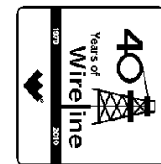


**Weatherford®****COMPACT DROP OFF
TRIPLE COMBO
QUICKLOOK LOG**

COMPANY ENCANA OIL AND GAS (USA)
WELL NP EF 09E-27 P27 595
FIELD GRAND VALLEY
PROVINCE/COUNTY GARFIELD
COUNTRY/STATE U.S.A. / COLORADO
LOCATION SHL: 728' FSL & 594' FEL

SEC 27 TWP 5S RGE 95W Other Services
API Number 05-045-20299
Permit Number

Permanent Datum G.L., Elevation 6650 feet
Log Measured From KB
Drilling Measured From K.B.

Elevations:
KB 6672.00
DF 6672.00
GL 6650.00

| | | |
|------------------------|---------------|---------------|
| Date | 22-JULY-2012 | |
| Run Number | 1 | |
| Depth Driller | 11265.00 | feet |
| Depth Logger | 11265.00 | feet |
| First Reading | 11212.00 | feet |
| Last Reading | 1826.00 | feet |
| Casing Driller | 1826.00 | feet |
| Casing Logger | 1826.00 | feet |
| Bit Size | 7.875 | inches |
| Hole Fluid Type | WBM | |
| Density / Viscosity | 10.80 lb/USg | 48.00 CP |
| PH / Fluid Loss | 8.80 | 4.50 ml/30Min |
| Sample Source | FLOWLINE | |
| Rm @ Measured Temp | 1.85 @ 96.4 | ohm-m |
| Rmf @ Measured Temp | 1.48 @ 96.4 | ohm-m |
| Rmc @ Measured Temp | 2.22 @ 96.4 | ohm-m |
| Source Rmf / Rmc | CALC | CALC |
| Rm @ BHT | 0.77 @235.0 | ohm-m |
| Time Since Circulation | 2 HOUR | |
| Max Recorded Temp | 235.00 | deg F |
| Equipment Name | COMPACT | |
| Equipment / Base | 13037 | RK SPR |
| Recorded By | B. ROSSER | |
| Witnessed By | J. RETHERFORD | |

BOREHOLE RECORD

Last Edited: 22-JUL-2012 22:53

| Bit Size inches | Depth From feet | Depth To feet |
|--------------------|--------------------|------------------|
| 8.750 | 1826.00 | 7553.00 |
| 7.865 | 7553.00 | 11265.00 |

CASING RECORD

| Type | Size inches | Depth From feet | Shoe Depth feet | Weight pounds/ft |
|---------|----------------|--------------------|--------------------|---------------------|
| SURFACE | 9.625 | 0.00 | 1826.00 | 36.00 |

REMARKS

SOFTWARE VERSION USED: WLS 12.02.4401

TOOLS CONVEYED VIA COMPACT DROP OFF.

ALL DEPTHS RECORDED WITH WEATHERFORD PASON INTERFACE SYSTEM.
ALL DEPTHS CORRECTED BACK TO DRILLERS STRAP.

MAI, MFE, MPD, MDN, MCG RAN IN COMBINATION.
HARDWARE USED: SEE TOOL DIAGRAM.

CUSTOMER'S SCALES USED AND INTERVALS LOGGED.

INDUCTION MODEL: RTAP WBM

CALIPER TRIGGERED CLOSED FROM 6362 FEET TO 5660 FEET DUE TO METALLIC PROPERTIES IN HOLE AT ABOUT 6490 FEET.
NO CALIPER DATA FROM 6362 FEET TO 5660 FEET.

ALL TOOLS REPROCESSED TO BIT SIZE CORRECTION FROM 6362 FEET TO 5660 FEET.

4.5 INCH PRODUCTION CASING USED TO CALCULATE ANNULAR HOLE VOLUME.

ANNULAR HOLE VOLUME: 3262 CUBIC FEET

HOLE VOLUME: 4217 CUBIC FEET

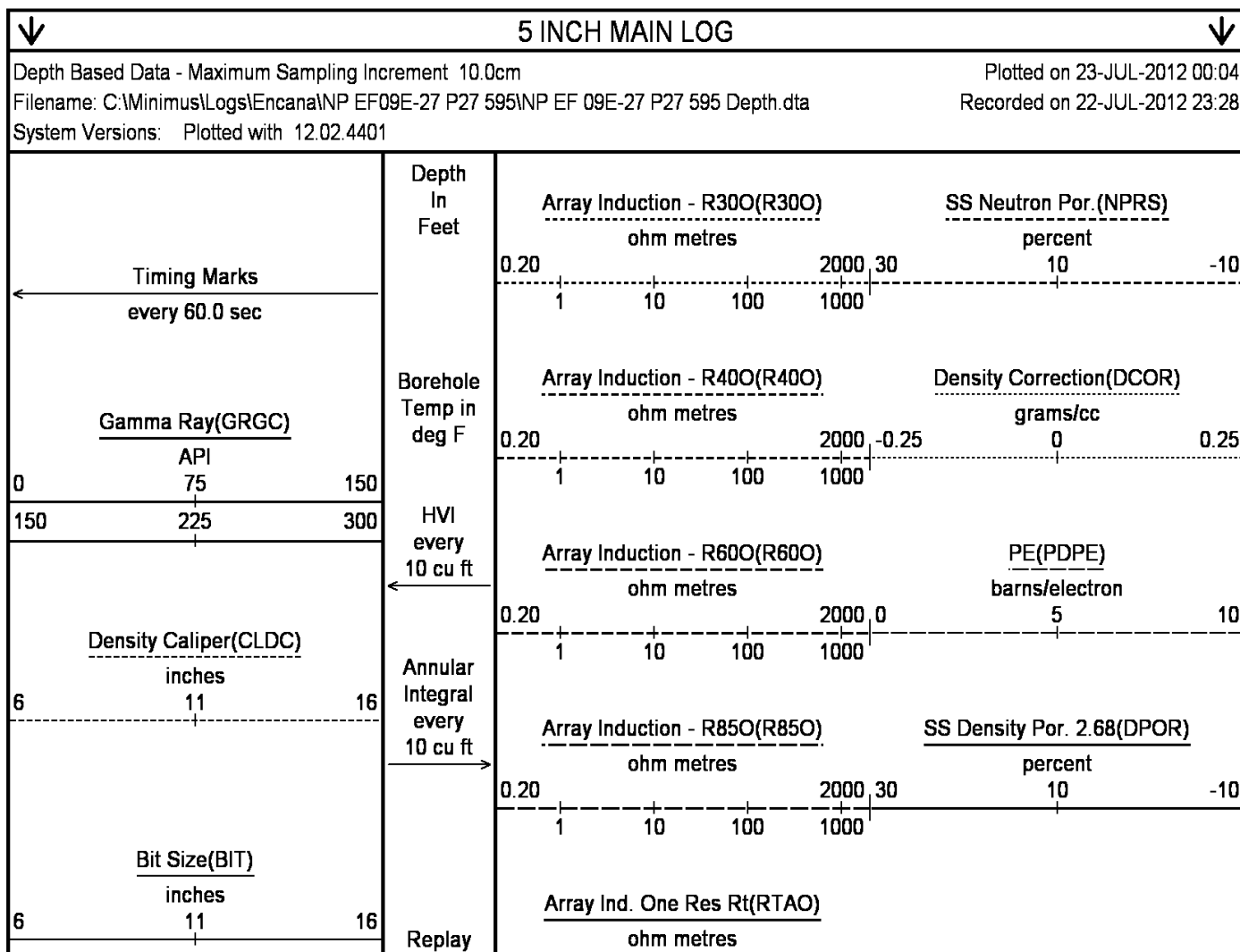
BOREHOLE SIZE AND RUGOSITY WILL AFFECT DATA QUALITY.

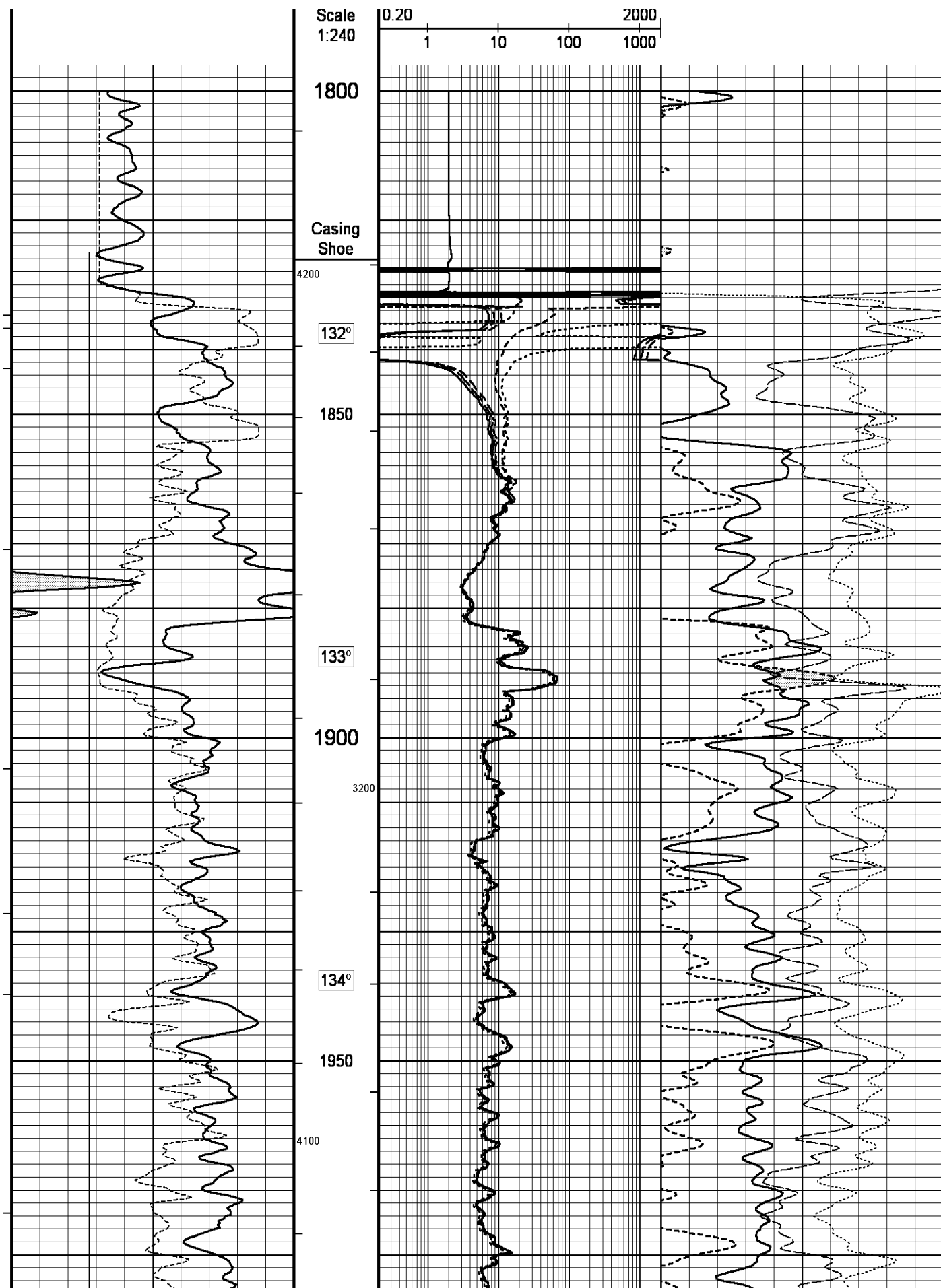
OPERATOR(S): D.SMITH, J.GERDES

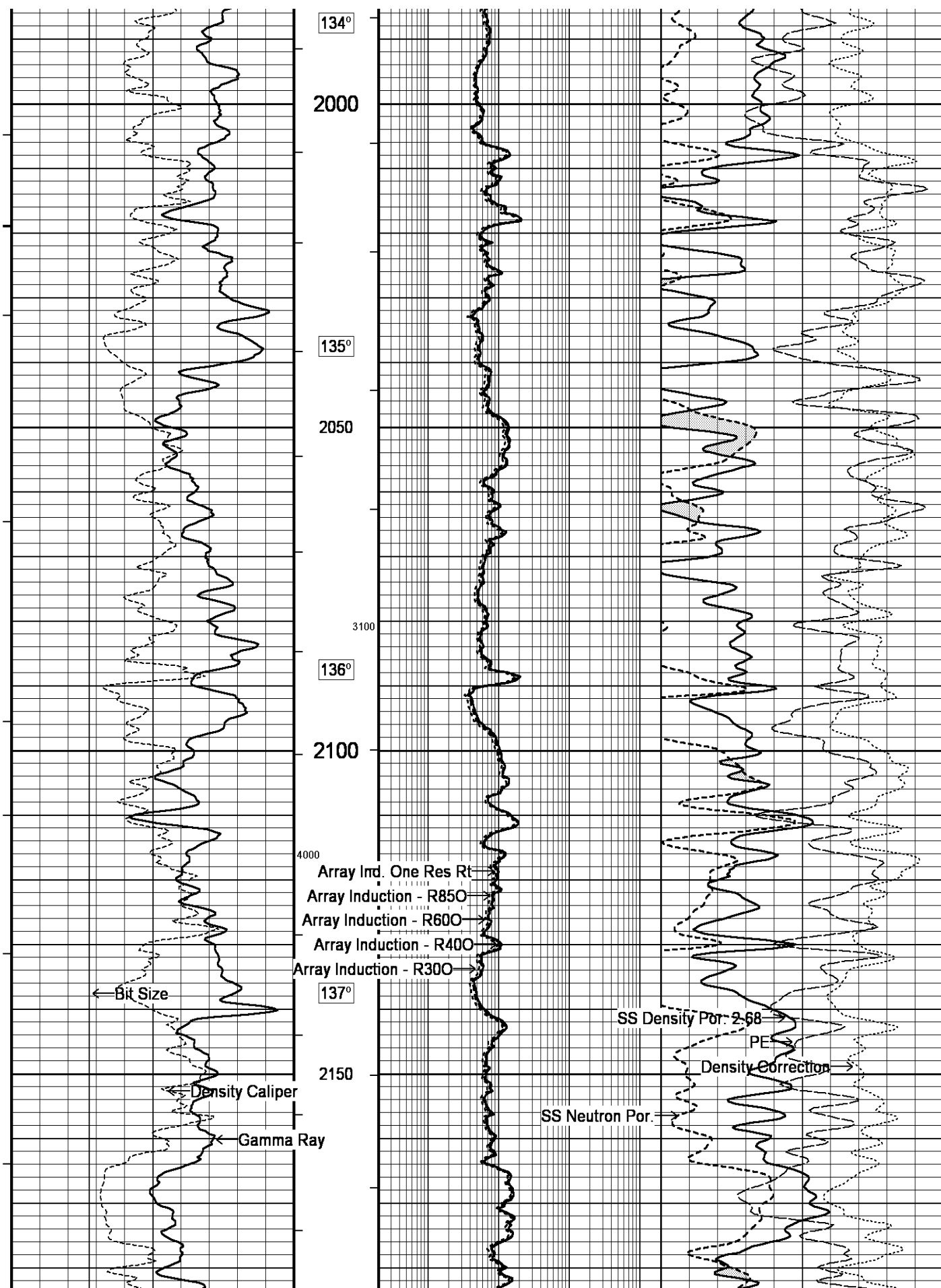
RIG: PATERSON 303

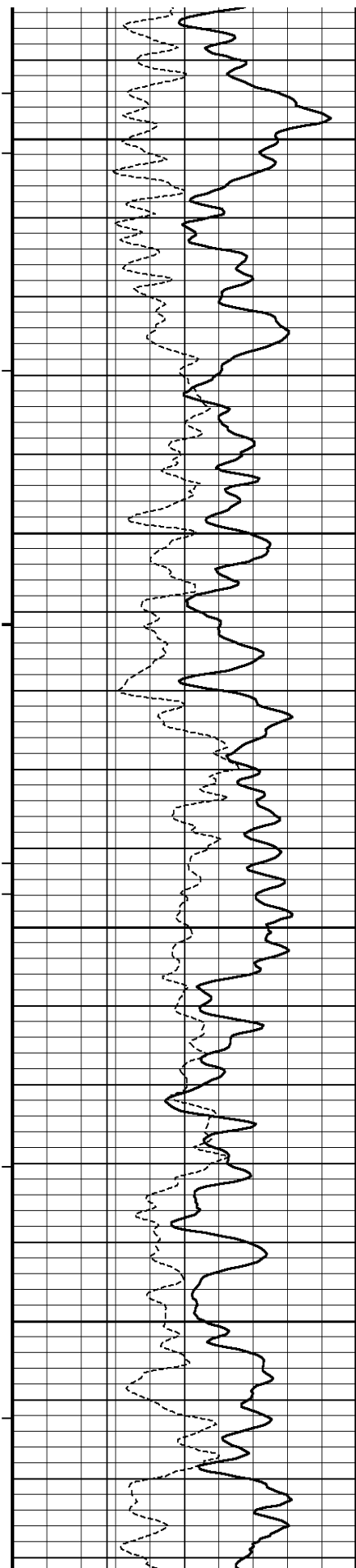
SERVICE ORDER #3529662

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.









138°

2200

139°

2250

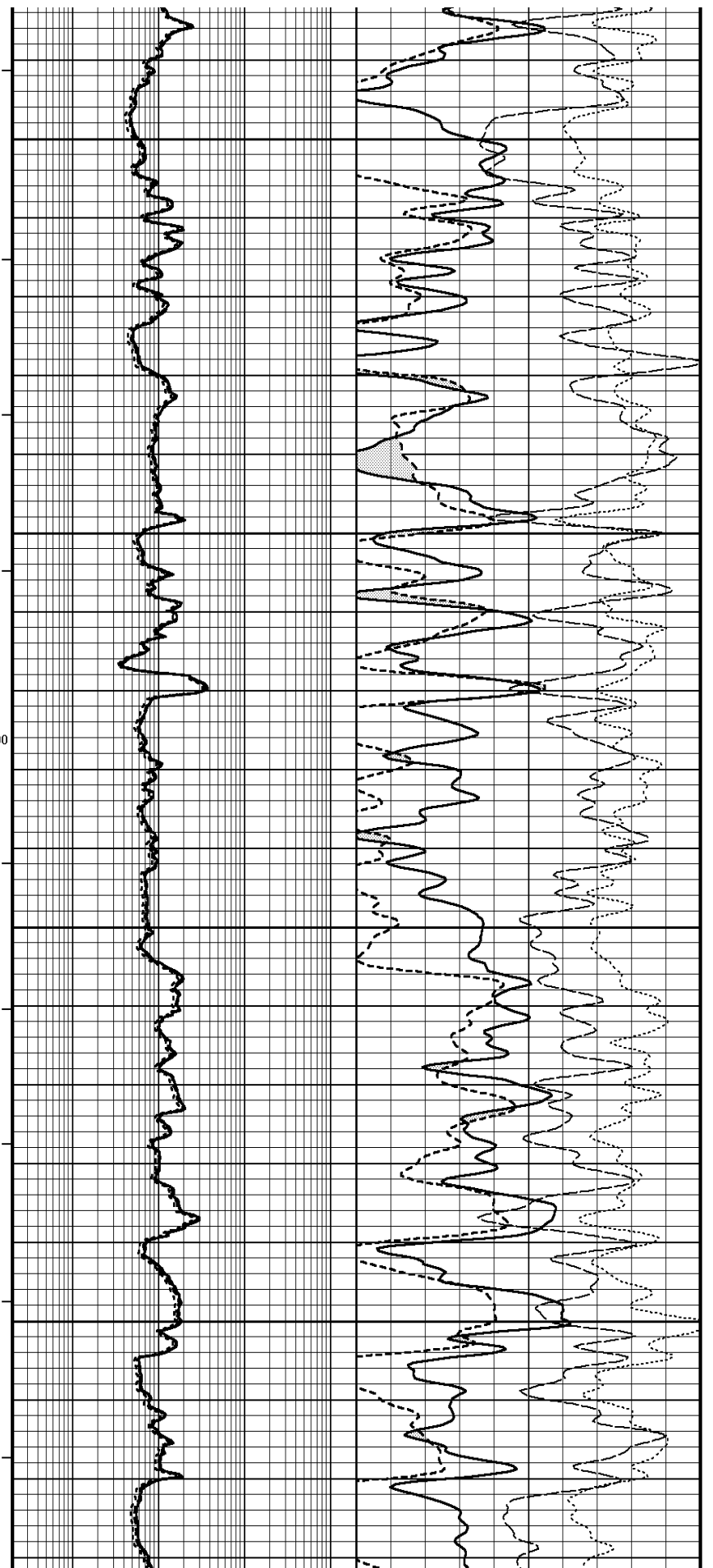
3900

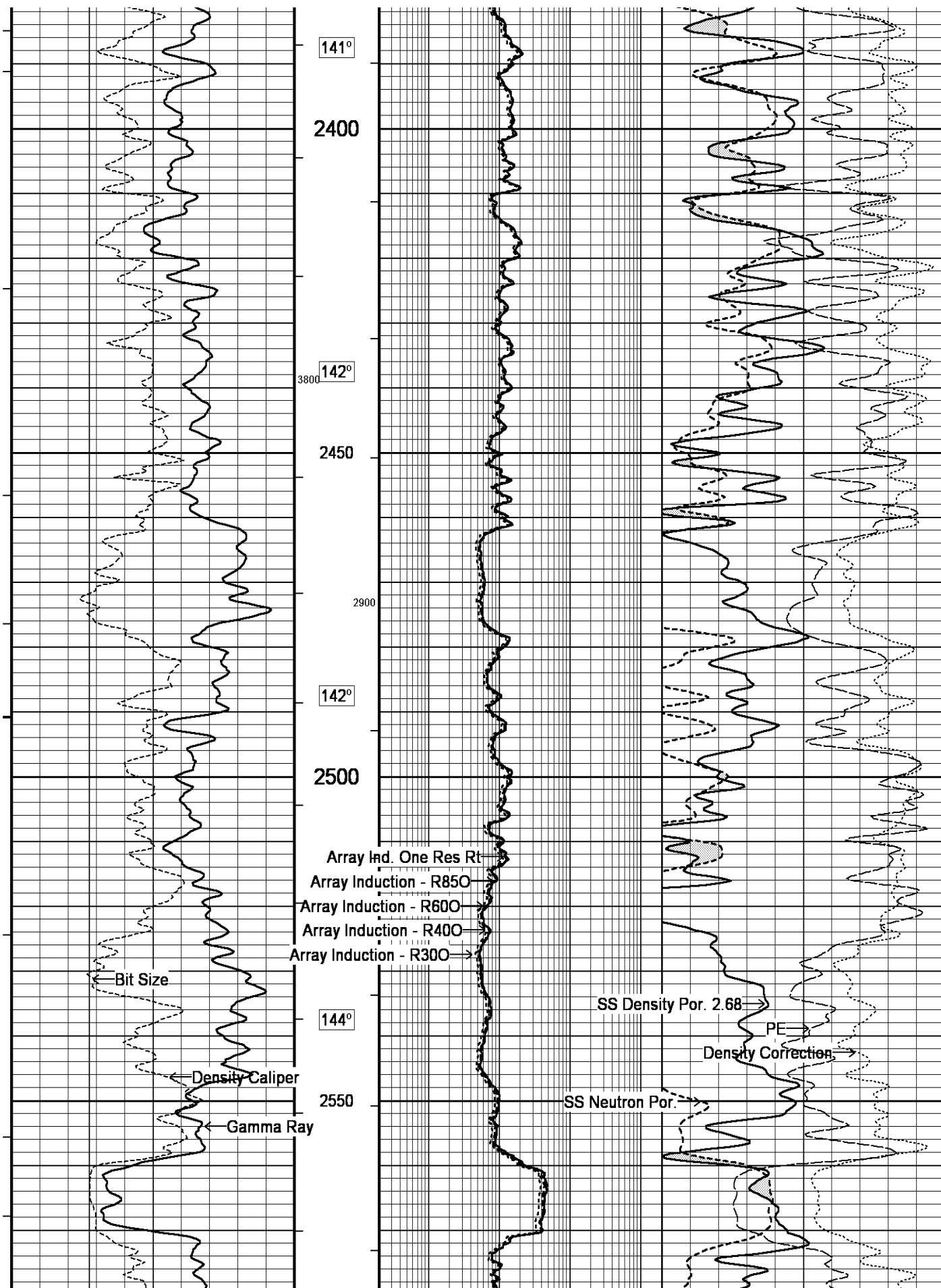
140°

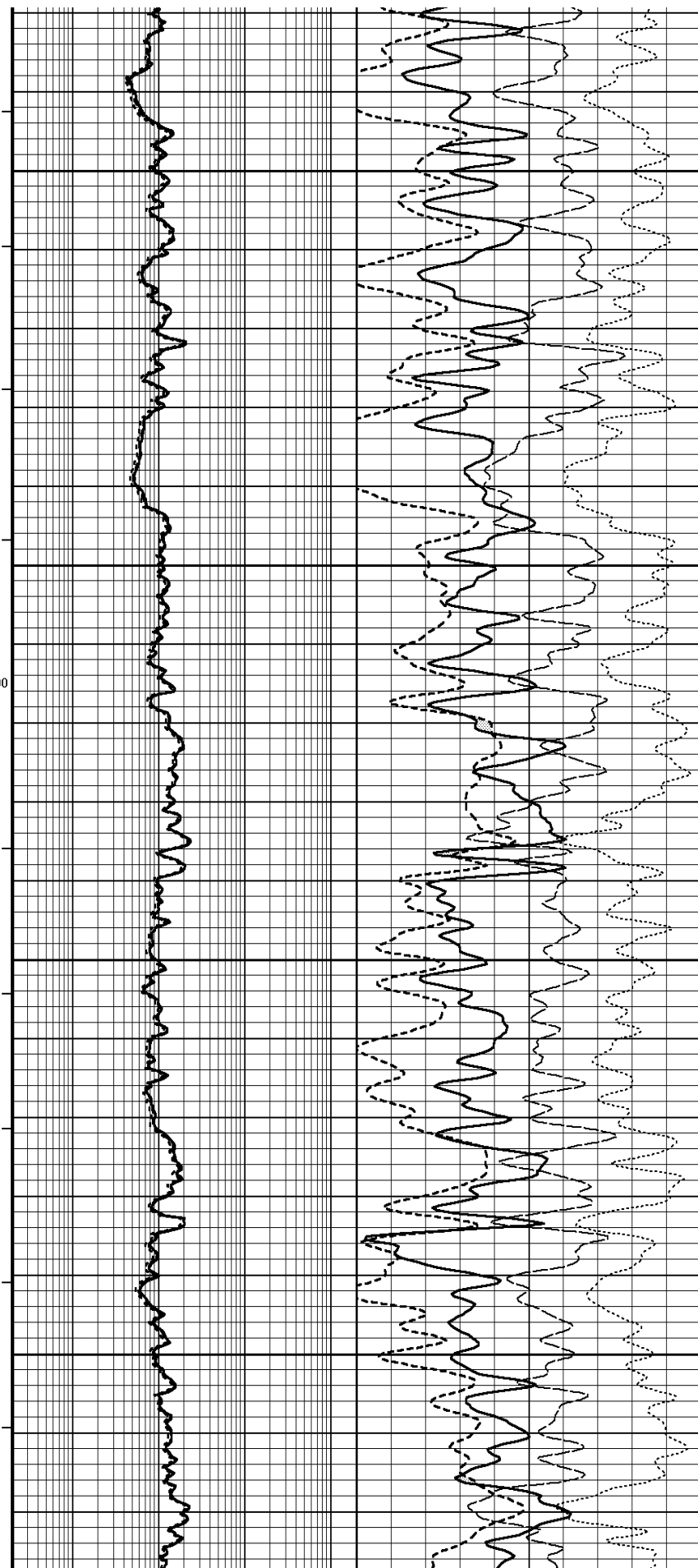
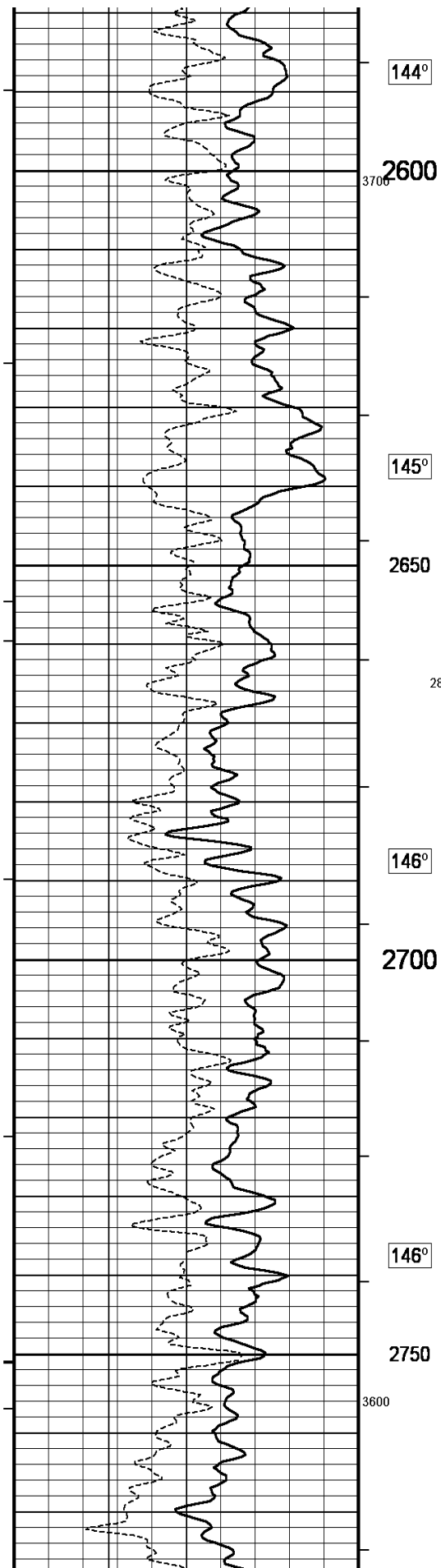
2300

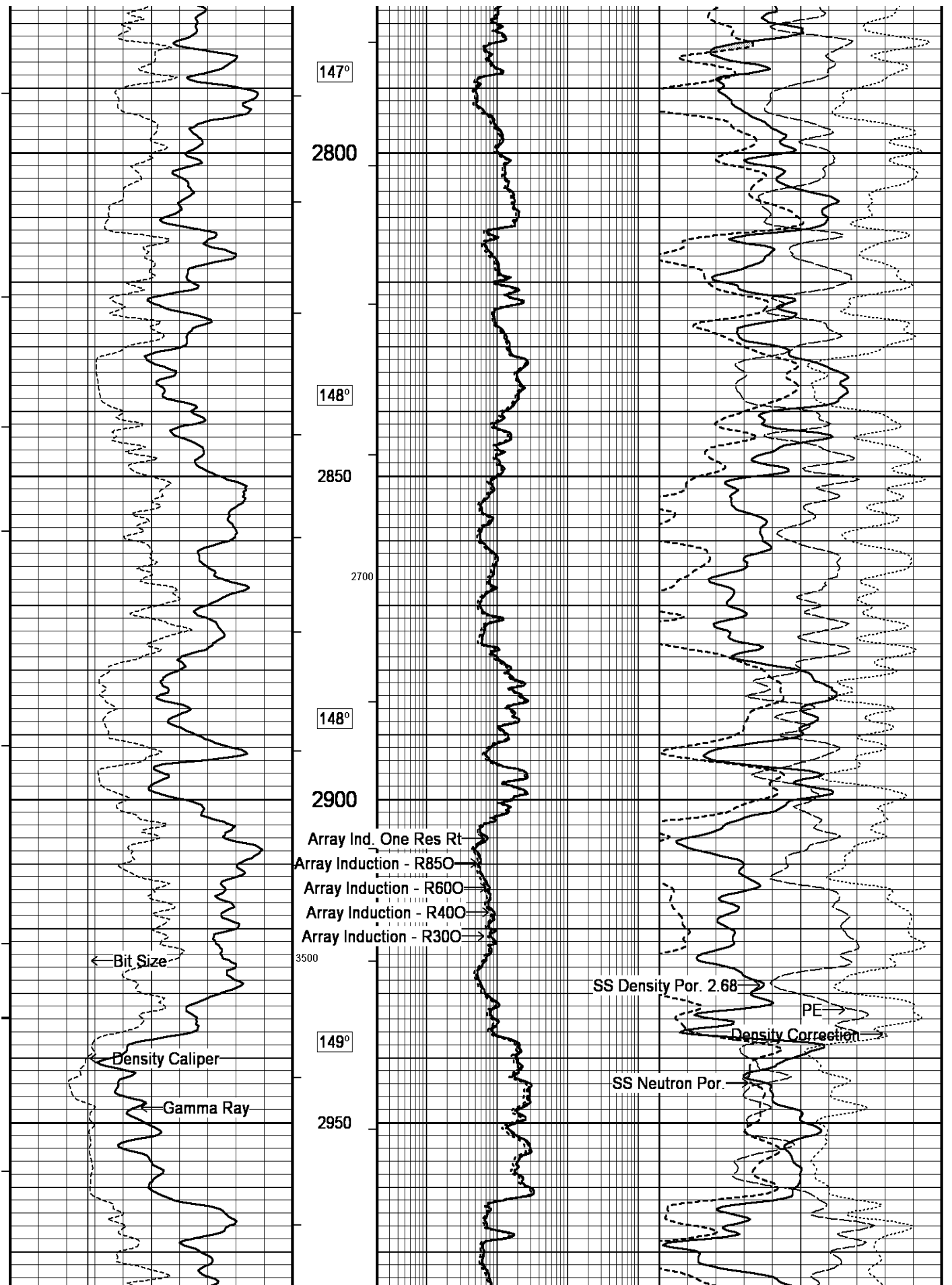
140°

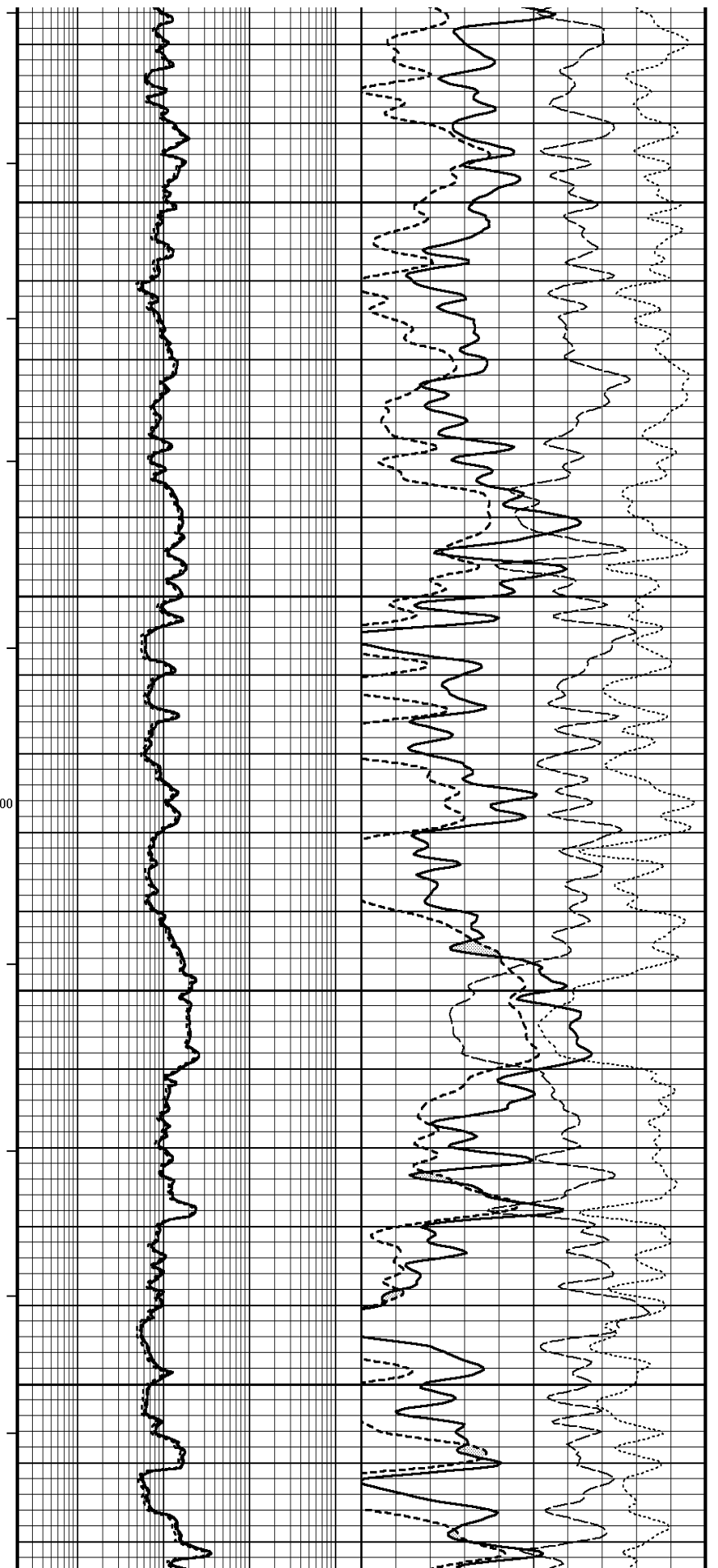
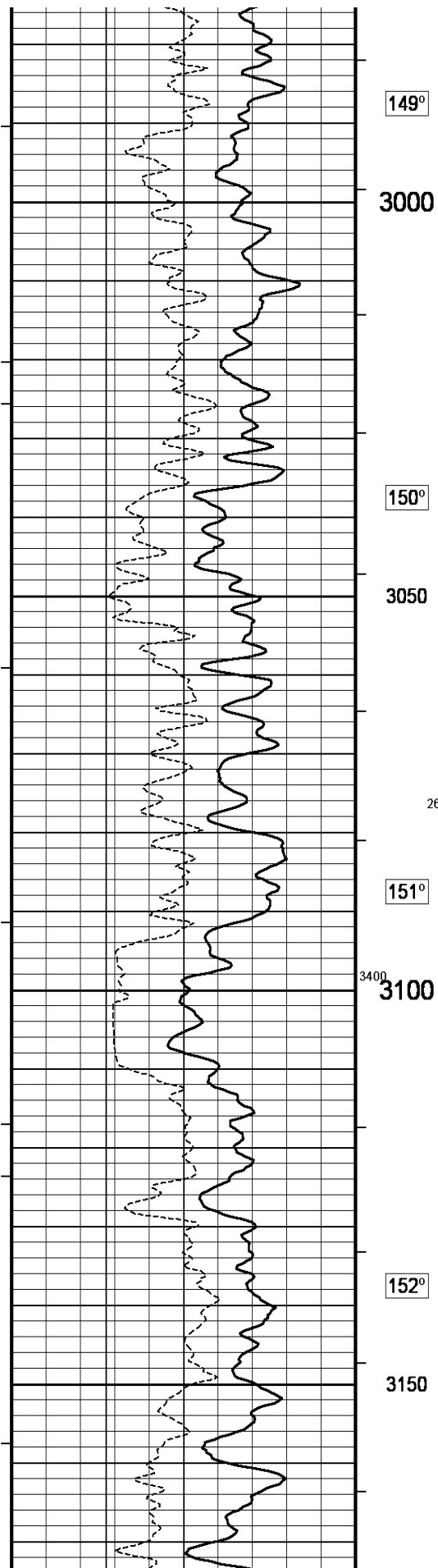
2350

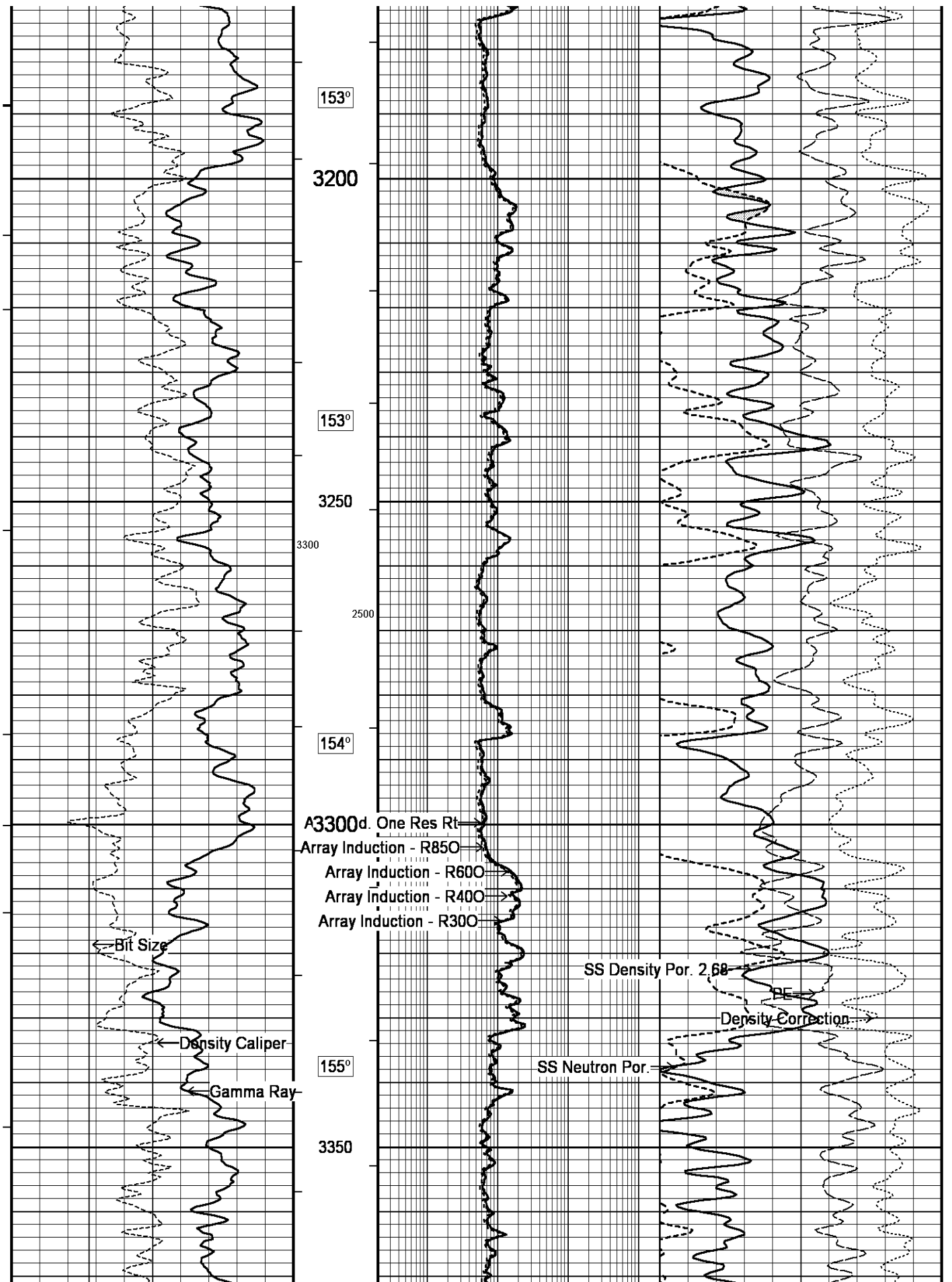


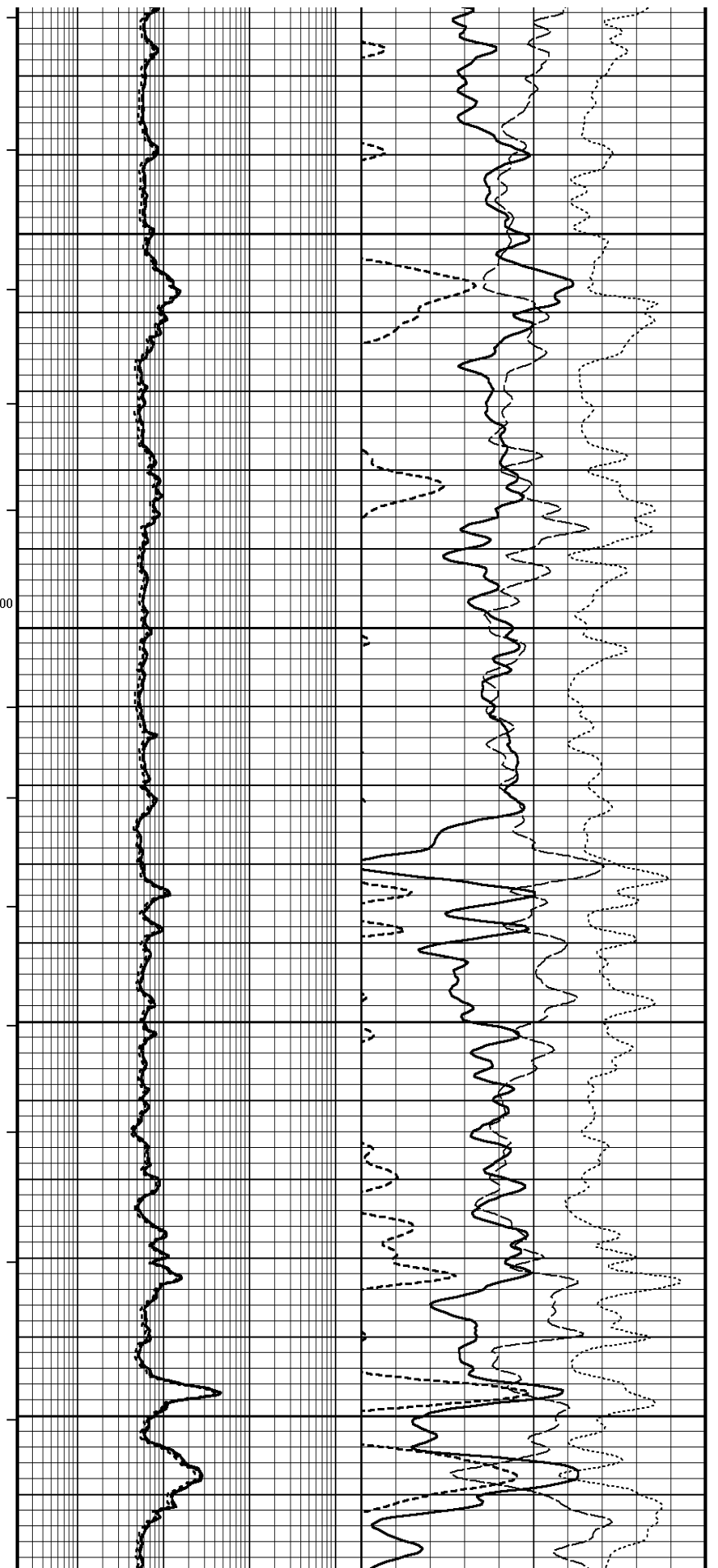
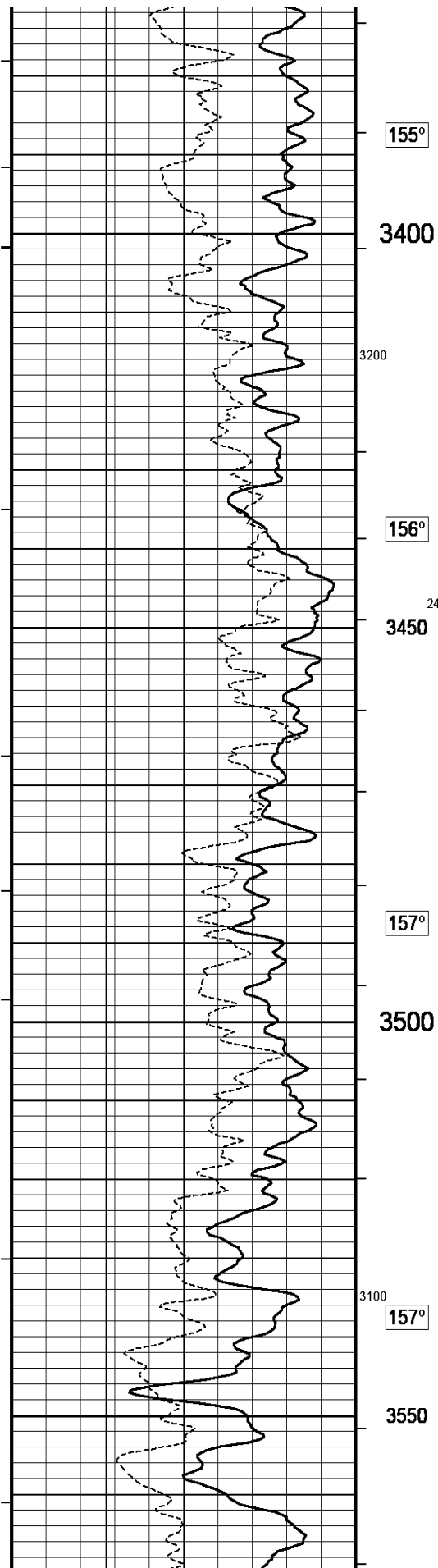


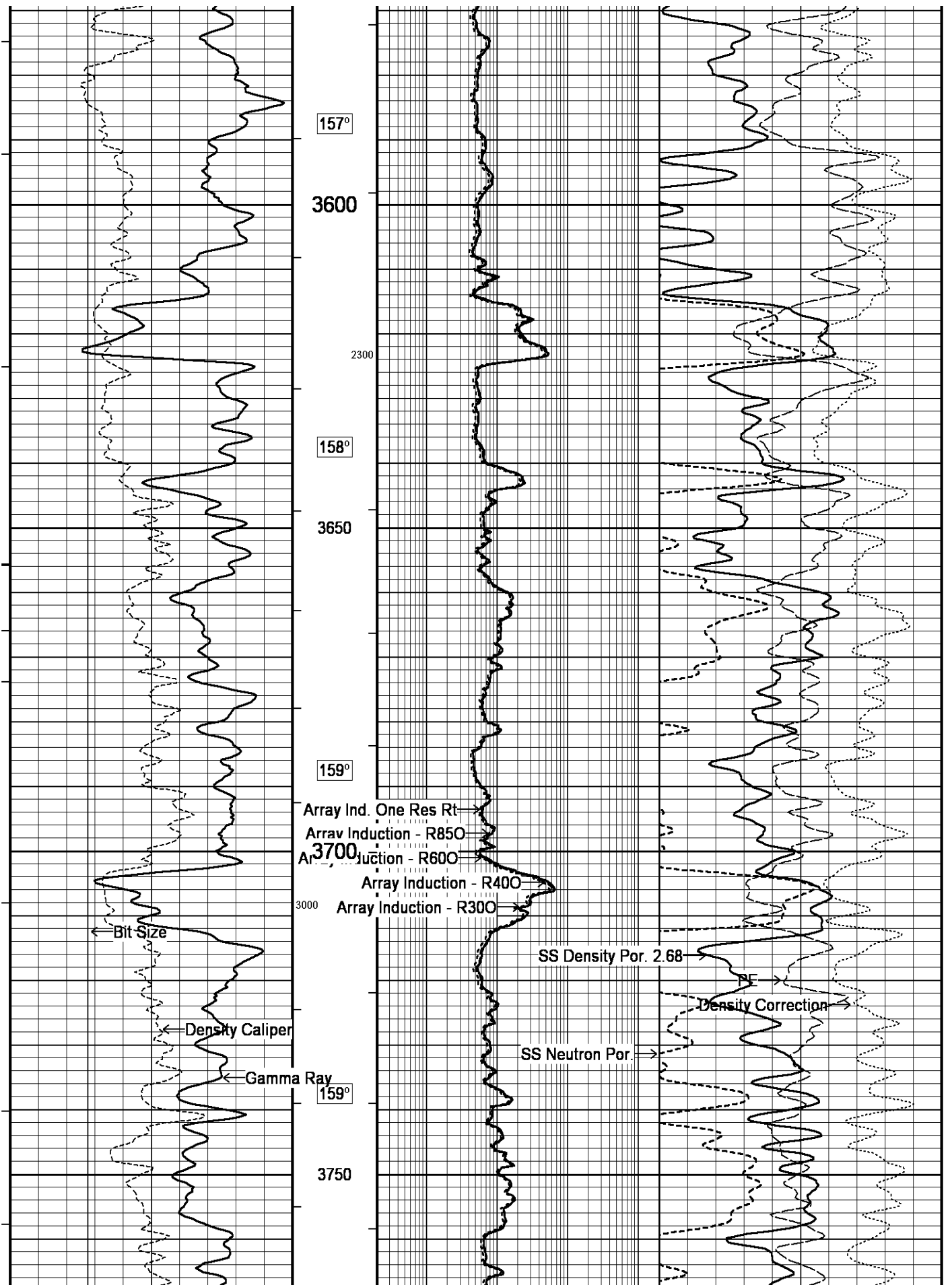


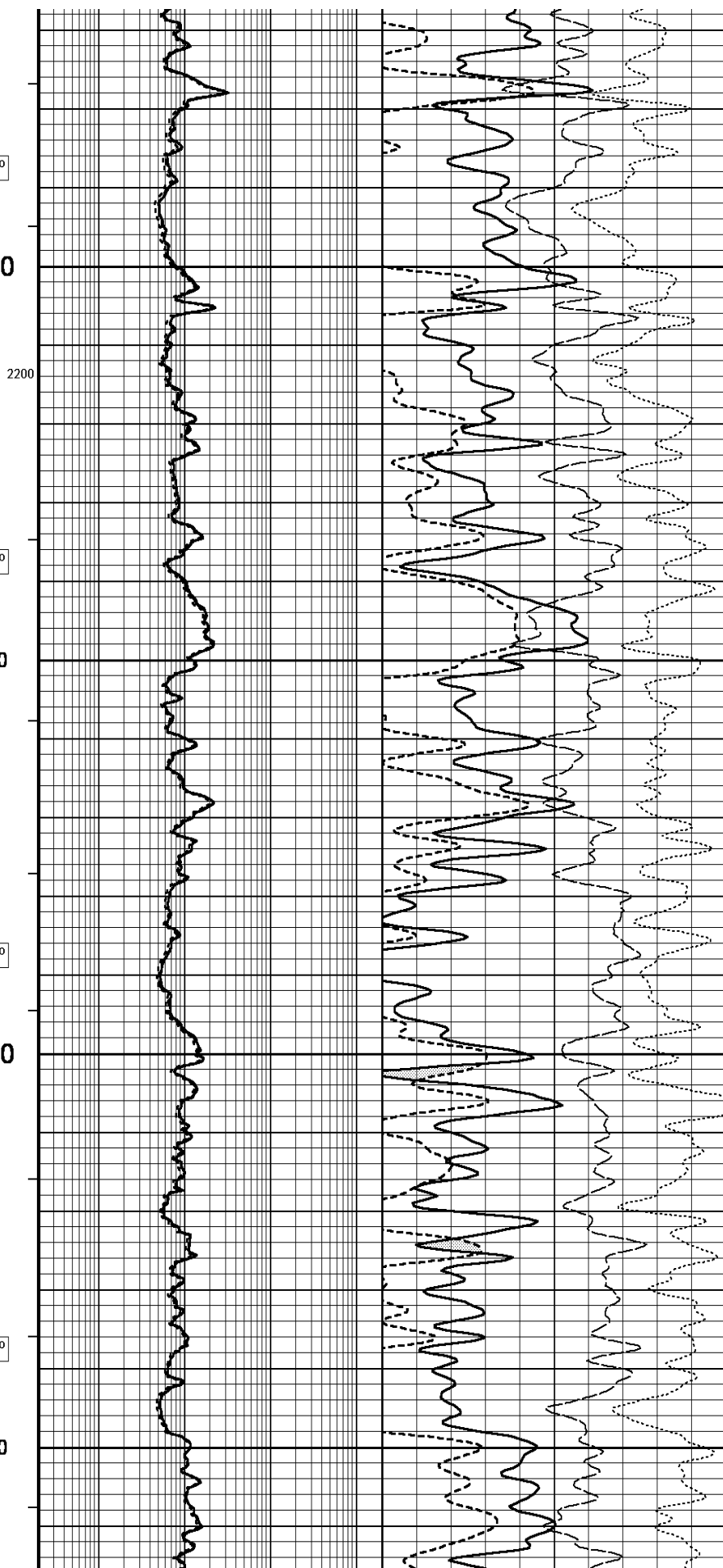
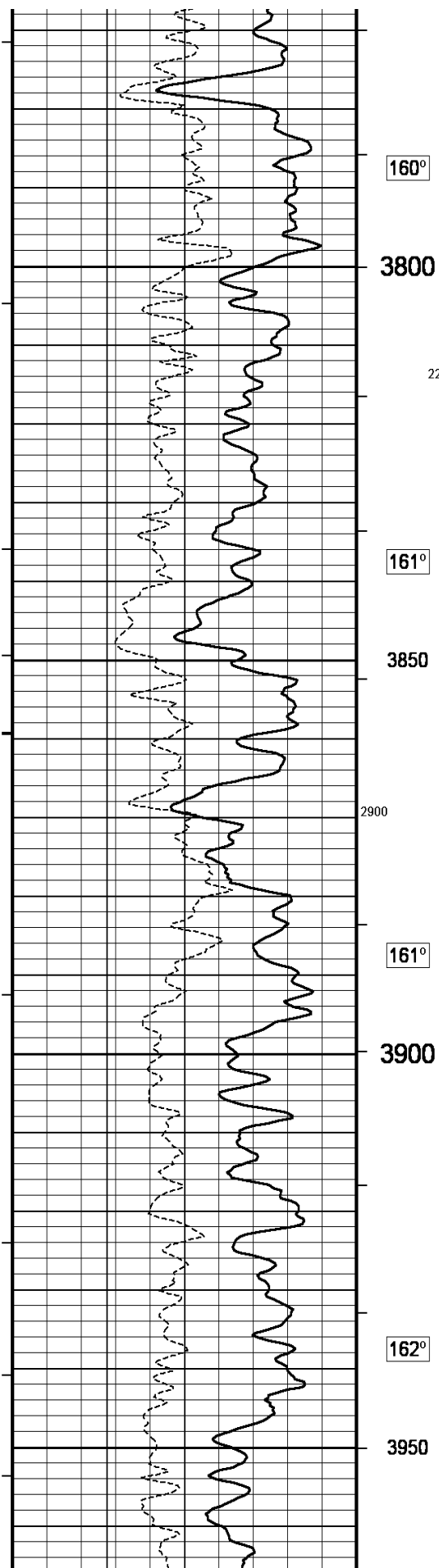


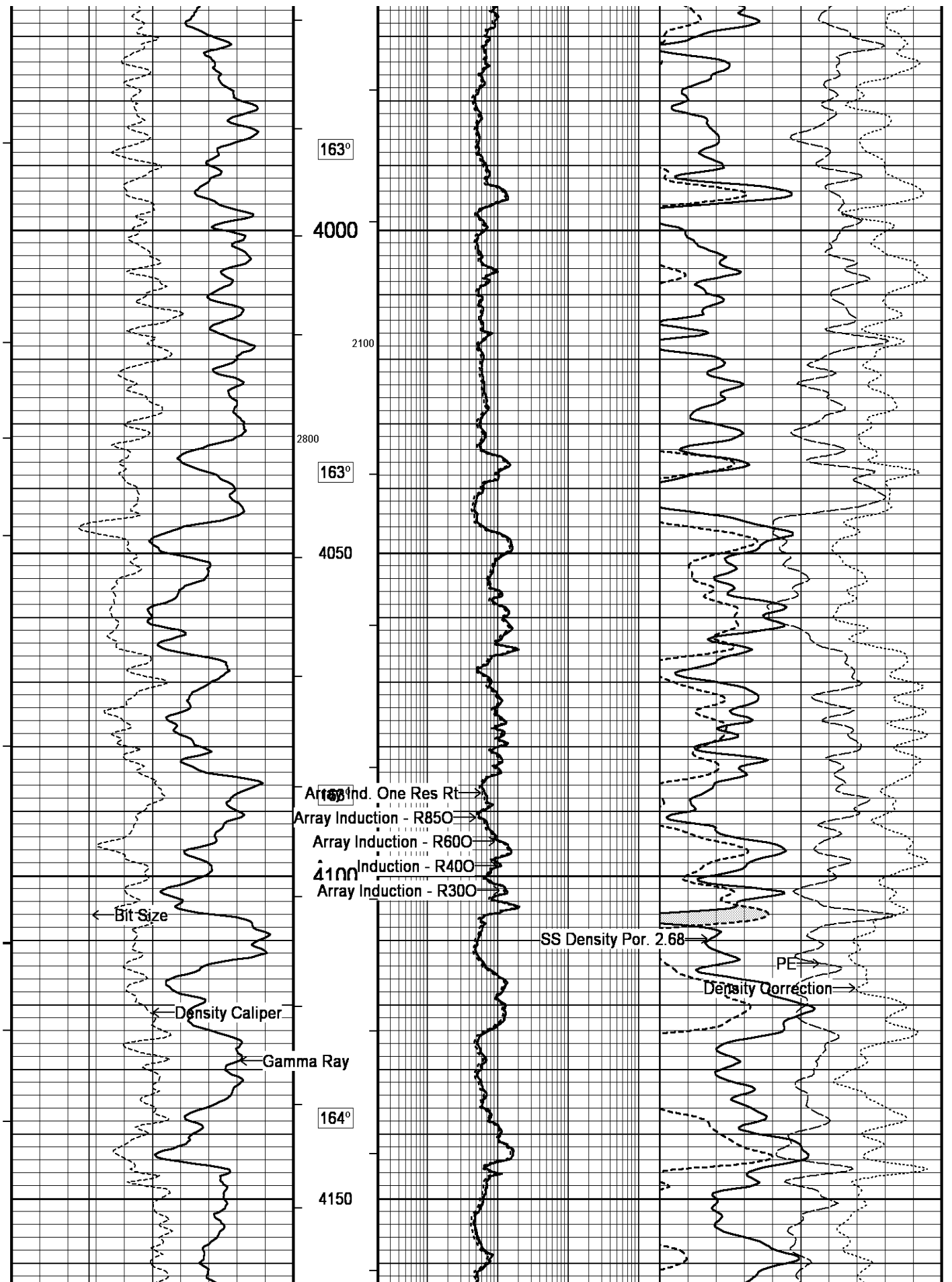


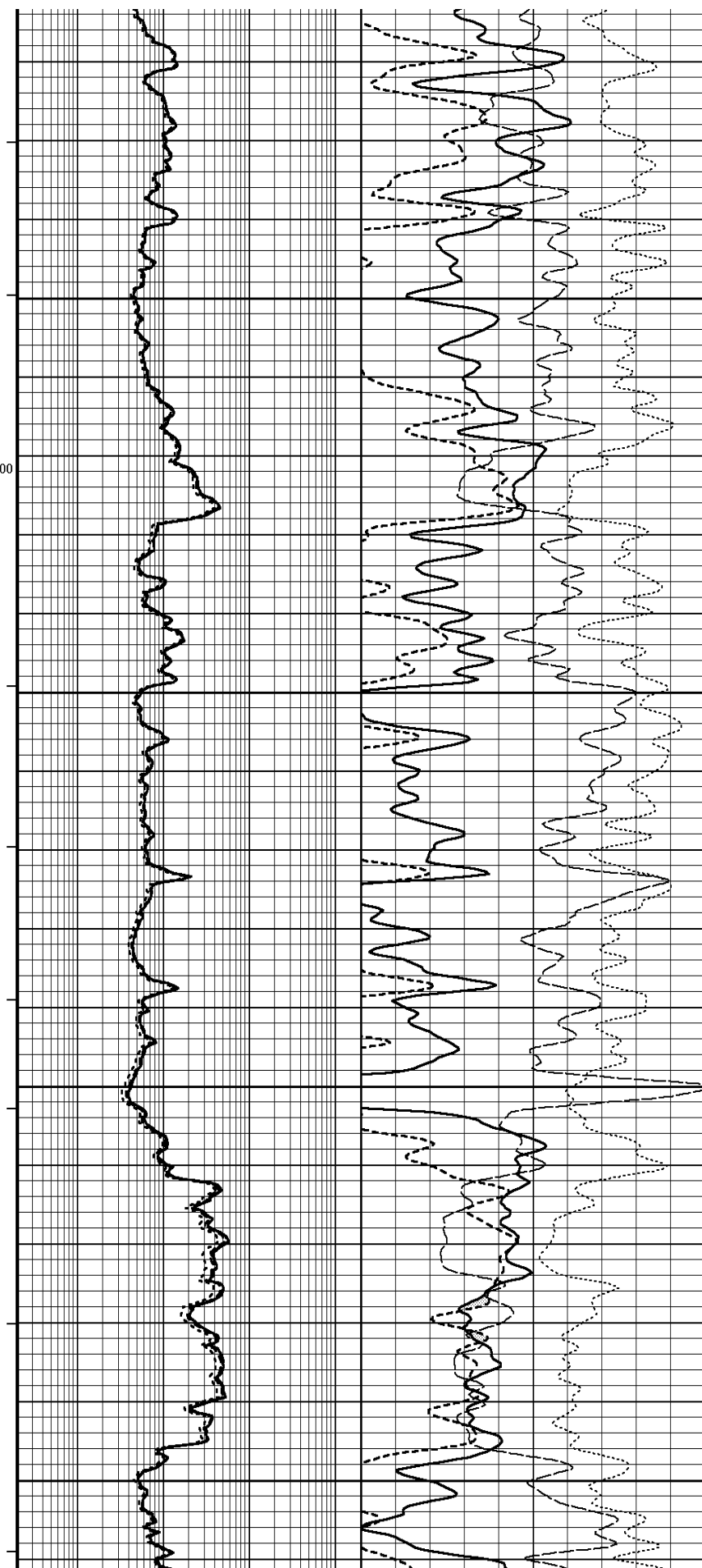
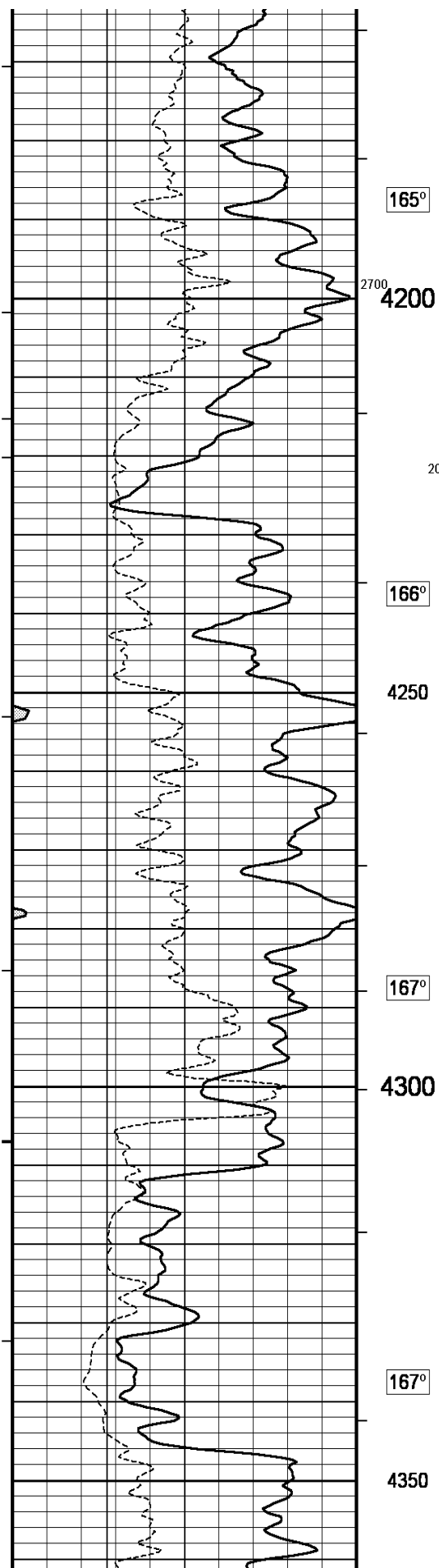


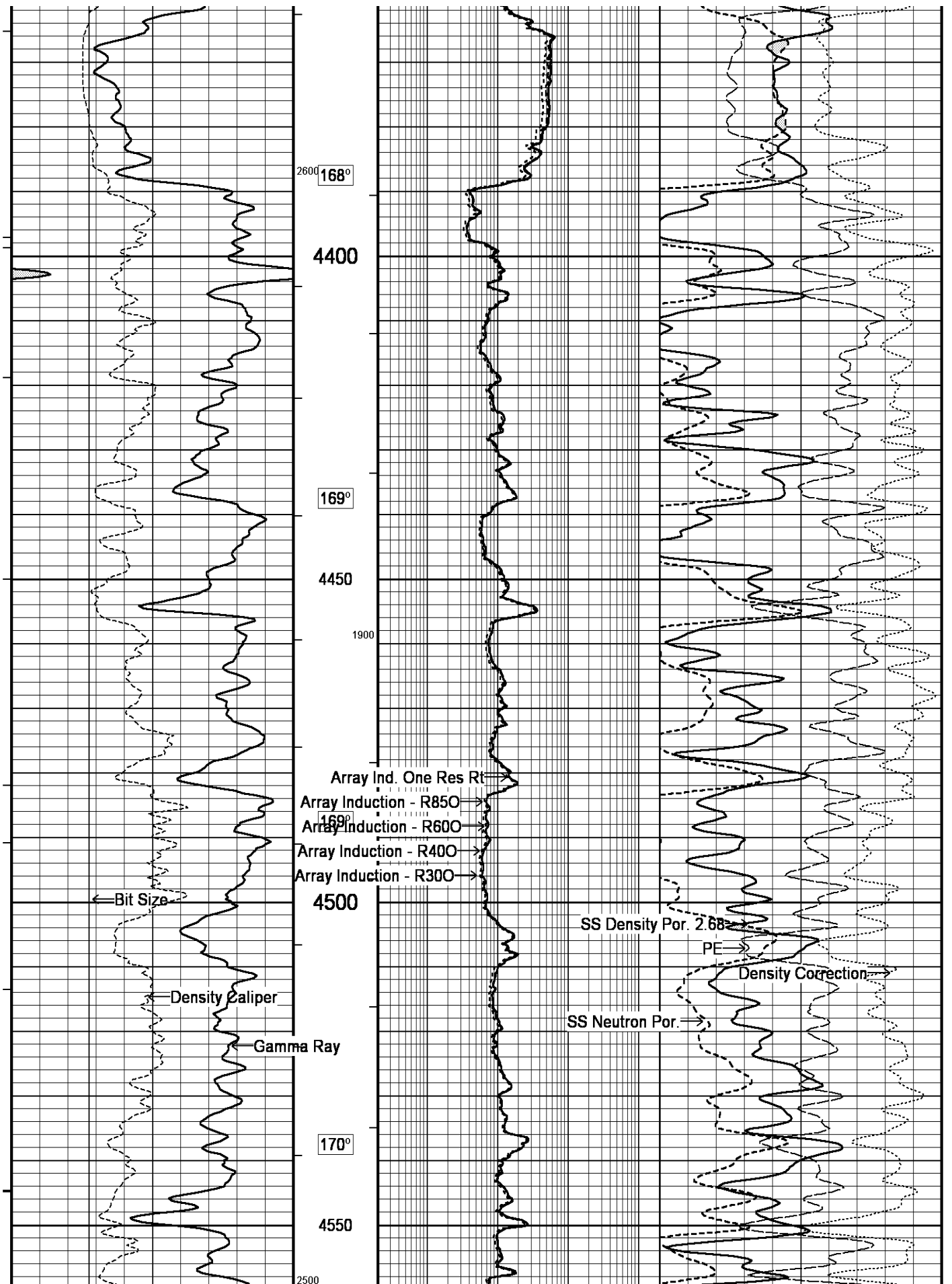


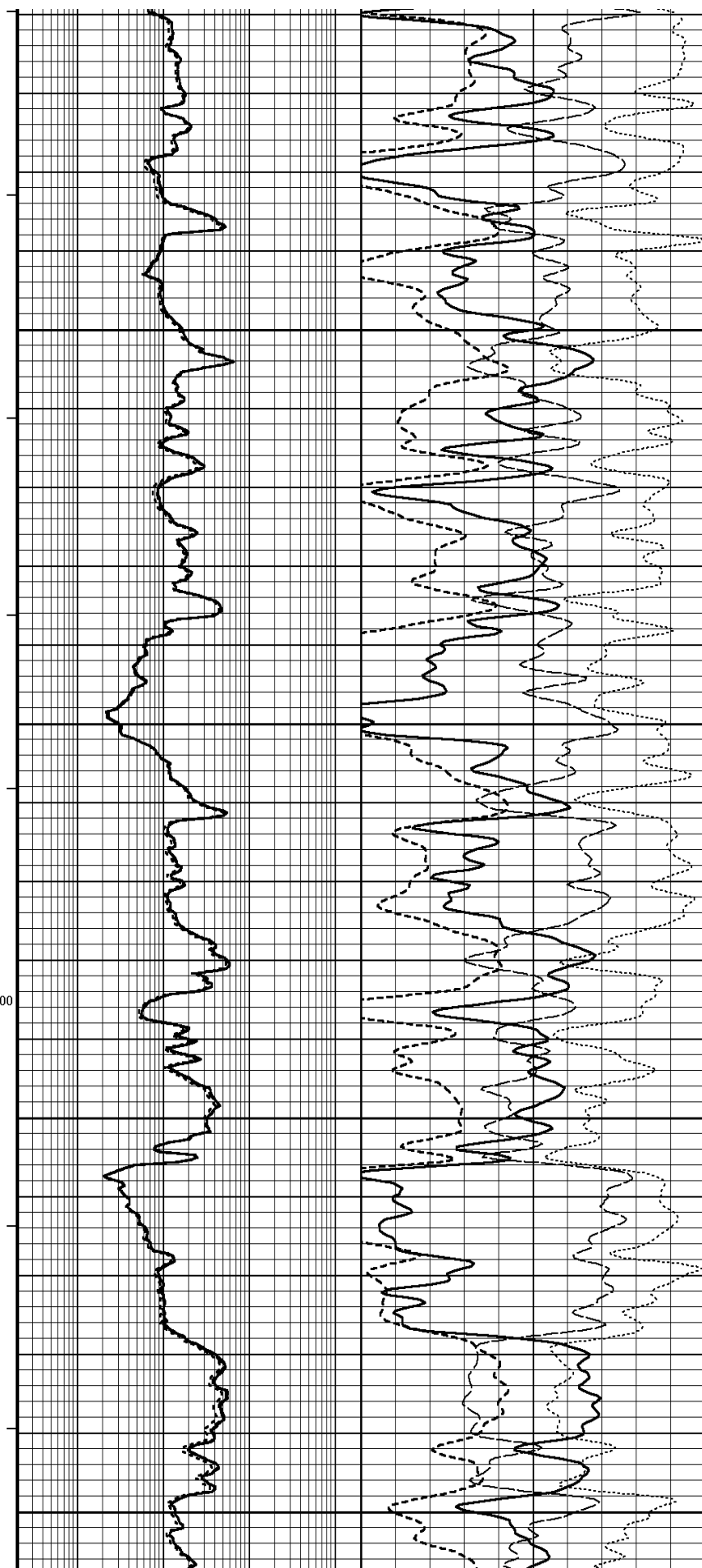
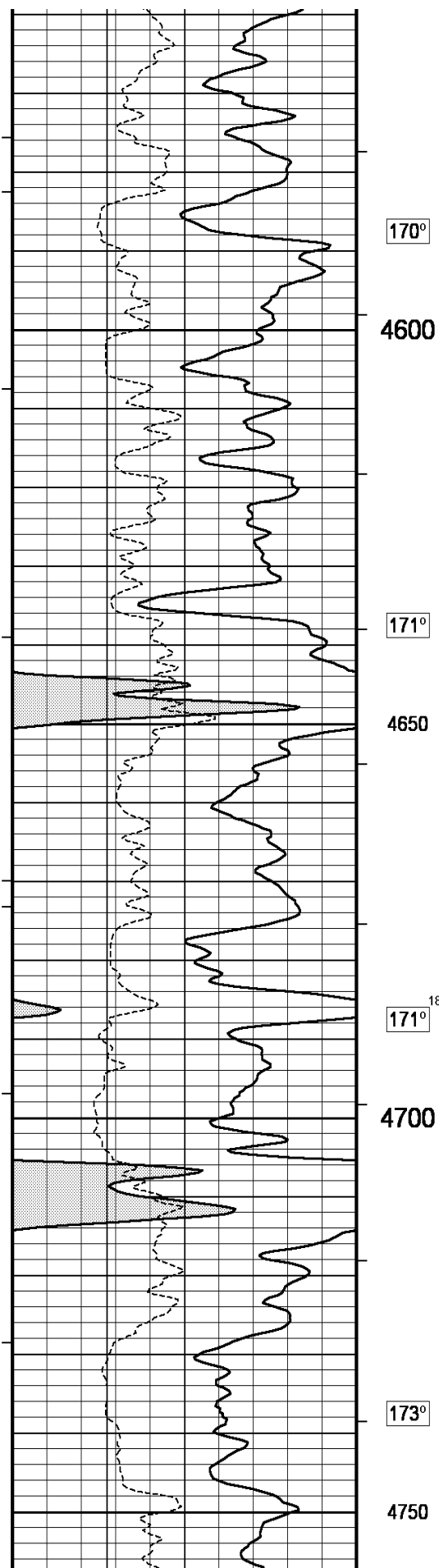


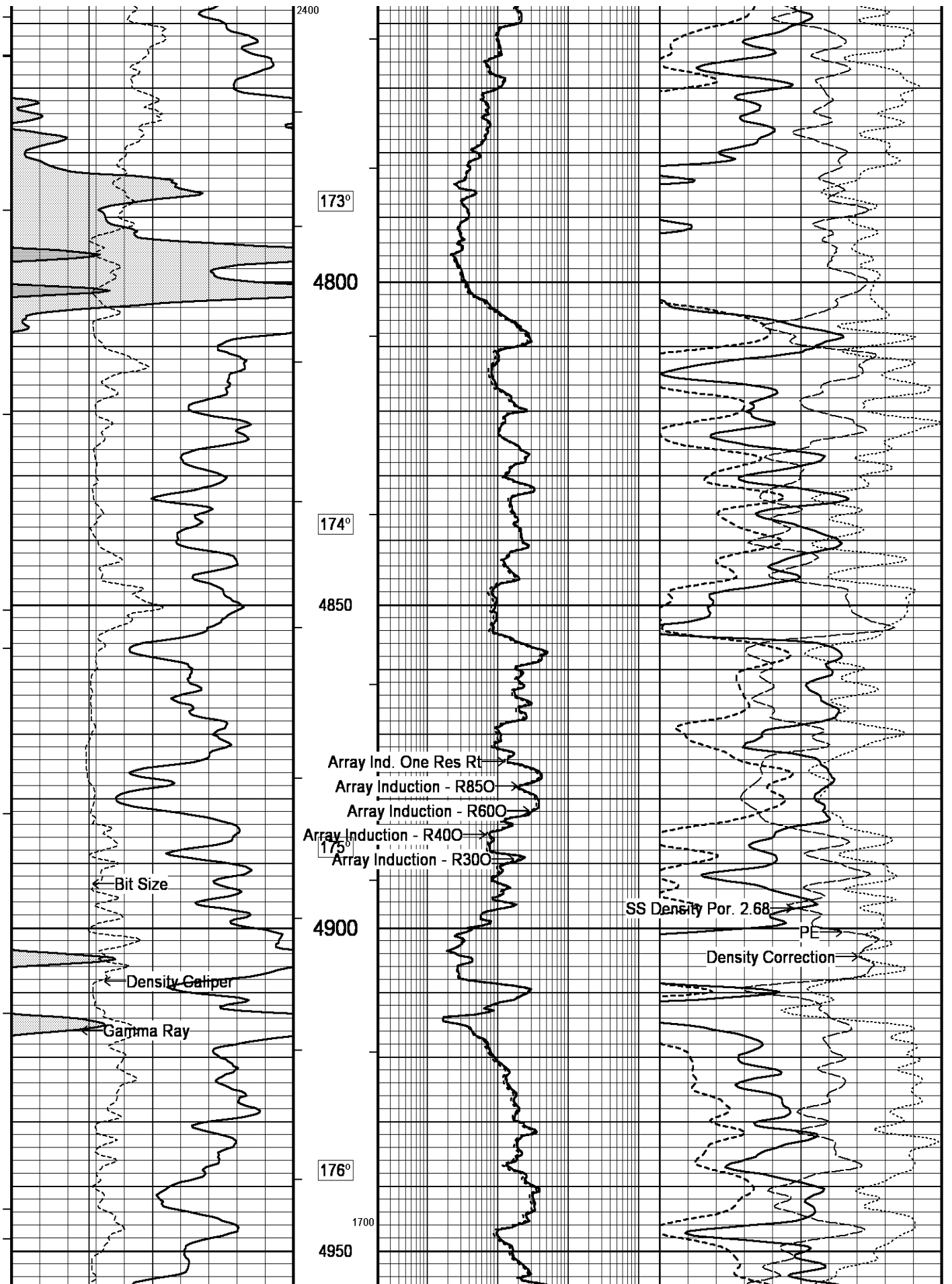


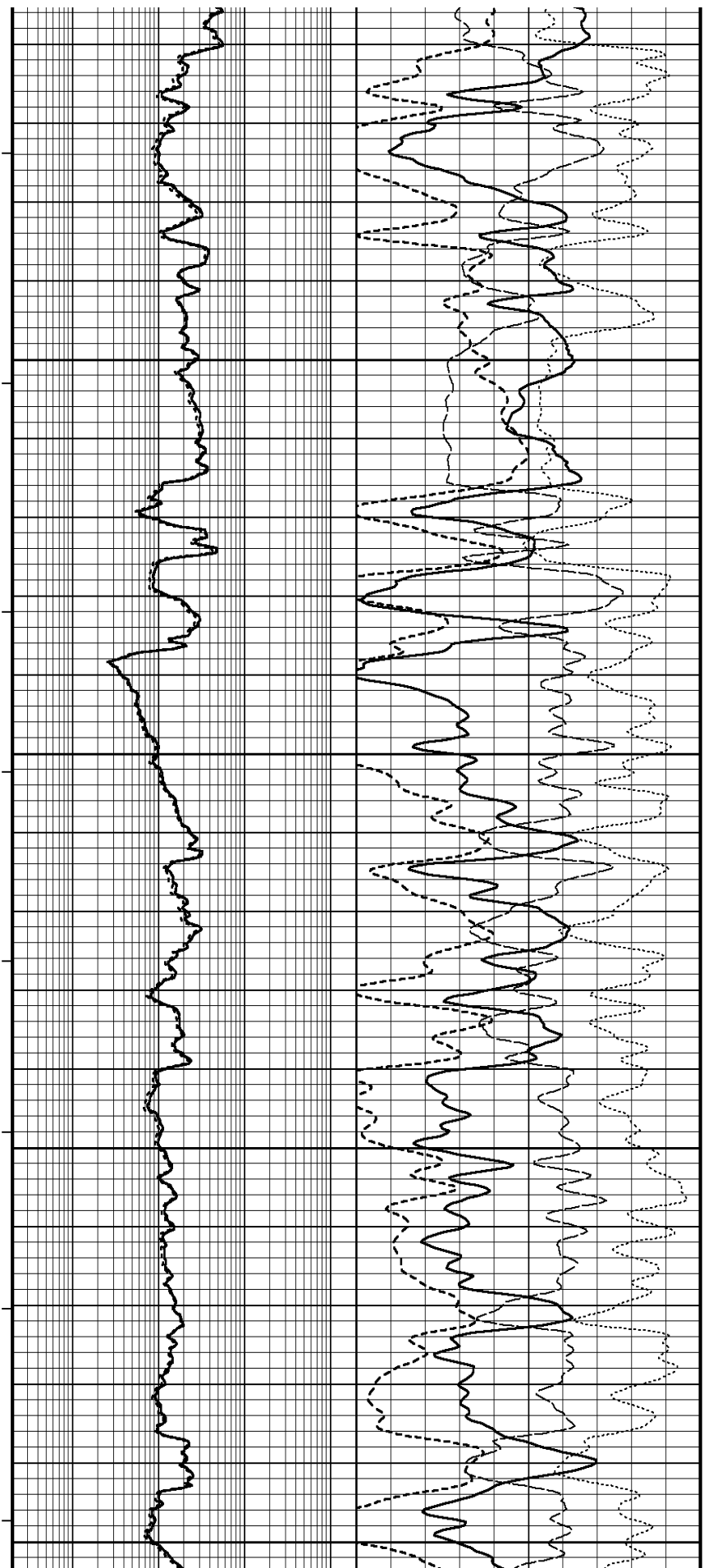
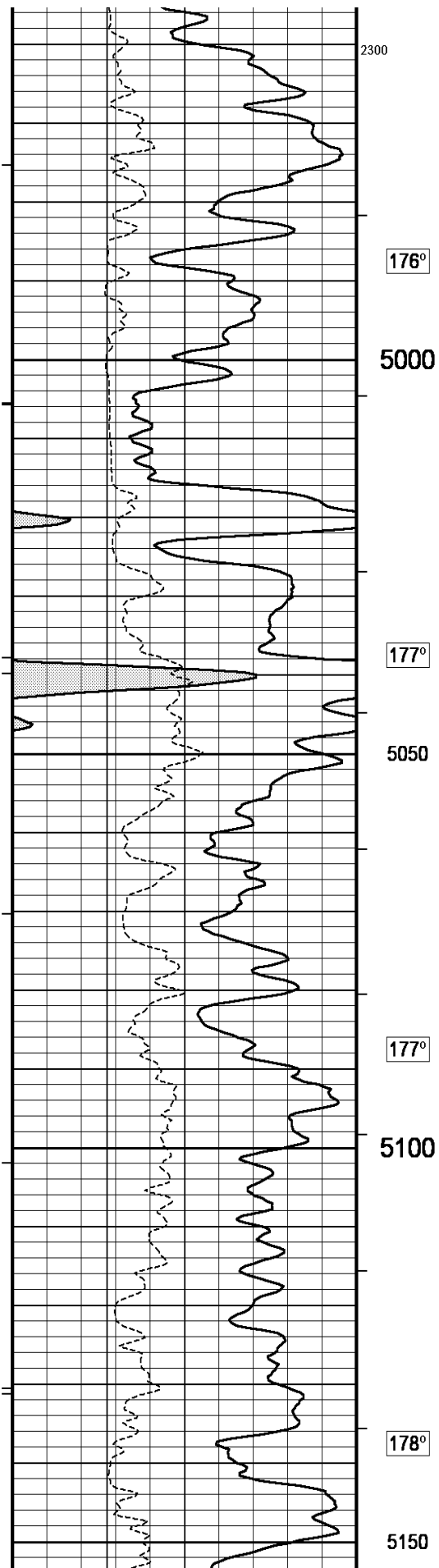


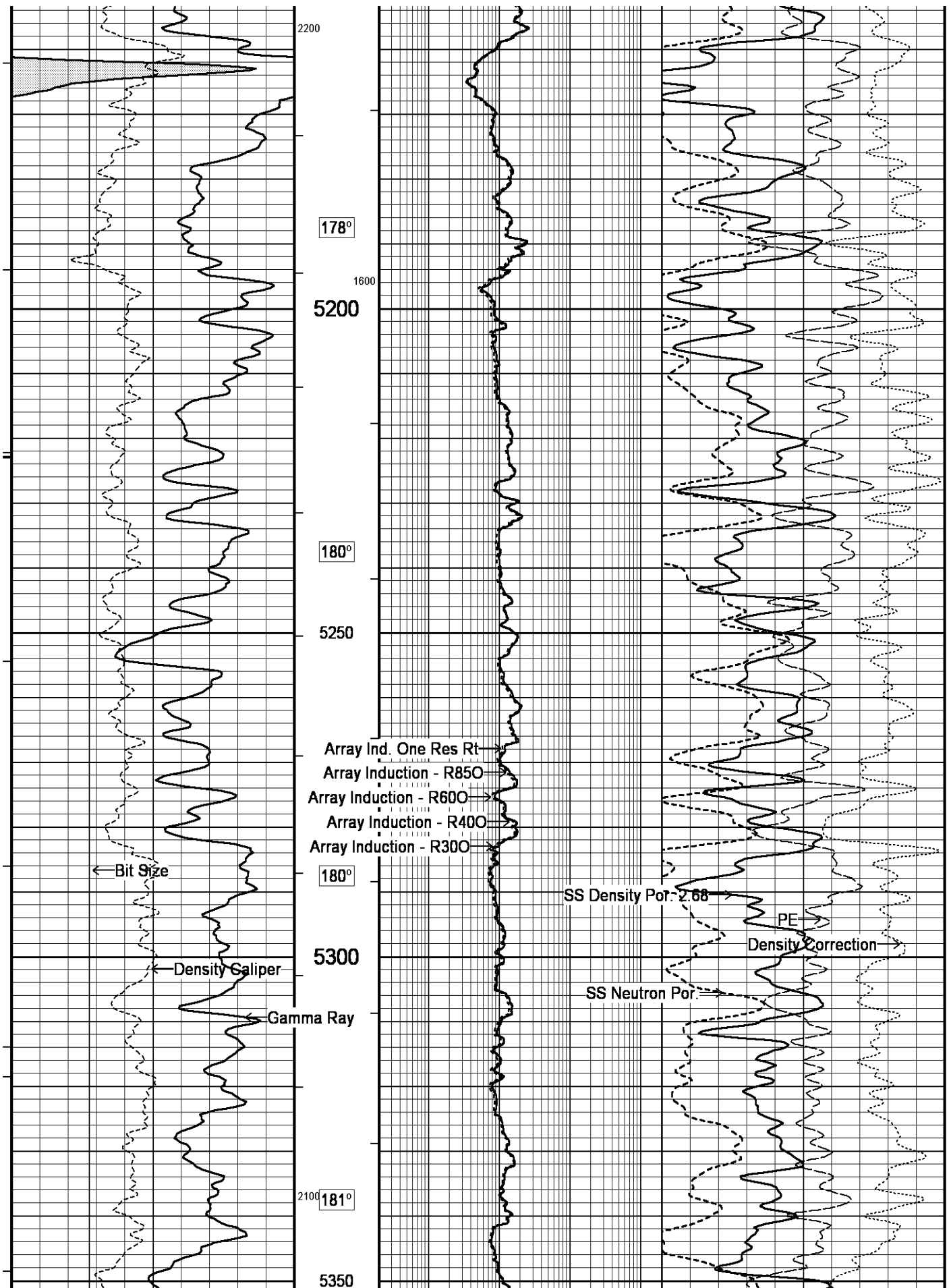


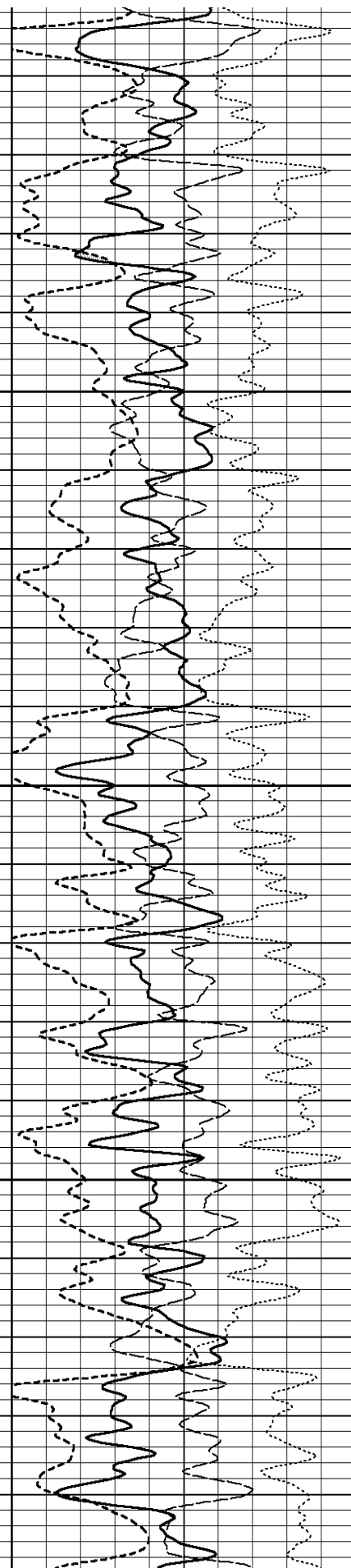
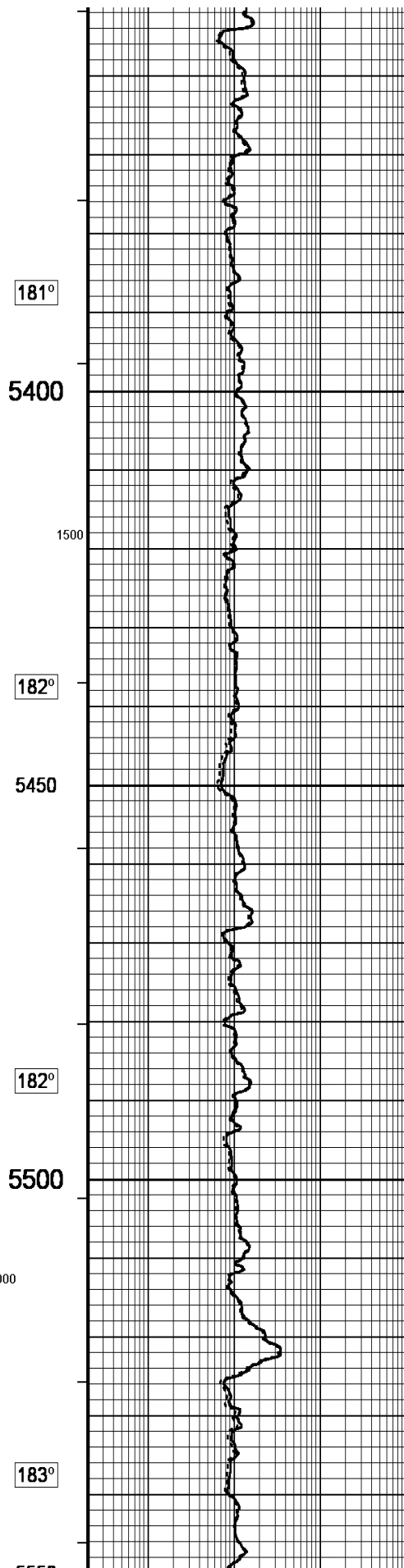
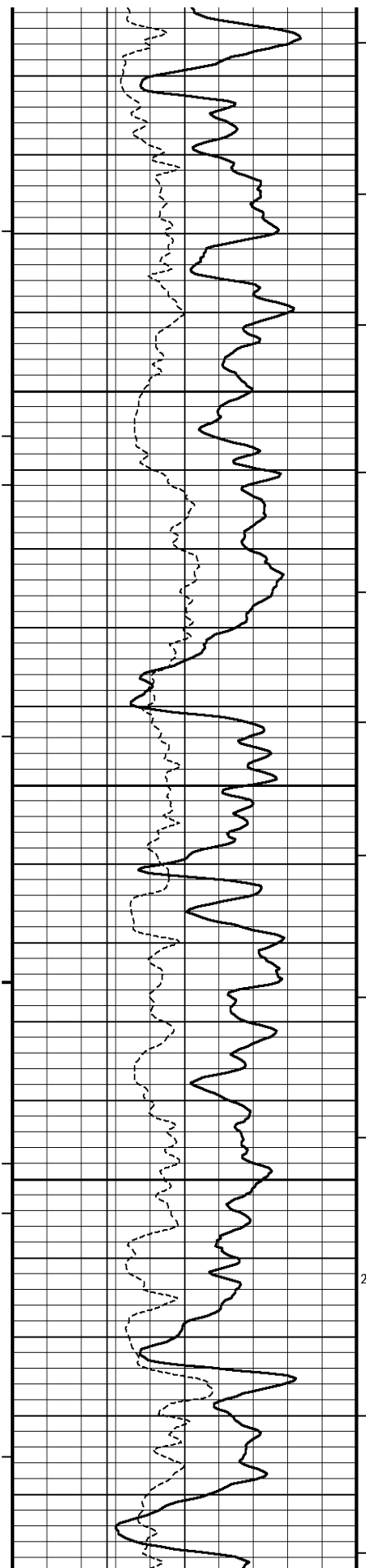


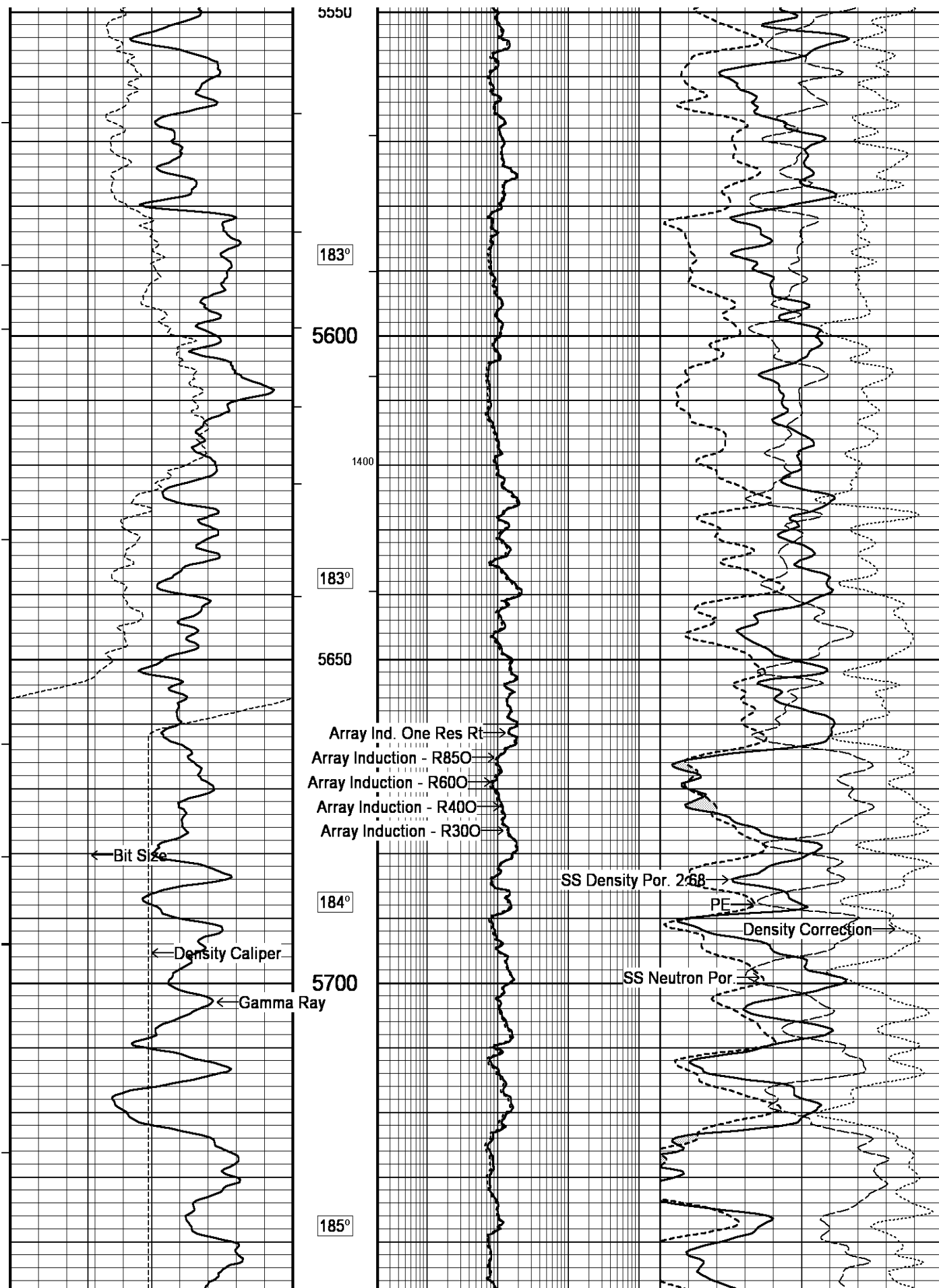


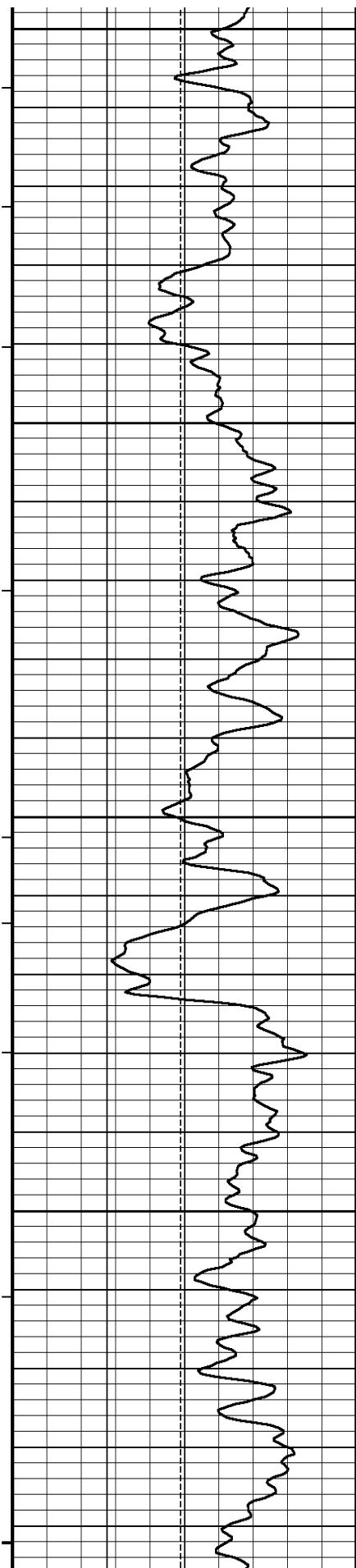












5750

185°

5800

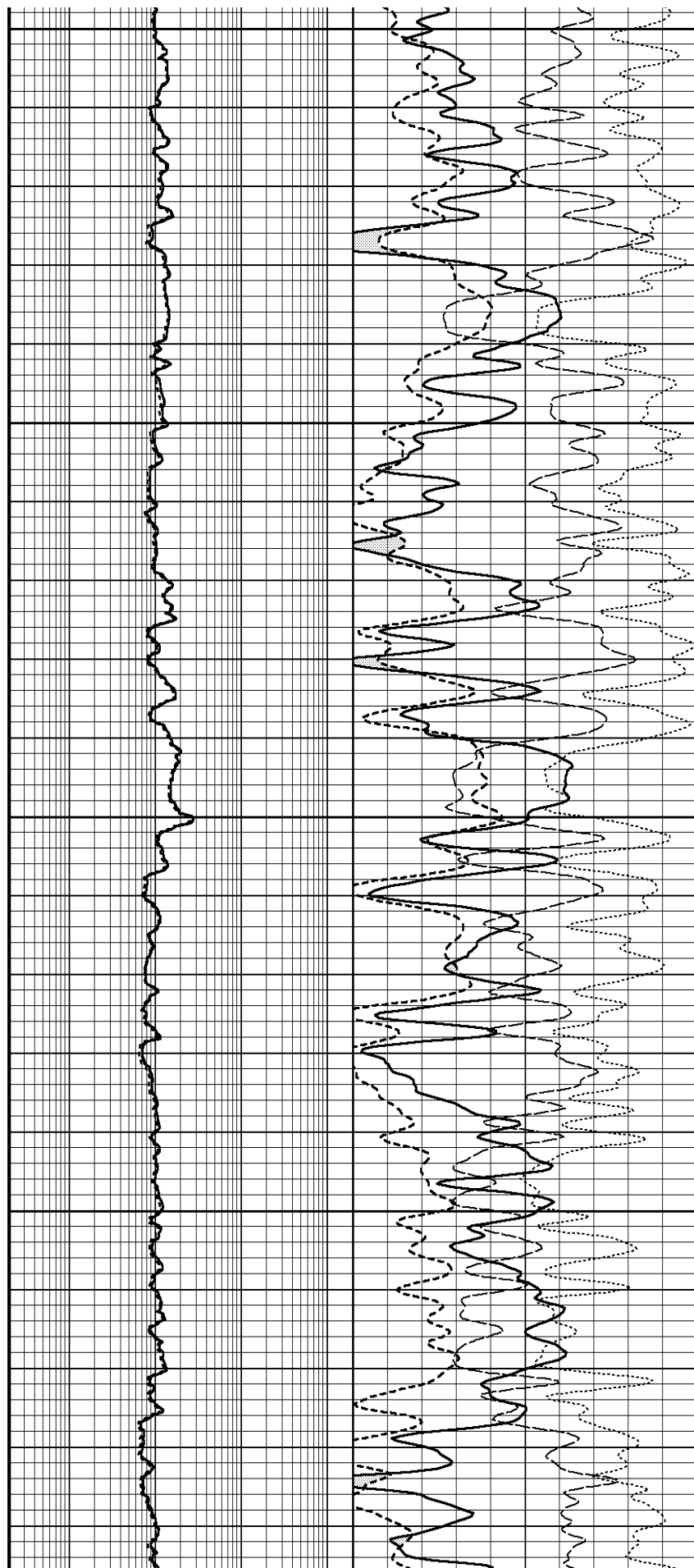
185°

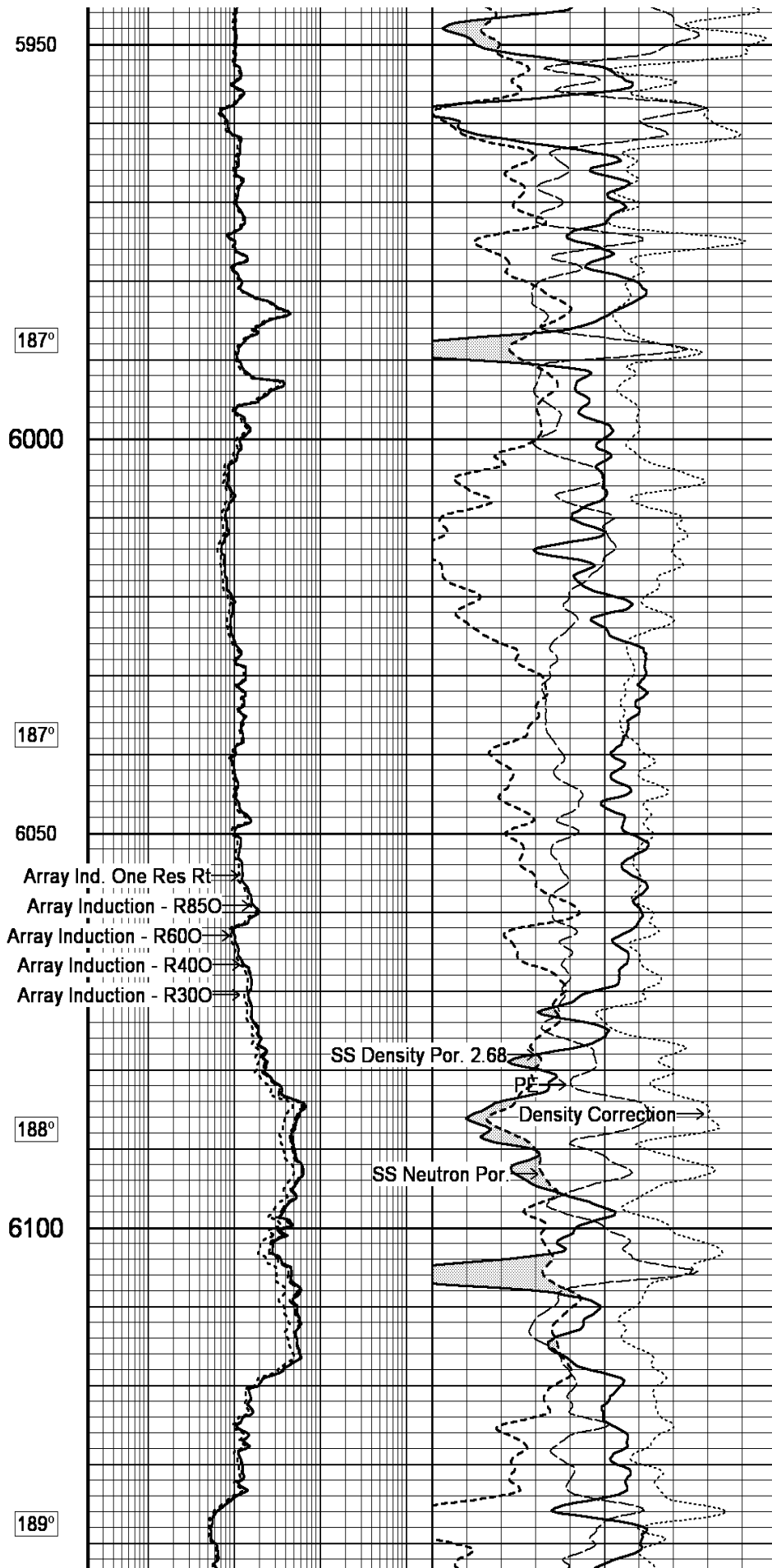
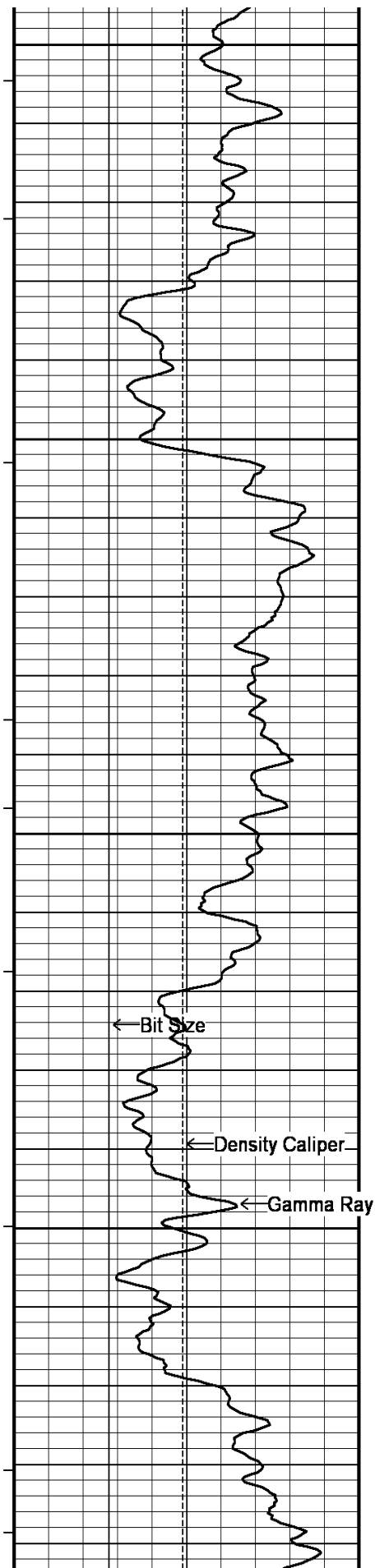
5850

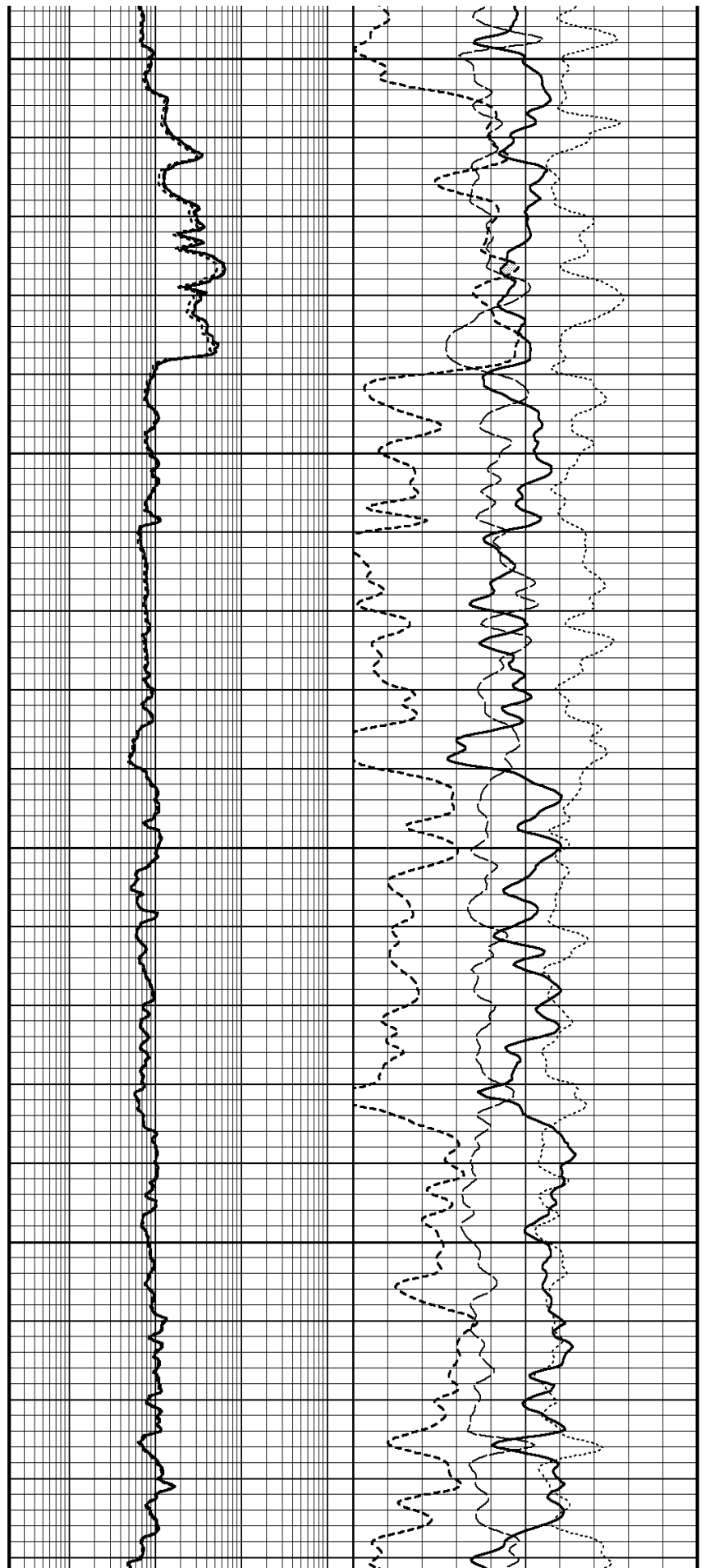
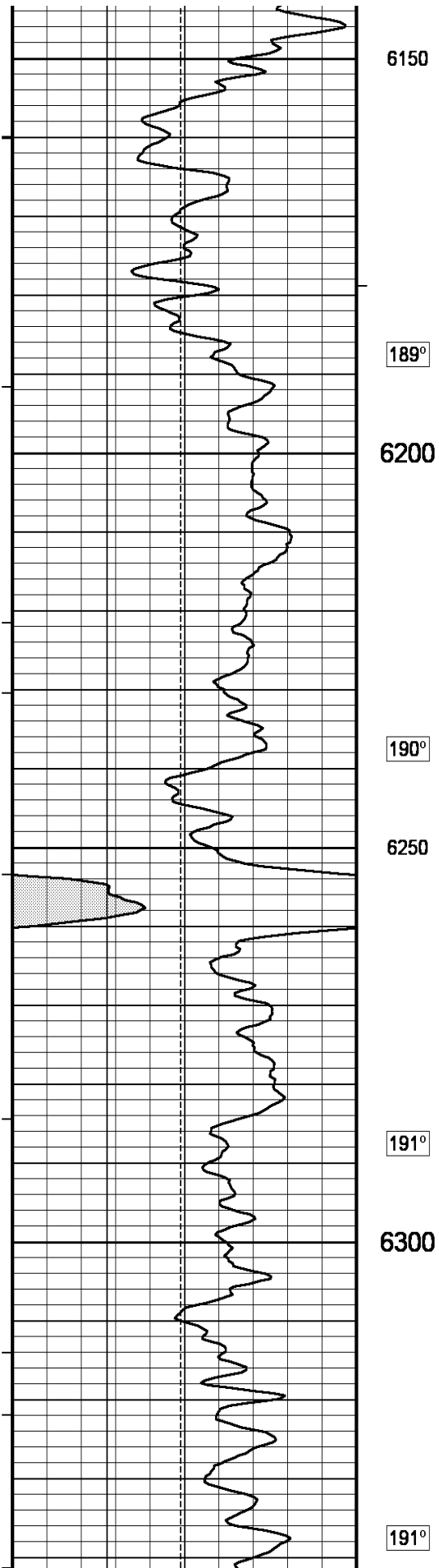
186°

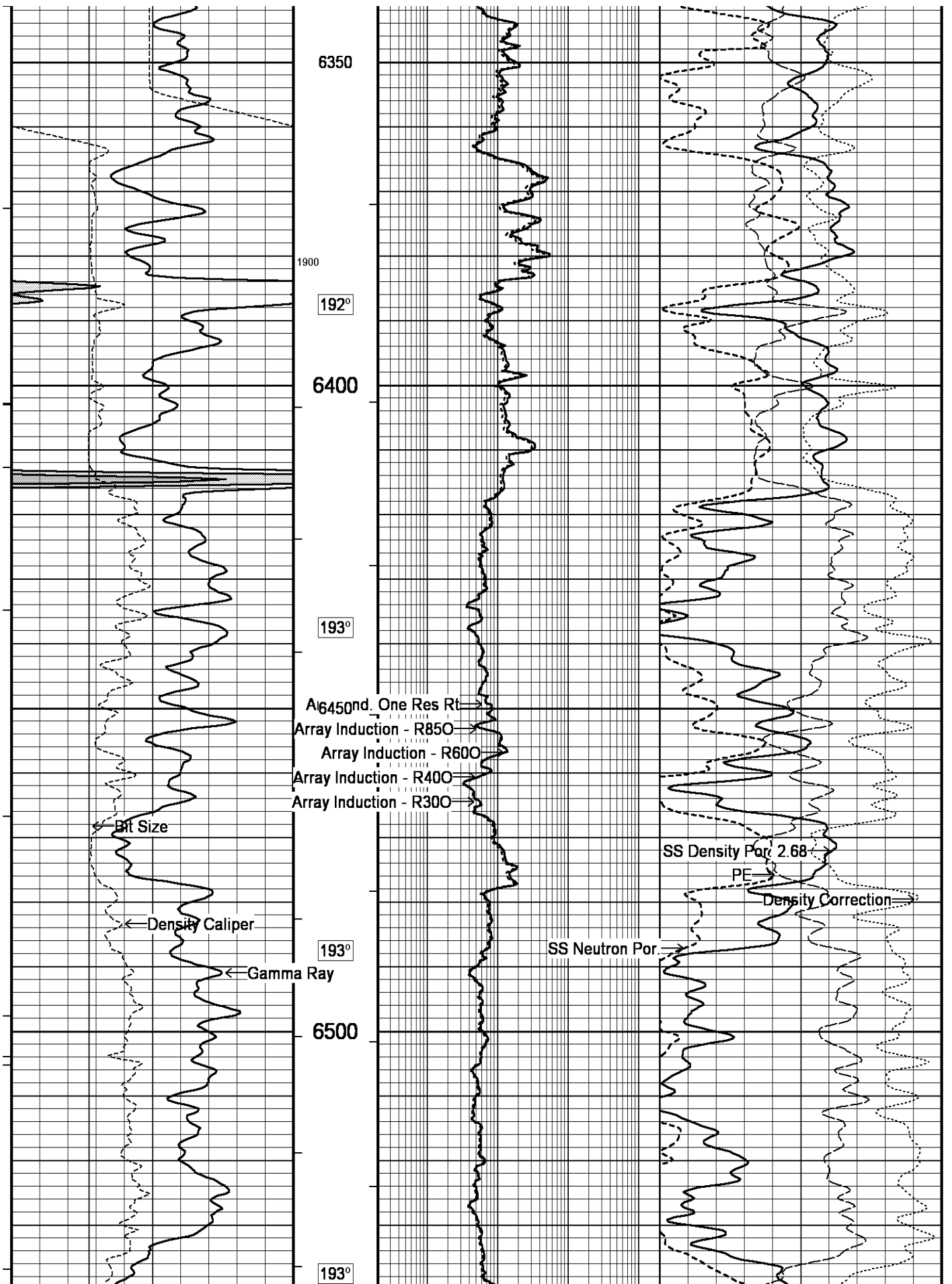
5900

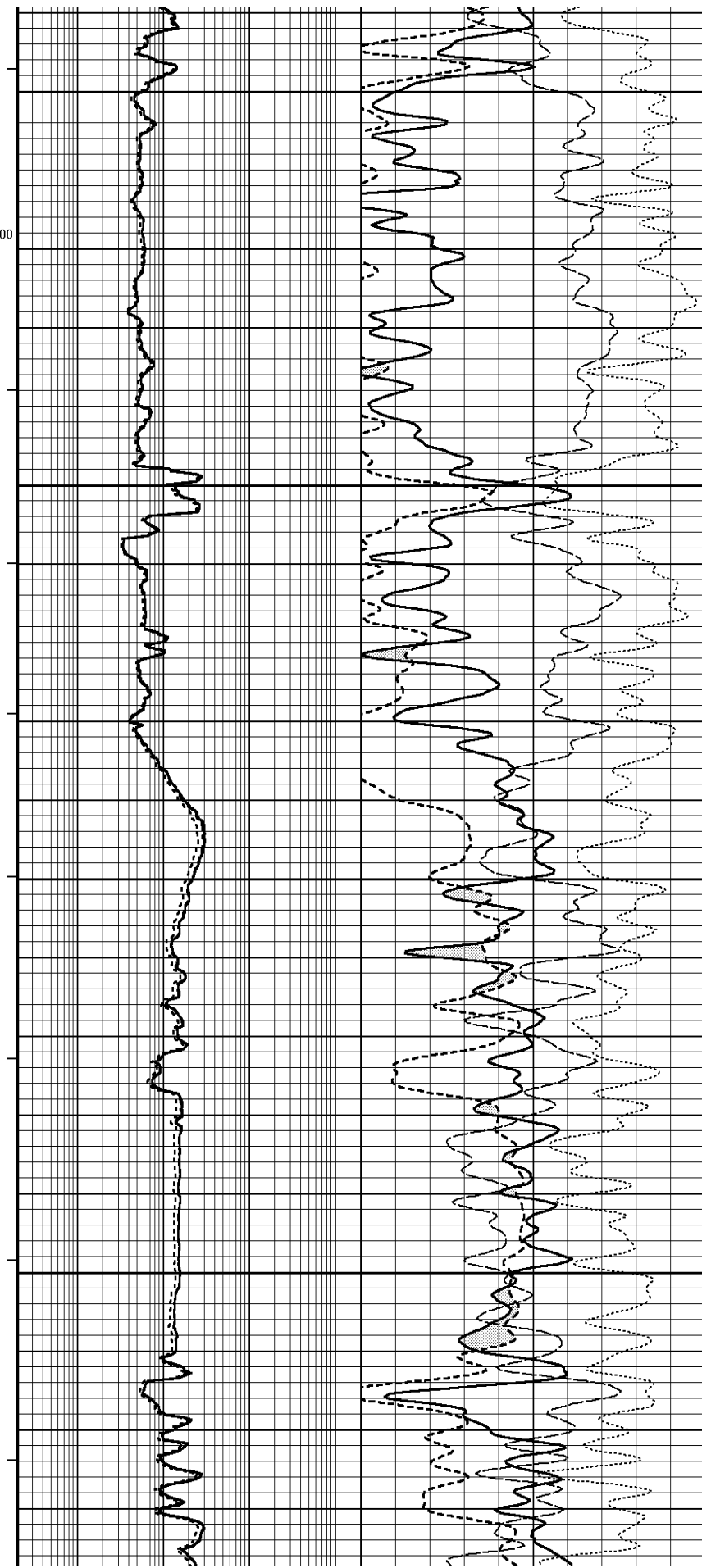
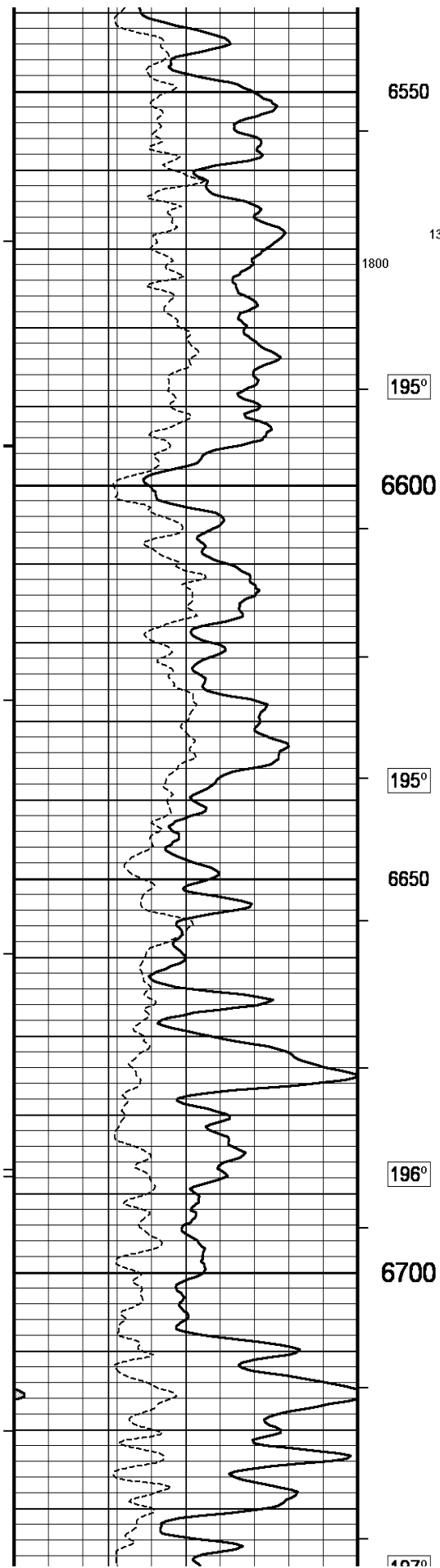
186°

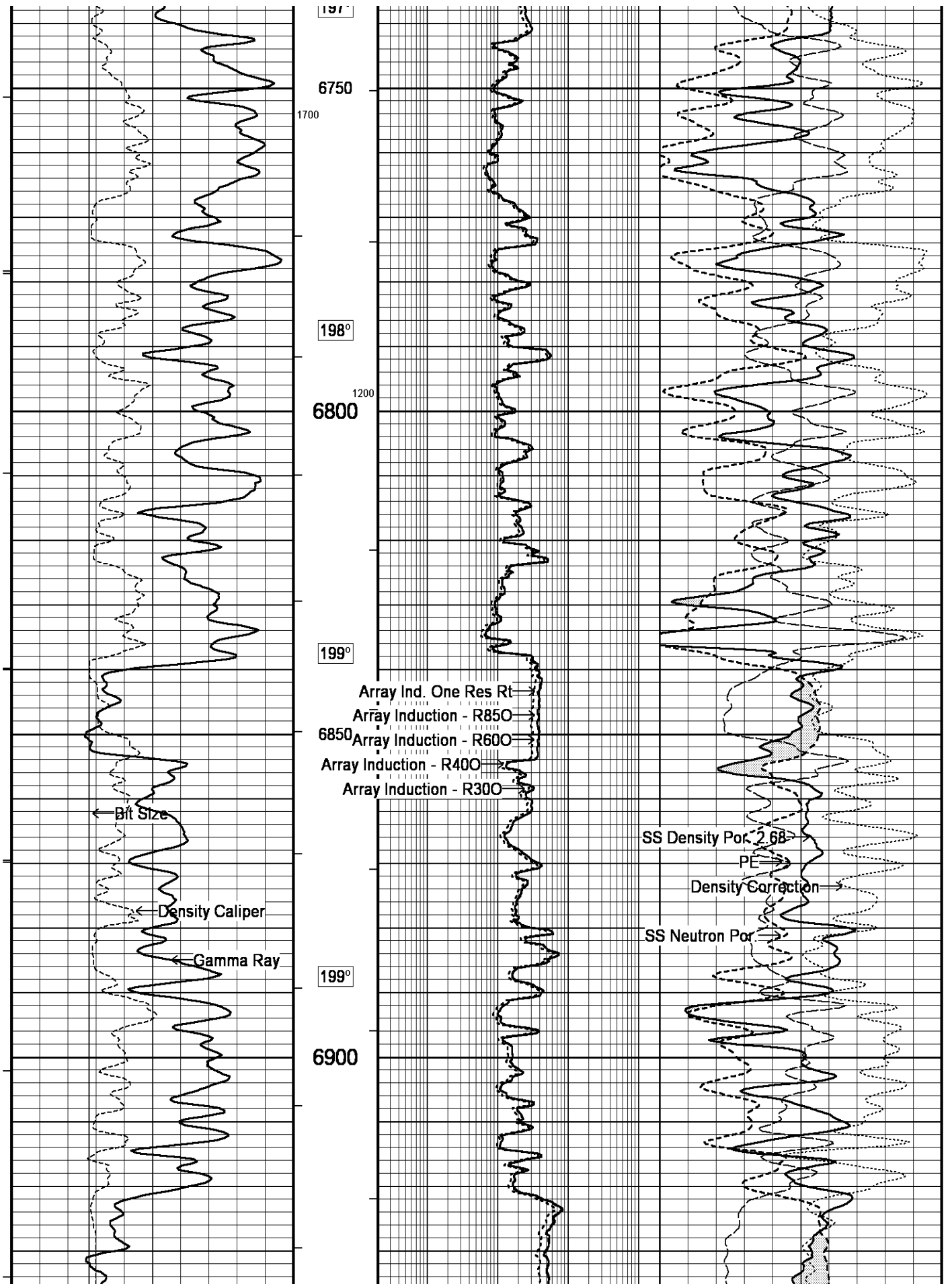


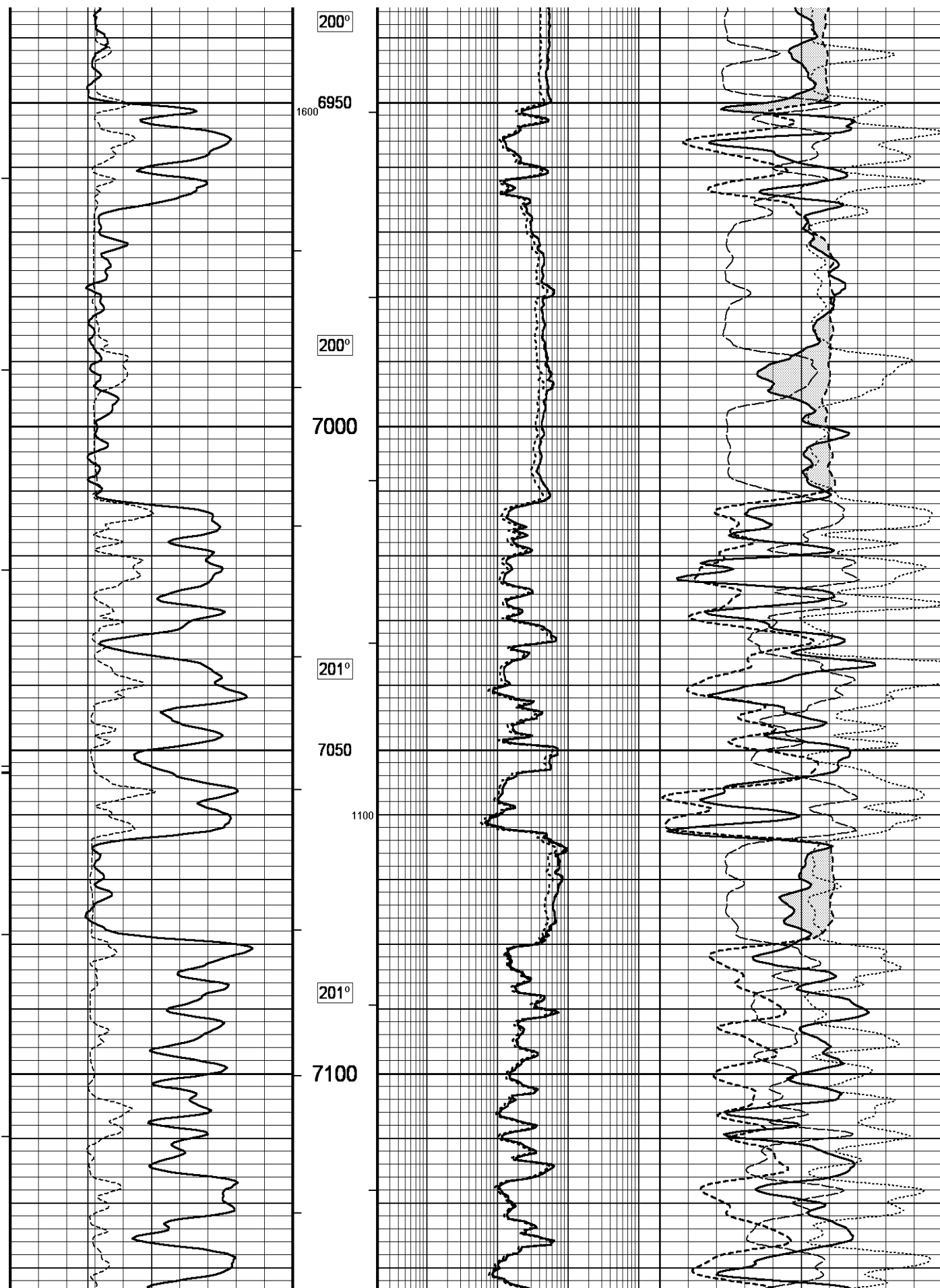


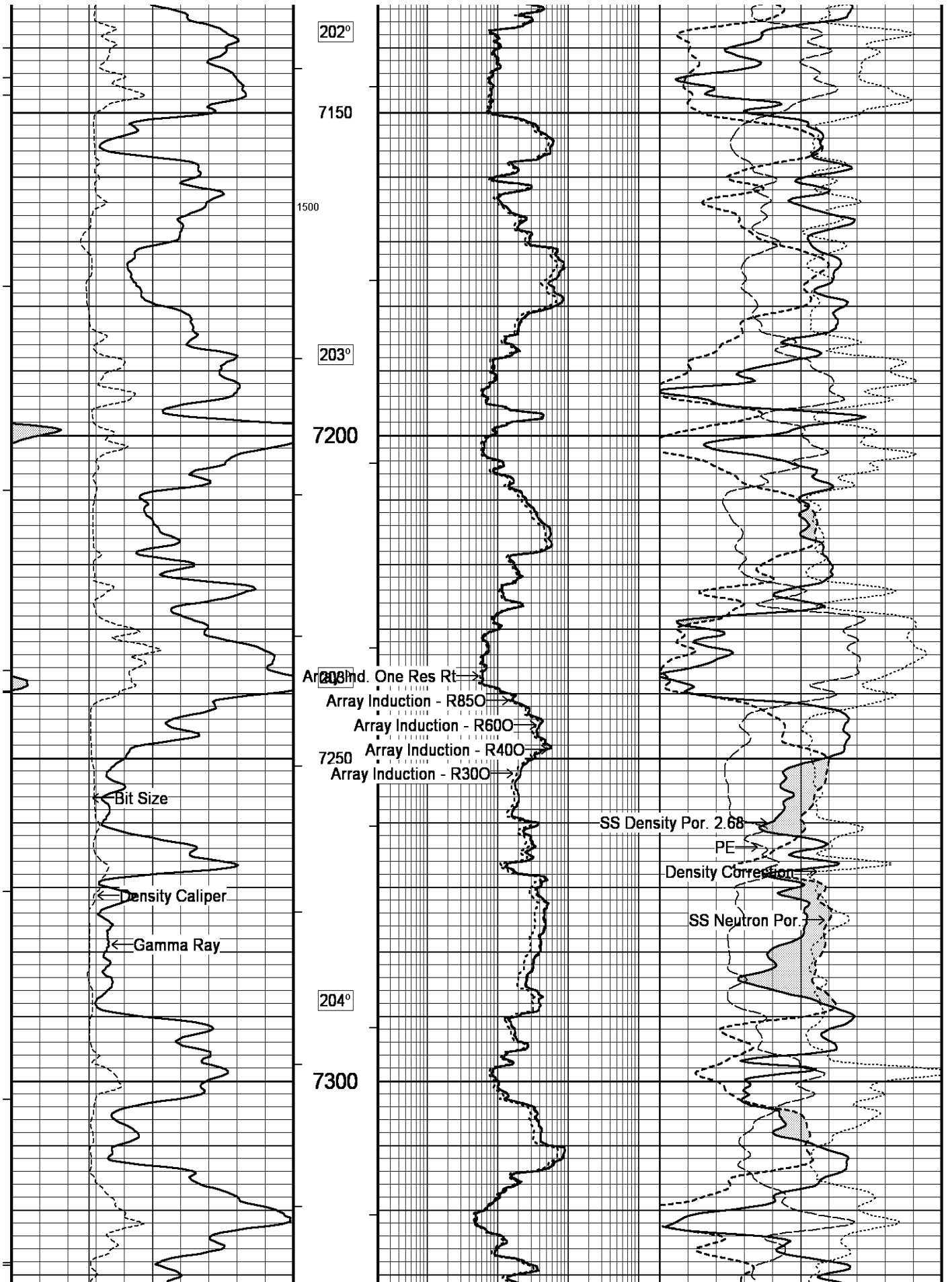


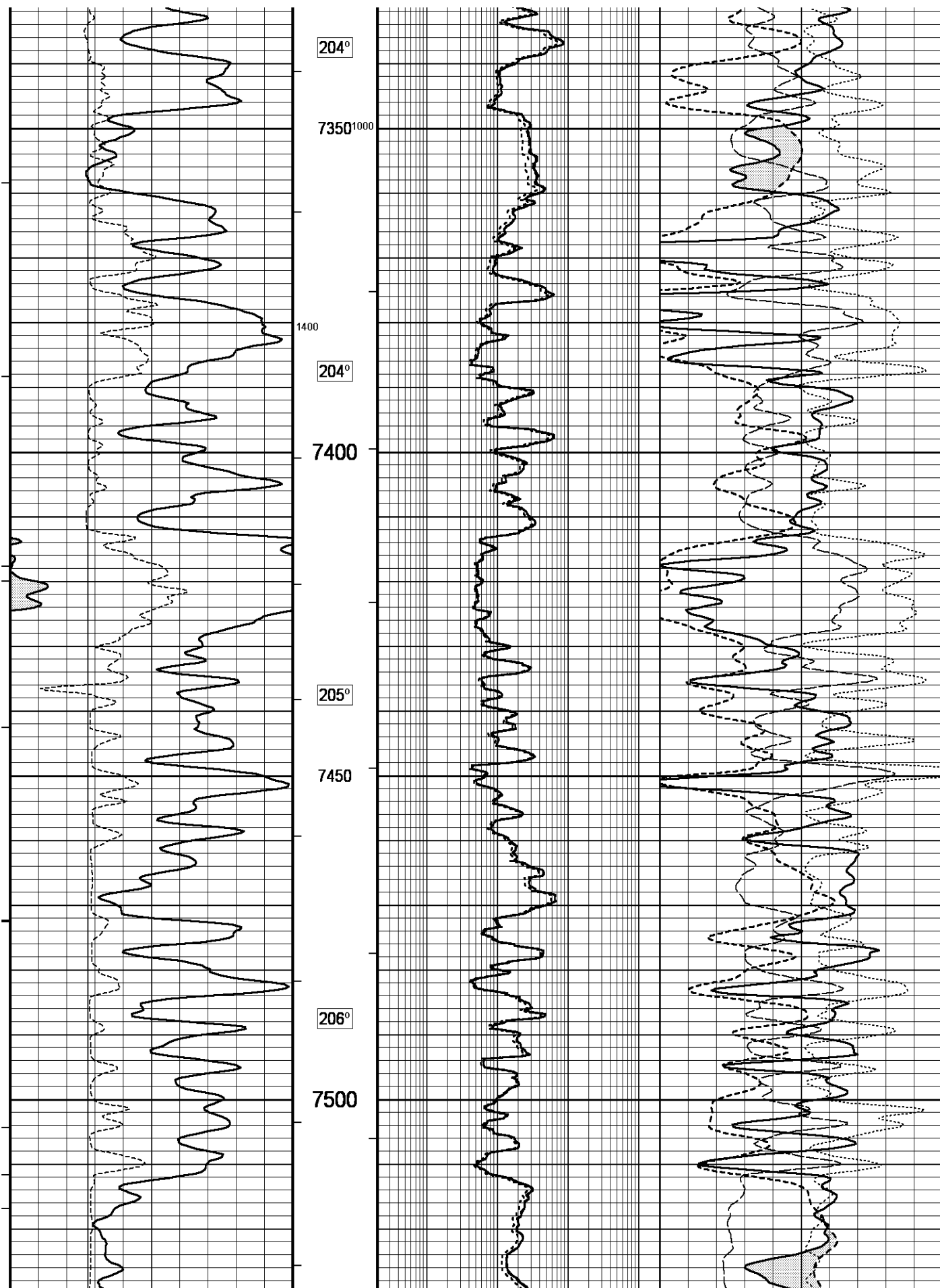


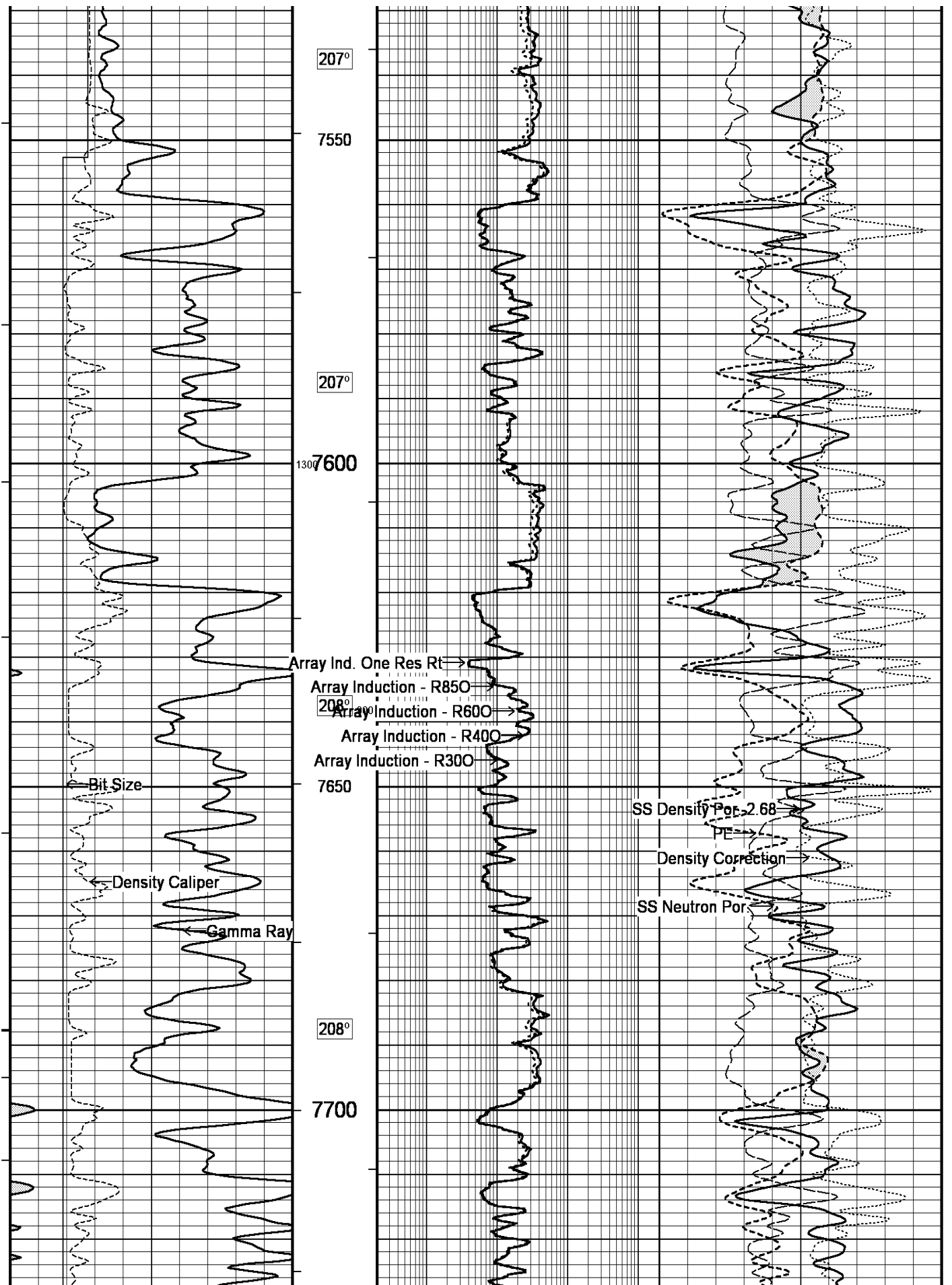


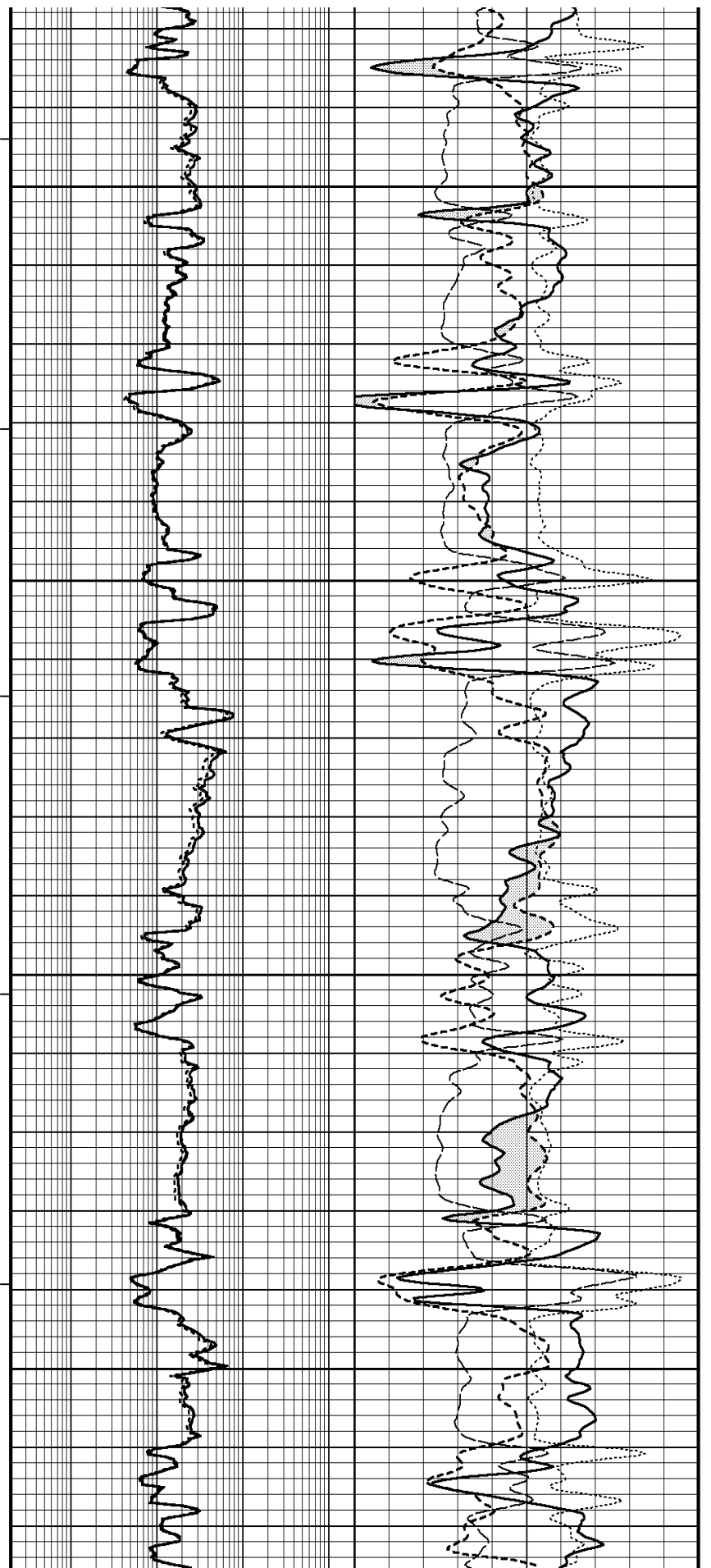
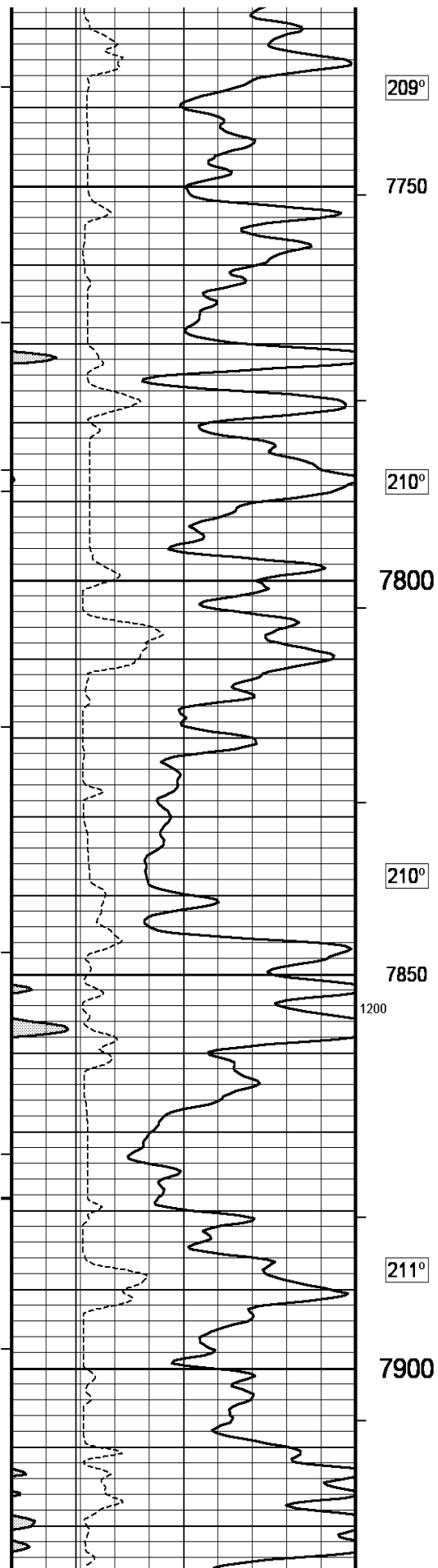


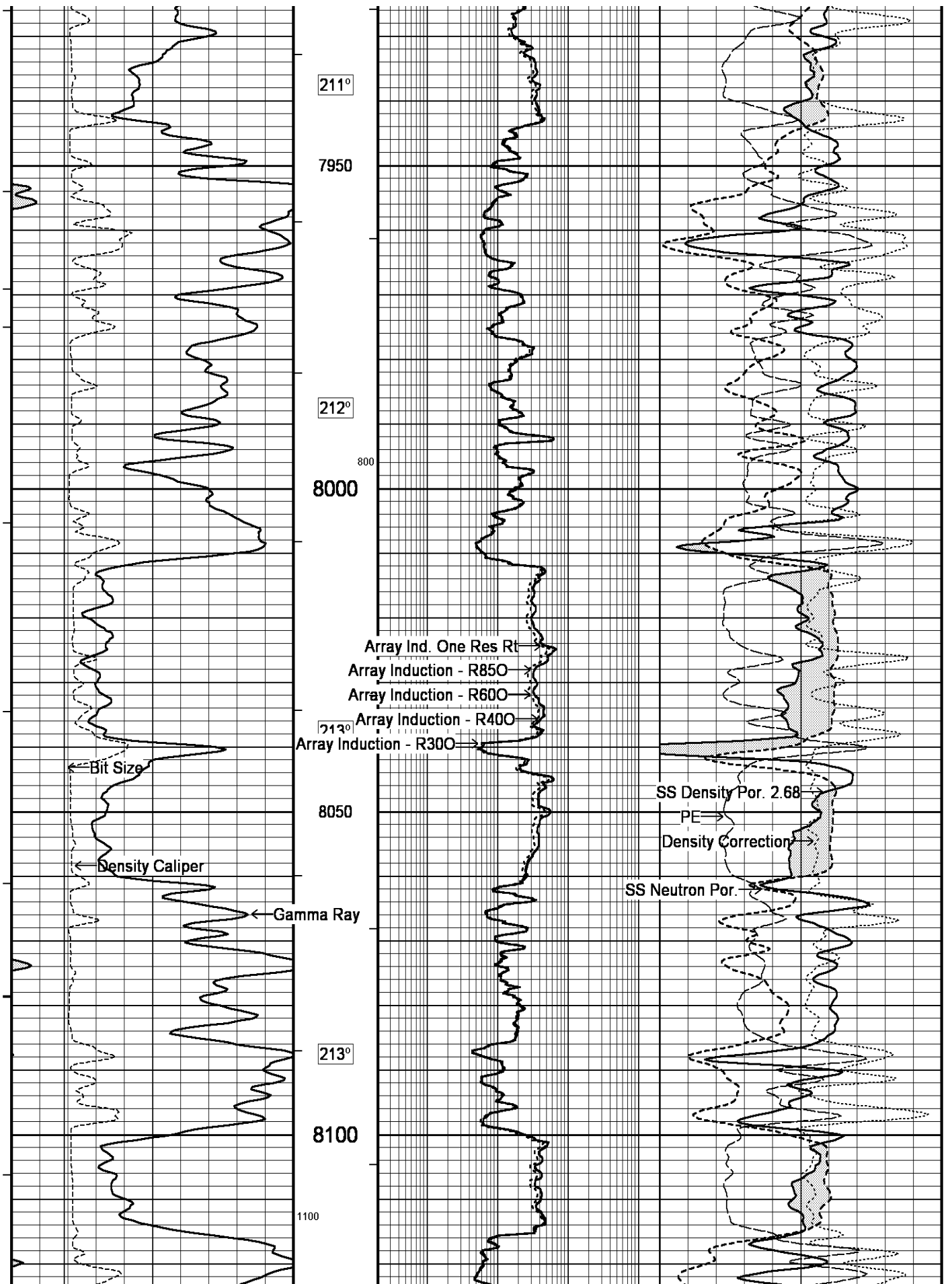


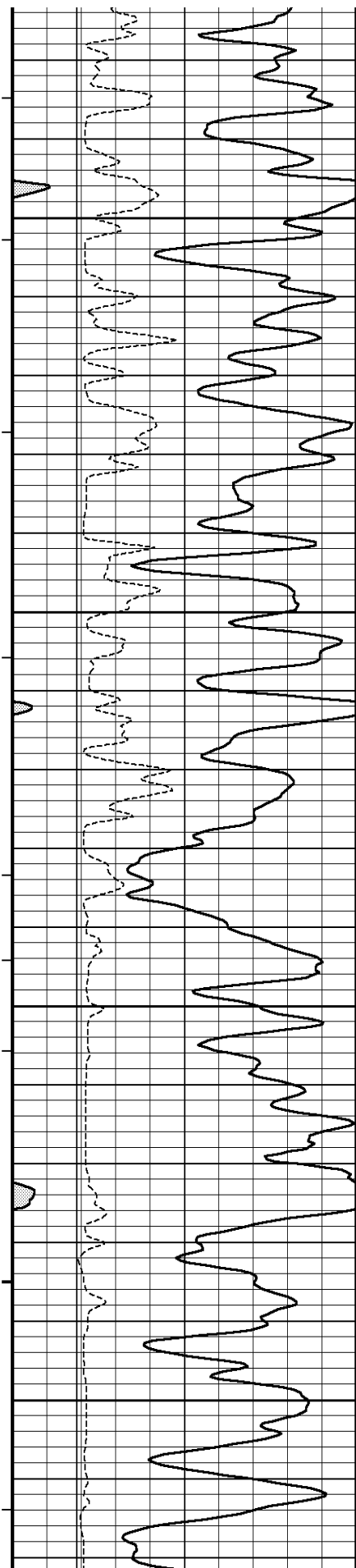












214°

8150

214°

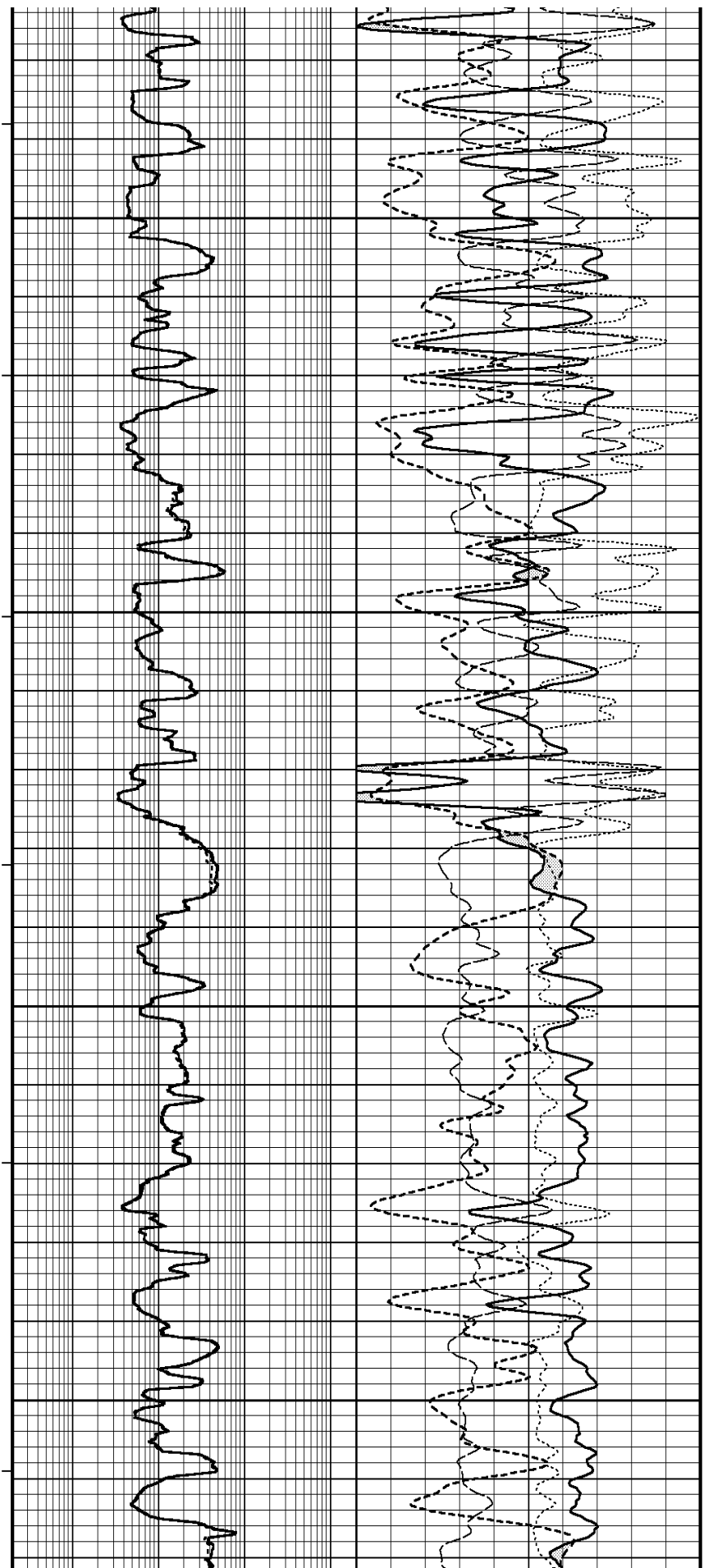
8200

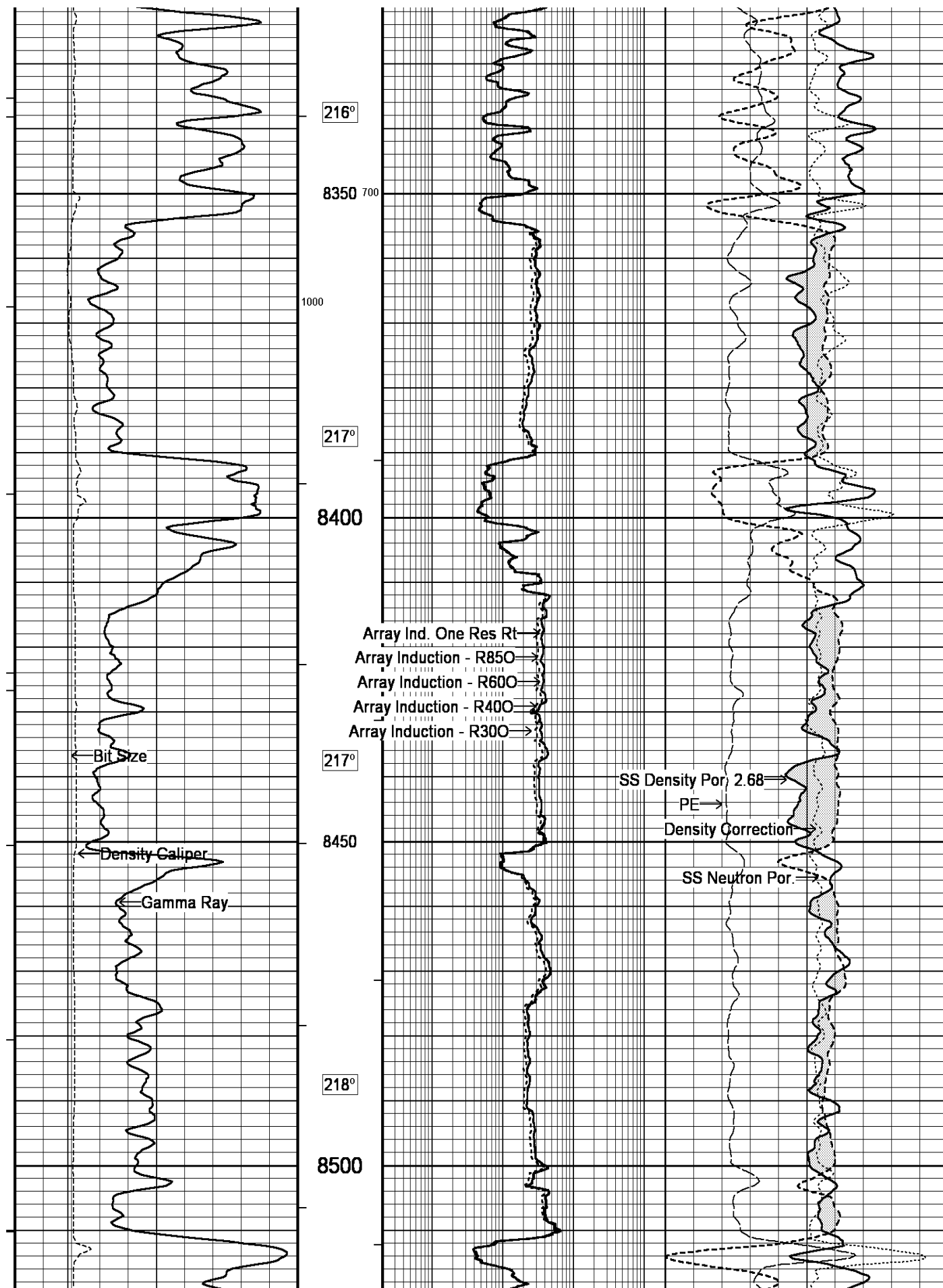
215°

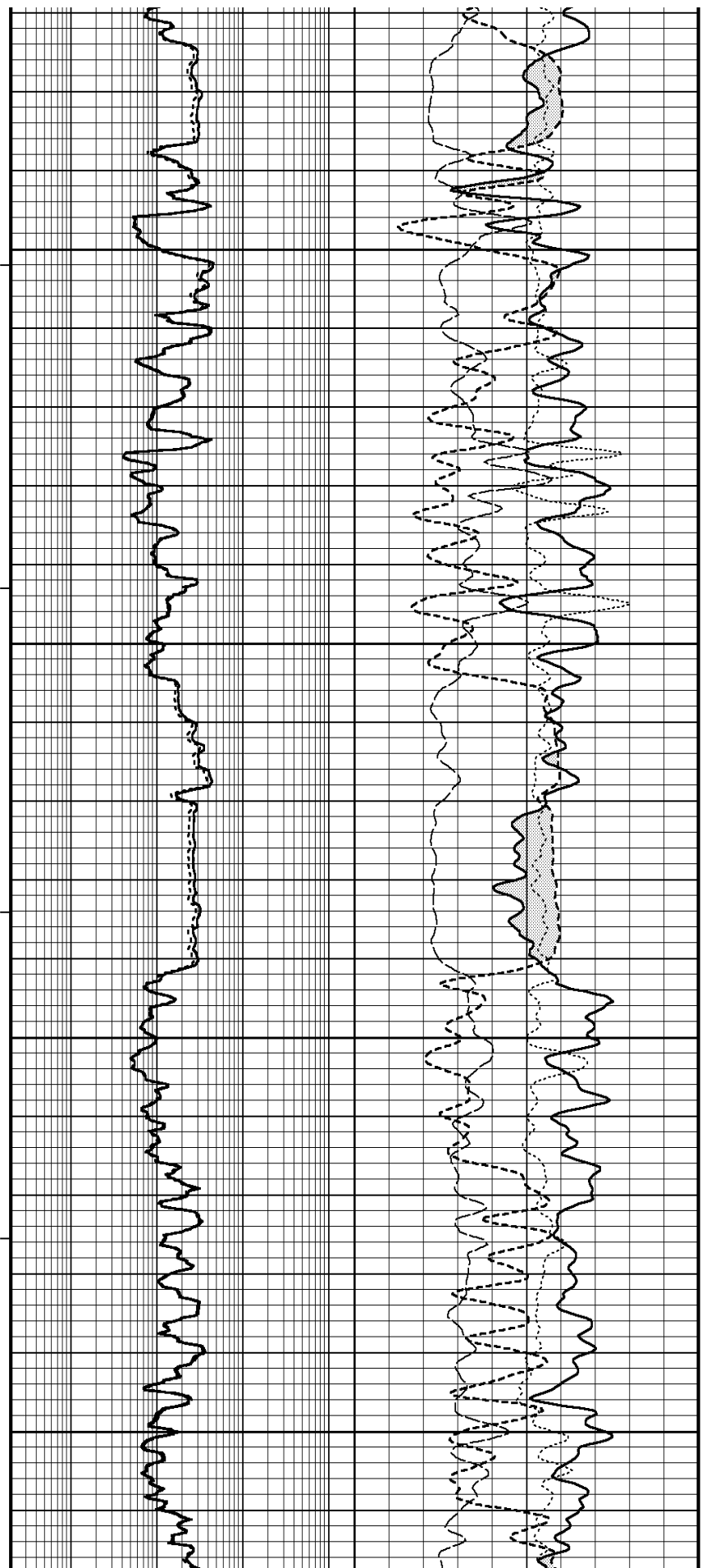
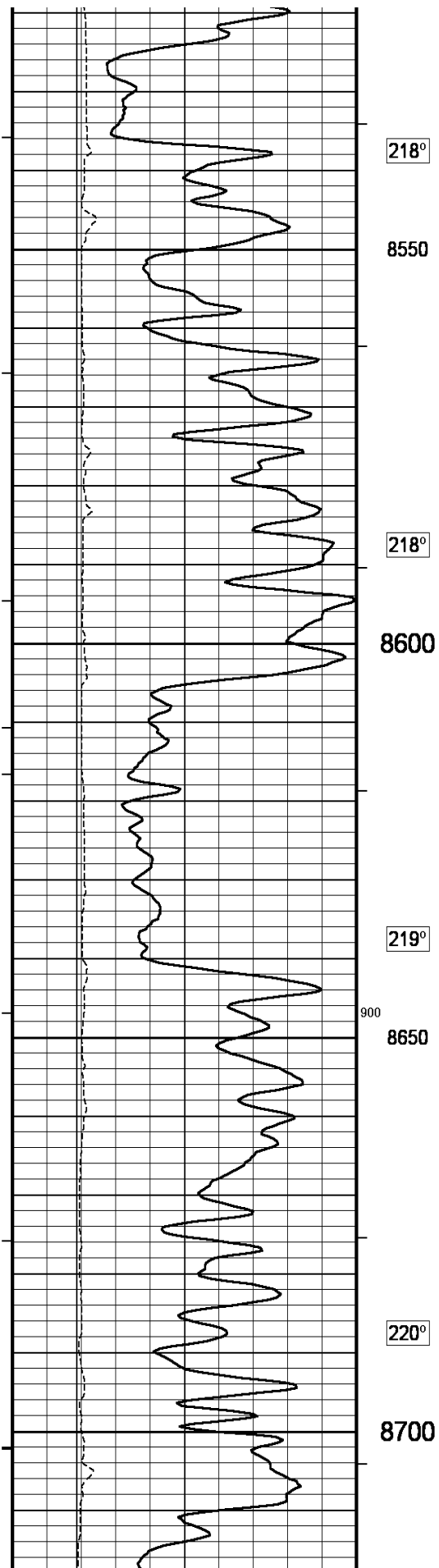
8250

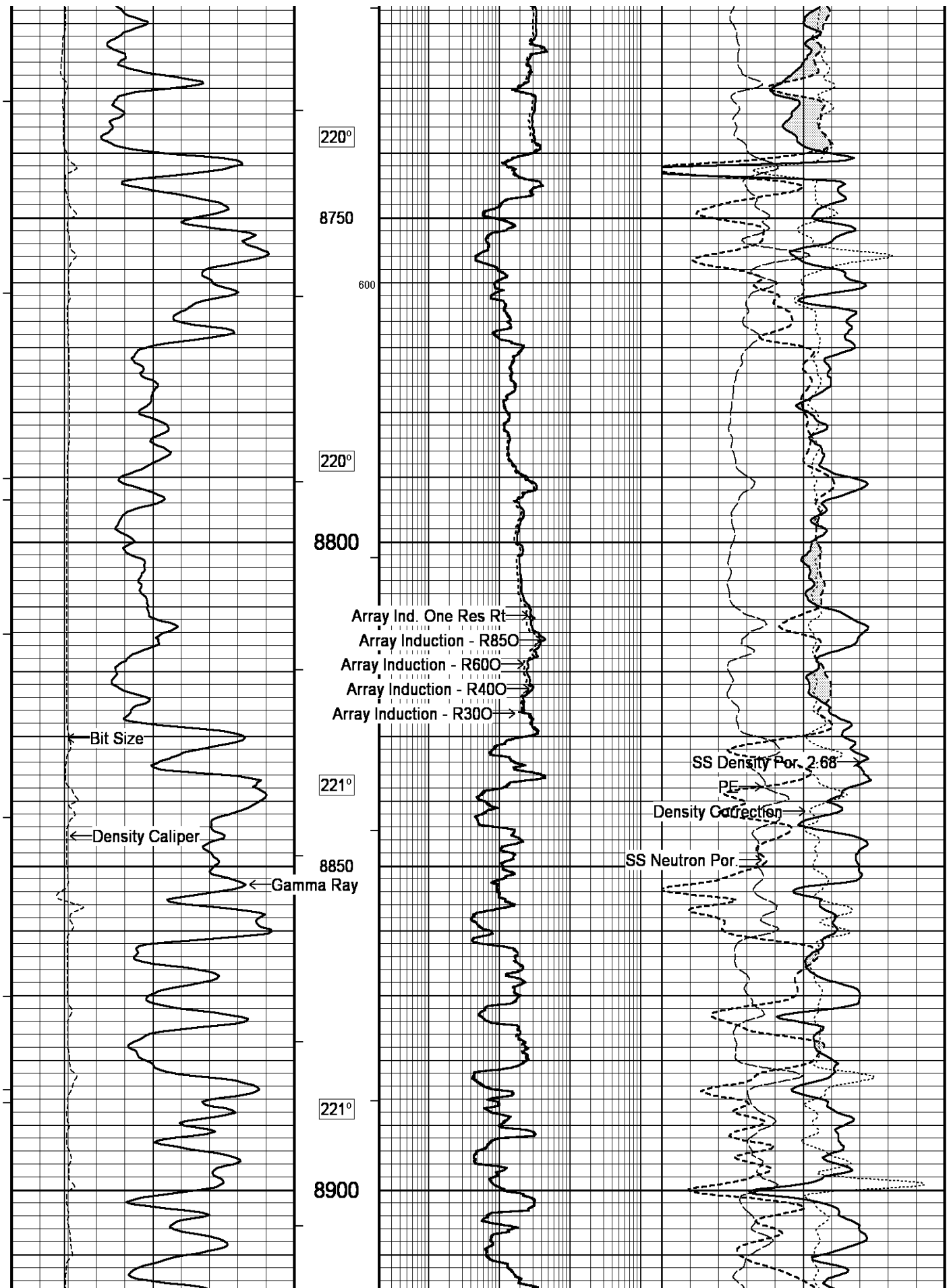
215°

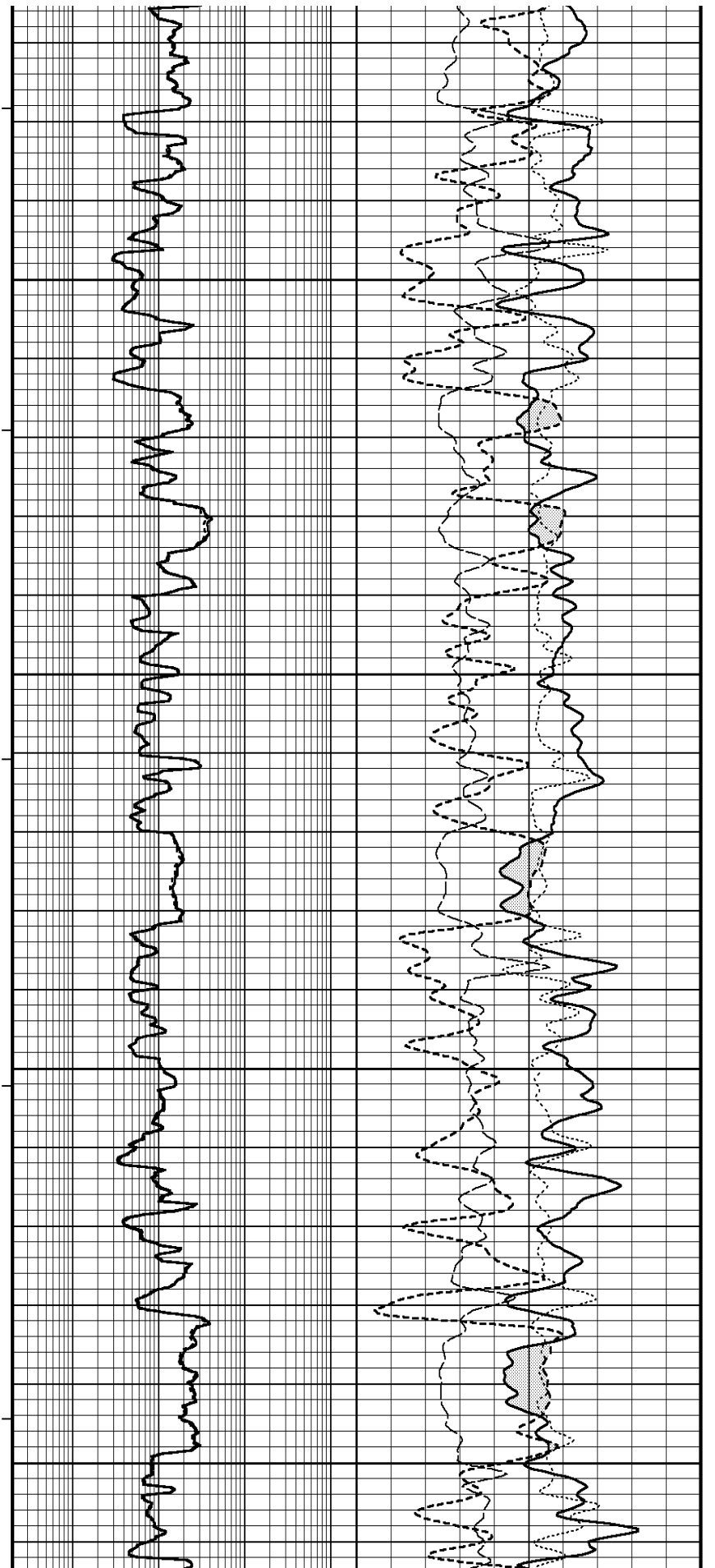
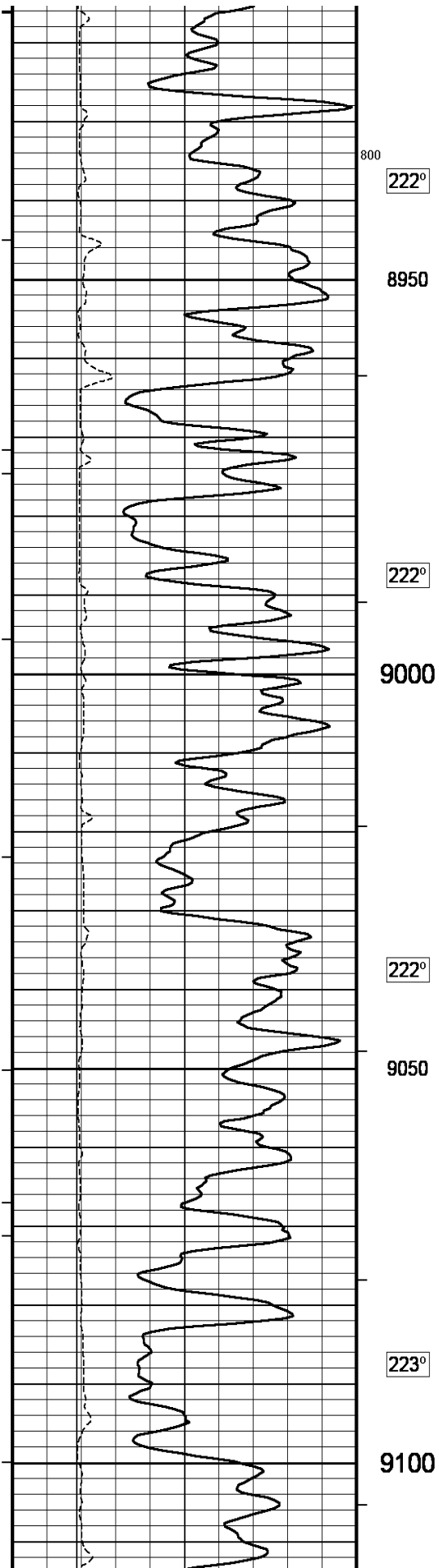
8300

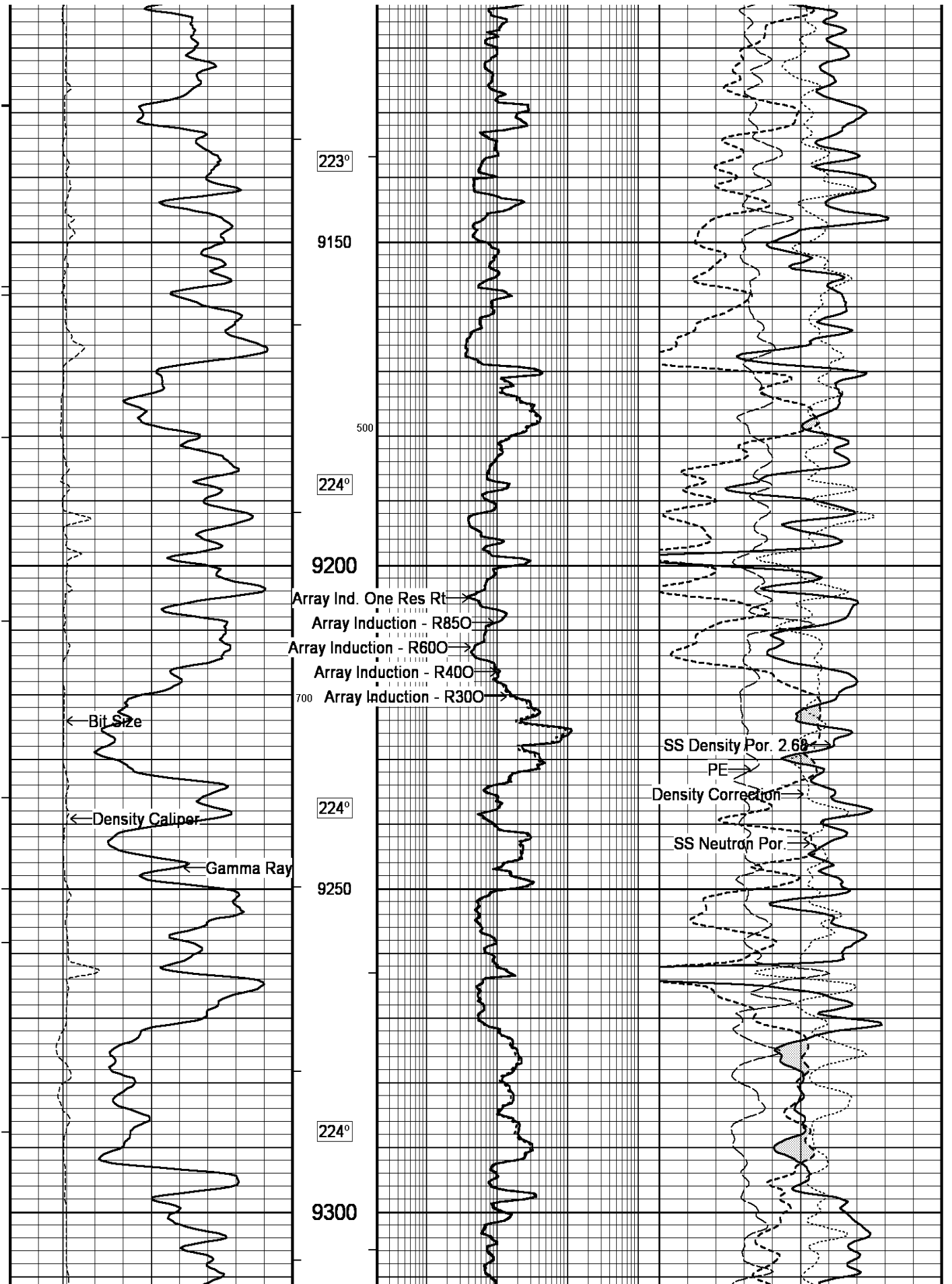


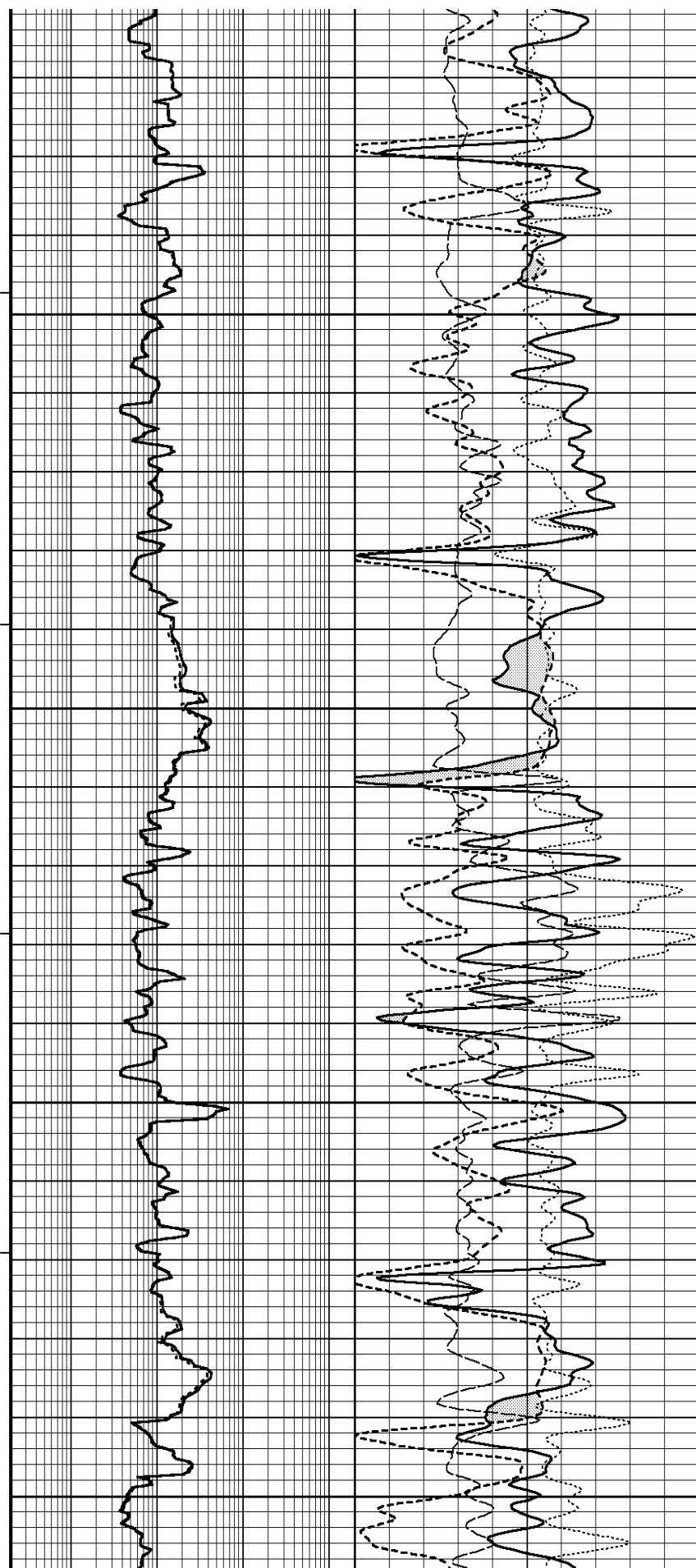
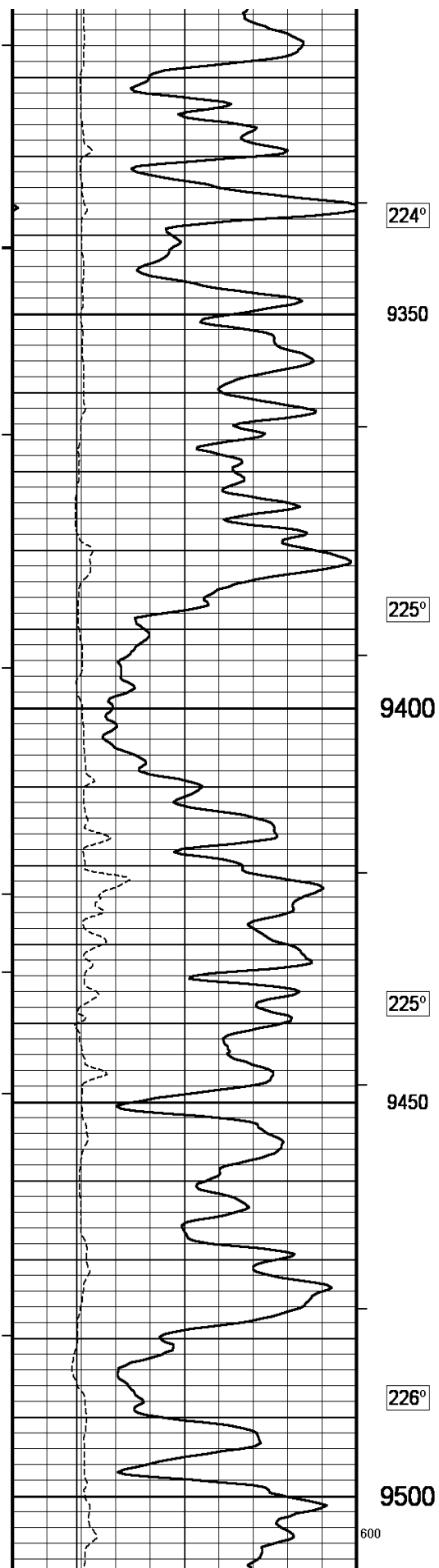


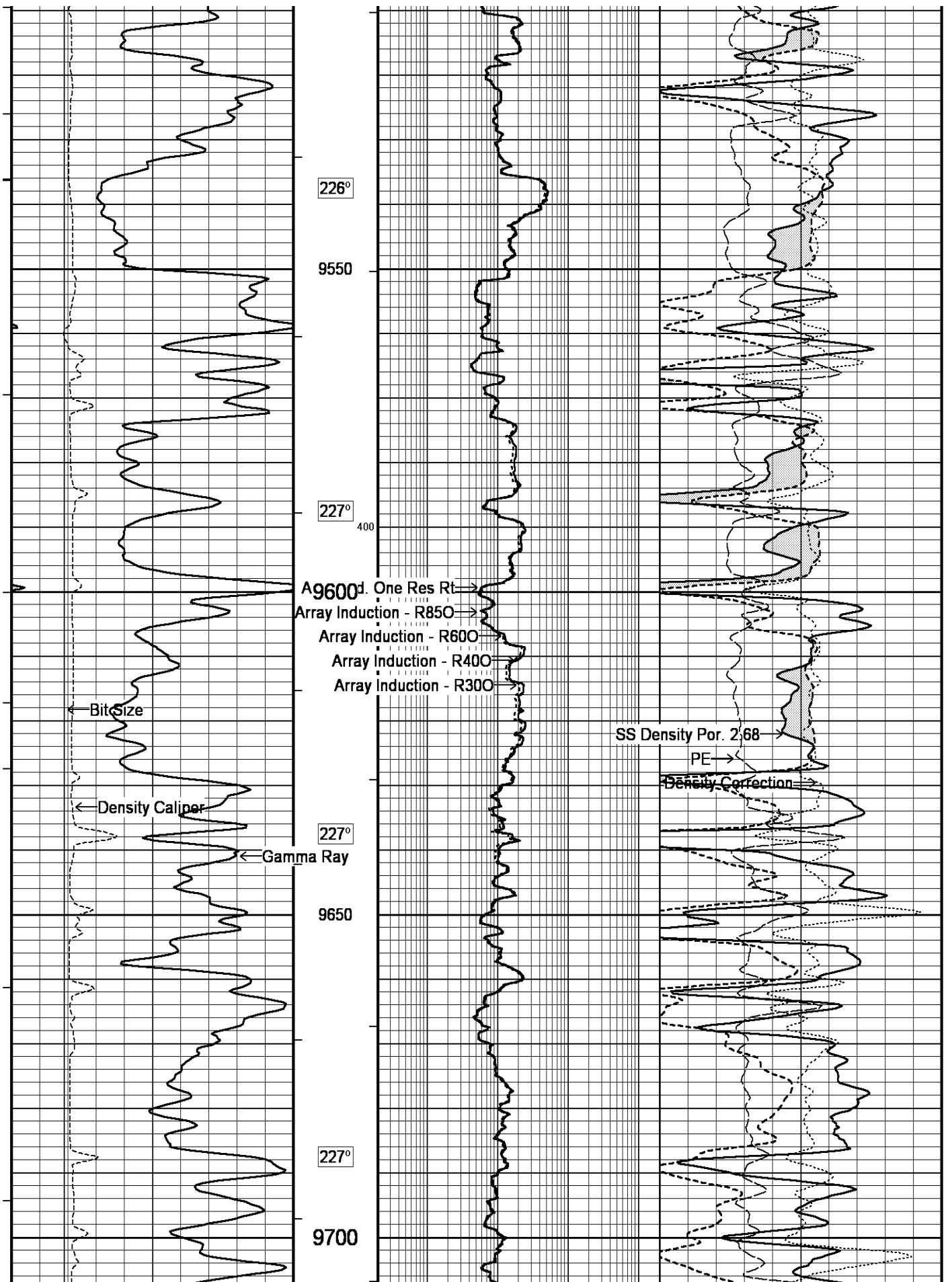


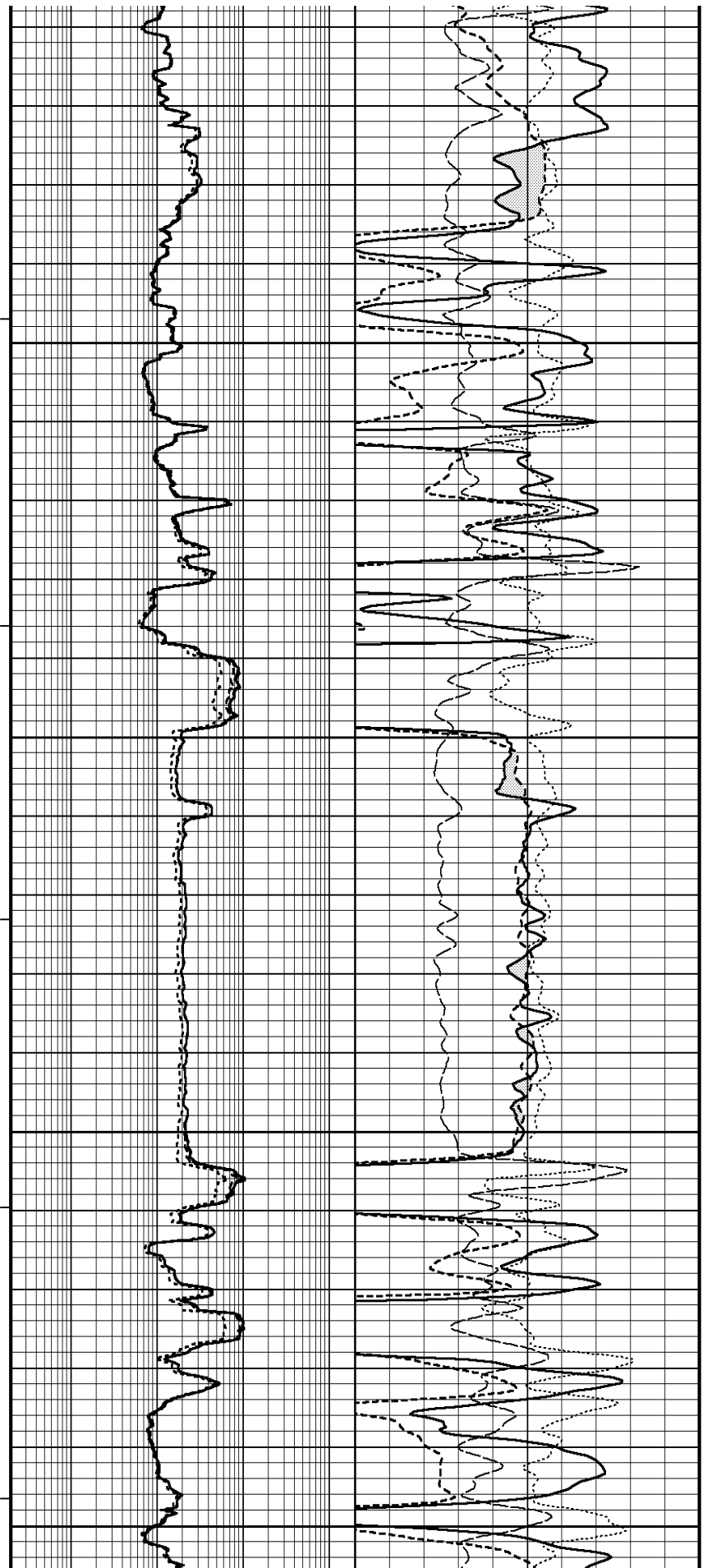
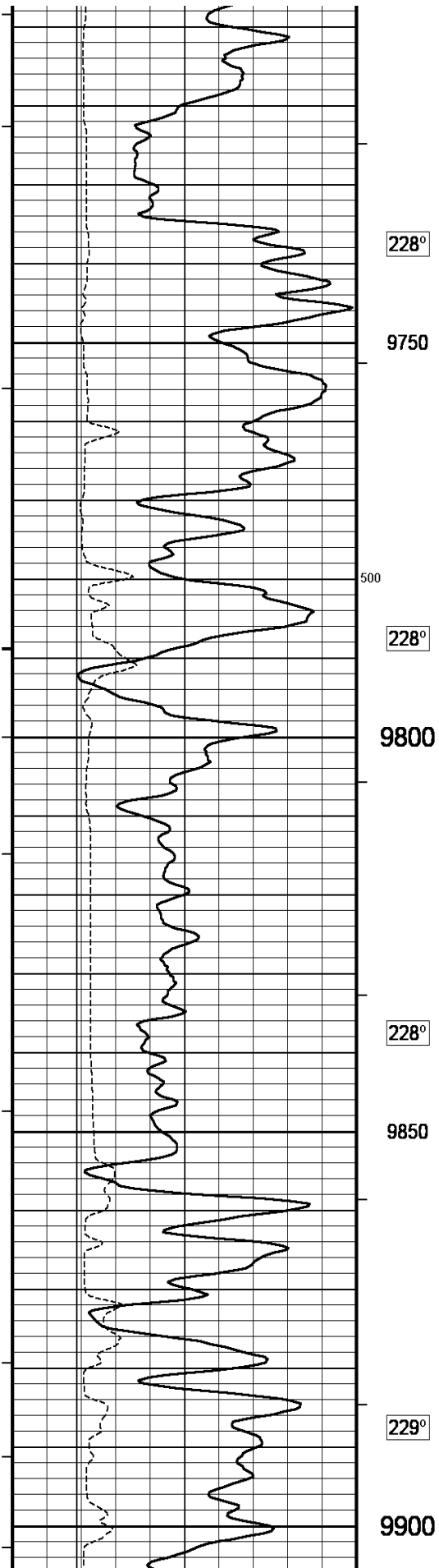


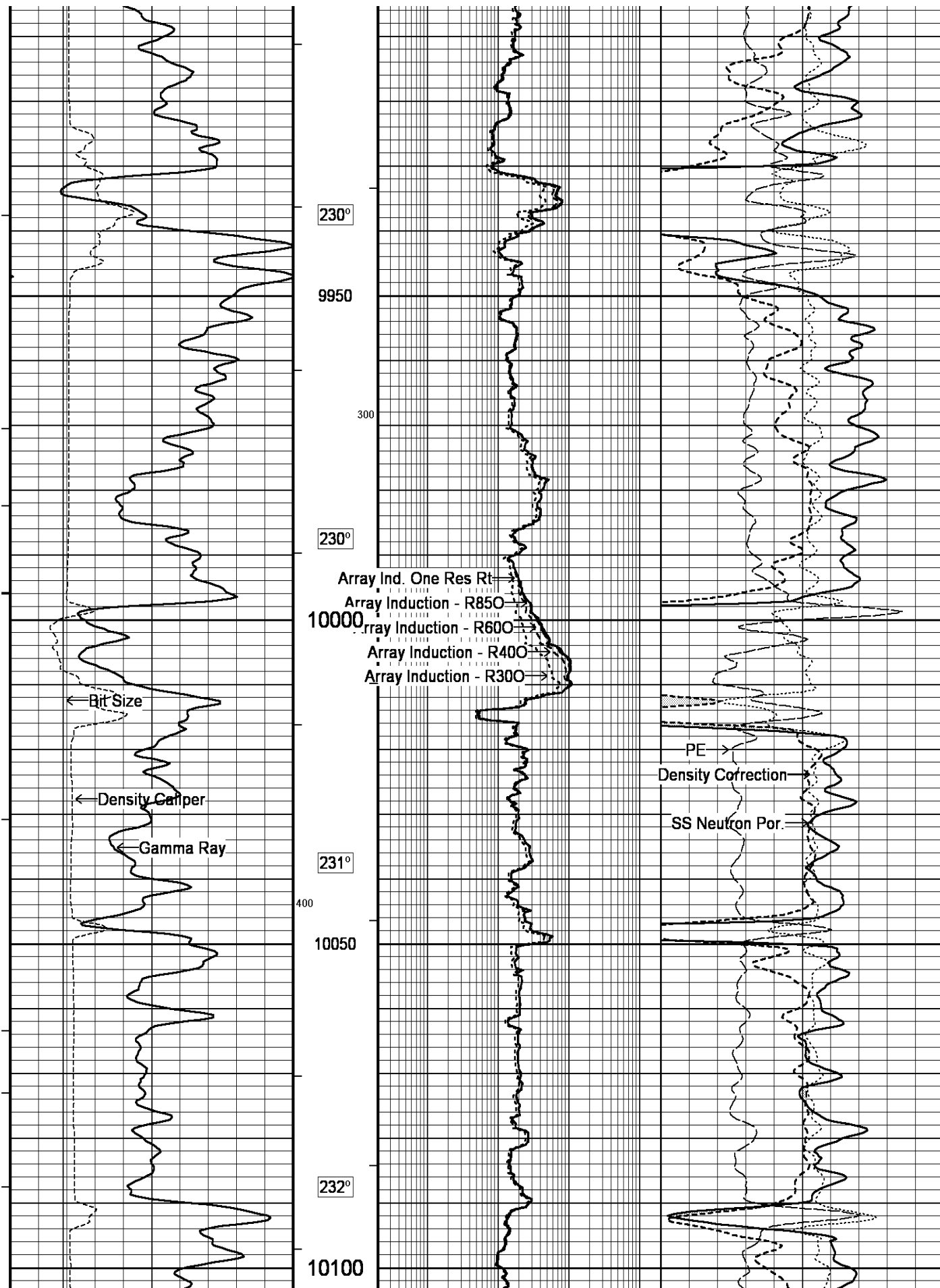


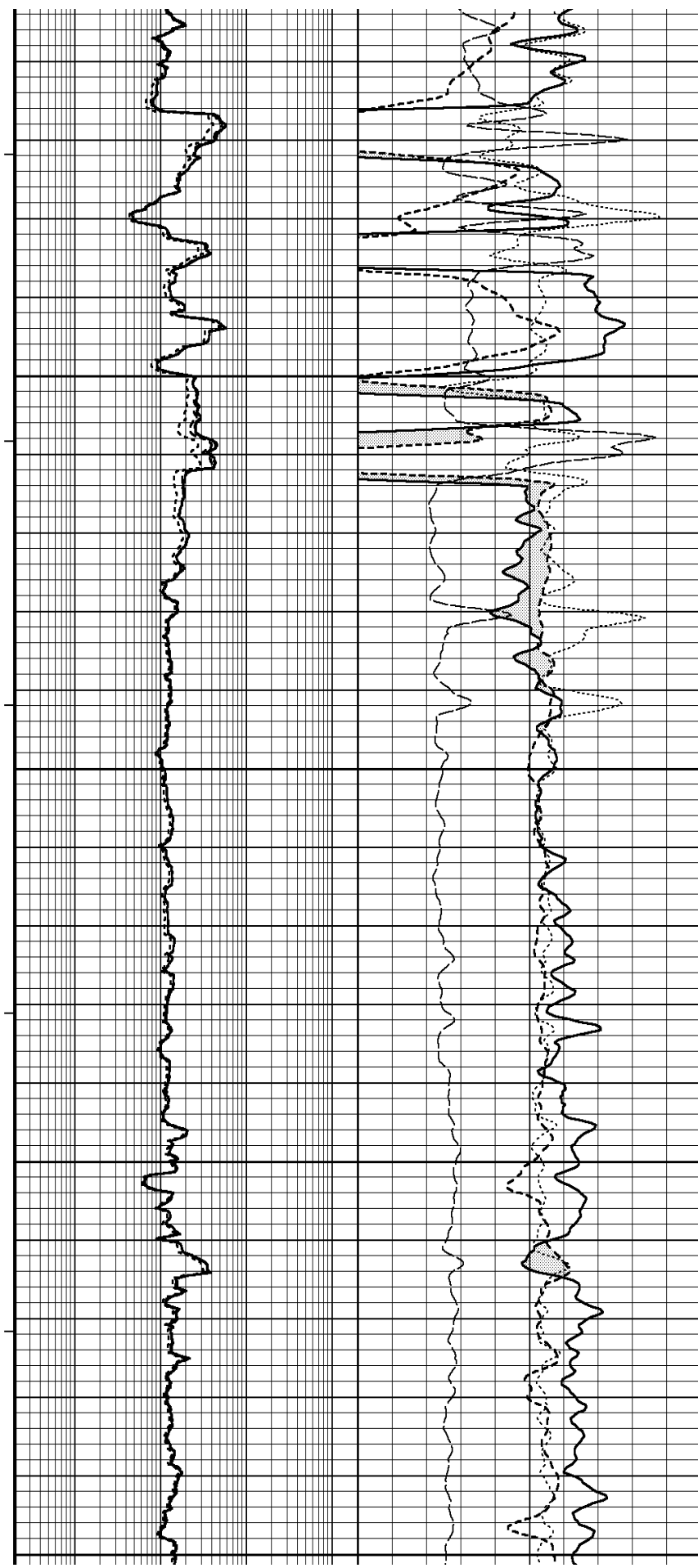
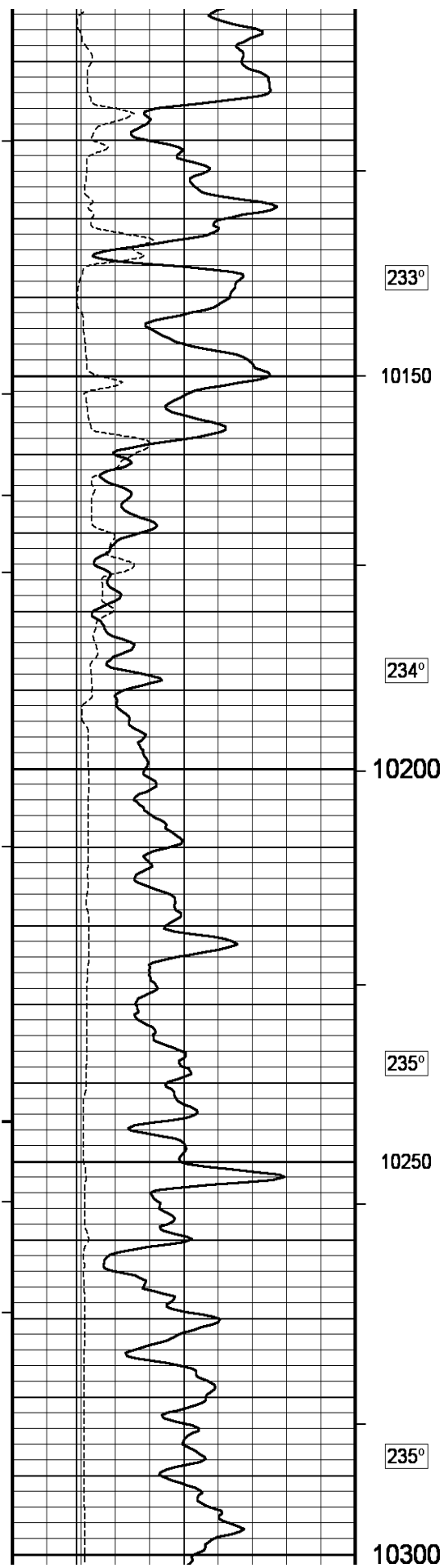


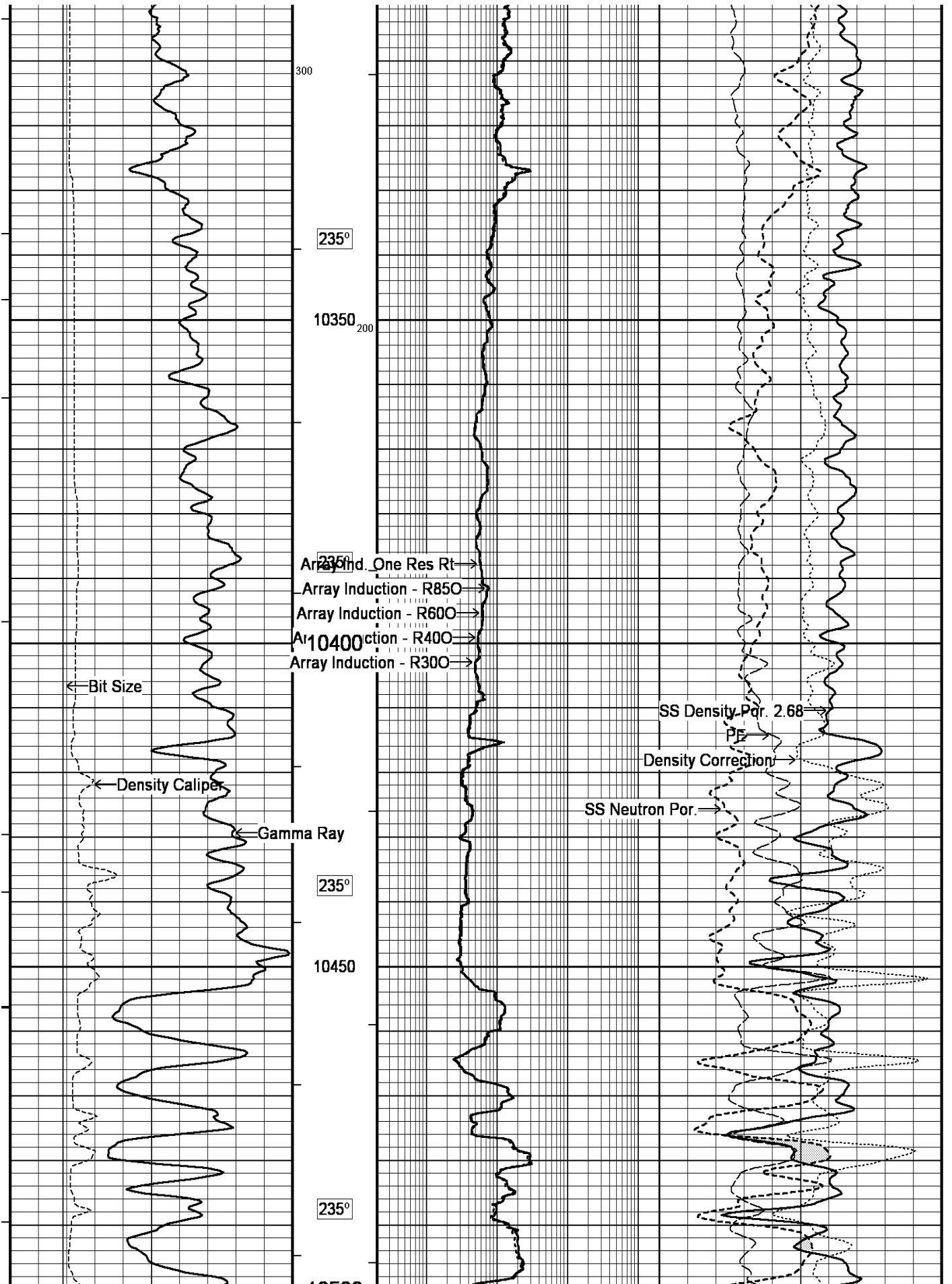


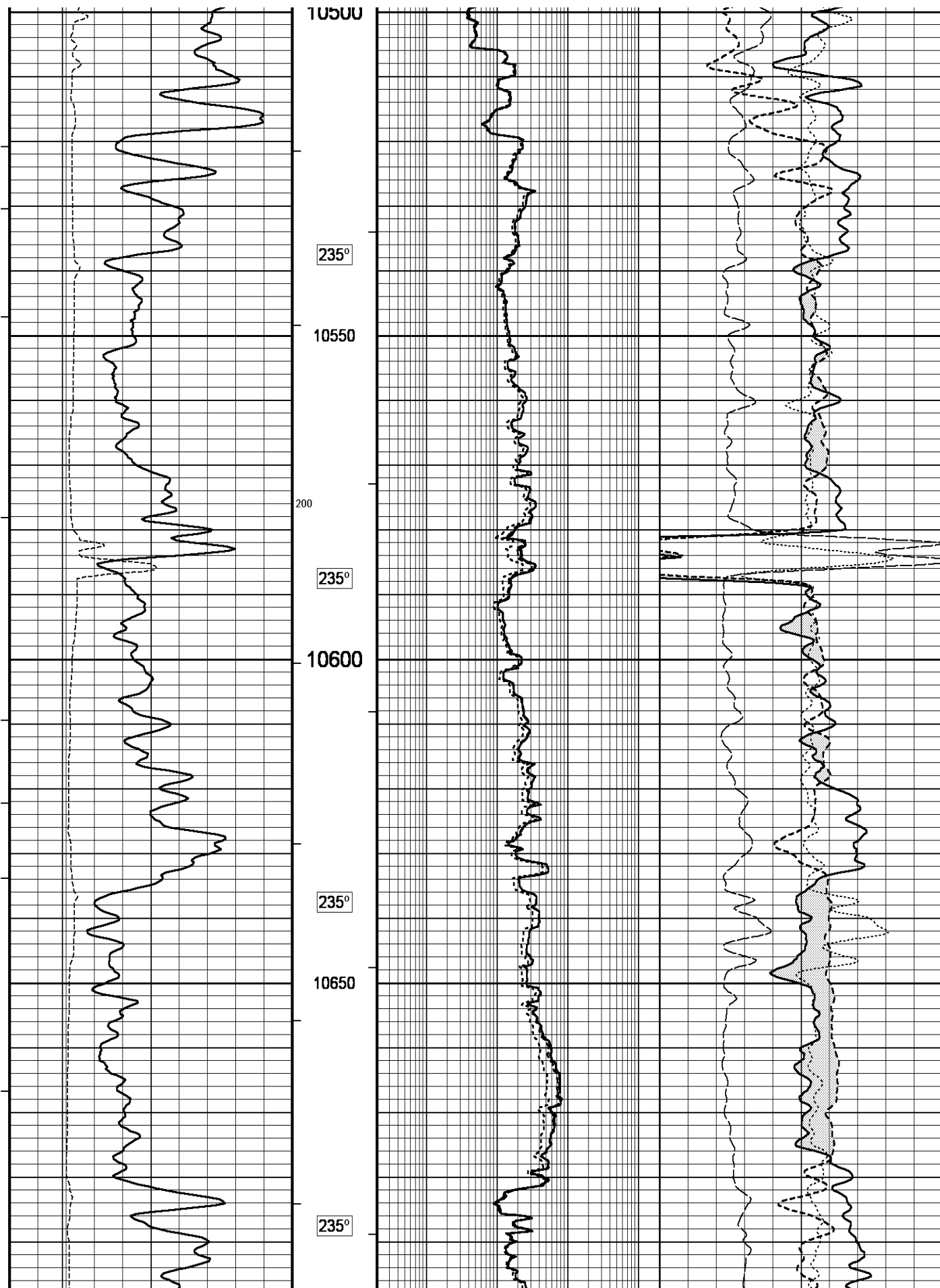


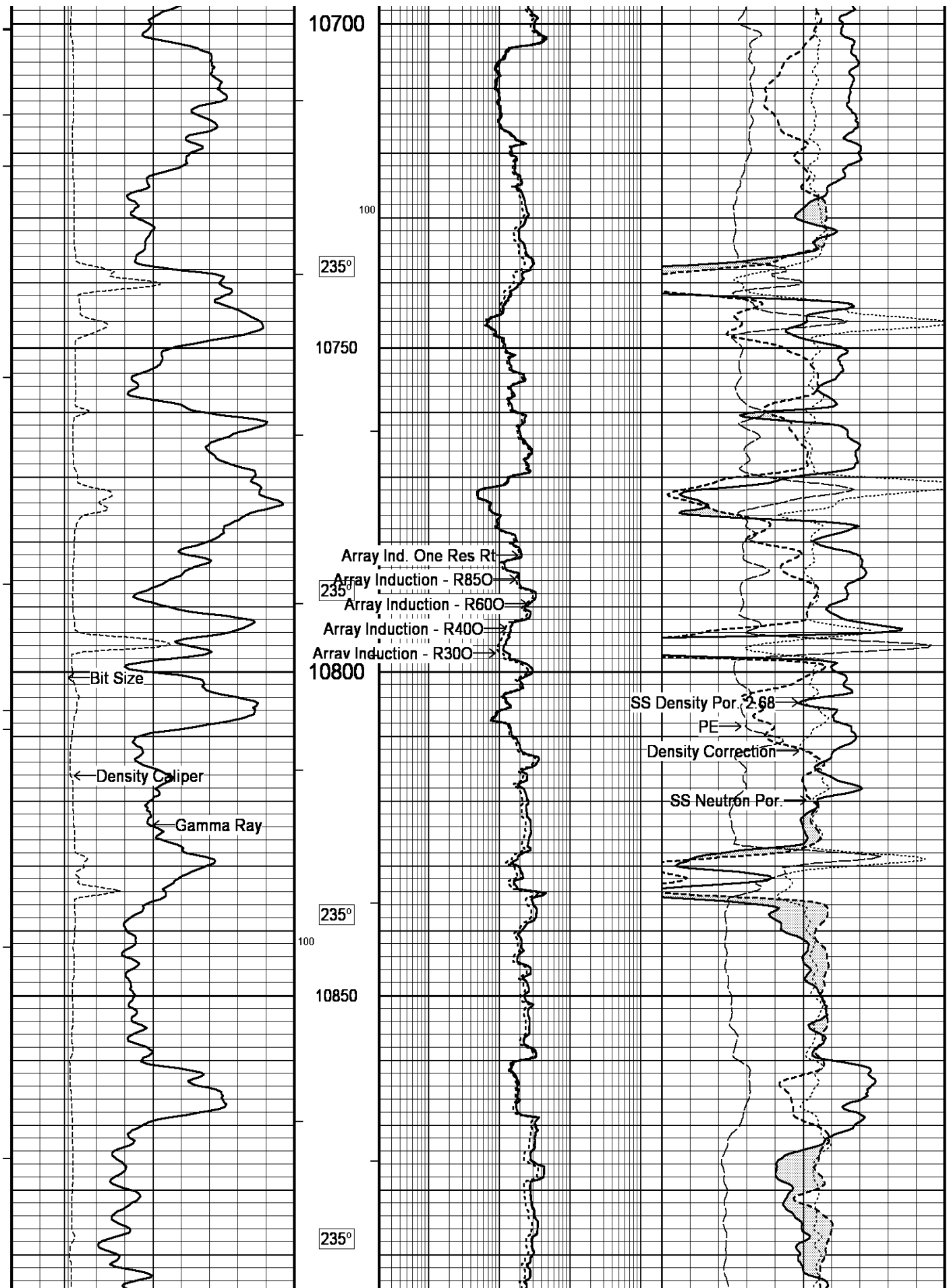


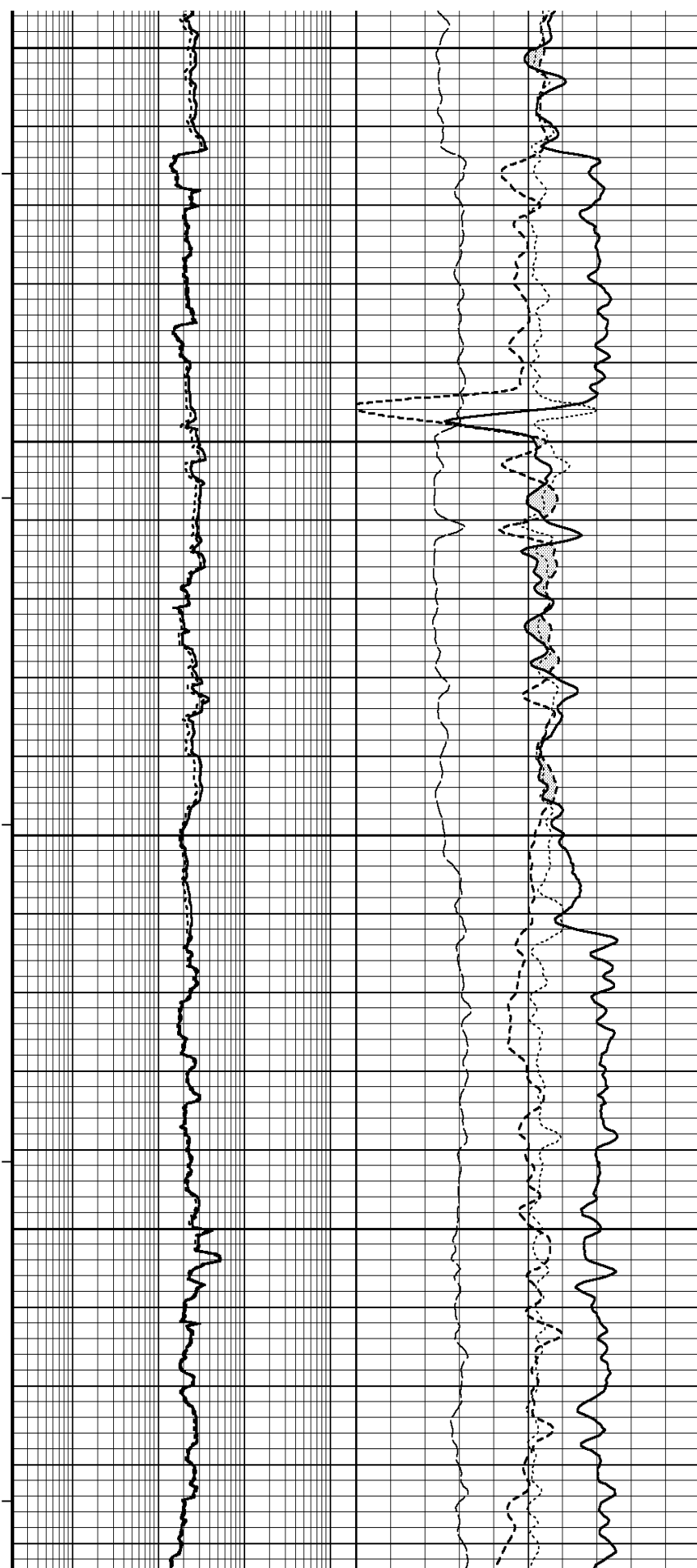
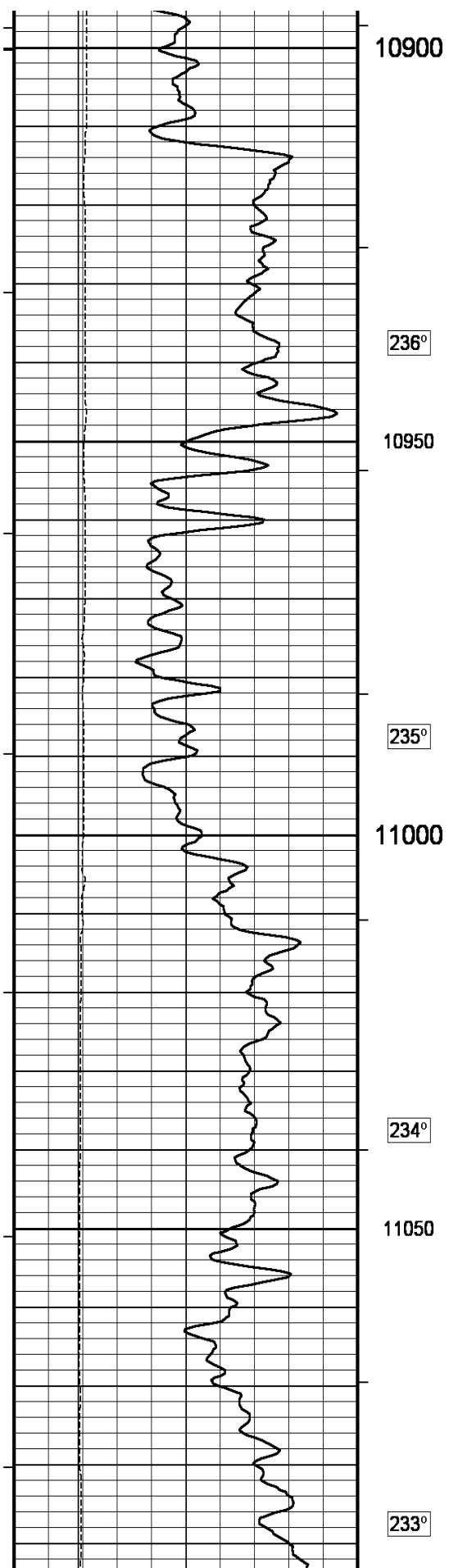


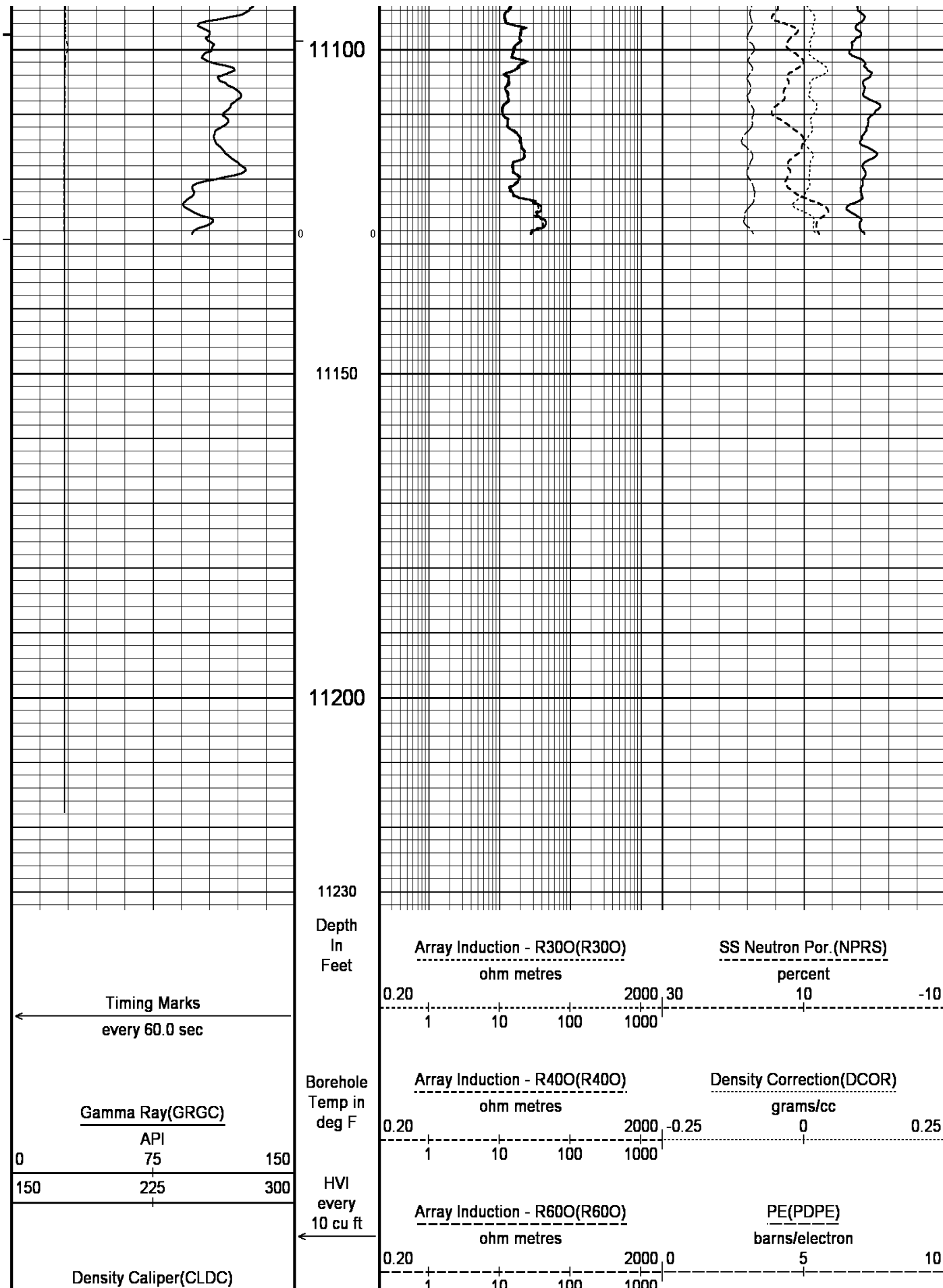


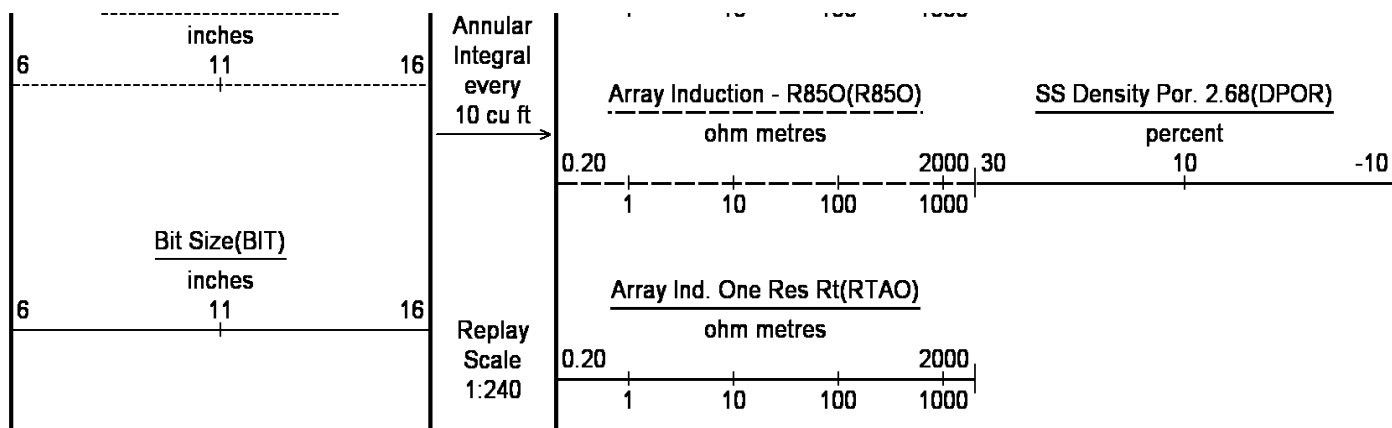












Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 23-JUL-2012 00:04

Filename: C:\Minimus\Logs\Encana\NP EF09E-27 P27 595\NP EF 09E-27 P27 595 Depth.dta

Recorded on 22-JUL-2012 23:28

System Versions: Plotted with 12.02.4401

↑
5 INCH MAIN LOG
↑

BEFORE SURVEY CALIBRATION

C:\Minimus\Logs\Encana\NP EF09E-27 P27 595\NP EF 09E-27 P27 595 Depth.dta

Down-hole Tension Calibration All 000

Field Calibration on 24-OCT-2010 03:34

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1 | 15659.85 | 0.00 |
| 2 | 15734.68 | 370.00 |

General Constants All 000

Last Edited on 22-JUL-2012 23:03

General Parameters

| | | |
|-----------------------------|----------|------------|
| Mud Resistivity | 1.850 | ohm-metres |
| Mud Resistivity Temperature | 96.400 | 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 | 4.500 | inches |
| Caliper for Differential Caliper | None | |

Rwa Parameters

| | |
|------------------|-----------------------|
| Porosity used | Base Density Porosity |
| Resistivity used | Array Ind. Two Res Rt |
| RWA Constant A | 0.610 |
| RWA Constant M | 2.150 |

Down-hole Tension Calibration SMS 0

Field Calibration on 06-MAY-2012 06:21

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1 | 12185.49 | 0.00 |
| 2 | 13145.20 | 430.00 |

High Resolution Temperature Calibration MCG-D.A 221

Field Calibration on 22-SEP-2011 10:19

| | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 50.00 | 50.00 |
| Upper | 75.00 | 75.00 |

High Resolution Temperature Constants MCG-D.A 221

Last Edited on

| | | |
|--|-----------------|--------------------|
| Pre-filter Length | 11 | |
| SP Calibration MCG-D.A 221 | | |
| | Measured | Calibrated (mV) |
| Reference 1 | 100.3 | 100.1 |
| Reference 2 | -99.7 | -100.1 |
| Field Calibration on 05-JUN-2012 15:23 | | |
| Gamma Calibration MCG-D.A 221 | | |
| | Measured | Calibrated (API) |
| Background | 70 | 47 |
| Calibrator (Gross) | 782 | 527 |
| Calibrator (Net) | 712 | 480 |
| Field Calibration on 21-JUL-2012 20:30 | | |
| Gamma Constants MCG-D.A 221 | | |
| Last Edited on 06-MAY-2012 00:11 | | |
| Gamma Calibrator Number | GRCC112 | |
| Mud Density | 1.00 | gm/cc |
| Caliper Source for Processing | Density Caliper | |
| Tool Position | Eccentred | |
| Concentration of KCl | 0.00 | kppm |
| Neutron Calibration MDN-B.A 193 | | |
| Base Calibration on 05-JUL-2012 14:50 | | |
| Field Check on 21-JUL-2012 20:47 | | |
| Base Calibration | | |
| | Measured | Calibrated (cps) |
| | Near Far | Near Far |
| | 2944 91 | 3714 110 |
| Ratio | 32.520 | 33.764 |
| Field Calibrator at Base | | |
| | | Calibrated (cps) |
| | | 1629 2362 |
| Ratio | | 0.690 |
| Field Check | | |
| | | Calibrated (cps) |
| | | 1663 2409 |
| Ratio | | 0.690 |
| Neutron Constants MDN-B.A 193 | | |
| Last Edited on 22-JUL-2012 23:04 | | |
| Neutron Source Id | P44382B | |
| Neutron Jig Number | 6531NK | |
| 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 | 7.00 | cu |
| Dolomite Sigma | 4.70 | cu |
| Formation Pressure Source | None | |
| Formation Pressure | N/A | kpsi |
| Temperature Source | None | |
| Temperature | N/A | degrees F |
| Mud Salinity | 0.00 | kppm |
| Formation Fluid Salinity Source | None | |
| Formation Fluid Salinity | N/A | kppm |
| Barite Mud Correction | Not Applied | |
| Salinity Correction | Not Applied | |
| FE Calibration MFE-B.A 248 | | |
| Base Calibration on 03-JUL-2012 11:46 | | |
| Field Check on 21-JUL-2012 20:36 | | |
| Base Calibration | | |
| | Measured | Calibrated (ohm-m) |
| Reference 1 | 0.0 | 0.0 |
| Reference 2 | 0.0 | 0.0 |
| Field Calibration on 03-JUL-2012 11:46 | | |
| Field Check on 21-JUL-2012 20:36 | | |

| | | |
|---|--------------------------|---|
| Reference 2 | 972.6 | 126.8 |
| Base Check | | 279.0 |
| Field Check | | 279.1 |
| FE Constants MFE-B.A 248 | | Last Edited on 21-JUL-2012 20:36 |
| 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 |
| High Resolution Temperature Calibration MAI-B.J 362 | | Field Calibration on 06-JUL-2012 14:06 |
| | Measured | Calibrated(Deg F) |
| Lower | 10.00 | 50.00 |
| Upper | 100.00 | 212.00 |
| High Resolution Temperature Constants MAI-B.J 362 | | Last Edited on |
| Pre-filter Length | 11 | |
| Induction Calibration MAI-B.J 362 | | Base Calibration on 21-JUL-2012 20:31 Field Check on 21-JUL-2012 20:34 |
| Base Calibration | | |
| Test Loop Calibration | | Measured |
| Channel | Low High | Calibrated (mmho/m) |
| 1 | 16.0 468.7 | Low High |
| 2 | 6.2 374.5 | Low High |
| 3 | 3.6 258.3 | Low High |
| 4 | 1.8 133.1 | Low High |
| Array Temperature | 74.8 | Deg F |
| Channel | Base Check (mmho/m) | Field Check (mmho/m) |
| | Low High | Low High |
| 1 | 0.0 0.0 | 15.1 3874.4 |
| 2 | 0.0 0.0 | 30.5 3604.8 |
| 3 | 0.0 0.0 | 28.5 3067.8 |
| 4 | 0.0 0.0 | 19.8 2078.1 |
| Deep | 0.0 0.0 | 17.5 1953.0 |
| Medium | 0.0 0.0 | 41.1 4074.9 |
| Shallow | 0.0 0.0 | 45.5 5399.7 |
| Array Temperature | 0.0 | 63.3 Deg F |
| Induction Constants MAI-B.J 362 | | Last Edited on 22-JUL-2012 23:04 |
| 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 | 6.0000 | |
| Stand-off Fin Angle | 60.00 | degrees |
| Stand-off Fin Width | 0.5000 | inches |
| Borehole Corr. Rm Source | Temperature Corr | |
| Temp. for Rm Corr. | MCG External Temperature | |
| 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 | | |

| | | | | |
|---------------------------------|-----------------------|----------------------|---|--|
| Caliper Calibration MPD-C.A 215 | | | Base Calibration on 03-JUL-2012 14:31 Field Calibration on 21-JUL-2012 20:37 | |
| Base Calibration | | | | |
| Reading No | Measured | Calibrator Size (in) | | |
| 1 | 13984 | 3.99 | | |
| 2 | 22368 | 5.96 | | |
| 3 | 30960 | 7.99 | | |
| 4 | 39000 | 9.86 | | |
| 5 | 48256 | 11.93 | | |
| 6 | N/A | N/A | | |
| Field Calibration | | | | |
| | Measured Caliper (in) | Actual Caliper (in) | | |
| | 7.82 | 7.99 | | |

| | | | | | | |
|---------------------------------------|--------|----------|-------|------------------|---|--|
| Photo Density Calibration MPD-C.A 215 | | | | | Base Calibration on 03-JUL-2012 14:15 Field Check on 21-JUL-2012 20:42 | |
| Density Calibration | | | | | | |
| Base Calibration | | | | | | |
| | | Measured | | Calibrated (sdu) | | |
| | | Near | Far | Near | Far | |
| Reference 1 | 44788 | 15011 | 52994 | 19128 | | |
| Reference 2 | 21362 | 2474 | 25185 | 2558 | | |
| Field Check at Base | | | | | | |
| | 1279.3 | 1358.9 | | | | |
| Field Check | | | | | | |
| | 1279.2 | 1369.3 | | | | |
| PE Calibration | | | | | | |
| Base Calibration | | | | | | |
| | WS | Measured | | Calibrated | | |
| | | WH | Ratio | Ratio | | |
| Background | 233 | 1145 | | | | |
| Reference 1 | 14407 | 44606 | 0.326 | 0.309 | | |
| Reference 2 | 5946 | 21223 | 0.285 | 0.274 | | |
| Field Check at Base | | | | | | |
| | 232.9 | 1145.1 | | | | |
| Field Check | | | | | | |

Density Constants MPD-C.A 215

Last Edited on 21-JUL-2012 20:42

| | | |
|-------------------------------|-----------------|-------|
| Density Source Id | 2859GW | |
| Nylon Calibrator Number | 527 | |
| Aluminium Calibrator Number | 527 | |
| Density Shoe Profile | 4 inch | |
| Caliper Source for Processing | Density Caliper | |
| PE Correction to Density | Not Applied | |
| Mud Density | 1.29 | 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) |
| 2.68 | 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 |
| 0.00 | 0.00 |

DOWNHOLE EQUIPMENT

C:\Minimus\Logs\Encana\NP EF09E-27 P27 595\NP EF 09E-27 P27 595 Depth.dta

Drop-off Running Tool (DRT A A)
DRT-A.A 105 LG: 9.42 ft WT: 66.1 lb OD: 2.60 in

MBS-A 400v Compact Battery Sub
MBS-A 11 LG: 7.84 ft WT: 57.3 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.A 221 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Memory Sub D.A
MMS-D.A 154 LG: 3.12 ft WT: 30.9 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 536 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 571 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 653 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.A 193 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.A 215 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

62.63 ft GRGC - Gamma Ray
59.72 ft CGXT - MCG External Temperature

42.89 ft NPRS - Sandstone Neutron Por.
42.89 ft NPOR - Base Neutron Porosity

35.65 ft AVOL - Annular Volume
35.65 ft HVOL - Hole Volume
35.65 ft CLDC - Density Caliper

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 728 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor
SHA-H 142 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 66 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

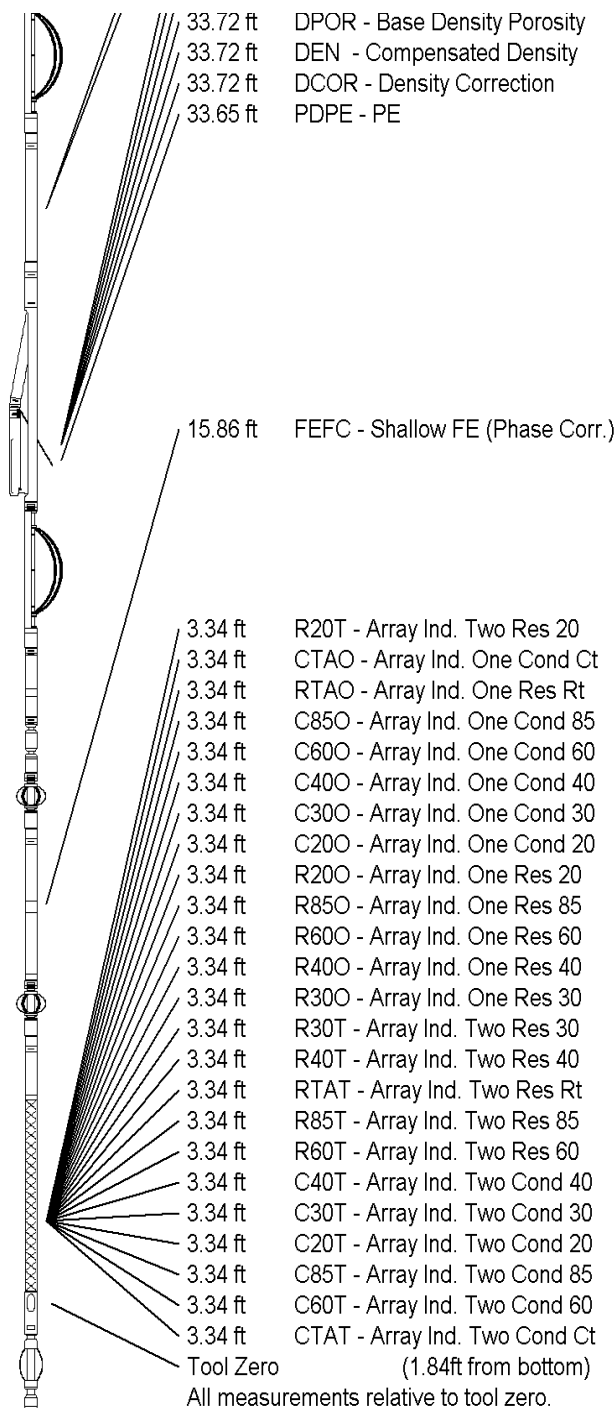
MIS-E.A Compact Inline Standoff sub
MIS-E.A 199 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.A 248 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

MIS-E.A Compact Inline Standoff sub
MIS-E.A 326 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-B.J 362 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in

Total Length: 86.88 ft Weight: 646.0 lb



| | |
|-----------------|--------------------------|
| COMPANY | ENCANA OIL AND GAS (USA) |
| WELL | NP EF 09E-27 P27 595 |
| FIELD | GRAND VALLEY |
| PROVINCE/COUNTY | GARFIELD |
| COUNTRY/STATE | U.S.A. / COLORADO |

| | | | | | |
|-------------------------|---------|------|---------------|----------|------|
| Elevation Kelly Bushing | 6672.00 | feet | First Reading | 11212.00 | feet |
| Elevation Drill Floor | 6672.00 | feet | Depth Driller | 11265.00 | feet |
| Elevation Ground Level | 6650.00 | feet | Depth Logger | 11265.00 | feet |



COMPACT DRILL OFF





Weatherford®

COMPACT DROP OFF
TRIPLE COMBO
QUICKLOOK LOG

