SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

# COMPENSATED DENSITY / NEUTRON LOG

Company CAERUS KANSAS, LLC.
Well HOFFMAN RANCH #23-23
Field HOISINGTON EAST
County BARTON State KANSAS
Location: API #: 15-009-25639
1795' FSL & 1814' FWL
SEC 23 TWP 17S RGE 13W

Other Services
DIL
SONIC/MEL

Permanent Datum GROUND LEVEL Elevation 1856
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1865
D.F.
G.L. 1856

| | | | |
|---|---|---|---|
| Company | CAERUS KANSAS, LLC. | | |
| Well | HOFFMAN RANCH #23-23 | | |
| Field | HOISINGTON EAST | | |
| County | BARTON | | |
| State | KANSAS | | |
| Date | 12-13-11 | | |
| Run Number | ONE | | |
| Depth Driller | 3450 | | |
| Depth Logger | 3449 | | |
| Bottom Logged Interval | 3425 | | |
| Top Log Interval | 1500 | | |
| Casing Driller | 820 | | |
| Casing Logger | 820 | | |
| Bit Size | 7.875 | | |
| Type Fluid in Hole | CHEMICAL MUD | | |
| Density / Viscosity | 9.3 / 45 | | |
| pH / Fluid Loss | 9.5 / 8.8 | | |
| Source of Sample | FLOWLINE | | |
| Rm @ Meas. Temp | 0.65 @ 70F | | |
| Rmf @ Meas. Temp | 0.49 @ 70F | | |
| Rmc @ Meas. Temp | 0.78 @ 70F | | |
| Source of Rmf / Rmc | MEASURED | | |
| Rm @ BHT | .420 @ 109F | | |
| Time Circulation Stopped | 2 HOURS | | |
| Time Logger on Bottom | 2:30 P.M. | | |
| Maximum Recorded Temperature | 109F | | |
| Equipment Number | 860 | | |
| Location | HAYS, KS. | | |
| Recorded By | RUPP | | |
| Witnessed By | JEFF LAWLER | BRIAN KARLIN | |

<<< Fold Here >>>



Comments

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HOISINGTON DAIRY QUEEN, 2E, 2 1/2N, E INTO.

SUPERIOR WELL SERVICES

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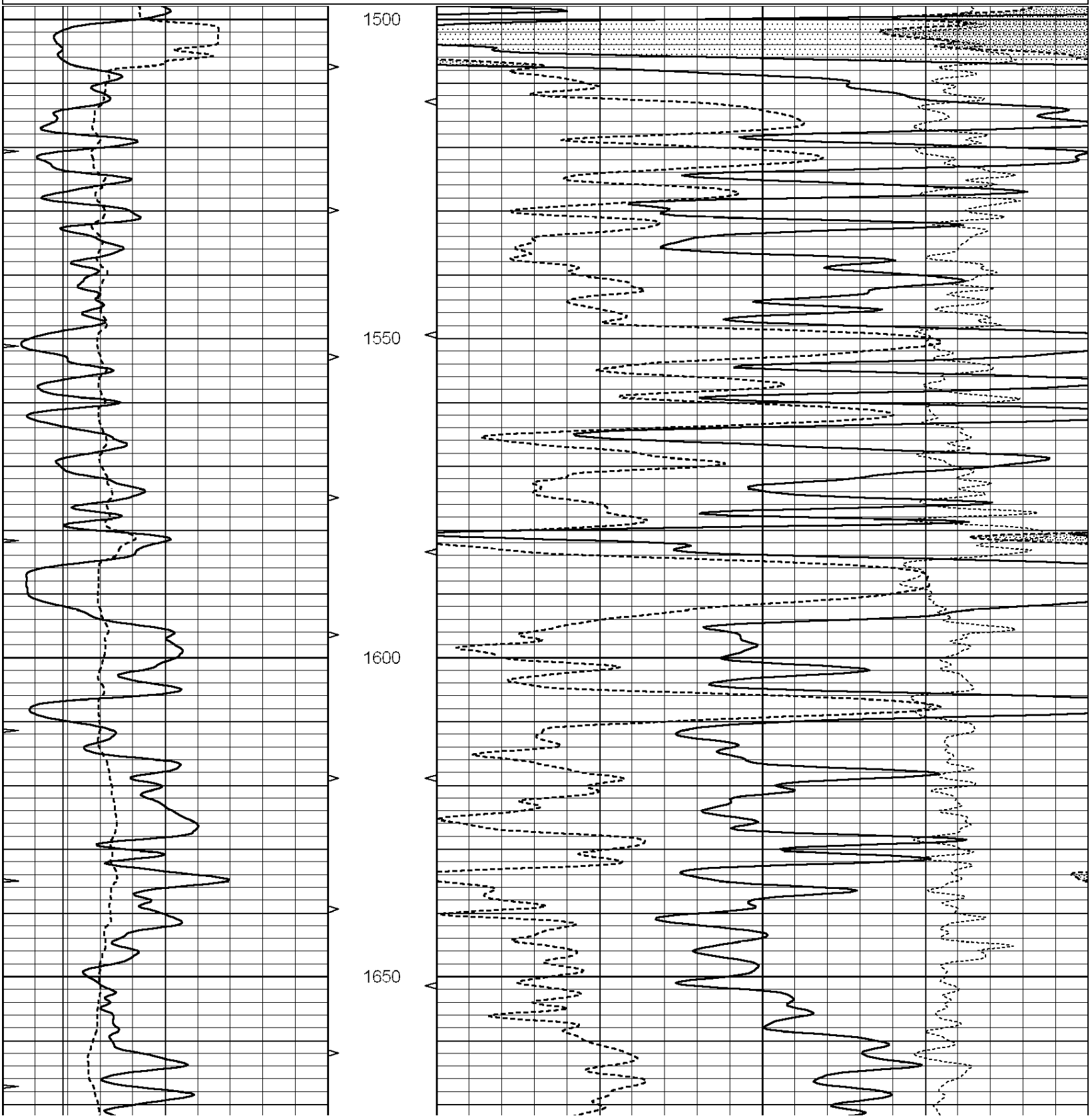
Hays,
Kansas

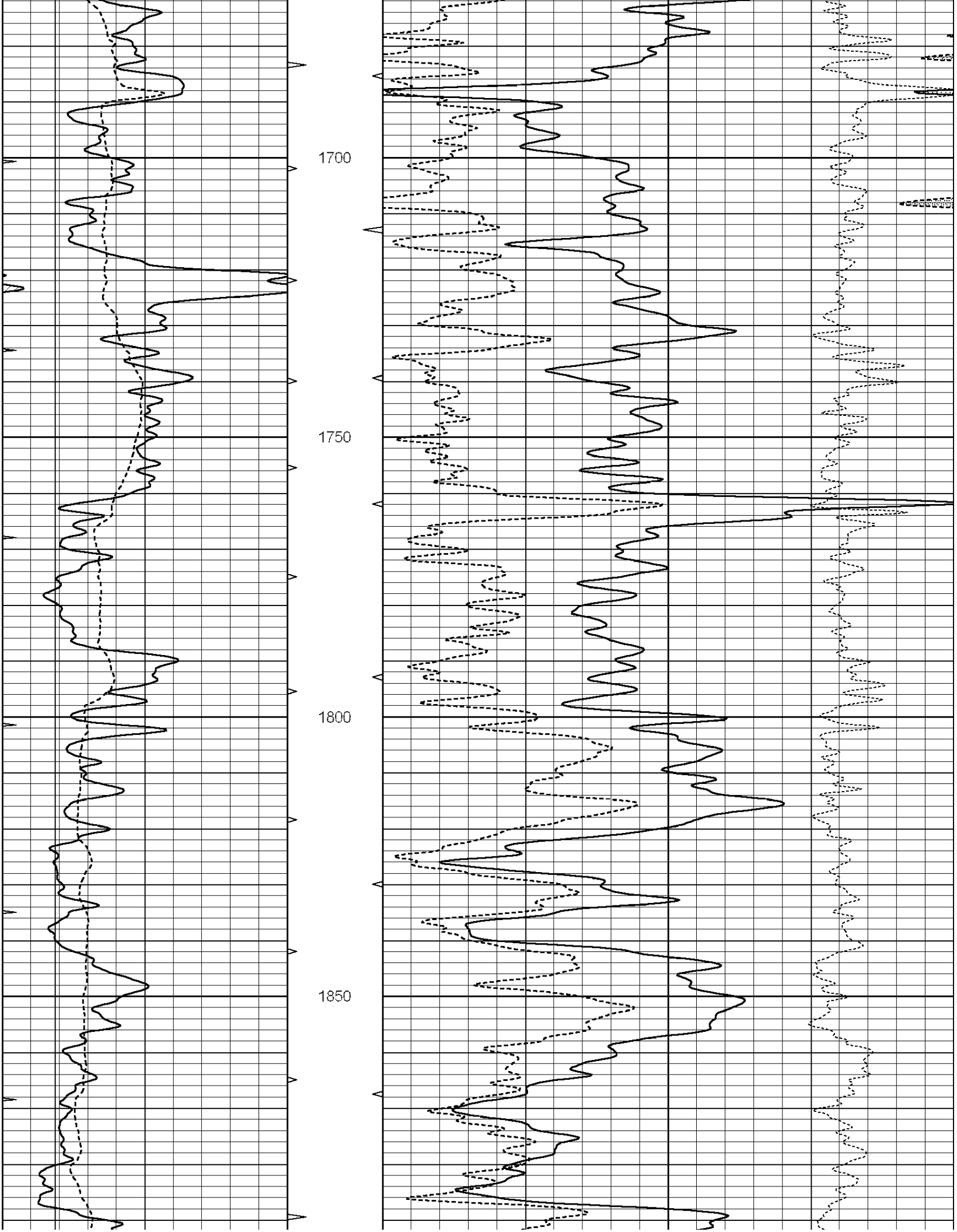
# MAIN SECTION

Kansas

| | |
|---|---|
| Database File: | 001214ddn.db |
| Dataset Pathname: | pass3.1 |
| Presentation Format: | den_neu |
| Dataset Creation: | Tue Dec 13 16:26:17 2011 by Calc Open-Cased 090629 |
| Charted by: | Depth in Feet scaled 1:240 |

| | | | | | |
|---|---|---|---|---|---|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV | 30 | COMPENSATED DENSITY (pu) | -10 |
| 6 | CALIPER (in) | 16 | 10 (ft3) 0 | 30 | COMPENSATED NEUTRON (pu) | -10 |
| 0 | MINMK | 20 | TBHV | -0.25 | CORRECTION (g/cc) | 0.25 |
| | | | 0 (ft3) 10 | | | |

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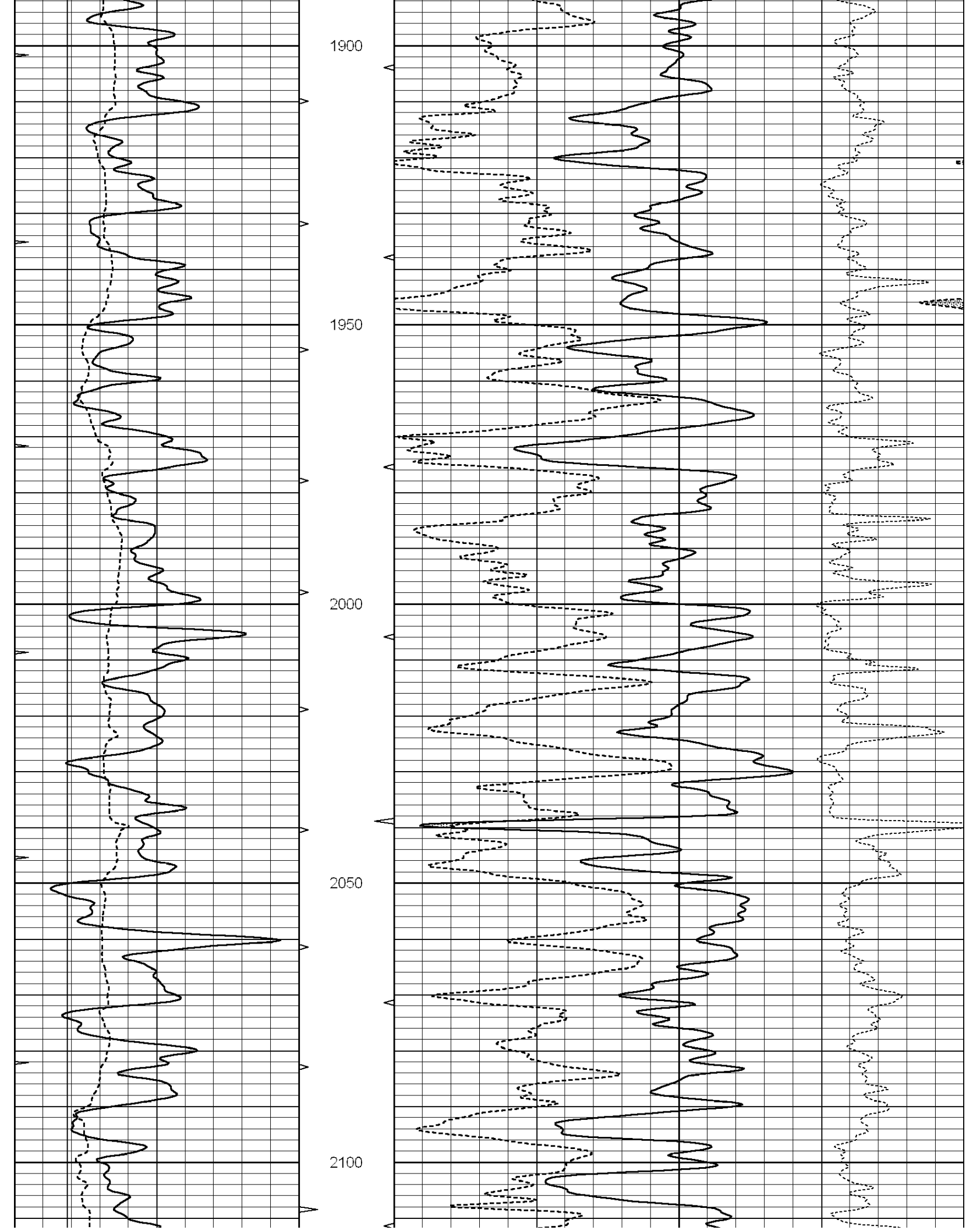
1750
1800
1850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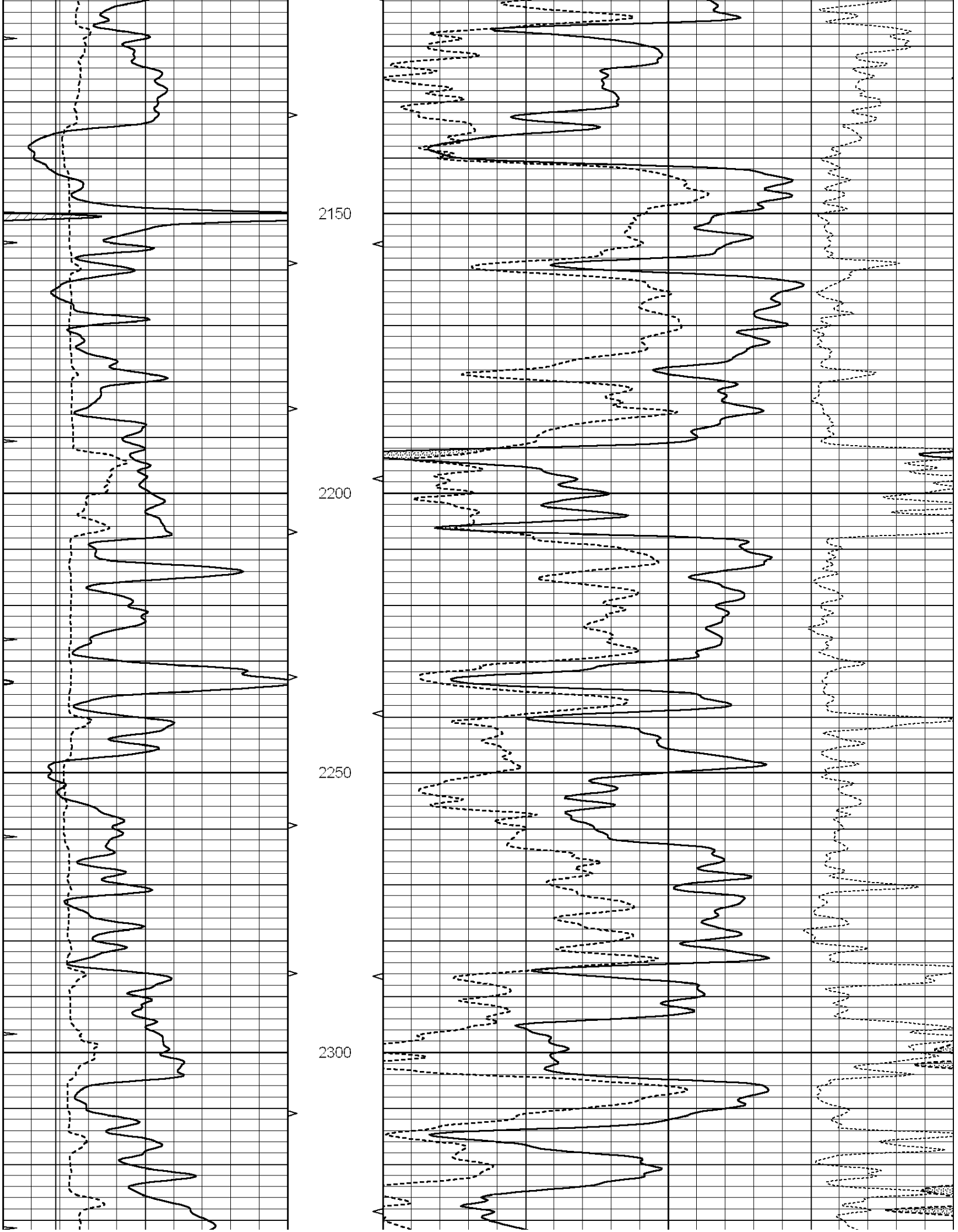
1950
2000
2050
2100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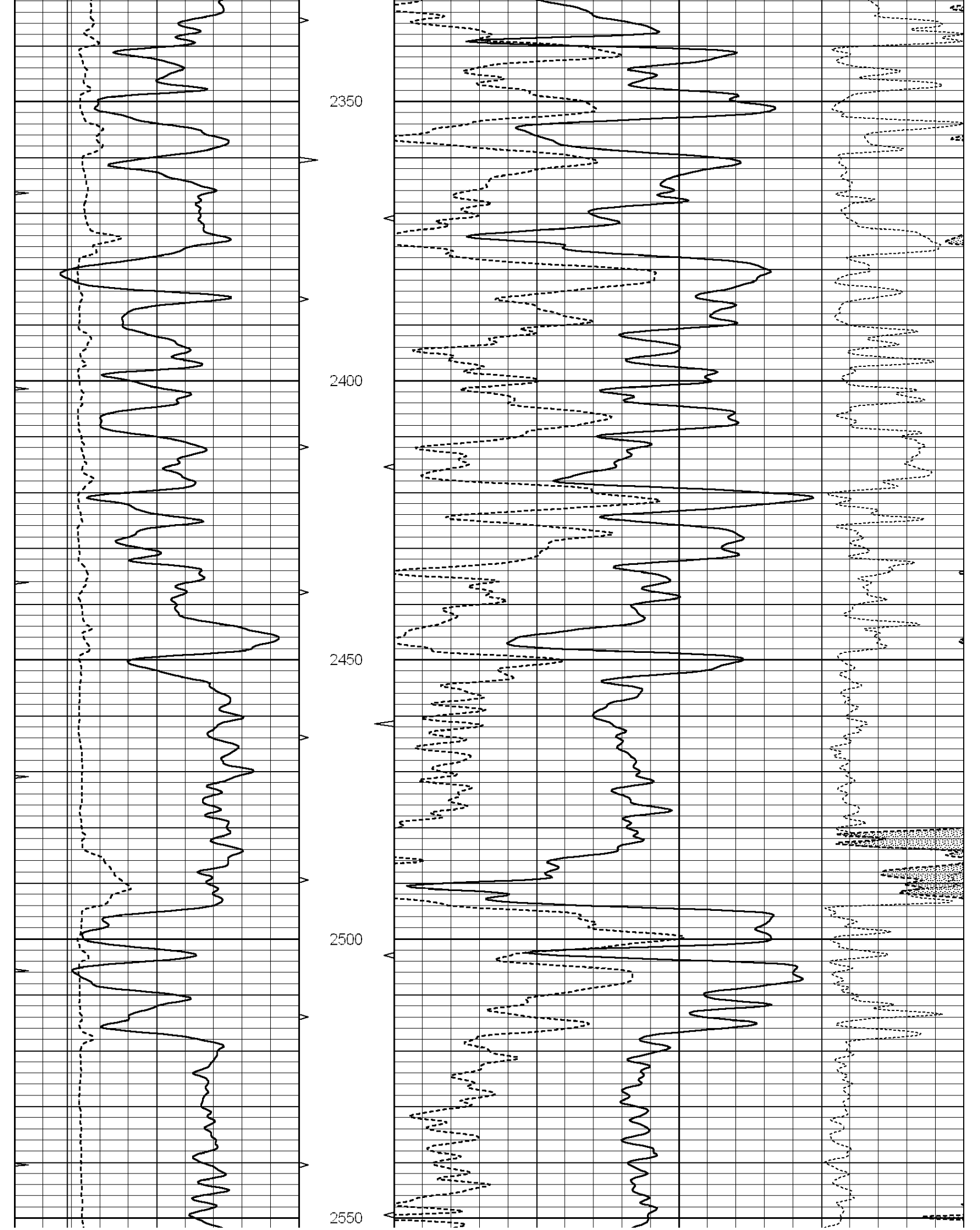
2200
2250
2300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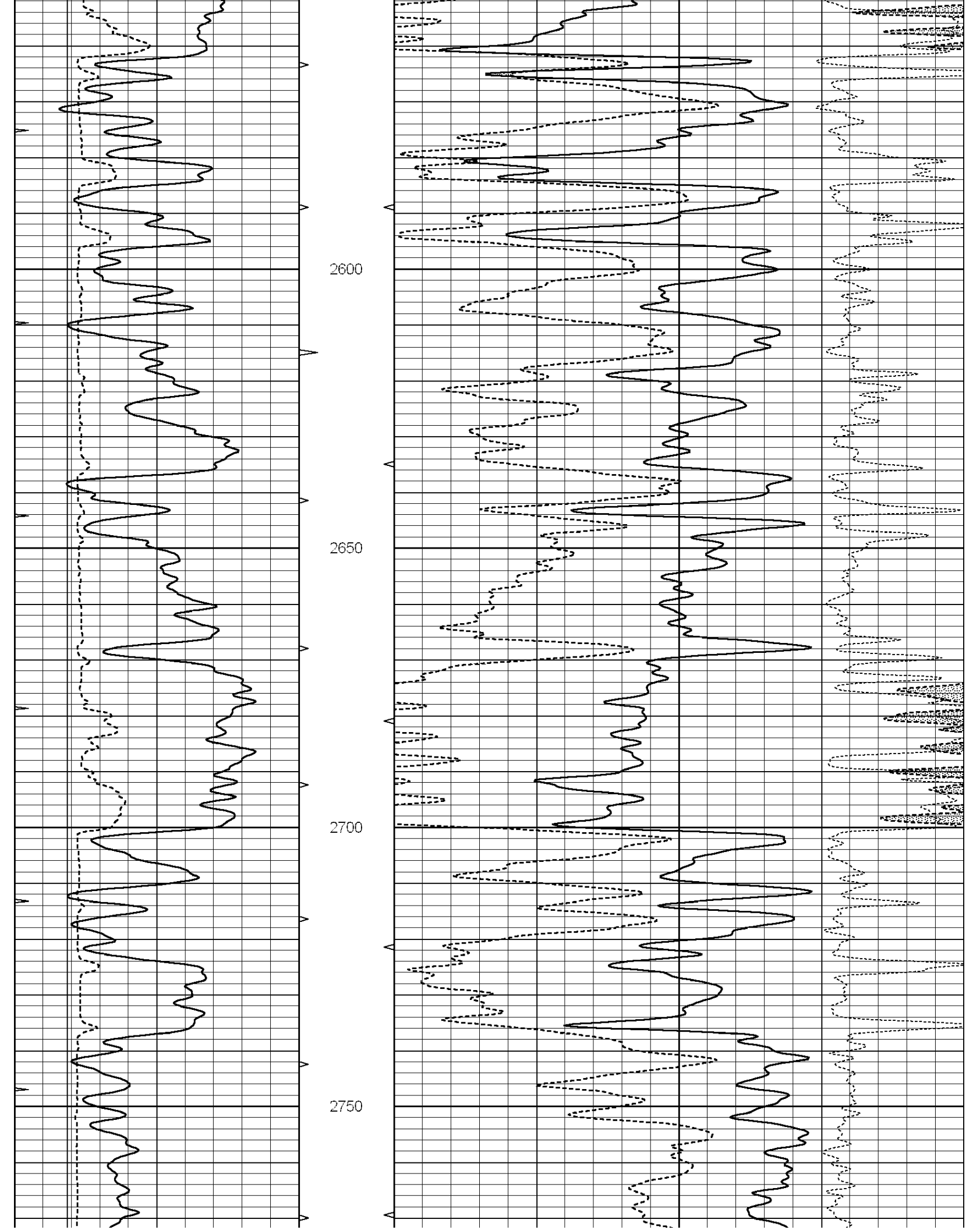
2400
2450
2500
2550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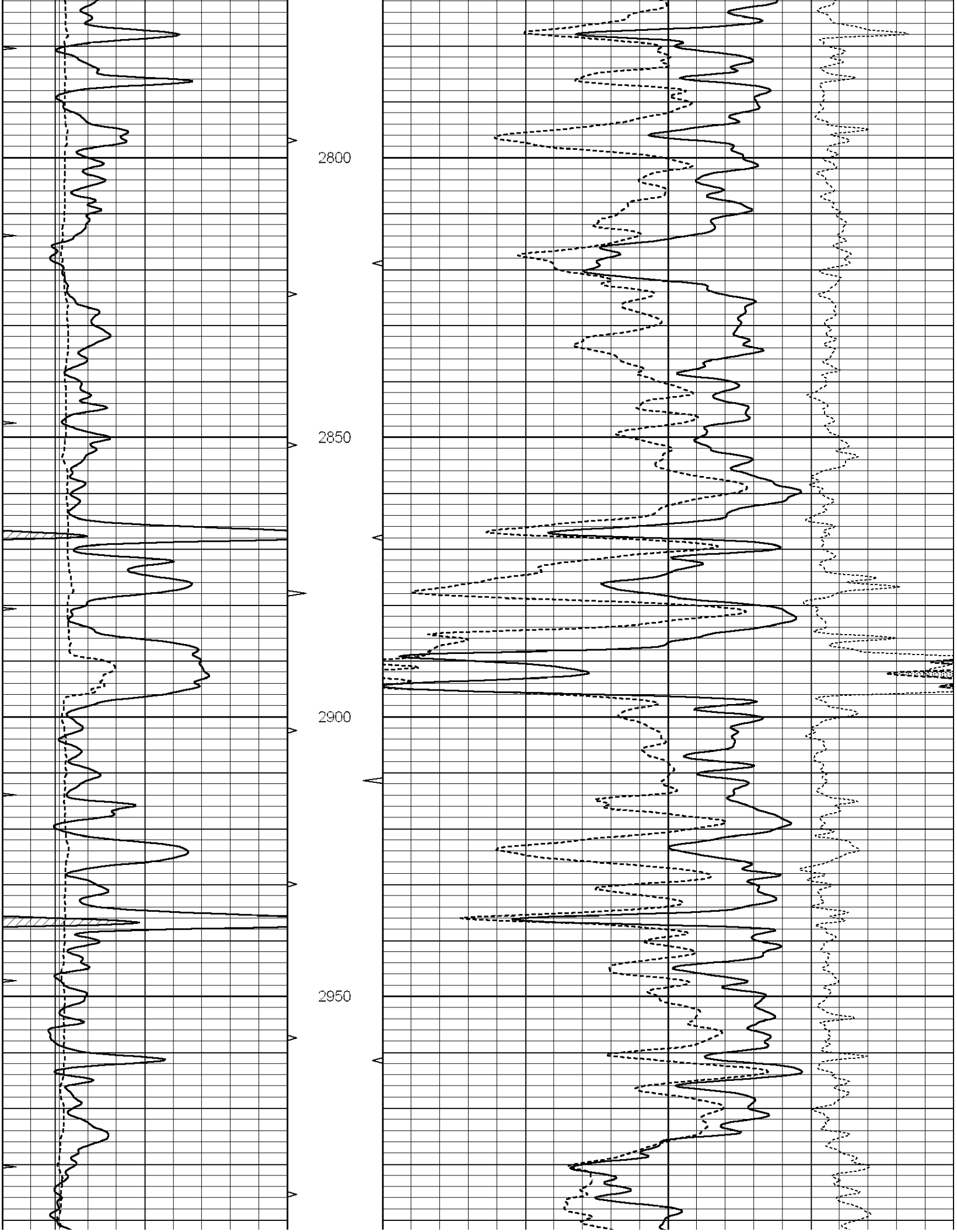
2650
2700
2750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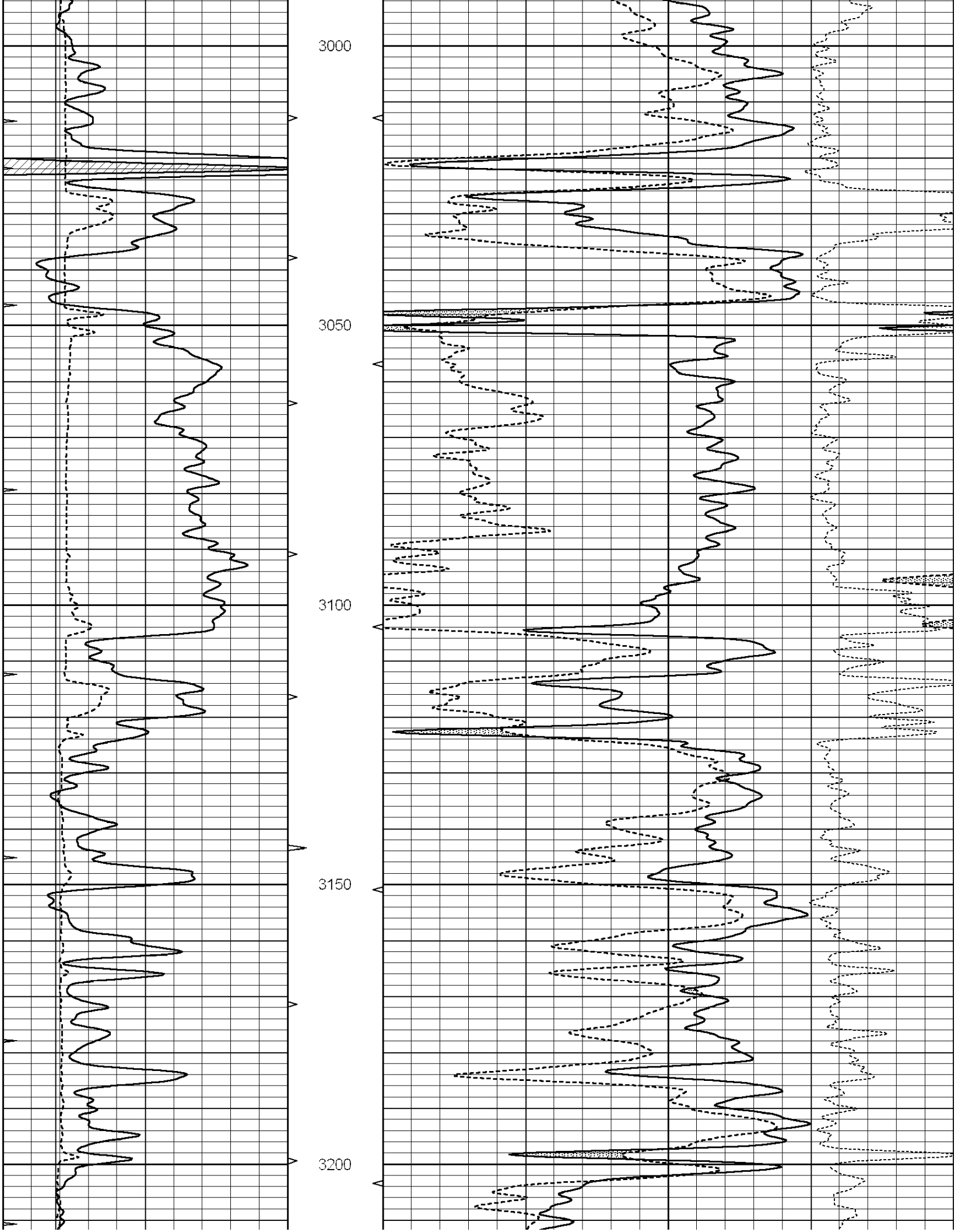
2850
2900
2950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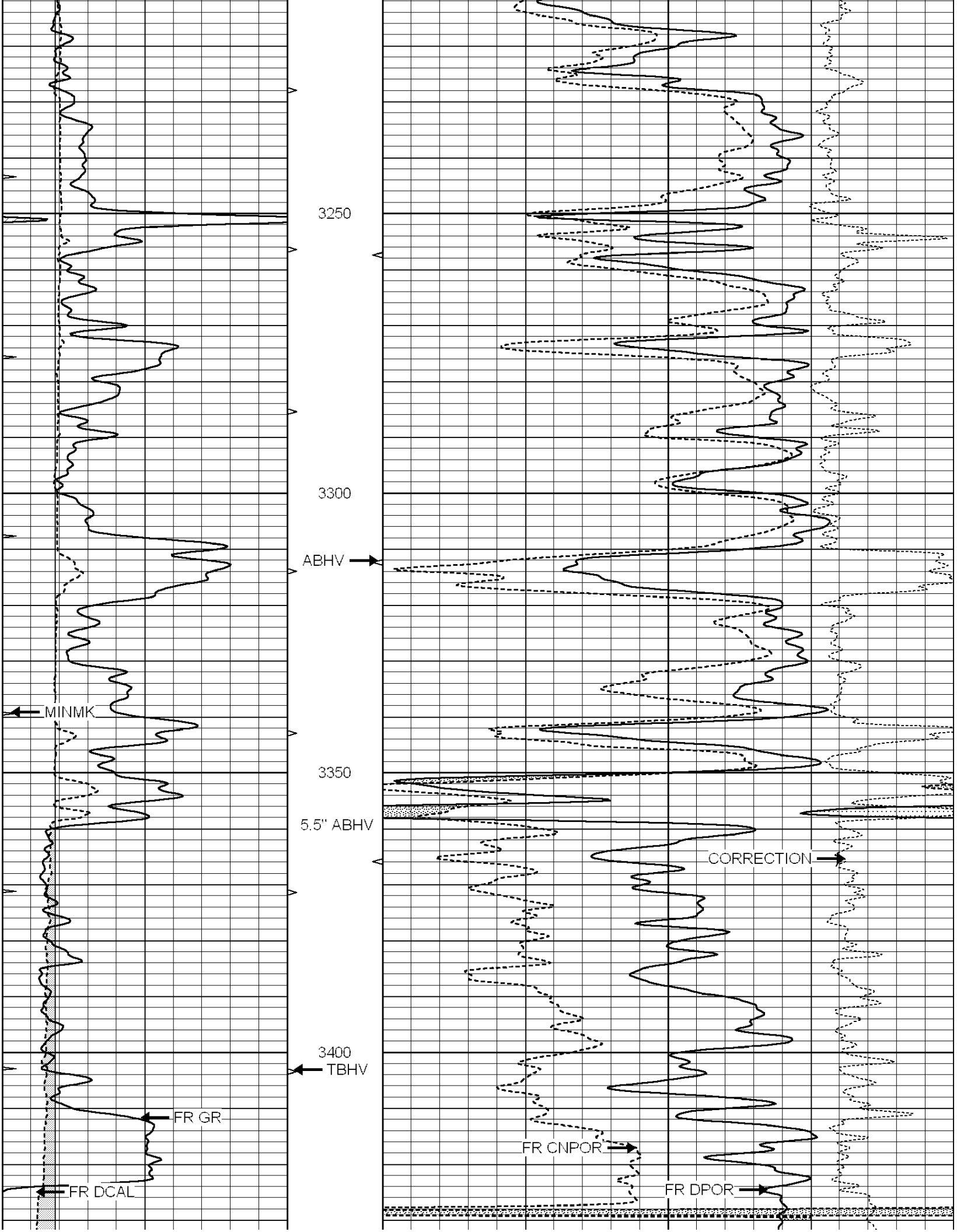
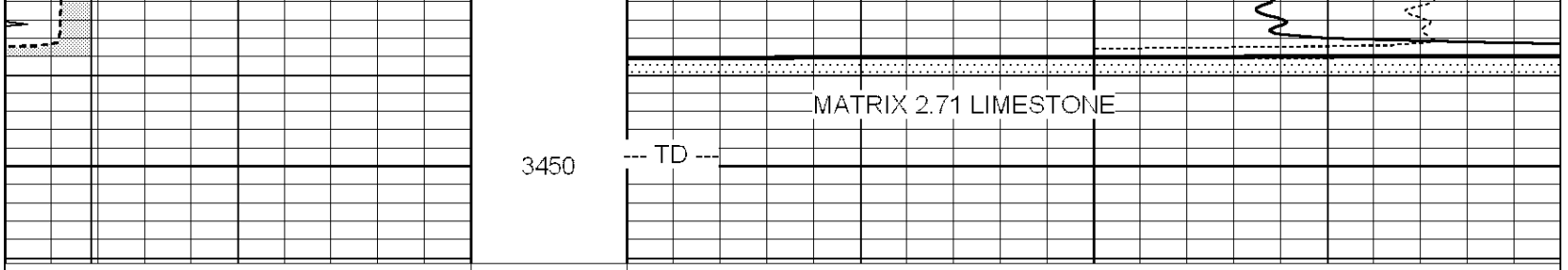
3050
3100
3150
3200


3250
3300
ABHV
MINMK
3350
5.5" ABHV
CORRECTION
3400
TBHV
FR GR
FR CNPOR
FR DCAL
FR DPOR




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV | 30 | COMPENSATED DENSITY (pu) | | -10 |
| 6 | CALIPER (in) | 16 | 10 (ft3) 0 | 30 | COMPENSATED NEUTRON (pu) | | -10 |
| 0 | MINMK | 20 | TBHV | | -0.25 | CORRECTION (g/cc) | 0.25 |
| | | | 0 (ft3) 10 | | | | |

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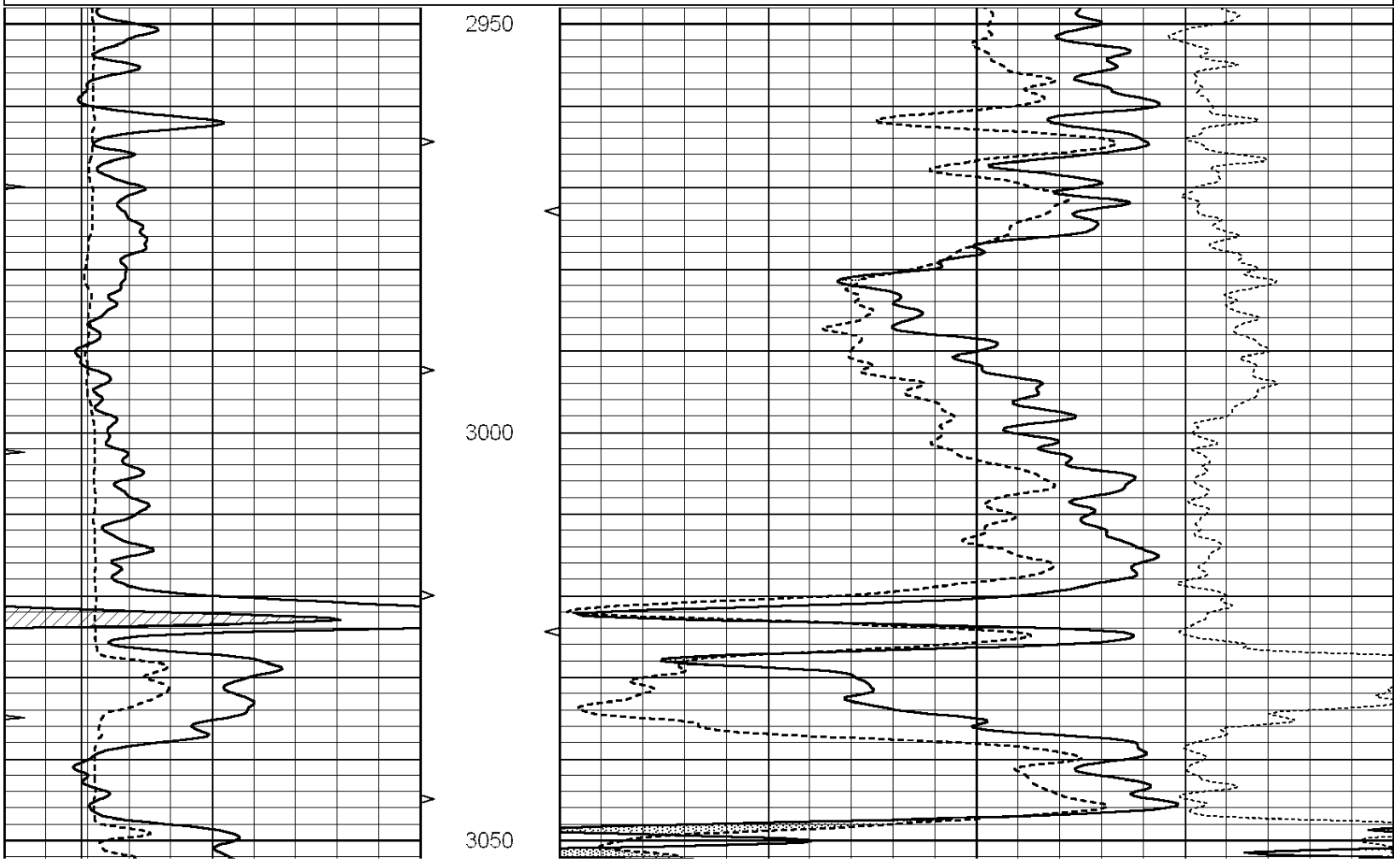
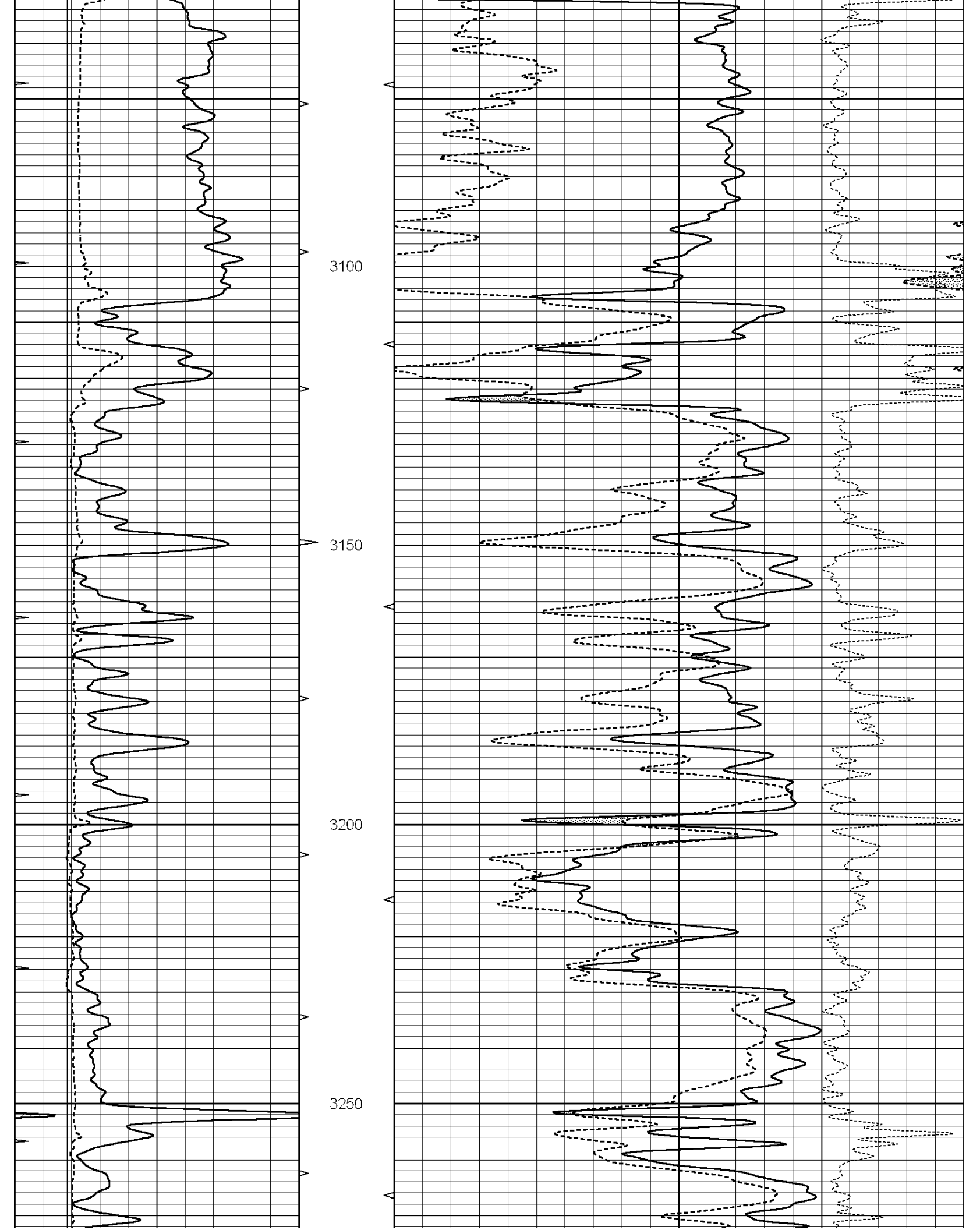
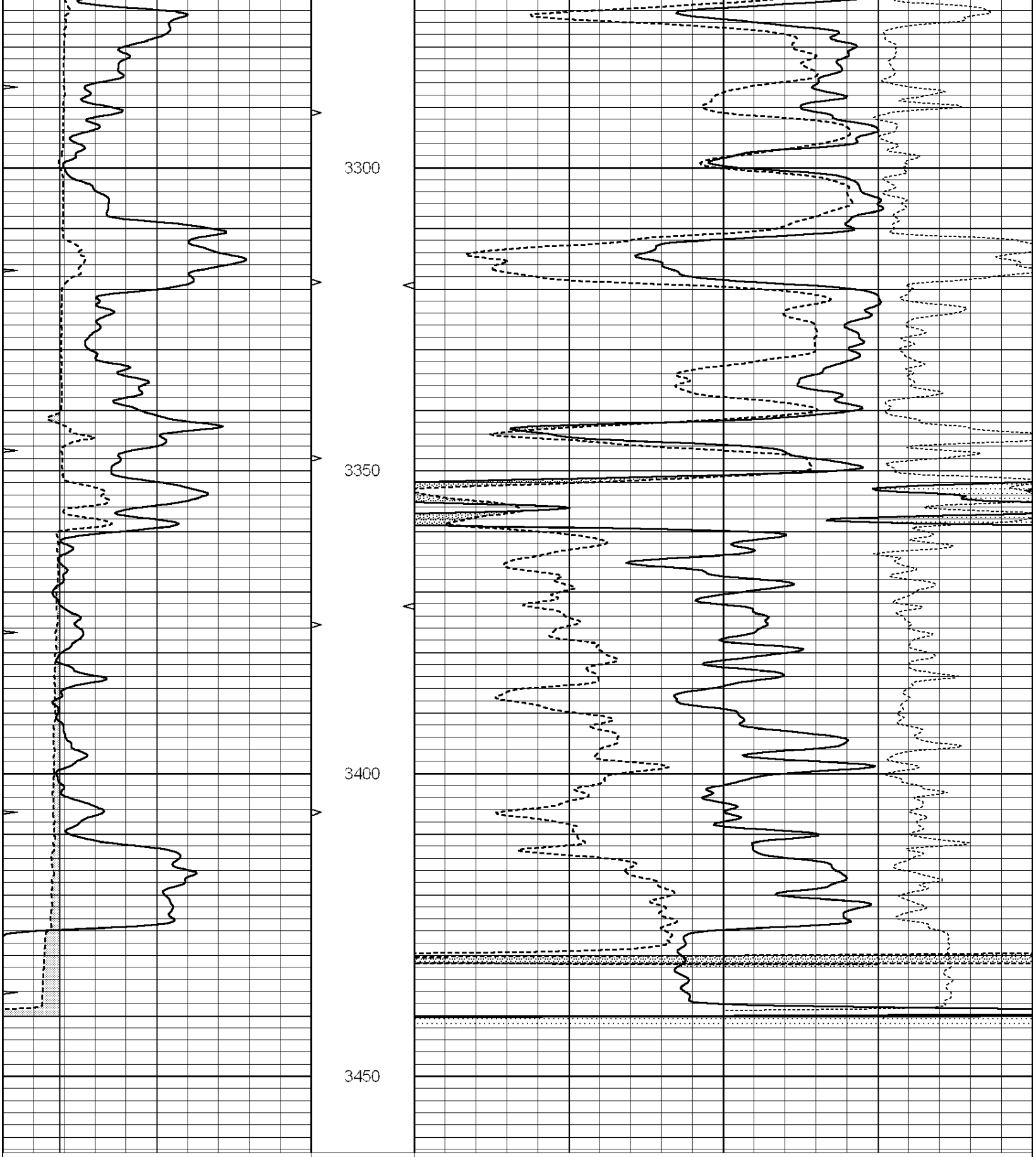
# REPEAT SECTION

| | |
|---|---|
| Database File: | 001214ddn.db |
| Dataset Pathname: | pass2.1A |
| Presentation Format: | den_neu |
| Dataset Creation: | Tue Dec 13 16:19:30 2011 by Calc Open-Cased 090629 |
| Charted by: | Depth in Feet scaled 1:240 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV | 30 | COMPENSATED DENSITY (pu) | | -10 |
| 6 | CALIPER (in) | 16 | 10 (ft3) 0 | 30 | COMPENSATED NEUTRON (pu) | | -10 |
| 0 | MINMK | 20 | TBHV | | -0.25 | CORRECTION (g/cc) | 0.25 |
| | | | 0 (ft3) 10 | | | | |




3100
3150
3200
3250




Calibration Report

Database File: 001214ddn.db
Dataset Pathname: pass2.1A
Dataset Creation: Tue Dec 13 16:19:30 2011 by Calc Open-Cased 090629

## Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
Performed: Tue Dec 13 14:50:27 2011

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.004 | 0.654 | V | 0.000 | 400.000 | mmho/m | 520.000 | -16.000 |
| Medium | -0.005 | 0.737 | V | 0.000 | 462.500 | mmho/m | 550.000 | -12.000 |
| 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: Tue Dec 13 14:50:14 2011

Master Calibration

| | Density | | Far Detector | Near Detector | |
|---|---|---|---|---|---|
| Magnesium | 1.710 | g/cc | 1243.76 | 629.14 | cps |
| Aluminum | 2.590 | g/cc | 282.16 | 435.01 | cps |

Spine Angle = 76.03 Density/Spine Ratio = 0.576

| | Size | | Reading | |
|---|---|---|---|---|
| Small Ring | 8.50 | in | 3.47 | V |
| Large Ring | 14.00 | in | 5.80 | V |

## Compensated Neutron Calibration Report

Serial Number: NUE_2I
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: Tue Dec 13 14:49:50 2011

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps