SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

# DUAL INDUCTION LOG

Company RITCHIE EXPLORATION, INC.

Well #2 STUCKY 36D

Field

County LOGAN State KANSAS

Location: API # : 15-109-20889

660' FSL & 330' FEL

SEC 36 TWP 13S RGE 32W

Other Services
CDL/CNL

Elevation
K.B. 2938
D.F.
G.L. 2928

Permanent Datum GROUND LEVEL Elevation 2928
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING

Company RITCHIE EXPLORATION, INC.
Well #2 STUCKY 36D
Field
County LOGAN
State KANSAS

| | | | |
|---|---|---|---|
| Date | 11-15-09 | | |
| Run Number | ONE | | |
| Depth Driller | 4655 | | |
| Depth Logger | 4658 | | |
| Bottom Logged Interval | 4656 | | |
| Top Log Interval | 00 | | |
| Casing Driller | 219 | | |
| Casing Logger | 218 | | |
| Bit Size | 7.875 | | |
| Type Fluid in Hole | CHEMICAL MUD | | |
| Density / Viscosity | 9.2 / 66 | | |
| pH / Fluid Loss | 9.5 / 10.4 | | |
| Source of Sample | FLOWLINE | | |
| Rm @ Meas. Temp | 1.00 @ 70F | | |
| Rmf @ Meas. Temp | 0.75 @ 70F | | |
| Rmc @ Meas. Temp | 1.20 @ 70F | | |
| Source of Rmf / Rmc | MEASURED | | |
| Rm @ BHT | .580 @ 121F | | |
| Time Circulation Stopped | 2 HOURS | | |
| Time Logger on Bottom | 7:30 P.M. | | |
| Maximum Recorded Temperature | 121F | | |
| Equipment Number | 860 | | |
| Location | HAYS, KS. | | |
| Recorded By | RUPP | | |
| Witnessed By | TERRY McLEOD | | |

<<< Fold Here >>>



Comments

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: OAKLEY, 11S, 3E, 6S, 1W, N INTO.

MAIN SECTION

SUPERIOR
Hays,
Kansas

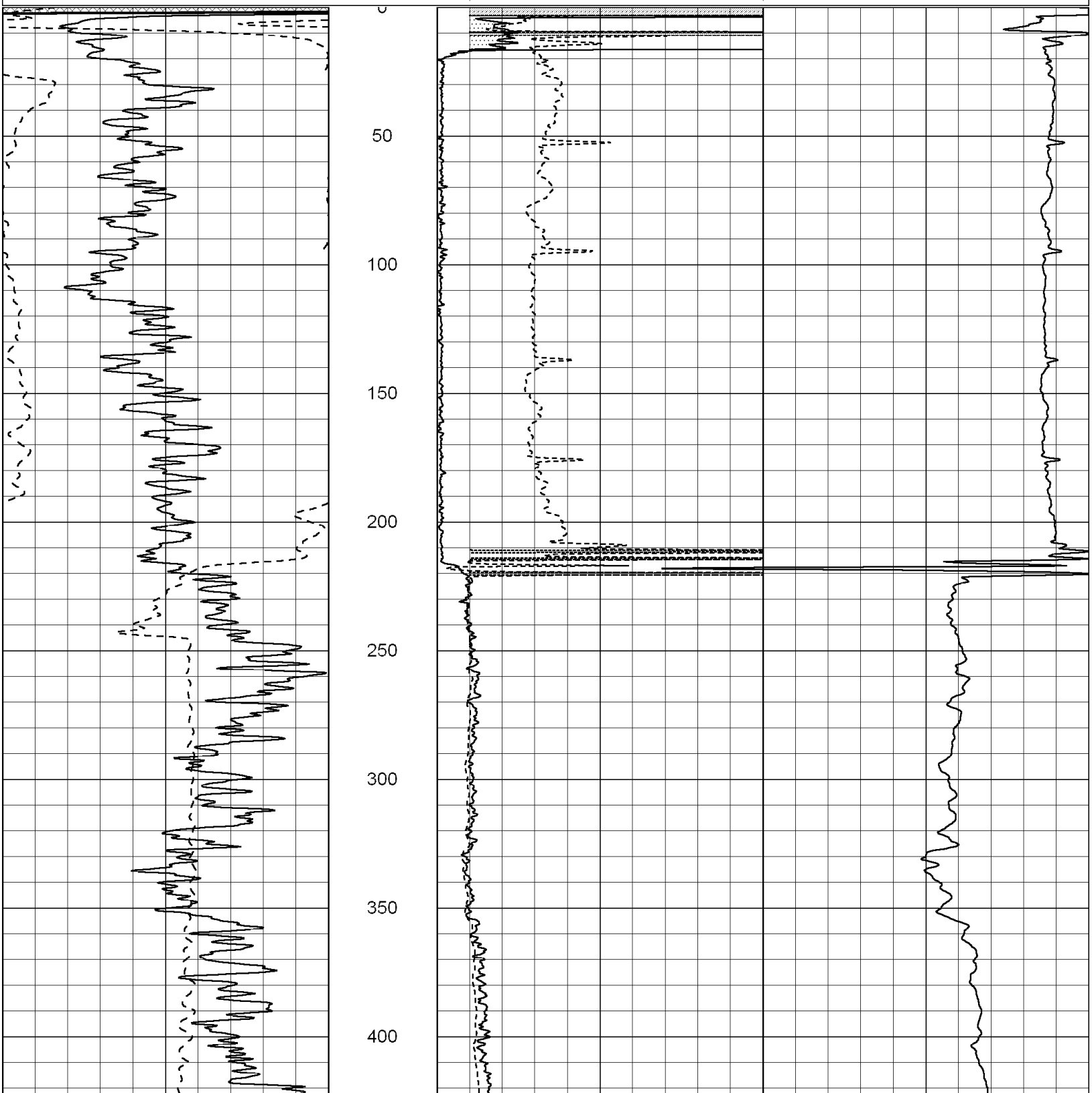
SUPERIOR WELL SERVICES

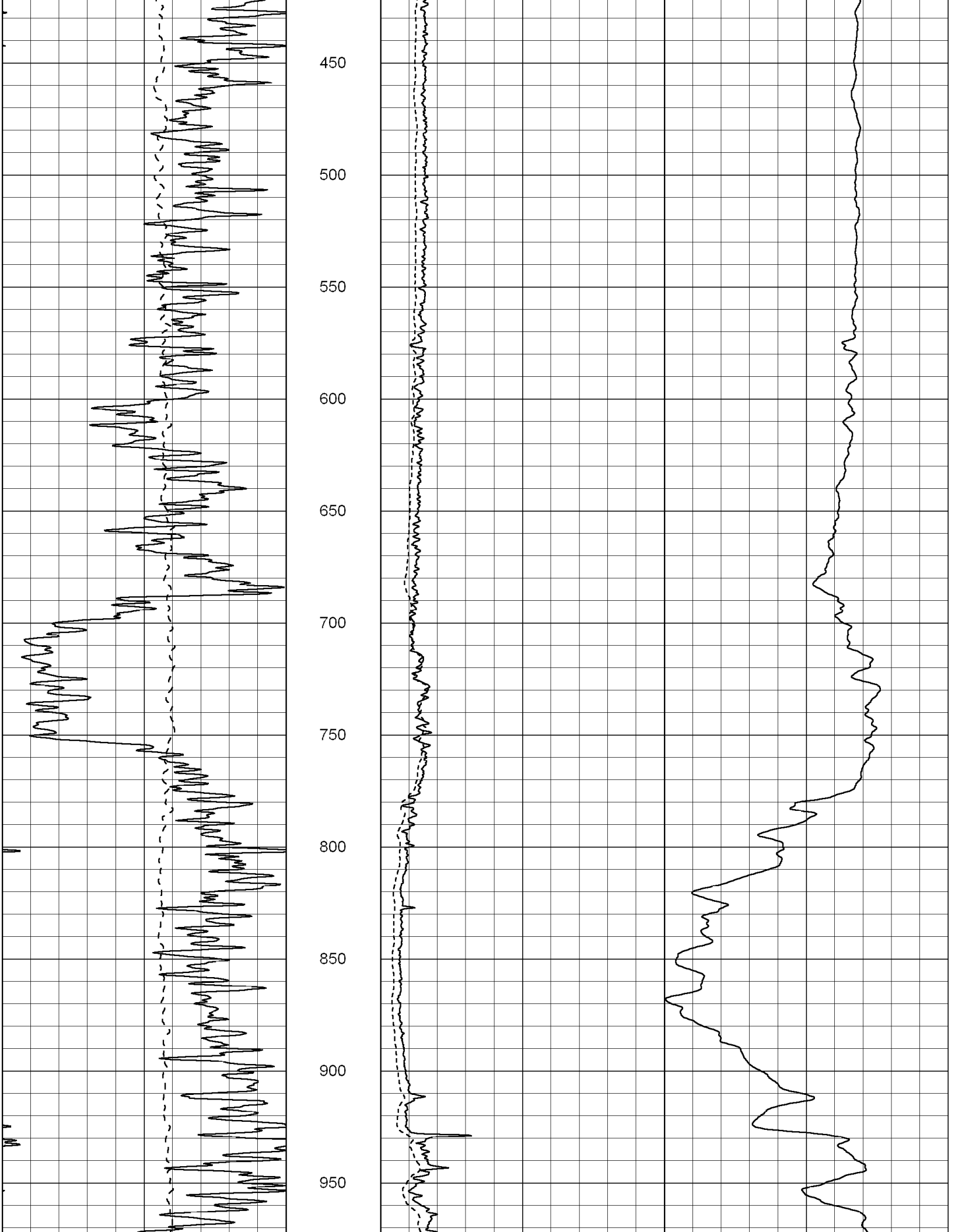
Kansas

| | |
|---|---|
| Database File: | 004308ddn.db |
| Dataset Pathname: | pass3.1 |
| Presentation Format: | dil2 |
| Dataset Creation: | Sun Nov 15 21:05:26 2009 by Calc Open-Cased 051020 |
| Charted by: | Depth in Feet scaled 1:600 |

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

| | | |
|---|---|---|
| 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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650
700
750
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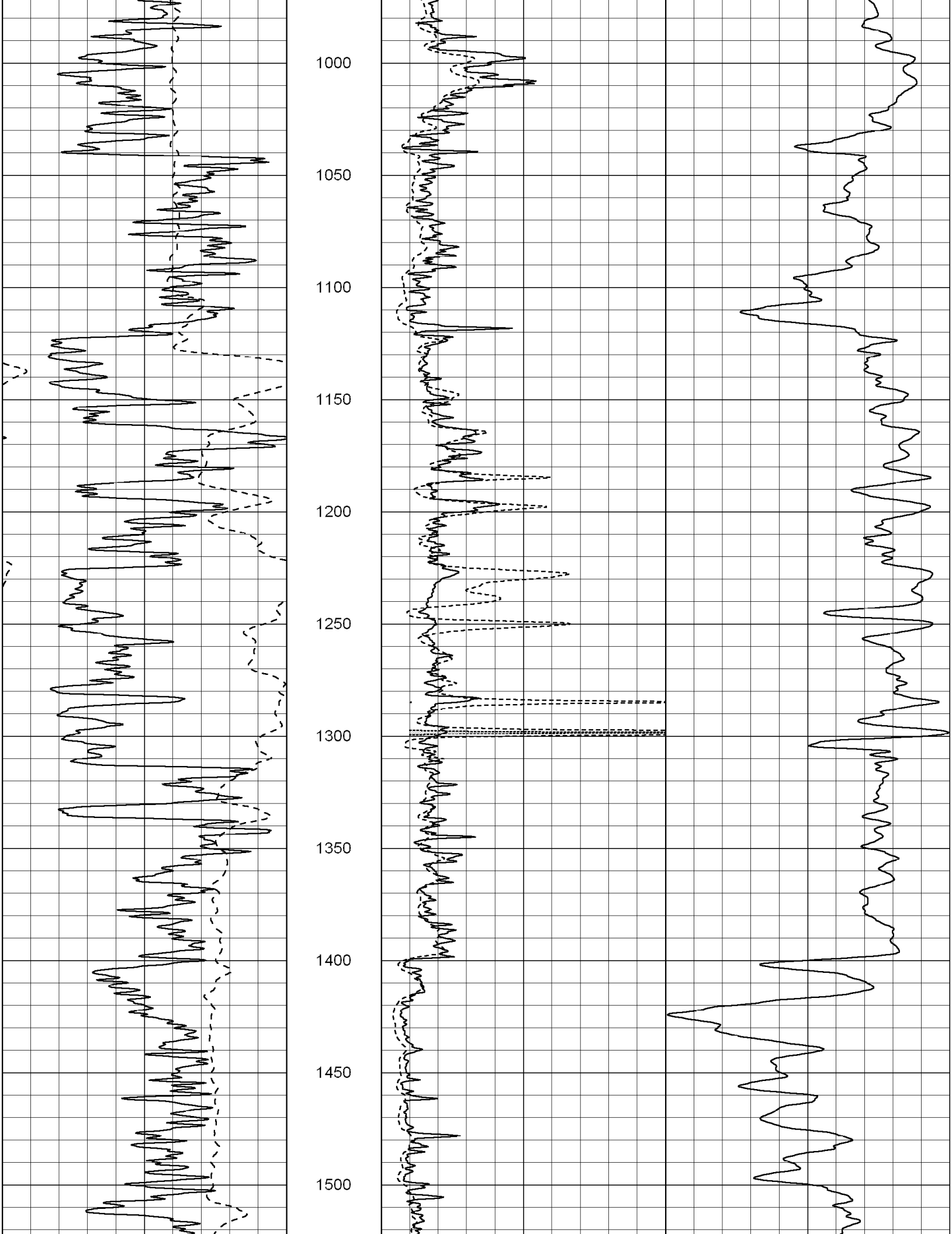
900
950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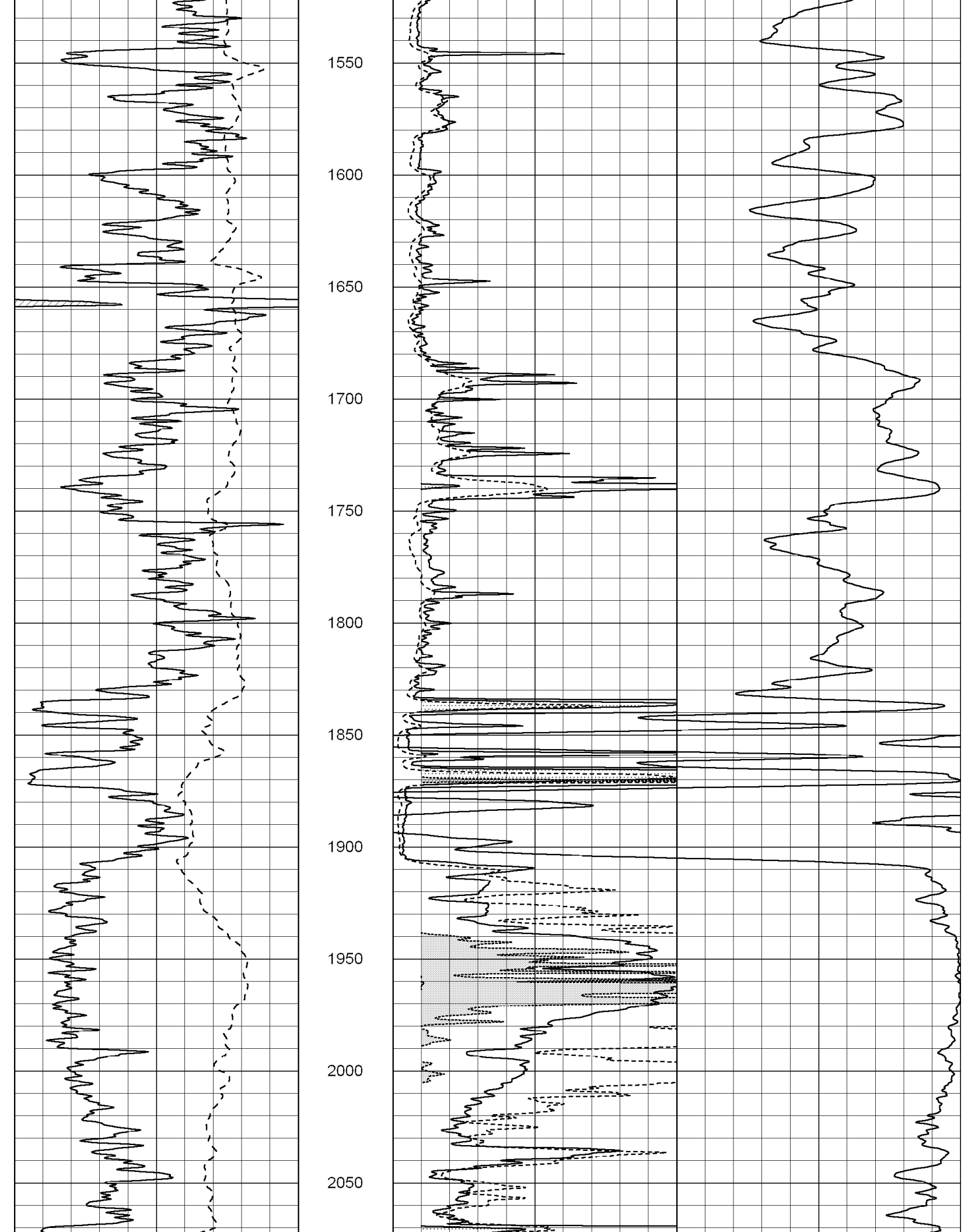
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500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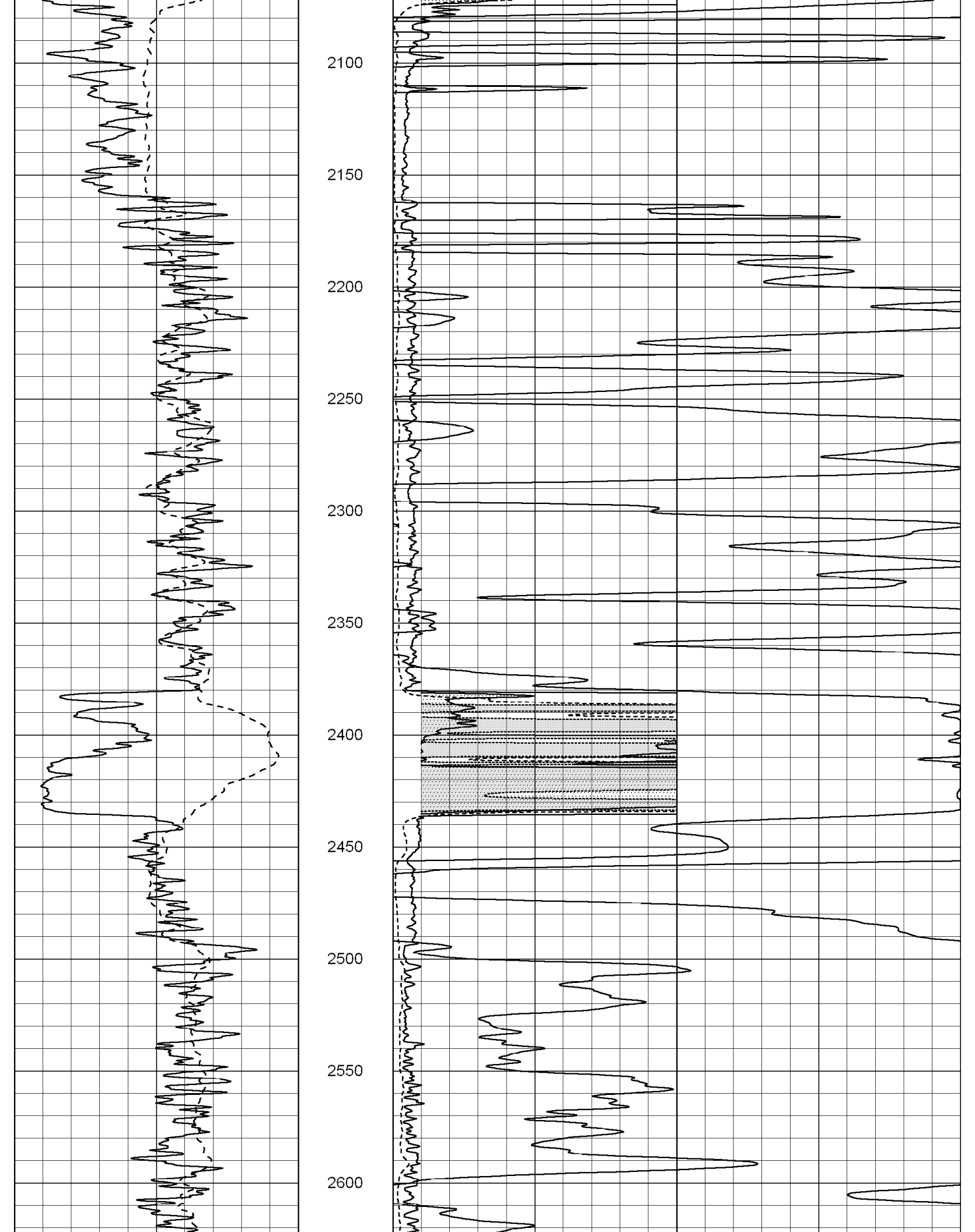
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050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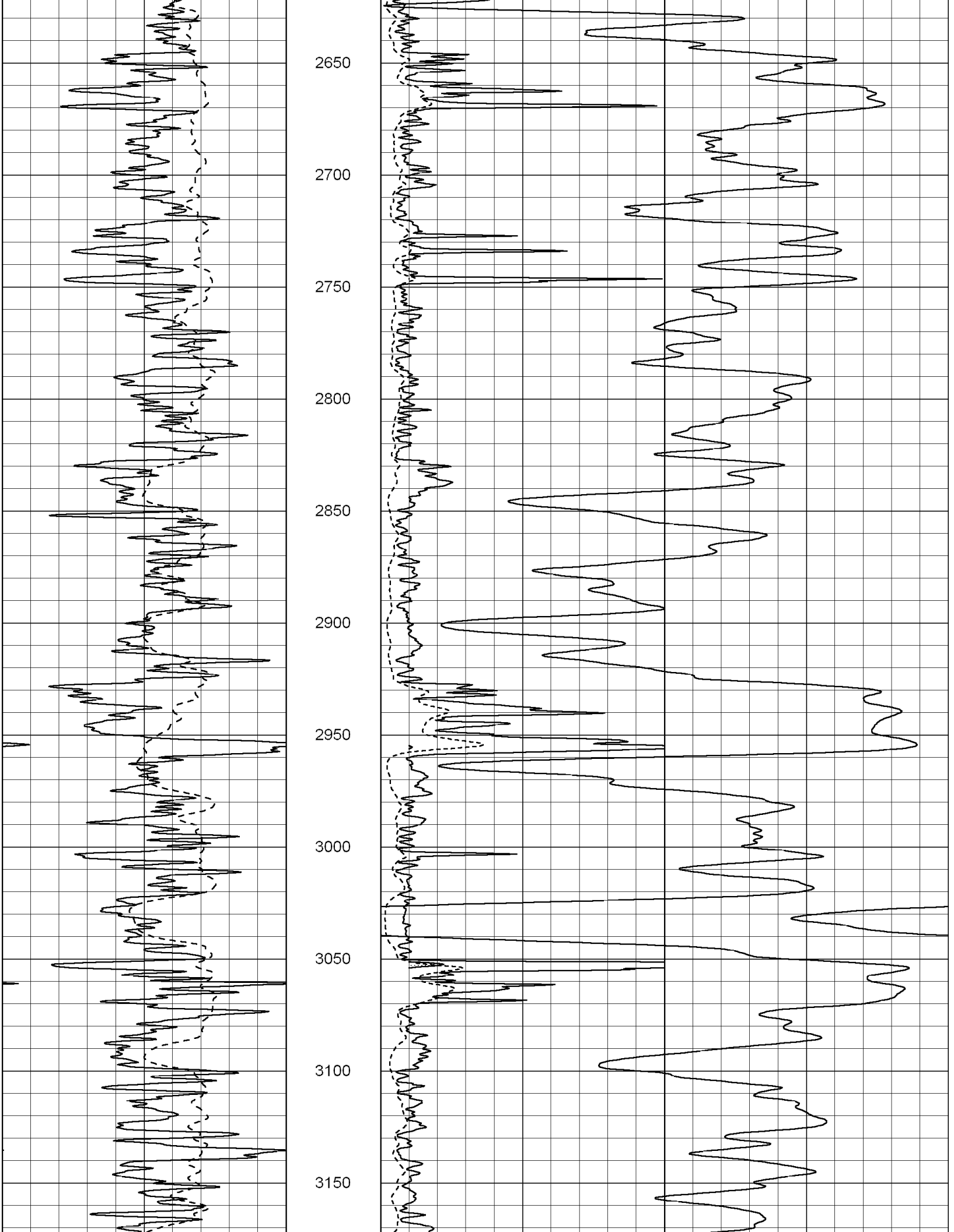
2200
2250
2300
2350
2400
2450
2500
2550
2600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2750
2800
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2900
2950
3000
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3100
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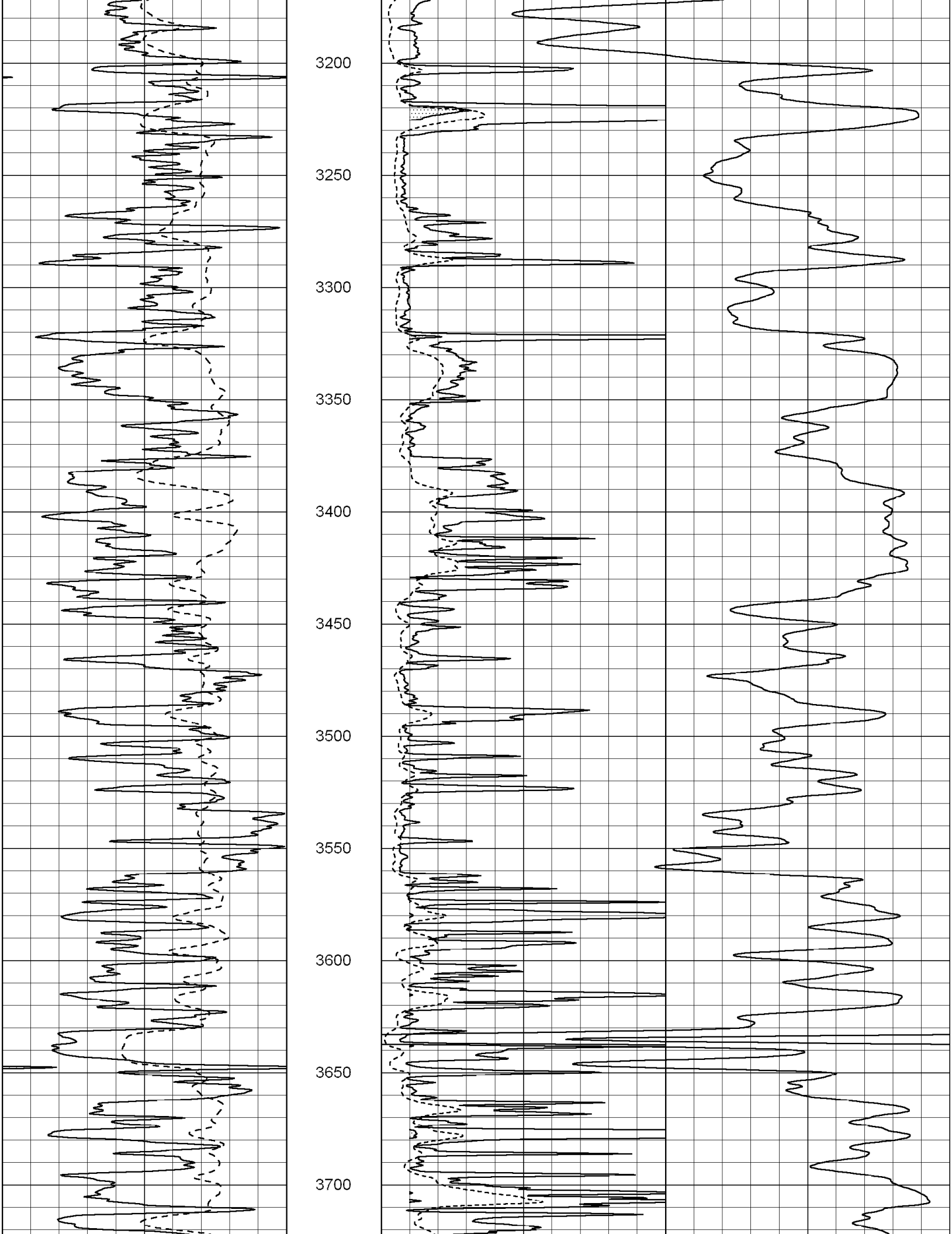
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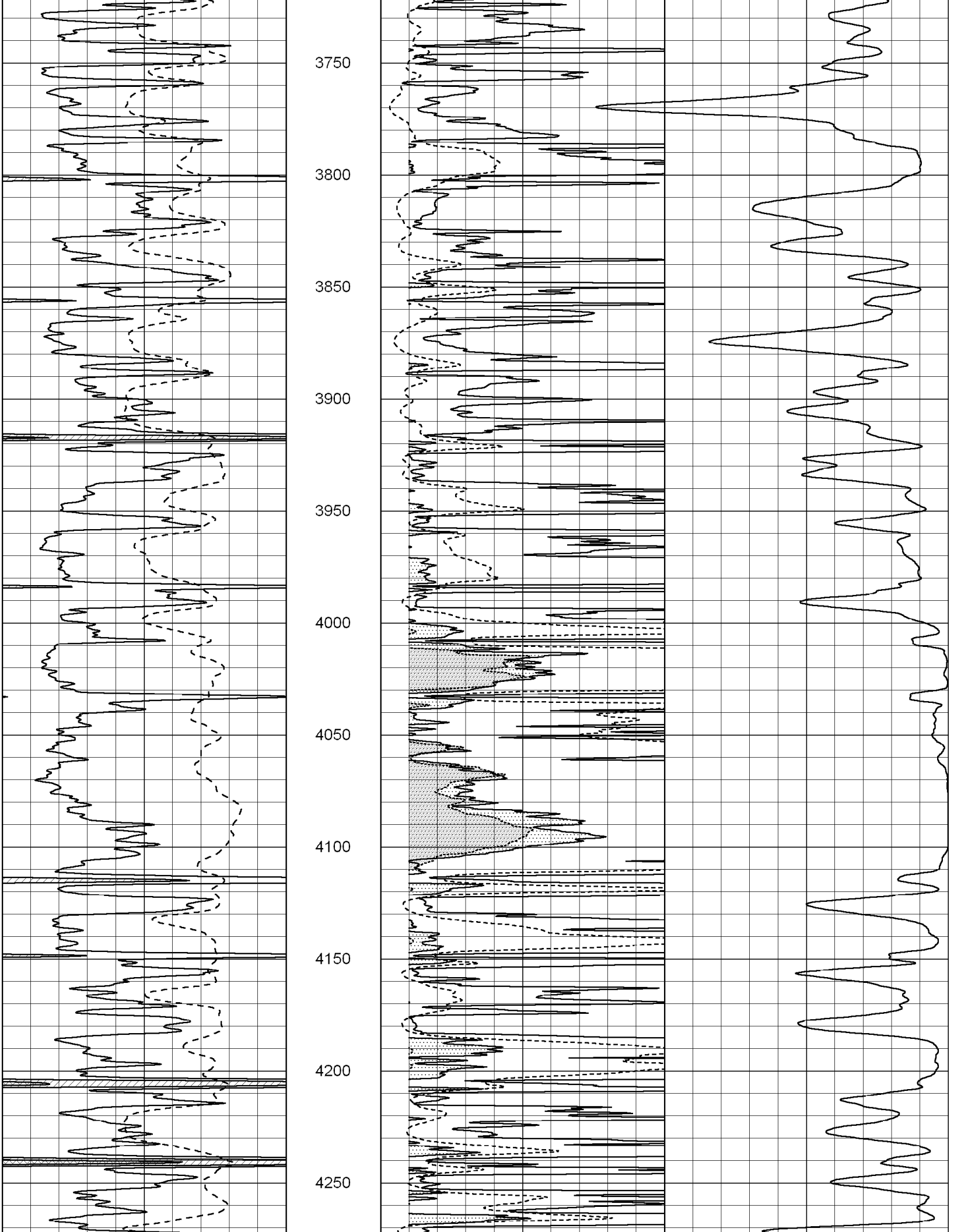
3300
3350
3400
3450
3500
3550
3600
3650
3700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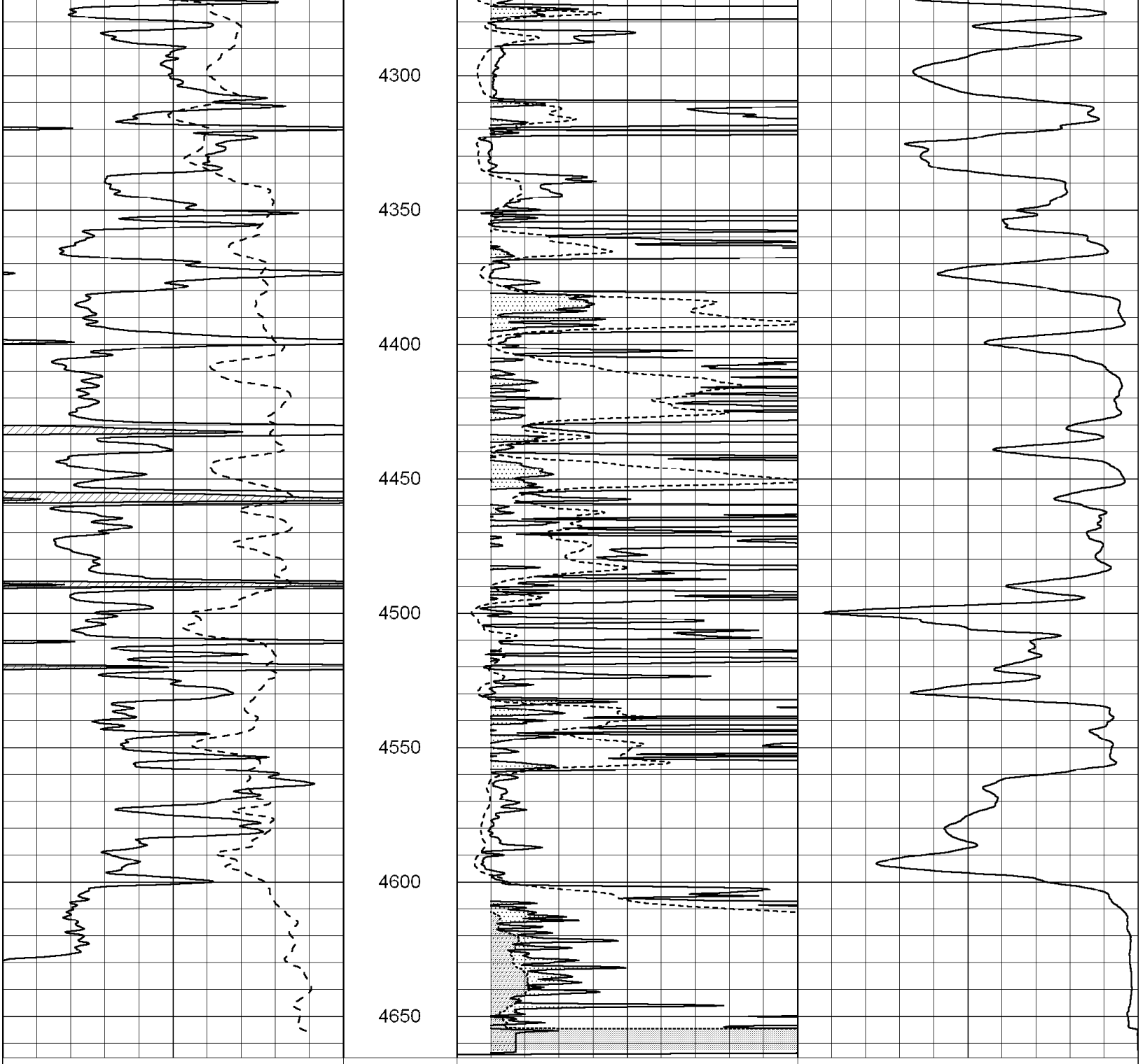
3850
3900
3950
4000
4050
4100
4150
4200
4250




SUPERIOR WELL SERVICES

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Hays,
Kansas

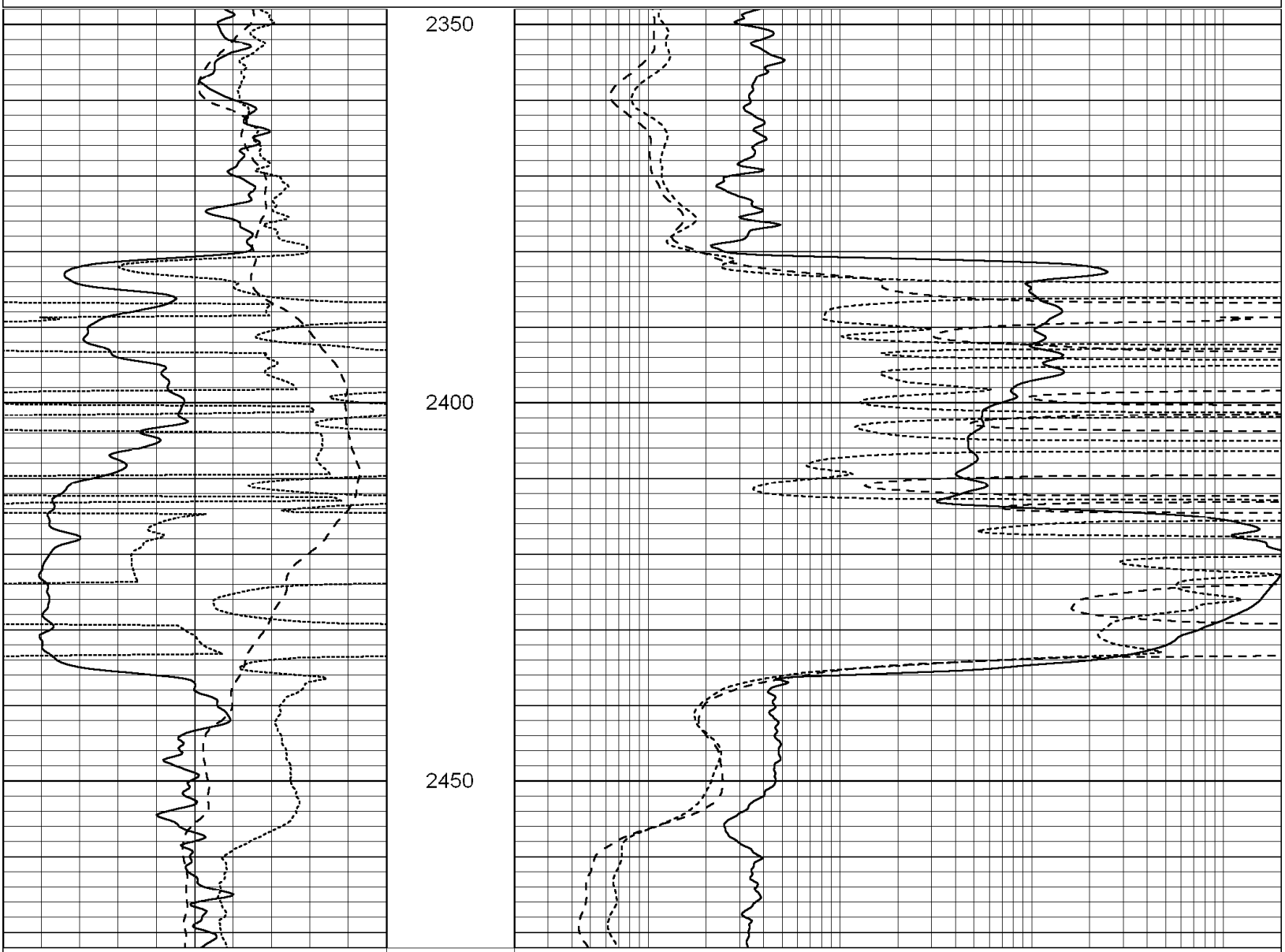
# MAIN SECTION

Database File: 004308ddn.db
Dataset Pathname: pass3.1
Presentation Format: dil

Dataset Creation: Sun Nov 15 21:05:26 2009 by Calc Open-Cased 051020
Charted by: Depth in Feet scaled 1:240

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

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





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

| | | |
|---|---|---|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |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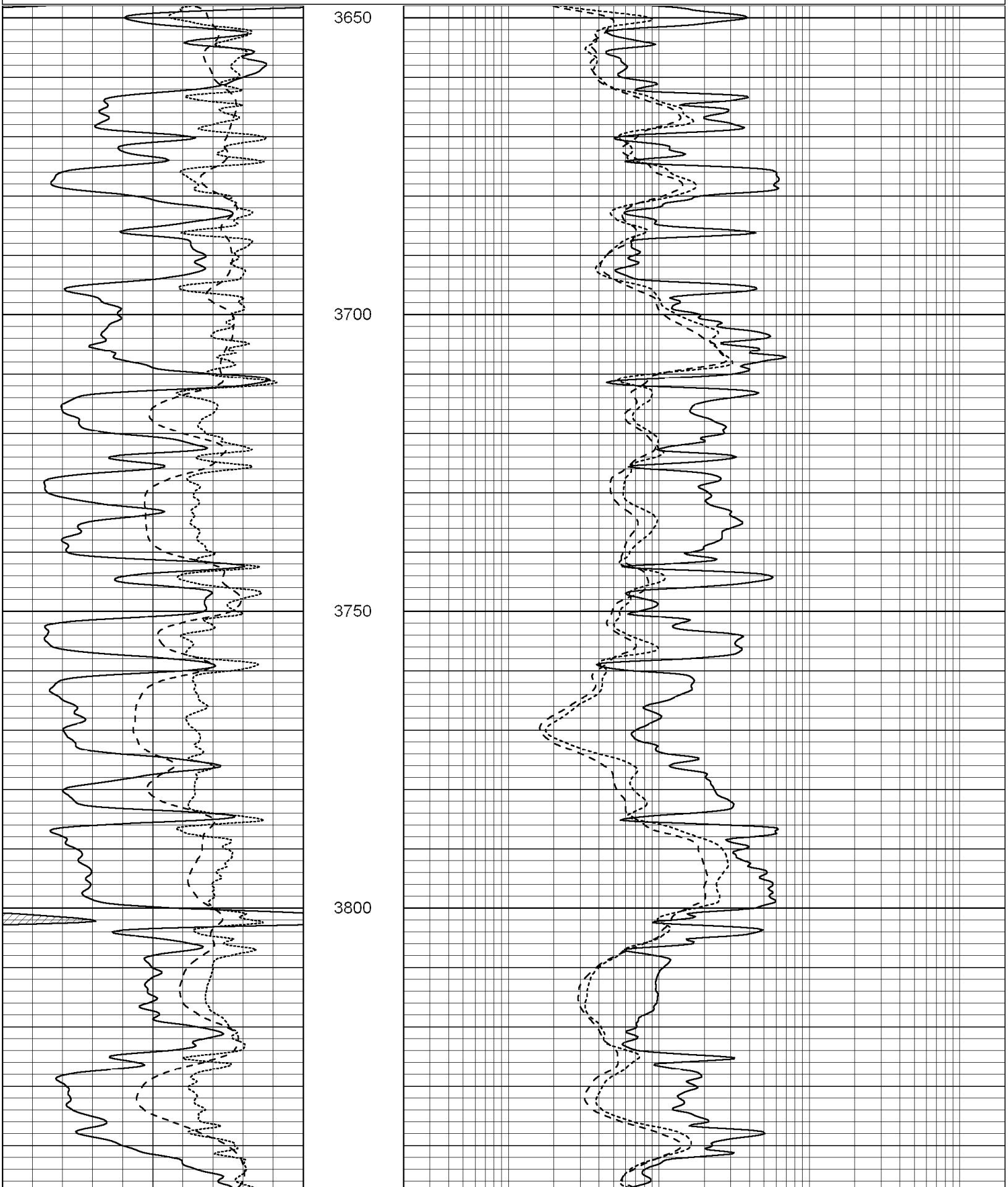
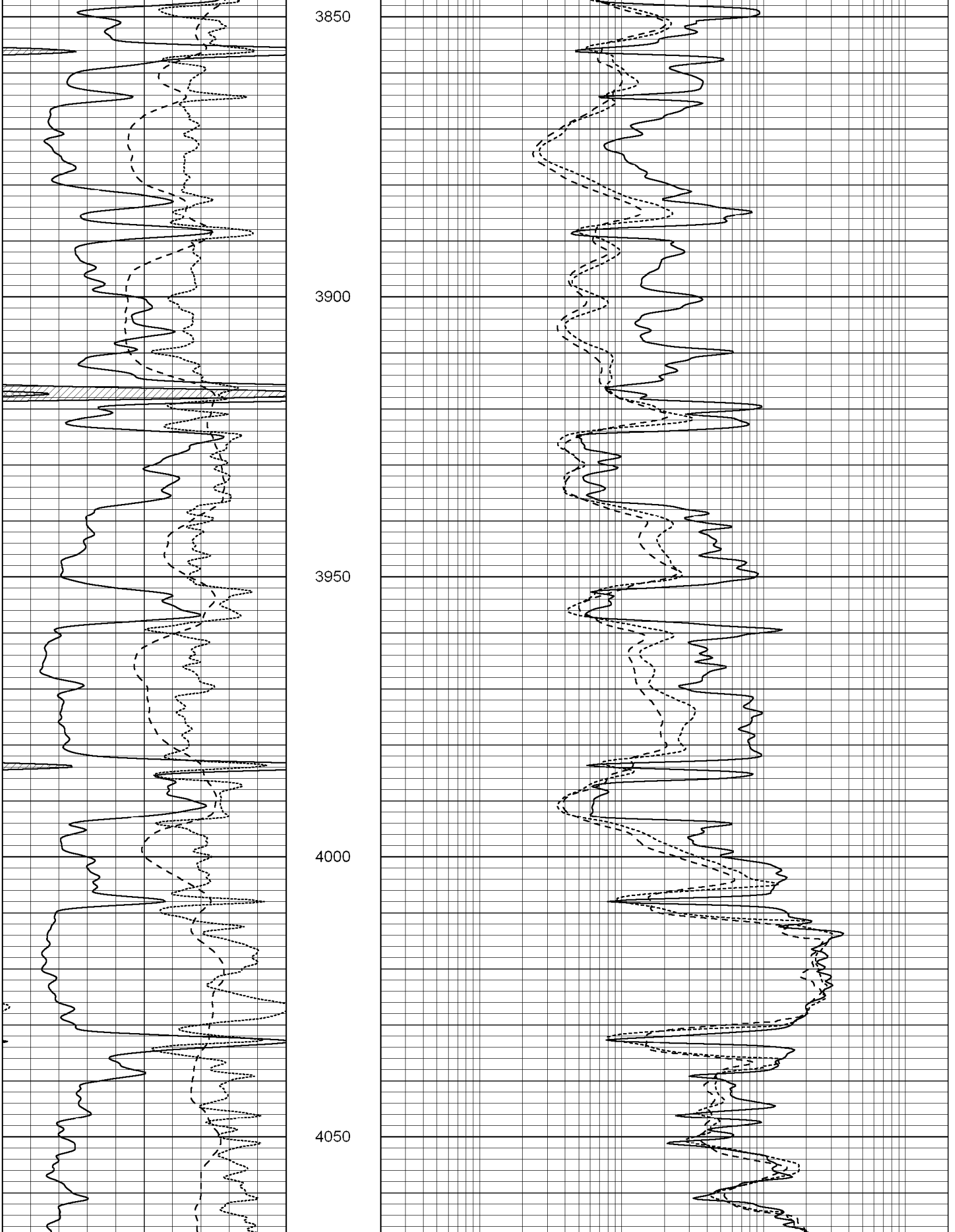
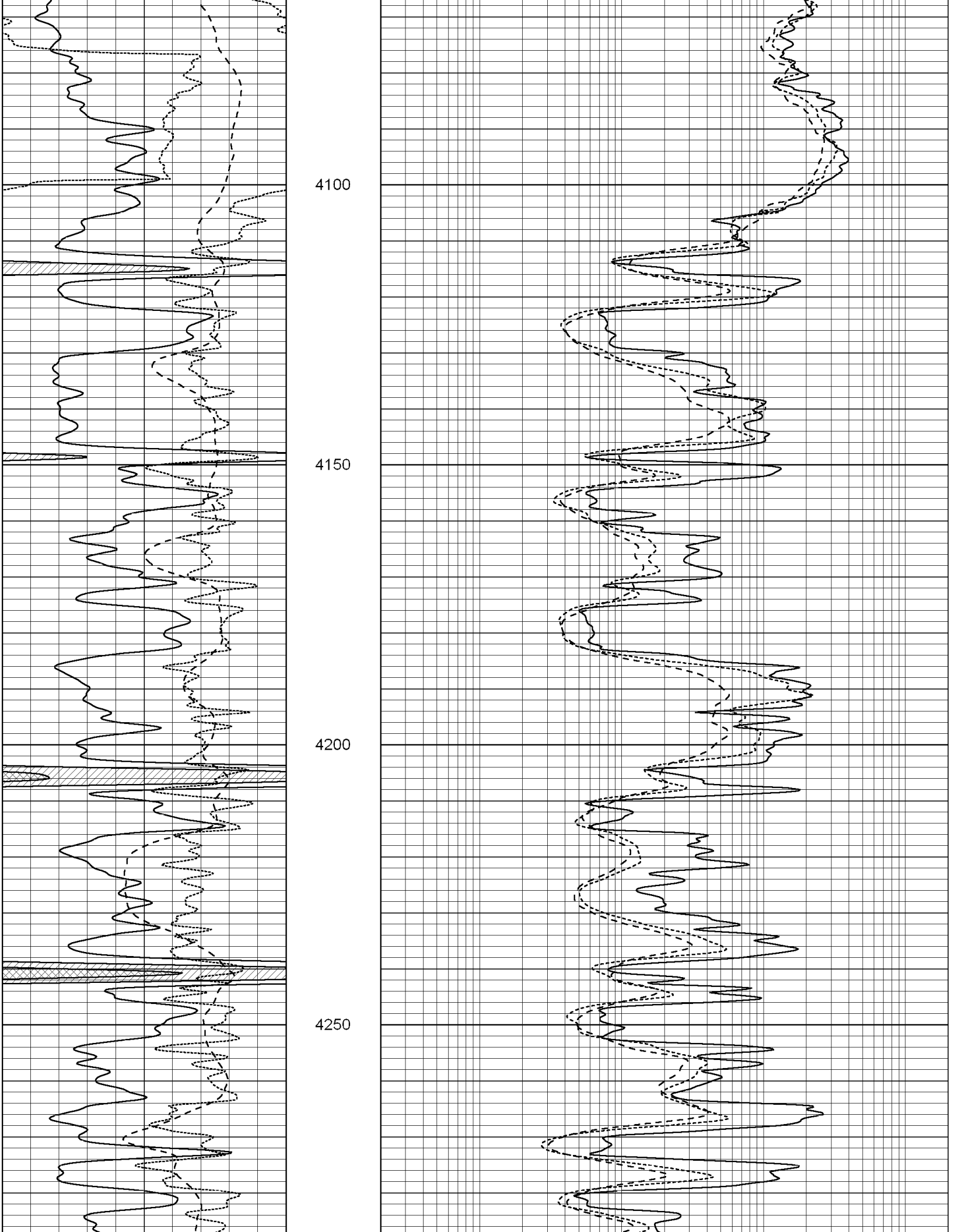
Charted by: Depth in Feet scaled 1:240

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

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




3850
3900
3950
4000
4050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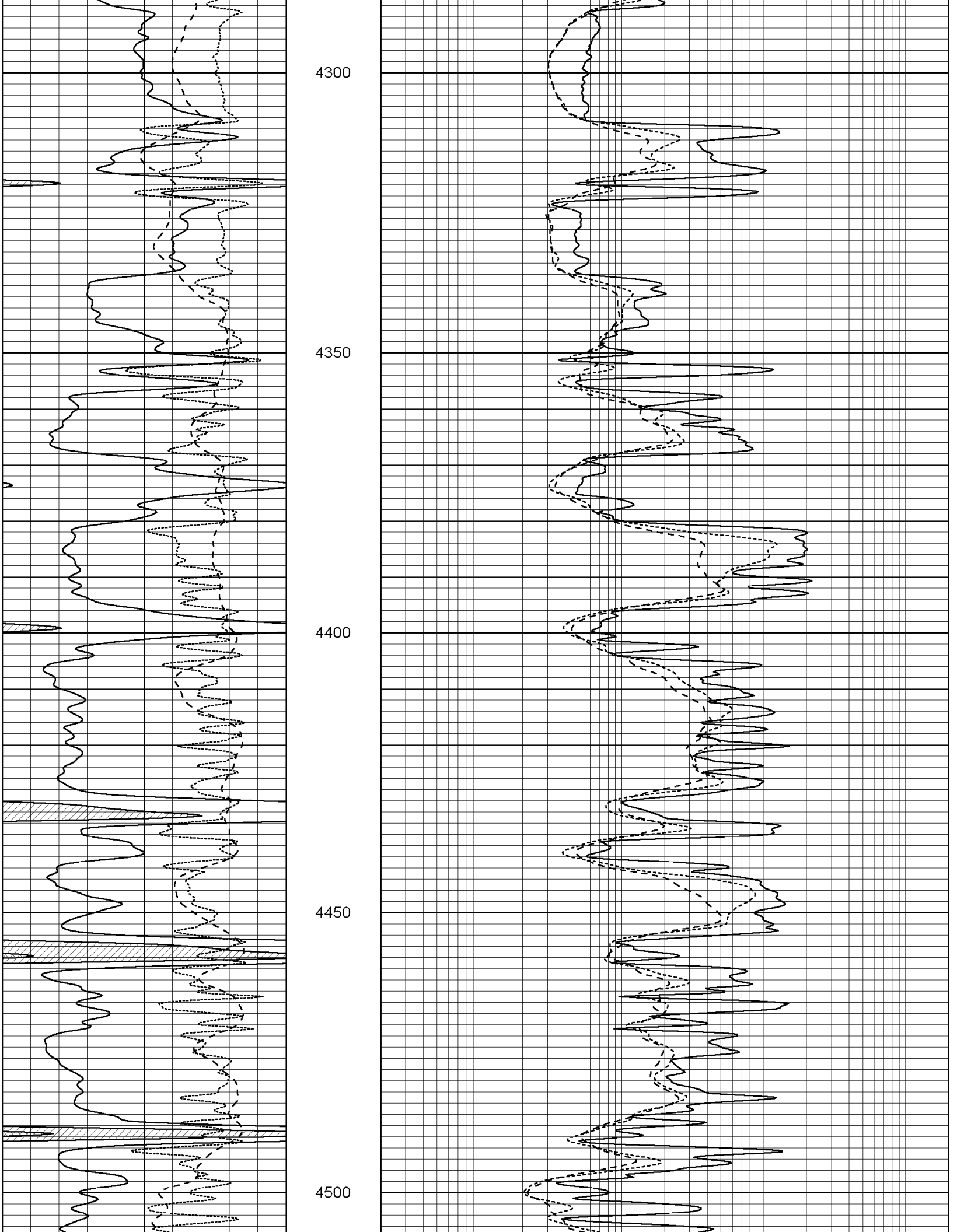
4150
4200
4250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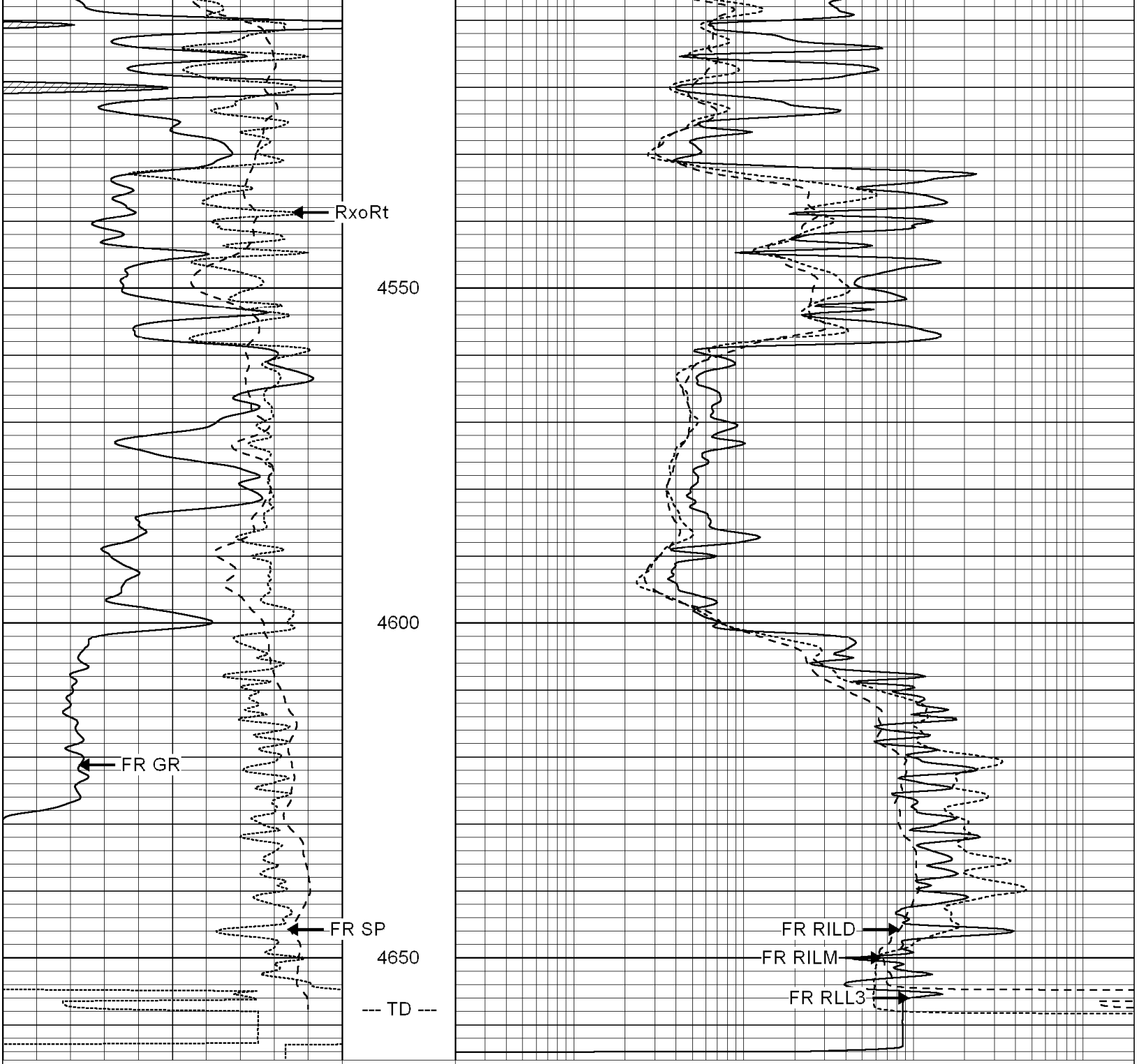
4350
4400
4450
4500

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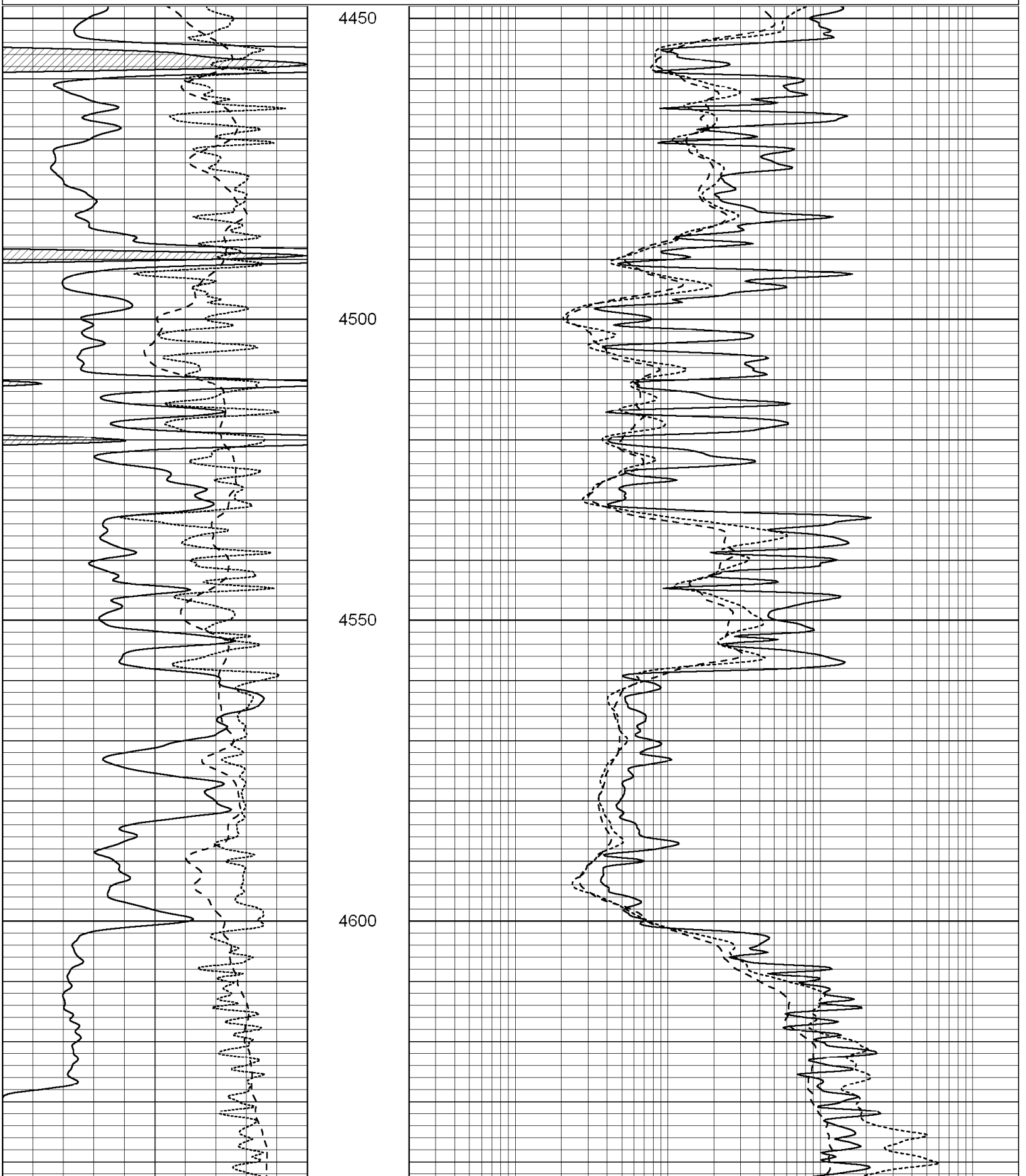
# REPEAT SECTION

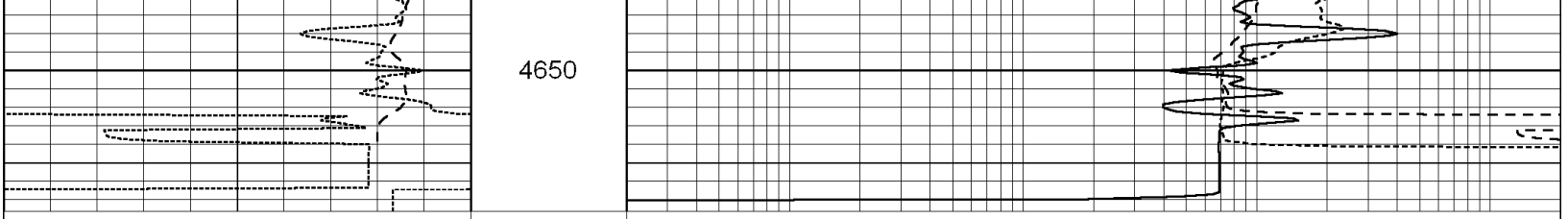
| | |
|---|---|
| Database File: | 004308ddn.db |
| Dataset Pathname: | pass2.1A |
| Presentation Format: | dil |
| Dataset Creation: | Sun Nov 15 21:45:36 2009 by Calc Open-Cased 051020 |

Charted by: Depth in Feet scaled 1:240

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

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






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

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

## Calibration Report

Database File: 004308ddn.db
Dataset Pathname: pass3.1
Dataset Creation: Sun Nov 15 21:05:26 2009 by Calc Open-Cased 051020

### Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
Performed: Sun Nov 15 20:08:52 2009

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.004 | 0.654 | V | 0.000 | 400.000 | mmho-m | 580.000 | -11.000 |
| Medium | -0.005 | 0.737 | V | 0.000 | 462.500 | mmho-m | 570.000 | -14.000 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.006 | 0.655 | V | 0.000 | 400.000 | mmho-m | 615.668 | -3.483 |
| Medium | 0.010 | 0.747 | V | 0.000 | 462.500 | mmho-m | 627.607 | -6.064 |

### Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Sun Nov 15 19:19:06 2009

Master Calibration

| | Density | | Far Detector | Near Detector | |
|---|---|---|---|---|---|
| Magnesium | 1.710 | g/cc | 1006.91 | 528.07 | cps |
| Aluminum | 2.610 | g/cc | 233.49 | 355.80 | cps |

Spine Angle = 74.88 Density/Spine Ratio = 0.594

| | Size | | Reading | |
|---|---|---|---|---|
| Small Ring | 8.00 | in | 3.68 | V |
| Large Ring | 14.00 | in | 6.06 | V |

### Compensated Neutron Calibration Report

Serial Number: NEU_1I
Tool Model: G

CALIBRATION

| Detector | Readings | | Target | | Normalization |
|---|---|---|---|---|---|
| Short Space | 1.00 | cps | 1.00 | cps | 1.0000 |
| Long Space | 1.00 | cps | 1.00 | cps | 1.0000 |

Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | GR5 | |
| Tool Model: | OPEN | |
| Performed: | Sat Nov 14 16:52:22 2009 | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 0.5500 | GAPI/cps |