



Weatherford[®]

**CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG**

COMPANY **SANDRIDGE ENERGY**
 WELL **UNRUH 2629 1-17H**
 FIELD **MONGER**
 PROVINCE/COUNTY **GRAY**
 COUNTRY/STATE **USA / KANSAS**
 LOCATION **SHL: 220' FSL & 400' FWL
BHL: 330' FNL & 400' FWL**

SEC **17** TWP **26S** RGE **29W** Other Services **MA/MI/FE**
 API Number **15-069-20387-01** SGS
 Permit Number

Permanent Datum G.L., Elevation 2760 feet
 Log Measured From DF
 Drilling Measured From D.F. @ 20 FEET

Elevations: **feet**
 KB **2780.00**
 DF **2780.00**
 GL **2760.00**

Date	10-SEP-2012
Run Number	ONE
Depth Driller	9320.00 feet
Depth Logger	9320.00 feet
First Reading	9255.00 feet
Last Reading	3500.00 feet
Casing Driller	5364.00 feet
Casing Logger	5364.00 feet
Bit Size	6.125 inches
Hole Fluid Type	WATER
Density / Viscosity	9.00 lb/USg 34.00 CP
PH / Fluid Loss	8.00 15.60 ml/30Min
Sample Source	FLOWLINE
Rm @ Measured Temp	1.50 @ 80.0 ohm-m
Rmf @ Measured Temp	1.20 @ 80.0 ohm-m
Rmc @ Measured Temp	1.80 @ 80.0 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.96 @ 124.0 ohm-m
Time Since Circulation	0 HOURS
Max Recorded Temp	124.00 deg F
Equipment Name	COMPACT
Equipment / Base	18006 OKC
Recorded By	D. ROWELL
Witnessed By	W. SCOTT
S.O.# / AFE	3531693 / DC12325

BOREHOLE RECORD

Last Edited: 10-SEP-2012 08:30

Bit Size inches	Depth From feet	Depth To feet
6.125	5364.00	9320.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
INTERMED	7.000	0.00	5364.00	26.00

REMARKS

LOGGED WITH WLS VER 13.03 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 TO CALCULATE POROSITY
 ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST

DRILL PIPE DEPTH DURING DEPLOYMENT - 9215
 LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9315

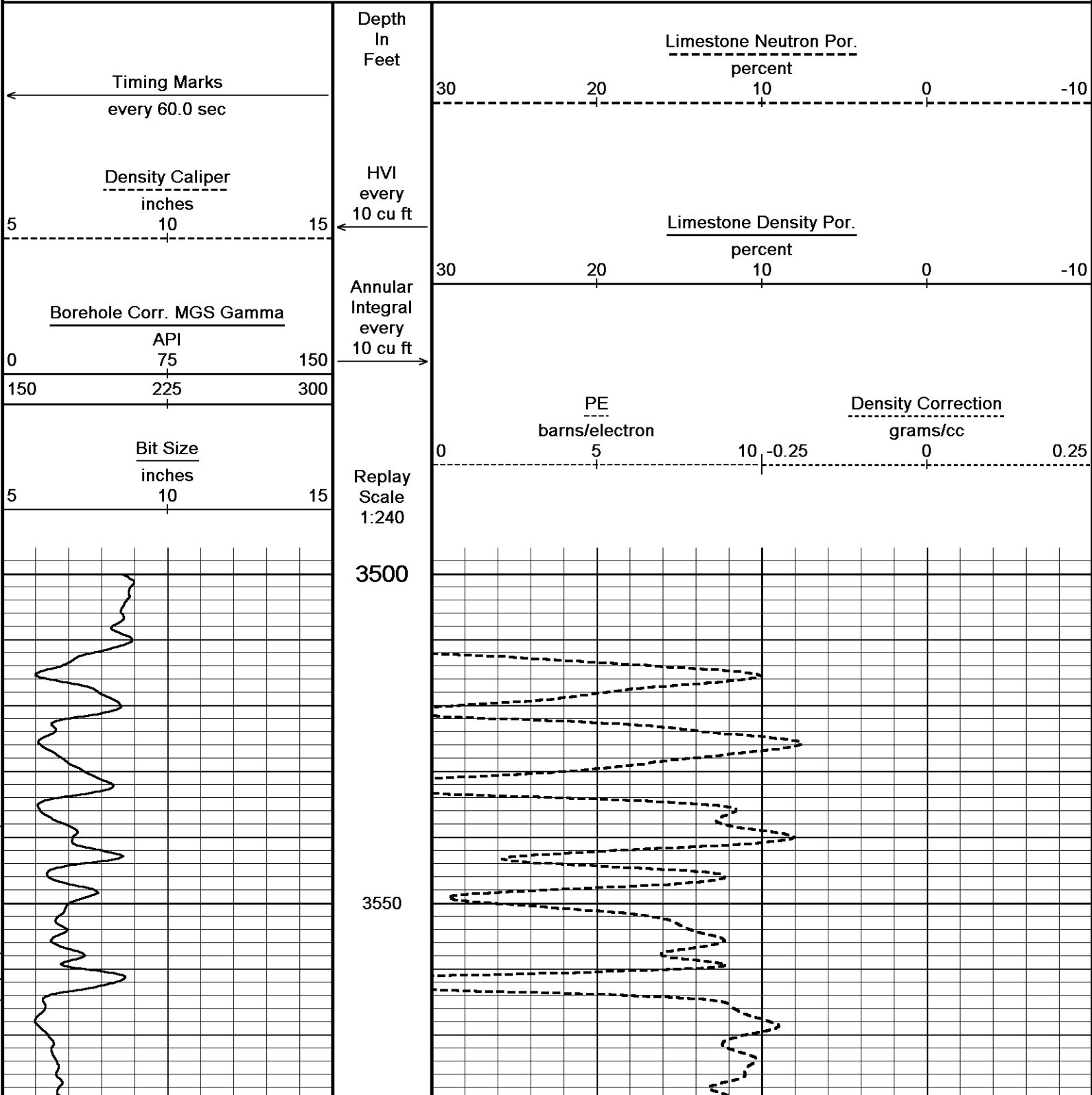
4.5" CASING USED TO CALCULATE AHV

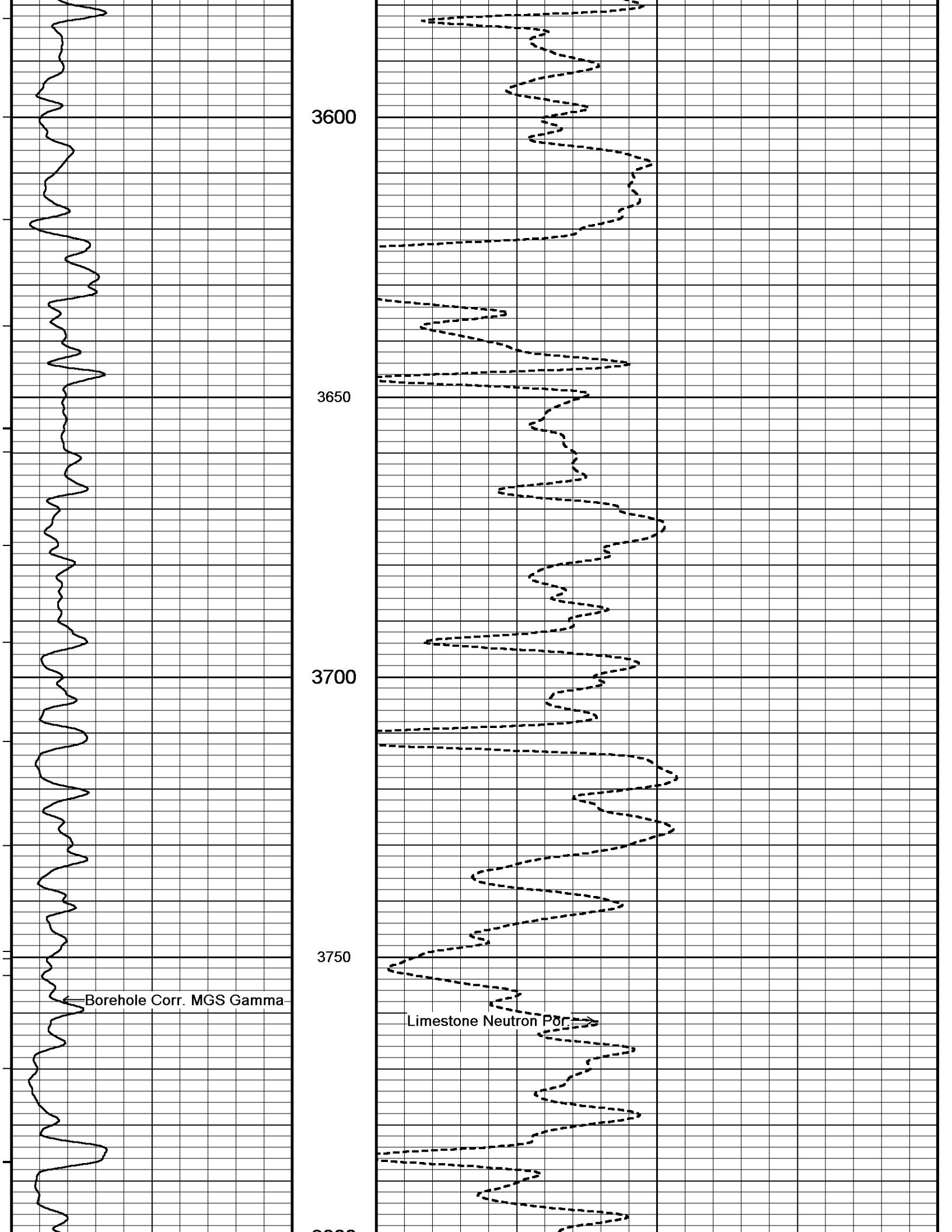
SERVICE ORDER # 3531693

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.

DSC

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 10-SEP-2012 10:56
Filename: C:\Minimus 13.03.7779\Data\SDRGE (UNRUH 2629 1-17H)\34701 RTAP.dta Recorded on 10-SEP-2012 10:17
System Versions: Processed with 13.03.7779 Plotted with 13.03.7779





3600

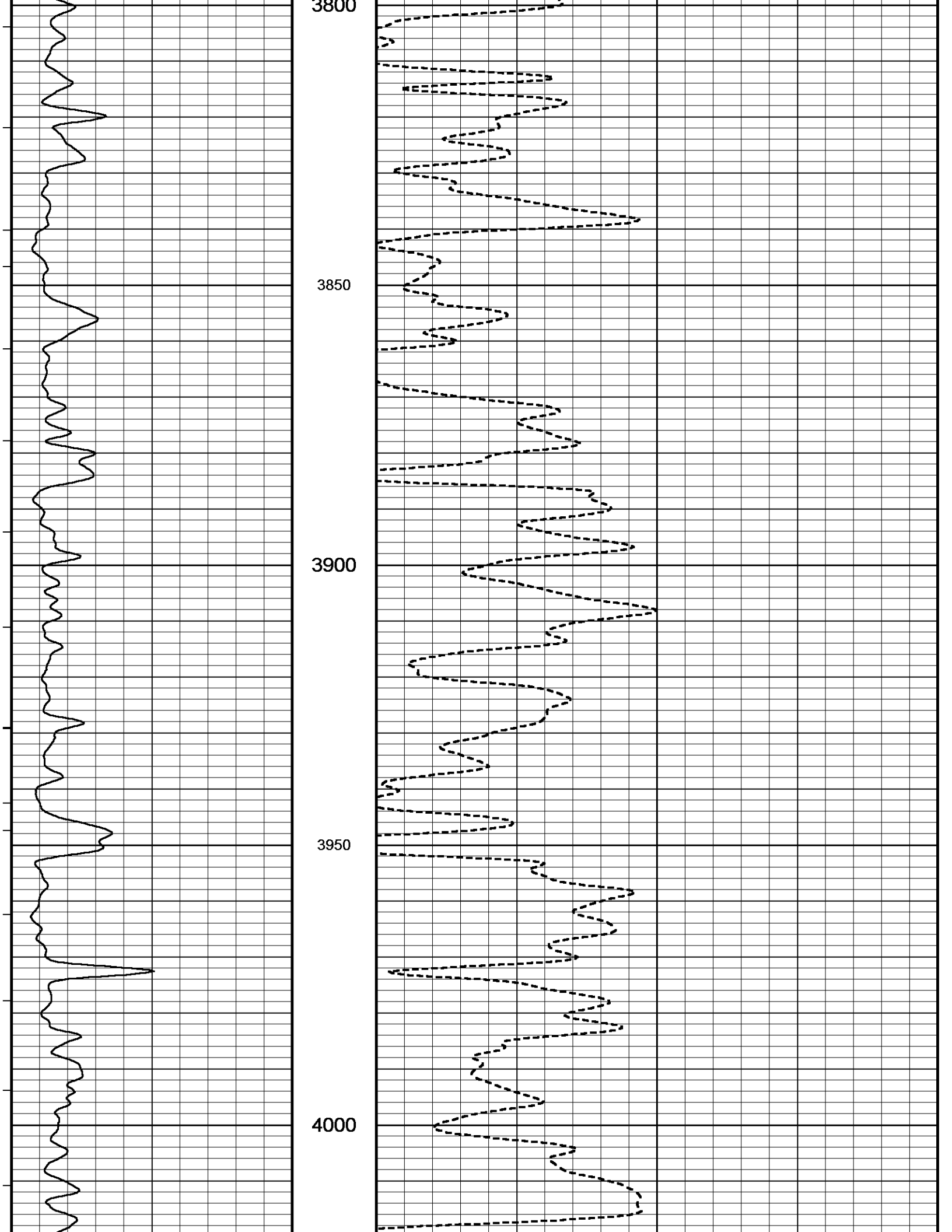
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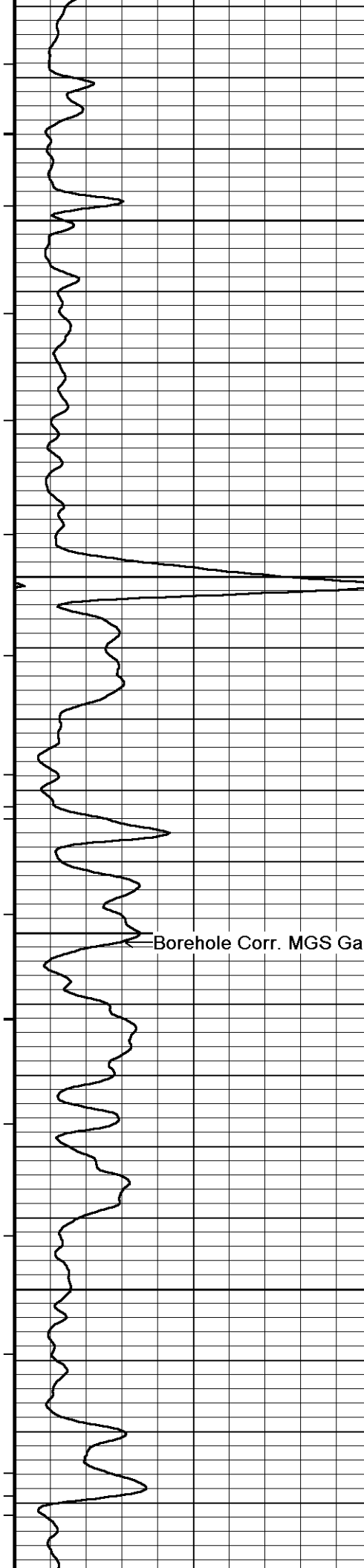
3700

3750

Borehole Corr. MGS Gamma

Limestone Neutron Por





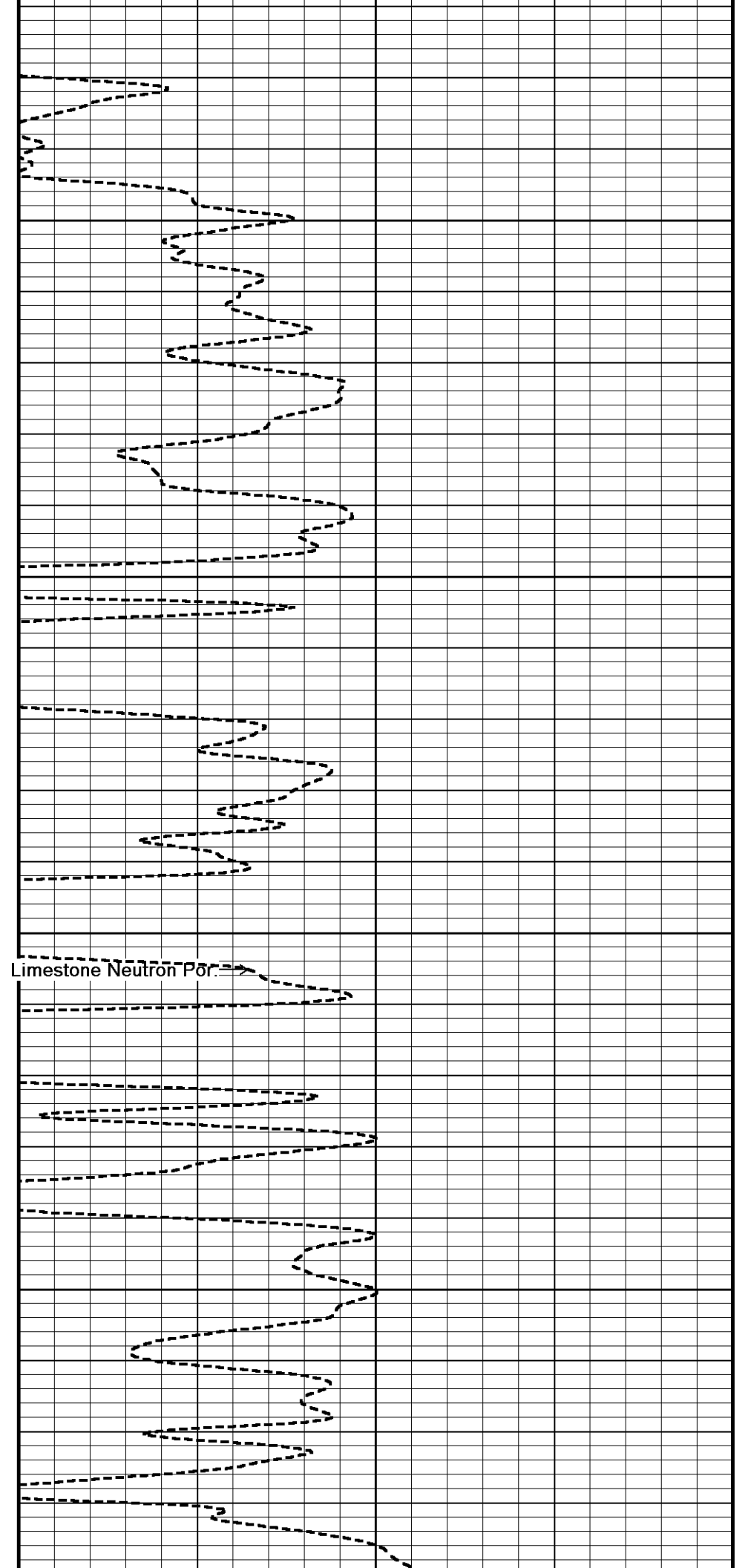
4050

4100

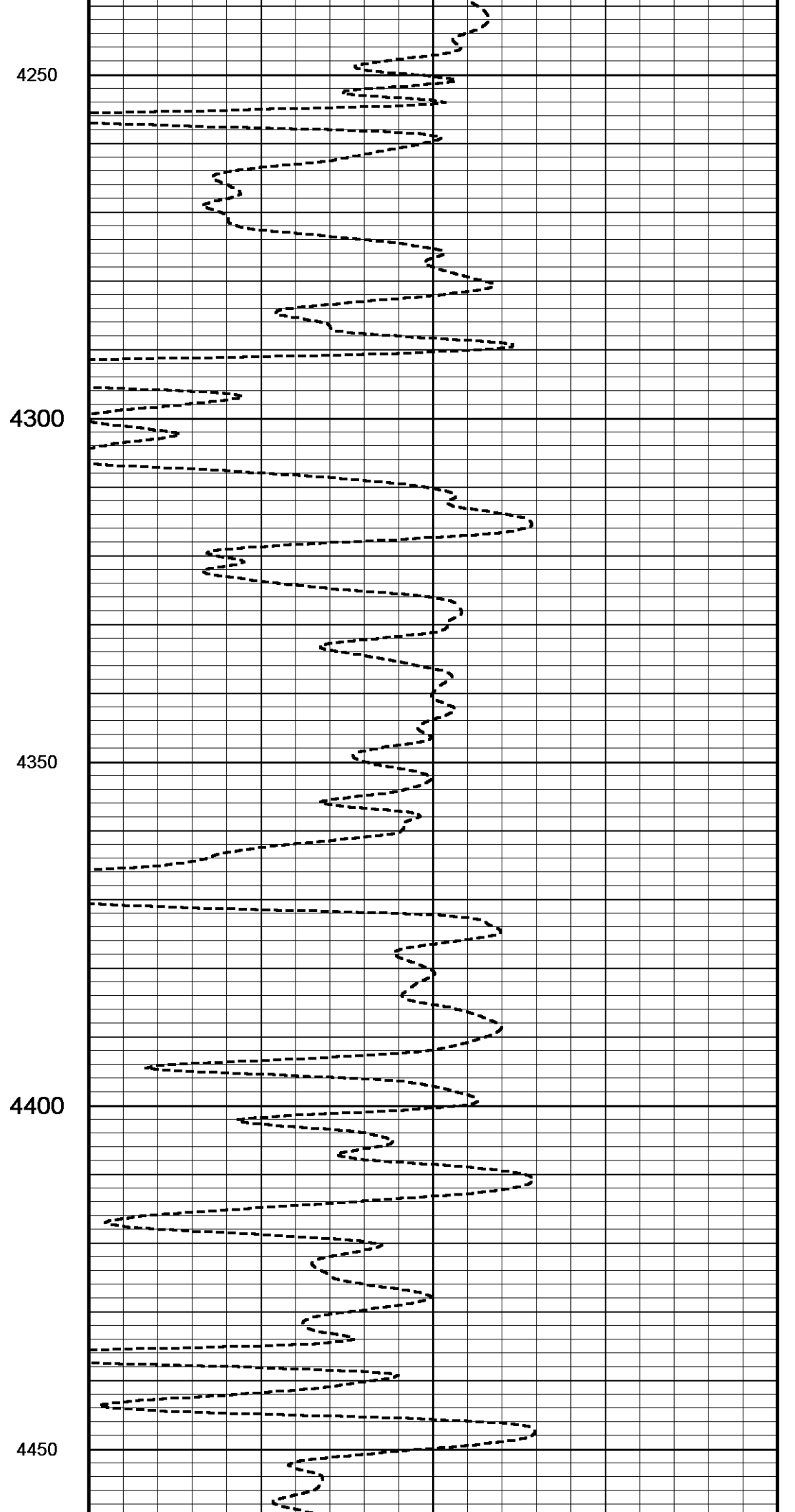
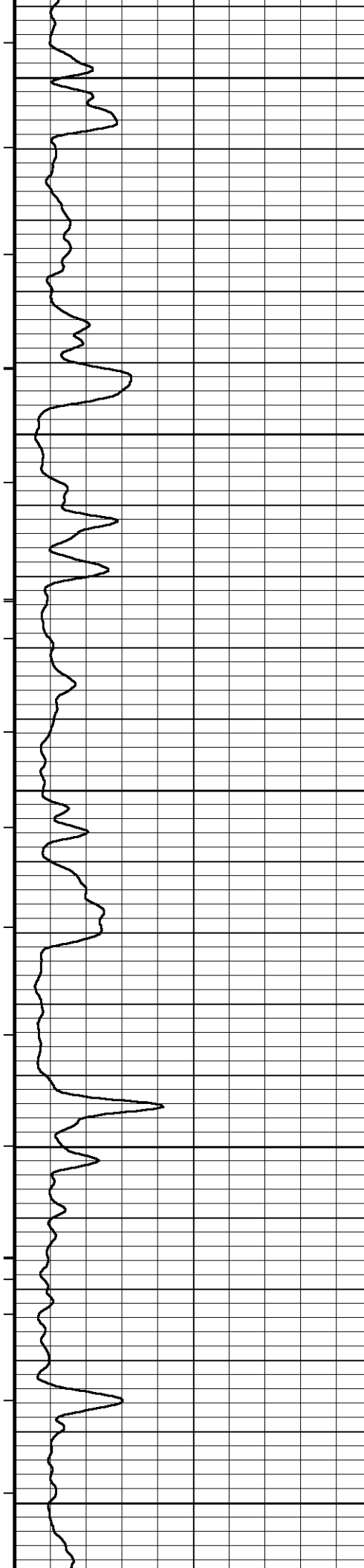
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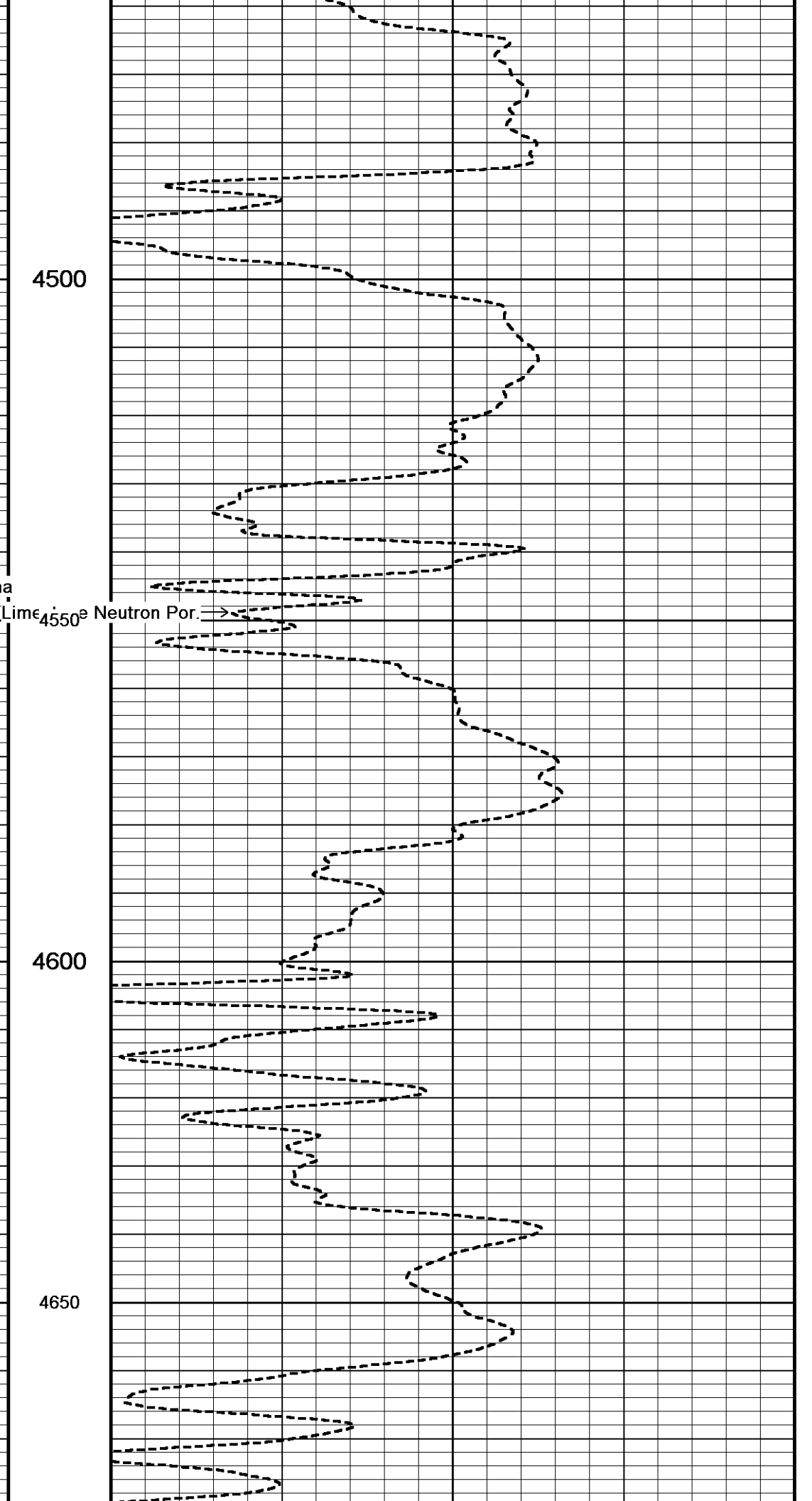
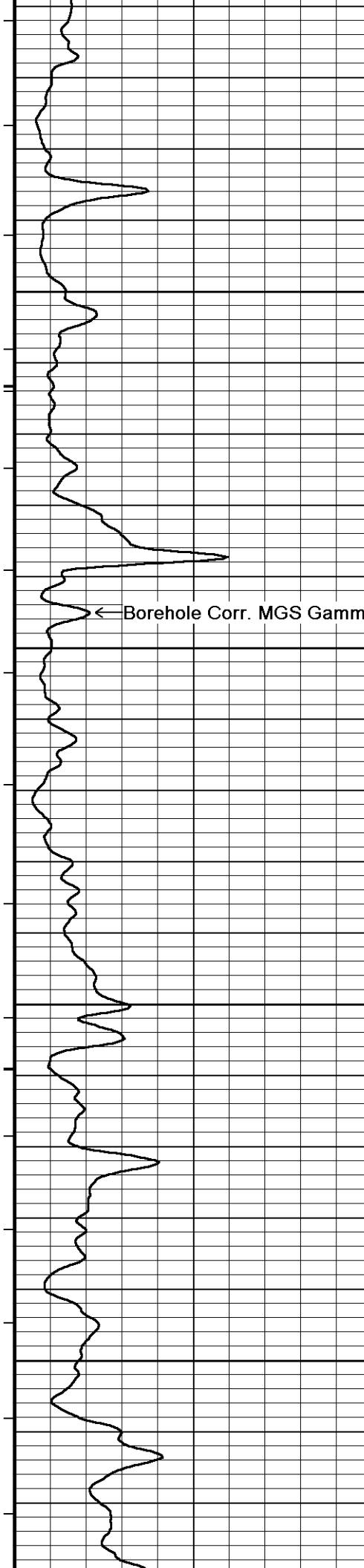
4200

Borehole Corr. MGS Gamma



Limestone Neutron Por.





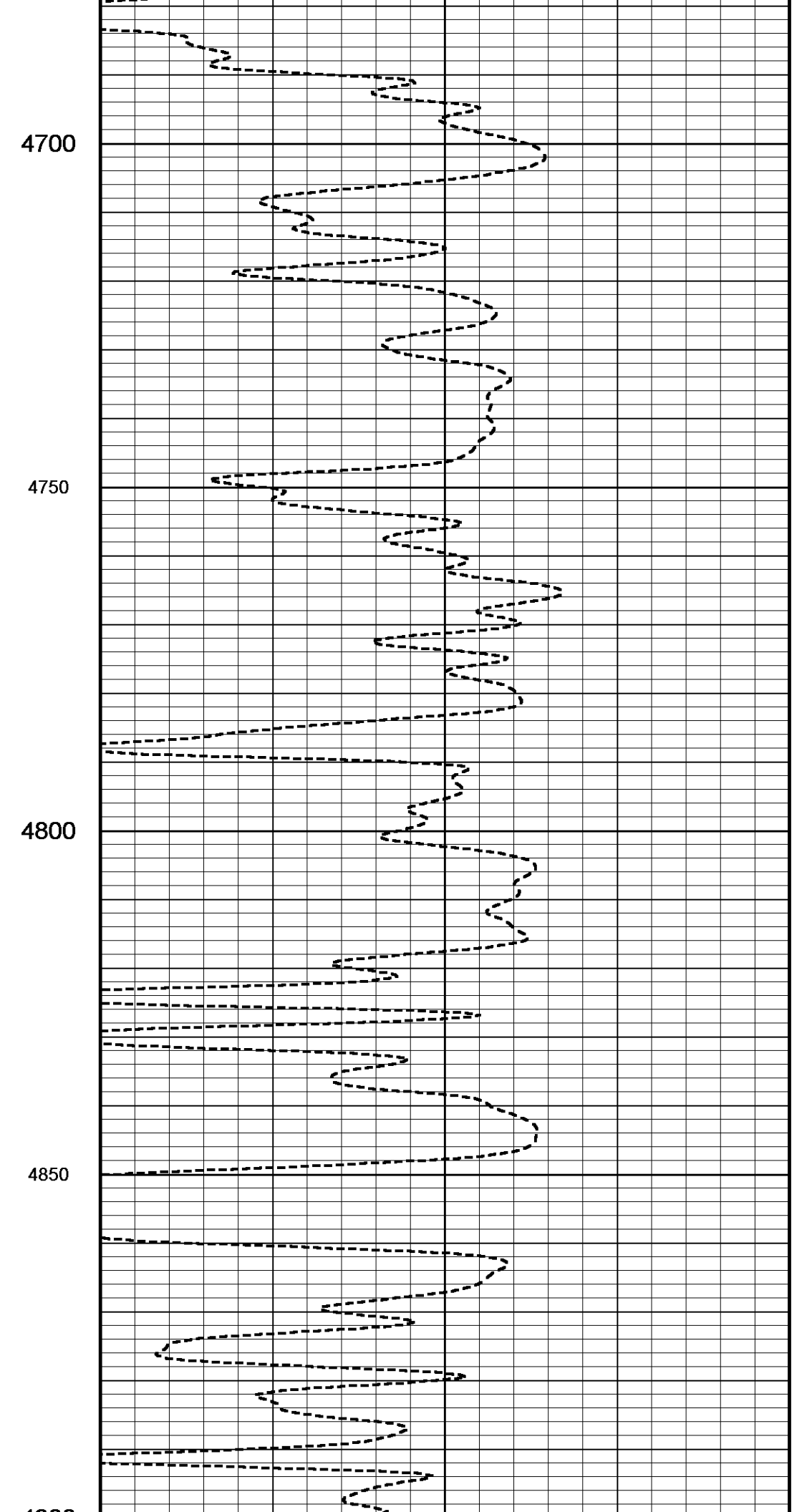
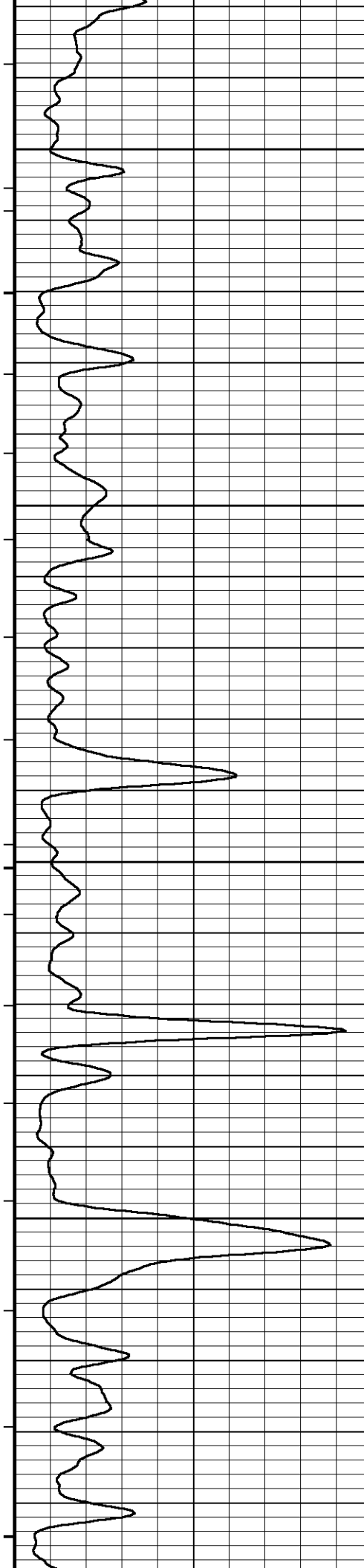
← Borehole Corr. MGS Gamma

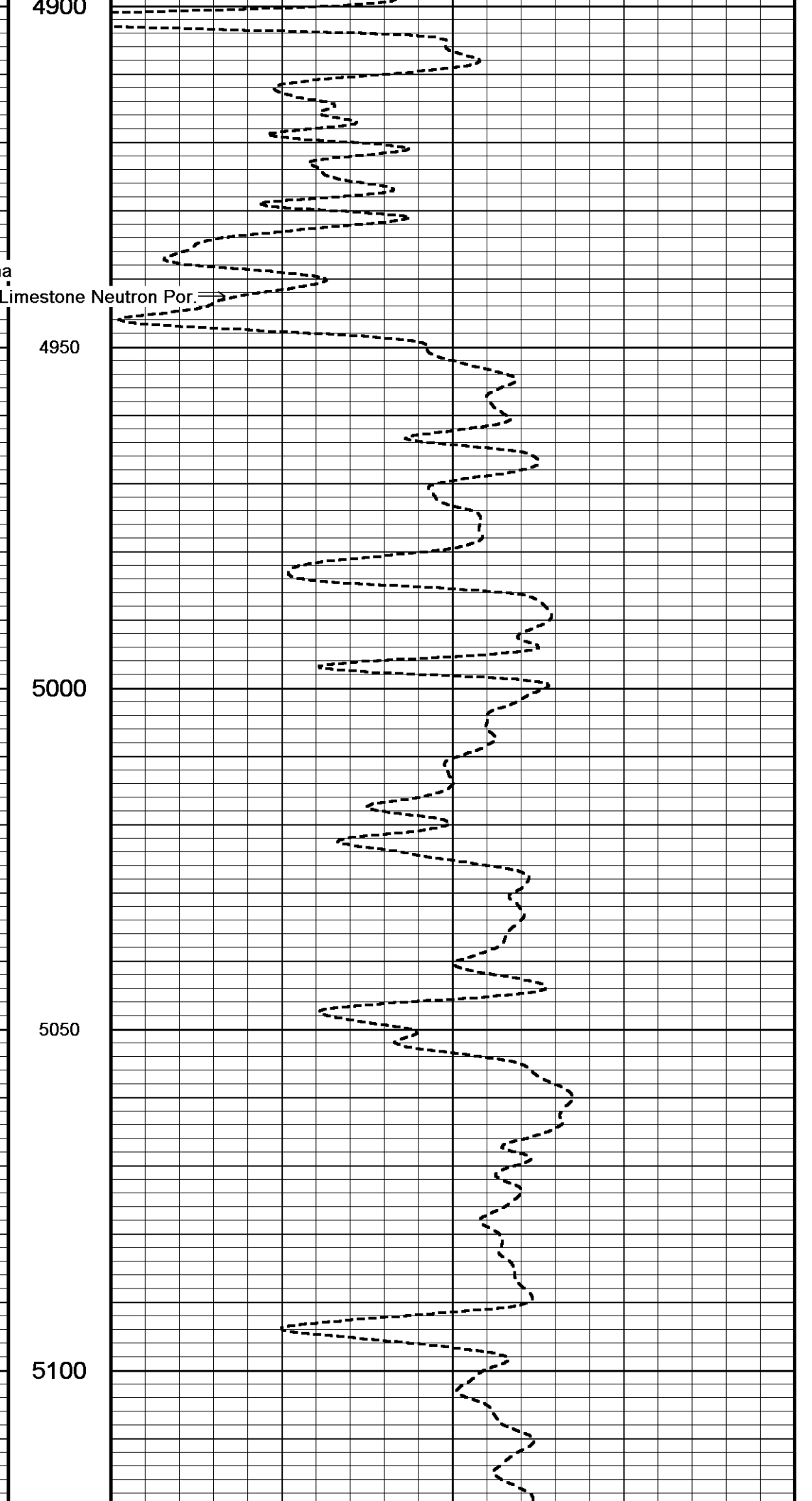
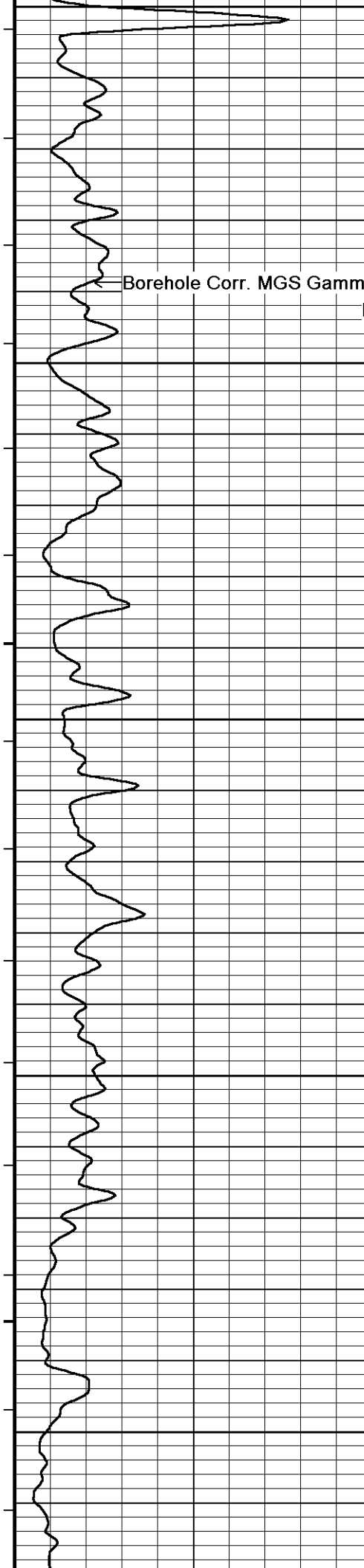
Lime 4550e Neutron Por. →

4500

4600

4650





Borehole Corr. MGS Gamma

Limestone Neutron Por.

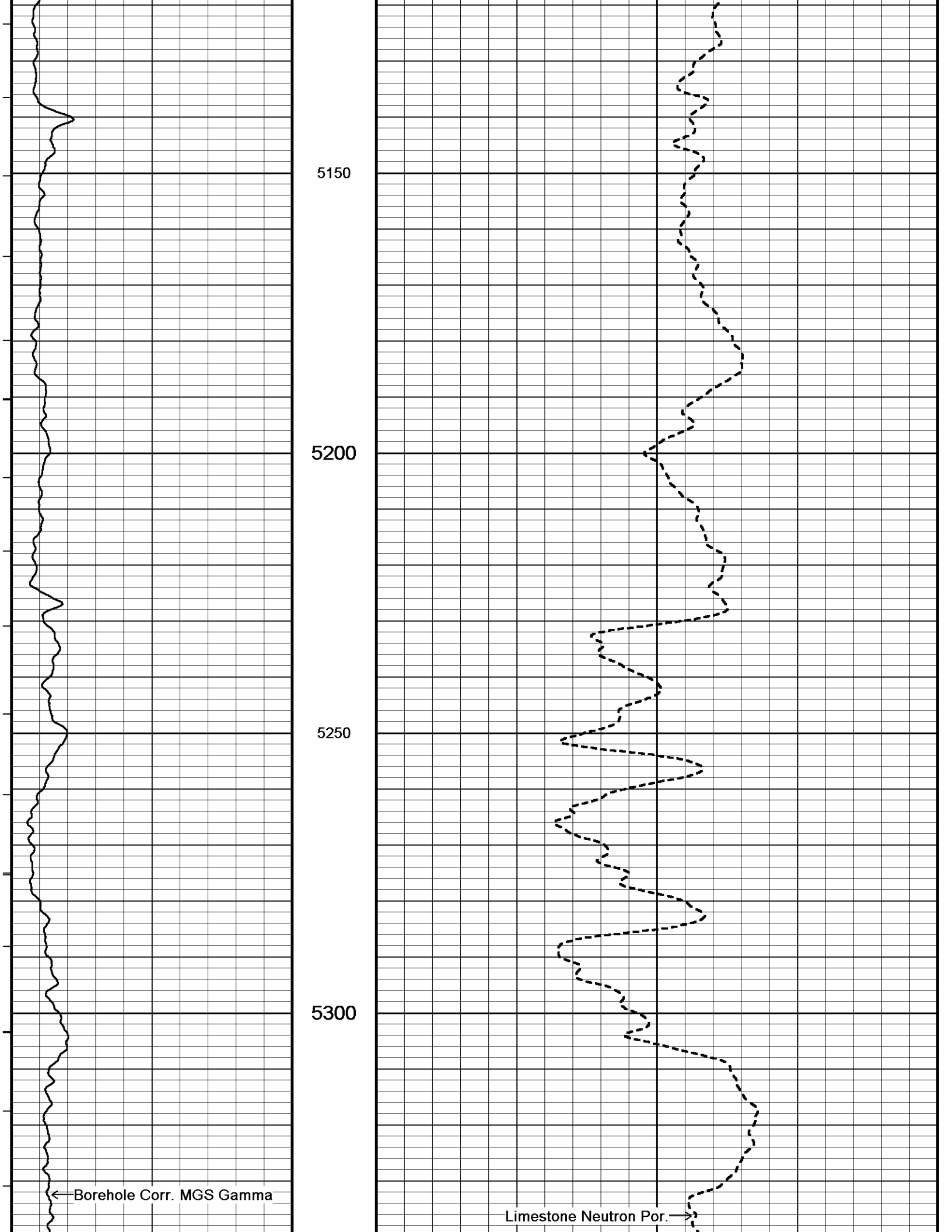
4900

4950

5000

5050

5100



5150

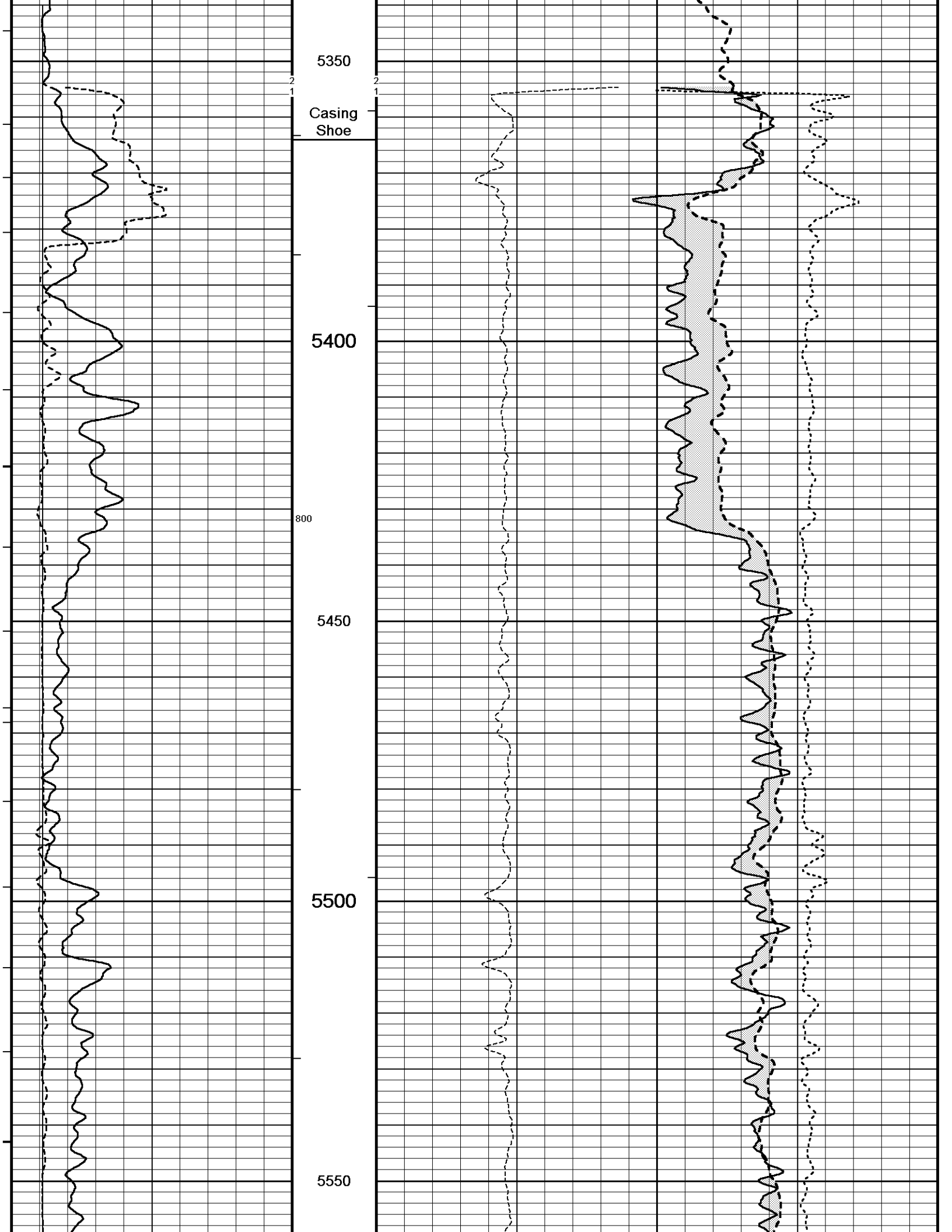
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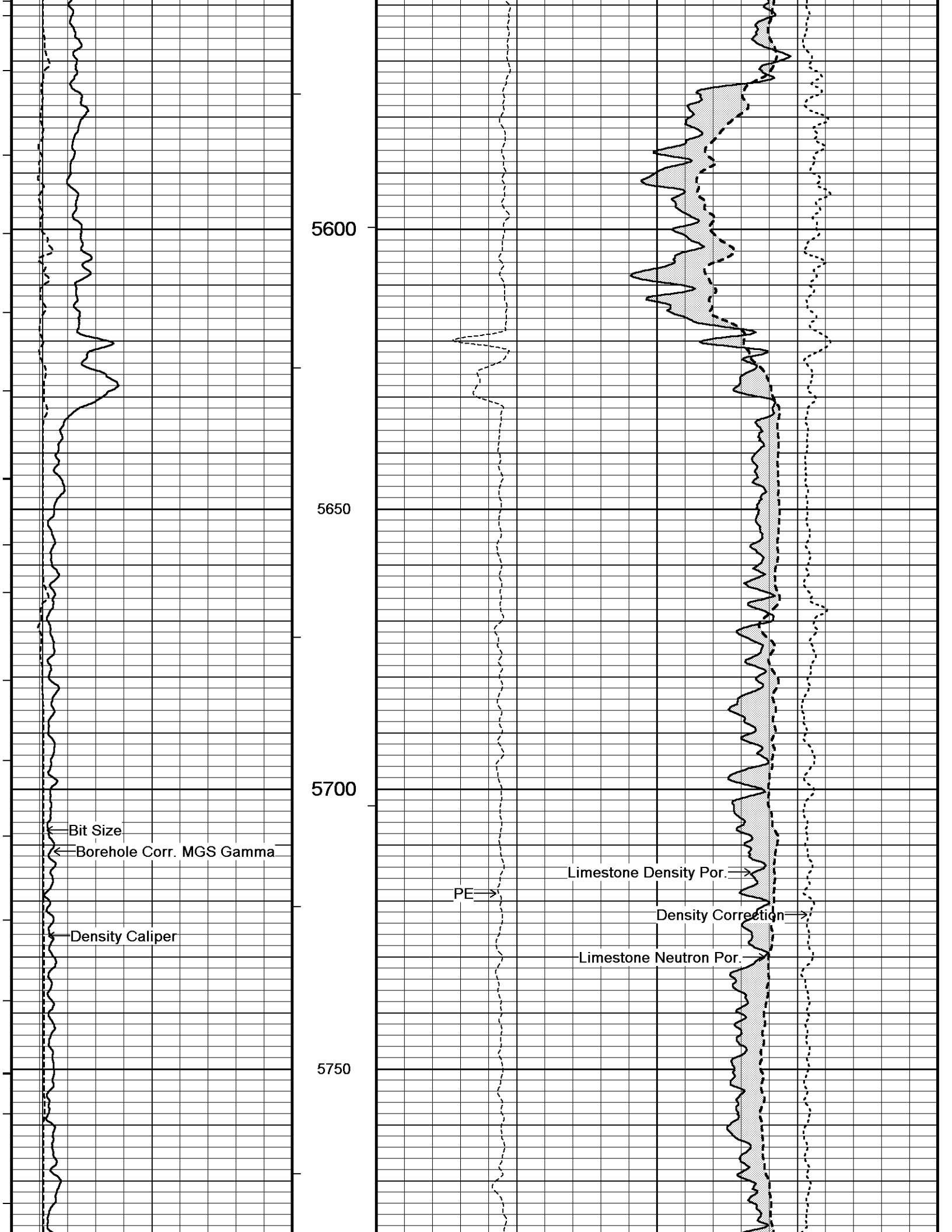
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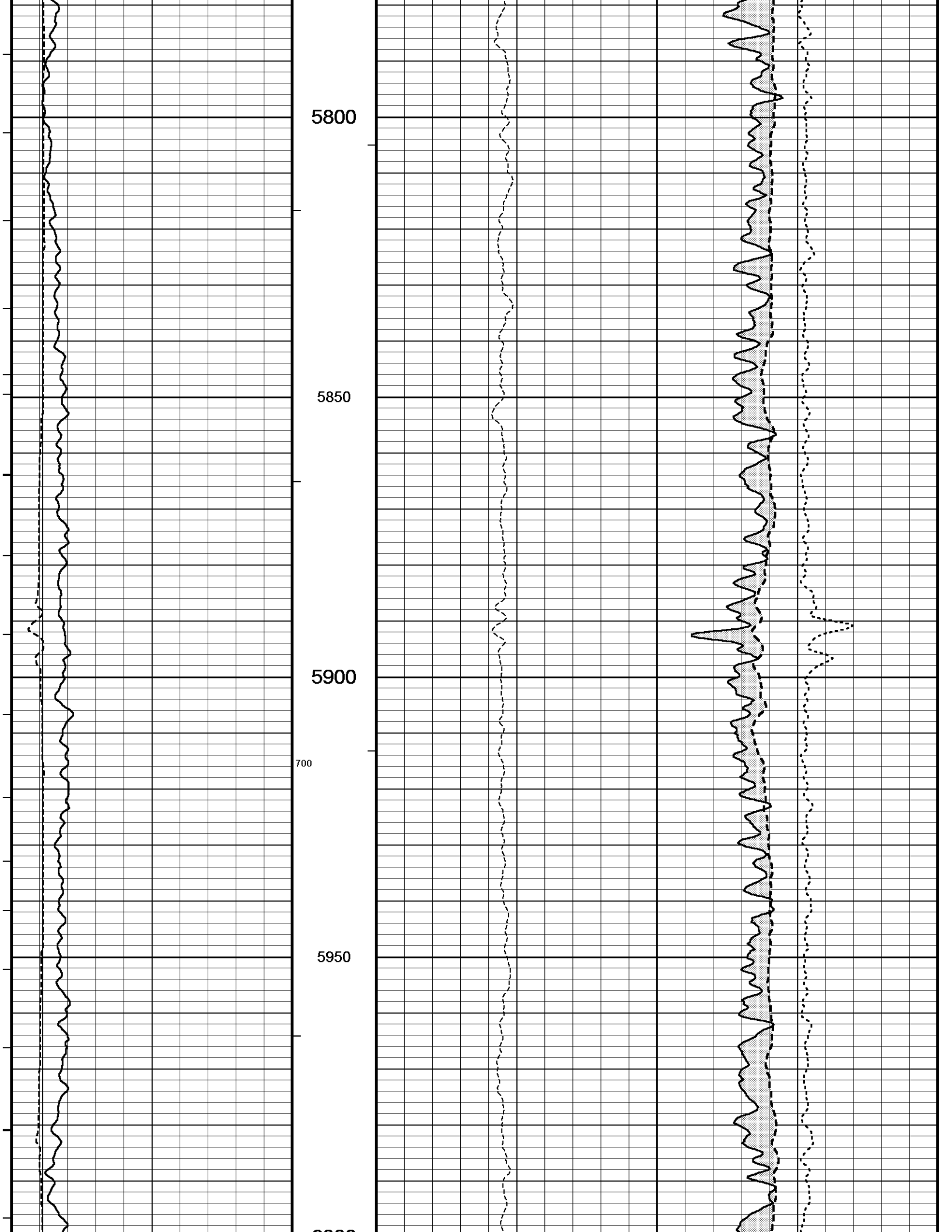
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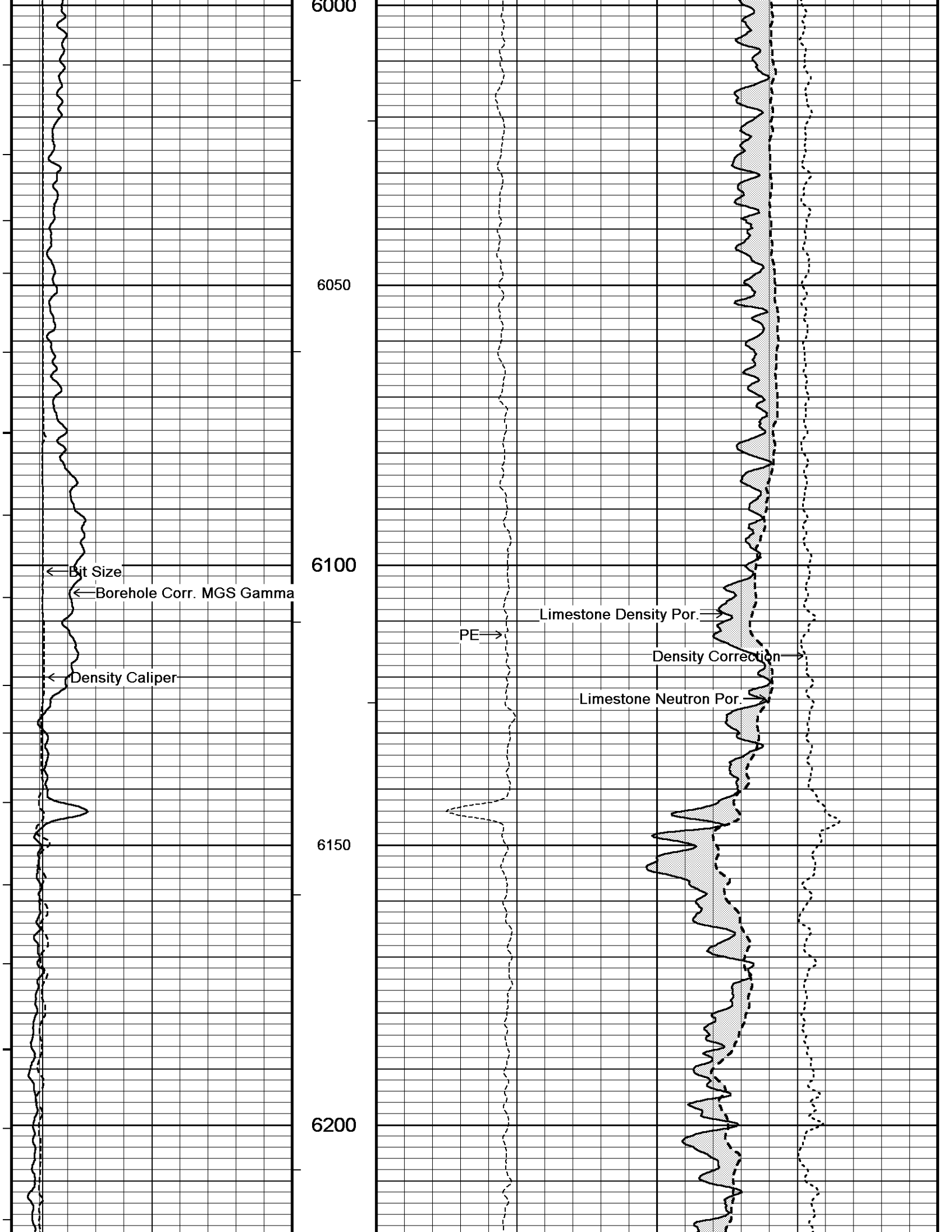
← Borehole Corr. MGS Gamma

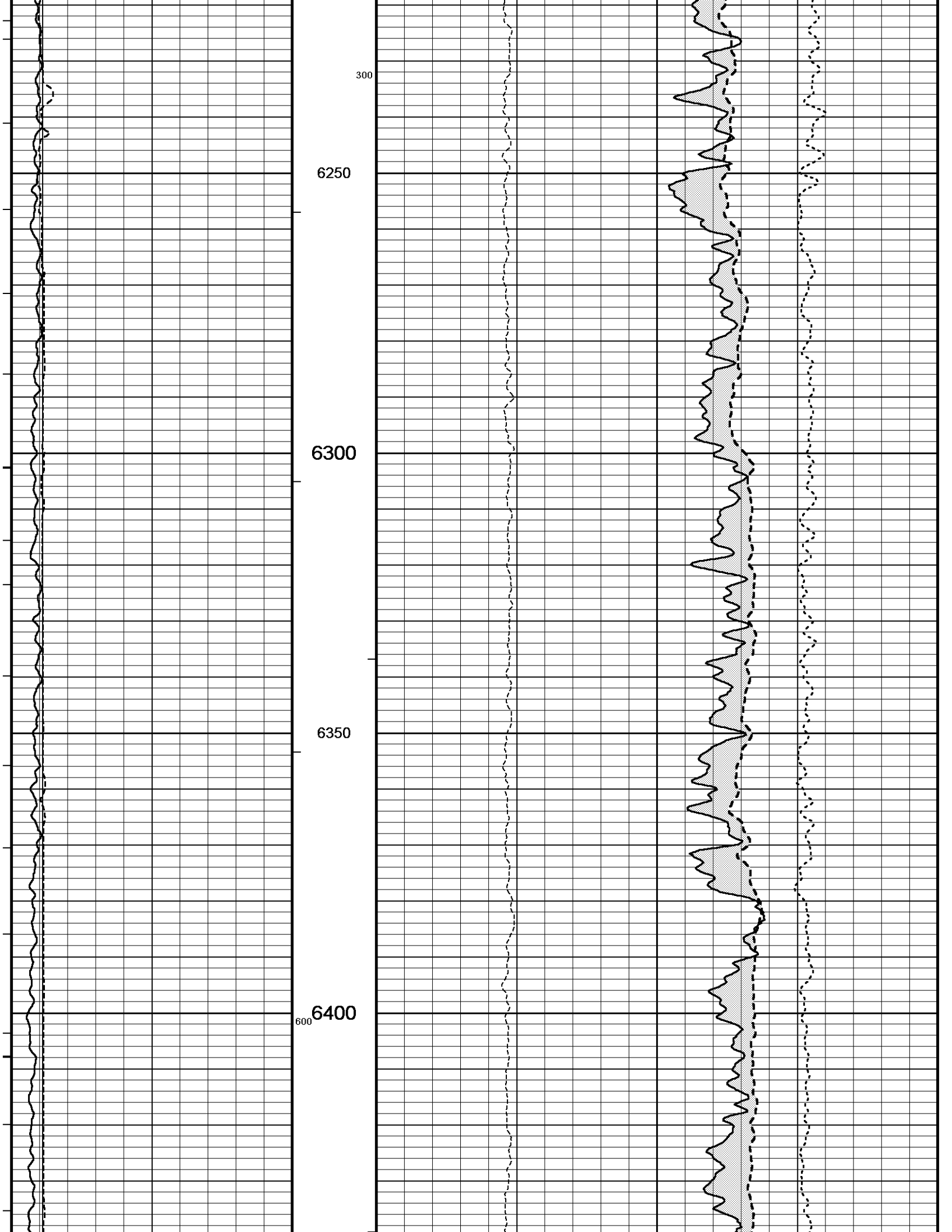
Limestone Neutron Por. →

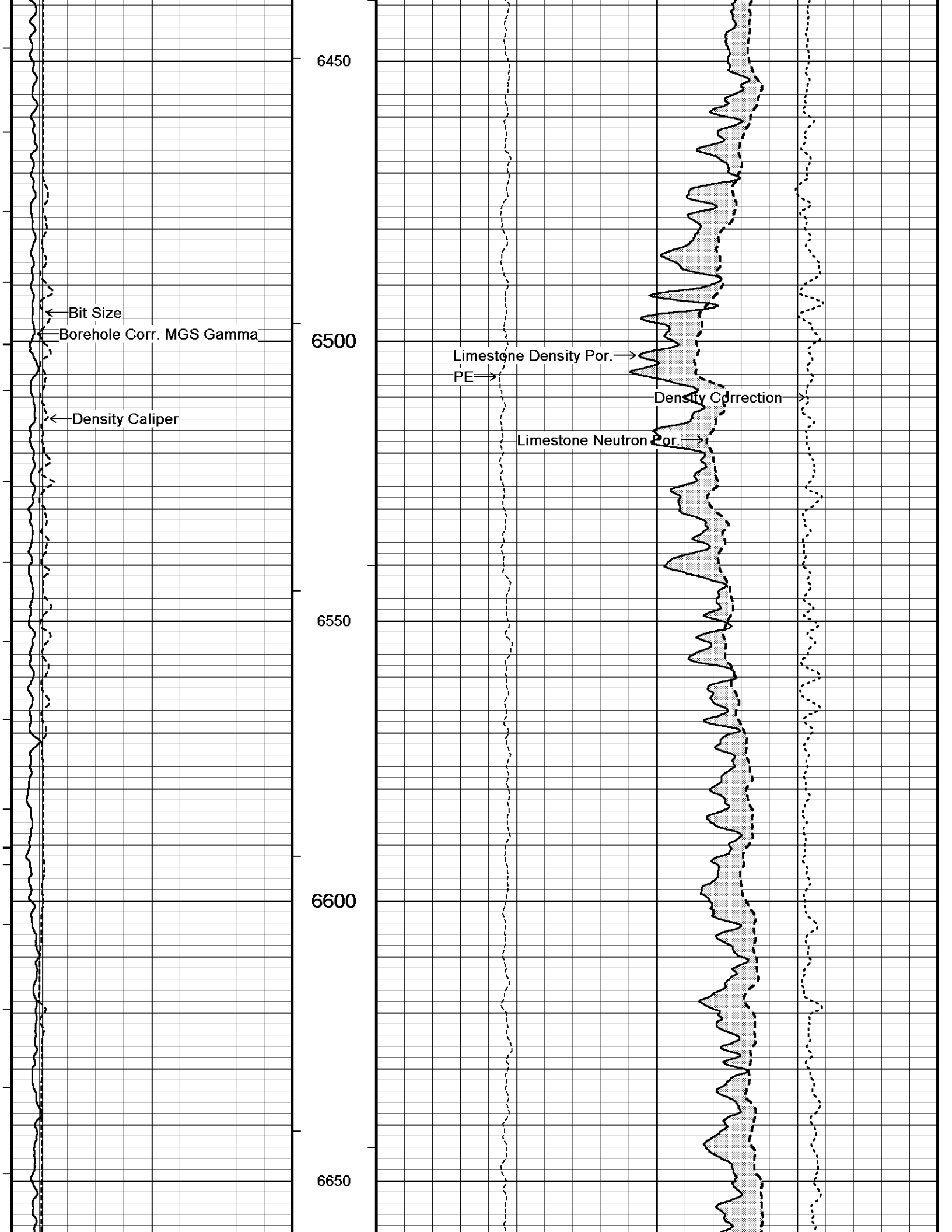












6450

6500

6550

6600

6650

← Bit Size

← Borehole Corr. MGS Gamma

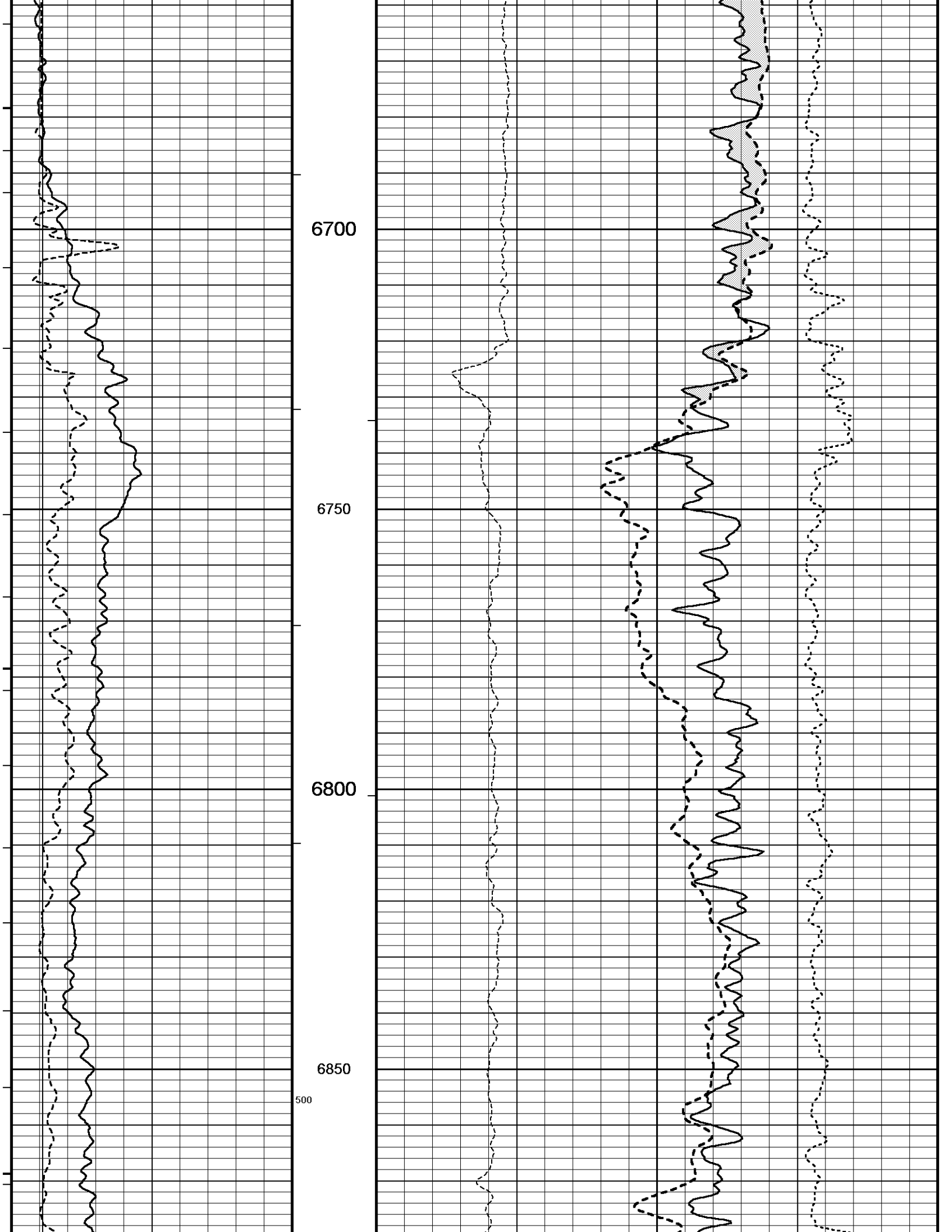
← Density Caliper

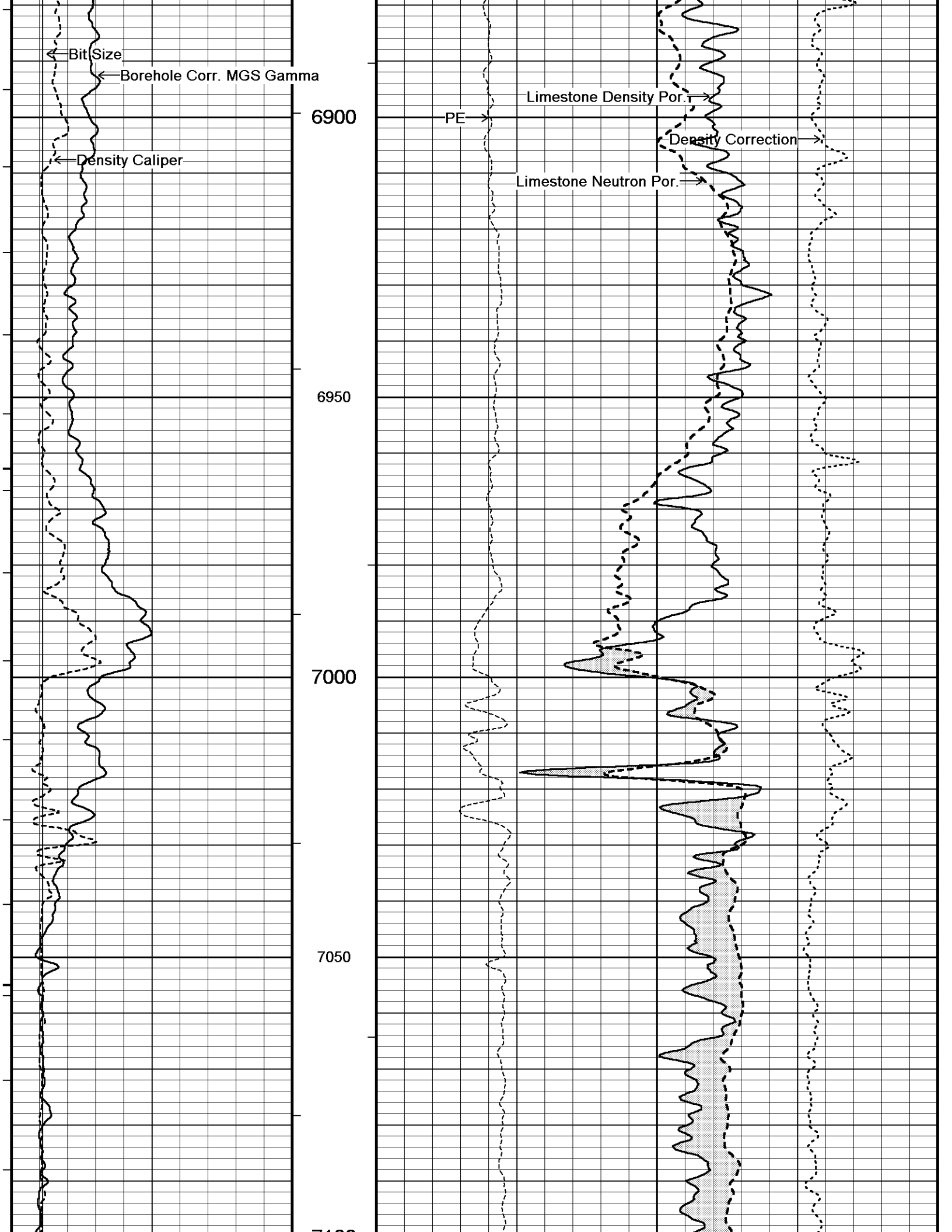
Limestone Density Por. ⇒

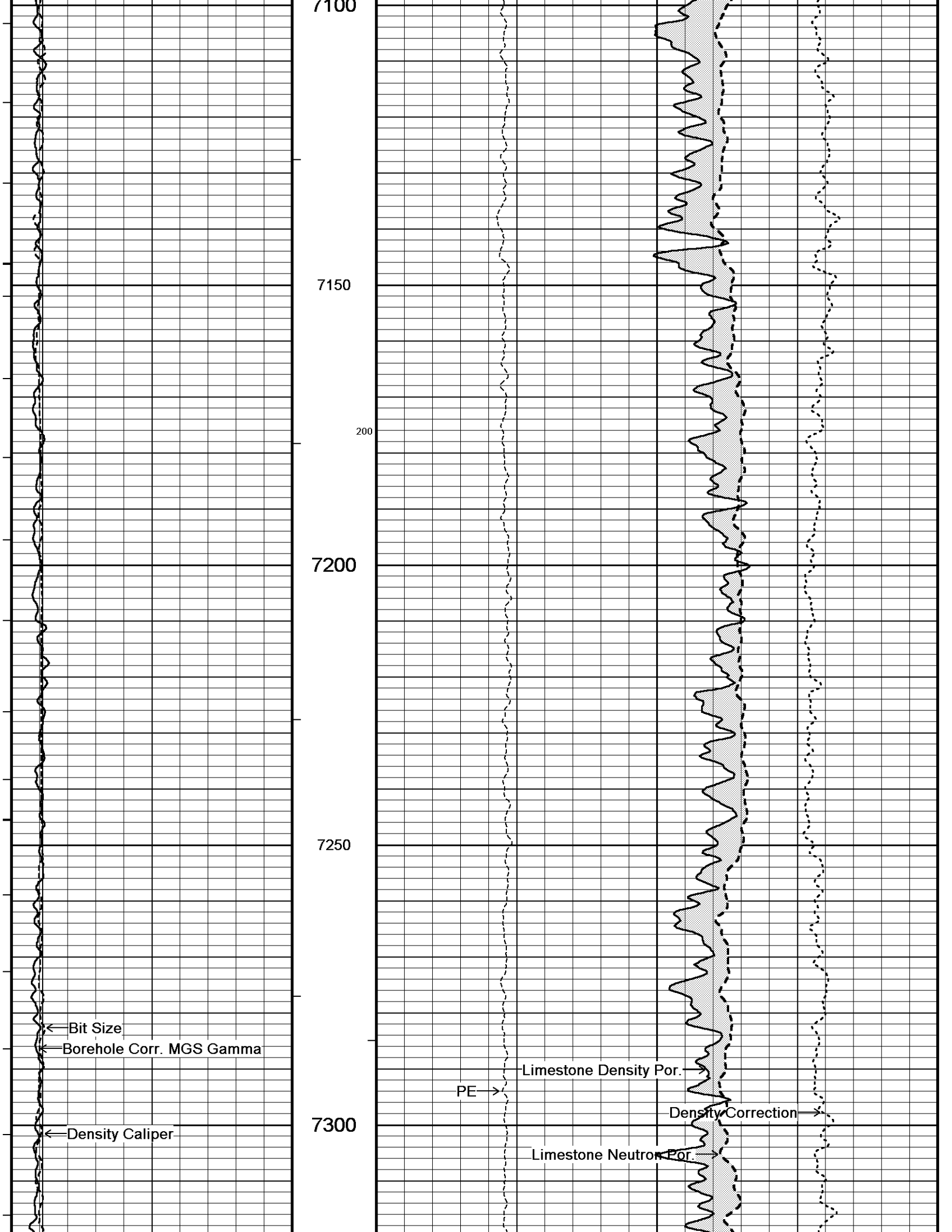
PE ⇒

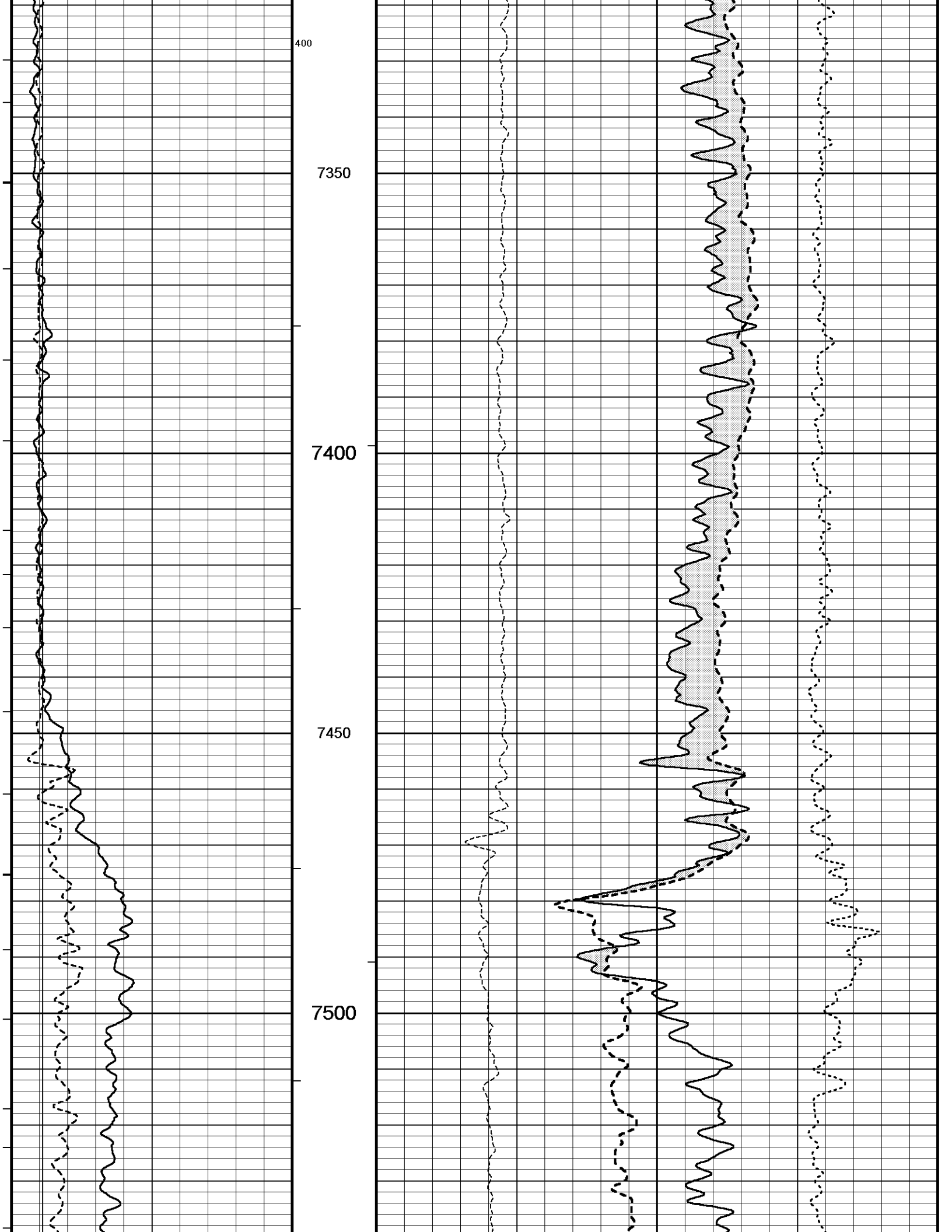
Density Correction ⇒

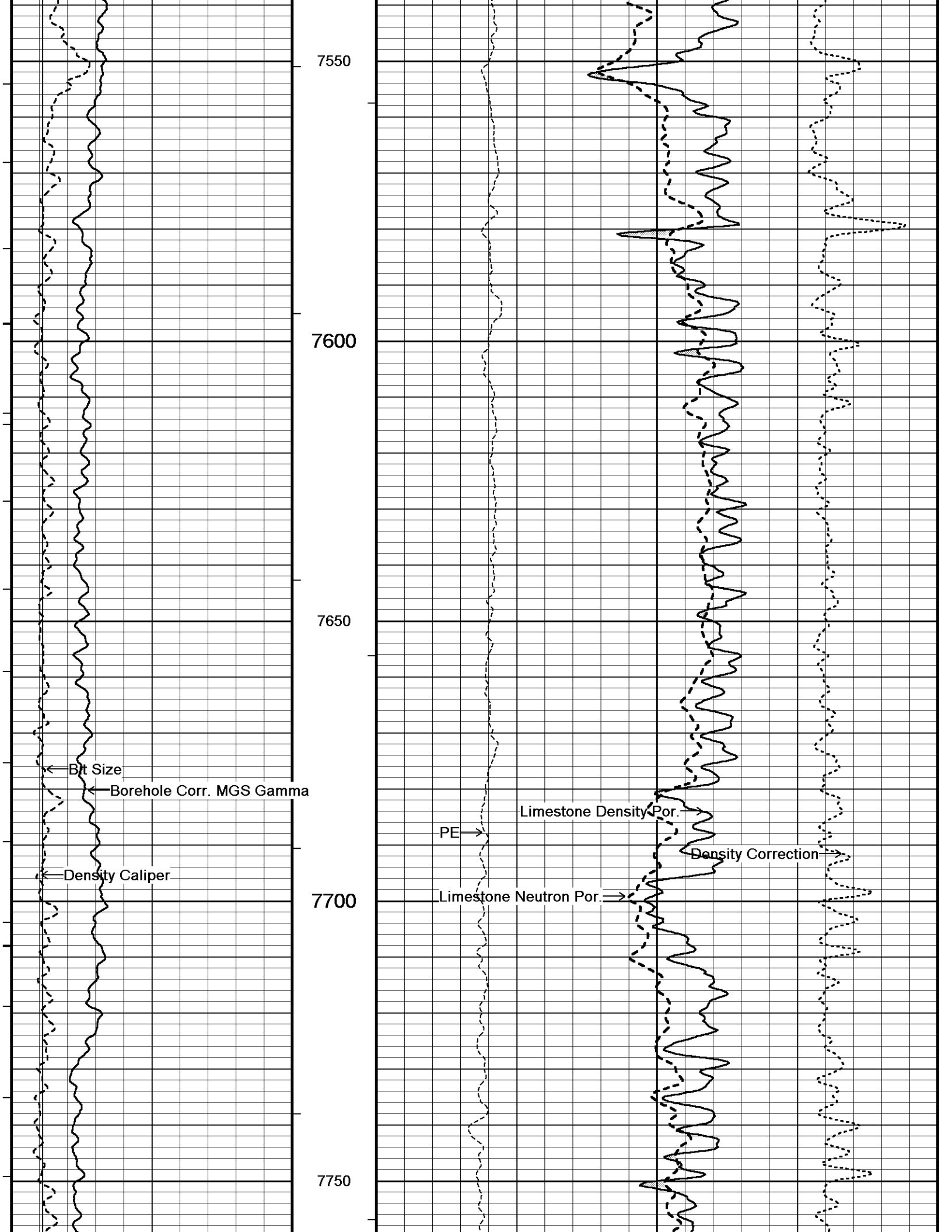
Limestone Neutron Por. ⇒

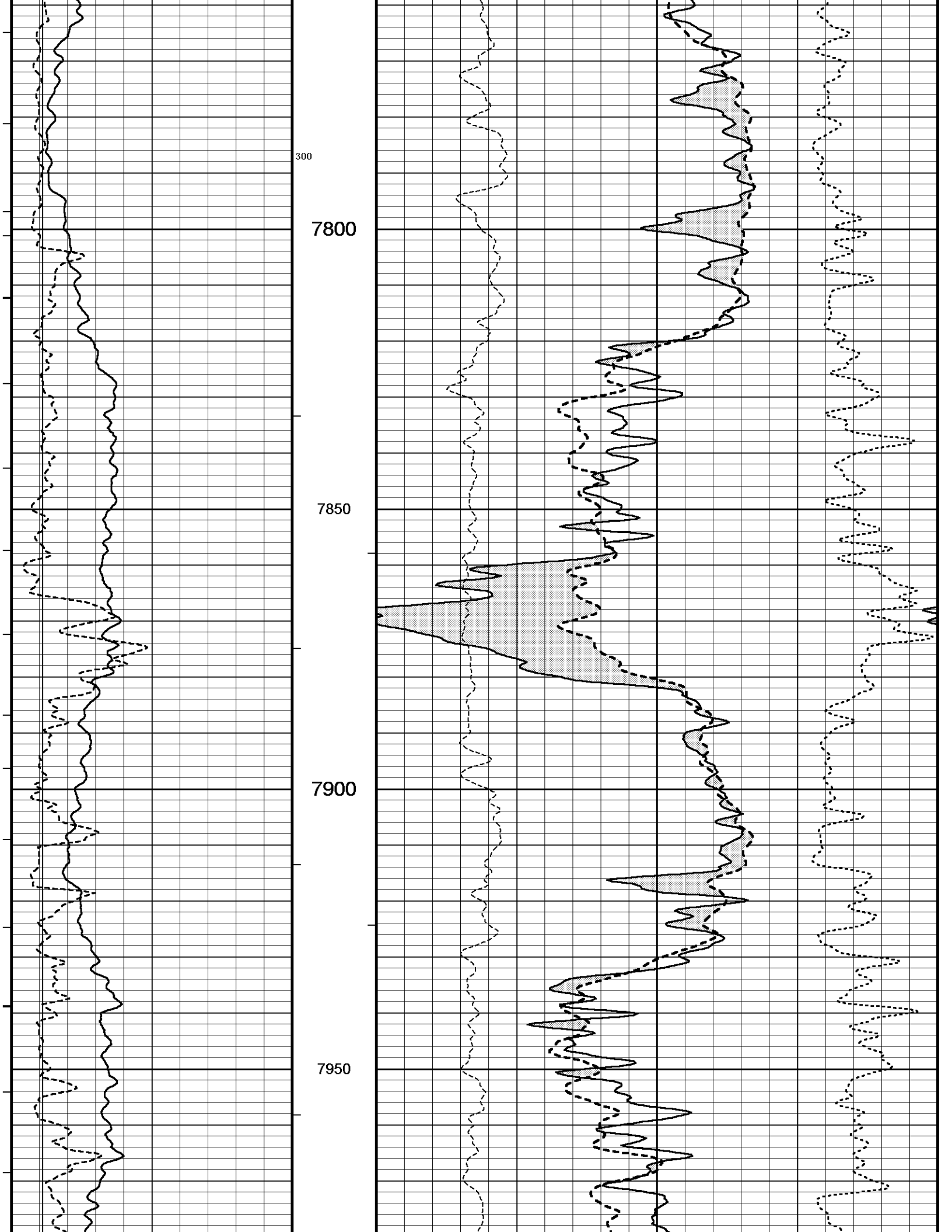


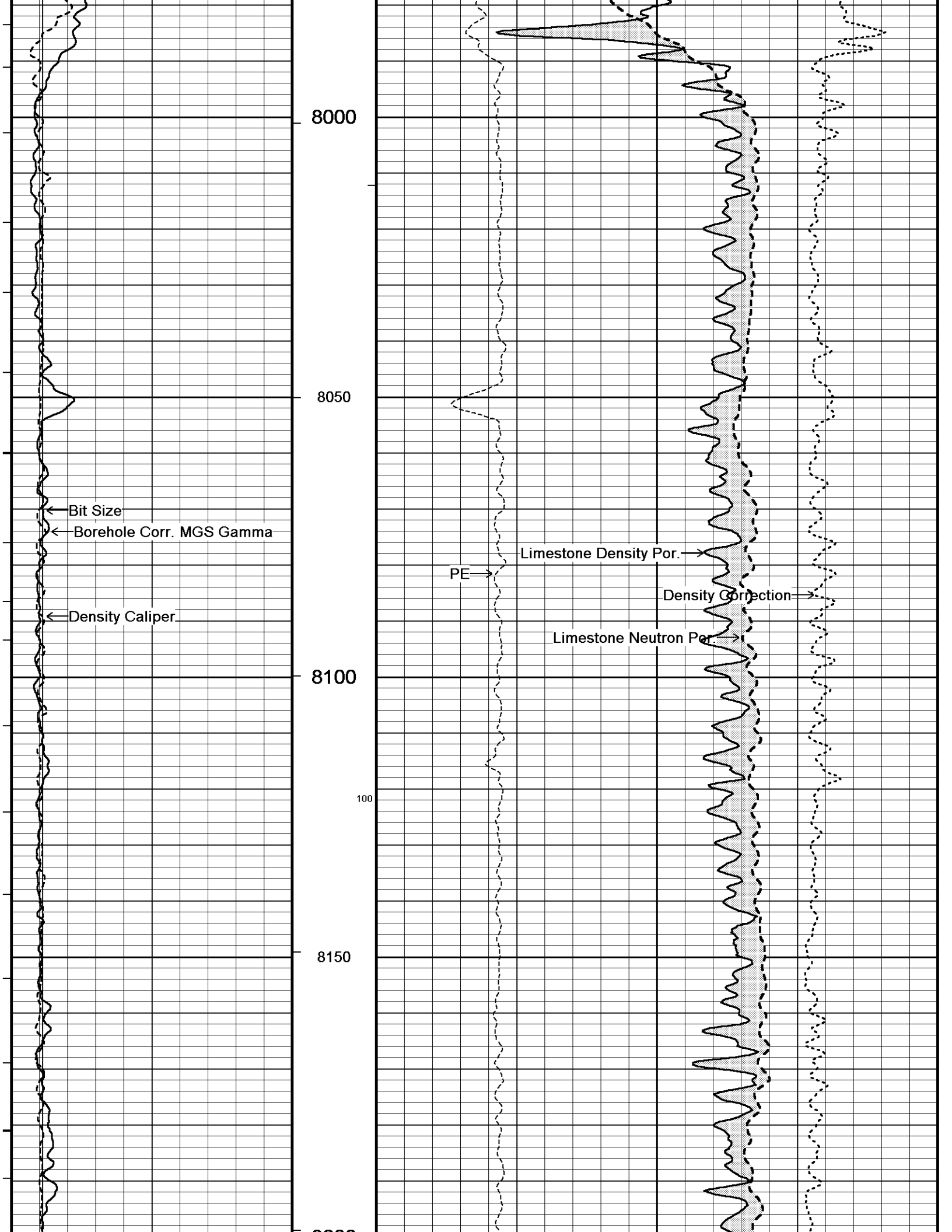


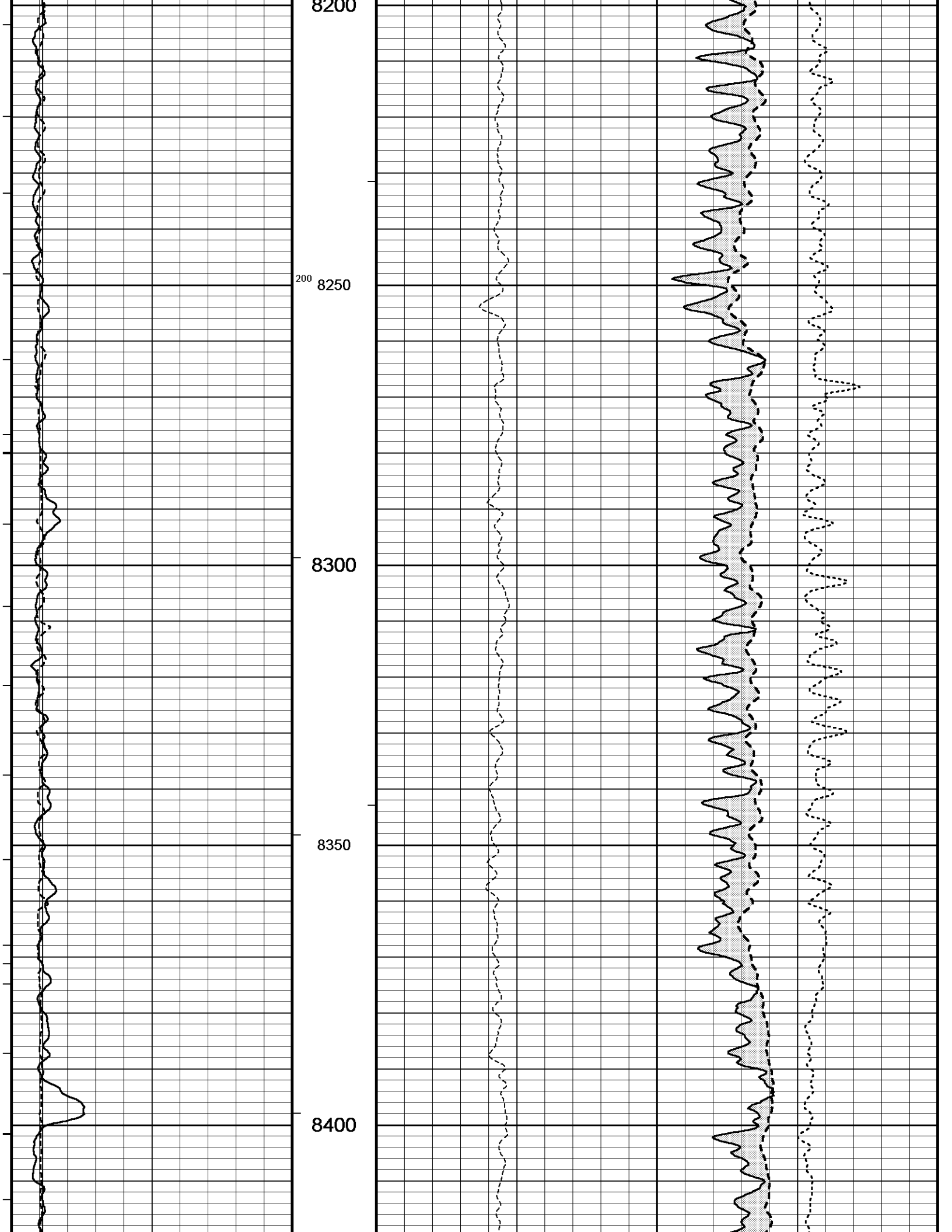


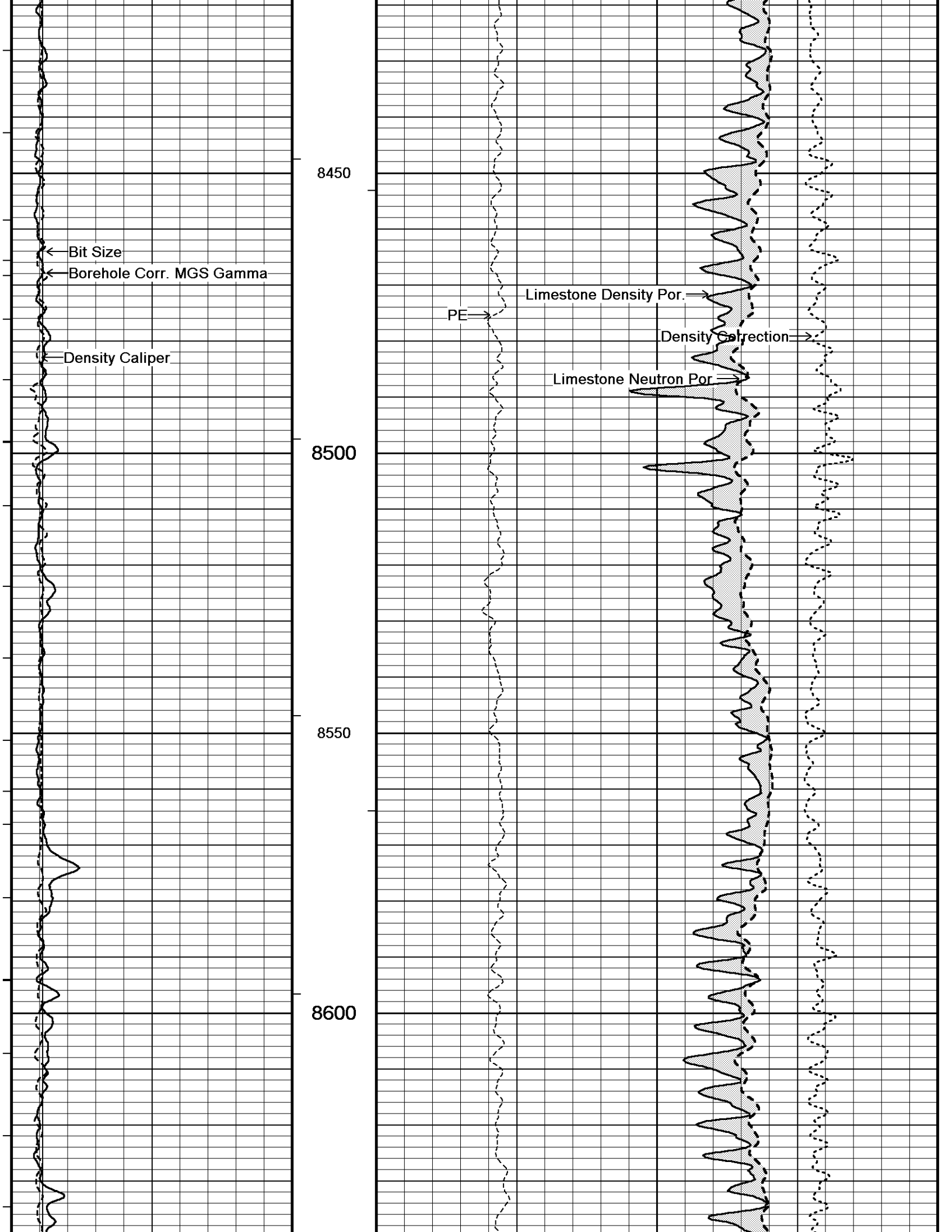


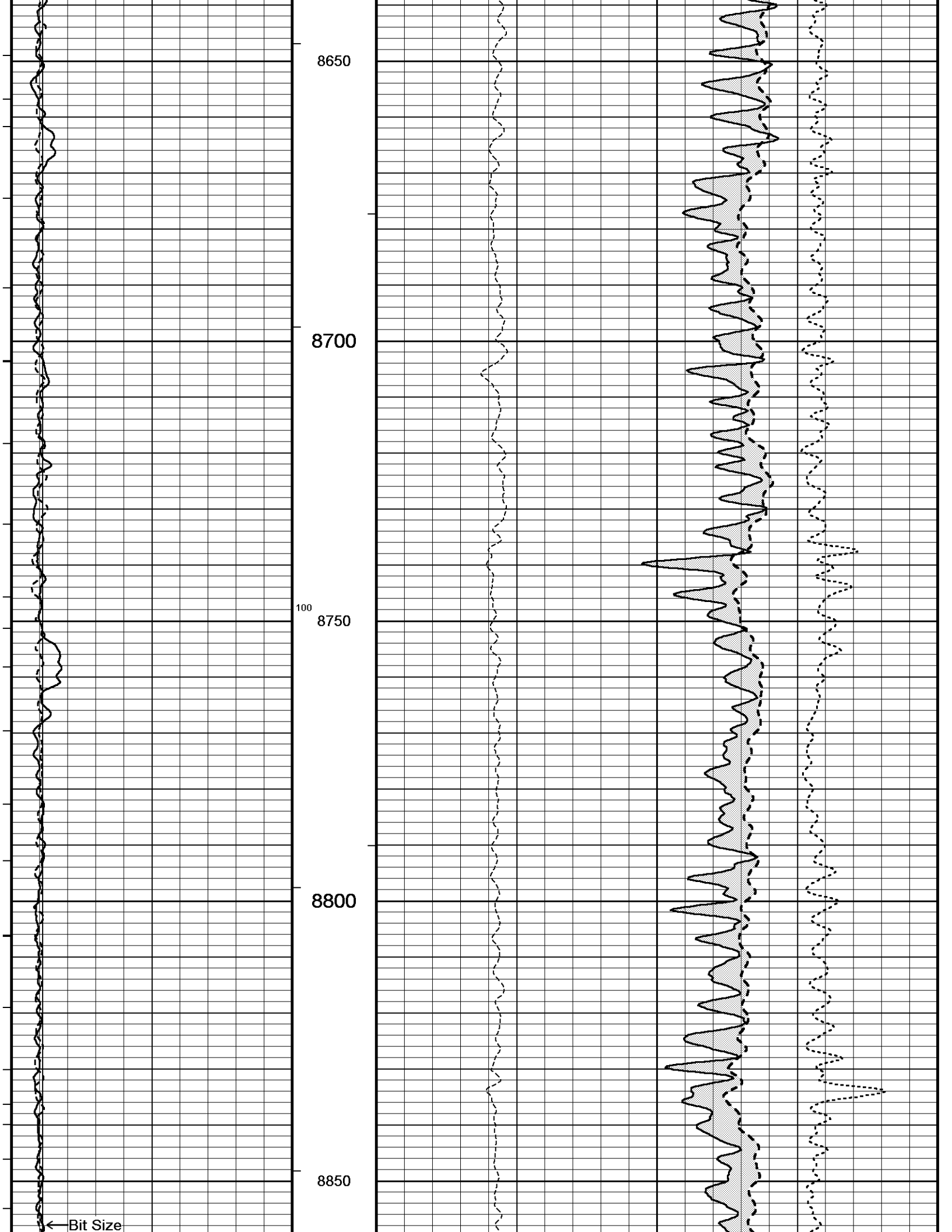


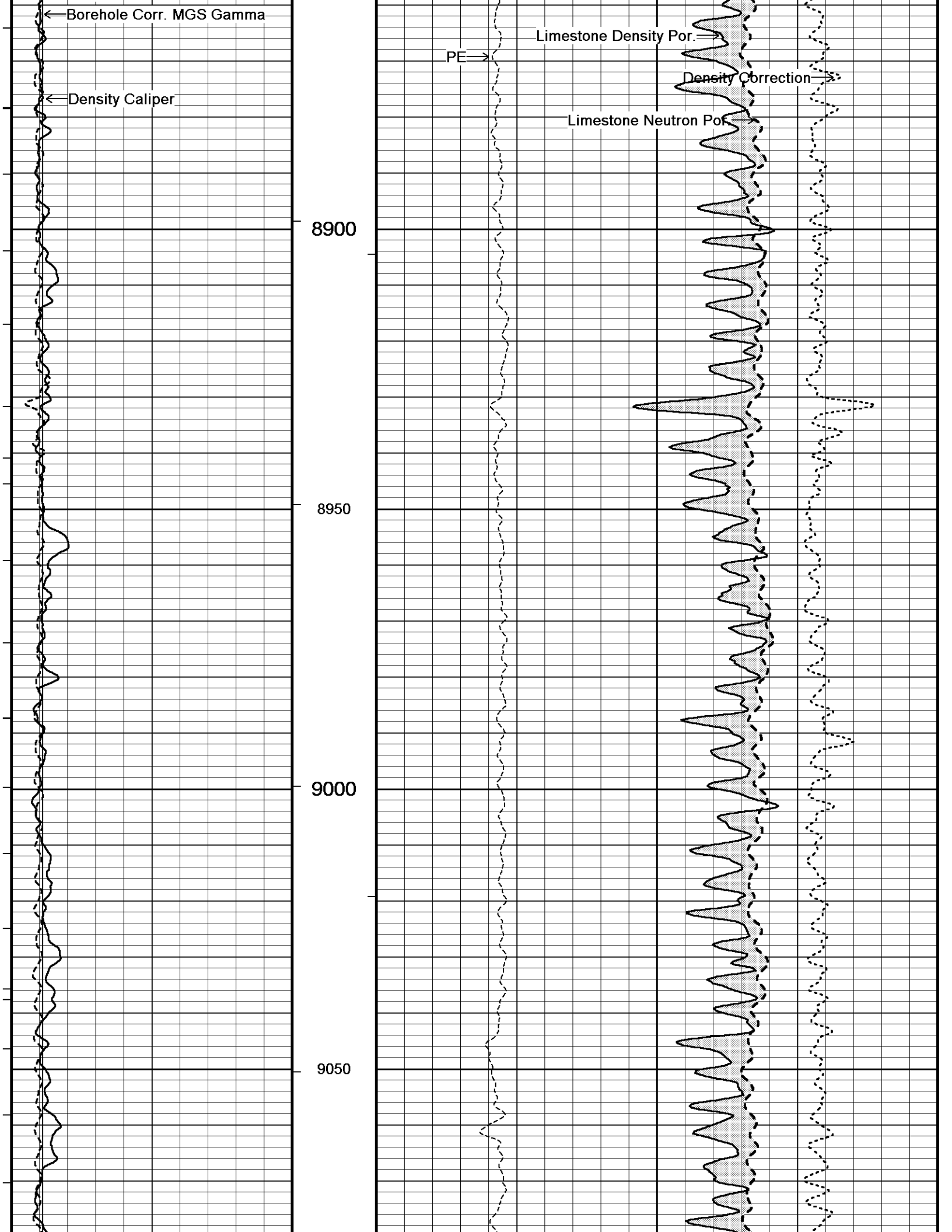


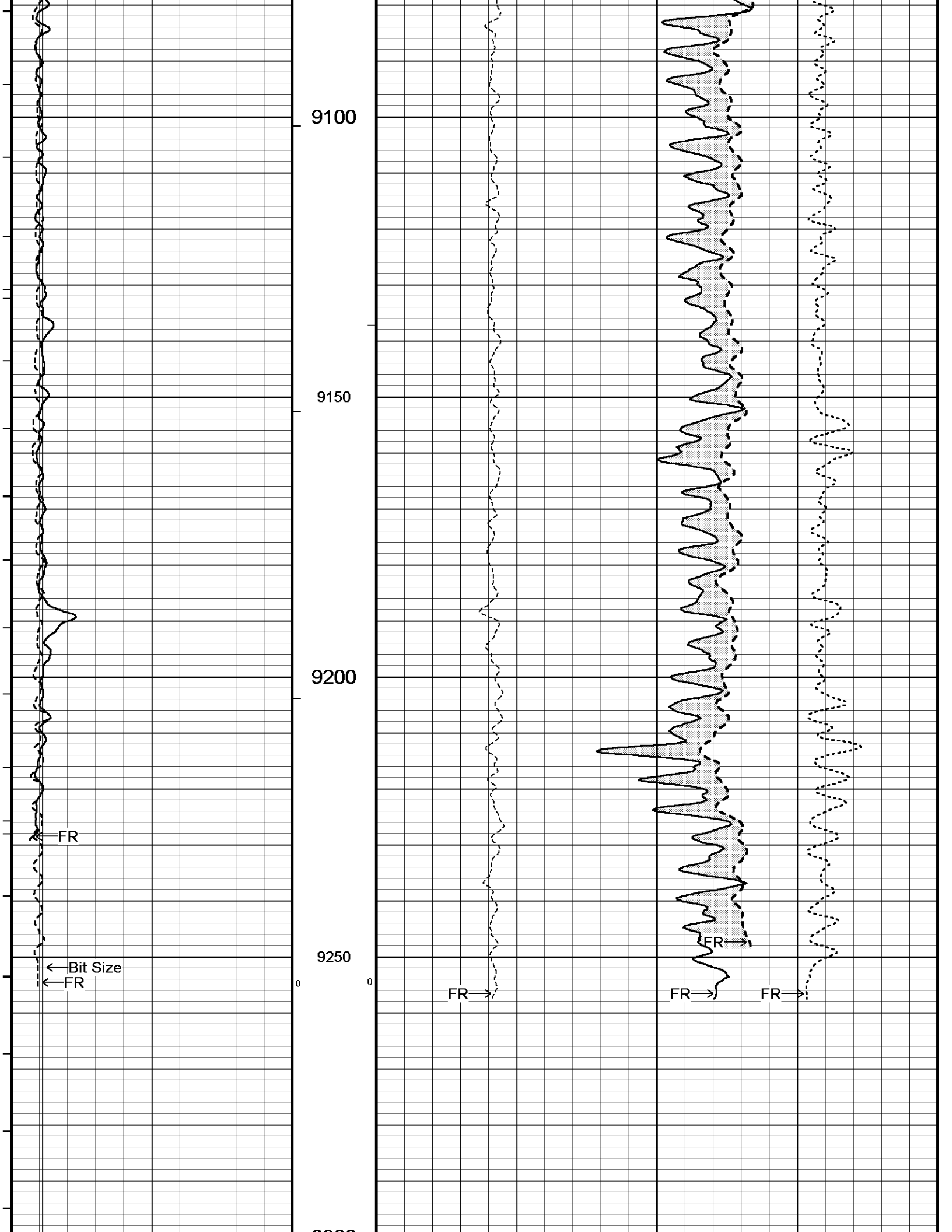












9300

9330

Depth In Feet

Timing Marks every 60.0 sec

Density Caliper inches

5 10 15

Borehole Corr. MGS Gamma

API

0 75 150 150 225 300

Bit Size inches

5 10 15

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 Density Por. percent

30 20 10 0 -10

PE barns/electron

0 5 10 -0.25

Density Correction grams/cc

0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
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System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

Plotted on 10-SEP-2012 10:56
Recorded on 10-SEP-2012 10:17

↑ DSC ↑

↓ DSC ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
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Depth In Feet

Timing Marks every 60.0 sec

Density Caliper inches

5 10 15

Borehole Corr. MGS Gamma

API

0 75 150 150 225 300

HVI every 10 cu ft

Annular Integral every 10 cu ft

Compensated Density grams/cc

2 2.25 2.50 2.75 3

Limestone Density Por. percent

30 20 10 0 -10

PE barns/electron

Density Correction grams/cc

Bit Size
inches

5 10 15

Replay
Scale
1:240

5338

5350

Casing
Shoe

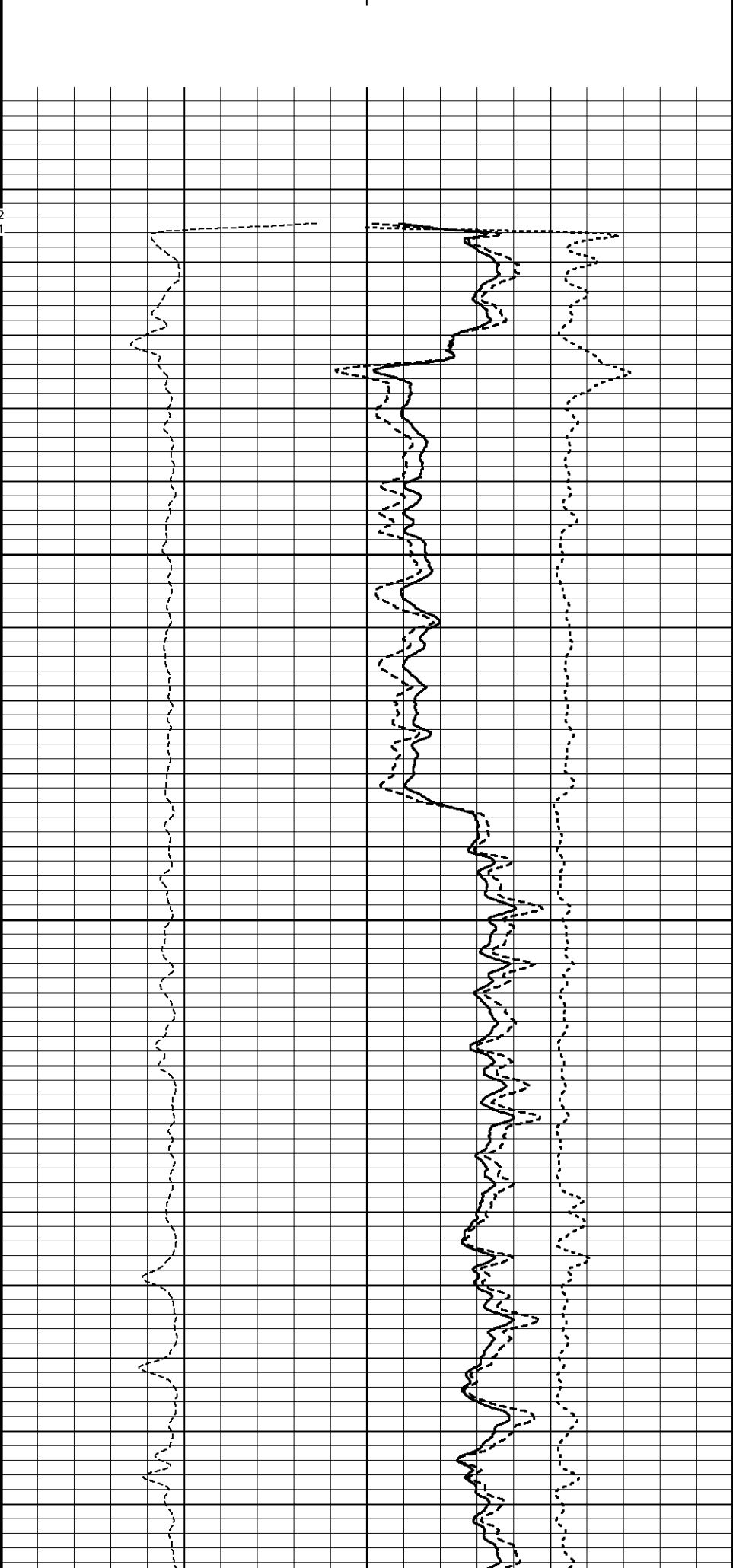
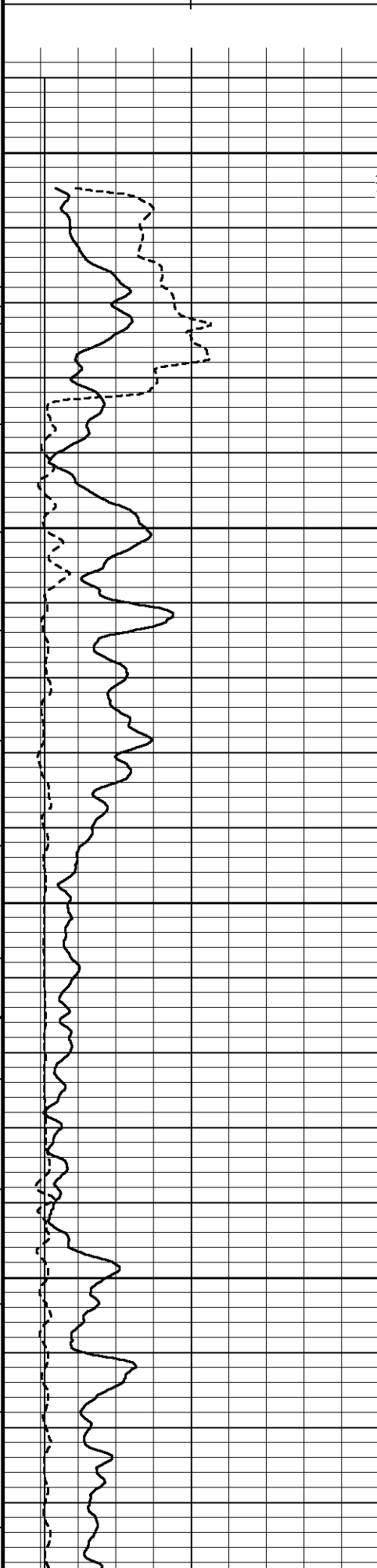
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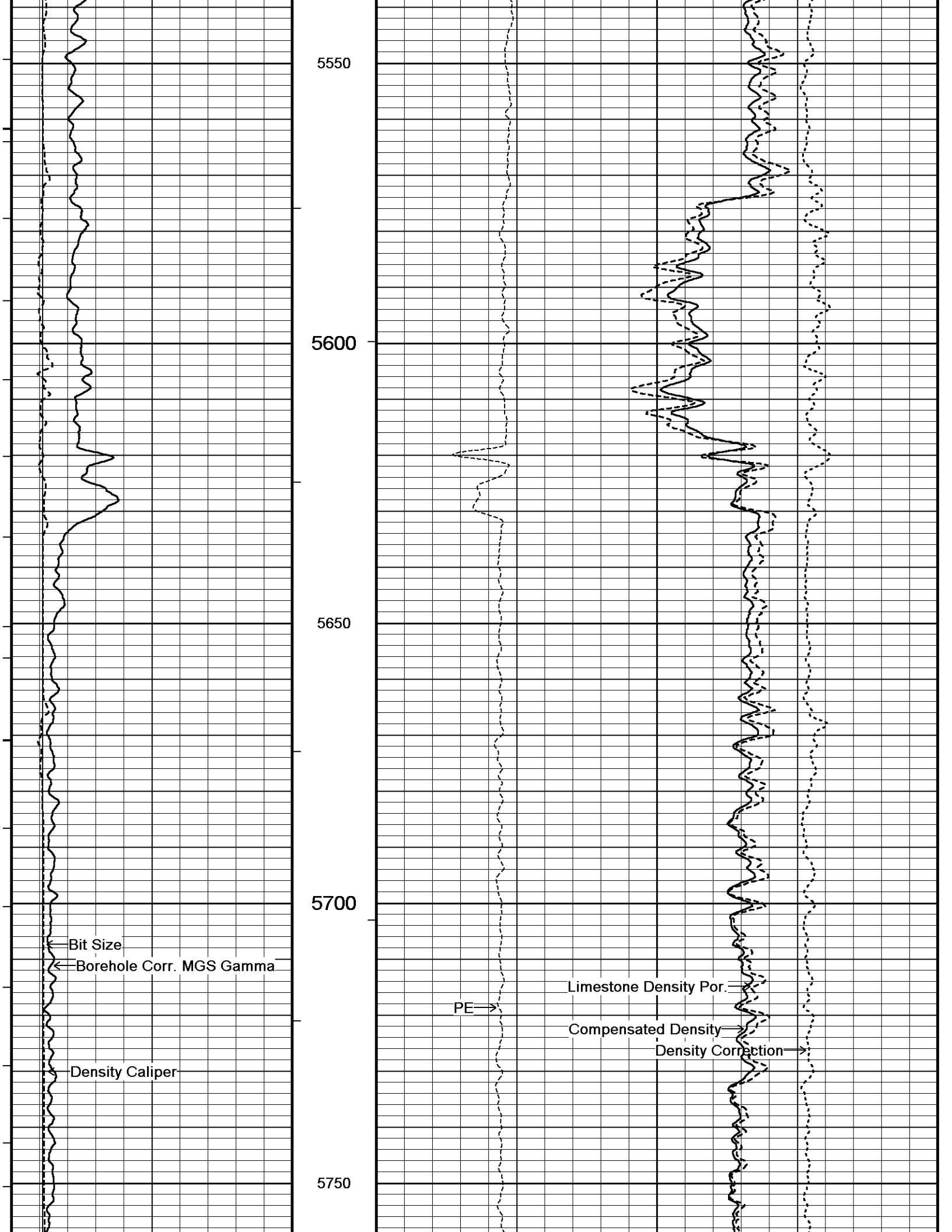
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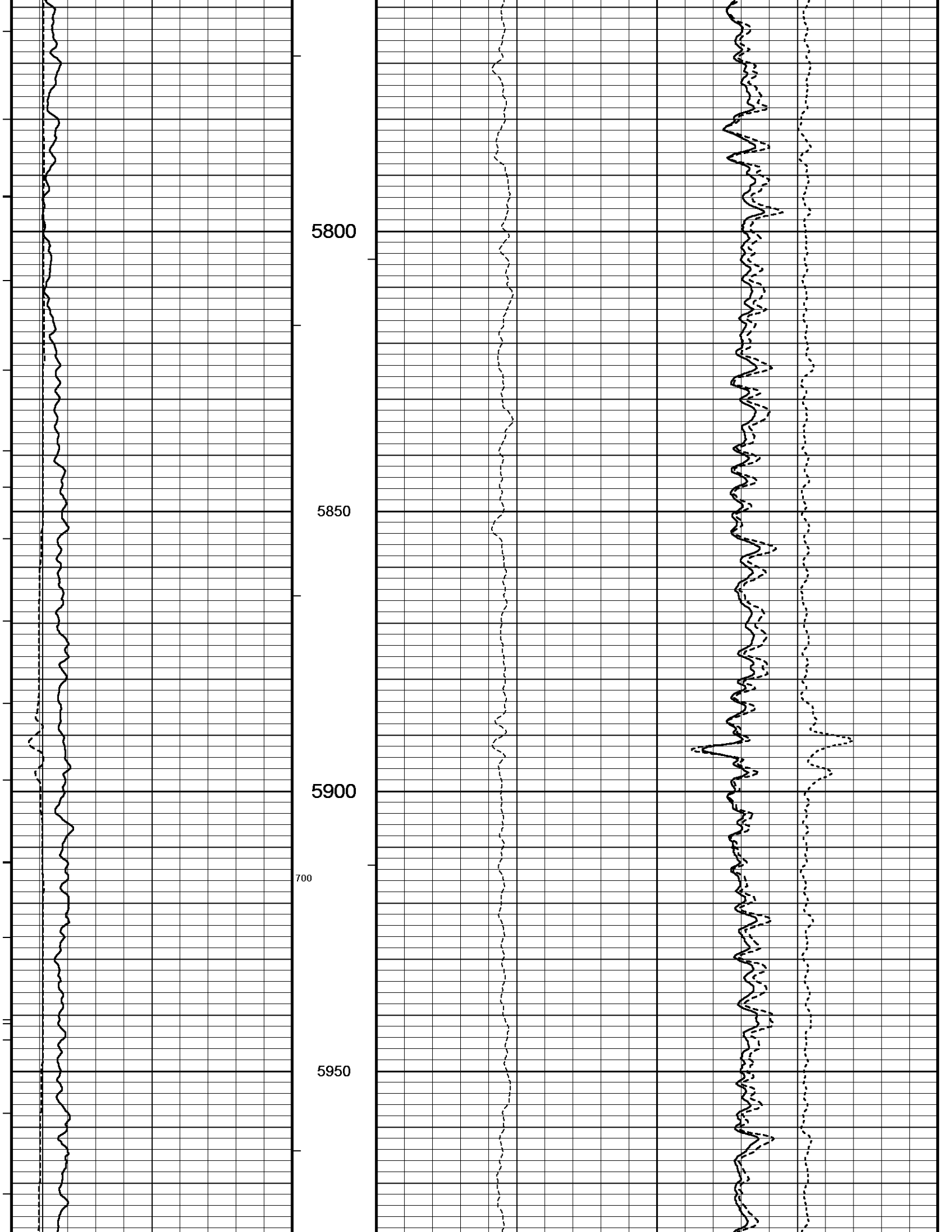
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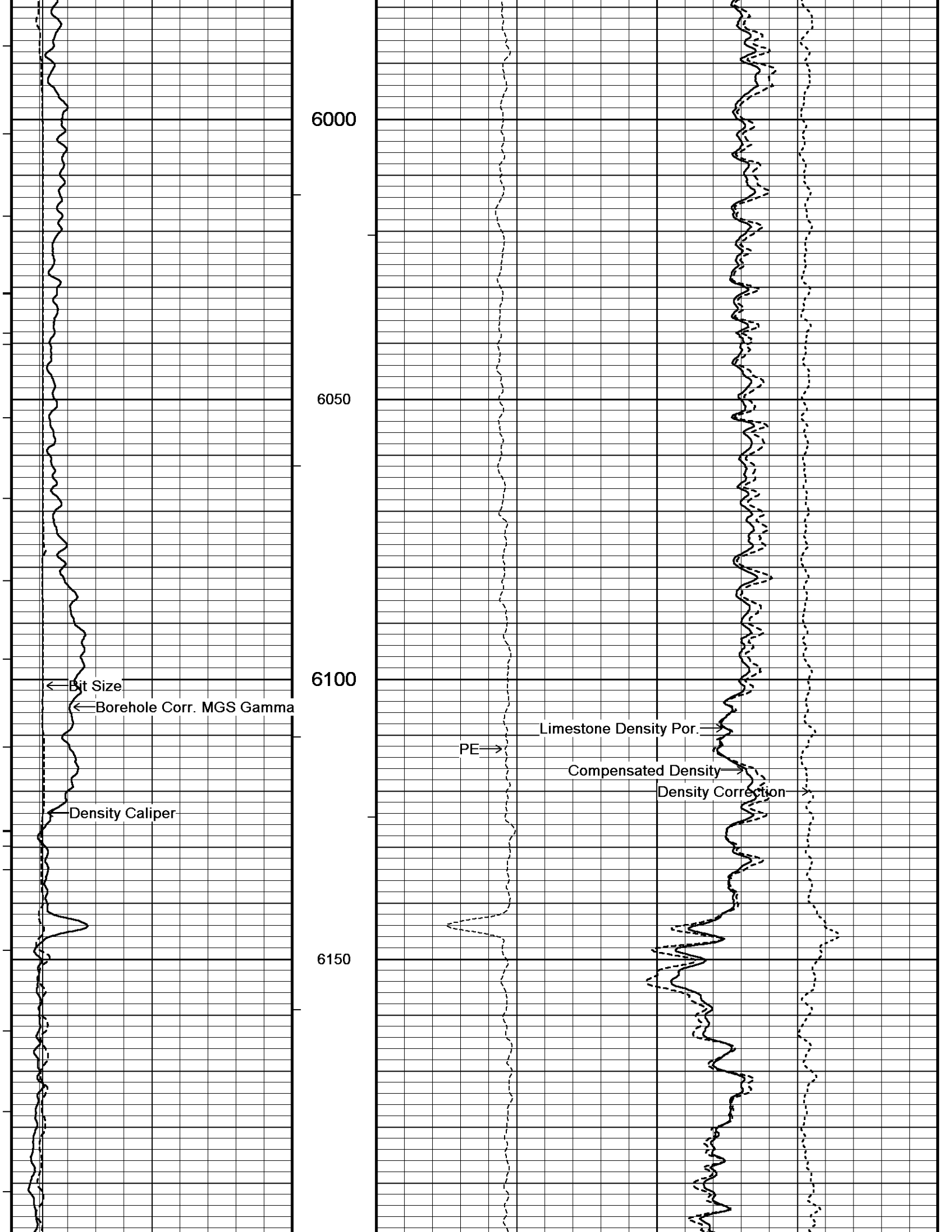
5500

0 5 10 -0.25 0 0.25









6000

6050

6100

6150

← Bit Size

← Borehole Corr. MGS Gamma

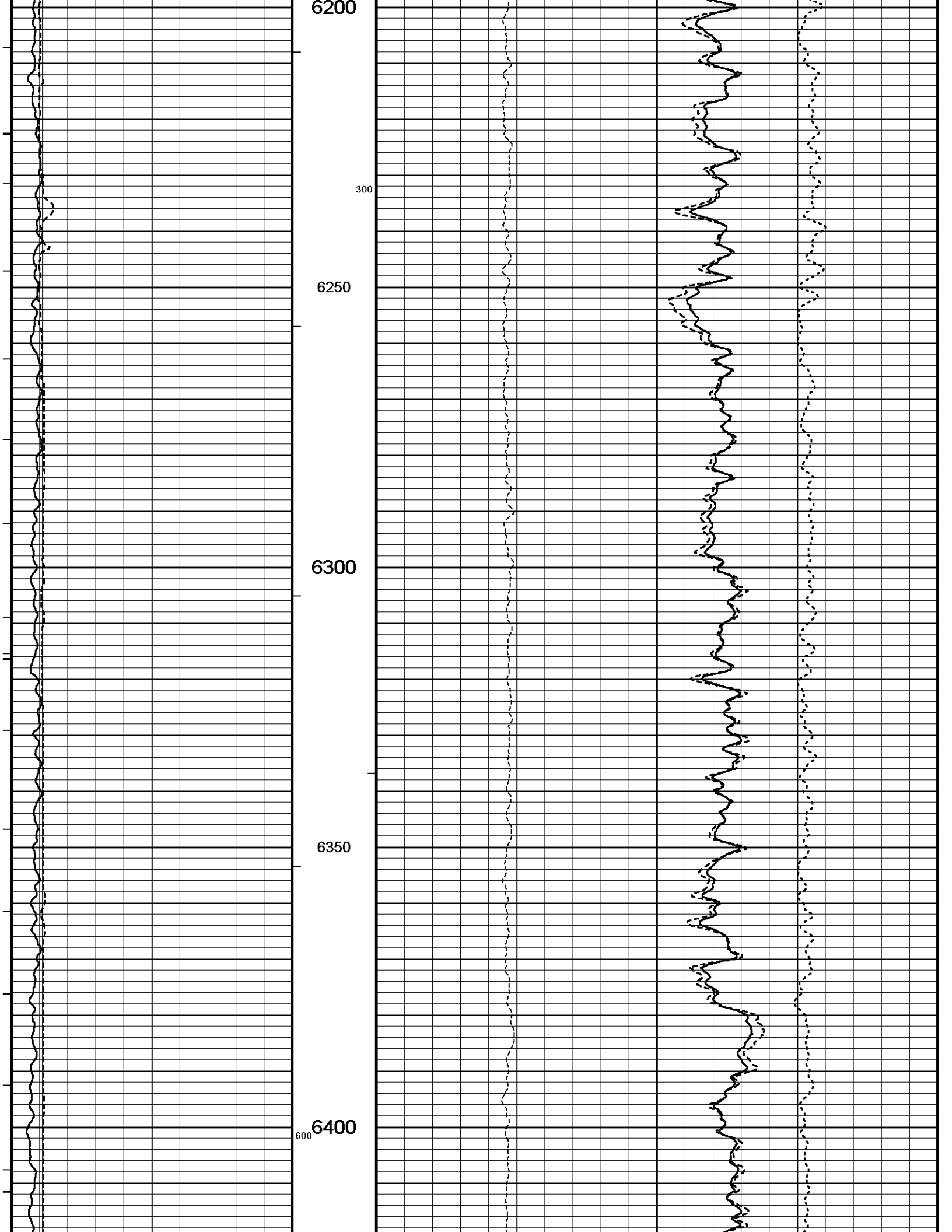
Density Caliper

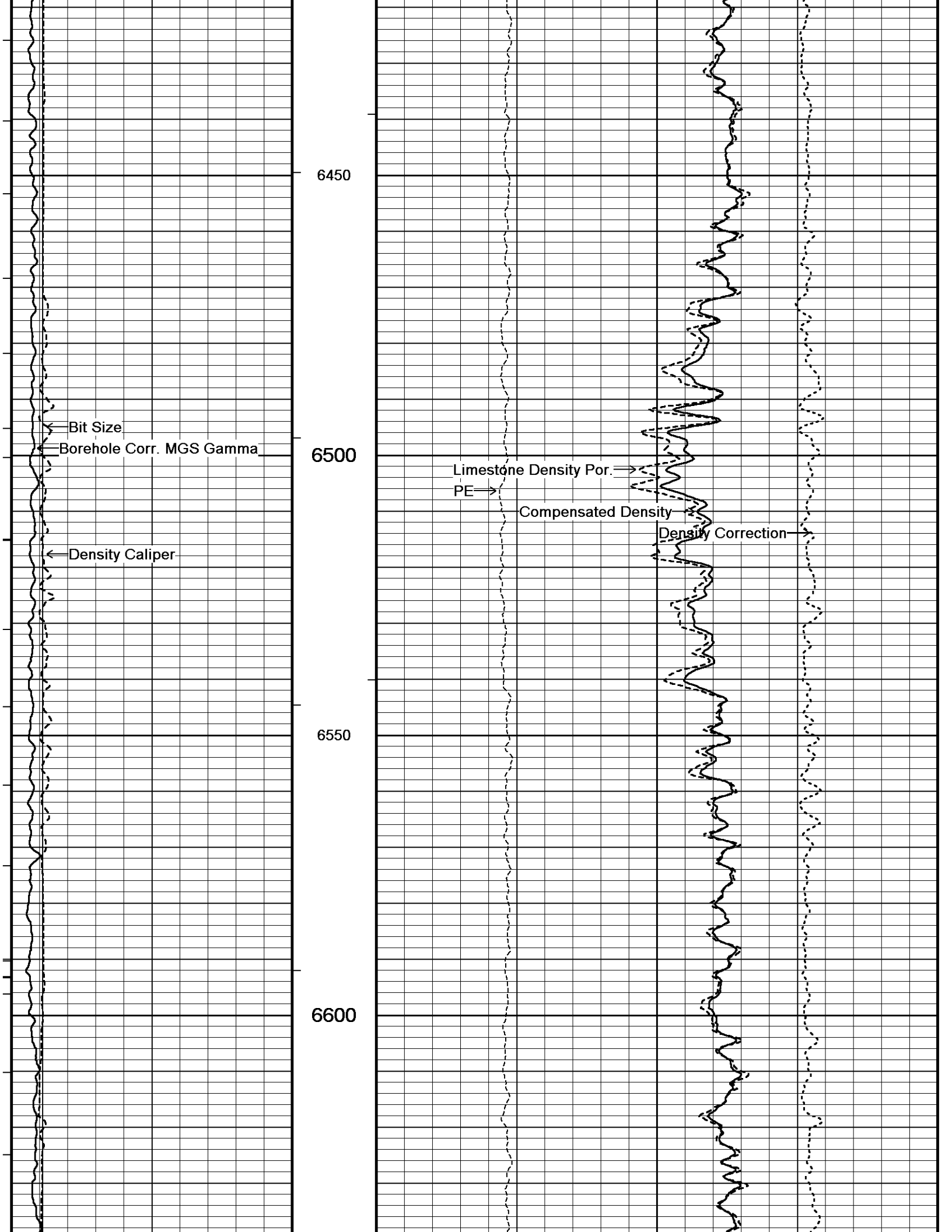
PE →

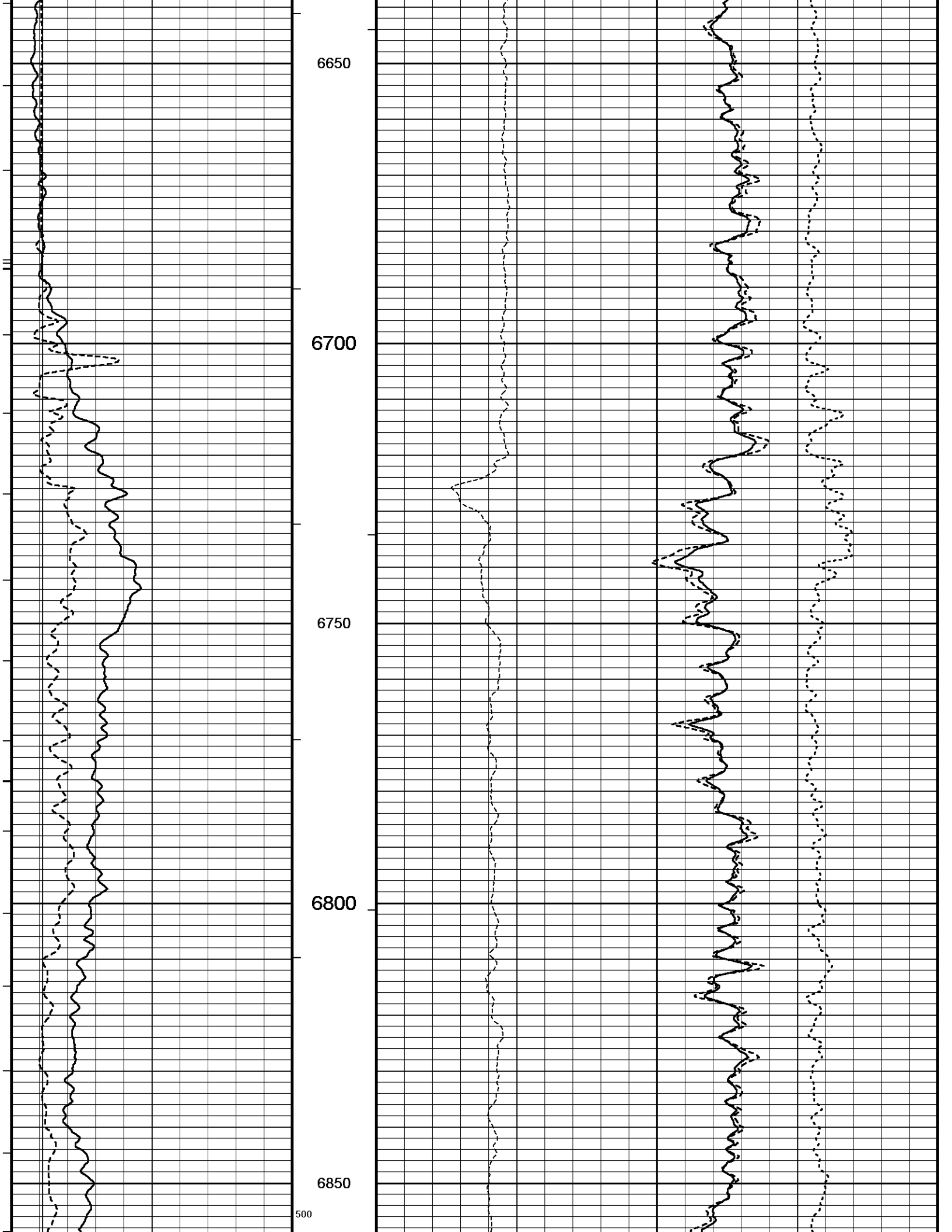
Limestone Density Por. →

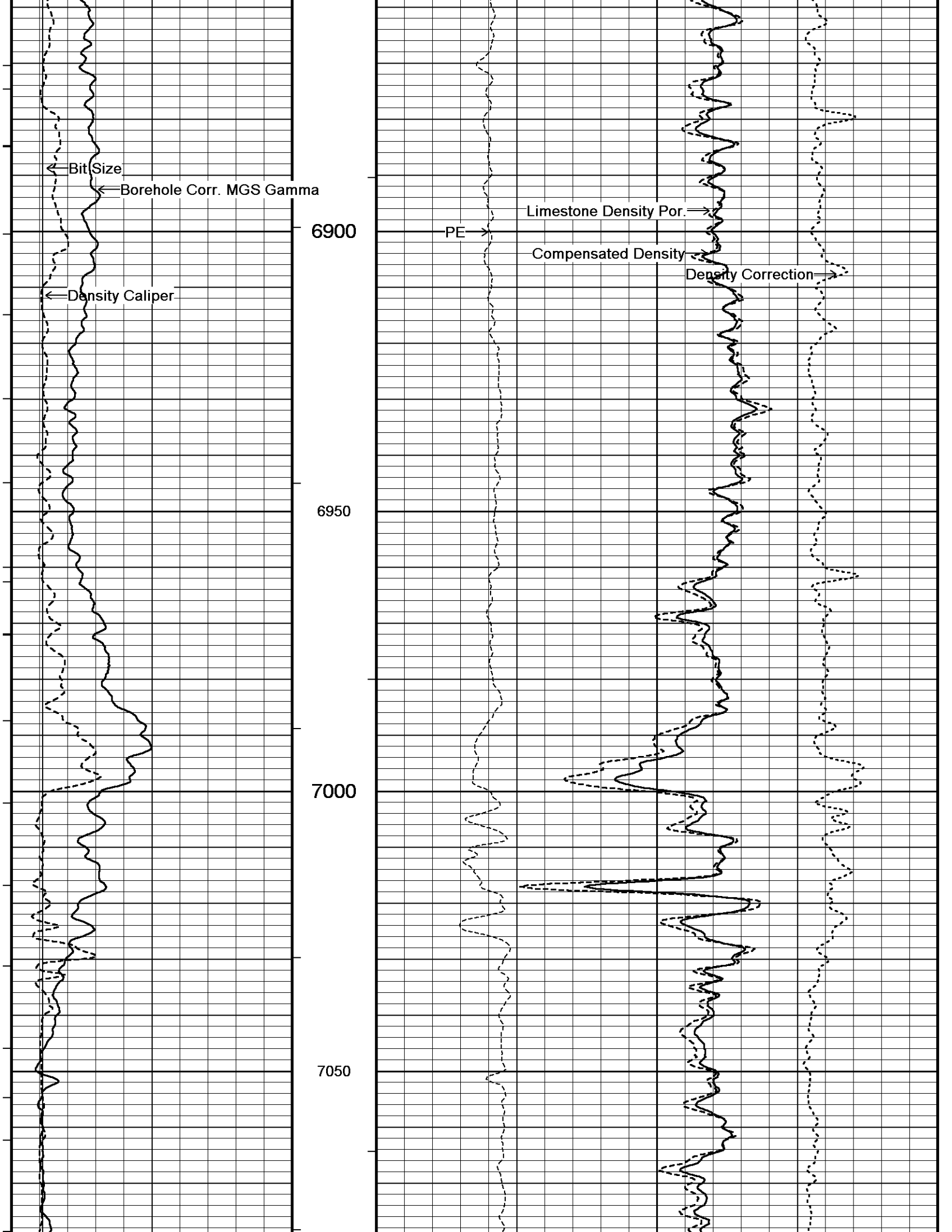
Compensated Density →

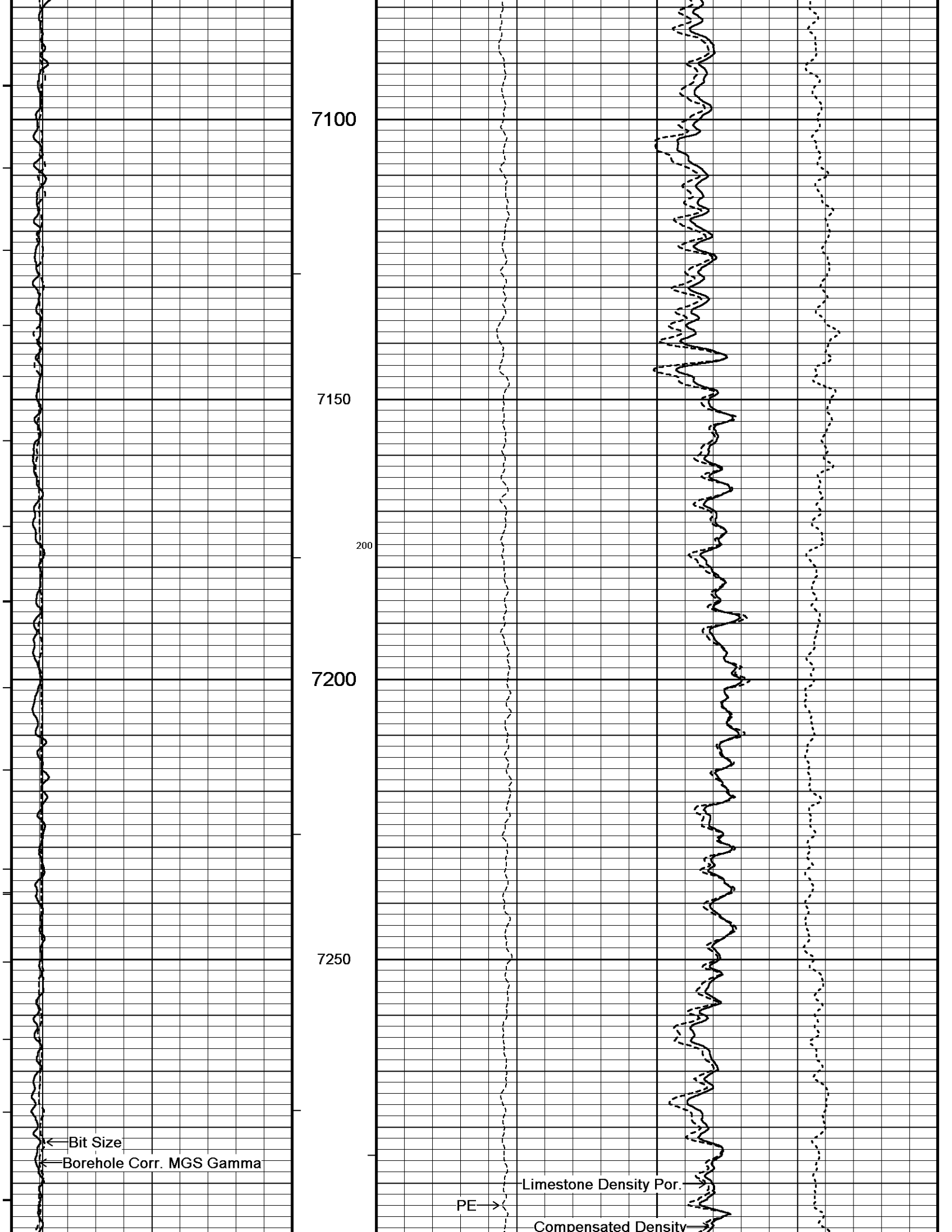
Density Correction →











7100

7150

200

7200

7250

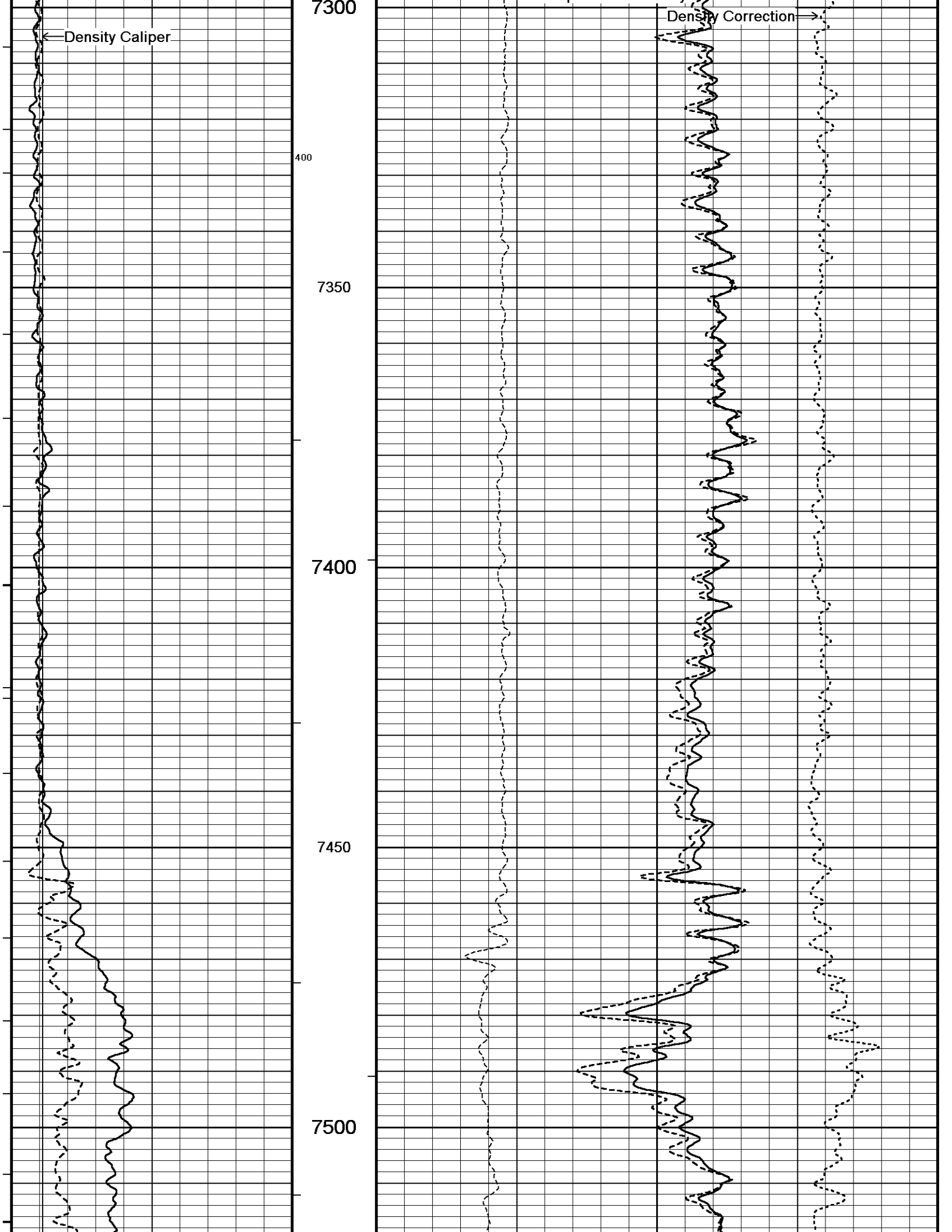
← Bit Size

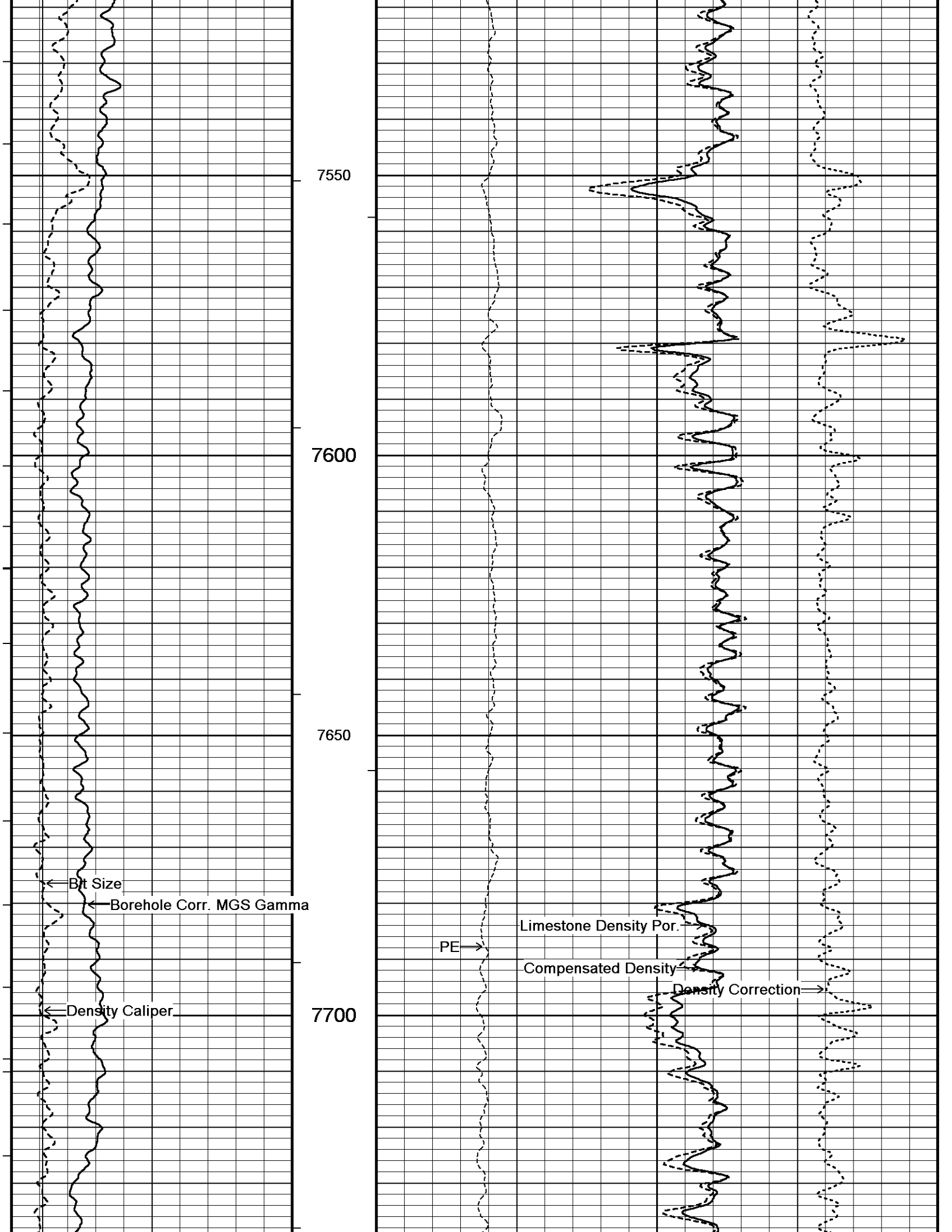
← Borehole Corr. MGS Gamma

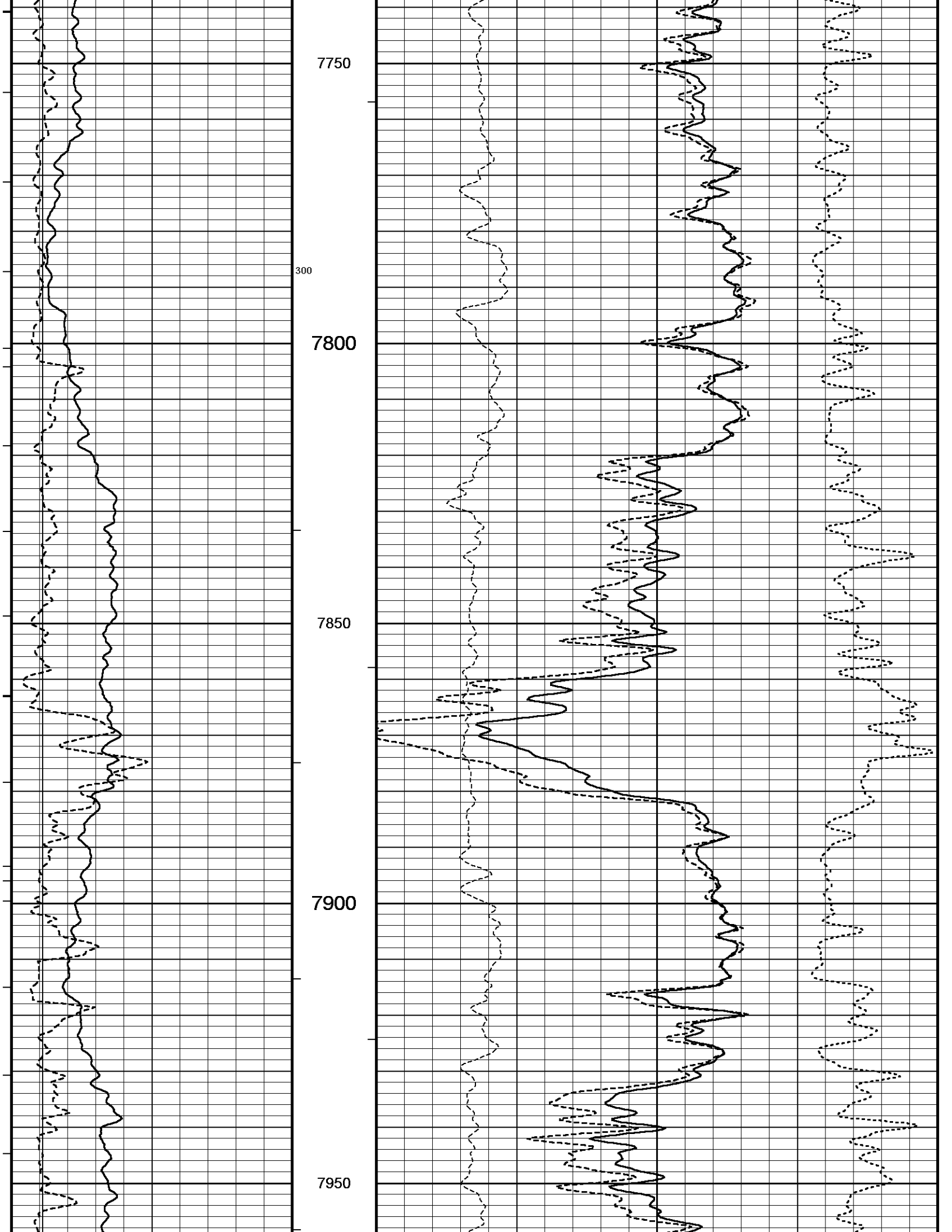
PE →

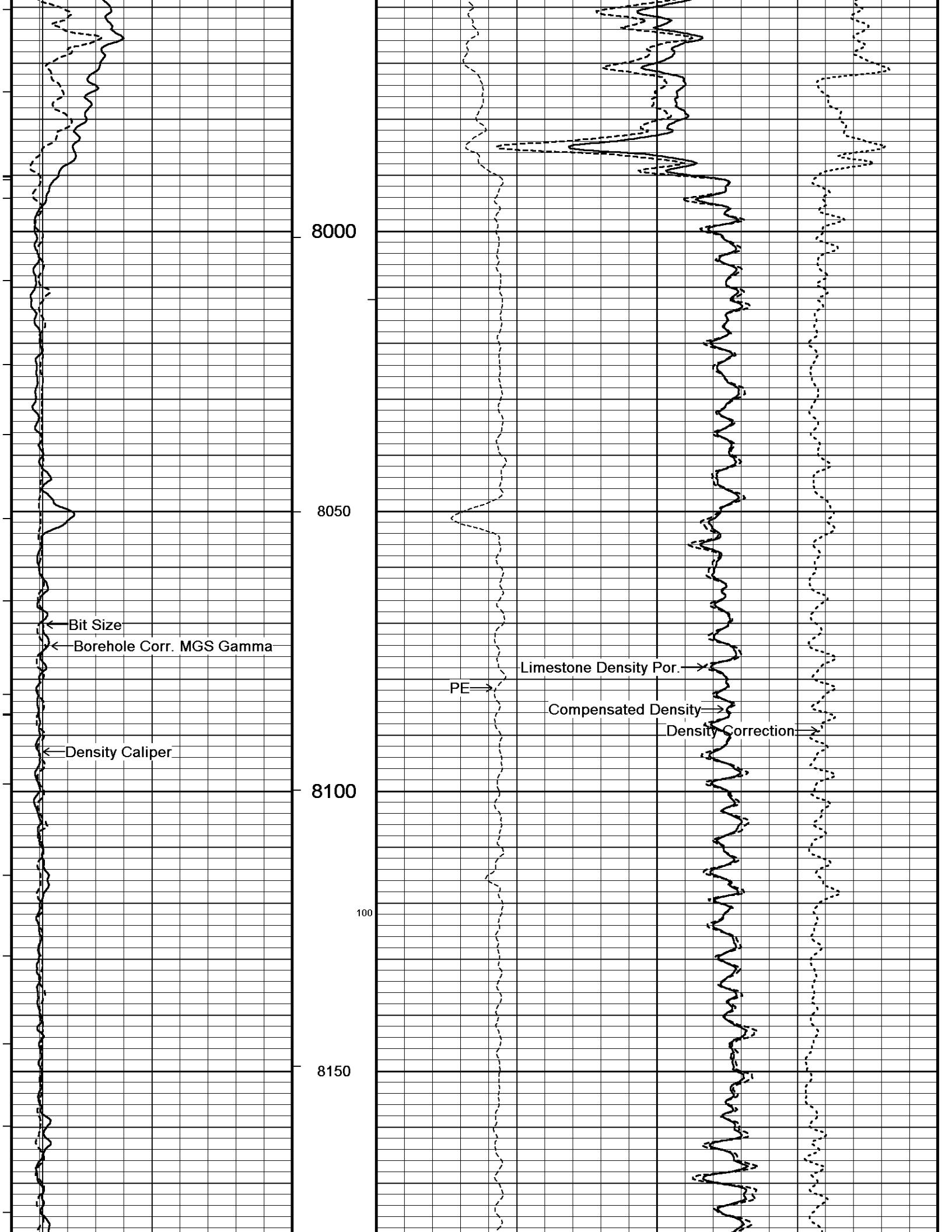
Limestone Density Por.

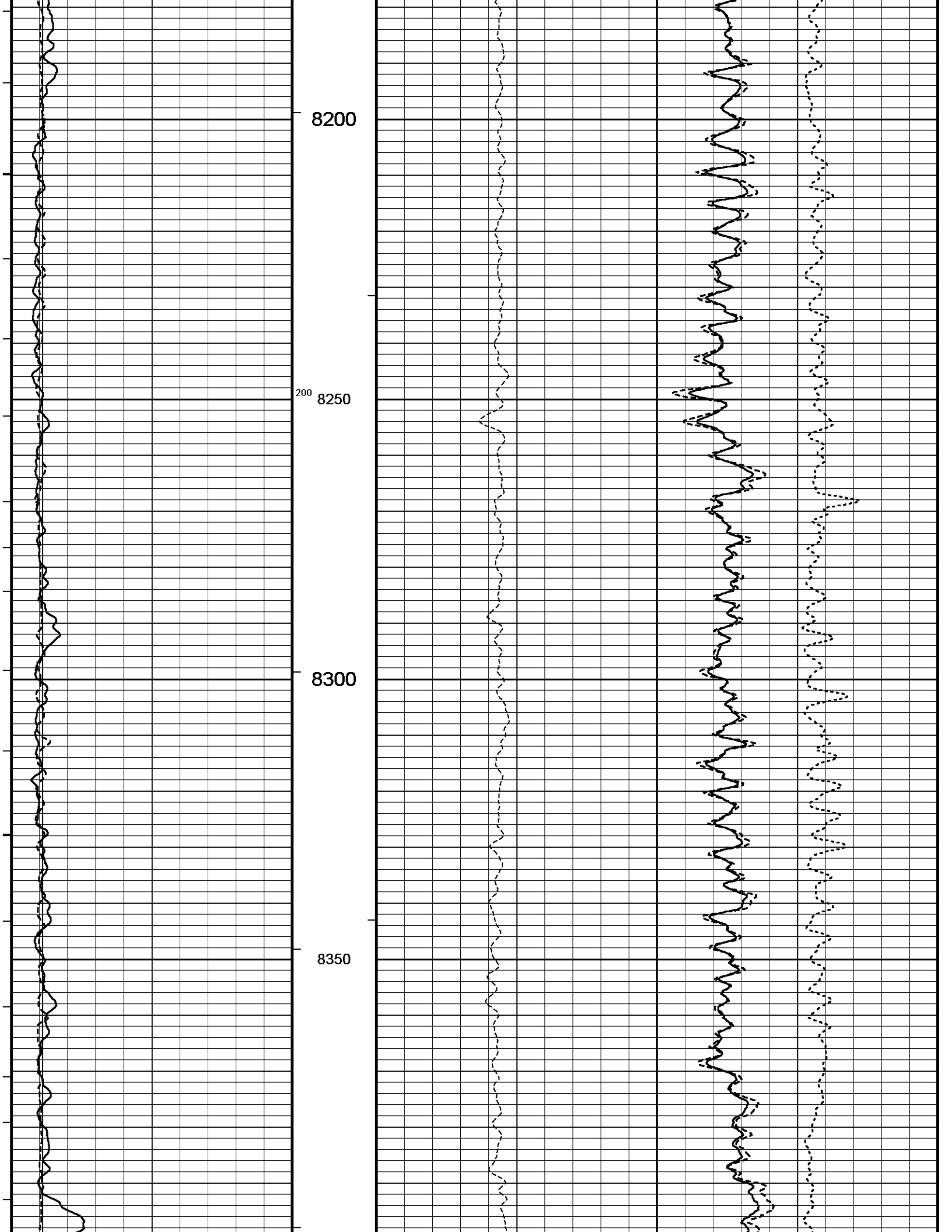
Compensated Density

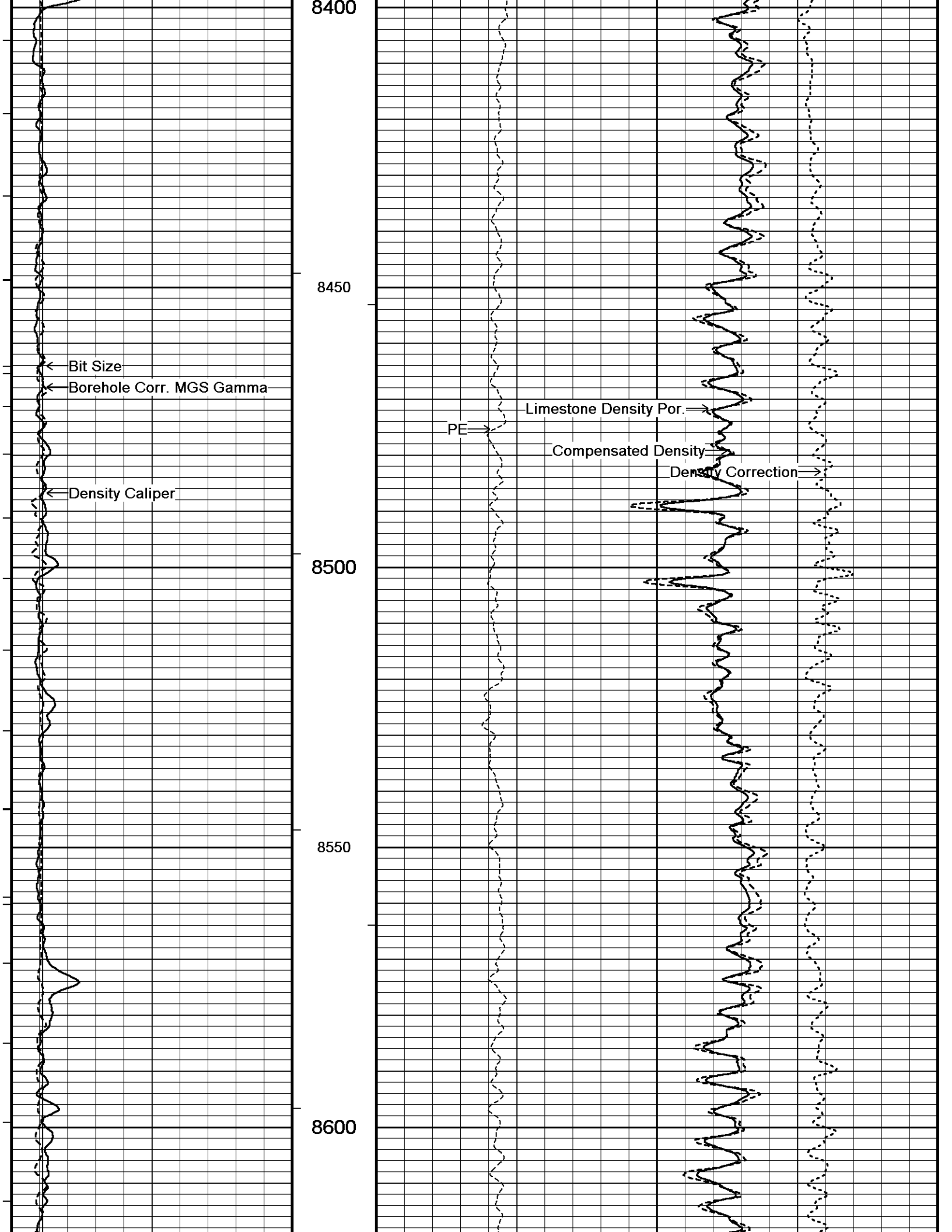


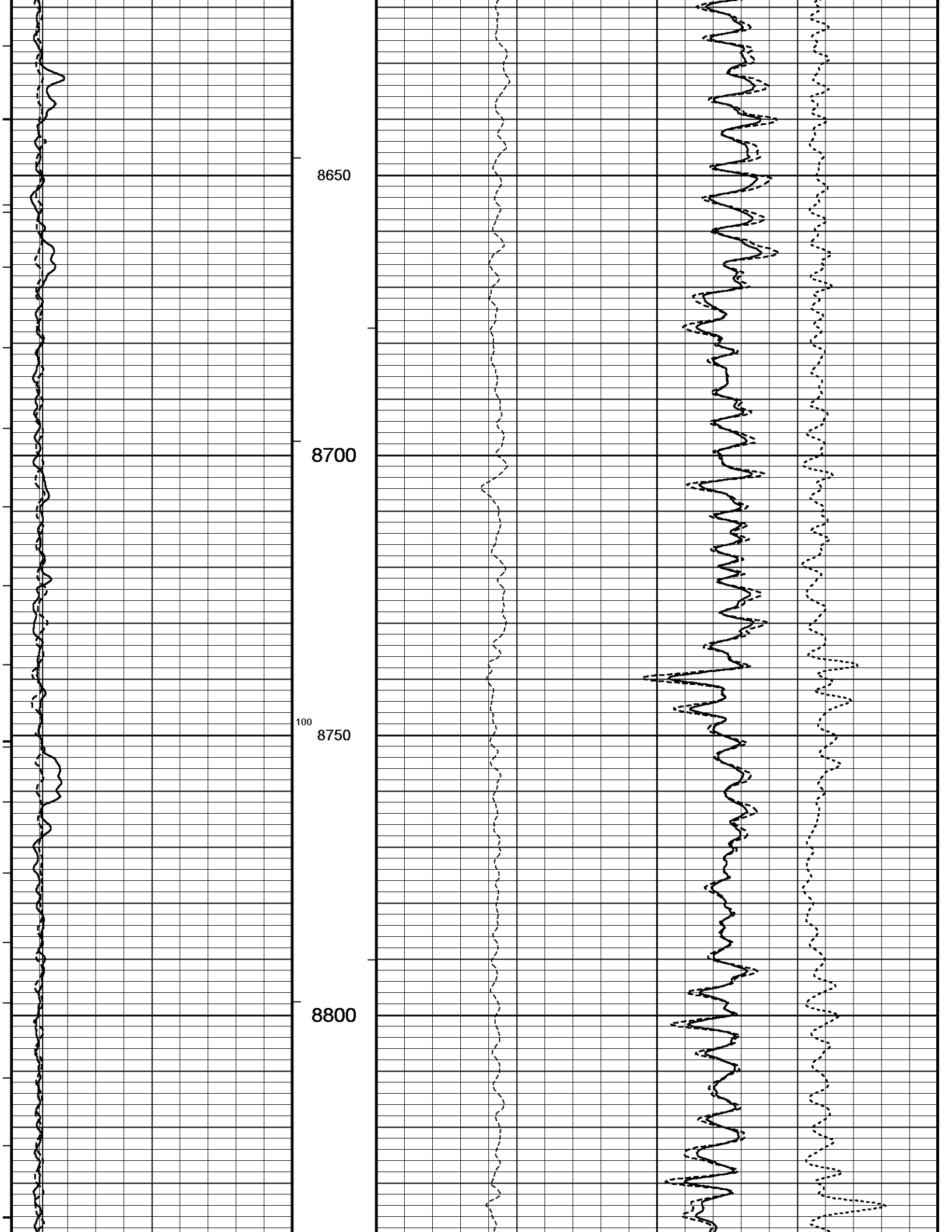


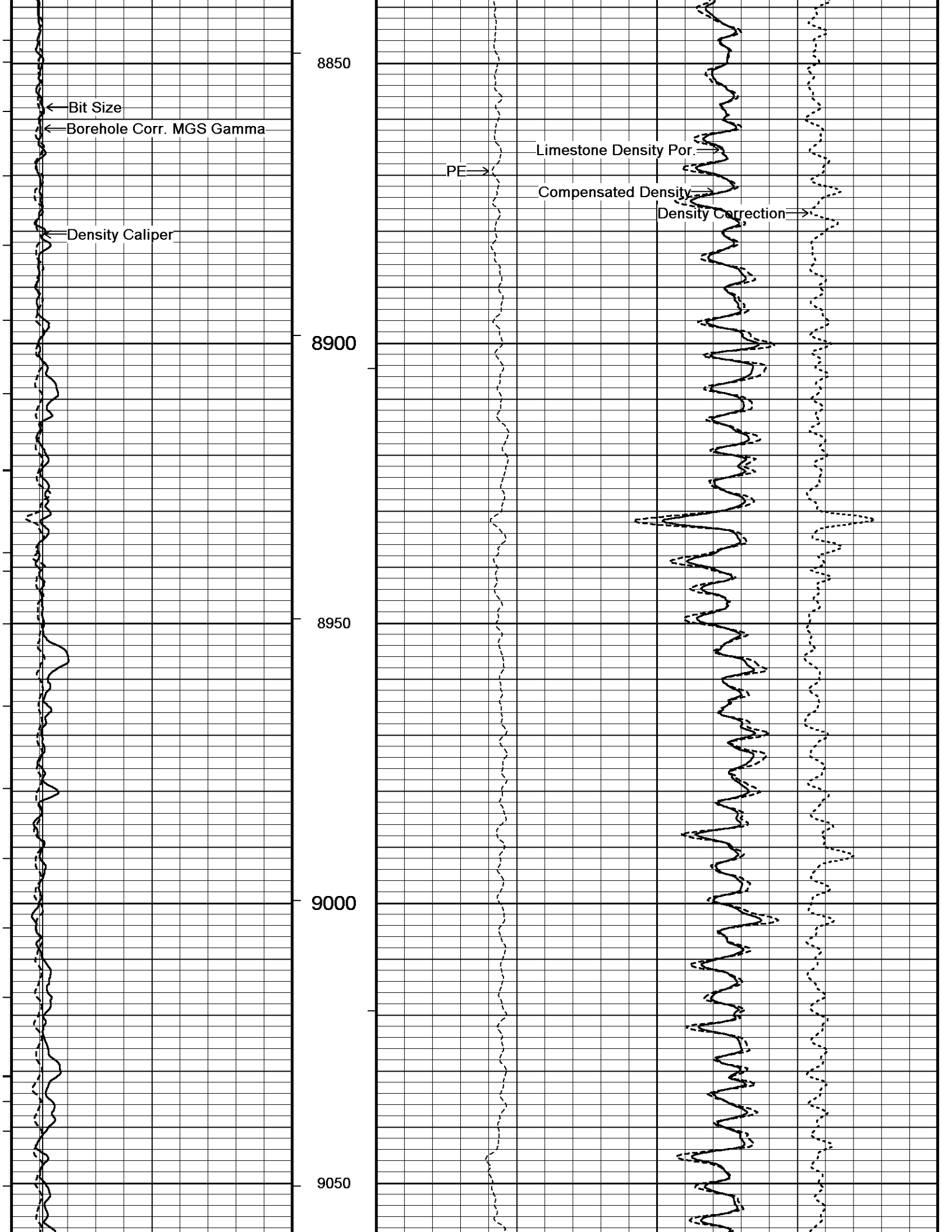


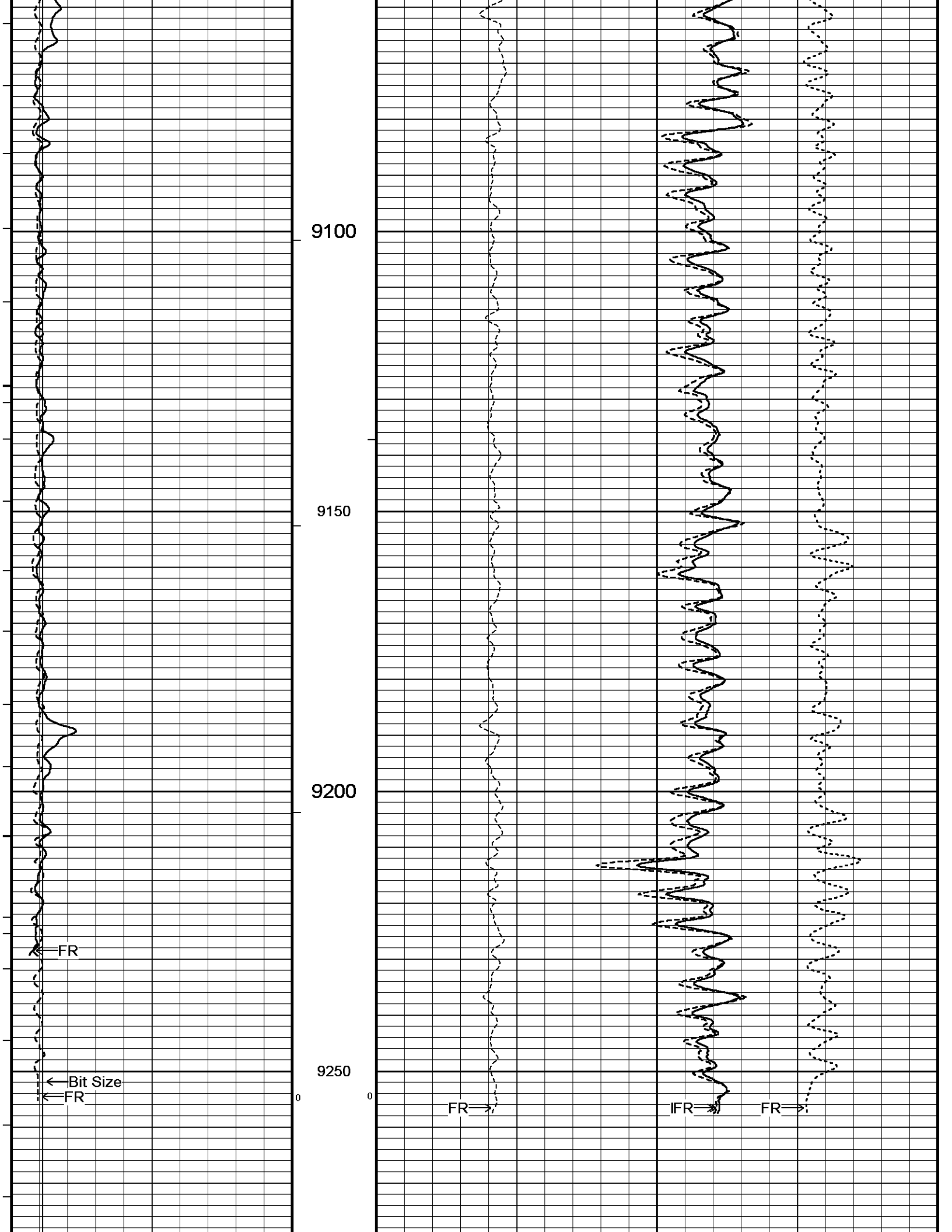


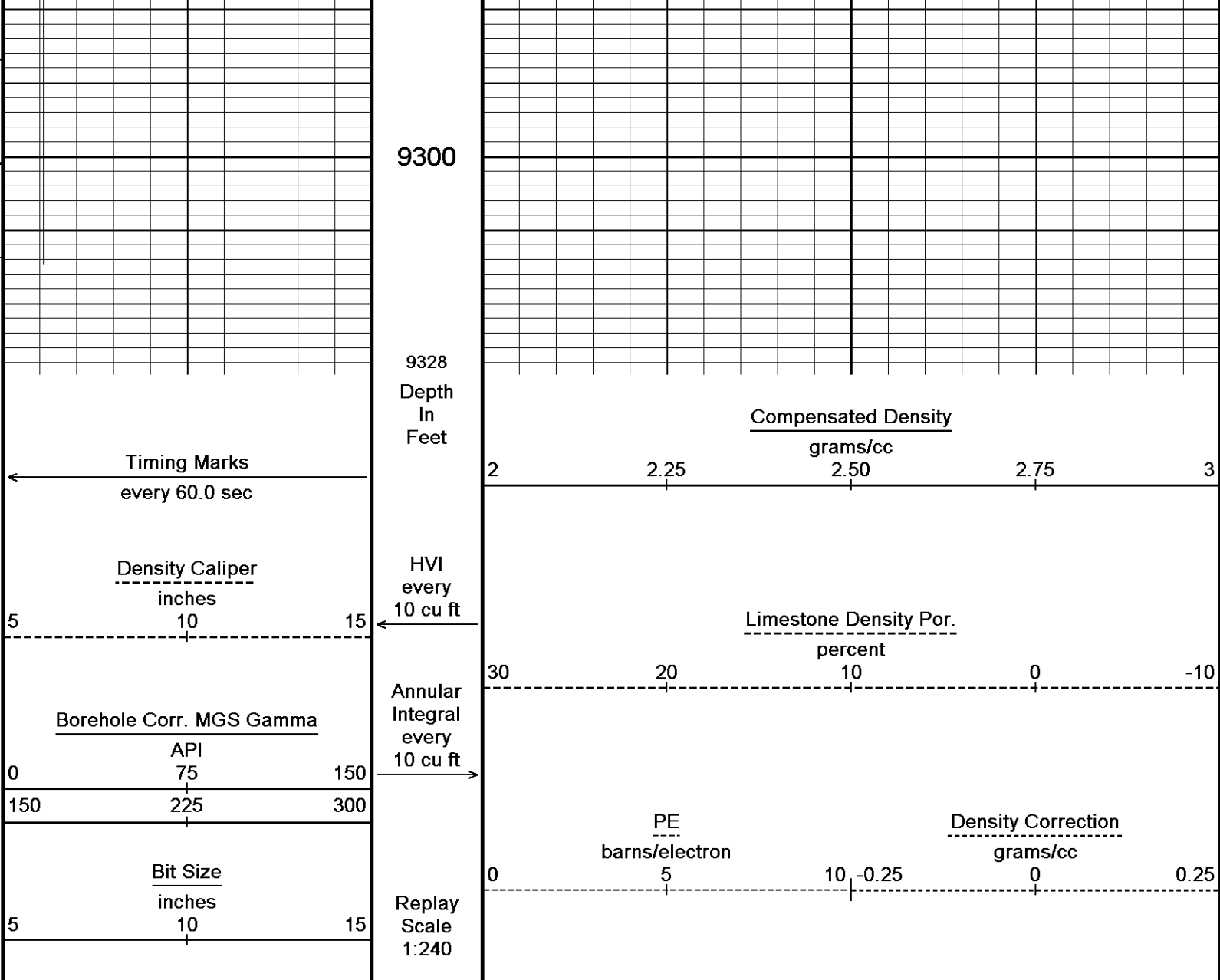












Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 10-SEP-2012 10:56
 Filename: C:\Minimus 13.03.7779\Data\SDRGE (UNRUH 2629 1-17H)\34701 RTAP.dta
 Recorded on 10-SEP-2012 10:17
 System Versions: Processed with 13.03.7779 Plotted with 13.03.7779

↑ DSC ↑

BEFORE SURVEY CALIBRATION
 C:\Minimus 13.03.7779\Data\SDRGE (UNRUH 2629 1-17H)\34701 RTAP.dta

Down-hole Tension Calibration All 000 Field Calibration on 24-FEB-2009 00:00

Reading No	Measured	
1	14953.75	0.00
2	17846.38	1500.00

General Constants All 000 Last Edited on 10-SEP-2012,08:59

General Parameters

Mud Resistivity	1.500	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 Limestone Density Por.
 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 29-MAR-2011 00:00

Reading No	Measured	
1	15152.07	0.00
2	19175.97	2000.00

Strain Gauge Constants MMS-E.B 167 Last Edited on 03-AUG-2012 11:54

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	0.000
2000.0	0.000	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	0.000
6000.0	0.000	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	0.000
10000.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Gamma Calibration MGS-C.J 135 Field Calibration on 03-SEP-2012 09:00

	Measured	Calibrated (API)
Background	85	56
Calibrator (Gross)	1453	953
Calibrator (Net)	1368	897

Gamma Constants MGS-C.J 135 Last Edited on 10-SEP-2012,08:54

Gamma Calibrator Number
 Mud Density 1.08 gm/cc
 Caliper Source for Processing Density Caliper
 Tool Position Eccentred
 Concentration of KCl 0.00 kppm

High Resolution Temperature Constants MGS-C.J 135 Last Edited on

Pre-filter Length 11

Neutron Calibration MDN-B.J 390 Base Calibration on 10-AUG-2012 02:10
Field Check on 16-AUG-2012,11:36

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	2974	91	3714	110
	32.653		33.764	

Field Calibrator at Base

	Calibrated (cps)	
Ratio	1236	1843
	0.671	

Field Check

	Calibrated (cps)	
Ratio	1290	1898
	0.680	

Neutron Constants MDN-B.J 390 Last Edited on 10-SEP-2012,08:54

Neutron Source Id P31112B
 Neutron Jig Number 5917NC
 Epithermal Neutron No

Caliper Source for Processing	Density Caliper		
Stand-off	0.00	inches	
Mud Density	1.08	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	Constant Value		
Temperature	20.00	degrees F	
Mud Salinity	1.00	kppm	
Salinity Correction	Applied		
Formation Fluid Salinity Source	None		
Formation Fluid Salinity	N/A	kppm	
Barite Mud Correction	Not Applied		

FE Calibration MFE-B.J 329

Base Calibration on 31-AUG-2012 13:33
Field Check on 31-AUG-2012 14:02

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	961.8	126.8
Base Check		281.9
Field Check		282.0

FE Constants MFE-B.J 329

Last Edited on 07-SEP-2012,03:21

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.	MGS External Temperature	
Stand-off	0.5	inches

High Resolution Temperature Calibration MAI-B.J 389

Field Calibration on 19-OCT-2011 09:44

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

High Resolution Temperature Constants MAI-B.J 389

Last Edited on

Pre-filter Length	11
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Induction Calibration MAI-B.J 389

Base Calibration on 01-SEP-2012,07:44
Field Check on 05-SEP-2012 07:29

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.7	465.5	9.3	966.2
2	6.4	384.0	7.6	821.4
3	3.1	258.9	5.2	566.0
4	1.8	133.7	2.6	279.2

Array Temperature	78.1	Deg F
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Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1			14.5	3894.6
2			29.5	3506.1
3			29.4	3047.2
4			19.7	2061.7
Deep			19.1	2011.6
Medium			42.3	4001.0
Shallow			42.3	5148.2

Array Temperature	80.7	Deg F
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Induction Constants MAI-B.J 389

Last Edited on 10-SEP-2012,08:58

Induction Model	RtAP-WRM
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Induction Model	RDM	WDM	
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	

Caliper Calibration MPD-C.J 393

Base Calibration on 31-AUG-2012 15:06
Field Calibration on 31-AUG-2012 15:06

Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	17903	4.01	
2	26102	5.96	
3	34623	7.98	
4	42800	9.86	
5	51872	11.88	
6	N/A	N/A	

Field Calibration			
	Measured Caliper (in)	Actual Caliper (in)	
	5.97	5.96	

Photo Density Calibration MPD-C.J 393

Base Calibration on 31-AUG-2012 17:21
Field Check on 05-SEP-2012 07:33

Density Calibration					
Base Calibration		Measured	Calibrated (sdu)		
		Near	Far	Near	Far
Reference 1	58443	27289	59869	31110	
Reference 2	24170	2616	24557	2522	

Field Check at Base	1220.9	1338.4
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Field Check	1222.0	1343.8
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PE Calibration				
Base Calibration		Measured	Calibrated	
	WS	WH	Ratio	Ratio
Background	227	1101		
Reference 1	25222	59249	0.429	0.269

Reference 1	25352	58248	0.439	0.369
Reference 2	7158	24033	0.302	0.271

Field Check at Base
227.1 1101.3

Field Check
223.5 1100.6

Density Constants MPD-C.J 393

Last Edited on 10-SEP-2012,08:54

Density Source Id	p31112b	
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	1.08	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	

Spectral Gamma Calibration SGS-E.J 170

Base Calibration on 26-MAR-2012 22:31
Field Calibration on 26-MAR-2012 22:03

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	205.8	107.5	23.2	0.9	1.4
Calibrator (Net)	125.8	83.7	20.8	-0.1	0.1

Concentrations	K %	U ppm	Th ppm
	5.8	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	480.0	163.5	14.5	7.8	4.1
Calibrator (Net)	400.0	139.8	12.1	6.8	2.8

Concentrations	K %	U ppm	Th ppm
	0.0	14.8	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	394.8	138.7	11.4	6.2	14.7
Calibrator (Net)	314.7	115.0	9.1	5.2	13.5

Concentrations	K %	U ppm	Th ppm
	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	918.4	363.2	44.9	13.6	18.2
Calibrator (Net)	838.4	339.5	42.5	12.6	16.9

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	113	23
Calibrator (Gross)	1362	273
Calibrator (Net)	1250	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	80.0	23.7	2.4	1.0	1.3
Calibrator (Gross)	918.4	363.2	44.9	13.6	18.2
Calibrator (Net)	838.4	339.5	42.5	12.6	16.9

Spectral Gamma Constants SGS-E.J 170

Last Edited on 10-SEP-2012,08:55

Background Calibrator Number	0	
Mixture Calibrator Number	147-1	
Potassium Calibrator Number	148-1	
Uranium Calibrator Number	150-1	
Thorium Calibrator Number	149-1	
Mud Density	1.08	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

DOWNHOLE EQUIPMENT

C:\Minimus 13.03.7779\Data\SDRGE (UNRUH 2629 1-17H)\34701 RTAP.dta

Compact Linker (Shuttle Running Tool 3.5
MLK-A 1 LG: 4.87 ft WT: 30.9 lb OD: 2.52 in

Compact Linker (MBS-D.A 400v Compact Bat
MLK-A 2 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

Compact Linker (MBS-D.A 400v Compact Bat
MLK-A 3 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub
MBS-G.A 135 LG: 16.66 ft WT: 132.3 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 167 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 67 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 135 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 60 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint
SKJ-E.A 166 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor
SHA-H 167 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 596 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.J 390 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper



86.35 ft GGME - Borehole Corr. MGS Gamma
84.36 ft GSXT - MGS External Temperature

82.34 ft GCSL - MCL C. Collar Locator

67.46 ft NPRL - Limestone Neutron Por.

60.24 ft AVOL - Annular Volume

MPD-C.J 393 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 603 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor
SHA-F 33 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 472 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 577 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Focussed Electric
MFE-B.J 329 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 576 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

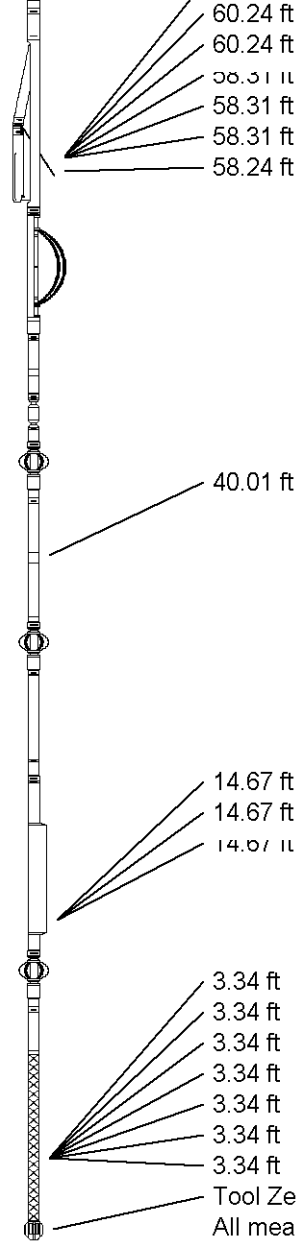
Compact Linker (MBS-D.A 400v Compact Bat
MLK-A 4 LG: 14.24 ft WT: 30.9 lb OD: 2.24 in

Spectral Gamma Ray Sub
SGS-E.J 170 LG: 7.78 ft WT: 105.8 lb OD: 3.54 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 573 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction
MAI-B.J 389 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 144.02 ft Weight: 910.5 lb



HVOL - Hole Volume
CLDC - Density Caliper
LTKL - Limestone Density Log
DEN - Compensated Density
DCOR - Density Correction
PDPE - PE

40.01 ft FEFC - Shallow FE (Phase Corr.)

14.67 ft GRTH - Thorium Gamma
14.67 ft GRPO - Potassium Gamma
14.67 ft GRUR - Uranium Gamma

3.34 ft CTAO - Array Ind. One Cond Ct
3.34 ft R400 - Array Ind. One Res 40
3.34 ft R300 - Array Ind. One Res 30
3.34 ft R200 - Array Ind. One Res 20
3.34 ft R600 - Array Ind. One Res 60
3.34 ft R850 - Array Ind. One Res 85
3.34 ft RTAO - Array Ind. One Res Rt
Tool Zero (0.13ft from bottom)
All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY		
WELL	UNRUH 2629 1-17H		
FIELD	MONGER		
PROVINCE/COUNTY	GRAY		
COUNTRY/STATE	USA / KANSAS		

Elevation Kelly Bushing	2780.00	feet	First Reading	9255.00	feet
Elevation Drill Floor	2780.00	feet	Depth Driller	9320.00	feet
Elevation Ground Level	2760.00	feet	Depth Logger	9320.00	feet



Weatherford[®]

CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG

