



Weatherford

**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY BILL BARRETT CORPORATION

WELL MILLER 33C-6-791

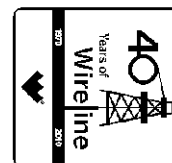
FIELD GIBSON GULCH

PROVINCE/COUNTY GARFIELD

COUNTRY/STATE U.S.A. / COLORADO

LOCATION SHL: 50' FNL & 2394' FEL

BHL: 520' FNL & 2070' FEL



SEC 6

TWP 7S

RGE 91W

Other Services

API Number 05-045-18666

Permit Number

Permanent Datum G.L., Elevation 6104 feet

Log Measured From K.B. @ 22 FEET above Permanent Datum

Drilling Measured From K.B.

Elevations:
KB 6288.00
DF 6287.00
GL 6266.00

Date 21-JAN-2011

Run Number ONE

Depth Driller 7135.00

Depth Logger 7130.00

First Reading 7130.00

Last Reading 738.00

Casing Driller 723.00

Casing Logger 738.00

Bit Size 7.880

Hole Fluid Type LSND

Density / Viscosity 10.30 lb/USg

PH / Fluid Loss 9.10

Sample Source FLOW LINE

Rm @ Measured Temp 3.0 @ 84.0

Rmf @ Measured Temp 2.25 @ 84.0

Rmc @ Measured Temp 4.50 @ 84.0

Source Rmf / Rmc CALC

Rm @ BHT 1.47 @ 174.0

Time Since Circulation 6 HOURS

Max Recorded Temp 174.00

Equipment Name COMPACT

Equipment / Base 13173

Recorded By J.GARCIA

Witnessed By J.BOYD

BOREHOLE RECORD

Last Edited: 21-JAN-2011 20:26

| Bit Size inches | Depth From feet | Depth To feet |
|--------------------|--------------------|------------------|
| 8.750 | 723.00 | 5143.00 |
| 7.880 | 5143.00 | 7135.00 |

CASING RECORD

| Type | Size inches | Depth From feet | Shoe Depth feet | Weight pounds/ft |
|---------|----------------|--------------------|--------------------|---------------------|
| SURFACE | 9.625 | 0.00 | 723.00 | 36.00 |

REMARKS

TOOLS: SHA, MCG, MDN, MPD, SKJ, MFE AND MAI RAN IN COMBINATION.

HARDWARE: MPD: 8 INCH PROFILE PLATE USED.
ONE 0.5 INCH STANDOFFS USED ON INDUCTION.
ONE 0.5 INCH STANDOFFS USED ON MFE.
DUAL BOWSPRING USED ON NEUTRON.

2.68 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TIGHT PULLS, BOREHOLE SIZE, AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.92" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT USED FROM SURFACE CASING TO 5143 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2560 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1850 CU.FT.

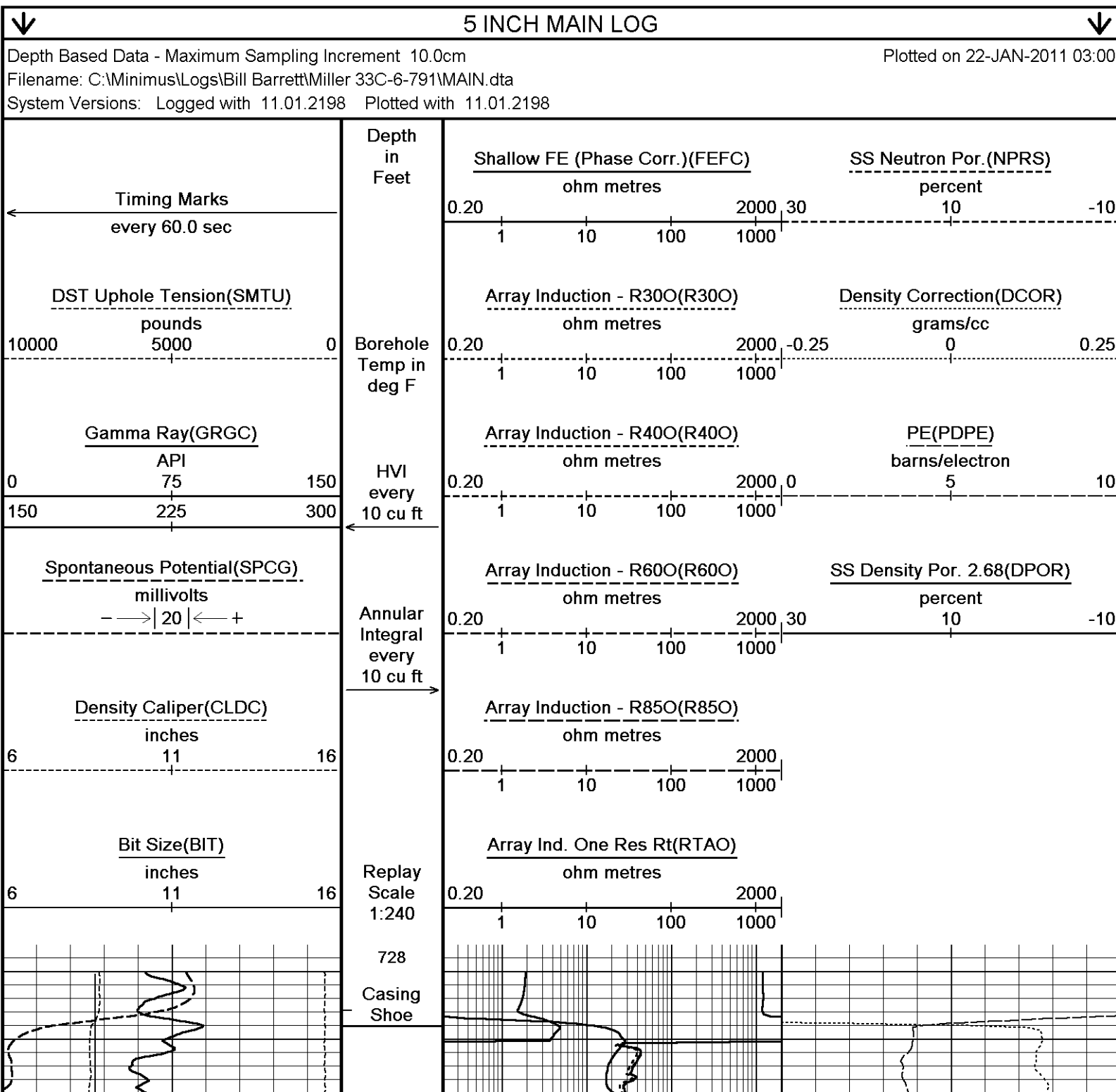
ENGINEER(S): J.GARCIA, J.P.

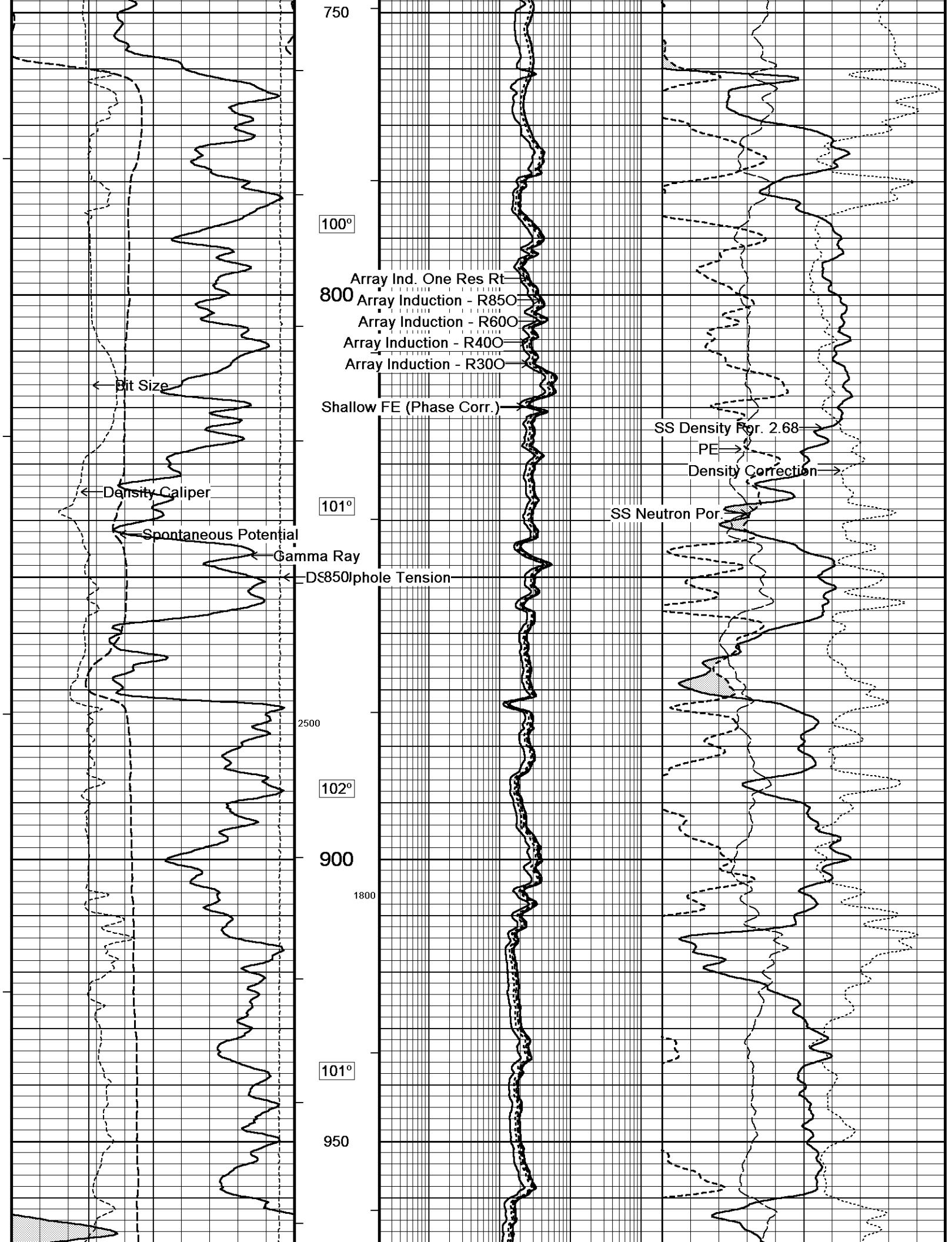
OPERATOR: D.DALEY, S.KAISER

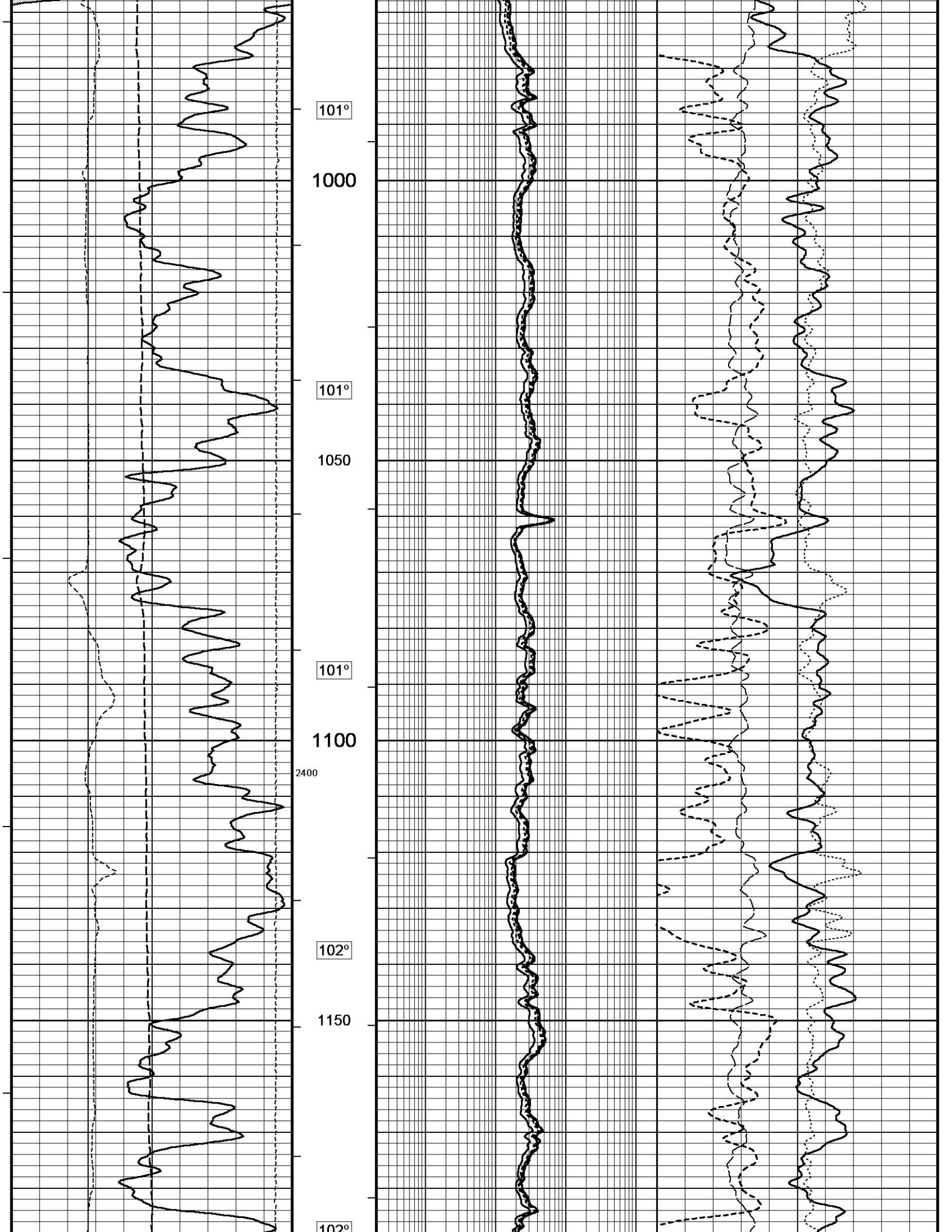
SERVICE ORDER: # 3524975

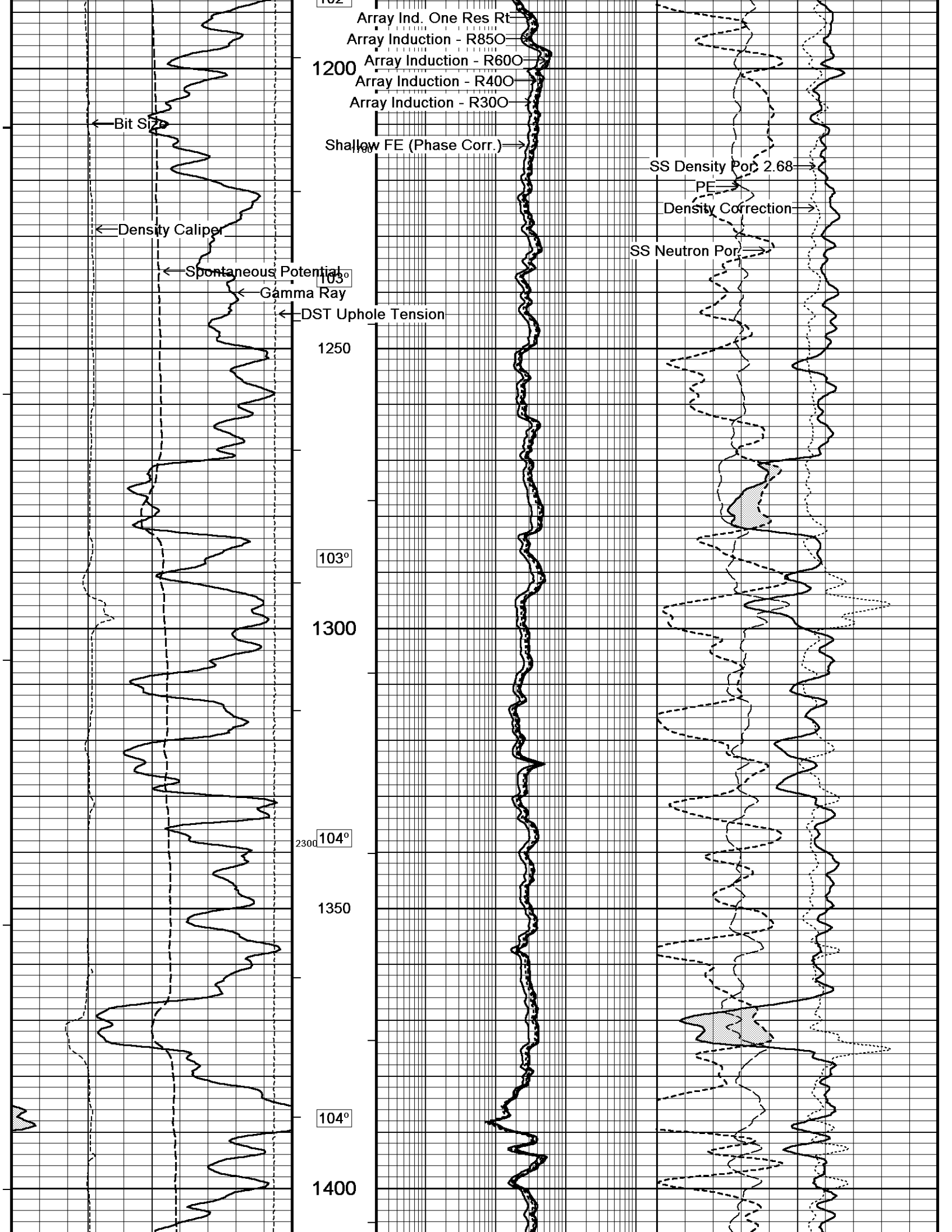
RIG: PATTERSON #313

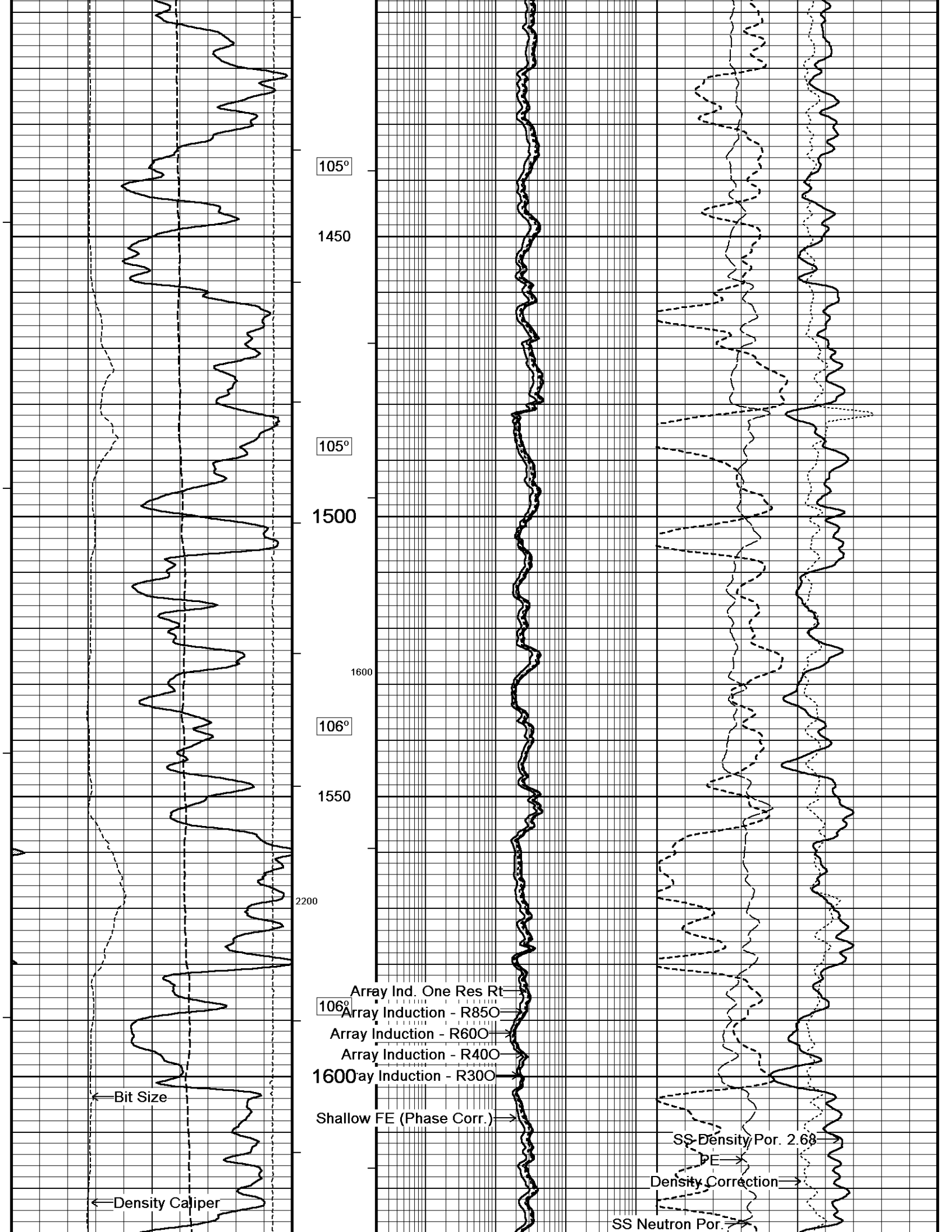
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

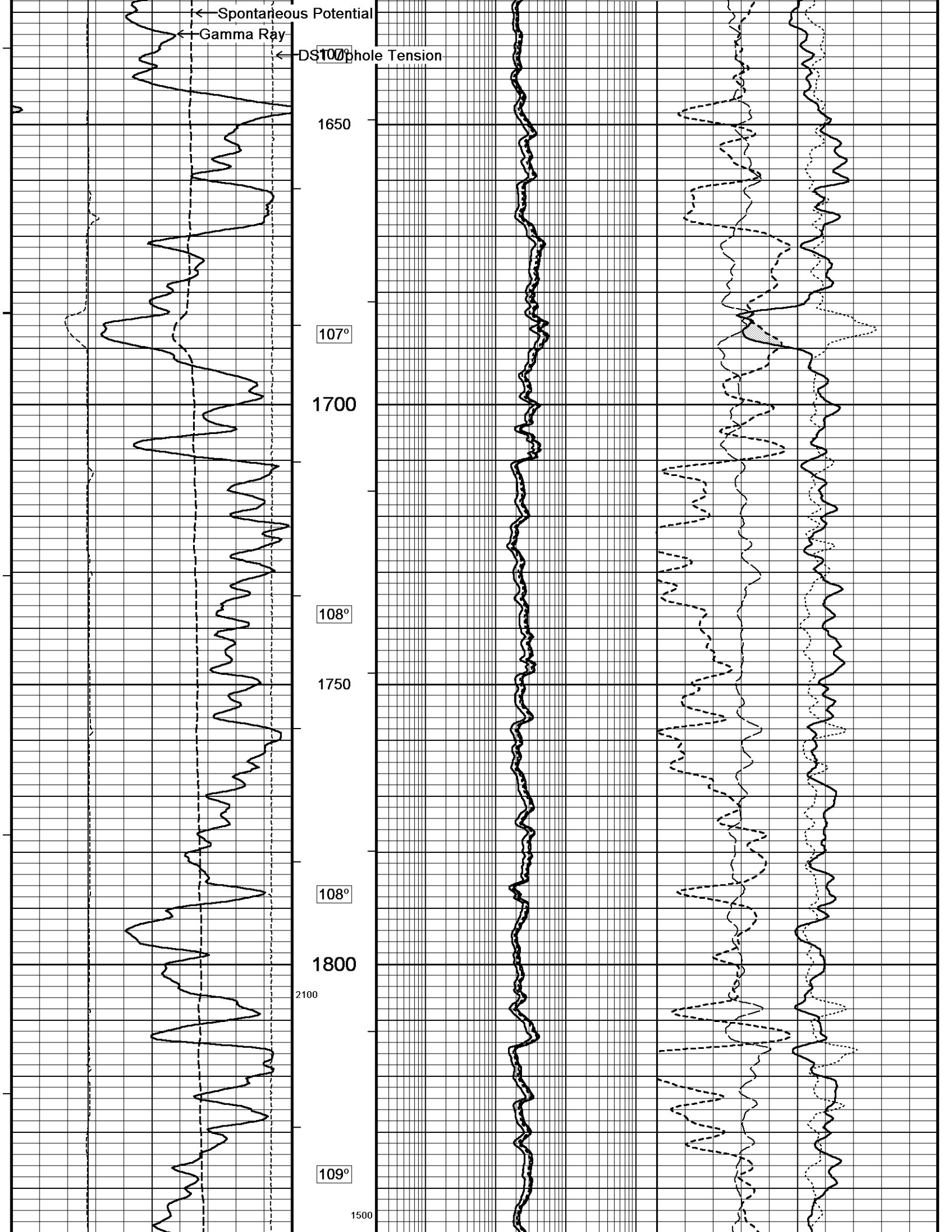


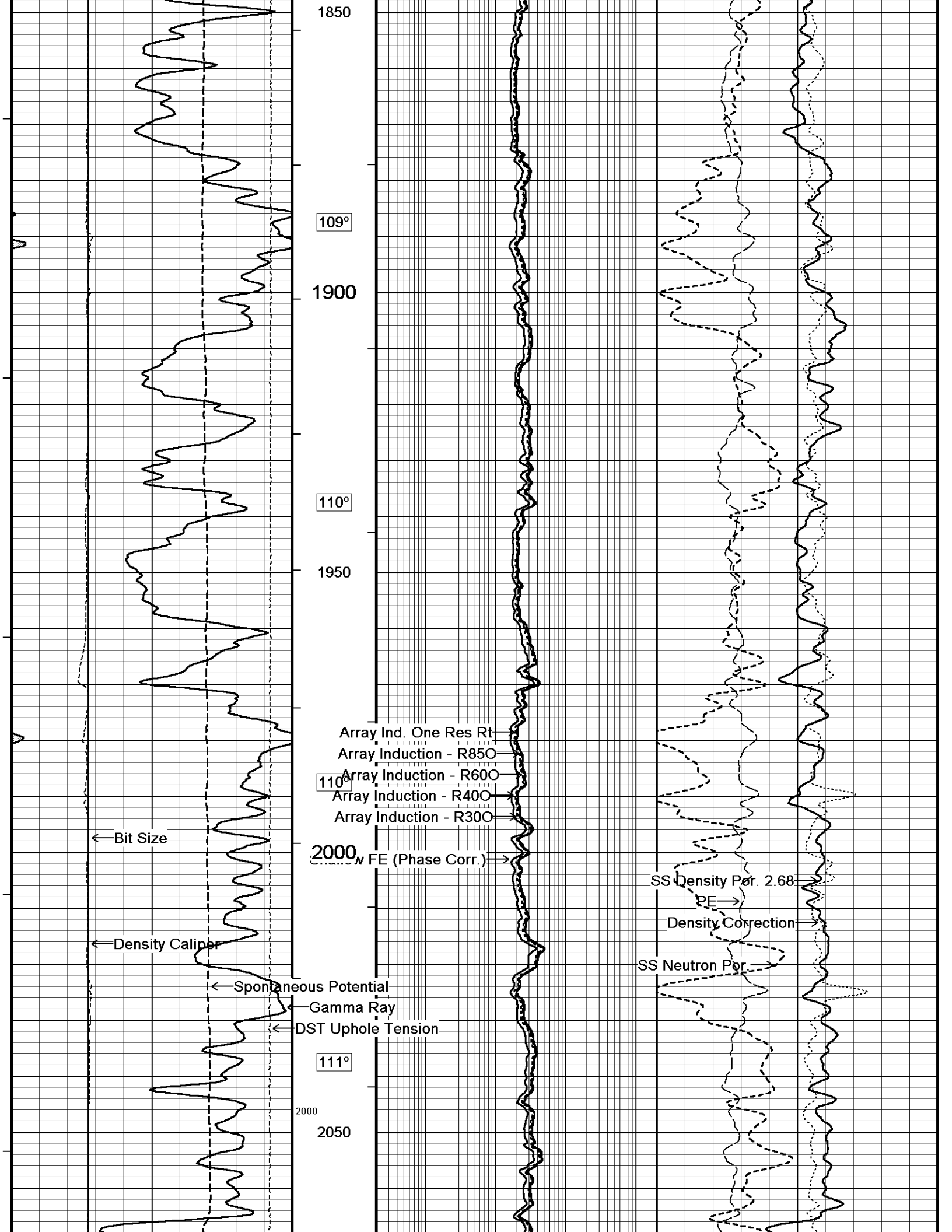


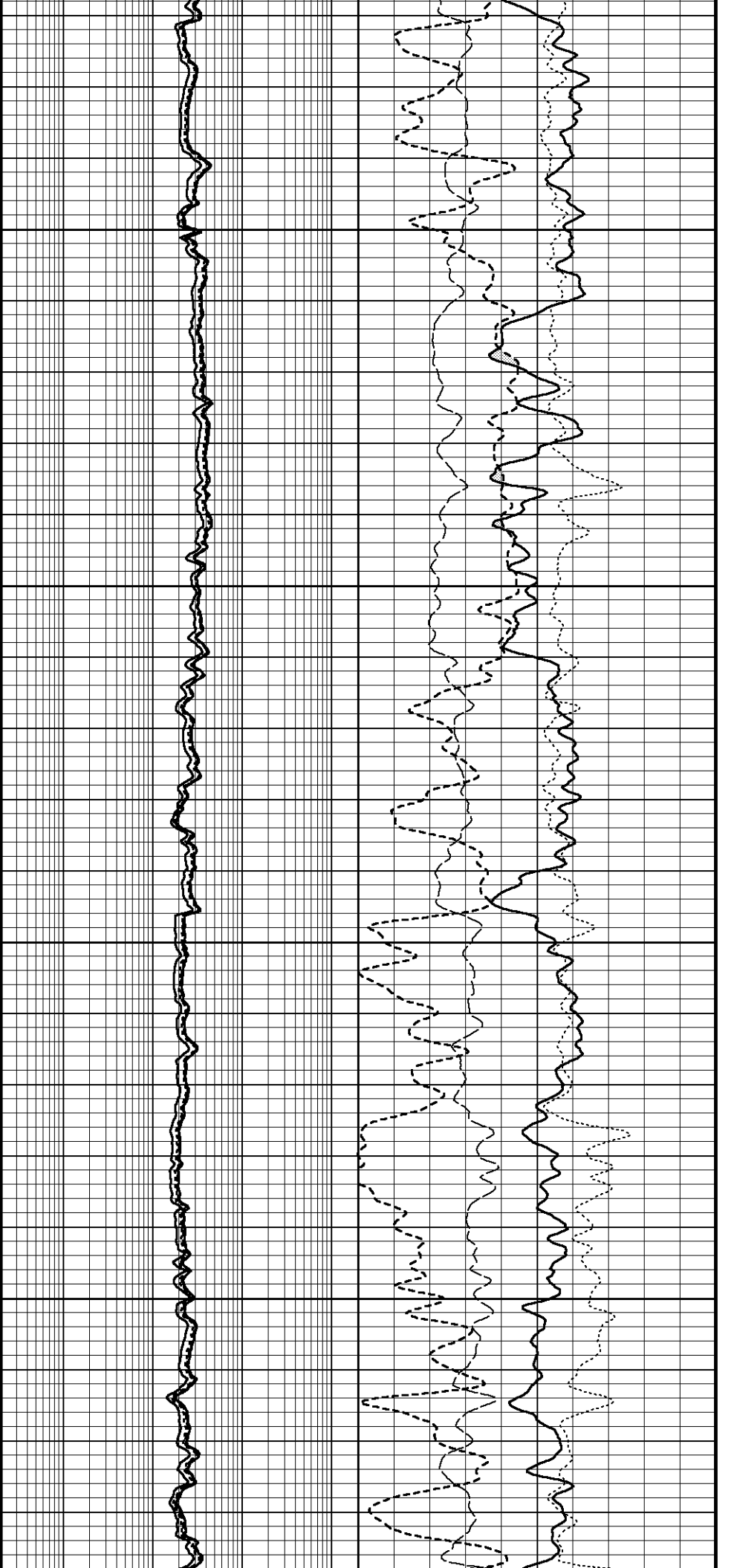
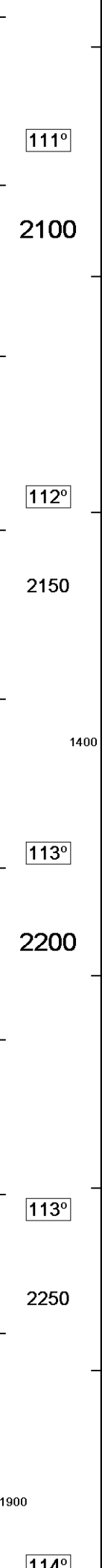
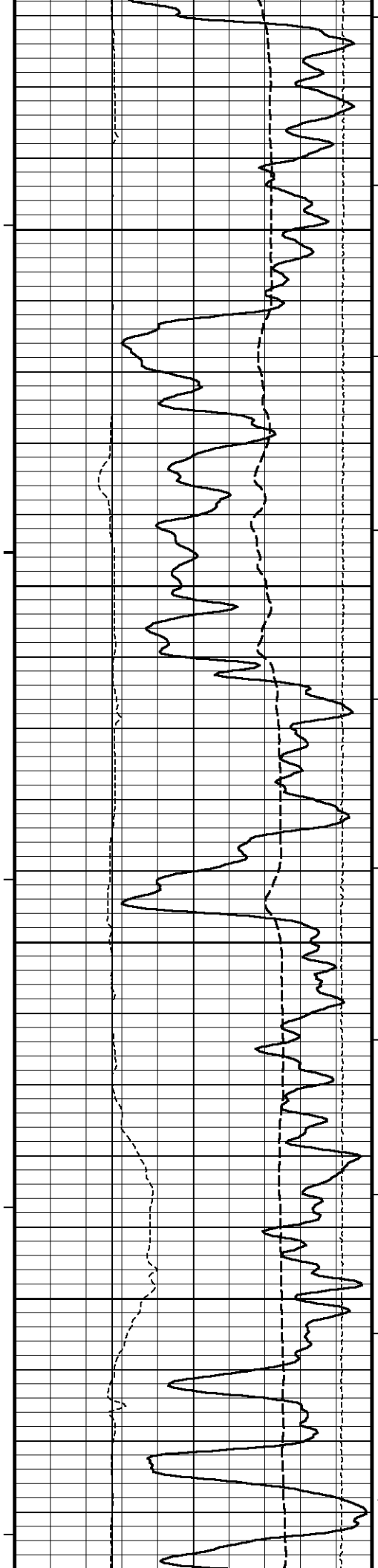


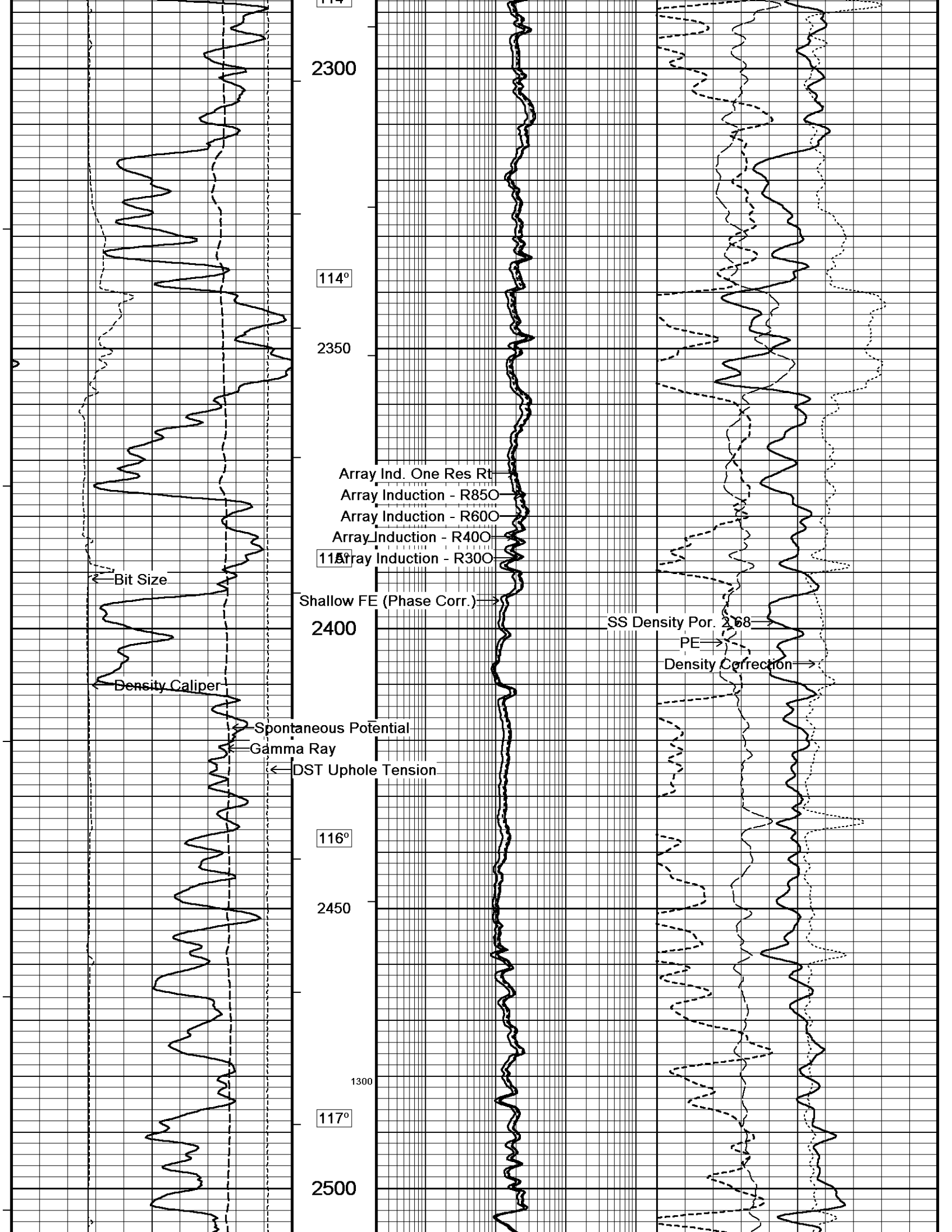


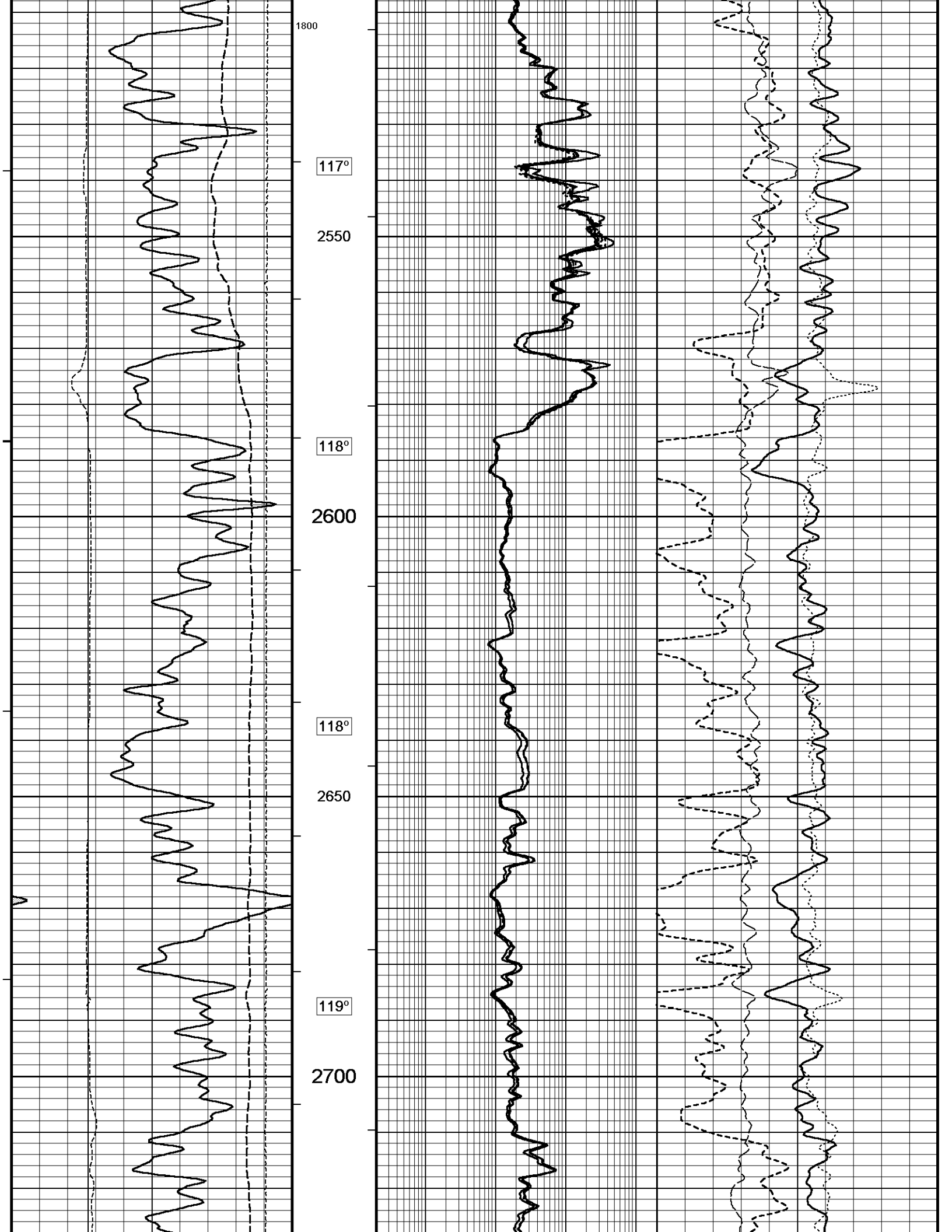


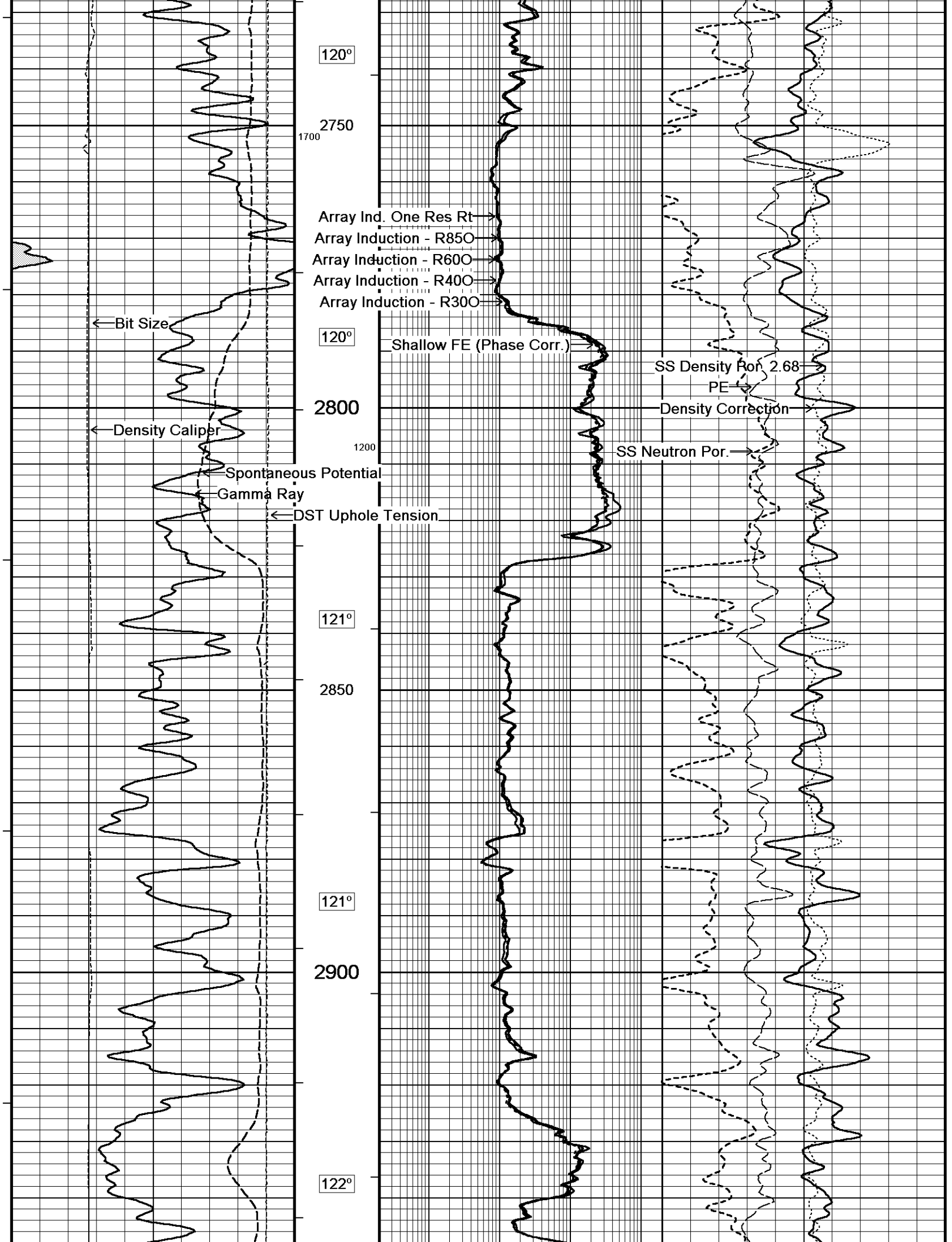


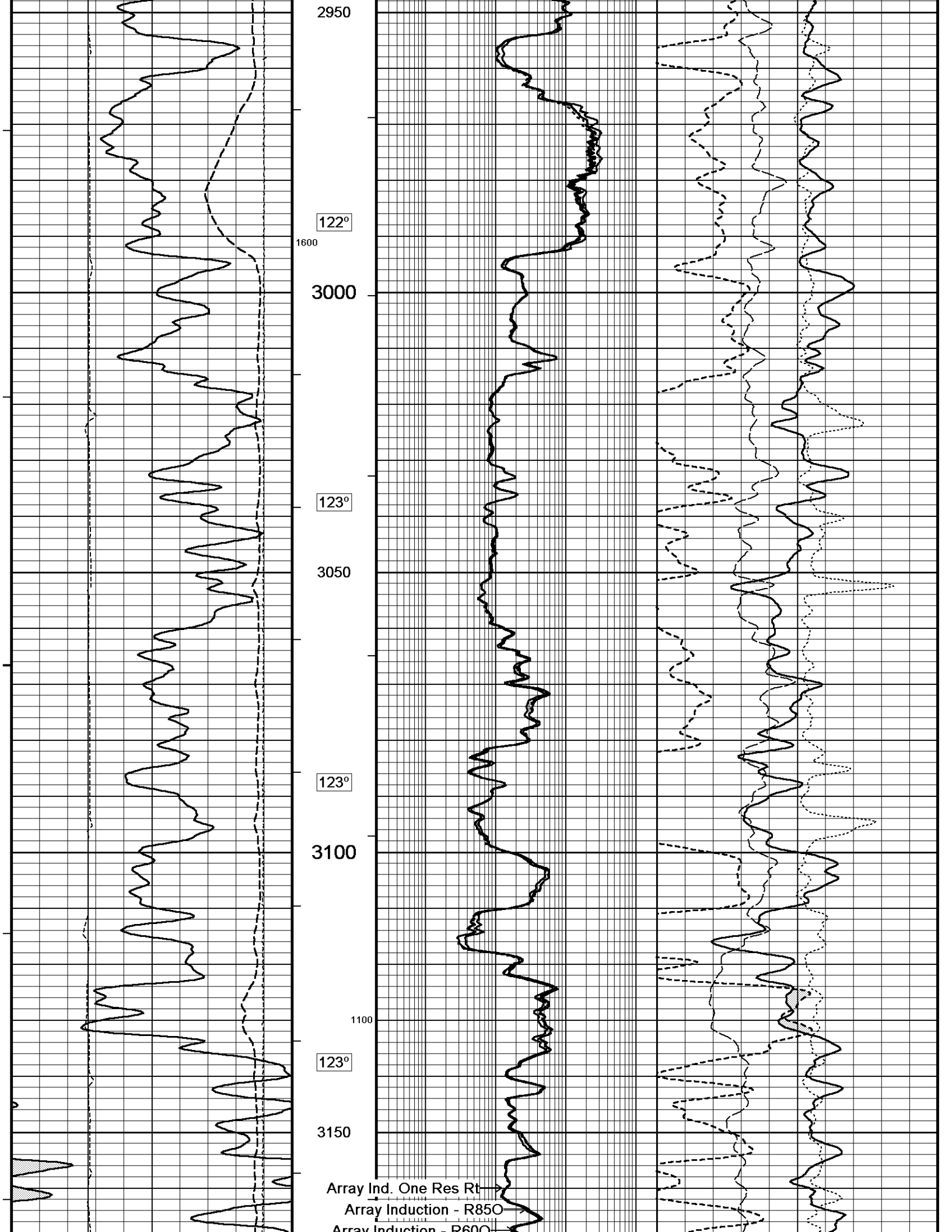


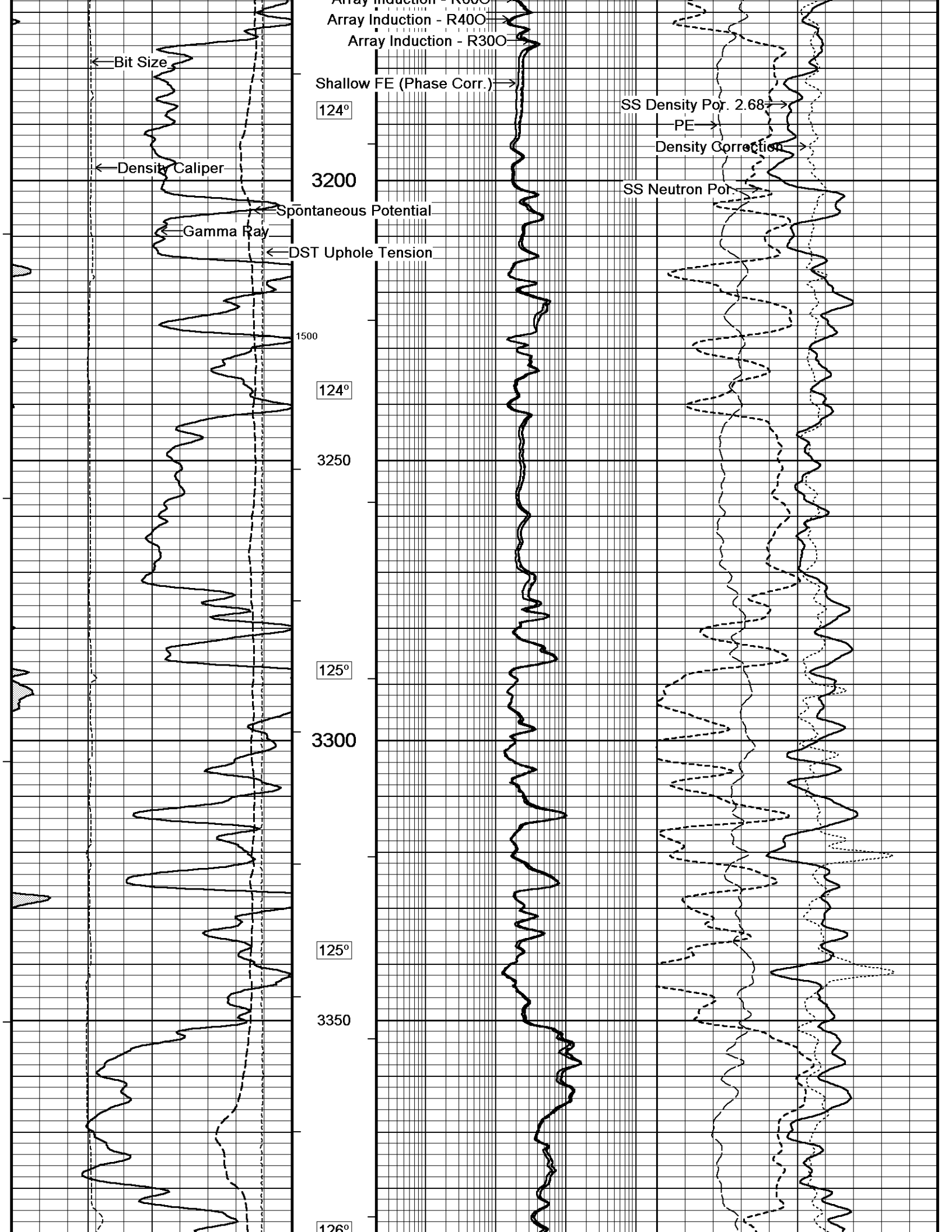


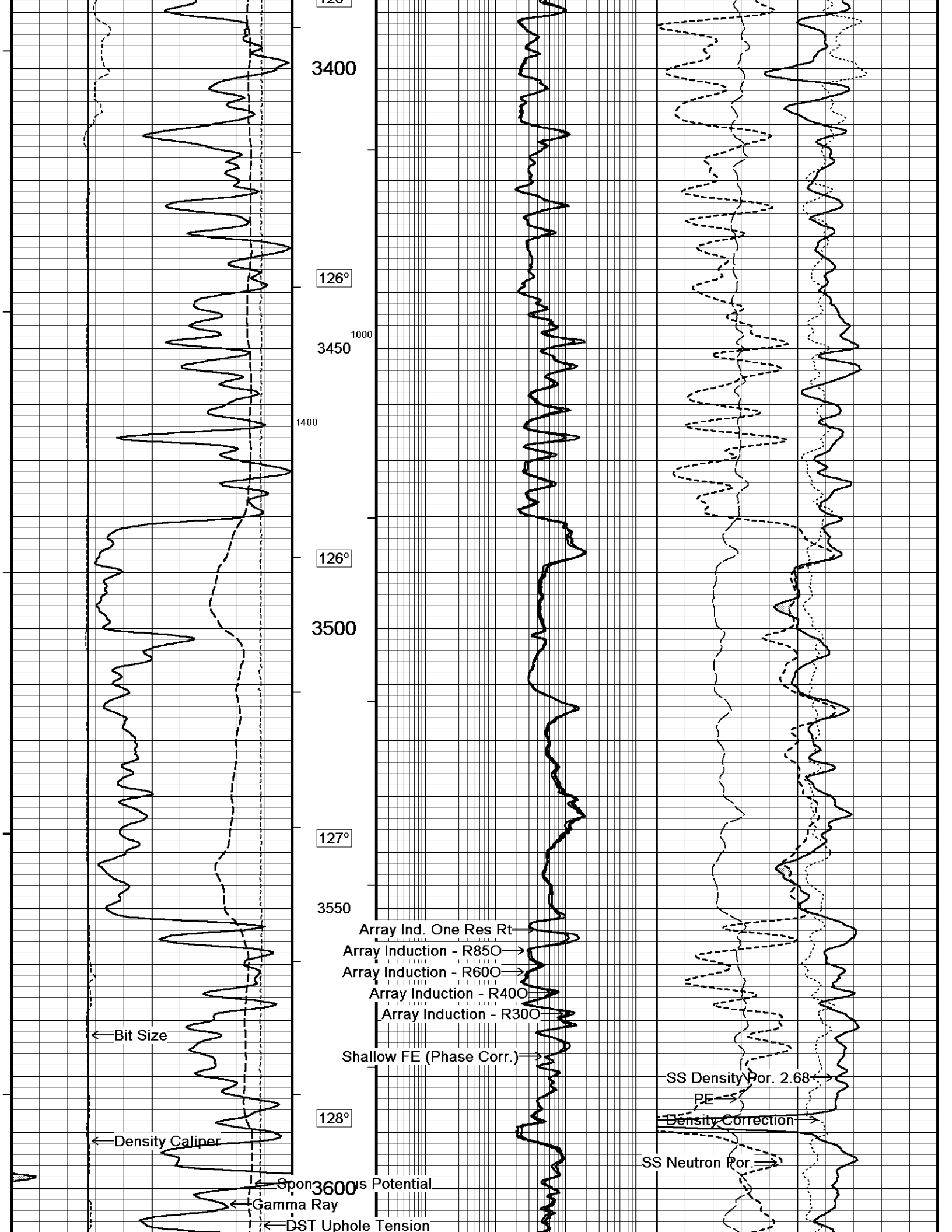


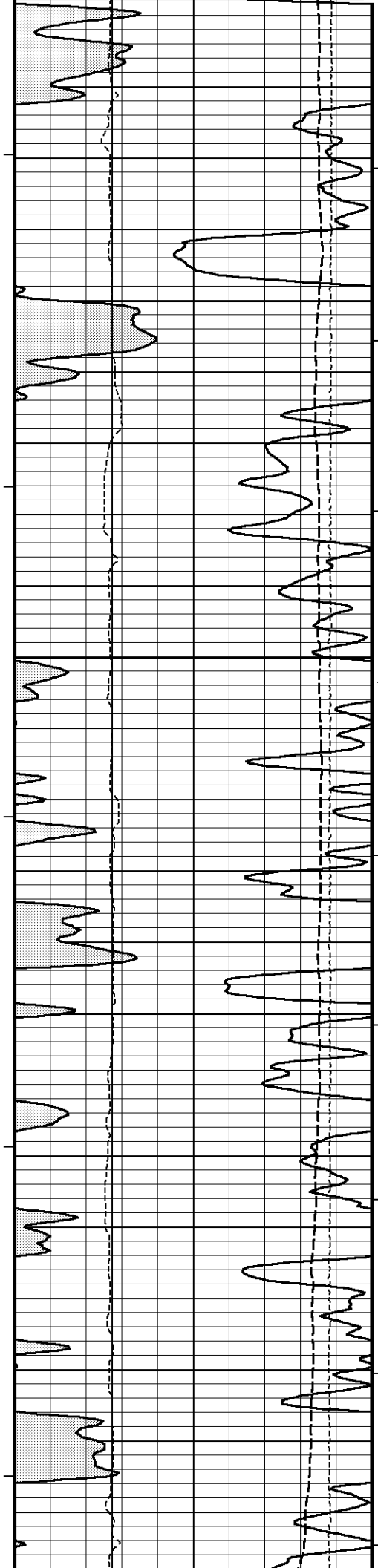












129°

3650

129°

3700

1300

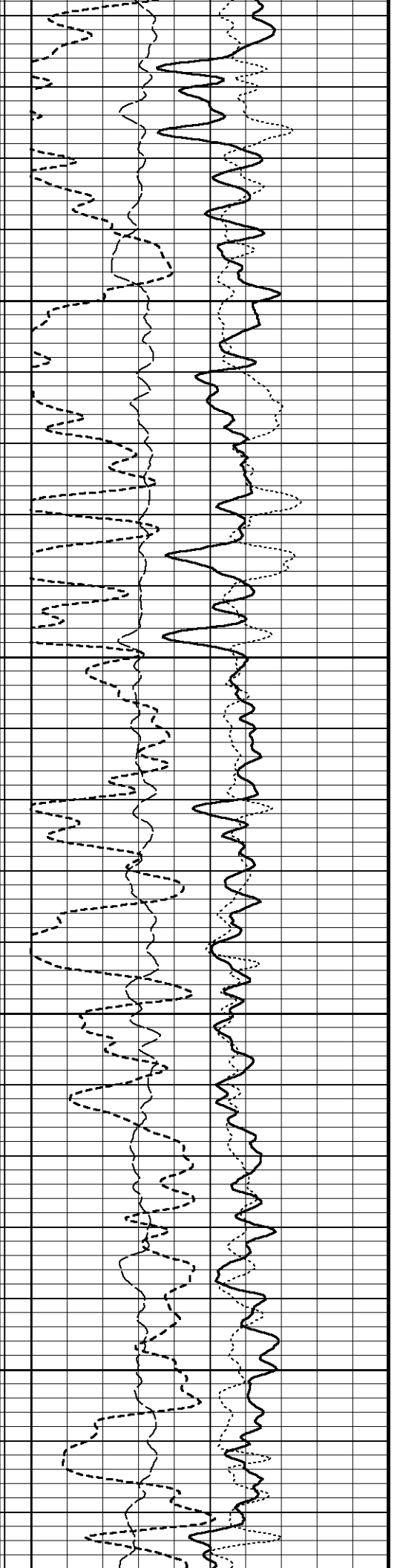
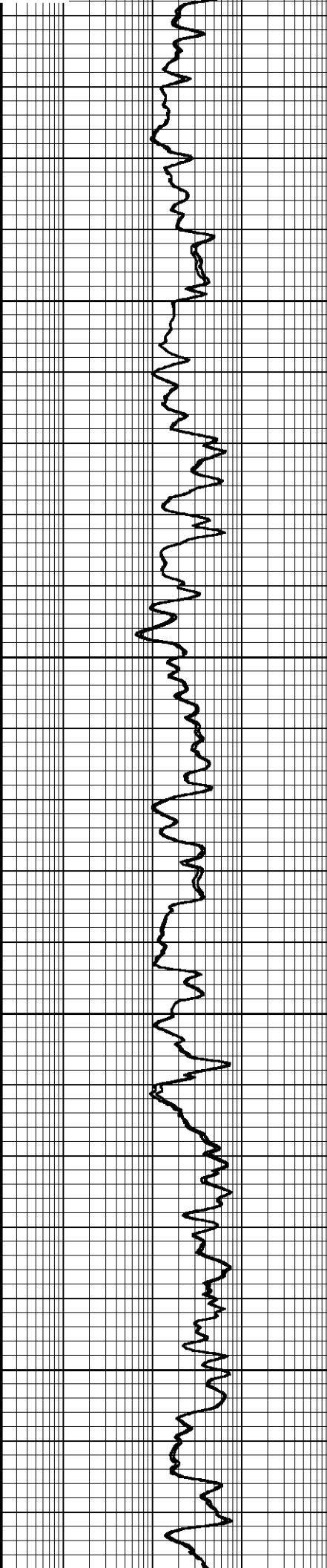
129°

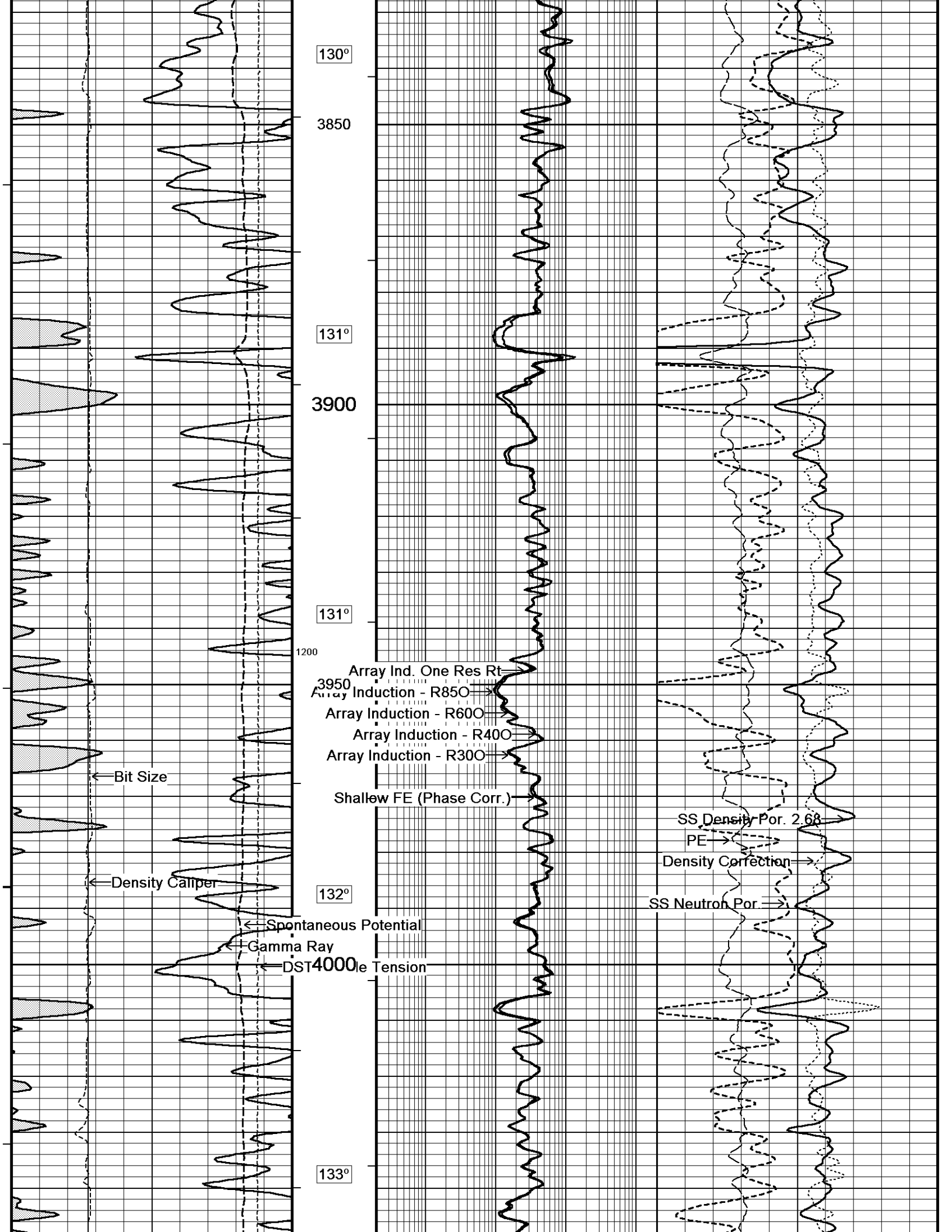
3750

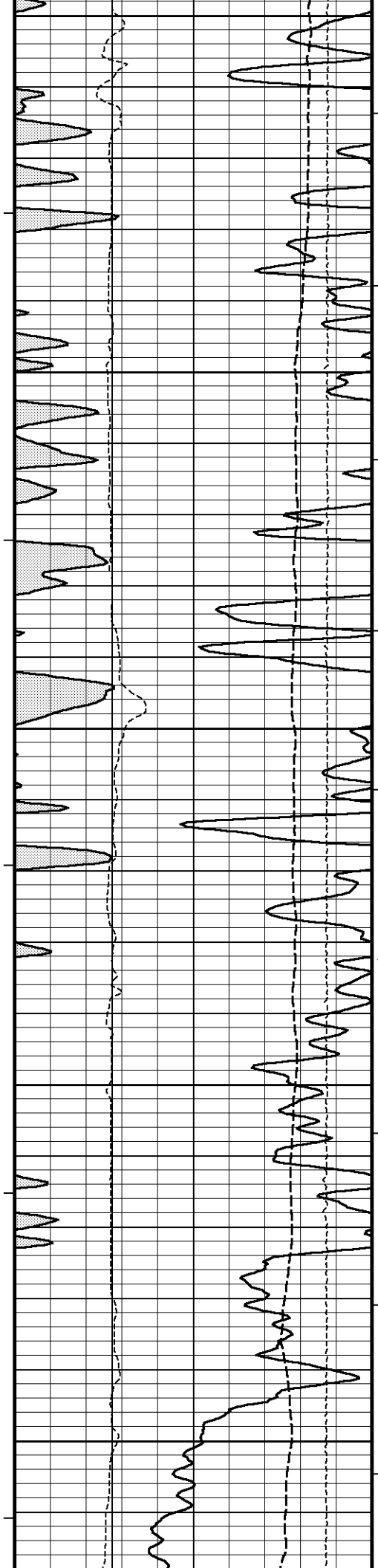
900

130°

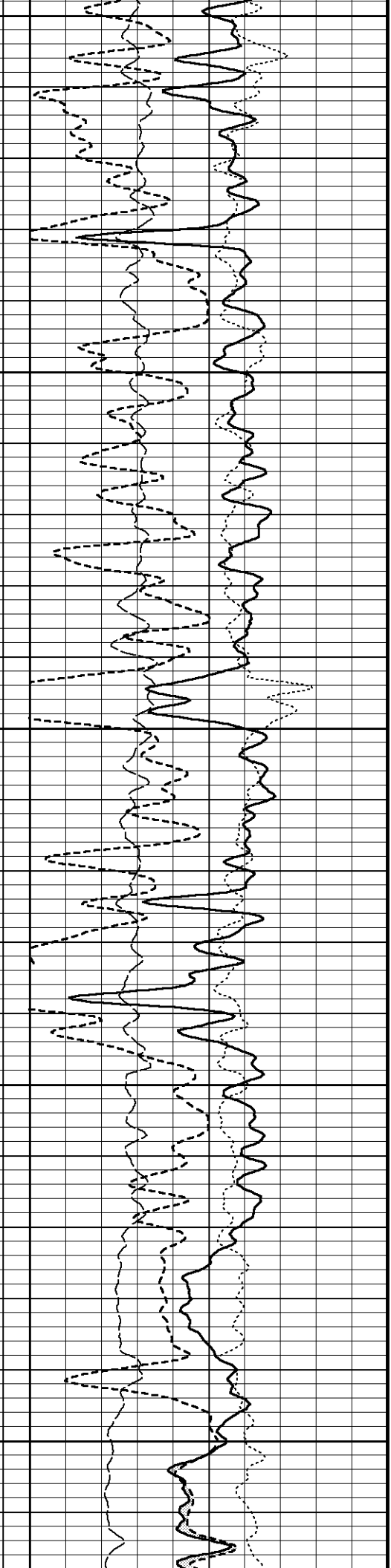
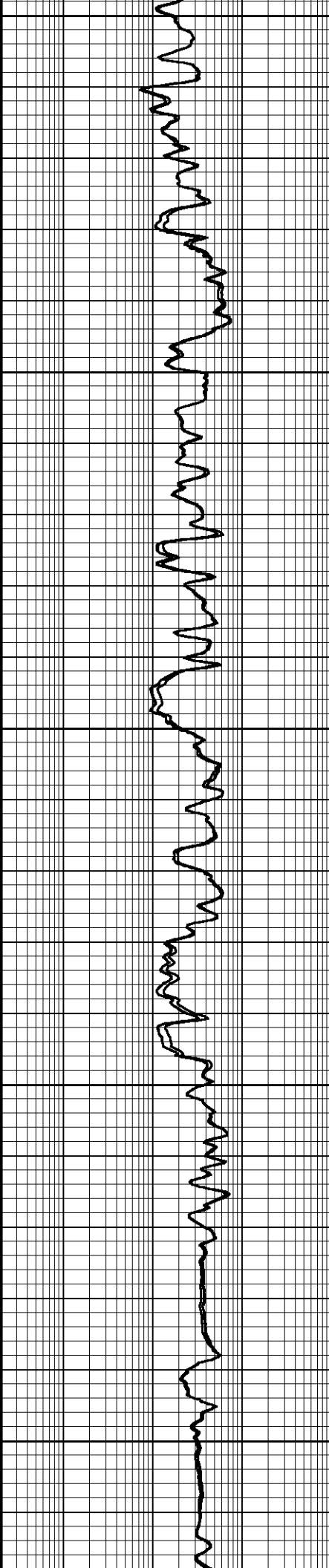
3800

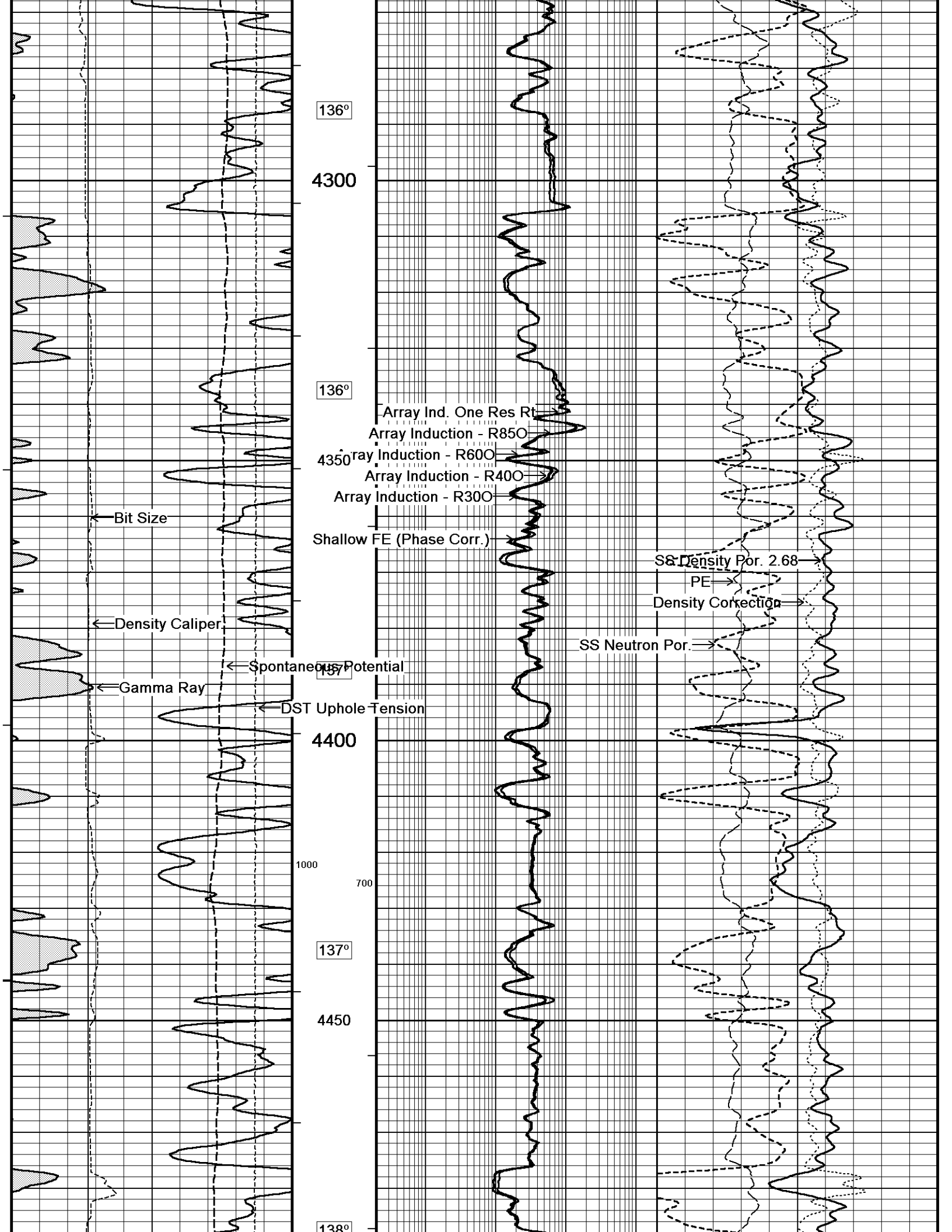


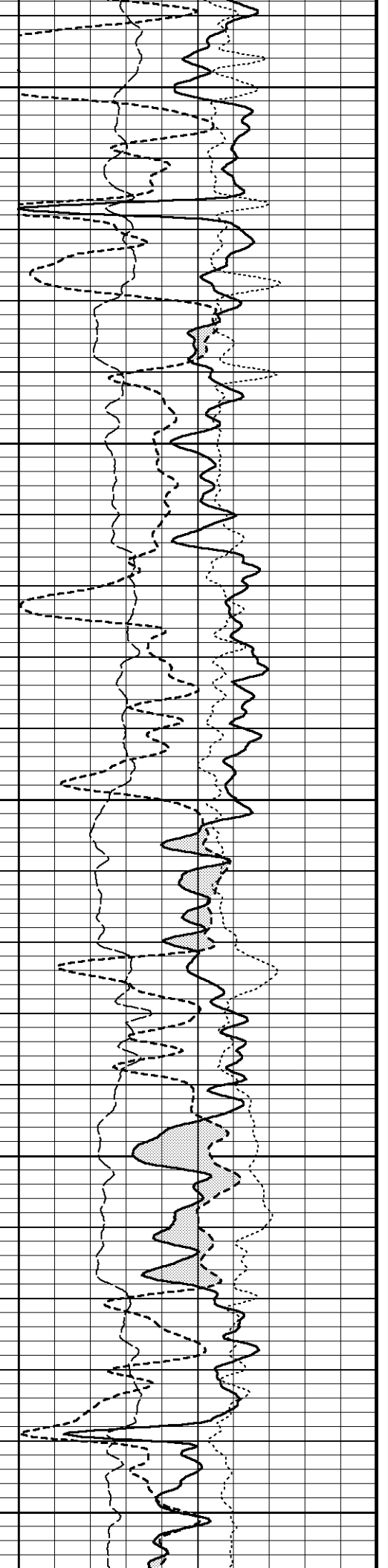
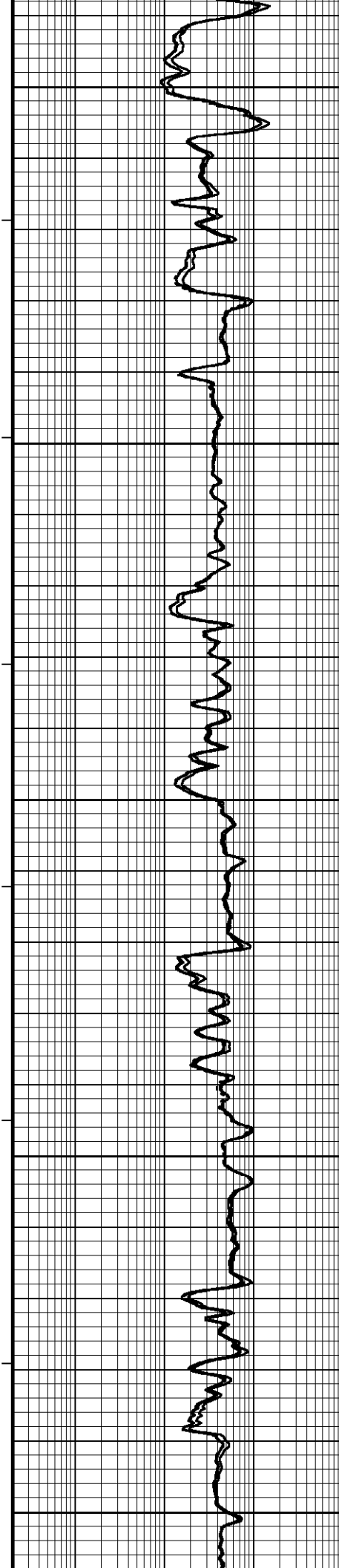
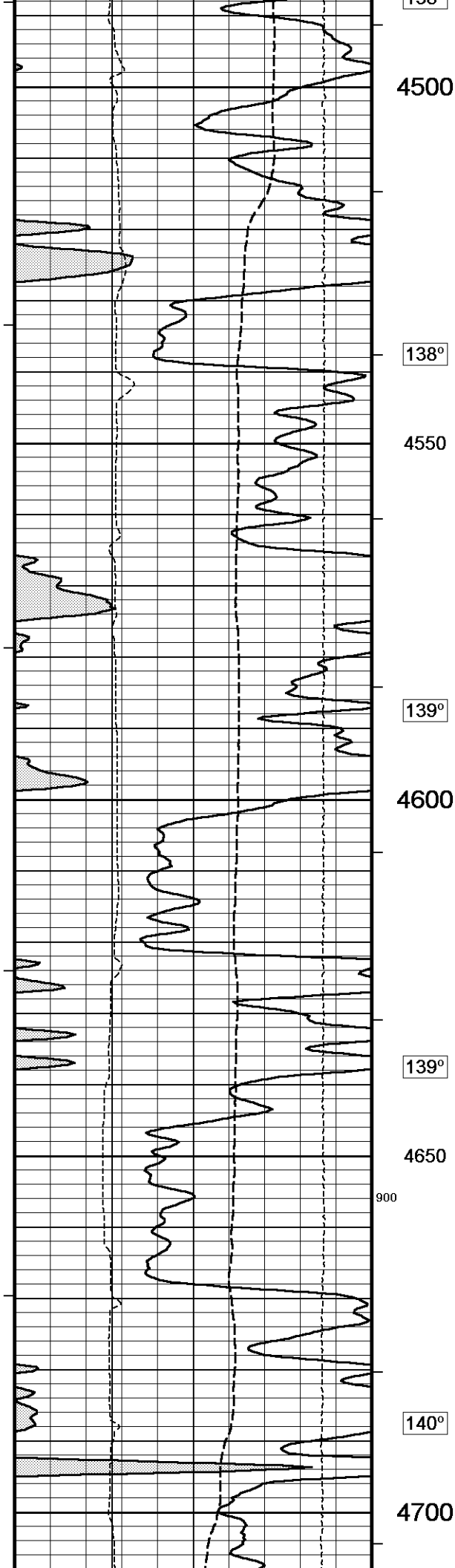


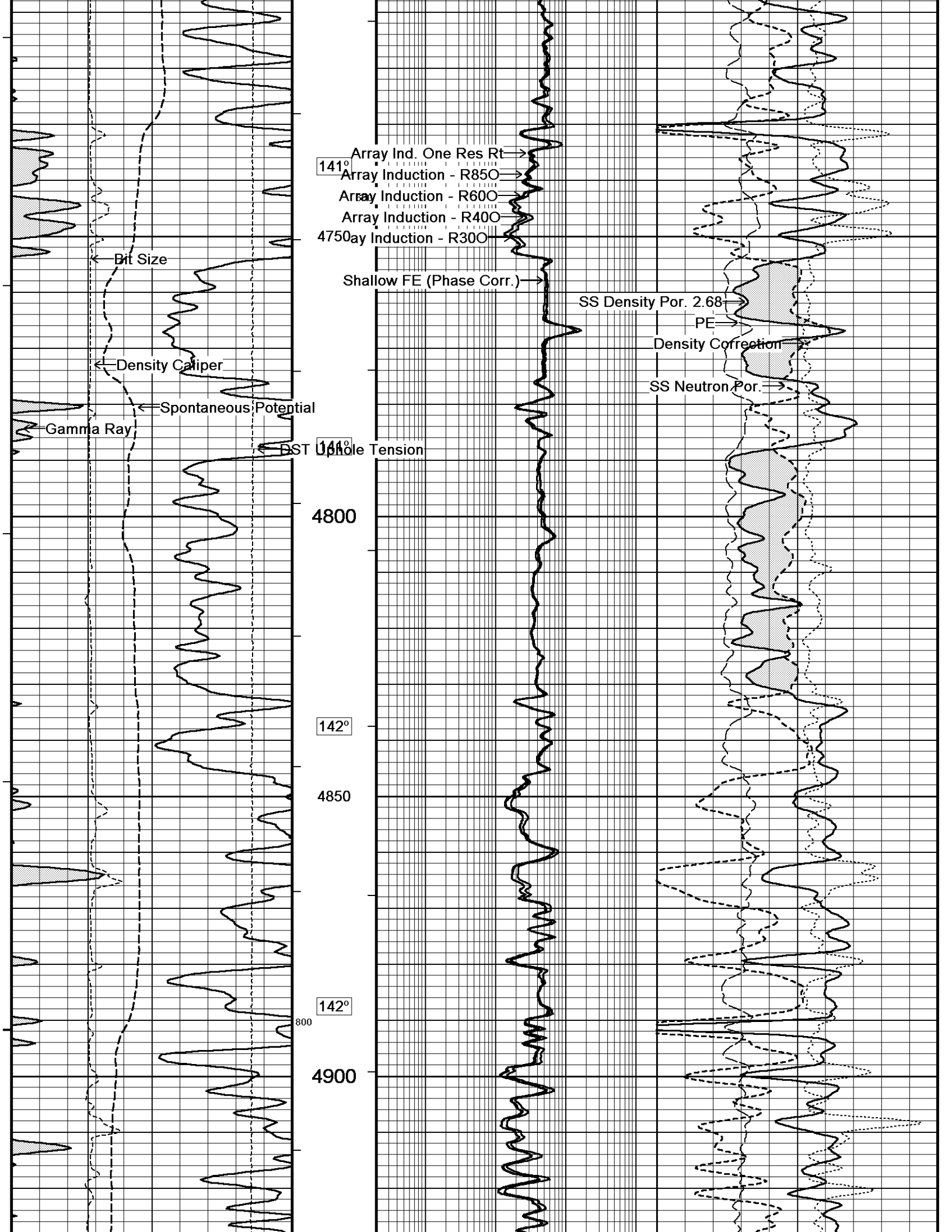


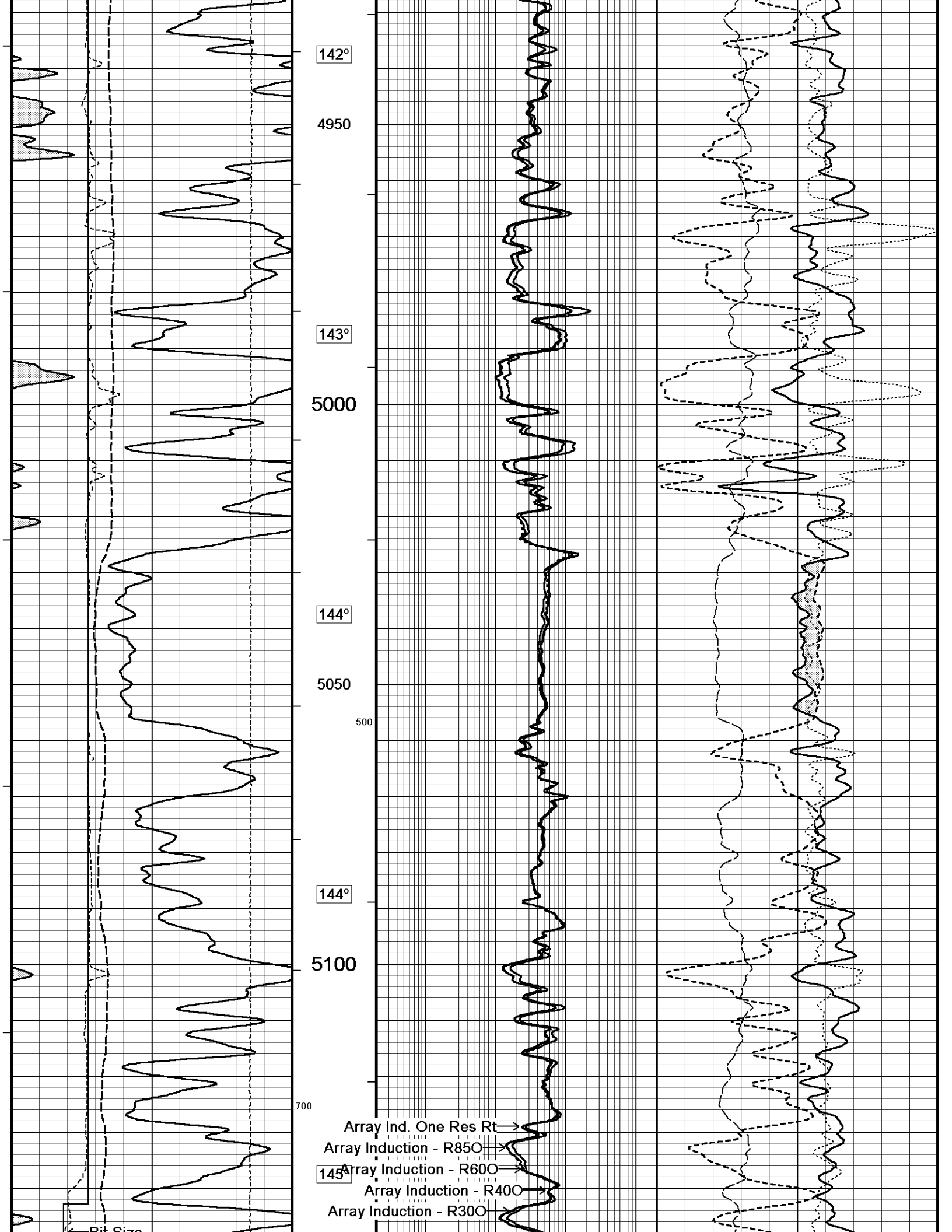
4050
133°
4100₈₀₀
134°
4150
1100
134°
4200
135°
4250

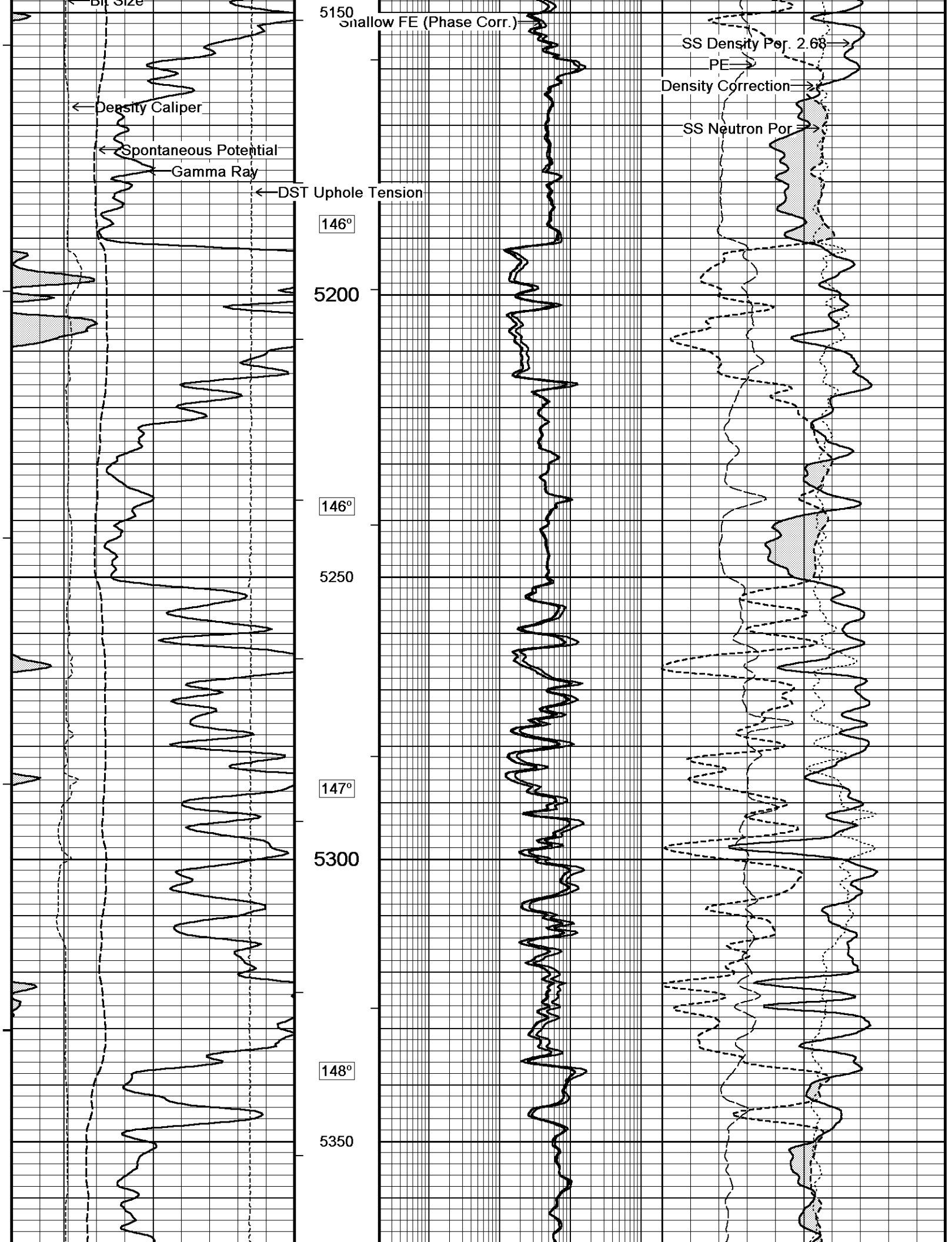


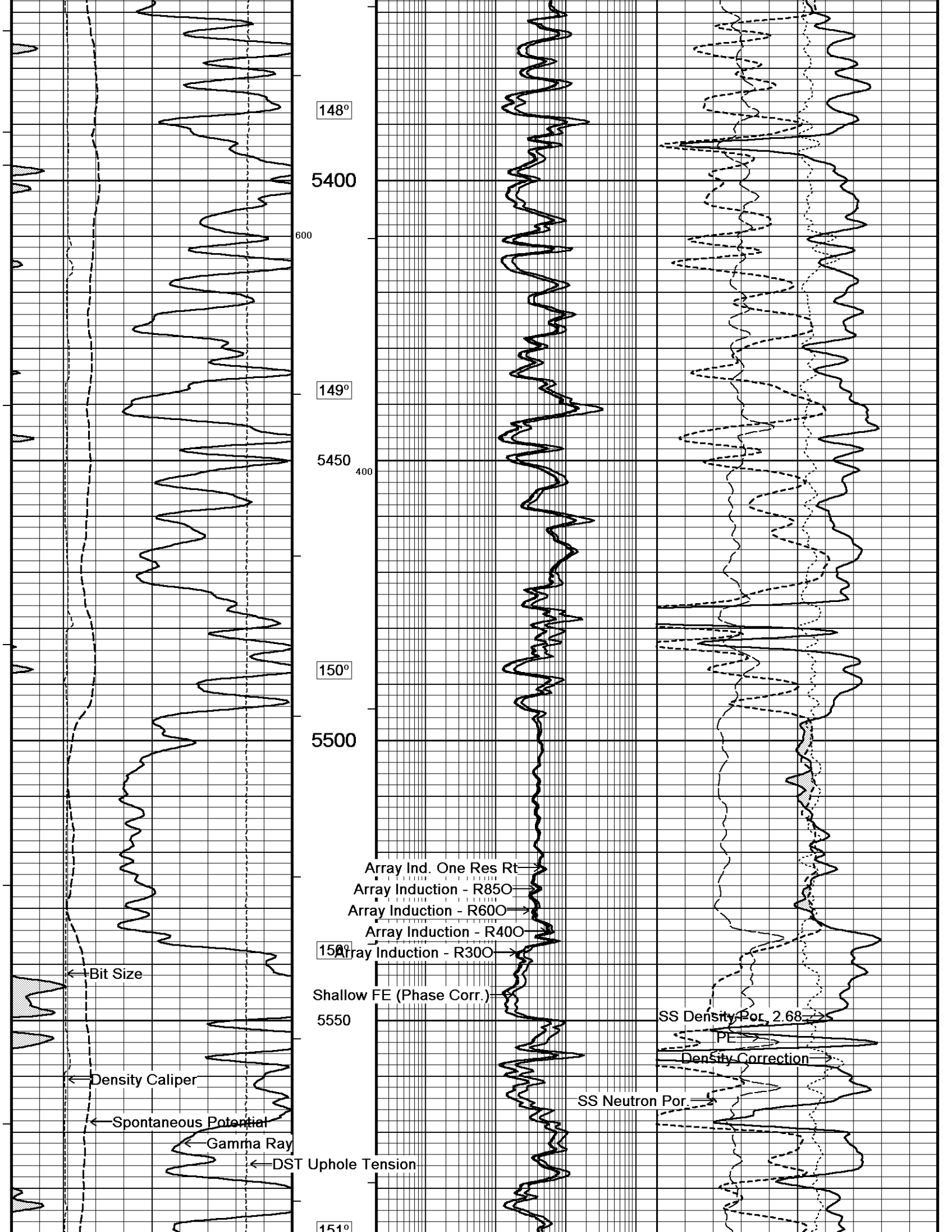


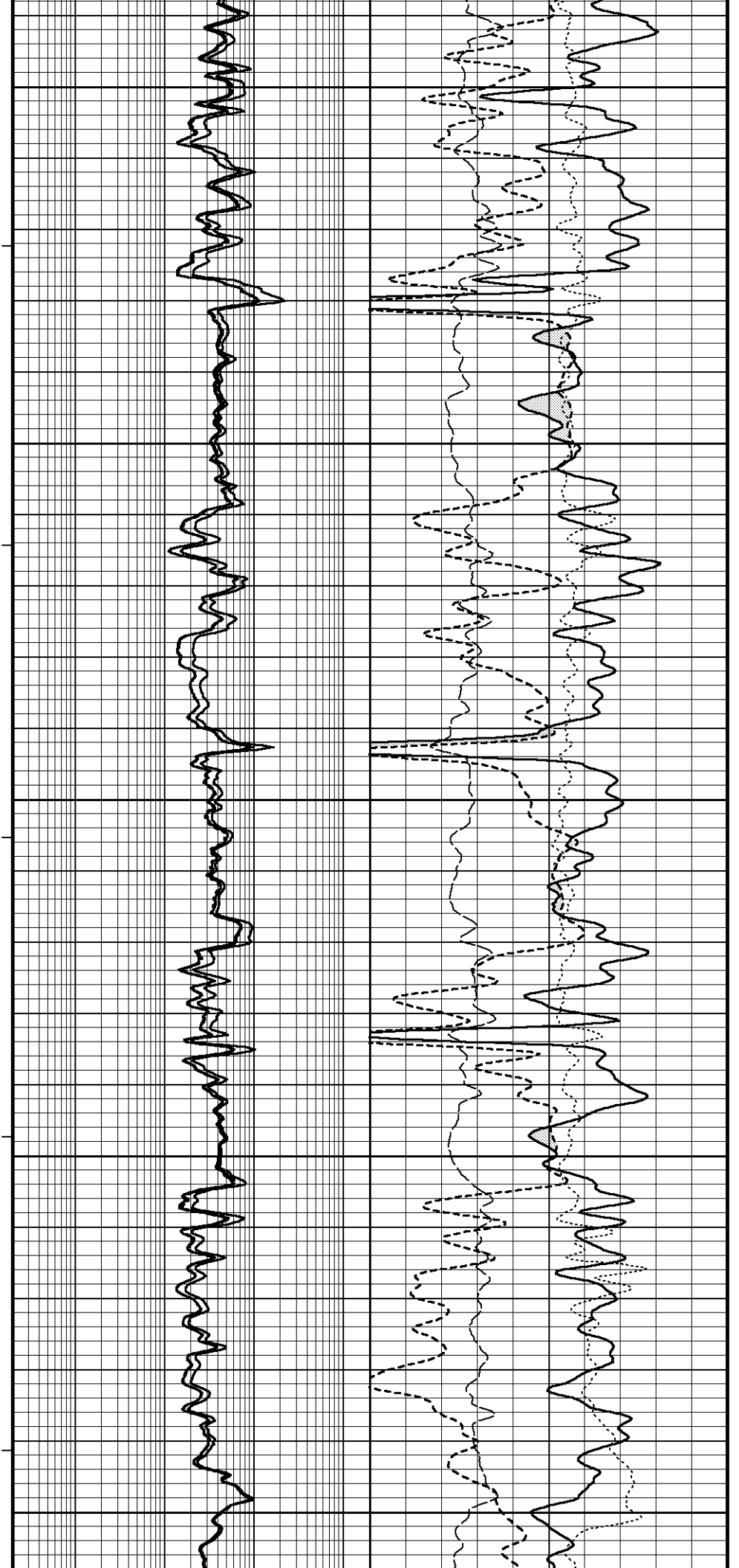
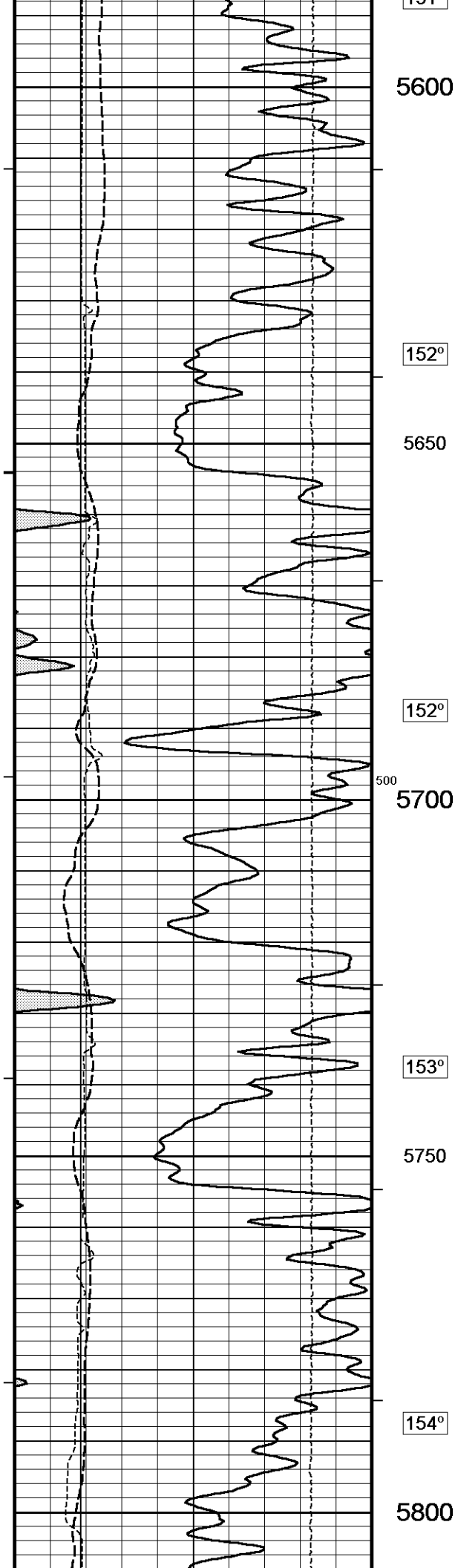


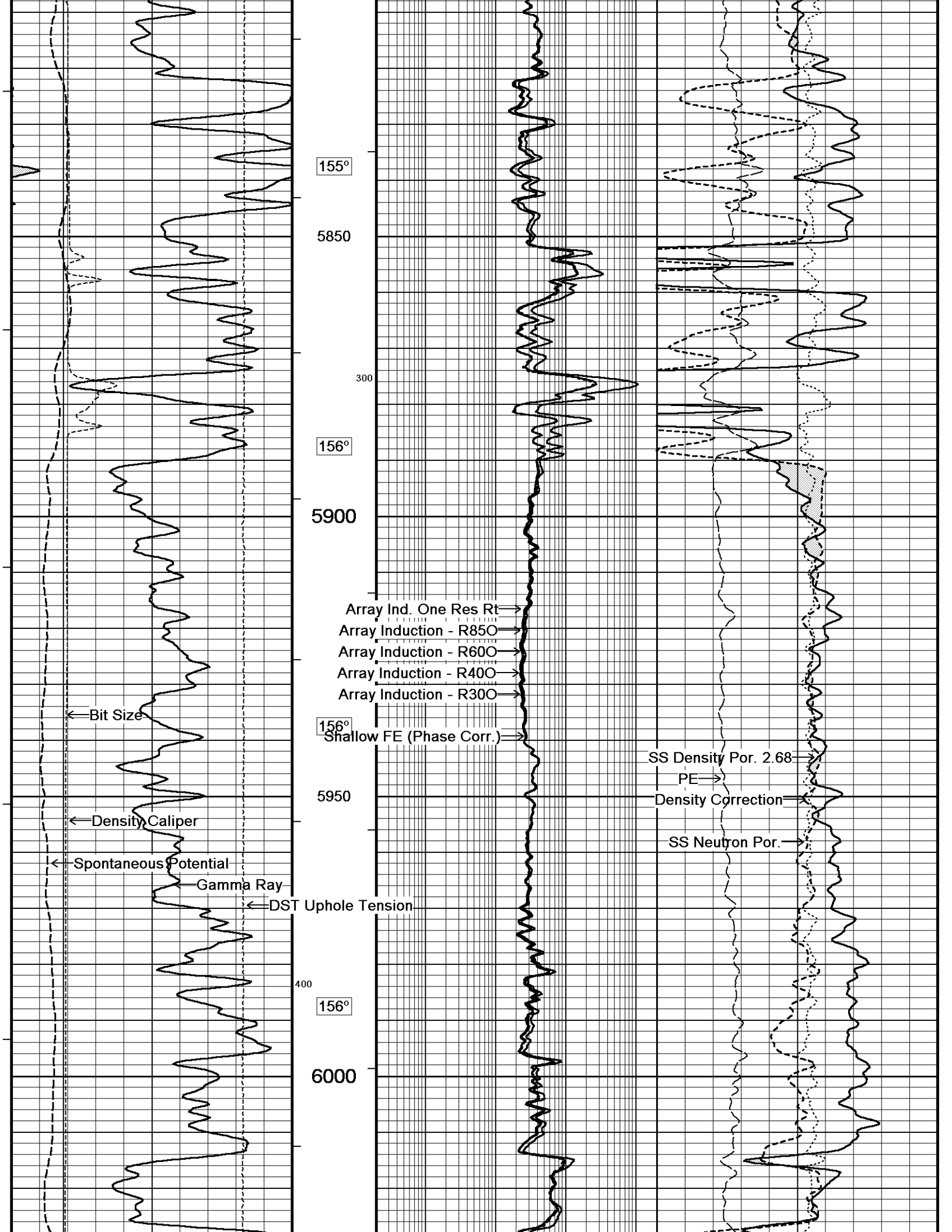


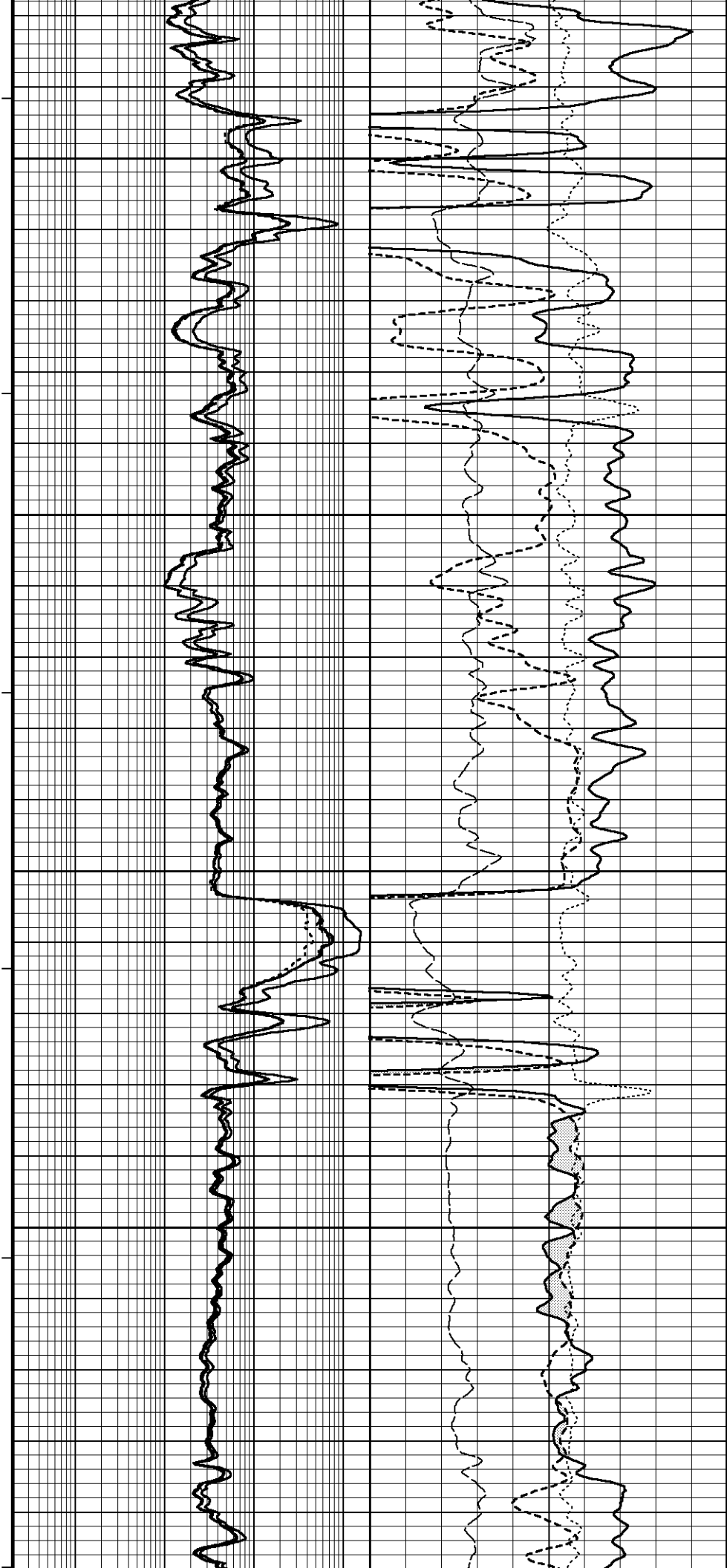
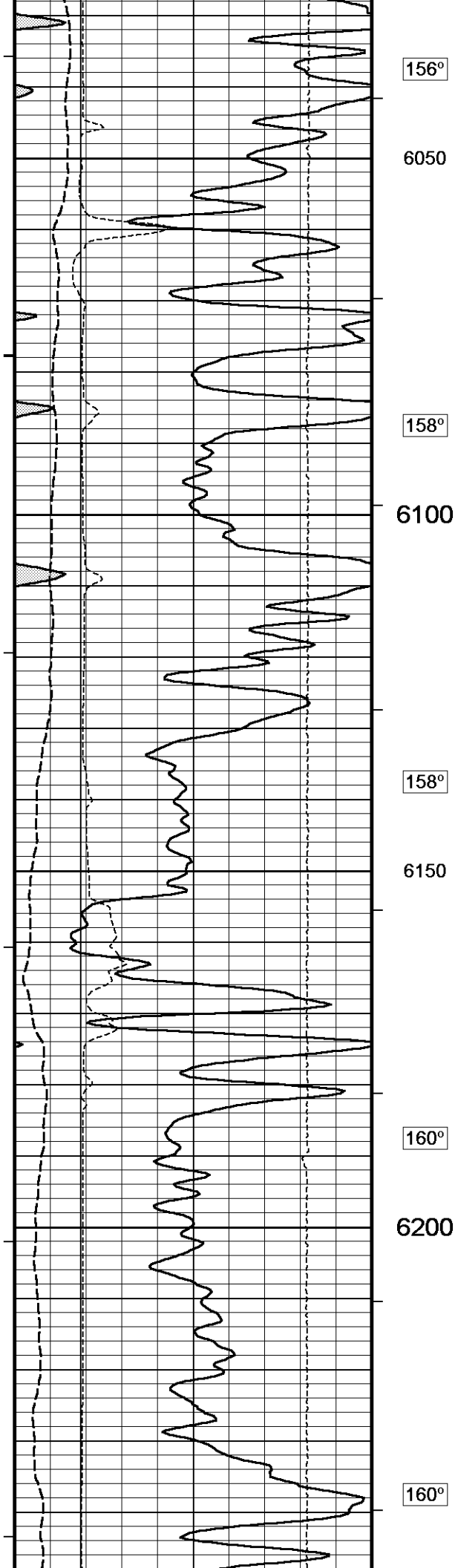


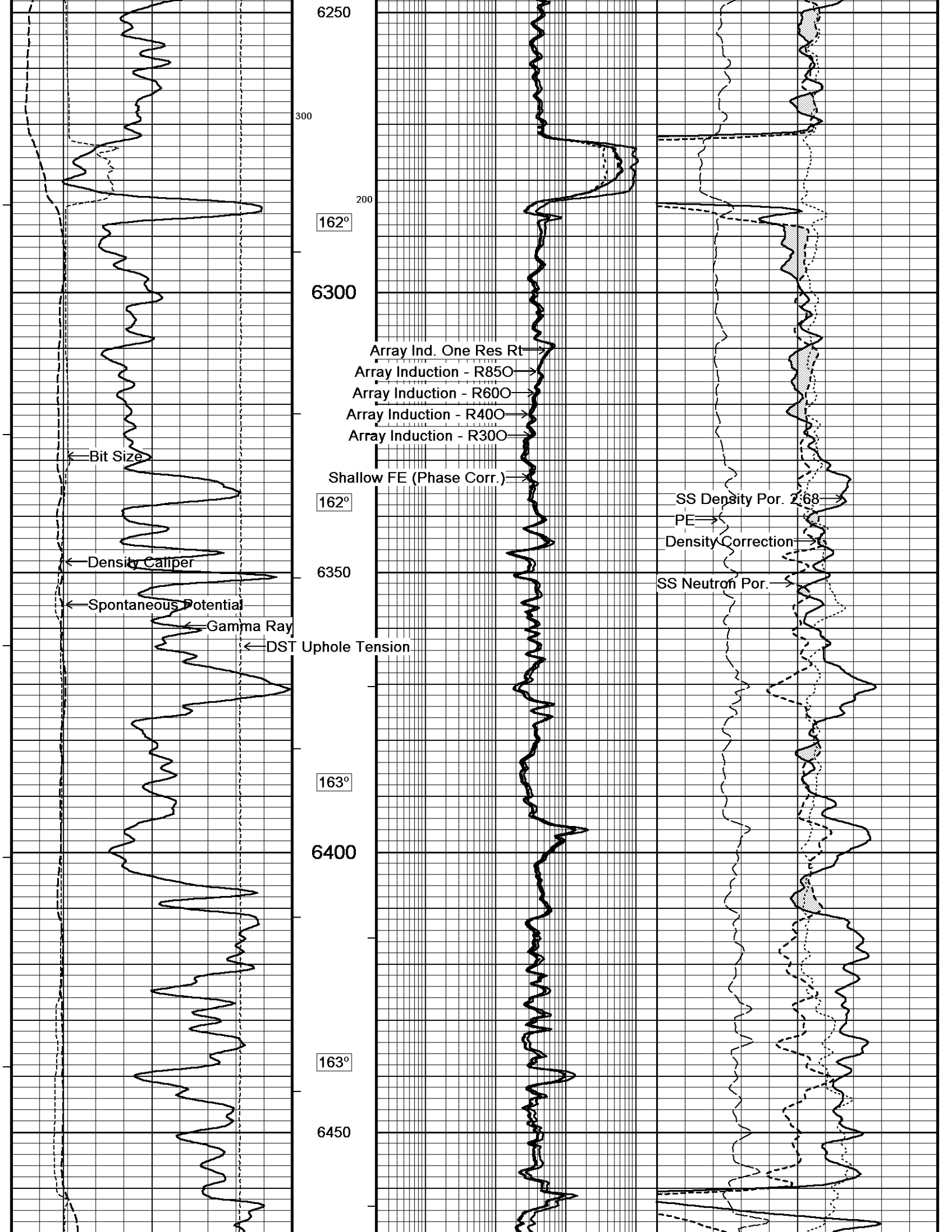


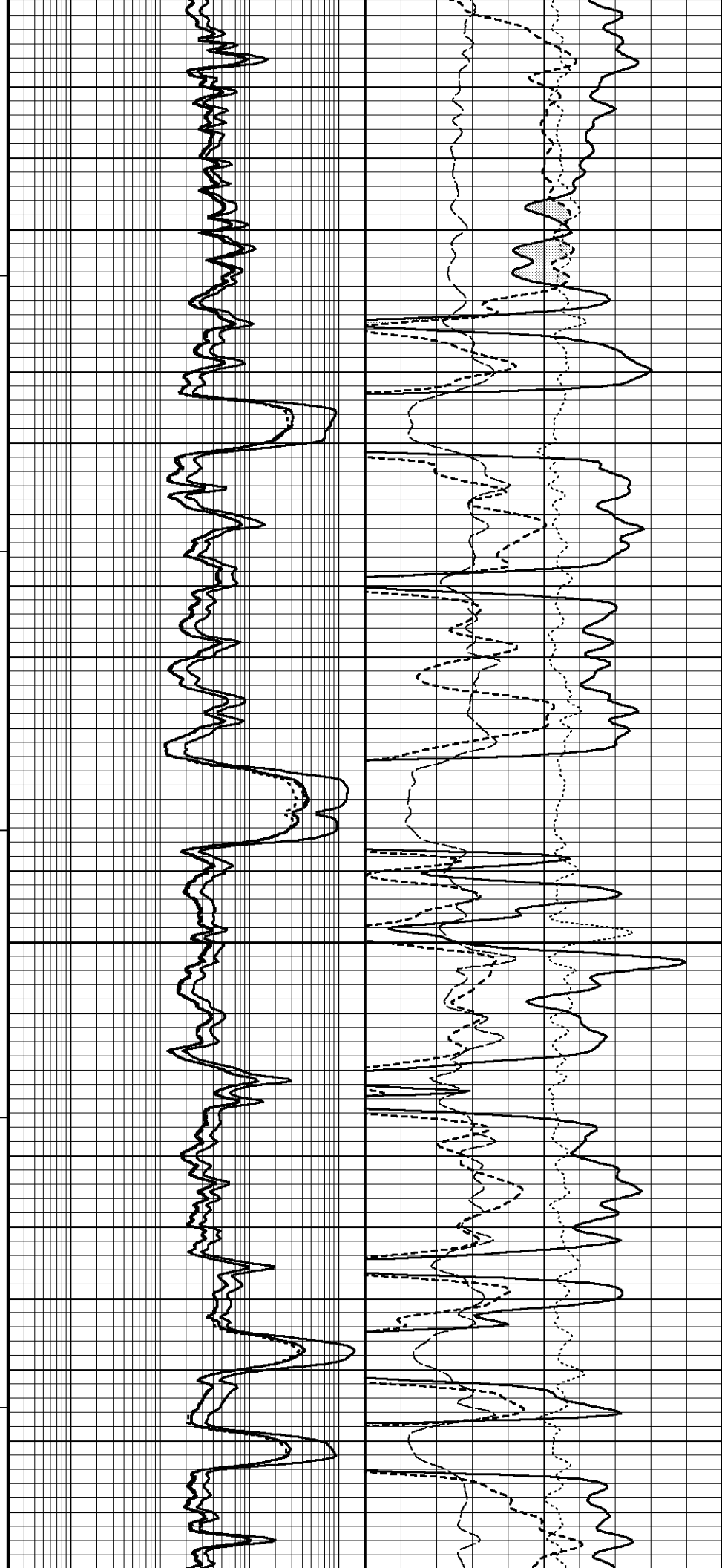
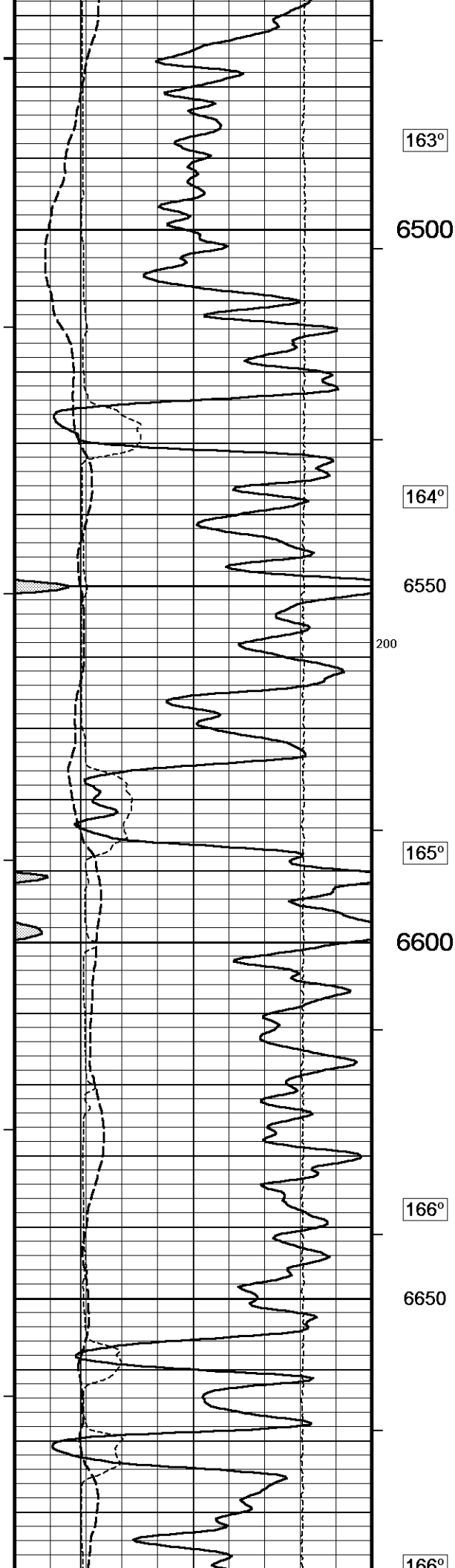


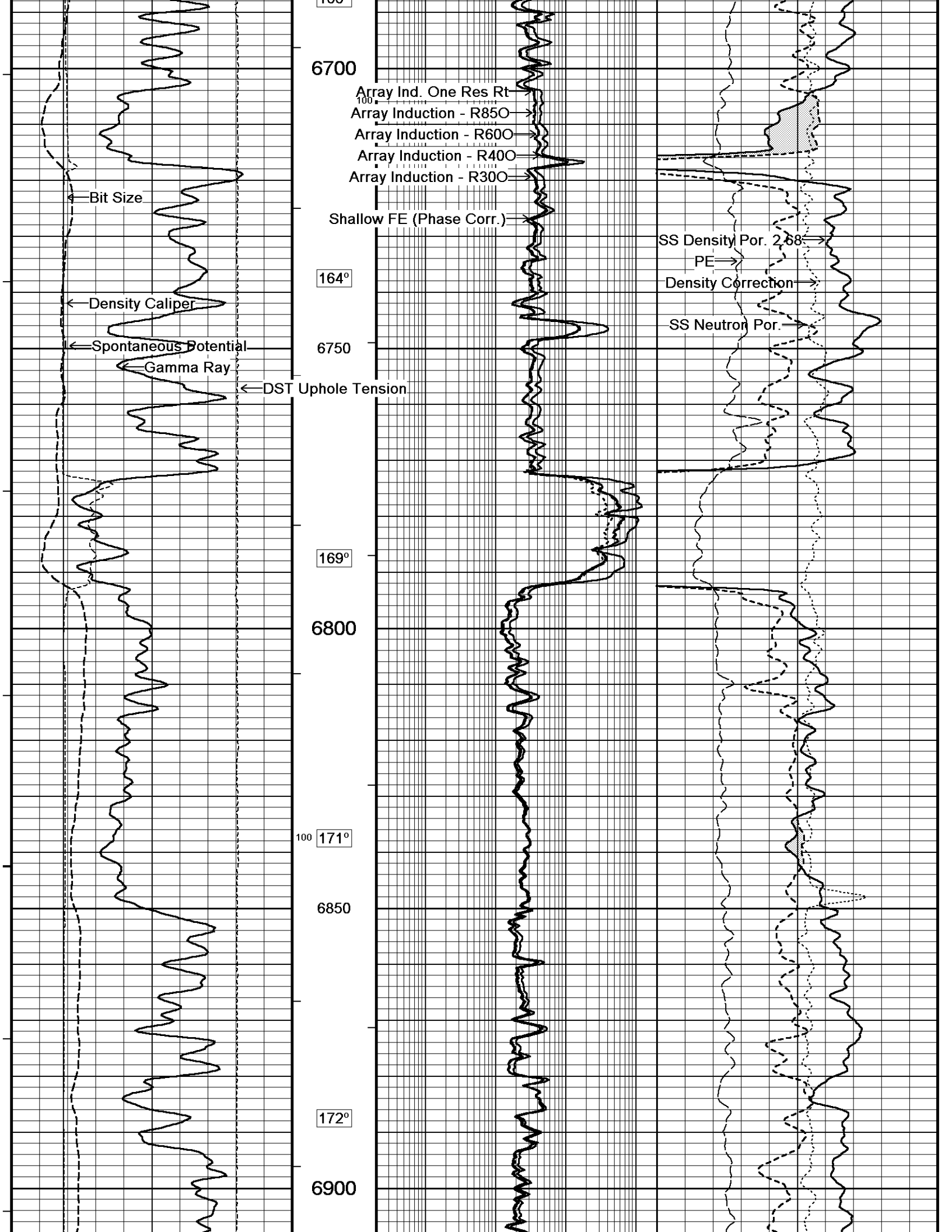


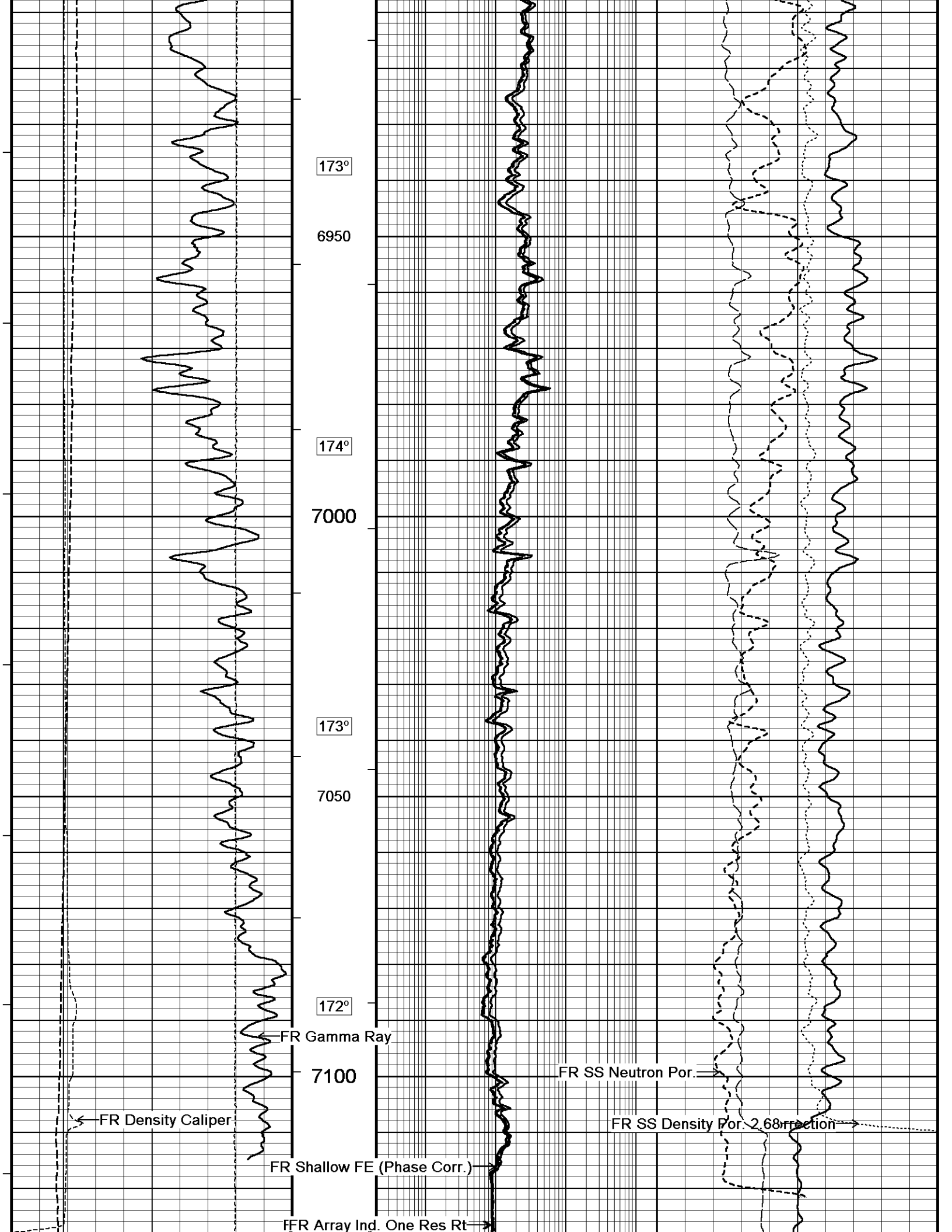


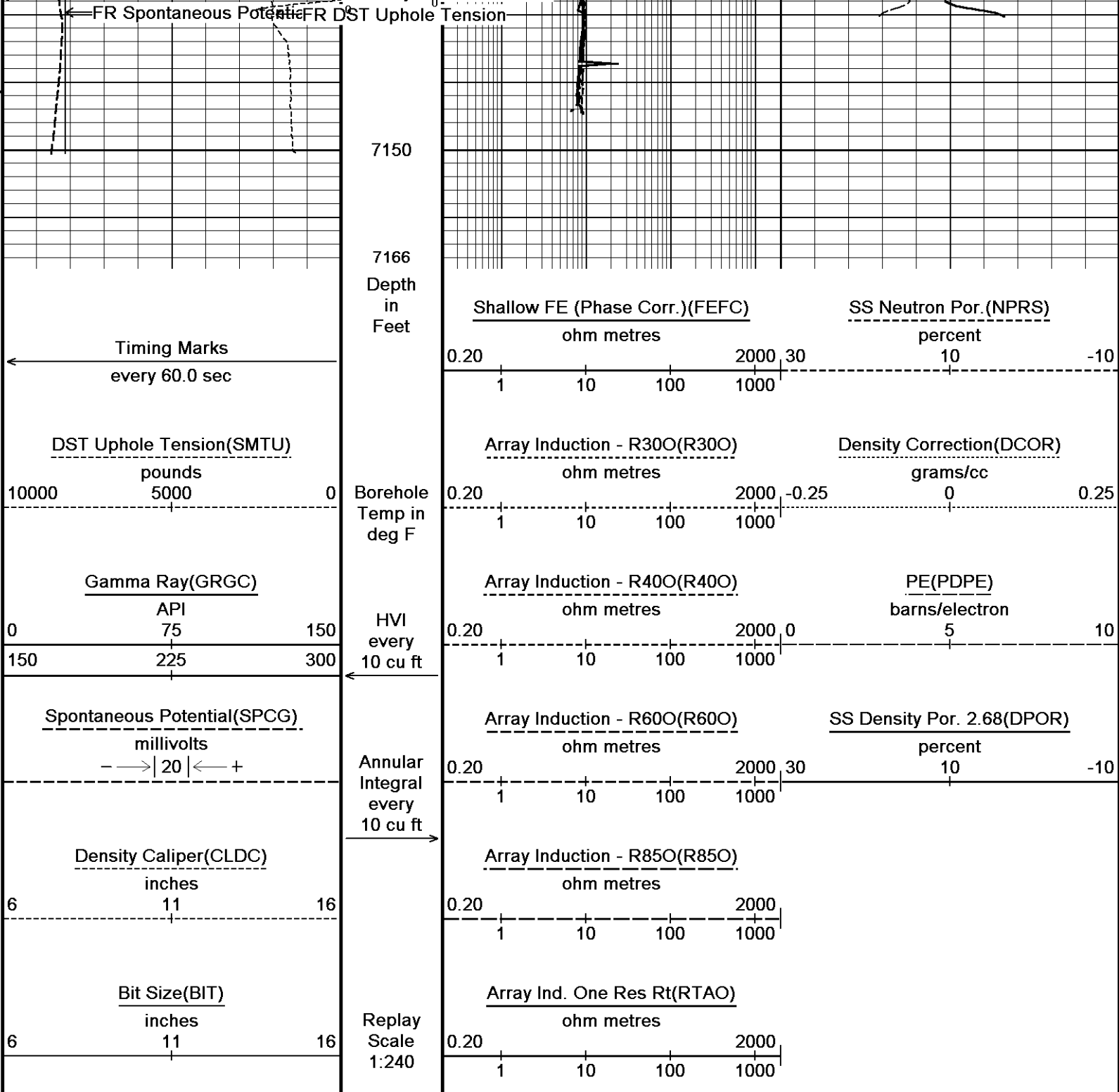








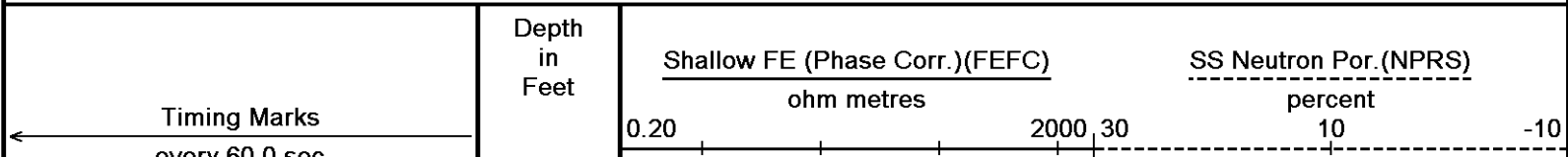




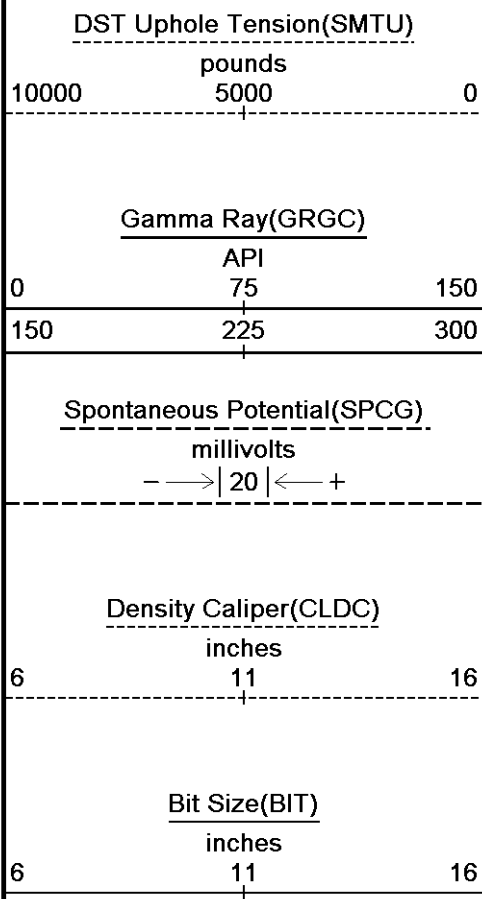
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus\Logs\Bill Barrett\Miller 33C-6-791\MAIN.dta
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus\Logs\Bill Barrett\Miller 33C-6-791\MAIN.dta
Filename: C:\Minimus\Logs\Bill Barrett\Miller 33C-6-791\REPEAT.dta
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198



every 00.0 sec



Borehole
Temp in
deg F

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:240

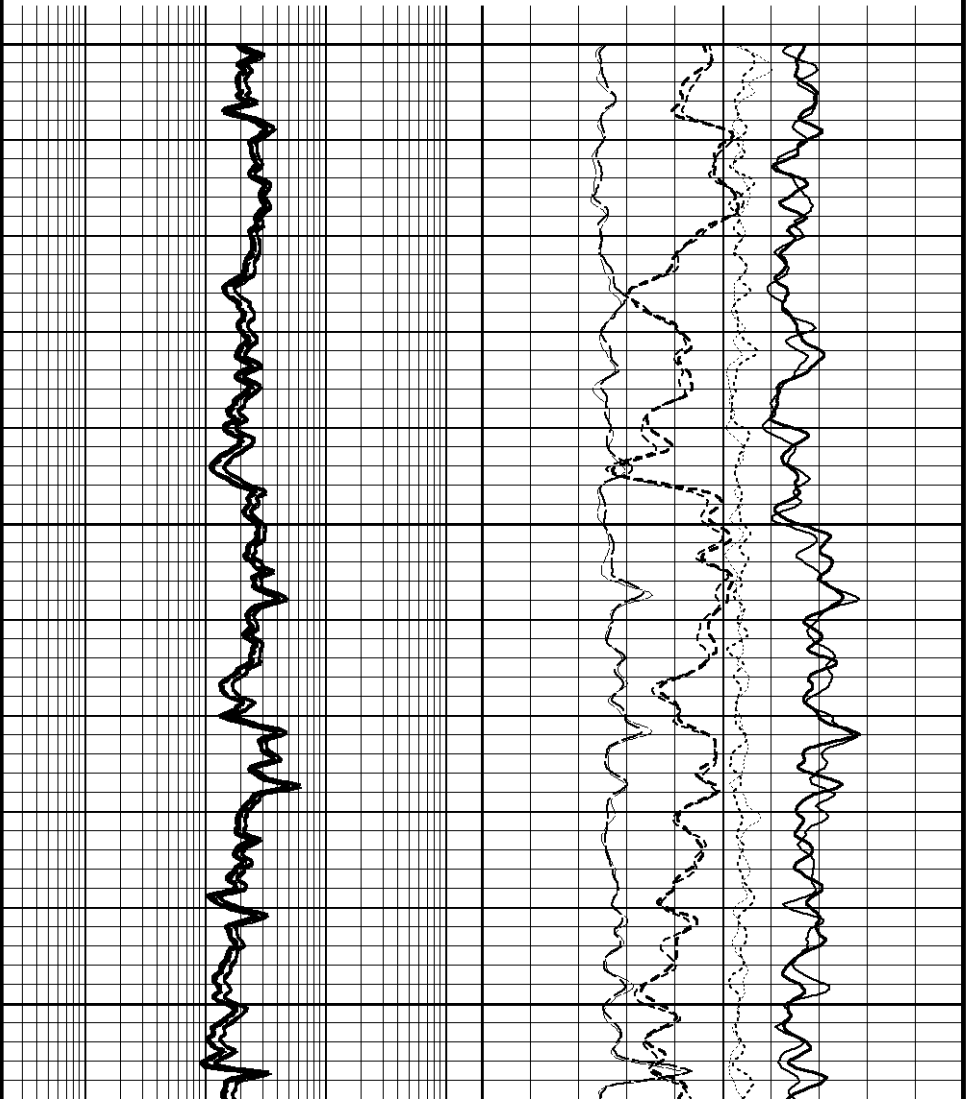
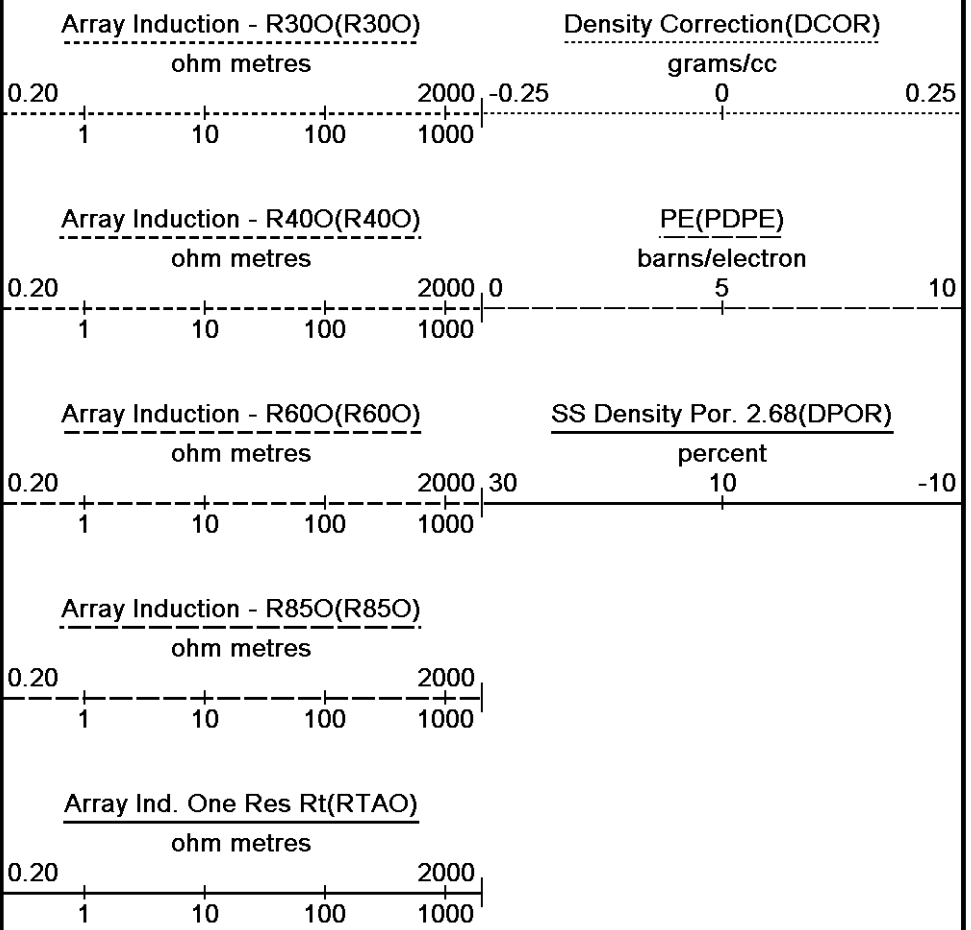
6900

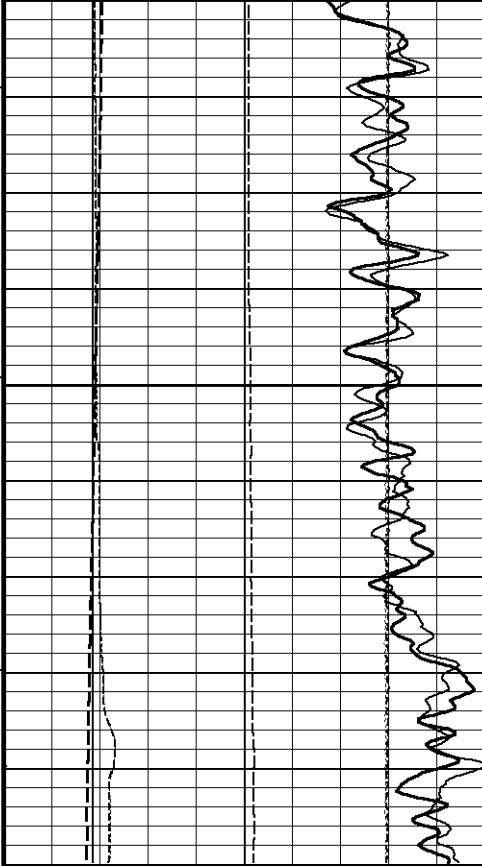
173°

6950

174°

7000





173°

7050

172°

7100

7114

Depth
in
Feet

Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)

pounds

10000 5000 0

Borehole
Temp in
deg F

Gamma Ray(GRGC)

API

0 75 150

150 225 300

HVI
every
10 cu ft

Spontaneous Potential(SPCG)

millivolts

- -> | 20 | <- +

Annular
Integral
every
10 cu ft

Density Caliper(CLDC)

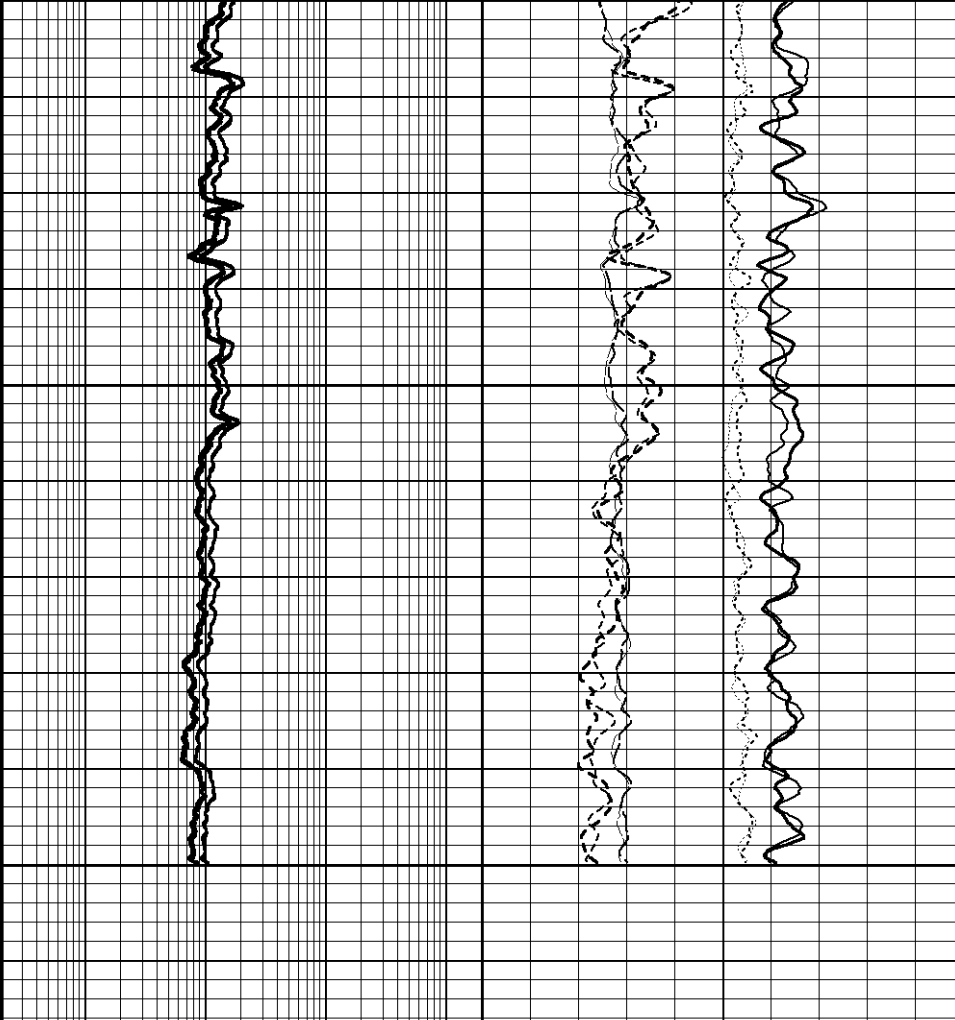
inches

6 11 16

Bit Size(BIT)

inches

Replay



Shallow FE (Phase Corr.)(FEFC)

ohm metres

0.20 1 10 100 1000 2000 30

SS Neutron Por.(NPRS)

percent

10 -10

Array Induction - R30O(R30O)

ohm metres

0.20 1 10 100 1000 2000 -0.25

Density Correction(DCOR)

grams/cc

0 0.25

Array Induction - R40O(R40O)

ohm metres

0.20 1 10 100 1000 2000 0

PE(PDPE)

barns/electron

5 10

Array Induction - R60O(R60O)

ohm metres

0.20 1 10 100 1000 2000 30

SS Density Por. 2.68(DPOR)

percent

10 -10

Array Induction - R85O(R85O)

ohm metres

0.20 1 10 100 1000 2000

Array Ind. One Res Rt(RTAO)

ohm metres

Base Calibration

| | Measured | | Calibrated (cps) | |
|-------|----------|-----|------------------|-----|
| | Near | Far | Near | Far |
| | 3208 | 98 | 3714 | 110 |
| Ratio | 32.812 | | 33.764 | |

Field Calibrator at Base

| | Calibrated (cps) |
|-------|------------------|
| | 1323 1983 |
| Ratio | 0.667 |

Field Check

| | Calibrated (cps) |
|-------|------------------|
| | 1308 1959 |
| Ratio | 0.668 |

Neutron Constants MDN-A.B 160

Last Edited on 21-JAN-2011,20:18

| | | |
|---------------------------------|-------------|-----------|
| Neutron Source Id | 1056 | |
| Neutron Jig Number | 5922 | |
| Epithermal Neutron | No | |
| Caliper Source for Processing | Bit Size | |
| 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 | |

FE Calibration MFE-A.A 85

Base Calibration on 04-JAN-2011 14:22

Field Check on 21-JAN-2011 21:12

Base Calibration

| | Measured | Calibrated (ohm-m) |
|-------------|----------|--------------------|
| Reference 1 | 0.0 | 0.0 |
| Reference 2 | 968.2 | 126.8 |
| Base Check | | 280.9 |
| Field Check | | 280.8 |

FE Constants MFE-A.A 85

Last Edited on 21-JAN-2011,21:10

| | | |
|----------------------------------|--------------------------|--------|
| 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.A 212

Field Calibration on 21-JAN-2011,21:15

| | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 10.00 | 50.00 |
| Upper | 100.00 | 212.00 |

High Resolution Temperature Constants MAI-B.A 212

Last Edited on 03-JAN-2011,01:08

| | |
|-------------------|----|
| Pre-filter Length | 11 |
|-------------------|----|

Induction Calibration MAI-B.A 212

Base Calibration on 12-NOV-2010,10:48

Field Check on 21-JAN-2011 21:14

Base Calibration

| Test Loop Calibration | | Measured | | Calibrated (mmho/m) | |
|-----------------------|--|----------|-------|---------------------|-------|
| Channel | | Low | High | Low | High |
| 1 | | 16.6 | 473.9 | 9.3 | 966.2 |
| 2 | | 6.2 | 387.5 | 7.6 | 821.4 |

| | | | | |
|-------------------|-----|---------------------|--------|----------------------|
| 2 | 0.2 | 307.3 | 7.0 | 021.4 |
| 3 | 3.9 | 263.1 | 5.2 | 566.0 |
| 4 | 2.0 | 132.9 | 2.6 | 279.2 |
| Array Temperature | | 71.2 | Deg F | |
| Channel | | Base Check (mmho/m) | | Field Check (mmho/m) |
| | | Low | High | Low High |
| 1 | | 12.0 | 3844.2 | 14.7 3846.0 |
| 2 | | 29.2 | 3492.6 | 30.1 3491.5 |
| 3 | | 27.3 | 3024.9 | 27.8 3023.8 |
| 4 | | 19.5 | 2089.0 | 19.7 2087.9 |
| Deep | | 16.9 | 2015.8 | 17.2 2015.1 |
| Medium | | 39.4 | 3943.0 | 39.9 3941.2 |
| Shallow | | 43.4 | 5106.6 | 44.9 5105.0 |
| Array Temperature | | 35.9 | 71.8 | Deg F |

| | | | | | |
|--|--------|--------------------------|-------------|----------------------------------|--|
| Induction Constants MAI-B.A 212 | | | | Last Edited on 21-JAN-2011,21:15 | |
| 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 | | 0.0000 | | 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-B 167 | | | Base Calibration on 21-JAN-2011 16:11 |
| | | | Field Calibration on 21-JAN-2011 16:13 |
| Base Calibration | | | |
| Reading No | Measured | Calibrator Size (in) | |
| 1 | 18525 | 4.00 | |
| 2 | 27040 | 5.96 | |
| 3 | 34832 | 7.98 | |
| 4 | 43072 | 9.86 | |
| 5 | 52544 | 11.88 | |
| 6 | N/A | N/A | |
| Field Calibration | | | |
| | Measured Caliper (in) | Actual Caliper (in) | |
| | 6.05 | 5.96 | |

Photo Density Calibration MPD-B 167

Base Calibration on 21-JAN-2011 15:55

Field Check on 21-JAN-2011 16:20

Density Calibration

Base Calibration

| | Measured | | Calibrated (sdu) | |
|-------------|----------|-------|------------------|-------|
| | Near | Far | Near | Far |
| Reference 1 | 48339 | 18513 | 53115 | 19186 |
| Reference 2 | 22777 | 3049 | 25020 | 2536 |

Field Check at Base

1168.2 1745.6

Field Check

1174.0 1746.6

PE Calibration

Base Calibration

| | WS | Measured | | Calibrated |
|-------------|-------|----------|-------|------------|
| | | WH | Ratio | Ratio |
| Background | 216 | 1046 | | |
| Reference 1 | 14699 | 48168 | 0.307 | 0.320 |
| Reference 2 | 5890 | 22643 | 0.263 | 0.272 |

Field Check at Base

216.3 1045.7

Field Check

213.1 1046.9

Density Constants MPD-B 167

Last Edited on 21-JAN-2011,20:20

| | |
|-------------------------------|-----------------|
| Density Source Id | P50561B |
| Nylon Calibrator Number | 507 |
| Aluminium Calibrator Number | 507 |
| Density Shoe Profile | 8 inch |
| Caliper Source for Processing | Density Caliper |
| PE Correction to Density | Not Applied |
| Mud Density | 1.23 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 |

AFTER SURVEY CALIBRATION

C:\Minimus\Logs\Bill Barrett\Miller 33C-6-791\MAIN.dta

Gamma Check MCG-C 192

Field Calibration on 21-JAN-2011 20:12

After Survey Check on 22-JAN-2011,02:07

| | Before (API) | After (API) |
|--------------------|--------------|-------------|
| Background | 60 | 60 |
| Calibrator (Gross) | 972 | 972 |
| Calibrator (Net) | 912 | 912 |

FE Check MFE-A.A 85

Before Survey Check 21-JAN-2011 21:12

After Survey Check on 22-JAN-2011 01:41

| Before (ohm-m) | After (ohm-m) |
|----------------|---------------|
| 280.8 | 280.8 |

Induction Check MAI-B.A 212

Before Survey Check on

| Channel | Before Survey (mmho/m) | | After Survey (mmho/m) | |
|-------------------|------------------------|------|-----------------------|--------|
| | Low | High | Low | High |
| 1 | 0.0 | 0.0 | 14.3 | 3844.7 |
| 2 | 0.0 | 0.0 | 29.8 | 3490.4 |
| 3 | 0.0 | 0.0 | 27.6 | 3022.9 |
| 4 | 0.0 | 0.0 | 19.6 | 2087.2 |
| Deep | 0.0 | 0.0 | 17.1 | 2014.5 |
| Medium | 0.0 | 0.0 | 39.6 | 3940.1 |
| Shallow | 0.0 | 0.0 | 44.4 | 5103.3 |
| Array Temperature | | 0.0 | | 68.3 |

Deg F

Photo Density Check MPD-B 167

Before Survey Check on 21-JAN-2011 16:20

After Survey Check on 22-JAN-2011 01:46

Density Check

| | Near | | Far | |
|--|--------|--------|--------|--------|
| | Before | After | Before | After |
| | 1174.0 | 1177.5 | 1746.6 | 1746.3 |

PE Check

| | Before | After |
|----|--------|--------|
| WS | 213.1 | 213.6 |
| WH | 1046.9 | 1052.6 |

DOWNHOLE EQUIPMENT

C:\Minimus\Logs\Bill Barrett\Miller 33C-6-791\MAIN.dta

3/8" Triple Cone Cable Head (MCB C A)

MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor

SHA-F 82 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Gamma

MCG-C 192 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron

MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper

MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

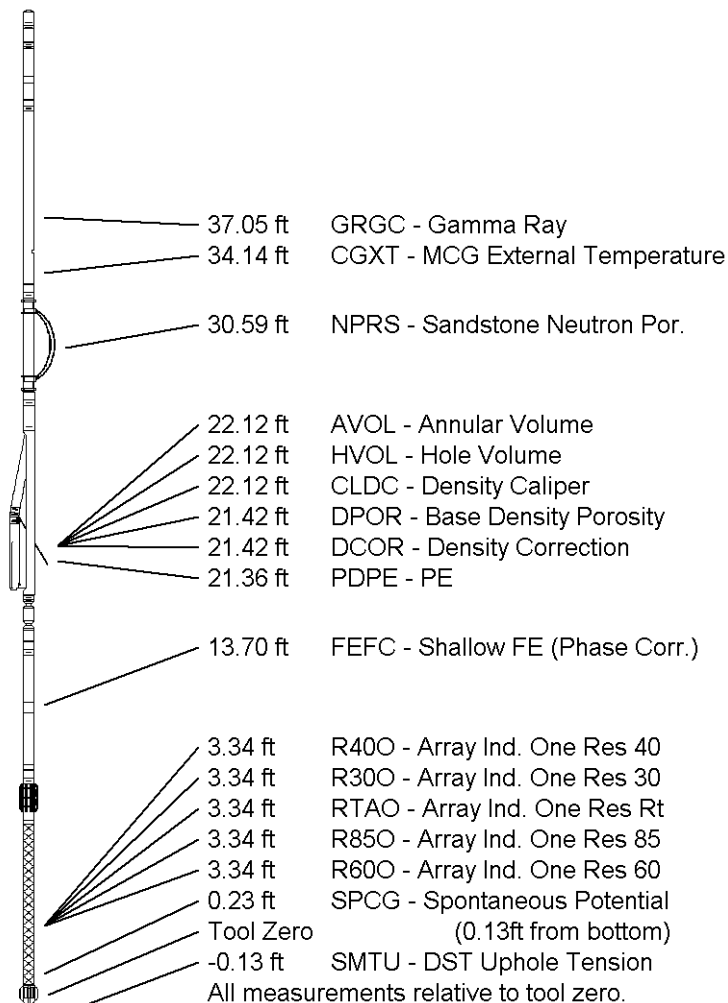
Compact Focussed Electric

MFE-A.A 85 LG: 6.03 ft WT: 48.5 lb OD: 2.24 in

Compact Induction

MAI-B.A 212 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 46.65 ft Weight: 368.2 lb



COMPANY
WELL
FIELD

BILL BARRETT CORPORATION
MILLER 33C-6-791
GIBSON CULCH

FIELD GIBSON GULCH
PROVINCE/COUNTY GARFIELD
COUNTRY/STATE U.S.A. / COLORADO

| | | | | | |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 6288.00 | feet | First Reading | 7130.00 | |
| Elevation Drill Floor | 6287.00 | feet | Depth Driller | 7135.00 | feet |
| Elevation Ground Level | 6266.00 | feet | Depth Logger | 7130.00 | feet |



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