**Schlumberger**

Company: **Lamont Doherty Earth Observatory**

Well: **Expedition 352, Site U1440B**
Field: **IBM−3 Forearc**
Rig: **JOIDES Resolution** Country:

Rig: JOIDES Resolution
Field: IBM−3 Forearc
Location: Latitude: N 28.44996*
Well: Expedition 352, Site U1440B
Company: Lamont Doherty Earth Observato

UBI Ultrasonic Borehole Imager

LOCATION

Latitude: N 28.44996*
Longitude: E 142.75374*

Elev.: K.B. −4785.80 m
G.L. 0.00 m
D.F. −4785.80 m

Permanent Datum: Sea Floor
Log Measured From: Drill Floor
Drilling Measured From: Drill Floor

Elev.: 0.00 m
0.00 m above Perm. Datum

| Ocean: Pacific | Max. Well Deviation 0 deg | Longitude E 142.75374 | Latitude N 28.44996 |
|---|---|---|---|

| | Run 1 | Run 2 | R |
|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Logging Date | | 25−Aug−2014 | | | | | |
| Run Number | | 1 | | | | | |
| Depth Driller | | 383.6 m | | | | | |
| Schlumberger Depth | | 254 m | | | | | |
| Bottom Log Interval | | 253.9 m | | | | | |
| Top Log Interval | | 113.3 m | | | | | |
| Casing Driller Size @ Depth | | 10.750 in | @ 98.2 m | | @ | | |
| Casing Schlumberger | | 98.2 m | | | | | |
| Bit Size | | 9.875 in | | | | | |
| Type Fluid In Hole | | Seawater | | | | | |
| MUD | Density | 1.03 g/cm3 | | | | | |
| MUD | Viscosity | | | | | | |
| MUD | Fluid Loss | | | | | | |
| MUD | PH | | | | | | |
| MUD | Source Of Sample | N/A | | | | | |
| RM @ Measured Temperature | | @ | | @ | | | |
| RMF @ Measured Temperature | | @ | | @ | | | |
| RMC @ Measured Temperature | | @ | | @ | | | |
| Source RMF | RMC | N/A | N/A | | | | |
| RM @ MRT | RMF @ MRT | @ 7 | @ 7 | @ | @ | | |
| Maximum Recorded Temperatures | | 7 degC | | | | | |
| Circulation Stopped | Time | 25−Aug−2014 | 14:00 | | | | |
| Logger On Bottom | Time | 25−Aug−2014 | 14:00 | | | | |
| Unit Number | Location | 627314 | Houston | | | | |
| Recorded By | | C. Furman | | | | | |
| Witnessed By | | S. Morgan | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Logging Date | | | | | | | |
| Run Number | | | | | | | |
| Depth Driller | | | | | | | |
| Schlumberger Depth | | | | | | | |
| Bottom Log Interval | | | | | | | |
| Top Log Interval | | | | | | | |
| Casing Driller Size @ Depth | | | | @ | | | |
| Casing Schlumberger | | | | | | | |
| Bit Size | | | | | | | |
| Type Fluid In Hole | | | | | | | |
| MUD | Density | | | | | | |
| MUD | Viscosity | | | | | | |
| MUD | Fluid Loss | | | | | | |
| MUD | PH | | | | | | |
| MUD | Source Of Sample | | | | | | |
| RM @ Measured Temperature | | | | @ | | | |
| RMF @ Measured Temperature | | | | @ | | | |
| RMC @ Measured Temperature | | | | @ | | | |
| Source RMF | RMC | | | | | | |
| RM @ MRT | RMF @ MRT | @ | | @ | | | |
| Maximum Recorded Temperatures | | | | | | | |
| Circulation Stopped | Time | | | | | | |
| Logger On Bottom | Time | | | | | | |
| Unit Number | Location | | | | | | |
| Recorded By | | | | | | | |
| Witnessed By | | | | | | | |

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@ @ @ @

@

Run 3

Run 4

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED−DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED−DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED−DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED−DATA.

OTHER SERVICES1

OS1: HNGS
OS2: FMS
OS3: DSI
OS4: HRLA / HLDS

REMARKS: RUN NUMBER 1

Hole drilled with RCB coring bit and bottom hole assembly (BHA). 9 7/8 " BS
Re−entry system and 10−3/4 in. casing deployed with casing shoe at 98.2mbsf.
Bit placed at 96.95mbsf (driller's depth) prior to logging.
Hole remained filled with sea water, as drilled, for logging.
Tools run as per tool sketch with upper section (HNGS & HLDS) eccentered using HLDS caliper and
lower section (HRLA & UBI) separated with knuckle joints and centralized using modified MCD inline bowsprings
and UBI built−in centralizers.
UBI run in 180 measurements/revolution by 0.2 in vertical resolution mode with 250KHz emission pattern.
HLDS run in standard mode during first pass but placed in high resolution mode (DPPM=HIRS) for second (main) pass.
Driller's TD was supposed to be 383.6mbsf, but wireline tools were unable to pass beyond 254mbsf;
logs recorded from maximum depth reached of 254mbsf.
Caliper closed at 118mbsf to facilitate casing / pipe entry; GR logs continued to just above sea floor.
UBI recorded from TD to a depth of 113.3mbsf, where sub stalled during pipe entry.
Log recorded from drill floor and then played back to have depth referenced to sea floor for matching with core data.

| RUN 1 | | | RUN 2 | | |
|---|---|---|---|---|---|
| SERVICE ORDER #: | | | SERVICE ORDER #: | | |
| PROGRAM VERSION: | | 19C0−187 | PROGRAM VERSION: | | |
| FLUID LEVEL: | | | FLUID LEVEL: | | |
| LOGGED INTERVAL | START | STOP | LOGGED INTERVAL | START | STOP |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# EQUIPMENT DESCRIPTION

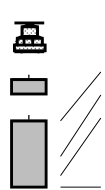
RUN 1 | RUN 2

## SURFACE EQUIPMENT

GSR−U 616008
WITM (EDTS)−A

## DOWNHOLE EQUIPMENT

LEH−QT — MDSB_EDTC — 40.41
AH−369 — Mud Tempe, CTEM, Gamma Ray — 39.08, 38.02, 37.45 — 39.52
EDTC−B — EFTB DIAG, TelStatus, EDTCB Ele — 37.10 — 39.08
EDTH−B 8303
EDTC−B 8317



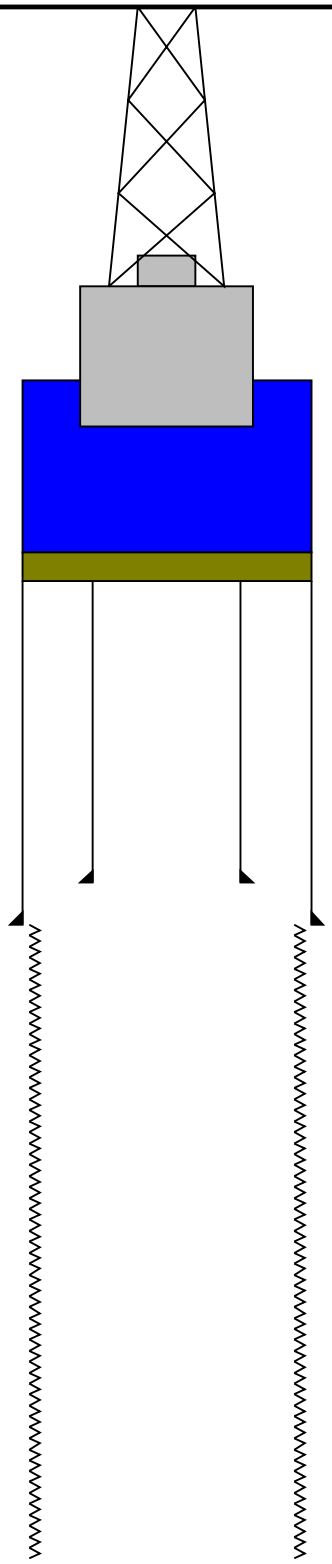
| | | | |
|---|---|---|---|
| HNGS−BA<br>HNGS−BA 194<br>HNSH−BA 205 | Upper_1<br>Lower_2 | 36.40<br>36.19 | 37.10 |
| HNGC−B | HNGC Stat | 34.07 | 34.60 |
| LDSC−B | LDSC Stat | 33.00 | 33.54 |
| HLDS<br>GSR−Z 8113<br>HLDV−D 45<br>HLDS−D 45<br>HEH−H 47<br>HLDP−C 45 | Caliper<br>SS LS Status | 28.41 | 32.47 |
| AH−184_NonMagKnuckleJoint | | | 27.65 |
| AH−NonMagSpacer<br>AH−NonMagSpacer | | | 27.04 |
| AH−184_NonMagKnuckleJoint | | | 24.15 |
| AH−MCD2<br>AH−MCD2 | | | 23.54 |
| HRLT−B<br>HRUH−B<br>HRUC−B<br>HRLS−B<br>HRLH−B<br>HRLC−B<br>AH−270 | High Res. | 17.67 | 21.26 |
| AH−MCD1<br>AH−MCD1 | | | 13.88 |
| DTA−A<br>ECH−KE 8456 | | | 11.60 |
| AH−NonMagSpacer<br>AH−NonMagSpacer | | | 10.38 |
| GPIT−A/B<br>GPIC−A 719 | | | 7.49 |
| UBI−D<br>USIC−D 900<br>ECH−MRA 4855<br>USIS−A 2758<br>USSC−A 1701<br>USRS−A 849 | UBI Contr<br>UBI Ultra<br>HV DF ACCZ<br>Tension GPIT | 0.09<br>0.00 | 6.27 |

TOOL ZERO

MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

| Production String | (in) | (m) | Well Schematic | (m) | (in) | Casing String |
|---|---|---|---|---|---|---|
| | OD | ID | | MD | OD | ID |

| | OD | ID | MD |
|---|---|---|---|
| Kelly Bushing Elevation | | | −4785.8 |
| Derrick Floor Elevation | | | −4785.8 |
| Mean Sea Level | | | −4775.2 |



| MD | OD | ID | |
|---|---|---|---|
| 0.0 | | | Sea Floor |
| 97.0 | 5.500 | | Casing Shoe |
| 98.2 | 10.750 | | Casing Shoe |
| 383.6 | 9.875 | | Total Depth − Driller |

Schlumberger

# Fluid Proprties Mode (FPM) Downlog

MAXIS Field Log

**Company:** **Well:**

## Input DLIS Files

| | | | | | |
|---|---|---|---|---|---|
| DEFAULT | Flip_UBI_HRLA_LDL_033LUP | PRODUCER | 29−Aug−2014 08:40 | 5044.1 M | 4711.4 M |

## Output DLIS Files

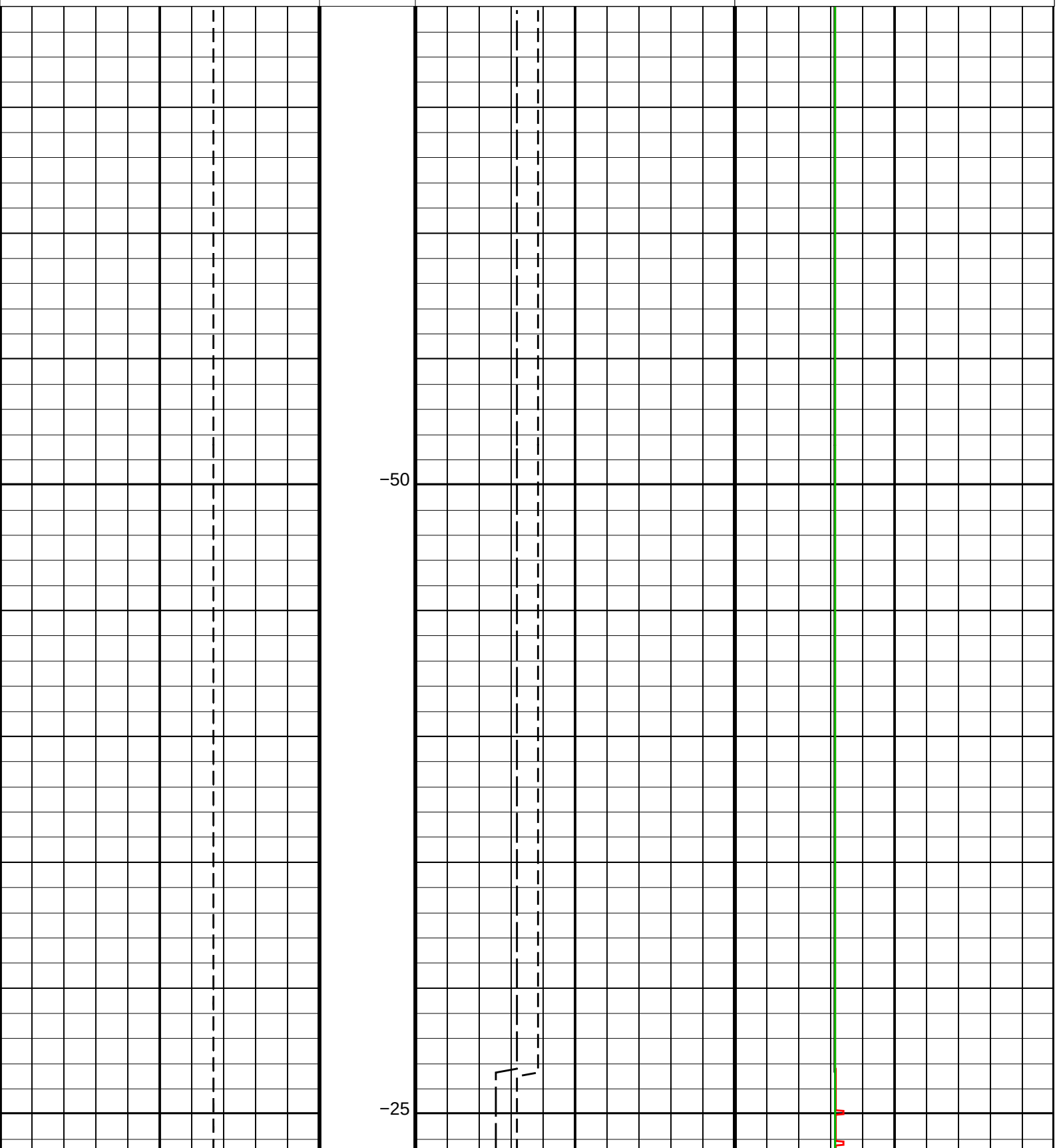
| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_034PUP | FN:41 | PRODUCER | 29−Aug−2014 08:47 | 263.7 M | −69.0 M |
| CUST | UBI_HRLA_LDL_NGS_034PUC | FN:42 | CUSTOMER | 29−Aug−2014 08:47 | 263.7 M | −69.0 M |

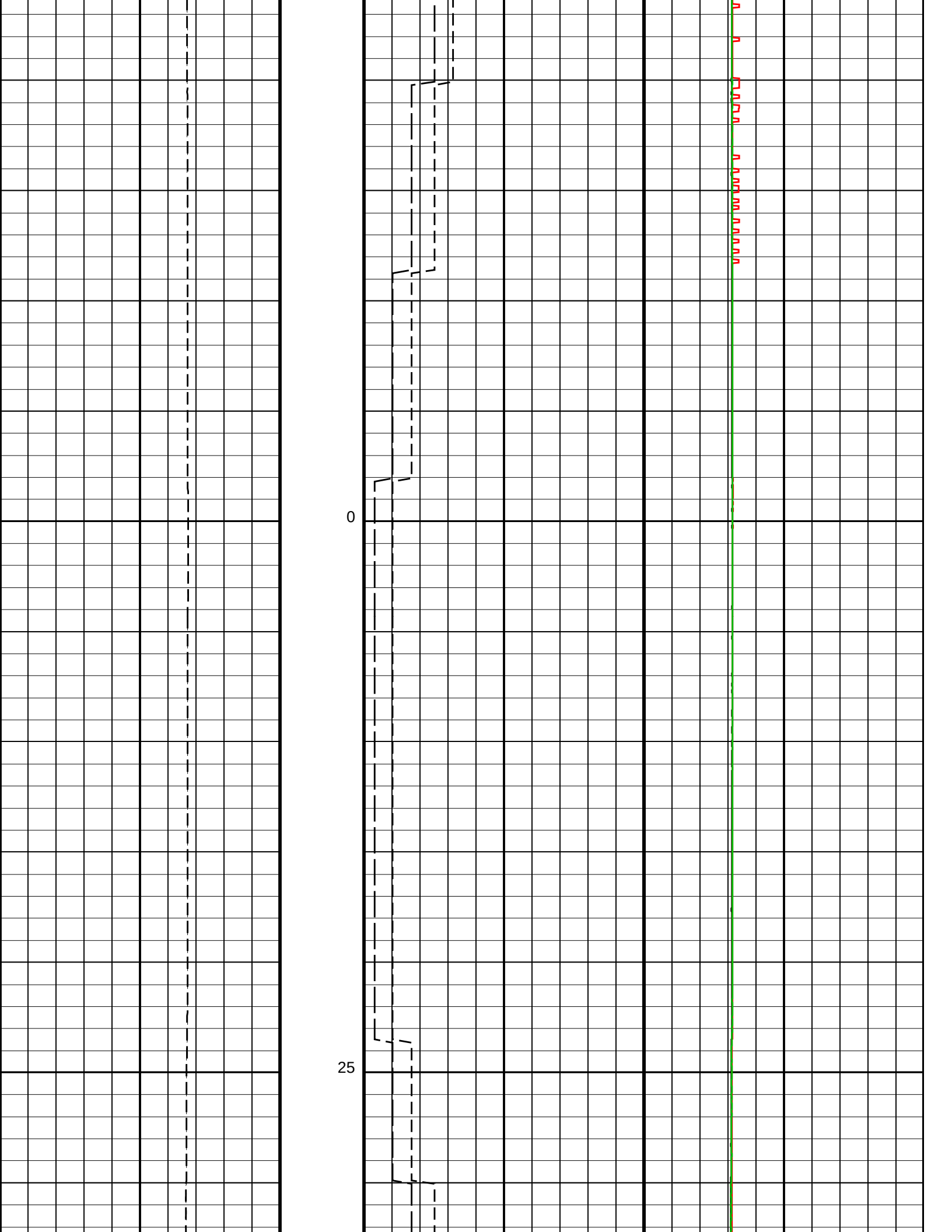
## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |

HNGC−B 19C0−187 HNGS−BA 19C0−187
EDTC−B SKK−5169−EDTCB

| Fluid velocity (HFVL) | MAX value of UPGA in 6 Inches interval (HGMX) | TTAV (HTAV) |
|---|---|---|
| 450 (US/M) 750 | −12 (DB) 48 | 20 (US) 40 |
| | | Transit time max (HTMX) |
| | | 20 (US) 40 |
| Raw Fluid velocity (RFVL) | MIN value of UPGA in 6 Inches interval (HGMN) | Transit time min (HTMN) |
| 450 (US/M) 750 | −12 (DB) 48 | 20 (US) 40 |

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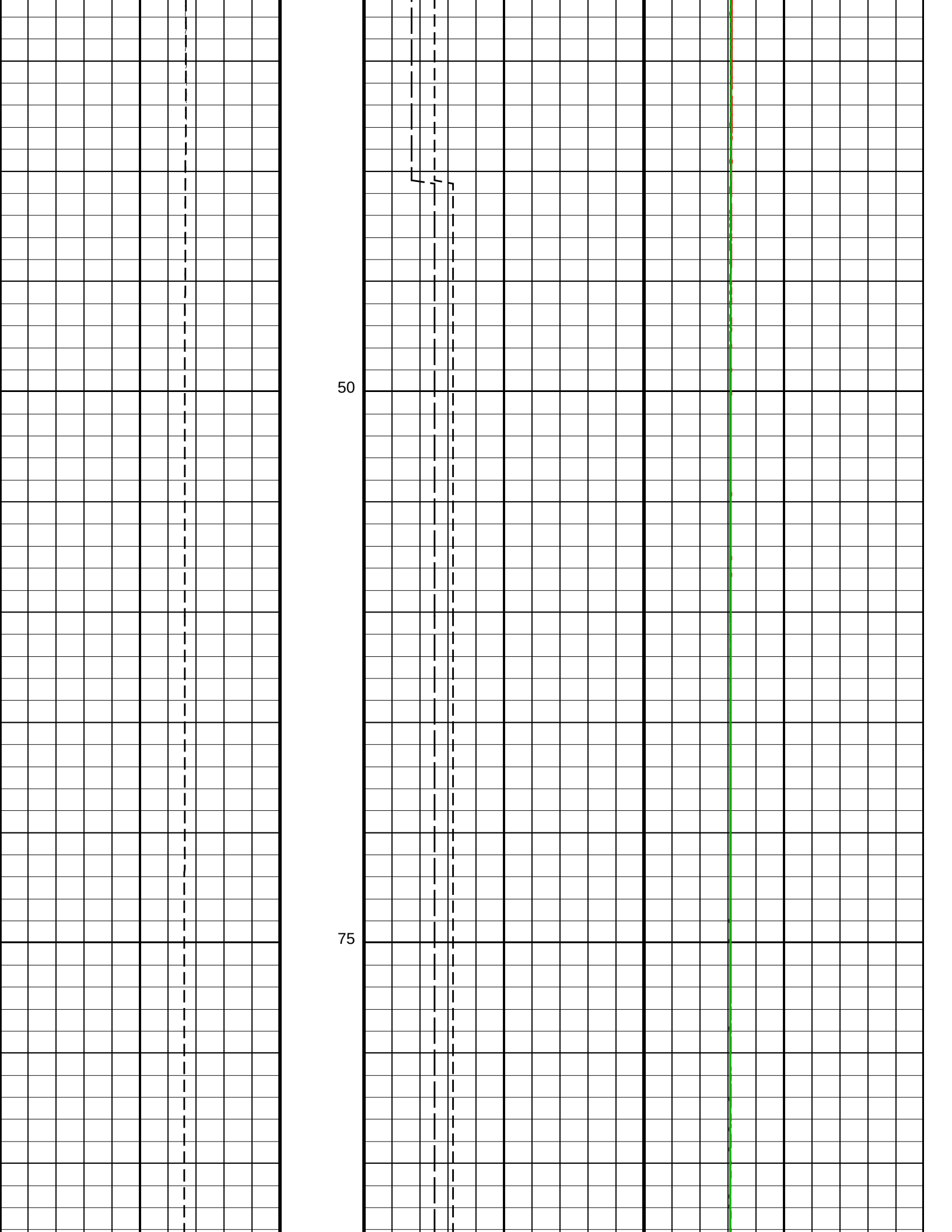
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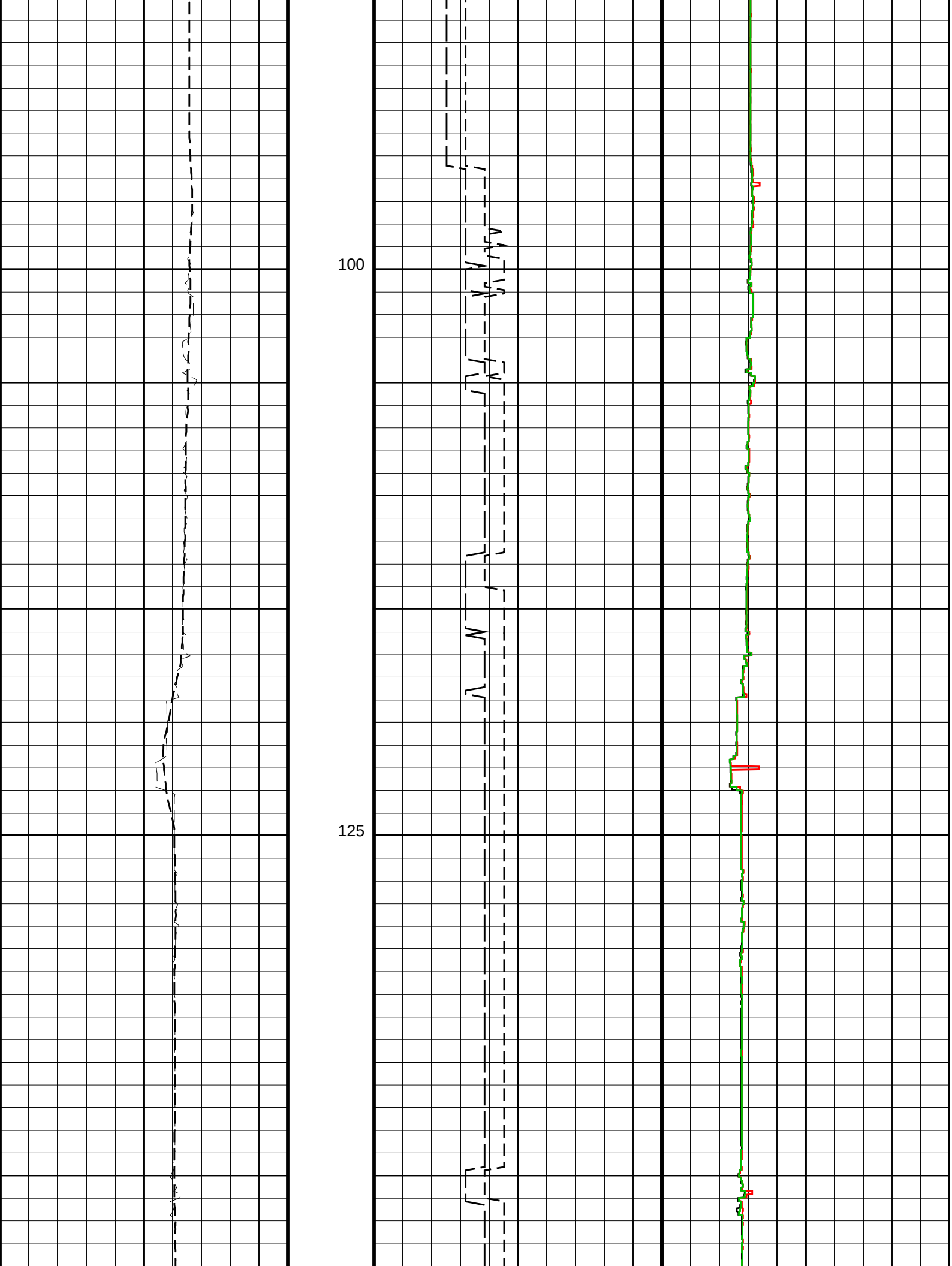
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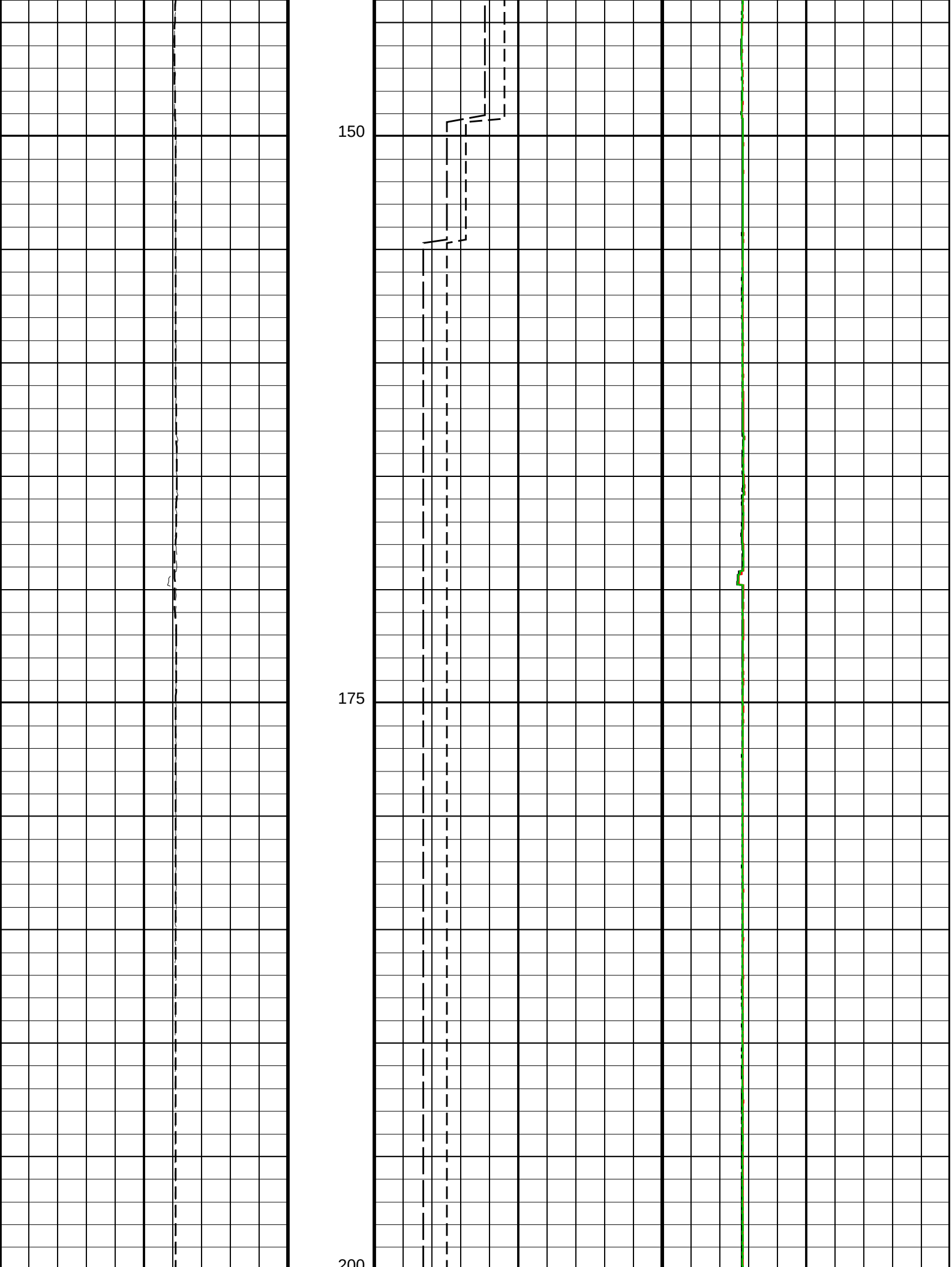
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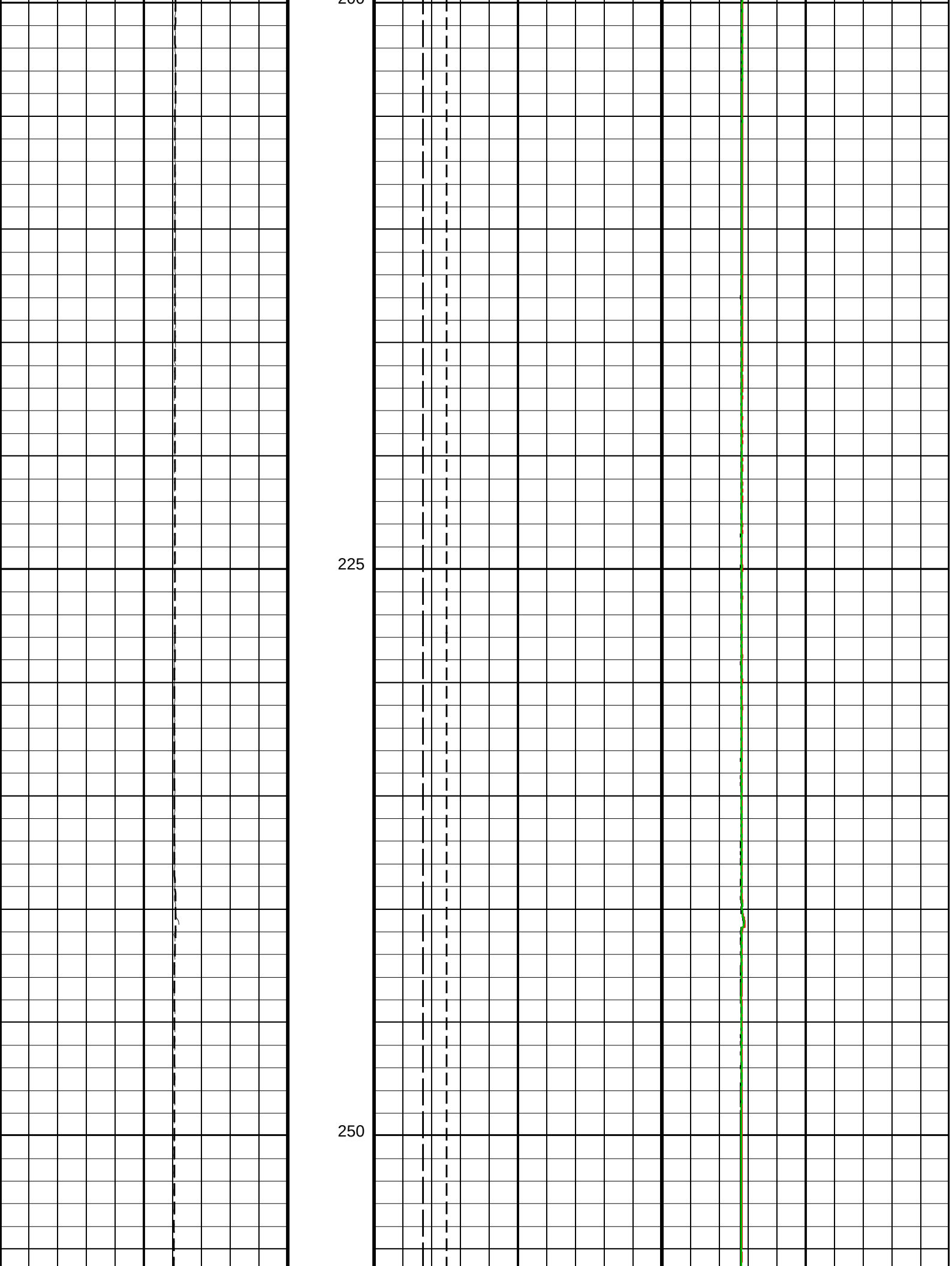
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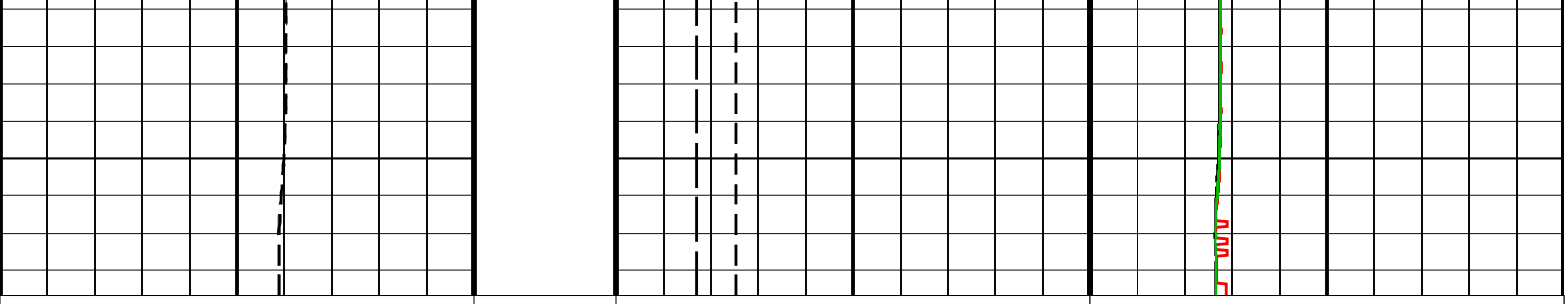


| Raw Fluid velocity (RFVL) | | |
|---|---|---|
| 450 | (US/M) | 750 |

| Fluid velocity (HFVL) | | |
|---|---|---|
| 450 | (US/M) | 750 |

| MIN value of UPGA in 6 Inches interval (HGMN) | | |
|---|---|---|
| −12 | (DB) | 48 |

| MAX value of UPGA in 6 Inches interval (HGMX) | | |
|---|---|---|
| −12 | (DB) | 48 |

| Transit time min (HTMN) | | |
|---|---|---|
| 20 | (US) | 40 |

| Transit time max (HTMX) | | |
|---|---|---|
| 20 | (US) | 40 |

| TTAV (HTAV) | | |
|---|---|---|
| 20 | (US) | 40 |

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| | UBI−D: Ultrasonic Borehole Imager − D | | |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| FVLM | Fluid Velocity Filter | MEAN | |
| HFLT | FVEL Filter Size | 10 | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| SUBT | UBI Sub type | Sub_5_inch_S | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| | UHSV: UBI Hole Shape Analysis | | |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| FVLM | Fluid Velocity Filter | MEAN | |
| HFLT | FVEL Filter Size | 10 | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| SUBT | UBI Sub type | Sub_5_inch_S | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| | System and Miscellaneous | | |
| BS | Bit Size | 9.875 | IN |
| DO | Depth Offset for Playback | −4780.5 | M |
| PP | Playback Processing | RECOMPUTE | |

Format: UBI_HFPM  Vertical Scale: 1:200  Graphics File Created: 29−Aug−2014 08:47

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |
| HNGC−B | 19C0−187 | HNGS−BA | 19C0−187 |
| EDTC−B | SKK−5169−EDTCB | | |

## Input DLIS Files

| | | | | | |
|---|---|---|---|---|---|
| DEFAULT | Flip_UBI_HRLA_LDL_033LUP | PRODUCER | 29−Aug−2014 08:40 | 5044.1 M | 4711.4 M |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_034PUP | FN:41 | PRODUCER | 29−Aug−2014 08:47 |
| CUST | UBI_HRLA_LDL_NGS_034PUC | FN:42 | CUSTOMER | 29−Aug−2014 08:47 |

Schlumberger

# First Pass

MAXIS Field Log

**Company:** **Well:**

## Input DLIS Files

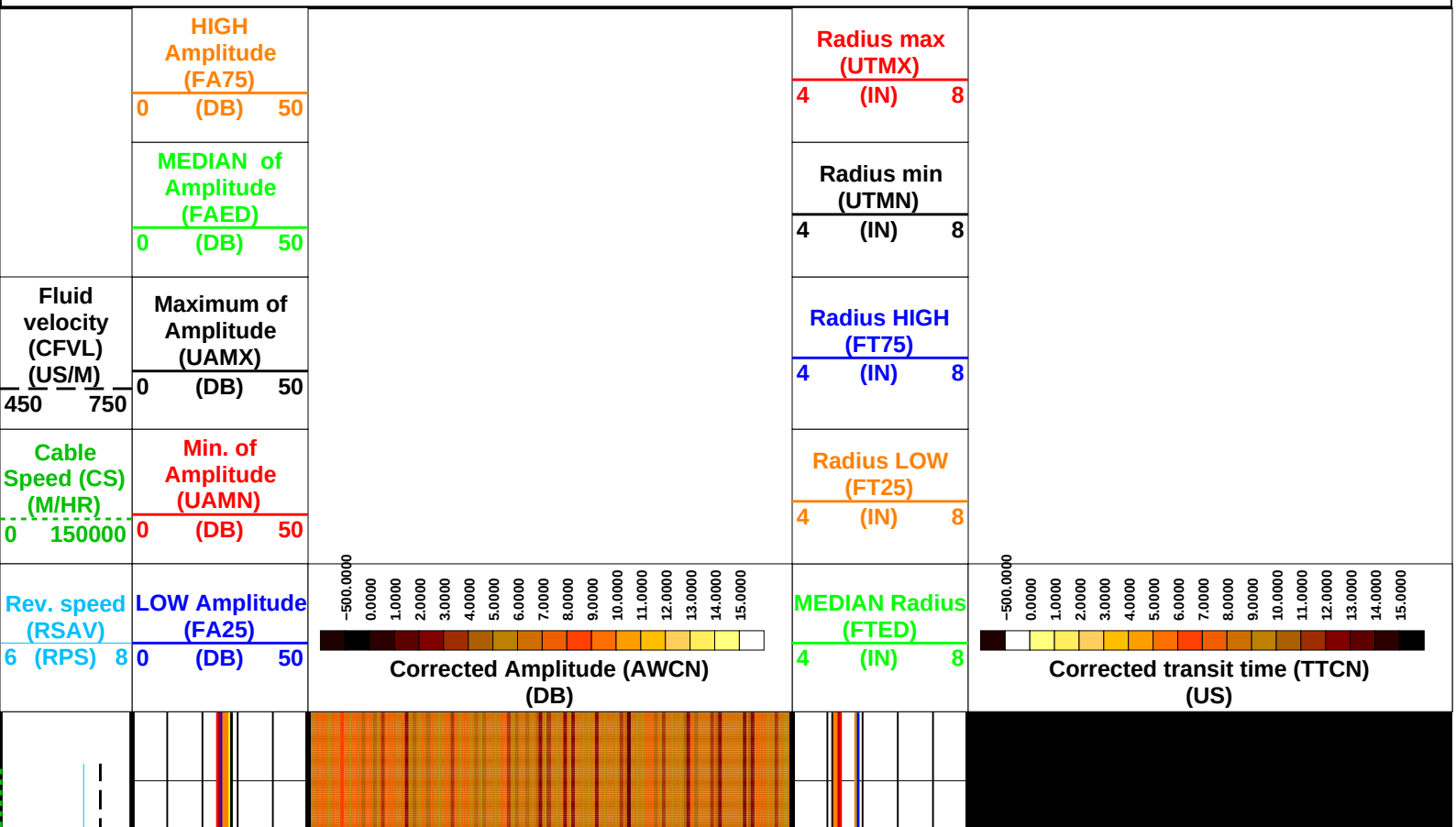
| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_013LUP | FN:13 | PRODUCER | 25−Aug−2014 02:16 | 5033.8 M | 4926.4 M |

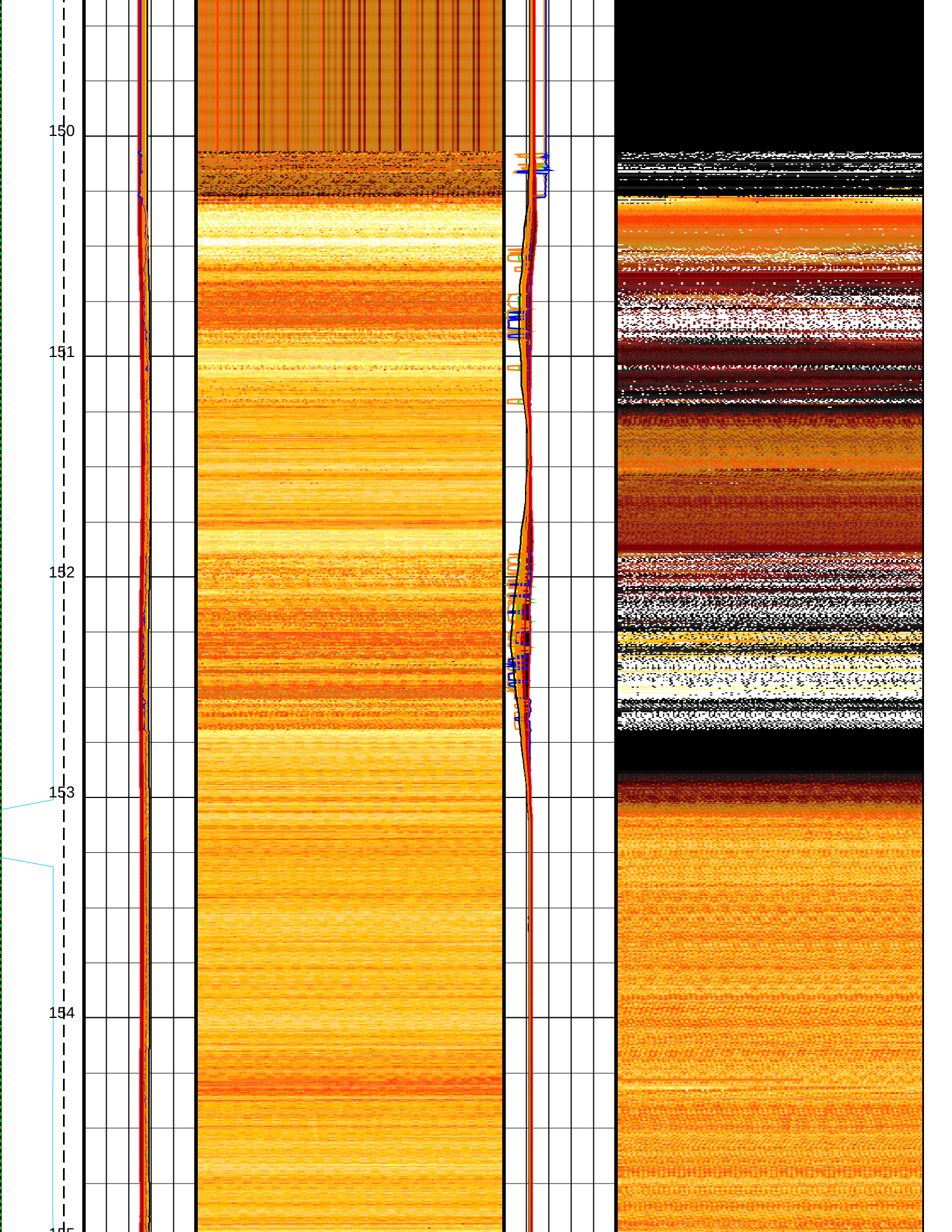
## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_042PUP | FN:57 | PRODUCER | 29−Aug−2014 10:17 | 256.0 M | 149.0 M |
| CUST | UBI_HRLA_LDL_NGS_042PUC | FN:58 | CUSTOMER | 29−Aug−2014 10:17 | 256.0 M | 149.0 M |

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |
| HNGC−B | 19C0−187 | HNGS−BA | 19C0−187 |
| EDTC−B | SKK−5169−EDTCB | | |

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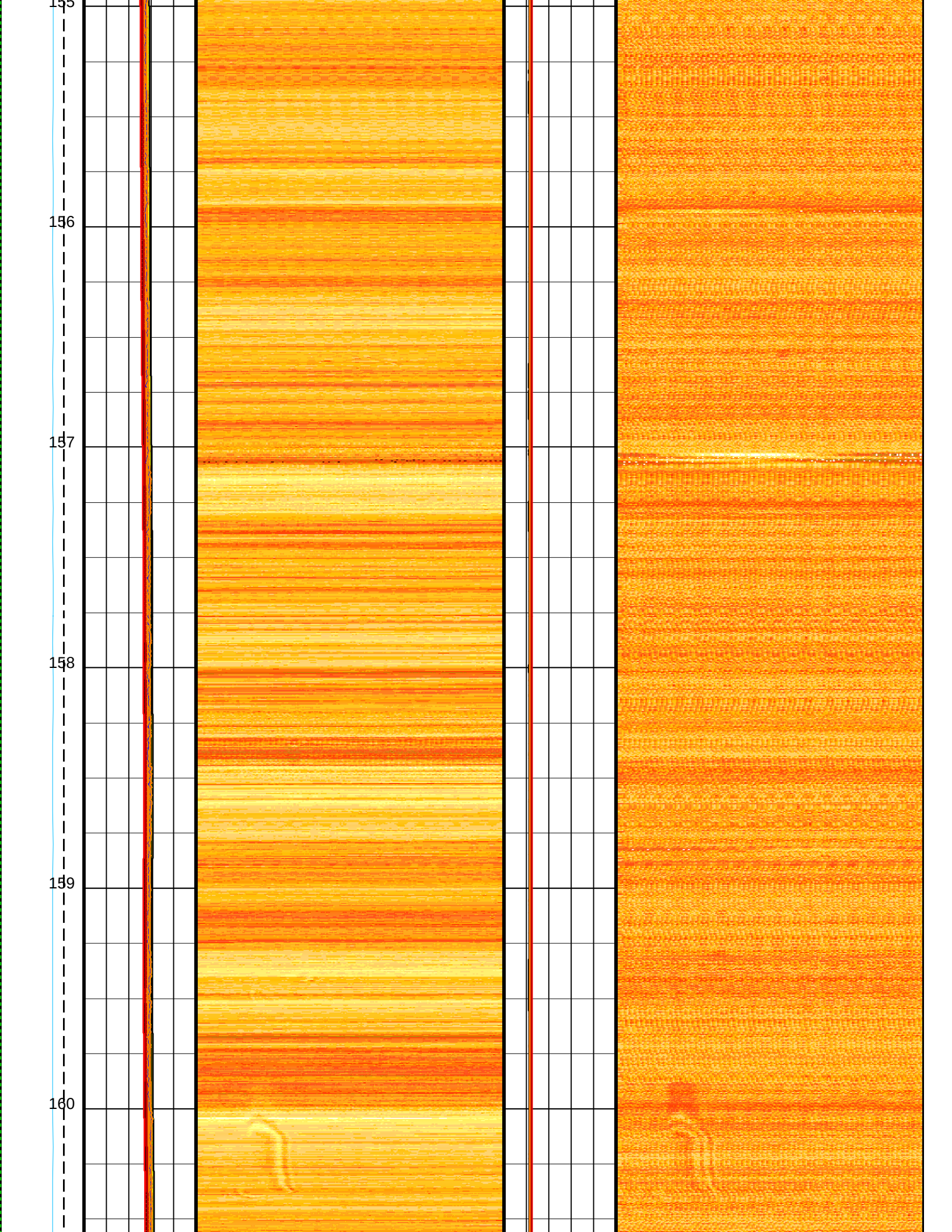
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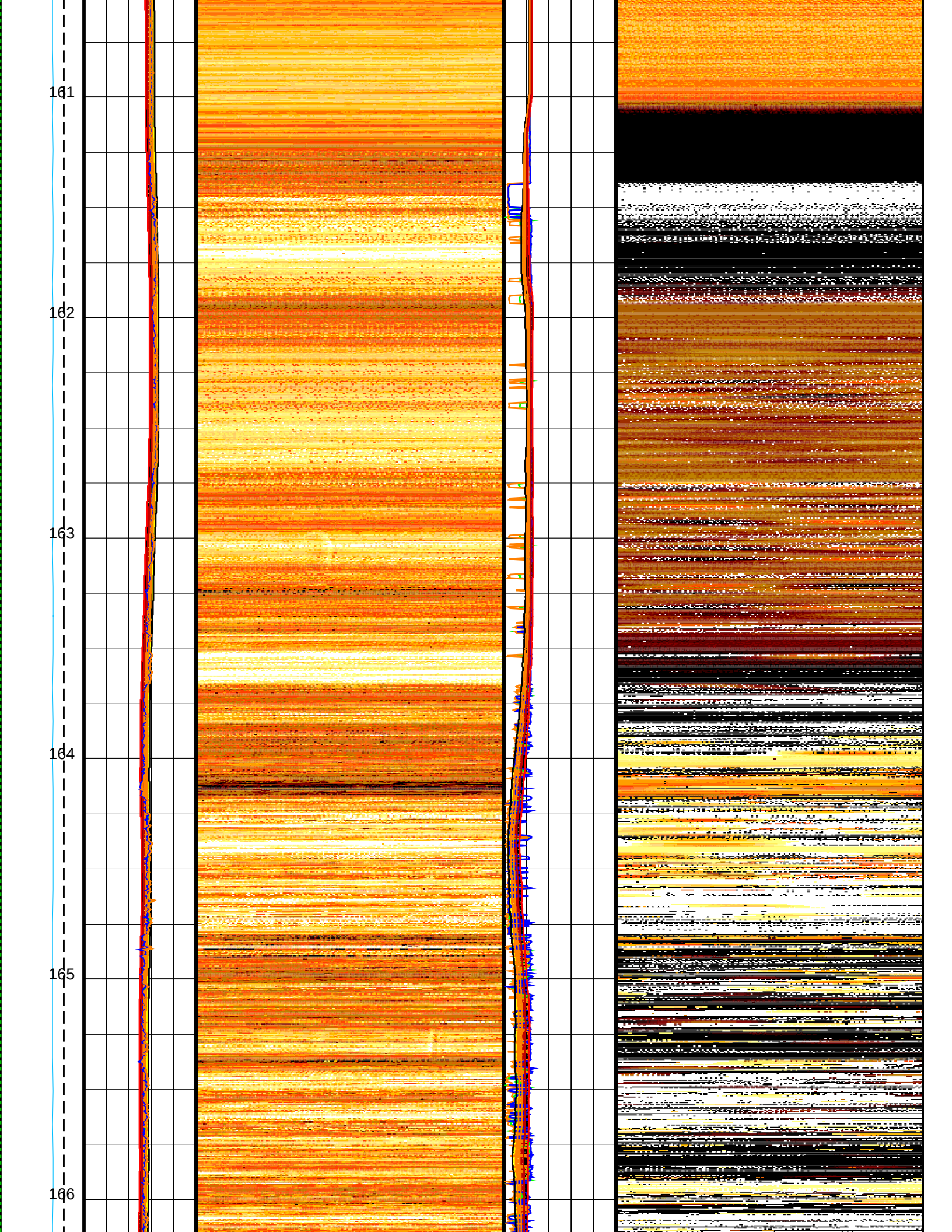
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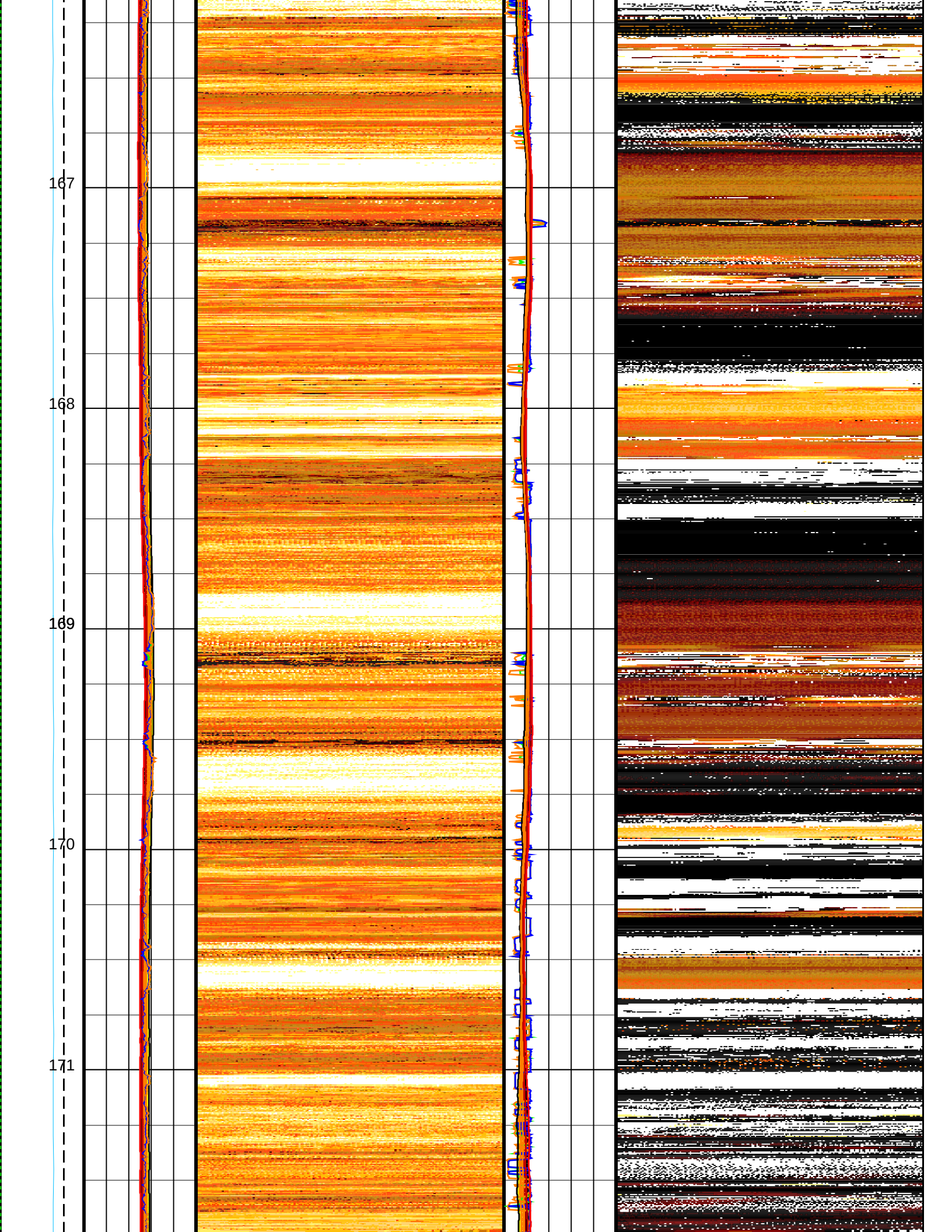
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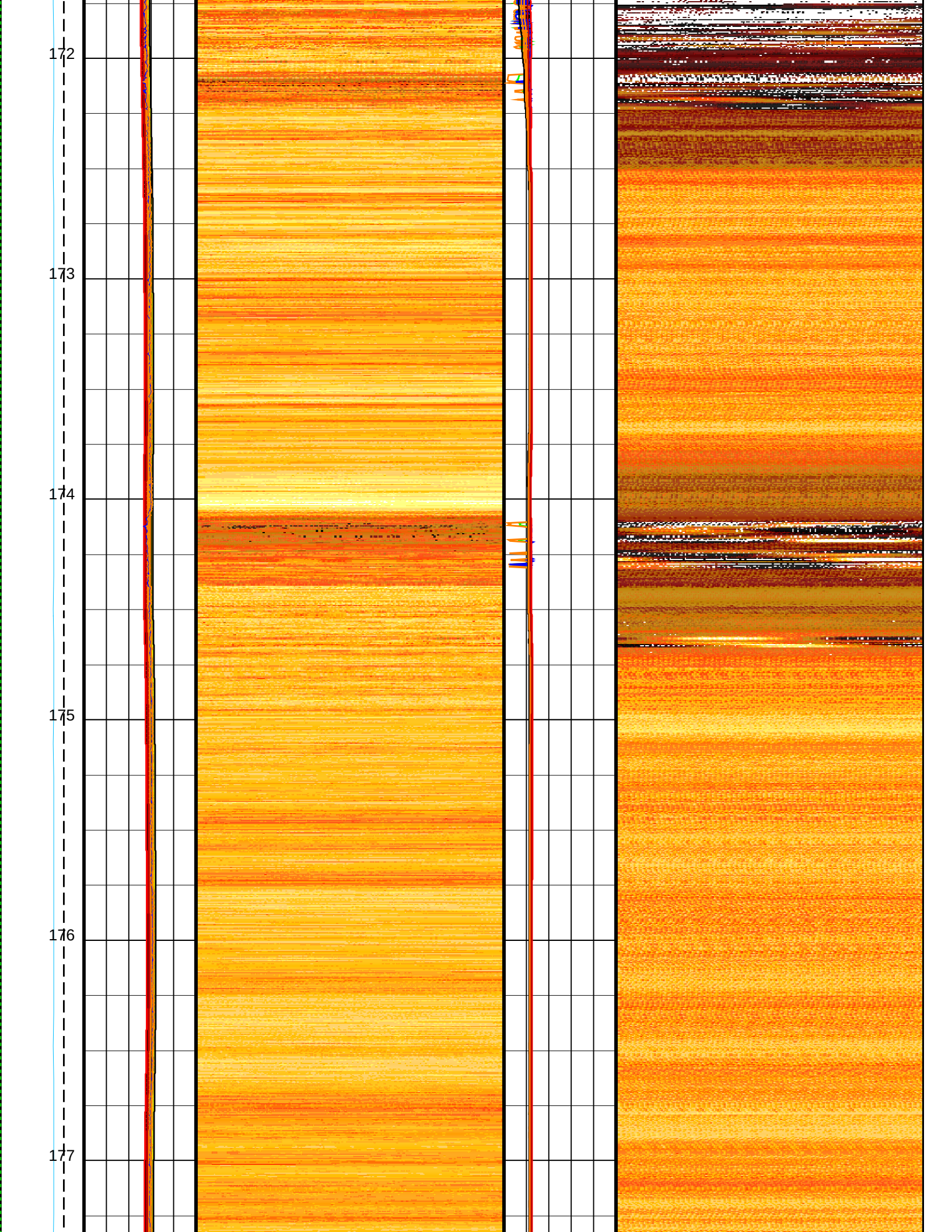
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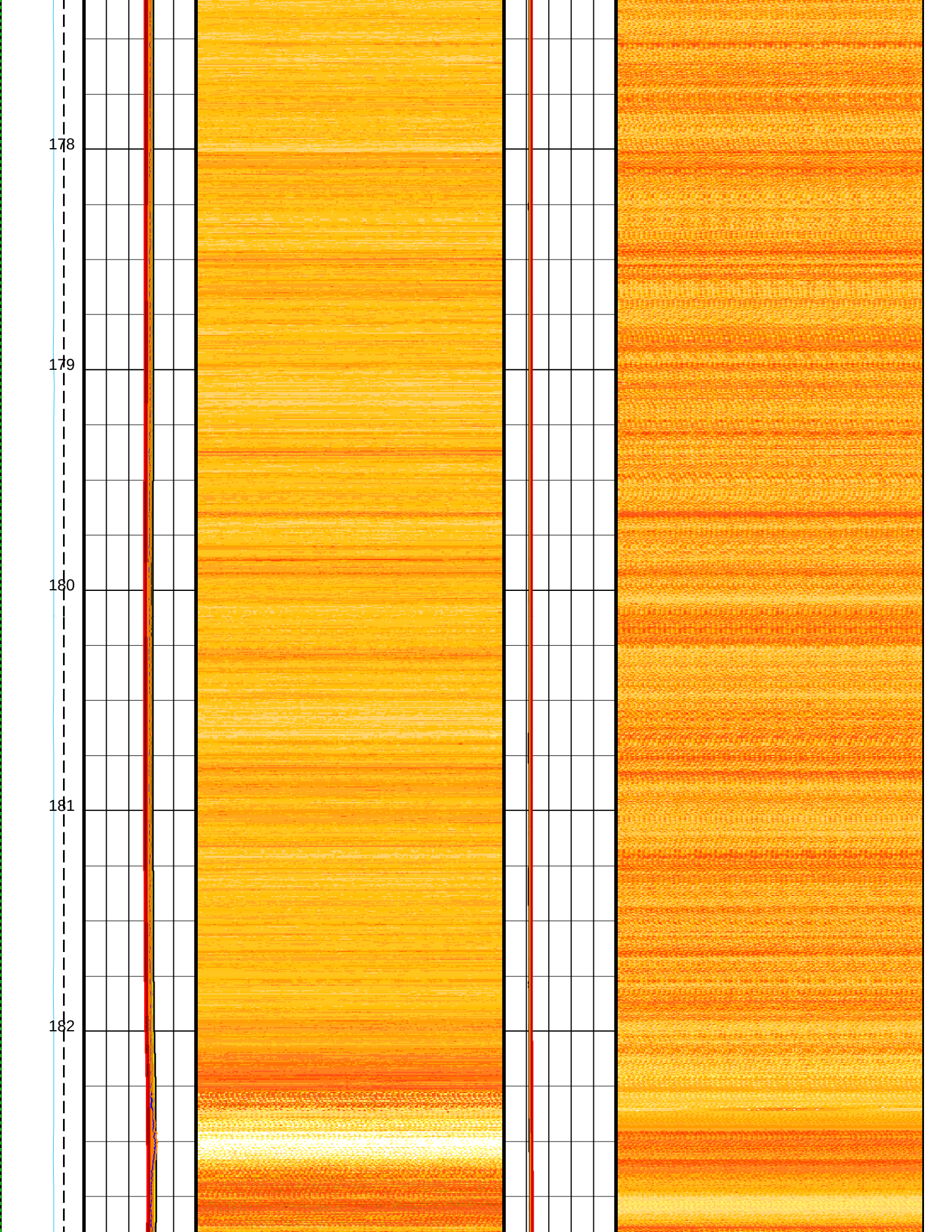
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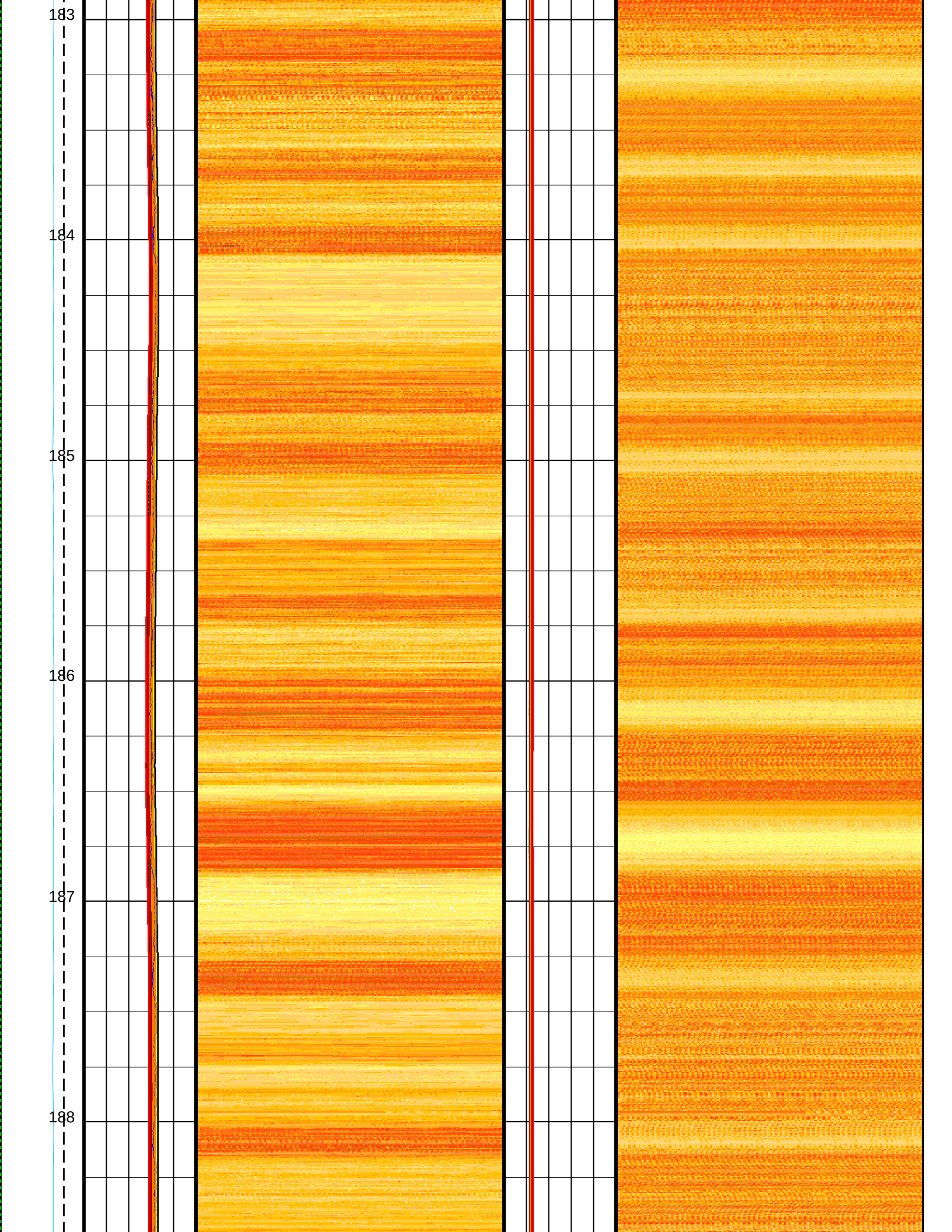
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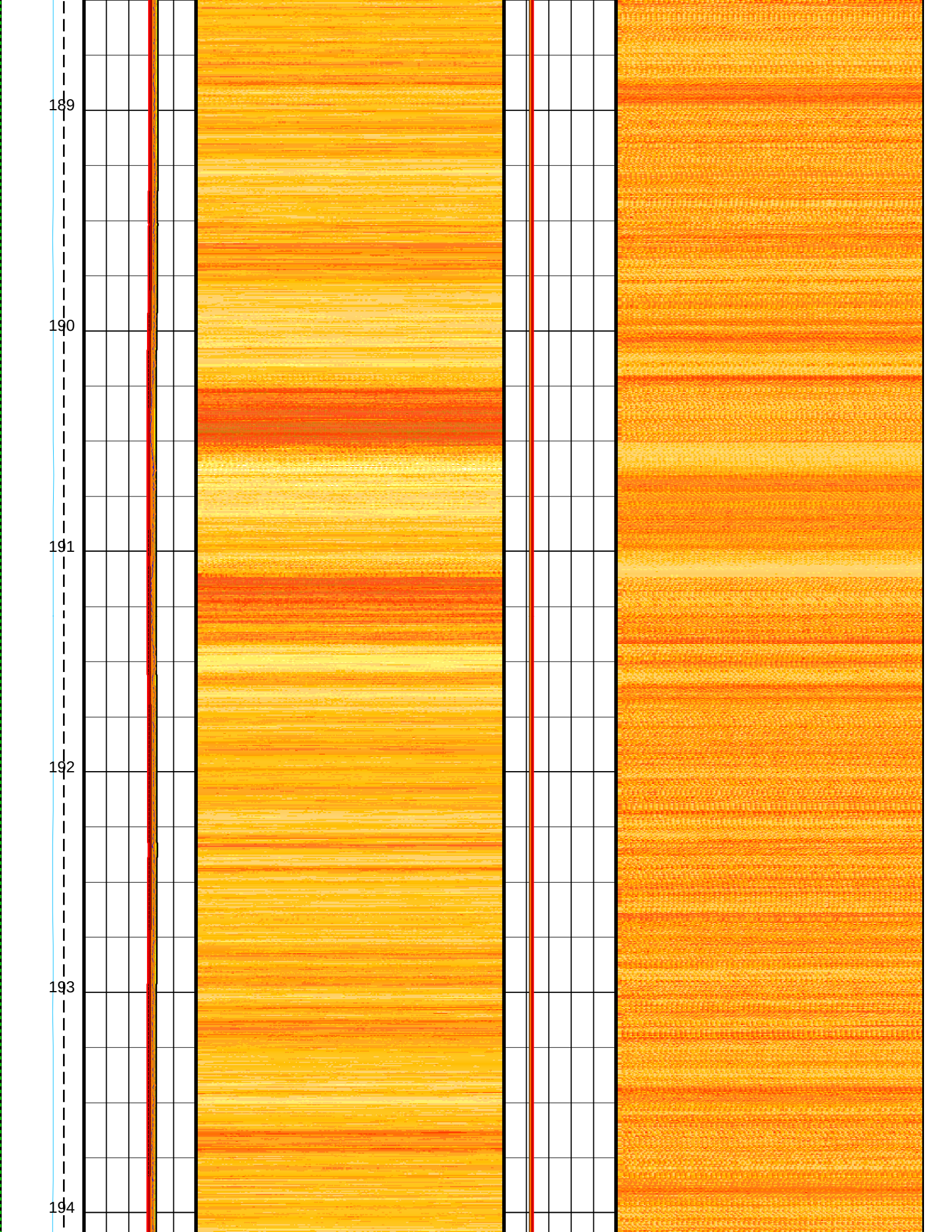
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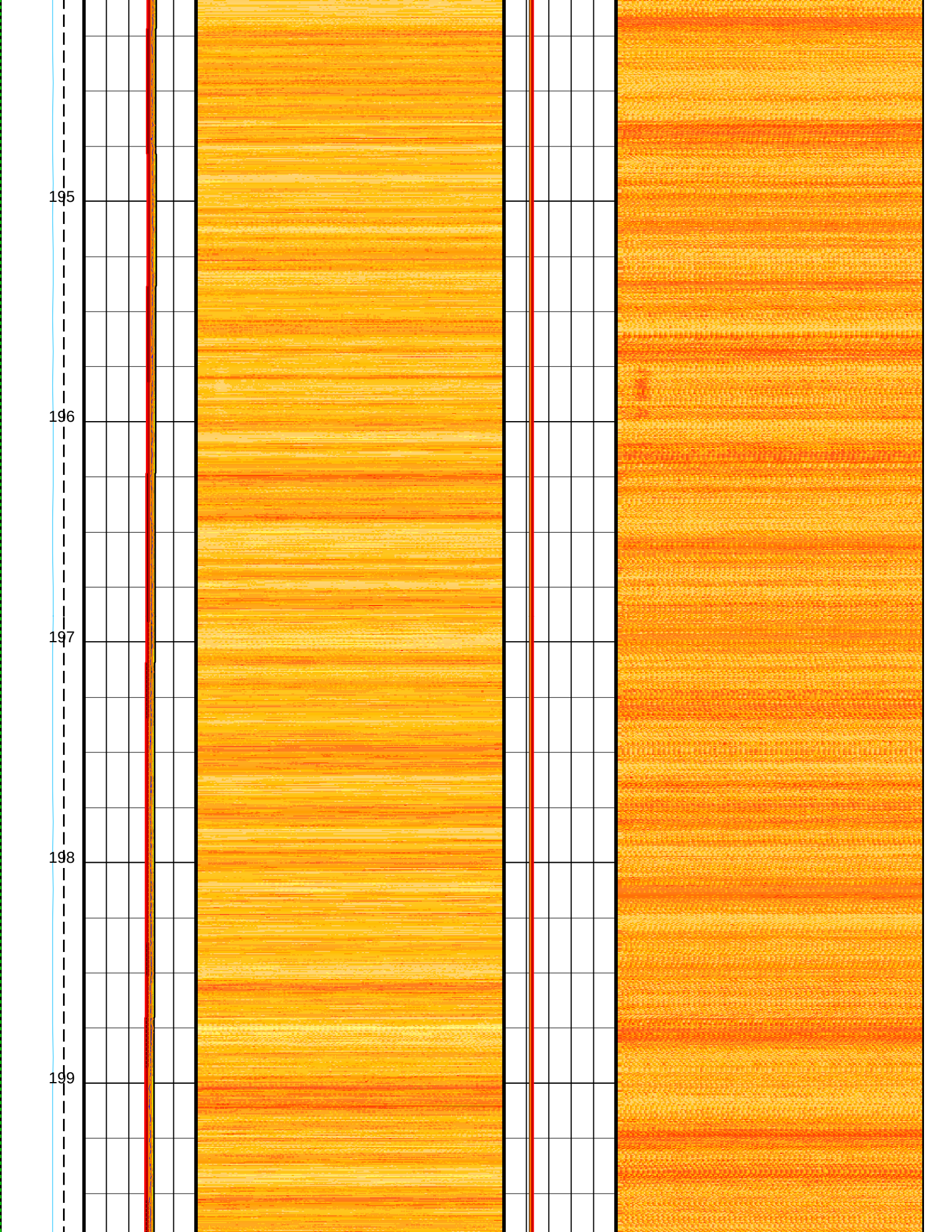
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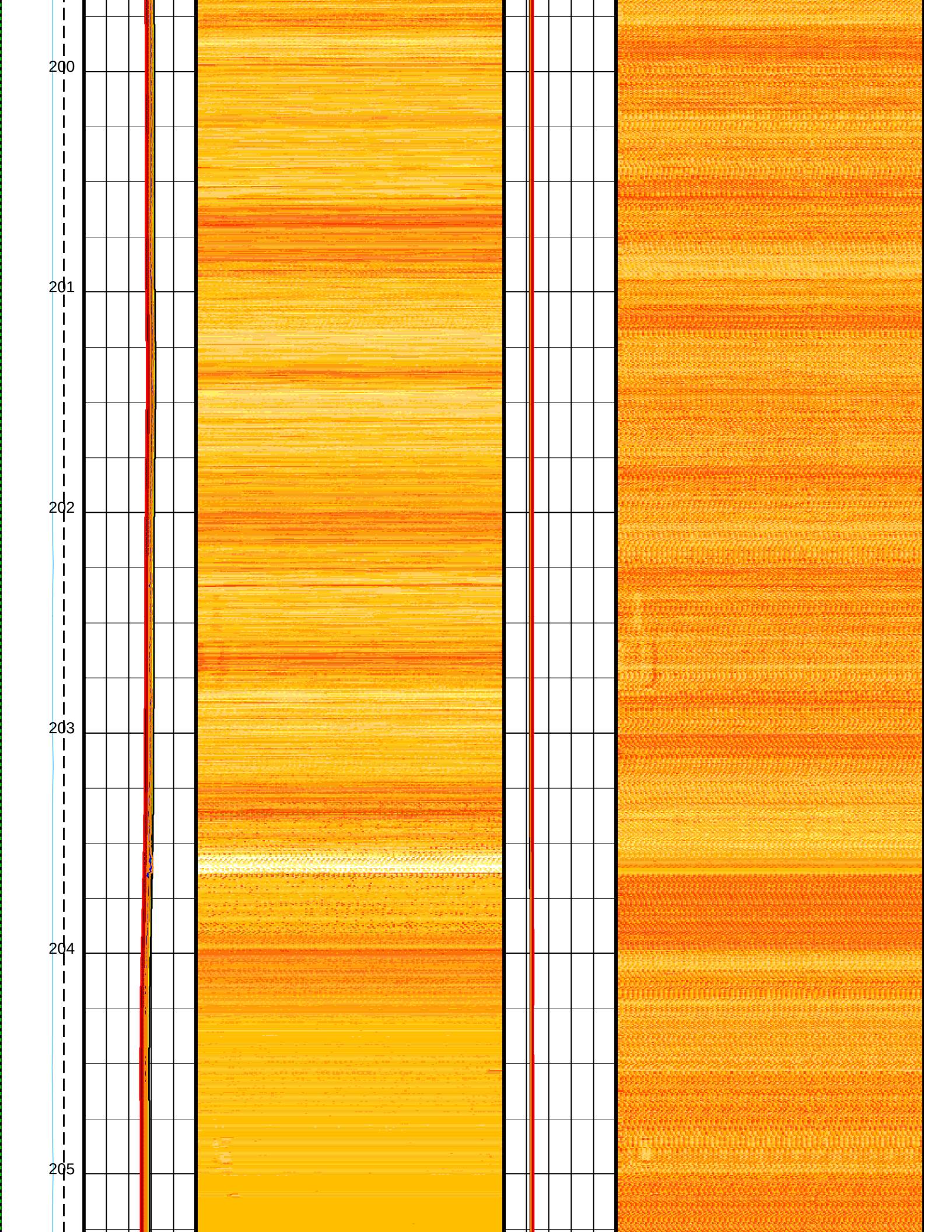
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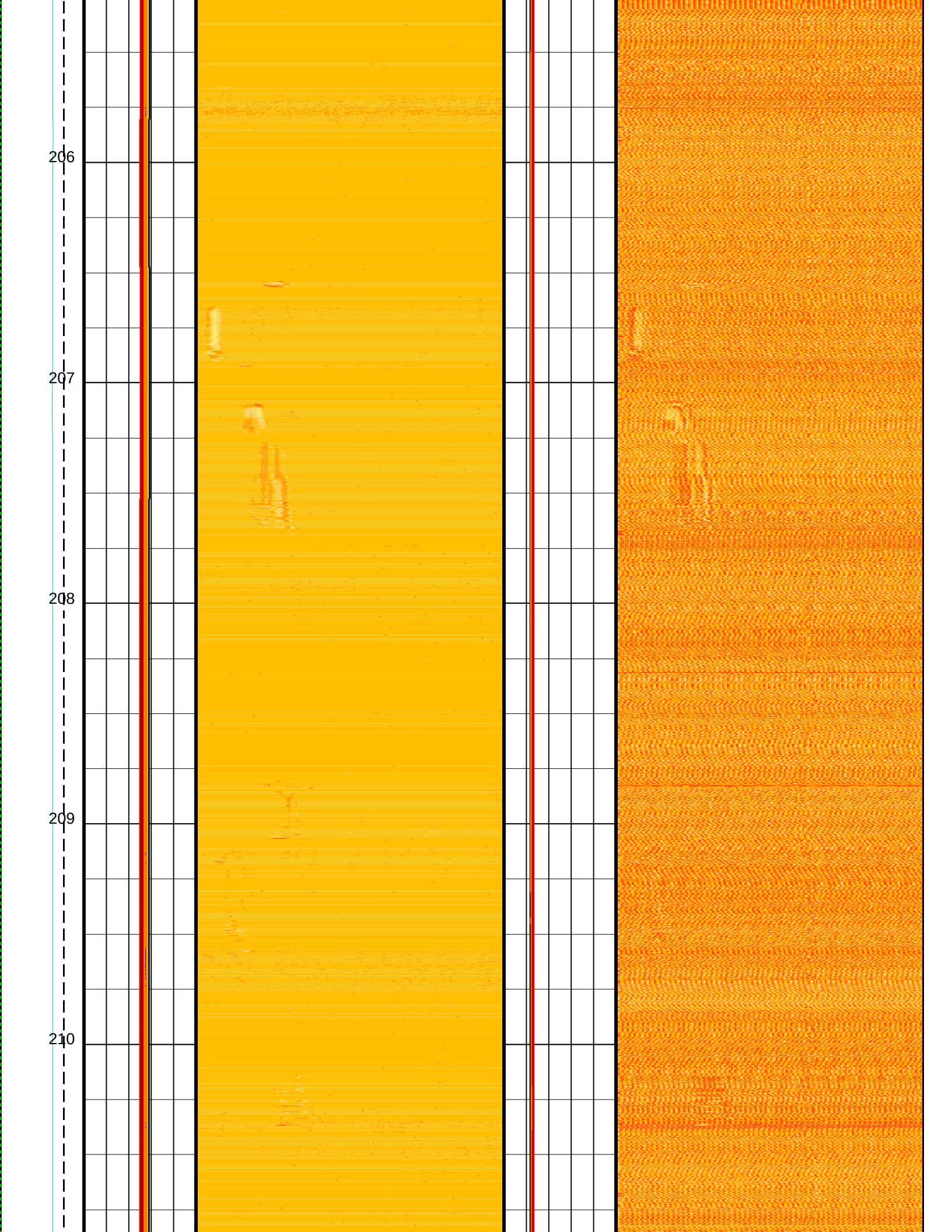
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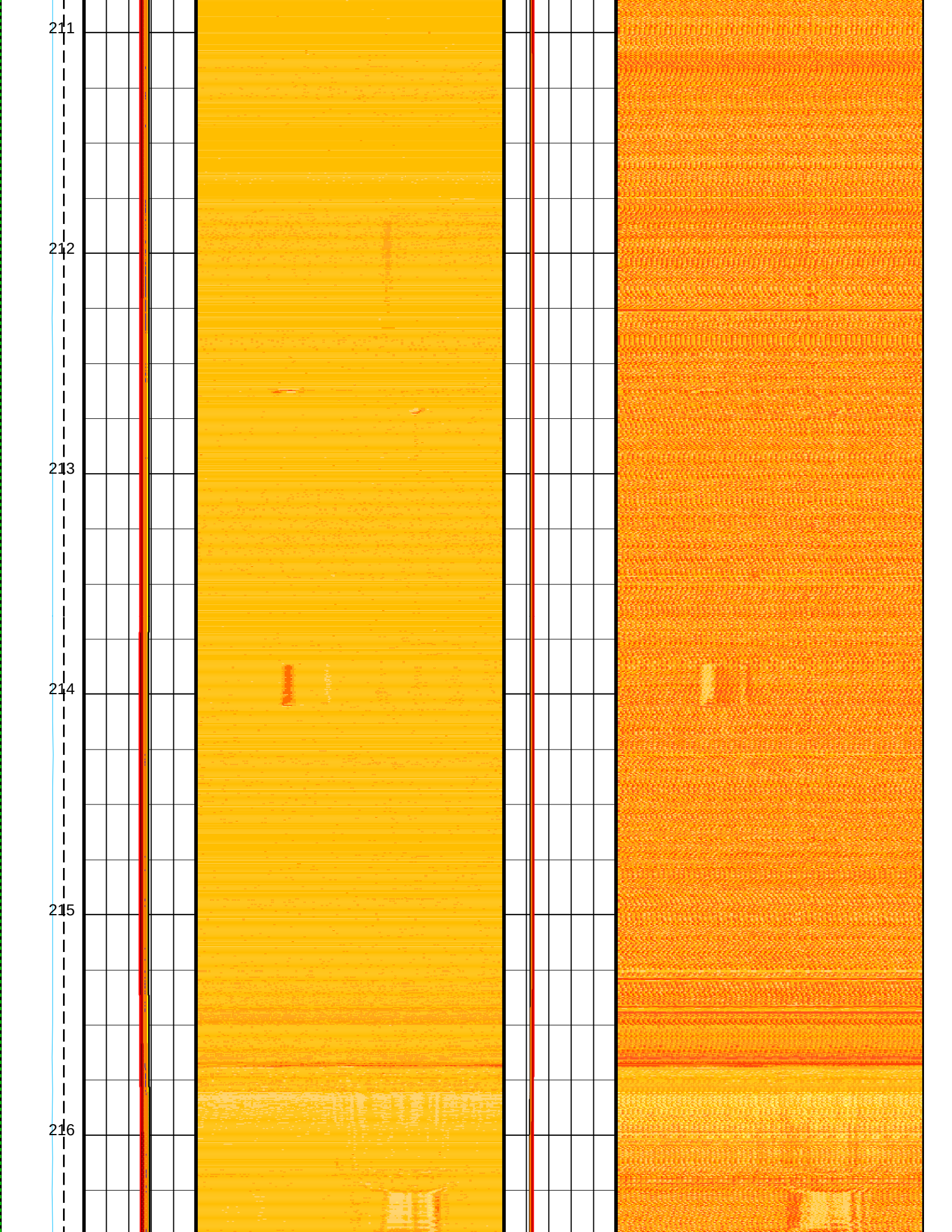
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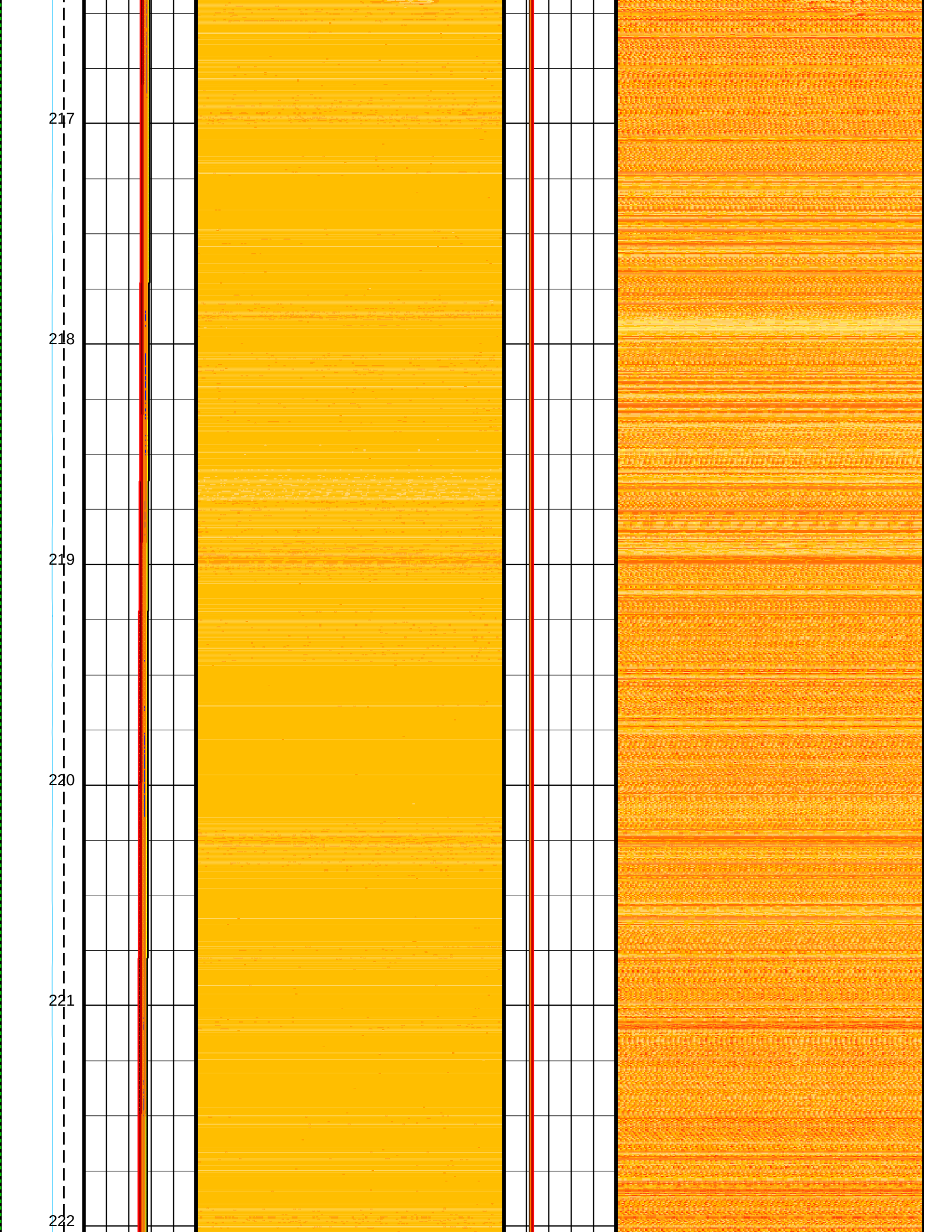
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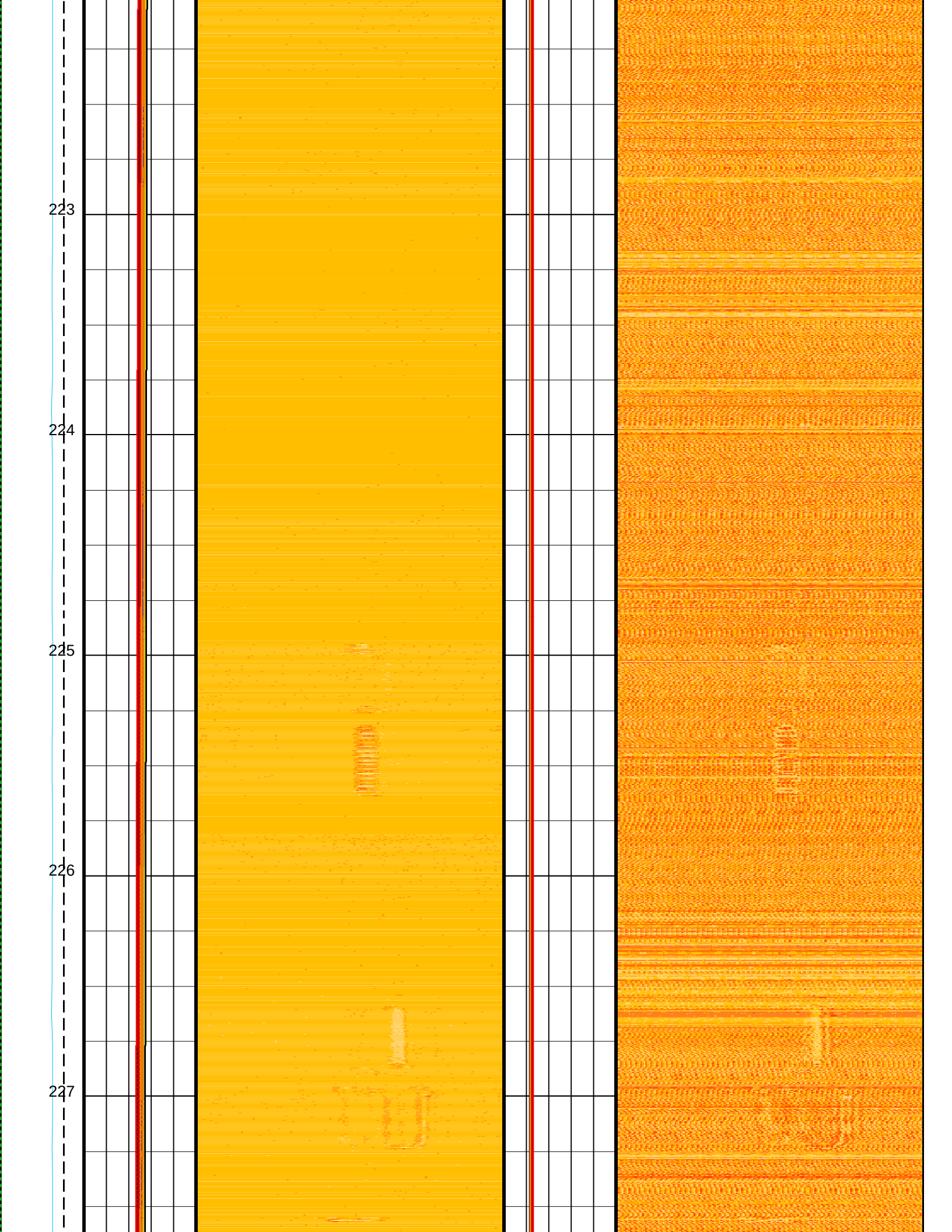
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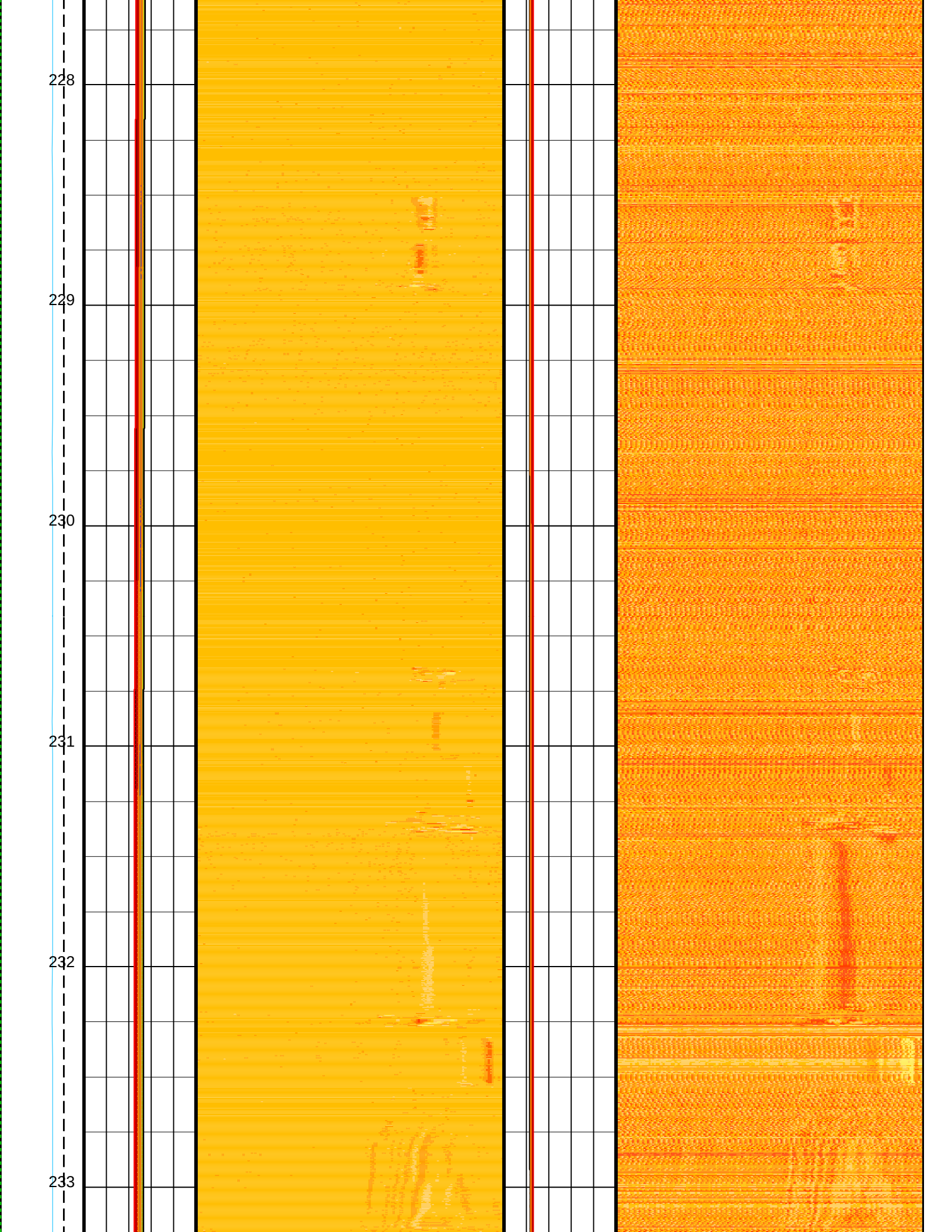
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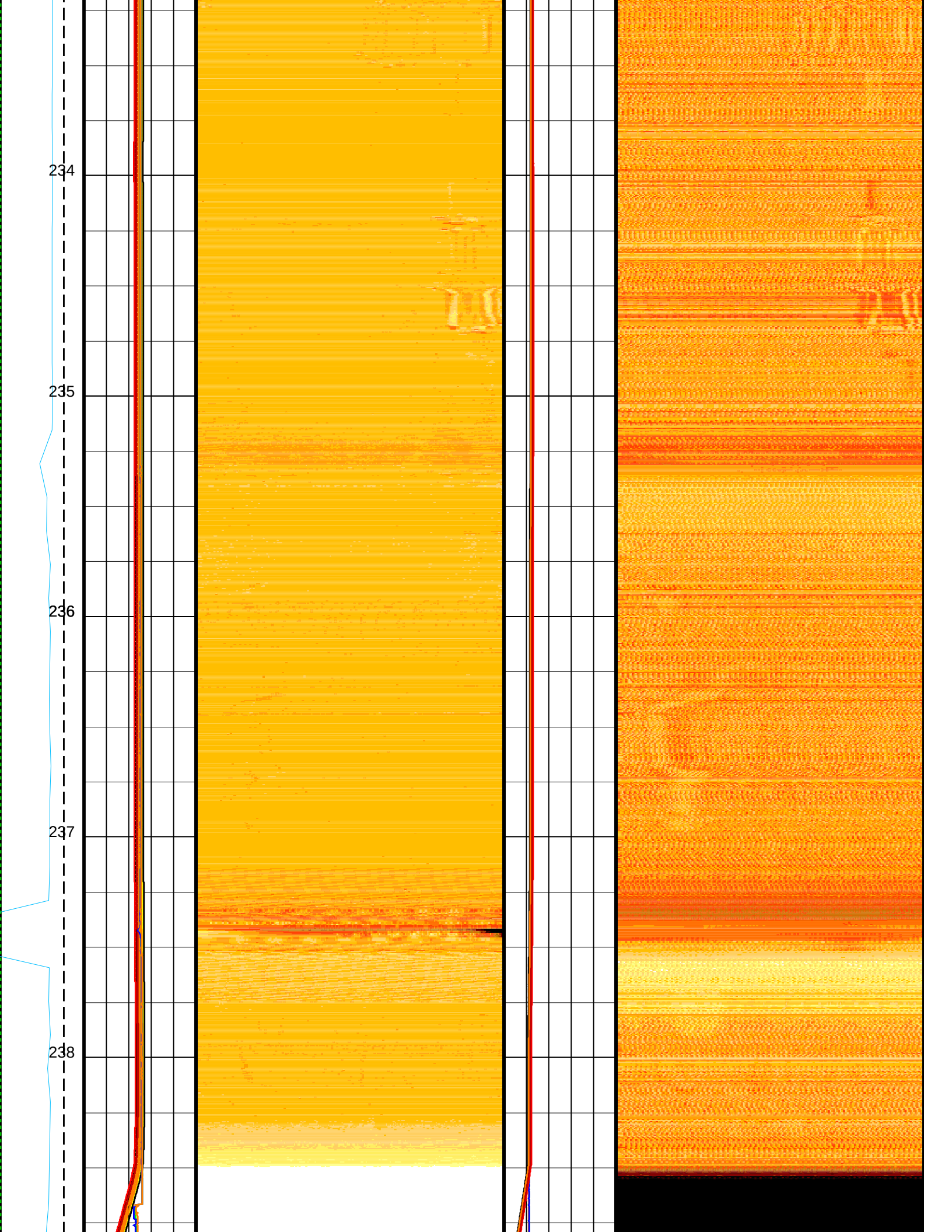
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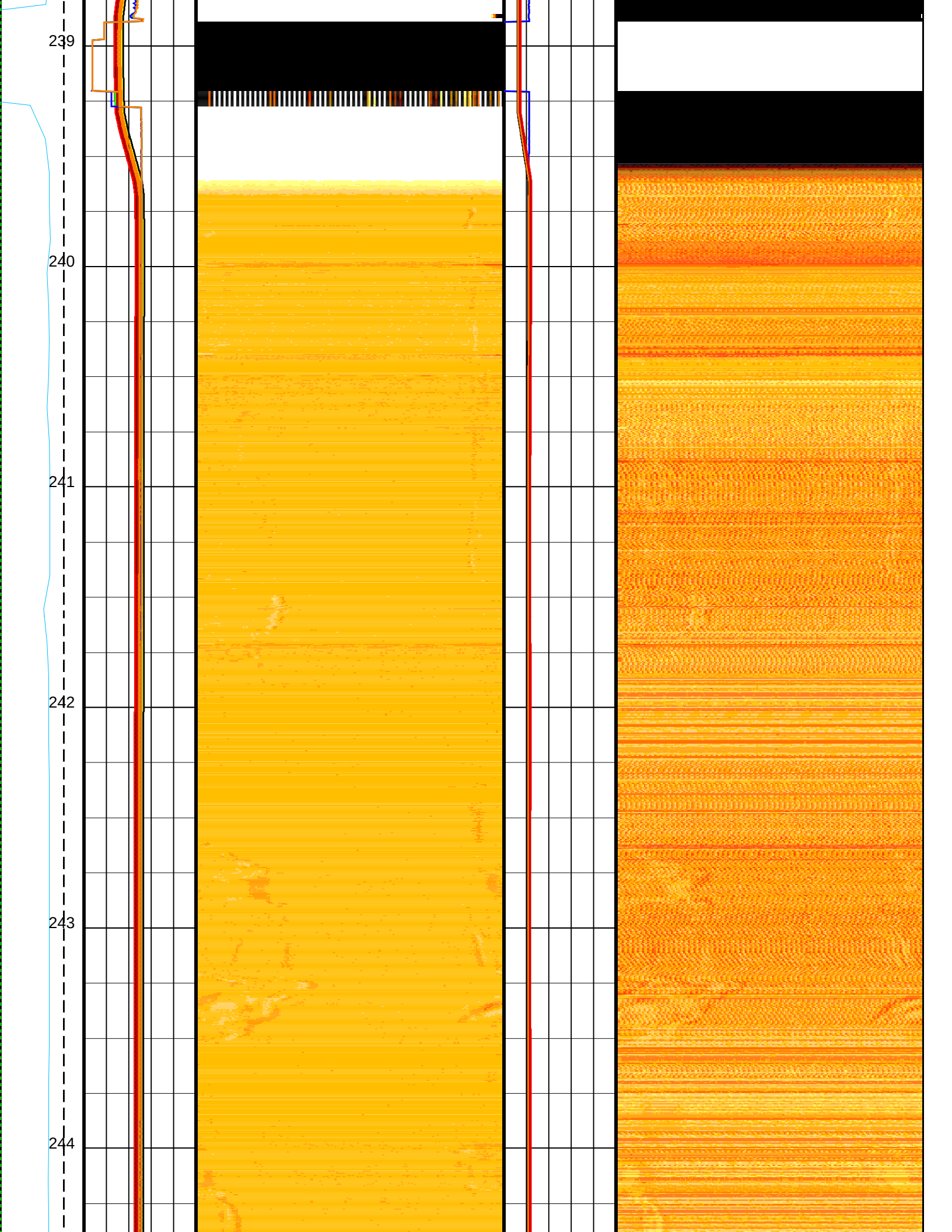
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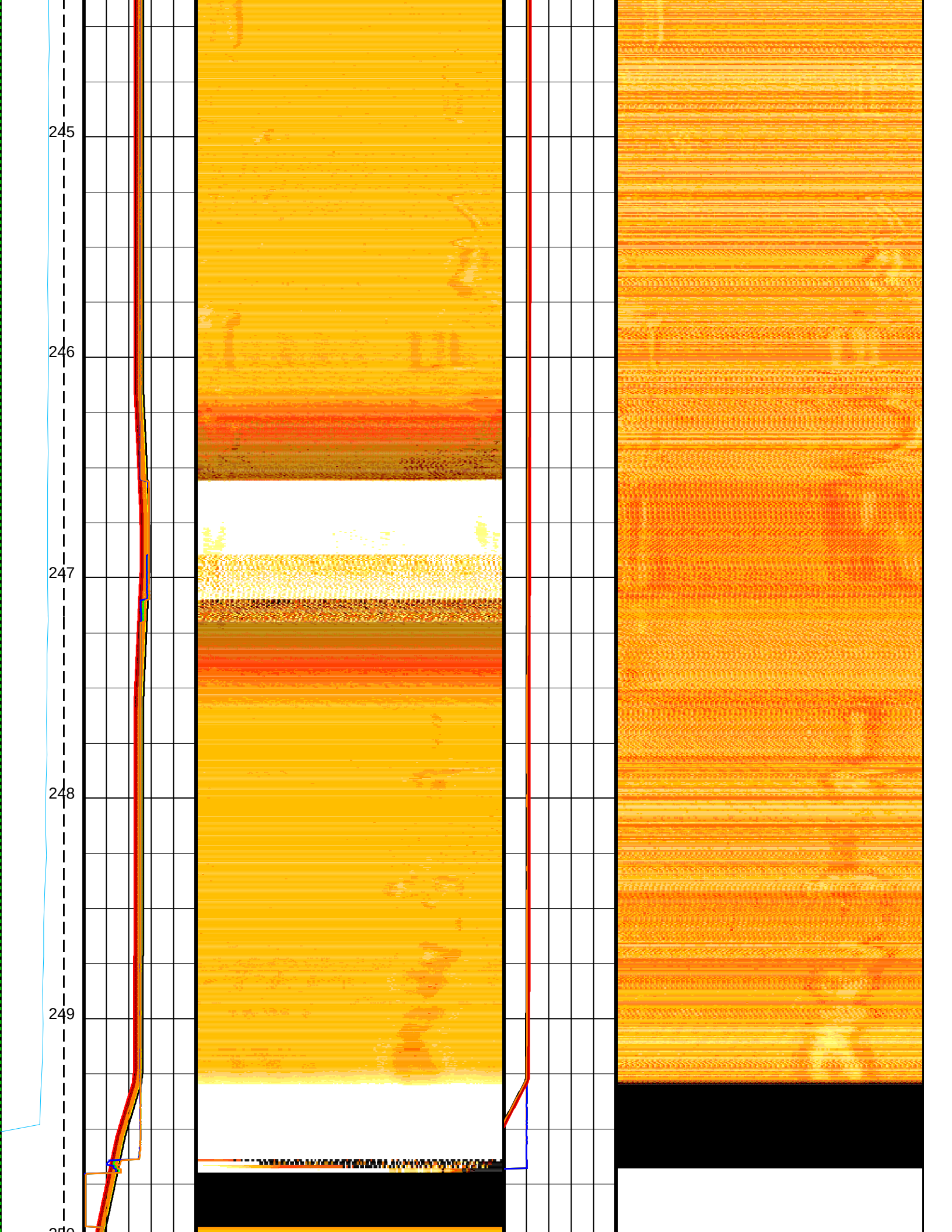
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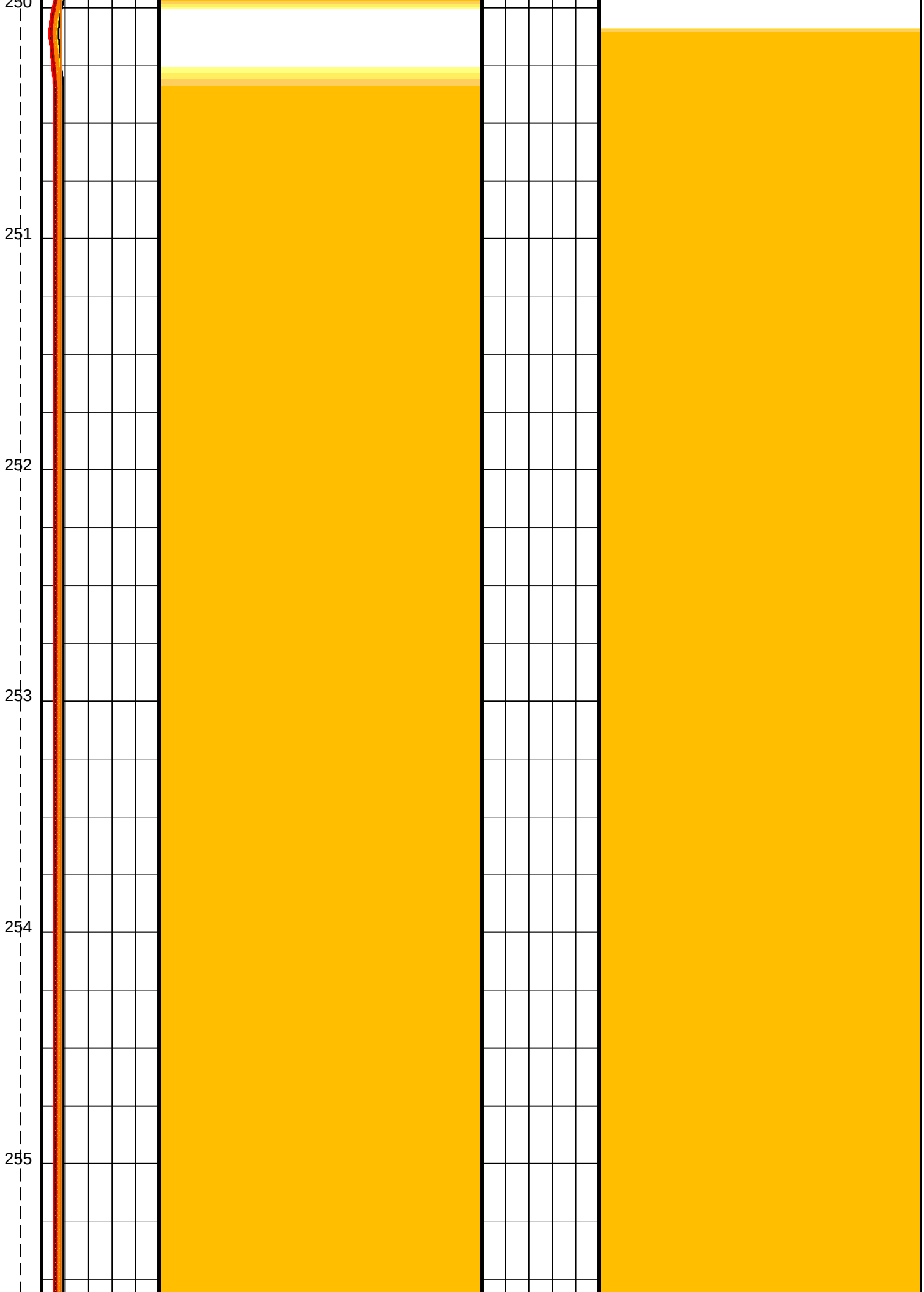
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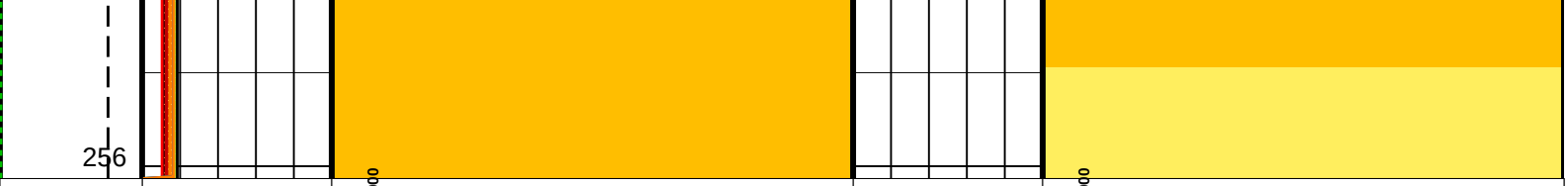



**Format: UBI_Image** **Vertical Scale: 1:20** **Graphics File Created: 29−Aug−2014 10:17**

## OP System Version: 19C0−187

| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |
| HNGC−B | 19C0−187 | HNGS−BA | 19C0−187 |
| EDTC−B | SKK−5169−EDTCB | | |

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| | UBI−D: Ultrasonic Borehole Imager − D | | |
| AAMN | Automatic Amplitude Minimum Scale | 2 | DB |
| ANGO | Angular Offset | −17 | DEG |
| ATMN | Automatic Transit Time Minimum Scale | 2 | US |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| ECRL | Eccentering Correction Level | FIRST | |
| ERDB | Eccentering Rejection | 12 | DB |
| FDOS | FVEL Depth Offset | 0 | M |
| FMOS | FVEL Measurement Offset | 0 | US/F |
| GCSW | Gain Correction | ON | |
| IMAR | Image Rotation | OFF | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| NBCD | Color Correction Depth Level | 80 | |
| NBLD | Eccentering Correction Depth Level | 1 | |
| NCDI | Noise Correction Depth Interval | 30 | |
| PNSW | Processing Noise Correction | ON | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| RJ60 | 60 Hz Correction | ON | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| UFON | UBI Flagging of Lost Echoes | OFF | |
| UGOS | UBI/UCI GPIT Offset | 3.63 | IN |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |

| | | | |
|---|---|---|---|
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| UHSV: UBI Hole Shape Analysis | | | |
| AAMN | Automatic Amplitude Minimum Scale | 2 | DB |
| ANGO | Angular Offset | −17 | DEG |
| ATMN | Automatic Transit Time Minimum Scale | 2 | US |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| ECRL | Eccentering Correction Level | FIRST | |
| ERDB | Eccentering Rejection | 12 | DB |
| FDOS | FVEL Depth Offset | 0 | M |
| FMOS | FVEL Measurement Offset | 0 | US/F |
| GCSW | Gain Correction | ON | |
| IMAR | Image Rotation | OFF | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| NBCD | Color Correction Depth Level | 80 | |
| NBLD | Eccentering Correction Depth Level | 1 | |
| NCDI | Noise Correction Depth Interval | 30 | |
| PNSW | Processing Noise Correction | ON | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| RJ60 | 60 Hz Correction | ON | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| UFON | UBI Flagging of Lost Echoes | OFF | |
| UGOS | UBI/UCI GPIT Offset | 3.63 | IN |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| System and Miscellaneous | | | |
| BS | Bit Size | 9.875 | IN |
| DO | Depth Offset for Playback | −4777.5 | M |
| PP | Playback Processing | RECOMPUTE | |

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_013LUP | FN:13 | PRODUCER | 25−Aug−2014 02:16 | 5033.8 M | 4926.4 M |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_042PUP | FN:57 | PRODUCER | 29−Aug−2014 10:17 |
| CUST | UBI_HRLA_LDL_NGS_042PUC | FN:58 | CUSTOMER | 29−Aug−2014 10:17 |

Schlumberger

# Second Pass

MAXIS Field Log

Company: Well:

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_014LUP | FN:15 | PRODUCER | 25−Aug−2014 03:32 | 5033.8 M | 4770.3 M |

## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_041PUP | FN:55 | PRODUCER | 29−Aug−2014 10:14 | 256.8 M | −6.9 M |
| CUST | UBI_HRLA_LDL_NGS_041PUC | FN:56 | CUSTOMER | 29−Aug−2014 10:14 | 256.8 M | −6.9 M |

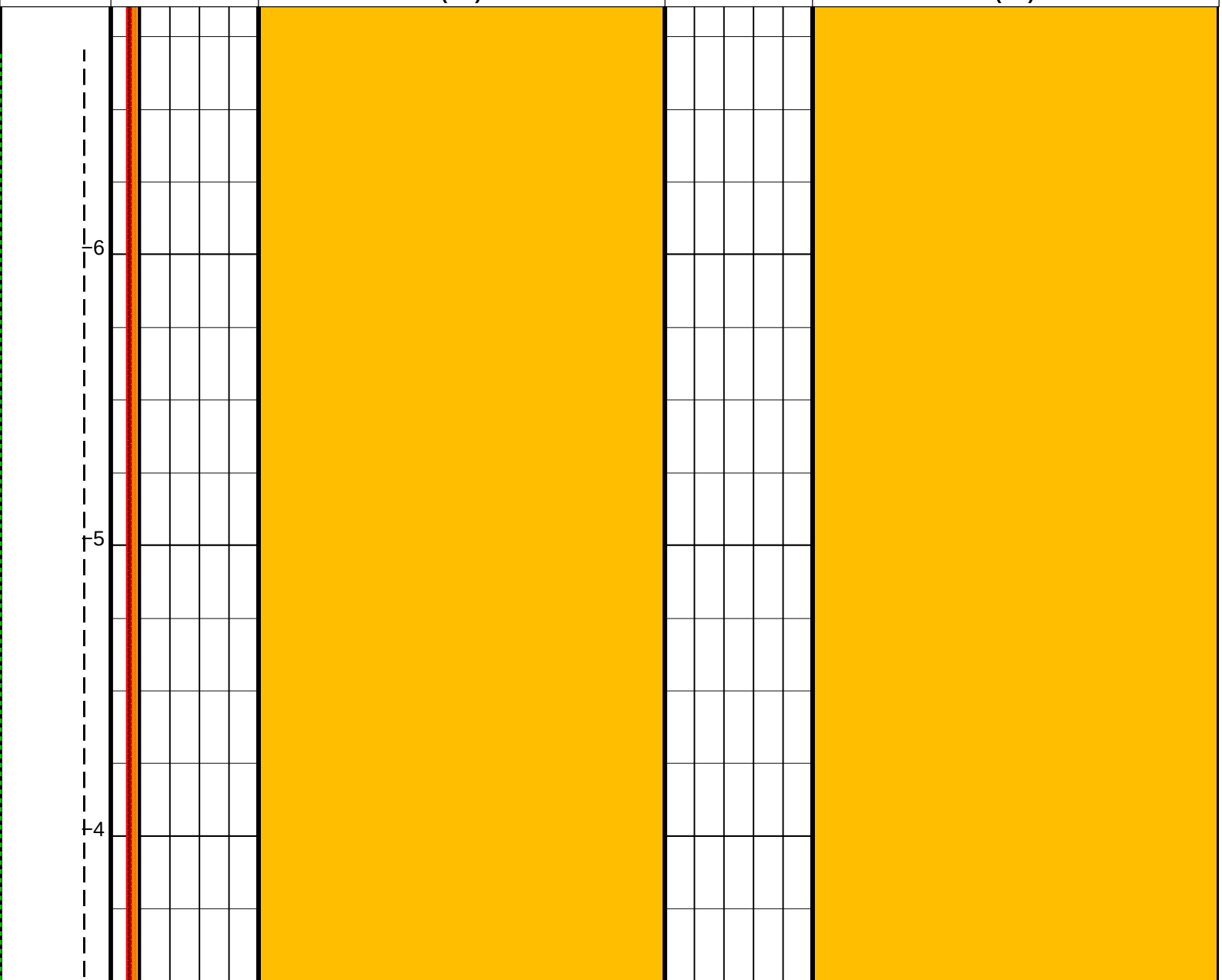
## OP System Version: 19C0−187

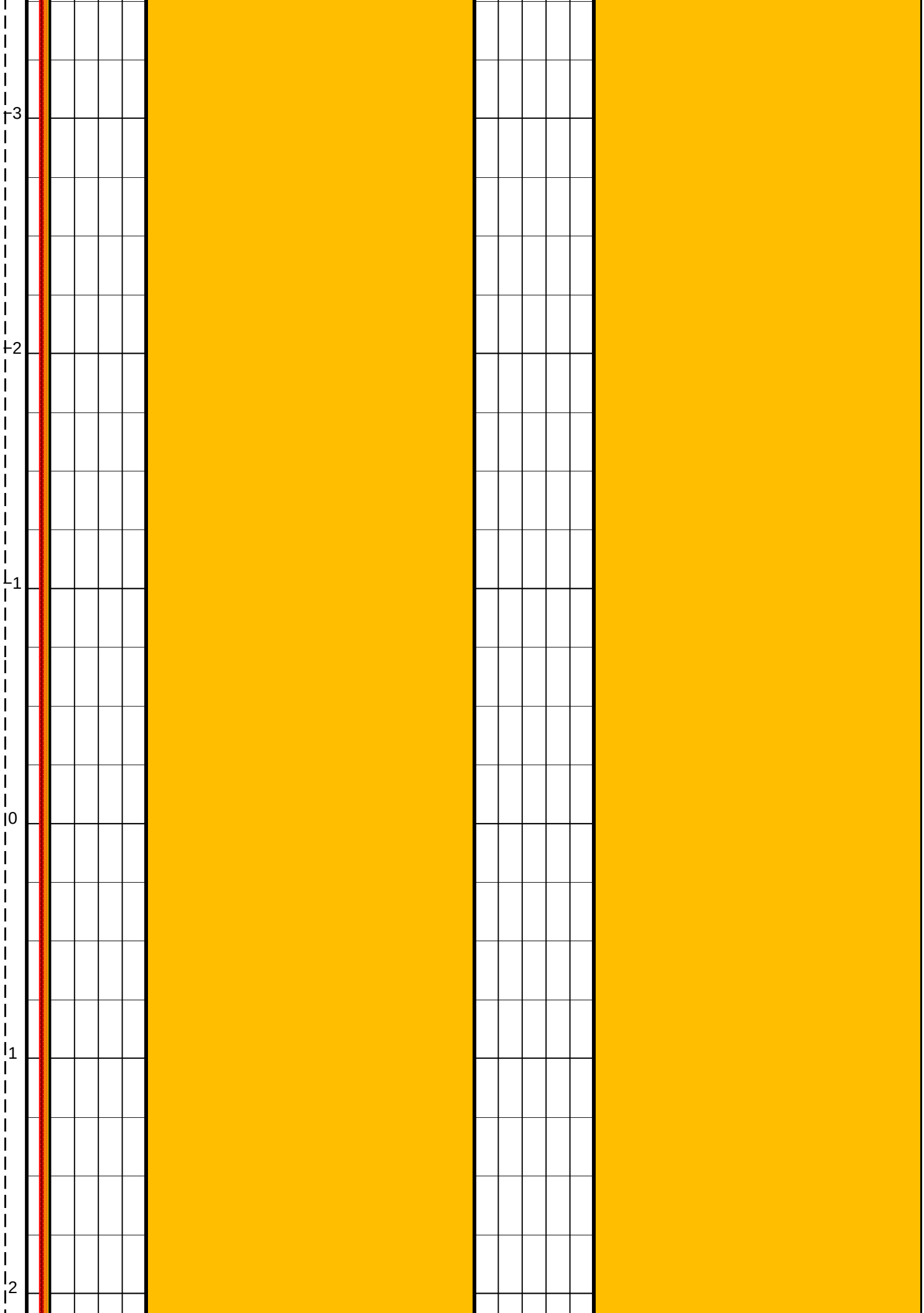
| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |

| | | | |
|---|---|---|---|
| HEDS | 19C0−187 | EDSC−B | 19C0−187 |
| HNGC−B | 19C0−187 | HNGS−BA | 19C0−187 |
| EDTC−B | SKK−5169−EDTCB | | |

| | | | |
|---|---|---|---|
| | HIGH Amplitude (FA75) 0 (DB) 50 | | Radius max (UTMX) 4 (IN) 8 |
| | MEDIAN of Amplitude (FAED) 0 (DB) 50 | | Radius min (UTMN) 4 (IN) 8 |
| Fluid velocity (CFVL) (US/M) 450 750 | Maximum of Amplitude (UAMX) 0 (DB) 50 | | Radius HIGH (FT75) 4 (IN) 8 |
| Cable Speed (CS) (M/HR) 0 150000 | Min. of Amplitude (UAMN) 0 (DB) 50 | | Radius LOW (FT25) 4 (IN) 8 |
| Rev. speed (RSAV) 6 (RPS) 8 | LOW Amplitude (FA25) 0 (DB) 50 | −500.0000 0.0000 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000 Corrected Amplitude (AWCN) (DB) | MEDIAN Radius (FTED) 4 (IN) 8 |

−500.0000 0.0000 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000
Corrected transit time (TTCN) (US)

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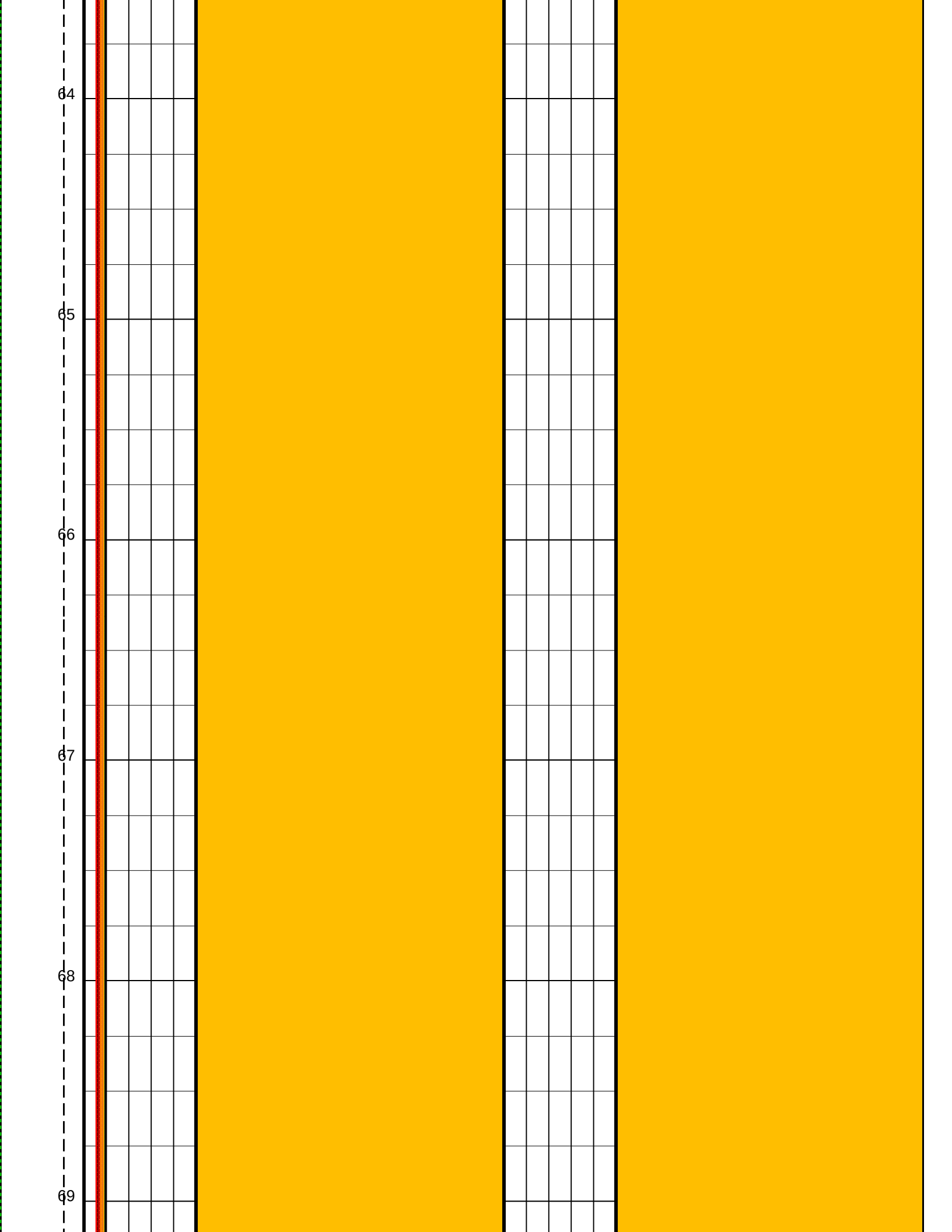
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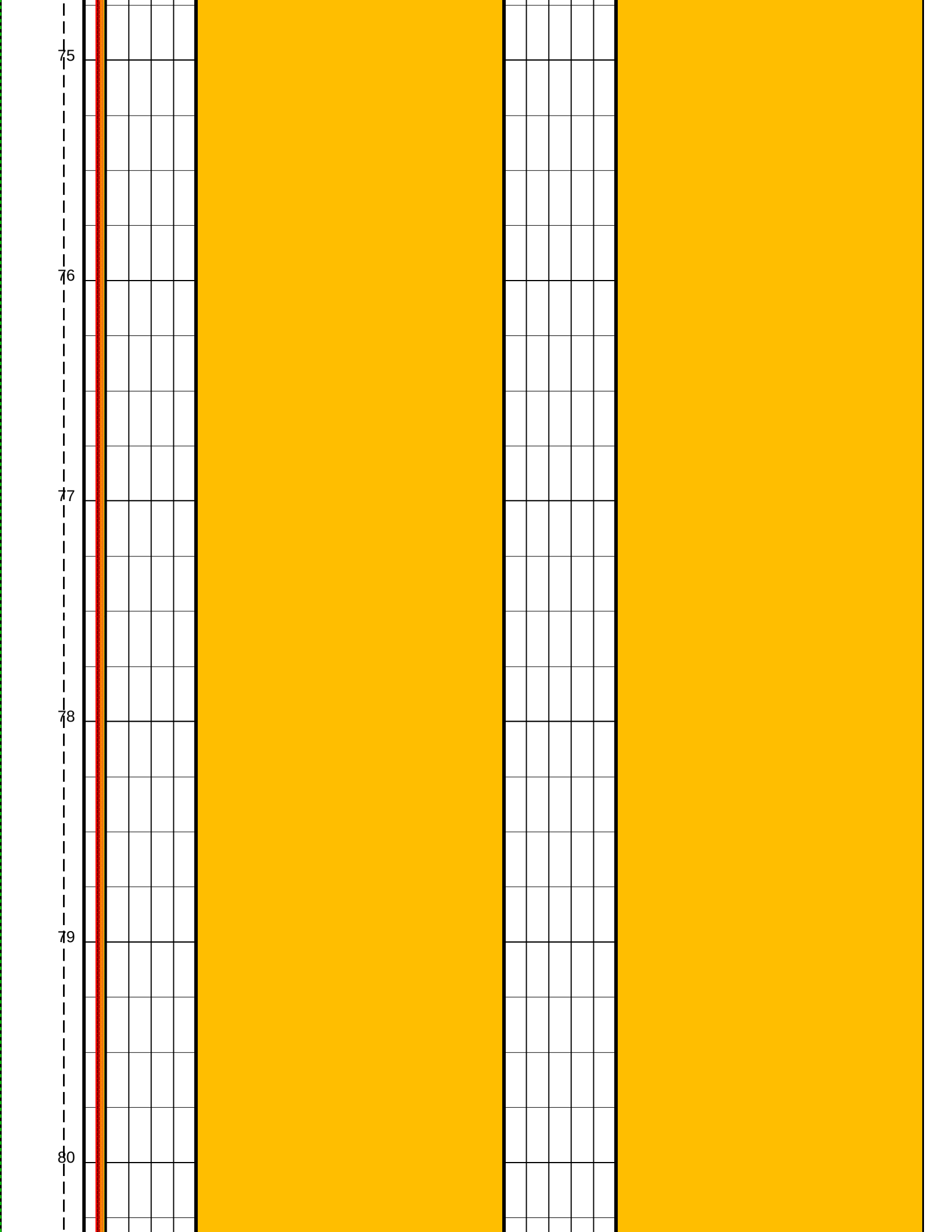
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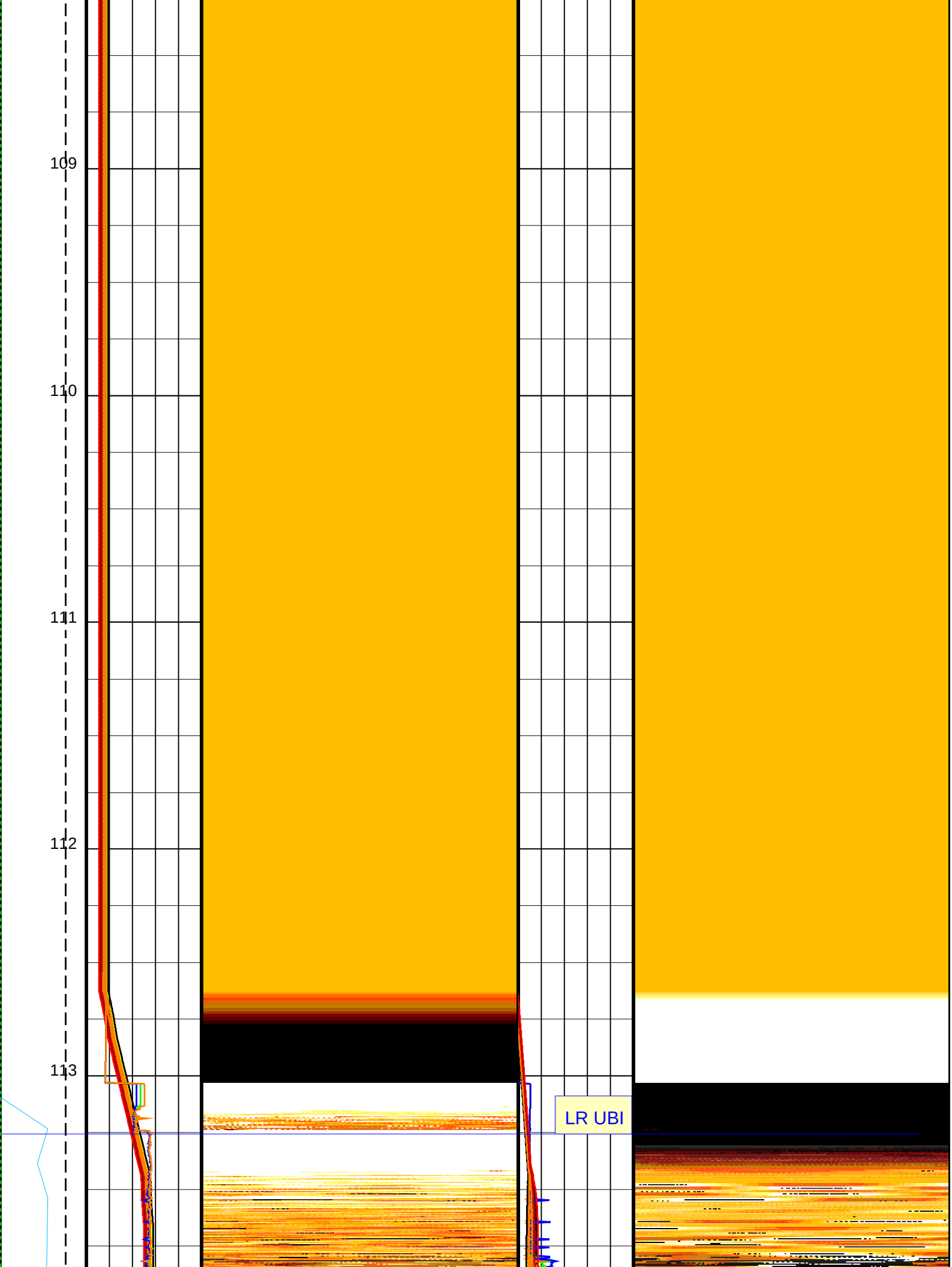
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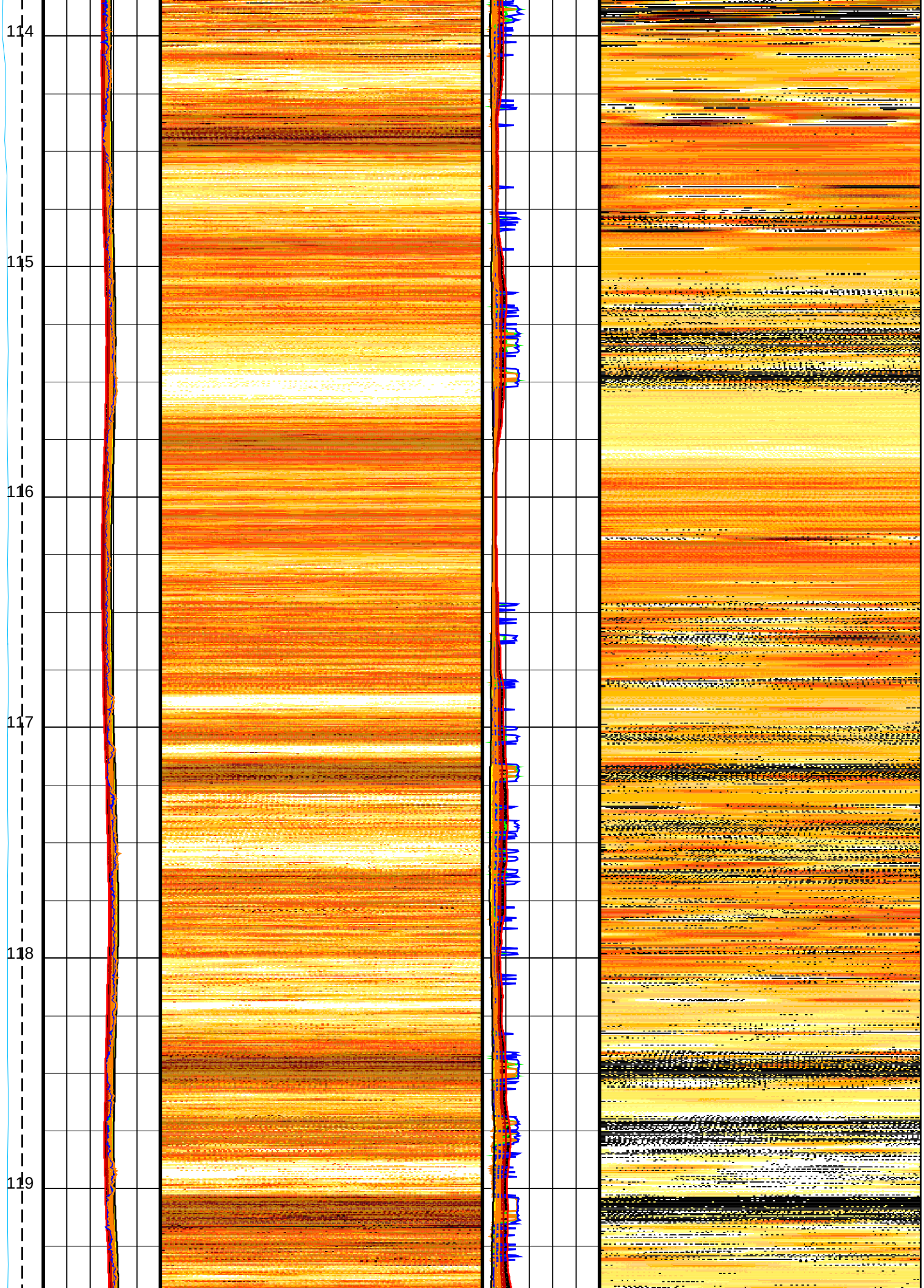
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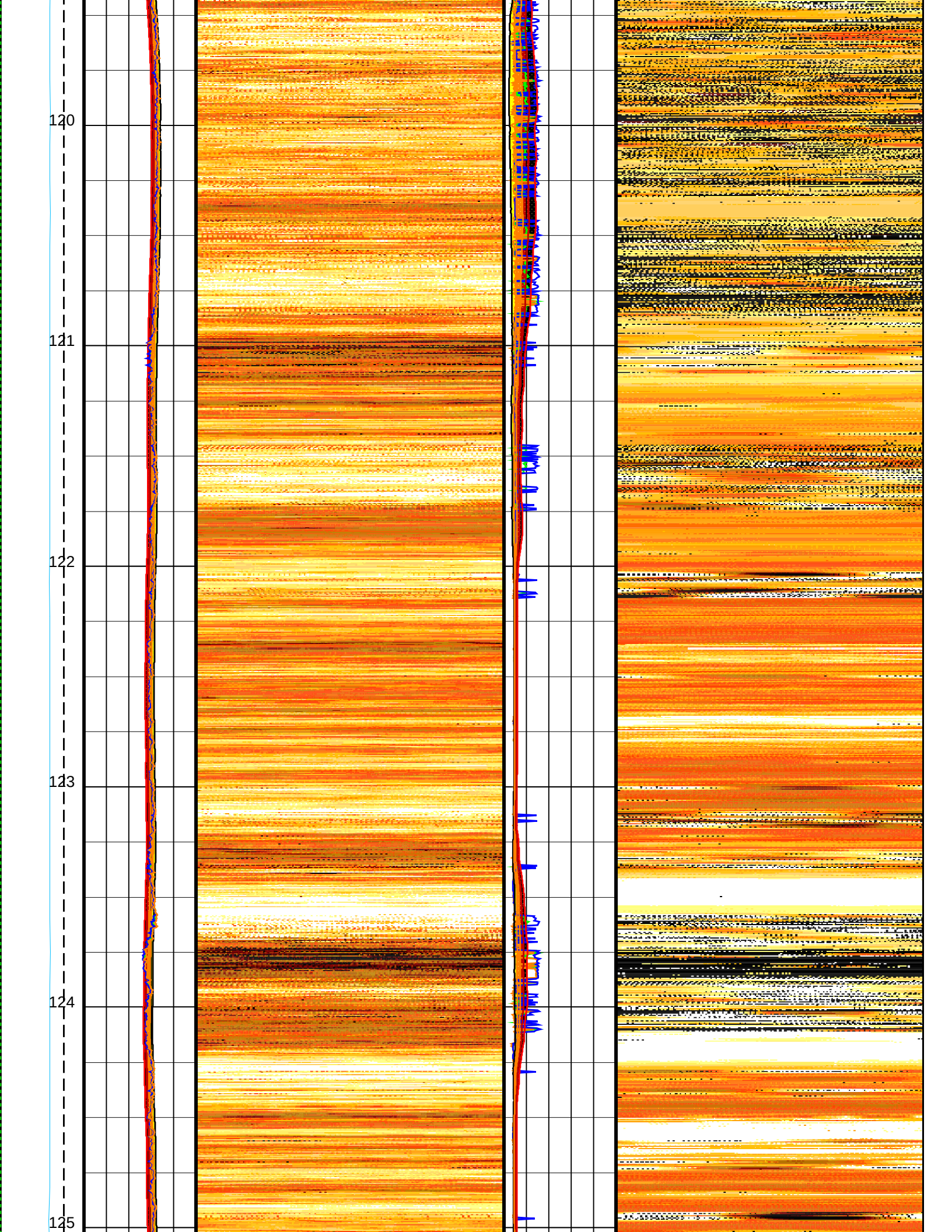
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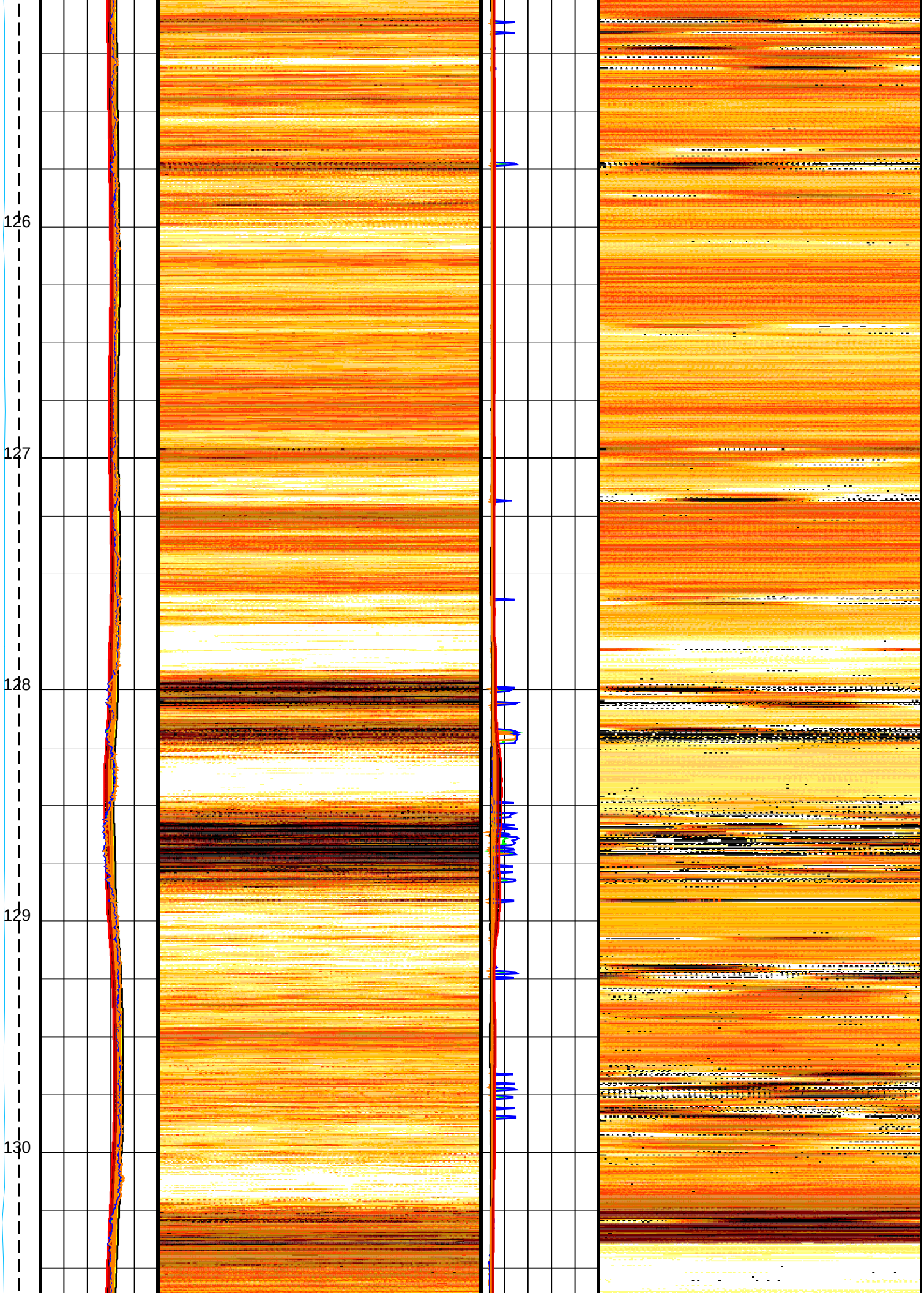
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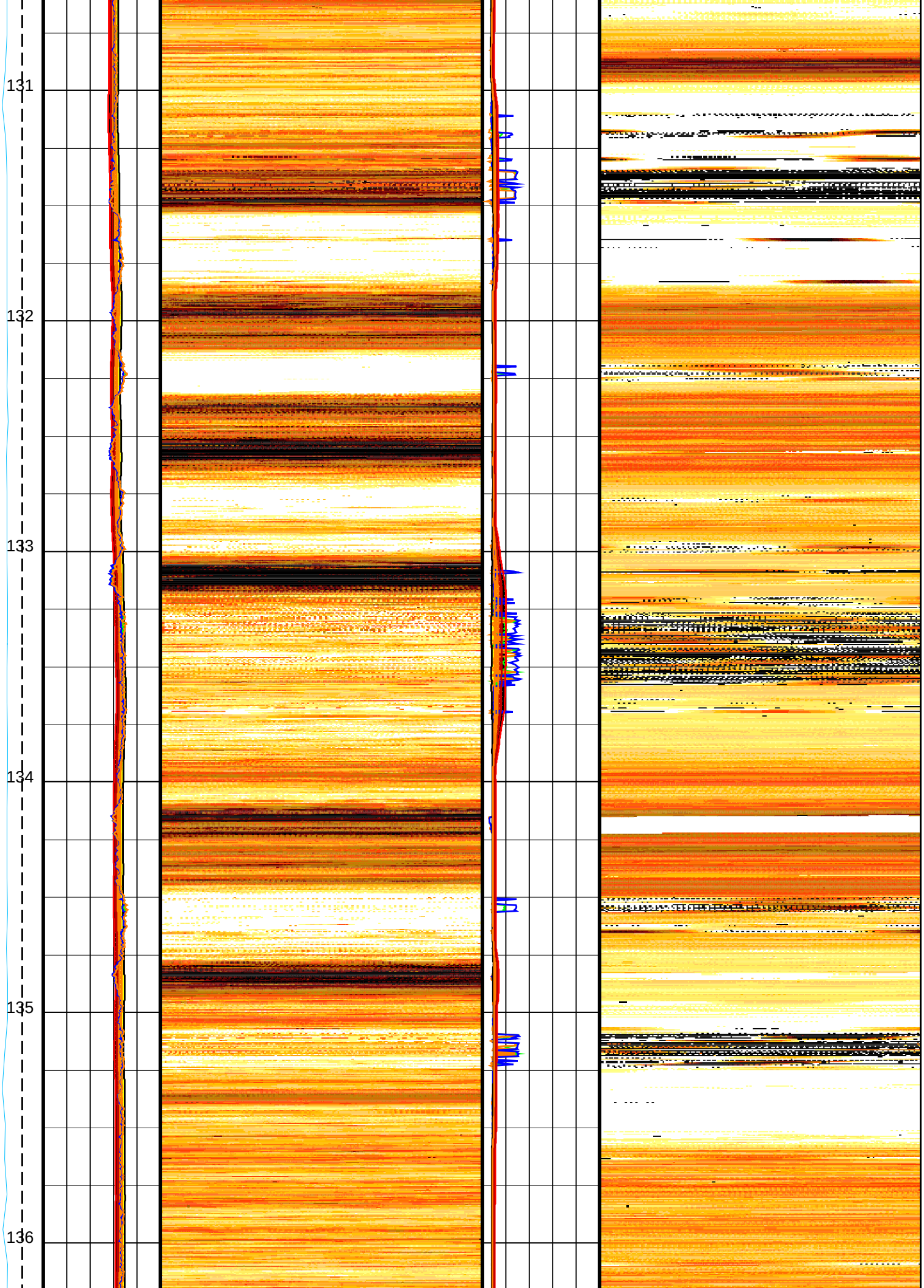
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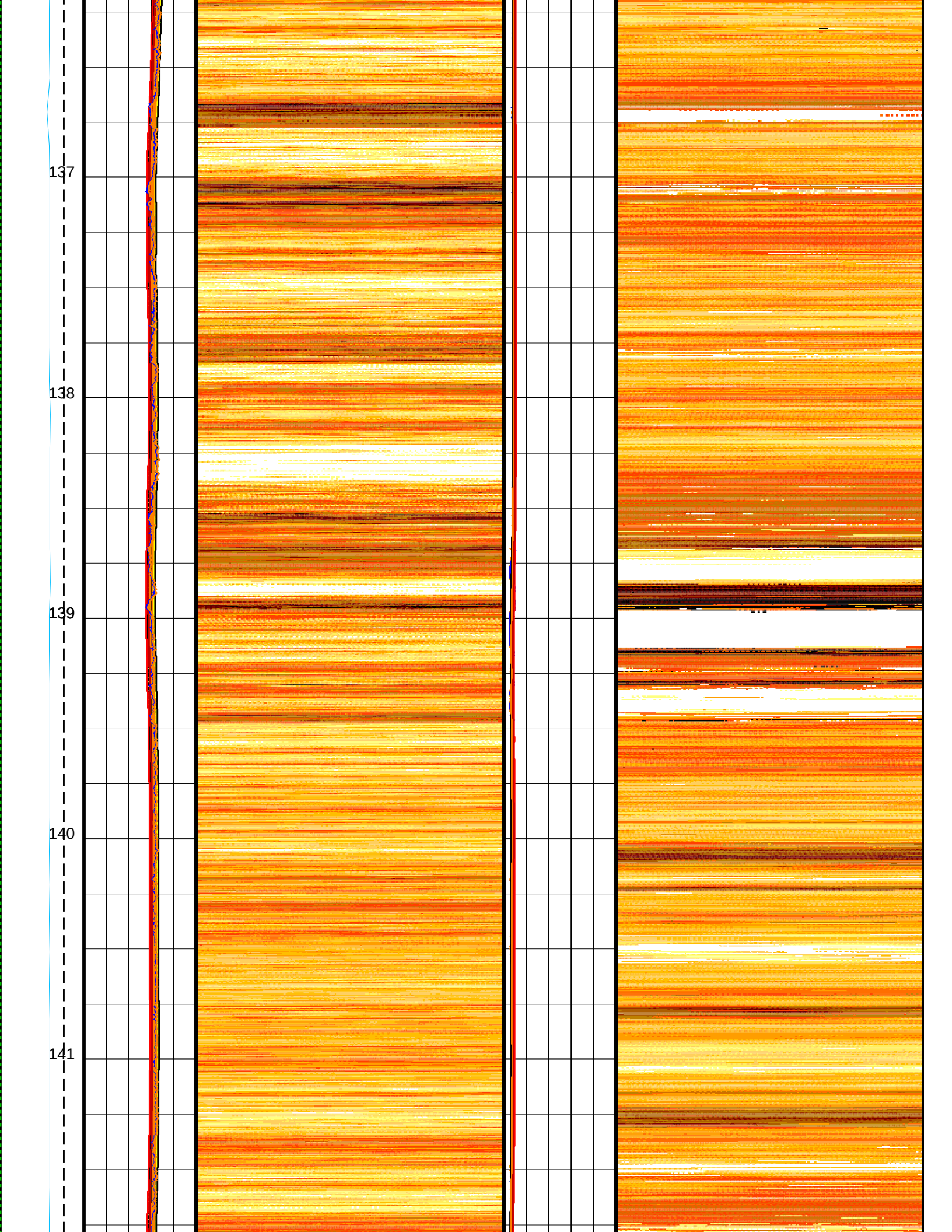
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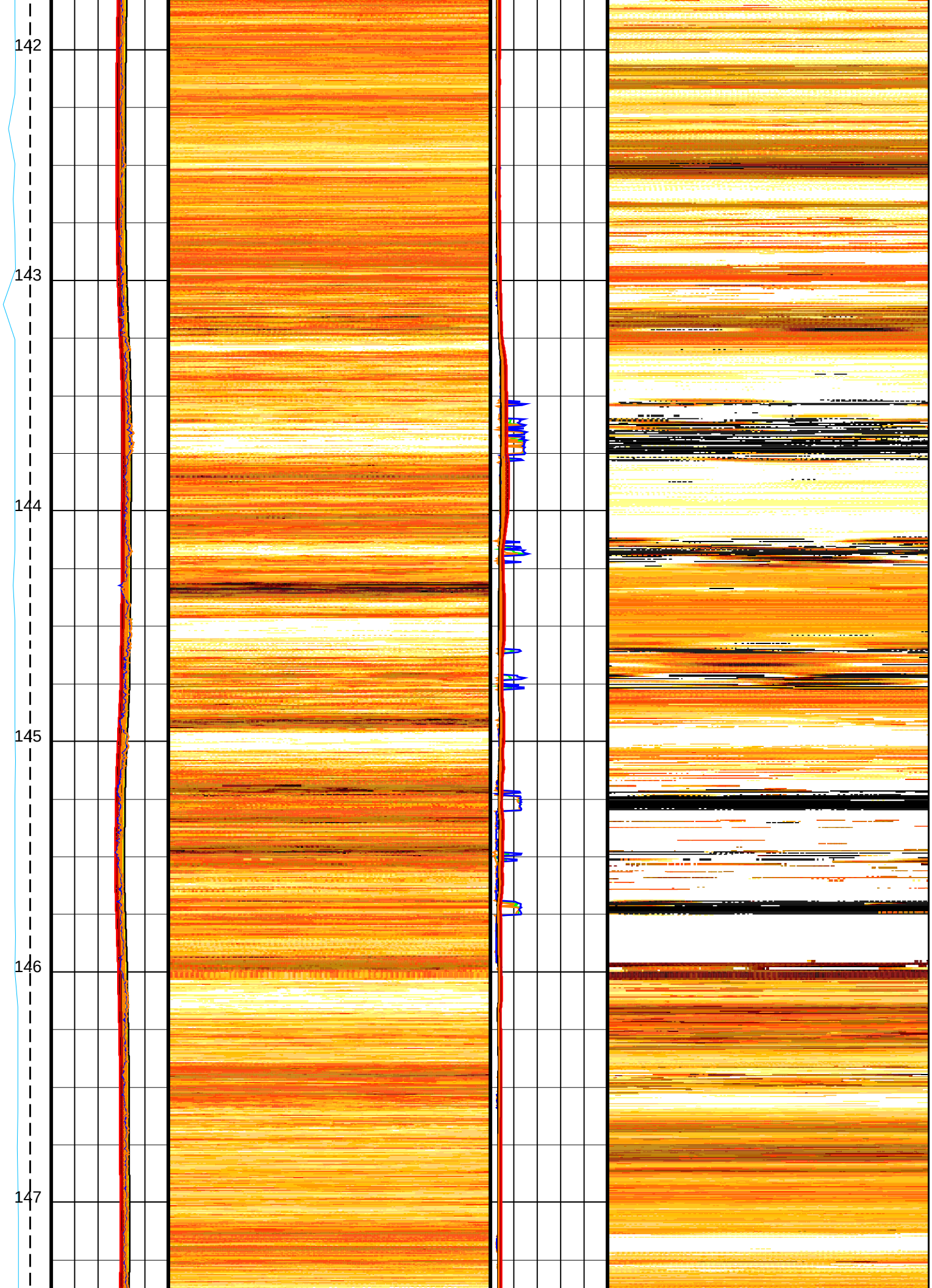
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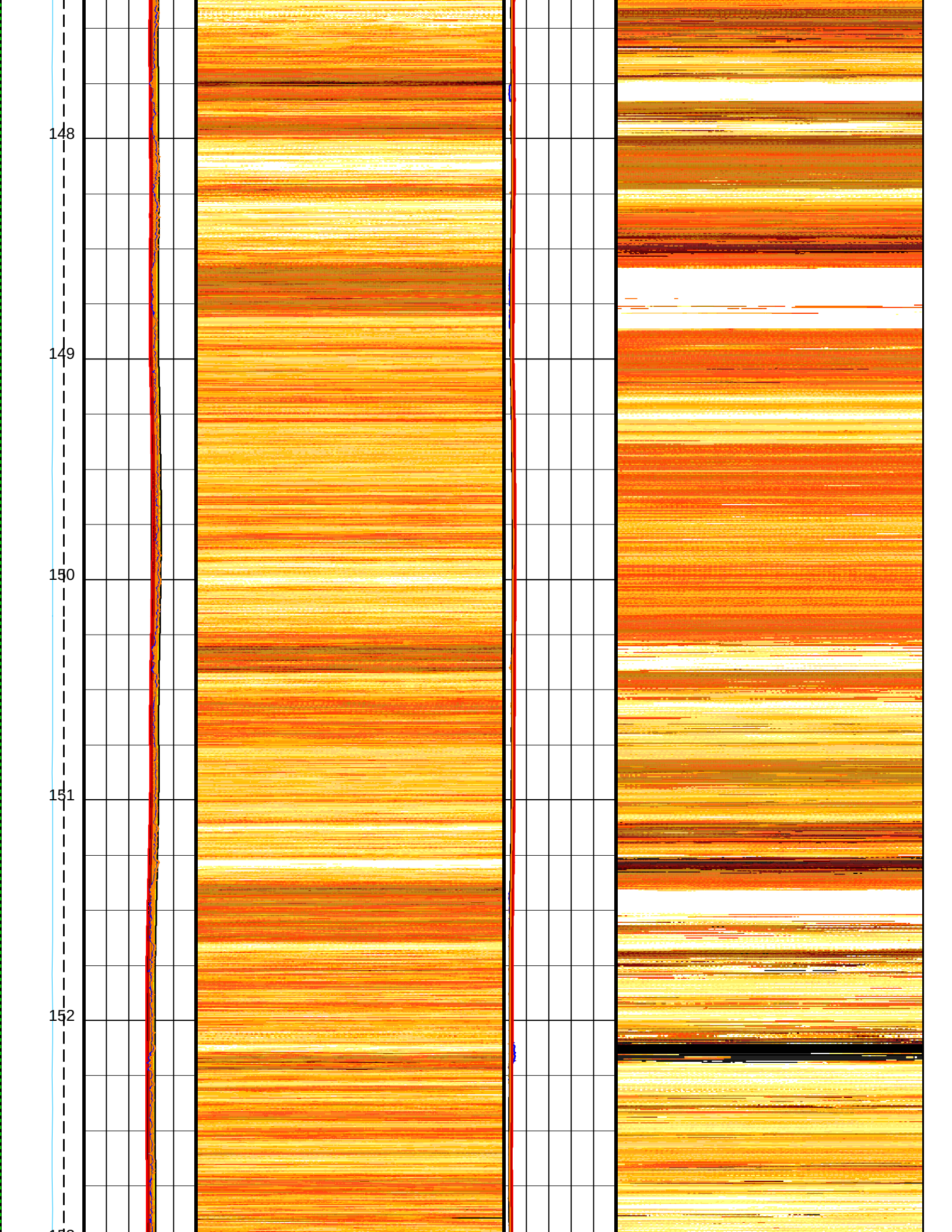
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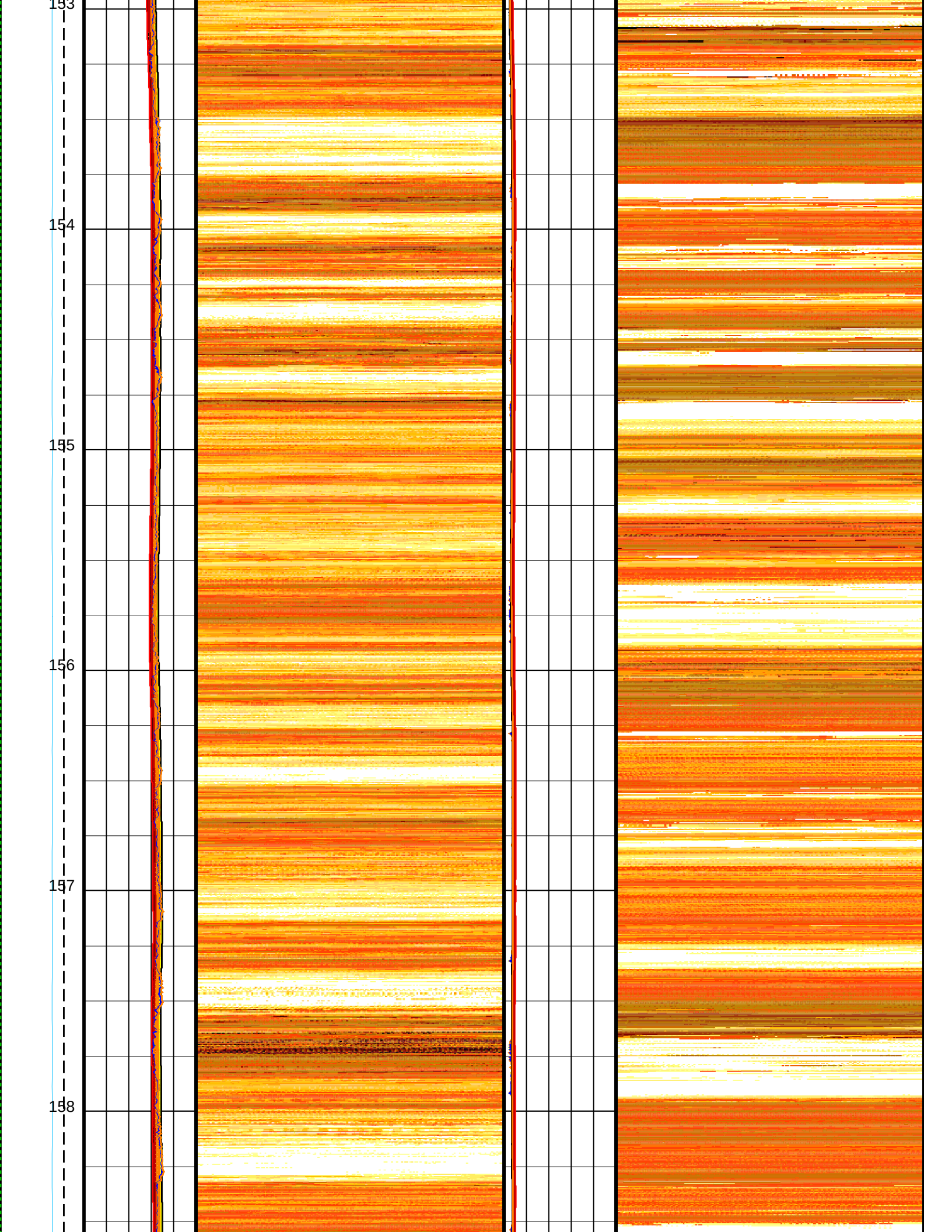
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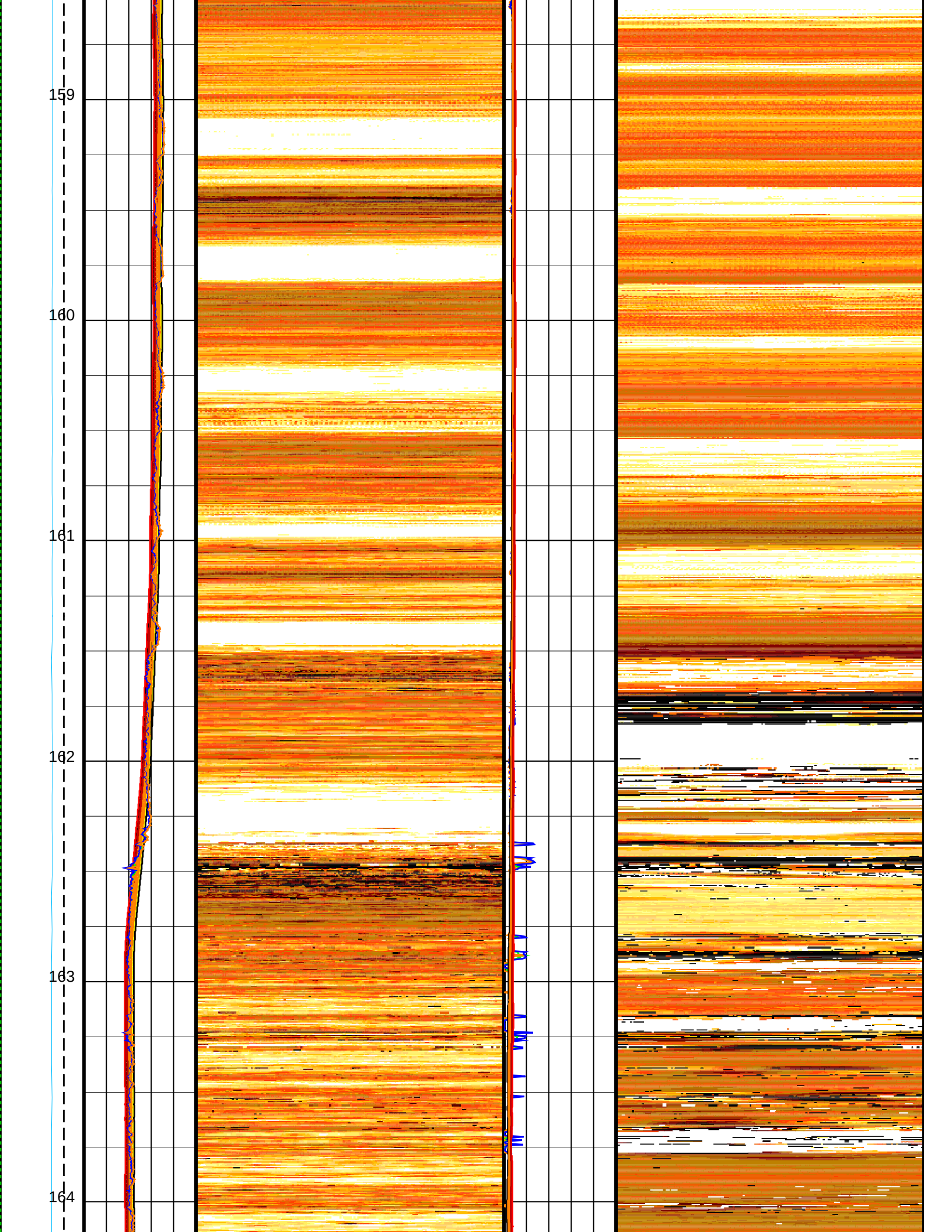
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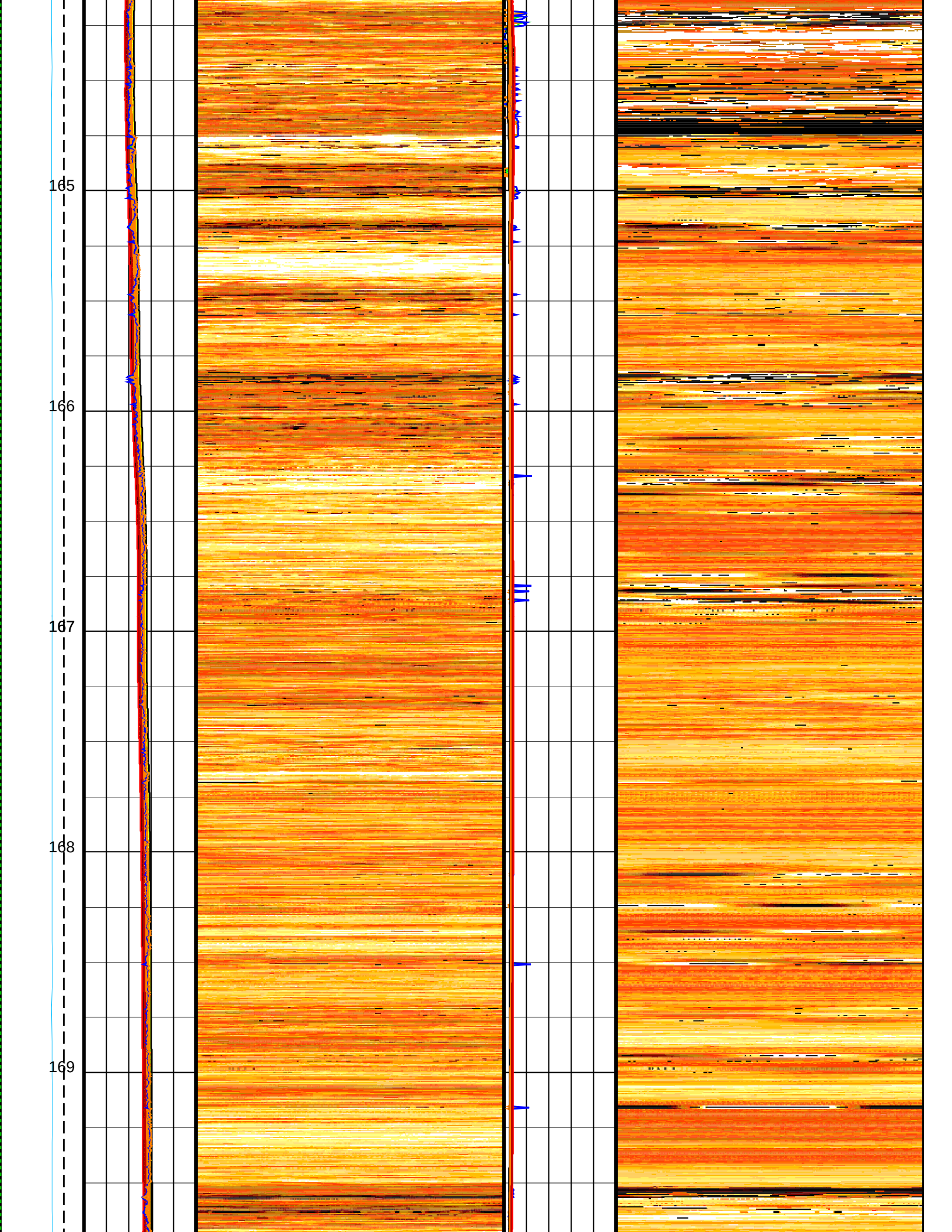
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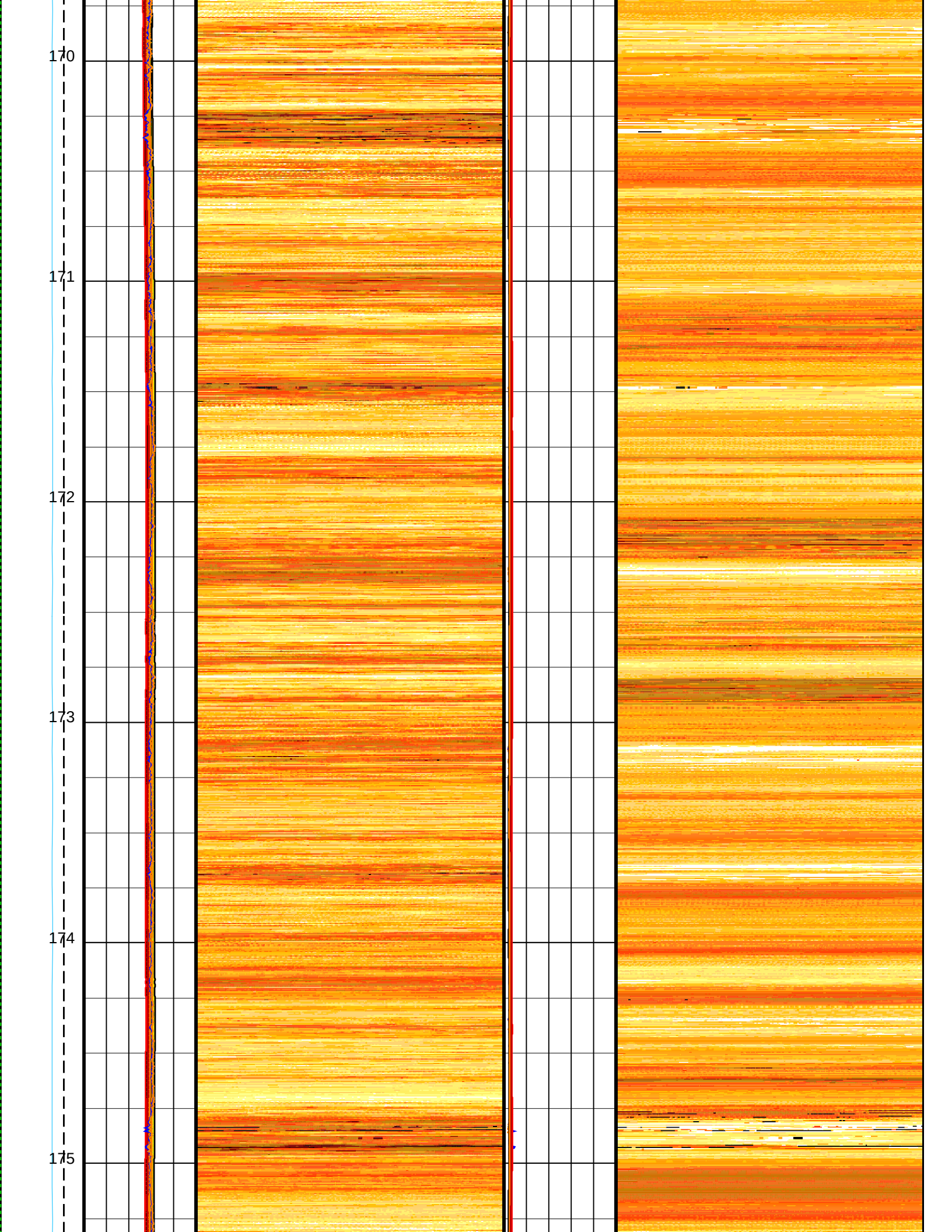
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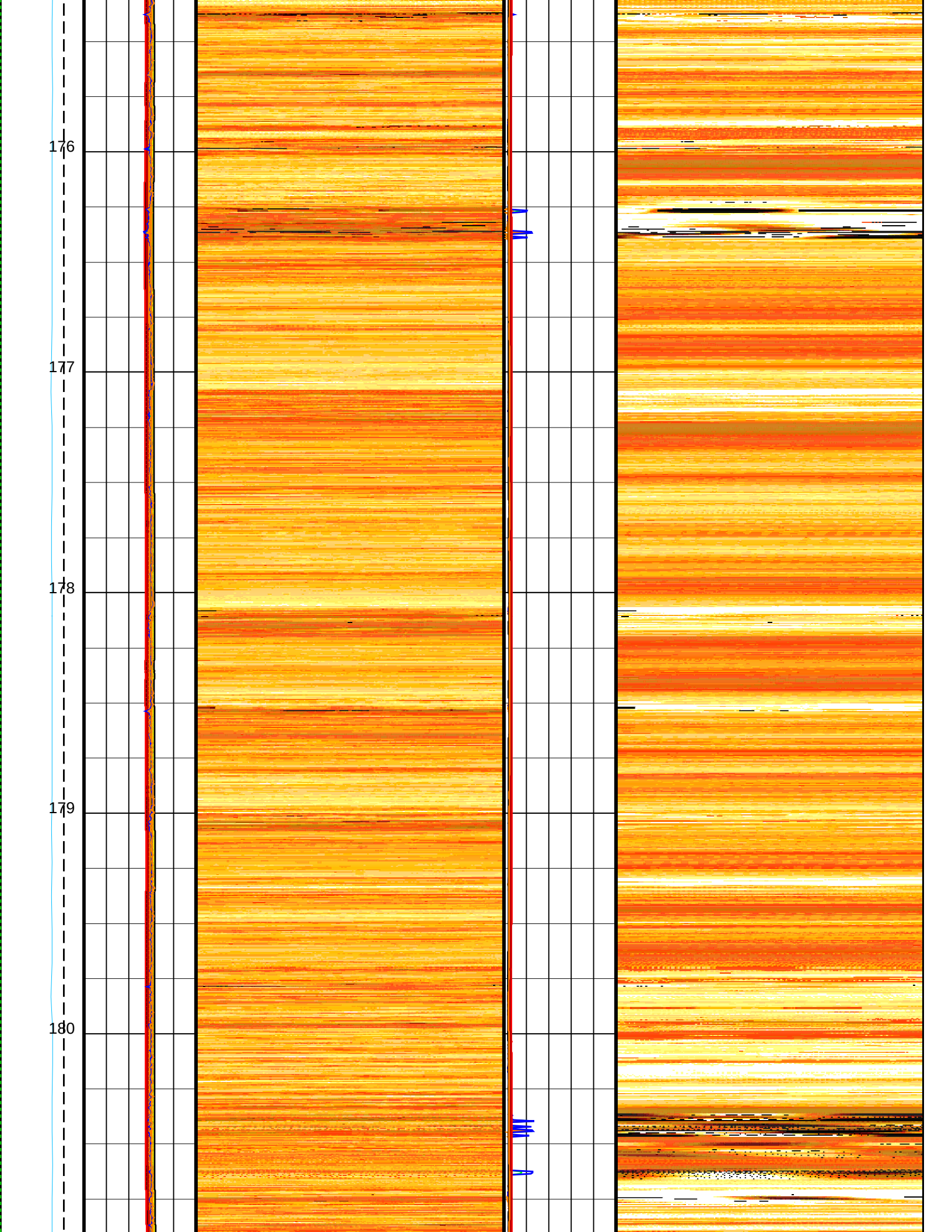
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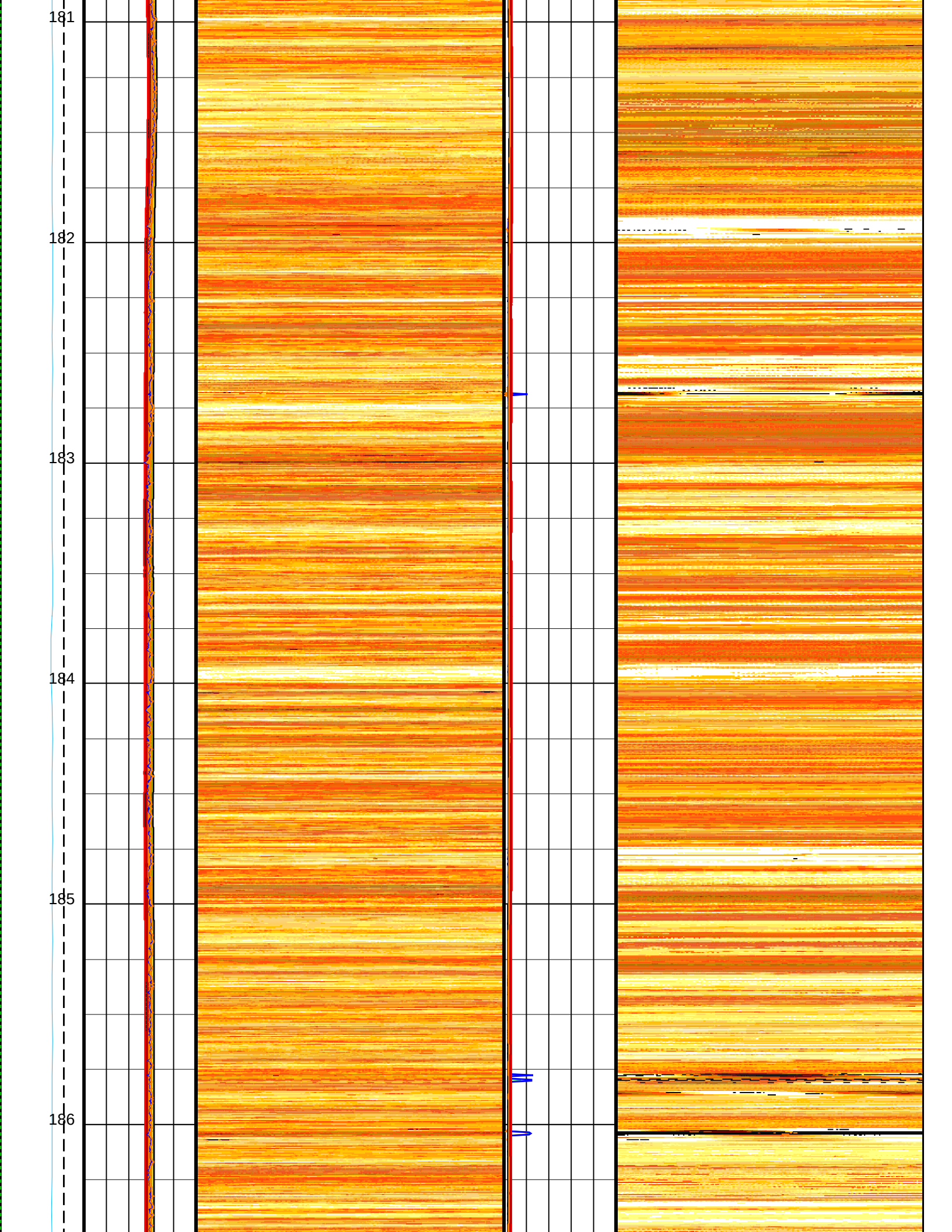
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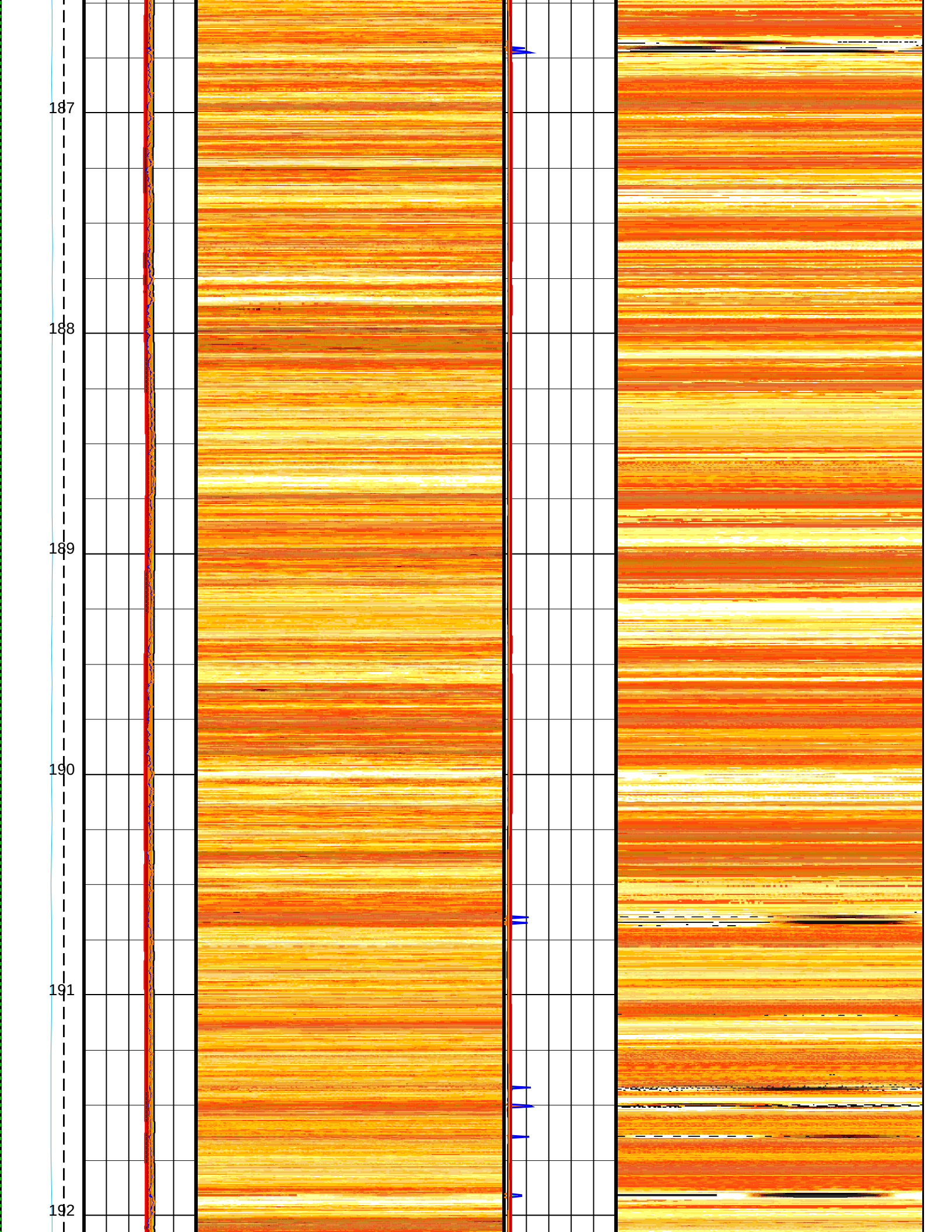
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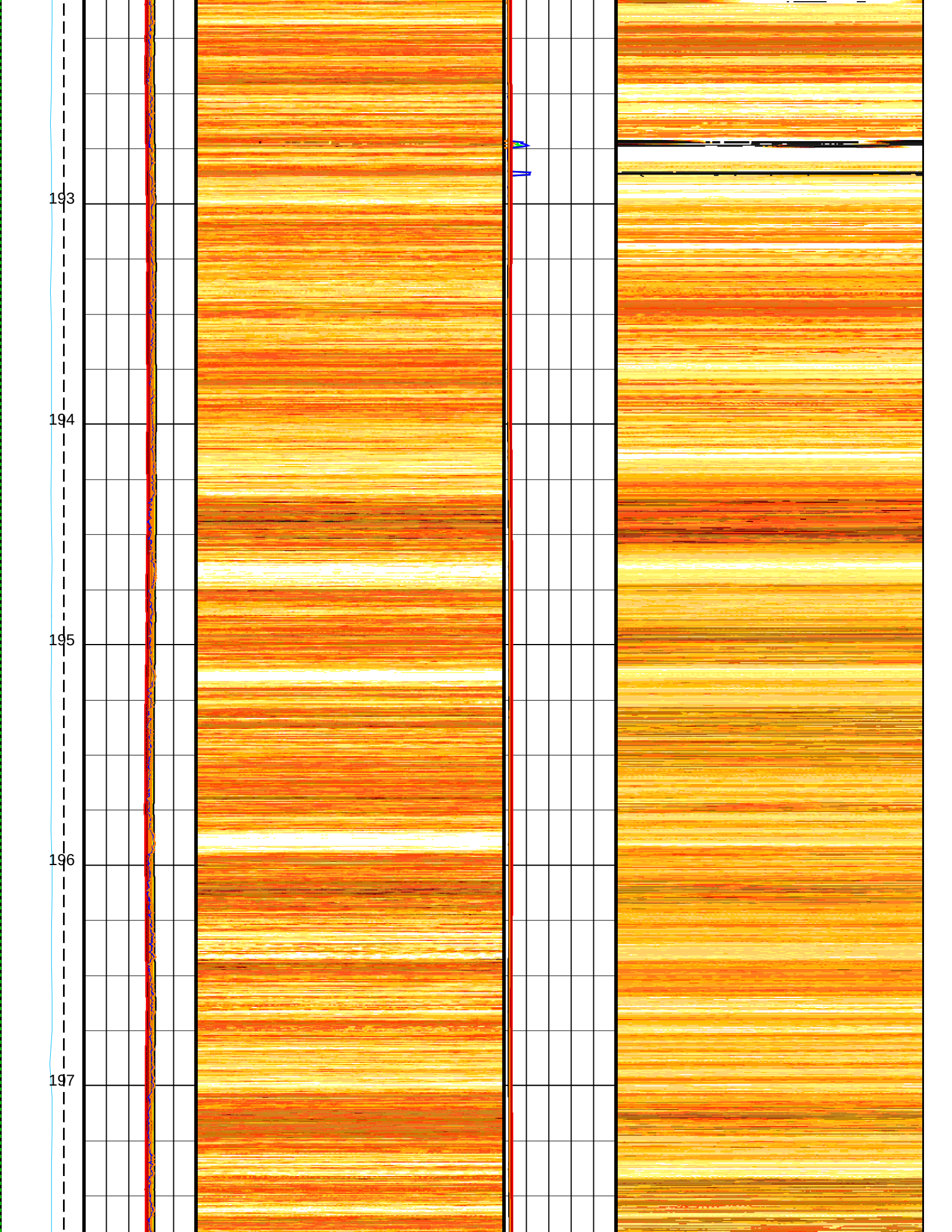
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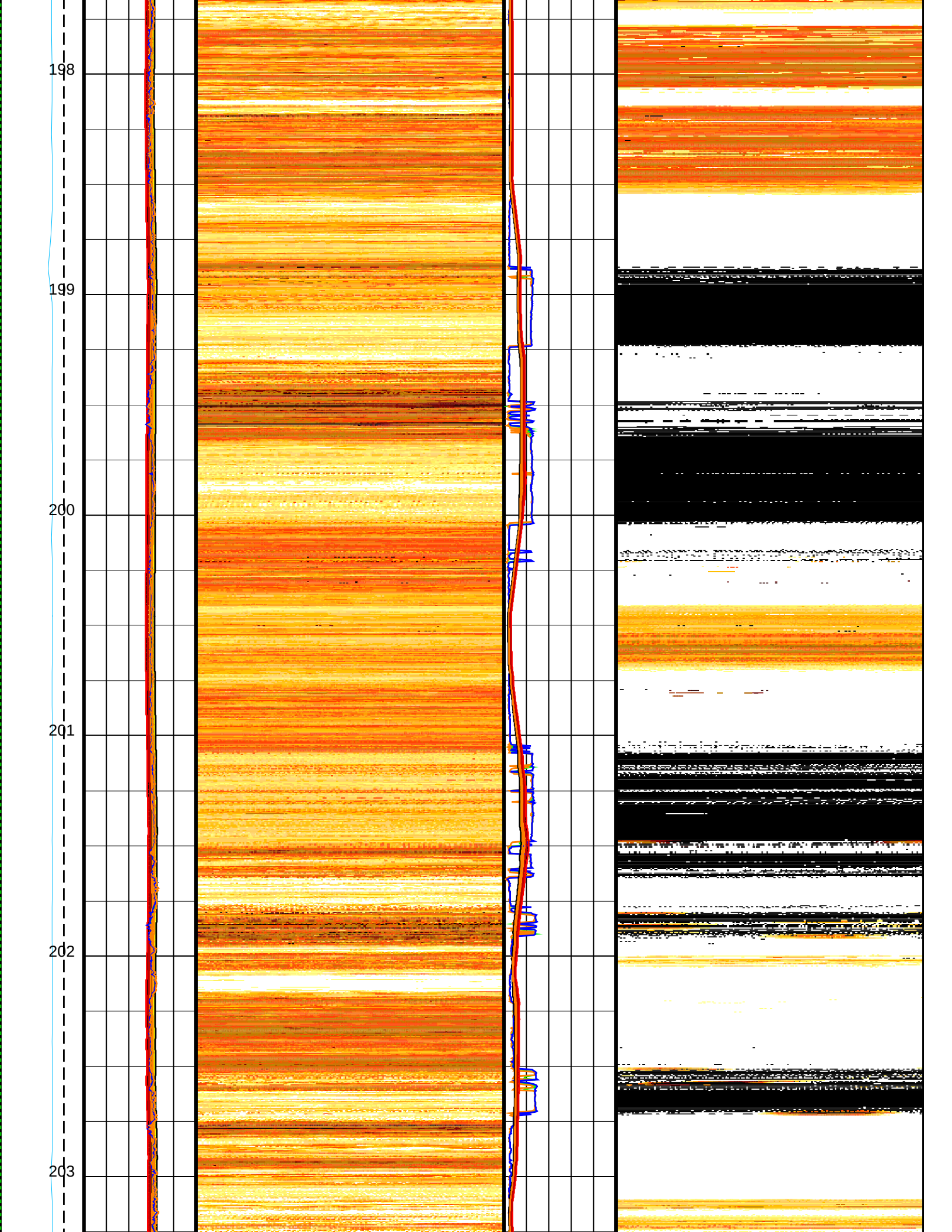
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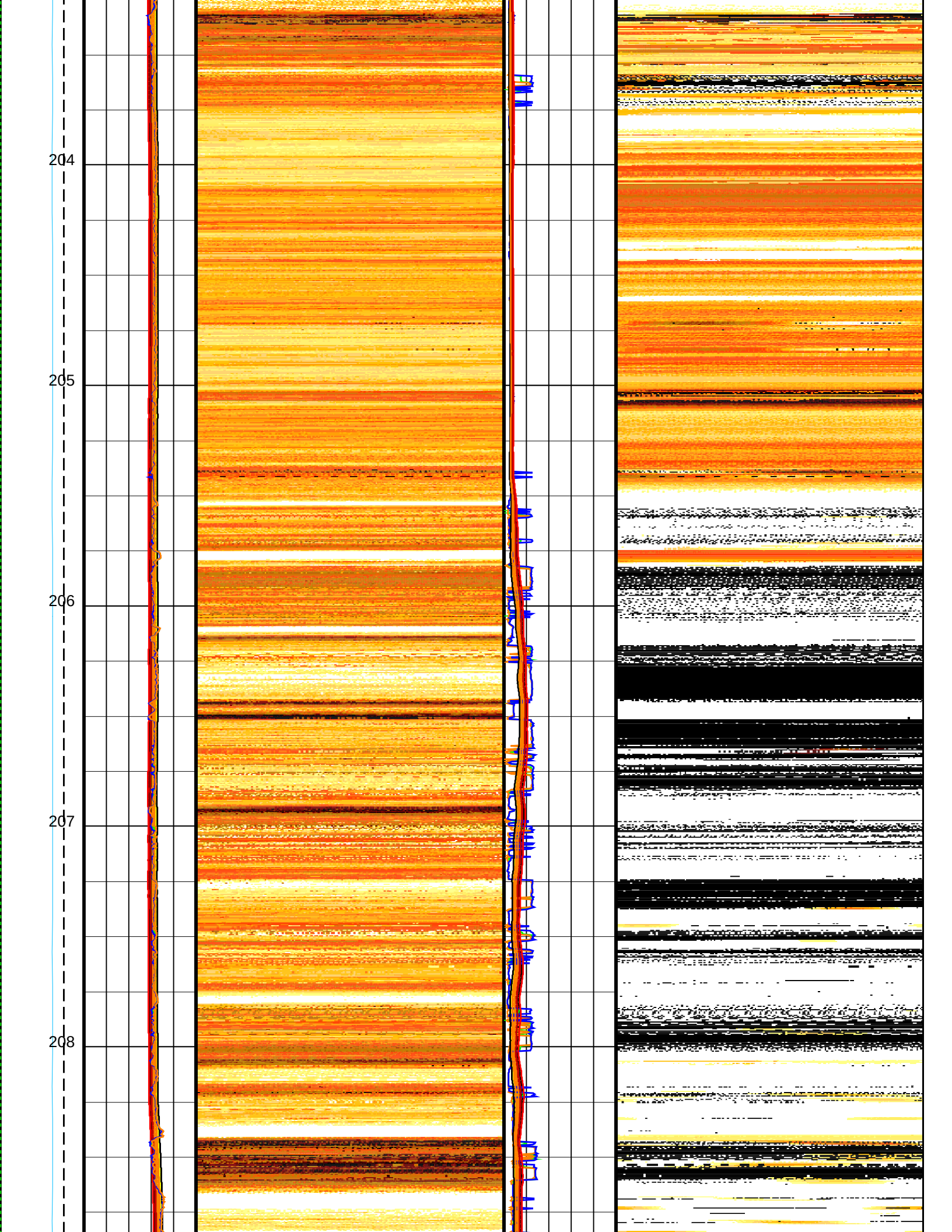
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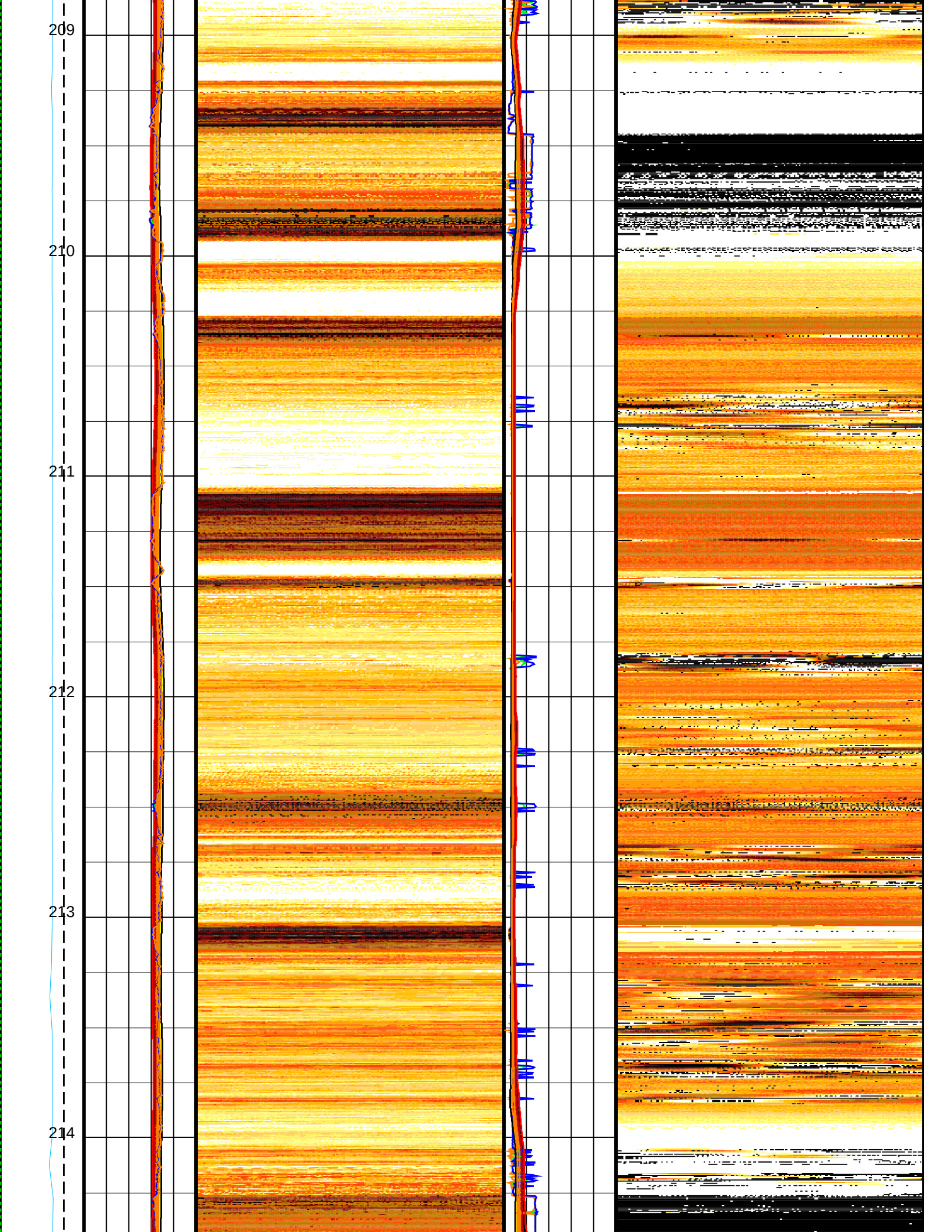
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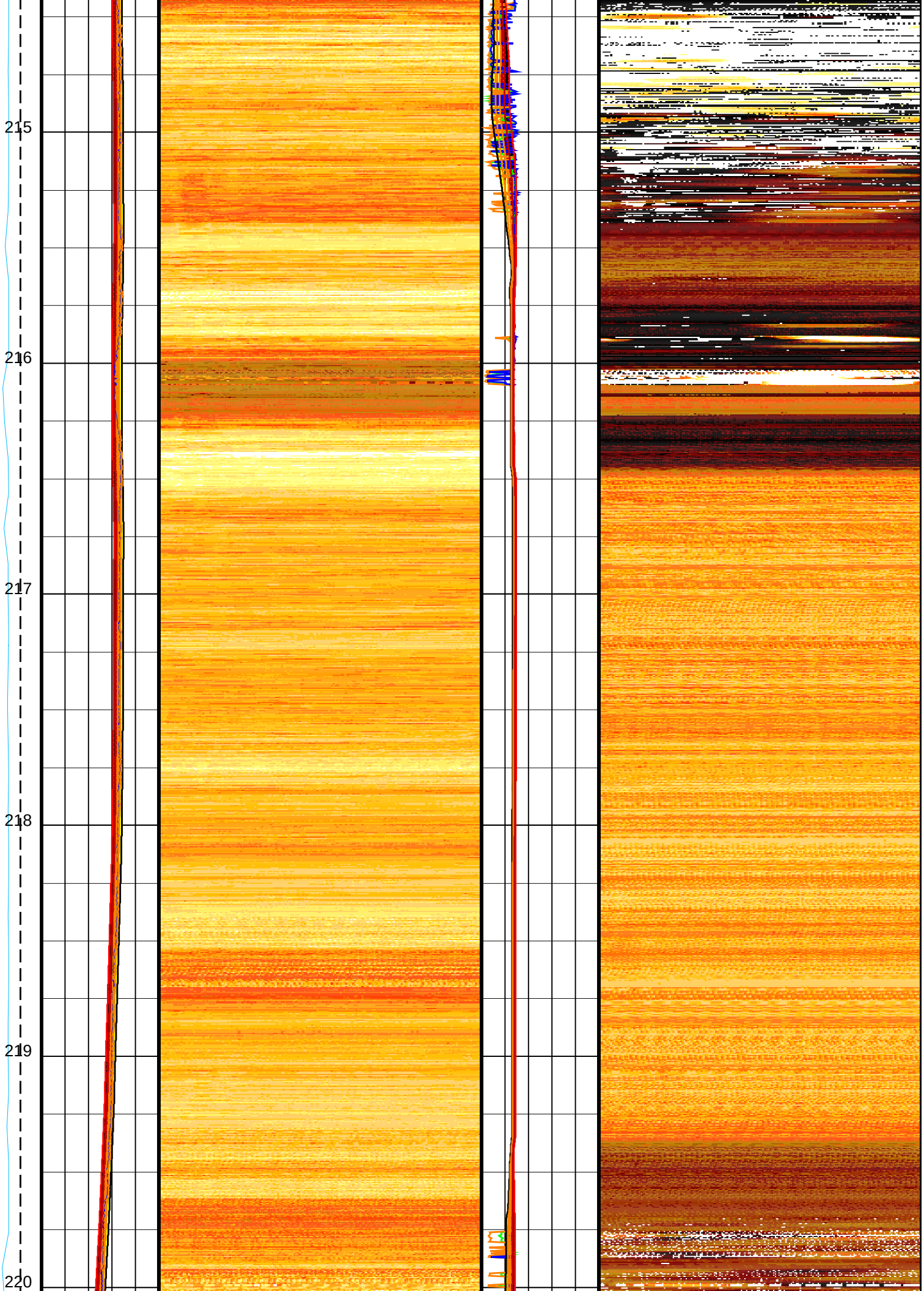
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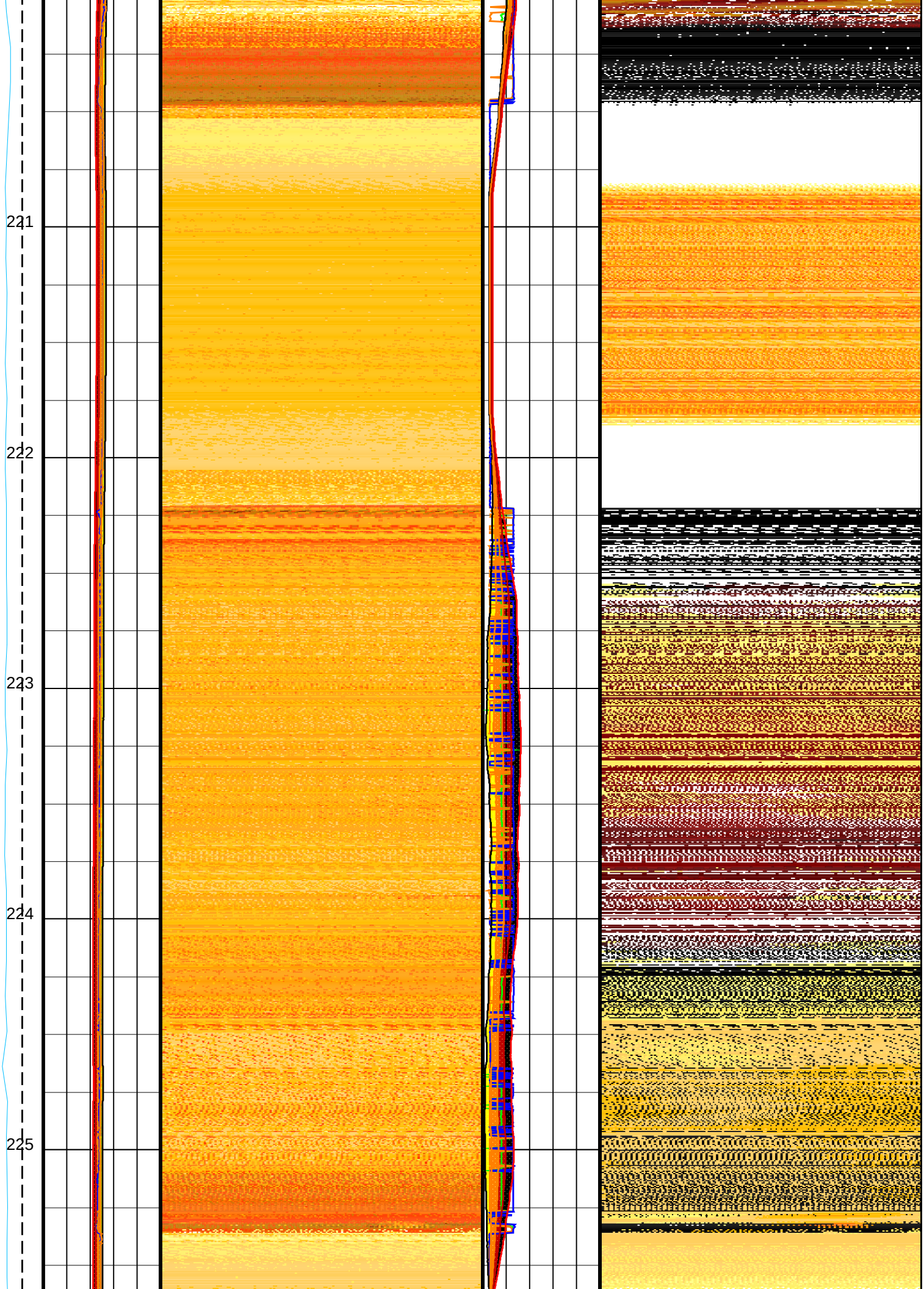
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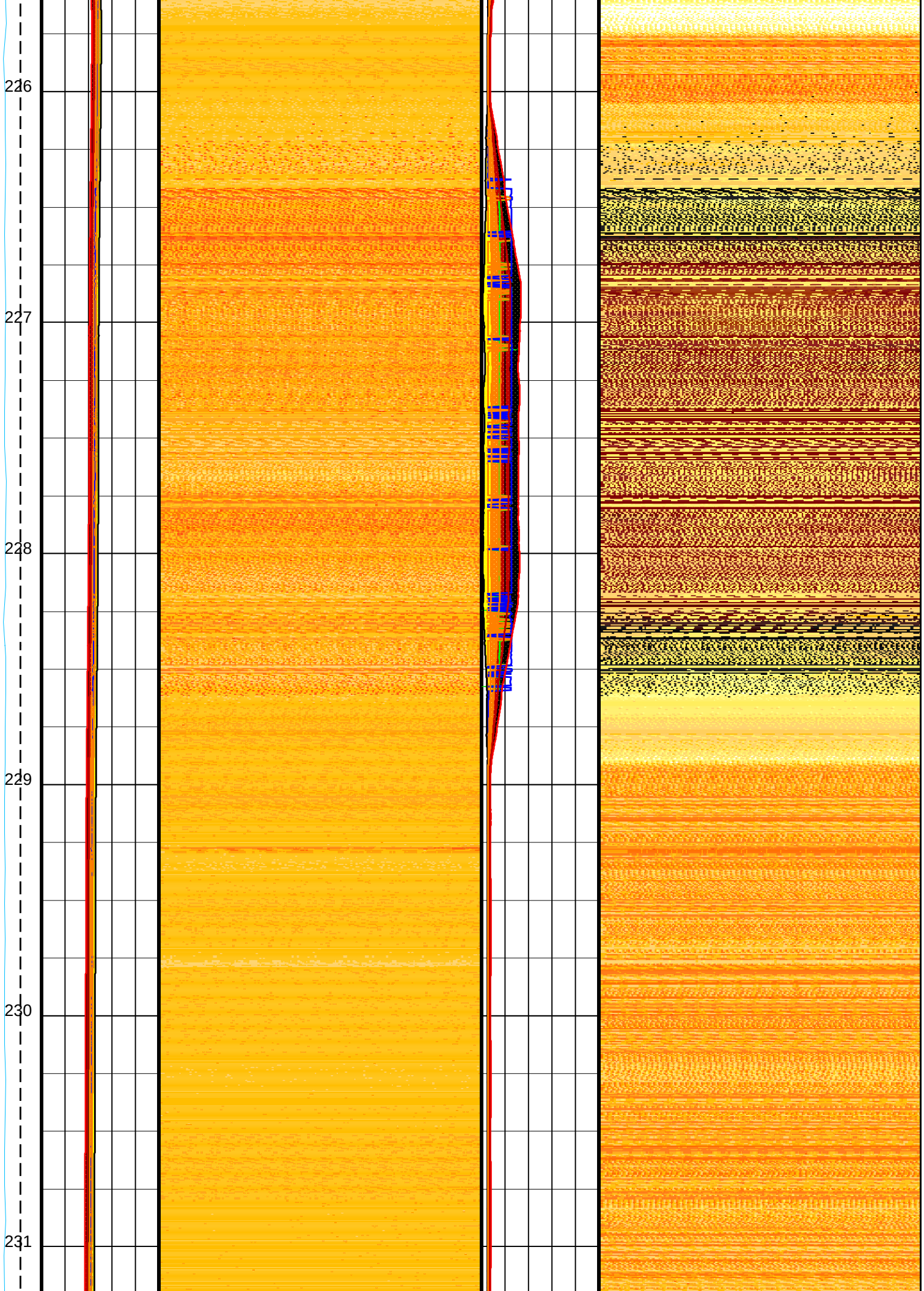
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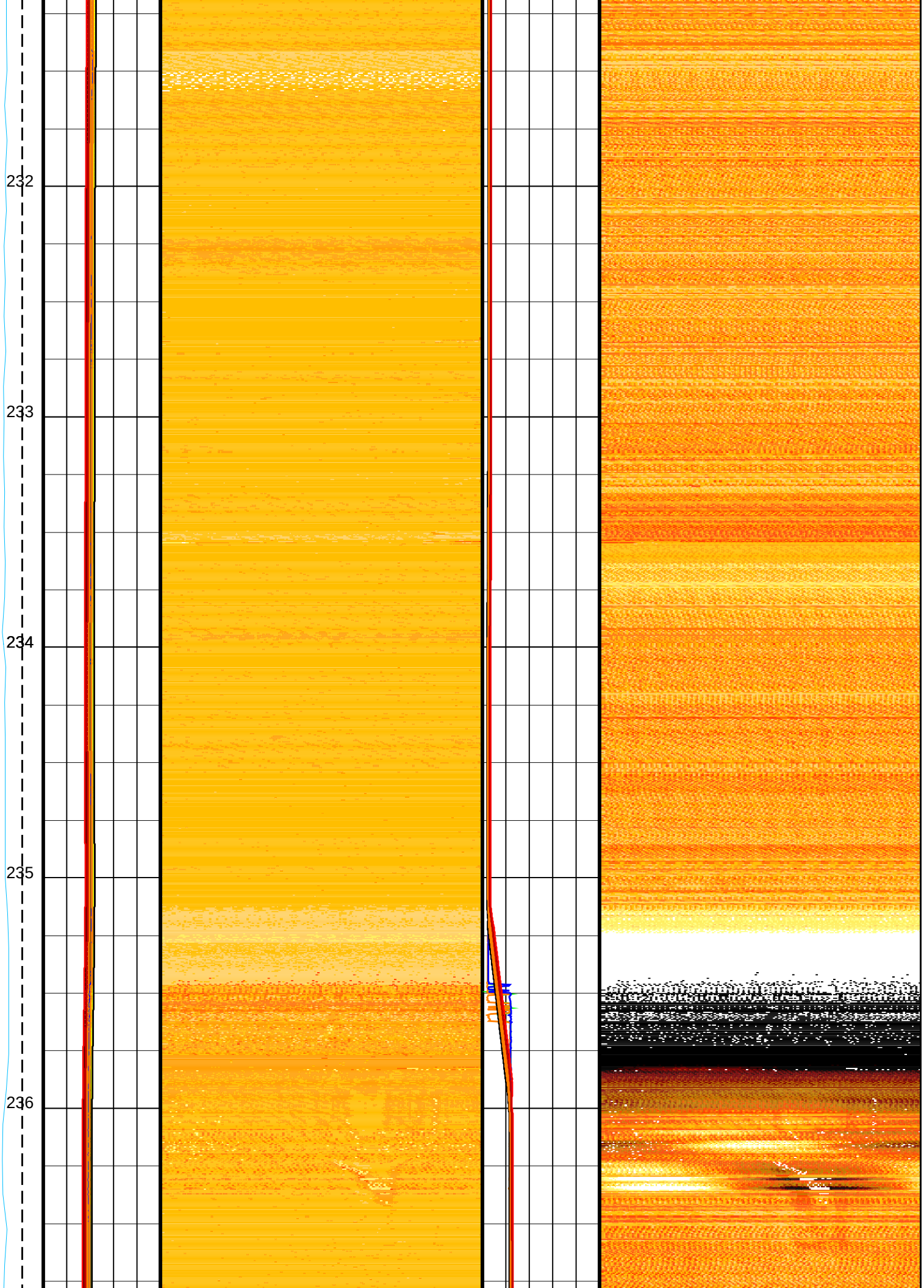
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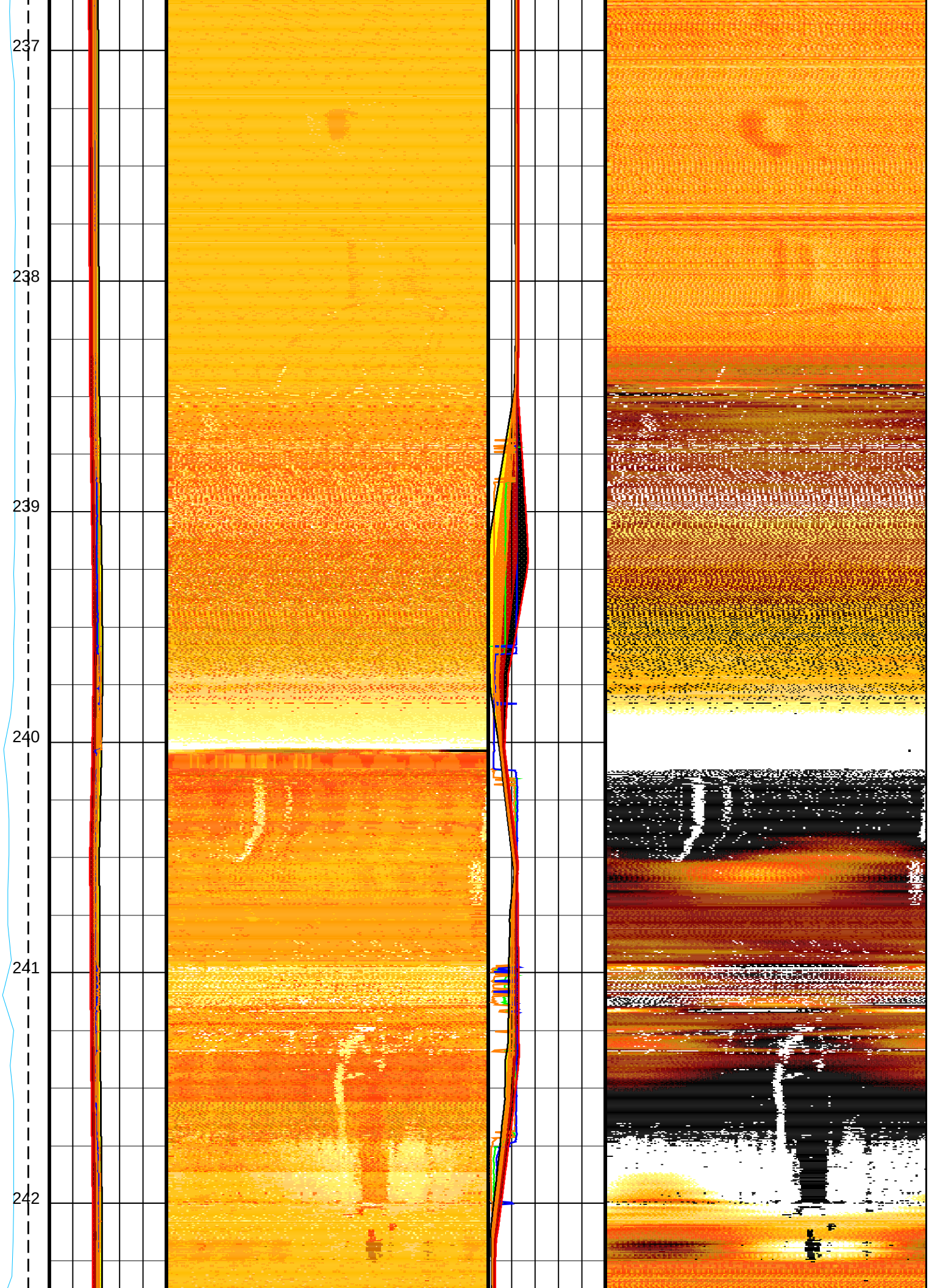
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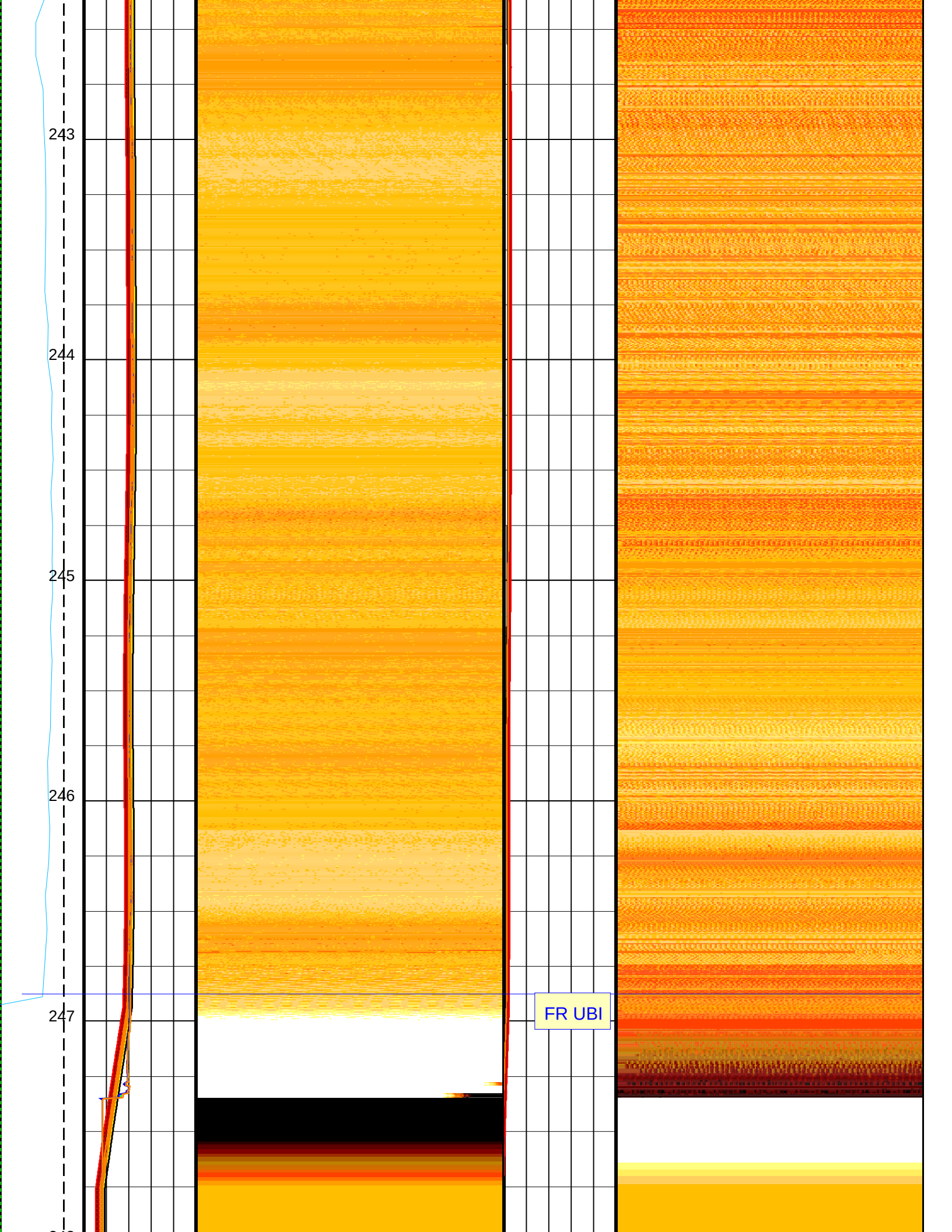
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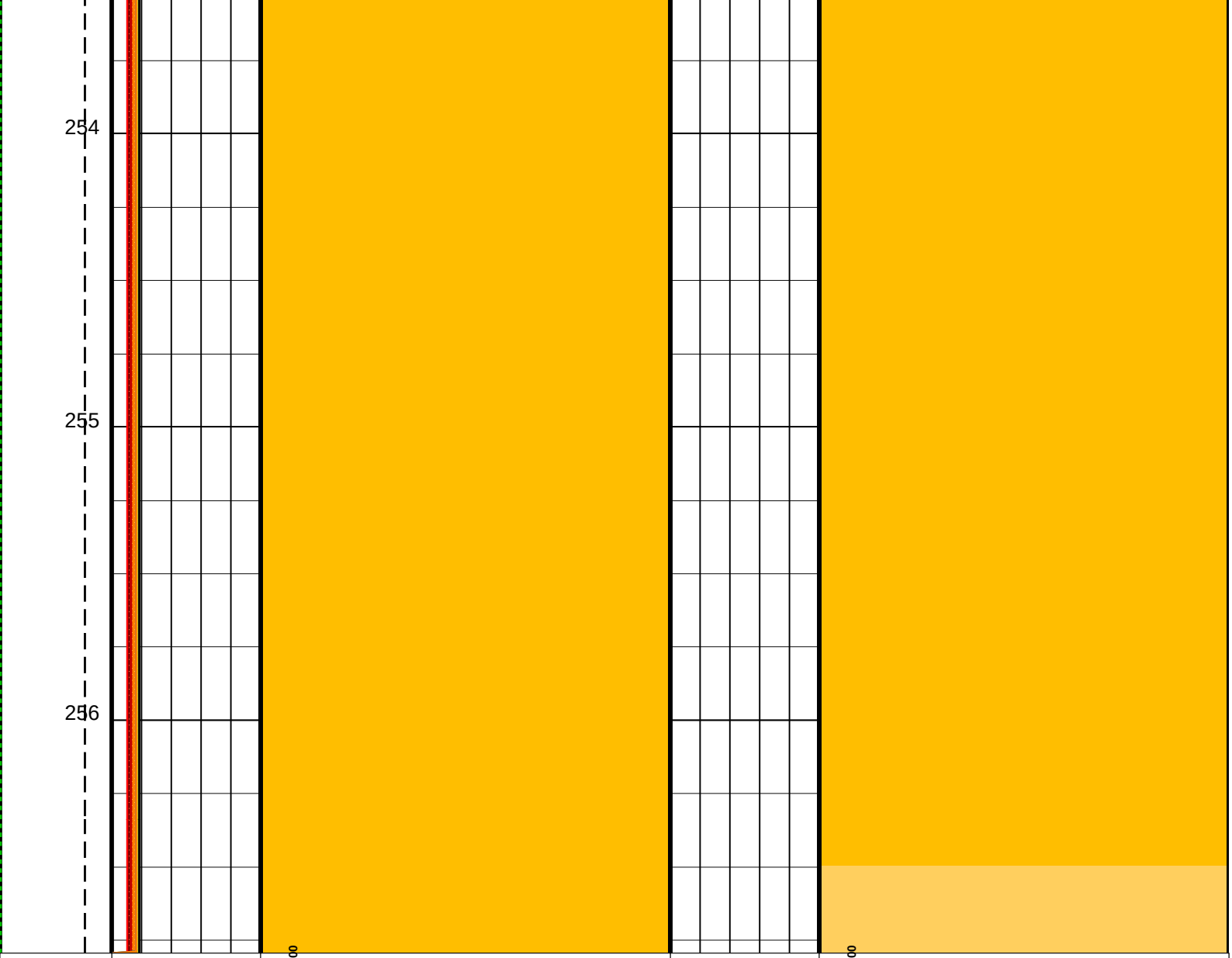


| | | | | |
|---|---|---|---|---|
| Rev. speed (RSAV) 6 (RPS) 8 | LOW Amplitude (FA25) 0 (DB) 50 | −500.0000 0.0000 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000 Corrected Amplitude (AWCN) (DB) | MEDIAN Radius (FTED) 4 (IN) 8 | −500.0000 0.0000 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000 Corrected transit time (TTCN) (US) |
| Cable Speed (CS) (M/HR) 0 150000 | Min. of Amplitude (UAMN) 0 (DB) 50 | | Radius LOW (FT25) 4 (IN) 8 | |
| Fluid velocity (CFVL) (US/M) 450 750 | Maximum of Amplitude (UAMX) 0 (DB) 50 | | Radius HIGH (FT75) 4 (IN) 8 | |
| | MEDIAN of Amplitude (FAED) 0 (DB) 50 | | Radius min (UTMN) 4 (IN) 8 | |
| | HIGH Amplitude (FA75) 0 (DB) 50 | | Radius max (UTMX) 4 (IN) 8 | |

Format: UBI_Image Vertical Scale: 1:20 Graphics File Created: 29−Aug−2014 10:14

**OP System Version: 19C0−187**

| | | | |
|---|---|---|---|
| UBI−D | SRPC−5095−H2−2011−OP19 | GPIT−A/B | 19C0−187 |
| DTA−A | 19C0−187 | HRLT−B | 19C0−187 |
| HLDS | 19C0−187 | LDSC−B | 19C0−187 |
| HNGC−B | 19C0−187 | HNGS−BA | 19C0−187 |
| EDTC−B | SKK−5169−EDTCB | | |

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| | UBI−D: Ultrasonic Borehole Imager − D | | |
| AAMN | Automatic Amplitude Minimum Scale | 2 | DB |
| ANGO | Angular Offset | −17 | DEG |
| ATMN | Automatic Transit Time Minimum Scale | 2 | US |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| ECRL | Eccentering Correction Level | FIRST | |
| ERDB | Eccentering Rejection | 12 | DB |
| FDOS | FVEL Depth Offset | 0 | M |
| FMOS | FVEL Measurement Offset | 0 | US/F |
| GCSW | Gain Correction | ON | |
| IMAR | Image Rotation | OFF | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| NBCD | Color Correction Depth Level | 80 | |
| NBLD | Eccentering Correction Depth Level | 1 | |
| NCDI | Noise Correction Depth Interval | 30 | |
| PNSW | Processing Noise Correction | ON | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| RJ60 | 60 Hz Correction | ON | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| UFON | UBI Flagging of Lost Echoes | OFF | |
| UGOS | UBI/UCI GPIT Offset | 3.63 | IN |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| | UHSV: UBI Hole Shape Analysis | | |
| AAMN | Automatic Amplitude Minimum Scale | 2 | DB |
| ANGO | Angular Offset | −17 | DEG |
| ATMN | Automatic Transit Time Minimum Scale | 2 | US |
| CSID | Casing Inner Diameter | 4 | IN |
| DCMN | Window Decrement Down | 0.8 | |
| DCMX | Window Decrement Up | 0.6 | |
| DFVL | Default Fluid Velocity | 206 | US/F |
| DOT | Diameter of Tool | 1.85 | IN |
| ECRL | Eccentering Correction Level | FIRST | |
| ERDB | Eccentering Rejection | 12 | DB |
| FDOS | FVEL Depth Offset | 0 | M |
| FMOS | FVEL Measurement Offset | 0 | US/F |
| GCSW | Gain Correction | ON | |
| IMAR | Image Rotation | OFF | |
| LIM1 | Minimum Limit Control | AUTO | |
| LIM2 | Maximum Limit Control | MANUAL | |
| NBCD | Color Correction Depth Level | 80 | |
| NBLD | Eccentering Correction Depth Level | 1 | |
| NCDI | Noise Correction Depth Interval | 30 | |
| PNSW | Processing Noise Correction | ON | |
| RCSO | Reference Calibrator Standoff | 0.795 | IN |
| RJ60 | 60 Hz Correction | ON | |
| SWLV | Sliding Window Minimum | Inh_18us | |
| SWMX | Sliding Window Maximum | Inh_167us | |
| UFON | UBI Flagging of Lost Echoes | OFF | |
| UGOS | UBI/UCI GPIT Offset | 3.63 | IN |
| USTO | Ultrasonic Time Offset | −3 | US |
| USUB | UBI Sub Identifier | Sub_5_inch | |
| UWKM | Current Working Mode | UBI3_SW250_180_1 | |
| | System and Miscellaneous | | |
| BS | Bit Size | 9.875 | IN |
| DO | Depth Offset for Playback | −4777.3 | M |
| PP | Playback Processing | RECOMPUTE | |

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | UBI_HRLA_LDL_NGS_014LUP | FN:15 | PRODUCER | 25−Aug−2014 03:32 | 5033.8 M | 4770.3 M |

## Output DLIS Files

Schlumberger

# Calibrations

MAXIS Field Log

Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|---|---|---|---|---|---|---|---|
| General Purpose Inclinometer Wellsite Calibration − CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY | | | | | | | |
| Before: 24−Aug−2014 22:03 | | | | | | | |
| TEMPERATURE REFERENCE : | N/A | N/A | 20 | N/A | N/A | N/A | DEGC |
| YEAR OF CALIBRATION : | N/A | N/A | 92 | N/A | N/A | N/A | |
| MONTH OF CALIBRATION : | N/A | N/A | 10 | N/A | N/A | N/A | |
| SERIAL NUMBER : | N/A | N/A | 448 | N/A | N/A | N/A | |
| General Purpose Inclinometer Wellsite Calibration − CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY | | | | | | | |
| Before: 24−Aug−2014 22:03 | | | | | | | |
| TEMPERATURE REFERENCE : | N/A | N/A | 19 | N/A | N/A | N/A | DEGC |
| YEAR OF CALIBRATION : | N/A | N/A | 99 | N/A | N/A | N/A | |
| MONTH OF CALIBRATION : | N/A | N/A | 12 | N/A | N/A | N/A | |
| SERIAL NUMBER : | N/A | N/A | 428 | N/A | N/A | N/A | |
| High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01 | | | | | | | |
| Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55 | | | | | | | |
| HRLT M0−M1 Voltage Plus − 0 | 0 | N/A | −319.4 | −318.7 | 0.7007 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 1 | 0 | N/A | −336.3 | −329.0 | 7.314 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 2 | 0 | N/A | −336.4 | −331.9 | 4.502 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 3 | 0 | N/A | −339.3 | −335.8 | 3.577 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 4 | 0 | N/A | −326.9 | −325.3 | 1.629 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 5 | 0 | N/A | −322.8 | −321.8 | 1.008 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 6 | 0 | N/A | 326.2 | 321.0 | −5.168 | 9.681 | UV |
| HRLT M0−M1 Voltage Plus − 7 | 0 | N/A | −322.7 | −322.7 | 0 | 9.681 | UV |
| High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12 | | | | | | | |
| Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55 | | | | | | | |
| HRLT M1−M2 Voltage Plus − 0 | 0 | N/A | 1756 | 1754 | −1.872 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 1 | 0 | N/A | 1850 | 1814 | −35.63 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 2 | 0 | N/A | 1844 | 1823 | −20.64 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 3 | 0 | N/A | 1859 | 1843 | −15.84 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 4 | 0 | N/A | 1791 | 1785 | −5.805 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 5 | 0 | N/A | 1769 | 1766 | −2.834 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 6 | 0 | N/A | −1803 | −1779 | 24.19 | 53.42 | UV |
| HRLT M1−M2 Voltage Plus − 7 | 0 | N/A | 1781 | 1781 | 0 | 53.42 | UV |
| High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23 | | | | | | | |
| Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55 | | | | | | | |
| HRLT M2−M3 Voltage Plus − 0 | 0 | N/A | 1741 | 1739 | −1.891 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 1 | 0 | N/A | 1847 | 1812 | −35.19 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 2 | 0 | N/A | 1842 | 1822 | −20.24 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 3 | 0 | N/A | 1861 | 1846 | −15.88 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 4 | 0 | N/A | 1786 | 1780 | −5.876 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 5 | 0 | N/A | 1766 | 1763 | −3.092 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 6 | 0 | N/A | −1789 | −1766 | 23.21 | 53.42 | UV |
| HRLT M2−M3 Voltage Plus − 7 | 0 | N/A | 1781 | 1781 | 0 | 53.42 | UV |
| High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34 | | | | | | | |
| Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55 | | | | | | | |
| HRLT A3−A4 Voltage Plus − 0 | 0 | N/A | 68500 | 68380 | −120.4 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 1 | 0 | N/A | 72430 | 71040 | −1393 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 2 | 0 | N/A | 72530 | 71720 | −814.2 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 3 | 0 | N/A | 73560 | 72910 | −642.1 | 2100 | UV |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A3−A4 Voltage Plus − 4 | 0 | N/A | 70580 | 70310 | −273.4 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 5 | 0 | N/A | 69760 | 69610 | −143.7 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 6 | 0 | N/A | −69150 | −68220 | 934.4 | 2100 | UV |
| HRLT A3−A4 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A4−A5 Voltage Plus − 0 | 0 | N/A | 68780 | 68650 | −122.9 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 1 | 0 | N/A | 72820 | 71410 | −1416 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 2 | 0 | N/A | 72900 | 72080 | −819.9 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 3 | 0 | N/A | 73910 | 73250 | −652.0 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 4 | 0 | N/A | 70880 | 70600 | −288.1 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 5 | 0 | N/A | 70050 | 69900 | −147.6 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 6 | 0 | N/A | −69520 | −68590 | 930.9 | 2100 | UV |
| HRLT A4−A5 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT A5−A6 Voltage Plus − 0 | 0 | N/A | 68680 | 68550 | −126.1 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 1 | 0 | N/A | 72540 | 71130 | −1411 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 2 | 0 | N/A | 72660 | 71840 | −814.2 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 3 | 0 | N/A | 73720 | 73040 | −675.5 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 4 | 0 | N/A | 70740 | 70460 | −275.4 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 5 | 0 | N/A | 69940 | 69780 | −160.5 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 6 | 0 | N/A | −69240 | −68330 | 911.0 | 2100 | UV |
| HRLT A5−A6 Voltage Plus − 7 | 0 | N/A | 70000 | 70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Torpedo−M0 Voltage − 0 | 0 | N/A | −68330 | −68220 | 113.2 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 1 | 0 | N/A | −72880 | −71460 | 1425 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 2 | 0 | N/A | −72970 | −72120 | 853.2 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 3 | 0 | N/A | −74000 | −73330 | 670.5 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 4 | 0 | N/A | −70940 | −70660 | 277.7 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 5 | 0 | N/A | −70090 | −69930 | 152.7 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 6 | 0 | N/A | 69530 | 68590 | −939.2 | 2100 | UV |
| HRLT Torpedo−M0 Voltage − 7 | 0 | N/A | −70000 | −70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Bridle#9−M0 Voltage − 0 | 0 | N/A | −68340 | −68220 | 115.0 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 1 | 0 | N/A | −72870 | −71420 | 1452 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 2 | 0 | N/A | −72960 | −72110 | 852.5 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 3 | 0 | N/A | −73980 | −73320 | 669.1 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 4 | 0 | N/A | −70930 | −70660 | 271.3 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 5 | 0 | N/A | −70080 | −69930 | 150.2 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 6 | 0 | N/A | 69510 | 68570 | −945.8 | 2100 | UV |
| HRLT Bridle#9−M0 Voltage − 7 | 0 | N/A | −70000 | −70000 | 0 | 2100 | UV |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Source Current Plus − 0 | 0 | N/A | 284.9 | 284.5 | −0.4226 | 8.520 | UA |
| HRLT Source Current Plus − 1 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 2 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 3 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 4 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 5 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 6 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |
| HRLT Source Current Plus − 7 | 0 | N/A | 281.1 | 281.1 | 0 | 8.520 | UA |

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 25−Aug−2014 2:12 After: 25−Aug−2014 8:55

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HRLT Vertical Voltage Pl − 0 | 0 | N/A | −321.7 | −321.2 | 0.4447 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 1 | 0 | N/A | −330.8 | −324.2 | 6.586 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 2 | 0 | N/A | −329.8 | −326.1 | 3.764 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 3 | 0 | N/A | −330.8 | −327.9 | 2.970 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 4 | 0 | N/A | −315.8 | −314.6 | 1.220 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 5 | 0 | N/A | −326.8 | −326.1 | 0.6814 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 6 | 0 | N/A | 333.9 | 329.1 | −4.743 | 9.681 | UV |
| HRLT Vertical Voltage Pl − 7 | 0 | N/A | −322.7 | −322.7 | 0 | 9.681 | UV |

Hostile Litho−Density Sonde Wellsite Calibration − Background Measurement
Master: 16−Jul−2014 4:36 Before: 24−Aug−2014 22:09 After: 25−Aug−2014 8:58

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SS Cs Resolution Bkg | 9.000 | 8.061 | 8.041 | 8.006 | −0.03465 | 1.800 | % |
| LS Cs Resolution Bkg | 9.000 | 8.137 | 8.216 | 8.157 | −0.05867 | 1.800 | % |
| LSW1 Background | 100.0 | 69.74 | 69.00 | 68.33 | −0.6711 | 3.000 | CPS |
| LSW2 Background | 100.0 | 63.61 | 63.74 | 64.22 | 0.4845 | 3.000 | CPS |
| LSW3 Background | 200.0 | 141.8 | 142.2 | 138.7 | −3.499 | 6.000 | CPS |
| LSW4 Background | 250.0 | 172.4 | 173.4 | 172.2 | −1.228 | 7.500 | CPS |
| LSW5 Background | 600.0 | 395.0 | 393.4 | 393.9 | 0.5004 | 18.00 | CPS |
| SSW1 Background | 100.0 | 78.54 | 77.45 | 77.02 | −0.4337 | 3.000 | CPS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SSW2 Background | 200.0 | 139.1 | 137.9 | 138.6 | 0.6754 | 6.000 | CPS |
| SSW3 Background | 500.0 | 371.9 | 373.8 | 371.5 | −2.302 | 15.00 | CPS |
| SSW4 Background | 270.0 | 195.4 | 194.9 | 195.1 | 0.2168 | 8.100 | CPS |
| SSW5 Background | 200.0 | 142.5 | 141.3 | 140.9 | −0.4190 | 6.000 | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement
Master: 16−Jul−2014 5:05

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LSW1 Aluminum | 600.0 | 508.4 | N/A | N/A | N/A | N/A | CPS |
| LSW2 Aluminum | 900.0 | 733.7 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Aluminum | 1100 | 883.4 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Aluminum | 580.0 | 447.4 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Aluminum | 570.0 | 407.5 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Aluminum | 2800 | 2389 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Aluminum | 8000 | 6455 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Aluminum | 11600 | 8951 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Aluminum | 5000 | 3637 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Aluminum | 660.0 | 442.1 | N/A | N/A | N/A | N/A | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement
Master: 16−Jul−2014 4:57

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LSW1 Iron | 400.0 | 349.8 | N/A | N/A | N/A | N/A | CPS |
| LSW2 Iron | 730.0 | 590.1 | N/A | N/A | N/A | N/A | CPS |
| LSW3 Iron | 1000 | 785.3 | N/A | N/A | N/A | N/A | CPS |
| LSW4 Iron | 520.0 | 408.9 | N/A | N/A | N/A | N/A | CPS |
| LSW5 Iron | 470.0 | 376.5 | N/A | N/A | N/A | N/A | CPS |
| SSW1 Iron | 2100 | 1743 | N/A | N/A | N/A | N/A | CPS |
| SSW2 Iron | 6800 | 5378 | N/A | N/A | N/A | N/A | CPS |
| SSW3 Iron | 10800 | 8163 | N/A | N/A | N/A | N/A | CPS |
| SSW4 Iron | 4600 | 3323 | N/A | N/A | N/A | N/A | CPS |
| SSW5 Iron | 580.0 | 390.1 | N/A | N/A | N/A | N/A | CPS |

Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration
Before: 17−Jul−2014 5:38

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HLDS Caliper Small Ring | 12.00 | N/A | 15.84 | N/A | N/A | N/A | IN |
| HLDS Caliper Large Ring | 15.19 | N/A | 19.69 | N/A | N/A | N/A | IN |

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check
Master: 15−Jul−2014 0:16 Before: 24−Aug−2014 22:10 After: 25−Aug−2014 8:59

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Na 511 Peak Loc | 40.00 | 39.57 | 39.31 | 39.37 | 0.06061 | 1.000 | |
| Na 511 Peak Res | 15.50 | 15.78 | 17.01 | 15.71 | −1.307 | 2.000 | % |
| High Voltage | 1150 | 1197 | 1191 | 1185 | −5.825 | N/A | V |
| Na 1785 Peak Loc | 142.6 | 142.4 | 141.4 | 140.8 | −0.6519 | 7.000 | |
| Na 1785 Peak Res | 8.500 | 9.334 | 9.293 | 9.752 | 0.4594 | 2.000 | % |
| Temperature | 15.50 | 37.42 | 37.84 | 33.92 | −3.928 | N/A | DEGC |
| Na Count Rate | 45.00 | 10.91 | 9.923 | 10.84 | 0.9130 | 8.000 | CPS |

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: 15−Jul−2014 0:16 Before: 24−Aug−2014 22:10 After: 25−Aug−2014 8:59

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Na 511 Peak Loc | 40.00 | 39.46 | 39.55 | 39.57 | 0.01600 | 1.000 | |
| Na 511 Peak Res | 15.50 | 16.20 | 16.79 | 17.06 | 0.2669 | 2.000 | % |
| High Voltage | 1150 | 1129 | 1126 | 1118 | −7.509 | N/A | V |
| Na 1785 Peak Loc | 142.6 | 141.8 | 141.2 | 139.9 | −1.267 | 7.000 | |
| Na 1785 Peak Res | 8.500 | 10.06 | 9.288 | 9.578 | 0.2898 | 2.000 | % |
| Temperature | 15.50 | 38.37 | 38.39 | 35.87 | −2.523 | N/A | DEGC |
| Na Count Rate | 45.00 | 11.54 | 10.32 | 11.05 | 0.7369 | 8.000 | CPS |

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: 15−Jul−2014 0:16 Before: 24−Aug−2014 22:10 After: 25−Aug−2014 8:59

| | | | | | | |
|---|---|---|---|---|---|---|
| Coincidence Count Rate Ratio | 1.000 | 0.9495 | 0.9636 | 0.9743 | 0.01068 | 0.05000 |

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: 24−Aug−2014 22:07

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EDTC Z−Axis Acceleration | 9.810 | N/A | 9.740 | N/A | N/A | N/A | M/S2 |

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 24−Aug−2014 22:08 After: 25−Aug−2014 8:56

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gamma Ray (Jig − Bkg) | 163.3 | N/A | 163.3 | 158.4 | −4.824 | 14.84 | GAPI |
| Gamma Ray (Calibrated) | 165.0 | N/A | 165.0 | 160.1 | −4.875 | 15.00 | GAPI |

General Purpose Inclinometer / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| GPIT Cartridge − A | GPIC − A | 719 |

Auxiliary Equipment:

| | | |
|---|---|---|
| GPIT Housing | GPIH − A | 2864 |

High Resolution Laterolog Array − B / Equipment Identification

| | |
|---|---|
| Primary Equipment: | |
| HRLT Sonde | HRLS − B |
| Auxiliary Equipment: | |
| HRLT lower Housing | HRLH − B |
| HRLT Lower Cartridge | HRLC − B |
| HRLT upper Housing | HRUH − B |
| HRLT Upper Cartridge | HRUC − B |

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M01

| Idx | Phase | HRLT M0−M1 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −319.4 | −322.7 | −280.7 | −379.7 |
| | After | | −318.7 | | | |
| 1 | Before | | −336.3 | −322.7 | −280.7 | −379.7 |
| | After | | −329.0 | | | |
| 2 | Before | | −336.4 | −322.7 | −280.7 | −379.7 |
| | After | | −331.9 | | | |
| 3 | Before | | −339.3 | −322.7 | −280.7 | −379.7 |
| | After | | −335.8 | | | |
| 4 | Before | | −326.9 | −322.7 | −280.7 | −379.7 |
| | After | | −325.3 | | | |
| 5 | Before | | −322.8 | −322.7 | −280.7 | −379.7 |
| | After | | −321.8 | | | |
| 6 | Before | | 326.2 | 322.7 | 379.7 | 280.7 |
| | After | | 321.0 | | | |
| 7 | Before | | −322.7 | −322.7 | −280.7 | −379.7 |
| | After | | −322.7 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

| Idx | Phase | HRLT M1−M2 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 1756 | 1781 | 2095 | 1549 |
| | After | | 1754 | | | |
| 1 | Before | | 1850 | 1781 | 2095 | 1549 |
| | After | | 1814 | | | |
| 2 | Before | | 1844 | 1781 | 2095 | 1549 |
| | After | | 1823 | | | |
| 3 | Before | | 1859 | 1781 | 2095 | 1549 |
| | After | | 1843 | | | |
| 4 | Before | | 1791 | 1781 | 2095 | 1549 |
| | After | | 1785 | | | |
| 5 | Before | | 1769 | 1781 | 2095 | 1549 |
| | After | | 1766 | | | |
| 6 | Before | | −1803 | −1781 | −1549 | −2095 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | After | | −1779 | | | |
| 7 | Before | | 1781 | 1781 | 2095 | 1549 |
| | After | | 1781 | | | |
| | (Minimum) (Nominal) (Maximum) | | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

| Idx | Phase | HRLT M2−M3 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 1741 | 1781 | 2095 | 1549 |
| | After | | 1739 | | | |
| 1 | Before | | 1847 | 1781 | 2095 | 1549 |
| | After | | 1812 | | | |
| 2 | Before | | 1842 | 1781 | 2095 | 1549 |
| | After | | 1822 | | | |
| 3 | Before | | 1861 | 1781 | 2095 | 1549 |
| | After | | 1846 | | | |
| 4 | Before | | 1786 | 1781 | 2095 | 1549 |
| | After | | 1780 | | | |
| 5 | Before | | 1766 | 1781 | 2095 | 1549 |
| | After | | 1763 | | | |
| 6 | Before | | −1789 | −1781 | −1549 | −2095 |
| | After | | −1766 | | | |
| 7 | Before | | 1781 | 1781 | 2095 | 1549 |
| | After | | 1781 | | | |
| | (Minimum) (Nominal) (Maximum) | | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

| Idx | Phase | HRLT A3−A4 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68500 | 70000 | 82360 | 60900 |
| | After | | 68380 | | | |
| 1 | Before | | 72430 | 70000 | 82360 | 60900 |
| | After | | 71040 | | | |
| 2 | Before | | 72530 | 70000 | 82360 | 60900 |
| | After | | 71720 | | | |
| 3 | Before | | 73560 | 70000 | 82360 | 60900 |
| | After | | 72910 | | | |
| 4 | Before | | 70580 | 70000 | 82360 | 60900 |
| | After | | 70310 | | | |
| 5 | Before | | 69760 | 70000 | 82360 | 60900 |
| | After | | 69610 | | | |
| 6 | Before | | −69150 | −70000 | −60900 | −82360 |
| | After | | −68220 | | | |
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | After | | 70000 | | | |
| | (Minimum) | (Nominal) | (Maximum) | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

| Idx | Phase | HRLT A4−A5 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68780 | 70000 | 82360 | 60900 |
| | After | | 68650 | | | |
| 1 | Before | | 72820 | 70000 | 82360 | 60900 |
| | After | | 71410 | | | |
| 2 | Before | | 72900 | 70000 | 82360 | 60900 |
| | After | | 72080 | | | |
| 3 | Before | | 73910 | 70000 | 82360 | 60900 |
| | After | | 73250 | | | |
| 4 | Before | | 70880 | 70000 | 82360 | 60900 |
| | After | | 70600 | | | |
| 5 | Before | | 70050 | 70000 | 82360 | 60900 |
| | After | | 69900 | | | |
| 6 | Before | | −69520 | −70000 | −60900 | −82360 |
| | After | | −68590 | | | |
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |
| | After | | 70000 | | | |
| | (Minimum) | (Nominal) | (Maximum) | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

| Idx | Phase | HRLT A5−A6 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 68680 | 70000 | 82360 | 60900 |
| | After | | 68550 | | | |
| 1 | Before | | 72540 | 70000 | 82360 | 60900 |
| | After | | 71130 | | | |
| 2 | Before | | 72660 | 70000 | 82360 | 60900 |
| | After | | 71840 | | | |
| 3 | Before | | 73720 | 70000 | 82360 | 60900 |
| | After | | 73040 | | | |
| 4 | Before | | 70740 | 70000 | 82360 | 60900 |
| | After | | 70460 | | | |
| 5 | Before | | 69940 | 70000 | 82360 | 60900 |
| | After | | 69780 | | | |
| 6 | Before | | −69240 | −70000 | −60900 | −82360 |
| | After | | −68330 | | | |
| 7 | Before | | 70000 | 70000 | 82360 | 60900 |
| | After | | 70000 | | | |
| | (Minimum) | (Nominal) | (Maximum) | | | |

Before: 25−Aug−2014 2:12

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

| Idx | Phase | HRLT Torpedo−M0 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −68330 | −70000 | −60900 | −82360 |
| | After | | −68220 | | | |
| 1 | Before | | −72880 | −70000 | −60900 | −82360 |
| | After | | −71460 | | | |
| 2 | Before | | −72970 | −70000 | −60900 | −82360 |
| | After | | −72120 | | | |
| 3 | Before | | −74000 | −70000 | −60900 | −82360 |
| | After | | −73330 | | | |
| 4 | Before | | −70940 | −70000 | −60900 | −82360 |
| | After | | −70660 | | | |
| 5 | Before | | −70090 | −70000 | −60900 | −82360 |
| | After | | −69930 | | | |
| 6 | Before | | 69530 | 70000 | 82360 | 60900 |
| | After | | 68590 | | | |
| 7 | Before | | −70000 | −70000 | −60900 | −82360 |
| | After | | −70000 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

| Idx | Phase | HRLT Bridle#9−M0 Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −68340 | −70000 | −60900 | −82360 |
| | After | | −68220 | | | |
| 1 | Before | | −72870 | −70000 | −60900 | −82360 |
| | After | | −71420 | | | |
| 2 | Before | | −72960 | −70000 | −60900 | −82360 |
| | After | | −72110 | | | |
| 3 | Before | | −73980 | −70000 | −60900 | −82360 |
| | After | | −73320 | | | |
| 4 | Before | | −70930 | −70000 | −60900 | −82360 |
| | After | | −70660 | | | |
| 5 | Before | | −70080 | −70000 | −60900 | −82360 |
| | After | | −69930 | | | |
| 6 | Before | | 69510 | 70000 | 82360 | 60900 |
| | After | | 68570 | | | |
| 7 | Before | | −70000 | −70000 | −60900 | −82360 |
| | After | | −70000 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

| Idx | Phase | HRLT Source Current Plus UA | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | 284.9 | 284.0 | 334.1 | 247.0 |
| | After | | 284.5 | | | |
| 1 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 2 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 3 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 4 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 5 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 6 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| 7 | Before | | 281.1 | 281.1 | 330.7 | 244.4 |
| | After | | 281.1 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

| Idx | Phase | HRLT Vertical Voltage Plus UV | Value | Nominal | Maximum | Minimum |
|---|---|---|---|---|---|---|
| 0 | Before | | −321.7 | −322.7 | −280.7 | −379.7 |
| | After | | −321.2 | | | |
| 1 | Before | | −330.8 | −322.7 | −280.7 | −379.7 |
| | After | | −324.2 | | | |
| 2 | Before | | −329.8 | −322.7 | −280.7 | −379.7 |
| | After | | −326.1 | | | |
| 3 | Before | | −330.8 | −322.7 | −280.7 | −379.7 |
| | After | | −327.9 | | | |
| 4 | Before | | −315.8 | −322.7 | −280.7 | −379.7 |
| | After | | −314.6 | | | |
| 5 | Before | | −326.8 | −322.7 | −280.7 | −379.7 |
| | After | | −326.1 | | | |
| 6 | Before | | 333.9 | 322.7 | 379.7 | 280.7 |
| | After | | 329.1 | | | |
| 7 | Before | | −322.7 | −322.7 | −280.7 | −379.7 |
| | After | | −322.7 | | | |
| | | (Minimum) (Nominal) (Maximum) | | | | |

Before: 25−Aug−2014 2:12

After: 25−Aug−2014 8:55

Hostile Litho−Density Sonde / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| Hostile Litho Density Sonde | HLDS − D | 45 |
| Hostile Litho Density High Voltage | HLDV − D | 45 |
| Gamma Source Radioactive | GSR − Z | 8113 |

Auxiliary Equipment:

| | | |
|---|---|---|
| Hostile Litho Density Pad | HLDP − C | 45 |
| Hostile Litho Density High Voltage Housi | HEH − H | 47 |

Hostile Litho−Density Sonde Wellsite Calibration

Background Measurement

| Phase | SS Cs Resolution Bkg % | Value |
|---|---|---|
| Master | | 8.061 |
| Before | | 8.041 |
| After | | 8.006 |
| | 7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum) | |

| Phase | LS Cs Resolution Bkg % | Value |
|---|---|---|
| Master | | 8.137 |
| Before | | 8.216 |
| After | | 8.157 |
| | 7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum) | |

| Phase | LSW1 Background CPS | Value |
|---|---|---|
| Master | | 69.74 |
| Before | | 69.00 |
| After | | 68.33 |
| | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | |

| Phase | LSW2 Background CPS | Value |
|---|---|---|
| Master | | 63.61 |
| Before | | 63.74 |
| After | | 64.22 |
| | 50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum) | |

| Phase | LSW3 Background CPS | Value |
|---|---|---|
| Master | | 141.8 |
| Before | | 142.2 |
| After | | 138.7 |
| | 110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum) | |

| Phase | LSW4 Background CPS | Value |
|---|---|---|
| Master | | 172.4 |
| Before | | 173.4 |
| After | | 172.2 |
| | 140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum) | |

| Phase | LSW5 Background CPS | Value |
|---|---|---|
| Master | | 395.0 |
| Before | | 393.4 |
| After | | 393.9 |
| | 330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum) | |

| Phase | SSW1 Background CPS | Value |
|---|---|---|
| Master | | 78.54 |
| Before | | 77.45 |
| After | | 77.02 |
| | 55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum) | |

| Phase | SSW2 Background CPS | Value |
|---|---|---|
| Master | | 139.1 |
| Before | | 137.9 |
| After | | 138.6 |
| | 100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum) | |

| Phase | SSW3 Background CPS | Value |
|---|---|---|
| Master | | 371.9 |
| Before | | 373.8 |
| After | | 371.5 |
| | 280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum) | |

| Phase | SSW4 Background CPS | Value |
|---|---|---|
| Master | | 195.4 |
| Before | | 194.9 |
| After | | 195.1 |
| | 150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum) | |

| Phase | SSW5 Background CPS | Value |
|---|---|---|
| Master | | 142.5 |
| Before | | 141.3 |
| After | | 140.9 |
| | 110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum) | |

Master: 16−Jul−2014 4:36 Before: 24−Aug−2014 22:09 After: 25−Aug−2014 8:58

Litho−Density Spectroscopy Cartridge − B / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| LDSC Cartridge | LDSC − B | 521 |

Auxiliary Equipment:

| | | |
|---|---|---|
| LDSC Housing | LDSH − A | 319 |

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| HNGC Cartridge | HNGC − B | 300 |

Auxiliary Equipment:

| | | |
|---|---|---|
| HNGC Housing | HNGH − A | 115 |

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| HNGS Sonde | HNGS − BA | 194 |

Auxiliary Equipment:

| | | |
|---|---|---|
| HNGS Sonde Housing | HNSH − BA | 205 |
| Gamma Source Radioactive | GSR − U | 616008 |

## Hostile Natural Gamma Ray Sonde Wellsite Calibration

### Detector 1 Check

| Phase | Na 511 Peak Loc | Value |
|---|---|---|
| Master | | 39.57 |
| Before | | 39.31 |
| After | | 39.37 |
| 37.50 (Minimum) | 40.00 (Nominal) | 43.50 (Maximum) |

| Phase | Na 511 Peak Res % | Value |
|---|---|---|
| Master | | 15.78 |
| Before | | 17.01 |
| After | | 15.71 |
| 12.00 (Minimum) | 15.50 (Nominal) | 19.00 (Maximum) |

| Phase | High Voltage V | Value |
|---|---|---|
| Master | | 1197 |
| Before | | 1191 |
| After | | 1185 |
| 900.0 (Minimum) | 1150 (Nominal) | 1600 (Maximum) |

| Phase | Na 1785 Peak Loc | Value |
|---|---|---|
| Master | | 142.4 |
| Before | | 141.4 |
| After | | 140.8 |
| 135.0 (Minimum) | 142.6 (Nominal) | 150.3 (Maximum) |

| Phase | Na 1785 Peak Res % | Value |
|---|---|---|
| Master | | 9.334 |
| Before | | 9.293 |
| After | | 9.752 |
| 7.000 (Minimum) | 8.500 (Nominal) | 11.00 (Maximum) |

| Phase | Temperature DEGC | Value |
|---|---|---|
| Master | | 37.42 |
| Before | | 37.84 |
| After | | 33.92 |
| −28.89 (Minimum) | 15.50 (Nominal) | 60.00 (Maximum) |

| Phase | Na Count Rate CPS | Value |
|---|---|---|
| Master | | 10.91 |
| Before | EXCEEDS LIMIT | 9.923 |
| After | | 10.84 |
| 10.00 (Minimum) | 45.00 (Nominal) | 100.0 (Maximum) |

Master: 15−Jul−2014 0:16 Before: 24−Aug−2014 22:10 After: 25−Aug−2014 8:59

## Hostile Natural Gamma Ray Sonde Wellsite Calibration

### Detector 2 Check

| Phase | Na 511 Peak Loc | Value |
|---|---|---|
| Master | | 39.46 |
| Before | | 39.55 |
| After | | 39.57 |
| 37.50 (Minimum) | 40.00 (Nominal) | 43.50 (Maximum) |

| Phase | Na 511 Peak Res % | Value |
|---|---|---|
| Master | | 16.20 |
| Before | | 16.79 |
| After | | 17.06 |
| 12.00 (Minimum) | 15.50 (Nominal) | 19.00 (Maximum) |

| Phase | High Voltage V | Value |
|---|---|---|
| Master | | 1129 |
| Before | | 1126 |
| After | | 1118 |
| 900.0 (Minimum) | 1150 (Nominal) | 1600 (Maximum) |

| Phase | Na 1785 Peak Loc | Value |
|---|---|---|
| Master | | 141.8 |
| Before | | 141.2 |
| After | | 139.9 |
| 135.0 (Minimum) | 142.6 (Nominal) | 150.3 (Maximum) |

| Phase | Na 1785 Peak Res % | Value |
|---|---|---|
| Master | | 10.06 |
| Before | | 9.288 |
| After | | 9.578 |
| 7.000 (Minimum) | 8.500 (Nominal) | 11.00 (Maximum) |

| Phase | Temperature DEGC | Value |
|---|---|---|
| Master | | 38.37 |
| Before | | 38.39 |
| After | | 35.87 |
| −28.89 (Minimum) | 15.50 (Nominal) | 60.00 (Maximum) |

| Phase | Na Count Rate CPS | Value |
|---|---|---|
| Master | | 11.54 |
| Before | | 10.32 |
| After | | 11.05 |
| 10.00 (Minimum) | 45.00 (Nominal) | 100.0 (Maximum) |

Master: 15−Jul−2014 0:16 Before: 24−Aug−2014 22:10 After: 25−Aug−2014 8:59

## Hostile Natural Gamma Ray Sonde Wellsite Calibration

### Ratio Of Detector 1 To Detector 2

| Phase | Coincidence Count Rate Ratio | Value |
|---|---|---|
| Master | EXCEEDS LIMIT | 0.9495 |
| Before | | 0.9636 |
| After | | 0.9743 |
| 0.9500 (Minimum) | 1.000 (Nominal) | 1.050 (Maximum) |

Master: 15−Jul−2014 0:16
Before: 24−Aug−2014 22:10
After: 25−Aug−2014 8:59

Enhanced DTS Cartridge / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| EDTC Gamma Ray Detector | EDTG − A/B | 8305 |
| Enhanced DTS Cartridge | EDTC − B | 8317 |
| Auxiliary Equipment: | | |
| EDTC Housing | EDTH − B | 8303 |

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

| Phase | EDTC Z−Axis Acceleration M/S2 | Value |
|---|---|---|
| Before | | 9.740 |

9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)

Before: 24−Aug−2014 22:07

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

| Phase | Gamma Ray Background GAPI | Value | Phase | Gamma Ray (Jig − Bkg) GAPI | Value | Phase | Gamma Ray (Calibrated) GAPI | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 1.464 | Before | | 163.3 | Before | | 165.0 |
| After | | 5.441 | After | | 158.4 | After | | 160.1 |

| Gamma Ray Background GAPI | | | Gamma Ray (Jig − Bkg) GAPI | | | Gamma Ray (Calibrated) GAPI | | |
|---|---|---|---|---|---|---|---|---|
| 0 (Minimum) | 30.00 (Nominal) | 120.0 (Maximum) | 148.4 (Minimum) | 163.3 (Nominal) | 178.1 (Maximum) | 150.0 (Minimum) | 165.0 (Nominal) | 180.0 (Maximum) |

Before: 24−Aug−2014 22:08 After: 25−Aug−2014 8:56

Company: **Lamont Doherty Earth Observatory**

Schlumberger

Well: **Expedition 352, Site U1440B**
Field: **IBM−3 Forearc**
Rig: **JOIDES Resolution**
Country:

UBI Ultrasonic Borehole Imager