

# HALLIBURTON

## SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

|                          |                         |                           |                      |
|--------------------------|-------------------------|---------------------------|----------------------|
| COMPANY                  |                         | EOG RESOURCES             |                      |
| WELL                     |                         | CYNTHIA 35-3              |                      |
| FIELD                    |                         | WILDCAT                   |                      |
| COUNTY                   |                         | STEVENS                   |                      |
| STATE                    |                         | KANSAS                    |                      |
| Permanent Datum          | GL                      | Elev. 3191.0 ft           | Elev. K.B. 3203.0 ft |
| Log measured from        | KB                      |                           | D.F. 3202.0 ft       |
| Drilling measured from   | KB                      | 12.0 ft above perm. Datum | GL. 3191.0 ft        |
| Date                     | 19-Nov-10               |                           |                      |
| Run No.                  | 1                       |                           |                      |
| Depth - Driller          | 6200.00 ft              |                           |                      |
| Depth - Logger           | 6203.0 ft               |                           |                      |
| Bottom - Logged Interval | 6165.0 ft               |                           |                      |
| Top - Logged Interval    | 3050.0 ft               |                           |                      |
| Casing - Driller         | 8.625 in @ 1736.0 ft    |                           |                      |
| Casing - Logger          | 1736.0 ft               |                           |                      |
| Bit Size                 | 7.875 in                |                           |                      |
| Type Fluid in Hole       | WATER BASED MUD         |                           |                      |
| Density                  | 8.9 ppg                 | 51.00 s/cf                |                      |
| PH                       | 9.60 pH                 | 6.4 qpm                   |                      |
| Source of Sample         | MUD PIT                 |                           |                      |
| Rm @ Meas. Temperature   | 1.250 ohmm @ 70.00 degF |                           |                      |
| Rmf @ Meas. Temperature  | 1.06 ohmm @ 70.00 degF  |                           |                      |
| Rmc @ Meas. Temperature  | 1.500 ohmm @ 70.00 degF |                           |                      |
| Source Rmf               | MEAS.                   |                           |                      |
| Rm @ BHT                 | 0.81 ohmm @ 135.0 degF  |                           |                      |
| Time Since Circulation   | 4.0 hr                  |                           |                      |
| Time on Bottom           | 19-Nov-10 09:11         |                           |                      |
| Max. Rec. Temperature    | 135.0 degF @ 6203.0 ft  |                           |                      |
| Equipment                | 10546696                | LIBERAL                   |                      |
| Recorded By              | J. BOSCH                |                           |                      |
| Witnessed By             | J. SESSIONS             | S. MUELLER                |                      |

COMPANY EOG RESOURCES  
WELL CYNTHIA 35-3  
FIELD WILDCAT  
COUNTY STEVENS  
STATE KANSAS

API No. 15-189-22759  
Location 1225' FNL & 2130' FEL

Other Services:  
ACRT  
MICRO  
BSAT

Fold here

Service Ticket No.: 7780058      API Serial No.: 15-189-22759      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.         | 1103960 | Serial No.   |  | Serial No.  | 143_M69 | Serial No.  | 11019643 |
| 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     | 3050  | 6165 | REC    | 0     | 150      |       |   |         | 30%   | -10% | 2.71    | 30%   | -10% | LIME   |
|         |       |      |        |       |          |       |   |         |       |      |         |       |      |        |
|         |       |      |        |       |          |       |   |         |       |      |         |       |      |        |

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 AND 4.5 INCH CASING

CHLORIDES: 800 MG/L LCM: 12

GPS COORDINATES: LAT: 37°18 N LONG: 101° 31 W

TODAY'S CREW: K. KELLY, C. PARKER

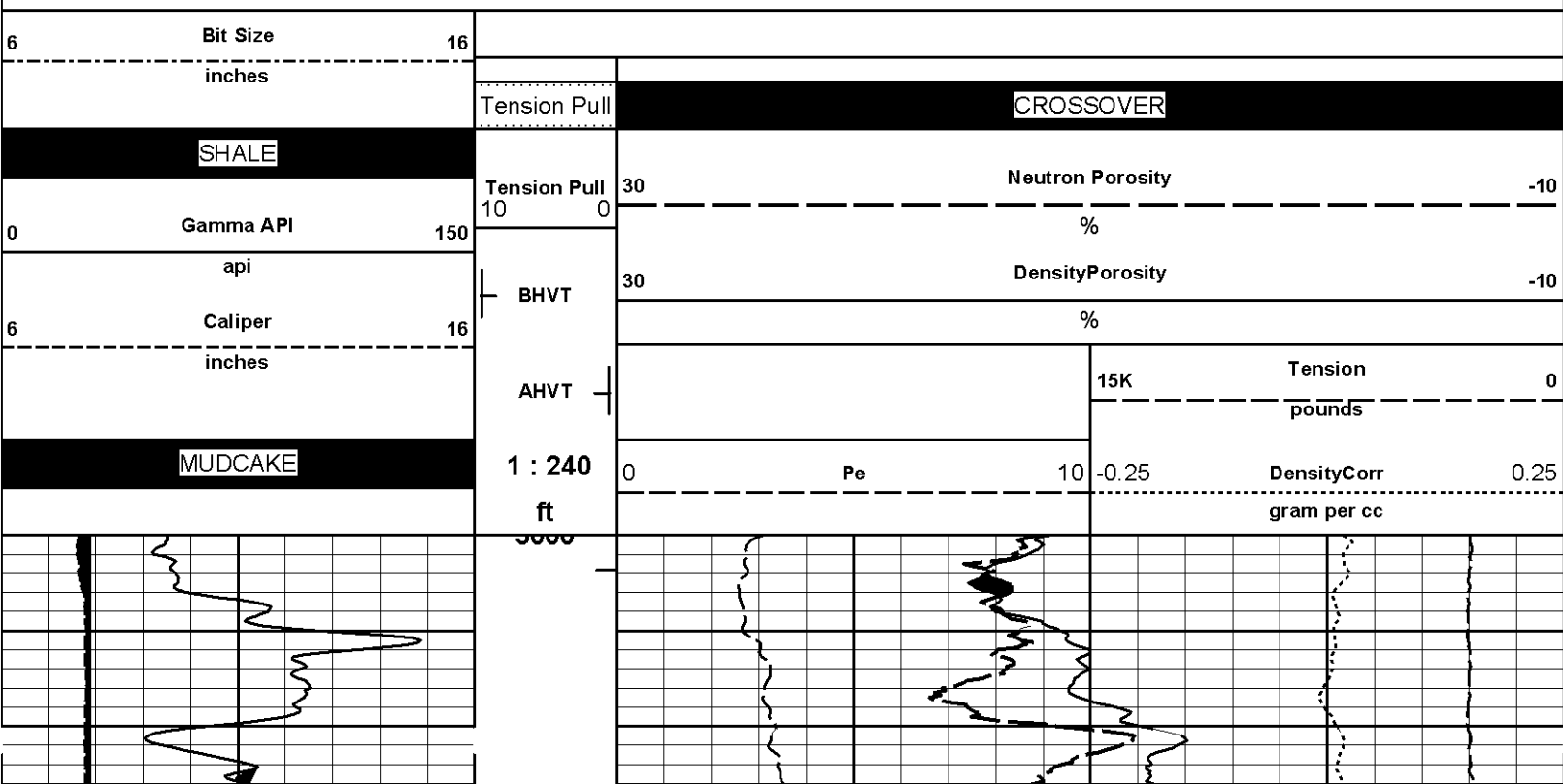
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, LIBERAL, KS 620-624-8123

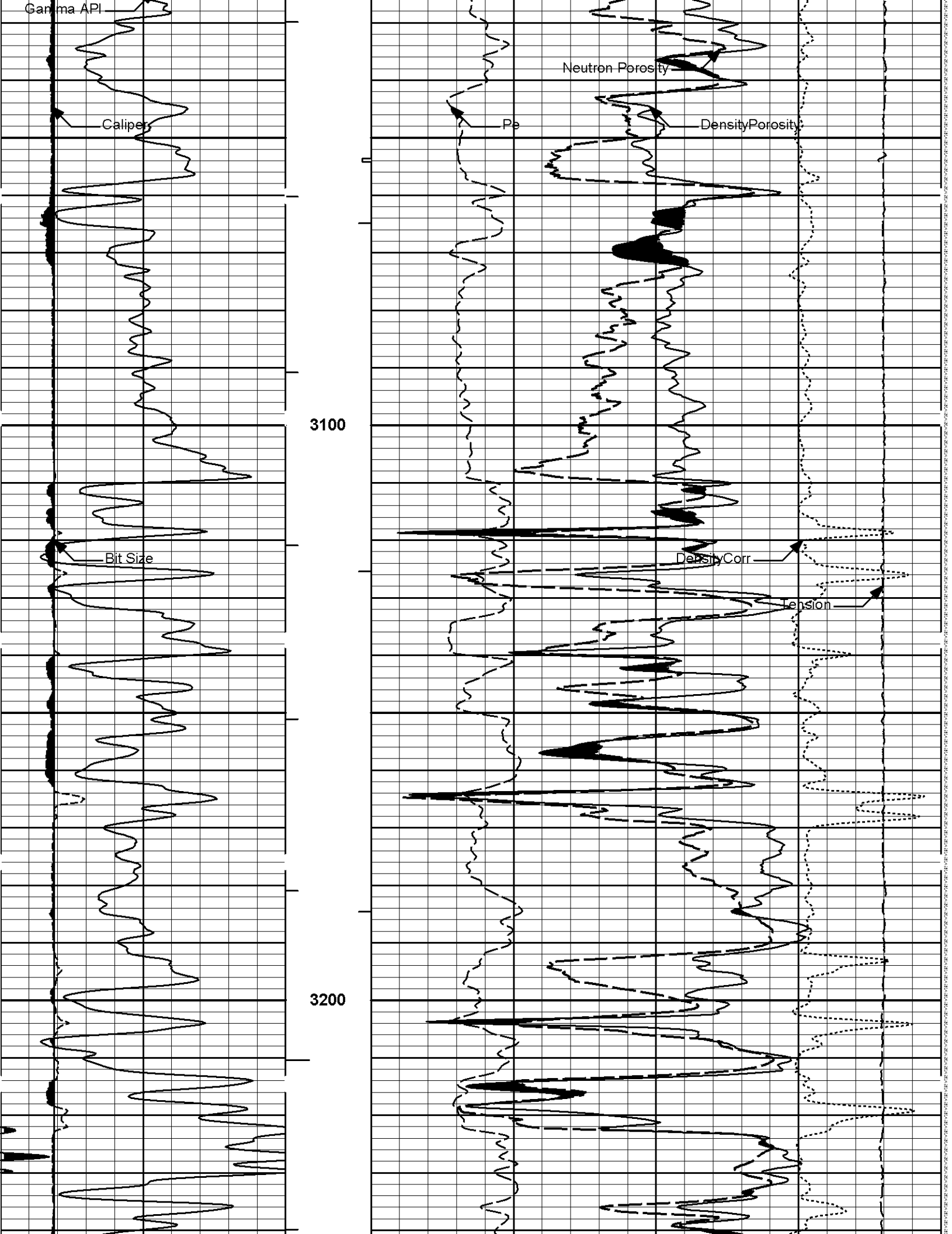
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR 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.

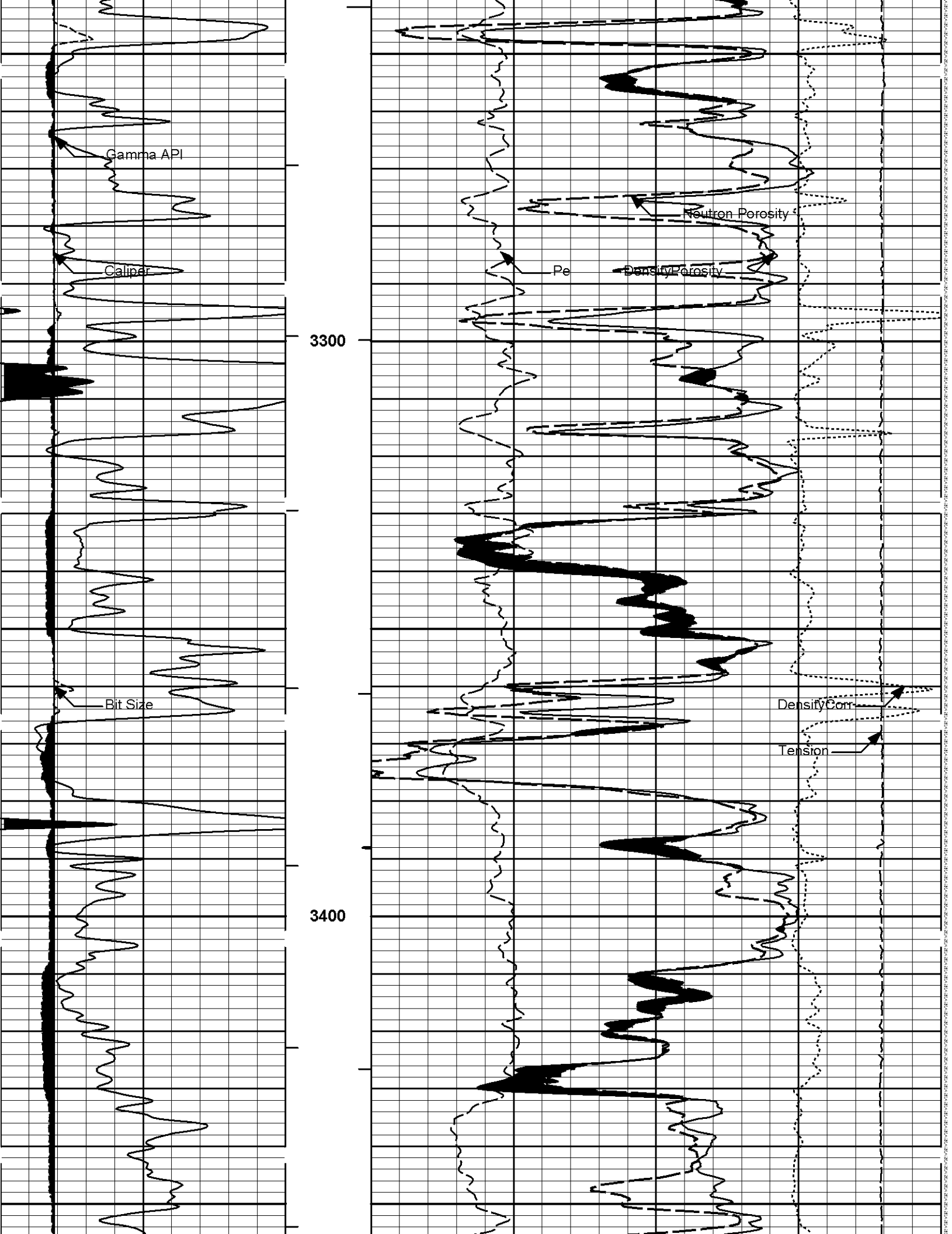
HALLIBURTON

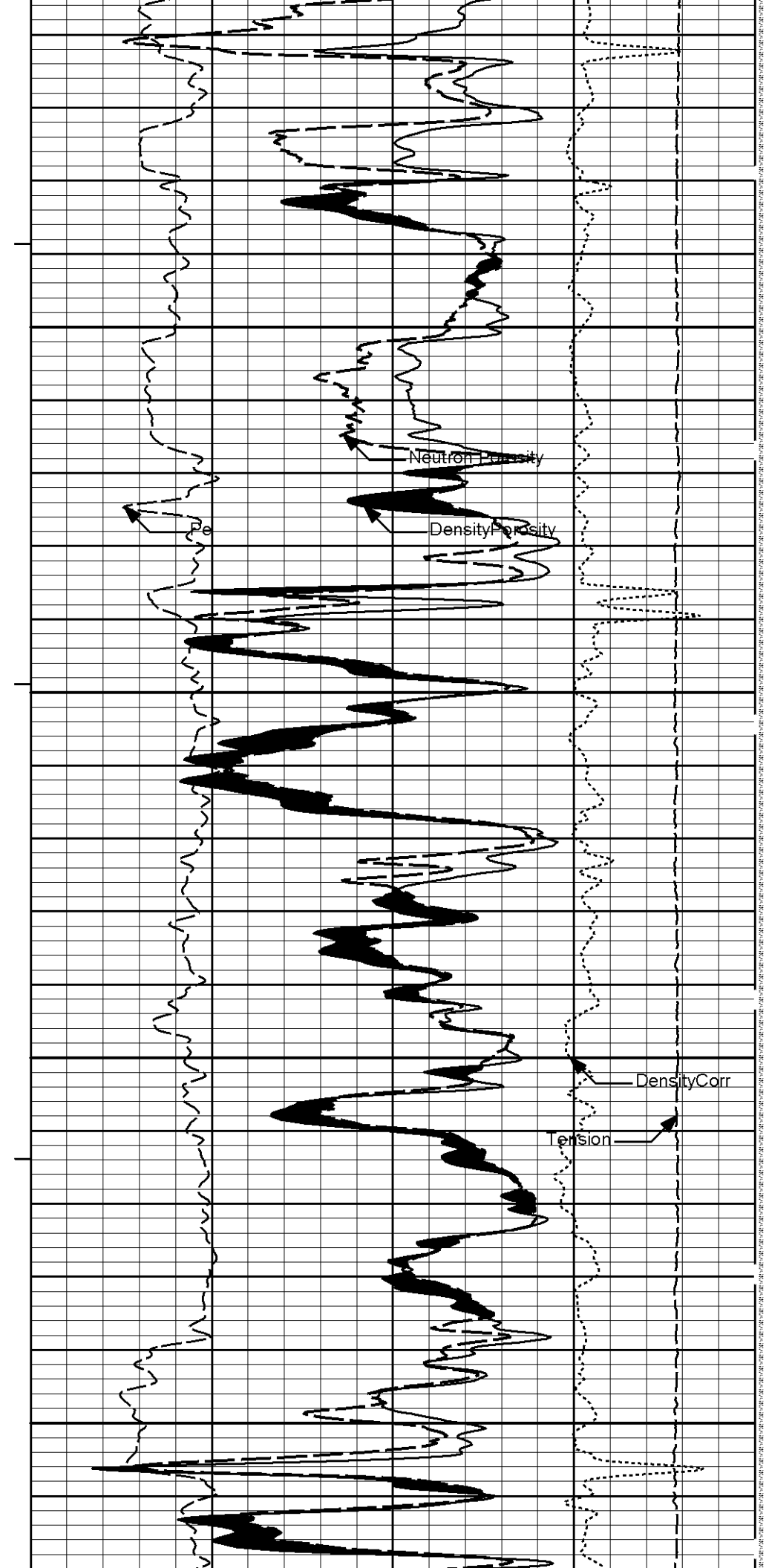
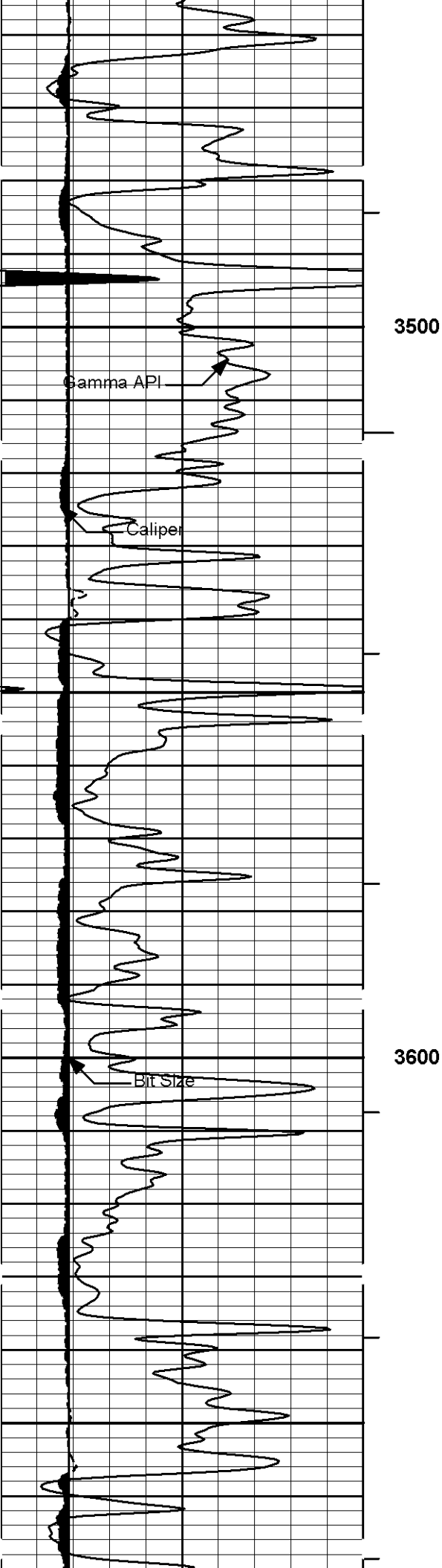
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 Plot Range: 3000 ft to 6207.5 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-003\  
 Plot File: \\PORO\EOG\_Poro\_IQ\_5\_MAIN\_LIB

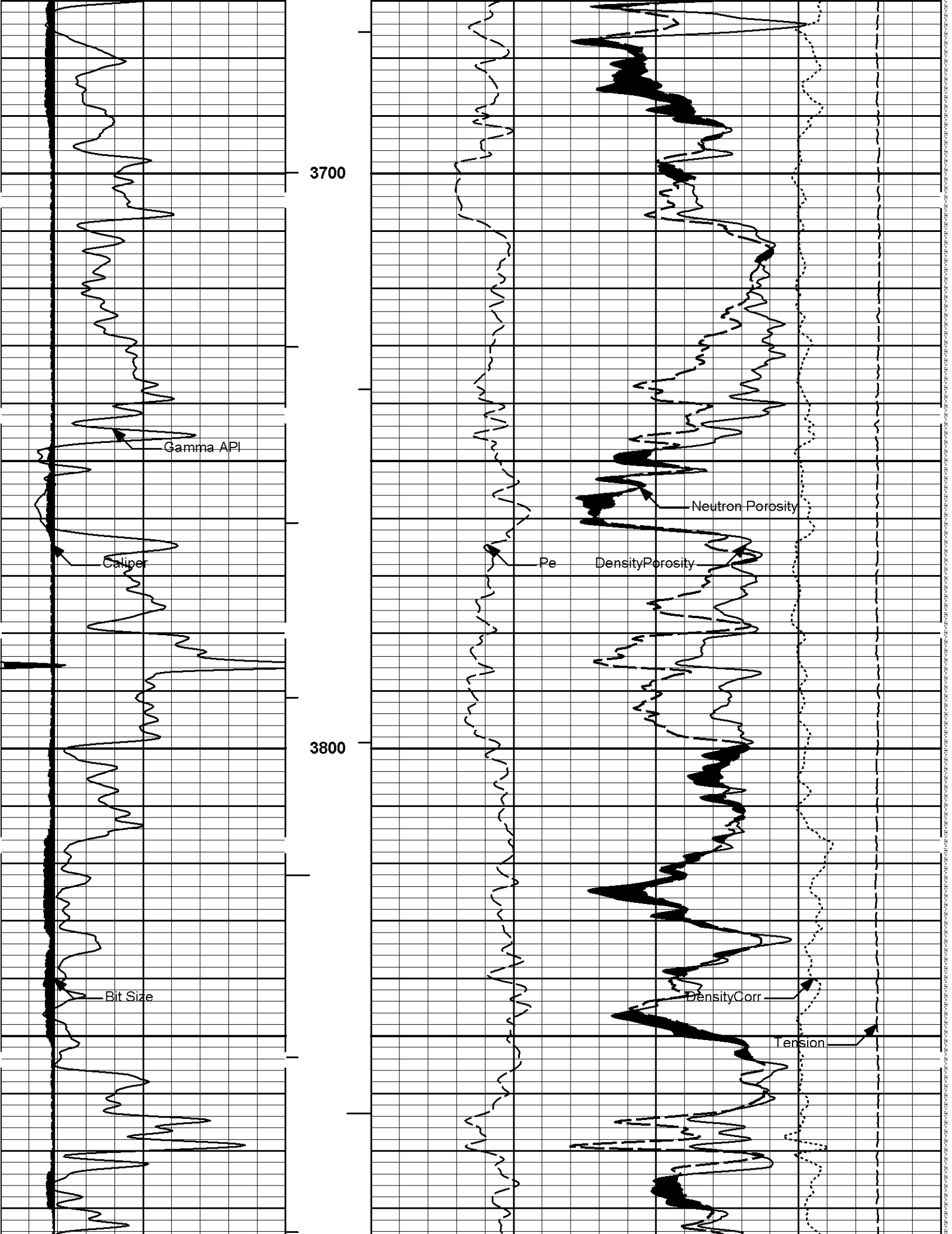
# 5 INCH MAIN LOG

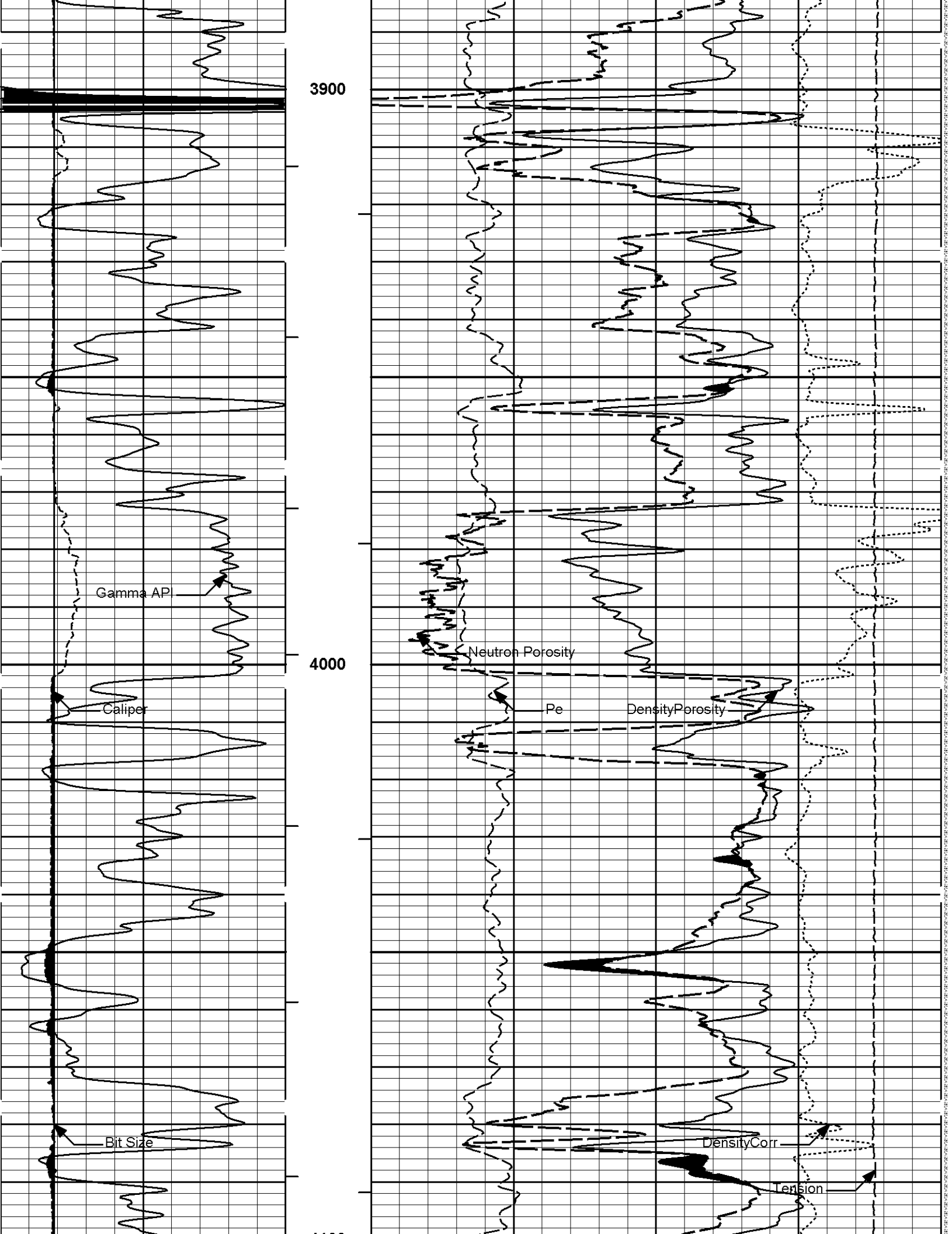


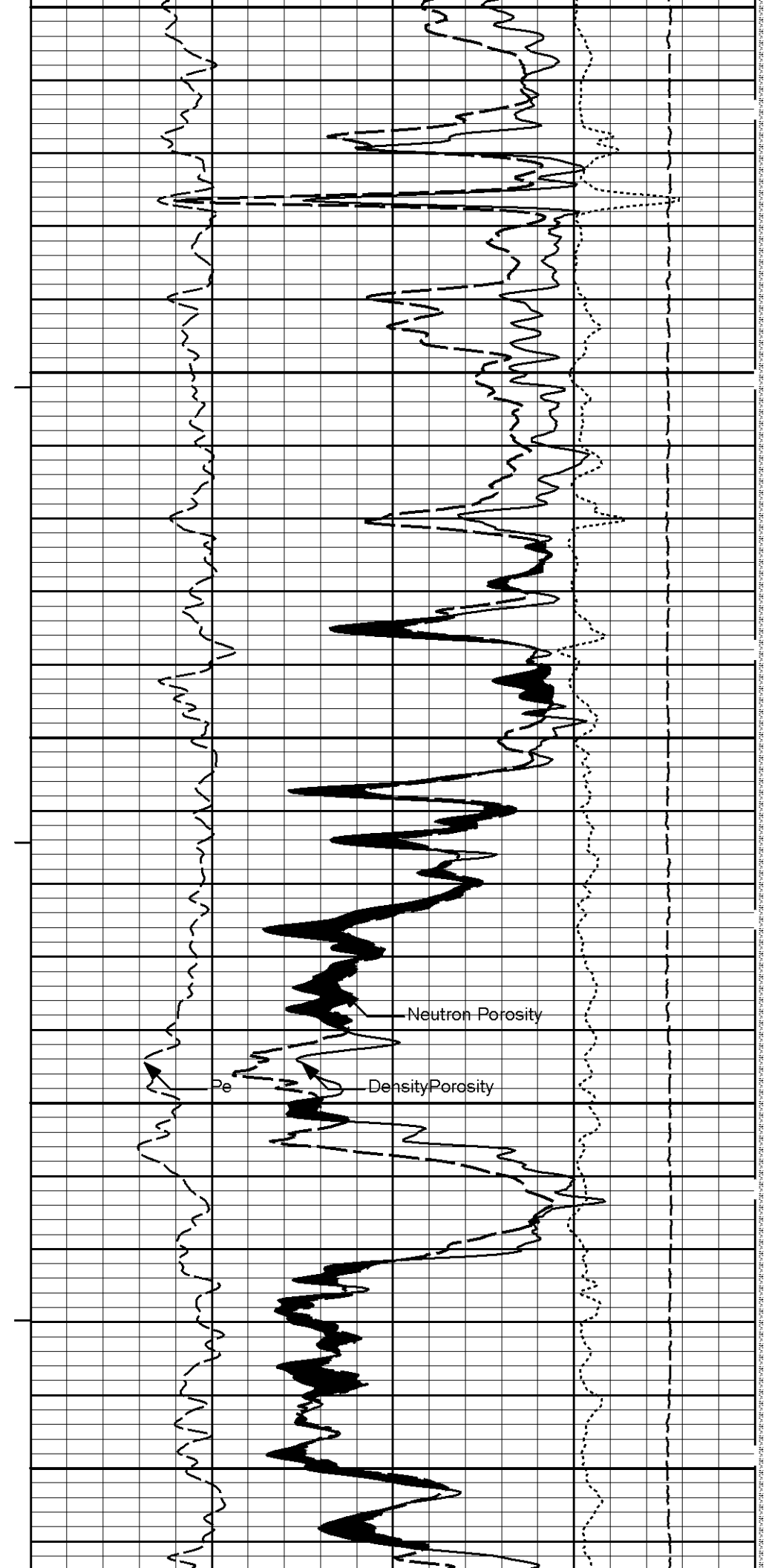
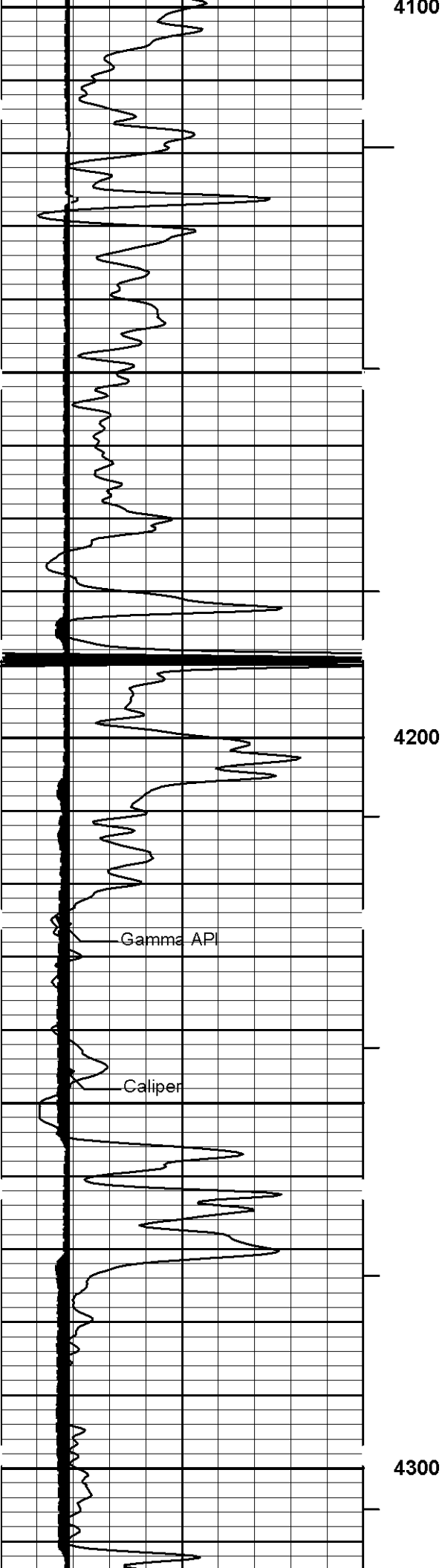


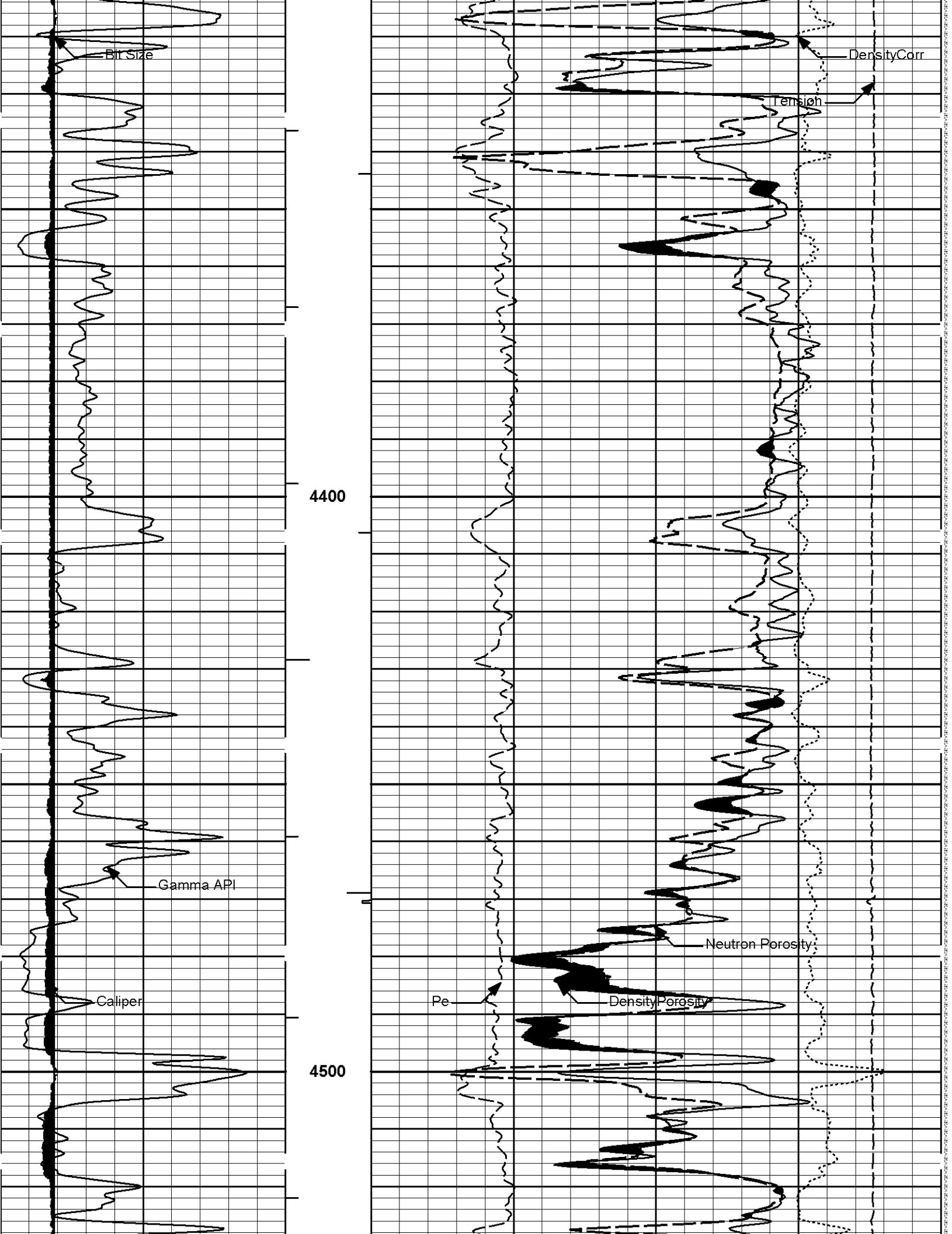


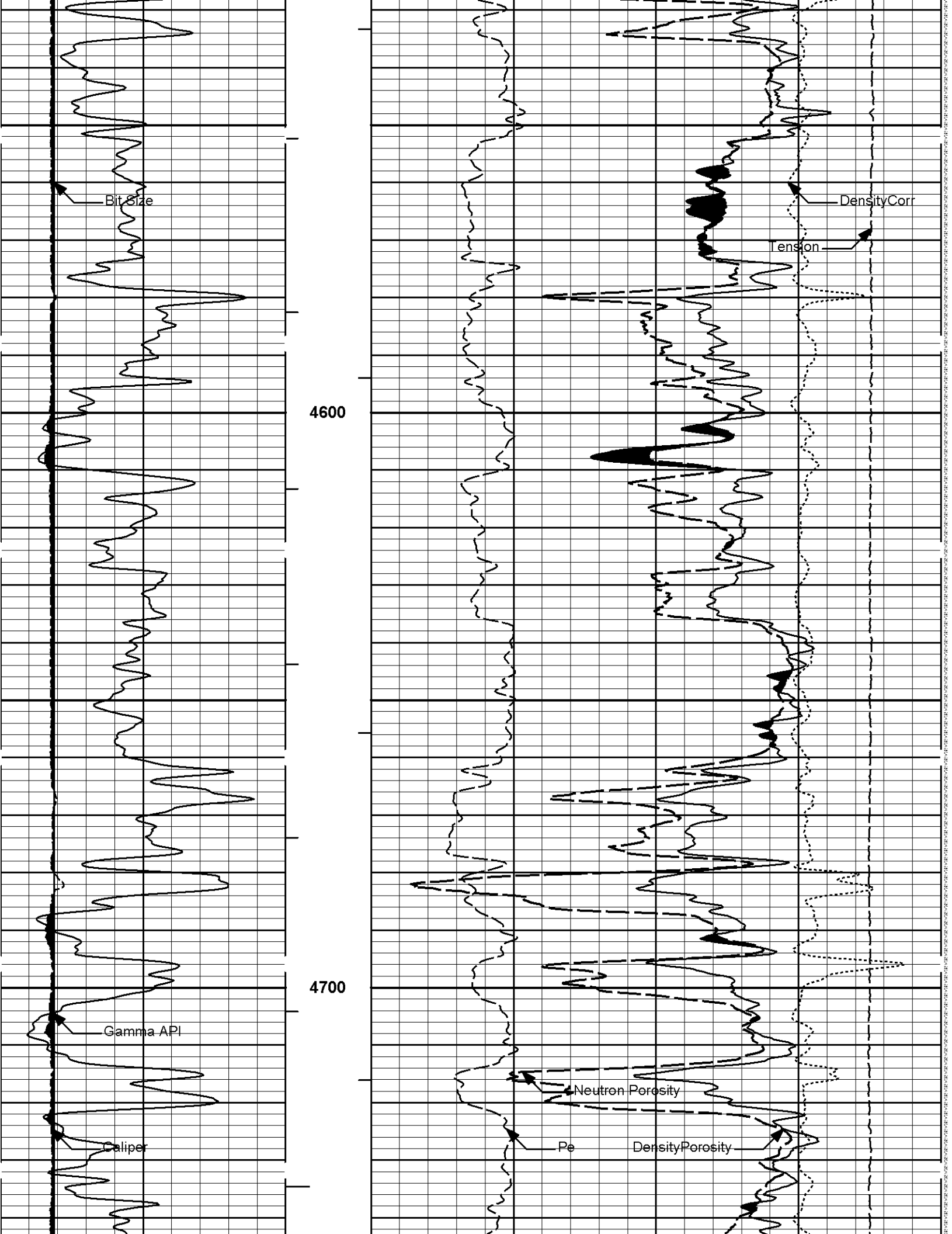


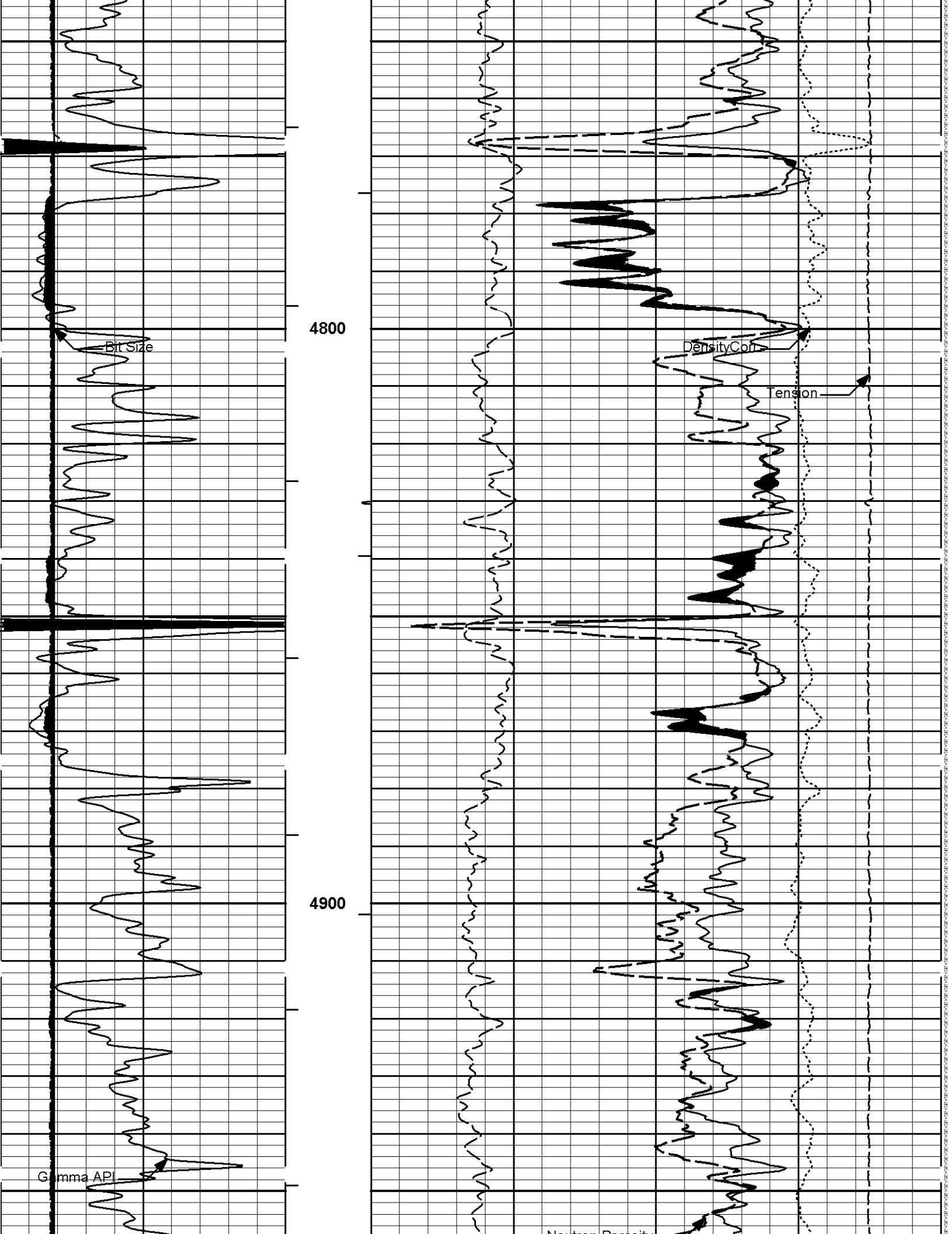


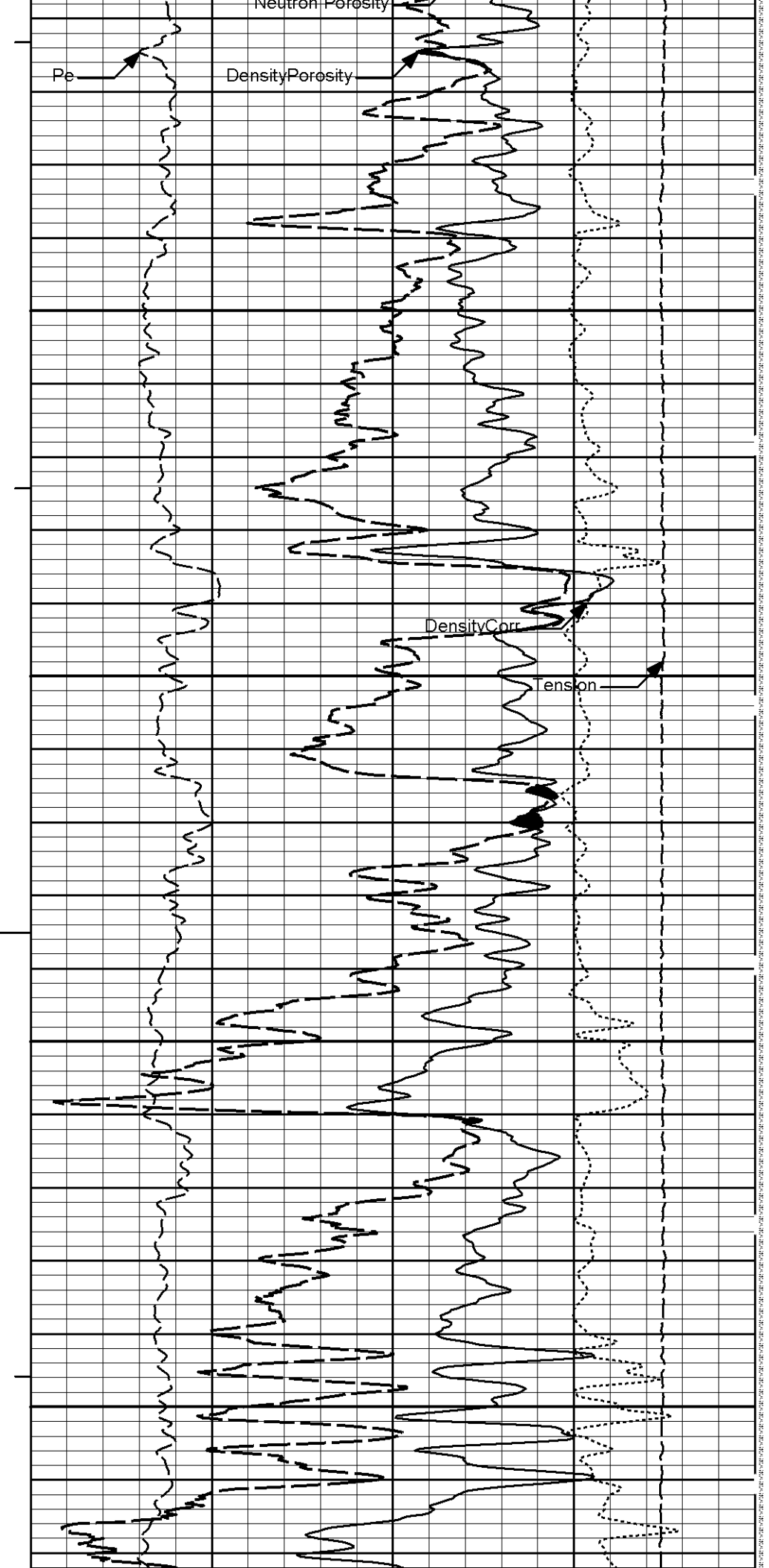
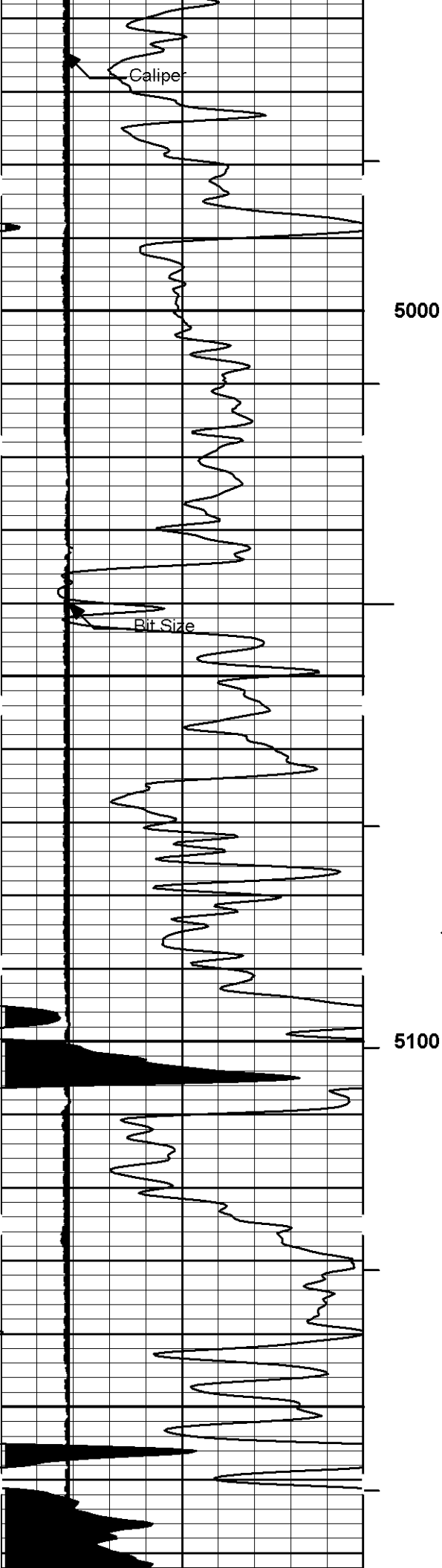


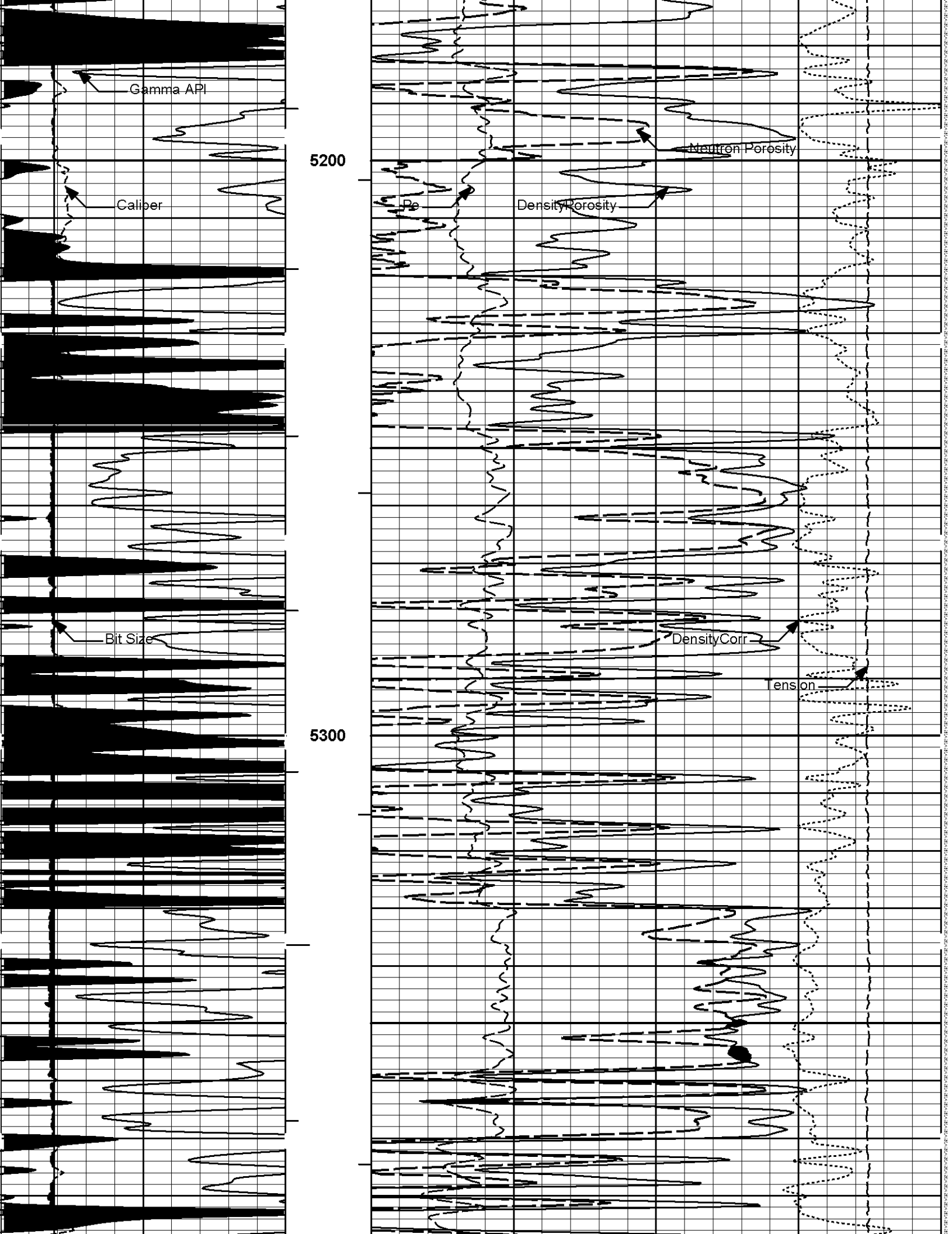


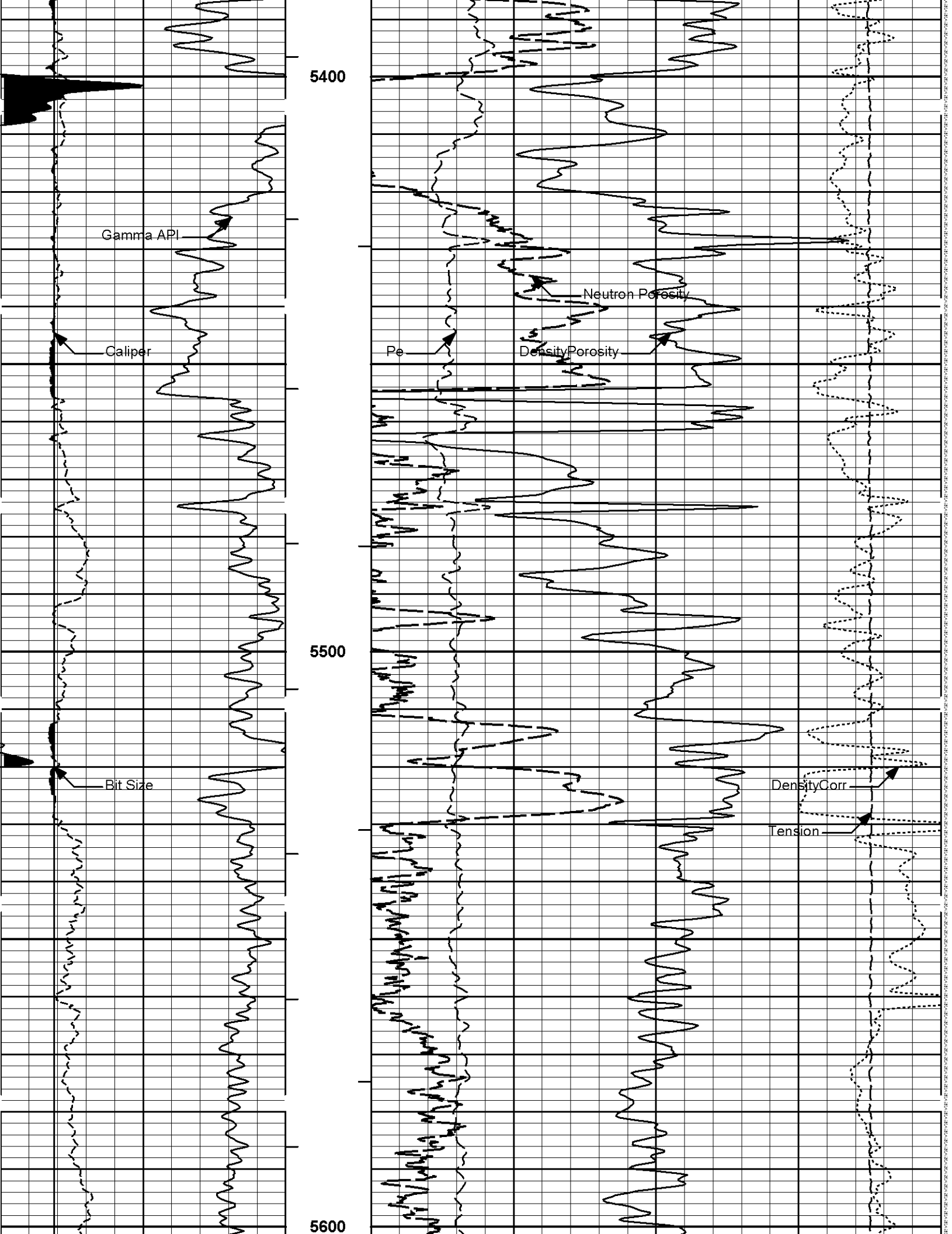


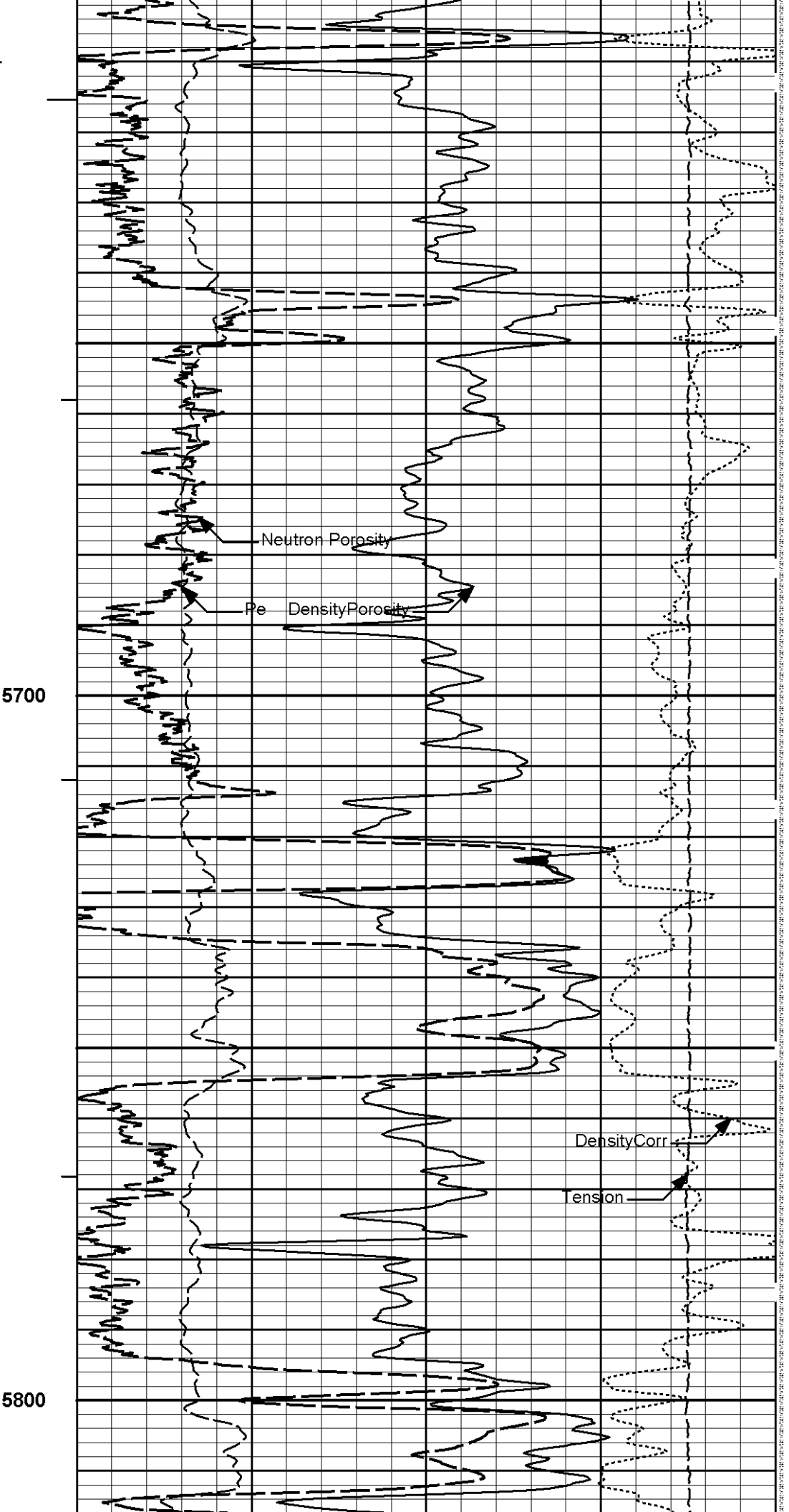
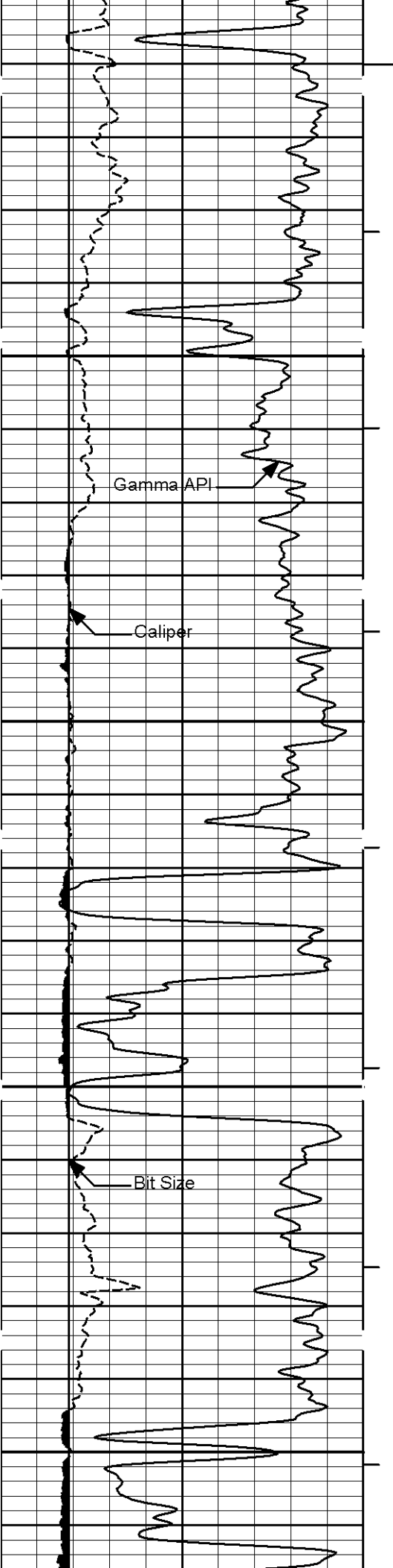


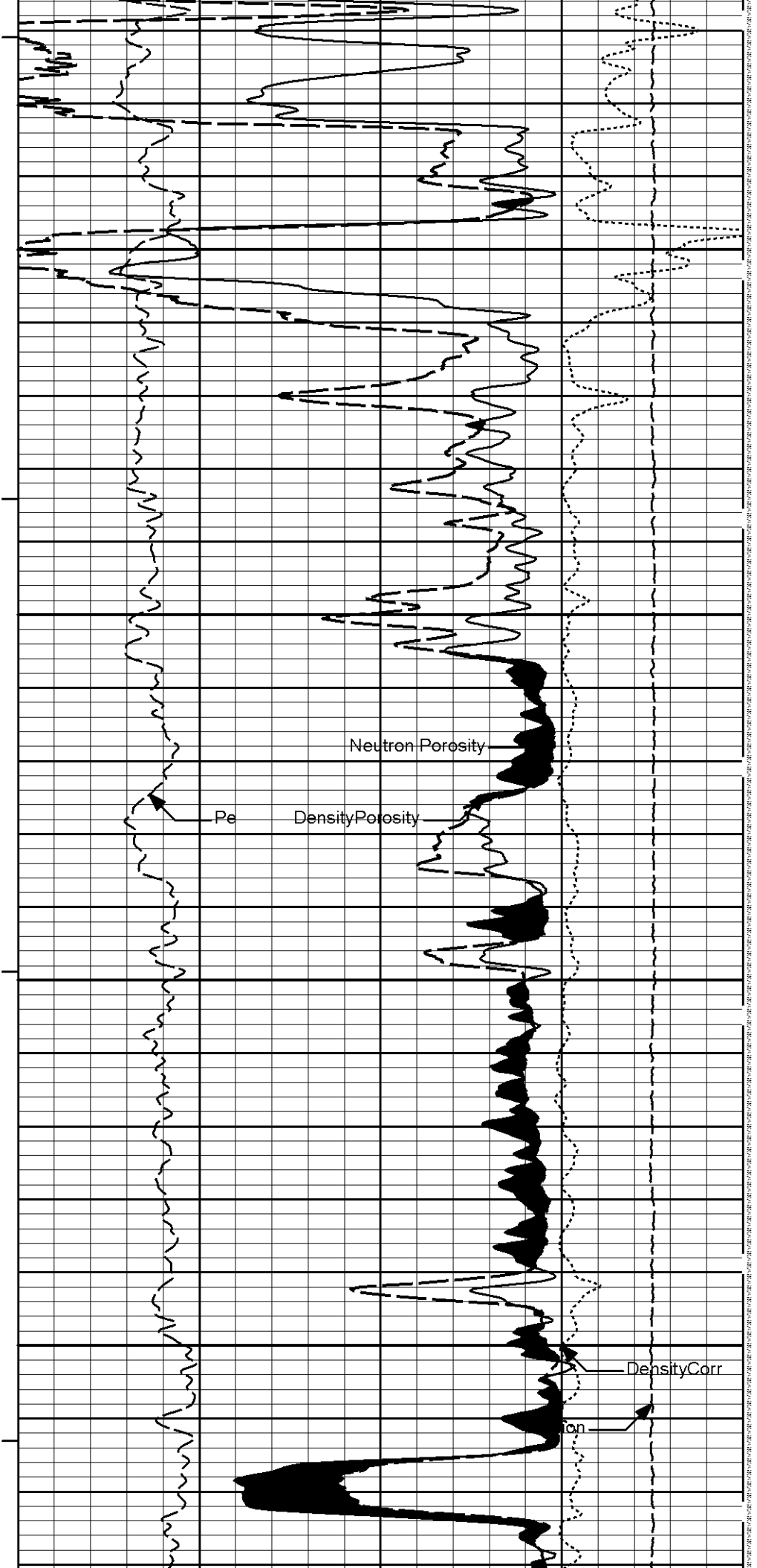
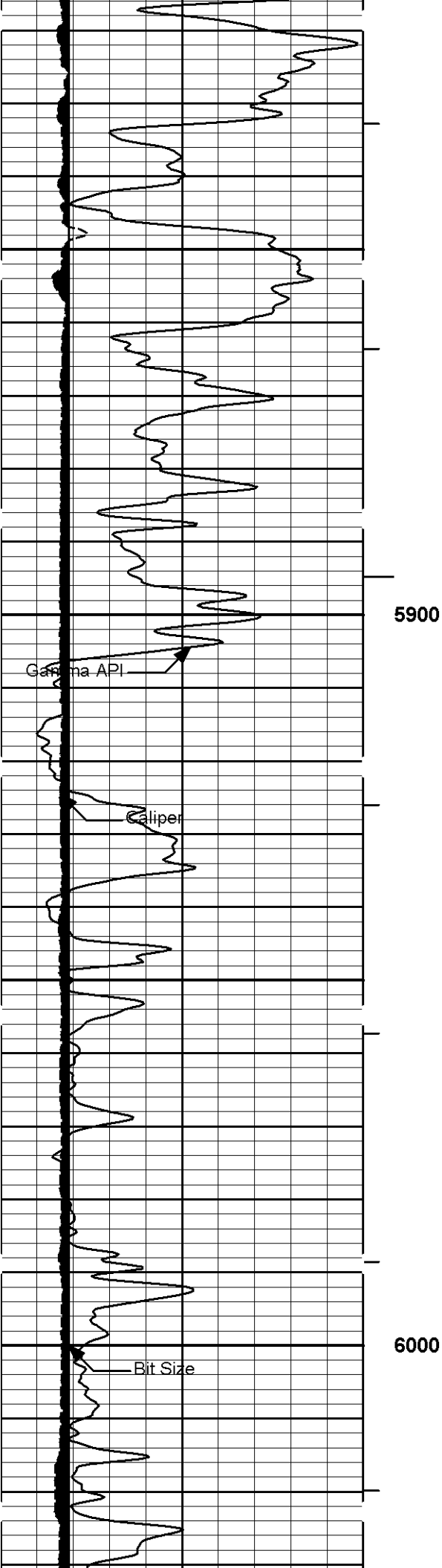


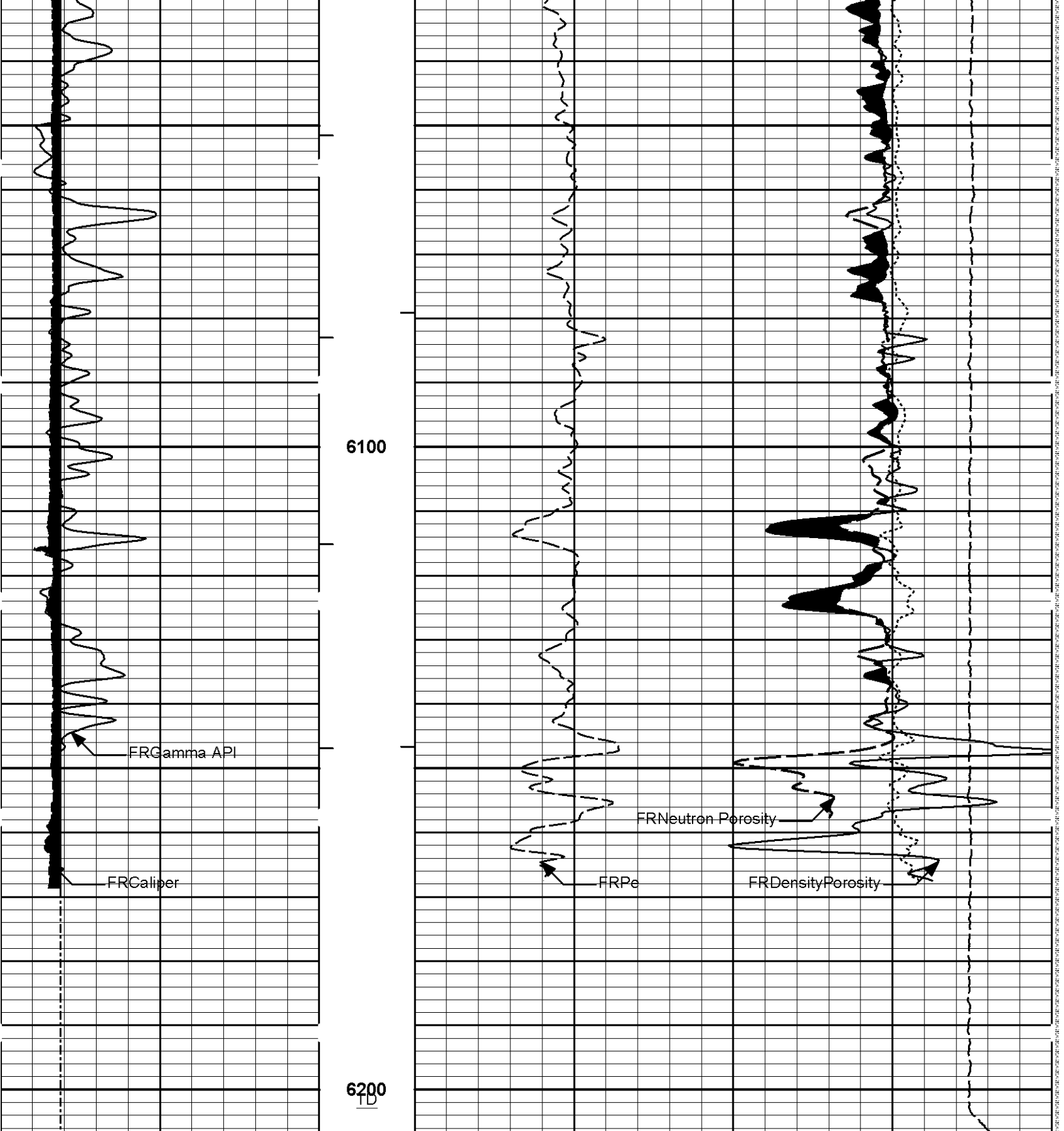












|   |              |     |                  |       |         |             |      |
|---|--------------|-----|------------------|-------|---------|-------------|------|
|   | 1 : 240      | 0   | Pe               | 10    | -0.25   | DensityCorr | 0.25 |
|   | ft           |     |                  | ----- |         | gram per cc |      |
|   | AHVT         |     |                  | 15K   | Tension |             | 0    |
| 6 | Caliper      | 16  |                  |       | pounds  |             |      |
|   | inches       |     |                  |       |         |             |      |
|   | BHVT         | 30  | DensityPorosity  |       |         |             | -10  |
| 0 | Gamma API    | 150 |                  |       |         |             |      |
|   | api          |     |                  |       |         |             |      |
|   | Tension Pull | 30  | Neutron Porosity |       |         |             | -10  |
|   | 10           | 0   |                  |       |         |             |      |

SHALE

CROSSOVER

Bit Size  
6 inches

Tension Pull

16

Plot Time: 19-Nov-10 18:17:18  
Plot Range: 3000 ft to 6207.5 ft  
Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-003\  
Plot File: \\PORO\EOG\_Poro\_IQ\_5\_MAIN\_LIB

# 5 INCH MAIN LOG

Plot Time: 19-Nov-10 18:17:18  
Plot Range: 5850 ft to 6207.58 ft  
Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-002\  
Plot File: \\PORO\EOG\_Poro\_5\_REPEAT\_IQ

# REPEAT SECTION

CROSSOVER

|       |                  |      |
|-------|------------------|------|
| 30    | Neutron Porosity | -10  |
|       | %                |      |
| 30    | Density Porosity | -10  |
|       | %                |      |
| 15K   | Tension          | 0    |
|       | pounds           |      |
| 0     | Pe               | 10   |
| -0.25 | Density Corr     | 0.25 |
|       | gram per cc      |      |

SHALE

BHVT

Gamma API  
api

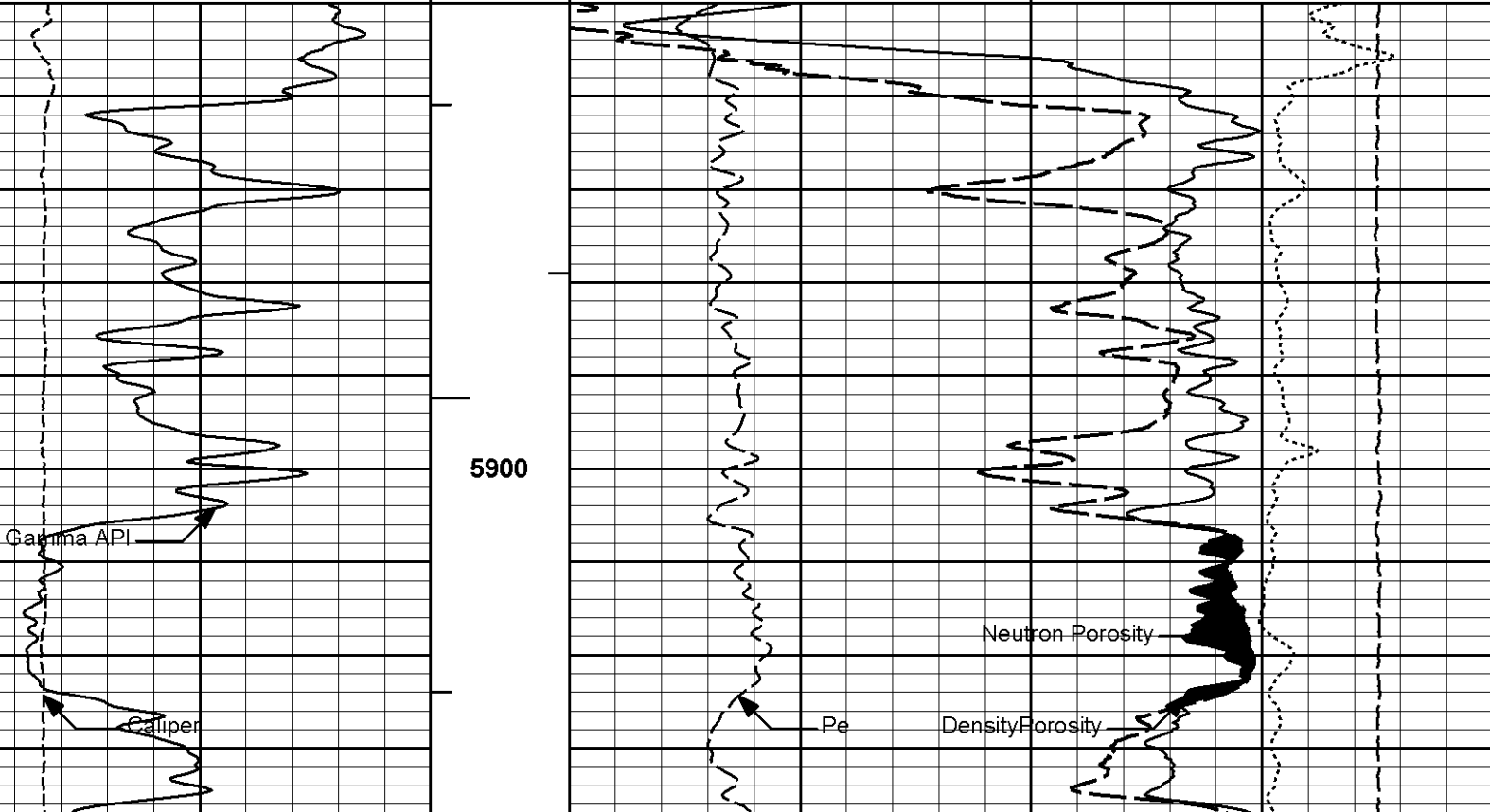
150

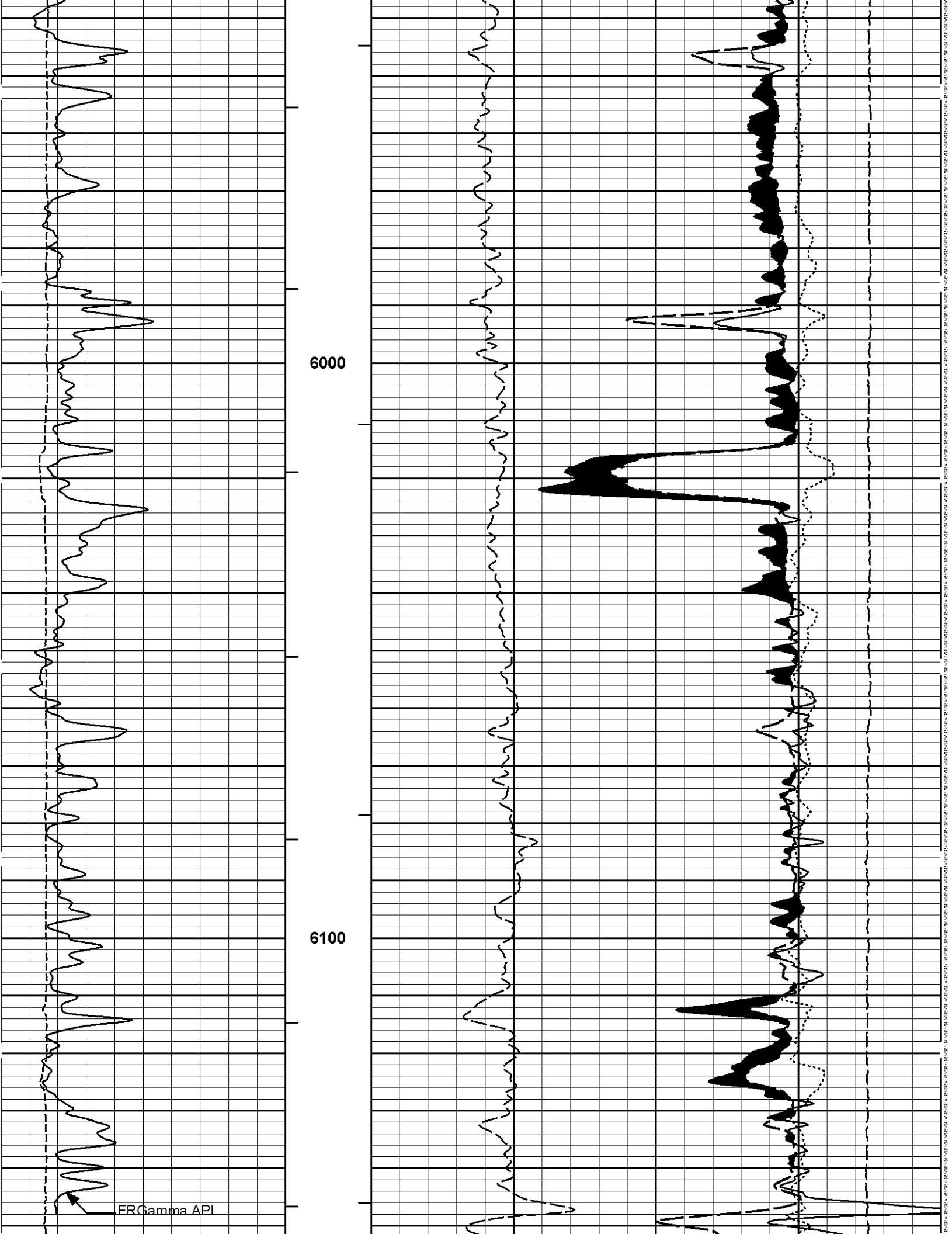
AHVT

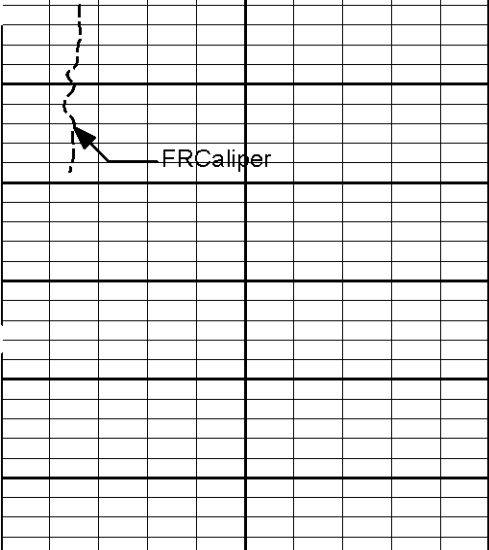
Caliper  
6 inches

16

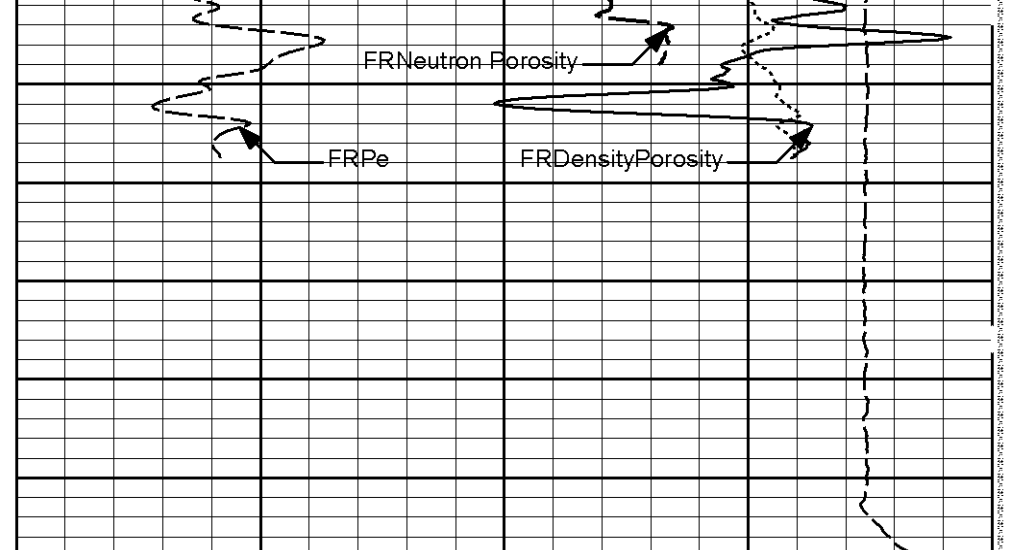
1 : 240  
ft







6200



|        |           |     |
|--------|-----------|-----|
| 6      | Caliper   | 16  |
| inches |           |     |
| 0      | Gamma API | 150 |
| api    |           |     |
| SHALE  |           |     |

1 : 240  
ft  
AHVT  
BHVT

|           |                  |    |             |             |      |
|-----------|------------------|----|-------------|-------------|------|
| 0         | Pe               | 10 | -0.25       | DensityCorr | 0.25 |
|           |                  |    | gram per cc |             |      |
|           |                  |    | 15K         | Tension     | 0    |
|           |                  |    | pounds      |             |      |
| 30        | DensityPorosity  |    |             |             | -10  |
| %         |                  |    |             |             |      |
| 30        | Neutron Porosity |    |             |             | -10  |
| %         |                  |    |             |             |      |
| CROSSOVER |                  |    |             |             |      |

Plot Time: 19-Nov-10 18:17:22  
 Plot Range: 5850 ft to 6207.58 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-002\  
 Plot File: \\PORO\EOG\_Poro\_5\_REPEAT\_IQ

## REPEAT SECTION

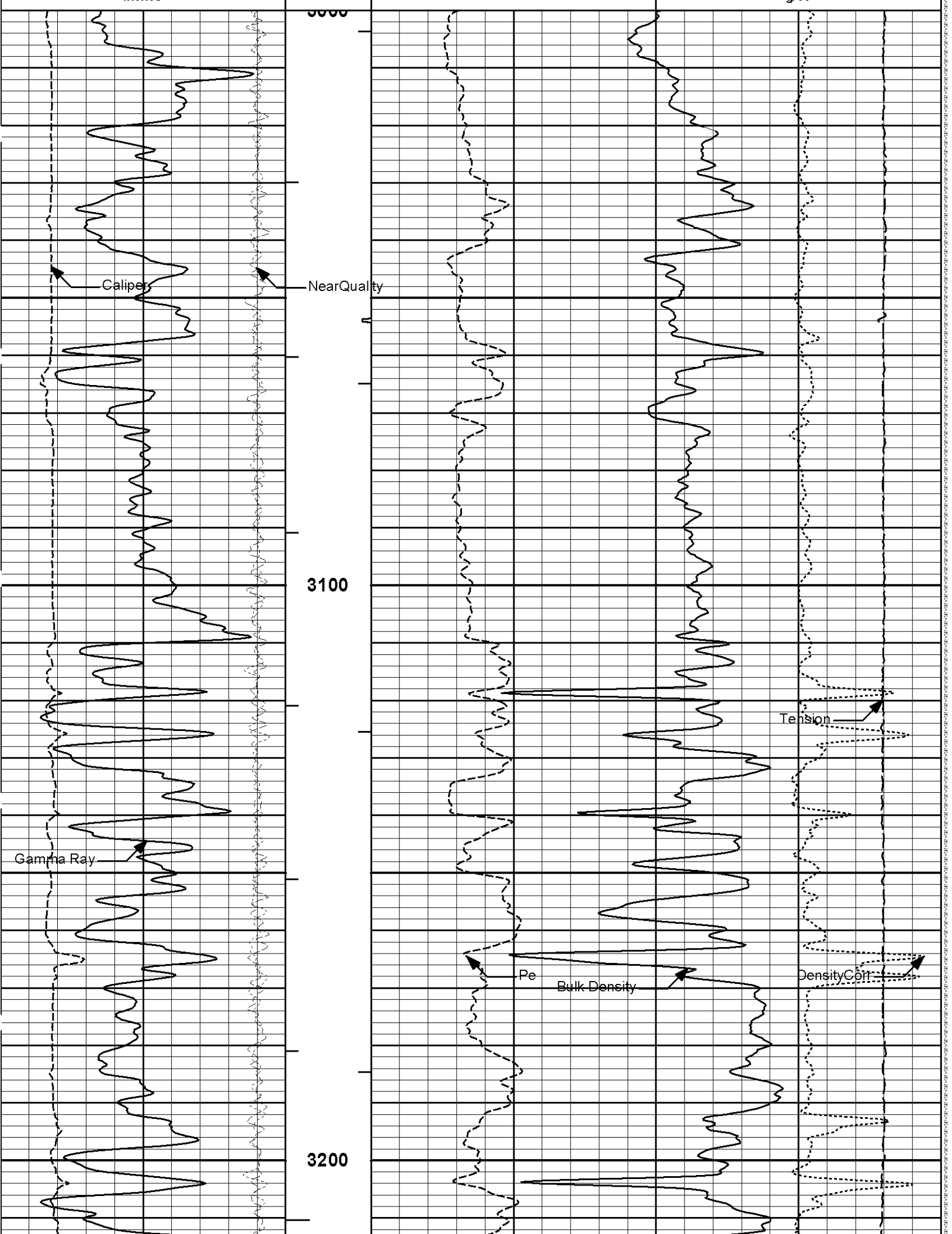
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 Plot Range: 3000 ft to 6207.5 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-003\  
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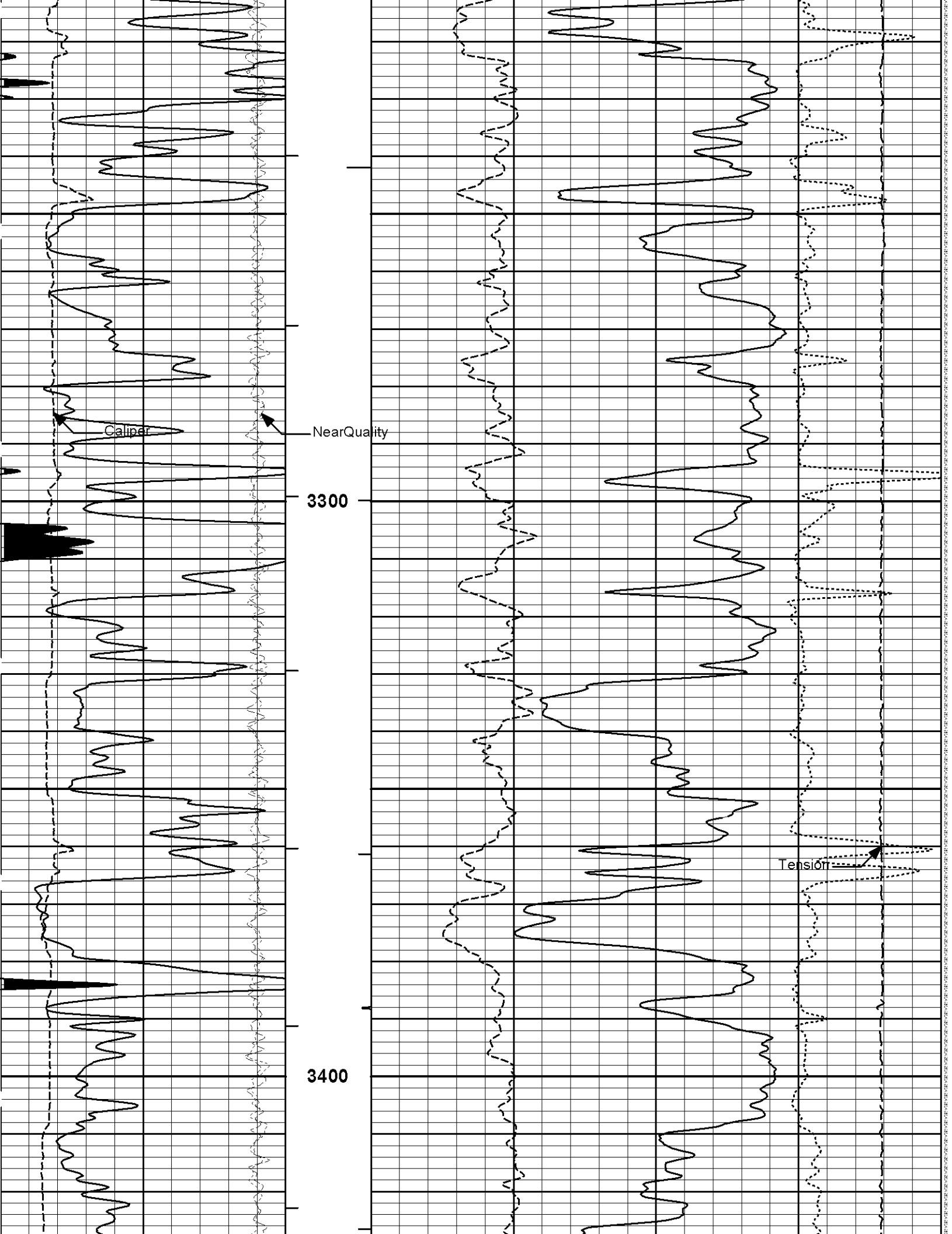
## 5 INCH MAIN LOG

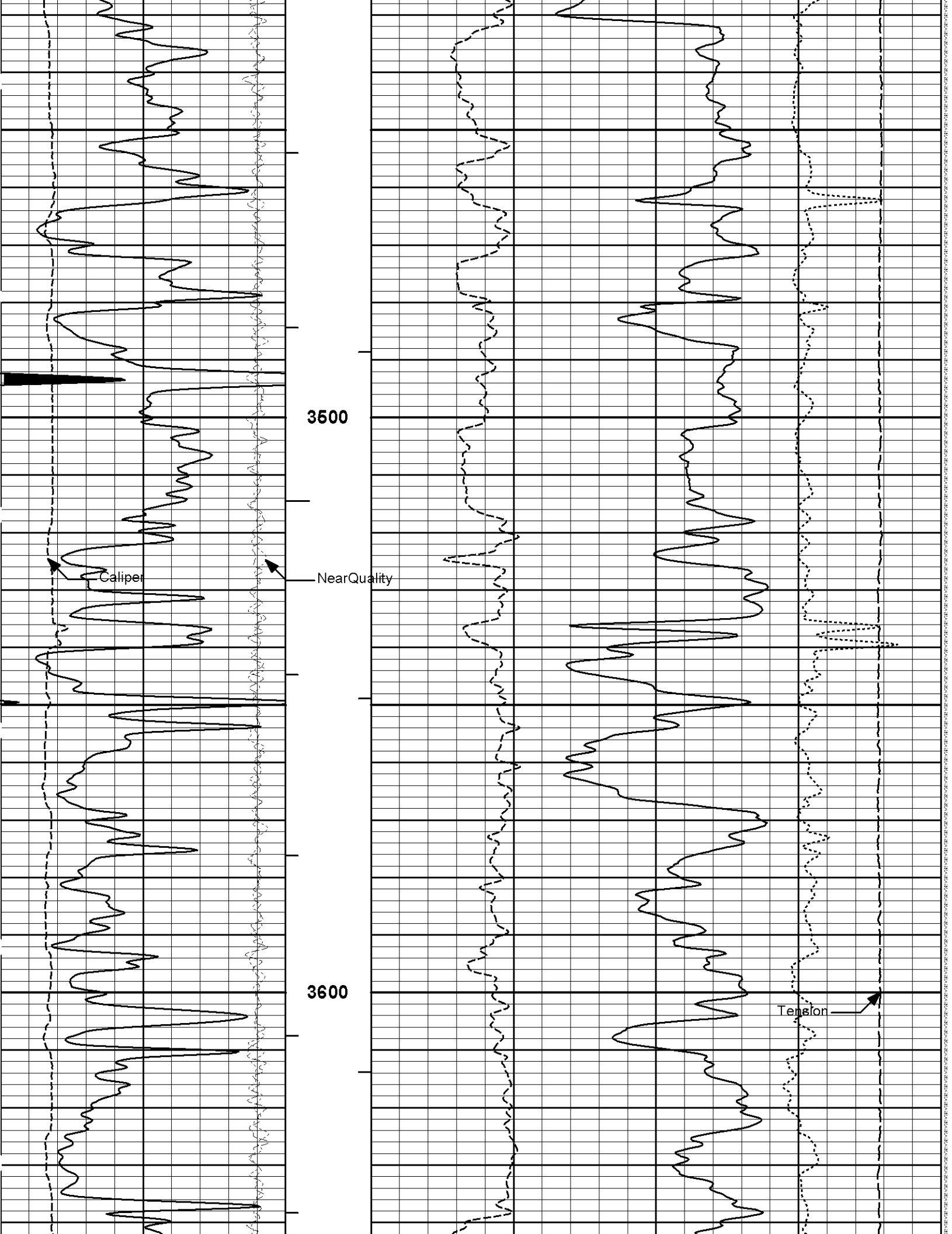
|        |             |     |
|--------|-------------|-----|
| SHALE  |             |     |
| 0      | Gamma Ray   | 150 |
| api    |             |     |
| 18     | FarQuality  | -2  |
| -18    | NearQuality | 2   |
| 6      | Caliper     | 16  |
| inches |             |     |

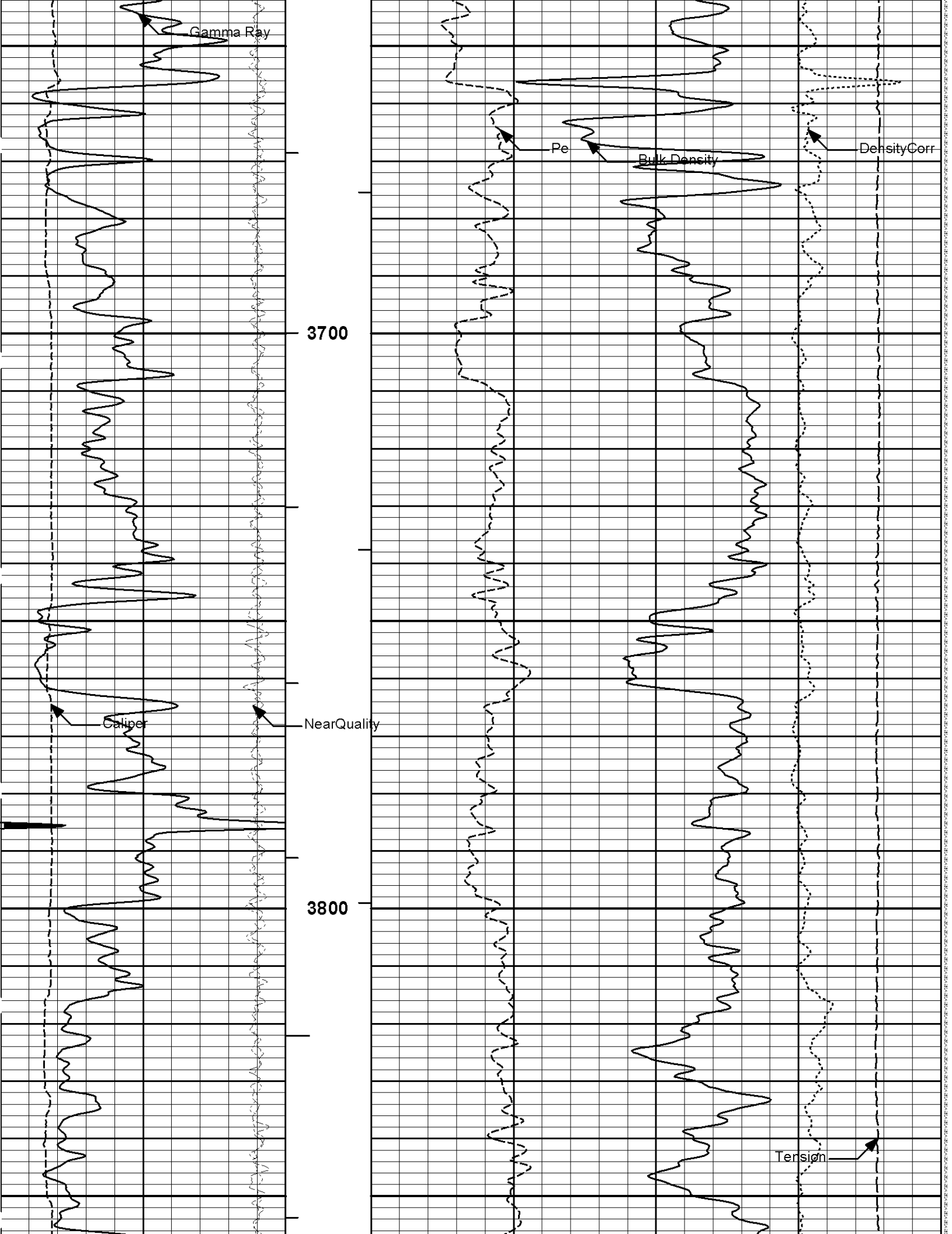
Tension Pull  
 Tension Pull  
 10 0  
 AHV  
 ft3  
 BHV  
 ft3  
 1 : 240  
 ft

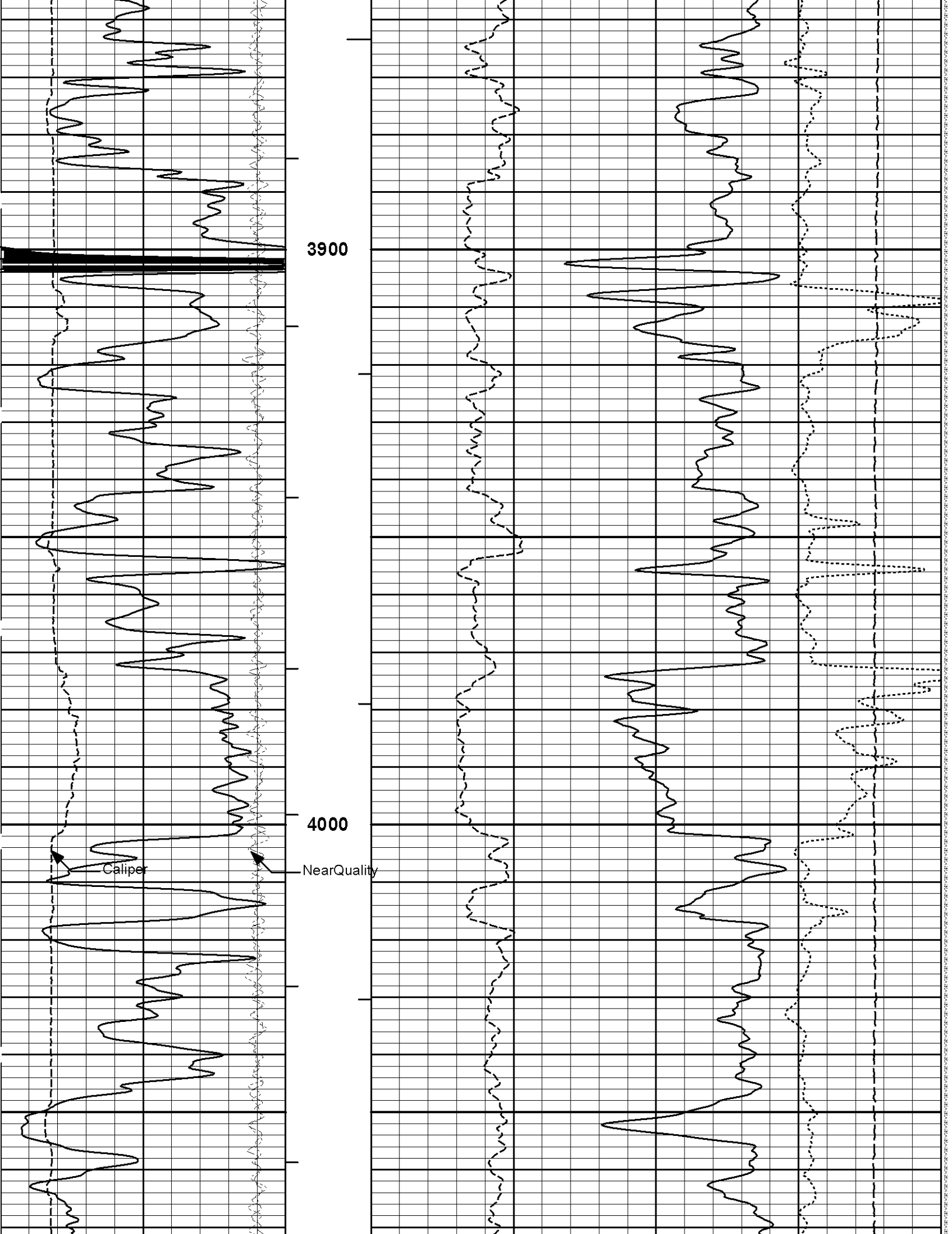
|   |    |    |              |             |      |   |
|---|----|----|--------------|-------------|------|---|
|   |    |    | Bulk Density |             |      | 3 |
|   |    |    | g/cc         |             |      |   |
|   |    |    | 15K          | Tension     | 0    |   |
|   |    |    | pounds       |             |      |   |
| 0 | Pe | 10 | -0.25        | DensityCorr | 0.25 |   |
|   |    |    | g/cc         |             |      |   |

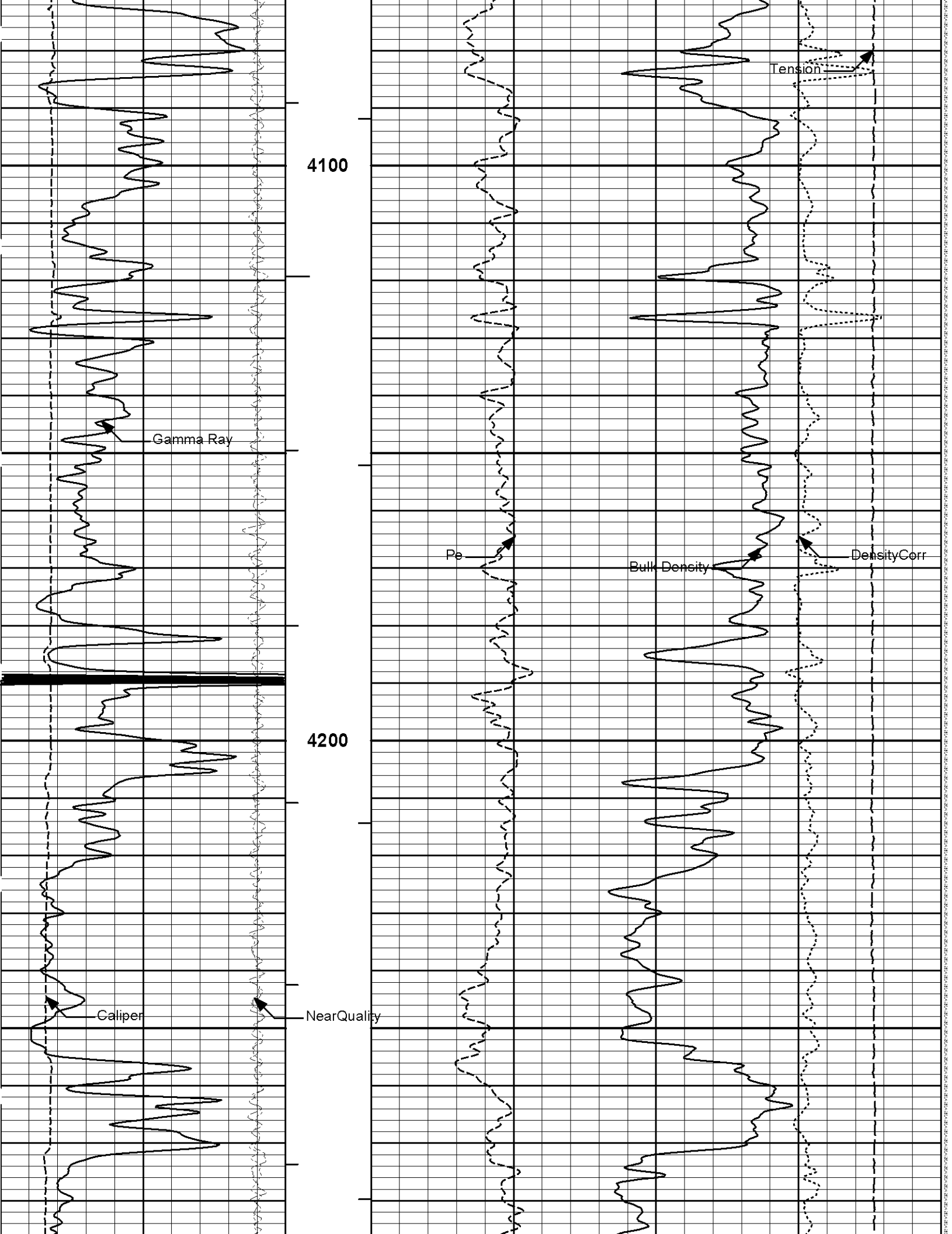


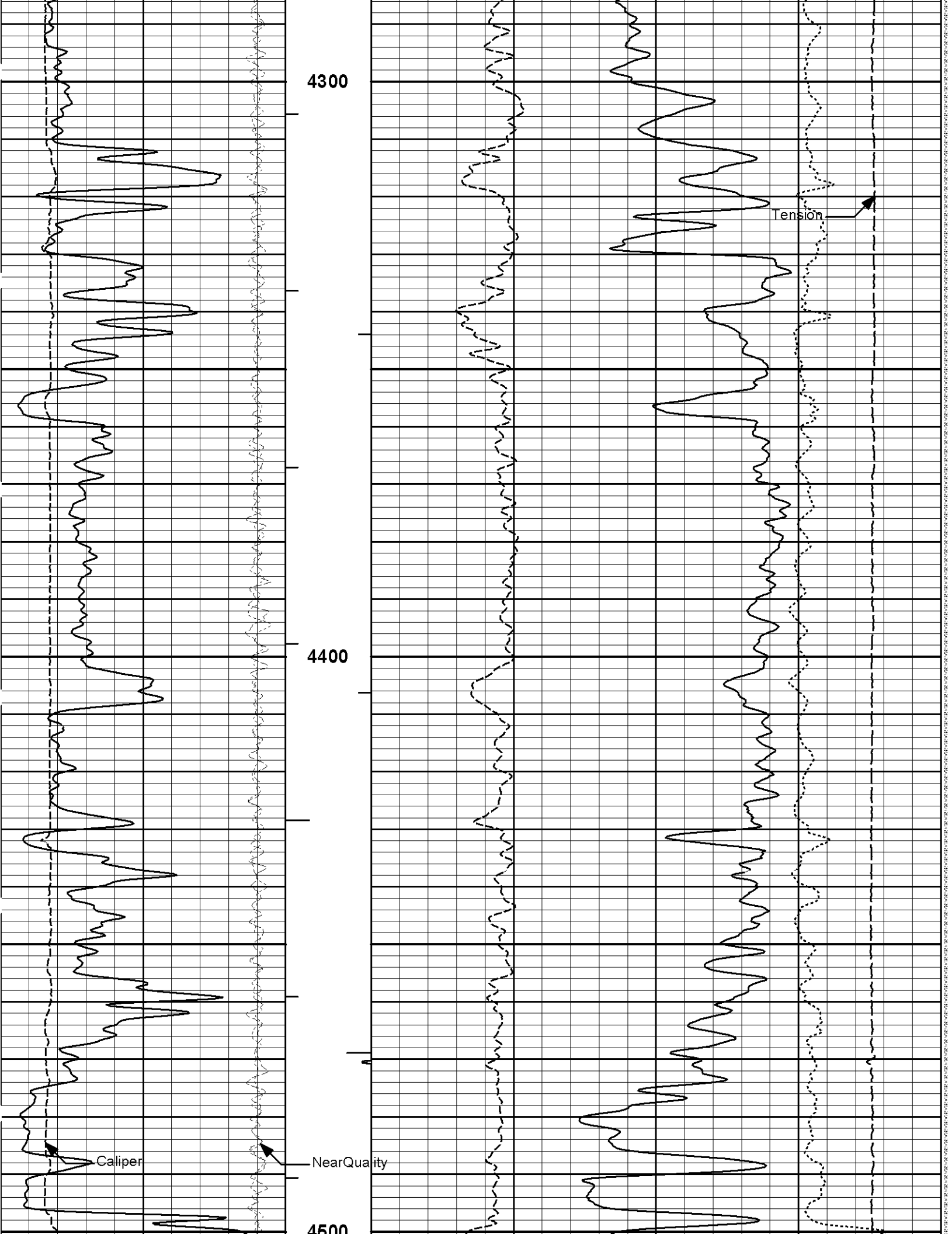


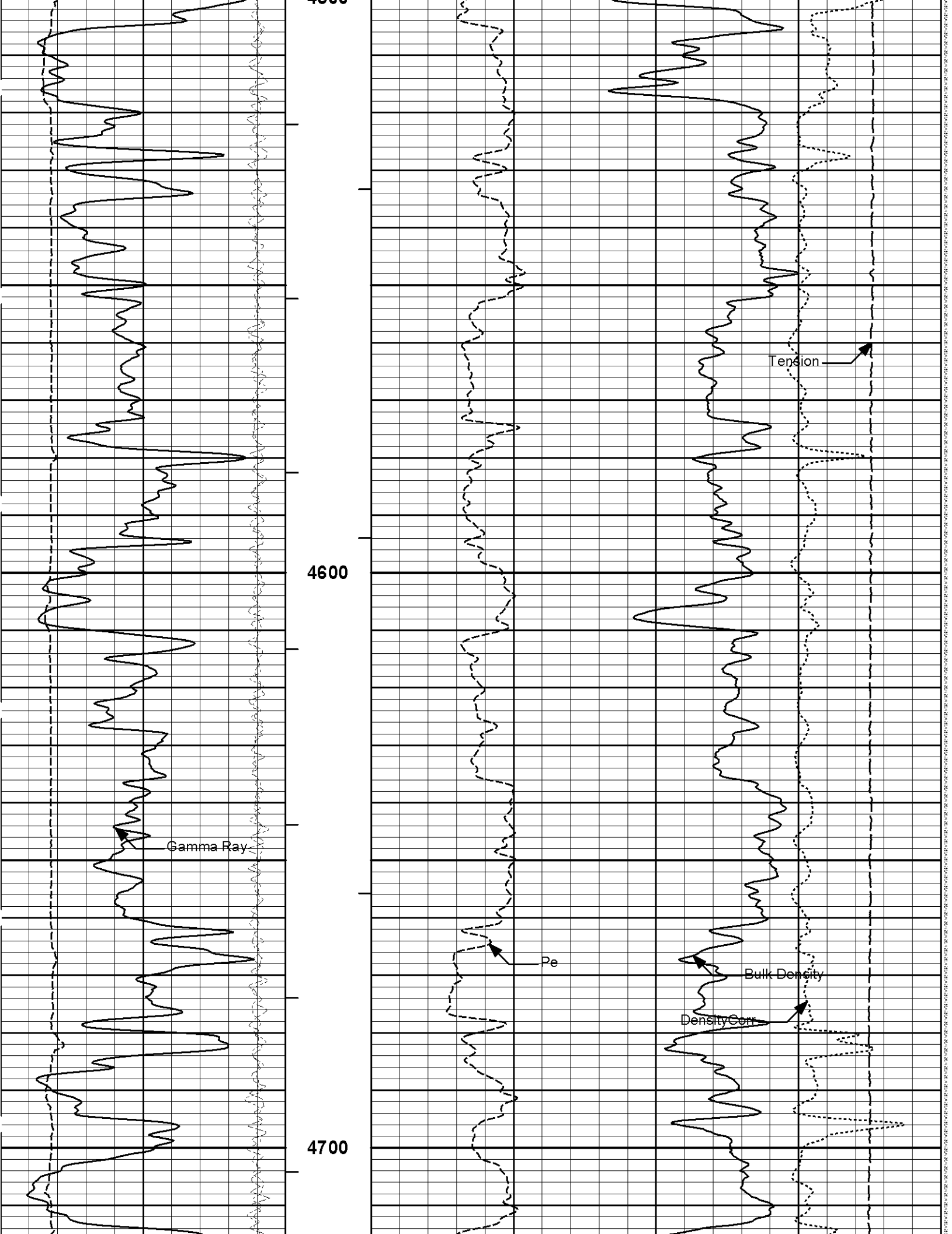


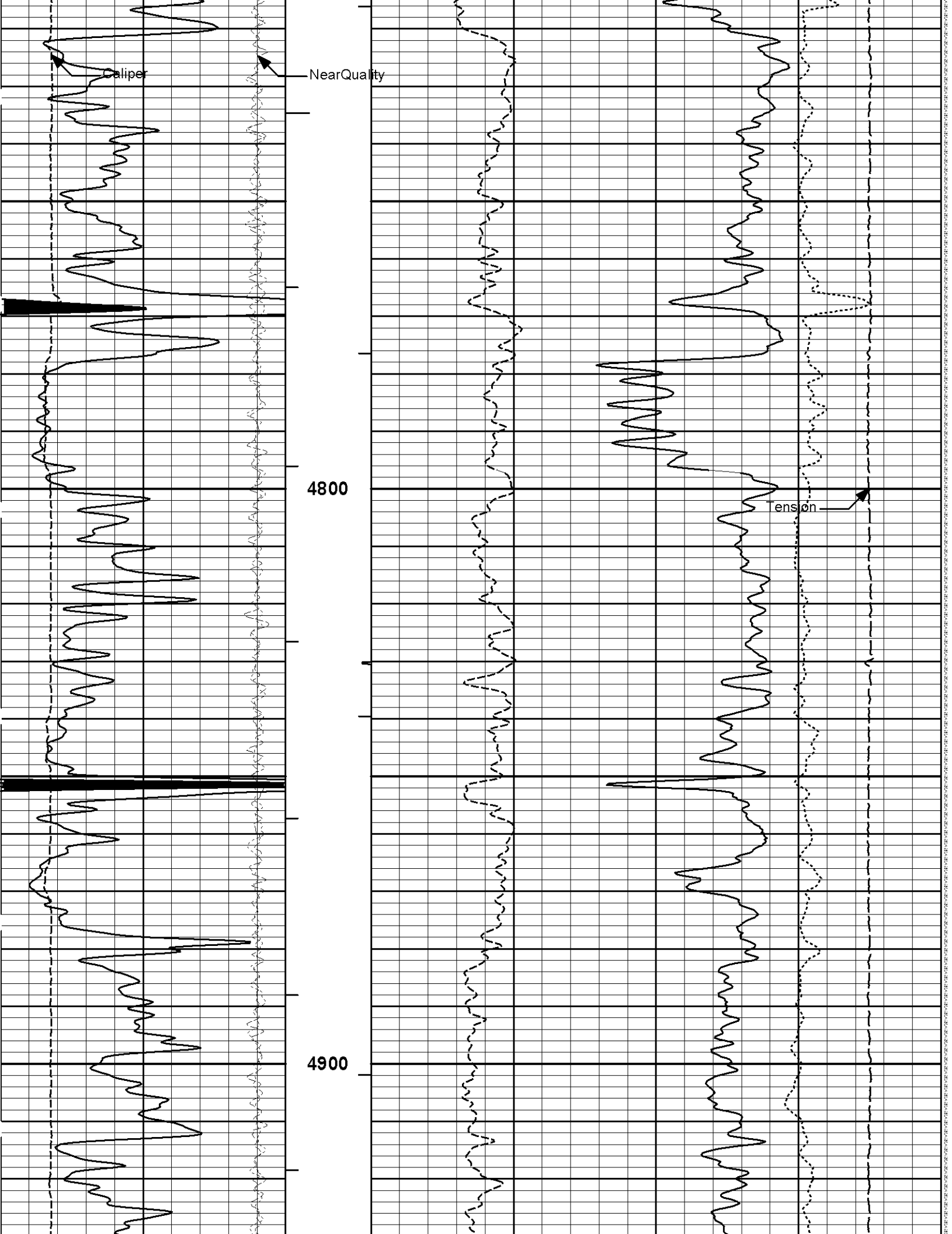


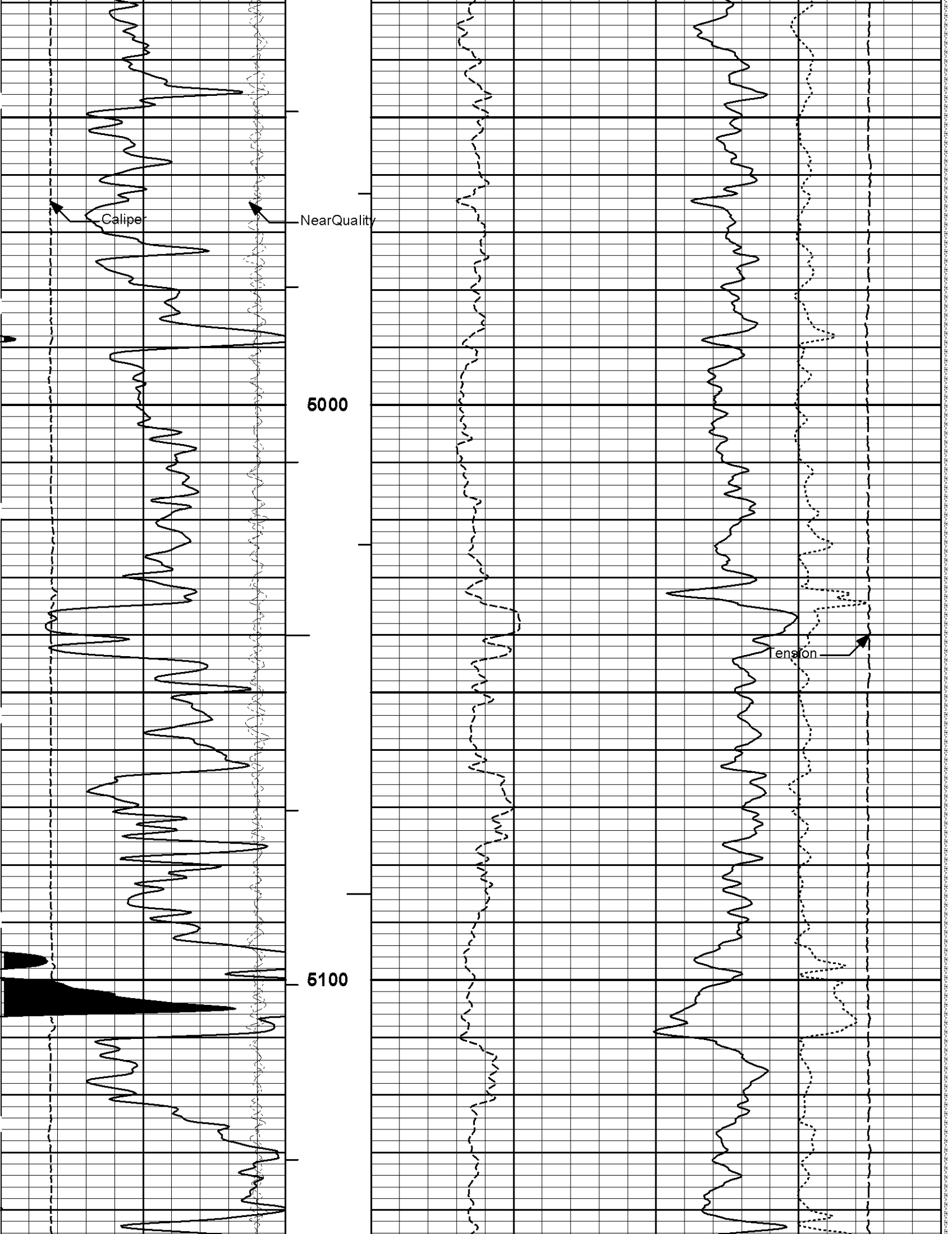


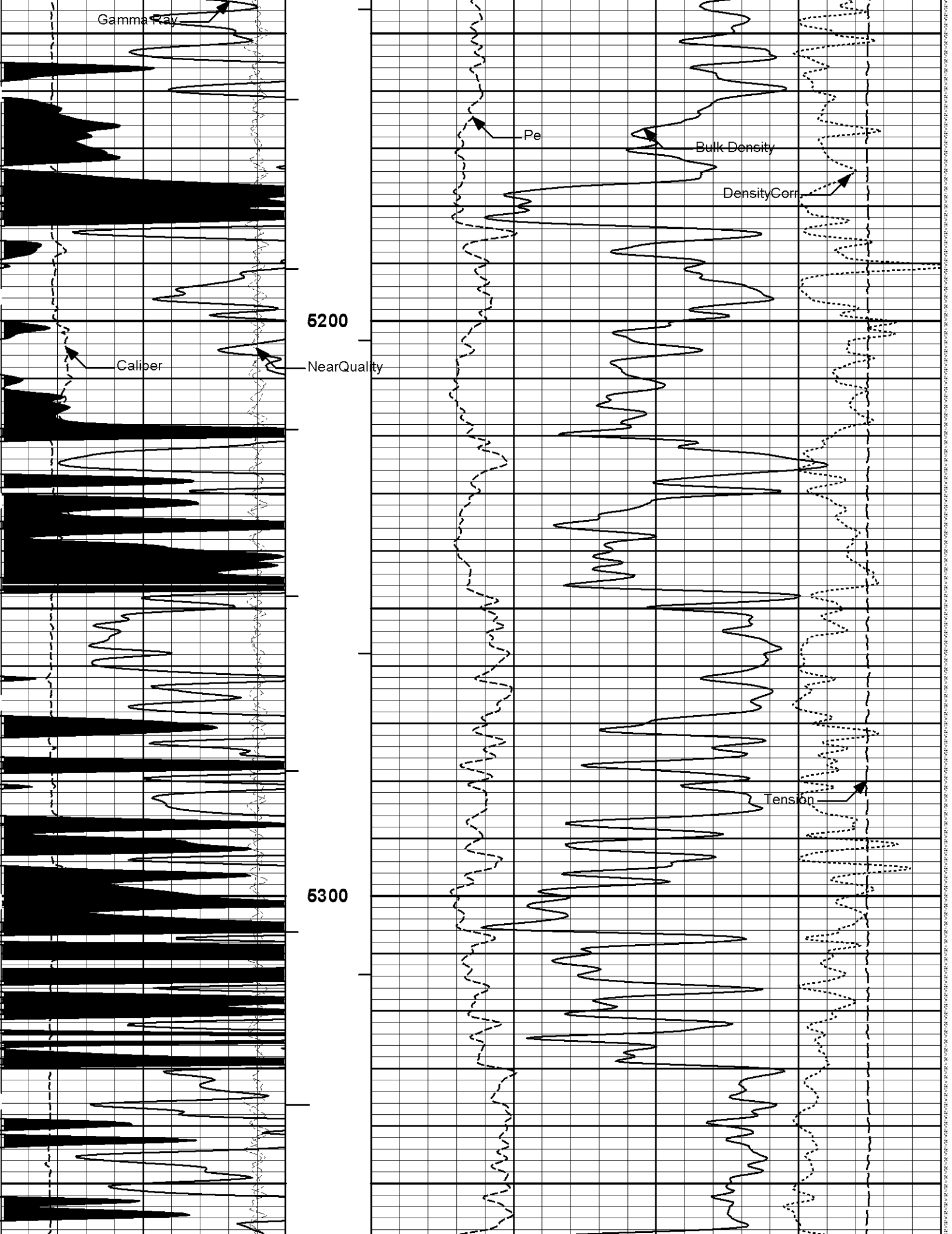


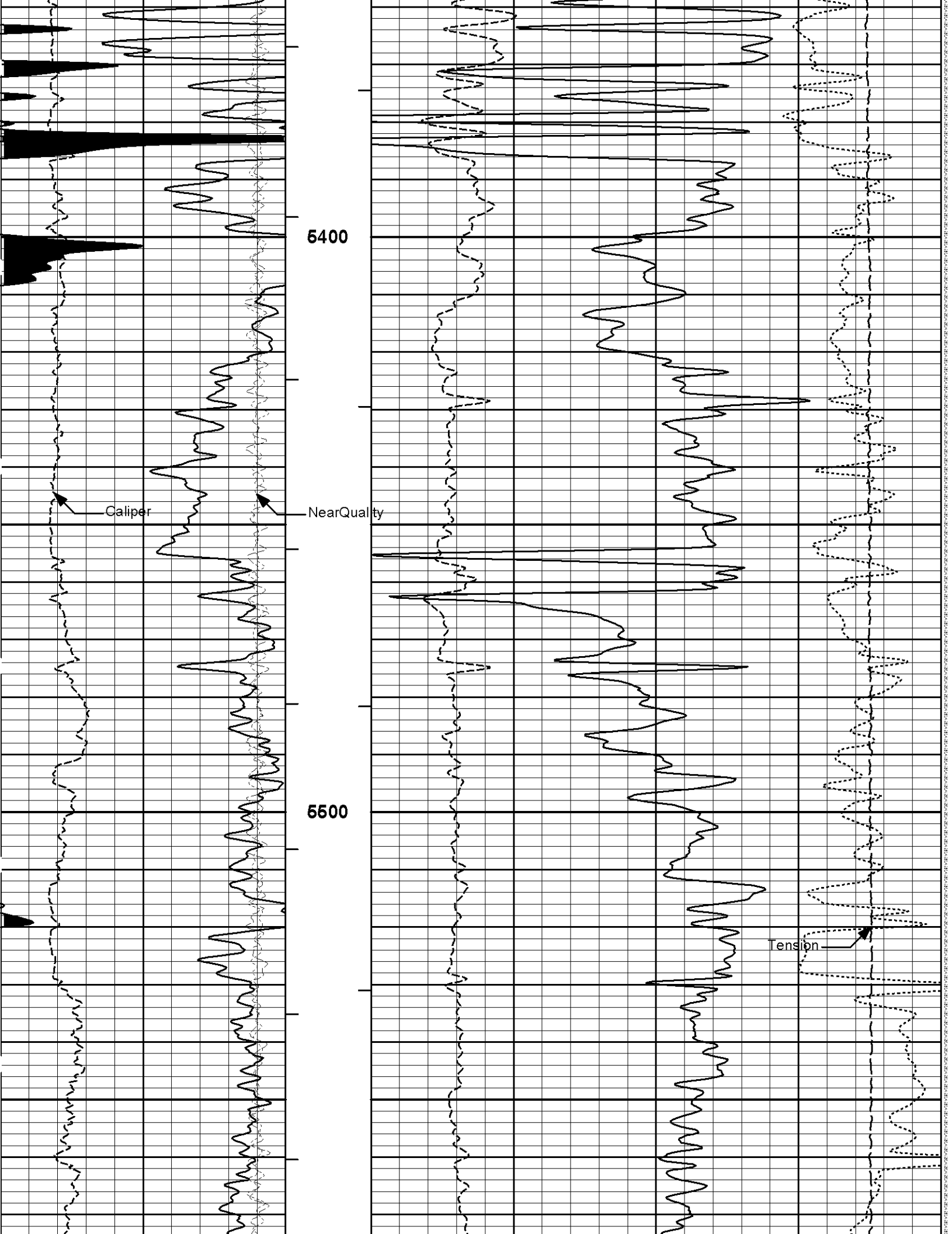


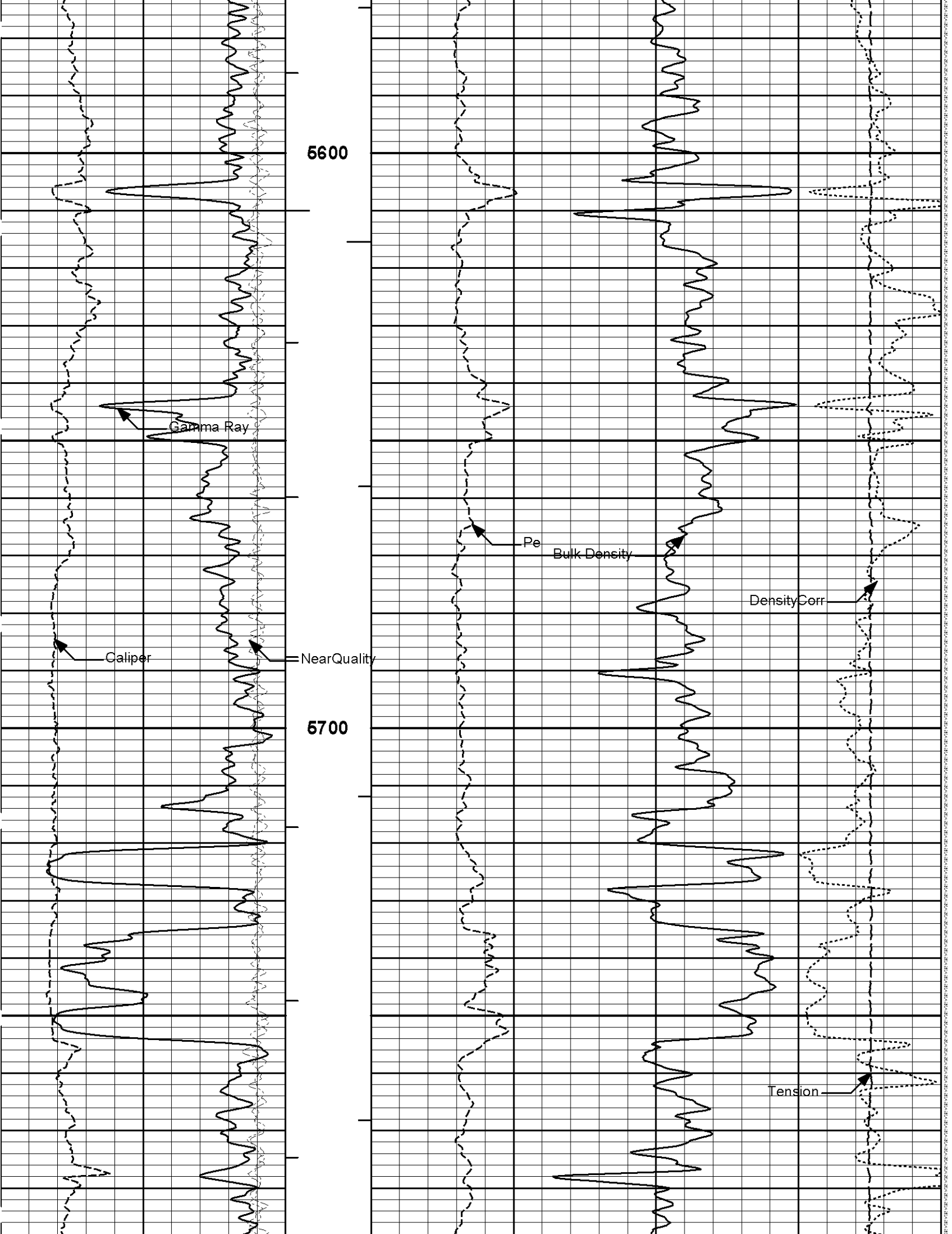


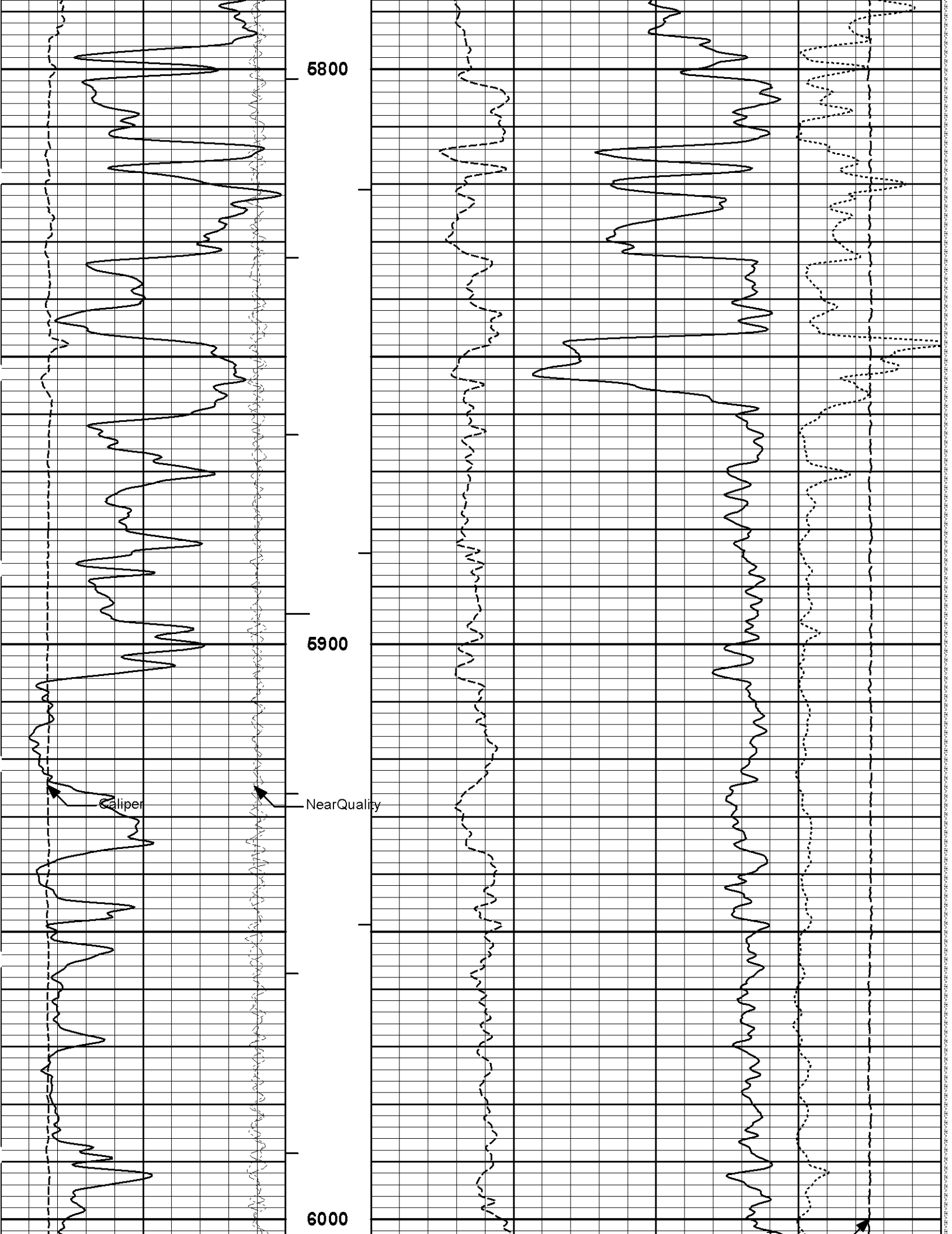


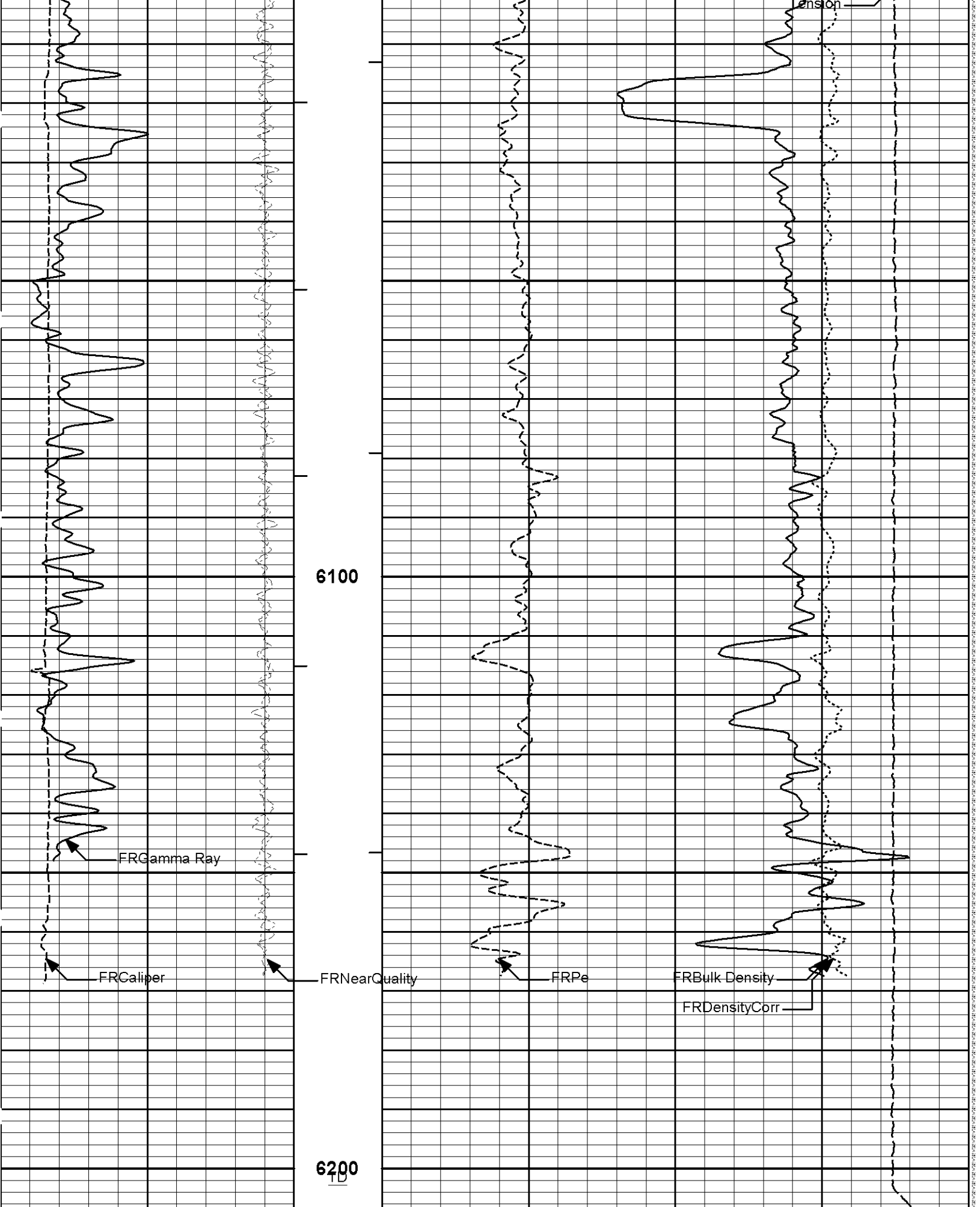












|   |         |    |         |   |    |    |       |             |      |
|---|---------|----|---------|---|----|----|-------|-------------|------|
| 6 | Caliper | 16 | 1 : 240 | 0 | Pe | 10 | -0.25 | DensityCorr | 0.25 |
|   | inches  |    | ft      |   |    |    |       | g/cc        |      |

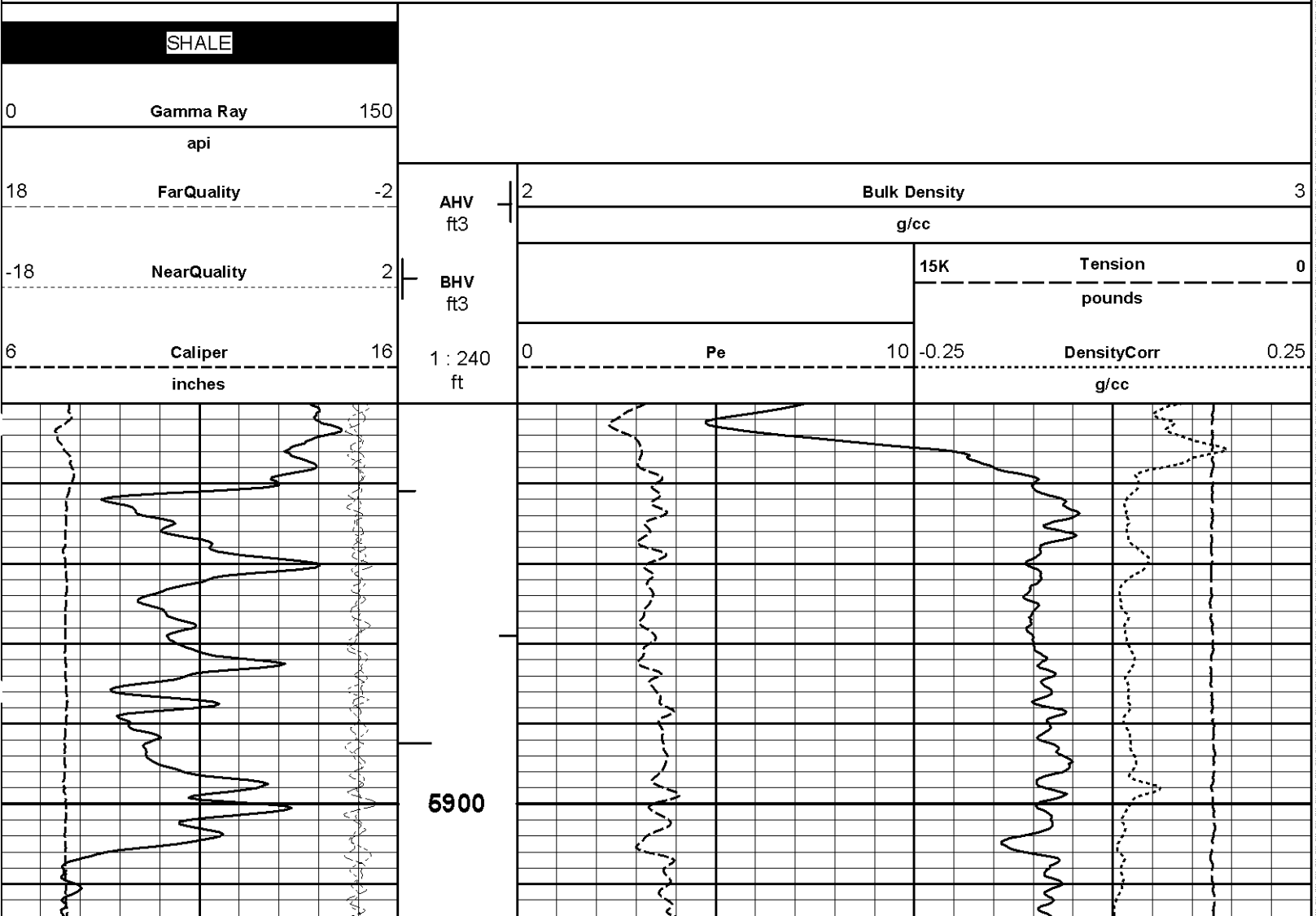
|       |             |     |              |              |         |   |
|-------|-------------|-----|--------------|--------------|---------|---|
| -18   | NearQuality | 2   | BHV<br>ft3   | 15K          | Tension | 0 |
|       |             |     |              |              | pounds  |   |
| 18    | FarQuality  | -2  | AHV<br>ft3   | Bulk Density |         | 3 |
|       |             |     |              | g/cc         |         |   |
| 0     | Gamma Ray   | 150 | Tension Pull | 10           | 0       |   |
|       | api         |     |              |              |         |   |
| SHALE |             |     | Tension Pull |              |         |   |

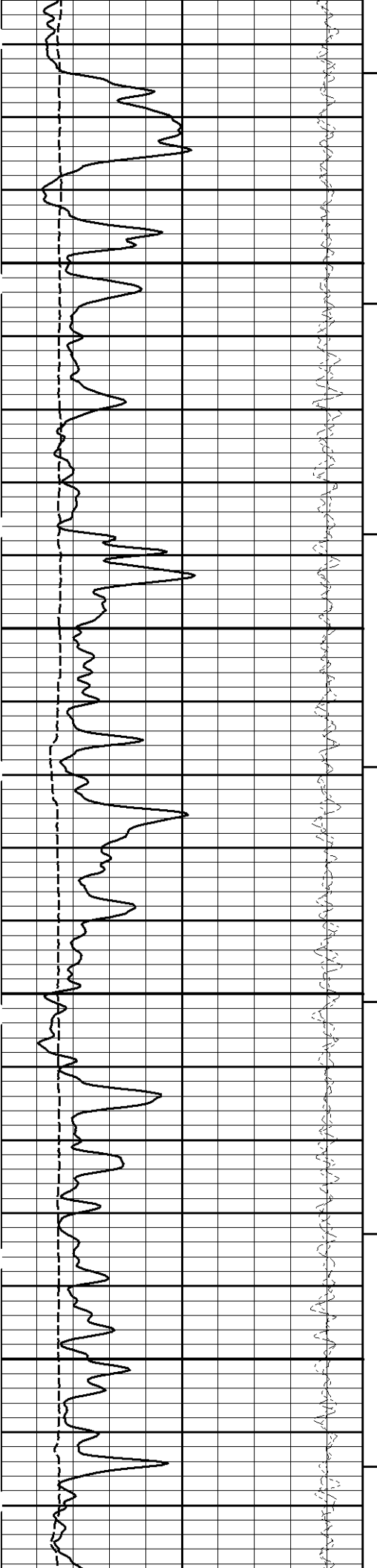
Plot Time: 19-Nov-10 18:17:29  
 Plot Range: 3000 ft to 6207.5 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-003\  
 Plot File: \\-LOCAL-1\CYNTHIA\_35\_3\0001 SP-GTET-DSN-SDL-BSAT-ACRT-CH\PORO\BULKD\_5\_MAIN\_LIB

## 5 INCH MAIN LOG

Plot Time: 19-Nov-10 18:17:29  
 Plot Range: 5850 ft to 6207.58 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-002\  
 Plot File: \\-LOCAL-1\CYNTHIA\_35\_3\0001 SP-GTET-DSN-SDL-BSAT-ACRT-CH\PORO\BULKD\_5\_REP\_LIB

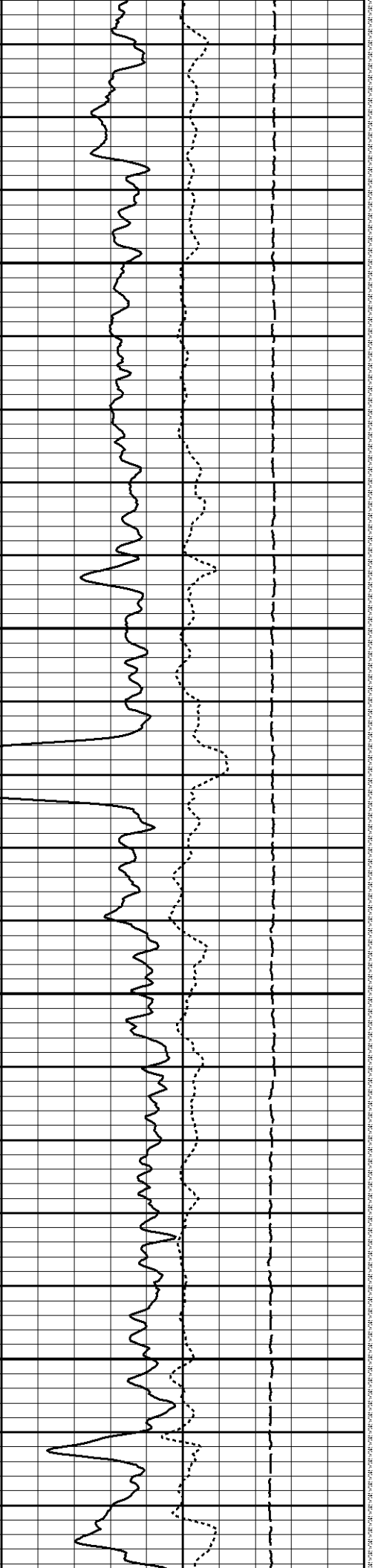
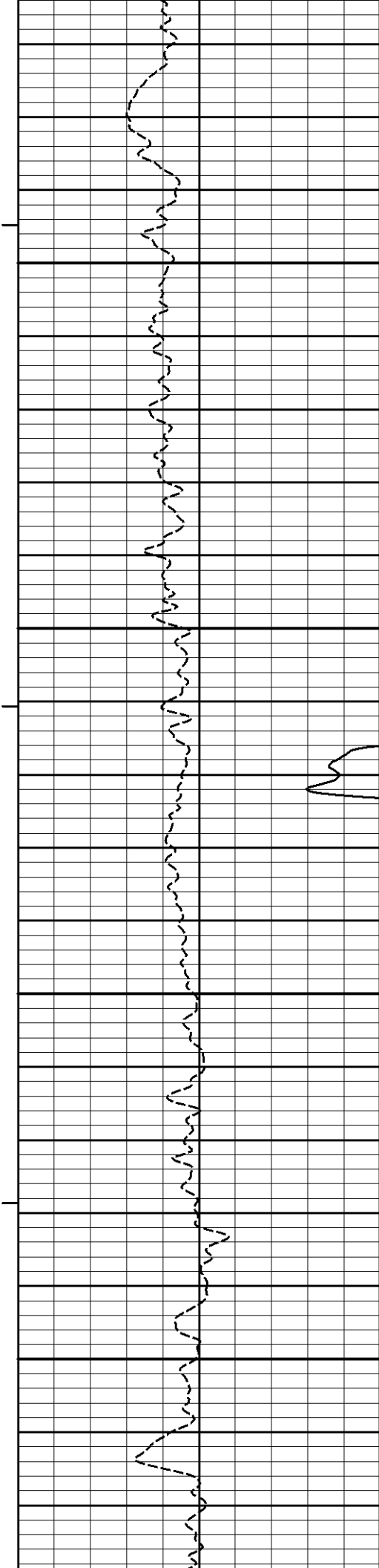
## REPEAT SECTION

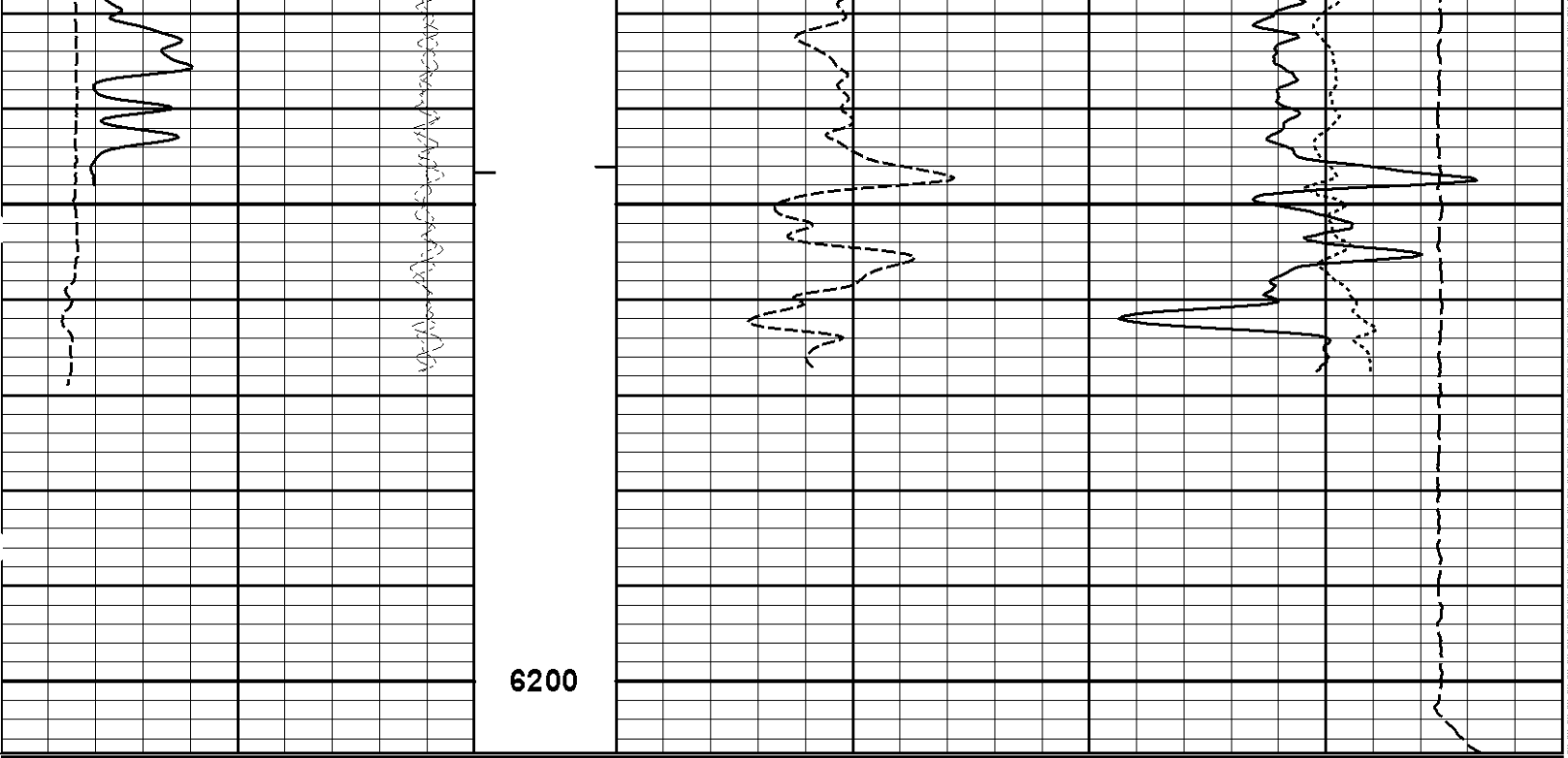




6000

6100





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

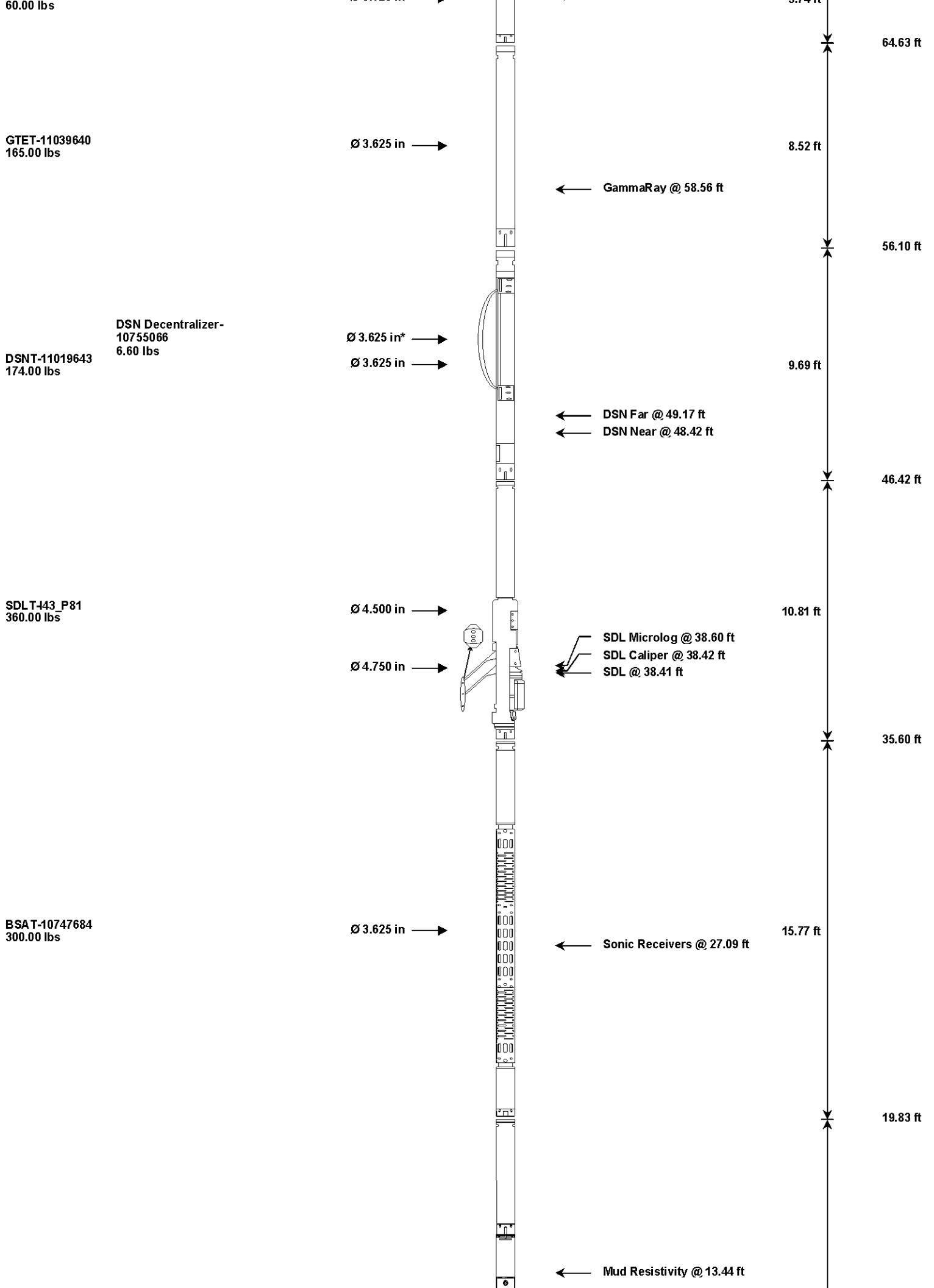
Plot Time: 19-Nov-10 18:17:31  
 Plot Range: 5850 ft to 6207.58 ft  
 Data: CYNTHIA\_35\_3\Well Based\DAQ-0001-002\  
 Plot File: \\-LOCAL-CYNTHIA\_35\_3\0001 SP-GTET-DSN-SDL-BSAT-ACRT-CH\PORO\BULKD\_5\_REP\_LIB

## 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 @ 71.31 ft | 3.03 ft | 72.34 ft           |
| XOHD-TRK696<br>20.00 lbs   |                      | Ø 2.750 in →<br>Ø 3.625 in → |         |                          | 0.95 ft | 69.31 ft           |
| SP Sub-PROT01              |                      | Ø 3.625 in →                 |         | ← SP @ 66.59 ft          | 3.74 ft | 68.36 ft           |



ACRt-I5059\_S8385  
250.00 lbs

Ø 3.625 in →

← ACRt @ 9.46 ft

19.25 ft

Cabbage Head-  
TRK696  
10.00 lbs

Ø 3.625 in →  
Ø 6.000 in →



0.58 ft  
0.58 ft  
0.00 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         | 69.31                   | 300.00              |
| XOHD         | Hostile to Dits Cross Over         | TRK696        | 20.00           | 0.95         | 68.36                   | 300.00              |
| SP           | SP Sub                             | PROT01        | 60.00           | 3.74         | 64.63                   | 300.00              |
| GTET         | Gamma Telemetry Tool               | 11039640      | 165.00          | 8.52         | 56.10                   | 60.00               |
| DSNT         | Dual Spaced Neutron                | 11019643      | 174.00          | 9.69         | 46.42                   | 60.00               |
| DCNT         | DSN Decentralizer                  | 10755066      | 6.60            | 5.13 *       | 49.75                   | 300.00              |
| SDLT         | Spectral Density Tool              | I43_P81       | 360.00          | 10.81        | 35.60                   | 60.00               |
| BSAT         | Borehole Sonic Array Tool          | 10747684      | 300.00          | 15.77        | 19.83                   | 60.00               |
| ACRt         | Array Compensated True Resistivity | I5059_S8385   | 250.00          | 19.25        | 0.58                    | 300.00              |
| CBHD         | Cabbage Head                       | TRK696        | 10.00           | 0.58         | 0.00                    | 300.00              |
| <b>Total</b> |                                    |               | <b>1,383.10</b> | <b>72.34</b> |                         |                     |

\* Not included in Total Length and Length Accumulation.

Data: CYNTHIA\_35\_3\0001 SP-GTET-DSN-SDL-BSAT-ACRT-CH\IDLE Date: 19-Nov-10 10:09:09

# HALLIBURTON

## CALIBRATION REPORT

### NATURAL GAMMA RAY TOOL SHOP CALIBRATION

|  |  |
|--|--|
| Tool Name: GTET - 11039640                   | Reference Calibration Date: 18-Nov-10 15:33:32 |
| Engineer: W.MILLER                           | Calibration Date: 18-Nov-10 15:40:50           |
| 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              | 128.9    | 105.5      | api   |
| Background + Calibrator | 458.5    | 375.1      | api   |
| Calibrator              | 246.2    | 269.6      | api   |

### NATURAL GAMMA RAY TOOL FIELD CALIBRATION

|  |  |
|--|--|
| Tool Name: GTET - 11039640                   | Reference Calibration Date: 18-Nov-10 15:40:50 |
| Engineer: W.MILLER                           | Calibration Date: 18-Nov-10 15:43:20           |
| 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

| Field Verification      | Shop  | Field      | Units     |
|-------------------------|-------|------------|-----------|
| Background              | 105.5 | 102.7      | api       |
| Background + Calibrator | 375.1 | 373.4      | api       |
| Calibrator              | 269.6 | 270.7      | api       |
| Shop                    | Field | Difference | Tolerance |
| 269.6                   | 270.7 | -1.1       | +/- 9.00  |

### NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name: GTET - 11039640 Reference Calibration Date: 18-Nov-10 15:43:20  
 Engineer: J. BOSH Calibration Date: 19-Nov-10 13:41:58  
 Software Version: WL INSITE R3.2.0 (Build 7) Calibration Version: 1

Calibrator Source S/N: TB 146  
 Calibrator API Reference:265.00 api  
 Calibrator API Reference:269.6 api

| Post Verification       | Field | Post  | Units      |           |
|-------------------------|-------|-------|------------|-----------|
| Background              | 102.7 | 54.6  | api        |           |
| Background + Calibrator | 373.4 | 327.5 | api        |           |
| Calibrator              | 270.7 | 272.9 | api        |           |
| Shop                    | Field | Post  | Difference | Tolerance |
| 269.6                   | 270.7 | 272.9 | -2.2       | +/- 9.00  |

### DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11019643 Reference Calibration Date: 06-Oct-10 11:38:45  
 Engineer: T. BRIDGEMAN Calibration Date: 05-Nov-10 14:17:11  
 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: 61 degF  
 Min. Tool Housing Outside Diameter: 3.620 in

### CALIBRATION CONSTANTS

| Measurement | Prev. Value | New Value | Control Limit On New Value |
|-------------|-------------|-----------|----------------------------|
| Gain:       | 0.955       | 0.953     | 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):   | 0.2111                           | 0.2106                 | 0.0005 | +/- 0.0020              |
| Calibrated Ratio: | 9.73                             | 9.72                   | 0.017  | +/- 0.050               |

### VERIFIER

| Measurement                | Value  | Control Limit     |
|----------------------------|--------|-------------------|
| Snow-Block Porosity (dec): | 0.0636 | 0.02000 - 0.09000 |

### PASS/FAIL SUMMARY

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

### DUAL SPACED NEUTRON FIELD CALIBRATION

|   |   |
|---|---|
| <b>Tool Name:</b> DSNT - 11019643                   | <b>Reference Calibration Date:</b> 05-Nov-10 14:17:11 |
| <b>Engineer:</b> W.MILLER                           | <b>Calibration Date:</b> 18-Nov-10 15:19:43           |
| <b>Software Version:</b> WL INSITE R3.2.0 (Build 7) | <b>Calibration Version:</b> 1                         |

Logging Source S/N: DSN-424  
Snow Block S/N: 696 BLOCK

### NEUTRON FIELD-CHECK SUMMARY

|                             | Shop   | Field  | Difference | Control Limit<br>On Change |
|-----------------------------|--------|--------|------------|----------------------------|
| Snow-Block Porosity (decp): | 0.0636 | 0.0649 | 0.0013     | +/- 0.0150                 |

### PASS/FAIL SUMMARY

|                        |        |
|------------------------|--------|
| Block Change Check:    | Passed |
| Snow Block Stat Check: | Passed |
| Temperature Check:     | Passed |

### DUAL SPACED NEUTRON POST CALIBRATION

|   |   |
|---|---|
| <b>Tool Name:</b> DSNT - 11019643                   | <b>Reference Calibration Date:</b> 18-Nov-10 15:19:43 |
| <b>Engineer:</b> J. BOSH                            | <b>Calibration Date:</b> 19-Nov-10 13:47:55           |
| <b>Software Version:</b> WL INSITE R3.2.0 (Build 7) | <b>Calibration Version:</b> 1                         |

Logging Source S/N: DSN-424  
Snow Block S/N: 696 BLOCK

### NEUTRON POST-CHECK SUMMARY

|                             | Field Value | Post Value | Difference | Control Limit<br>On Change |
|-----------------------------|-------------|------------|------------|----------------------------|
| Snow-Block Porosity (decp): | 0.0649      | 0.0705     | 0.0056     | +/- 0.0150                 |

### PASS/FAIL SUMMARY

|                        |        |
|------------------------|--------|
| Block Change Check:    | Passed |
| Snow Block Stat Check: | Passed |
| Temperature Check:     | Passed |

### SPECTRAL DENSITY SHOP CALIBRATION

|   |   |
|---|---|
| <b>Tool Name:</b> SDLT - I43_P81                    | <b>Reference Calibration Date:</b> 22-Oct-10 11:02:01 |
| <b>Engineer:</b> W.MILLER                           | <b>Calibration Date:</b> 18-Nov-10 14:33:14           |
| <b>Software Version:</b> WL INSITE R3.2.0 (Build 7) | <b>Calibration Version:</b> 1                         |

|                              |                    |           |
|------------------------------|--------------------|-----------|
| 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  | 1.0250         | 1.0139    | 0.90 - 1.10   |
| Near Dens Gain | 1.0069         | 1.0119    | 0.90 - 1.10   |
| Near Peak Gain | 1.0111         | 0.9975    | 0.90 - 1.10   |
| Near Lith Gain | 0.9713         | 0.9945    | 0.90 - 1.10   |

|                      |         |         |             |
|----------------------|---------|---------|-------------|
| Far Bar Gain         | 1.0107  | 1.0110  | 0.90 - 1.10 |
| Far Dens Gain        | 1.0027  | 1.0013  | 0.90 - 1.10 |
| Far Peak Gain        | 0.9986  | 0.9959  | 0.90 - 1.10 |
| Far Lith Gain        | 0.9803  | 0.9777  | 0.90 - 1.10 |
| Near Bar Offset      | -0.1238 | -0.0173 | NONE        |
| Near Dens Offset     | 0.0217  | -0.0190 | NONE        |
| Near Peak Offset     | -0.0243 | 0.0929  | NONE        |
| Near Lith Offset     | 0.3047  | 0.1150  | NONE        |
| Far Bar Offset       | -0.0531 | -0.0536 | NONE        |
| Far Dens Offset      | 0.0068  | 0.0242  | NONE        |
| Far Peak Offset      | 0.0075  | 0.0377  | NONE        |
| Far Lith Offset      | 0.1235  | 0.1586  | NONE        |
| Near Bar Background  | 853.19  | 850.69  | 700 - 1450  |
| Near Dens Background | 278.09  | 281.06  | 230 - 480   |
| Near Peak Background | 123.24  | 121.80  | 100 - 210   |
| Near Lith Background | 150.52  | 148.32  | 125 - 260   |
| Far Bar Background   | 557.49  | 557.26  | 450 - 900   |
| Far Dens Background  | 218.65  | 216.20  | 175 - 345   |
| Far Peak Background  | 86.58   | 85.98   | 70 - 140    |
| Far Lith Background  | 88.33   | 89.25   | 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) | 1.684                              | 1.684                    | -0.000 | +/- 0.015                  |
| Pe             | 2.580                              | 2.545                    | -0.035 | +/- 0.150                  |
| ALUMINUM       |                                    |                          |        |                            |
| Density (g/cc) | 2.598                              | 2.598                    | -0.000 | +/- 0.01500                |
| Pe             | 3.096                              | 3.117                    | 0.021  | +/- 0.150                  |

#### TOOL SUMMARY

| Measurement                | Near Detector |                | Far Detector |                |
|----------------------------|---------------|----------------|--------------|----------------|
|                            | Value         | Control Limits | Value        | Control Limits |
| QUALITY                    |               |                |              |                |
| Background                 | -0.0005       | +/- 0.0110     | -0.0006      | +/- 0.0140     |
| Magnesium Block            | -0.0010       | +/- 0.0110     | -0.0001      | +/- 0.0140     |
| Aluminum Block             | 0.0003        | +/- 0.0110     | 0.0009       | +/- 0.0140     |
| Resolution                 | 9.42          | 6.00 - 11.50   | 8.87         | 6.00 - 11.50   |
| Internal Verifier(B+D+P+L) | 1402          | 1200 - 2700    | 949          | 800 - 1700     |

#### 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 |

### SPECTRAL DENSITY FIELD CHECK

Tool Name: SDLT - I43\_P81

Reference Calibration Date: 18-Nov-10 14:33:14

Engineer: W.MILLER

Calibration Date: 18-Nov-10 14:39:32

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

Calibration Version: 1

Pad Temperature: 61.1 degF

#### DENSITY FIELD CALIBRATION SUMMARY

| Measurement        | Shop     | Field    | Change | Control Limit +/- |
|--------------------|----------|----------|--------|-------------------|
| Near (B+D+P+L) cps | 1401.877 | 1401.028 | -0.849 | 15.120            |
| Far (B+D+P+L) cps  | 948.688  | 946.332  | -2.356 | 16.616            |
| Near Resolution    | 9.42     | 9.55     | 0.130  | 0.50              |
| Far Resolution     | 8.87     | 8.87     | 0.000  | 1.00              |

#### PASS/FAIL SUMMARY

|                         |        |
|-------------------------|--------|
| Bkg Quality Check:      | Passed |
| Bkg Resolution Check:   | Passed |
| Bkg Verification Check: | Passed |

### SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - I43\_P81

Reference Calibration Date: 18-Nov-10 14:39:32

Engineer: J. BOSH

Calibration Date: 19-Nov-10 13:41:56

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

Calibration Version: 1

Pad Temperature: 75.1 degF

#### DENSITY POST CALIBRATION SUMMARY

| Measurement        | Field    | Post     | Change | Control Limit +/- |
|--------------------|----------|----------|--------|-------------------|
| Near (B+D+P+L) cps | 1401.028 | 1398.210 | -2.818 | 15.120            |
| Far (B+D+P+L) cps  | 946.332  | 950.287  | 3.955  | 16.616            |
| Near Resolution    | 9.55     | 9.64     | 0.090  | 0.50              |
| Far Resolution     | 8.87     | 9.13     | 0.260  | 1.00              |

#### PASS/FAIL SUMMARY

|                         |        |
|-------------------------|--------|
| Bkg Quality Check:      | Passed |
| Bkg Resolution Check:   | Passed |
| Bkg Verification Check: | Passed |

### MICRO LOG SHOP CALIBRATION

Tool Name: SDLT - I43\_P81

Reference Calibration Date: 23-Sep-10 08:31:40

Engineer: T. BRIDGEMAN

Calibration Date: 22-Oct-10 16:26:46

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

Calibration Version: 1

#### CALIBRATION COEFFICIENT SUMMARY

| Measurement          | Micro Log Normal |            | Micro Log Lateral |            | Units |
|----------------------|------------------|------------|-------------------|------------|-------|
|                      | Measured         | Calibrated | Measured          | Calibrated |       |
| Tool Zero            | -0.07            | -0.06      | -0.01             | -0.12      | ohmm  |
| Calibration Point #1 | -0.00            | 0.00       | 0.12              | 0.00       | ohmm  |
| Calibration Point #2 | 21.02            | 20.00      | 21.96             | 20.00      | ohmm  |
| Internal Reference   | 20.95            | 19.94      | 21.50             | 19.58      | ohmm  |

| Measurement | Micro Log Normal<br>Tool Value | Micro Log Lateral<br>Tool Value | Units |
|-------------|--------------------------------|---------------------------------|-------|
|-------------|--------------------------------|---------------------------------|-------|



|                       |       |       |       |          |
|-----------------------|-------|-------|-------|----------|
| Small Ring (in)       | 2.05  | 2.00  | -0.05 | +/- 0.20 |
| Medium Ring (in)      | 3.64  | 3.75  | 0.11  | +/- 0.20 |
| <b>RING DIAMETER:</b> |       |       |       |          |
| Small Ring (in)       | 6.70  | 6.50  | -0.20 | +/- 0.20 |
| Medium Ring (in)      | 8.28  | 8.25  | -0.03 | +/- 0.20 |
| Large Ring (in)       | 15.18 | 15.00 | -0.18 | +/- 0.20 |

**PASS/FAIL SUMMARY**

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

**PASS/FAIL SUMMARY**

Calibration-Coefficients Range Check: Passed

**SDLT CALIPER FIELD CALIBRATION**

|   |   |
|---|---|
| <b>Tool Name:</b> SDLT - I43_P81                    | <b>Reference Calibration Date:</b> 18-Nov-10 15:05:13 |
| <b>Engineer:</b> W.MILLER                           | <b>Calibration Date:</b> 18-Nov-10 15:08:04           |
| <b>Software Version:</b> WL INSITE R3.2.0 (Build 7) | <b>Calibration Version:</b> 1                         |

**MEASURED CALIPER VALUES**

| Measurement   | Shop | Field | Change | Control Limit On New Value |
|---------------|------|-------|--------|----------------------------|
| Pad Extension | 3.75 | 3.78  | 0.03   | +/- 0.10                   |
| Ring Diameter | 8.25 | 8.31  | 0.06   | +/- 0.15                   |

**PASS/FAIL SUMMARY**

Pad Extension Check: Passed  
 Diameter Check: Passed

**SDLT CALIPER POST CALIBRATION**

|   |   |
|---|---|
| <b>Tool Name:</b> SDLT - I43_P81                    | <b>Reference Calibration Date:</b> 18-Nov-10 15:08:04 |
| <b>Engineer:</b> J. BOSH                            | <b>Calibration Date:</b> 19-Nov-10 13:51:58           |
| <b>Software Version:</b> WL INSITE R3.2.0 (Build 7) | <b>Calibration Version:</b> 1                         |

**MEASURED CALIPER VALUES**

| Measurement   | Field | Post | Change | Control Limit On New Value |
|---------------|-------|------|--------|----------------------------|
| Pad Extension | 3.78  | 3.85 | 0.08   | +/- 0.10                   |
| Ring Diameter | 8.31  | 8.29 | -0.02  | +/- 0.15                   |

**PASS/FAIL SUMMARY**

Pad Extension Check: Passed  
 Diameter Check: Passed

**CALIBRATION SUMMARY**

| Sensor               | Shop     | Field    | Post     | Difference | Tolerance  | Units |
|----------------------|----------|----------|----------|------------|------------|-------|
| <b>GTET-11039640</b> |          |          |          |            |            |       |
| Gamma Ray Calibrator | 269.6    | 270.7    | 272.9    | -2.2       | +/- 9.00   | api   |
| <b>DSNT-11019643</b> |          |          |          |            |            |       |
| Snow-Block Porosity  | 0.0636   | 0.0649   | 0.0705   | -0.0056    | +/- 0.0150 | decp  |
| <b>SDLT-I43_P81</b>  |          |          |          |            |            |       |
| Near(B+D+P+L)        | 1401.877 | 1401.028 | 1398.210 | 2.818      | +/-15.120  | cps   |
| Far(B+D+P+L)         | 948.688  | 946.332  | 950.287  | -3.955     | +/-16.616  | cps   |
| Microlog Normal      | 19.94    | 19.88    | 20.06    | 0.18       | +/- 0.80   | ohmm  |

|                  |       |       |       |       |         |      |
|------------------|-------|-------|-------|-------|---------|------|
| MicroLog Normal  | 19.94 | 19.88 | 20.00 | -0.18 | +/-0.80 | ohmm |
| MicroLog Lateral | 19.58 | 19.51 | 19.75 | -0.24 | +/-0.80 | ohmm |
| Pad Extension    | 3.75  | 3.78  | 3.85  | -0.07 | +/-0.10 | in   |
| Ring Diameter    | 8.25  | 8.31  | 8.29  | 0.020 | +/-0.15 | in   |

Data: CYNTHIA\_35\_3\0001 SP-GTET-DSN-SDL-BSAT-ACRT-CH\IDLE Date: 19-Nov-10 13:54:29

# HALLIBURTON

## PARAMETERS REPORT

| Depth (ft) | Tool Name | Mnemonic | Description   | Value     | Units |
|------------|-----------|----------|---|-----------|-------|
| TOP        |           |          |   |           |       |
|            | DSNT      | DNOK     | Process DSN?  | No        |       |
|            | SDLT      | DNOK     | Process Density?                                      | No        |       |
|            | SDLT      | MLOK     | Process MicroLog Outputs?                             | No        |       |
| 2990.00    |           |          |   |           |       |
|            | 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                                 | 8.900     | 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                                       | 1.250     | 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                                      | 6200.00   | ft    |
|            | SHARED    | BHT      | Bottom Hole Temperature                               | 135.0     | 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          | 0.300     | 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            |      |
| BSAT | MBOK | Compute BCAS Results?             | Yes            |      |
| BSAT | FLLO | Frequency Filter Low Pass Value?  | 7000           | Hz   |
| BSAT | FLHI | Frequency Filter High Pass Value? | 27000          | Hz   |
| BSAT | DFTL | Delta -T Fluid                    | 189.00         | uspf |
| BSAT | DTMT | Delta -T Matrix Type              | User define    |      |
| BSAT | DTMA | Delta -T Matrix                   | 47.60          | uspf |
| BSAT | DTSH | Delta -T Shale                    | 100.00         | uspf |
| BSAT | SPEQ | Acoustic Porosity Equation        | Wylie          |      |
| 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

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## INPUTS, DELAYS AND FILTERS TABLE

| Mnemonic           | Input Description                                       | Delay (ft) | Filter Type | Filter Length (ft) |
|--------------------|---|------------|-------------|--------------------|
| <b>Depth Panel</b> |   |            |             |                    |
| TENS               | Tension   | 0.00       | NO          |                    |
| <b>CH_HOS</b>      |   |            |             |                    |
| DHTN               | DownholeTension   | 0.00       | BLK         | 0.000              |
| <b>SP Sub</b>      |   |            |             |                    |
| PLTC               | Plot Control Mask                                       | 66.58      | NO          |                    |
| SP                 | Spontaneous Potential                                   | 66.58      | BLK         | 1.250              |
| SPR                | Raw Spontaneous Potential                               | 66.58      | NO          |                    |
| SPO                | Spontaneous Potential Offset                            | 66.58      | NO          |                    |
| <b>GTET</b>        |   |            |             |                    |
| TPUL               | Tension Pull  | 58.56      | NO          |                    |
| GR                 | Natural Gamma Ray API                                   | 58.56      | TRI         | 1.750              |
| GRU                | Unfiltered Natural Gamma Ray API                        | 58.56      | NO          |                    |
| EGR                | Natural Gamma Ray API with Enhanced Vertical Resolution | 58.56      | W           | 1.416 , 0.750      |
| ACCZ               | Accelerometer Z   | 0.00       | BLK         | 0.083              |
| DEVI               | Inclination   | 0.00       | NO          |                    |
| <b>DSNT</b>        |   |            |             |                    |
| TPUL               | Tension Pull  | 48.32      | NO          |                    |
| RNDS               | Near Detector Telemetry Counts                          | 48.42      | BLK         | 1.417              |
| RFDS               | Far Detector Telemetry Counts                           | 49.17      | TRI         | 0.583              |
| DNTT               | DSN Tool Temperature                                    | 48.42      | NO          |                    |

|             |                                    |       |     |       |
|-------------|------------------------------------|-------|-----|-------|
| DSNS        | DSN Tool Status                    | 48.32 | NO  |       |
| ERND        | Near Detector Telemetry Counts EVR | 48.42 | BLK | 0.000 |
| ERFD        | Far Detector Telemetry Counts EVR  | 49.17 | BLK | 0.000 |
| ENTM        | DSN Tool Temperature EVR           | 48.42 | NO  |       |
| <b>SDLT</b> |                                    |       |     |       |
| TPUL        | Tension Pull                       | 38.41 | NO  |       |
| NAB         | Near Above                         | 38.24 | BLK | 0.920 |
| NHI         | Near Cesium High                   | 38.24 | BLK | 0.920 |
| NLO         | Near Cesium Low                    | 38.24 | BLK | 0.920 |
| NVA         | Near Valley                        | 38.24 | BLK | 0.920 |
| NBA         | Near Barite                        | 38.24 | BLK | 0.920 |
| NDE         | Near Density                       | 38.24 | BLK | 0.920 |
| NPK         | Near Peak                          | 38.24 | BLK | 0.920 |
| NLI         | Near Lithology                     | 38.24 | BLK | 0.920 |
| NBAU        | Near Barite Unfiltered             | 38.24 | BLK | 0.250 |
| NLIU        | Near Lithology Unfiltered          | 38.24 | BLK | 0.250 |
| FAB         | Far Above                          | 38.58 | BLK | 0.250 |
| FHI         | Far Cesium High                    | 38.58 | BLK | 0.250 |
| FLO         | Far Cesium Low                     | 38.58 | BLK | 0.250 |
| FVA         | Far Valley                         | 38.58 | BLK | 0.250 |
| FBA         | Far Barite                         | 38.58 | BLK | 0.250 |
| FDE         | Far Density                        | 38.58 | BLK | 0.250 |
| FPK         | Far Peak                           | 38.58 | BLK | 0.250 |
| FLI         | Far Lithology                      | 38.58 | BLK | 0.250 |
| PTMP        | Pad Temperature                    | 38.42 | BLK | 0.920 |
| NHV         | Near Detector High Voltage         | 35.60 | NO  |       |
| FHV         | Far Detector High Voltage          | 35.60 | NO  |       |
| ITMP        | Instrument Temperature             | 35.60 | NO  |       |
| DDHV        | Detector High Voltage              | 35.60 | NO  |       |
| TPUL        | Tension Pull                       | 38.42 | NO  |       |
| PCAL        | Pad Caliper                        | 38.42 | TRI | 0.250 |
| ACAL        | Arm Caliper                        | 38.42 | TRI | 0.250 |
| TPUL        | Tension Pull                       | 38.60 | NO  |       |
| MINV        | Microlog Lateral                   | 38.60 | BLK | 0.750 |
| MNOR        | Microlog Normal                    | 38.60 | BLK | 0.750 |
| <b>BSAT</b> |                                    |       |     |       |
| TPUL        | Tension Pull                       | 27.09 | NO  |       |
| STAT        | Status                             | 27.09 | NO  |       |
| DLYT        | Delay Time                         | 27.09 | NO  |       |
| SI          | Sample Interval                    | 27.09 | NO  |       |
| TXRX        | Raw Telemetry 10 Receivers         | 27.09 | NO  |       |
| FRMC        | Tool Frame Count                   | 27.09 | NO  |       |
| <b>ACRt</b> |                                    |       |     |       |
| 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 |

|  |   |       |     |                          |
|--|---|-------|-----|--------------------------|
| F1R1   | ACRT 12KHz - 10in R 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  |                          |
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|         |               |       |        |
|---------|---------------|-------|--------|
| COMPANY | EOG RESOURCES |       |        |
| WELL    | CYNTHIA 35-3  |       |        |
| FIELD   | WILDCAT       |       |        |
| COUNTY  | STEVENS       | STATE | KANSAS |

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