



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

|                              |                             |
|------------------------------|-----------------------------|
| Company                      | DOWNING-NELSON OIL CO. INC. |
| Well                         | HOCKERSMITH-ROBBEN #2-29    |
| Field                        | OSTMEYER NORTHWEST          |
| County                       | THOMAS                      |
| State                        | KANSAS                      |
| Location:                    | API # : 15-193-20900-00-00  |
| Permanent Datum              | 1760' FSL & 1160' FWL       |
| Log Measured From            | NE - SE - NW - SW           |
| Drilling Measured From       | SEC 29 TWP 9S RGE 31W       |
| GROUND LEVEL                 | Elevation                   |
| KELLY BUSHING 8' A.G.L.      | K.B. 3046                   |
| KELLY BUSHING                | D.F. 3044                   |
|                              | G.L. 3038                   |
| Run Number                   | ONE                         |
| Depth Driller                | 4710                        |
| Depth Logger                 | 4710                        |
| Bottom Logged Interval       | 4686                        |
| Top Log Interval             | 3750                        |
| Casing Driller               | 8 5/8 " @ 307'              |
| Casing Logger                | 307'                        |
| Bit Size                     | 7.875                       |
| Type Fluid in Hole           | CHEMICAL MUD                |
| Density / Viscosity          | 9.4 / 69                    |
| pH / Fluid Loss              | 10.0 / 8.0                  |
| Source of Sample             | FLOWLINE                    |
| Rim @ Meas. Temp             | 1.00 @ 89F                  |
| Rmf @ Meas. Temp             | 0.75 @ 89F                  |
| Rmc @ Meas. Temp             | 1.20 @ 89F                  |
| Source of Rmf / Rmc          | MEASURED                    |
| Rim @ BHT                    | 0.73 @ 122F                 |
| Time Circulation Stopped     | 2 HOURS                     |
| Time Logger on Bottom        |                             |
| Maximum Recorded Temperature | 122F                        |
| Equipment Number             | 860                         |
| Location                     | HAYS, KS.                   |
| Recorded By                  | JEFF GRONEWEG               |
| Witnessed By                 | MARC DOWNING                |

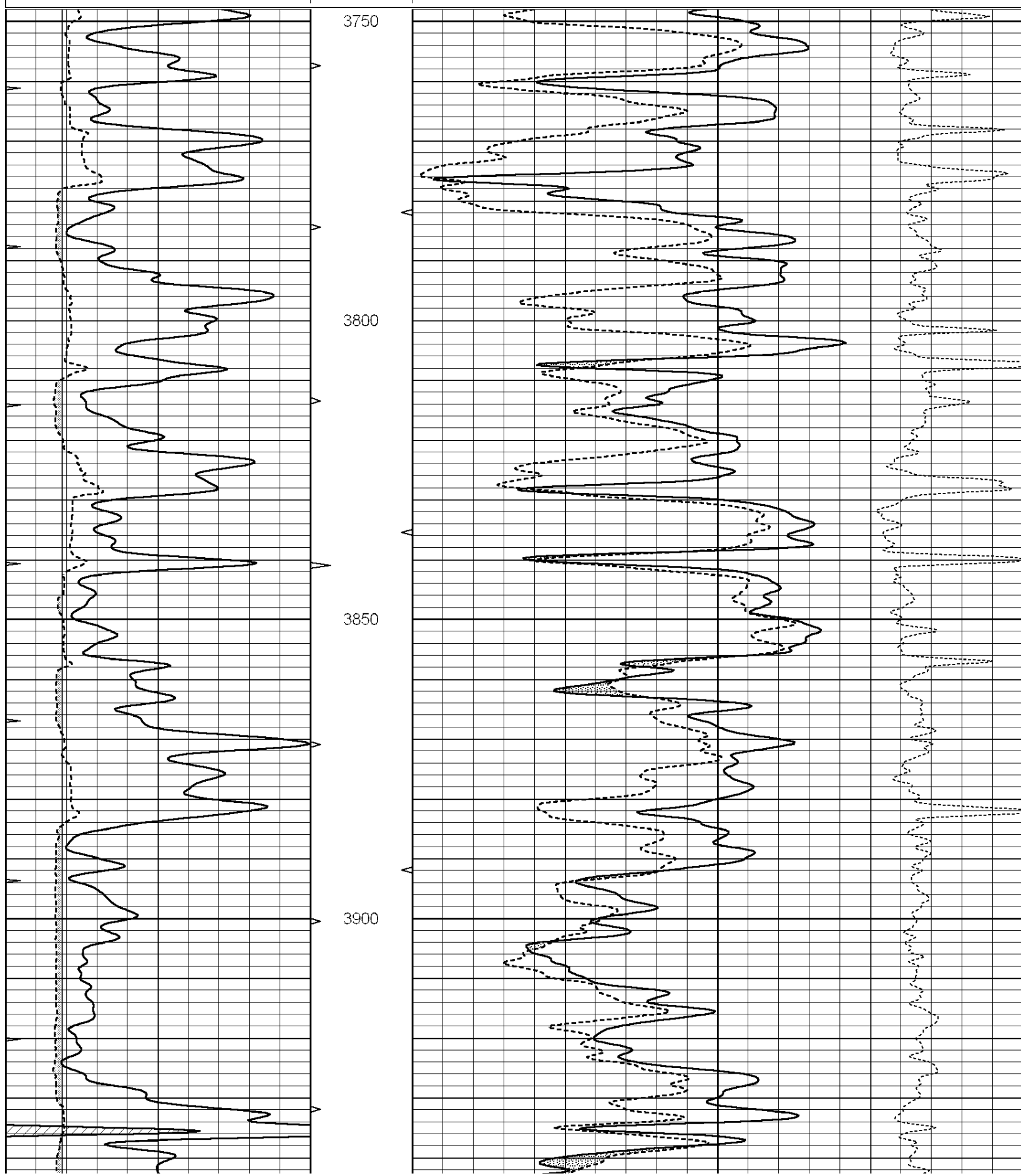
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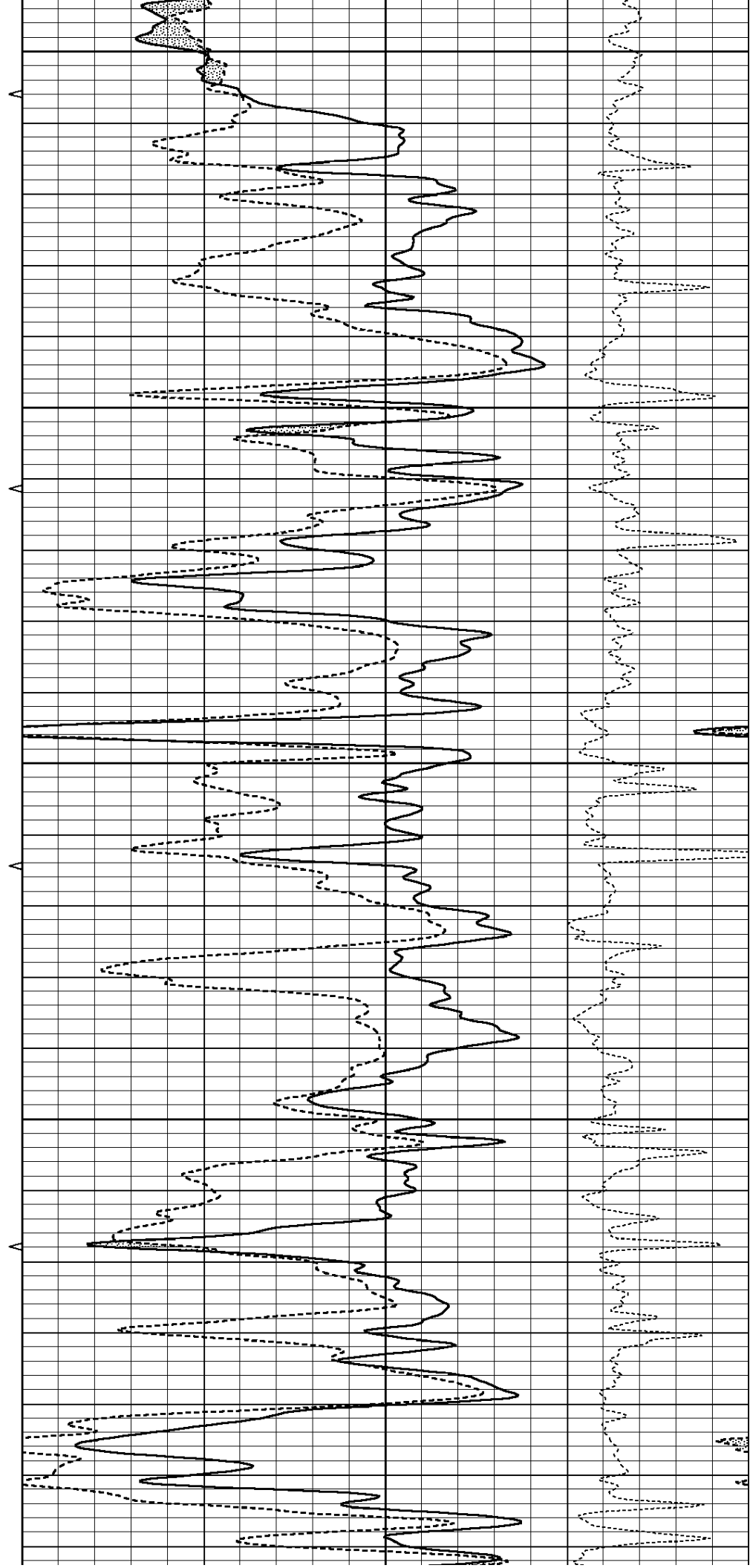
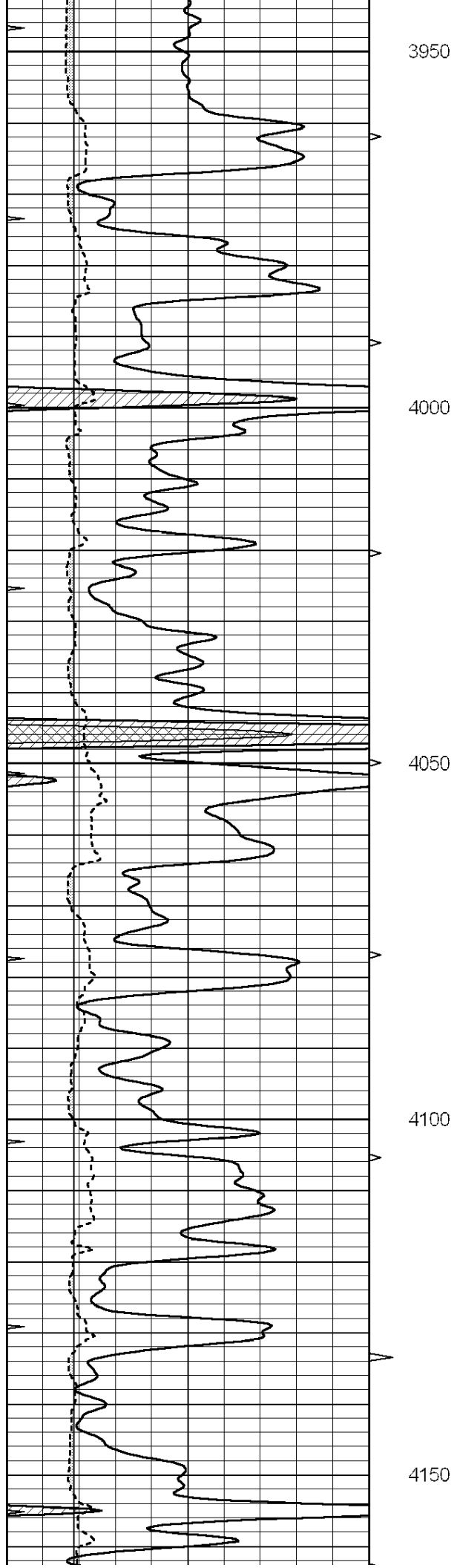
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

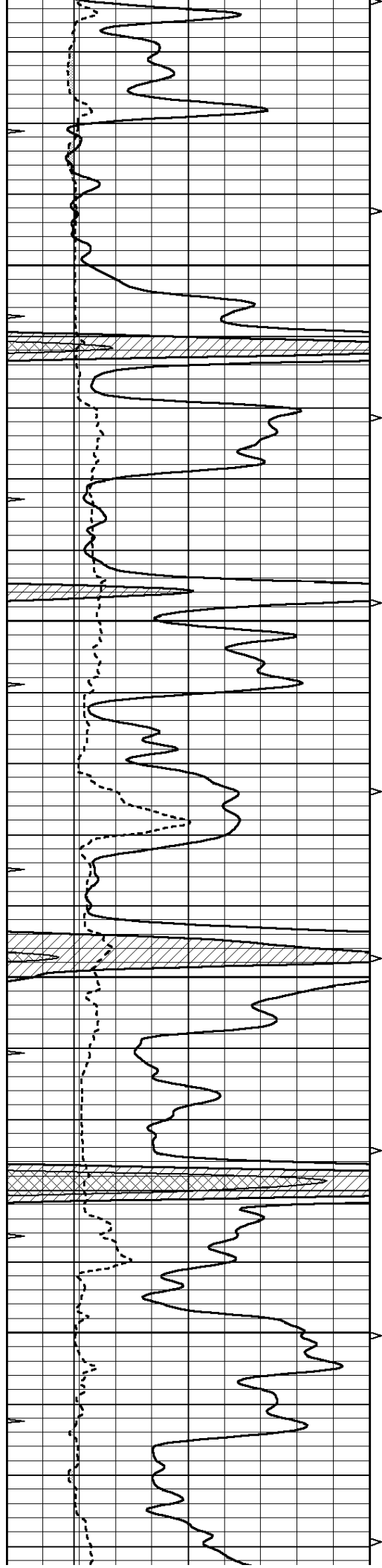
Comments

NABORS COMPLETION & PRODUCTION SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: CAMPUS, KS - 8 MILES NORTH TO RD H - 4 MILES WEST TO RD 32  
1/2 MILE NORTH - EAST INTO

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





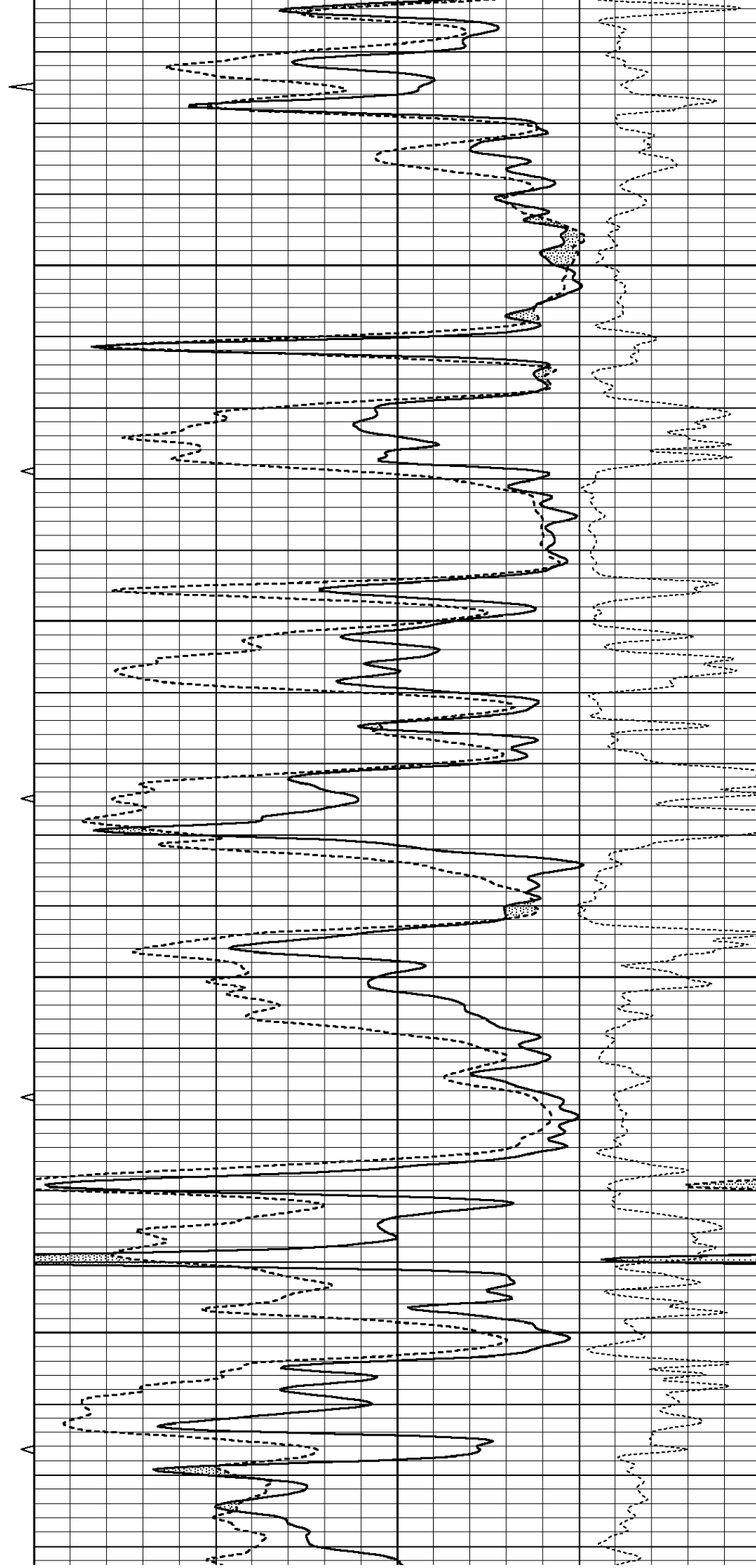


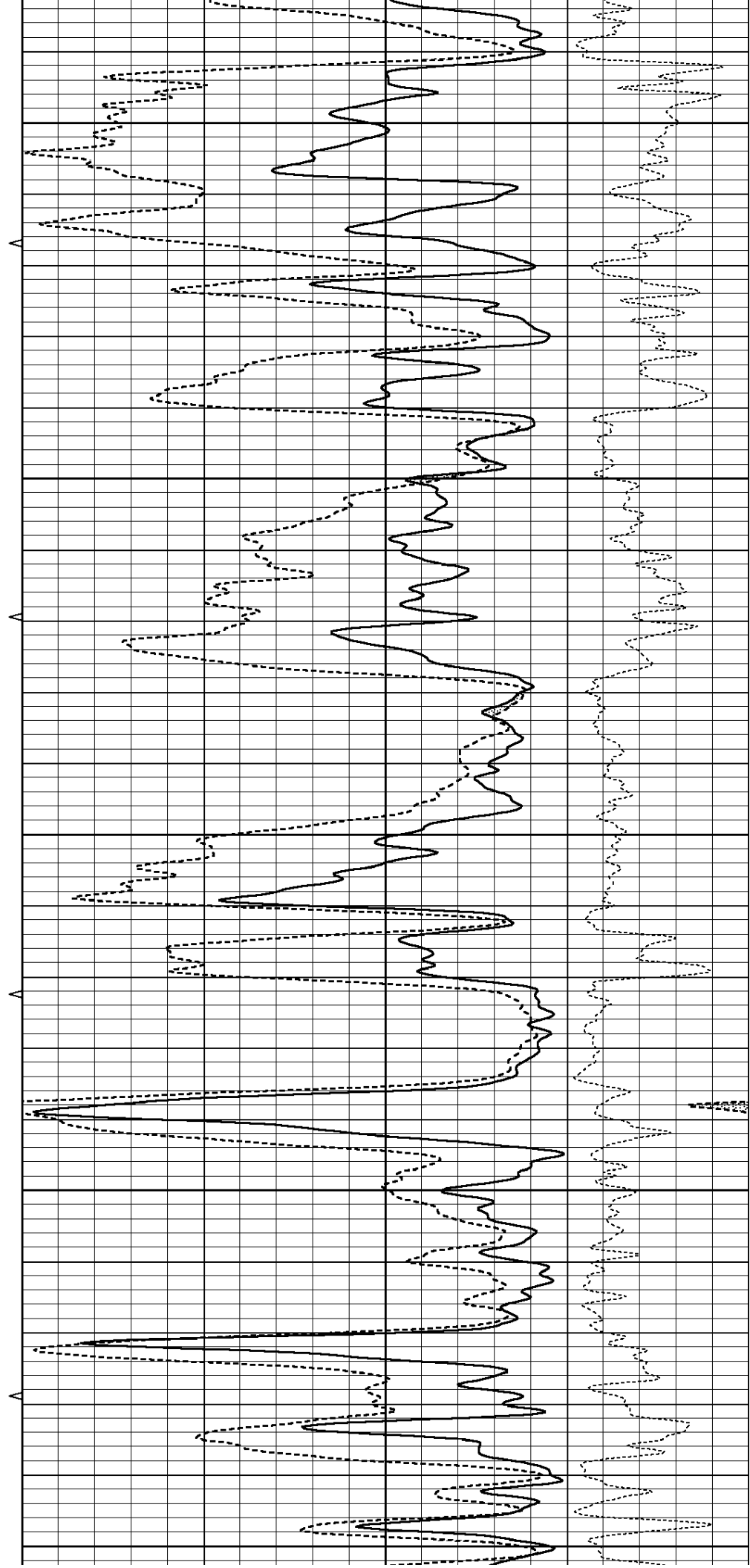
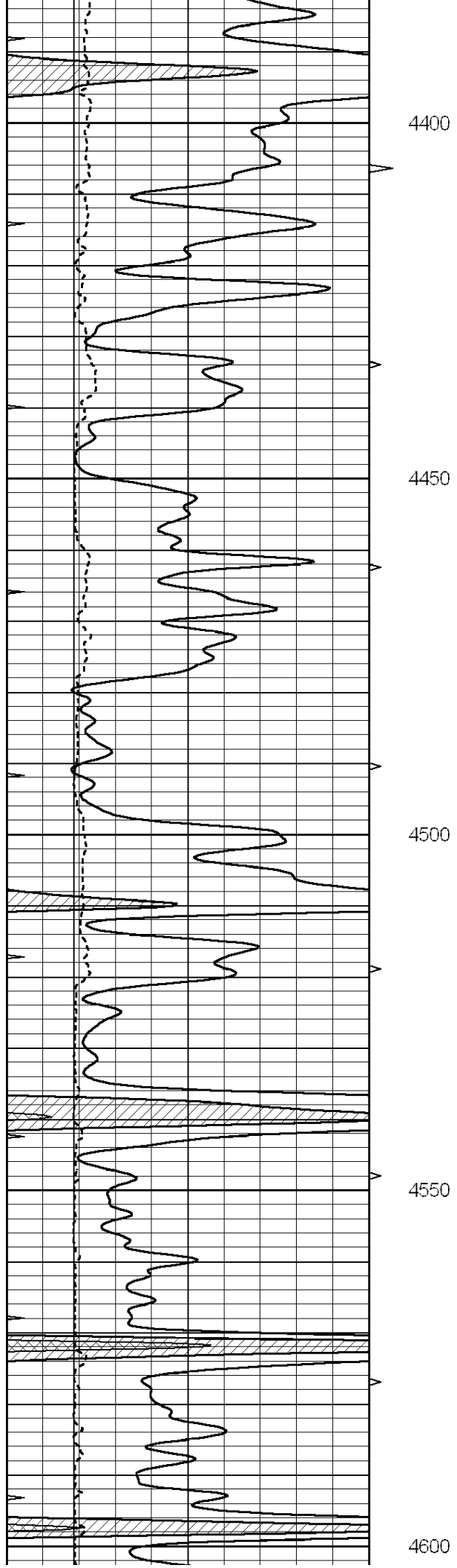
4200

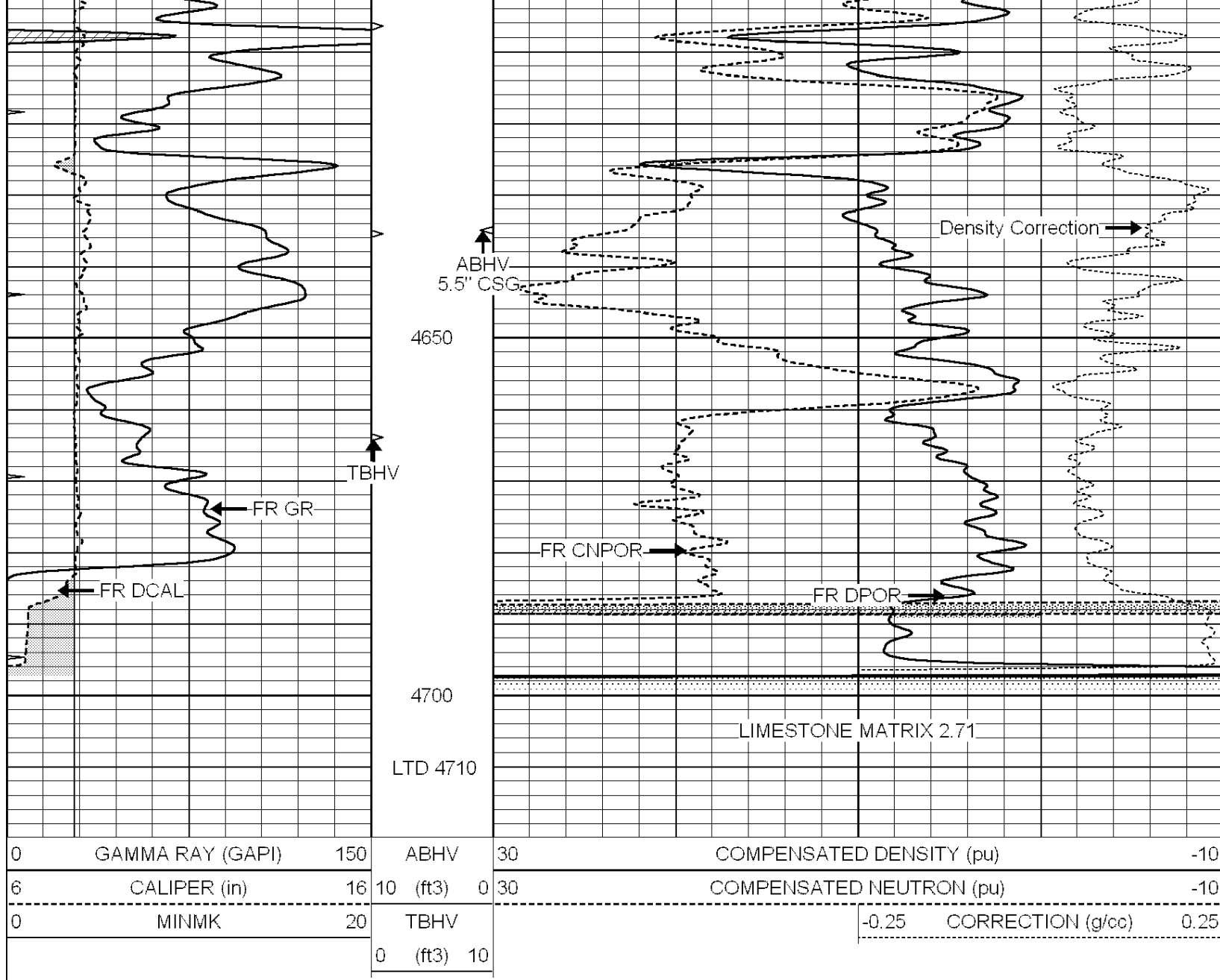
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4300

4350

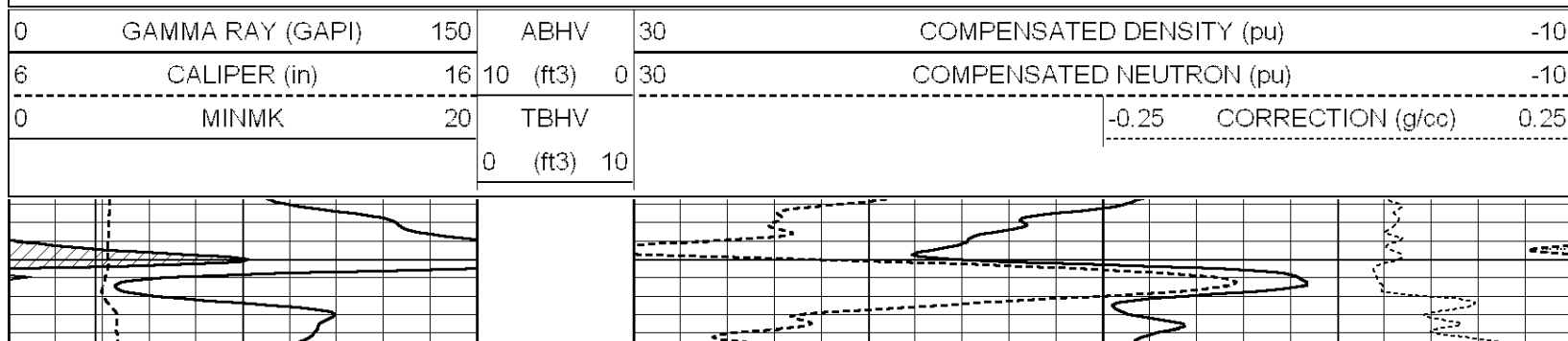


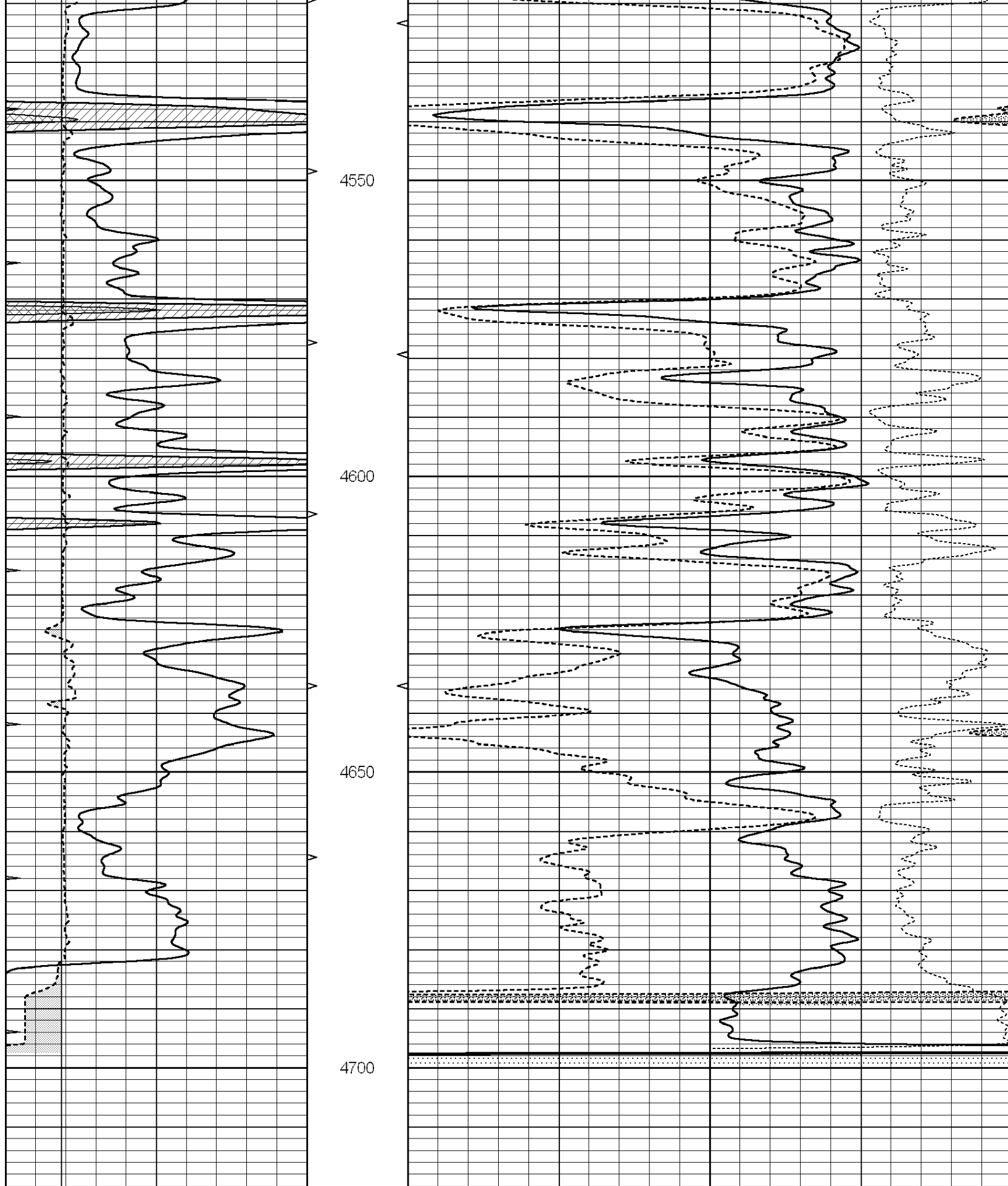




# REPEAT SECTION

Database File: 010206ddn.db  
 Dataset Pathname: pass2.3  
 Presentation Format: \_den\_neu  
 Dataset Creation: Fri Sep 27 14:27:24 2013 by Calc Open-Cased 090629  
 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: 010206ddn.db  
 Dataset Pathname: pass3.3  
 Dataset Creation: Fri Sep 27 14:21:20 2013 by Calc Open-Cased 090629

## Dual Induction Calibration Report

Serial-Model: DIL3-GEAR  
 Performed: Thu Jun 28 04:38:49 2007

| Readings  |       |       |   | References |         |        | Results |        |
|-----------|-------|-------|---|------------|---------|--------|---------|--------|
| Loop:     | Air   | Loop  |   | Air        | Loop    |        | m       | b      |
| Deep      | 0.011 | 0.656 | V | 0.000      | 400.000 | mmho/m | 540.000 | -2.000 |
| Medium    | 0.013 | 0.740 | V | 0.000      | 462.500 | mmho/m | 578.000 | -7.600 |
| Internal: | Zero  | Cal   |   | Zero       | Cal     |        | m       | b      |
| Deep      | 0.002 | 0.645 | V | 0.000      | 400.000 | mmho/m | 560.000 | -1.071 |
| Medium    | 0.007 | 0.740 | V | 0.000      | 462.500 | mmho/m | 540.000 | -4.000 |

## Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART  
 Source / Verifier: 147 / 147  
 Master Calibration Performed: Thu Aug 29 12:00:35 2013

### Master Calibration

|                     | Density |      |                             | Far Detector | Near Detector |     |
|---------------------|---------|------|-----------------------------|--------------|---------------|-----|
| Magnesium           | 1.710   | g/cc |                             | 1205.77      | 610.74        | cps |
| Aluminum            | 2.590   | g/cc |                             | 271.21       | 419.72        | cps |
| Spine Angle = 75.89 |         |      | Density/Spine Ratio = 0.572 |              |               |     |
|                     | Size    |      |                             | Reading      |               |     |
| Small Ring          | 8.20    | in   |                             | 4.83         | V             |     |
| Large Ring          | 14.00   | in   |                             | 7.01         | V             |     |

## Compensated Neutron Calibration Report

Serial Number: NEU\_4I  
 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 |

## Gamma Ray Calibration Report

Serial Number: GR5  
 Tool Model: OPEN  
 Performed: Wed Sep 04 17:51:54 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps