



# DUAL INDUCTION LOG

|                              |                           |                |                        |
|------------------------------|---------------------------|----------------|------------------------|
| Company                      | WHITE EXPLORATION INC.    | Company        | WHITE EXPLORATION INC. |
| Well                         | LAWRENCE #1               | Well           | LAWRENCE #1            |
| Field                        | WHELAN WEST               | Field          | WHELAN WEST            |
| County                       | BARBER                    | County         | BARBER                 |
| State                        | KANSAS                    | State          | KANSAS                 |
| Location:                    | AP1 # : 15-007-24366-0000 | Other Services | CDL/CNL/MEL<br>SON     |
|                              | 2075' FSL & 650' FEL      |                |                        |
|                              | SEC 25 TWP 31S RGE 12W    |                |                        |
| Permanent Datum              | GROUND LEVEL              | Elevation      | 1518                   |
| Log Measured From            | KELLY BUSHING 7' A.G.L.   | K.B. 1525      |                        |
| Drilling Measured From       | KELLY BUSHING             | D.F. 1523      |                        |
|                              |                           | G.L. 1518      |                        |
| Date                         | 1/24/20                   |                |                        |
| Run Number                   | ONE                       |                |                        |
| Depth Driller                | 4630                      |                |                        |
| Depth Logger                 | 4629                      |                |                        |
| Bottom Logged Interval       | 4628                      |                |                        |
| Top Log Interval             | 00                        |                |                        |
| Casing Driller               | 8 5/8" @ 394              |                |                        |
| Casing Logger                | 394                       |                |                        |
| Bit Size                     | 7 7/8"                    |                |                        |
| Type Fluid in Hole           | CHEMICAL MUD              |                |                        |
| Density / Viscosity          | 9.4/47                    |                |                        |
| pH / Fluid Loss              | 10.5/8.8                  |                |                        |
| Source of Sample             | FLOWLINE                  |                |                        |
| Rm @ Meas. Temp              | .60 @ 62F                 |                |                        |
| Rmt @ Meas. Temp             | .45 @ 62F                 |                |                        |
| Rmc @ Meas. Temp             | .72 @ 62F                 |                |                        |
| Source of Rmt / Rmc          | MEASURED                  |                |                        |
| Rm @ BHT                     | .30 @ 122F                |                |                        |
| Time Circulation Stopped     | 2 HOURS                   |                |                        |
| Time Logger on Bottom        | ///                       |                |                        |
| Maximum Recorded Temperature | 122F                      |                |                        |
| Equipment Number             | 1523                      |                |                        |
| Location                     | HAYS, KANSAS              |                |                        |
| Recorded By                  | GUS PFANENSTIEL           |                |                        |
| Witnessed By                 | ANDY WHITE                |                |                        |

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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 ELI WIRELINE, HAYS, KS. (785) 628-6395

DIRECTIONS:NORTH OF MEDICINE LODGE TO WELL RD., EAST 1/2 MILE,  
SOUTH 1/2, EAST 1/2, SOUTH INTO.

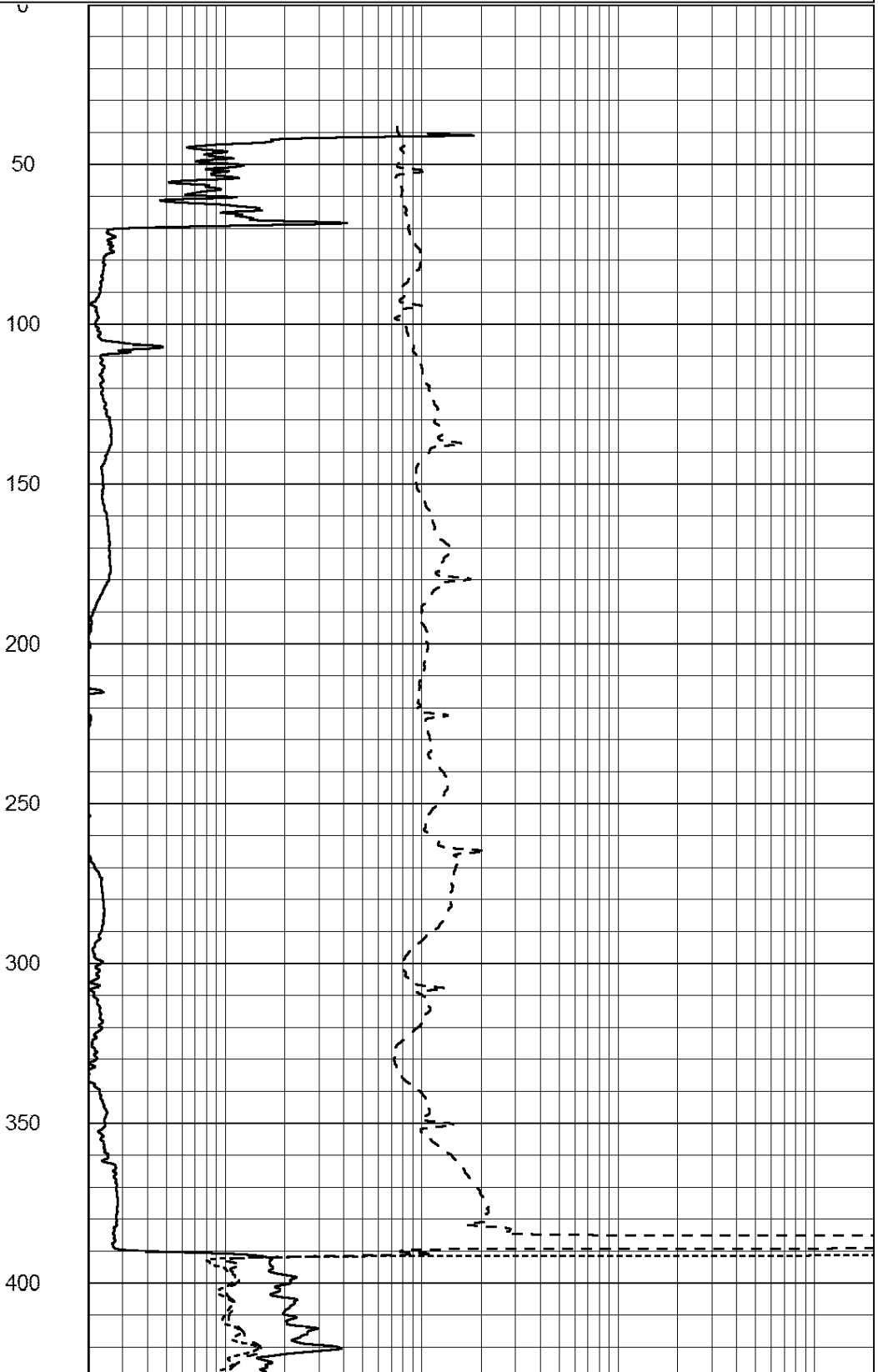
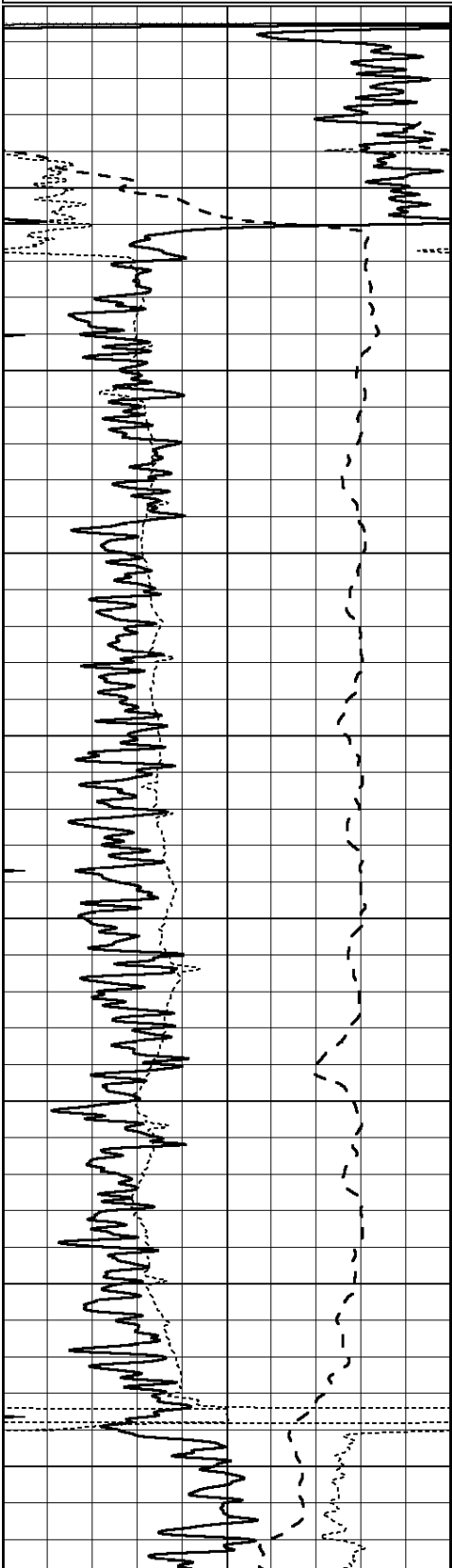


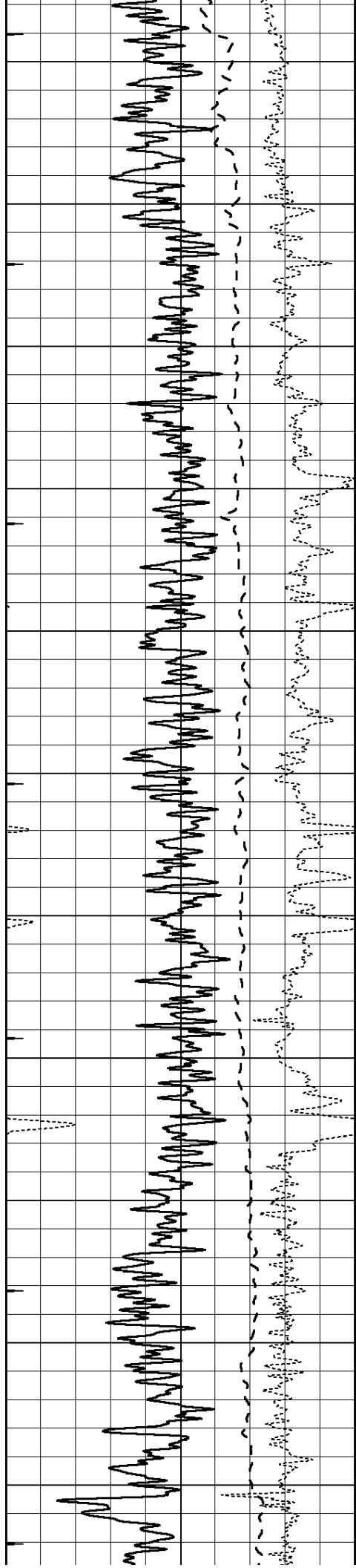
# MAIN PASS

Database File: 4475pe.db  
Dataset Pathname: pass3MAIN  
Presentation Format: \_dil  
Dataset Creation: Fri Jan 24 16:06:56 2020  
Charted by: Depth in Feet scaled 1:600

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





450

500

550

600

650

700

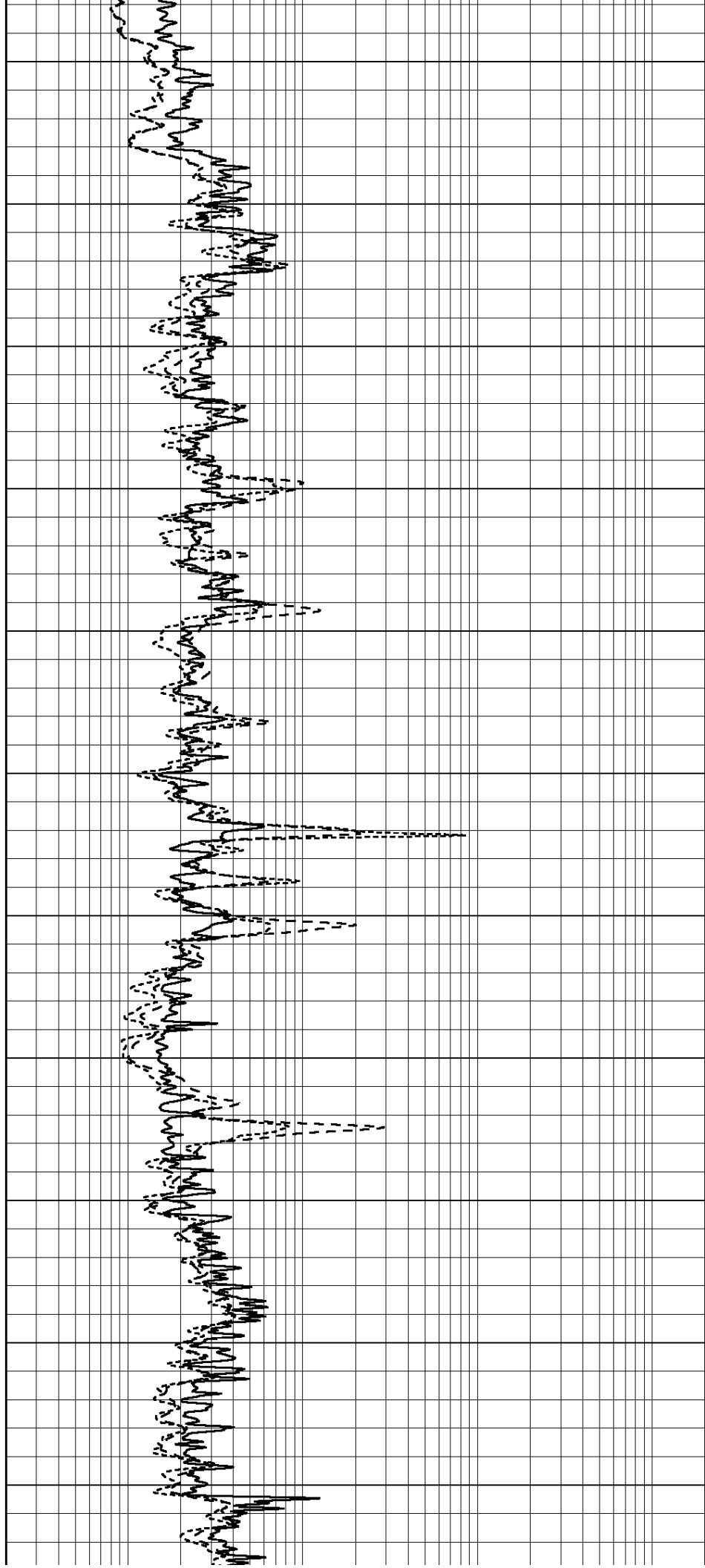
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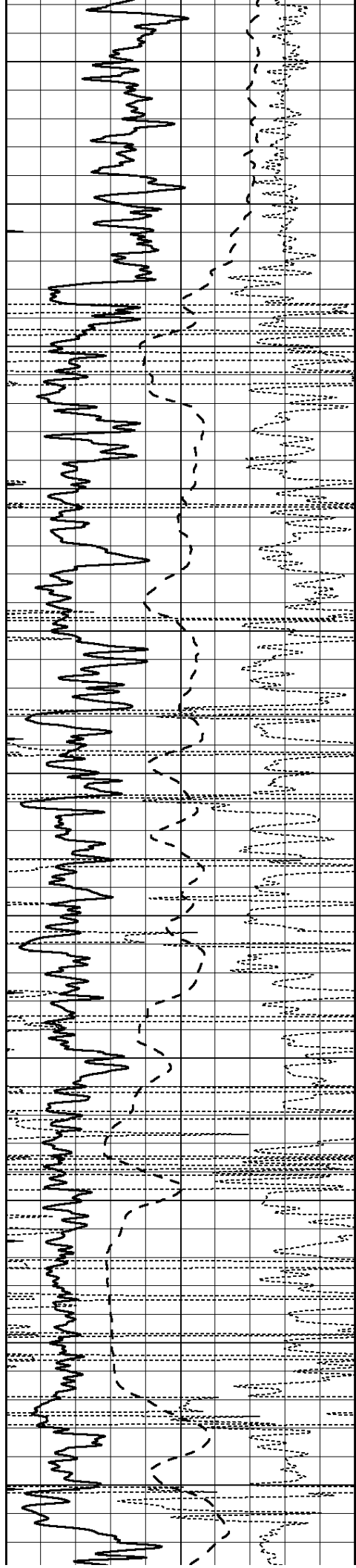
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850

900

950





1000

1050

1100

1150

1200

1250

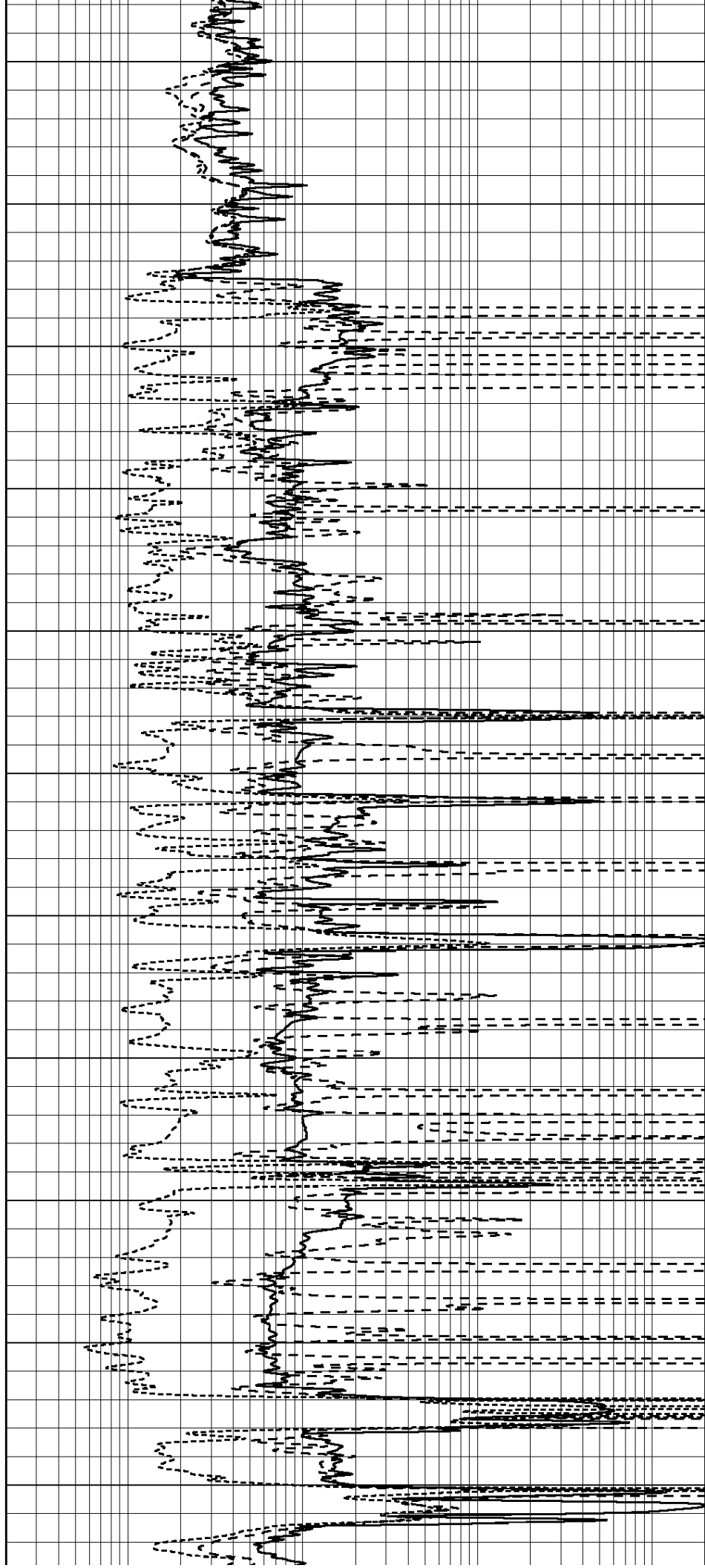
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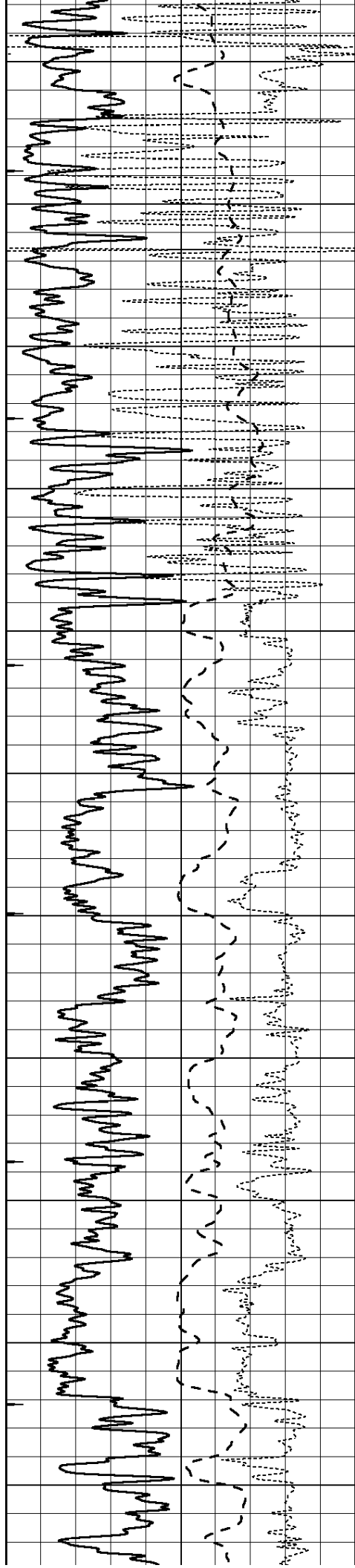
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1400

1450

1500





1550

1600

1650

1700

1750

1800

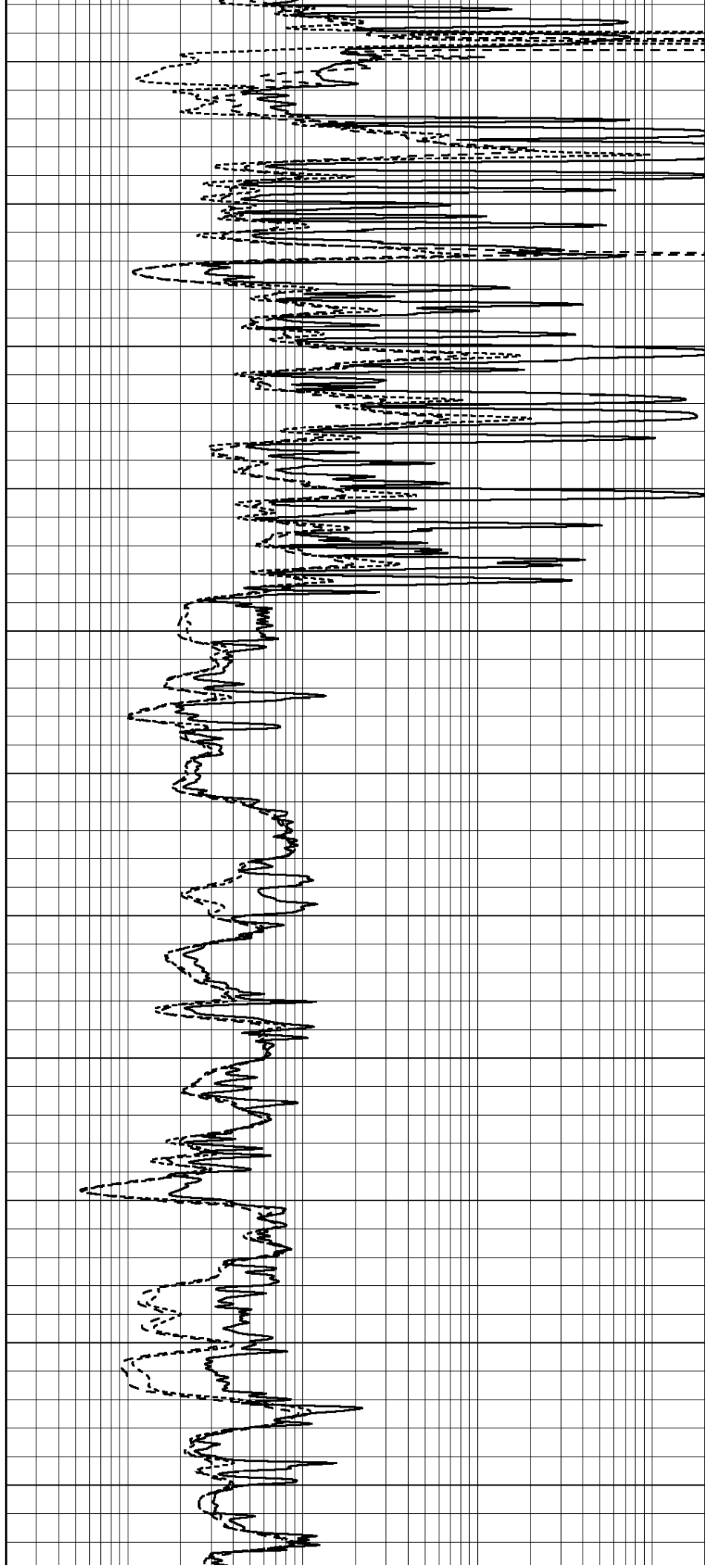
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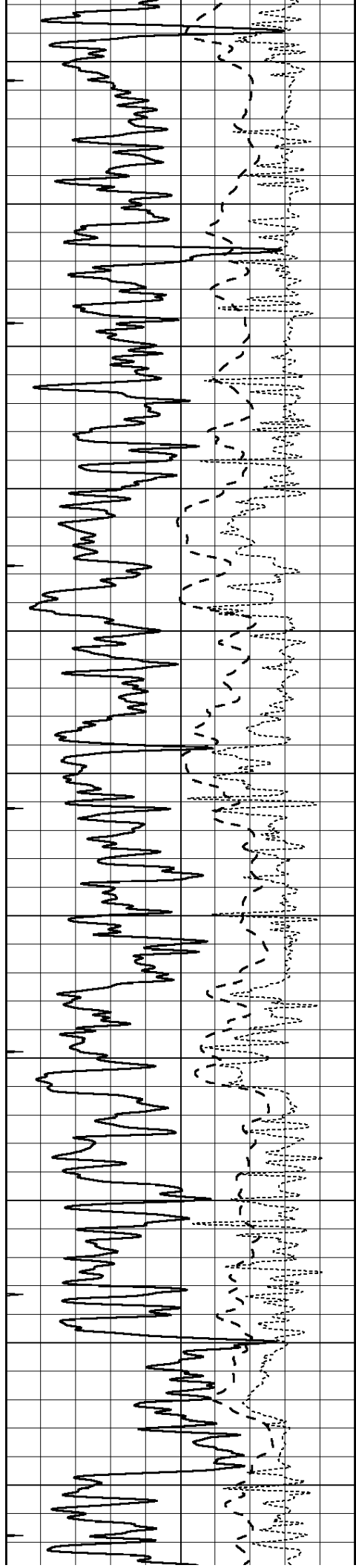
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1950

2000

2050





2100

2150

2200

2250

2300

2350

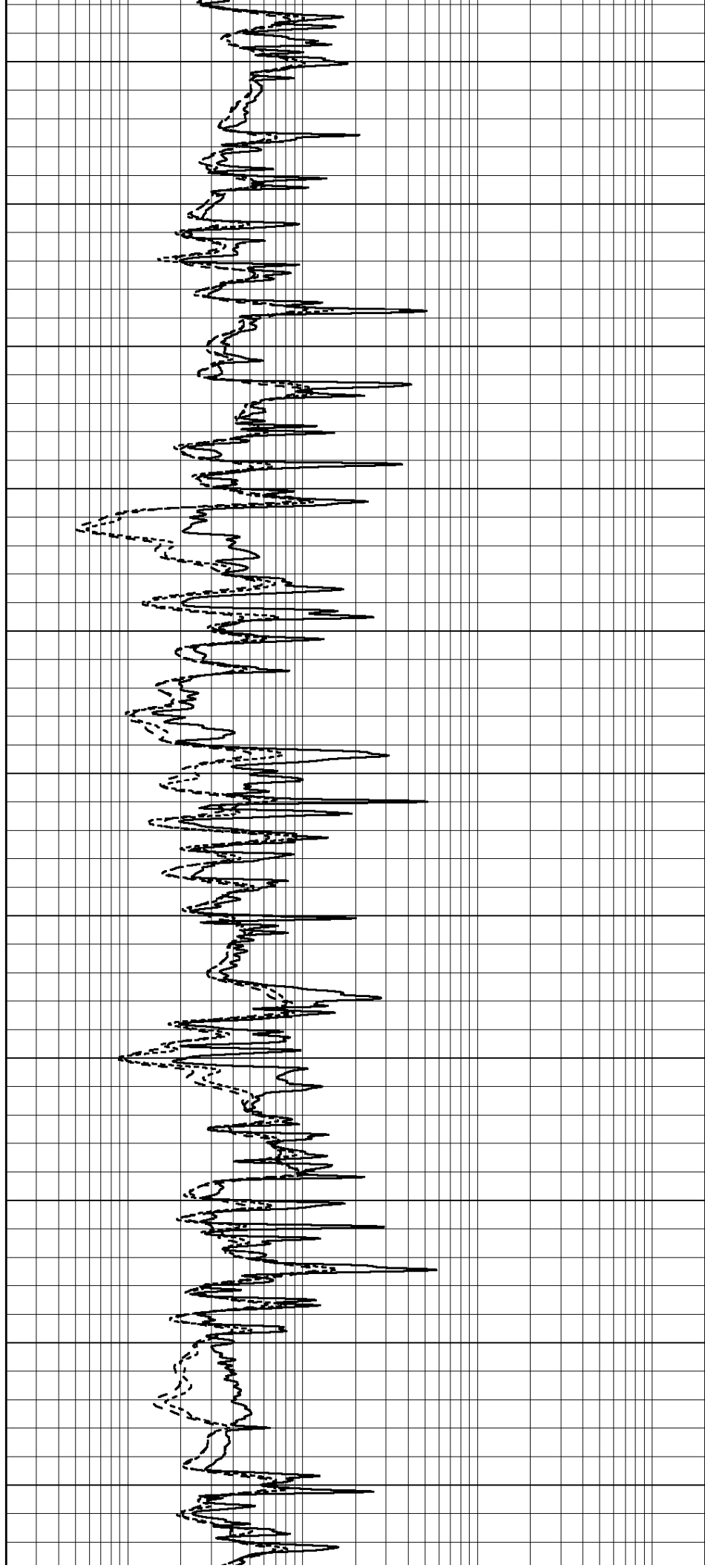
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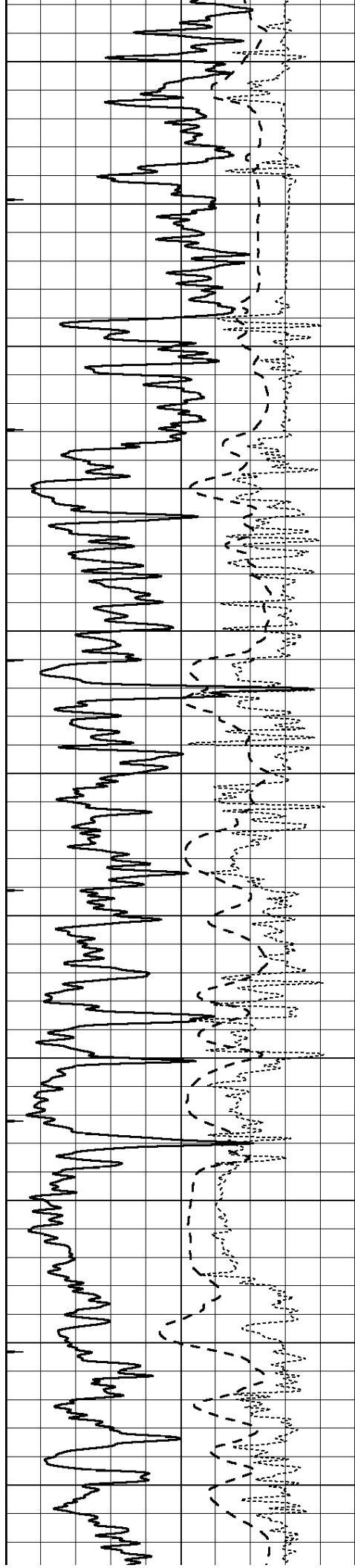
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2550

2600





2650

2700

2750

2800

2850

2900

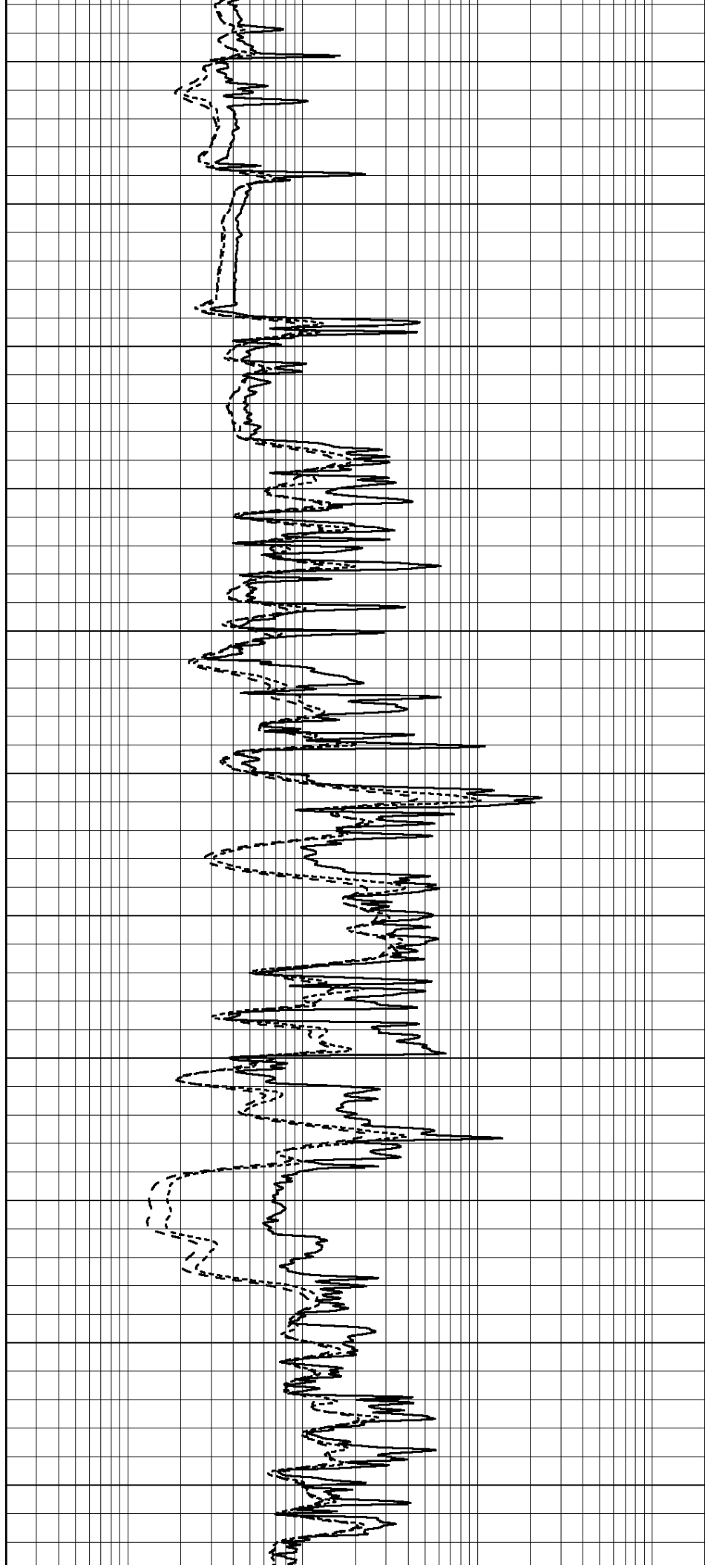
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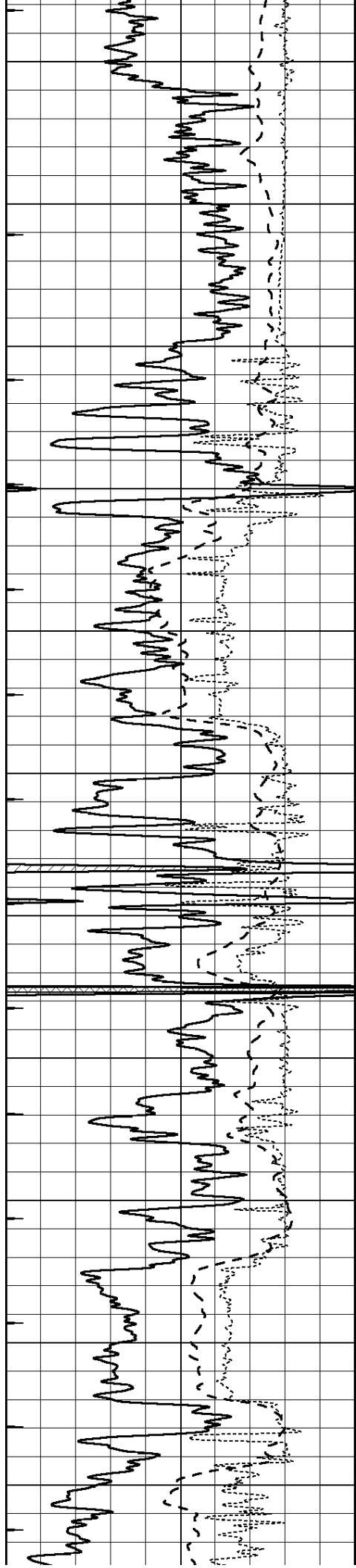
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3050

3100

3150





3200

3250

3300

3350

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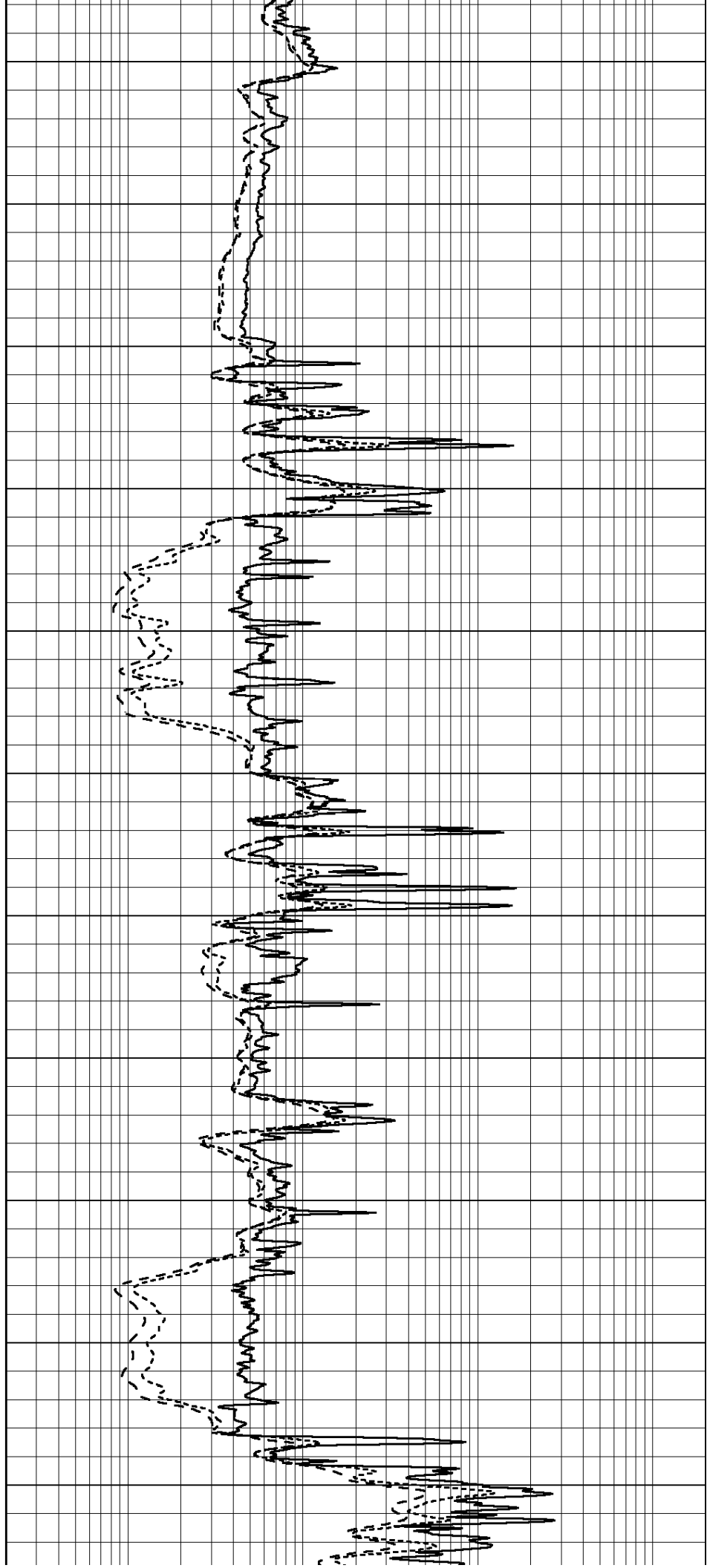
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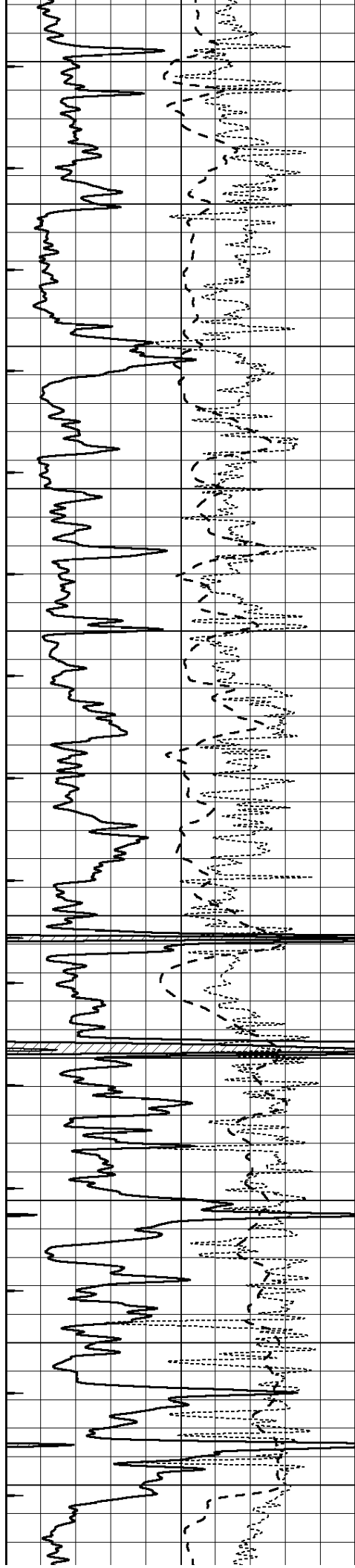
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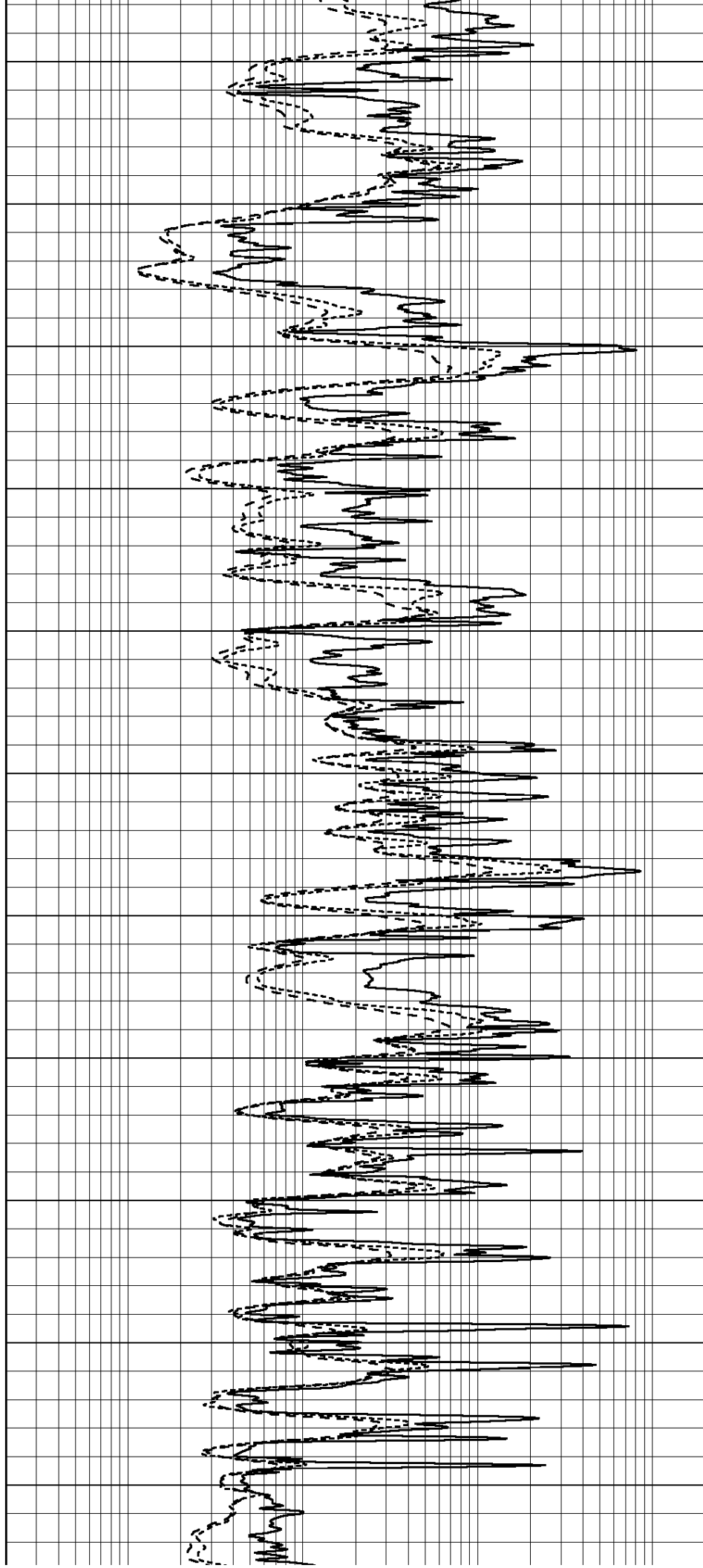
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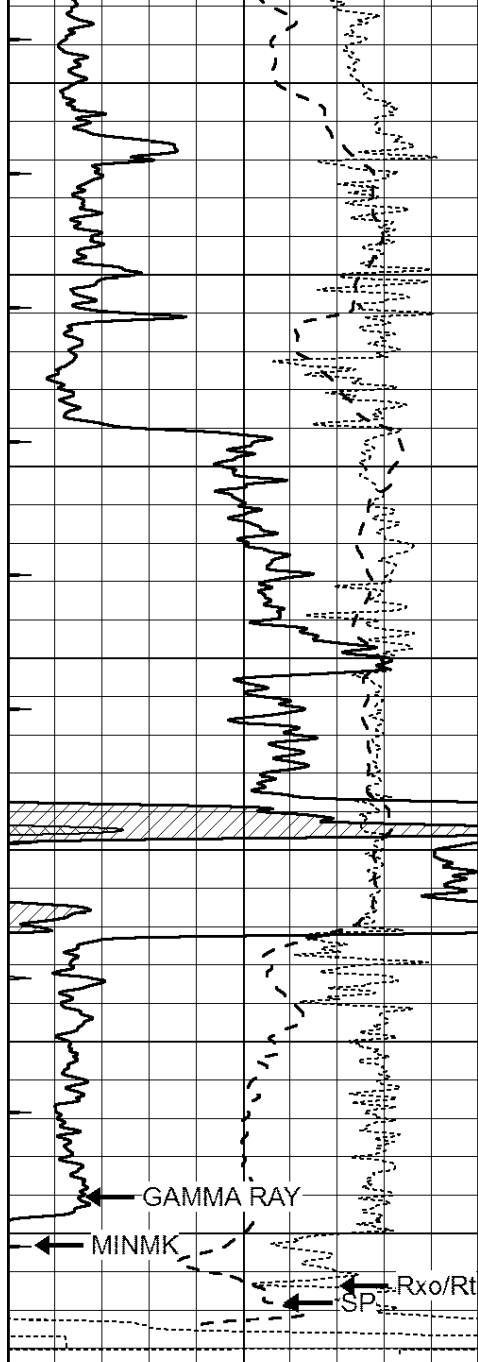
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4150

4200

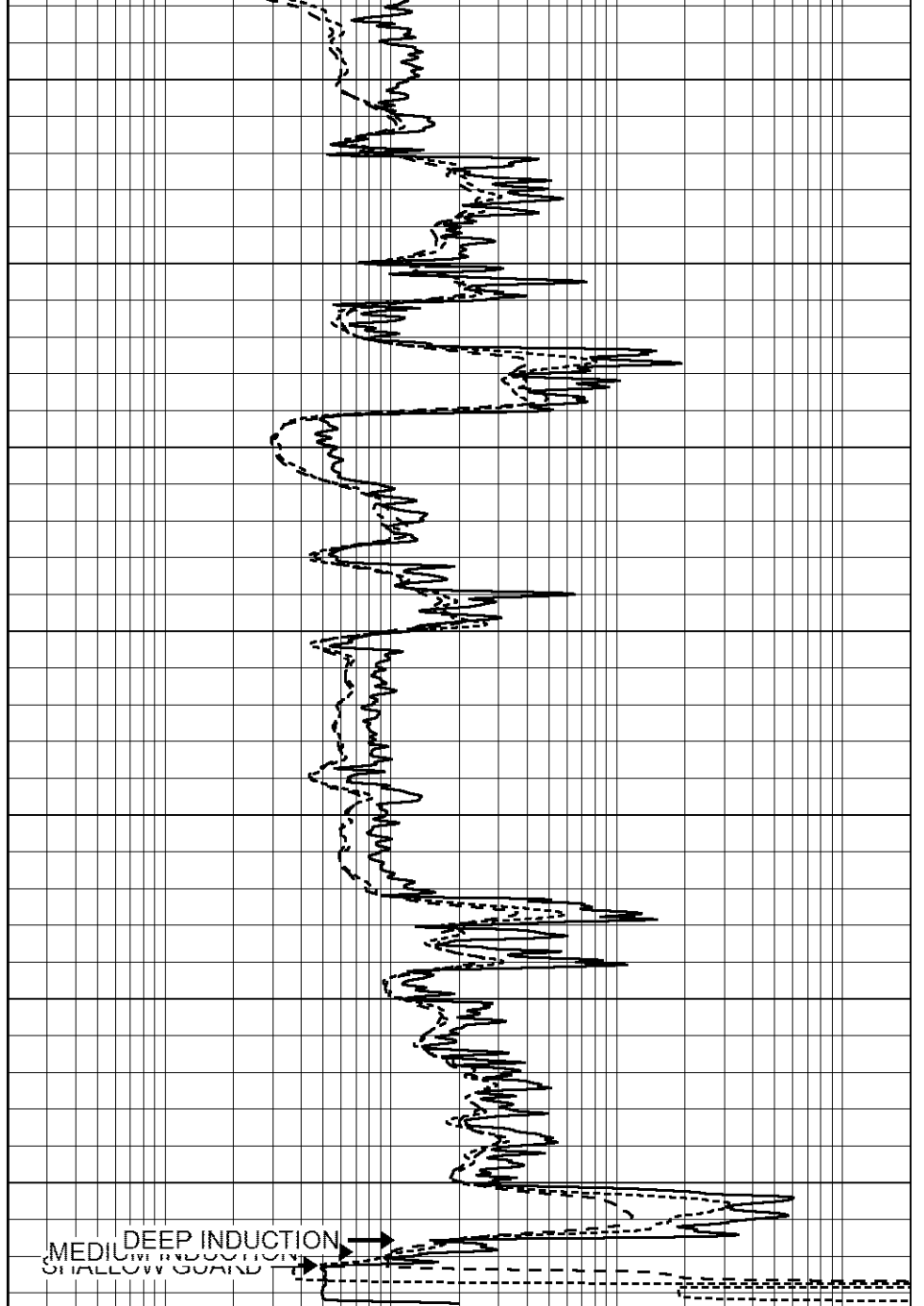
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4300  
4350  
4400  
4450  
4500  
4550  
4600  
LTD 4629

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



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



# MAIN PASS

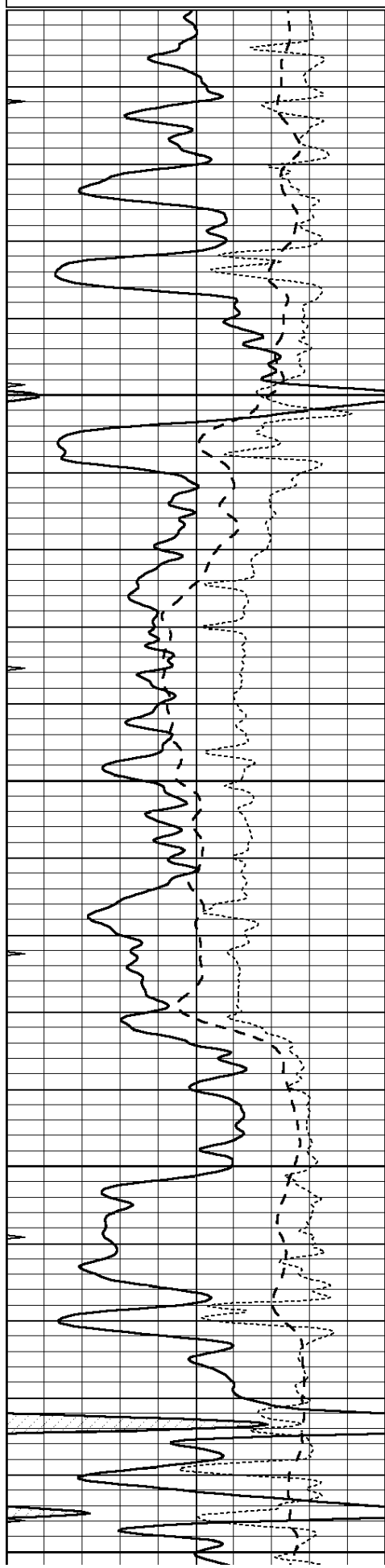
Database File: 4475pe.db  
Dataset Pathname: pass3MAIN  
Presentation Format: \_dil  
Dataset Creation: Fri Jan 24 16:06:56 2020  
Charted by: Depth in Feet scaled 1:240

|      |                  |     |
|------|------------------|-----|
| 0    | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV)          | 100 |

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

|      |         |     |
|------|---------|-----|
| 100  | SP (mV) | 100 |
| -250 | Rxo/Rt  | 50  |
| 0    | MINMK   | 20  |

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



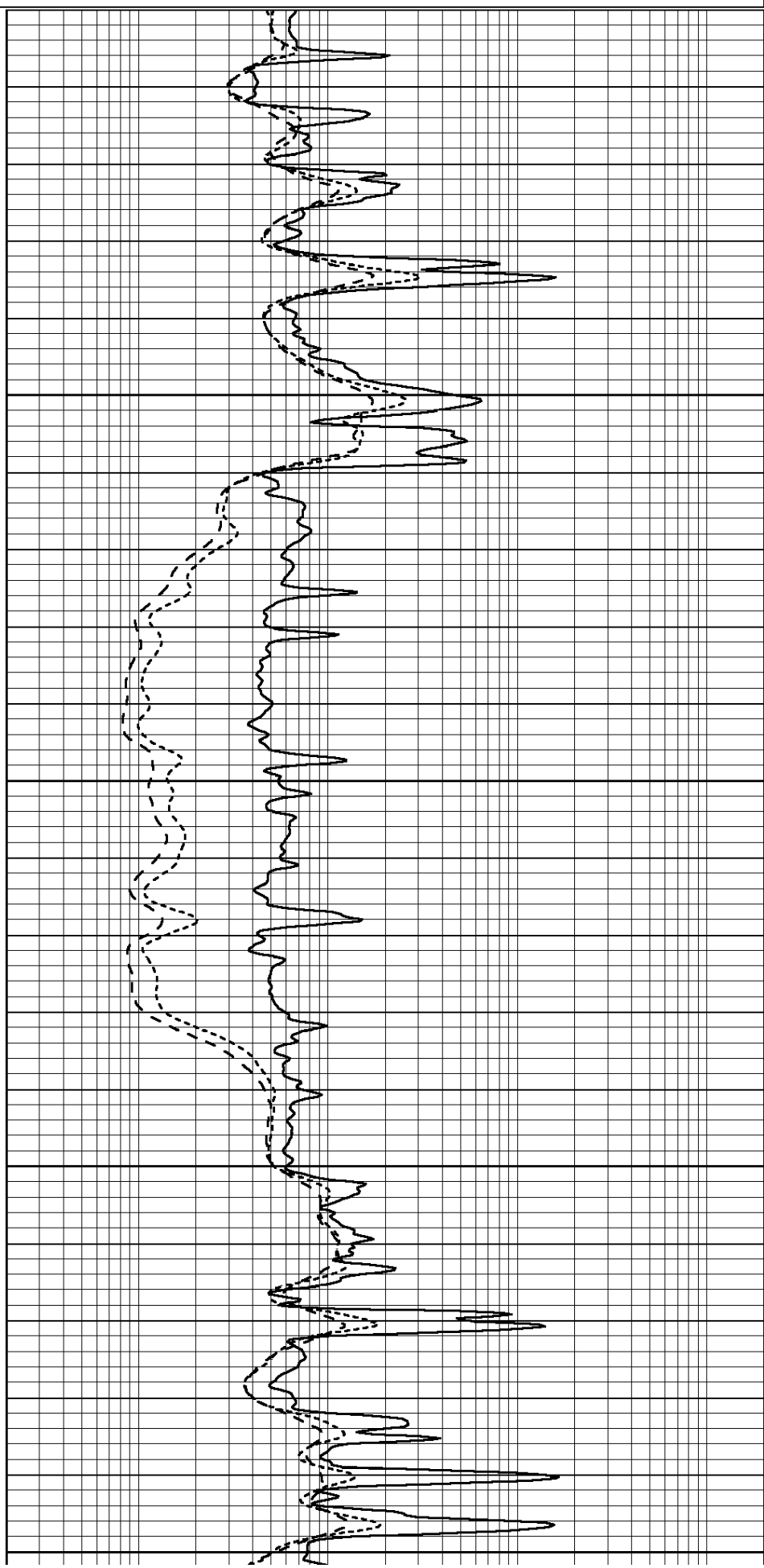
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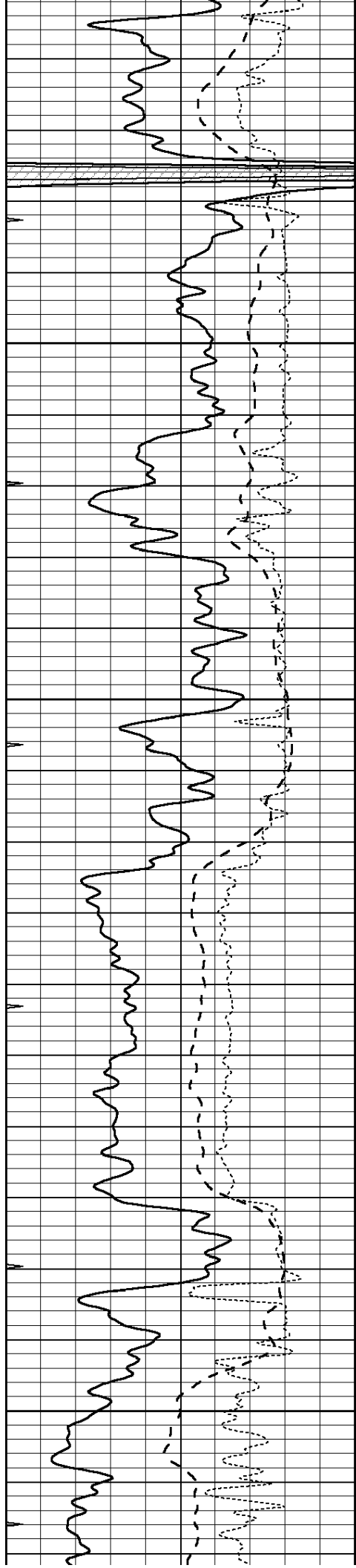
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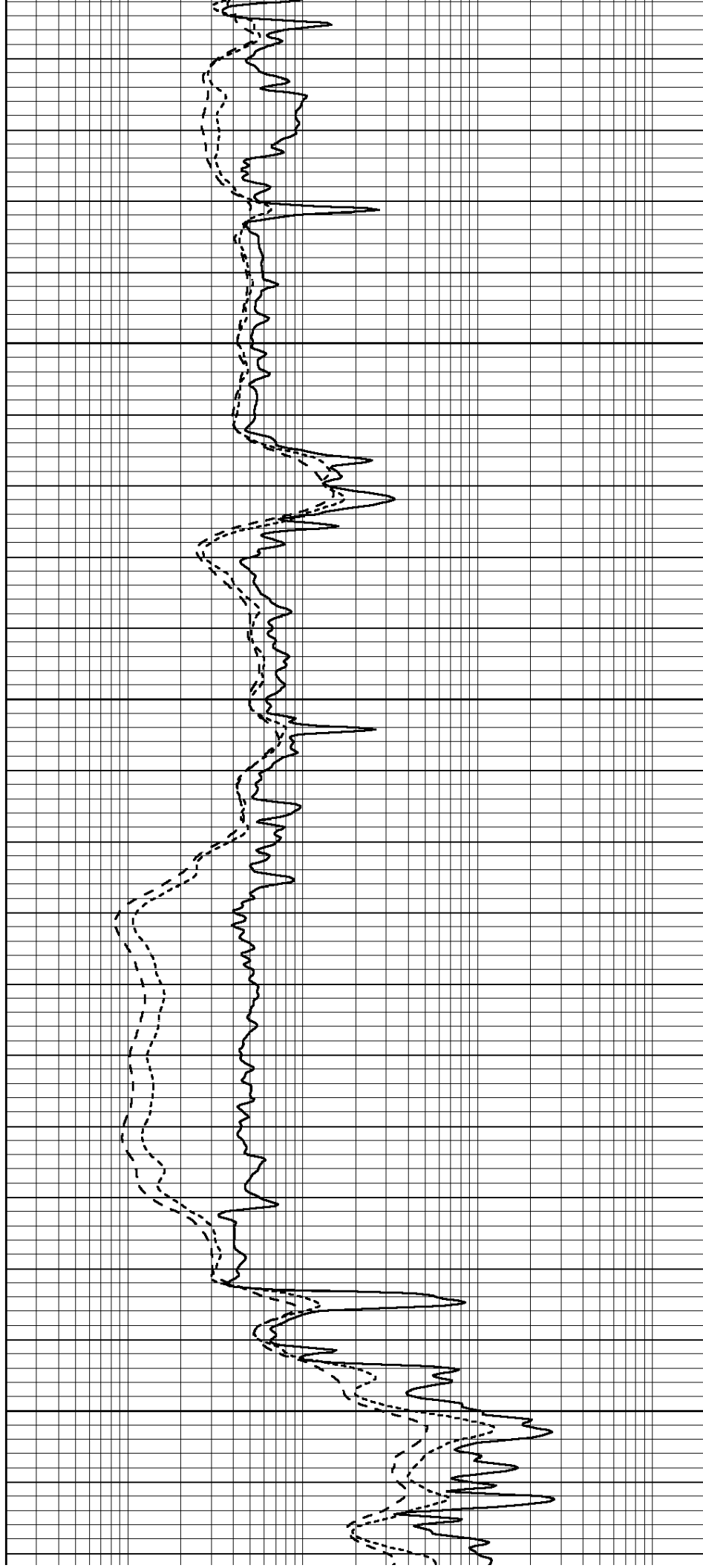


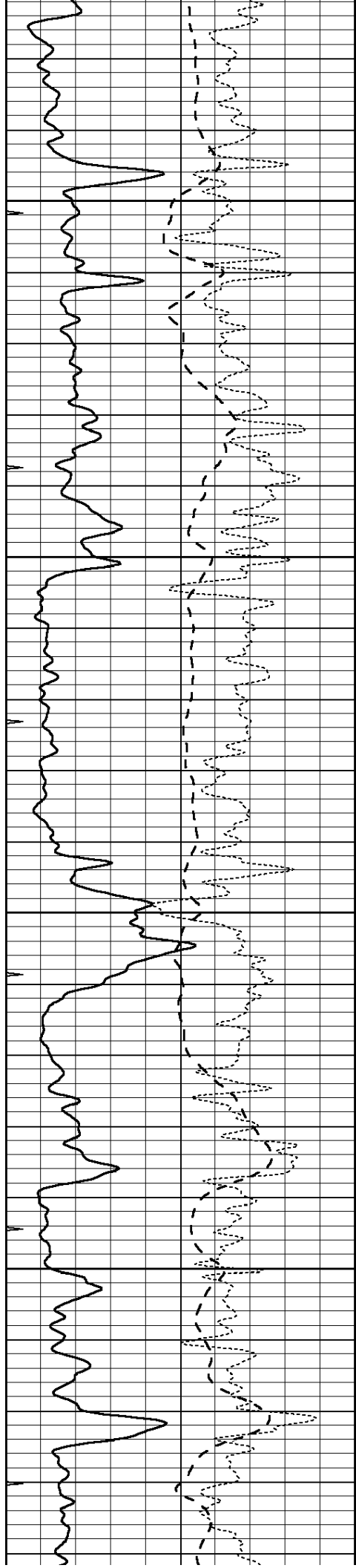
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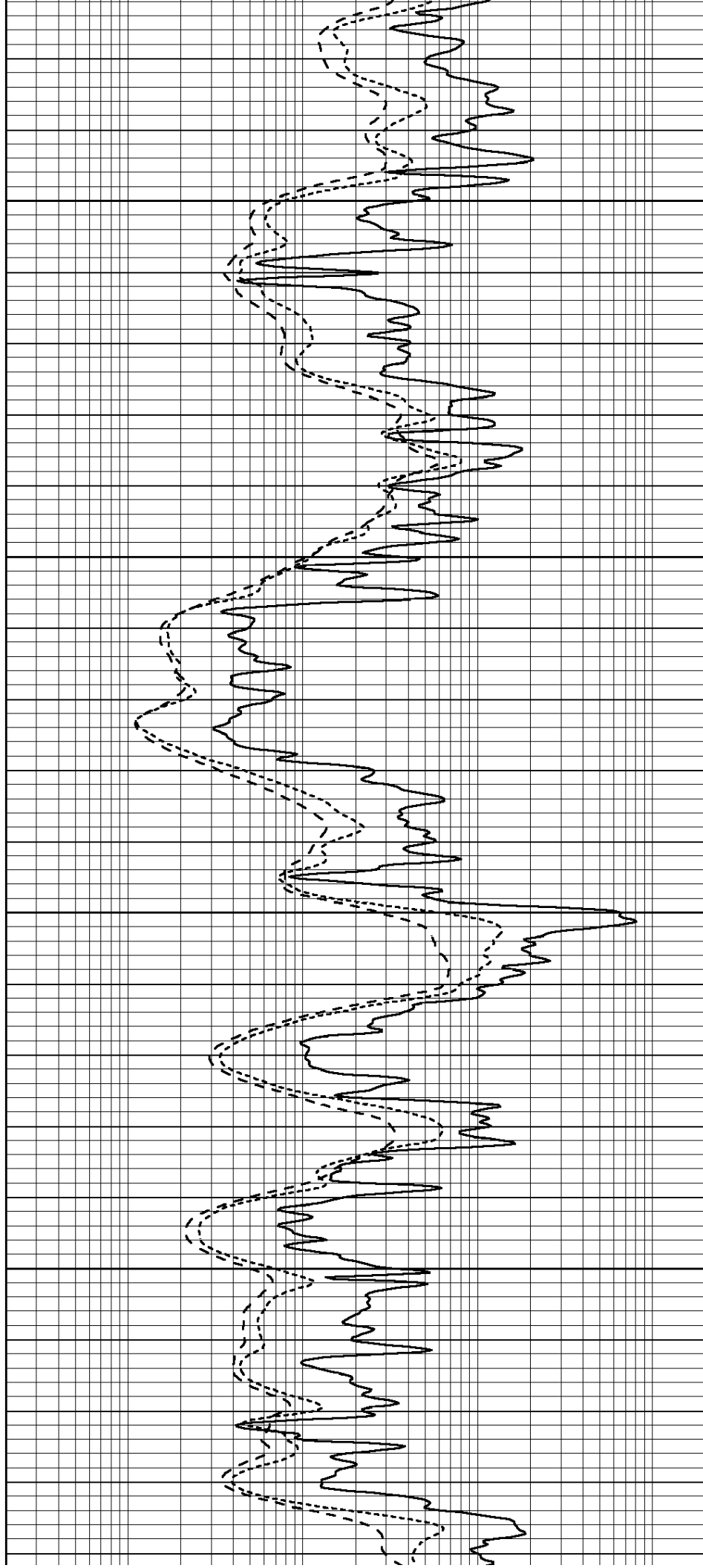


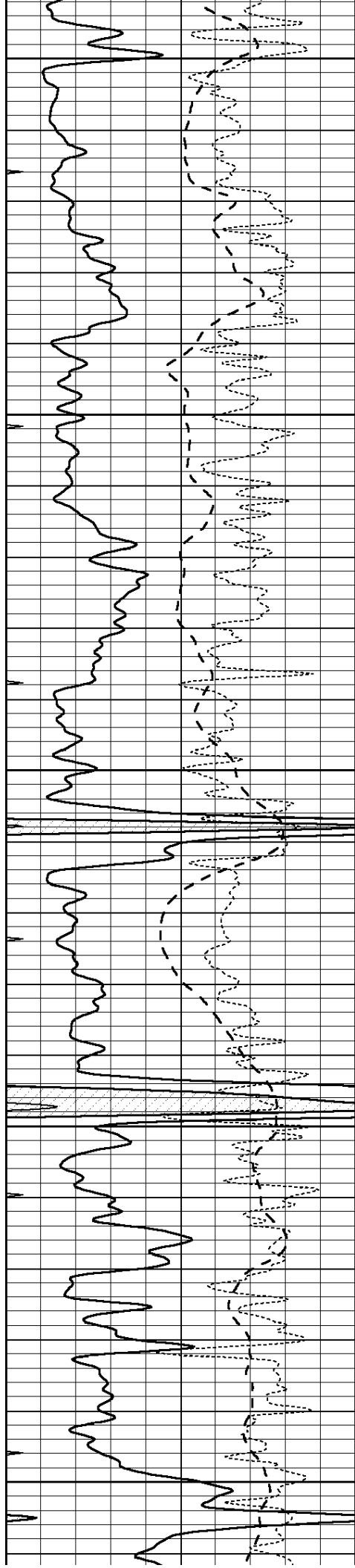
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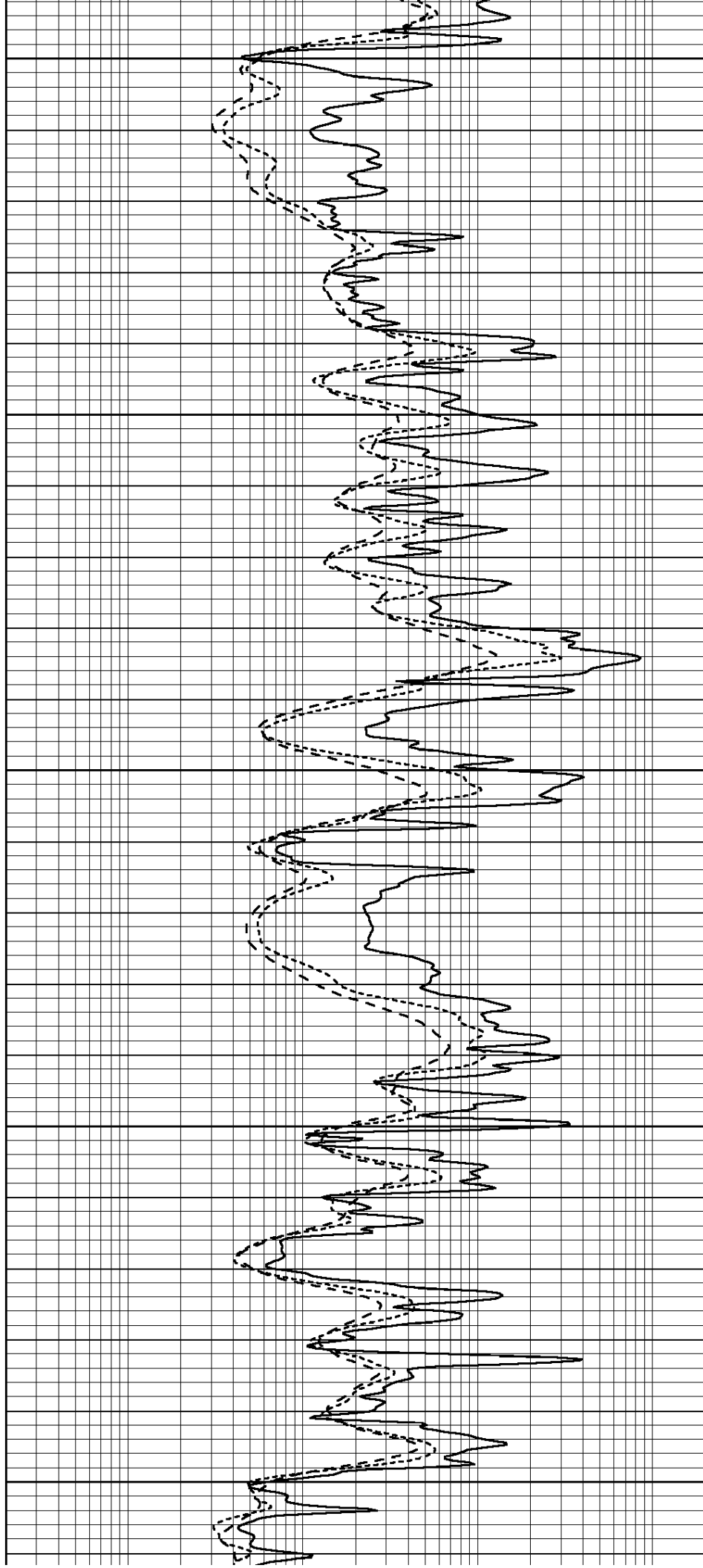
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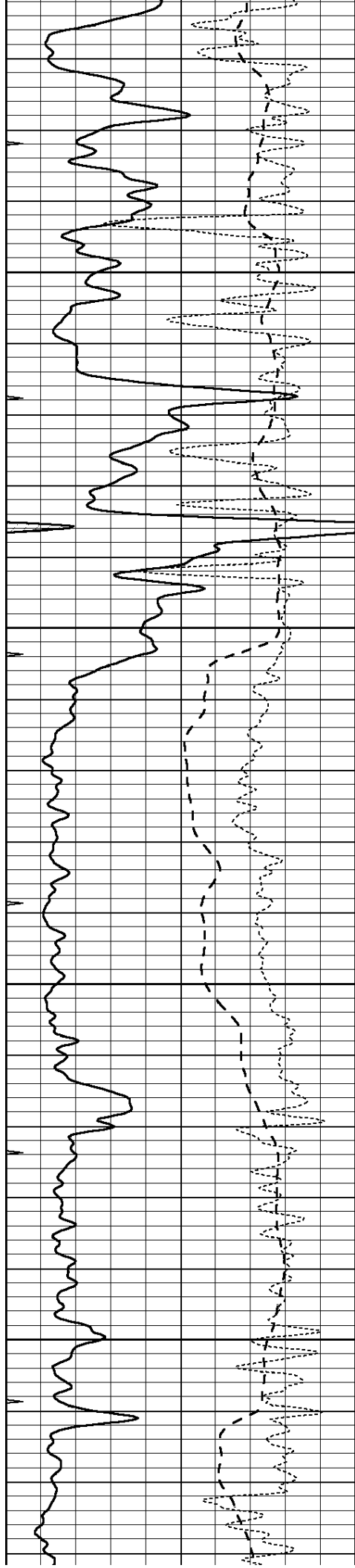
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4050

4100

4150



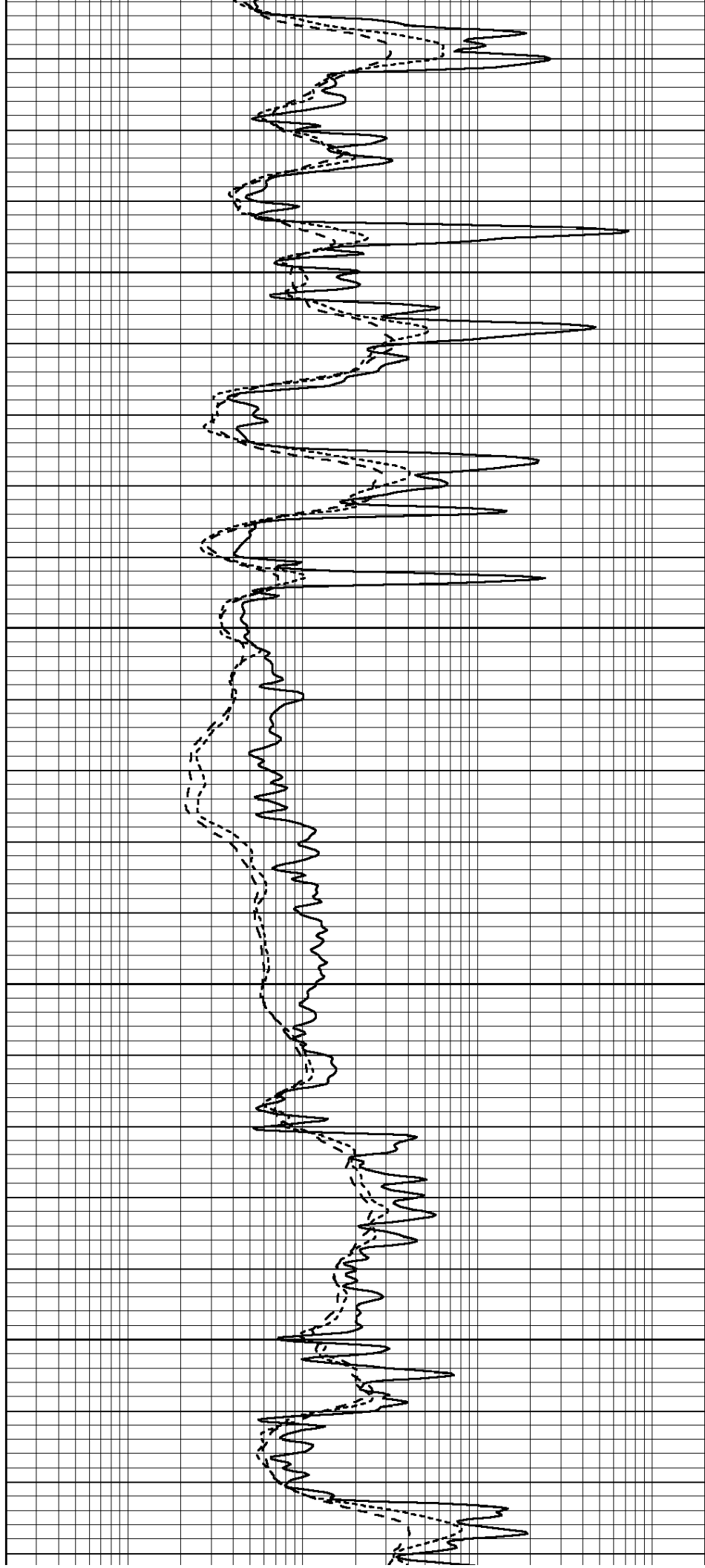


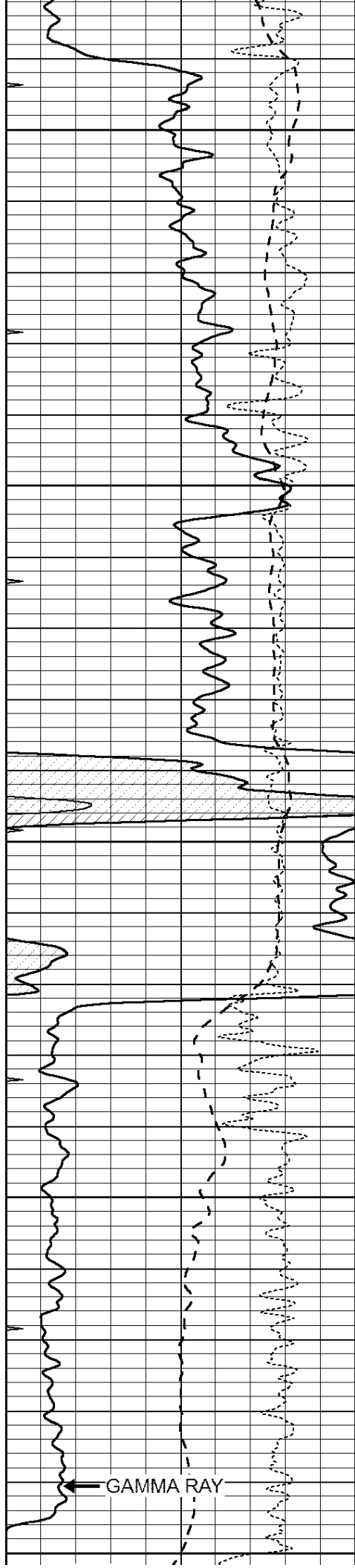
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4250

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4350





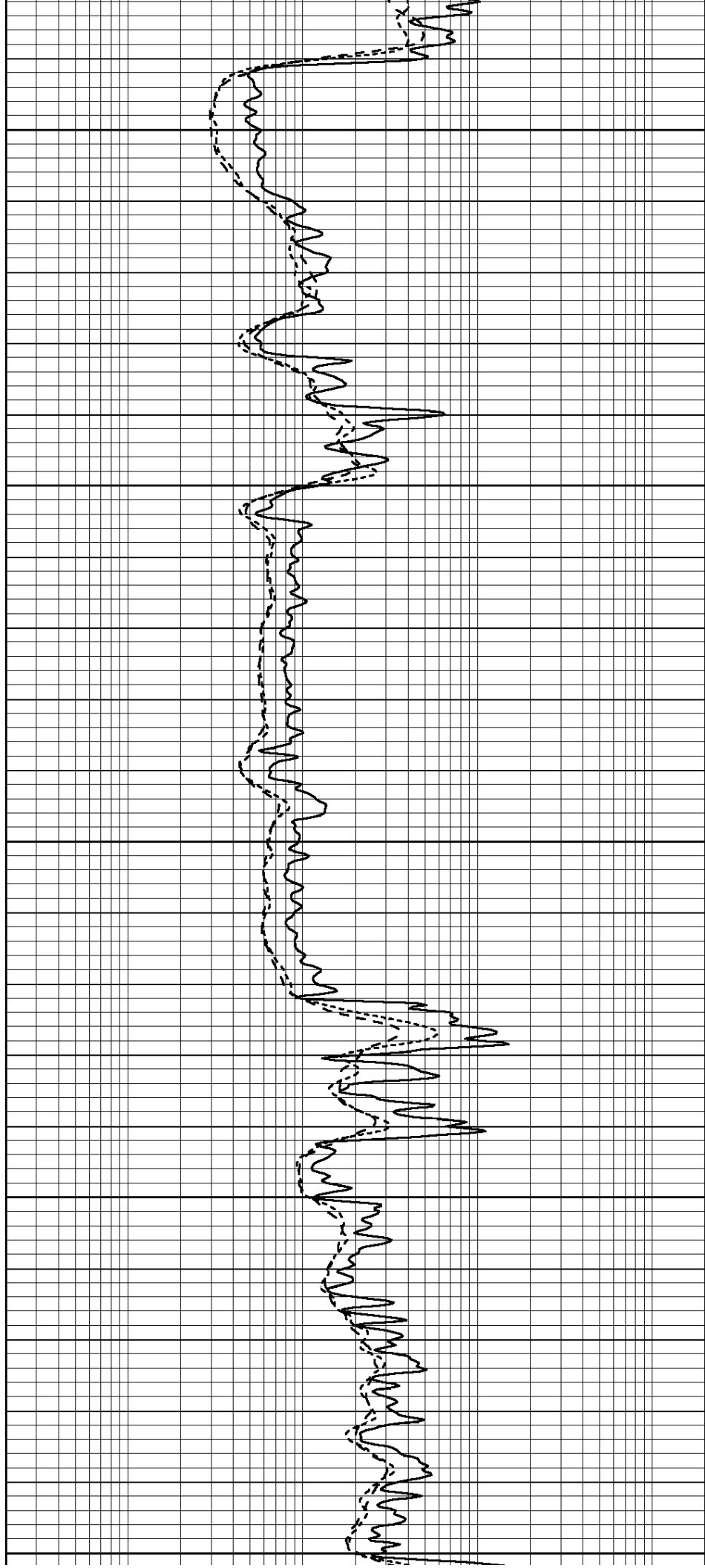
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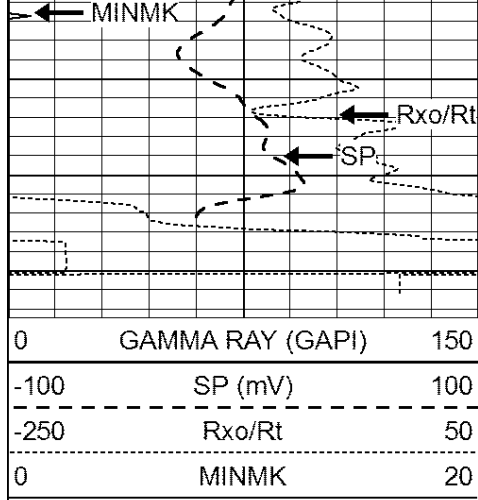
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4500

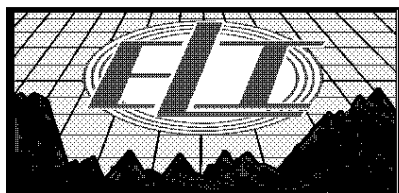
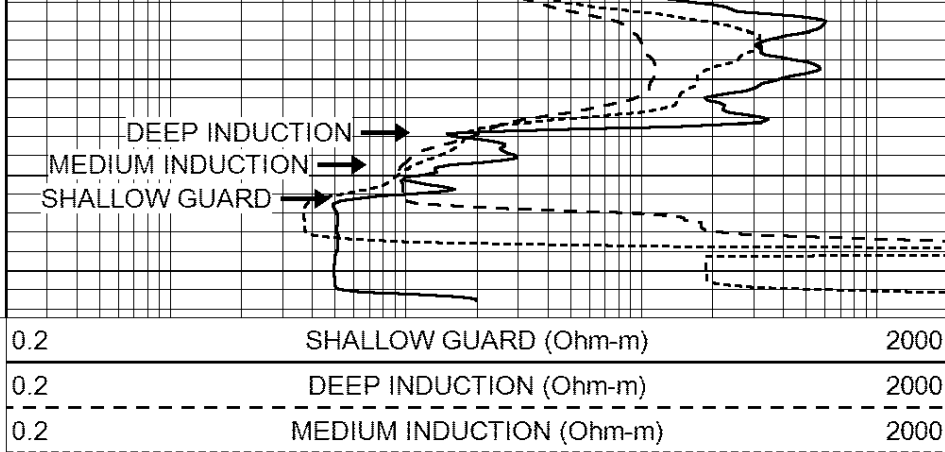
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4600



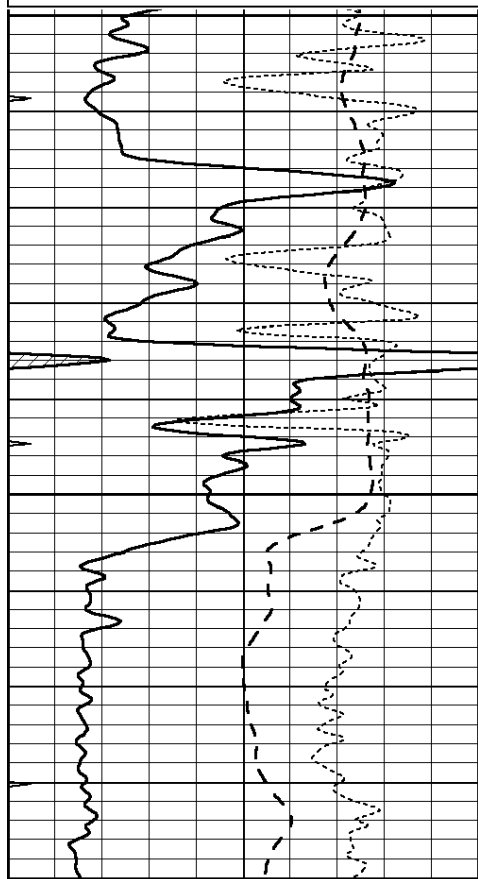
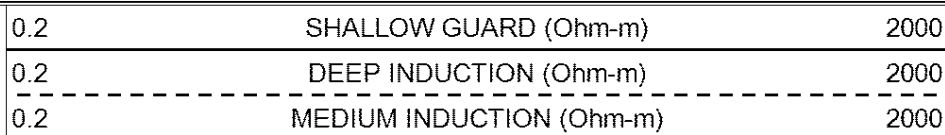
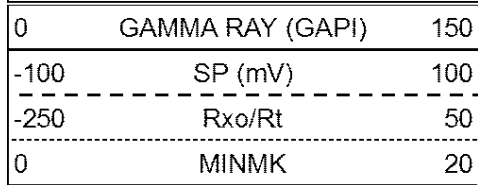


LTD 4629



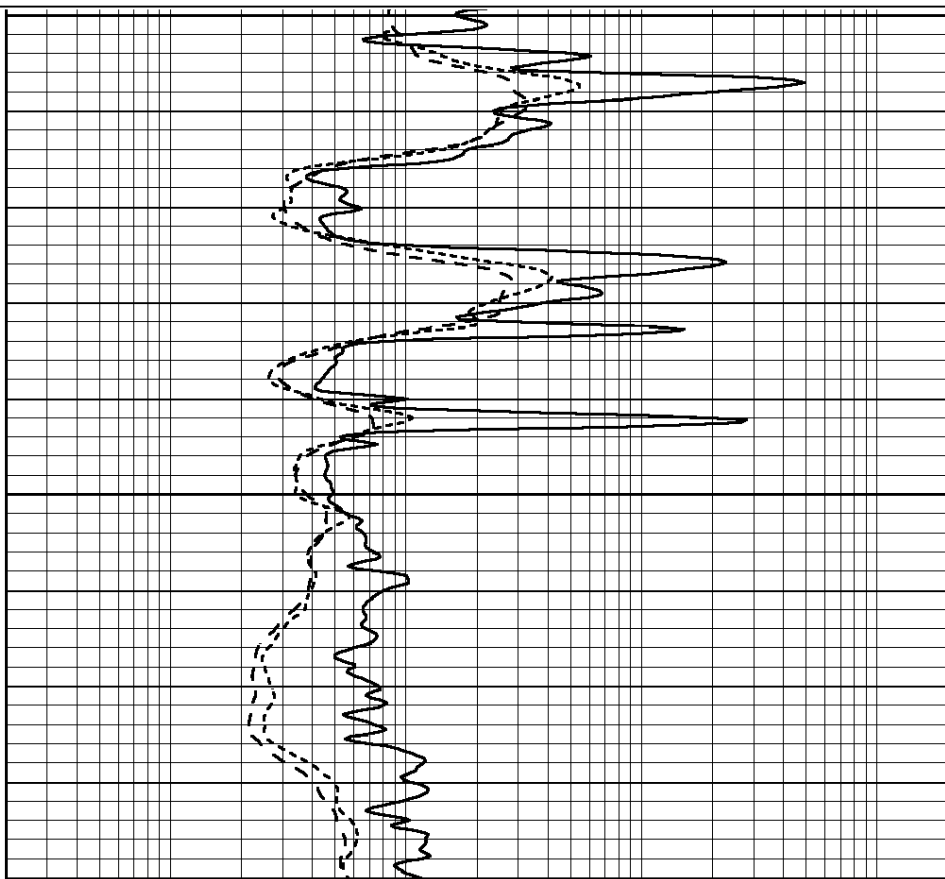
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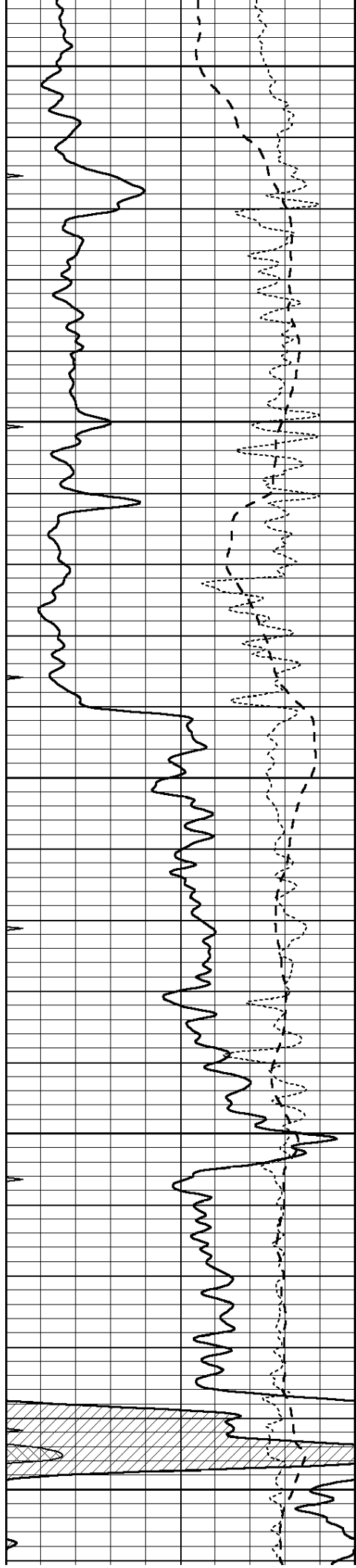
Database File: 4475pe.db  
 Dataset Pathname: pass2.1  
 Presentation Format: \_dil  
 Dataset Creation: Fri Jan 24 14:19:13 2020 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240



4200

4250





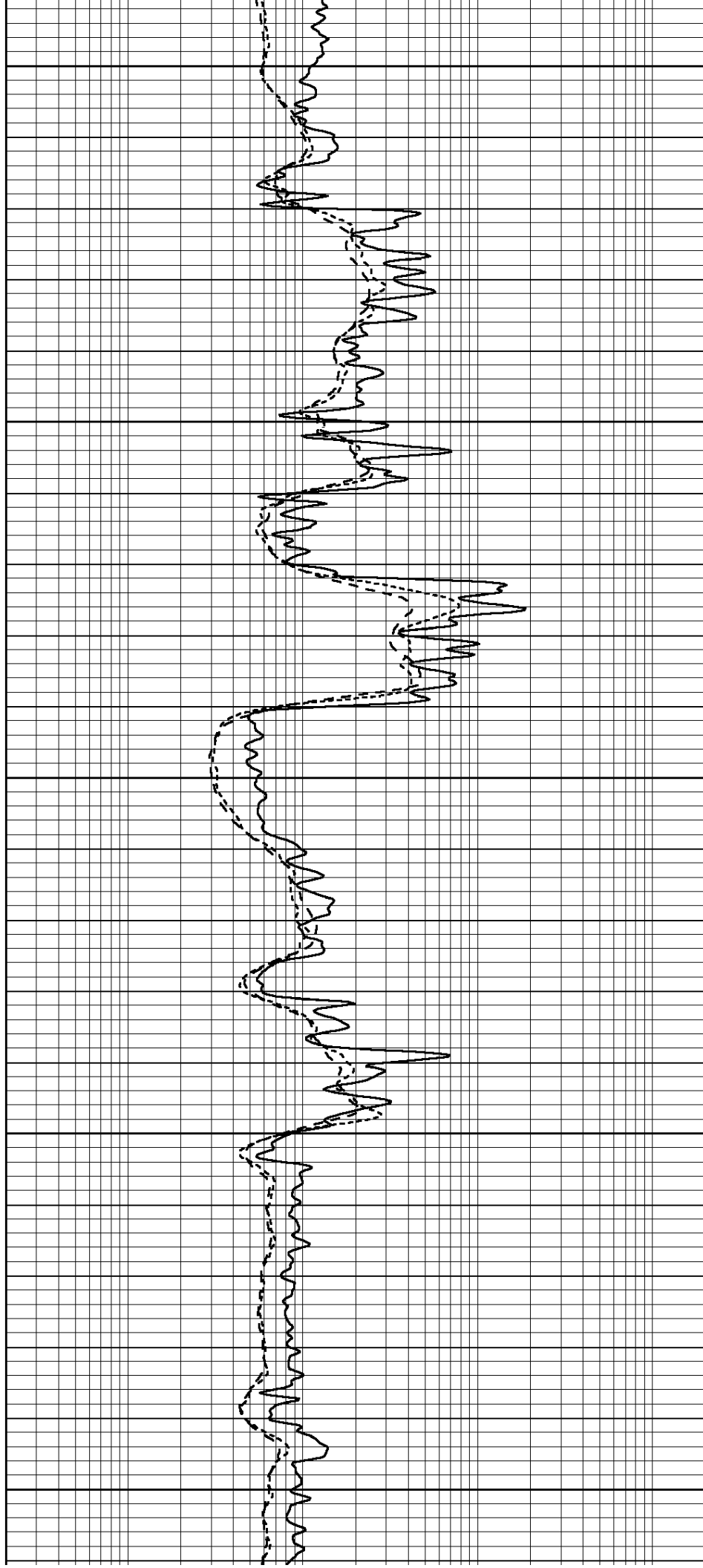
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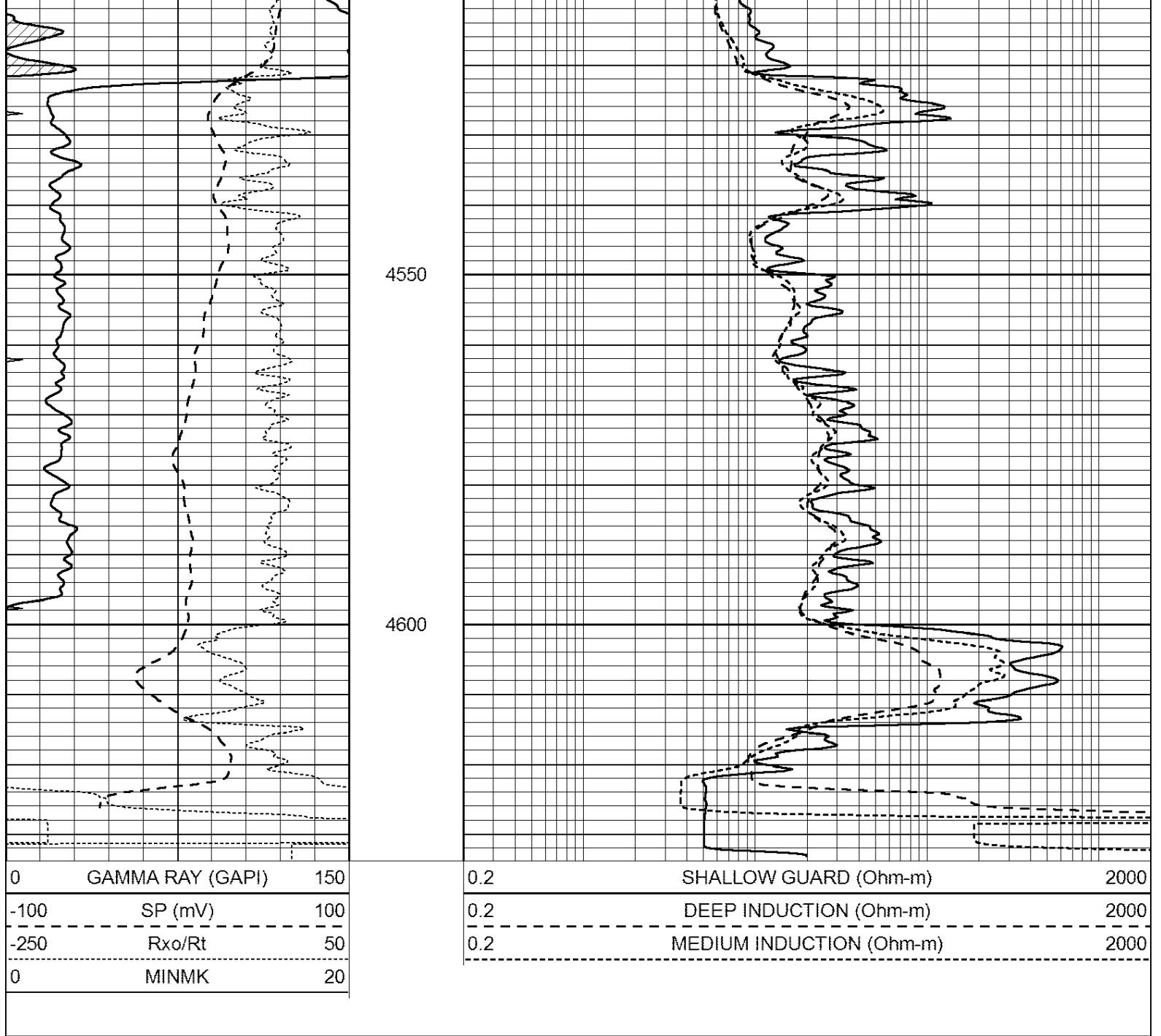
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4400

4450

4500





### Calibration Report

Database File: 4475pe.db  
 Dataset Pathname: pass2.1  
 Dataset Creation: Fri Jan 24 14:19:13 2020 by Calc Open-Cased 090629

### Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Mon Sep 10 14:28:35 2018  
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018  
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

#### Surface Calibration

| Loop:     | Readings |       |   | References |         |        | Results |         |
|-----------|----------|-------|---|------------|---------|--------|---------|---------|
|           | Air      | Loop  |   | Air        | Loop    |        | m       | b       |
| Deep      | 0.015    | 0.648 | V | 0.000      | 400.000 | mmho/m | 620.000 | 0.000   |
| Medium    | 0.029    | 0.796 | V | 0.000      | 464.000 | mmho/m | 590.000 | -12.000 |
| Internal: | Zero     | Cal   |   | Zero       | Cal     |        | m       | b       |

|                                  |            |             |                                    |                     |          |           |         |         |
|----------------------------------|------------|-------------|------------------------------------|---------------------|----------|-----------|---------|---------|
| 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: 001N      Model: PRB     |            |             |                                    |                     |          |           |         |         |
| Master Calibration               |            |             | Performed Fri Feb 22 10:21:38 2019 |                     |          |           |         |         |
|                                  | Background | Magnesium   |                                    | Aluminum            |          | Sandstone |         |         |
| Window 1                         | 1650.2     | 7609.7      |                                    | 2906.5              |          | 8386.5    |         | cps     |
| Window 2                         | 1538.2     | 6635.9      |                                    | 2614.4              |          | 7212.4    |         | cps     |
| Window 3                         | 1257.0     | 3718.7      |                                    | 1765.8              |          | 3927.1    |         | cps     |
| Window 4                         | 376.8      | 375.6       |                                    | 373.4               |          | 374.5     |         | cps     |
| Long Space                       | 0.0        | 5097.7      |                                    | 1076.2              |          | 5674.2    |         | cps     |
| Short Space                      | 2.8        | 1704.3      |                                    | 1106.3              |          | 1723.6    |         | cps     |
| Rho                              |            | 1.7100      |                                    | 2.5900              |          | 1.3800    |         | g/cc    |
| Pe                               |            | 0.0000      |                                    | 2.5700              |          | 1.5500    |         |         |
| Rib Angle                        | : 44.5     | Rib Slope   | : 0.982                            | Density/Spine Ratio |          | : 0.545   |         |         |
| Spine Angle                      | : 74.5     | Spine Slope | : 3.599                            | Spine Intercept     |          | : -18.2   |         |         |
| 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:                         |             | 6I                       |          |               |      |
| Tool Model:                            |             | G                        |          |               |      |
| CALIBRATION                            |             |                          |          |               |      |
| Detector                               |             | Readings                 |          | Target        |      |
|                                        |             |                          |          | Normalization |      |
| Short Space                            |             | 1.00                     | cps      | 1.00          | cps  |
| Long Space                             |             | 1.00                     | cps      | 1.00          | cps  |
|                                        |             |                          |          | 1.0000        |      |
|                                        |             |                          |          | 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:                             |             | Wed Jul 03 12:57:34 2019 |          |               |      |
| Calibrator Value:                      |             | 150.0                    | GAPI     |               |      |
| Background Reading:                    |             | 0.0                      | cps      |               |      |
| Calibrator Reading:                    |             | 276.0                    | cps      |               |      |
| Sensitivity:                           |             | 0.5700                   | GAPI/cps |               |      |