



# NABORS

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
PE LOG**

|                              |                                                                                                 |                            |                           |
|------------------------------|-------------------------------------------------------------------------------------------------|----------------------------|---------------------------|
| Company                      |                                                                                                 | CASTELLI EXPLORATION, INC. |                           |
| Well                         | WHITESIDE - HALES #2-6                                                                          |                            |                           |
| Field                        | WILDCAT                                                                                         |                            |                           |
| County                       | HODGEMAN                                                                                        | State                      | KANSAS                    |
| Location:                    | API # : 15-083-21901-0000<br>1704' FNL & 797' FWL<br>SW - NE - SW - NW<br>SEC 6 TWP 24S RGE 22W |                            | Other Services<br>DIL/MEL |
| Permanent Datum              | GROUND LEVEL                                                                                    | Elevation                  | 2276                      |
| Log Measured From            | KELLY BUSHING 8' A.G.L.                                                                         |                            | K.B. 2284                 |
| Drilling Measured From       | KELLY BUSHING                                                                                   |                            | D.F. 2282                 |
|                              |                                                                                                 |                            | G.L. 2276                 |
| Date                         | 1/6/14                                                                                          |                            |                           |
| Run Number                   | ONE                                                                                             |                            |                           |
| Depth Driller                | 4750                                                                                            |                            |                           |
| Depth Logger                 | 4752                                                                                            |                            |                           |
| Bottom Logged Interval       | 4728                                                                                            |                            |                           |
| Top Log Interval             | 3700                                                                                            |                            |                           |
| Casing Driller               | 8 5/8"@306"                                                                                     |                            |                           |
| Casing Logger                | 306                                                                                             |                            |                           |
| Bit Size                     | 7 7/8"                                                                                          |                            |                           |
| Type Fluid in Hole           | CHEMICAL MUD                                                                                    | CHLORIDES 9,000 PPM        |                           |
| Density / Viscosity          | 9.3/50                                                                                          |                            |                           |
| pH / Fluid Loss              | 9.5/10.2                                                                                        |                            |                           |
| Source of Sample             | FLOWLINE                                                                                        |                            |                           |
| Rim @ Meas. Temp             | .550@60F                                                                                        |                            |                           |
| Rmf @ Meas. Temp             | .413@60F                                                                                        |                            |                           |
| Rmc @ Meas. Temp             | .660@60F                                                                                        |                            |                           |
| Source of Rmf / Rmc          | MEASUREMENT                                                                                     |                            |                           |
| Rim @ BHT                    | .268@123F                                                                                       |                            |                           |
| Time Circulation Stopped     | 2.5 HOURS                                                                                       |                            |                           |
| Time Logger on Bottom        | 4:45 P.M.                                                                                       |                            |                           |
| Maximum Recorded Temperature | 123F                                                                                            |                            |                           |
| Equipment Number             | 4854                                                                                            |                            |                           |
| Location                     | HAYS, KANSAS                                                                                    |                            |                           |
| Recorded By                  | JEFF LUEBBERS                                                                                   |                            |                           |
| Witnessed By                 | TOM CASTELL                                                                                     | RICK POPP                  |                           |

<<< Fold Here >>>

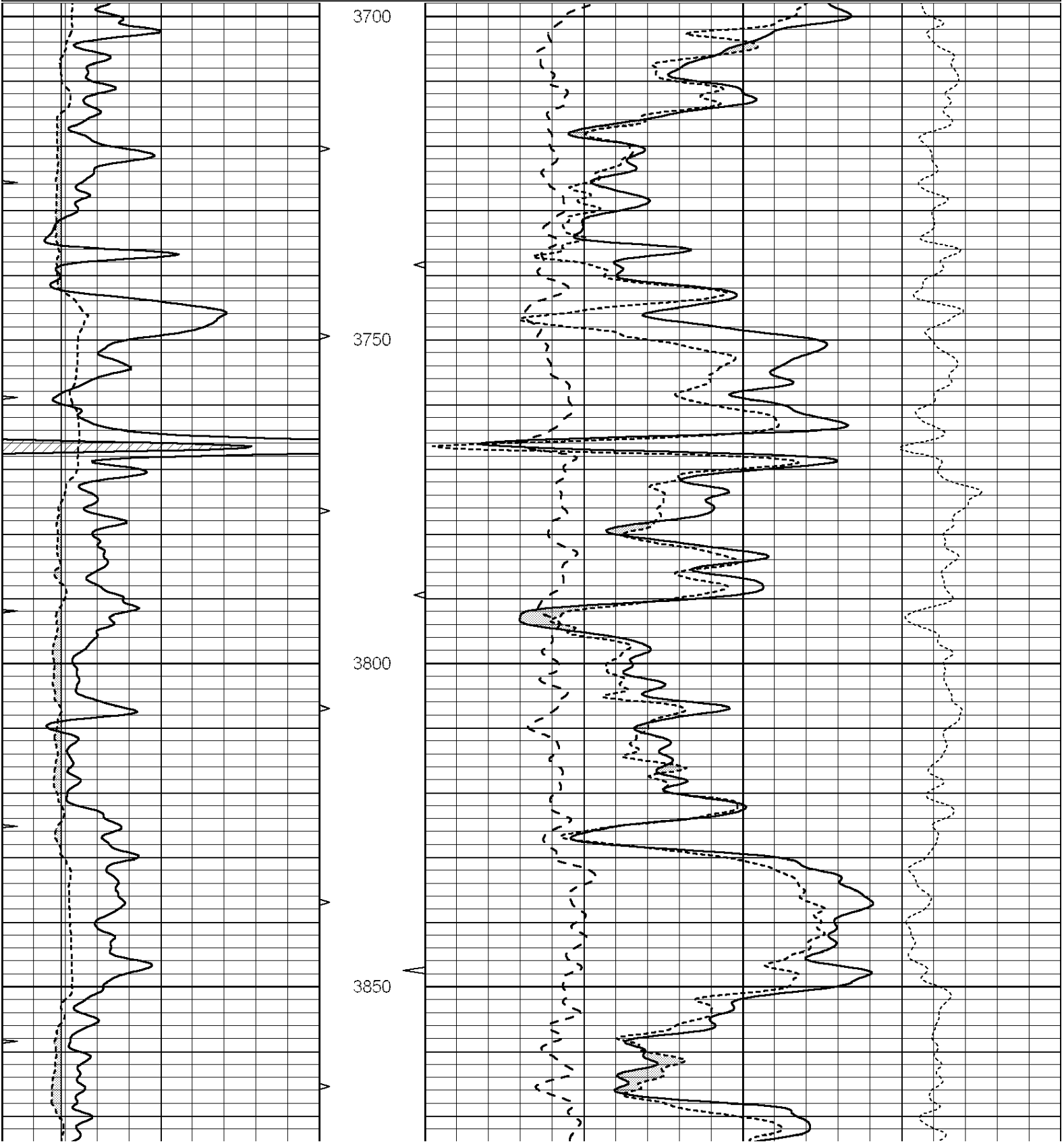
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

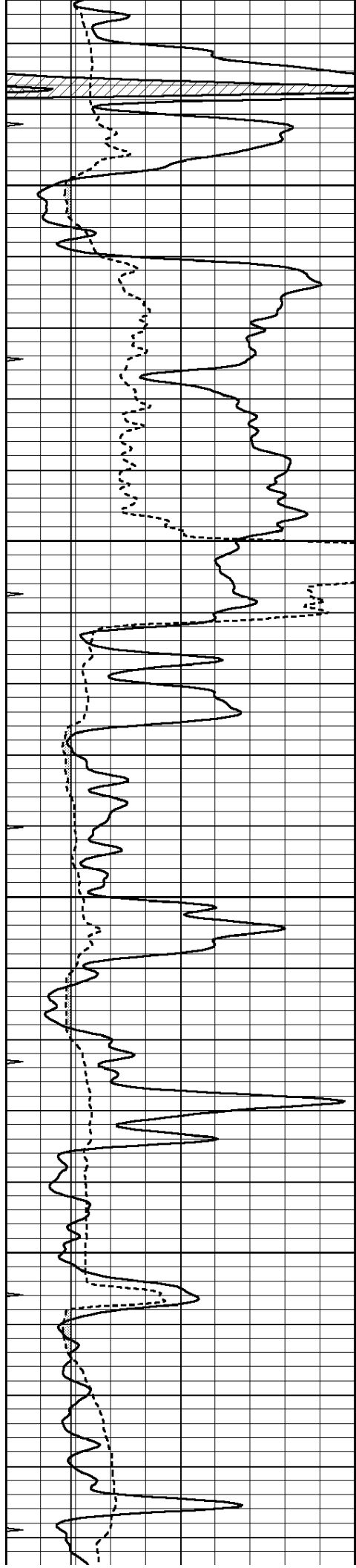
## Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395  
 DIRECTIONS  
 HANSTON, KS.5W. ON HWY 156 TO "RD. 224", 7 1/2S., E. INTO

Database File: 22230pe.db  
Dataset Pathname: pass3.3  
Presentation Format: ldt\_neu  
Dataset Creation: Mon Jan 06 18:08:50 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  | PE                       | 10                       | -0.25 | CORRECTION (g/cc) | 0.25 |
|       |                  |     | 0 (ft3)  | 10 |                          |                          |       |                   |      |
|       |                  |     |          |    |                          |                          |       |                   |      |



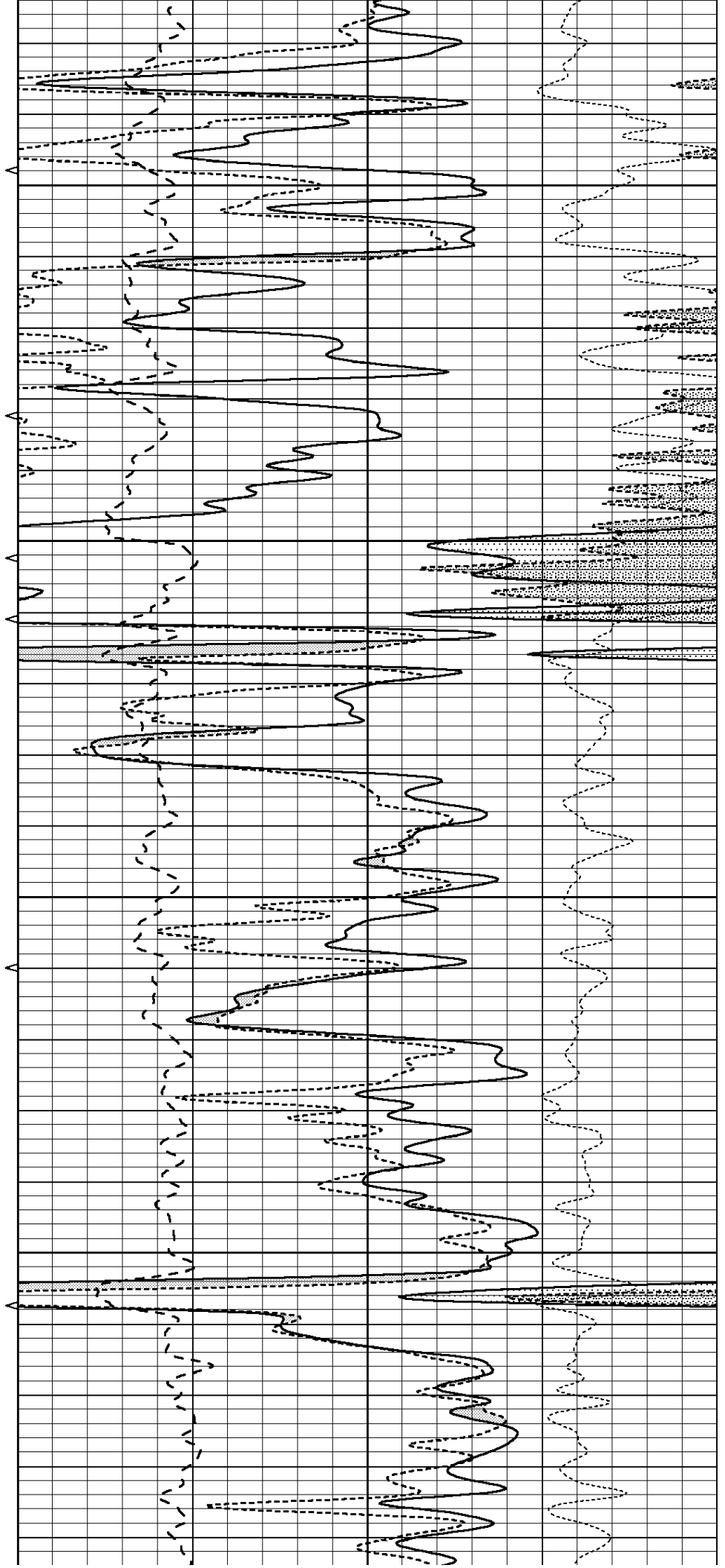


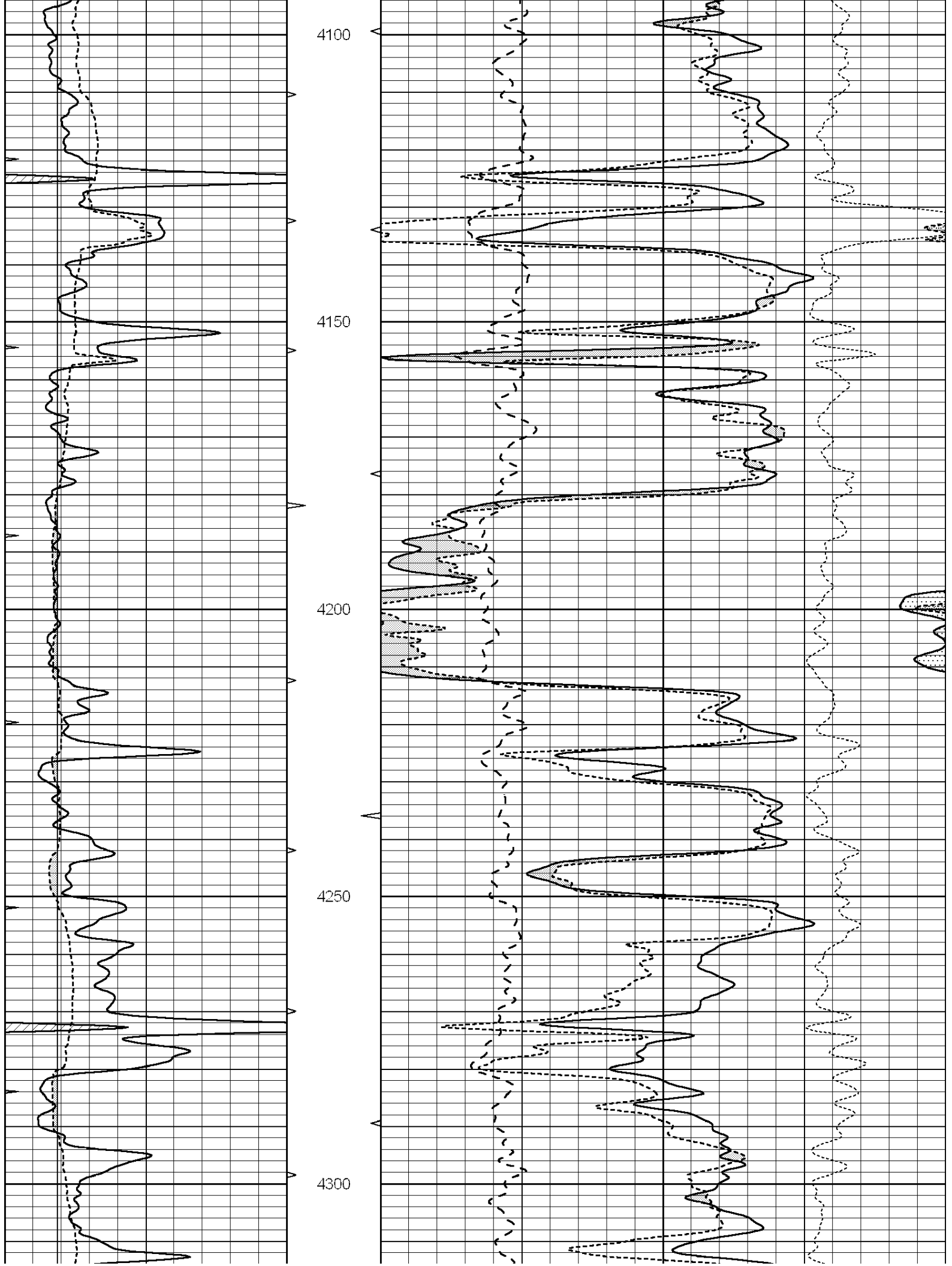
3900

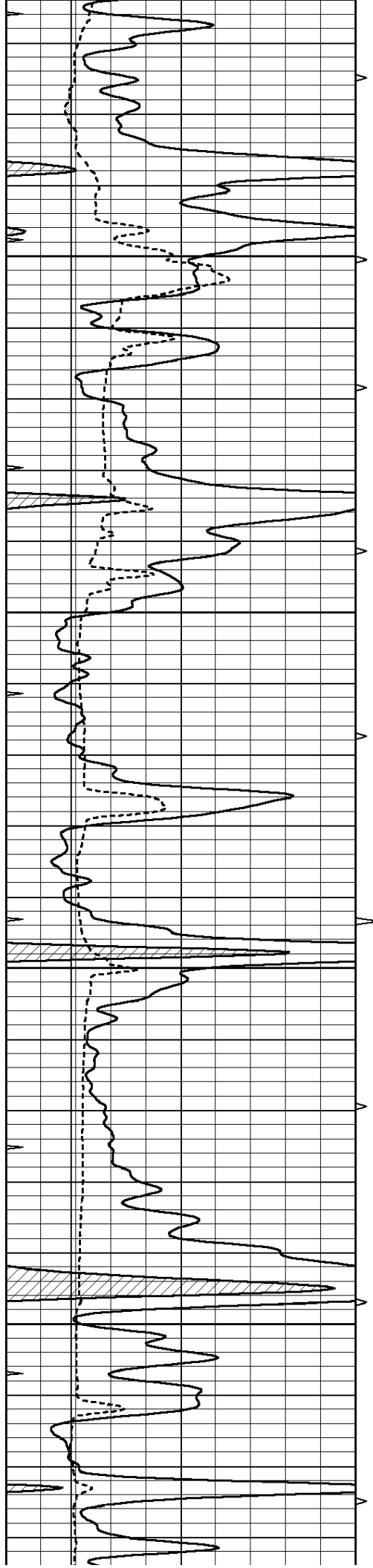
3950

4000

4050





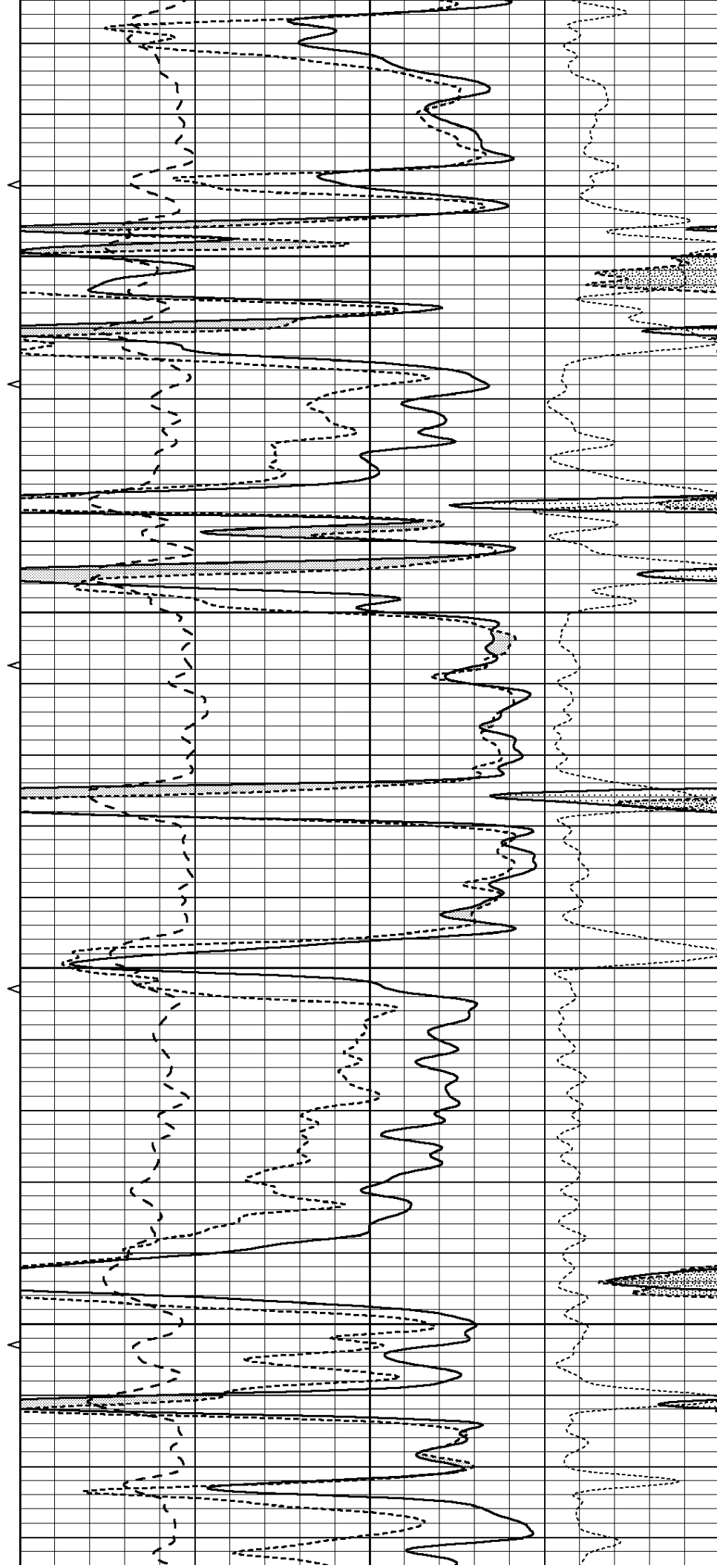


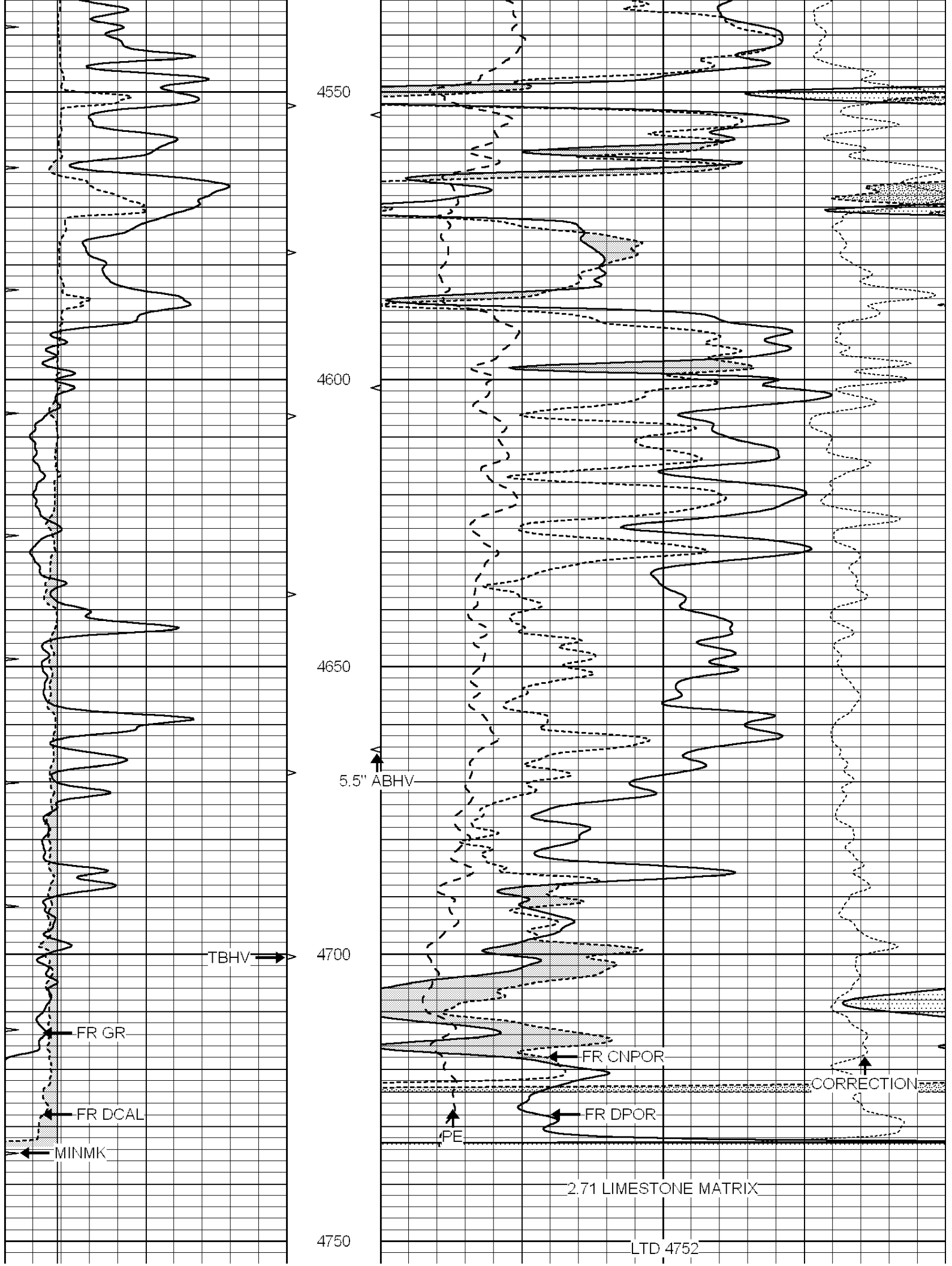
4350

4400

4450

4500





|   |                  |     |            |    |                          |    |       |                   |      |
|---|------------------|-----|------------|----|--------------------------|----|-------|-------------------|------|
| 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 | CORRECTION (g/cc) | 0.25 |
|   |                  |     | 0 (ft3) 10 |    |                          |    |       |                   |      |

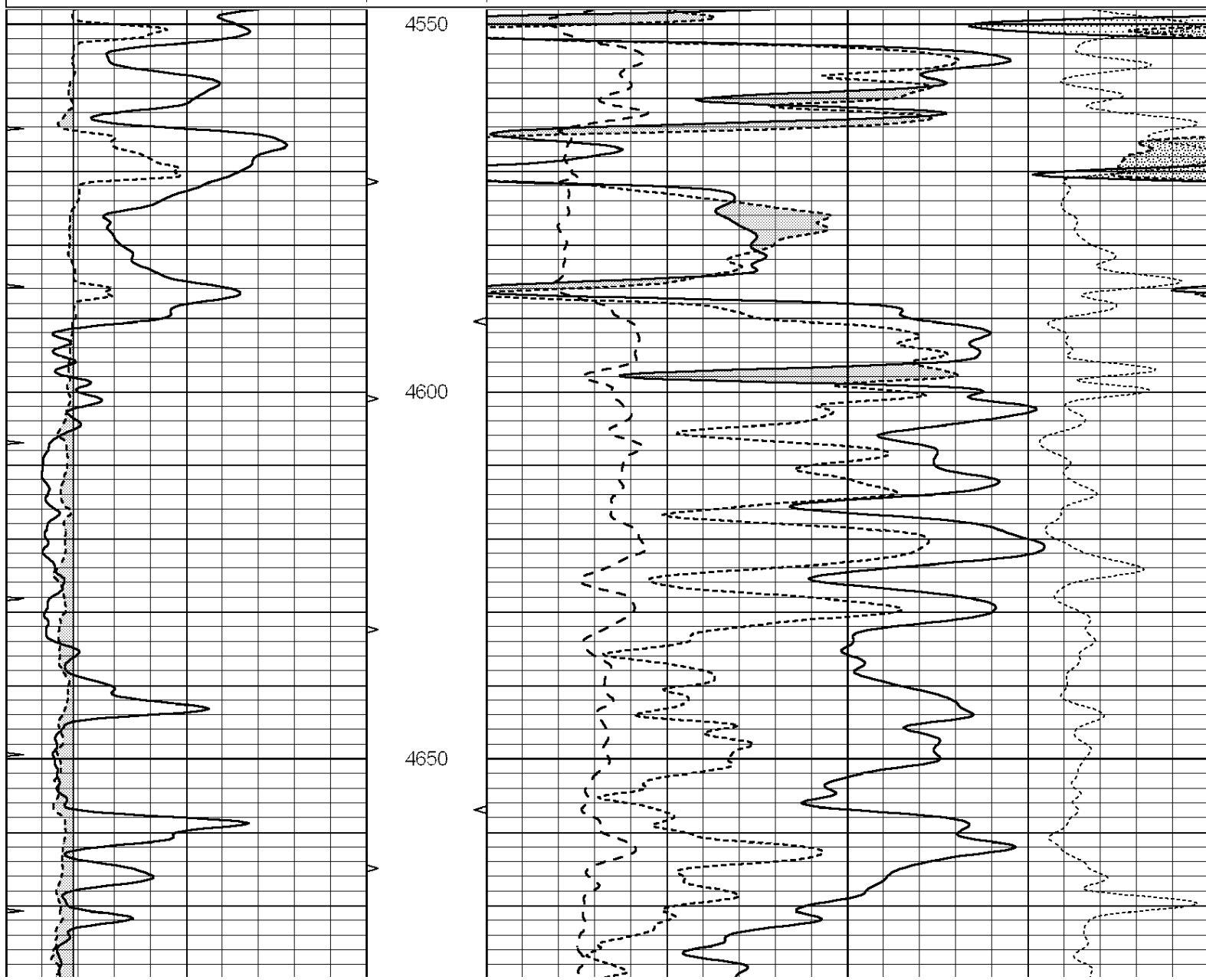


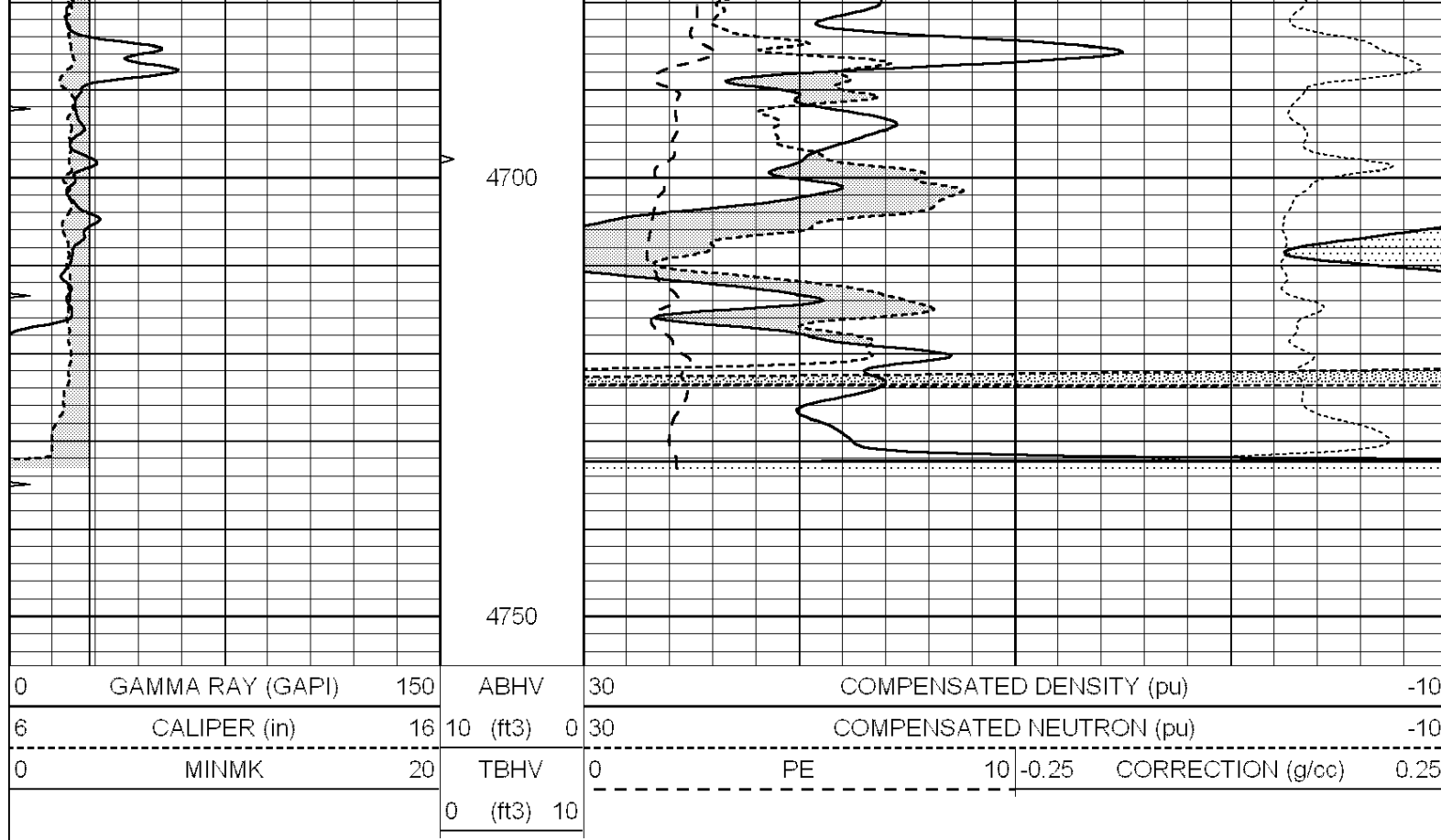
**COMPLETION  
& PRODUCTION  
SERVICES CO.**

# REPEAT SECTION

Database File: 22230pe.db  
Dataset Pathname: pass2.2  
Presentation Format: ldt\_neu  
Dataset Creation: Mon Jan 06 18:15:35 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  | PE                       |                          | 10 | -0.25 | CORRECTION (g/cc) |     | 0.25 |
|   |                  |     |      |       |    | -----                    |                          |    |       |                   |     |      |
|   |                  |     | 0    | (ft3) | 10 |                          |                          |    |       |                   |     |      |





### Calibration Report

Database File: 22230pe.db  
Dataset Pathname: pass3.3  
Dataset Creation: Mon Jan 06 18:08:50 2014 by Calc SOC 120430

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
Surface Cal Performed: Mon Jan 06 15:04:45 2014  
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 | 650.000 | -5.500  |
| Medium    | 0.039  | 0.728 | V | 0.000      | 464.000 | mmho/m | 640.000 | -13.500 |
| 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<br>Serial: 004N      Model: PRB |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------|--|--|--|--|--|--|--|--|

|                    |            |             |                                    |                     |  |           |         |      |
|--------------------|------------|-------------|------------------------------------|---------------------|--|-----------|---------|------|
| Master Calibration |            |             | Performed Mon Jun 03 09:36:56 2013 |                     |  |           |         |      |
|                    | Background | Magnesium   |                                    | Aluminum            |  | Sandstone |         |      |
| Window 1           | 1417.6     | 10391.4     |                                    | 3464.6              |  | 11537.5   |         | cps  |
| Window 2           | 1295.0     | 8959.7      |                                    | 3050.1              |  | 9816.4    |         | cps  |
| Window 3           | 1105.1     | 5464.2      |                                    | 2051.0              |  | 5838.8    |         | cps  |
| Window 4           | 315.0      | 317.7       |                                    | 312.9               |  | 319.8     |         | cps  |
| Long Space         | 0.0        | 7664.6      |                                    | 1755.0              |  | 8521.3    |         | cps  |
| Short Space        | 1.8        | 1582.4      |                                    | 1040.8              |  | 1699.4    |         | cps  |
| Rho                |            | 1.7100      |                                    | 2.5900              |  | 1.3800    |         | g/cc |
| Pe                 |            | 0.0000      |                                    | 2.5700              |  | 1.5500    |         |      |
| Rib Angle          | : 44.1     | Rib Slope   | : 0.970                            | Density/Spine Ratio |  |           | : 0.574 |      |
| Spine Angle        | : 74.1     | Spine Slope | : 3.519                            | Spine Intercept     |  |           | : -17.0 |      |

|                            |     |        |                                    |        |  |        |  |      |
|----------------------------|-----|--------|------------------------------------|--------|--|--------|--|------|
| 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:               | 070559                   |          |        |
| Tool Model:                  | OPEN_GR                  |          |        |
| Performed:                   | Thu Dec 19 09:01:02 2013 |          |        |
| Calibrator Value:            | 1.0                      | GAPI     |        |
| Background Reading:          | 0.0                      | cps      |        |
| Calibrator Reading:          | 1.0                      | cps      |        |
| Sensitivity:                 | 0.2800                   | GAPI/cps |        |