



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company SHELBY RESOURCES, LLC.  
Well COLLENE UNIT #1-21  
Field WILDCAT  
County BARTON  
State KANSAS

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Field WILDCAT  
County BARTON State KANSAS

Location: API # : 15-009-26061-0000  
1717' FSL & 140' FEL  
SEC 21 TWP 18S RGE 14W  
Permanent Datum GROUND LEVEL Elevation 1911  
Log Measured From KELLY BUSHING 13' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL/MEL  
SONIC  
Elevation  
K.B. 1924  
D.F. 1922  
G.L. 1911

|                              |                 |                     |  |
|------------------------------|-----------------|---------------------|--|
| Date                         | 11/27/14        |                     |  |
| Run Number                   | ONE             |                     |  |
| Depth Driller                | 3565            |                     |  |
| Depth Logger                 | 3562            |                     |  |
| Bottom Logged Interval       | 3538            |                     |  |
| Top Log Interval             | 2800            |                     |  |
| Casing Driller               | 8 5/8"@890'     |                     |  |
| Casing Logger                | 890             |                     |  |
| Bit Size                     | 7 7/8"          |                     |  |
| Type Fluid in Hole           | CHEMICAL MUD    | CHLORIDES 6,400 PPM |  |
| Density / Viscosity          | 9.2/57          |                     |  |
| pH / Fluid Loss              | 10.0/8.8        |                     |  |
| Source of Sample             | FLOWLINE        |                     |  |
| Rim @ Meas. Temp             | .900@80F        |                     |  |
| Rmf @ Meas. Temp             | .675@80F        |                     |  |
| Rmc @ Meas. Temp             | 1.08@80F        |                     |  |
| Source of Rmf / Rmc          | MEASUREMENT     |                     |  |
| Rim @ BHT                    | .643@112F       |                     |  |
| Time Circulation Stopped     | 2 HOURS         |                     |  |
| Time Logger on Bottom        | 3:15 A.M.       |                     |  |
| Maximum Recorded Temperature | 112F            |                     |  |
| Equipment Number             | 4854            |                     |  |
| 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**

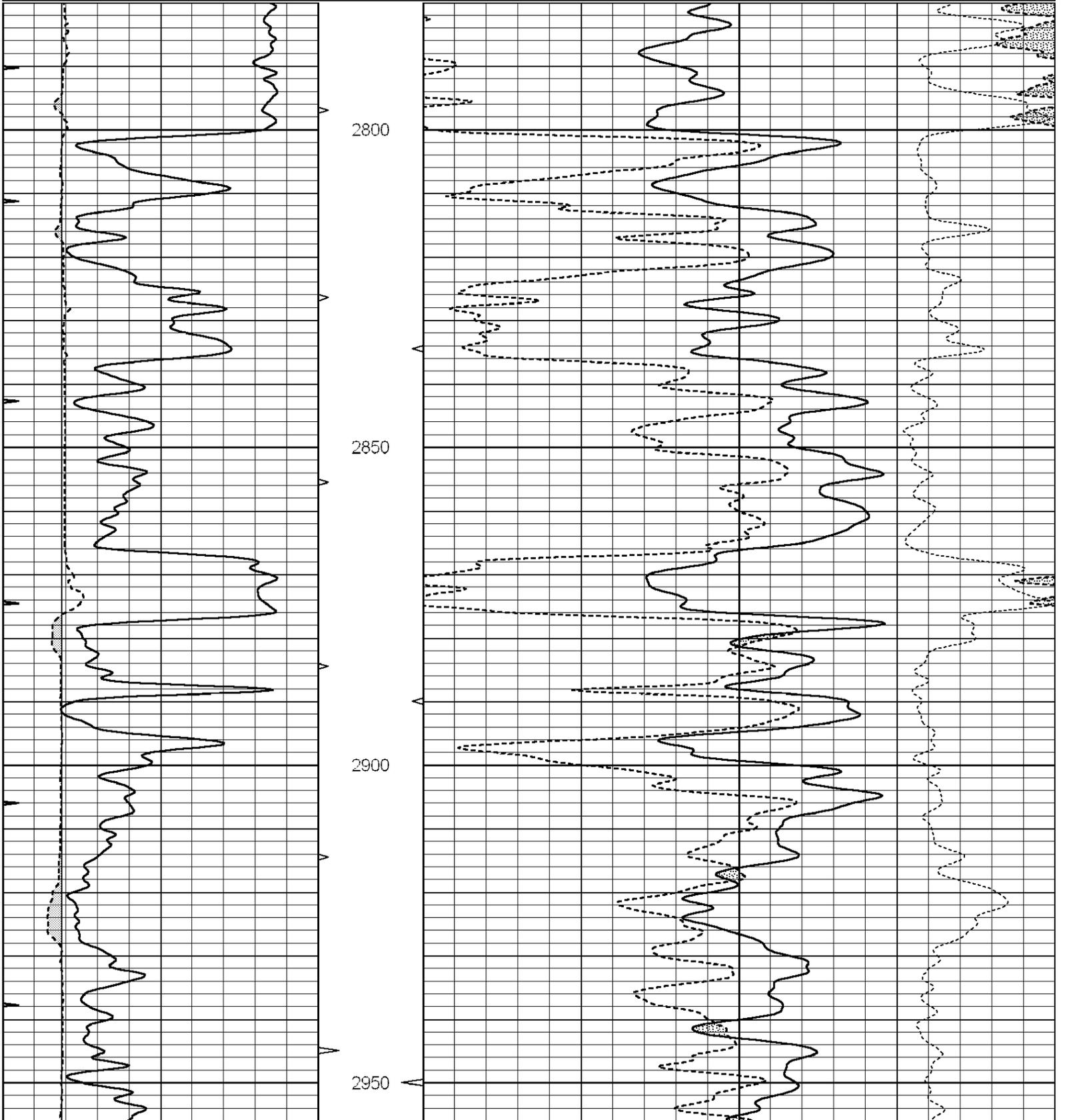
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
W. OF HOISINGTON, KS.TO (HWY 4 & 281) 4S. ON "BOYD RD.", TO "RD. 80", 1W., 1S., W. INTO  
HAPPY THANKSGIVING

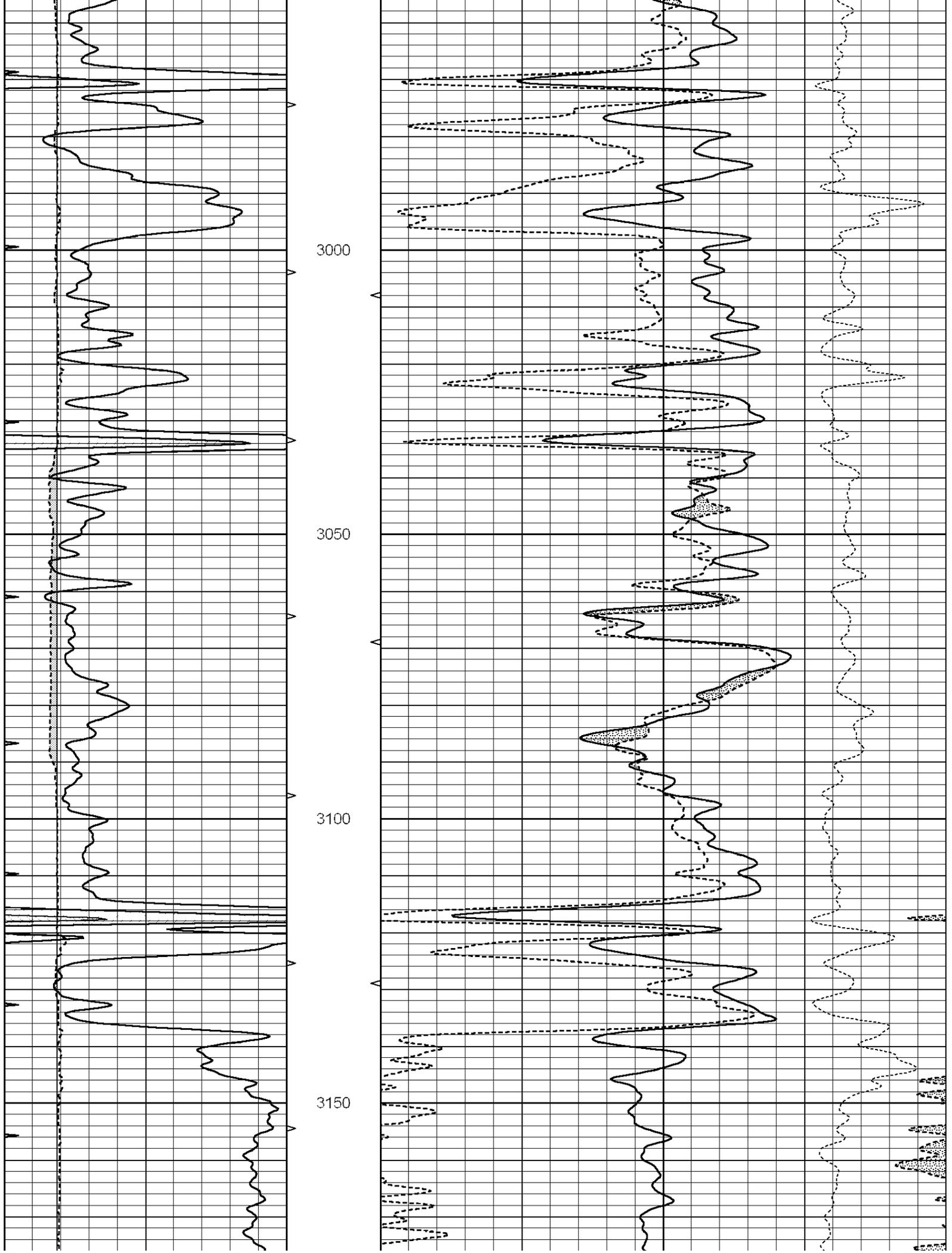


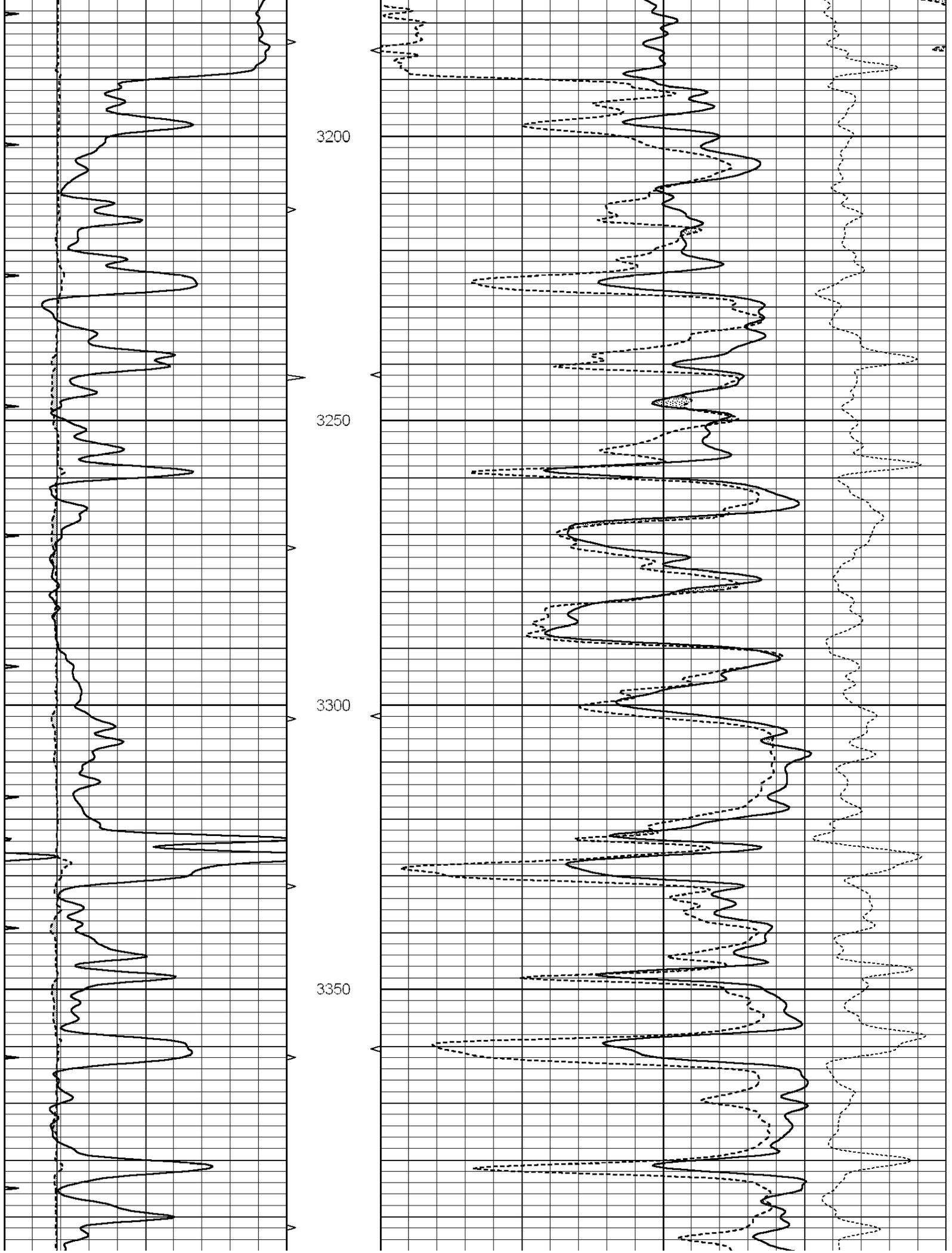
**MAIN SECTION**

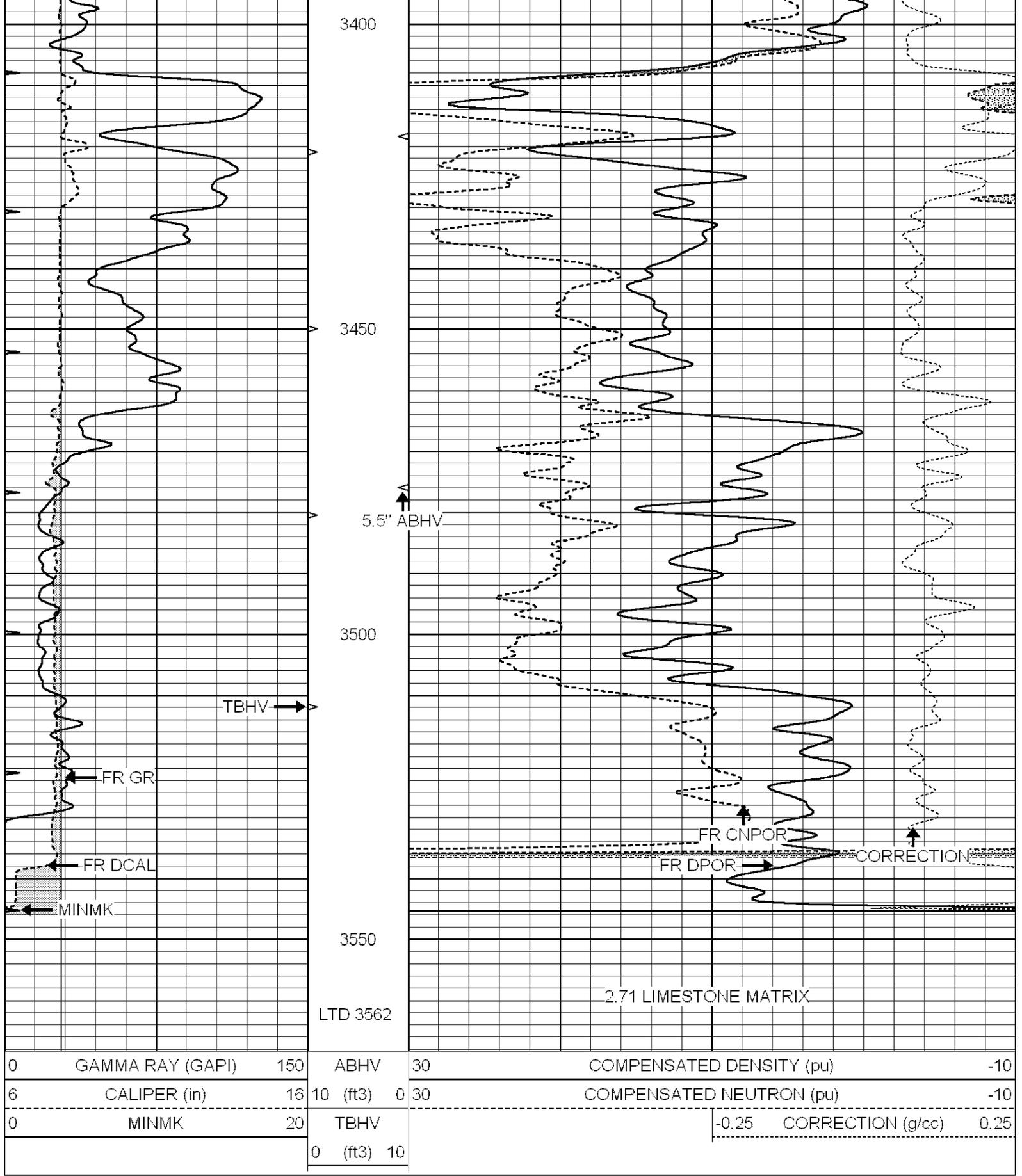
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 Dataset Pathname: pass3.5  
 Presentation Format: den\_neu  
 Dataset Creation: Thu Nov 27 04:17:26 2014 by Calc SOC 120430  
 Charted by: Depth in Feet scaled 1:240

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









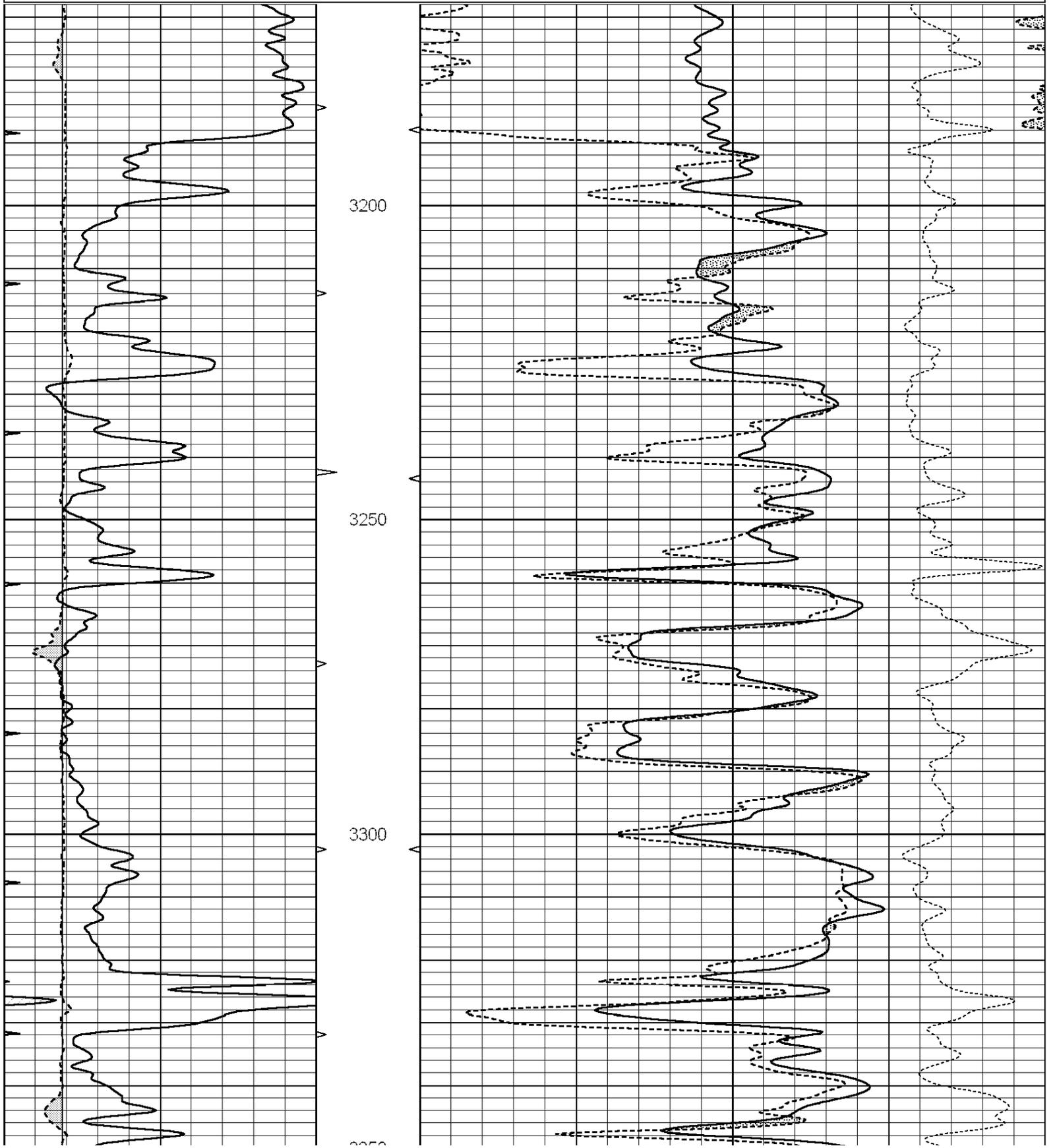
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|---|------------------|-----|----------|------|--------------------------|-------------------|------|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV     | 30   | COMPENSATED DENSITY (pu) | -10               |      |
| 6 | CALIPER (in)     | 16  | 10 (ft3) |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

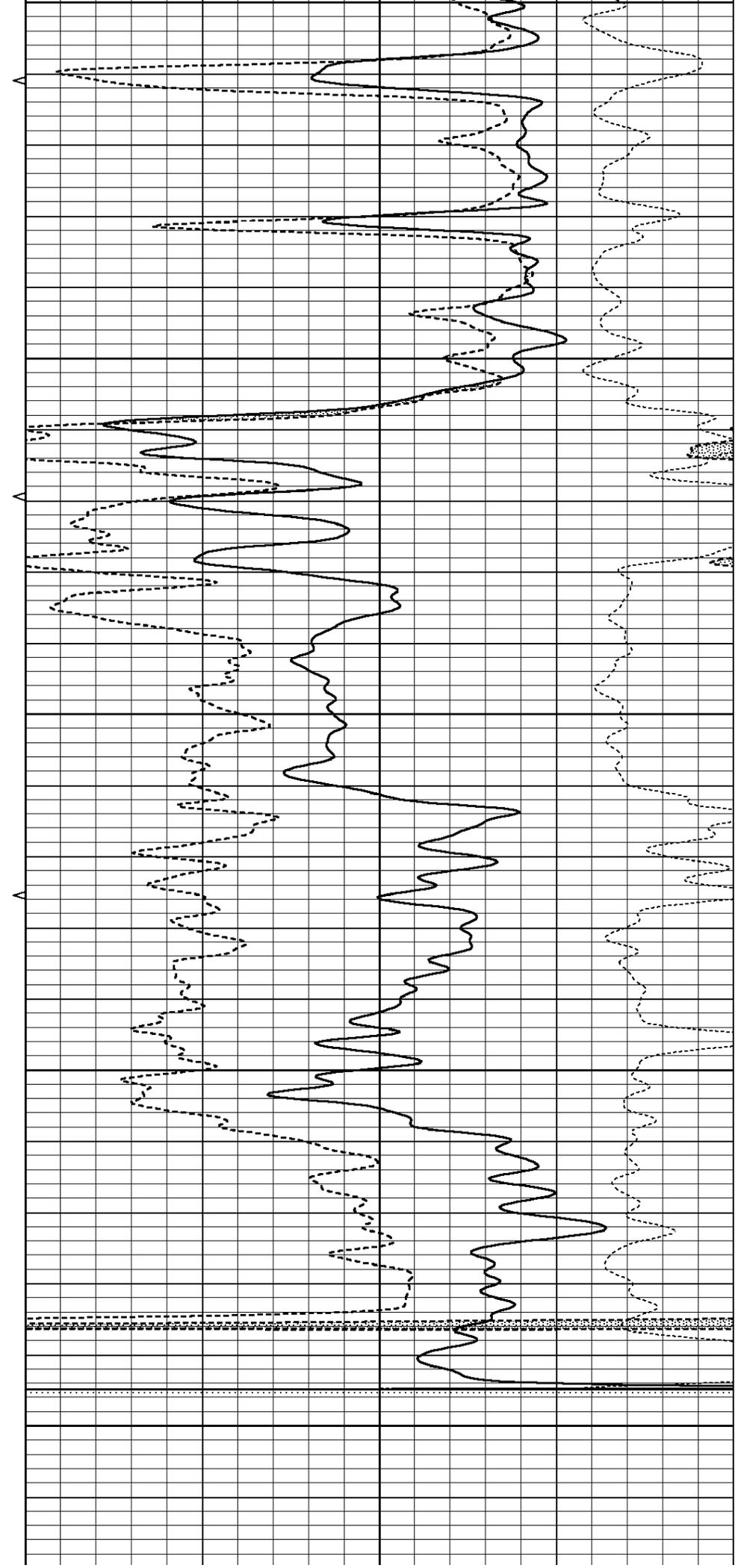
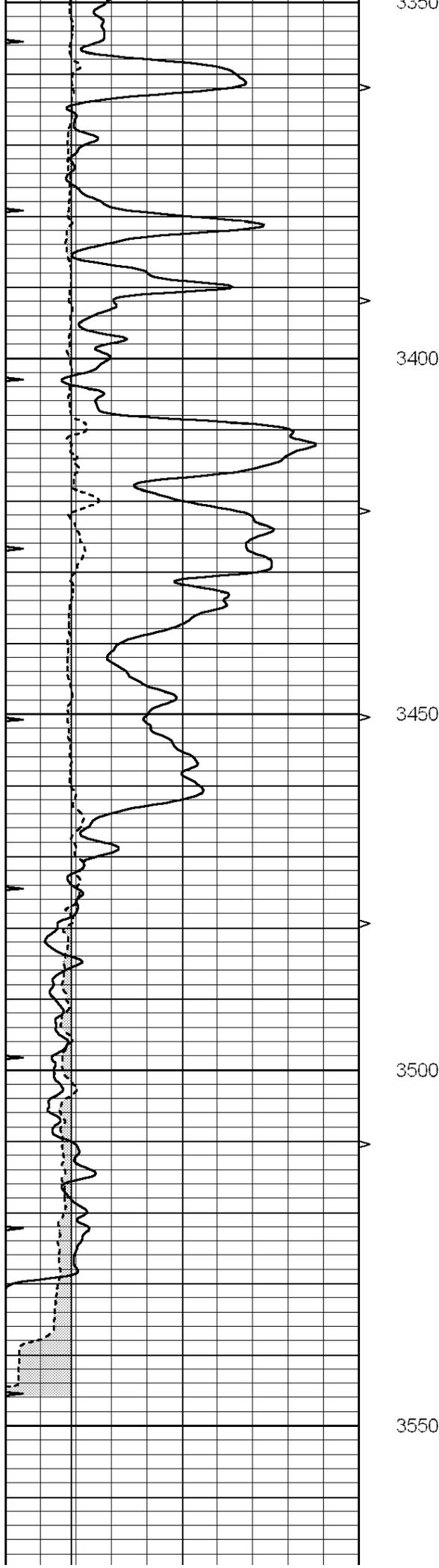


# REPEAT SECTION

Database File: 25920ddn.db  
 Dataset Pathname: pass2.4  
 Presentation Format: den\_neu  
 Dataset Creation: Thu Nov 27 03:37:36 2014 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   |                          |      |





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

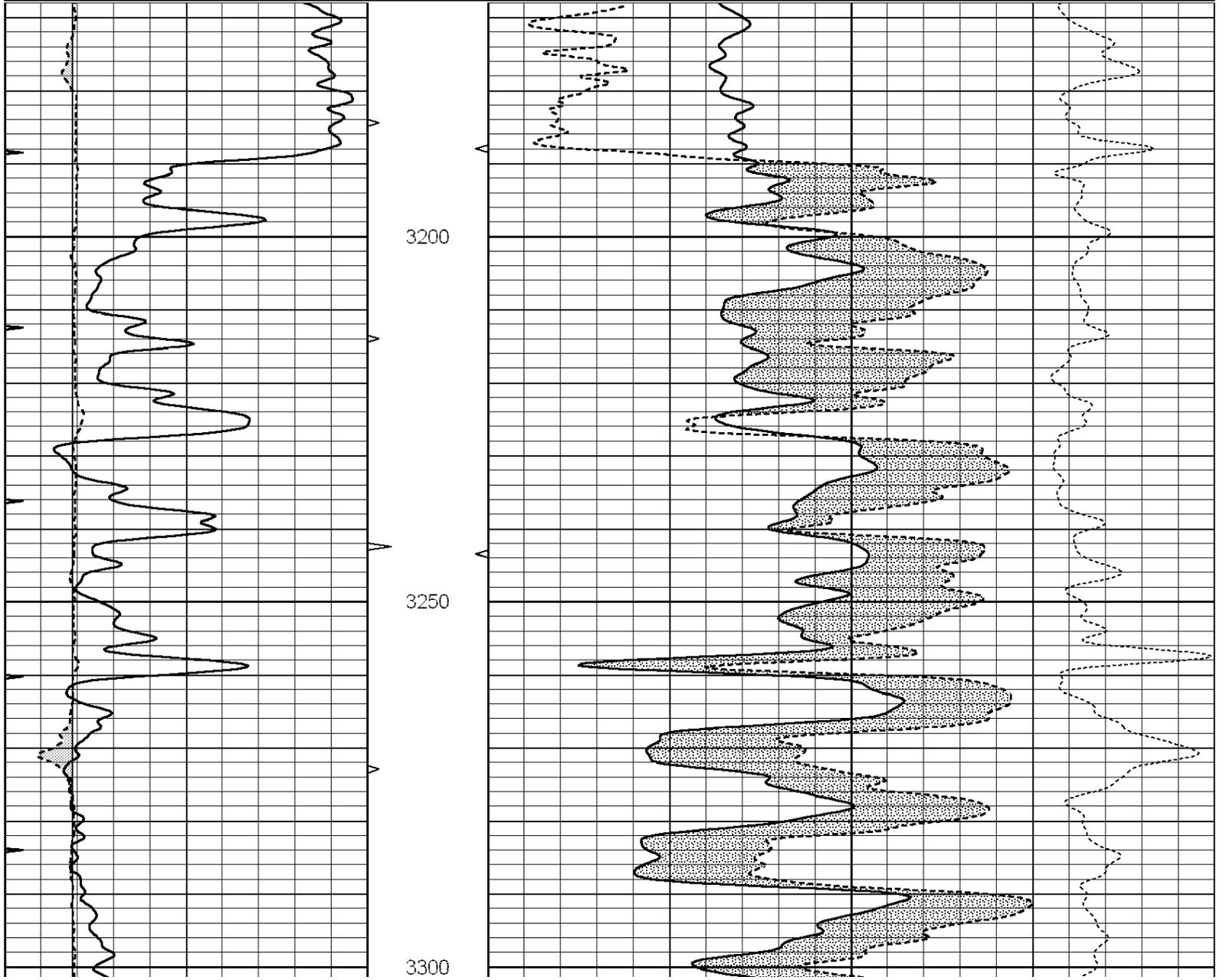


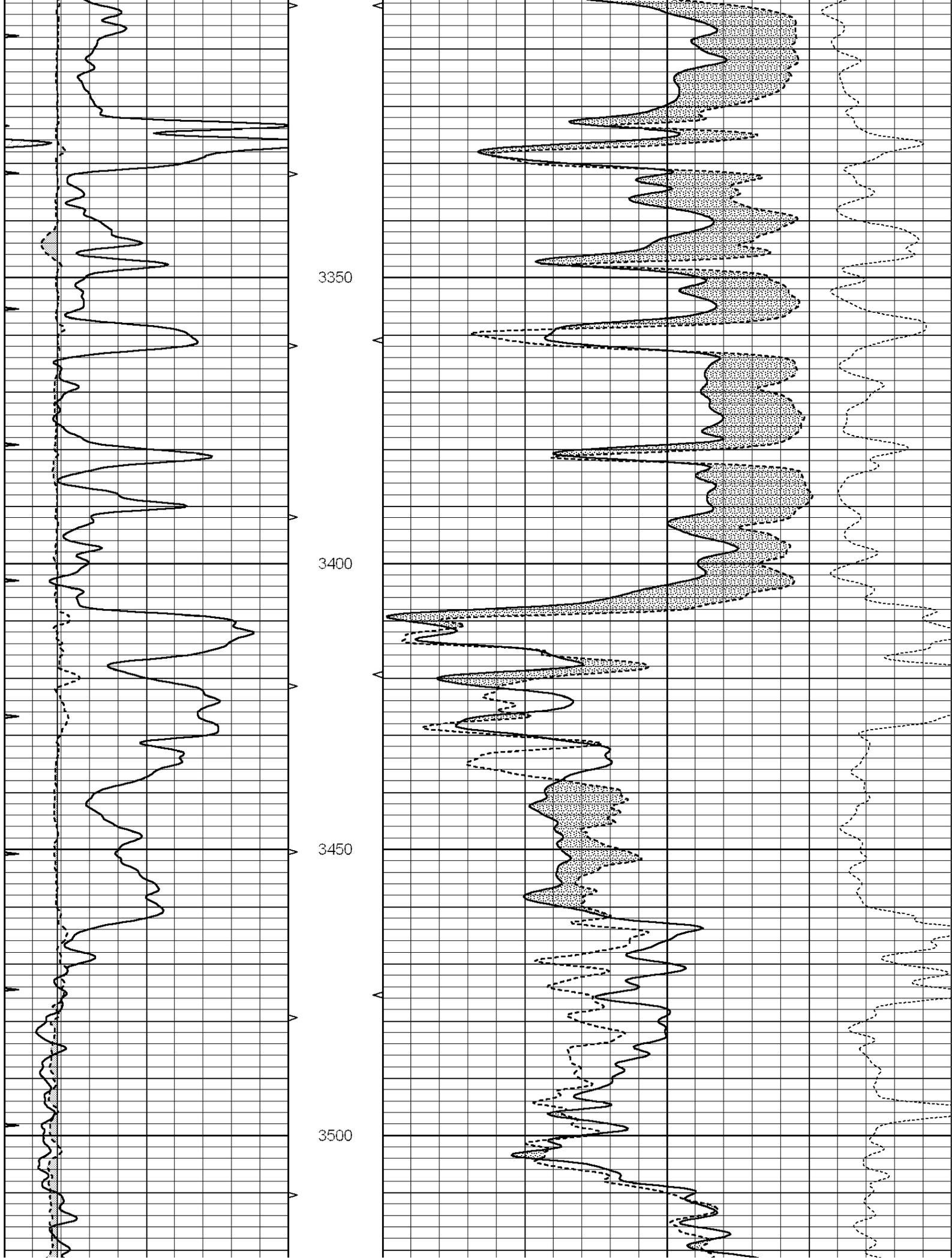
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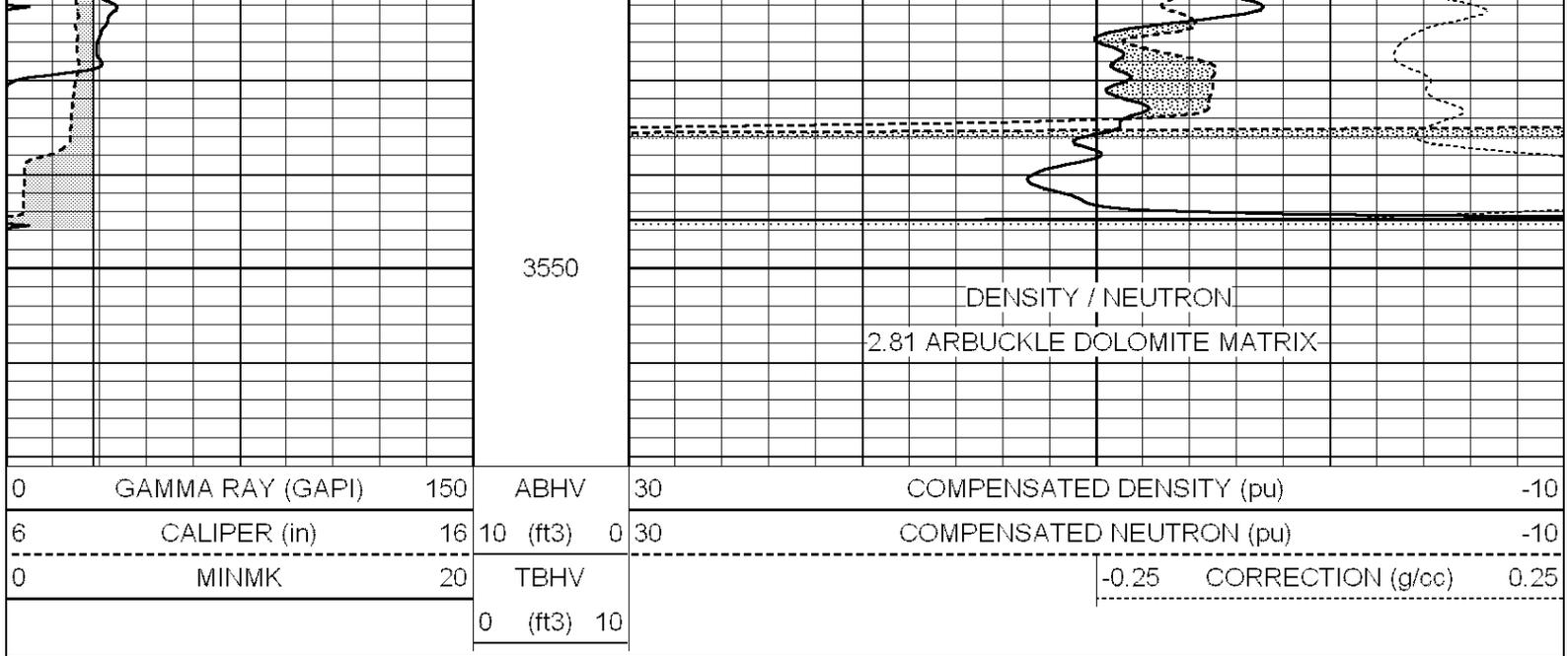
# DOLOMITE MATRIX

Database File: 25920ddn.db  
 Dataset Pathname: pass2.6  
 Presentation Format: den\_neu  
 Dataset Creation: Thu Nov 27 03:42:15 2014  
 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   |                          |      |







### Calibration Report

Database File: 25920ddn.db  
 Dataset Pathname: pass3.5  
 Dataset Creation: Thu Nov 27 04:17:26 2014 by Calc SOC 120430

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Tue Nov 25 21:40:59 2014  
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008  
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

#### Surface Calibration

| Loop:     | Readings |       |   | References |         |        | Results |         |
|-----------|----------|-------|---|------------|---------|--------|---------|---------|
|           | Air      | Loop  |   | Air        | Loop    |        | m       | b       |
| Deep      | -0.014   | 0.629 | V | 0.000      | 400.000 | mmho/m | 670.000 | -16.000 |
| Medium    | 0.039    | 0.728 | V | 0.000      | 464.000 | mmho/m | 670.000 | -24.000 |
| 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  |         |       |

Litho Density Calibration Report  
 Serial: 004N Model: PRB

Master Calibration Performed Fri May 30 11:01:00 2014

|             | Background | Magnesium   | Aluminum | Sandstone           |         |
|-------------|------------|-------------|----------|---------------------|---------|
| Window 1    | 1378.8     | 10804.6     | 3492.0   | 12453.4             | cps     |
| Window 2    | 1262.4     | 9313.5      | 3076.7   | 10594.7             | cps     |
| Window 3    | 1077.6     | 5668.7      | 2076.0   | 6314.8              | cps     |
| Window 4    | 306.4      | 313.0       | 306.4    | 315.6               | cps     |
| Long Space  | 0.0        | 8051.0      | 1814.3   | 9332.3              | cps     |
| Short Space | 1.9        | 1706.1      | 1146.0   | 1707.6              | cps     |
| Rho         |            | 1.7100      | 2.5900   | 1.3800              | g/cc    |
| Pe          |            | 0.0000      | 2.5700   | 1.5500              |         |
| Rib Angle   | : 45.0     | Rib Slope   | : 1.002  | Density/Spine Ratio | : 0.571 |
| Spine Angle | : 75.0     | Spine Slope | : 3.745  | Spine Intercept     | : -18.9 |

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      |          |        |

## Gamma Ray Calibration Report

|                     |                          |          |
|---------------------|--------------------------|----------|
| Serial Number:      | 070558                   |          |
| Tool Model:         | OPEN_GR                  |          |
| Performed:          | Mon Nov 17 10:01:40 2014 |          |
| Calibrator Value:   | 1.0                      | GAPI     |
| Background Reading: | 0.0                      | cps      |
| Calibrator Reading: | 1.0                      | cps      |
| Sensitivity:        | 0.2800                   | GAPI/cps |