



LOG

COMPANY	BILL BARRETT CORPORATION
WELL	GGU FEDERAL 31C-29-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO
LOCATION	SHL: 1200' FNL & 1367' FEL BHL: 492' FNL & 1990' FEL

SEC	TWP	RGE	Other Services MA/IME
29	6S	91W	
API Number		05-045-19807	
Permit Number			

Permanent Datum G.L., Elevation 6104 feet

Log Measured From K.B. @ 23 FEET above Permanent Datum

Drilling Measured From K.B.		ST	6104.00
Date	24-MAR-2011		
Run Number	ONE		
Depth Driller	7475.00	feet	
Depth Logger	7474.00	feet	
First Reading	7451.86		
Last Reading	761.00		
Casing Driller	760.00	feet	
Casing Logger	761.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	LSND		
Density / Viscosity	10.70 lb/USg	55.00 CP	
PH / Fluid Loss	9.80	6.00 ml/30Min	
Sample Source	FLOW LINE		
Rm @ Measured Temp	3.0 @ 90.0	ohm-m	
Rmf @ Measured Temp	2.40 @ 90.0	ohm-m	
Rmc @ Measured Temp	3.60 @ 90.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	1.81 @182.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	182.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	13173	GD JCT	
Recorded By	M. RICHINS, K. SALLER		
Witnessed By	C. CROW		

Last Edited: 24-MAR-2011 20:53

Bit Size inches	Depth From feet	Depth To feet
8.750	760.00	3412.00
7.880	3412.00	7475.00

Depth From	
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Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	760.00	36.00

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. = 8.93" (9 5/8", 36 LB/FT CASING)

MAXIMUM WELL DEVIATION 17 DEG

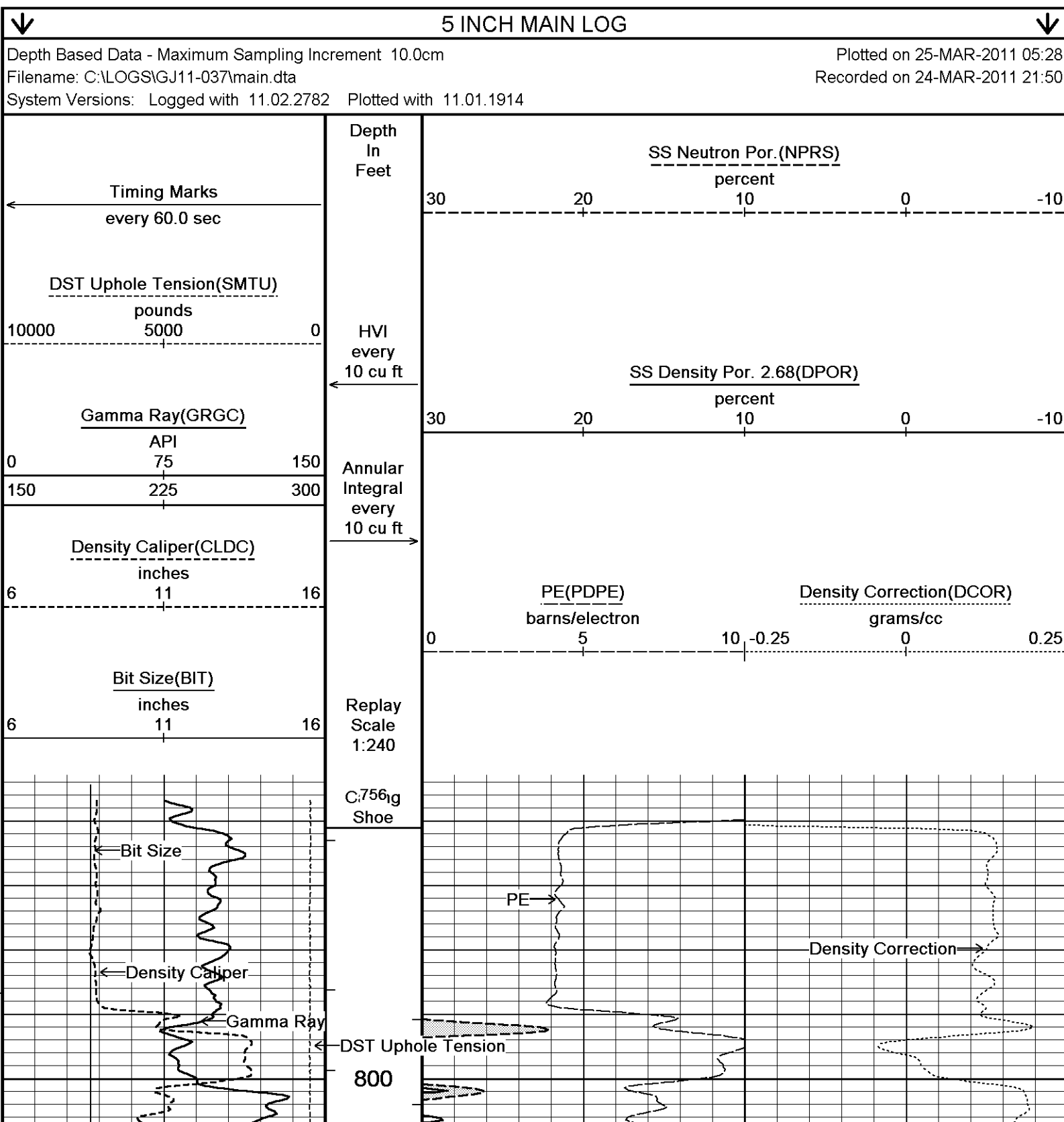
TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 2560 CU.FT.

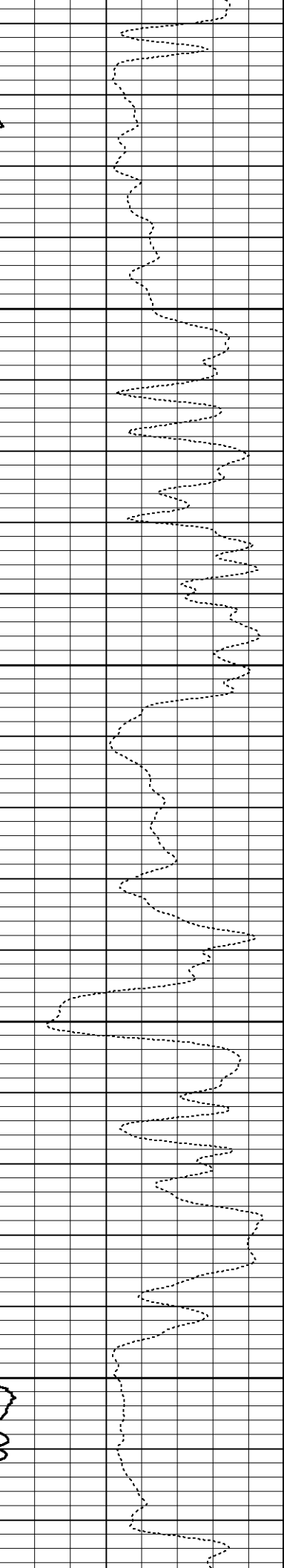
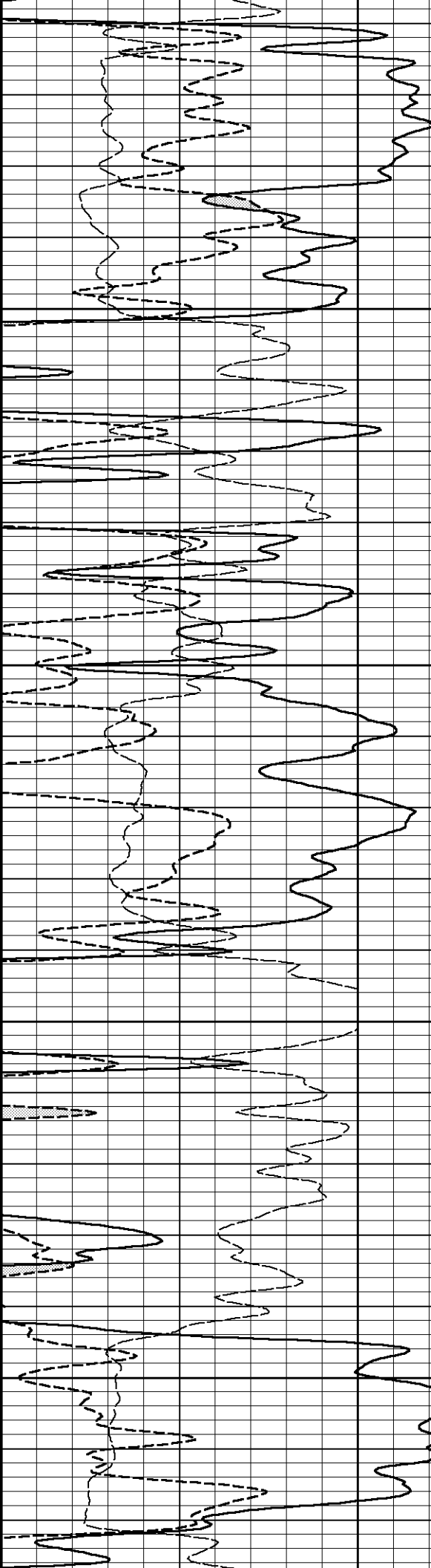
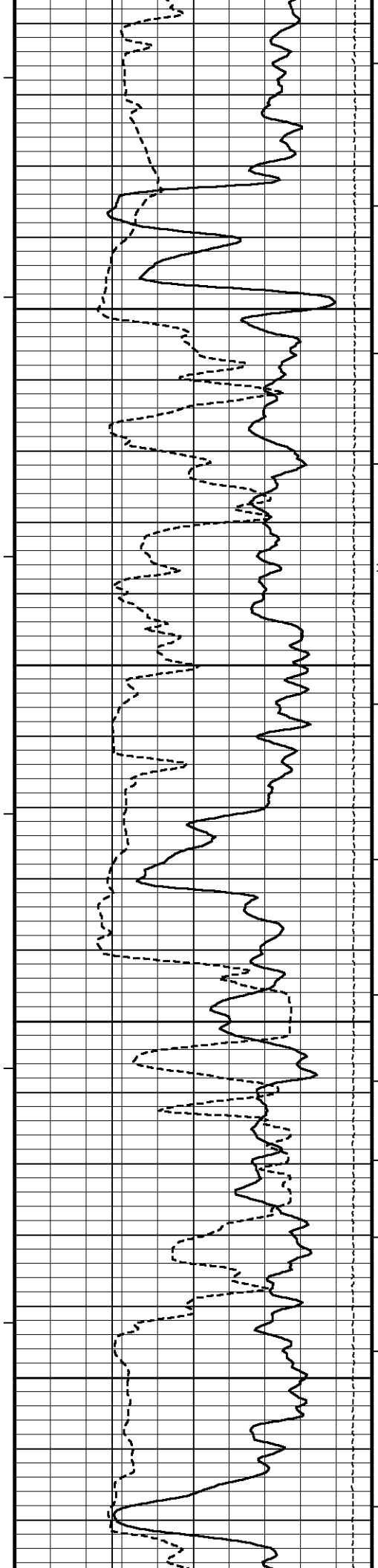
ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1830 CU.FT.

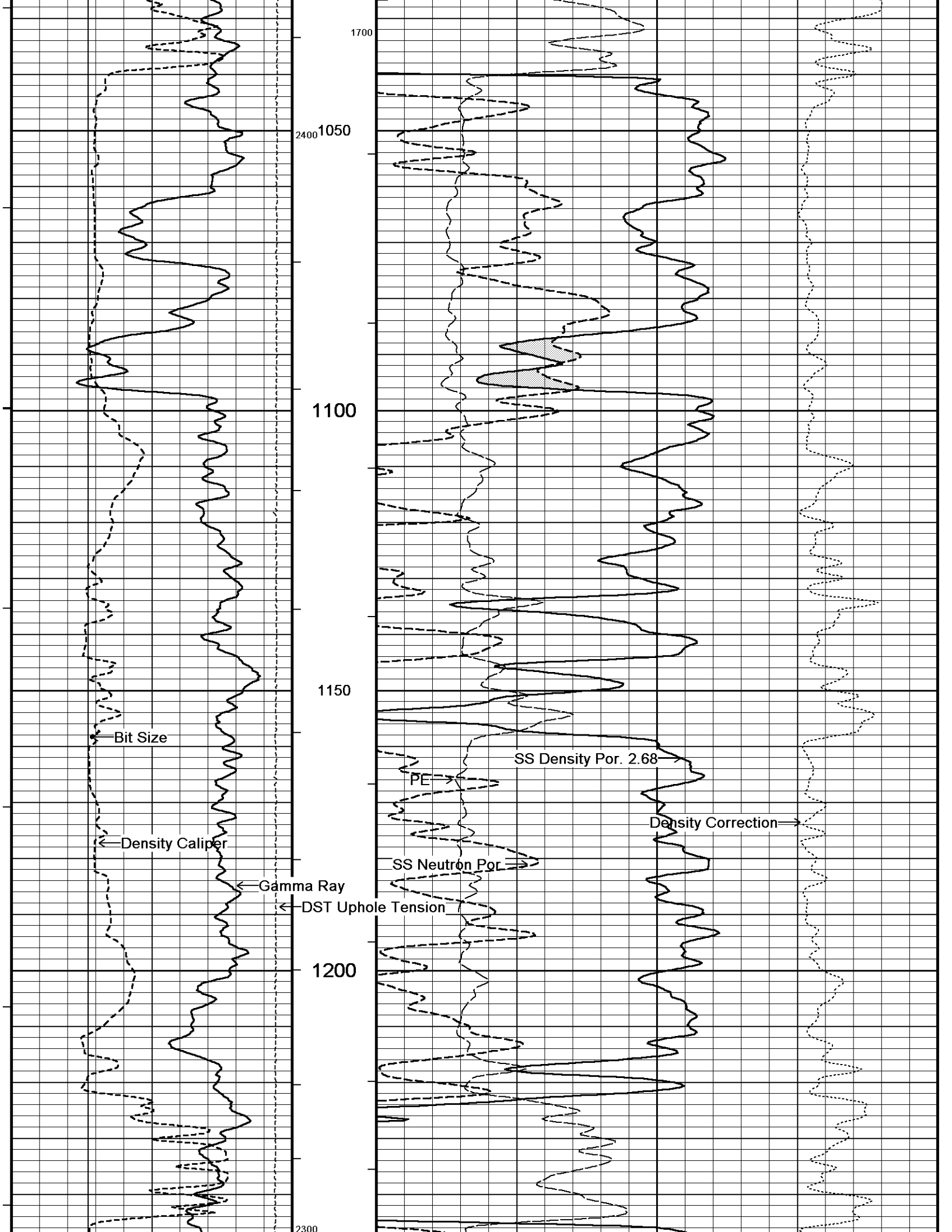
SERVICE ORDER: # 3524873

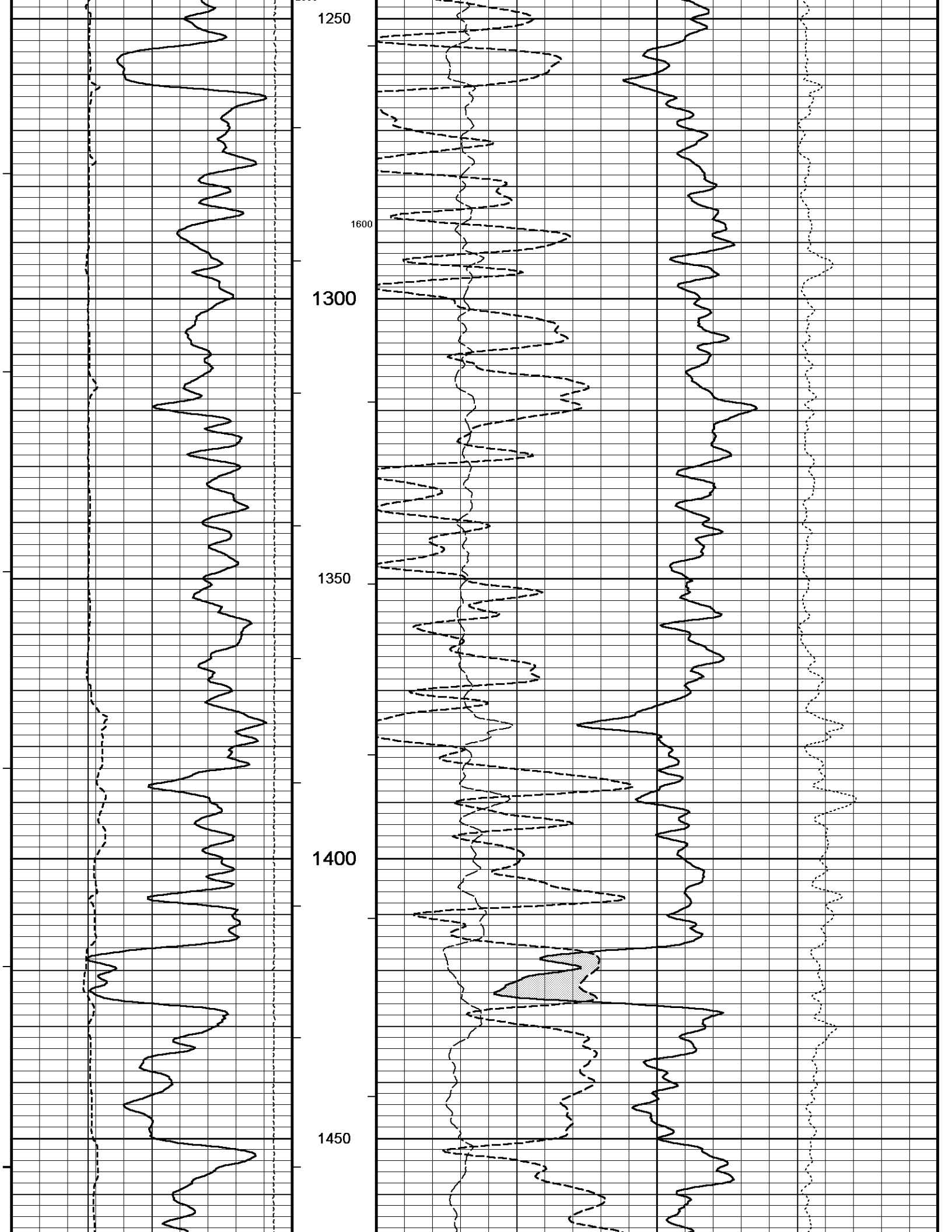
RIG: PATTERSON #307

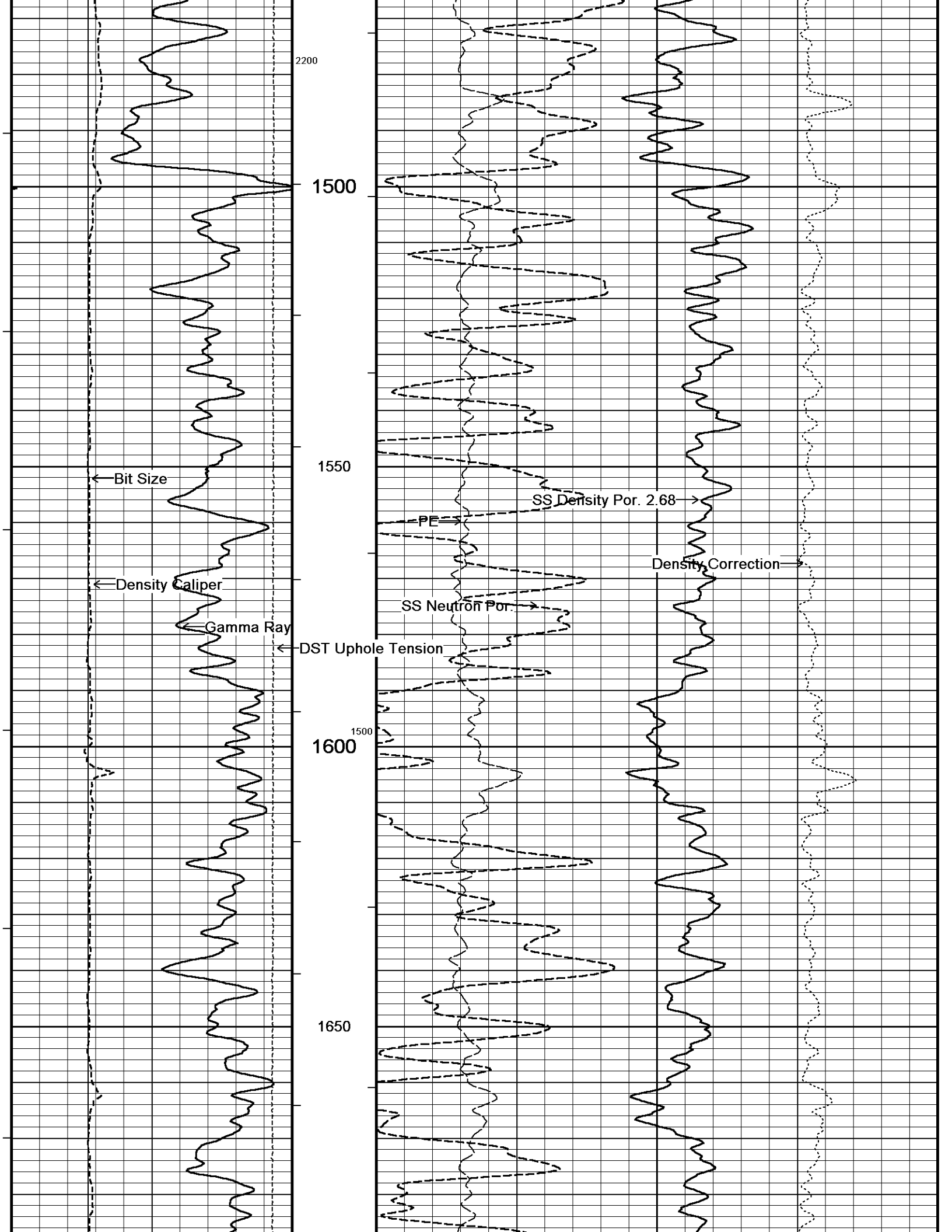
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

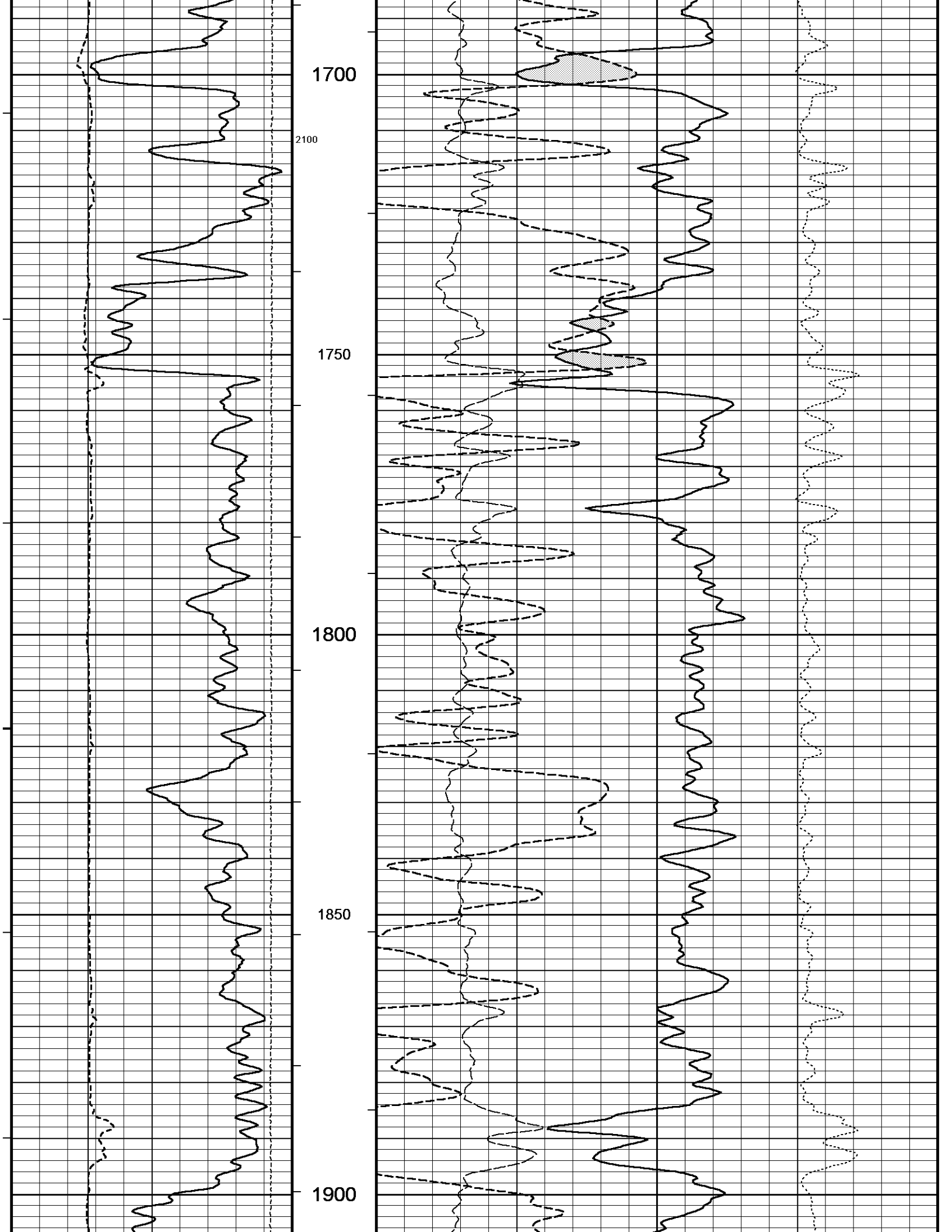


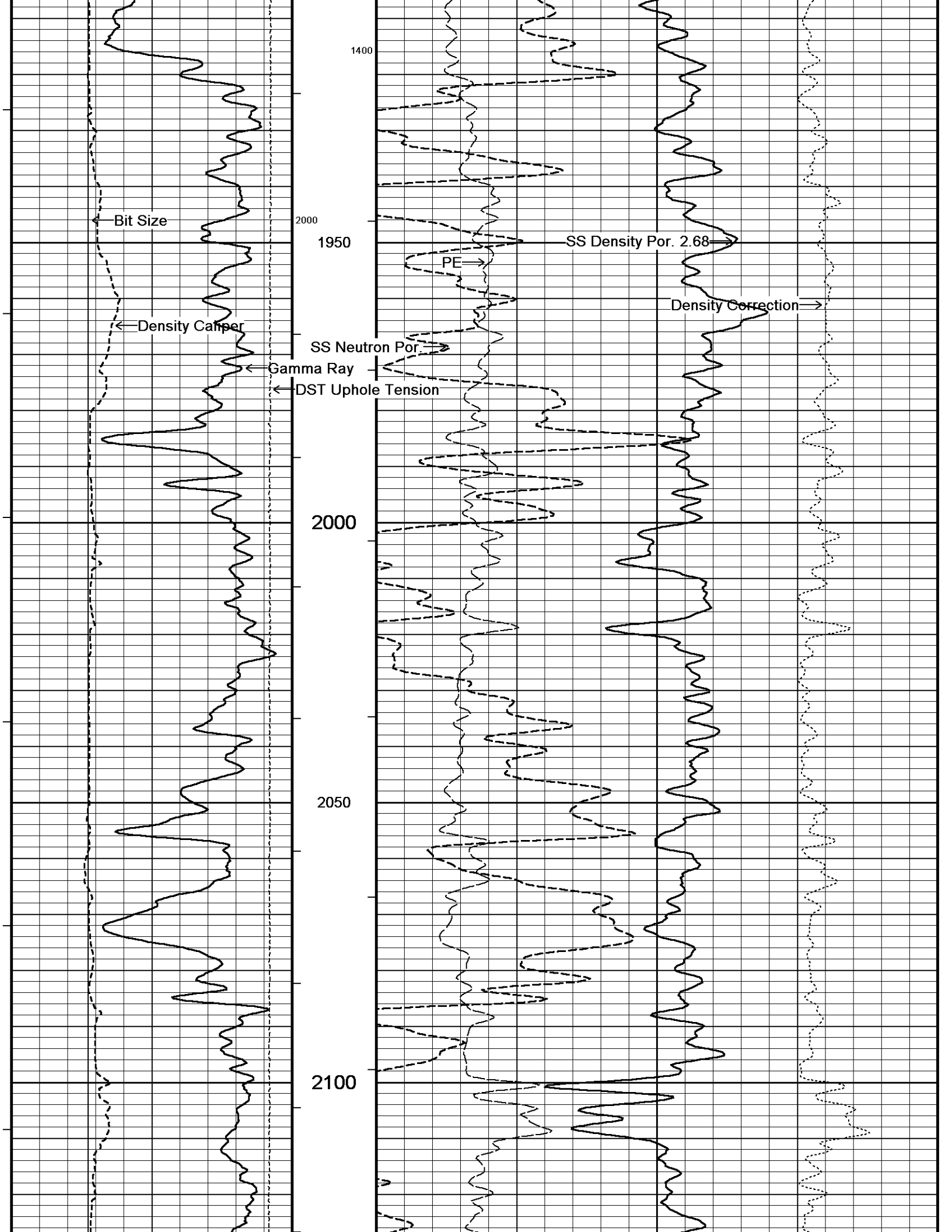


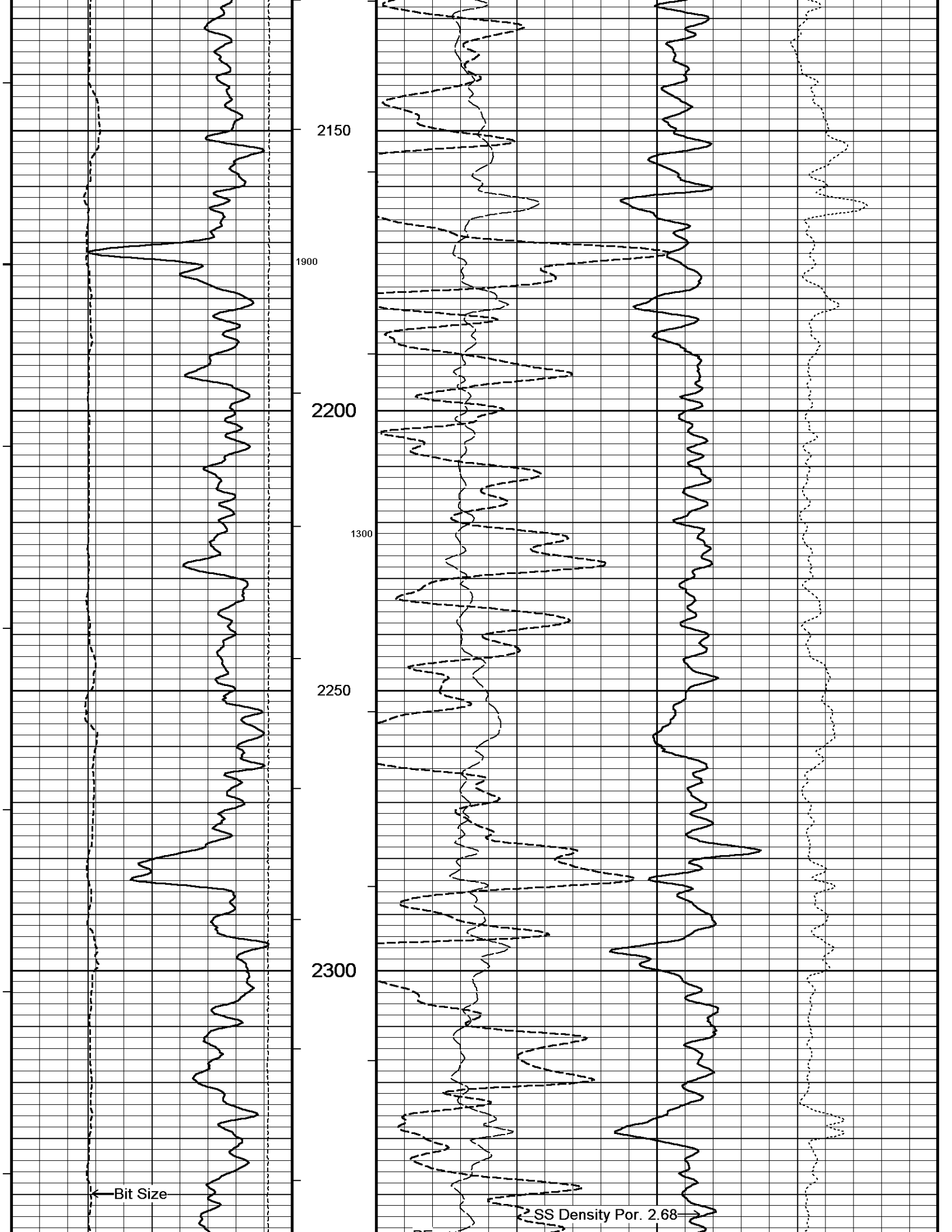


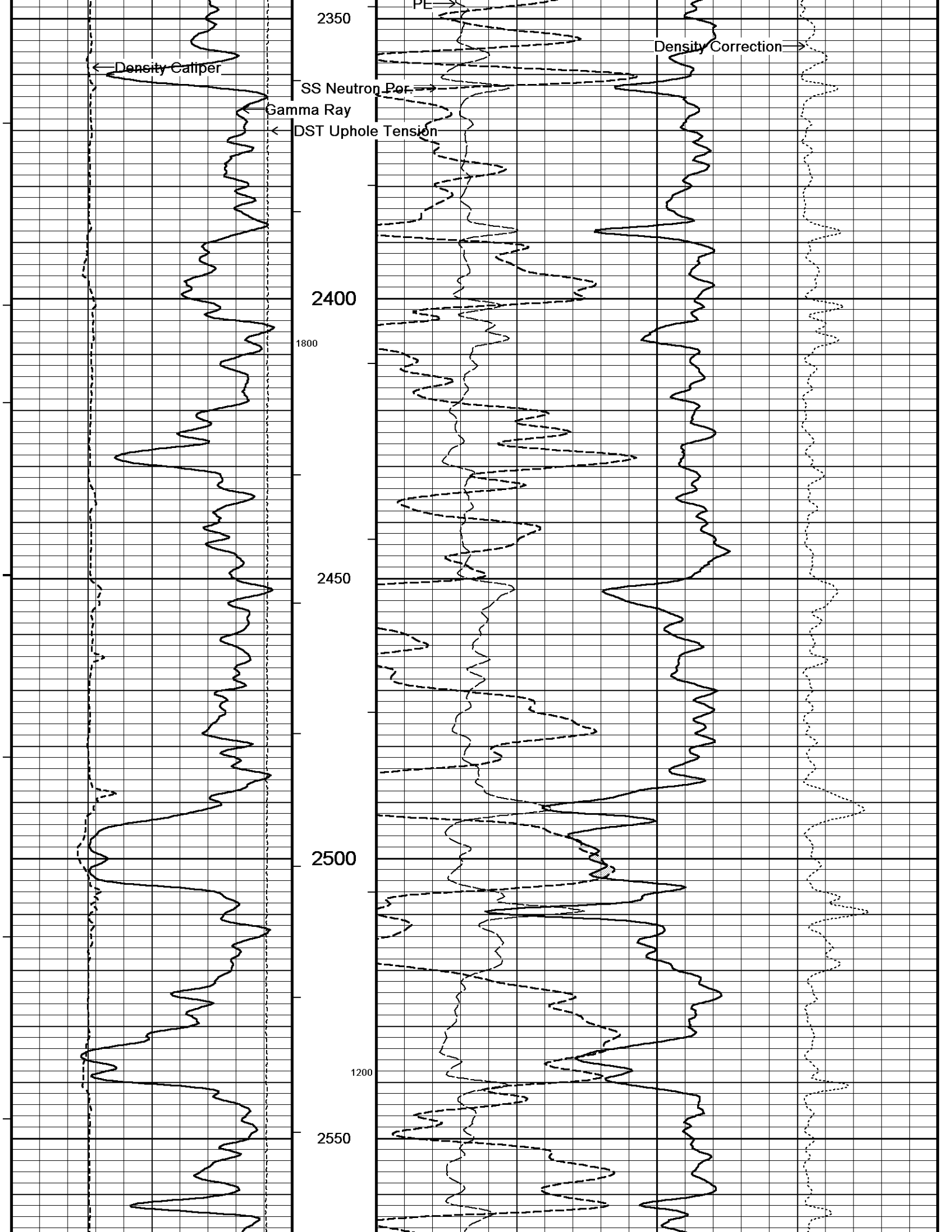


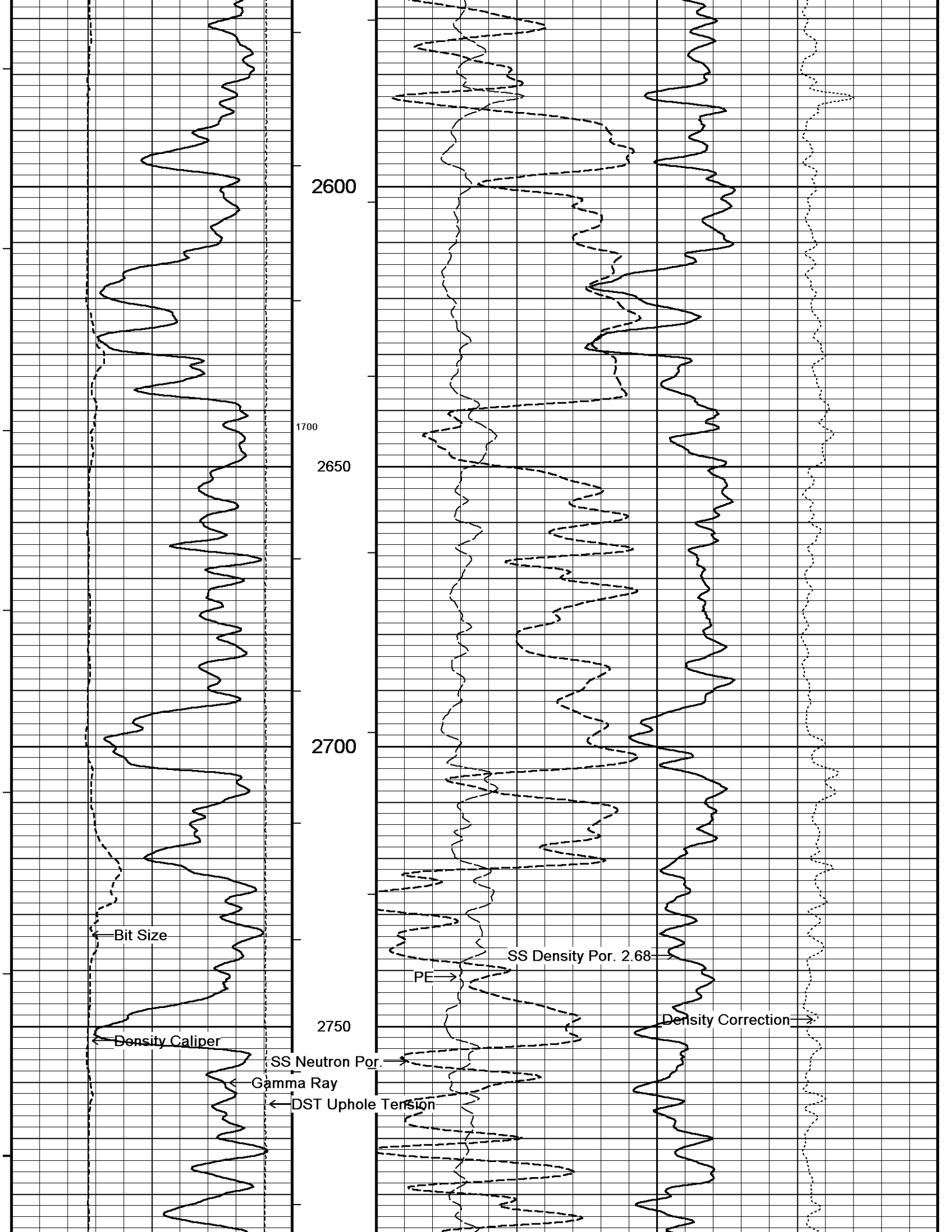


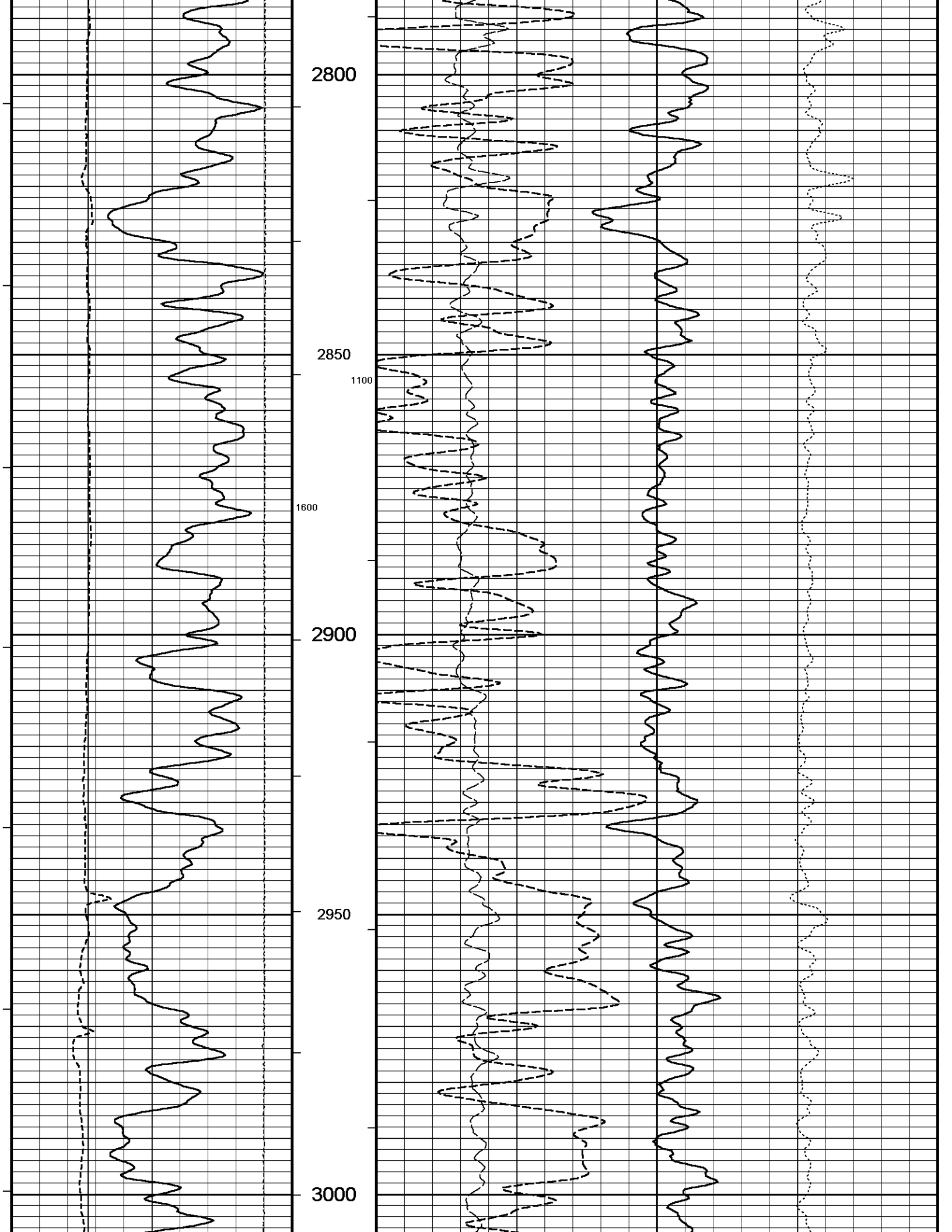


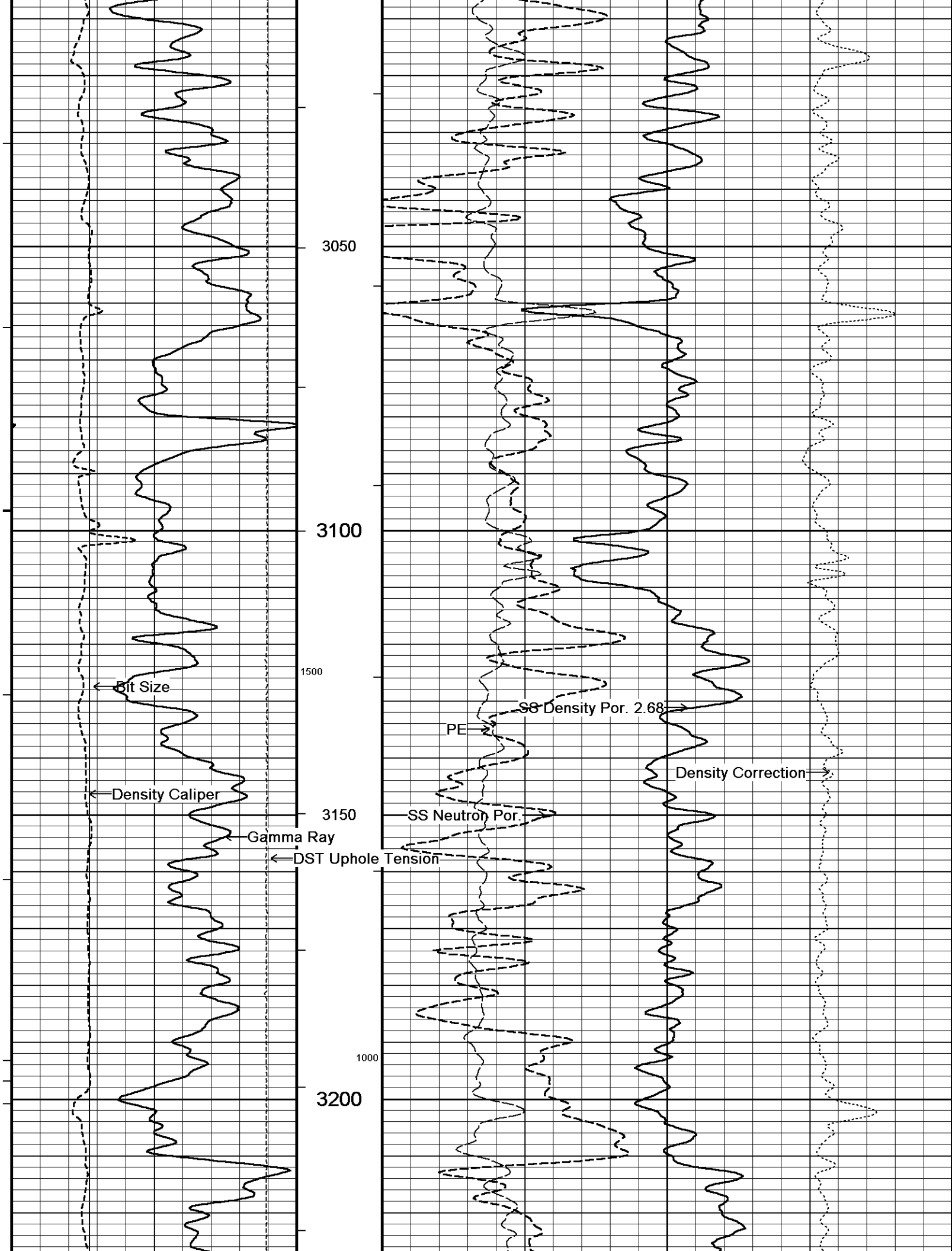


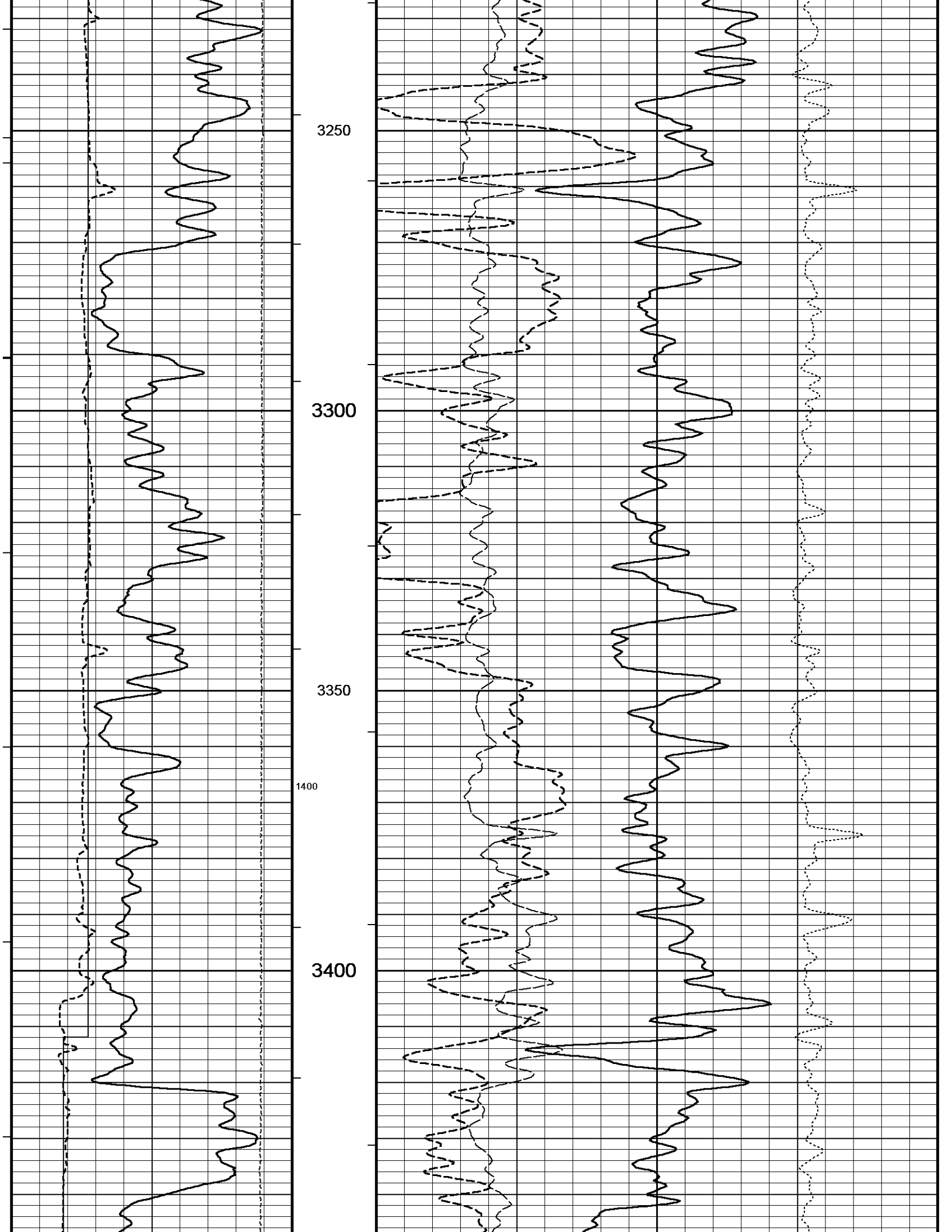


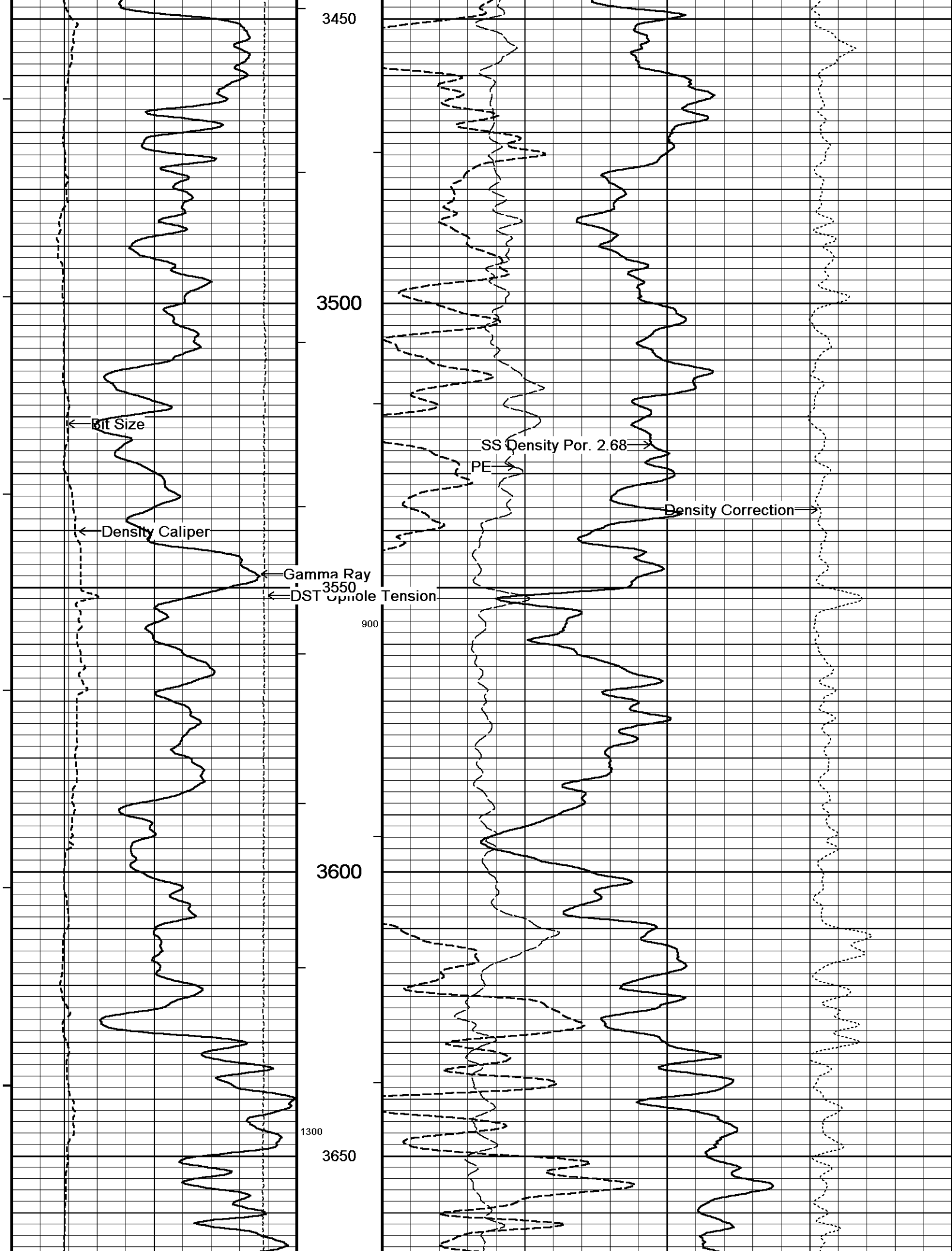


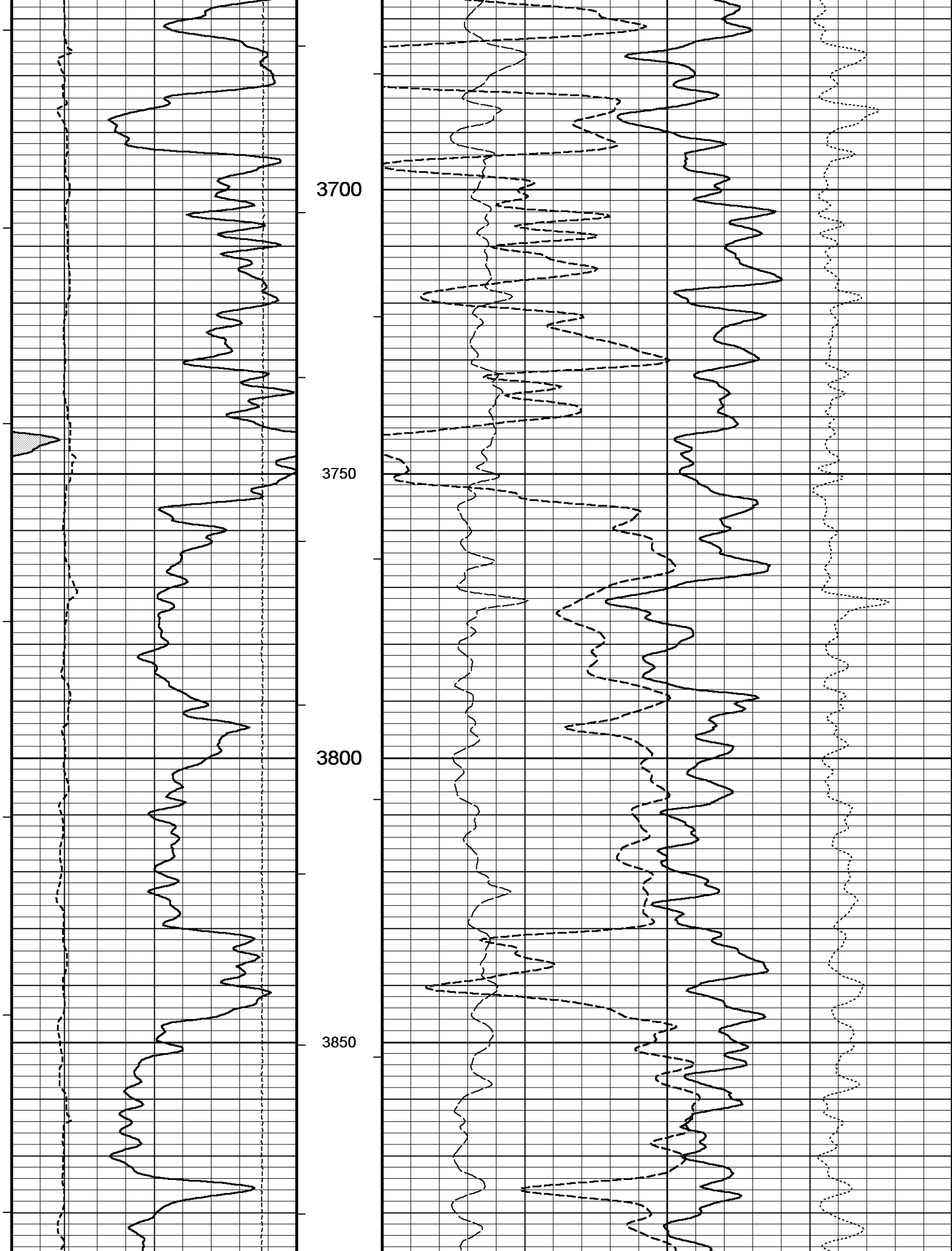


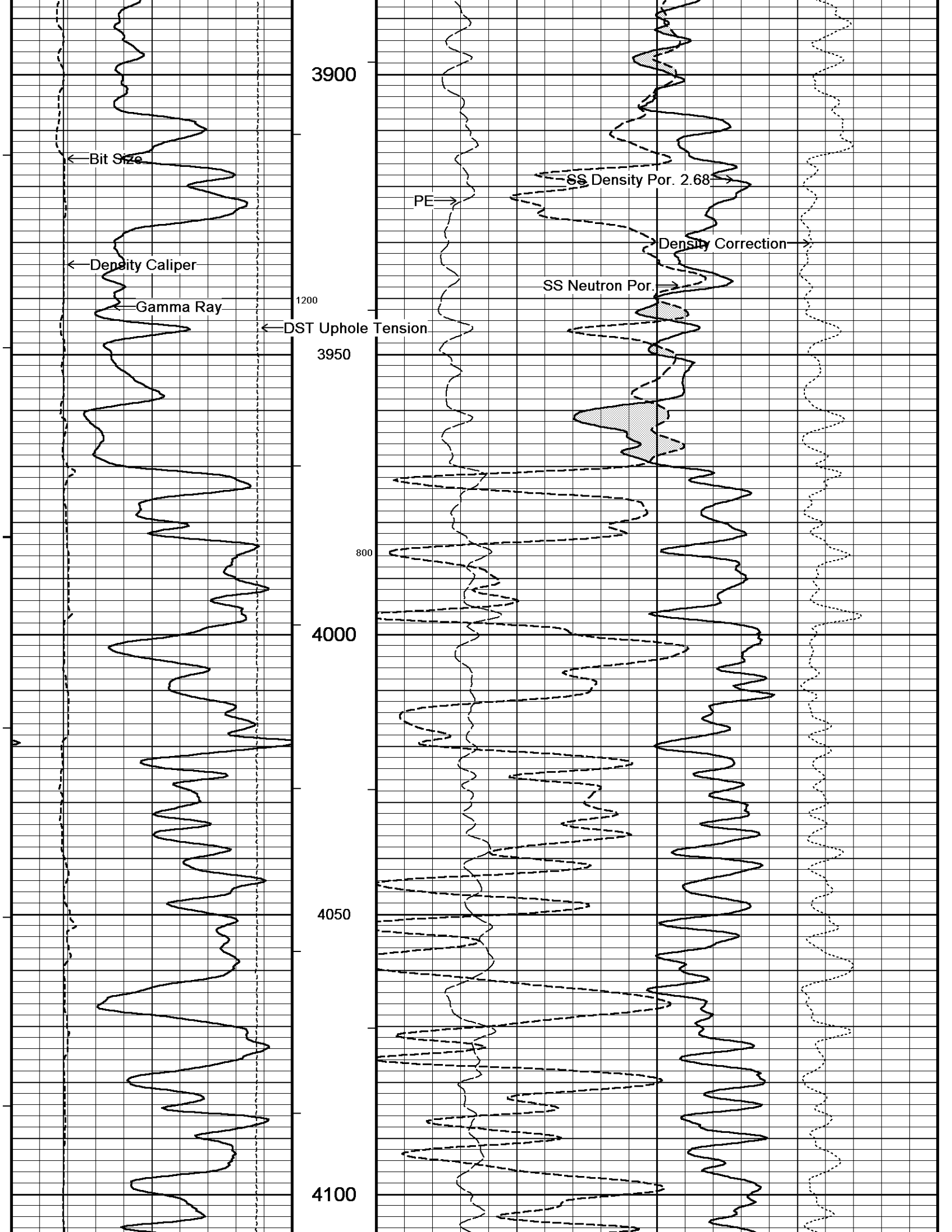


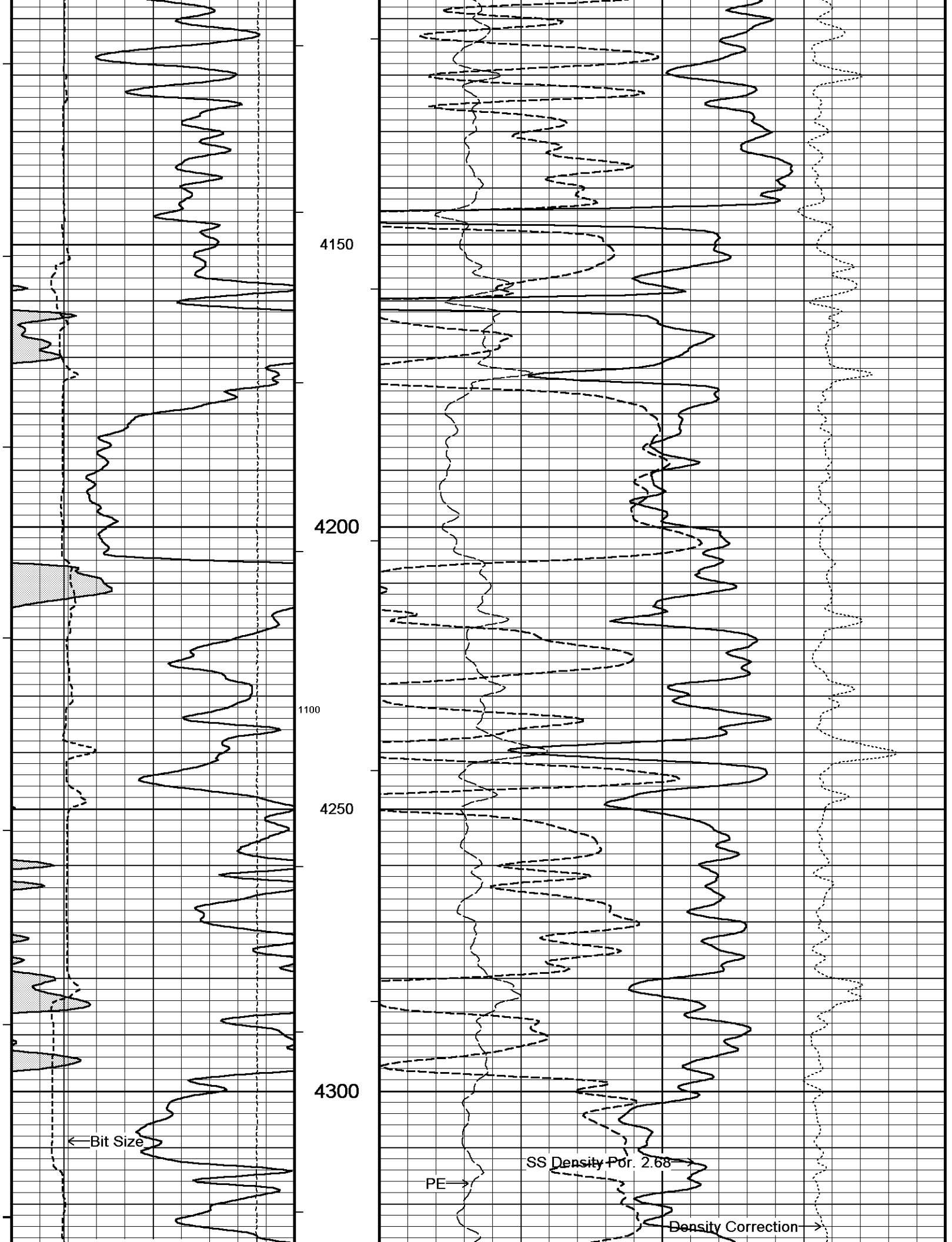


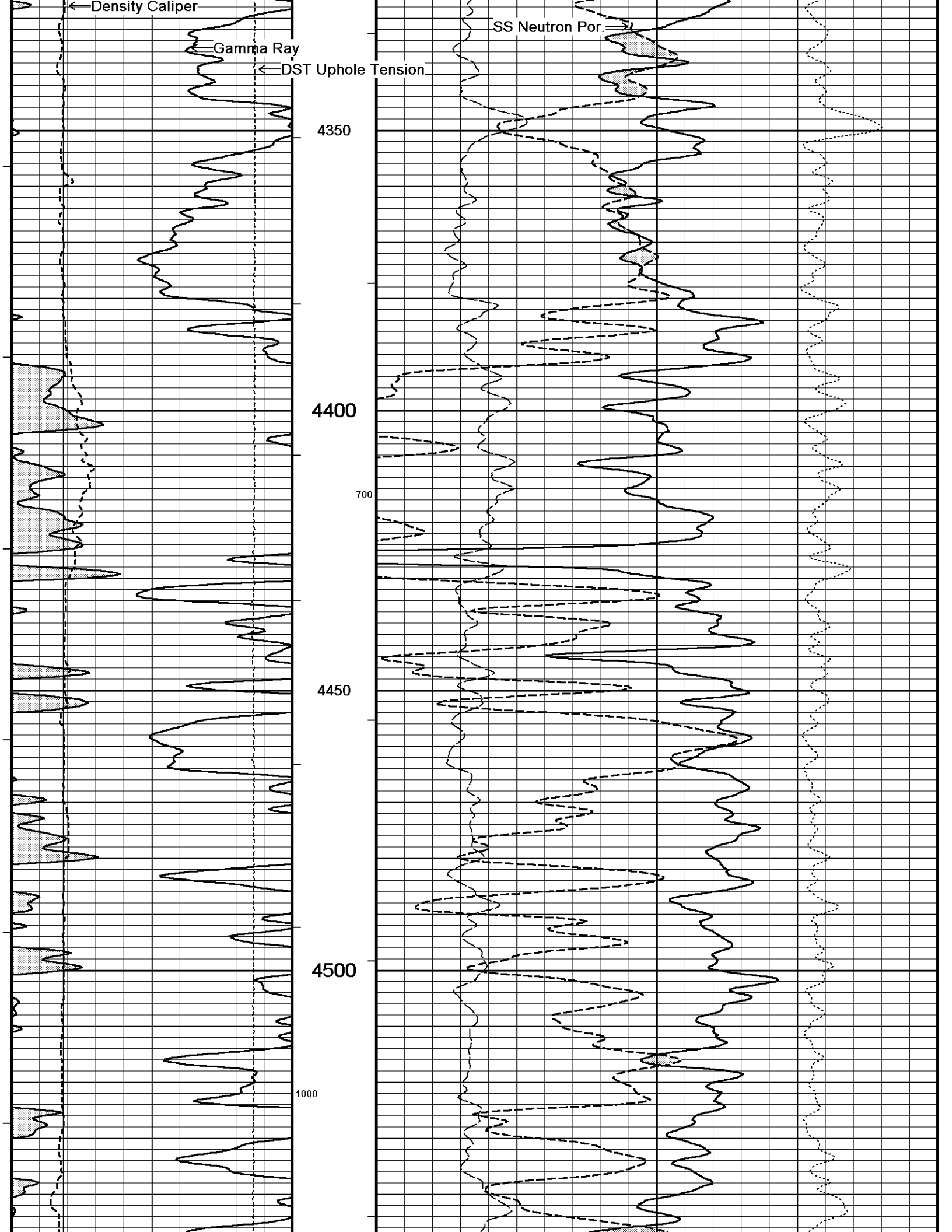


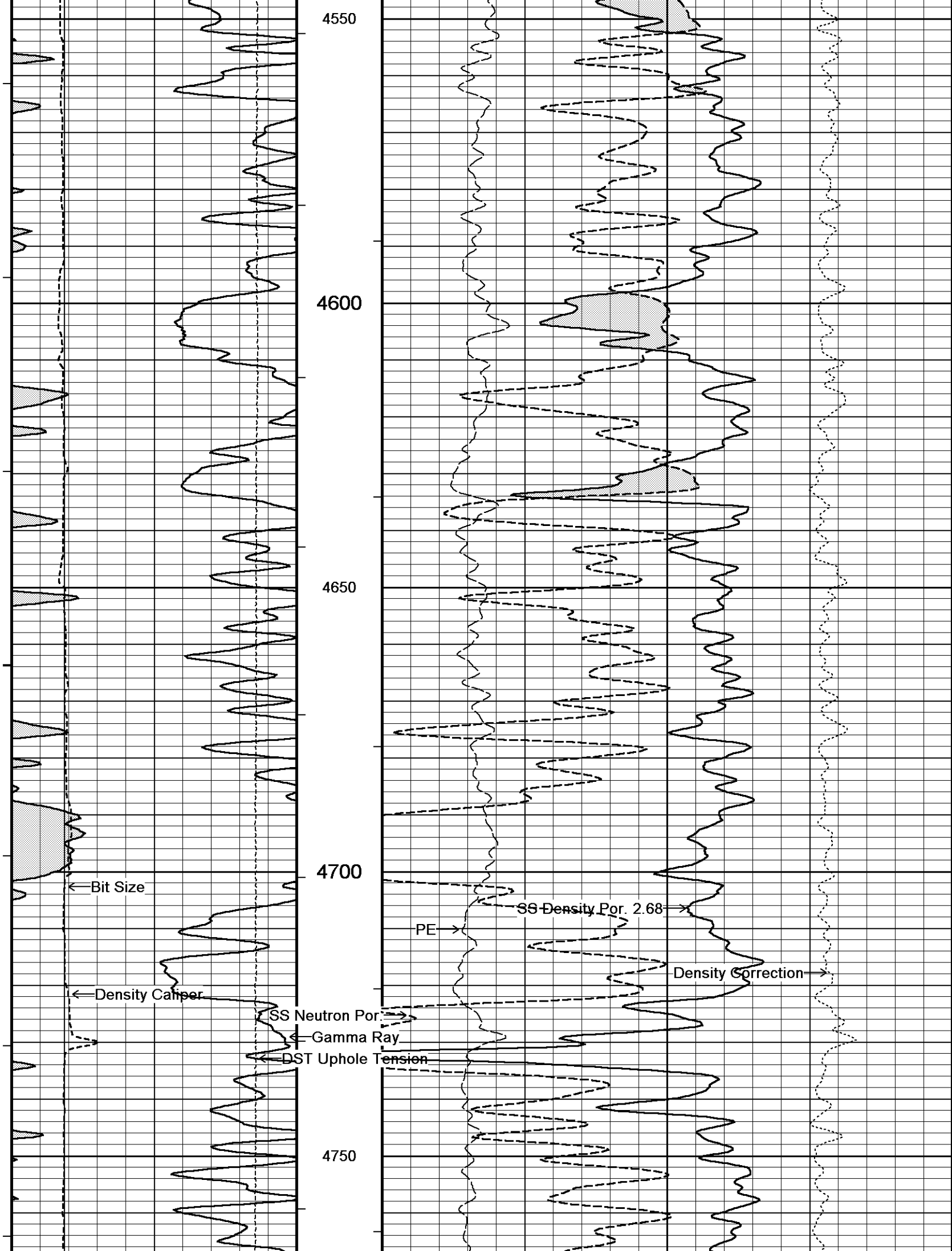


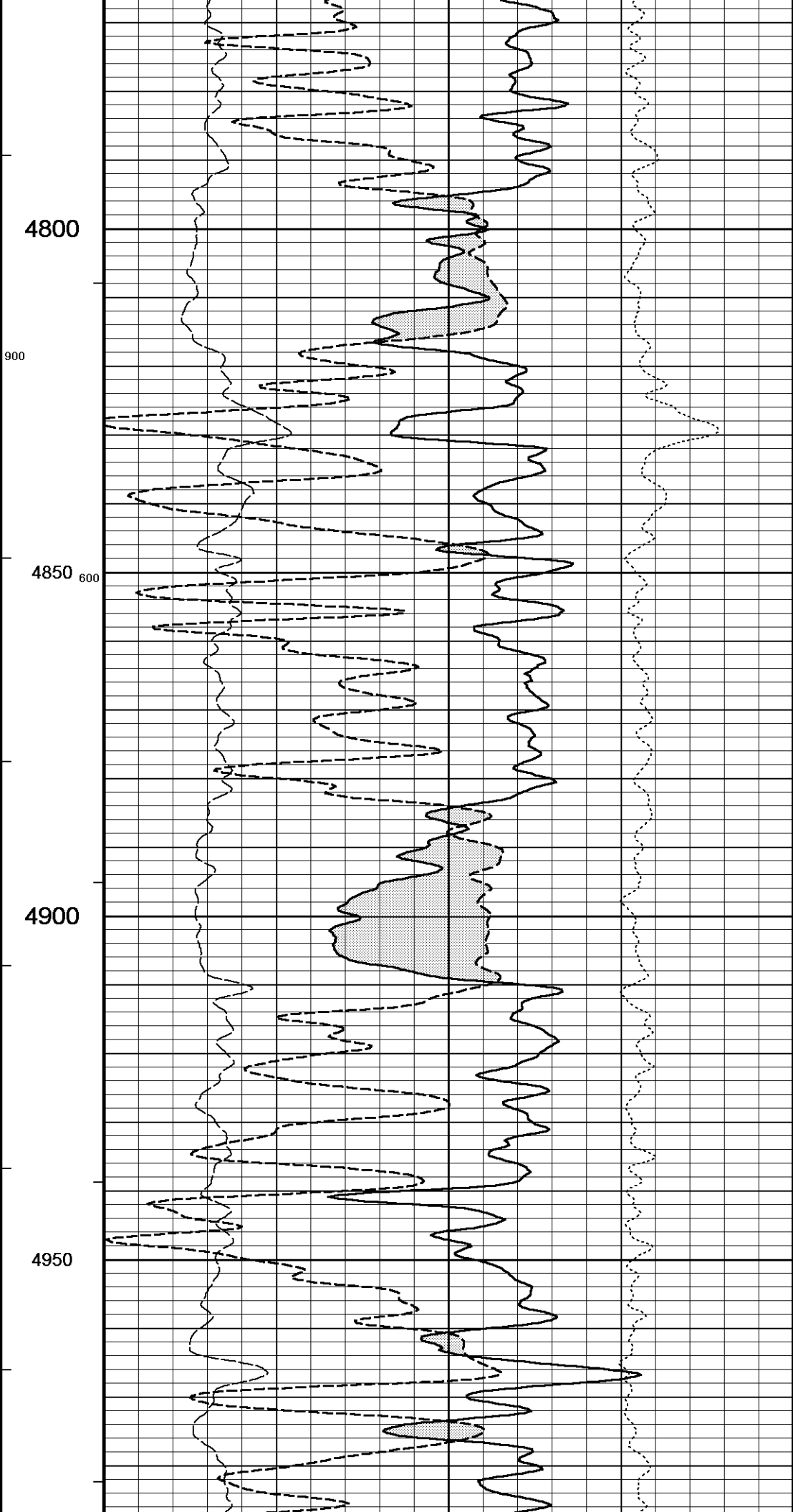
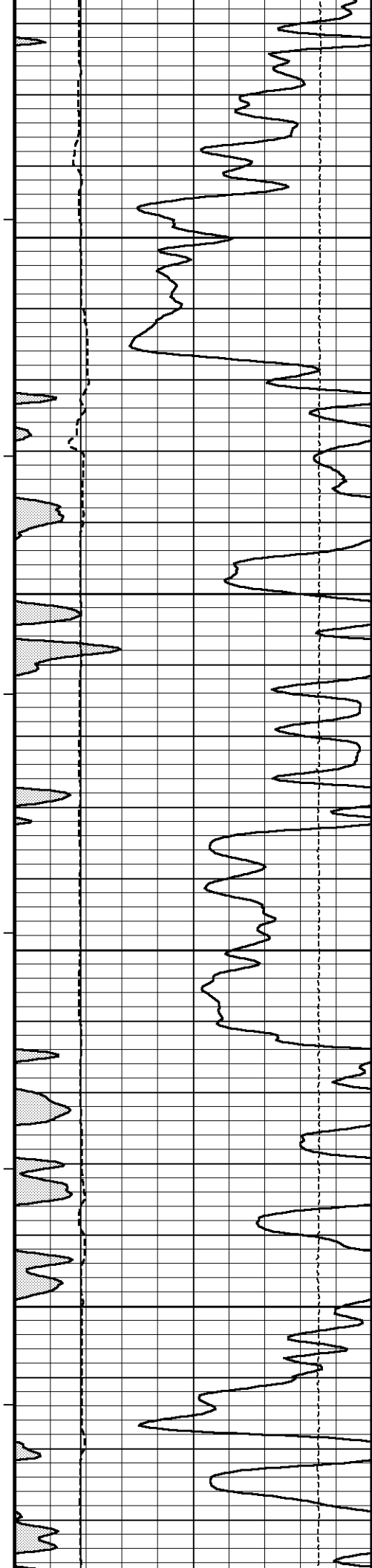


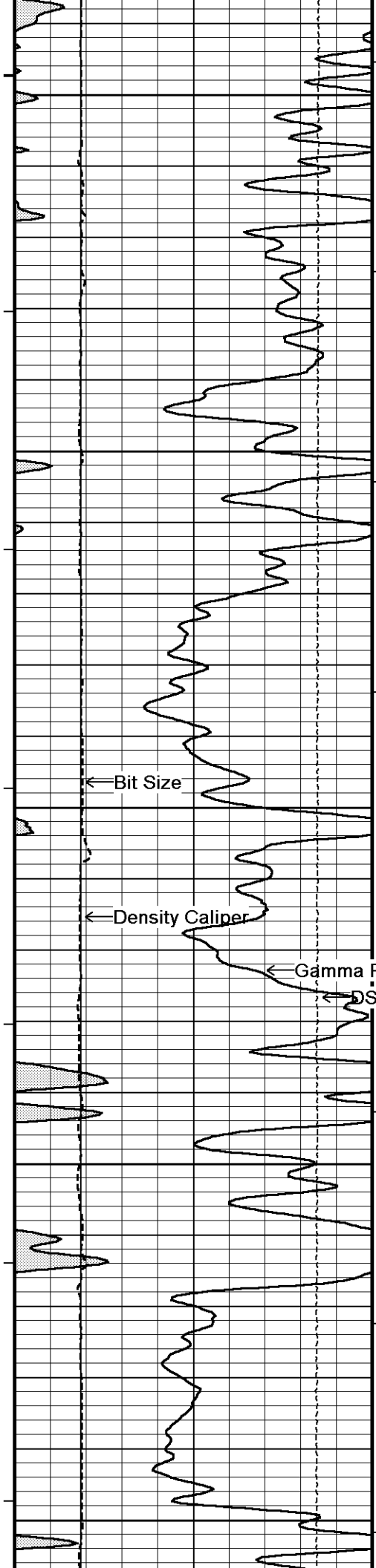




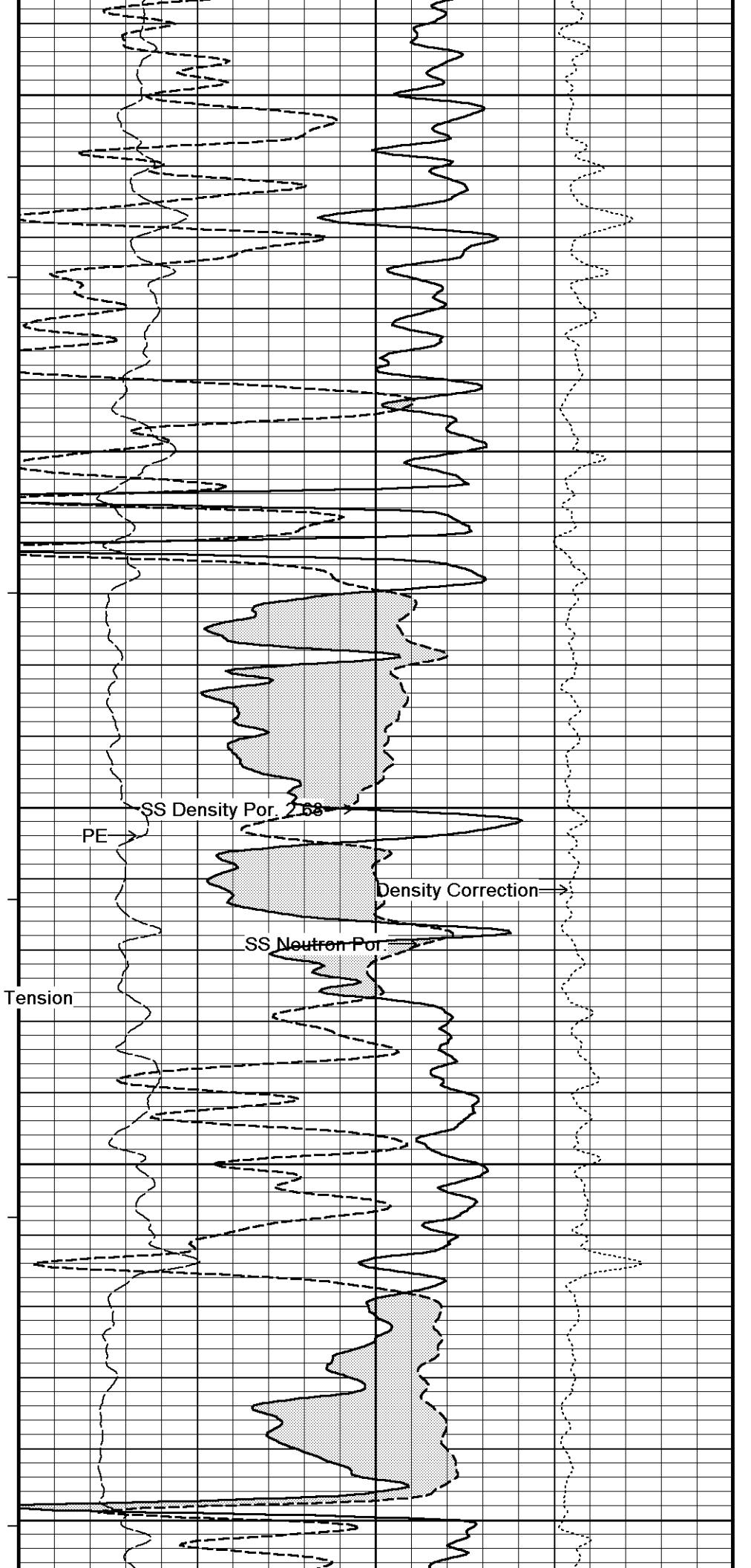








5000
5050
5100
800
5150
5200



← Bit Size

← Density Caliper

← Gamma Ray

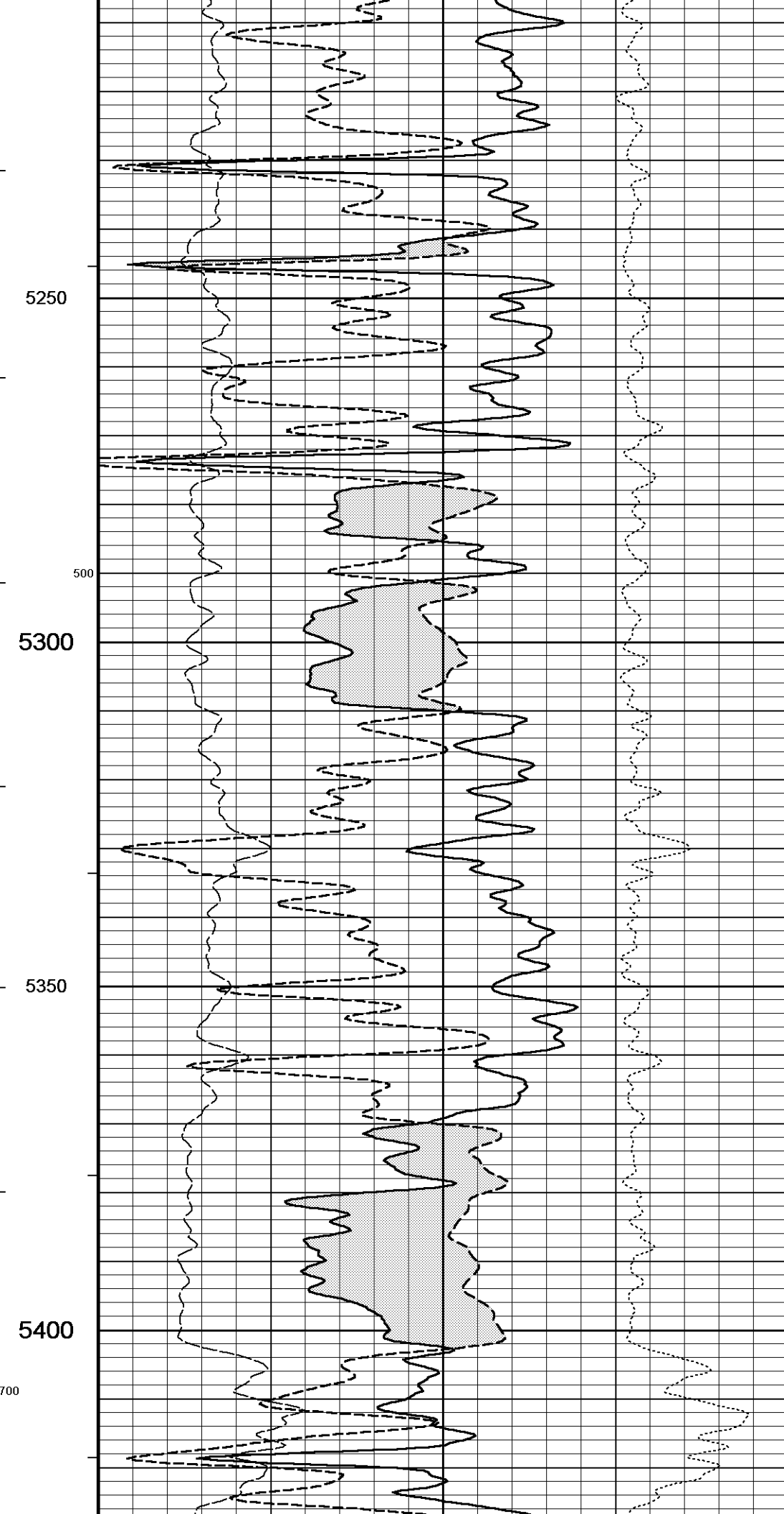
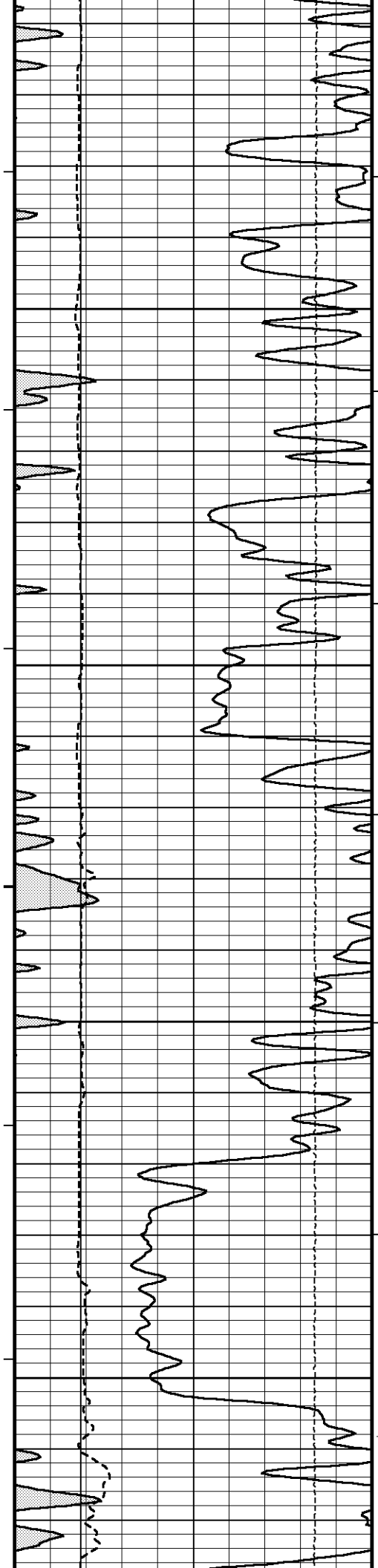
← DST Uphole Tension

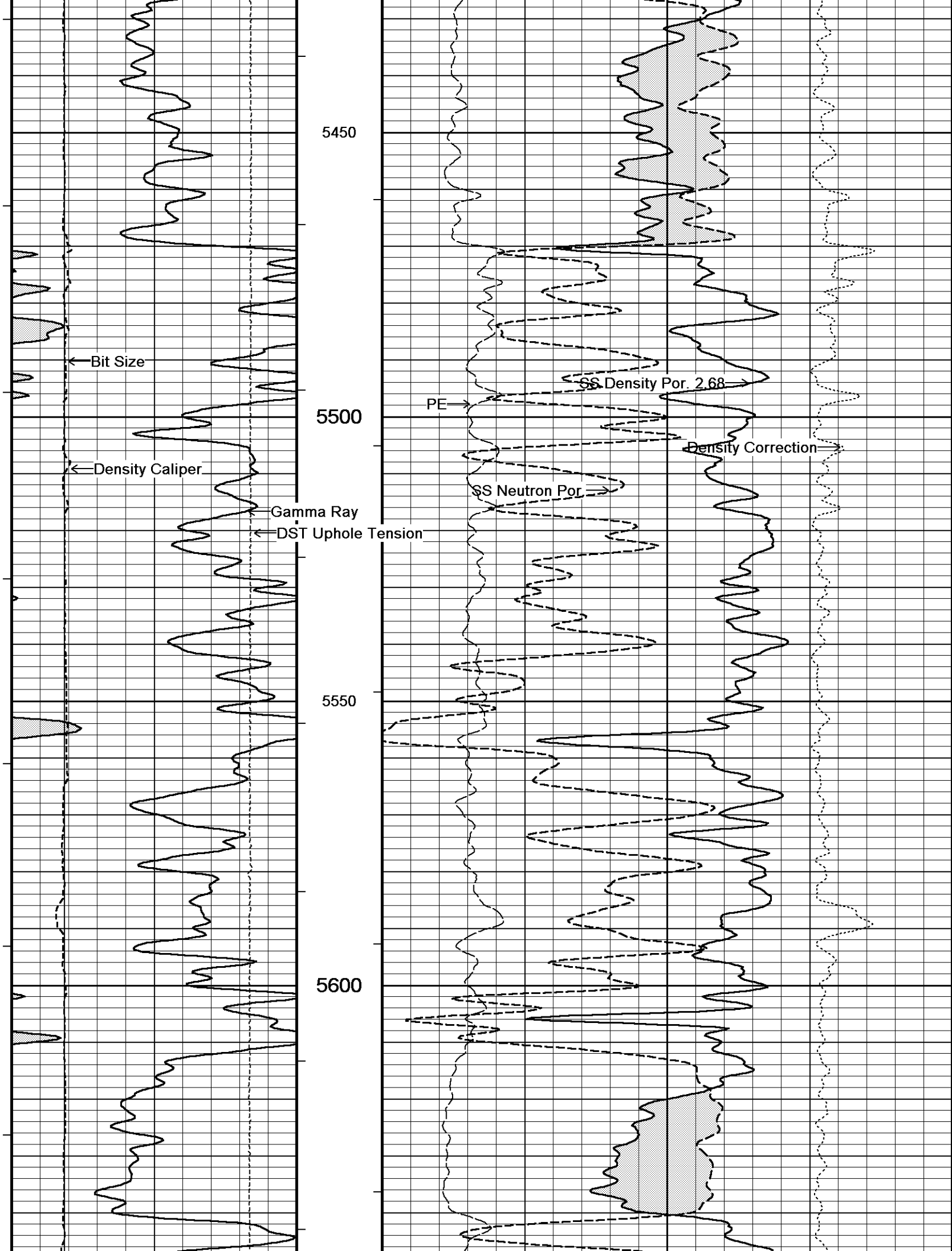
PE →

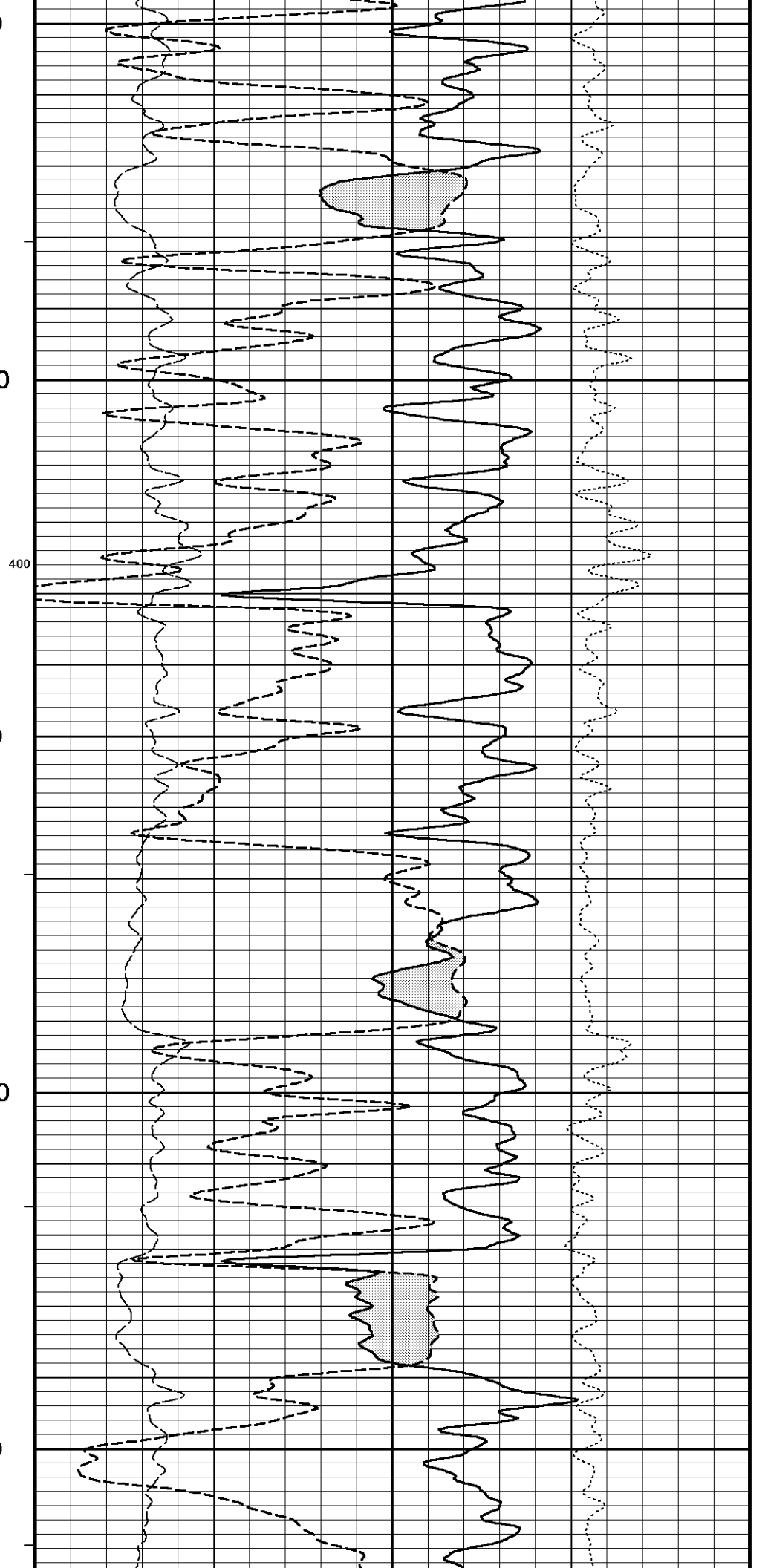
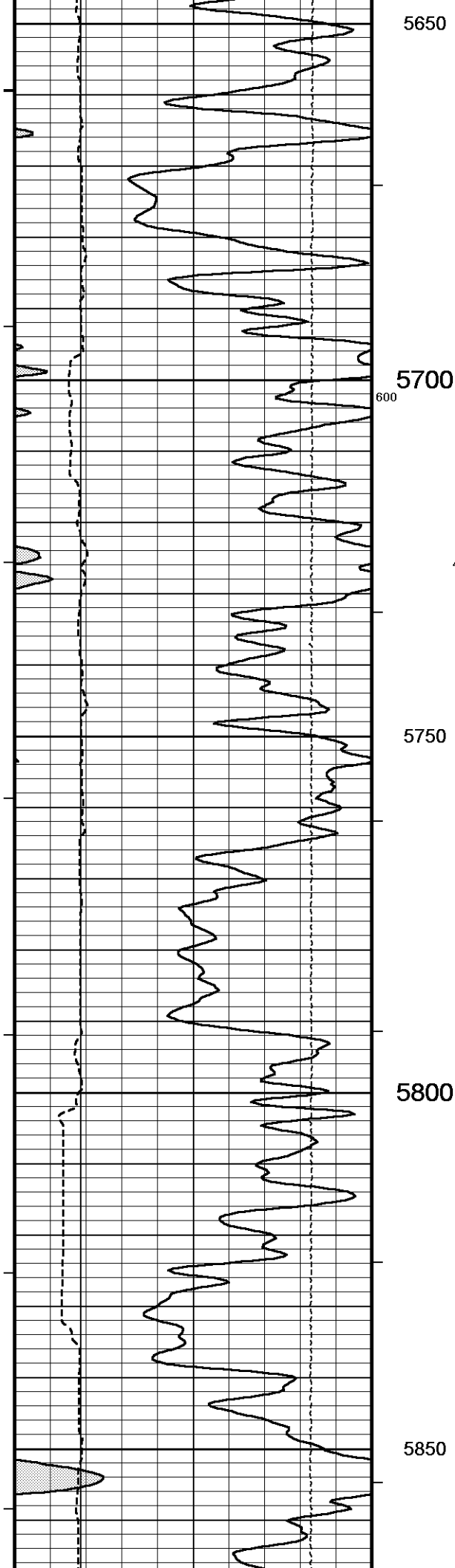
SS Density Por. →

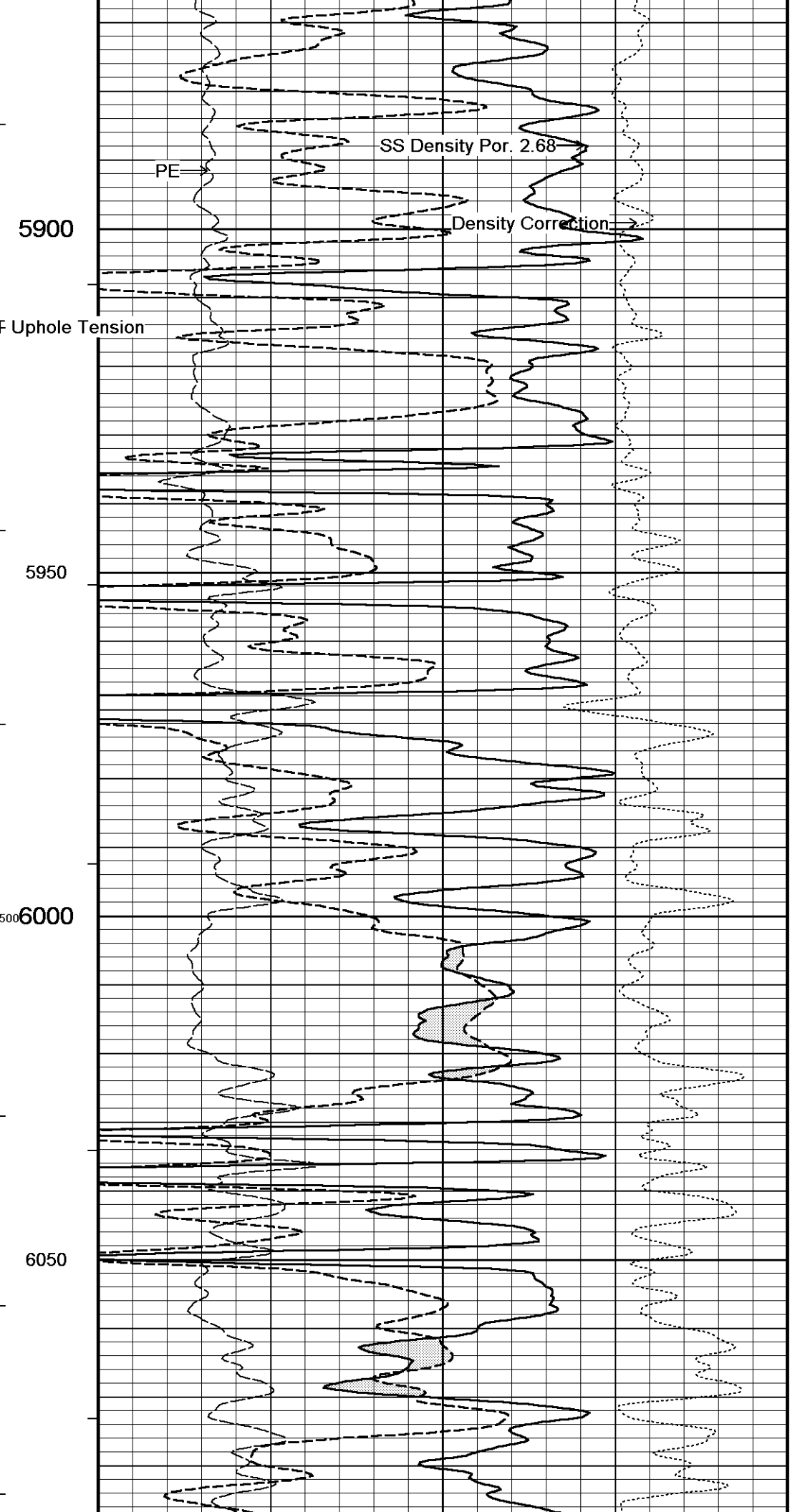
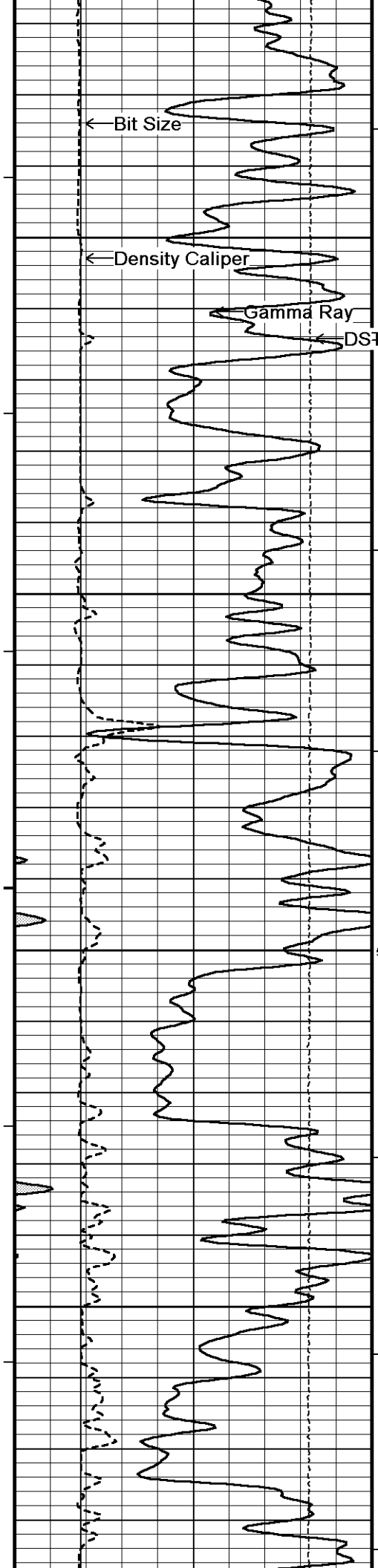
SS Neutron Por. →

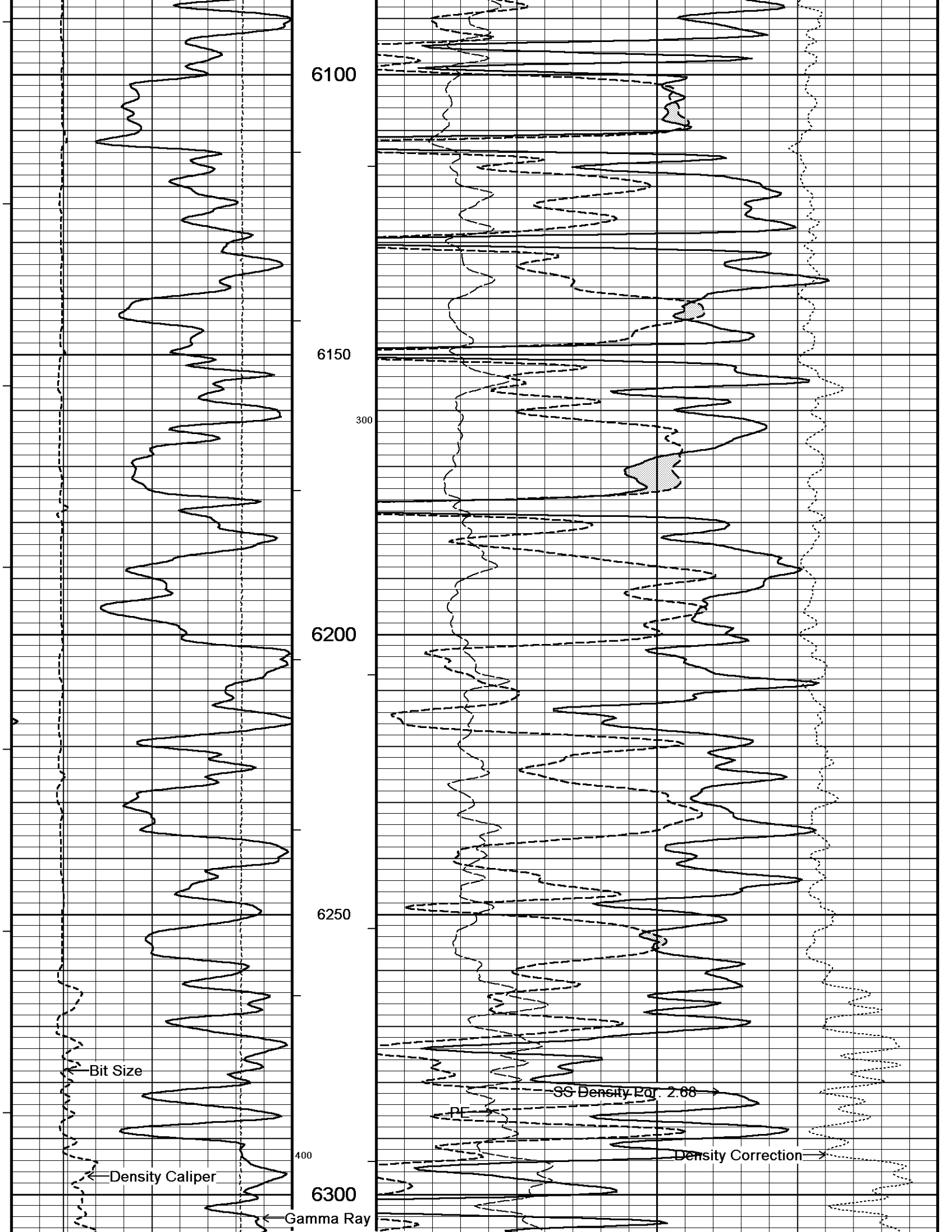
Density Correction →

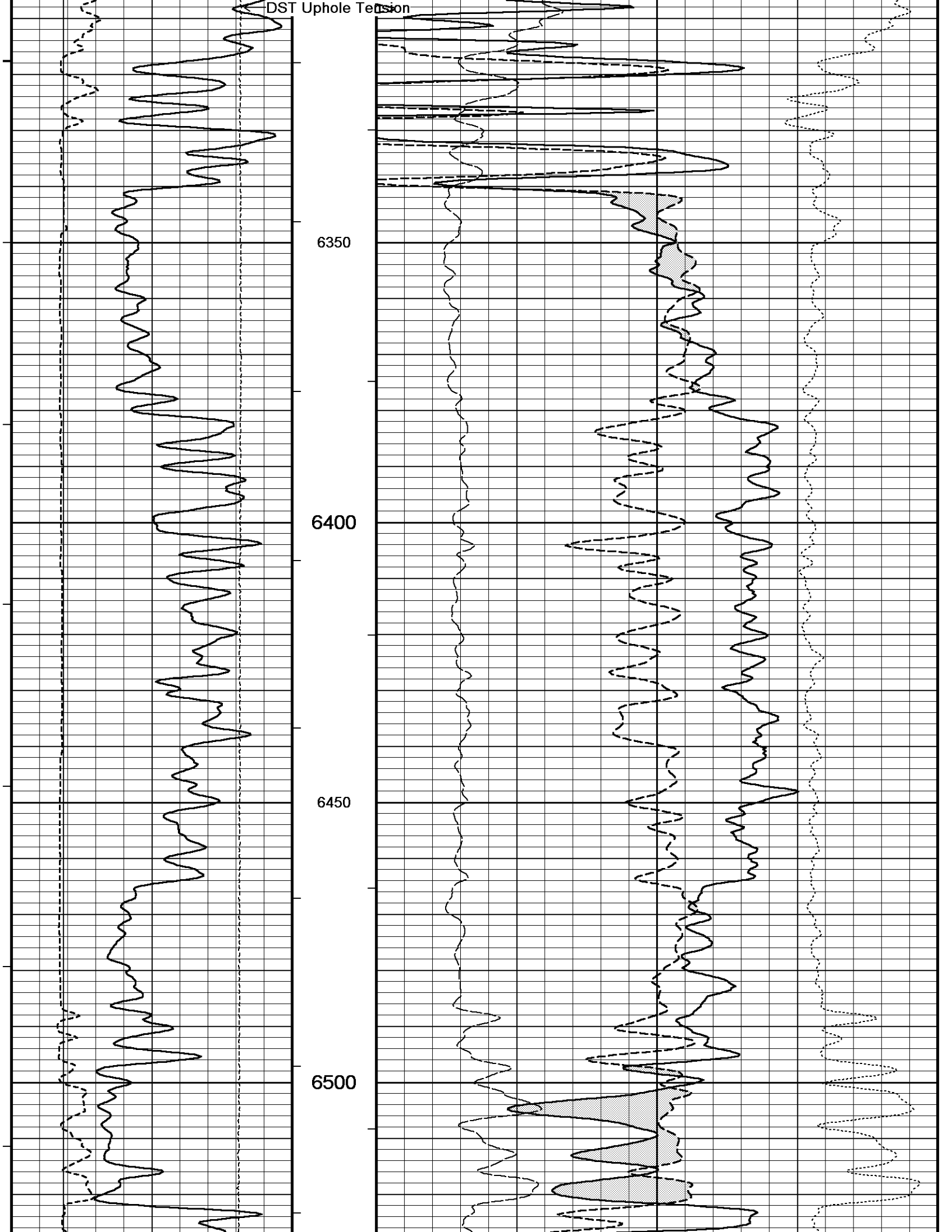


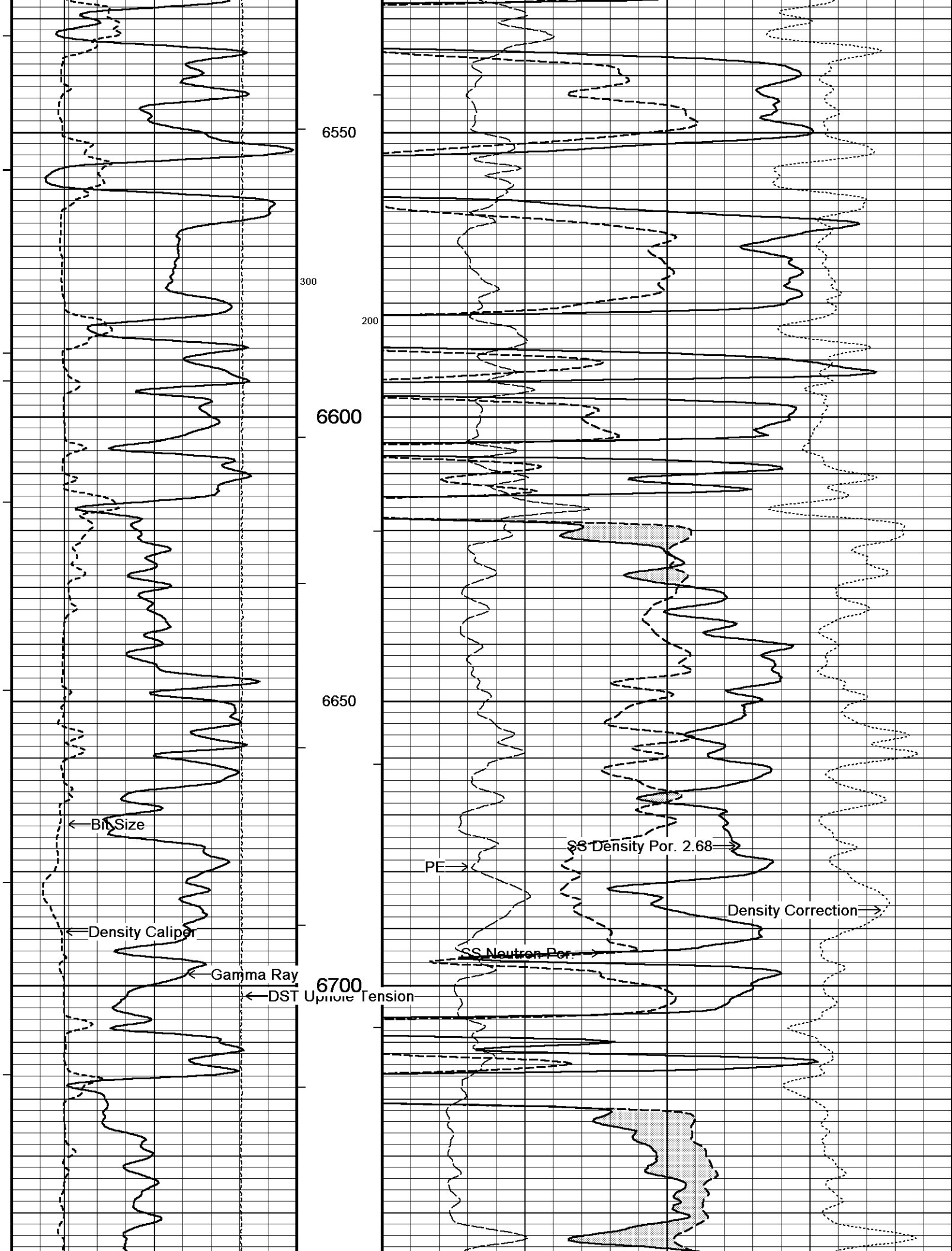


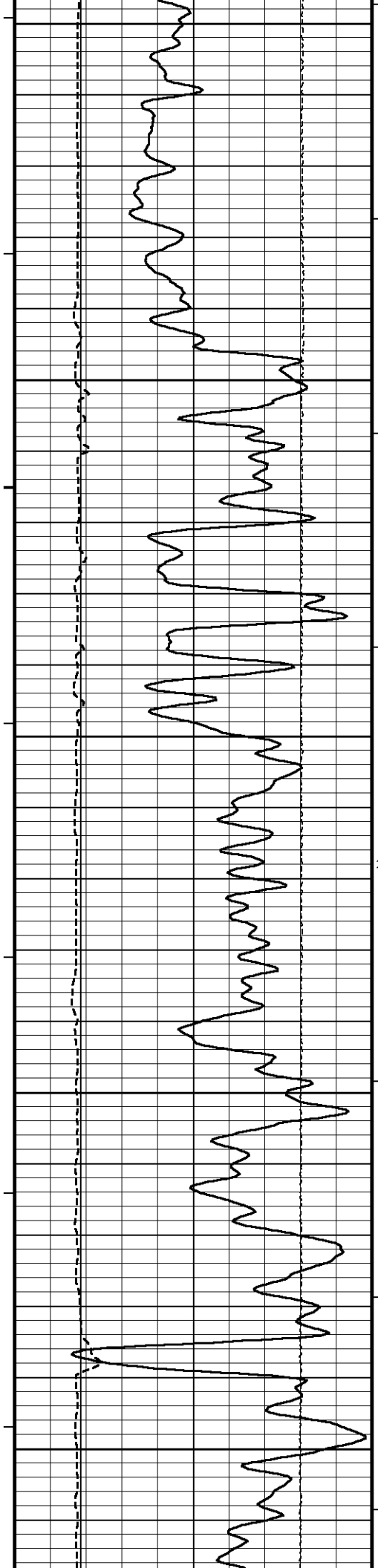












6750

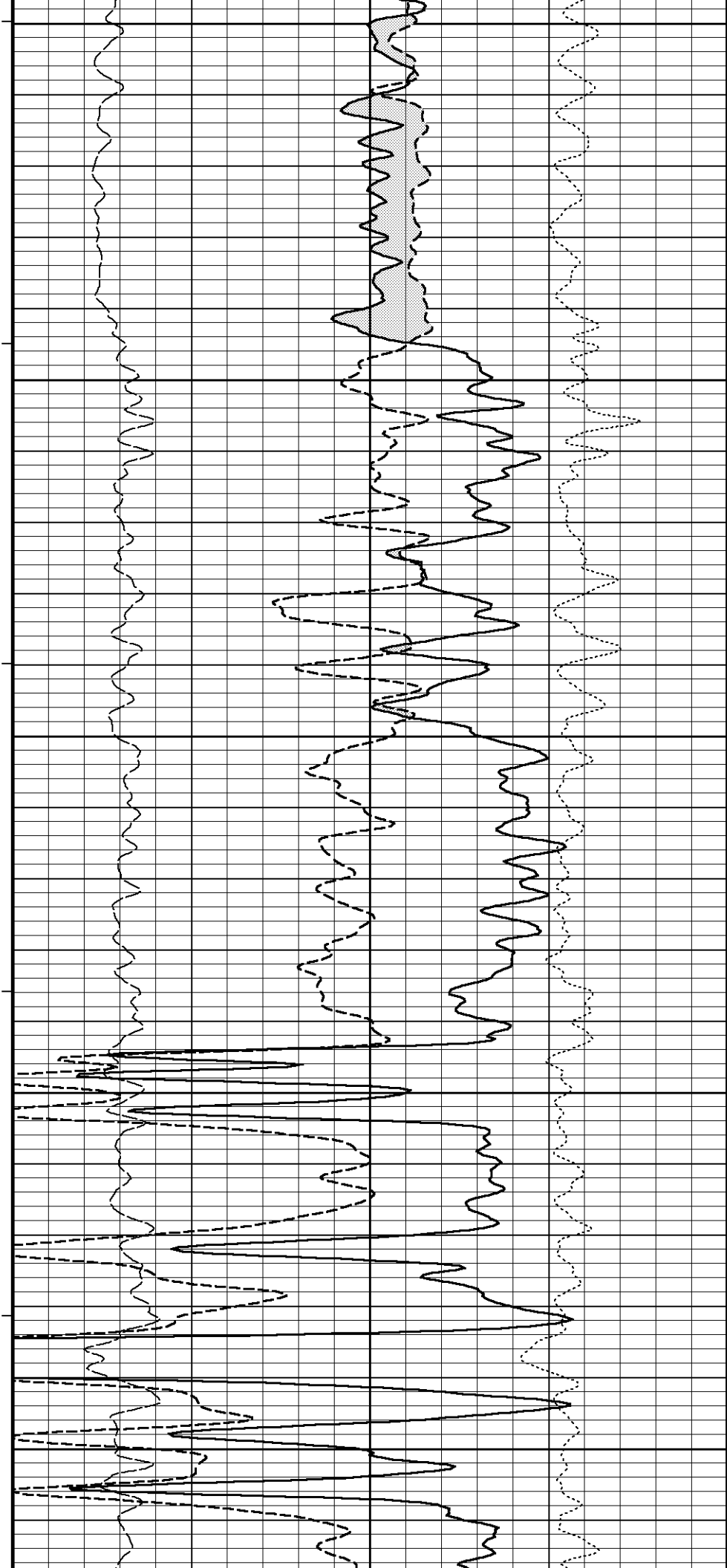
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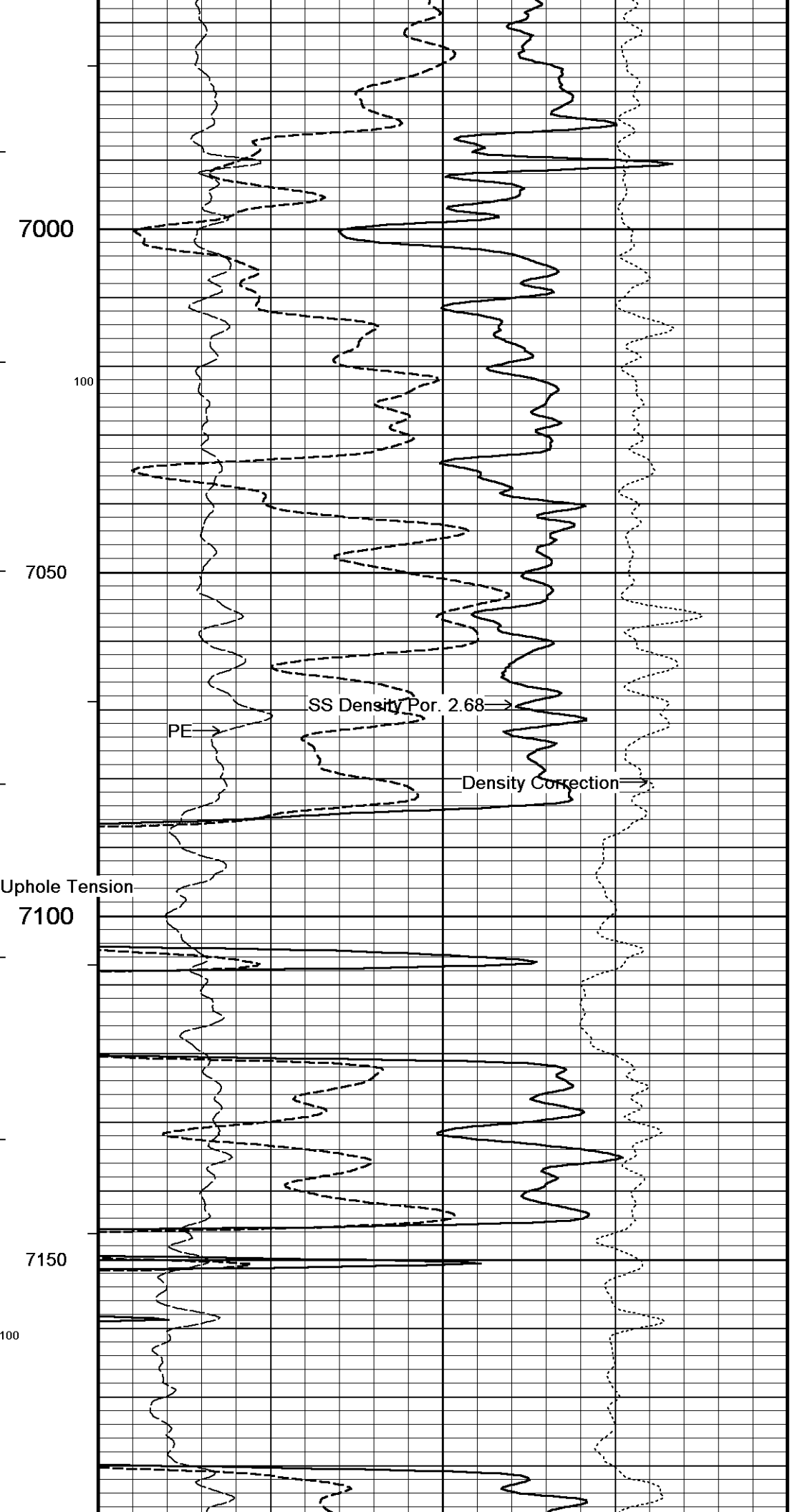
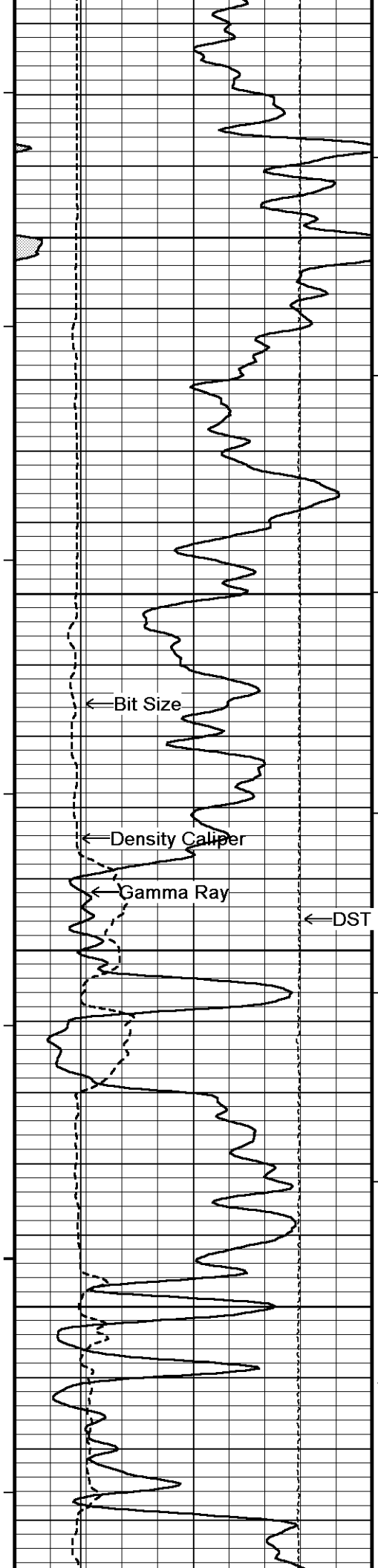
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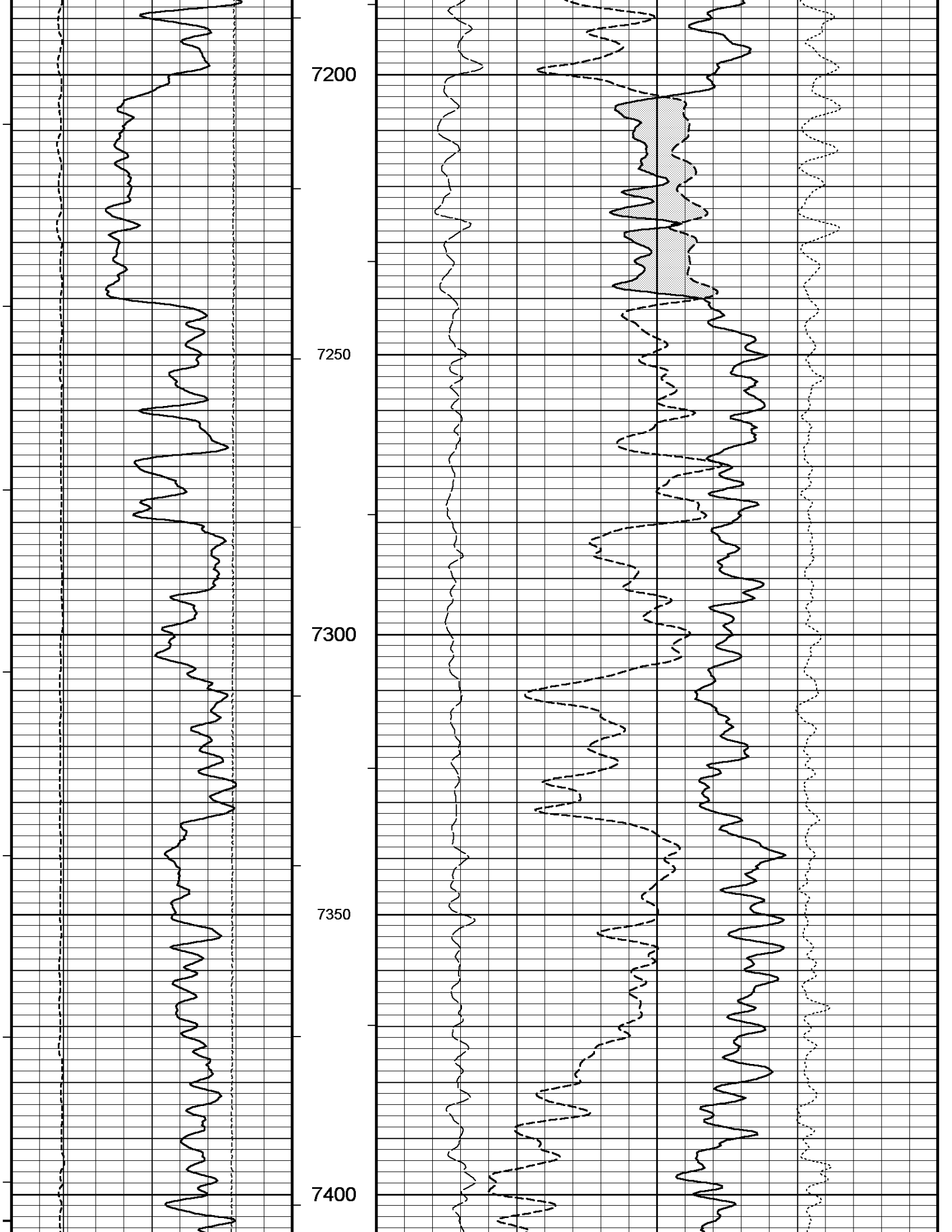
200

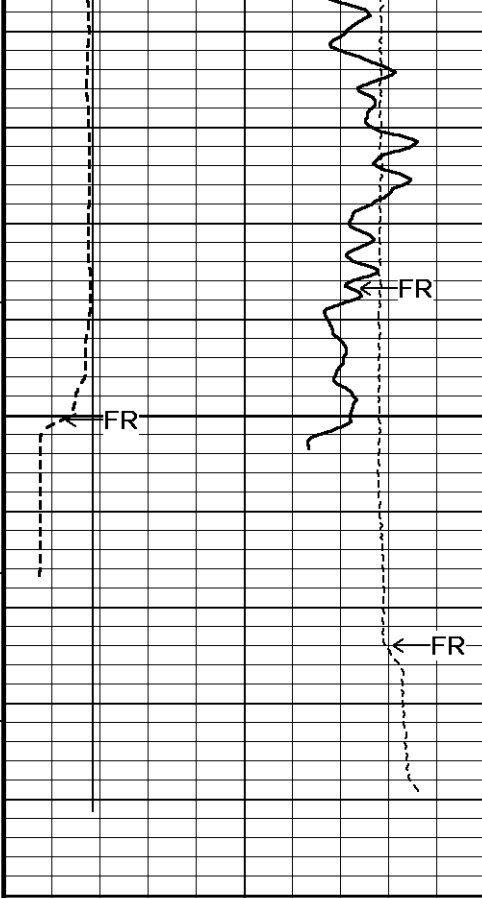
6900

6950









7450

7500

Depth
In
Feet

Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

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

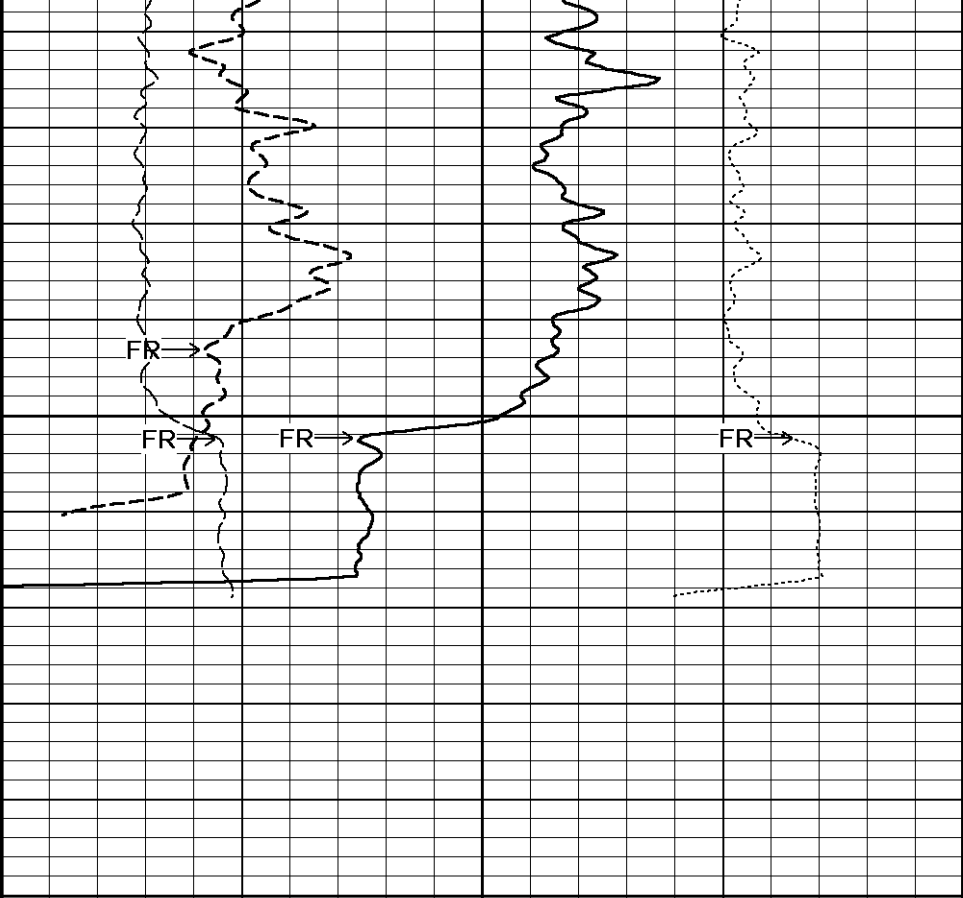
Density Caliper(CLDC)
inches
6 11 16

Bit Size(BIT)
inches
6 11 16

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

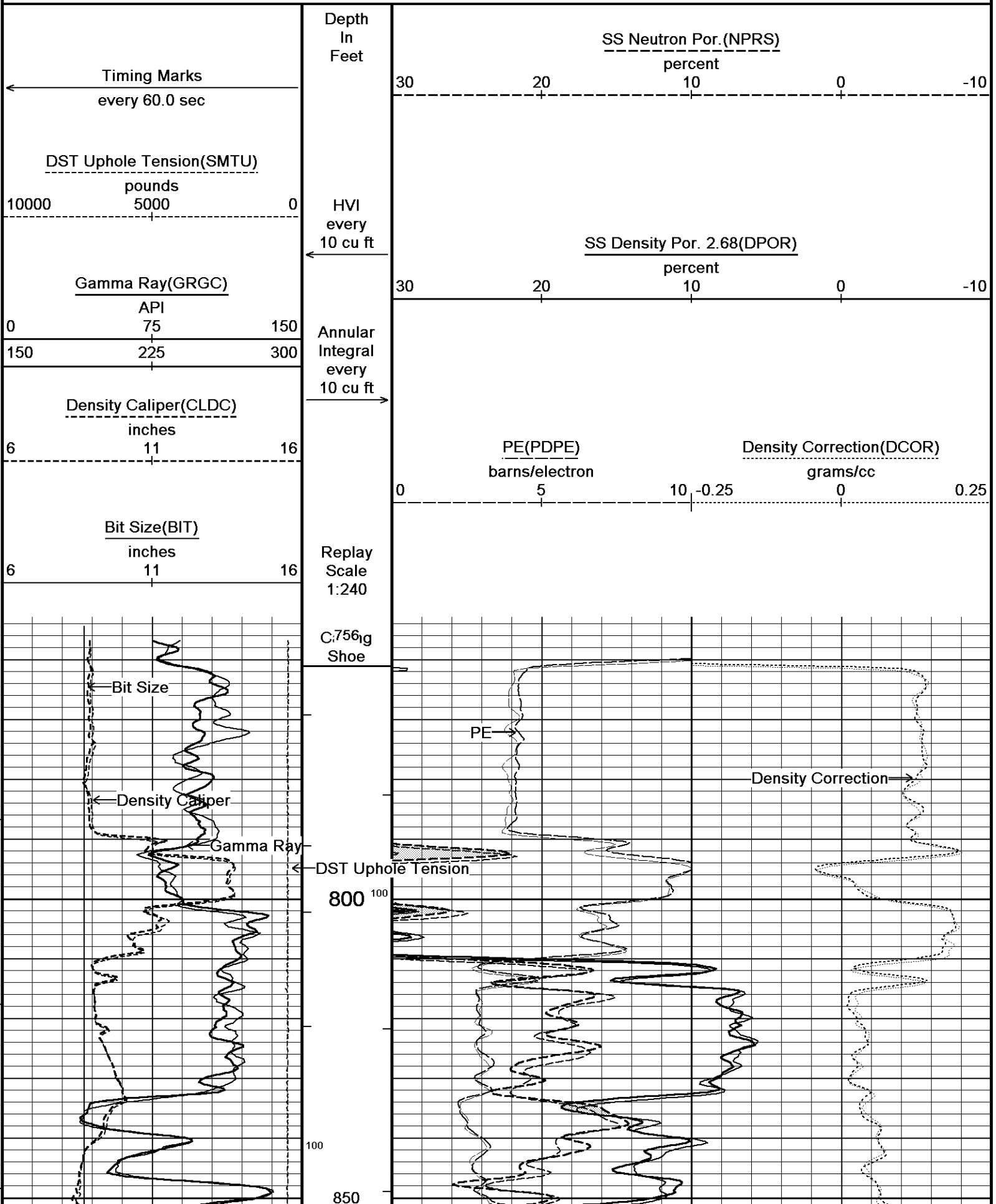
Replay
Scale
1:240

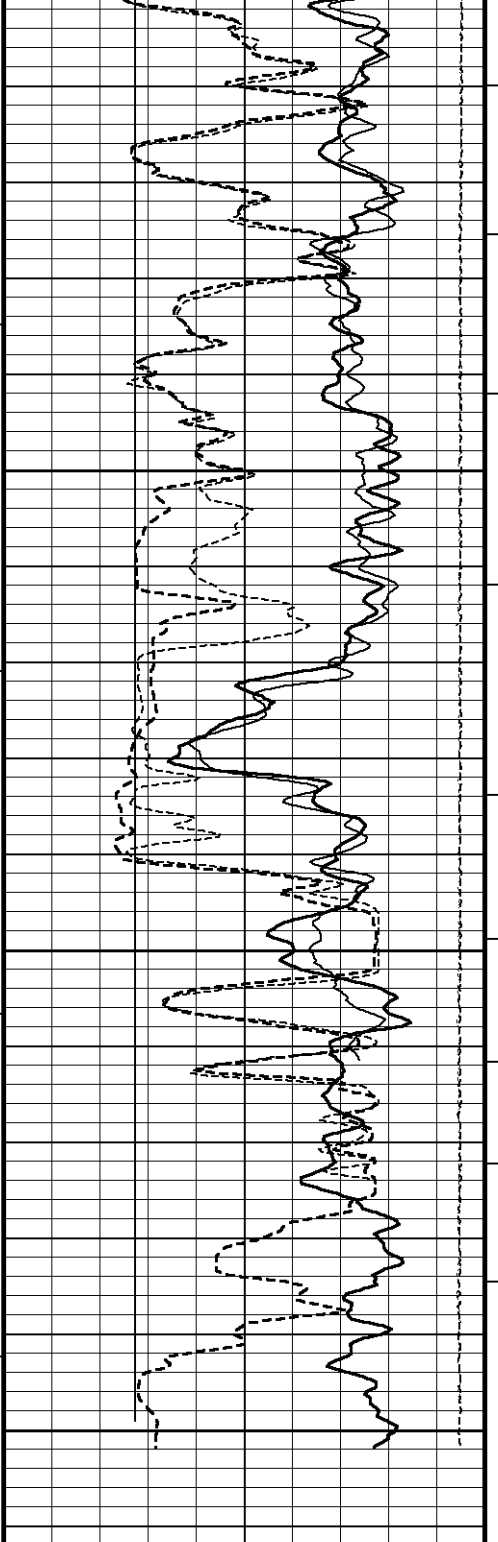


SS Neutron Por. (NPRS)
percent
30 20 10 0 -10

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





900

950

1000

1010
Depth
In
Feet

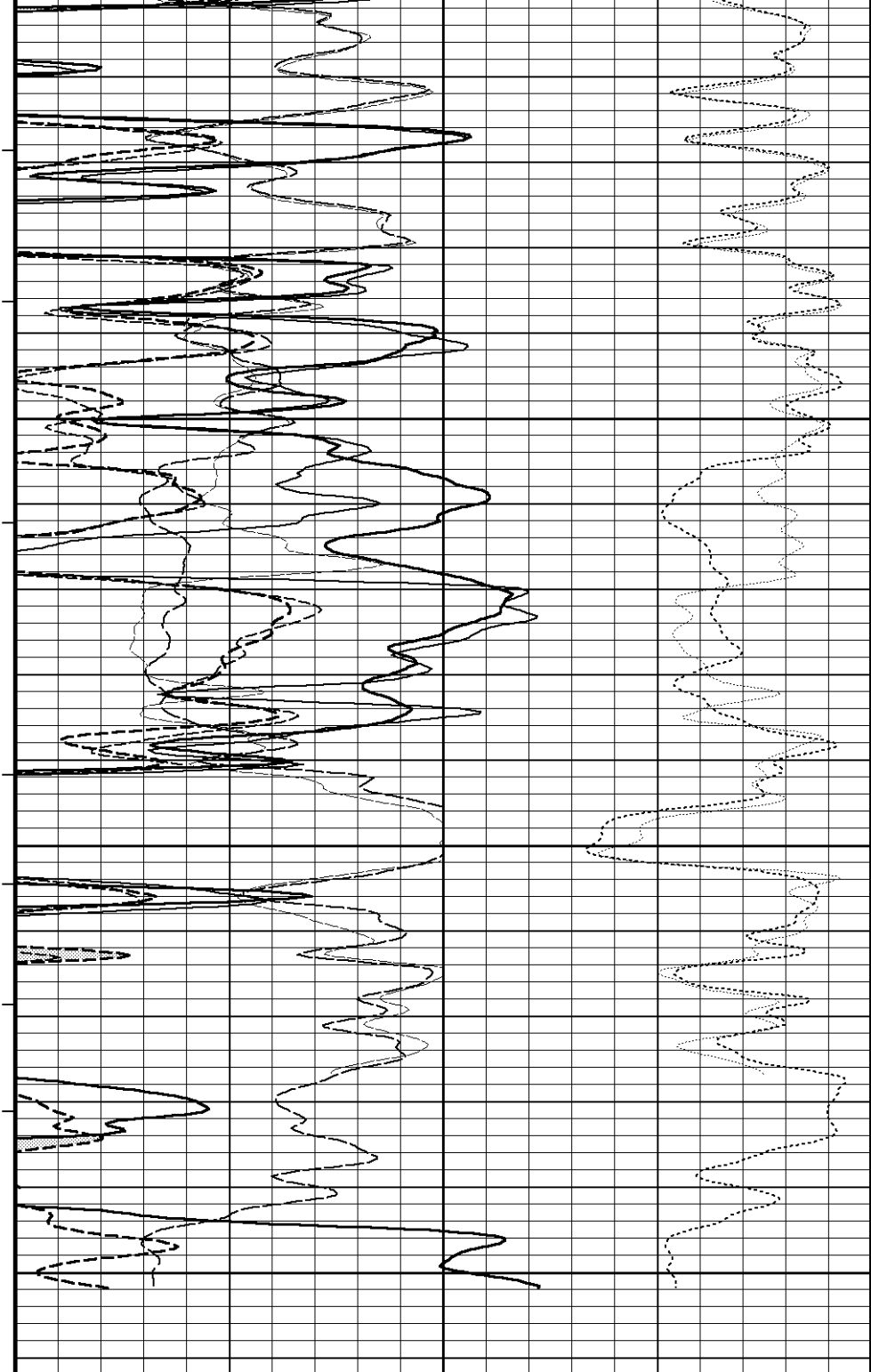
← Timing Marks
every 60.0 sec

DST Uphole Tension(SMTU)
pounds
10000 5000 0

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

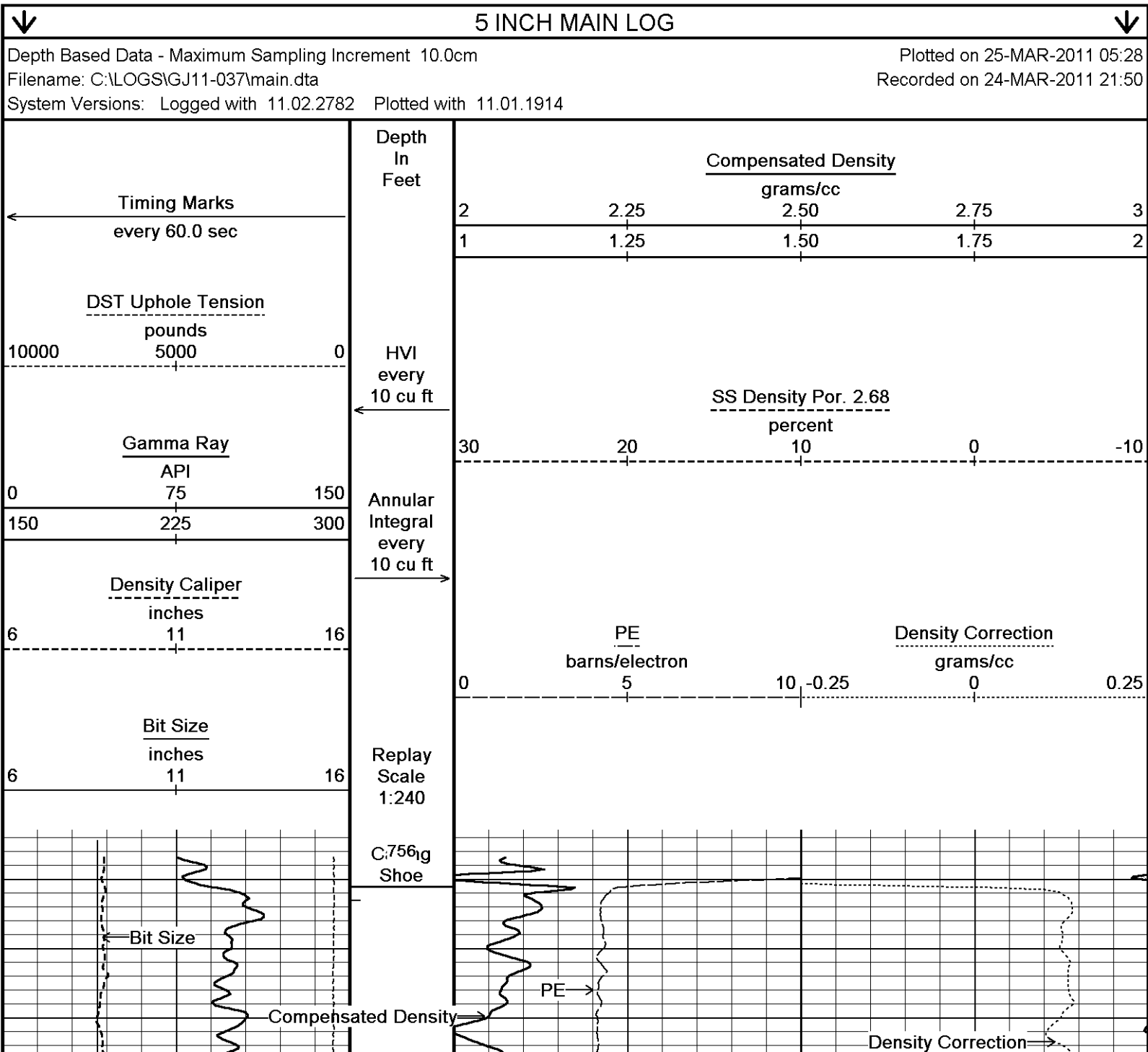
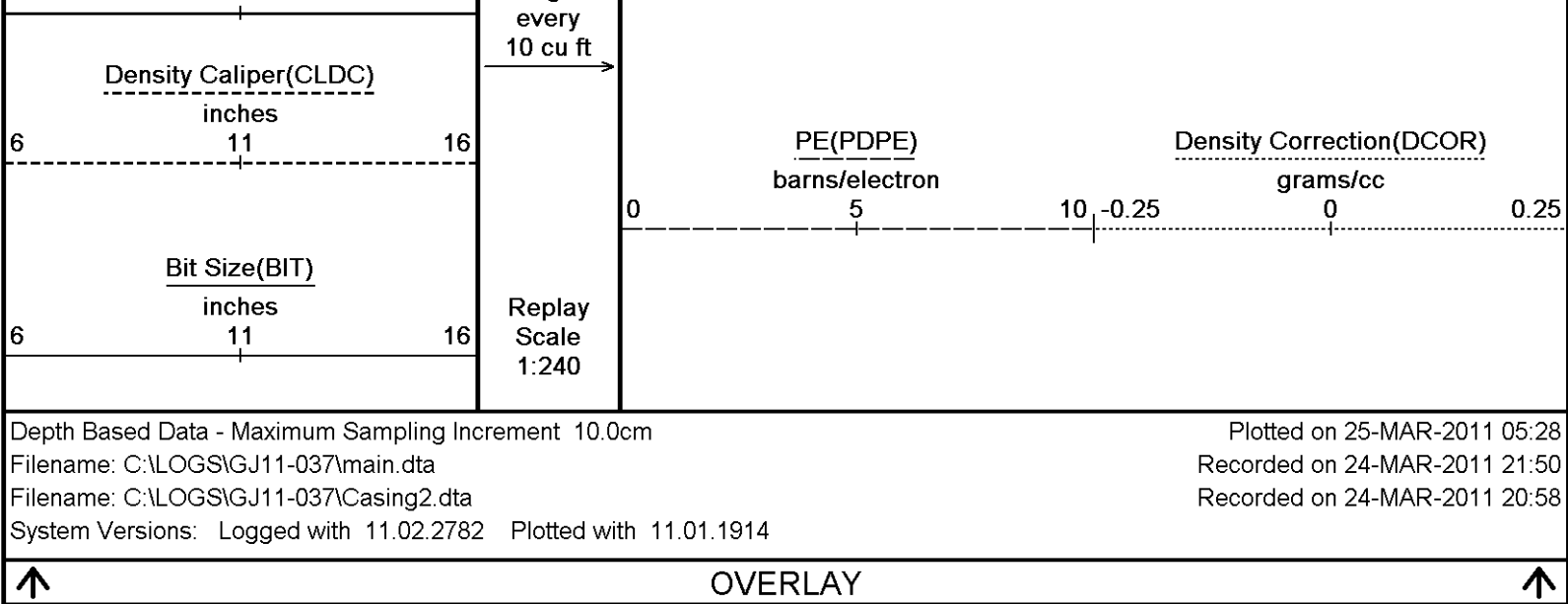
HVI
every
10 cu ft
←

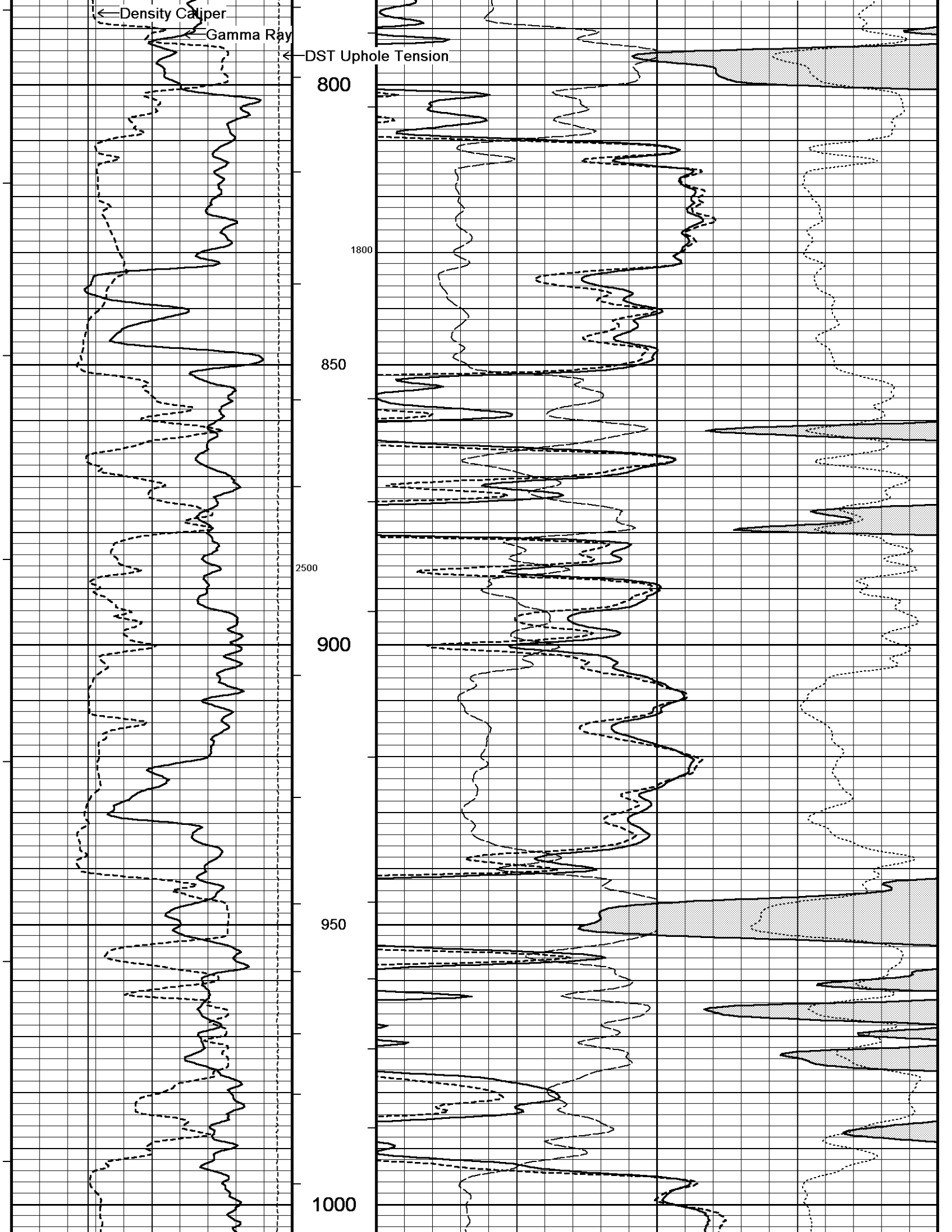
Annular
Integral

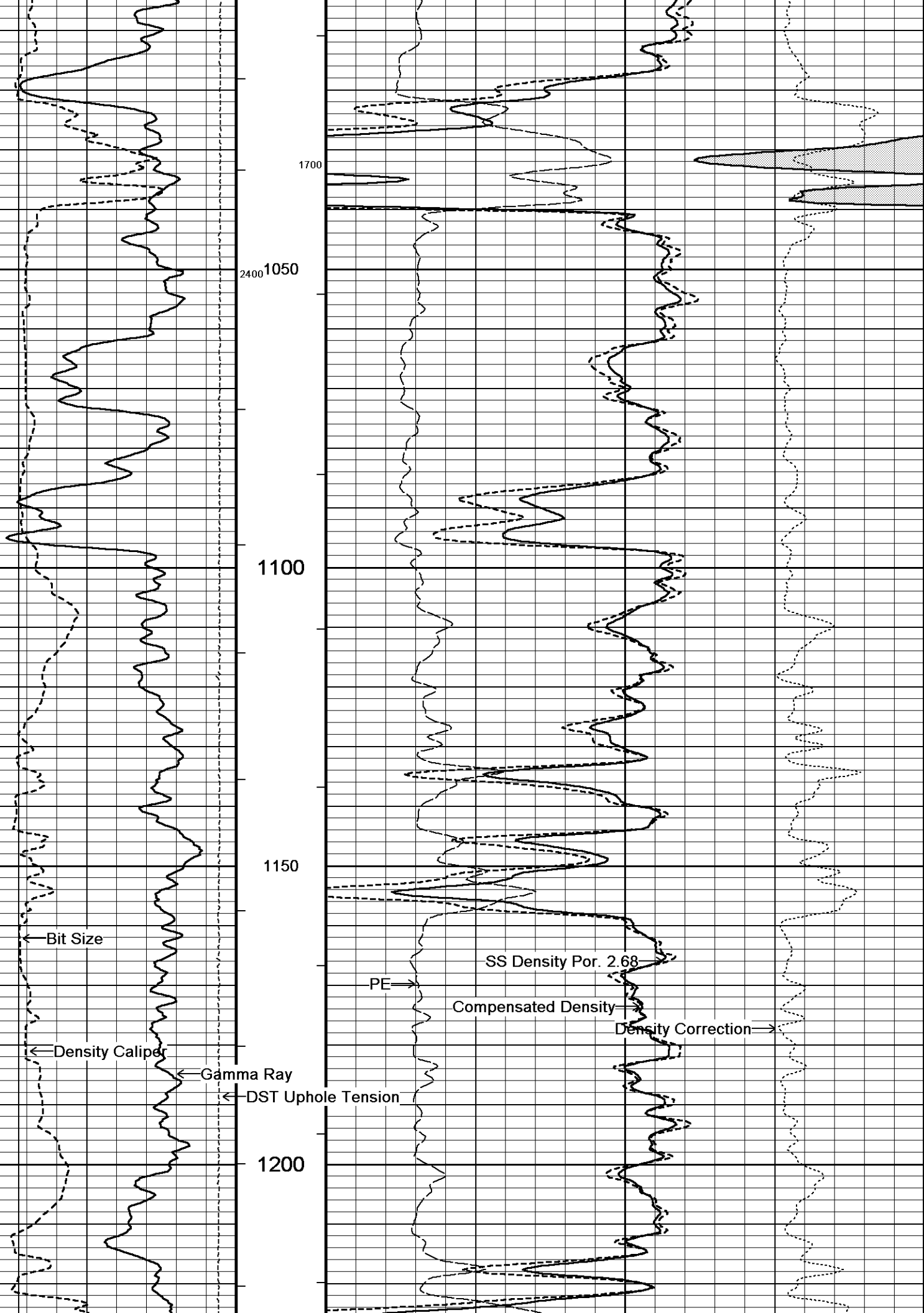


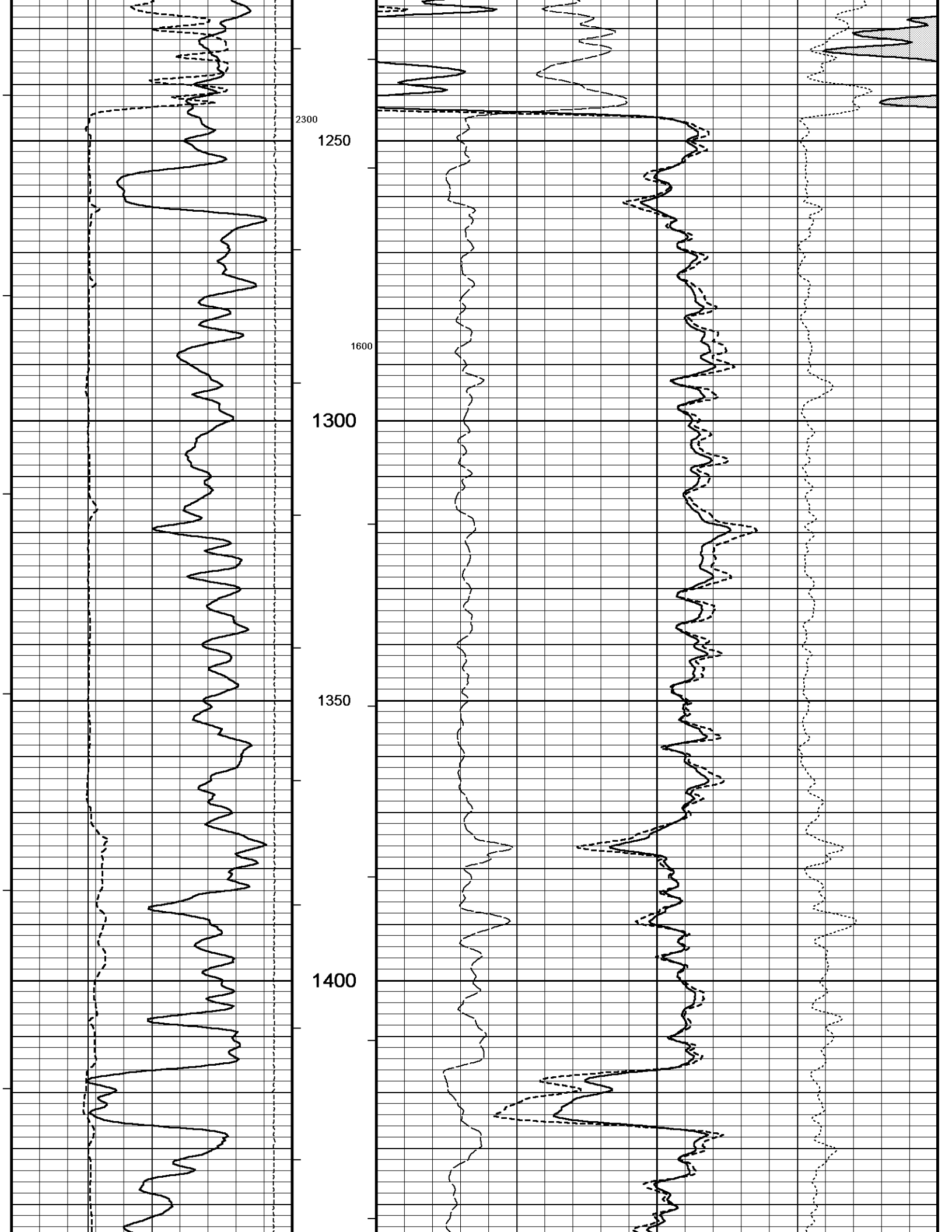
SS Neutron Por. (NPRS)
percent
30 20 10 0 -10

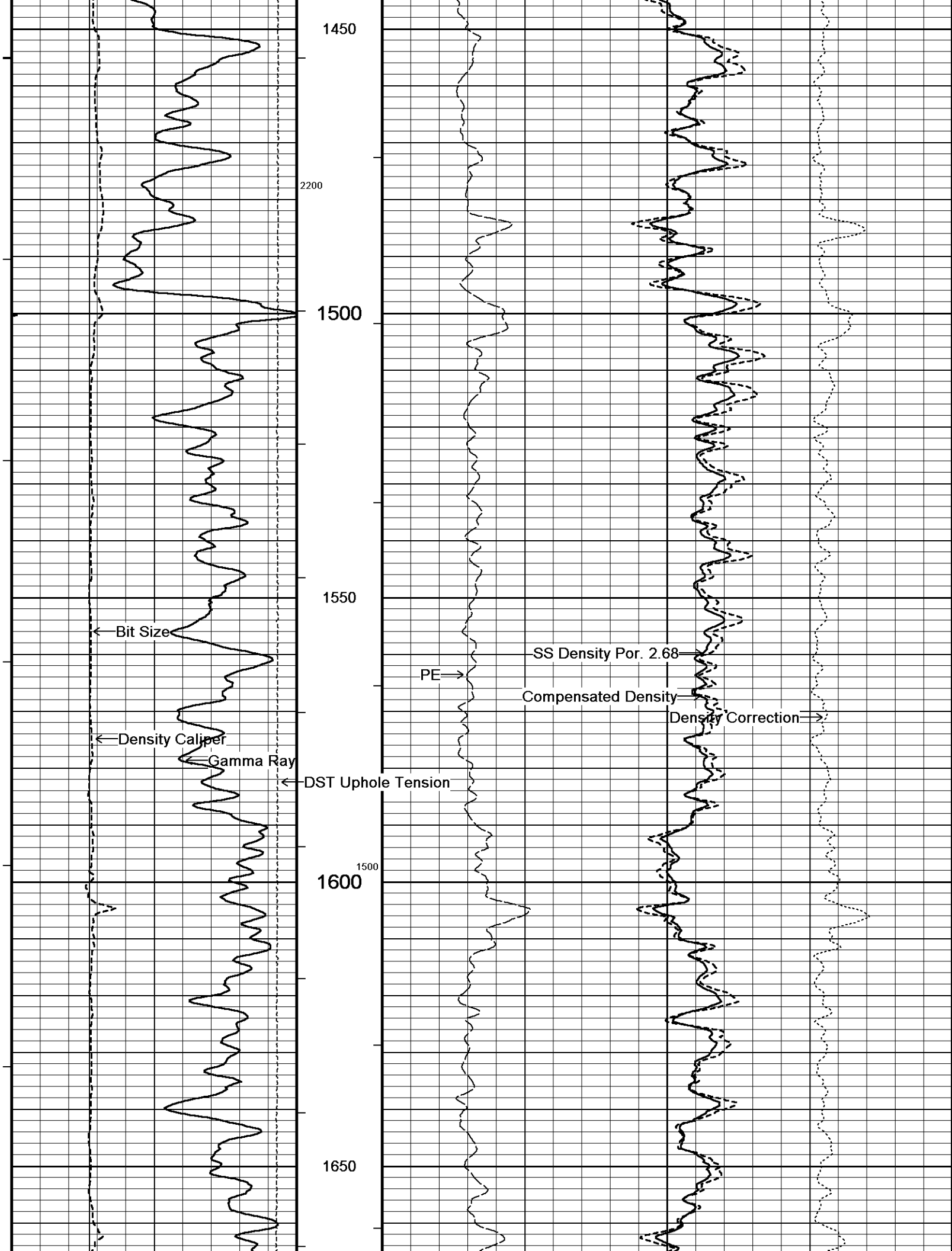
SS Density Por. 2.68(DPOR)
percent
30 20 10 0 -10

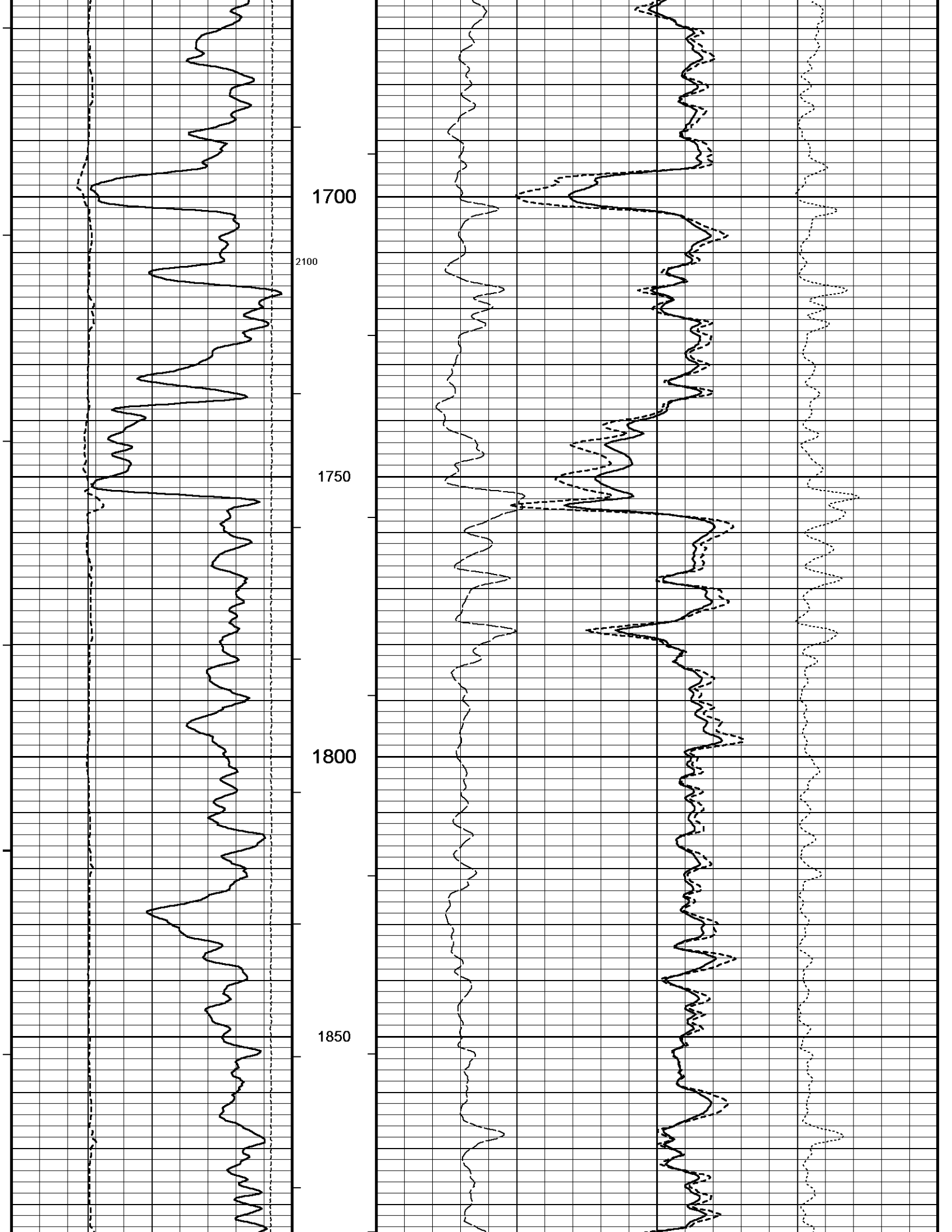


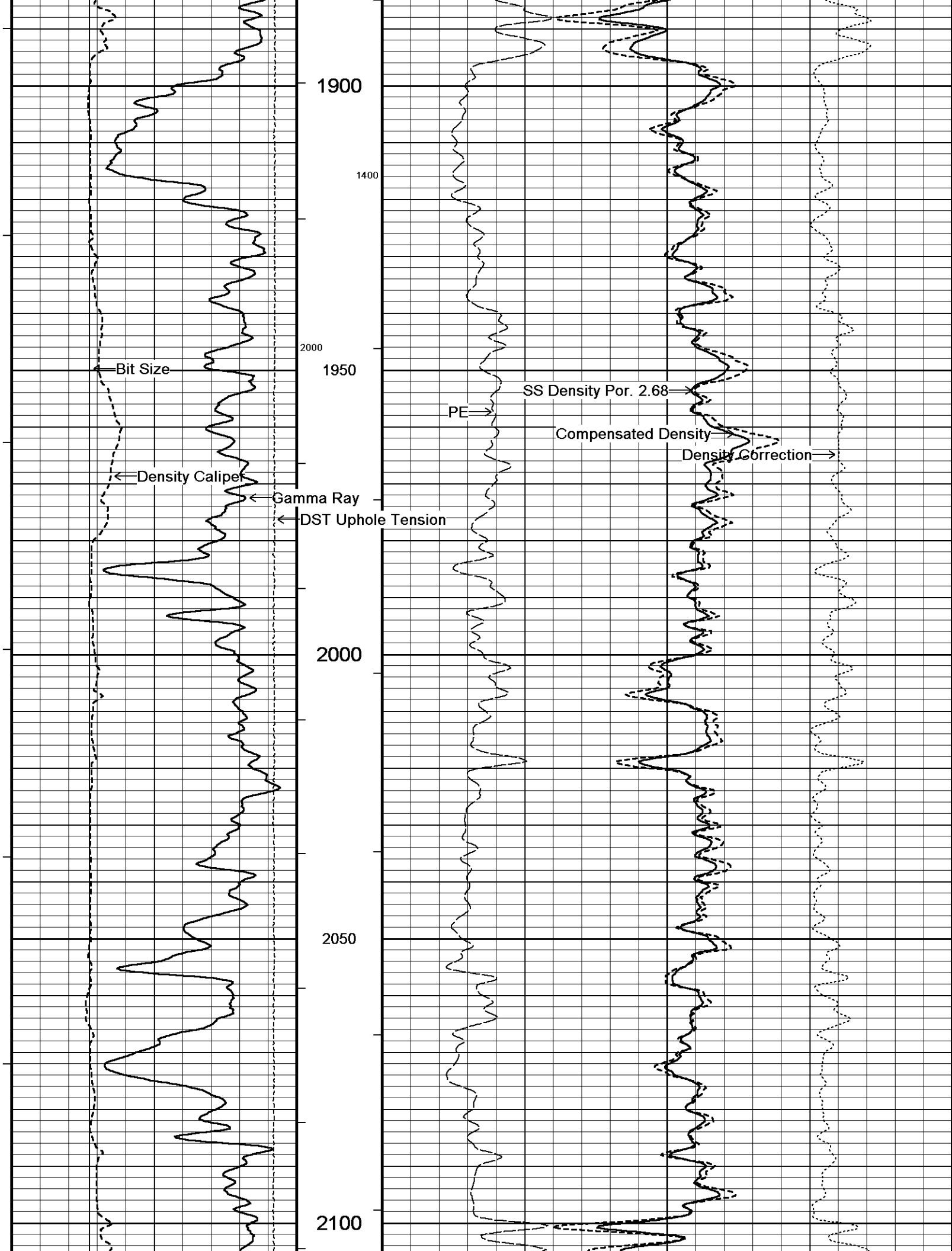


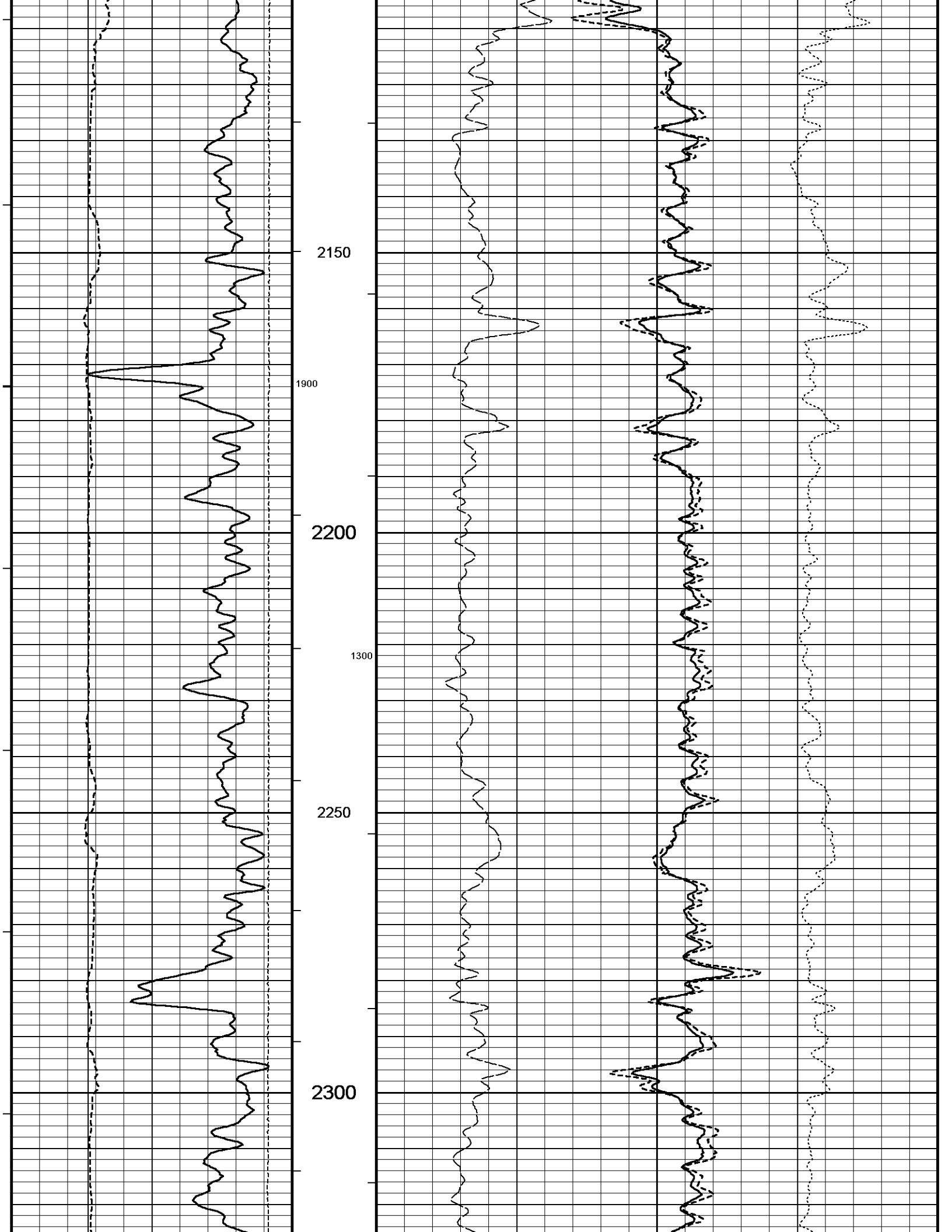


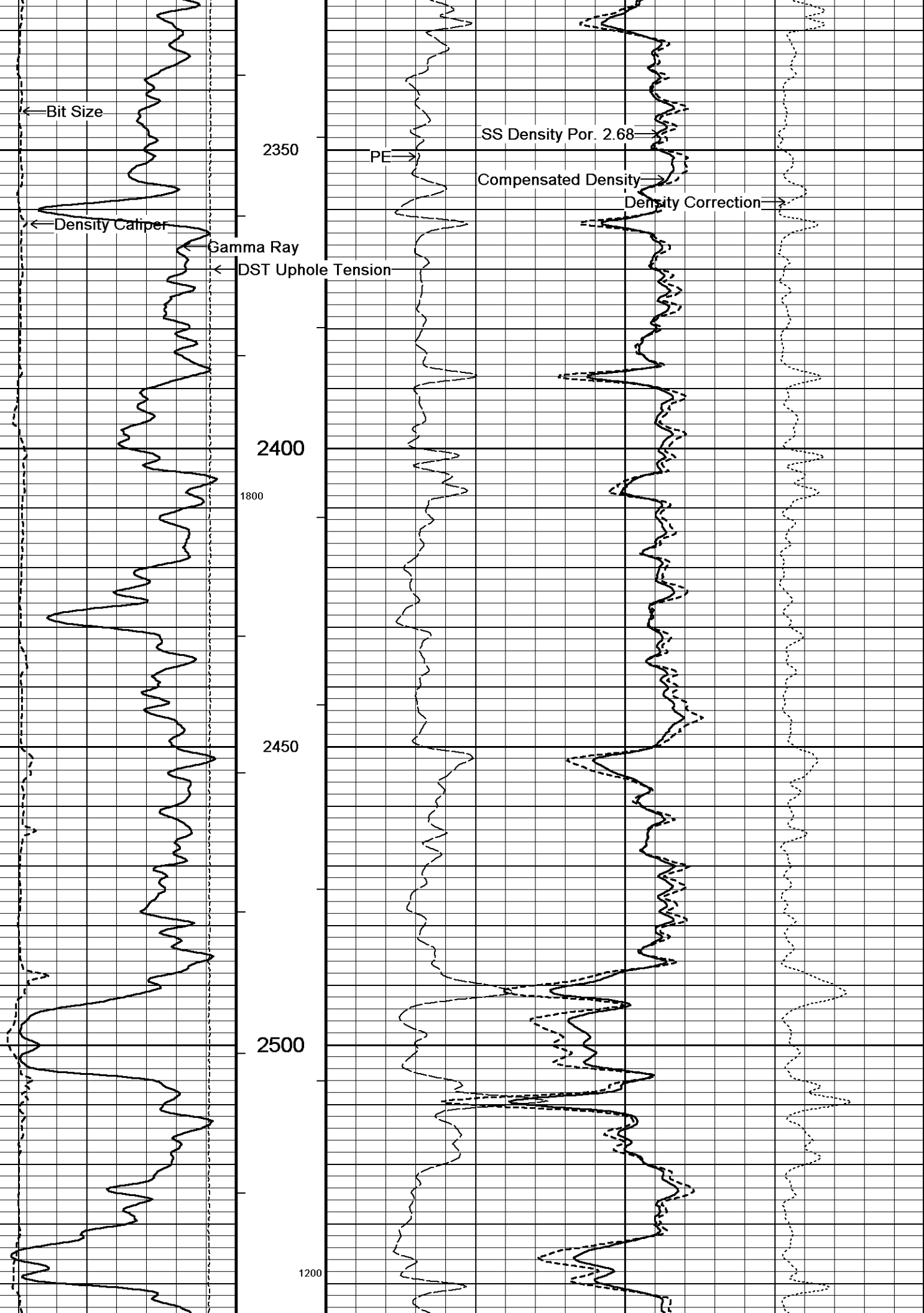


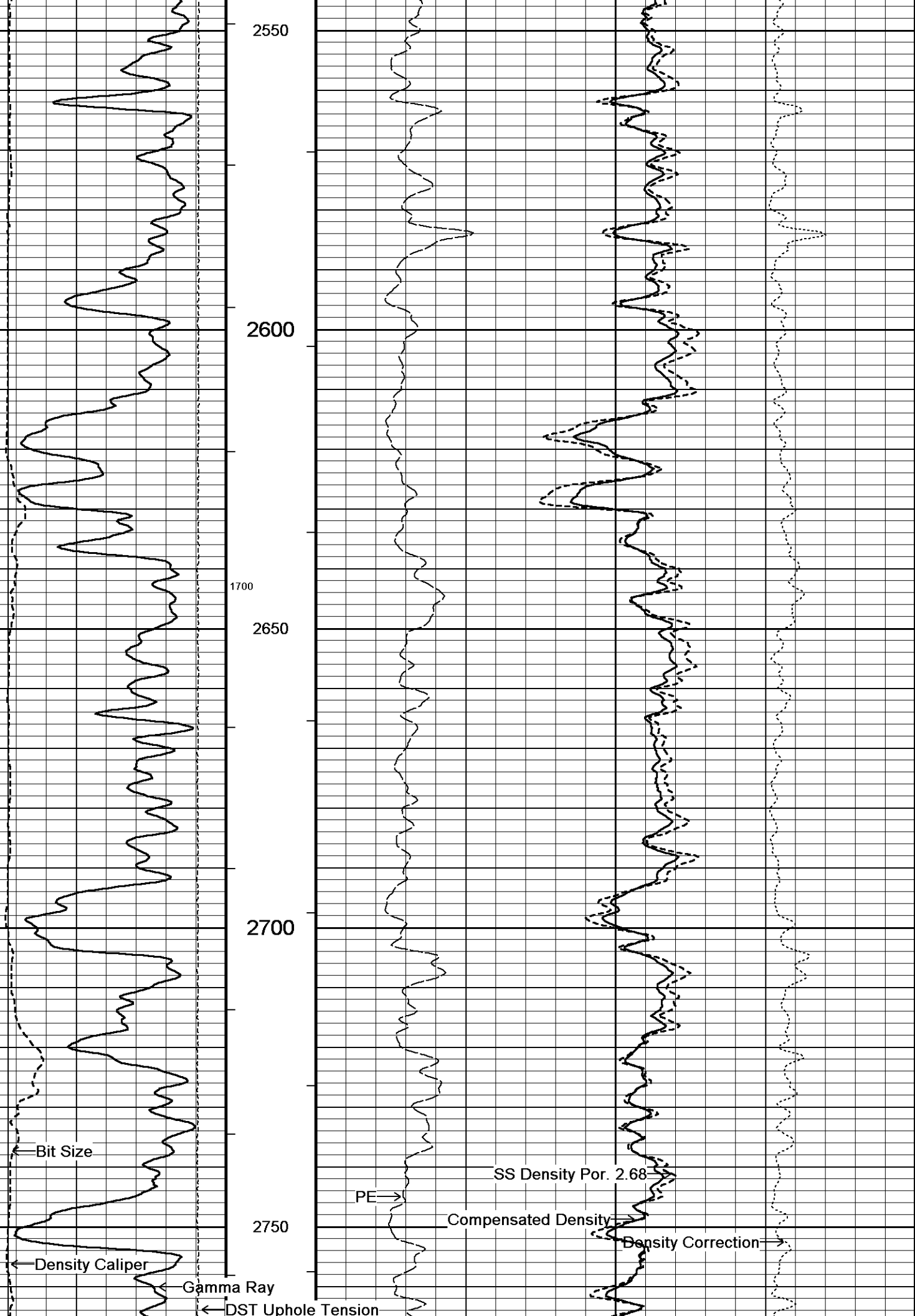


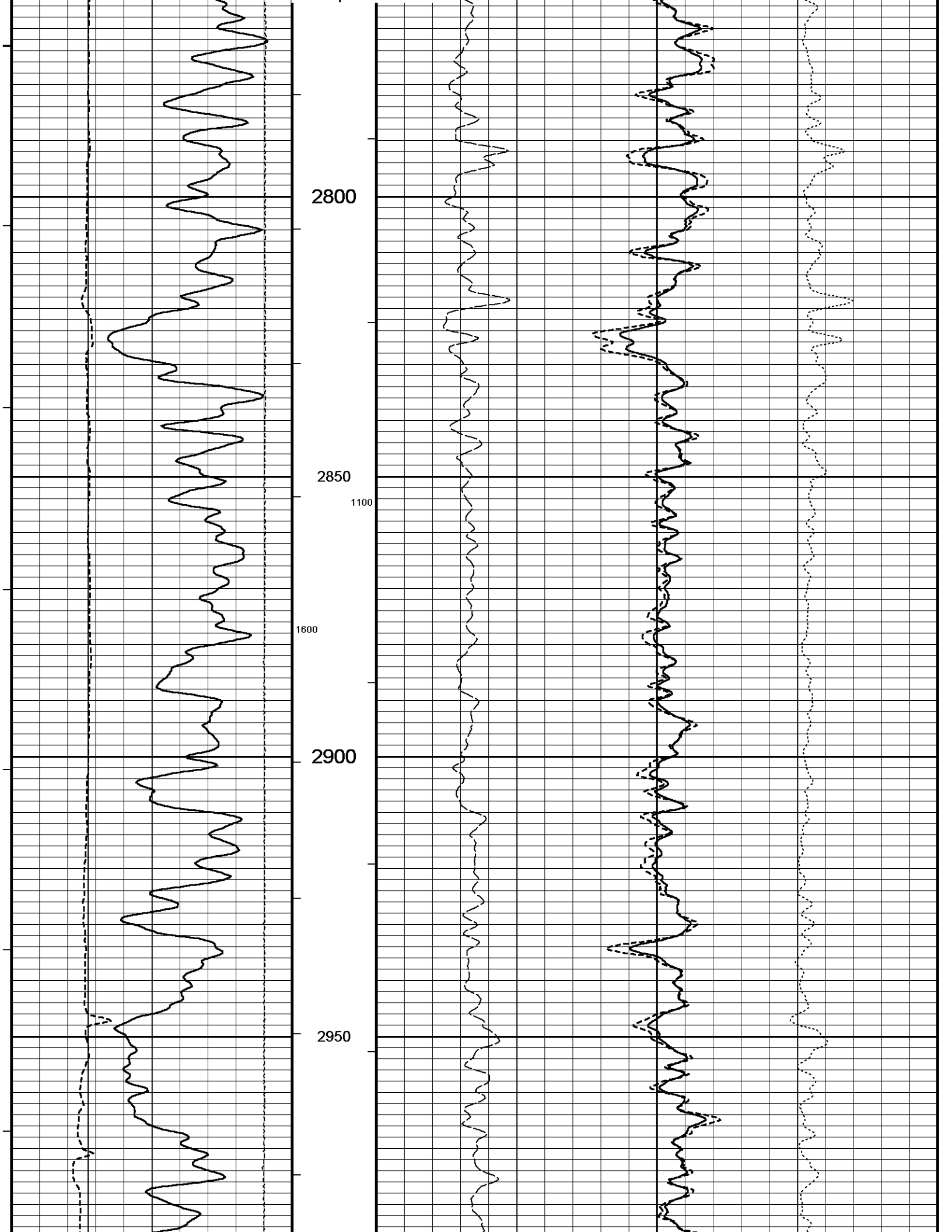


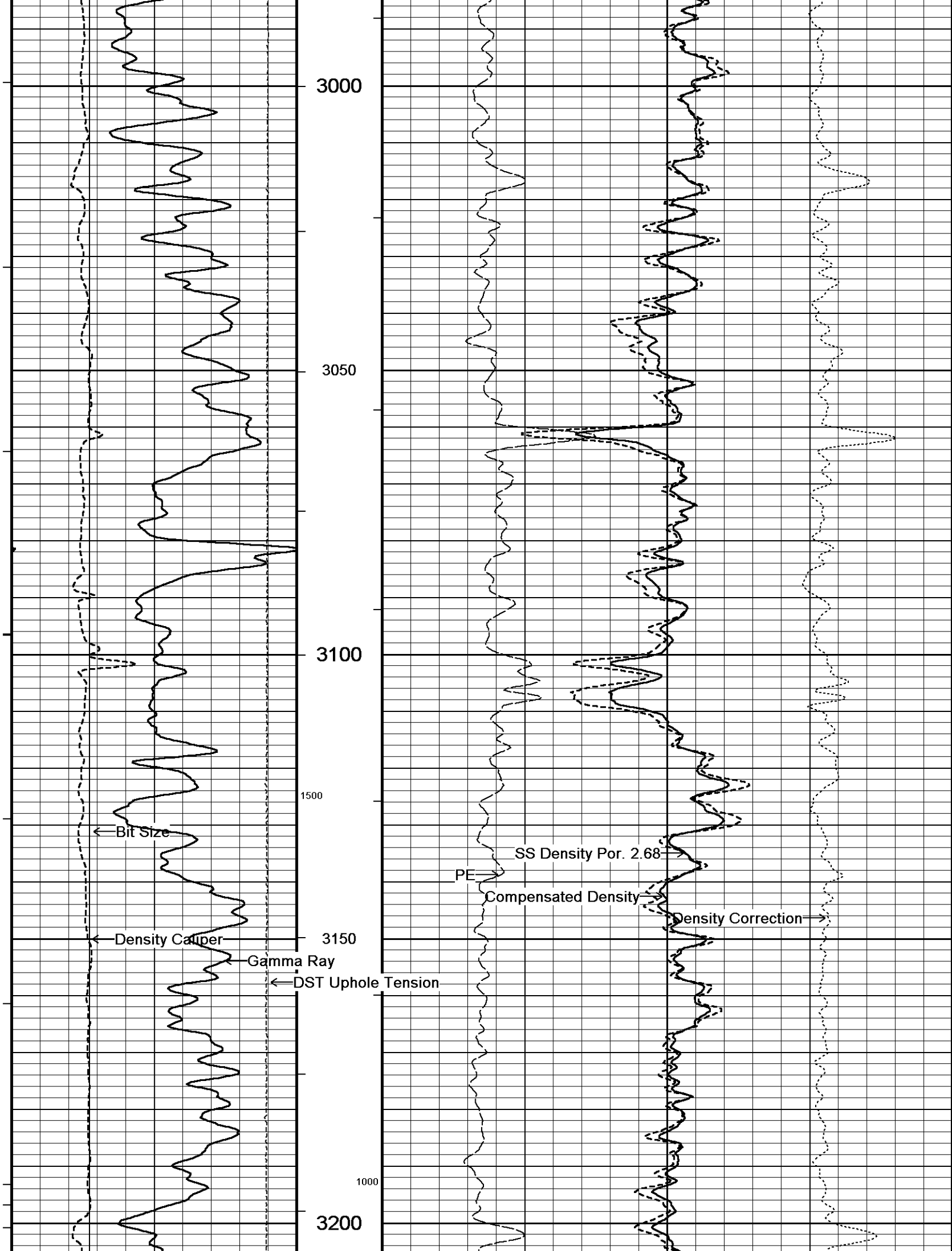


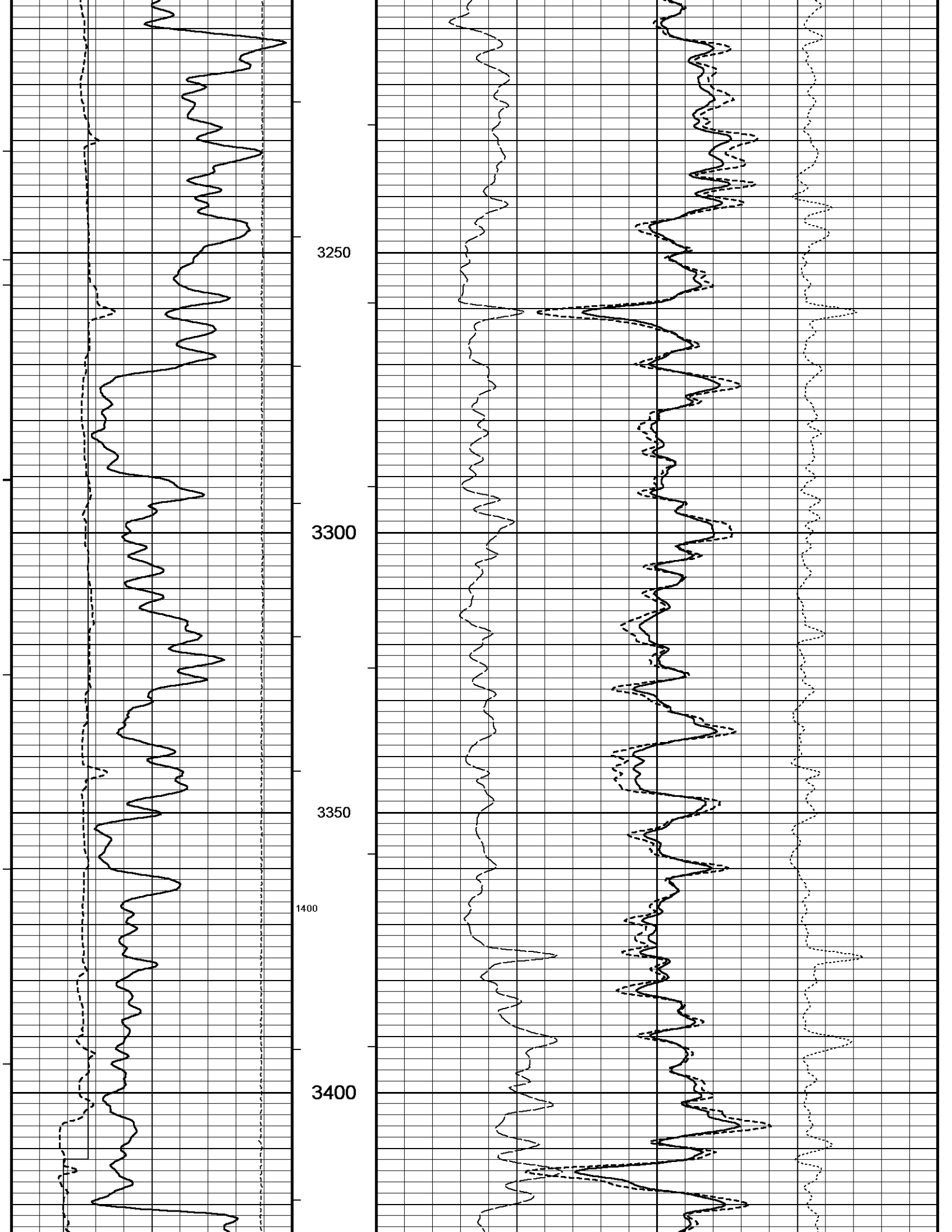


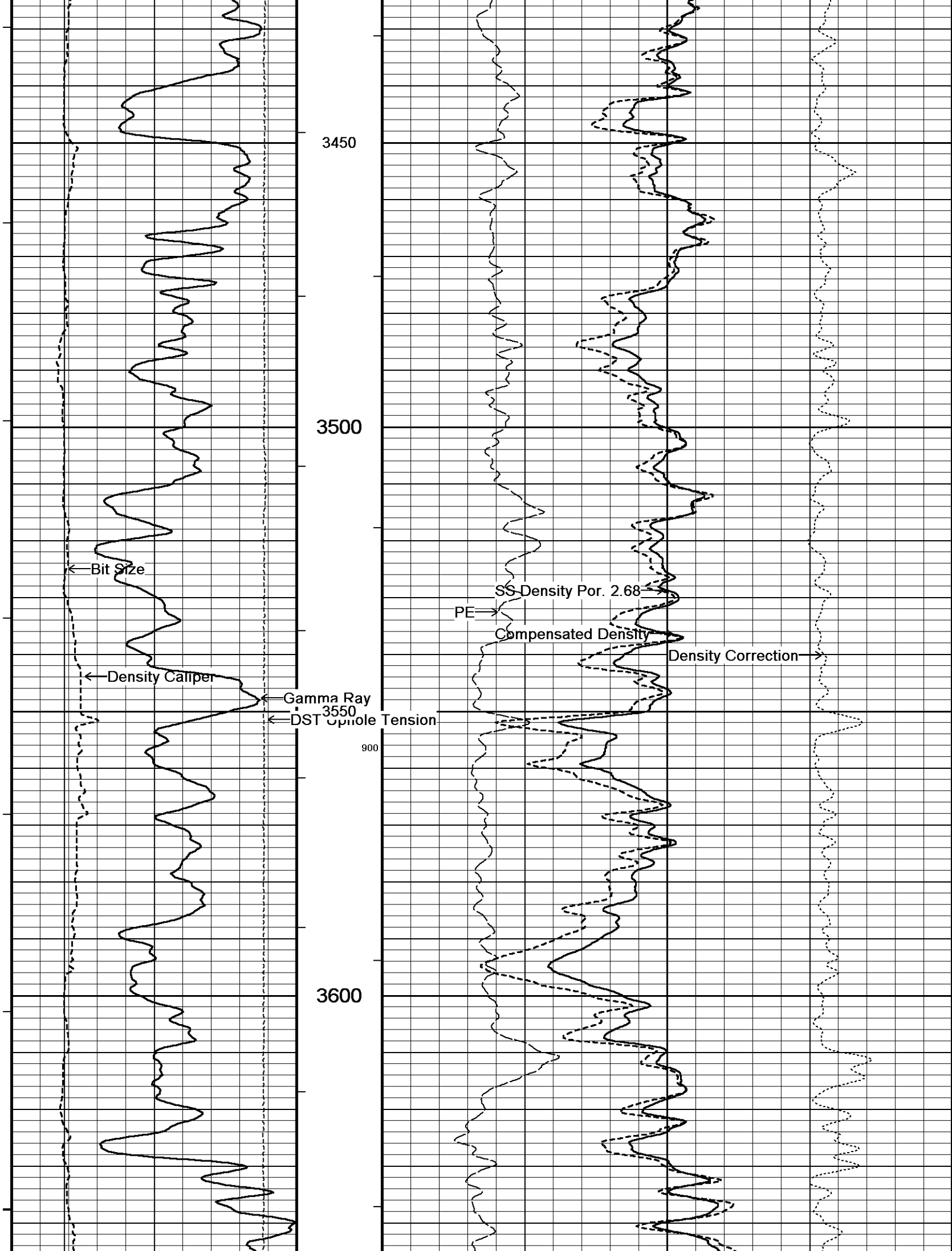


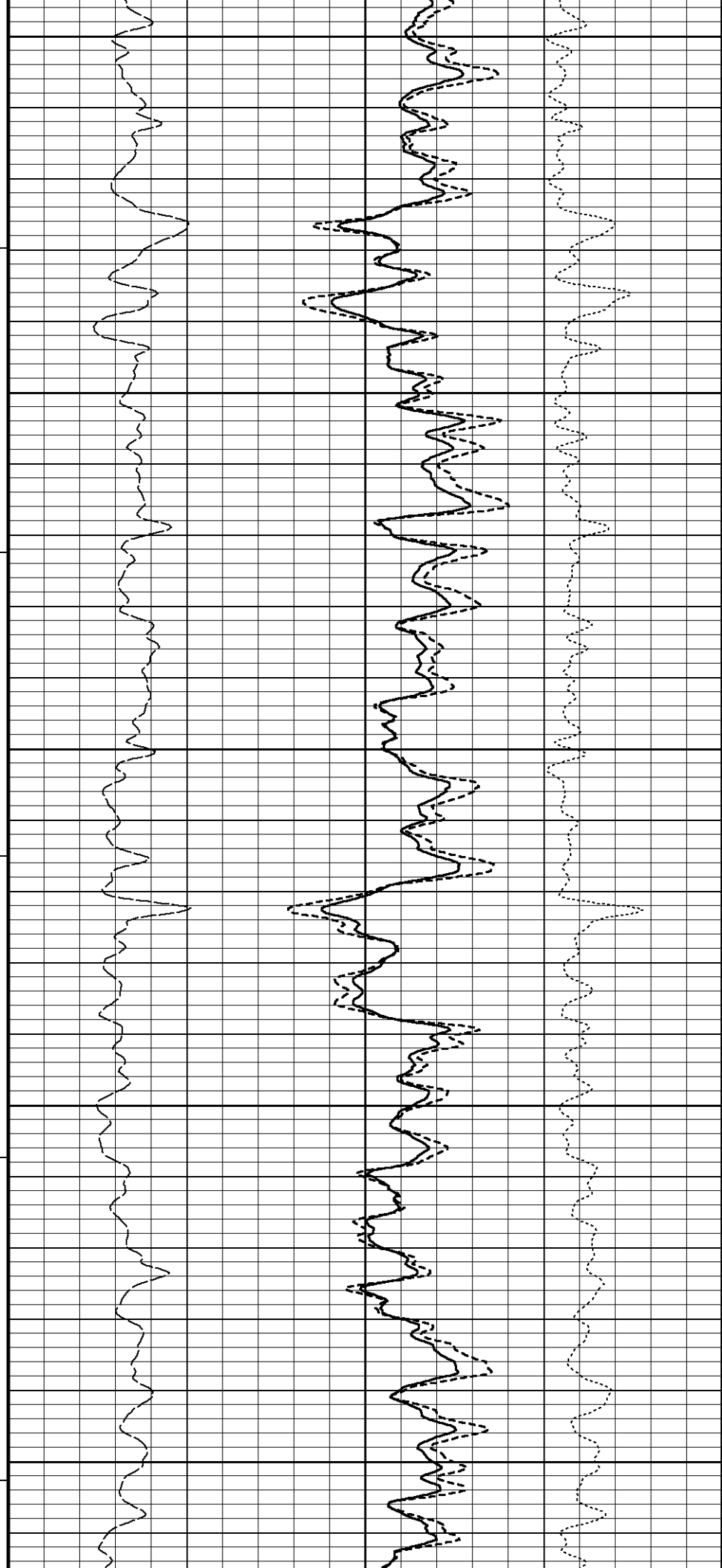
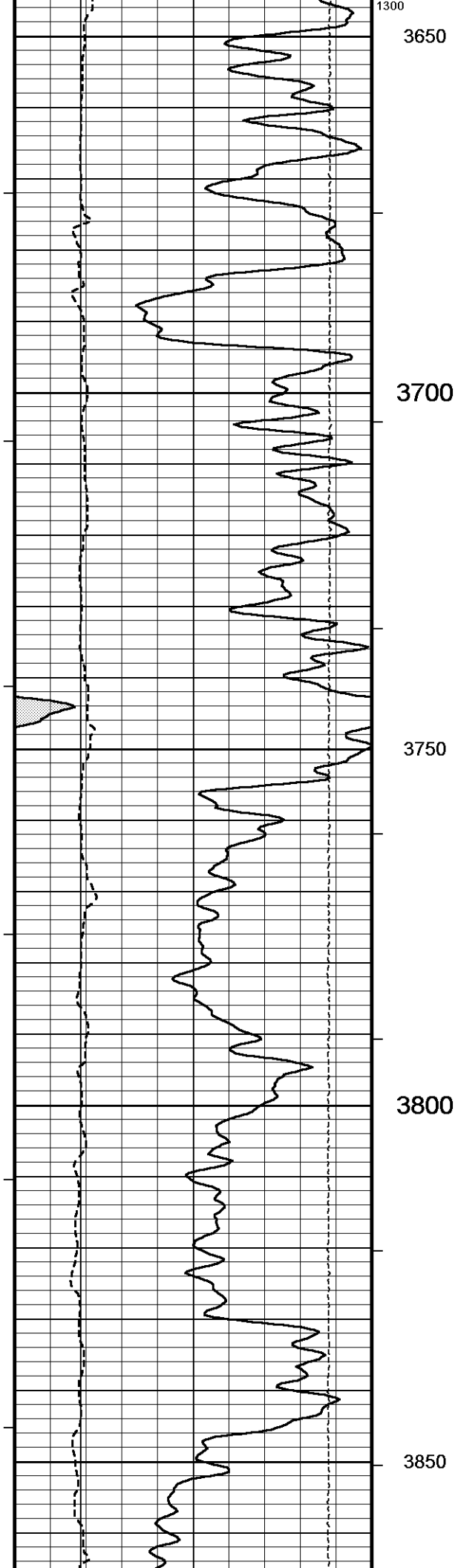


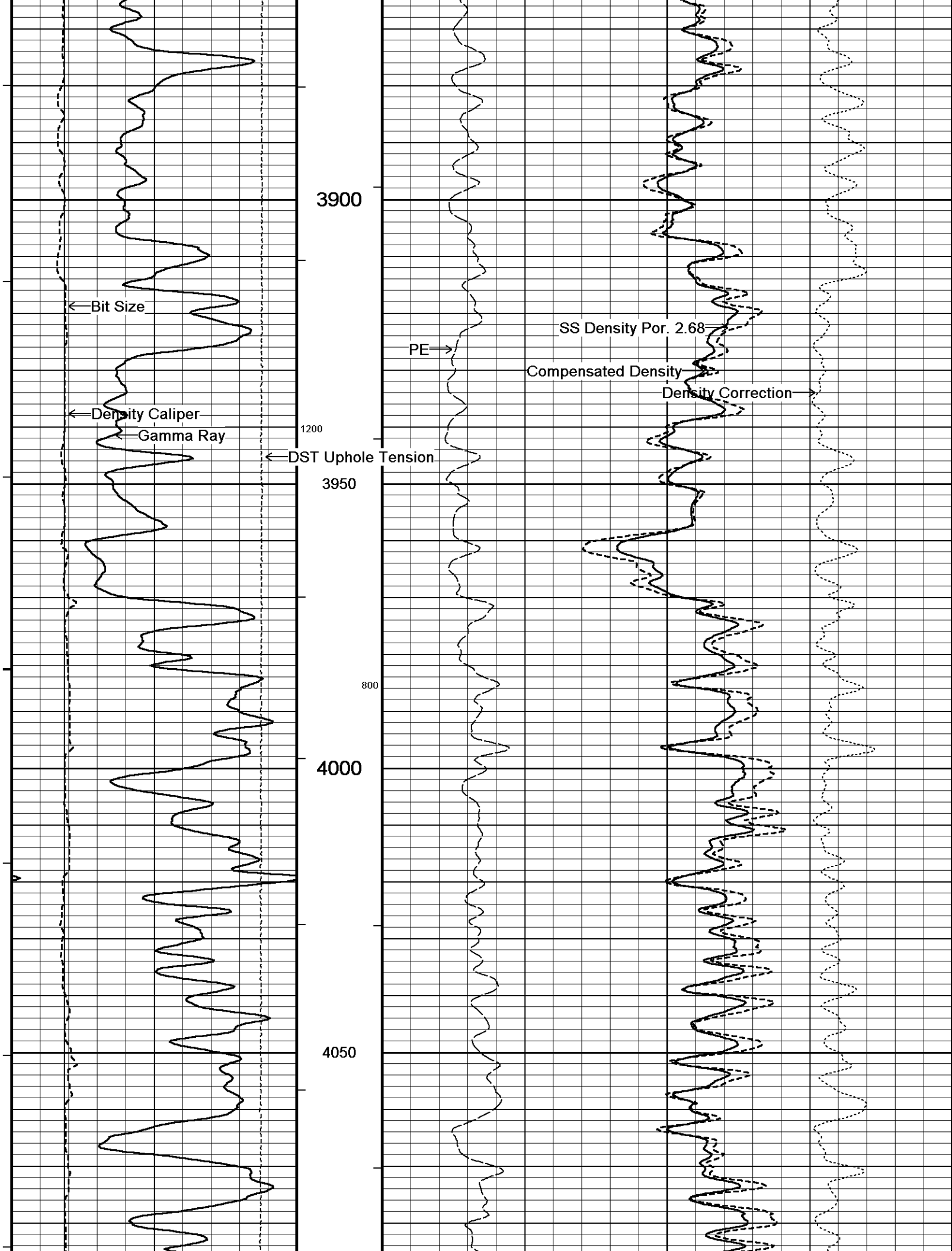


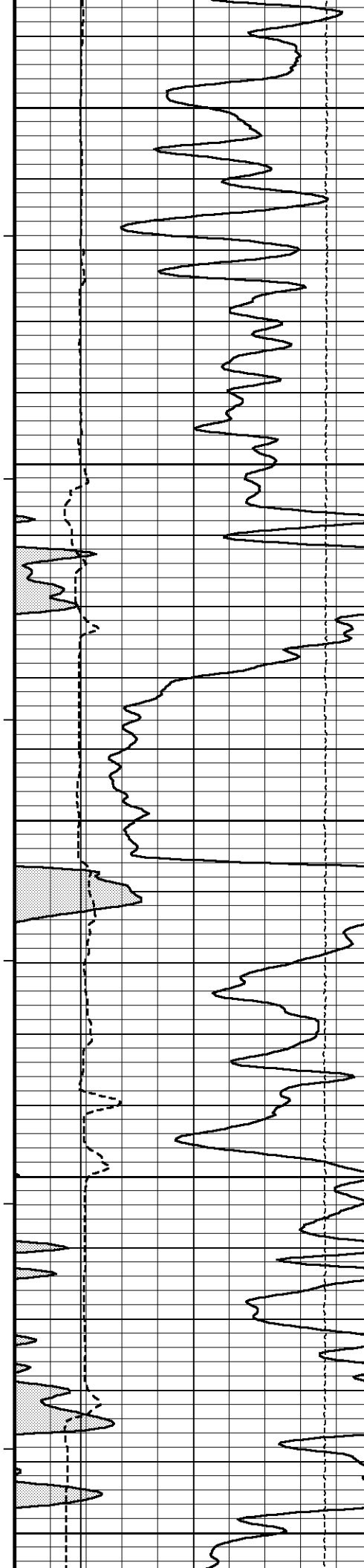




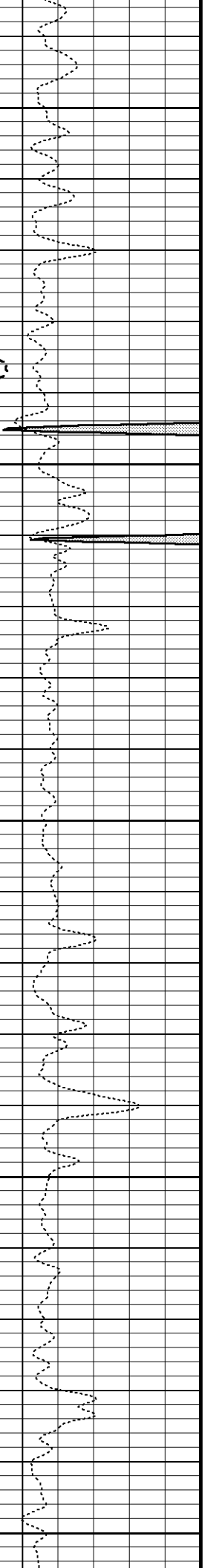
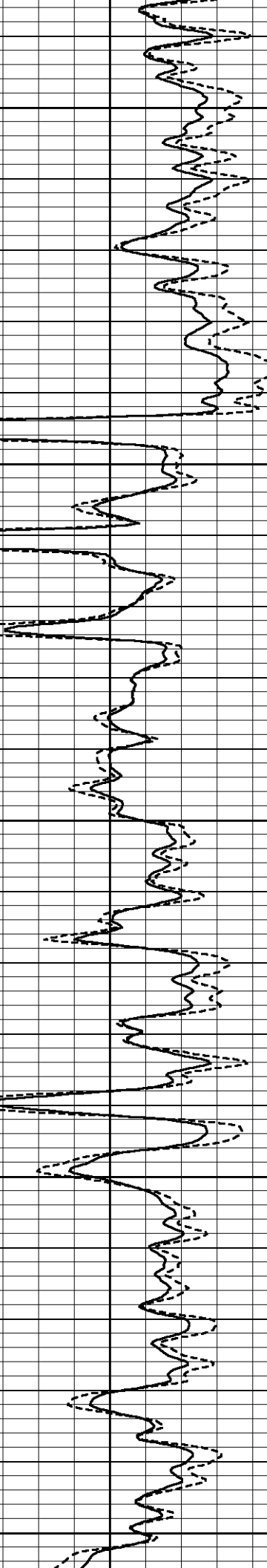
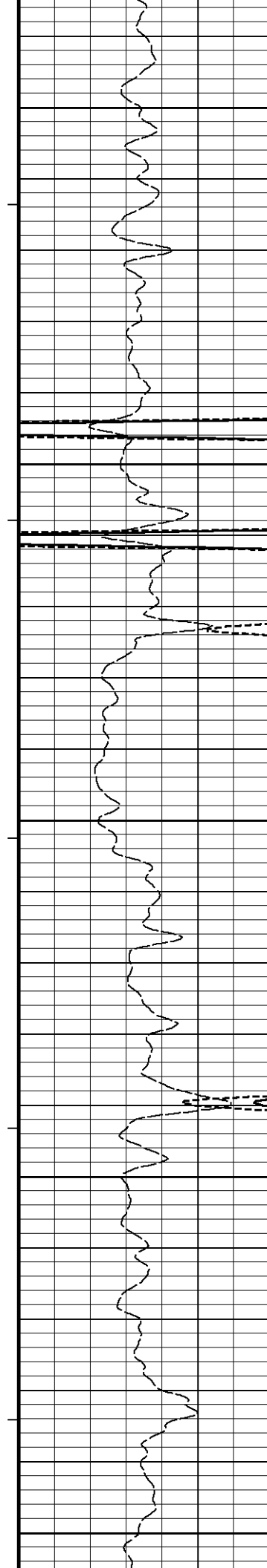


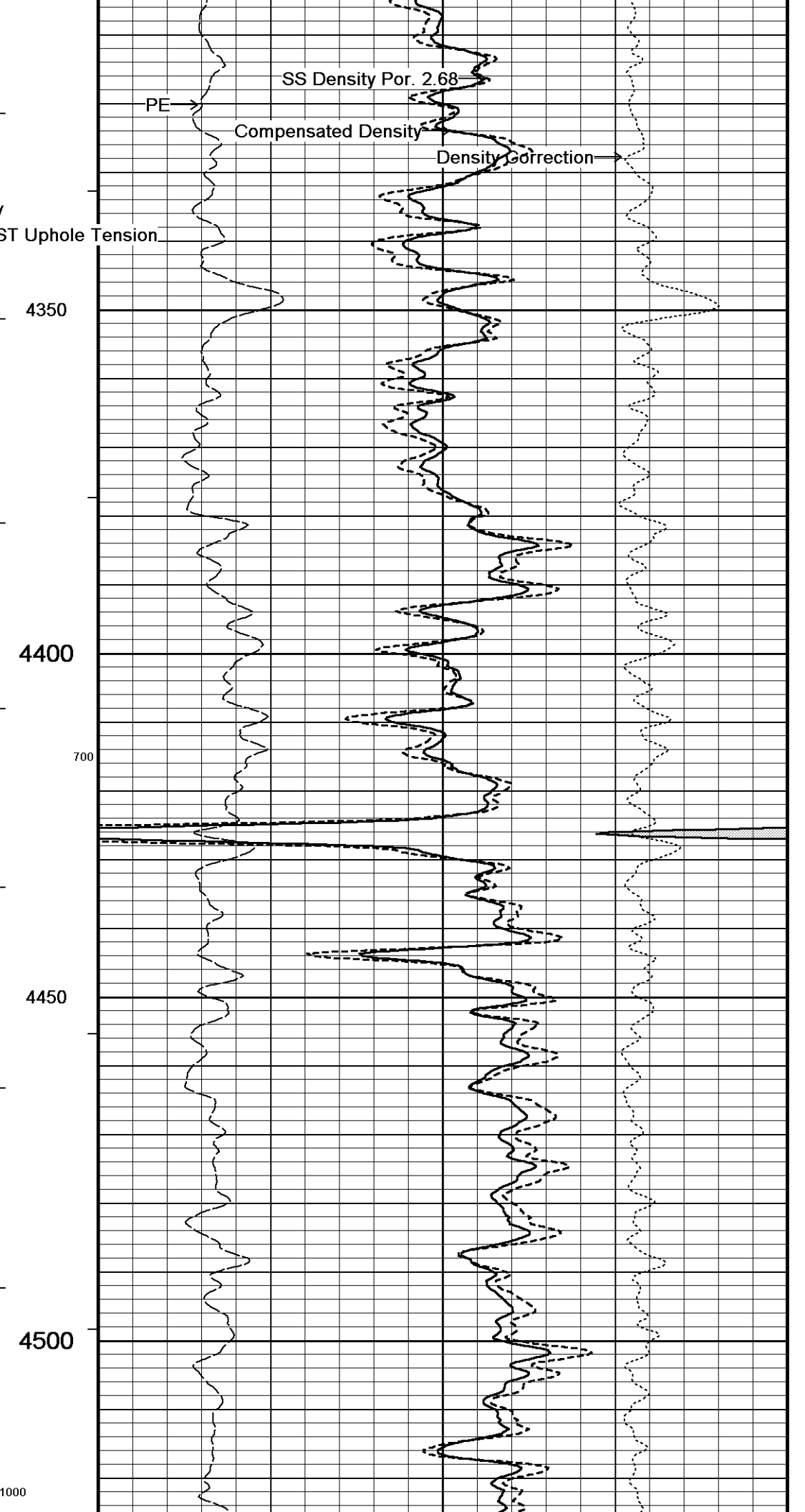
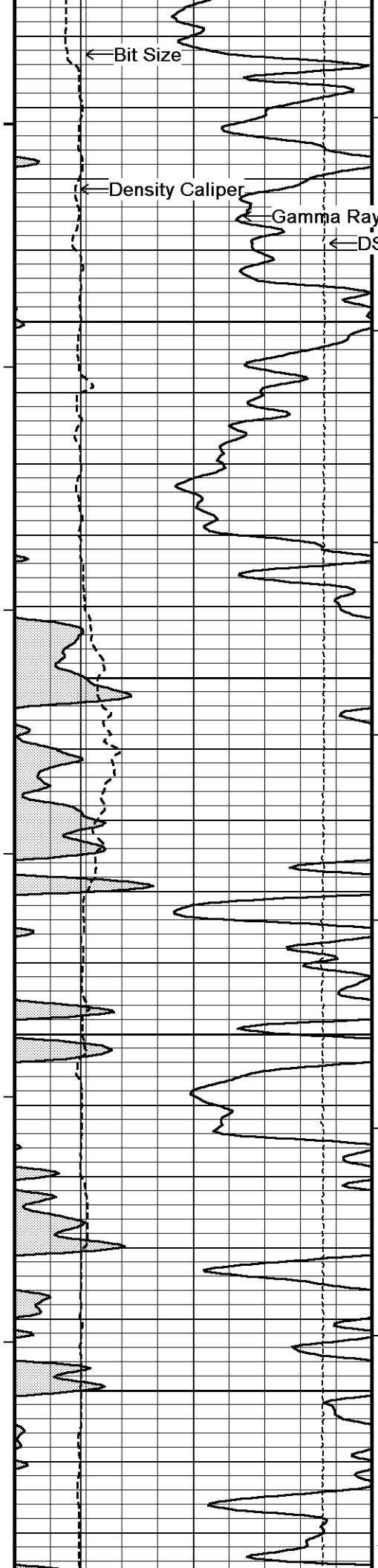


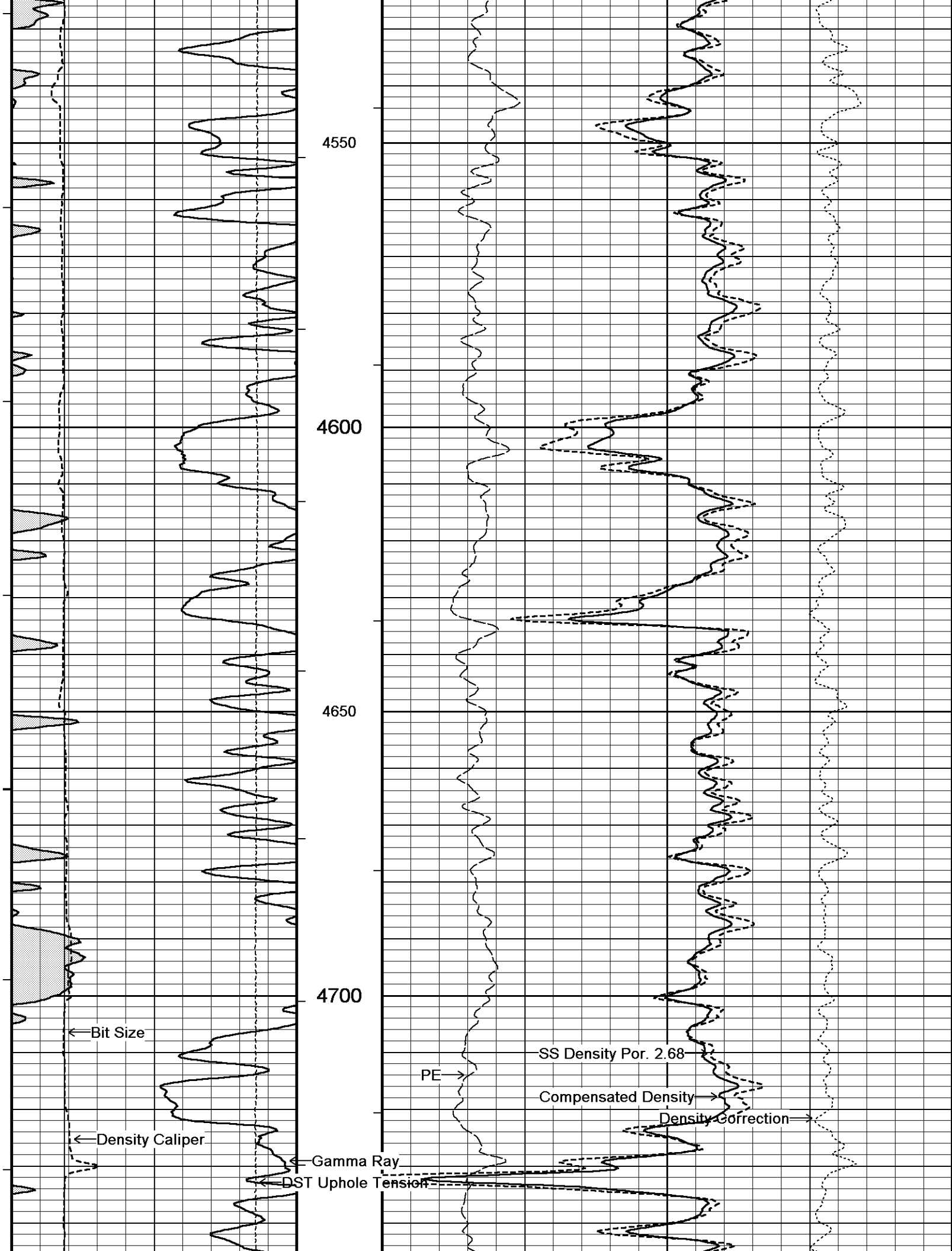


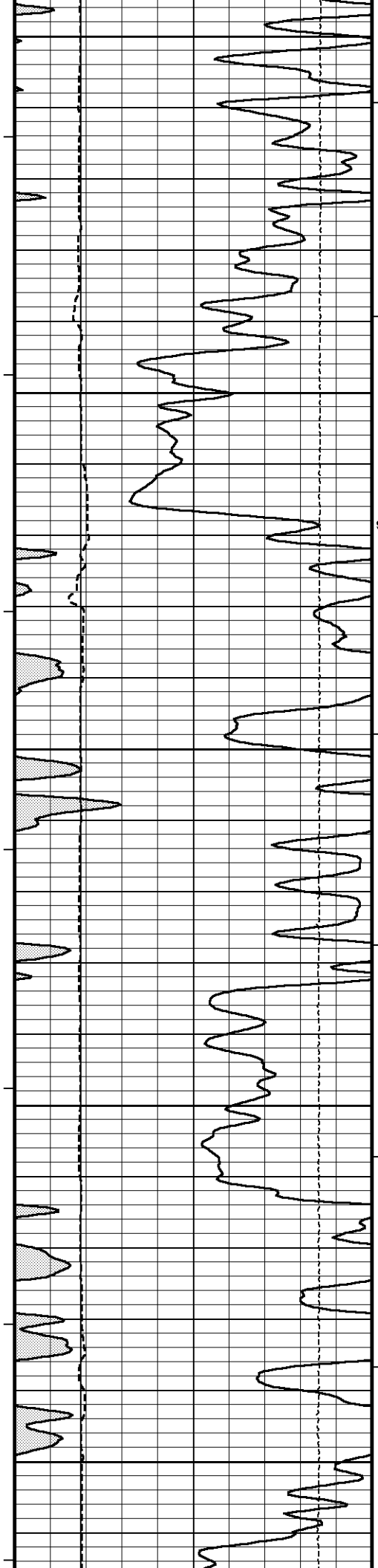


4100
4150
4200
1100
4250
4300









4750

4800

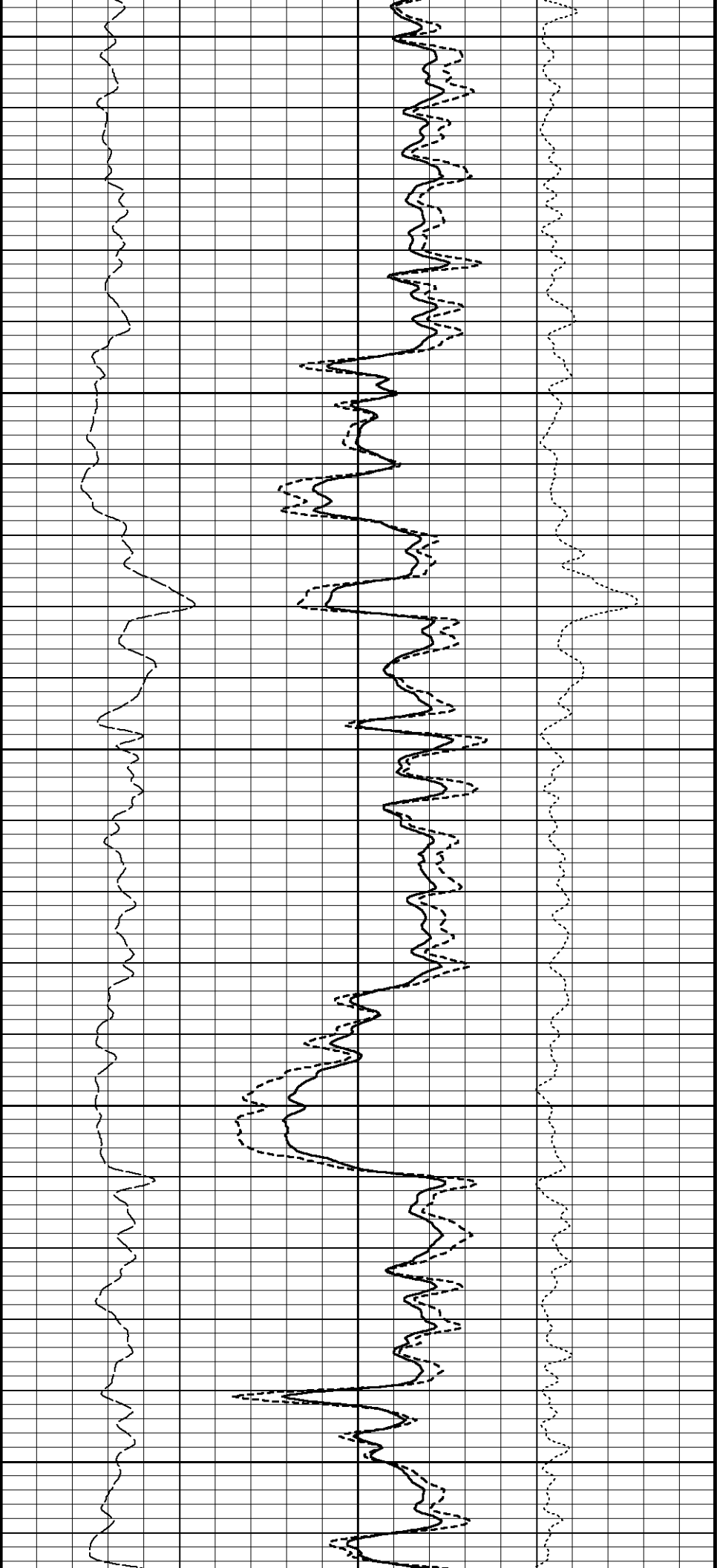
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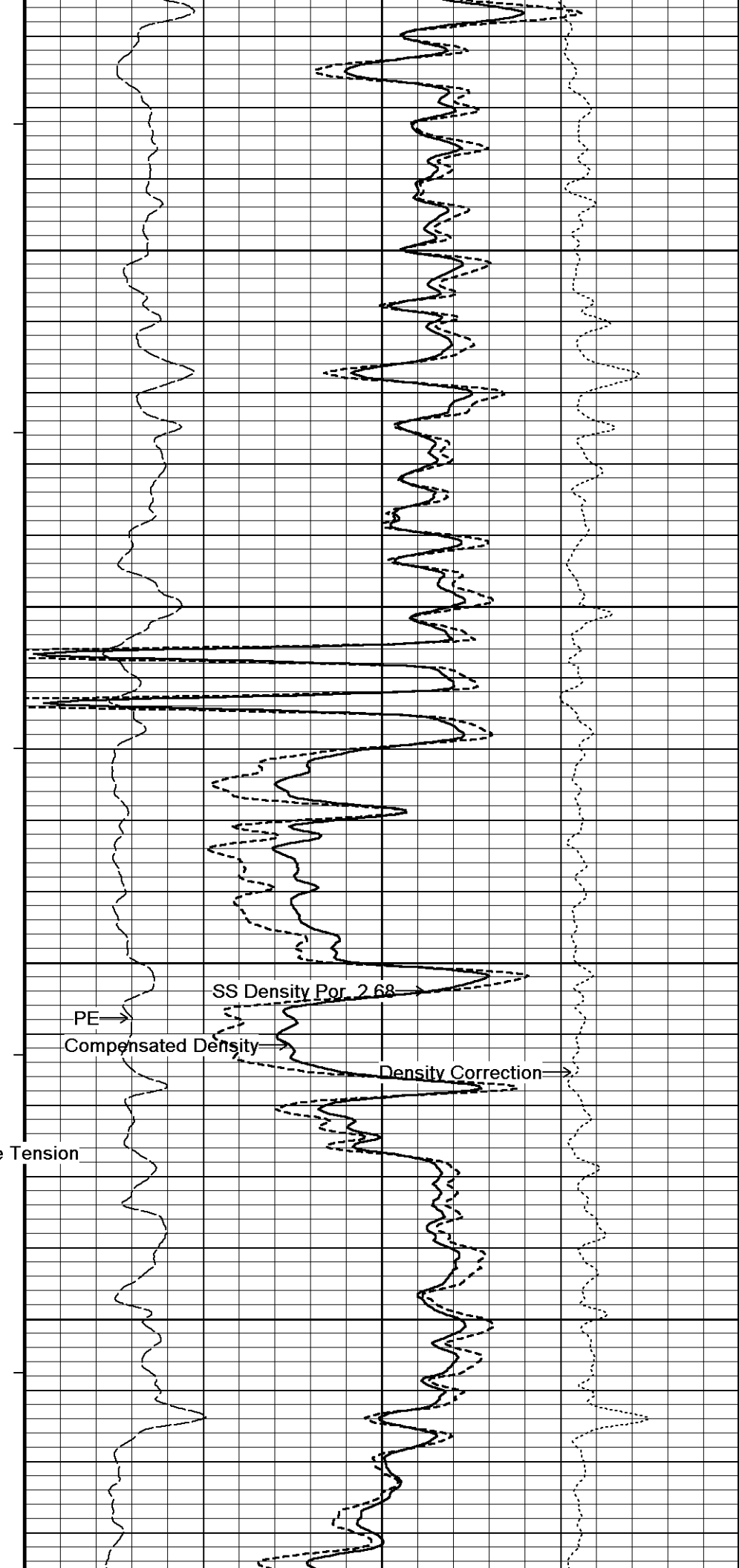
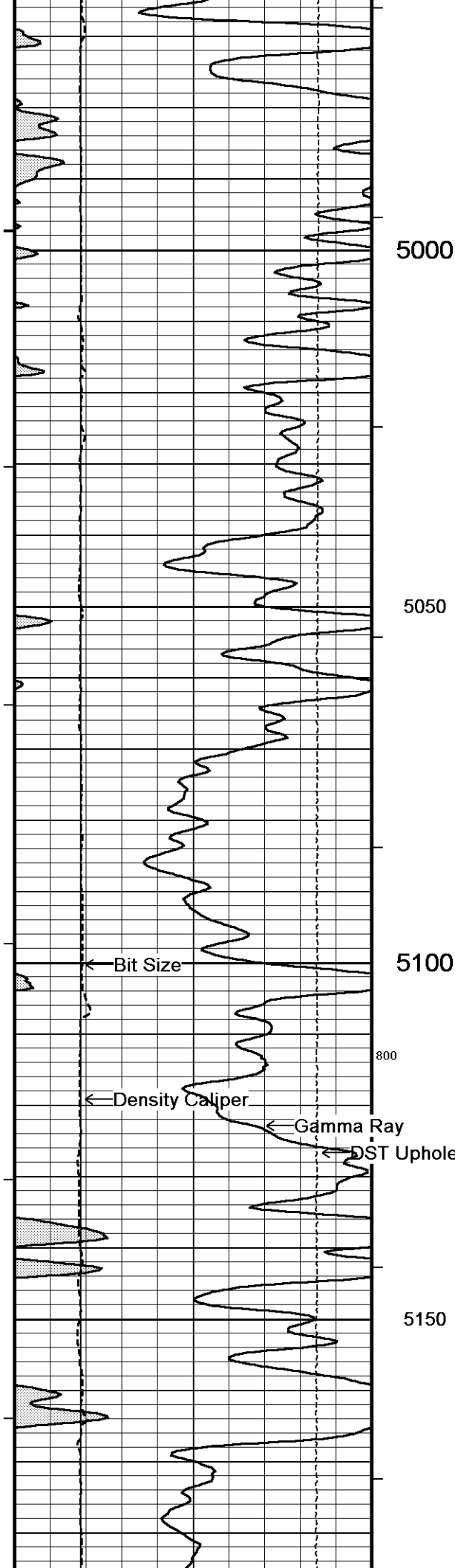
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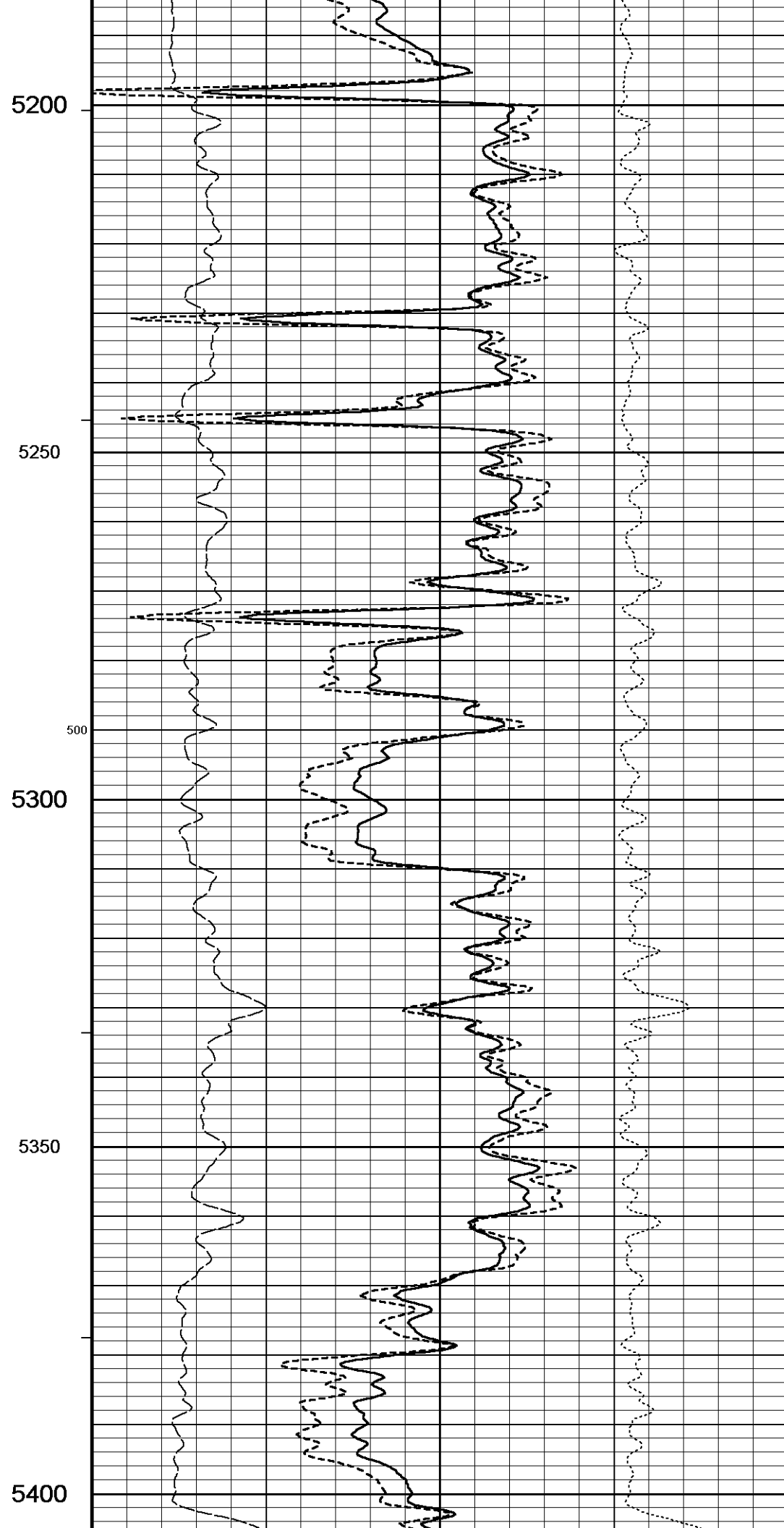
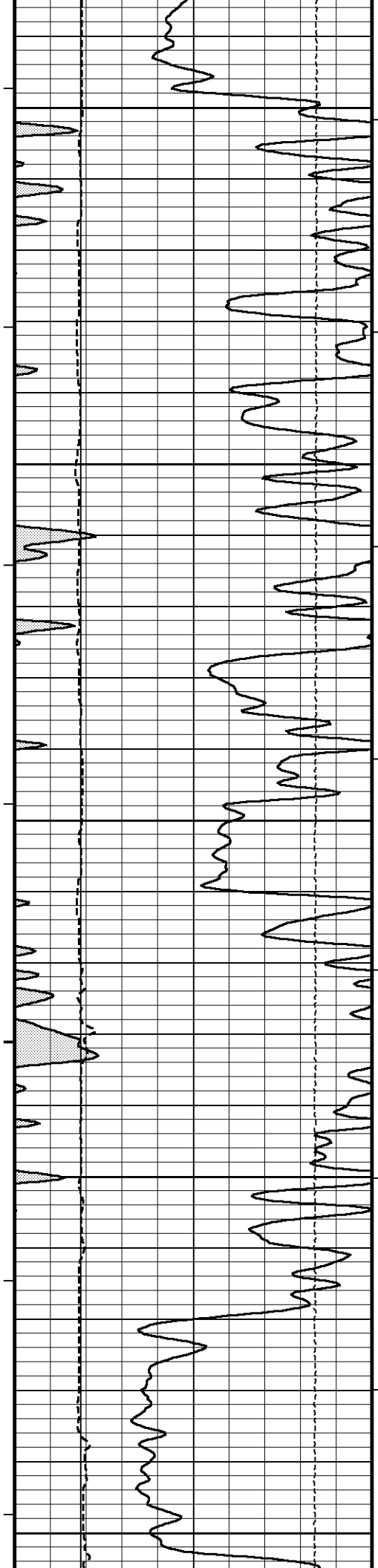
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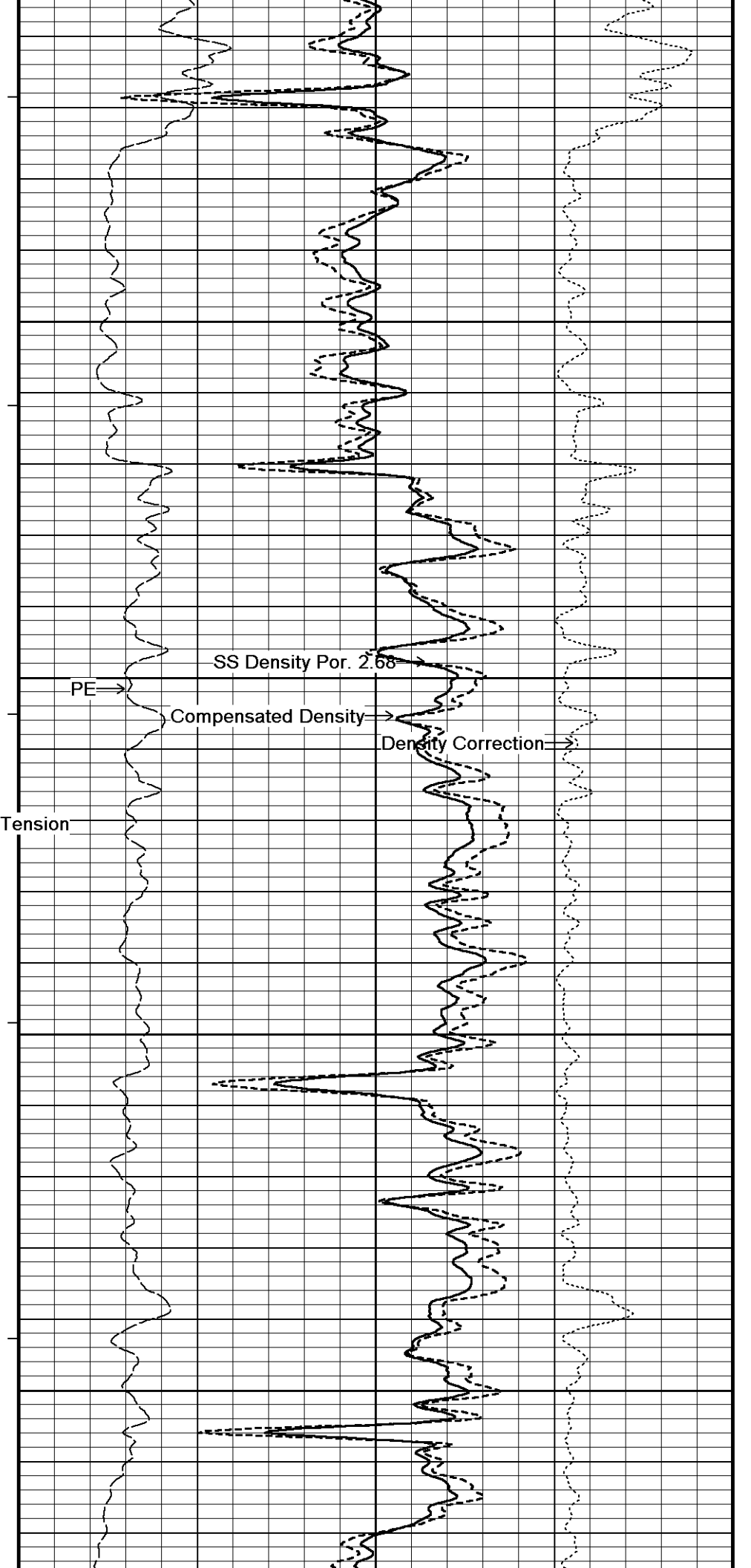
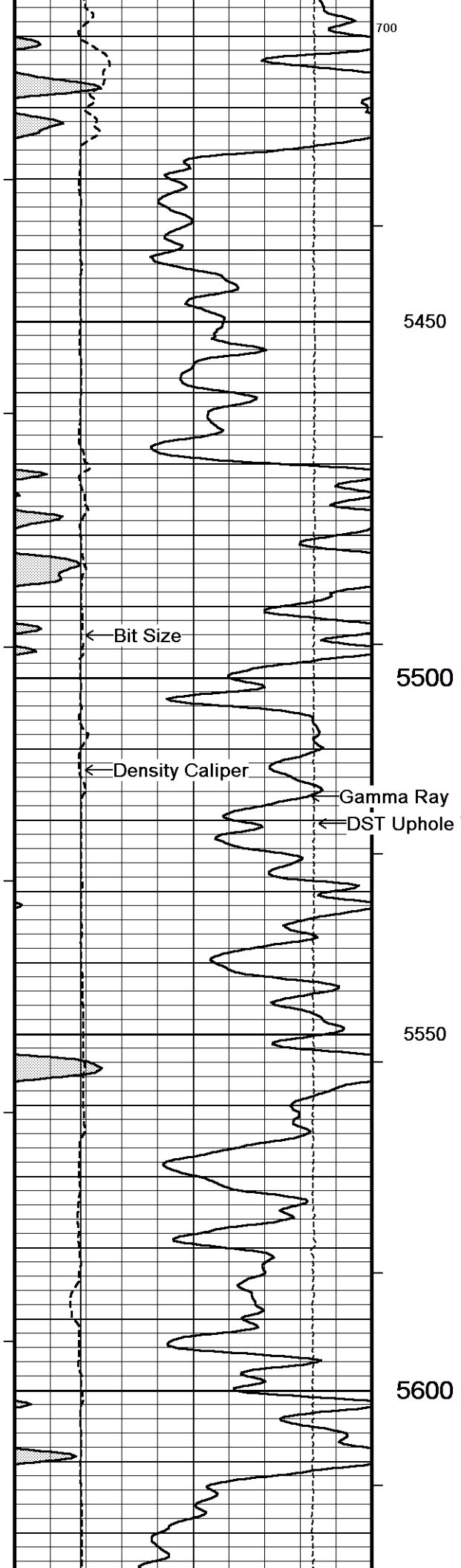
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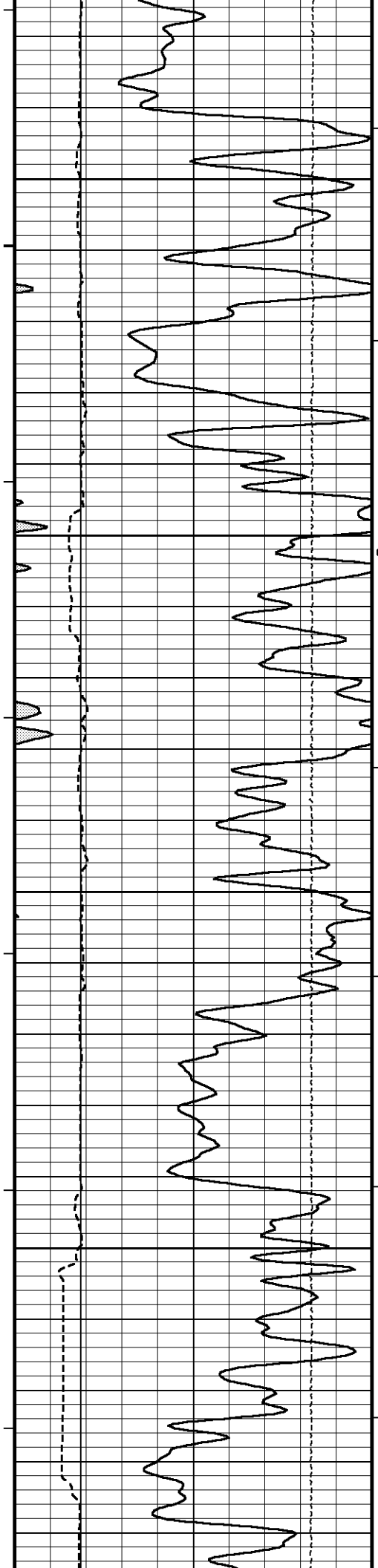
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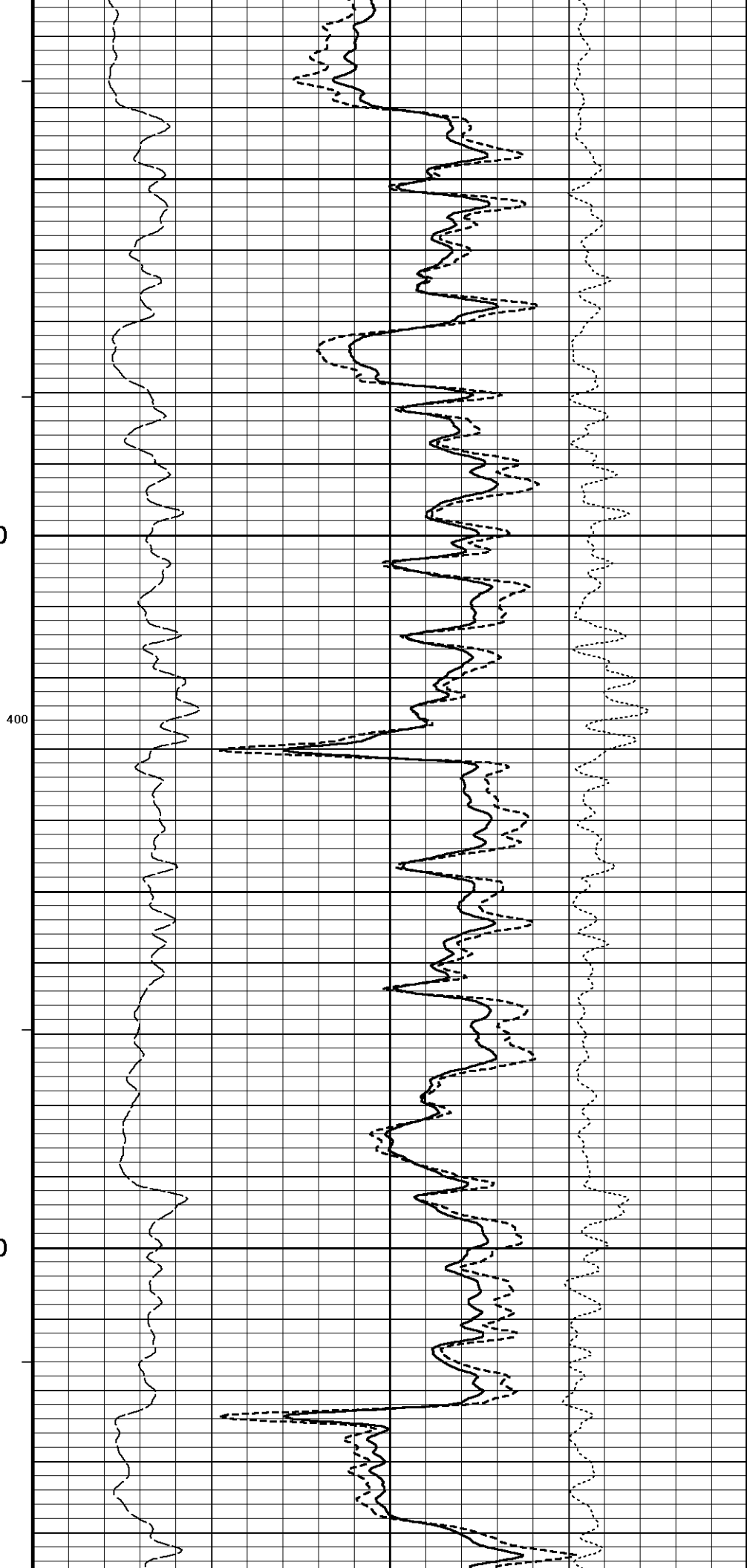




5650

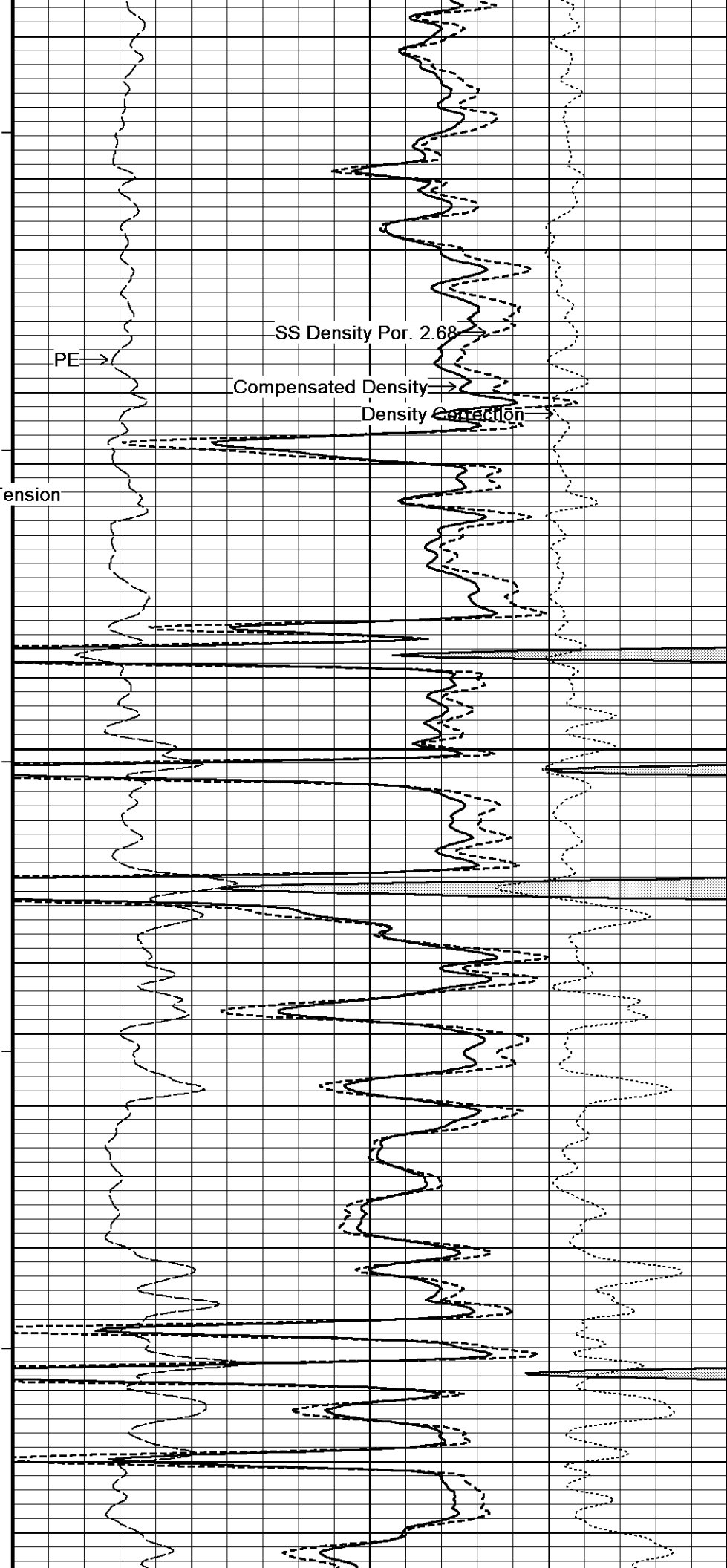
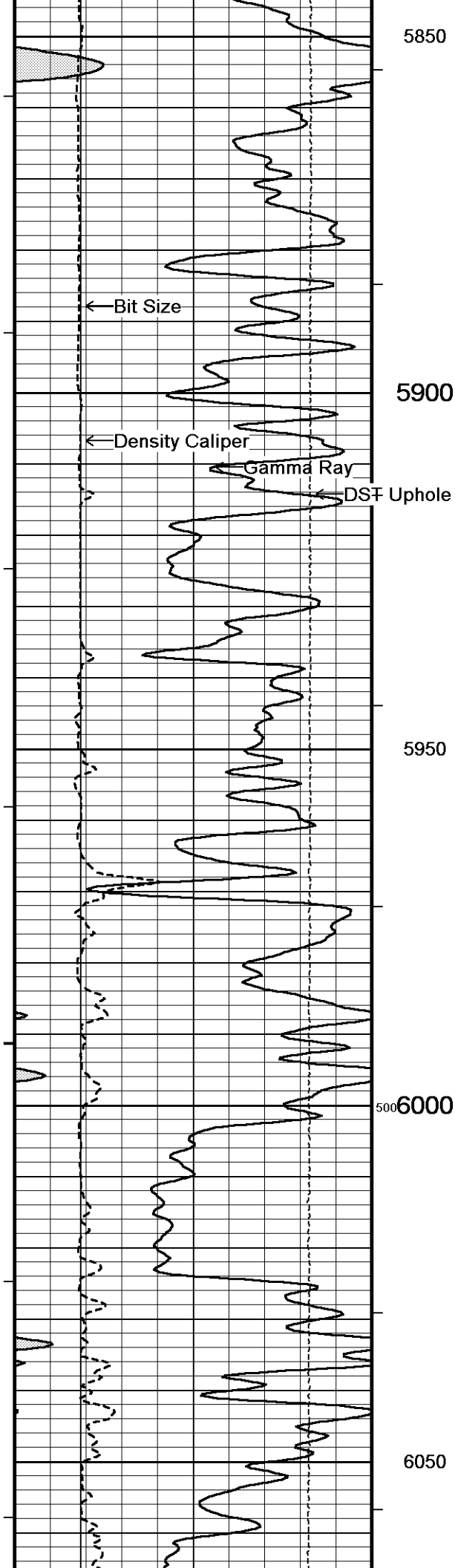
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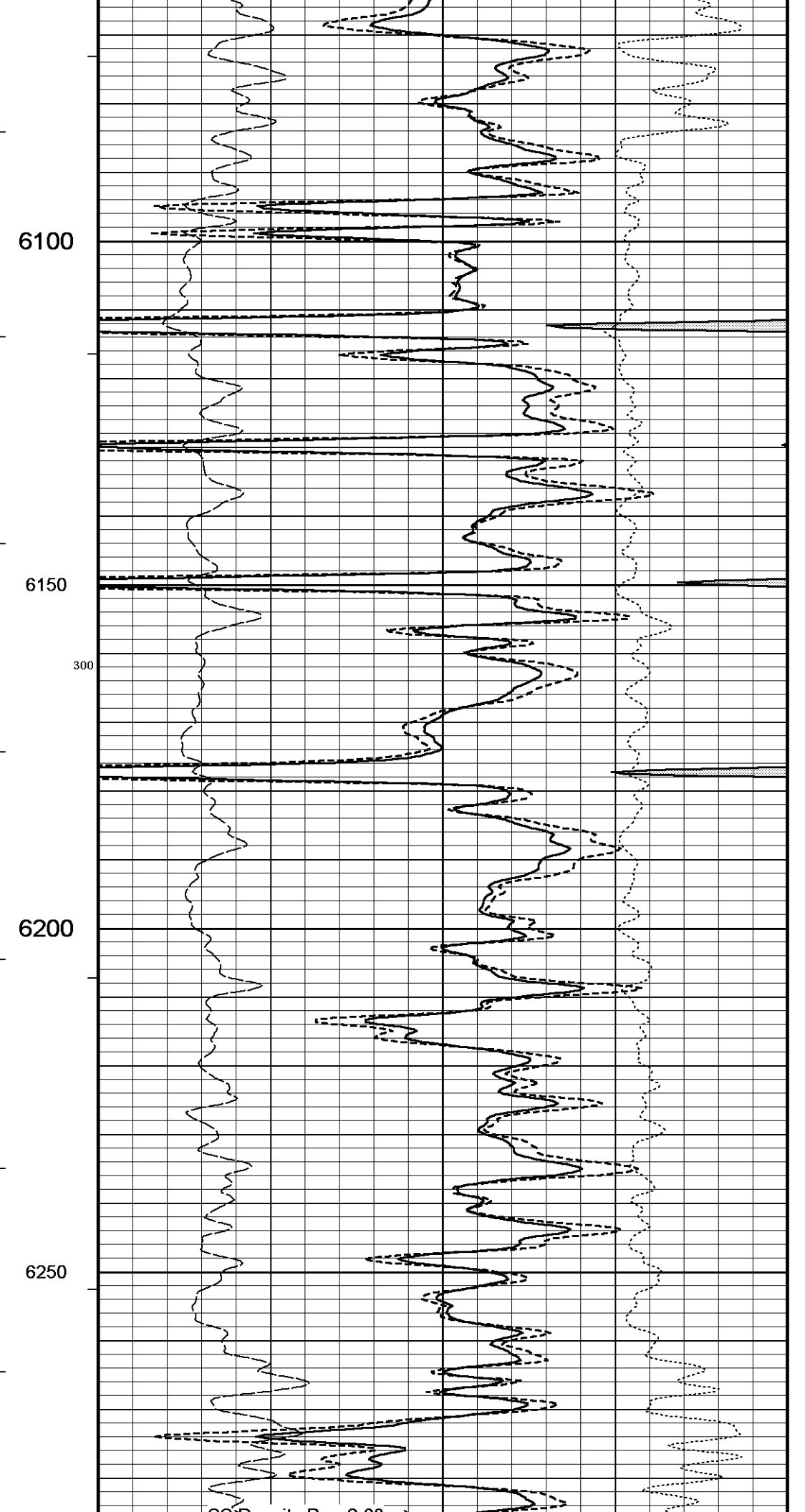
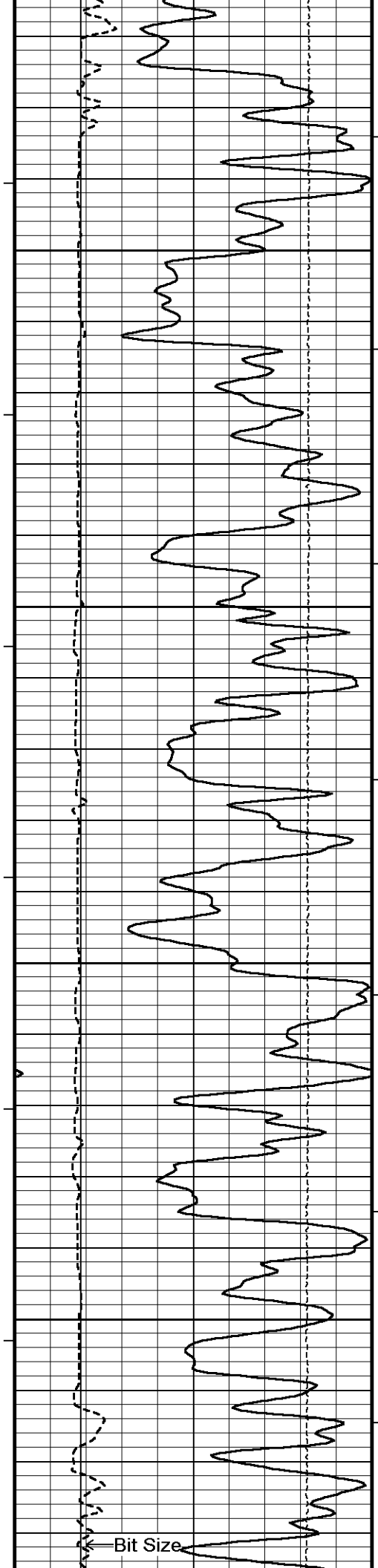
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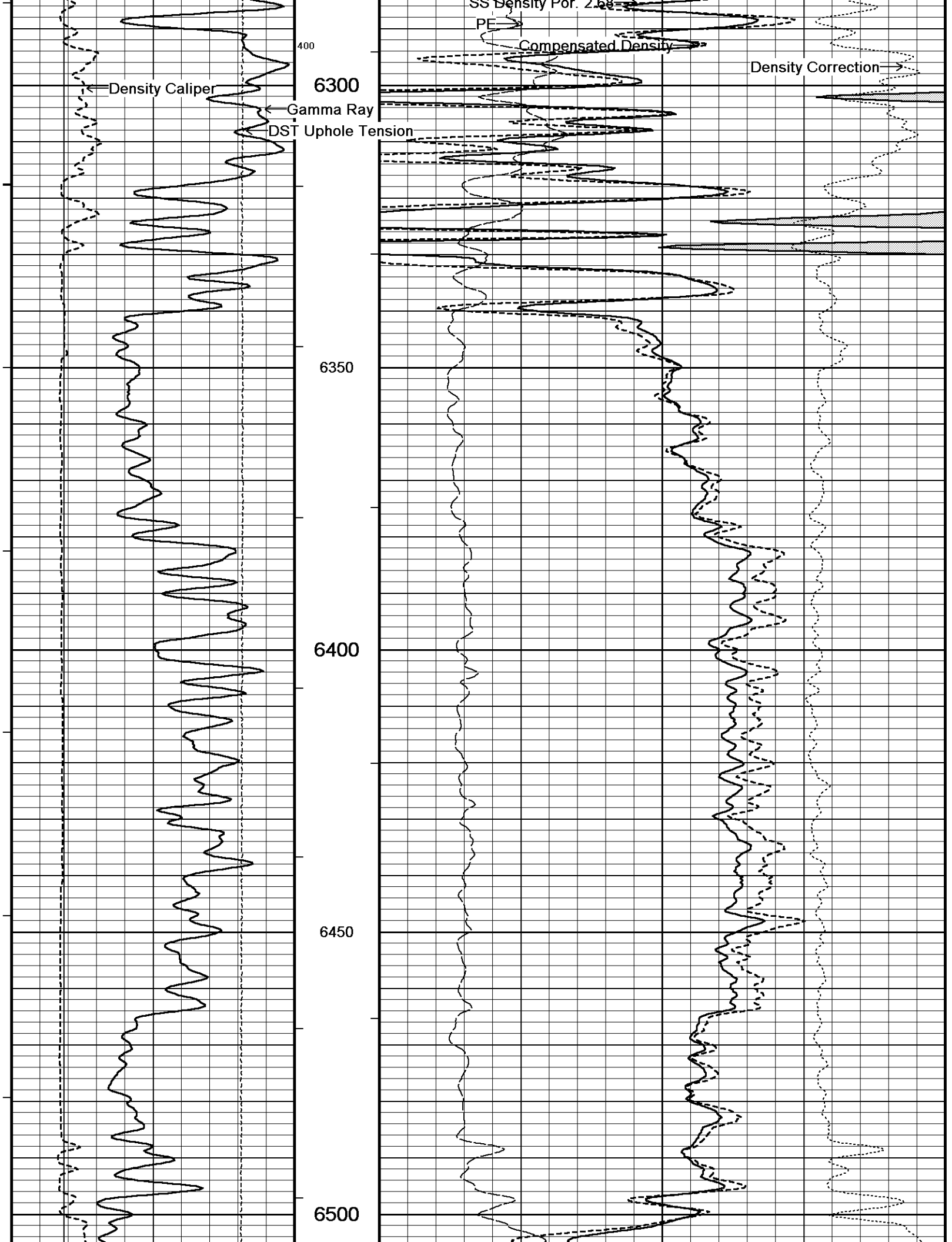


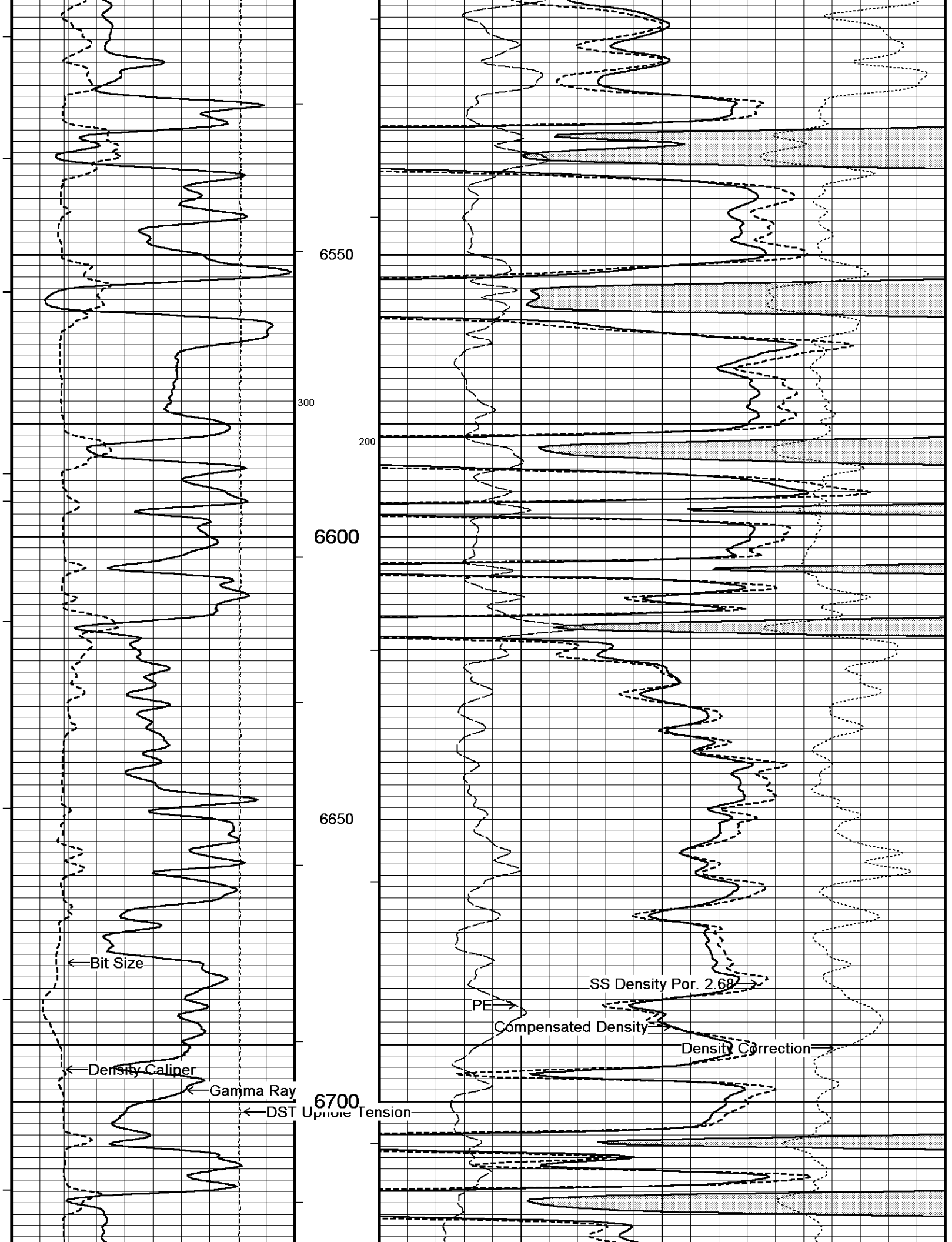
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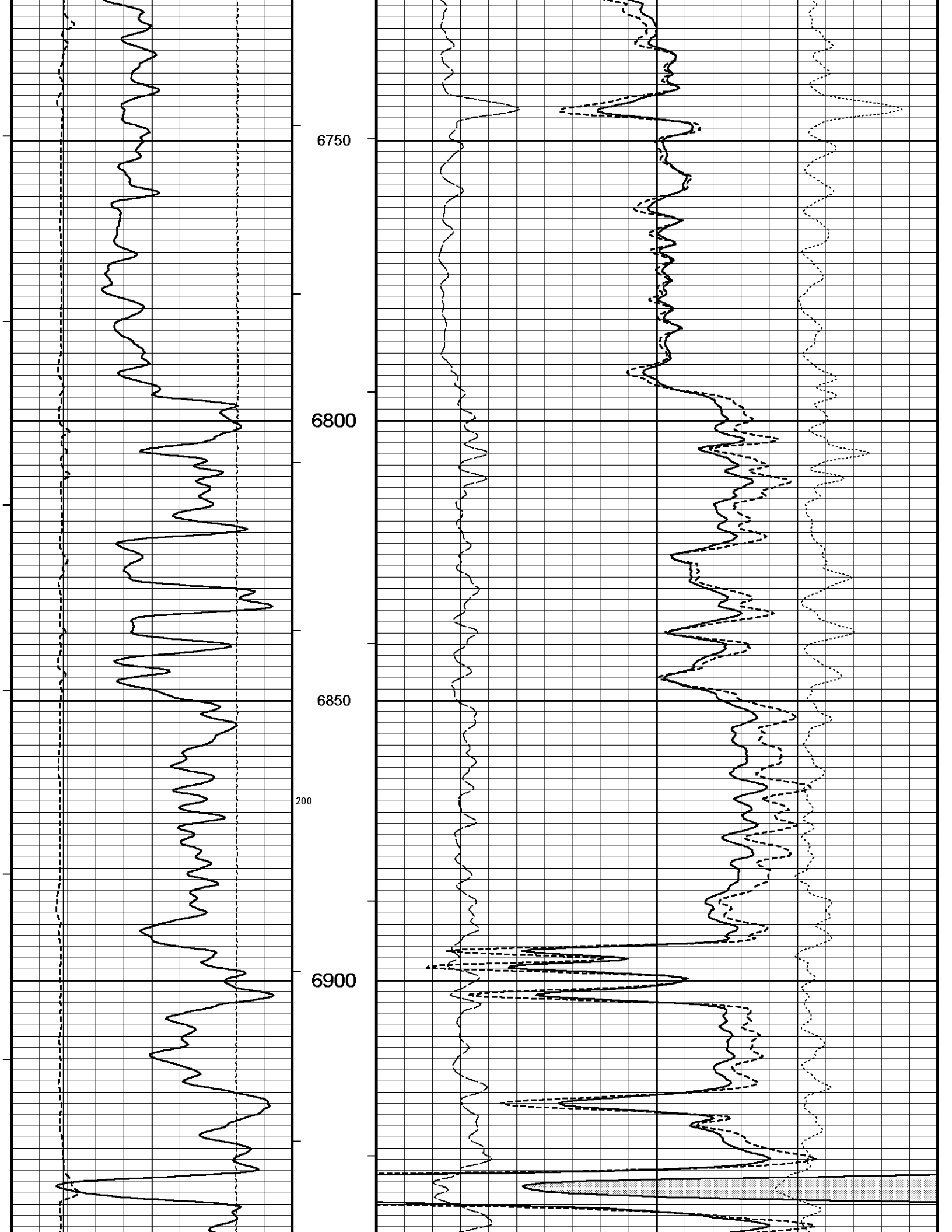
600

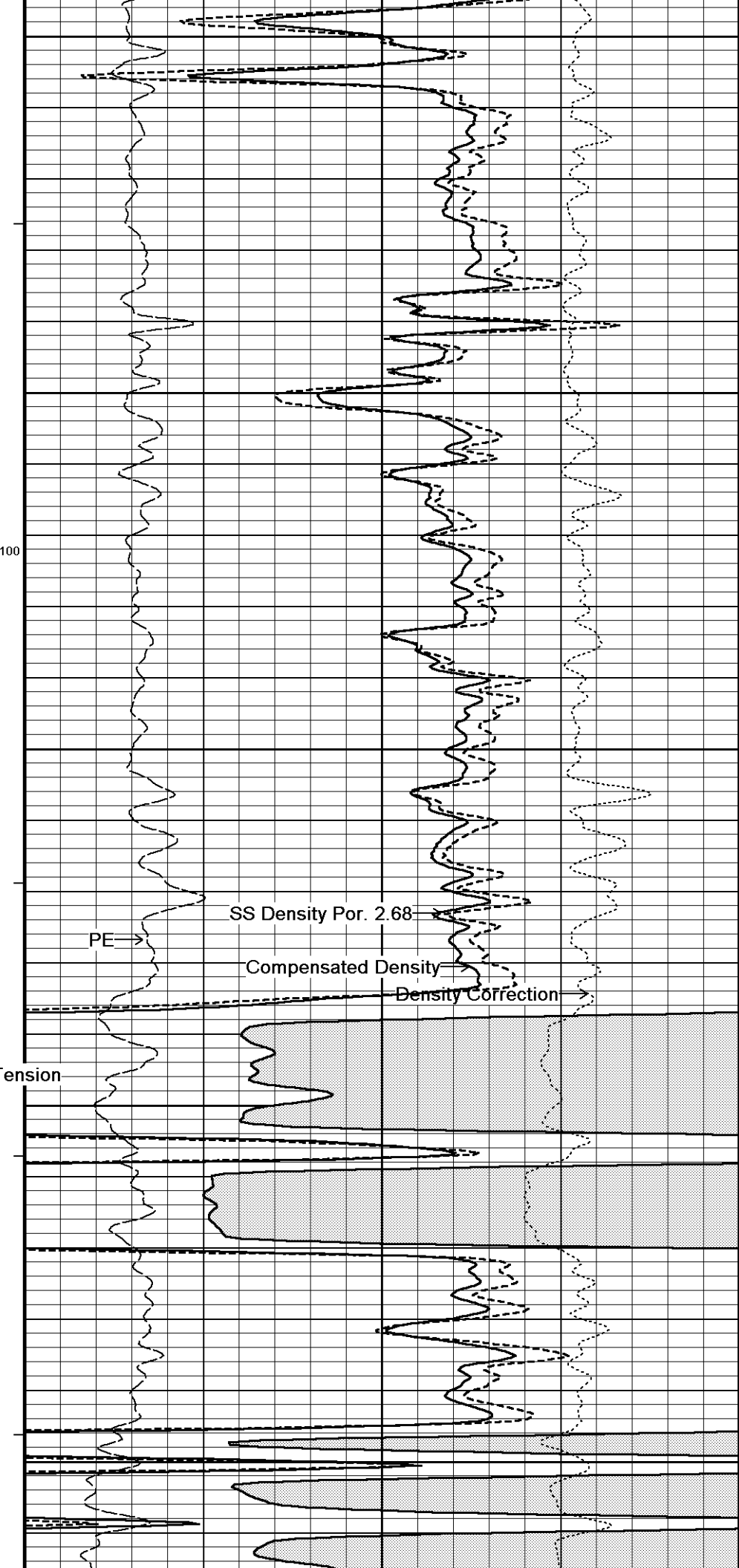
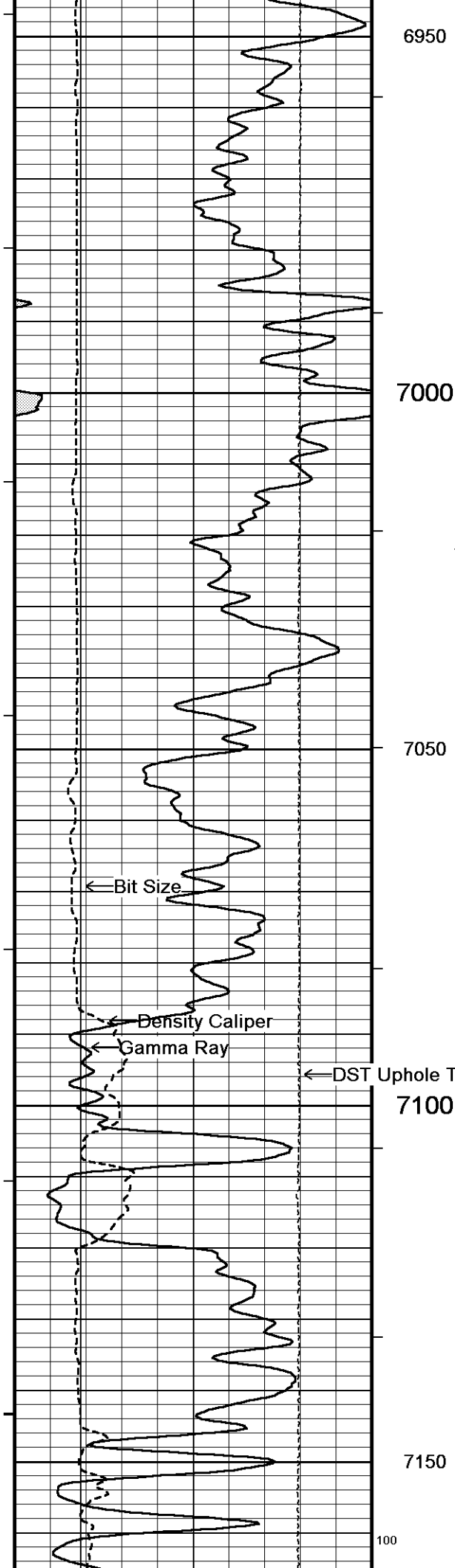


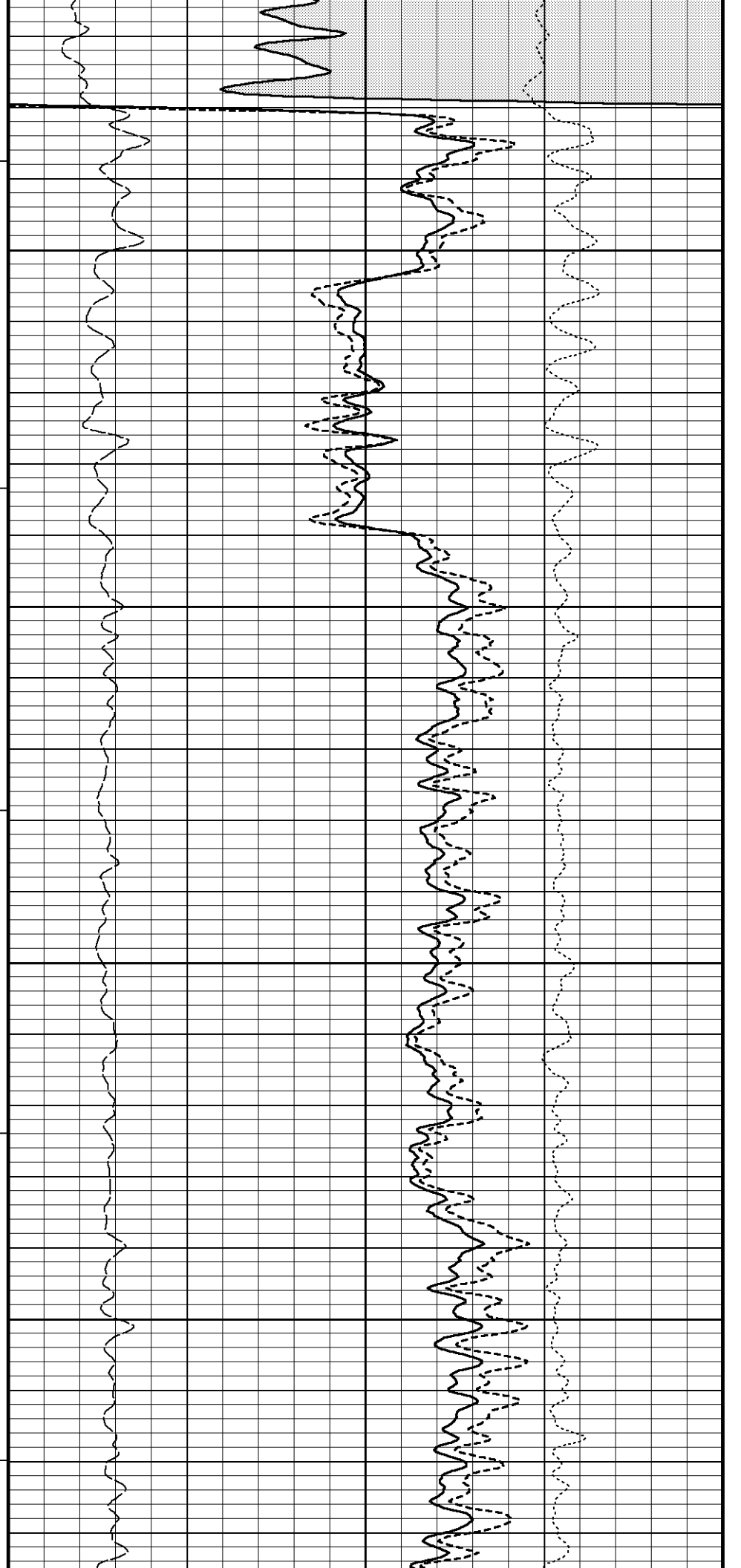
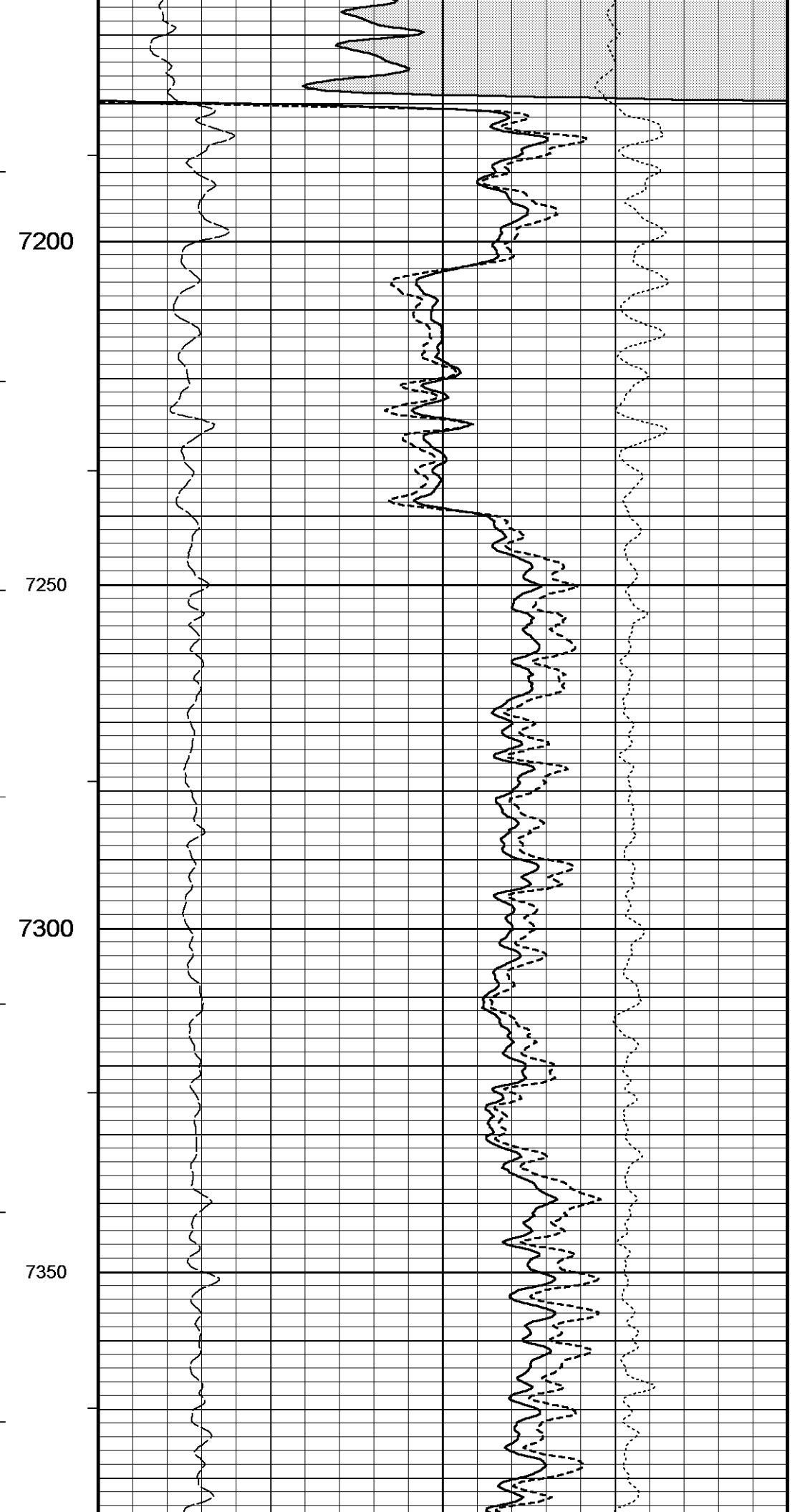
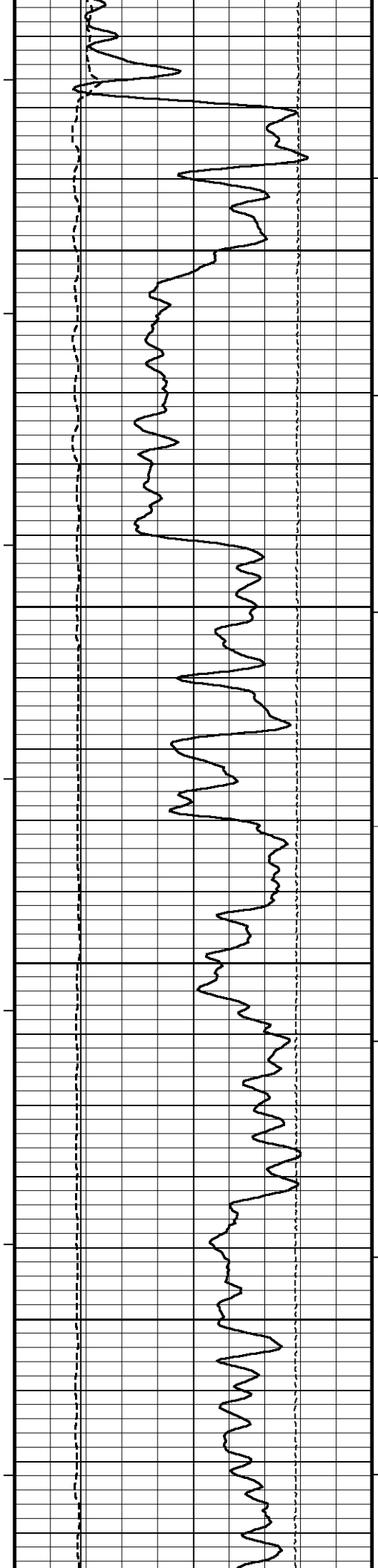


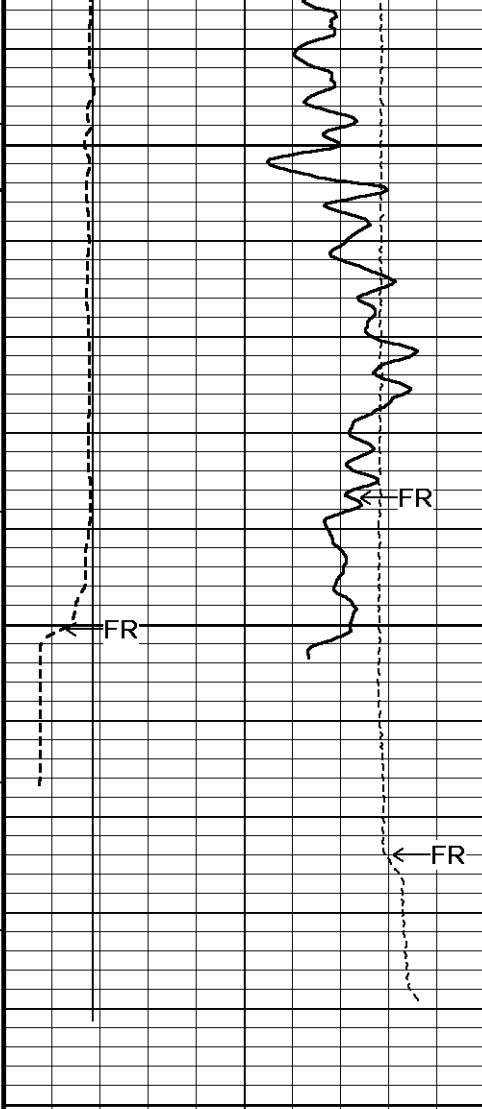












7400

7450

0

7500
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

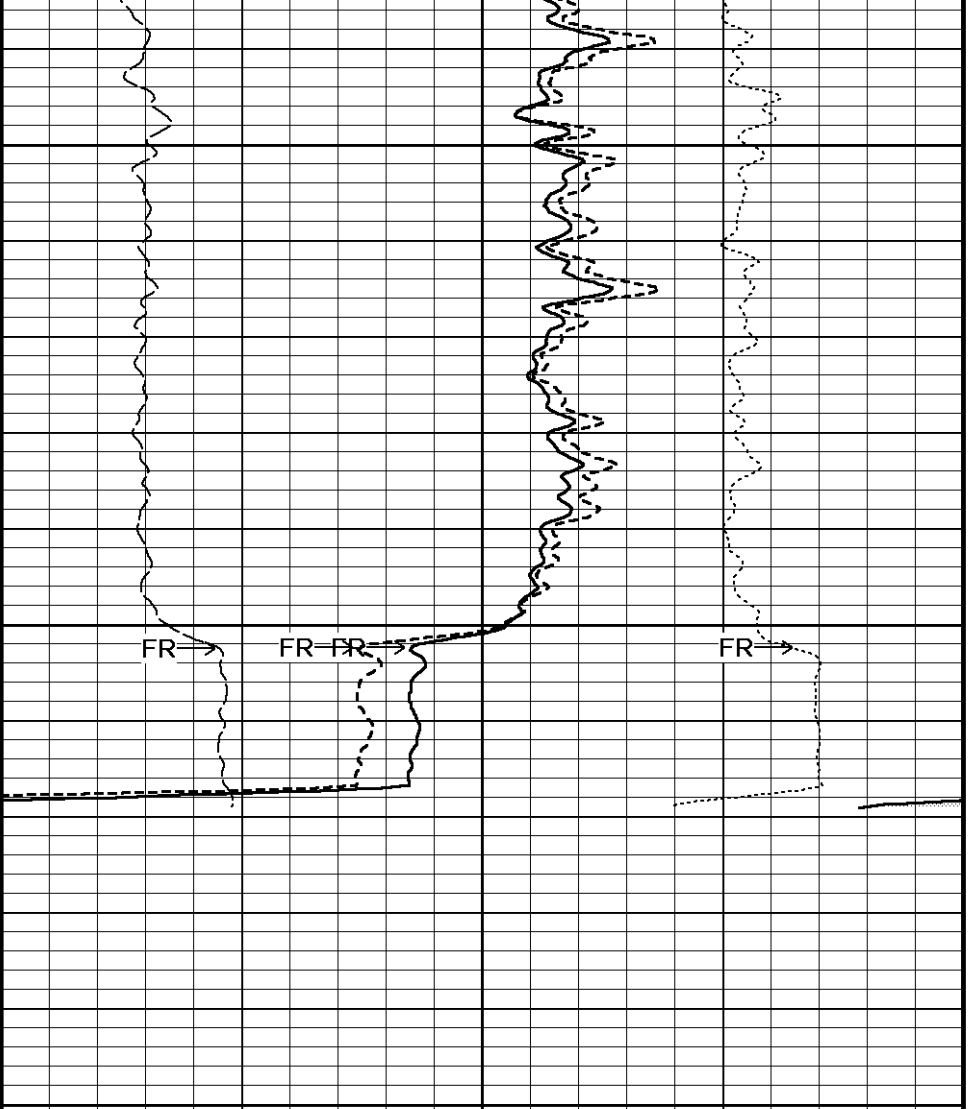
Density Caliper
inches
6 11 16

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



5 INCH MAIN LOG



BEFORE SURVEY CALIBRATION

C:\LOGS\GJ11-037\main.dta

General Constants All 000

Last Edited on 24-MAR-2011,20:53

General Parameters

Mud Resistivity	3.000	ohm-metres
Mud Resistivity Temperature	90.000	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

Down-hole Tension Calibration SMS 0

Field Calibration on 24-MAR-2011 20:35

Reading No	Measured	Calibrated (lbs)
1	15606.31	0.00
2	16566.65	350.00

High Resolution Temperature Calibration MCG-C 192

Field Calibration on 11-MAR-2011,06:06

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

High Resolution Temperature Constants MCG-C 192

Last Edited on 11-MAR-2011,06:06

Pre-filter Length	11
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SP Calibration MCG-C 192

Field Calibration on 11-MAR-2011,06:06

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

Gamma Calibration MCG-C 192

Field Calibration on 24-MAR-2011 18:41

	Measured	Calibrated (API)
Background	150	104
Calibrator (Gross)	1466	1016
Calibrator (Net)	1316	912

Gamma Constants MCG-C 192

Last Edited on 24-MAR-2011,18:35

Gamma Calibrator Number	GRC-072	
Mud Density	1.28	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 24-MAR-2011 18:51

Base Calibration

	Measured	Calibrated (cps)
	Near	Far

Ratio	32.812	3714	110
Field Calibrator at Base		Calibrated (cps)	
Ratio		1323	1983
Field Check		Calibrated (cps)	
Ratio		1316	1980
			0.665

Neutron Constants MDN-A.B 160		Last Edited on 24-MAR-2011,18:52	
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	
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	10.7	1.3	
Reference 2	965.5	126.8	
Base Check		281.9	
Field Check		0.0	

FE Constants MFE-A.A 85		Last Edited on 24-MAR-2011,19:06	
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	
Base Calibration			
Test Loop Calibration	Measured	Calibrated (mmho/m)	
Channel	Low High	Low 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)		Field Check (mmho/m)	
	Low	High	Low	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 23-MAR-2011,15:22	
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 24-MAR-2011 14:49
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)	
	7.99	7.98	

Photo Density Calibration MPD-B 167			Base Calibration on 24-MAR-2011 14:37	
			Field Check on 24-MAR-2011 19:01	
Density Calibration				
Base Calibration	Measured		Calibrated (sdu)	

Base Calibration		Near	Far	Near	Far
Reference 1		50013	18682	53115	19186
Reference 2		23150	3037	25020	2536
Field Check at Base					
		1169.0	1734.7		
Field Check					
		1171.0	1736.4		
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio		Ratio
Background	210	1040			
Reference 1	15507	49836	0.313		0.320
Reference 2	6038	23013	0.265		0.272
Field Check at Base					
	209.6	1039.8			
Field Check					
	214.4	1046.2			

Density Constants MPD-B 167			Last Edited on 24-MAR-2011,18:54		
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	1.28		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:\LOGS\GJ11-037\main.dta					
FE Check MFE-A.A 85			Before Survey Check		
			After Survey Check on 25-MAR-2011 01:56		
		Before (ohm-m)			After (ohm-m)
		0.0			281.8
Induction Check MAI-B.A 213			Before Survey Check on		
			After Survey Check on 25-MAR-2011 01:58		
Channel	Before Survey (mmho/m)		After Survey (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	13.7	3935.5	
2	0.0	0.0	30.1	3539.9	
3	0.0	0.0	28.8	3113.9	
4	0.0	0.0	19.0	2096.2	
Deep	0.0	0.0	17.4	2077.5	
Medium	0.0	0.0	42.6	4088.3	
Shallow	0.0	0.0	45.3	5160.2	

Photo Density Check MPD-B 167

Before Survey Check on 24-MAR-2011 19:01

After Survey Check on 25-MAR-2011 01:55

Density Check

	Near		Far	
	Before	After	Before	After
	1171.0	1169.3	1736.4	1740.6

PE Check

	Before	After
WS	214.4	212.1
WH	1046.2	1041.9

DOWNHOLE EQUIPMENT

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SHA-J.A Compact Swivel Head Adaptor

SHA-J.A 316 LG: 2.30 ft WT: 22.0 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-D.A Compact Knuckle Joint

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

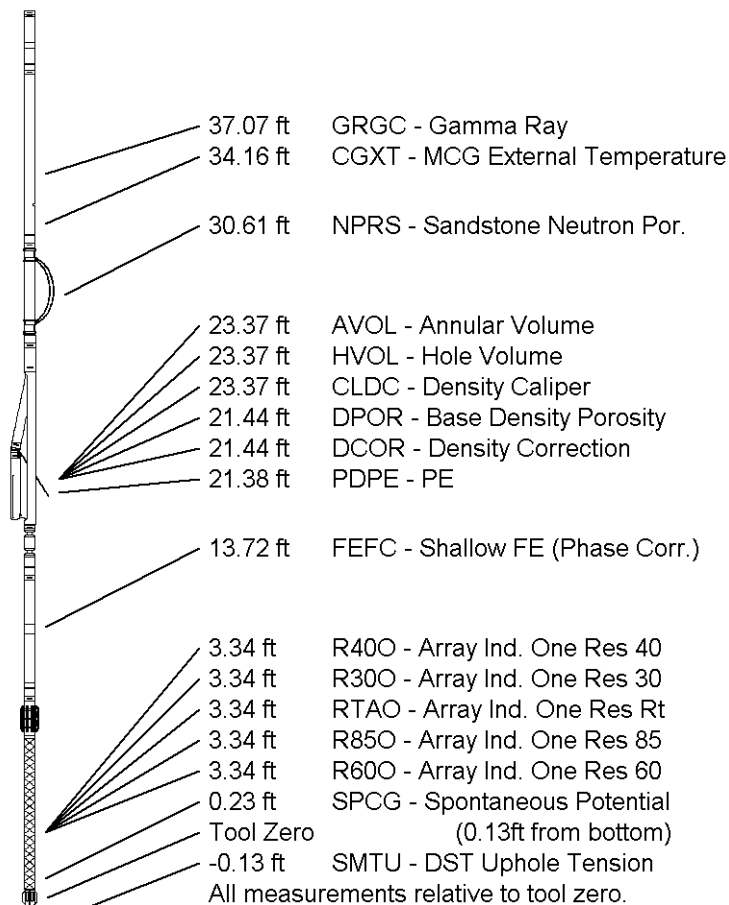
Compact Focussed Electric

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

Compact Induction

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

Total Length: 44.66 ft Weight: 348.3 lb



COMPANY

BILL BARRETT CORPORATION

WELL

GGU FEDERAL 31C-29-691

FIELD

GIBSON GULCH

PROVINCE/COUNTY

GARFIELD

COUNTRY/STATE

U.S.A. / COLORADO

Elevation Kelly Bushing	6127.00	feet
Elevation Drill Floor		feet
Elevation Ground Level	6104.00	feet

First Reading	7451.86
Depth Driller	7475.00 feet
Depth Logger	7474.00 feet



COMPENSATED PHOTO DENSITY
COMPENSATED DUAL NEUTRON
LOG

Weatherford®

