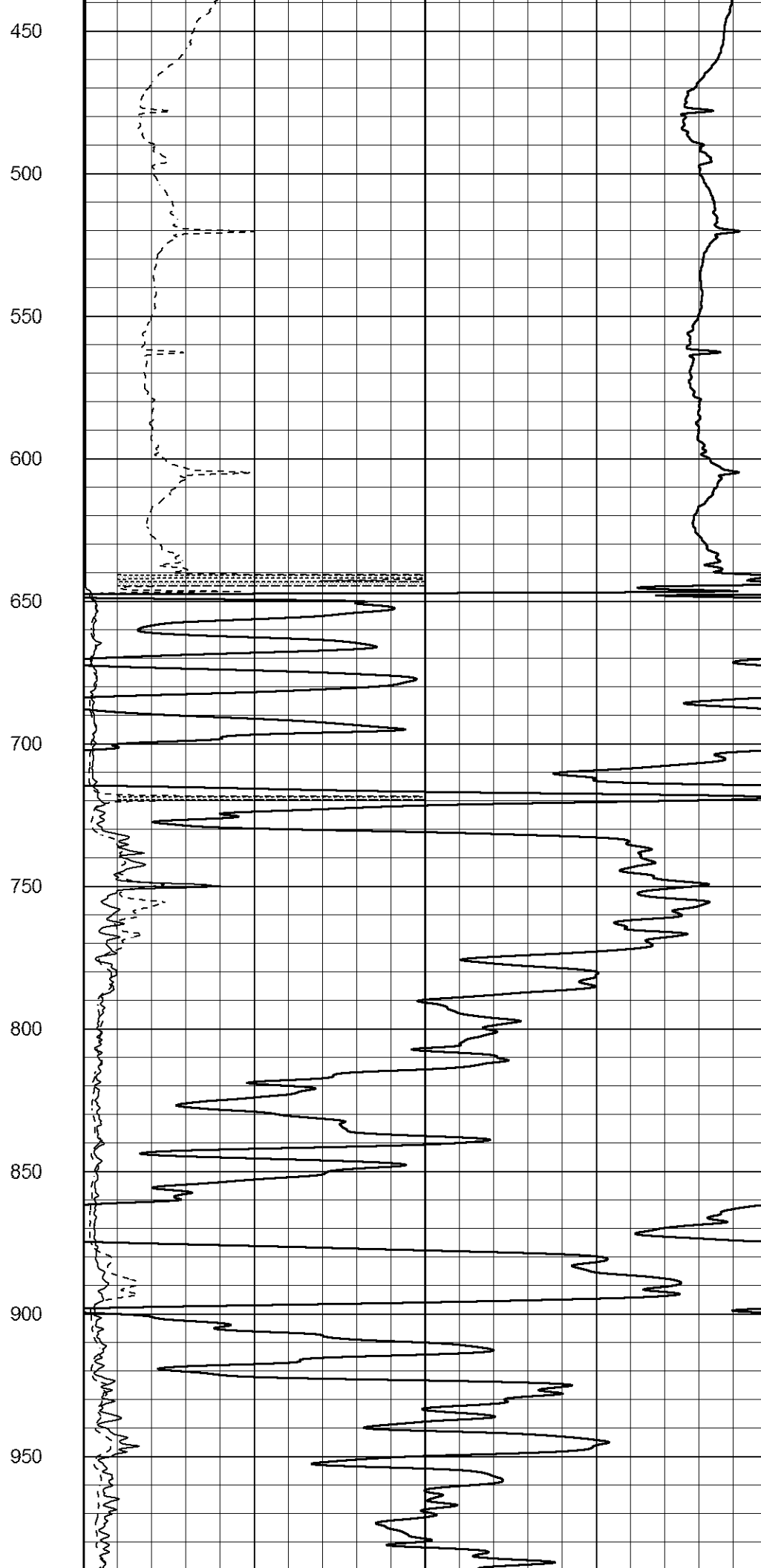
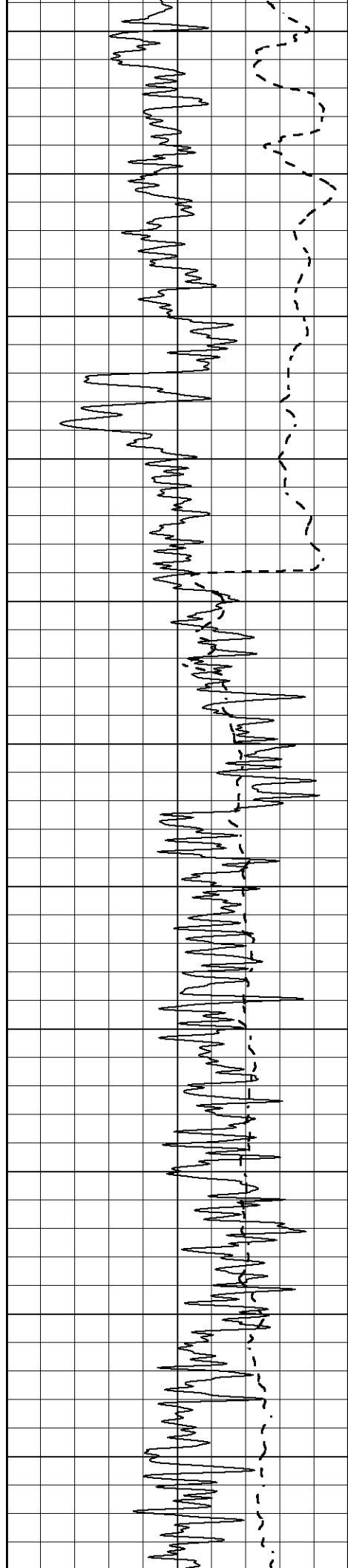


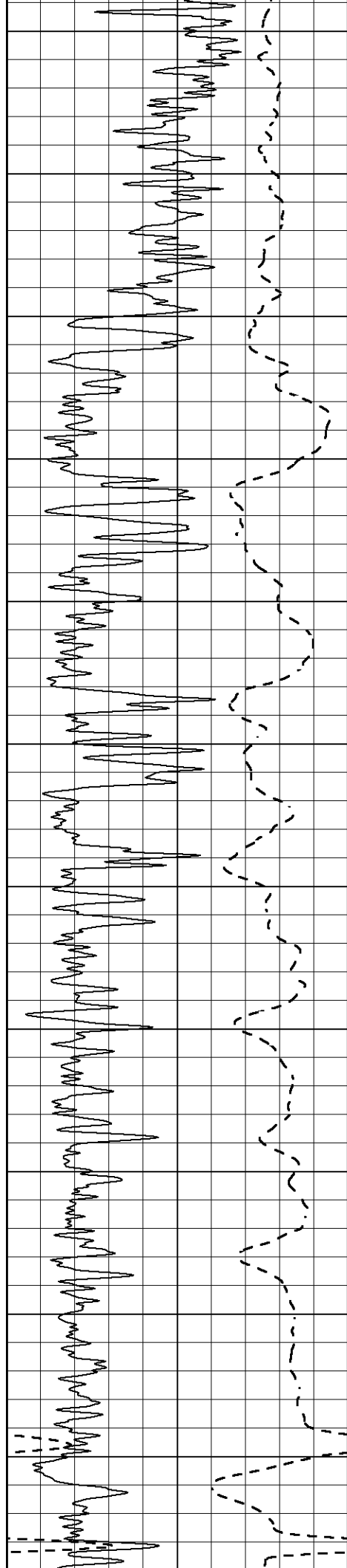
## MAIN SECTION

|                     |                            |
|---------------------|----------------------------|
| Database File       | 7708ddn.db                 |
| Dataset Pathname    | pass3M                     |
| Presentation Format | _dil2                      |
| Dataset Creation    | Tue Aug 01 22:45:13 2023   |
| Charted by          | Depth in Feet scaled 1:600 |

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







1000

1050

1100

1150

1200

1250

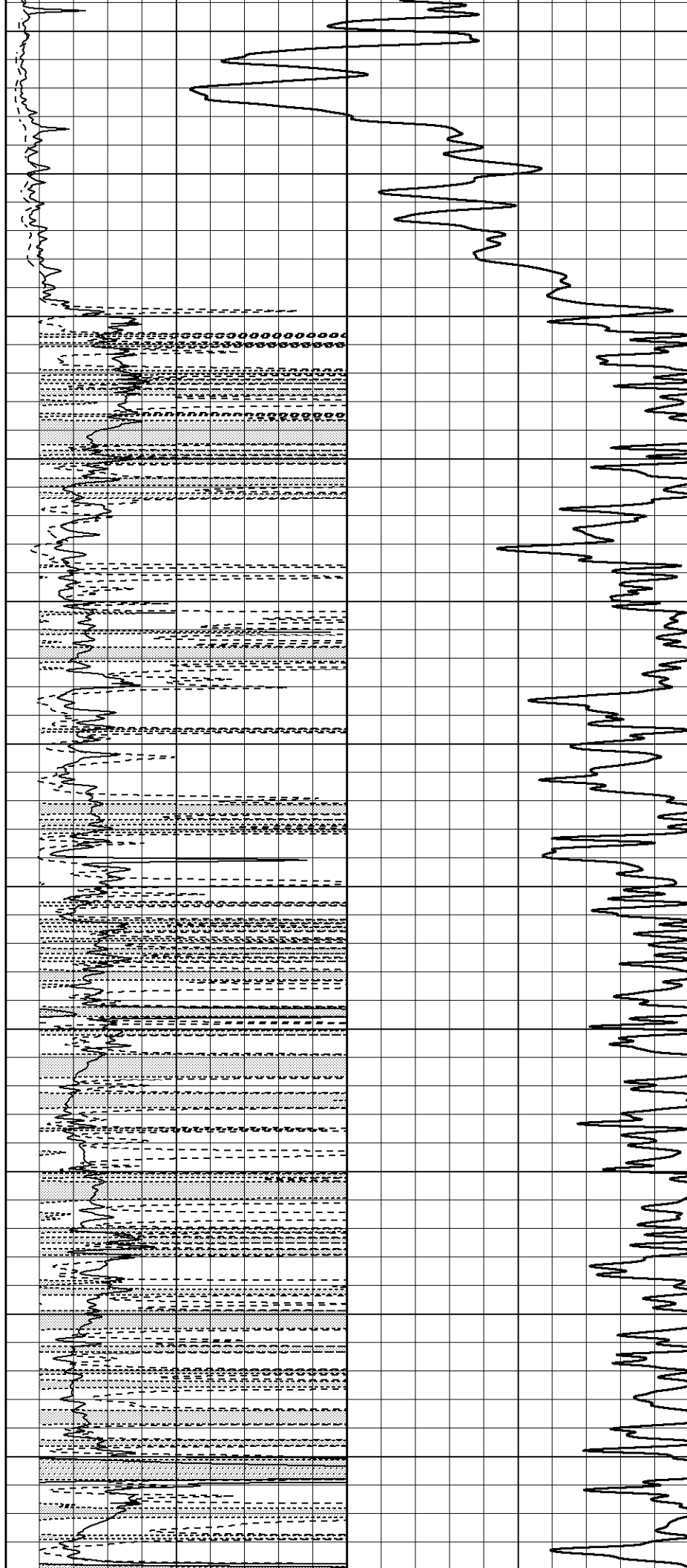
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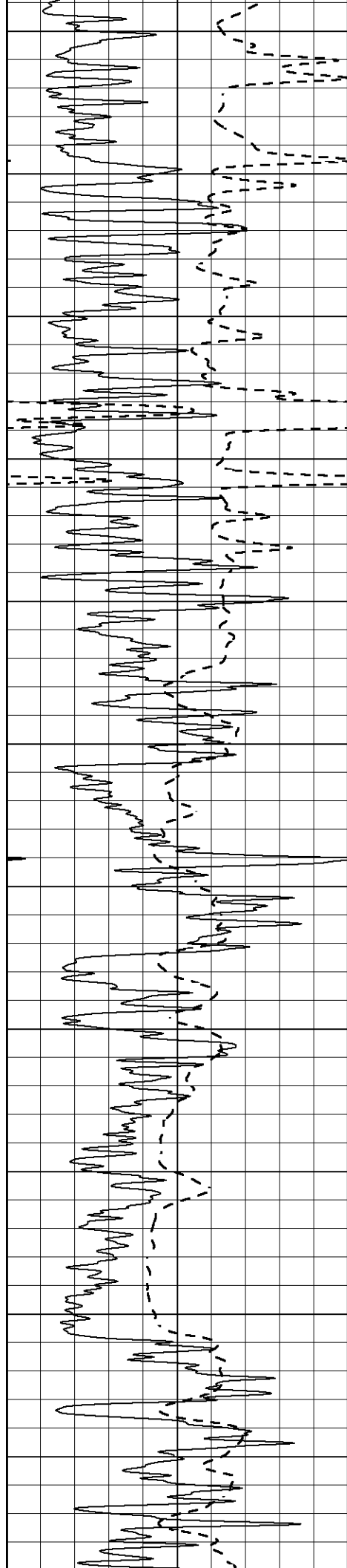
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1400

1450

1500





1550

1600

1650

1700

1750

1800

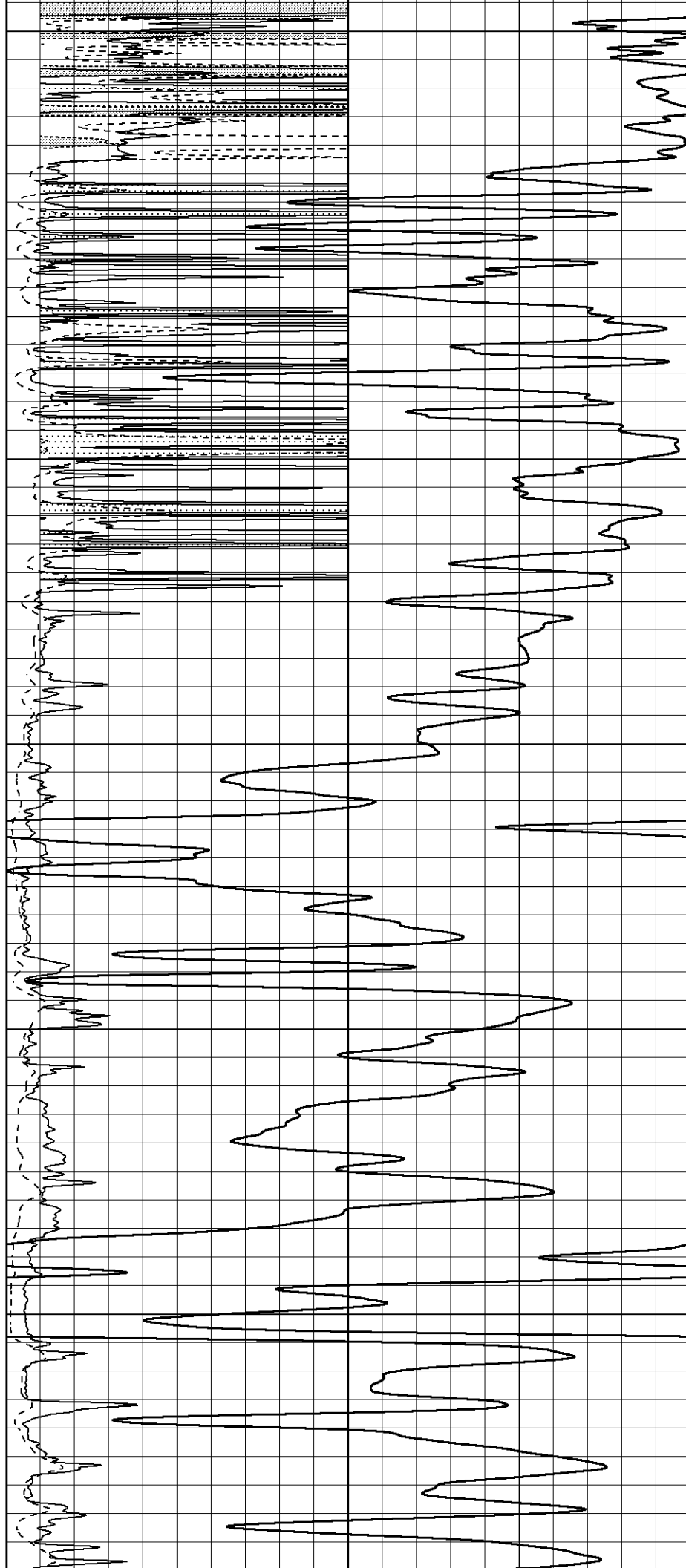
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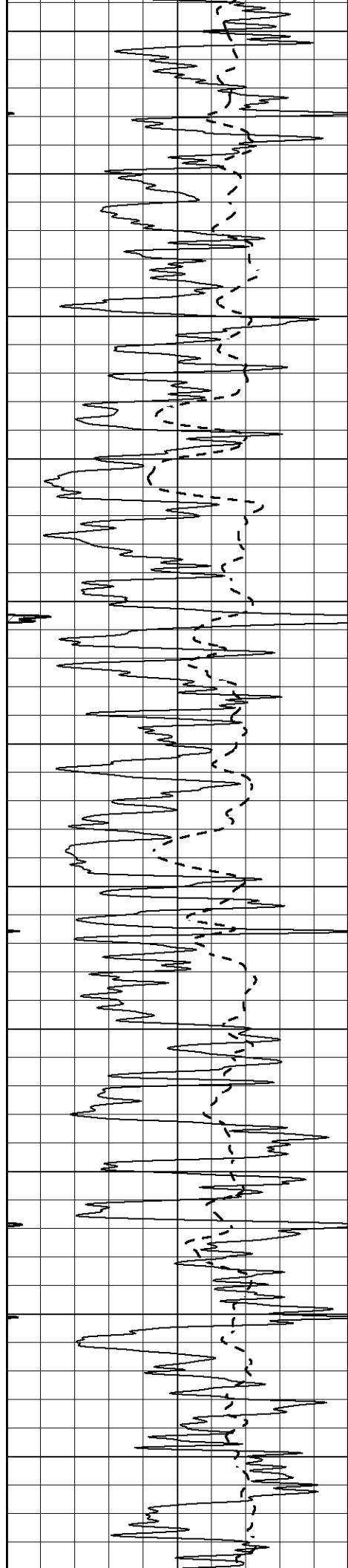
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

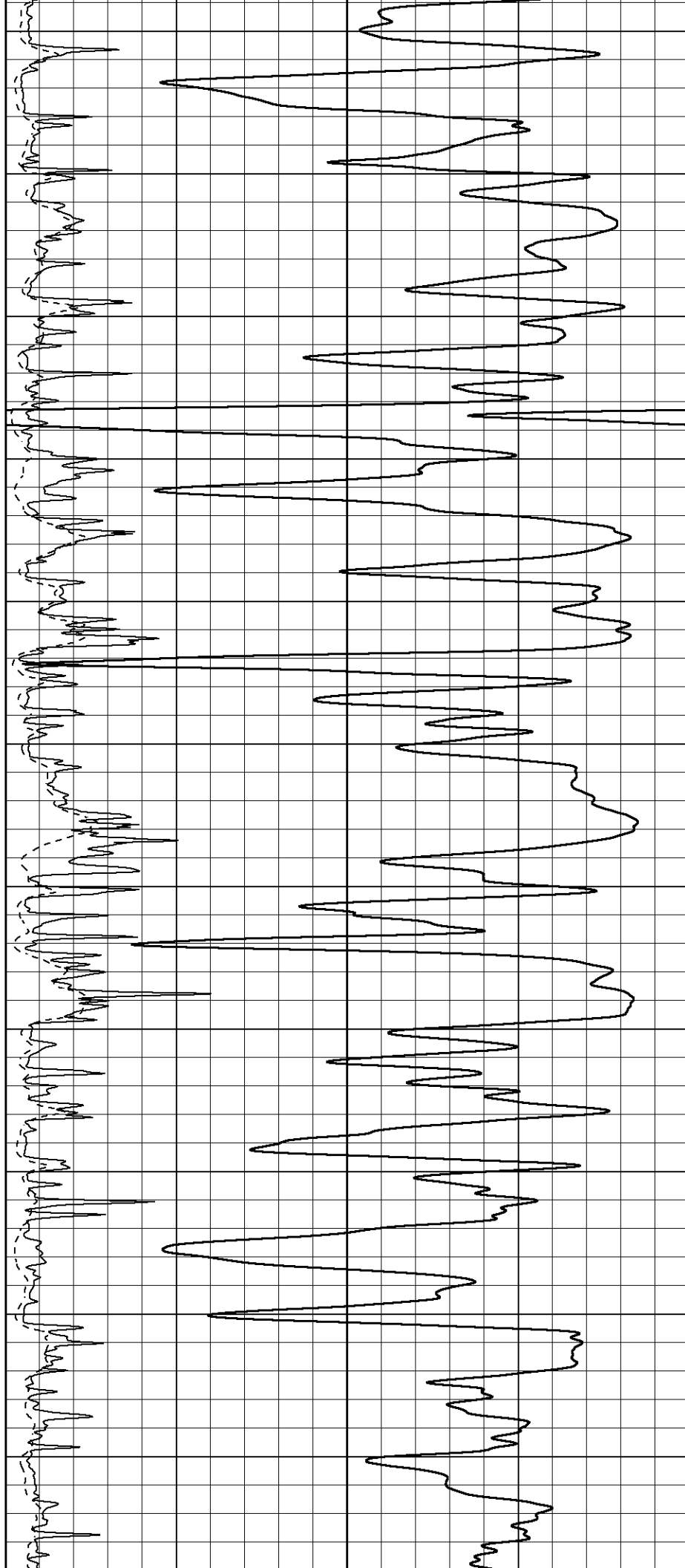
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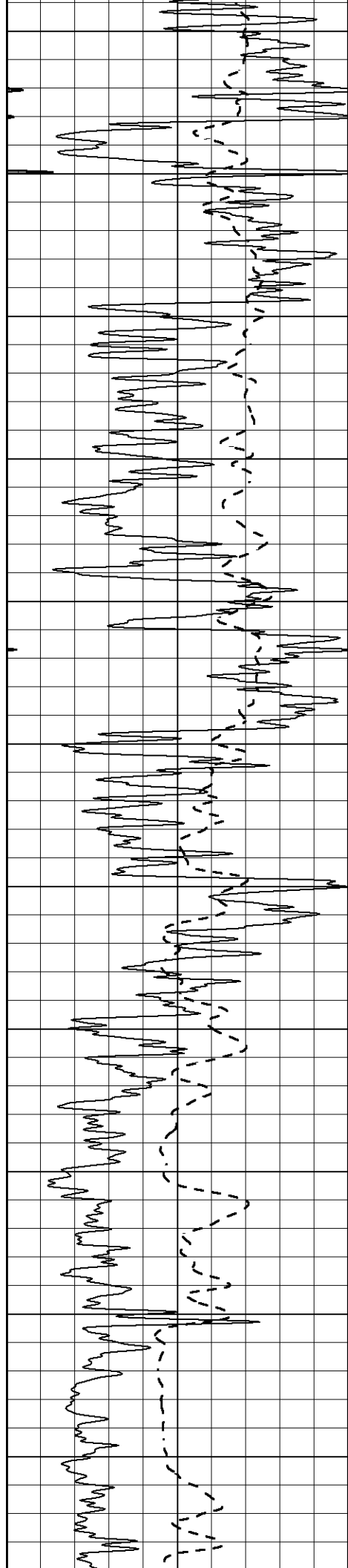
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2500

2550

2600





2650

2700

2750

2800

2850

2900

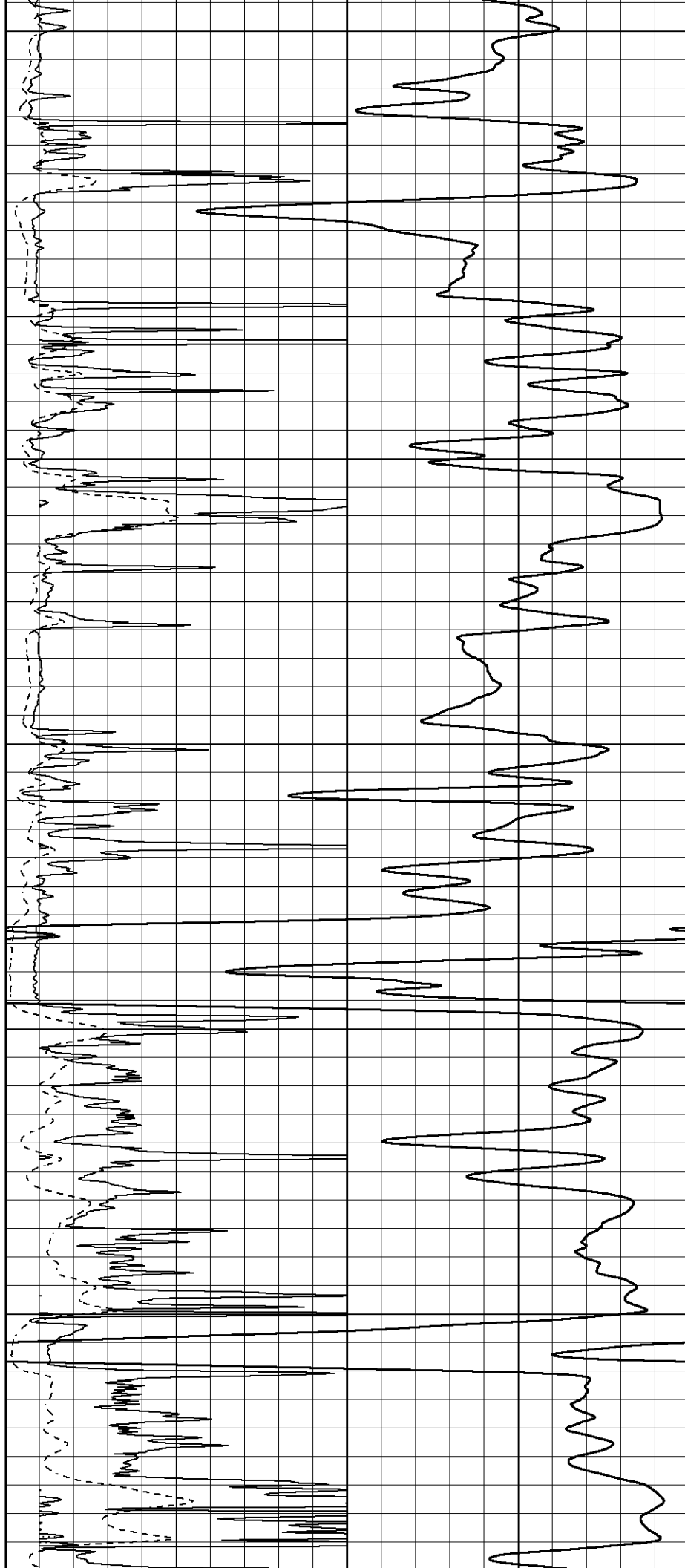
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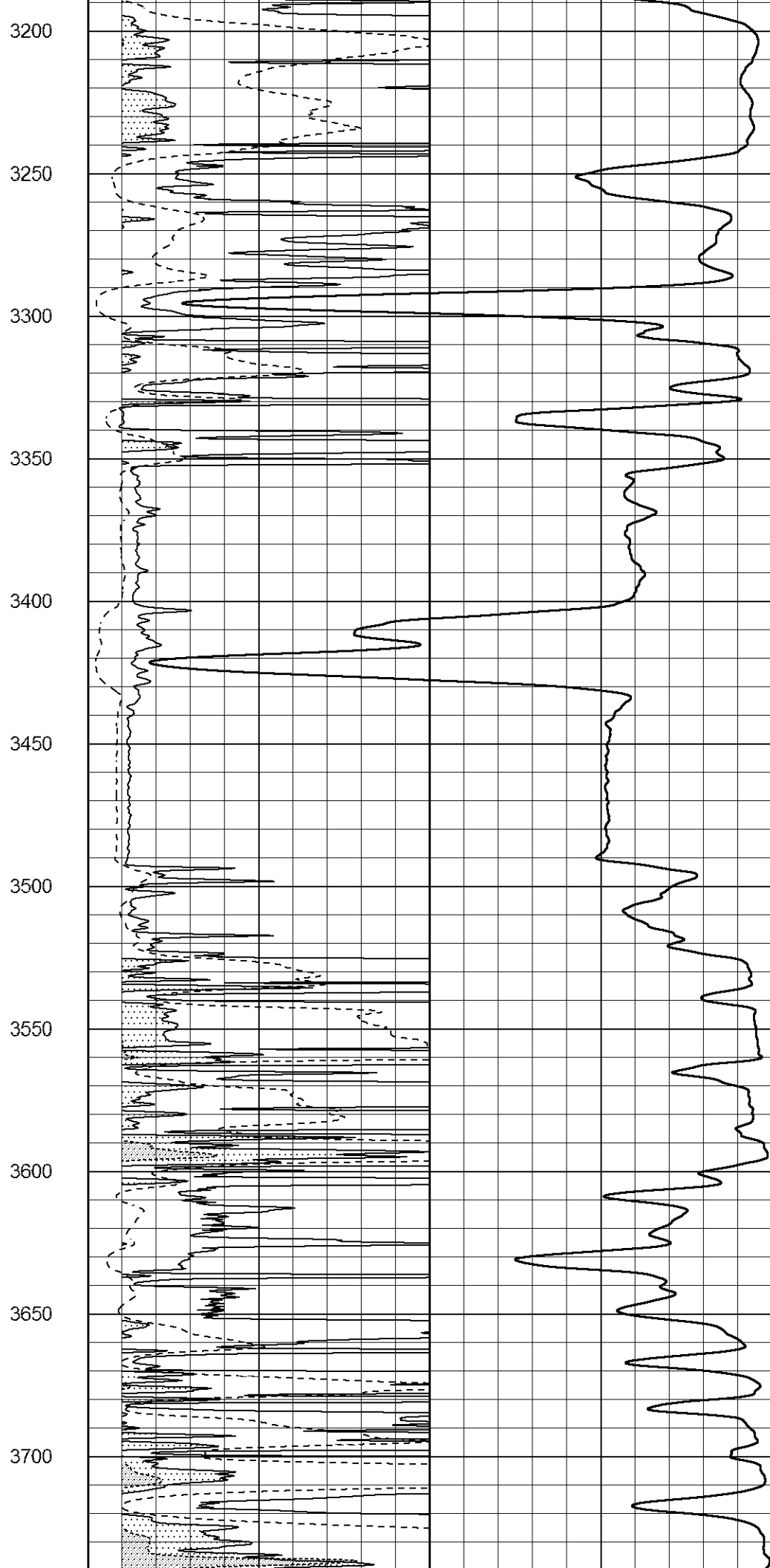
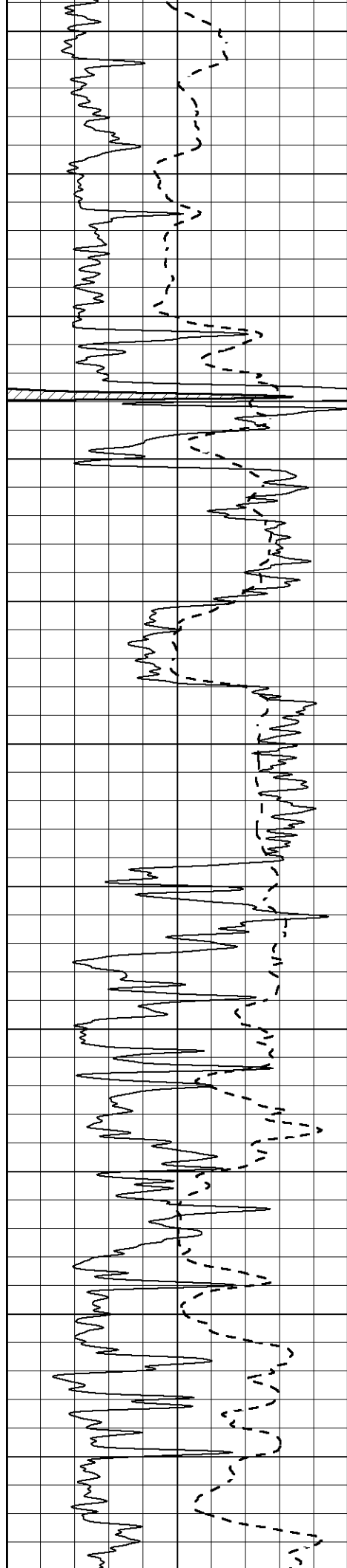
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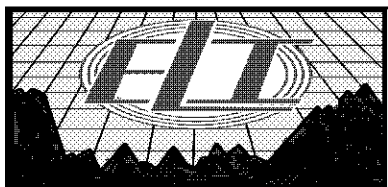
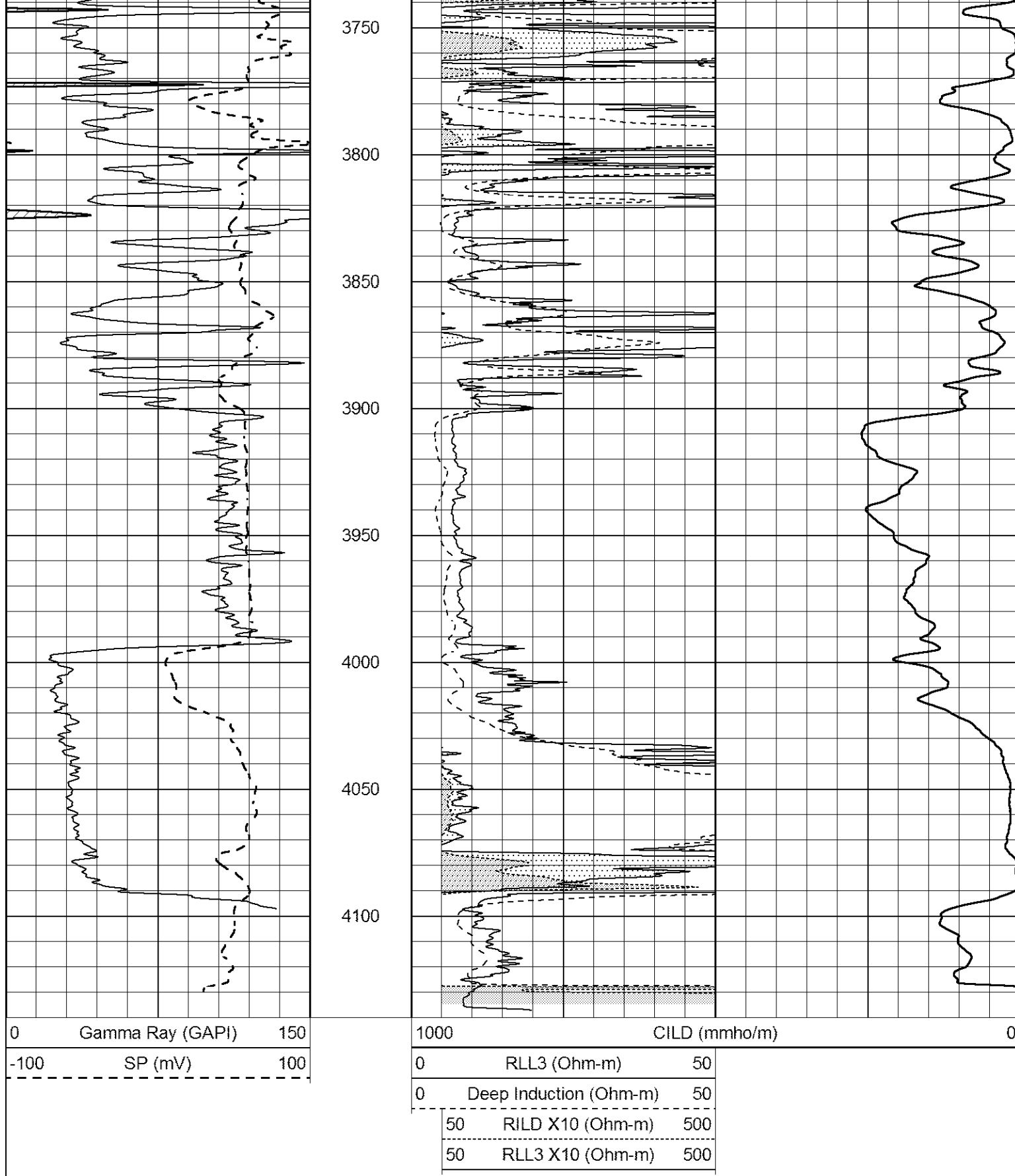
3050

3100

3150



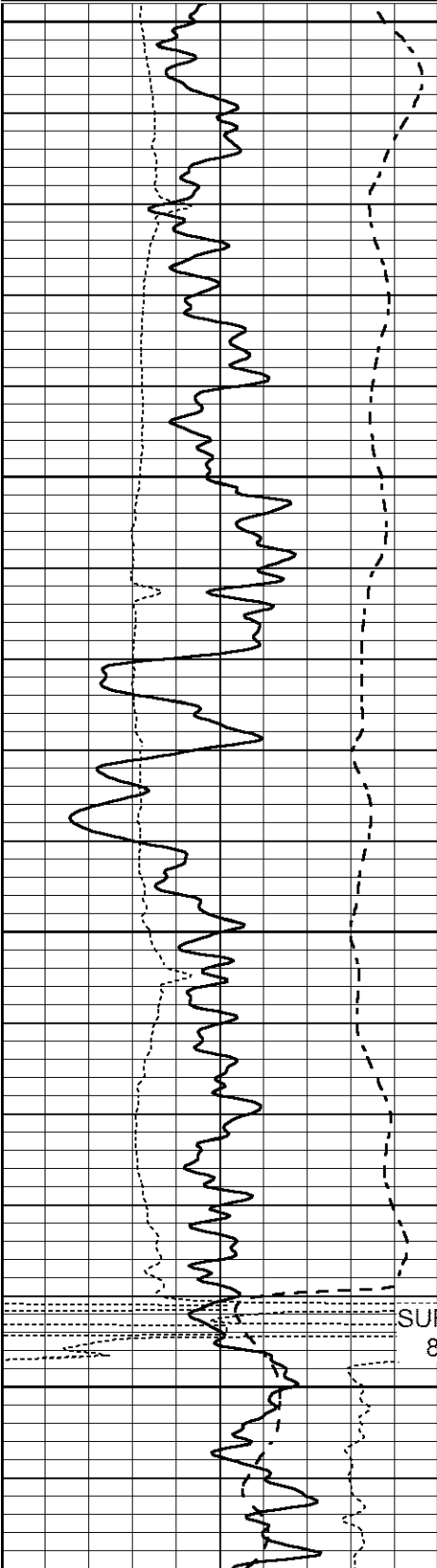




# SURFACE CASING

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

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



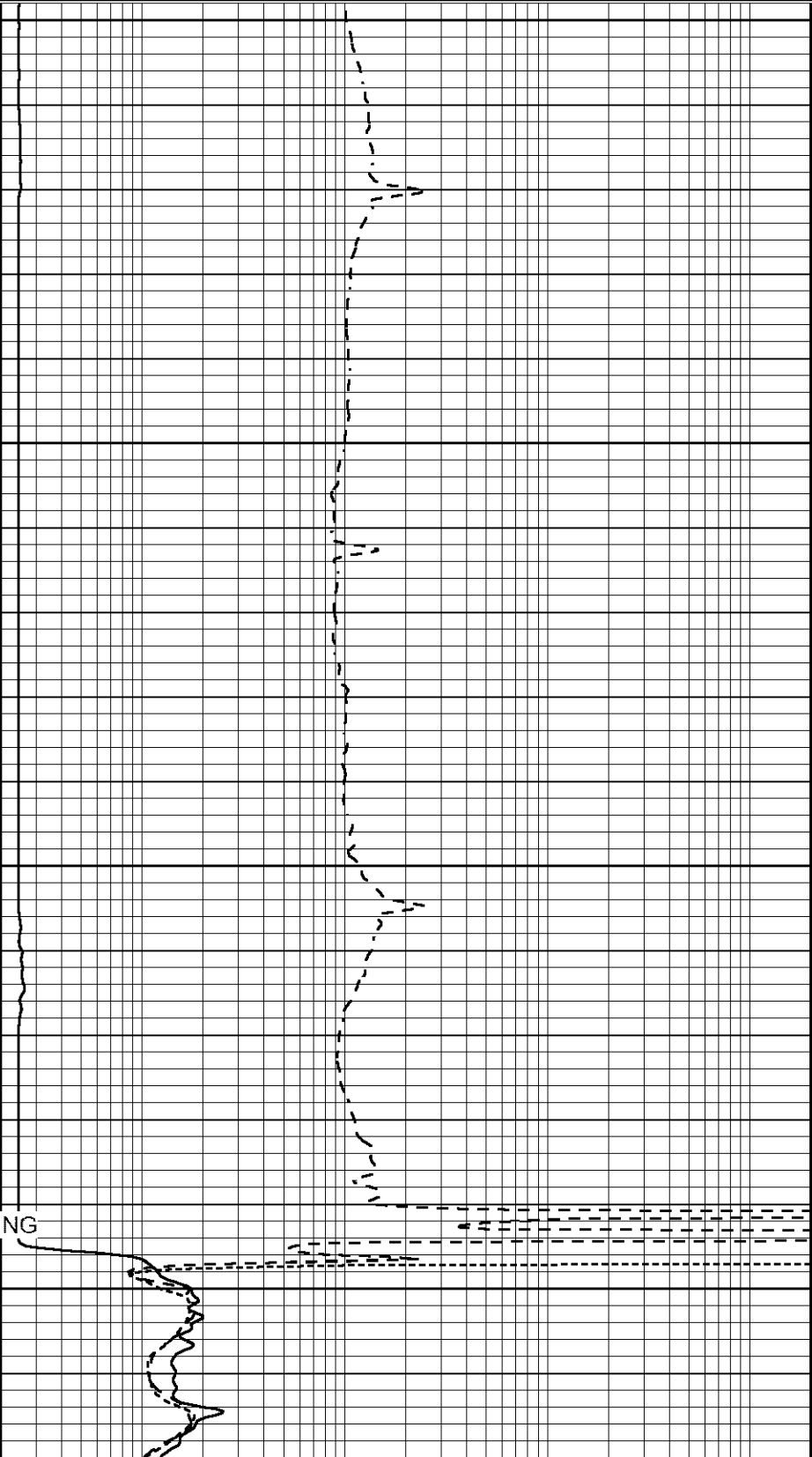
500

550

600

SURFACE CASING  
8 5/8" @ 647'

650



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

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

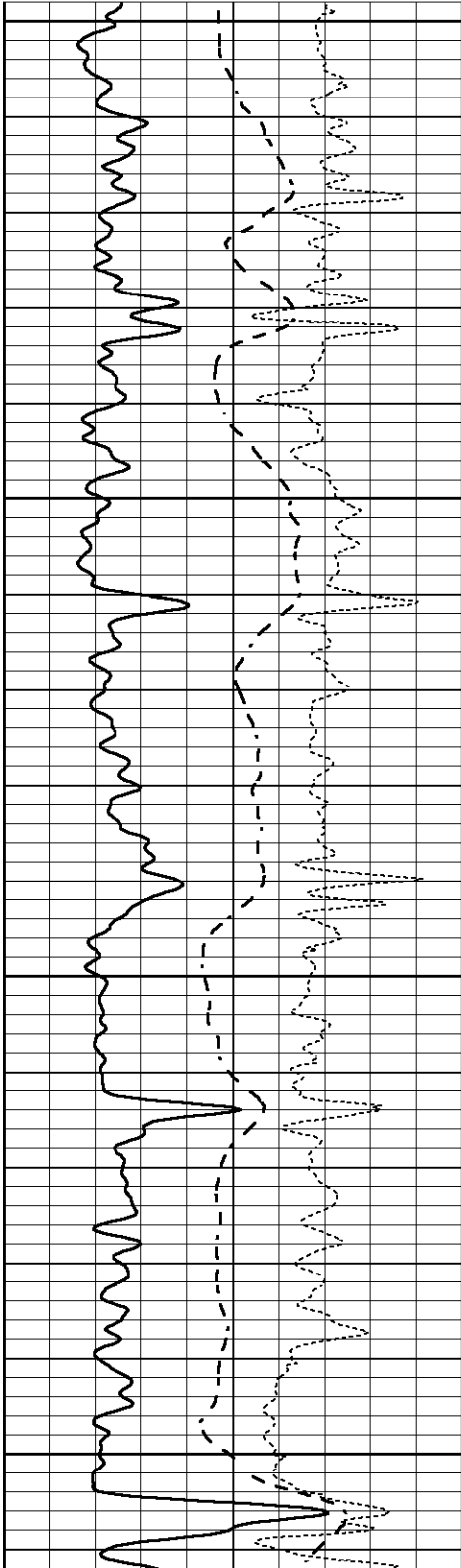


# MAIN SECTION

Database File 7708ddn.db  
Dataset Pathname pass3D  
Presentation Format \_dil  
Dataset Creation Tue Aug 01 22:27:34 2023  
Charted by Depth in Feet scaled 1:240

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

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

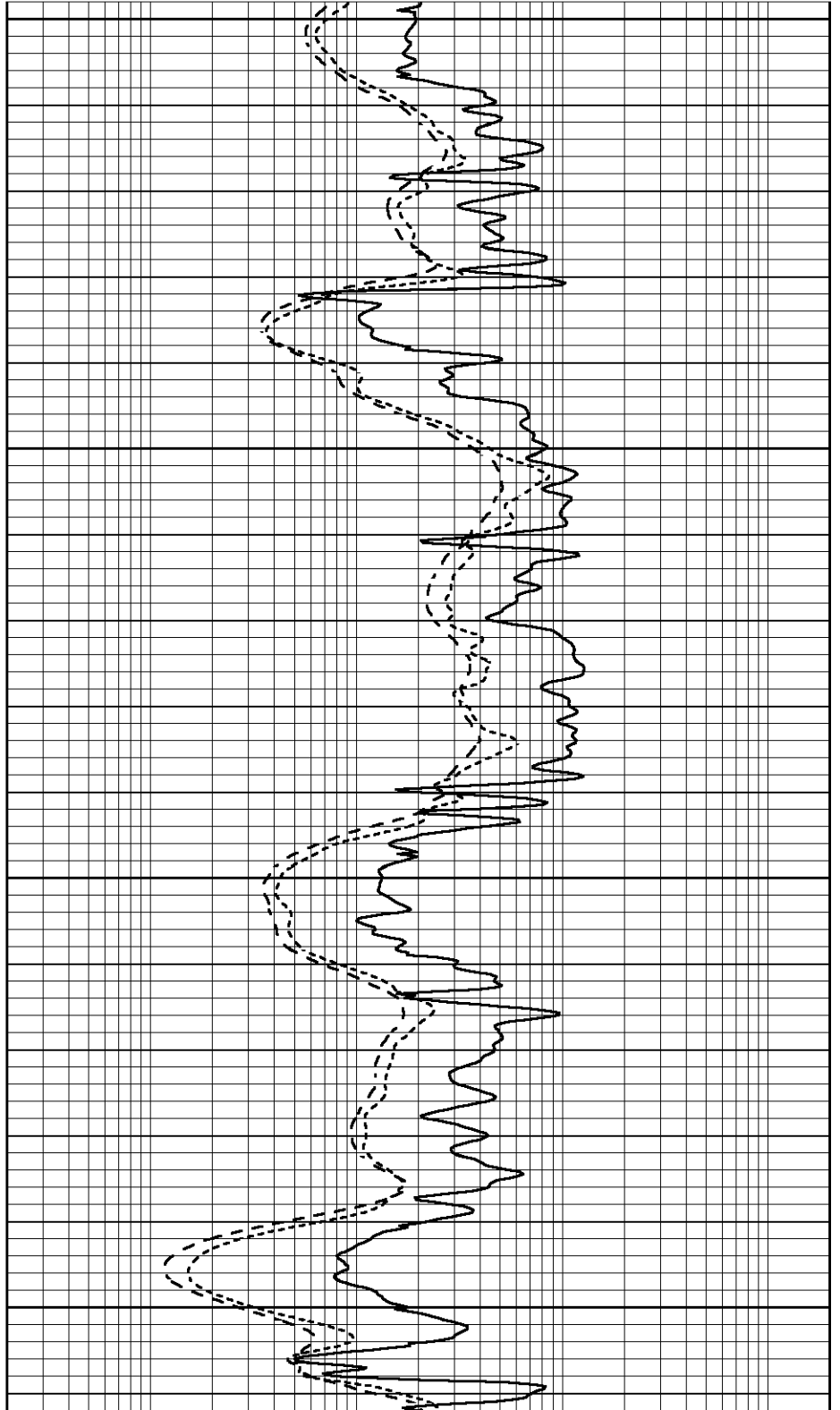


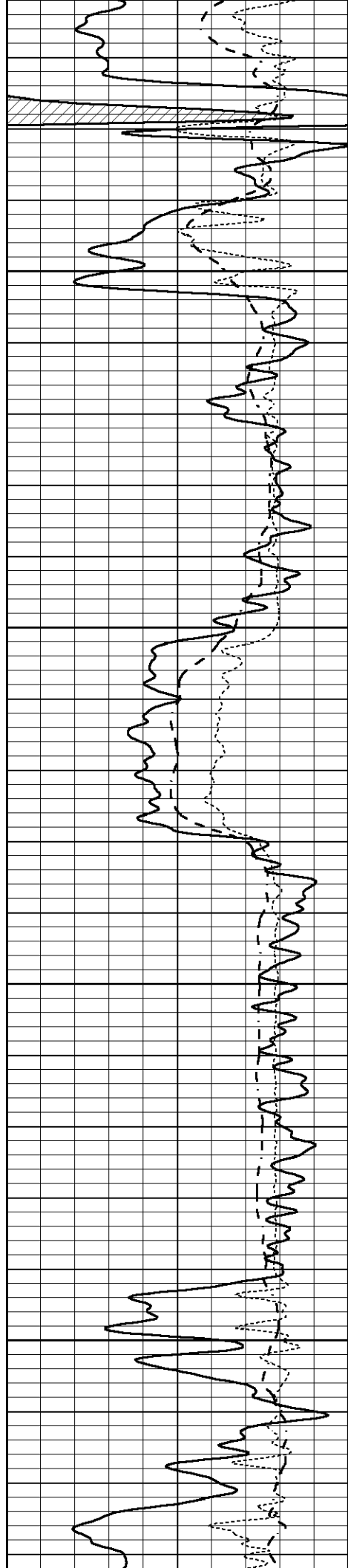
3150

3200

3250

3300



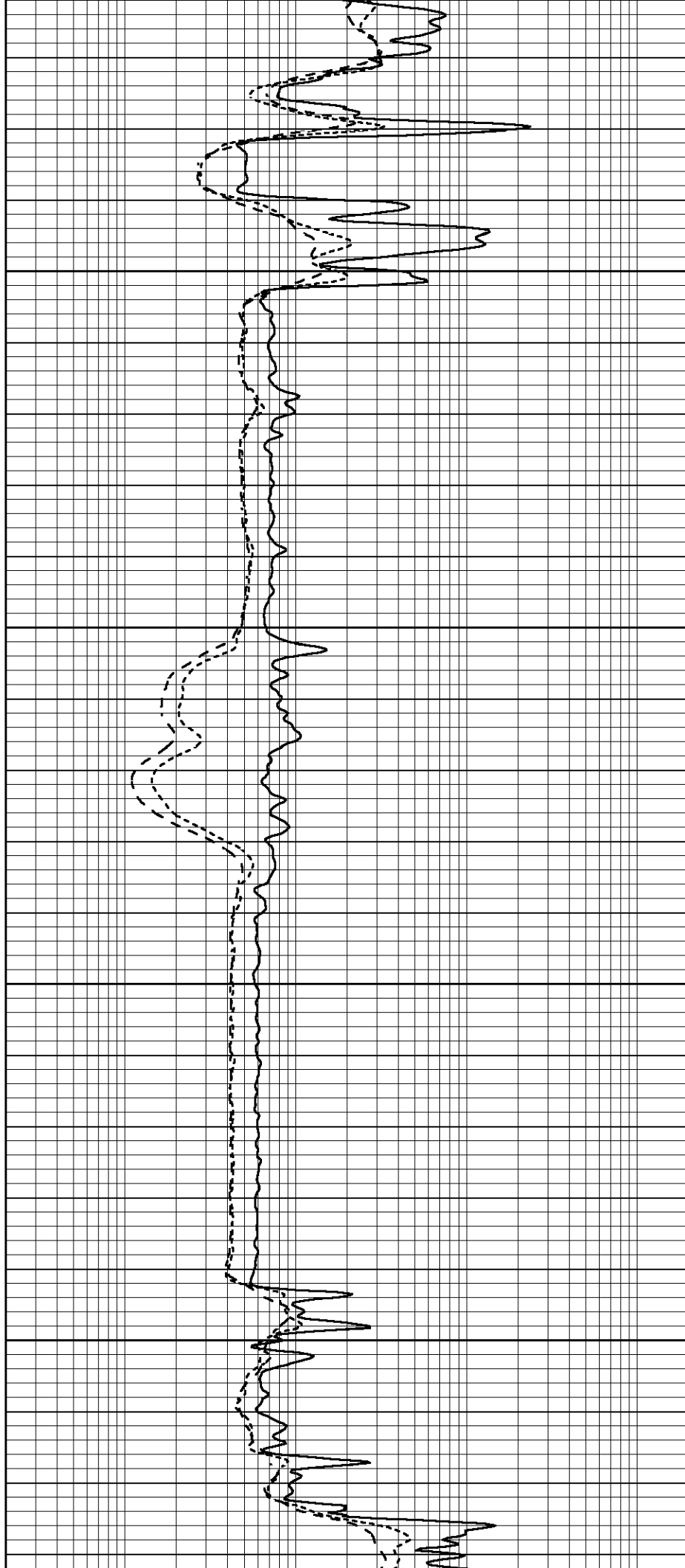


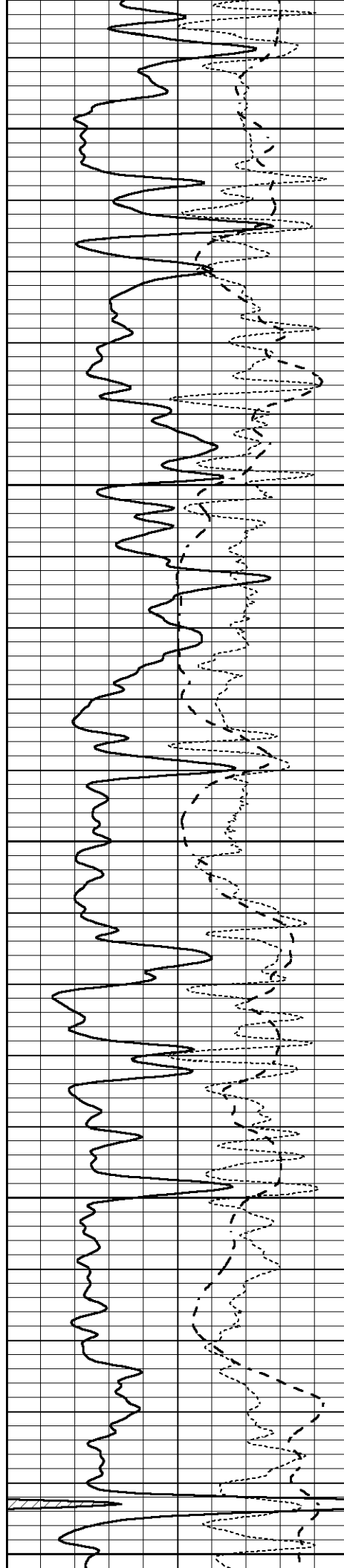
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3400

3450

3500





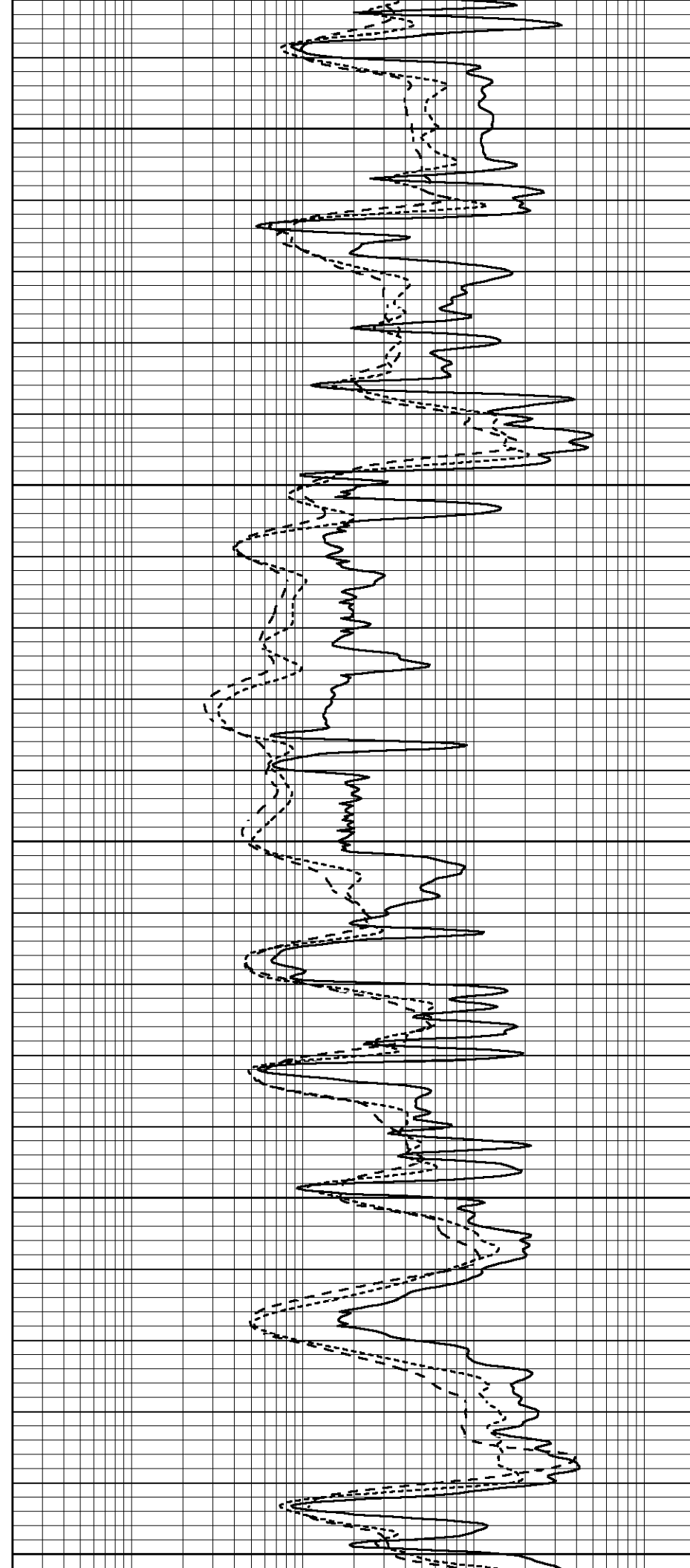
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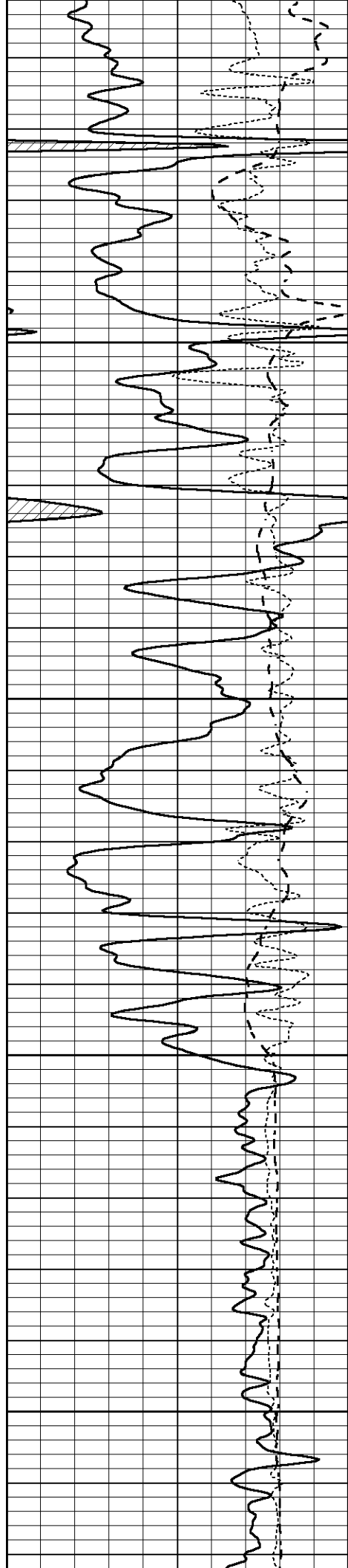
3600

3650

3700

3750



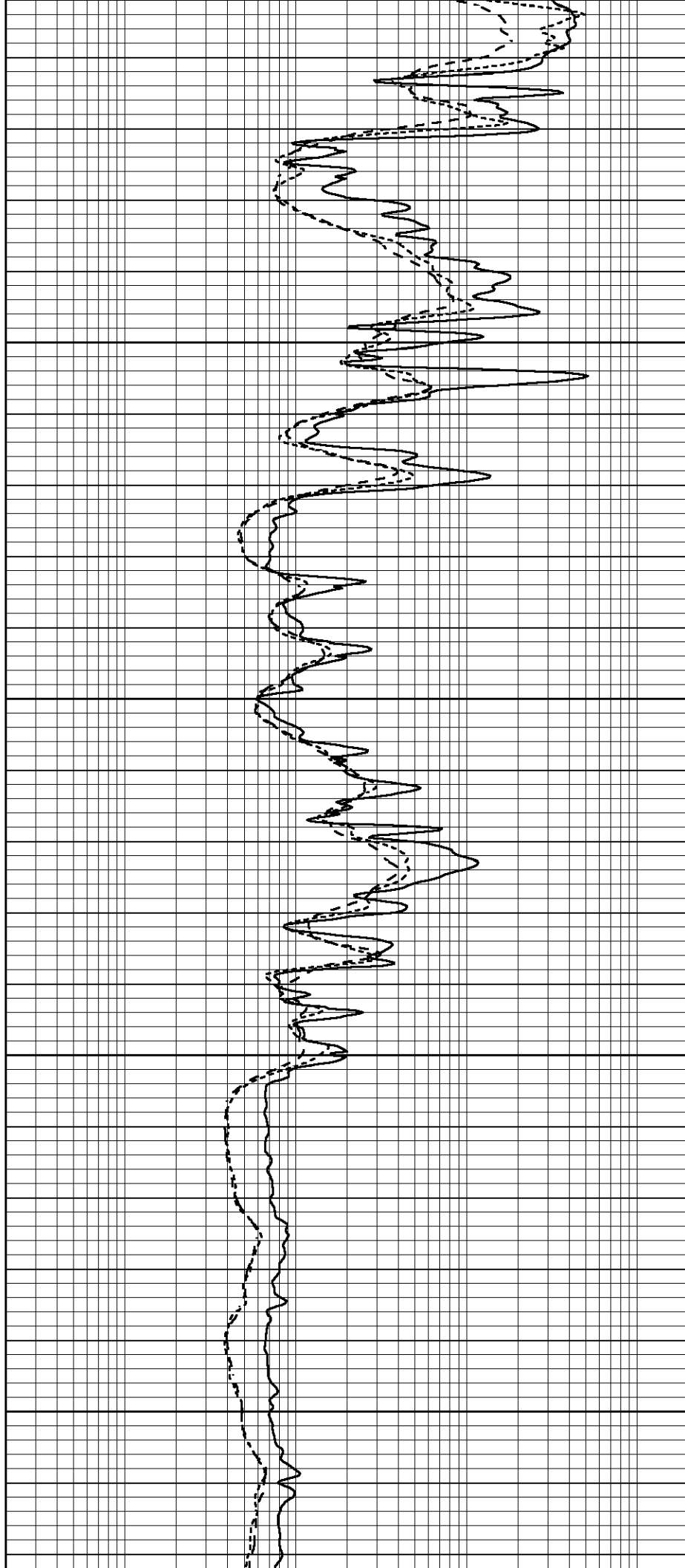


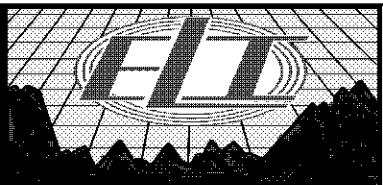
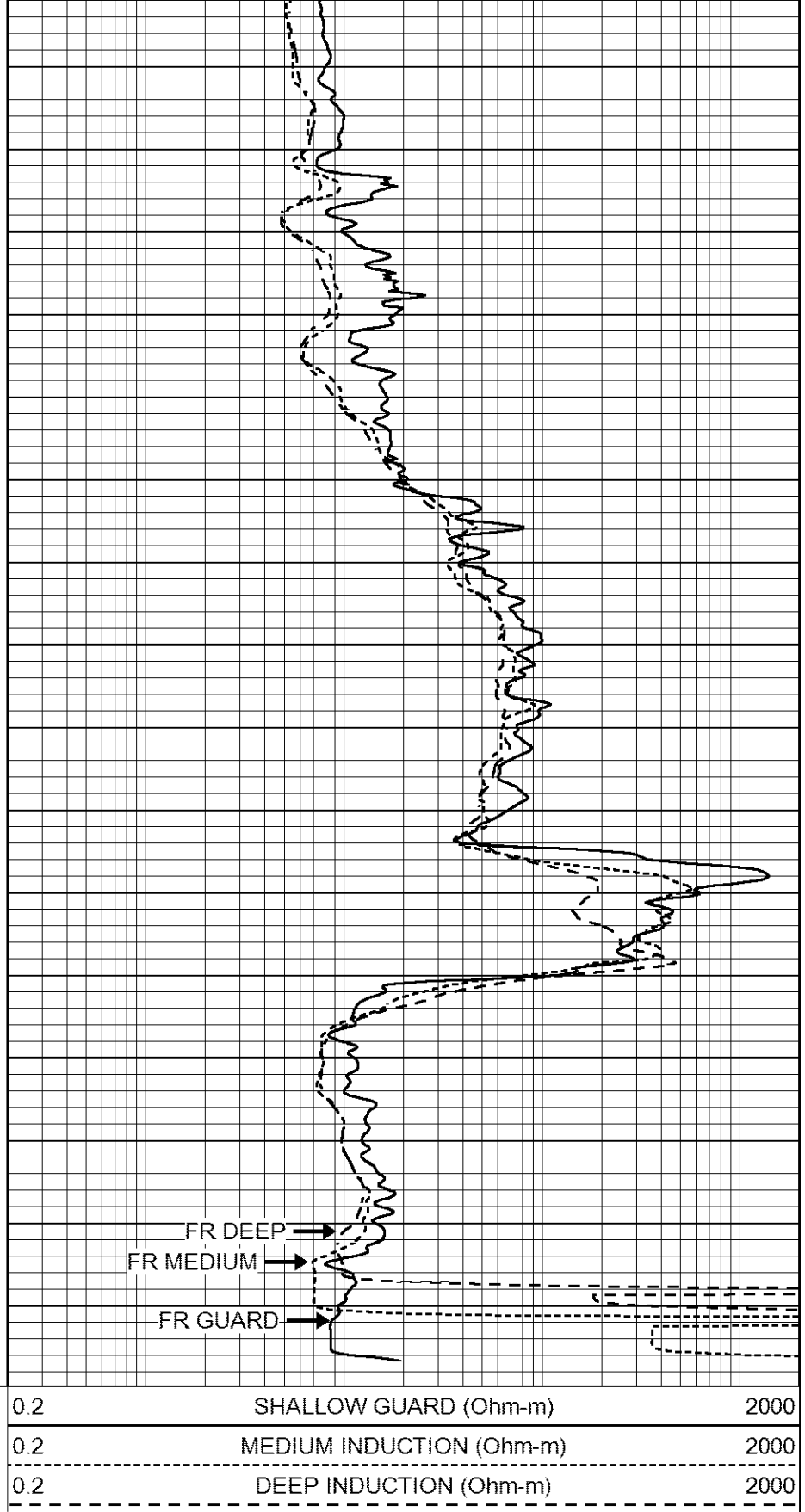
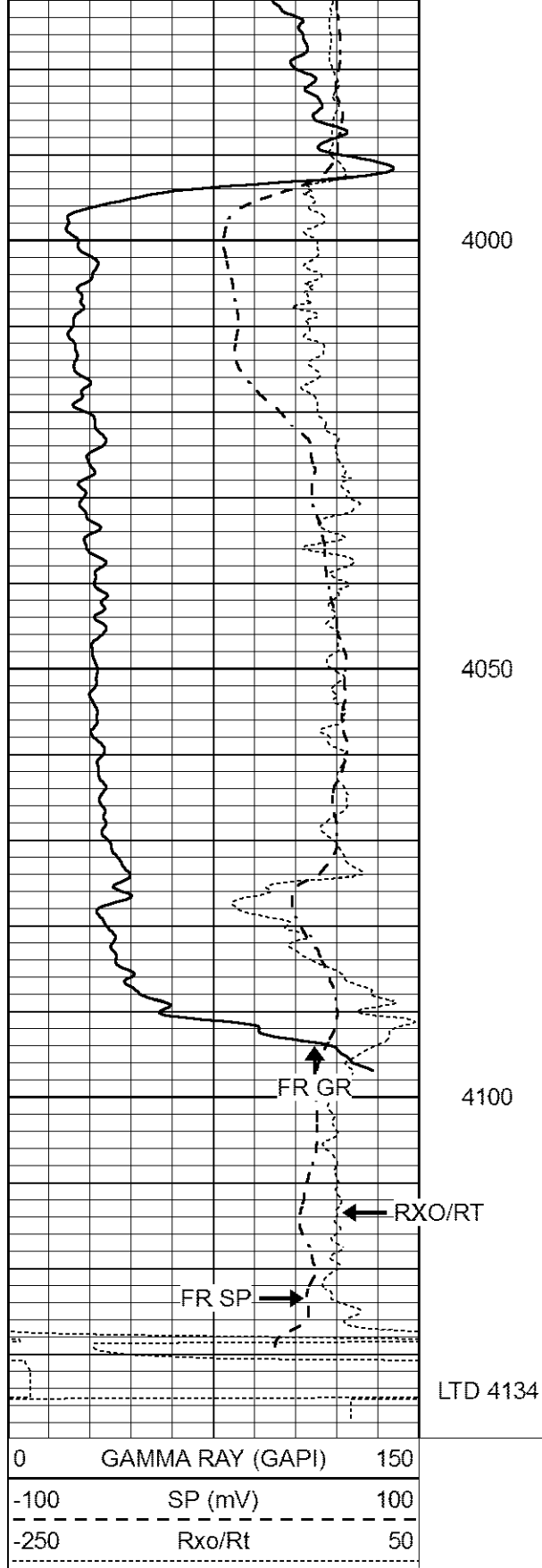
3800

3850

3900

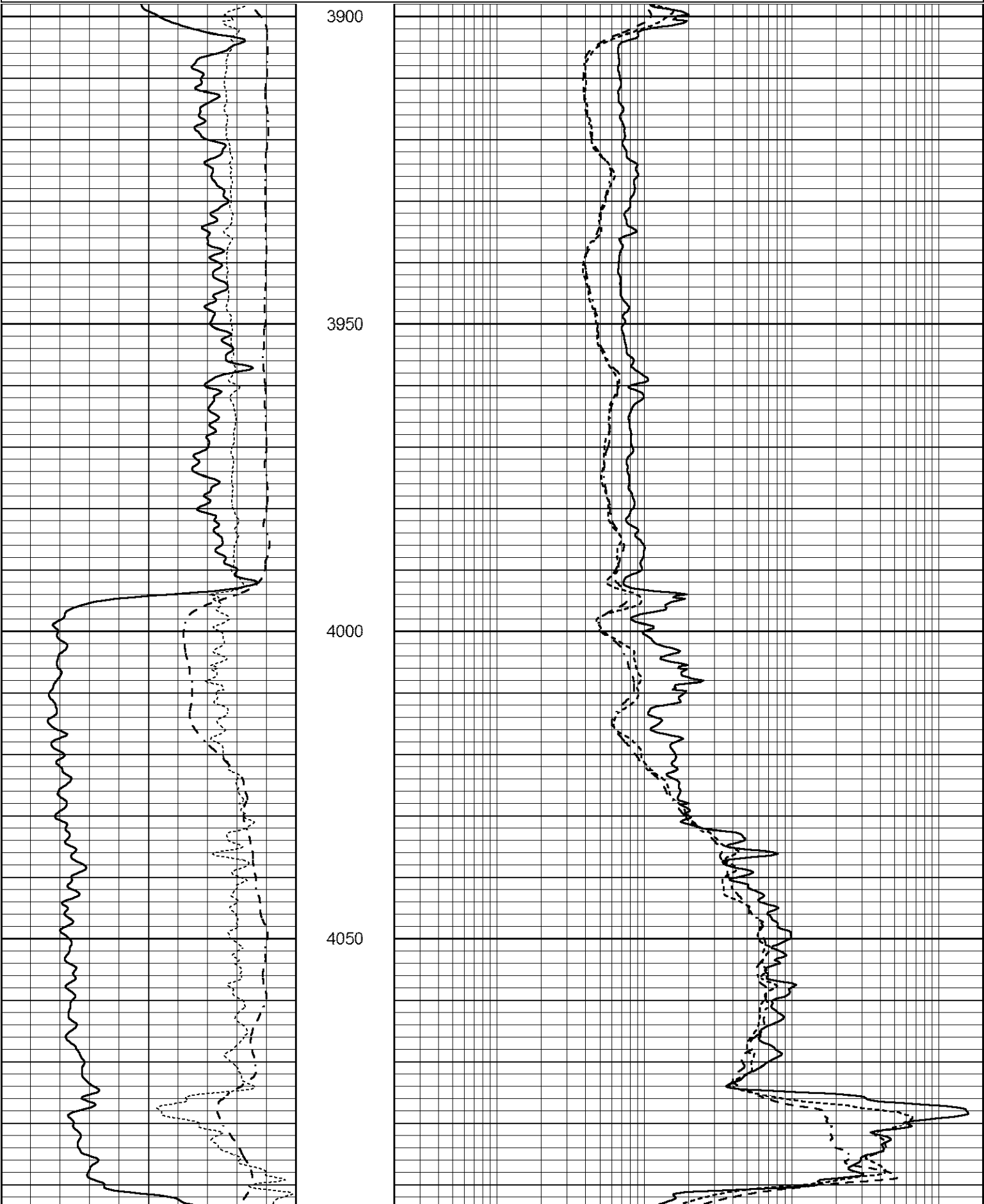
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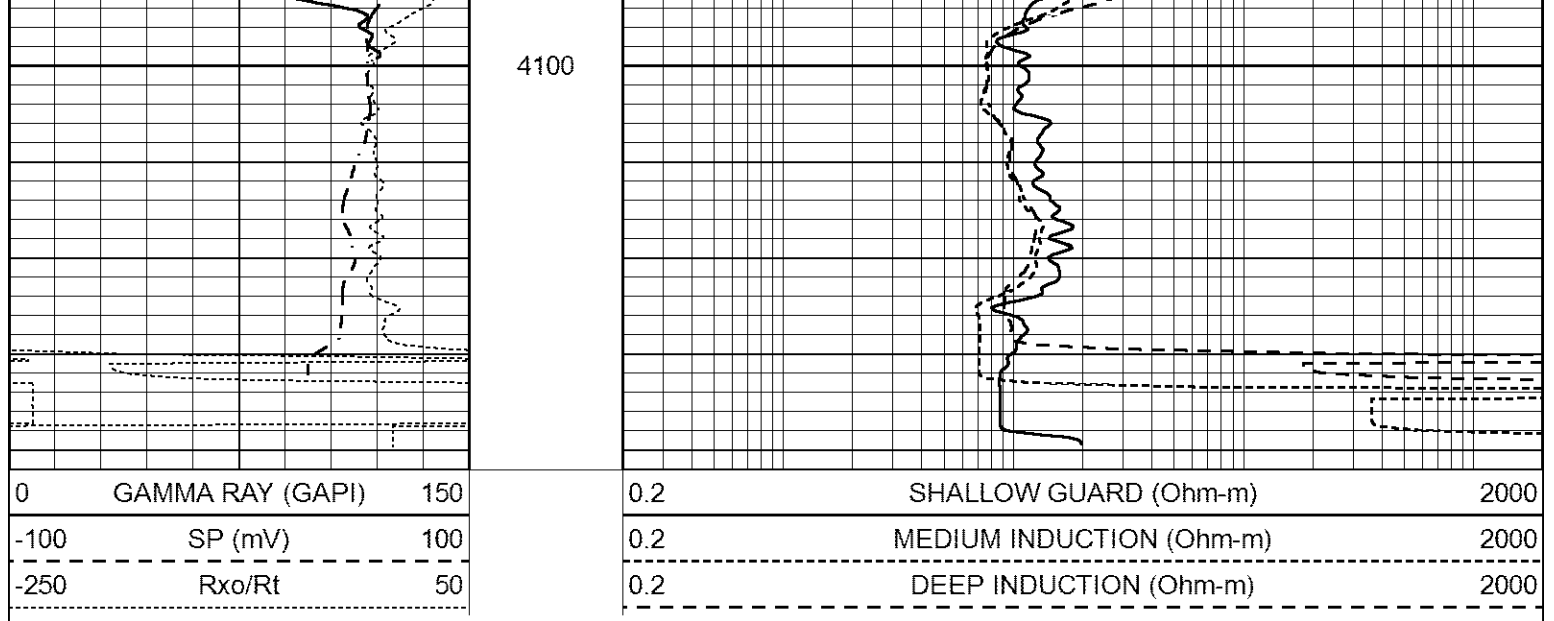




# REPEAT SECTION

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





| Calibration Report                   |                          |          |        |        |                          |        |         |         |  |
|--------------------------------------|--------------------------|----------|--------|--------|--------------------------|--------|---------|---------|--|
| Database File                        | 7708ddn.db               |          |        |        |                          |        |         |         |  |
| Dataset Pathname                     | pass3M                   |          |        |        |                          |        |         |         |  |
| Dataset Creation                     | Tue Aug 01 22:45:13 2023 |          |        |        |                          |        |         |         |  |
| Dual Induction Calibration Report    |                          |          |        |        |                          |        |         |         |  |
| Serial-Model:                        |                          |          |        |        | FW1410-55-Probe          |        |         |         |  |
| Surface Cal Performed:               |                          |          |        |        | Sat Jul 29 01:57:42 2023 |        |         |         |  |
| Downhole Cal Performed:              |                          |          |        |        | Tue Feb 19 11:44:24 2019 |        |         |         |  |
| After Survey Verification Performed: |                          |          |        |        | Tue Feb 19 11:44:27 2019 |        |         |         |  |
| Surface Calibration                  |                          |          |        |        |                          |        |         |         |  |
|                                      |                          | Readings |        |        | References               |        |         | Results |  |
| Loop:                                | Air                      | Loop     |        | Air    | Loop                     |        | m       | b       |  |
| Deep                                 | 0.011                    | 0.656    | V      | 1.000  | 400.000                  | mmho/m | 575.000 | -6.000  |  |
| Medium                               | -0.000                   | 0.731    | V      | 1.000  | 464.000                  | mmho/m | 530.000 | -12.000 |  |
| Internal:                            | Zero                     | Cal      |        | Zero   | Cal                      |        | m       | b       |  |
| Deep                                 | 0.007                    | 0.649    | V      | 0.000  | 400.000                  | mmho/m | 623.784 | -4.595  |  |
| Medium                               | 0.004                    | 0.743    | V      | 0.000  | 464.000                  | mmho/m | 627.284 | -2.251  |  |
| Downhole Calibration                 |                          |          |        |        |                          |        |         |         |  |
|                                      |                          | Readings |        |        | References               |        |         | Results |  |
|                                      | Zero                     | Cal      |        | Zero   | Cal                      |        | m'      | b'      |  |
| Deep                                 | -0.824                   | 395.917  | mmho/m | -0.976 | 397.550                  | mmho/m | 1.004   | -0.149  |  |
| Medium                               | 3.565                    | 471.327  | mmho/m | 3.468  | 471.590                  | mmho/m | 1.001   | -0.099  |  |
| LL3                                  |                          | 7.503    | V      |        | 1500.000                 | Ohm-m  |         |         |  |
|                                      |                          | 0.001    | V      |        | 20.000                   | Ohm-m  |         |         |  |
|                                      |                          | -7.481   | V      |        | 3745.000                 | mmho-m |         |         |  |
| After Survey Verification            |                          |          |        |        |                          |        |         |         |  |
|                                      |                          | Readings |        |        | Targets                  |        |         | Results |  |
|                                      | Zero                     | Cal      |        | Zero   | Cal                      |        | m'      | b'      |  |
| Deep                                 | 0.000                    | 0.000    | mmho/m | -0.824 | 395.917                  | mmho/m | 1.000   | 0.000   |  |
| Medium                               | 0.000                    | 0.000    | mmho/m | 3.565  | 471.327                  | mmho/m | 1.000   | 0.000   |  |
| LL3                                  |                          | 0.000    | Ohm-m  |        | 1500.000                 | Ohm-m  |         |         |  |
|                                      |                          | 0.000    | Ohm-m  |        | 20.000                   | Ohm-m  |         |         |  |
|                                      |                          | 0.000    | mmho-m |        | 3745.000                 | mmho-m |         |         |  |

Litho Density Calibration Report  
Serial: 140704  
Model: V4\_10P  
Source Number: 74GBq-19

Master Calibration

Performed: Fri May 12 10:26:47 2023

|              | Background    | Aluminum  | Magnesium    |         |          |
|--------------|---------------|-----------|--------------|---------|----------|
| Window 1     | 521.46        | 5212.91   | 23528.37     | cps     |          |
| Window 2     | 43.81         | 1175.90   | 6160.42      | cps     |          |
| Window 4     | 226.45        | 1217.97   | 4891.35      | cps     |          |
| Window 5     | 519.17        | 8959.34   | 17037.10     | cps     |          |
| Window 6     | 39.35         | 1453.85   | 2926.68      | cps     |          |
| Window 8     | 253.66        | 2919.24   | 5361.51      | cps     |          |
| Bulk Density | -             | 2.6020    | 1.6830       | g/cc    |          |
| Pe           | -             | 3.0000    | 2.5070       | b/e     |          |
| LS Alpha:    | : -1.7699     | SS Alpha: | : -0.7448    | LS CPE: | : 1.1844 |
| LS Beta:     | : 101708.6271 | SS Beta:  | : 19263.5258 | SS CPE: | : 1.5835 |

Before Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

|          |      |     |
|----------|------|-----|
| Window 1 | 0.00 | cps |
| Window 2 | 0.00 | cps |
| Window 4 | 0.00 | cps |
| Window 5 | 0.00 | cps |
| Window 6 | 0.00 | cps |
| Window 8 | 0.00 | cps |

After Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

|          |      |     |
|----------|------|-----|
| Window 1 | 0.00 | cps |
| Window 2 | 0.00 | cps |
| Window 4 | 0.00 | cps |
| Window 5 | 0.00 | cps |
| Window 6 | 0.00 | cps |
| Window 8 | 0.00 | cps |

Lithodensity Caliper Calibration

Performed: Fri May 12 10:26:47 2023

| Results | Readings | References (in) |      | Gain | Offset |
|---------|----------|-----------------|------|------|--------|
| Low     | High     | Low             | High |      |        |
| 7228.5  | 10151.9  | 8.0             | 14.0 | 0.0  | -7.4   |

Before Survey Caliper Verification

Performed:

| Reference    | Reading |
|--------------|---------|
| _____        | _____   |
| Caliper (in) |         |

After Survey Caliper Verification

Performed:

| Reference    | Reading |
|--------------|---------|
| _____        | _____   |
| Caliper (in) |         |

| Compensated Neutron Calibration Report |                          |           |        |
|----------------------------------------|--------------------------|-----------|--------|
| Serial Number:                         |                          | 080621PMC |        |
| Tool Model:                            |                          | NABORS    |        |
| 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:                         | 7                        |           |        |
| Tool Model:                            | Probe1                   |           |        |
| Performed:                             | Tue Aug 01 20:36:29 2023 |           |        |
| Calibrator Value:                      | 1.0                      | GAPI      |        |
| Background Reading:                    | 0.0                      | cps       |        |
| Calibrator Reading:                    | 1.0                      | cps       |        |
| Sensitivity:                           | 0.4400                   | GAPI/cps  |        |