

# COMPENSATED DENSITY / NEUTRON LOG

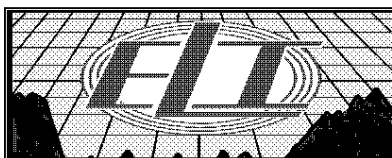
|                              |                                                                        |                     |                                    |
|------------------------------|------------------------------------------------------------------------|---------------------|------------------------------------|
| Company                      | SHELBY RESOURCES, LLC                                                  |                     |                                    |
| Well                         | FROETSCHNER #1-12                                                      |                     |                                    |
| Field                        | WILDCAT                                                                |                     |                                    |
| County                       | PAWNEE                                                                 | State               | KANSAS                             |
| Location:                    | APL # : 15-145-21833-0000<br>1860' FNL & 526' FEL<br>SW - NE - SE - NE |                     | Other Services<br>DIL/MEL<br>SONIC |
| Permanent Datum              | GROUND LEVEL                                                           | Elevation           | 2020                               |
| Log Measured From            | KELLY BUSHING 11' A.G.L.                                               |                     |                                    |
| Drilling Measured From       | KELLY BUSHING                                                          |                     |                                    |
| Date                         | 7/5/18                                                                 |                     |                                    |
| Run Number                   | ONE                                                                    |                     |                                    |
| Depth Driller                | 4020                                                                   |                     |                                    |
| Depth Logger                 | 4020                                                                   |                     |                                    |
| Bottom Logged Interval       | 3996                                                                   |                     |                                    |
| Top Log Interval             | 3000                                                                   |                     |                                    |
| Casing Driller               | 8 5/8" @ 1057'                                                         |                     |                                    |
| Casing Logger                | 1057                                                                   |                     |                                    |
| Bit Size                     | 7 7/8"                                                                 |                     |                                    |
| Type Fluid in Hole           | CHEMICAL MUD                                                           | CHLORIDES 5,600 PPM |                                    |
| Density / Viscosity          | 9.3/59                                                                 |                     |                                    |
| pH / Fluid Loss              | 10.5/8.8                                                               |                     |                                    |
| Source of Sample             | FLOWLINE                                                               |                     |                                    |
| Rim @ Meas. Temp             | .600 @ 90F                                                             |                     |                                    |
| Rmf @ Meas. Temp             | .450 @ 90F                                                             |                     |                                    |
| Rmc @ Meas. Temp             | .720 @ 90F                                                             |                     |                                    |
| Source of Rmf / Rmc          | MEASUREMENT                                                            |                     |                                    |
| Rim @ BHT                    | .466 @ 116F                                                            |                     |                                    |
| Time Circulation Stopped     | 2 HOURS                                                                |                     |                                    |
| Time Logger on Bottom        | 8:15 A.M.                                                              |                     |                                    |
| Maximum Recorded Temperature | 116F                                                                   |                     |                                    |
| Equipment Number             | 922339                                                                 |                     |                                    |
| Location                     | HAYS, KANSAS                                                           |                     |                                    |
| Recorded By                  | JEFF LUEBBERS                                                          |                     |                                    |
| Witnessed By                 | JEREMY SCHWARTZ                                                        |                     |                                    |

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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

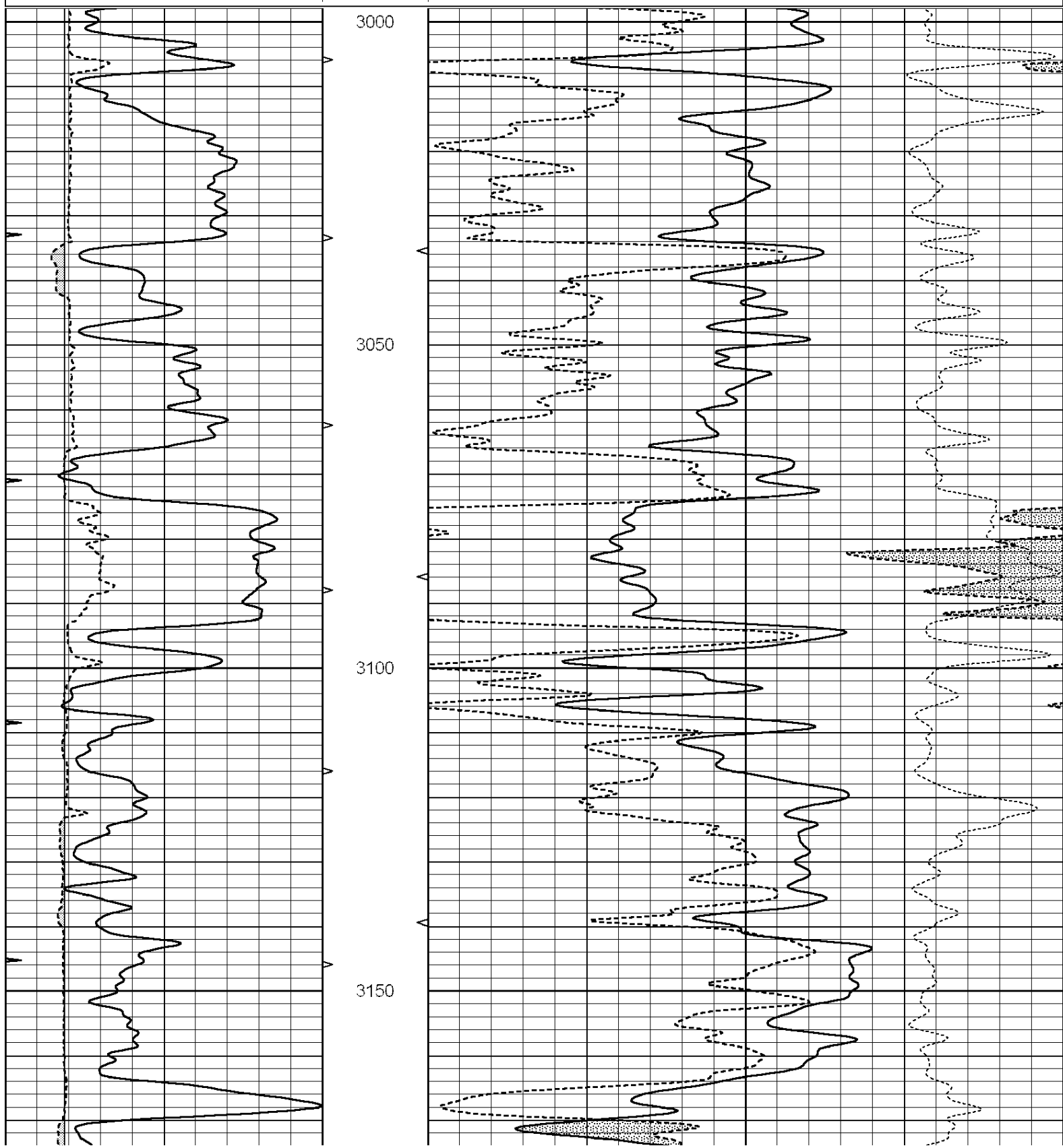
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
LARNED, KS., (MAIN ST. & HWY 56) 2 S.W. ON HWY 56, N. INTO

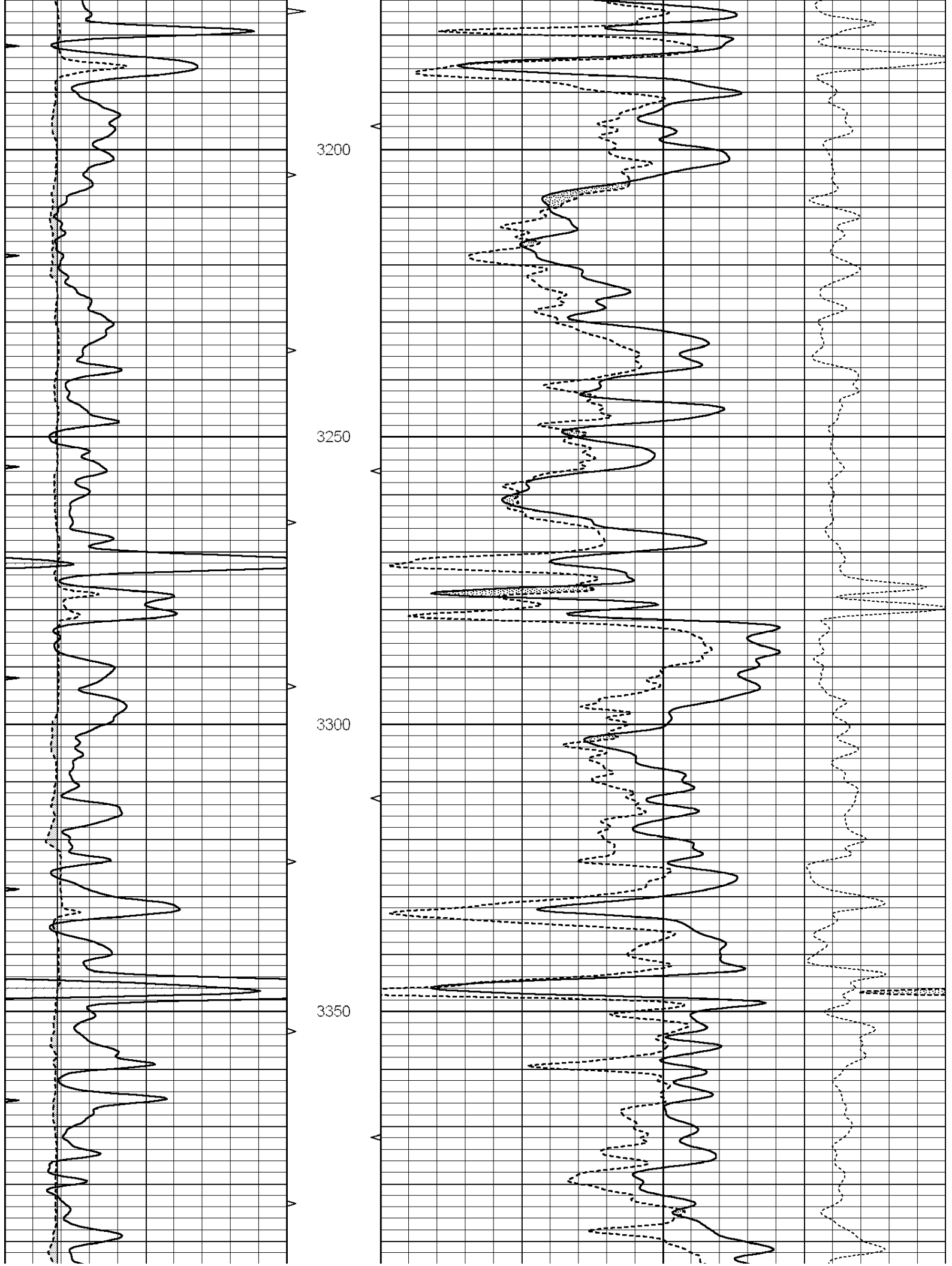


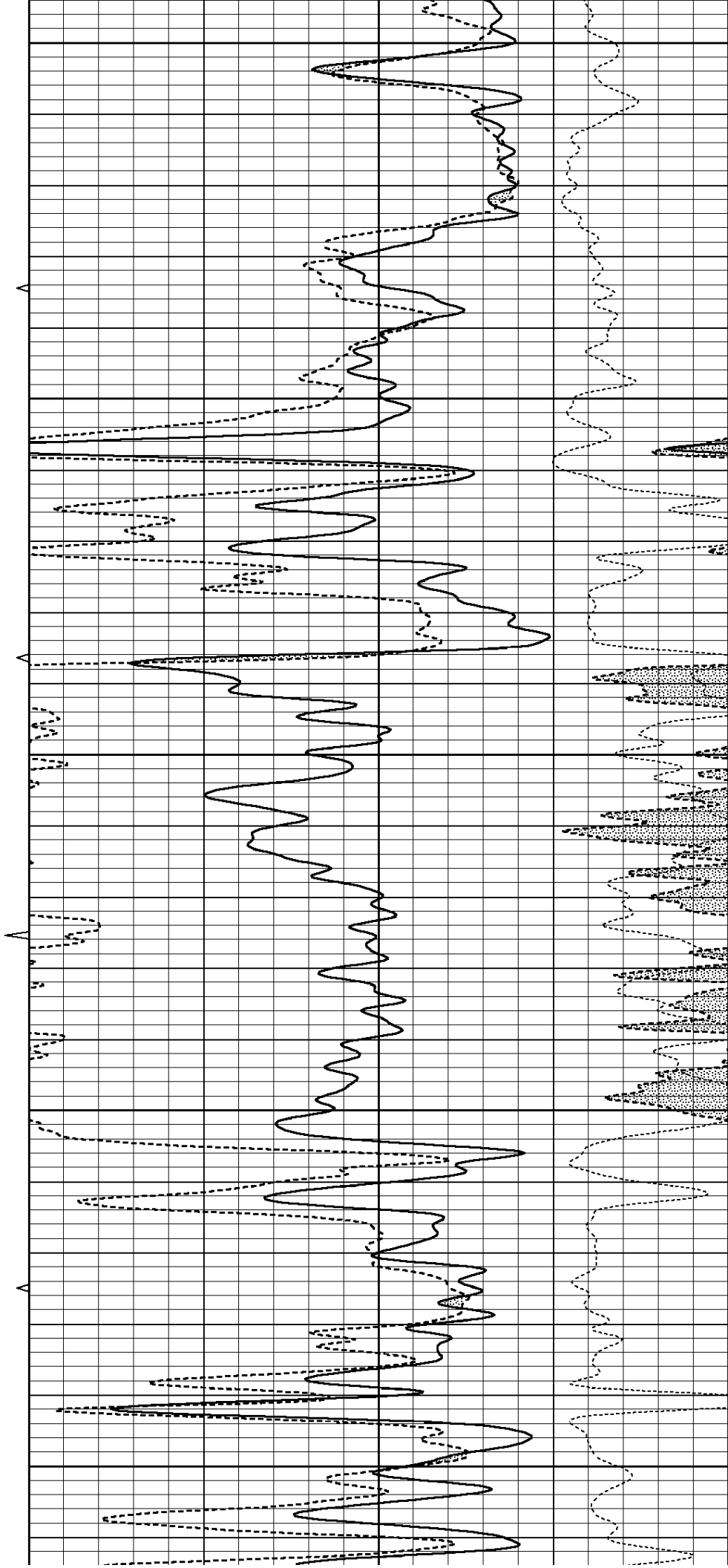
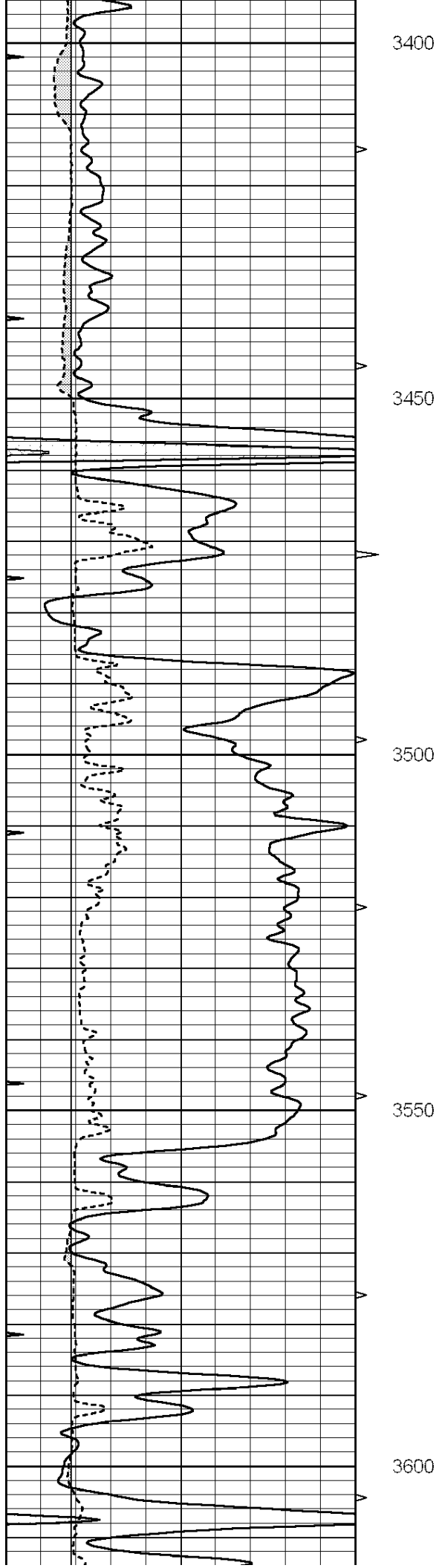
# MAIN SECTION

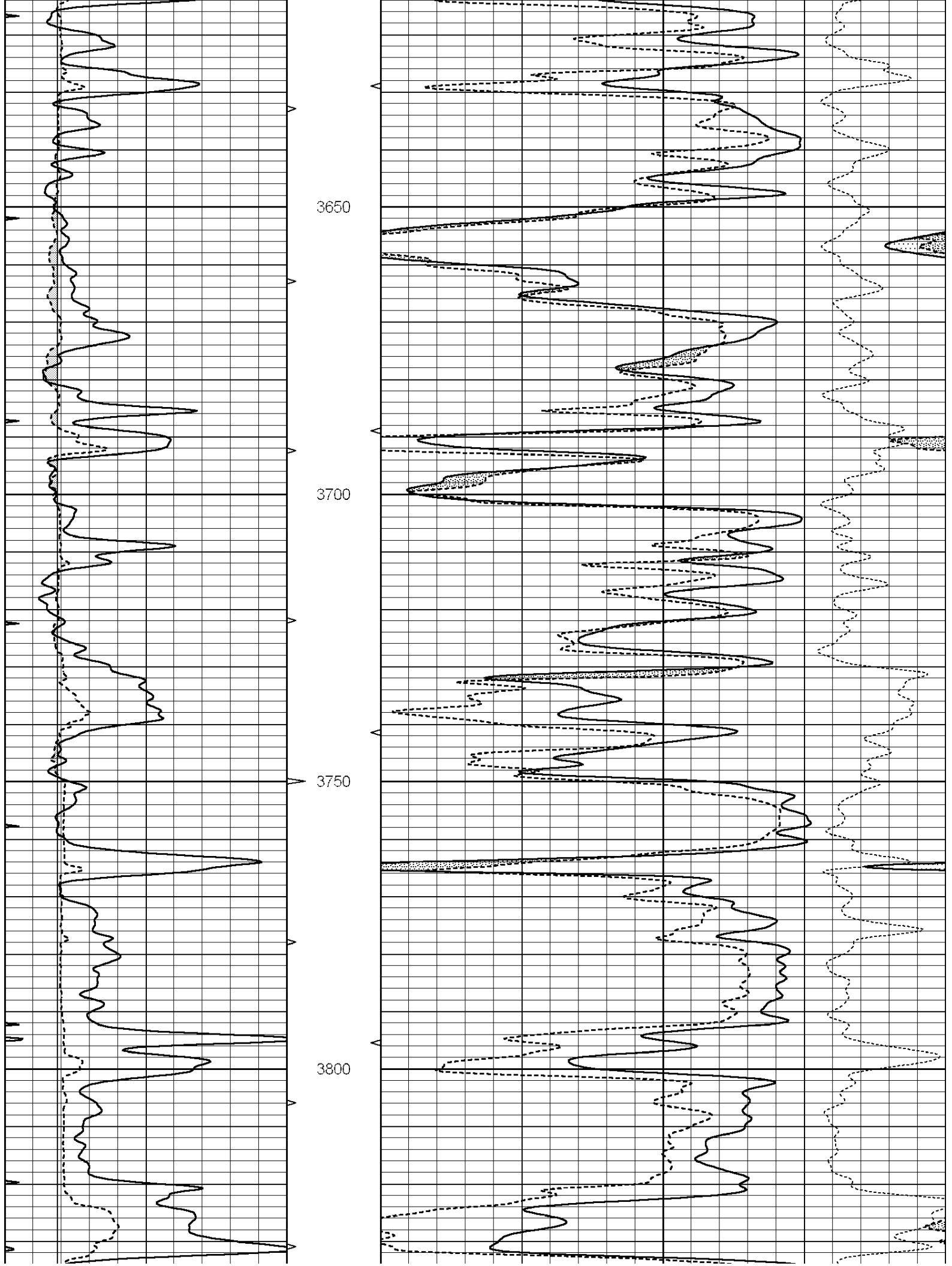
Database File: 2658ddn.db  
 Dataset Pathname: pass3.4  
 Presentation Format: den\_neu  
 Dataset Creation: Thu Jul 05 09:36:45 2018 by Calc SOC 120430  
 Charted by: Depth in Feet scaled 1:240

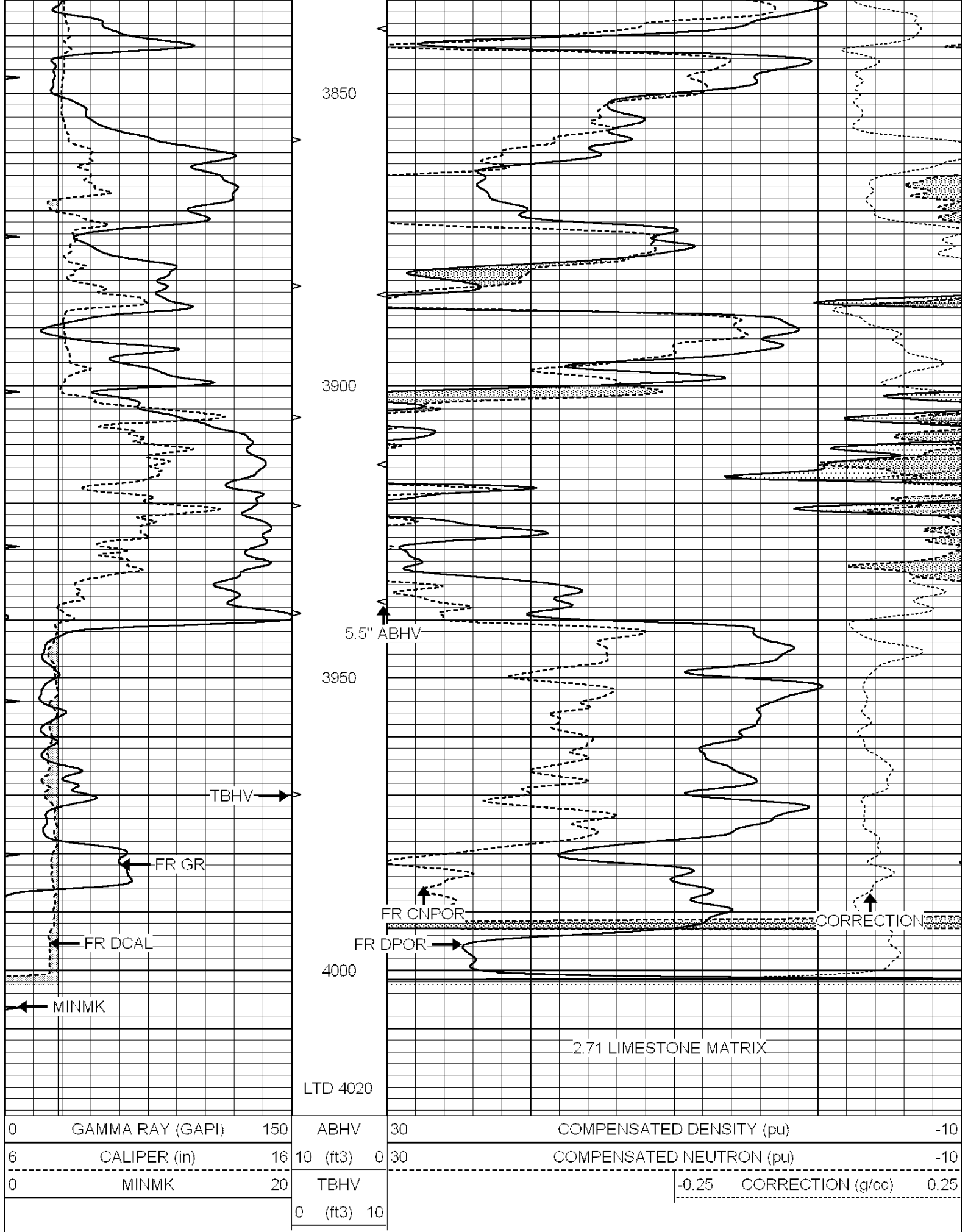
|   |                  |     |          |      |                          |      |
|---|------------------|-----|----------|------|--------------------------|------|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV     | 30   | COMPENSATED DENSITY (pu) | -10  |
| 6 | CALIPER (in)     | 16  | 10 (ft3) | 0 30 | COMPENSATED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

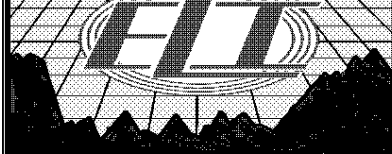








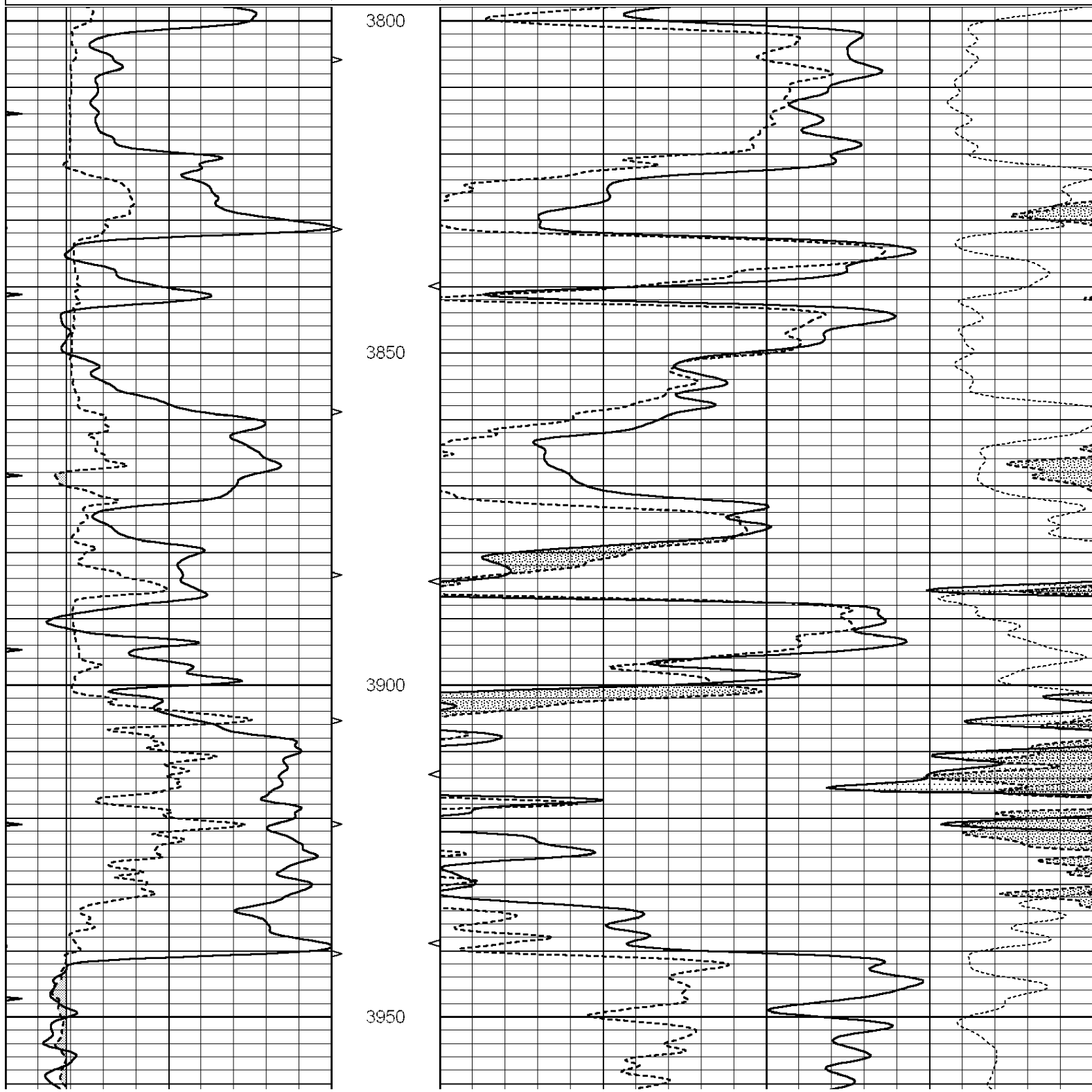


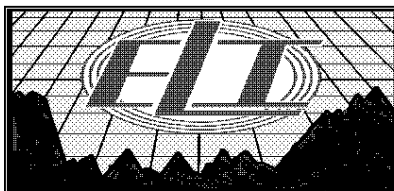
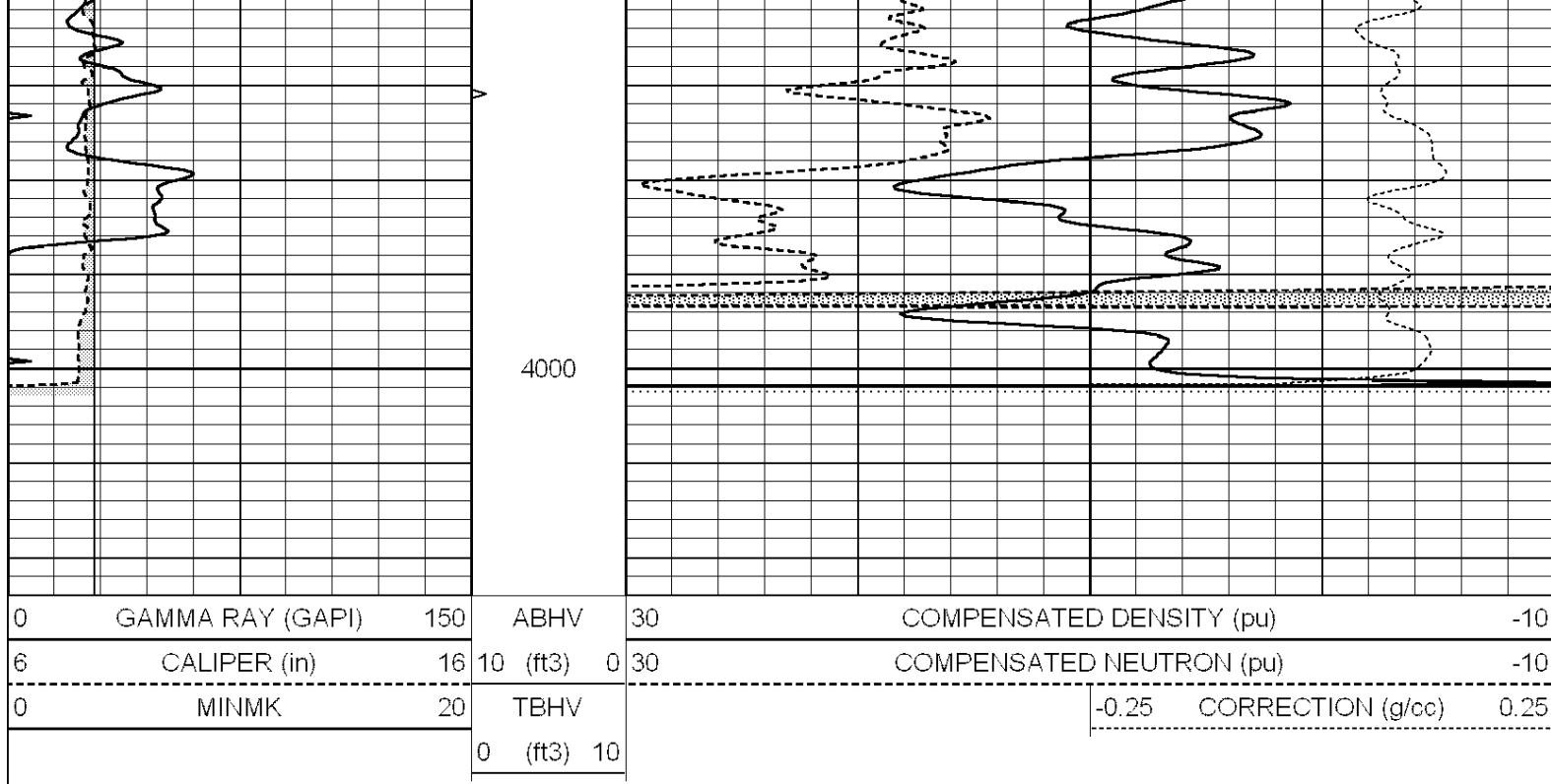


# REPEAT SECTION

Database File: 2658ddn.db  
Dataset Pathname: pass2.2  
Presentation Format: den\_neu  
Dataset Creation: Thu Jul 05 08:21:27 2018 by Calc SOC 120430  
Charted by: Depth in Feet scaled 1:240

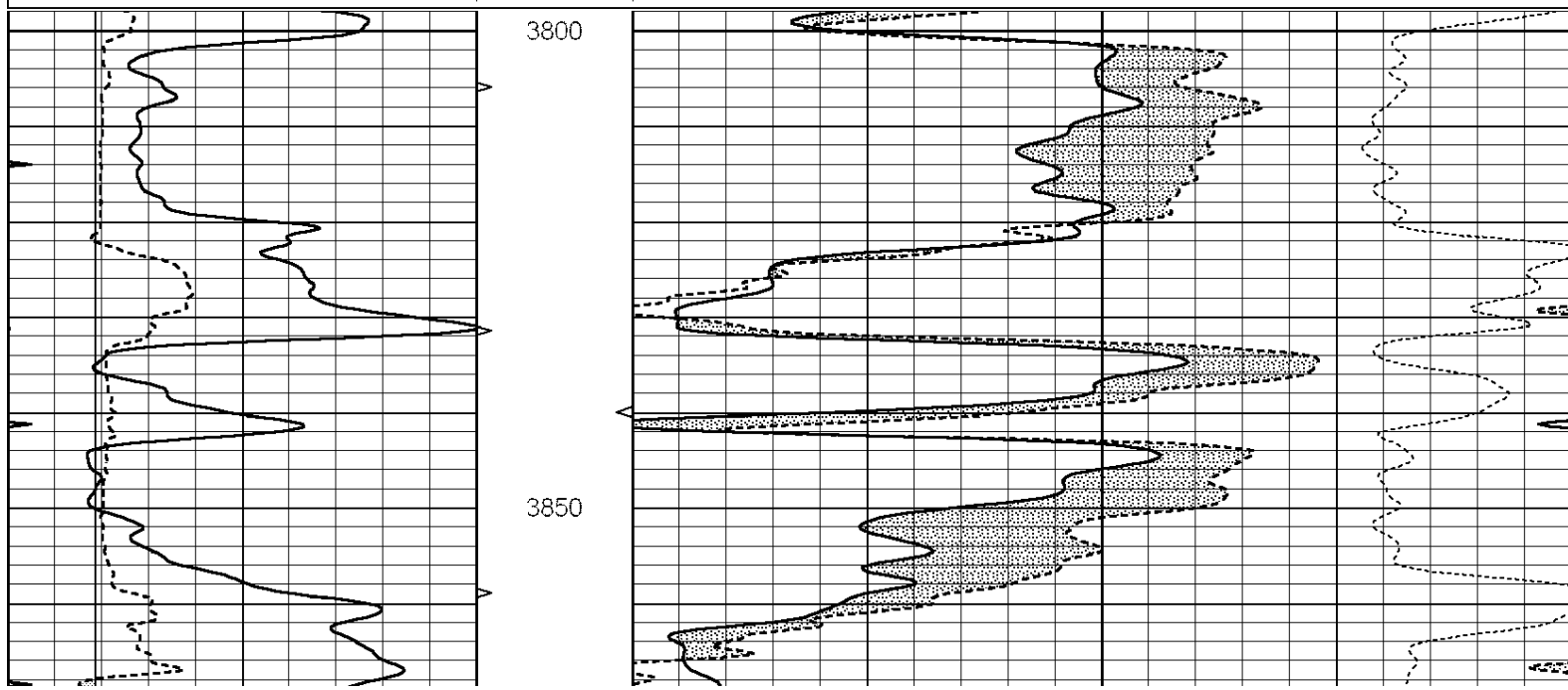
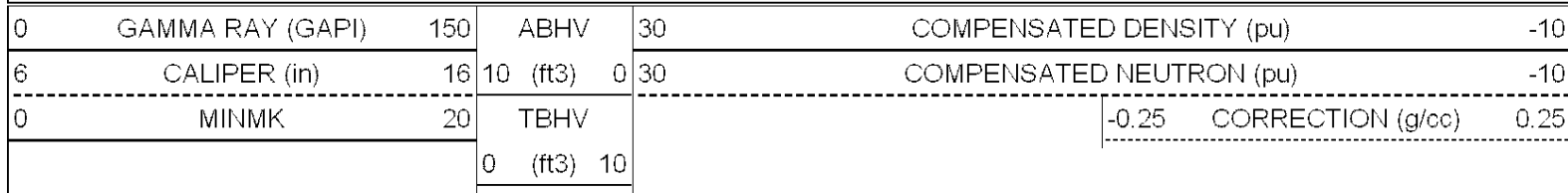
|   |                  |     |          |       |                          |                          |       |                   |      |
|---|------------------|-----|----------|-------|--------------------------|--------------------------|-------|-------------------|------|
| 0 | GAMMA RAY (GAPI)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

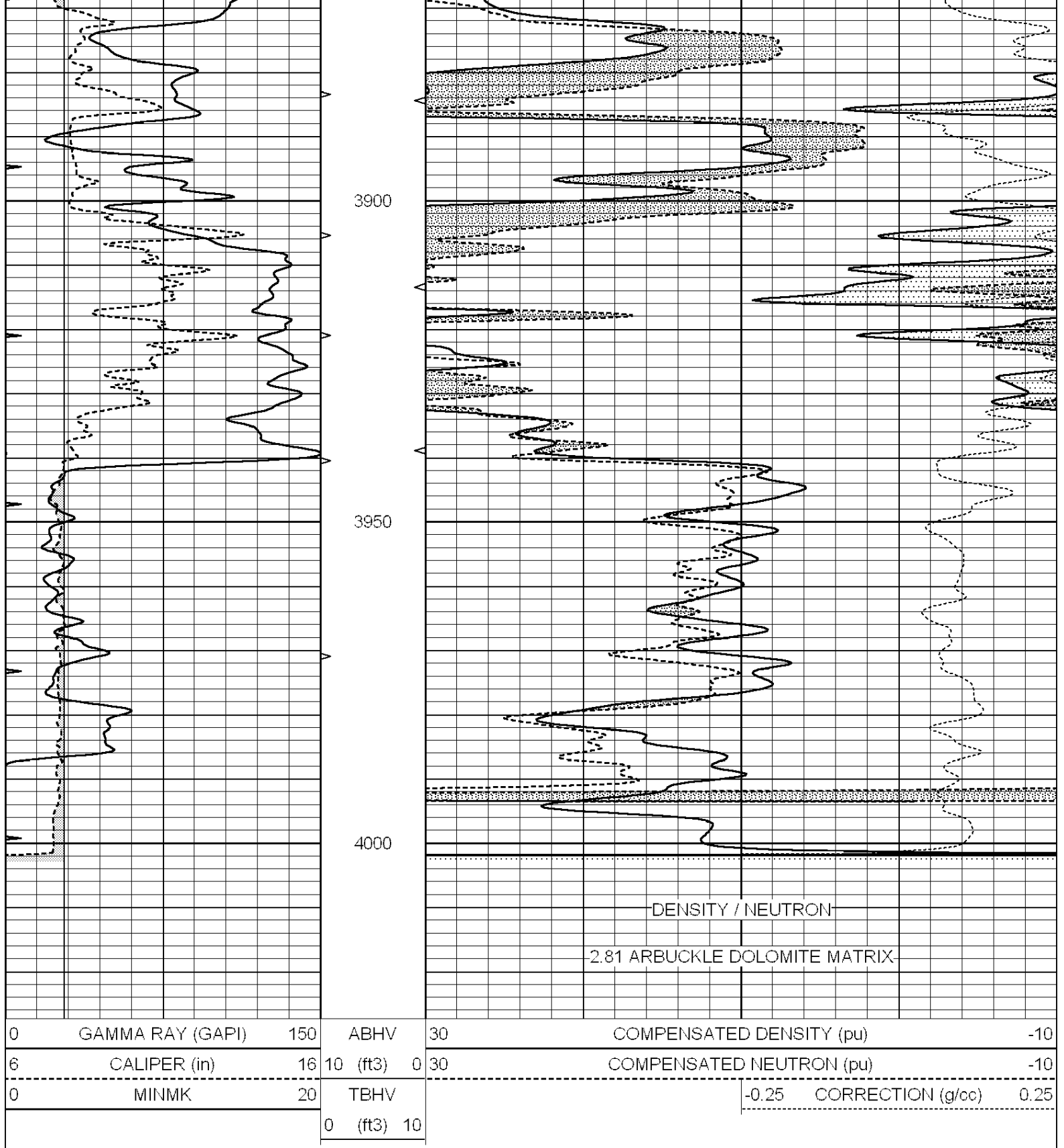




# DOLOMITE MATRIX

Database File: 2658ddn.db  
 Dataset Pathname: pass2.2D  
 Presentation Format: den\_neu  
 Dataset Creation: Thu Jul 05 08:24:46 2018  
 Charted by: Depth in Feet scaled 1:240





### Calibration Report

Database File: 1598ddn.db  
Dataset Pathname: pass4  
Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

### Dual Induction Calibration Report

|                                      |                          |
|--------------------------------------|--------------------------|
| Serial-Model:                        | PROBE7-DILG              |
| Surface Cal Performed:               | Wed Aug 30 00:06:33 2017 |
| Downhole Cal Performed:              | Mon Jul 28 12:02:56 2008 |
| After Survey Verification Performed: | Mon Jul 28 12:02:56 2008 |

| Surface Calibration |        |       |            |       |         |        |         |         |
|---------------------|--------|-------|------------|-------|---------|--------|---------|---------|
| Readings            |        |       | References |       |         |        | Results |         |
| Loop:               | Air    | Loop  |            | Air   | Loop    |        | m       | b       |
| Deep                | -0.014 | 0.629 | V          | 0.000 | 400.000 | mmho/m | 620.000 | 0.000   |
| Medium              | 0.039  | 0.728 | V          | 0.000 | 464.000 | mmho/m | 675.000 | -44.000 |
| Internal:           | Zero   | Cal   |            | Zero  | Cal     |        | m       | b       |
| Deep                | 0.011  | 0.610 | V          | 0.000 | 400.000 | mmho/m | 667.135 | -7.256  |
| Medium              | 0.005  | 0.712 | V          | 0.000 | 464.000 | mmho/m | 655.677 | -3.102  |

| Downhole Calibration |       |        |            |         |          |        |         |       |
|----------------------|-------|--------|------------|---------|----------|--------|---------|-------|
| Readings             |       |        | References |         |          |        | Results |       |
|                      | Zero  | Cal    |            | Zero    | Cal      |        | m'      | b'    |
| Deep                 | 0.000 | 0.000  | mmho/m     | 14.508  | 388.384  | mmho/m | 1.000   | 0.000 |
| Medium               | 0.000 | 0.000  | mmho/m     | 166.367 | 504.400  | mmho/m | 1.000   | 0.000 |
| LL3                  |       | 7.500  | V          |         | 1400.000 | Ohm-m  |         |       |
|                      |       | 0.000  | V          |         | 20.000   | Ohm-m  |         |       |
|                      |       | -7.200 | V          |         | 4000.000 | mmho-m |         |       |

| After Survey Verification |       |       |         |       |       |        |         |       |
|---------------------------|-------|-------|---------|-------|-------|--------|---------|-------|
| Readings                  |       |       | Targets |       |       |        | Results |       |
|                           | Zero  | Cal   |         | Zero  | Cal   |        | m'      | b'    |
| Deep                      | 0.000 | 0.000 | mmho/m  | 0.000 | 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: 002                      |  |  | Model: PRB |  |  |  |  |  |

| Master Calibration |            |             |          |                     | Performed Mon Aug 21 11:27:42 2017 |  |  |         |
|--------------------|------------|-------------|----------|---------------------|------------------------------------|--|--|---------|
|                    | Background | Magnesium   | Aluminum | Sandstone           |                                    |  |  |         |
| Window 1           | 837.1      | 10632.5     | 2945.1   | 12110.1             |                                    |  |  | cps     |
| Window 2           | 772.0      | 9117.4      | 2570.1   | 10197.3             |                                    |  |  | cps     |
| Window 3           | 631.7      | 4669.0      | 1481.9   | 5042.9              |                                    |  |  | cps     |
| Window 4           | 187.0      | 187.5       | 185.9    | 189.9               |                                    |  |  | cps     |
| Long Space         | 0.0        | 8345.4      | 1798.1   | 9425.3              |                                    |  |  | cps     |
| Short Space        | 1.1        | 1927.9      | 1285.9   | 2050.2              |                                    |  |  | cps     |
| Rho                |            | 1.7100      | 2.5960   | 1.3800              |                                    |  |  | g/cc    |
| Pe                 |            | 0.0000      | 2.5700   | 1.5500              |                                    |  |  |         |
| Rib Angle          | : 45.2     | Rib Slope   | : 1.008  | Density/Spine Ratio |                                    |  |  | : 0.558 |
| Spine Angle        | : 75.2     | Spine Slope | : 3.790  | Spine Intercept     |                                    |  |  | : -19.6 |

| 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: 070808  
Tool Model: Probe

## 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: 070558  
Tool Model: OPEN\_GR  
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps