



**COMPENSATED
DENSITY/NEUTRON
PE 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 DILMEL 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 | 4698 |
| Top Log Interval | 3400 |
| 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

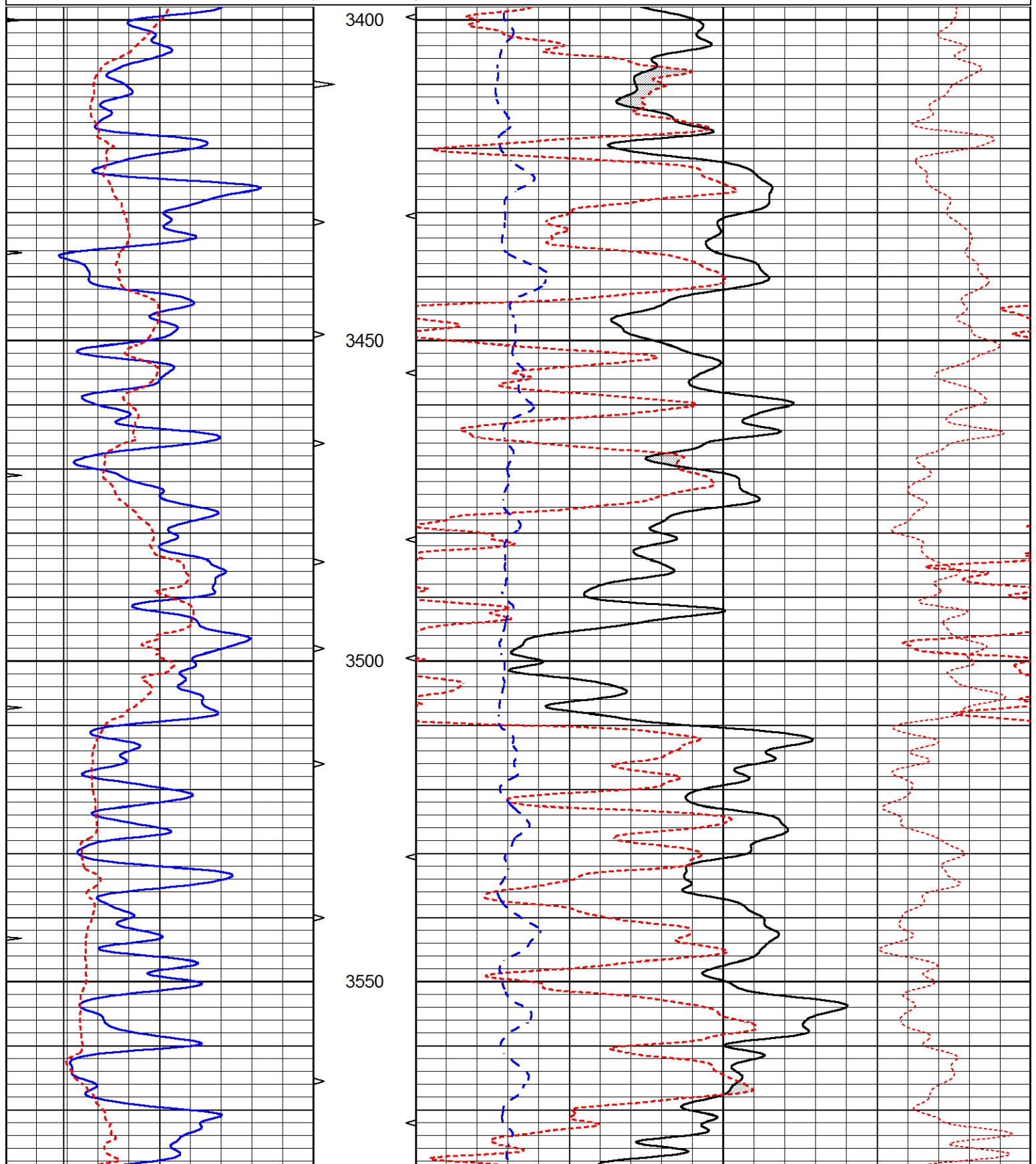
THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
 DIRECTIONS:
 OAKLEY, KS., 9S. ON HWY 83 TO "QUAIL RD.", 7W. TO "RD. 370", 1 S. TO "PLAINS RD.", 2W. TO "RD. 350", S. TO "INDIAN RD.", 4W. TO TANK BATTERY, 2N. ON TRAIL

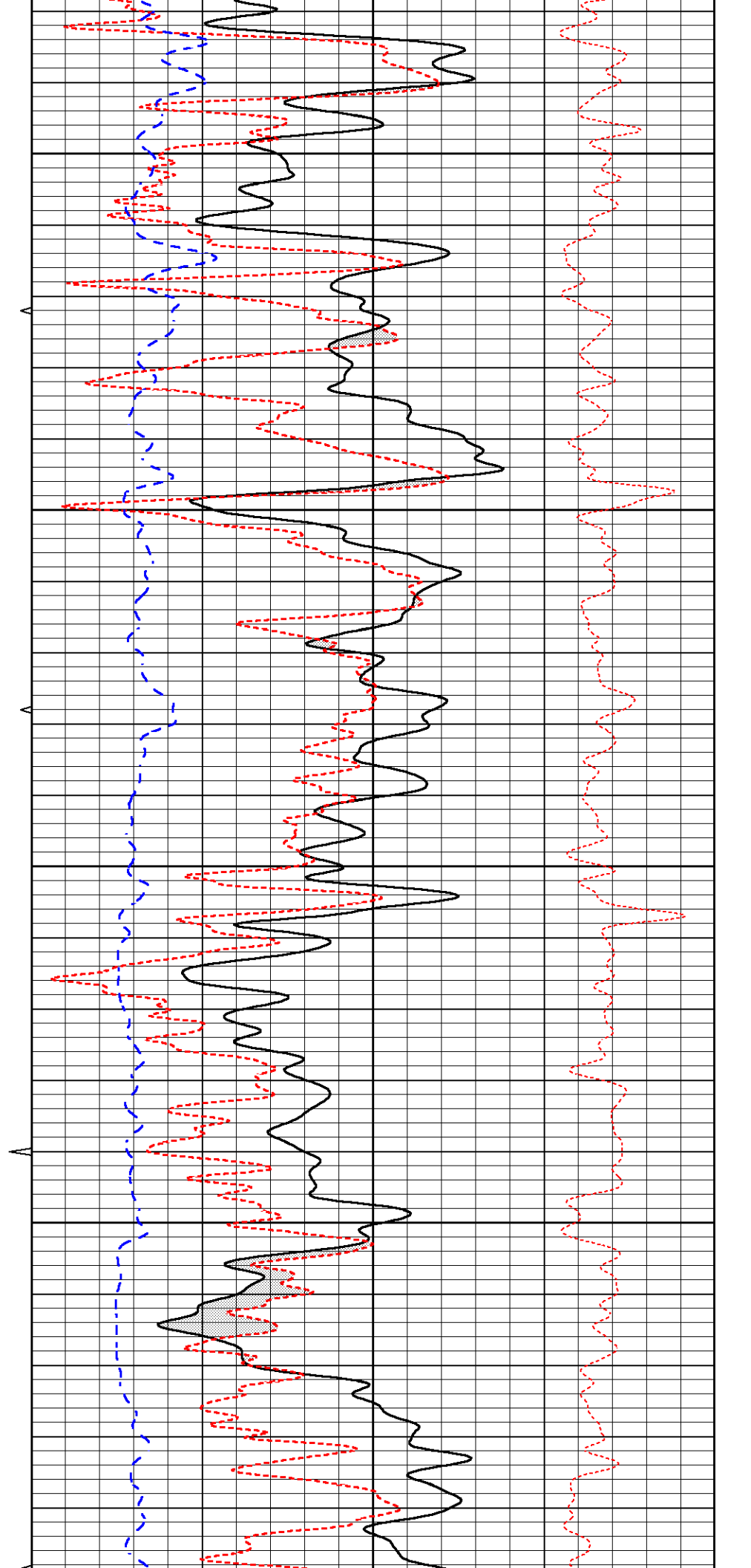
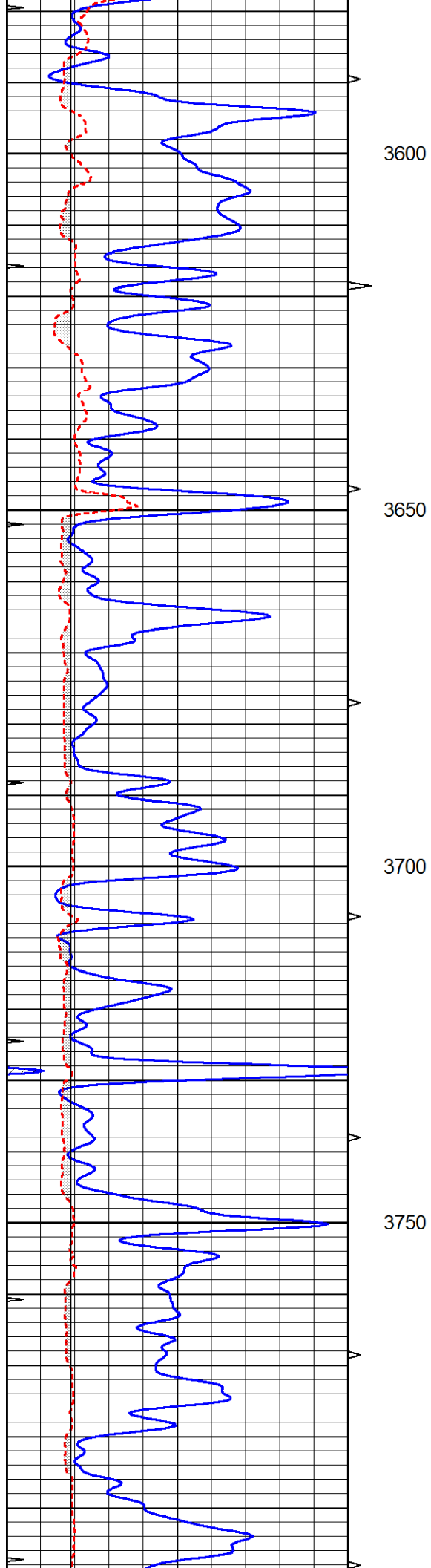


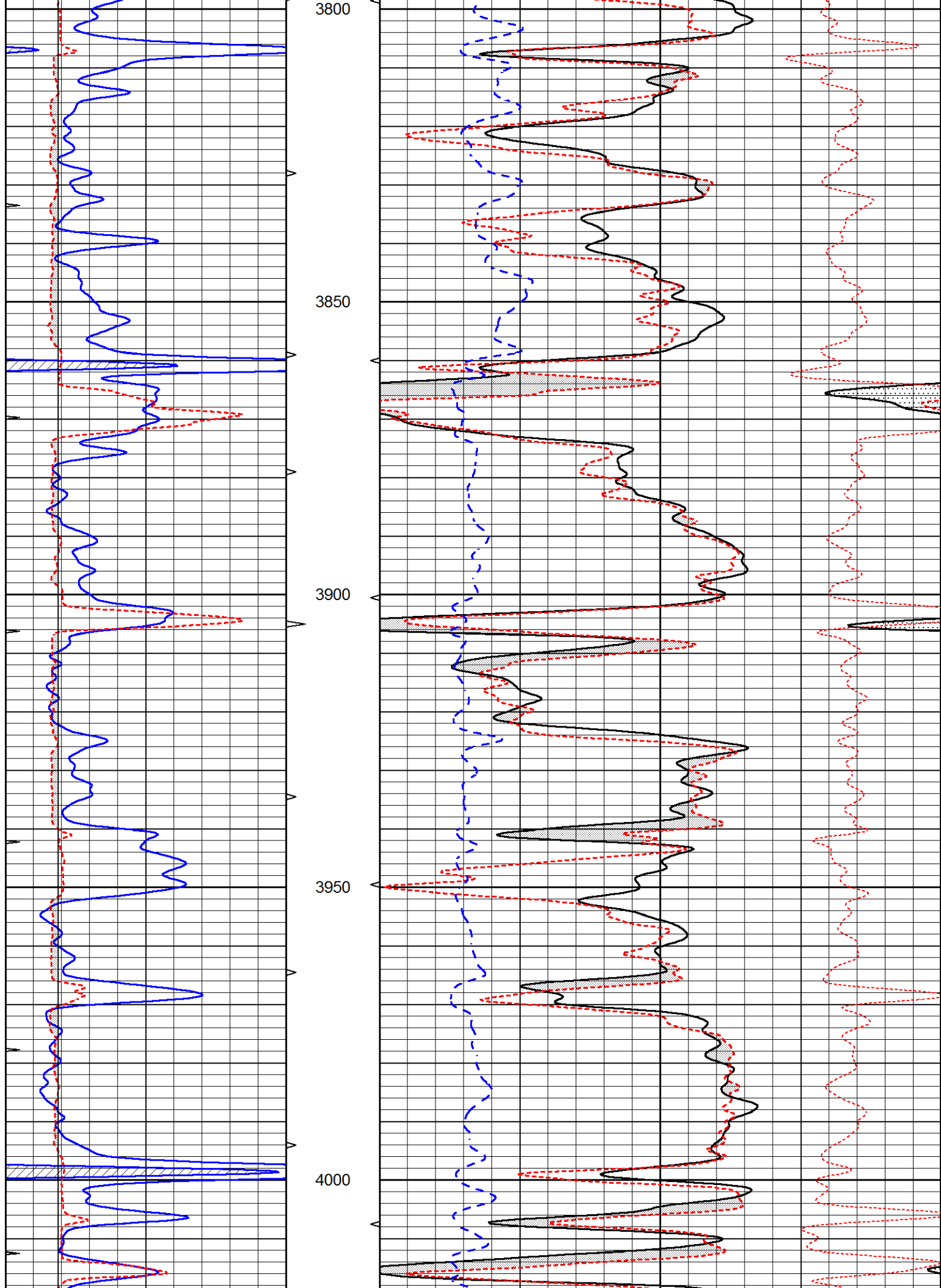
MAIN SECTION

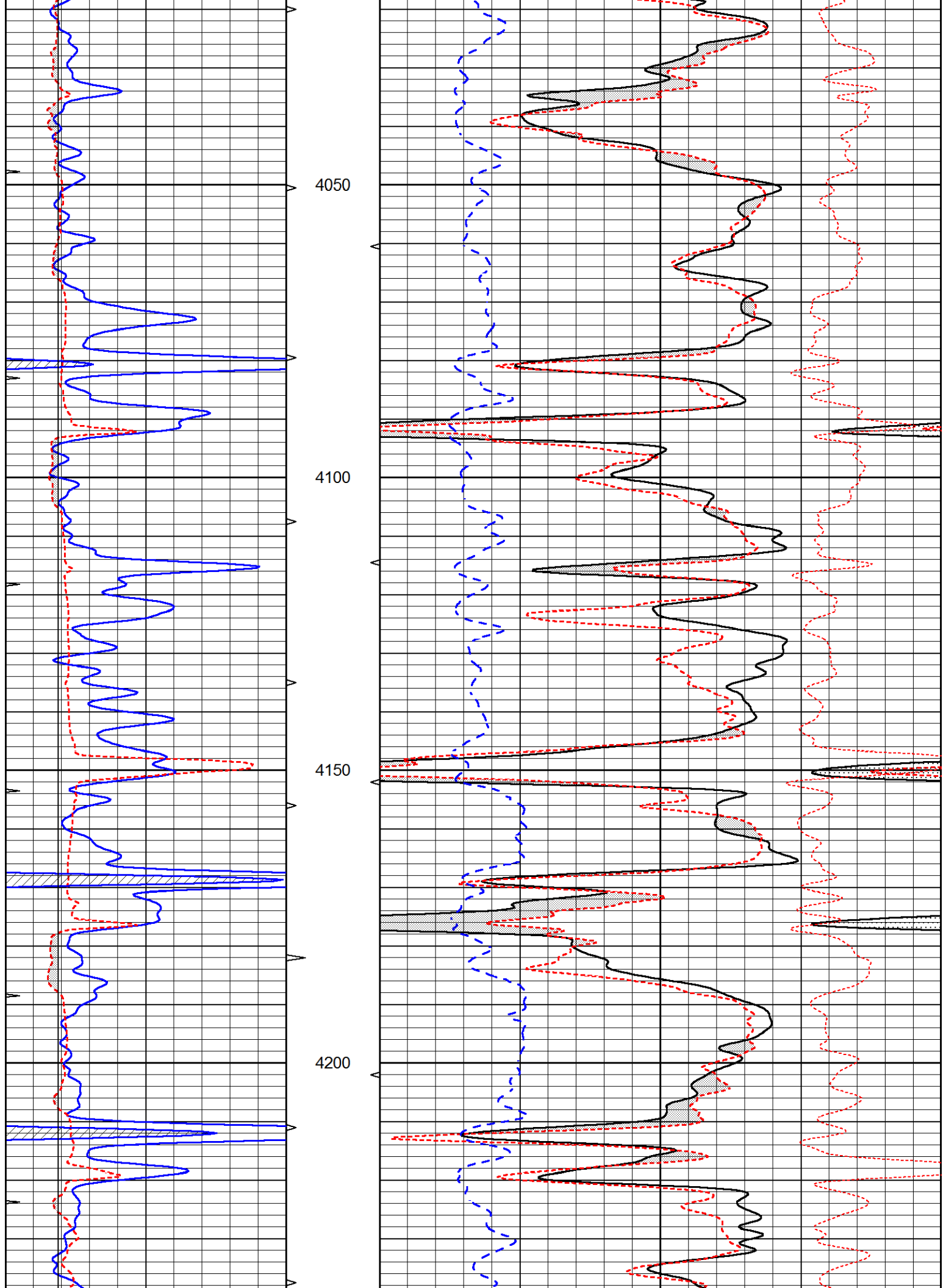
Database File 6711pe.db
 Dataset Pathname pass3.2M
 Presentation Format _ldt_neu
 Dataset Creation Tue Jul 12 15:18:30 2022
 Charted by Depth in Feet scaled 1:240

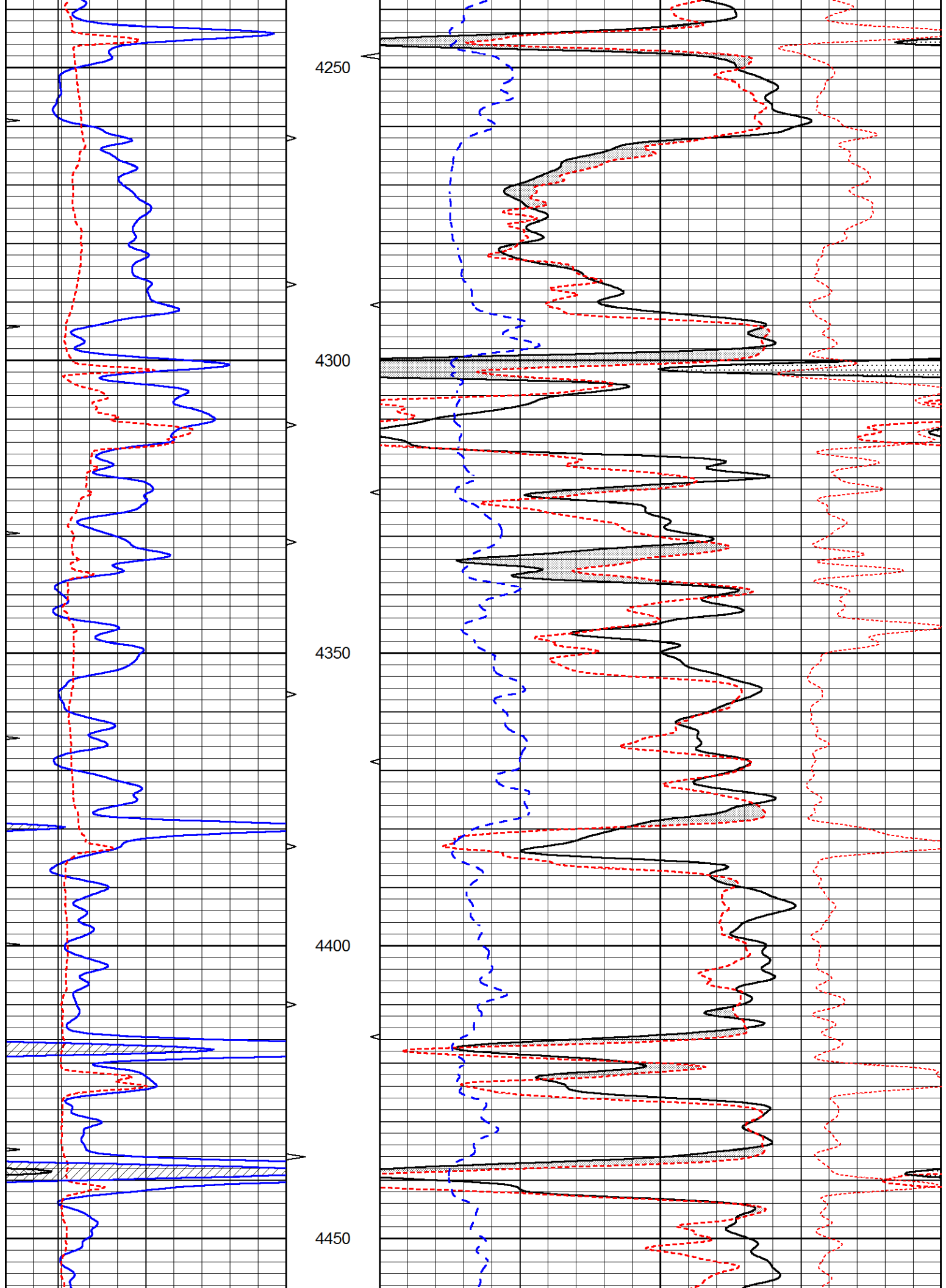
| | | | | | | | |
|---|------------------|-----|----------|----|--------------------------|----|-------|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV | 30 | COMPENSATED DENSITY (pu) | | -10 |
| 6 | CALIPER (in) | 16 | 10 (ft3) | 0 | COMPENSATED NEUTRON (pu) | | -10 |
| 0 | MINMK | 20 | TBHV | 0 | PE | 10 | -0.25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

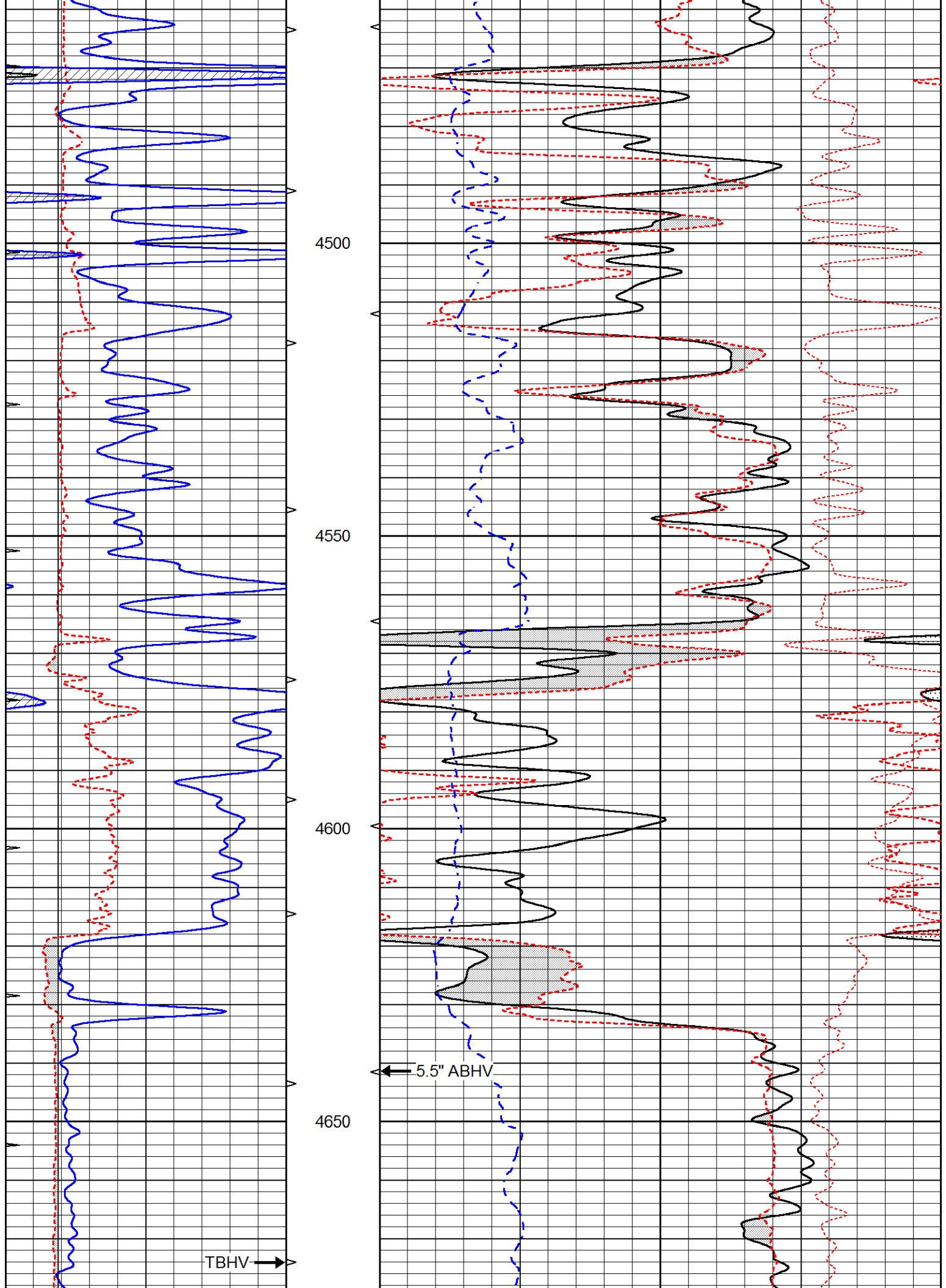


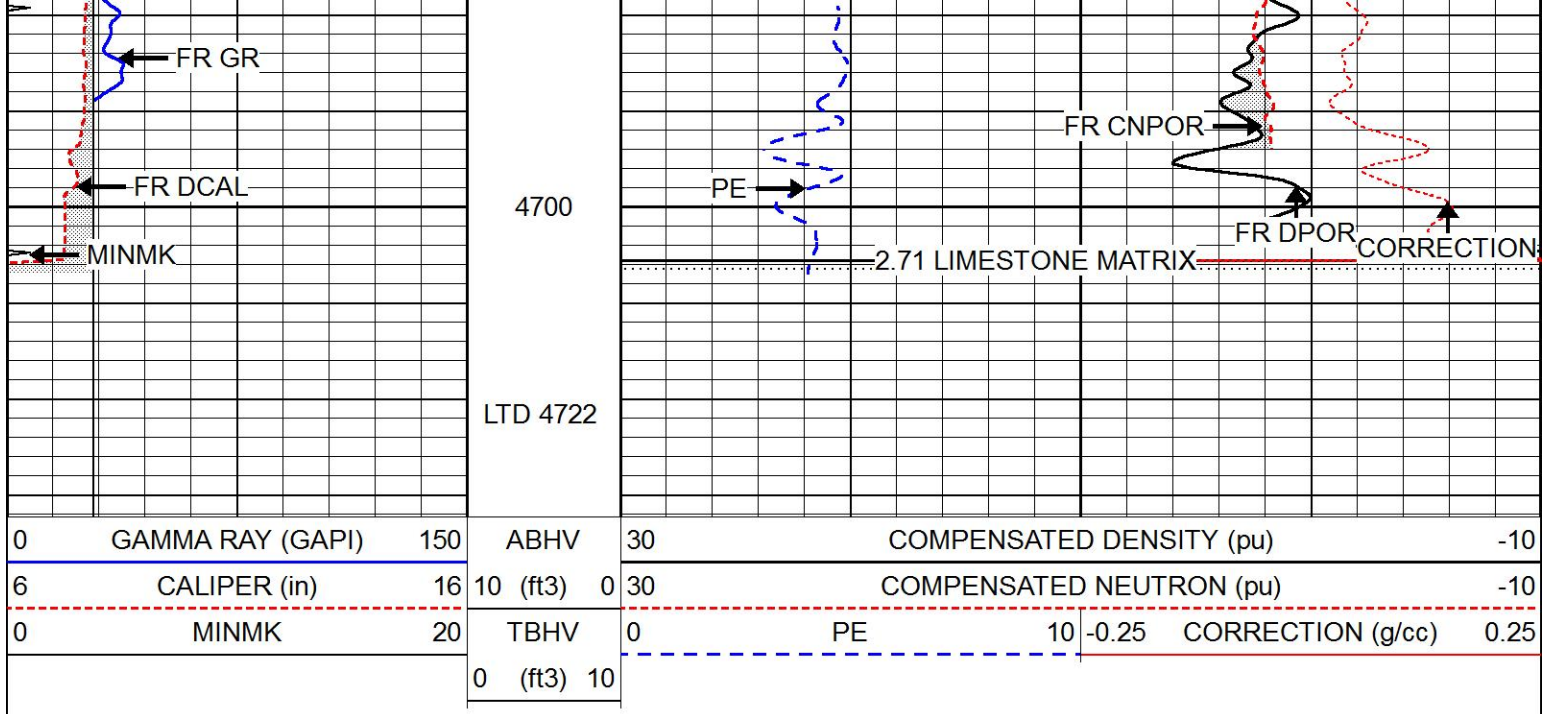








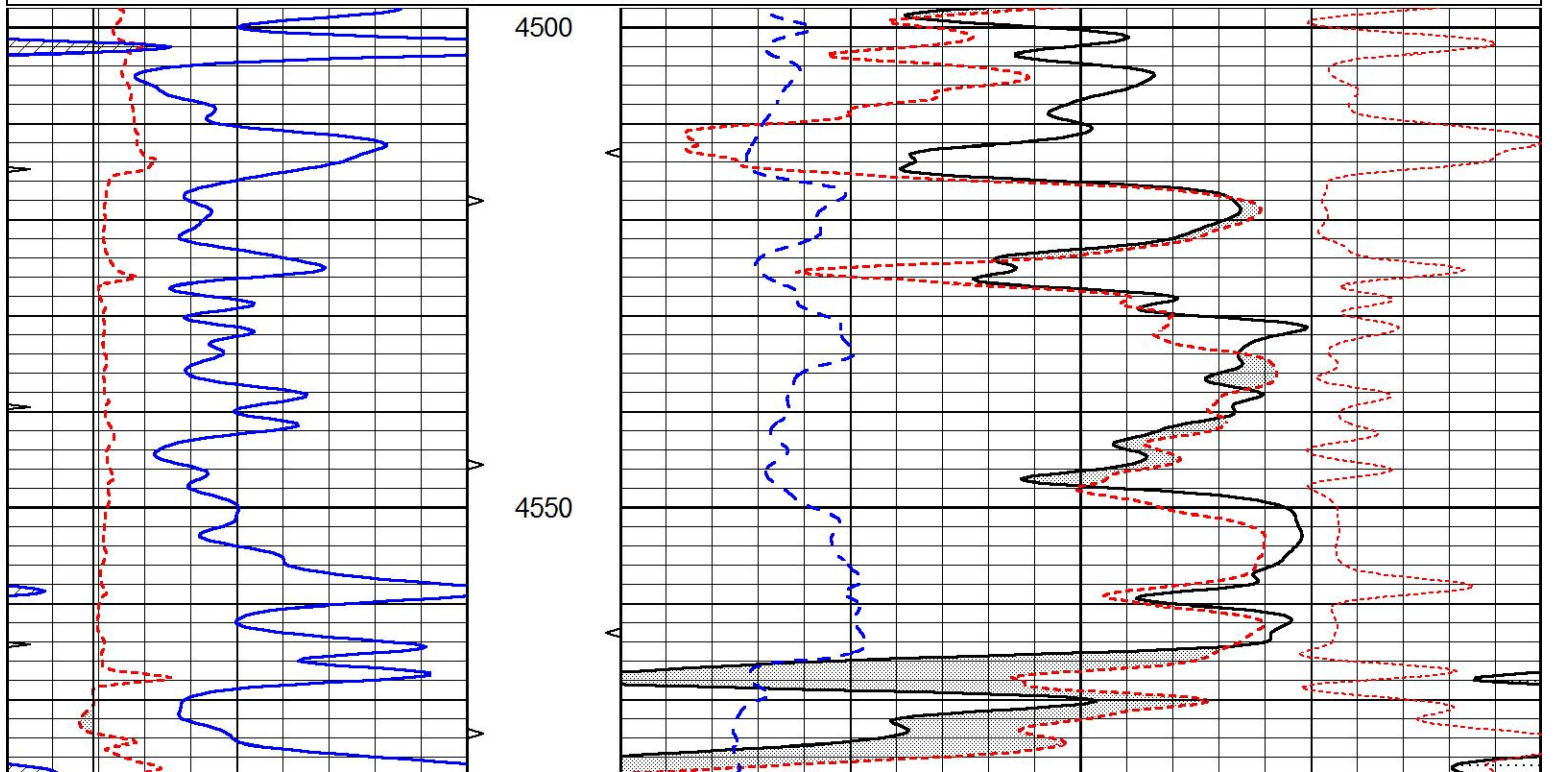


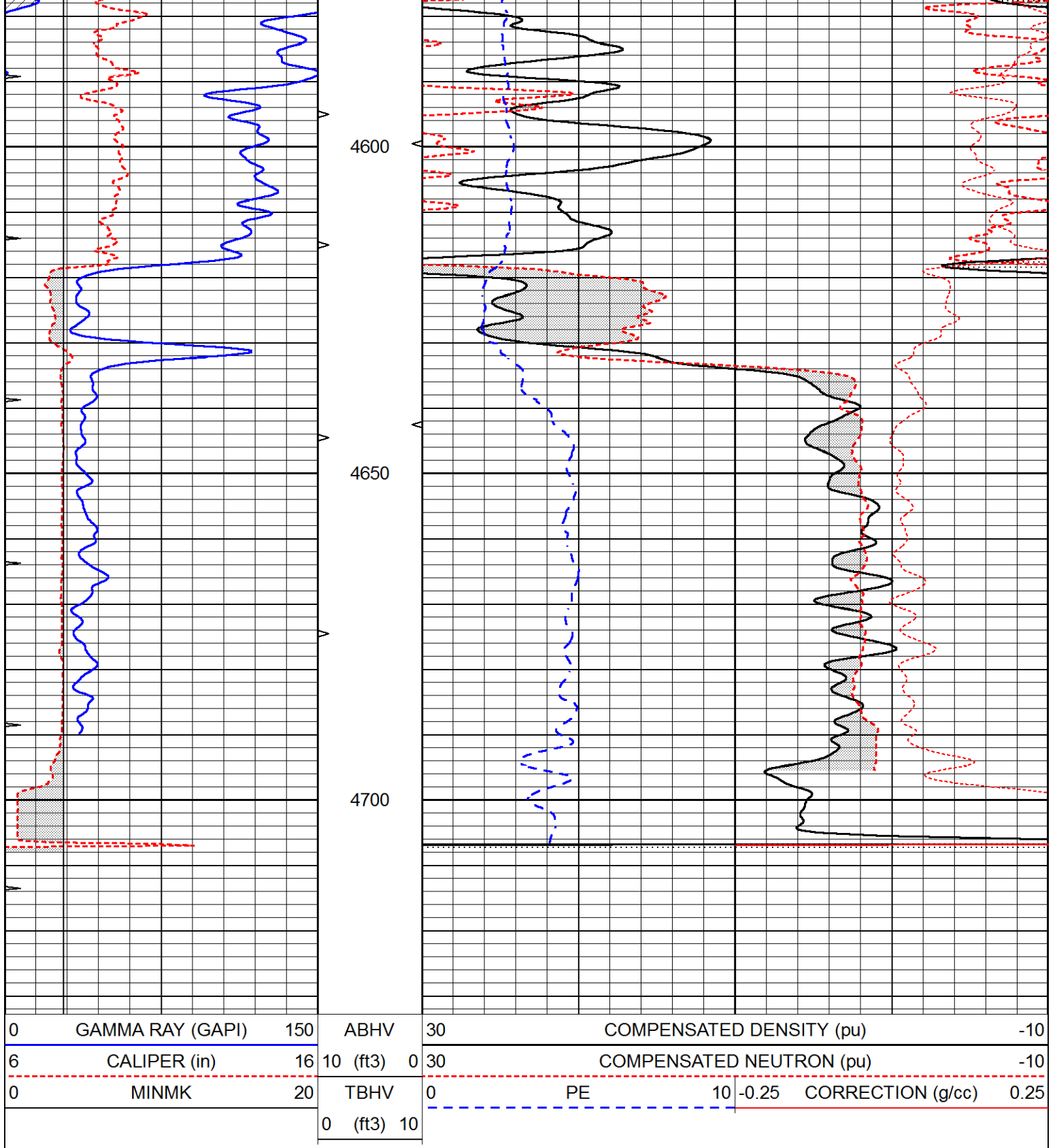


REPEAT SECTION

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

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





Calibration Report

Database File 6711pe.db
 Dataset Pathname pass3.2M
 Dataset Creation Tue Jul 12 15:18:30 2022

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 | | | |
|----------------------------|------------|-----------|----------|-------------|------------------------------------|--|--|------|
| | Background | Magnesium | Aluminum | Aluminum+Fe | | | | |
| 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