



**NABORS**

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

|                              |                                                                              |                    |                |
|------------------------------|------------------------------------------------------------------------------|--------------------|----------------|
| Company                      | RITCHIE EXPLORATION INC.                                                     |                    |                |
| Well                         | DURLER-SCHMIDT #1                                                            |                    |                |
| Field                        | FORD                                                                         |                    |                |
| County                       | FORD                                                                         | State              | KANSAS         |
| Location:                    | API # : 15-057-20851-00-00<br>150N & 40W OF NW¼NW¼NE<br>180' FNL & 2350' FEL |                    | Other Services |
|                              | SEC 14 TWP 26S RGE 23W                                                       |                    | DIL            |
| Permanent Datum              | GROUND LEVEL                                                                 | Elevation          | 2428           |
| Log Measured From            | KELLY BUSHING 11' A.G.L.                                                     |                    | K.B. 2439      |
| Drilling Measured From       | KELLY BUSHING                                                                |                    | D.F. 2437      |
|                              |                                                                              |                    | G.L. 2428      |
| Date                         | 11/3/12                                                                      |                    |                |
| Run Number                   | ONE                                                                          |                    |                |
| Depth Driller                | 5130                                                                         |                    |                |
| Depth Logger                 | 5133                                                                         |                    |                |
| Bottom Logged Interval       | 5109                                                                         |                    |                |
| Top Log Interval             | 3400                                                                         |                    |                |
| Casing Driller               | 8 5/8"@350'                                                                  |                    |                |
| Casing Logger                | 344                                                                          |                    |                |
| Bit Size                     | 7 7/8"                                                                       |                    |                |
| Type Fluid in Hole           | CHEMICAL MUD                                                                 | CHLORIDES 8600 PPM |                |
| Density / Viscosity          | 9.2/56                                                                       |                    |                |
| pH / Fluid Loss              | 10.0/12.8                                                                    |                    |                |
| Source of Sample             | FLOWLINE                                                                     |                    |                |
| Rm @ Meas. Temp              | 0.75@60F                                                                     |                    |                |
| Rmf @ Meas. Temp             | 0.56@60F                                                                     |                    |                |
| Rmc @ Meas. Temp             | 0.90@60F                                                                     |                    |                |
| Source of Rmf / Rmc          | MEASUREMENT                                                                  |                    |                |
| Rm @ BHT                     | 0.36@126F                                                                    |                    |                |
| Time Circulation Stopped     | 2 HOURS                                                                      |                    |                |
| Time Logger on Bottom        |                                                                              |                    |                |
| Maximum Recorded Temperature | 126F                                                                         |                    |                |
| Equipment Number             | 4010                                                                         |                    |                |
| Location                     | HAYS, KANSAS                                                                 |                    |                |
| Recorded By                  | IAN MABB                                                                     | JEFF GRONEWEG      |                |
| Witnessed By                 | DAVE WILLIAMS                                                                |                    |                |

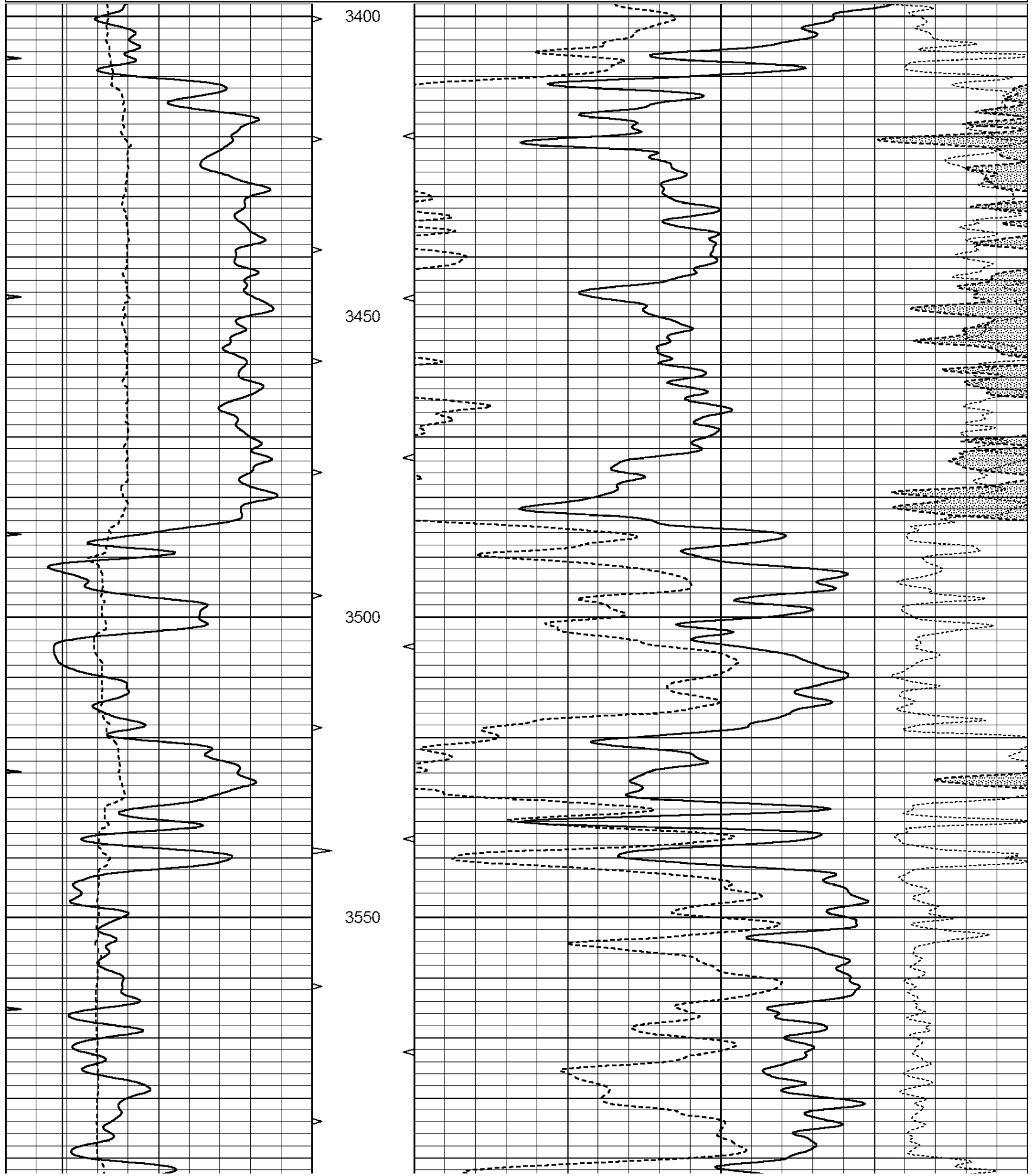
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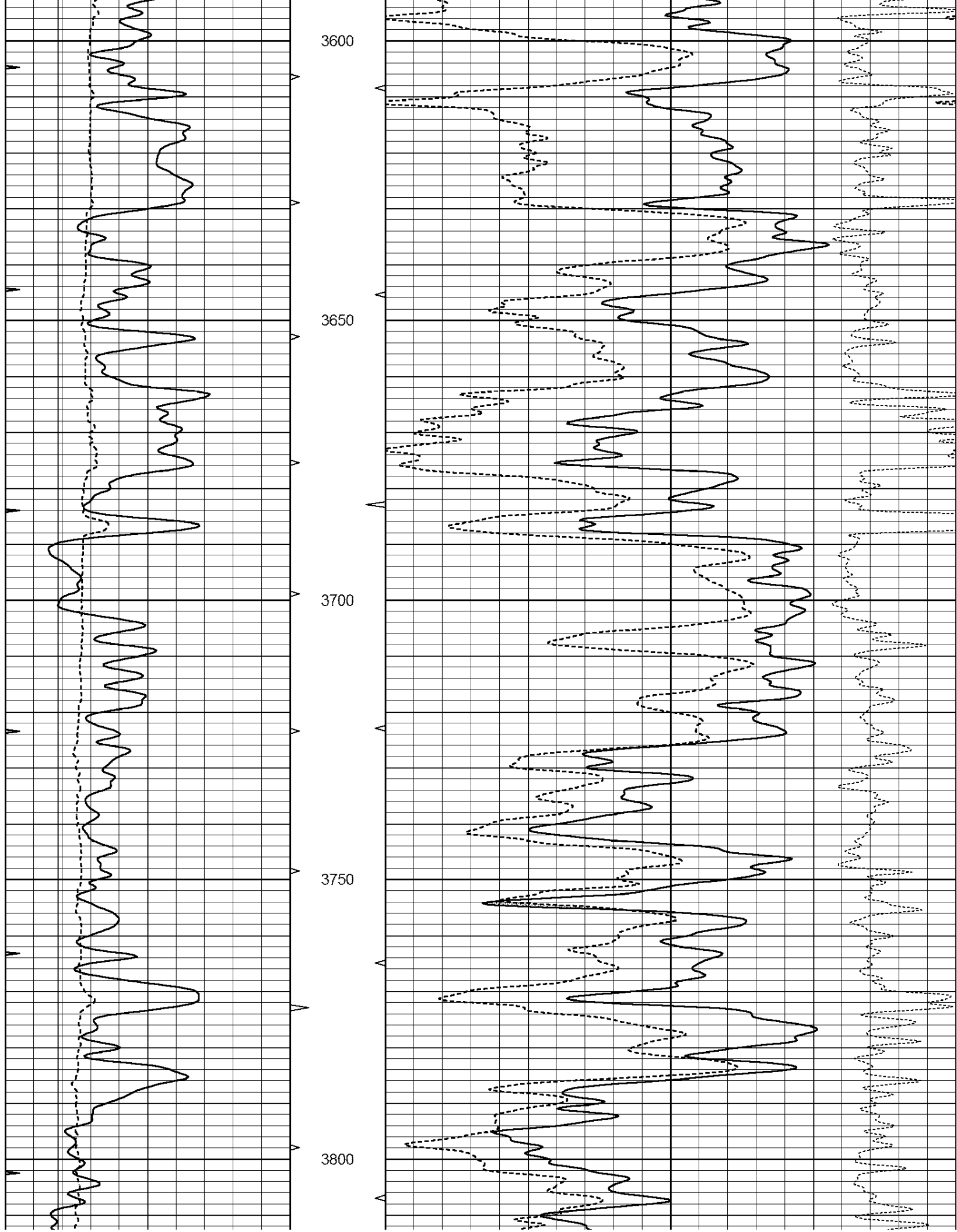
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

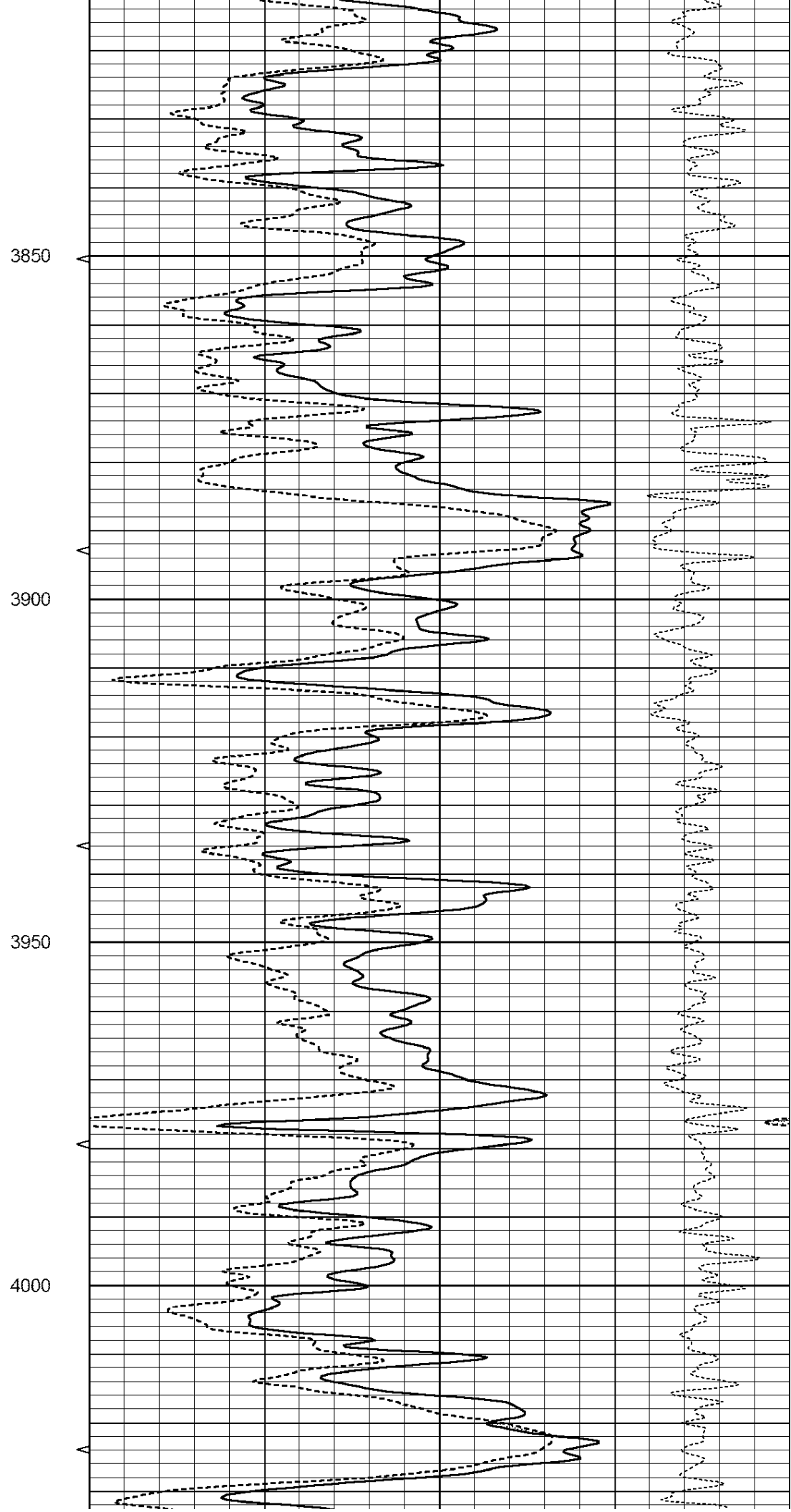
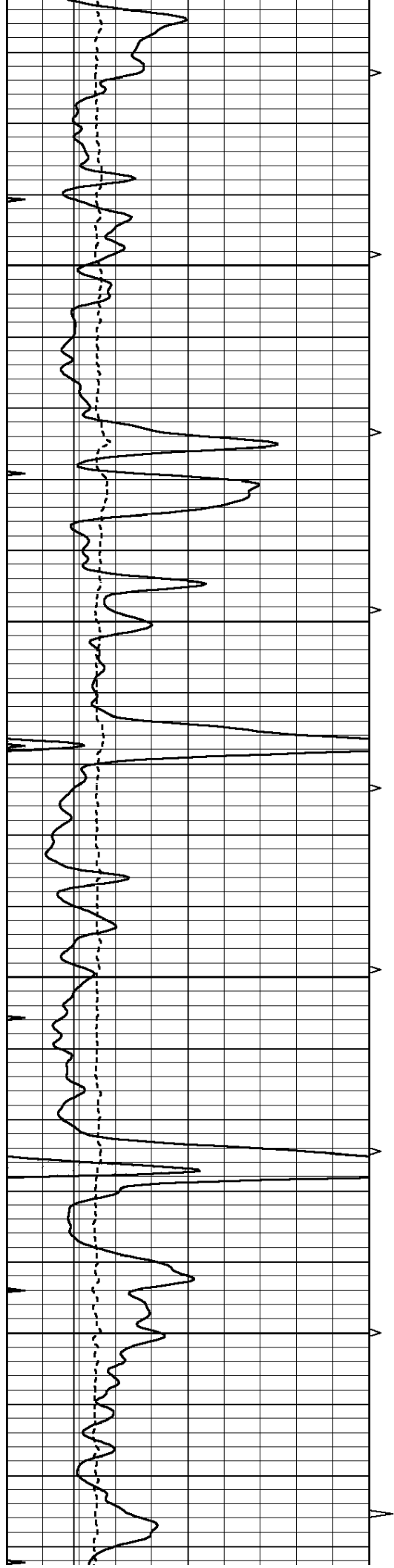
Comments

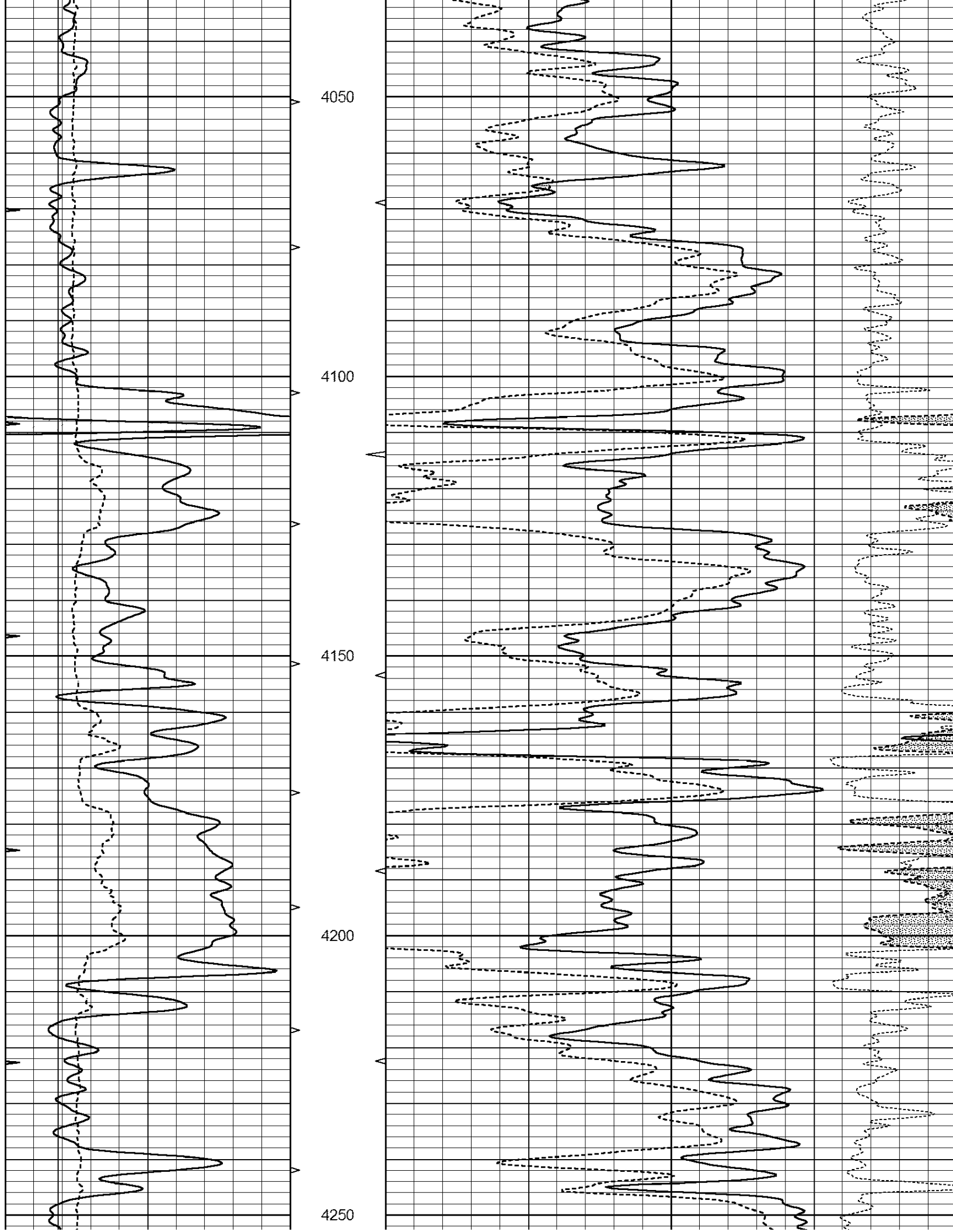
THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
SPEARVILLE, KS - 2 1/2 MILES WEST SOUTH ON GARNETT RD - 1/2 EAST TO RD 123 - SOUTH 1 1/2 -  
WEST INTO

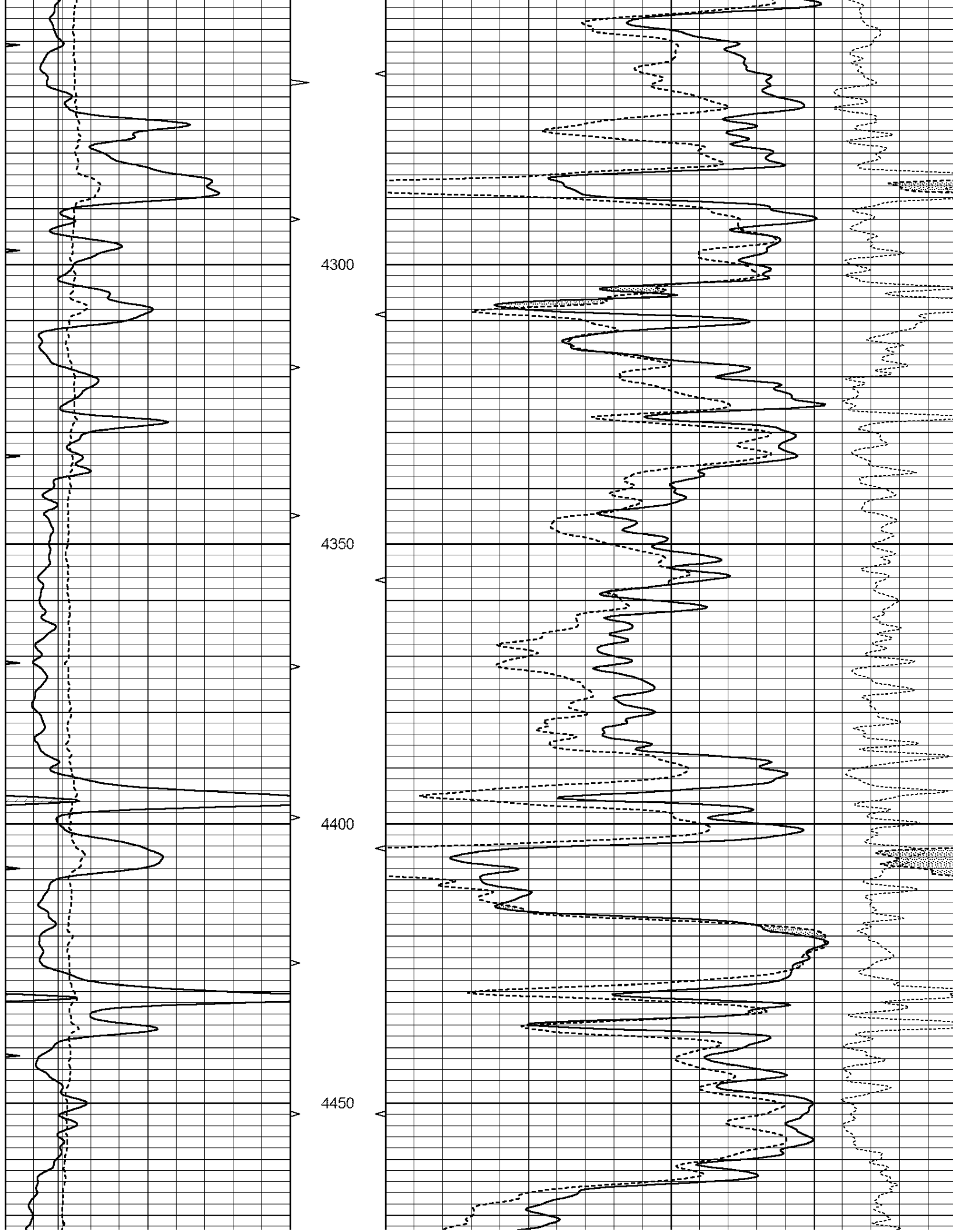
|   |                  |     |            |    |                          |      |
|---|------------------|-----|------------|----|--------------------------|------|
| 0 | GAMMA RAY (GAPI) | 150 | ABHV       | 30 | COMPENSATED DENSITY (pu) | -10  |
| 6 | CALIPER (in)     | 16  | 10 (ft3) 0 | 30 | COMPENSATED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

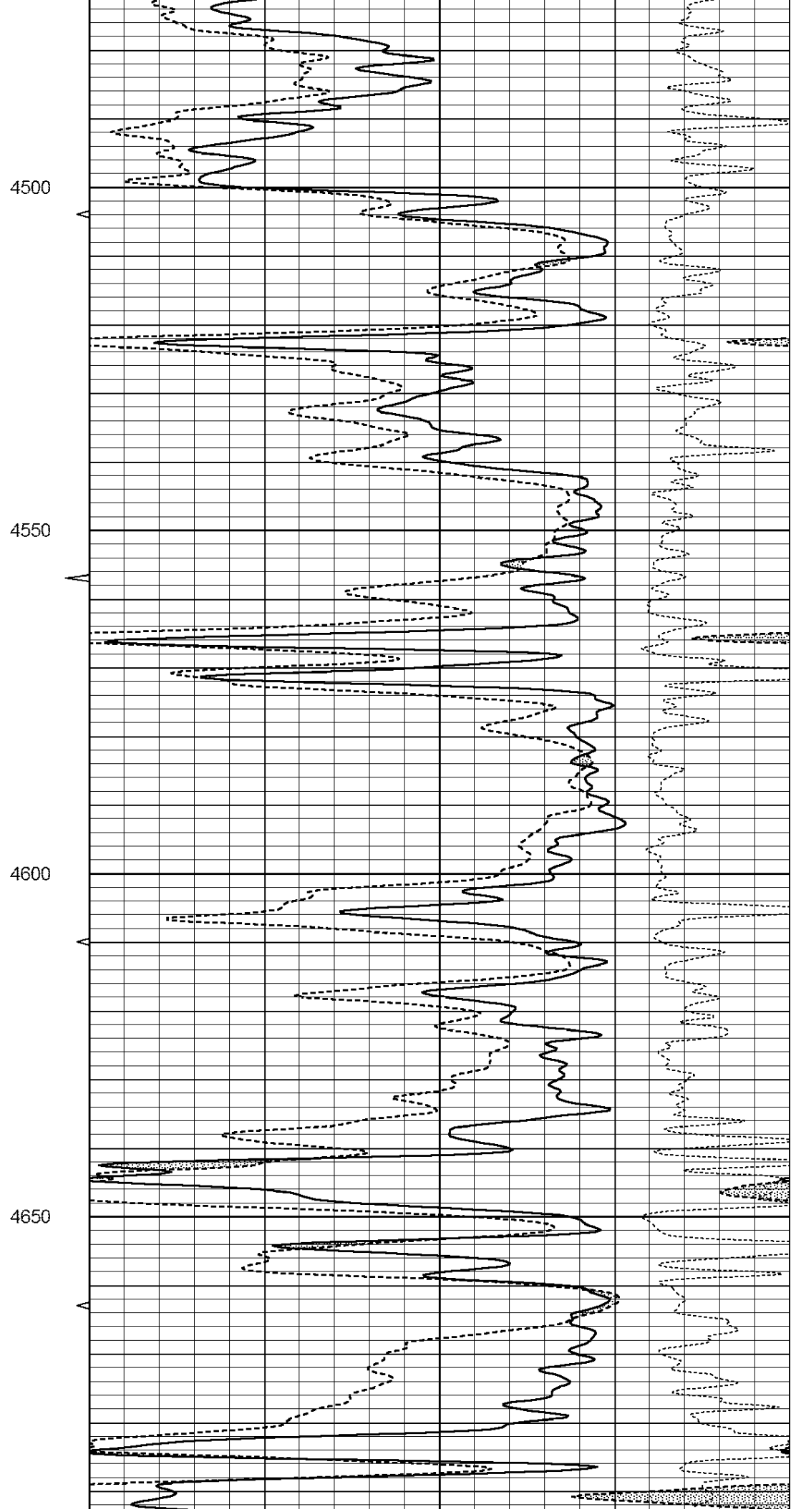
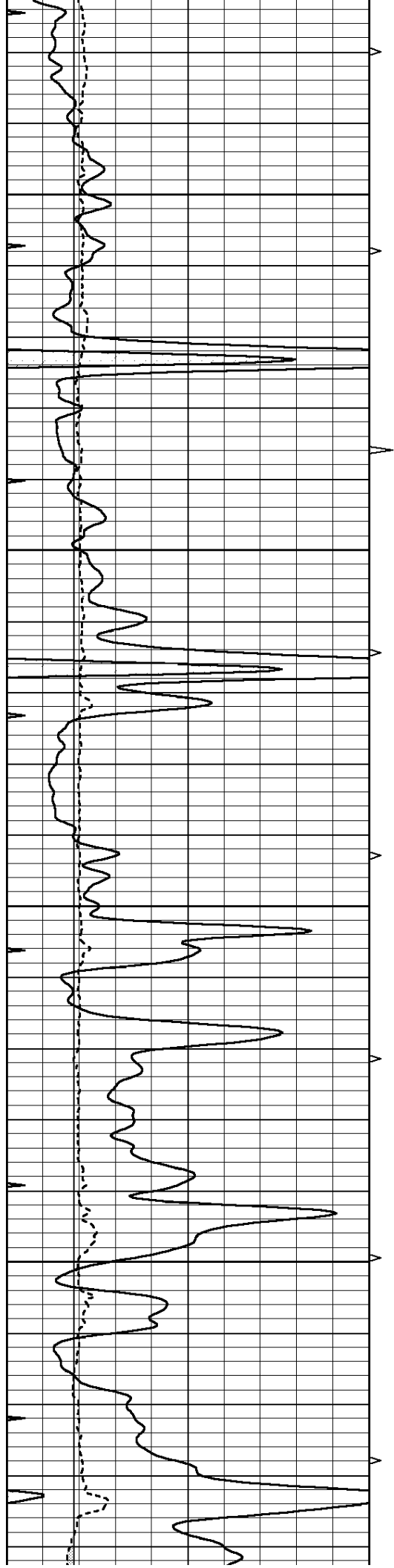


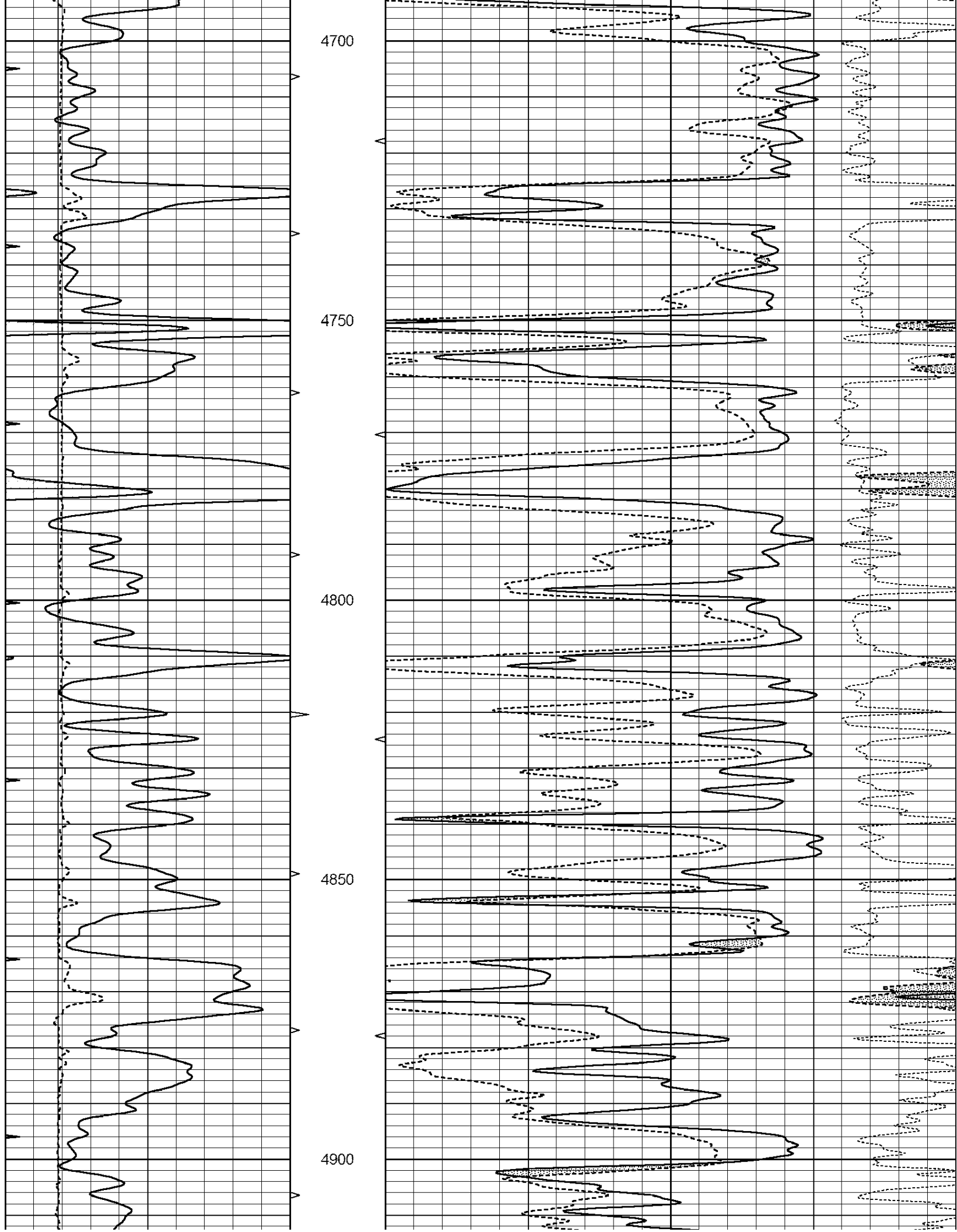


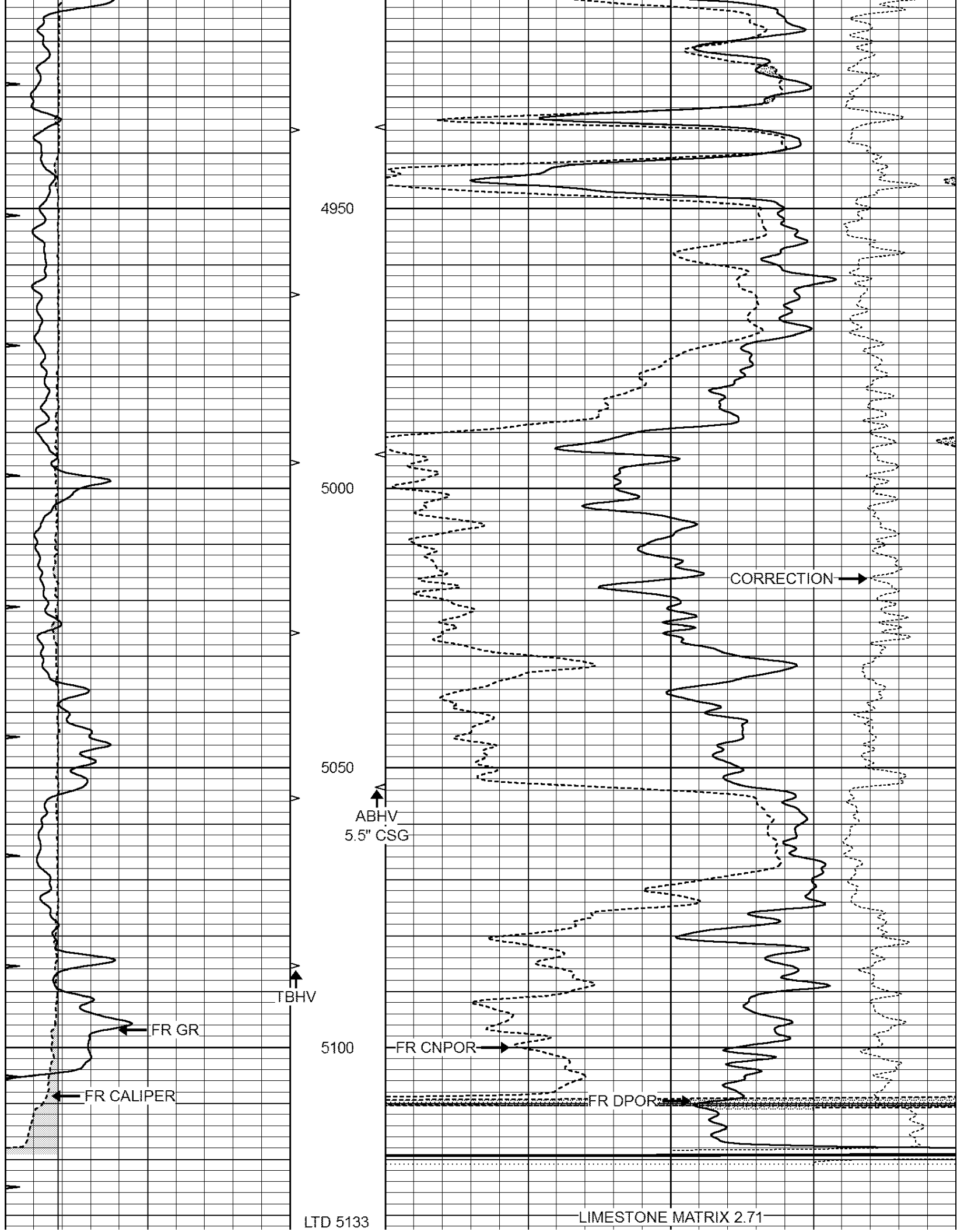












|   |                  |     |            |    |                          |      |
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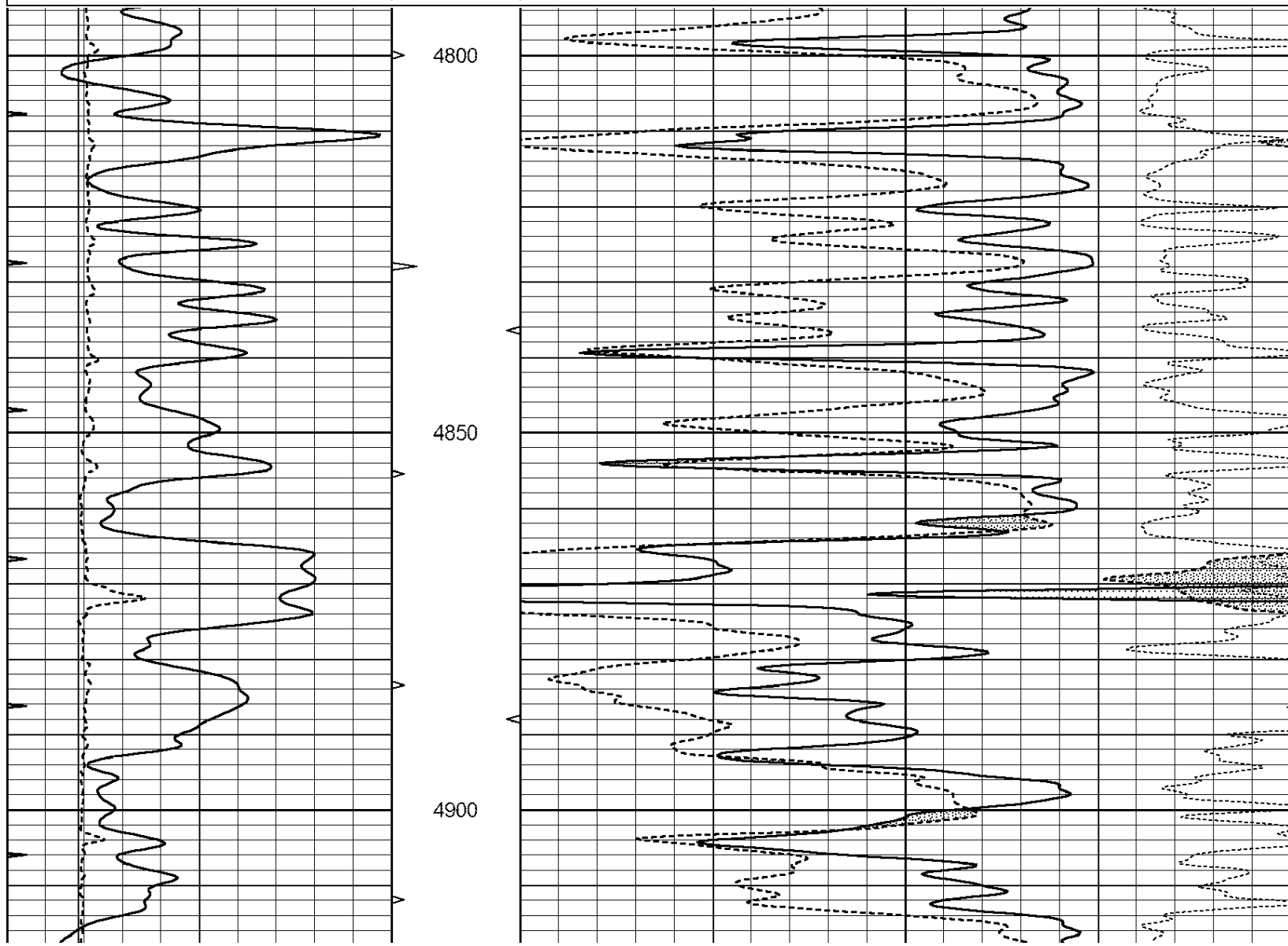


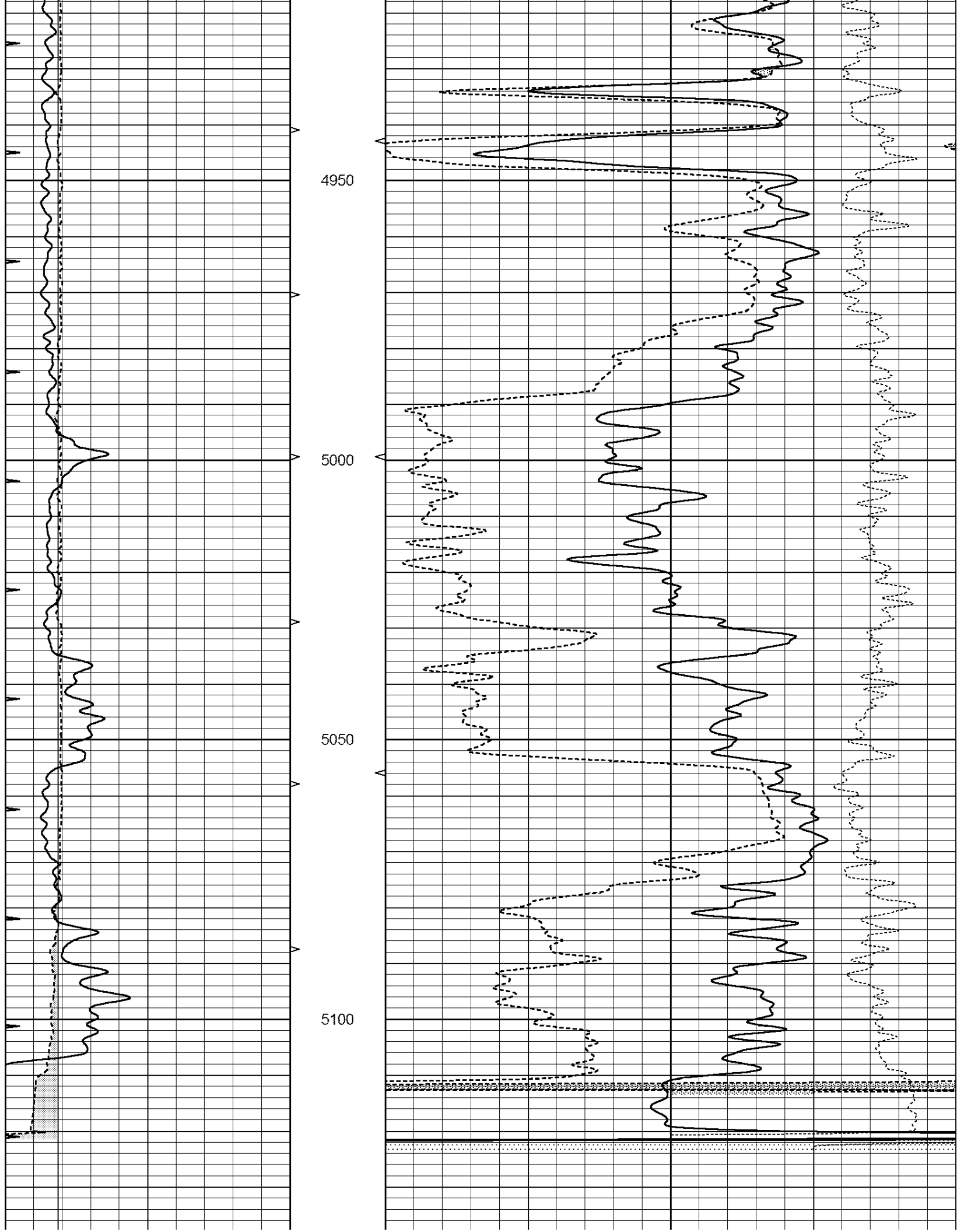
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# REPEAT SECTION

Database File: 409781ddn.db  
Dataset Pathname: pass2.1.1  
Presentation Format: den\_neu  
Dataset Creation: Sat Nov 03 05:18:18 2012 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:                                                       |         | 409781ddn.db                                       |     |                                                         |         |               |         |         |  |
| Dataset Pathname:                                                    |         | pass3.3                                            |     |                                                         |         |               |         |         |  |
| Dataset Creation:                                                    |         | Sat Nov 03 06:09:32 2012 by Calc Open-Cased 090629 |     |                                                         |         |               |         |         |  |
| Dual Induction Calibration Report                                    |         |                                                    |     |                                                         |         |               |         |         |  |
| Serial-Model:<br>Performed:                                          |         |                                                    |     | DIL5-GEAR<br>Tue Oct 30 10:36:47 2012                   |         |               |         |         |  |
|                                                                      |         |                                                    |     |                                                         |         |               |         |         |  |
| Readings                                                             |         |                                                    |     | References                                              |         |               | Results |         |  |
| Loop:                                                                | Air     | Loop                                               |     | Air                                                     | Loop    |               | m       | b       |  |
| Deep                                                                 | 0.004   | 0.654                                              | V   | 0.000                                                   | 400.000 | mmho/m        | 470.000 | -13.000 |  |
| Medium                                                               | -0.005  | 0.737                                              | V   | 0.000                                                   | 462.500 | mmho/m        | 500.000 | -8.000  |  |
| Internal:                                                            | Zero    | Cal                                                |     | Zero                                                    | Cal     |               | m       | b       |  |
| Deep                                                                 | 0.006   | 0.655                                              | V   | 0.000                                                   | 400.000 | mmho/m        | 615.668 | -3.483  |  |
| Medium                                                               | 0.010   | 0.747                                              | V   | 0.000                                                   | 462.500 | mmho/m        | 627.607 | -6.064  |  |
| Compensated Density Calibration Report                               |         |                                                    |     |                                                         |         |               |         |         |  |
| Serial-Model:<br>Source / Verifier:<br>Master Calibration Performed: |         |                                                    |     | GEAR1-GEARHART<br>147 / 147<br>Tue Oct 30 08:31:02 2012 |         |               |         |         |  |
| Master Calibration                                                   |         |                                                    |     |                                                         |         |               |         |         |  |
|                                                                      | Density |                                                    |     | Far Detector                                            |         | Near Detector |         |         |  |
| Magnesium                                                            | 1.710   | g/cc                                               |     | 1205.67                                                 | 613.10  | cps           |         |         |  |
| Aluminum                                                             | 2.590   | g/cc                                               |     | 277.64                                                  | 430.46  | cps           |         |         |  |
| Spine Angle = 76.46                                                  |         |                                                    |     | Density/Spine Ratio = 0.583                             |         |               |         |         |  |
|                                                                      | Size    |                                                    |     | Reading                                                 |         |               |         |         |  |
| Small Ring                                                           | 9.40    | in                                                 |     | 4.69                                                    | V       |               |         |         |  |
| Large Ring                                                           | 14.00   | in                                                 |     | 6.52                                                    | V       |               |         |         |  |
| Compensated Neutron Calibration Report                               |         |                                                    |     |                                                         |         |               |         |         |  |
| Serial Number:<br>Tool Model:                                        |         |                                                    |     | NUE_2I<br>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:                                                           |         | Tue Oct 30 11:39:23 2012                           |     |                                                         |         |               |         |         |  |

