

**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company DEUTSCH OIL COMPANY
Well WANETA #1-35
Field WILDCAT
County FORD
State KANSAS

Company DEUTSCH OIL COMPANY
Well WANETA #1-35
Field WILDCAT
County FORD State KANSAS

Location: API #: 15-057-20940
2170' FSL & 1490' FWL
SEC 35 TWP 29S RGE 24W
Permanent Datum GROUND LEVEL Elevation 2572
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
Elevation
K.B. 2582
D.F.
G.L. 2572

| | |
|------------------------------|--------------|
| Date | 9-12-14 |
| Run Number | ONE |
| Depth Driller | 5490 |
| Depth Logger | 5490 |
| Bottom Logged Interval | 5488 |
| Top Log Interval | 00 |
| Casing Driller | 641 |
| Casing Logger | 646 |
| Bit Size | 7.875 |
| Type Fluid in Hole | CHEMICAL MUD |
| Density / Viscosity | 9.1 / 51 |
| pH / Fluid Loss | 10.5 / 10.4 |
| Source of Sample | FLOWLINE |
| Rm @ Meas. Temp | 0.40 @ 80F |
| Rmf @ Meas. Temp | 0.30 @ 80F |
| Rmc @ Meas. Temp | 0.48 @ 80F |
| Source of Rmf / Rmc | MEASURED |
| Rm @ BHT | .246 @ 130F |
| Time Circulation Stopped | 3 HOURS |
| Time Logger on Bottom | 6:00 P.M. |
| Maximum Recorded Temperature | 130F |
| Equipment Number | 3802 |
| Location | HAYS, KS. |
| Recorded By | RUPP |
| Witnessed By | KEITH REAVIS |

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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

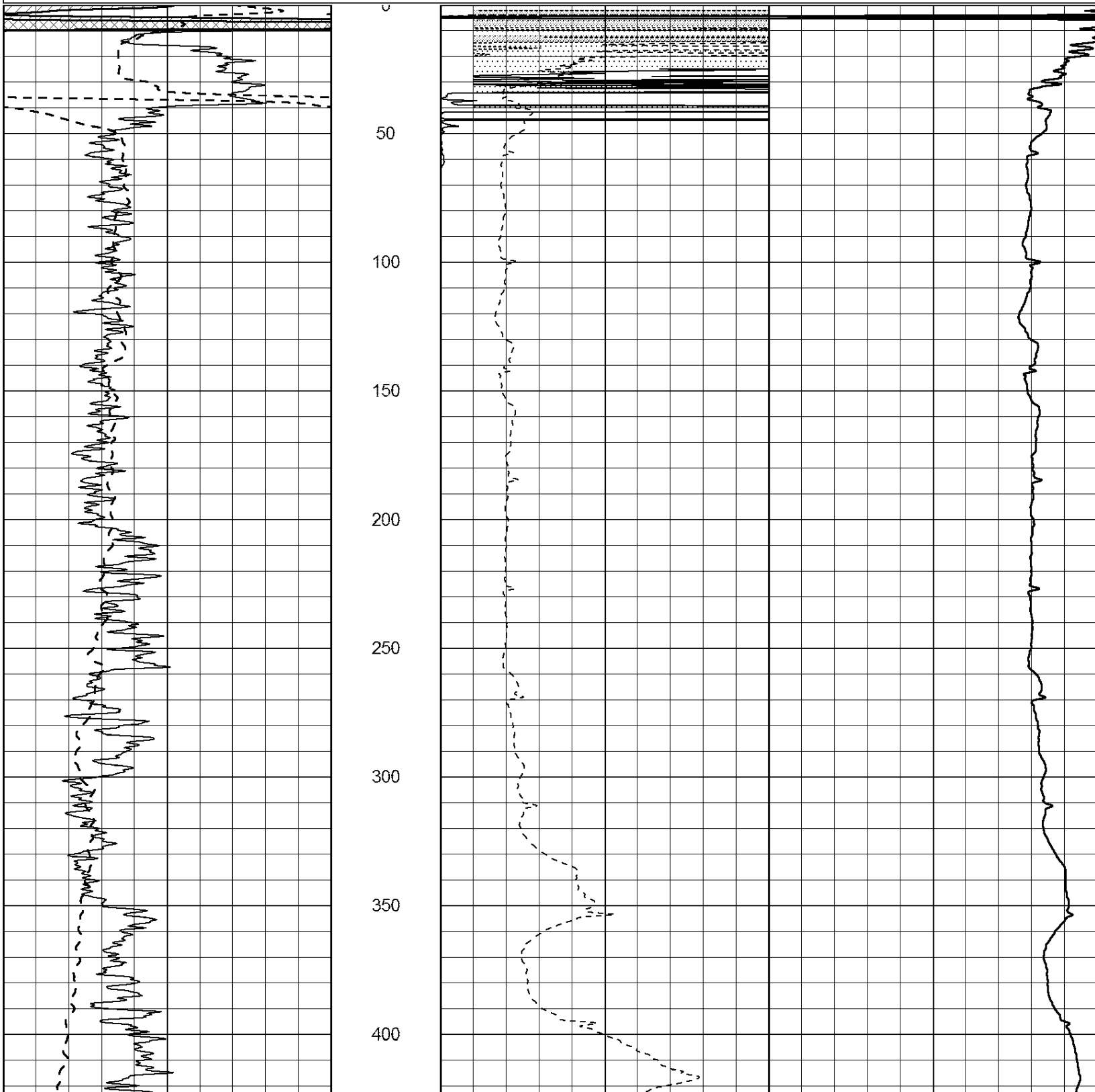
NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: BLOOM, KS., 1W, S INTO.

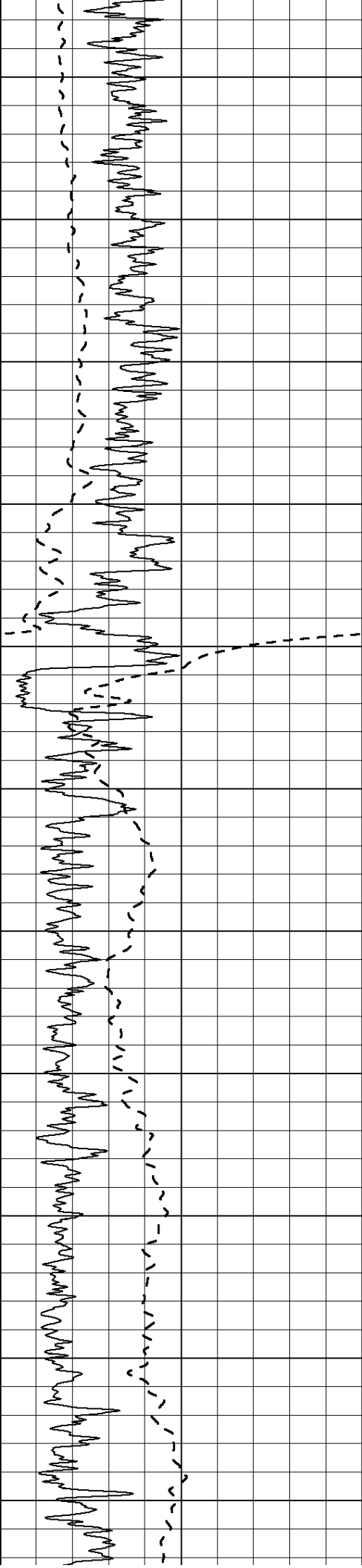


MAIN SECTION

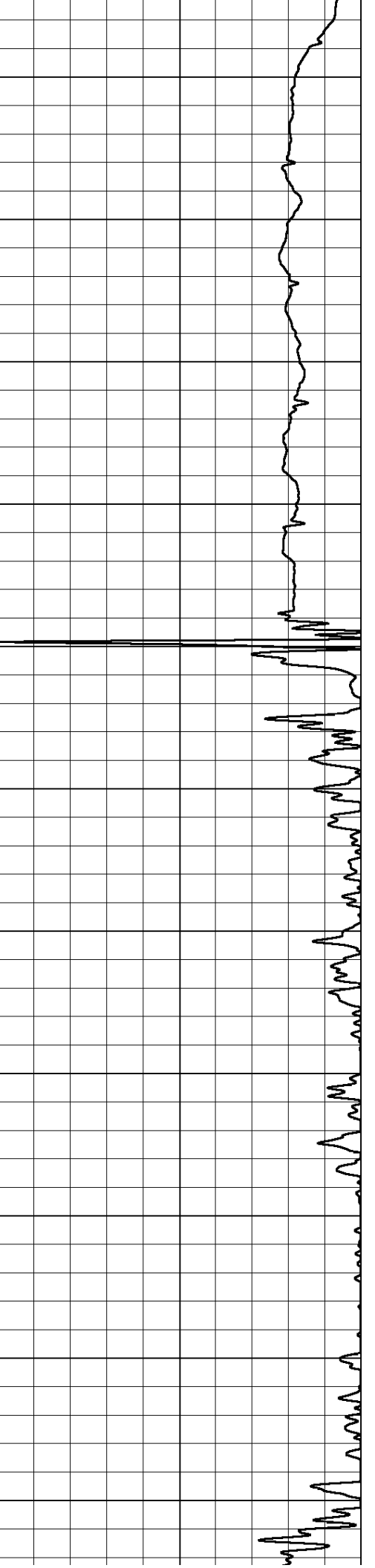
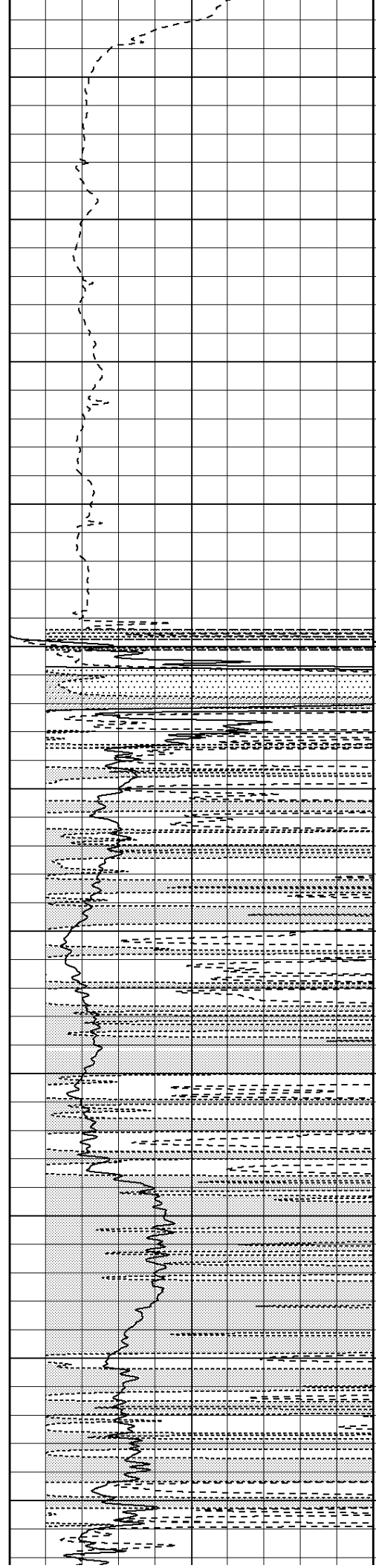
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 Dataset Creation: Fri Sep 12 19:48:49 2014 by Calc Open-Cased 090629
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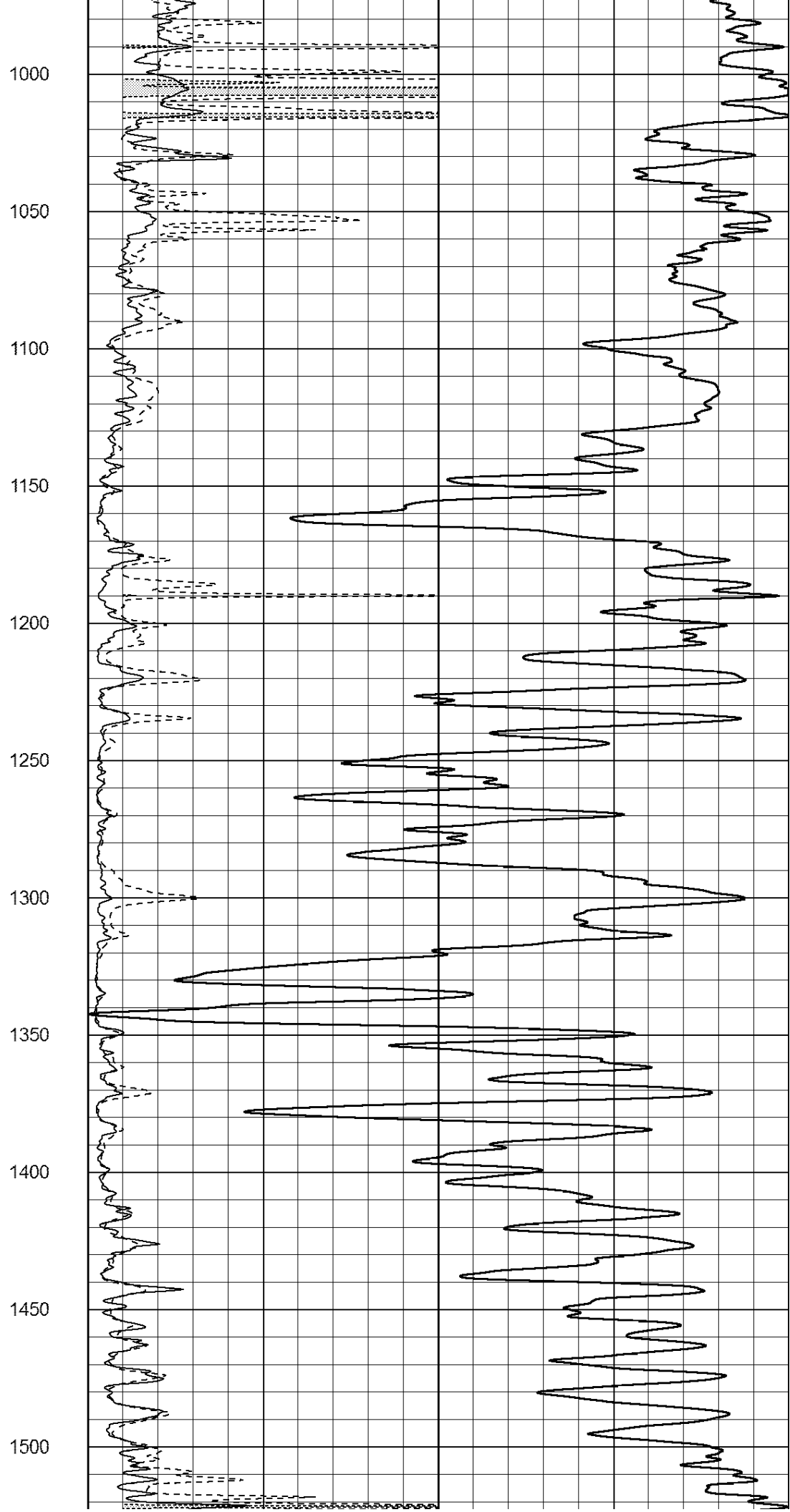
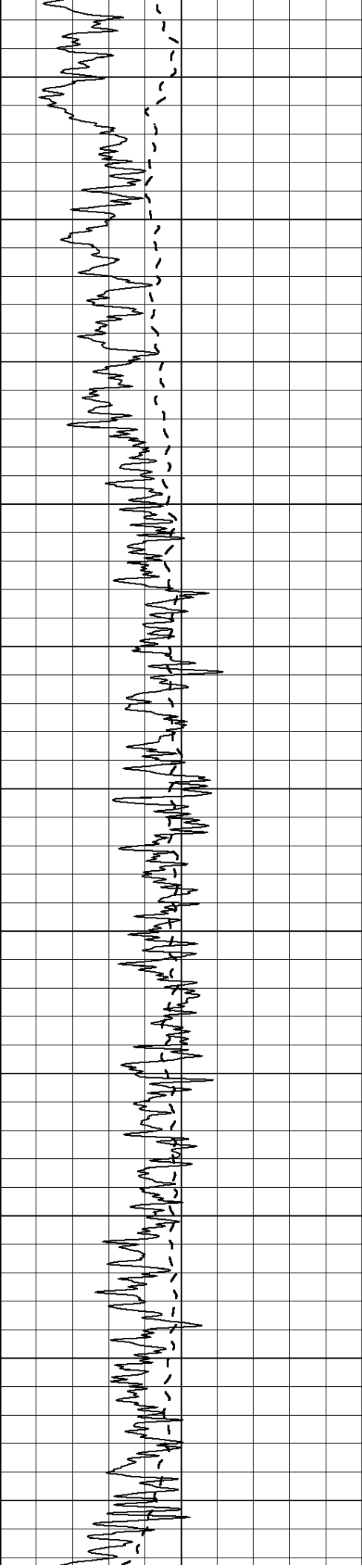
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| 0 | Gamma Ray (GAPI) | 150 | 0 | RLL3 (Ohm-m) | 50 |
| | | | 0 | Deep Induction (Ohm-m) | 50 |
| | | | 1000 | CILD (mmho/m) | 0 |
| | | | 50 | RILD X10 (Ohm-m) | 500 |
| | | | 50 | RLL3 X10 (Ohm-m) | 500 |

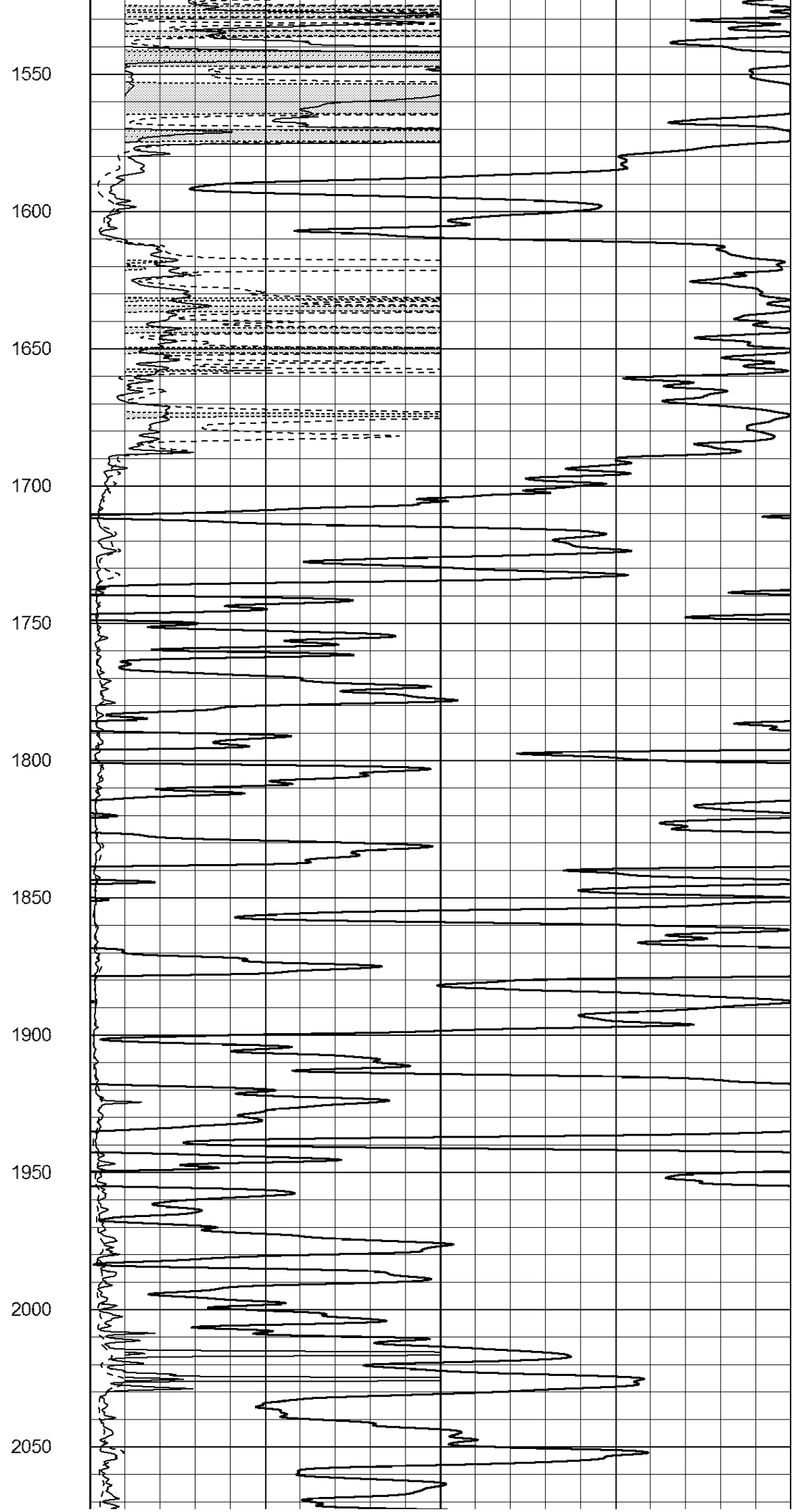
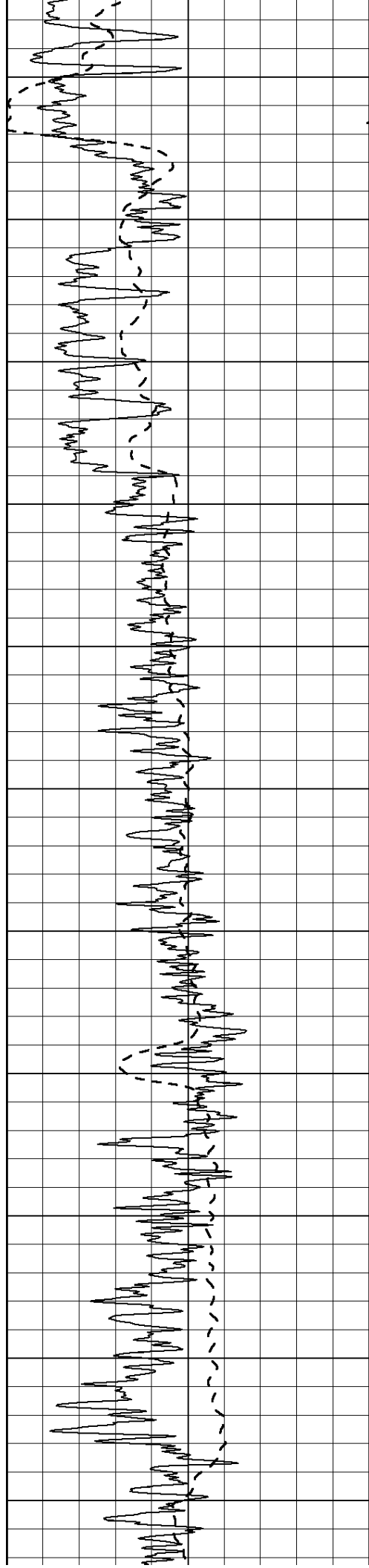


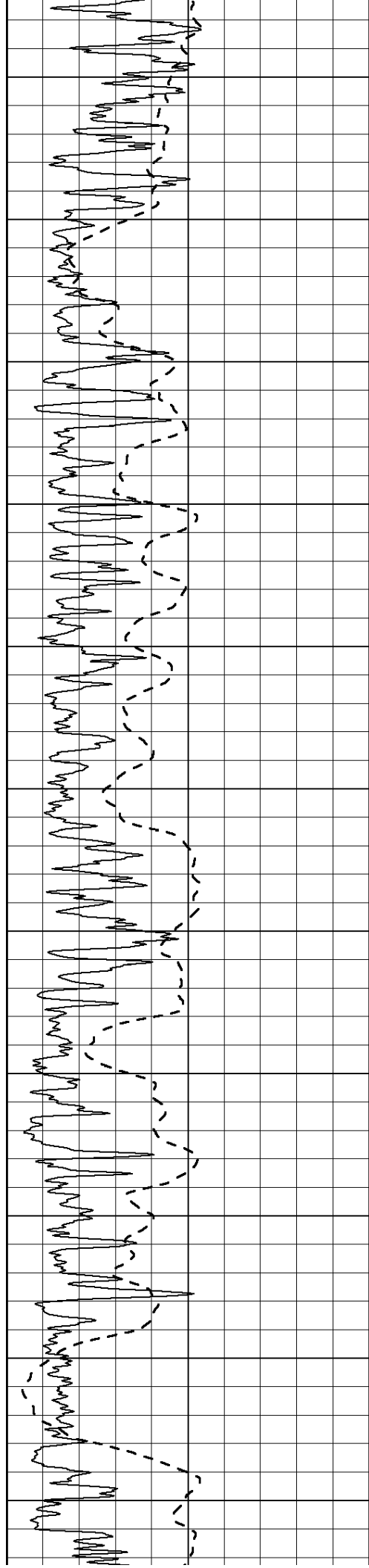


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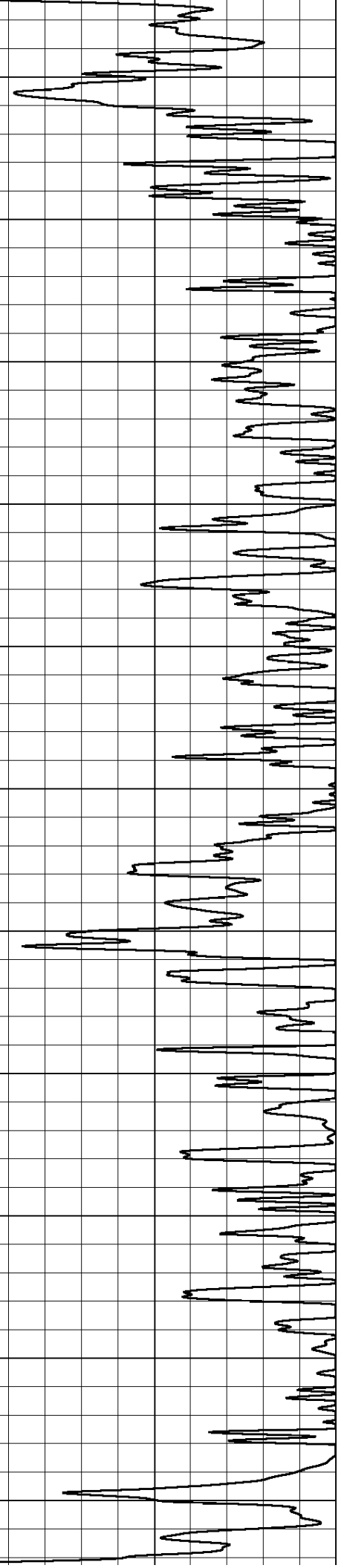
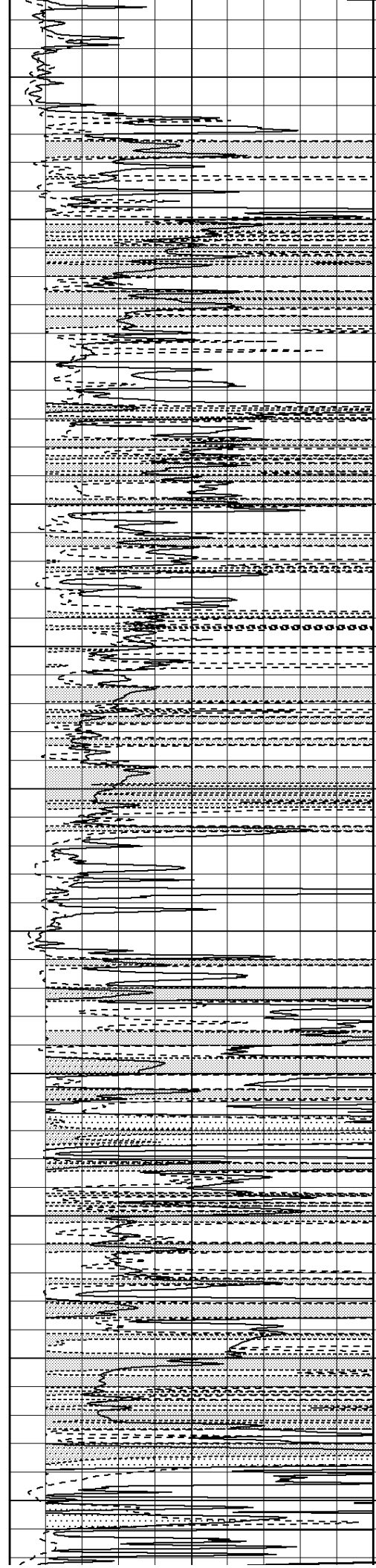


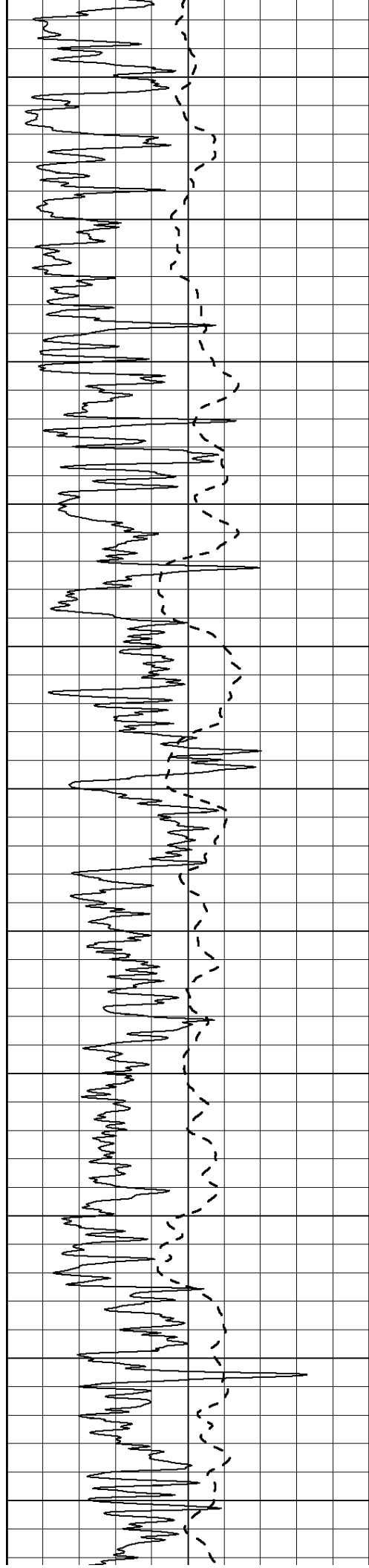






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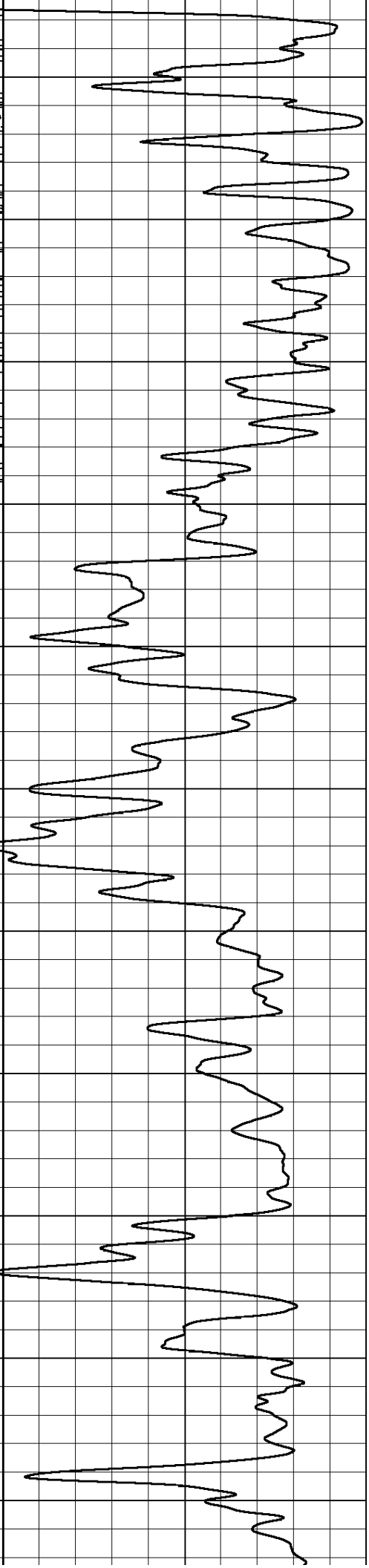
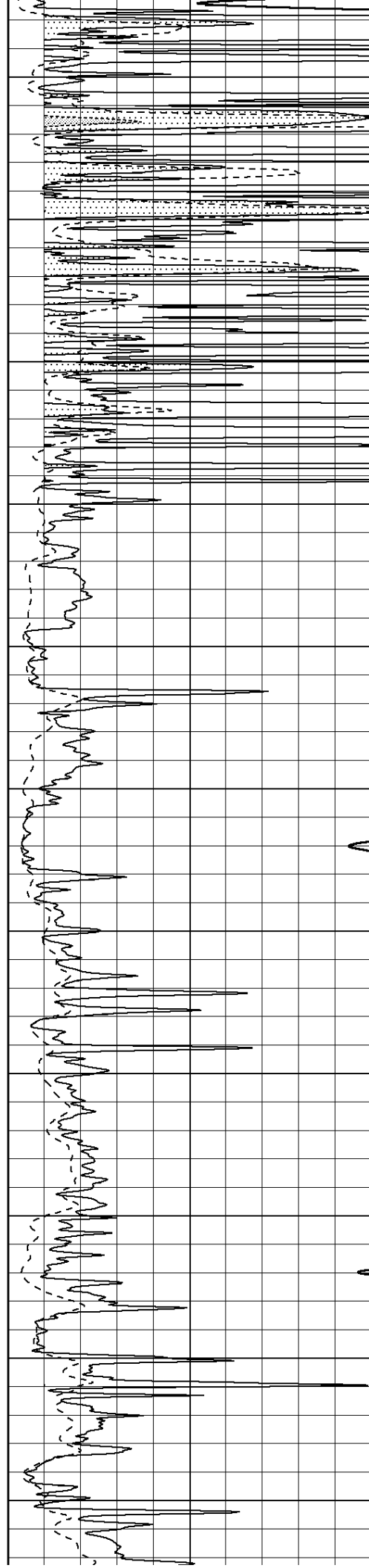
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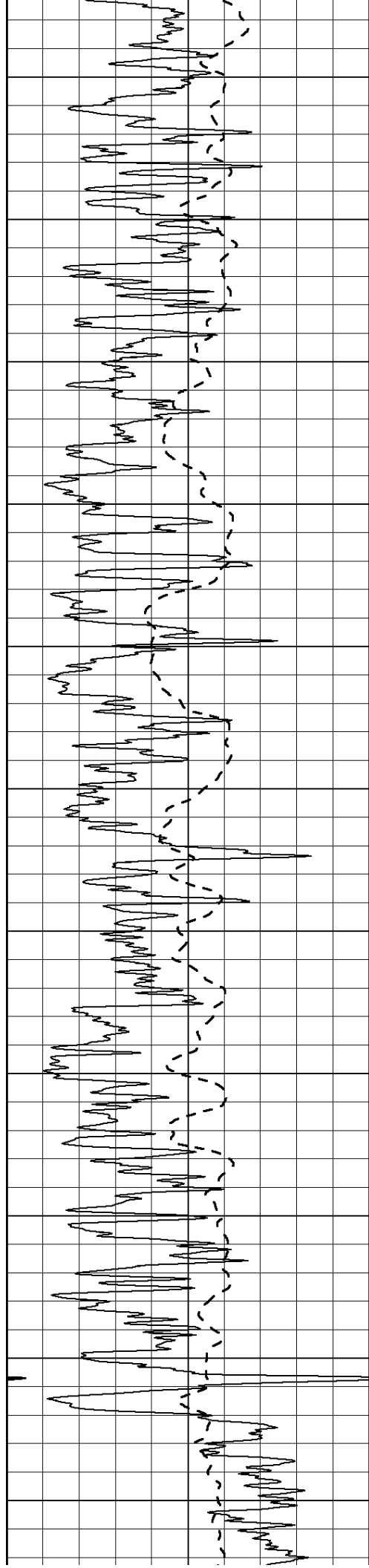
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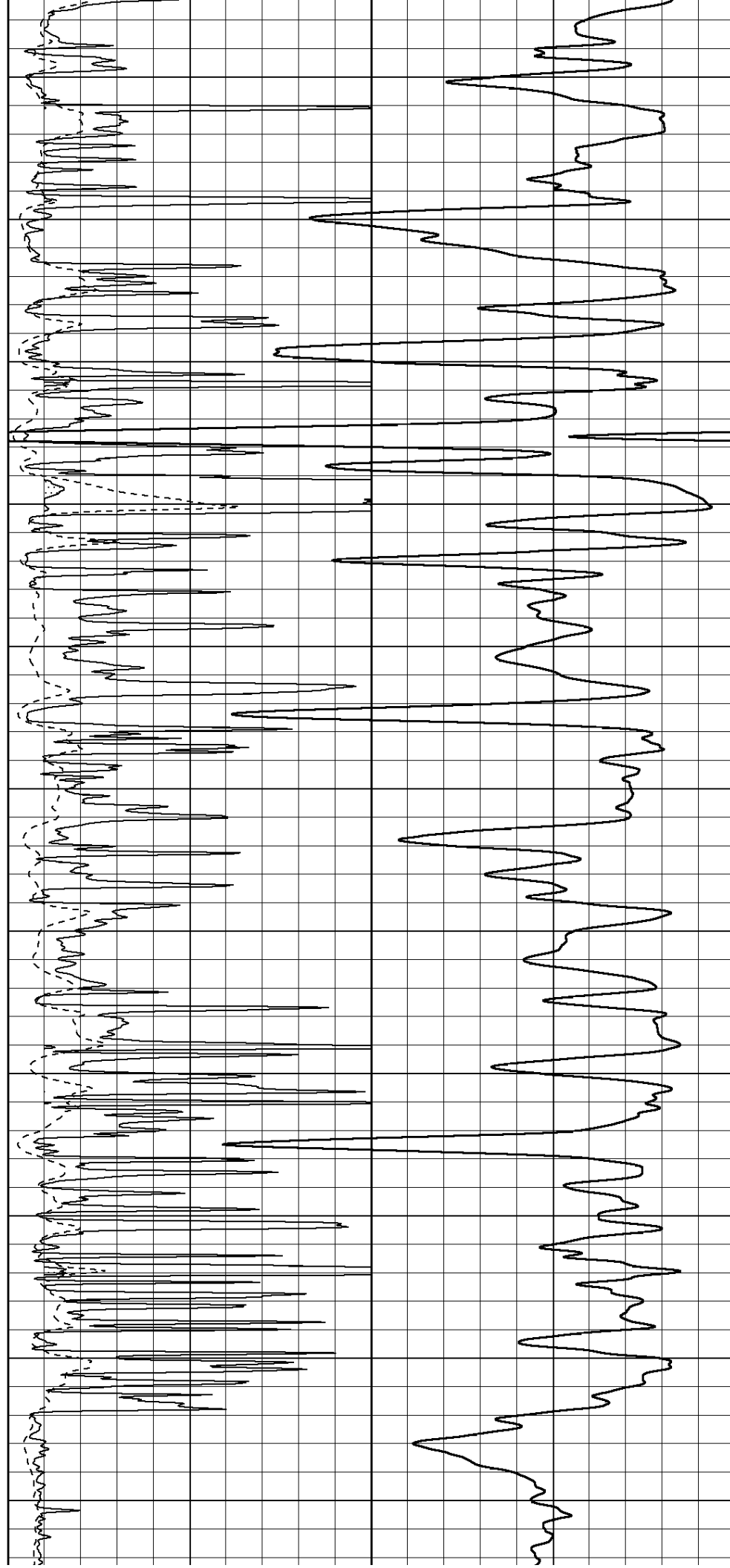
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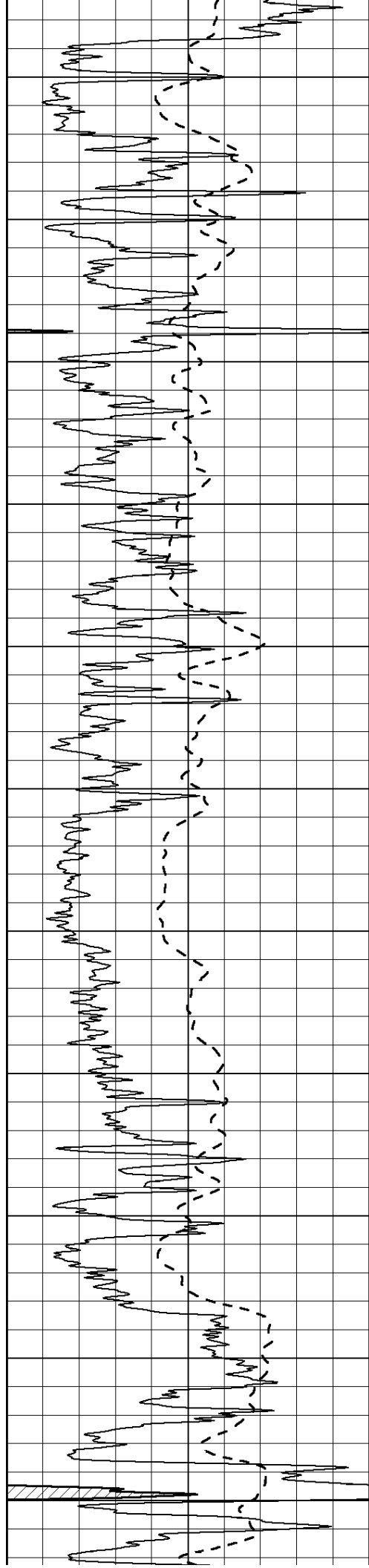
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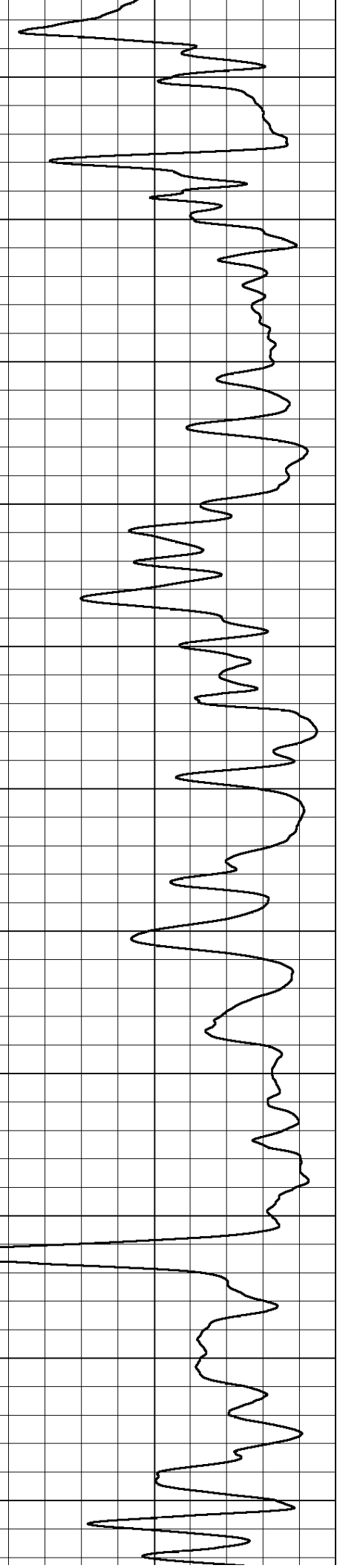
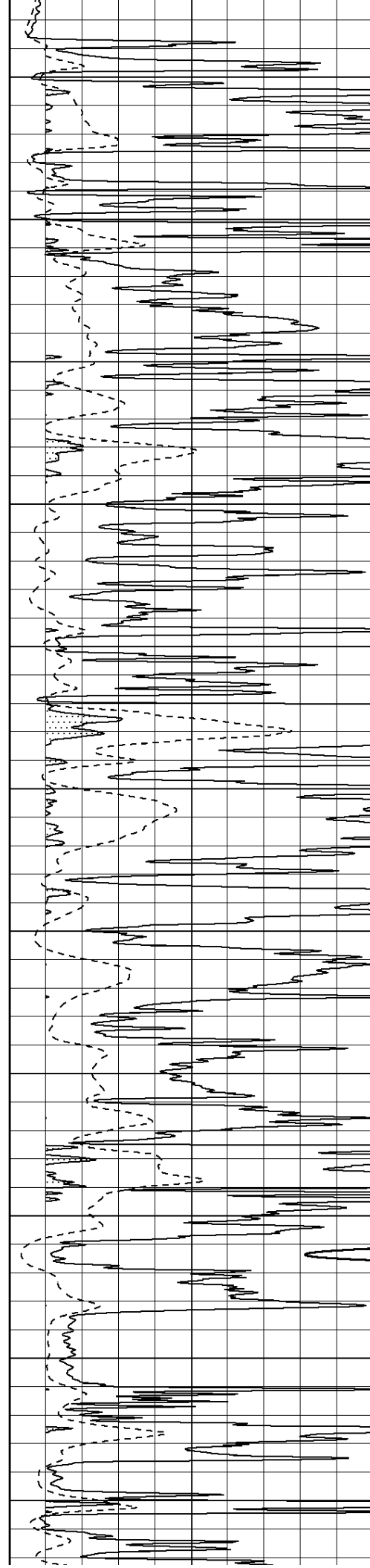
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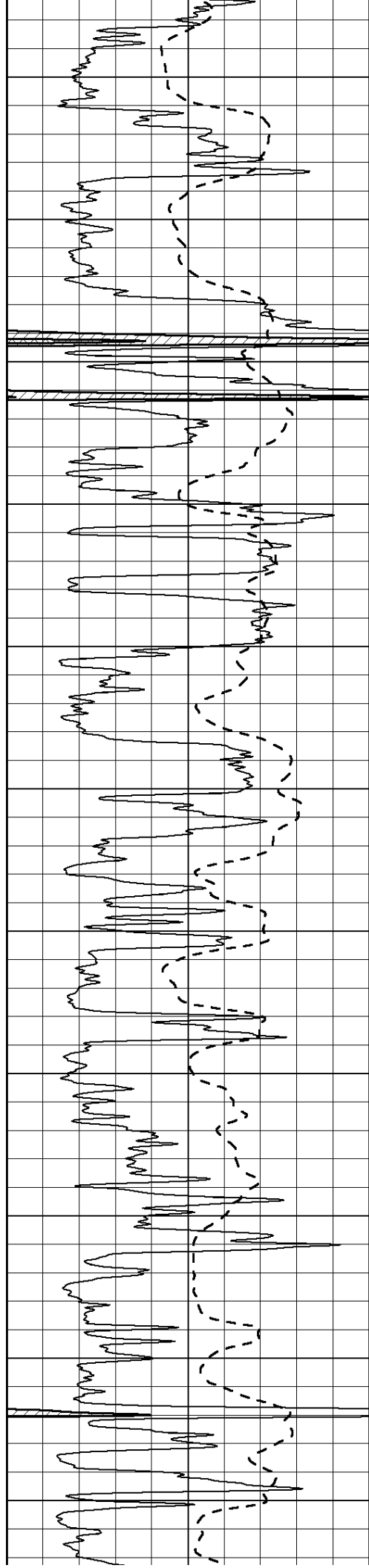
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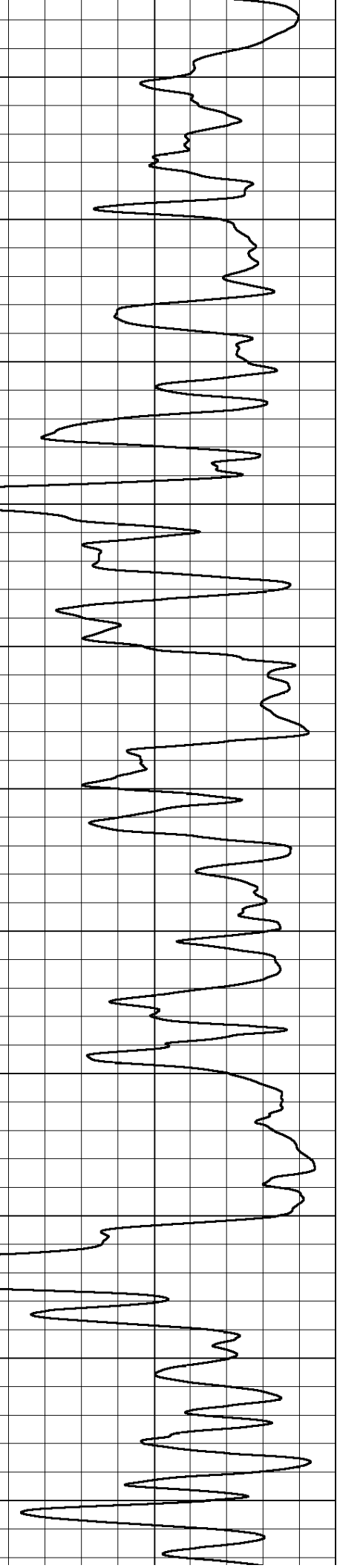
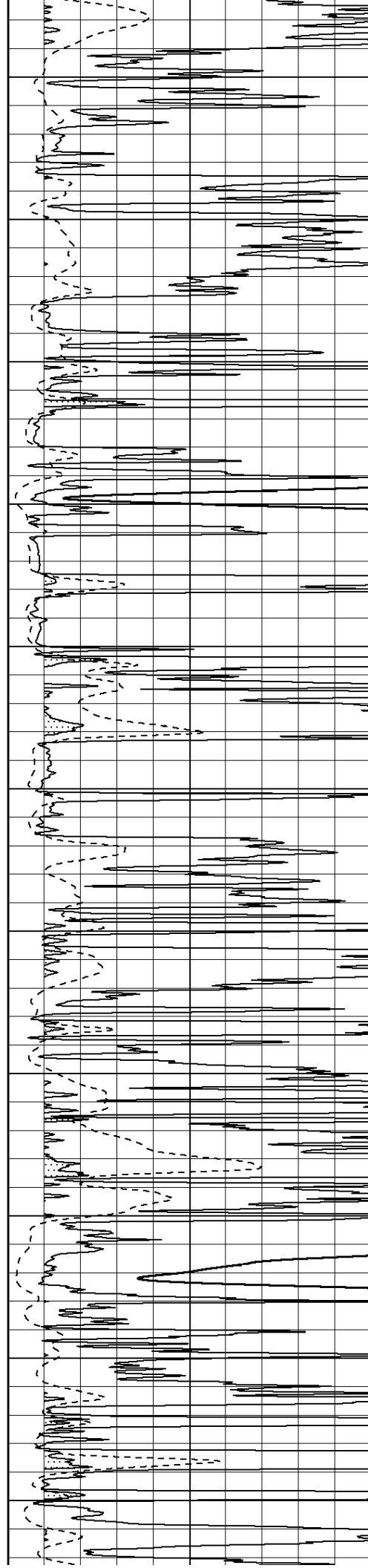
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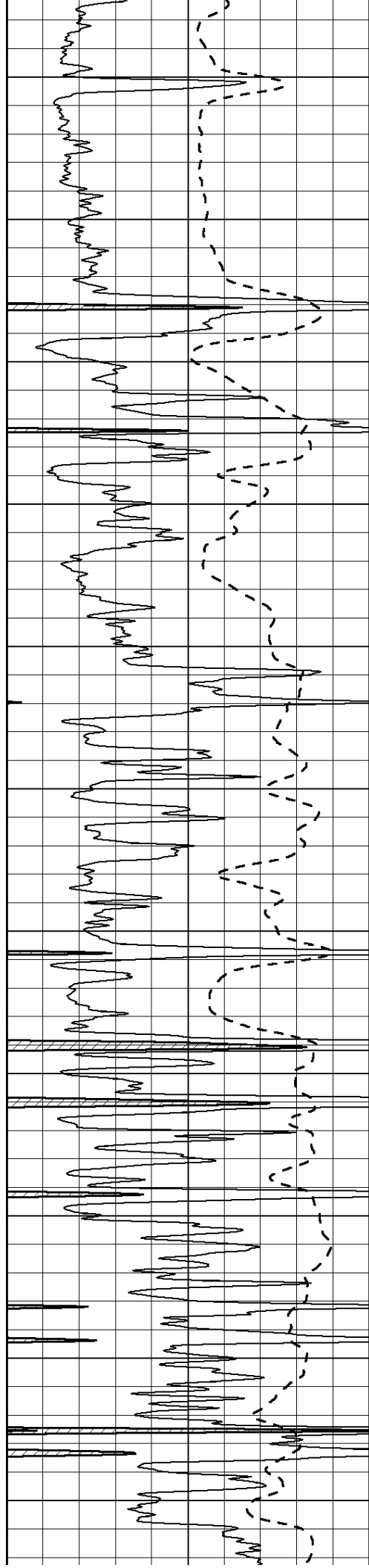
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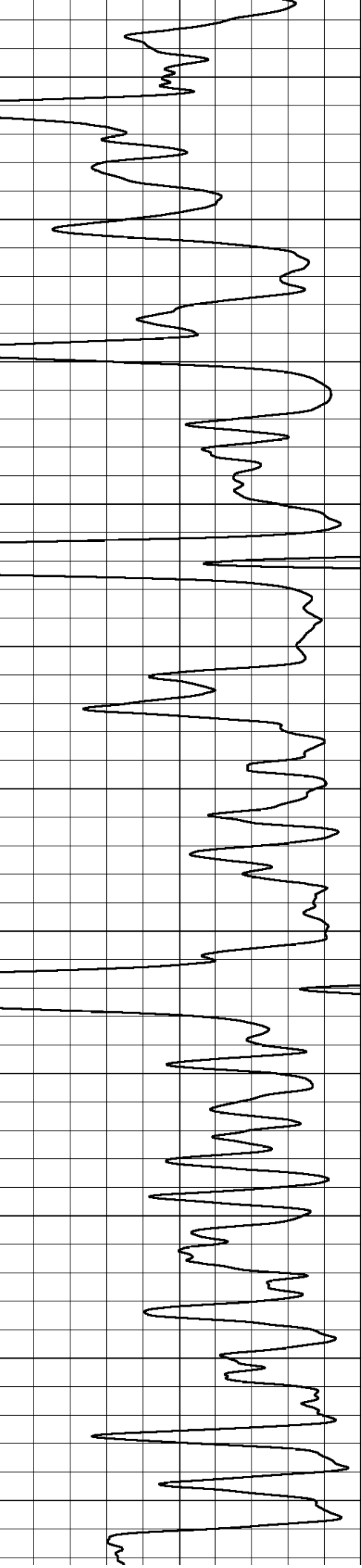
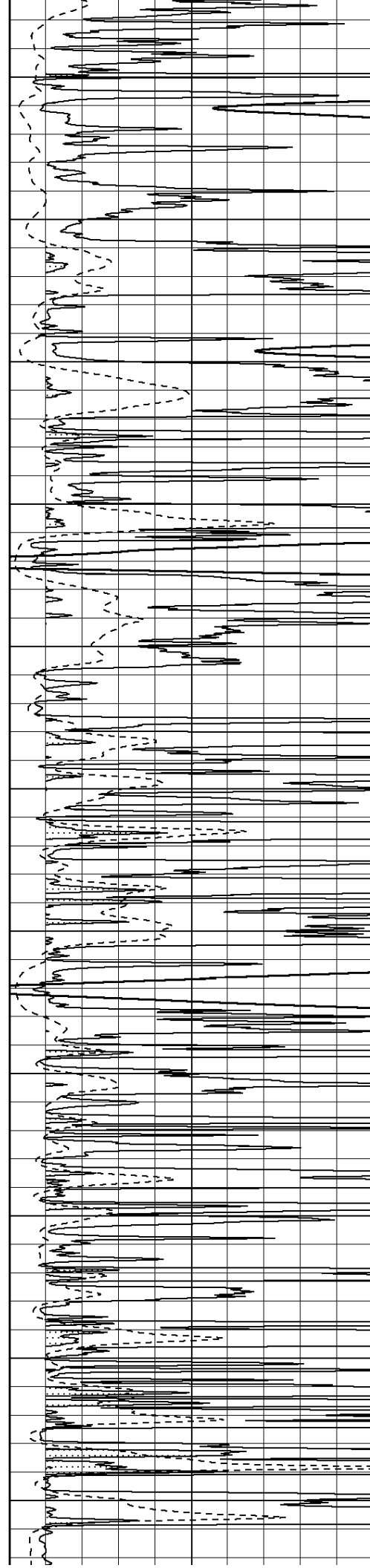
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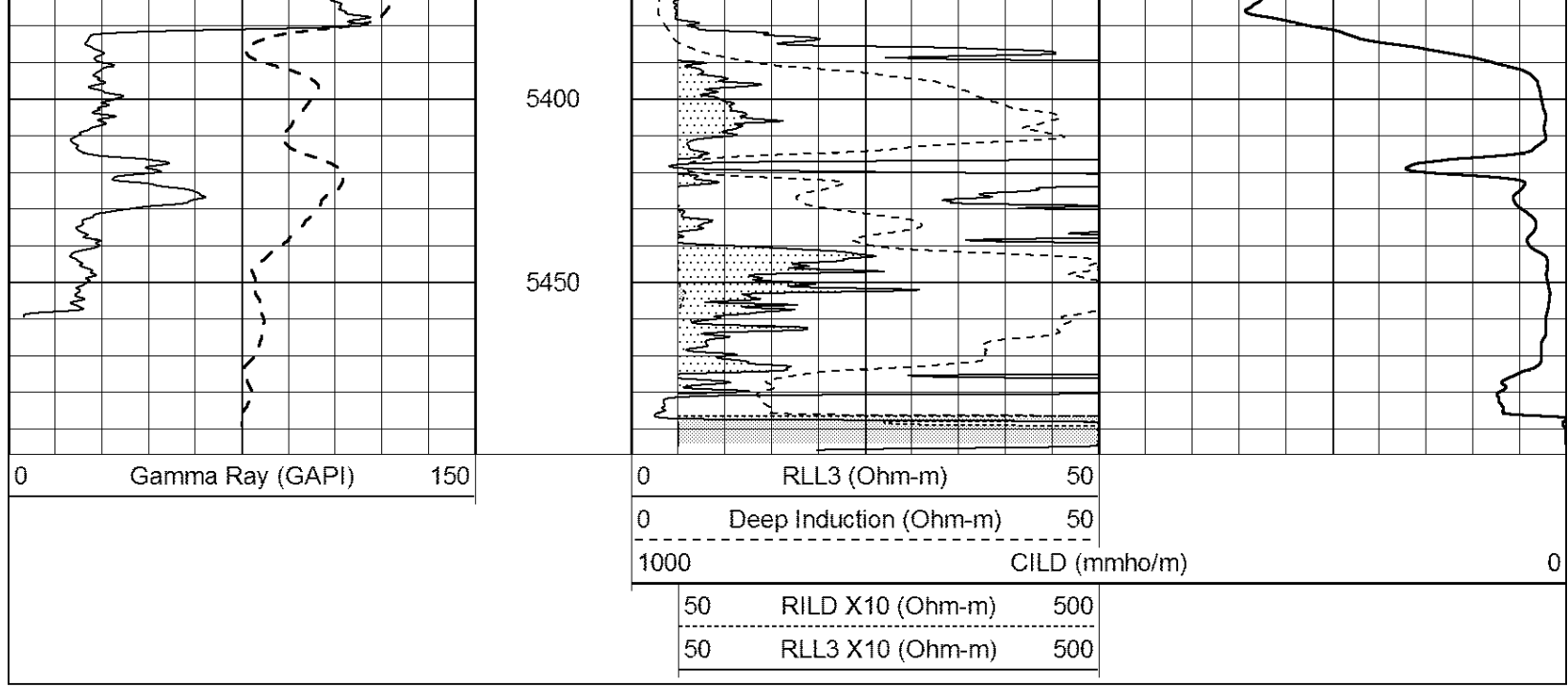
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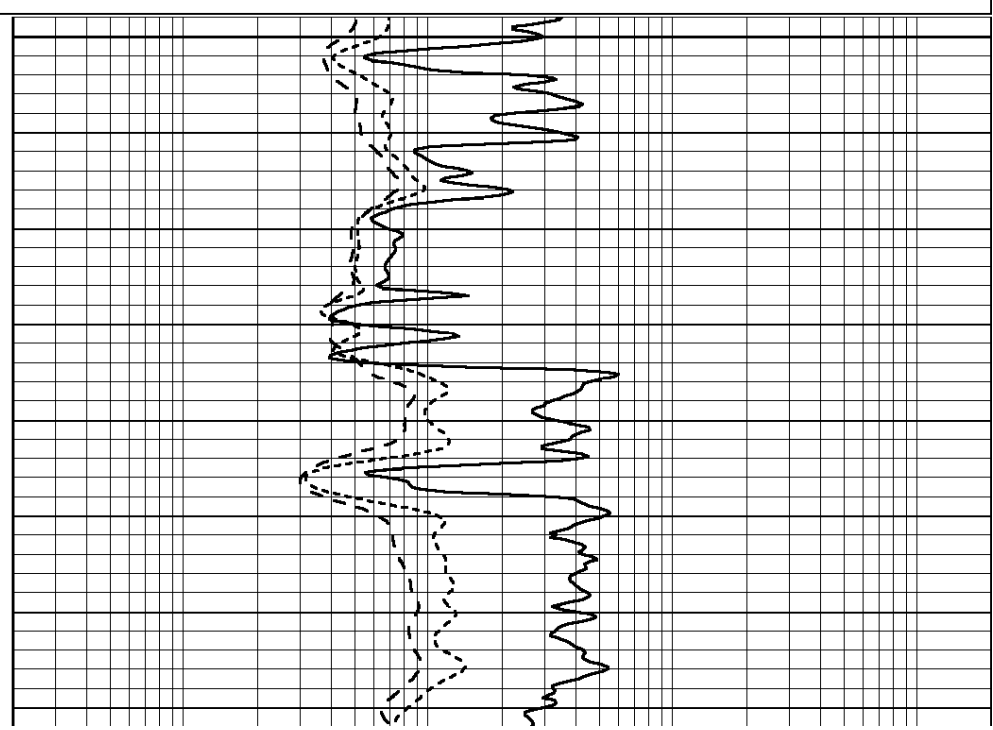
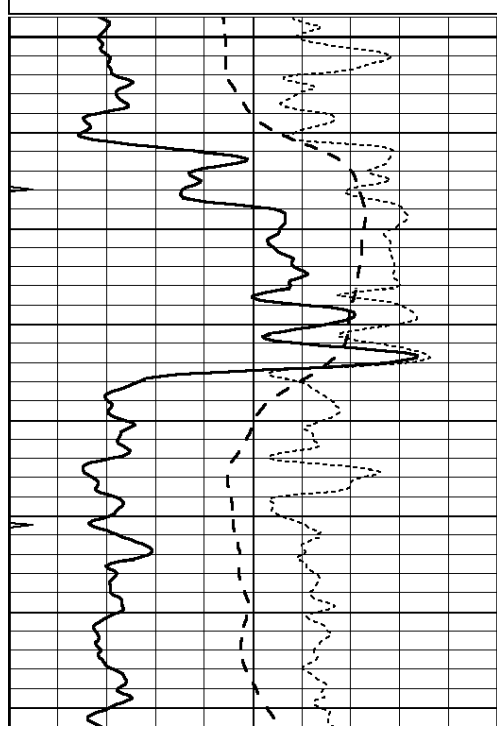


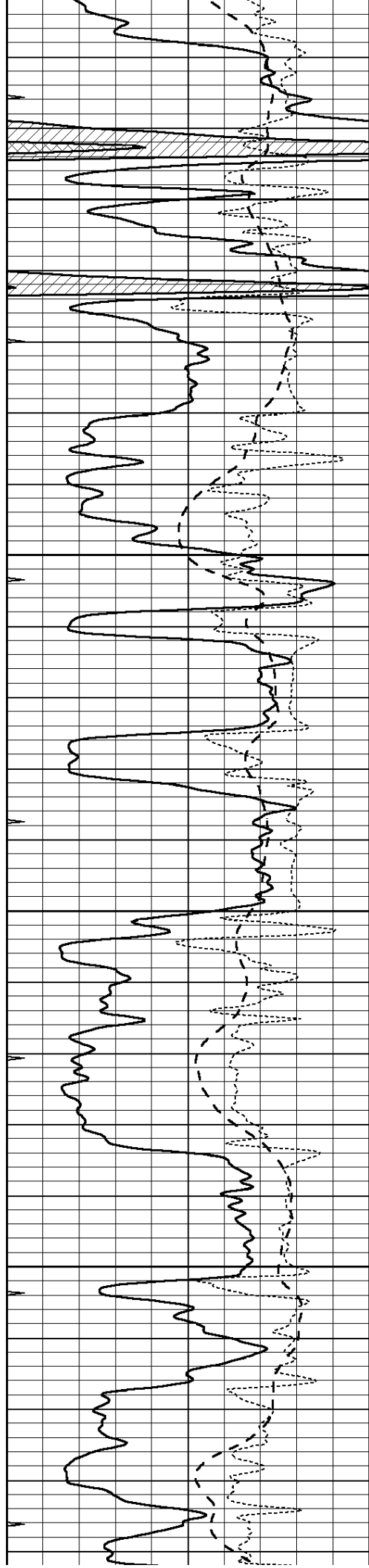
MAIN SECTION

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 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Fri Sep 12 19:48:49 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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



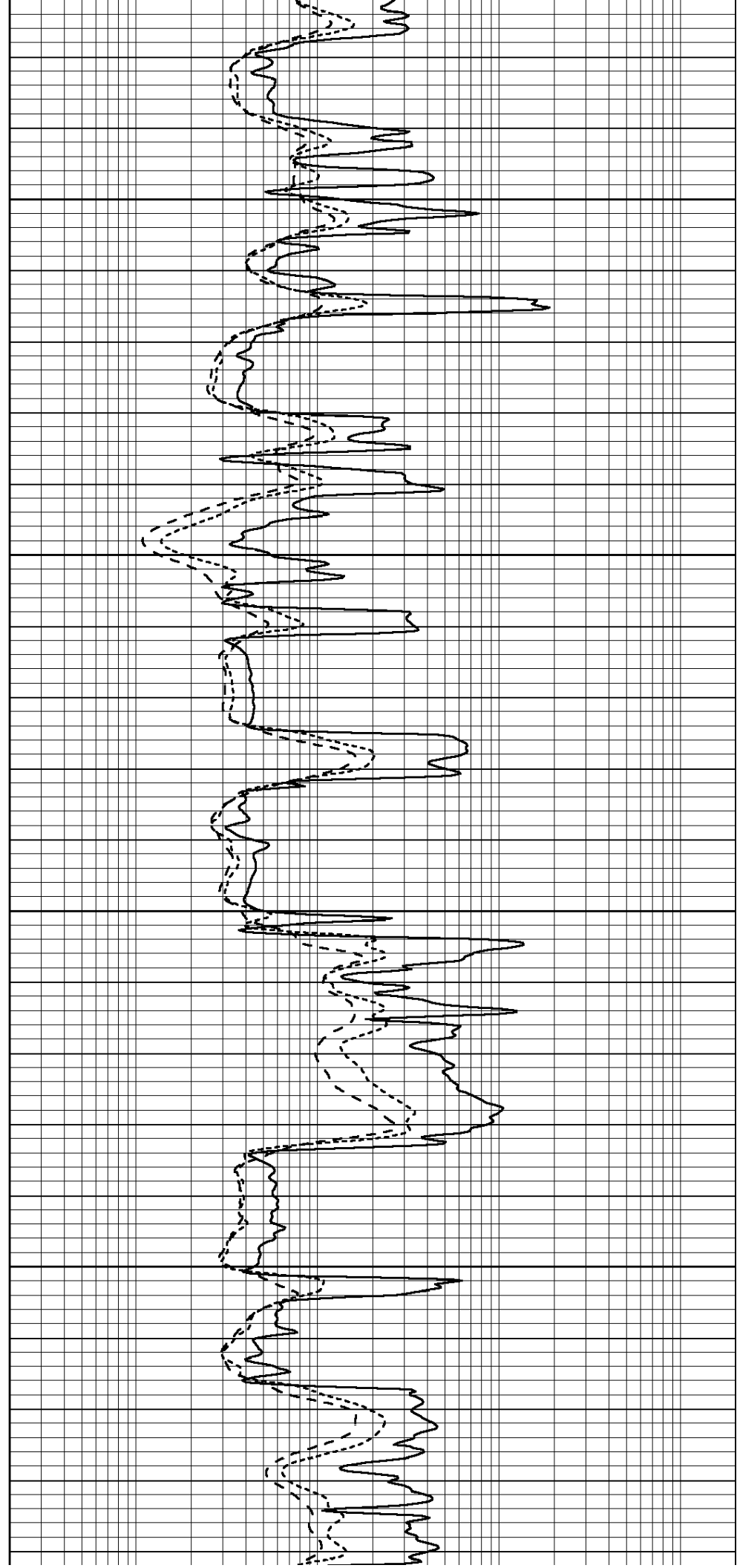


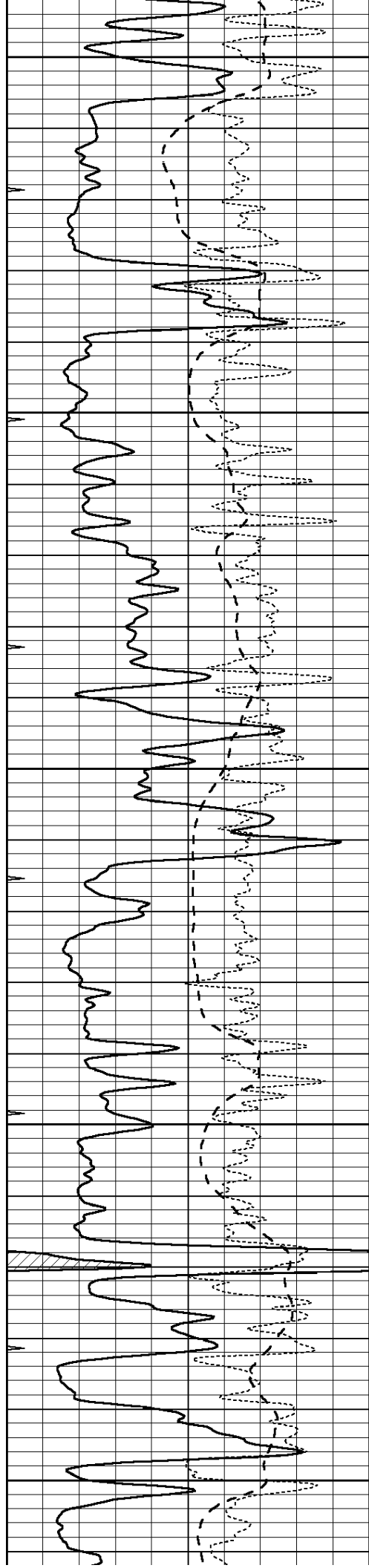
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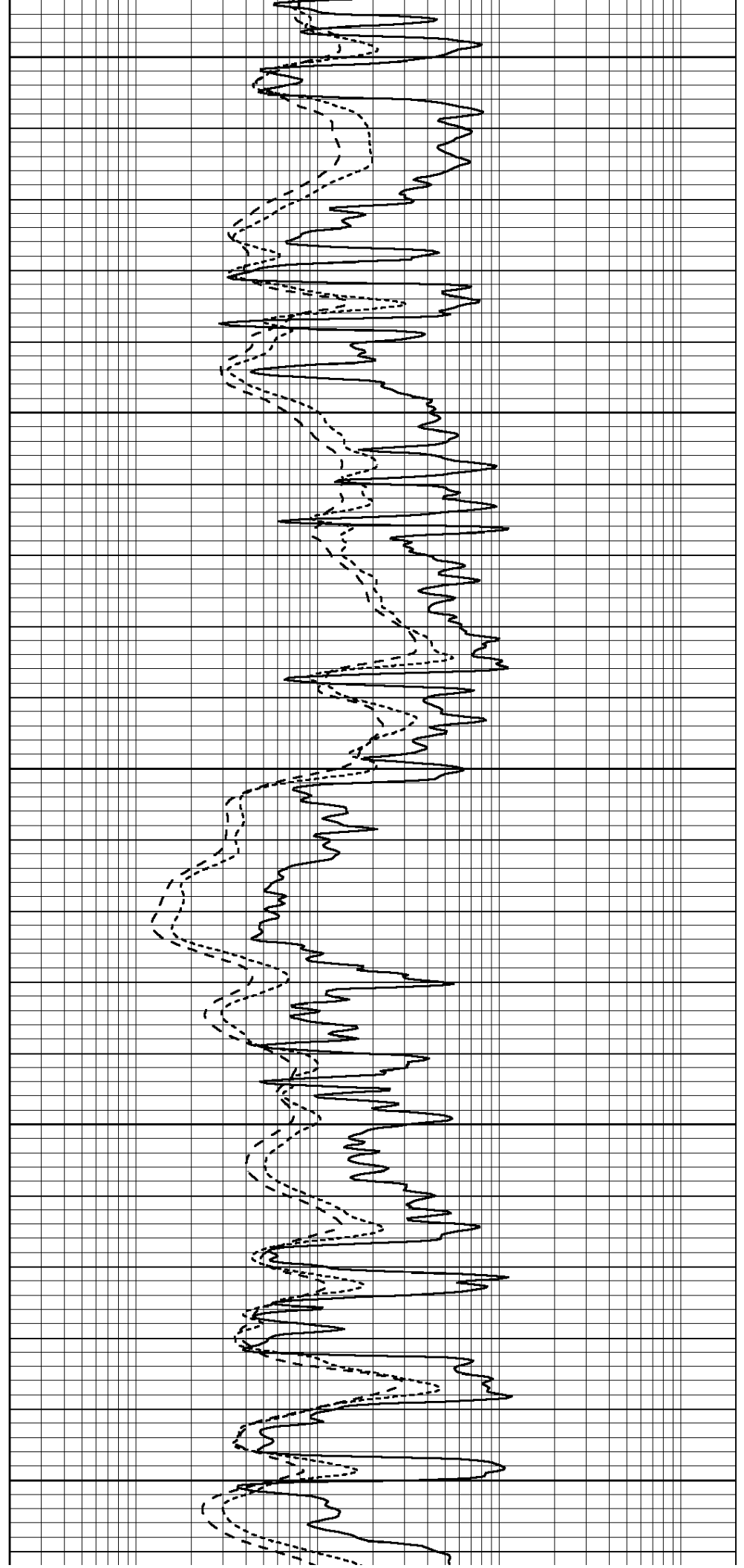
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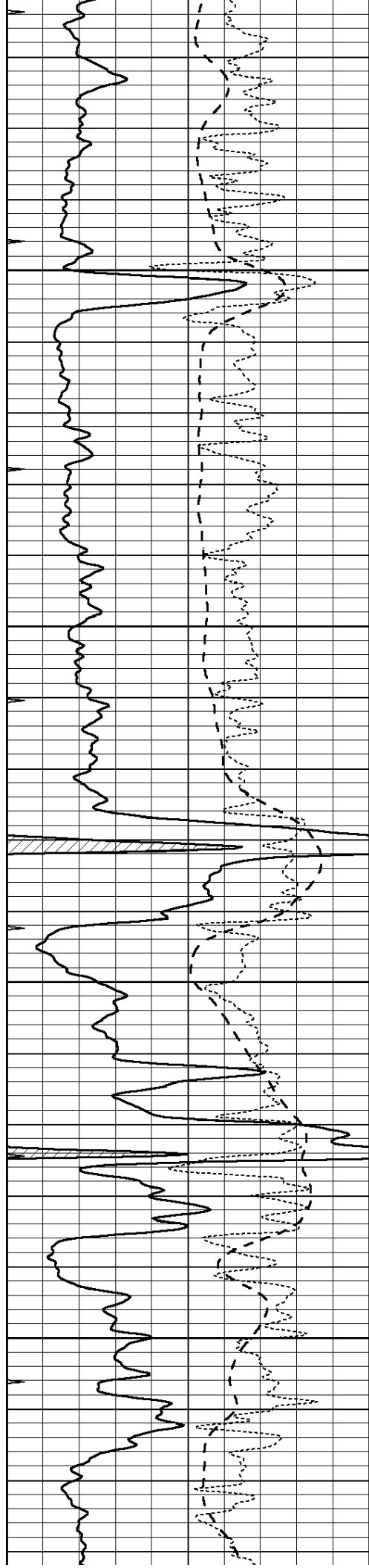
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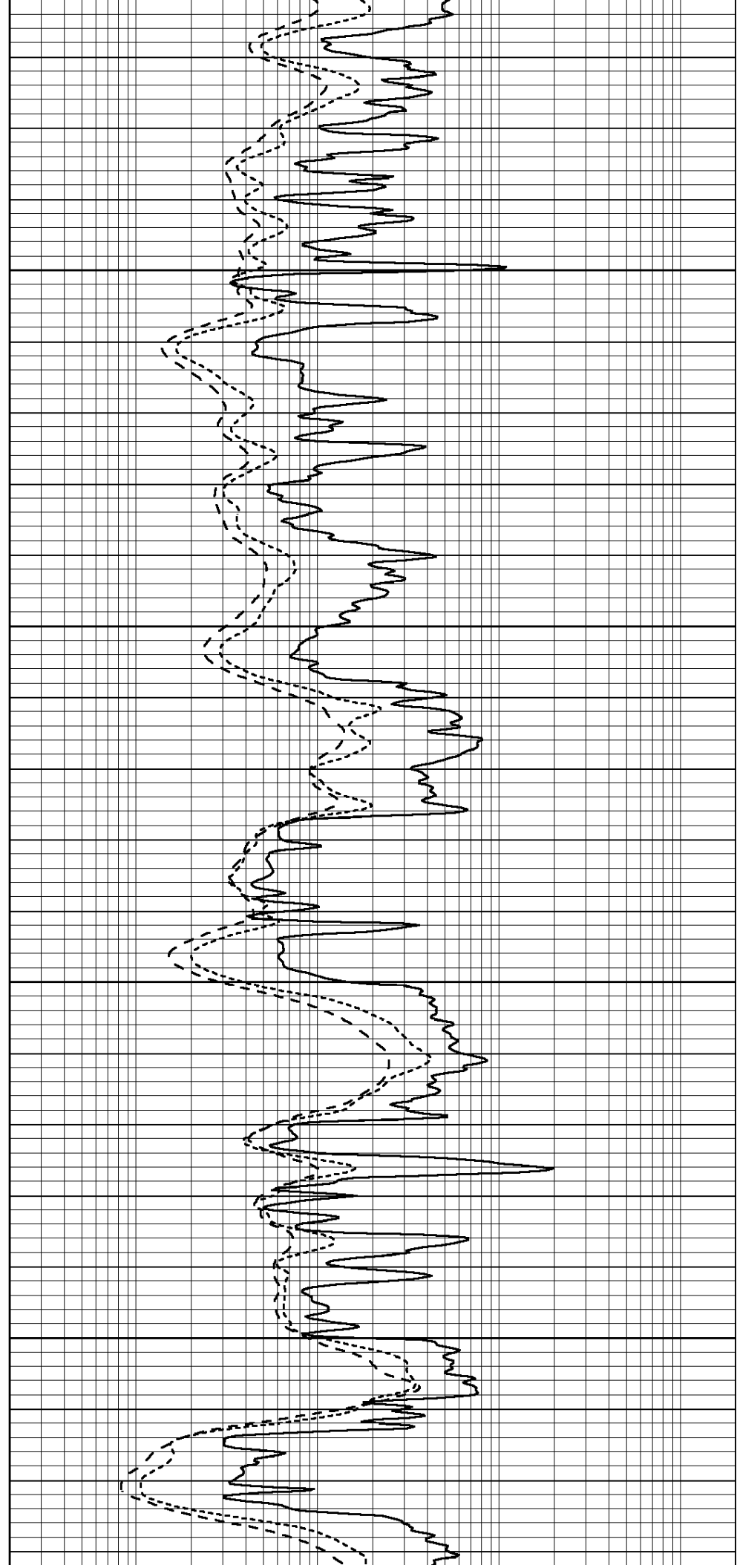


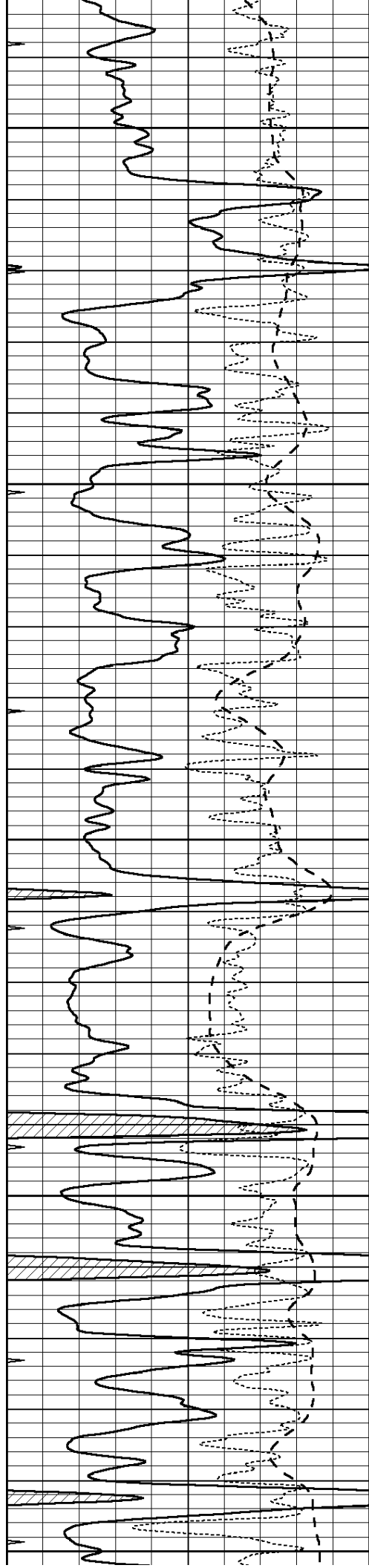
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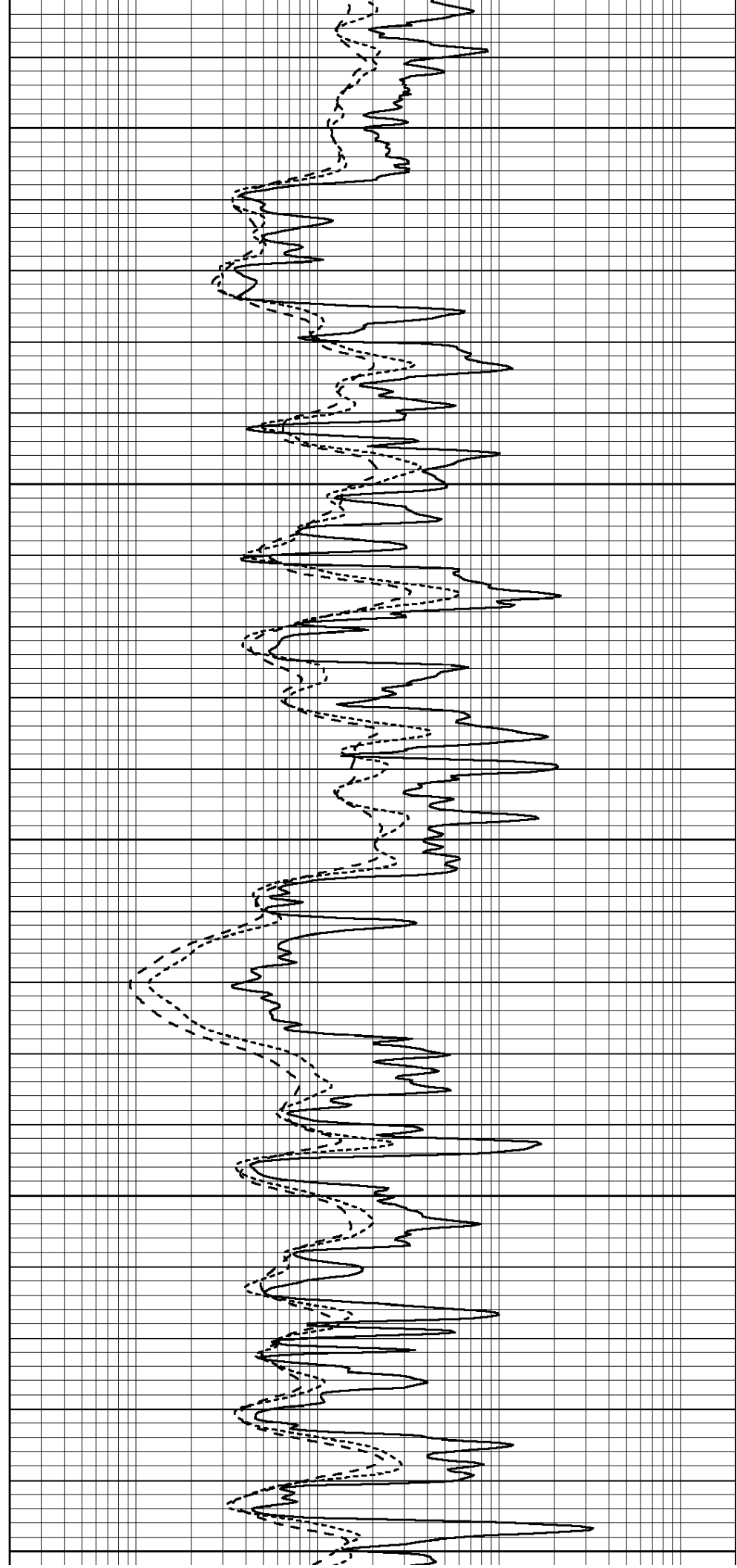
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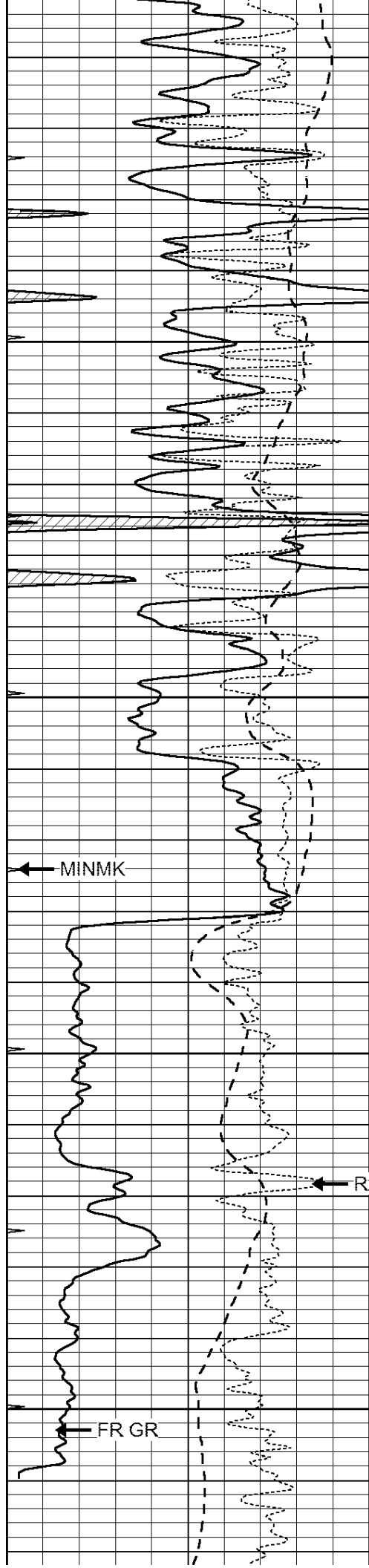
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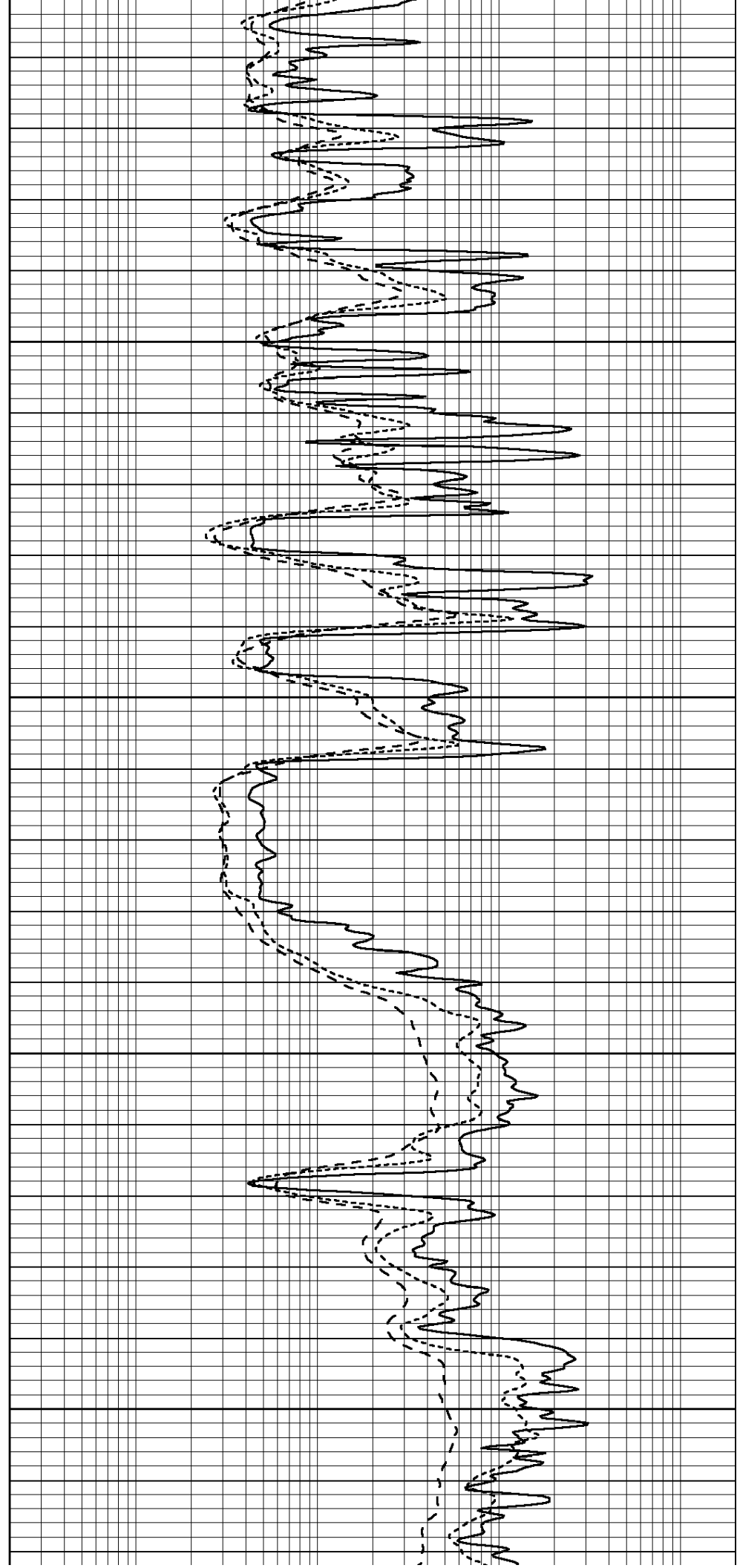


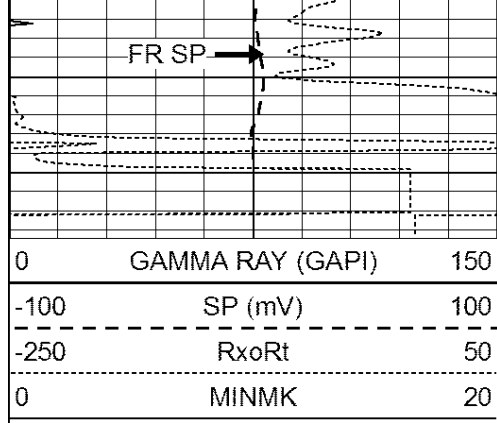
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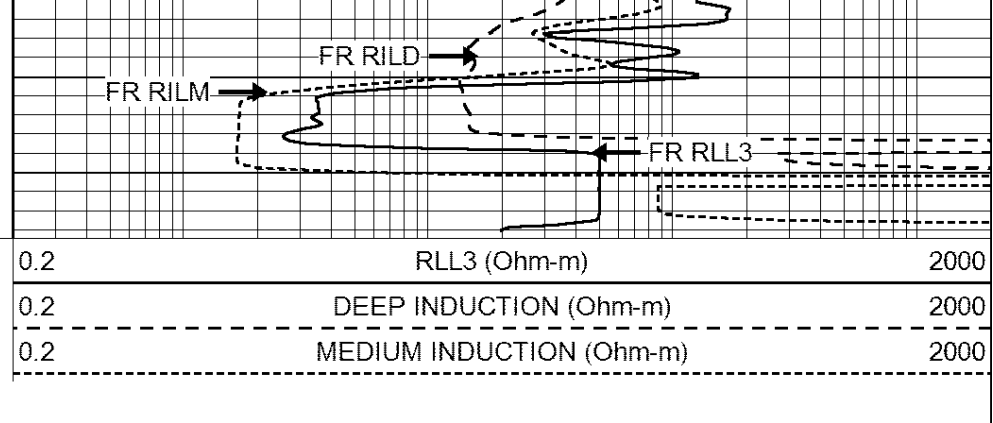
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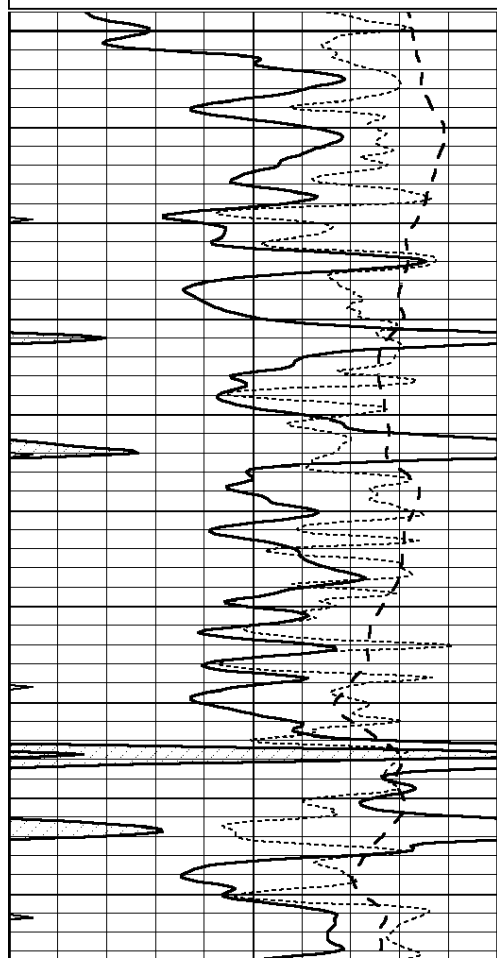


REPEAT SECTION

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 Presentation Format: _dil
 Dataset Creation: Fri Sep 12 18:23:30 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

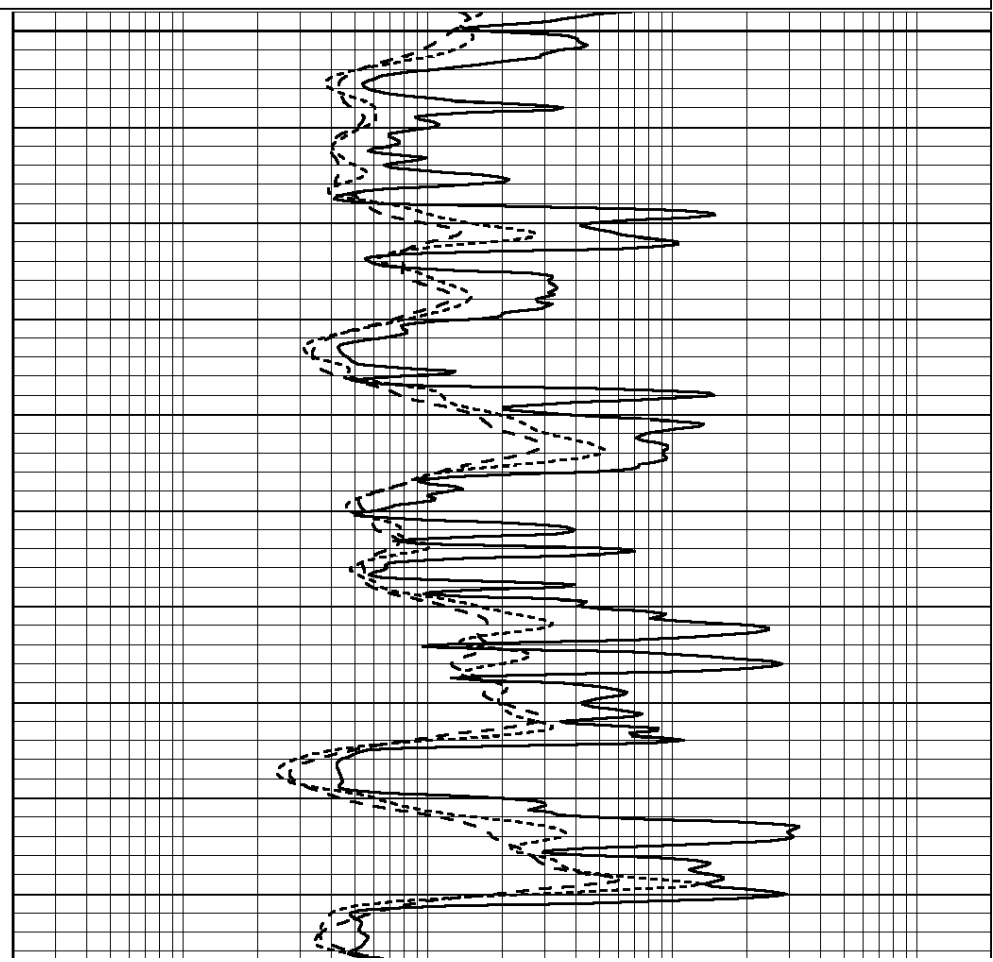
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|------|------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | RxoRt | 50 |
| 0 | MINMK | 20 |

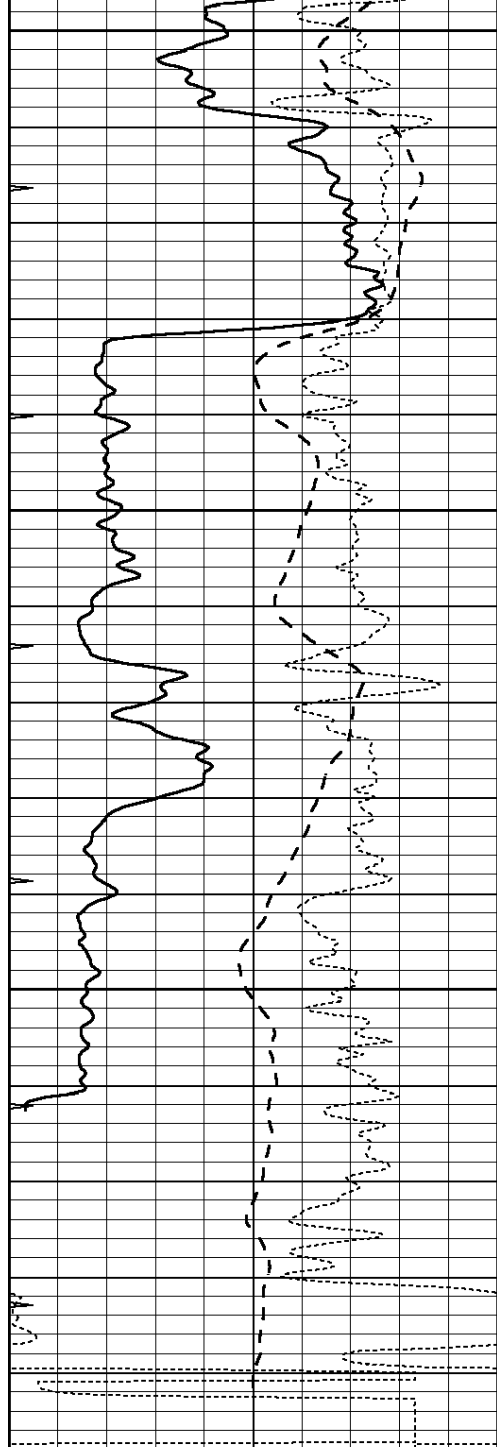
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|-----|--------------------------|------|
| 0.2 | RLL3 (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |



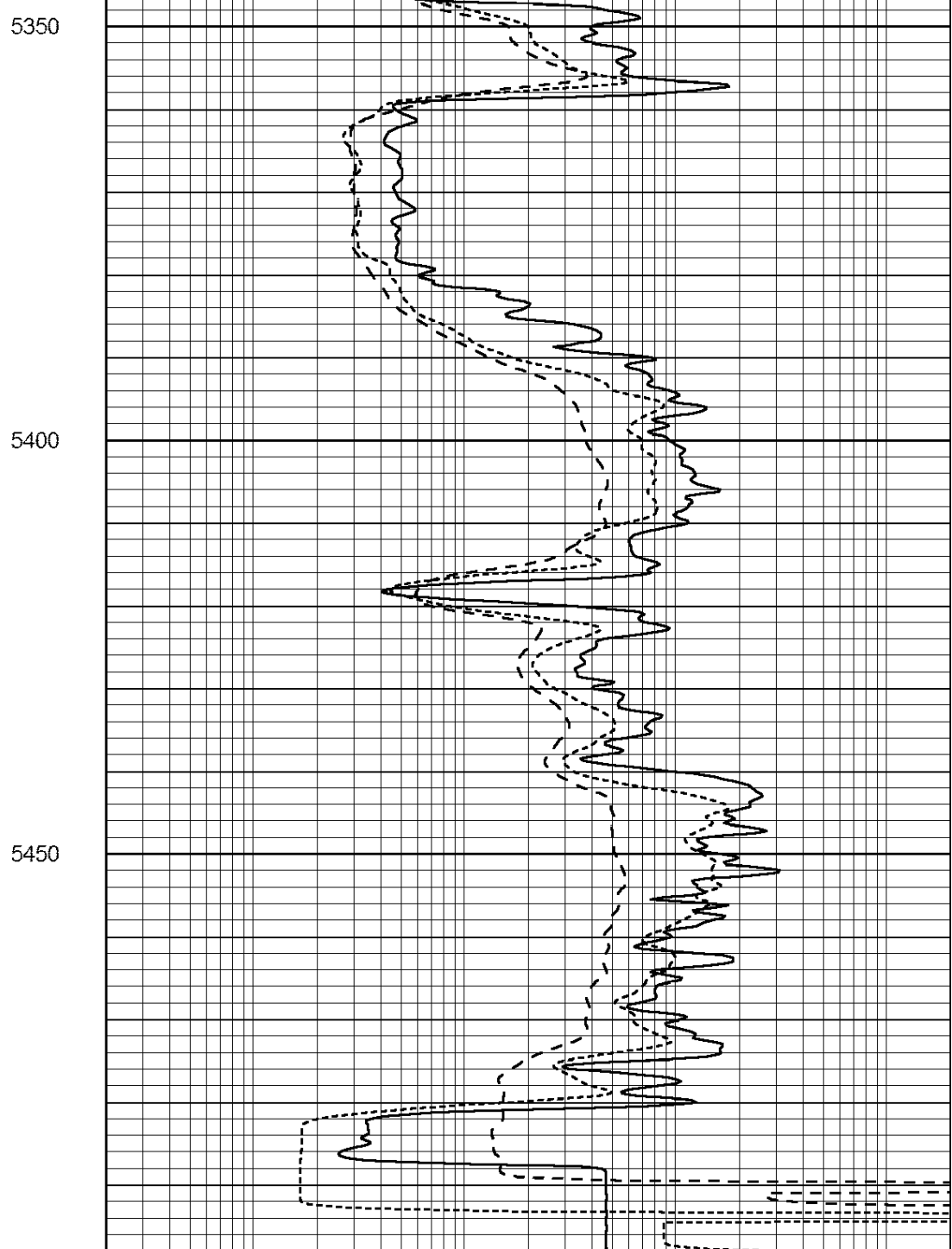
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| | | |
|------|------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | RxoRt | 50 |
| 0 | MINMK | 20 |



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

Calibration Report

Database File: 25816pdn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Fri Sep 12 19:48:49 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

| | |
|--------------------------------------|--------------------------|
| Serial-Model: | PROBE7-DILG |
| Surface Cal Performed: | Fri Sep 12 18:11:27 2014 |
| Downhole Cal Performed: | Sat Jan 19 19:51:38 2013 |
| After Survey Verification Performed: | Sat Jan 19 19:51:38 2013 |

| Surface Calibration | | | Readings | | | References | | Results | |
|---------------------|-------|-------|----------|-------|---------|------------|---------|---------|--|
| Loop: | Air | Loop | | Air | Loop | | m | b | |
| Deep | 0.793 | 0.790 | V | 0.000 | 400.000 | mmho/m | 550.000 | 4.000 | |
| Medium | 0.992 | 1.002 | V | 0.000 | 464.000 | mmho/m | 580.000 | -48.000 | |
| Internal: | Zero | Cal | | Zero | Cal | | m | b | |
| Deep | 0.041 | 0.642 | V | 0.000 | 400.000 | mmho/m | 664.874 | -27.011 | |
| Medium | 0.035 | 0.802 | V | 0.000 | 464.000 | mmho/m | 604.936 | -21.367 | |

| Downhole Calibration | | | Readings | | | References | | Results | |
|----------------------|------------|-----------|----------|------------|-----------|------------|-------|---------|--|
| | Zero | Cal | | Zero | Cal | | m' | b' | |
| Deep | 135384.000 | 27094.500 | mmho/m | 135400.000 | 27082.400 | mmho/m | 1.000 | -19.259 | |
| Medium | -47330.100 | -9381.740 | mmho/m | -47327.100 | -9389.280 | mmho/m | 1.000 | -10.154 | |
| LL3 | | 7.322 | V | | 1400.000 | Ohm-m | | | |
| | | 0.038 | V | | 20.000 | Ohm-m | | | |
| | | -7.273 | V | | 4000.000 | mmho-m | | | |

| After Survey Verification | | | Readings | | | Targets | | Results | |
|---------------------------|-------|-------|----------|------------|-----------|---------|-------|---------|--|
| | Zero | Cal | | Zero | Cal | | m' | b' | |
| Deep | 0.000 | 0.000 | mmho/m | 135384.000 | 27094.500 | mmho/m | 1.000 | 0.000 | |
| Medium | 0.000 | 0.000 | mmho/m | -47330.100 | -9381.740 | mmho/m | 1.000 | 0.000 | |
| LL3 | | 0.000 | Ohm-m | | 1400.000 | Ohm-m | | | |
| | | 0.000 | Ohm-m | | 20.000 | Ohm-m | | | |
| | | 0.000 | mmho-m | | 4000.000 | mmho-m | | | |

Litho Density Calibration Report
Serial: 002 Model: PRB

| Master Calibration | | Performed Tue May 27 11:05:38 2014 | | | |
|--------------------|------------|------------------------------------|----------|---------------------|---------|
| | Background | Magnesium | Aluminum | Sandstone | |
| Window 1 | 819.4 | 6916.8 | 2053.5 | 6968.1 | cps |
| Window 2 | 780.4 | 5708.6 | 1783.3 | 5727.0 | cps |
| Window 3 | 656.9 | 3349.4 | 1194.5 | 3336.6 | cps |
| Window 4 | 187.3 | 183.4 | 186.5 | 186.2 | cps |
| Long Space | 0.0 | 4928.2 | 1002.9 | 4946.6 | cps |
| Short Space | 1.2 | 1266.1 | 819.1 | 1290.7 | cps |
| Rho | | 1.7100 | 2.5960 | 1.3800 | g/cc |
| Pe | | 0.0000 | 2.5700 | 1.5500 | |
| Rib Angle | : 44.7 | Rib Slope | : 0.990 | Density/Spine Ratio | : 0.537 |
| Spine Angle | : 74.7 | Spine Slope | : 3.655 | Spine Intercept | : -17.6 |

| Before Survey Verification | | Performed Wed Dec 31 18:00:00 1969 | | | |
|----------------------------|------------|------------------------------------|----------|-----------|------|
| | Background | Magnesium | Aluminum | Sandstone | |
| 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 | |

| | | | | | |
|---------------------|-----|--------|--------|--------|------|
| 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: 080620
 Tool Model: Probe

PRE-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|-------------|----------|----------|--------|
| Short Space | cps | | |
| Long Space | cps | pu | pu |

POST-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|-------------|----------|----------|--------|
| Short Space | cps | | |
| Long Space | cps | pu | pu |

Gamma Ray Calibration Report

Serial Number: 46001
 Tool Model: Probe1
 Performed: Fri Sep 12 17:20:19 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2600 GAPI/cps