# DUAL INDUCTION LOG

Company K & N PETROLEUM, INC.
Well SOEKEN #21-1
Field KRAFT - PRUSA
County BARTON State KANSAS

Location: API # : 15-009-26352-0000
330' FSL & 552' FEL
W/2 - SE - SE - SE
SEC 21 TWP 17S RGE 11W

Other Services
CDL/CNL
MEL/SON

Permanent Datum GROUND LEVEL Elevation 1820
Log Measured From KELLY BUSHING10' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1830
D.F. 1828
G.L. 1820

Company K & N PETROLEUM, INC.
Well SOEKEN #21-1
Field KRAFT - PRUSA
County BARTON
State KANSAS

| | | | |
|---|---|---|---|
| Date | 5/17/22 | | |
| Run Number | ONE | | |
| Depth Driller | 3375 | | |
| Depth Logger | 3376 | | |
| Bottom Logged Interval | 3374 | | |
| Top Log Interval | 00 | | |
| Casing Driller | 8 5/8"@654' | | |
| Casing Logger | 654 | | |
| Bit Size | 7 7/8 | | |
| Type Fluid in Hole | CHEMICAL MUD | CHLORIDES 5,000 PPM | |
| Density / Viscosity | 9.0/60 | | |
| pH / Fluid Loss | 10.0/5.4 | | |
| Source of Sample | FLOWLINE | | |
| Rm @ Meas. Temp | .850@80F | | |
| Rmf @ Meas. Temp | .638@80F | | |
| Rmc @ Meas. Temp | 1.02@80F | | |
| Source of Rmf / Rmc | MEASUREMENT | | |
| Rm @ BHT | .618@110F | | |
| Time Circulation Stopped | 2 HOURS | | |
| Time Logger on Bottom | 1:30 P.M. | | |
| Maximum Recorded Temperature | 110F | | |
| Equipment Number | 3802 | | |
| Location | HAYS, KANSAS | | |
| Recorded By | JEFF LUEBBERS | | |
| Witnessed By | MAX LOVELY | JIM MUSGROVE | KYLE NEMNICH |

<<< Fold Here >>>

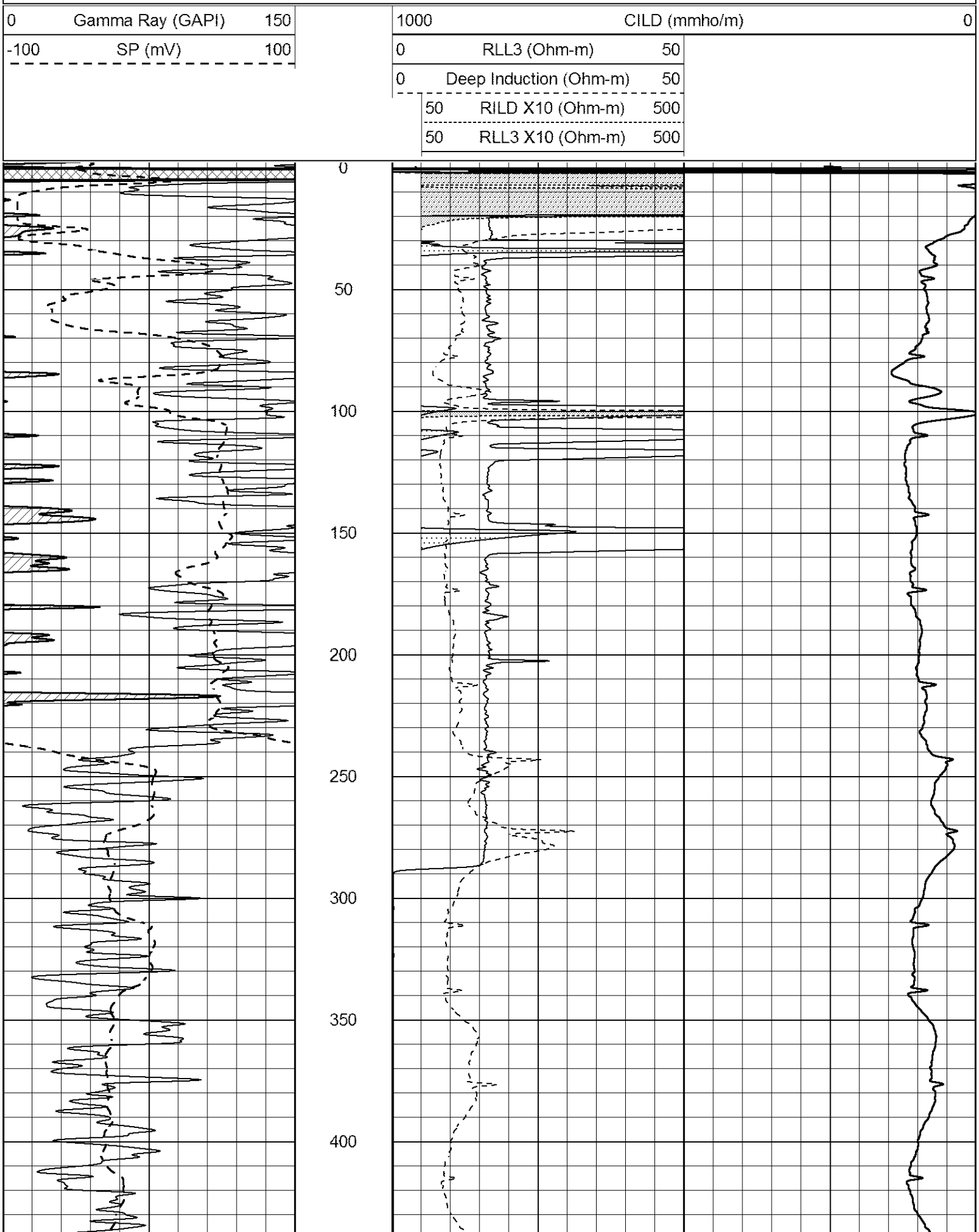
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

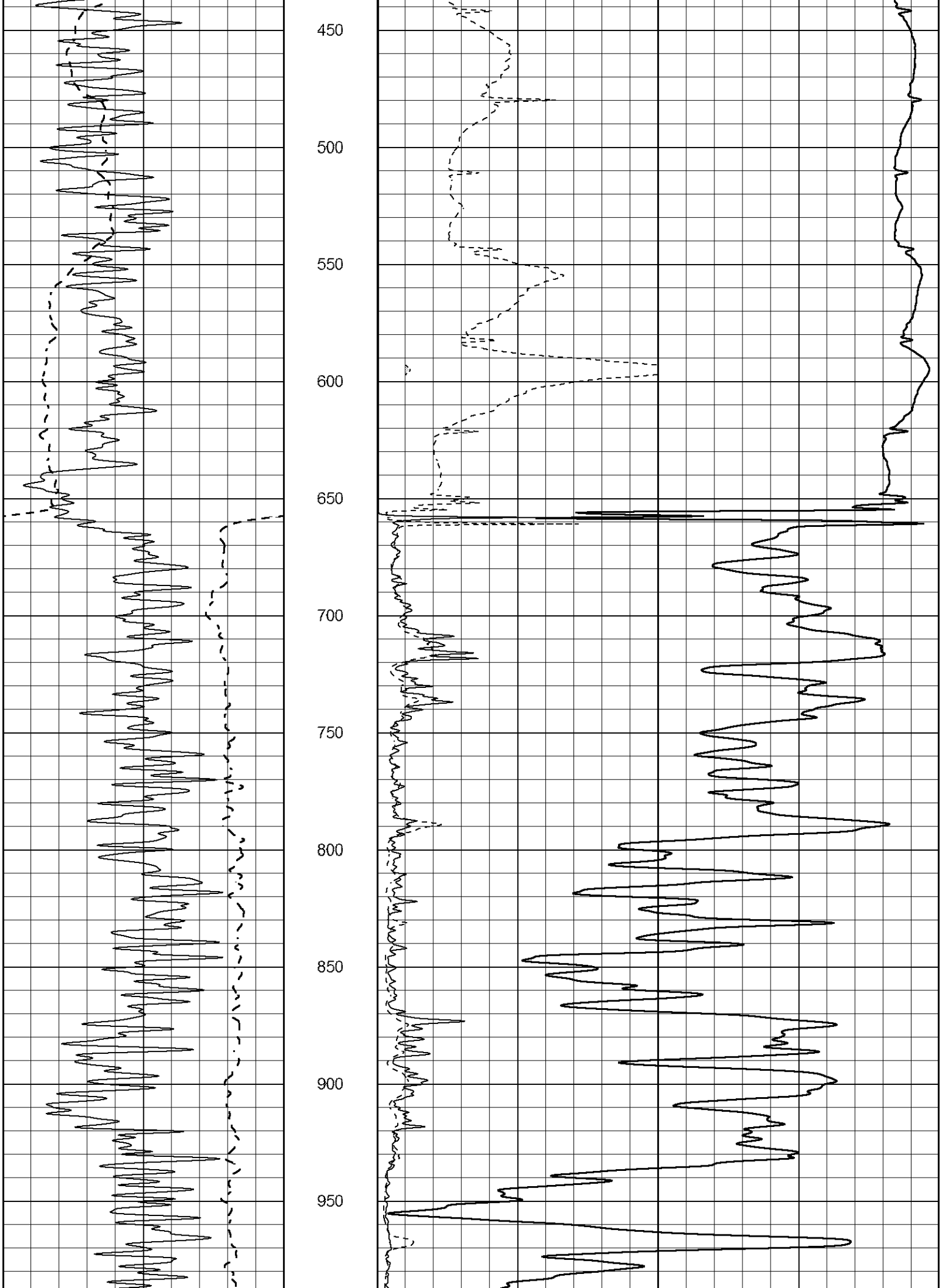
Comments

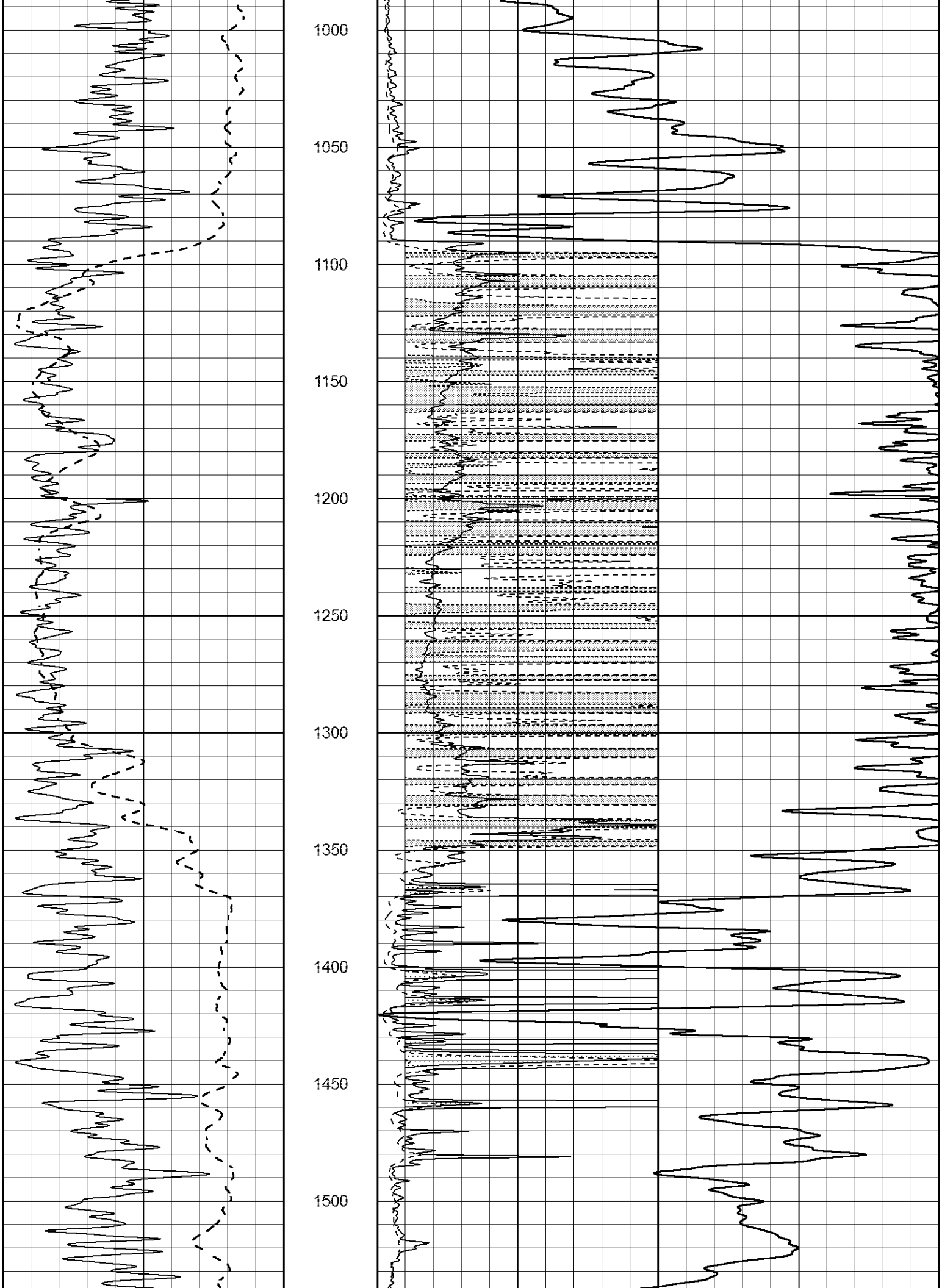
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395
DIRECTIONS
CLAFLIN, KS., 2N. ON BLKTOP, W. INTO

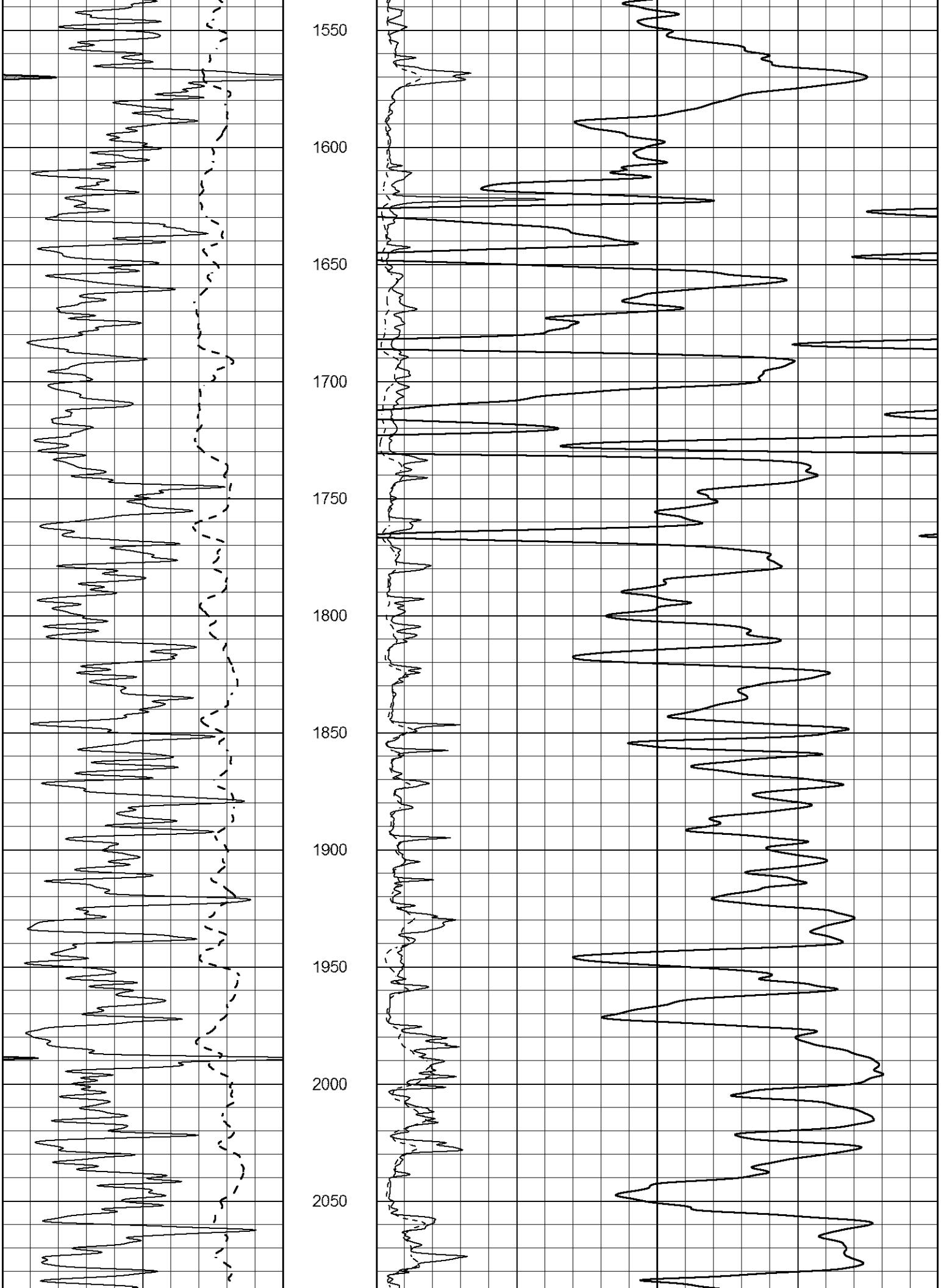
MAIN SECTION

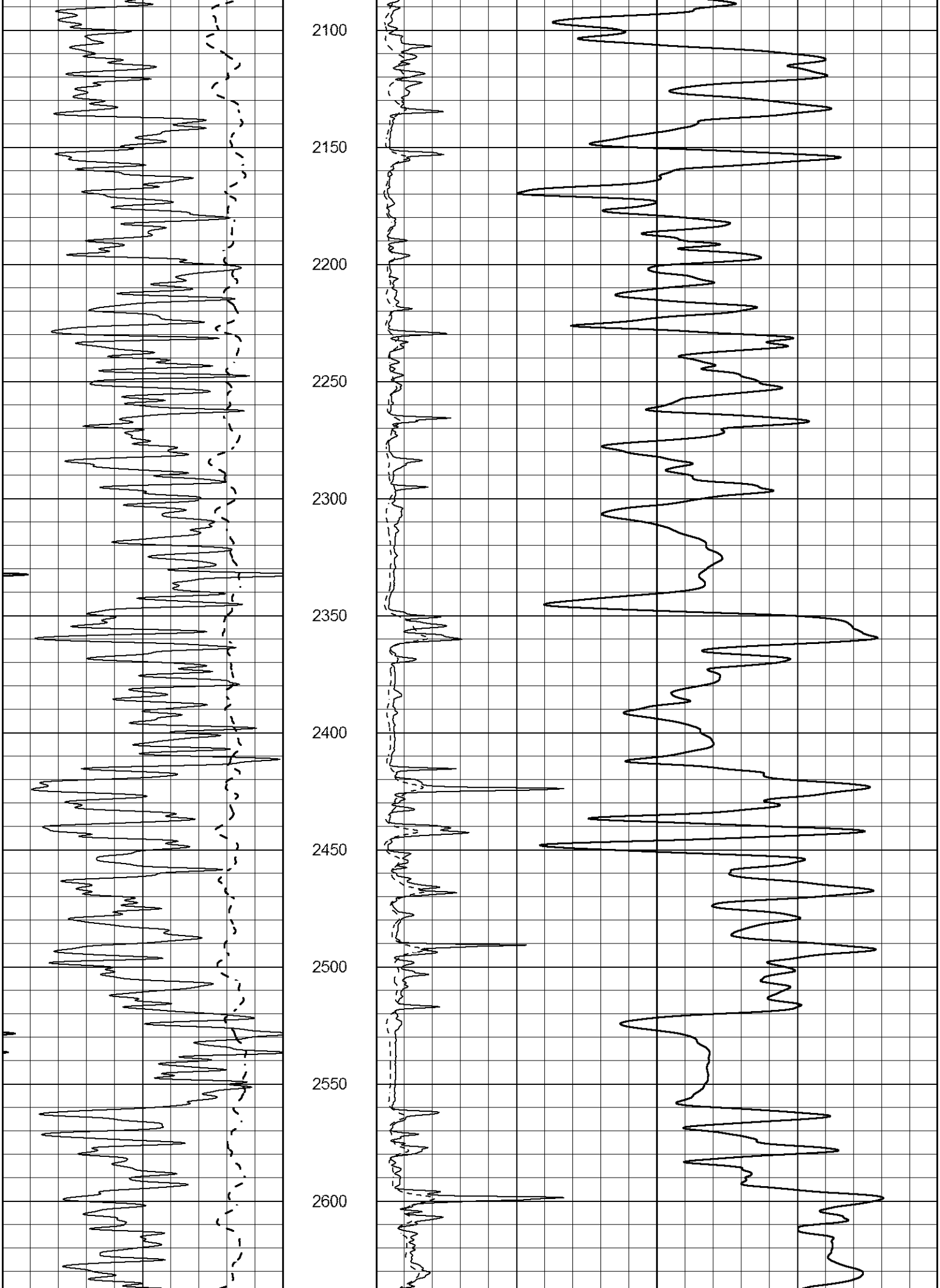
| | |
|---|---|
| Database File | 6529ddn.db |
| Dataset Pathname | pass3.1M |
| Presentation Format | _dil2 |
| Dataset Creation | Tue May 17 14:43:59 2022 |
| Charted by | Depth in Feet scaled 1:600 |

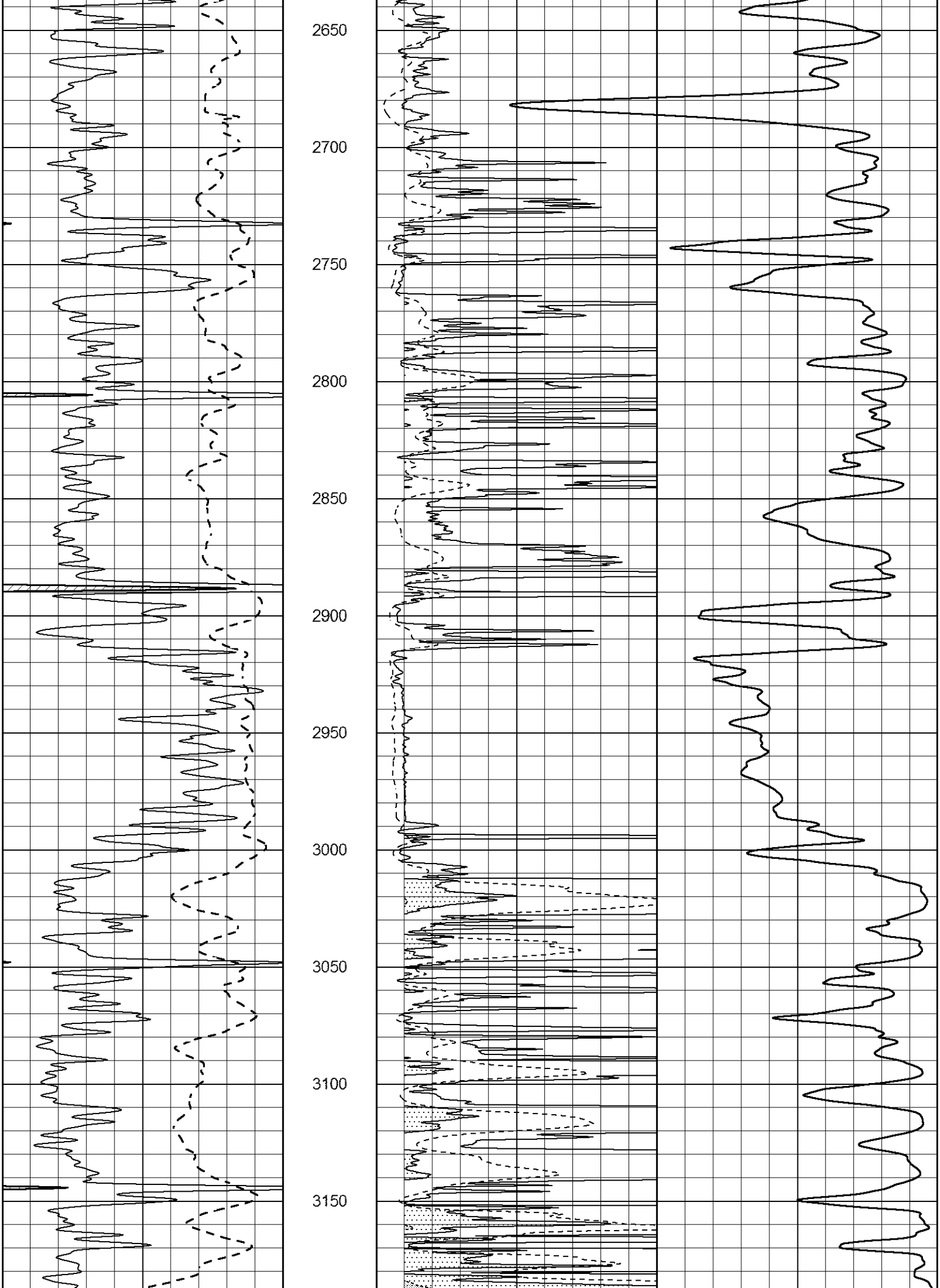


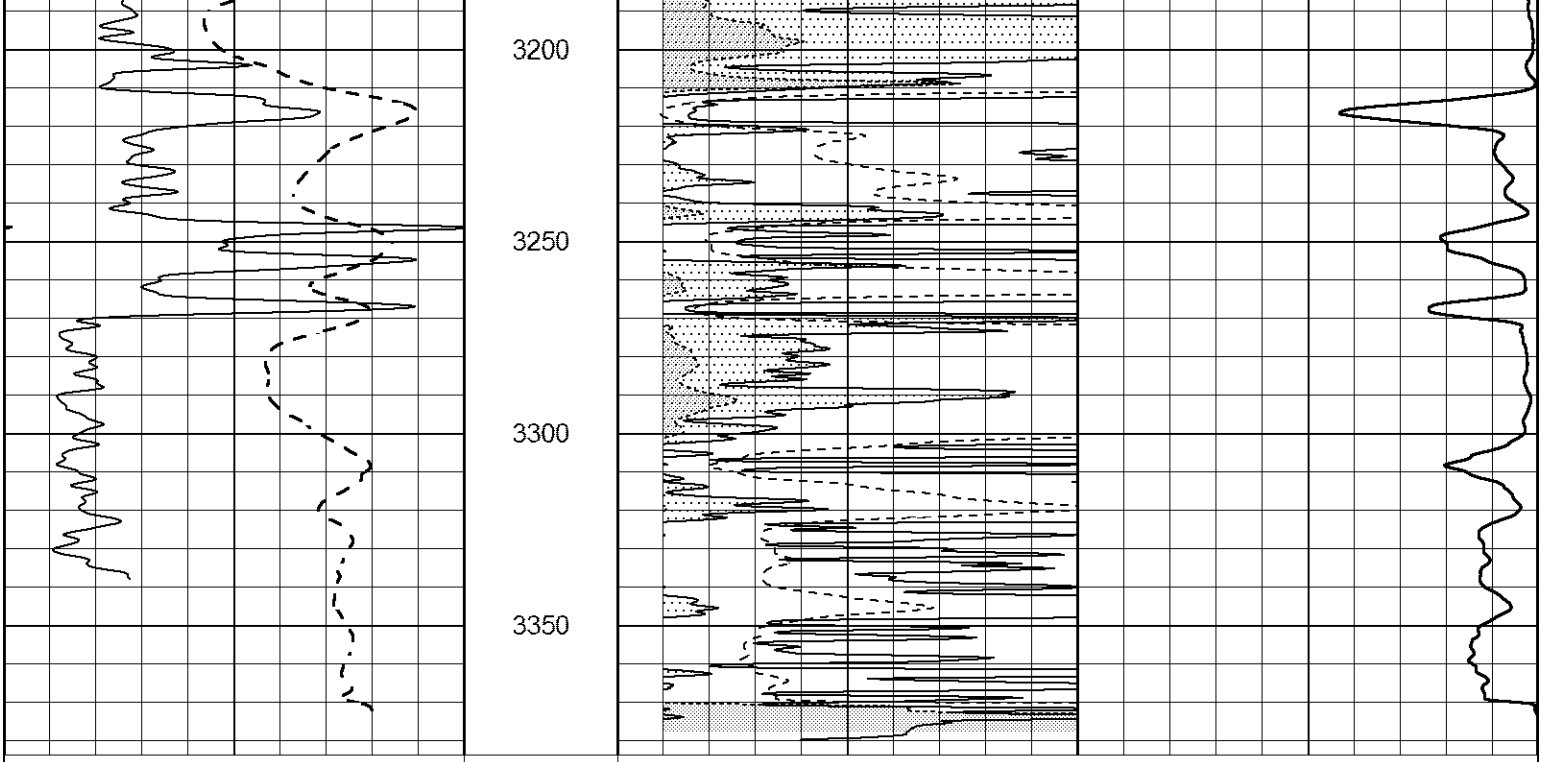

450
500
550
600
650
700
750
800
850
900
950


1000
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




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

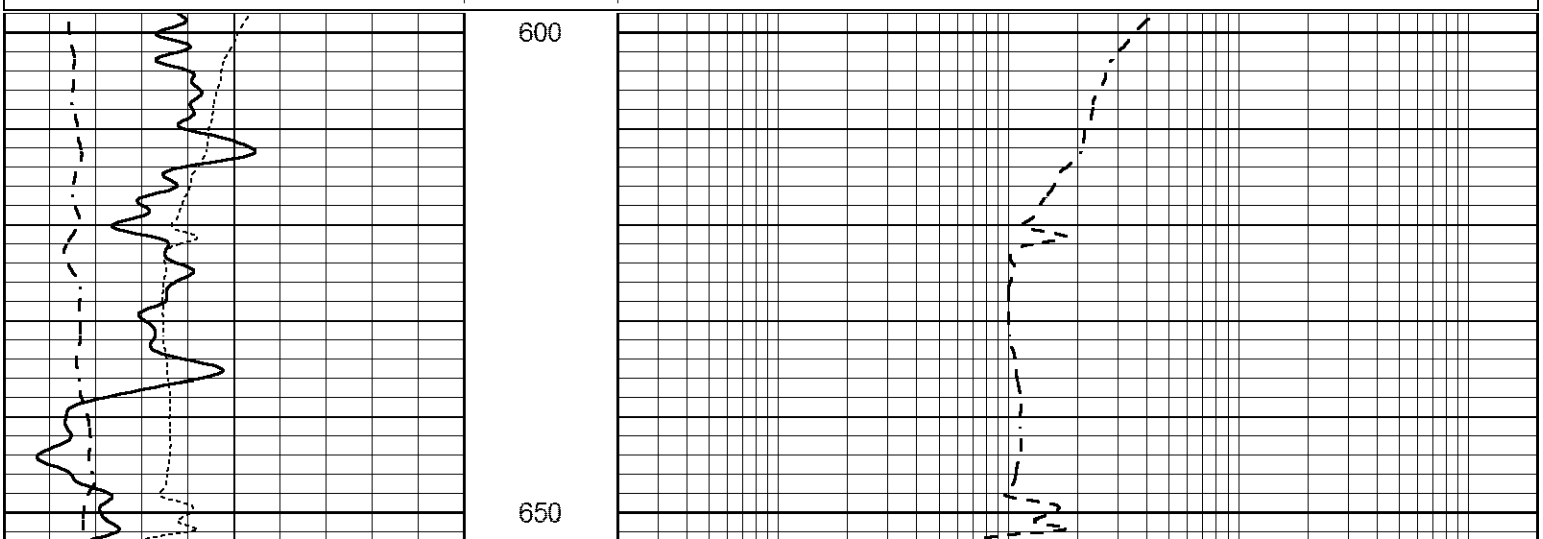
| | | |
|---|---|---|
| 1000 | CILD (mmho/m) | 0 |
| 0 | RLL3 (Ohm-m) | 50 |
| 0 | Deep Induction (Ohm-m) | 50 |
| 50 | RILD X10 (Ohm-m) | 500 |
| 50 | RLL3 X10 (Ohm-m) | 500 |

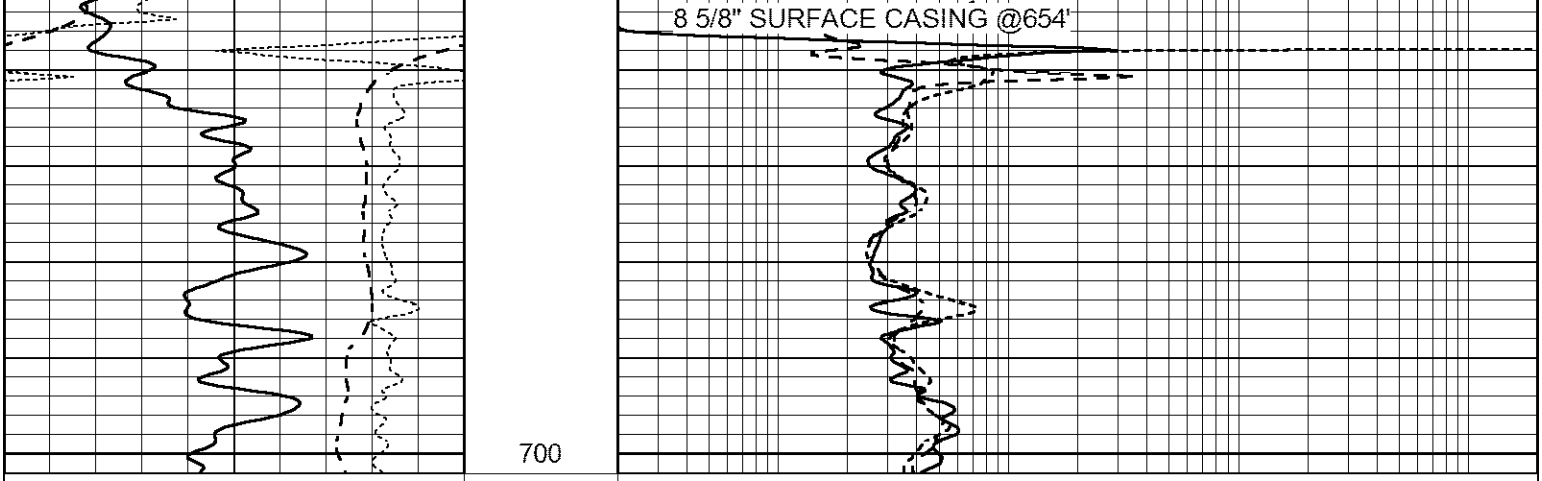
# ANHYDRITE

| | |
|---|---|
| Database File | 6529ddn.db |
| Dataset Pathname | pass3.1A |
| Presentation Format | _dil |
| Dataset Creation | Tue May 17 14:49:49 2022 |
| Charted by | Depth in Feet scaled 1:240 |

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

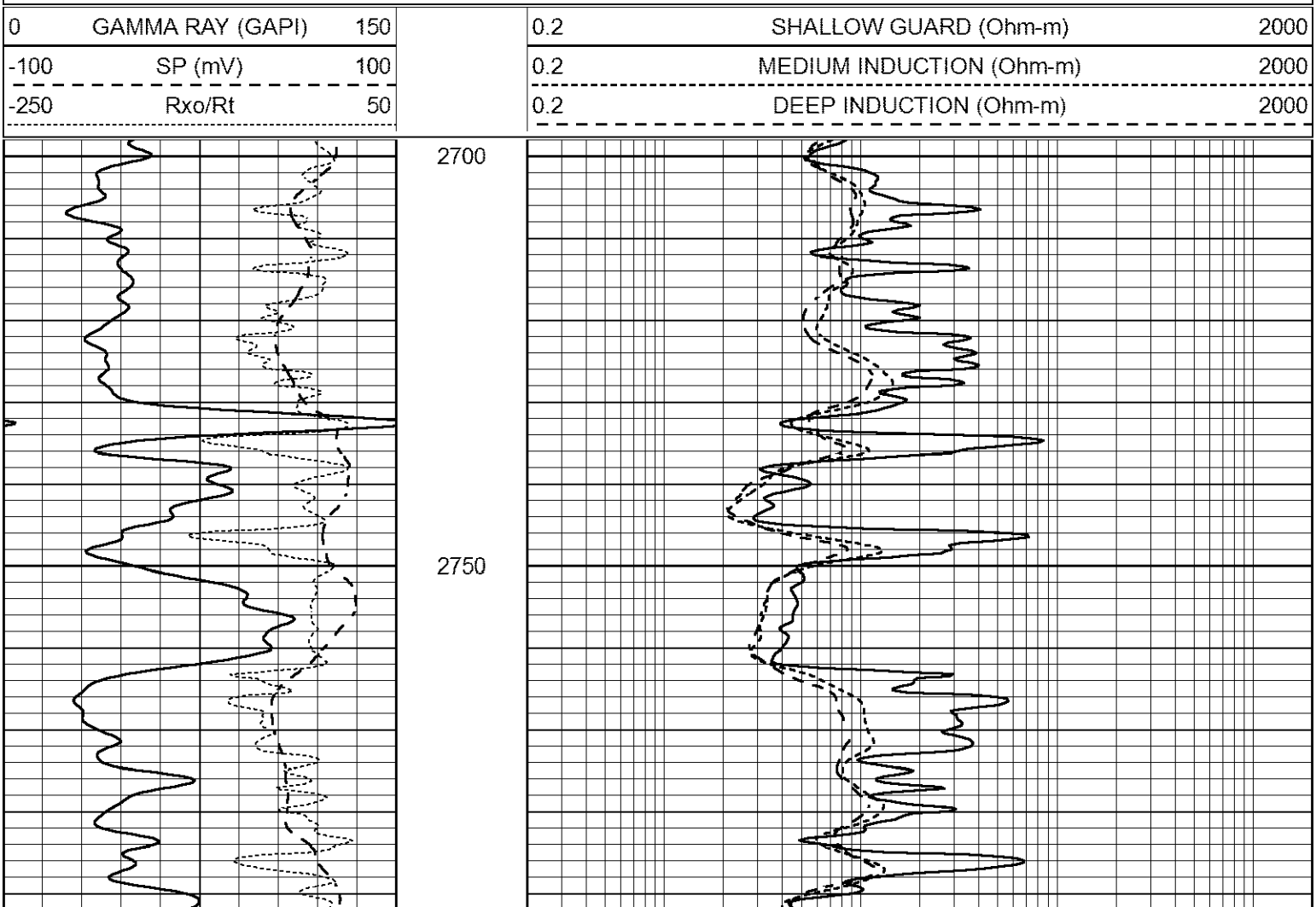
| | | |
|---|---|---|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |

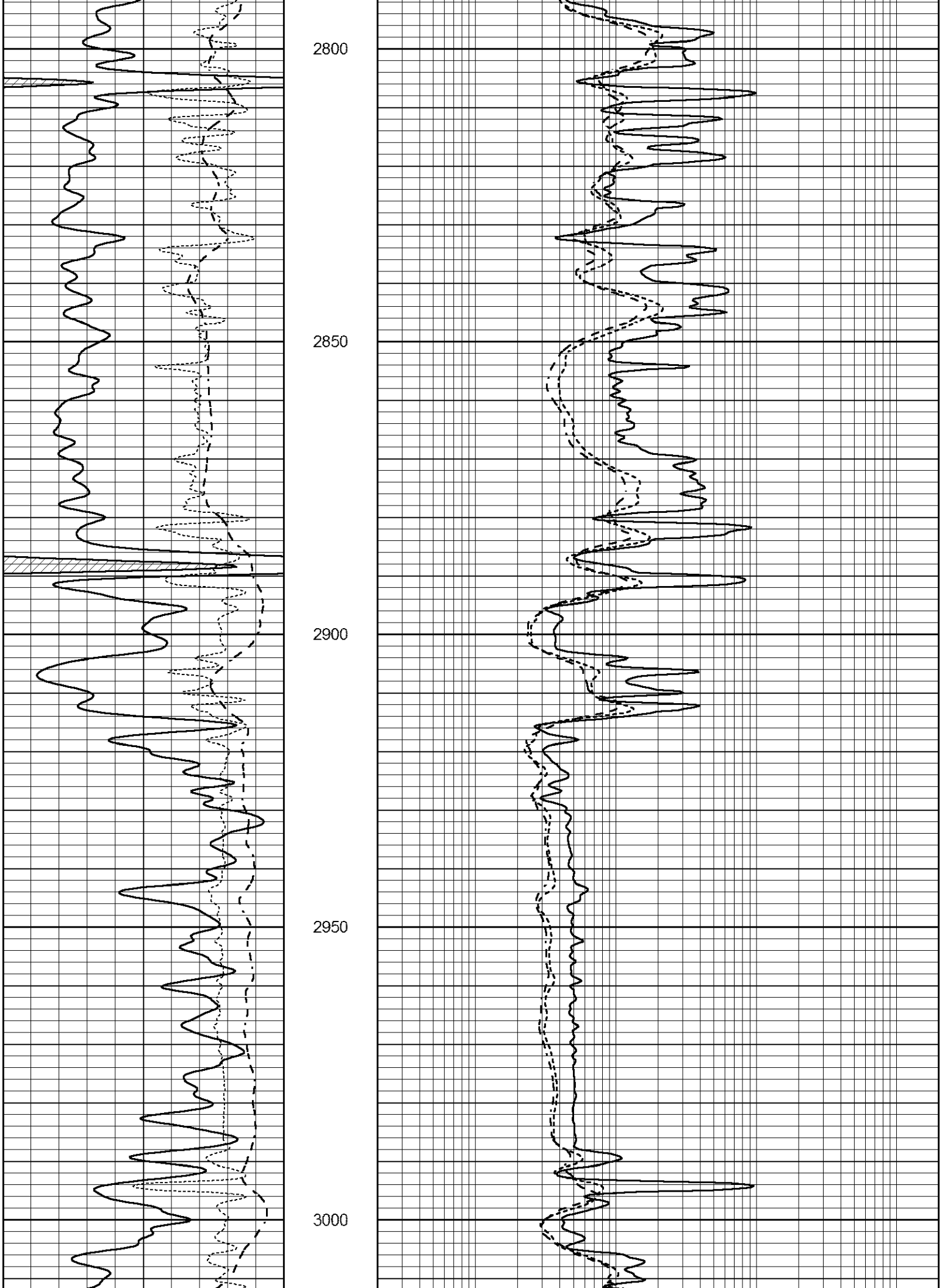


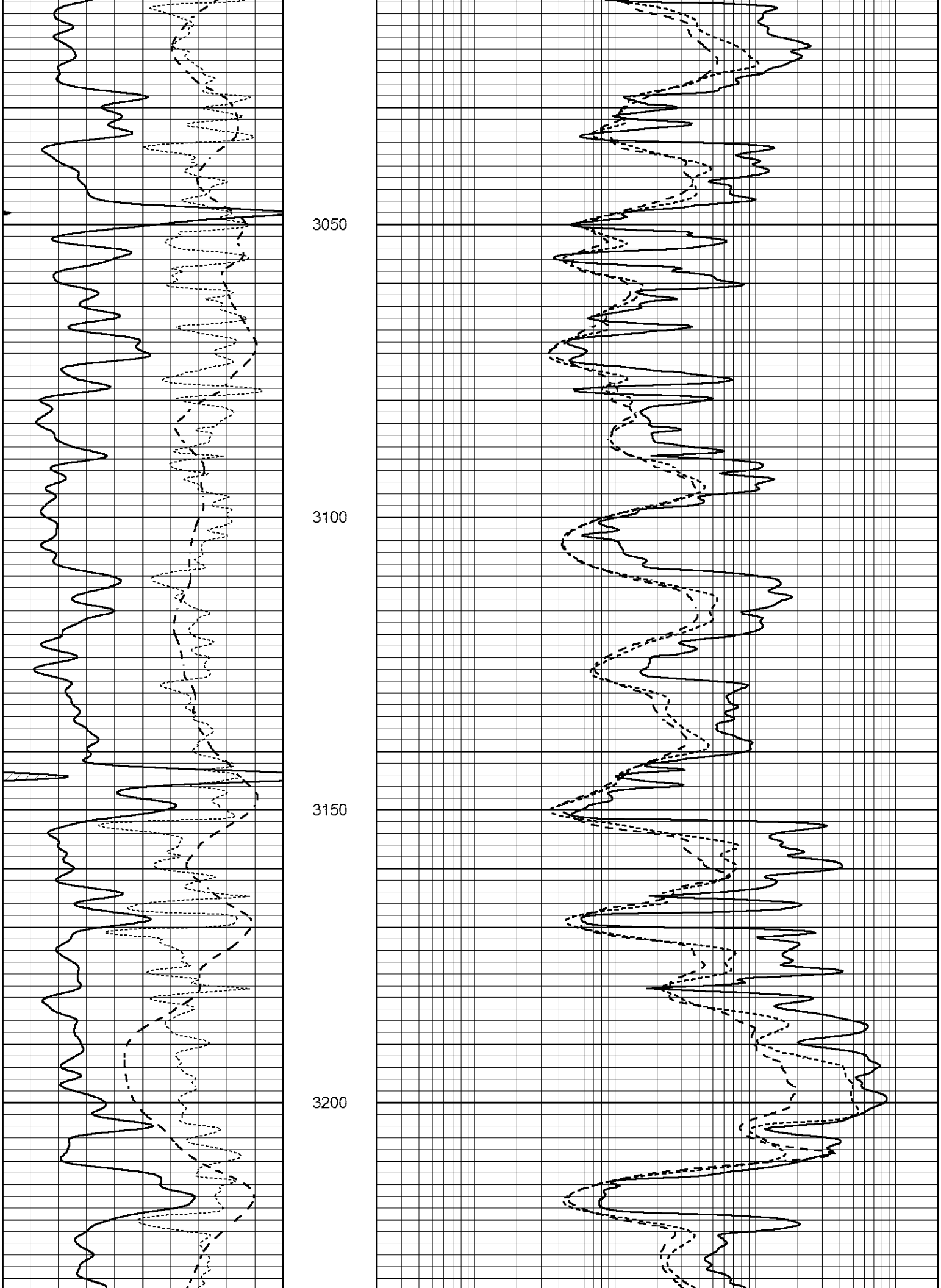


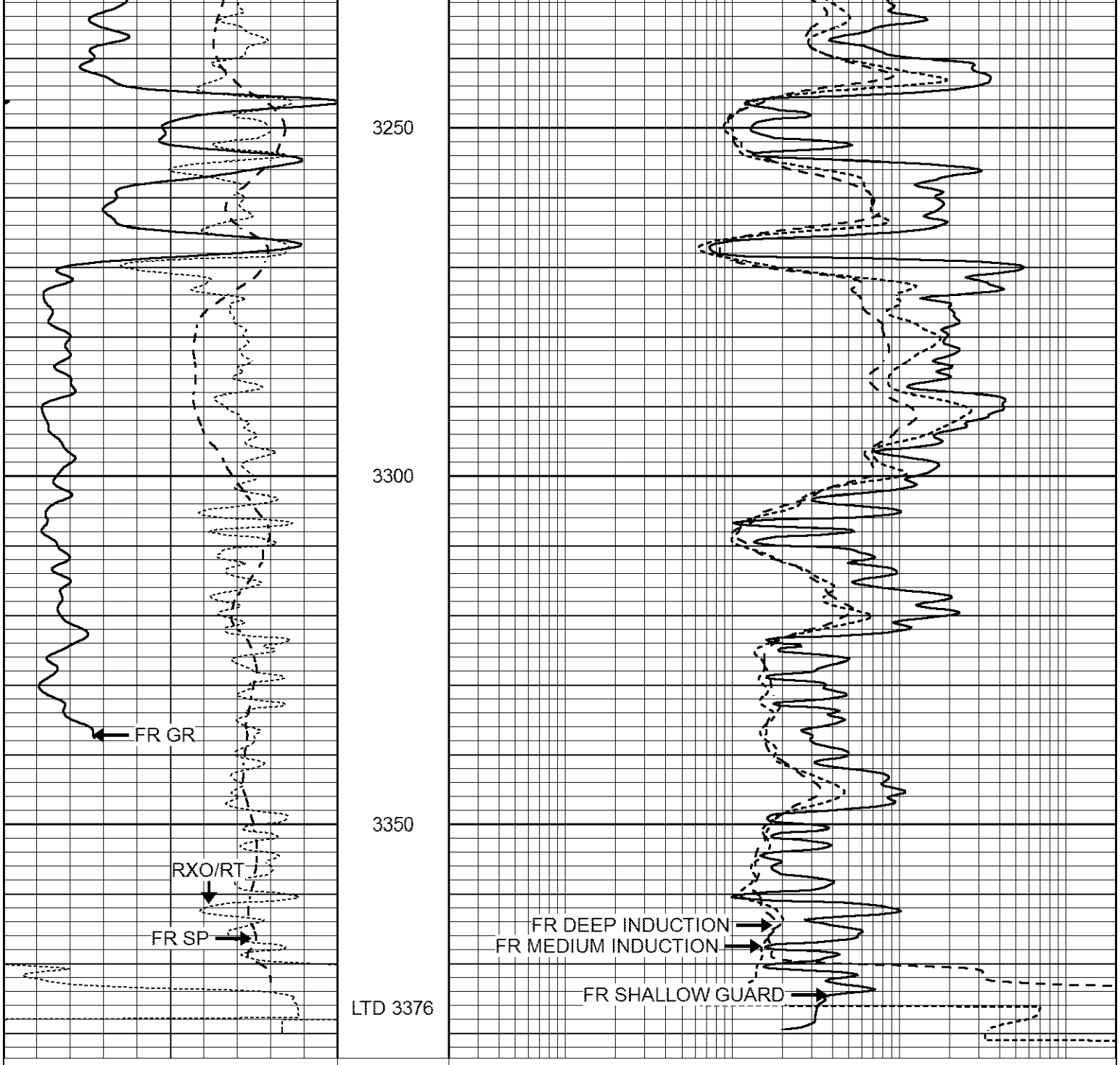

# MAIN SECTION

| | |
|---|---|
| Database File | 6529ddn.db |
| Dataset Pathname | pass3.1M |
| Presentation Format | _dil |
| Dataset Creation | Tue May 17 14:43:59 2022 |
| Charted by | Depth in Feet scaled 1:240 |




2800
2850
2900
2950
3000


3050
3100
3150
3200




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

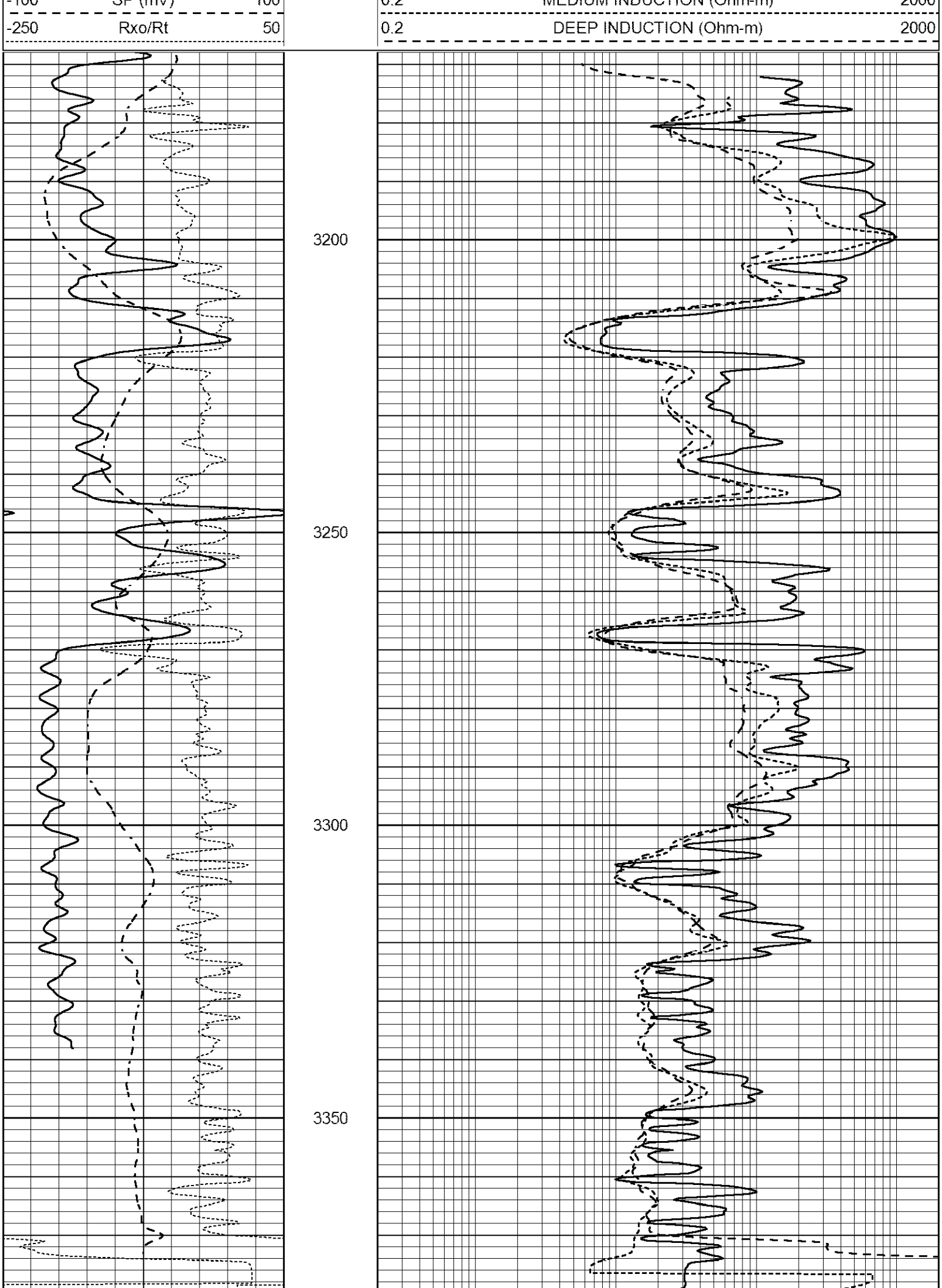
| | | |
|---|---|---|
| 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |

# REPEAT SECTION

| | |
|---|---|
| Database File | 6529ddn.db |
| Dataset Pathname | pass2.2R |
| Presentation Format | _dil |
| Dataset Creation | Tue May 17 15:00:28 2022 |
| Charted by | Depth in Feet scaled 1:240 |

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

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


-100
SP (mV)
100
-250
Rxo/Rt
50
0.2
MEDIUM INDUCTION (Ohm-m)
2000
0.2
DEEP INDUCTION (Ohm-m)
2000
3200
3250
3300
3350

| | | | | | |
|---|---|---|---|---|---|
| 0 | GAMMA RAY (GAPI) | 150 | 0.2 | SHALLOW GUARD (Ohm-m) | 2000 |
| -100 | SP (mV) | 100 | 0.2 | MEDIUM INDUCTION (Ohm-m) | 2000 |
| -250 | Rxo/Rt | 50 | 0.2 | DEEP INDUCTION (Ohm-m) | 2000 |

## Calibration Report

Database File 6529ddn.db
Dataset Pathname pass3.1M
Dataset Creation Tue May 17 14:43:59 2022

## Dual Induction Calibration Report

| | |
|---|---|
| Serial-Model: | FW1410-56-Probe |
| Surface Cal Performed: | Tue May 17 12:24:41 2022 |
| Downhole Cal Performed: | Tue Jul 25 12:15:37 2017 |
| After Survey Verification Performed: | Tue Jul 25 12:15:38 2017 |

### Surface Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.008 | 0.765 | V | 1.000 | 400.000 | mmho/m | 420.000 | 0.000 |
| Medium | -0.056 | 0.761 | V | 1.000 | 464.000 | mmho/m | 420.000 | 140.000 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.005 | 0.624 | V | 0.000 | 400.000 | mmho/m | 645.611 | -3.034 |
| Medium | 0.012 | 0.721 | V | 0.000 | 464.000 | mmho/m | 653.591 | -7.532 |

### Downhole Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | -0.647 | 301.329 | mmho/m | -0.780 | 336.378 | mmho/m | 1.117 | -0.058 |
| Medium | 38.256 | 411.013 | mmho/m | 39.046 | 441.706 | mmho/m | 1.080 | -2.280 |
| LL3 | | 7.471 | V | | 2500.000 | Ohm-m | | |
| | | 0.001 | V | | 20.000 | Ohm-m | | |
| | | -7.085 | V | | 4000.000 | mmho-m | | |

### After Survey Verification

| | Readings | | | Targets | | | Results | |
|---|---|---|---|---|---|---|---|---|
| | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | 0.000 | 0.000 | mmho/m | -0.647 | 301.329 | mmho/m | 1.000 | 0.000 |
| Medium | 0.000 | 0.000 | mmho/m | 38.256 | 411.013 | mmho/m | 1.000 | 0.000 |
| LL3 | | 0.000 | Ohm-m | | 1500.000 | Ohm-m | | |
| | | 0.000 | Ohm-m | | 20.000 | Ohm-m | | |
| | | 0.000 | mmho-m | | 3745.000 | mmho-m | | |

## Litho Density Calibration Report

Serial: 005 Model: Litho_Ver3

### Master Calibration

Performed Fri May 13 13:54:56 2022

| | Background | Magnesium | Aluminum | Aluminum+Fe | |
|---|---|---|---|---|---|
| Window 1 | 1363.1 | 46477.8 | 11515.9 | 9589.9 | cps |
| Window 2 | 1239.4 | 36488.4 | 9270.1 | 7998.9 | cps |
| Window 3 | 1044.3 | 20488.1 | 5500.7 | 4913.3 | cps |
| Window 4 | 315.7 | 358.7 | 321.5 | 319.5 | cps |
| Long Space | 0.0 | 35249.0 | 8030.7 | 6759.4 | cps |
| Short Space | 1.4 | 9675.7 | 6523.4 | 5391.9 | cps |
| Rho | | 1.7100 | 2.5900 | 0.0000 | g/cc |

| | | | |
|---|---|---|---|
| Pe | 2.0000 | 2.7500 | 5.7900 |

| | | | | | |
|---|---|---|---|---|---|
| Rib Angle | : 45.1 | Rib Slope | : 1.003 | Density/Spine Ratio | : 0.575 |
| Spine Angle | : 75.1 | Spine Slope | : 3.752 | Spine Intercept | : -24.0 |

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: 080621PMC
Tool Model: NABORS

PRE-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|---|---|---|---|
| Short Space | cps | | |
| Long Space | cps | pu | pu |

POST-SURVEY VERIFICATION

| Detector | Readings | Measured | Target |
|---|---|---|---|
| Short Space | cps | | |
| Long Space | cps | pu | pu |

## Gamma Ray Calibration Report

Serial Number: 7
Tool Model: Probe1
Performed: Tue May 17 12:24:57 2022

| | | |
|---|---|---|
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 0.5000 | GAPI/cps |