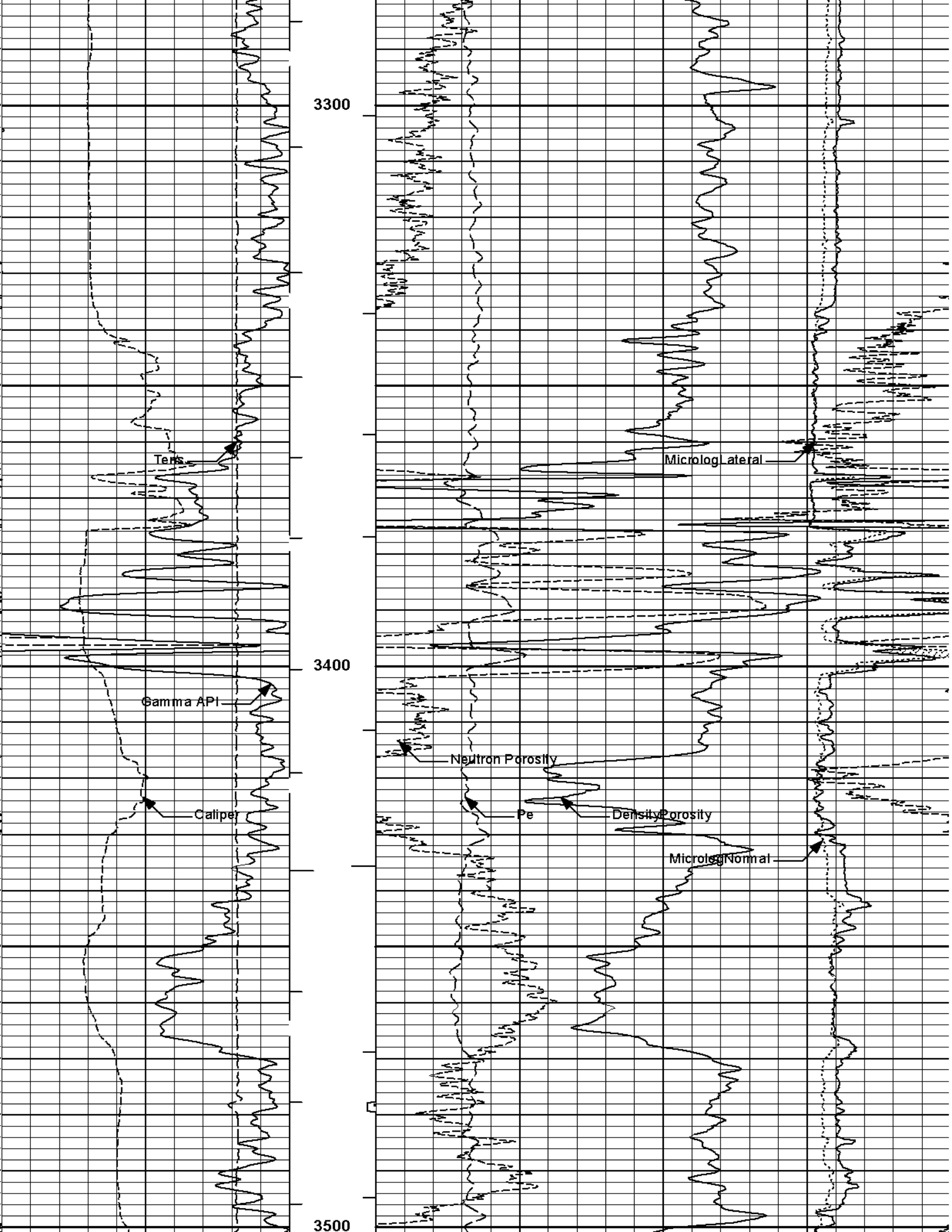


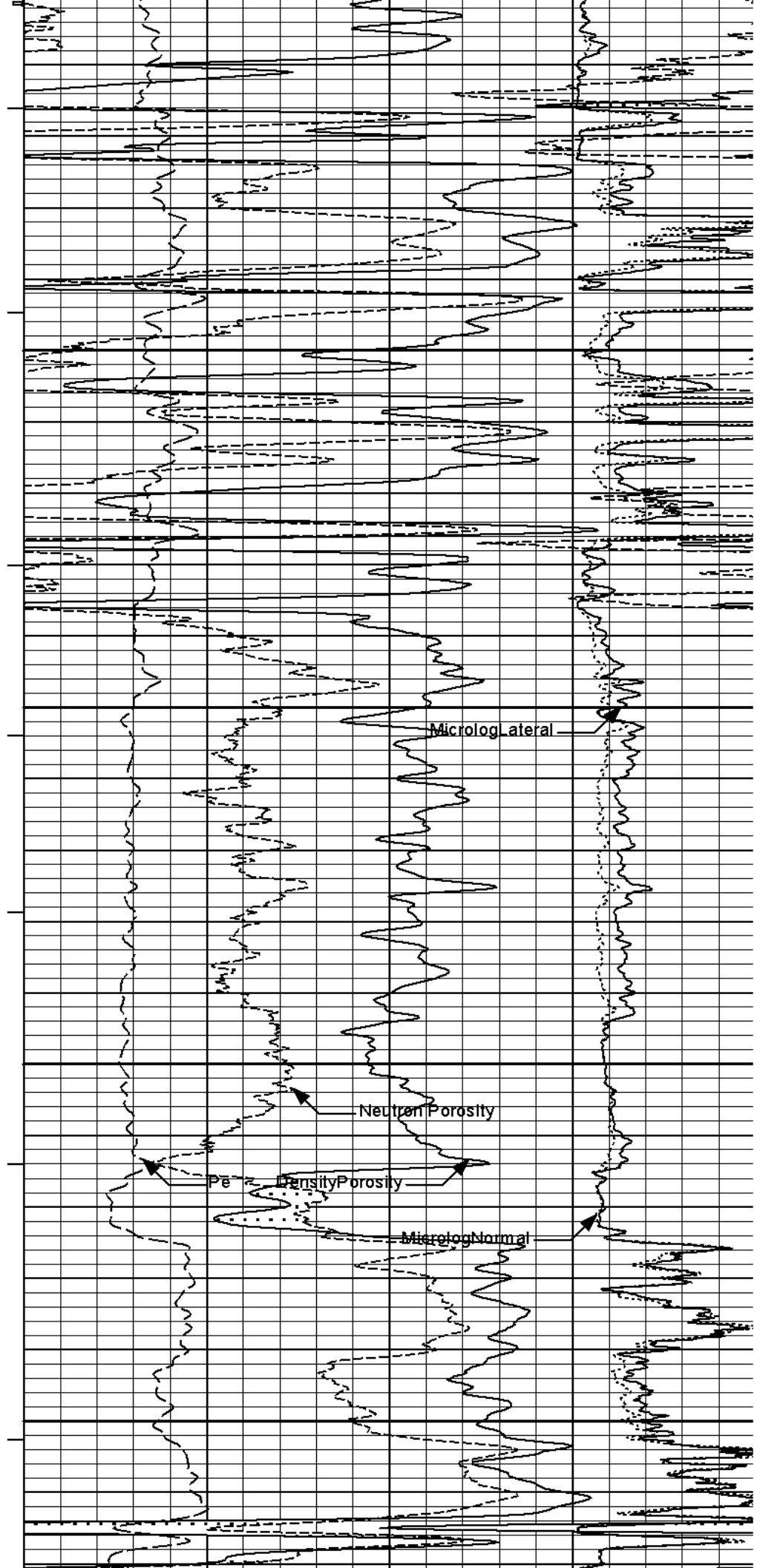
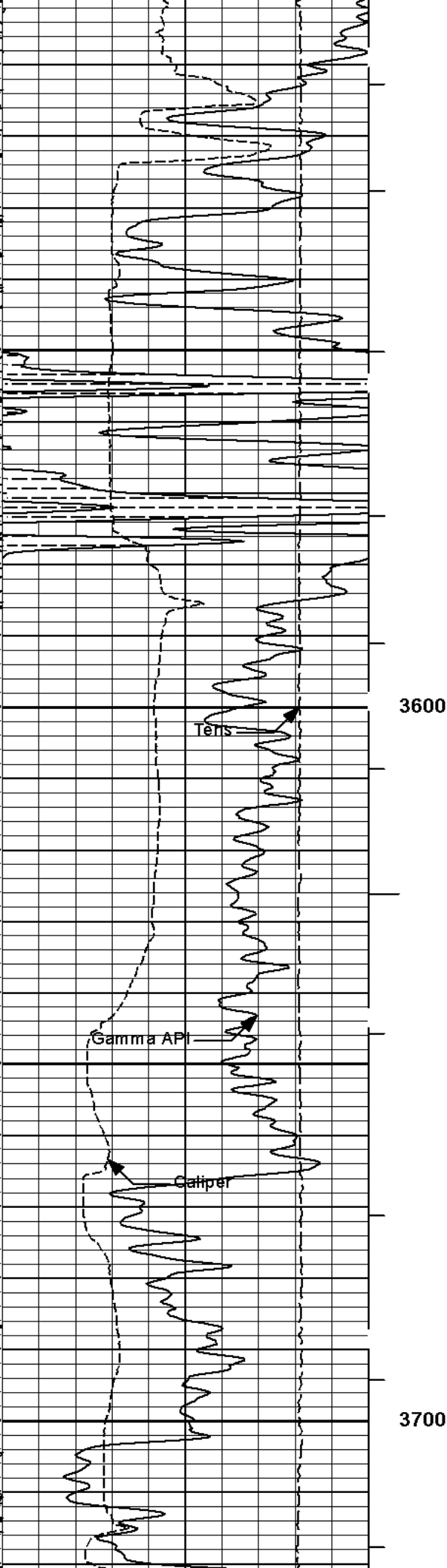
**SPECTRAL DENSITY  
DUAL SPACED NEUTRON  
LOG**

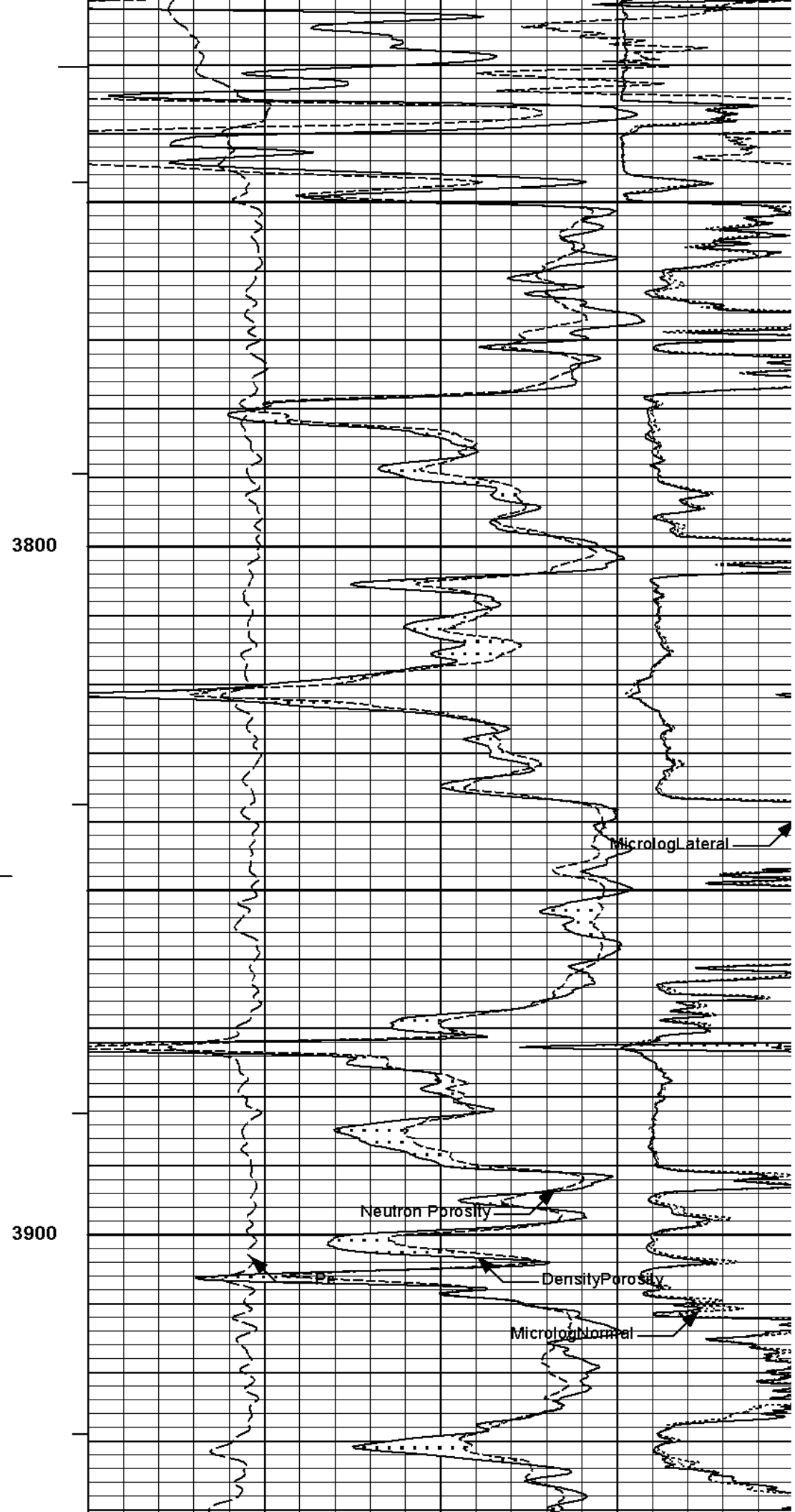
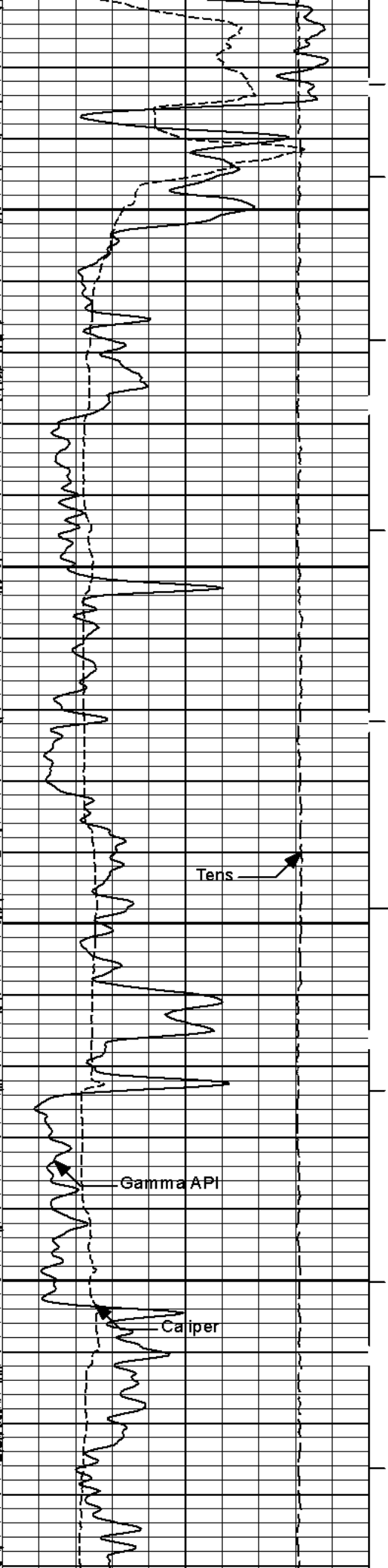
|                                         |  |            |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
|-----------------------------------------|--|------------|--|--------------|--|------------------------------|--|-------------|--|---------|--|-----------------------------------------|--|-----------------|--|---------------|--|-----------------|--|-------|--|--|--|
| Service Ticket No.: 8287001             |  |            |  |              |  | API Serial No.: 15-007-23726 |  |             |  |         |  | PGM Version: WL INSITE R3.2.0 (Build 7) |  |                 |  |               |  |                 |  |       |  |  |  |
| CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE |  |            |  |              |  |                              |  |             |  |         |  | RESISTIVITY SCALE CHANGES               |  |                 |  |               |  |                 |  |       |  |  |  |
| Date                                    |  | Sample No. |  |              |  |                              |  |             |  |         |  | Type Log                                |  | Depth           |  | Scale Up Hole |  | Scale Down Hole |  |       |  |  |  |
| Depth-Driller                           |  |            |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Type Fluid in Hole                      |  |            |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Density                                 |  | Viscosity  |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Ph                                      |  | Fluid Loss |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Source of Sample                        |  |            |  |              |  |                              |  |             |  |         |  | RESISTIVITY EQUIPMENT DATA              |  |                 |  |               |  |                 |  |       |  |  |  |
| Rm @ Meas. Temp                         |  |            |  | @            |  |                              |  | @           |  |         |  | Run No.                                 |  | Tool Type & No. |  | Pad Type      |  | Tool Pos.       |  | Other |  |  |  |
| Rmf @ Meas. Temp.                       |  |            |  | @            |  |                              |  | @           |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Rmc @ Meas. Temp.                       |  |            |  | @            |  |                              |  | @           |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Source Rmf                              |  | Rmc        |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Rm @ BHT                                |  |            |  | @            |  |                              |  | @           |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Rmf @ BHT                               |  |            |  | @            |  |                              |  | @           |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| Rmc @ BHT                               |  |            |  | @            |  |                              |  | @           |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| EQUIPMENT DATA                          |  |            |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |
| GAMMA                                   |  |            |  | ACOUSTIC     |  |                              |  | DENSITY     |  |         |  | NEUTRON                                 |  |                 |  |               |  |                 |  |       |  |  |  |
| Run No.                                 |  | ONE        |  | Run No.      |  |                              |  | Run No.     |  | ONE     |  | Run No.                                 |  | ONE             |  |               |  |                 |  |       |  |  |  |
| Serial No.                              |  | 11048627   |  | Serial No.   |  |                              |  | Serial No.  |  | 104_P84 |  | Serial No.                              |  | 11055304        |  |               |  |                 |  |       |  |  |  |
| Model No.                               |  | GTET       |  | Model No.    |  |                              |  | Model No.   |  | SDLT-I  |  | Model No.                               |  | DSNT-I          |  |               |  |                 |  |       |  |  |  |
| Diameter                                |  | 3.625      |  | No. of Cent. |  |                              |  | Diameter    |  | 4.5     |  | Diameter                                |  | 3.625           |  |               |  |                 |  |       |  |  |  |
| Detector Model No.                      |  | T-102      |  | Spacing      |  |                              |  | Log Type    |  | GAM-GAM |  | Log Type                                |  | NEU-NEU         |  |               |  |                 |  |       |  |  |  |
| Type                                    |  | SCINT      |  |              |  |                              |  | Source Type |  | CS137   |  | Source Type                             |  | AM241BE         |  |               |  |                 |  |       |  |  |  |
| Length                                  |  | 8"         |  | LSA [Y/N]    |  |                              |  | Serial No.  |  | 5168 GW |  | Serial No.                              |  | DSN-424         |  |               |  |                 |  |       |  |  |  |
| Distance to Source                      |  | 10'        |  | FWDA [Y/N ]  |  |                              |  | Strength    |  | 1.5 CI  |  | Strength                                |  | 15 CI           |  |               |  |                 |  |       |  |  |  |
| LOGGING DATA                            |  |            |  |              |  |                              |  |             |  |         |  |                                         |  |                 |  |               |  |                 |  |       |  |  |  |

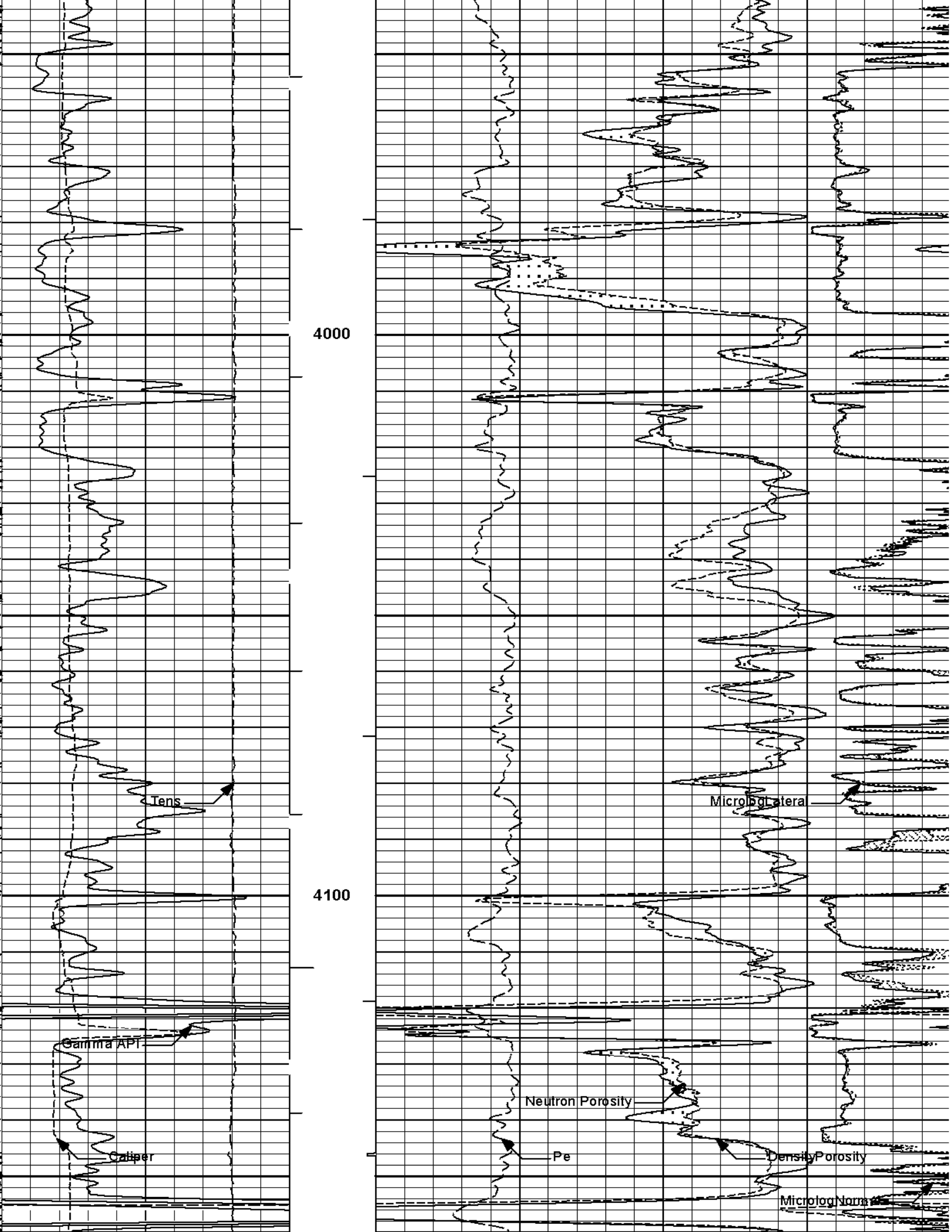
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |        | GAMMA |     | ACOUSTIC |   | DENSITY |       | NEUTRON |        |       |     |        |  |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|--------|-------|-----|----------|---|---------|-------|---------|--------|-------|-----|--------|--|---|
| Run                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Depth |      | Speed  | Scale |     | Scale    |   | Matrix  | Scale |         | Matrix | Scale |     | Matrix |  |   |
| No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | From  | To   | ft/min | L     | R   | L        | R |         | L     | R       |        | L     | R   |        |  |   |
| ONE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TD    | 3250 | REC    | 0     | 150 |          |   |         | 30    | -10     | 2.71   | 30    | -10 | LIME   |  |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| DIRECTIONAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| Maximum Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |      |        |       |     |          |   | @       | KOP   |         |        |       |     |        |  | @ |
| Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| CHLORIDES: 9000 PPM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| GPS COORDINATES: LAT: 37.19 N LONG: 98.32 W                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| TODAY'S CREW: K. KING, V. JAIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, LIBERAL, KS 620-624-8123                                                                                                                                                                                                                                                                                                                                                                                                                            |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF. |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |
| HALLIBURTON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |      |        |       |     |          |   |         |       |         |        |       |     |        |  |   |

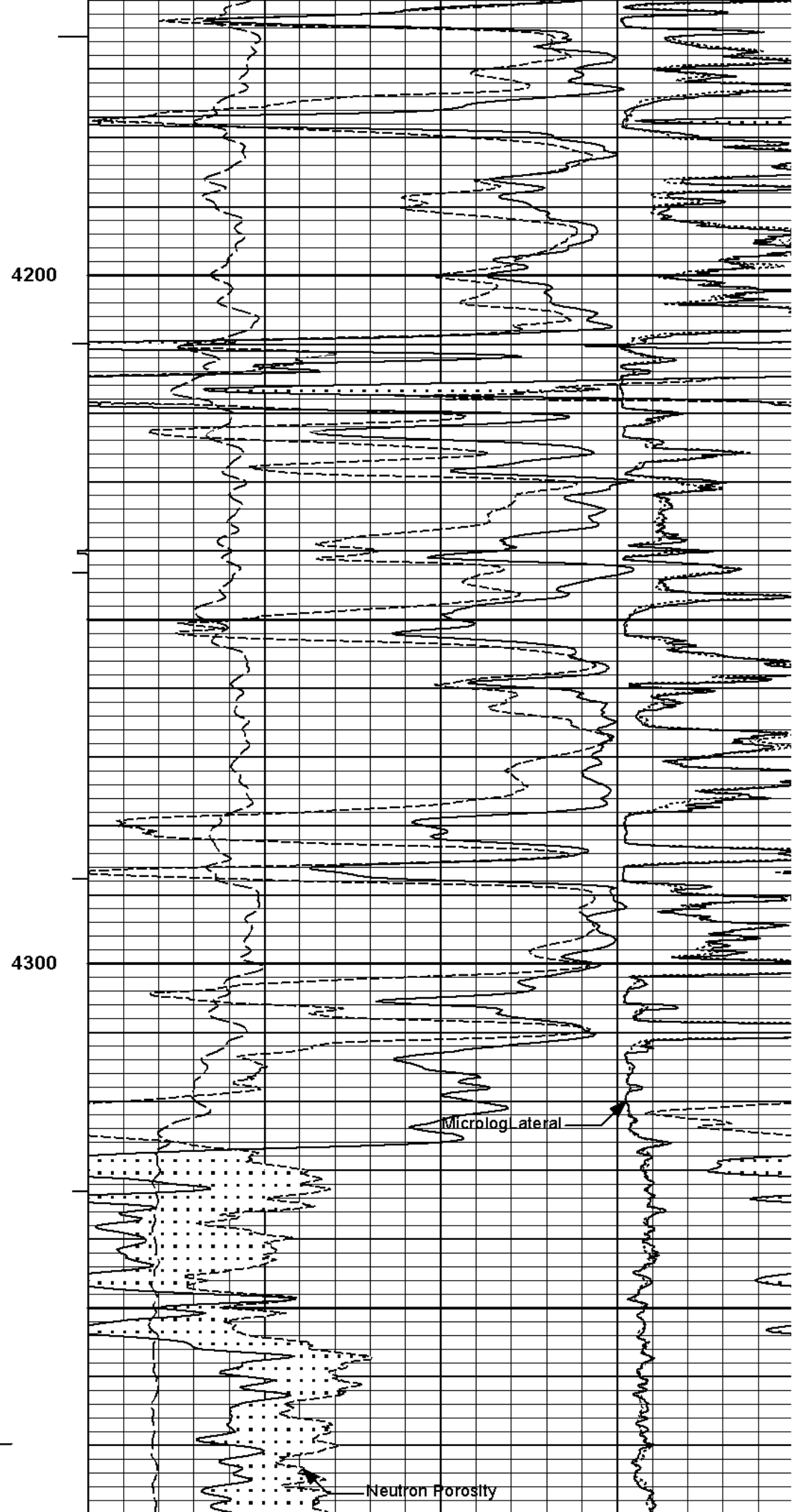
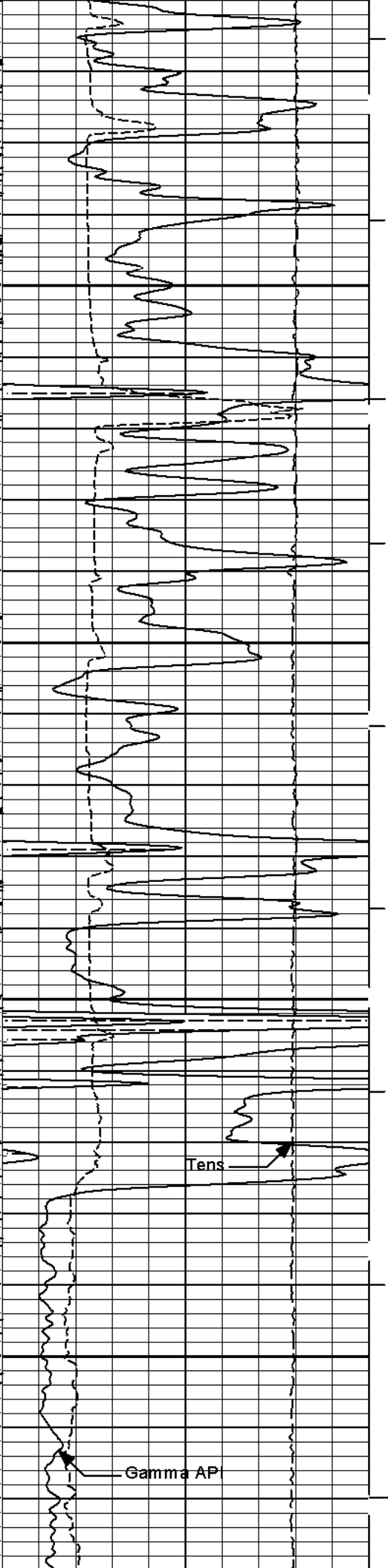
|       |           |              |         |                  |                     |
|-------|-----------|--------------|---------|------------------|---------------------|
|       |           |              |         | CROSSOVER        |                     |
|       |           | Tension Pull | 30      | Neutron Porosity | -10                 |
|       |           |              |         | %                |                     |
| SHALE |           | Tension Pull | 30      | Density Porosity | -10                 |
|       |           | 10           | 0       | %                |                     |
| 0     | Gamma API | 150          | BHVT    | PERMEABLE        |                     |
|       | api       |              |         | 0                | Microlog Lateral 20 |
| 6     | Caliper   | 16           | AHVT    | ohm-metre        |                     |
|       | inches    |              |         | 0                | Microlog Normal 20  |
| 15K   | Tens      | 0            | 1 : 240 | ohm-metre        |                     |
|       | pounds    |              | ft      | 0                |                     |
|       |           |              |         | Pe               | 10                  |
|       |           |              |         |                  |                     |

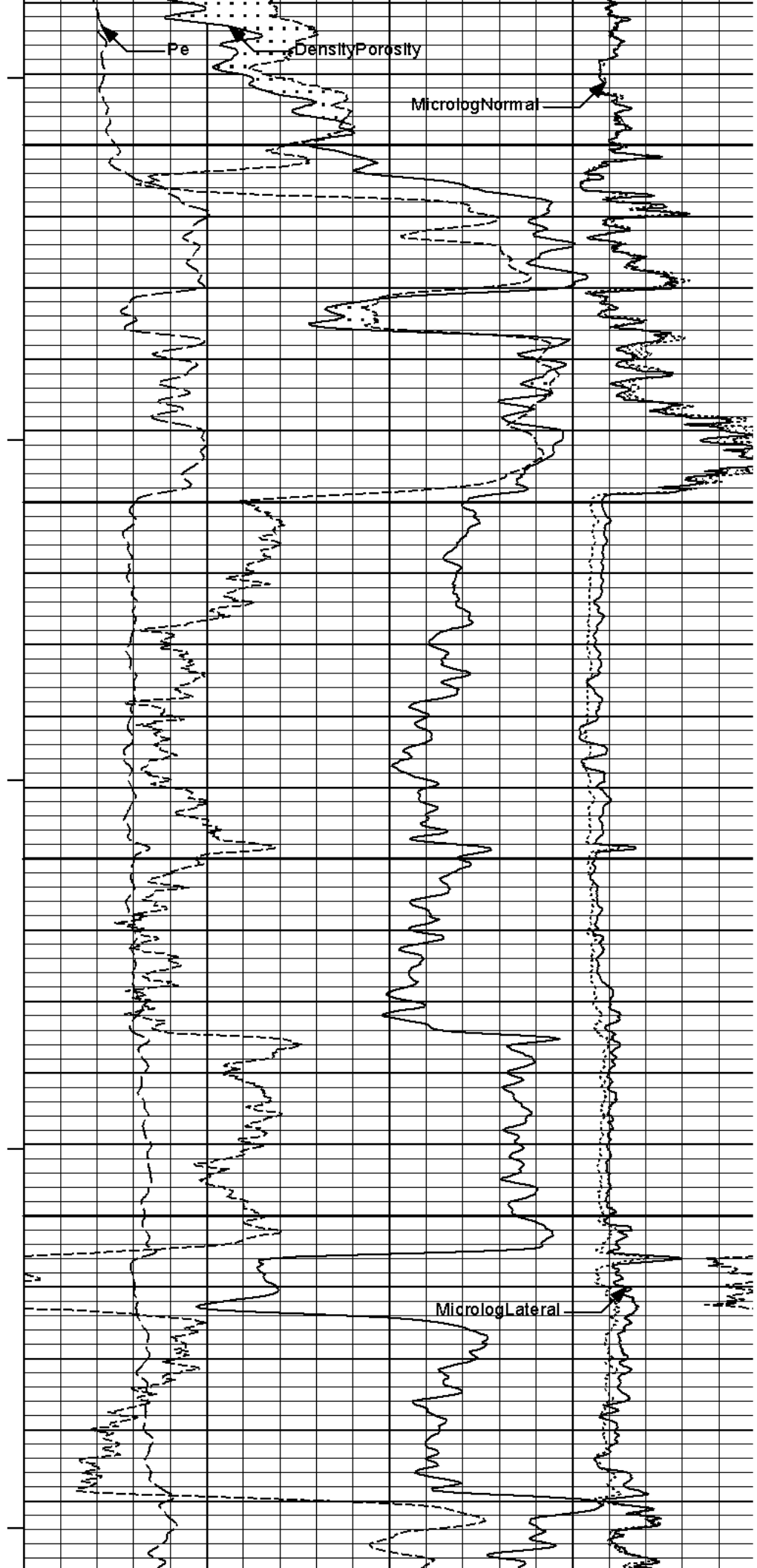
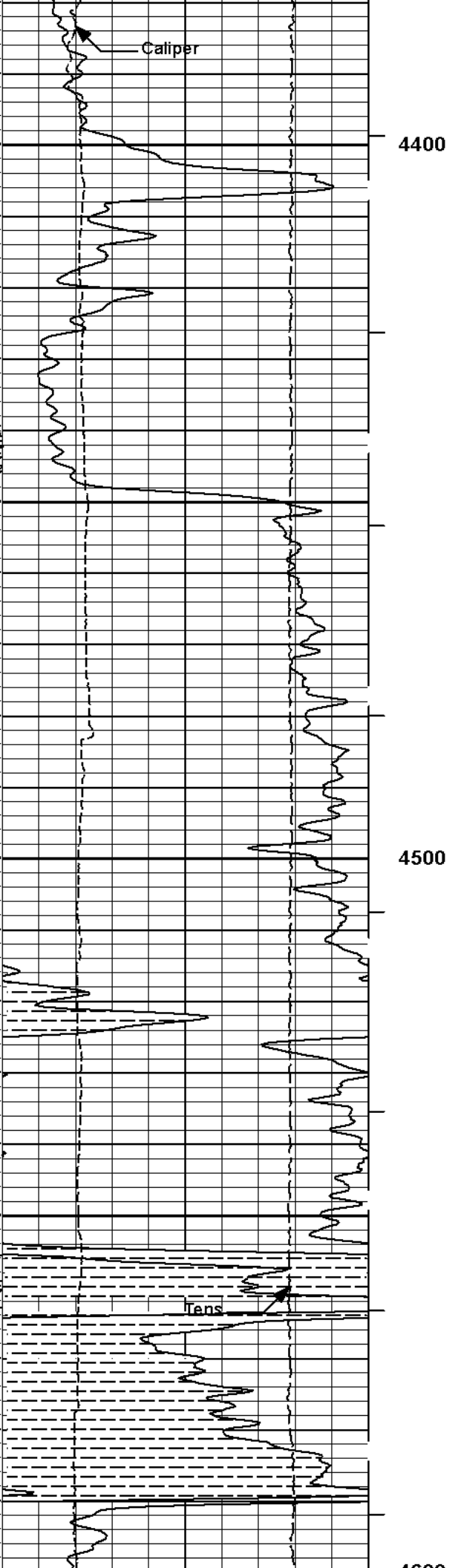




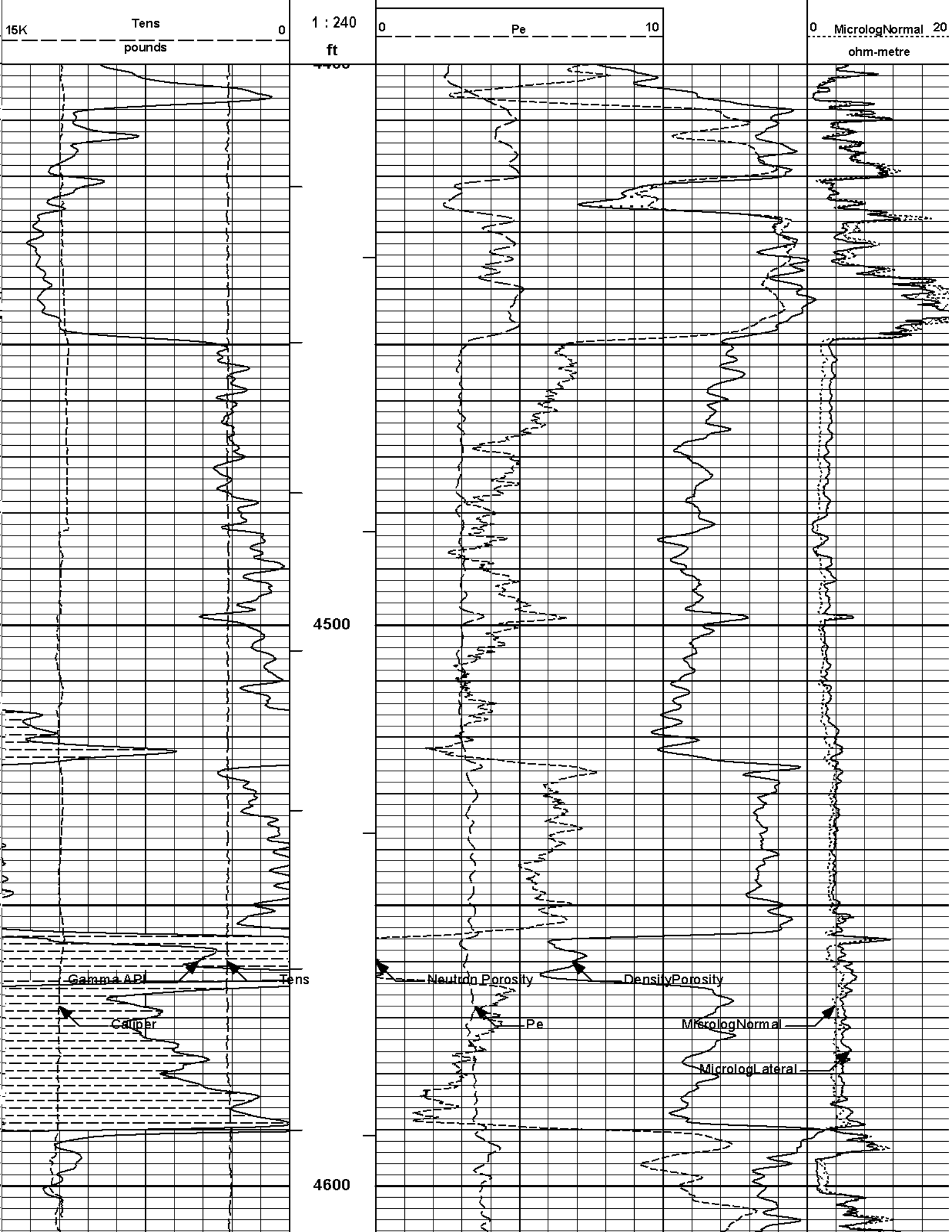




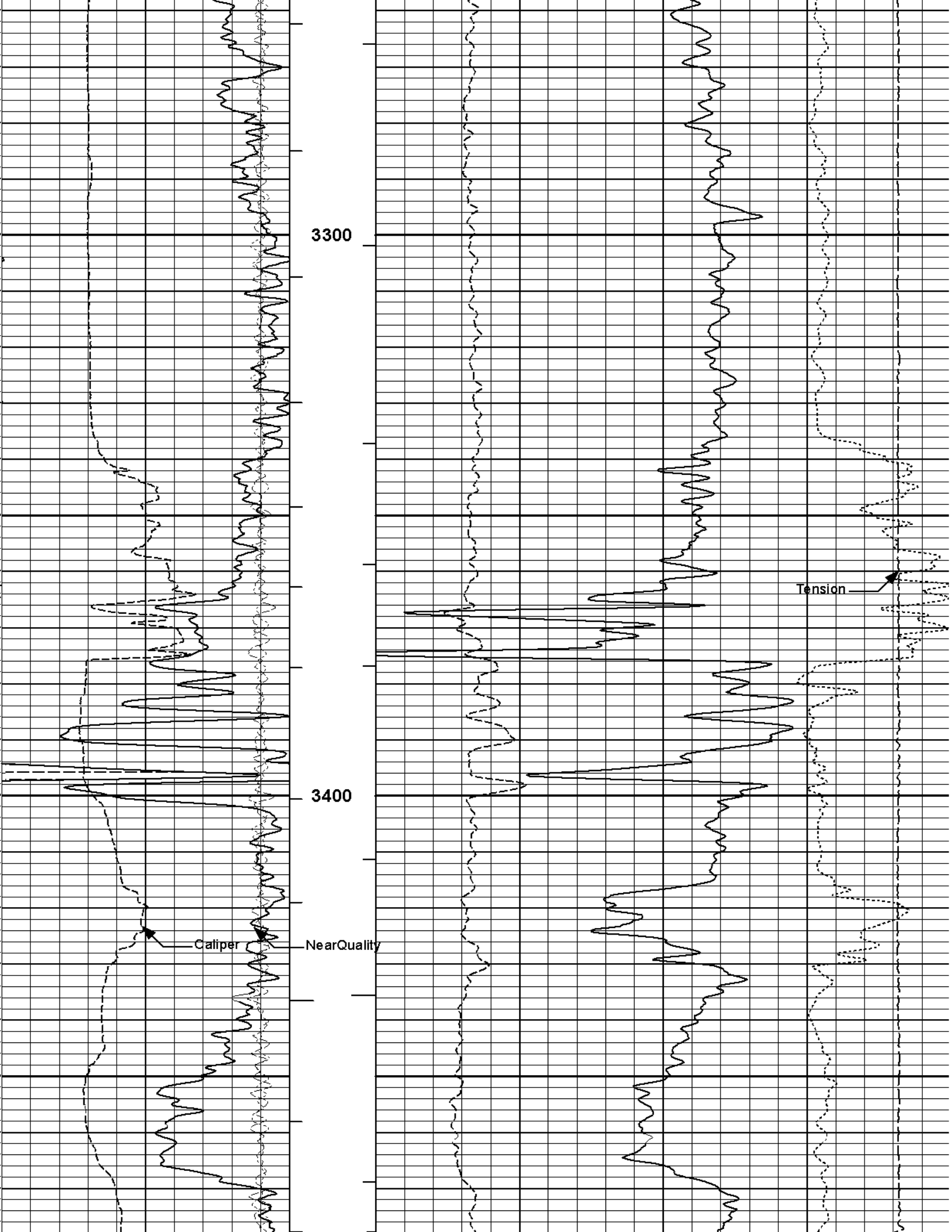


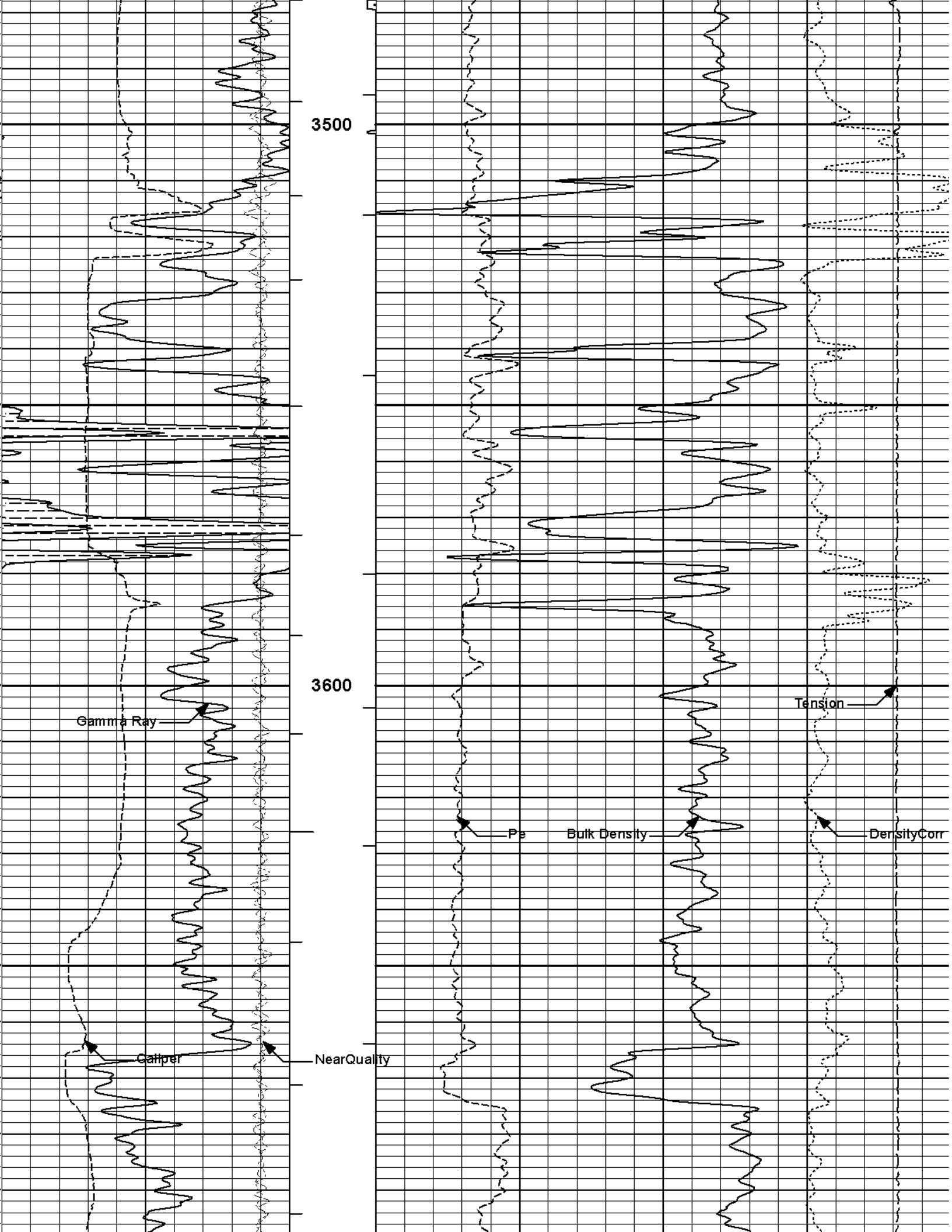


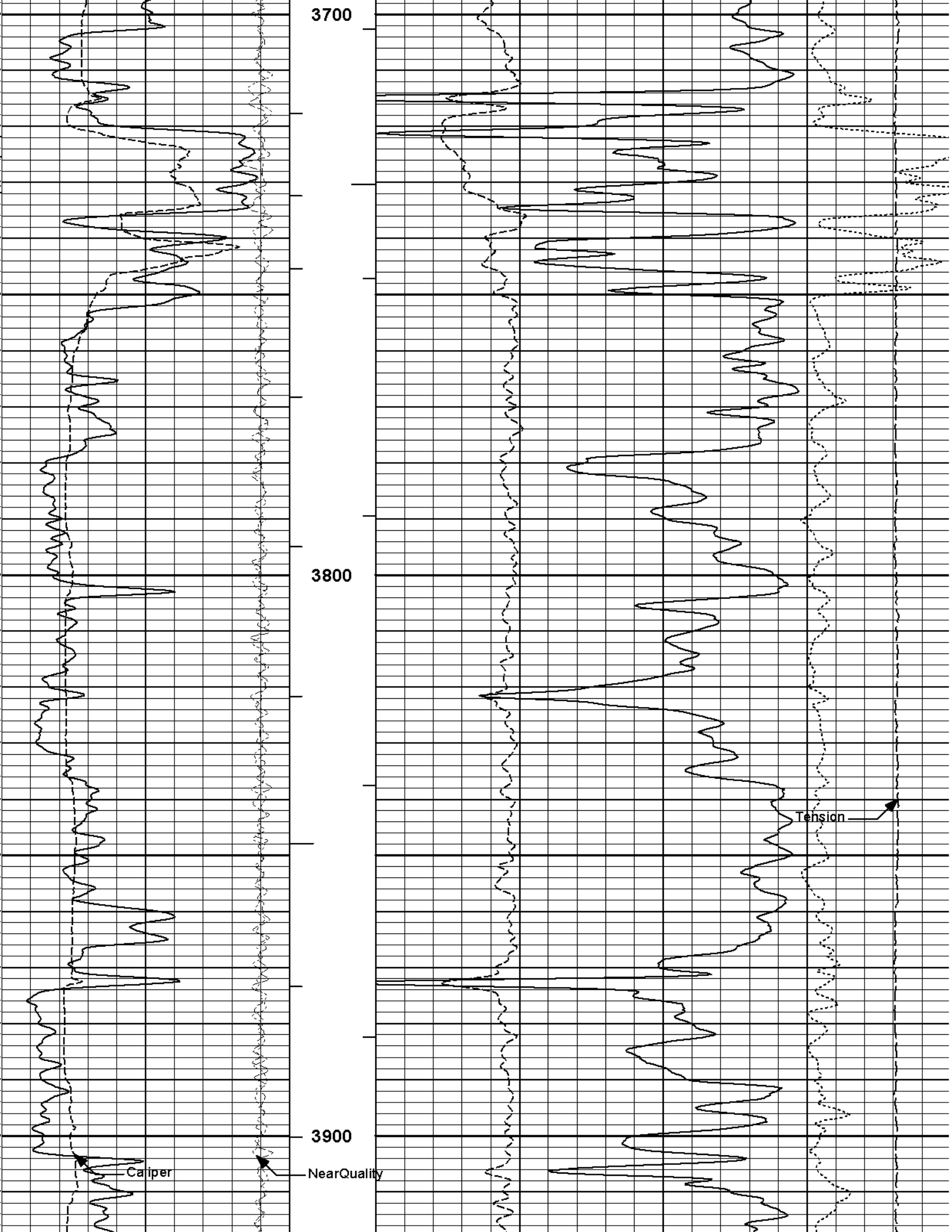


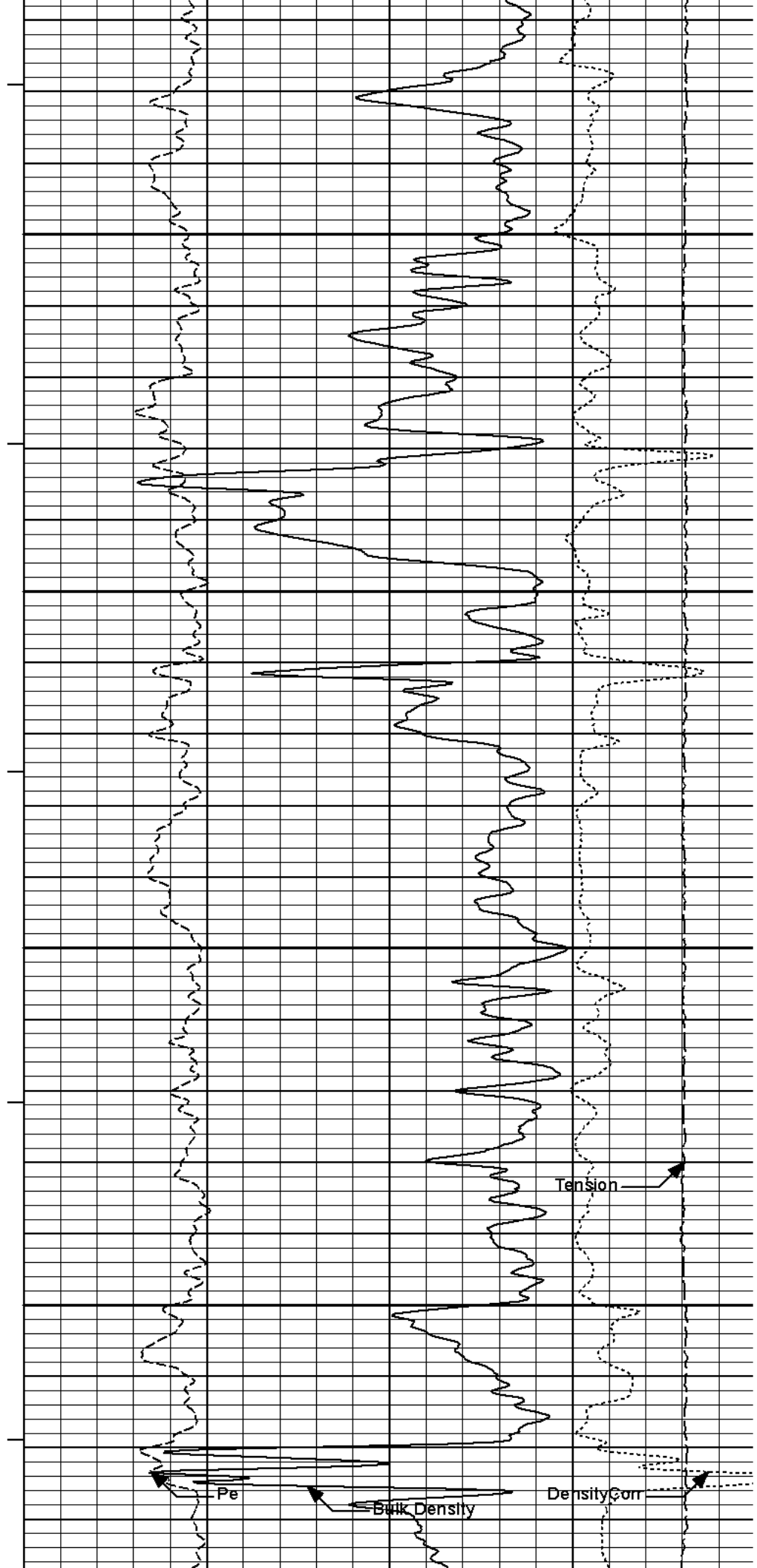
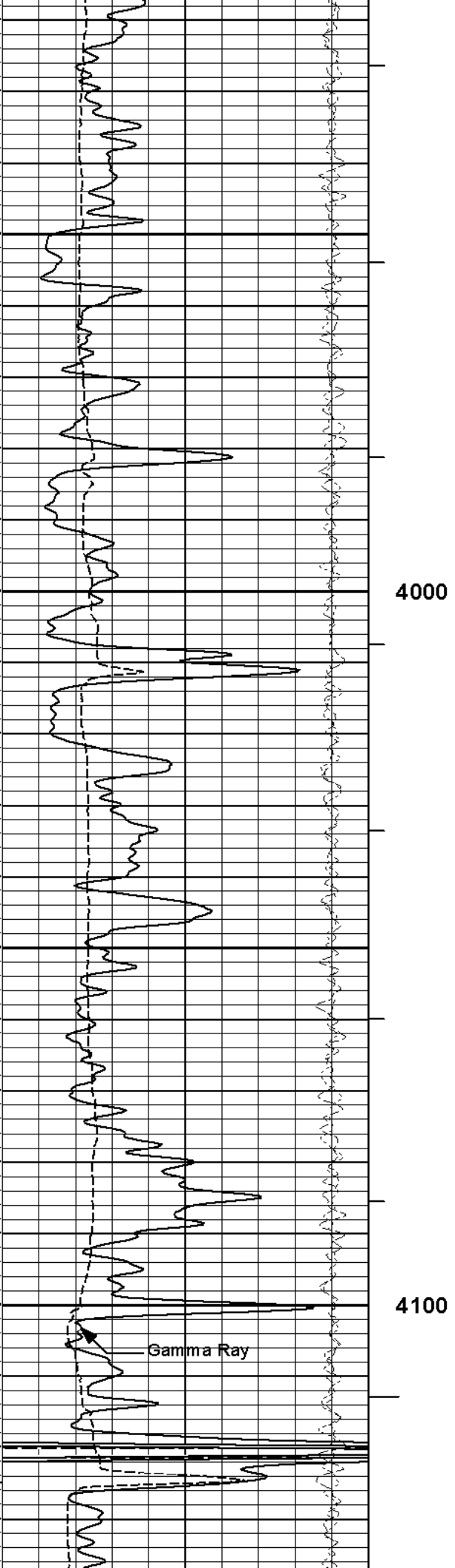


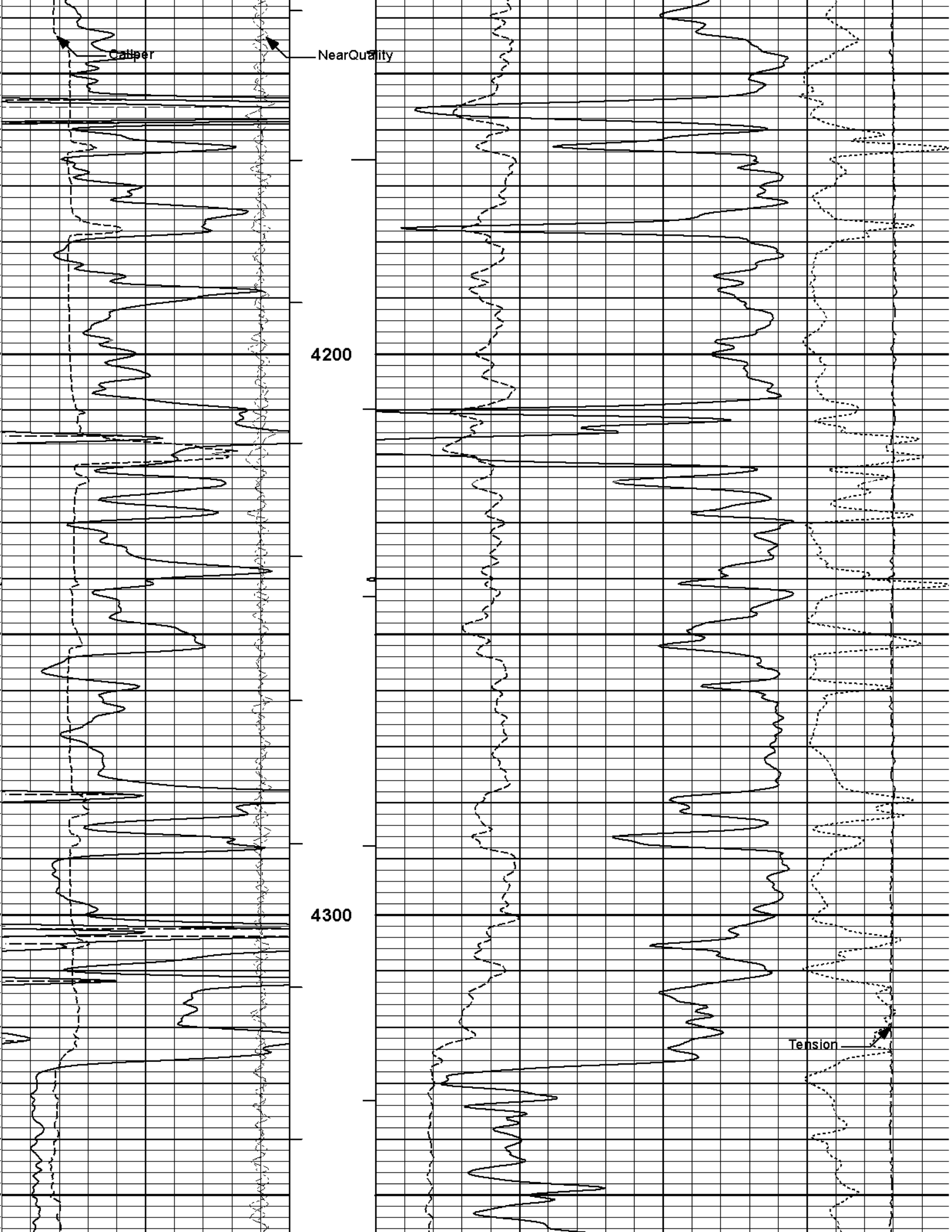


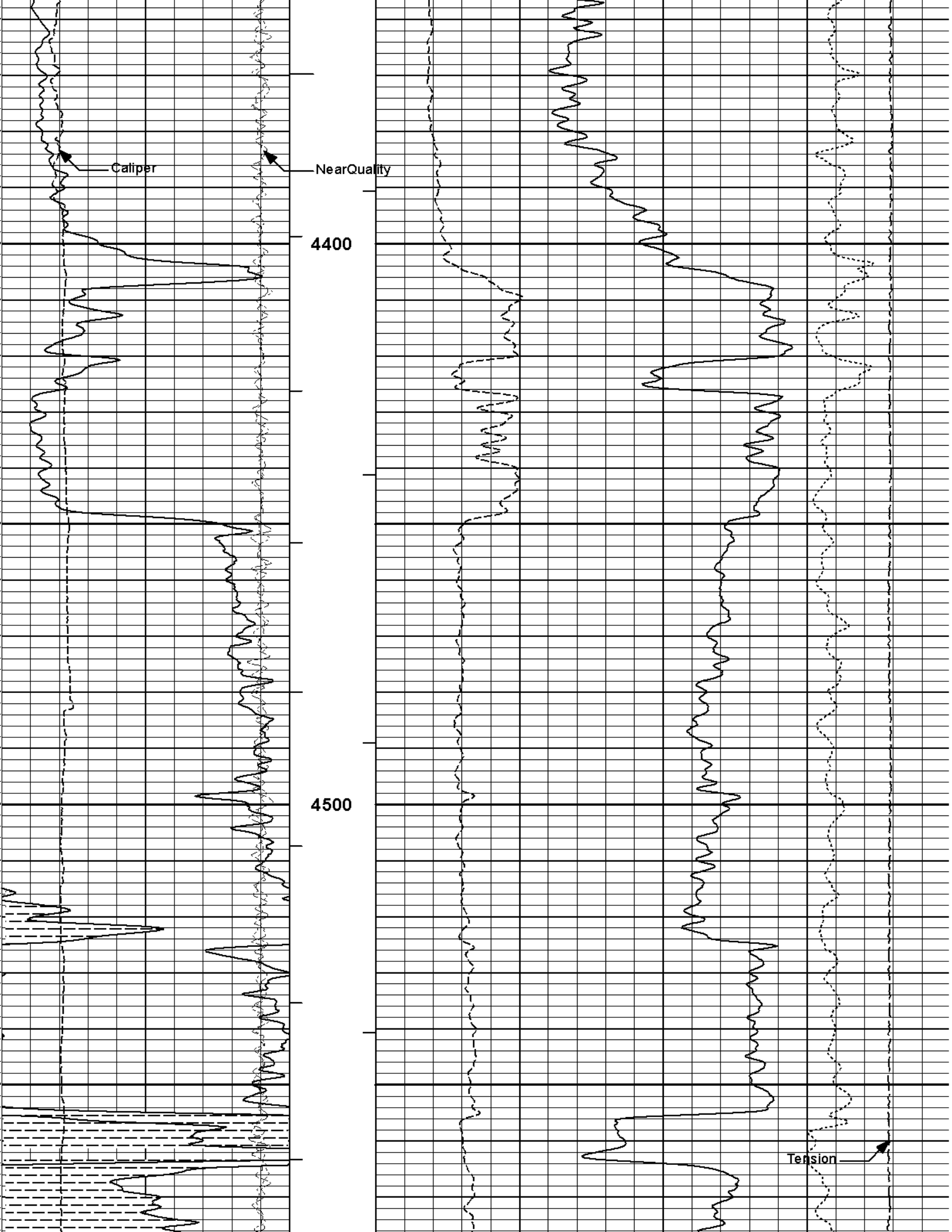


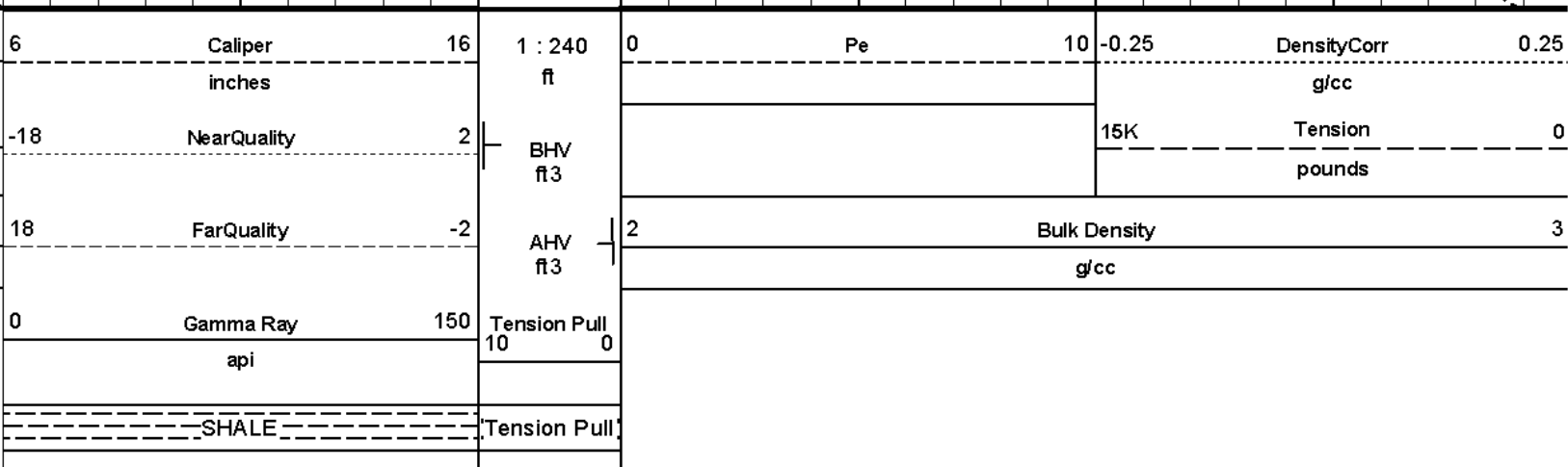












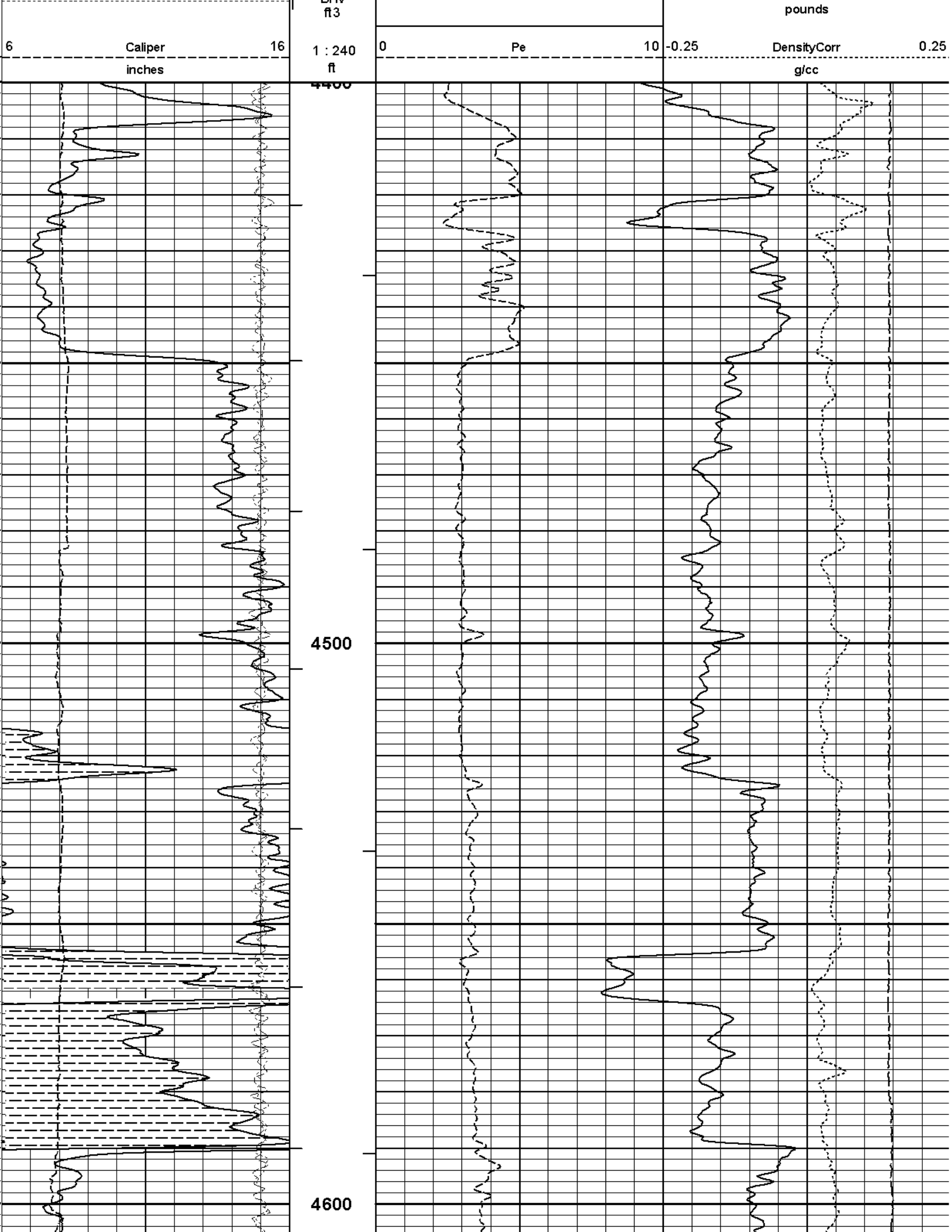
Plot Time: 07-Jul-11 03:23:05  
Plot Range: 3250 ft to 4650.17 ft  
Data: WHELAN\_V1\_29\Well Based\DAQ-0001-003\  
Plot File: \\LOCAL-1\WHELAN\_V1\_29\Well Based\PORO\BULKD\_5\_MAIN\_LIB

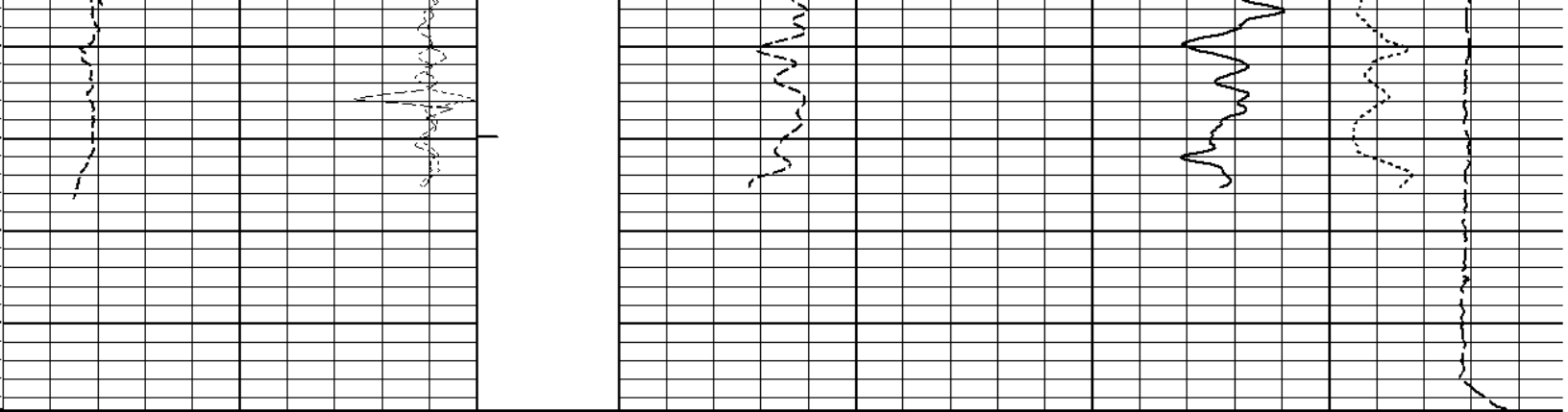
## 5 INCH MAIN LOG

Plot Time: 07-Jul-11 03:23:05  
Plot Range: 4400 ft to 4649.42 ft  
Data: WHELAN\_V1\_29\Well Based\DAQ-0001-002\  
Plot File: \\LOCAL-1\WHELAN\_V1\_29\Well Based\PORO\BULKD\_5\_REP\_LIB

## REPEAT SECTION

|       |             |     |            |              |         |   |   |
|-------|-------------|-----|------------|--------------|---------|---|---|
|       |             |     |            |              |         |   |   |
| SHALE |             |     |            |              |         |   |   |
|       |             |     |            |              |         |   |   |
| 0     | Gamma Ray   | 150 |            |              |         |   |   |
| api   |             |     |            |              |         |   |   |
| 18    | FarQuality  | -2  | AHV<br>ft3 | Bulk Density |         |   | 3 |
|       |             |     |            | g/cc         |         |   |   |
| -18   | NearQuality | 2   | BHV        | 15K          | Tension | 0 |   |
|       |             |     |            |              |         |   |   |





|        |             |     |               |                  |    |        |       |             |         |
|--------|-------------|-----|---------------|------------------|----|--------|-------|-------------|---------|
| 6      | Caliper     | 16  | 1 : 240<br>ft | 0                | Pe | 10     | -0.25 | DensityCorr | 0.25    |
| inches |             |     |               |                  |    |        | g/cc  |             |         |
| -18    | NearQuality | 2   |               | BHv<br>ft3       |    |        |       | 15K         | Tension |
|        |             |     |               |                  |    | pounds |       |             |         |
| 18     | FarQuality  | -2  | AHV<br>ft3    | 2 Bulk Density 3 |    |        |       |             |         |
|        |             |     |               | g/cc             |    |        |       |             |         |
| 0      | Gamma Ray   | 150 |               |                  |    |        |       |             |         |
| api    |             |     |               |                  |    |        |       |             |         |
| SHALE  |             |     |               |                  |    |        |       |             |         |
|        |             |     |               |                  |    |        |       |             |         |

**HALLIBURTON**

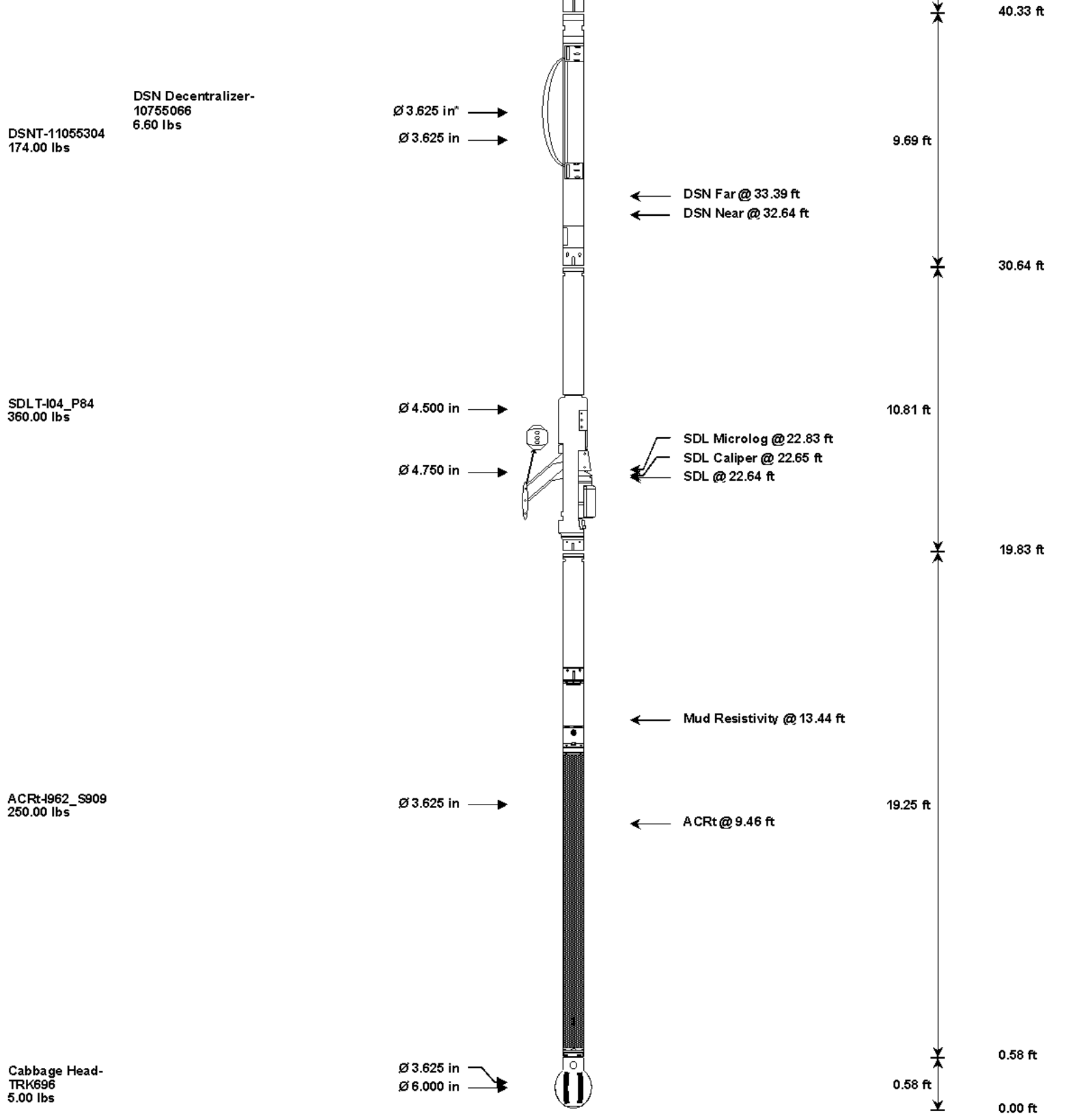
Plot Time: 07-Jul-11 03:23:08  
Plot Range: 4400 ft to 4649.42 ft  
Data: WHELAN\_V1\_29\Well Based\DAQ-0001-002\  
Plot File: \\LOCAL-WHELAN\_V1\_29\Well Based\PORO\BULKD\_5\_REP\_LIB

REPEAT SECTION

**HALLIBURTON**

TOOL STRING DIAGRAM REPORT

| Description                 | Overbody Description | O.D.                         | Diagram | Sensors @ Delays         | Length  | Accumulated Length |
|-----------------------------|----------------------|------------------------------|---------|--------------------------|---------|--------------------|
| CH_HOS-CH_696<br>37.50 lbs  |                      | Ø 2.750 in →                 |         | ← Temperature @ 55.54 ft | 3.03 ft | 56.57 ft           |
| XOHD-TRK696<br>20.00 lbs    |                      | Ø 2.750 in →<br>Ø 3.625 in → |         |                          | 0.95 ft | 53.54 ft           |
| SP Sub-PROT01<br>60.00 lbs  |                      | Ø 3.625 in →                 |         | ← SP @ 50.81 ft          | 3.74 ft | 52.59 ft           |
|                             |                      |                              |         |                          |         | 48.85 ft           |
| GTET-11048627<br>165.00 lbs |                      | Ø 3.625 in →                 |         | ← GammaRay @ 42.79 ft    | 8.52 ft |                    |



| Mnemonic     | Tool Name                          | Serial Number | Weight (lbs)    | Length (ft)  | Accumulated Length (ft) | Max.Log. Speed (fpm) |
|--------------|------------------------------------|---------------|-----------------|--------------|-------------------------|----------------------|
| CH_HOS       | Hostile Cable Head with Load Cell  | CH_696        | 37.50           | 3.03         | 53.54                   | 300.00               |
| XOHD         | Hostile to Dits Cross Over         | TRK696        | 20.00           | 0.95         | 52.59                   | 300.00               |
| SP           | SP Sub                             | PROT01        | 60.00           | 3.74         | 48.85                   | 300.00               |
| GTET         | Gamma Telemetry Tool               | 11048627      | 165.00          | 8.52         | 40.33                   | 60.00                |
| DSNT         | Dual Spaced Neutron                | 11055304      | 174.00          | 9.69         | 30.64                   | 60.00                |
| DCNT         | DSN Decentralizer                  | 10755066      | 6.60            | 5.13         | *                       | 33.97                |
| SDLT         | Spectral Density Tool              | I04_P84       | 360.00          | 10.81        | 19.83                   | 60.00                |
| ACRt         | Array Compensated True Resistivity | I962_S909     | 250.00          | 19.25        | 0.58                    | 300.00               |
| CBHD         | Cabbage Head                       | TRK696        | 5.00            | 0.58         | 0.00                    | 300.00               |
| <b>Total</b> |                                    |               | <b>1,078.10</b> | <b>56.57</b> |                         |                      |

\* Not included in Total Length and Length Accumulation.

**HALLIBURTON****CALIBRATION REPORT****NATURAL GAMMA RAY TOOL SHOP CALIBRATION**

Tool Name: GTET - 11048627

Reference Calibration Date: 30-Jun-11 14:28:57

Engineer: S. JUNG

Calibration Date: 02-Jul-11 03:38:33

Software Version: WL INSITE R3.2.0 (Build 7)

Calibration Version: 1

Calibrator Source S/N: TB 146

Calibrator API Reference: 265.00 api

Equivalent Calibrator API Reference: 269.6 api

| Measurement             | Measured | Calibrated | Units |
|-------------------------|----------|------------|-------|
| Background              | 47.5     | 43.8       | api   |
| Background + Calibrator | 334.6    | 308.8      | api   |
| Calibrator              | 261.3    | 265.0      | api   |

**DUAL SPACED NEUTRON SHOP CALIBRATION**

Tool Name: DSNT - 11055304

Reference Calibration Date: 13-Jun-11 11:38:55

Engineer: C. PARKER

Calibration Date: 06-Jul-11 10:45:13

Software Version: WL INSITE R3.2.0 (Build 7)

Calibration Version: 1

Logging Source S/N: DSN-424

Tank Serial Number: LIB-105060

Reference value assigned to Tank: 51.680

Snow Block S/N: 696 BLOCK

Calibration Tank Water Temperature: 89 degF

Min. Tool Housing Outside Diameter: 3.625 in

**CALIBRATION CONSTANTS**

| Measurement | Prev. Value | New Value | Control Limit On New Value |
|-------------|-------------|-----------|----------------------------|
| Gain:       | 0.985       | 0.988     | 0.900 - 1.100              |

**WATER TANK SUMMARY (Horizontal Water Tank)**

| Measurement       | Current Reading (Previous Coef.) | Calibrated (New Coef.) | Change | Control Limit On Change |
|-------------------|----------------------------------|------------------------|--------|-------------------------|
| Porosity (dec):   | 0.2102                           | 0.2110                 | 0.0007 | +/- 0.0020              |
| Calibrated Ratio: | 9.70                             | 9.73                   | 0.025  | +/- 0.050               |

**VERIFIER**

| Measurement                | Value  | Control Limit     |
|----------------------------|--------|-------------------|
| Snow-Block Porosity (dec): | 0.0743 | 0.02000 - 0.09000 |

**PASS/FAIL SUMMARY**

|                   |        |
|-------------------|--------|
| Background Check: | Passed |
| Gain-Range Check: | Passed |
| Snow-Block Check: | Passed |

**SPECTRAL DENSITY SHOP CALIBRATION**

Tool Name: SDLT - I04\_P84

Reference Calibration Date: 09-Jun-11 11:46:34

Logging Source S/N: 5168GW

Aluminum Block S/N: LIBERAL

Density: 2.598g/cc

Pe: 3.170

Magnesium Block S/N: LIBERAL

Density: 1.684g/cc

Pe: 2.594

**DENSITY CALIBRATION SUMMARY**

| Measurement          | Previous Value | New Value | Control Limit |
|----------------------|----------------|-----------|---------------|
| Near Bar Gain        | 1.0424         | 0.9730    | 0.90 - 1.10   |
| Near Dens Gain       | 1.0011         | 0.9539    | 0.90 - 1.10   |
| Near Peak Gain       | 1.0002         | 0.9164    | 0.90 - 1.10   |
| Near Lith Gain       | 0.9977         | 0.9029    | 0.90 - 1.10   |
| Far Bar Gain         | 1.0138         | 1.0050    | 0.90 - 1.10   |
| Far Dens Gain        | 1.0012         | 0.9943    | 0.90 - 1.10   |
| Far Peak Gain        | 0.9928         | 0.9896    | 0.90 - 1.10   |
| Far Lith Gain        | 0.9692         | 0.9637    | 0.90 - 1.10   |
| Near Bar Offset      | -0.2425        | 0.3892    | NONE          |
| Near Dens Offset     | 0.1113         | 0.5216    | NONE          |
| Near Peak Offset     | 0.0872         | 0.7836    | NONE          |
| Near Lith Offset     | 0.0717         | 0.8593    | NONE          |
| Far Bar Offset       | -0.0382        | 0.0327    | NONE          |
| Far Dens Offset      | 0.0399         | 0.0960    | NONE          |
| Far Peak Offset      | 0.0724         | 0.0937    | NONE          |
| Far Lith Offset      | 0.2020         | 0.2445    | NONE          |
| Near Bar Background  | 769.95         | 772.91    | 700 - 1450    |
| Near Dens Background | 248.97         | 250.52    | 230 - 480     |
| Near Peak Background | 109.11         | 109.08    | 100 - 210     |
| Near Lith Background | 135.52         | 135.85    | 125 - 260     |
| Far Bar Background   | 534.90         | 534.97    | 450 - 900     |
| Far Dens Background  | 208.46         | 209.79    | 175 - 345     |
| Far Peak Background  | 82.15          | 82.95     | 70 - 140      |
| Far Lith Background  | 85.04          | 86.15     | 75 - 145      |

**CALIBRATION BLOCK SUMMARY**

| Measurement    | Current Reading<br>(Previous Coef) | Calibrated<br>(New Coef) | Change | Control Limit<br>On Change |
|----------------|------------------------------------|--------------------------|--------|----------------------------|
| MAGNESIUM      |                                    |                          |        |                            |
| Density (g/cc) | 1.692                              | 1.684                    | -0.008 | +/- 0.015                  |
| Pe             | 2.461                              | 2.559                    | 0.098  | +/- 0.150                  |
| ALUMINUM       |                                    |                          |        |                            |
| Density (g/cc) | 2.597                              | 2.598                    | 0.001  | +/- 0.01500                |
| Pe             | 3.132                              | 3.131                    | -0.001 | +/- 0.150                  |

**TOOL SUMMARY**

| Measurement     | Near Detector |                | Far Detector |                |
|-----------------|---------------|----------------|--------------|----------------|
|                 | Value         | Control Limits | Value        | Control Limits |
| QUALITY         |               |                |              |                |
| Background      | 0.0008        | +/- 0.0110     | 0.0013       | +/- 0.0140     |
| Magnesium Block | -0.0003       | +/- 0.0110     | 0.0003       | +/- 0.0140     |
| Aluminum Block  | -0.0006       | +/- 0.0110     | 0.0015       | +/- 0.0140     |
| Resolution      | 9.11          | 6.00 - 11.50   | 8.84         | 6.00 - 11.50   |

**PASS/FAIL SUMMARY**

|                                |        |
|--------------------------------|--------|
| Background Quality Check:      | Passed |
| Background Range Check:        | Passed |
| Background Resolution Check:   | Passed |
| Background Verification Check: | Passed |
| Magnesium Quality Check:       | Passed |
| Aluminum Quality Check:        | Passed |
| Gains Check:                   | Passed |
| Changes in Calibration Blocks: | Passed |

**DENSITY CALIPER SHOP CALIBRATION**Tool Name: **SDLT - I04\_P84**Reference Calibration Date: **06-Jul-11 11:13:24**Engineer: **C. PARKER**Calibration Date: **06-Jul-11 11:18:56**Software Version: **WL INSITE R3.2.0 (Build 7)**Calibration Version: **1****CALIBRATION COEFFICIENTS**

| Measurement | Previous Value | New Value    | Control Limit On<br>New Value |
|-------------|----------------|--------------|-------------------------------|
| Pad Offset  | -3660.52       | -4528.92     | -7000.00 - -1000.00           |
| Pad Gain    | 0.0003891      | 0.0004362    | 0.000200 - 0.000600           |
| Arm Offset  | -2332.50       | -2306.72     | -5000.00 - 3000.00            |
| Arm Gain    | 0.0004848      | 0.0005863    | 0.000300 - 0.000700           |
| Arm Power   | -0.000003814   | -0.000009382 | -0.000010 - 0.000010          |

The ring diameter is computed from:  $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$ 

Tool Diameter: 4.50 in

**CALIBRATION RINGS**

| Measurement      | Current Reading<br>(Previous Coeff.) | Calibrated<br>(New Coeff.) | Change | Control Limit On<br>New Value |
|------------------|--------------------------------------|----------------------------|--------|-------------------------------|
| PAD EXTENSION:   |                                      |                            |        |                               |
| Small Ring (in)  | 2.12                                 | 2.00                       | -0.12  | +/- 0.20                      |
| Medium Ring (in) | 3.68                                 | 3.75                       | 0.07   | +/- 0.20                      |
| RING DIAMETER:   |                                      |                            |        |                               |
| Small Ring (in)  | 6.50                                 | 6.50                       | 0.00   | +/- 0.20                      |
| Medium Ring (in) | 8.06                                 | 8.25                       | 0.19   | +/- 0.20                      |
| Large Ring (in)  | 14.96                                | 15.00                      | 0.04   | +/- 0.20                      |

**PASS/FAIL SUMMARY**

|                                       |        |
|---------------------------------------|--------|
| Calibration-Coefficients Range Check: | Passed |
| Ring-Measurement Check:               | Passed |

**PASS/FAIL SUMMARY**

|                                       |        |
|---------------------------------------|--------|
| Calibration-Coefficients Range Check: | Passed |
|---------------------------------------|--------|

**CALIBRATION SUMMARY**

| Sensor               | Shop     | Field | Post  | Difference | Tolerance | Units |
|----------------------|----------|-------|-------|------------|-----------|-------|
| <b>GTET-11048627</b> |          |       |       |            |           |       |
| Gamma Ray Calibrator | 265.0    | ----- | ----- | 0.0        | +/- 9.00  | api   |
| <b>DSNT-11055304</b> |          |       |       |            |           |       |
| Snow-Block Porosity  | 0.0743   | ----- | ----- | 0.0000     | +/- .-.-- | decP  |
| <b>SDLT-I04_P84</b>  |          |       |       |            |           |       |
| Near(B+D+P+L)        | 1268.355 | ----- | ----- | 0.000      | +/-12.631 | cps   |

|               |         |       |       |       |           |     |
|---------------|---------|-------|-------|-------|-----------|-----|
| Far(B+D+P+L)  | 913.857 | ----- | ----- | 0.000 | +/-14.873 | cps |
| Pad Extension | 3.75    | ----- | ----- | 0.00  | +/-0.20   | in  |
| Ring Diameter | 8.25    | ----- | ----- | 0.00  | +/-0.20   | in  |

Data: WHELAN\_V1\_29\0001 SP-GTET-DSN-SDL-ACRT-CHWDL Date: 07-Jul-11 00:11:05

# HALLIBURTON

## PARAMETERS REPORT

| Depth<br>(ft) | Tool Name | Mnemonic | Description                                           | Value     | Units |
|---------------|-----------|----------|-------------------------------------------------------|-----------|-------|
| TOP           |           |          |                                                       |           |       |
|               | DSNT      | DNOK     | Process DSN?                                          | No        |       |
|               | SDLT      | DNOK     | Process Density?                                      | No        |       |
|               | SDLT      | MLOK     | Process MicroLog Outputs?                             | No        |       |
| 3240.00       |           |          |                                                       |           |       |
|               | SHARED    | BS       | Bit Size                                              | 7.875     | in    |
|               | SHARED    | UBS      | Use Bit Size instead of Caliper for all applications. | No        |       |
|               | SHARED    | MDBS     | Mud Base                                              | Water     |       |
|               | SHARED    | MDWT     | Borehole Fluid Weight                                 | 9.000     | ppg   |
|               | SHARED    | WAGT     | Weighting Agent                                       | Barite    |       |
|               | SHARED    | BSAL     | Borehole salinity                                     | 0.00      | ppm   |
|               | SHARED    | FSAL     | Formation Salinity NaCl                               | 0.00      | ppm   |
|               | SHARED    | KPCT     | Percent K in Mud by Weight?                           | 0.00      | %     |
|               | SHARED    | RMUD     | Mud Resistivity                                       | 0.330     | ohmm  |
|               | SHARED    | TRM      | Temperature of Mud                                    | 75.0      | degF  |
|               | SHARED    | CSD      | Logging Interval is Cased?                            | No        |       |
|               | SHARED    | ICOD     | AHV Casing OD                                         | 5.500     | in    |
|               | SHARED    | ST       | Surface Temperature                                   | 75.0      | degF  |
|               | SHARED    | TD       | Total Well Depth                                      | 4646.00   | ft    |
|               | SHARED    | BHT      | Bottom Hole Temperature                               | 120.0     | degF  |
|               | SHARED    | SVTM     | Navigation and Survey Master Tool                     | NONE      |       |
|               | SHARED    | AZTM     | High Res Z Accelerometer Master Tool                  | GTET      |       |
|               | SHARED    | TEMM     | Temperature Master Tool                               | NONE      |       |
|               | SHARED    | BHSM     | Borehole Size Master Tool                             | NONE      |       |
|               | GTET      | GROK     | Process Gamma Ray?                                    | Yes       |       |
|               | GTET      | GRSO     | Gamma Tool Standoff                                   | 0.000     | in    |
|               | GTET      | GEOK     | Process Gamma Ray EVR?                                | No        |       |
|               | GTET      | TPOS     | Tool Position                                         | Centered  |       |
|               | DSNT      | DNOK     | Process DSN?                                          | Yes       |       |
|               | DSNT      | DEOK     | Process DSN EVR?                                      | No        |       |
|               | DSNT      | NLIT     | Neutron Lithology                                     | Limestone |       |
|               | DSNT      | DNSO     | DSN Standoff - 0.25 in (6.35 mm) Recommended          | 0.250     | in    |
|               | DSNT      | DNTP     | Temperature Correction Type                           | None      |       |
|               | DSNT      | DPRS     | DSN Pressure Correction Type                          | None      |       |
|               | DSNT      | SHCO     | View More Correction Options                          | No        |       |
|               | DSNT      | UTVD     | Use TVD for Gradient Corrections?                     | No        |       |
|               | DSNT      | LHWT     | Logging Horizontal Water Tank?                        | No        |       |
|               | SDLT      | DNOK     | Process Density?                                      | Yes       |       |
|               | SDLT      | DNOK     | Process Density EVR?                                  | No        |       |
|               | SDLT      | CB       | Logging Calibration Blocks?                           | No        |       |
|               | SDLT      | SPVT     | SDLT Pad Temperature Valid?                           | Yes       |       |
|               | SDLT      | DTWN     | Disable temperature warning                           | No        |       |
|               | SDLT      | DMA      | Formation Density Matrix                              | 2.710     | g/cc  |
|               | SDLT      | DFL      | Formation Density Fluid                               | 1.000     | g/cc  |

|                                                     |      |                               |                          |      |
|-----------------------------------------------------|------|-------------------------------|--------------------------|------|
| SDLT                                                | CLOK | Process Caliper Outputs?      | Yes                      |      |
| SDLT                                                | MLOK | Process MicroLog Outputs?     | Yes                      |      |
| ACRt                                                | RTOK | Process ACRt?                 | Yes                      |      |
| ACRt                                                | MNSO | Minimum Tool Standoff         | 1.50                     | in   |
| ACRt                                                | TCS1 | Temperature Correction Source | FP Lwr & FP Up           |      |
| ACRt                                                | TPOS | Tool Position                 | Free Hanging             |      |
| ACRt                                                | RMOP | Rmud Source                   | Mud Cell                 |      |
| ACRt                                                | RMIN | Minimum Resistivity for MAP   | 0.20                     | ohmm |
| ACRt                                                | RMIN | Maximum Resistivity for MAP   | 200.00                   | ohmm |
| ACRt                                                | THQY | Threshold Quality             | 0.50                     |      |
| BOTTOM                                              |      |                               |                          |      |
| Data: WHELAN_V1_2910001 SP-GTET-DSN-SDL-ACRT-CHIDLE |      |                               | Date: 07-Jul-11 01:53:51 |      |

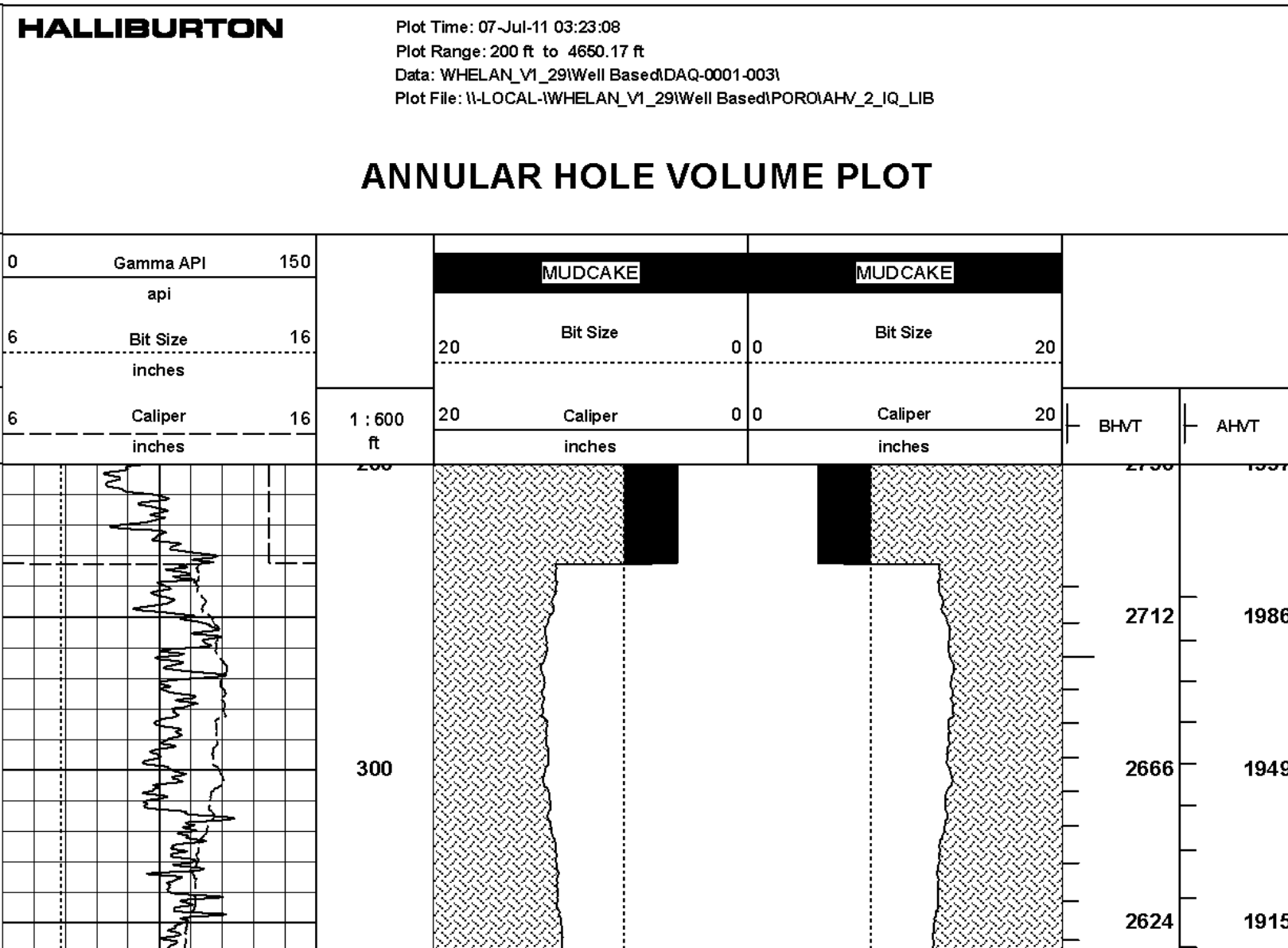
| HALLIBURTON                      |                                                         |            |             |                    |
|----------------------------------|---------------------------------------------------------|------------|-------------|--------------------|
| INPUTS, DELAYS AND FILTERS TABLE |                                                         |            |             |                    |
| Mnemonic                         | Input Description                                       | Delay (ft) | Filter Type | Filter Length (ft) |
| Depth Panel                      |                                                         |            |             |                    |
| TENS                             | Tension                                                 | 0.00       | NO          |                    |
| CH_HOS                           |                                                         |            |             |                    |
| DHTN                             | DownholeTension                                         | 0.00       | BLK         | 0.000              |
| SP Sub                           |                                                         |            |             |                    |
| PLTC                             | Plot Control Mask                                       | 50.81      | NO          |                    |
| SP                               | Spontaneous Potential                                   | 50.81      | BLK         | 1.250              |
| SPR                              | Raw Spontaneous Potential                               | 50.81      | NO          |                    |
| SPO                              | Spontaneous Potential Offset                            | 50.81      | NO          |                    |
| GTET                             |                                                         |            |             |                    |
| TPUL                             | Tension Pull                                            | 42.79      | NO          |                    |
| GR                               | Natural Gamma Ray API                                   | 42.79      | TRI         | 1.750              |
| GRU                              | Unfiltered Natural Gamma Ray API                        | 42.79      | NO          |                    |
| EGR                              | Natural Gamma Ray API with Enhanced Vertical Resolution | 42.79      | W           | 1.416 , 0.750      |
| ACCZ                             | Accelerometer Z                                         | 0.00       | BLK         | 0.083              |
| DEVI                             | Inclination                                             | 0.00       | NO          |                    |
| DSNT                             |                                                         |            |             |                    |
| TPUL                             | Tension Pull                                            | 32.54      | NO          |                    |
| RNDS                             | Near Detector Telemetry Counts                          | 32.64      | BLK         | 1.417              |
| RFDS                             | Far Detector Telemetry Counts                           | 33.39      | TRI         | 0.583              |
| DNTT                             | DSN Tool Temperature                                    | 32.64      | NO          |                    |
| DSNS                             | DSN Tool Status                                         | 32.54      | NO          |                    |
| ERND                             | Near Detector Telemetry Counts EVR                      | 32.64      | BLK         | 0.000              |
| ERFD                             | Far Detector Telemetry Counts EVR                       | 33.39      | BLK         | 0.000              |
| ENTM                             | DSN Tool Temperature EVR                                | 32.64      | NO          |                    |
| SDLT                             |                                                         |            |             |                    |
| TPUL                             | Tension Pull                                            | 22.64      | NO          |                    |
| NAB                              | Near Above                                              | 22.46      | BLK         | 0.920              |
| NHI                              | Near Cesium High                                        | 22.46      | BLK         | 0.920              |
| NLO                              | Near Cesium Low                                         | 22.46      | BLK         | 0.920              |
| NVA                              | Near Valley                                             | 22.46      | BLK         | 0.920              |
| NBA                              | Near Barite                                             | 22.46      | BLK         | 0.920              |
| NBS                              | Near Barium                                             | 22.46      | BLK         | 0.920              |

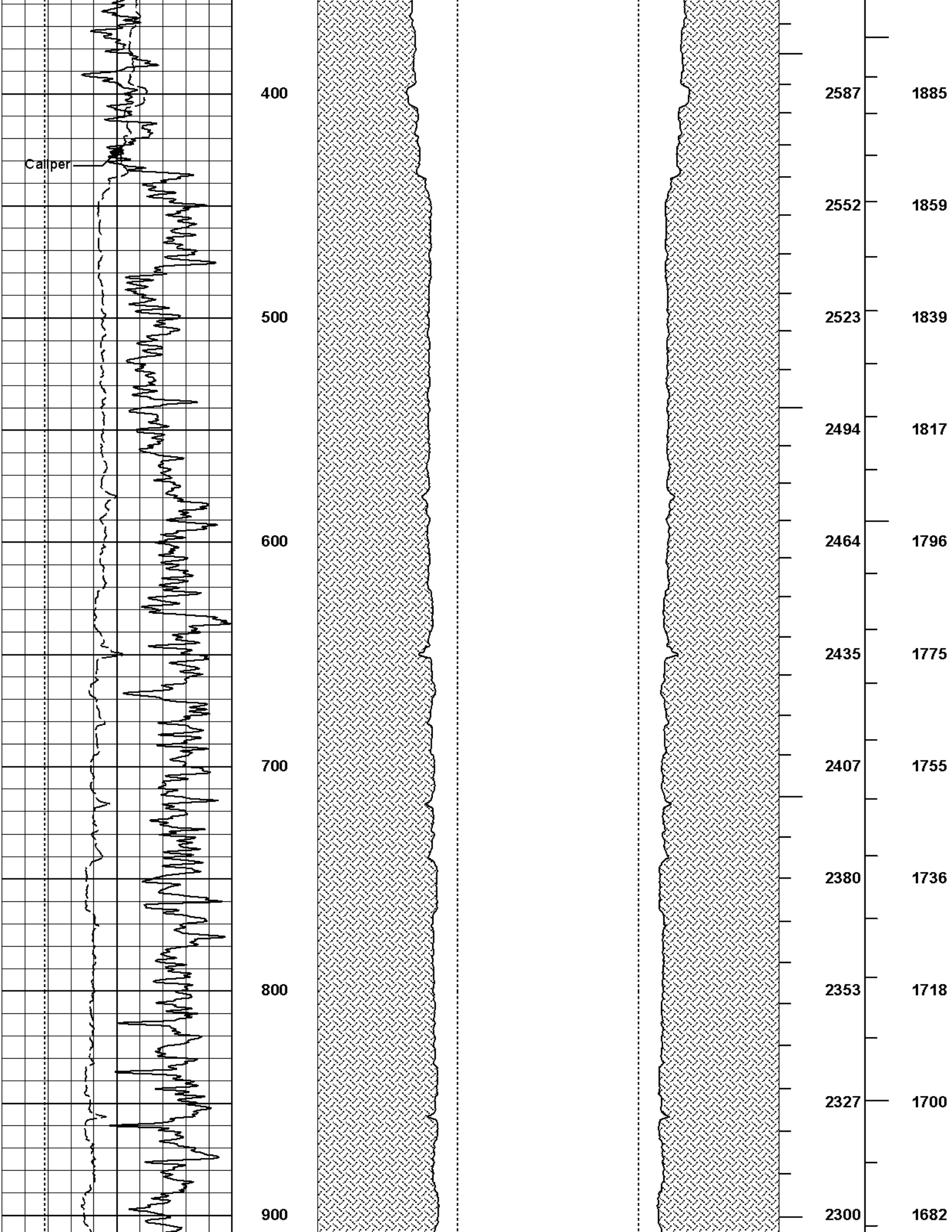
|      |                            |       |     |       |
|------|----------------------------|-------|-----|-------|
| NDE  | Near Density               | 22.46 | BLK | 0.920 |
| NPK  | Near Peak                  | 22.46 | BLK | 0.920 |
| NLI  | Near Lithology             | 22.46 | BLK | 0.920 |
| NBAU | Near Barite Unfiltered     | 22.46 | BLK | 0.250 |
| NLIU | Near Lithology Unfiltered  | 22.46 | BLK | 0.250 |
| FAB  | Far Above                  | 22.81 | BLK | 0.250 |
| FHI  | Far Cesium High            | 22.81 | BLK | 0.250 |
| FLO  | Far Cesium Low             | 22.81 | BLK | 0.250 |
| FVA  | Far Valley                 | 22.81 | BLK | 0.250 |
| FBA  | Far Barite                 | 22.81 | BLK | 0.250 |
| FDE  | Far Density                | 22.81 | BLK | 0.250 |
| FPK  | Far Peak                   | 22.81 | BLK | 0.250 |
| FLI  | Far Lithology              | 22.81 | BLK | 0.250 |
| PTMP | Pad Temperature            | 22.65 | BLK | 0.920 |
| NHV  | Near Detector High Voltage | 19.83 | NO  |       |
| FHV  | Far Detector High Voltage  | 19.83 | NO  |       |
| ITMP | Instrument Temperature     | 19.83 | NO  |       |
| DDHV | Detector High Voltage      | 19.83 | NO  |       |
| TPUL | Tension Pull               | 22.65 | NO  |       |
| PCAL | Pad Caliper                | 22.65 | TRI | 0.250 |
| ACAL | Arm Caliper                | 22.65 | TRI | 0.250 |
| TPUL | Tension Pull               | 22.83 | NO  |       |
| MINV | Microlog Lateral           | 22.83 | BLK | 0.750 |
| MNOR | Microlog Normal            | 22.83 | BLK | 0.750 |

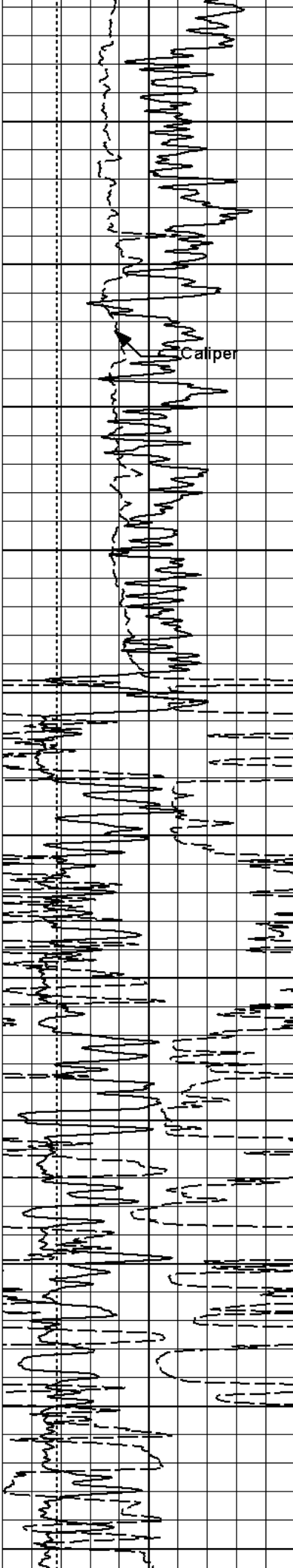
#### ACRt

|      |                           |      |     |       |
|------|---------------------------|------|-----|-------|
| TPUL | Tension Pull              | 2.97 | NO  |       |
| F1R1 | ACRT 12KHz - 80in R value | 9.22 | BLK | 0.000 |
| F1X1 | ACRT 12KHz - 80in X value | 9.22 | BLK | 0.000 |
| F1R2 | ACRT 12KHz - 50in R value | 6.72 | BLK | 0.000 |
| F1X2 | ACRT 12KHz - 50in X value | 6.72 | BLK | 0.000 |
| F1R3 | ACRT 12KHz - 29in R value | 5.22 | BLK | 0.000 |
| F1X3 | ACRT 12KHz - 29in X value | 5.22 | BLK | 0.000 |
| F1R4 | ACRT 12KHz - 17in R value | 4.22 | BLK | 0.000 |
| F1X4 | ACRT 12KHz - 17in X value | 4.22 | BLK | 0.000 |
| F1R5 | ACRT 12KHz - 10in R value | 3.72 | BLK | 0.000 |
| F1X5 | ACRT 12KHz - 10in X value | 3.72 | BLK | 0.000 |
| F1R6 | ACRT 12KHz - 6in R value  | 3.47 | BLK | 0.000 |
| F1X6 | ACRT 12KHz - 6in X value  | 3.47 | BLK | 0.000 |
| F2R1 | ACRT 36KHz - 80in R value | 9.22 | BLK | 0.000 |
| F2X1 | ACRT 36KHz - 80in X value | 9.22 | BLK | 0.000 |
| F2R2 | ACRT 36KHz - 50in R value | 6.72 | BLK | 0.000 |
| F2X2 | ACRT 36KHz - 50in X value | 6.72 | BLK | 0.000 |
| F2R3 | ACRT 36KHz - 29in R value | 5.22 | BLK | 0.000 |
| F2X3 | ACRT 36KHz - 29in X value | 5.22 | BLK | 0.000 |
| F2R4 | ACRT 36KHz - 17in R value | 4.22 | BLK | 0.000 |
| F2X4 | ACRT 36KHz - 17in X value | 4.22 | BLK | 0.000 |
| F2R5 | ACRT 36KHz - 10in R value | 3.72 | BLK | 0.000 |
| F2X5 | ACRT 36KHz - 10in X value | 3.72 | BLK | 0.000 |
| F2R6 | ACRT 36KHz - 6in R value  | 3.47 | BLK | 0.000 |
| F2X6 | ACRT 36KHz - 6in X value  | 3.47 | BLK | 0.000 |
| F3R1 | ACRT 72KHz - 80in R value | 9.22 | BLK | 0.000 |
| F3X1 | ACRT 72KHz - 80in X value | 9.22 | BLK | 0.000 |
| F3R2 | ACRT 72KHz - 50in R value | 6.72 | BLK | 0.000 |
| F3X2 | ACRT 72KHz - 50in X value | 6.72 | BLK | 0.000 |
| F3R3 | ACRT 72KHz - 29in R value | 5.22 | BLK | 0.000 |

|                                                      |                                               |       |     |                          |
|------------------------------------------------------|-----------------------------------------------|-------|-----|--------------------------|
| F3X3                                                 | ACRT 72KHz - 29in X value                     | 5.22  | BLK | 0.000                    |
| F3R4                                                 | ACRT 72KHz - 17in R value                     | 4.22  | BLK | 0.000                    |
| F3X4                                                 | ACRT 72KHz - 17in X value                     | 4.22  | BLK | 0.000                    |
| F3R5                                                 | ACRT 72KHz - 10in R value                     | 3.72  | BLK | 0.000                    |
| F3X5                                                 | ACRT 72KHz - 10in X value                     | 3.72  | BLK | 0.000                    |
| F3R6                                                 | ACRT 72KHz - 6in R value                      | 3.47  | BLK | 0.000                    |
| F3X6                                                 | ACRT 72KHz - 6in X value                      | 3.47  | BLK | 0.000                    |
| RMUD                                                 | Mud Resistivity                               | 12.76 | BLK | 0.000                    |
| F1RT                                                 | Transmitter Reference 12 KHz Real Signal      | 2.97  | BLK | 0.000                    |
| F1XT                                                 | Transmitter Reference 12 KHz Imaginary Signal | 2.97  | BLK | 0.000                    |
| F2RT                                                 | Transmitter Reference 36 KHz Real Signal      | 2.97  | BLK | 0.000                    |
| F2XT                                                 | Transmitter Reference 36 KHz Imaginary Signal | 2.97  | BLK | 0.000                    |
| F3RT                                                 | Transmitter Reference 72 KHz Real Signal      | 2.97  | BLK | 0.000                    |
| F3XT                                                 | Transmitter Reference 72 KHz Imaginary Signal | 2.97  | BLK | 0.000                    |
| TFPU                                                 | Upper Feedpipe Temperature Calculated         | 2.97  | BLK | 0.000                    |
| TFPL                                                 | Lower Feedpipe Temperature Calculated         | 2.97  | BLK | 0.000                    |
| ITMP                                                 | Instrument Temperature                        | 2.97  | BLK | 0.000                    |
| TCVA                                                 | Temperature Correction Values Loop Off        | 2.97  | NO  |                          |
| TIDV                                                 | Instrument Temperature Derivative             | 2.97  | NO  |                          |
| TUDV                                                 | Upper Temperature Derivative                  | 2.97  | NO  |                          |
| TLDV                                                 | Lower Temperature Derivative                  | 2.97  | NO  |                          |
| TRBD                                                 | Receiver Board Temperature                    | 2.97  | NO  |                          |
| Data: WHELAN_V1_29\0001 SP-GTET-DSN-SDL-ACRT-CH\IDLE |                                               |       |     | Date: 07-Jul-11 00:12:42 |







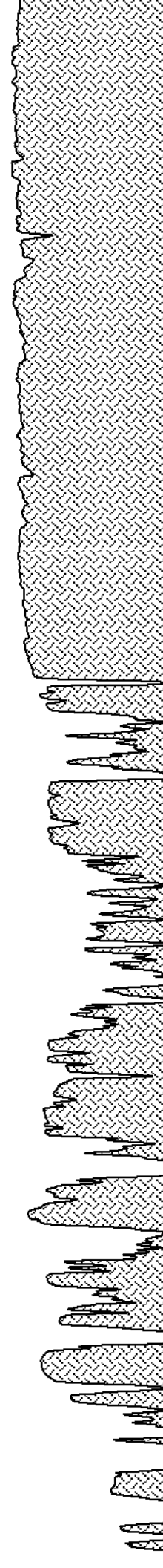
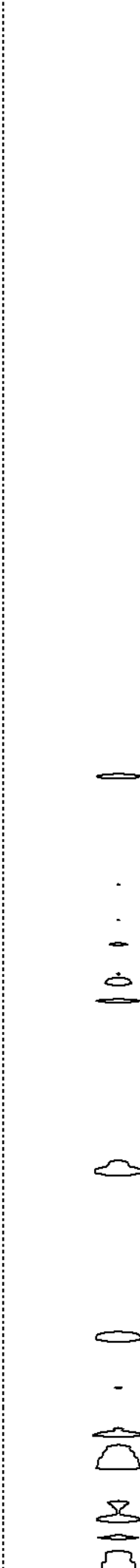
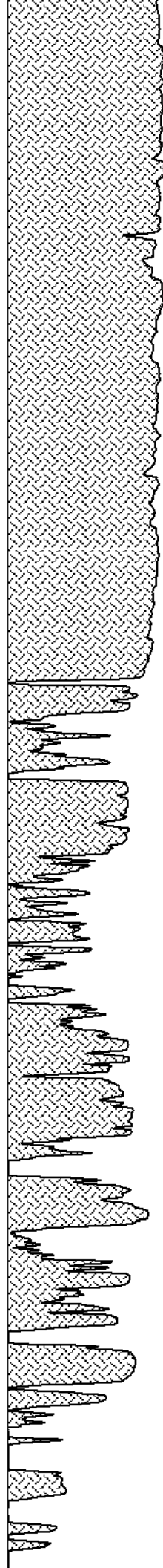
1000

1100

1200

1300

1400



2275

2249

2223

2195

2164

2105

2030

1972

1903

1844

1744

1665

1647

1629

1610

1586

1535

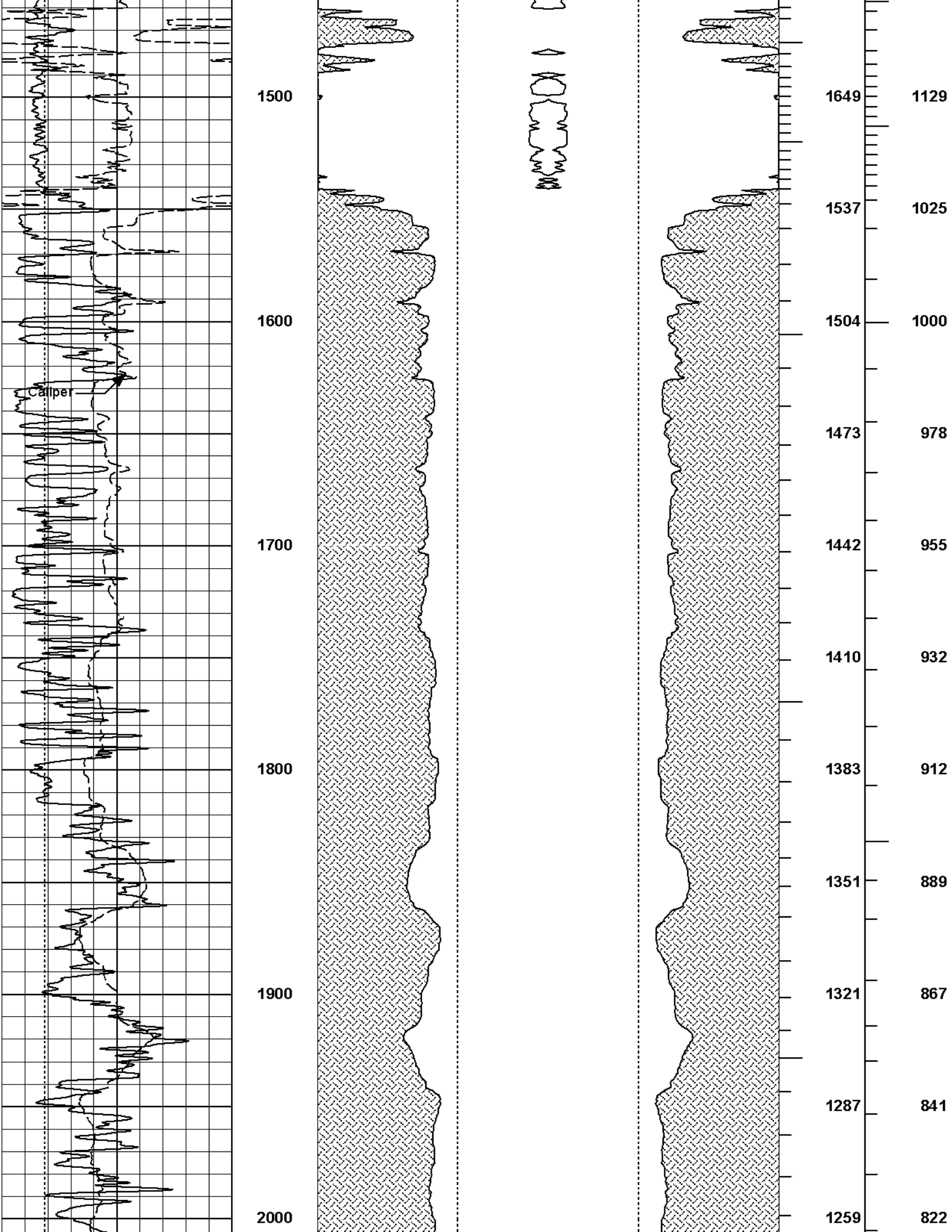
1469

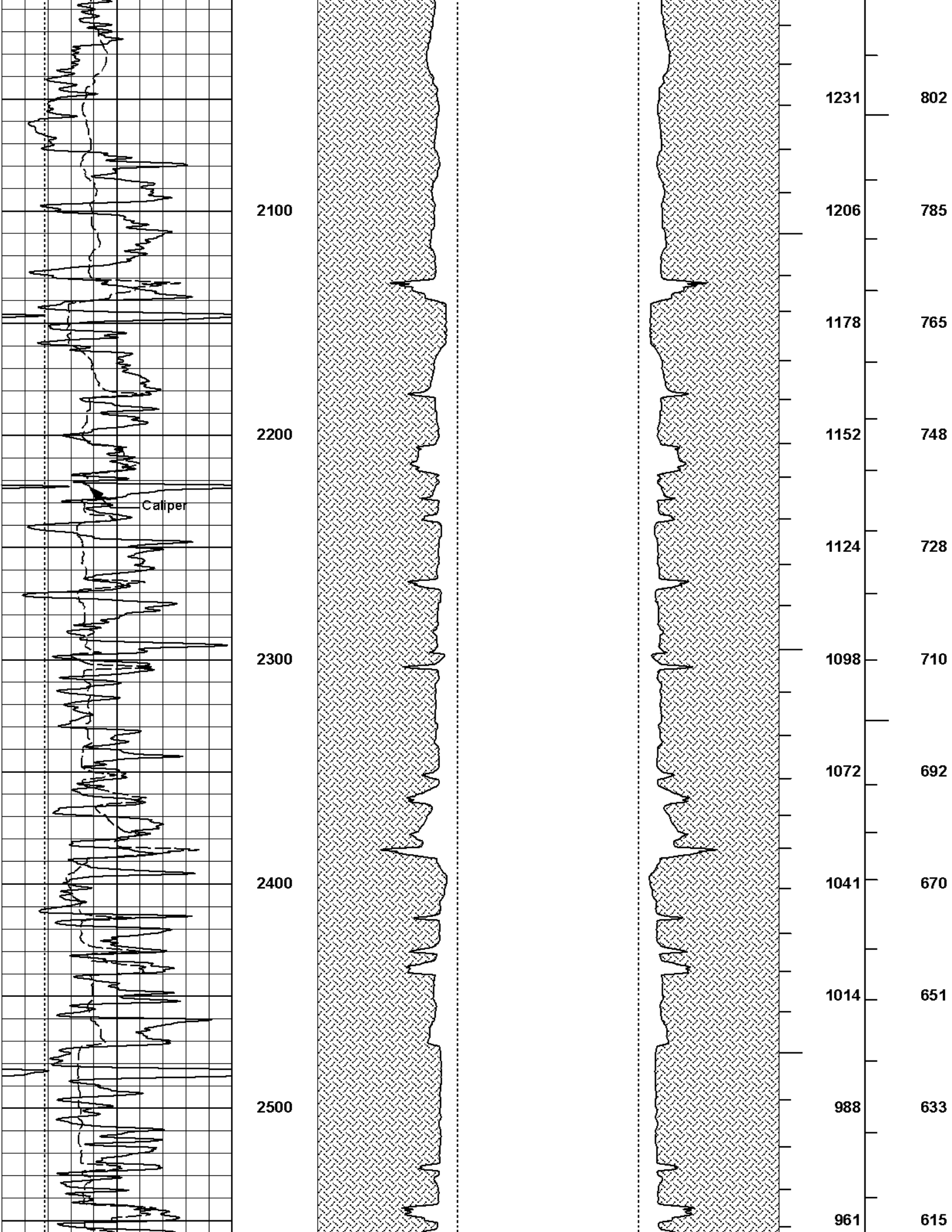
1419

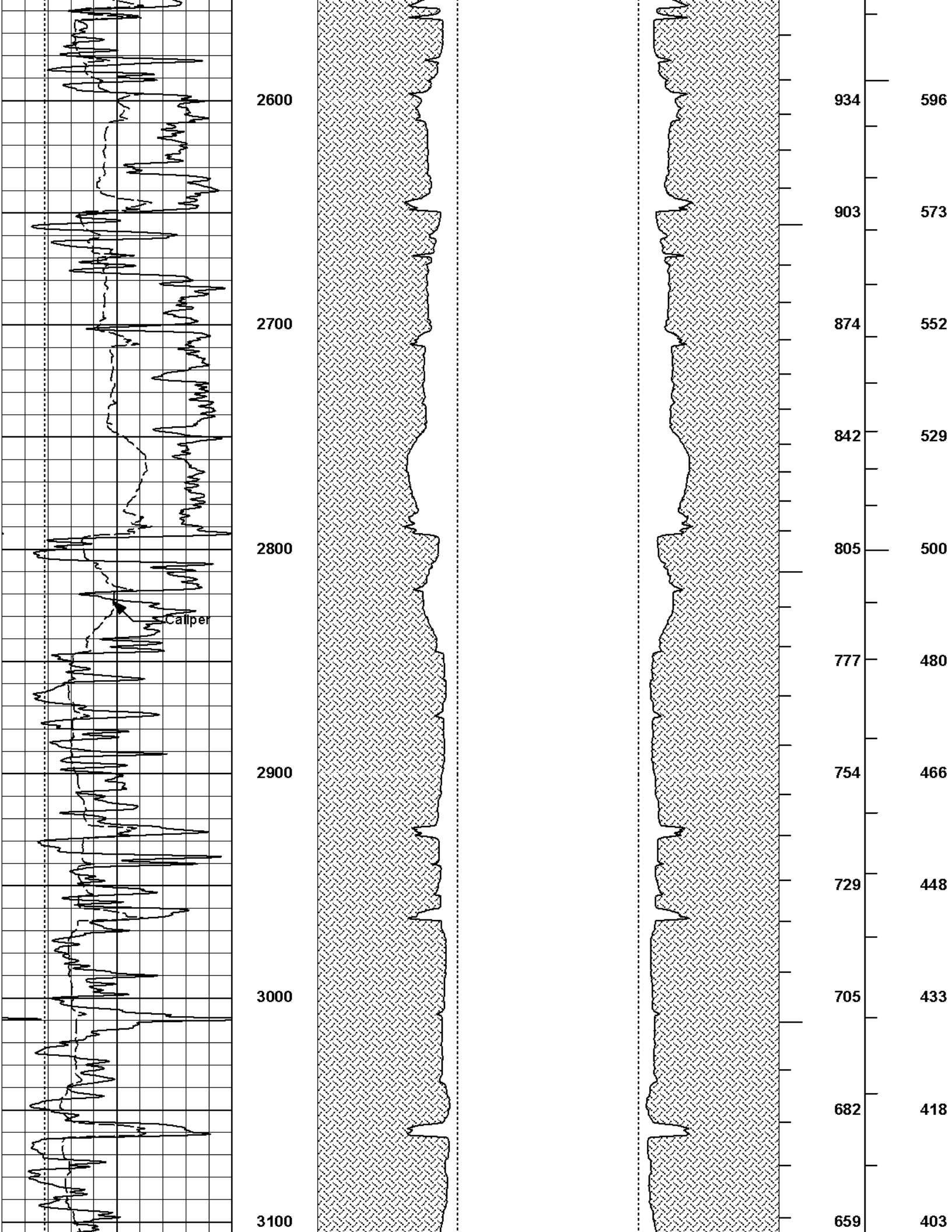
1359

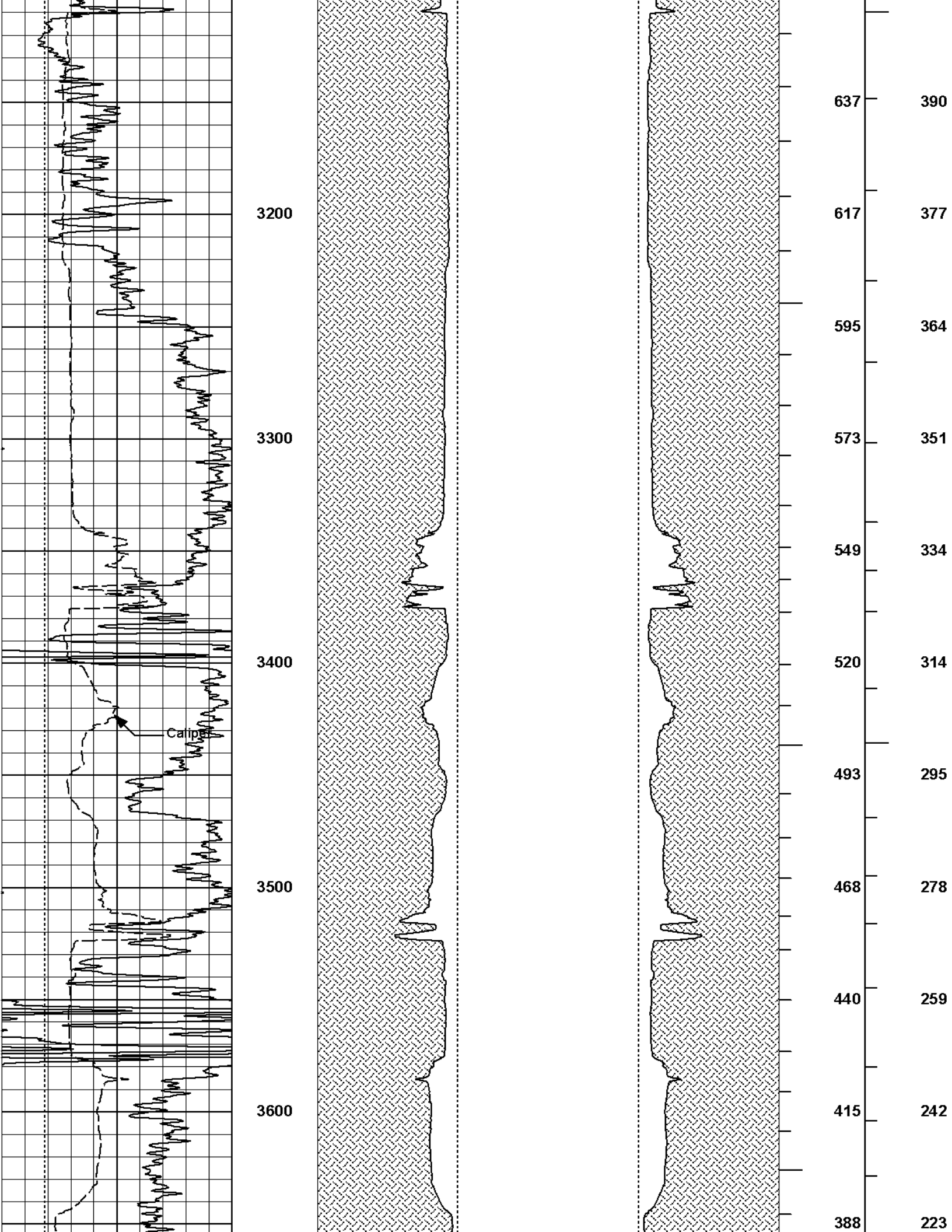
1307

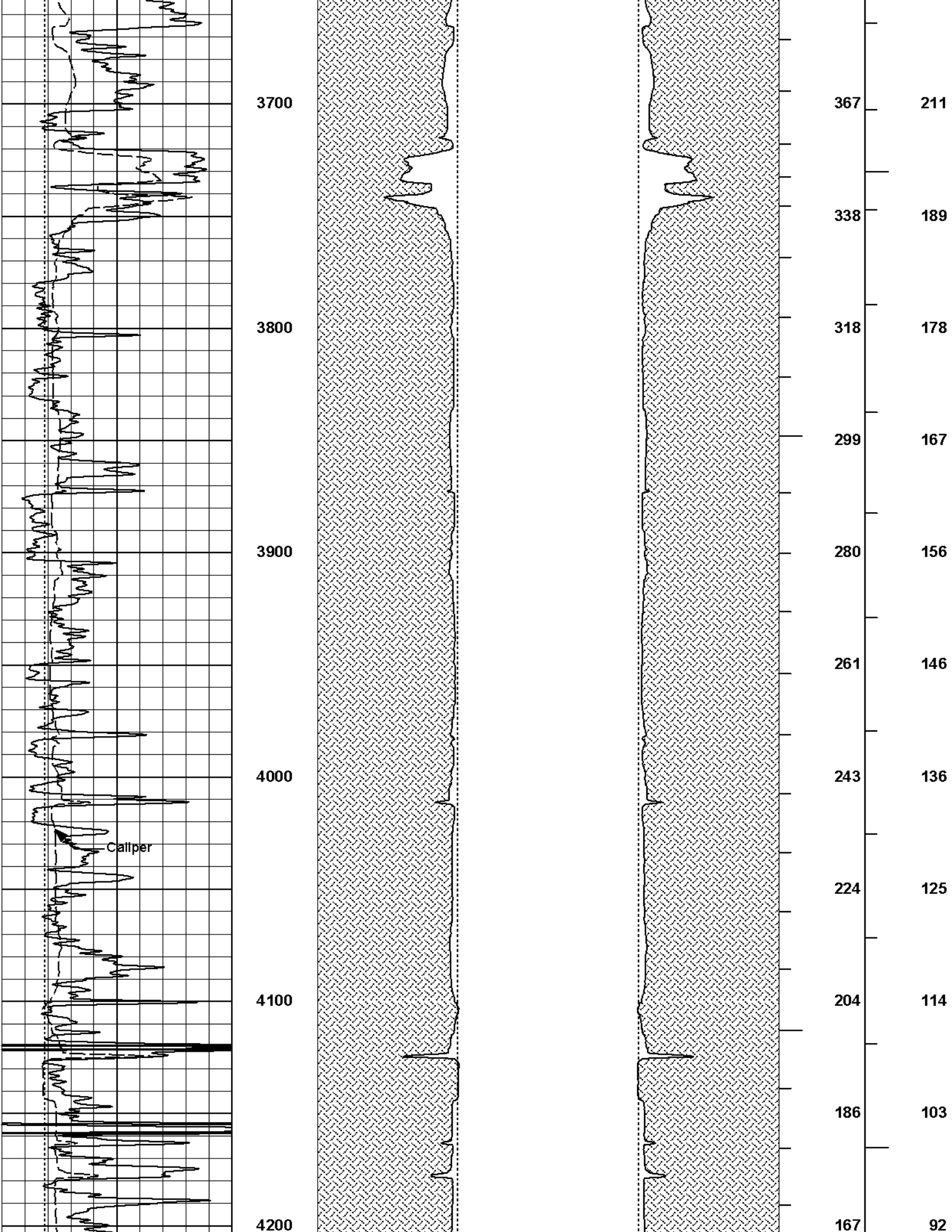
1216

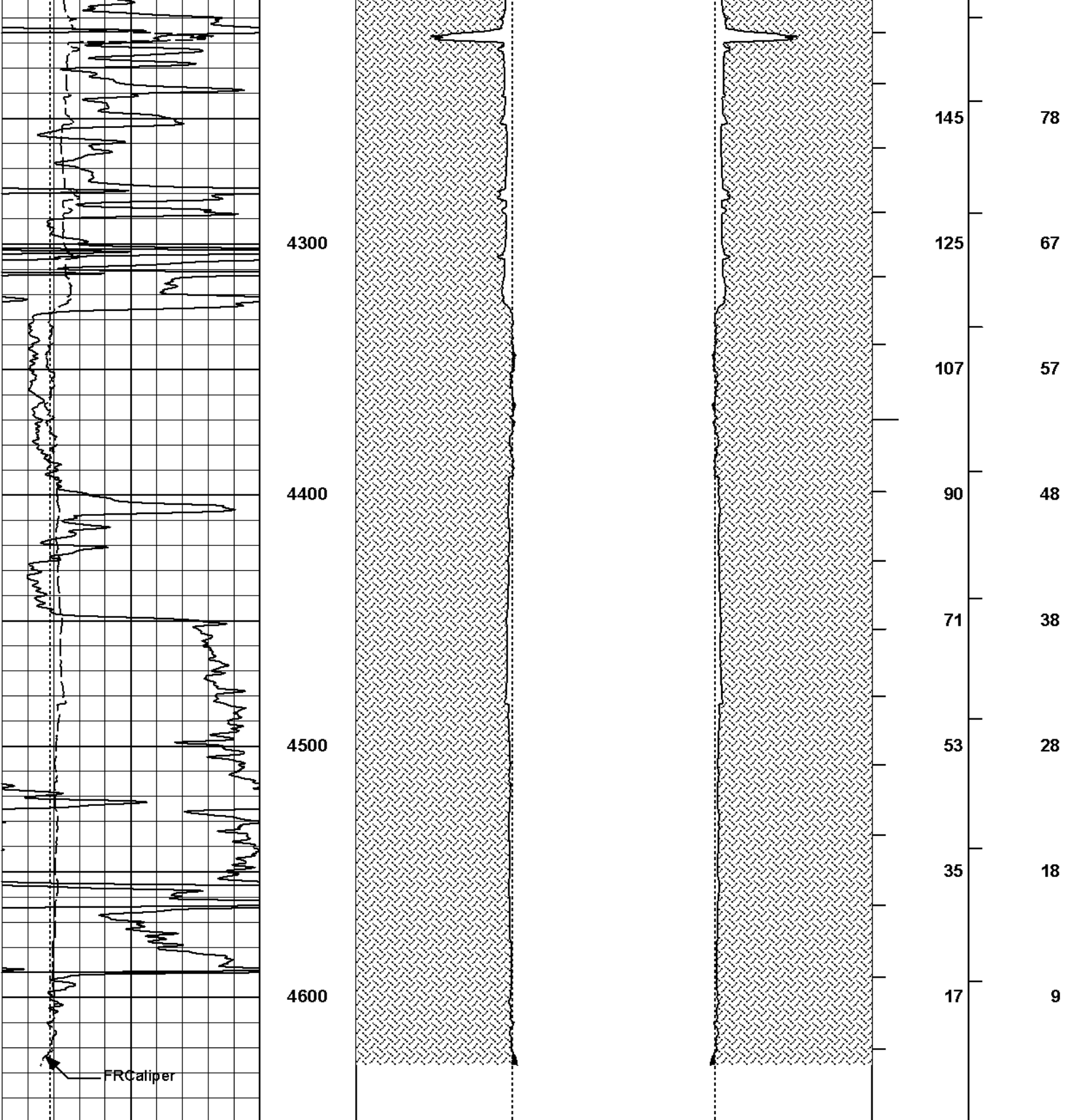












|   |           |     |               |    |          |     |         |      |      |
|---|-----------|-----|---------------|----|----------|-----|---------|------|------|
| 6 | Caliper   | 16  | 1 : 600<br>ft | 20 | Caliper  | 0 0 | 20      | BHVT | AHVT |
|   | inches    |     |               |    | inches   |     |         |      |      |
| 6 | Bit Size  | 16  |               | 20 | Bit Size | 0 0 | 20      |      |      |
|   | inches    |     |               |    |          |     |         |      |      |
| 0 | Gamma API | 150 |               |    |          |     |         |      |      |
|   | api       |     |               |    |          |     |         |      |      |
|   |           |     |               |    | MUDCAKE  |     | MUDCAKE |      |      |

HALLIBURTON

Plot Time: 07-Jul-11 03:23:14  
Plot Range: 200 ft to 4650.17 ft  
Data: WHELAN\_V1\_29\Well Based\DAQ-0001-003\

# ANNULAR HOLE VOLUME PLOT

|             |                |                                                |        |
|-------------|----------------|------------------------------------------------|--------|
| COMPANY     | VAL ENERGY INC |                                                |        |
| WELL        | WHELAN V1-29   |                                                |        |
| FIELD       | UNKNOWN        |                                                |        |
| COUNTY      | BARBER         | STATE                                          | KANSAS |
| HALLIBURTON |                | SPECTRAL DENSITY<br>DUAL SPACED NEUTRON<br>LOG |        |