COMPACT TRIPLE COMBO QUICKLOOK LOG

Weatherford®

COMPANY	BILL BARRETT CORPORATION
WELL	FEDERAL 32D-20-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO
LOCATION	SHL: 2600' FNL & 1750' FEL
	BHL: 1420' FNL & 1992' FEL

SEC	TWP	RGE	Other Services
20	6S	91W	

API Number 05-045-19680
Permit Number

Permanent Datum G.L., Elevation 5530 feet
Log Measured From KB
Drilling Measured From K.B. @ 23 FT.

Elevations:	feet
KB	5553.00
DF	5553.00
GL	5530.00

Date	12-JULY-2011			
Run Number	ONE			
Depth Driller	7875.00	feet		
Depth Logger	7866.00	feet		
First Reading	7866.00			
Last Reading	854.00			
Casing Driller	855.00	feet		
Casing Logger	854.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	LSND			
Density / Viscosity	10.10 lb/USg	50.00 CP		
PH / Fluid Loss	9.40	8.00 ml/30Min		
Sample Source	FLOW LINE			
Rm @ Measured Temp	2.70 @ 83.0	ohm-m		
Rmf @ Measured Temp	2.16 @ 83.0	ohm-m		
Rmc @ Measured Temp	3.24 @ 83.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.31 @174.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	174.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13173	GD JCT		
Recorded By	N. TAYLOR		O. GOYZUETA	
Witnessed By	C. CROWTON			

BOREHOLE RECORD

Last Edited: 17-JUL-2011 07:50

Bit Size inches	Depth From feet	Depth To feet
8.750	854.00	5270.00
7.880	5270.00	7866.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	854.00	36.00

REMARKS

LOGGING SOFTWARE USED: 11.03.3657

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

HARDWARE: MPD: 8 INCH PROFILE PLATE USED.
TWO 0.5 INCH STANDOFFS USED ON INDUCTION.
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.

BOREHOLE CONDITIONS REQUIRED MULTIPLE REPEAT PASSES. AS SUCH, TWO OVERLAYS ARE SHOWN.

CALIPER CHECK IN CASING PRESENTED. REFERENCE I.D. = 9.02" (9 5/8", 36 LB/FT CASING)

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

8.75 INCH BIT CHANGE AT 5270 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3240 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2470 CU.FT.

ENGINEER(S): N. TAYLOR, O. GOYZUETA

OPERATOR(S): S. KAISER

SERVICE ORDER: # 3531828

RIG: NABORS #37

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Main.dta
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657

Plotted on 17-JUL-2011 08:46
Recorded on 17-JUL-2011 05:08

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0
0 -5000 -10000

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
– → | 20 | ← +

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth In Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

842

Casing Shoe 850'

Shallow FE (Phase Corr.)
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 85
ohm metres
0.20 2000
1 10 100 1000

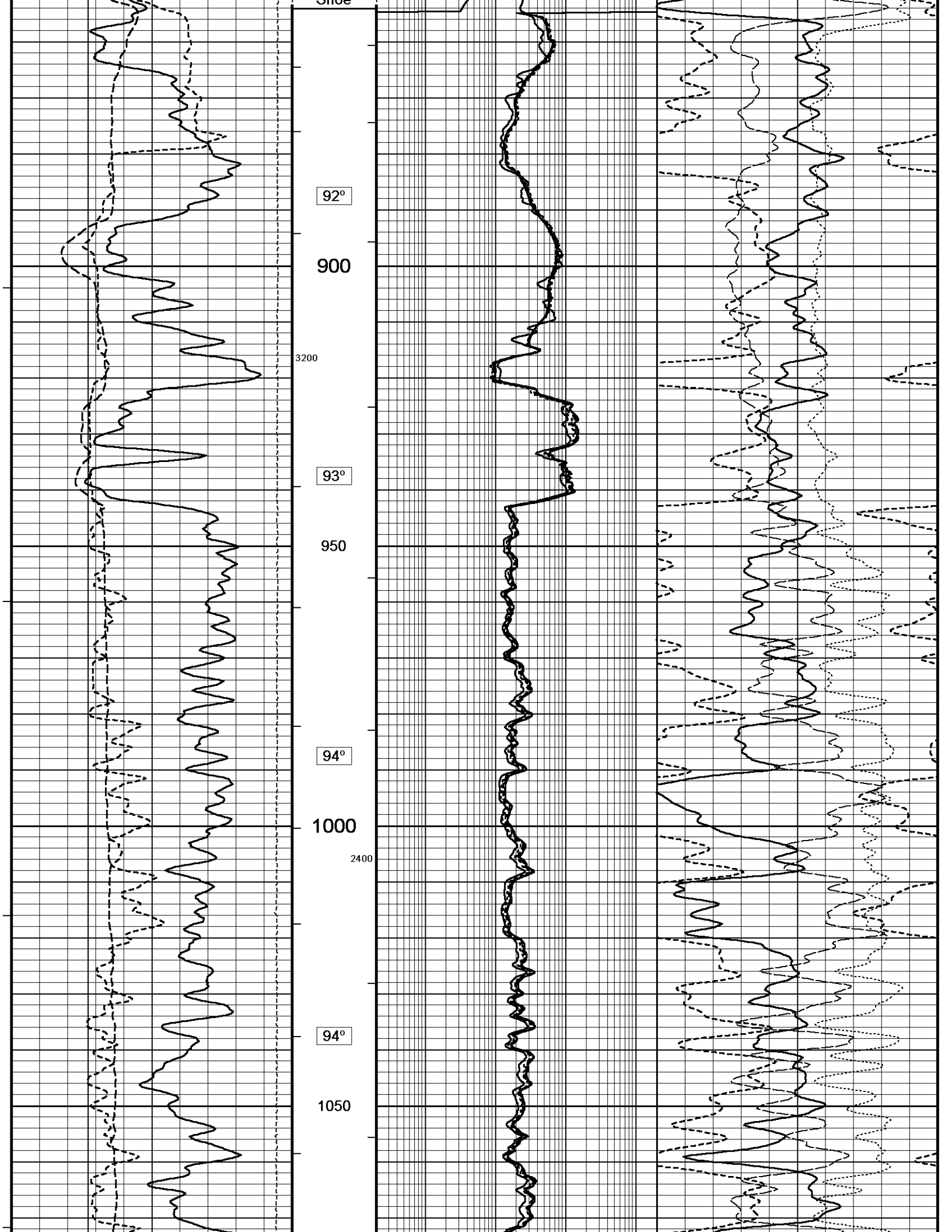
Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

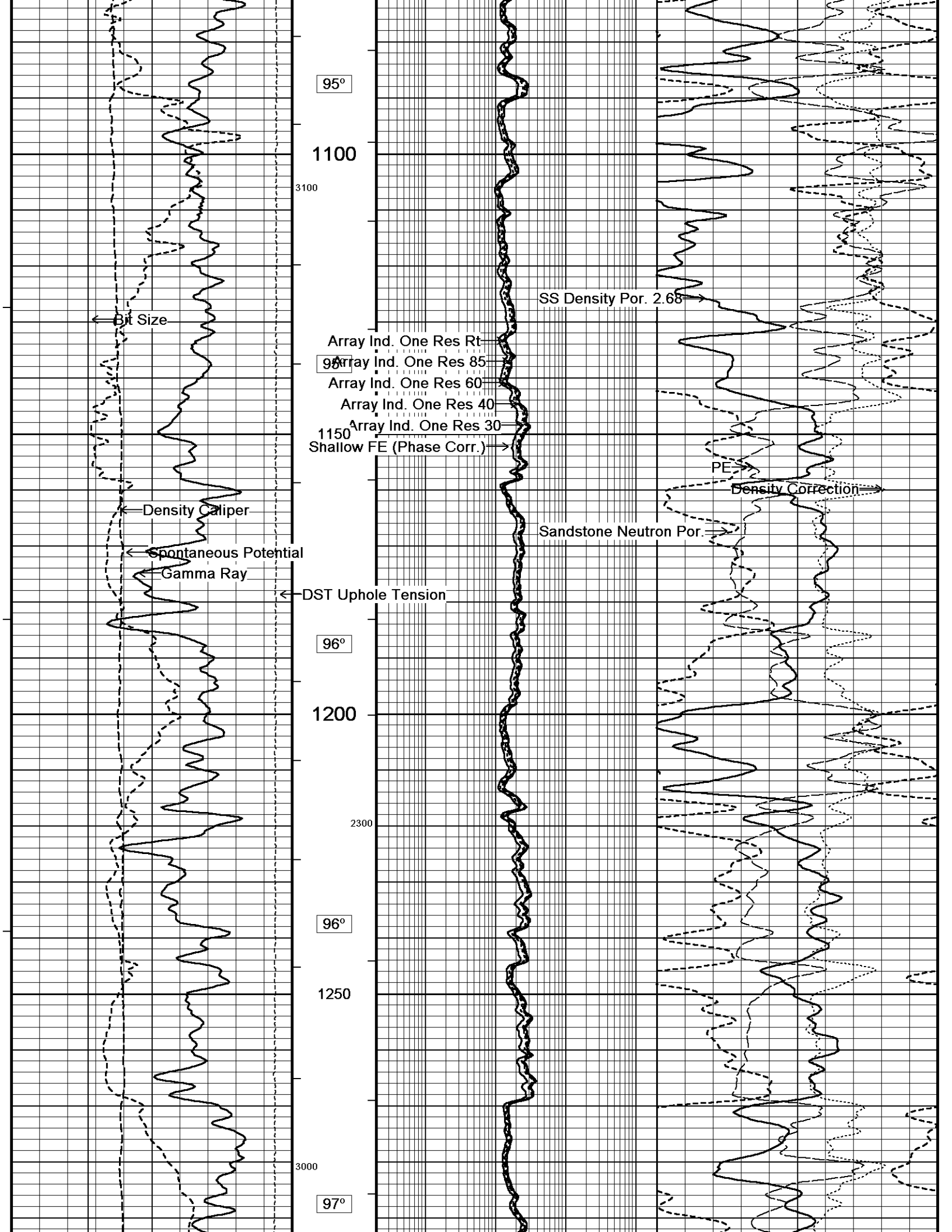
Sandstone Neutron Por.
percent
30 10 -10

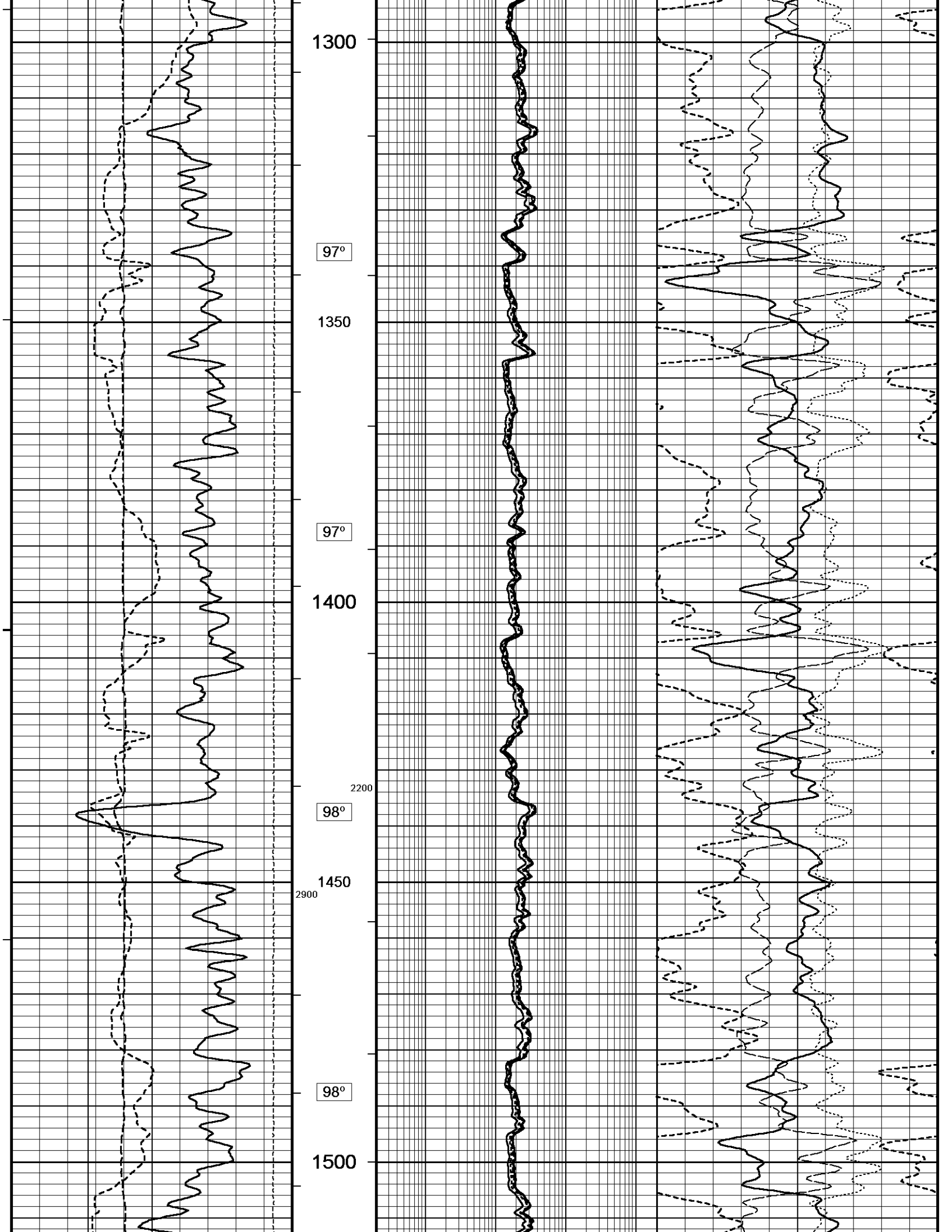
Density Correction
grams/cc
-0.25 0 0.25

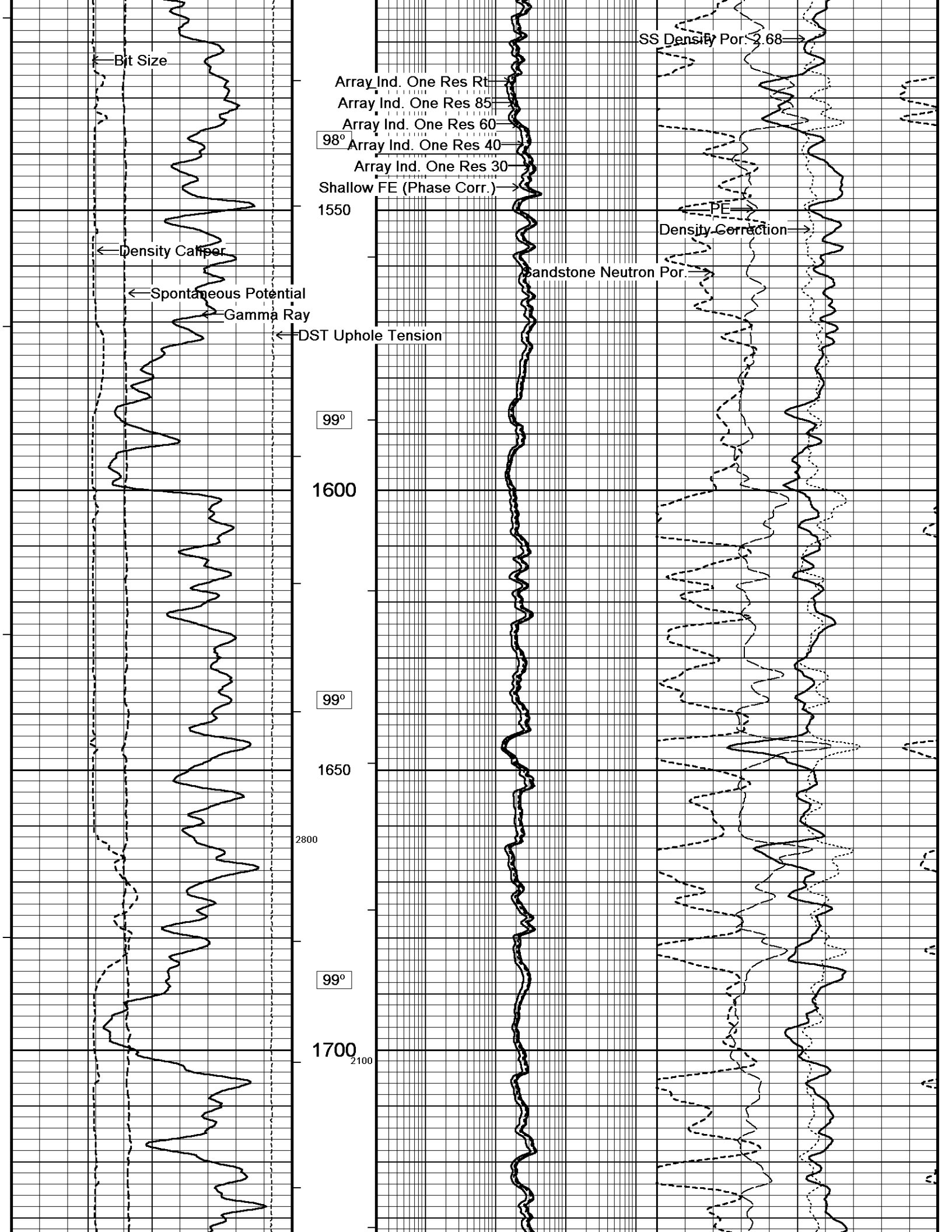
PE
barns/electron
0 5 10

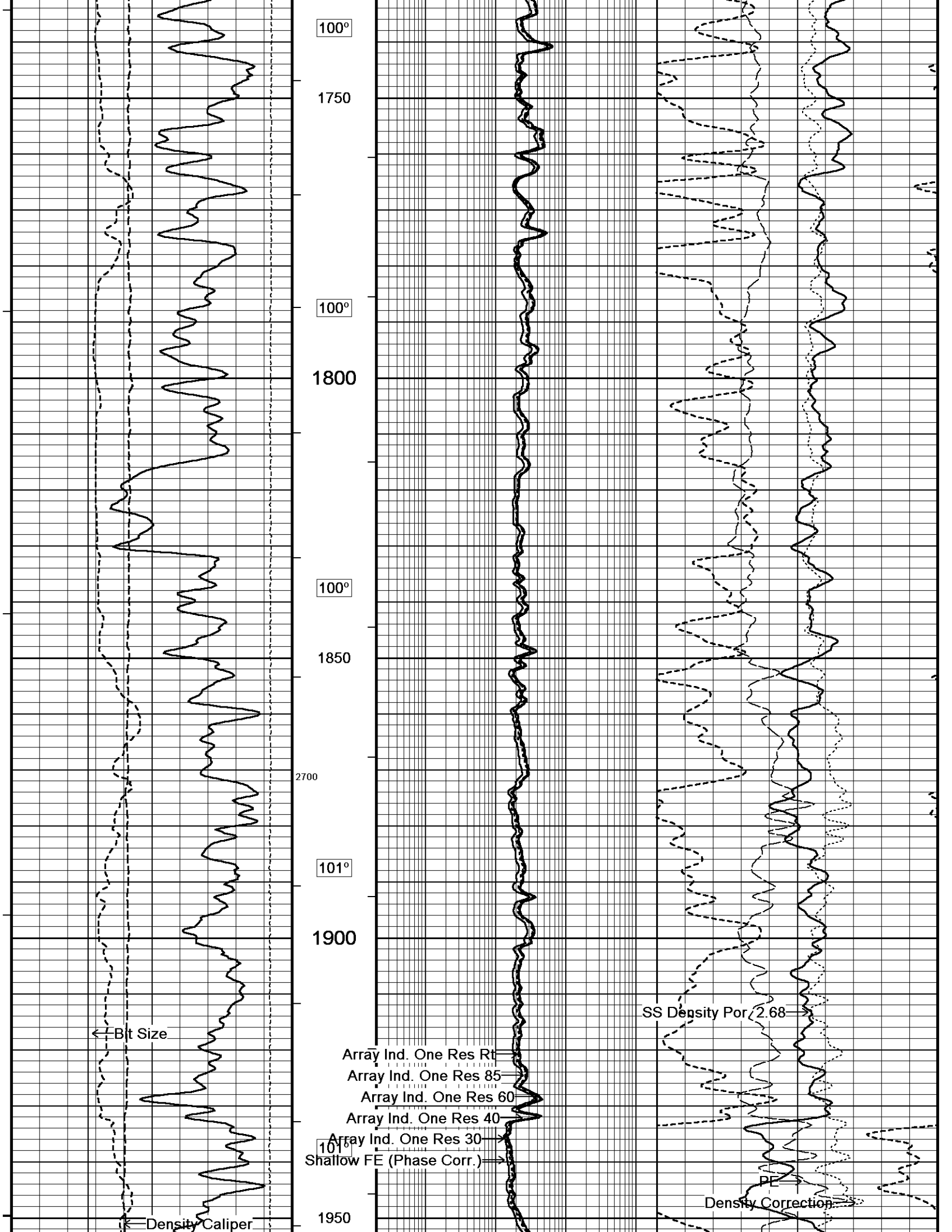
SS Density Por. 2.68
percent
30 10 -10

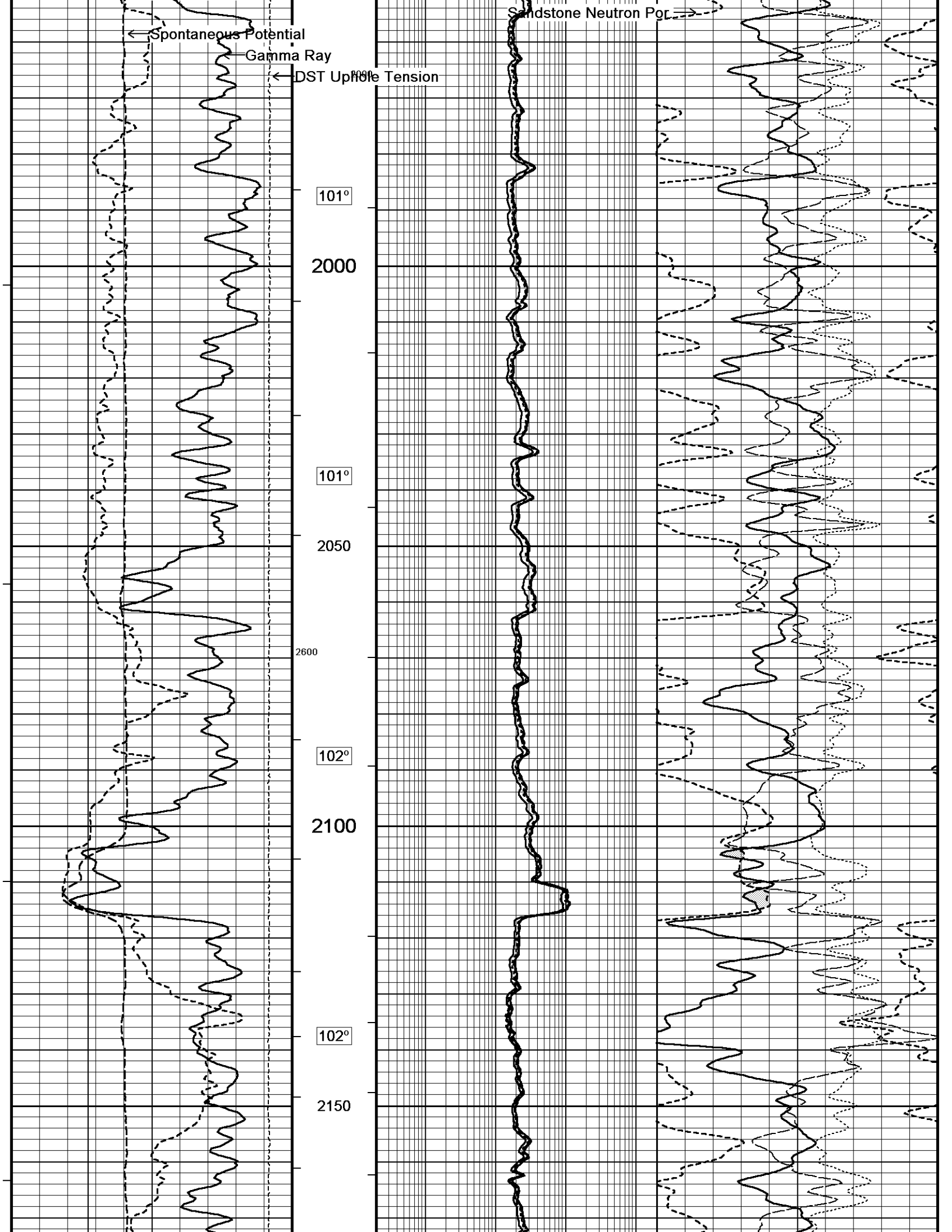

Shoe
92°
900
3200
93°
950
94°
1000
2400
94°
1050

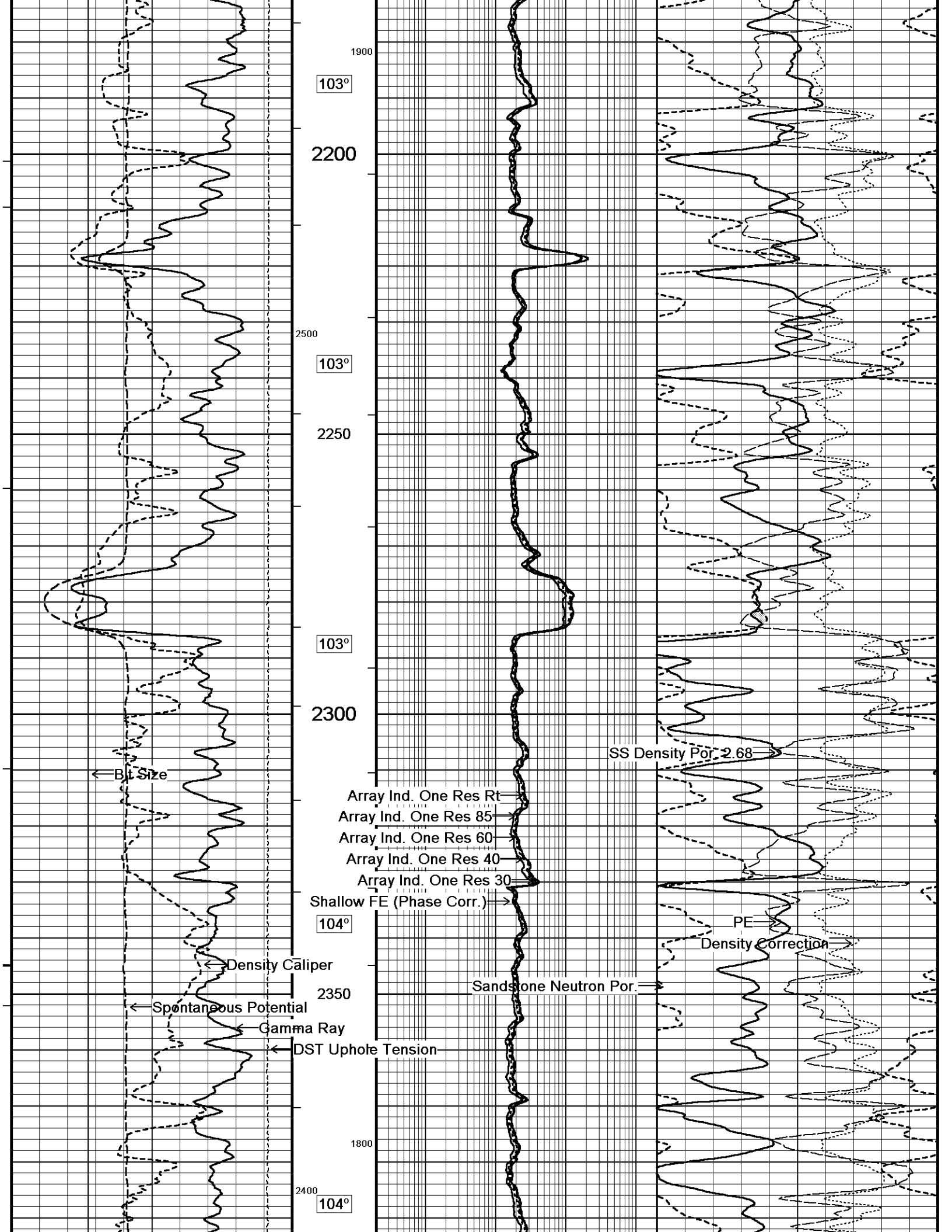

95°
1100
3100
SS Density Por. 2.68
Bit Size
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
1150
Shallow FE (Phase Corr.)
PE
Density Correction
Density Caliper
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
96°
1200
2300
96°
1250
3000
97°

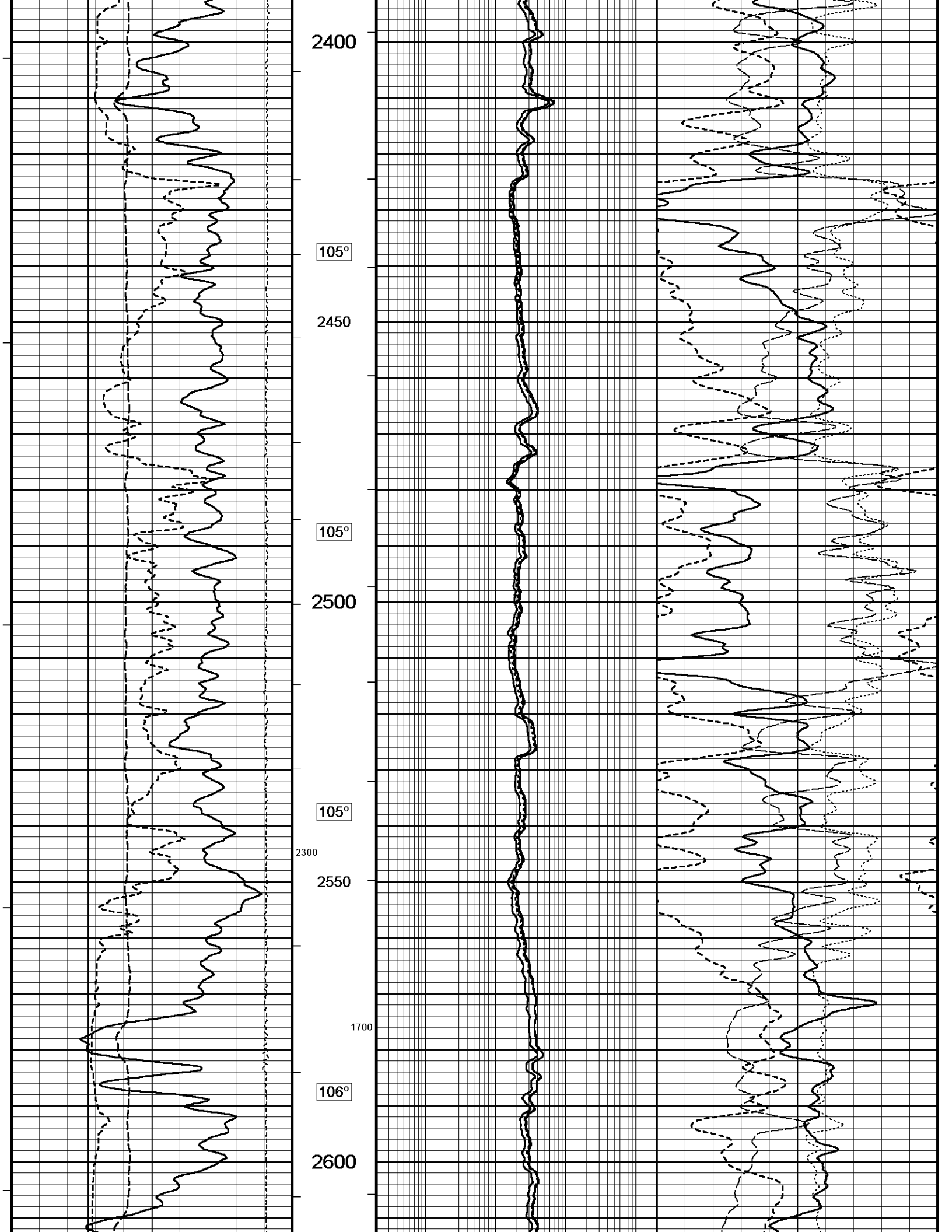

1300
97°
1350
97°
1400
2200
98°
1450
2900
98°
1500

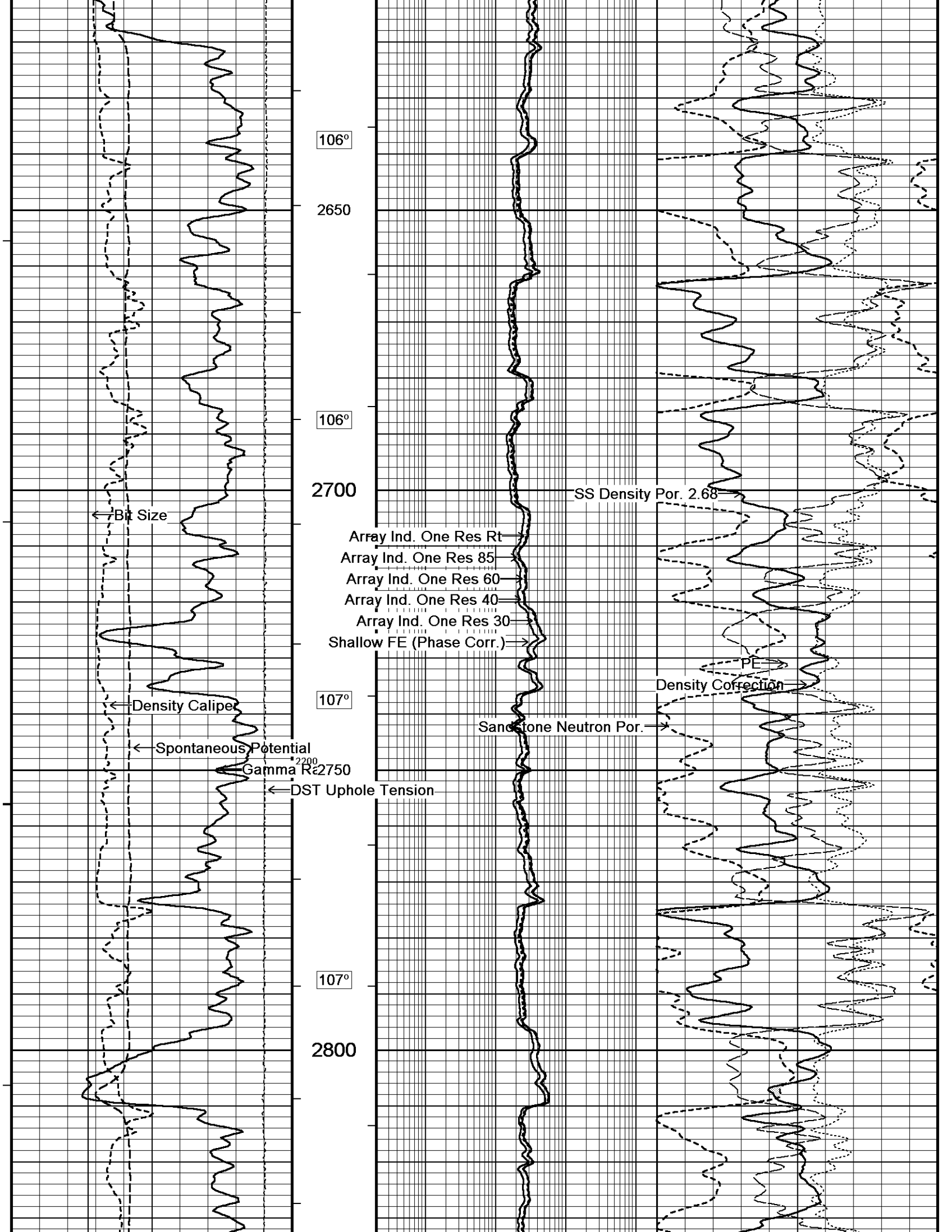

Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Sandstone Neutron Por.
98°
99°
99°
99°
1550
1600
1650
1700
2800
2100

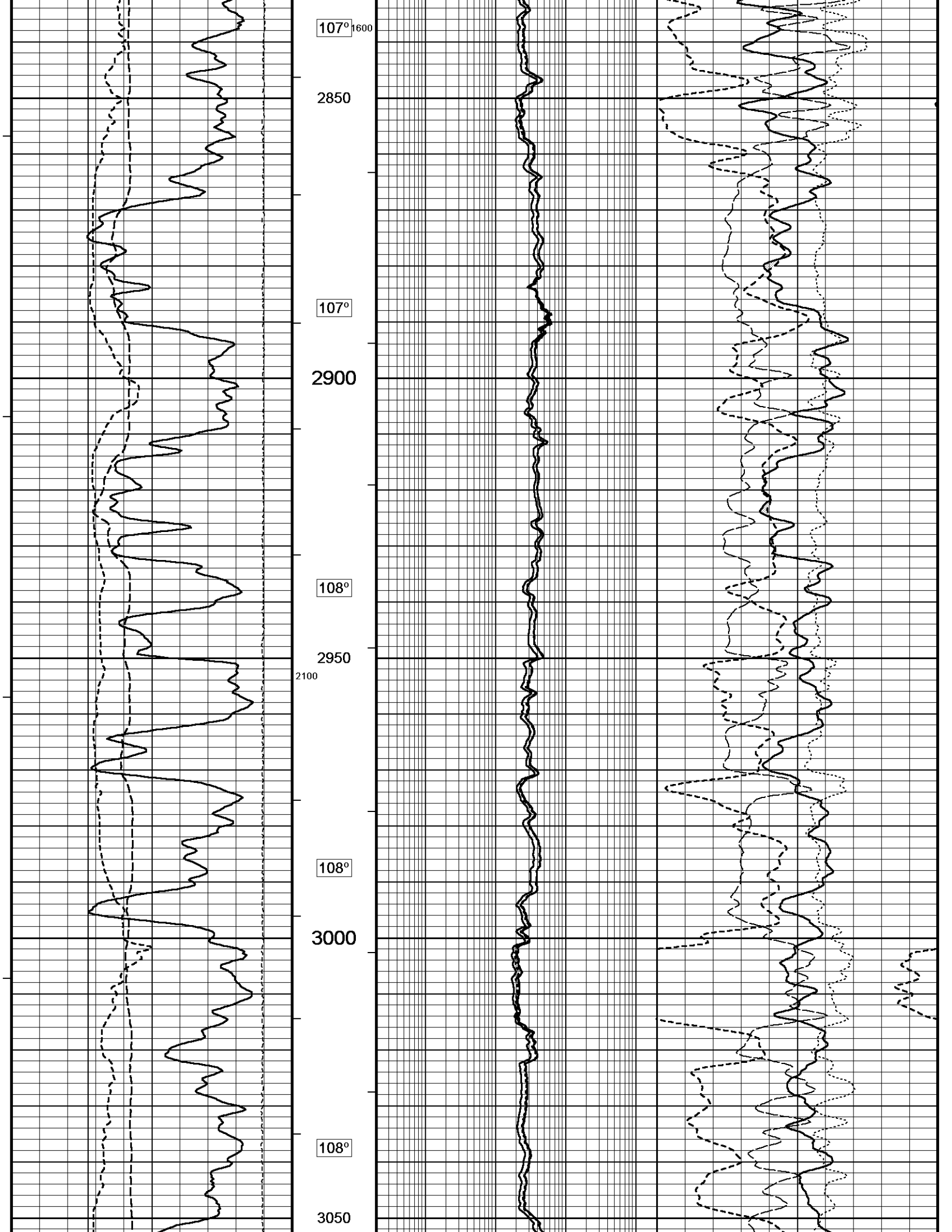

100°
1750
100°
1800
100°
1850
2700
101°
1900
101°
1950
Bit Size
Density Caliper
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por 2.68
PE
Density Correction

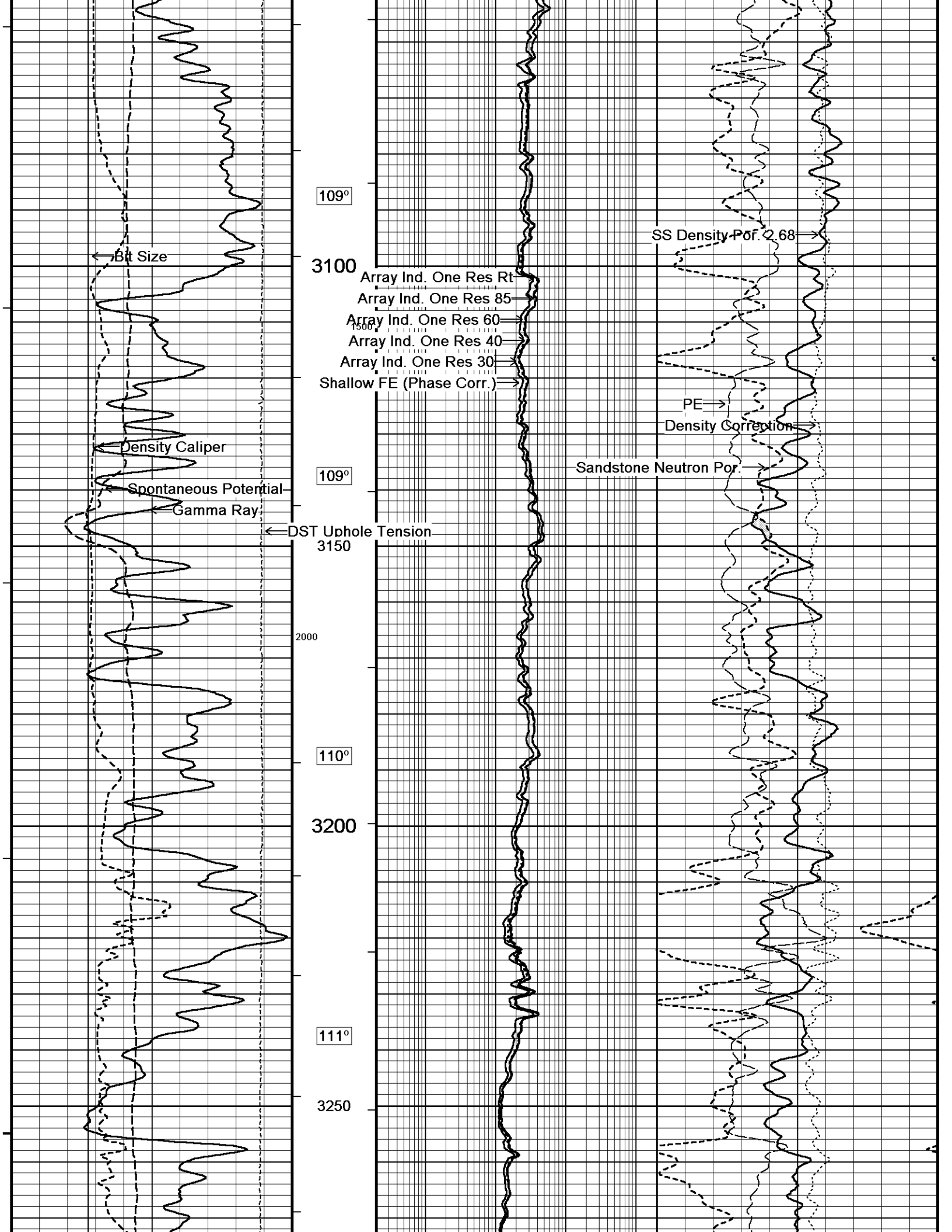

Sandstone Neutron Por
Spontaneous Potential
Gamma Ray
DST Uphole Tension
2000
101°
2000
101°
2050
2600
102°
2100
102°
2150

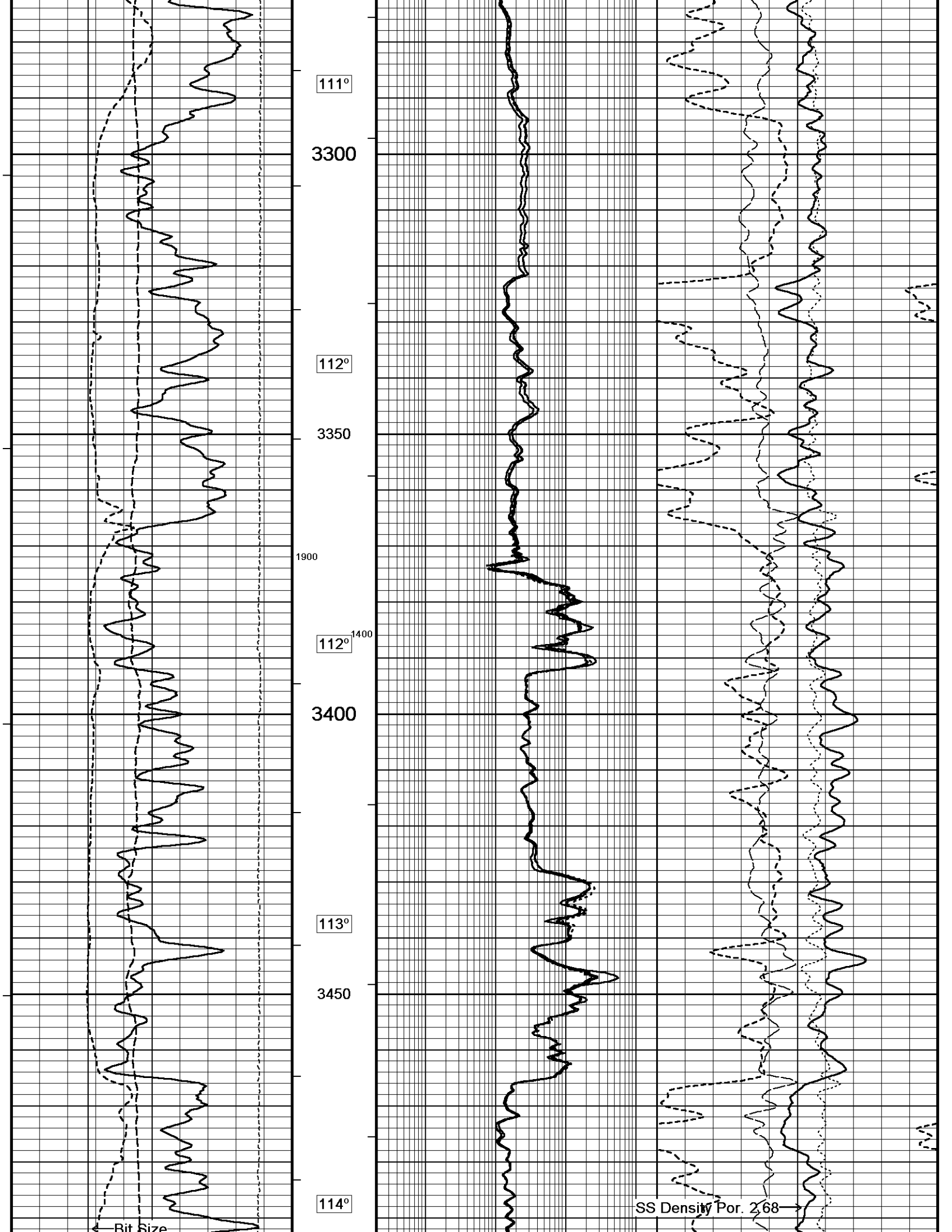

1900
103°
2200
2500
103°
2250
103°
2300
Bit Size
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
104°
SS Density Por. 2.68
PE
Density Correction
Density Caliper
2350
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
1800
2400
104°

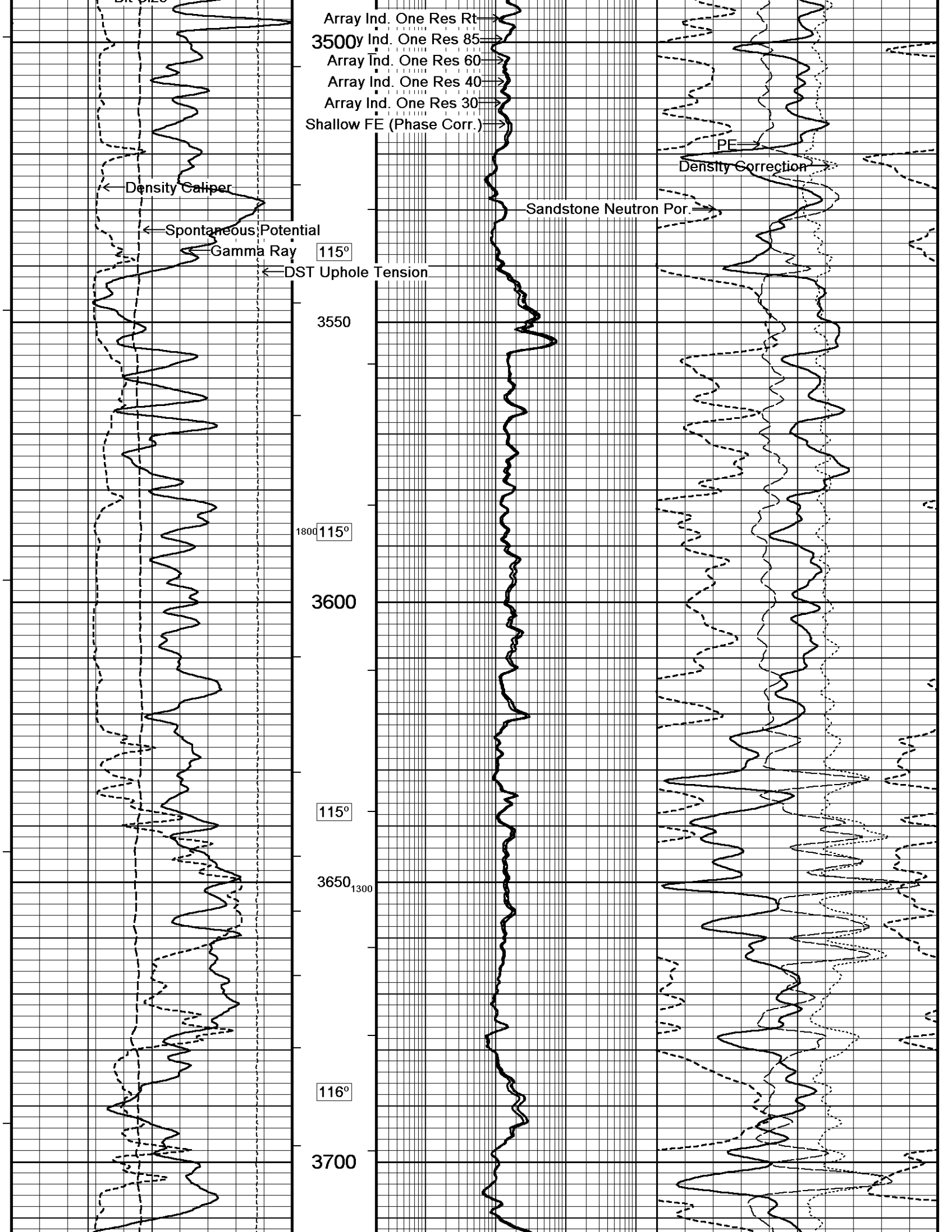

2400
105°
2450
105°
2500
105°
2300
2550
1700
106°
2600

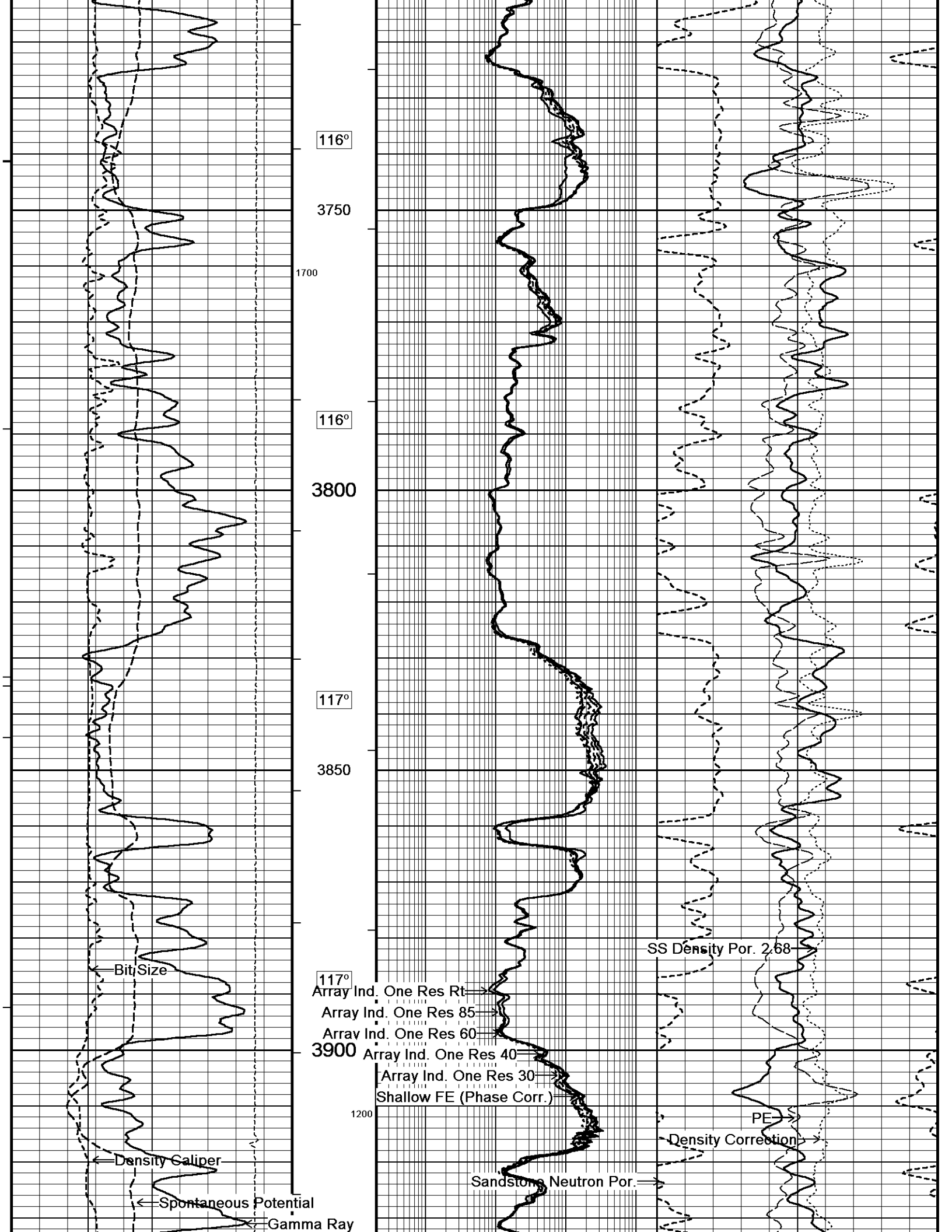

106°
2650
106°
2700
107°
107°
2800
Bit Size
Density Caliper
Spontaneous Potential
Gamma Ra
2200
2750
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Sandstone Neutron Por.

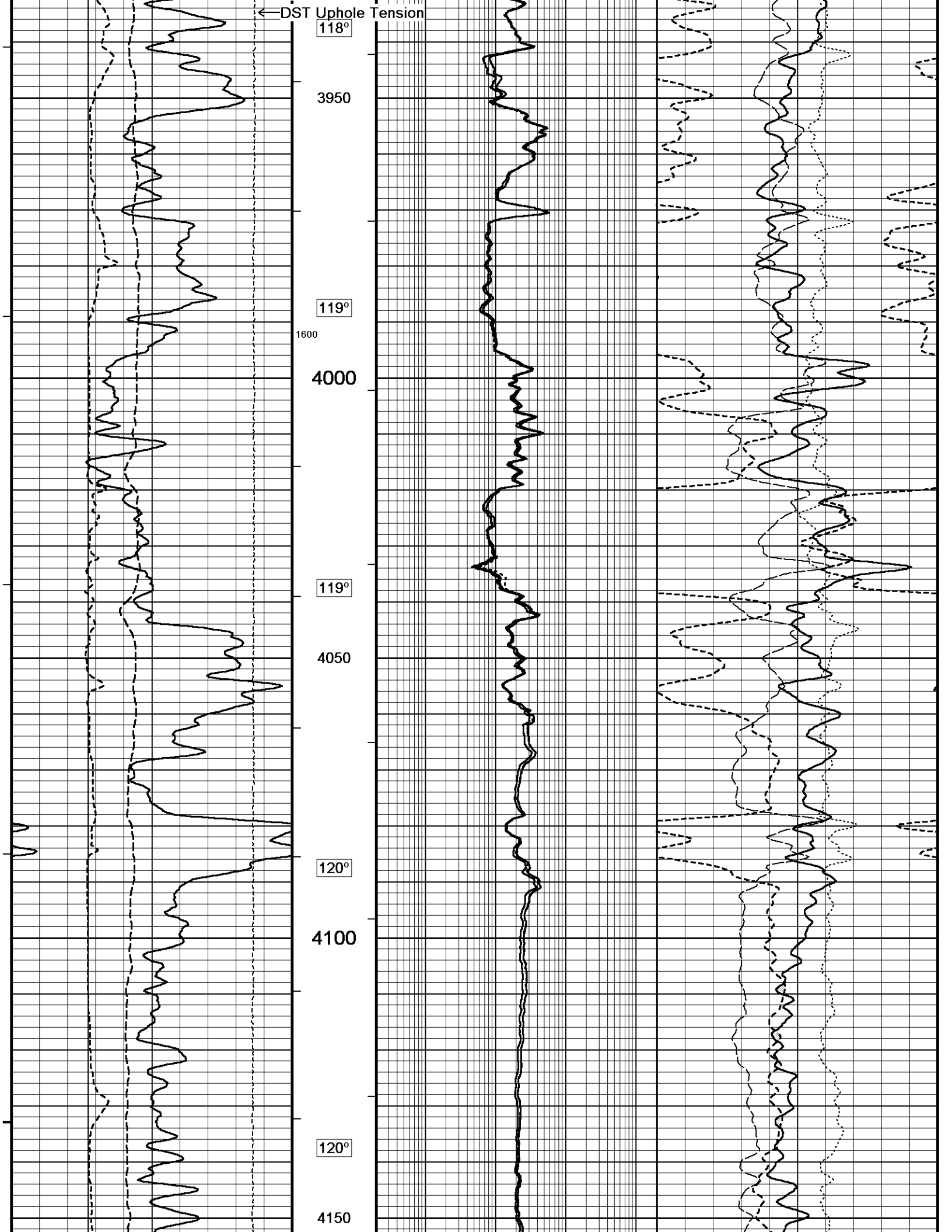

107°
1600
2850
107°
2900
108°
2950
2100
108°
3000
108°
3050

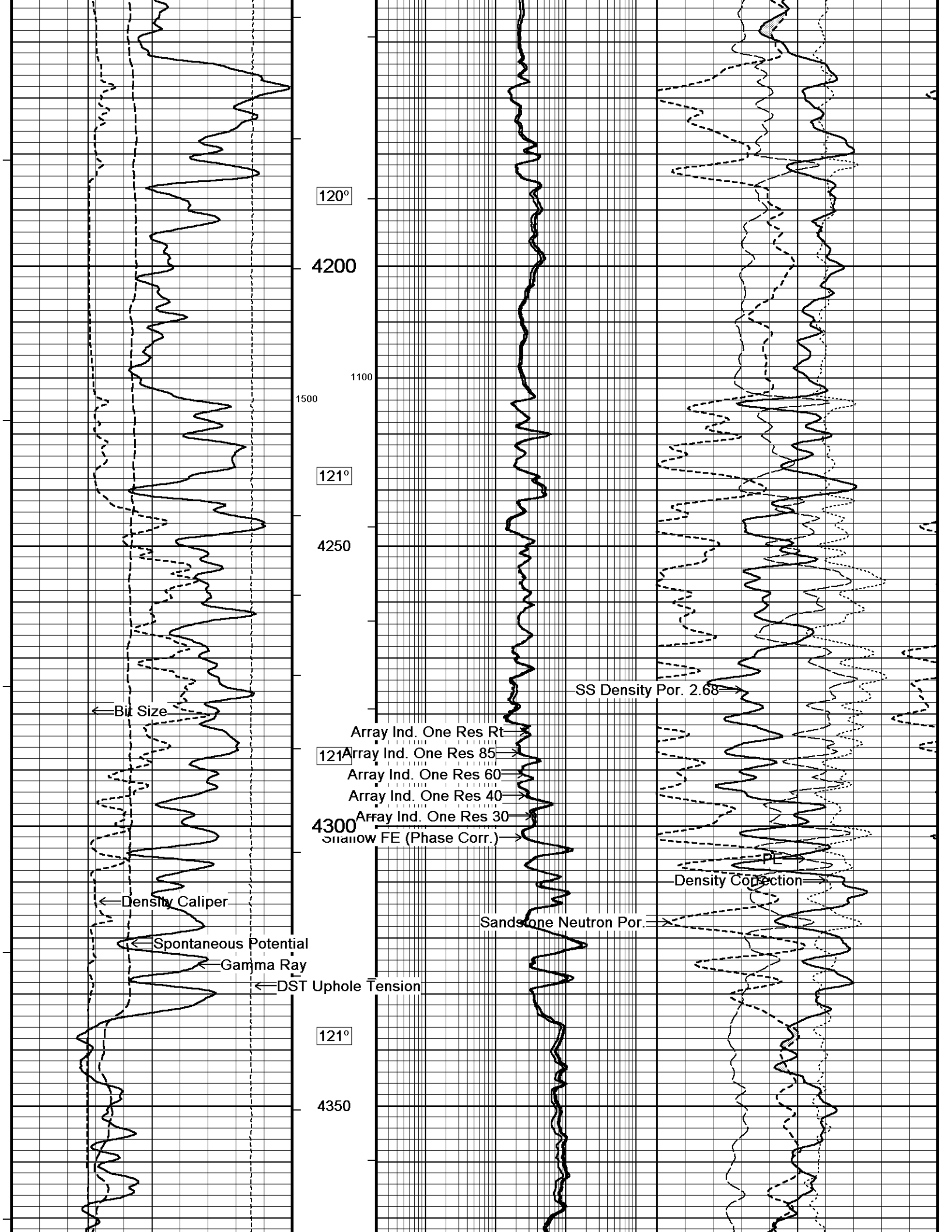

Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
109°
3100
1500
109°
3150
2000
110°
3200
111°
3250
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Sandstone Neutron Por.

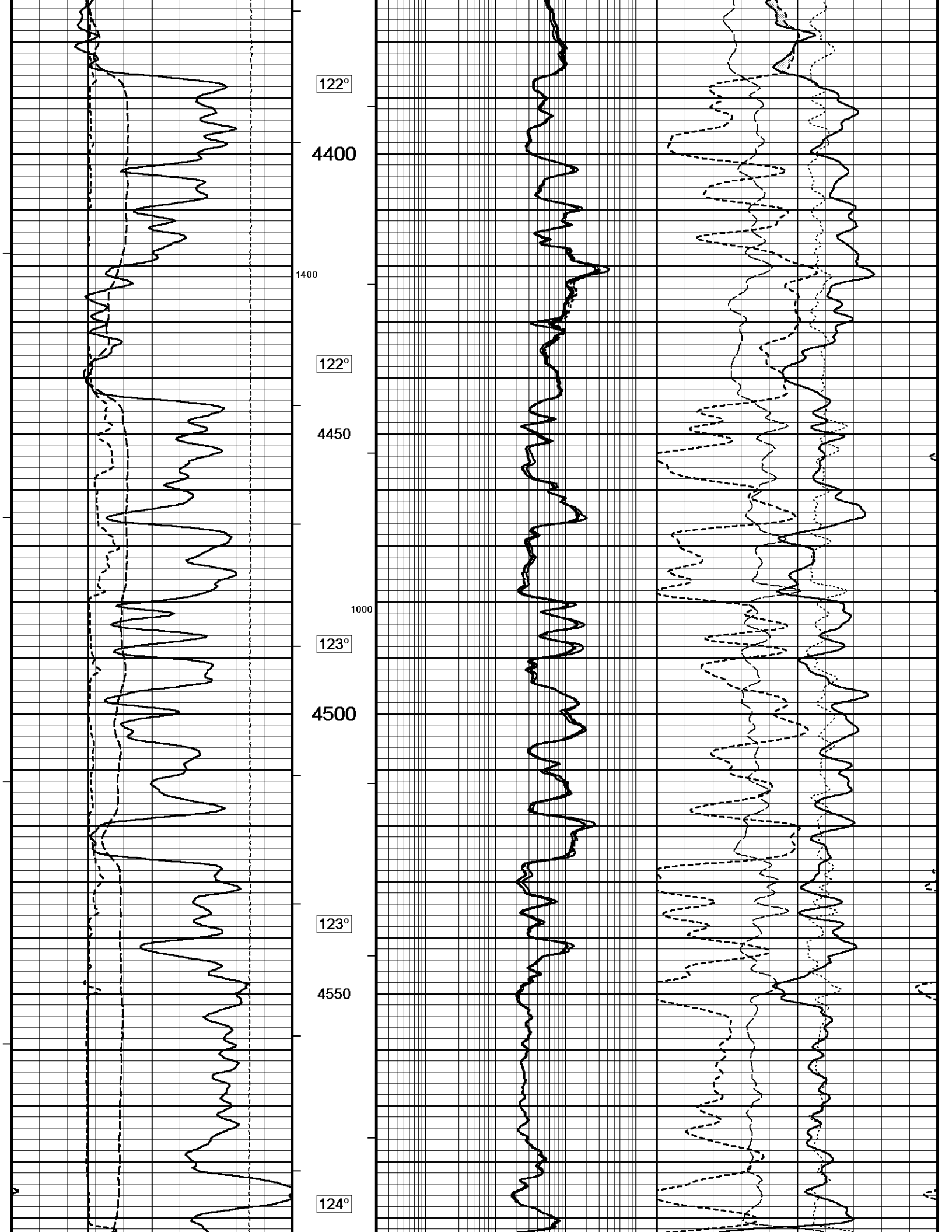

111°
3300
112°
3350
1900
112°
1400
3400
113°
3450
114°
SS Density Por. 2.68→
←Bit Size

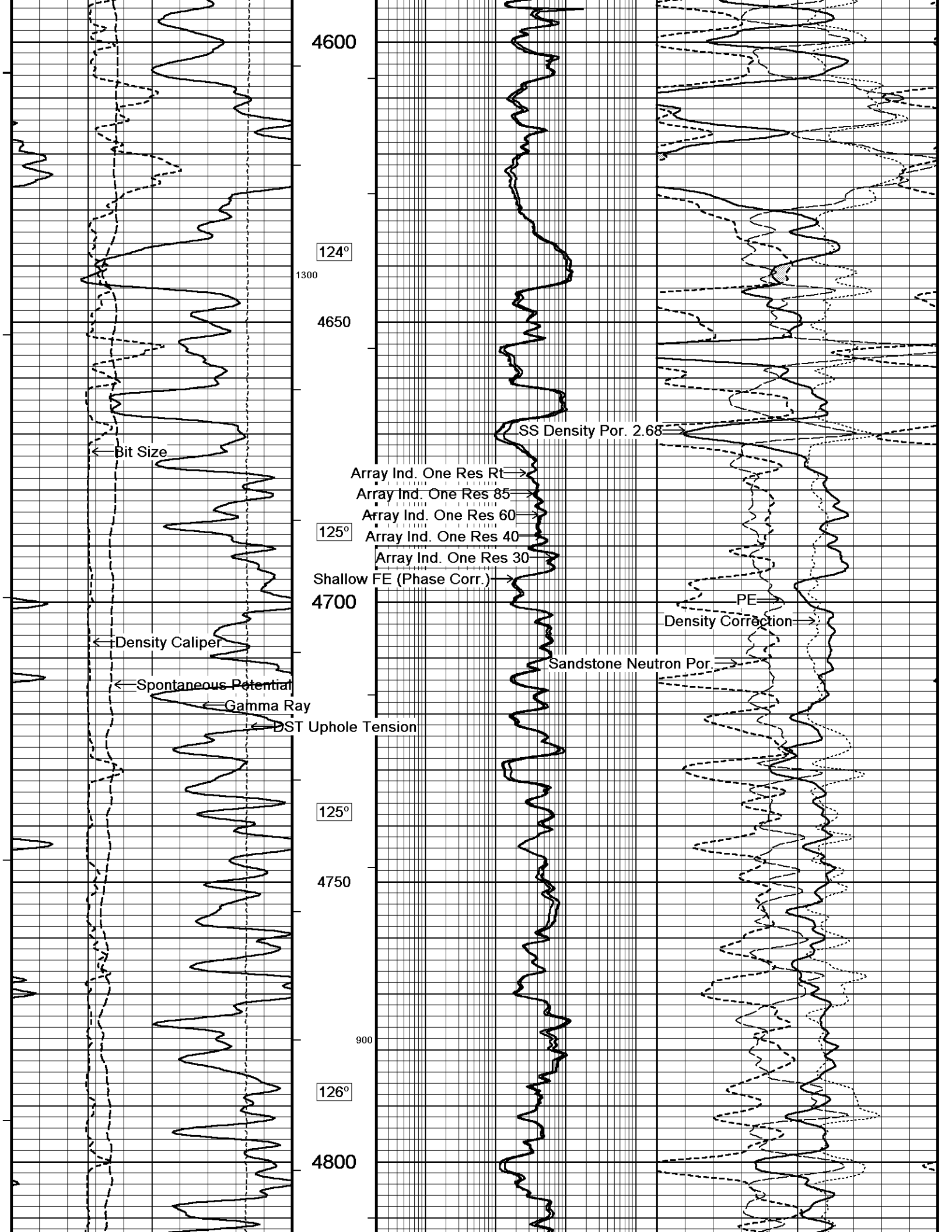

Array Ind. One Res Rt
Array Ind. One Res 85
3500
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
PE
Density Correction
Density Caliper
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
115°
DST Uphole Tension
3550
1800
115°
3600
115°
3650
1300
116°
3700

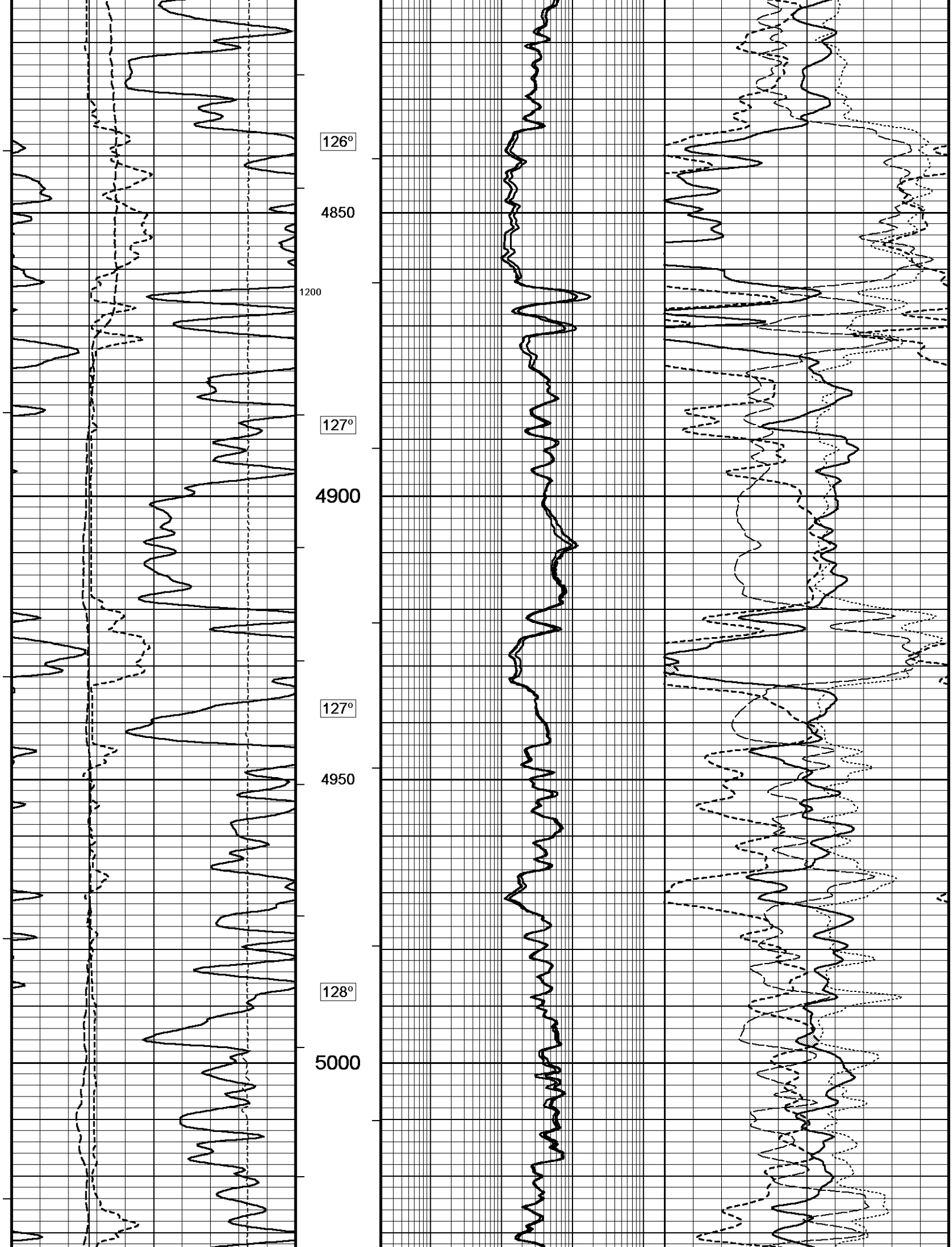

116°
3750
1700
116°
3800
117°
3850
117°
3900
1200
Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
Sandstone Neutron Por.
SS Density Por. 2.68
PE
Density Correction

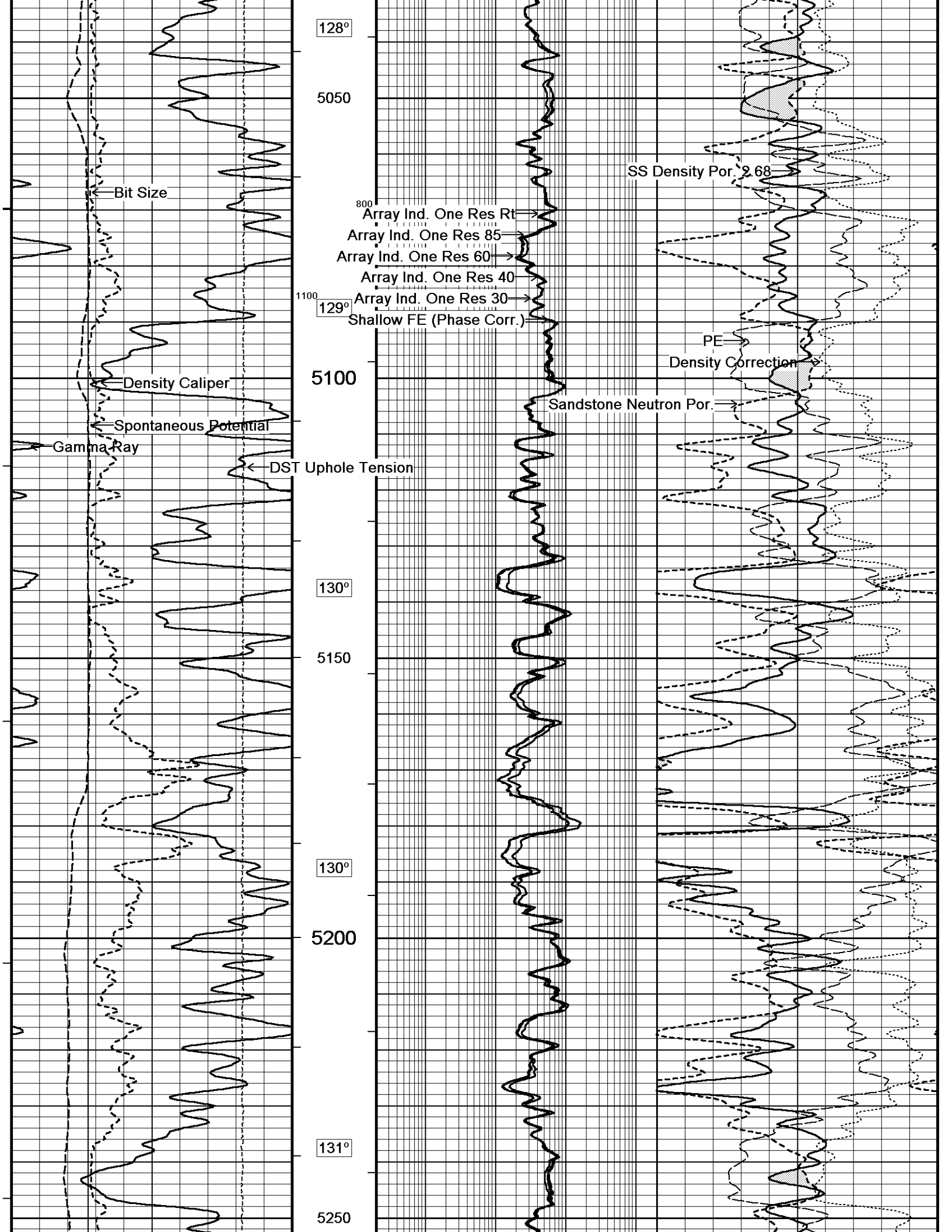

←DST Uphole Tension
118°
3950
119°
1600
4000
119°
4050
120°
4100
120°
4150

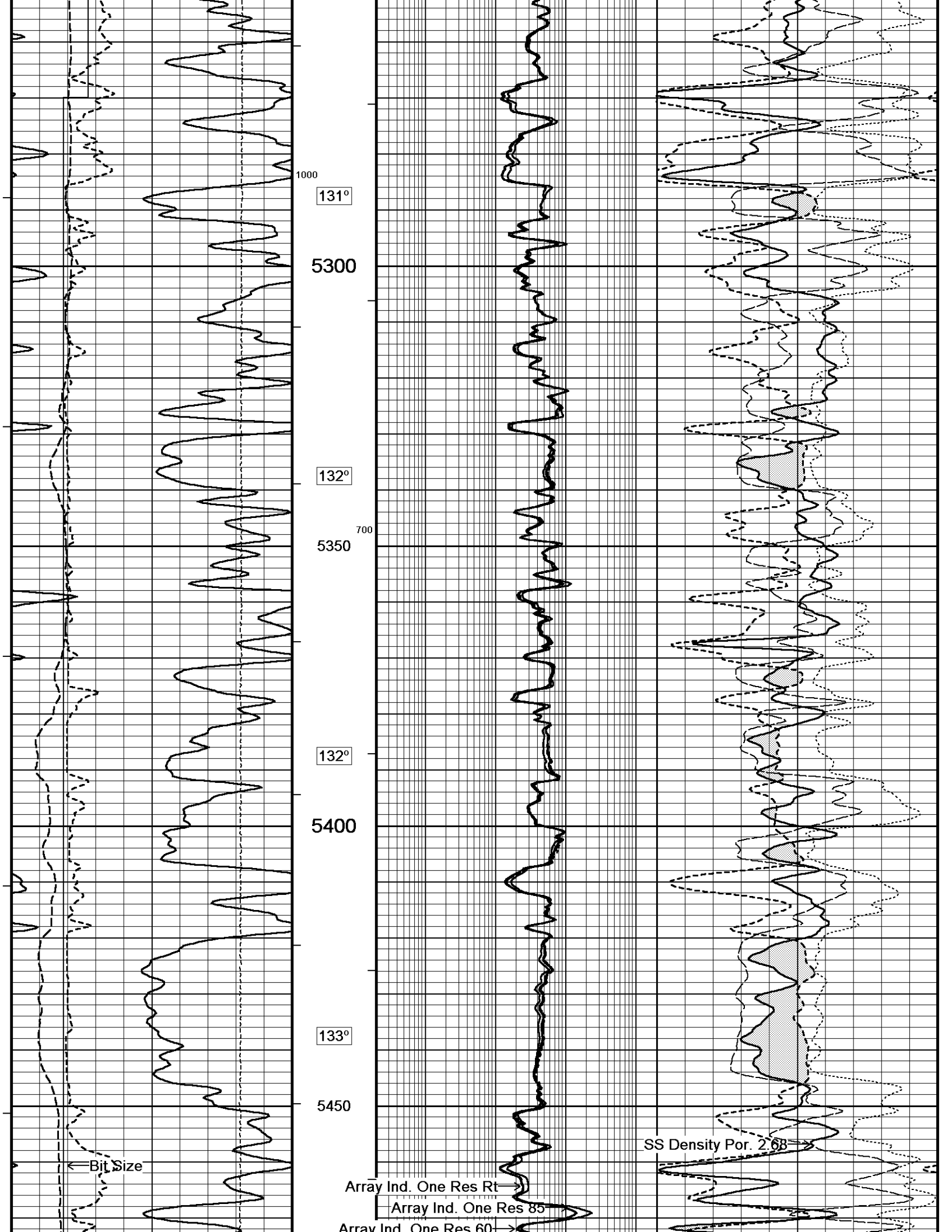

120°
4200
1100
1500
121°
4250
Bit Size
Array Ind. One Res Rt
121
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
4300
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Density Caliper
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
121°
4350

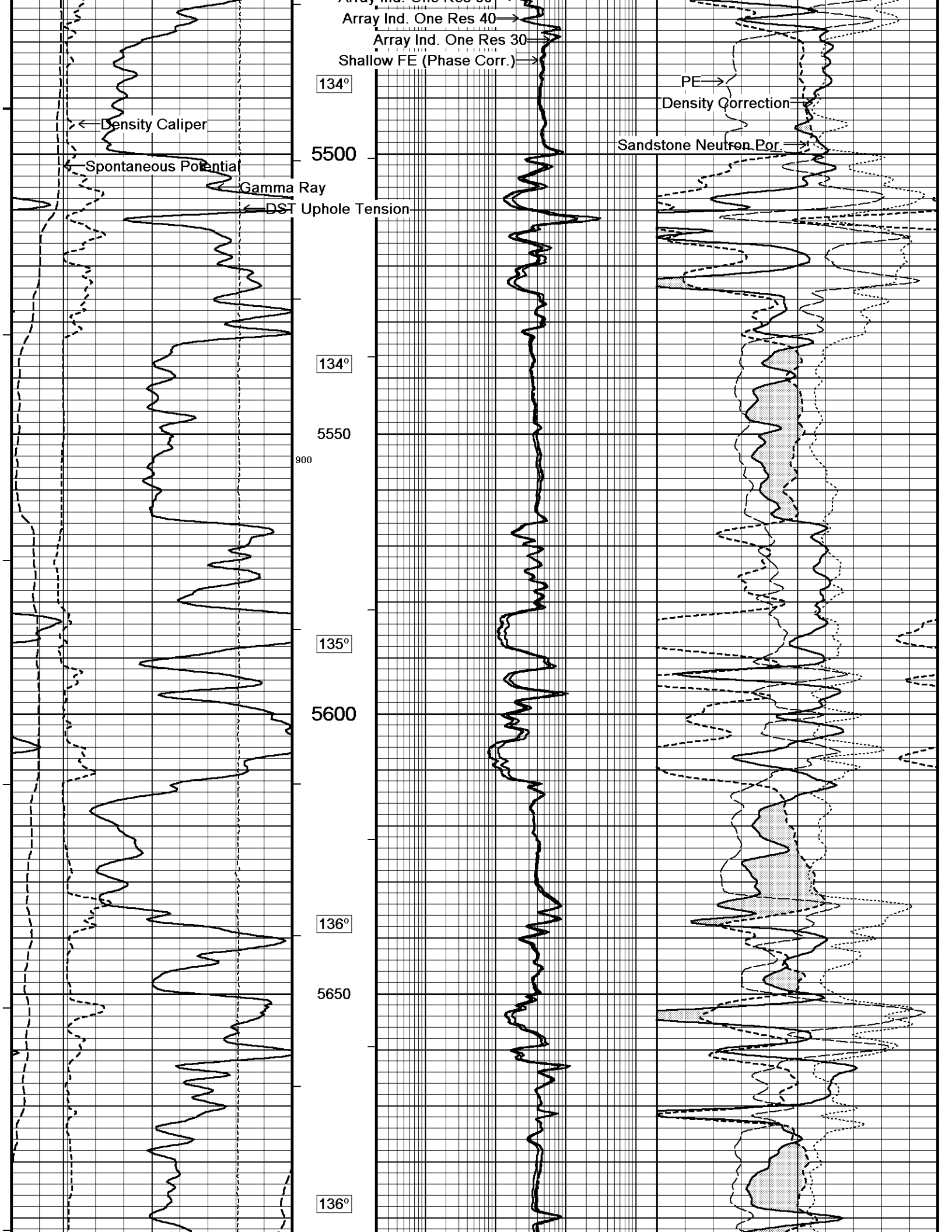

122°
4400
1400
122°
4450
1000
123°
4500
123°
4550
124°

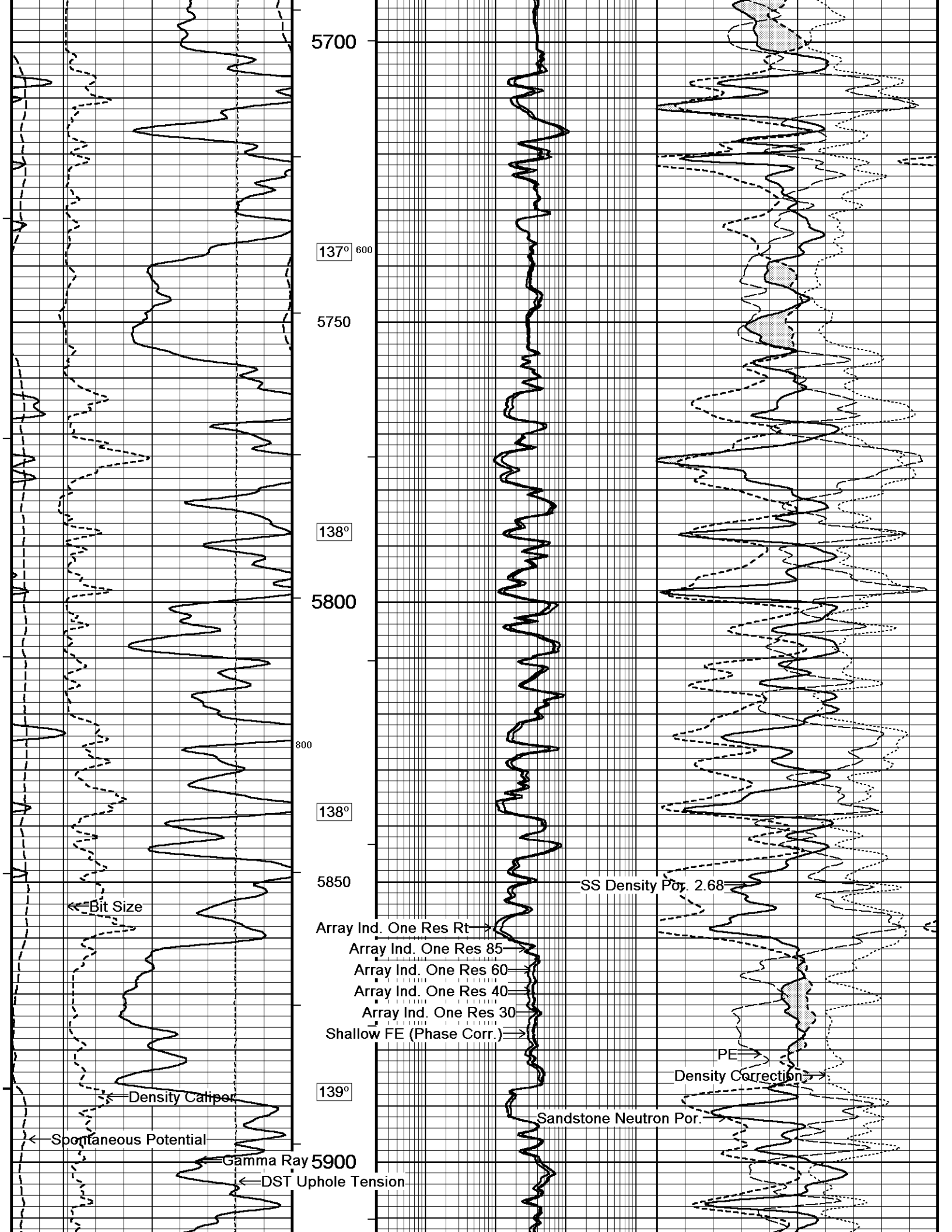

4600
124°
1300
4650
SS Density Por. 2.68
Bit Size
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
125°
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
4700
PE
Density Correction
Density Caliper
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
125°
4750
900
126°
4800

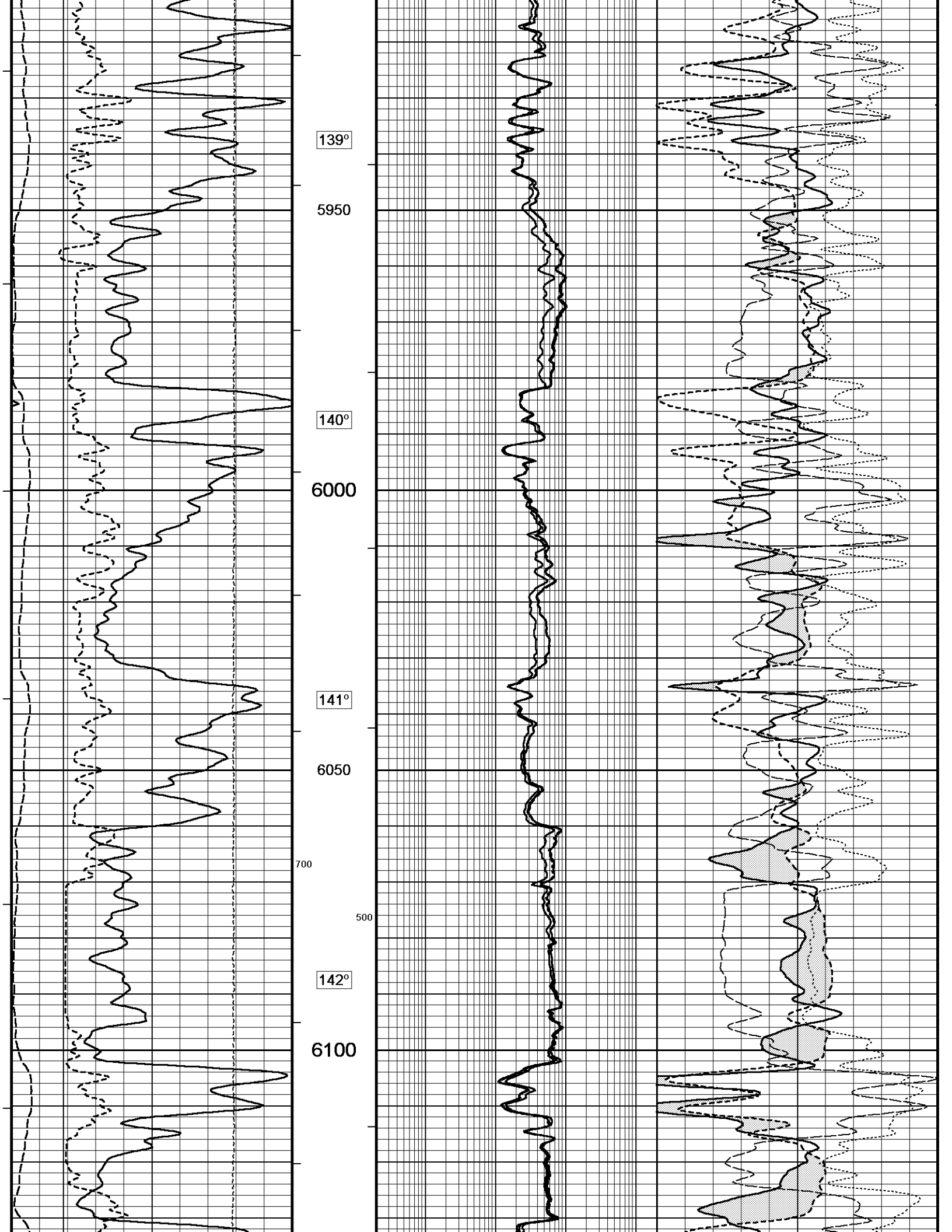

126°
4850
1200
127°
4900
127°
4950
128°
5000

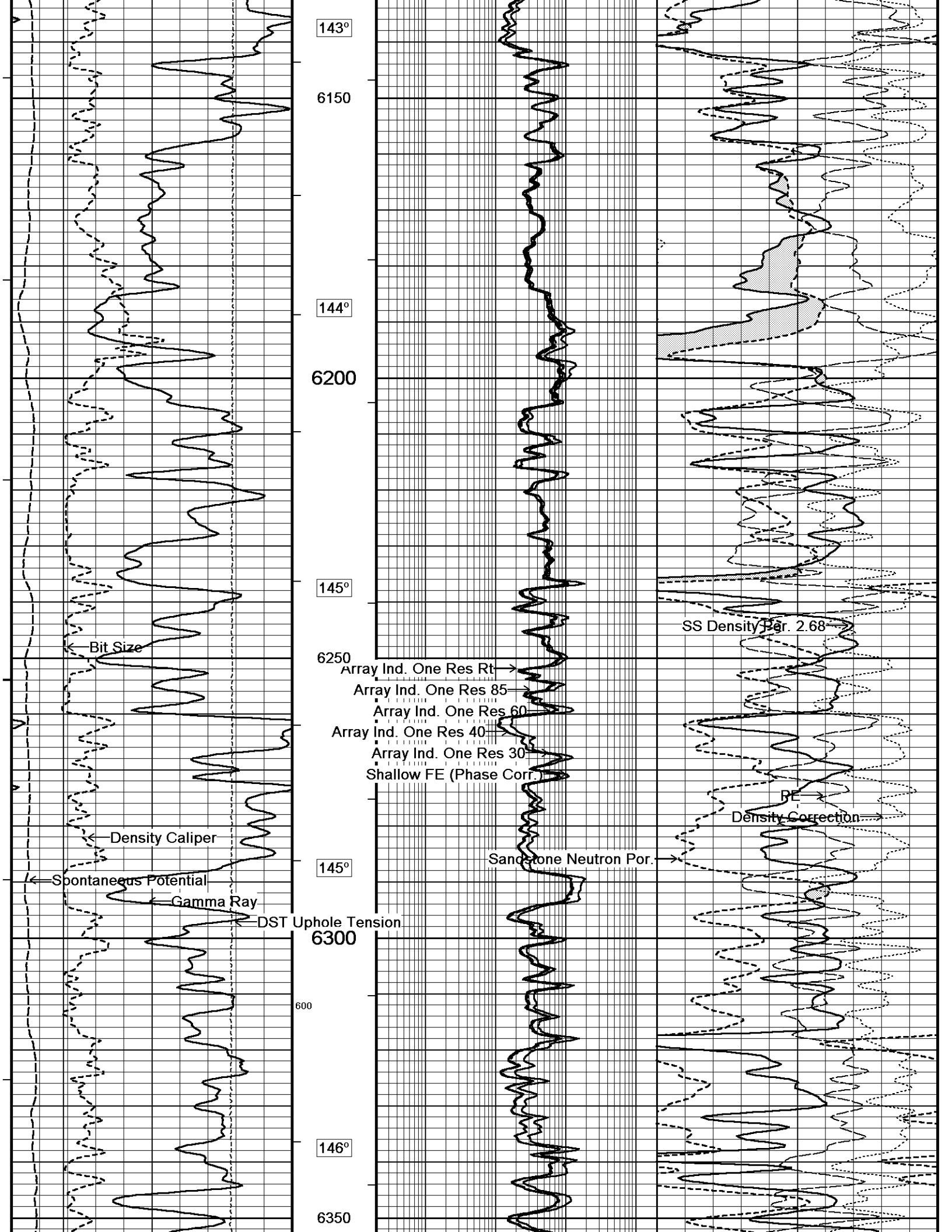

128°
5050
Bit Size
800
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
1100
Array Ind. One Res 30
129°
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Density Caliper
5100
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
130°
5150
130°
5200
131°
5250

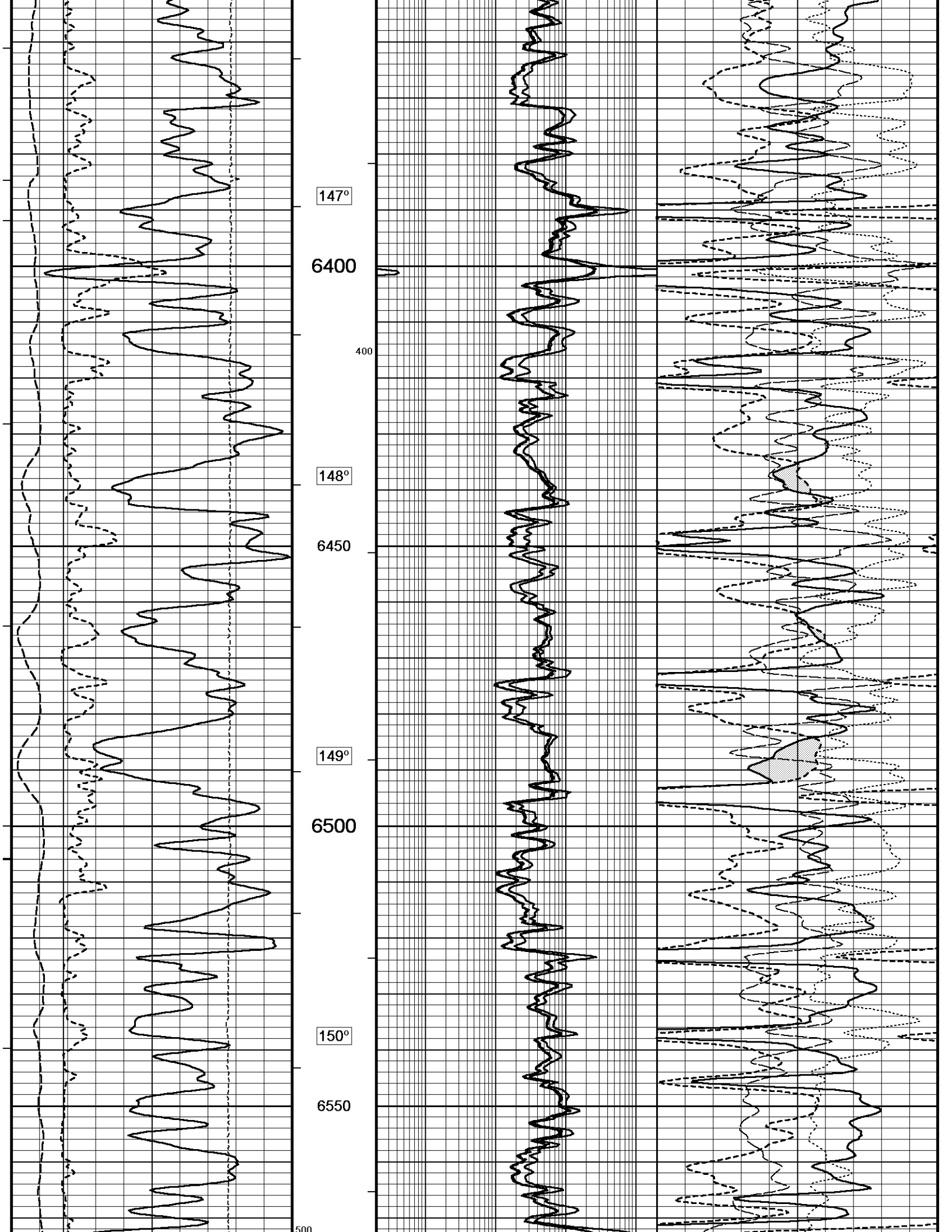

1000
131°
5300
132°
700
5350
132°
5400
133°
5450
Bit Size
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
SS Density Por. 2.68

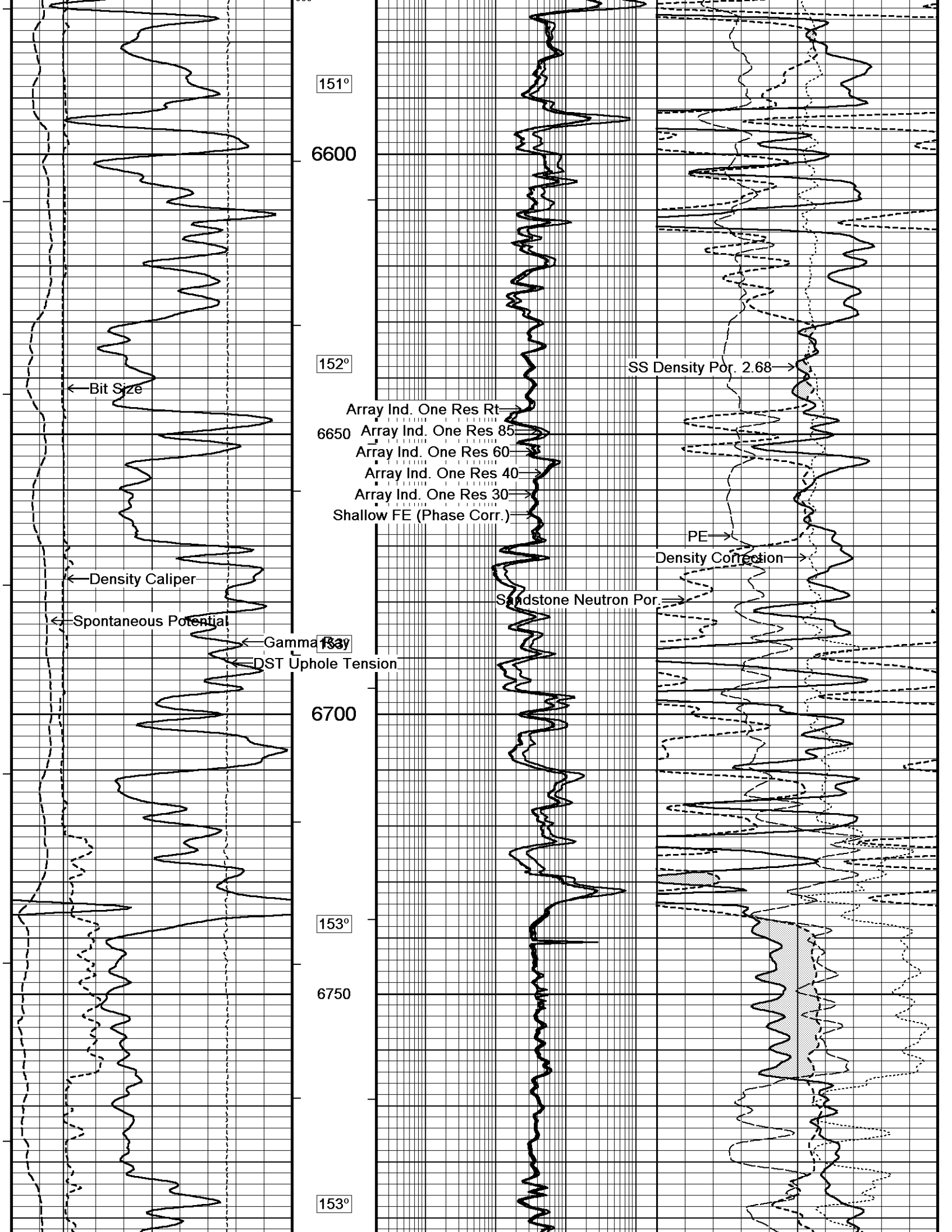

Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
PE
Density Correction
Sandstone Neutron Por.
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
134°
5500
134°
5550
900
135°
5600
136°
5650
136°

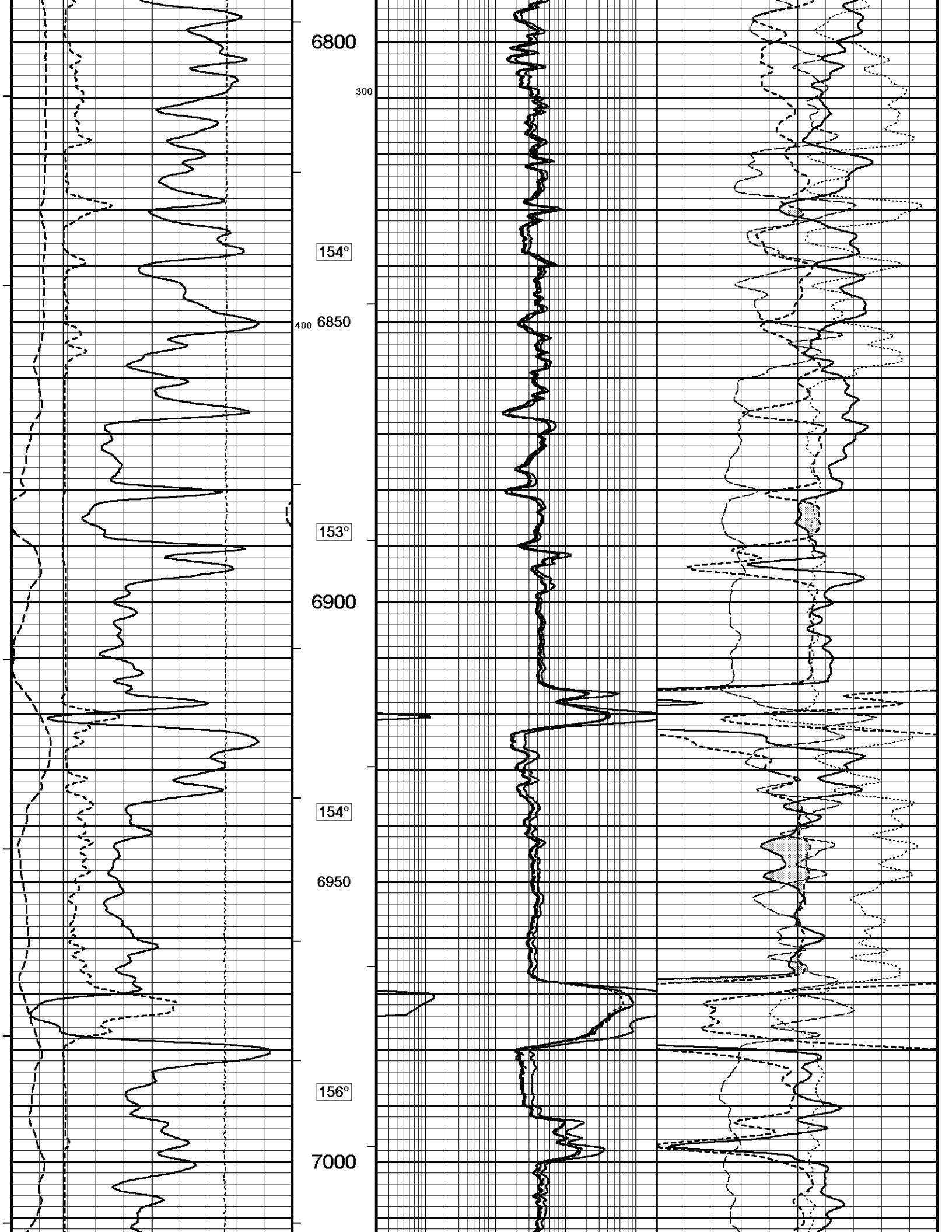

5700
137°
600
5750
138°
5800
800
138°
5850
139°
5900
Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Sandstone Neutron Por.

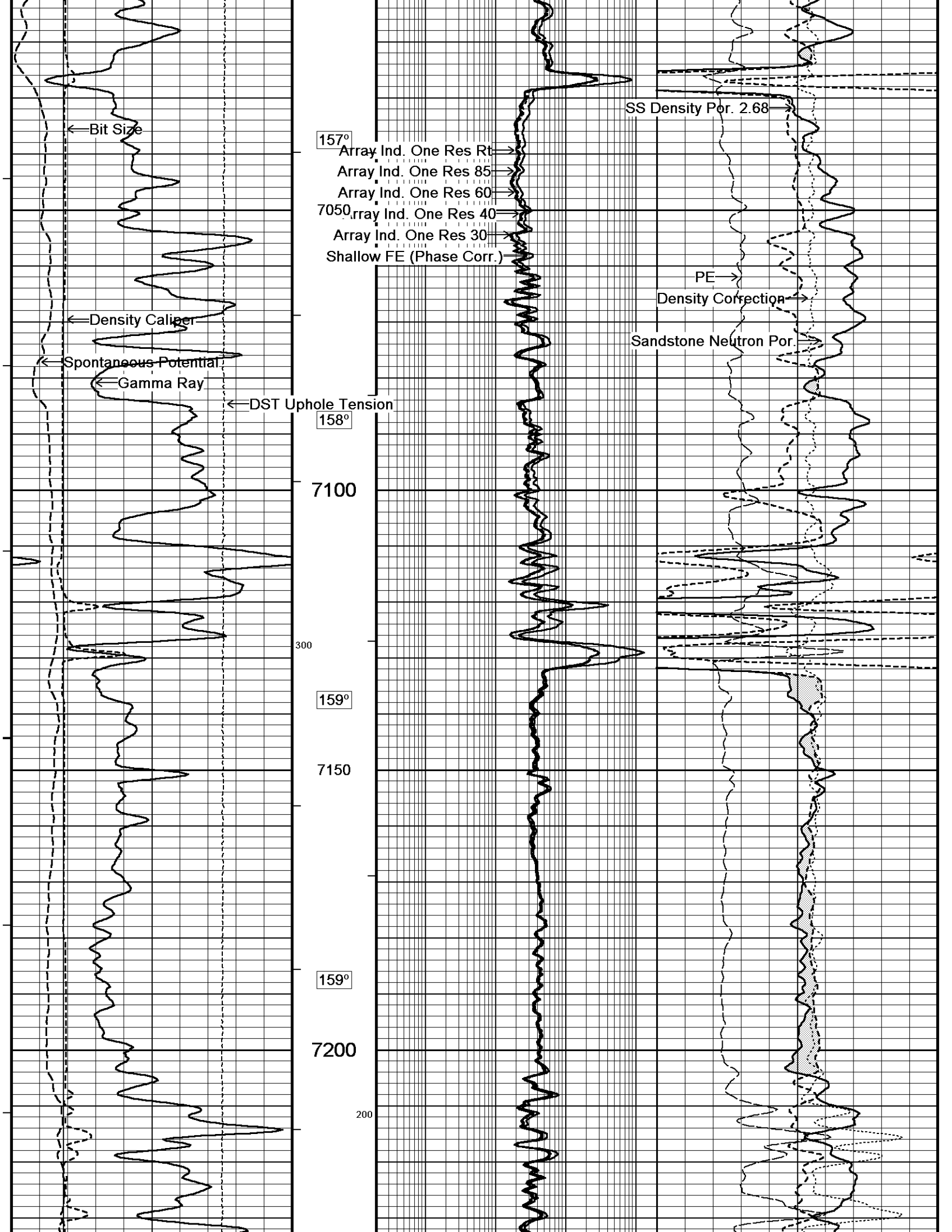

139°
5950
140°
6000
141°
6050
700
500
142°
6100

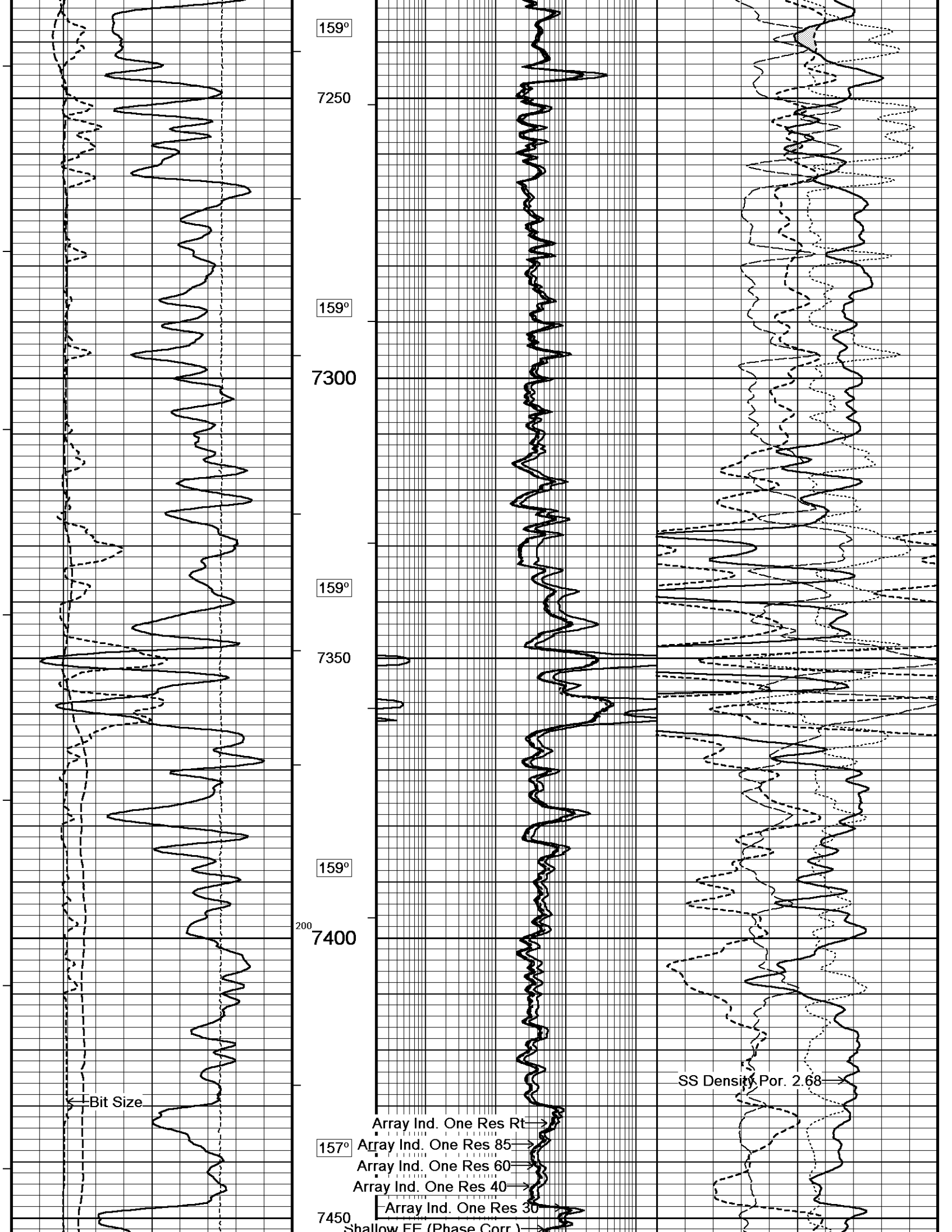

143°
6150
144°
6200
145°
6250
145°
6300
600
146°
6350
Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.
Sandstone Neutron Por.
SS Density Por. 2.68
RE
Density Correction

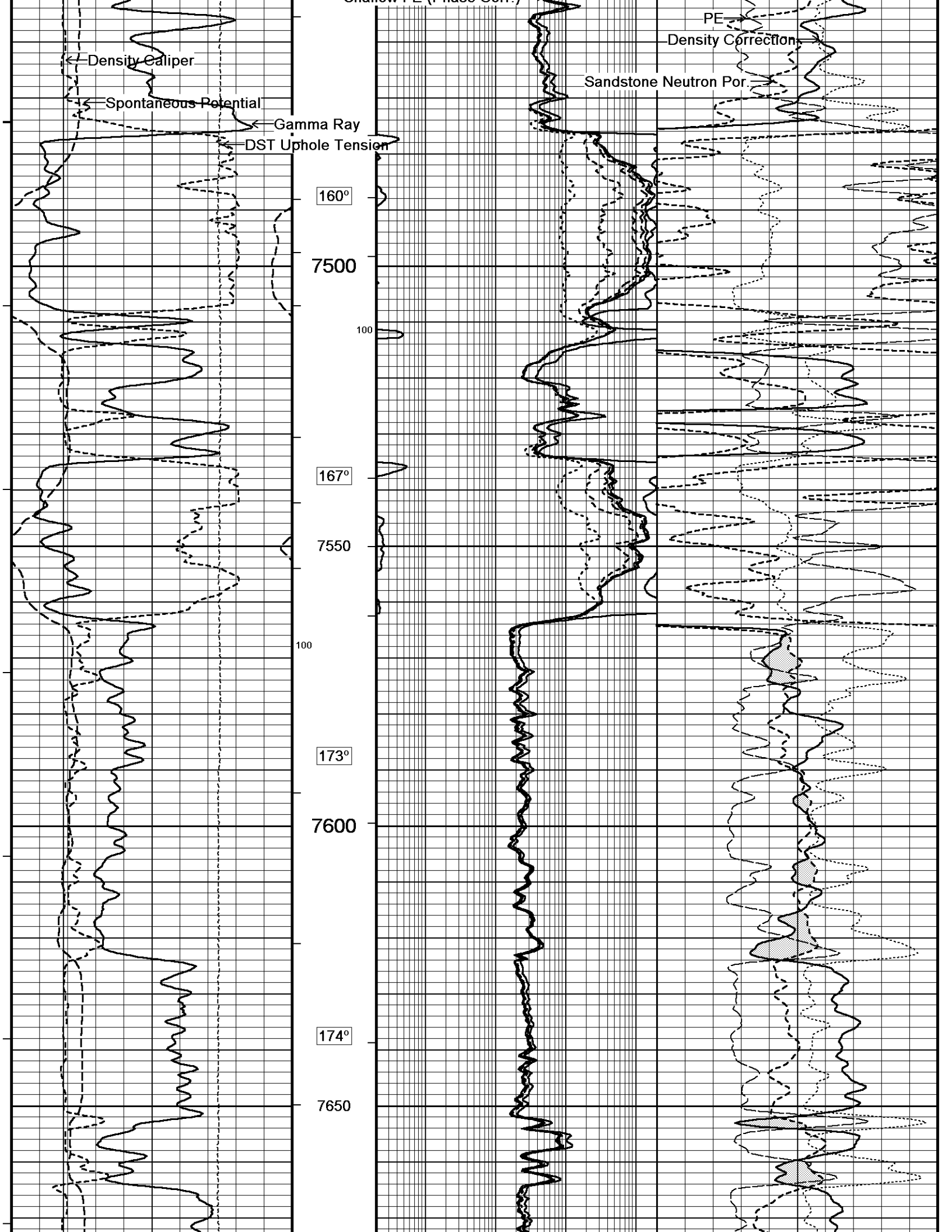

147°
6400
400
148°
6450
149°
6500
150°
6550
500

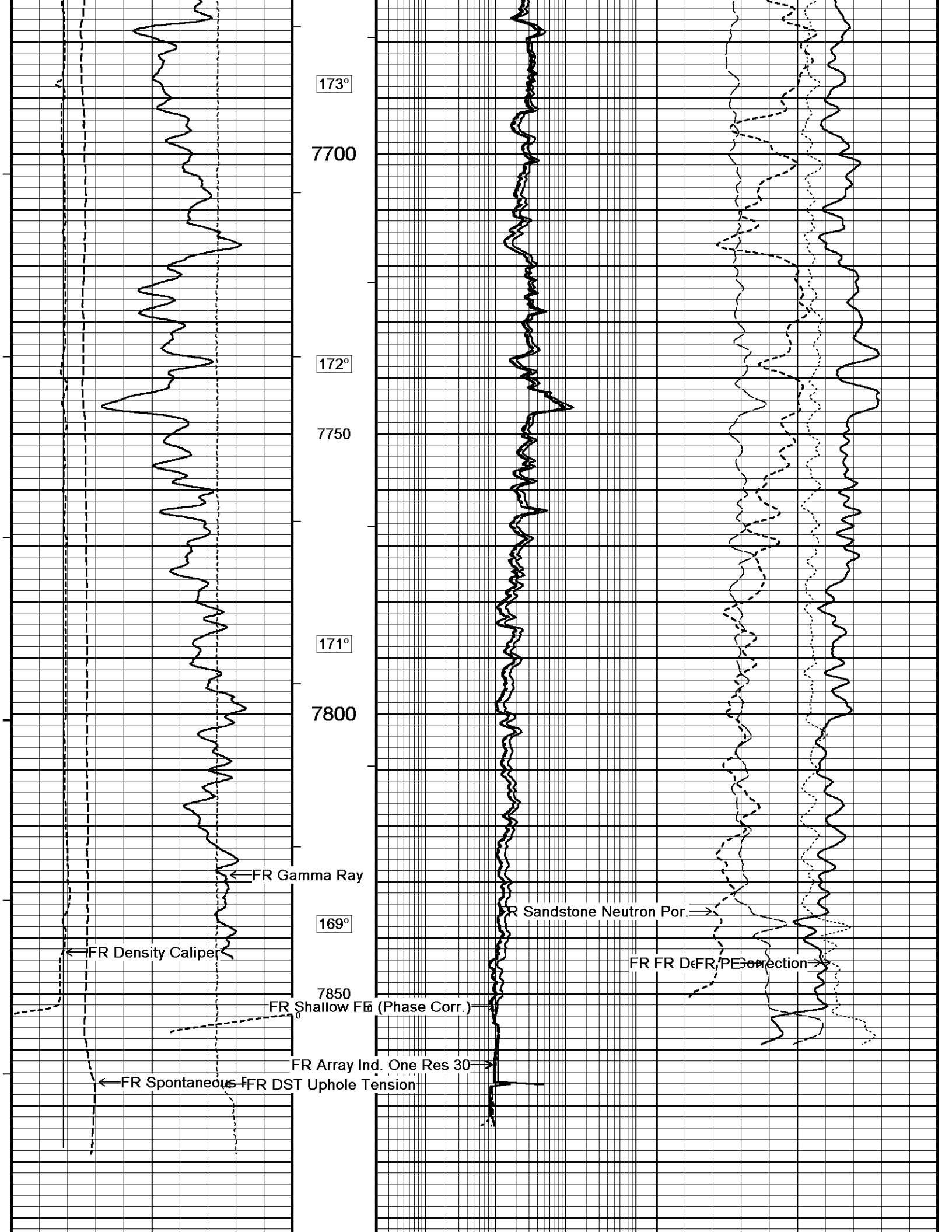

151°
6600
152°
SS Density Por. 2.68
Bit Size
Array Ind. One Res Rt
6650
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
PE
Density Correction
Density Caliper
Sandstone Neutron Por.
Spontaneous Potential
Gamma Ray
DST Uphole Tension
6700
153°
6750
153°

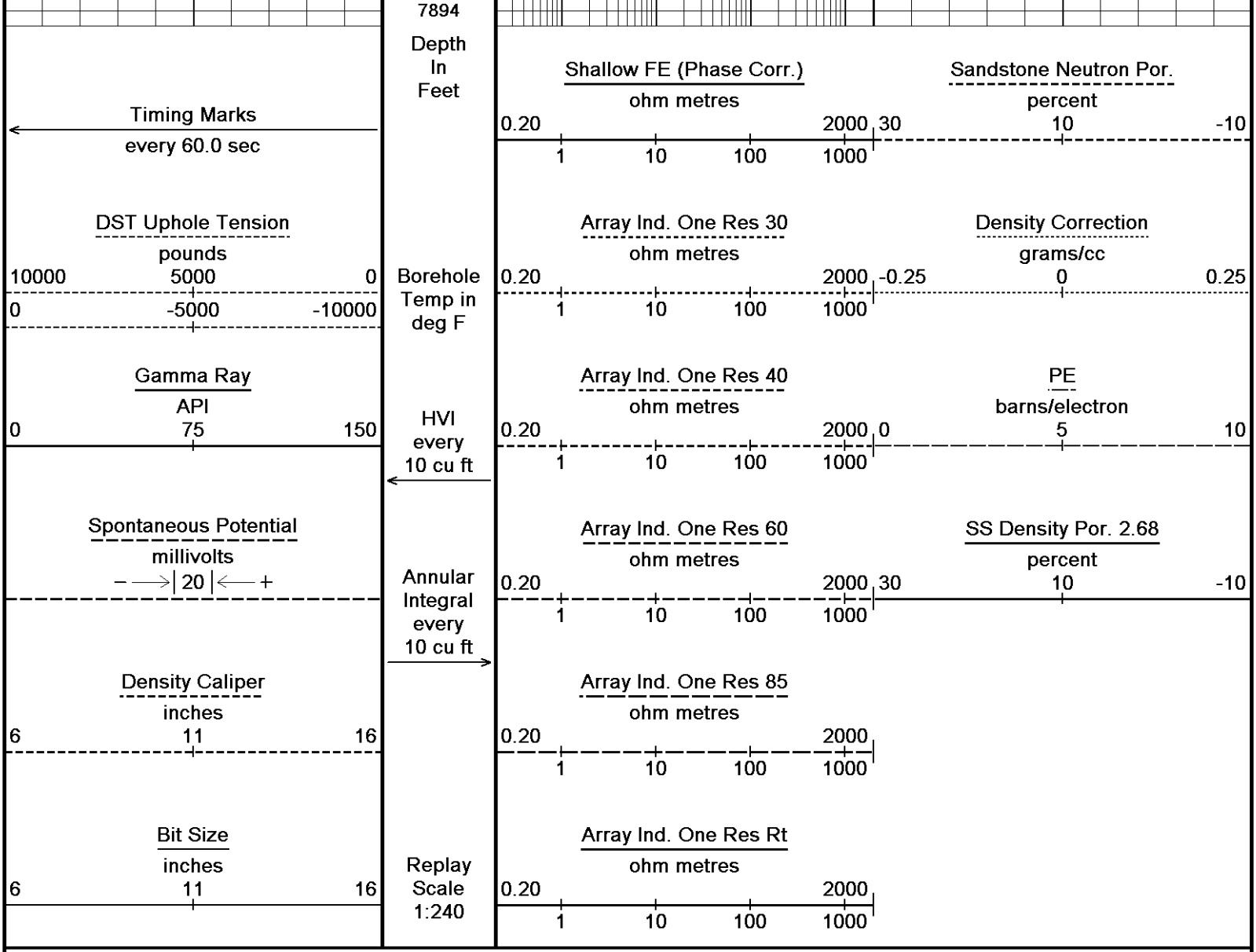

6800
300
154°
400
6850
153°
6900
154°
6950
156°
7000


Bit Size
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
157°
158°
159°
159°
7050
7100
7150
7200
300
200
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68
PE
Density Correction
Sandstone Neutron Por.


159°
7250
159°
7300
159°
7350
159°
200
7400
157°
7450
Bit Size
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)
SS Density Por. 2.68


Shallow PE (Phase Corr.)
PE
Density Correction
Sandstone Neutron Por.
Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
160°
7500
100
167°
7550
100
173°
7600
174°
7650


173°
7700
172°
7750
171°
7800
169°
7850
FR Gamma Ray
FR Density Caliper
FR Spontaneous
FR Shallow FE (Phase Corr.)
FR Array Ind. One Res 30
FR DST Uphole Tension
R Sandstone Neutron Por.
FR FR D FR PE orrection

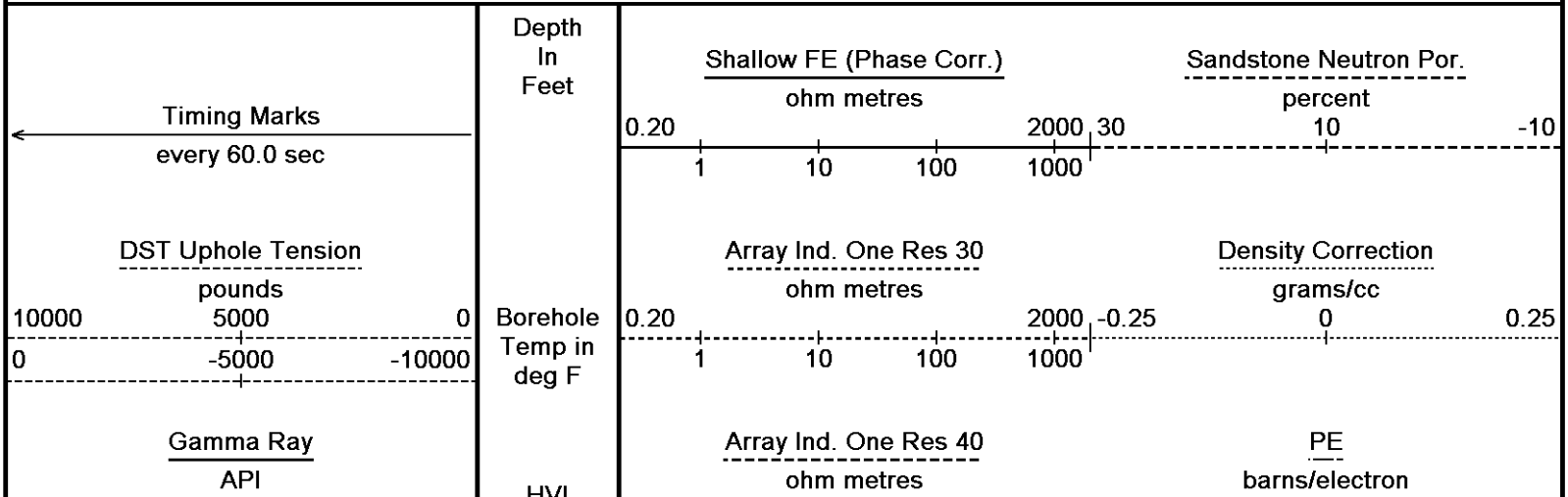


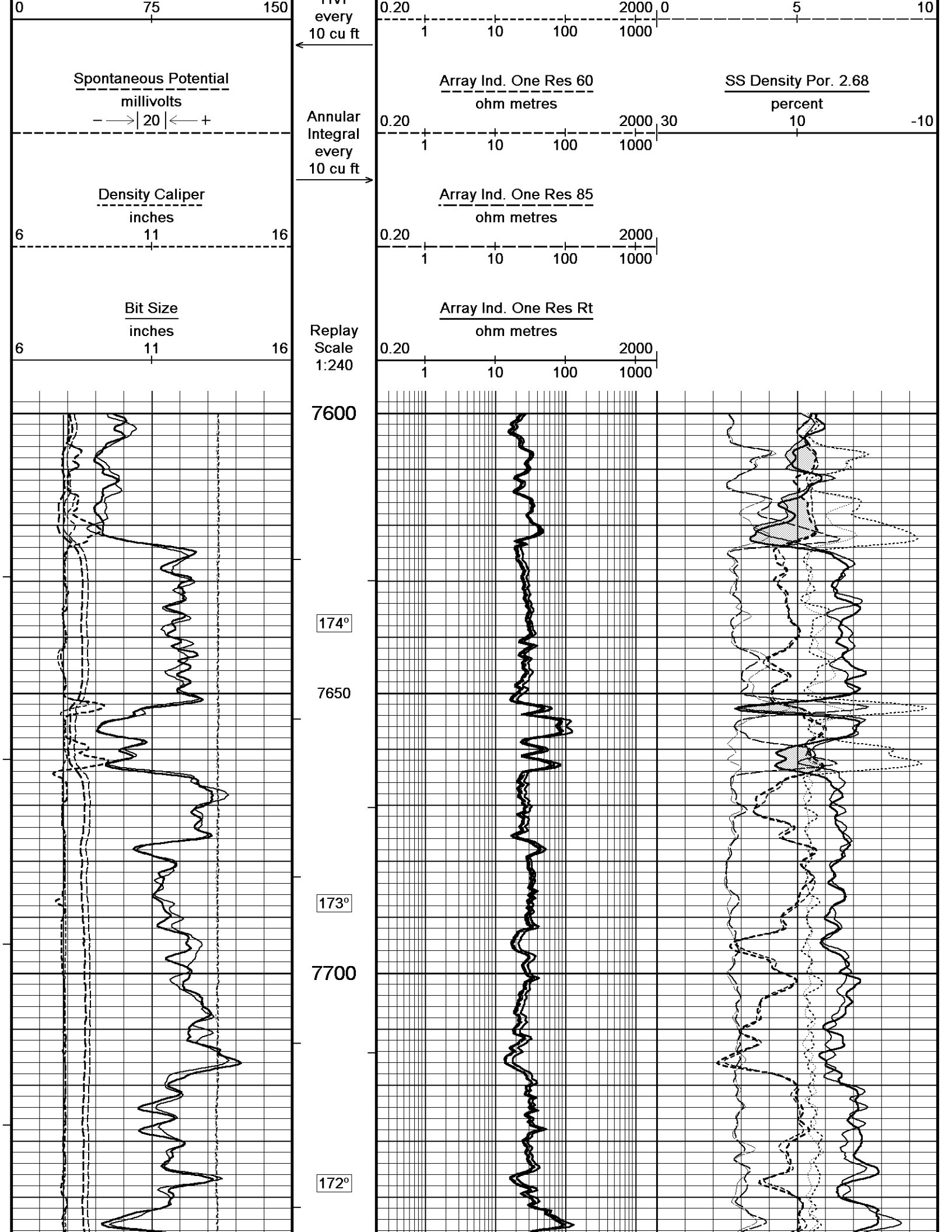
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 17-JUL-2011 08:46
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Main.dta
Recorded on 17-JUL-2011 05:08
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657

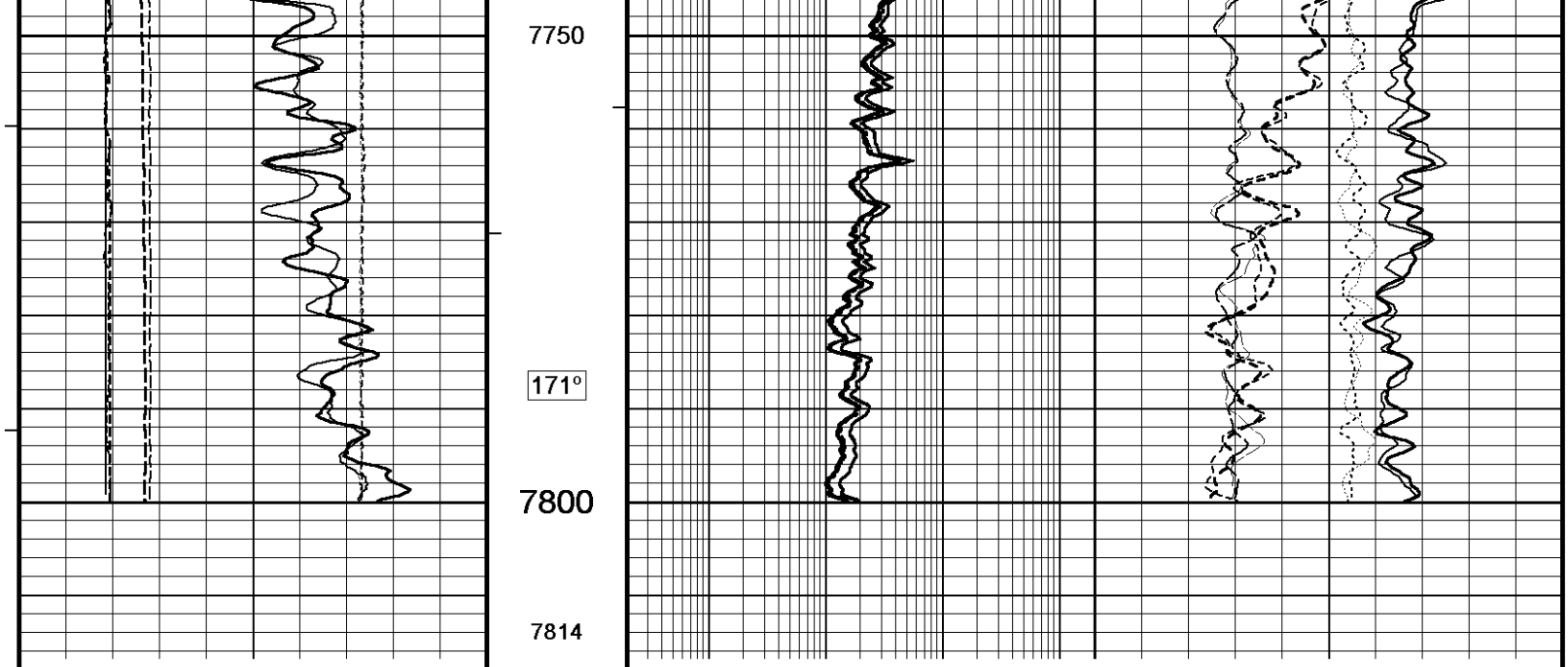
5 INCH MAIN LOG

OVERLAY

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 17-JUL-2011 08:46
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Main.dta
Recorded on 17-JUL-2011 05:08
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat3.dta
Recorded on 17-JUL-2011 03:39
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657




0
75
150
Spontaneous Potential
millivolts
20
TMI
every
10 cu ft
Annular
Integral
every
10 cu ft
Density Caliper
inches
6
11
16
Bit Size
inches
6
11
16
Replay
Scale
1:240
0.20
2000
1
10
100
1000
Array Ind. One Res 60
ohm metres
Array Ind. One Res 85
ohm metres
Array Ind. One Res Rt
ohm metres
0
5
10
SS Density Por. 2.68
percent
30
10
-10
7600
174°
7650
173°
7700
172°



Depth In Feet

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0
0 -5000 -10000

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
– → | 20 | ← +

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Shallow FE (Phase Corr.)
ohm metres
0.20 2000
1 10 100 1000

Sandstone Neutron Por.
percent
30 10 -10

Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-0.25 0 0.25

Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

PE
barns/electron
0 5 10

Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

SS Density Por. 2.68
percent
30 10 -10

Array Ind. One Res 85
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Main.dta
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat3.dta
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657

Plotted on 17-JUL-2011 08:46
Recorded on 17-JUL-2011 05:08
Recorded on 17-JUL-2011 03:39

OVERLAY

OVERLAY 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat.dta
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat2.dta
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657

Plotted on 17-JUL-2011 08:46
Recorded on 17-JUL-2011 02:11
Recorded on 17-JUL-2011 02:32

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0
0 -5000 -10000

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
– → | 20 | ← +

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Shallow FE (Phase Corr.)
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 85
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

Sandstone Neutron Por.
percent
30 10 -10

Density Correction
grams/cc
-0.25 0 0.25

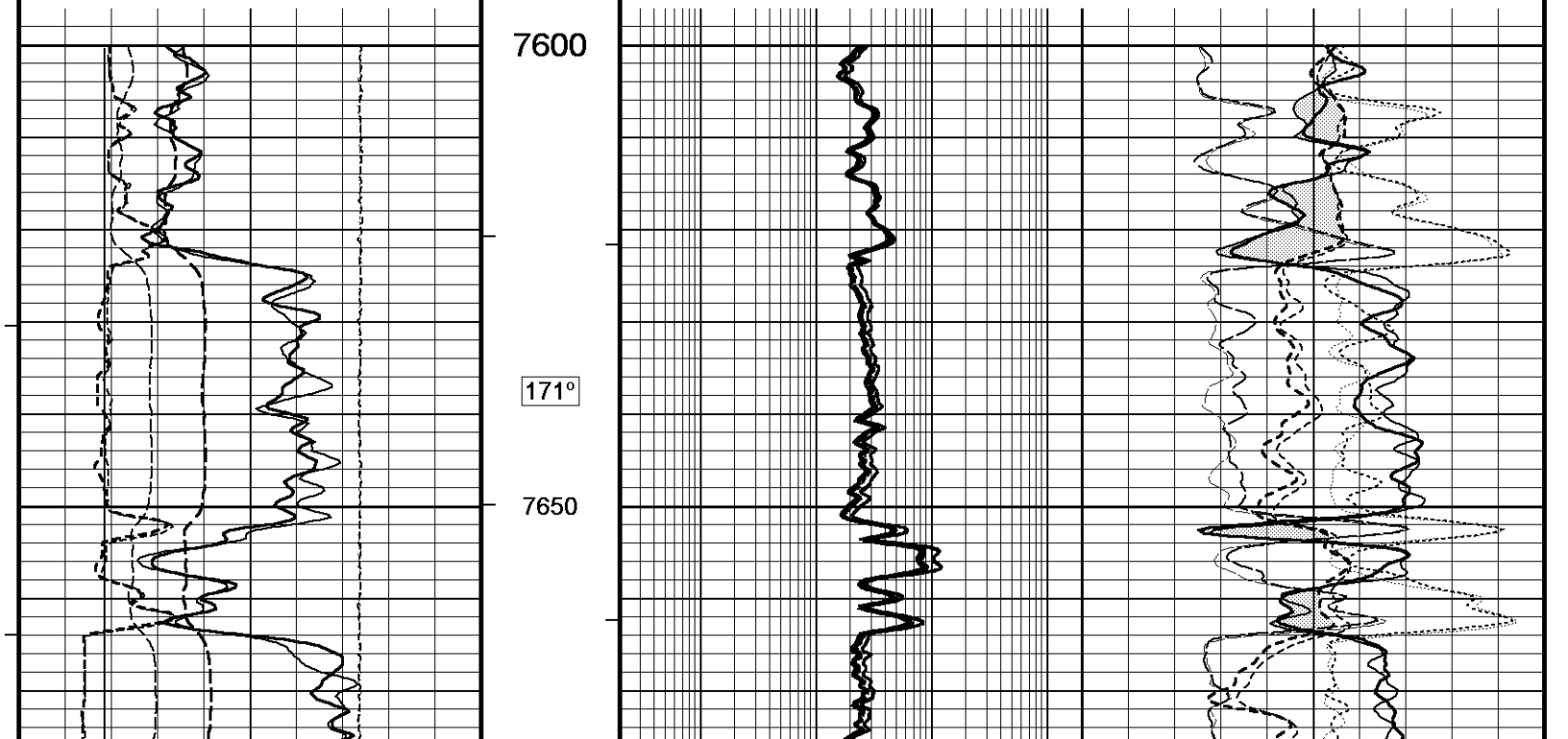
PE
barns/electron
0 5 10

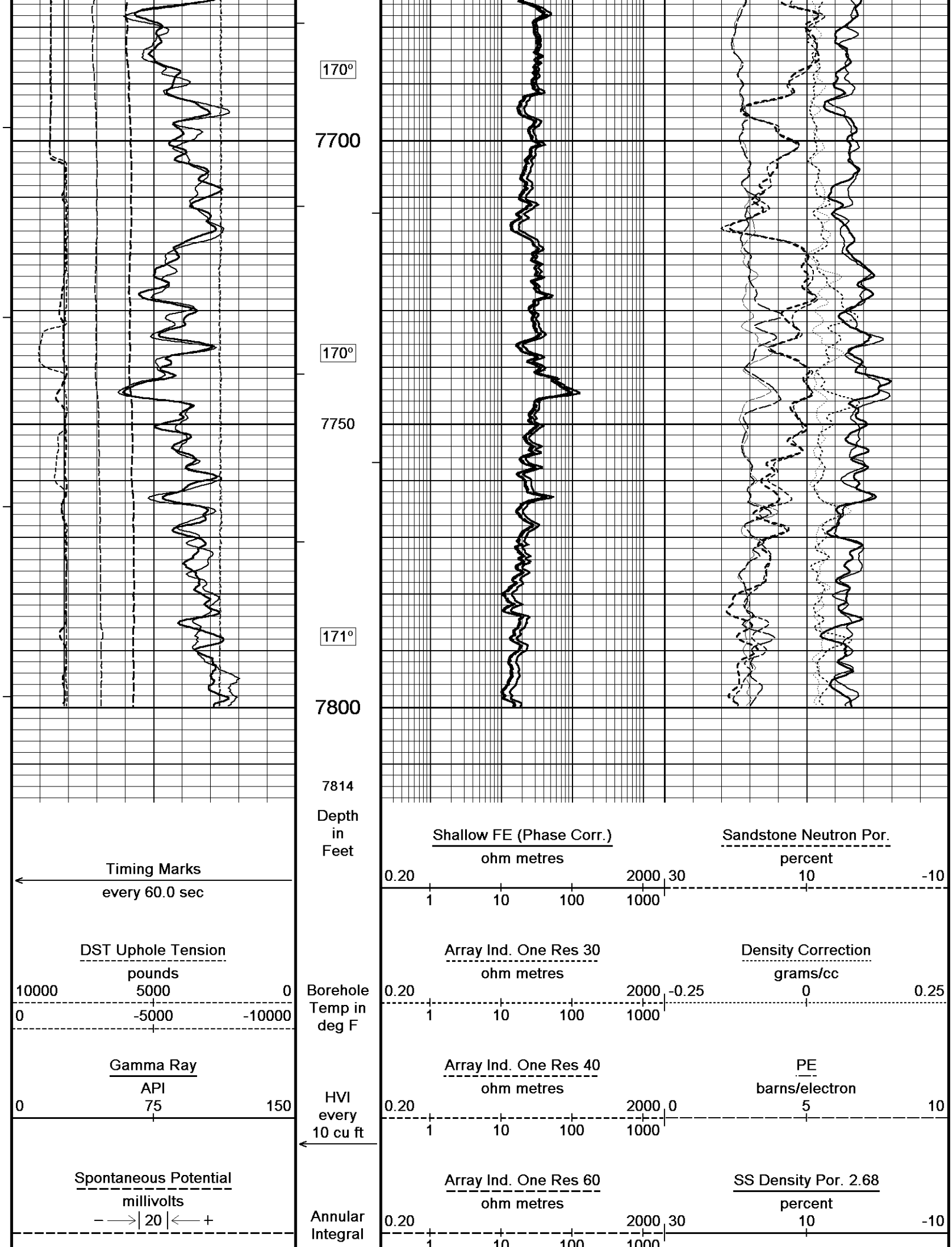
SS Density Por. 2.68
percent
30 10 -10

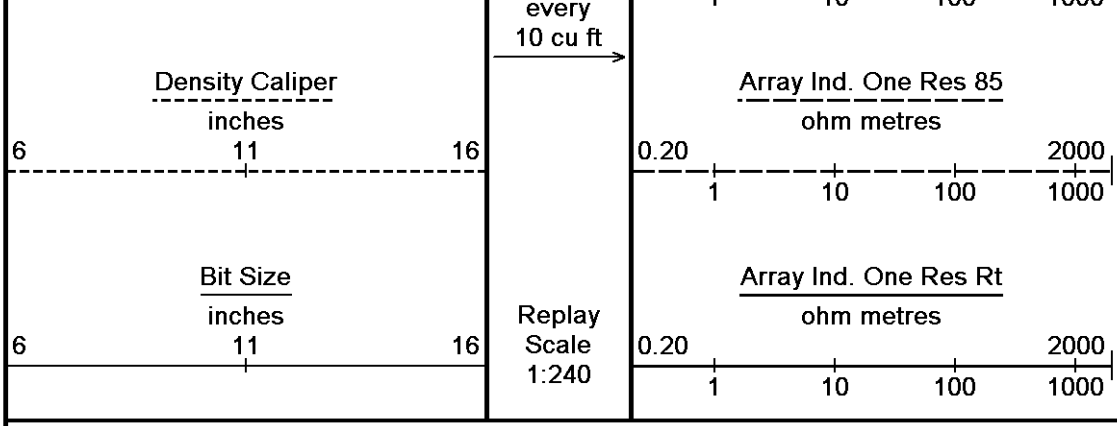
7600

171°

7650




170°
7700
170°
7750
171°
7800
7814
Depth in Feet
Timing Marks
every 60.0 sec
DST Uphole Tension
pounds
10000 5000 0
0 -5000 -10000
Gamma Ray
API
0 75 150
Spontaneous Potential
millivolts
– → | 20 | ← +
Borehole Temp in deg F
HVI every 10 cu ft
Annular Integral
Shallow FE (Phase Corr.)
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 30
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000
Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000
Sandstone Neutron Por.
percent
30 10 -10
Density Correction
grams/cc
-0.25 0 0.25
PE
barns/electron
0 5 10
SS Density Por. 2.68
percent
30 10 -10



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 17-JUL-2011 08:46
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat.dta — Recorded on 17-JUL-2011 02:11
Filename: C:\LOGS\Bill Barrett\Federal 32D-20-691\Repeat2.dta — Recorded on 17-JUL-2011 02:32
System Versions: Logged with 11.03.3657 Plotted with 11.03.3657

OVERLAY 2

BEFORE SURVEY CALIBRATION

C:\LOGS\Bill Barrett\Federal 32D-20-691\Setup.dta

General Constants All 000

Last Edited on 17-JUL-2011,01:01

General Parameters		
Mud Resistivity	2.700	ohm-metres
Mud Resistivity Temperature	83.000	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	4.500	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. One Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG-D.A 287

Field Calibration on 16-JUL-2011 23:58

	Measured	Calibrated (API)
Background	129	86
Calibrator (Gross)	1492	998
Calibrator (Net)	1363	912

Gamma Constants MCG-D.A 287

Last Edited on 16-JUL-2011,23:58

Gamma Calibrator Number	GRC-072	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG-D.A 287

Field Calibration on 17-JUL-2011,01:01

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	50.00	50.00

High Resolution Temperature Constants MCG-D.A 287

Last Edited on 12-JUL-2011,10:42

Pre-filter Length	11

Neutron Calibration MDN-A B 160

Base Calibration on 09-MAY-2011 11:52

Field Check on 17-JUL-2011 00:10

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3186	99	3714	110
Ratio	32.247		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1296	1921
Ratio	0.675	

Field Check

	Calibrated (cps)	
	1348	1983
Ratio	0.680	

Neutron Constants MDN-A.B 160

Last Edited on 17-JUL-2011,01:02

Neutron Source Id	1056	
Neutron Jig Number	5922	
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	

FE Calibration MFE-A.A 85

Base Calibration on 04-MAY-2011 15:19
Field Check on 17-JUL-2011 00:41

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	965.0	126.8
Base Check		281.4
Field Check		281.6

FE Constants MFE-A.A 85

Last Edited on 17-JUL-2011,00:40

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

Induction Calibration MAI-B.A 213

Base Calibration on 22-JUN-2011,04:47
Field Check on

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.8	462.4	9.3	966.2
2	6.2	381.7	7.6	821.4
3	3.6	254.8	5.2	566.0
4	2.3	132.3	2.6	279.2

Array Temperature 73.6 Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0

3	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0	0.0	
Deep	0.0	0.0	0.0	0.0	
Medium	0.0	0.0	0.0	0.0	
Shallow	0.0	0.0	0.0	0.0	
Array Temperature		0.0		0.0	Deg F

Induction Constants MAI-B.A 213

Last Edited on 17-JUL-2011,00:38

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-B 167

Base Calibration on 24-MAR-2011 14:48
Field Calibration on 17-JUL-2011,01:02

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	18272	4.00
2	26728	5.96
3	35183	7.98
4	43312	9.86
5	52336	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.50	8.98

Photo Density Calibration MPD-B 167

Base Calibration on 09-JUL-2011 00:43
Field Check on 17-JUL-2011 00:47

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	50869	18007	53237	19445
Reference 2	23616	2995	25135	2545

Field Check at Base

Field Check at Base	1192.6	1730.2
Field Check	1209.9	1731.8

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	220	1075		
Reference 1	16954	50697	0.337	0.320
Reference 2	6509	23479	0.281	0.274

Field Check at Base	220.5	1075.3
Field Check	221.0	1085.4

Density Constants MPD-B 167

Last Edited on 17-JUL-2011,00:42

Density Source Id	P50561B	
Nylon Calibrator Number	532	
Aluminium Calibrator Number	532	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.21	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	

AFTER SURVEY CALIBRATION

C:\LOGS\Bill Barrett\Federal 32D-20-691\Setup.dta

Gamma Check MCG-D.A 287

Field Calibration on 16-JUL-2011 23:58
After Survey Check on 17-JUL-2011 07:26

	Before (API)	After (API)
Background	86	85
Calibrator (Gross)	998	997
Calibrator (Net)	912	912

Neutron Check MDN-A.B 160

Before Survey Check on 17-JUL-2011 00:10
After Survey Check on 17-JUL-2011 07:33

Near (cps)		Far (cps)	
Before	After	Before	After
1348	1353	1983	1991

Ratio	
Before	After
0.680	0.680

FE Check MFE-A.A 85

Before Survey Check 17-JUL-2011 00:41
After Survey Check on 17-JUL-2011 06:52

Before (ohm-m)	After (ohm-m)
281.6	281.6

Induction Check MAI-B.A 213

Before Survey Check on
After Survey Check on 17-JUL-2011 06:51

Channel	Before Survey (mmho/m) Low	High	After Survey (mmho/m) Low	High	
1	0.0	0.0	14.7	3936.9	
2	0.0	0.0	30.4	3540.2	
3	0.0	0.0	28.9	3114.5	
4	0.0	0.0	19.1	2097.0	
Deep	0.0	0.0	17.5	2078.7	
Medium	0.0	0.0	42.6	4088.4	
Shallow	0.0	0.0	45.6	5159.6	
Array Temperature		0.0		80.4	Deg F

Photo Density Check MPD-B 167

Before Survey Check on 17-JUL-2011 00:47
After Survey Check on 17-JUL-2011 06:57

Density Check

Near		Far	
Before	After	Before	After
1209.9	1212.5	1731.8	1730.9

PE Check

	Before	After
WS	221.0	220.6
WH	1085.4	1085.9

DOWNHOLE EQUIPMENT

C:\LOGS\Bill Barrett\Federal 32D-20-691\Setup.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

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

SHA-F Compact Swivel Head Adaptor
SHA-F 82 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.A 287 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.A 287 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 Neutron
MDN-A.B 160 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

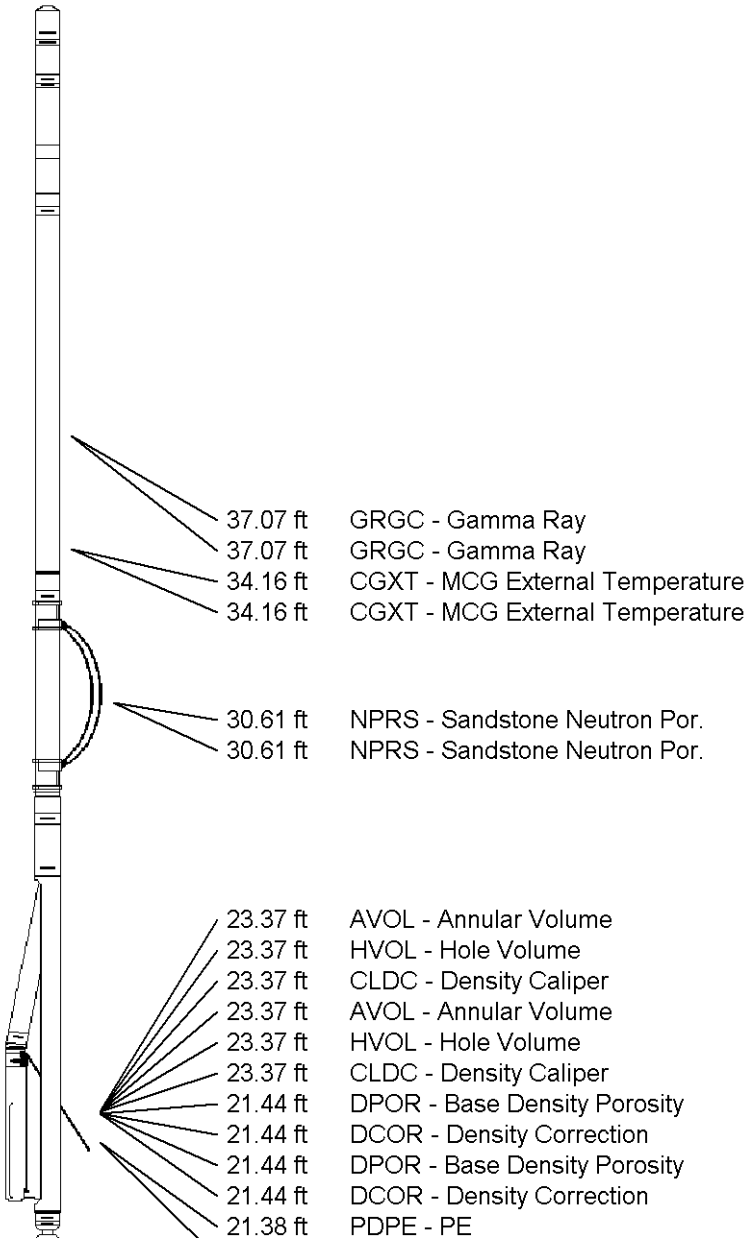
Compact Density/Caliper
MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper
MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 114 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric



MFE-A.A 85 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

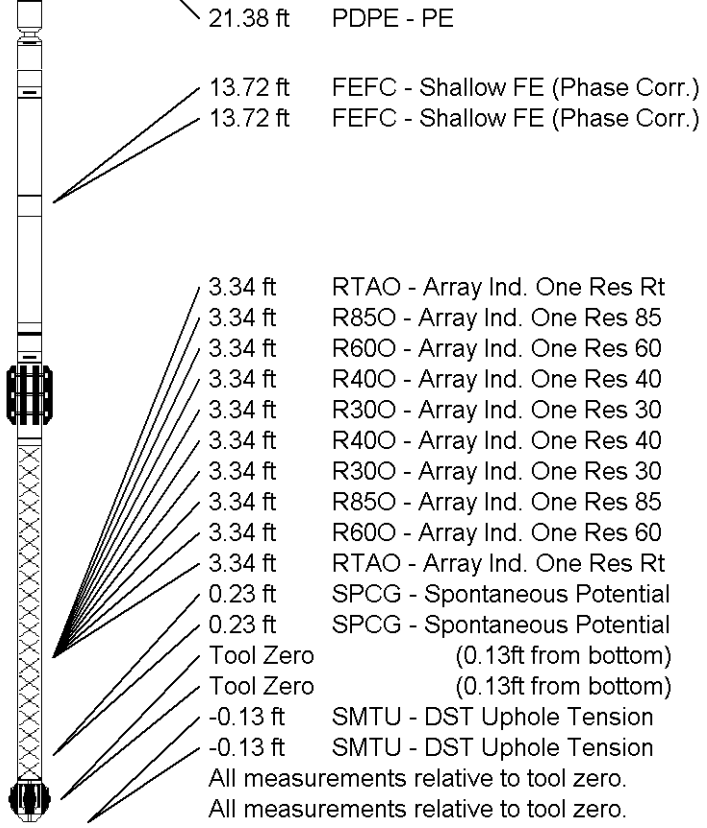
Compact Focussed Electric
MFE-A.A 85 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-B.A 213 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-B.A 213 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 46.67 ft Weight: 368.2 lb

Total Length: 46.67 ft Weight: 368.2 lb



21.38 ft	PDPE - PE
13.72 ft	FEFC - Shallow FE (Phase Corr.)
13.72 ft	FEFC - Shallow FE (Phase Corr.)
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R85O - Array Ind. One Res 85
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R30O - Array Ind. One Res 30
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R30O - Array Ind. One Res 30
3.34 ft	R85O - Array Ind. One Res 85
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	RTAO - Array Ind. One Res Rt
0.23 ft	SPCG - Spontaneous Potential
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.
All measurements relative to tool zero.

COMPANY	BILL BARRETT CORPORATION
WELL	FEDERAL 32D-20-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	5553.00	feet	First Reading	7866.00	
Elevation Drill Floor	5553.00	feet	Depth Driller	7875.00	feet
Elevation Ground Level	5530.00	feet	Depth Logger	7866.00	feet

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