



Weatherford

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

COMPANY

HUSKY VENTURES, INC.

WELL

HOFFMAN 1-25H

FIELD

LINDSBORG

PROVINCE/COUNTY

MCPHERSON

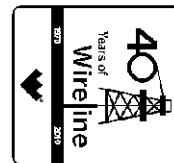
COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

480' FNL & 1965' FEL

SW SE SW SE



SEC

TWP

RGE

Other Services

CMI

25

17S

4W

MAI

Permit Number

15-113-21349-01

Permanent Datum G.L., Elevation 1354 feet

Log Measured From K.B. @ 12 FEET above Permanent Datum

Drilling Measured From K.B.

Elevations:

feet

KB

DF

GL

1366.00
1364.00
1354.00

Date

21-DEC-2011

Run Number

ONE

Depth Driller

7883.00

feet

Depth Logger

7883.00

feet

First Reading

7786.00

feet

Last Reading

3760.00

feet

Casing Driller

3760.00

feet

Casing Logger

3760.00

feet

Bit Size

6.125

inches

Hole Fluid Type

WATER

Density / Viscosity

8.70

lb/USg

37.00

CP

PH / Fluid Loss

11.50

6.40

ml/30Min

Sample Source

FLOWLINE

Rm @ Measured Temp

1.40 @ 45.0

ohm-m

Rmf @ Measured Temp

1.12 @ 45.0

ohm-m

Rmc @ Measured Temp

1.68 @ 45.0

ohm-m

Source Rmf / Rmc

CALC

CALC

Rm @ BHT

0.53 @ 118.0

ohm-m

Time Since Circulation

5 HOURS

Max Recorded Temp

118.00

deg F

Equipment Name

COMPACT

Equipment / Base

18006

OKC

BOREHOLE RECORD

Last Edited: 22-DEC-2011 01:48

Bit Size
inches

6.125

Depth From
feet

3760.00

Depth To
feet

7883.00

CASING RECORD

Type

Size
inches

Depth From
feet

Shoe Depth
feet

Weight
pounds/ft

SURFACE

9.625

0.00

505.00

32.00

INTERMED

7.000

0.00

3760.00

26.00

REMARKS

WLS LOGGING SOFTWARE VERSION 11.02.3186 WAS USED

ALL LOGS WERE SET TO DEPTH WITH MWD GAMMA RAY

DRILL PIPE DEPTH DURING DEPLOYMENT: 7747
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 7848

4.5" CASING USED TO CALCULATE AHV

OPERATORS: J. TURNER, R. BRADSHAW
S.O: 3534259
RIG: DUKE # 20

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.

5 INCH MAIN LOG DSC

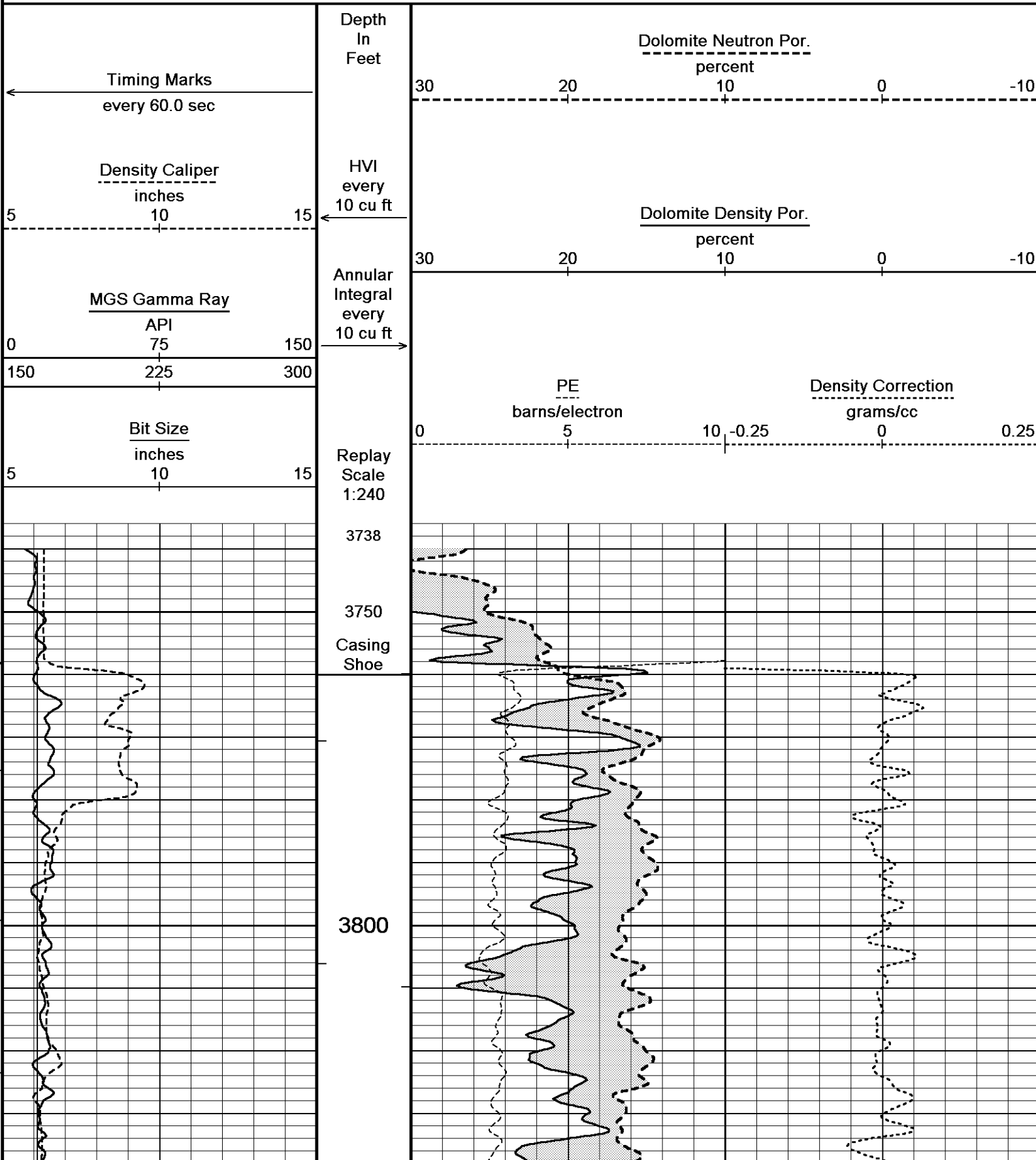
Depth Based Data - Maximum Sampling Increment 10.0cm

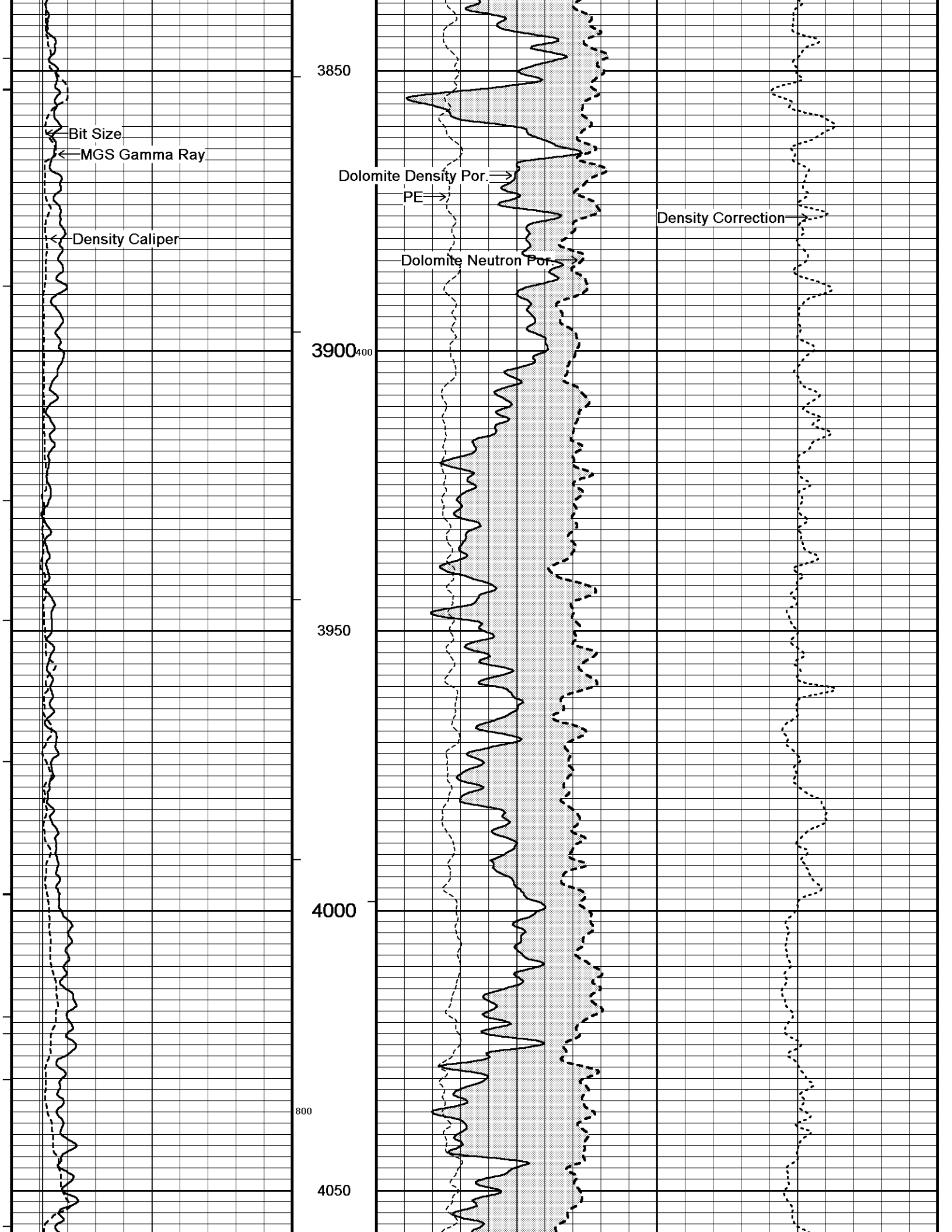
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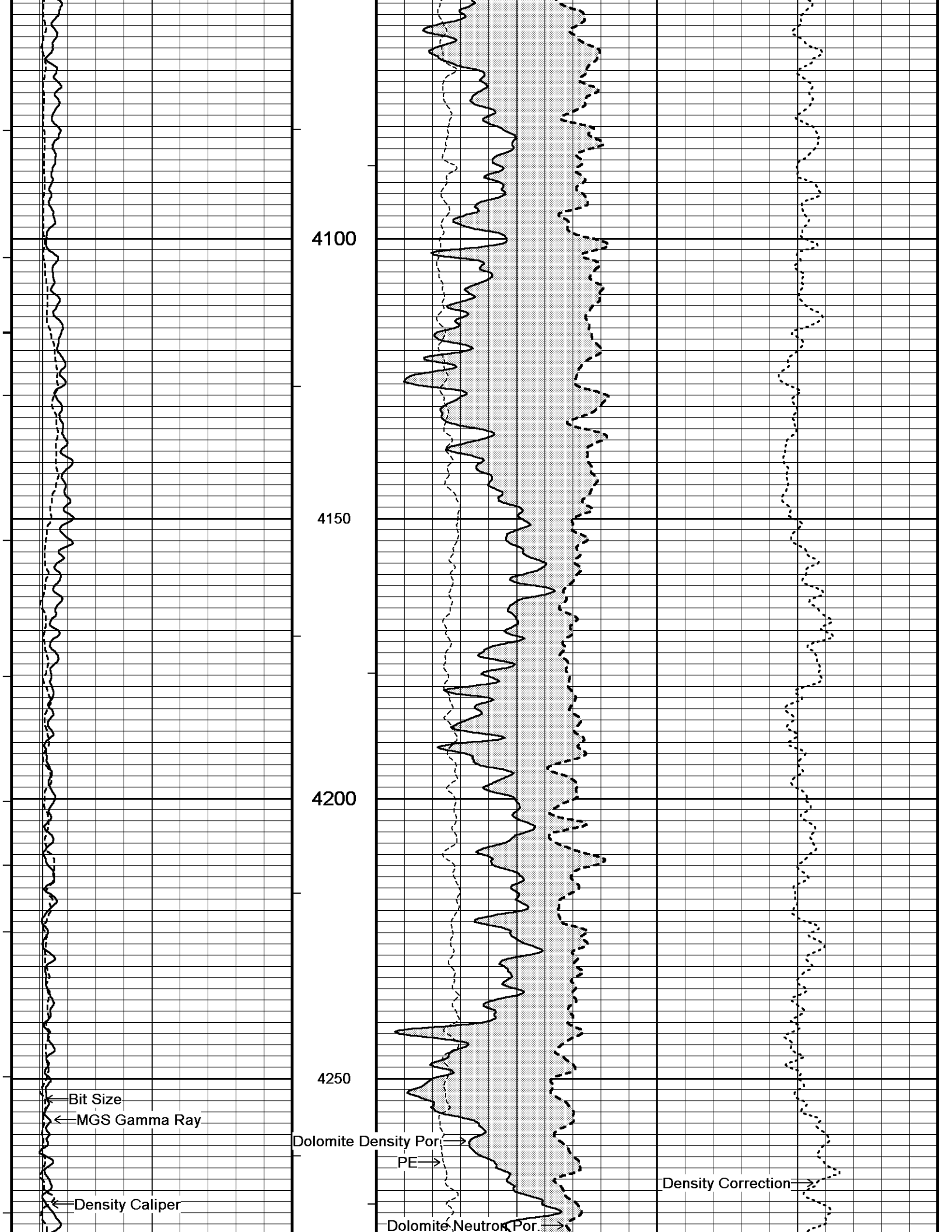
Filename: C:\Minimus 11.2.3186\Data\ HUSKEY (HOFFMAN 1-25H)\rtap.dta

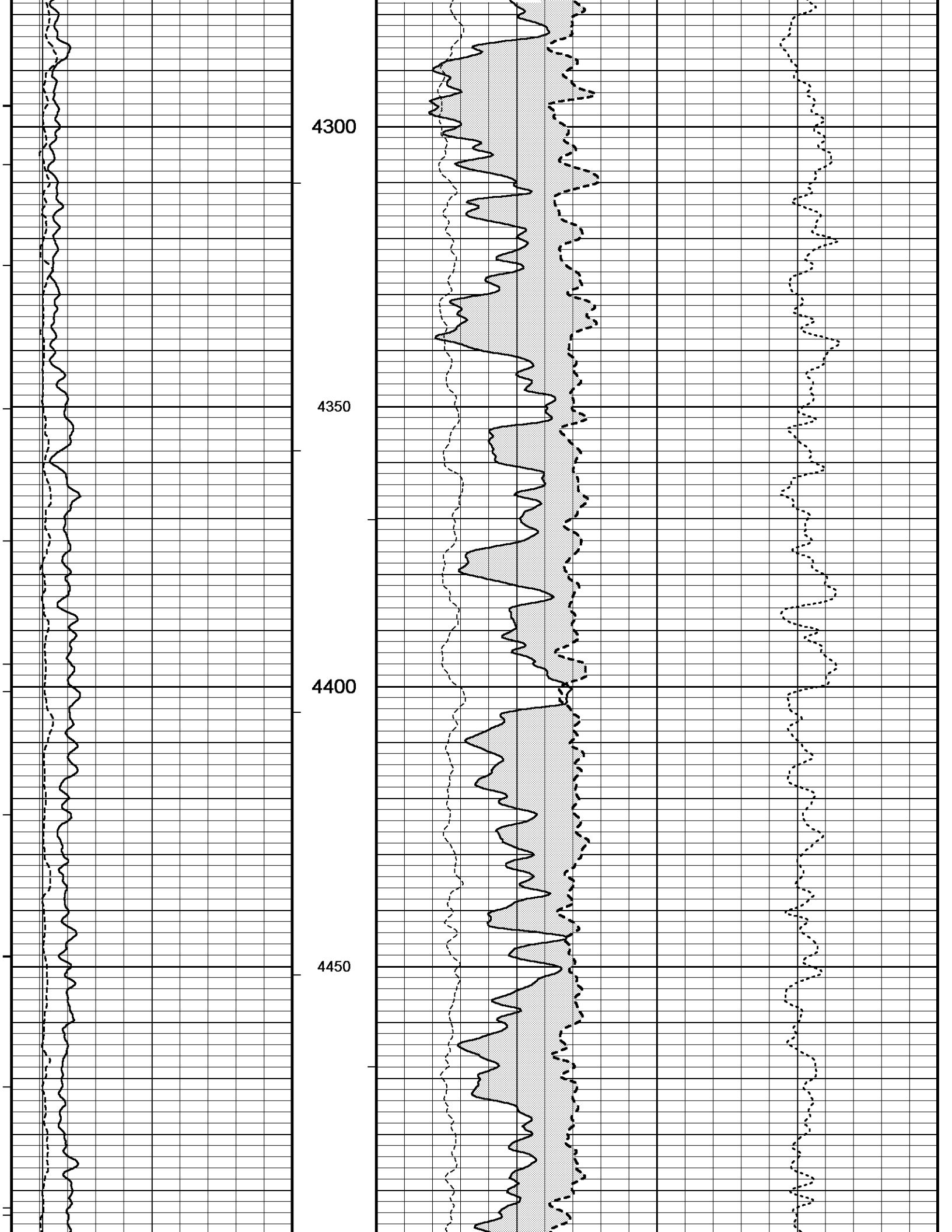
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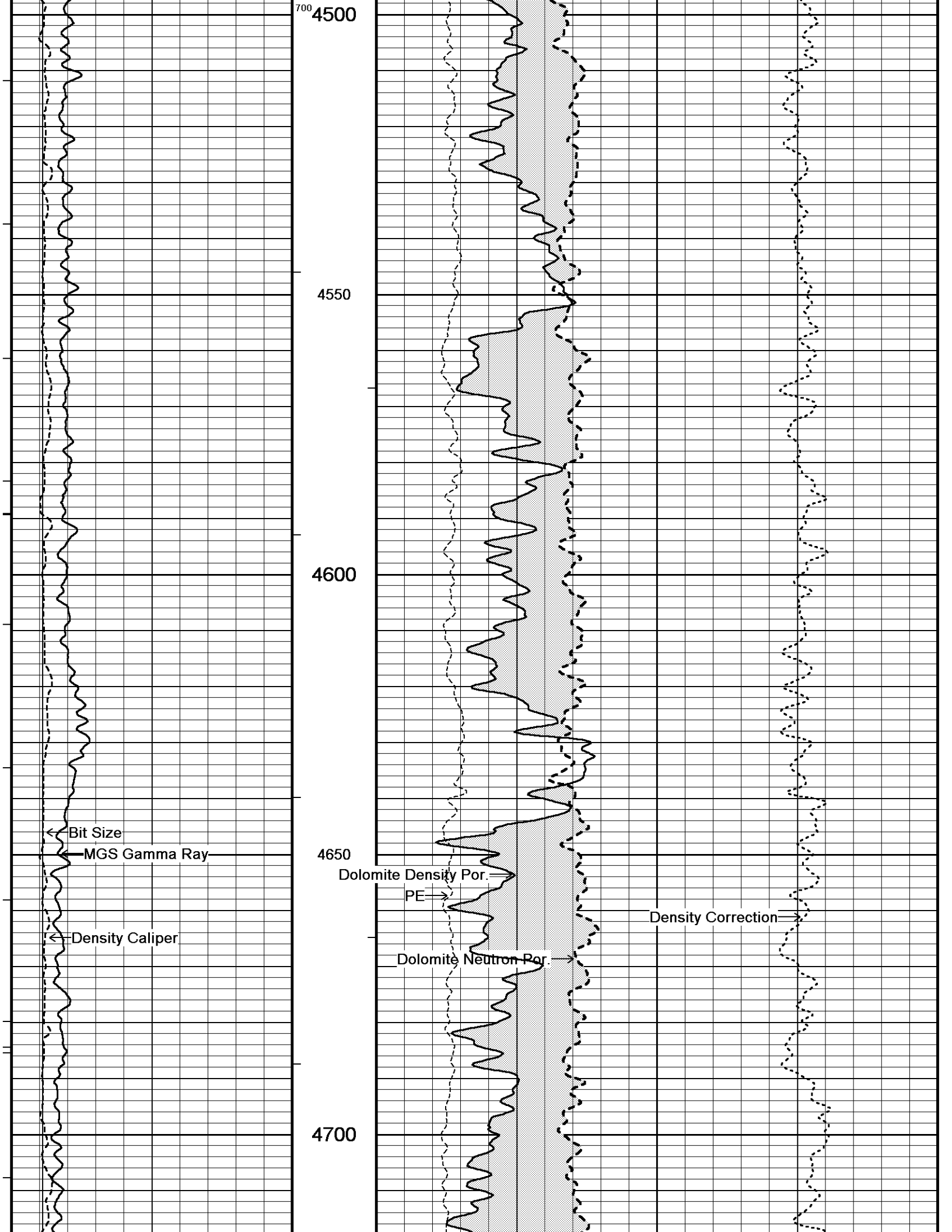
System Versions: Processed with 11.02.3186 Plotted with 11.02.3186

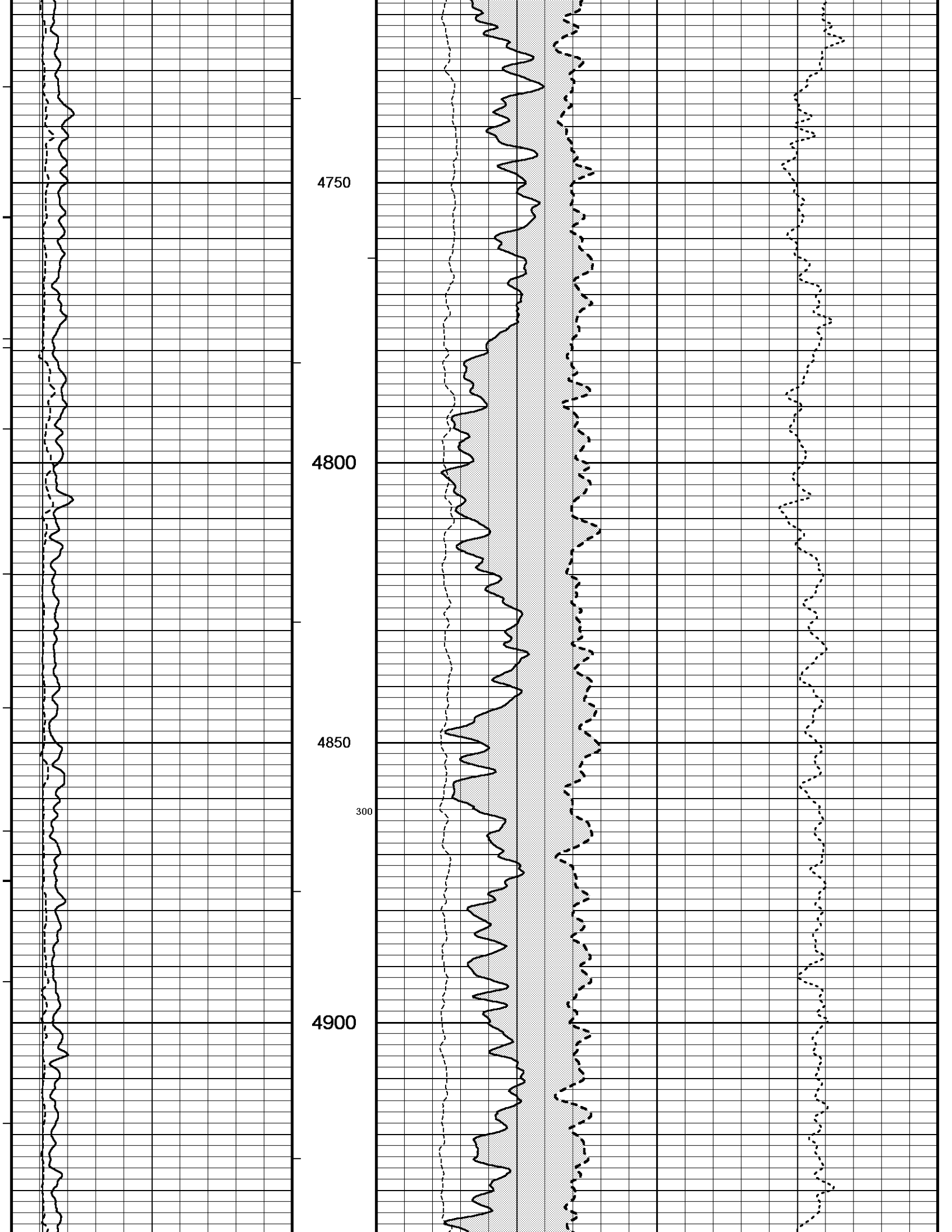


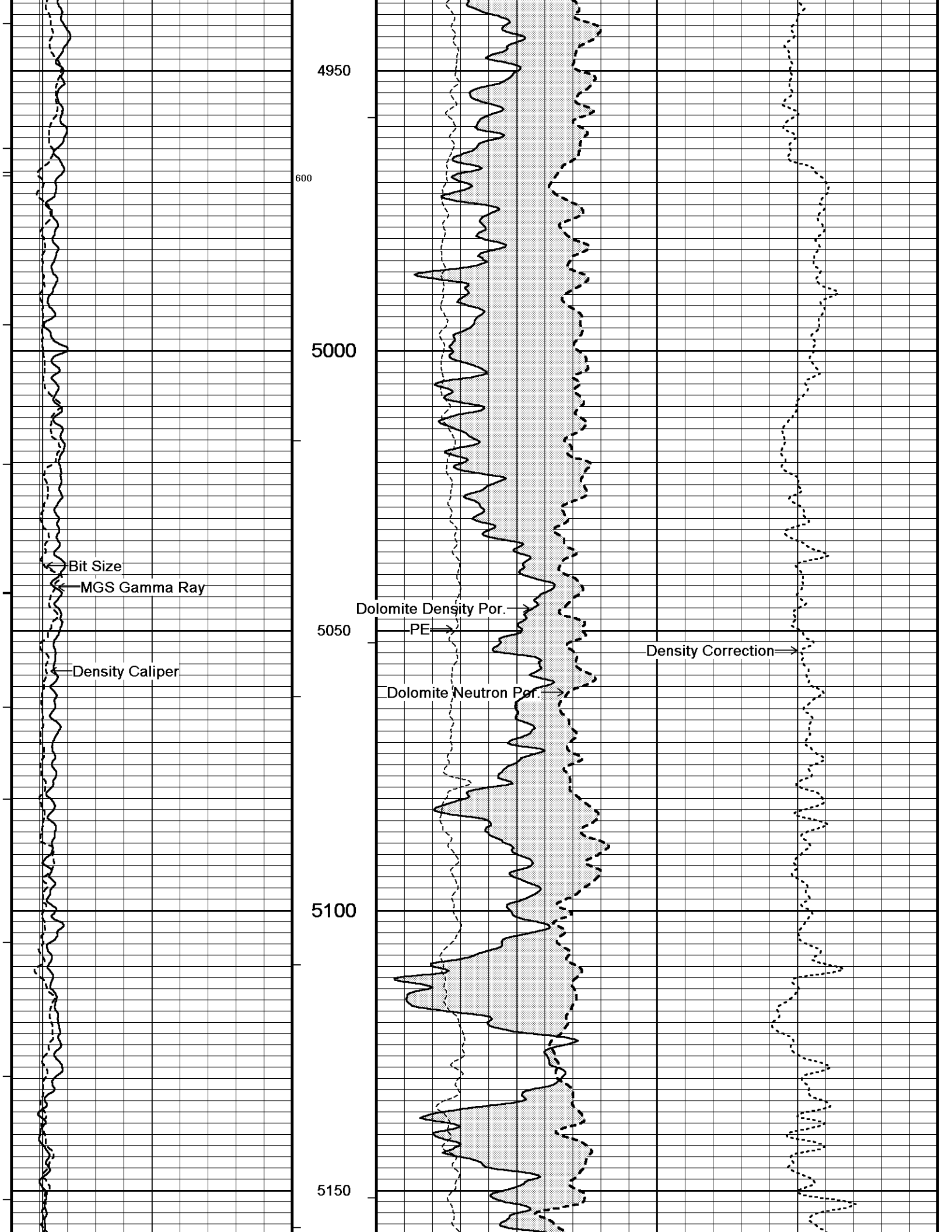


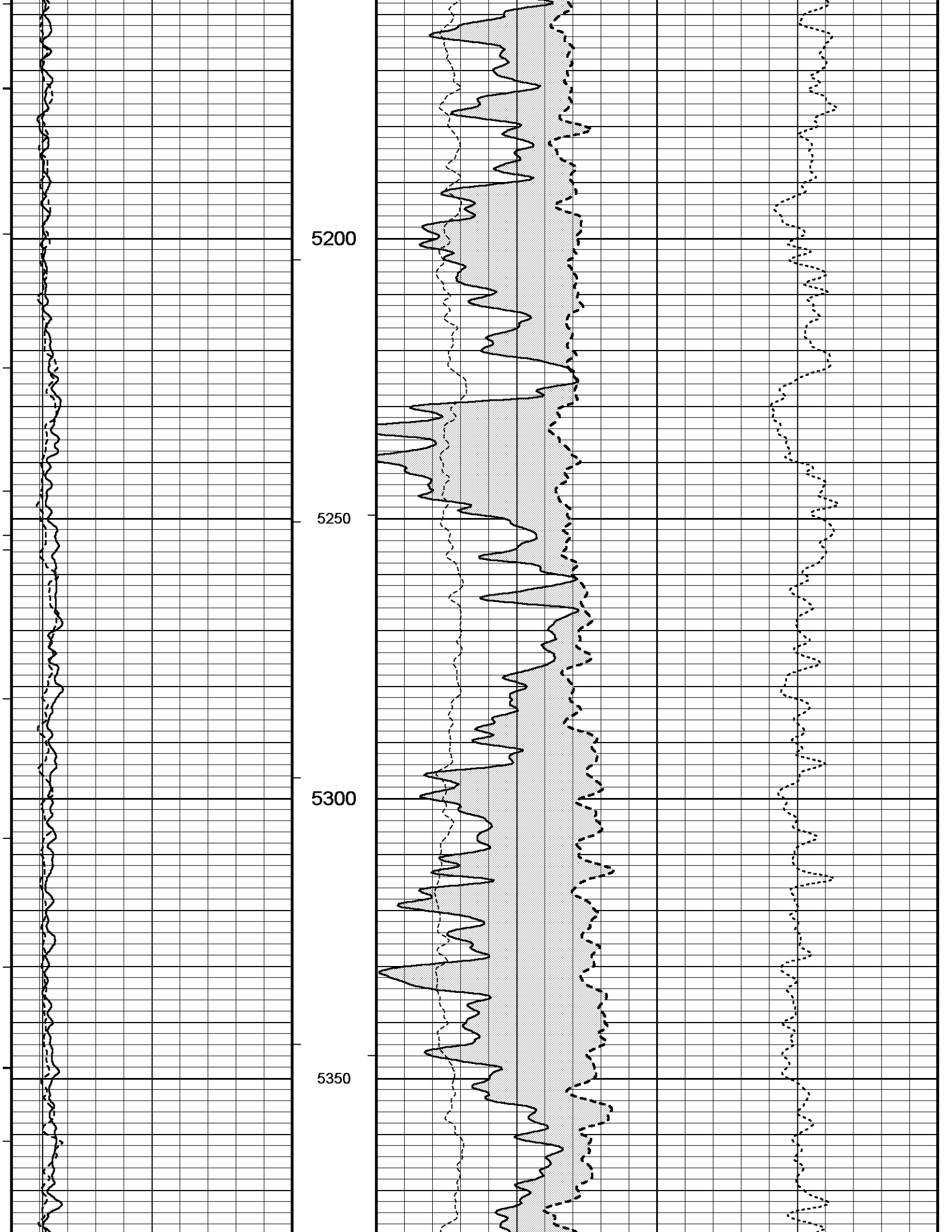


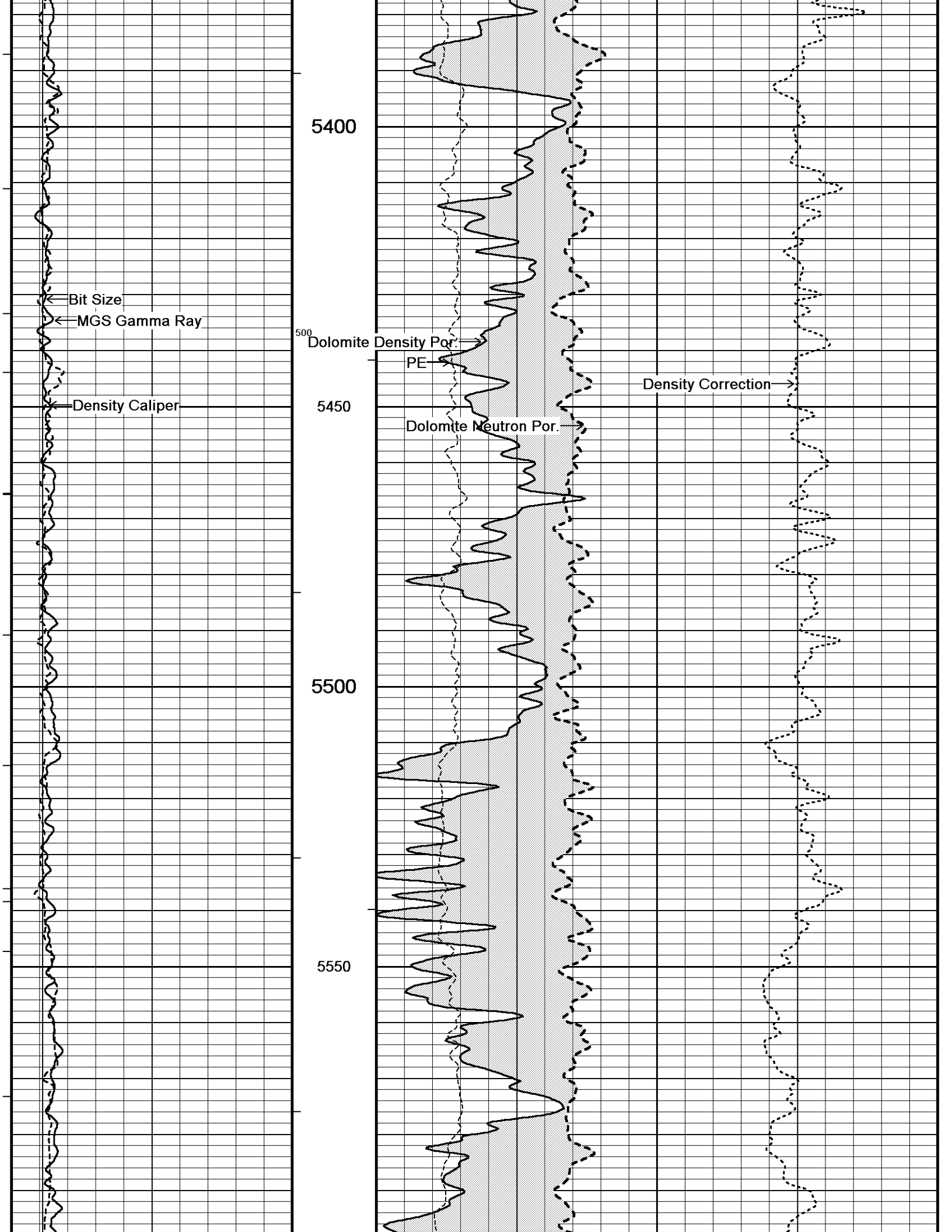


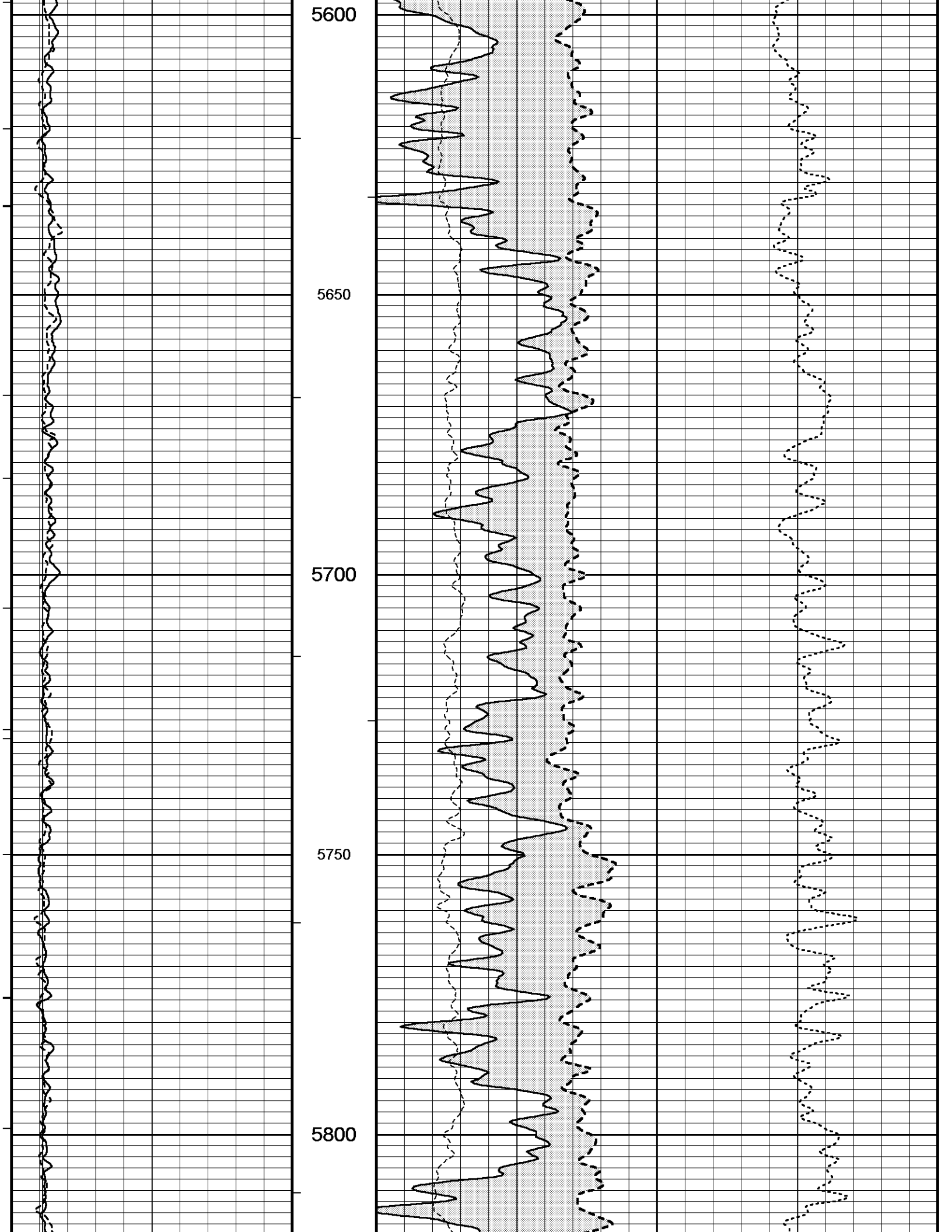


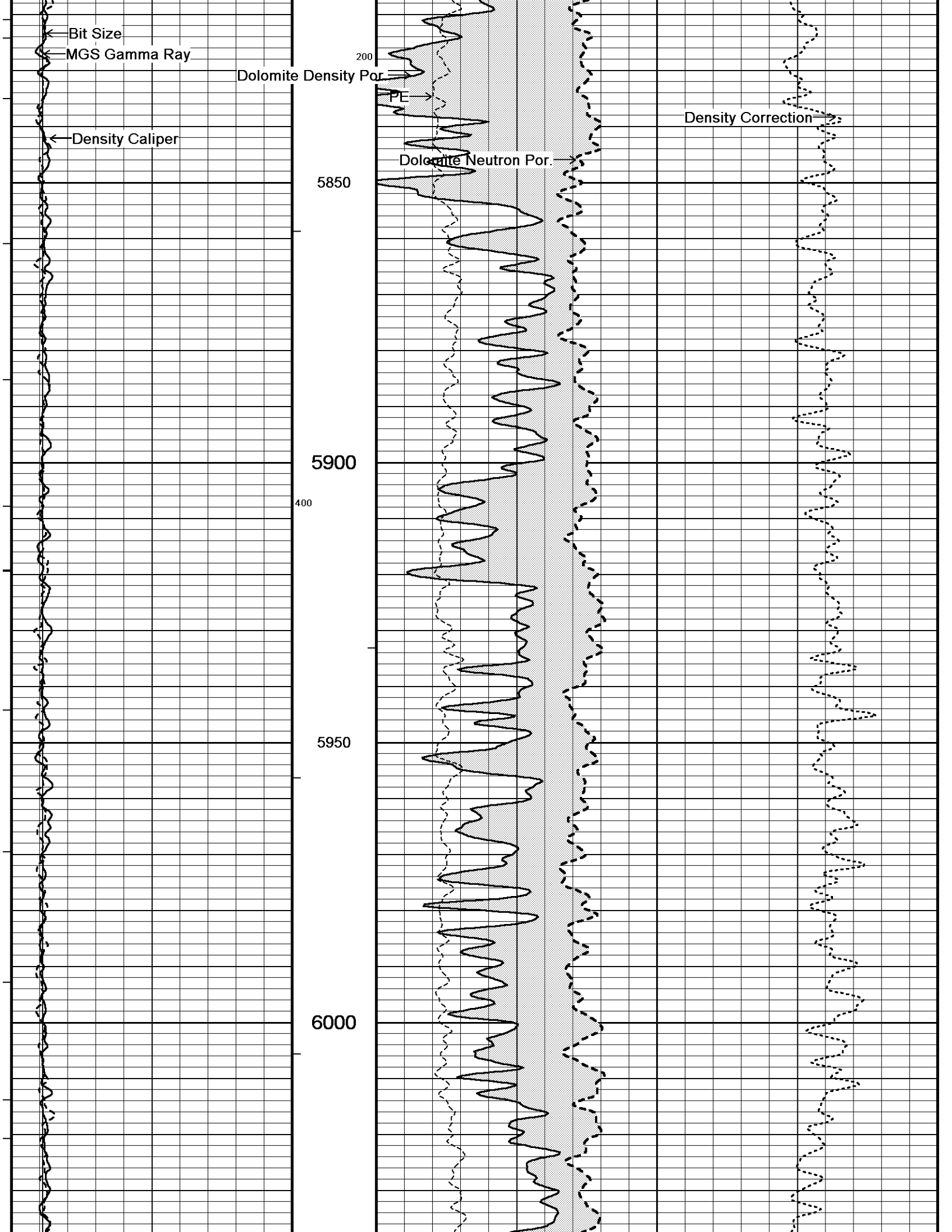


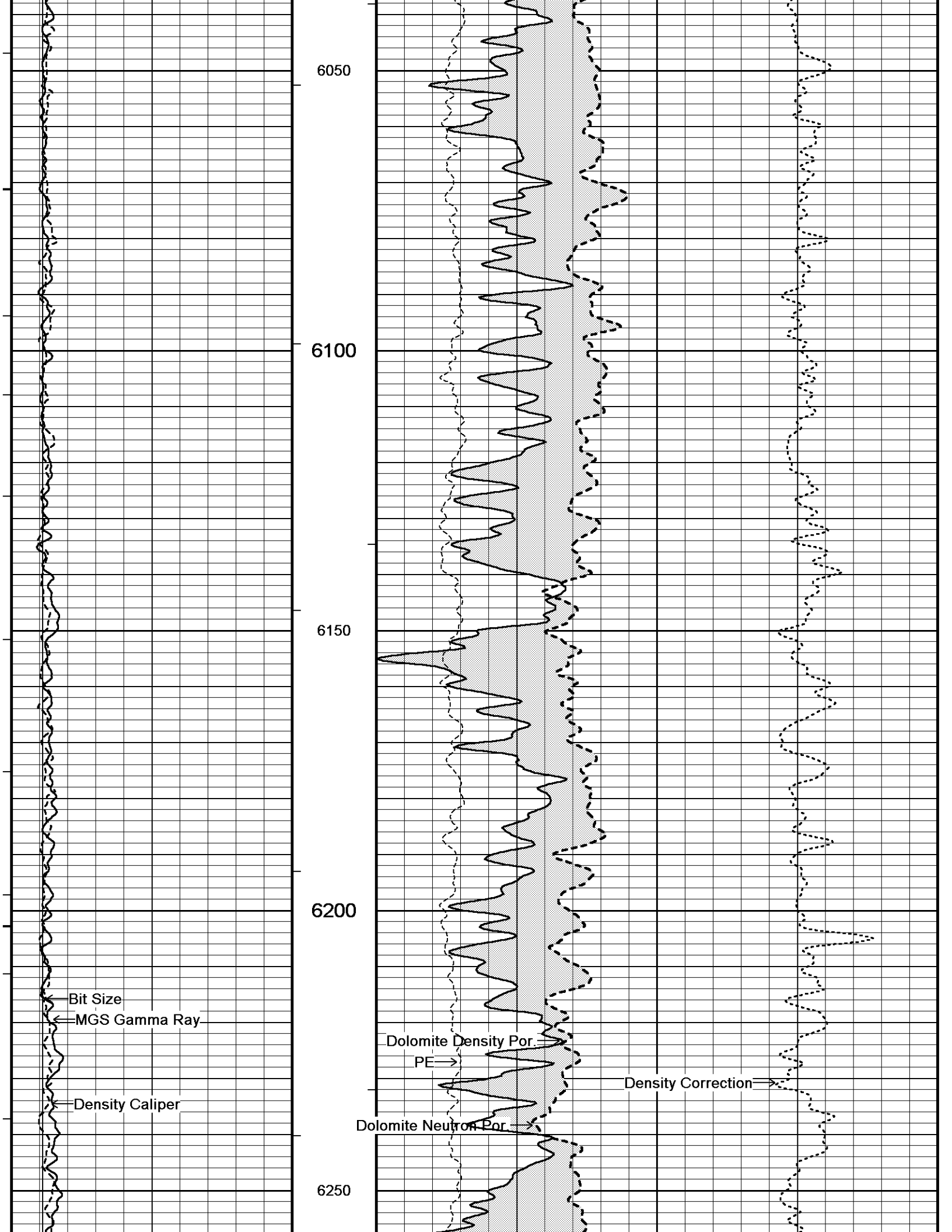


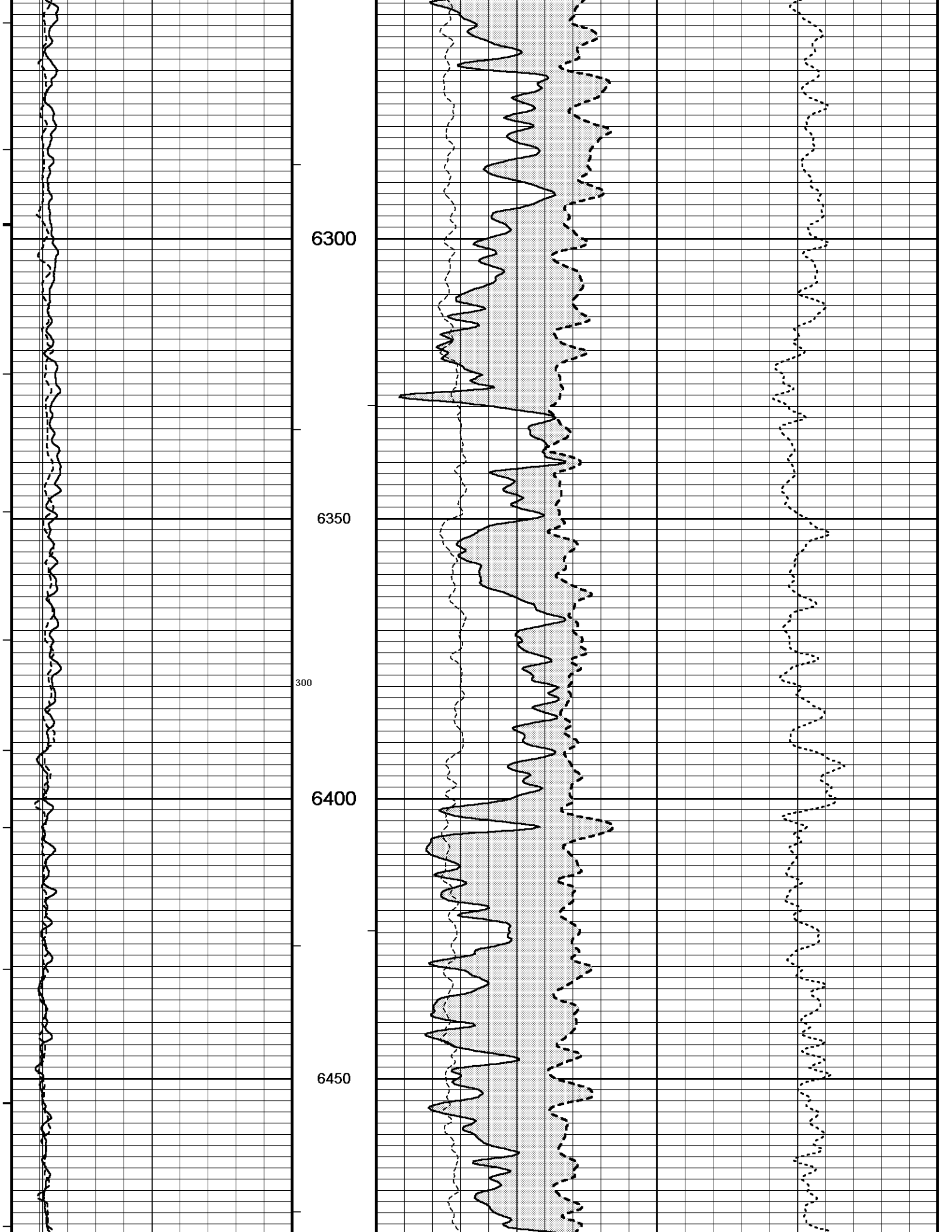


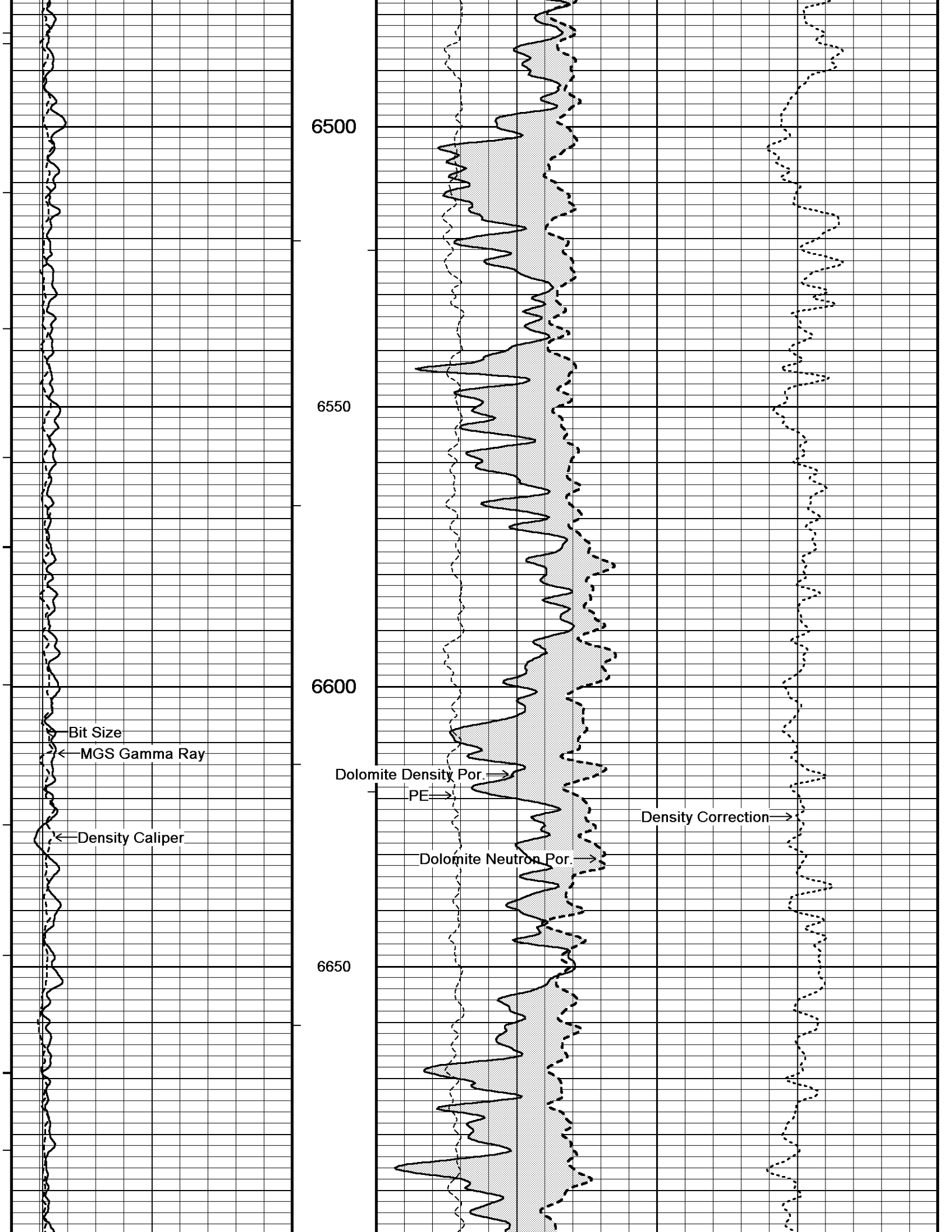


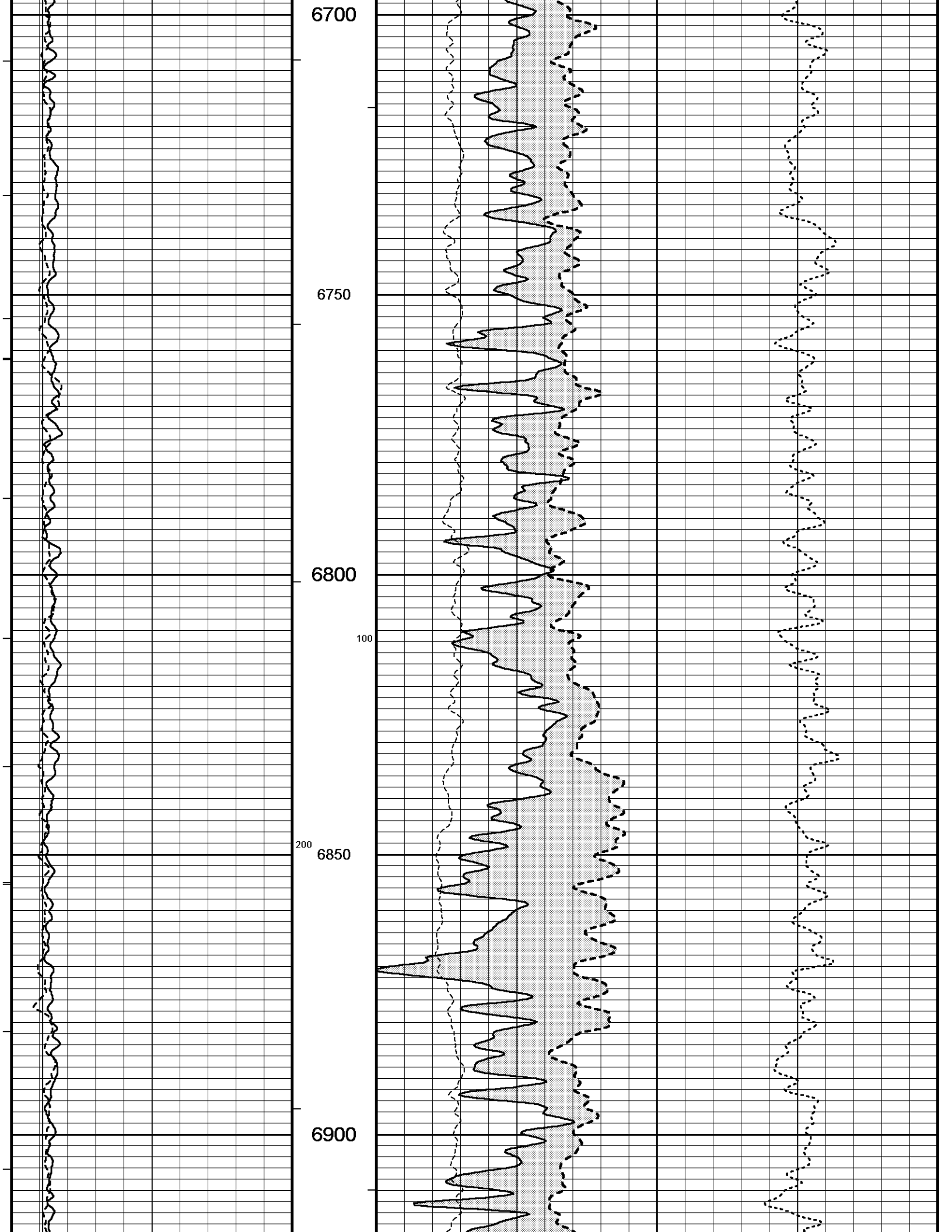


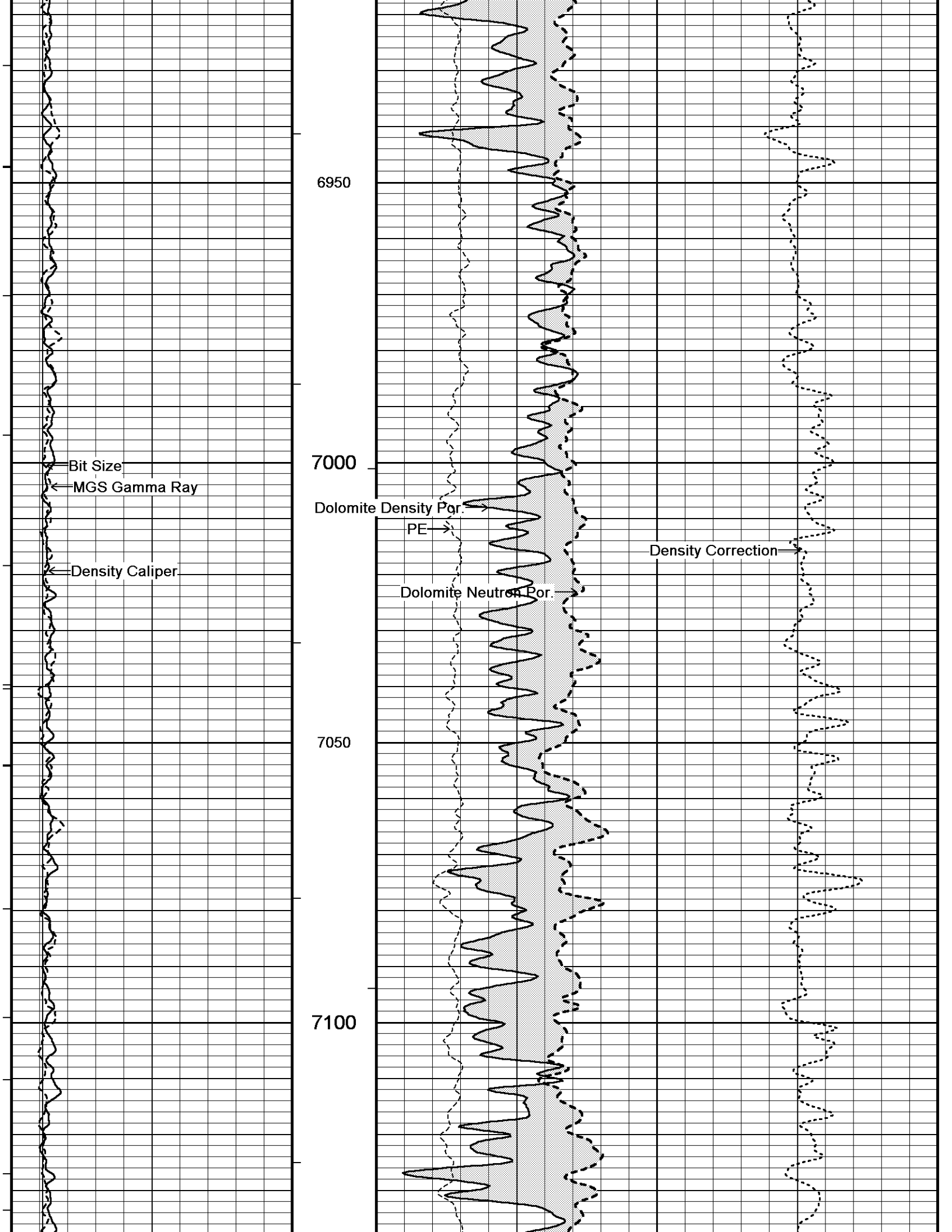


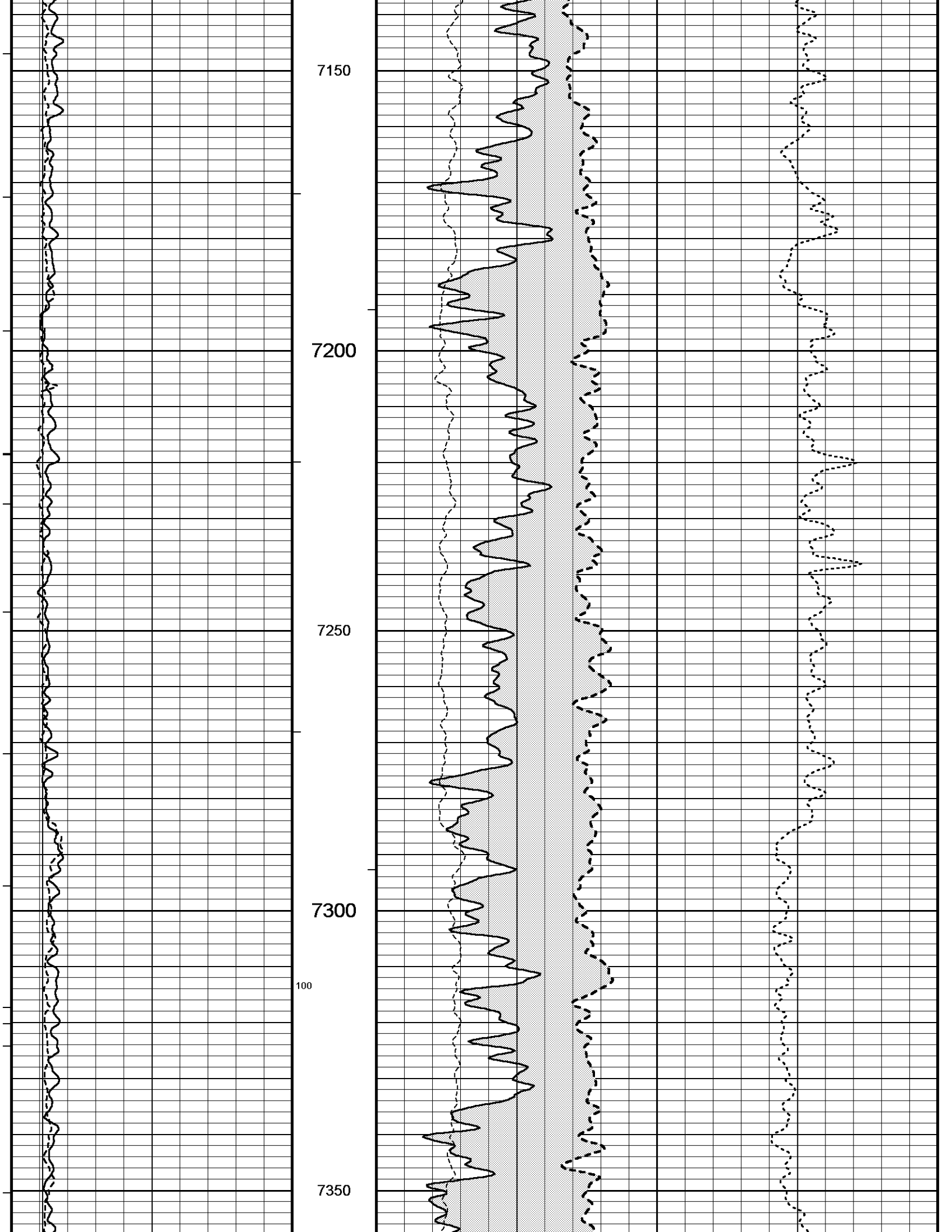


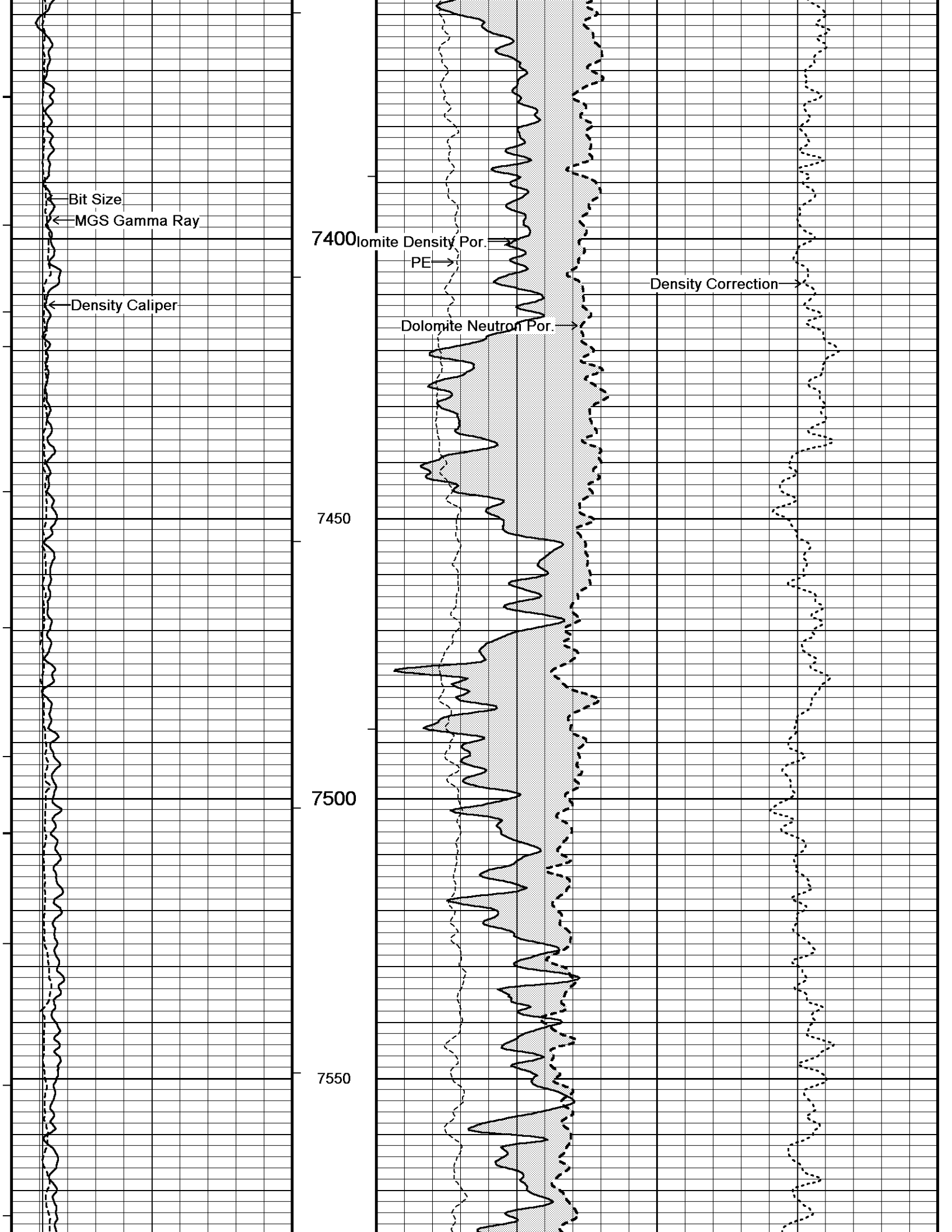


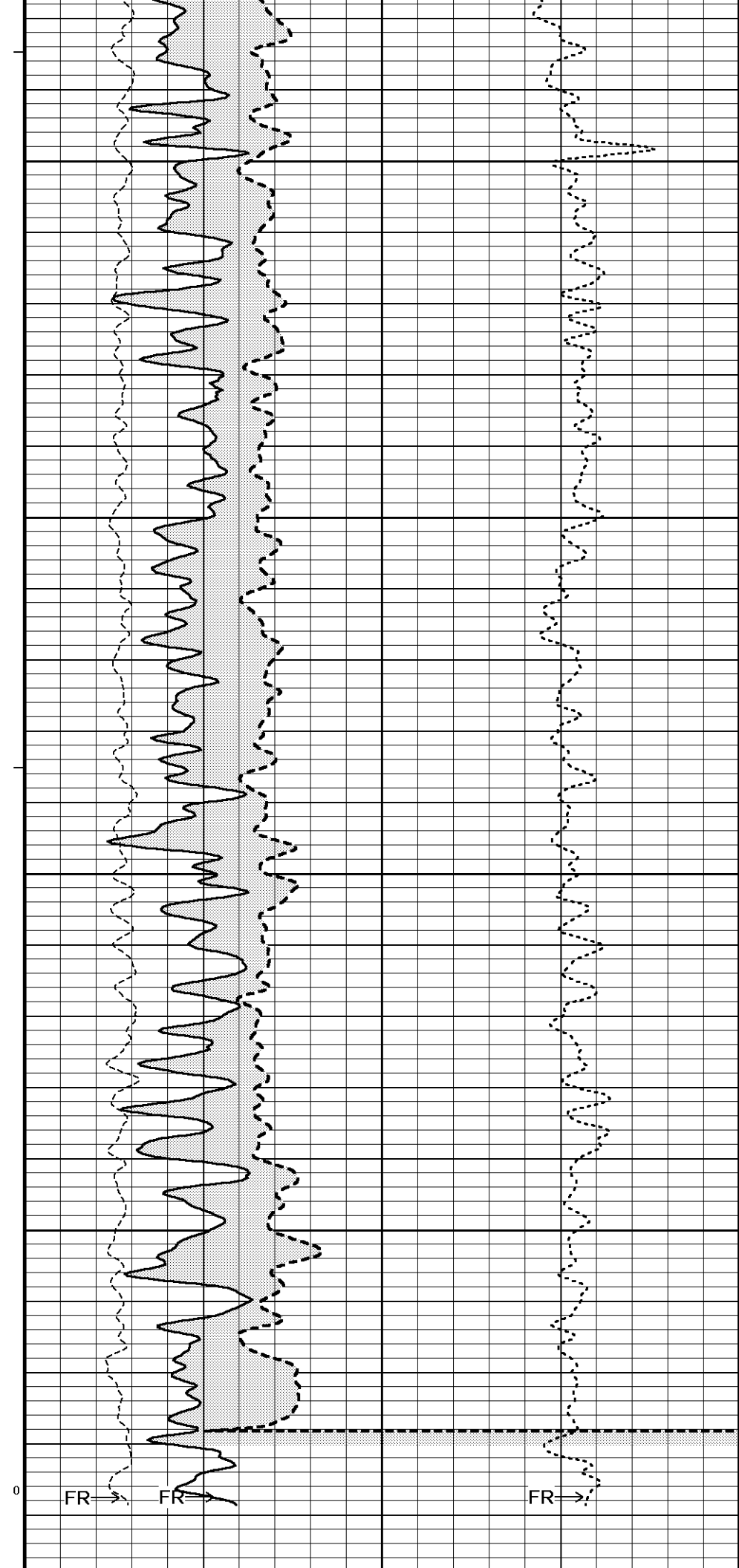
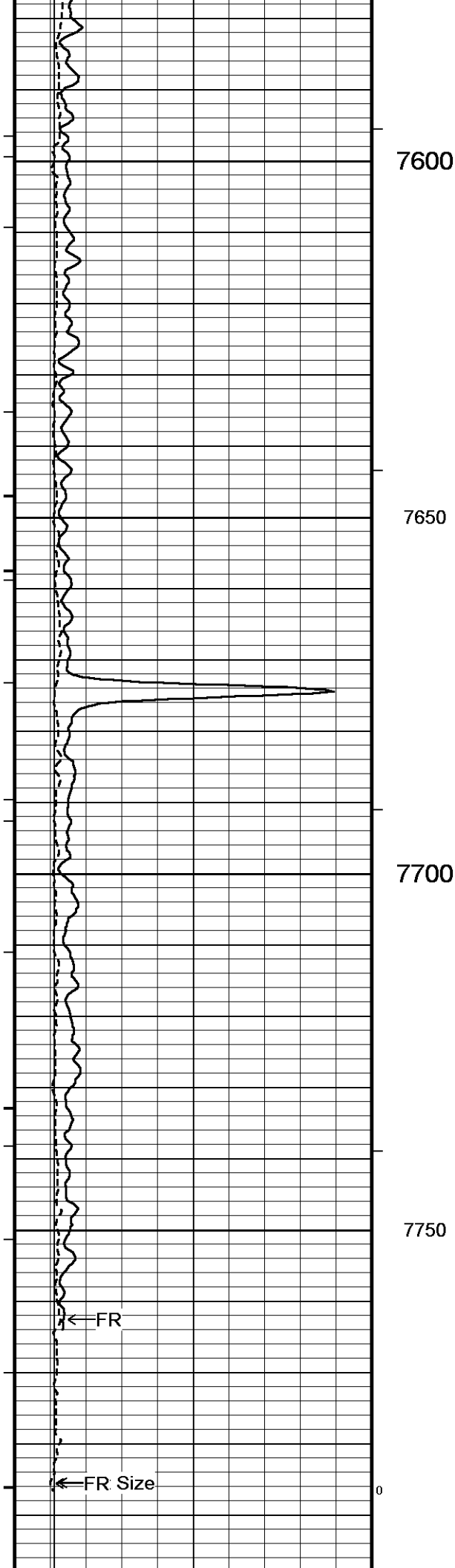


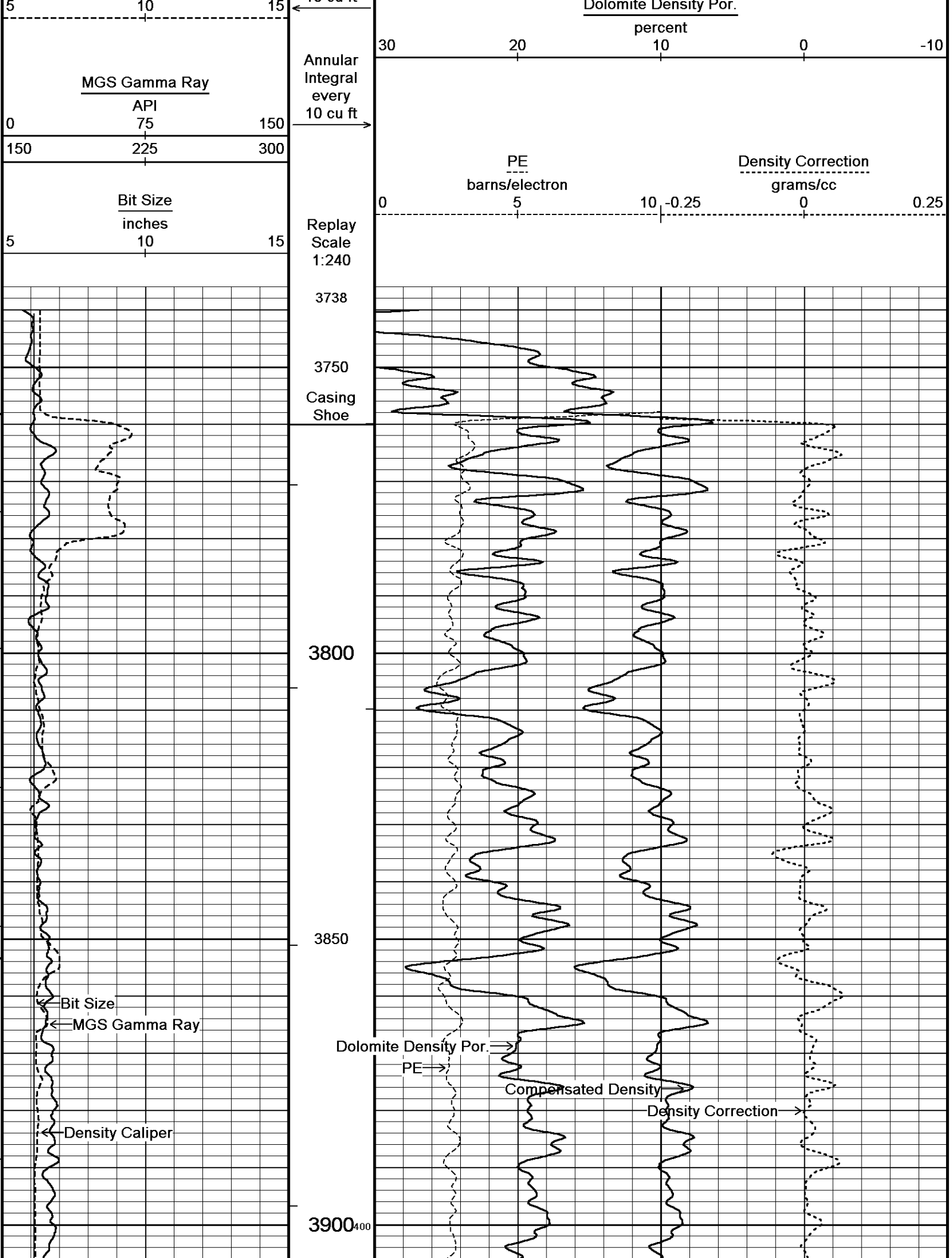


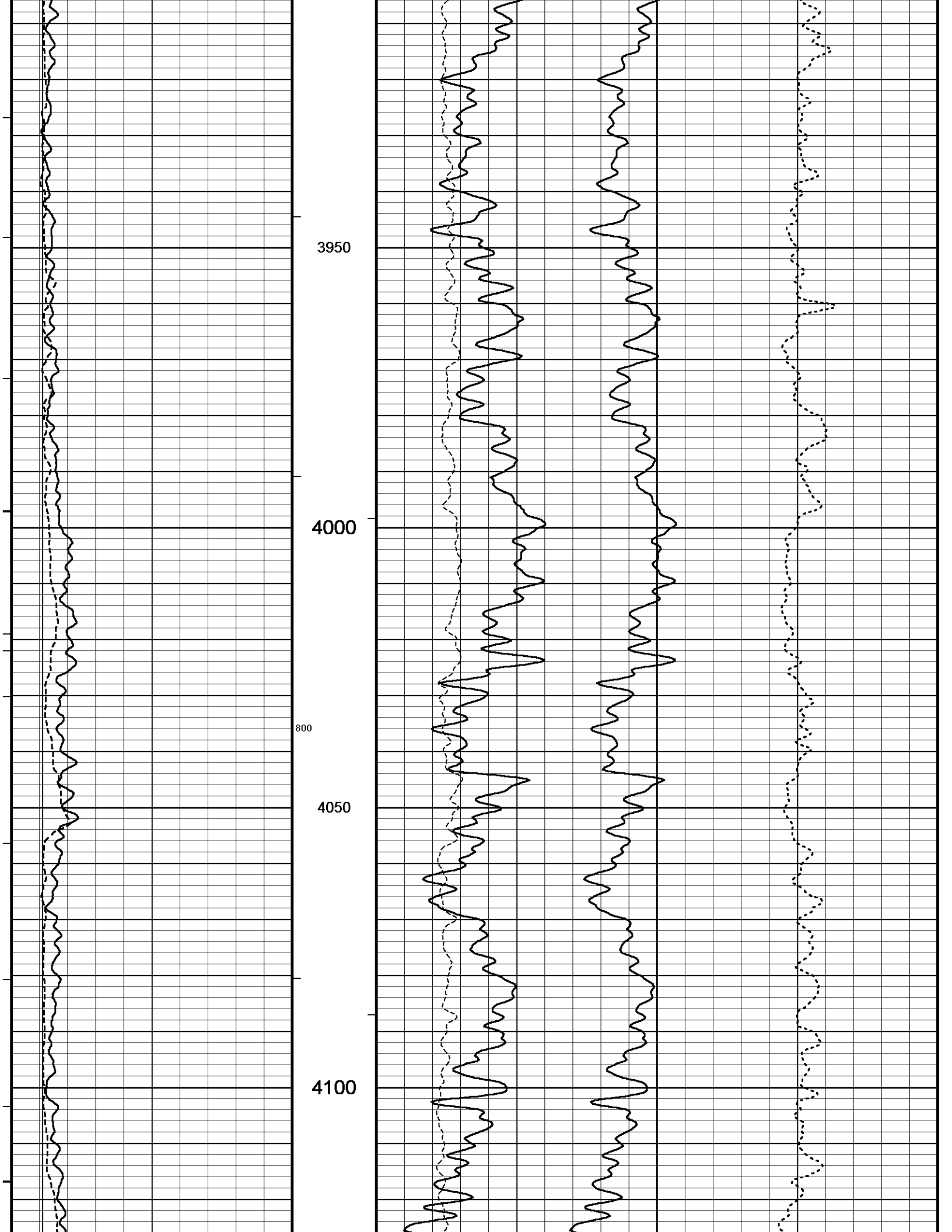


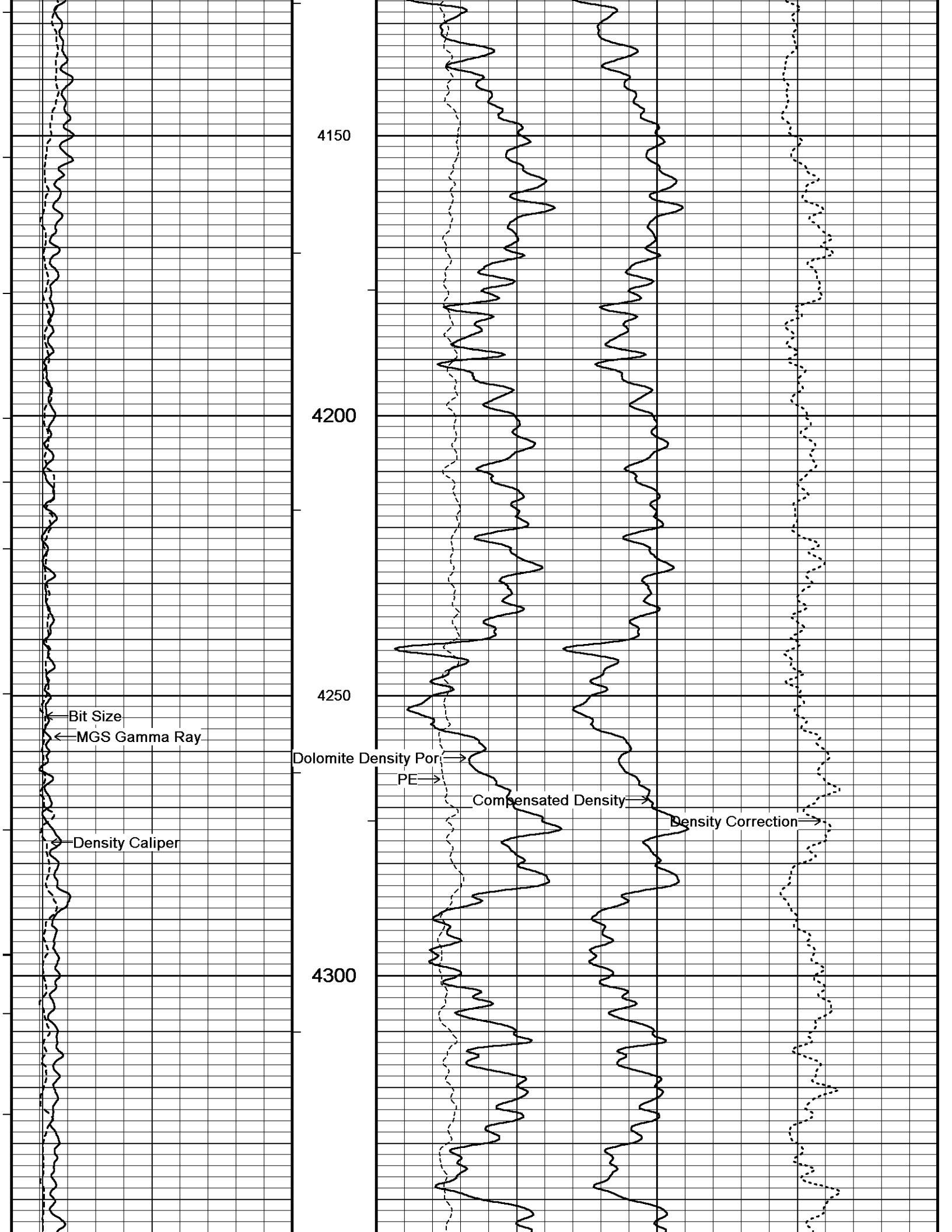


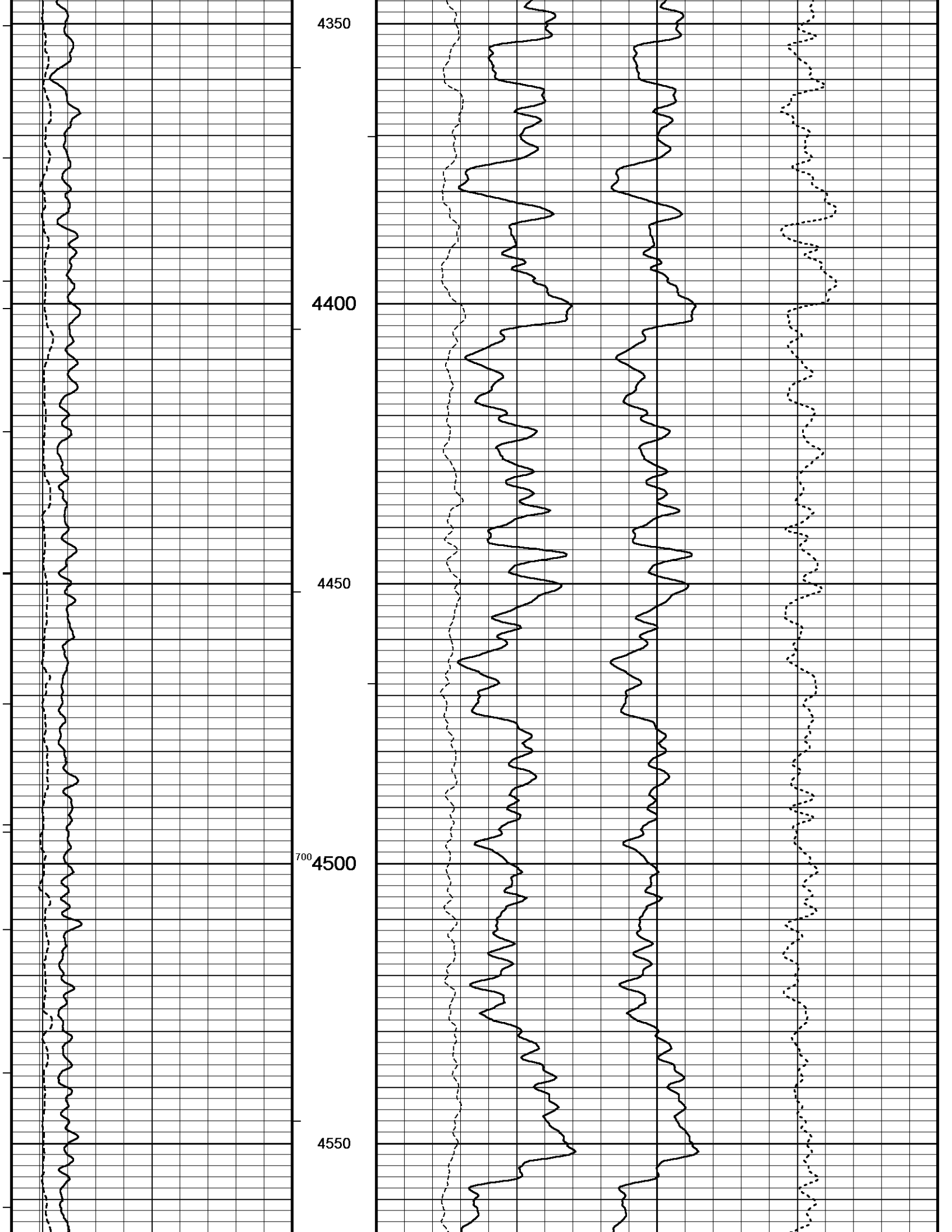


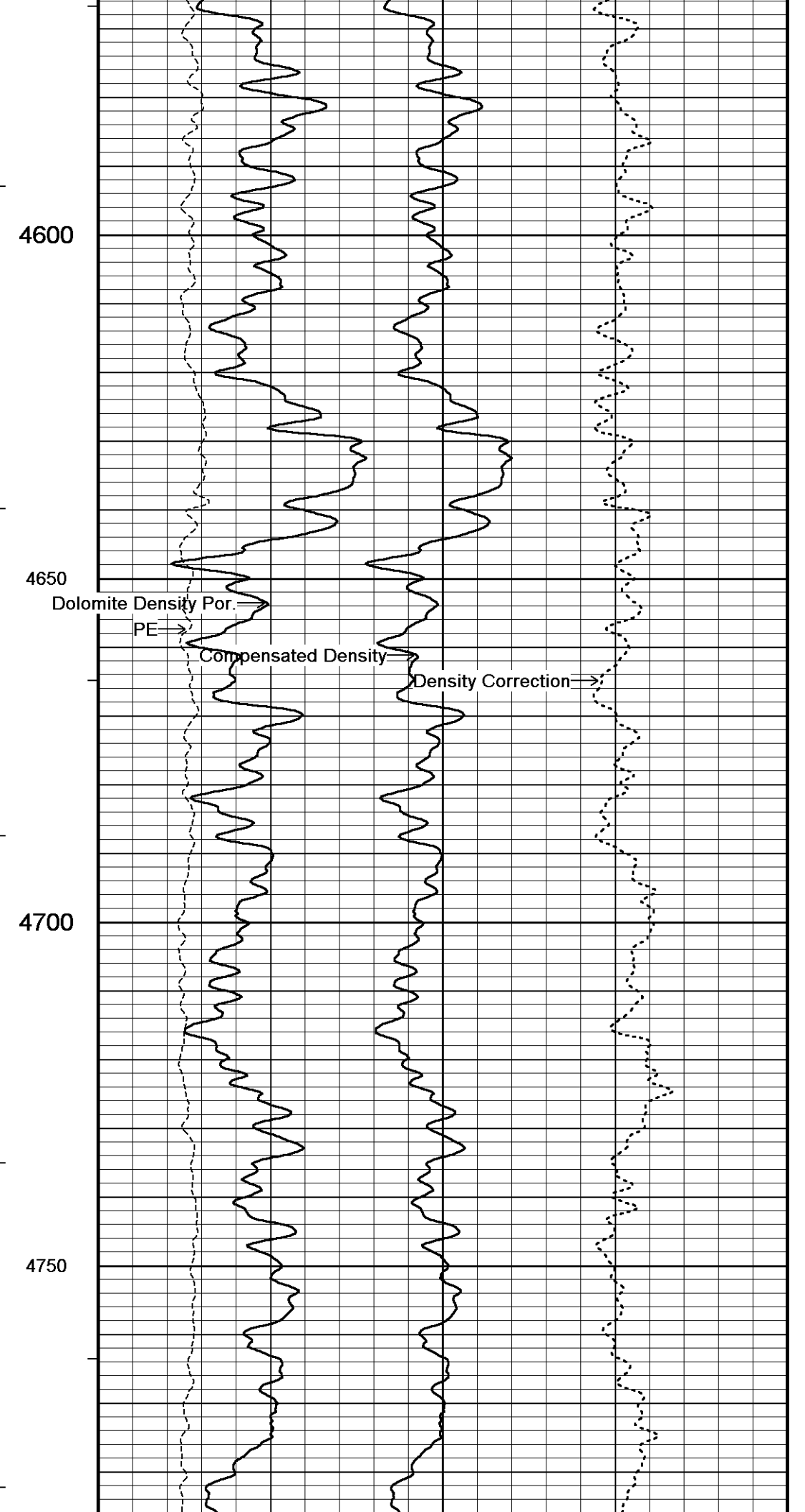
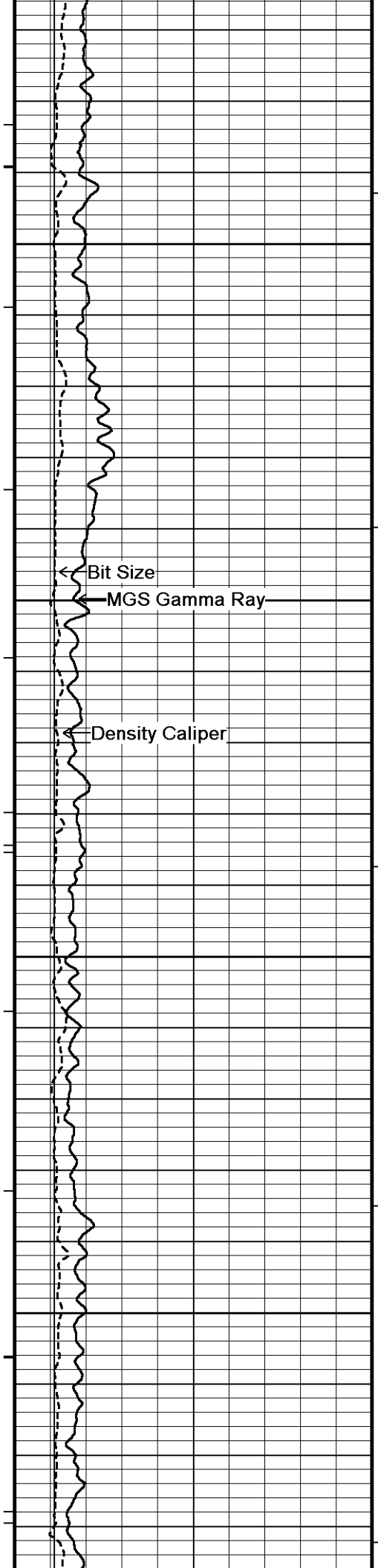


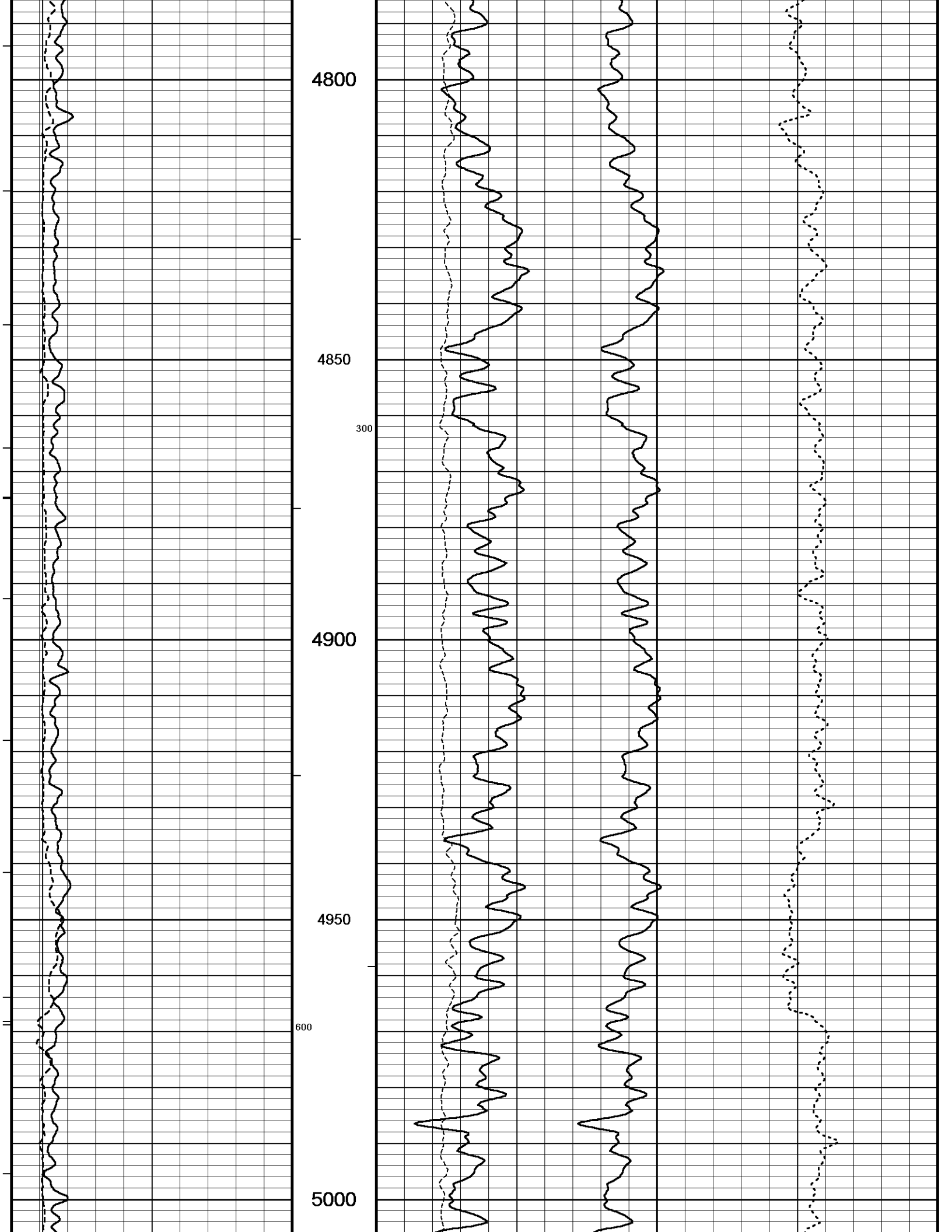


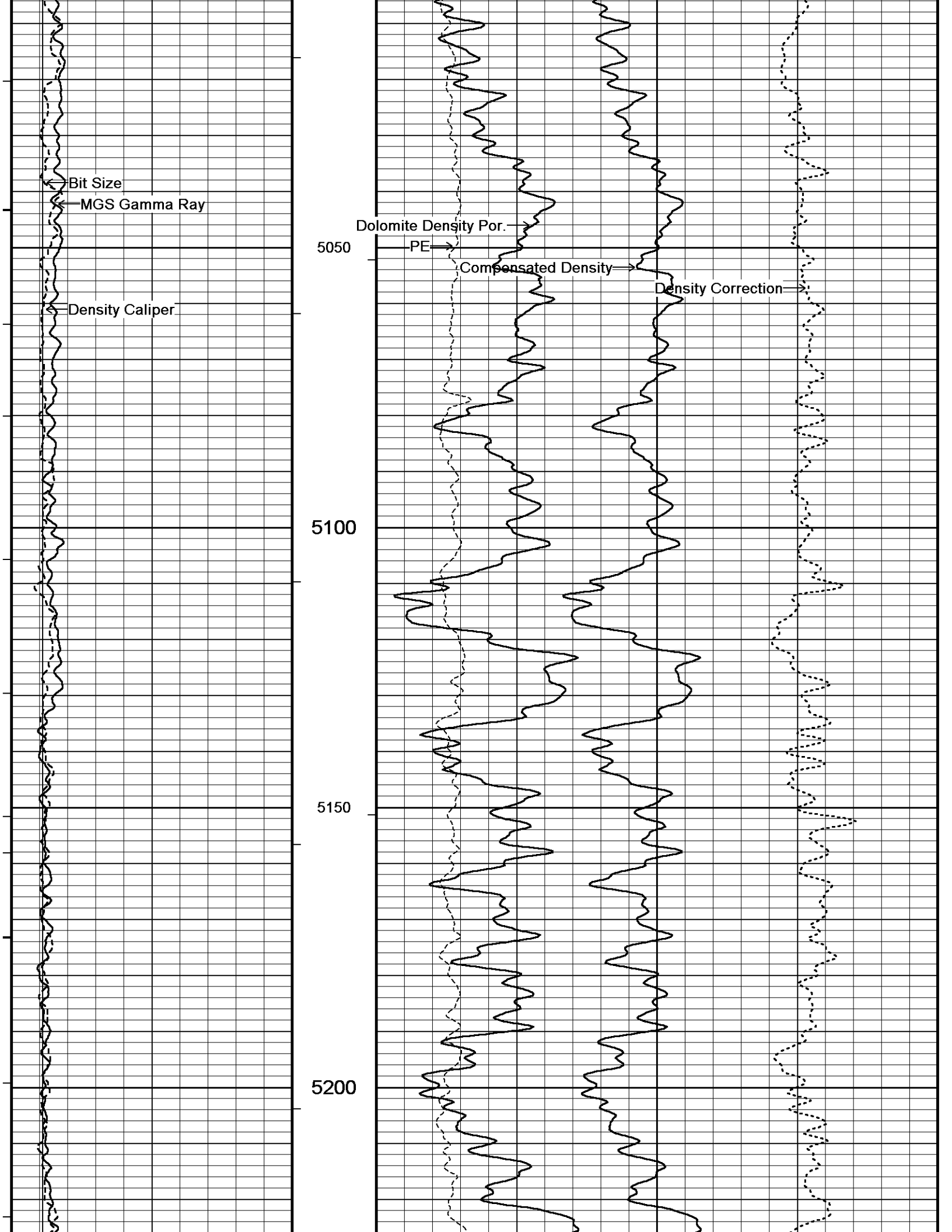


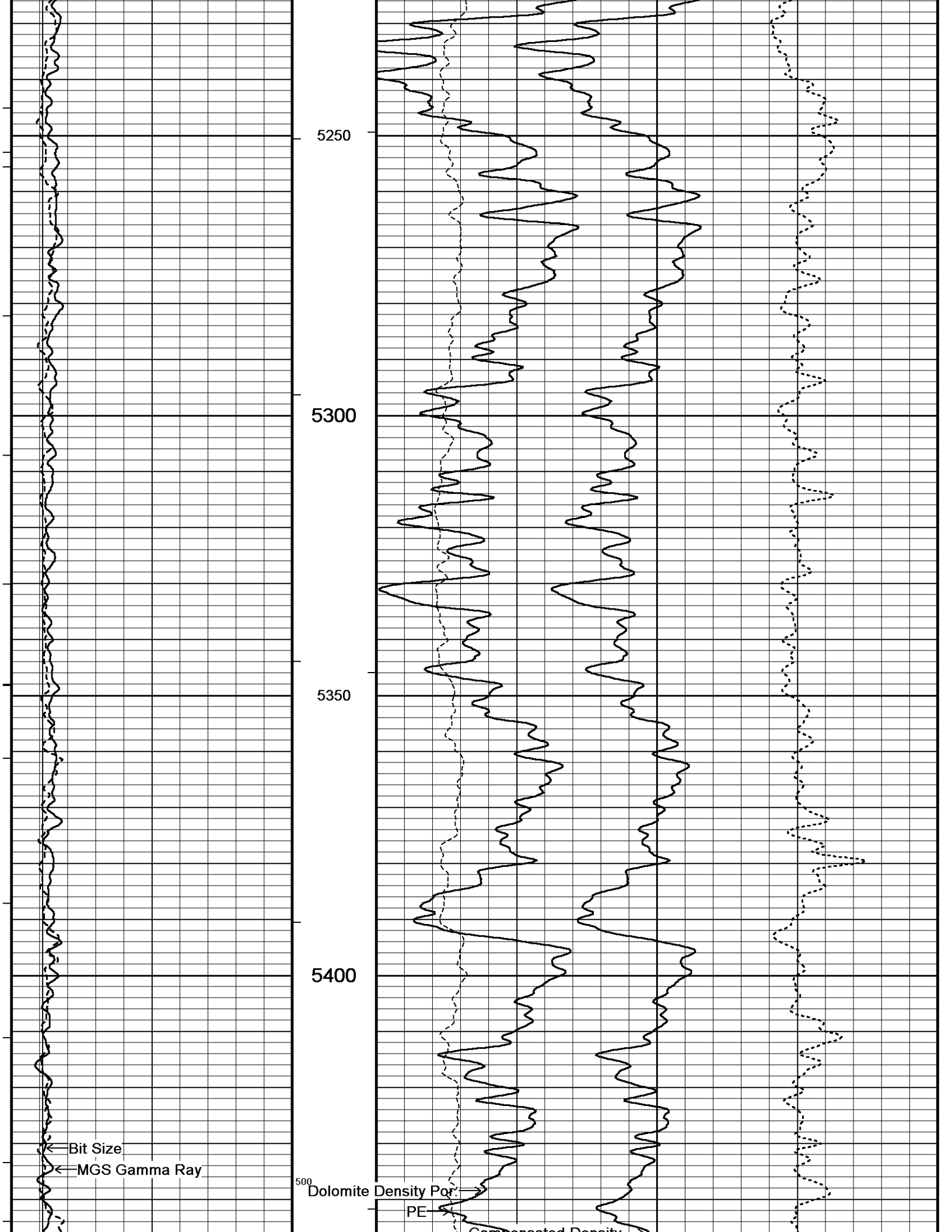


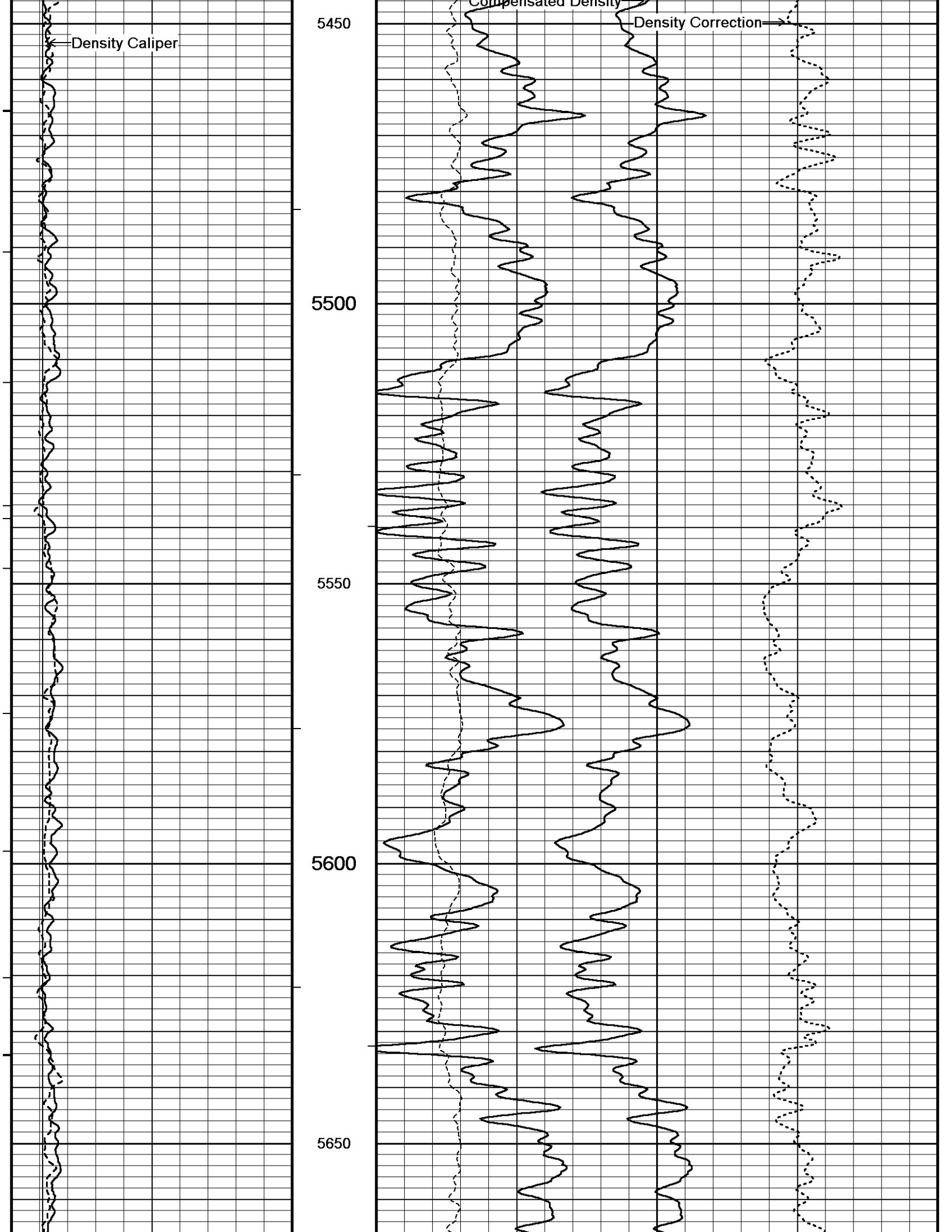


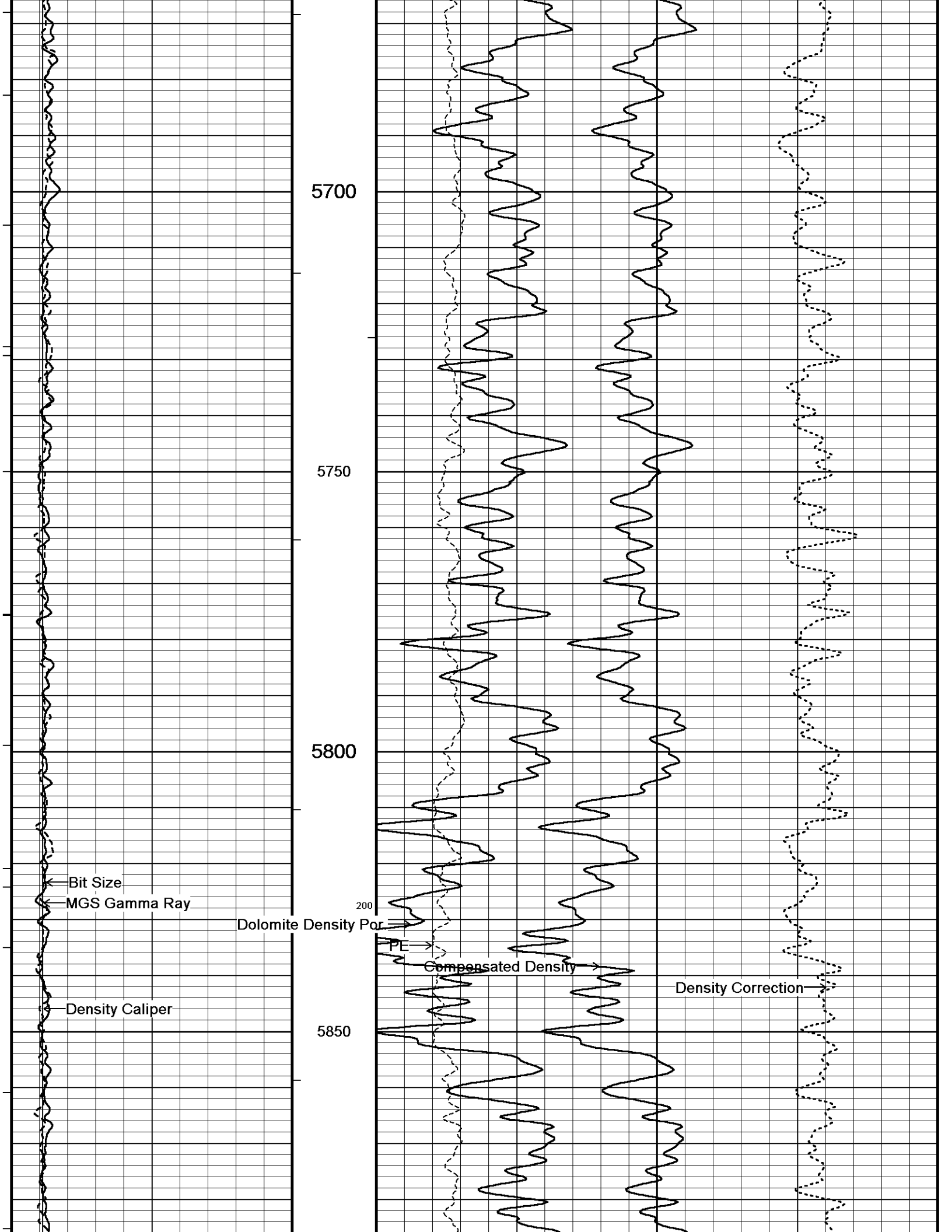


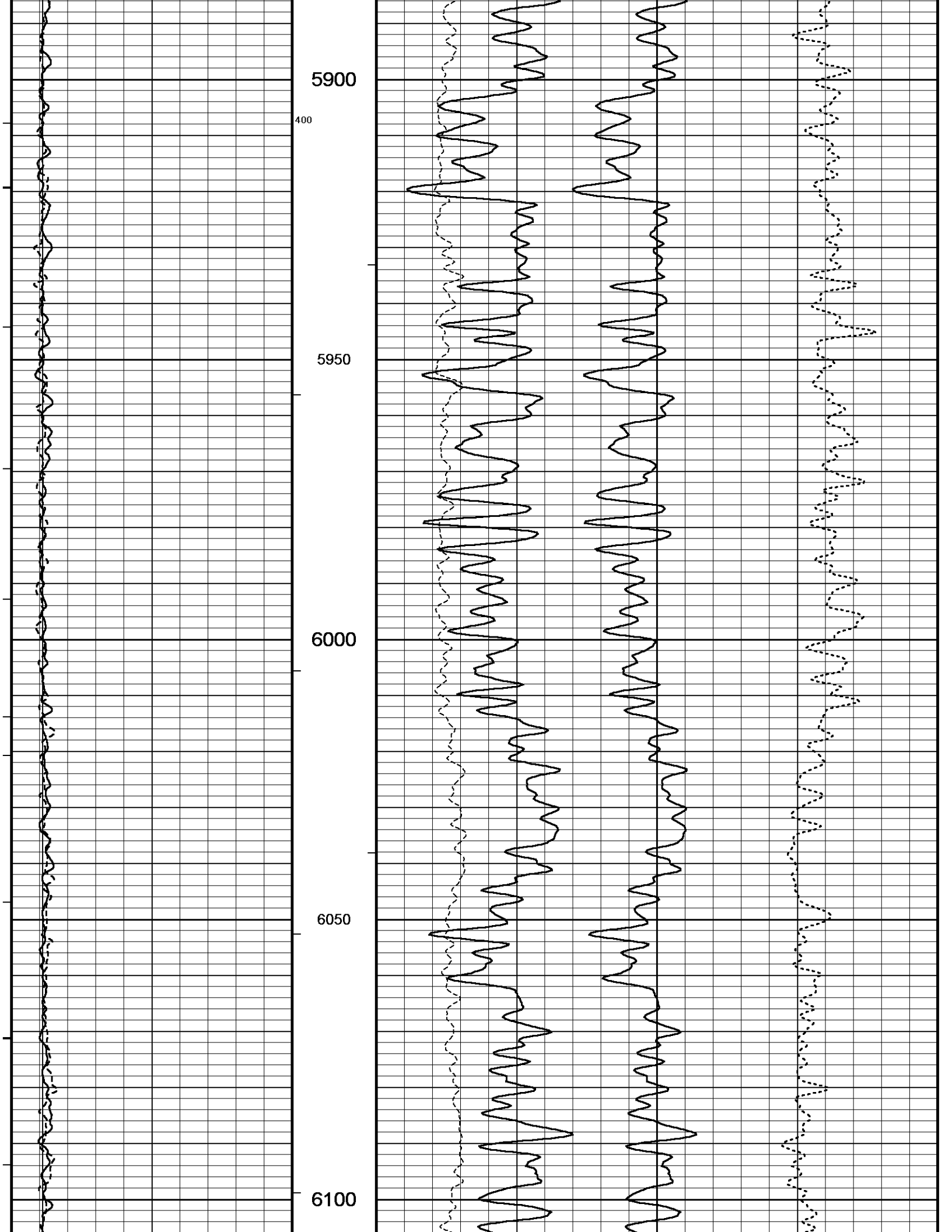


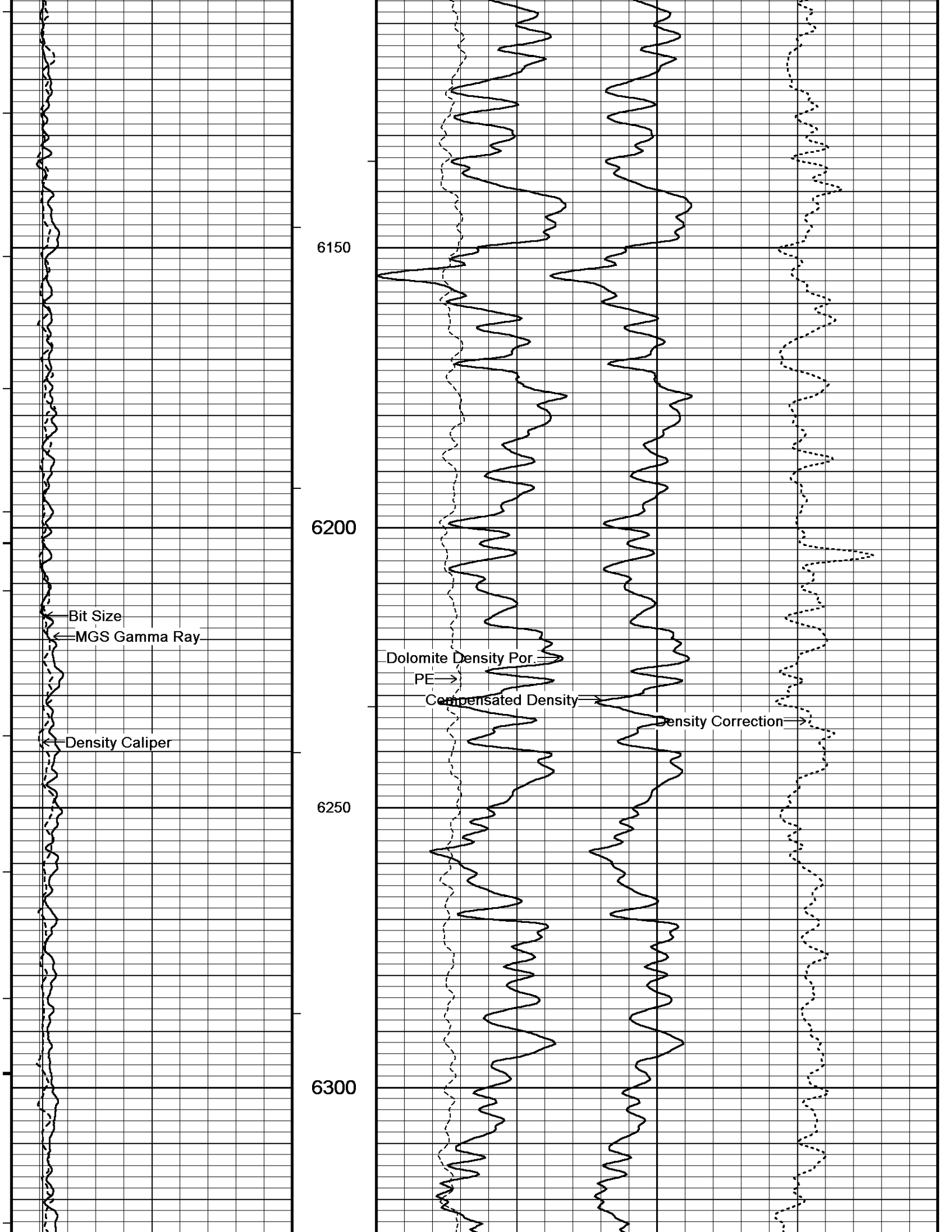


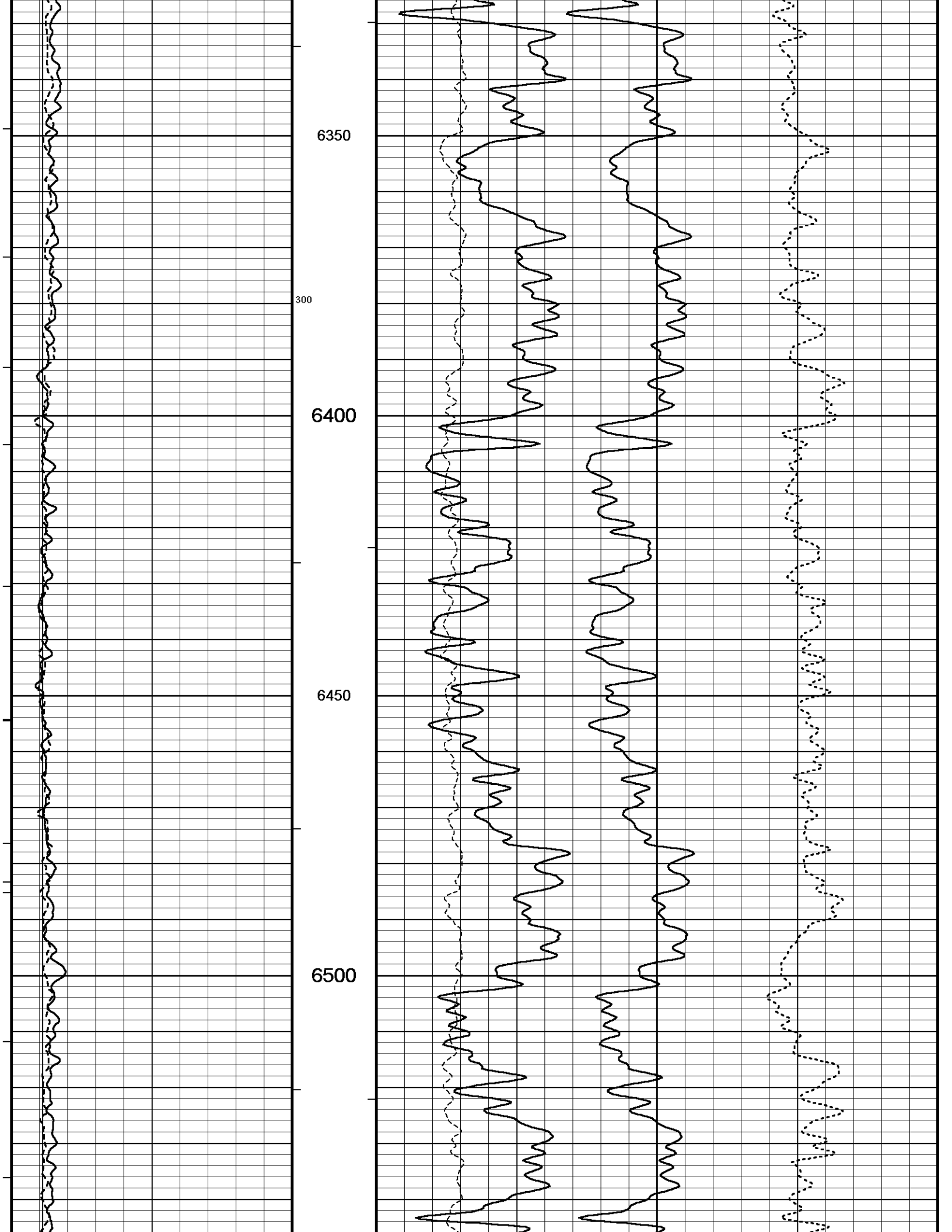


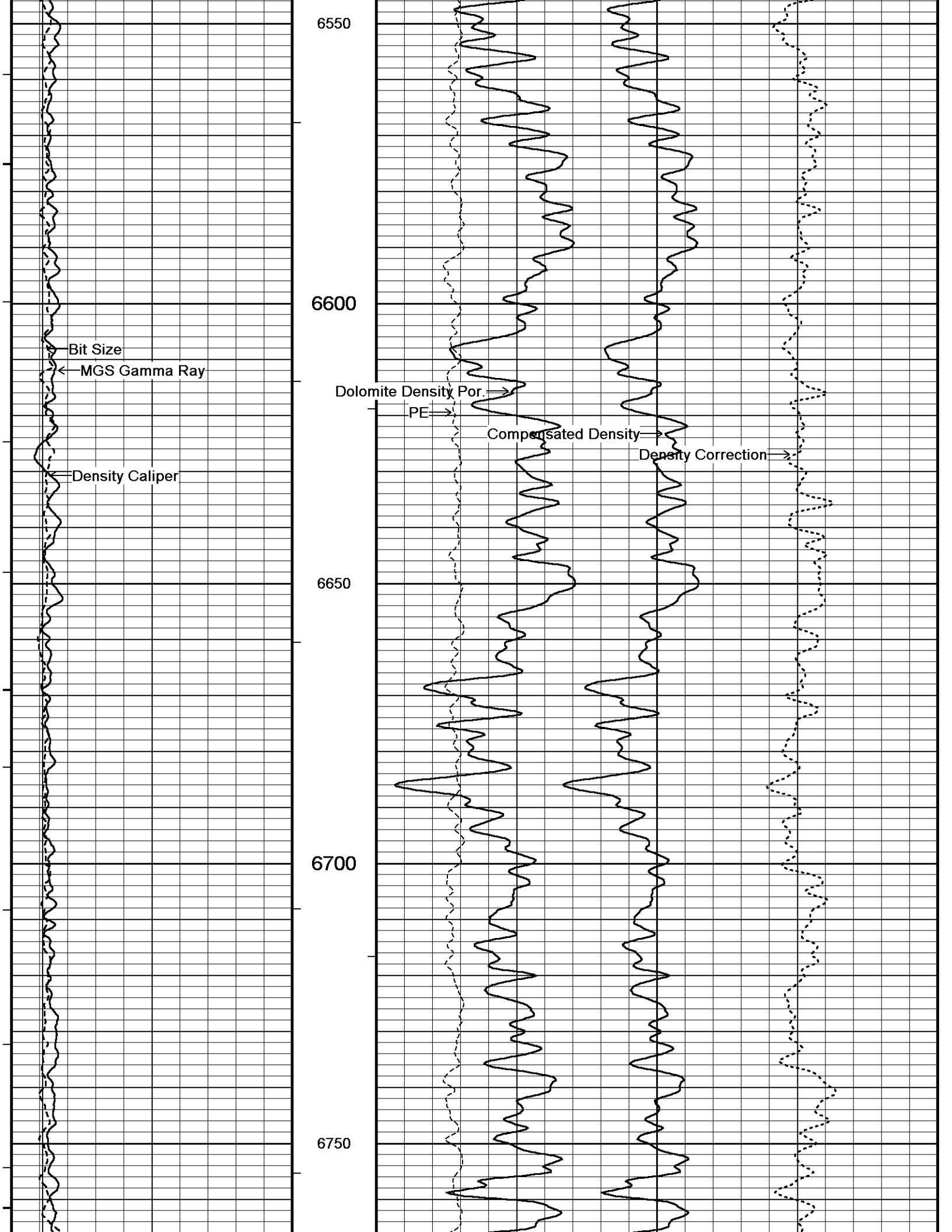


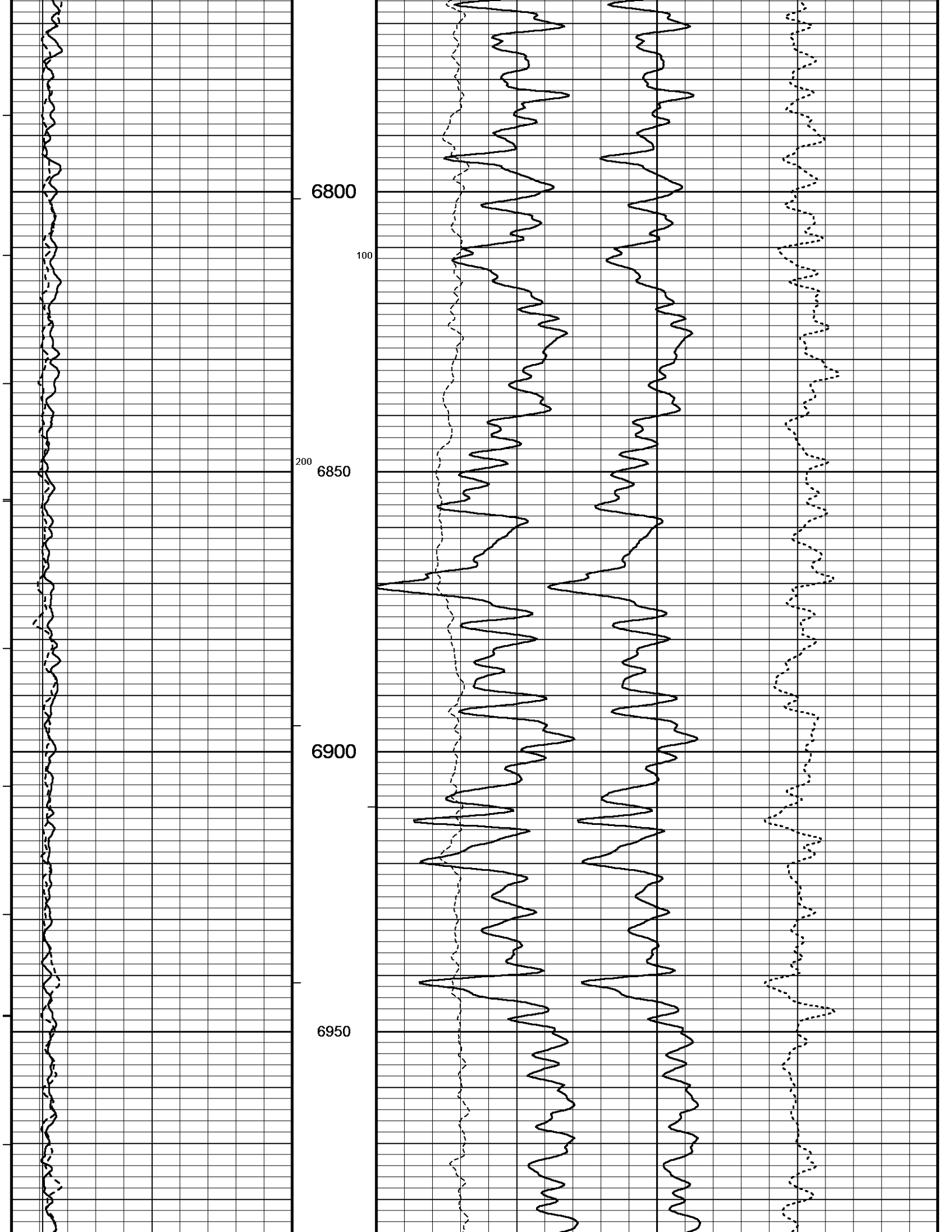


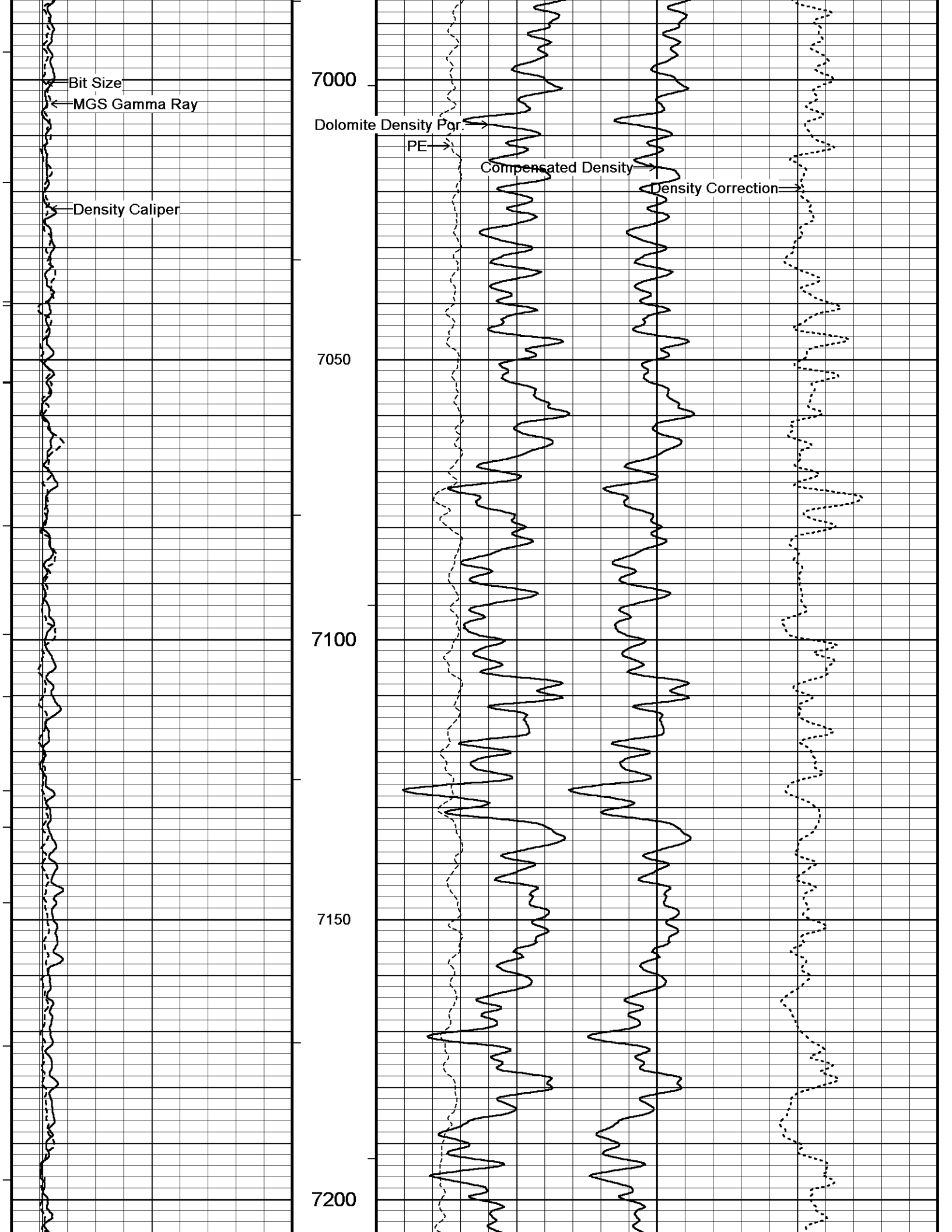


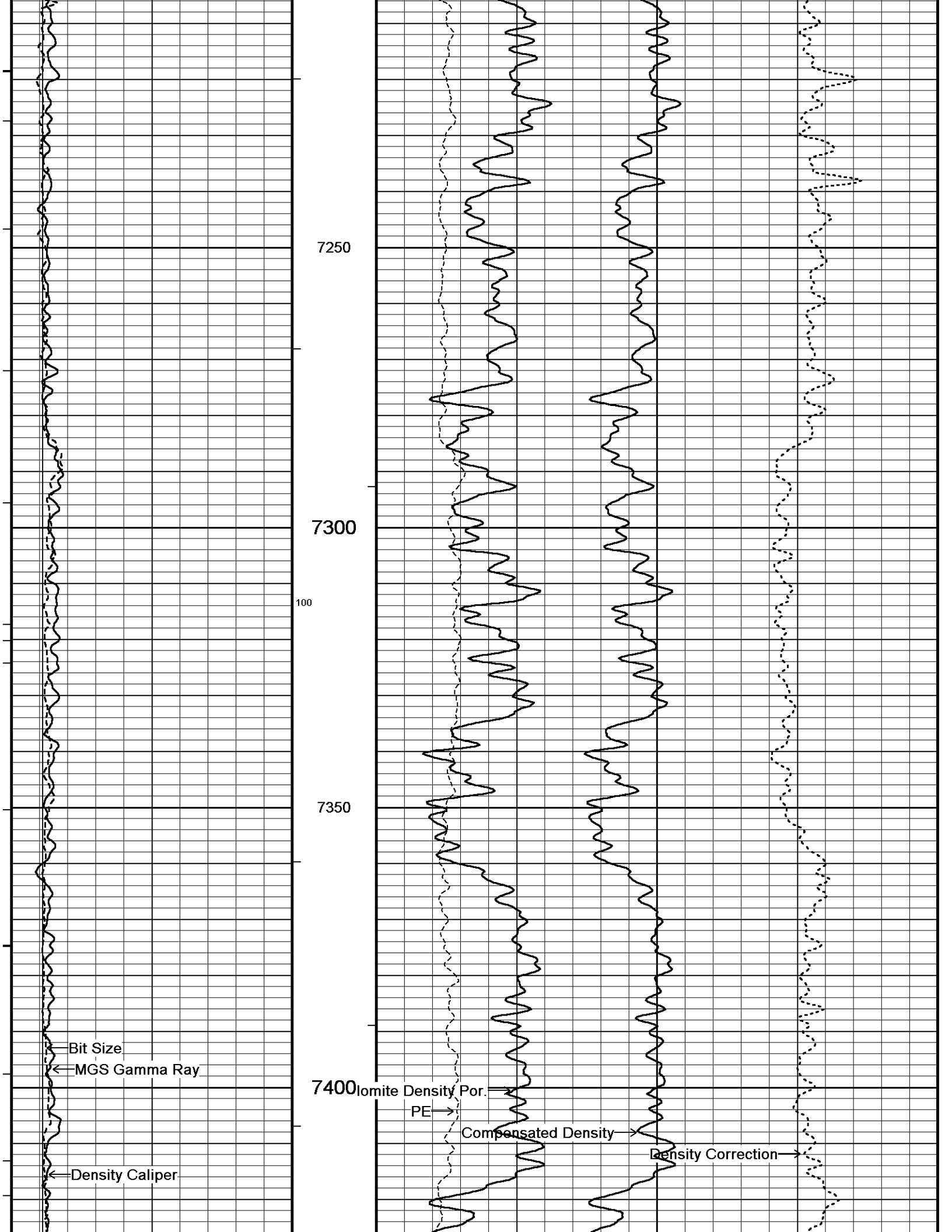


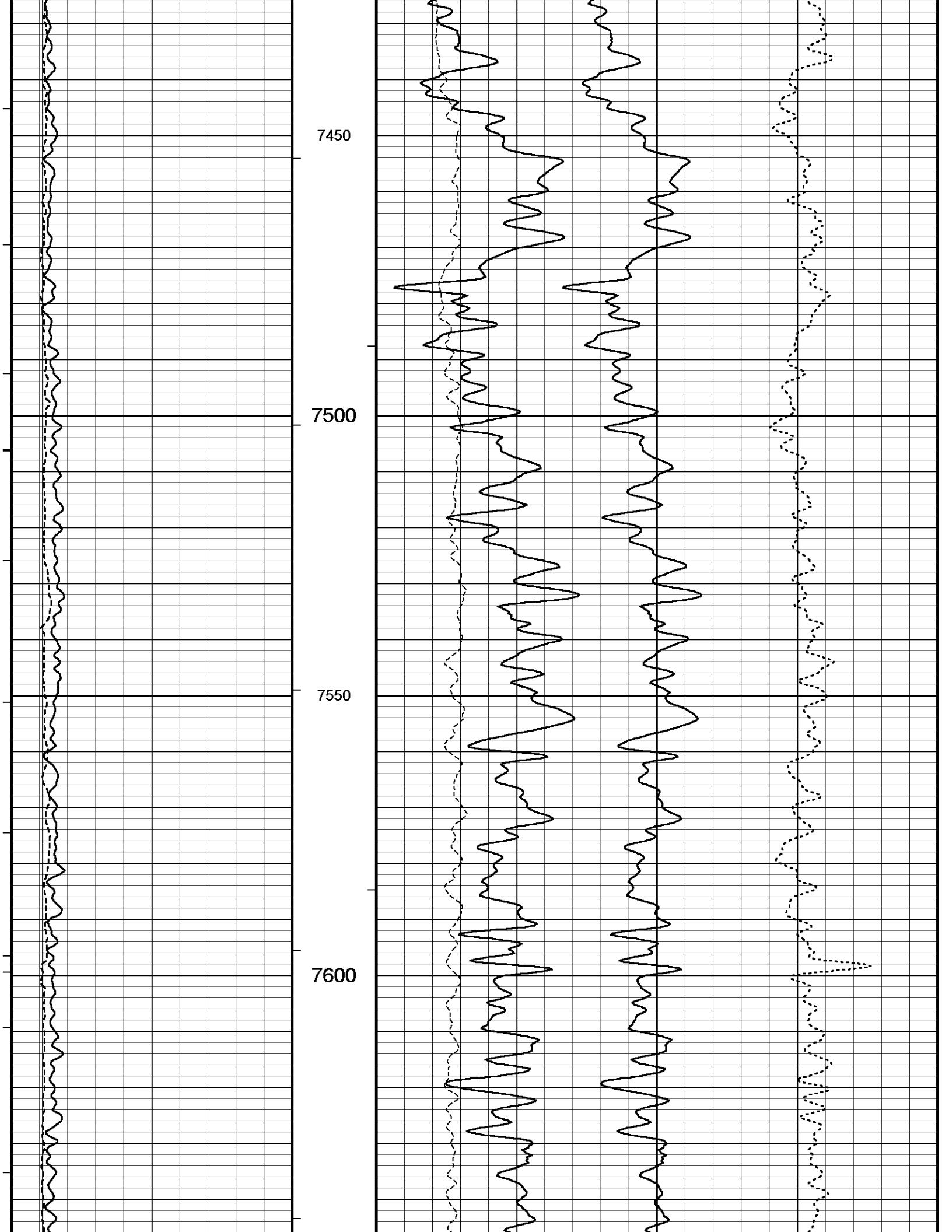


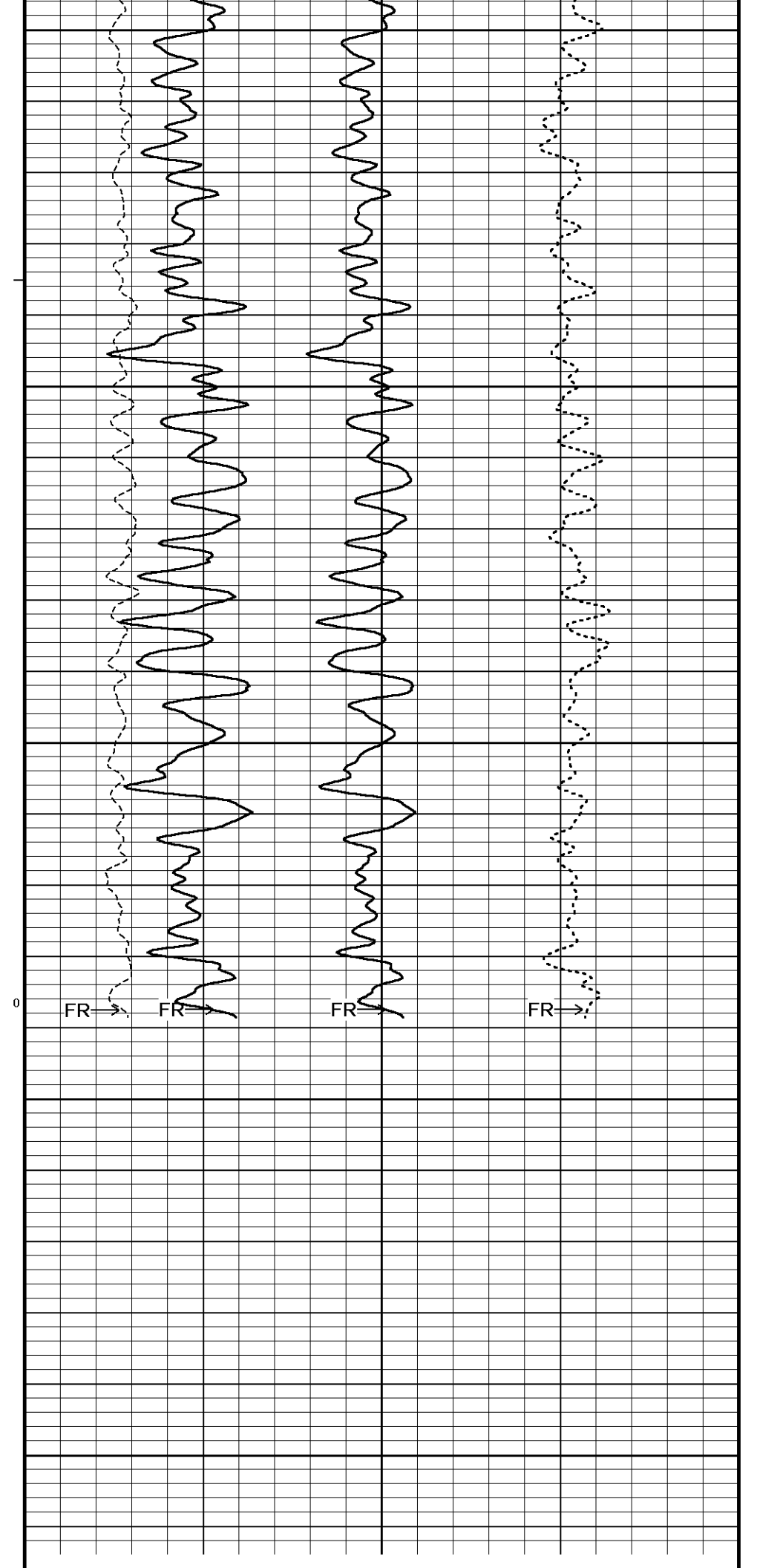
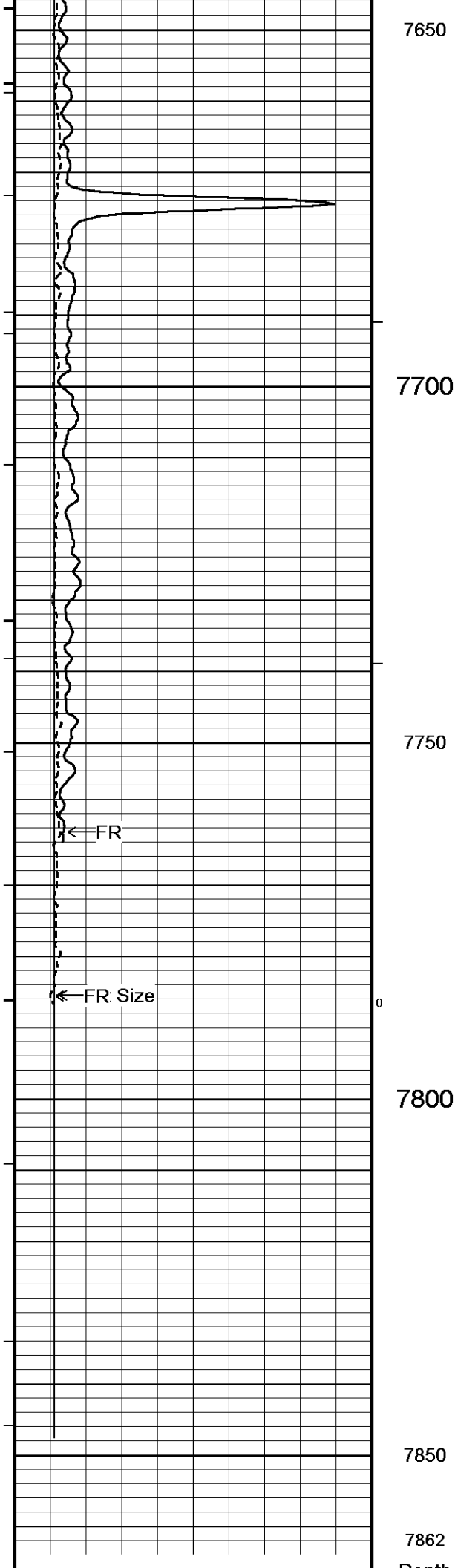


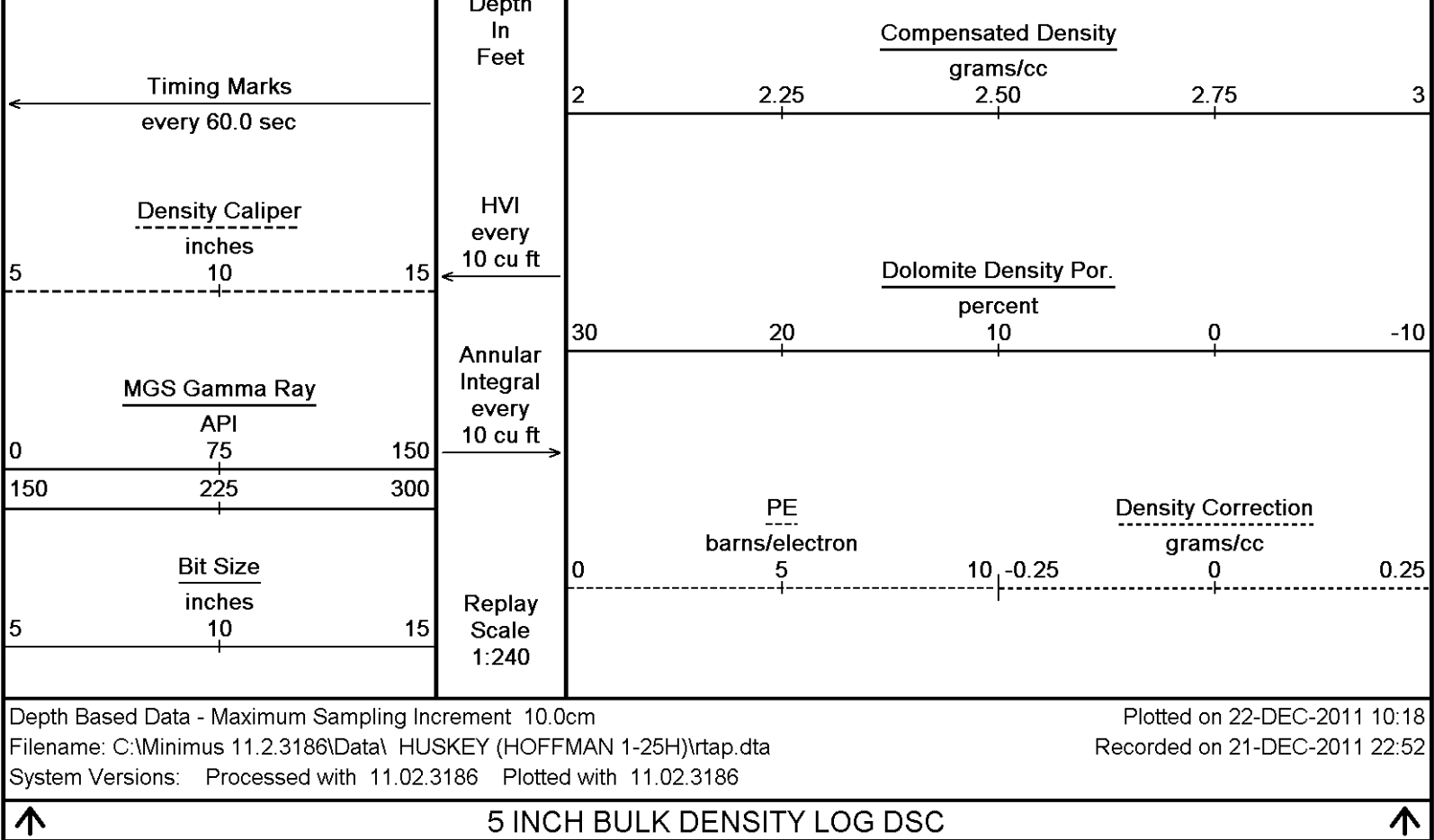












BEFORE SURVEY CALIBRATION			
C:\Minimus 11.2.3186\Data\ HUSKEY (HOFFMAN 1-25H)\rtap.dta			
Down-hole Tension Calibration All 000			
			Field Calibration on 24-FEB-2009
Reading No	Measured	Calibrated (lbs)	
1	14953.75	0.00	
2	17846.38	1500.00	
General Constants All 000			
			Last Edited on 22-DEC-2011,01:29
General Parameters			
Mud Resistivity	1.400	ohm-metres	
Mud Resistivity Temperature	43.000	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	MIE Caliper X		
Rwa Parameters			
Porosity used	Limestone Density Por.		
Resistivity used	Array Ind. Four Res Rt		
RWA Constant A	0.610		
RWA Constant M	2.150		
Down-hole Tension Calibration SMS 0			
			Field Calibration on 29-MAR-2011
Reading No	Measured	Calibrated (lbs)	
1	15152.07	0.00	
2	19175.97	2000.00	
SP Calibration MGS-C.J 138			
			Field Calibration on 27-SEP-2011,12:04
Reading No	Measured	Calibrated (mV)	

Reference 1	Measured	Calibrated (mV)
Reference 2	100.0	100.0
	-100.0	-100.0
Gamma Calibration MGS-C.J 138		
	Measured	Calibrated (API)
Background	50	34
Calibrator (Gross)	1059	730
Calibrator (Net)	1009	696
Field Calibration on 17-OCT-2011 05:01		
Gamma Constants MGS-C.J 138		
Last Edited on 16-OCT-2011,13:09		
Gamma Calibrator Number	696	
Mud Density	1.11	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm
High Resolution Temperature Constants MGS-C.J 138		
Last Edited on		
Pre-filter Length	11	
Neutron Calibration MDN-B.J 388		
Base Calibration		Base Calibration on 07-DEC-2011 09:22
		Field Check on
	Measured	Calibrated (cps)
	Near Far	Near Far
	2961 90	3714 110
Ratio	33.000	33.764
Field Calibrator at Base		Calibrated (cps)
		2455 3622
Ratio		0.678
Field Check		Calibrated (cps)
		0 0
Ratio		0.000
Neutron Constants MDN-B.J 388		
Last Edited on 02-NOV-2011,16:23		
Neutron Source Id	P31112B	
Neutron Jig Number	N639	
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	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	None	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	
Imager Pad Check MIE-A.A 113		
Field Check on 16-AUG-2008,11:45		
Pad 1	Pad Not Tested	Pad 5
Pad 2	Pad Not Tested	Pad 6
Pad 3	Pad Not Tested	Pad 7
Pad 4	Pad Not Tested	Pad 8
Pad Not Tested		Pad Not Tested
Pad Not Tested		Pad Not Tested
Pad Not Tested		Pad Not Tested
Pad Not Tested		Pad Not Tested
Compact Micro Imager Constants MIE-A.A 113		
Last Edited on 20-DEC-2011,21:27		
Centre Pad 1 Rotational Offset	0.00	degrees
Image/Borehole Ovality Reference	Relative Bearing	
Non Active Buttons	Omit	
Search Angle	45.00	degrees
Correlation Interval	3.28	feet

Correlation Step	1.64	feet
Current Offset	0.0000	mAmp
Squasher Start	0.0500	mAmp
Image Processing	Enabled	
Navigation Constants MIE-A.A 113		Last Edited on 29-DEC-2009,15:28
Magnetic Declination	6.00	degrees East
Magnetometer Parameters MIE-A.A 113		
Date Of Last Magnetometer Calibration	01-JAN-1998	
Slope	X Magnetometer -1.000000	Y Magnetometer -1.016573
Offset	0.006568	Z Magnetometer -1.003898
Magnetometer Constants MIE-A.A 113		Last Edited on
Magnetometer Calibrator Number	000	
Accelerometer Parameters MIE-A.A 113		
Date Of Last Accelerometer Calibration	01-JAN-1998	
Slope	X Accelerometer -1.105490	Y Accelerometer -1.103970
Offset	0.000458	Z Accelerometer -1.107420
Accelerometer Constants MIE-A.A 113		Last Edited on 11-JUN-2009,17:18
Accelerometer Calibrator Number	000	
Accelerometer Temperature Characterisation		
X Accelerometer		
Serial Number	282	
Calibration Date	18-Jul-2007	
Bias(g)	B0 0.00000e+000	B1 3.41234e-005
Scale Factor(mA/g)	SF0 3.00000e+000	SF1 2.70372e-004
Y Accelerometer		
Serial Number	284	
Calibration Date	18-Jul-2007	
Bias(g)	B0 0.00000e+000	B1 1.41306e-005
Scale Factor(mA/g)	SF0 3.00000e+000	SF1 2.83655e-004
Z Accelerometer		
Serial Number	287	
Calibration Date	20-Jul-2007	
Bias(g)	B0 0.00000e+000	B1 2.30753e-005
Scale Factor(mA/g)	SF0 3.00000e+000	SF1 2.66160e-004
Base Calibration		
Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.
1	24856	25276
2	35545	35312
3	44370	44687
4	55326	56381
5	0	0
Calibrator Size (in)	5.97	
1	23517	25136
2	32111	33147
3	39601	41110
4	49214	50836
5	0	0
Calibrator Size (in)	5.97	
Field Calibration		
Reading No	Pad 2 Meas.	Pad 4 Meas.
1	23517	25136
2	32111	33147
3	39601	41110
4	49214	50836
5	0	0
Calibrator Size (in)	5.97	
1	23517	25136
2	32111	33147
3	39601	41110
4	49214	50836
5	0	0
Calibrator Size (in)	5.97	
Base Calibration		
Reading No	Pad 6 Meas.	Pad 8 Meas.
1	25351	23970
2	34289	33287
3	42395	41619
4	52775	51339
5	0	0
Calibrator Size (in)	5.97	
1	25351	23970
2	34289	33287
3	42395	41619
4	52775	51339
5	0	0
Calibrator Size (in)	5.97	
Field Calibration		
Reading No	Pad 6 Meas.	Pad 8 Meas.
1	25351	23970
2	34289	33287
3	42395	41619
4	52775	51339
5	0	0
Calibrator Size (in)	5.97	
1	25351	23970
2	34289	33287
3	42395	41619
4	52775	51339
5	0	0
Calibrator Size (in)	5.97	

Field Calibration		Measured Pads 1-5 Caliper(in) 0.00	Measured Pads 3-7 Caliper(in) 0.00	Actual Caliper(in) 0.00	
	Measured Pad 2 Caliper(in) 0.00	Measured Pad 4 Caliper(in) 0.00	Measured Pad 6 Caliper(in) 0.00	Measured Pad 8 Caliper(in) 0.00	Actual Caliper(in) 0.00
Caliper Constants MIE-A.A 113				Last Edited on 20-DEC-2011,21:27	
Caliper Difference for BRKT		0.120	inches		
High Resolution Temperature Calibration MAI-B.J 391				Field Calibration on 07-DEC-2011 09:23	
Lower	Measured 10.00	Calibrated(Deg F) 50.00			
Upper	100.00	212.00			
High Resolution Temperature Constants MAI-B.J 391				Last Edited on	
Pre-filter Length		11			
Induction Calibration MAI-B.J 391				Base Calibration on 07-DEC-2011 09:22 Field Check on	
Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High	
1	17.1	473.5	9.3	966.2	
2	6.0	381.9	7.6	821.4	
3	3.8	262.4	5.2	566.0	
4	2.3	133.8	2.6	279.2	
Array Temperature		76.6	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.J 391				Last Edited on 22-DEC-2011,01:28	
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 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.A 214

Base Calibration on 12-OCT-2011 09:12
Field Calibration on 10-DEC-2011,04:31

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	17504	4.01
2	26928	5.96
3	36576	7.98
4	46497	9.86
5	57302	11.88
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.93	5.97

Photo Density Calibration MPD-C.A 214

Base Calibration on 12-OCT-2011 09:05
Field Check on 14-NOV-2011 22:09

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	56441	26176	59869	31110
Reference 2	23271	2549	24557	2522

Field Check at Base

1251.9	1317.8
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Field Check

1249.9	1312.8
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PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	228	1117		
Reference 1	23553	56236	0.423	0.369
Reference 2	6613	23124	0.290	0.271

Field Check at Base

227.6	1116.6
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Field Check

227.4	1111.8
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Density Constants MPD-C.A 214

Last Edited on 09-DEC-2011,12:47

Density Source Id	P31112B	
Nylon Calibrator Number		
Aluminium Calibrator Number		
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.02	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

DOWNHOLE EQUIPMENT

C:\Minimus 11.2.3186\Data\ HUSKEY (HOFFMAN 1-25H)\rtap.dta

RUNNING TOOL

MLK-A 1 LG: 4.87 ft WT: 30.9 lb OD: 2.24 in

EMPTY EXT BATTERY

MLK-A 2 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

EMPTY EXT BATTERY

MLK-A 3 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

SKJ-D Compact Knuckle Joint

SKJ-D 30 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MBS-G.A 200v Compact Battery Sub

MBS-G.A 112 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 72 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma

MGS-C.J 138 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 140 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor

SHA-J.A 208 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-A.A Compact Inline Bowspring sub

MIS-A.A 259 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron

MDN-B.J 388 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper

MPD-C.A 214 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-A.A Compact Inline Bowspring sub

MIS-A.A 279 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor

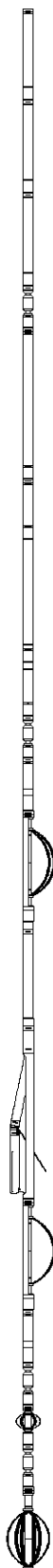
SHA-J.A 451 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 207 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.A Compact Inline Standoff sub

MIS-E.A 202 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in



SKJ-E.B Compact Knuckle Joint
SKJ-E.B 479 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 590 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact MMI Memory Section
MIM-A.A 209 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

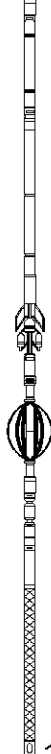
Compact MMI Electrode Section
MIE-A.A 113 LG: 13.96 ft WT: 99.2 lb OD: 4.10 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 596 LG: 5.70 ft WT: 33.1 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

Compact Induction
MAI-B.J 391 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 144.56 ft Weight: 928.1 lb



Tool Zero (0.13ft from bottom)
All measurements relative to tool zero.

COMPANY	HUSKY VENTURES, INC.
WELL	HOFFMAN 1-25H
FIELD	LINDSBORG
PROVINCE/COUNTY	MCPHERSON
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	1366.00	feet	First Reading	7786.00	feet
Elevation Drill Floor	1364.00	feet	Depth Driller	7883.00	feet
Elevation Ground Level	1354.00	feet	Depth Logger	7883.00	feet



Weatherford®

CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED DUAL NEUTRON LOG

