CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG

COMPANY	SANDRIDGE ENERGY
WELL	TURNER 3406 3-7H
FIELD	EASTHAM
PROVINCE/COUNTY	HARPER
COUNTRY/STATE	USA / KANSAS
LOCATION	250' FSL & 880' FWL SW SE SW SW

SEC	TWP	RGE	Other Services
7	34S	6W	MAI

API Number 15-077-21896
Permit Number

Permanent Datum G.L., Elevation 1301 feet
Log Measured From DF
Drilling Measured From DF @ 18FEET

Elevations:	feet
KB	1319.00
DF	1319.00
GL	1301.00

Date	11-JAN-2013		
Run Number	ONE		
Depth Driller	11690.00 feet		
Depth Logger	11690.00 feet		
First Reading	11558.00 feet		
Last Reading	2500.00 feet		
Casing Driller	5360.00 feet		
Casing Logger	5360.00 feet		
Bit Size	6.125 inches		
Hole Fluid Type	WATER		
Density / Viscosity	8.35 lb/USg	27.00 CP	
PH / Fluid Loss	8.00	60.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	2.20 @ 60.0 ohm-m		
Rmf @ Measured Temp	1.76 @ 60.0 ohm-m		
Rmc @ Measured Temp	2.64 @ 60.0 ohm-m		
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.90 @146.0 ohm-m		
Time Since Circulation	1 HOUR		
Max Recorded Temp	146.00 deg F		
Equipment Name	COMPACT		
Equipment / Base	18064	OKC	
Recorded By	B.ALLEN		
Witnessed By	T. ALCORN		
AFE #/ S.O.	DC12568		3539577

BOREHOLE RECORD

Last Edited: 12-JAN-2013 18:22

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	800.00
8.750	800.00	5360.00
6.125	5360.00	11690.00

REMARKS

LOGGED WITH WLS VER 13.03.7779 SOFTWARE

WELL LOGGED USING MESSENGER METHOD OF DEPLOYMENT, AND MEMORY LOGGING SYSTEM

HARDWARE: MAI: ISA STANDOFF BELOW
MPD: 4"PROFILE PLATE, MIS-A SINGLE SPRING DECENTRALIZER BELOW
MDN: MISD DOUBLE SPRING DECENTRALIZER RAN ABOVE

2.71 G/CC DENSITY MATRIX USED TOCALCULATE POROSITY
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST

DRILL PIPE DEPTH DURING DEPLOYMENT - 11511.47
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 11594.47

4.5" CASING USED TO CALCULATE AHV

SERVICE ORDER # 3539577
RIG: LARIAT 39

OPERATORS: R. BRADSHAW, C. ALEXANDER

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 12-JAN-2013 18:36
Filename: C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta
Recorded on 12-JAN-2013 17:02
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

Timing Marks
every 60.0 sec

Density Caliper
inches
4 9 14

MGS Gamma Ray
API
0 75 150
150 225 300

MGS Gamma Ray (2)
API
0 75 150
150 225 300

Bit Size
inches
4 9 14

Depth In Feet

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Limestone Neutron Por.
percent
30 20 10 0 -10

Limestone Neutron Por. (2)
percent
30 20 10 0 -10
70 60 50 40 30

Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

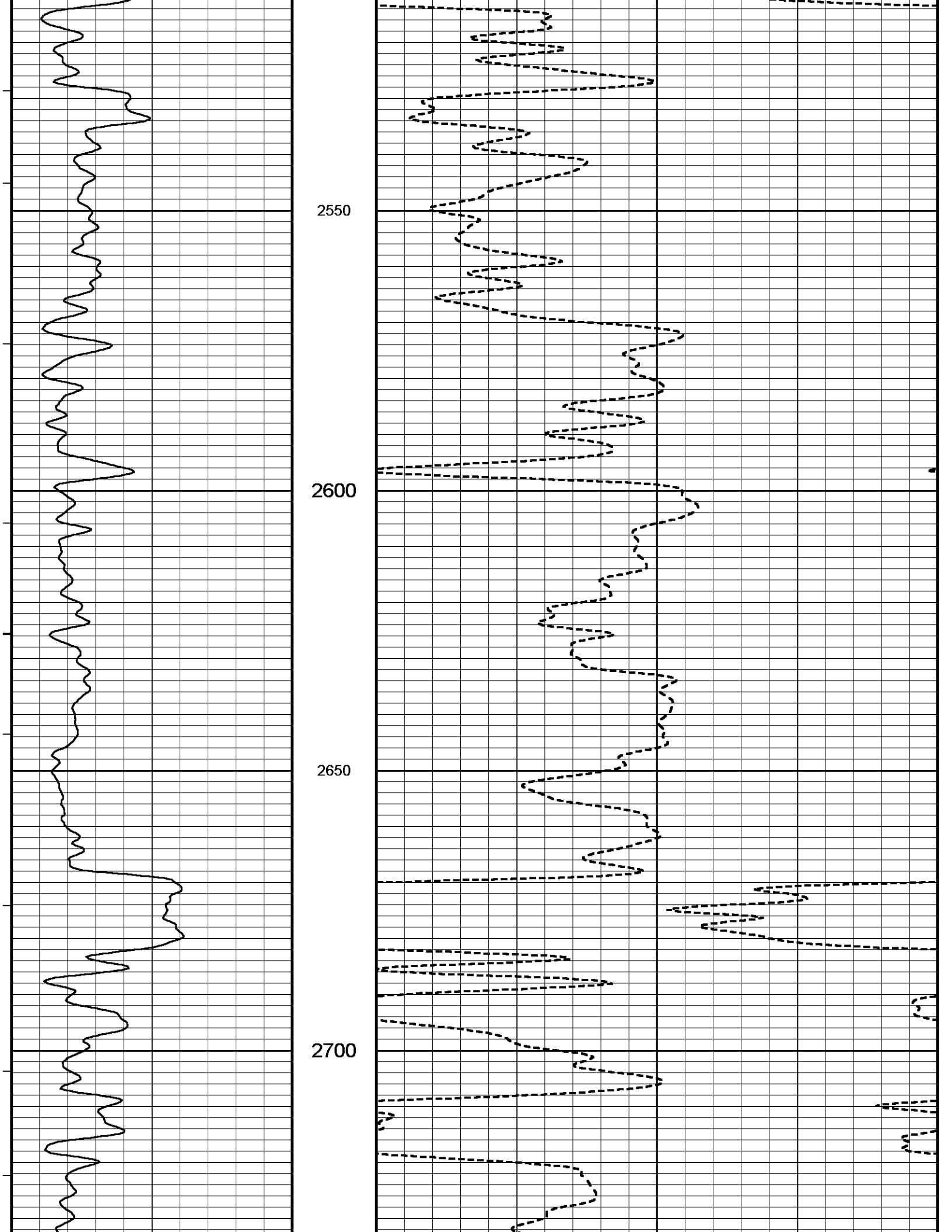
Density Correction
grams/cc
-0.50 0 0.50

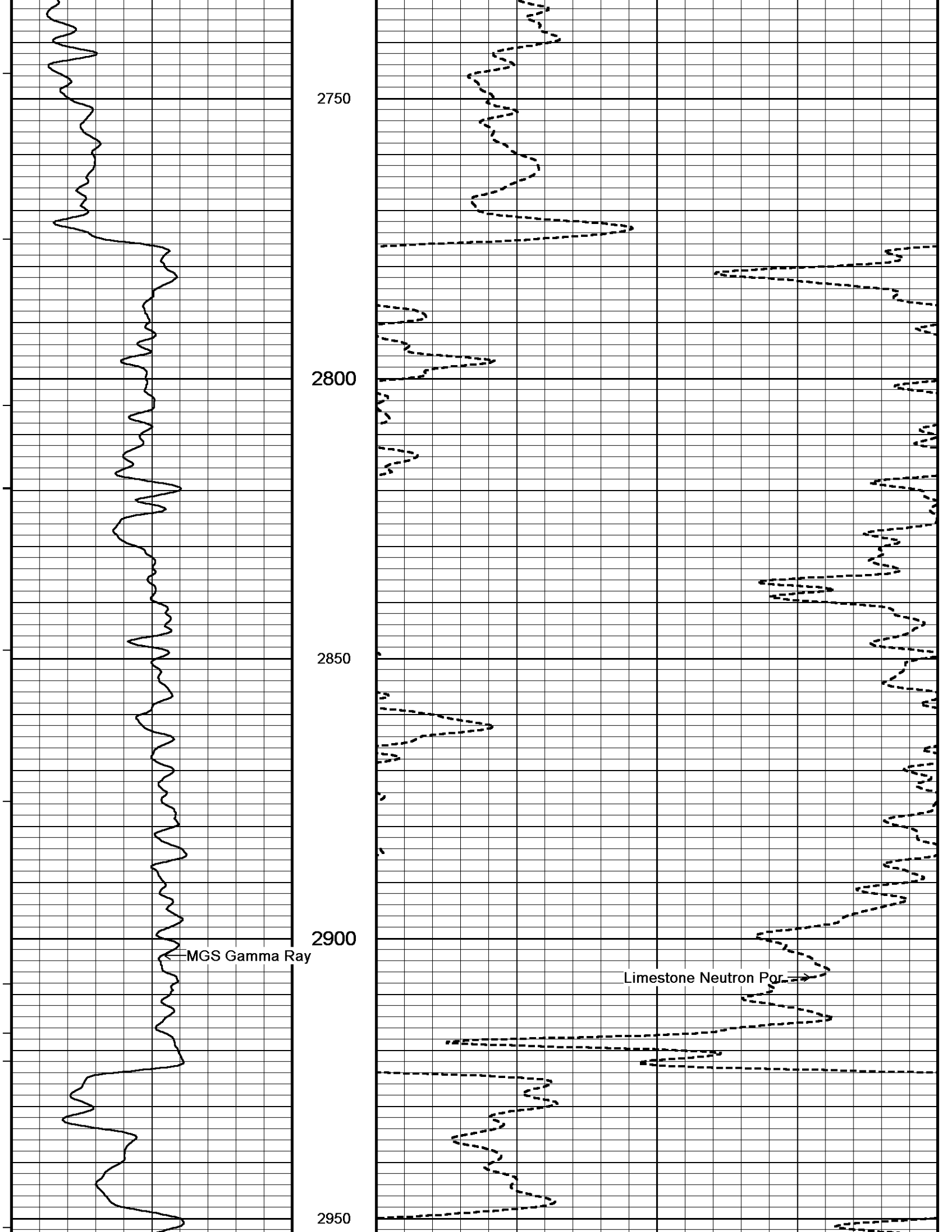
2450

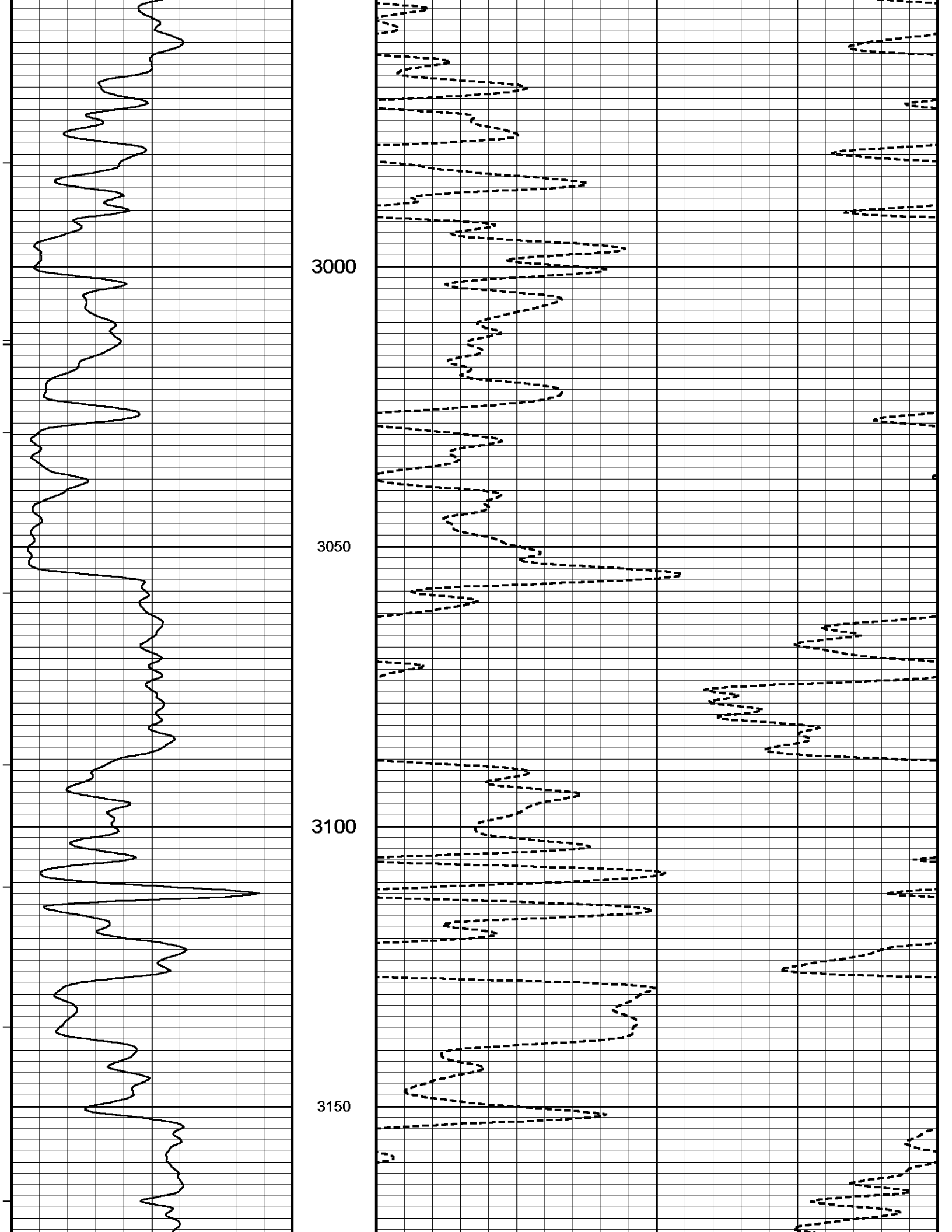
2500

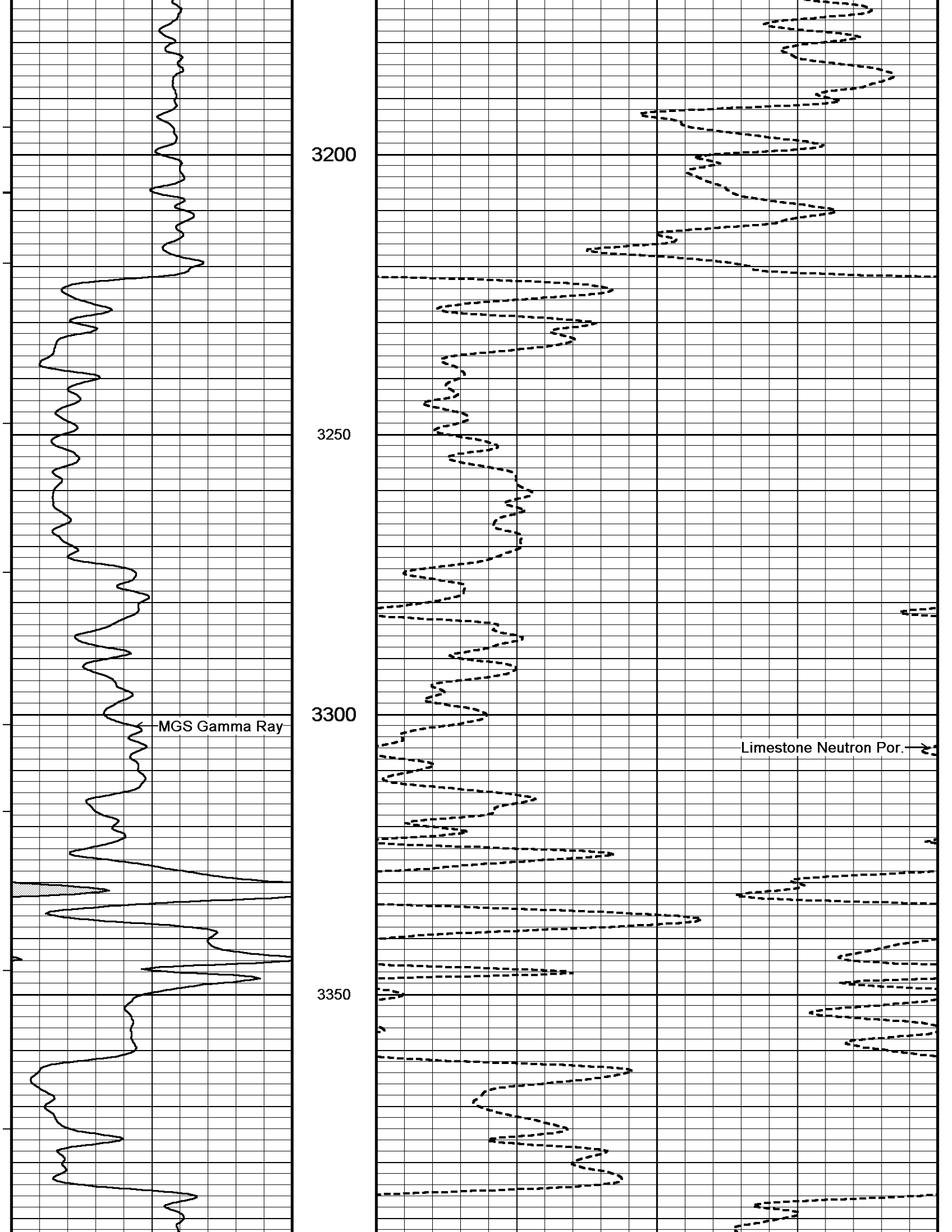
MGS Gamma Ray

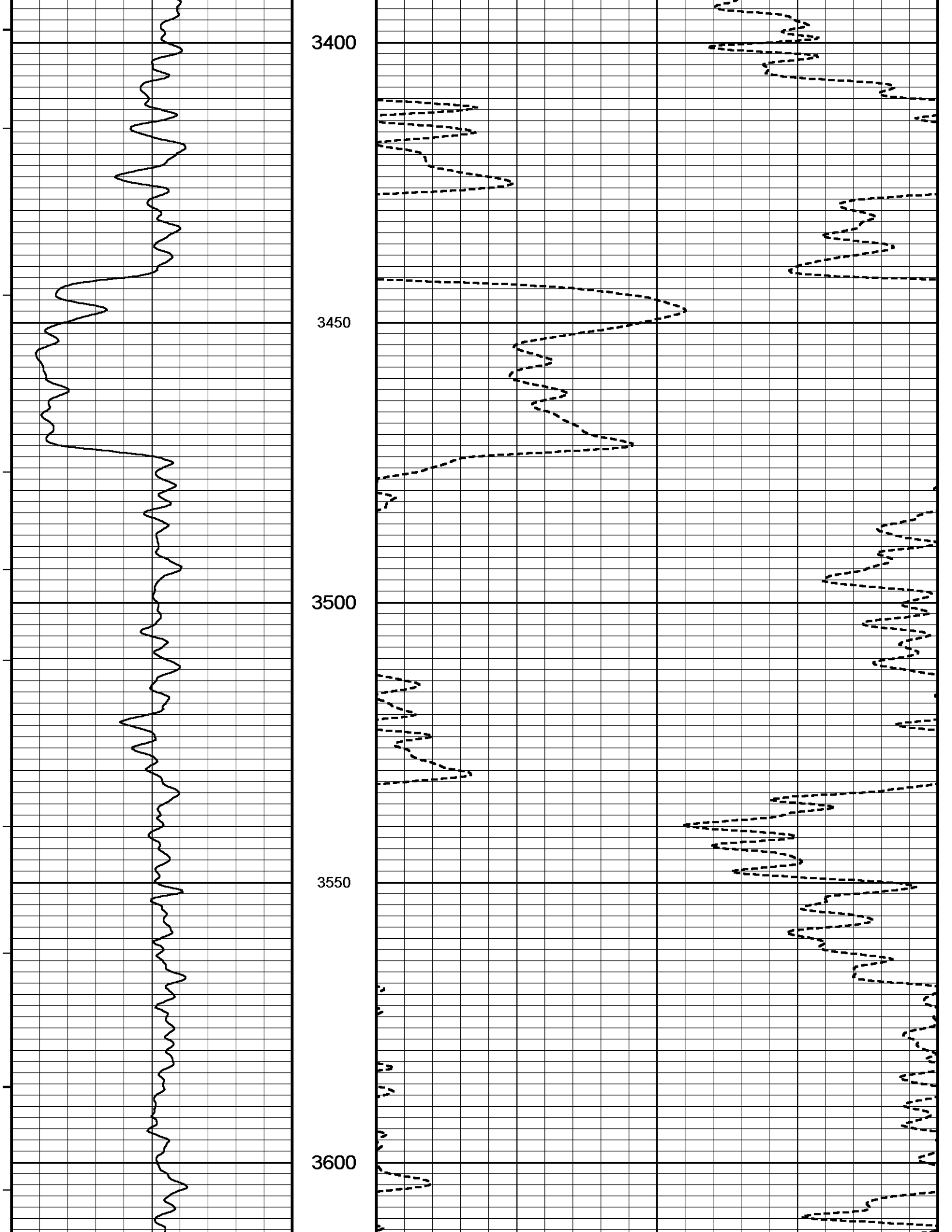
Limestone Neutron Por.

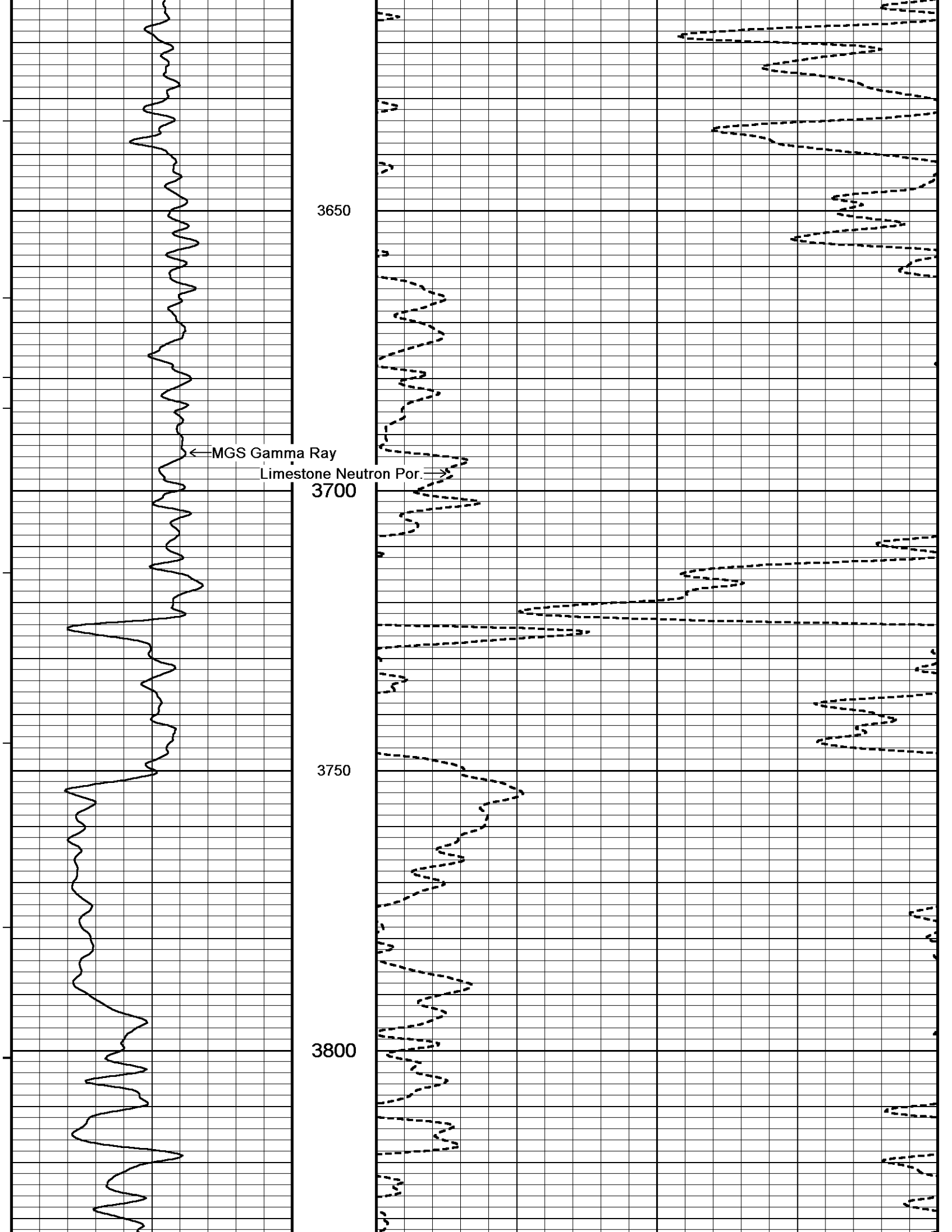

2550
2600
2650
2700

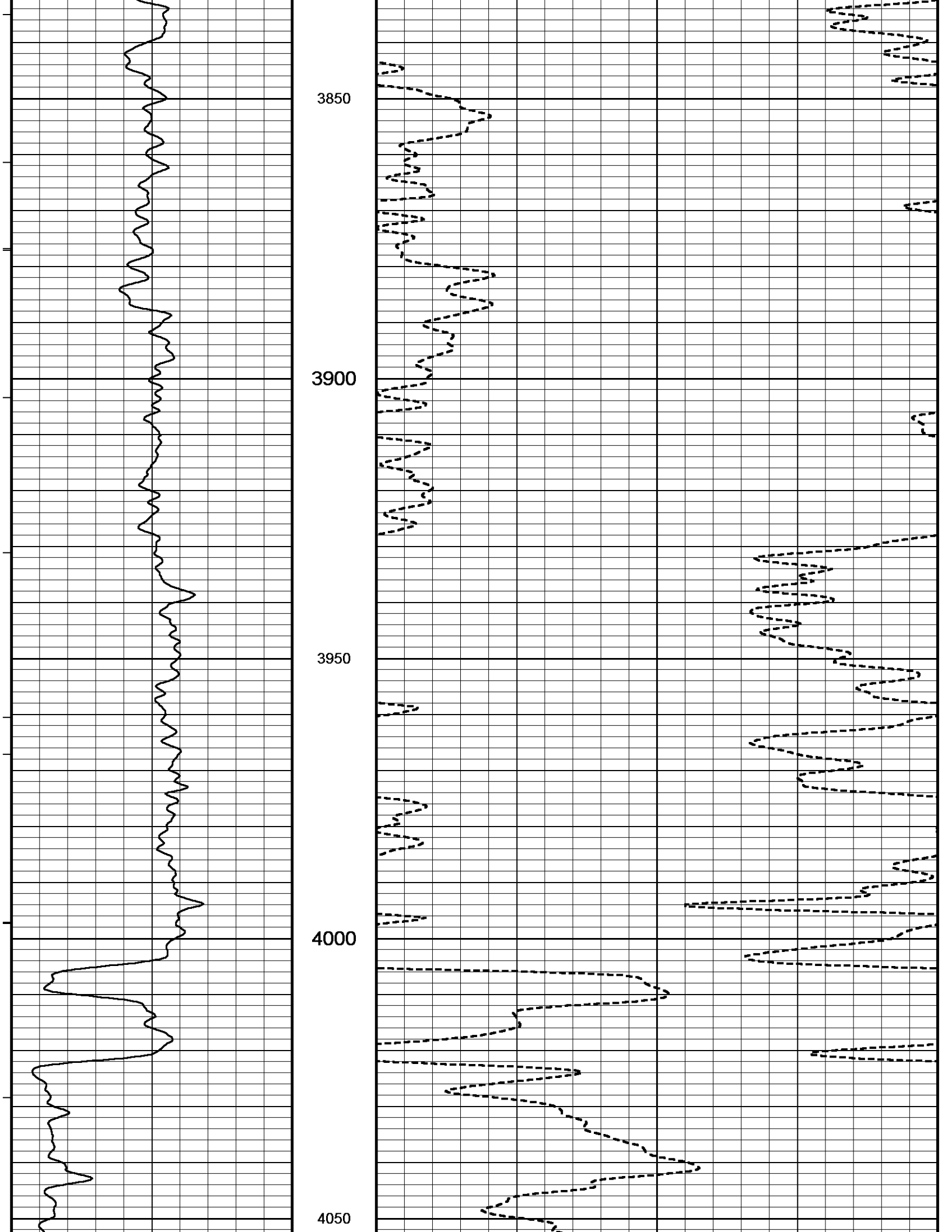

2750
2800
2850
2900
2950
MGS Gamma Ray
Limestone Neutron Por

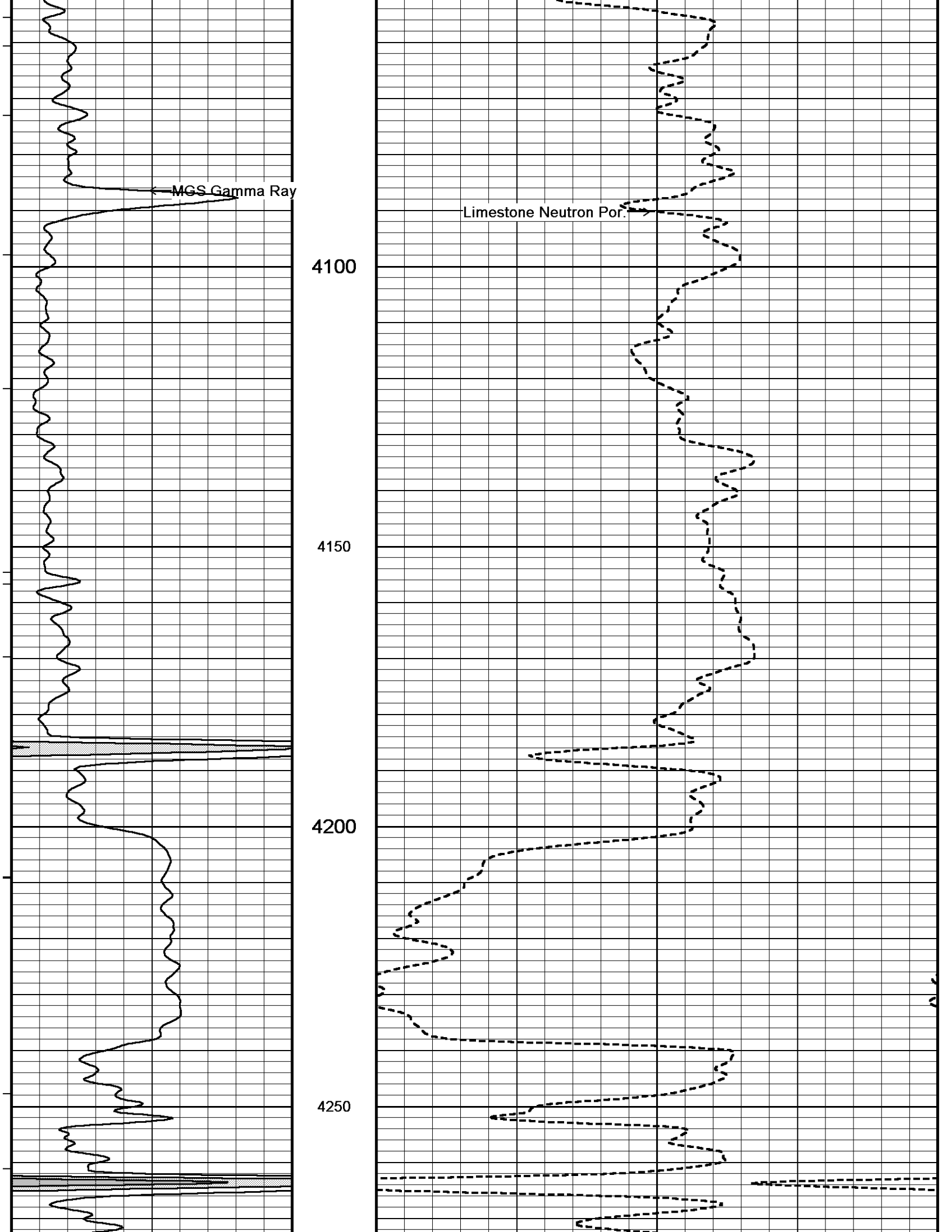

3000
3050
3100
3150

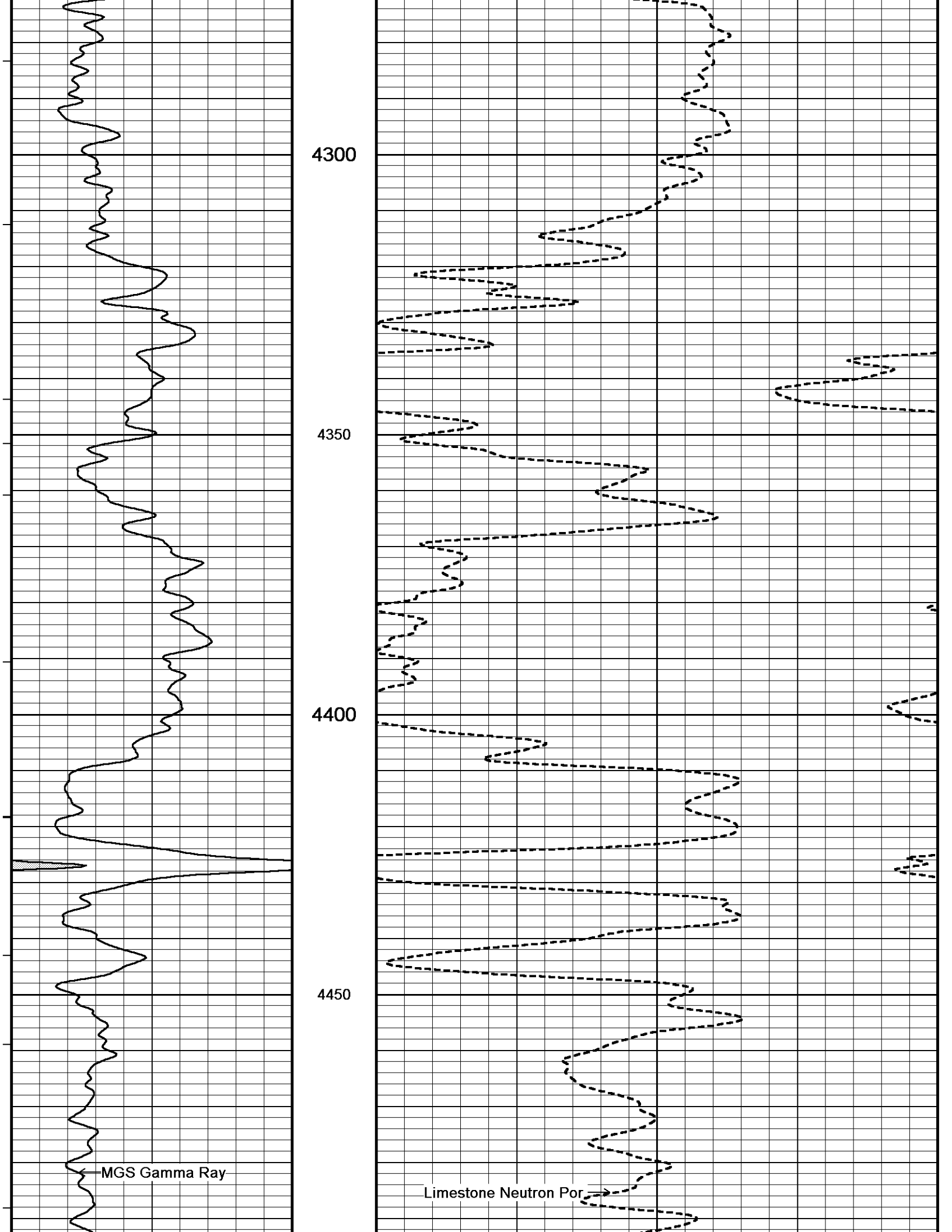

3200
3250
3300
3350
MGS Gamma Ray
Limestone Neutron Por.

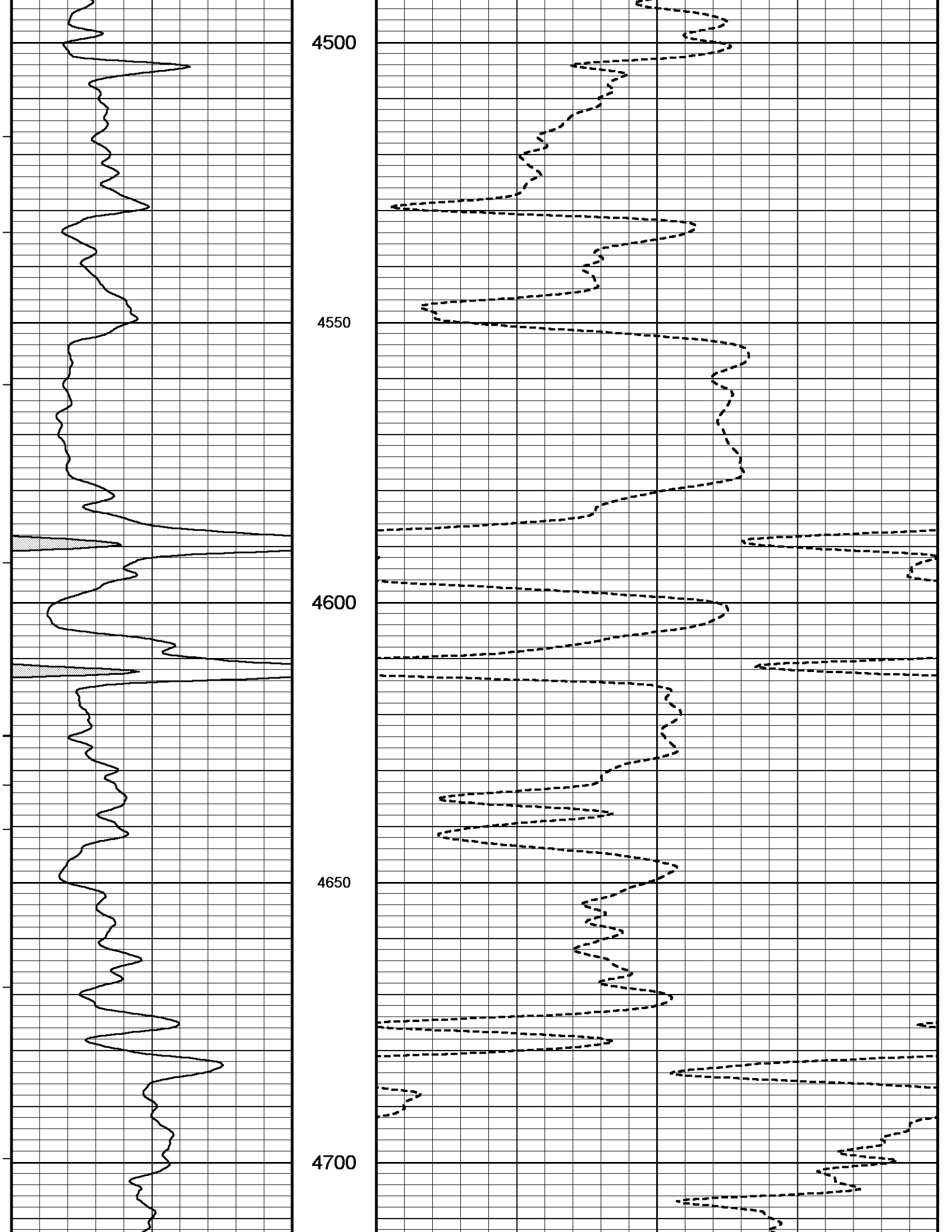

3400
3450
3500
3550
3600

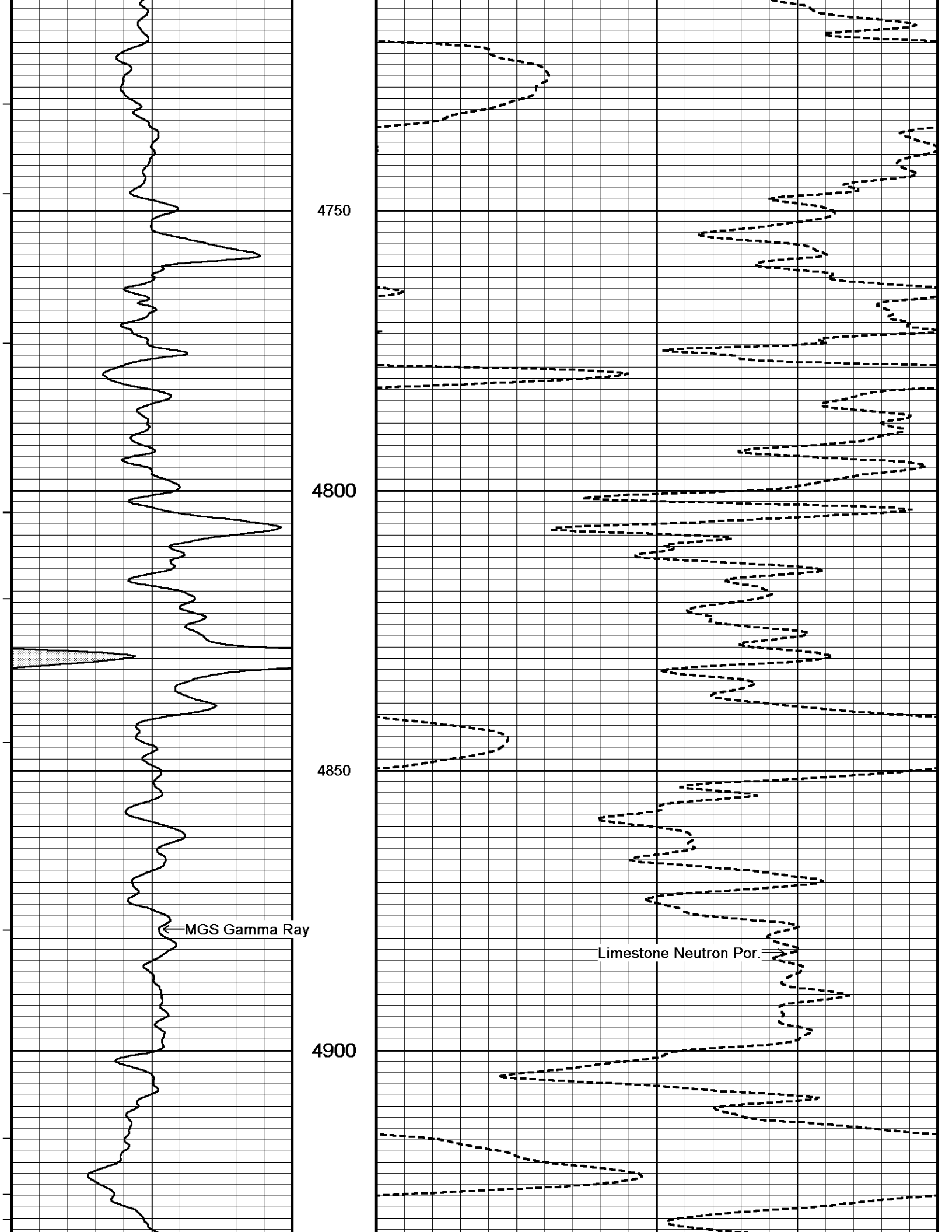

3650
MGS Gamma Ray
Limestone Neutron Por.
3700
3750
3800

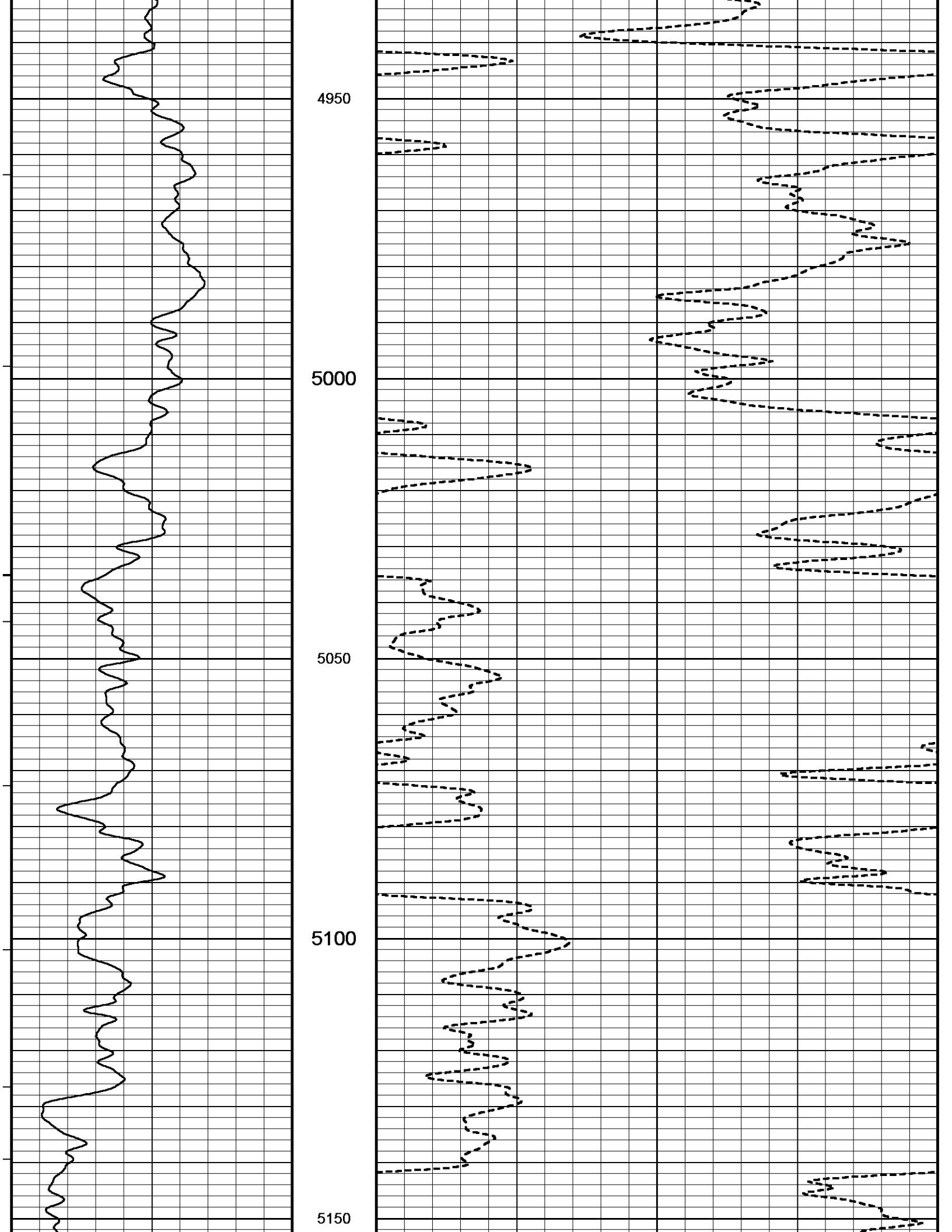

3850
3900
3950
4000
4050

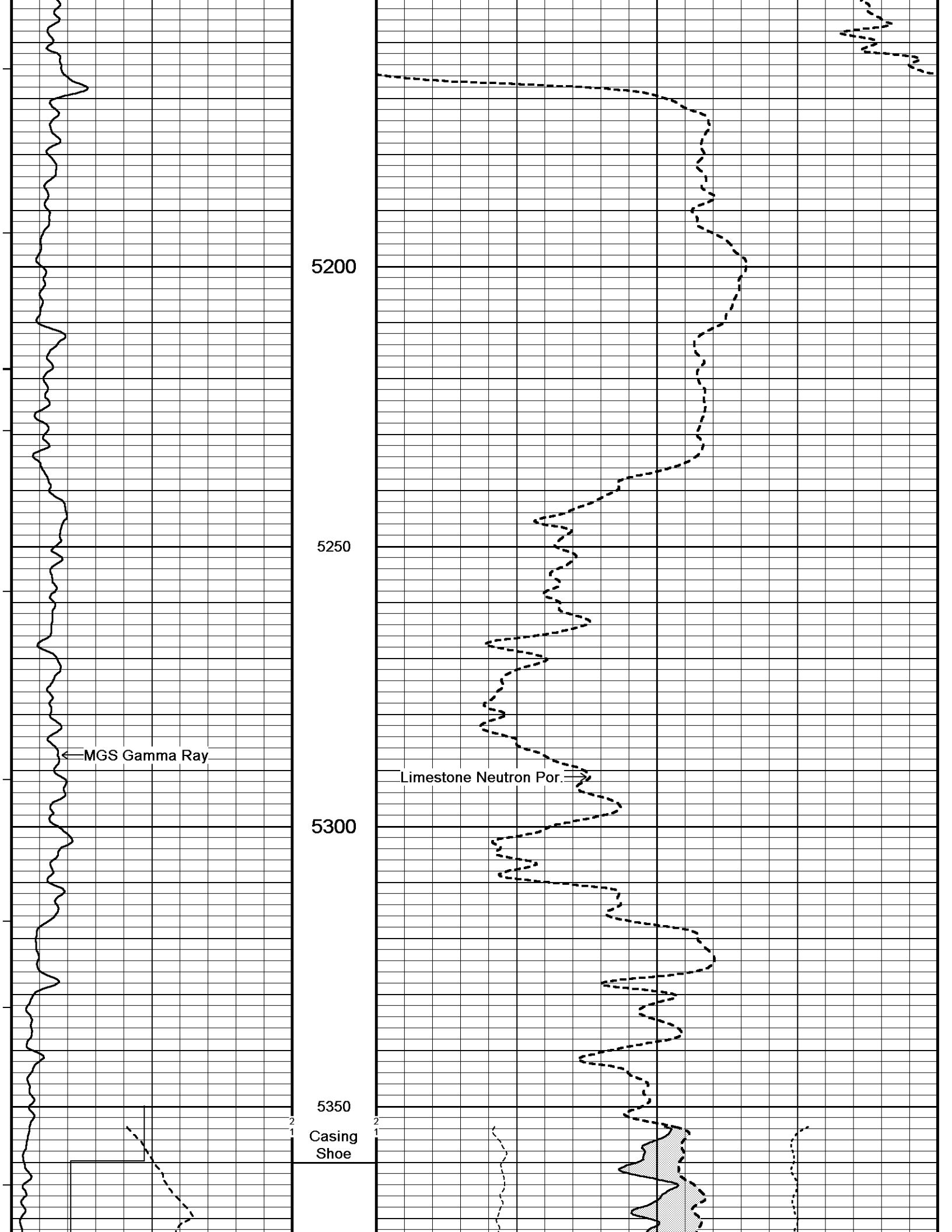

MGS Gamma Ray
Limestone Neutron Por.
4100
4150
4200
4250

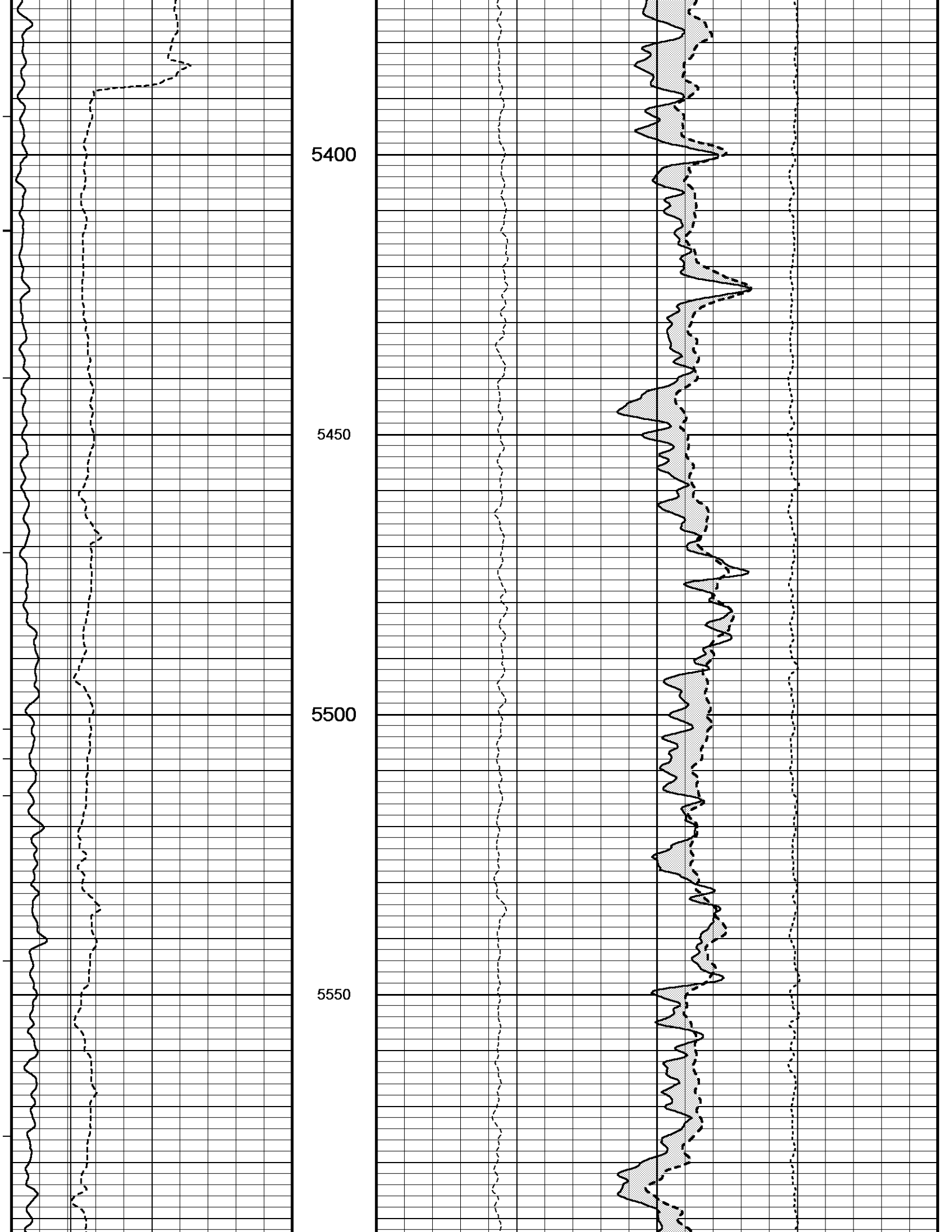

4300
4350
4400
4450
MGS Gamma Ray
Limestone Neutron Por

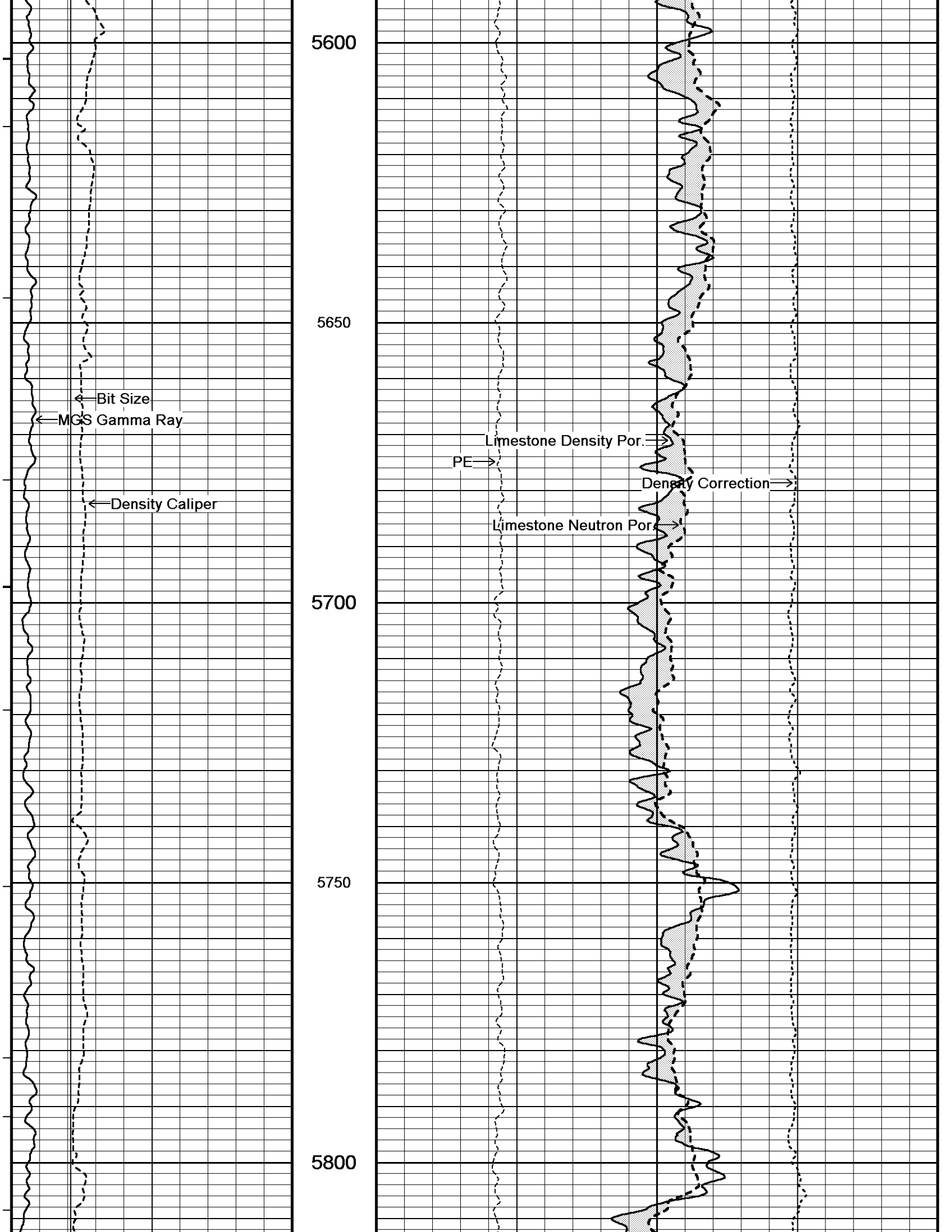

4500
4550
4600
4650
4700

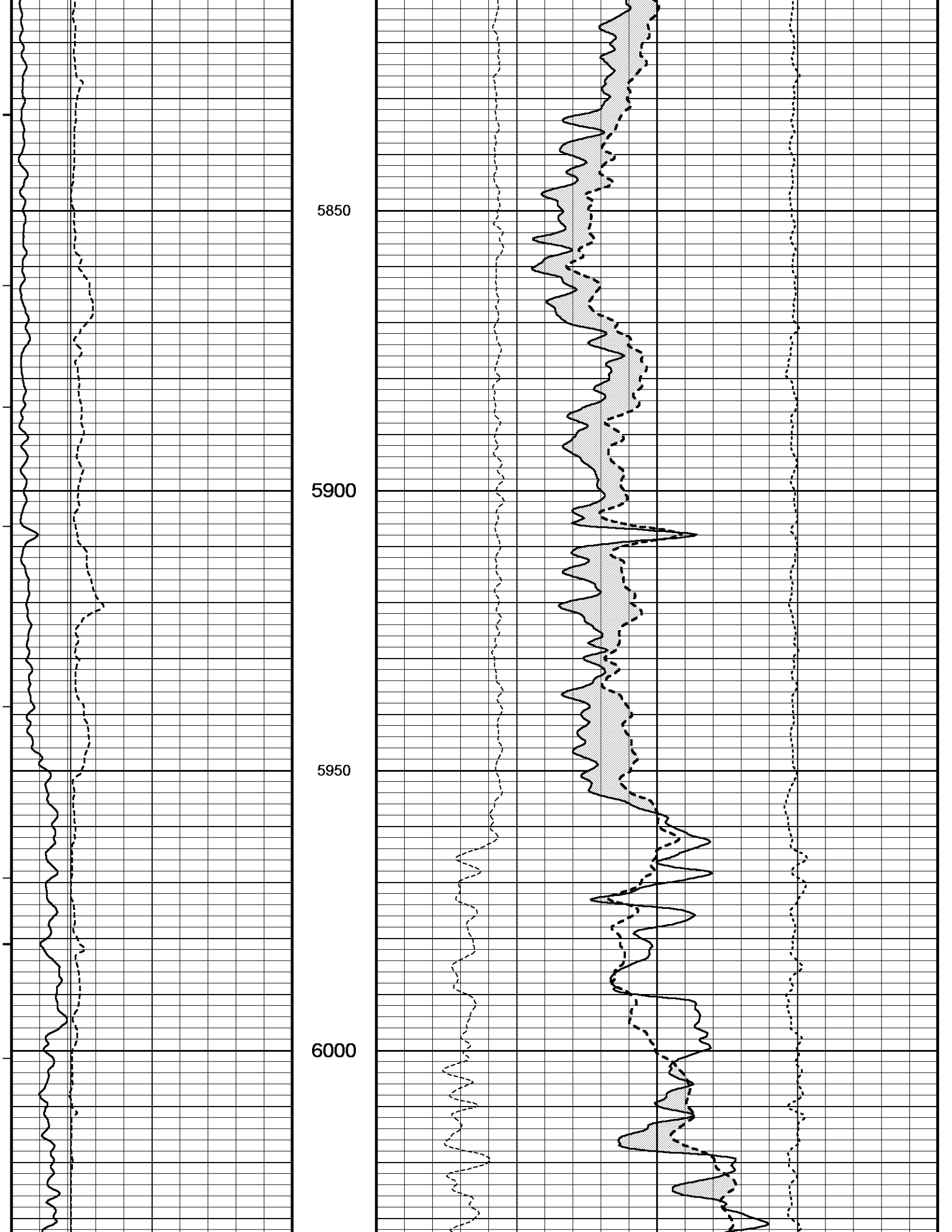

4750
4800
4850
4900
MGS Gamma Ray
Limestone Neutron Por.

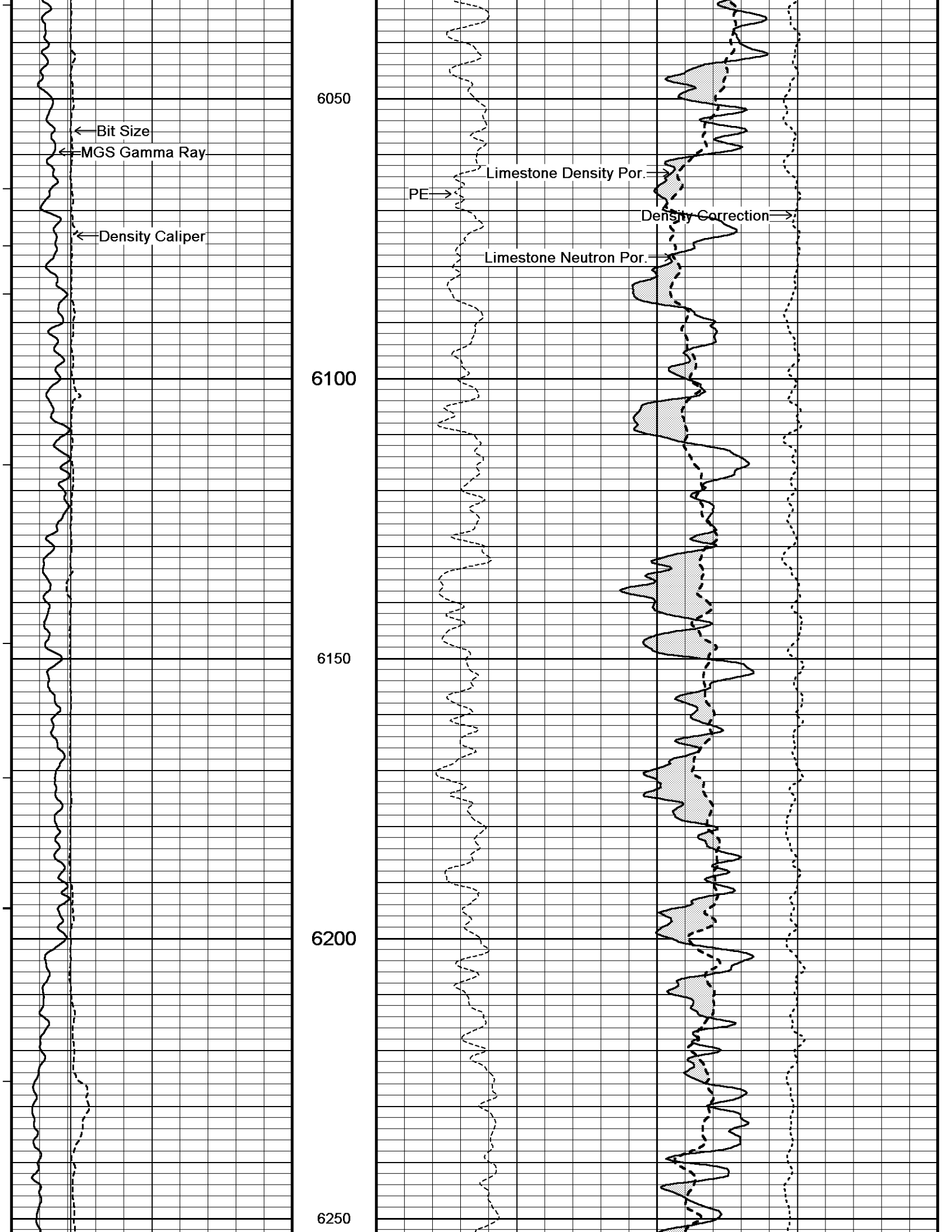

4950
5000
5050
5100
5150

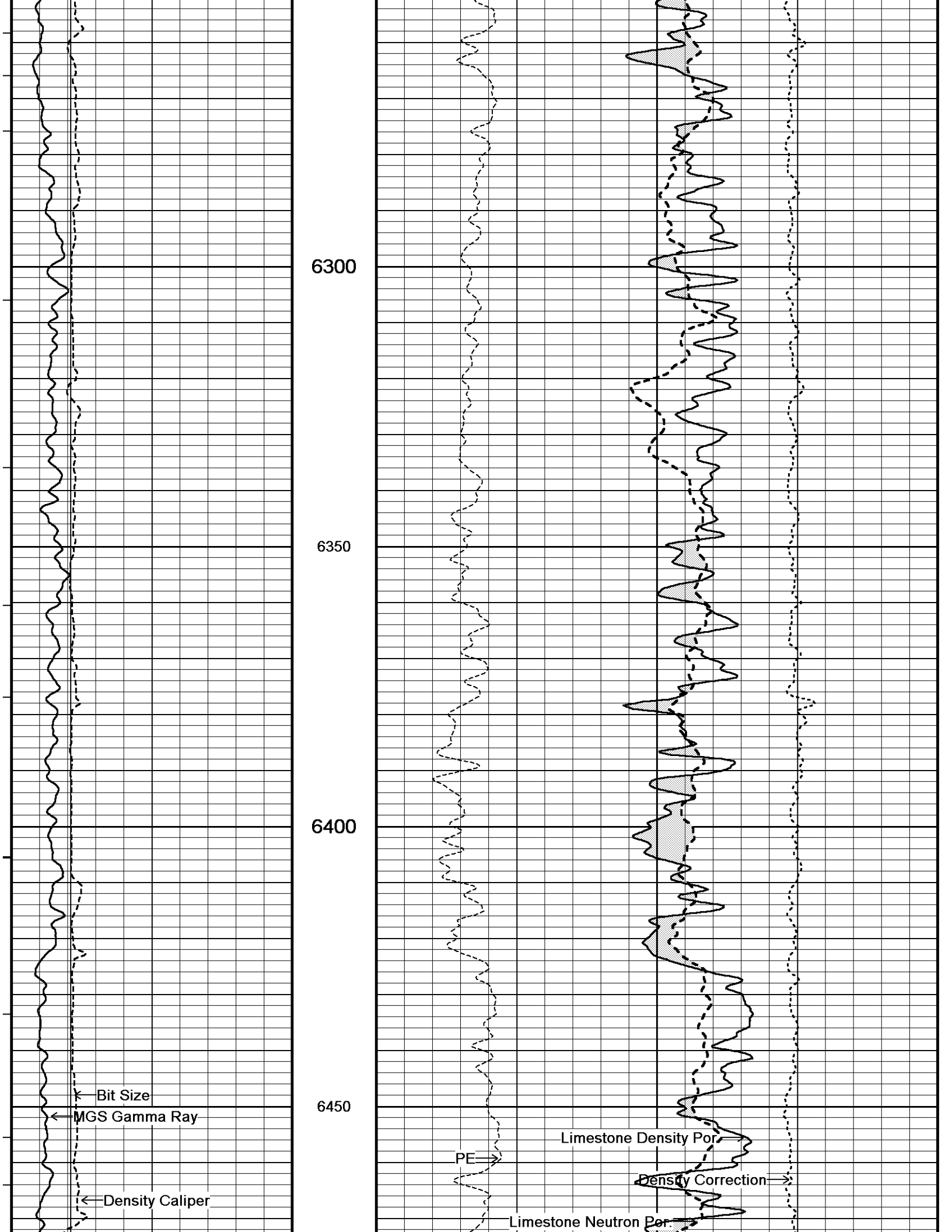

5200
5250
5300
5350
MGS Gamma Ray
Limestone Neutron Por.
Casing Shoe
2
1
2
1

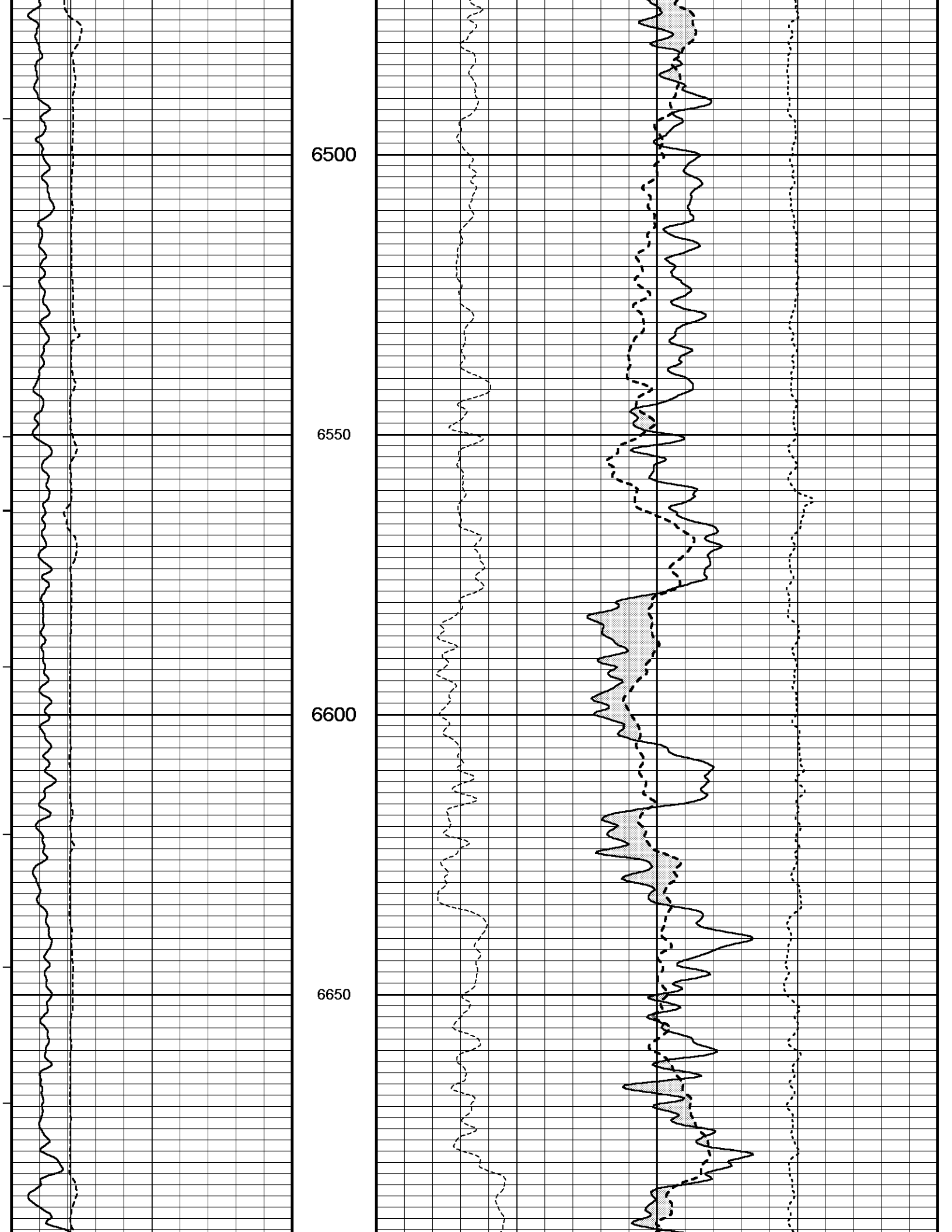

5400
5450
5500
5550

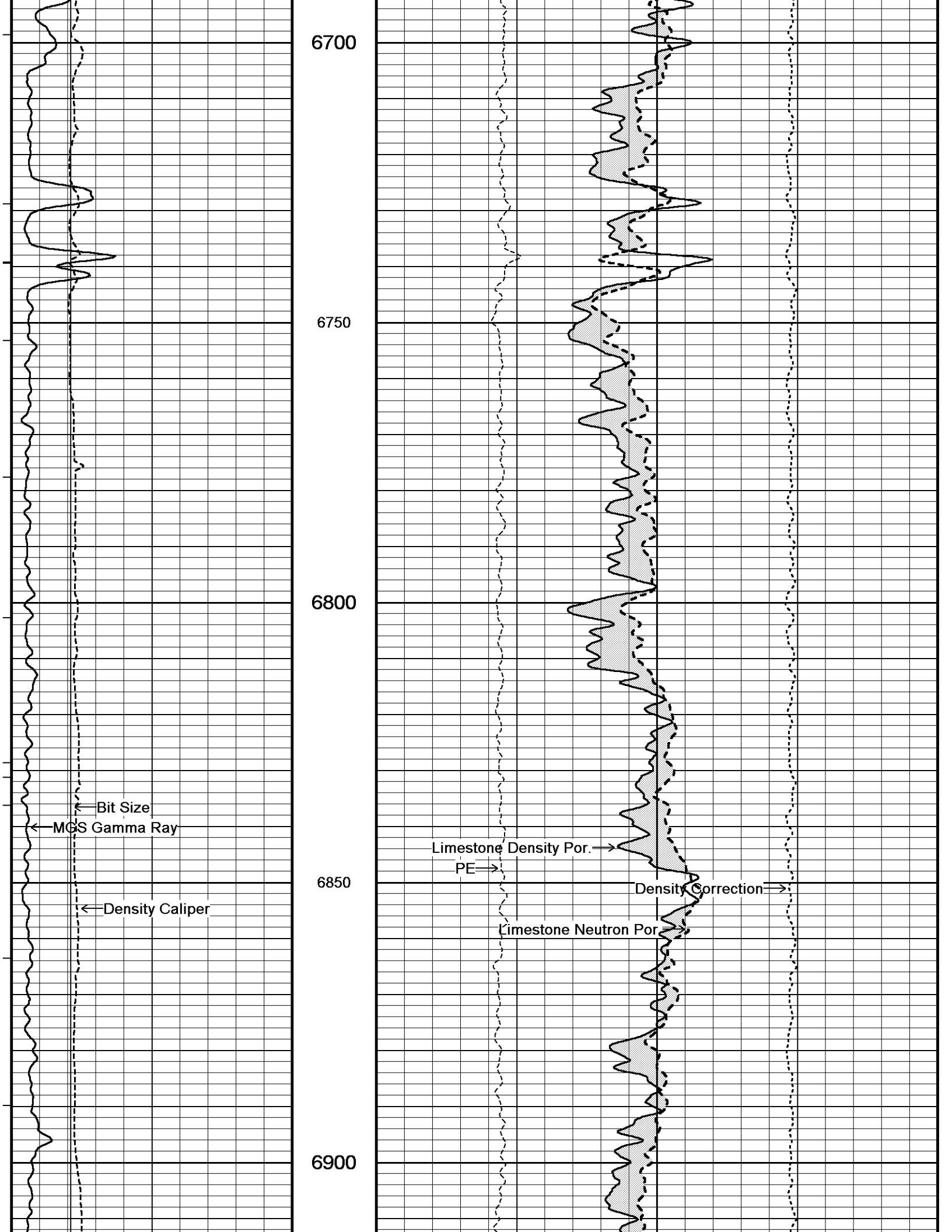

5600
5650
5700
5750
5800
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.

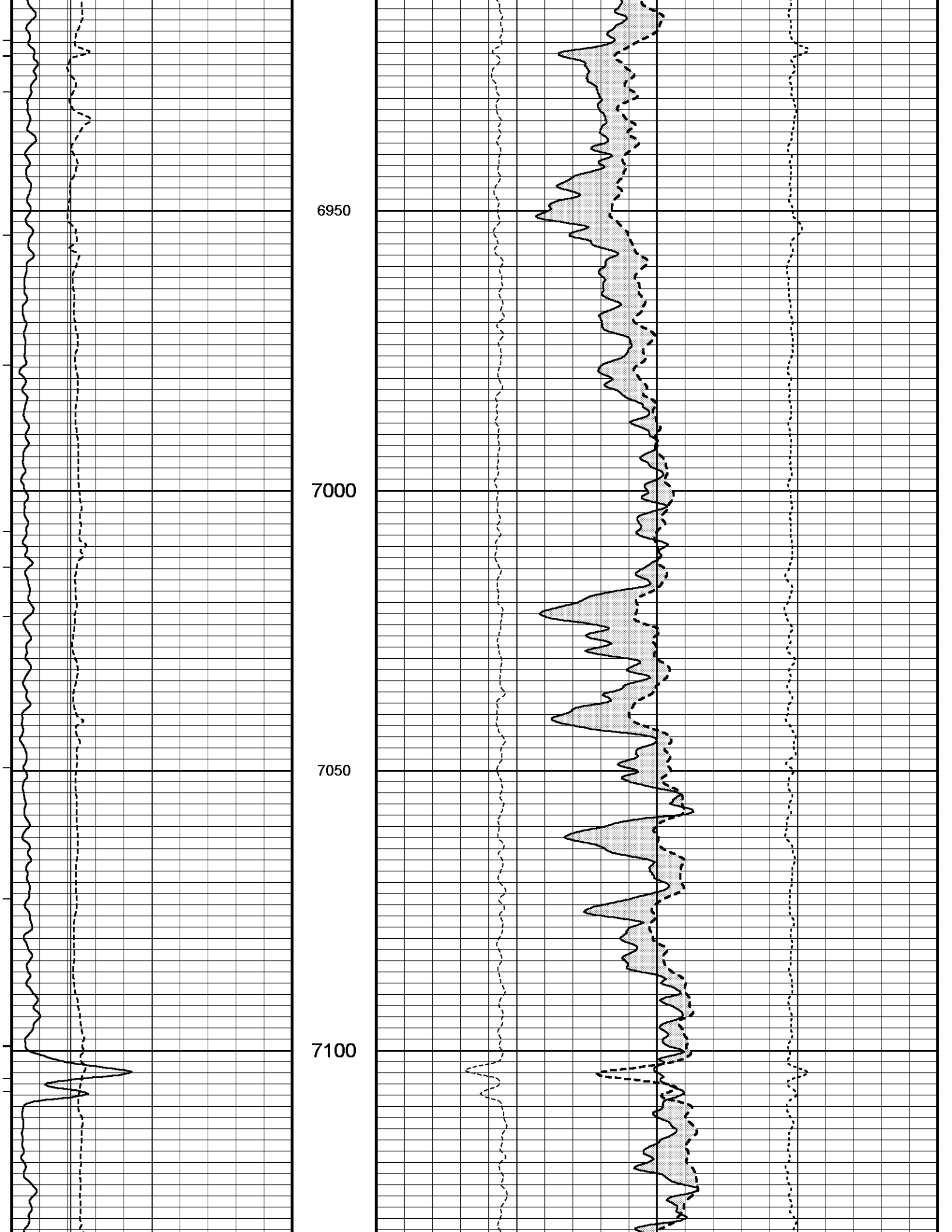

5850
5900
5950
6000

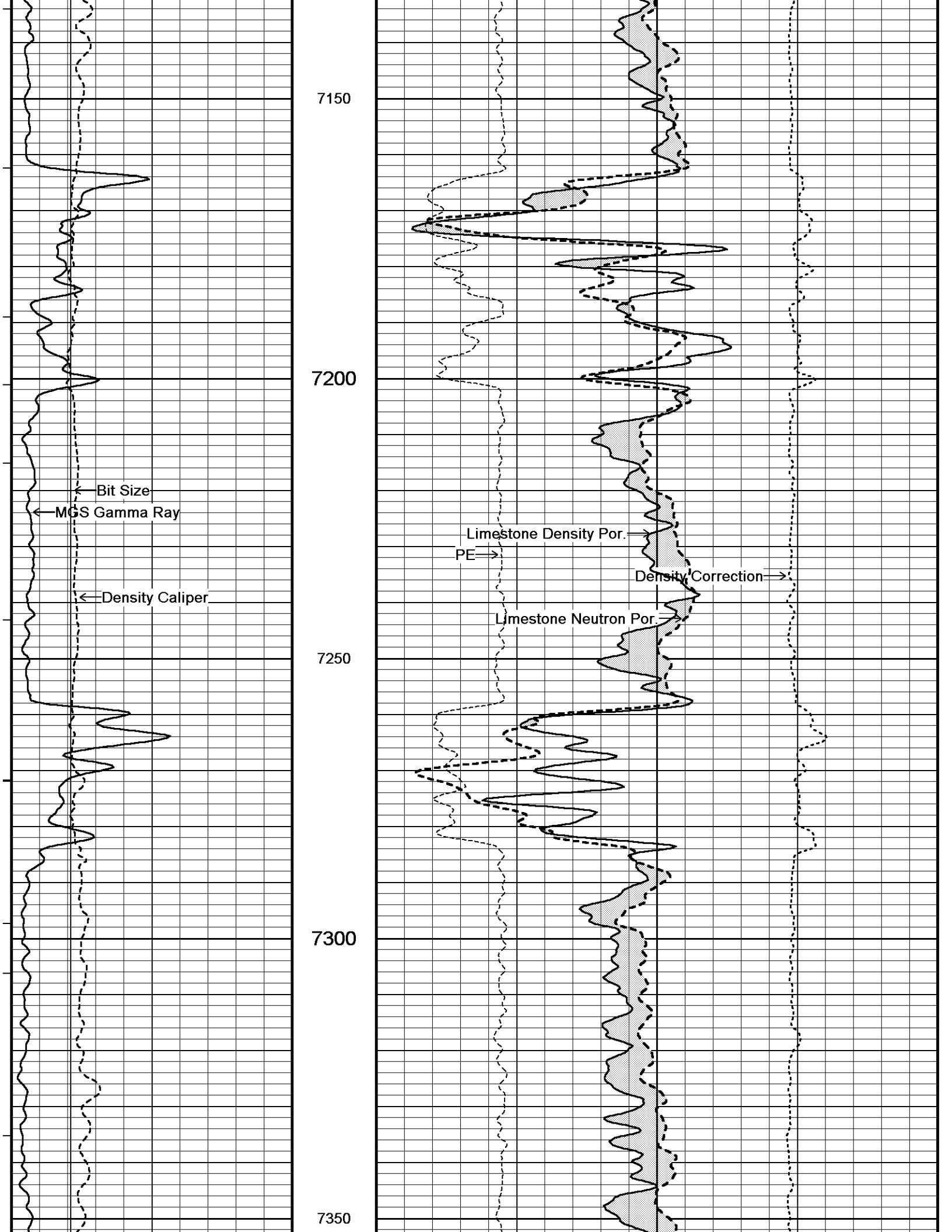

Bit Size
MGS Gamma Ray
Density Caliper
6050
6100
6150
6200
6250
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.

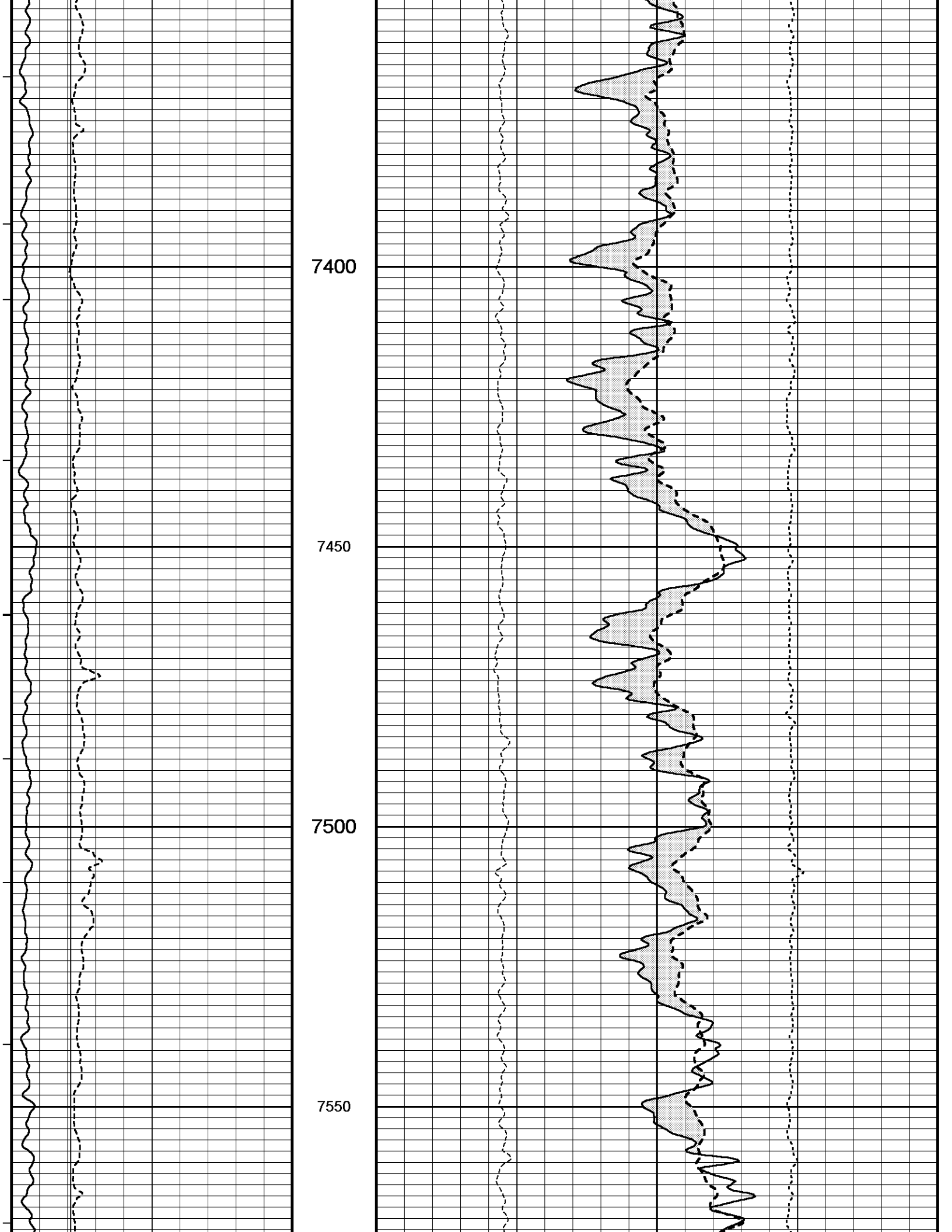

6300
6350
6400
6450
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por
Density Correction
Limestone Neutron Por

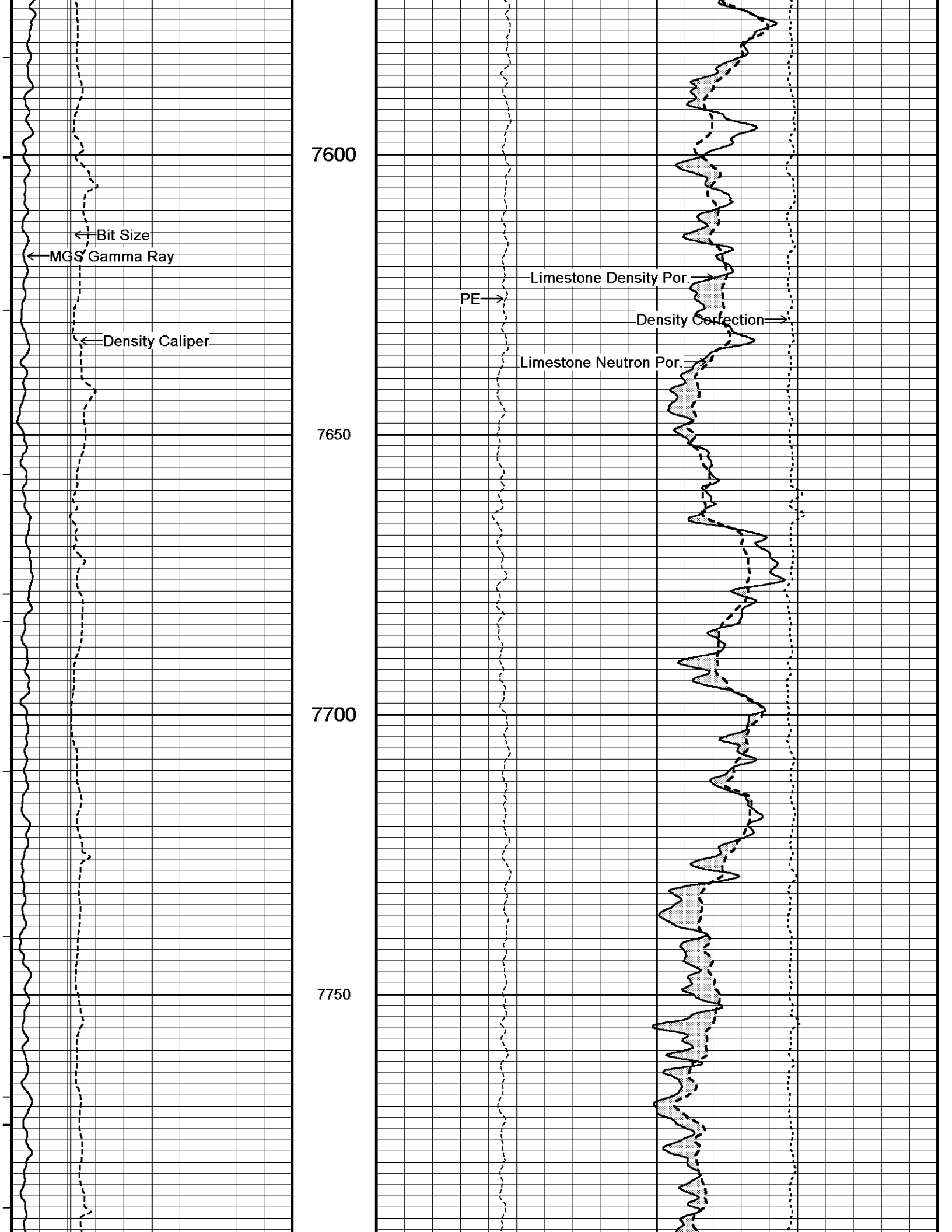

6500
6550
6600
6650

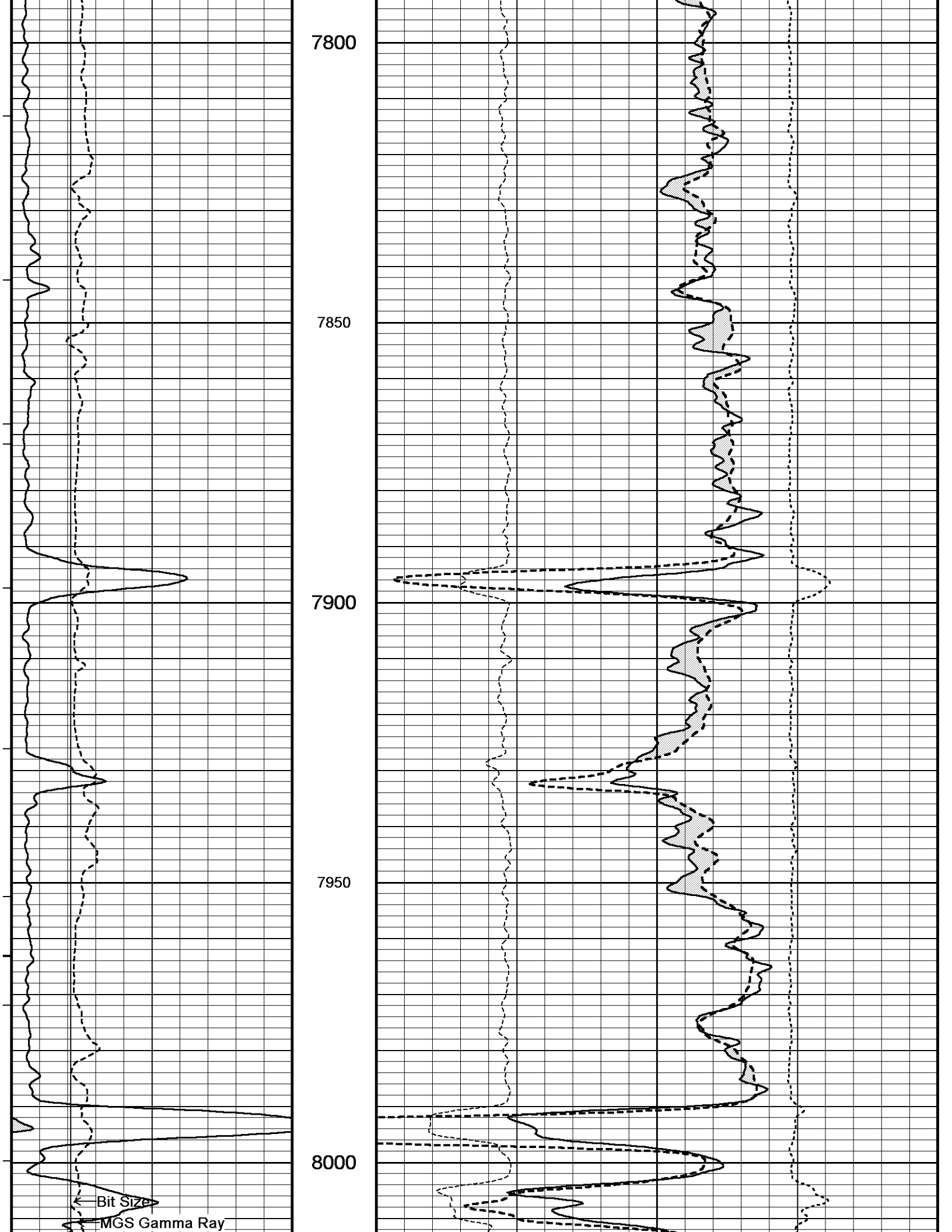

6700
6750
6800
6850
6900
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.

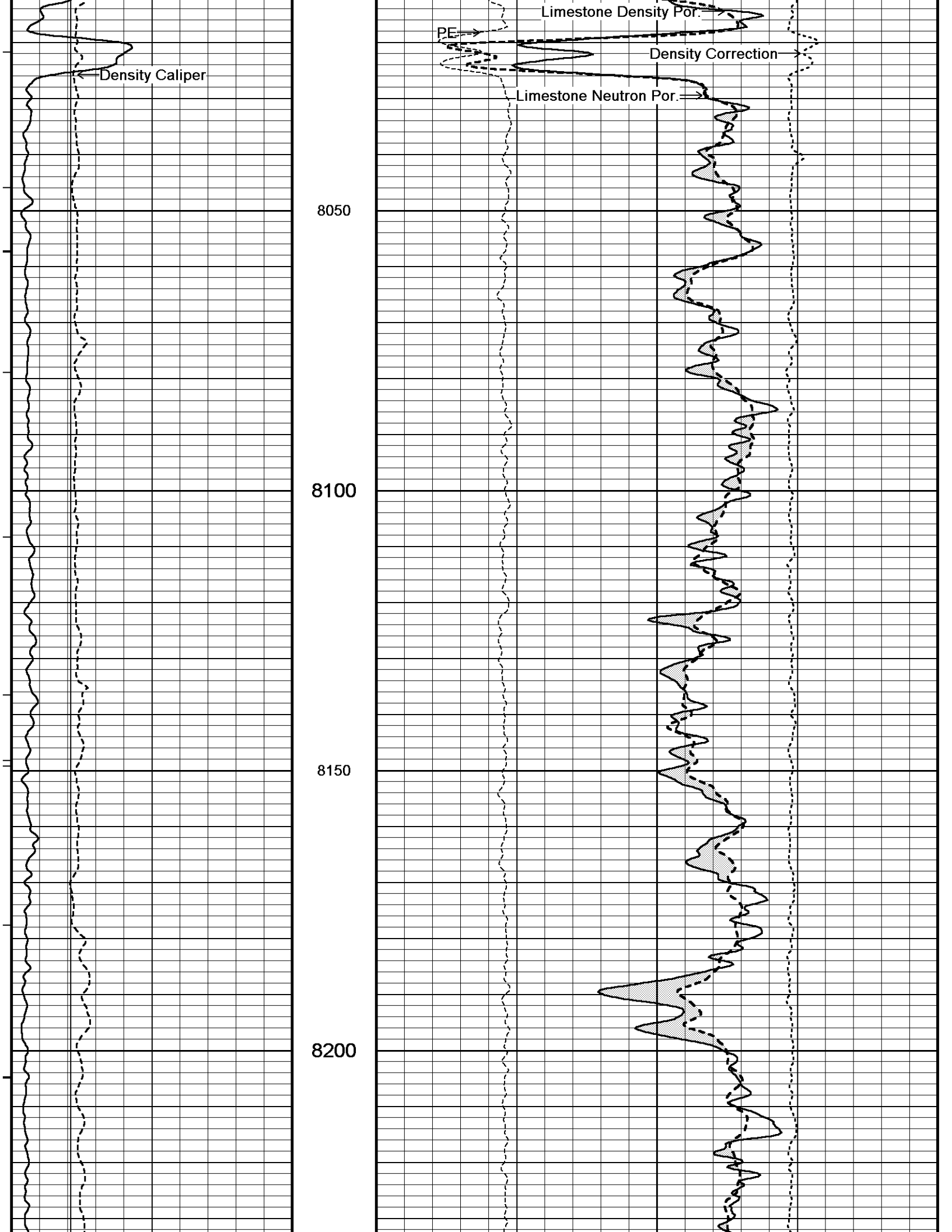

6950
7000
7050
7100

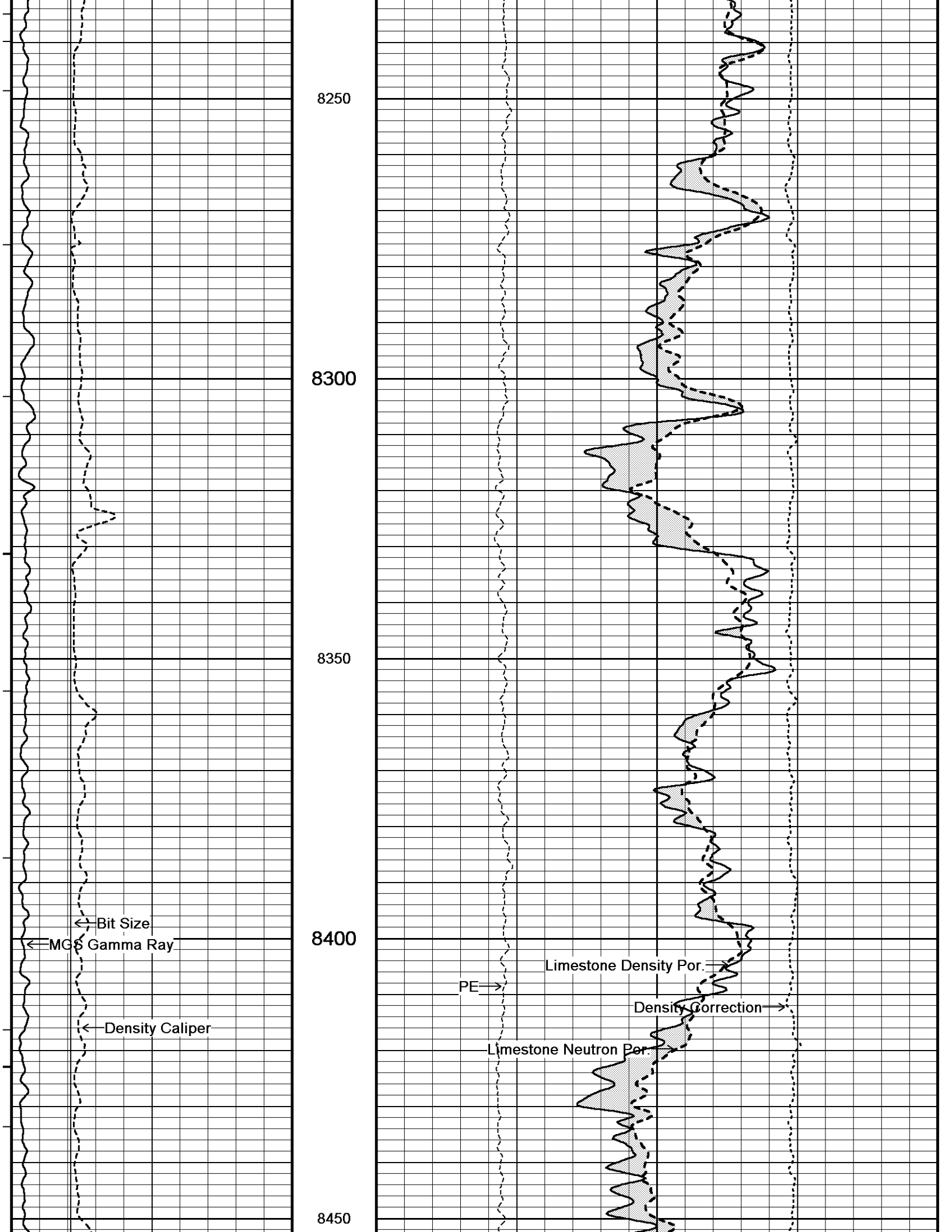

7150
7200
7250
7300
7350
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.

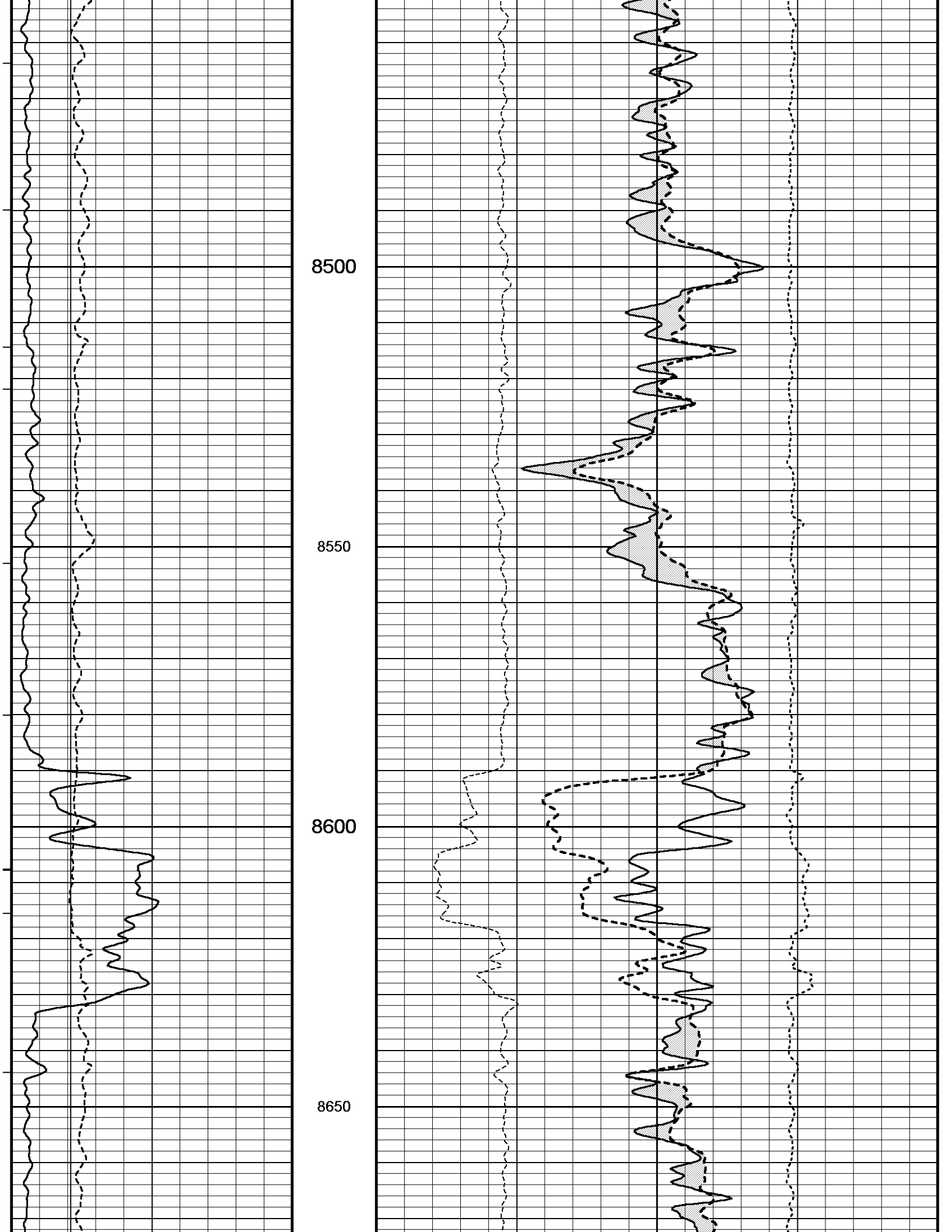

7400
7450
7500
7550

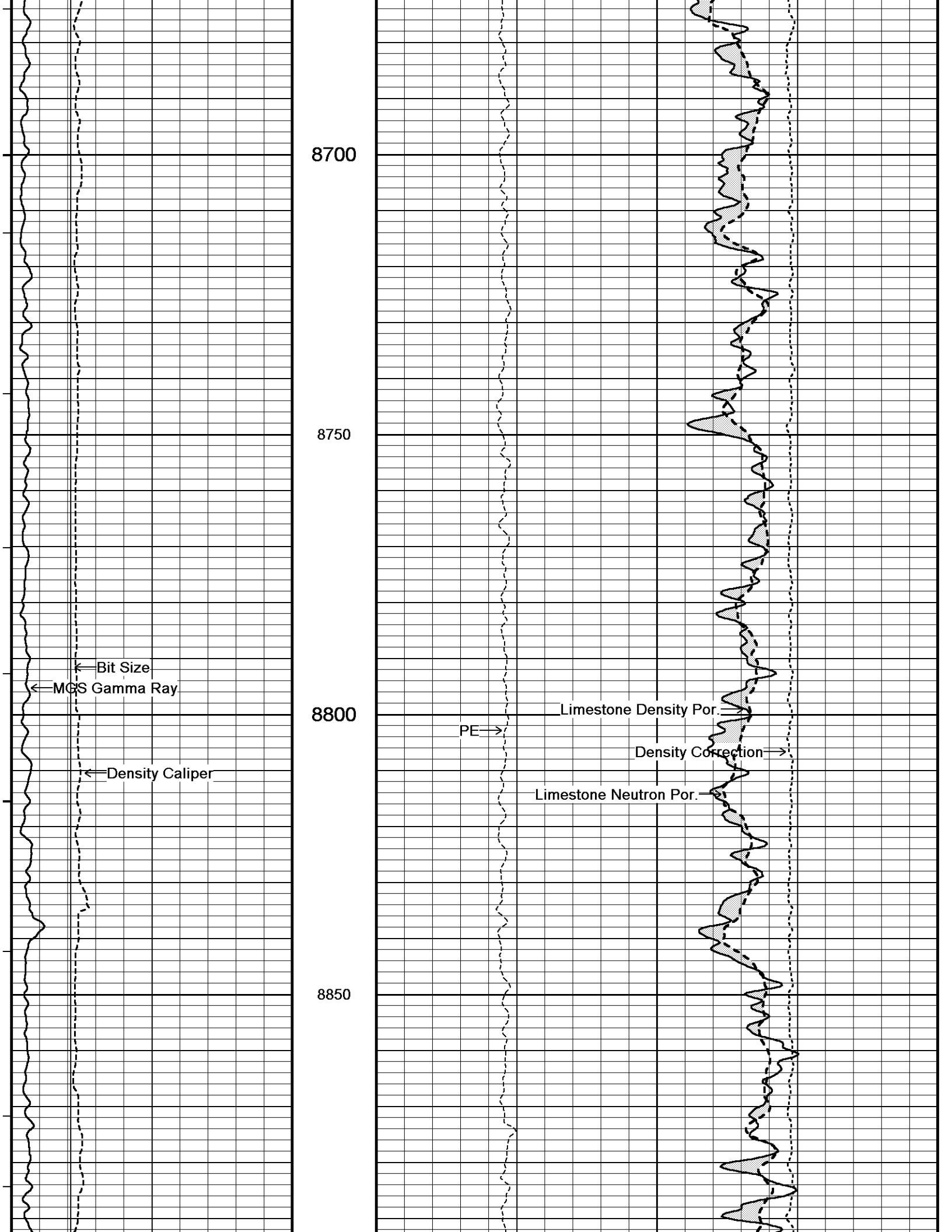

7600
7650
7700
7750
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.

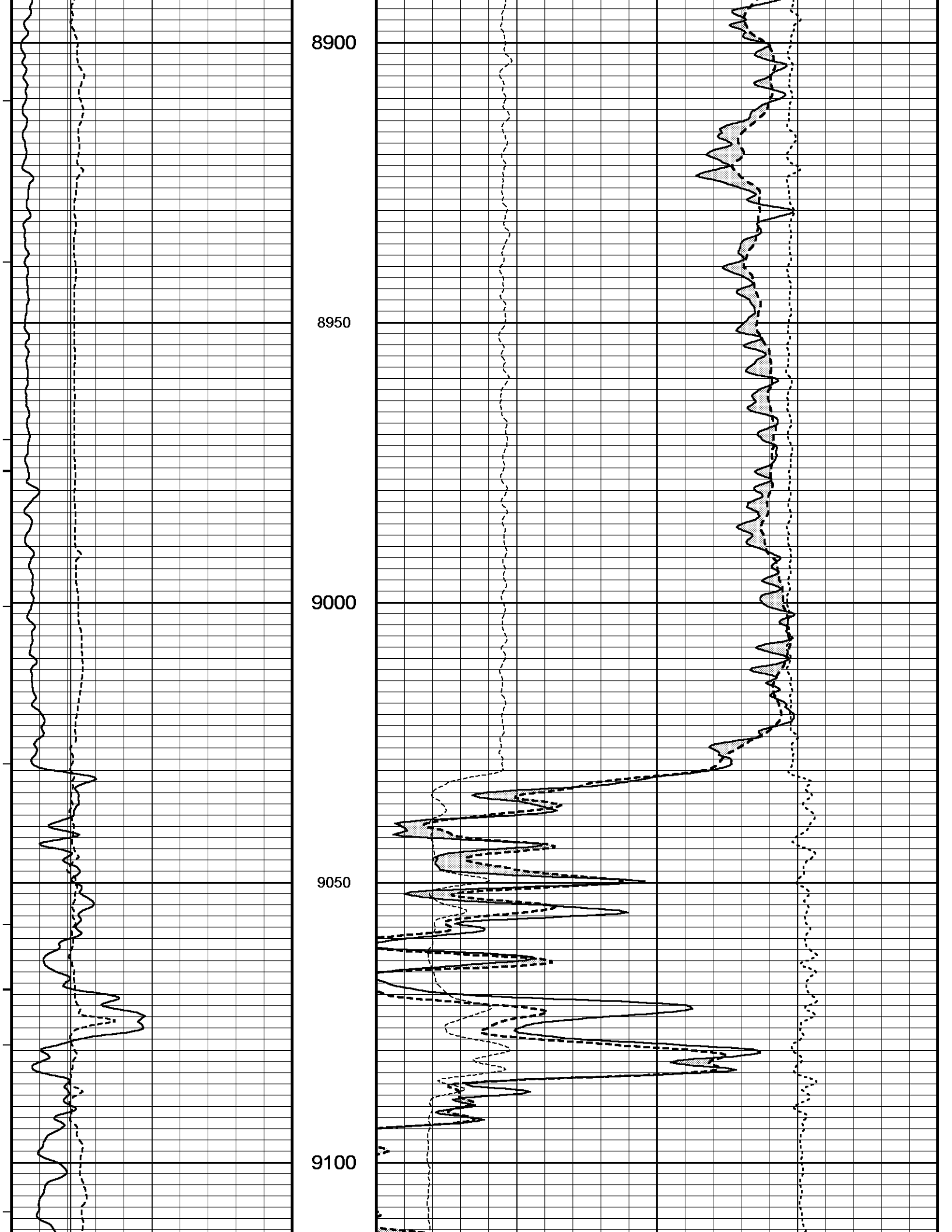

7800
7850
7900
7950
8000
Bit Size
MGS Gamma Ray

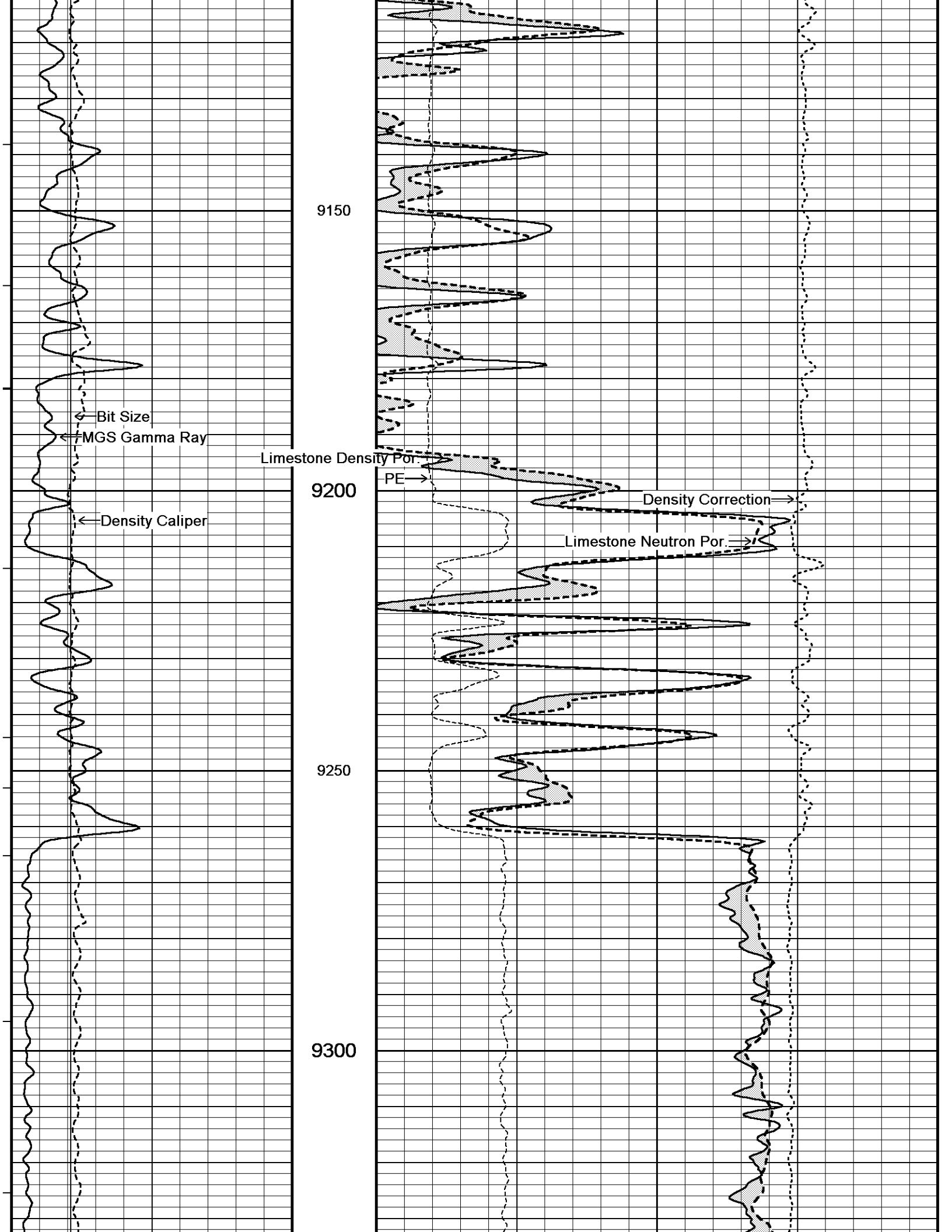

Density Caliper
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.
8050
8100
8150
8200

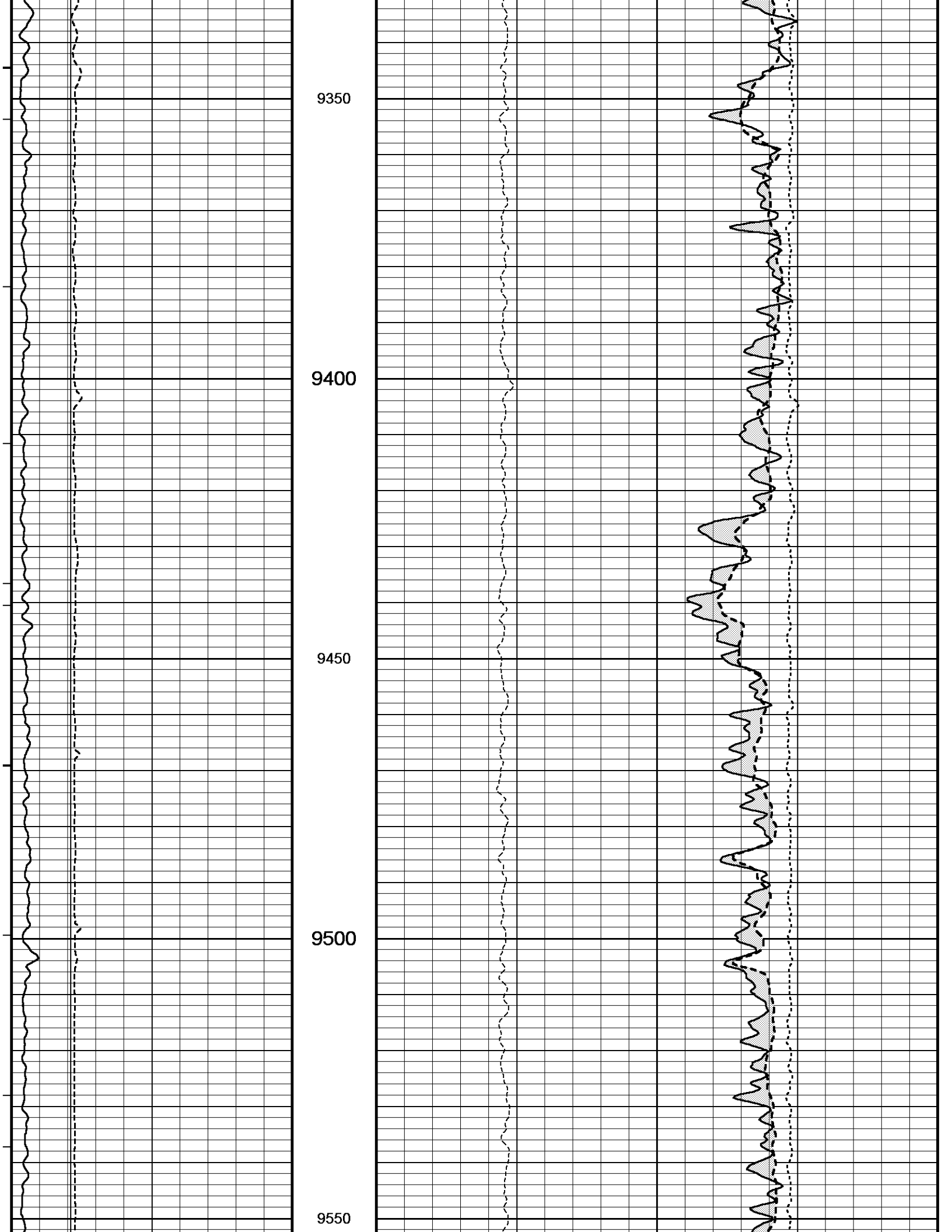

8250
8300
8350
8400
8450
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.

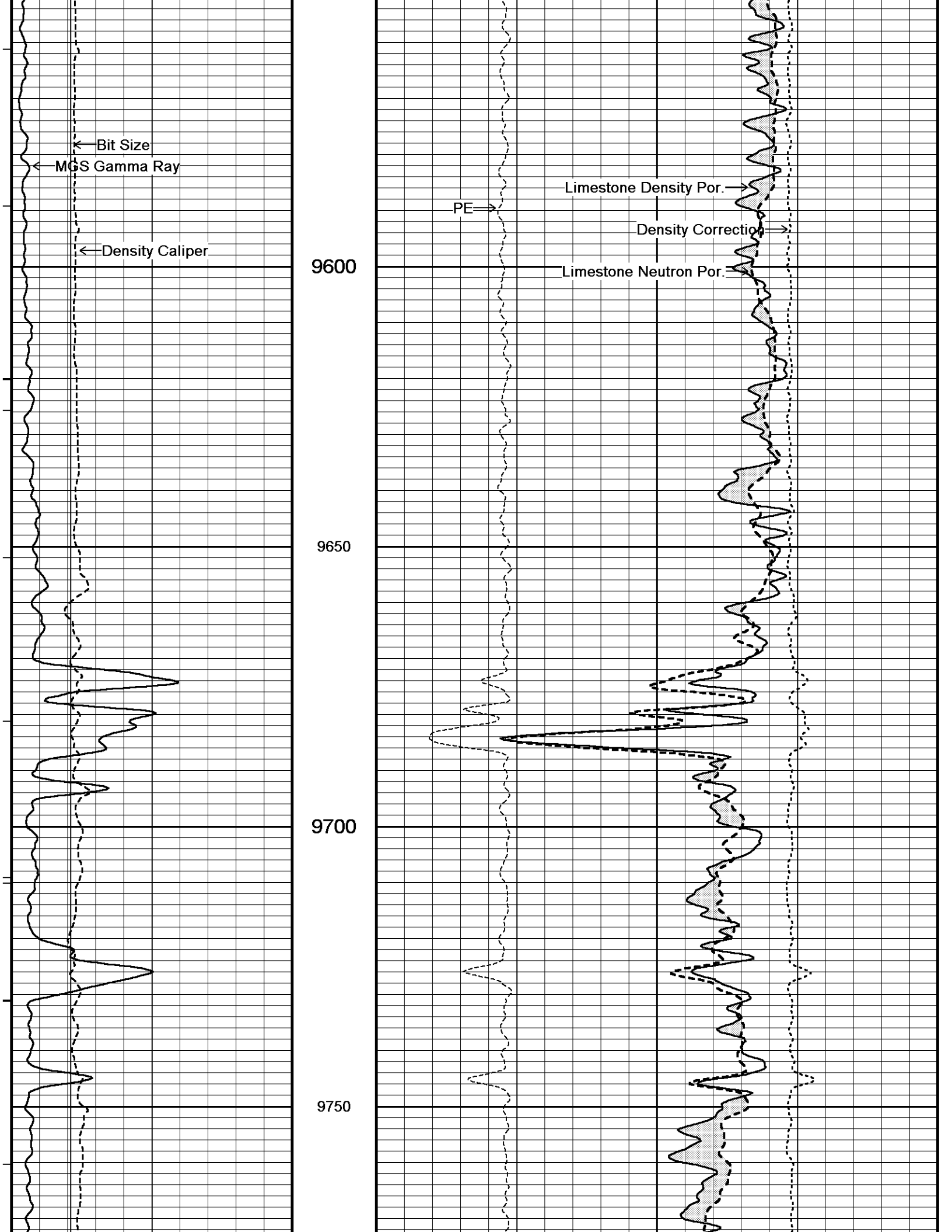

8500
8550
8600
8650

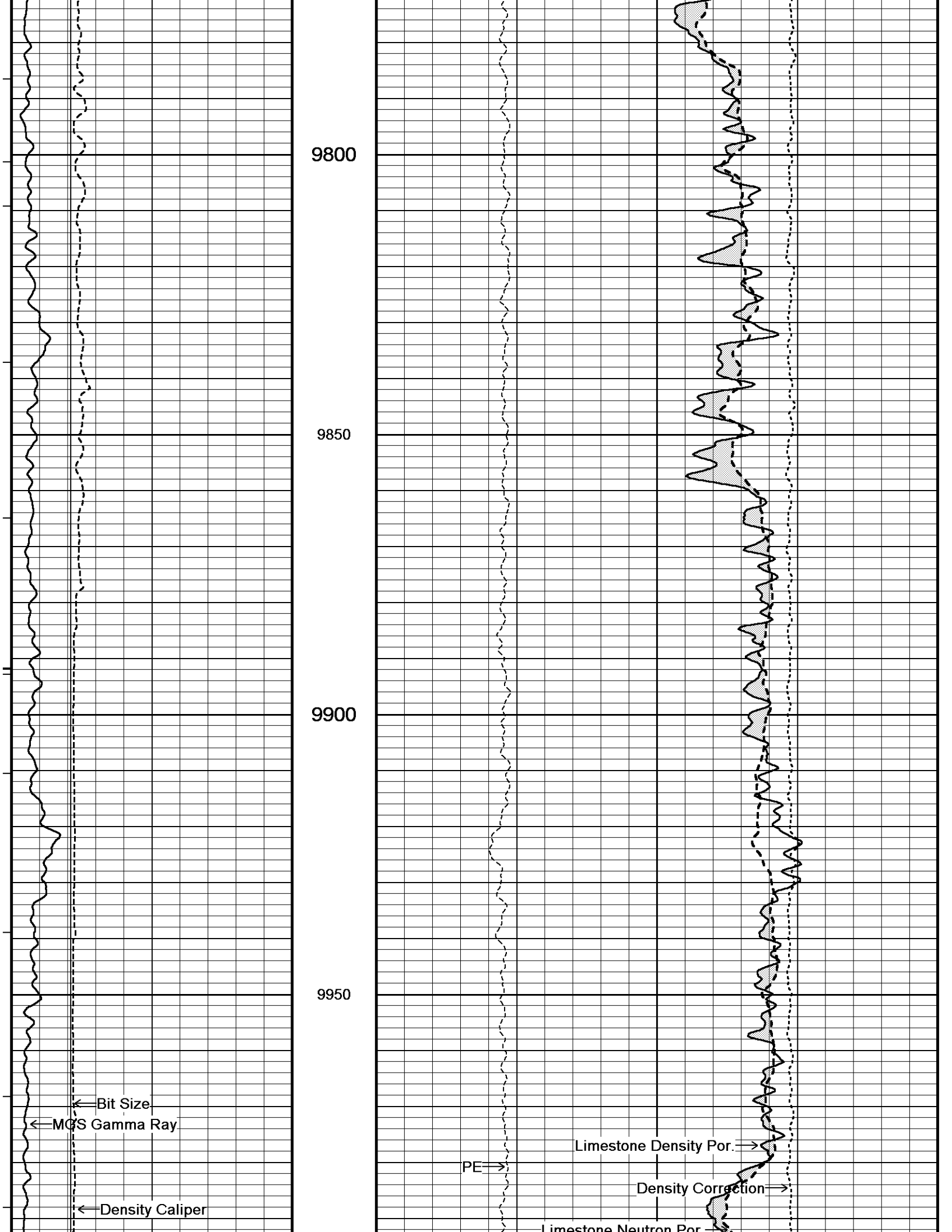

8700
8750
8800
8850
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.

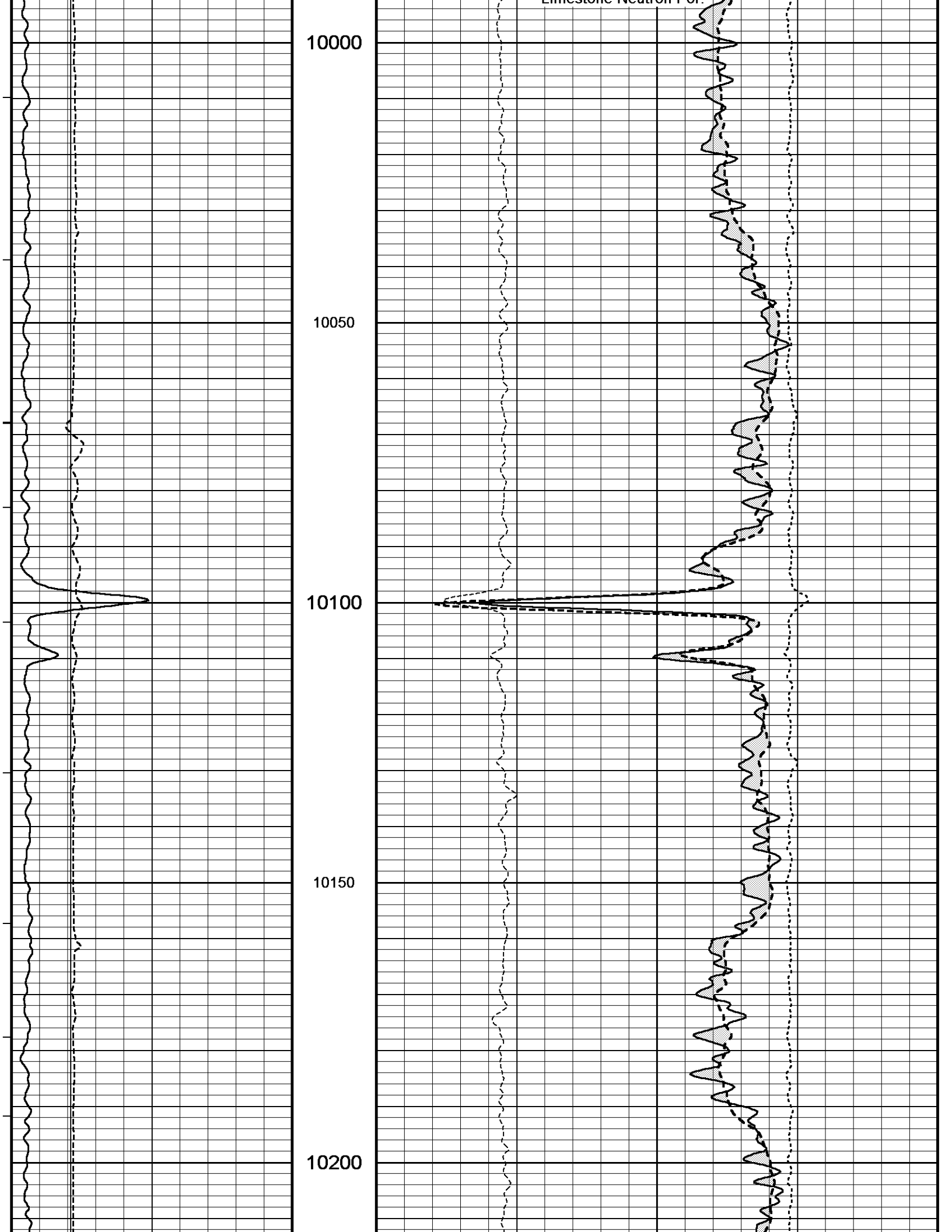

8900
8950
9000
9050
9100

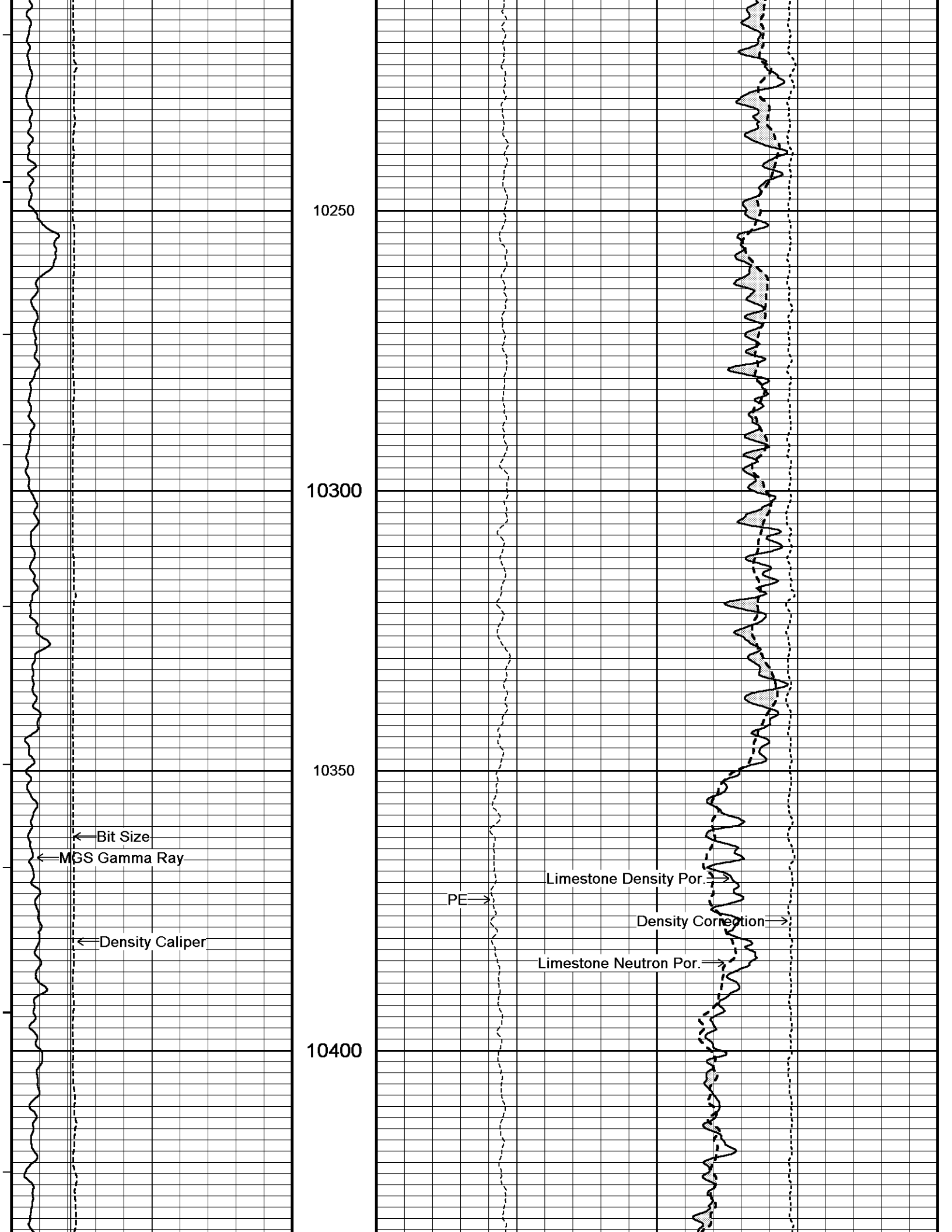

9150
Bit Size
MGS Gamma Ray
Limestone Density Por.
PE
9200
Density Correction
Density Caliper
Limestone Neutron Por.
9250
9300

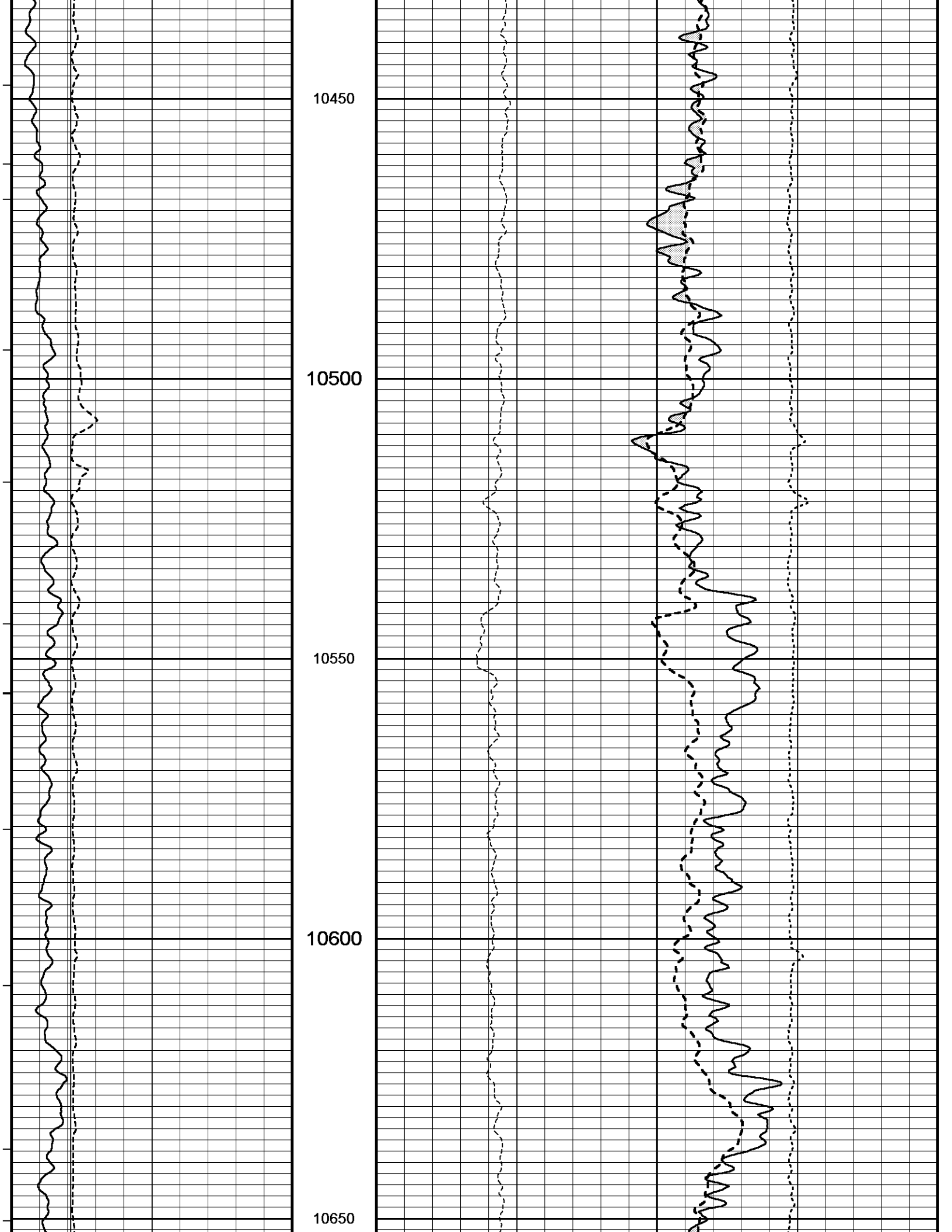

9350
9400
9450
9500
9550

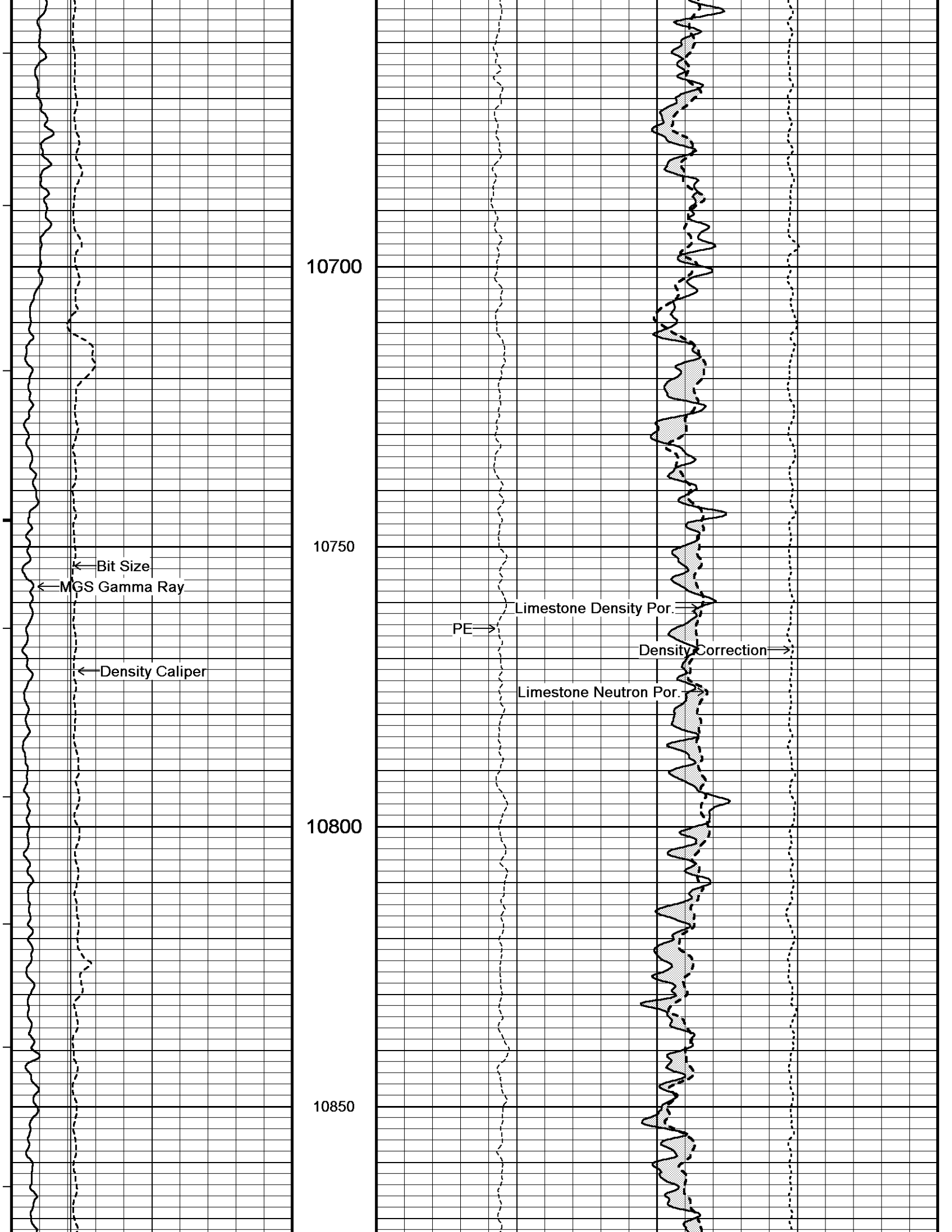

Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.
9600
9650
9700
9750

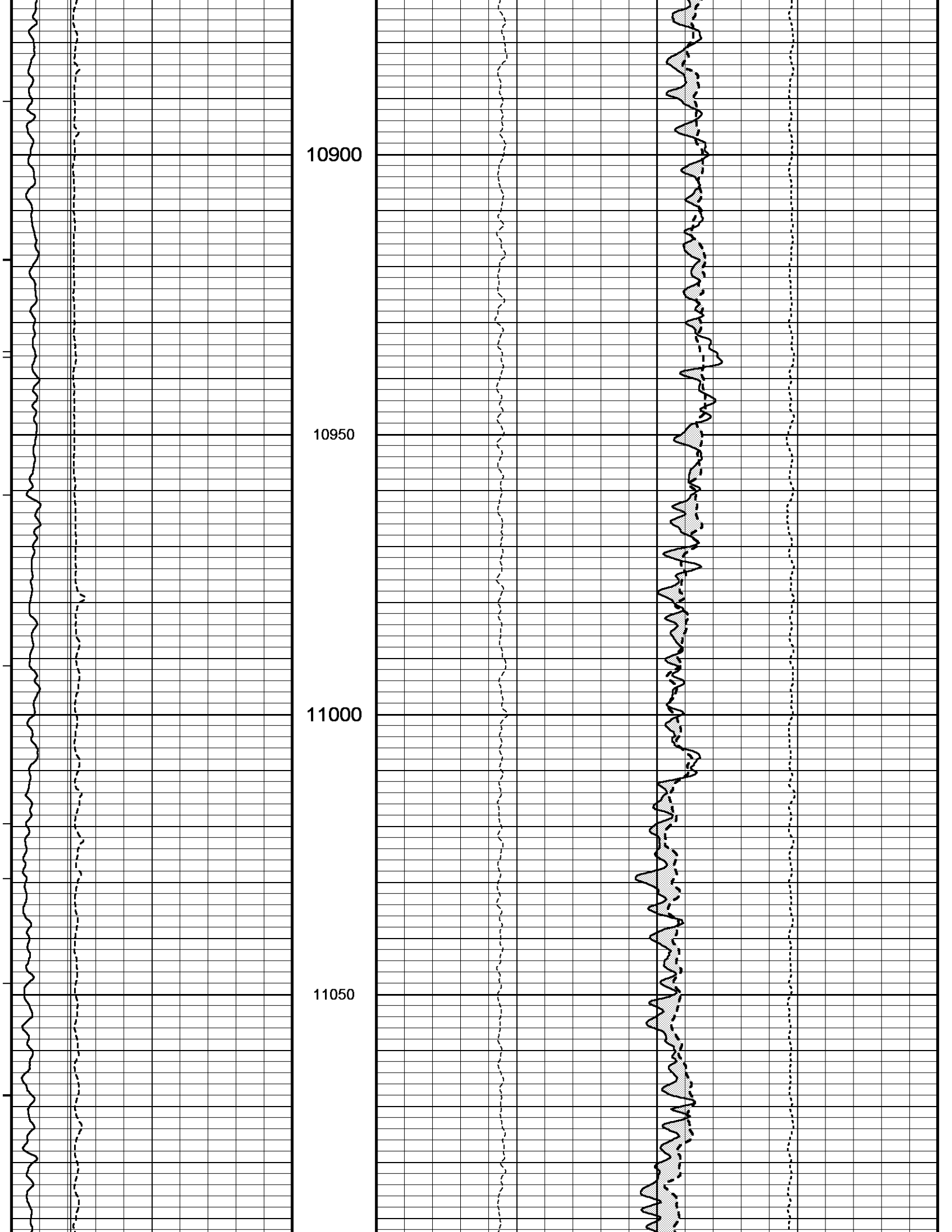

9800
9850
9900
9950
Bit Size
MCS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.

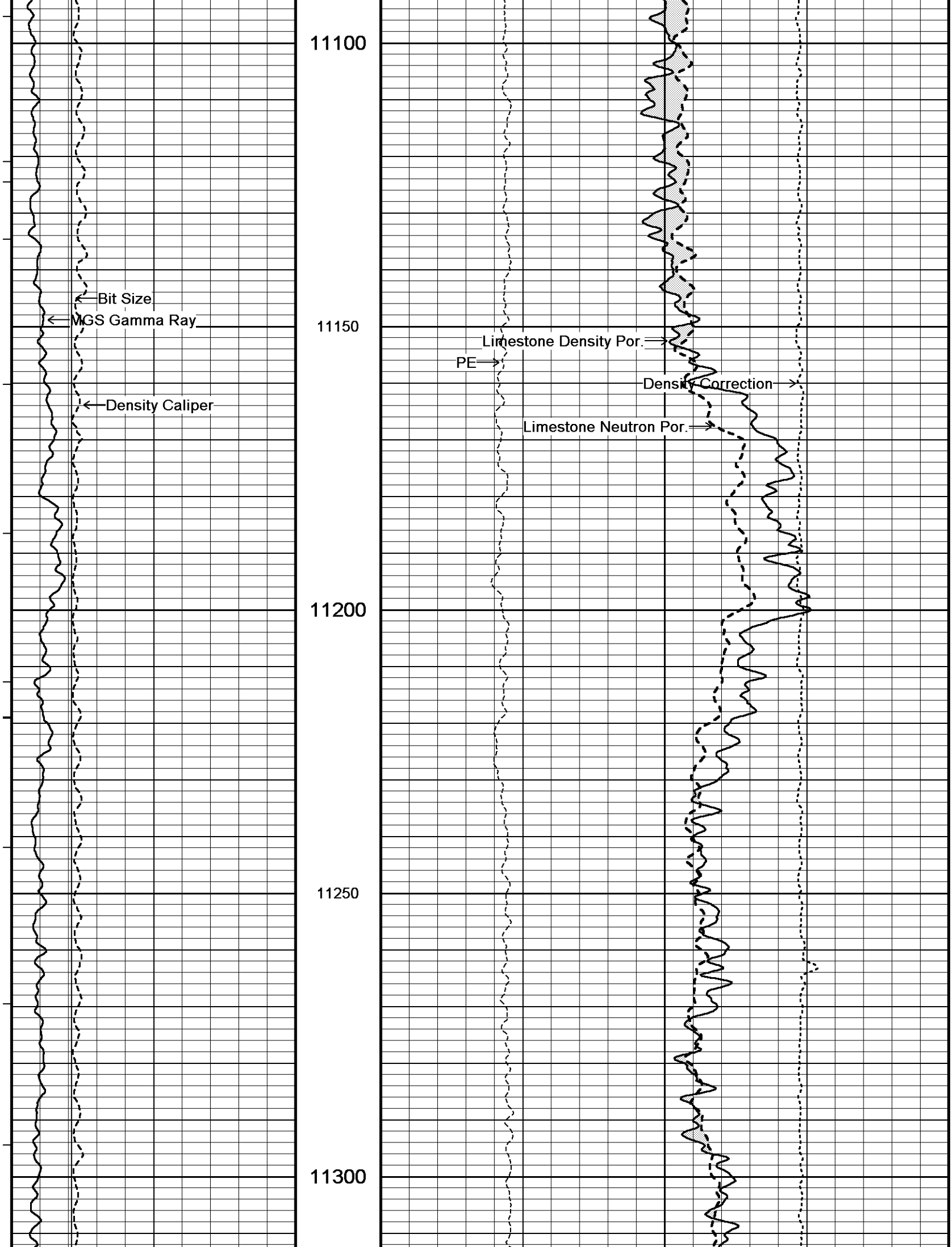

Limestone Neutron Por.
10000
10050
10100
10150
10200

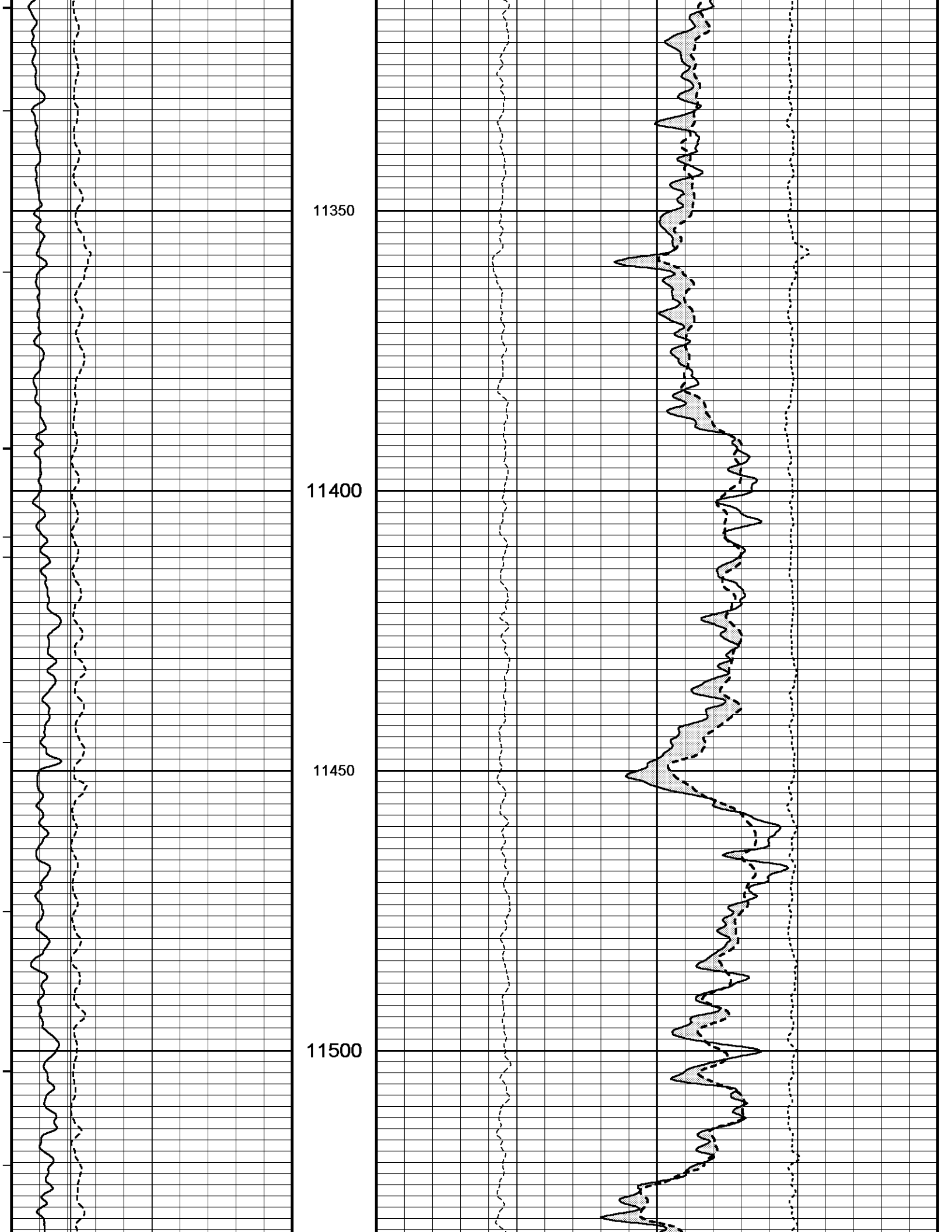

10250
10300
10350
10400
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.

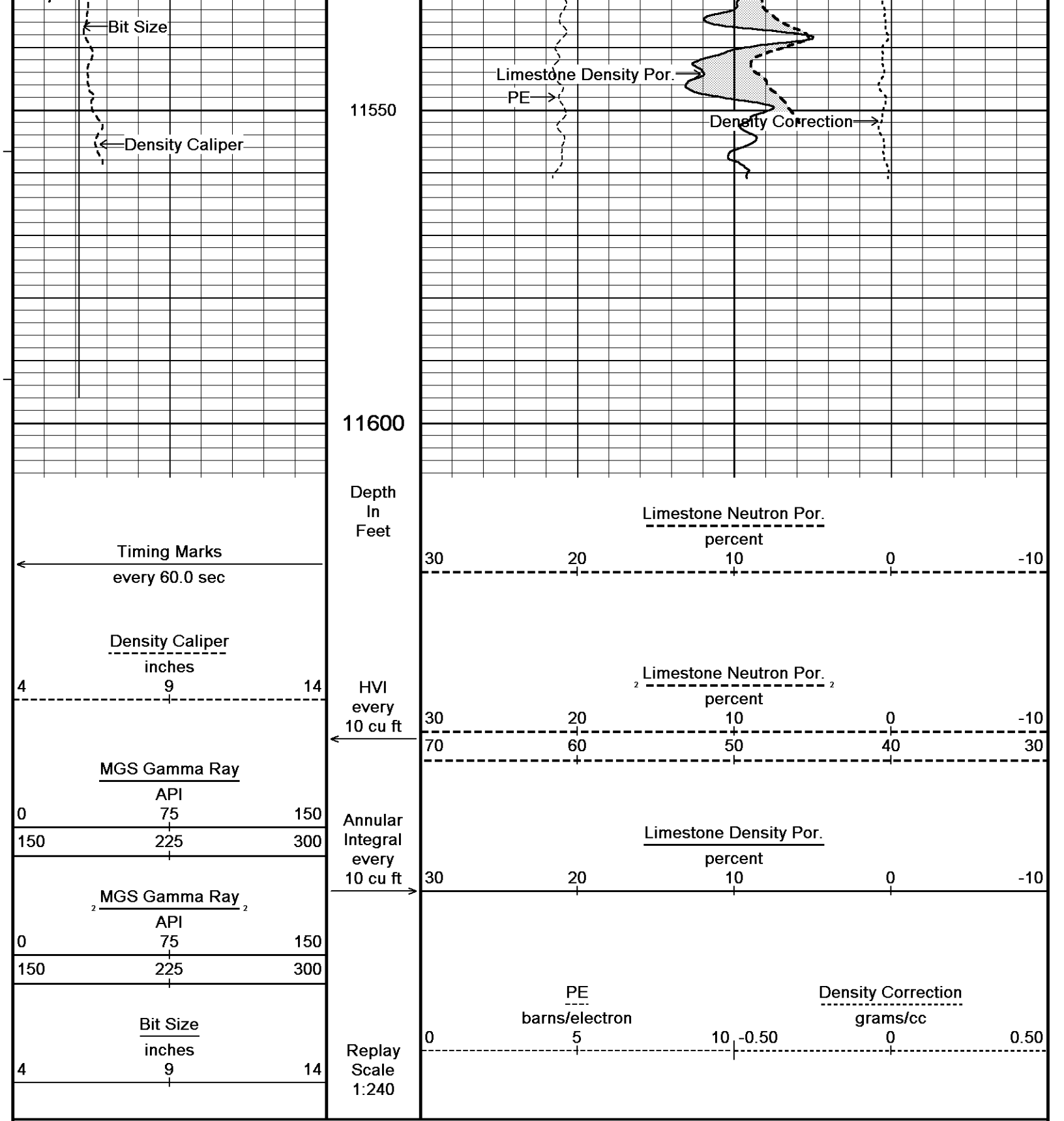

10450
10500
10550
10600
10650


10700
10750
10800
10850
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Density Correction
Limestone Neutron Por.


10900
10950
11000
11050


11100
11150
11200
11250
11300
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Density Correction
Limestone Neutron Por.


11350
11400
11450
11500

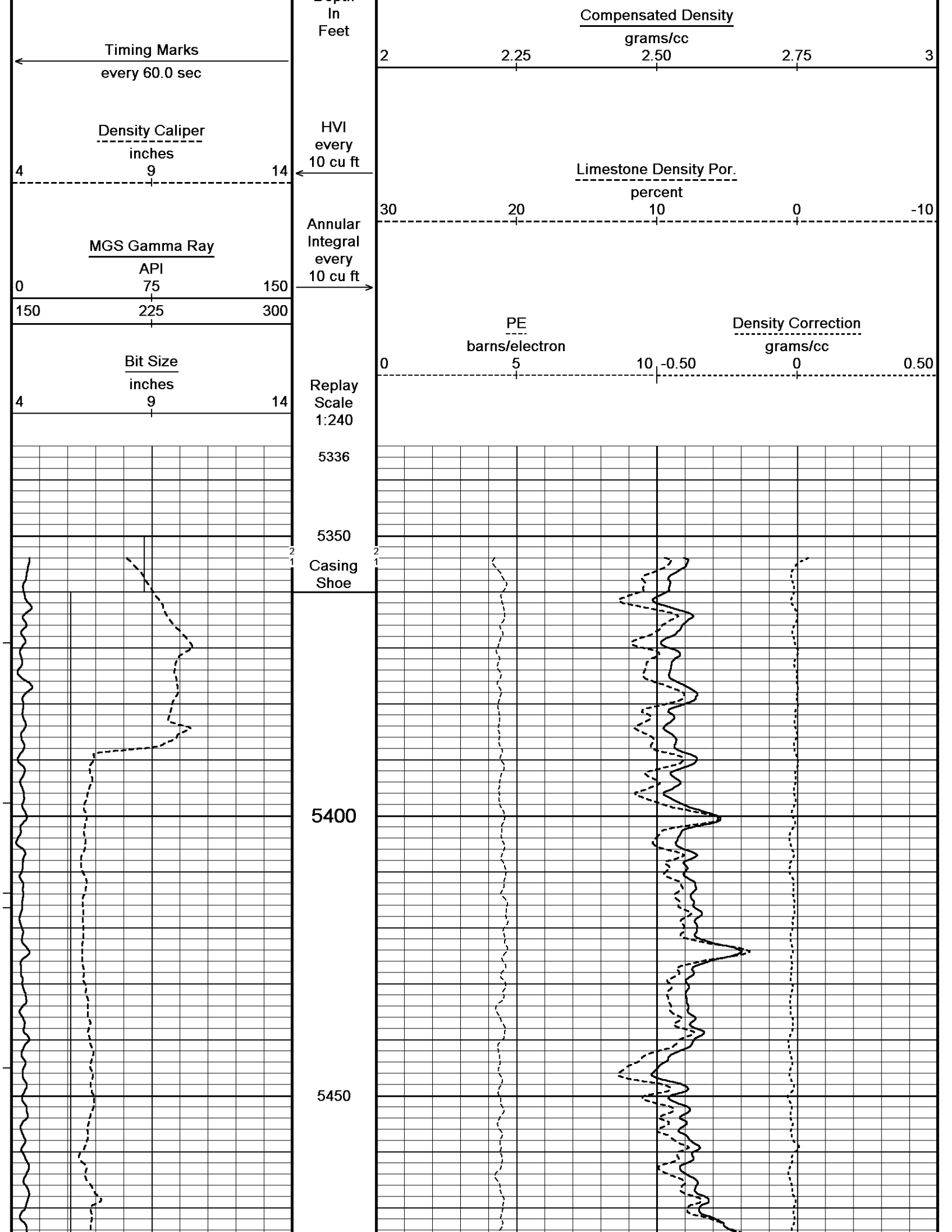


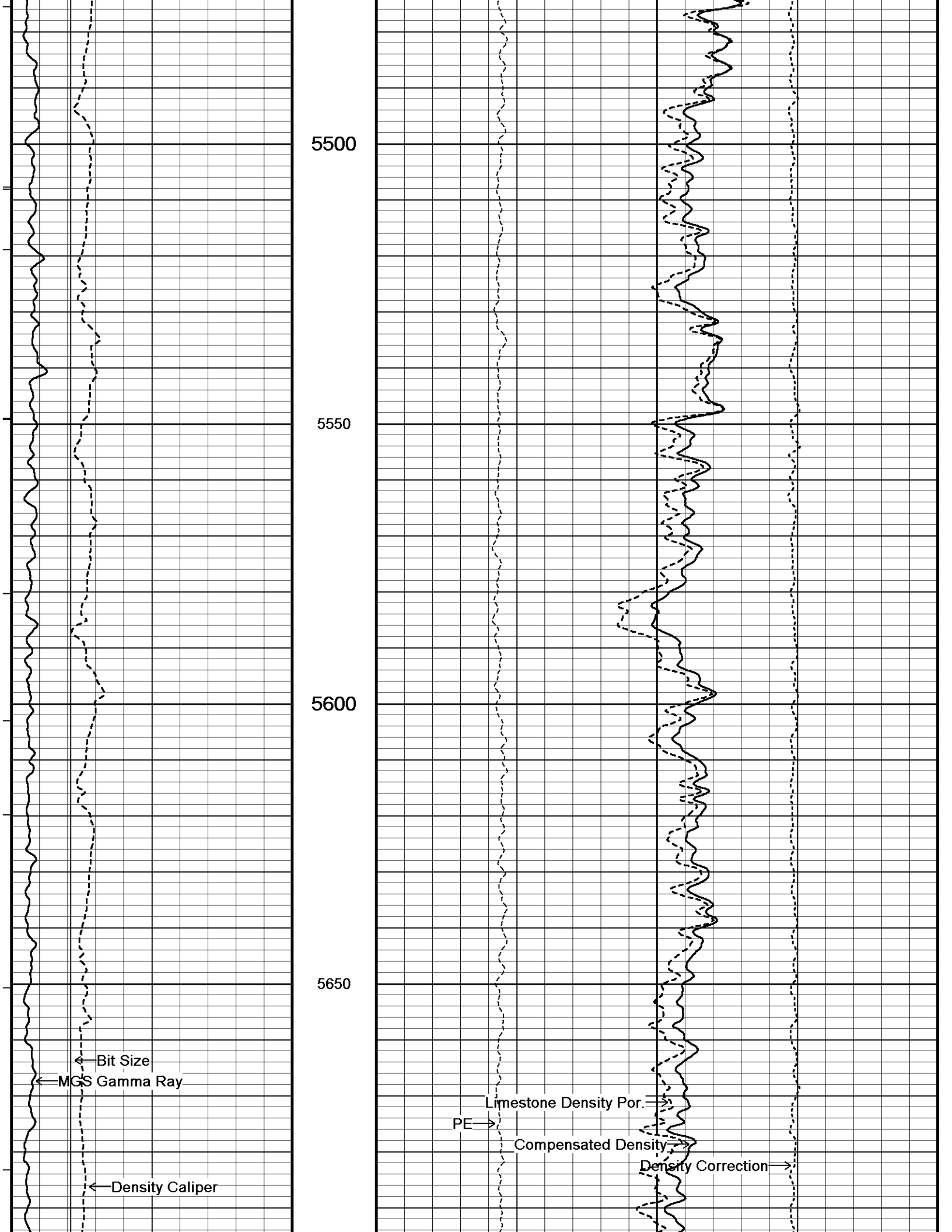
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 12-JAN-2013 18:36
Filename: C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta
Recorded on 12-JAN-2013 17:02
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

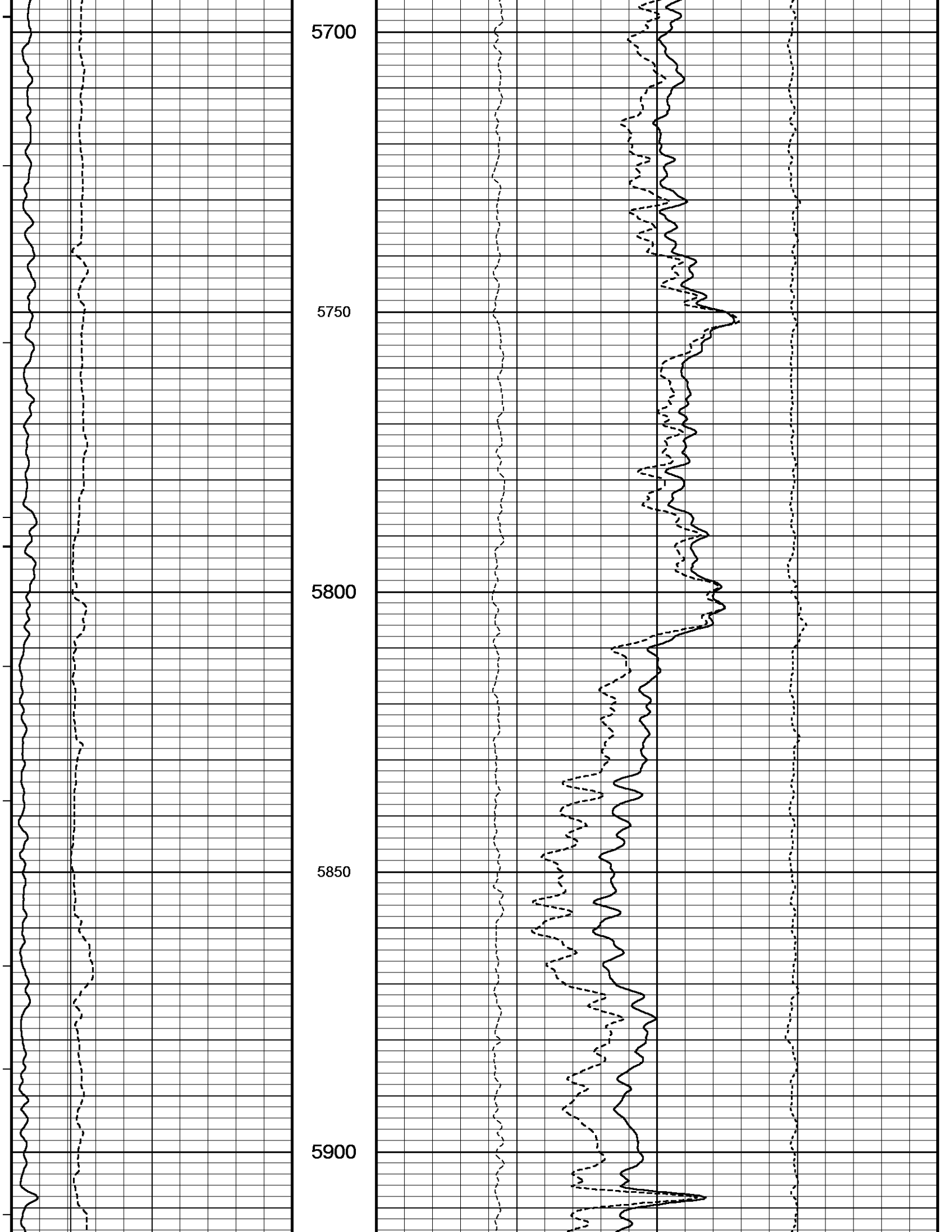
5 INCH MAIN PASS

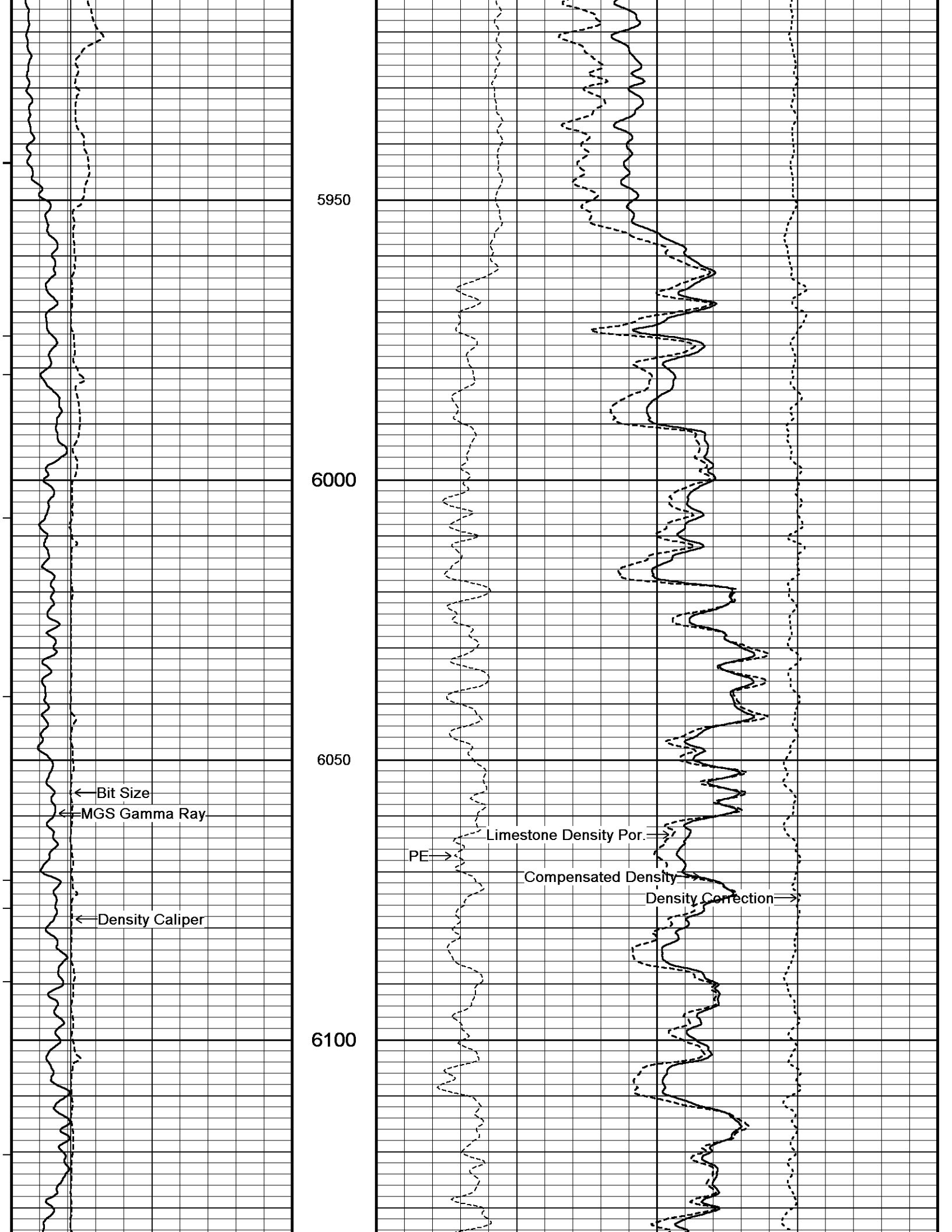
5 INCH BULK DENSITY

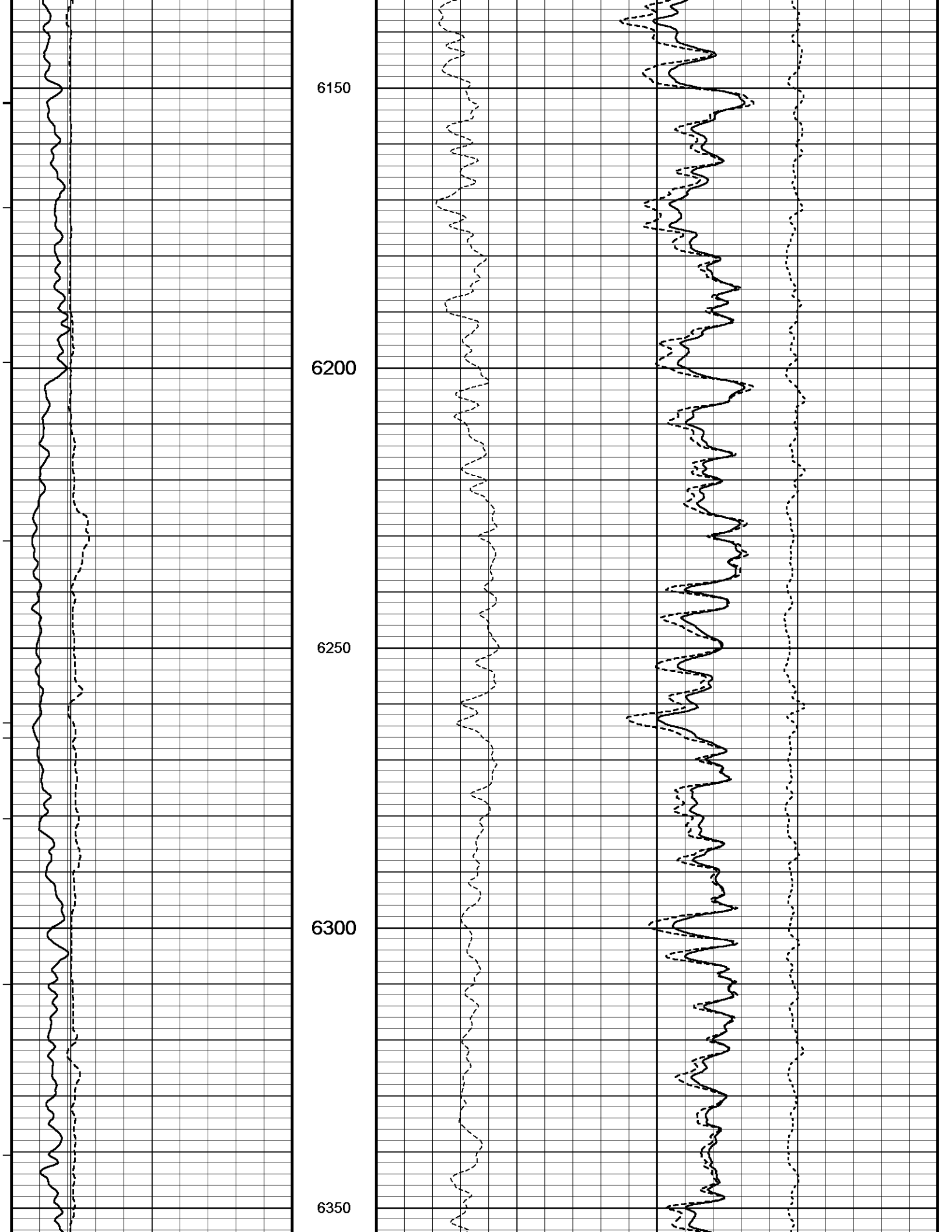
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 12-JAN-2013 18:36
Filename: C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta
Recorded on 12-JAN-2013 17:02
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

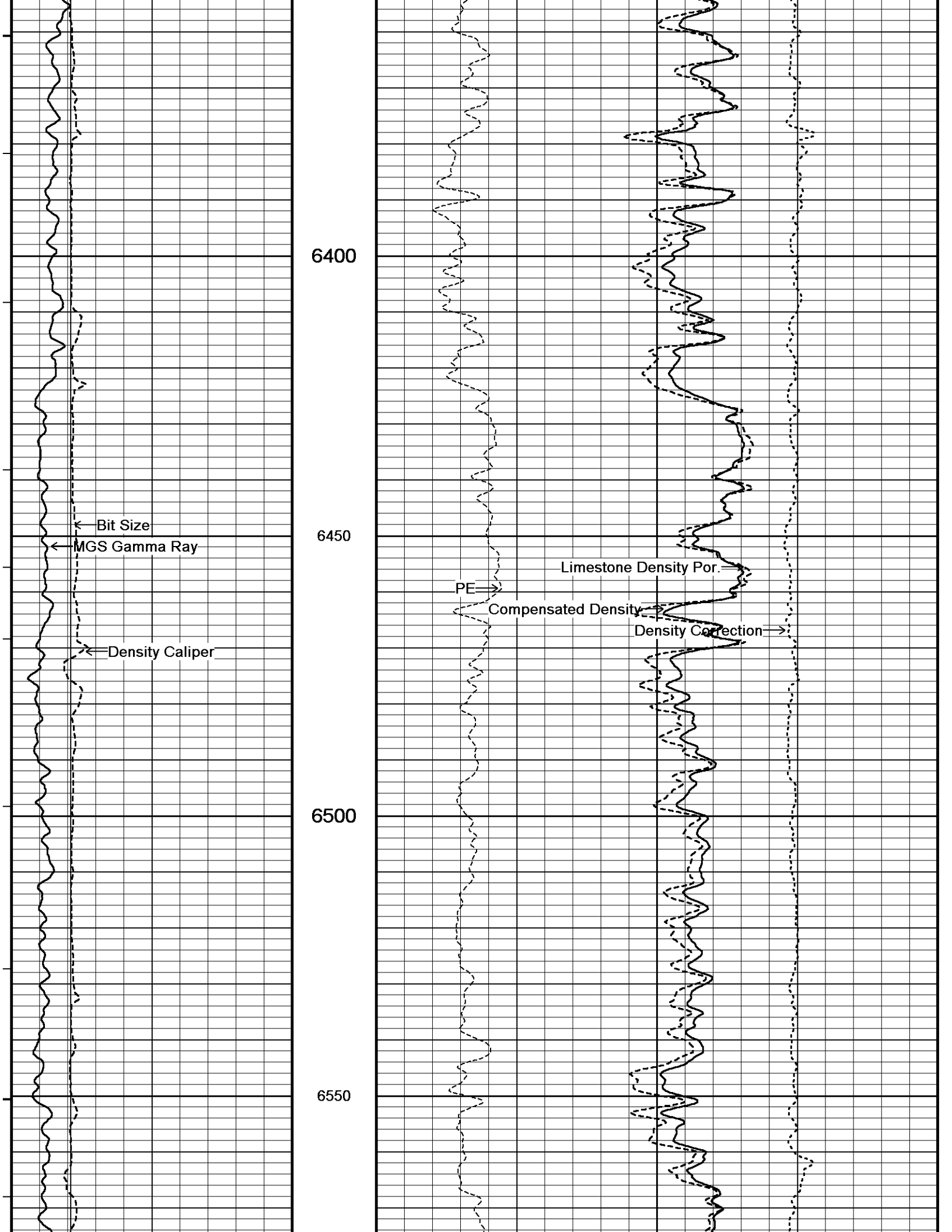

Depth In Feet
Timing Marks
every 60.0 sec
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Density Caliper
inches
4
9
14
HVI every 10 cu ft
Limestone Density Por.
percent
30
20
10
0
-10
Annular Integral every 10 cu ft
MGS Gamma Ray
API
0
75
150
150
225
300
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.50
0
0.50
Bit Size
inches
4
9
14
Replay Scale 1:240
5336
5350
Casing Shoe
5400
5450

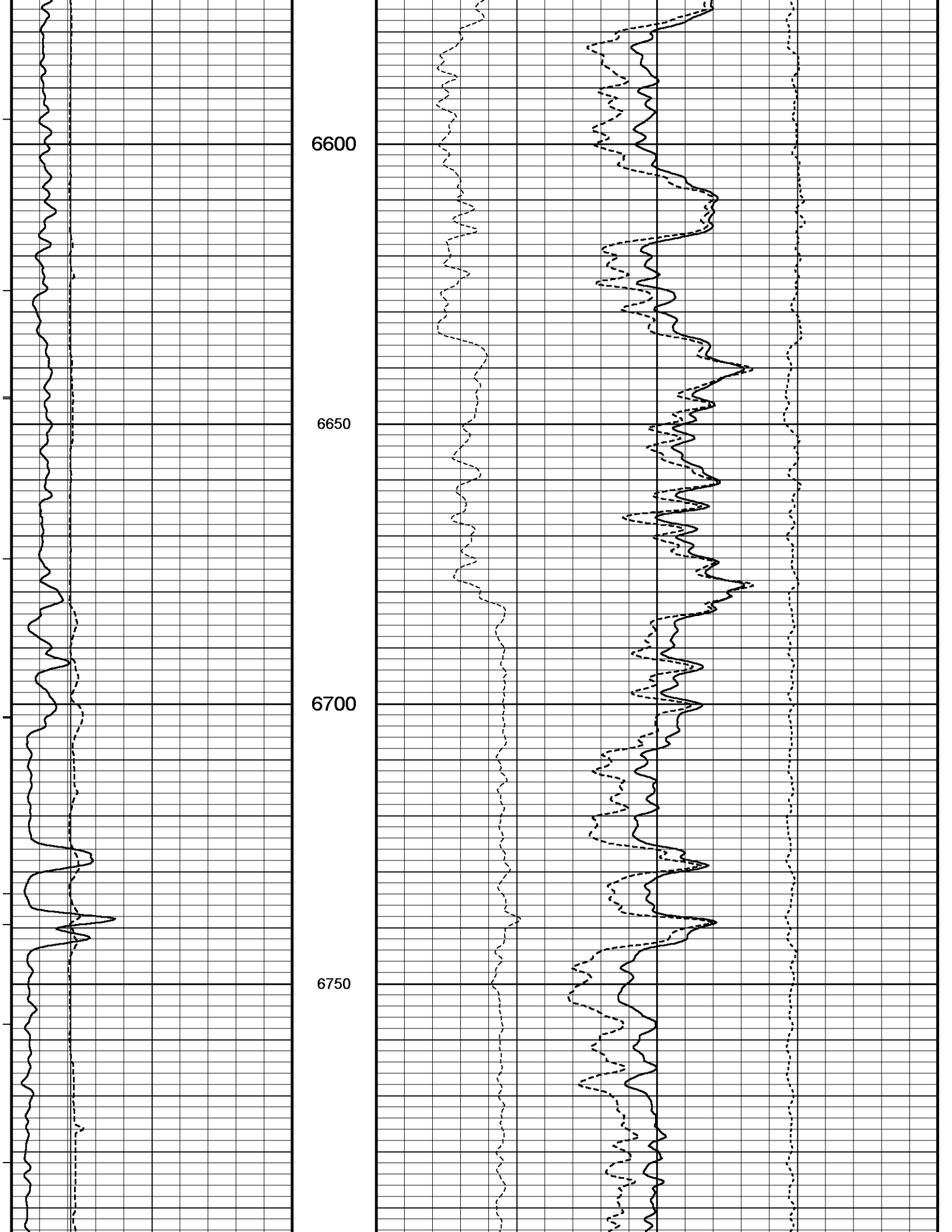

5500
5550
5600
5650
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

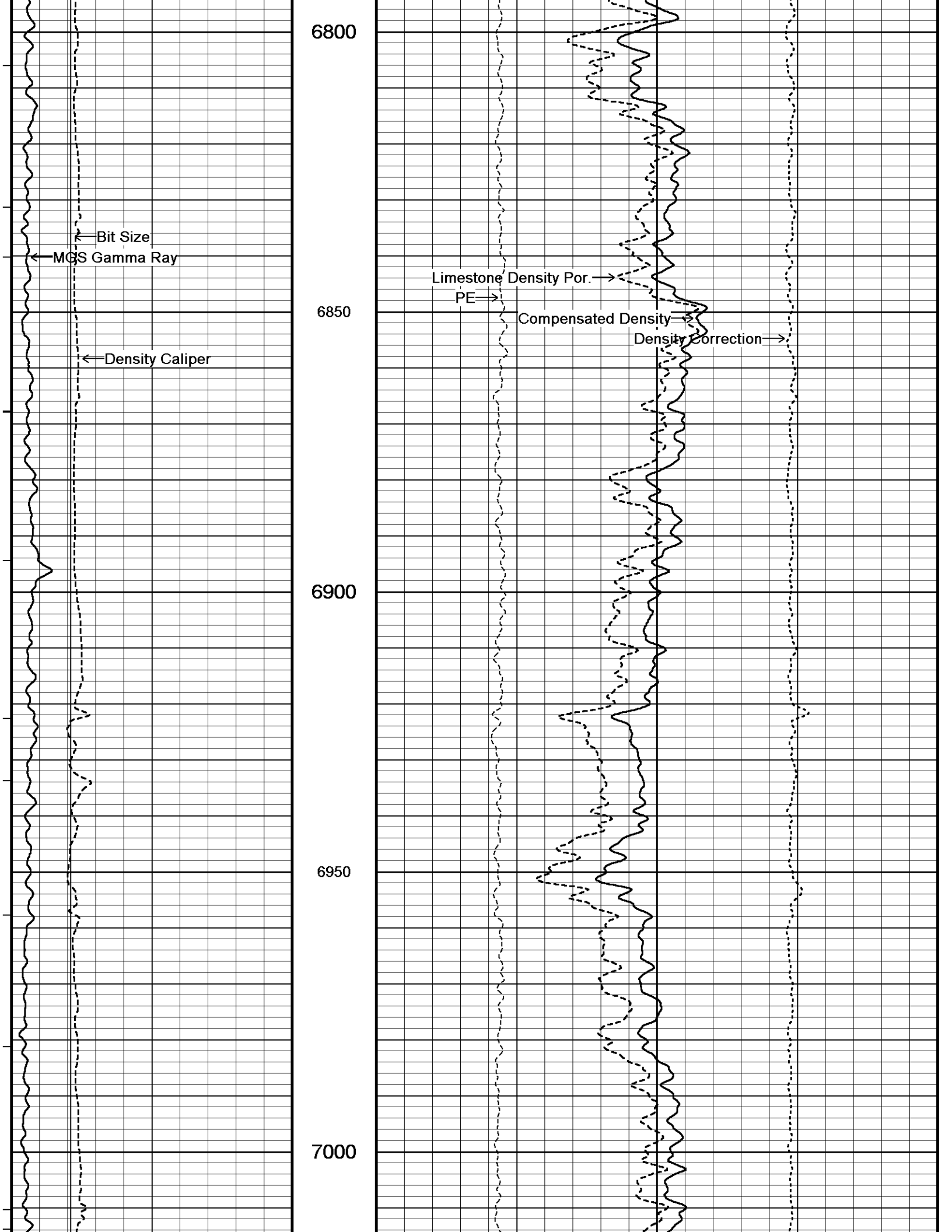

5700
5750
5800
5850
5900

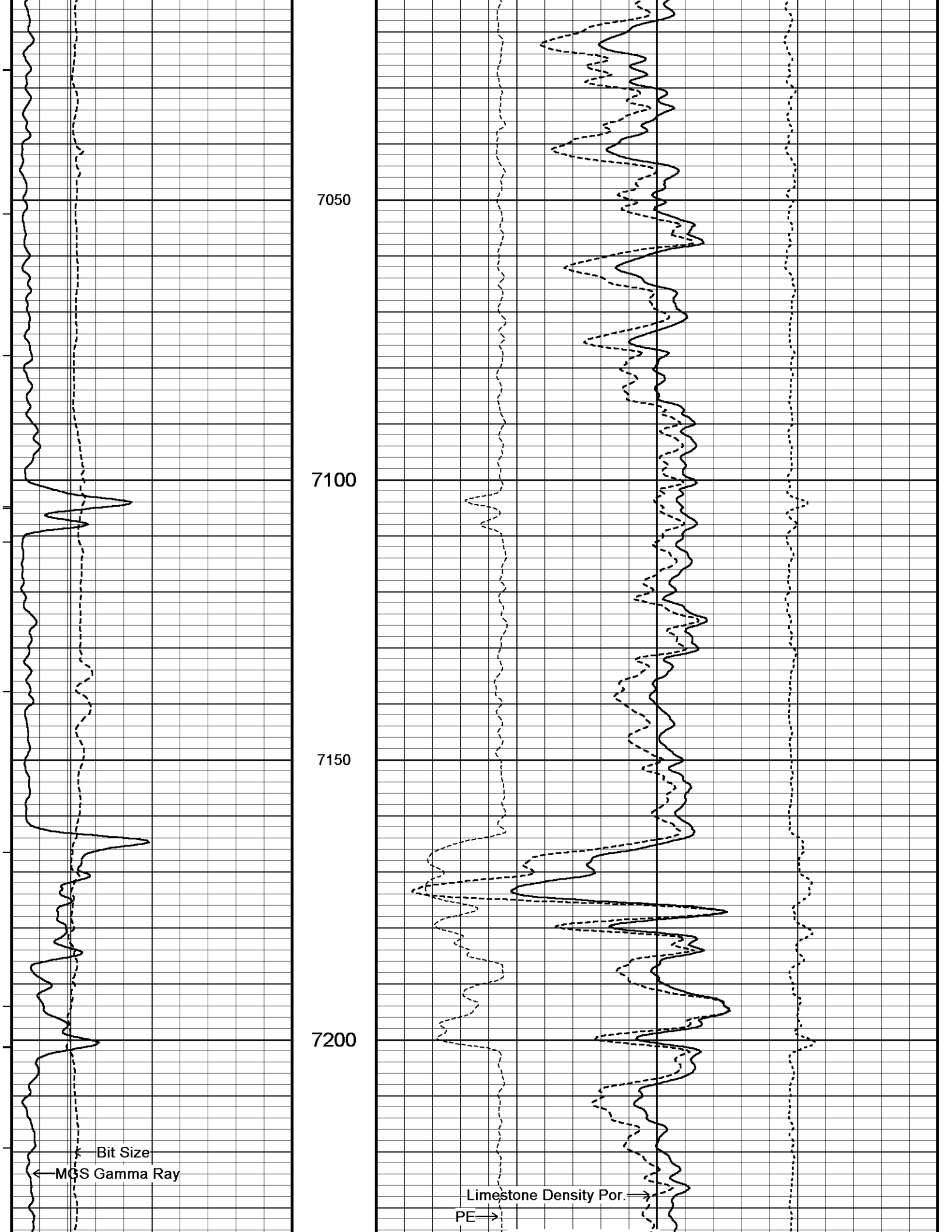

5950
6000
6050
6100
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

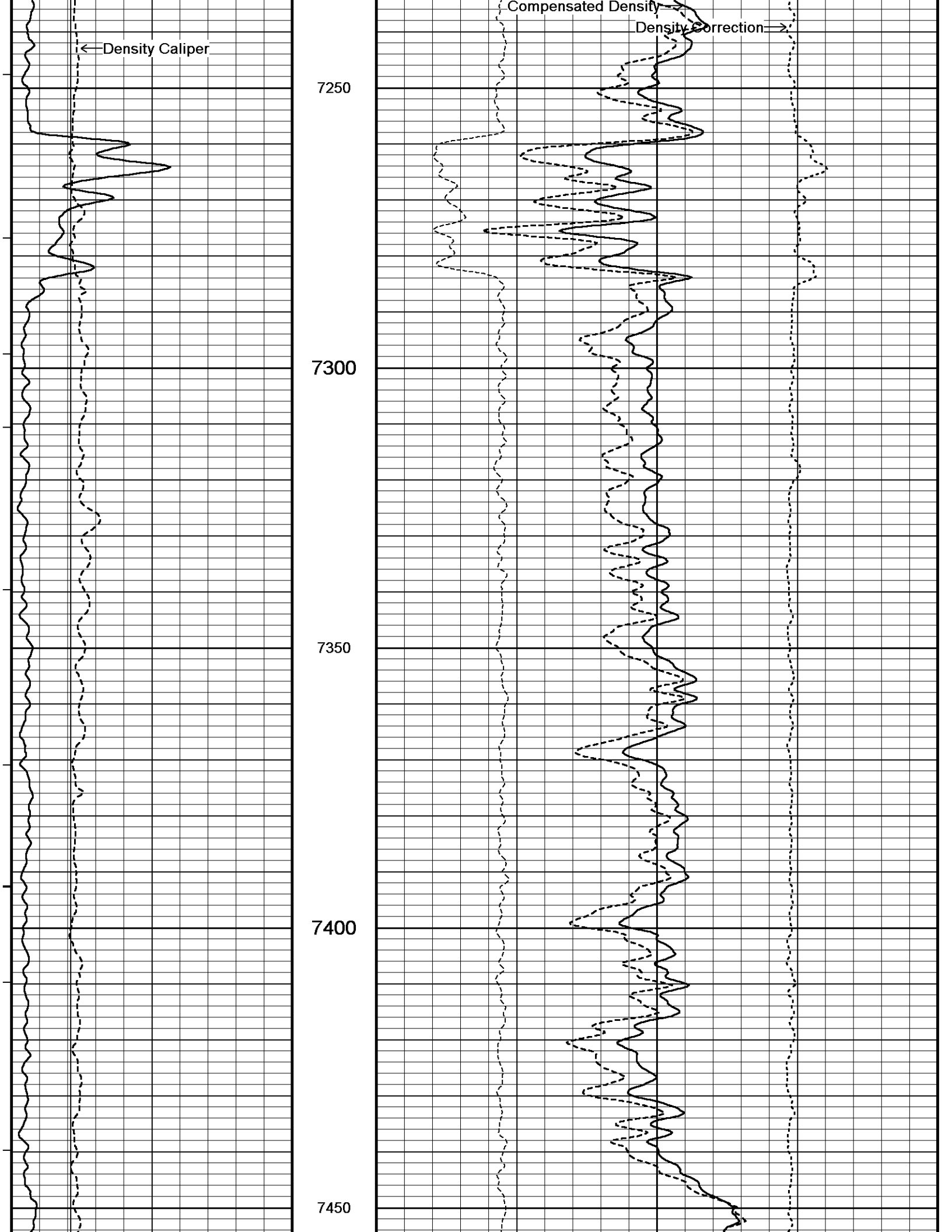

6150
6200
6250
6300
6350

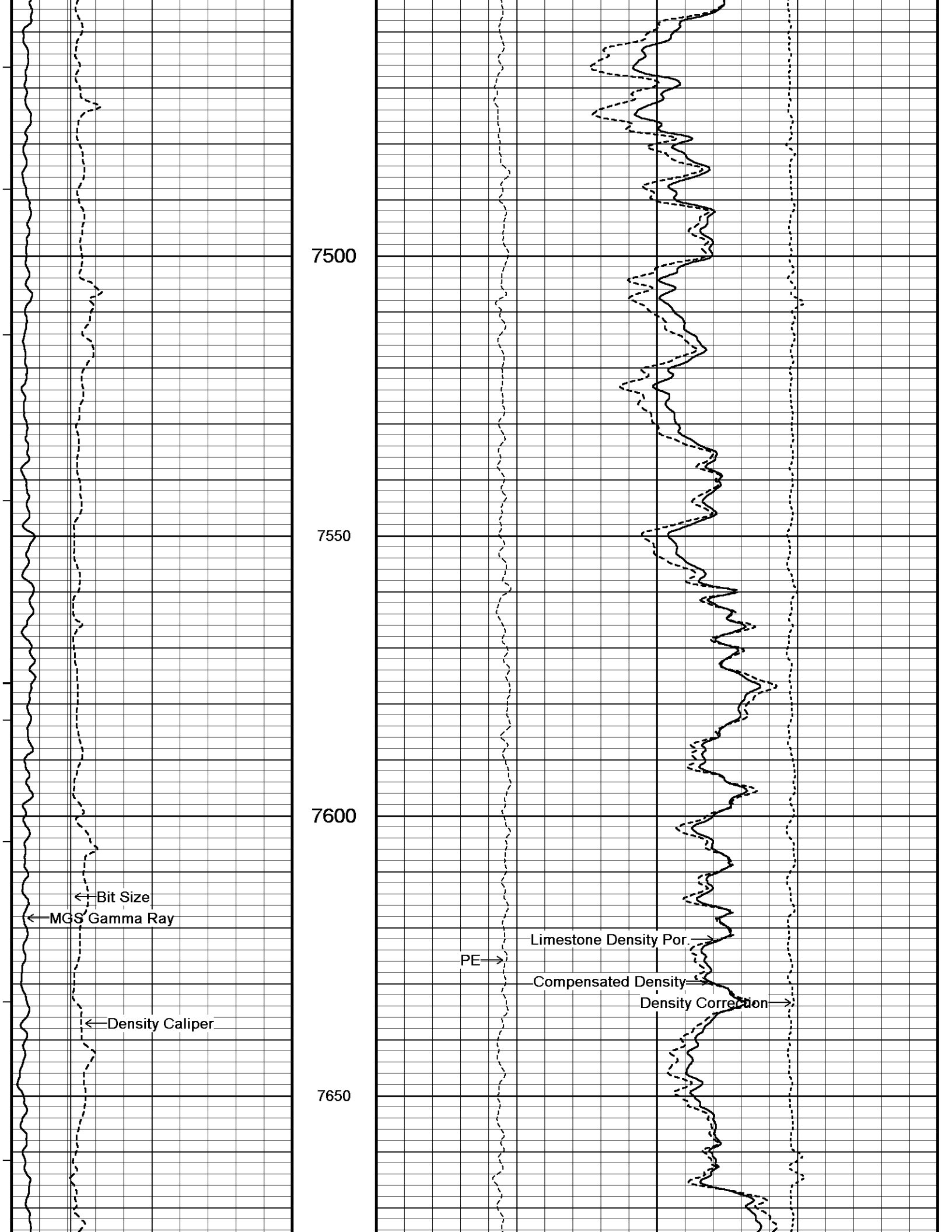

6400
6450
6500
6550
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

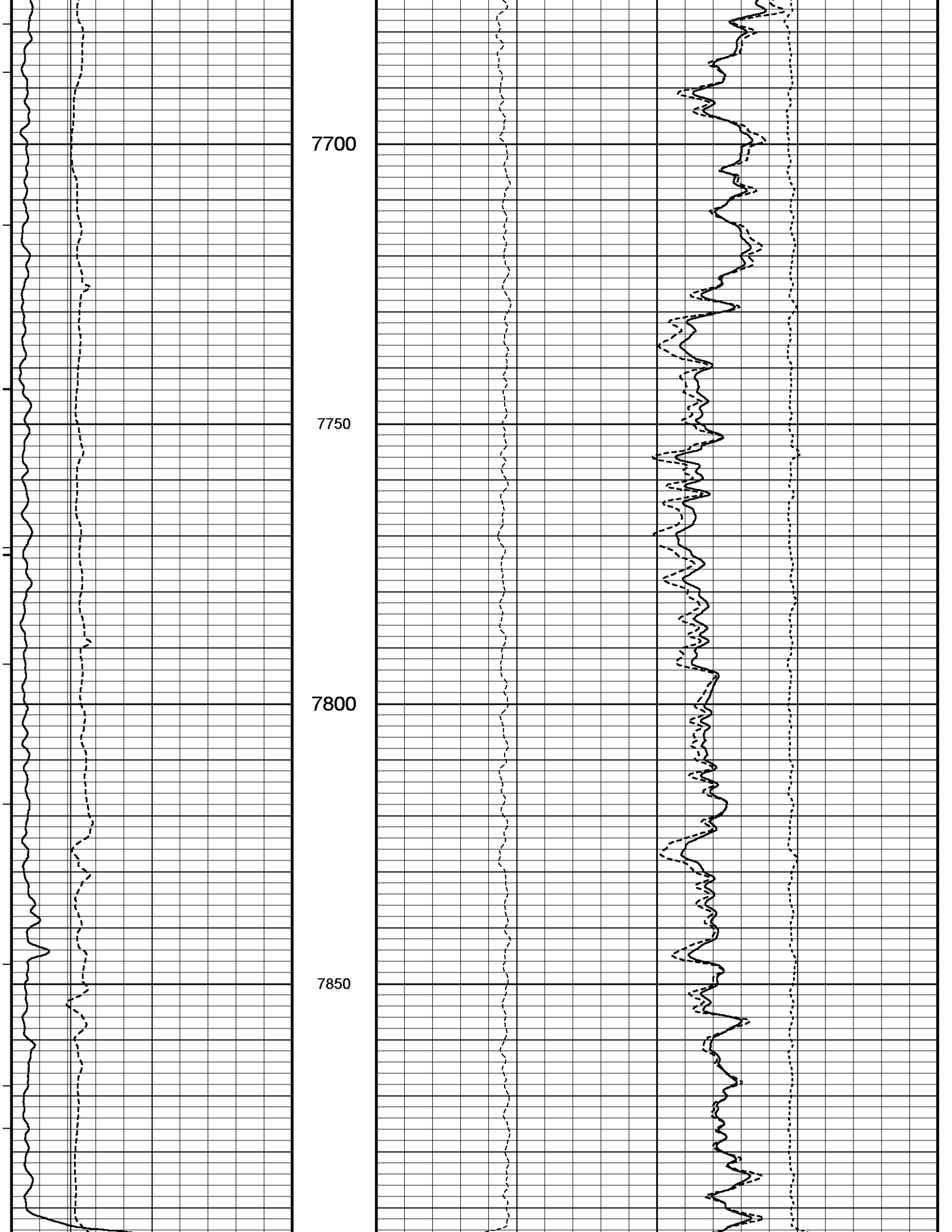

6600
6650
6700
6750

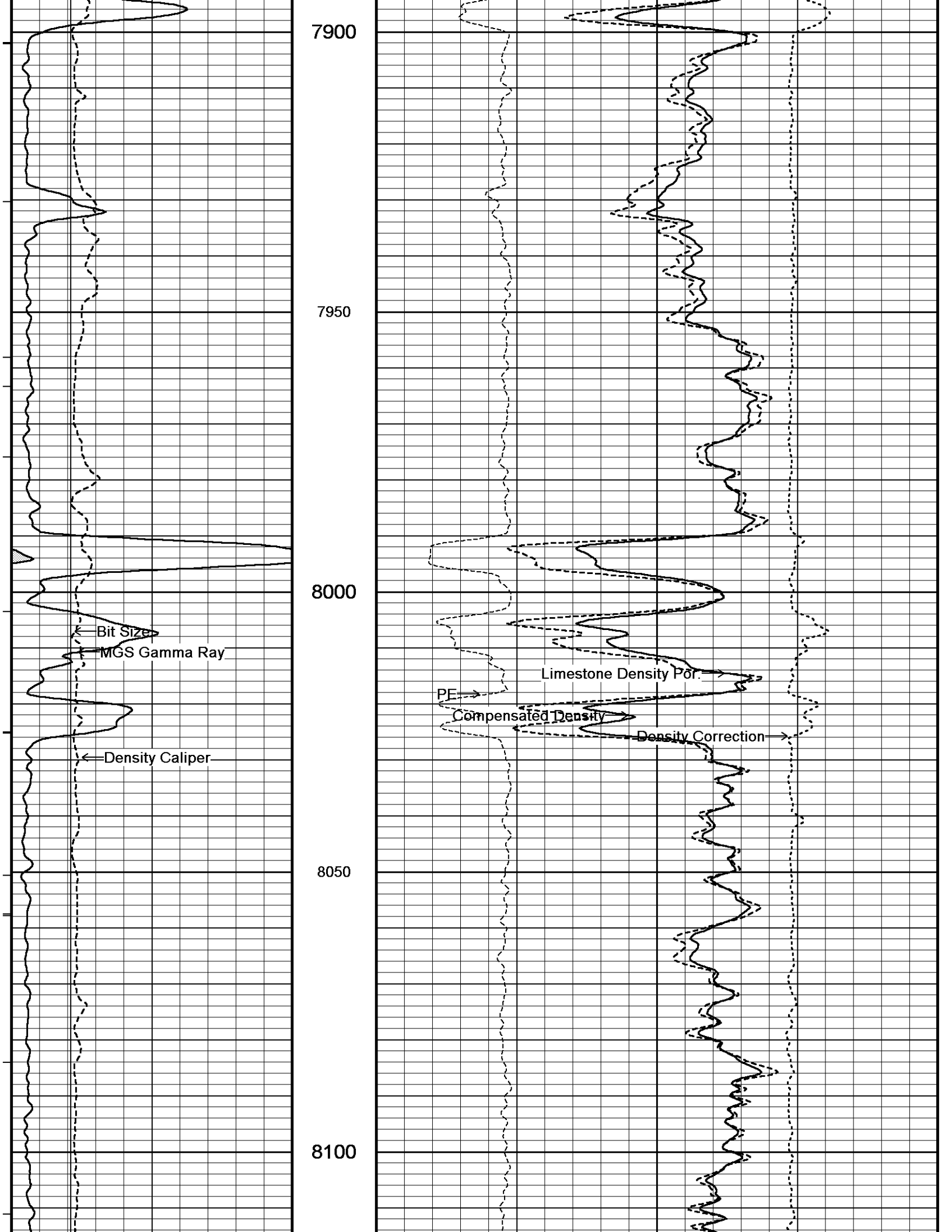

6800
6850
6900
6950
7000
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

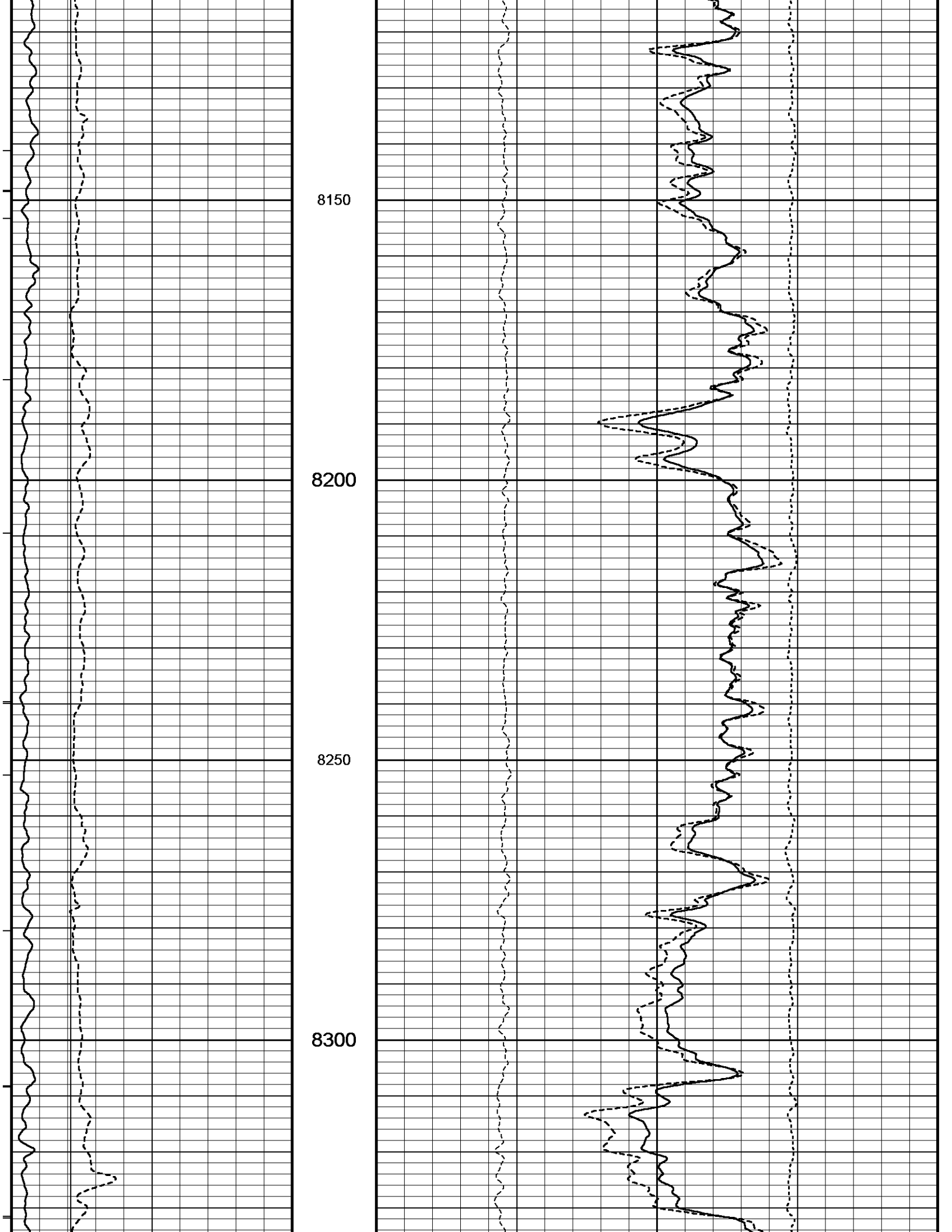

7050
7100
7150
7200
Bit Size
MGS Gamma Ray
Limestone Density Por.
PE

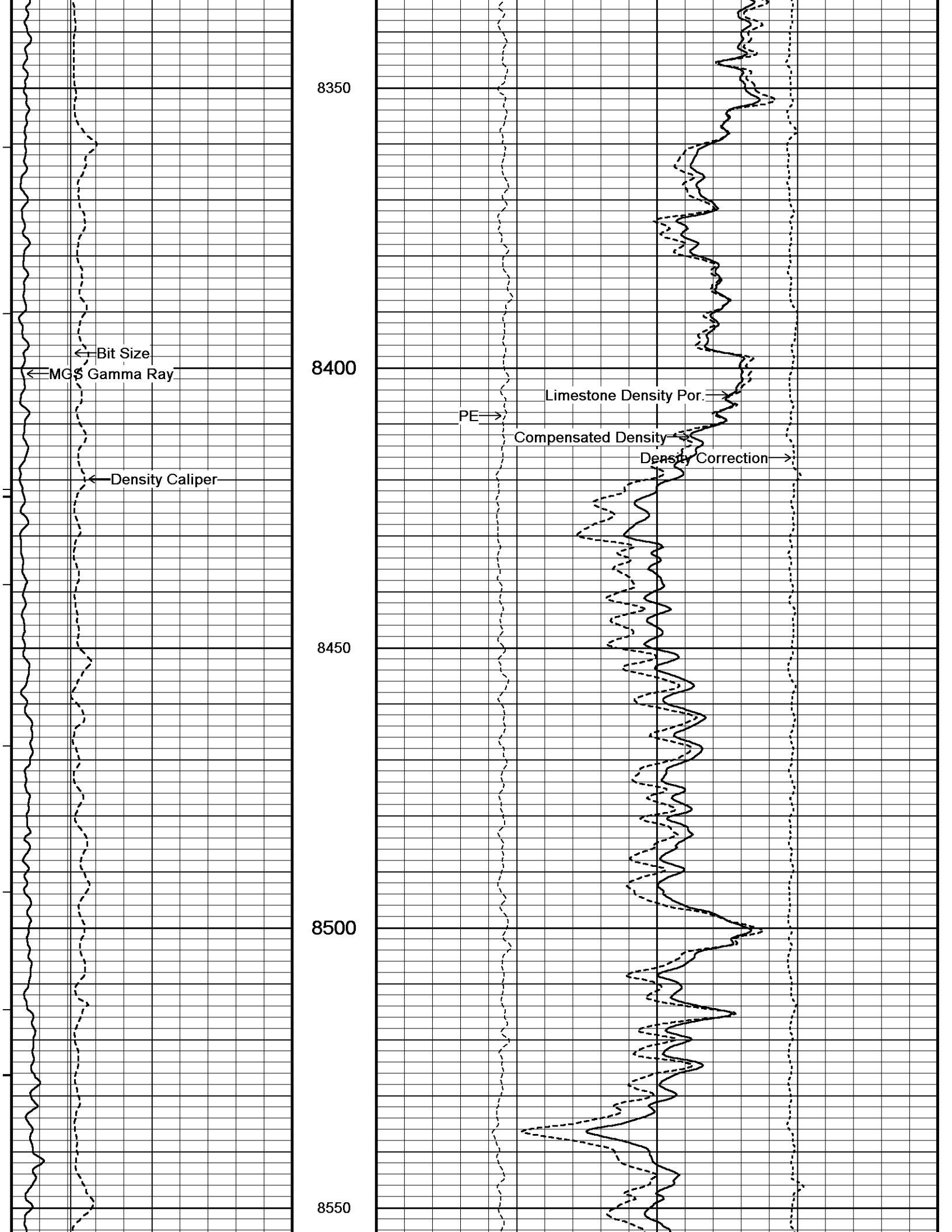

Compensated Density
Density Correction
Density Caliper
7250
7300
7350
7400
7450

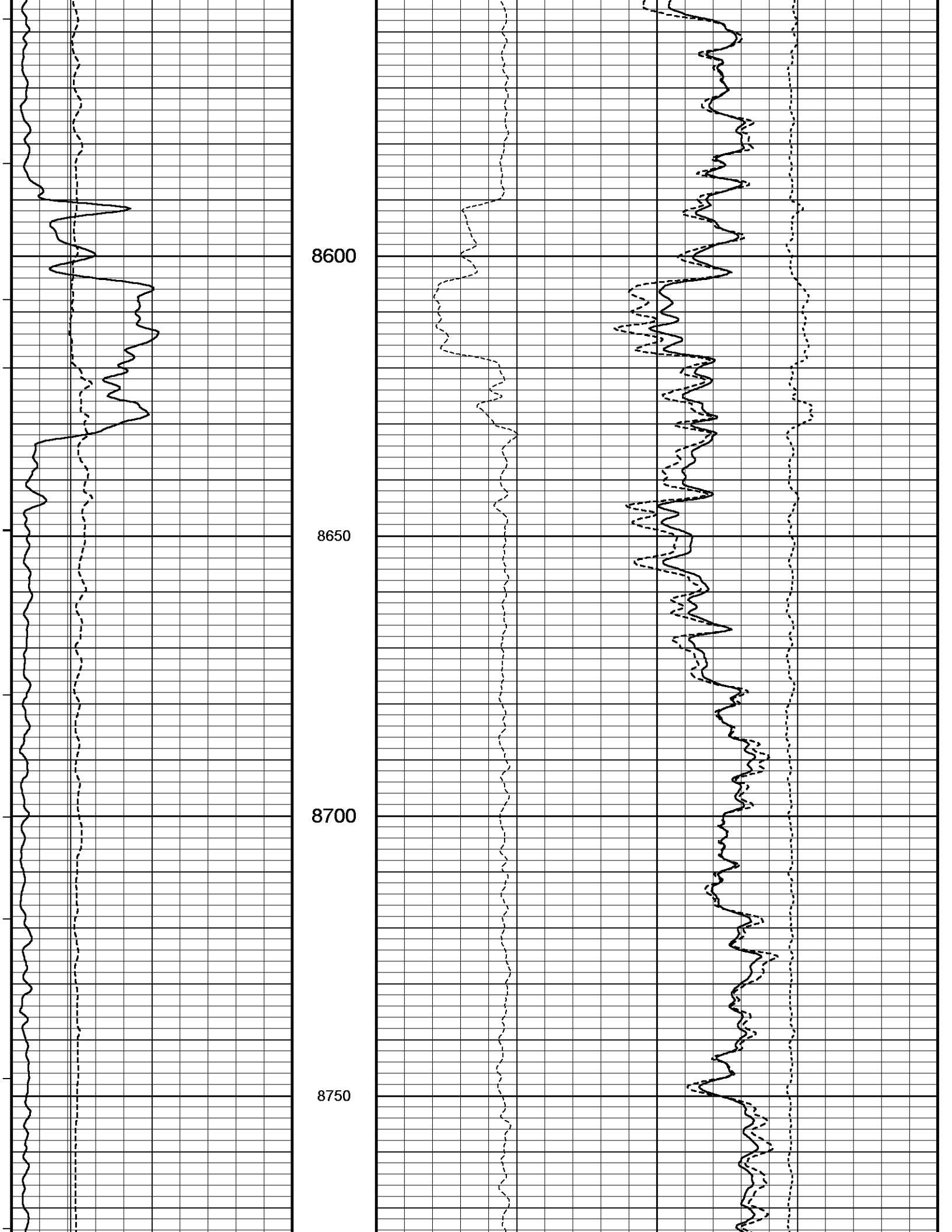

7500
7550
7600
7650
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

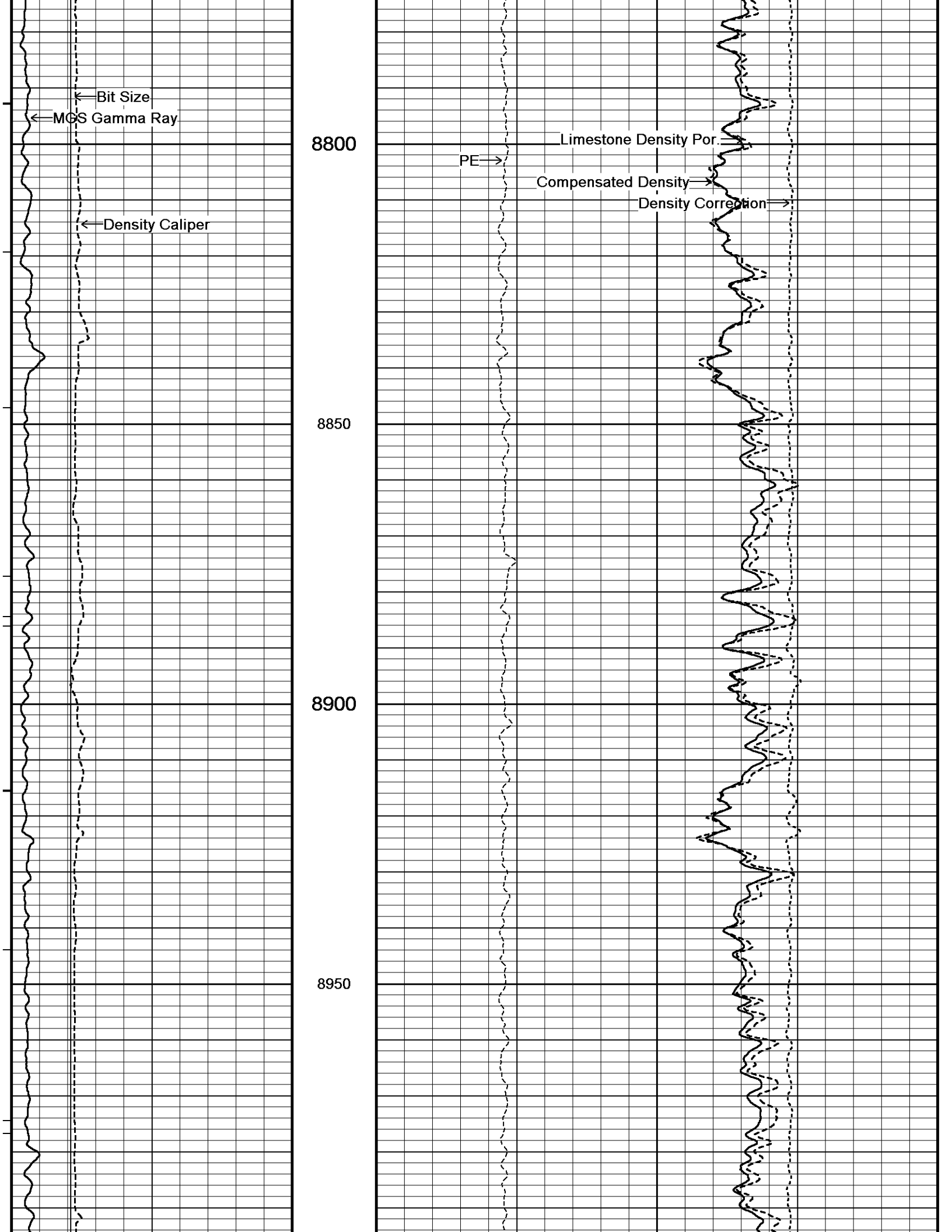

7700
7750
7800
7850

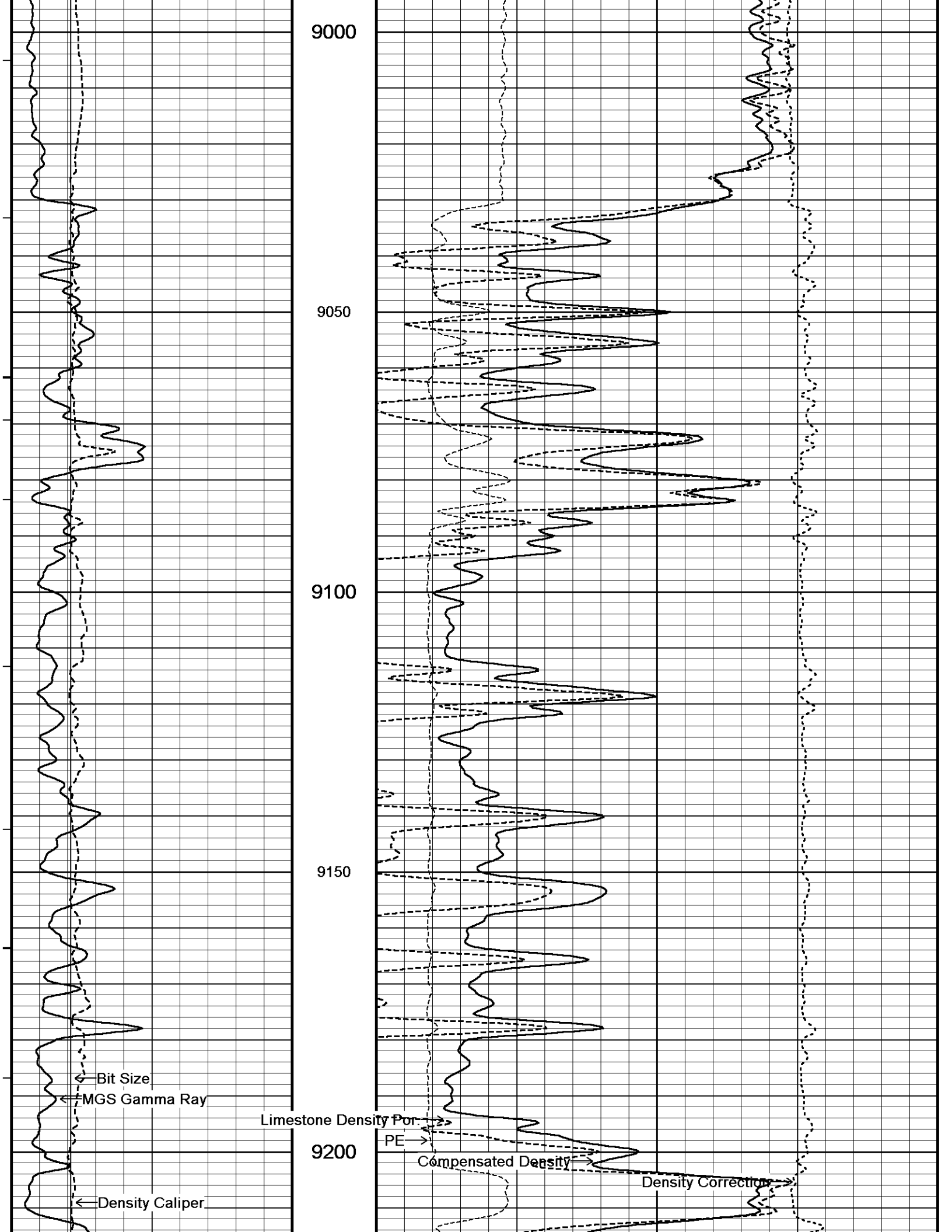

7900
7950
8000
8050
8100
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

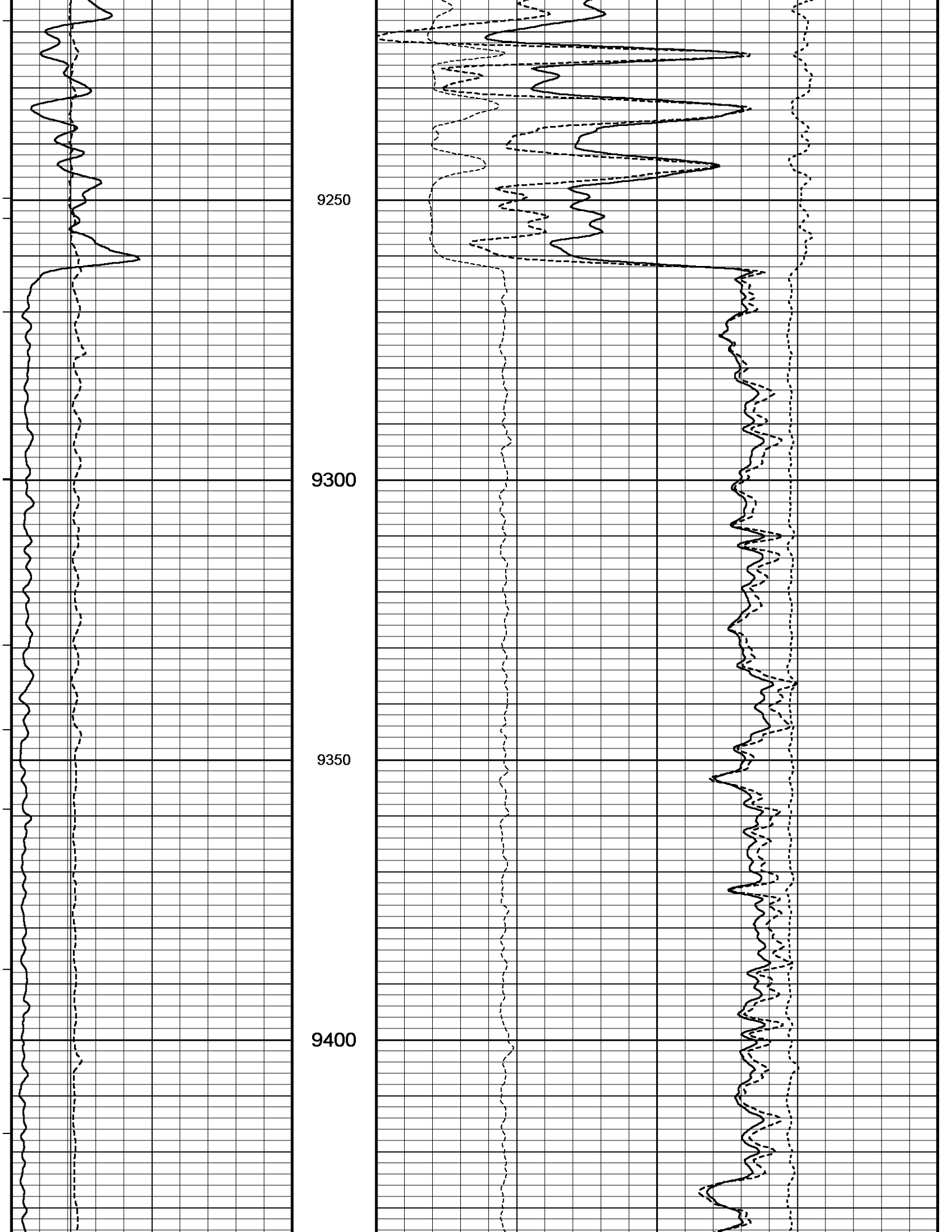

8150
8200
8250
8300

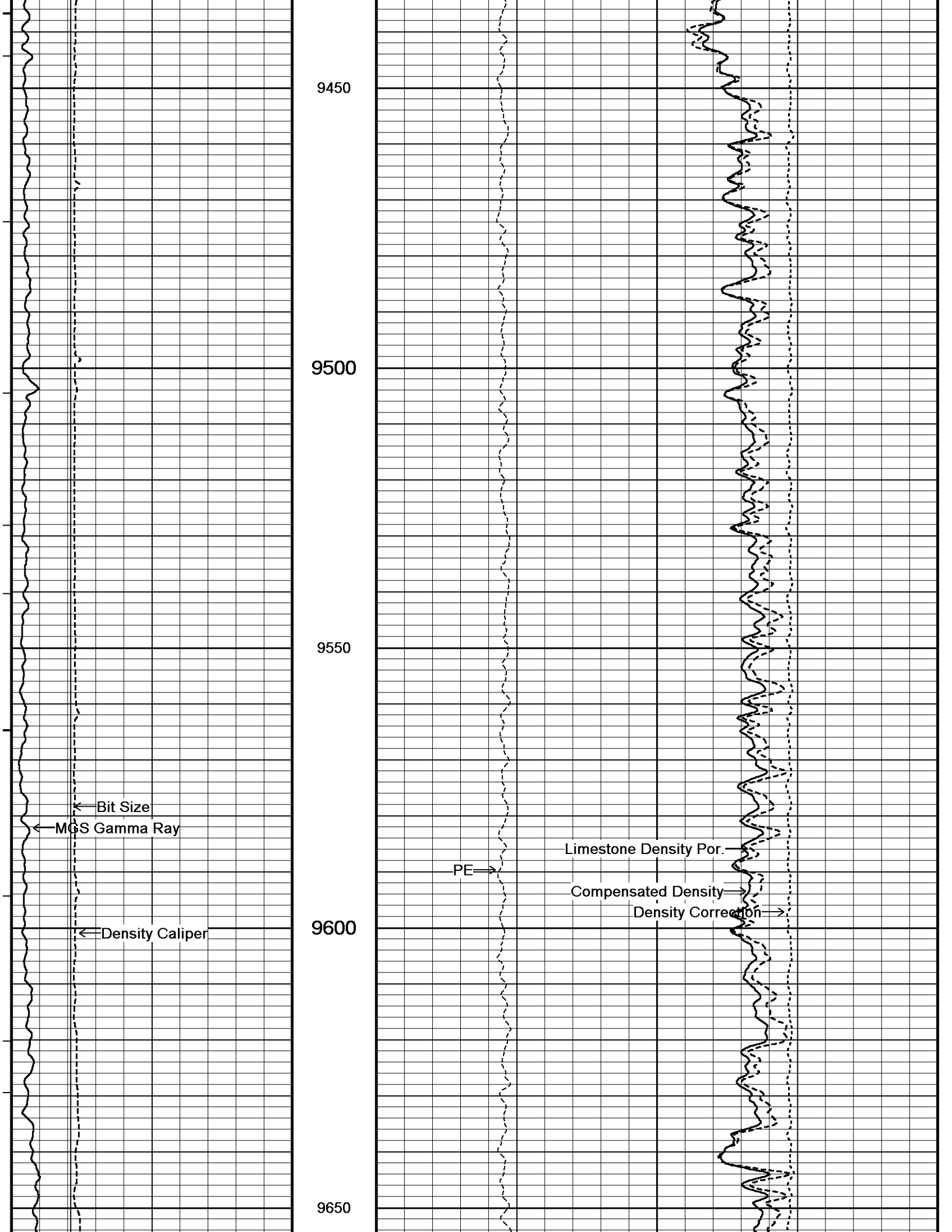

8350
8400
8450
8500
8550
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

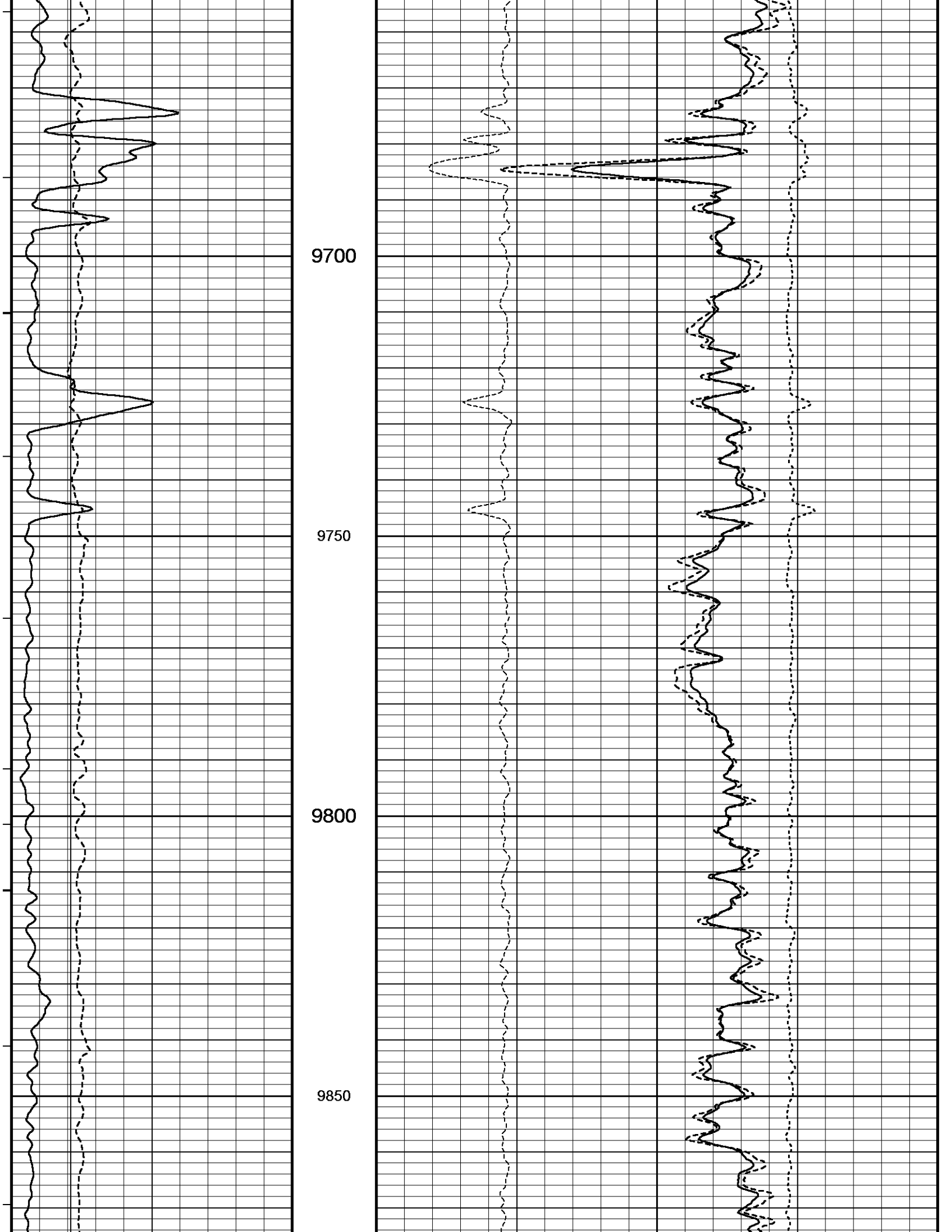

8600
8650
8700
8750

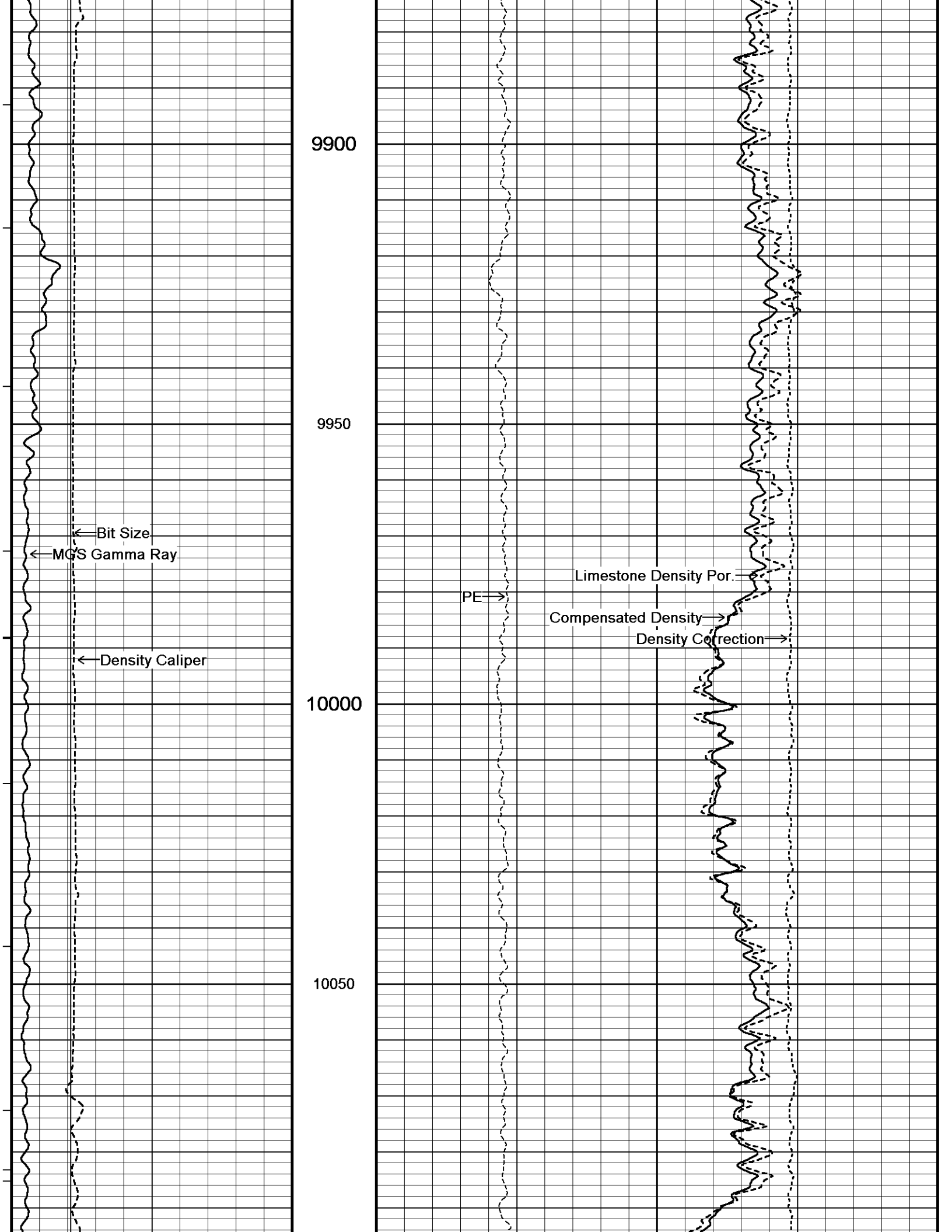

Bit Size
MGS Gamma Ray
Density Caliper
8800
8850
8900
8950
PE
Limestone Density Por
Compensated Density
Density Correction

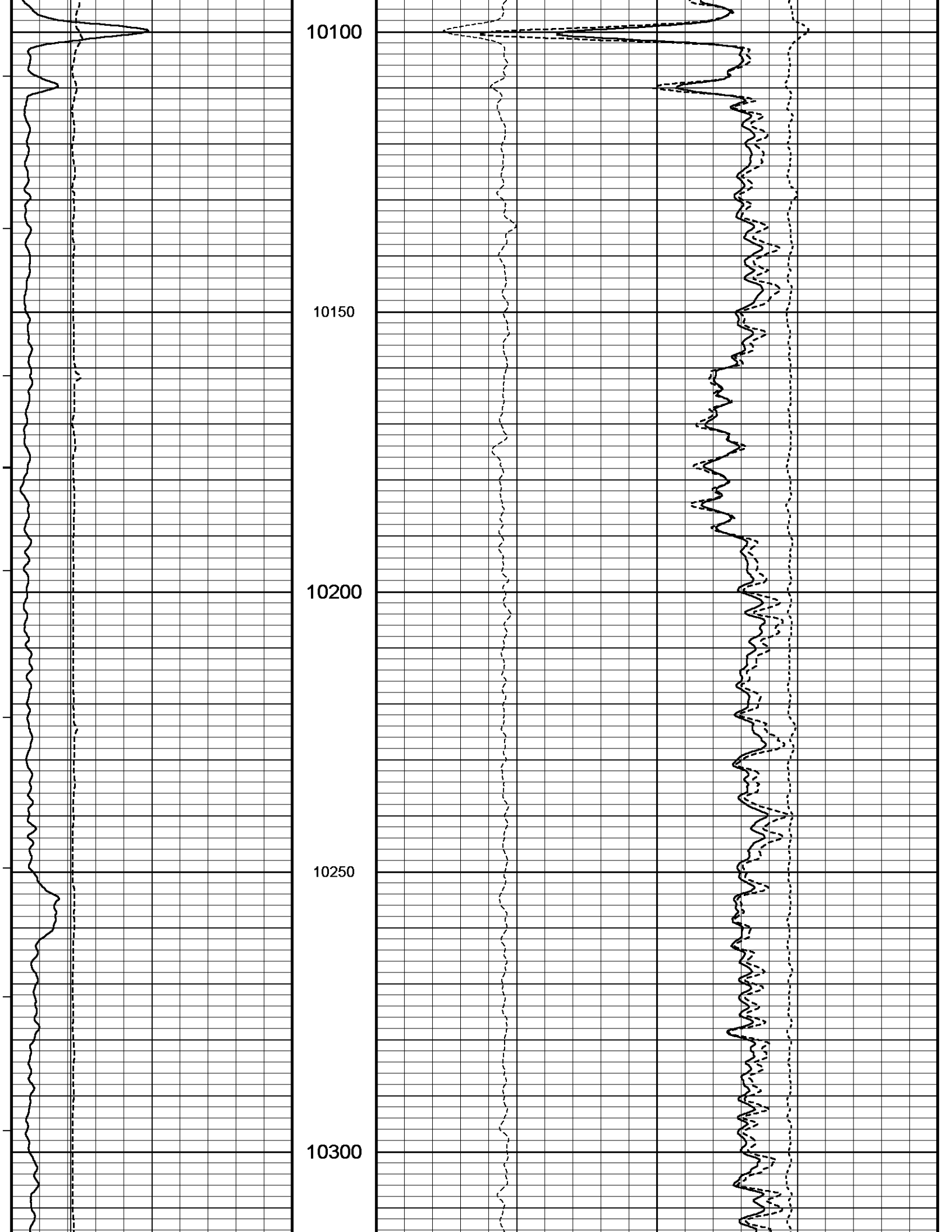

9000
9050
9100
9150
9200
Bit Size
MGS Gamma Ray
Limestone Density Por.
PE
Compensated Density
Density Correction
Density Caliper

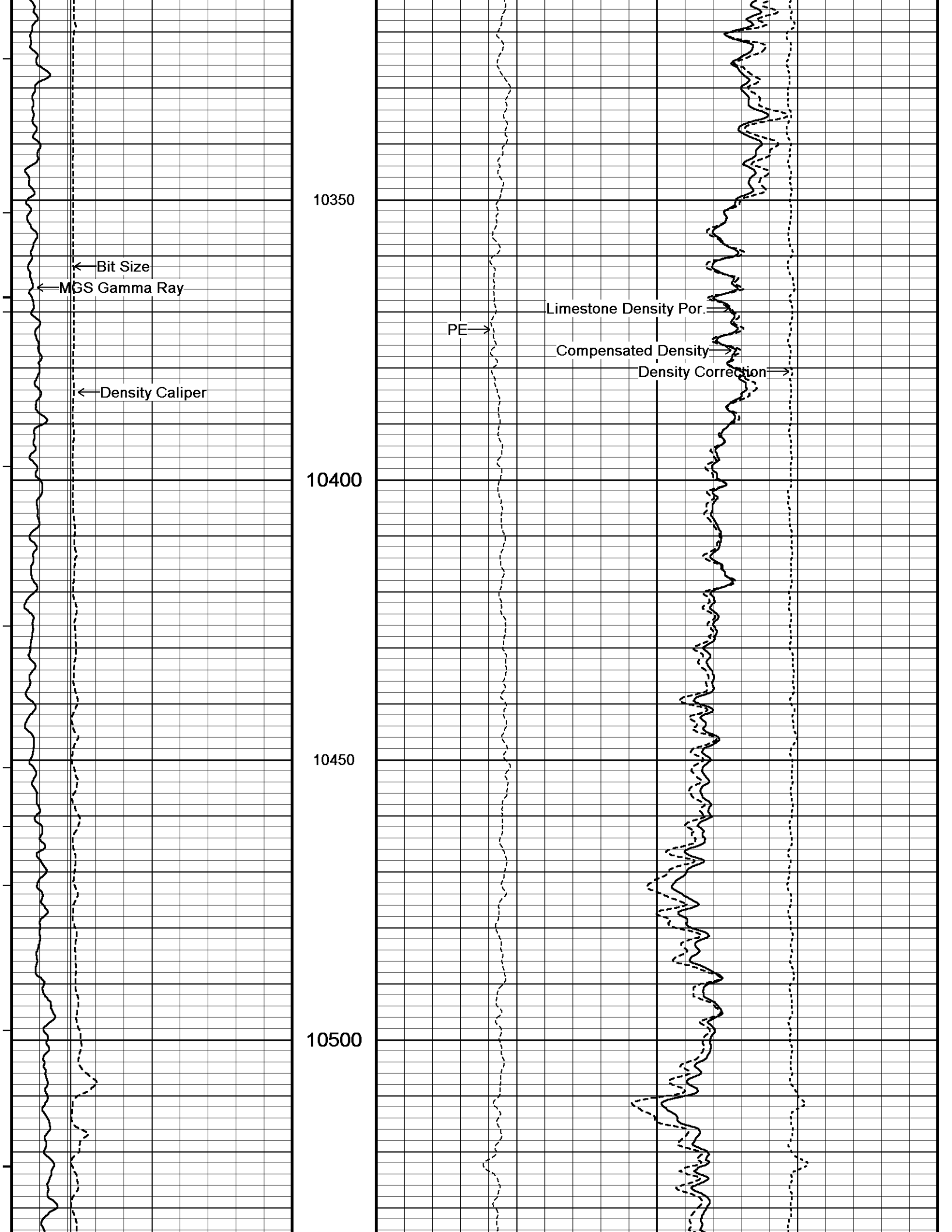

9250
9300
9350
9400

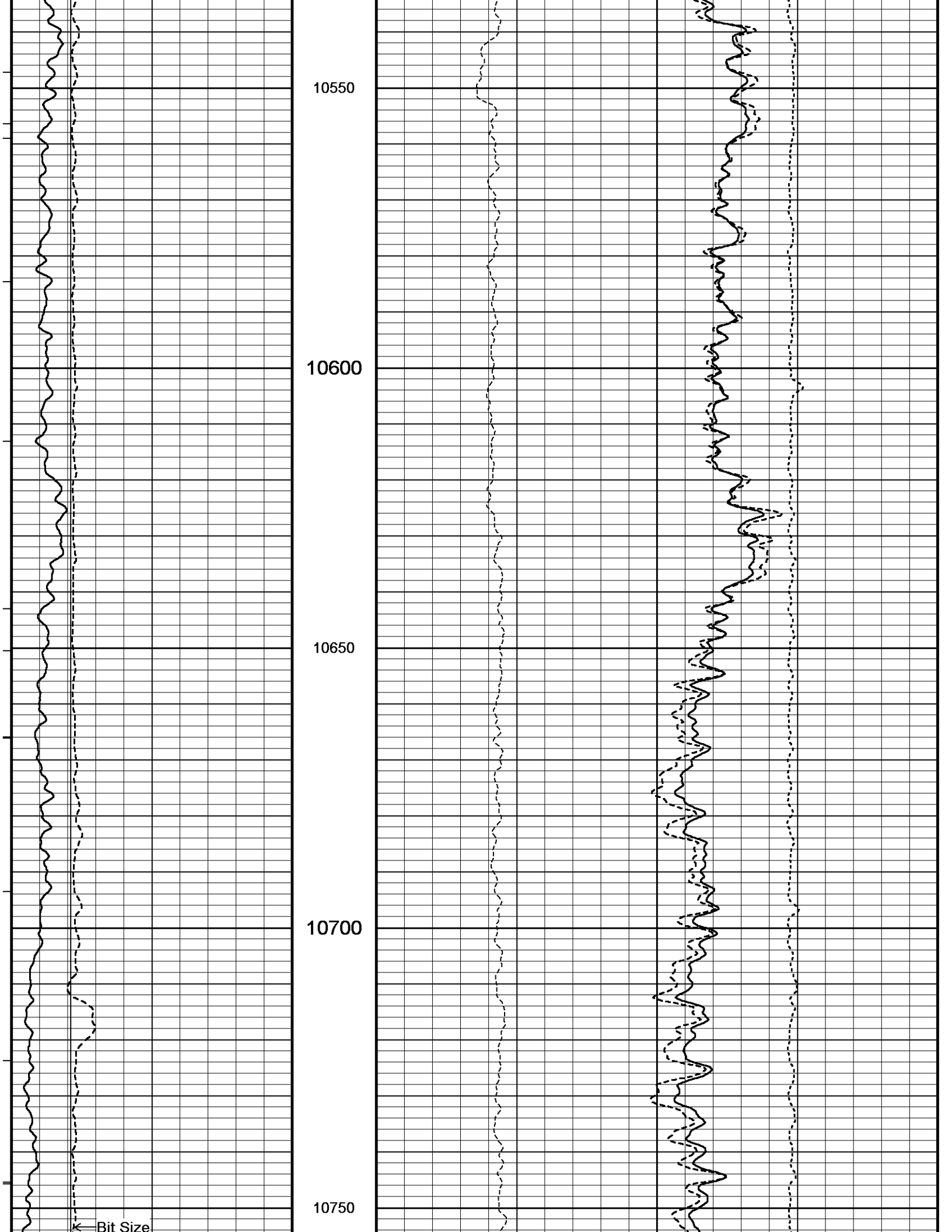

9450
9500
9550
9600
9650
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

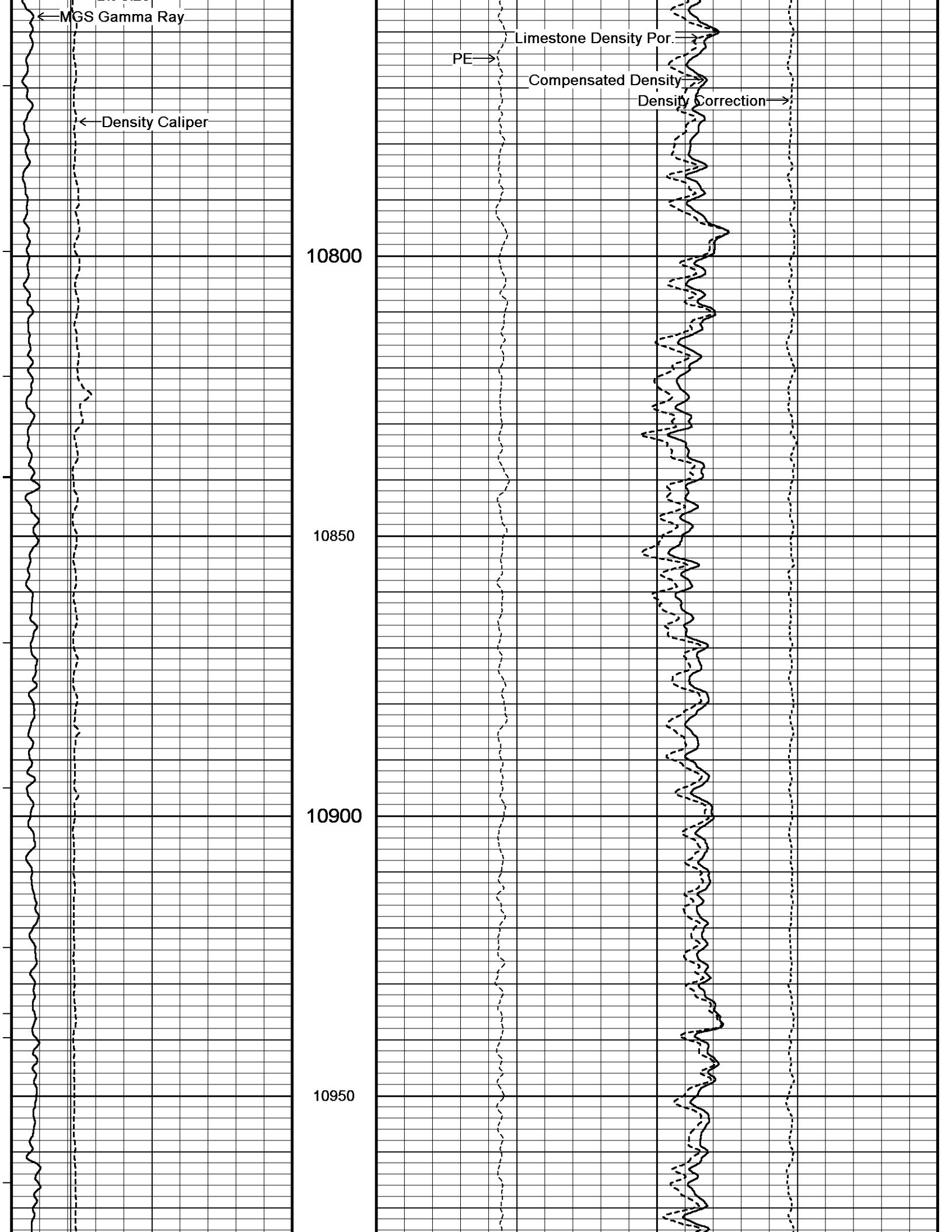

9700
9750
9800
9850

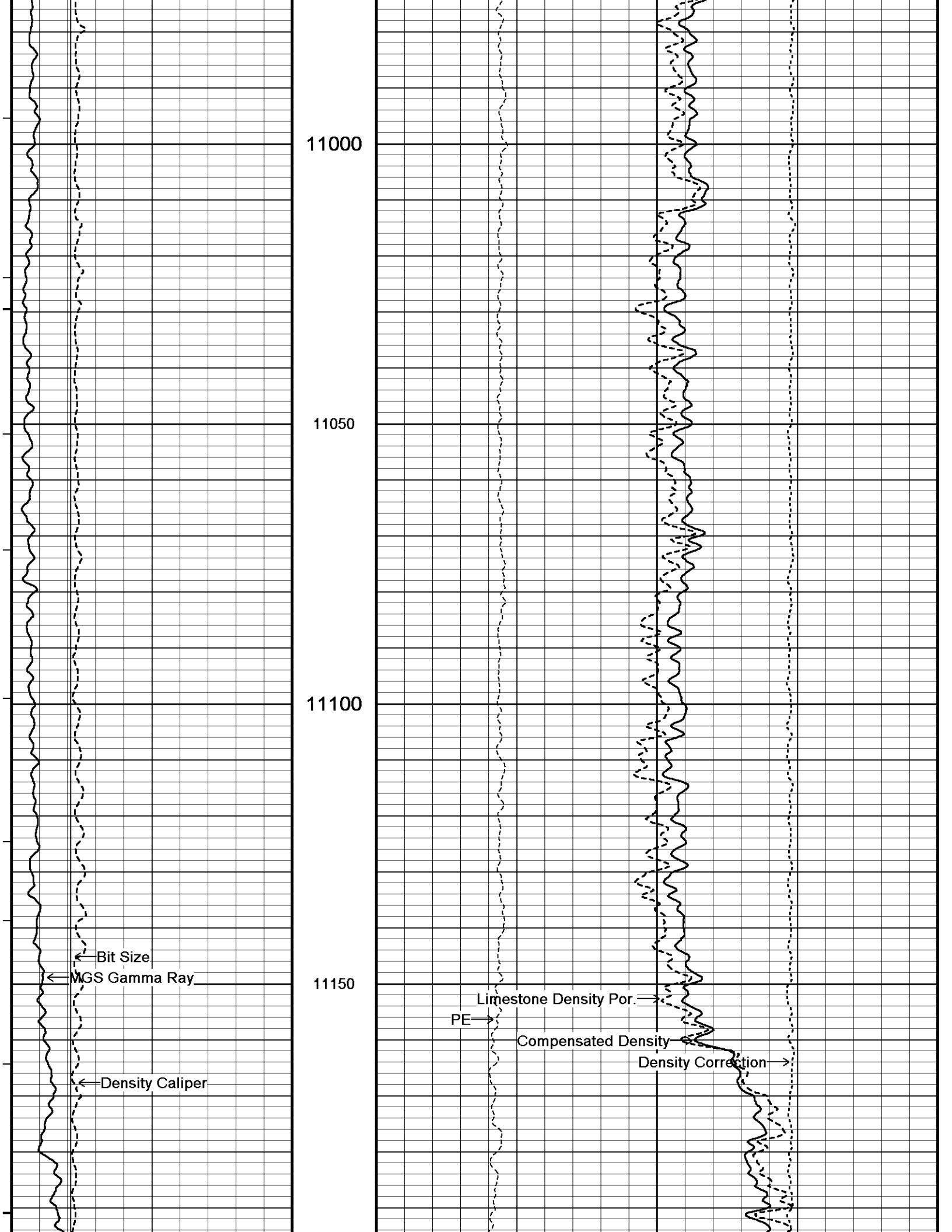

9900
9950
10000
10050
Bit Size
MCS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

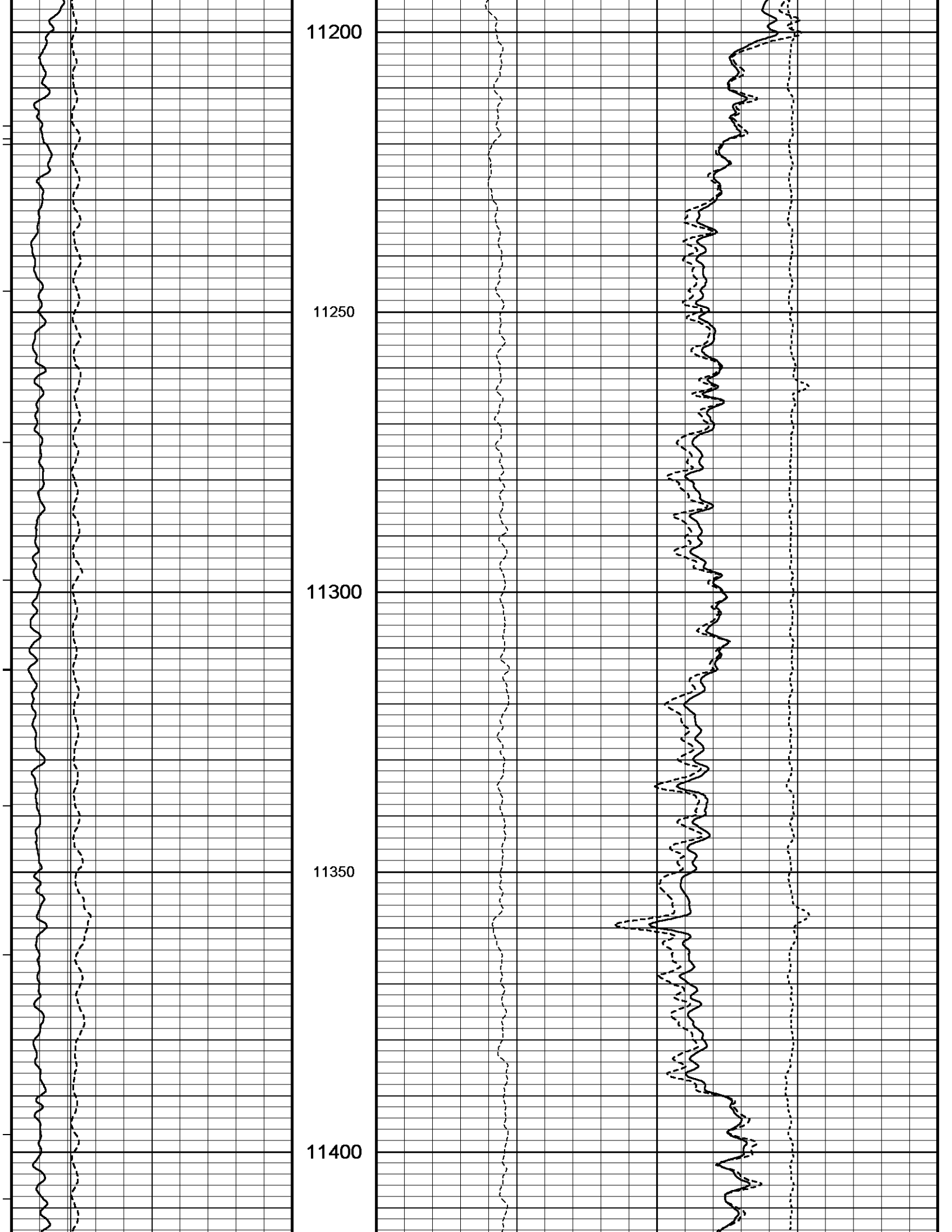

10100
10150
10200
10250
10300

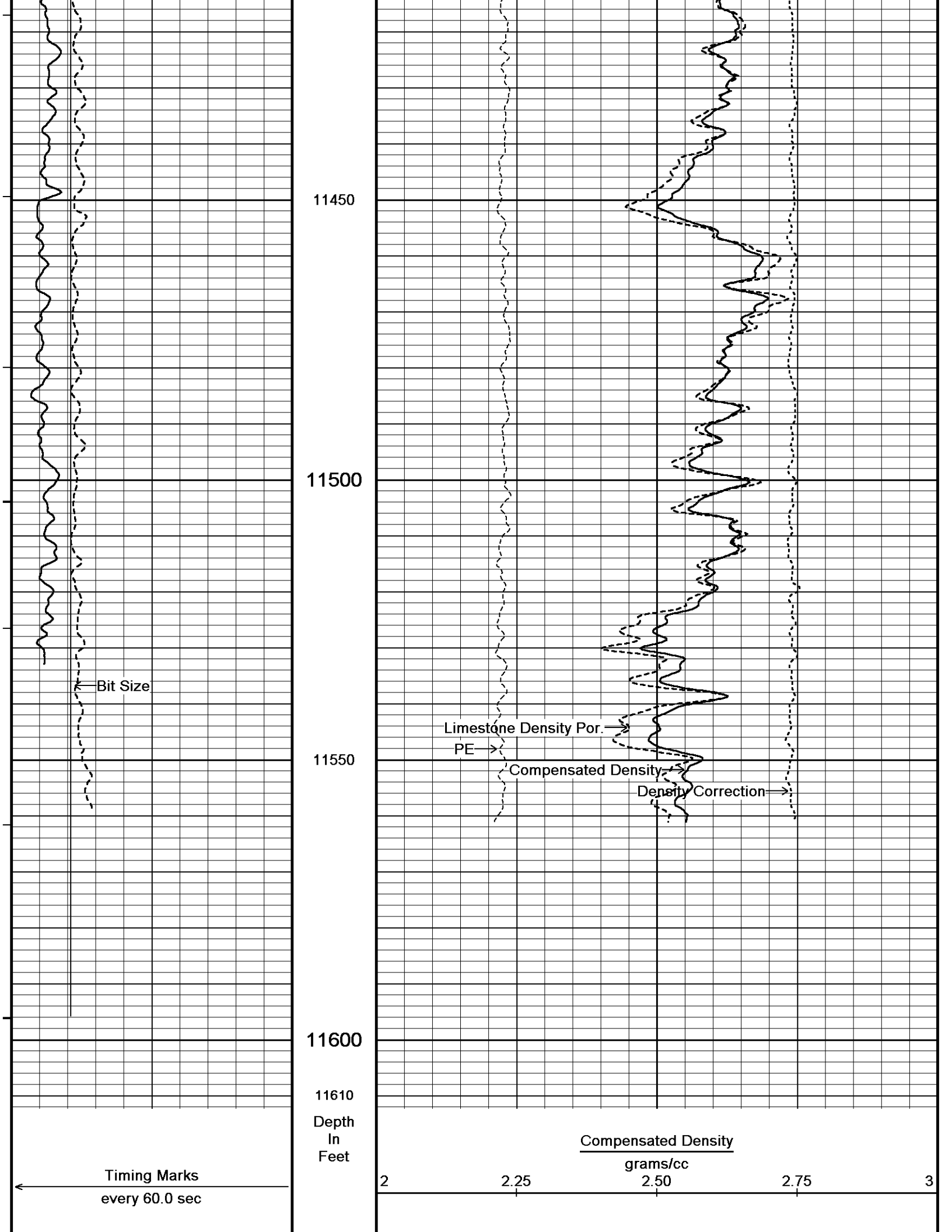

10350
10400
10450
10500
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

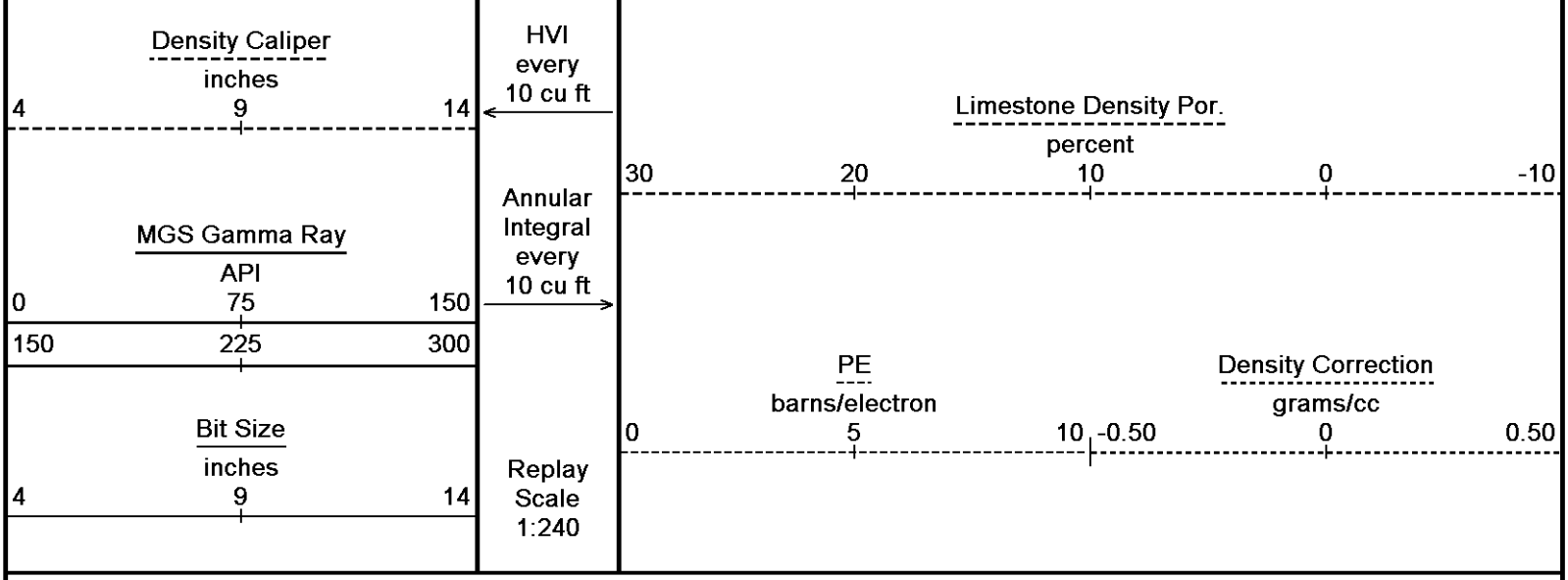

10550
10600
10650
10700
10750
Bit Size


MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction
10800
10850
10900
10950


11000
11050
11100
11150
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction


11200
11250
11300
11350
11400


11450
11500
11550
11600
11610
Bit Size
Limestone Density Por.
PE
Compensated Density
Density Correction
Depth
In
Feet
Timing Marks
every 60.0 sec
Compensated Density
grams/cc
2
2.25
2.50
2.75
3



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 12-JAN-2013 18:36
Filename: C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta — Recorded on 12-JAN-2013 17:02
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

5 INCH BULK DENSITY

BEFORE SURVEY CALIBRATION

C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta

General Constants All 000

Last Edited on 12-JAN-2013,17:16

General Parameters		
Mud Resistivity	2.200	ohm-metres
Mud Resistivity Temperature	60.000	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	None	
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 05-SEP-2012,13:01

Reading No	Measured	Calibrated (lbs)
1	15152.07	0.00
2	18386.74	2000.00

Strain Gauge Constants MMS-E.B 166

Last Edited on

Atmospheric Pressure	14.70 psi
Serial Number	0
Calibration Date	000000000000
Base Check Date	
Dead Weight Serial Number	0
Dead Weight Gravitational Correction	1.0

Temperature	75.0		150.0		250.0		350.0	degrees F
Pressure psia	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

8000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10000.0	0.000		0.000		0.000		0.000	

MMS Parameters MMS-E.B 166

Last Edited on 11-JAN-2013 09:54

Logging Parameters

Firmware Version	2v40	
Caliper Open On	MAI	
Caliper Open Delay		minutes
Caliper Closed On	Unknown	
Caliper Closed Delay	N/A	minutes
Sample Rate	1.00	seconds
Use Deep Sleep	No	
Delay Deep Sleep	N/A	
Deep Sleep Wake Time	N/A	minutes
Deep Sleep Wake on Temperature	N/A	
Deep Sleep Wake Temperature	N/A	degrees C
Deep Sleep Wake on Pressure	N/A	
Deep Sleep Wake Pressure	N/A	psi
MMI Pad Pressure	0.0	

Release Parameters

Pulse Duration Base Level	10.0	seconds
Pulse Duration Transition Time	60.0	seconds
Pulse Duration Status Pulse From	20.0	seconds
Pulse Duration Caliper Close From	145.0	seconds
Pulse Duration Caliper Open From	150.0	seconds
Pulse Duration Release Pulse From	215.0	seconds
Pulse Duration Release Pulse To	280.0	seconds
Pulse Release Duration	240.0	seconds
Pulse Discriminator Pressure Band	96.0	seconds
Pulse Pressure Discriminator	213.0	seconds
Use Negative Pulsing	No	
Good Status Reply Open Hole	65535.0	seconds
Good Status Reply Cased Hole	20.0	seconds
Bad Status Reply	60.0	seconds
Status Pulse To	80.0	seconds
Caliper Close To		seconds
Caliper Open To	210.0	seconds

Configuration

MMS,MGS,MDN,MPD,MPD,MFE,MAI

Gamma Calibration MGS-C.J 133

Field Calibration on 11-JAN-2013 09:43

	Measured	Calibrated (API)
Background	49	34
Calibrator (Gross)	1052	730
Calibrator (Net)	1003	696

Gamma Constants MGS-C.J 133

Last Edited on 12-JAN-2013,05:49

Gamma Calibrator Number	036	
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 MGS-C.J 133

Field Calibration on 11-JAN-2013,09:39

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	0.00	0.00

High Resolution Temperature Constants MGS-C.J 133

Last Edited on 11-JAN-2013,09:39

Pre-filter Length	11

Neutron Calibration MDN-B.J 423

Base Calibration on 07-DEC-2012 10:11
Field Check on 11-JAN-2013 09:39

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2834	86	3714	110
Ratio	32.927		33.764	

Field Calibrator at Base	Calibrated (cps)	
	2559	3758
Ratio	0.681	

Field Check	Calibrated (cps)	
	1361	2006
Ratio		

Neutron Constants MDN-B.J 423

Last Edited on 11-JAN-2013,09:32

Neutron Source Id	000	
Neutron Jig Number	000	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.04	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	MGS External Temperature	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

FE Calibration MFE-B.J 328

Base Calibration on 07-DEC-2012 09:27
Field Check on 11-JAN-2013 09:27

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	981.4	126.8
Base Check		274.7
Field Check		274.8

FE Constants MFE-B.J 328

Last Edited on 11-JAN-2013,09:26

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Bit Size	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Constant Value	
Temp. for Rm Corr.	N/A	
Stand-off	Centred	inches

High Resolution Temperature Calibration MAI-C.A 427

Field Calibration on 11-JAN-2013,09:21

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

High Resolution Temperature Constants MAI-C.A 427

Last Edited on 11-JAN-2013,09:21

Pre-filter Length	11

Induction Calibration MAI-C.A 427

Base Calibration on 08-DEC-2012,09:11
Field Check on 11-JAN-2013 09:26

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	14.4	434.9	9.3	966.2
2	5.8	355.4	7.6	821.4
3	2.7	244.4	5.2	566.0

4	1.8	129.3	2.6	279.2

Array Temperature 22.9 Deg F

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High
1			17.8	4140.3
2			32.1	3770.4
3			31.4	3209.8
4			20.1	2124.3
Deep			19.5	2020.0
Medium			45.9	4288.6
Shallow			47.4	5678.9

Array Temperature 47.1 Deg F

Induction Constants MAI-C.A 427

Last Edited on 12-JAN-2013,17:16

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.	MGS 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	

Photo Density Calibration MPD-D.A 471

Base Calibration on 26-DEC-2012 09:33
Field Check on 11-JAN-2013 09:32

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	54132	27447	59869	31110
Reference 2	22673	2730	24557	2522

Field Check at Base

1281.3	1476.8

Field Check

1282.4	1476.6

PE Calibration

Base Calibration		Measured		Calibrated
	WS	WH	Ratio	Ratio
Background	246	1128		
Reference 1	23825	53911	0.447	0.369
Reference 2	6960	22516	0.314	0.271

Field Check at Base		
	245.7	1128.4

Field Check		
	245.2	1136.5

Density Constants MPD-D.A 471

Last Edited on 12-JAN-2013,05:50

Density Source Id	243	
Nylon Calibrator Number	633	
Aluminium Calibrator Number	633	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.00	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)
2.71	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

Caliper Calibration MPD-D.A 471

Base Calibration on 14-DEC-2012,07:31
Field Calibration on 11-JAN-2013 09:46

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	19410	3.99
2	29147	5.97
3	38815	7.99
4	48375	9.86
5	59610	11.93
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.87	5.97

DOWNHOLE EQUIPMENT

C:\Data\SANDRIDGE (TURNER 3406 3-7H)\41985 RTAP Depth.dta

Shuttle Running Tool 3.5")
SRT-A.A 40 LG: 6.62 ft WT: 37.5 lb OD: 2.52 in

MBS-F.A 200v Compact Battery Sub
MBS-F.A 131 LG: 10.61 ft WT: 70.5 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 166 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 63 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 133 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 72 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 458 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 432 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-A.A Compact Inline Bowspring sub
MIS-A.A 247 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.J 423 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-D.A 471 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 591 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 205 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 477 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

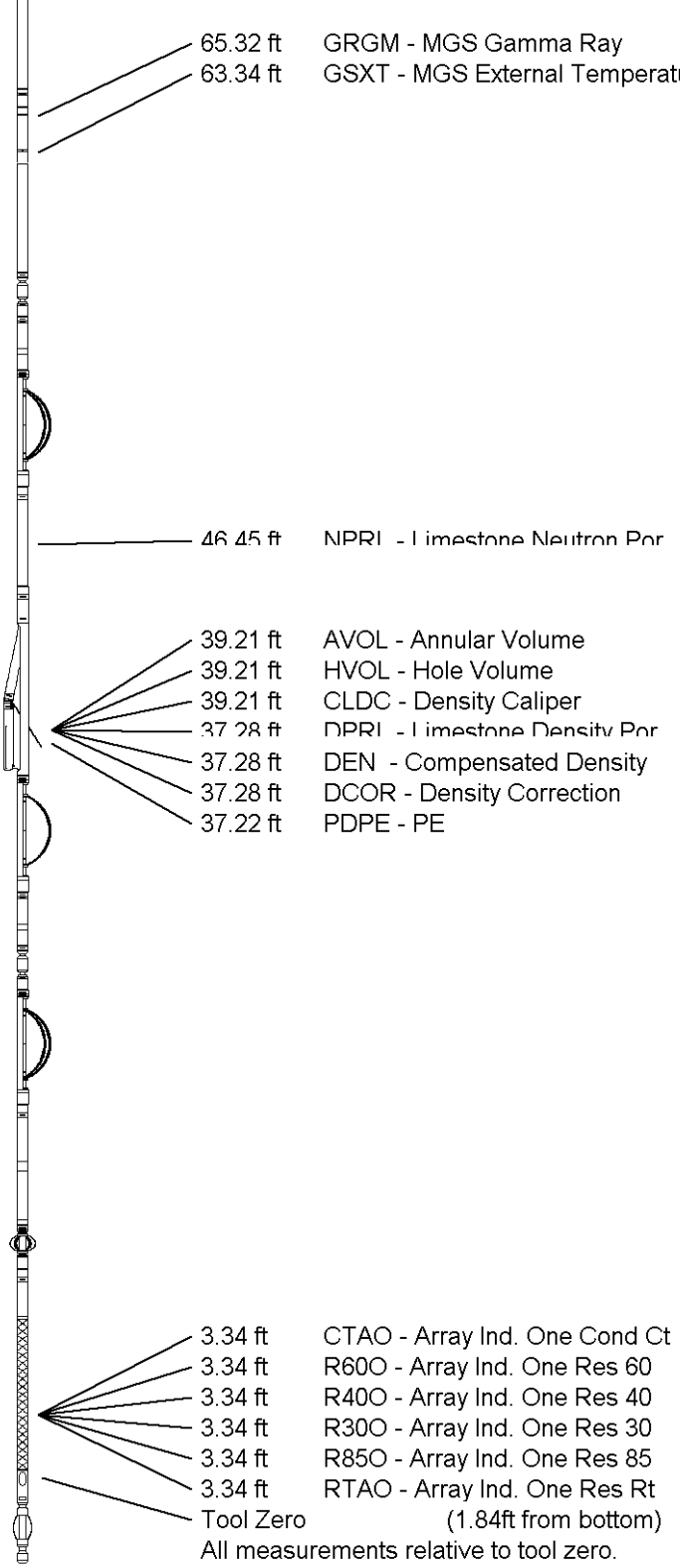
MIS-D.B Compact Inline Bowspring sub
MIS-D.B 565 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.J 328 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

MIS-E.A Compact Inline Standoff sub
MIS-E.A 336 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-C.A 427 LG: 12.52 ft WT: 48.5 lb OD: 2.24 in

Total Length: 91.93 ft Weight: 654.8 lb



All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY
WELL	TURNER 3406 3-7H
FIELD	EASTHAM
PROVINCE/COUNTY	HARPER
COUNTRY/STATE	USA / KANSAS

Elevation Kelly Bushing	1319.00	feet	First Reading	11558.00	feet
Elevation Drill Floor	1319.00	feet	Depth Driller	11690.00	feet
Elevation Ground Level	1301.00	feet	Depth Logger	11690.00	feet

CML MESSENGER SHUTTLE

Weatherford®

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG