



DUAL INDUCTION LOG

Company RANEY OIL COMPANY, LLC.
 Well BRUCE #1
 Field ALBRIGHT
 County COWLEY State KANSAS

Location: API #: 15-035-24760-0000
 960' FSL & 2160' FEL
 SE - NW - SW - SE
 SEC 11 TWP 34S RGE 5E
 Permanent Datum GROUND LEVEL Elevation 1238
 Log Measured From KELLY BUSHING 9' A.G.L
 Drilling Measured From KELLY BUSHING
 Other Services CDL/CNL/PE MEL/SON
 Elevation K.B. 1247
 D.F. 1245
 G.L. 1238

| | |
|------------------------------|--------------|
| Date | 1/7/23 |
| Run Number | ONE |
| Depth Driller | 3330 |
| Depth Logger | 3332 |
| Bottom Logged Interval | 3330 |
| Top Log Interval | 00 |
| Casing Driller | 8 5/8" @ 209 |
| Casing Logger | 209 |
| Bit Size | 7 7/8 |
| Type Fluid in Hole | CHEMICAL MUD |
| Density / Viscosity | 9.7/39 |
| PH / Fluid Loss | 9.5/11.2 |
| Source of Sample | FLOWLINE |
| Rm @ Meas. Temp | 1.50 @ 76F |
| Rmt @ Meas. Temp | 1.13 @ 76F |
| Rmc @ Meas. Temp | 1.80 @ 76F |
| Source of Rmf / Rmc | MEASUREMENT |
| Rm @ BHT | 1.04 @ 110F |
| Time Circulation Stopped | 4 HOURS |
| Time Logger on Bottom | 1:30 A.M. |
| Maximum Recorded Temperature | 110F |
| Equipment Number | 3802 |
| Location | HAYS, KANSAS |
| Recorded By | COLE ROBBEN |
| Witnessed By | BILL STOUT |

<<< Fold Here >>>

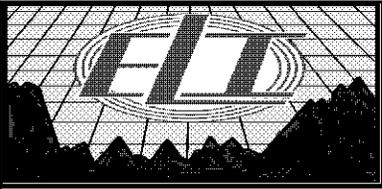
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 ARKANSAS CITY, KANSAS GO 9 MILES EAST ON HIGHWAY 166 TO GROUSE CREEK ROAD,
 FOLLOW FOR 2 1/2 MILES TO 256TH ROAD, FOLLOW NORTH UP A HILL THEN CURVE WEST,
 SOUTH INTO THROUGH GATE

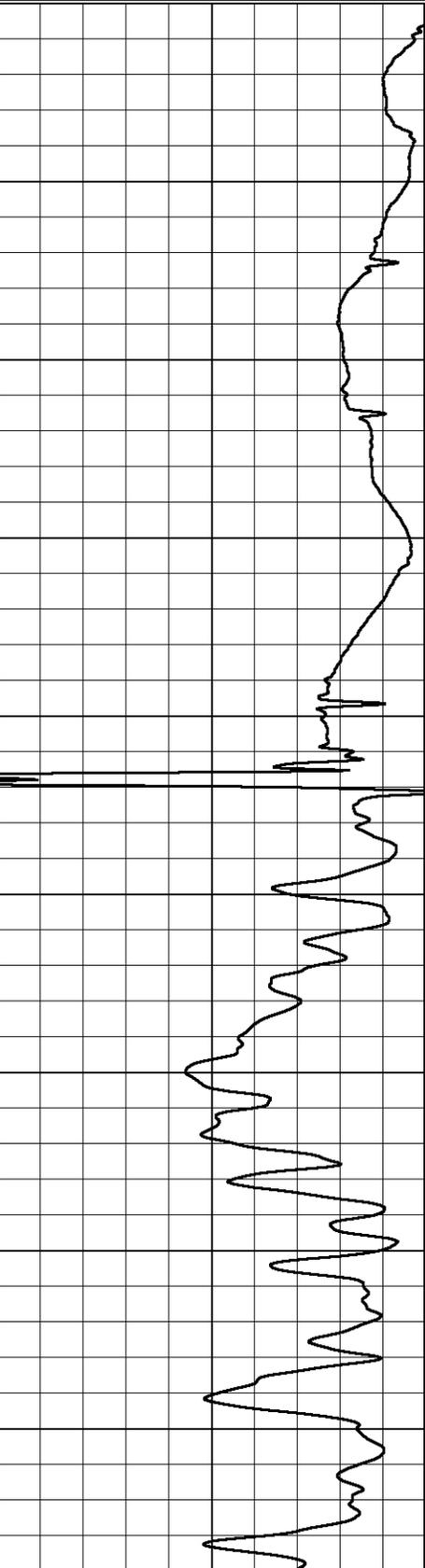
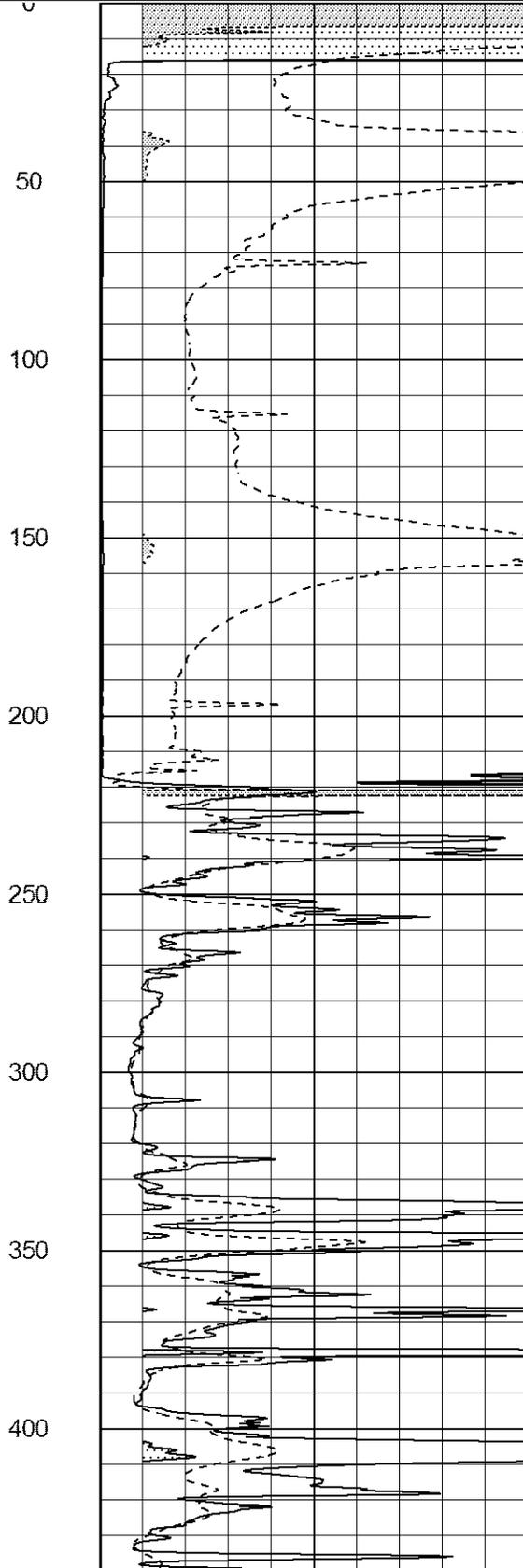
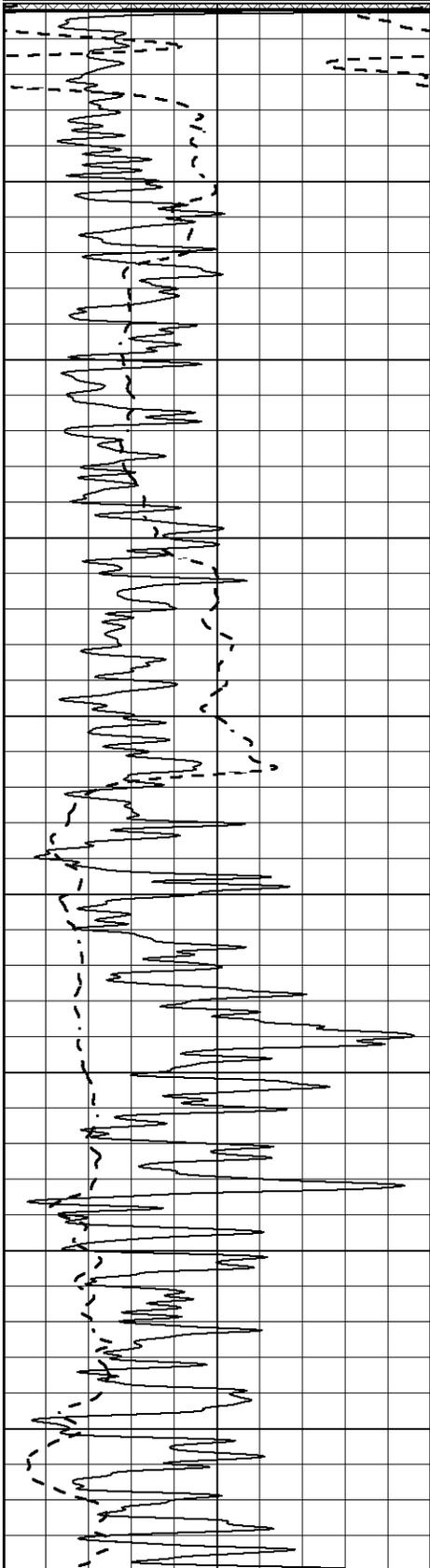


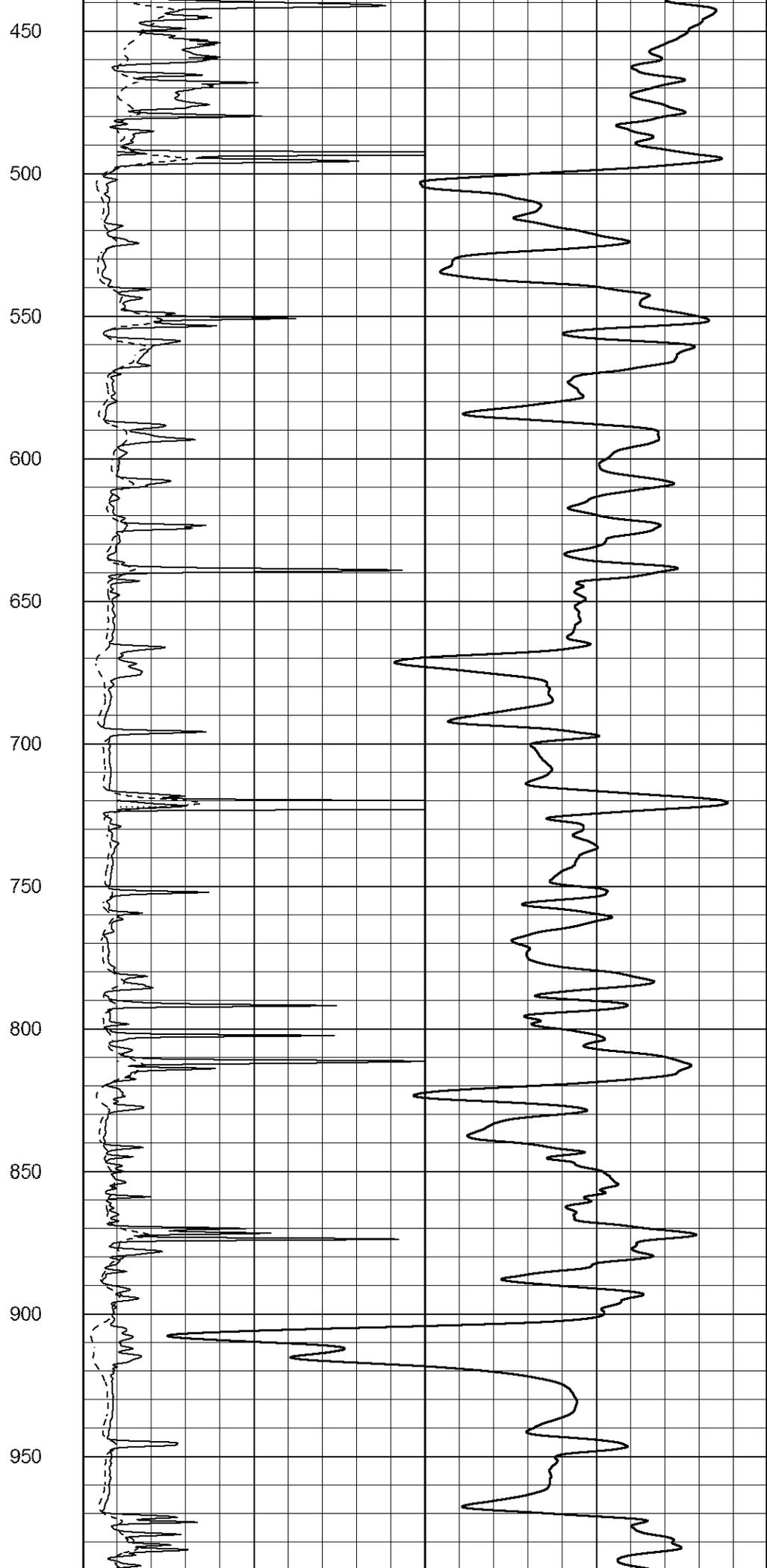
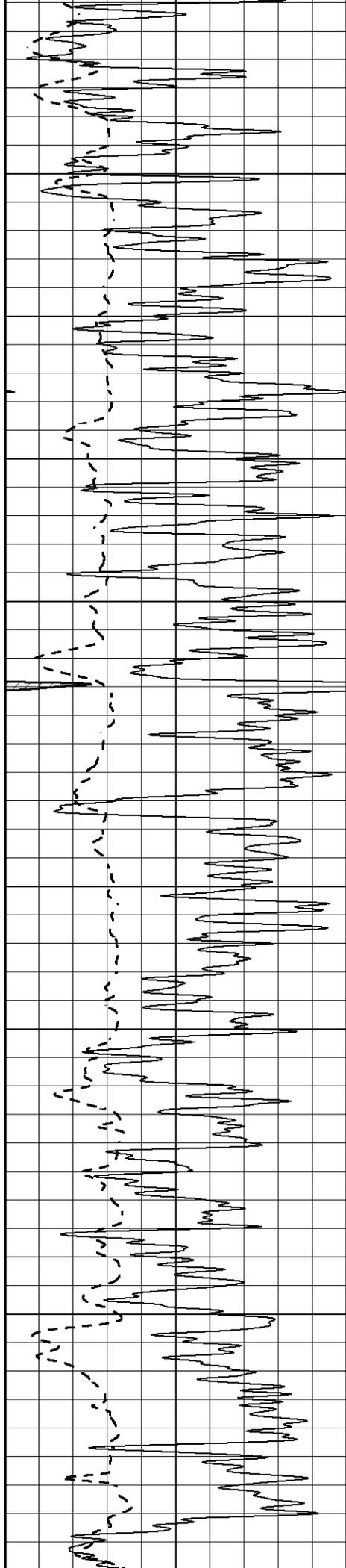
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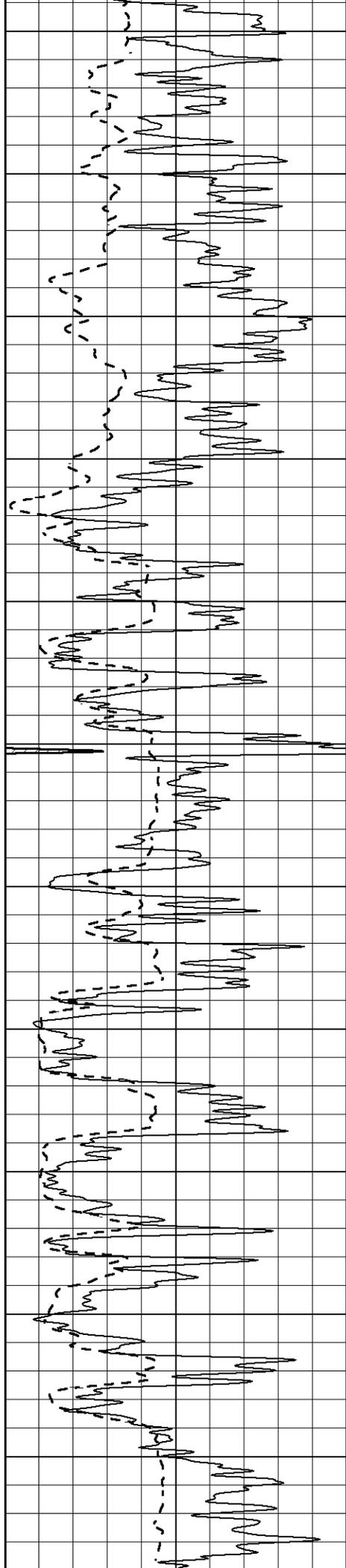
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 Dataset Pathname pass3M
 Presentation Format _dil2
 Dataset Creation Sat Jan 07 03:16:37 2023
 Charted by Depth in Feet scaled 1:600

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

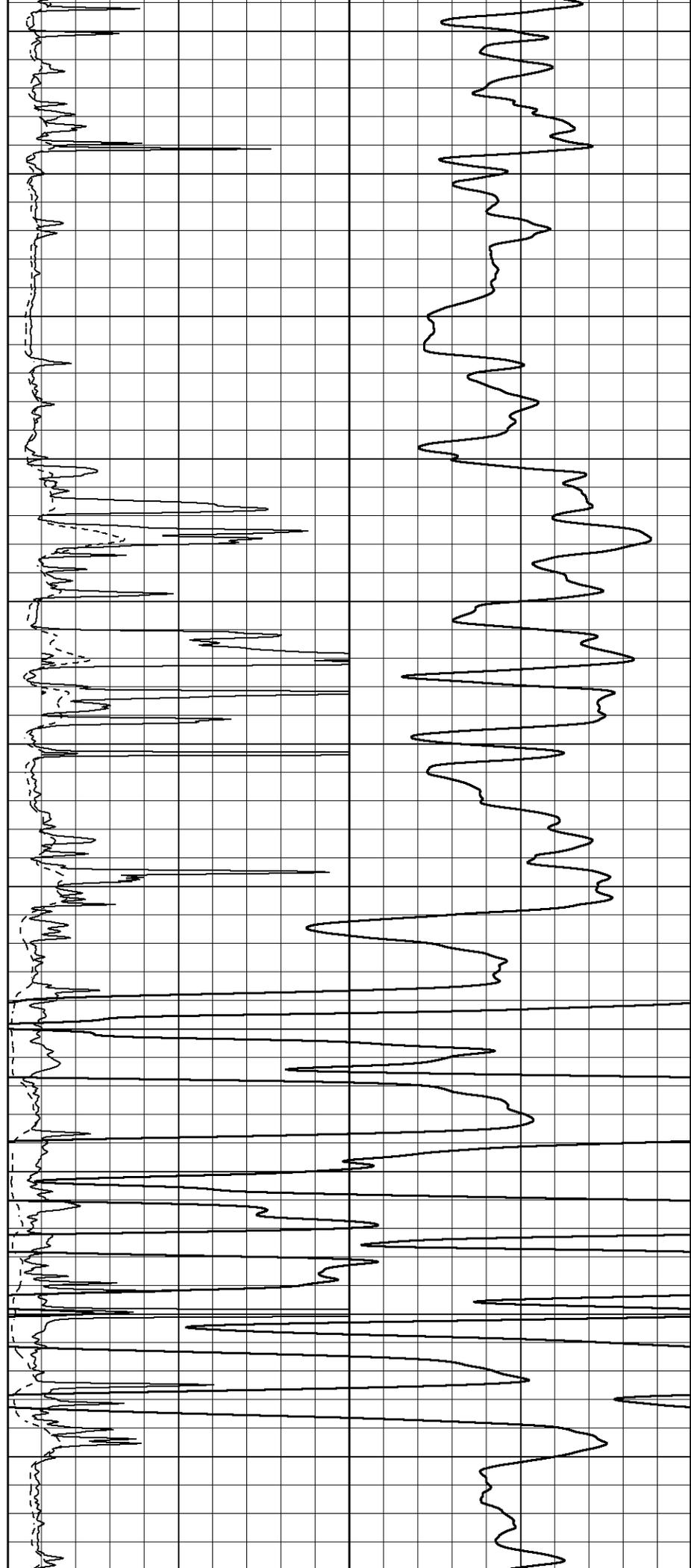
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 0 RLL3 (Ohm-m) 50
 0 Deep Induction (Ohm-m) 50
 50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500

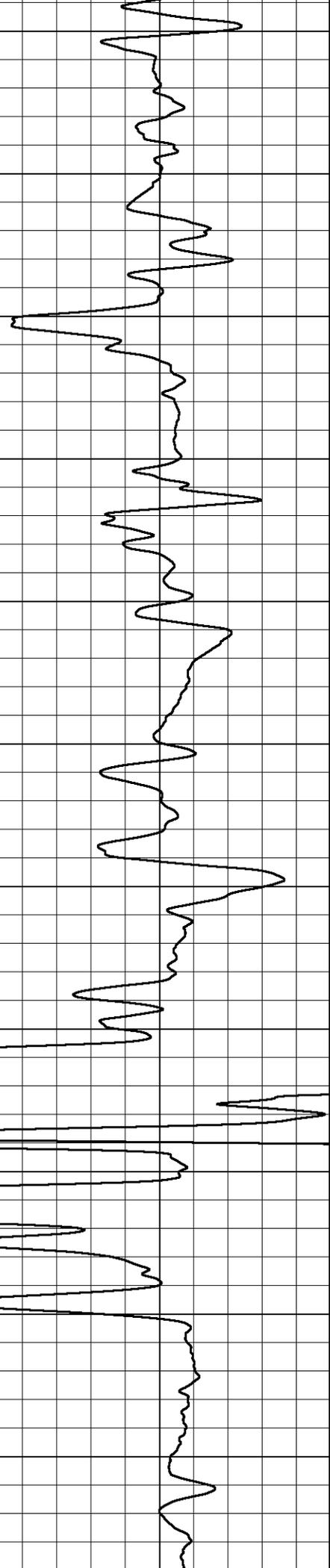
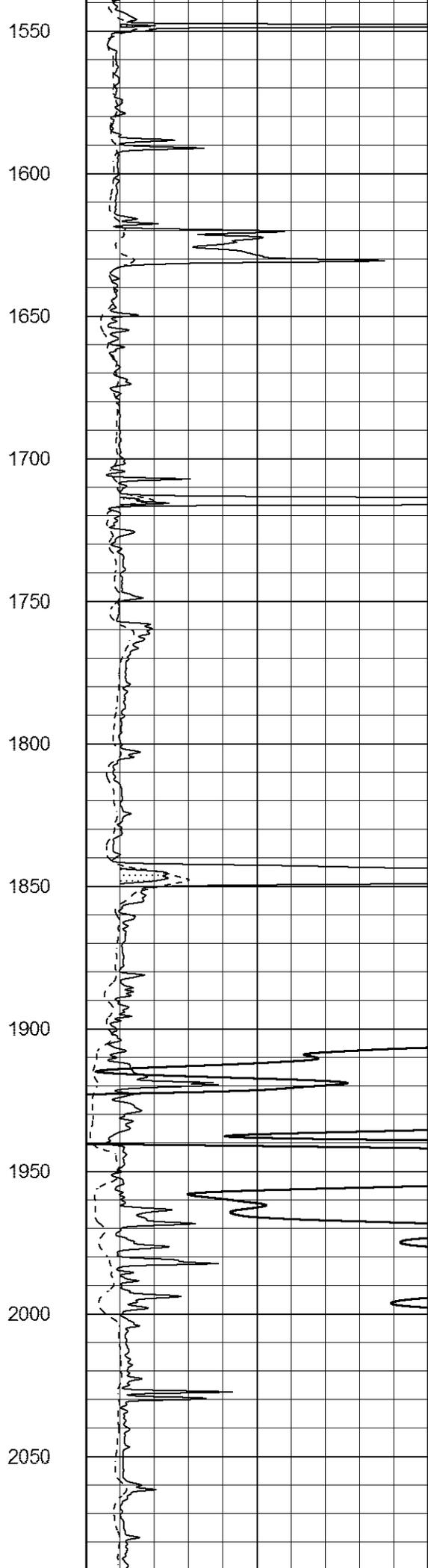
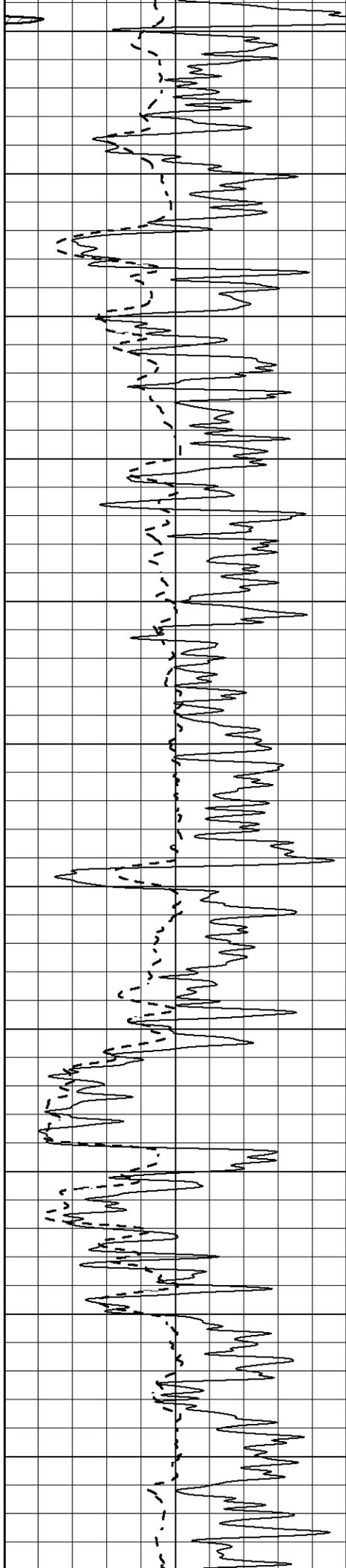


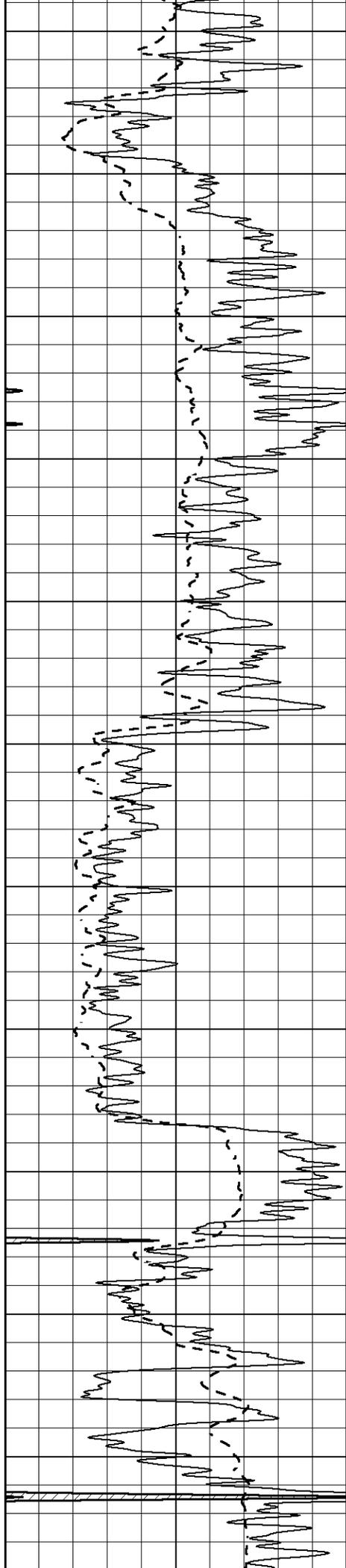




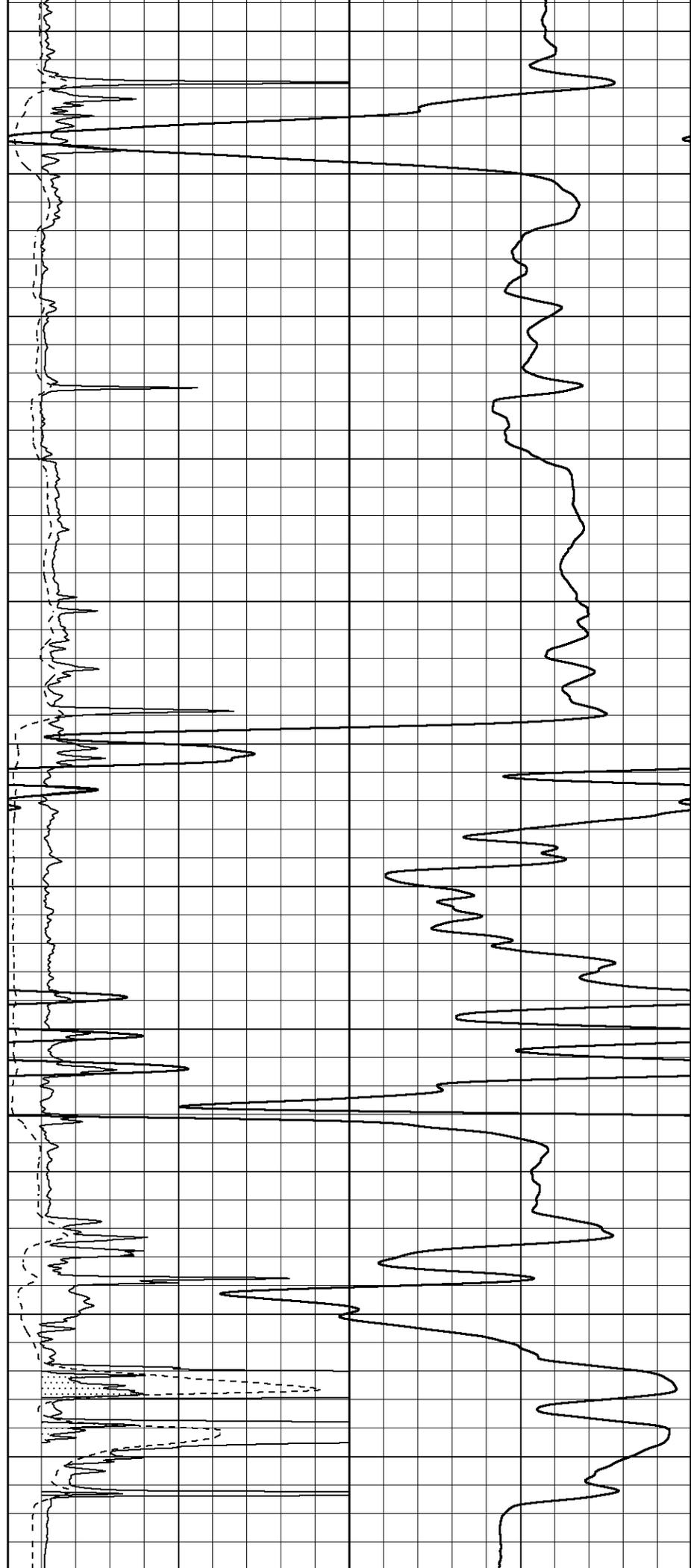
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1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

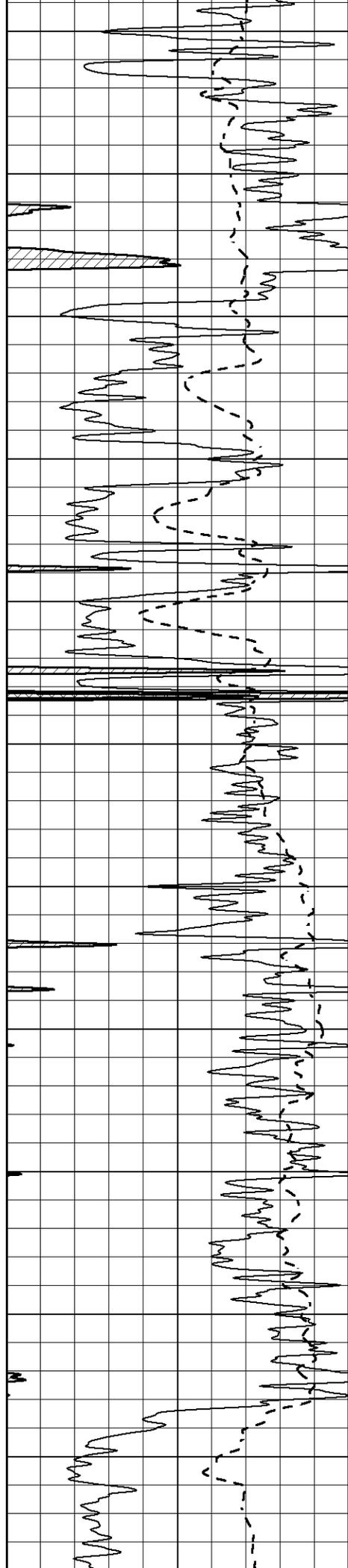




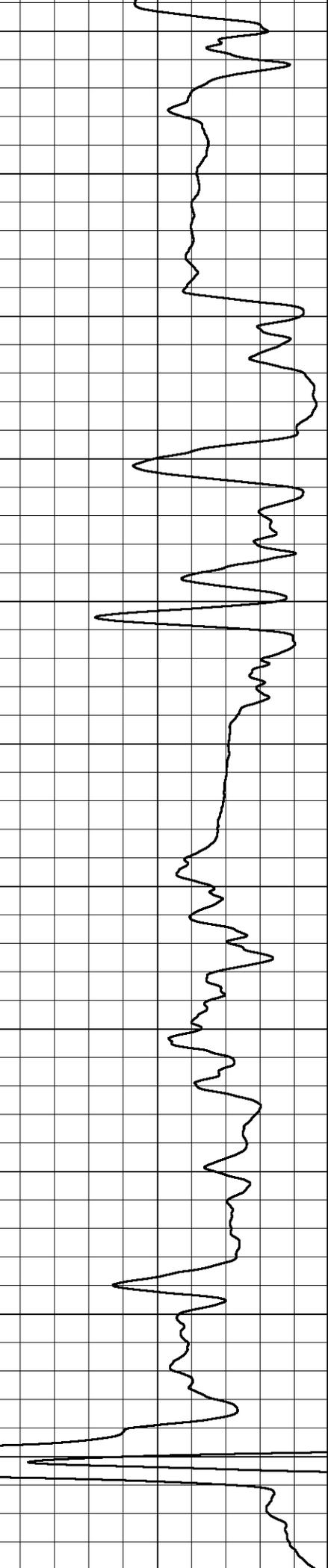
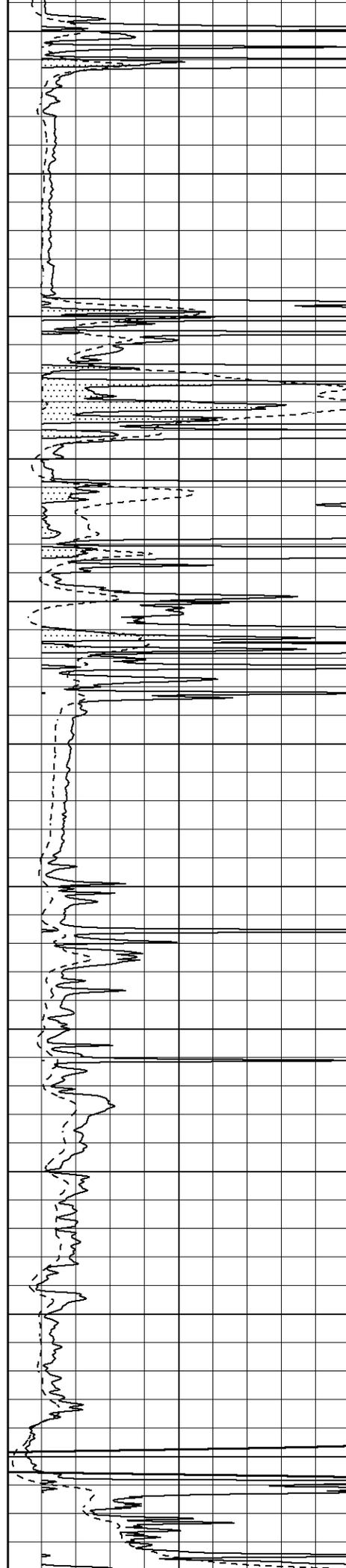


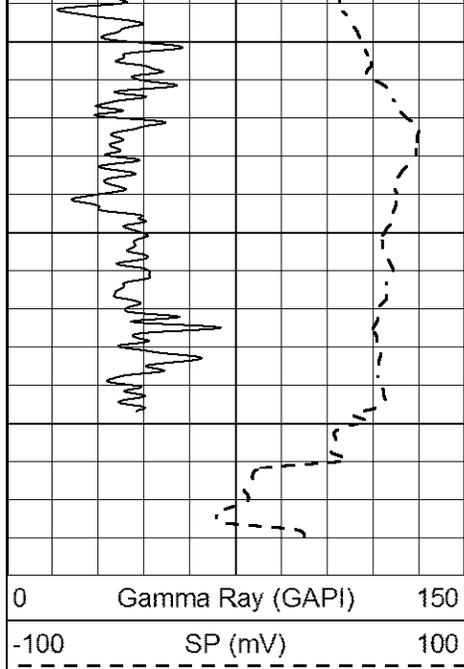
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600



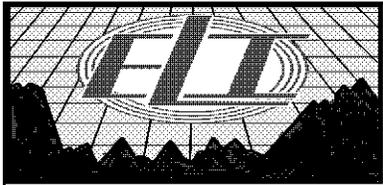
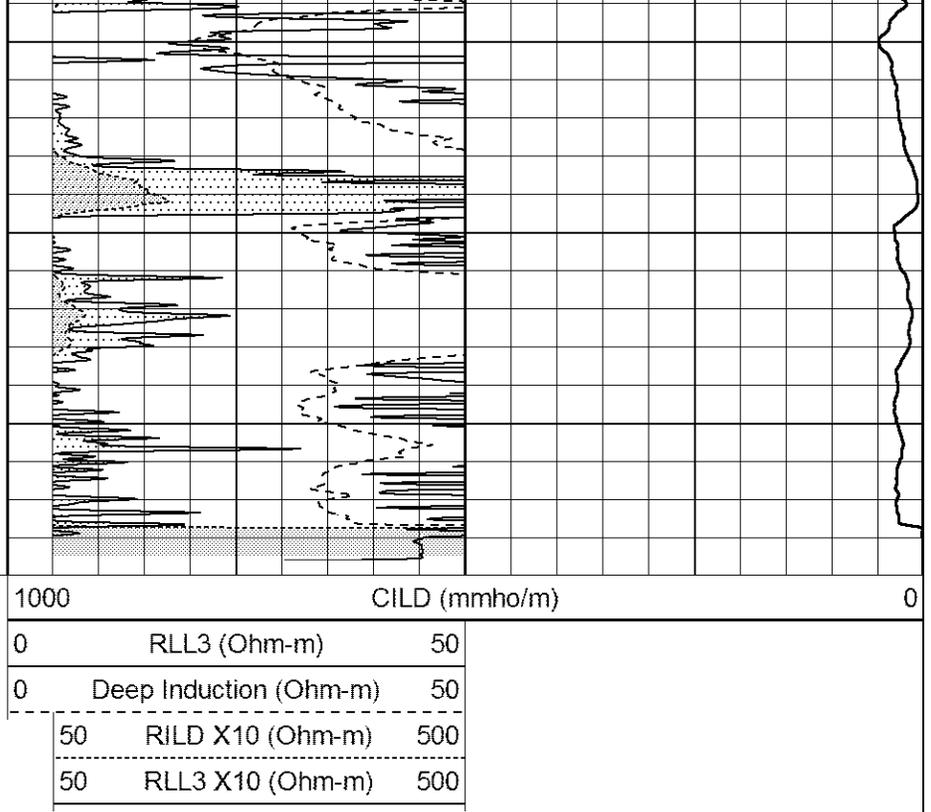


2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150





3200
3250
3300

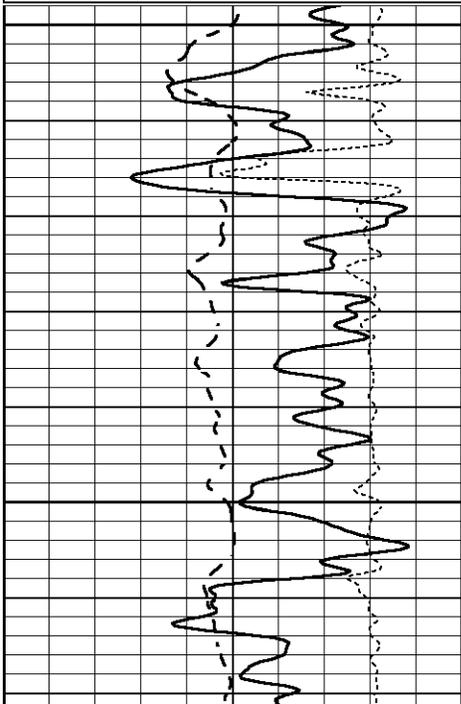


MAIN SECTION

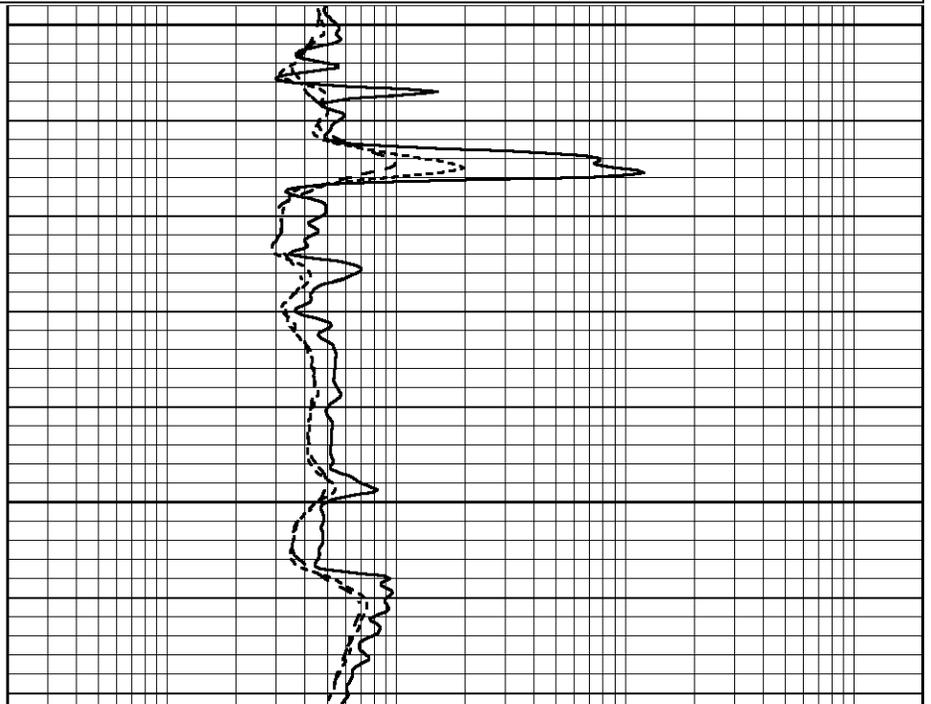
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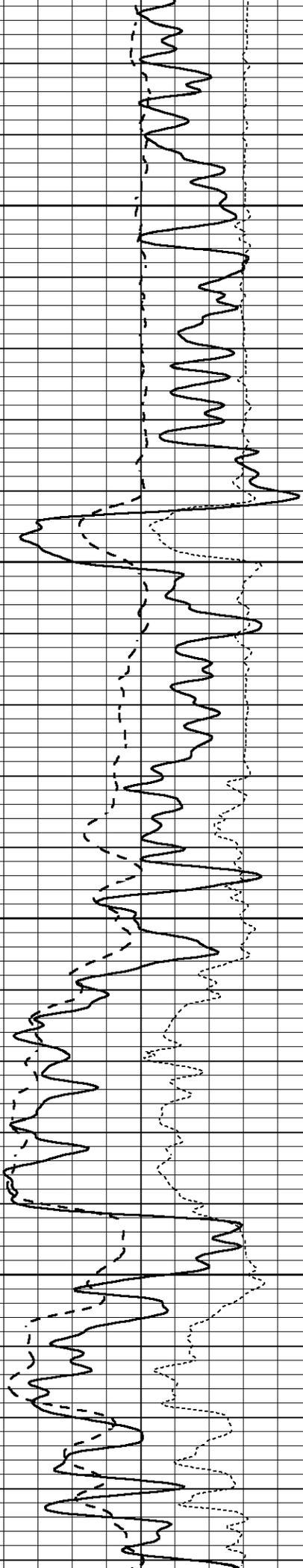
| | | |
|------|------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | Rxo/Rf | 50 |

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



1700
1750



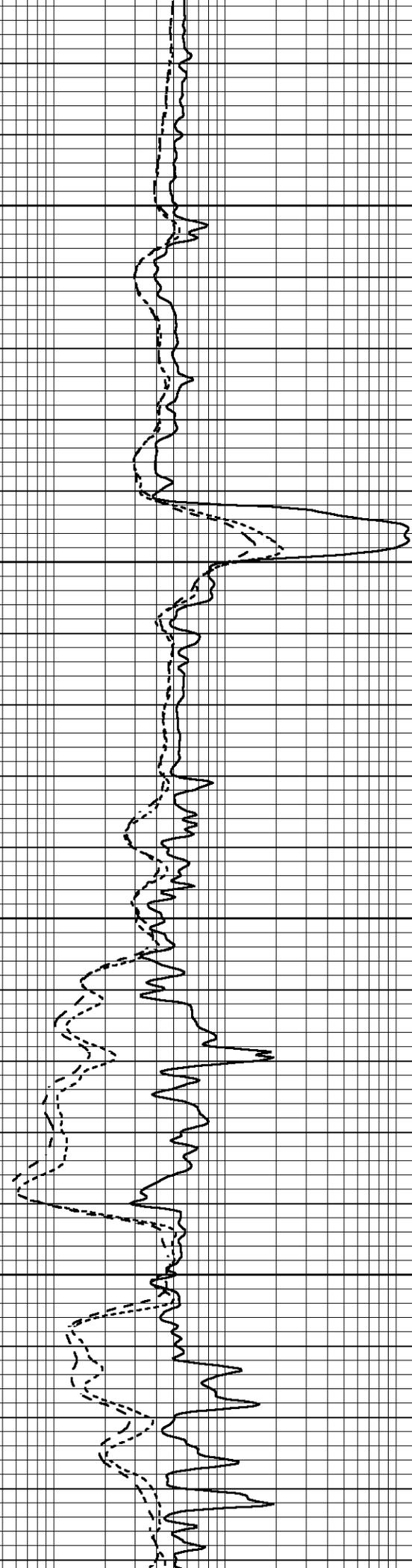


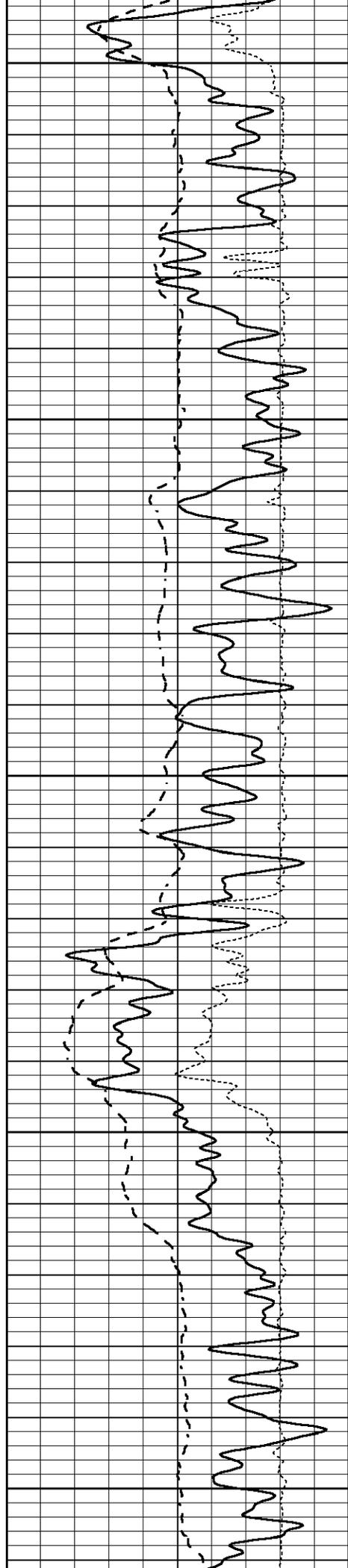
1800

1850

1900

1950





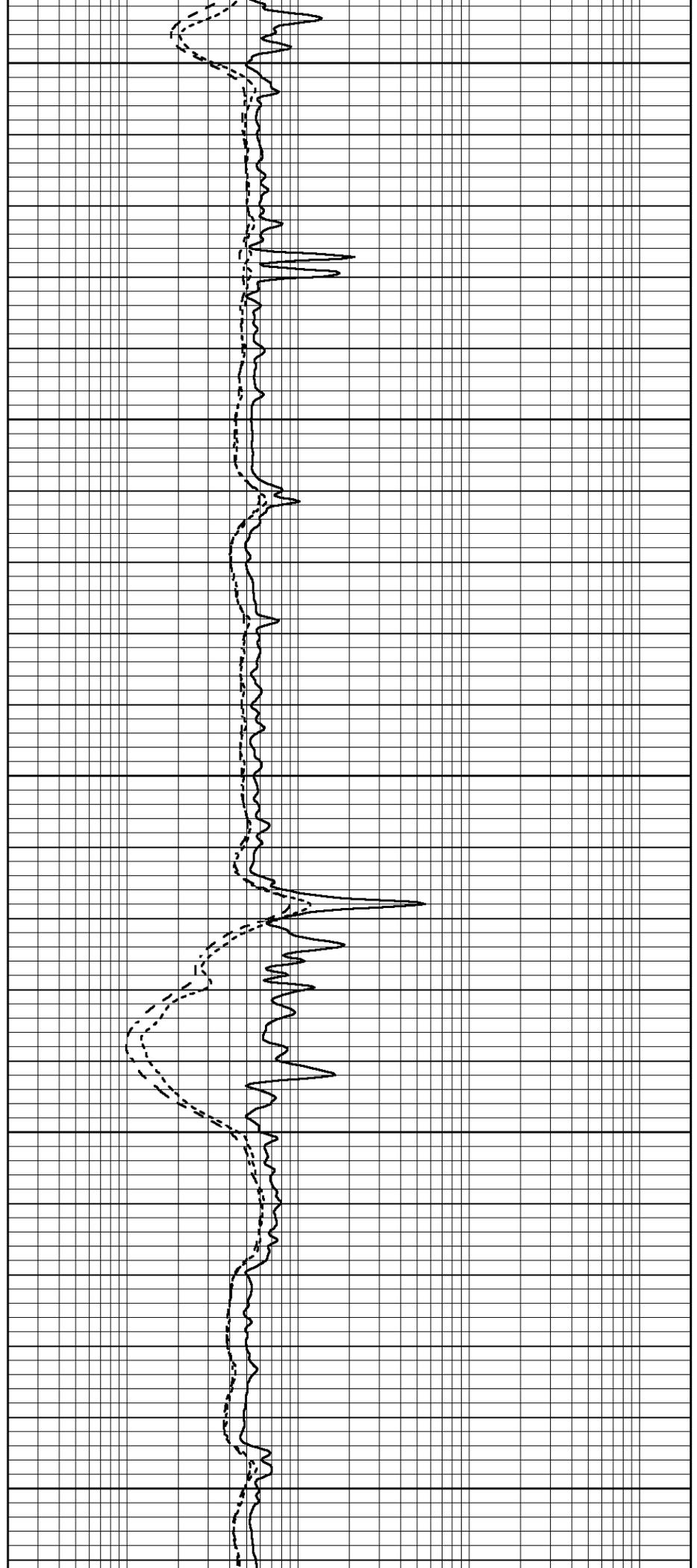
2000

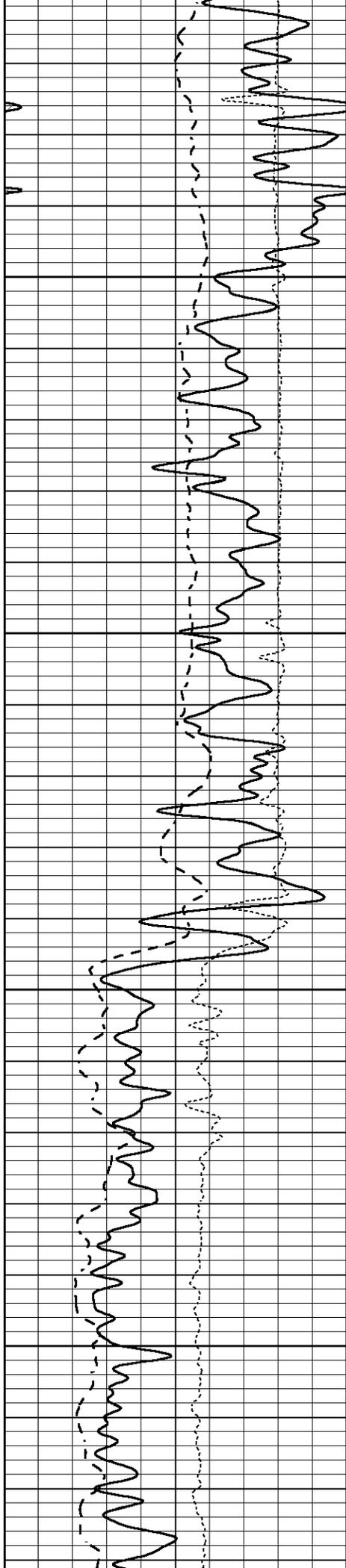
2050

2100

2150

2200



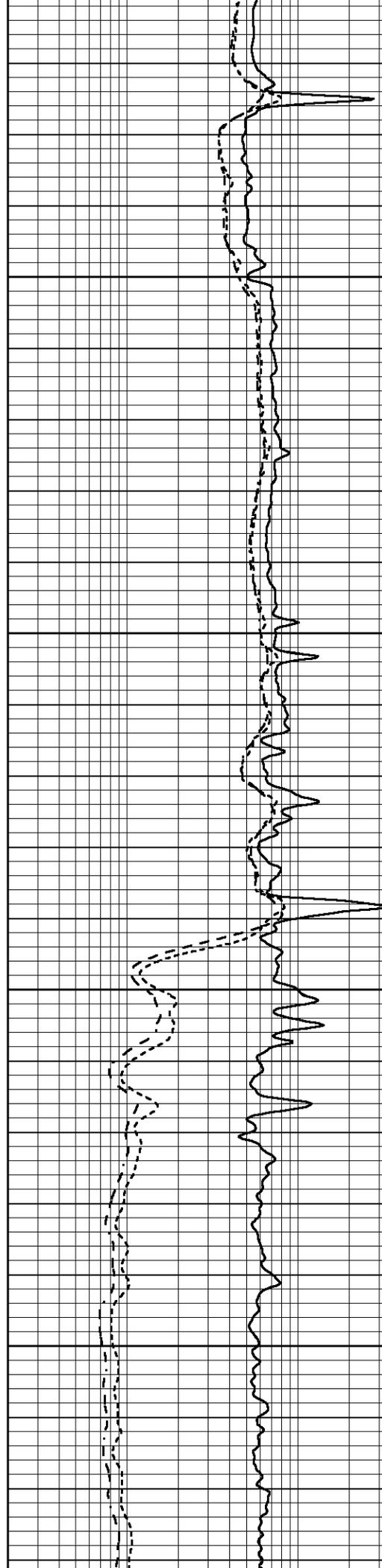


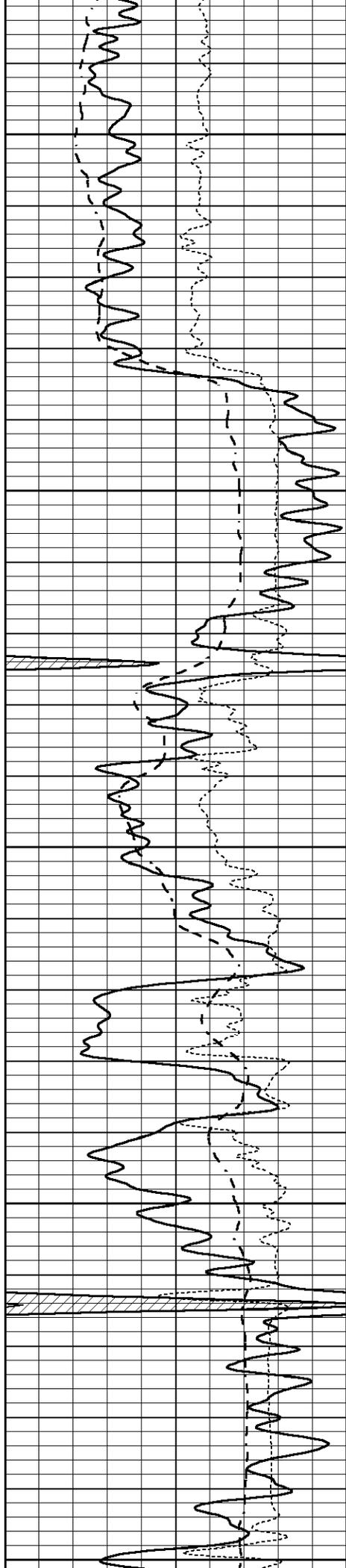
2250

2300

2350

2400





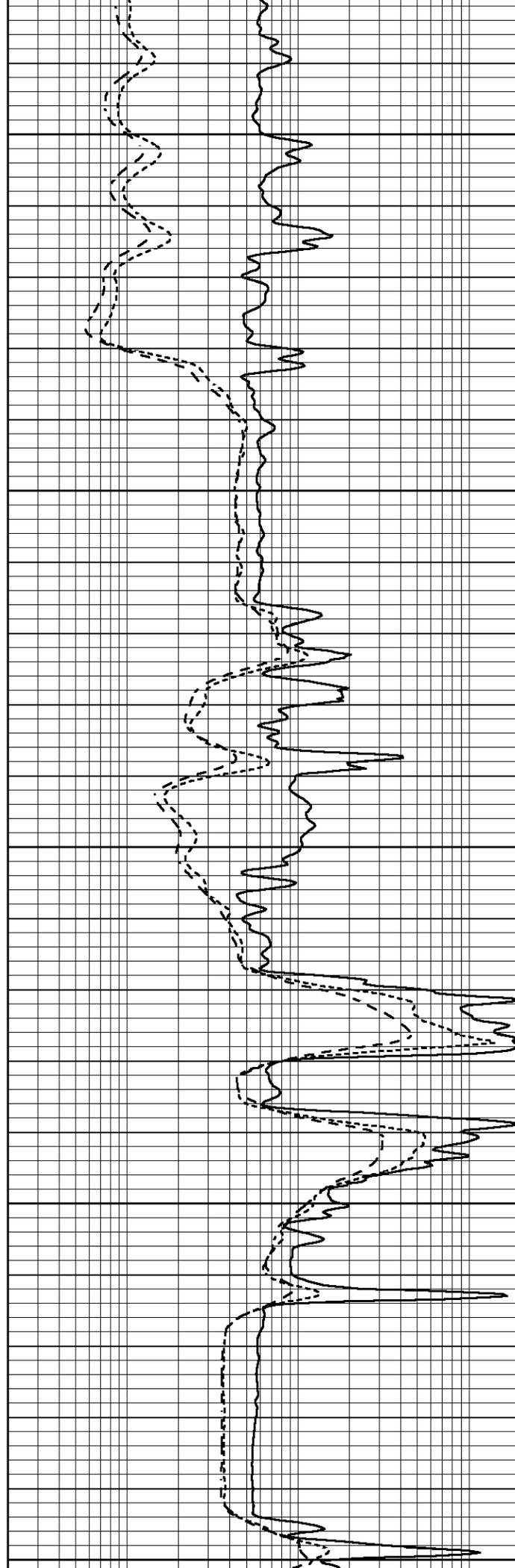
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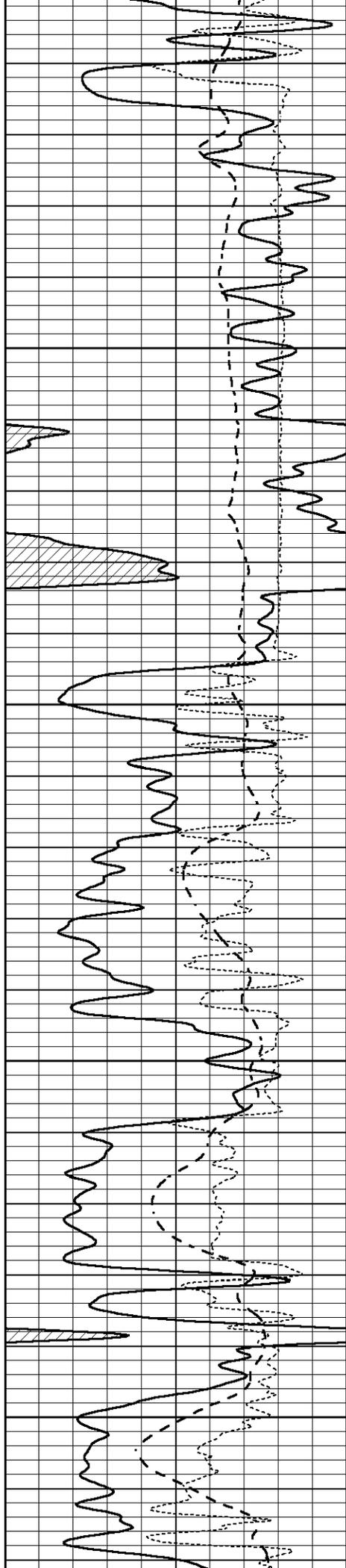
2500

2550

2600

2650



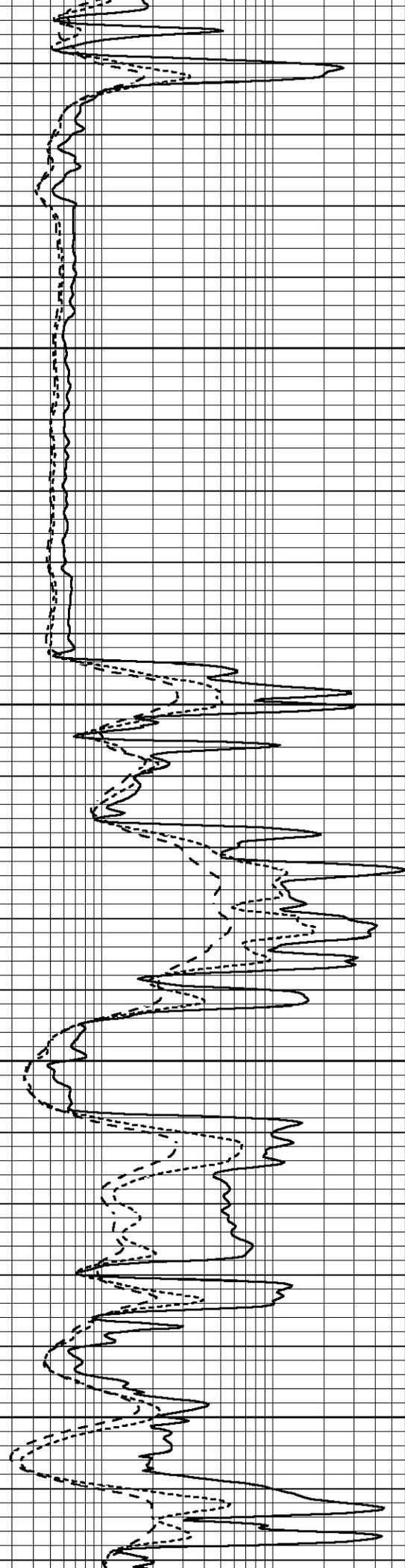


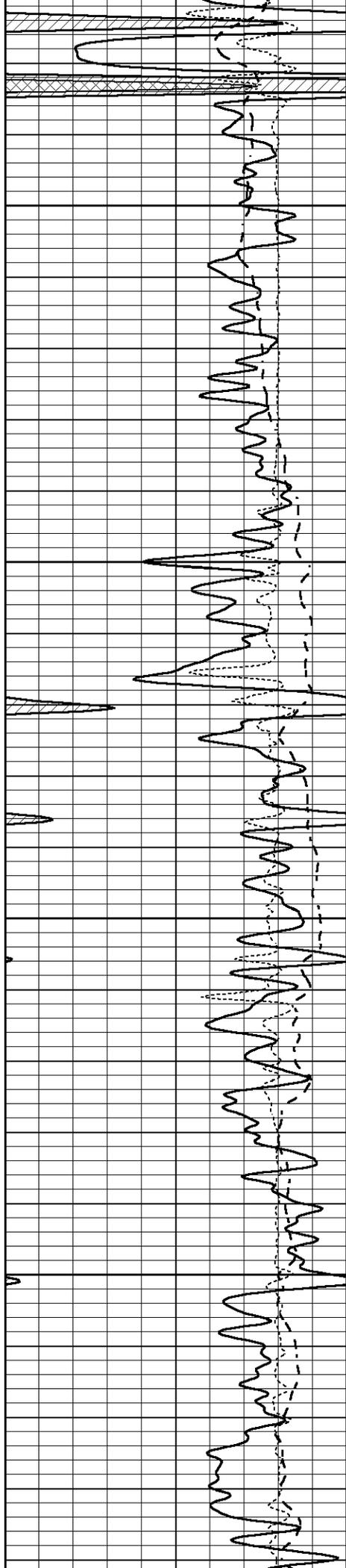
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2750

2800

2850



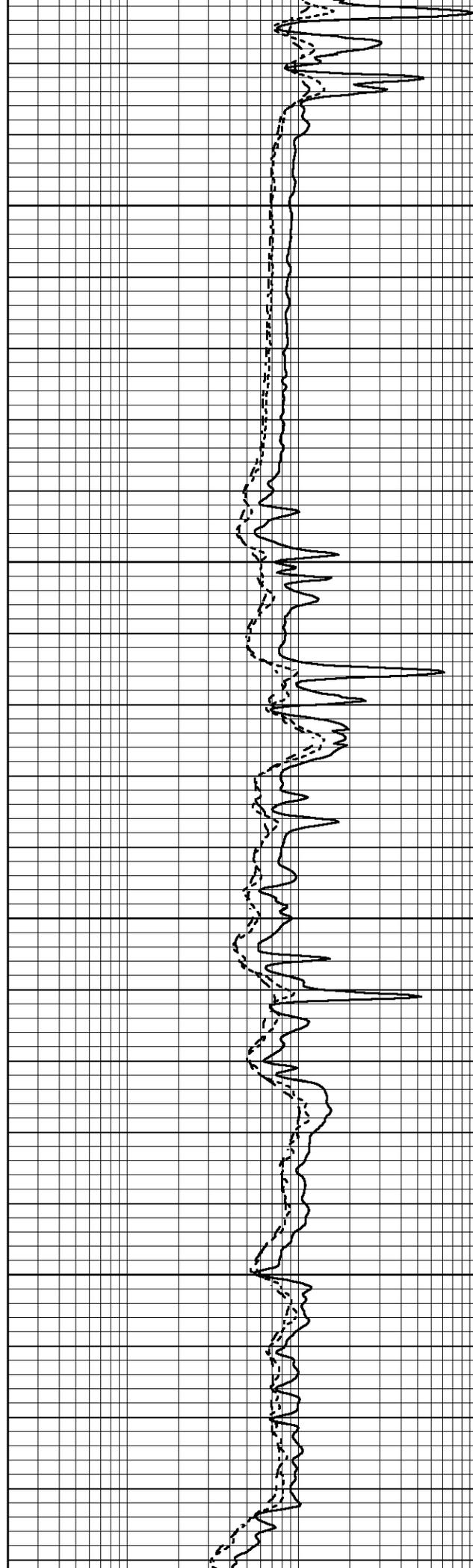


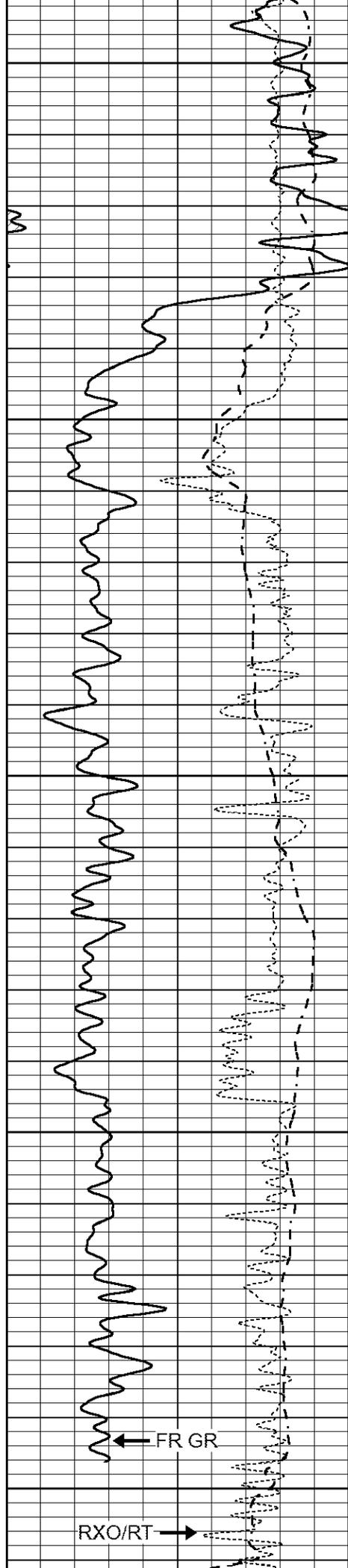
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2950

3000

3050





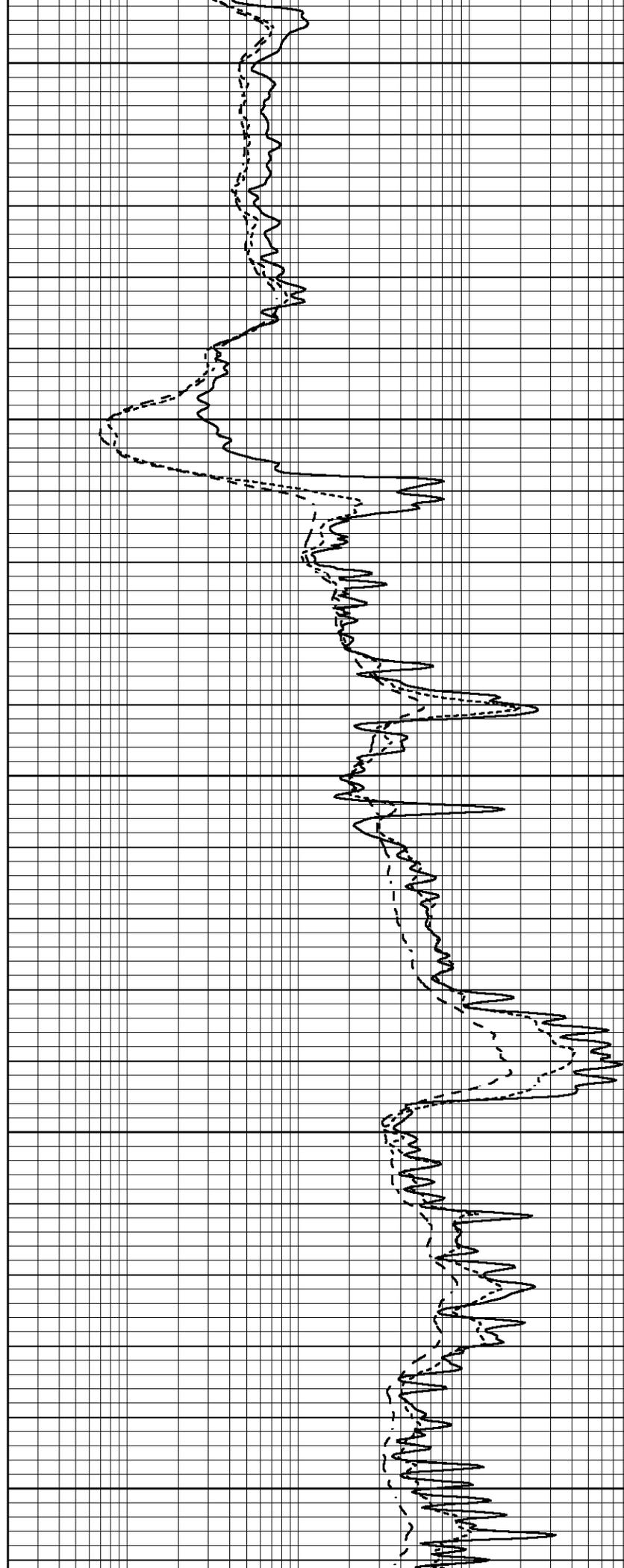
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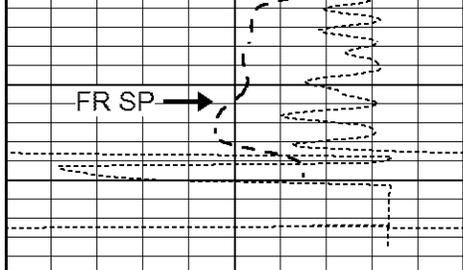
3150

3200

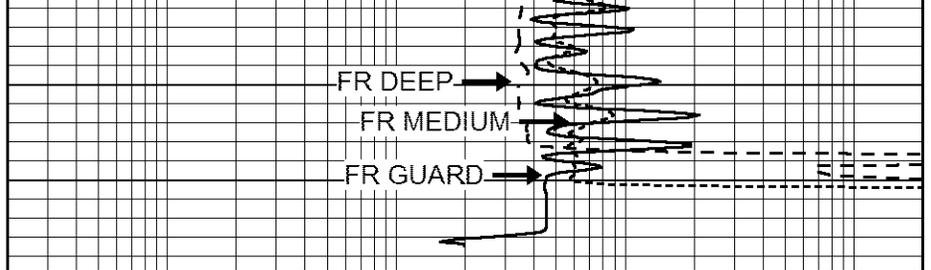
3250

3300





LTD 3332



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

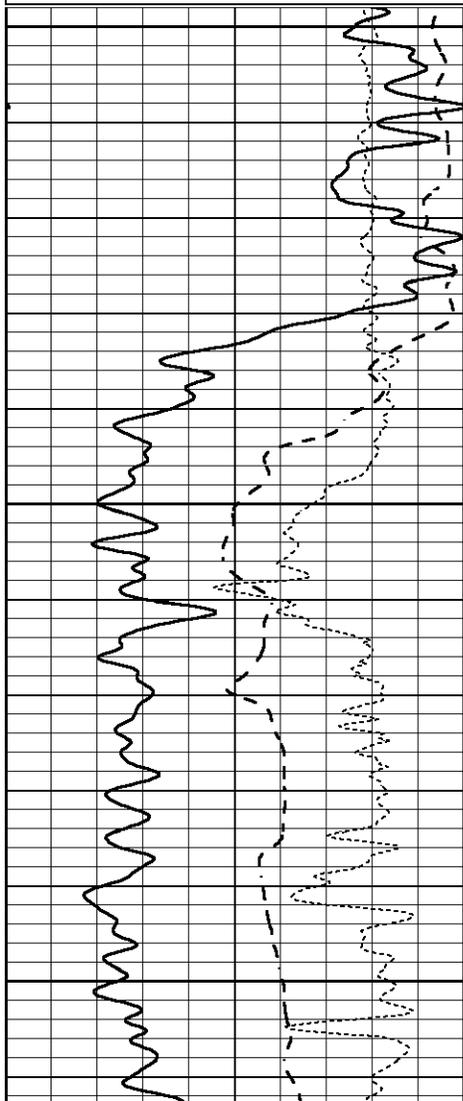


REPEAT SECTION

Database File 7526pe.db
 Dataset Pathname pass2R
 Presentation Format _dil
 Dataset Creation Sat Jan 07 01:44:56 2023
 Charted by Depth in Feet scaled 1:240

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

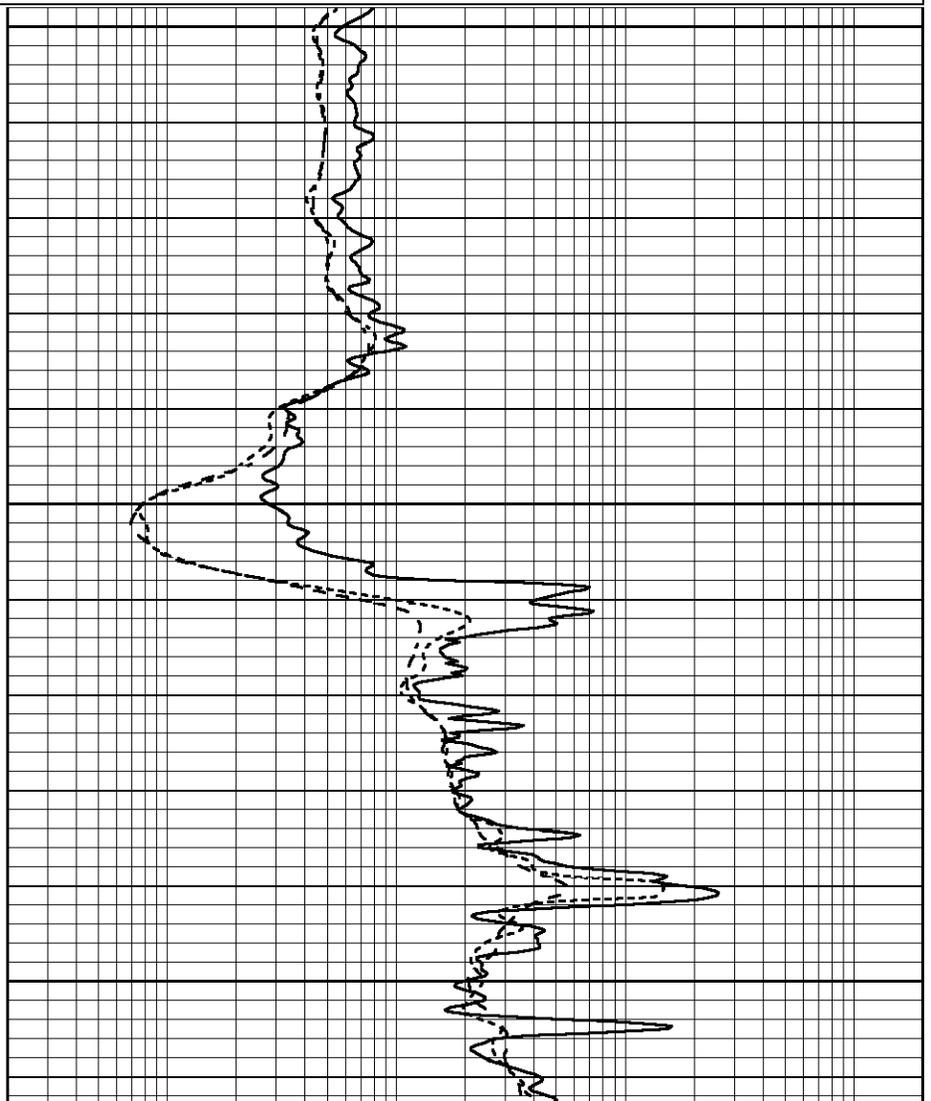
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|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |

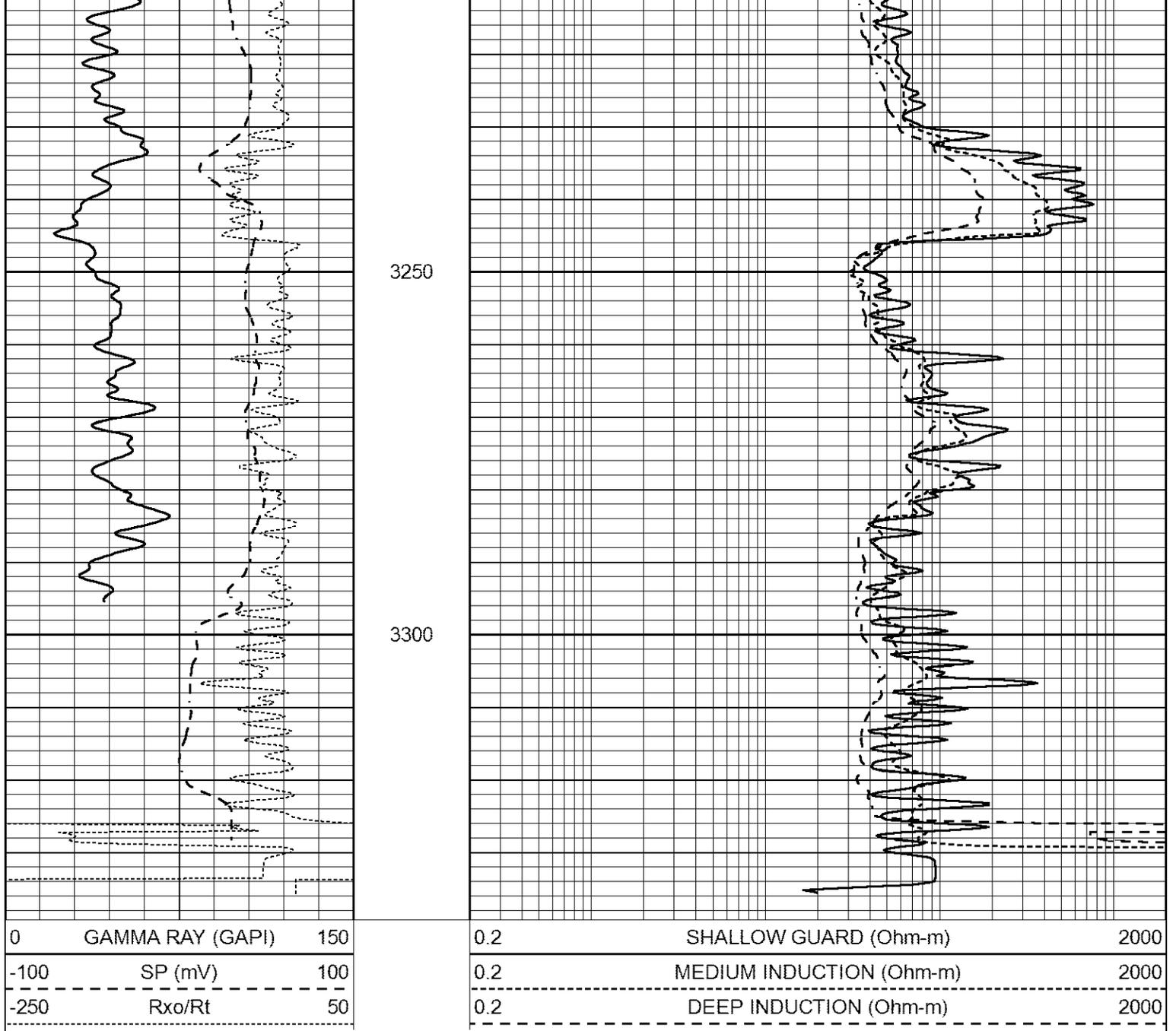


3100

3150

3200





Calibration Report

Database File 7526pe.db
 Dataset Pathname pass3M
 Dataset Creation Sat Jan 07 03:16:37 2023

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Thu Jun 30 01:48:00 2022
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

| Loop: | Readings | | | | References | | Results | |
|-----------|----------|-------|---|-------|------------|--------|---------|---------|
| | Air | Loop | | | Air | Loop | m | b |
| Deep | 0.011 | 0.656 | V | 1.000 | 400.000 | mmho/m | 650.000 | -3.000 |
| Medium | -0.000 | 0.731 | V | 1.000 | 464.000 | mmho/m | 632.856 | -10.500 |
| 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: 005 Model: Litho_Ver3

| Master Calibration | | | | | | Performed Fri May 13 13:54:33 2012 | | |
|--------------------|------------|-------------|----------|---------------------|--|------------------------------------|---------|------|
| | Background | Magnesium | Aluminum | Aluminum+Fe | | | | |
| Window 1 | 1363.1 | 46477.8 | 11515.9 | 9589.9 | | | | cps |
| Window 2 | 1239.4 | 36488.4 | 9270.1 | 7998.9 | | | | cps |
| Window 3 | 1044.3 | 20488.1 | 5500.7 | 4913.3 | | | | cps |
| Window 4 | 315.7 | 358.7 | 321.5 | 319.5 | | | | cps |
| Long Space | 0.0 | 35249.0 | 8030.7 | 6759.4 | | | | cps |
| Short Space | 1.4 | 9675.7 | 6523.4 | 5391.9 | | | | cps |
| Rho | | 1.7100 | 2.5900 | 0.0000 | | | | g/cc |
| Pe | | 2.0000 | 2.7500 | 5.7900 | | | | |
| Rib Angle | : 45.1 | Rib Slope | : 1.003 | Density/Spine Ratio | | | : 0.575 | |
| Spine Angle | : 75.1 | Spine Slope | : 3.752 | Spine Intercept | | | : -24.0 | |

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

| | | | | | |
|---------------------|-----|--------|--------|--------|------|
| 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: 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: Thu May 26 08:56:46 2022

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps