# DUAL INDUCTION LOG

Company L. D. DRILLING, INC.
Well #35-1 MIDDLETON
Field WHITNEY SOUTHWEST
County GOVE State KANSAS

Company L. D. DRILLING, INC.
Well #35-1 MIDDLETON
Field WHITNEY SOUTHWEST
County GOVE State KANSAS

Location: API # : 15-063-22423-0000
1466' FSL & 1868' FEL
SW - SE - NW - SE
SEC 35 TWP 15S RGE 27W

Other Services
CDL/CNL
MEL/SONIC

Permanent Datum GROUND LEVEL Elevation 2523
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2528
D.F. 2526
G.L. 2523

| | | | | |
|---|---|---|---|---|
| Date | 1/16/23 | | | |
| Run Number | ONE | | | |
| Depth Driller | 4517 | | | |
| Depth Logger | 4518 | | | |
| Bottom Logged Interval | 4416 | | | |
| Top Log Interval | 00 | | | |
| Casing Driller | 8 5/8"@306' | | | |
| Casing Logger | 306 | | | |
| Bit Size | 7 7/8" | | | |
| Type Fluid in Hole | CHEMICAL MUD | CHLORIDES: 3,600 PPM | | |
| Density / Viscosity | 9.4/49 | | | |
| pH / Fluid Loss | 8.5/13.6 | | | |
| Source of Sample | FLOWLINE | | | |
| Rm @ Meas. Temp | 1.00@66F | | | |
| Rmf @ Meas. Temp | .750@66F | | | |
| Rmc @ Meas. Temp | 1.20@66F | | | |
| Source of Rmf / Rmc | MEASUREMENT | | | |
| Rm @ BHT | .545@121F | | | |
| Time Circulation Stopped | 2.5 HOURS | | | |
| Time Logger on Bottom | 4:45 A.M. | | | |
| Maximum Recorded Temperature | 121F | | | |
| Equipment Number | 8916 | | | |
| Location | HAYS, KANSAS | | | |
| Recorded By | JEFF LUEBBERS | | | |
| Witnessed By | KIM SHOEMAKER | | | |

<<< Fold Here >>>

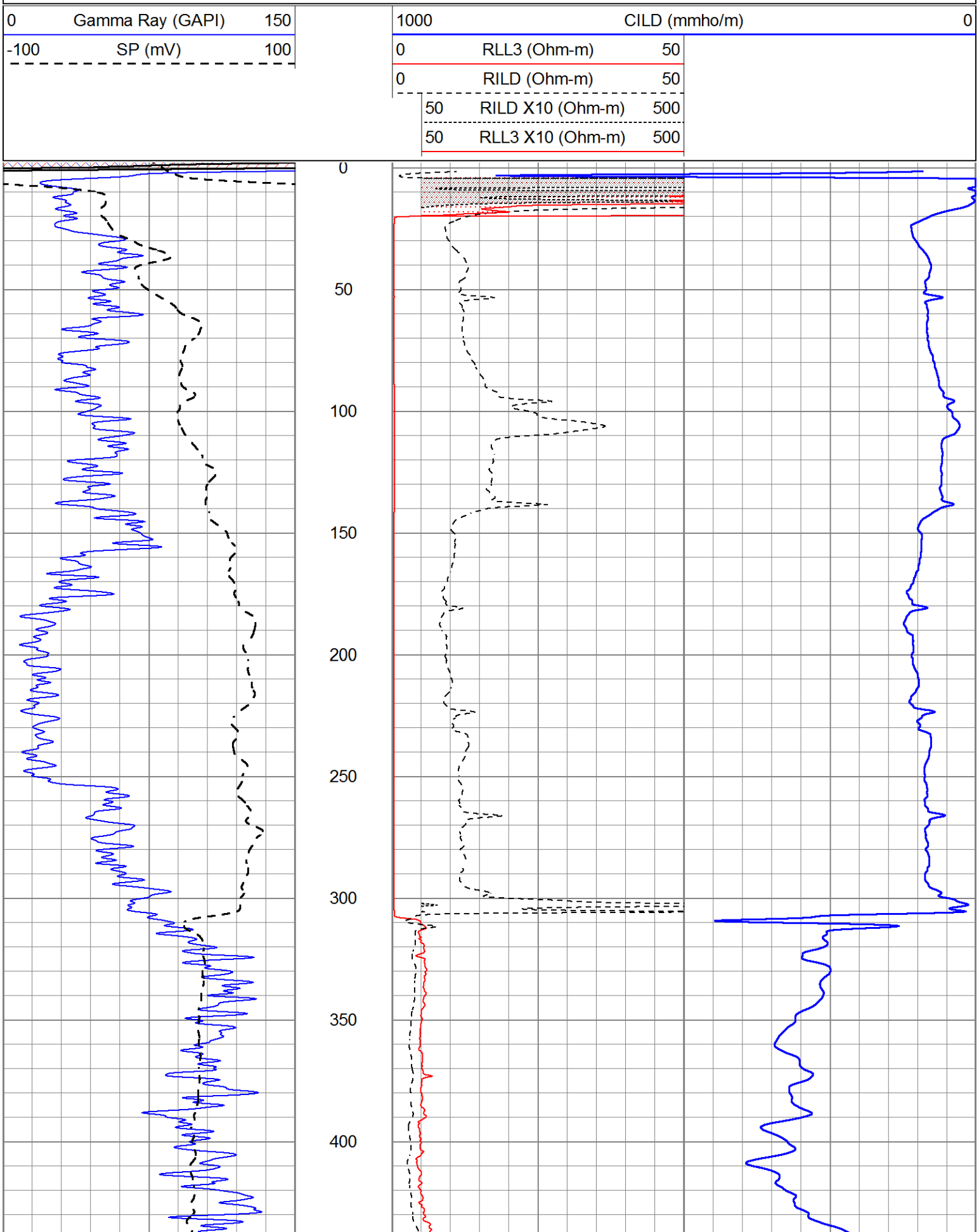


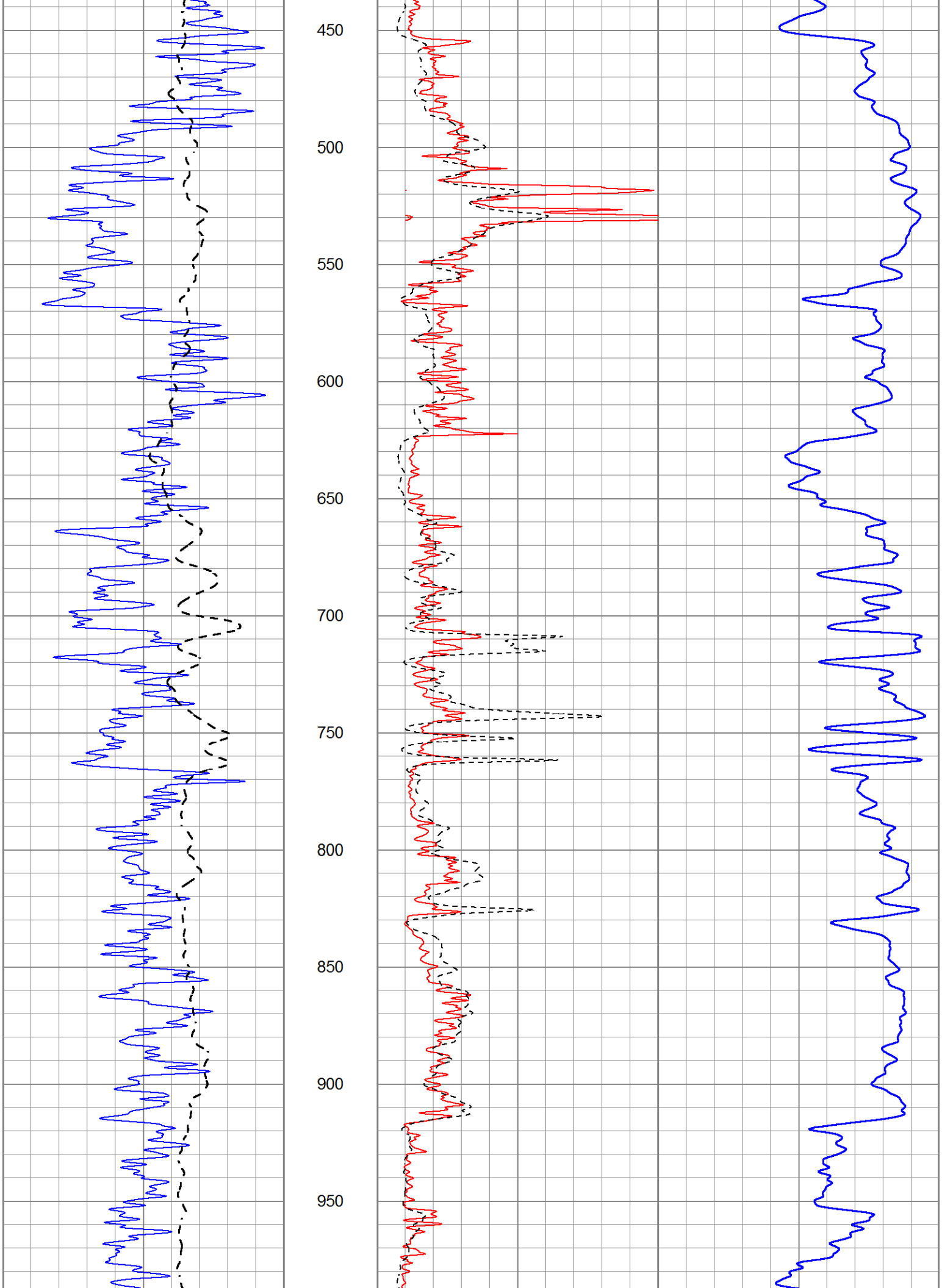
Comments

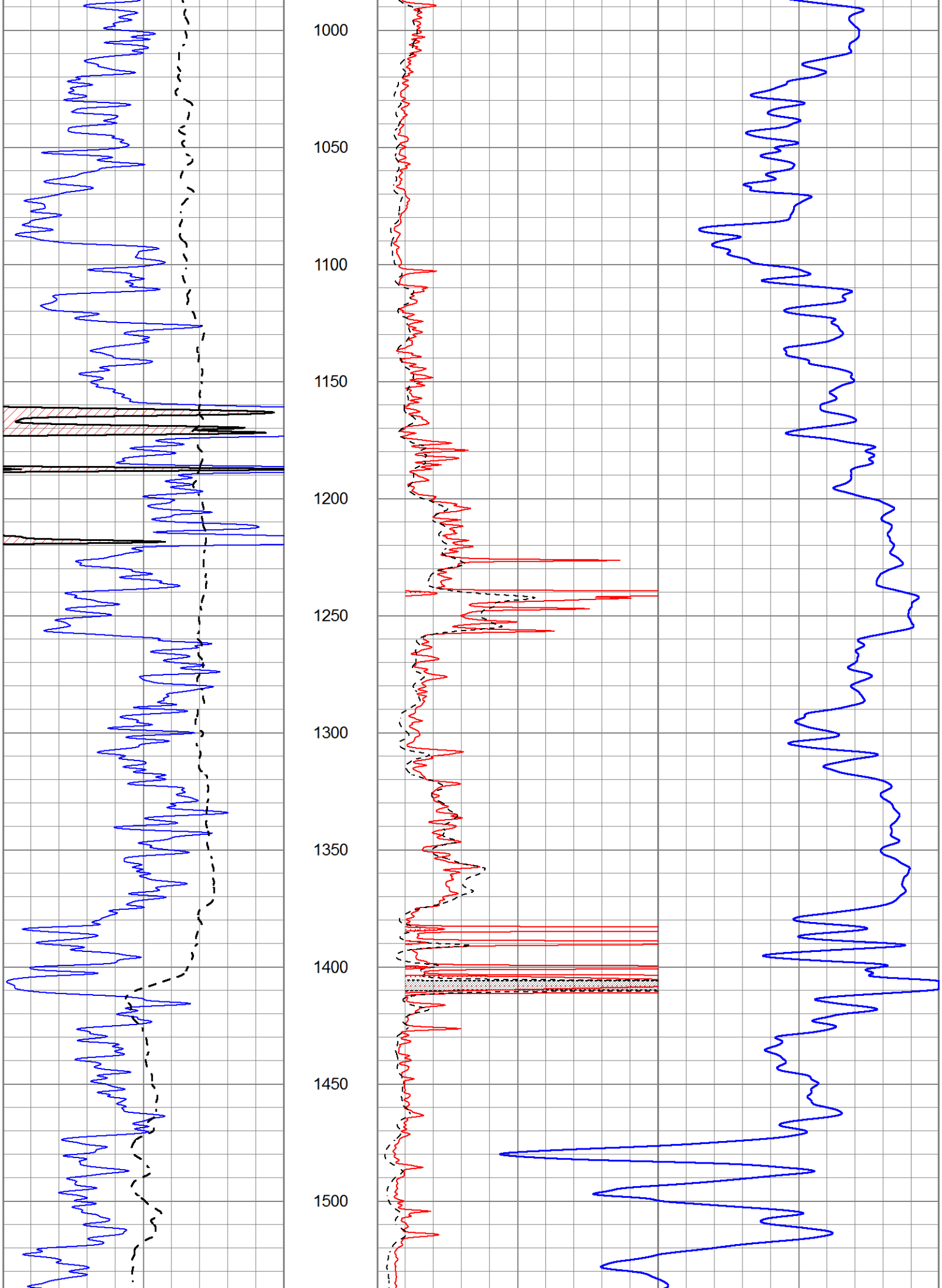
THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
DIRECTIONS:
PENDENNIS, KS., (RED CHIEF RD. & HWY 4) 6N. TO "RD.C", 1 1/2E. TO CURVE, CONTINUE 1 MORE EAST THROUGH CATTLE GUARD ON TRAIL, TRAIL TURNS SOUTH 2 MORE MILES TO LOCATION

# MAIN SECTION

| | |
|---|---|
| Database File | 7439ddn.db |
| Dataset Pathname | pass3.1M |
| Presentation Format | _dil2 |
| Dataset Creation | Mon Jan 16 06:26:14 2023 |
| Charted by | Depth in Feet scaled 1:600 |




450
500
550
600
650
700
750
800
850
900
950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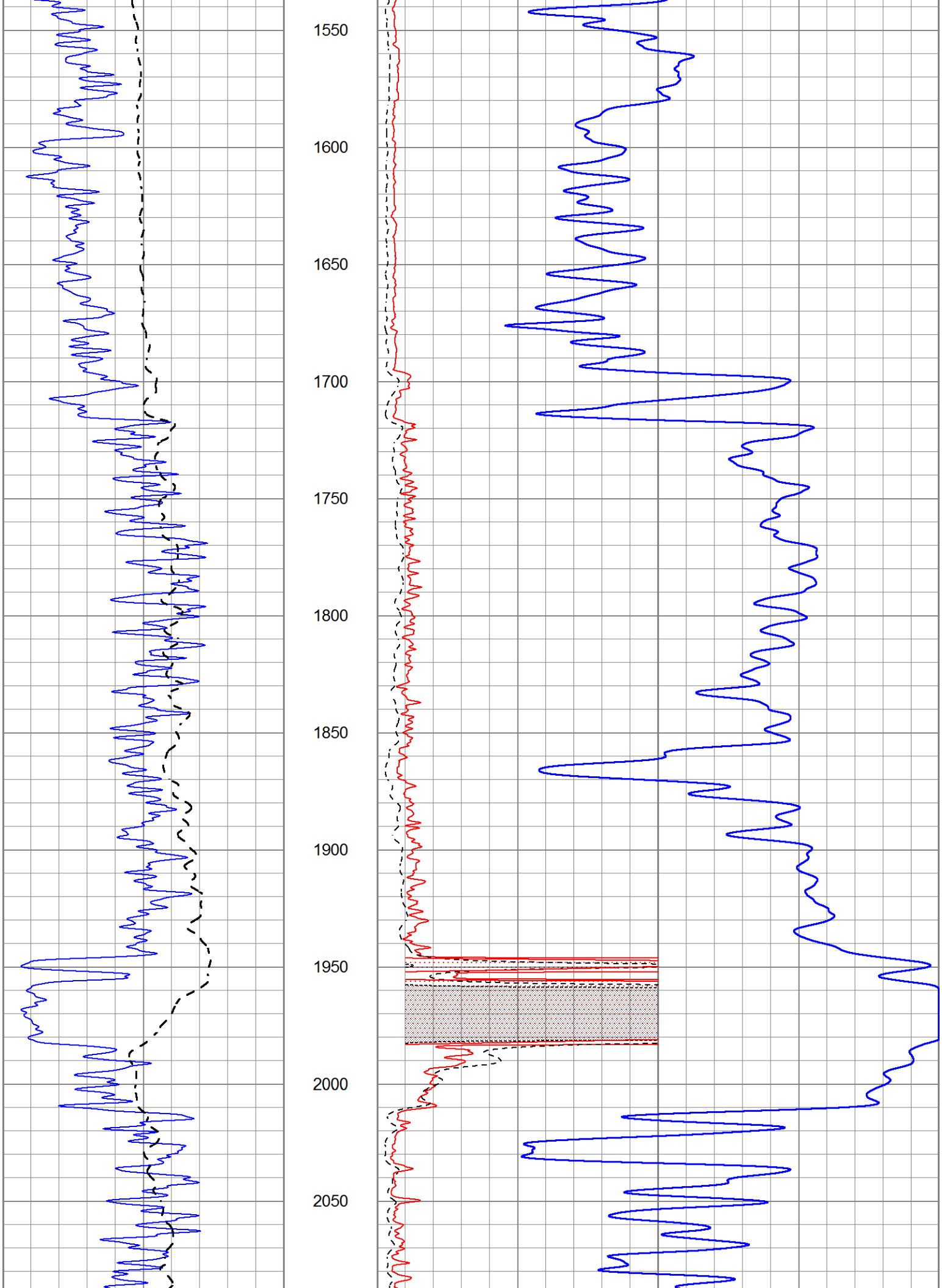
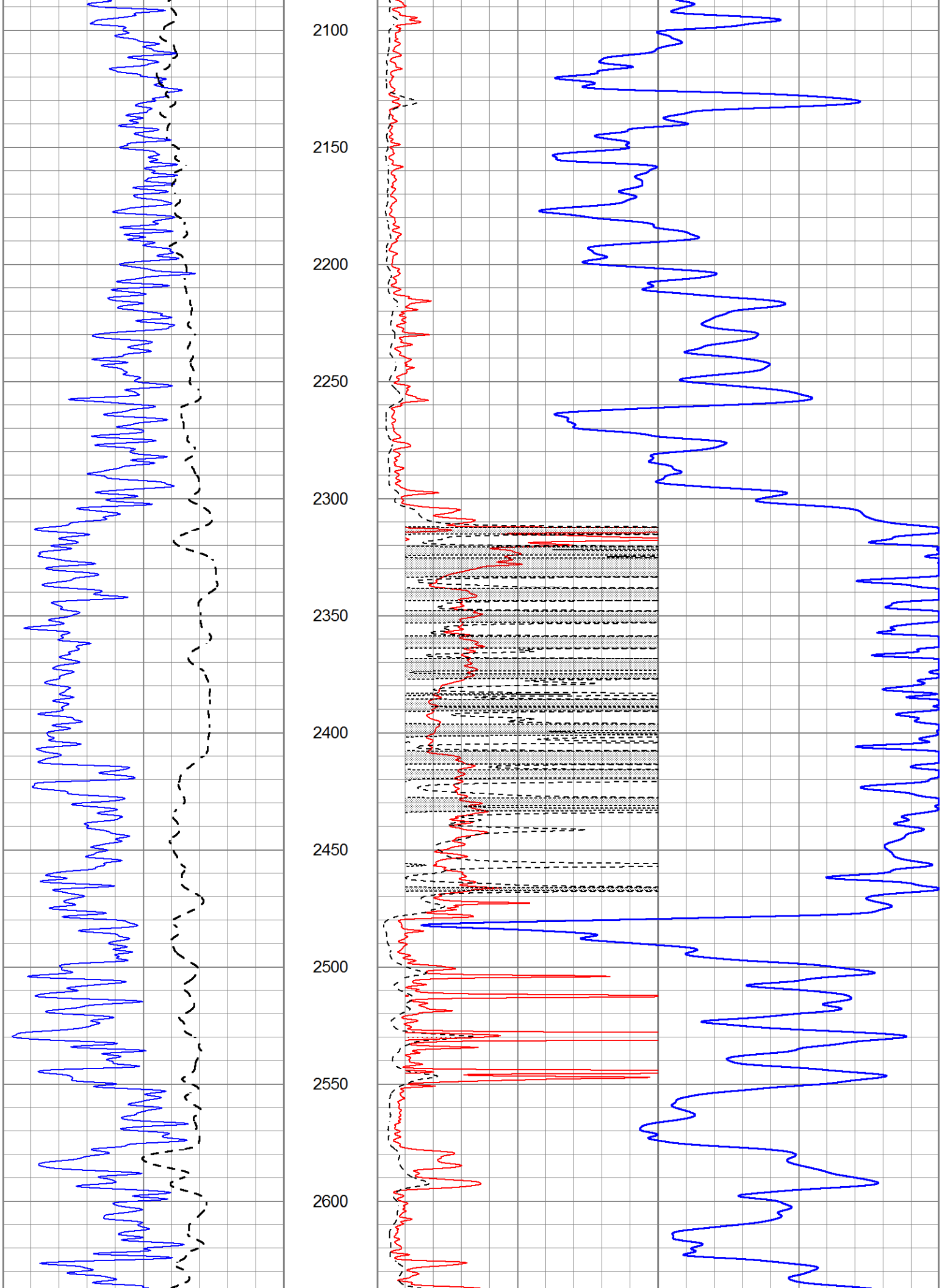
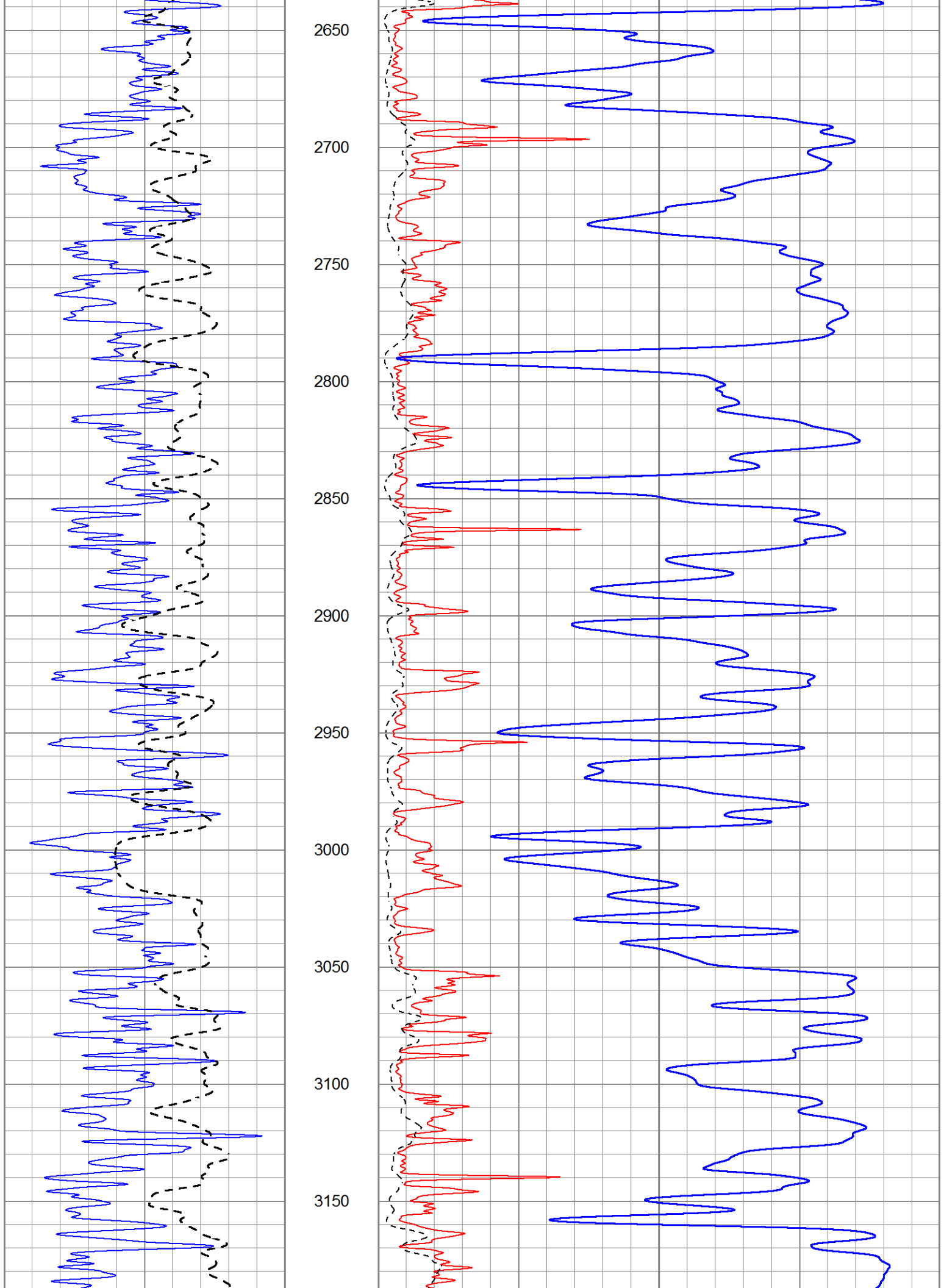
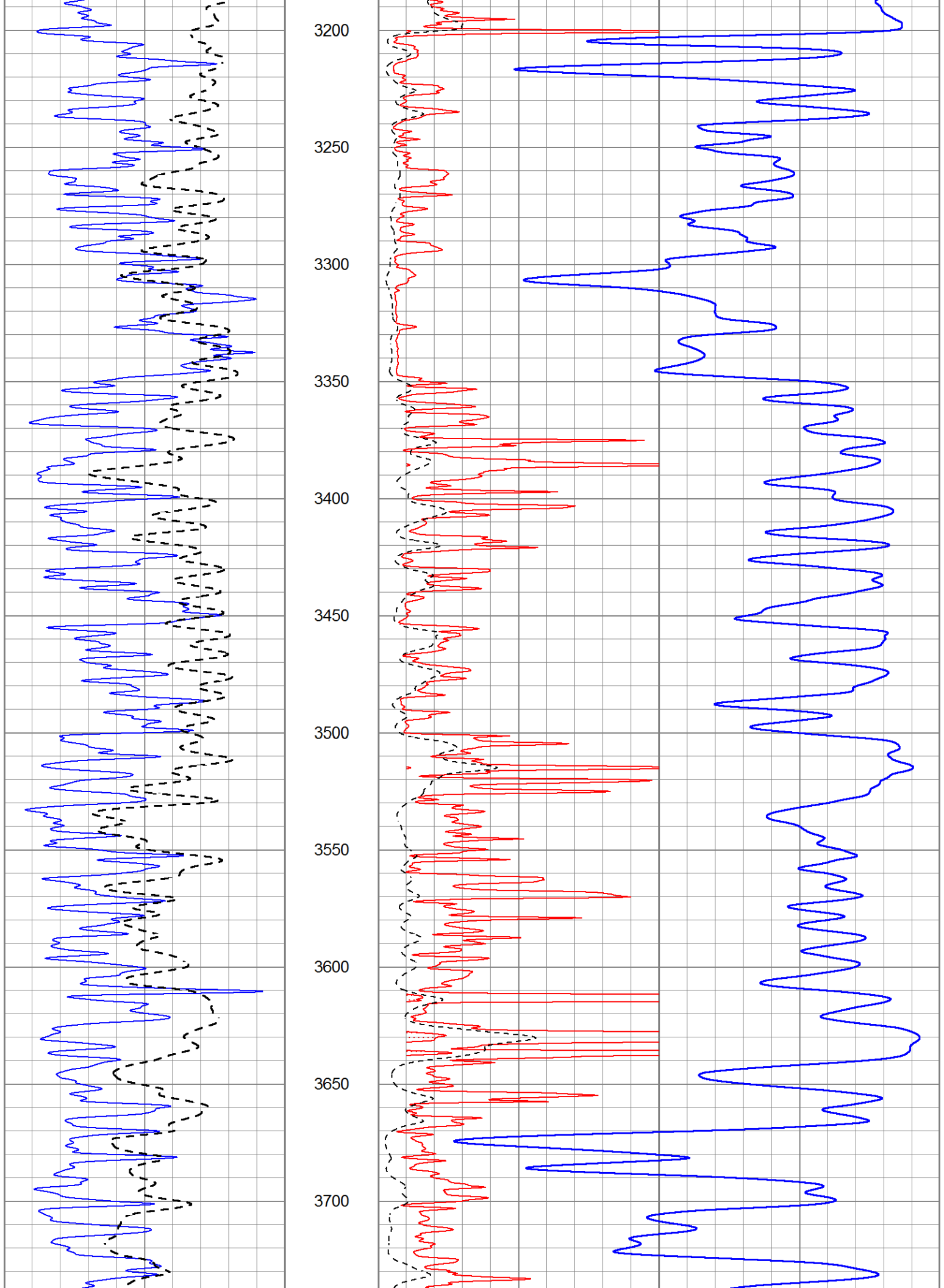
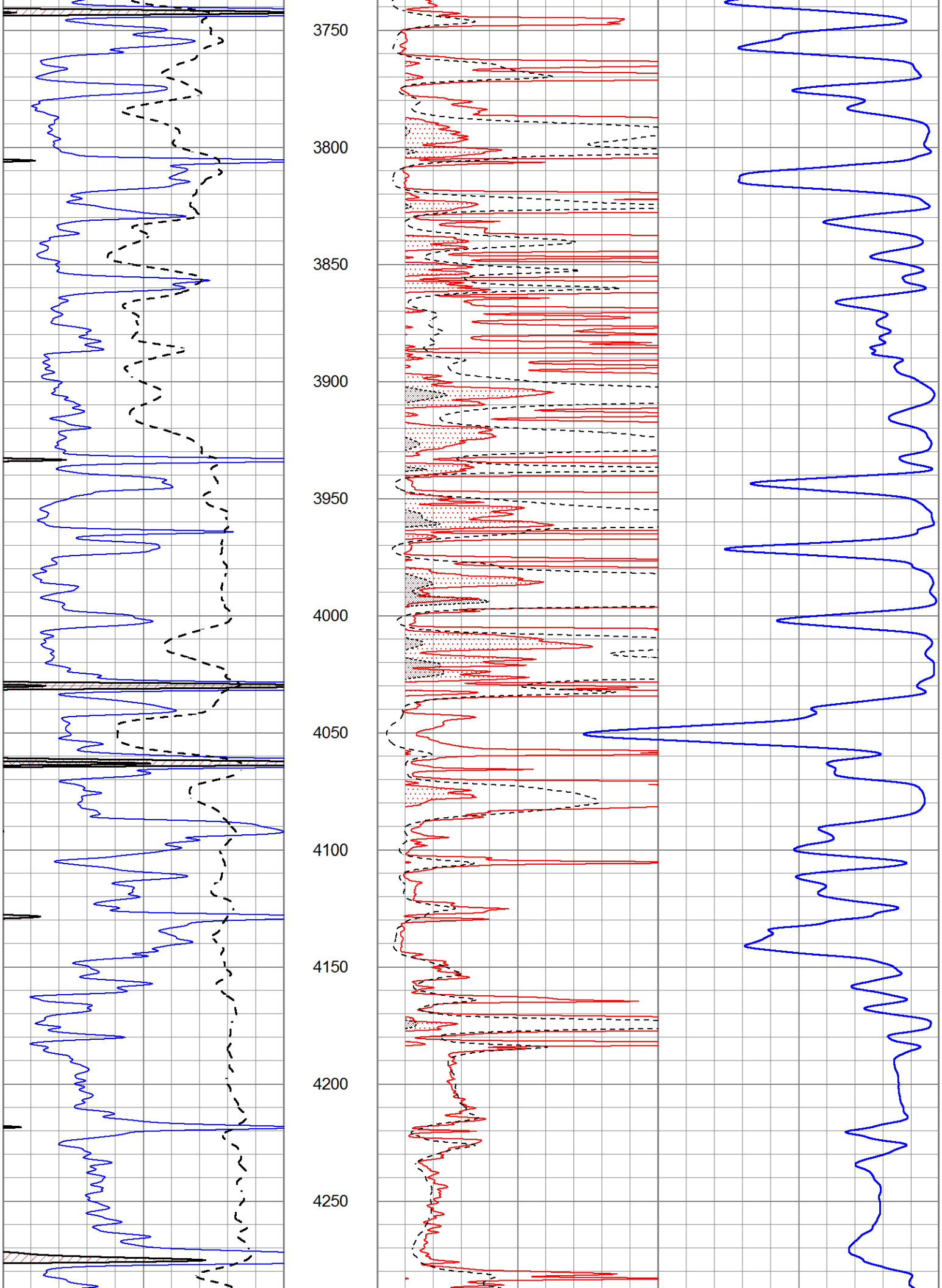
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

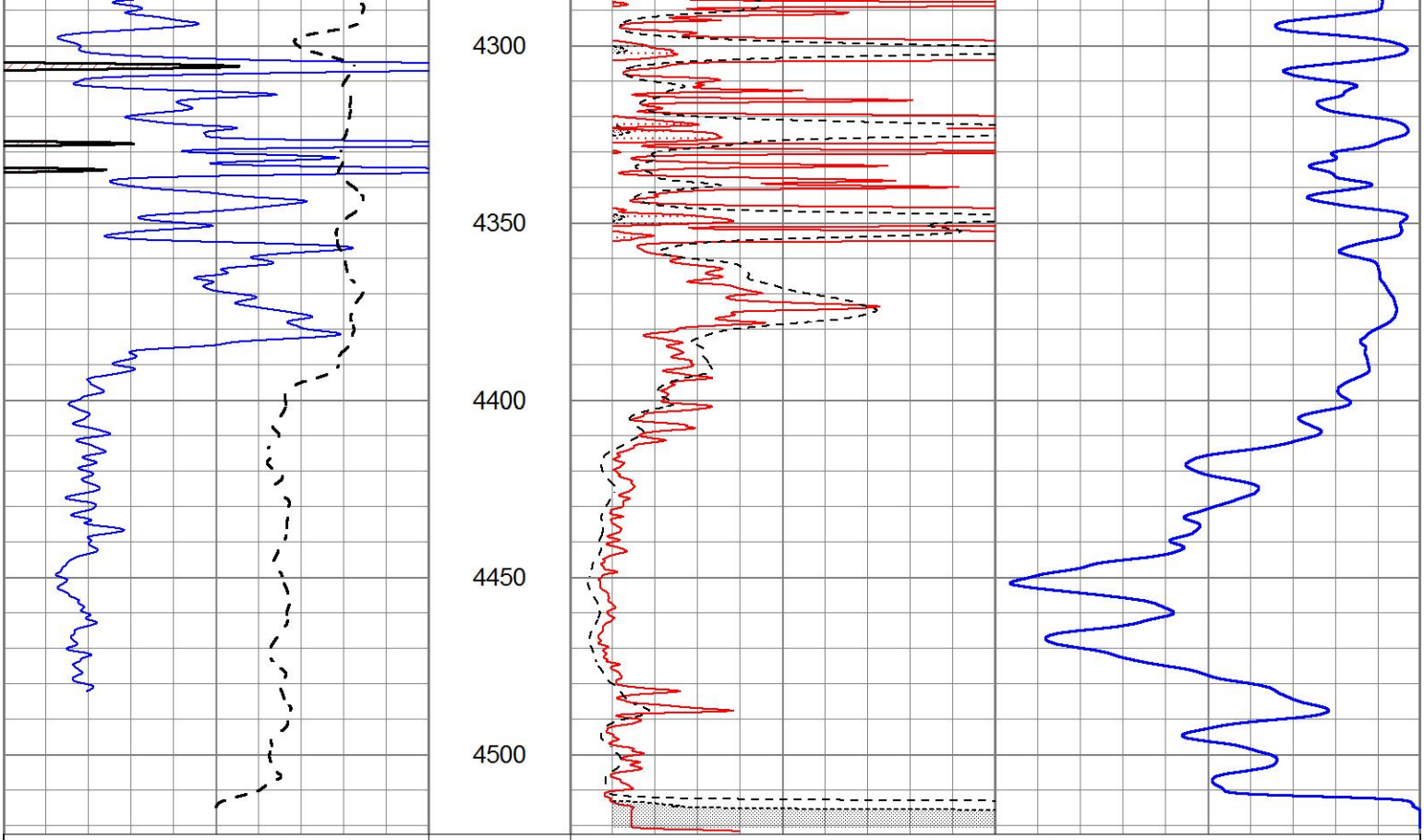

1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050


2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600


2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150


3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700


3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250

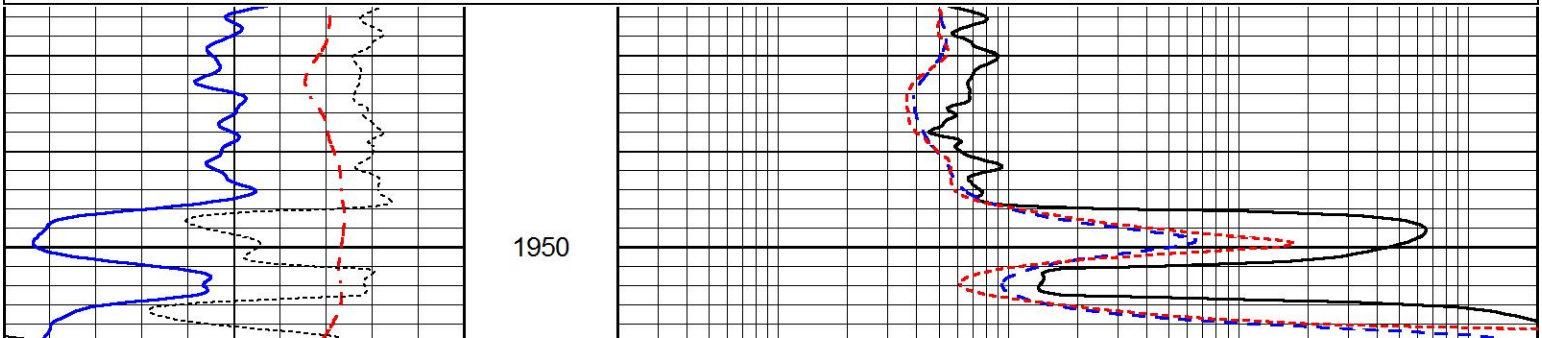


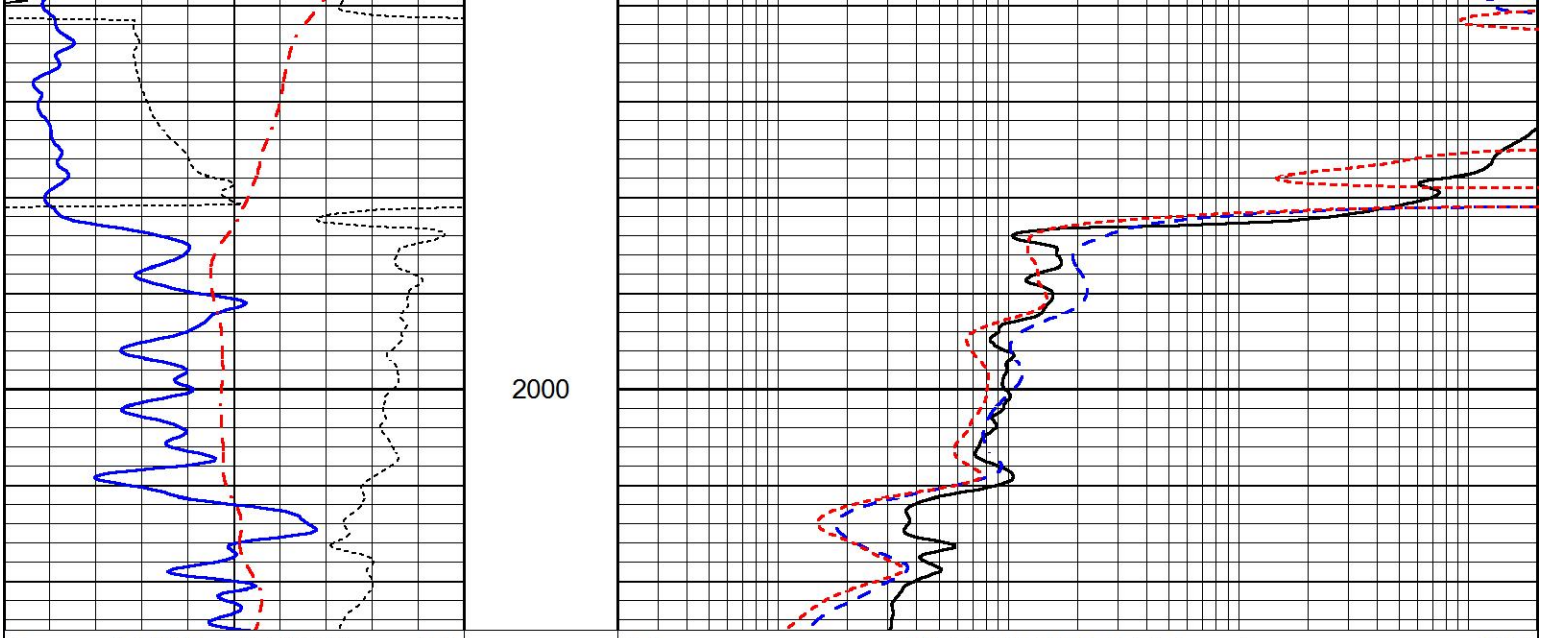

# ANHYDRITE

| | |
|---|---|
| Database File | 7439ddn.db |
| Dataset Pathname | pass3.1A |
| Presentation Format | _dil |
| Dataset Creation | Mon Jan 16 06:27:40 2023 |
| 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 |

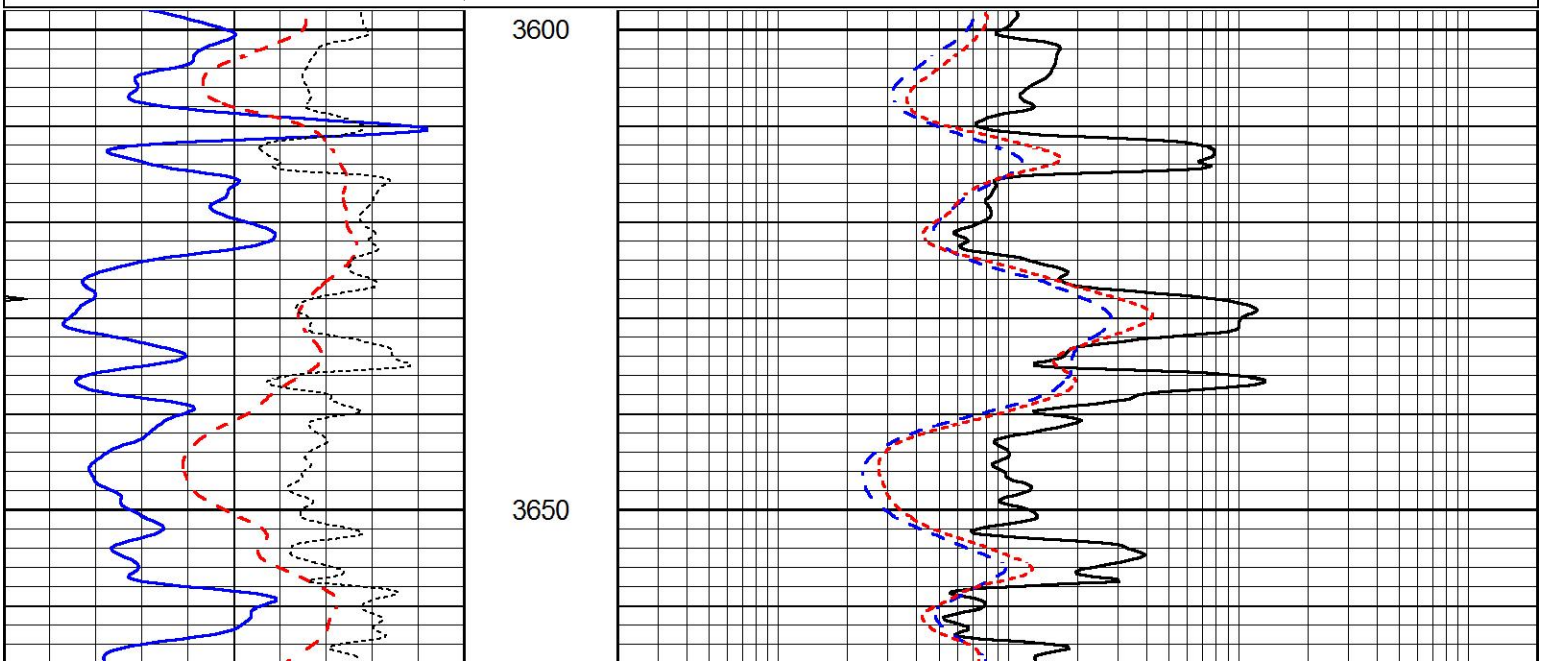
| | | |
|---|---|---|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |

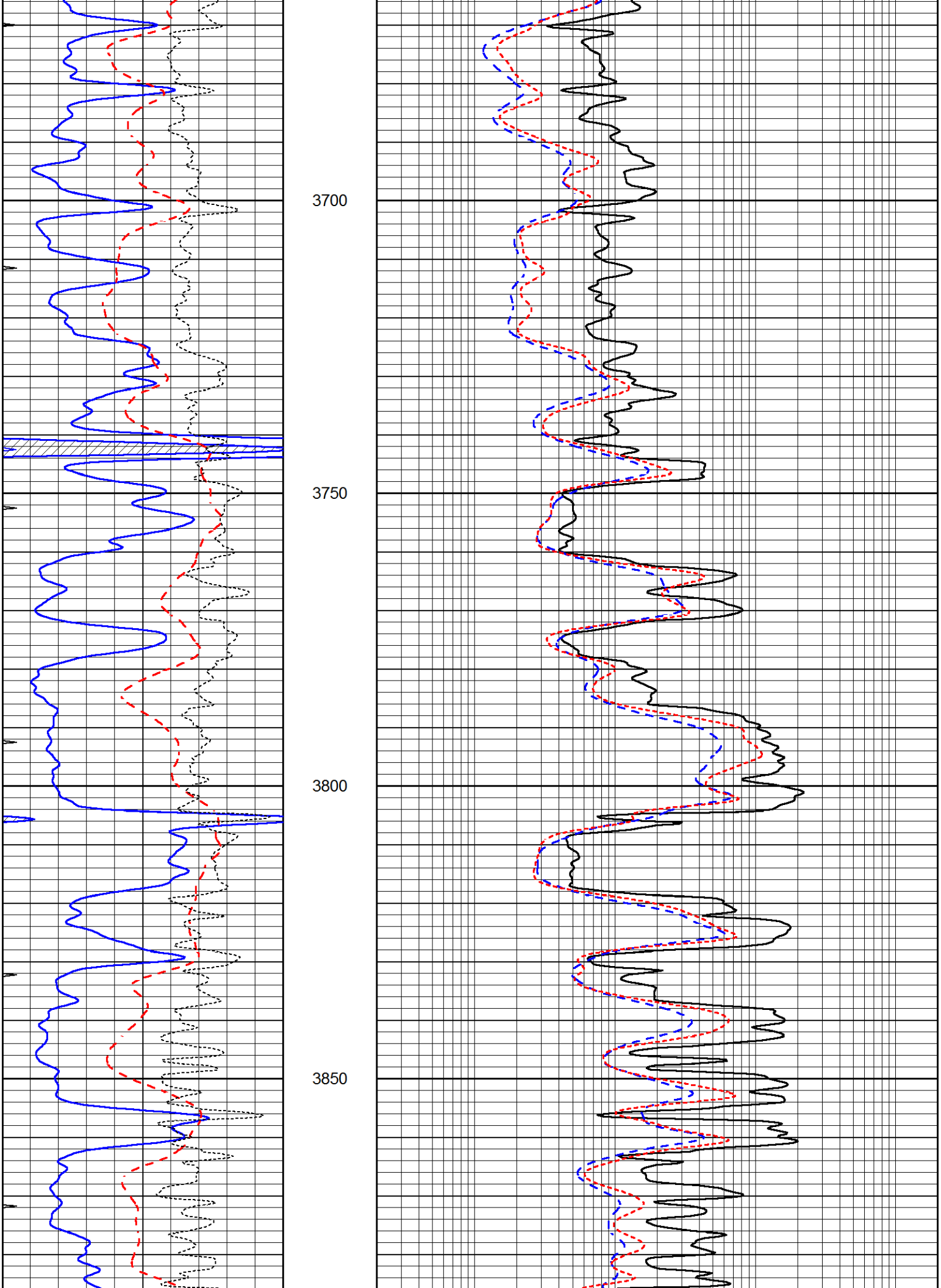
# MAIN SECTION

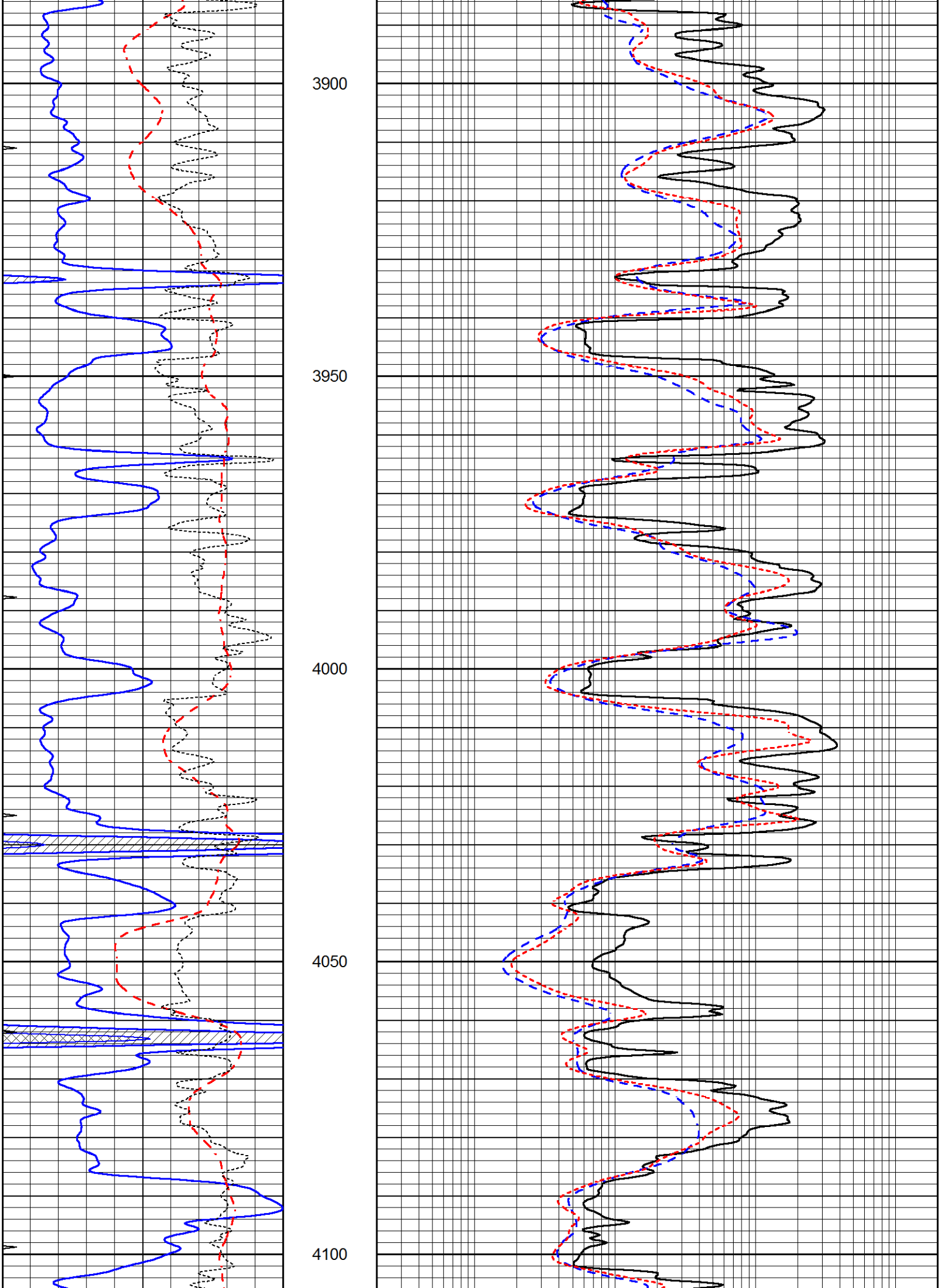
| | |
|---|---|
| Database File | 7439ddn.db |
| Dataset Pathname | pass3.1M |
| Presentation Format | _dil |
| Dataset Creation | Mon Jan 16 06:26:14 2023 |
| Charted by | Depth in Feet scaled 1:240 |

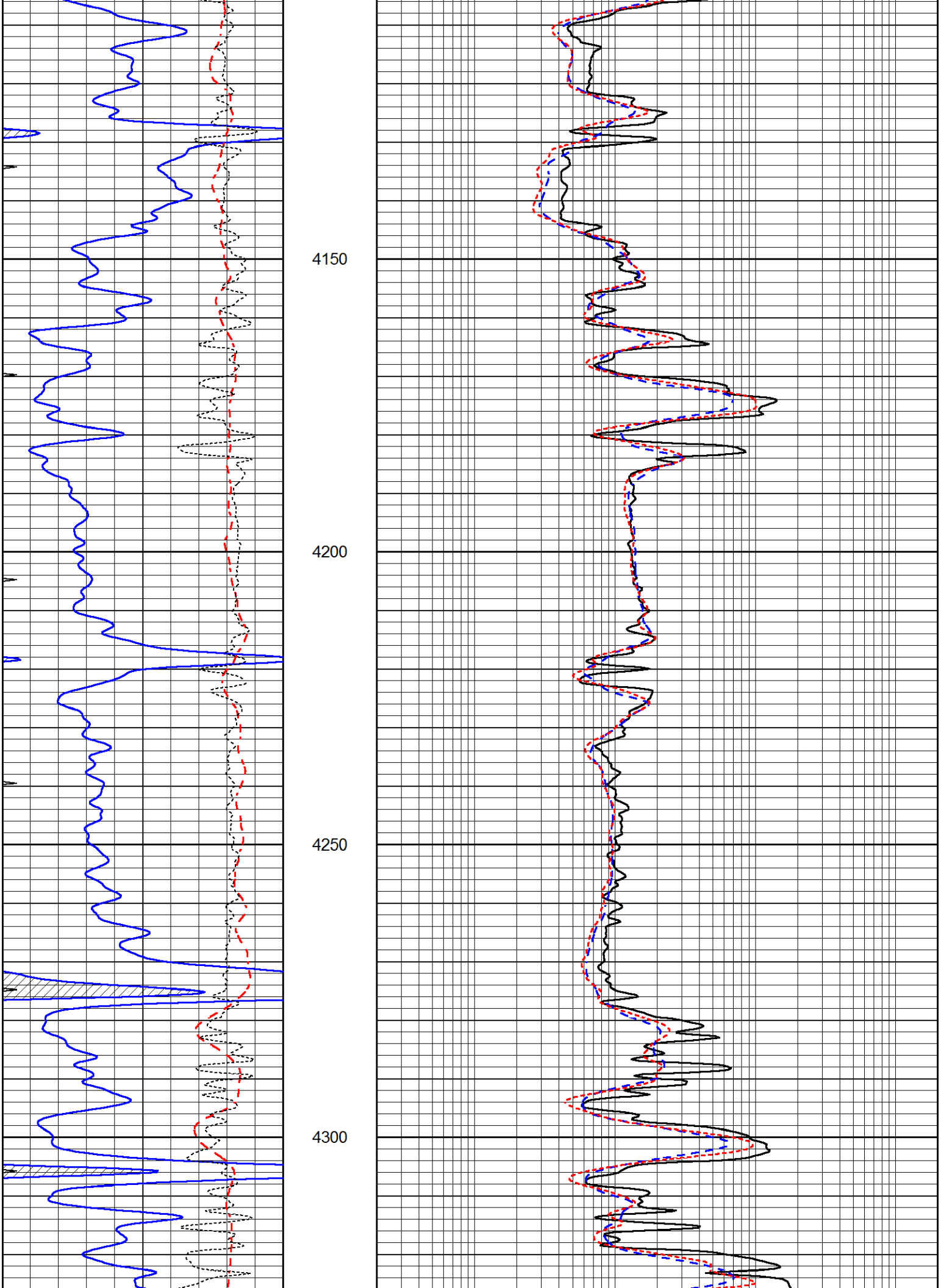
| | | |
|---|---|---|
| 0 | GAMMA RAY (GAPI) | 150 |
| -100 | SP (mV) | 100 |
| -250 | Rxo/Rt | 50 |
| 0 | MINMK | 20 |

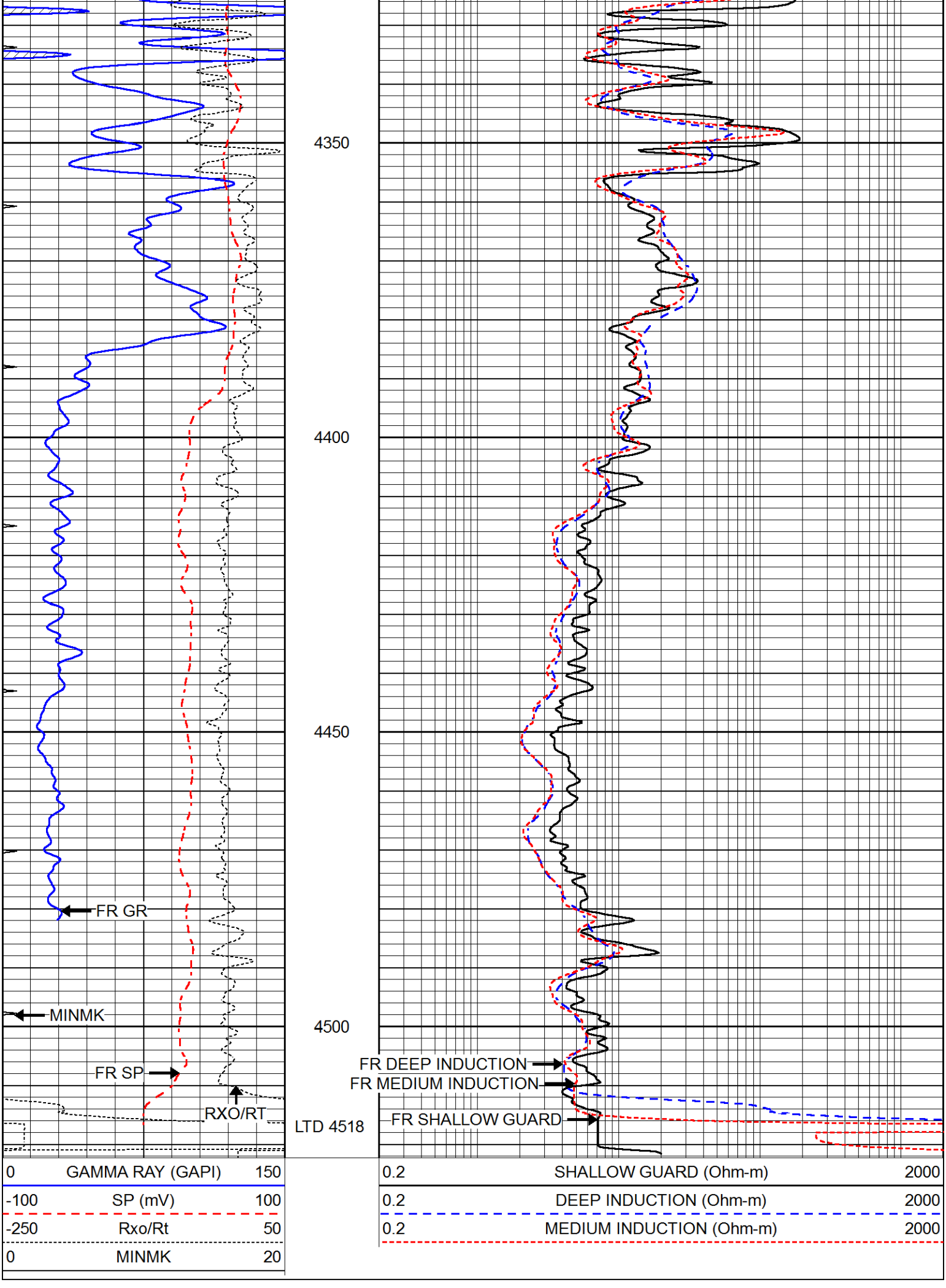
| | | |
|---|---|---|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |




3700
3750
3800
3850


3900
3950
4000
4050
4100


4150
4200
4250
4300

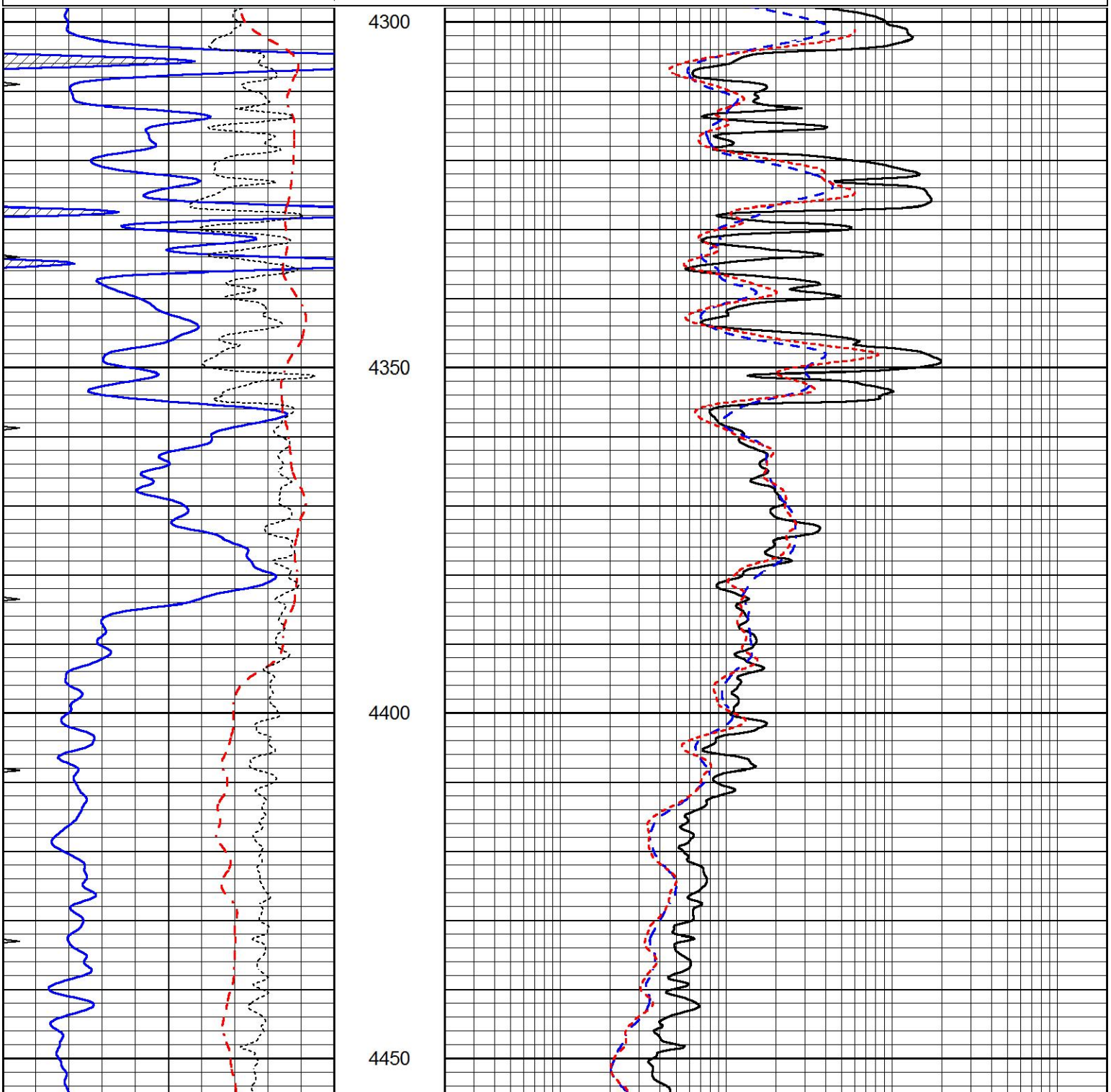

4350
4400
4450
4500
FR GR
MINMK
FR SP
RXO/RT
LTD 4518
FR DEEP INDUCTION
FR MEDIUM INDUCTION
FR SHALLOW GUARD
0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0 MINMK 20
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000

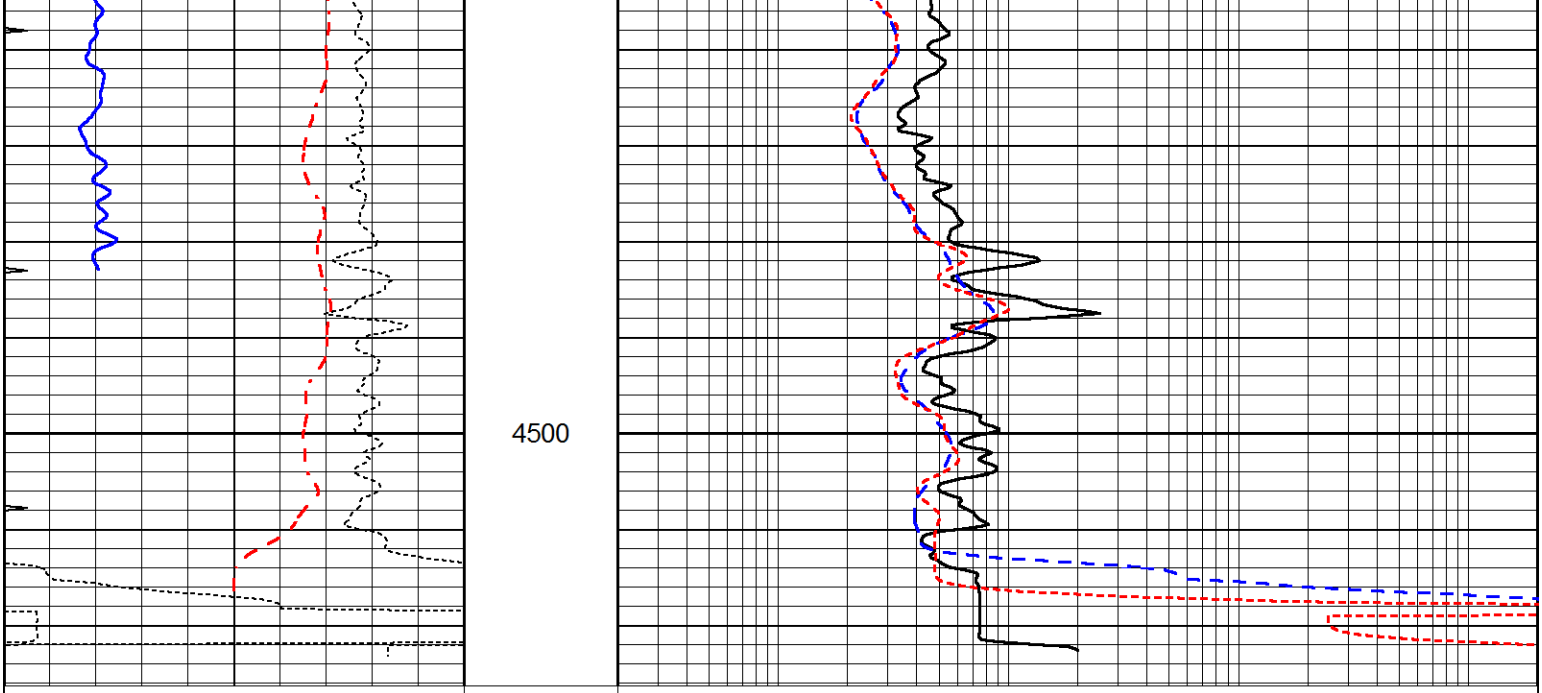
# REPEAT SECTION

| | |
|---|---|
| Database File | 7439ddn.db |
| Dataset Pathname | pass2.1R |
| Presentation Format | _dil |
| Dataset Creation | Mon Jan 16 05:33:56 2023 |
| 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 |

## Calibration Report

Database File 7439ddn.db
Dataset Pathname pass3.1M
Dataset Creation Mon Jan 16 06:26:14 2023

## Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Mon Jan 16 05:41:53 2023
Downhole Cal Performed: Mon Sep 10 14:28:38 2018
After Survey Verification Performed: Mon Sep 10 14:28:40 2018

### Surface Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.015 | 0.648 | V | 0.000 | 400.000 | mmho/m | 620.000 | -2.000 |
| Medium | 0.029 | 0.796 | V | 0.000 | 464.000 | mmho/m | 620.000 | -10.000 |
| 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 | |
|---|---|---|---|---|---|---|---|---|

| | Readings | | | Target | | | 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: 004 Model: PRB

Master Calibration — Performed Fri Nov 04 15:19:59 2022

| | Background | Magnesium | Aluminum | Aluminum+Fe | |
|---|---|---|---|---|---|
| Window 1 | 1153.2 | 7232.1 | 2536.8 | 2279.5 | cps |
| Window 2 | 1055.6 | 6225.5 | 2222.3 | 2030.5 | cps |
| Window 3 | 902.5 | 3849.3 | 1546.4 | 1462.0 | cps |
| Window 4 | 254.4 | 258.2 | 253.1 | 253.9 | cps |
| Long Space | 0.0 | 5169.9 | 1166.7 | 974.9 | cps |
| Short Space | 4.7 | 1383.0 | 950.5 | 792.1 | cps |
| Rho | | 1.7100 | 2.5900 | 0.0000 | g/cc |
| Pe | | 2.0000 | 2.7500 | 5.7900 | |

| | | | | | |
|---|---|---|---|---|---|
| Rib Angle | : 45.9 | Rib Slope | : 1.031 | Density/Spine Ratio | : 0.573 |
| Spine Angle | : 75.9 | Spine Slope | : 3.970 | Spine Intercept | : -20.2 |

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: | Thu Jan 12 05:07:40 2023 | |
| Calibrator Value: | 150.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 276.0 | cps |
| Sensitivity: | 0.8500 | GAPI/cps |