COMPENSATED PHOTO DENSITY
COMPENSATED DUAL NEUTRON
LOG

Weatherford®

COMPANY	BILL BARRETT CORPORATION
WELL	GGU SWANSON 32D-29-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO
LOCATION	SHL: 1221' FNL & 1342' FEL
	BHL: 1473' FNL & 1990' FEL

SEC	TWP	RGE	Other Services
29	6S	91W	MAI/MFE

API Number 05-045-19801
Permit Number

Permanent Datum G.L., Elevation 6104 feet
Log Measured From KB @ 23 FT above Permanent Datum
Drilling Measured From K.B.

Elevations:	feet
KB	6127.00
DF	6126.00
GL	6104.00

Date	22-FEB-2011			
Run Number	ONE			
Depth Driller	7467.00	feet		
Depth Logger	7456.00	feet		
First Reading	7433.00			
Last Reading	768.00			
Casing Driller	768.00	feet		
Casing Logger	768.00	feet		
Bit Size	7.880	inches		
Hole Fluid Type	LSND			
Density / Viscosity	10.60 lb/USg	55.00 CP		
PH / Fluid Loss	9.60	5.20 ml/30Min		
Sample Source	FLOW LINE			
Rm @ Measured Temp	4.0 @ 80.0	ohm-m		
Rmf @ Measured Temp	3.20 @ 80.0	ohm-m		
Rmc @ Measured Temp	4.80 @ 80.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	1.85 @176.0	ohm-m		
Time Since Circulation	6 HOURS			
Max Recorded Temp	176.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13173	GD JCT		
Recorded By	J.GARCIA			
Witnessed By	C.CROW			

BOREHOLE RECORD

Last Edited: 23-FEB-2011 01:26

Bit Size inches	Depth From feet	Depth To feet
8.750	768.00	7467.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	768.00	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. = 8.99" (9 5/8", 36 LB/FT CASING)

8.75 INCH BIT USED FROM SURFACE CASING TO 7456 FT.

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 3060 CU FT

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 6990 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 2320 CU.FT.

ENGINEER(S): J.GARCIA

OPERATOR: R.SYERS, S.KAISER

SERVICE ORDER: # 3524851

RIG: PATTERSON #307

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-FEB-2011 03:12

Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta — Recorded on 22-FEB-2011 23:21

System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

Timing Marks every 60.0 sec

DST Uphole Tension(SMTU) pounds 10000 5000 0

Gamma Ray(GRGC) API 0 75 150 / 150 225 300

Density Caliper(CLDC) inches 6 11 16

Bit Size(BIT) inches 6 11 16

Depth In Feet

HVI every 10 cu ft

Annular Integral every 10 cu ft

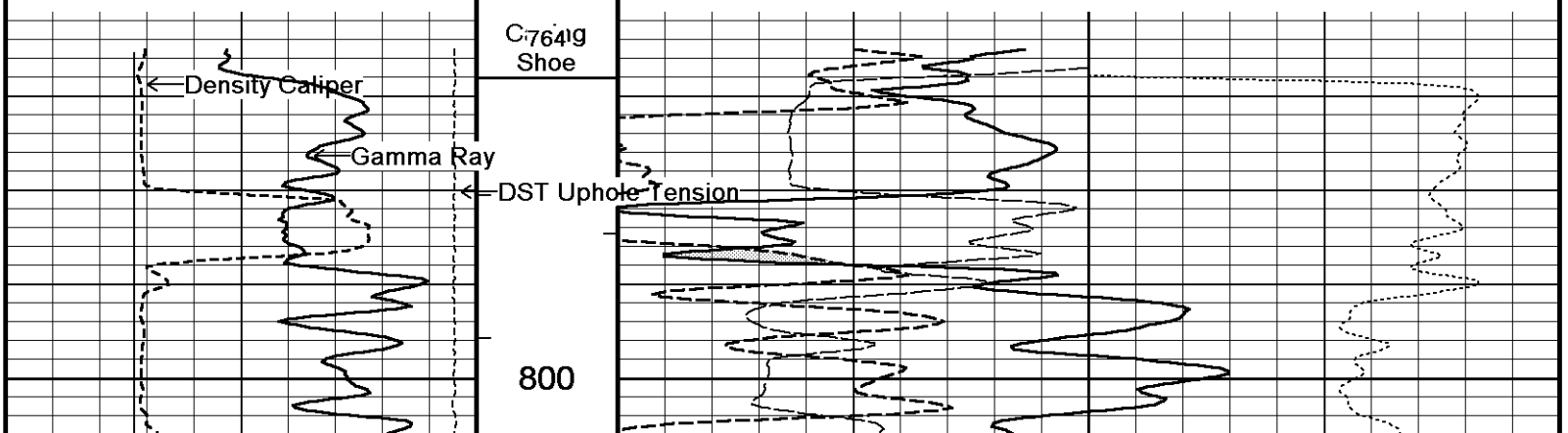
Replay Scale 1:240

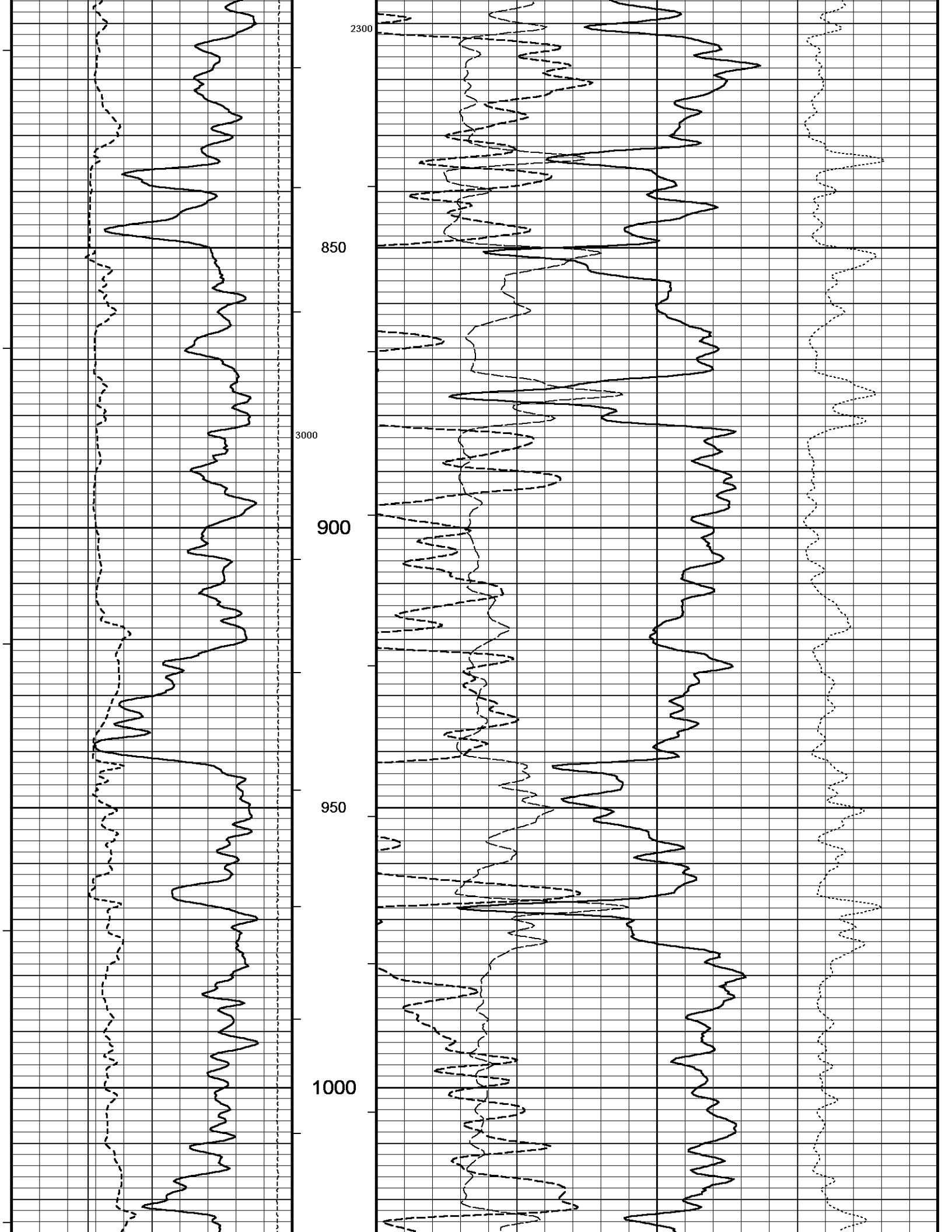
SS Neutron Por.(NPRS) percent 30 20 10 0 -10

SS Density Por. 2.68(DPOR) percent 30 20 10 0 -10

PE(PDPE) barns/electron 0 5 10

Density Correction(DCOR) grams/cc -0.25 0 0.25

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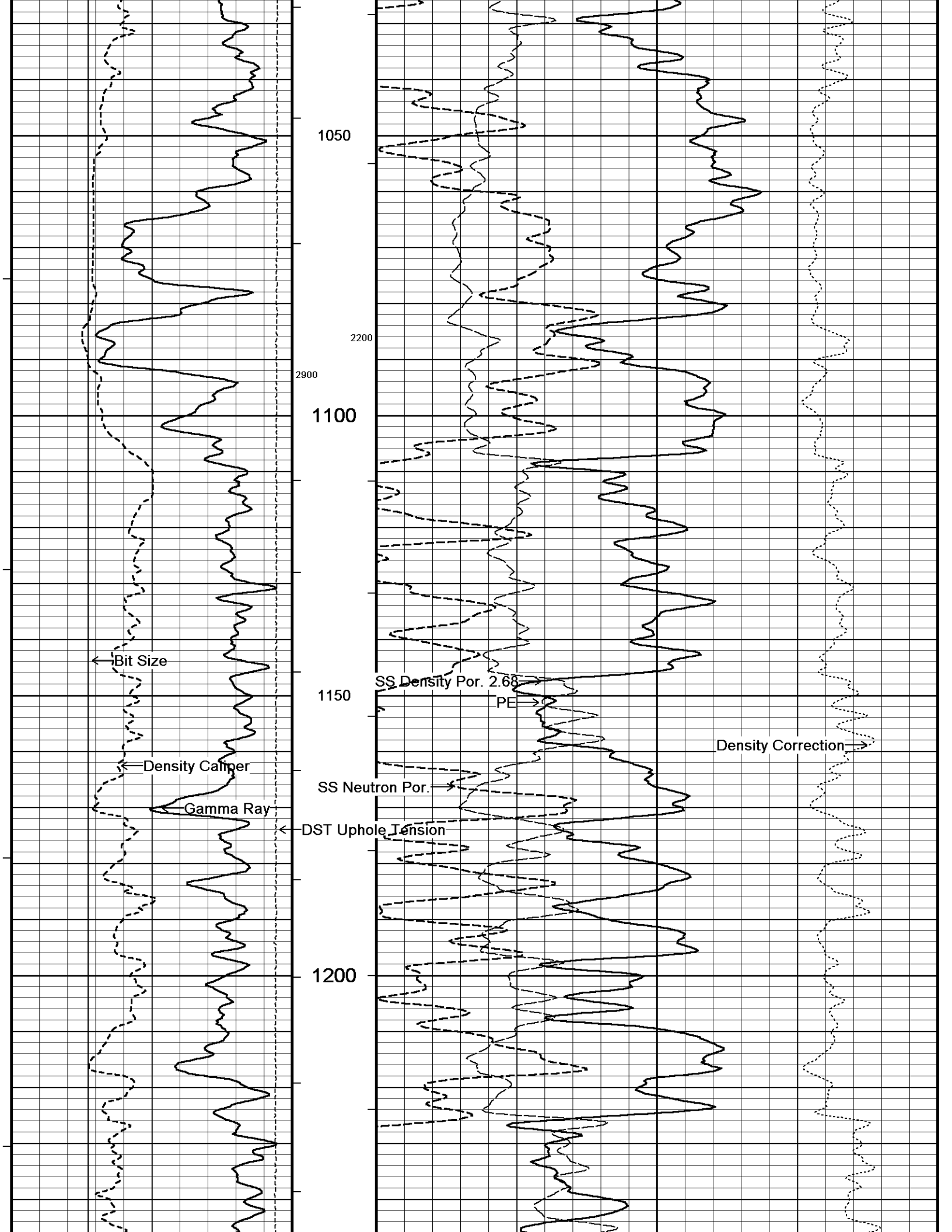
850
3000
900
950
1000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2200
2900
1100
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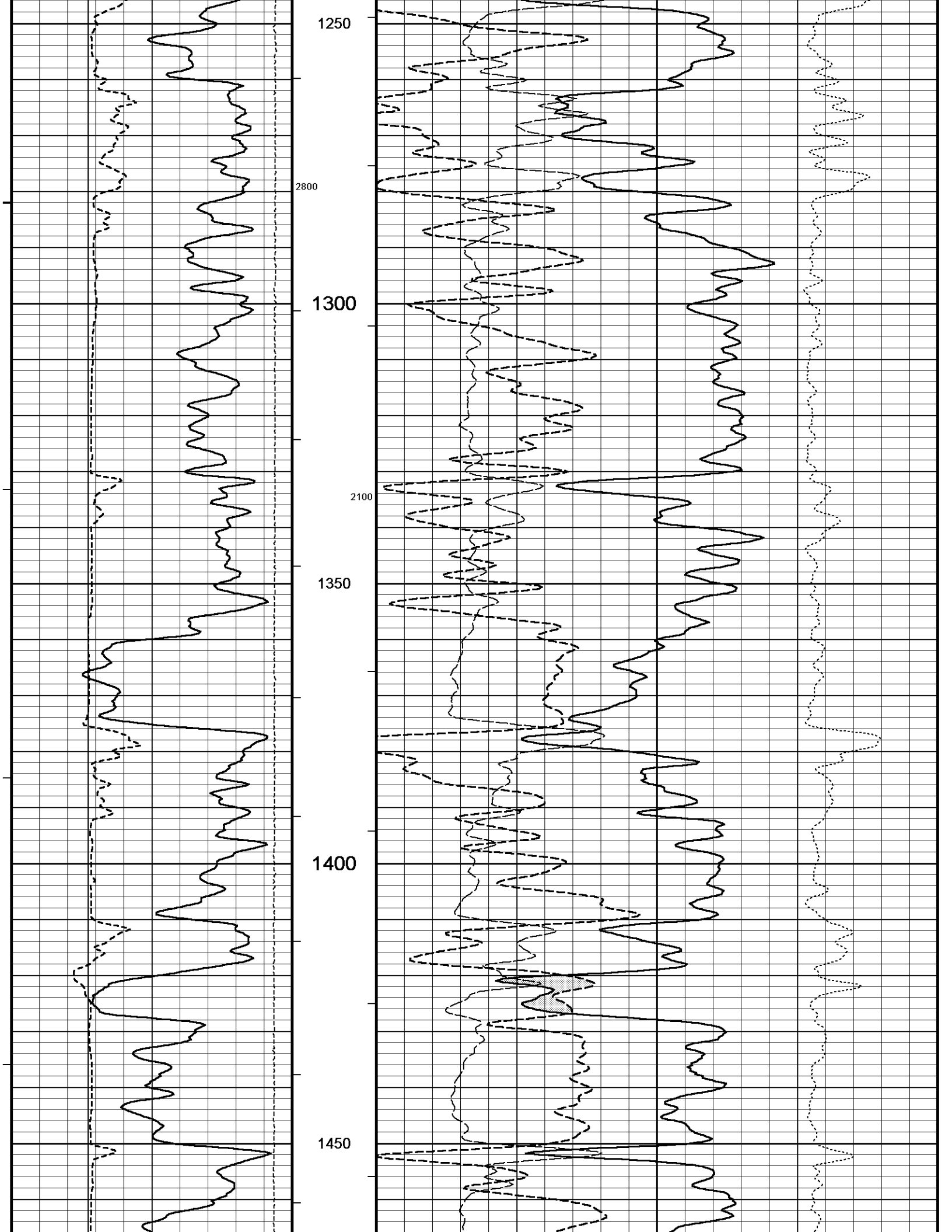
SS Density Por. 2.68
1150
PE
Density Correction
Density Caliper
SS Neutron Por.
Gamma Ray
DST Uphole Tension
1200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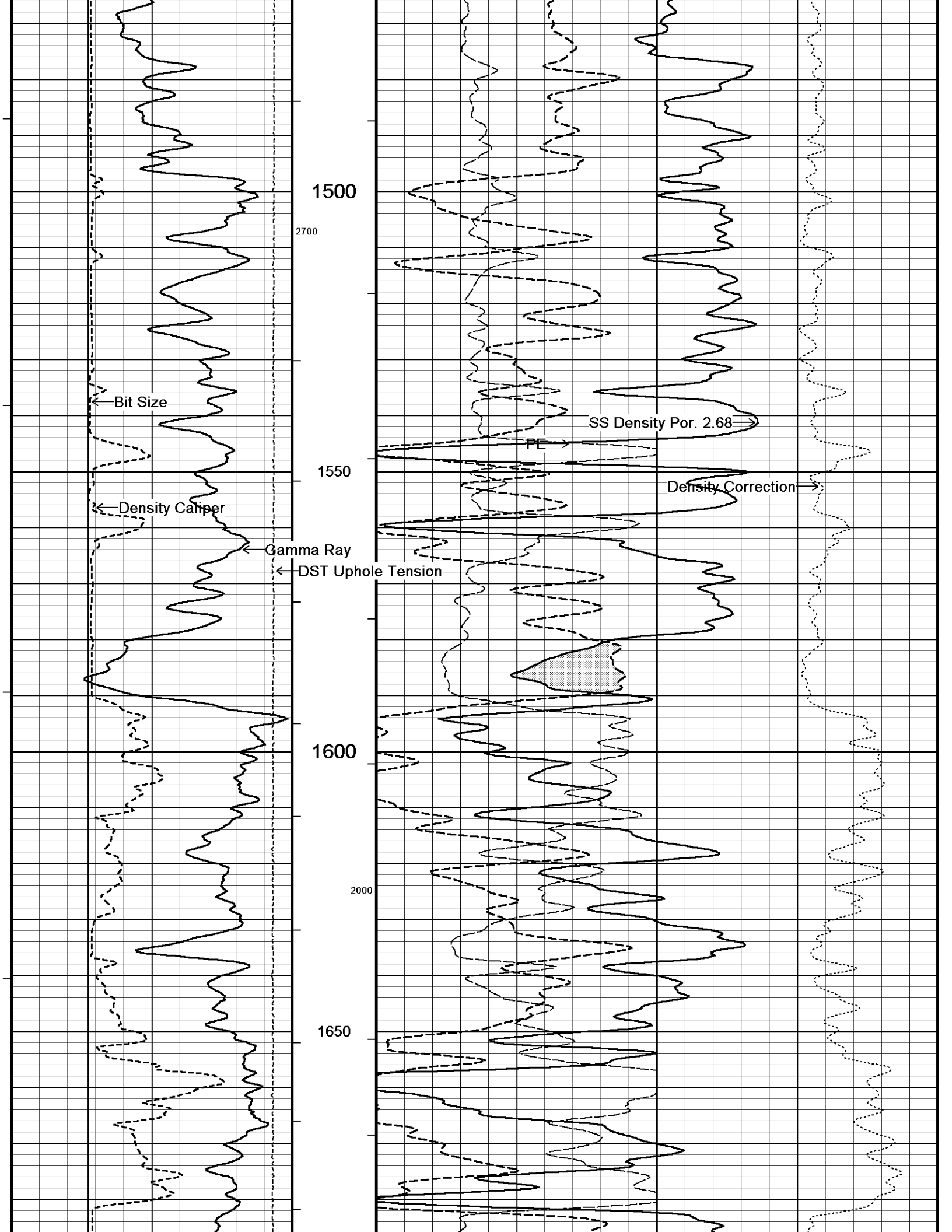
1300
2100
1350
1400
1450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2700
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PE
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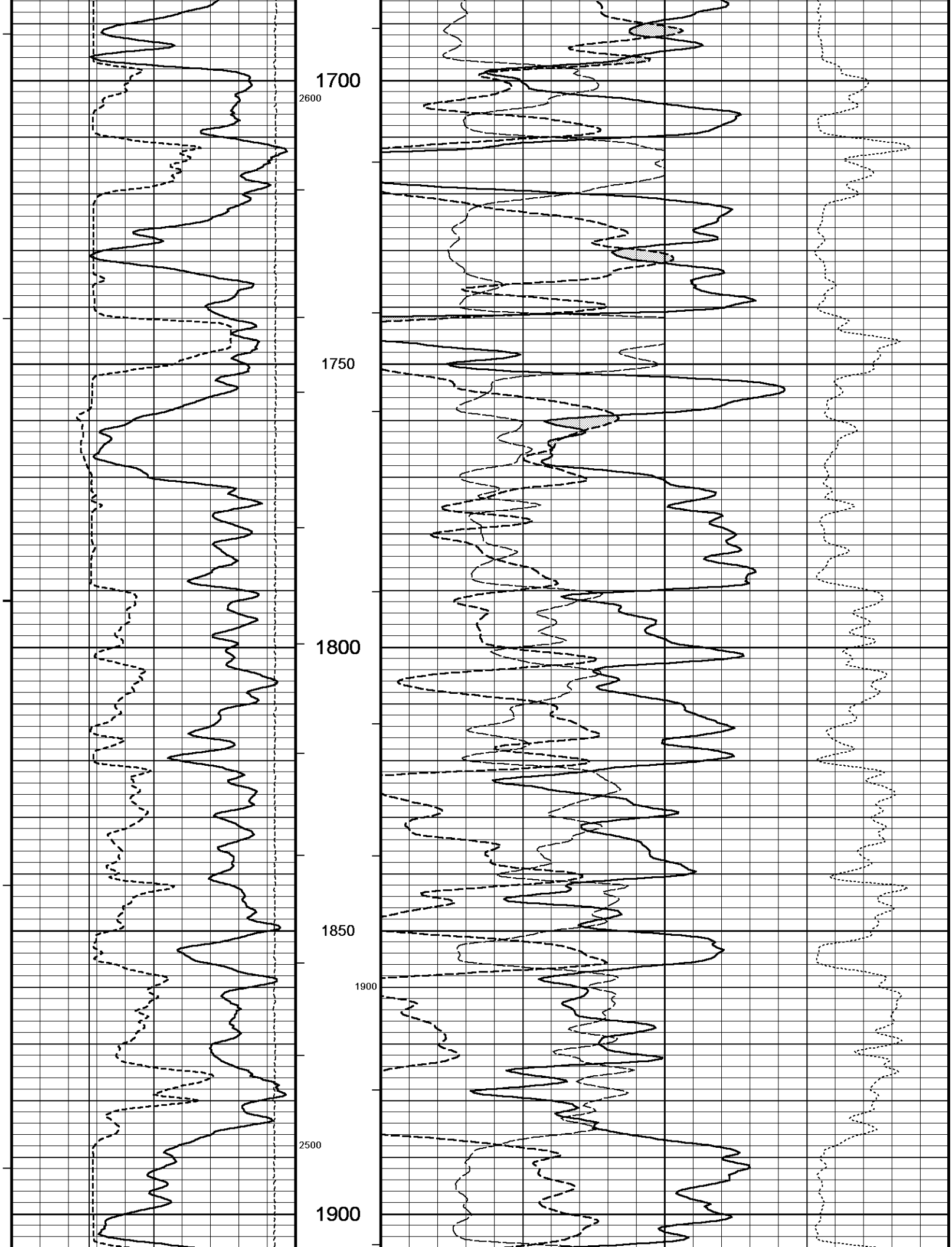
Density Caliper
Gamma Ray
DST Uphole Tension
1600
2000
1650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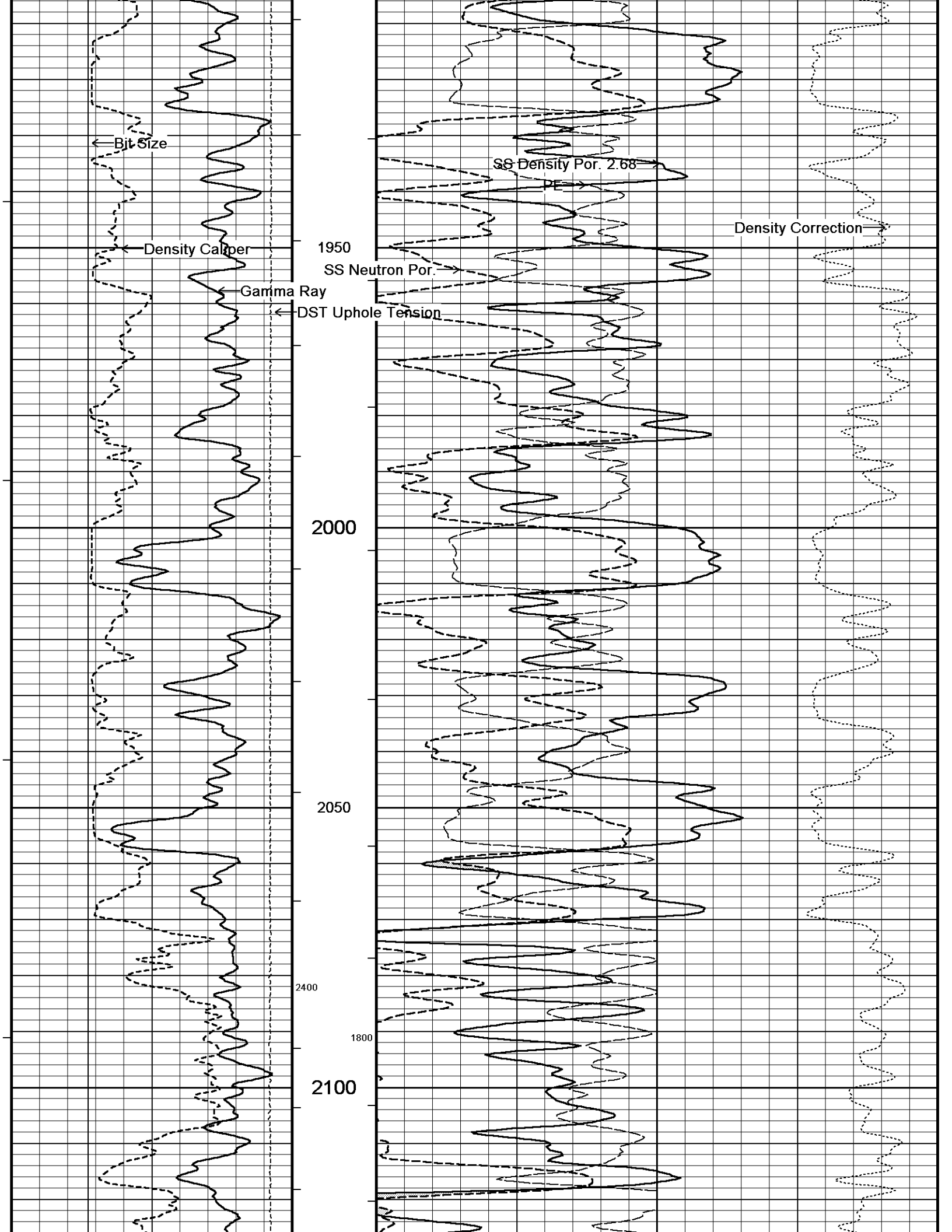
2600
1750
1800
1850
1900
2500
1900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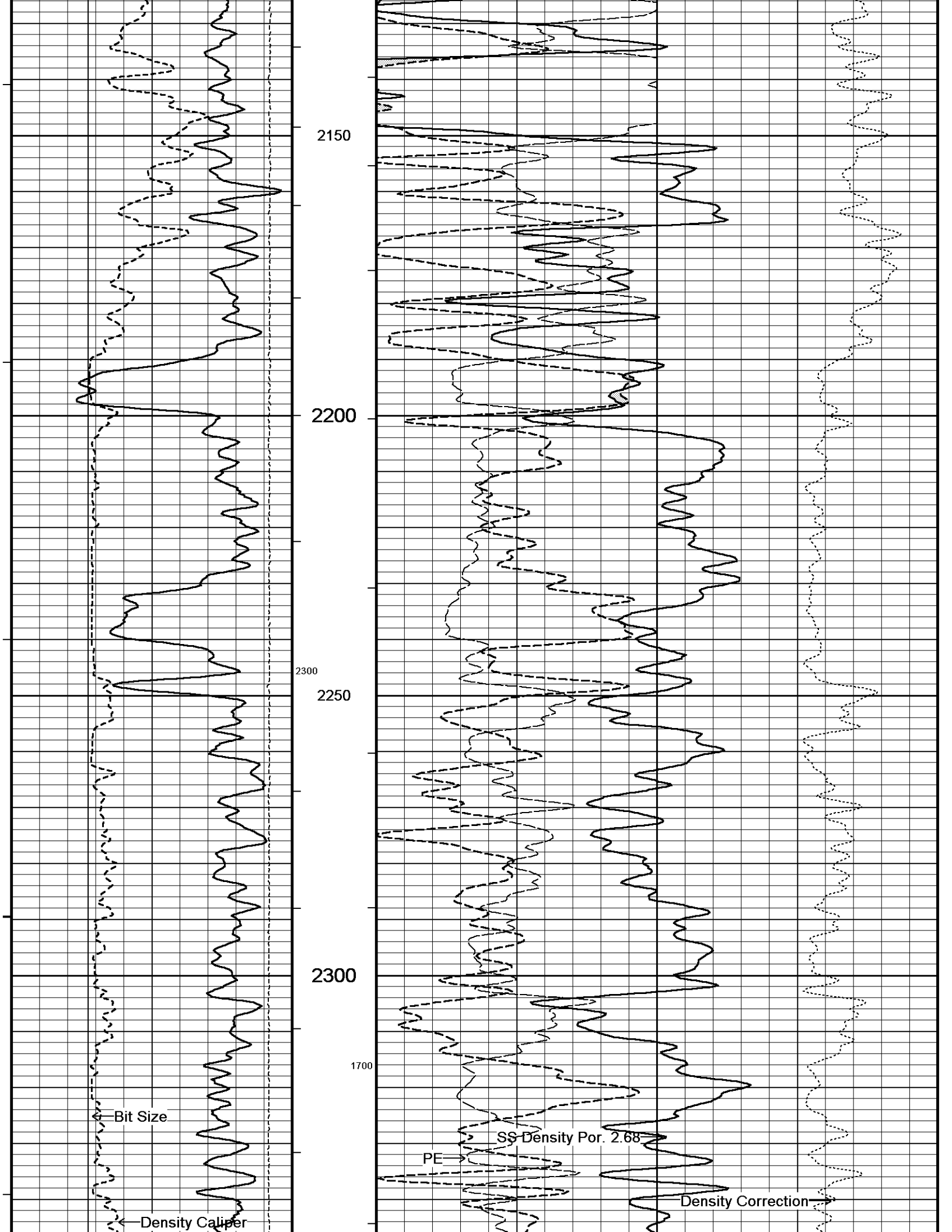
Density Caliper
Gamma Ray
DST Uphole Tension
SS Density Por. 2.68
PE
Density Correction
SS Neutron Por.
1950
2000
2050
2400
1800
2100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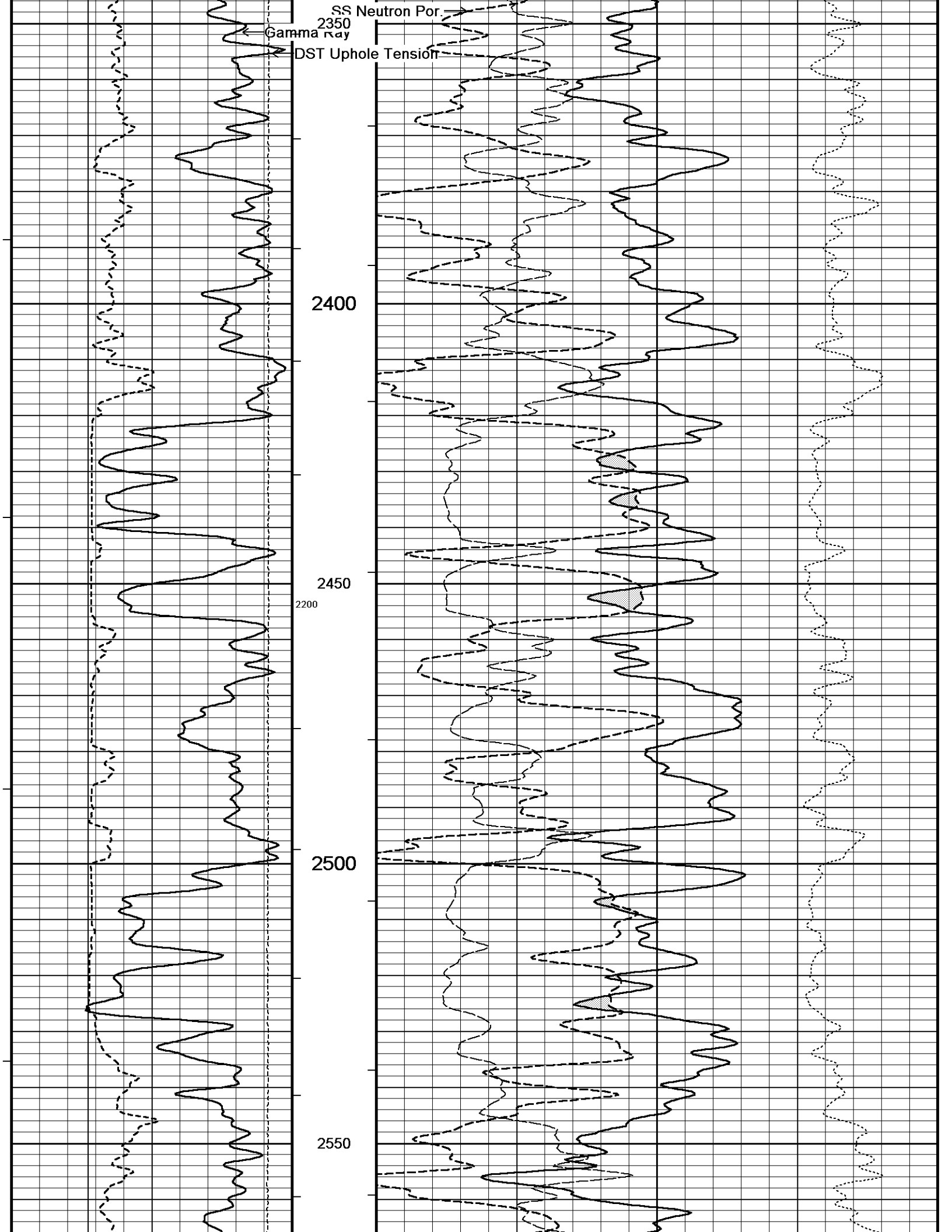
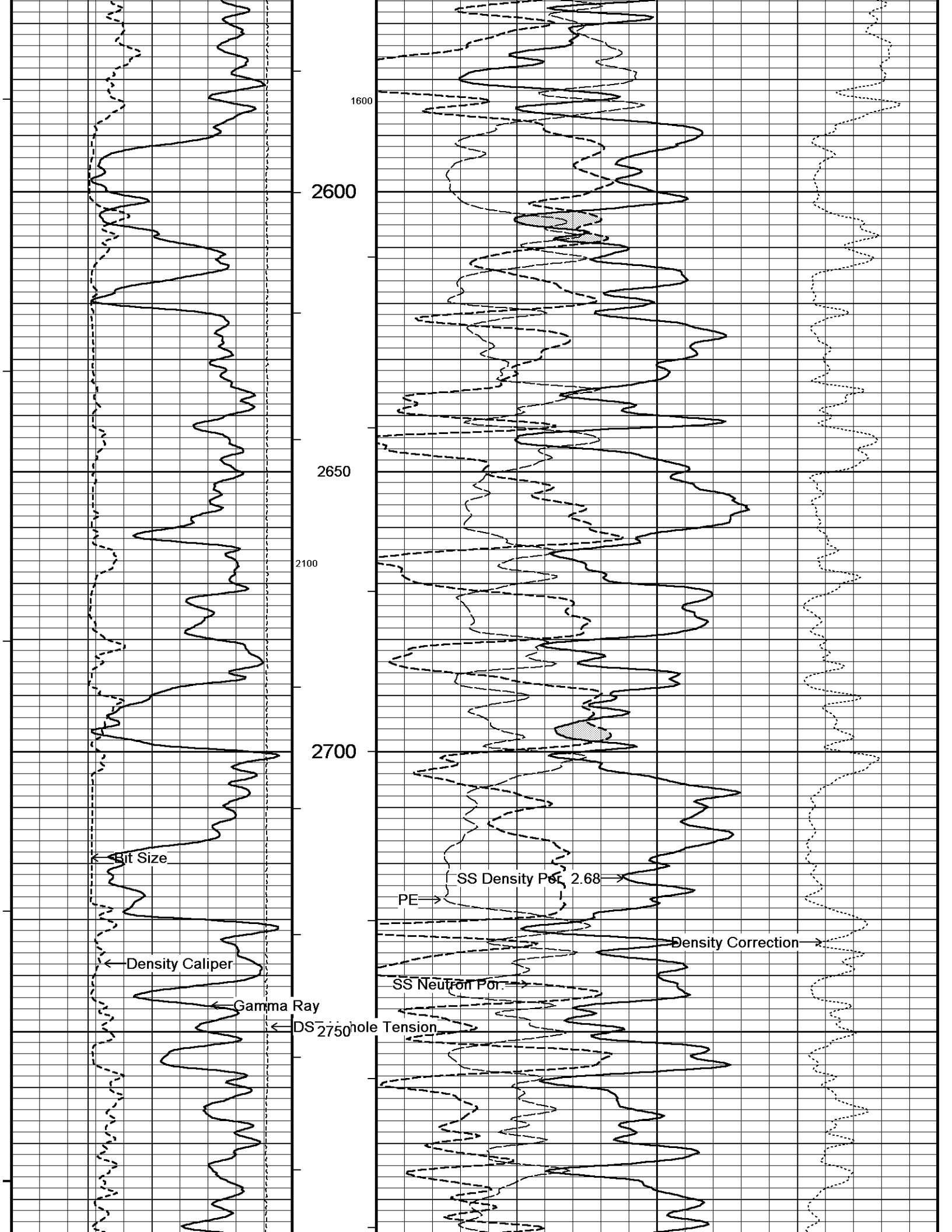
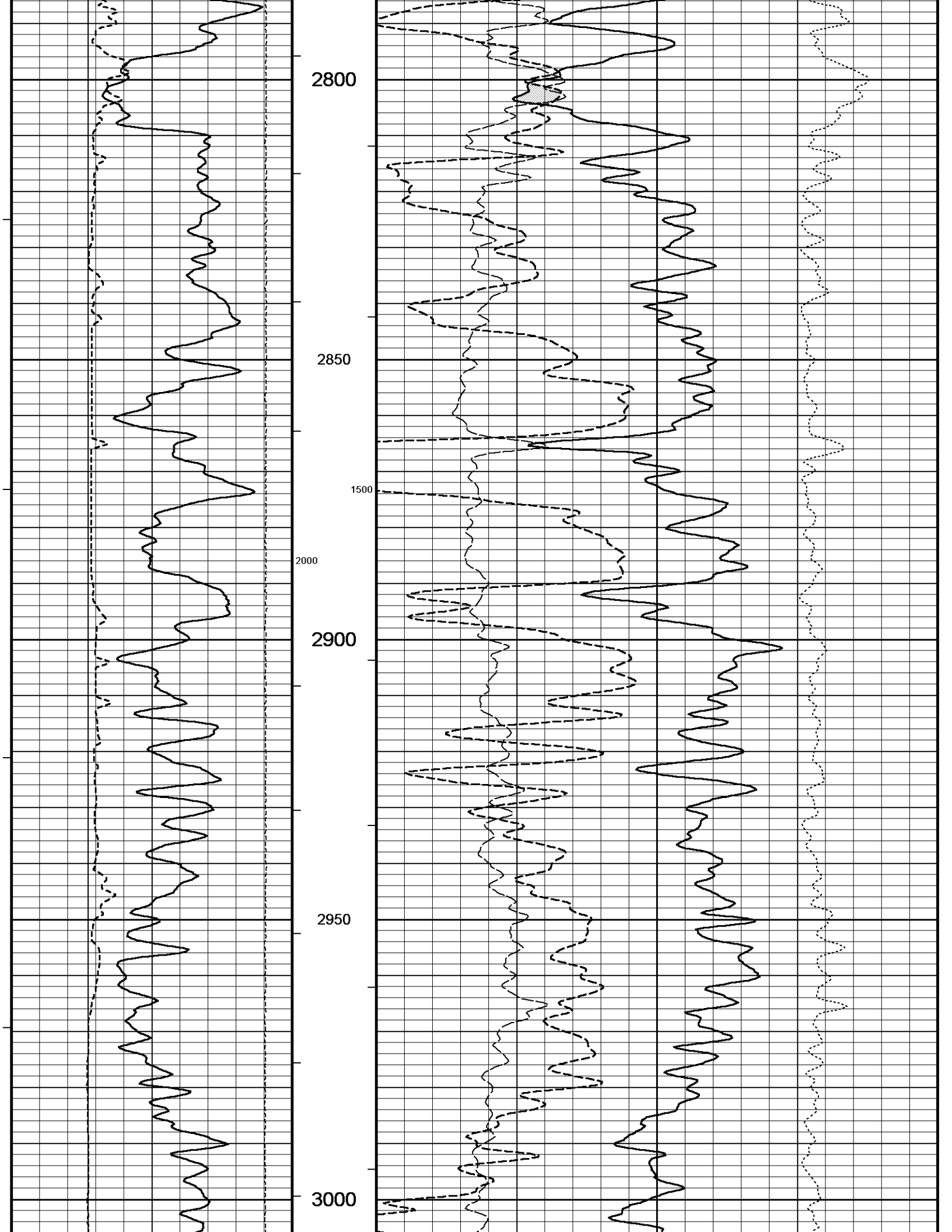
2200
2300
2250
2300
1700
Bit Size
Density Caliper
SS Density Por. 2.68
PE
Density Correction


SS Neutron Por.
2350
Gamma Ray
DST Uphole Tension
2400
2450
2200
2500
2550


1600
2600
2650
2100
2700
Bit Size
SS Density Por. 2.68
PE
Density Correction
Density Caliper
SS Neutron Por.
Gamma Ray
DS
hole Tension
2750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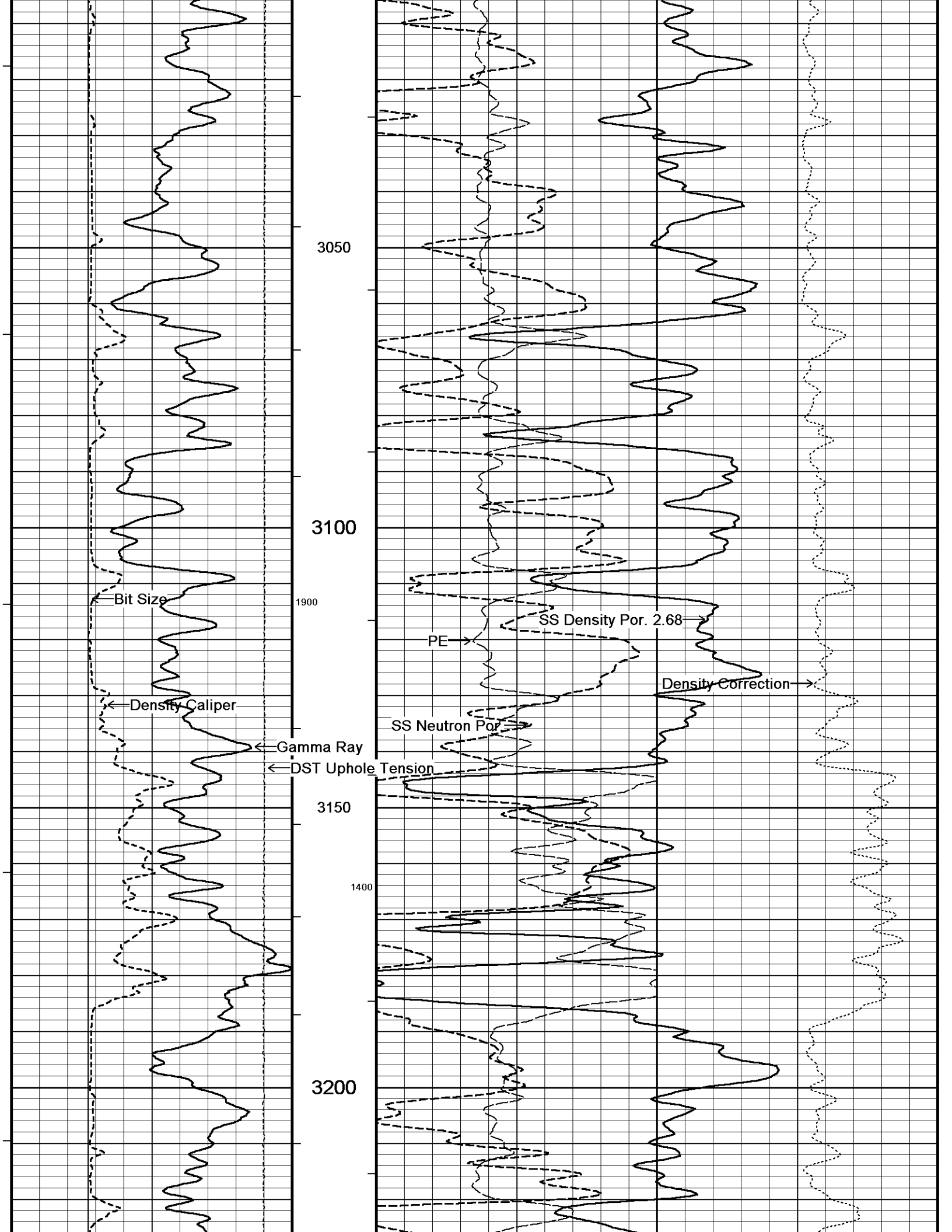
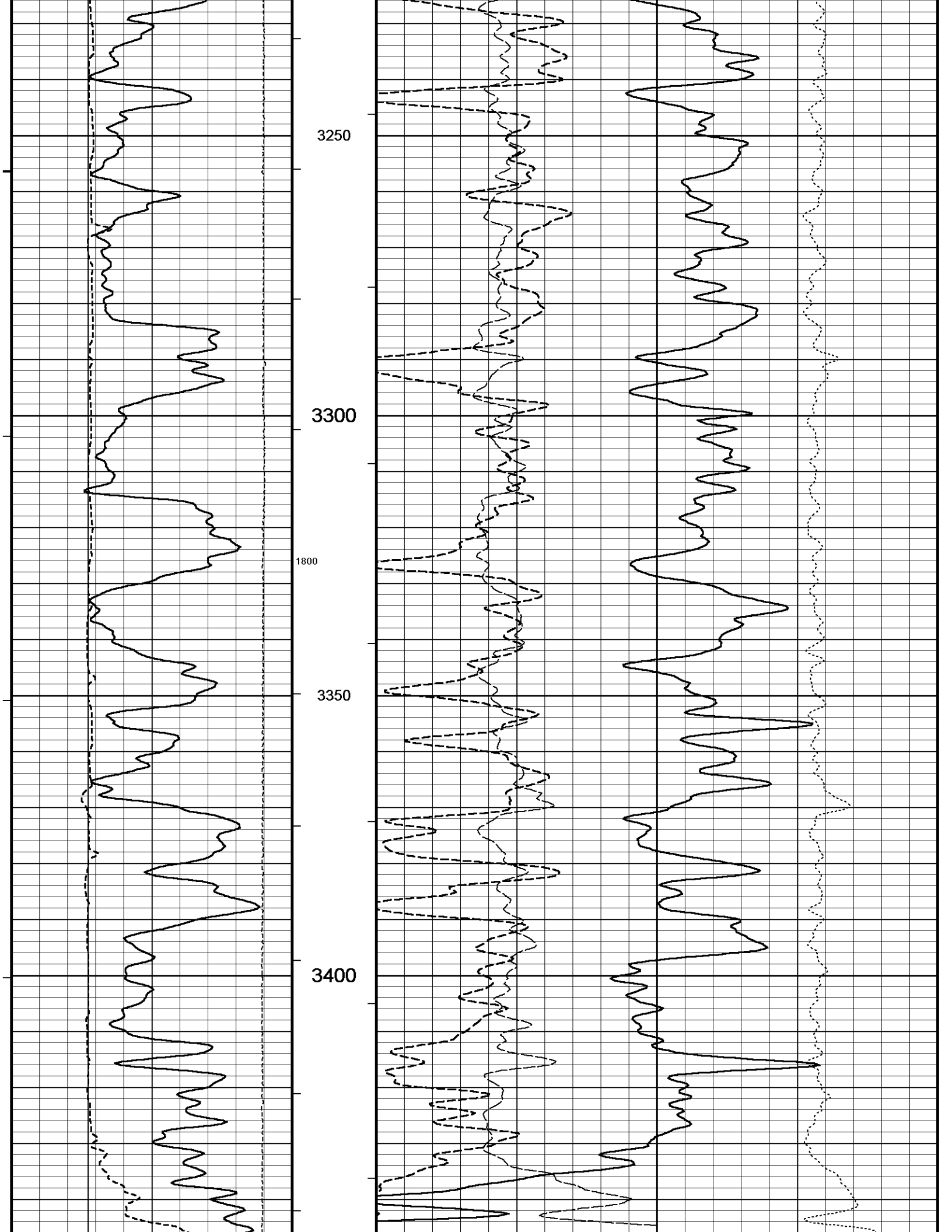
2850
1500
2000
2900
2950
3000


3050
3100
1900
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
SS Density Por. 2.68
PE
Density Correction
SS Neutron Por
3150
1400
3200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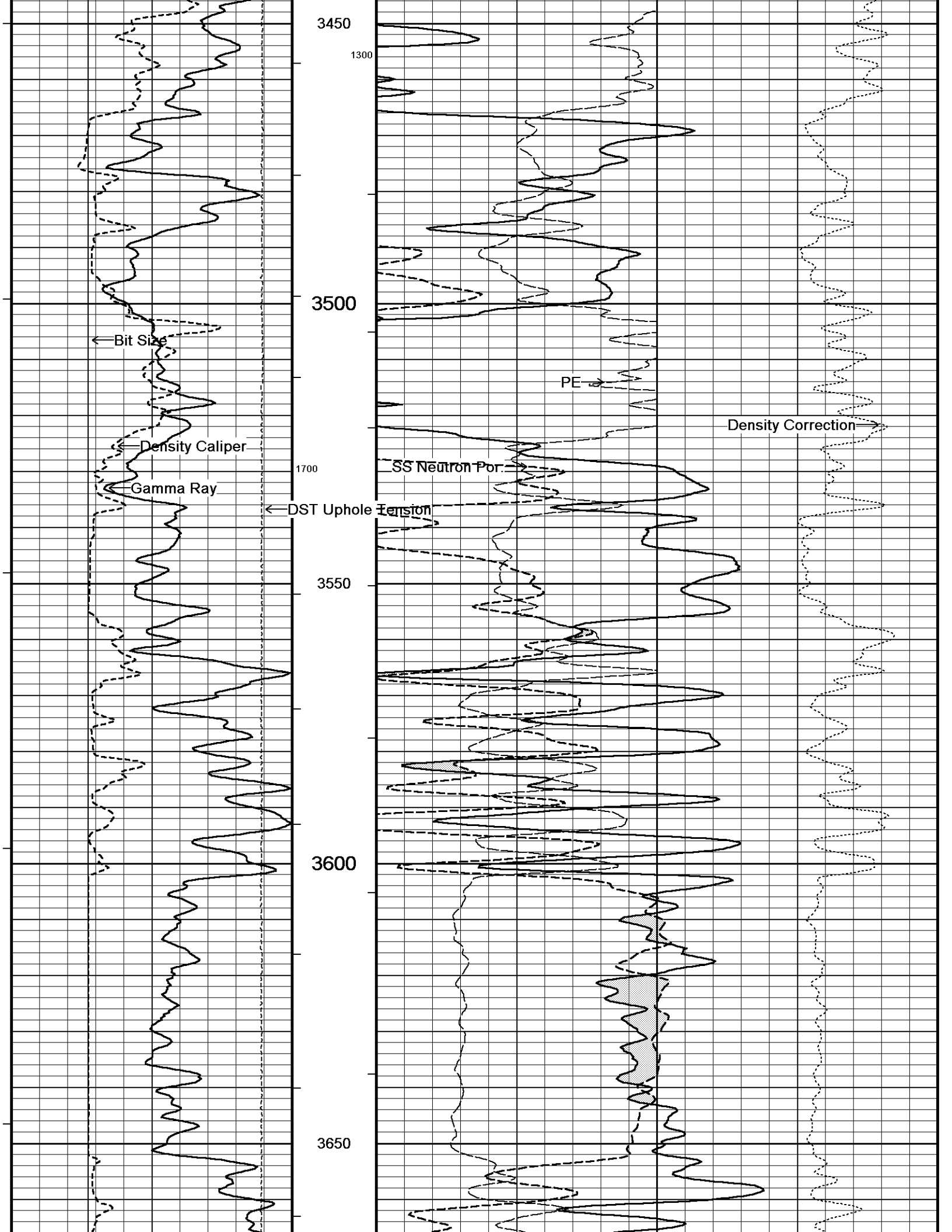
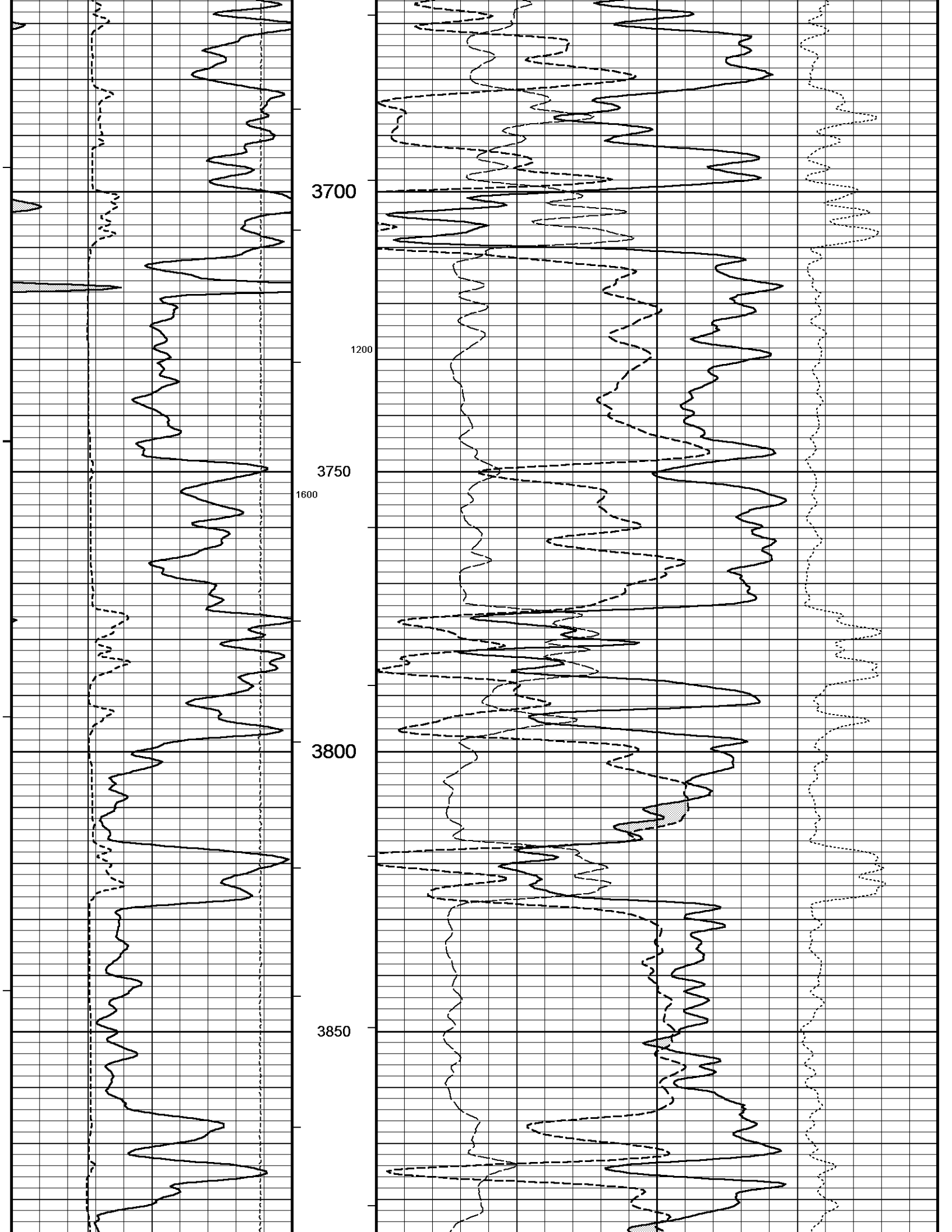
3300
1800
3350
3400


3450
1300
3500
Bit Size
PE
Density Correction
Density Caliper
1700
SS Neutron Por
Gamma Ray
DST Uphole Tension
3550
3600
3650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1200
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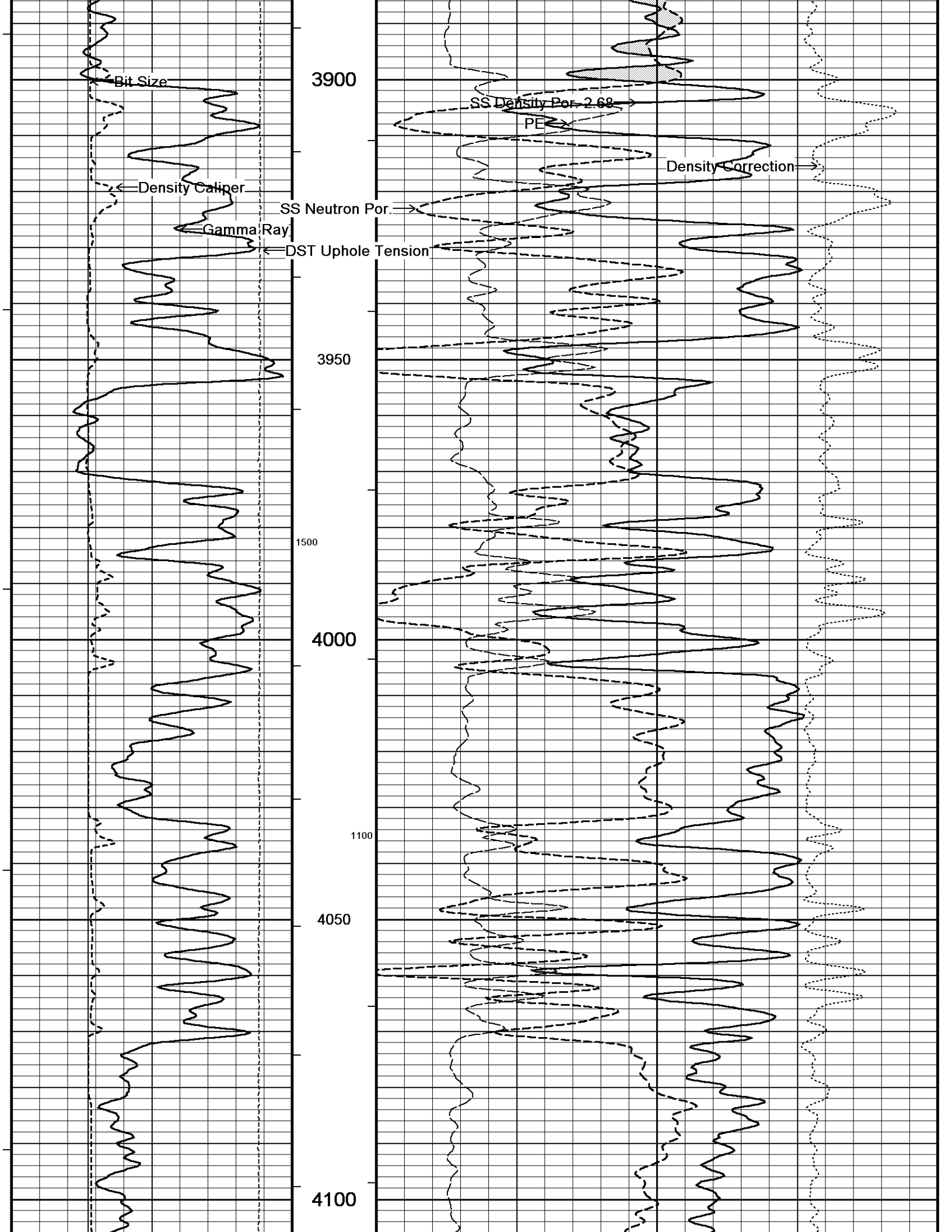
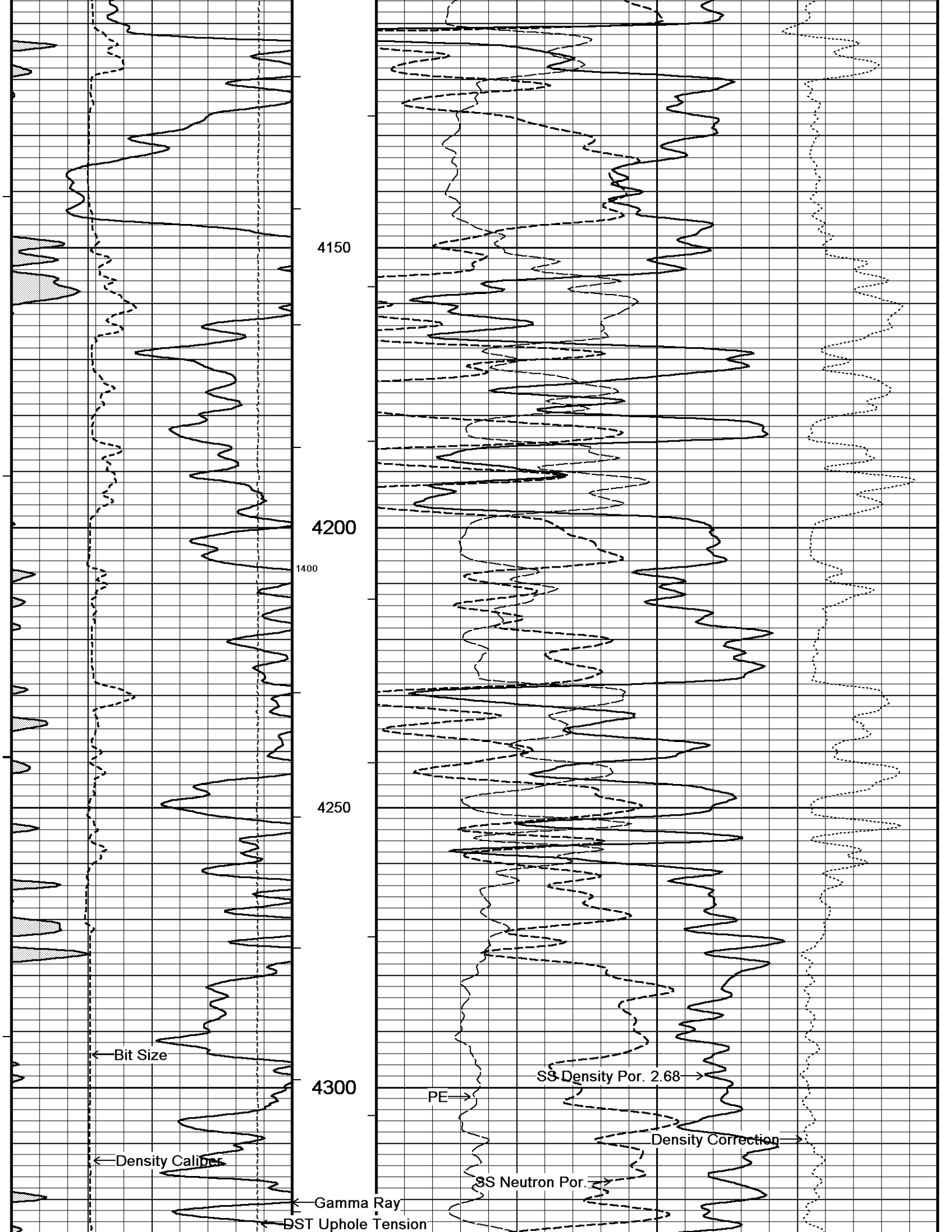
1600
3800
3850


Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
SS Neutron Por.
SS Density Por. 2.68
PE
Density Correction
3900
3950
4000
4050
4100
1500
1100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4200
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Bit Size
Density Caliper
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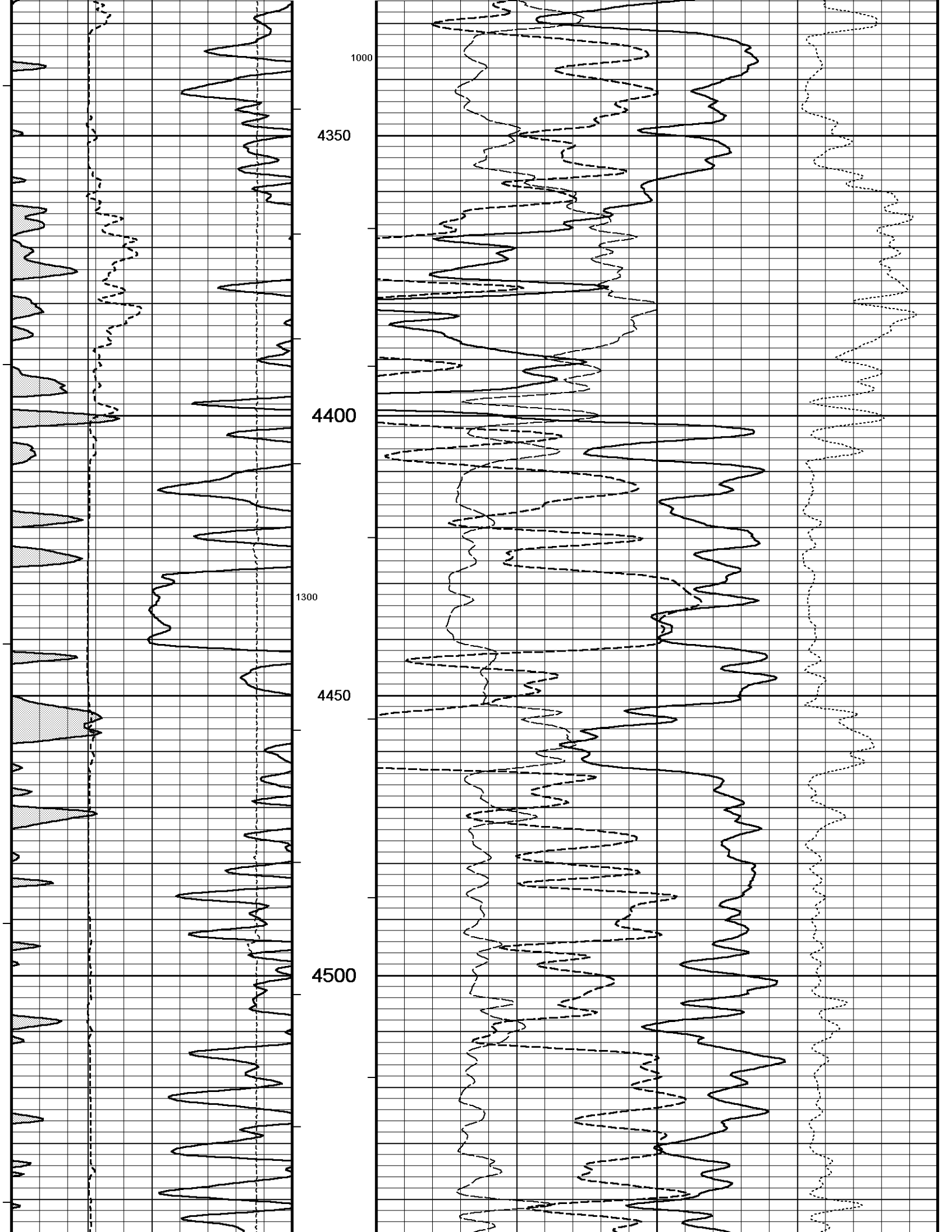
PE
SS Density Por. 2.68
Density Correction
SS Neutron Por.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1300
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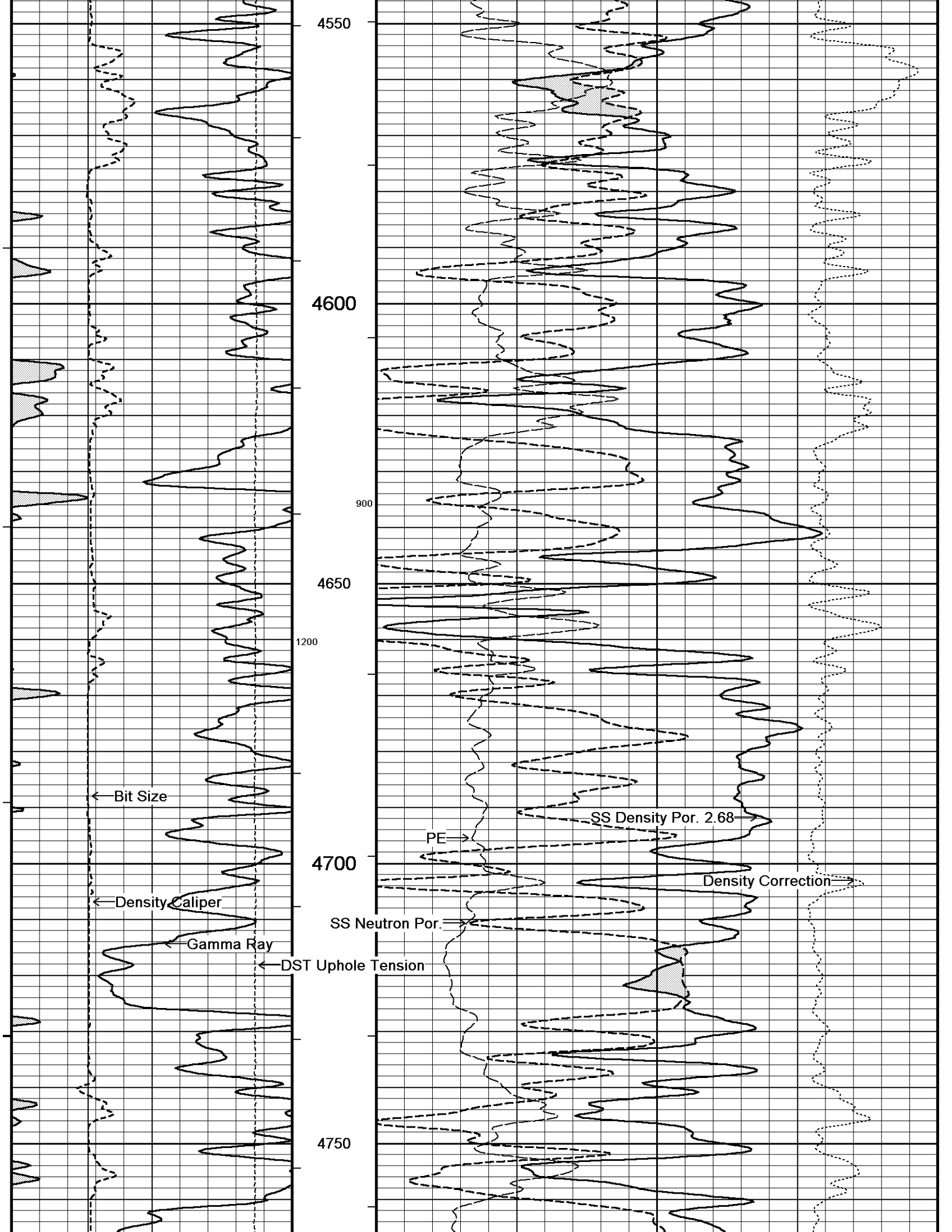
4500


4550
4600
900
4650
1200
4700
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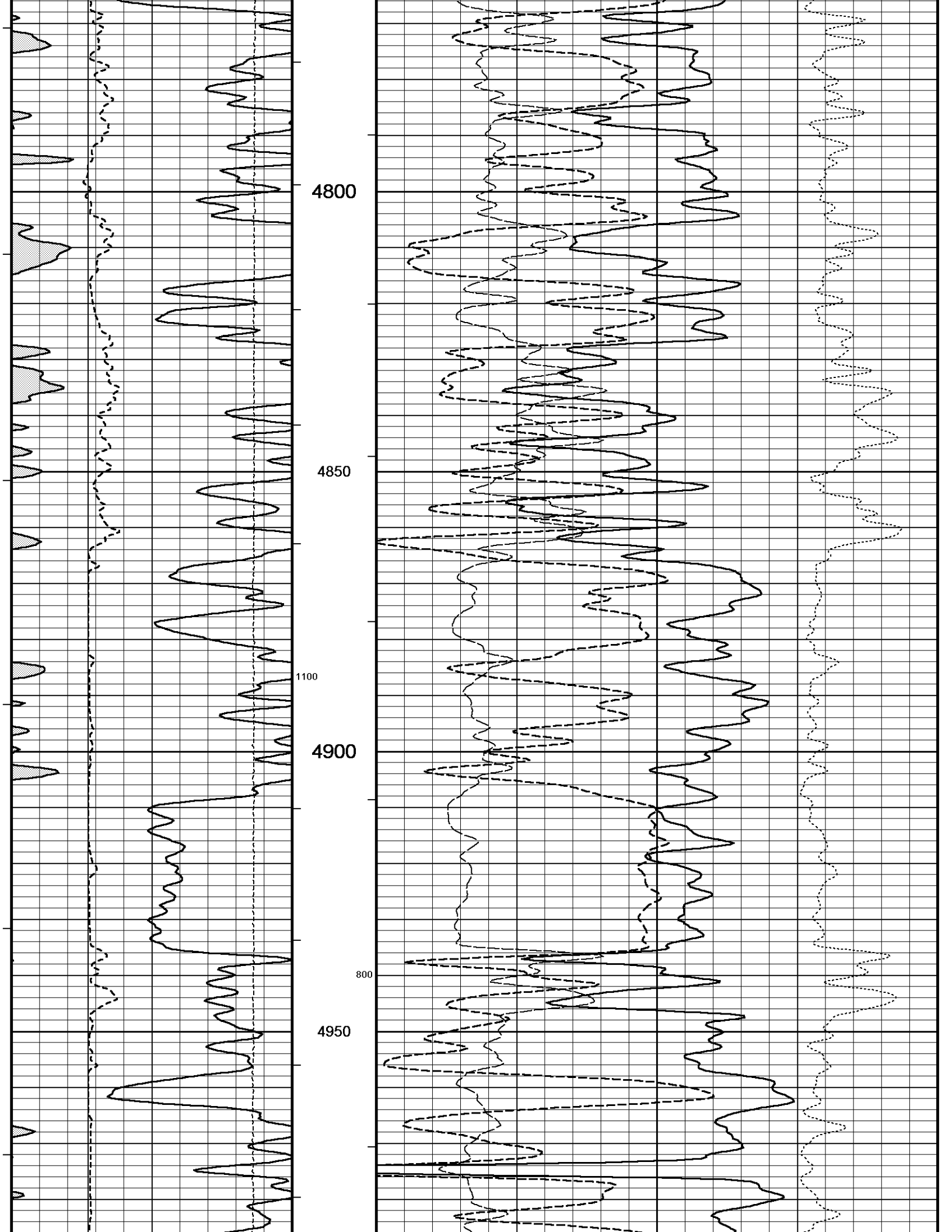
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
SS Density Por. 2.68
Density Correction
SS Neutron Por.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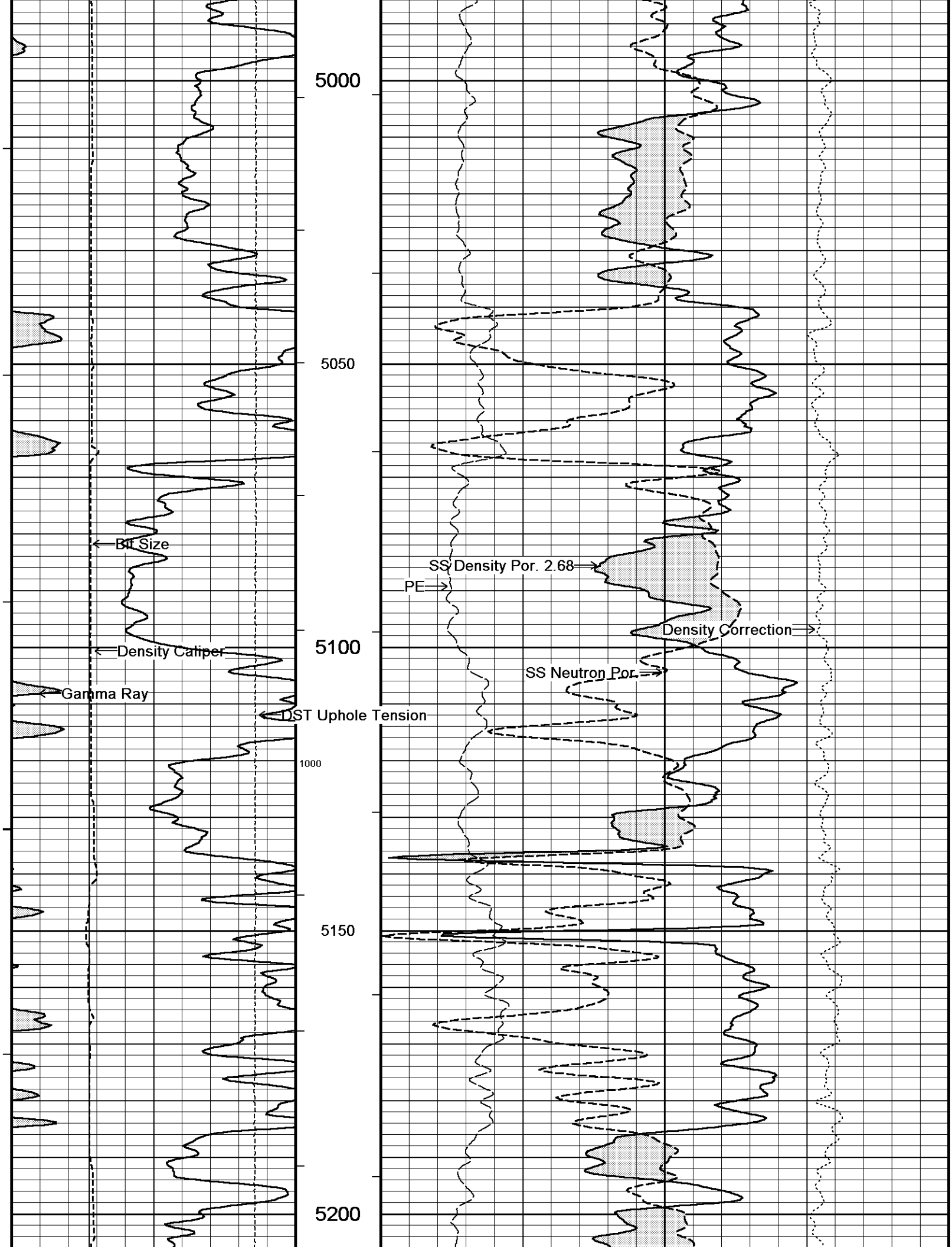
4850
1100
4900
800
4950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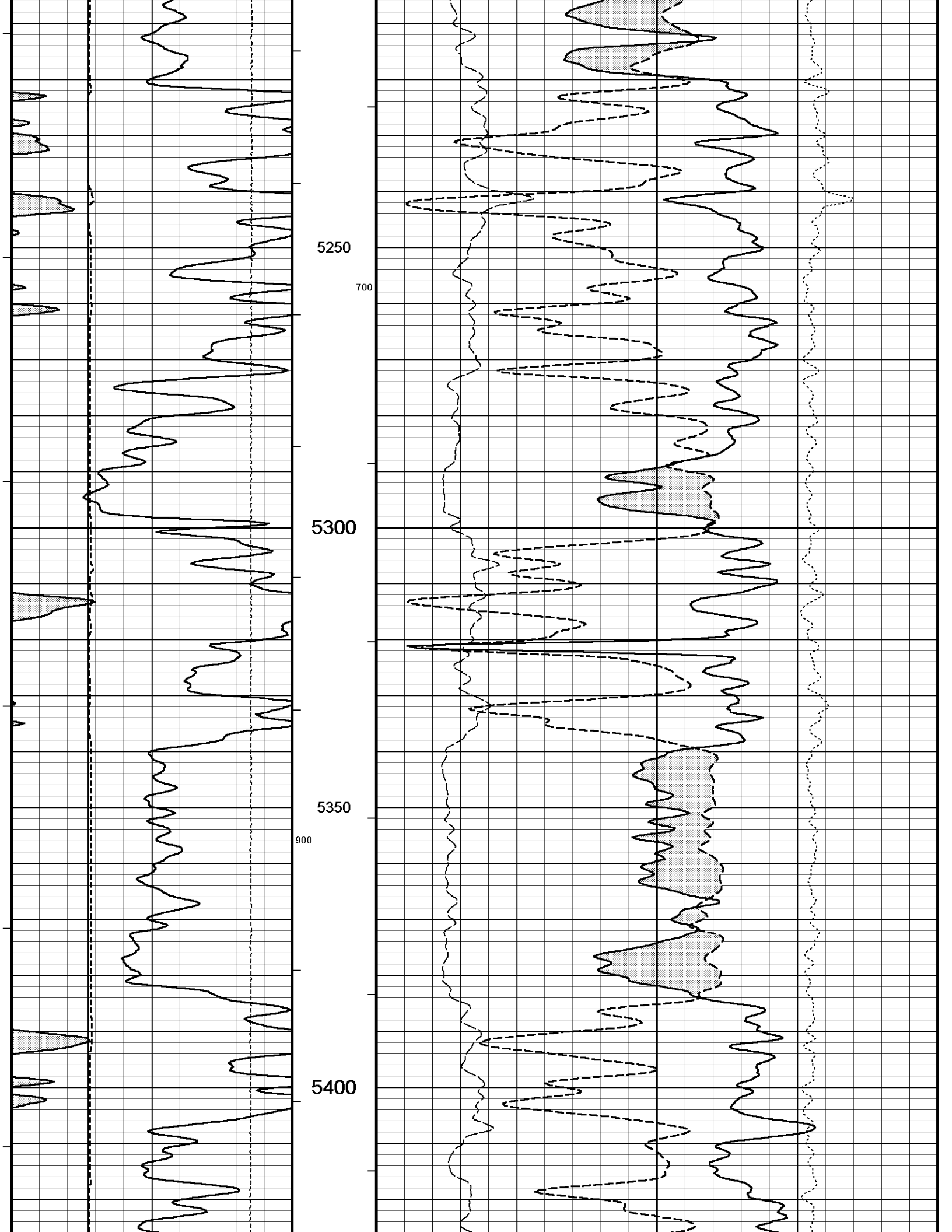
5050
5100
5150
5200
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
1000
SS Density Por. 2.68
PE
Density Correction
SS Neutron Por.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900
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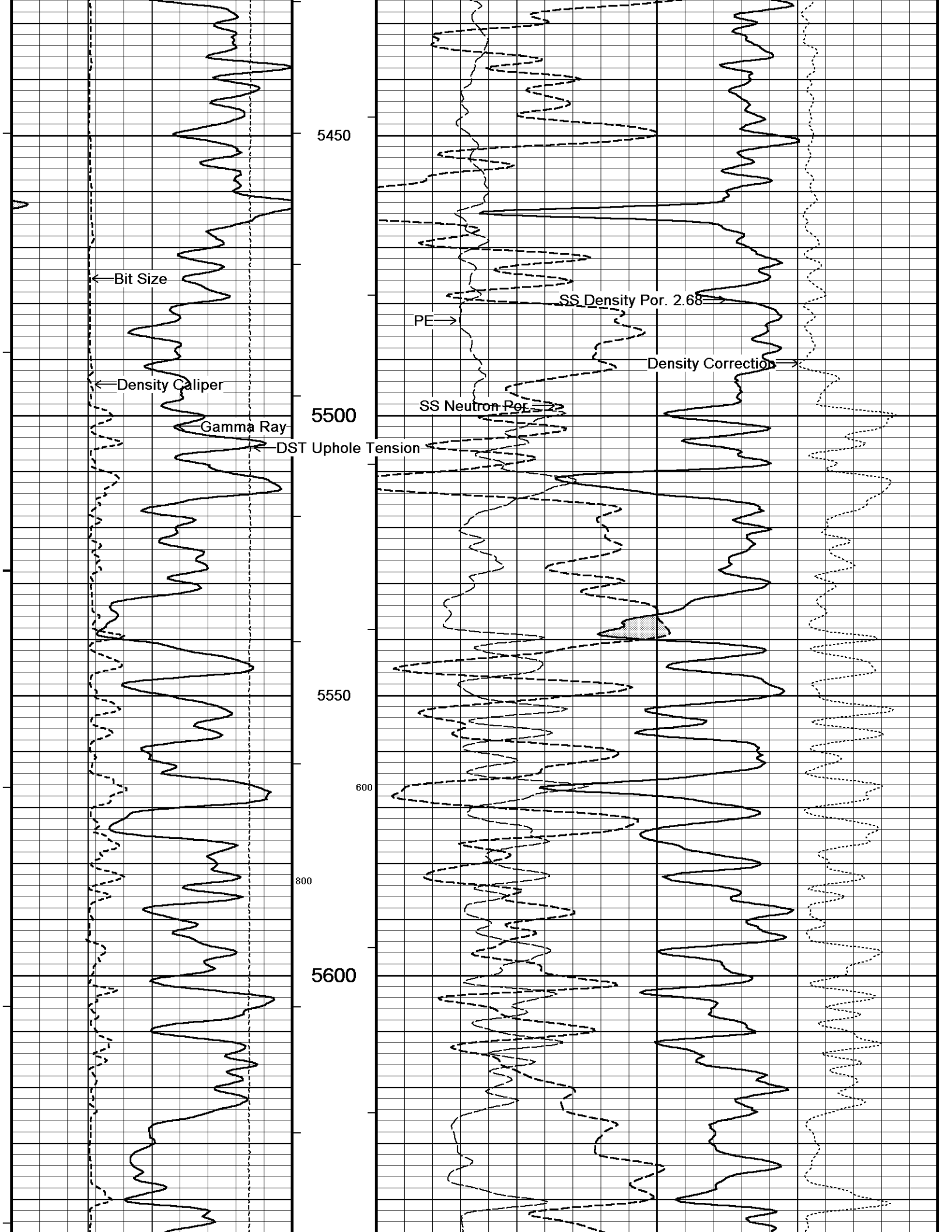
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Bit Size
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Density Correction
Density Caliper
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SS Neutron Por.
Gamma Ray
DST Uphole Tension
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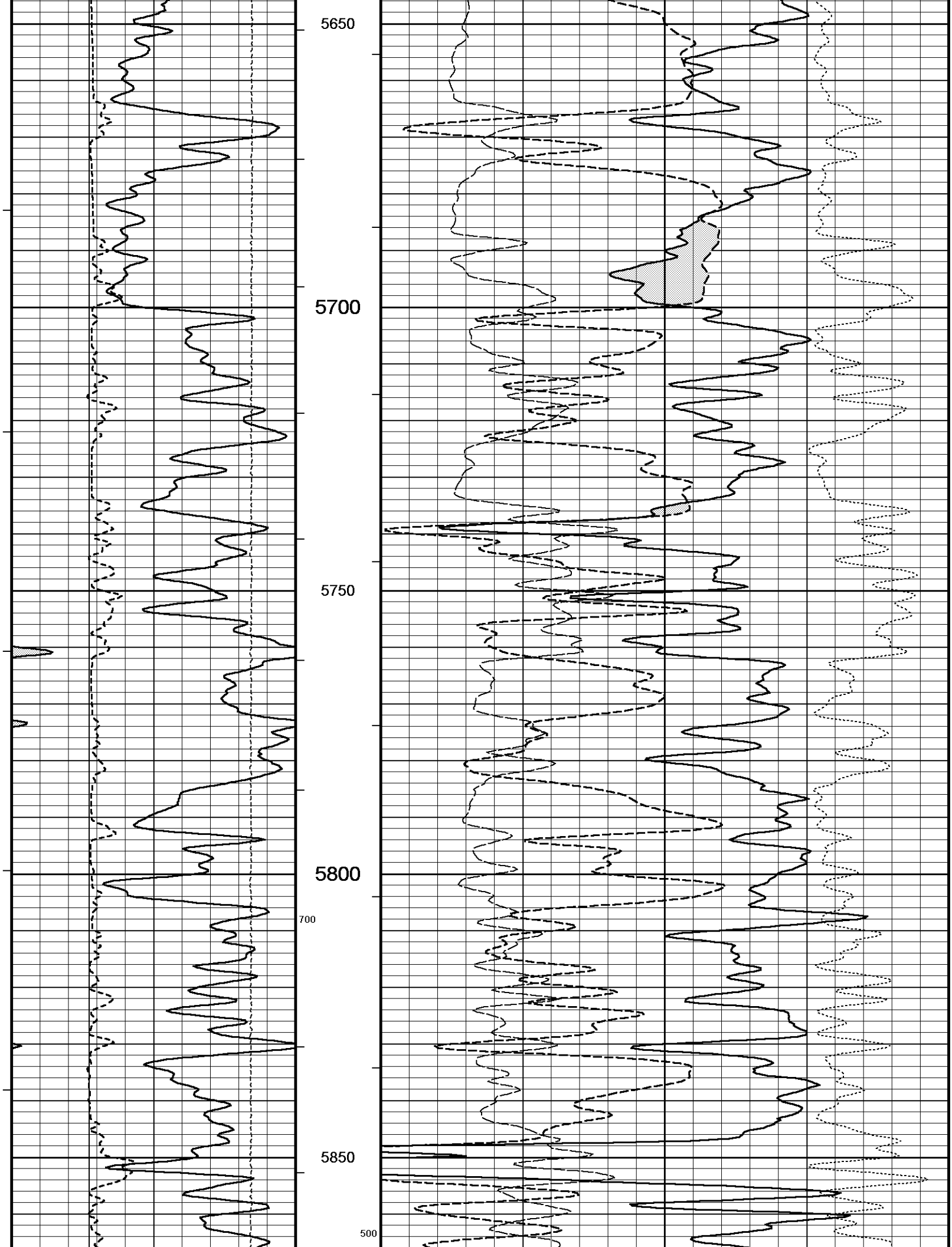
600
800
5600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5850
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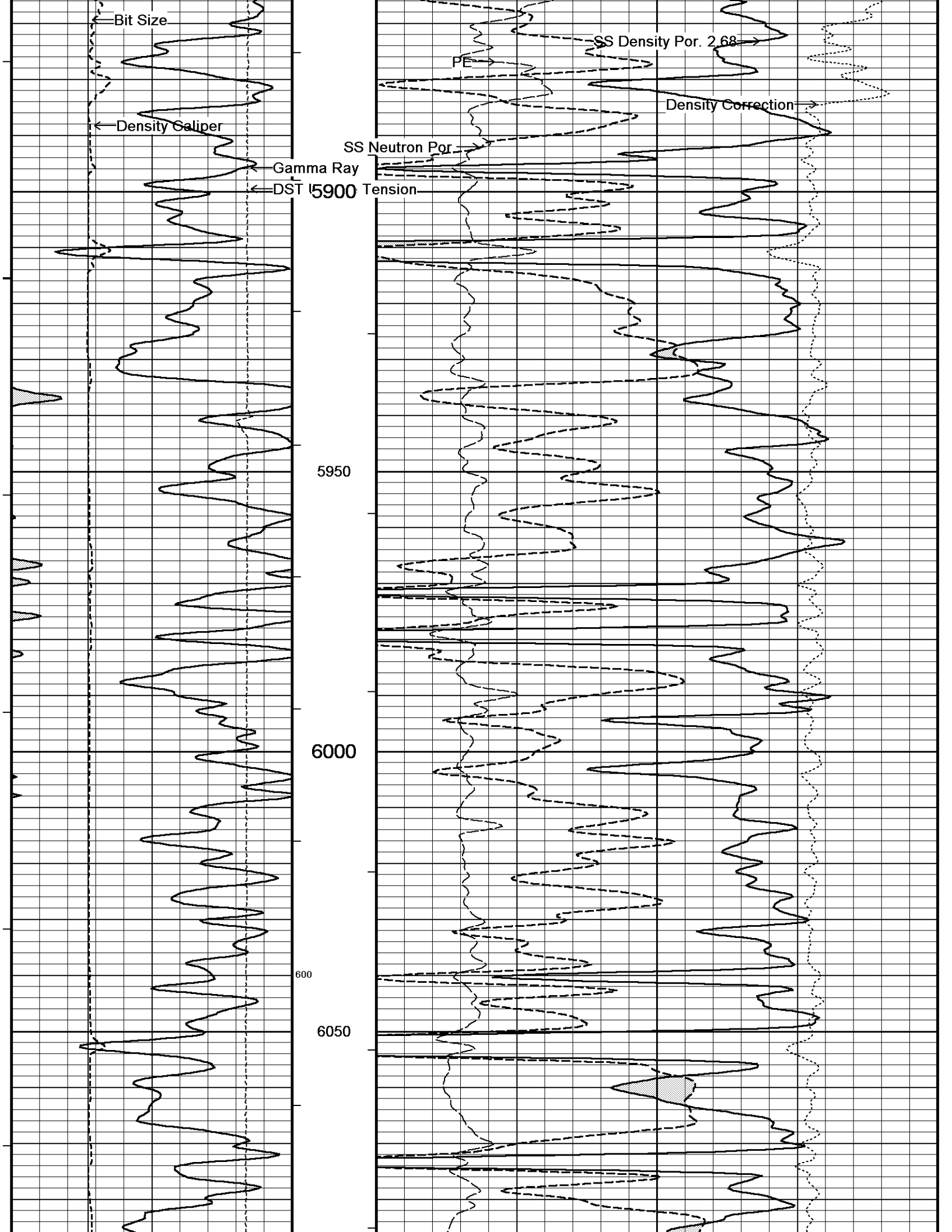
Bit Size
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Gamma Ray
DST I
Tension
SS Density Por. 2.68
PE
Density Correction
SS Neutron Por
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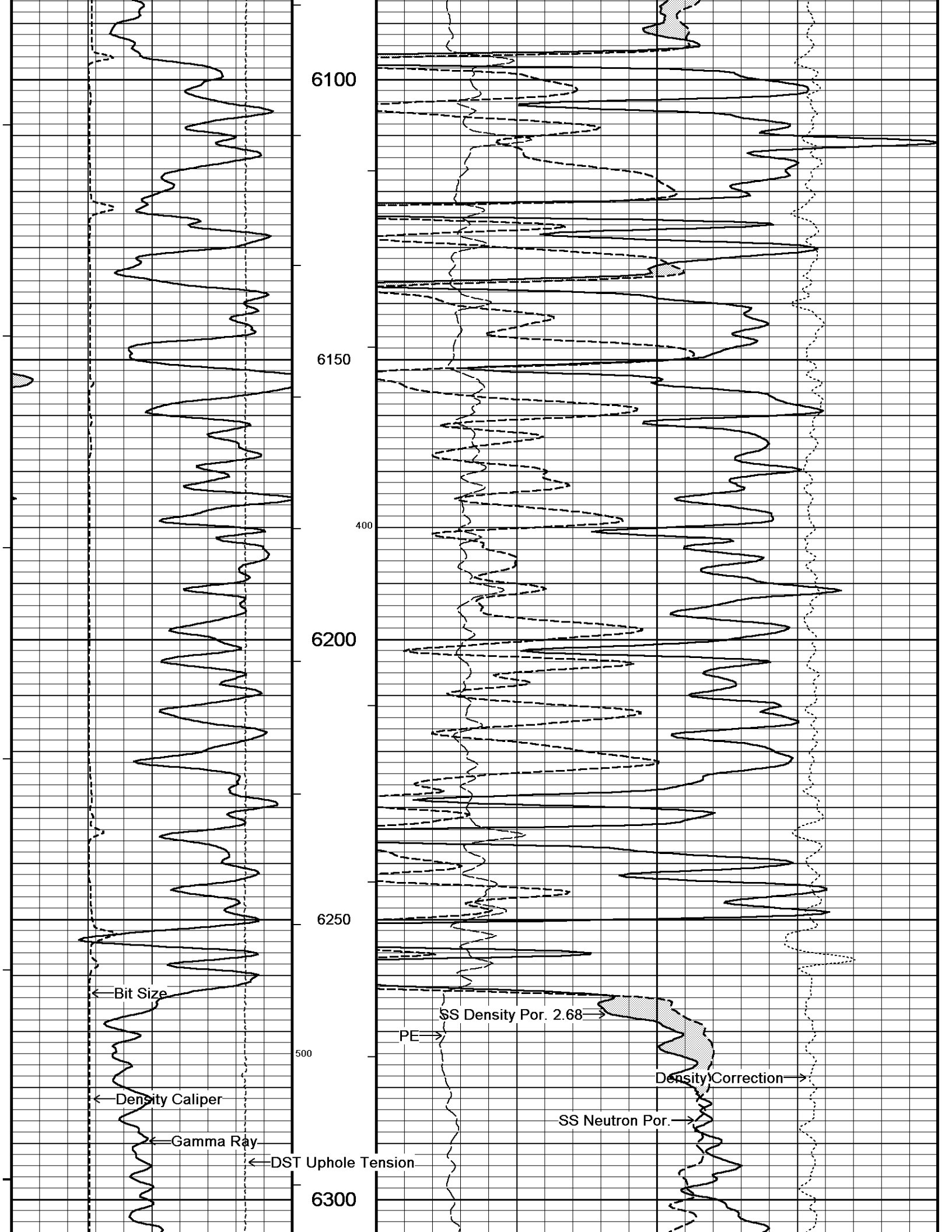
6000
600
6050


6100
6150
400
6200
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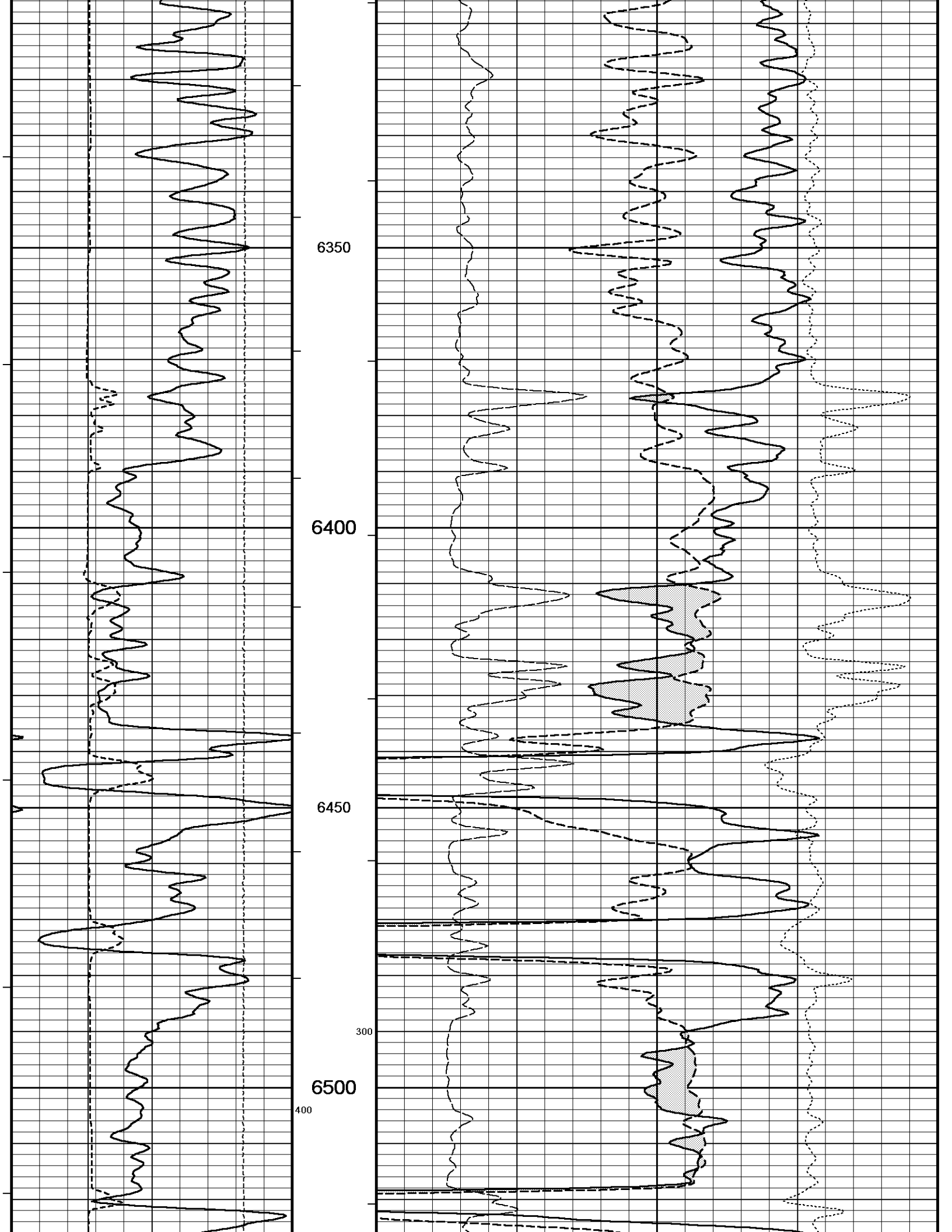
Density Caliper
Gamma Ray
DST Uphole Tension
6300
SS Density Por. 2.68
PE
Density Correction
SS Neutron Por.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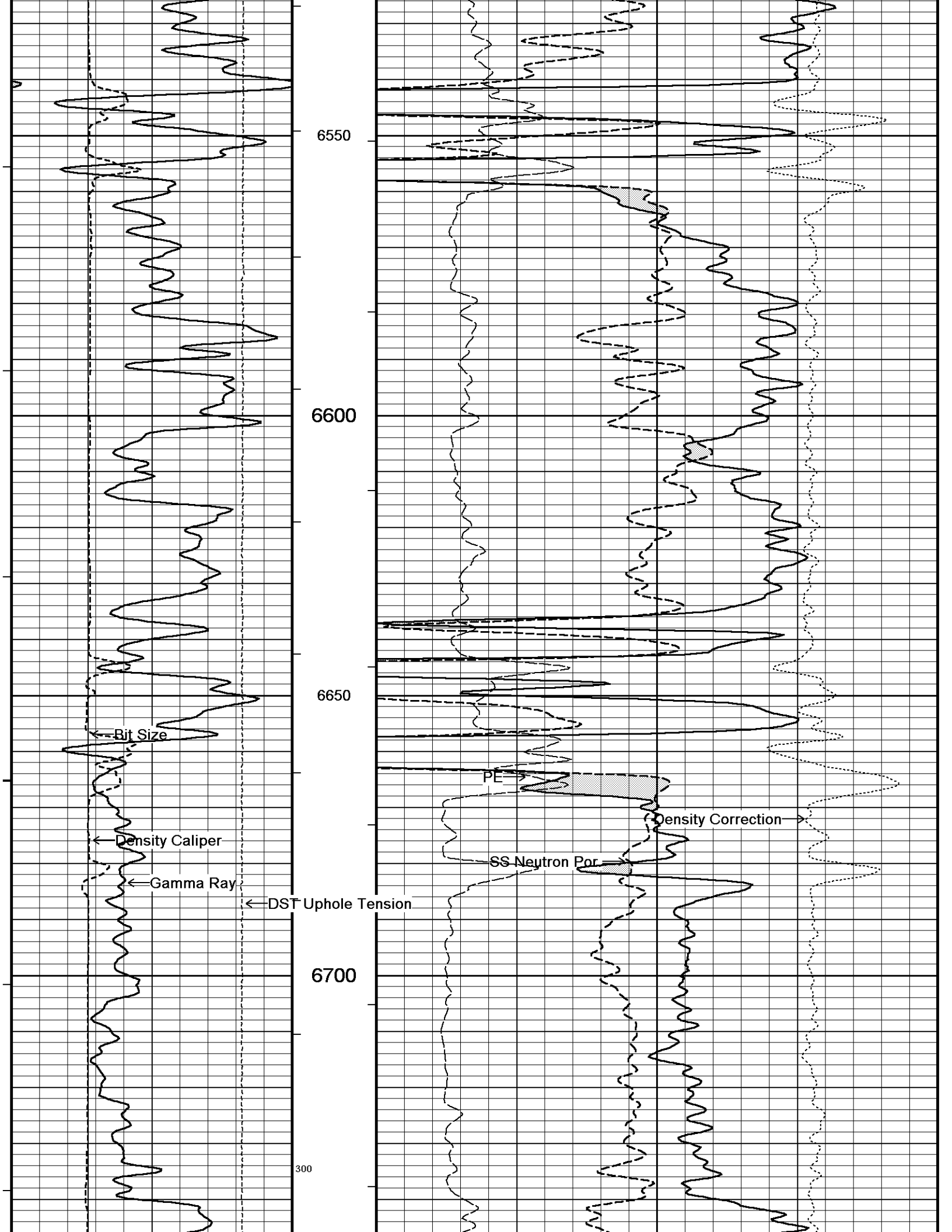
6400
6450
300
6500
400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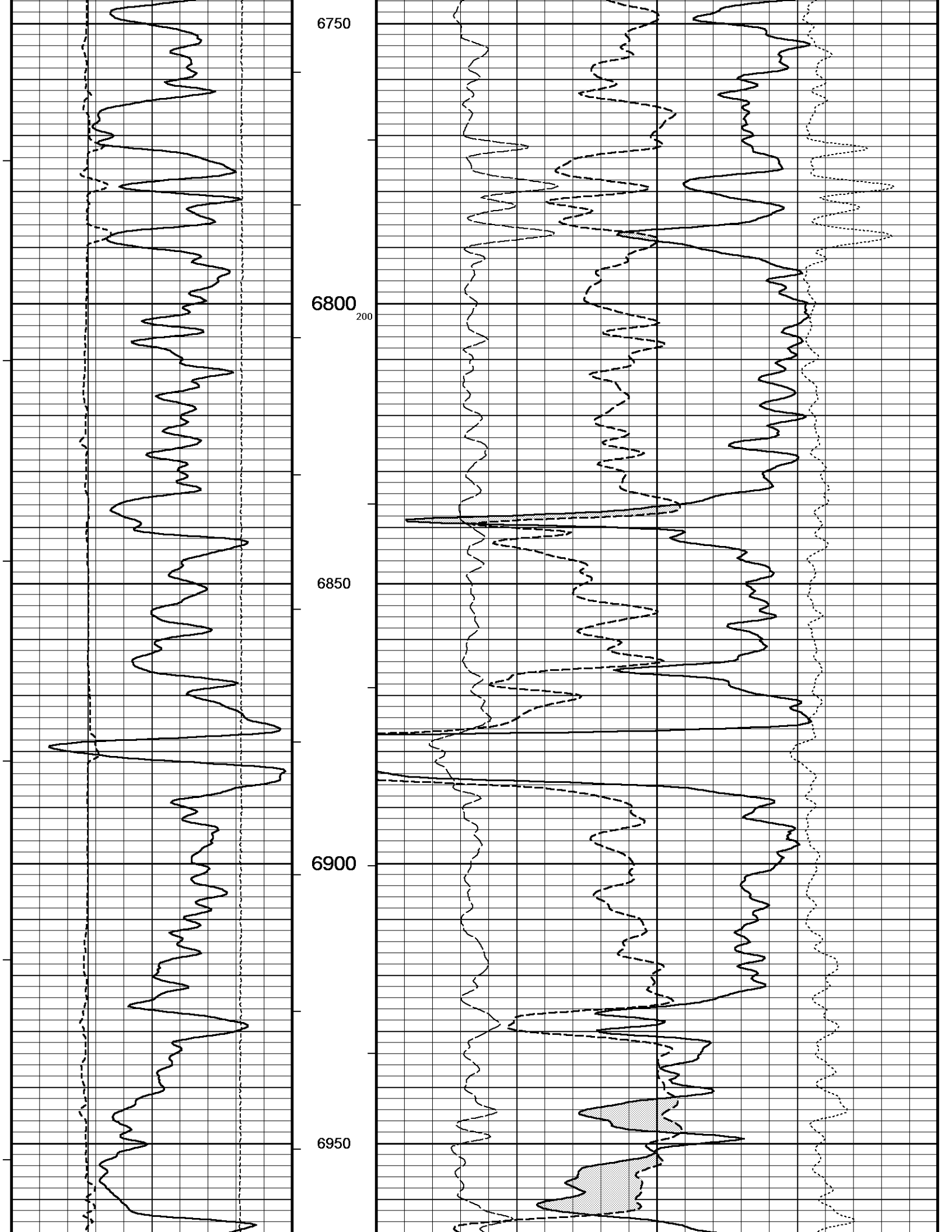
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
Density Correction
SS Neutron Por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6850
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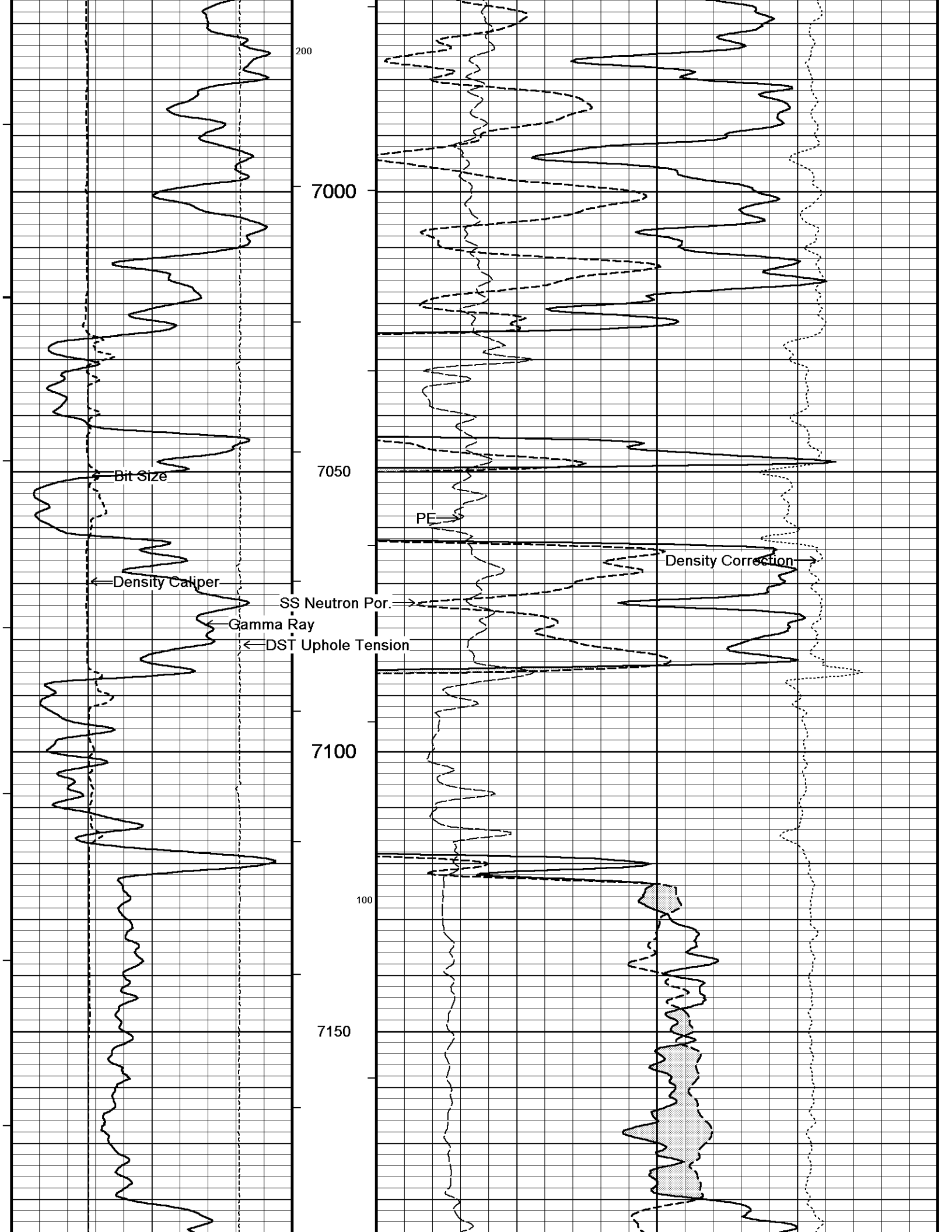
6950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Gamma Ray
DST Uphole Tension
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100
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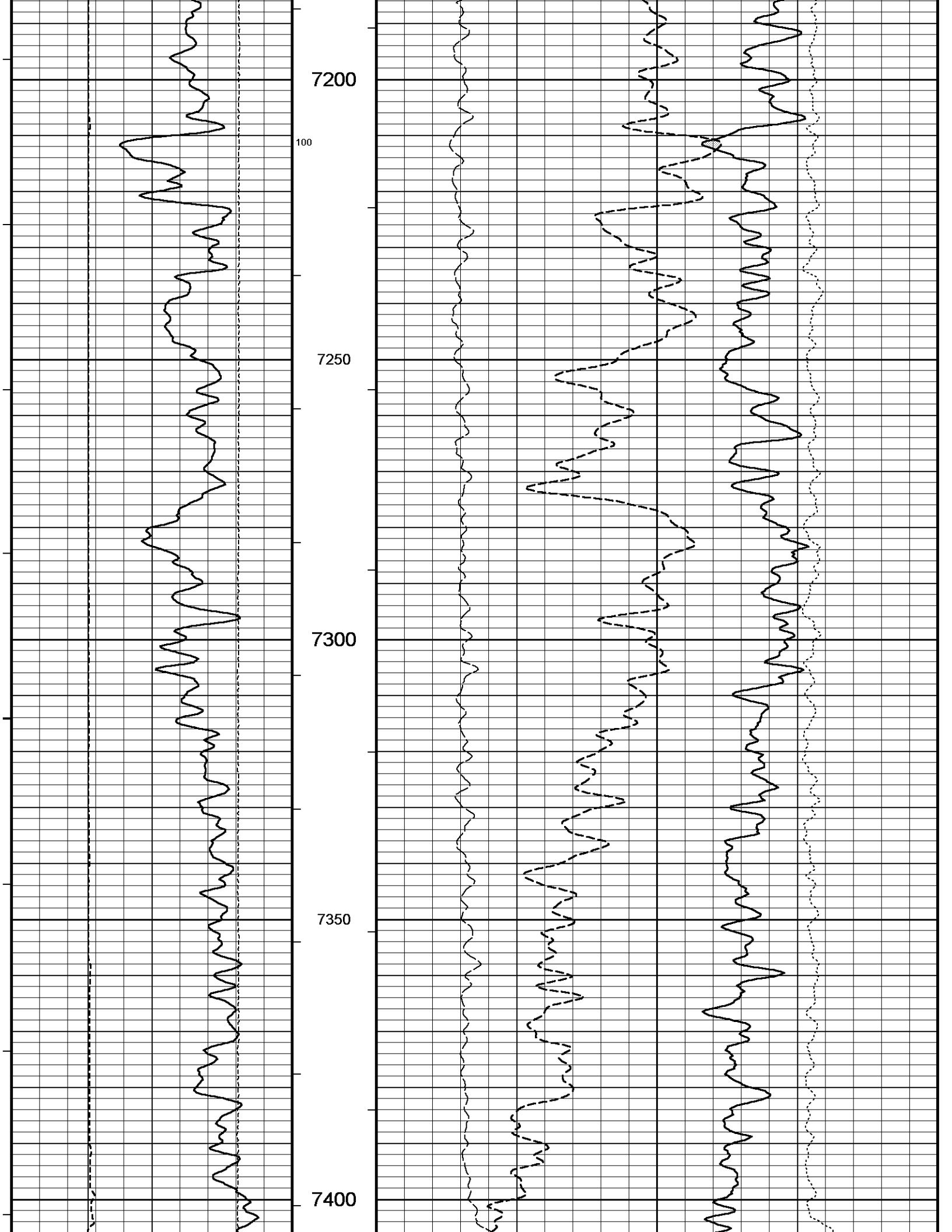
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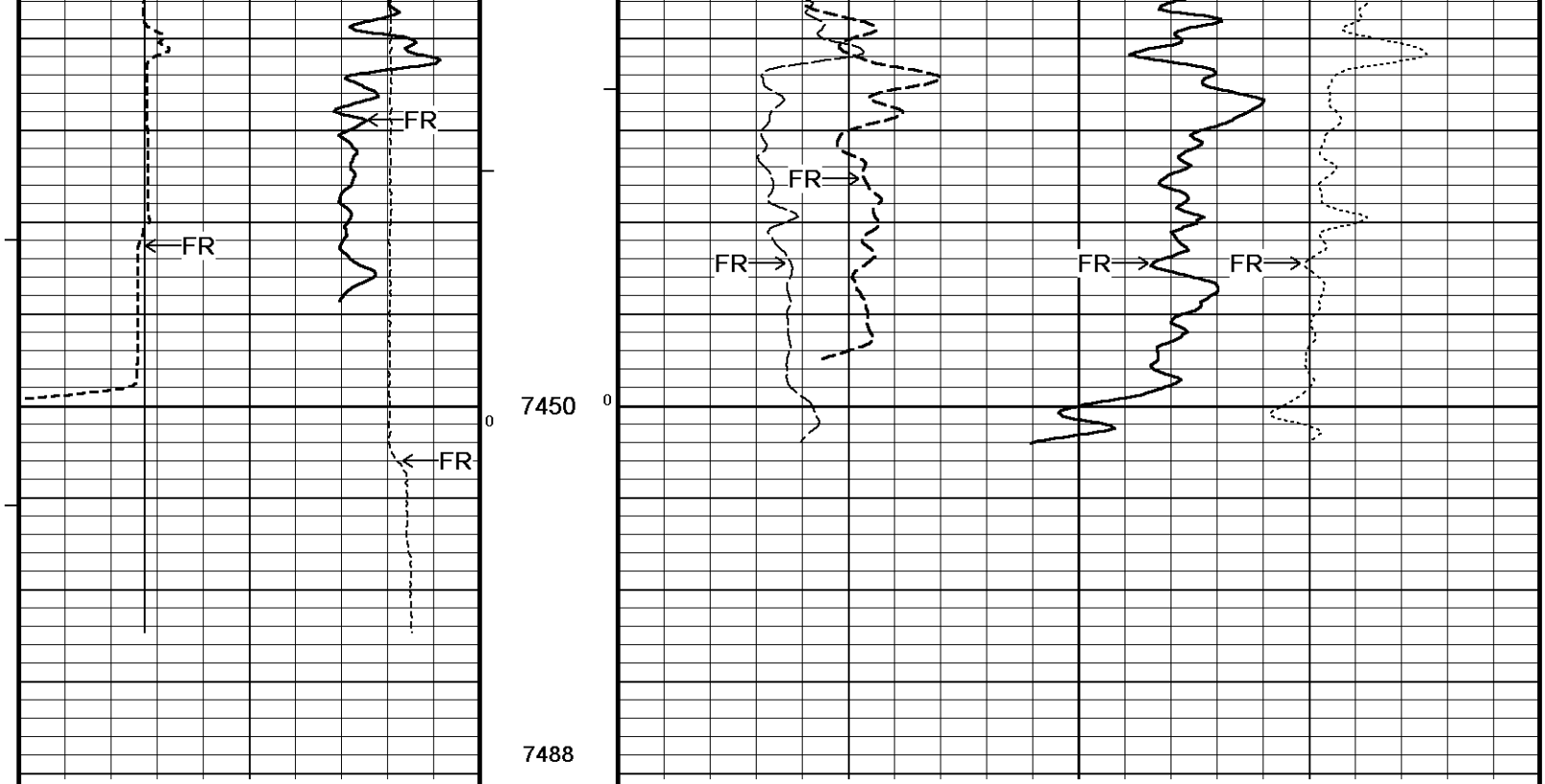


7488

Depth In Feet

Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

HVI every 10 cu ft

Gamma Ray(GRGC)
API
0 75 150
150 225 300

Annular Integral every 10 cu ft

Density Caliper(CLDC)
inches
6 11 16

Bit Size(BIT)
inches
6 11 16

Replay Scale 1:240

SS Neutron Por.(NPRS)
percent
30 20 10 0 -10

SS Density Por. 2.68(DPOR)
percent
30 20 10 0 -10

PE(PDPE)
barns/electron
0 5 10

Density Correction(DCOR)
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

5 INCH MAIN LOG

OVERLAY

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21

Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\RPT2.dta
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

Gamma Ray(GRGC)
API
0 75 150
150 225 300

Density Caliper(CLDC)
inches
6 11 16

Bit Size(BIT)
inches
6 11 16

Depth in Feet

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

SS Neutron Por.(NPRS)
percent
30 20 10 0 -10

SS Density Por. 2.68(DPOR)
percent
30 20 10 0 -10

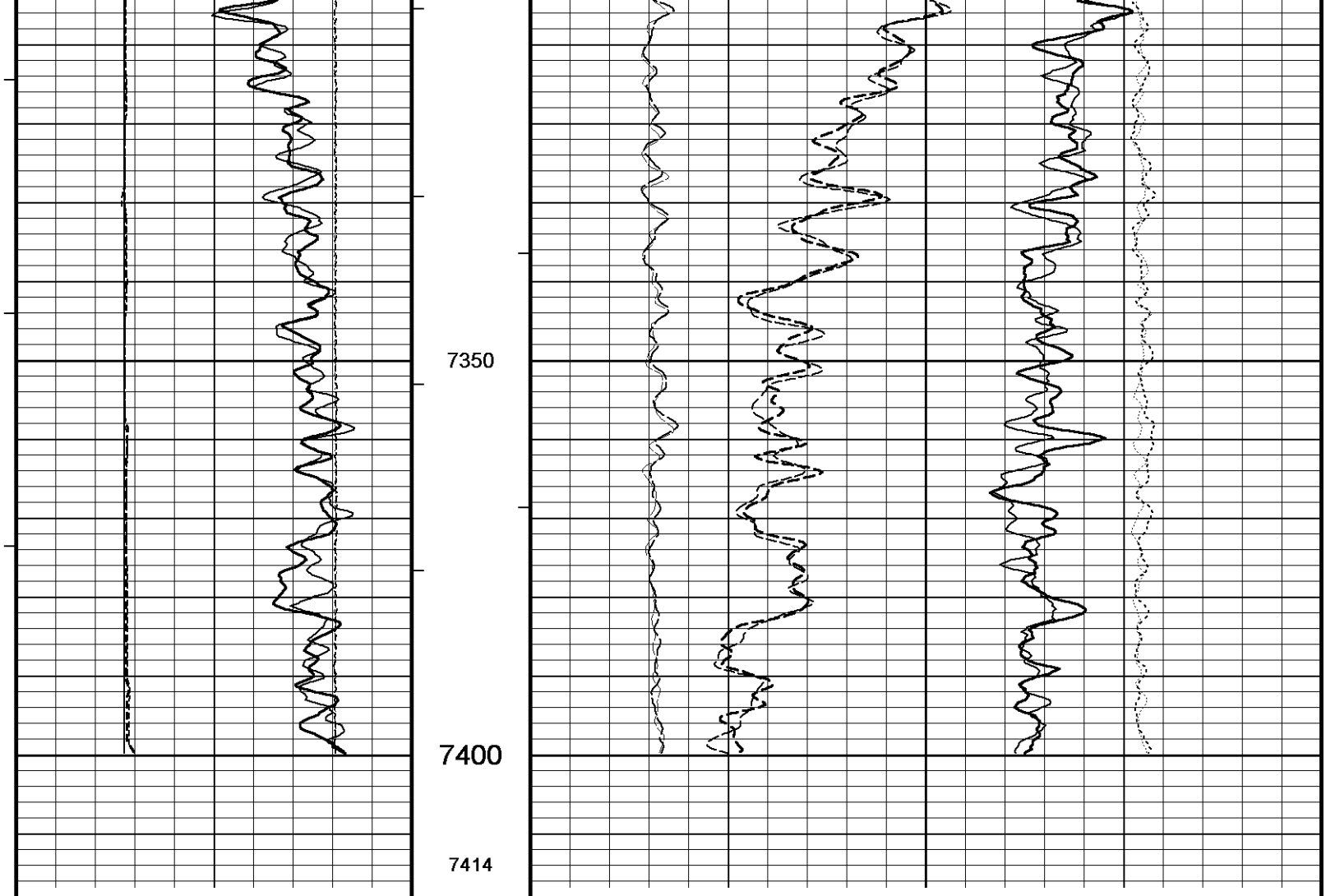
PE(PDPE)
barns/electron
0 5 10

Density Correction(DCOR)
grams/cc
-0.25 0 0.25

7200

7250

7300



7414

Depth
in
Feet

Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

HVI
every
10 cu ft

Gamma Ray(GRGC)
API
0 75 150
150 225 300

Annular
Integral
every
10 cu ft

Density Caliper(CLDC)
inches
6 11 16

Bit Size(BIT)
inches
6 11 16

Replay
Scale
1:240

SS Neutron Por.(NPRS)
percent
30 20 10 0 -10

SS Density Por. 2.68(DPOR)
percent
30 20 10 0 -10

PE(PDPE)
barns/electron
0 5 10

Density Correction(DCOR)
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 23-FEB-2011 03:12

Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta Recorded on 22-FEB-2011 23:21
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\RPT2.dta
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

OVERLAY

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta Recorded on 22-FEB-2011 23:21
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth In Feet

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Compensated Density
grams/cc
2 2.25 2.50 2.75 3
1 1.25 1.50 1.75 2

SS Density Por. 2.68
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

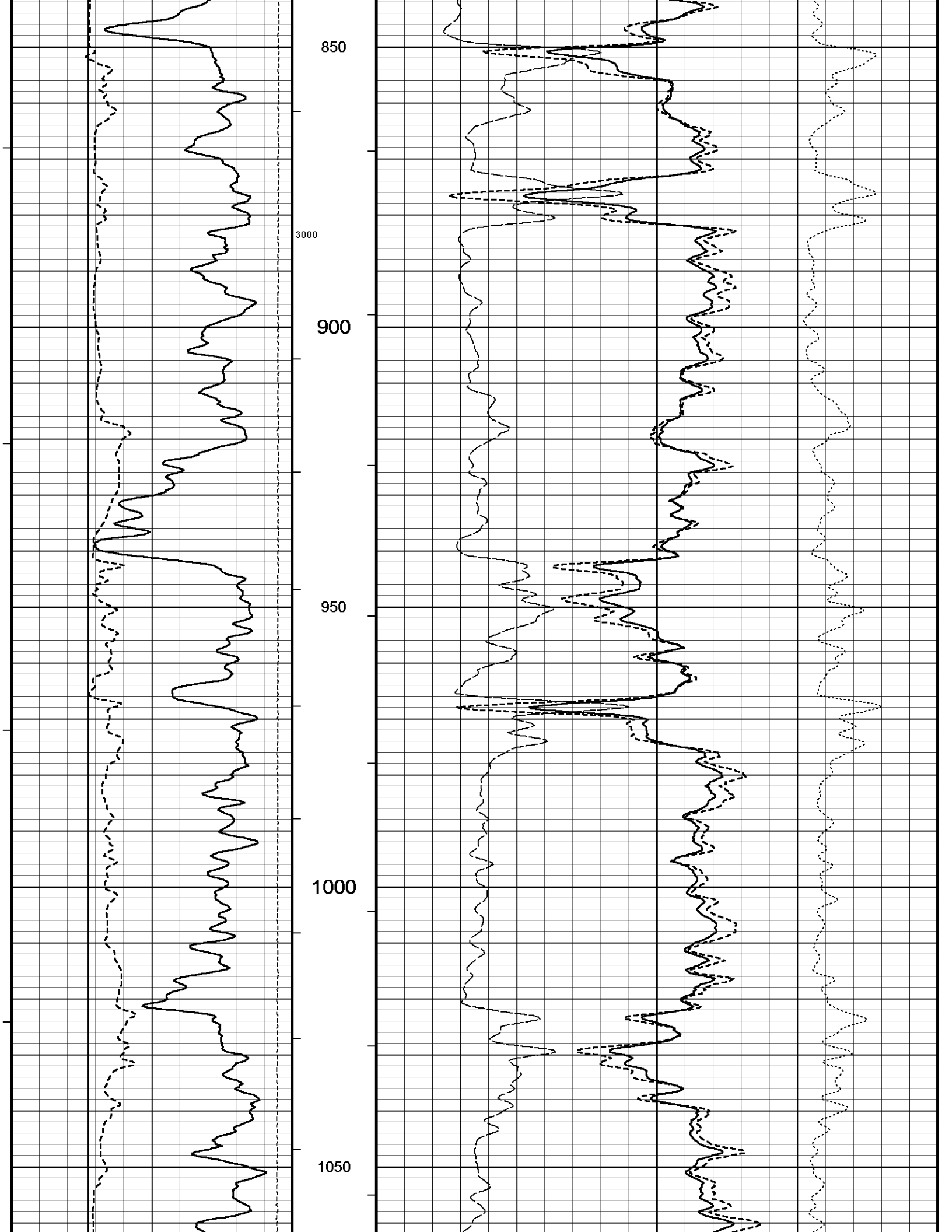
Density Correction
grams/cc
-0.25 0 0.25

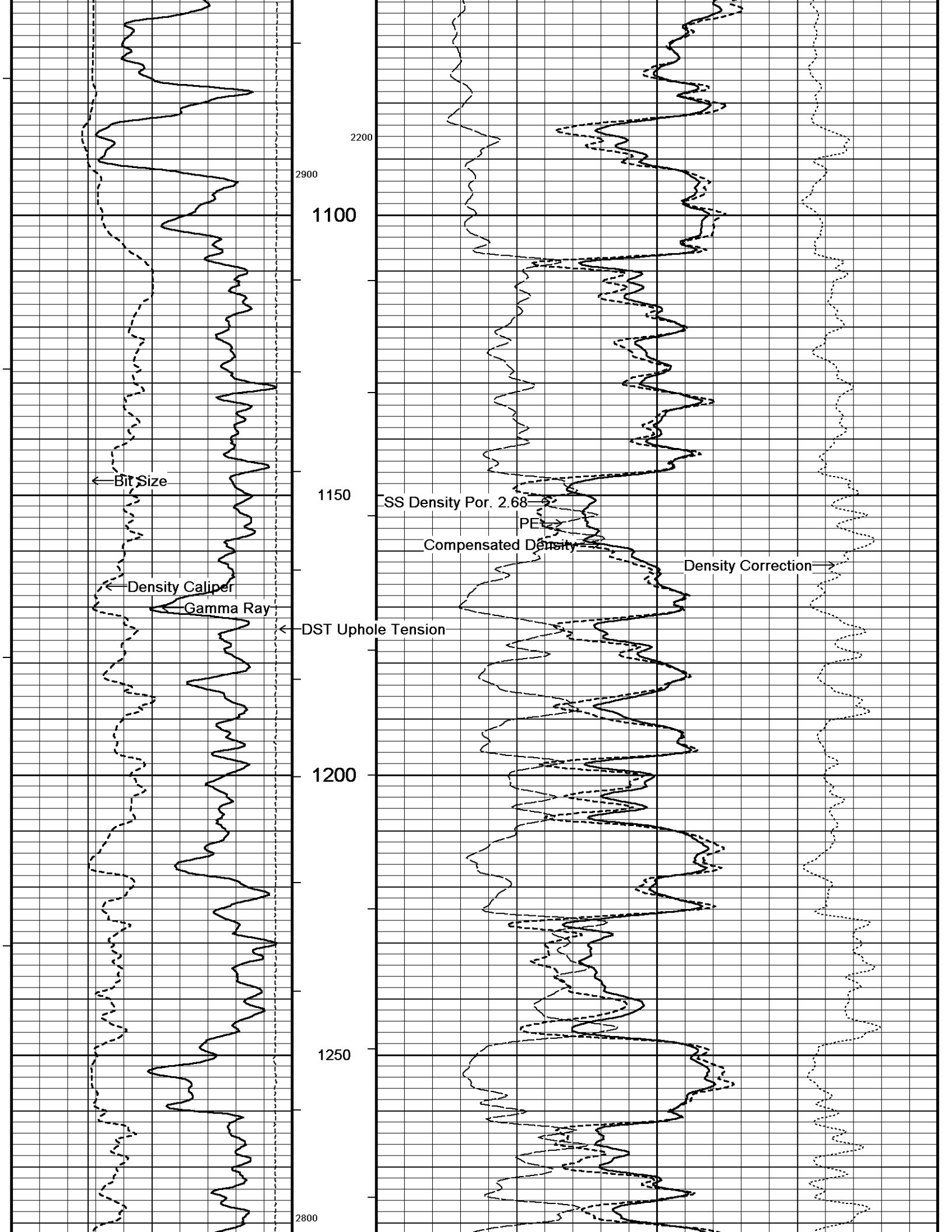
7640 Csg Shoe

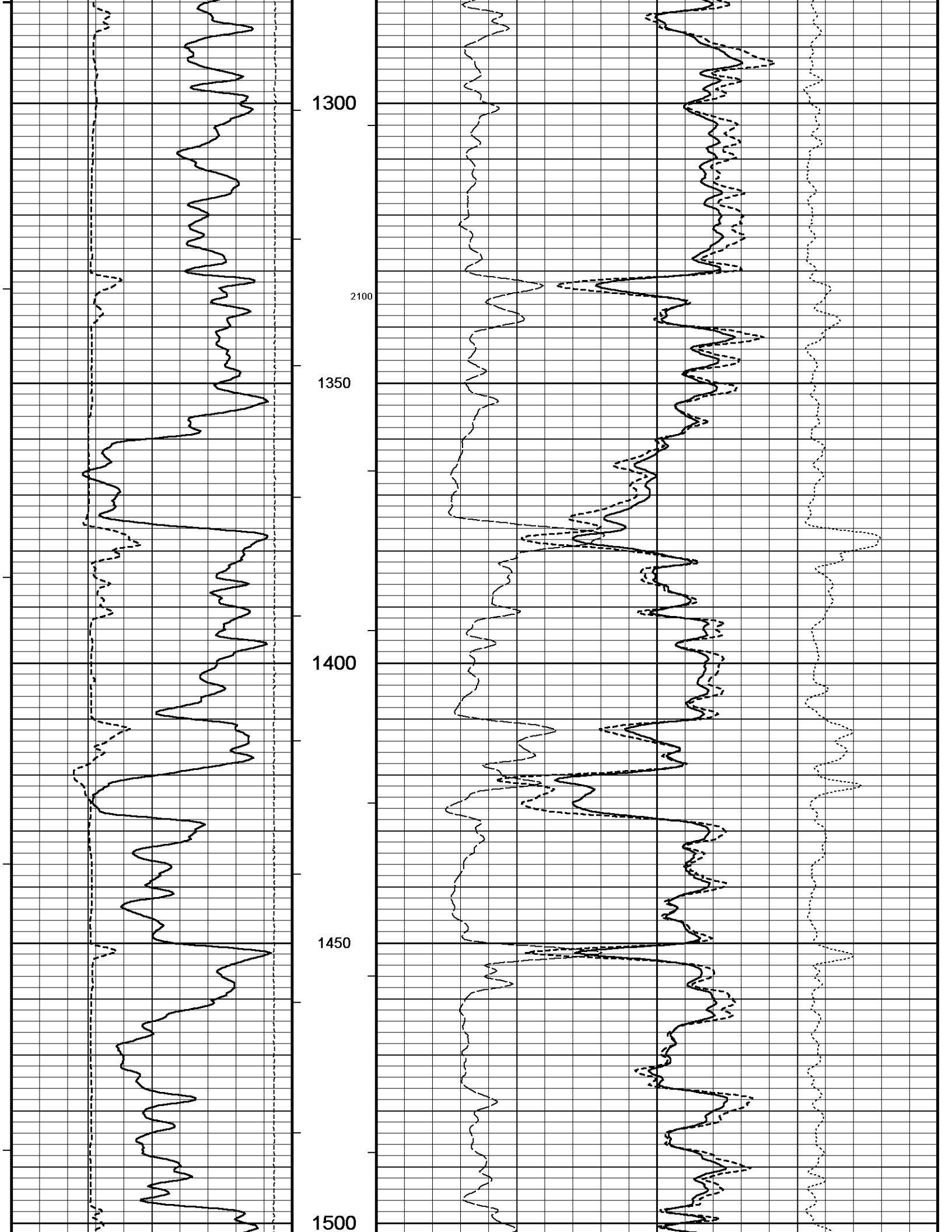
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension

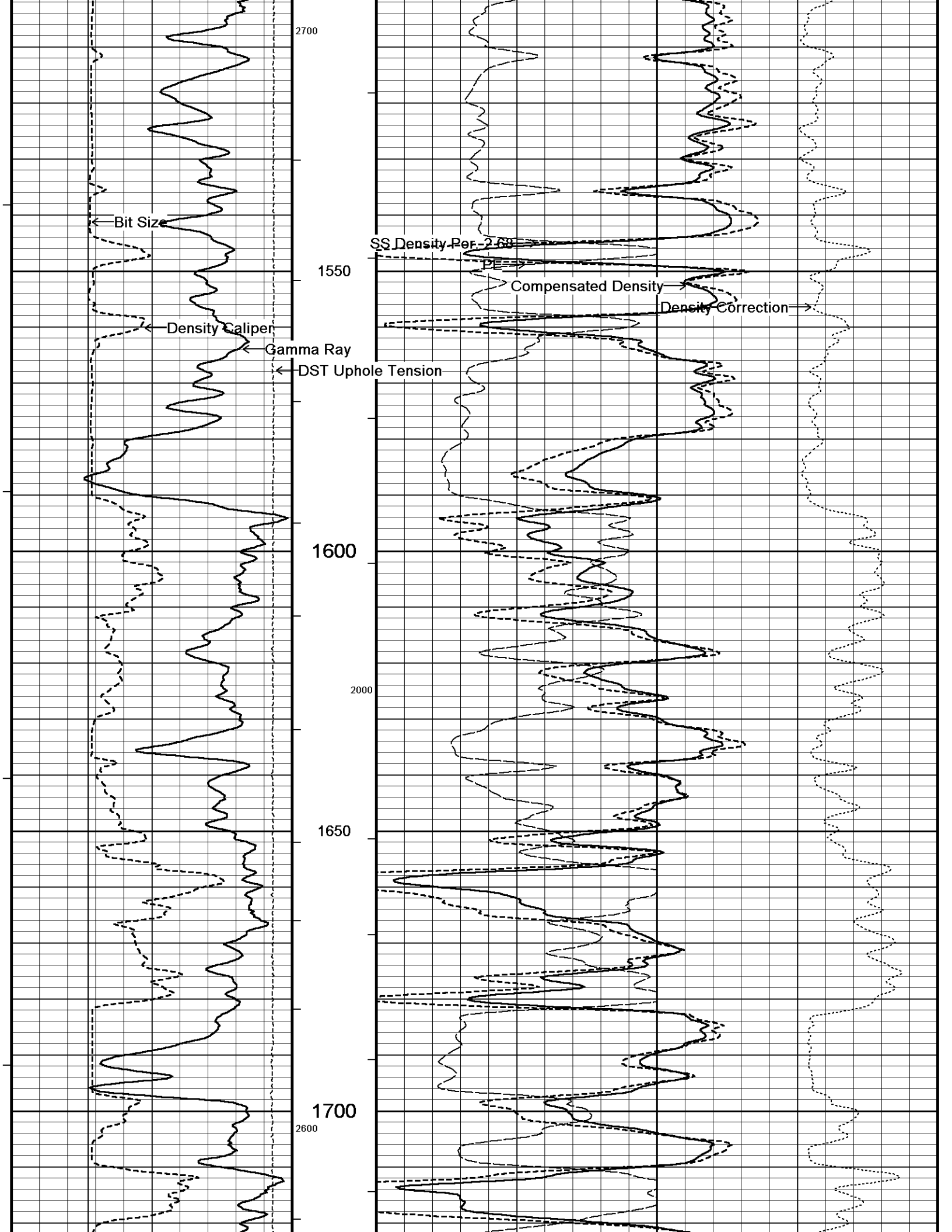
800

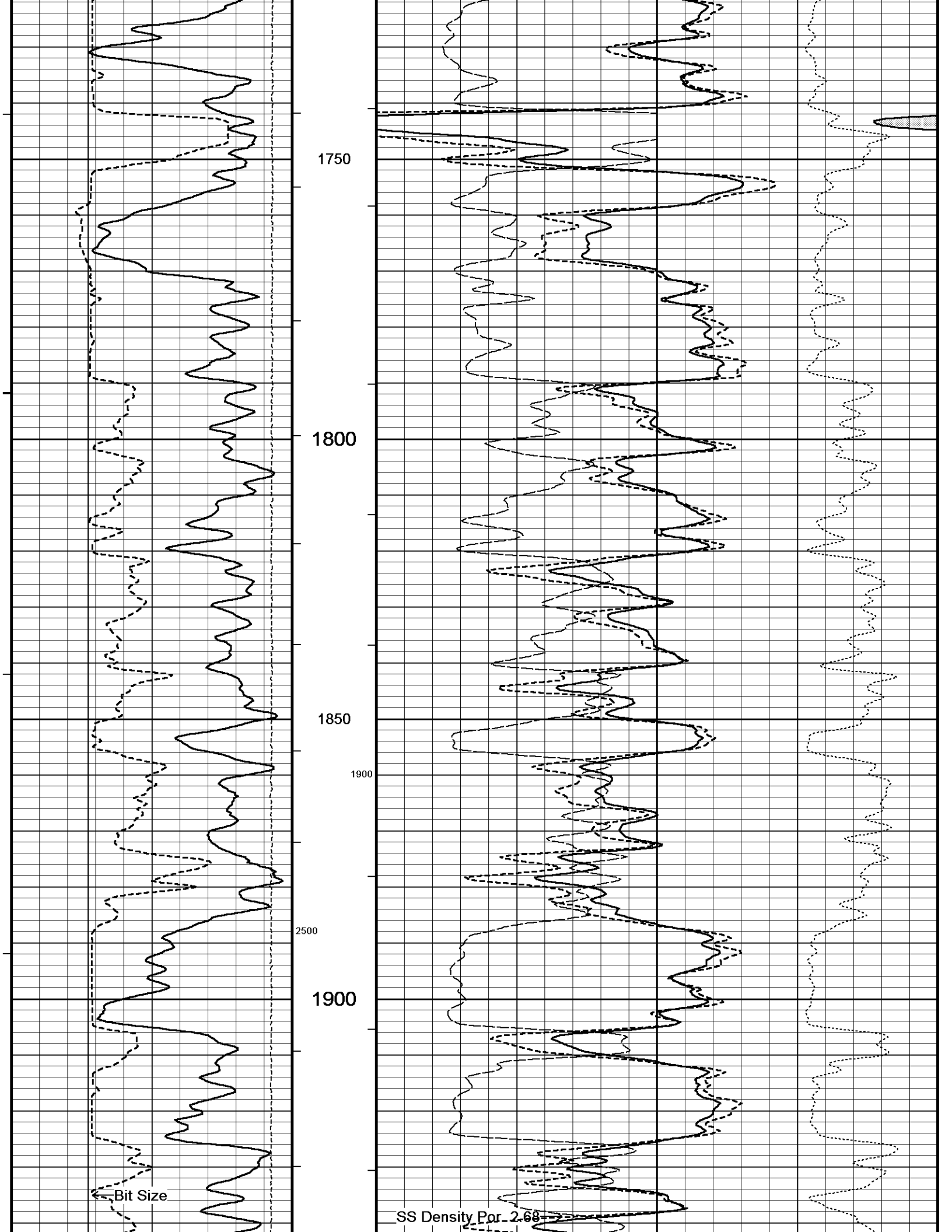
2300

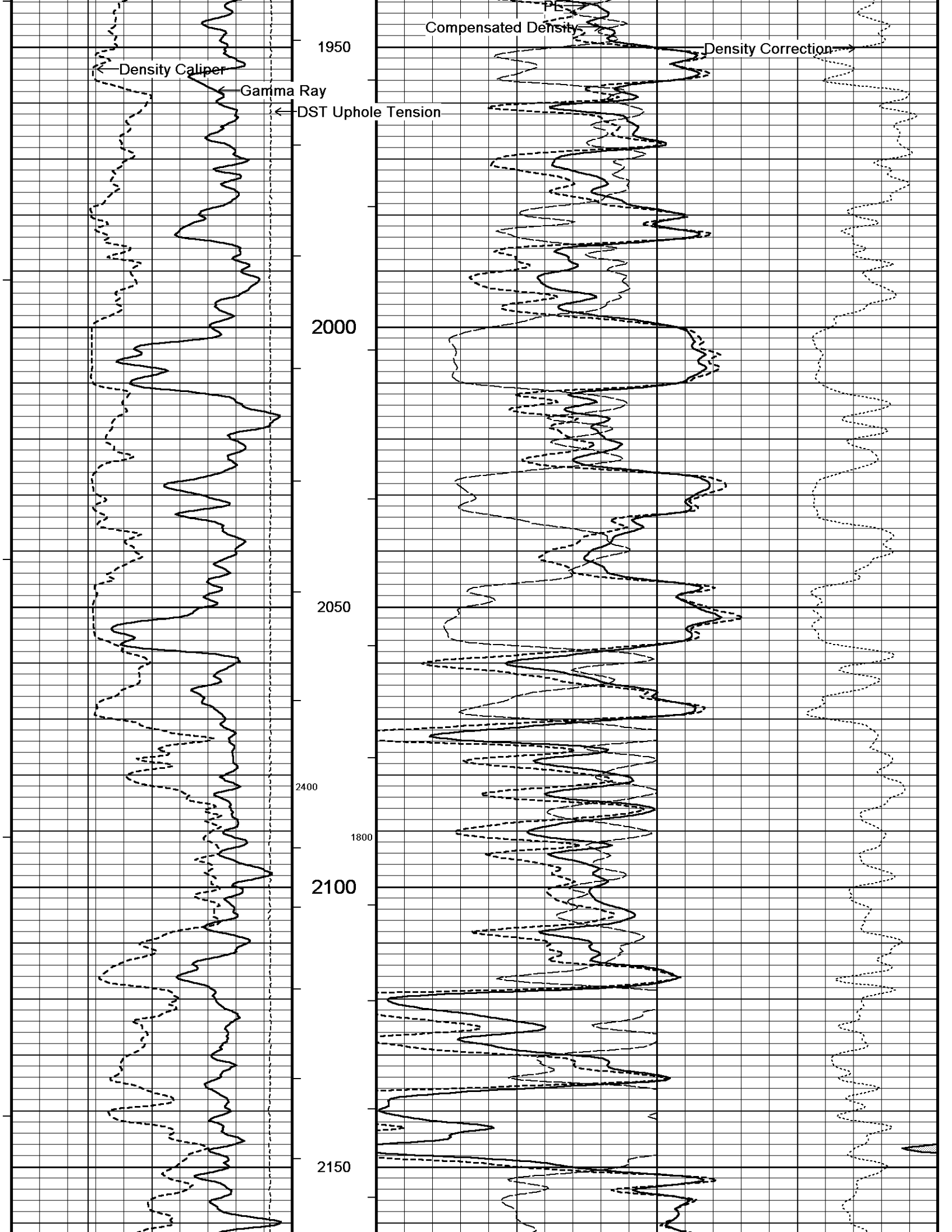

850
3000
900
950
1000
1050

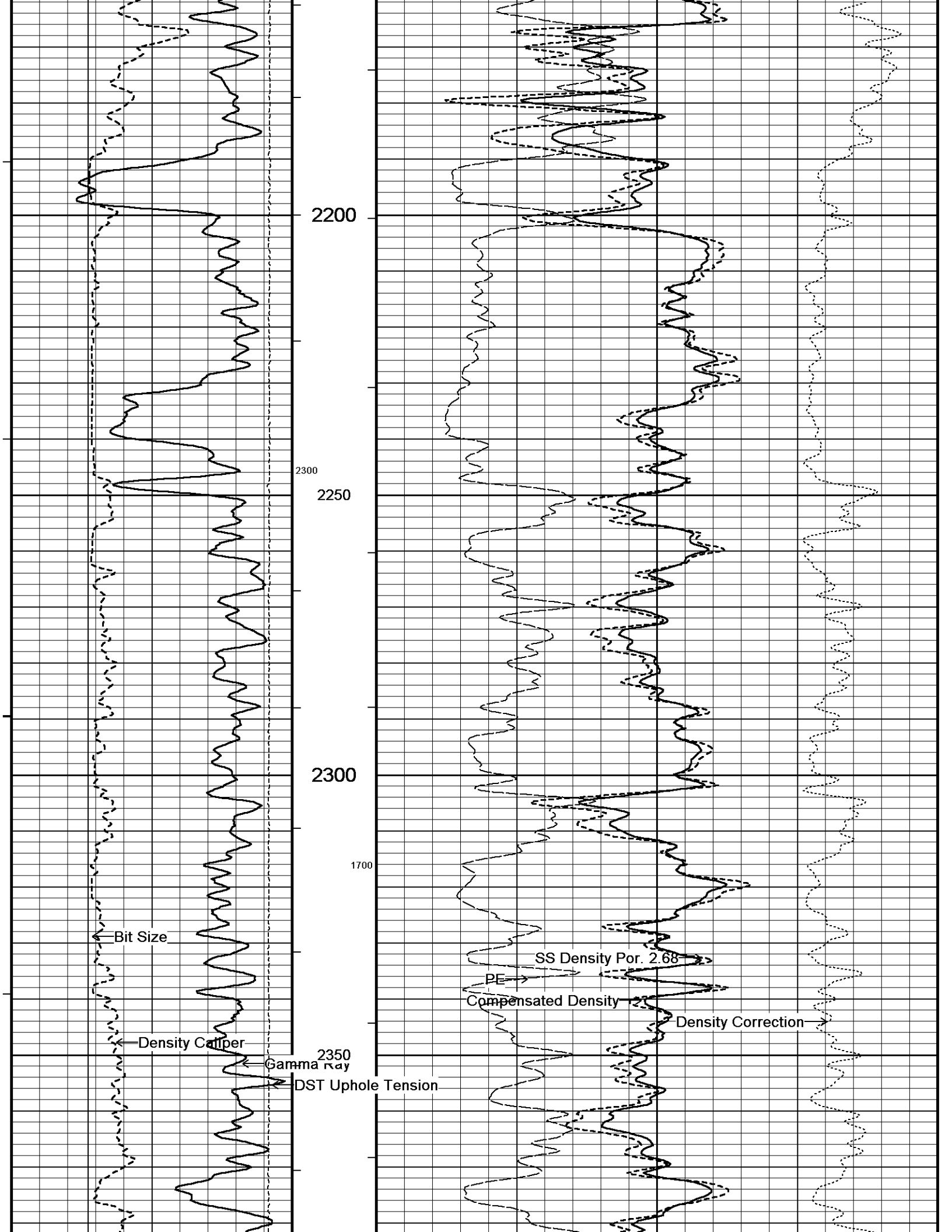

2900
2200
1100
Bit Size
1150
SS Density Por. 2.68
PE
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
1200
1250
2800

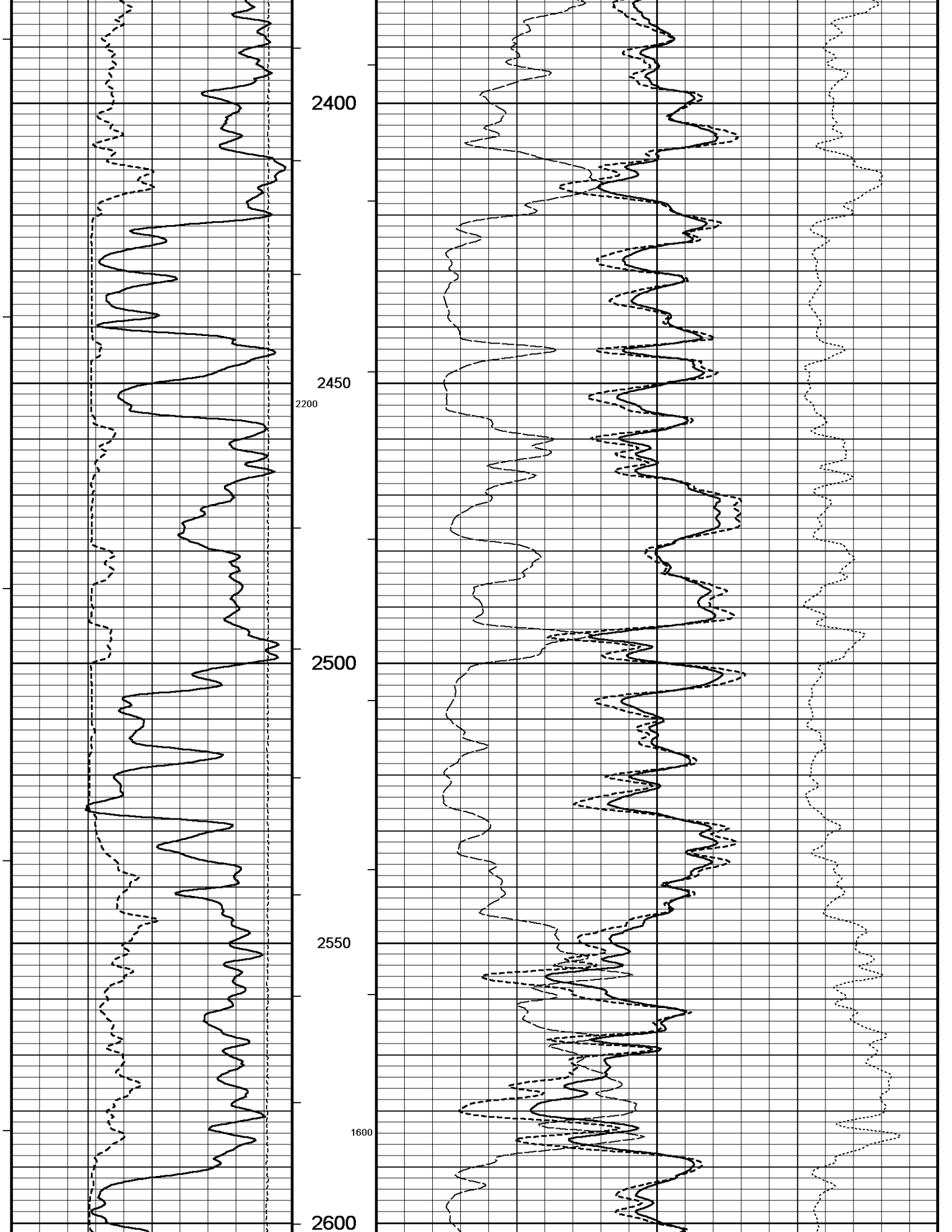

1300
2100
1350
1400
1450
1500

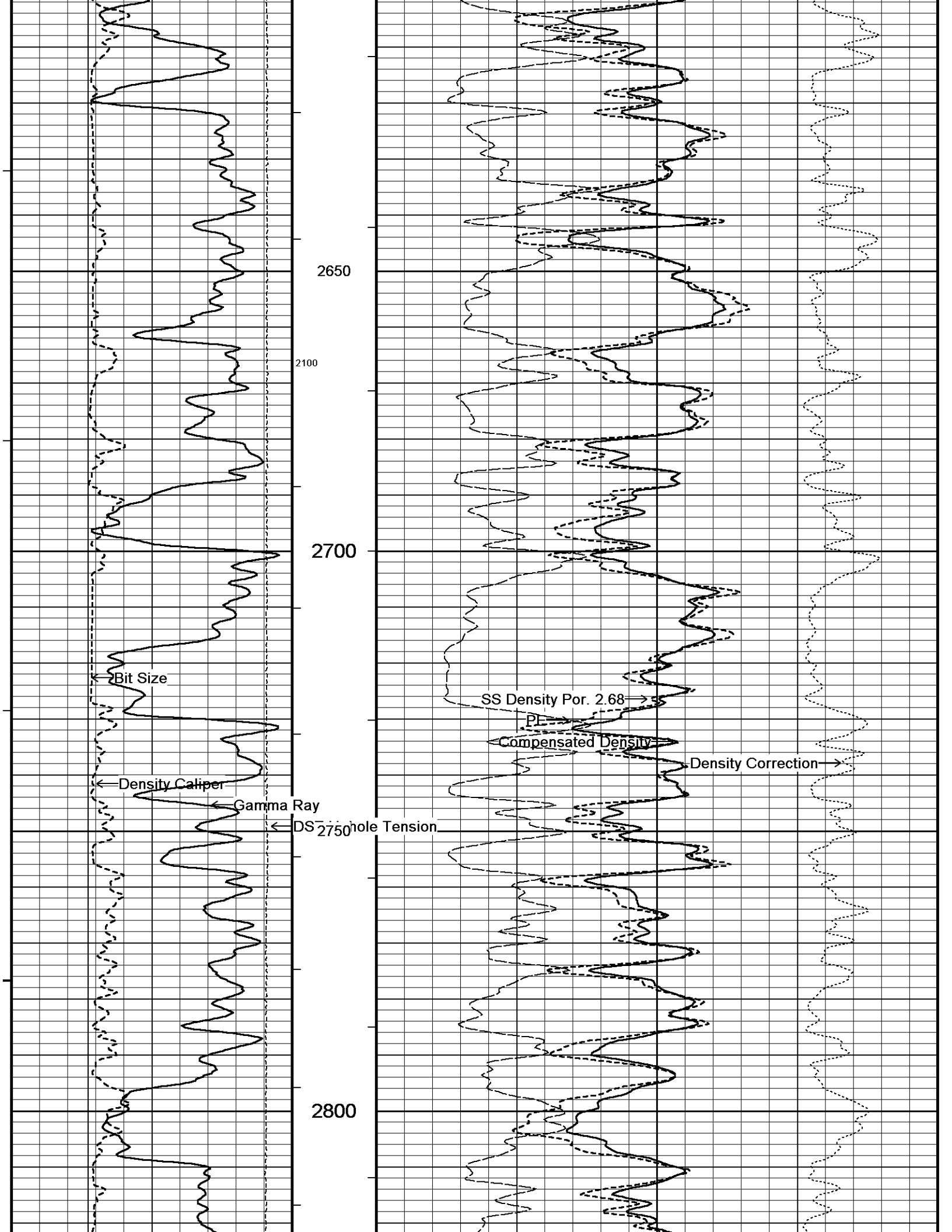

2700
Bit Size
SS Density Per 2.68
PE
1550
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
1600
2000
1650
1700
2600

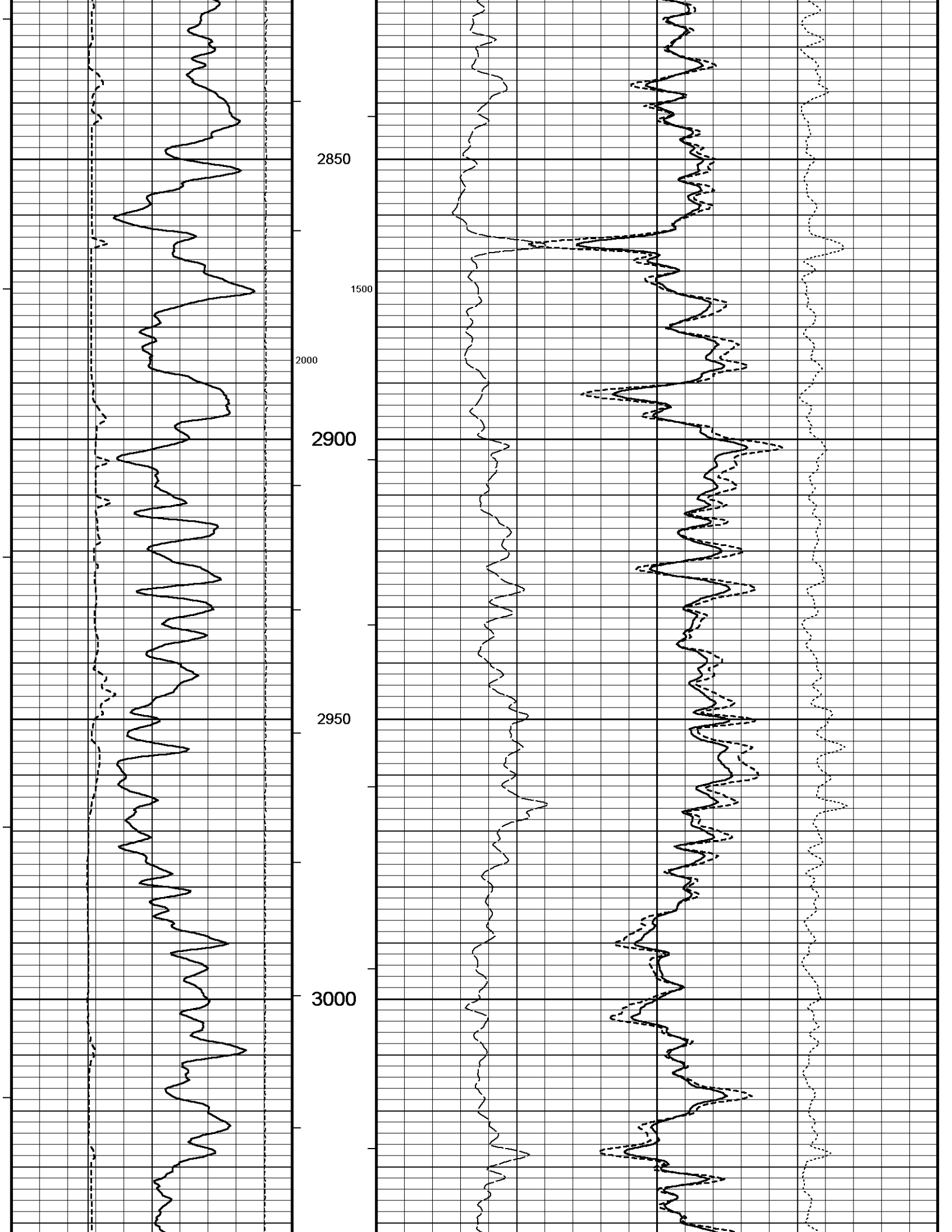

1750
1800
1850
1900
2500
1900
Bit Size
SS Density Por 2.68

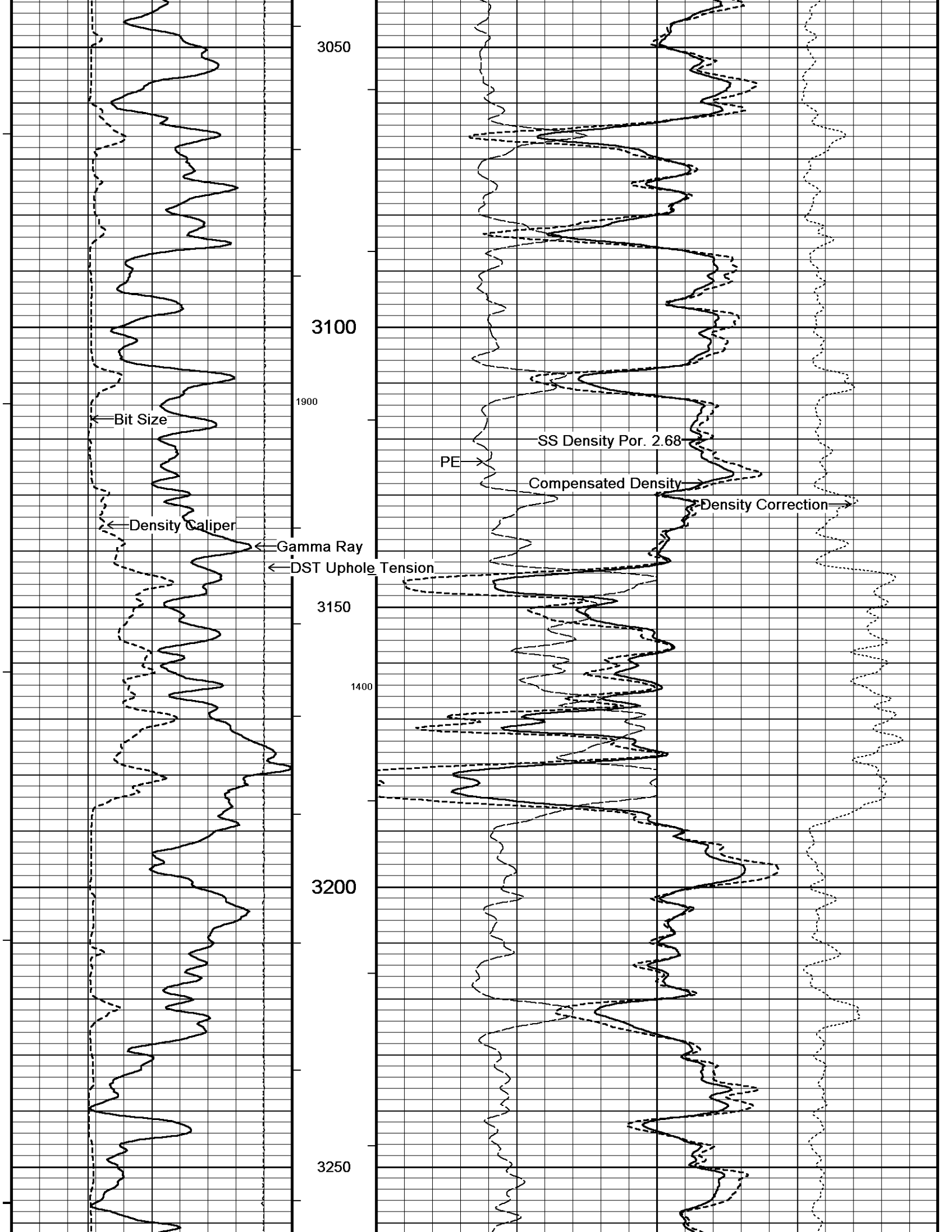

Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
1950
2000
2050
2400
1800
2100
2150

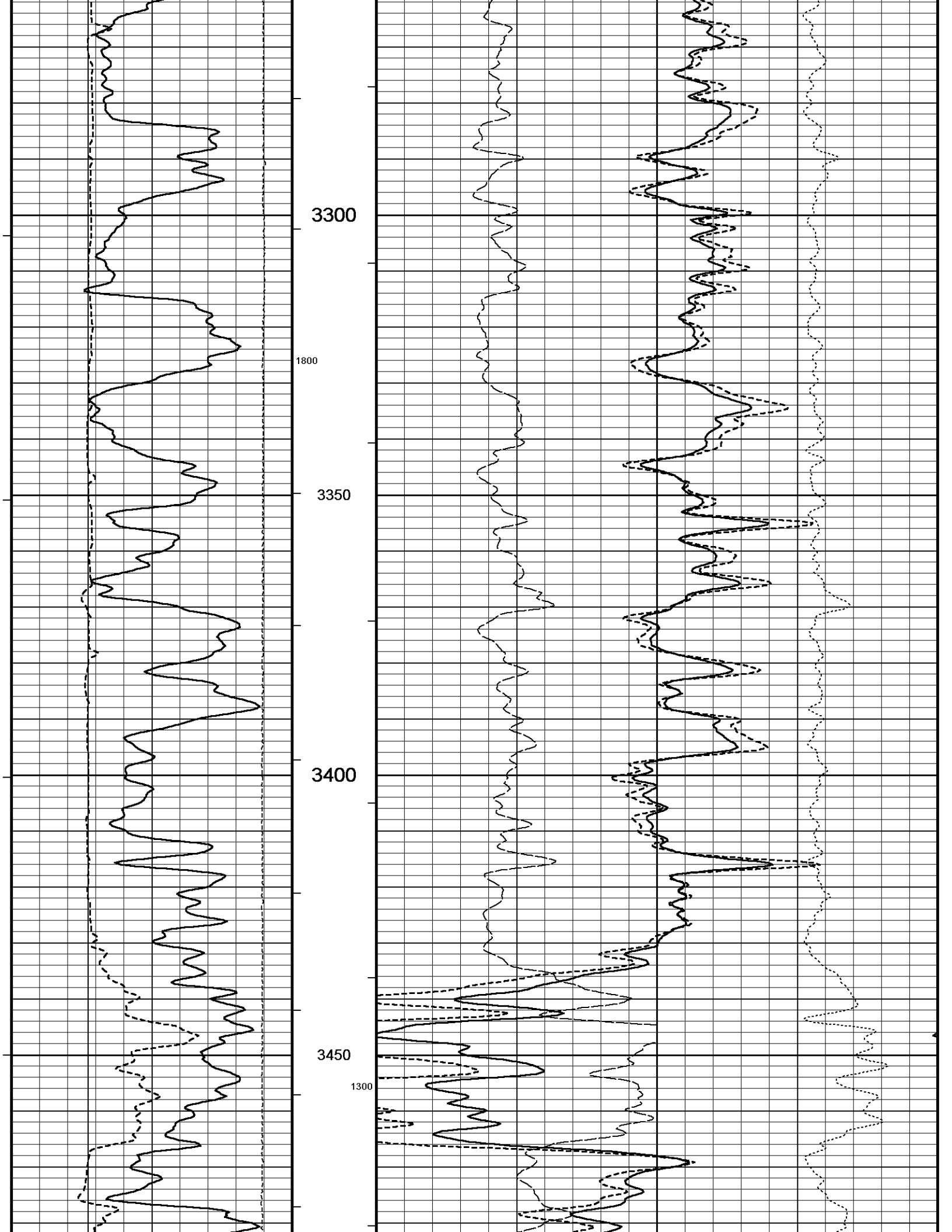

2200
2300
2250
2300
1700
2350
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
SS Density Por. 2.68
PE
Compensated Density
Density Correction

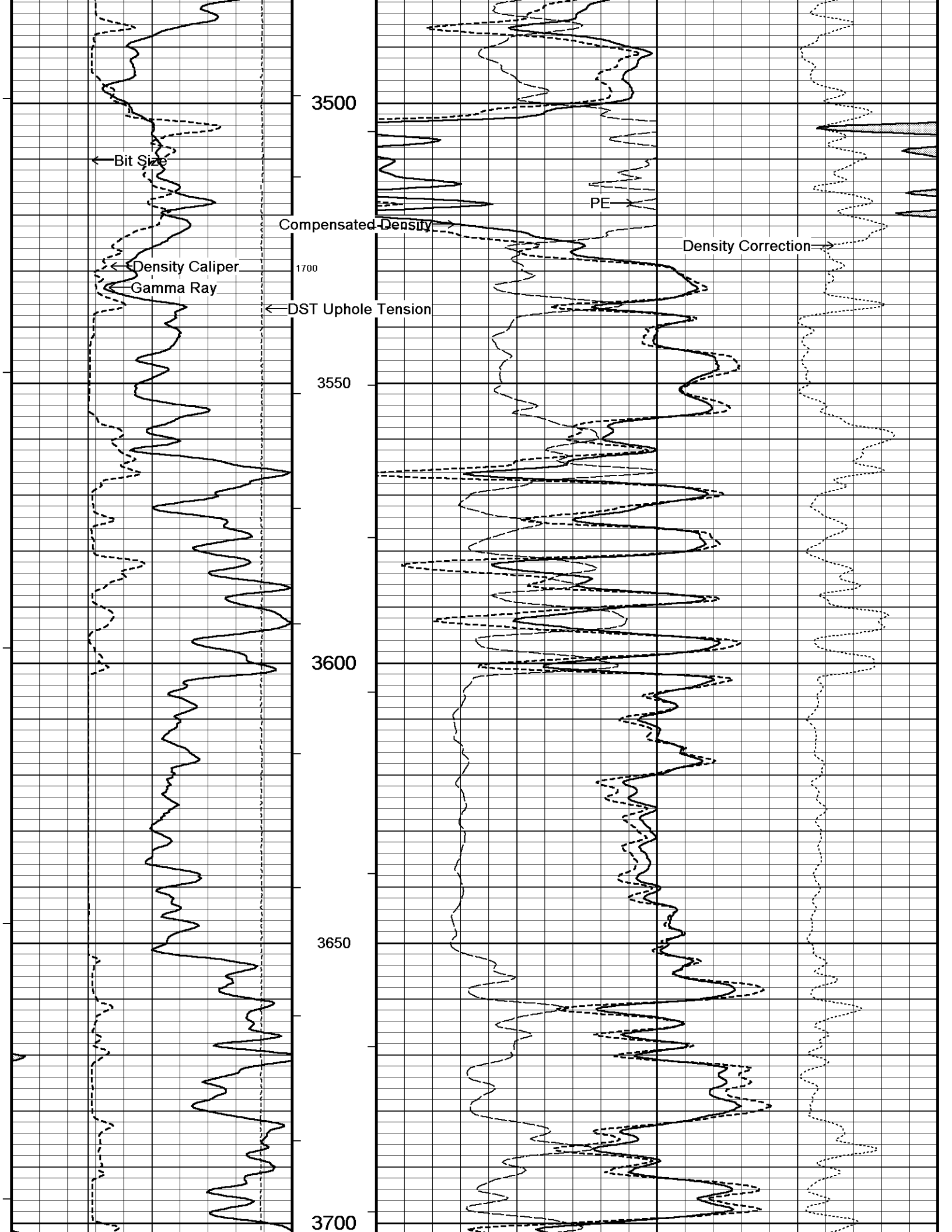

2400
2450
2200
2500
2550
1600
2600

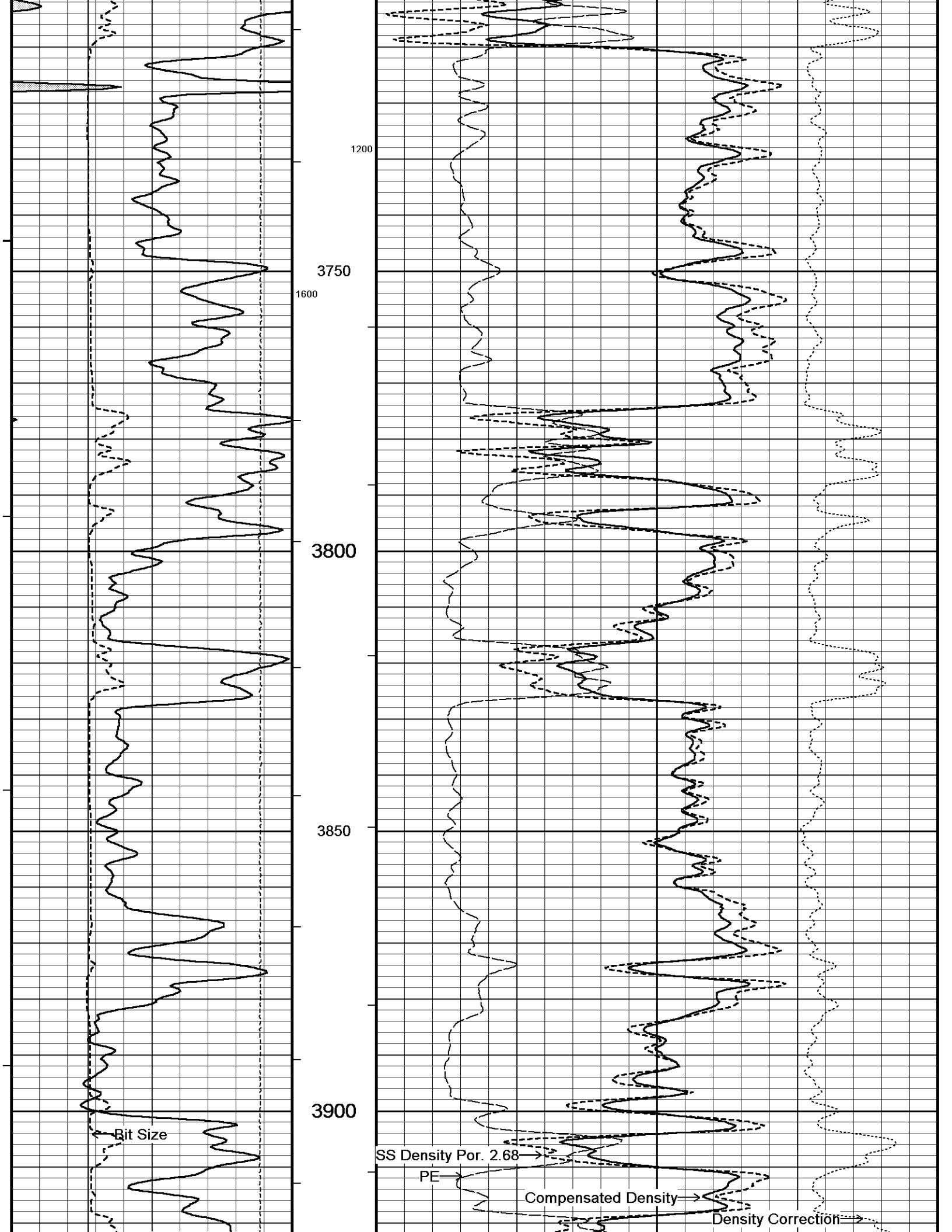

2650
2100
2700
Bit Size
SS Density Por. 2.68
PE
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DS
hole Tension
2750
2800

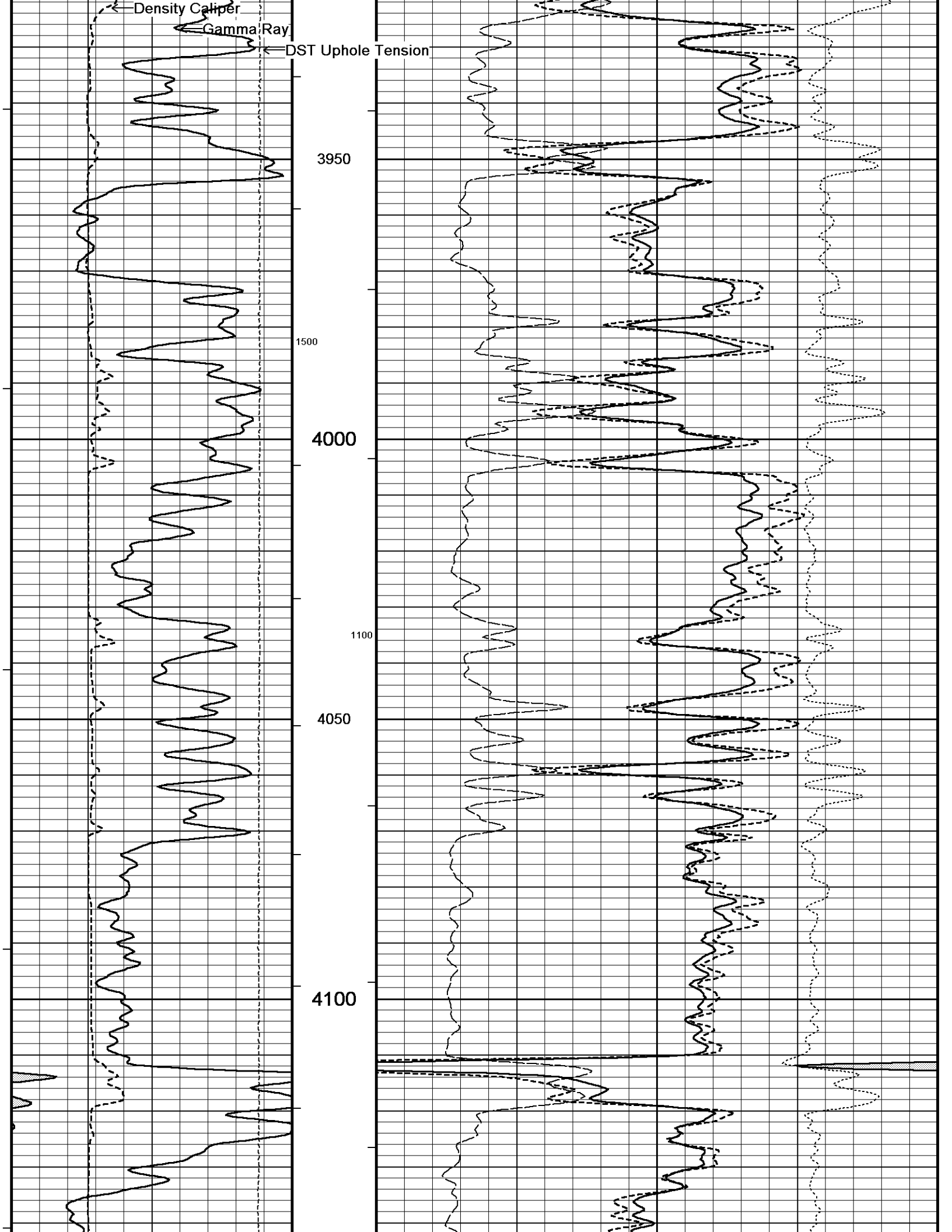

2850
1500
2000
2900
2950
3000

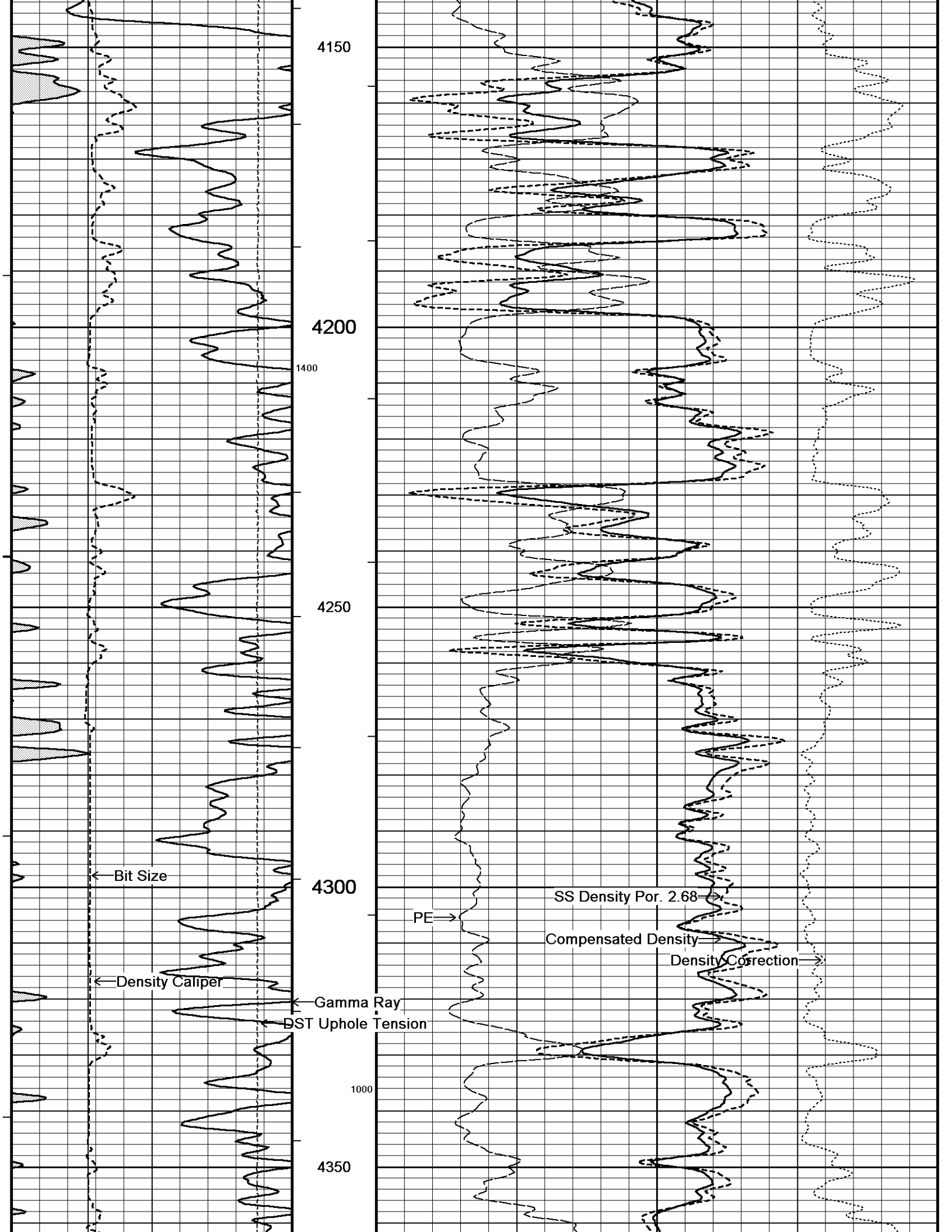

3050
3100
1900
Bit Size
SS Density Por. 2.68
PE
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
3150
1400
3200
3250

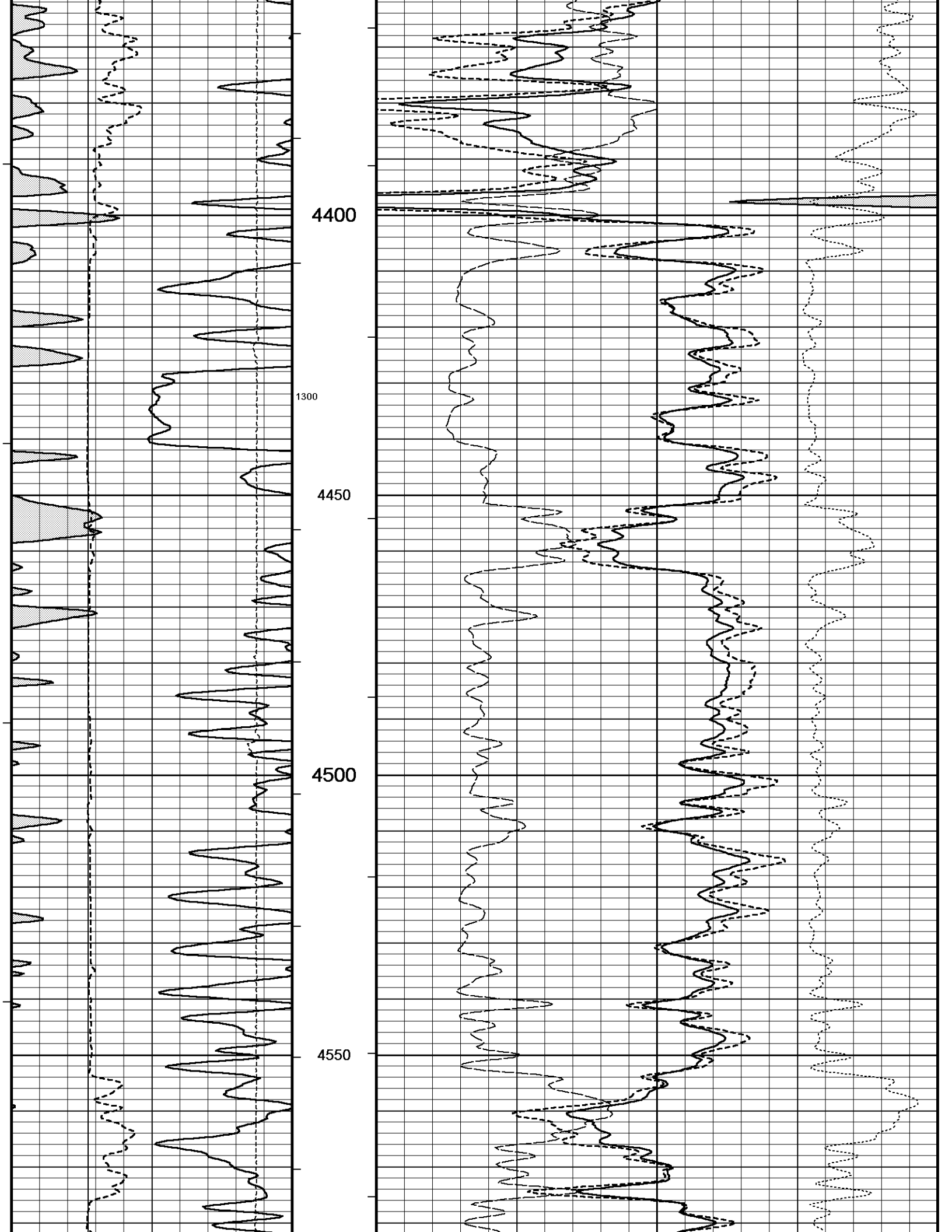

3300
1800
3350
3400
3450
1300

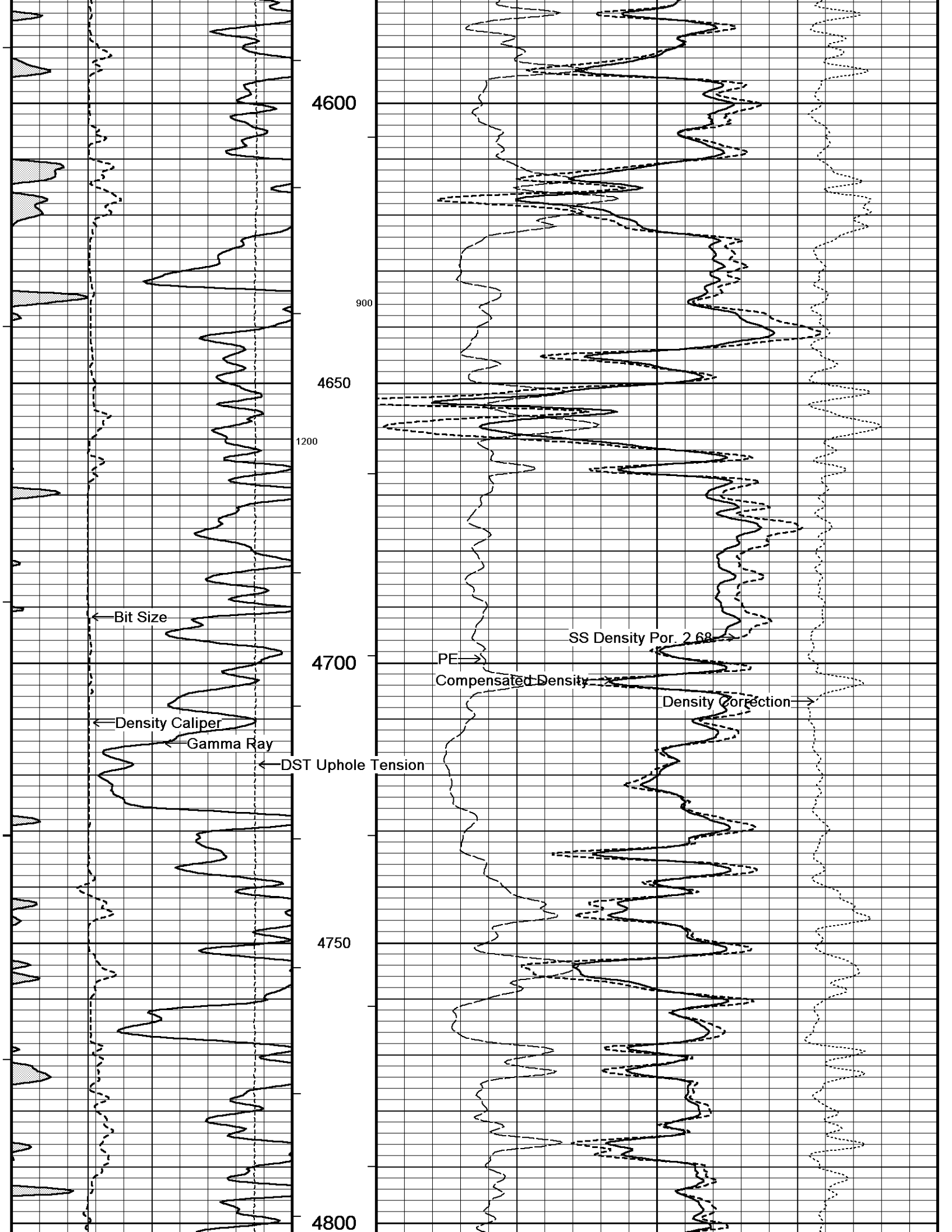

3500
Bit Size
PE
Compensated Density
Density Correction
Density Caliper
1700
Gamma Ray
DST Uphole Tension
3550
3600
3650
3700

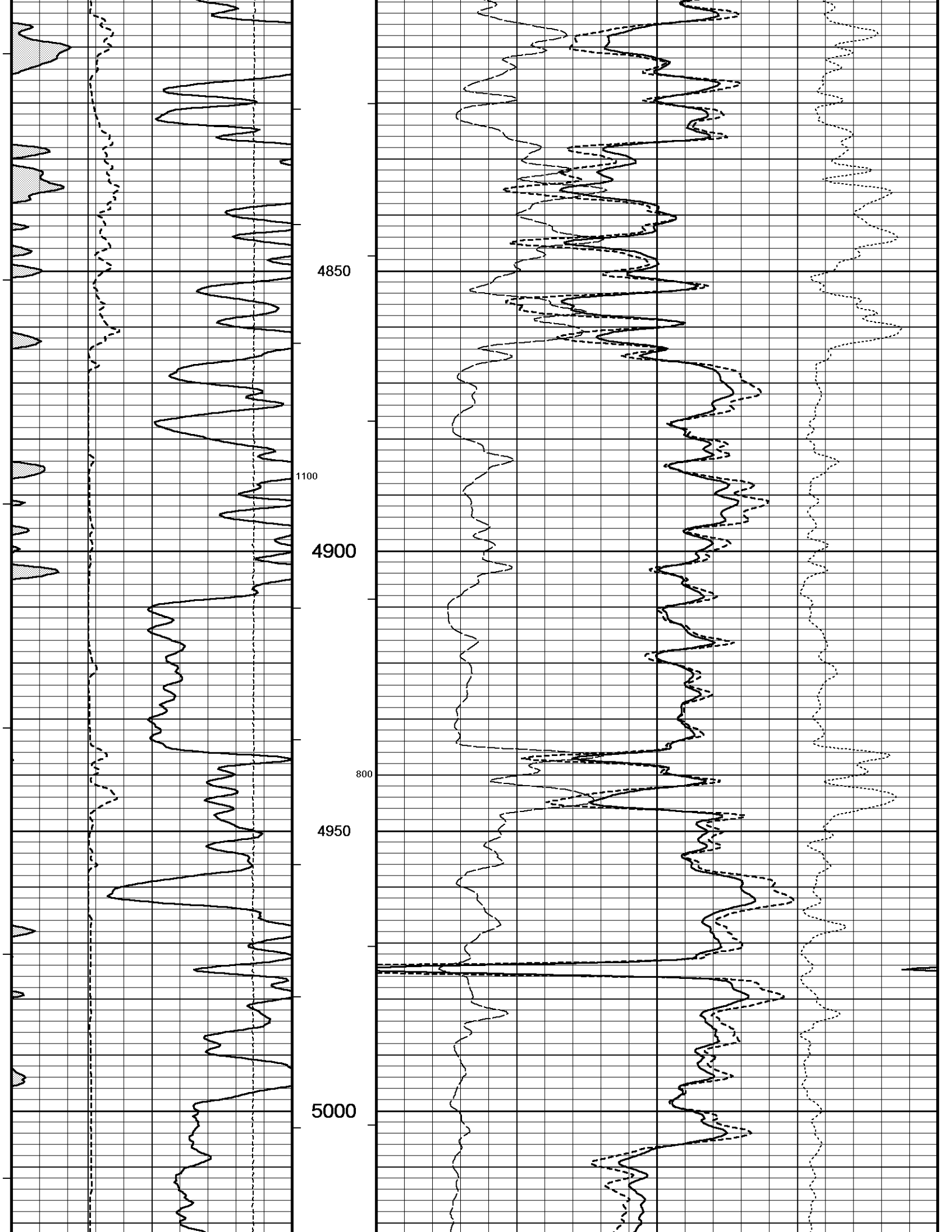

1200
3750
1600
3800
3850
3900
Bit Size
SS Density Por. 2.68
PE
Compensated Density
Density Correction

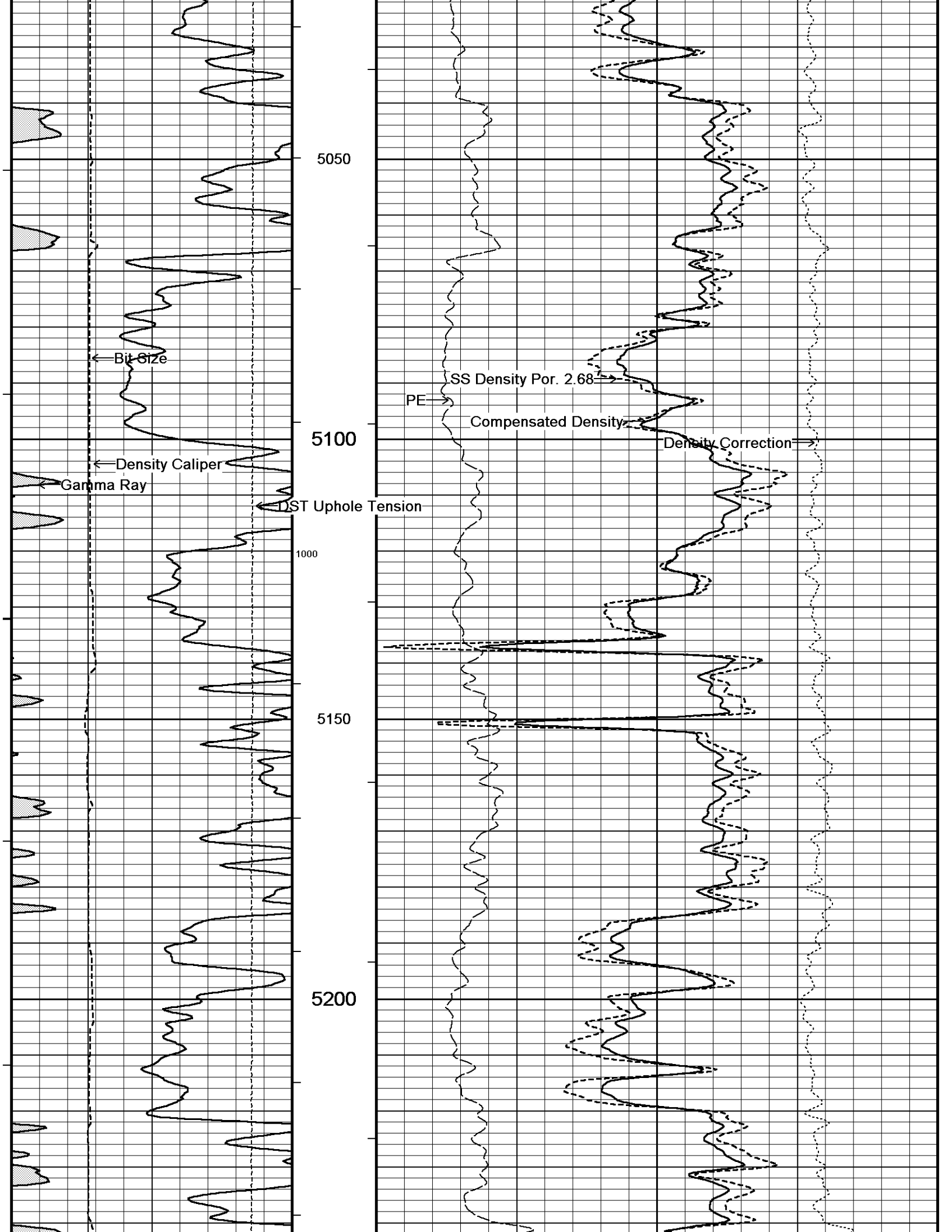

Density Caliper
Gamma Ray
DST Uphole Tension
3950
1500
4000
1100
4050
4100

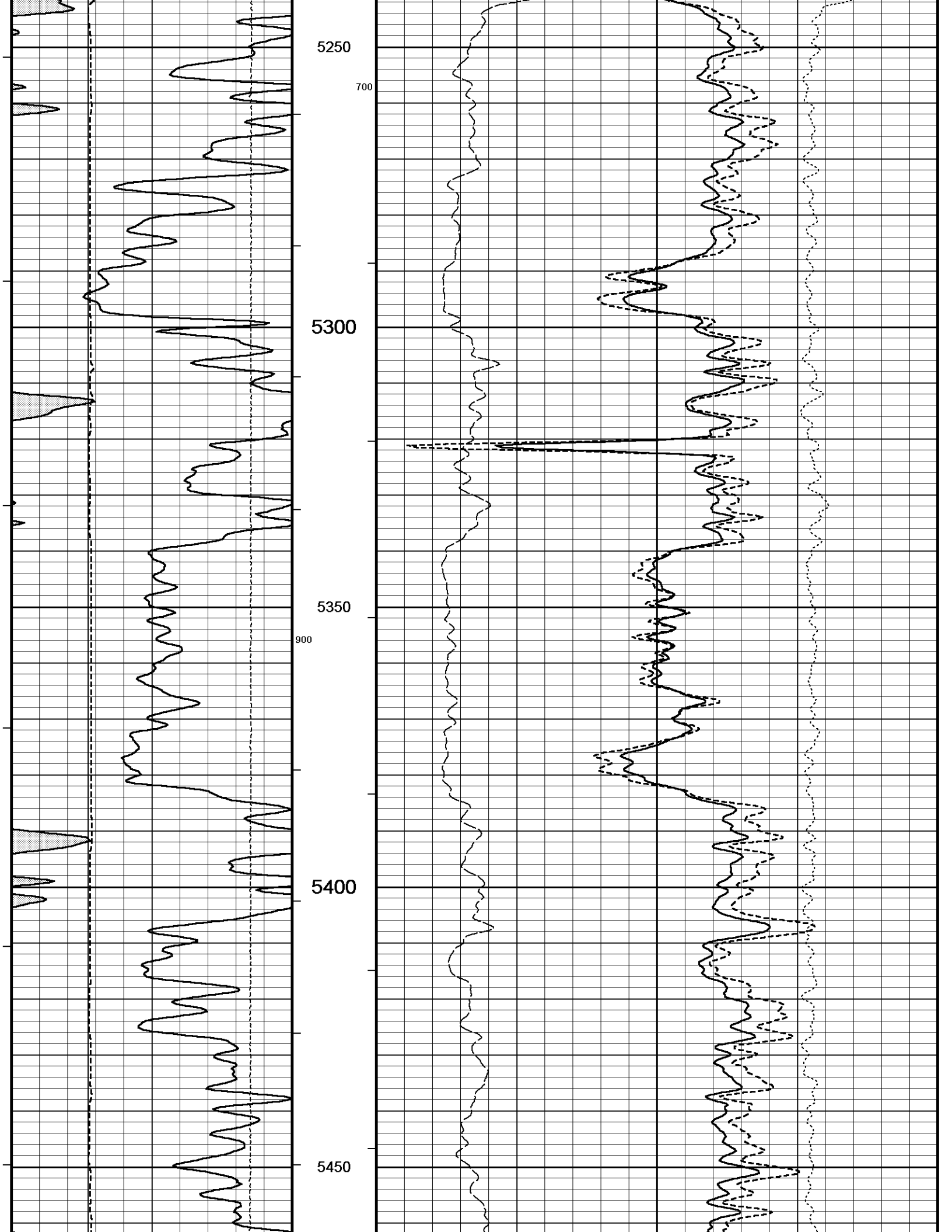

4150
4200
1400
4250
4300
4350
1000
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
SS Density Por. 2.68
Compensated Density
Density Correction

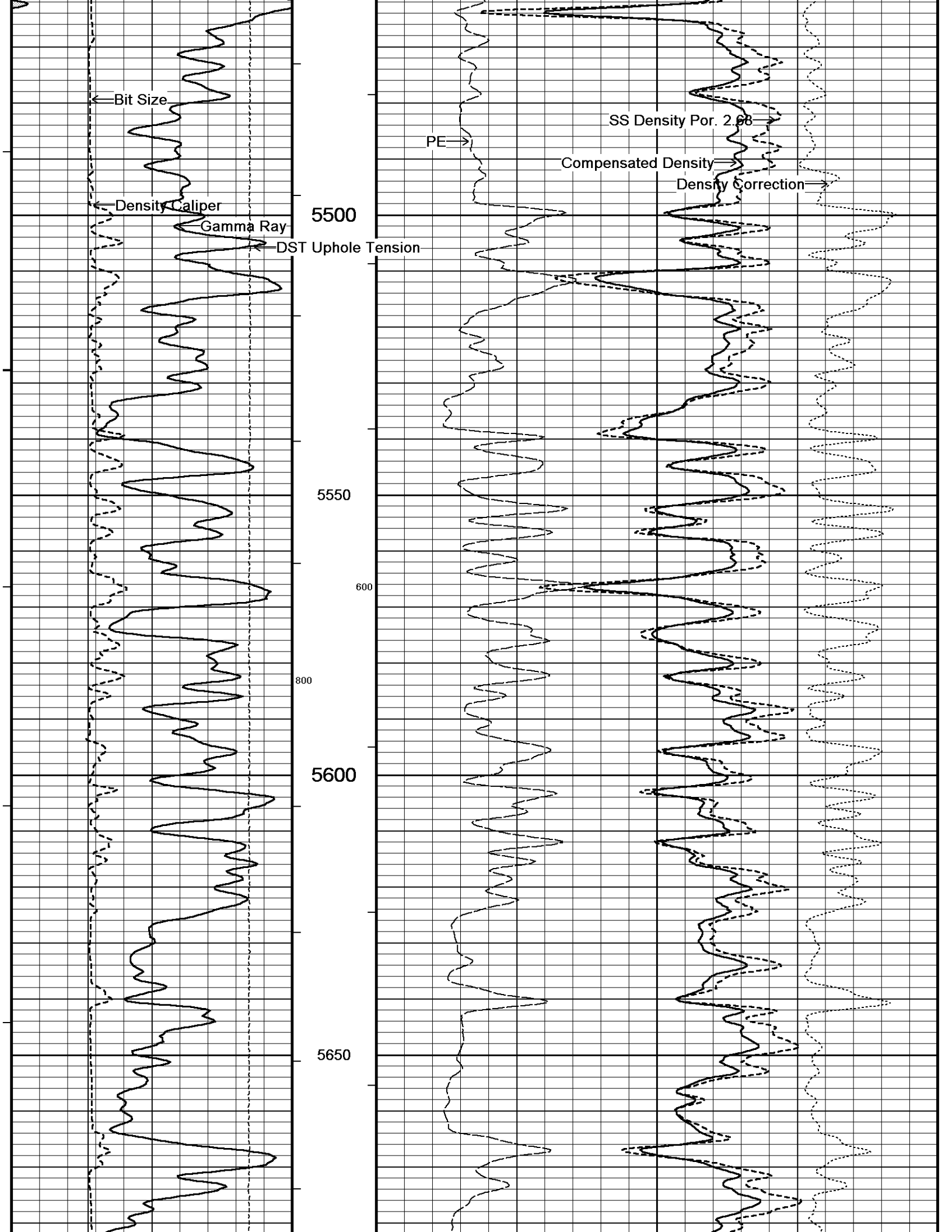

4400
1300
4450
4500
4550

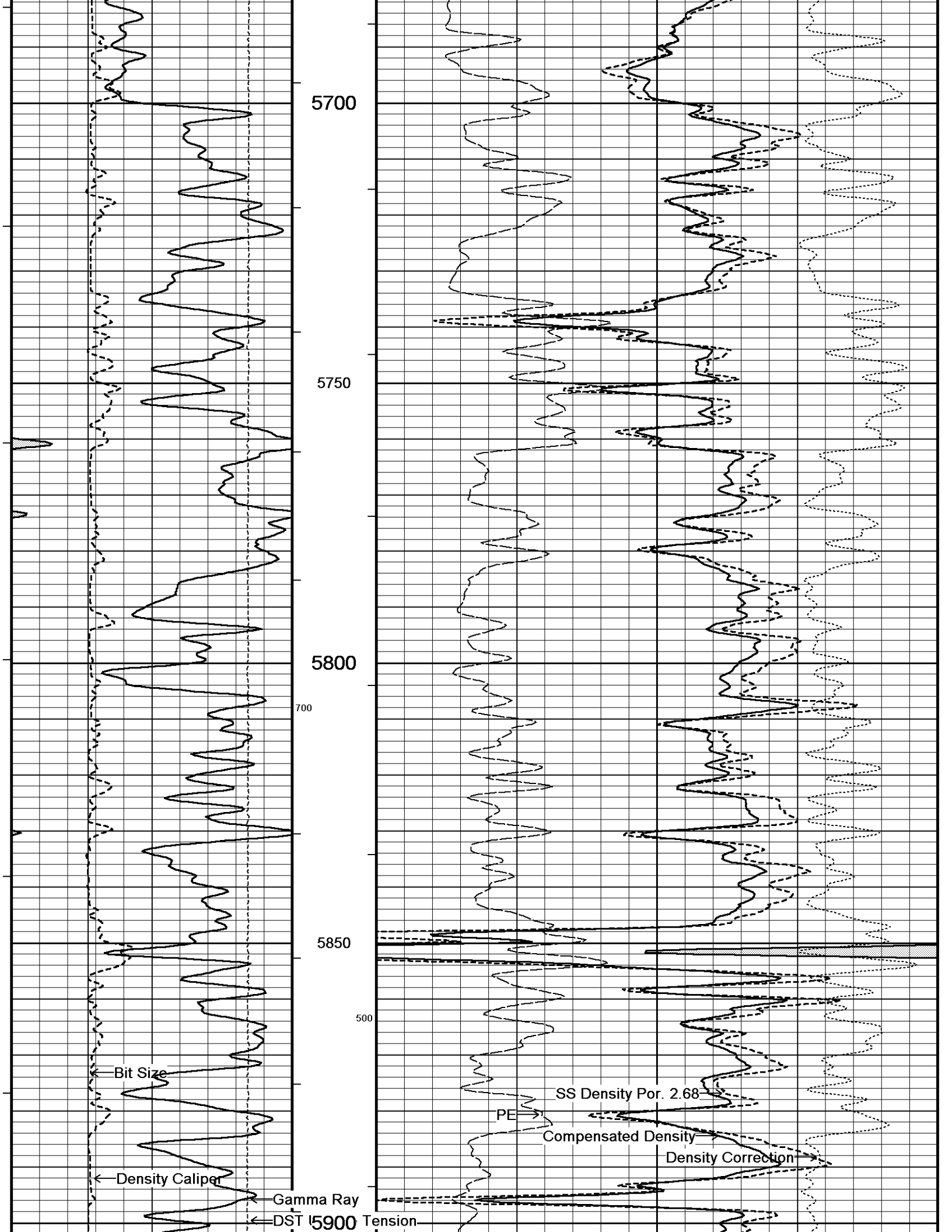

4600
900
4650
1200
Bit Size
SS Density Por. 2.68
4700
PE
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
4750
4800

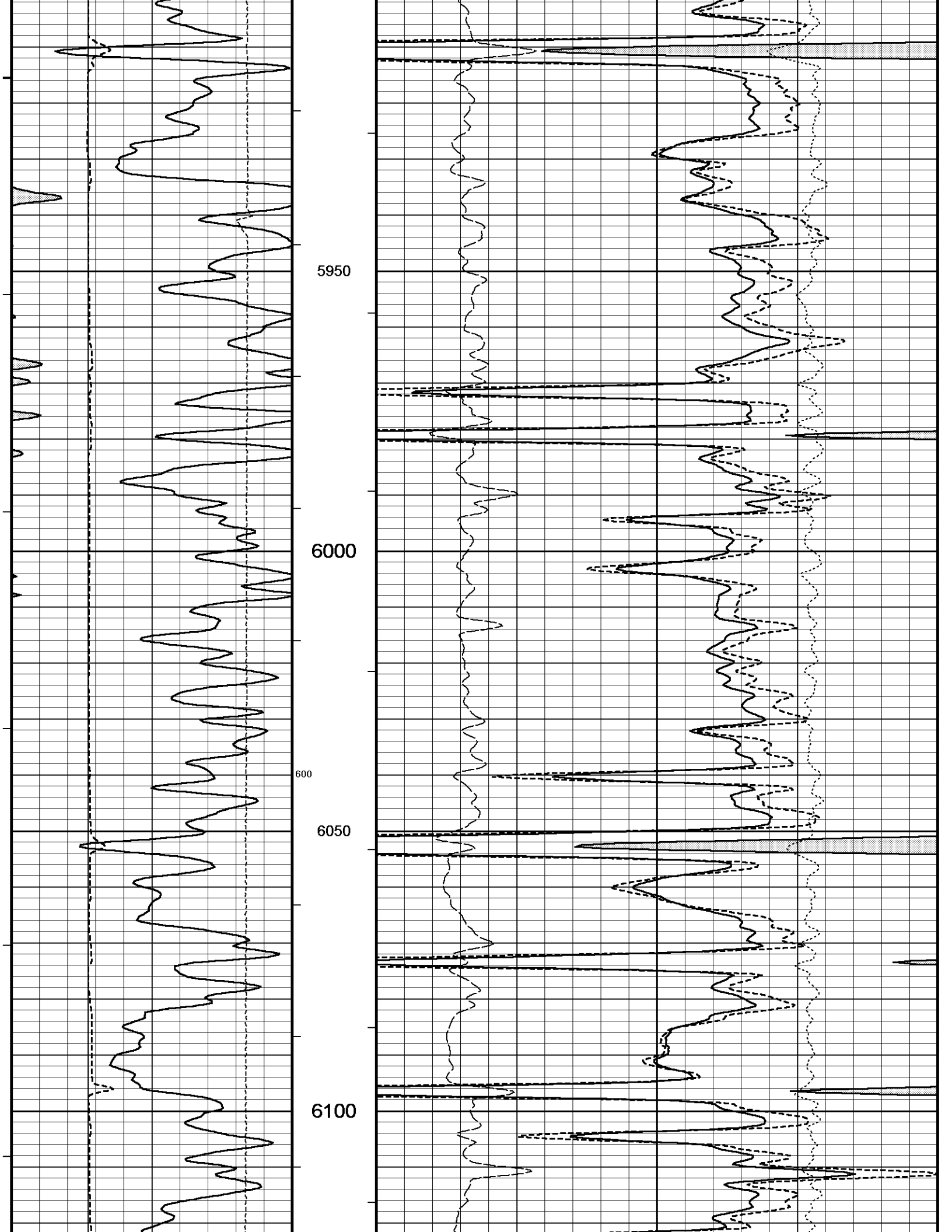

4850
1100
4900
800
4950
5000

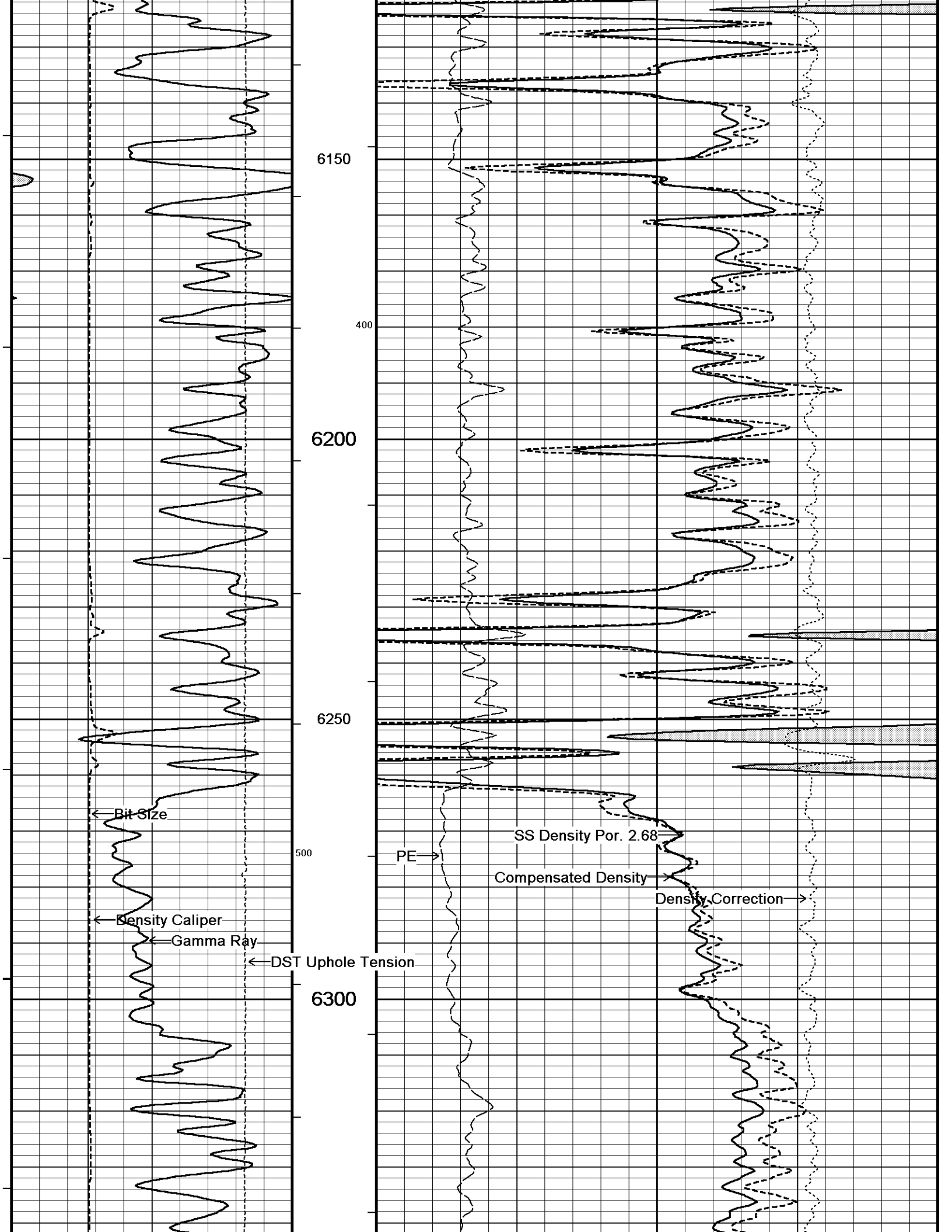

5050
Bit Size
SS Density Por. 2.68
PE
Compensated Density
5100
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
1000
5150
5200

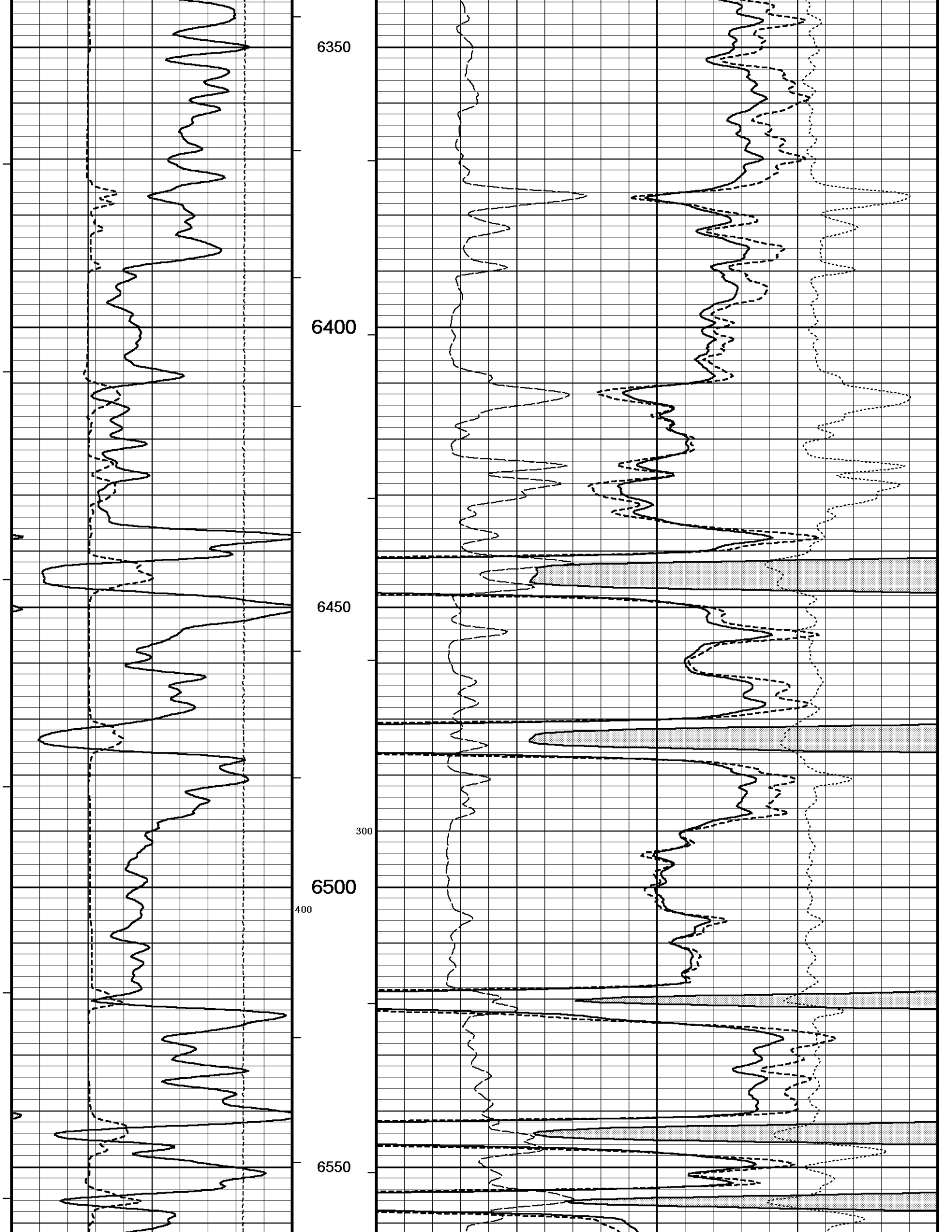

5250
700
5300
5350
900
5400
5450

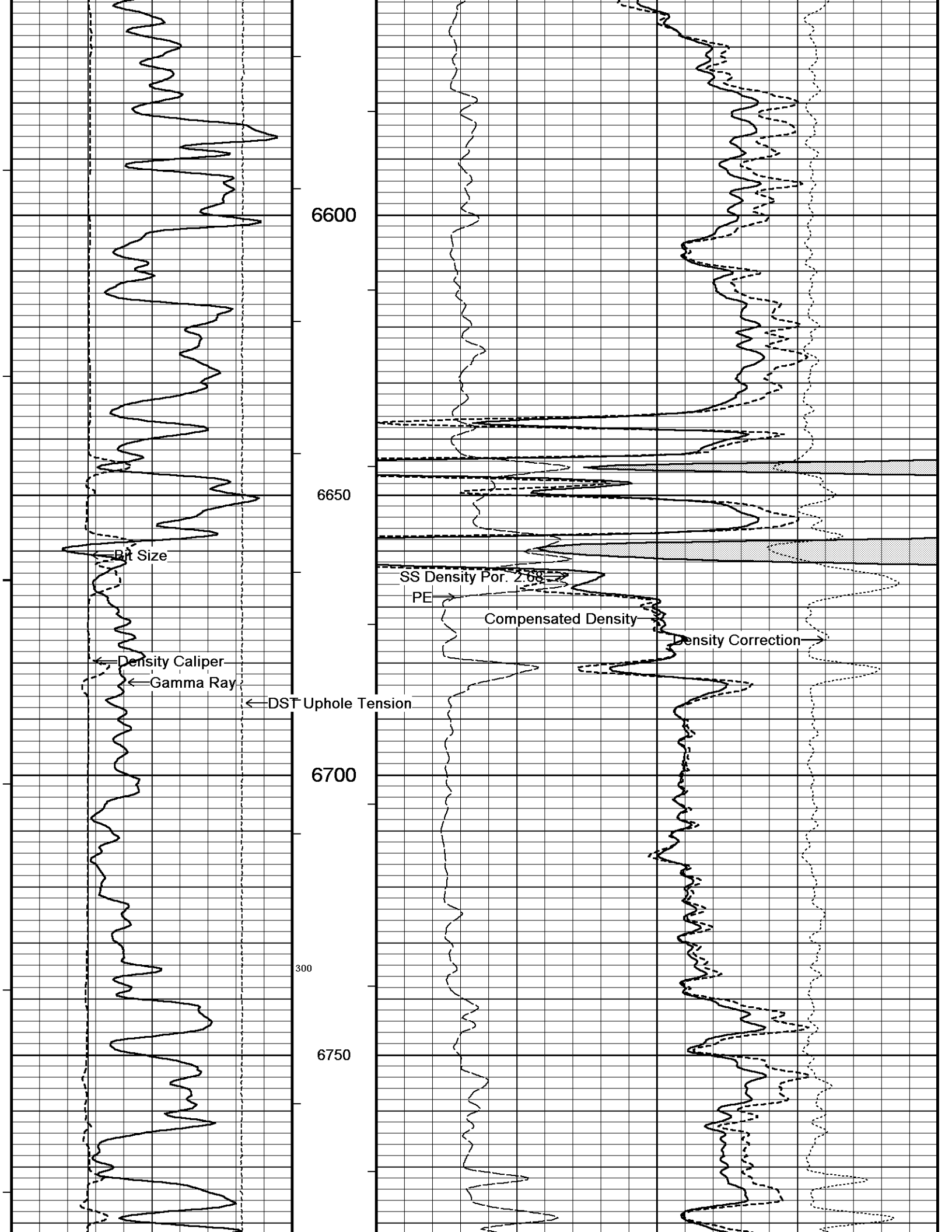

Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
SS Density Por. 2.68
Compensated Density
Density Correction
5500
5550
600
800
5600
5650

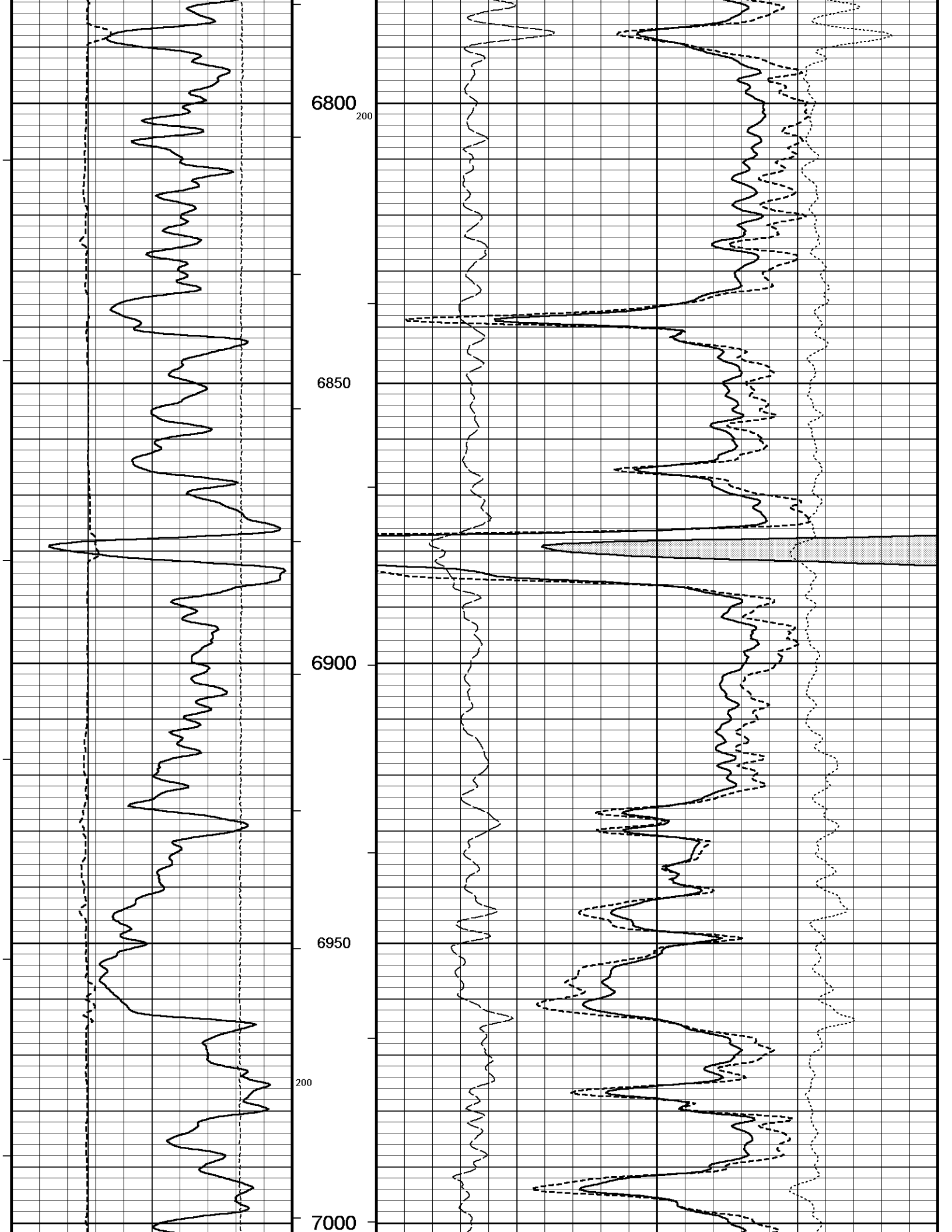

5700
5750
5800
700
5850
500
5900
Bit Size
Density Caliper
Gamma Ray
DST I
Tension
SS Density Por. 2.68
PE
Compensated Density
Density Correction

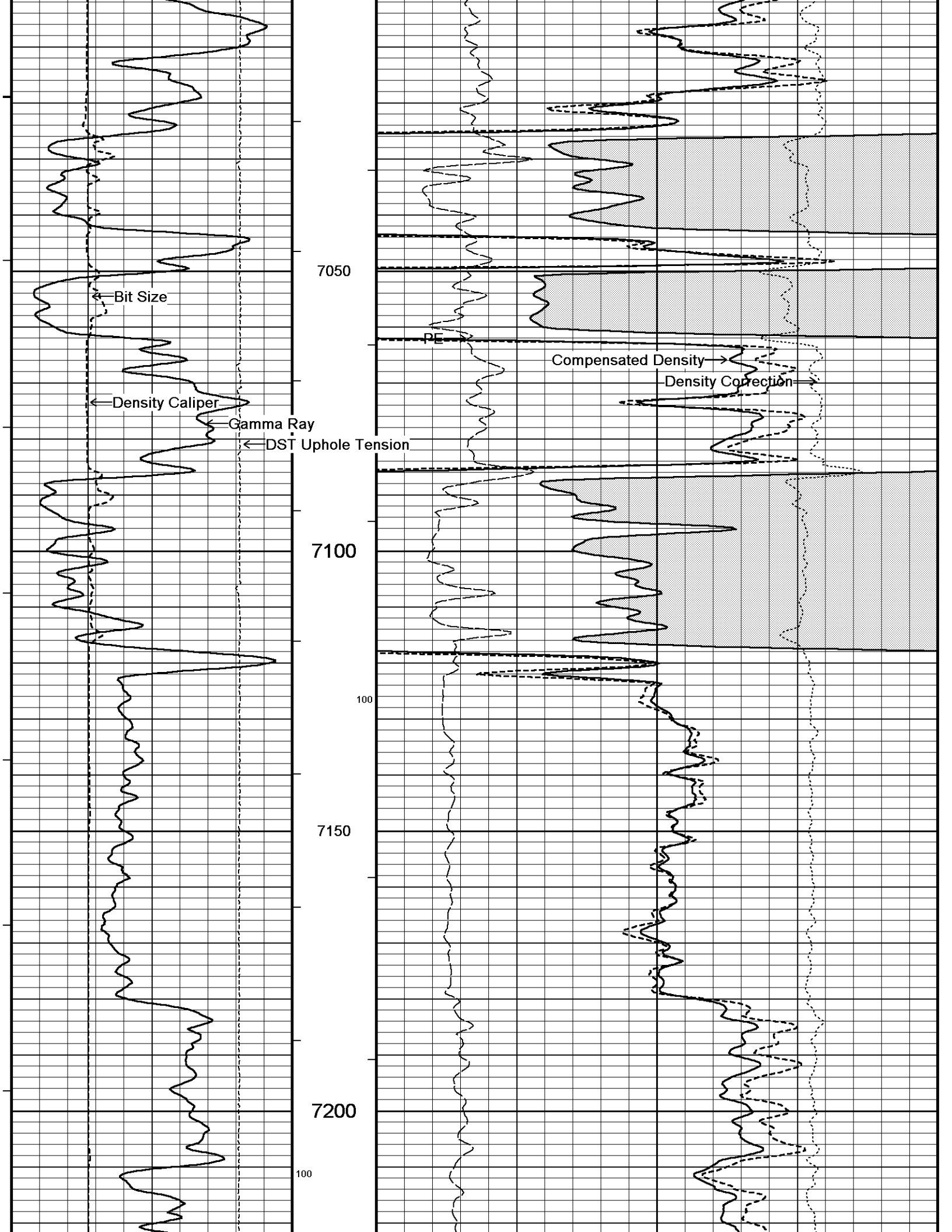

5950
6000
600
6050
6100

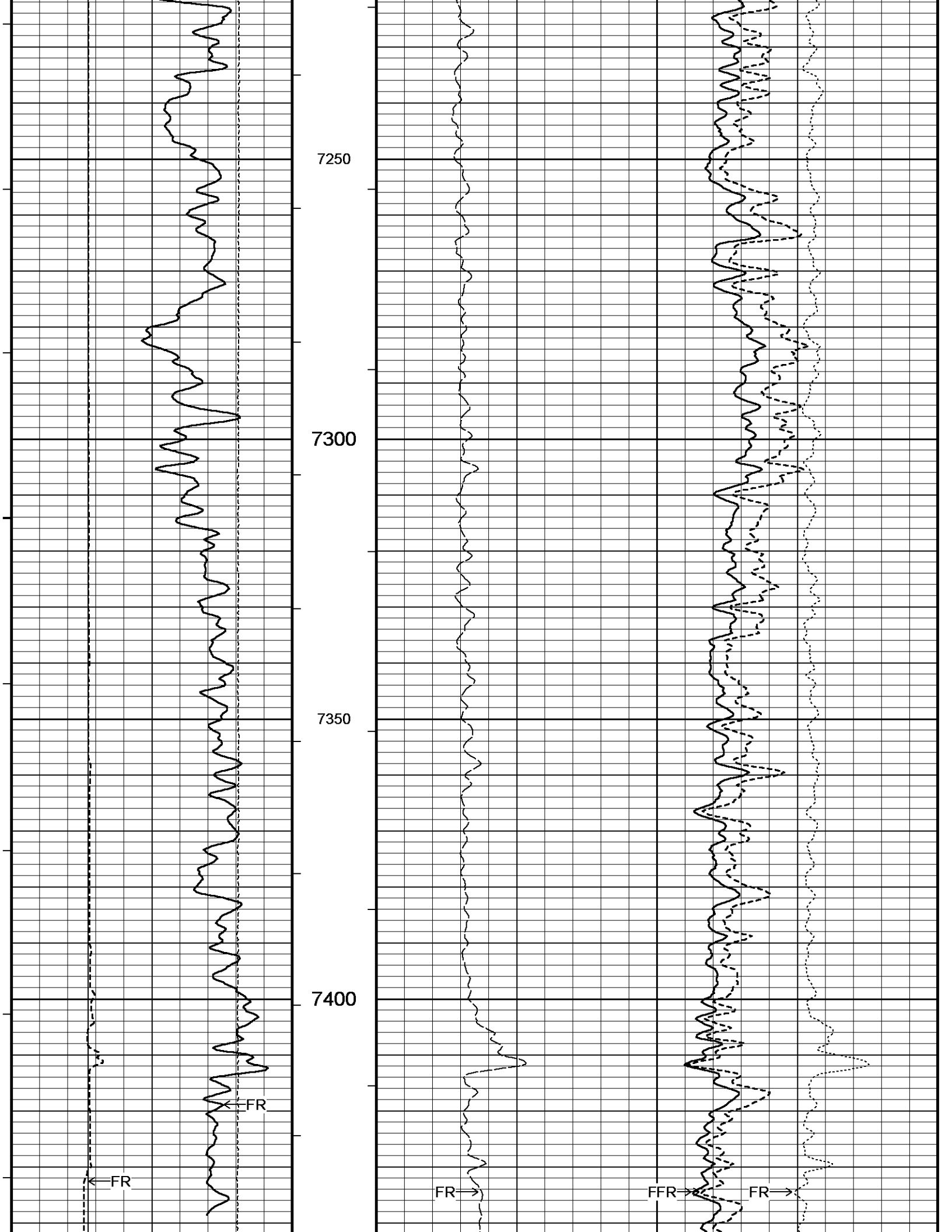

6150
400
6200
6250
500
6300
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
SS Density Por. 2.68
PE
Compensated Density
Density Correction

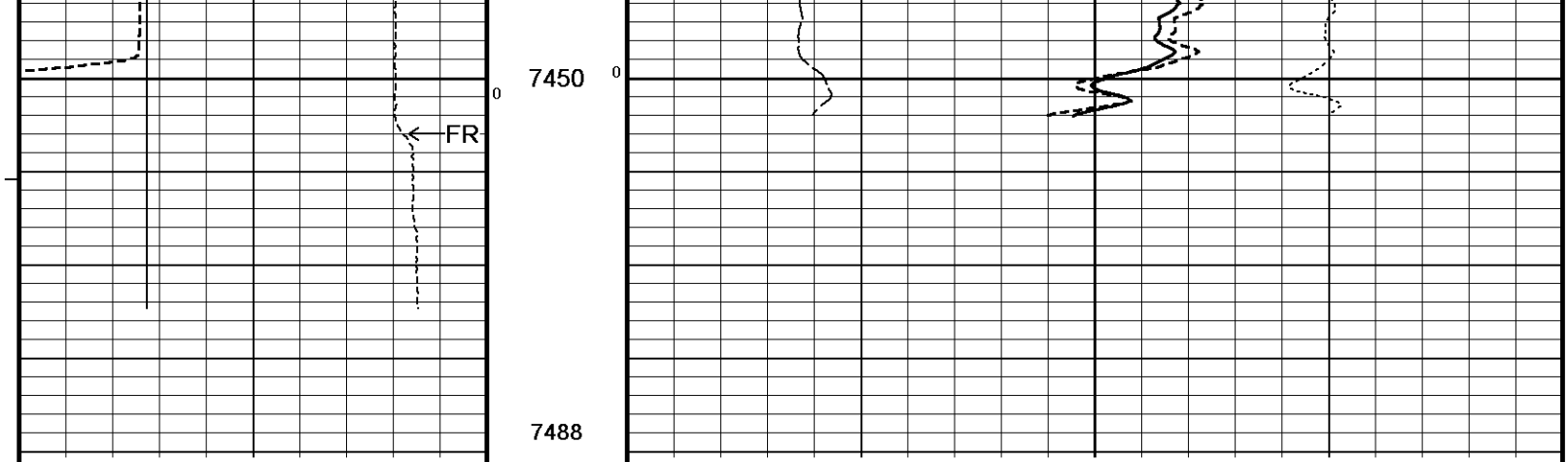

6350
6400
6450
300
6500
400
6550


6600
6650
6700
6750
300
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
SS Density Por. 2.68
PE
Compensated Density
Density Correction


6800
200
6850
6900
6950
200
7000


Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
PE
Compensated Density
Density Correction
7050
7100
7150
7200
100
100


7250
7300
7350
7400
FR
FR
FR
FFR
FR



7488

Depth In Feet

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Compensated Density
grams/cc
2 2.25 2.50 2.75 3
1 1.25 1.50 1.75 2

SS Density Por. 2.68
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

5 INCH MAIN LOG

OVERLAY

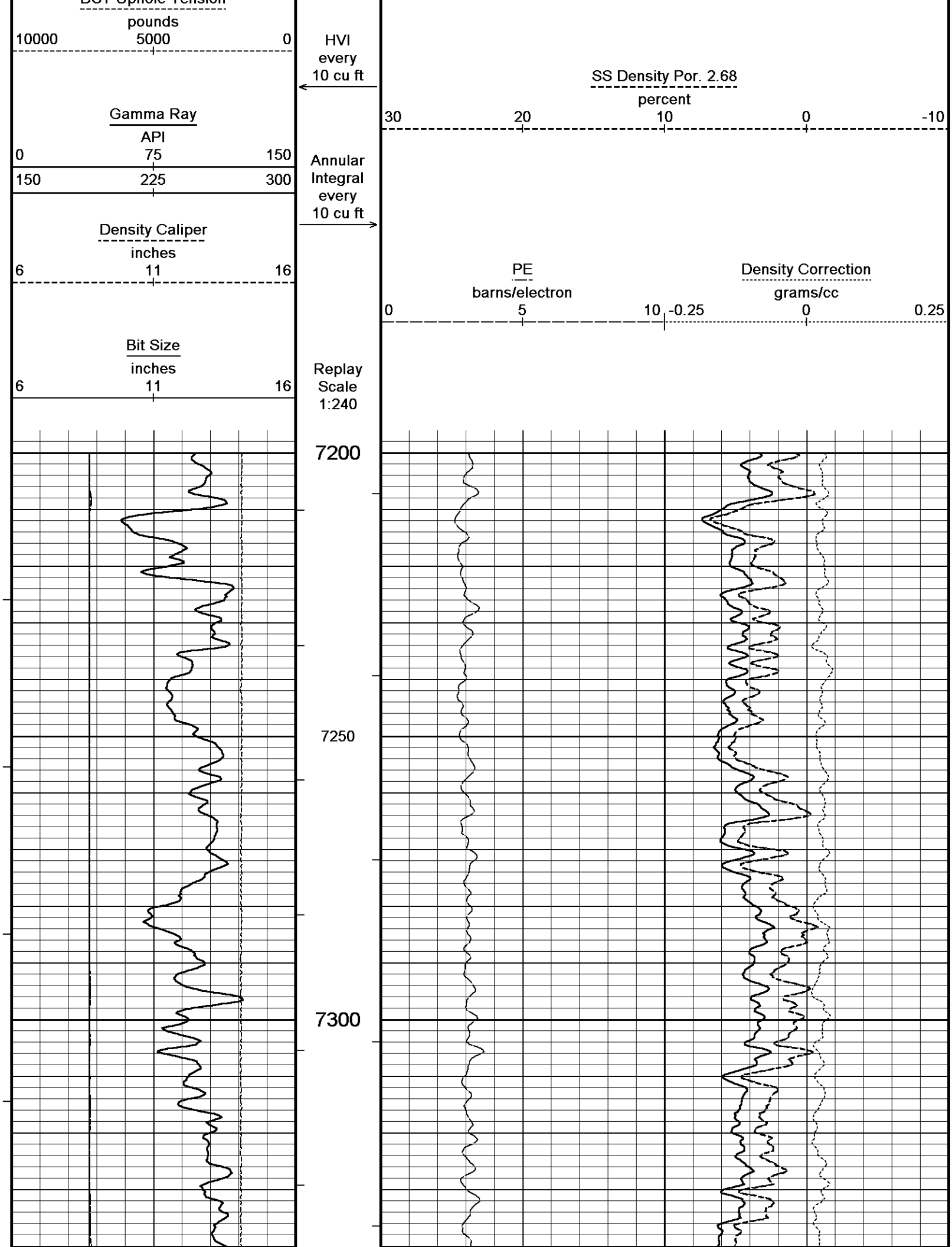
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

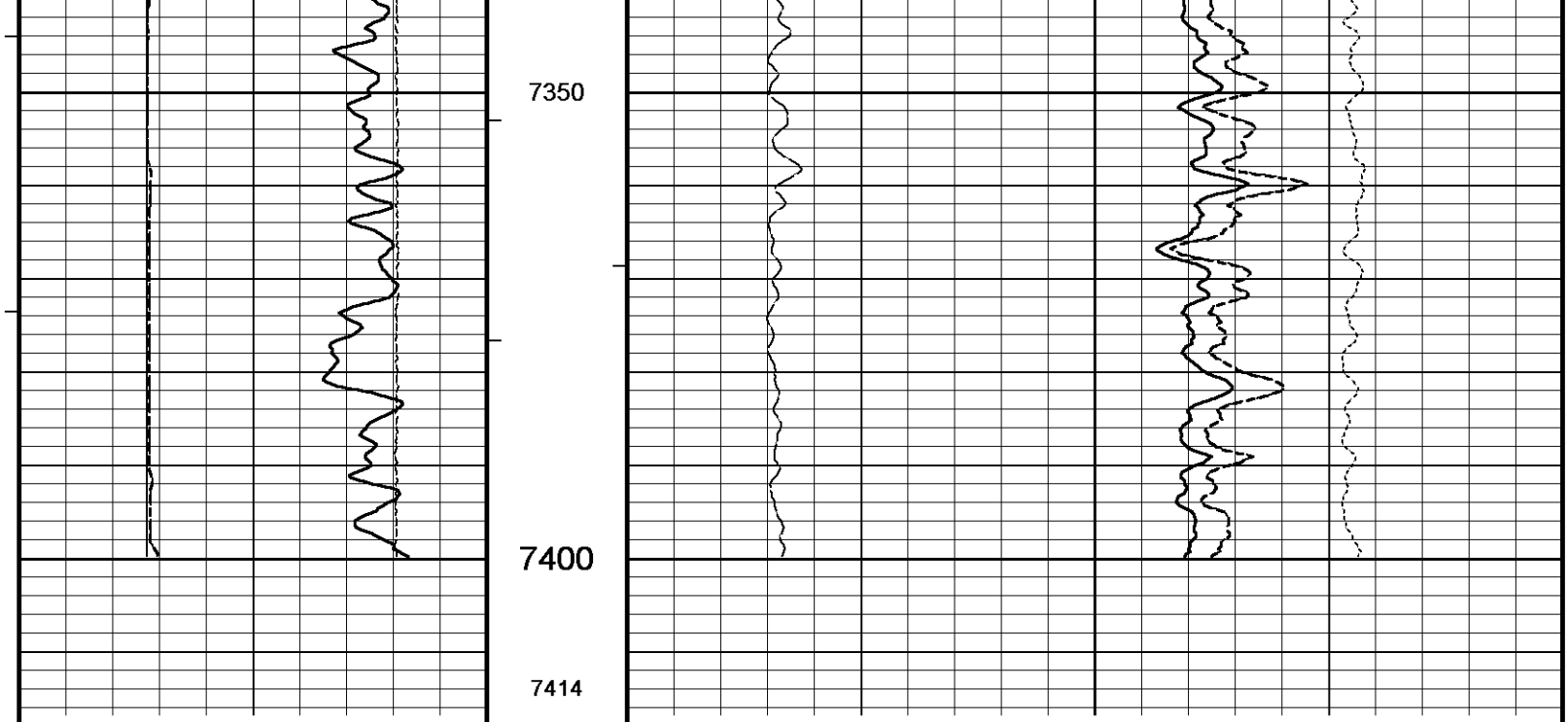
Depth in Feet

Timing Marks
every 60.0 sec

Compensated Density
grams/cc
2 2.25 2.50 2.75 3
1 1.25 1.50 1.75 2

DST Uphole Tension


BCT Sphole Tension
pounds
10000
5000
0
HVI
every
10 cu ft
SS Density Por. 2.68
percent
30
20
10
0
-10
Gamma Ray
API
0
75
150
150
225
300
Annular
Integral
every
10 cu ft
Density Caliper
inches
6
11
16
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.25
0
0.25
Bit Size
inches
6
11
16
Replay
Scale
1:240
7200
7250
7300



7414

Depth in Feet

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
10000 5000 0

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Compensated Density
grams/cc
2 2.25 2.50 2.75 3
1 1.25 1.50 1.75 2

SS Density Por. 2.68
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-FEB-2011 03:12
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
Filename: C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta
Recorded on 22-FEB-2011 23:21
System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

OVERLAY

BEFORE SURVEY CALIBRATION

C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta

General Constants All 000

Last Edited on 22-FEB-2011,20:53

General Parameters		
Mud Resistivity	4.000	ohm-metres
Mud Resistivity Temperature	80.000	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	Density Caliper	

Rwa Parameters	
Porosity used	Base Density Porosity
Resistivity used	Array Ind. One Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 0

Field Calibration on 22-FEB-2011 21:40

Reading No	Measured	Calibrated (lbs)
1	15753.48	0.00
2	16748.19	382.00

High Resolution Temperature Calibration MCG-C 192

Field Calibration on 18-FEB-2011,09:26

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

High Resolution Temperature Constants MCG-C 192

Last Edited on 13-DEC-2010,09:50

Pre-filter Length	11

SP Calibration MCG-C 192

Field Calibration on 22-FEB-2011,20:05

	Measured	Calibrated (mV)
Reference 1	100.9	100.0
Reference 2	-100.2	-100.0

Gamma Calibration MCG-C 192

Field Calibration on 22-FEB-2011 20:05

	Measured	Calibrated (API)
Background	97	71
Calibrator (Gross)	1341	983
Calibrator (Net)	1244	912

Gamma Constants MCG-C 192

Last Edited on 12-FEB-2011,12:54

Gamma Calibrator Number	912	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN-A.B 160

Base Calibration on 22-FEB-2011,05:29
Field Check on 22-FEB-2011 20:11

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)	
	1278	1966
Ratio	0.650	

Neutron Constants MDN-A.B 160

Last Edited on 23-FEB-2011,02:58

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-FEB-2011 09:44
Field Check on 22-FEB-2011 20:26

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	10.7	1.3
Reference 2	965.5	126.8
Base Check		281.9
Field Check		282.3

FE Constants MFE-A.A 85

Last Edited on 23-FEB-2011,02:17

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 213

Field Calibration on 22-DEC-2010,21:10

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MAI-B.A 213

Last Edited on 13-DEC-2010,09:54

Pre-filter Length	11

Induction Calibration MAI-B.A 213

Base Calibration on 22-FEB-2011,05:28
Field Check on 22-FEB-2011 20:34

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	12.1	3932.4	12.1	3931.9
2	29.6	3538.5	29.6	3538.8
3	28.5	3113.0	28.5	3113.5
4	18.9	2095.5	18.9	2095.9
Deep	17.1	2076.8	17.1	2077.3
Medium	42.3	4087.5	42.3	4088.2
Shallow	44.6	5158.2	44.5	5158.4
Array Temperature		42.3		41.7 Deg F

Induction Constants MAI-B.A 213

Last Edited on 23-FEB-2011,02:15

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	0.5000	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 10-FEB-2011 10:23
Field Calibration on 22-FEB-2011,20:21

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	18496	4.00
2	27008	5.96
3	34874	7.98
4	43063	9.86
5	52192	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.98	7.98

Photo Density Calibration MPD-B 167

Base Calibration on 13-FEB-2011 15:22
Field Check on 22-FEB-2011 20:20

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	48677	18603	53115	19186
Reference 2	22687	3043	25020	2536

Field Check at Base

1173.5	1744.9

Field Check

1171.4	1737.9

PE Calibration

Base Calibration	Measured WS	Measured WH	Ratio	Calibrated Ratio
Background	214	1052		
Reference 1	15293	48508	0.318	0.320
Reference 2	5942	22551	0.266	0.272

Field Check at Base		
	214.1	1052.3

Field Check		
	215.4	1051.2

Density Constants MPD-B 167

Last Edited on 22-FEB-2011,20:53

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	1.20	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:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta

Gamma Check MCG-C 192

Field Calibration on 22-FEB-2011 20:05
After Survey Check on 23-FEB-2011 02:57

	Before (API)	After (API)
Background	71	79
Calibrator (Gross)	983	991
Calibrator (Net)	912	912

Neutron Check MDN-A.B 160

Before Survey Check on 22-FEB-2011 20:11
After Survey Check on 23-FEB-2011 03:05

Near (cps)		Far (cps)	
Before	After	Before	After
1278	1295	1966	1951

Ratio	
Before	After
0.650	0.664

FE Check MFE-A.A 85

Before Survey Check 22-FEB-2011 20:26
After Survey Check on 23-FEB-2011 02:18

Before (ohm-m)	After (ohm-m)
282.3	281.7

Induction Check MAI-B.A 213

Before Survey Check on 22-FEB-2011 20:34
After Survey Check on 23-FEB-2011 02:17

Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	12.1	3931.9	14.7	3937.6
2	29.6	3538.8	30.4	3540.2
3	28.5	3113.5	29.0	3113.9
4	18.9	2095.9	19.1	2096.6

Deep	17.1	2077.3	17.5	2078.0	
Medium	42.3	4088.2	42.6	4087.6	
Shallow	44.5	5158.4	45.7	5160.1	
Array Temperature		41.7		79.0	Deg F

Photo Density Check MPD-B 167

Before Survey Check on 22-FEB-2011 20:20
After Survey Check on 23-FEB-2011 02:23

Density Check

Near		Far	
Before	After	Before	After
1171.4	1173.5	1737.9	1746.3

PE Check

	Before	After
WS	215.4	213.6
WH	1051.2	1046.6

DOWNHOLE EQUIPMENT

C:\Minimus\Logs\Bill Barrett\GGU Swanson 32D-29-691\MAIN-2.dta

3/8" Triple Cone Cable Head (MCB F B)
MCB-F.B 9 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 Comms 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

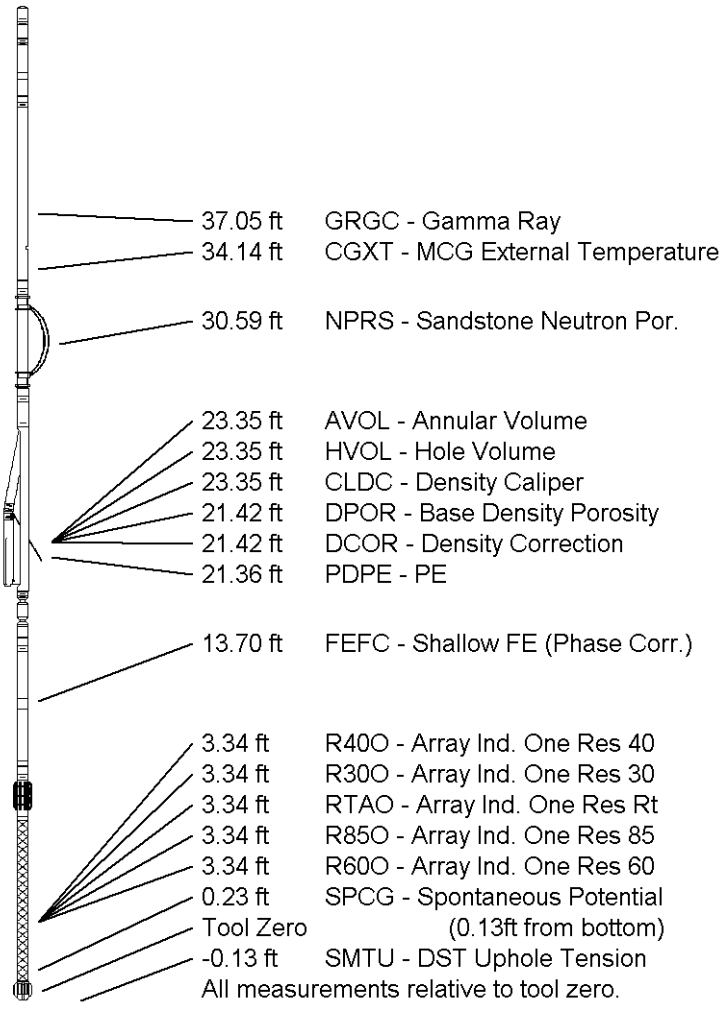
Compact Density/Caliper
MPD-B 167 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

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 213 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 46.65 ft Weight: 368.2 lb



COMPANY	BILL BARRETT CORPORATION
WELL	GGU SWANSON 32D-29-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	6127.00	feet	First Reading	7433.00	
Elevation Drill Floor	6126.00	feet	Depth Driller	7467.00	feet
Elevation Ground Level	6104.00	feet	Depth Logger	7456.00	feet

Elevation Ground Level	[illegible]	feet	Depth Logger	[illegible]	feet

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