



DUAL INDUCTION LOG

Company DARRAH OIL COMPANY, LLC.

Well YOUNKIN #2-10

Field EAGLE BLUFF

County LOGAN State KANSAS

Location: API #: 15-109-21640-0000

1831' FSL & 985' FWL

SEC 10 TWP 14S RGE 34W

Permanent Datum GROUND LEVEL Elevation 3021
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL/PE
MEL/SONIC
Elevation
K.B. 3032
D.F. 3030
G.L. 3021

| | |
|------------------------------|---------------|
| Date | 7/12/22 |
| Run Number | ONE |
| Depth Driller | 4720 |
| Depth Logger | 4722 |
| Bottom Logged Interval | 4720 |
| Top Log Interval | 00 |
| Casing Driller | 8 5/8"@255' |
| Casing Logger | 252 |
| Bit Size | 7 7/8" |
| Type Fluid in Hole | CHEMICAL MUD |
| Density / Viscosity | 9.5/55 |
| pH / Fluid Loss | 9.5/10.4 |
| Source of Sample | FLOWLINE |
| Rm @ Meas. Temp | .400@93F |
| Rmf @ Meas. Temp | .300@93F |
| Rmc @ Meas. Temp | .480@93F |
| Source of Rmf / Rmc | MEASURED |
| Rm @ BHT | .305@122F |
| Time Circulation Stopped | 2.5 HOURS |
| Time Logger on Bottom | 1:00 P.M. |
| Maximum Recorded Temperature | 122F |
| Equipment Number | 8916 |
| Location | HAYS, KANSAS |
| Recorded By | JEFF LUEBBERS |
| Witnessed By | SETH EVENSON |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
DIRECTIONS:

OAKLEY, KS., 9S. ON HWY 83 TO "QUAIL RD.", 7W. TO "RD. 370", 1 S. TO "PLAINS RD.", 2W. TO "RD. 350", S. TO "INDIAN RD.", 4W. TO TANK BATTERY, 2N. ON TRAIL

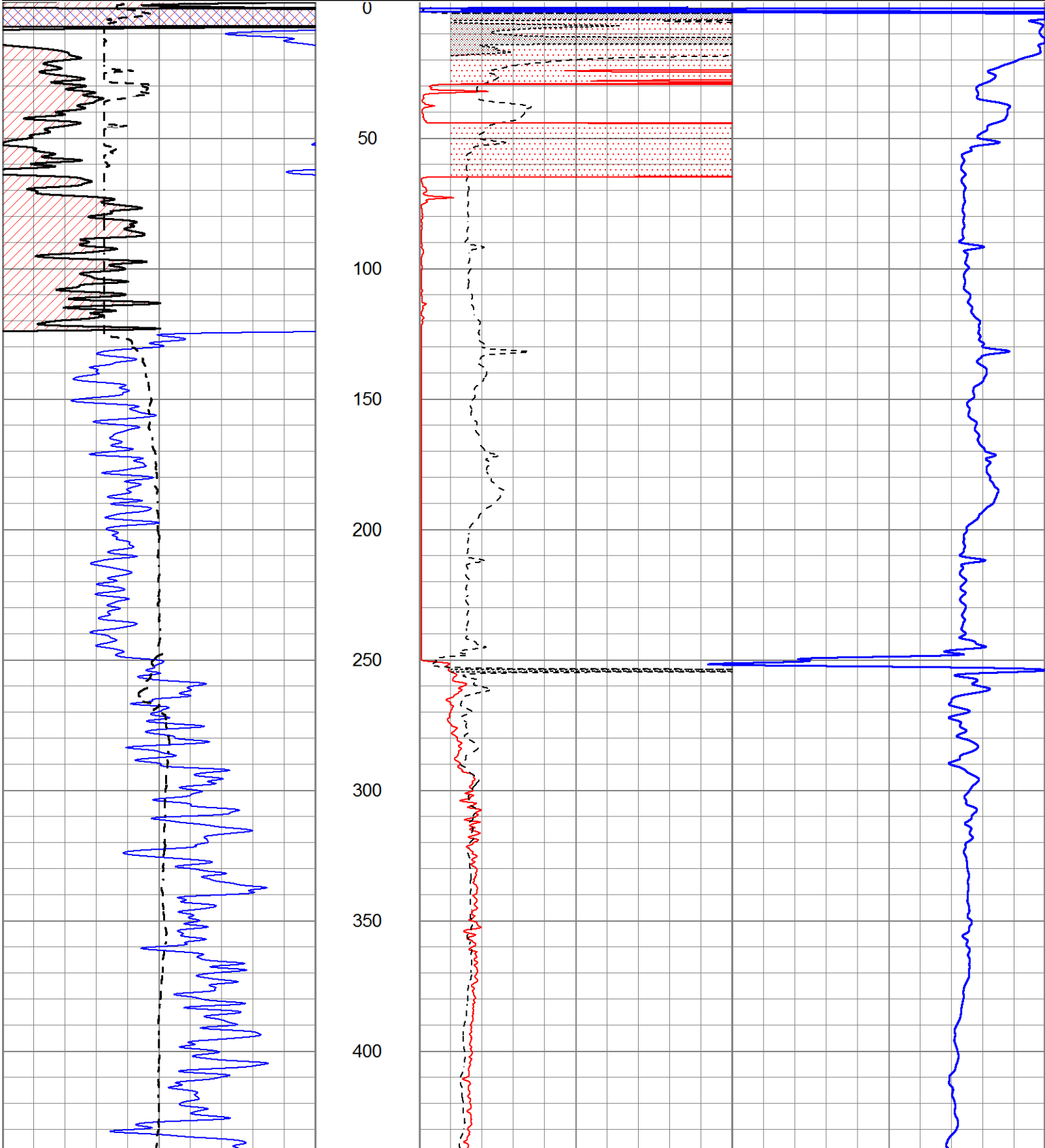


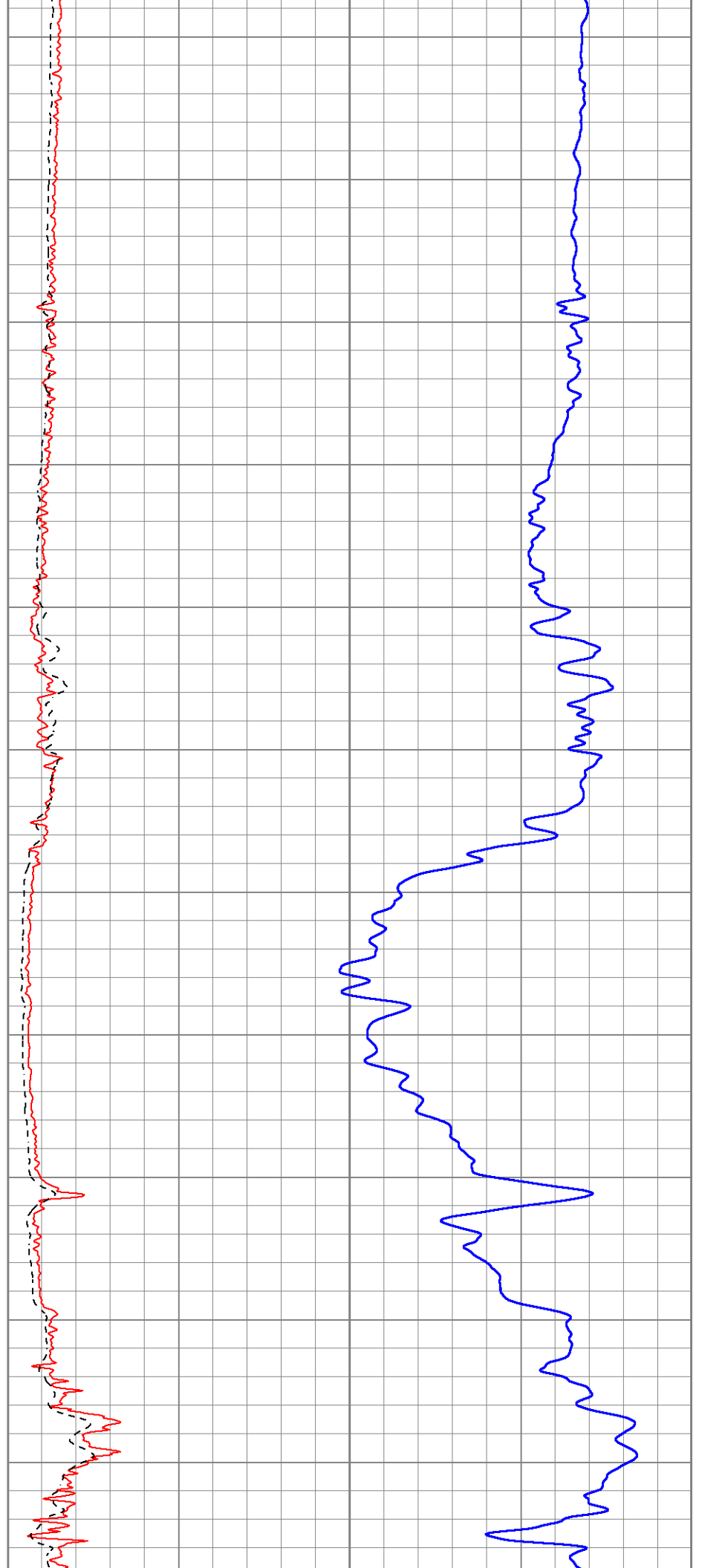
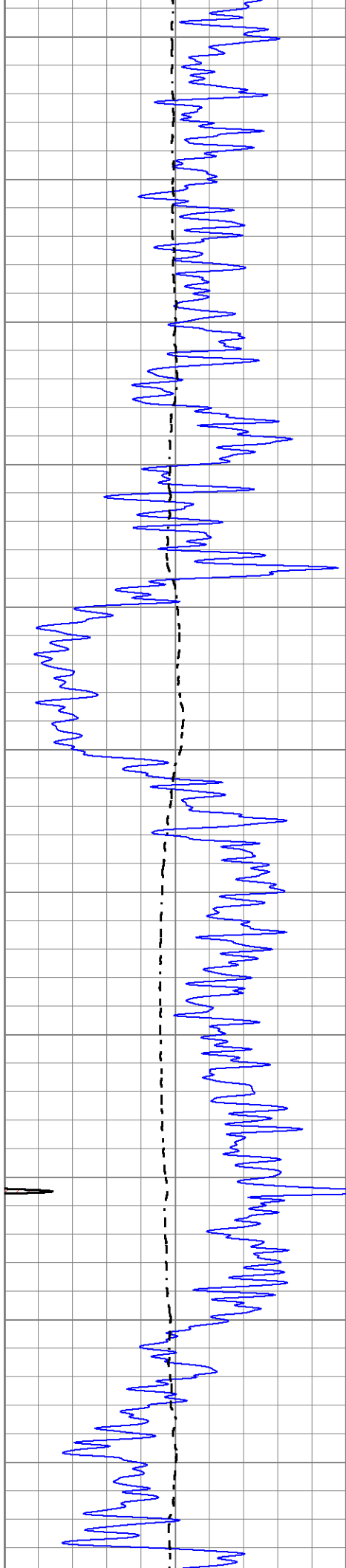
MAIN SECTION

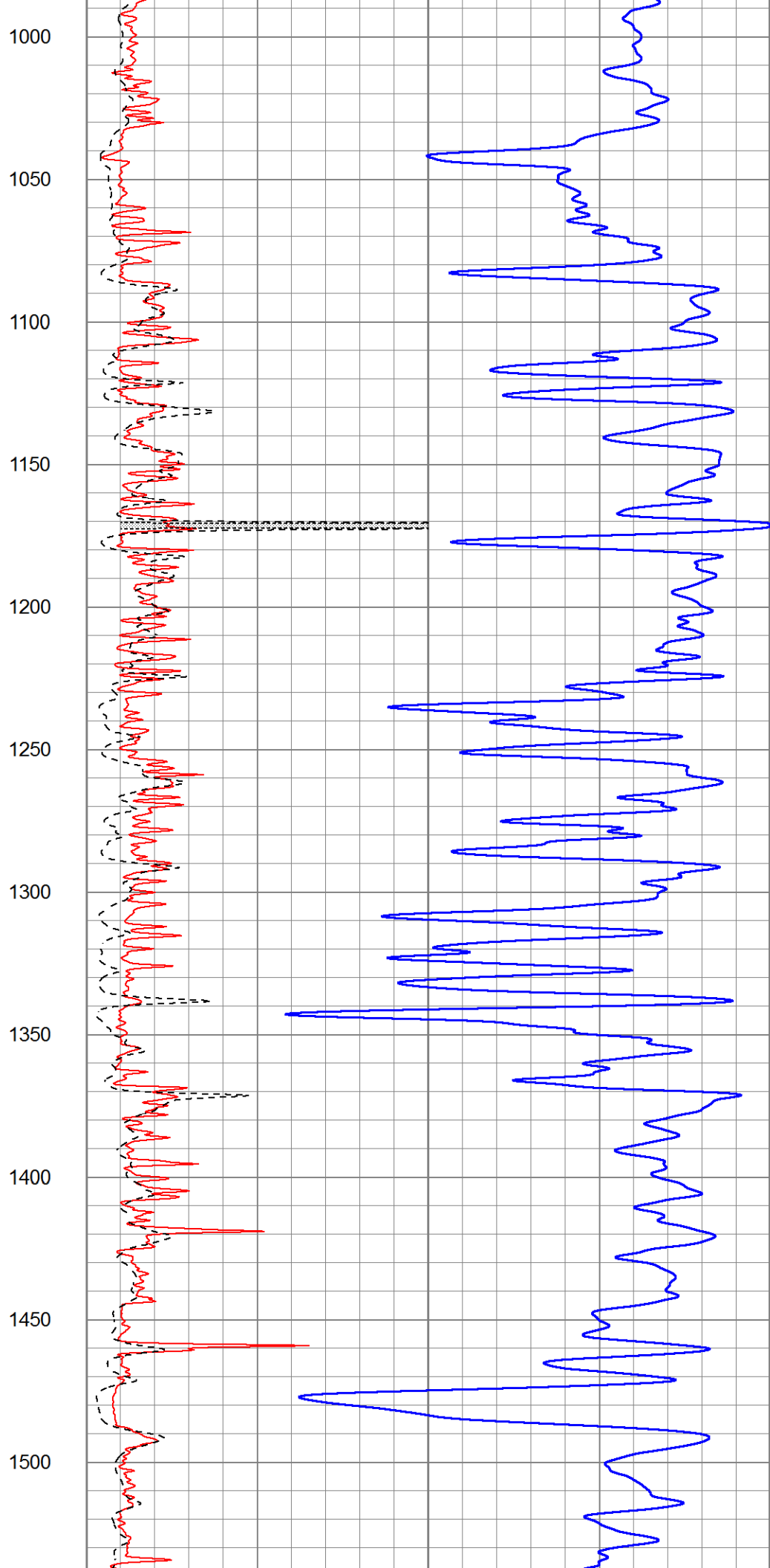
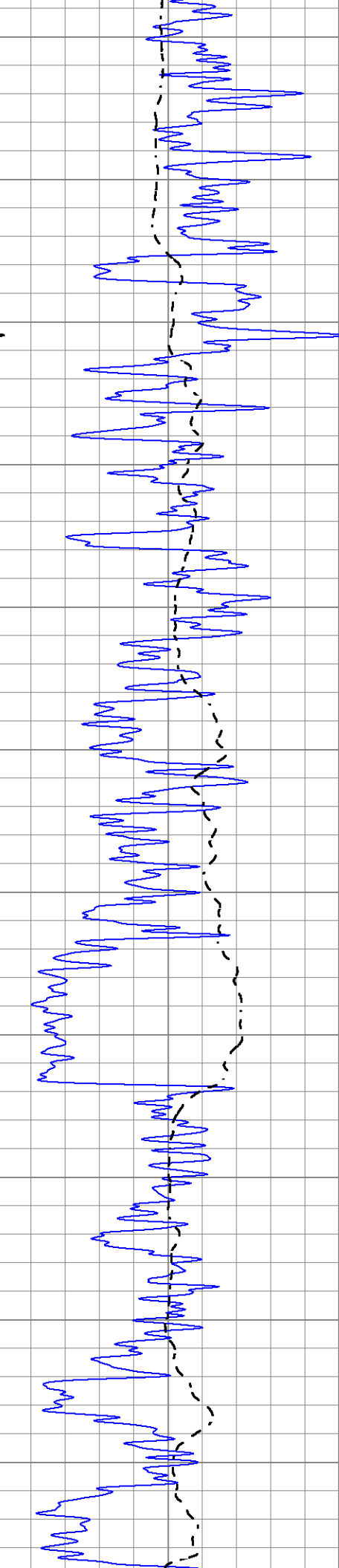
Database File 6711pe.db
 Dataset Pathname pass3.2M
 Presentation Format _dil2
 Dataset Creation Tue Jul 12 15:18:30 2022
 Charted by Depth in Feet scaled 1:600

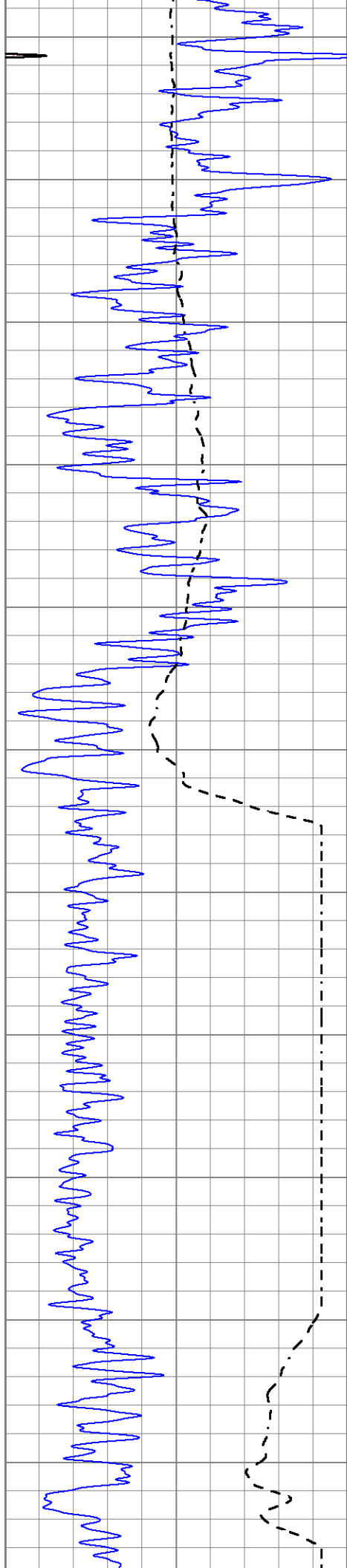
0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

1000 CILD (mmho/m) 0
 0 RLL3 (Ohm-m) 50
 0 RILD (Ohm-m) 50
 50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500









1550

1600

1650

1700

1750

1800

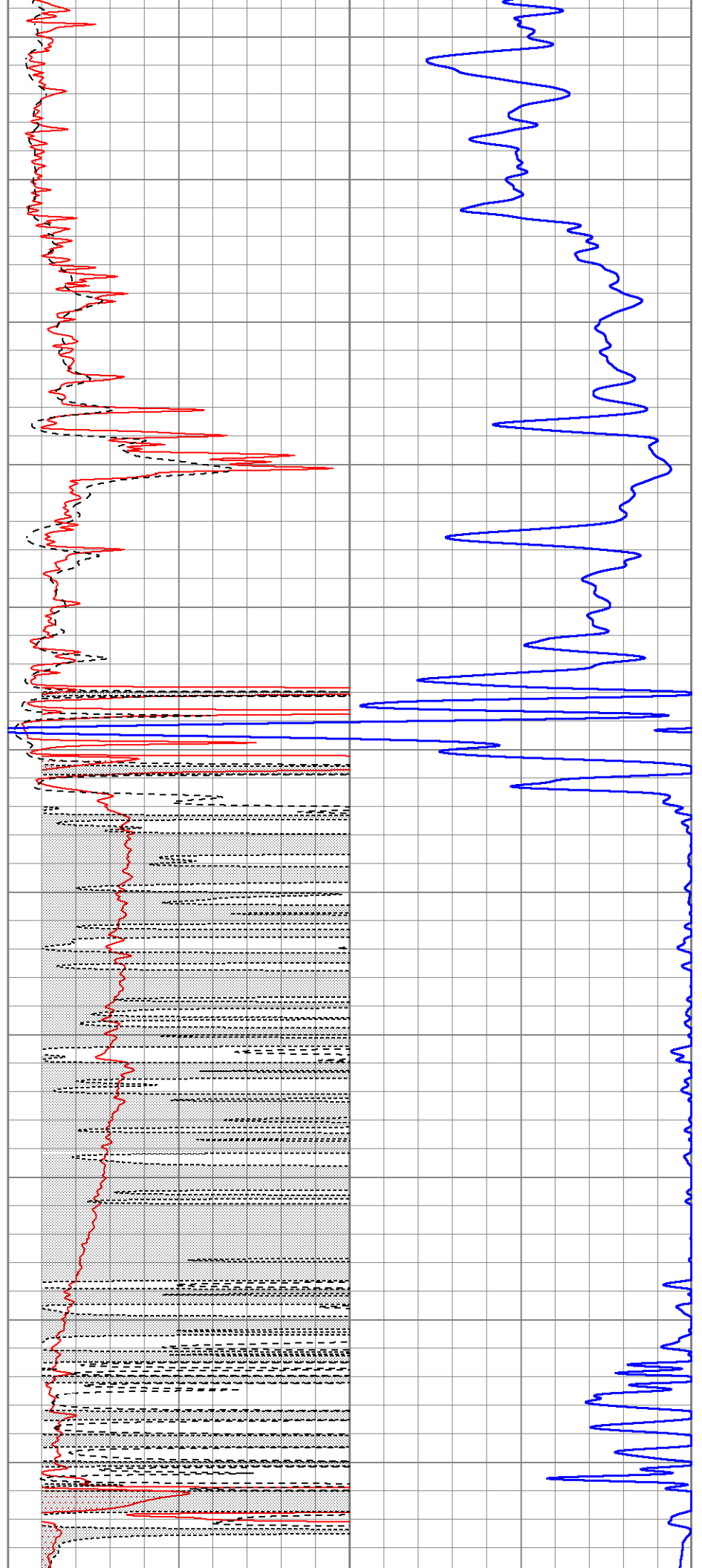
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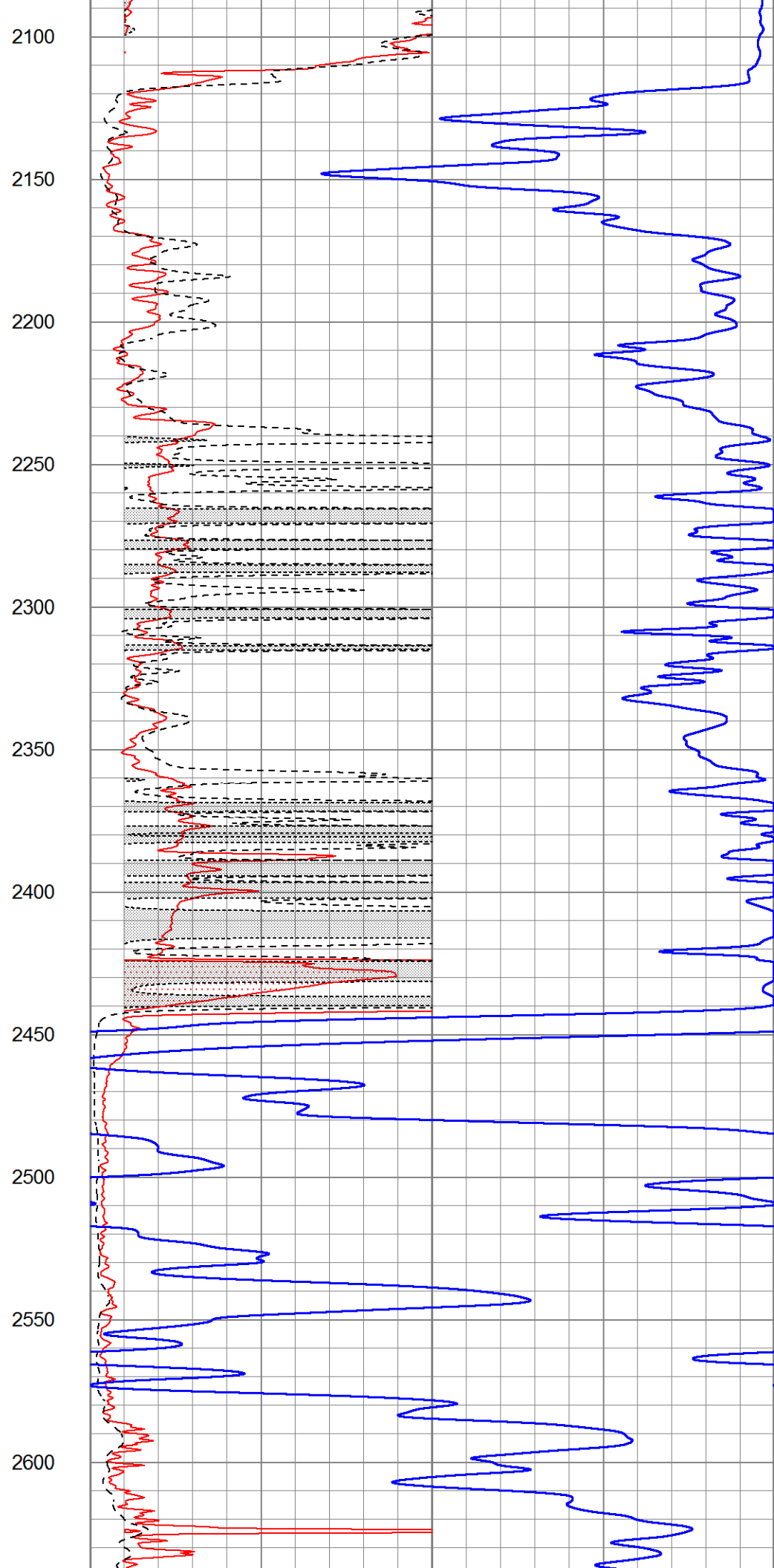
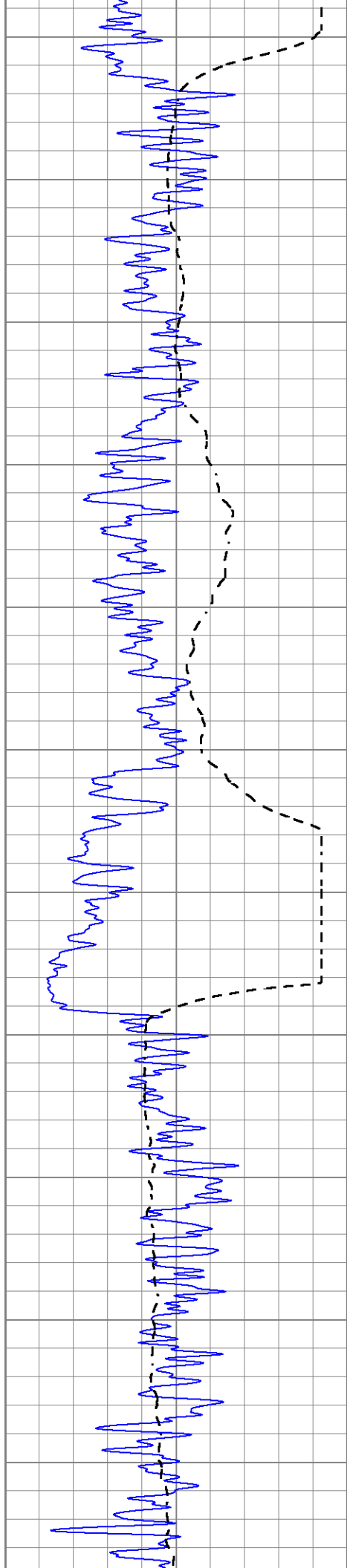
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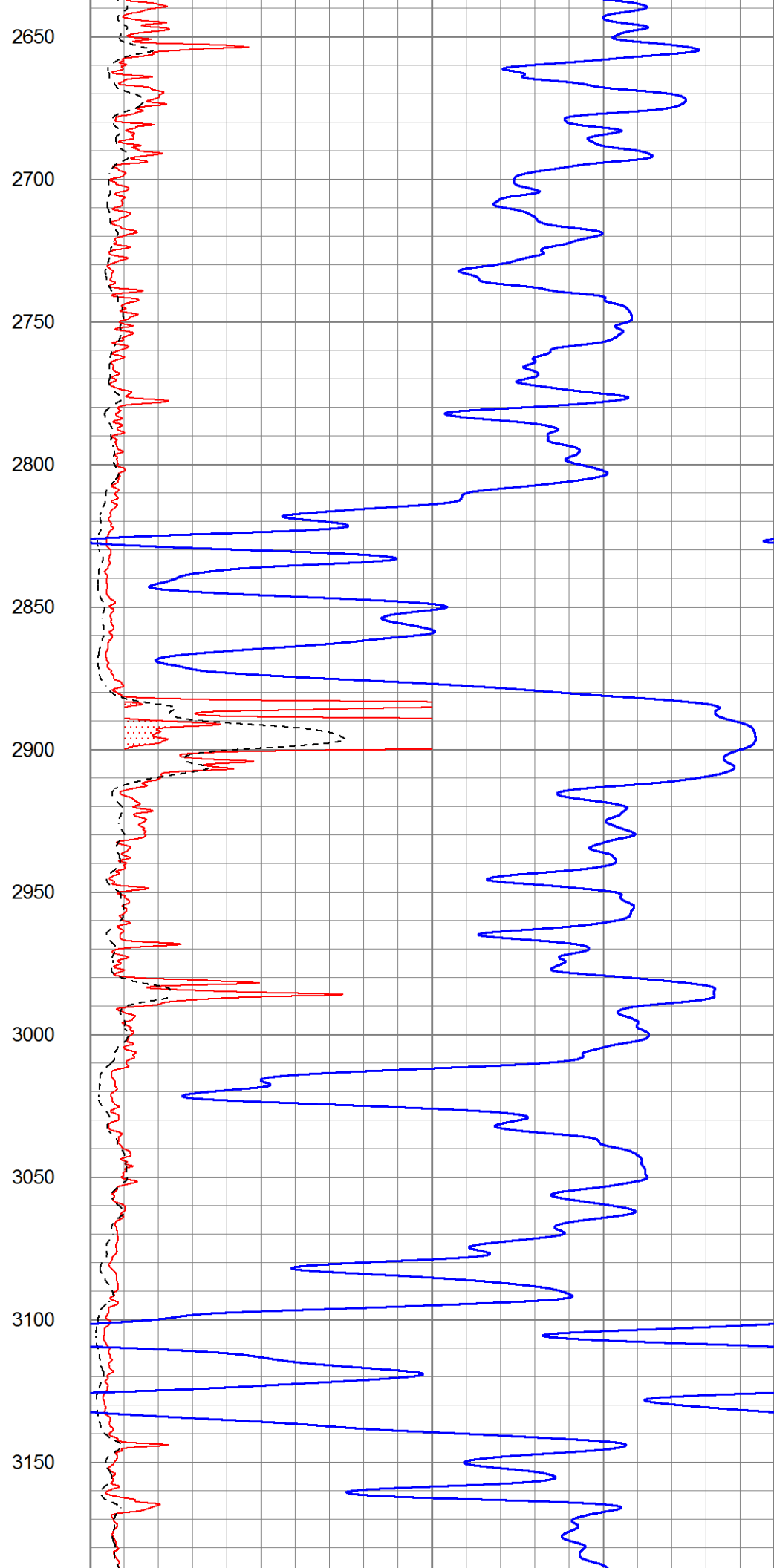
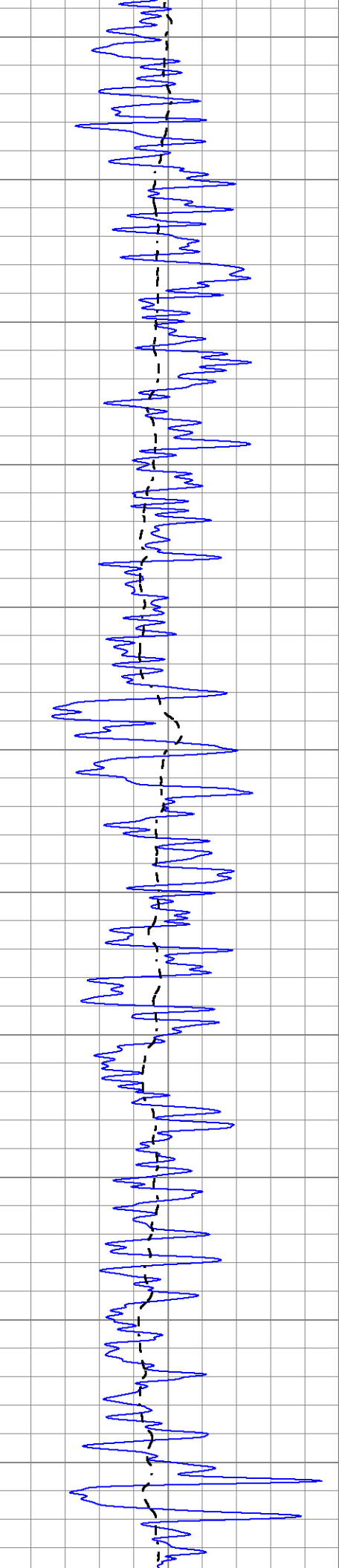
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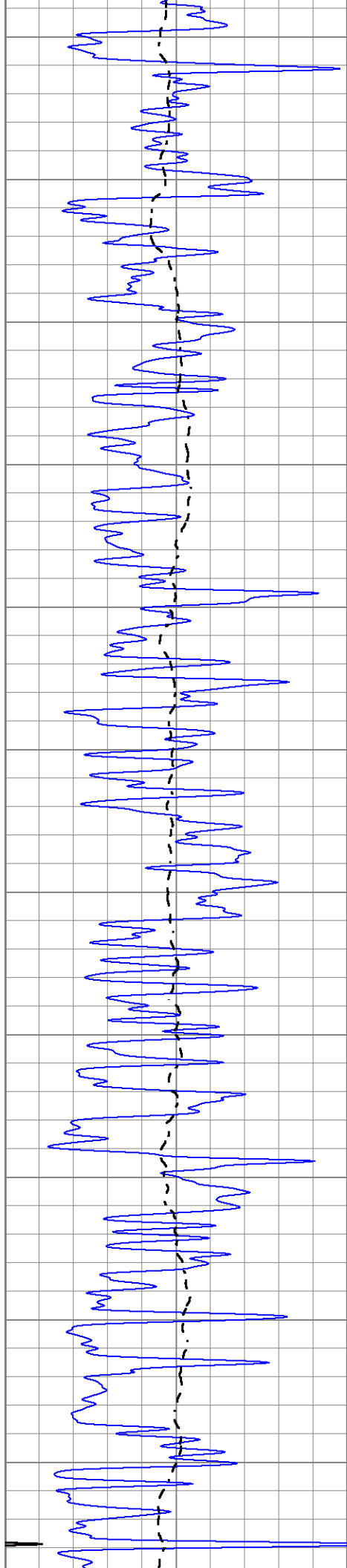
2000

2050









3200

3250

3300

3350

3400

3450

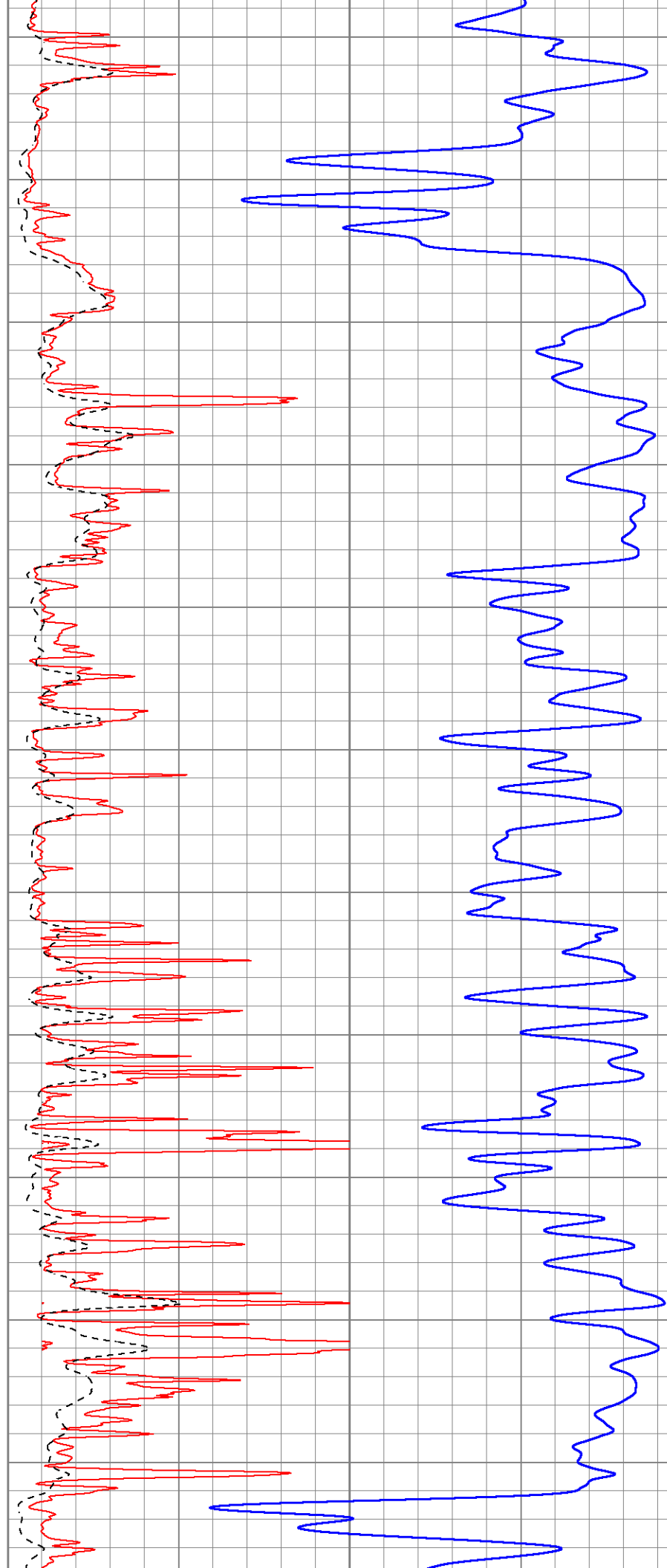
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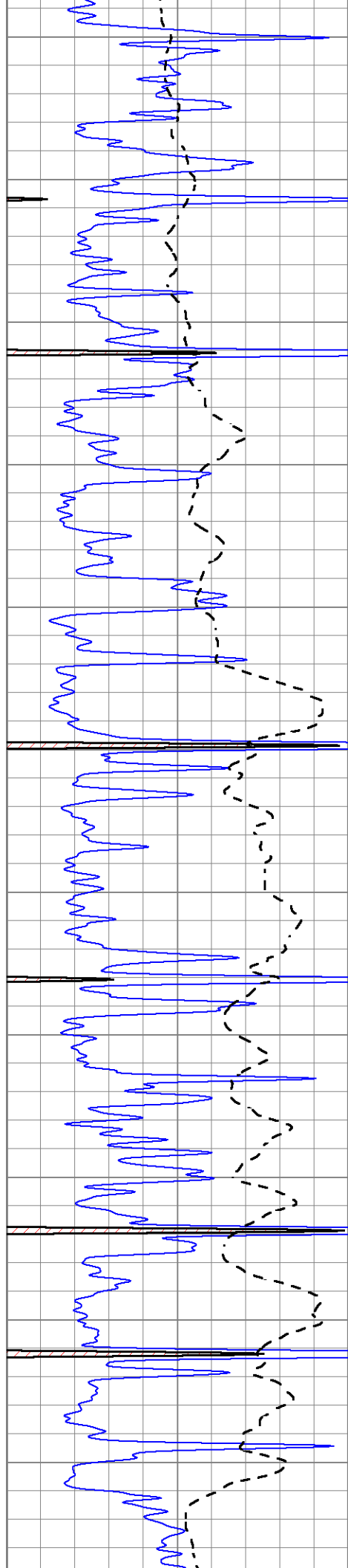
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3600

3650

3700





3750

3800

3850

3900

3950

4000

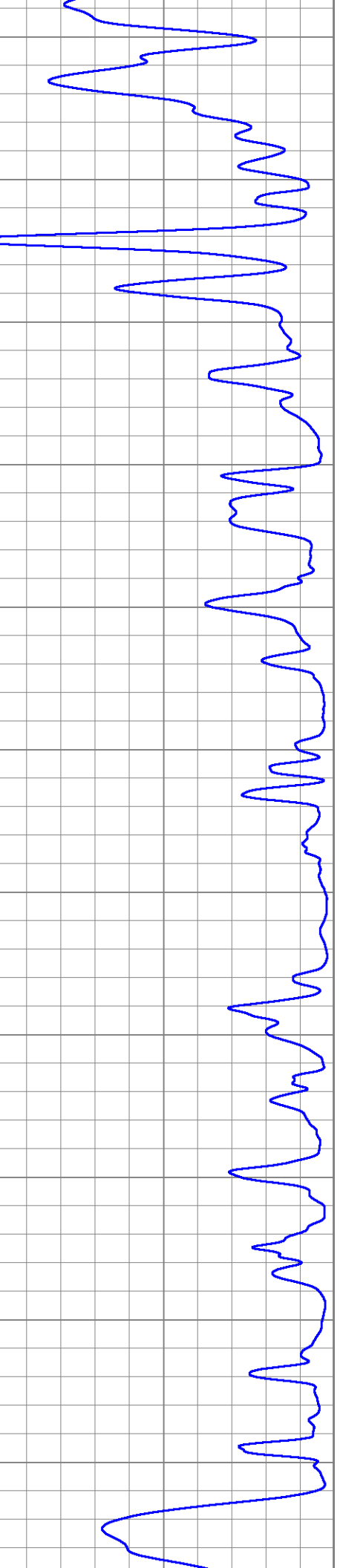
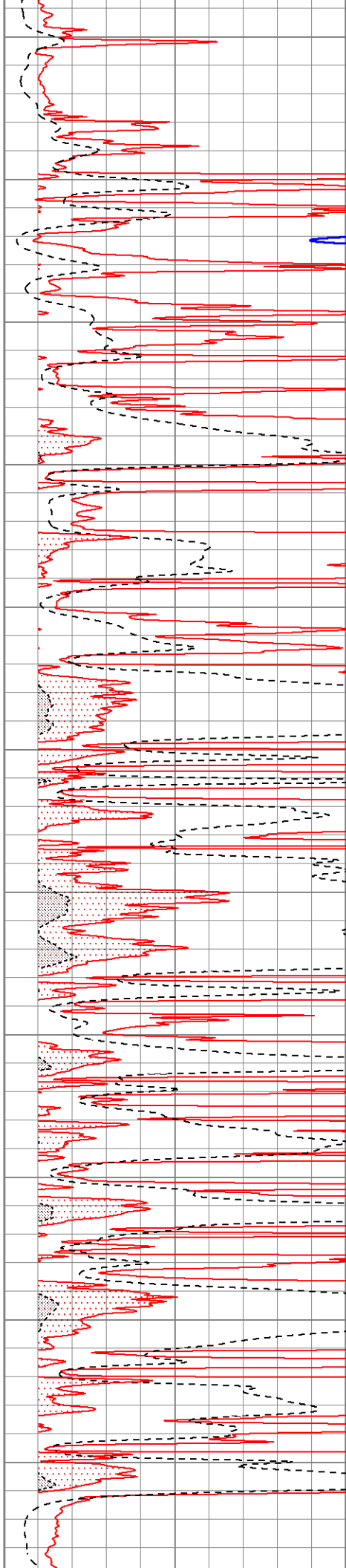
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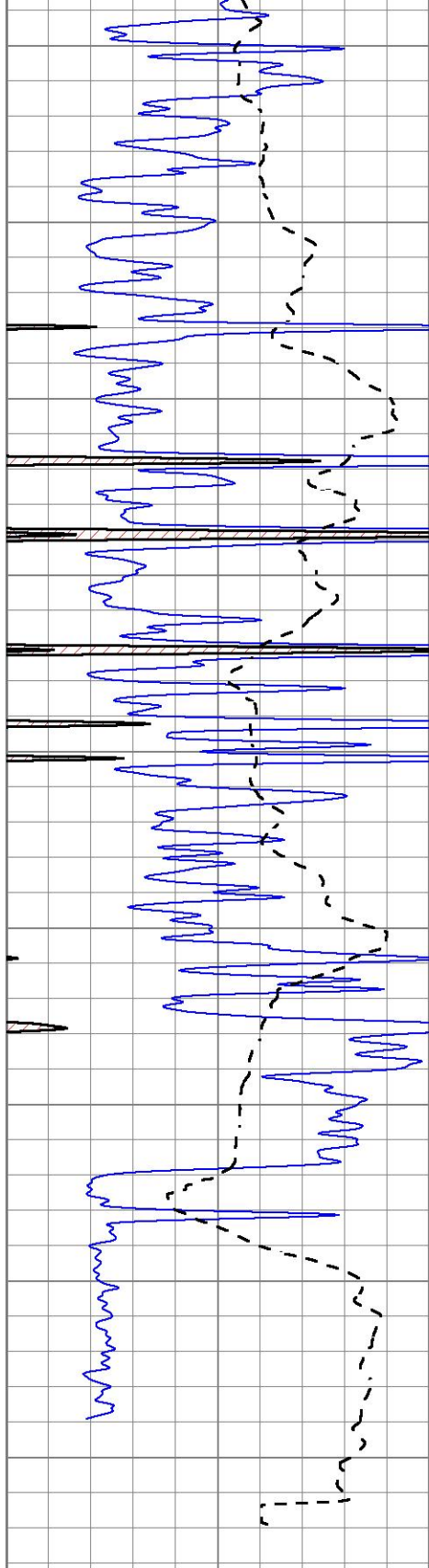
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4150

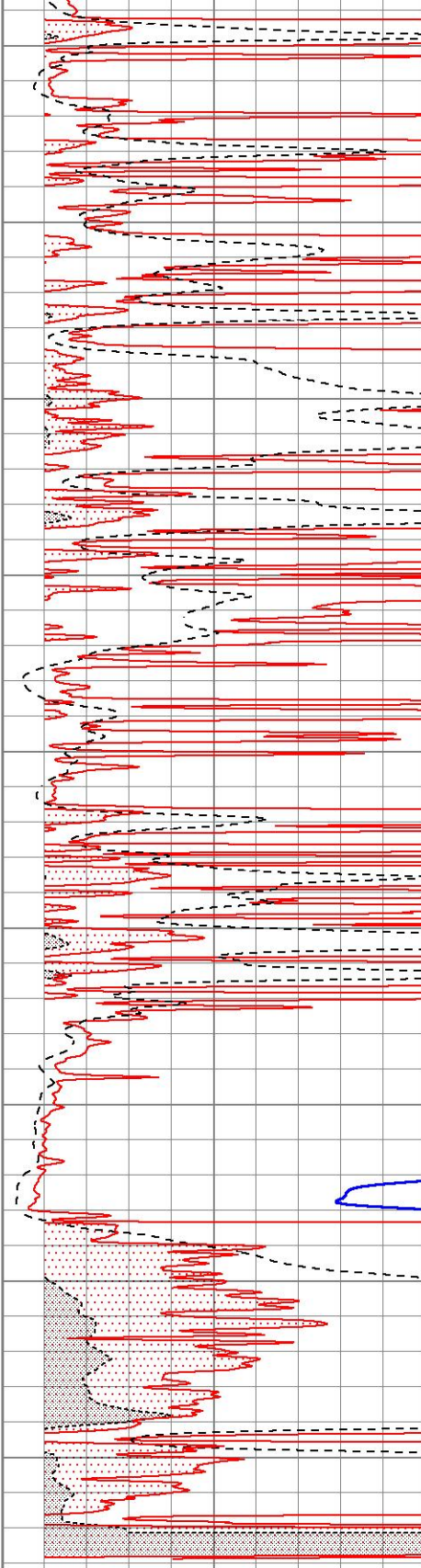
4200

4250





4300
4350
4400
4450
4500
4550
4600
4650
4700



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

1000 CILD (mmho/m) 0

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



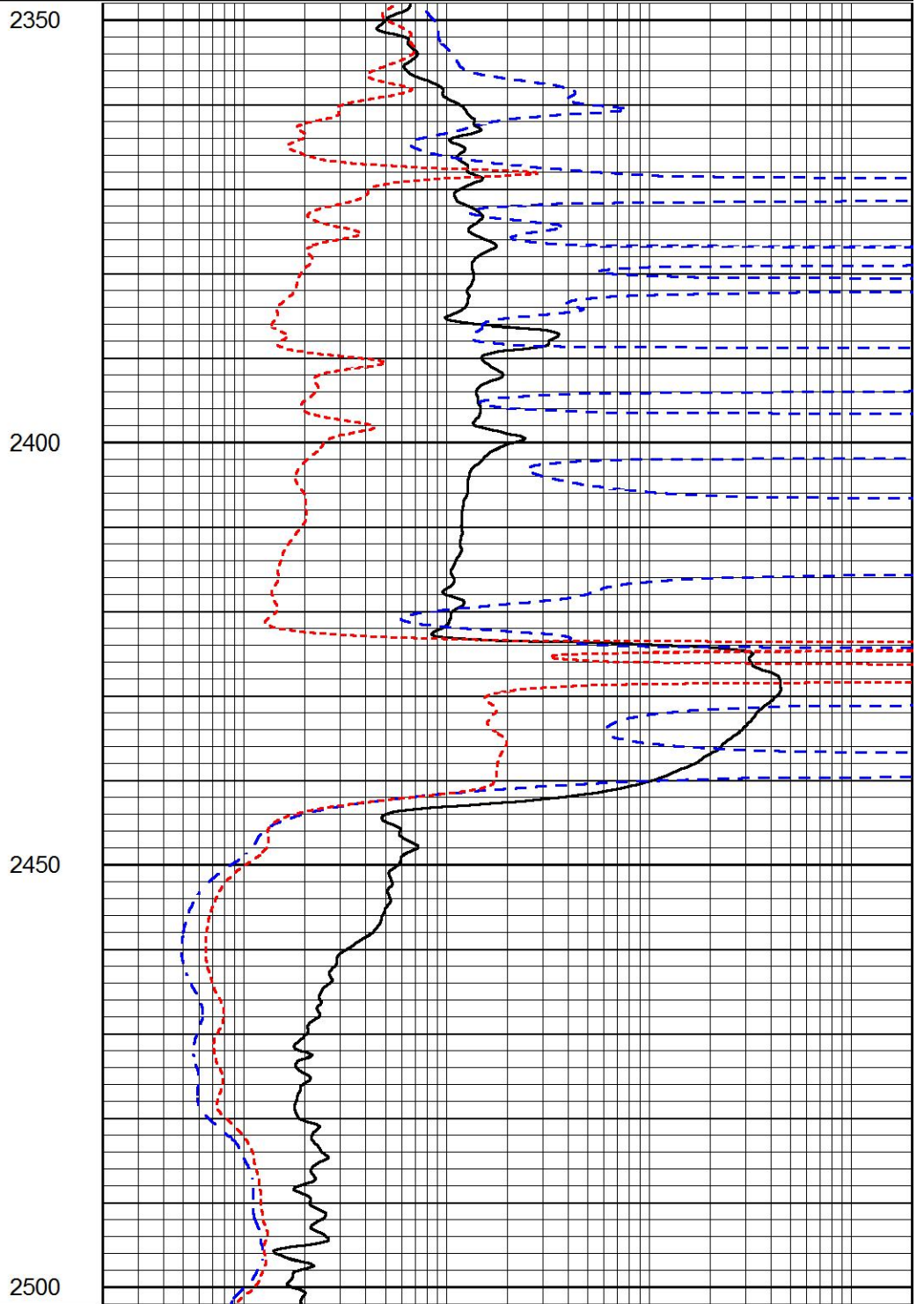
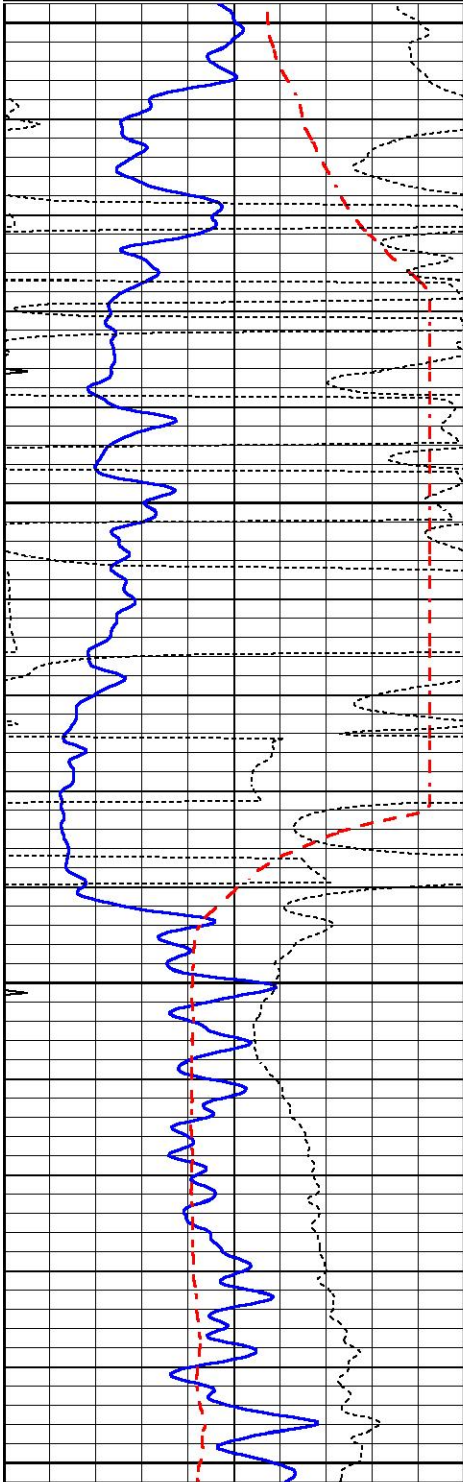
ANHYDRITE

ANITDRITE

Database File 6711pe.db
 Dataset Pathname pass3.1A
 Presentation Format _dil
 Dataset Creation Tue Jul 12 15:04:13 2022
 Charted by Depth in Feet scaled 1:240

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

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



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

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

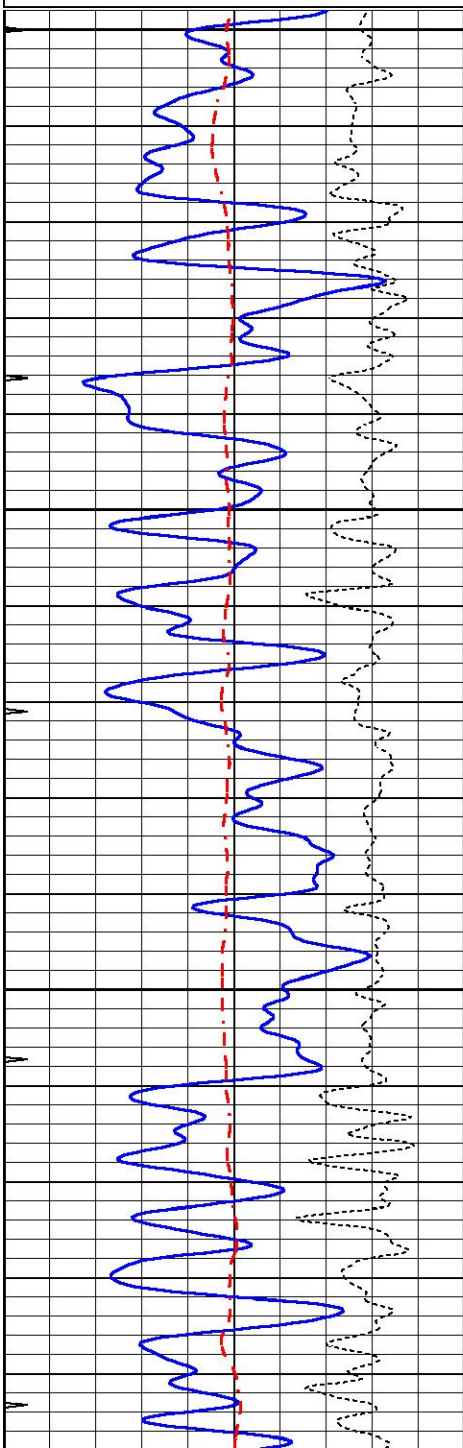


MAIN SECTION

Database File 6711pe.db
 Dataset Pathname pass3.2M
 Presentation Format _dil
 Dataset Creation Tue Jul 12 15:18:30 2022
 Charted by Depth in Feet scaled 1:240

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

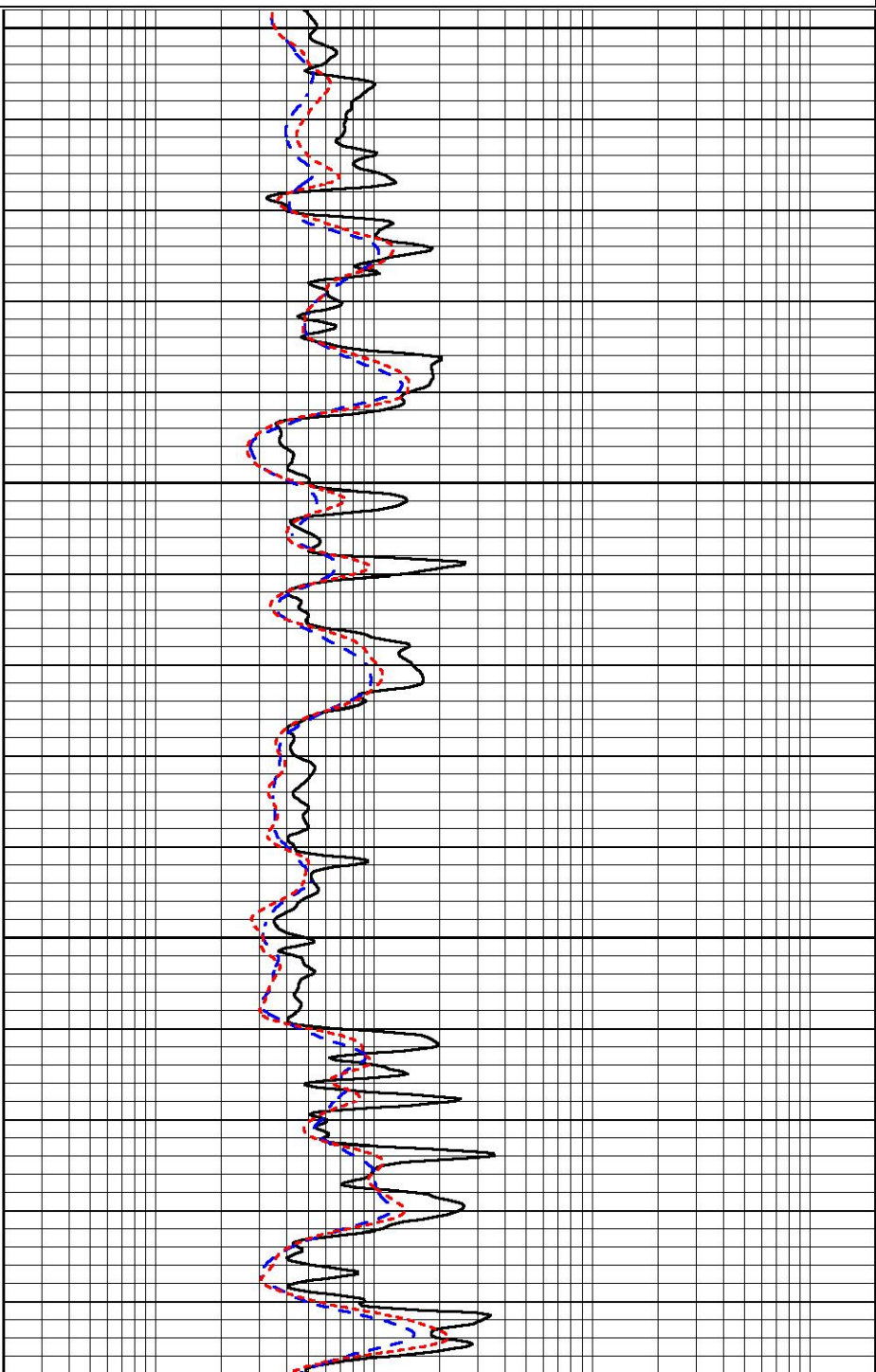
| | | |
|-----|--------------------------|------|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

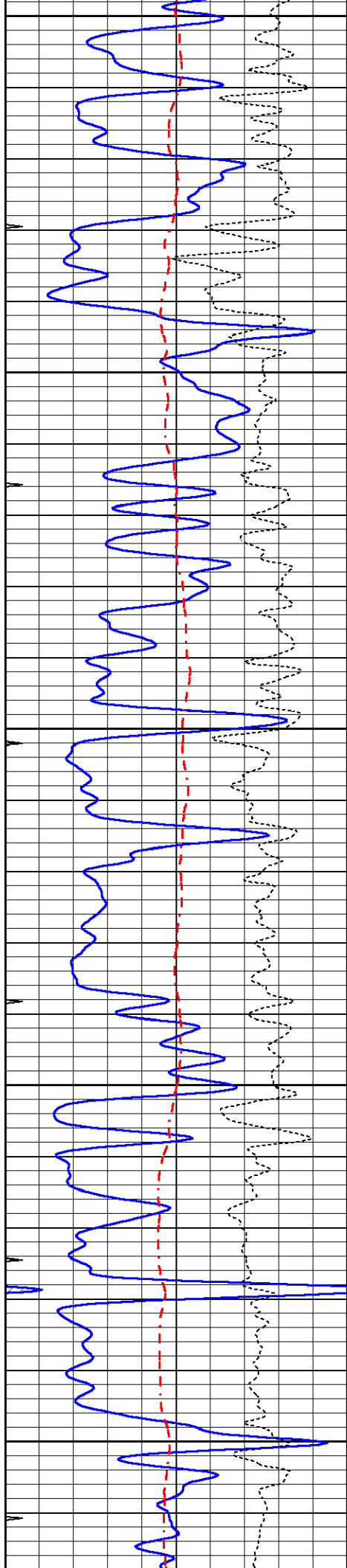


3400

3450

3500





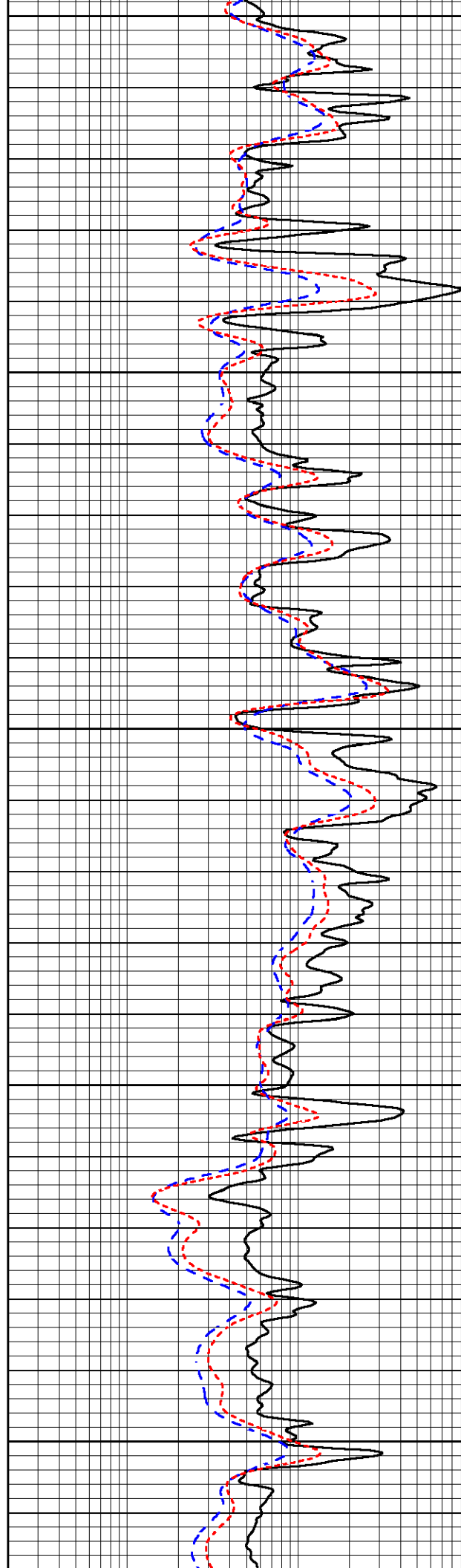
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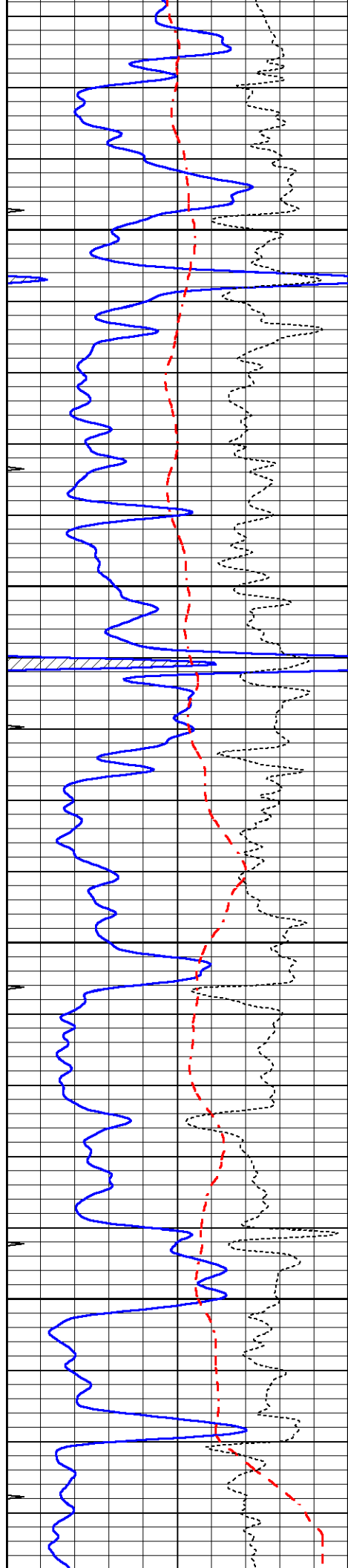
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3650

3700

3750



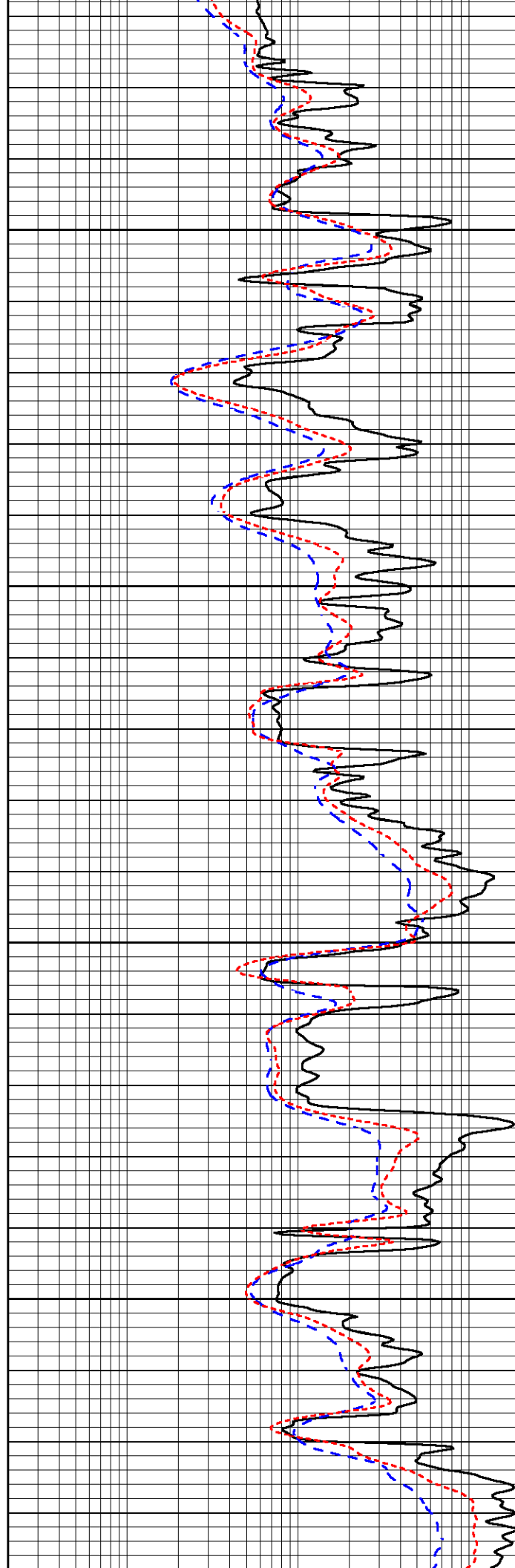


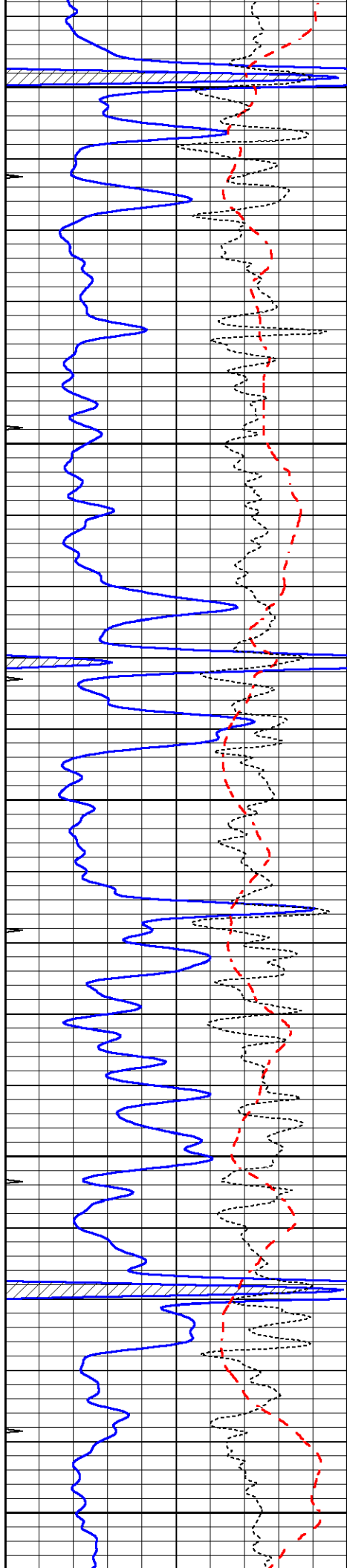
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3850

3900

3950





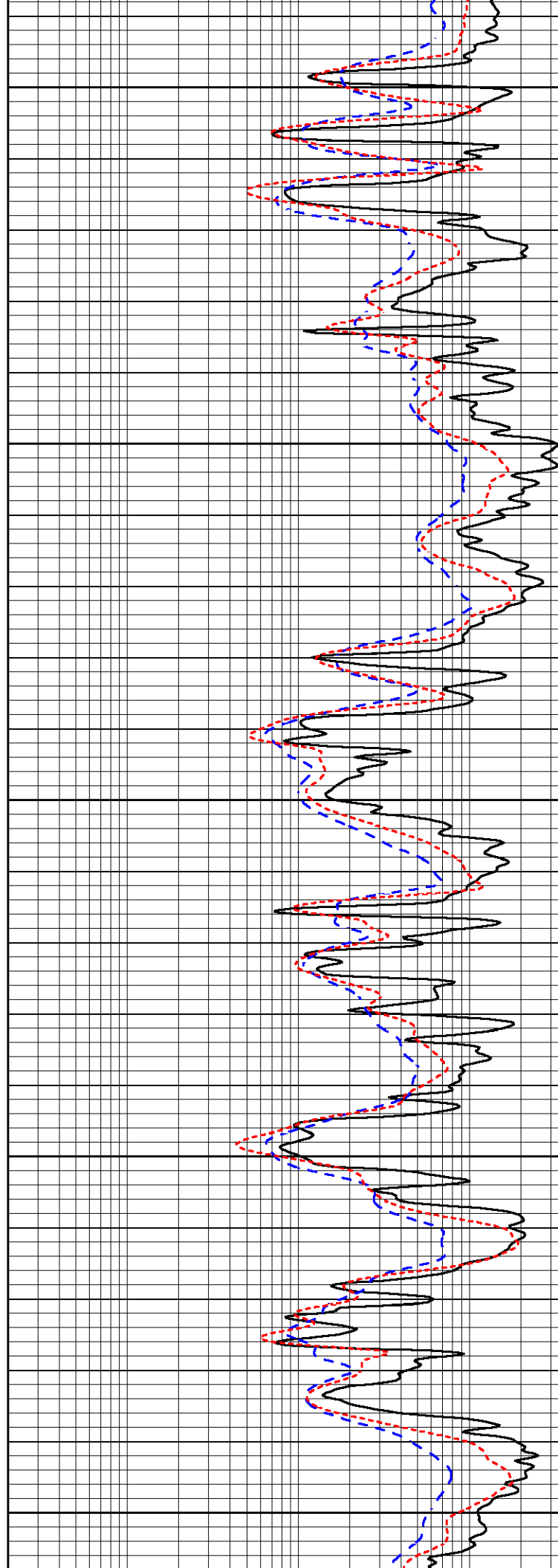
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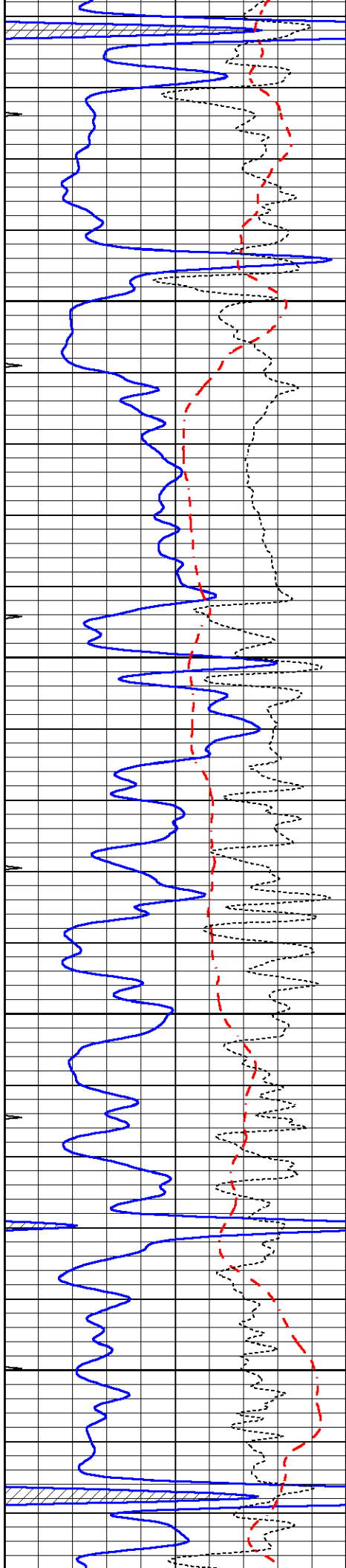
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4100

4150

4200



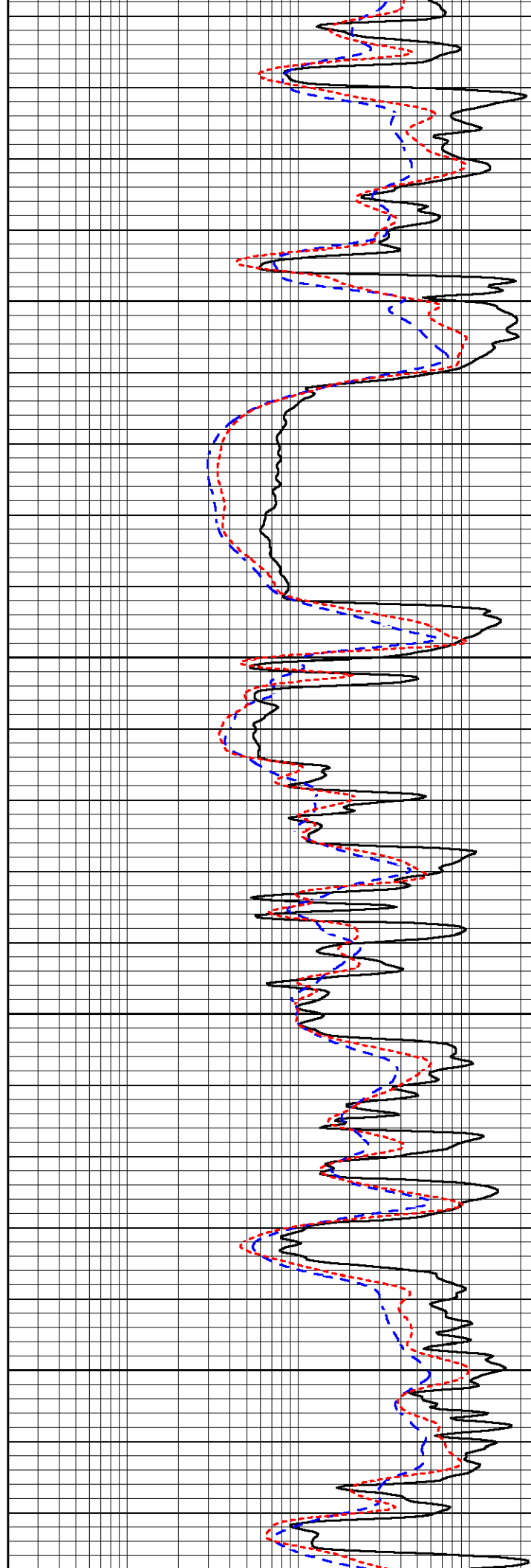


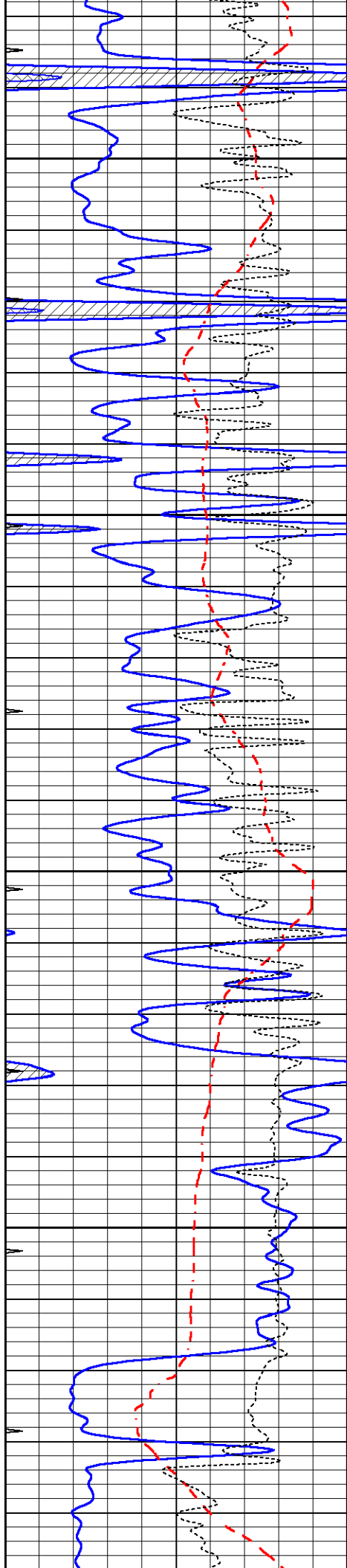
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4300

4350

4400



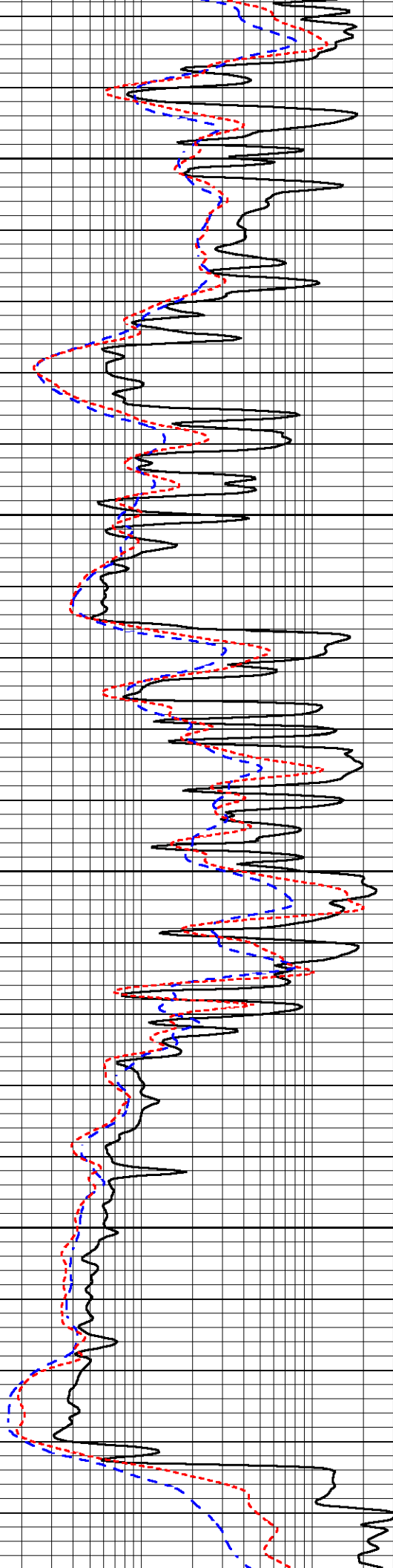


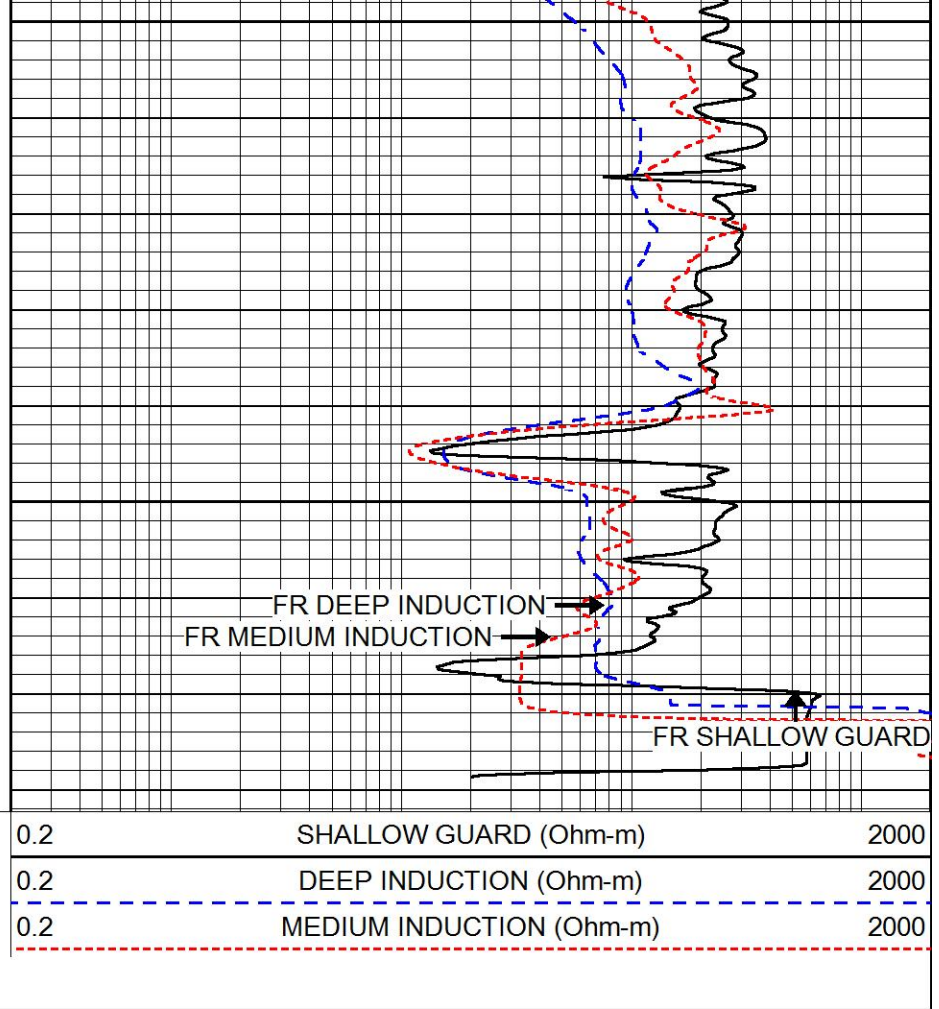
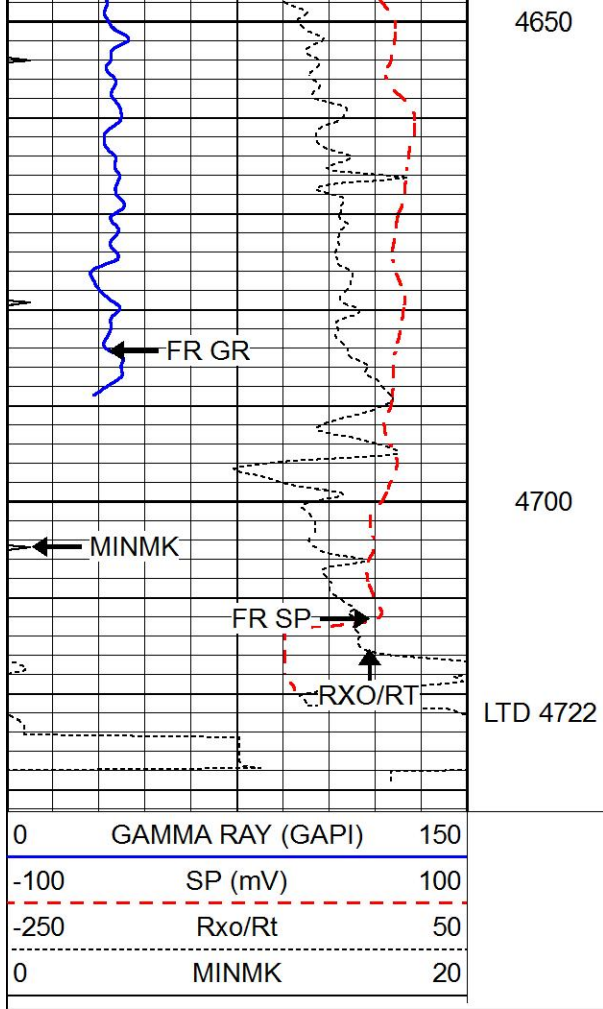
4450

4500

4550

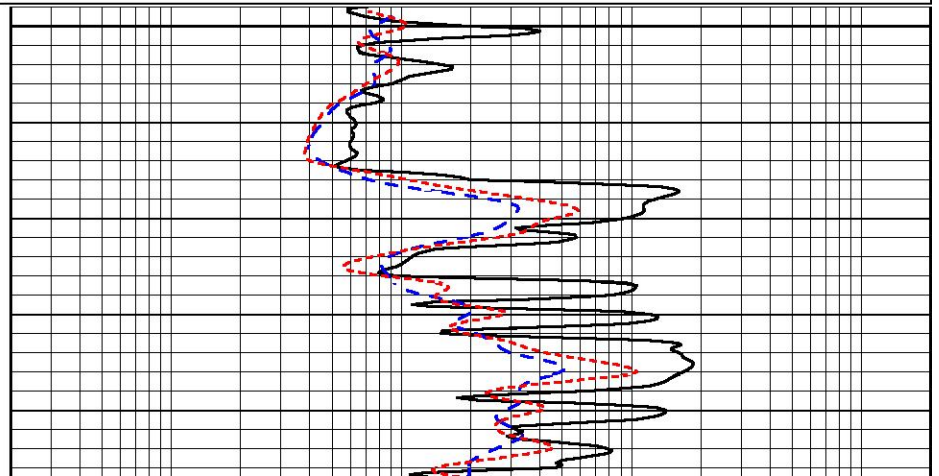
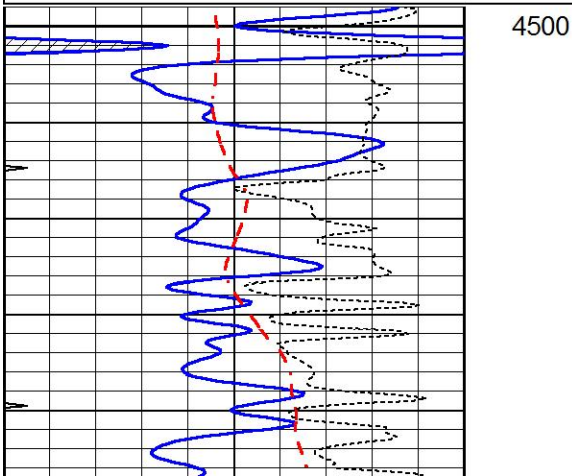
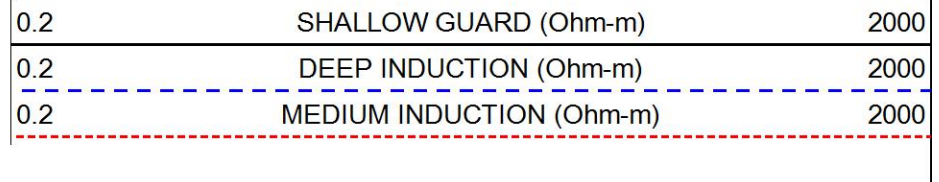
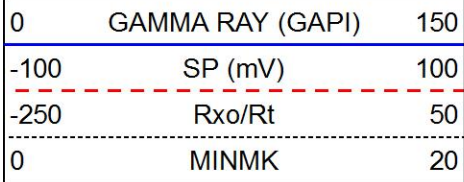
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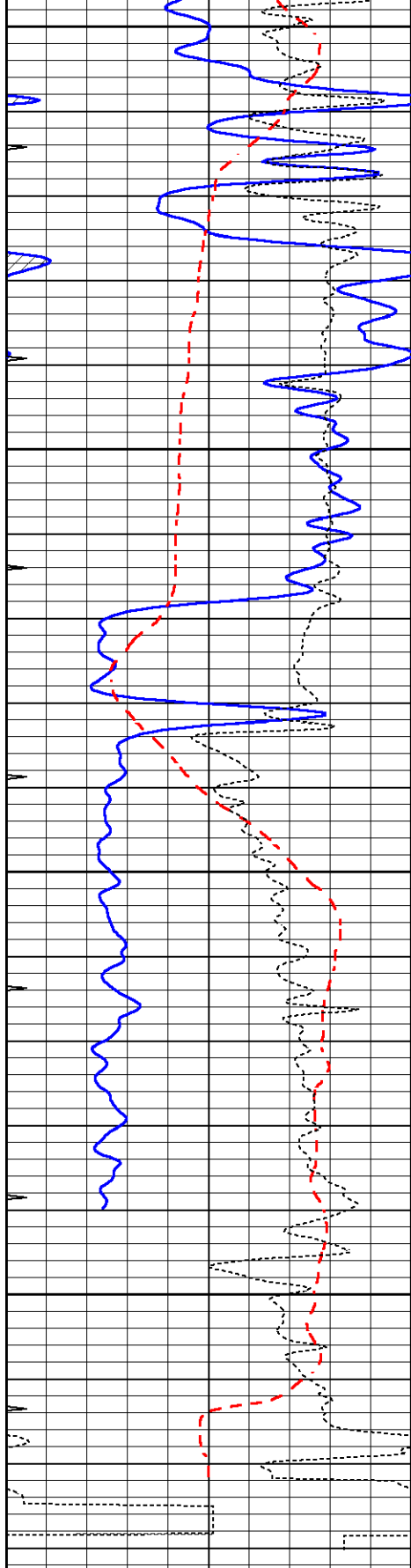




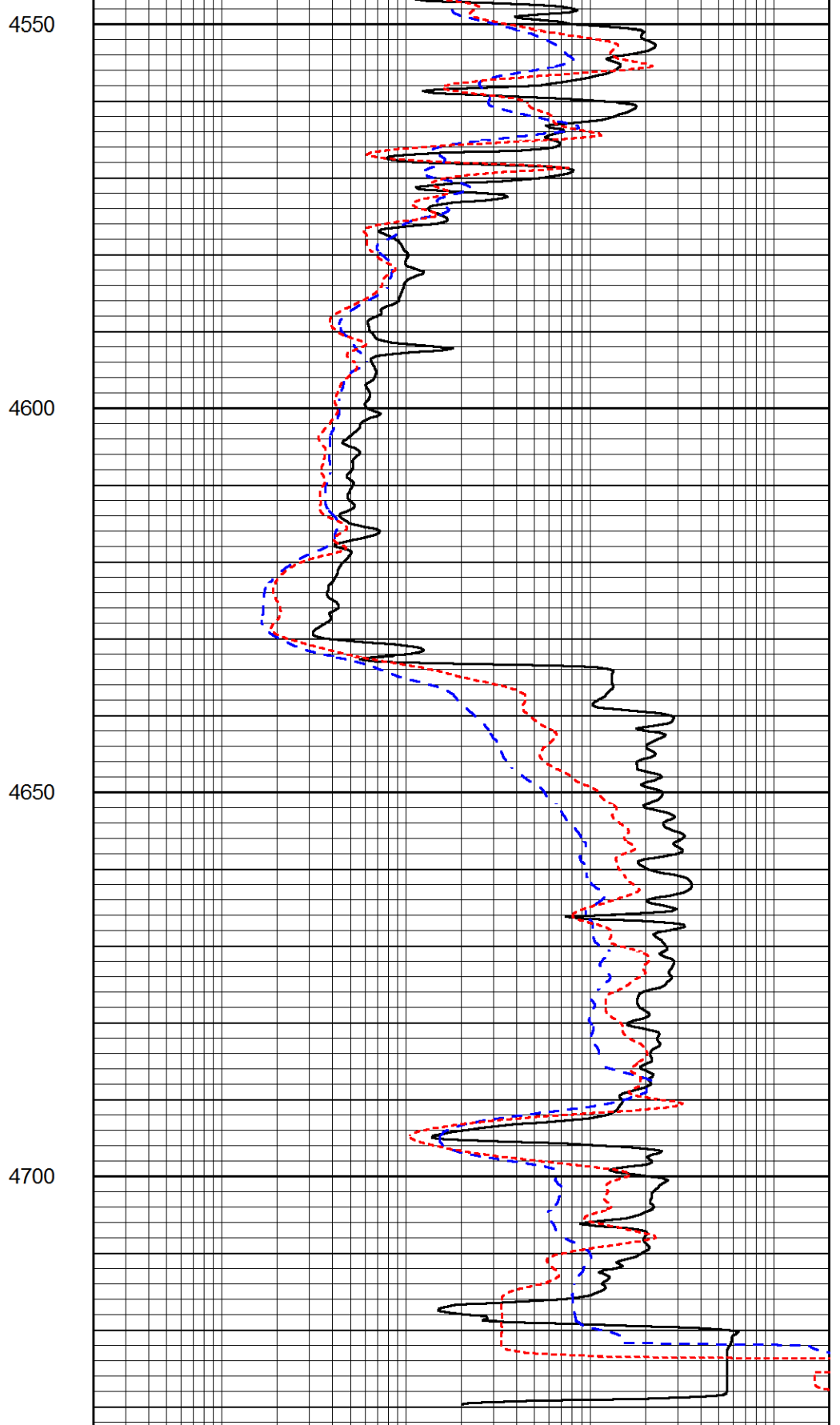
REPEAT SECTION

Database File 6711pe.db
 Dataset Pathname pass2.1R
 Presentation Format _dil
 Dataset Creation Tue Jul 12 14:03:03 2022
 Charted by Depth in Feet scaled 1:240





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



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

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Tue Jul 12 14:08:34 2022
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

| Loop: | Readings | | | References | | | Results | |
|-----------|----------|-------|---|------------|---------|--------|---------|---------|
| | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.015 | 0.648 | V | 0.000 | 400.000 | mmho/m | 620.000 | 6.000 |
| Medium | 0.029 | 0.796 | V | 0.000 | 464.000 | mmho/m | 600.000 | -8.000 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.017 | 0.657 | V | 0.000 | 400.000 | mmho/m | 625.153 | -10.619 |
| Medium | 0.016 | 0.757 | V | 0.000 | 464.000 | mmho/m | 625.992 | -9.739 |

Downhole Calibration

| | Readings | | | References | | | Results | |
|--------|----------|--------|--------|------------|----------|--------|---------|-------|
| | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | 0.000 | 0.000 | mmho/m | 2.011 | 405.777 | mmho/m | 1.000 | 0.000 |
| Medium | 0.000 | 0.000 | mmho/m | 7.590 | 503.393 | mmho/m | 1.000 | 0.000 |
| LL3 | | 7.500 | V | | 1500.000 | Ohm-m | | |
| | | 0.000 | V | | 20.000 | Ohm-m | | |
| | | -7.200 | V | | 3800.000 | mmho-m | | |

After Survey Verification

| | Readings | | | Targets | | | Results | |
|--------|----------|-------|--------|---------|-------|--------|---------|-------|
| | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 |
| Medium | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 | mmho/m | 0.000 | 0.000 |
| LL3 | | 1.000 | Ohm-m | | 1.000 | Ohm-m | | |
| | | 0.000 | Ohm-m | | 0.000 | Ohm-m | | |
| | | 1.000 | mmho-m | | 1.000 | mmho-m | | |

Litho Density Calibration Report

Serial: 001N Model: PRB

Master Calibration

Performed Thu Mar 19 11:30:16 2020

| | Background | Magnesium | Aluminum | Aluminum+Fe | |
|-------------|------------|-------------|----------|---------------------|---------|
| Window 1 | 1572.2 | 7510.8 | 2837.3 | 2643.1 | cps |
| Window 2 | 1446.2 | 6523.9 | 2552.8 | 2409.9 | cps |
| Window 3 | 1060.9 | 3611.4 | 1731.5 | 1684.8 | cps |
| Window 4 | 145.5 | 363.4 | 363.2 | 368.1 | cps |
| Long Space | 0.0 | 5077.7 | 1106.6 | 963.7 | cps |
| Short Space | 3.1 | 1709.3 | 1103.4 | 916.9 | cps |
| Rho | | 1.7100 | 2.5900 | 0.0000 | g/cc |
| Pe | | 2.0000 | 2.7500 | 5.7900 | |
| Rib Angle | : 44.0 | Rib Slope | : 0.965 | Density/Spine Ratio | : 0.555 |
| Spine Angle | : 74.0 | Spine Slope | : 3.481 | Spine Intercept | : -17.4 |

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

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

| | | | | | |
|---------------------|-----|--------|--------|--------|------|
| Window 1 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 2 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 3 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Window 4 | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Long Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Short Space | 0.0 | 0.0 | 0.0 | 0.0 | cps |
| Measured Rho | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Correction | | 0.0000 | 0.0000 | 0.0000 | g/cc |
| Measured Pe | | | 0.0000 | 0.0000 | |

Compensated Neutron Calibration Report

Serial Number: 6I
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 |

PRE-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|----------------|----------|----------|--------|
| 1) Short Space | cps | | |
| Long Space | cps | pu | pu |
| 2) Short Space | cps | | |
| Long Space | cps | pu | |
| 3) Short Space | cps | | |
| Long Space | cps | pu | |

POST-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|----------------|----------|----------|--------|
| 1) Short Space | cps | | |
| Long Space | cps | pu | pu |
| 2) Short Space | cps | | |
| Long Space | cps | pu | pu |
| 3) Short Space | cps | | |
| Long Space | cps | pu | pu |

Gamma Ray Calibration Report

Serial Number: GR6

Tool Model: OPEN
Performed: Mon Jun 20 01:31:16 2022

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.8500 GAPI/cps