



Weatherford[®]

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

MULL DRILLING COMPANY, INC.

BLEUMER # 1-13

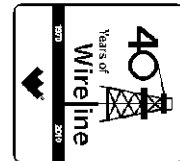
WILDCAT

GRAY COUNTY

U.S.A. / KANSAS

2112' FNL & 778' FWL

SW/4 NW/4



| | | | |
|---|--------------|---------------|---|
| SEC | TWP | RGE | Other Services |
| 13 | 26S | 30W | MSS |
| API Number | 15-069-20371 | MA/MI/FE | SGS |
| Permit Number | | | |
| Permanent Datum G.L., Elevation 2772 feet | | | |
| Log Measured From KB | | | |
| Drilling Measured From K.B. | | | |
| Date | 07-MAY-2012 | | Elevations: KB 2785.00 DF 2783.00 GL 2772.00 |
| Run Number | ONE | | |
| Depth Driller | 6200.00 | feet | |
| Depth Logger | 6193.00 | feet | |
| First Reading | 6159.00 | feet | |
| Last Reading | 3700.00 | feet | |
| Casing Driller | 464.00 | feet | |
| Casing Logger | 462.00 | feet | |
| Bit Size | 7.875 | inches | |
| Hole Fluid Type | CHEMICAL | | |
| Density / Viscosity | 9.40 lb/USg | 57.00 CP | |
| PH / Fluid Loss | 8.50 | 8.00 ml/30Min | |
| Sample Source | FLOWLINE | | |
| Rm @ Measured Temp | 0.87 @ 70.0 | ohm-m | |
| Rmf @ Measured Temp | 0.70 @ 70.0 | ohm-m | |
| Rmc @ Measured Temp | 1.04 @ 70.0 | ohm-m | |
| Source Rmf / Rmc | CALC | CALC | |
| Rm @ BHT | 0.49 @129.0 | ohm-m | |
| Time Since Circulation | 5 HOURS | | |
| Max Recorded Temp | 130.00 | deg F | |
| Equipment Name | COMPACT | | |
| Equipment / Base | 13096 | LIB | |
| Recorded By | A. GIAMBALVO | | |
| Witnessed By | PAUL GERLACH | | |
| S.O. / JOB # | 3534535 | | LB12-115 |

BOREHOLE RECORD

Last Edited: 07-MAY-2012 07:55

| | | |
|--------------------|--------------------|------------------|
| Bit Size inches | Depth From feet | Depth To feet |
| 7.875 | 462.00 | 6193.00 |

CASING RECORD

| Type | Size inches | Depth From feet | Shoe Depth feet | Weight pounds/ft |
|---------|----------------|--------------------|--------------------|---------------------|
| SURFACE | 8.625 | 13.00 | 462.00 | 24.00 |

REMARKS

Tools Ran: MCG, SGS, MML, MDN, MPD, SKJ, MFE, MSS, MAI.
 Hardware Used: MDN Dual Eccentralizer used. MPD 8 inch profile plate used. MFE, MSS and MAI 0.5 inch standoffs used.
 2.71 g/cc Limestone Density Matrix used to calculate porosity.
 Sonic porosity calculated using a Limestone scale (47.5 usec/ft).
 All intervals logged and scaled per customer's request.
 Annular volume with 5 inch production casing from TD to Surface Casing = 1468 cu. ft.
 Total hole volume from TD to Surface Casing = 2248 cu. ft.
 Service order: #3534535
 Rig: Duke # 9
 Engineer: A. Giambalvo
 Operator(s): J. LaPoint, N. Adame

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.



5 INCH MAIN



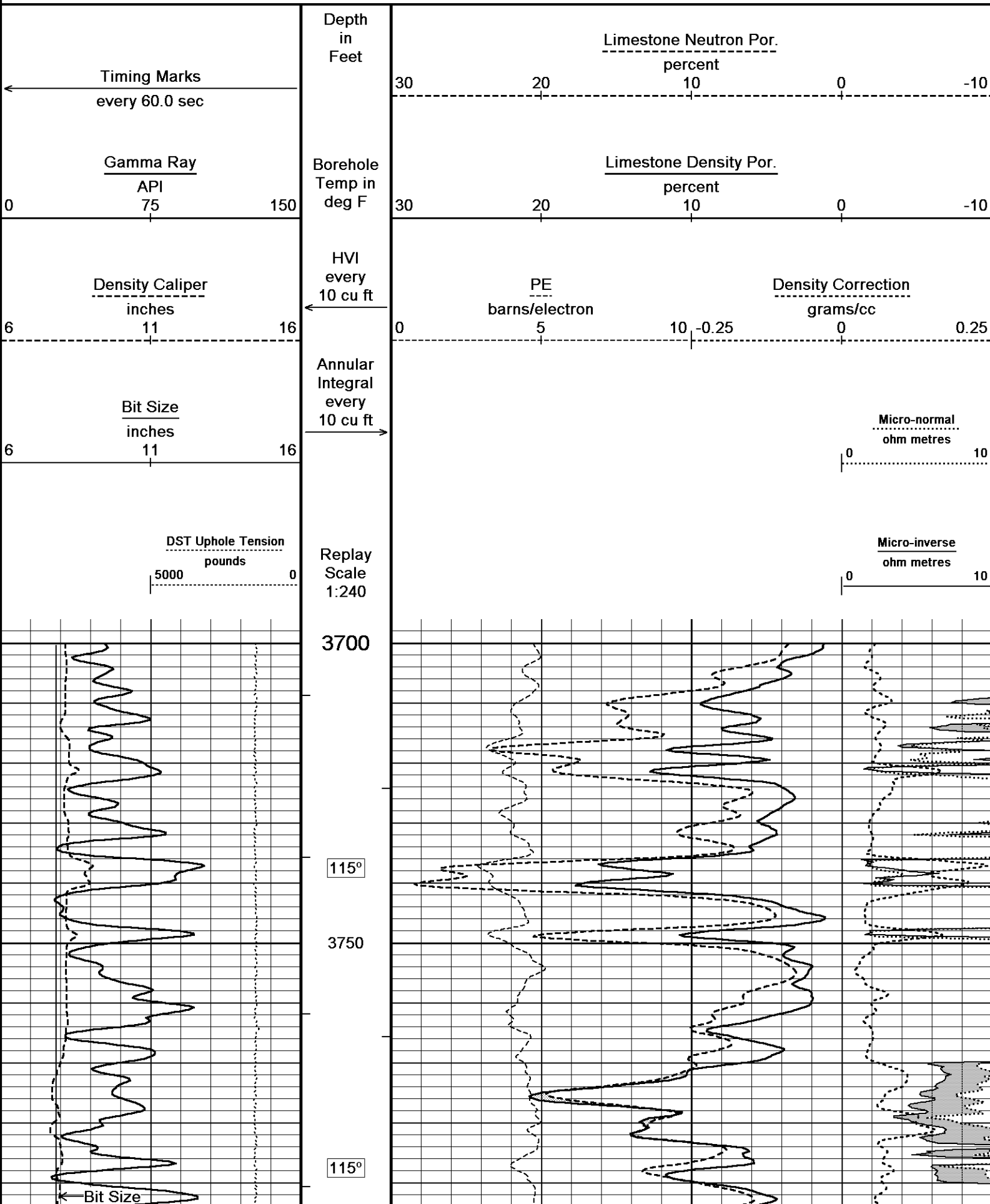
Depth Based Data - Maximum Sampling Increment 10.0cm

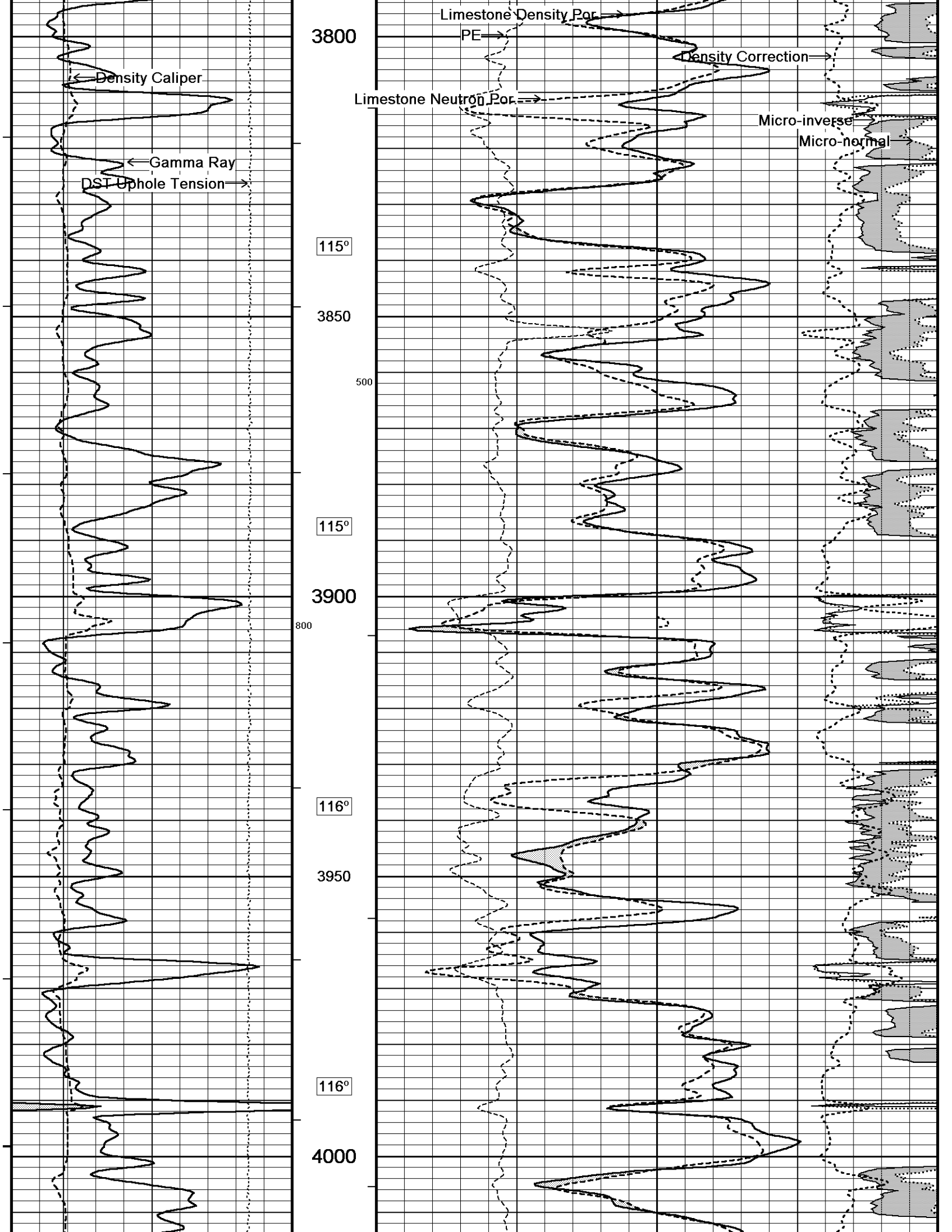
Plotted on 07-MAY-2012 08:22

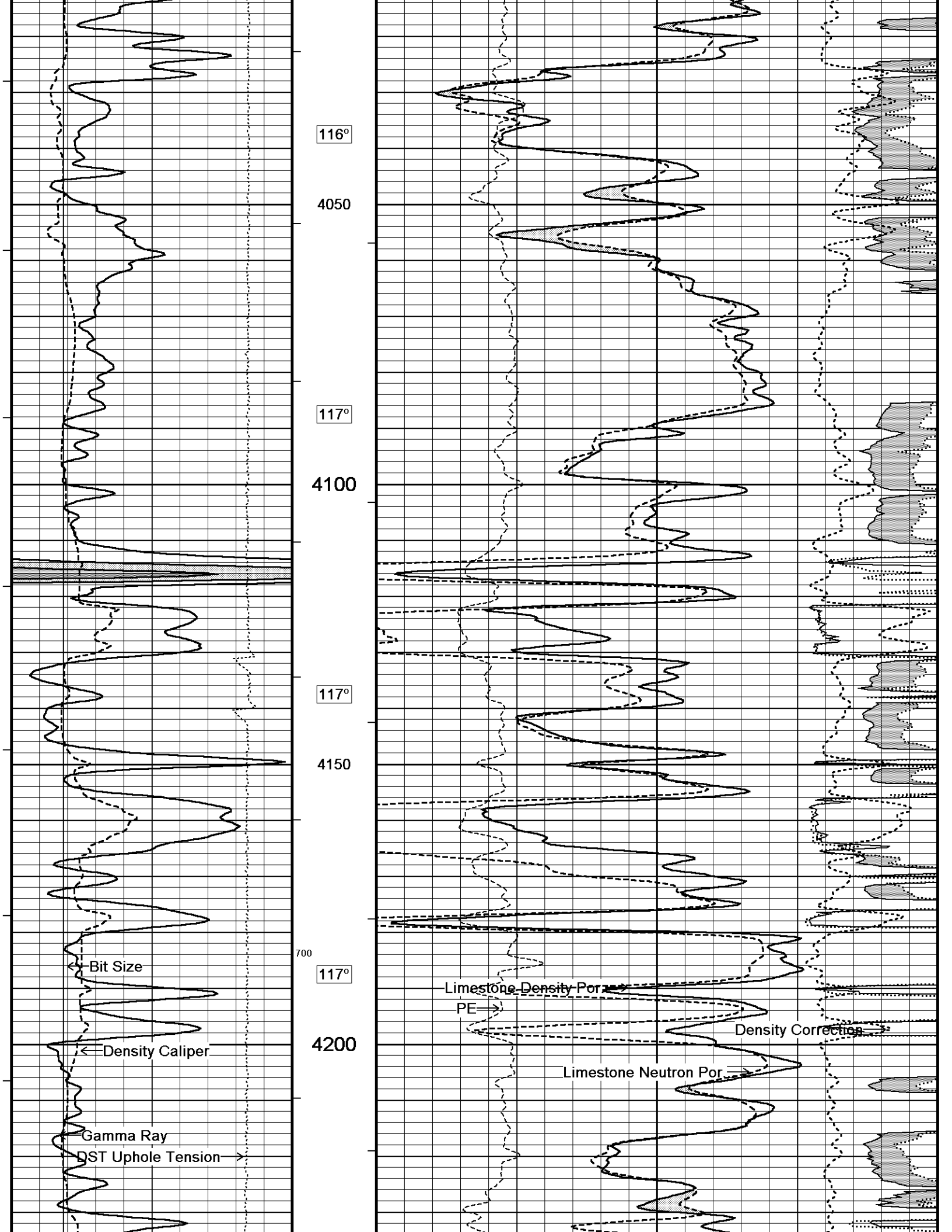
Filename: C:\Minimus 11_03_4044\Data\M...Mull Drilling Company, Inc. Bleumer # 1-13 Run 1_001.dta

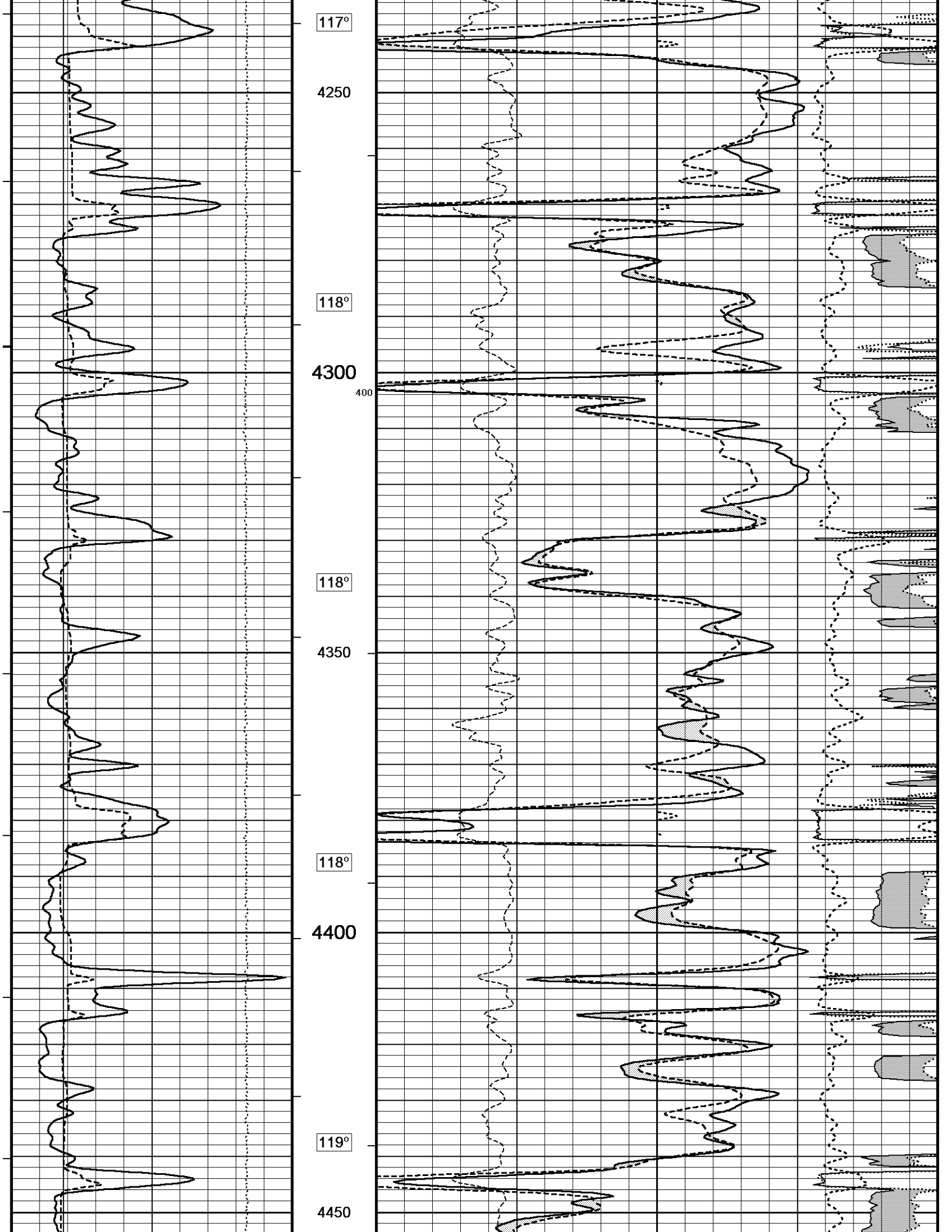
Recorded on 07-MAY-2012 03:49

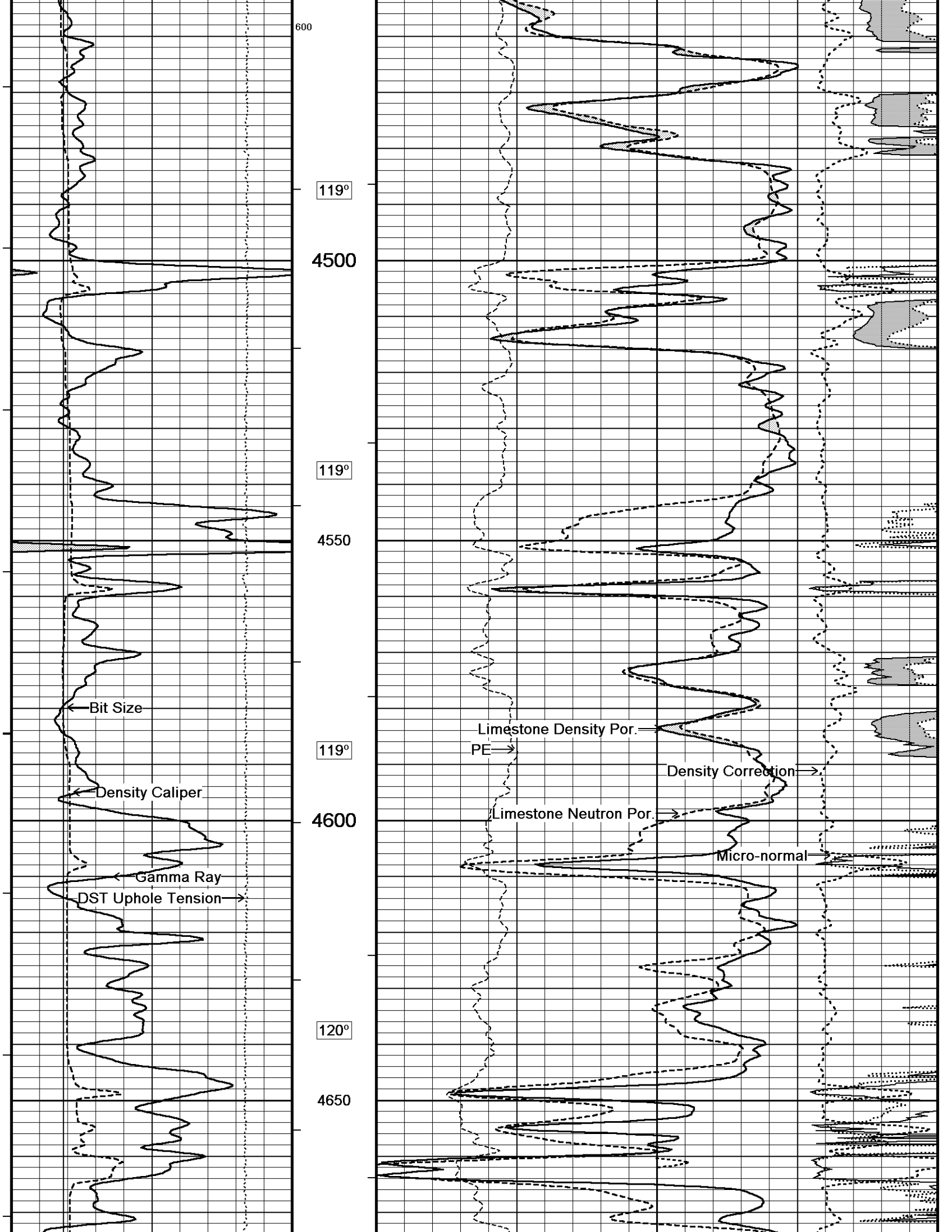
System Versions: Logged with 11.03.4044 Plotted with 11.03.4044

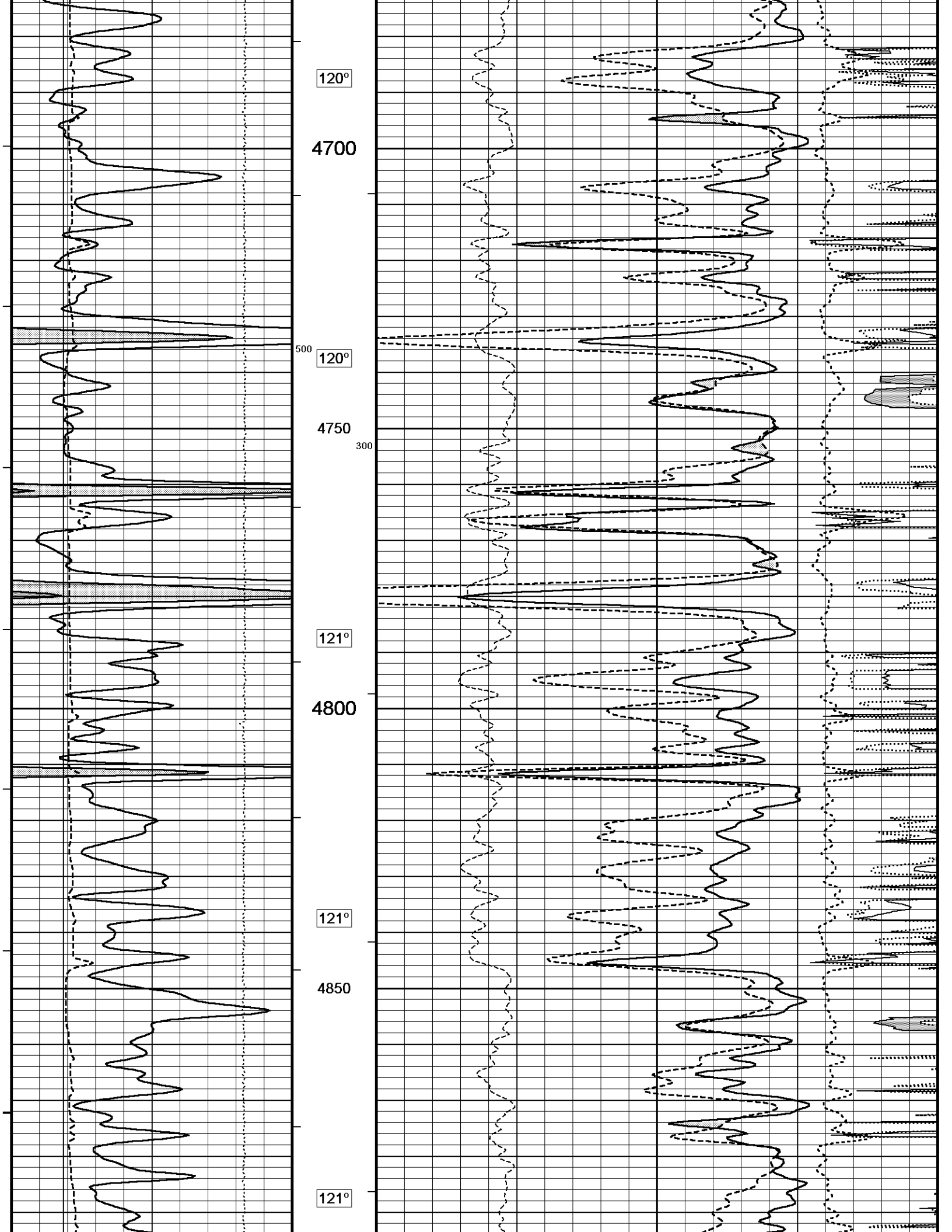


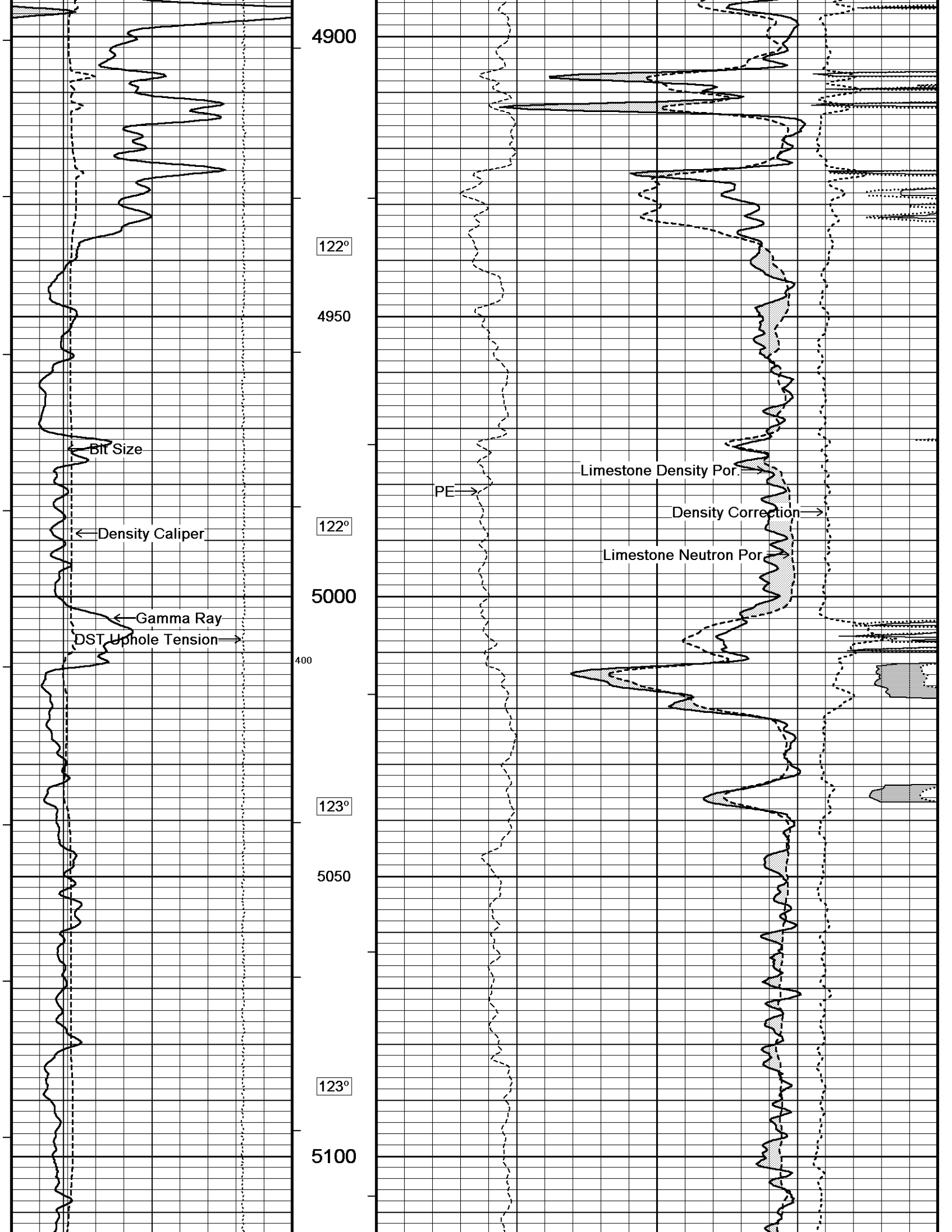


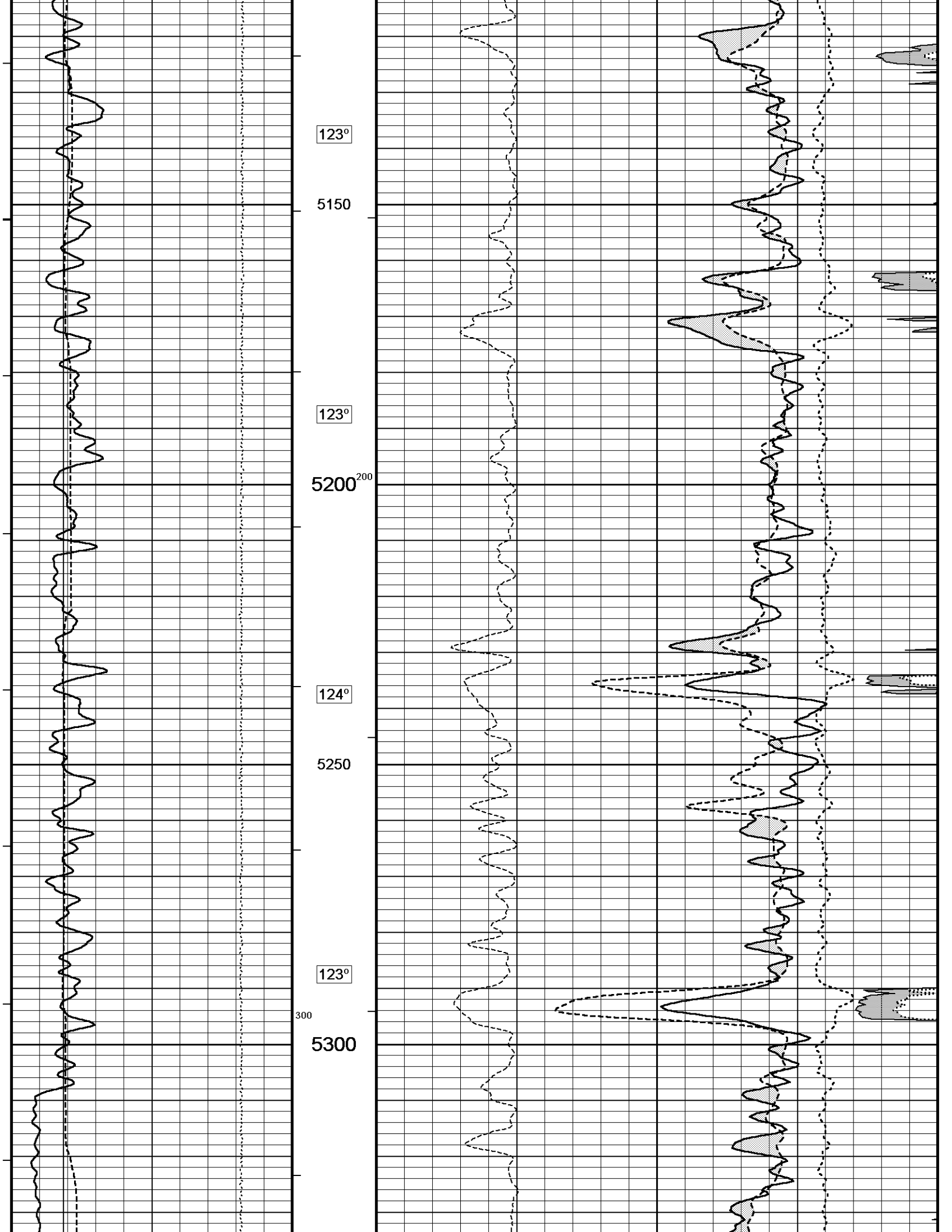


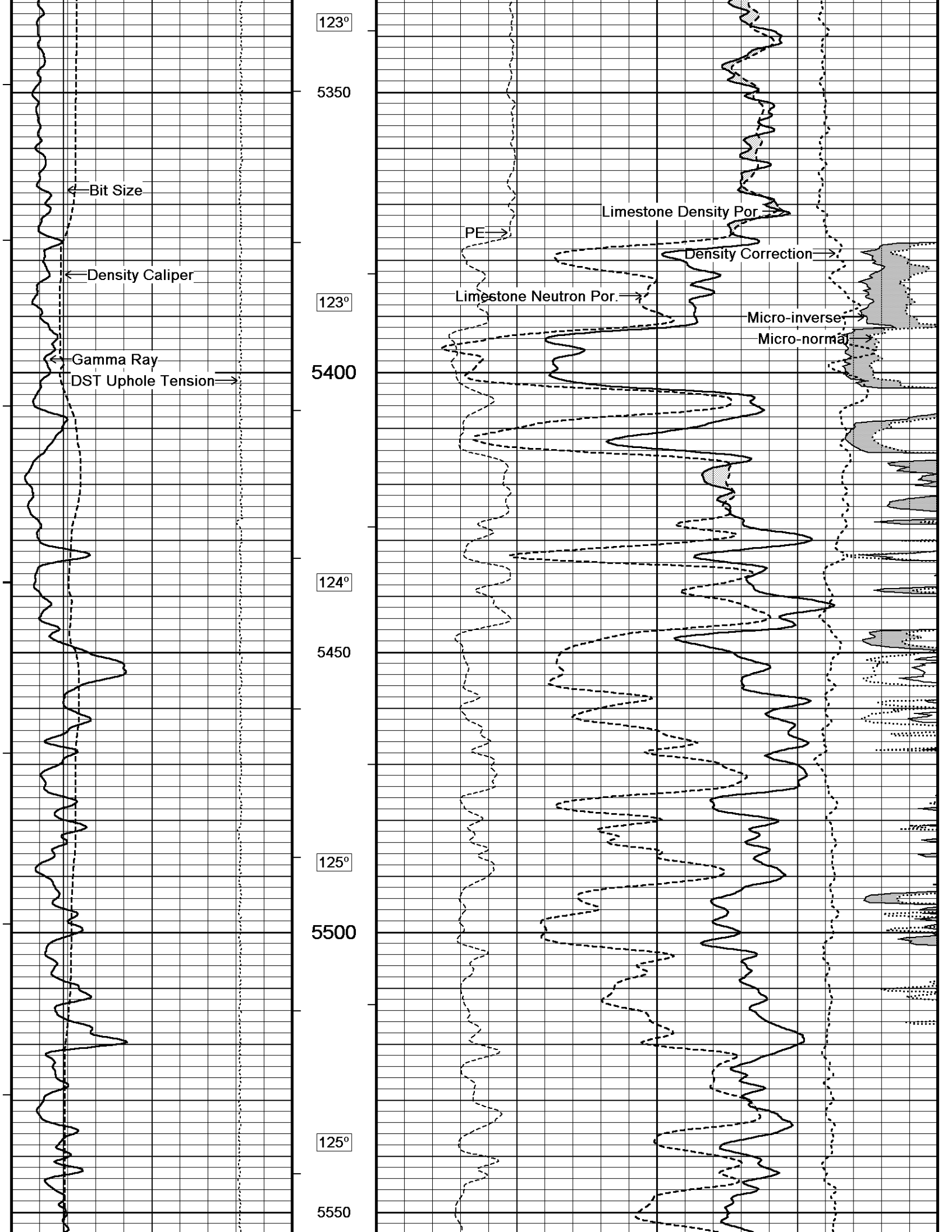


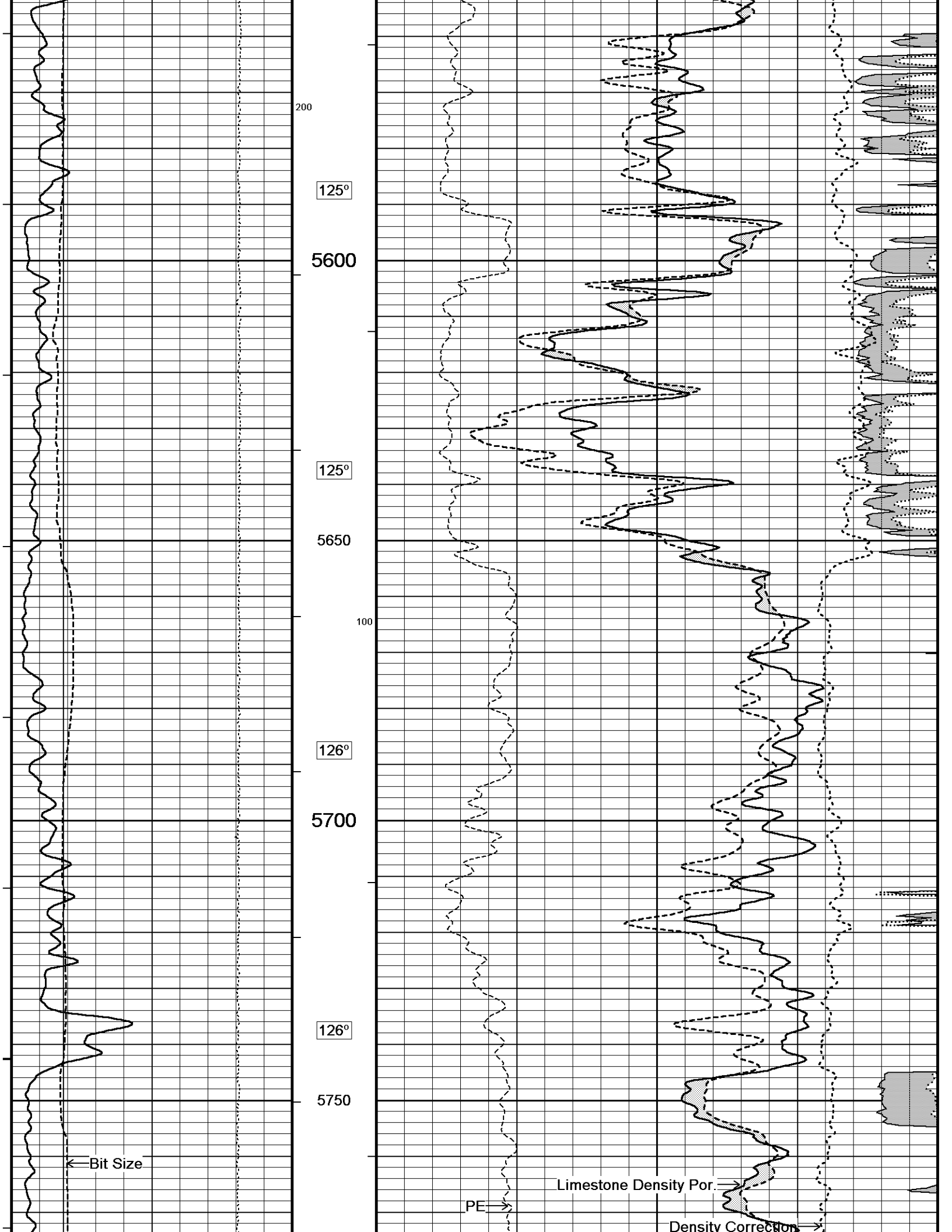


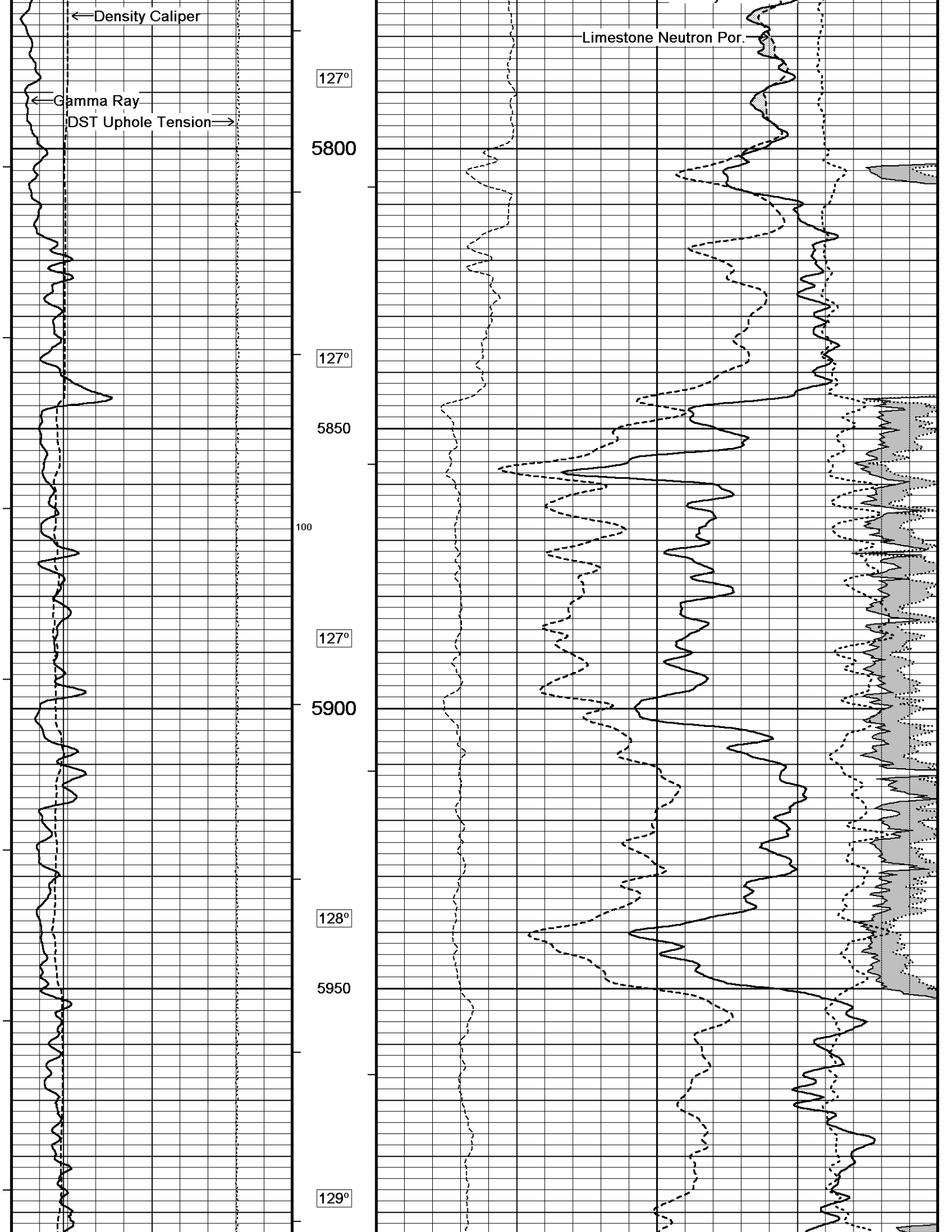


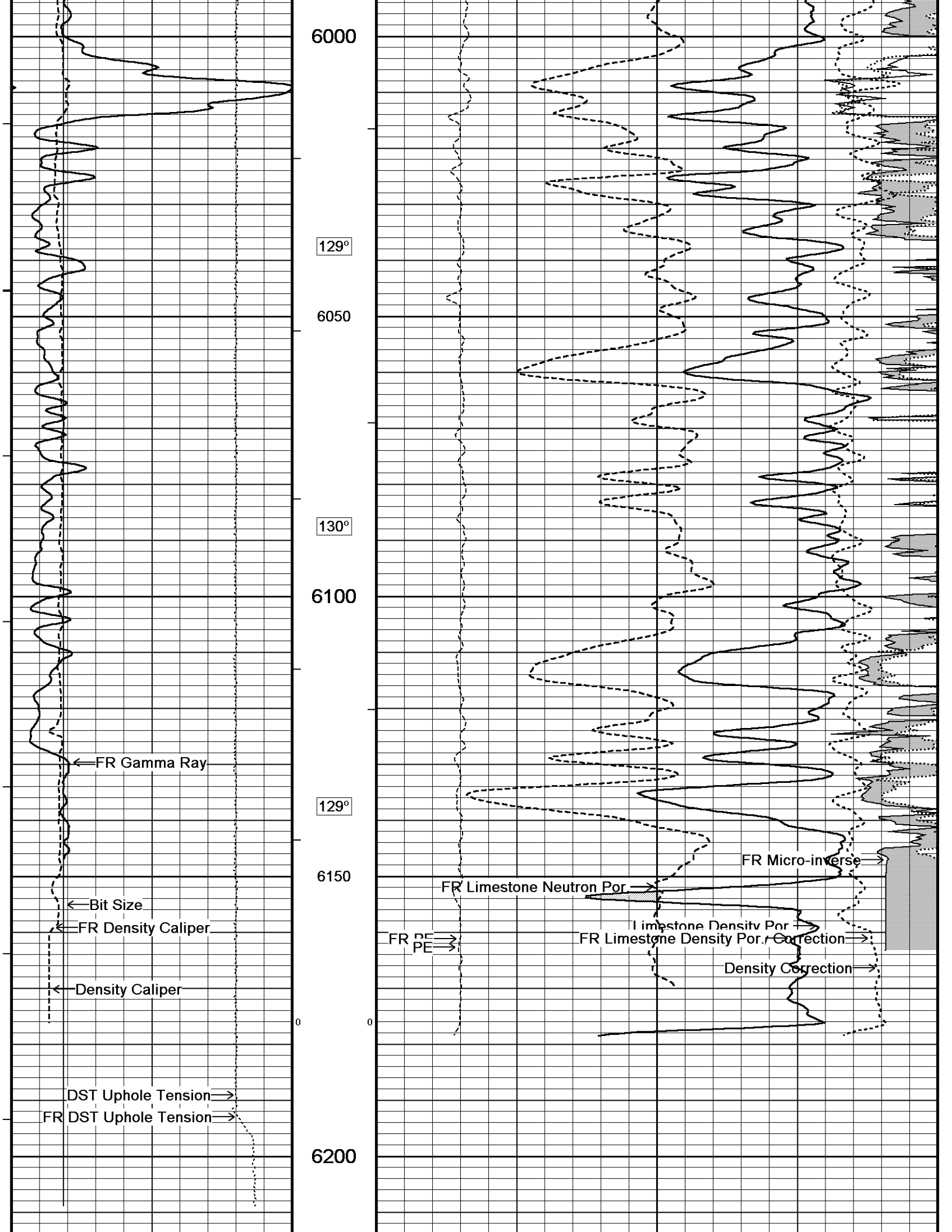


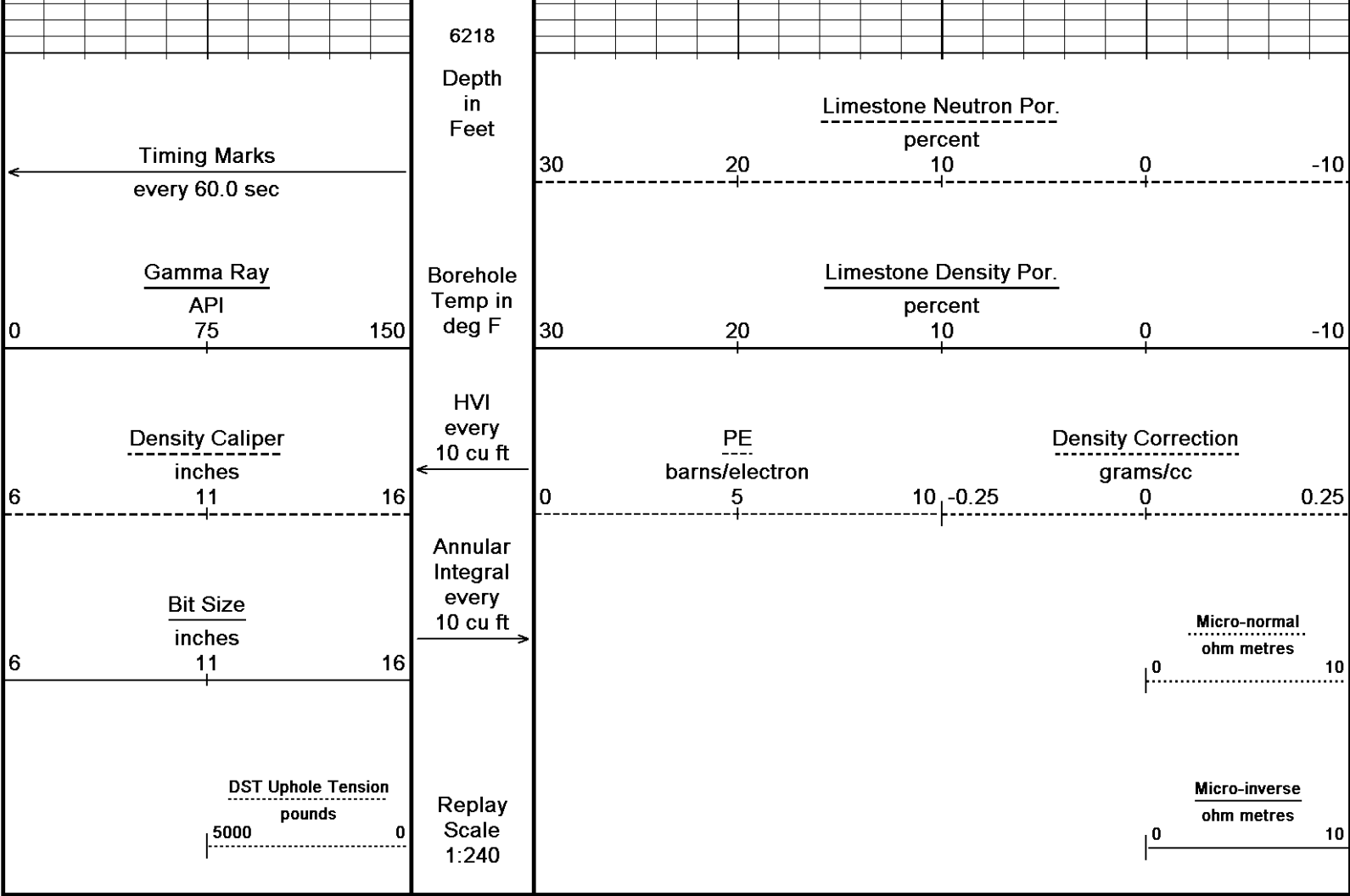












Depth Based Data - Maximum Sampling Increment 10.0cm
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 System Versions: Logged with 11.03.4044 Plotted with 11.03.4044

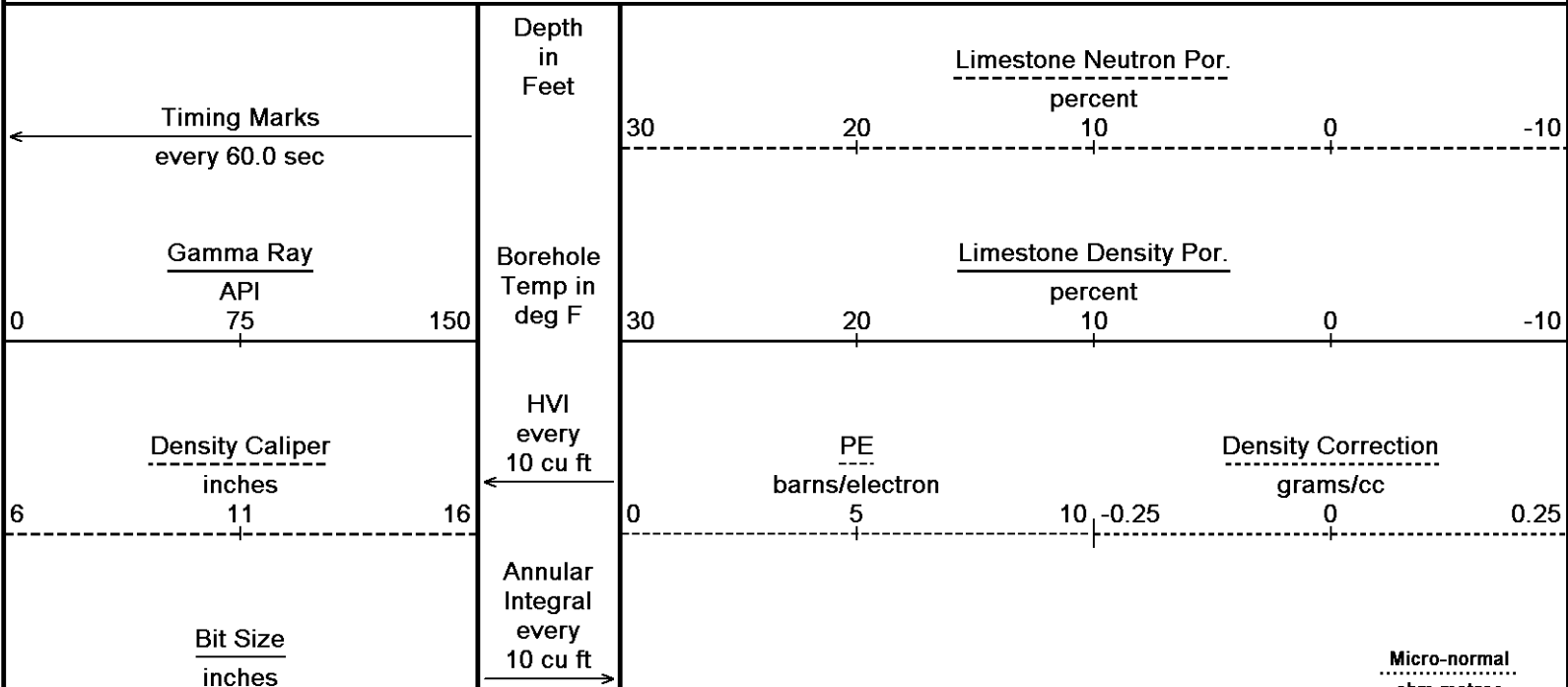
Plotted on 07-MAY-2012 08:22
 Recorded on 07-MAY-2012 03:49

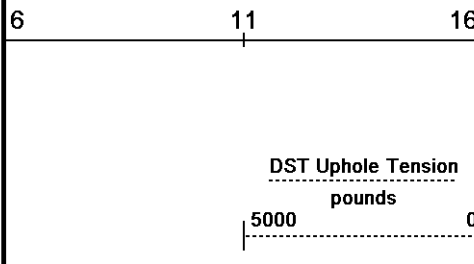
5 INCH MAIN

REPEAT SECTION

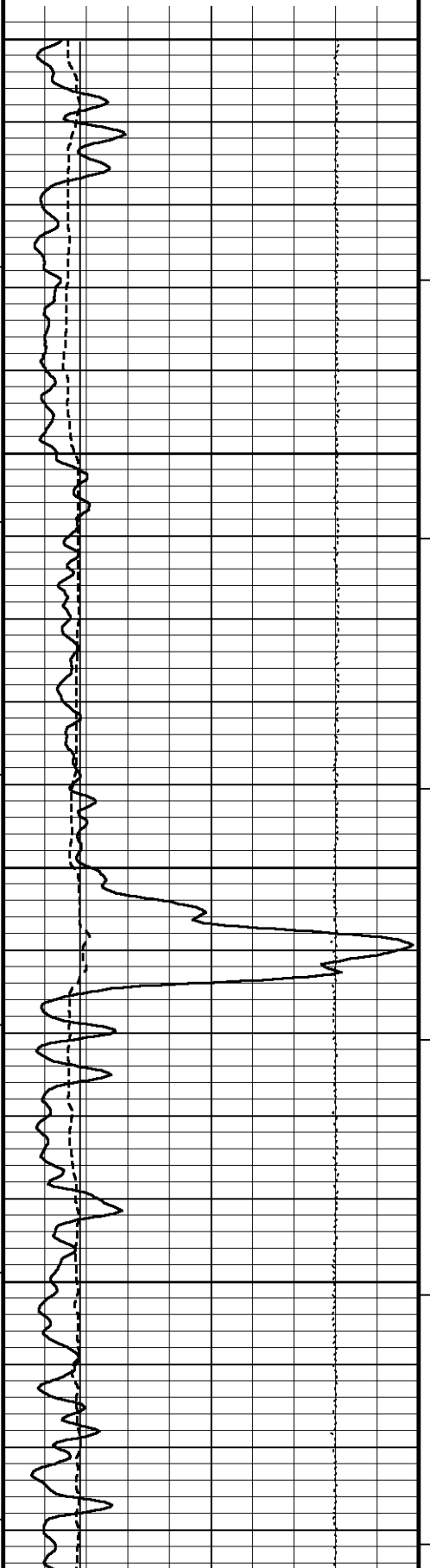
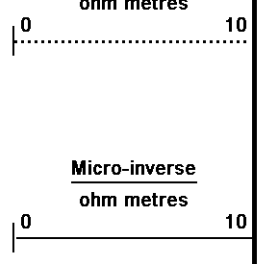
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Replay
Scale
1:240



5900

127°

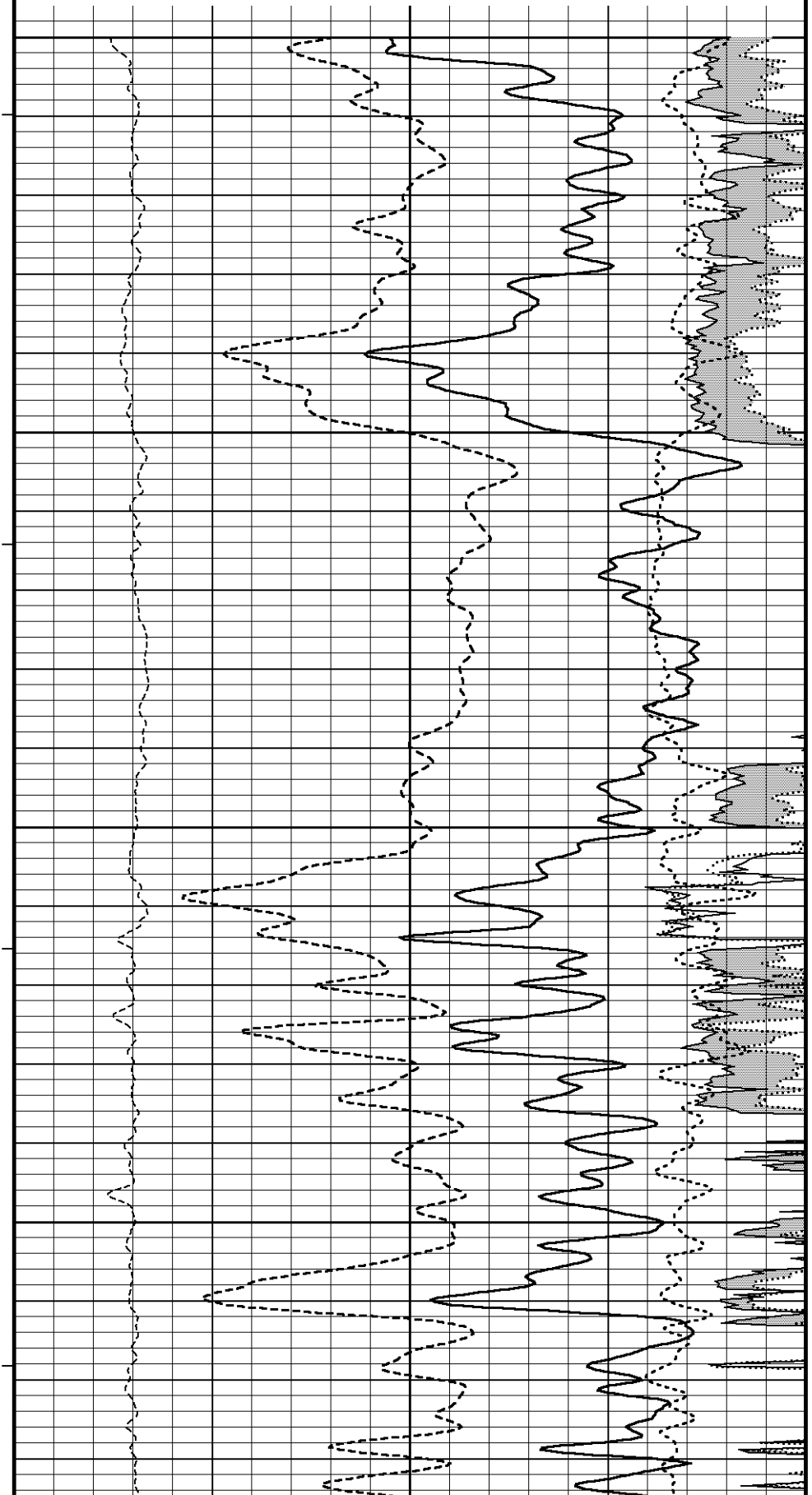
5950

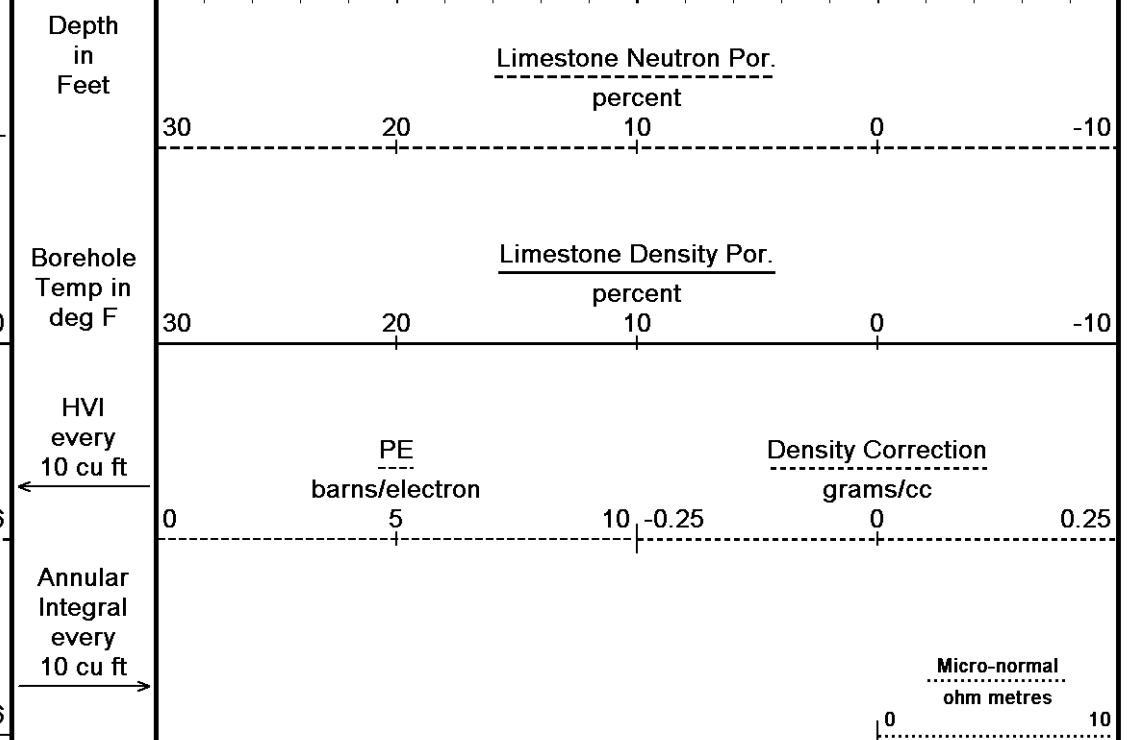
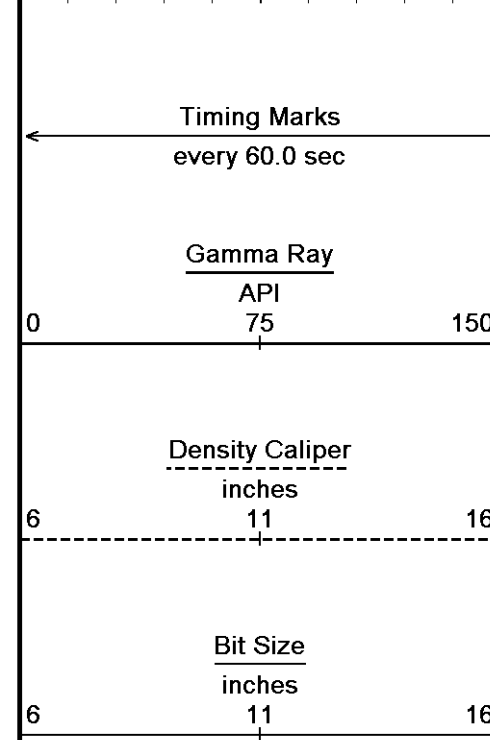
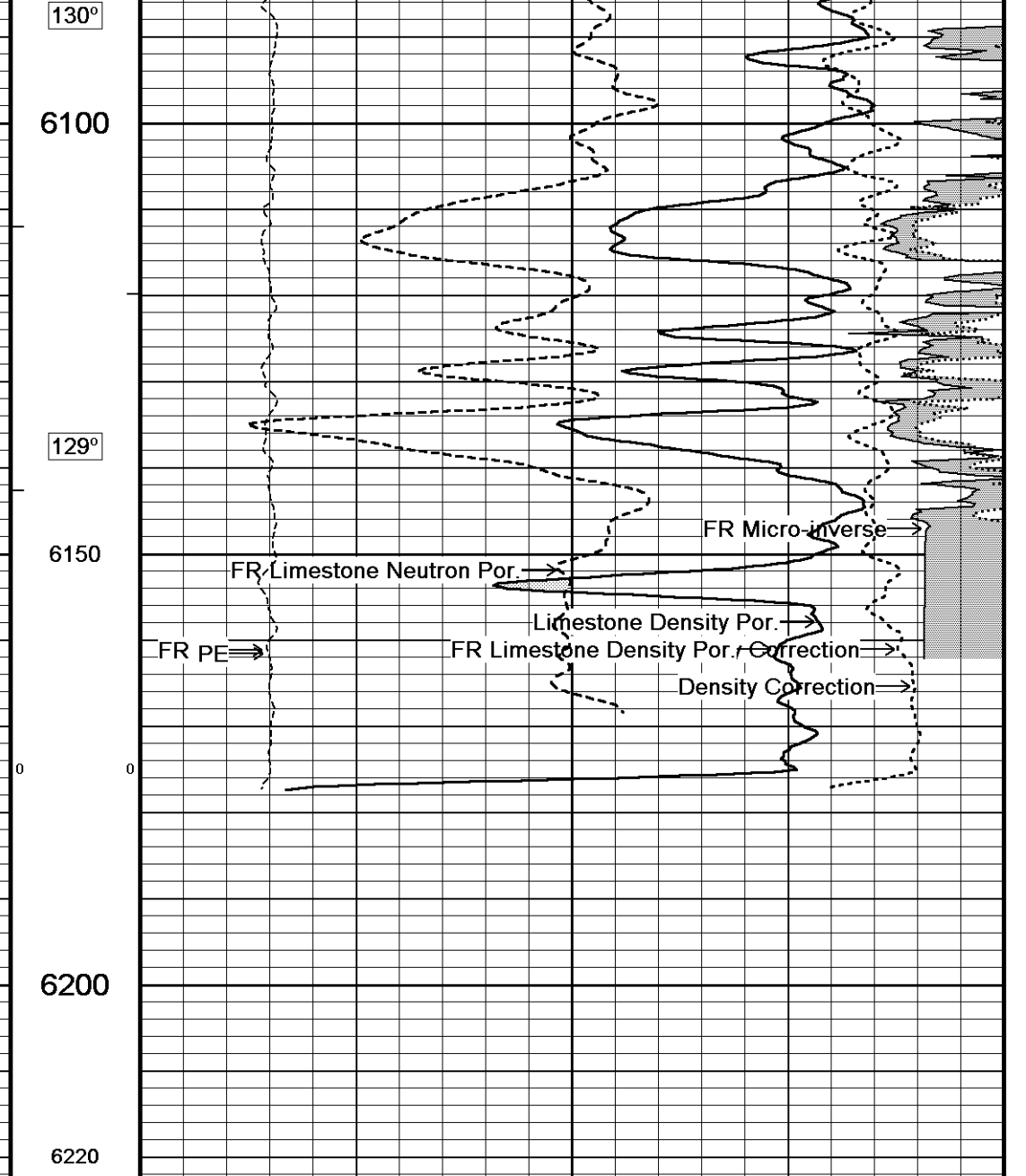
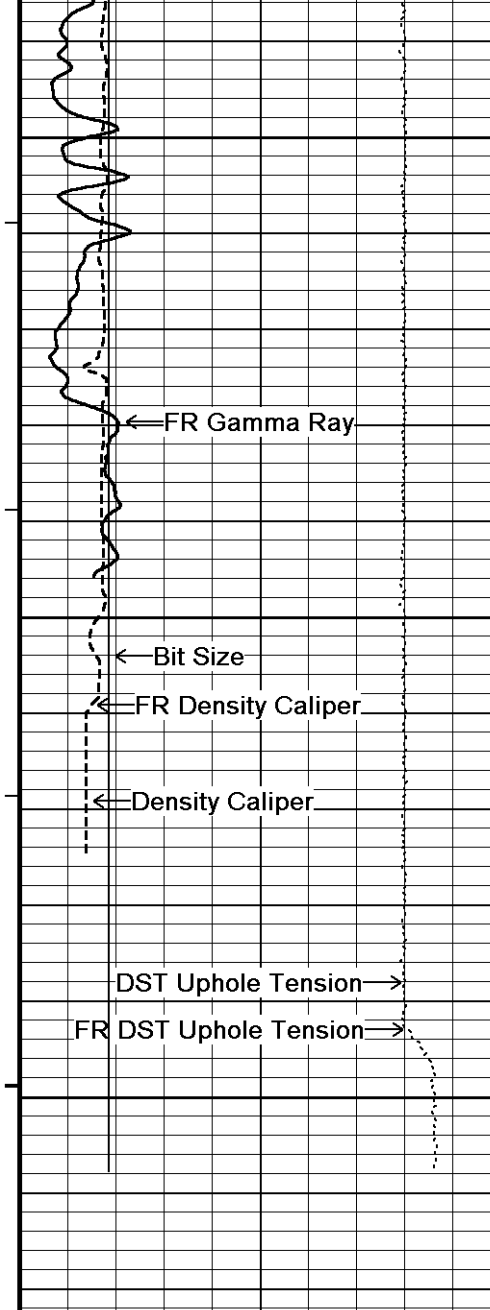
128°

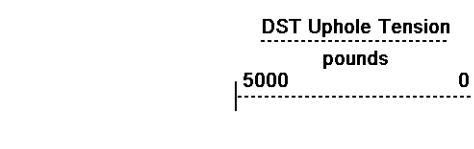
6000

129°

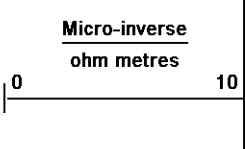
6050







Replay
Scale
1:240

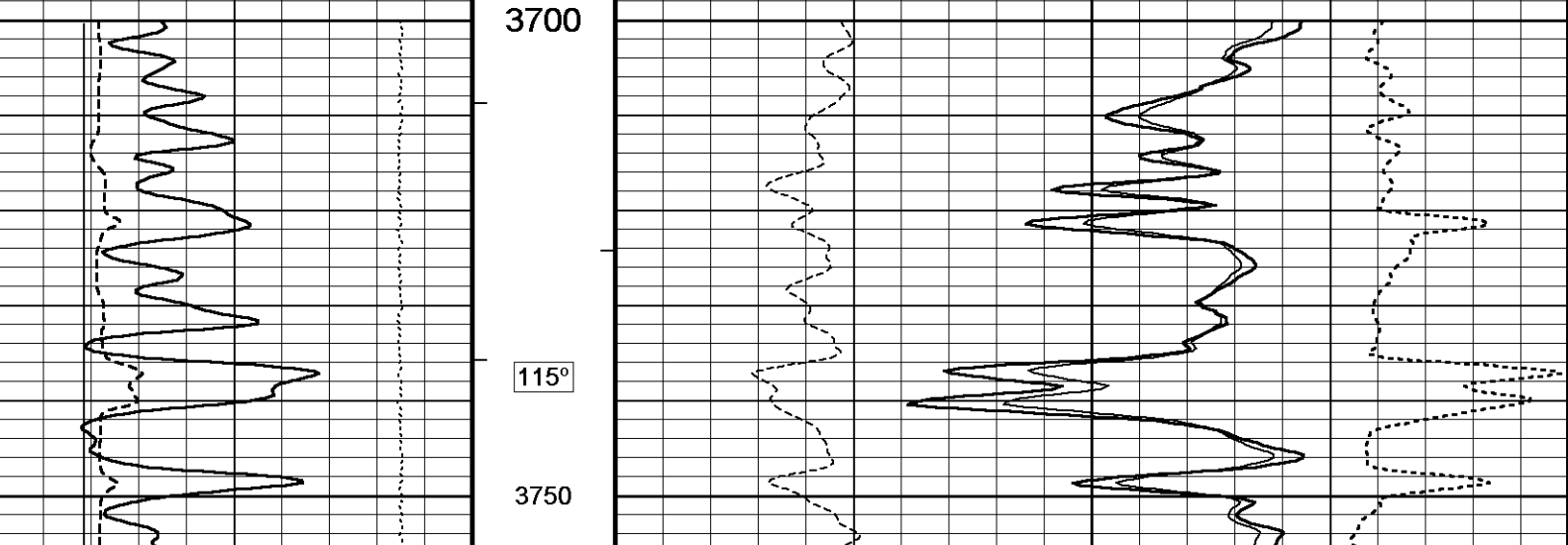
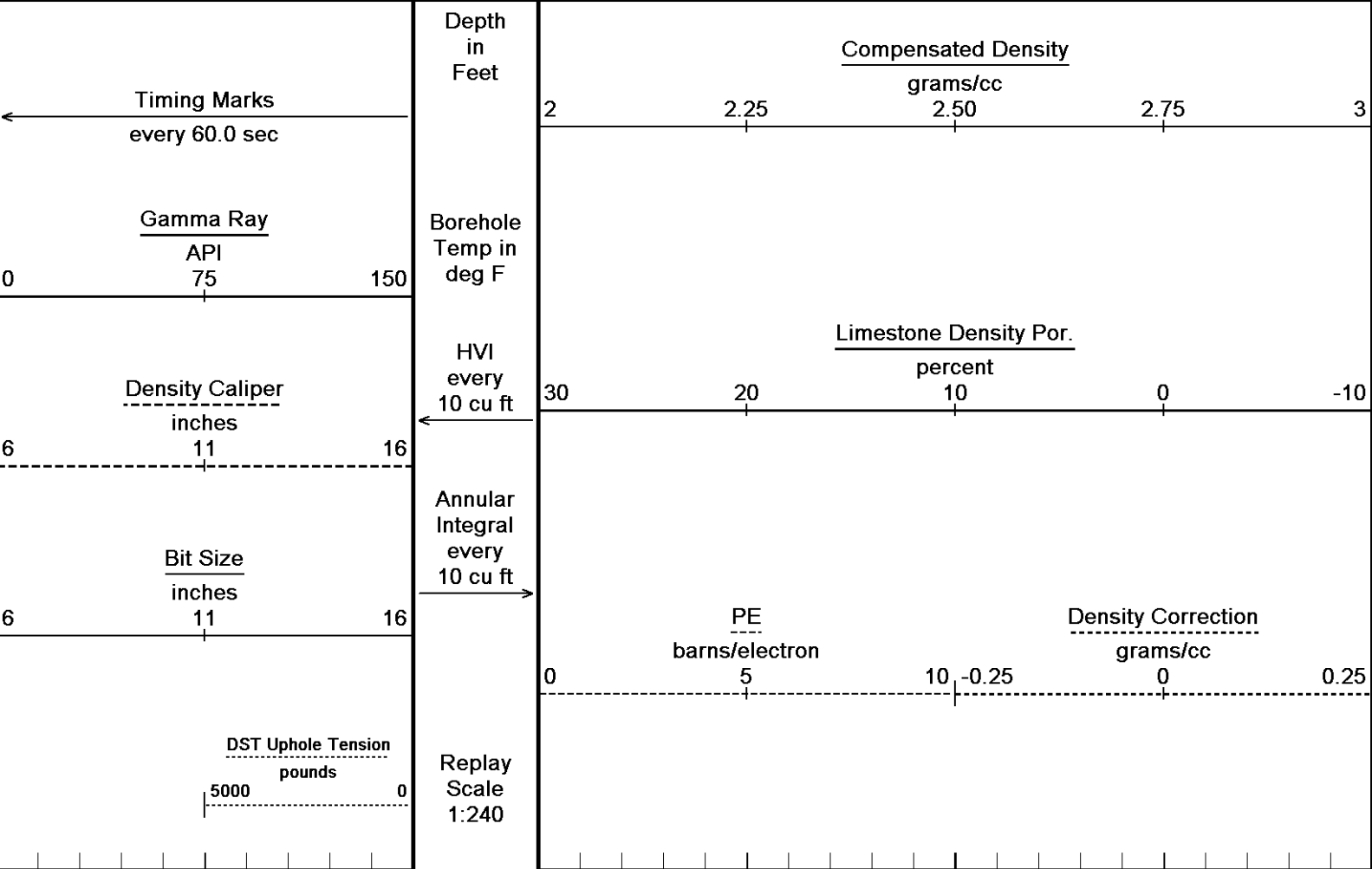


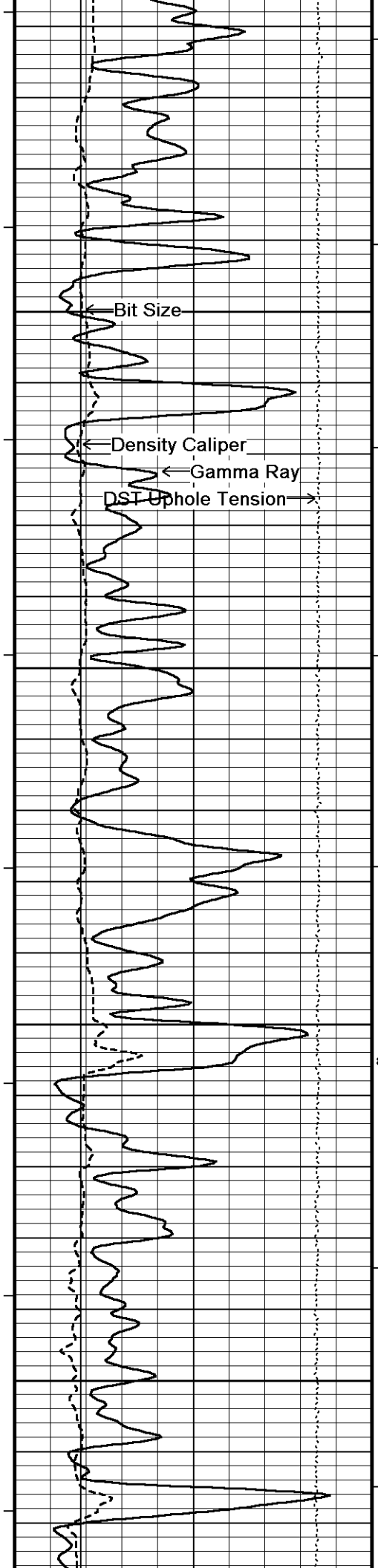
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↑ REPEAT SECTION ↑

↓ 5 INCH MAIN ↓

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115°

3800

115°

3850

500

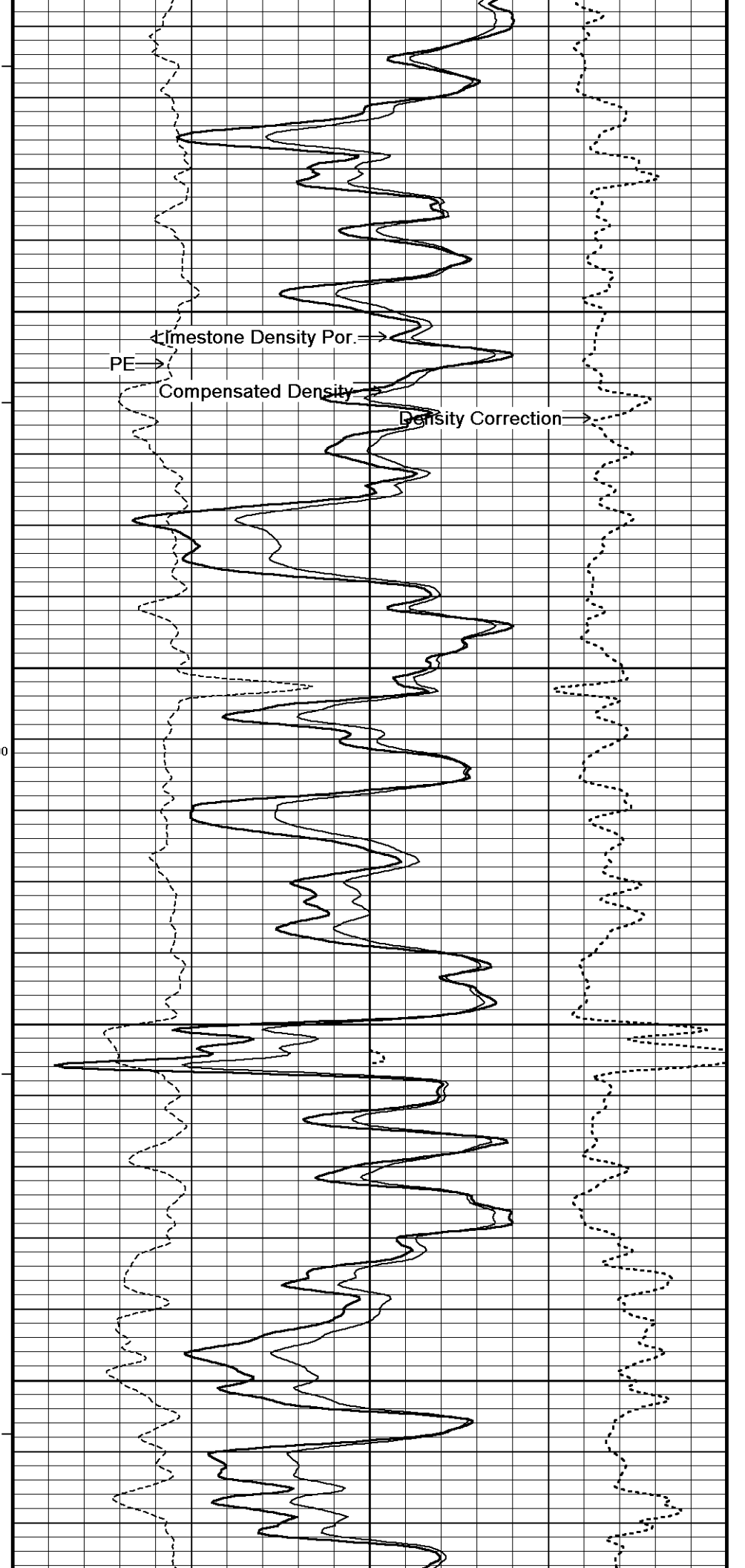
115°

3900

800

116°

3950

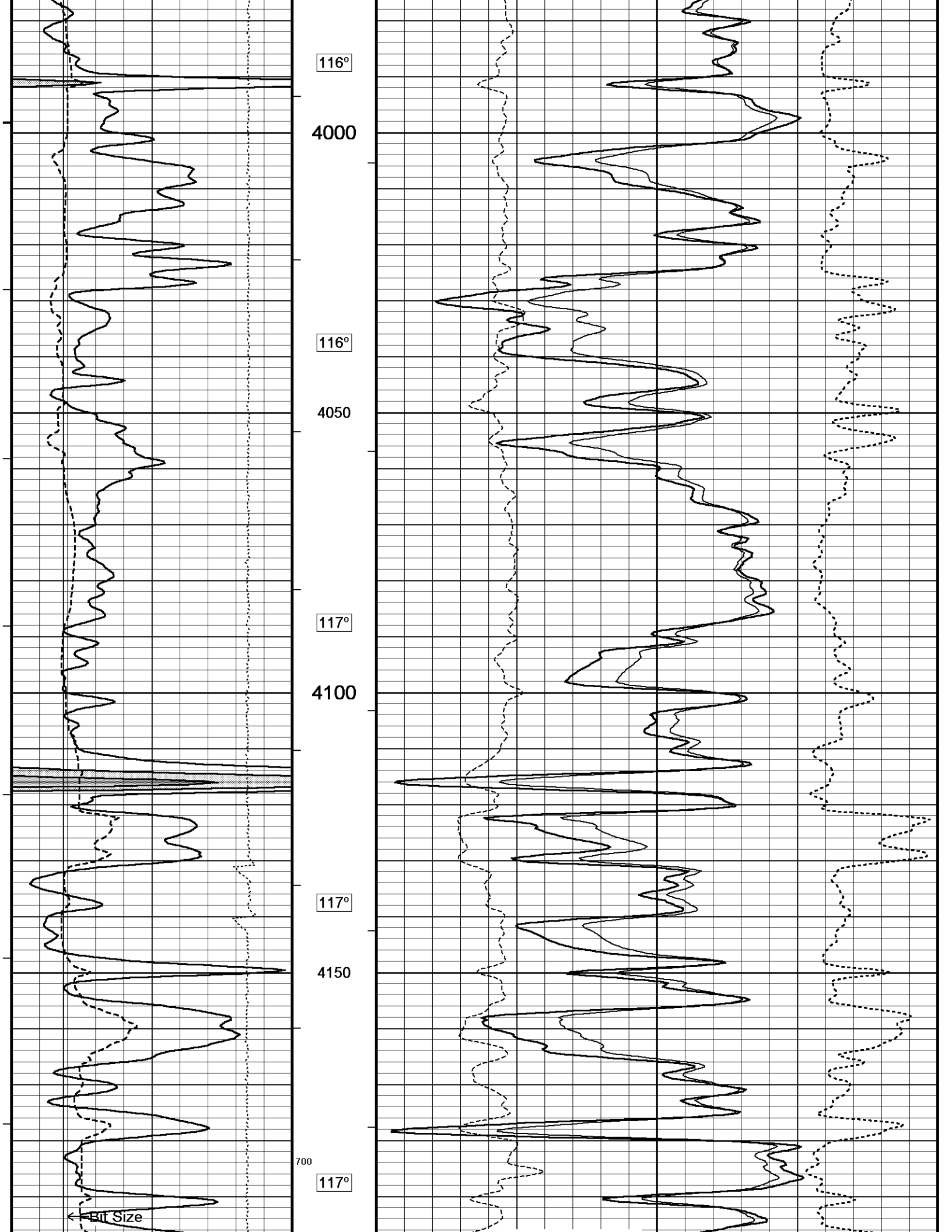


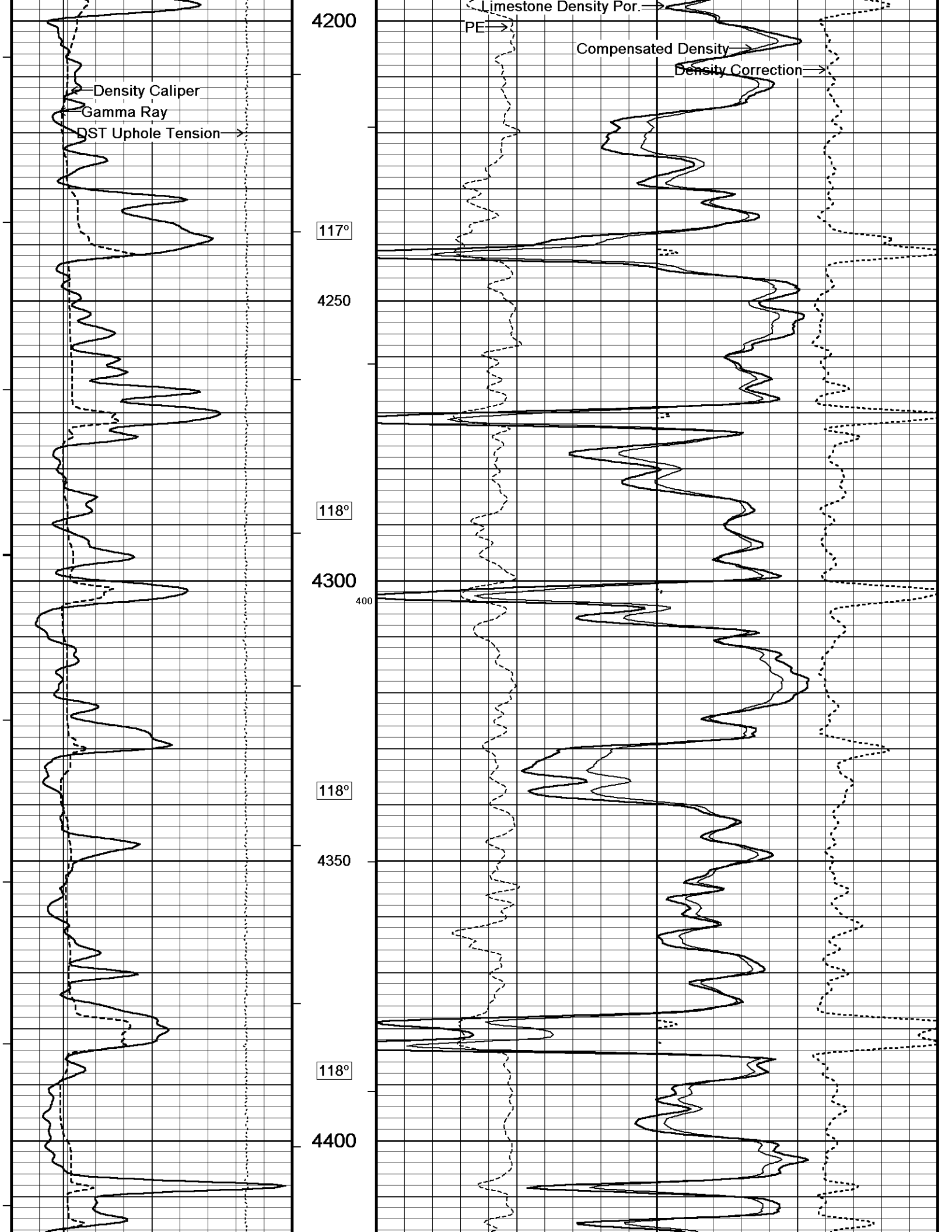
← Limestone Density Por. →

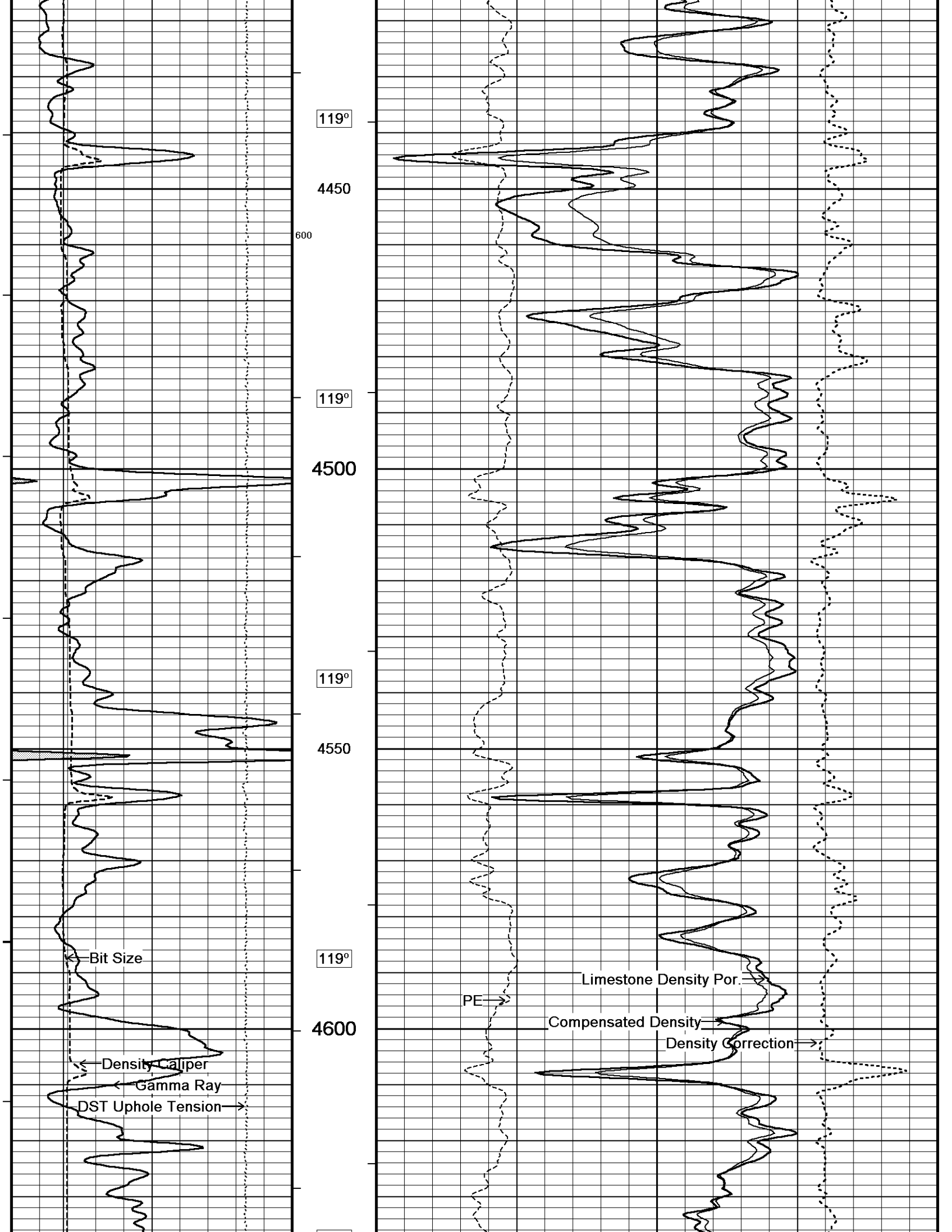
PE →

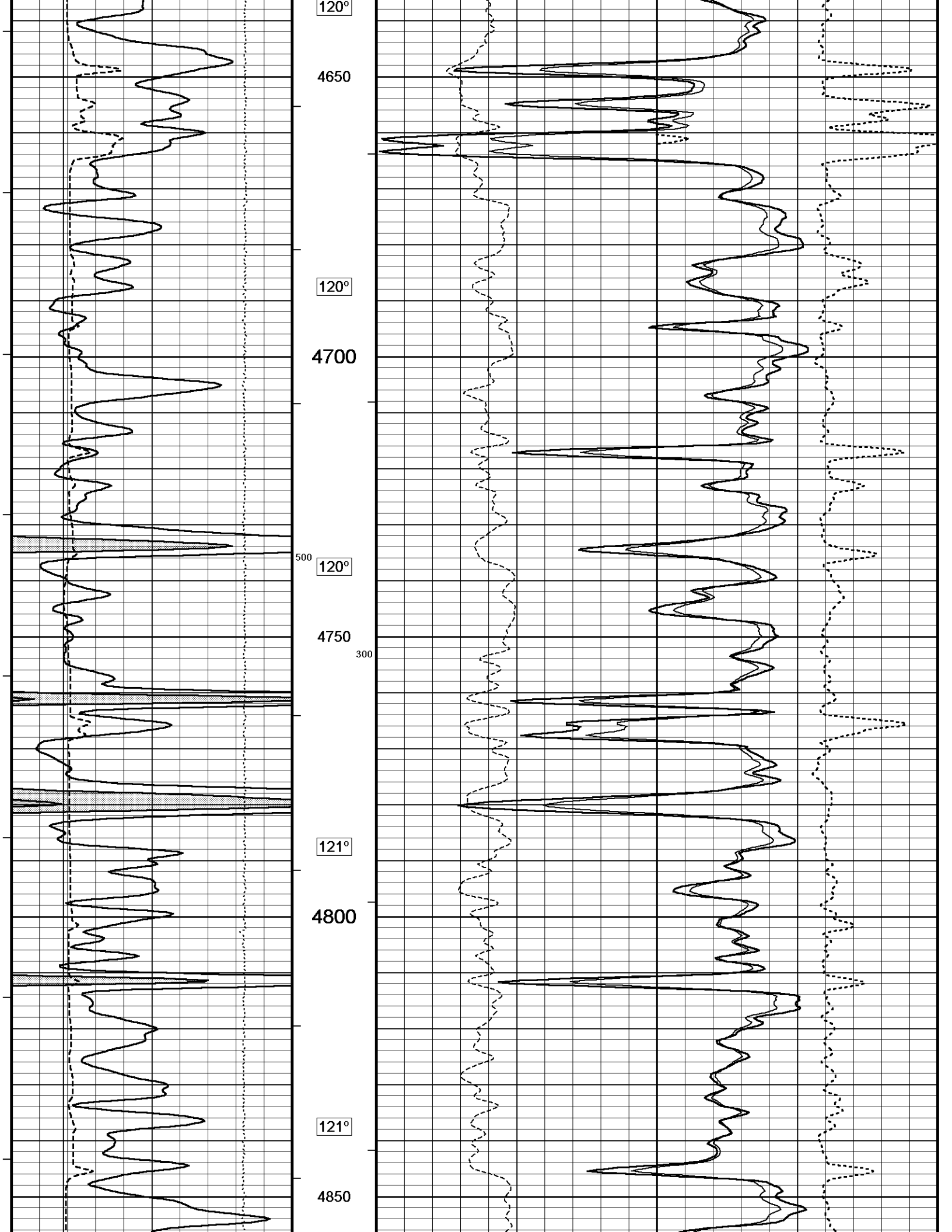
Compensated Density →

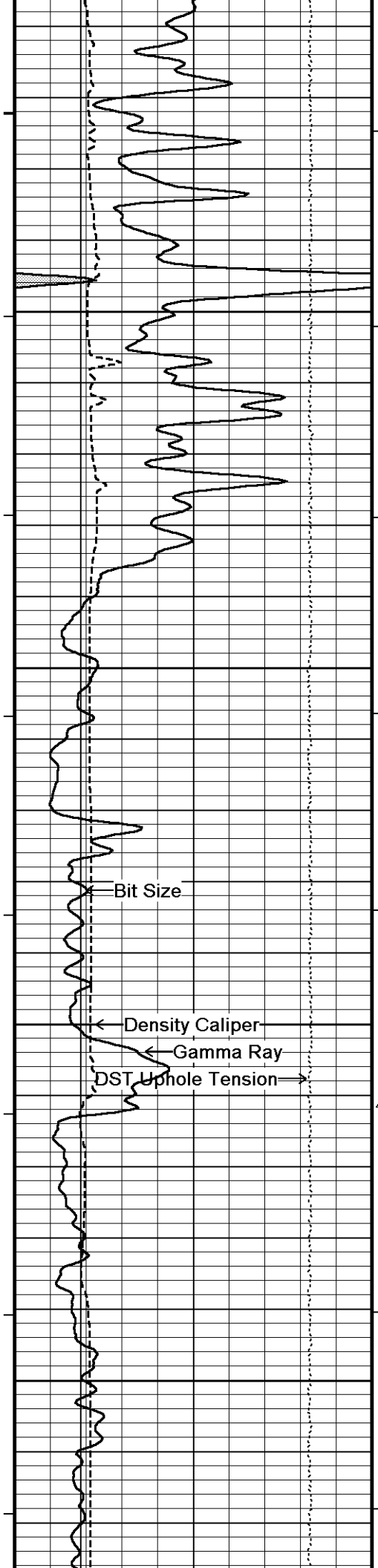
Density Correction →











121°

4900

122°

4950

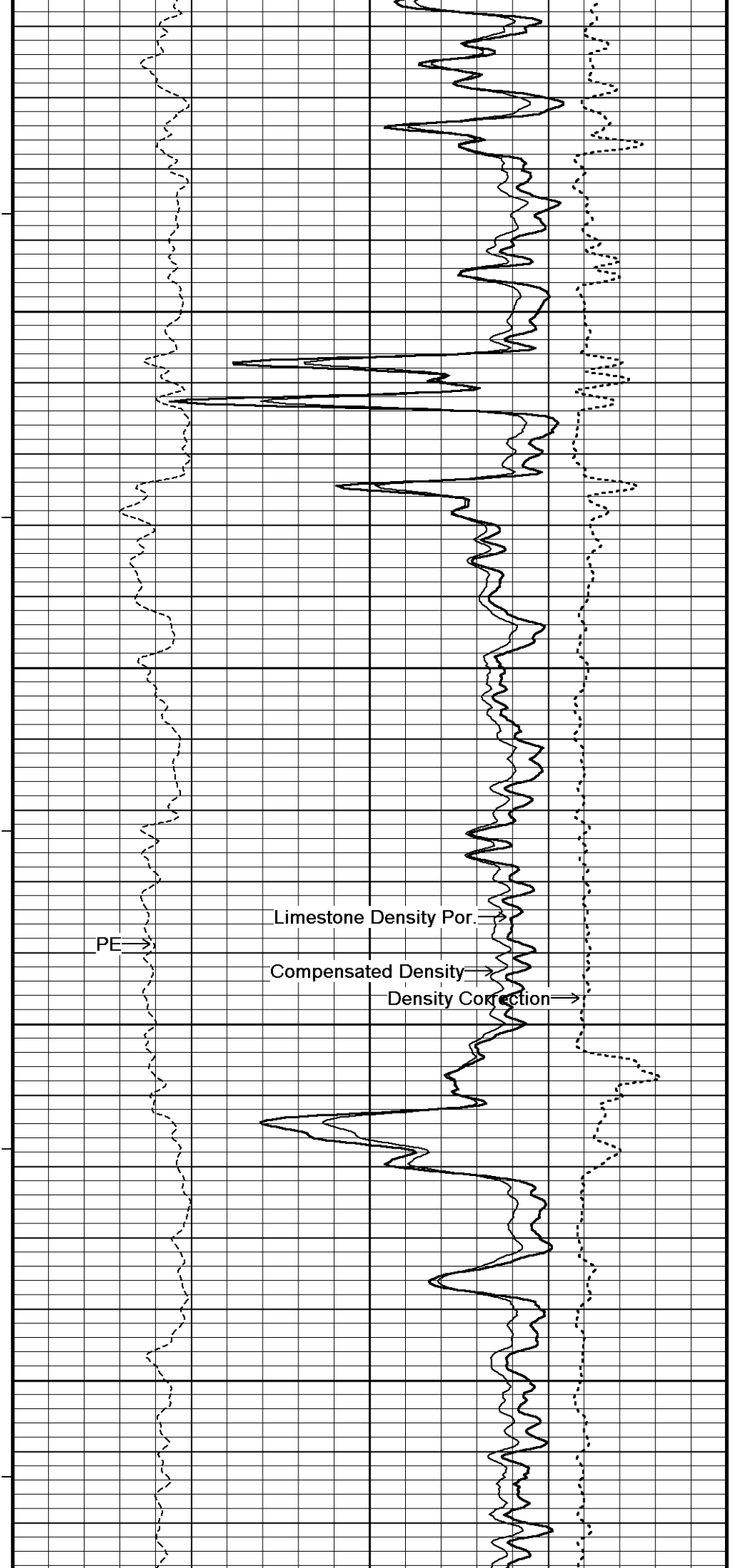
122°

5000

400

123°

5050

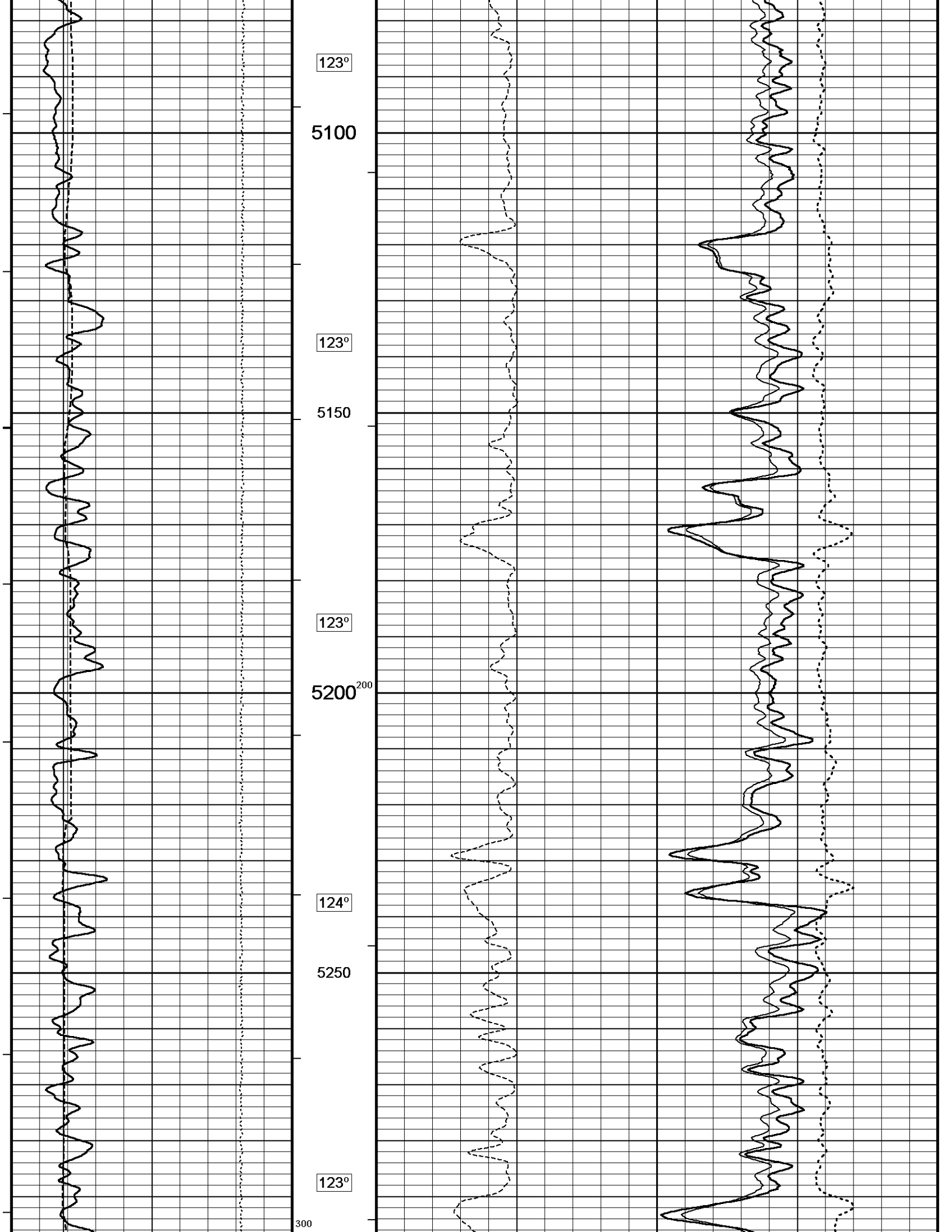


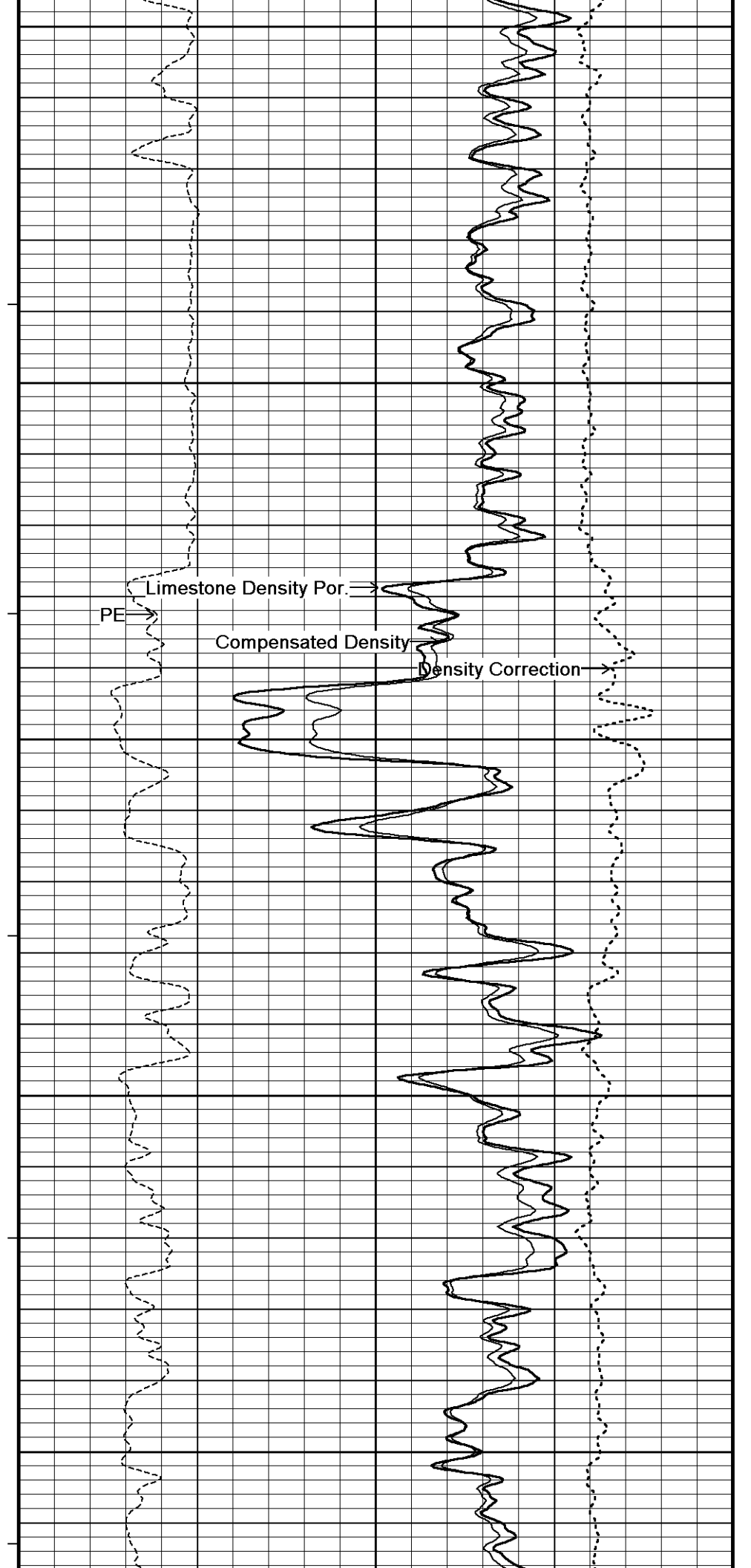
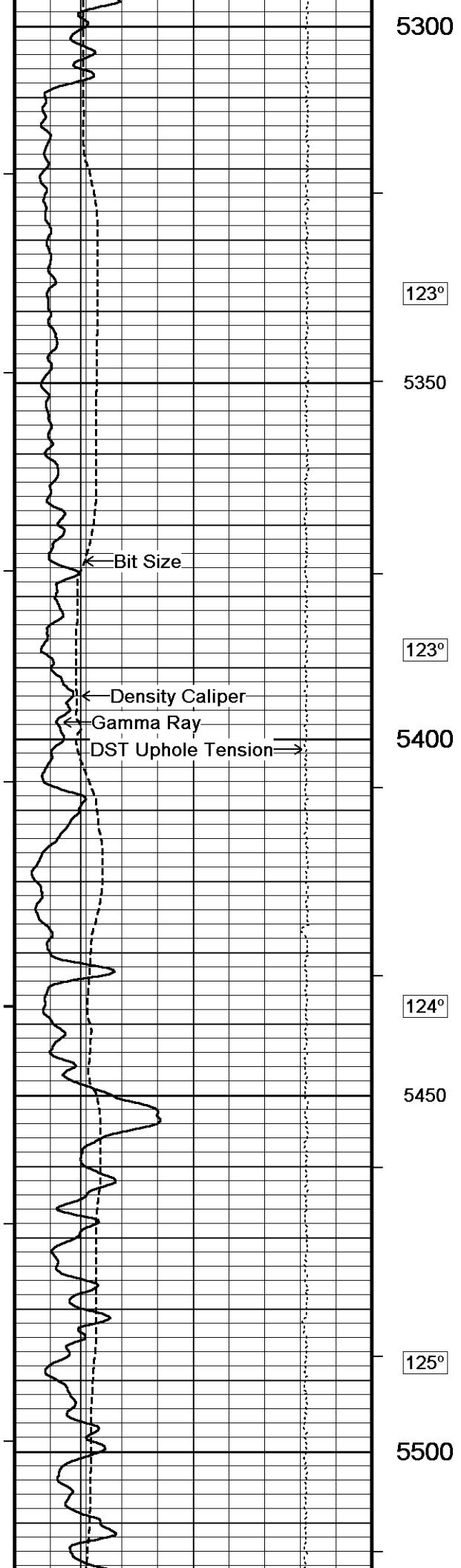
PE →

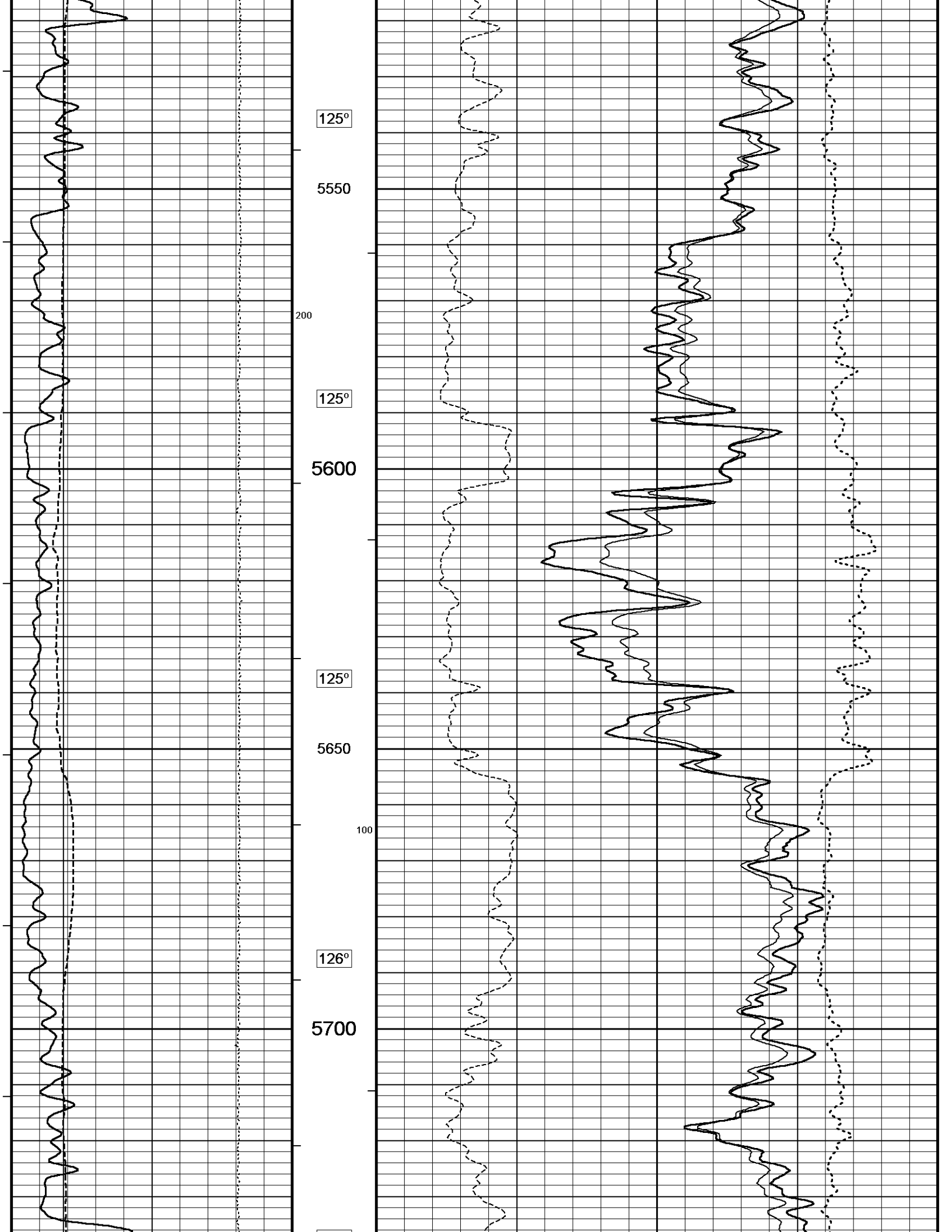
Limestone Density Por. →

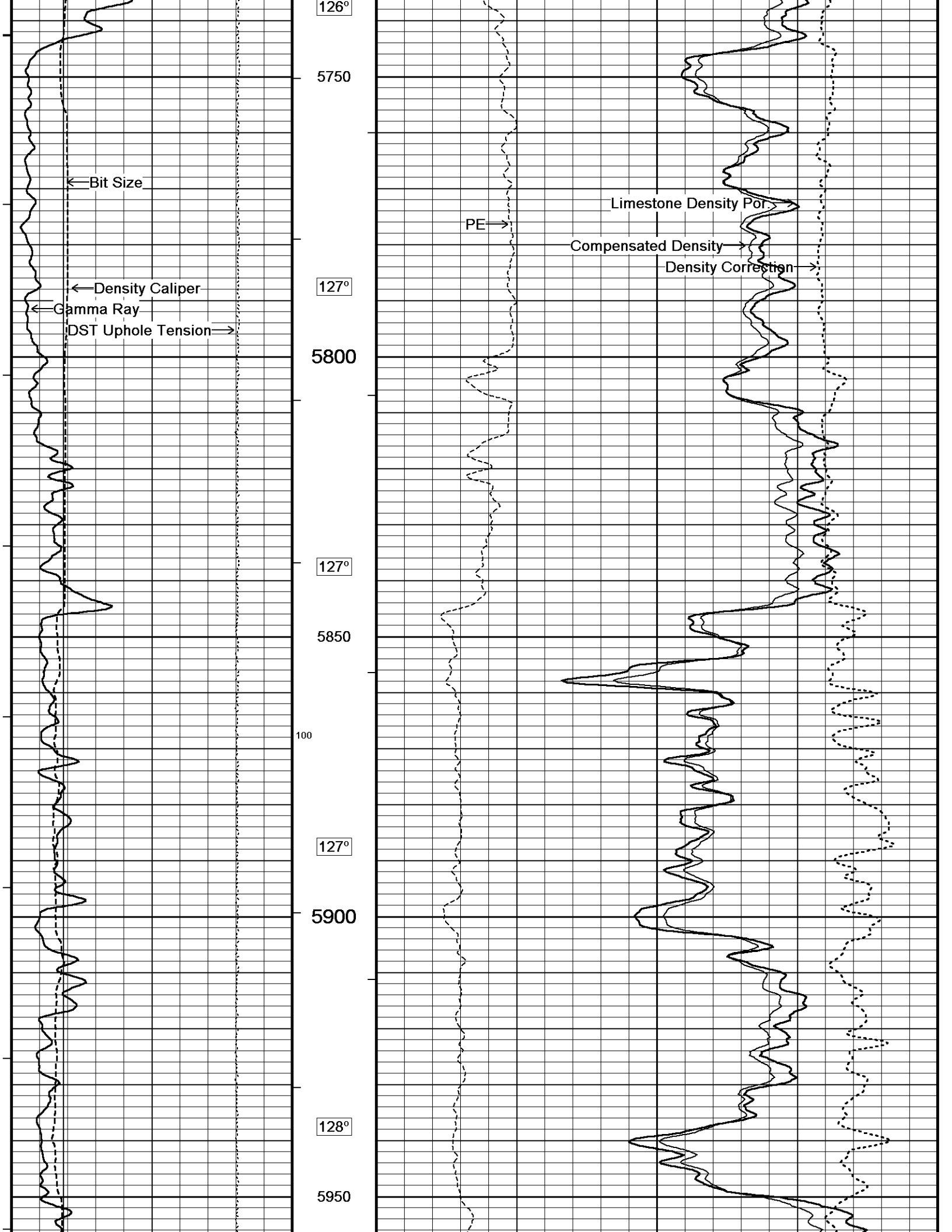
Compensated Density →

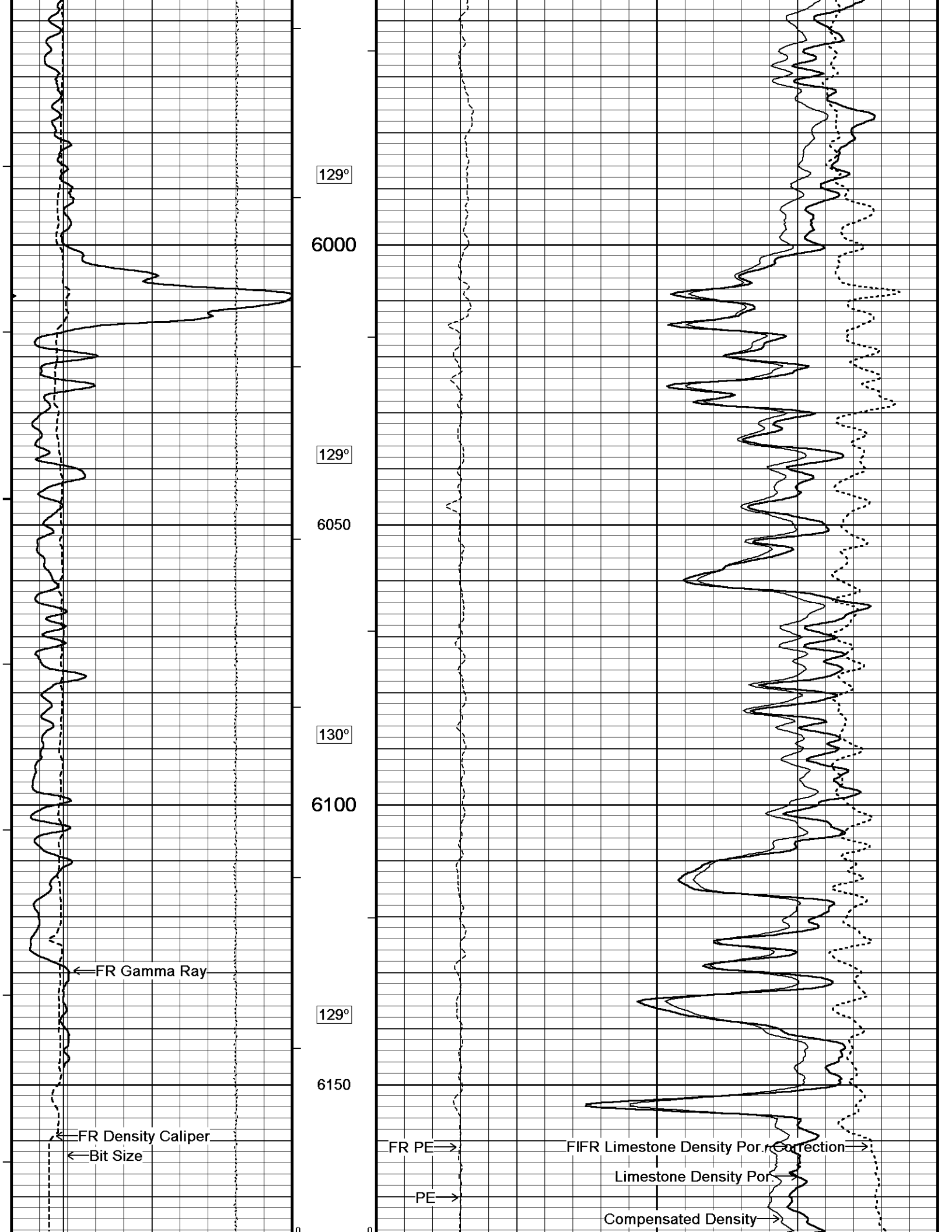
Density Correction →

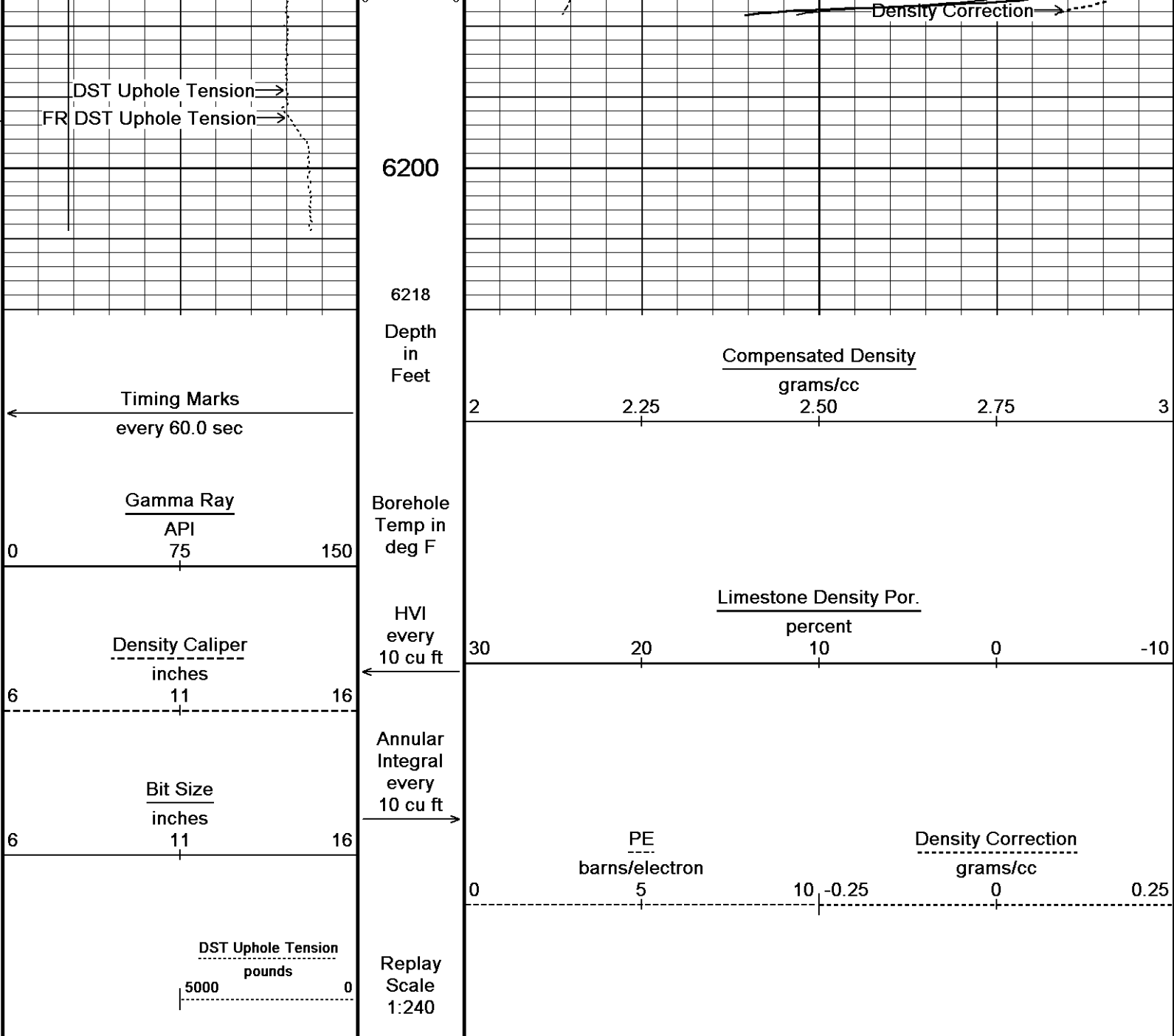










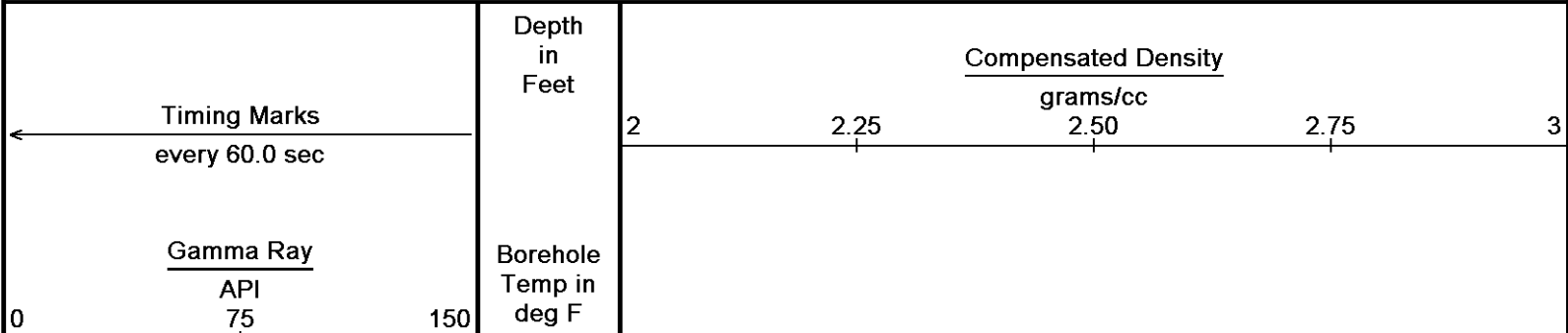


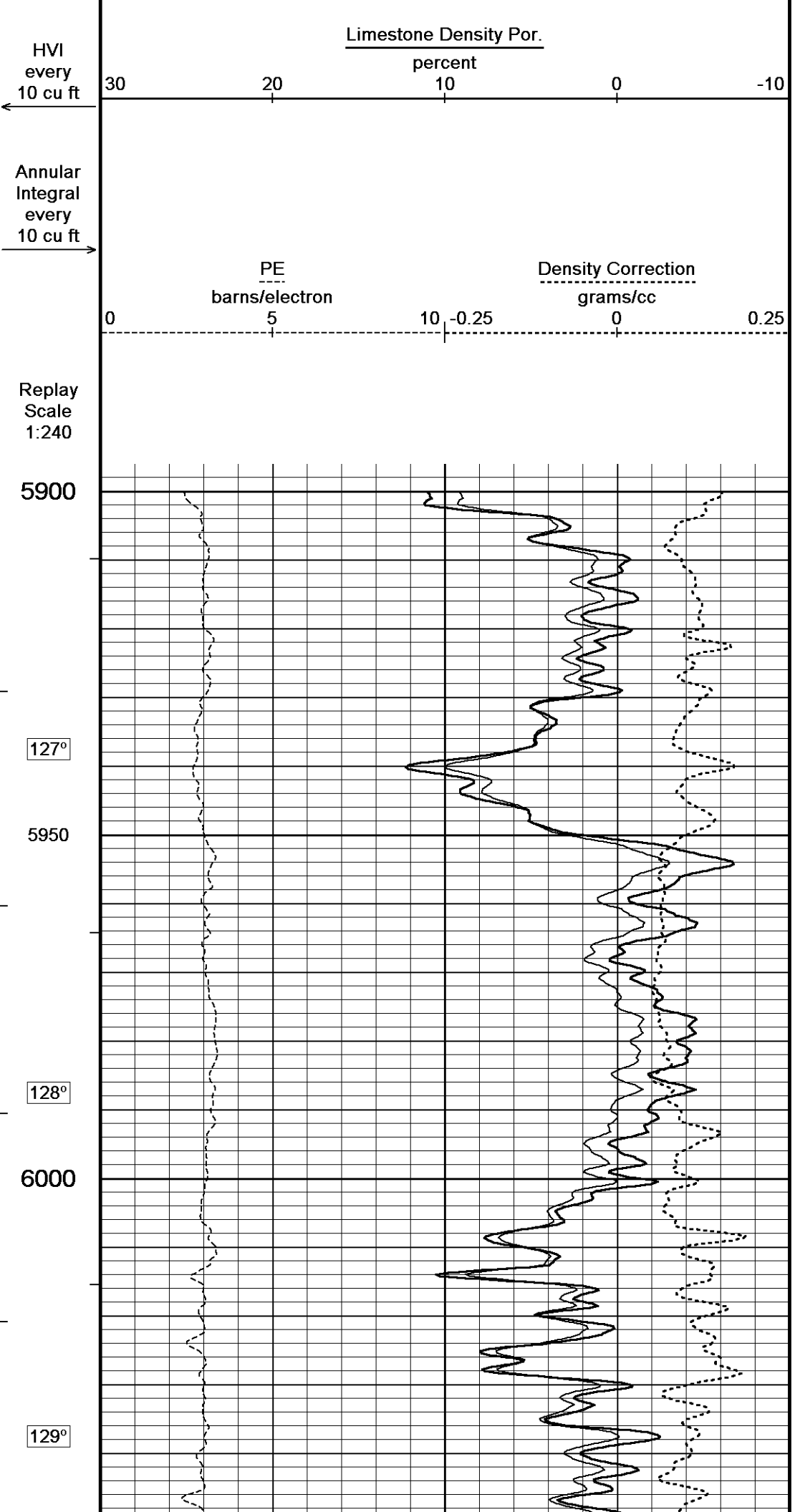
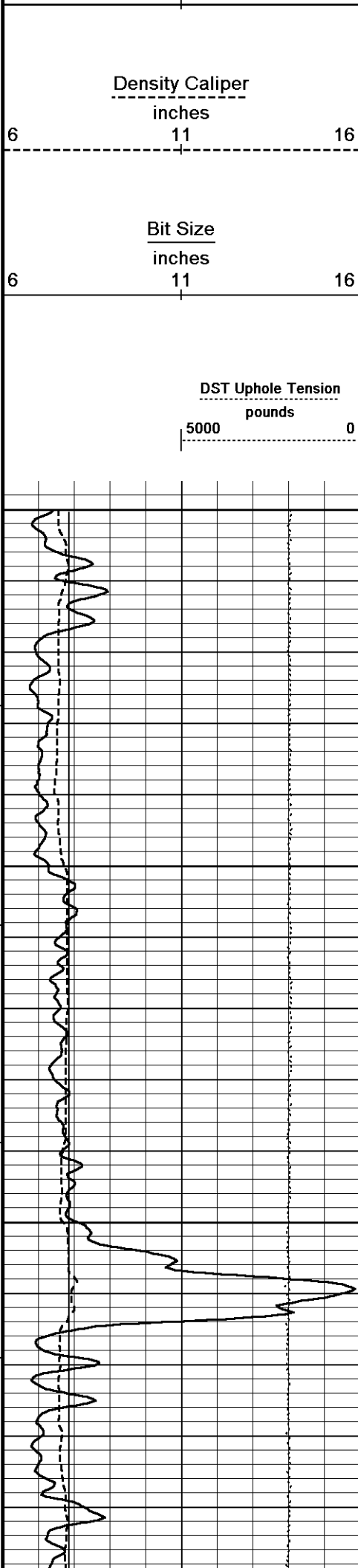
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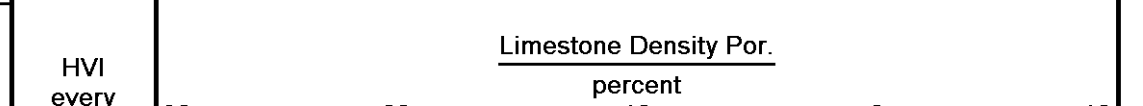
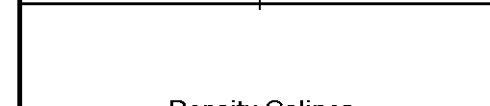
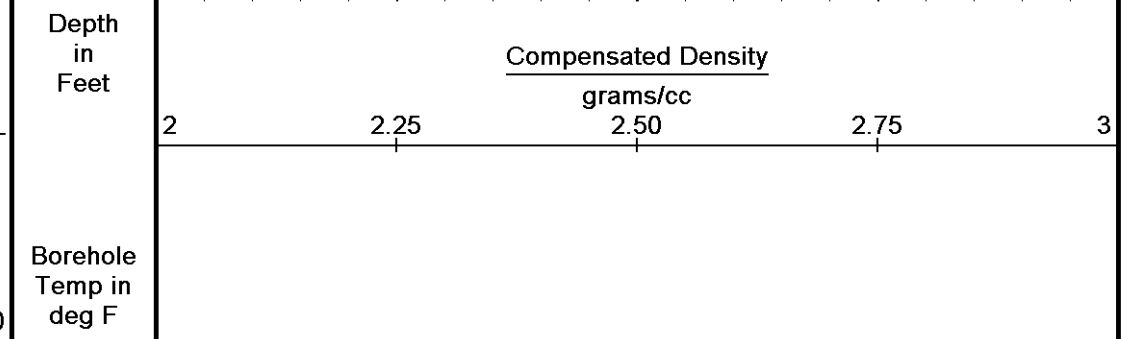
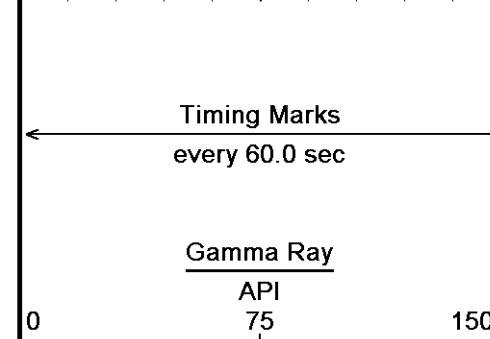
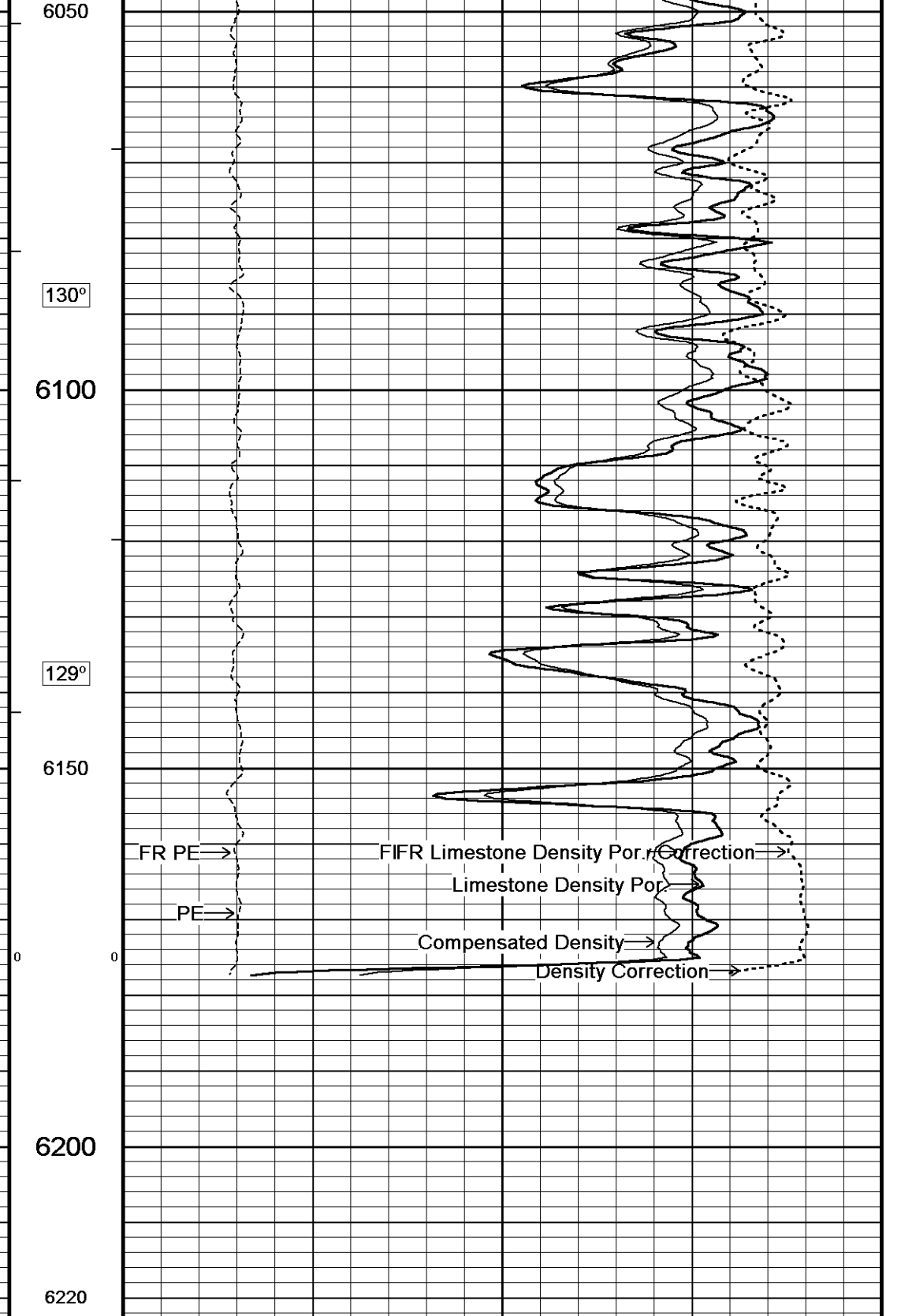
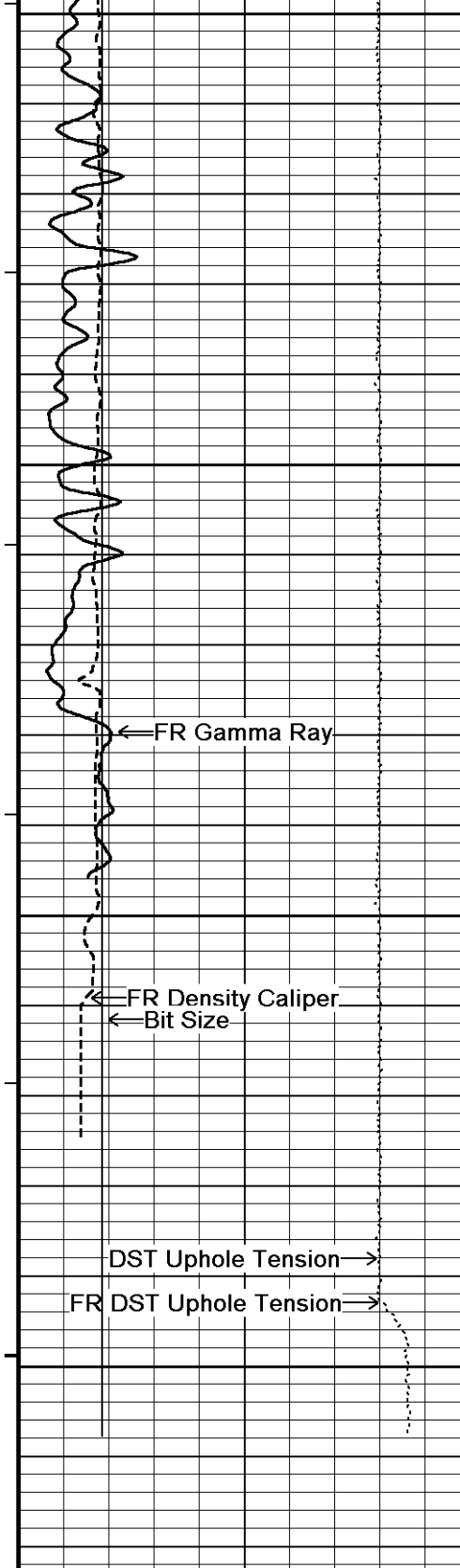
5 INCH MAIN

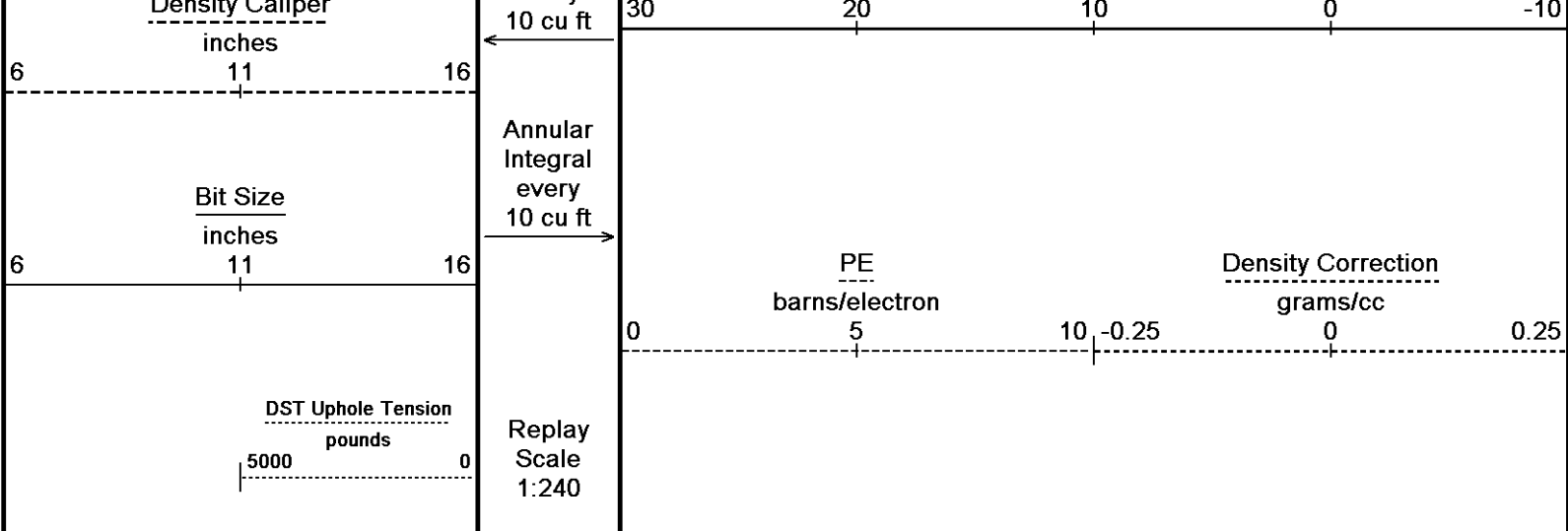
REPEAT SECTION

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↑ REPEAT SECTION ↑

BEFORE SURVEY CALIBRATION
 C:\Minimus 11_03_4044\Data\Mull Drilling Company, Inc. Bleumer # 1-13\Mull Drilling Company, Inc. Bleumer # 1-13 Run 1_001.dta

General Constants All 000 Last Edited on 07-MAY-2012,02:08

| | | |
|--|------------------------|------------|
| General Parameters | | |
| Mud Resistivity | 0.870 | ohm-metres |
| Mud Resistivity Temperature | 70.000 | degrees F |
| Water Level | 0.000 | feet |
| Density/Neutron Processing | Wet Hole | |
| Hole/Annular Volume and Differential Caliper Parameters | | |
| HVOL Method | Single Caliper | |
| HVOL Caliper 1 | Density Caliper | |
| HVOL Caliper 2 | N/A | |
| Annular Volume Diameter | 5.000 | inches |
| Caliper for Differential Caliper | Density Caliper | |
| Rwa Parameters | | |
| Porosity used | Limestone Density Por. | |
| Resistivity used | Array Ind. One Res Rt | |
| RWA Constant A | 1.000 | |
| RWA Constant M | 2.000 | |

Down-hole Tension Calibration SMS 0 Field Calibration on 23-FEB-2012 23:25

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1 | 13693.36 | 0.00 |
| 2 | 14387.39 | 407.90 |

Gamma Calibration MCG-B 39 Field Calibration on 02-APR-2012 14:02

| | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background | 74 | 49 |
| Calibrator (Gross) | 752 | 505 |
| Calibrator (Net) | 678 | 456 |

Gamma Constants MCG-B 39 Last Edited on 07-MAY-2012,00:51

| | | |
|-------------------------------|-----------------|-------|
| Gamma Calibrator Number | GRC141 | |
| Mud Density | 1.13 | gm/cc |
| Caliper Source for Processing | Density Caliper | |
| Tool Position | Eccentred | |
| Concentration of KCl | 0.00 | kppm |

SP Calibration MCG-B 39 Field Calibration on 02 APR 2012 14:02

| | | |
|-------------|----------|-----------------|
| | Measured | Calibrated (mV) |
| Reference 1 | 100.0 | 100.0 |
| Reference 2 | -100.0 | -100.0 |

High Resolution Temperature Calibration MCG-B 39

Field Calibration on 02-APR-2012, 14:03

| | | |
|-------|----------|-------------------|
| | Measured | Calibrated(Deg F) |
| Lower | 50.00 | 50.00 |
| Upper | 100.00 | 100.00 |

High Resolution Temperature Constants MCG-B 39

Last Edited on

Pre-filter Length 11

Caliper Calibration MML-A 4

Base Calibration on 0C3170021008,
Field Calibration on 0C4060524000

| | | |
|-------------------|-----------------------|----------------------|
| Base Calibration | | |
| Reading No | Measured | Calibrator Size (in) |
| 1 | 15017 | 5.98 |
| 2 | 18447 | 7.97 |
| 3 | 21786 | 9.86 |
| 4 | 25801 | 11.92 |
| 5 | 0 | 0.00 |
| 6 | N/A | N/A |
| Field Calibration | | |
| | Measured Caliper (in) | Actual Caliper (in) |
| | 6.08 | 5.98 |

Micro Normal and Micro Inverse Calibration MML-A 4

Base Calibration on 0C3170023008,
Field Check on 0C4060525000

| | | | | |
|------------------|--------------------|---------------------|-----------------------|------------|
| Base Calibration | | | | |
| Channel | Resistor 1 | Measured Resistor 2 | Calibrated Resistor 1 | Resistor 2 |
| Micro Normal | 12.2 | 60.2 | 5.0 | 25.0 |
| Micro Inverse | 15.7 | 78.3 | 5.0 | 25.0 |
| Channel | Base Check (ohm-m) | | Field Check (ohm-m) | |
| Micro Normal | 62.9 | | 62.9 | |
| Micro Inverse | 48.3 | | 48.3 | |

Micro Normal and Micro Inverse Constants MML-A 4

Last Edited on 0C4060A13004,

| | | | |
|------------------------|---|--|--------|
| Pad Type | 8-12 in Soft Rubber Inflatable 006-9011-159 | | |
| Micro Normal K Factor | 1.0000 | | |
| Micro Inverse K Factor | 1.0000 | | |
| Standoff Offset | N/A | | inches |

Neutron Calibration MDN-B.J 387

Base Calibration on 0C31C0938008
Field Check on 0C4060537000

| | | | | |
|--------------------------|----------|-----|------------------|------|
| Base Calibration | | | | |
| | Measured | | Calibrated (cps) | |
| | Near | Far | Near | Far |
| | 2956 | 91 | 3714 | 110 |
| Ratio | 32.635 | | 33.764 | |
| Field Calibrator at Base | | | Calibrated (cps) | |
| | | | 2214 | 3169 |
| Ratio | | | 0.699 | |
| Field Check | | | Calibrated (cps) | |
| | | | 2202 | 3182 |
| Ratio | | | 0.692 | |

Neutron Constants MDN-B.J 387

Last Edited on 07-MAY-2012,00:51

| | | | |
|-------------------------------|-----------------|--------|--|
| Neutron Source Id | P0204NN | | |
| Neutron Jig Number | NEDC117 | | |
| Epithermal Neutron | No | | |
| Caliper Source for Processing | Density Caliper | | |
| Stand-off | 0.00 | inches | |
| Mud Density | 1.00 | gm/cc | |
| Limestone Sigma | 7.10 | cu | |

| | | |
|---------------------------------|----------------|-----------|
| Sandstone Sigma | 4.26 | cu |
| Dolomite Sigma | 4.70 | cu |
| Formation Pressure Source | Constant Value | |
| Formation Pressure | 0.00 | kpsi |
| Temperature Source | Constant Value | |
| Temperature | 68.00 | degrees F |
| Mud Salinity | 0.00 | kppm |
| Formation Fluid Salinity Source | Constant Value | |
| Formation Fluid Salinity | 0.00 | kppm |
| Barite Mud Correction | Not Applied | |

FE Calibration MFE-B.J 352

Base Calibration on 0C31B0831004
Field Check on 0C4060523000

| | | |
|------------------|----------|--------------------|
| Base Calibration | | |
| | Measured | Calibrated (ohm-m) |
| Reference 1 | 0.0 | 0.0 |
| Reference 2 | 963.7 | 126.8 |
| Base Check | | 281.5 |
| Field Check | | 281.5 |

FE Constants MFE-B.J 352

Last Edited on 07-MAY-2012,00:52

| | | |
|----------------------------------|--------------------------|--------|
| Running Mode | No Sleeve | |
| MFE K Factor | 0.1268 | |
| Caliper Source for FE correction | Density Caliper | |
| Caliper Value for FE correction | N/A | inches |
| Rm Source for FE correction | Temperature Corr | |
| Temp. for Rm Corr. | MCG External Temperature | |
| Stand-off | 0.5 | inches |

Sonic Constants MSS-A.A 126

Last Edited on 07-MAY-2012,00:53

| | | |
|---------------------------|------------------------|--------------|
| Maximum Boundary Contrast | 100.00 | micro-sec/ft |
| Fluid Transit Time | 189.00 | micro-sec/ft |
| Limestone Transit Time | 47.50 | micro-sec/ft |
| Sandstone Transit Time | 55.50 | micro-sec/ft |
| Dolomite Transit Time | 43.50 | micro-sec/ft |
| Sonic used for Porosities | 3-5' Compensated Sonic | |
| Correction for Sonde Skew | Applied | |
| Cycle Stretch Algorithm | Applied | |
| MN3FT | N/A | micro-sec |
| MX3FT | N/A | micro-sec |
| Hunt-Raymer Constant | 83.13 | micro-sec/ft |

| | |
|------------|-------------|
| Sonde Mode | Compensated |
| Hole Type | Open Hole |

Sonde Parameters

| | | |
|-----------------------|----------|------------|
| | Measured | Calibrated |
| Offset | N/A | 0.0000 |
| Free Pipe | N/A | N/A |
| Peak Amplitude Source | | N/A |

| Waveform | Start Time (micro-sec) | Width (micro-sec) | Pre Gain | Start Gain | Discriminator (mV) |
|----------|------------------------|-------------------|----------|------------|--------------------|
| 3' | N/A | N/A | N/A | N/A | N/A |
| 4' | N/A | N/A | N/A | N/A | N/A |
| 5' | N/A | N/A | N/A | N/A | N/A |
| 6' | N/A | N/A | N/A | N/A | N/A |

Processed Fixed Gate Parameters

| | | | | |
|------------------------------|----------------------|--------------------|-----|-----|
| Waveform Used For Processing | N/A | | | |
| Start Time (micro-sec) | End Time (micro-sec) | Discriminator (mV) | N/A | |
| N/A | N/A | N/A | | N/A |
| N/A | N/A | N/A | | N/A |
| N/A | N/A | N/A | | N/A |
| N/A | N/A | N/A | | N/A |
| N/A | N/A | N/A | | N/A |

Full Waveform Parameters

| | | |
|---------------------------------|-----|-----------|
| Use 3' Waveform to derive TR | N/A | |
| Use 4' Waveform to derive TR | N/A | |
| Use 5' Waveform to derive TR | N/A | |
| Use 6' Waveform to derive TR | N/A | |
| 3' Waveform Discriminator Level | N/A | mV |
| 4' Waveform Discriminator Level | N/A | mV |
| 5' Waveform Discriminator Level | N/A | mV |
| 6' Waveform Discriminator Level | N/A | mV |
| 3' Waveform Filter | N/A | |
| 4' Waveform Filter | N/A | |
| 5' Waveform Filter | N/A | |
| 6' Waveform Filter | N/A | |
| Semblance Level | N/A | |
| Semblance Window Width | N/A | micro-sec |
| Sonic 1 Despiker | N/A | N/A |
| Sonic 2 Despiker | N/A | N/A |

Induction Calibration MAI-A.A 178

Base Calibration on 0C31B0B06000,
Field Check on 0C4060521000

Base Calibration

| Test Loop Calibration | | Measured | | Calibrated (mmho/m) | |
|-----------------------|------|----------|-----|---------------------|--|
| Channel | Low | High | Low | High | |
| 1 | 17.6 | 484.7 | 9.3 | 966.2 | |
| 2 | 6.2 | 391.4 | 7.6 | 821.4 | |
| 3 | 4.0 | 264.5 | 5.2 | 566.0 | |
| 4 | 2.3 | 135.1 | 2.6 | 279.2 | |

Array Temperature 77.0 Deg F

| Channel | Base Check (mmho/m) | | Field Check (mmho/m) | | |
|---------|---------------------|------|----------------------|--------|--|
| | Low | High | Low | High | |
| 1 | 0.0 | 0.0 | 12.3 | 3762.6 | |
| 2 | 0.0 | 0.0 | 29.6 | 3466.9 | |
| 3 | 0.0 | 0.0 | 27.3 | 3014.1 | |
| 4 | 0.0 | 0.0 | 18.8 | 2064.7 | |
| Deep | 0.0 | 0.0 | 15.9 | 1995.3 | |
| Medium | 0.0 | 0.0 | 40.3 | 3955.3 | |
| Shallow | 0.0 | 0.0 | 45.3 | 5081.7 | |

Array Temperature 0.0 72.7 Deg F

Induction Constants MAI-A.A 178

Last Edited on 07-MAY-2012,03:16

| | | | |
|-----------------------------------|-----------------|------------|--------|
| Induction Model | RtAP-WBM | | |
| Caliper for Borehole Corr. | Density Caliper | | |
| Hole Size for Borehole Correction | N/A | inches | |
| Tool Centred | No | | |
| Stand-off Type | Fins | | |
| Stand-off | 0.50 | inches | |
| Number of Fins on Stand-off | 8.0000 | | |
| Stand-off Fin Angle | 45.00 | degrees | |
| Stand-off Fin Width | 0.5000 | inches | |
| Borehole Corr. Rm Source | Constant Value | | |
| Temp. for Rm Corr. | N/A | | |
| Squasher Start | 0.0020 | mhos/metre | |
| Squasher Offset | N/A | mhos/metre | |
| Borehole Normalisation | | | |
| DRM1 | 0.0000 | DRC1 | 0.0000 |
| DRM2 | 0.0000 | DRC2 | 0.0000 |
| MRM1 | 0.0000 | MRC1 | 0.0000 |
| MRM2 | 0.0000 | MRC2 | 0.0000 |
| SRM1 | 0.0000 | SRC1 | 0.0000 |
| SRM2 | 0.0000 | SRC2 | 0.0000 |

Calibration Site Corrections

| | | |
|-----------|------|-------------|
| Channel 1 | 0.00 | mmhos/metre |
| Channel 2 | 0.00 | mmhos/metre |
| Channel 3 | 0.00 | mmhos/metre |

Channel 4 0.00 mmhos/metre

Apparent Porosity and Water Saturation Constants

| | | |
|--------------------------------------|--------|---------|
| Archie Constant (A) | 1.00 | |
| Cementation Exponent (M) | 2.00 | |
| Saturation Exponent (N) | 2.00 | |
| Saturation of Water for Apor | 100.00 | percent |
| Resistivity of Water for Apor and Sw | 0.05 | ohm-m |
| Resistivity of Mud Filtrate for Sw | 0.00 | ohm-m |
| Source for Rt | 0.00 | |
| Source for Rxo | 0.00 | |

High Resolution Temperature Calibration MAI-A.A 178

Field Calibration on 0C4030110004,

| | | |
|-------|----------|-------------------|
| | Measured | Calibrated(Deg F) |
| Lower | 32.00 | 32.00 |
| Upper | 68.00 | 68.00 |

High Resolution Temperature Constants MAI-A.A 178

Last Edited on 0C4060522000,

Pre-filter Length 11

Caliper Calibration MPD-B 35

Base Calibration on 0C31C0A2C008
Field Calibration on 0C4060527000

Base Calibration

| | | |
|------------|----------|----------------------|
| Reading No | Measured | Calibrator Size (in) |
| 1 | 20688 | 3.99 |
| 2 | 30944 | 5.98 |
| 3 | 41312 | 7.97 |
| 4 | 50976 | 9.86 |
| 5 | 61184 | 11.92 |
| 6 | N/A | N/A |

Field Calibration

| | |
|-----------------------|---------------------|
| Measured Caliper (in) | Actual Caliper (in) |
| 5.99 | 5.98 |

Photo Density Calibration MPD-B 35

Base Calibration on 0C31C0B00008
Field Check on 0C406052B000

Density Calibration

| | | | | |
|------------------|-------|----------|------------------|-------|
| Base Calibration | | Measured | Calibrated (sdu) | |
| | Near | Far | Near | Far |
| Reference 1 | 62298 | 31871 | 59556 | 30836 |
| Reference 2 | 26887 | 2863 | 24941 | 2541 |

Field Check at Base

1142.9 1359.1

Field Check

1145.7 1361.2

PE Calibration

| | | | | |
|------------------|-------|----------|------------|-------|
| Base Calibration | | Measured | Calibrated | |
| | WS | WH | Ratio | Ratio |
| Background | 204 | 1008 | | |
| Reference 1 | 23049 | 62096 | 0.374 | 0.371 |
| Reference 2 | 7079 | 26739 | 0.267 | 0.272 |

Field Check at Base

204.4 1008.1

Field Check

206.4 1011.8

Density Constants MPD-B 35

Last Edited on 07-MAY-2012,00:52

| | |
|-------------------------------|-----------------|
| Density Source Id | 18235B |
| Nylon Calibrator Number | DNCE695 |
| Aluminium Calibrator Number | DACD698 |
| Density Shoe Profile | 8 inch |
| Caliper Source for Processing | Density Caliper |
| PE Correction to Density | Not Applied |

| | | |
|-------------------------------|------------|-------|
| Mud Density | 1.13 | gm/cc |
| Mud Density Z/A Multiplier | 1.11 | |
| Mud Filtrate Density | 1.00 | gm/cc |
| Dry Hole Mud Filtrate Density | 1.00 | gm/cc |
| DNCT | 0.00 | gm/cc |
| CRCT | 0.00 | gm/cc |
| Density Z/A Correction | Hybrid | |
| Matrix Density (gm/cc) | Depth (ft) | |
| 2.71 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |
| 0.00 | 0.00 | |

Spectral Gamma Calibration SGS-E.J 150

Base Calibration on 14-NOV-2011,14:14
Field Calibration on 14-NOV-2011,14:09

Base Calibration

Potassium Calibrator

| | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5 |
|--------------------|--------|--------|--------|--------|--------|
| Background | 79.9 | 23.1 | 2.2 | 0.8 | 1.4 |
| Calibrator (Gross) | 204.7 | 109.8 | 22.0 | 0.9 | 1.3 |
| Calibrator (Net) | 124.8 | 86.7 | 19.7 | 0.2 | -0.1 |

| | | | |
|----------------|-----|-------|--------|
| Concentrations | K % | U ppm | Th ppm |
| | 5.8 | 0.0 | 0.0 |

Uranium Calibrator

| | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5 |
|--------------------|--------|--------|--------|--------|--------|
| Background | 79.9 | 23.1 | 2.2 | 0.8 | 1.4 |
| Calibrator (Gross) | 480.7 | 164.8 | 14.5 | 7.2 | 4.1 |
| Calibrator (Net) | 400.8 | 141.7 | 12.3 | 6.5 | 2.7 |

| | | | |
|----------------|-----|-------|--------|
| Concentrations | K % | U ppm | Th ppm |
| | 0.0 | 9.8 | 0.0 |

Thorium Calibrator

| | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5 |
|--------------------|--------|--------|--------|--------|--------|
| Background | 79.9 | 23.1 | 2.2 | 0.8 | 1.4 |
| Calibrator (Gross) | 397.7 | 137.8 | 11.3 | 6.3 | 15.0 |
| Calibrator (Net) | 317.8 | 114.7 | 9.0 | 5.6 | 13.6 |

| | | | |
|----------------|-----|-------|--------|
| Concentrations | K % | U ppm | Th ppm |
| | 0.0 | 0.0 | 44.3 |

Mixture Calibrator

| | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5 |
|--------------------|--------|--------|--------|--------|--------|
| Background | 79.9 | 23.1 | 2.2 | 0.8 | 1.4 |
| Calibrator (Gross) | 914.0 | 361.7 | 43.2 | 12.9 | 17.8 |
| Calibrator (Net) | 834.0 | 338.5 | 41.0 | 12.1 | 16.4 |

Field Calibration

Gamma Ray

| | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background | 112 | 23 |
| Calibrator (Gross) | 1354 | 273 |
| Calibrator (Net) | 1242 | 250 |

Mixture Calibrator

| | Gate 1 | Gate 2 | Gate 3 | Gate 4 | Gate 5 |
|--------------------|--------|--------|--------|--------|--------|
| Background | 79.9 | 23.1 | 2.2 | 0.8 | 1.4 |
| Calibrator (Gross) | 914.0 | 361.7 | 43.2 | 12.9 | 17.8 |
| Calibrator (Net) | 834.0 | 338.5 | 41.0 | 12.1 | 16.4 |

Spectral Gamma Constants SGS-E.J 150

Last Edited on 30-APR-2012,12:03

| | |
|-----------------------------|-------|
| Mixture Calibrator Number | 147-1 |
| Potassium Calibrator Number | 148-1 |
| Uranium Calibrator Number | 150-1 |

| | | |
|-------------------------------|-----------------|-------|
| Uranium Calibrator Number | 150-1 | |
| Thorium Calibrator Number | 149-1 | |
| Mud Density | 1.13 | gm/cc |
| Caliper Source for Processing | Density Caliper | |
| Tool Position | Eccentred | |
| Concentration of KCl | 0.00 | kppm |

DOWNHOLE EQUIPMENT

C:\Minimus 11_03_4044\Data\Mull Drilling Company, Inc. Bleumer # 1-13\Mull Drilling Company, Inc. Bleumer # 1-13 Run 1_001.dta

MCB-A.A 11B Tension Cablehead
 MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
 SHA-F 59 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma
 MCG-B 39 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Spectral Gamma Ray Sub
 SGS-E.J 150 LG: 7.78 ft WT: 105.8 lb OD: 3.54 in

Compact Micro-log
 MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
 MDN-B.J 387 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

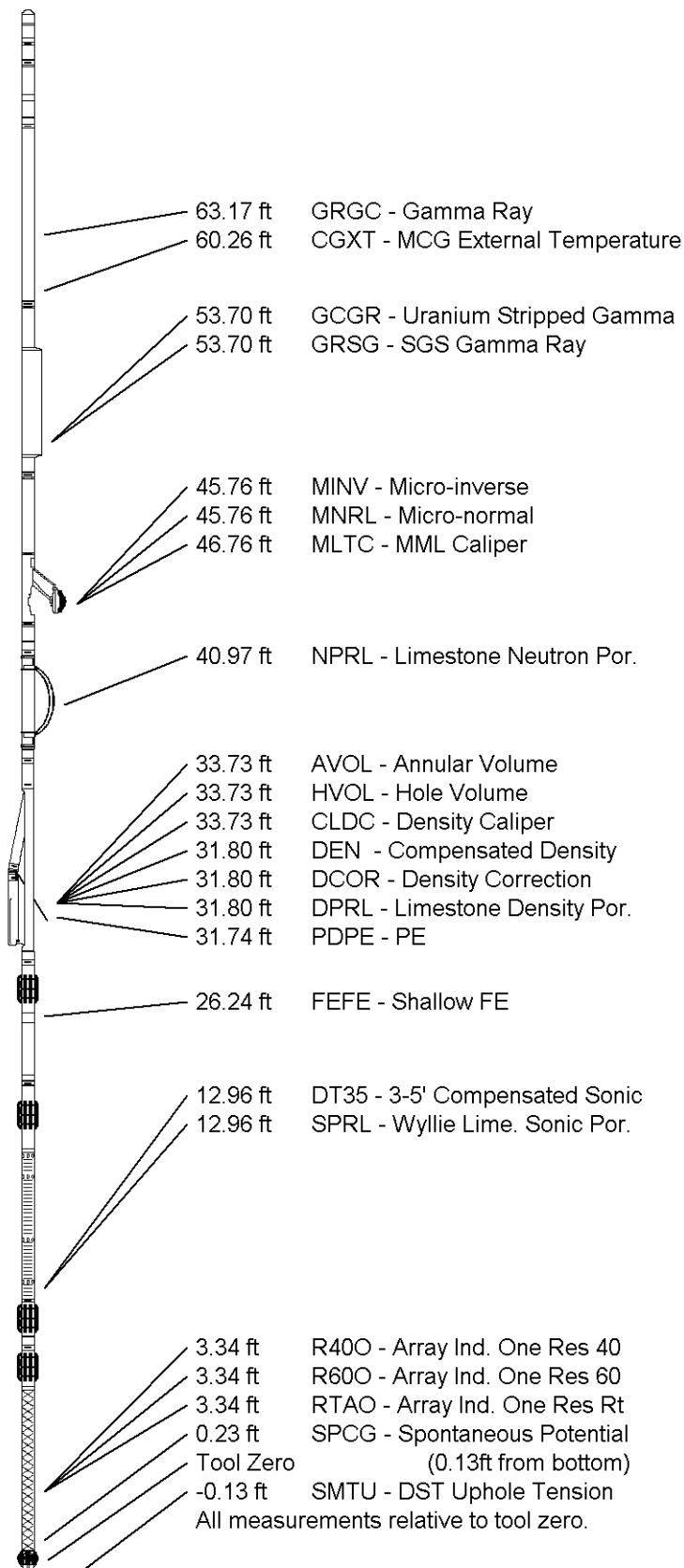
Compact Density/Caliper
 MPD-B 35 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
 MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic
 MSS-A.A 126 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
 MAI-A.A 178 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 73.59 ft Weight: 608.5 lb



COMPANY MULL DRILLING COMPANY, INC.
 WELL BLEUMER # 1-13
 FIELD WILDCAT
 PROVINCE/COUNTY GRAY COUNTY
 COUNTRY/STATE U.S.A. / KANSAS

| | | | | | |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 2785.00 | feet | First Reading | 6159.00 | feet |
| Elevation Drill Floor | 2783.00 | feet | Depth Driller | 6200.00 | feet |
| Elevation Ground Level | 2772.00 | feet | Depth Logger | 6193.00 | feet |



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