Weatherford®

CML MESSENGER SHUTTLE
COMPACT PHOTO DENSITY
COMPENSATED NEUTRON LOG

COMPANY	SANDRIDGE ENERGY
WELL	JOCHEMS 2721 2-2H
FIELD	WILDCAT
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	SHL: 200' FSL & 2240' FEL
	BHL: 330' FNL & 2240' FEL

SEC	TWP	RGE
2	27S	21W

API Number 15-057-20832
Permit Number

Other Services
MAI
CMI

Permanent Datum G.L., Elevation 2284 feet
Log Measured From KB
Drilling Measured From K.B. @ 18.5 FEET

Elevations:	feet
KB	2302.50
DF	2301.50
GL	2284.00

Date	11-SEPT-2012		
Run Number	ONE		
Depth Driller	9217.00	feet	
Depth Logger	9217.00	feet	
First Reading	9135.00	feet	
Last Reading	1200.00	feet	
Casing Driller	5245.00	feet	
Casing Logger	5236.00	feet	
Bit Size	6.125	inches	
Hole Fluid Type	WBM		
Density / Viscosity	9.00 g/c3	38.00 CP	
PH / Fluid Loss	8.50	4.00 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.51 @ 79.8	ohm-m	
Rmf @ Measured Temp	0.41 @ 79.8	ohm-m	
Rmc @ Measured Temp	0.61 @ 79.8	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.33 @125.0	ohm-m	
Time Since Circulation	1.5 HOUR		
Max Recorded Temp	125.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	18063	OKC	
Recorded By	KYLE SALLER		
Witnessed By	JOHN		
S.O. # / JOB #	3535499		

BOREHOLE RECORD

Last Edited: 12-SEP-2012 03:52

Bit Size inches	Depth From feet	Depth To feet
6.125	5245.00	9217.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
INTERMED	7.000	0.00	5245.00	23.00

REMARKS

LOGGED WITH WLS VER 13.02.6600 SOFTWARE

WELL LOGGED USING 200V MEMORY MESSAGER DEPLOYMENT SYSTEM

HARDWARE: 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

LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9194FT

HOLE RUGOSITY MAY AFFECT LOG QUALITY.

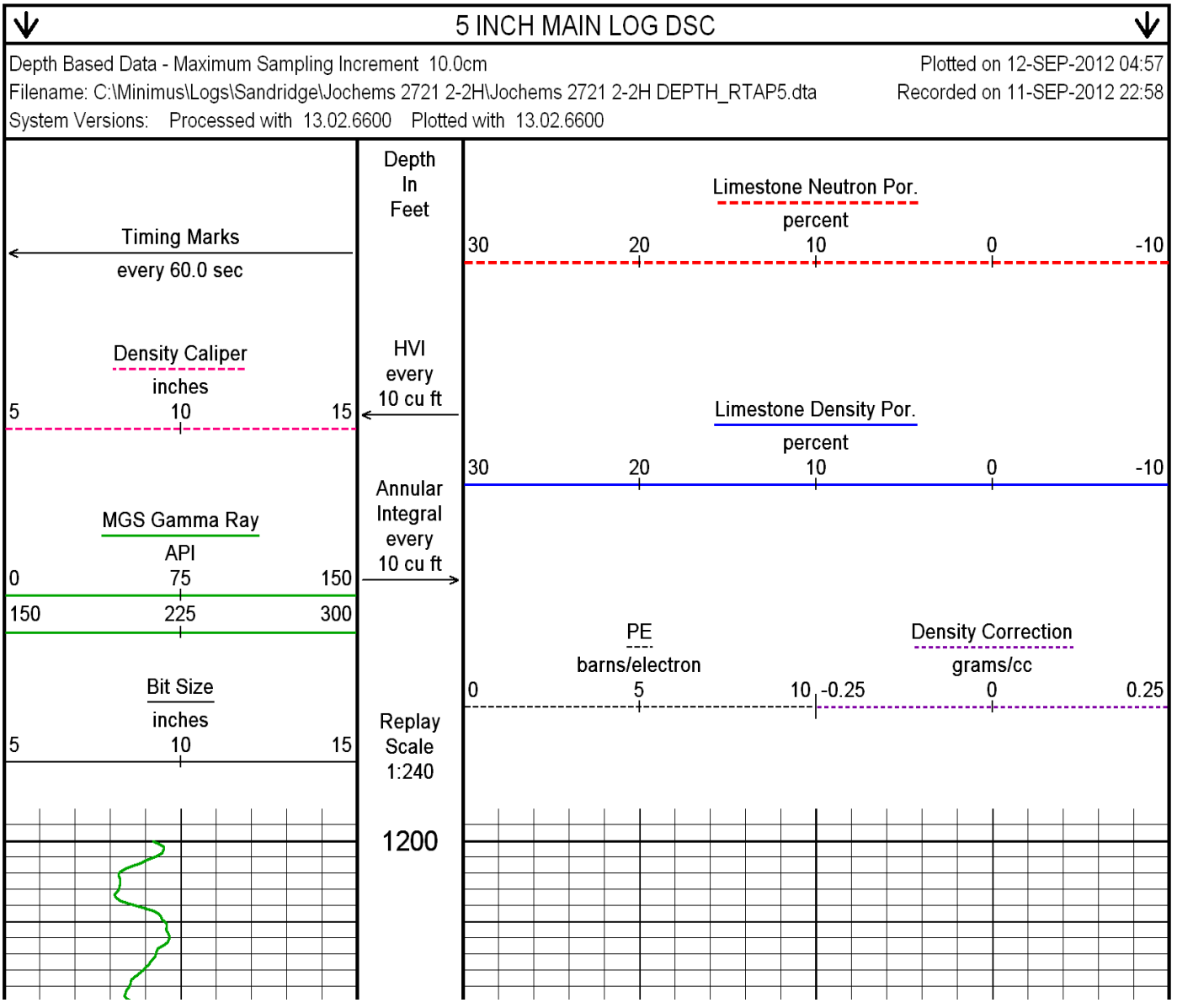
4.5 INCH CASING USED TO CALCULATE ANNULAR HOLE VOLUME

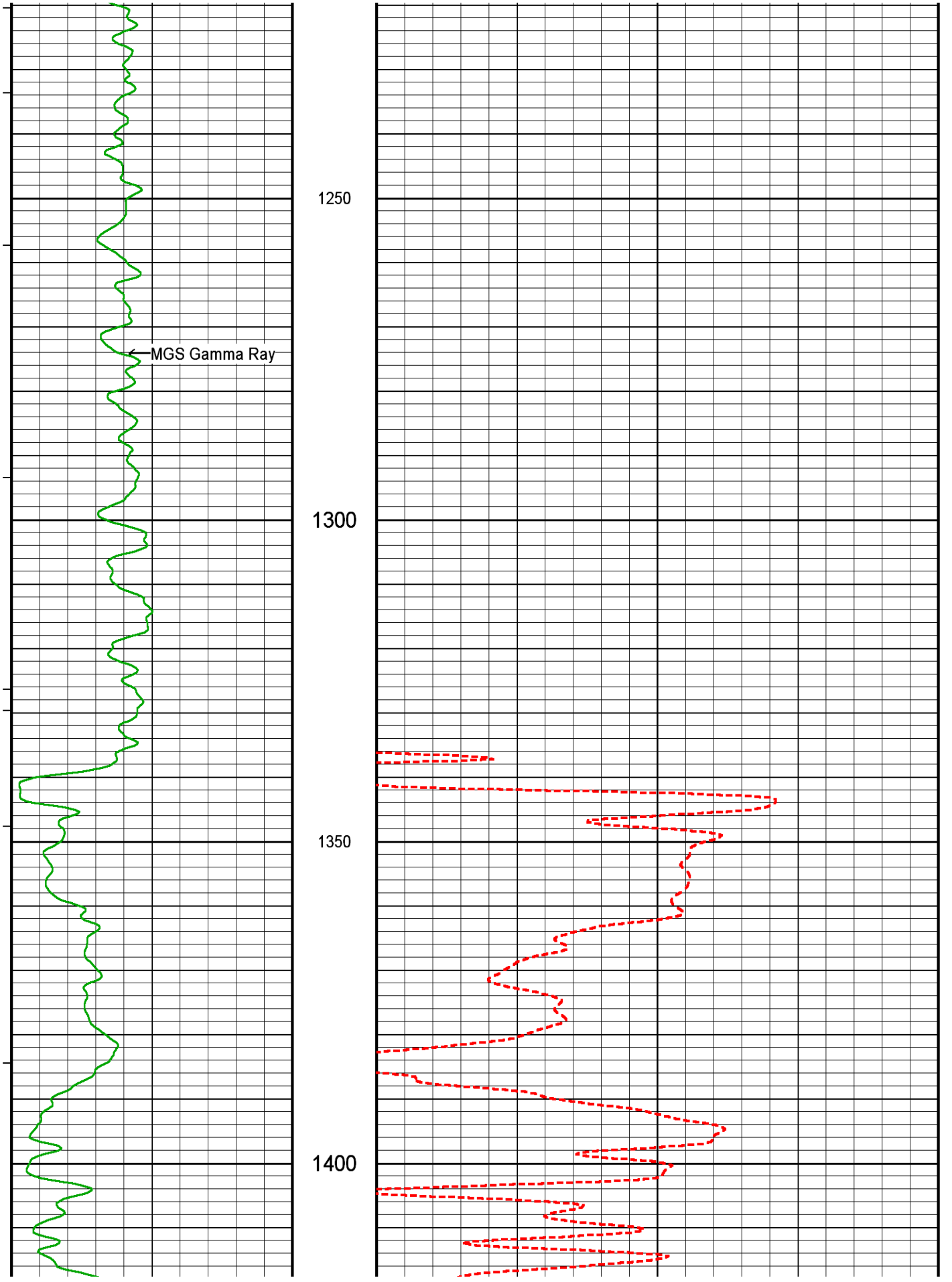
BOREHOLE VOLUME TD TO INTERMEDIATE CASING = 865 CUFT
ANNULAR VOLUME FROM TD TO INTERMEDIATE CASING = 430 CU FT

LAT: 37.7180
LONG: -99.5853

SERVICE ORDER # 3535499
RIG: LARIAT 41

OPERATORS: J. GOODMAN, B. PECK

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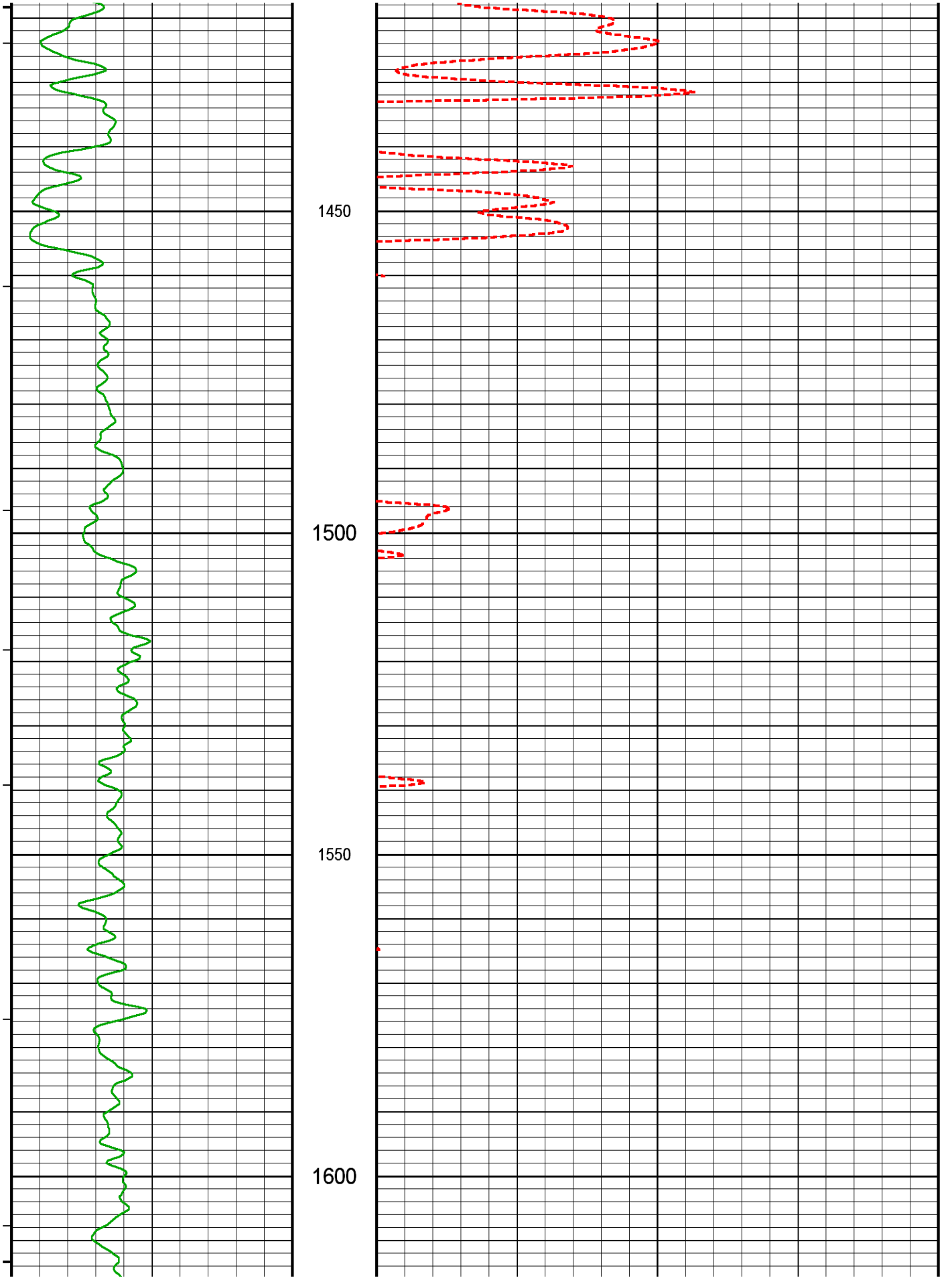
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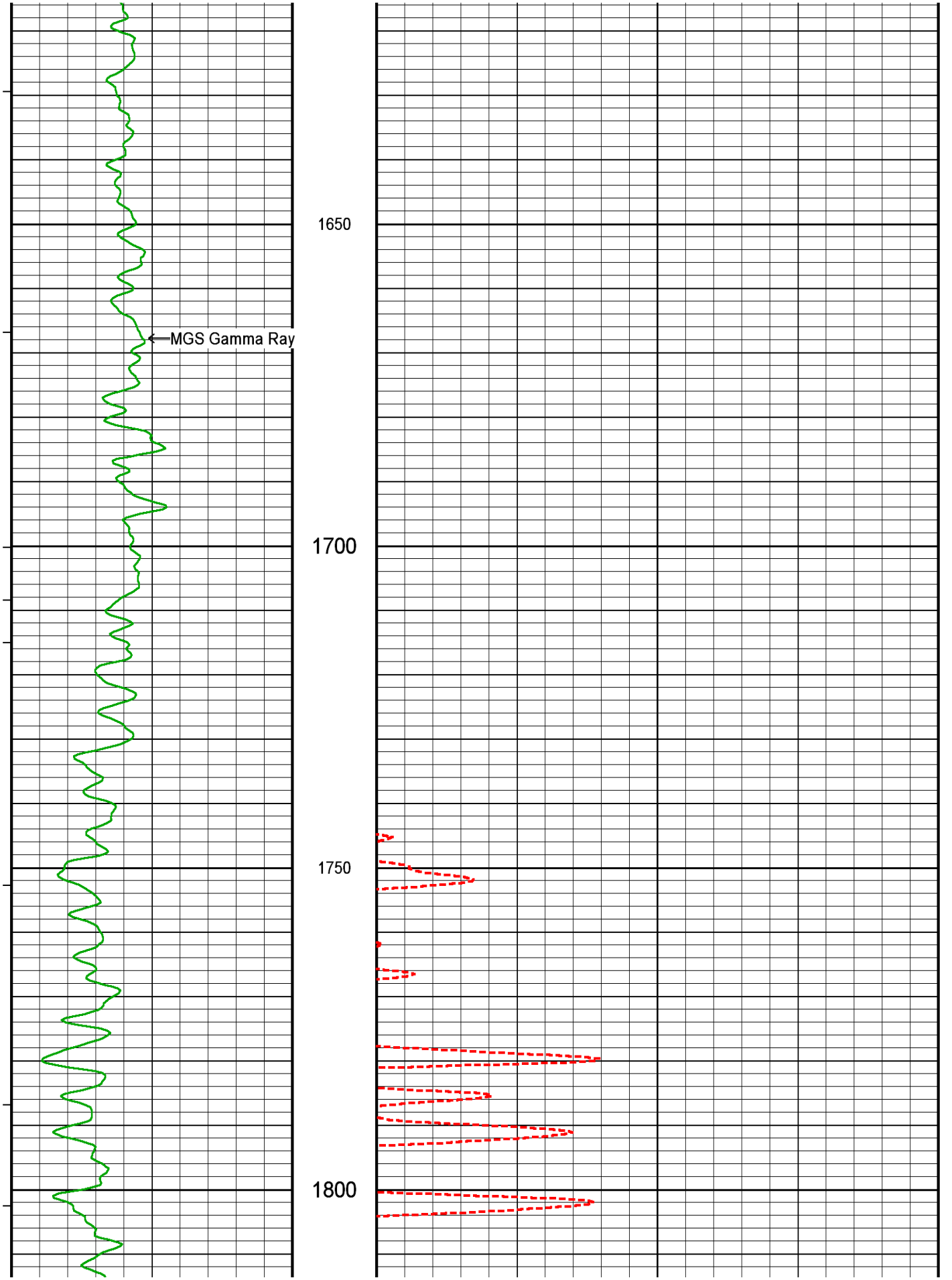
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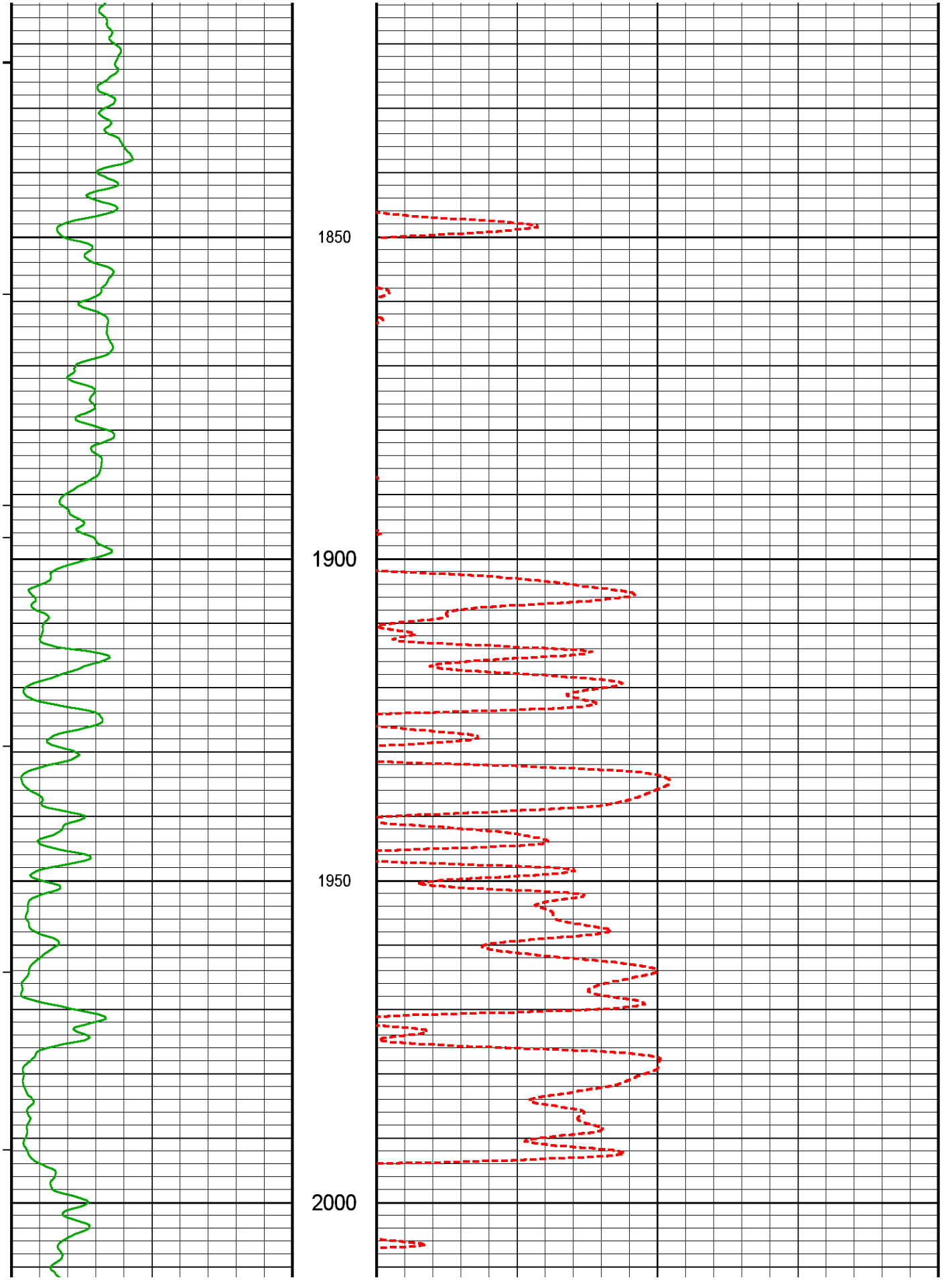
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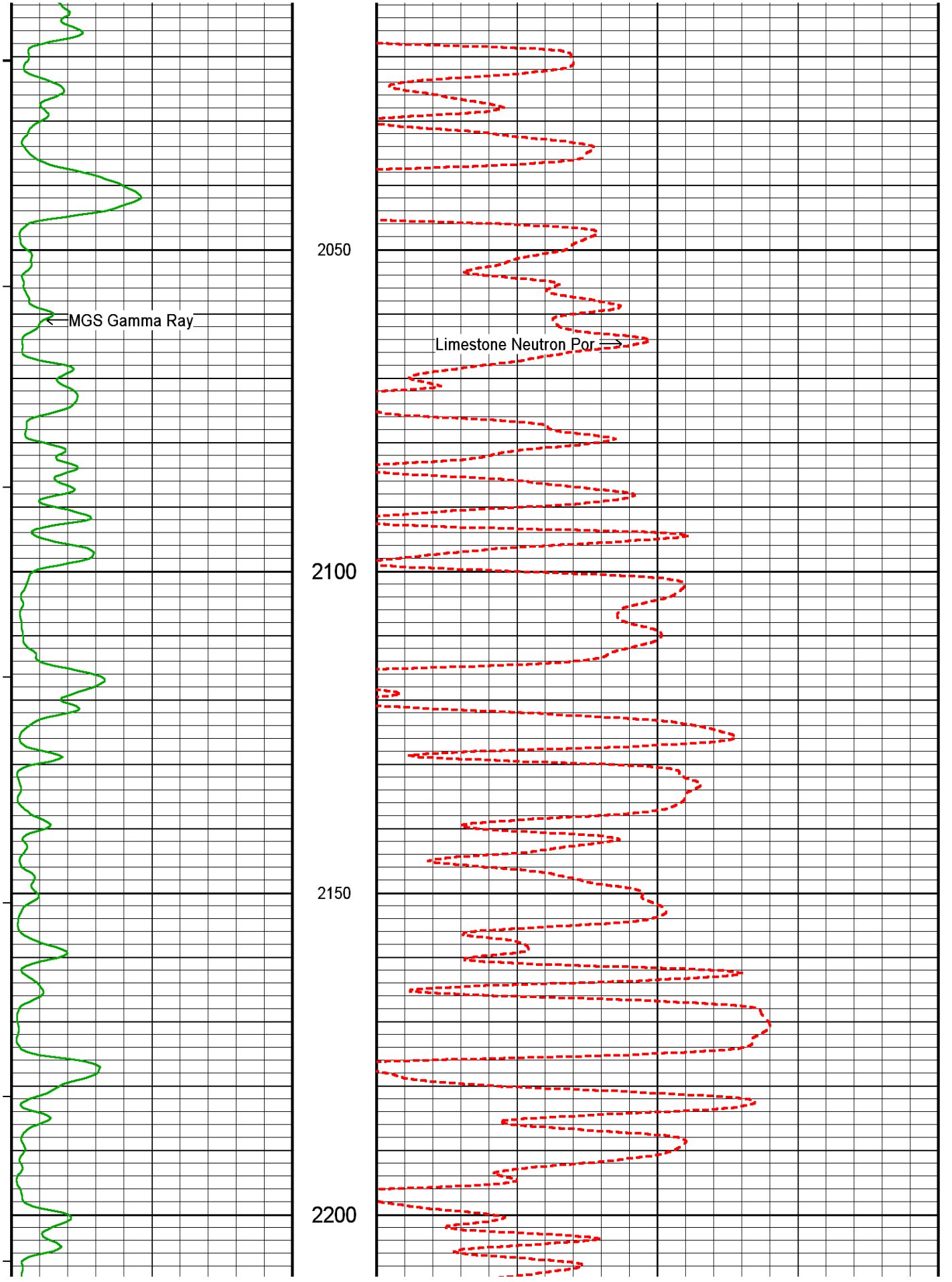
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Limestone Neutron Por
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2150
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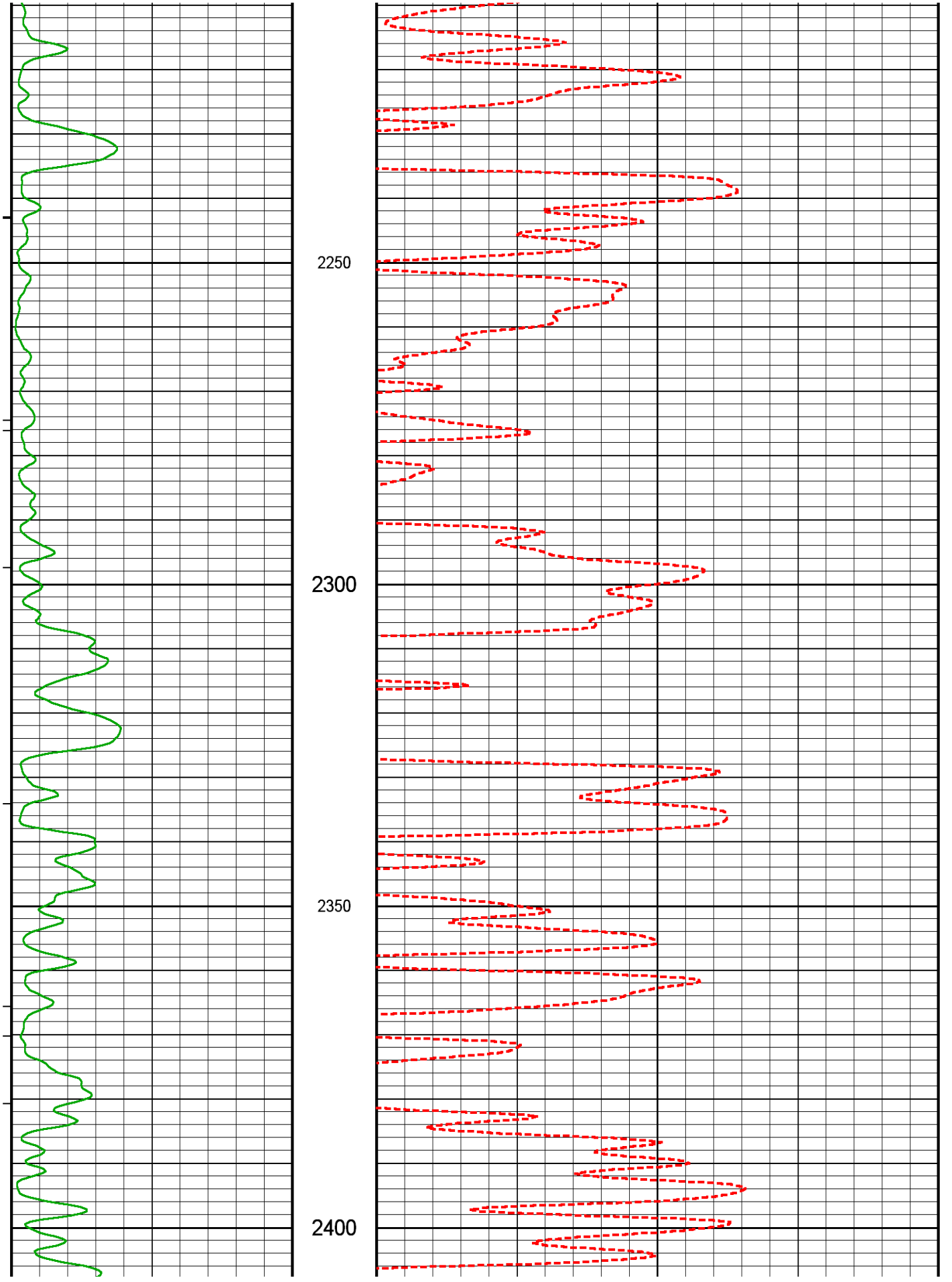
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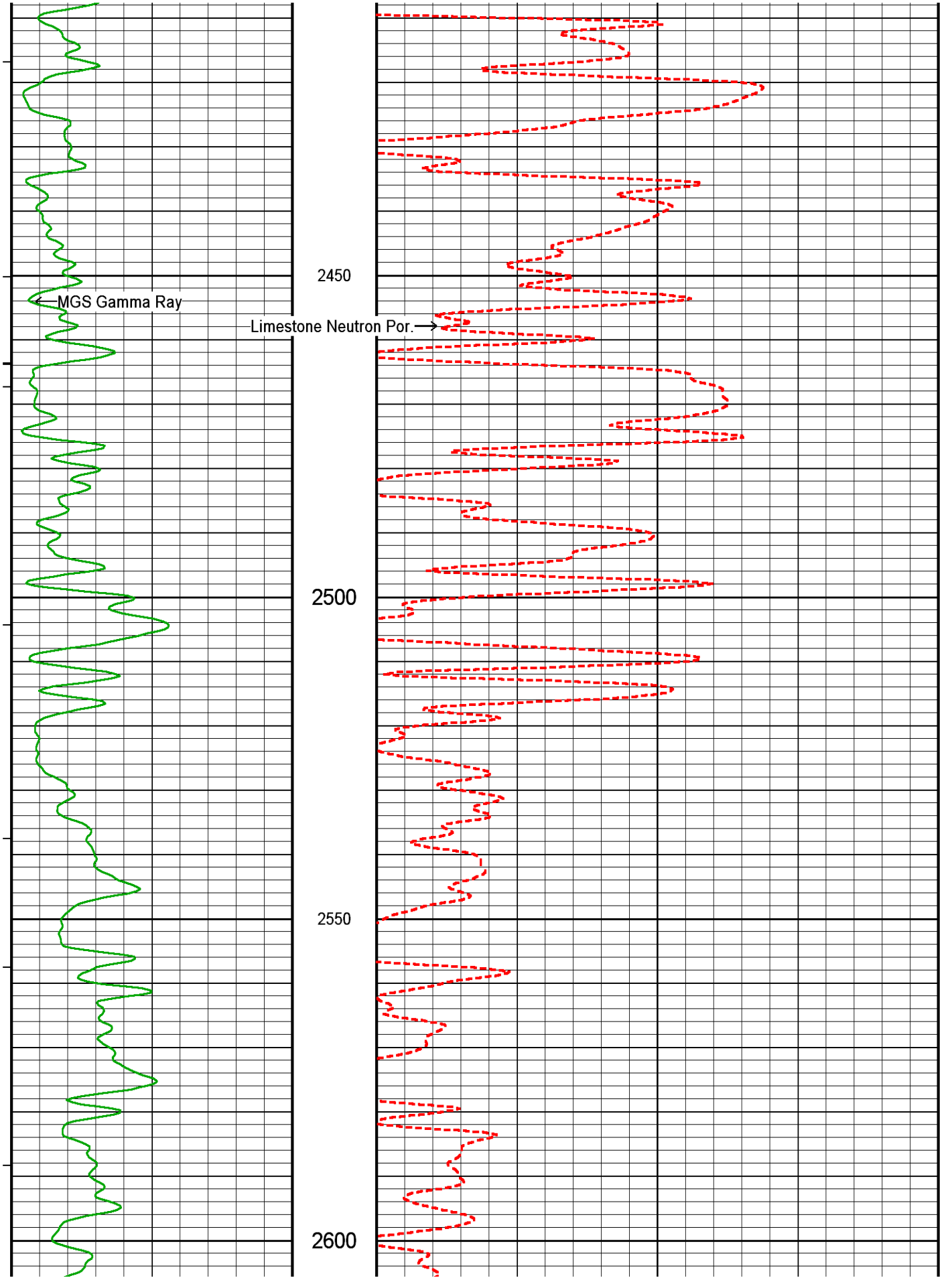
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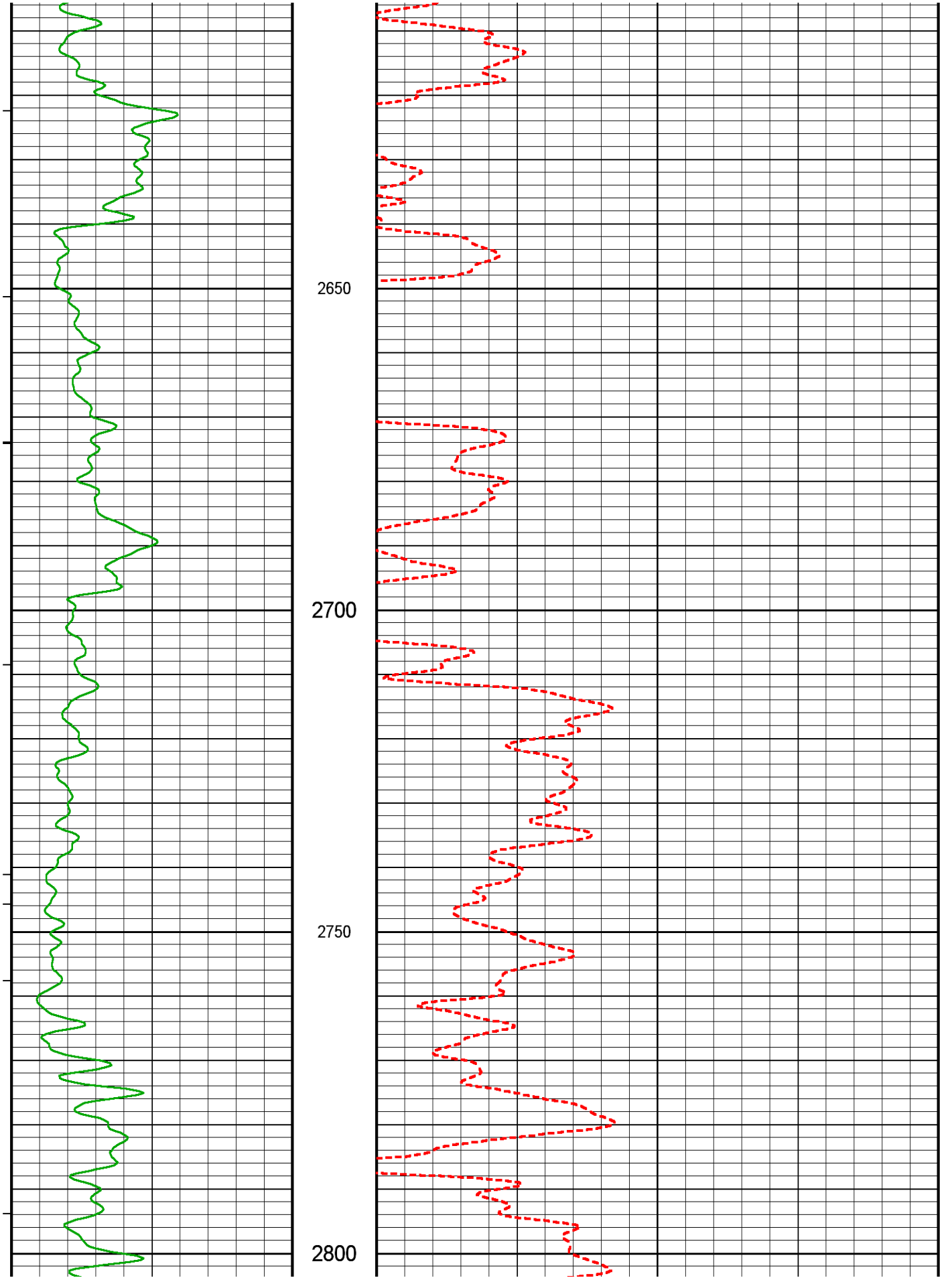
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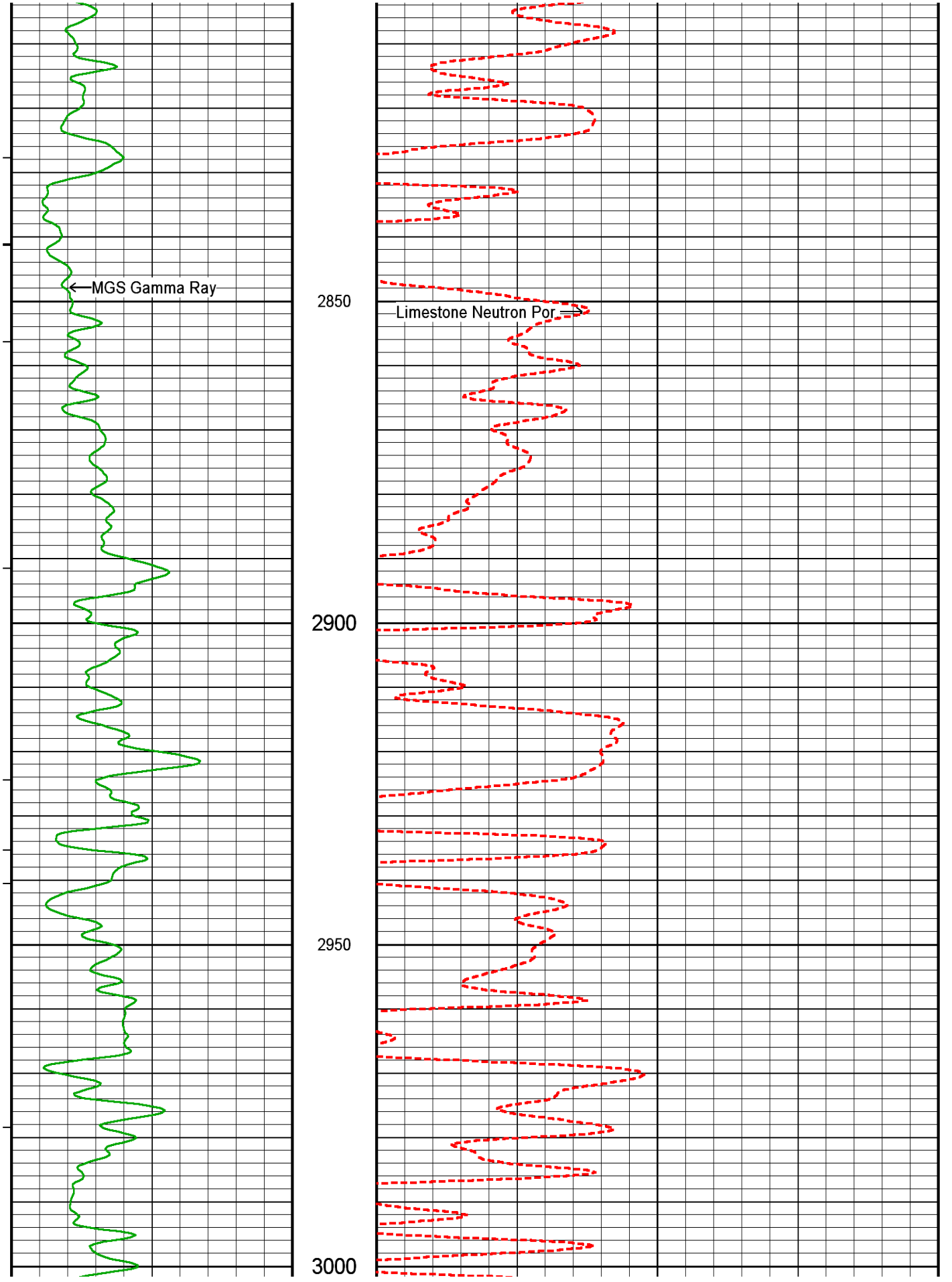
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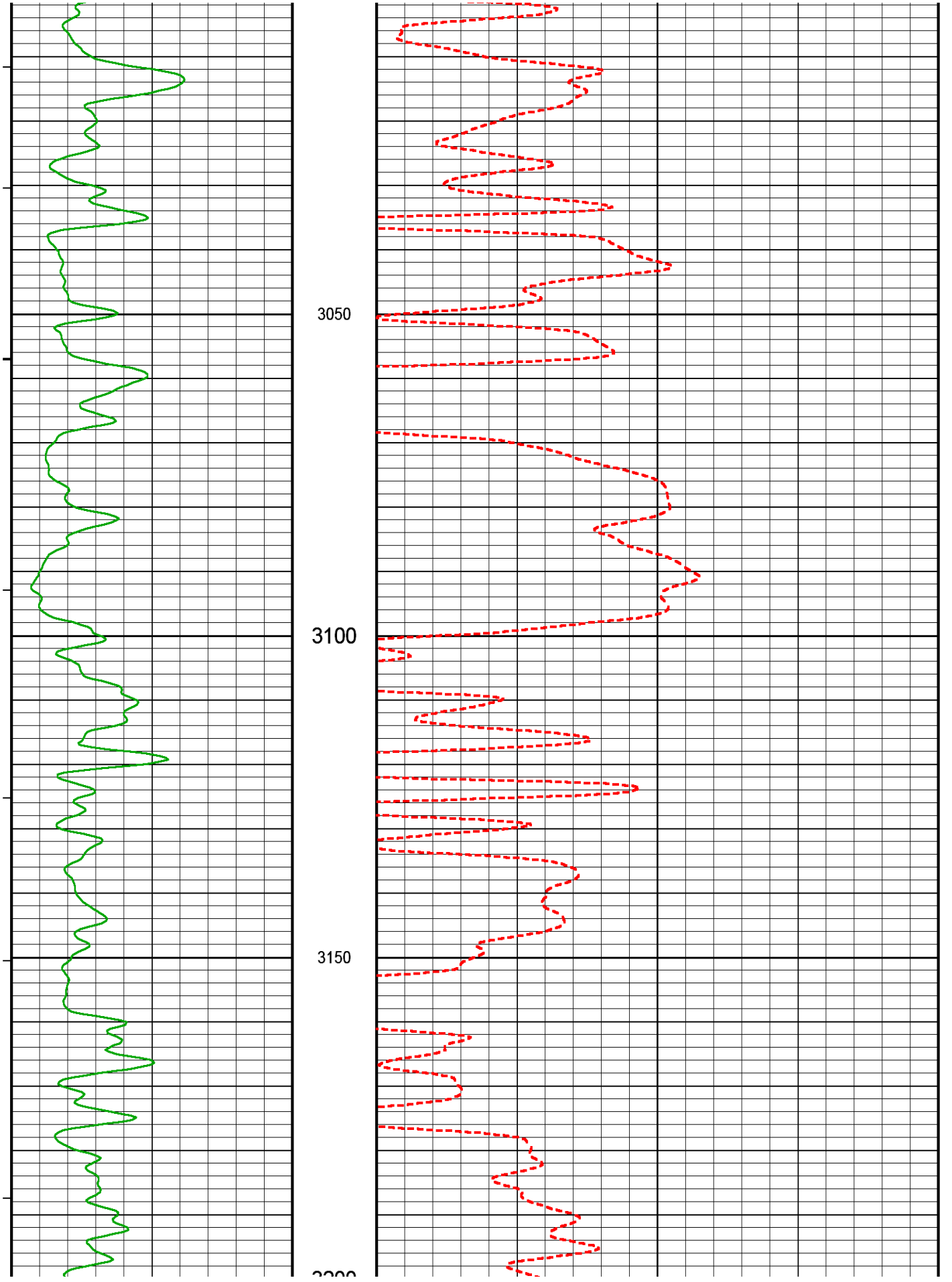
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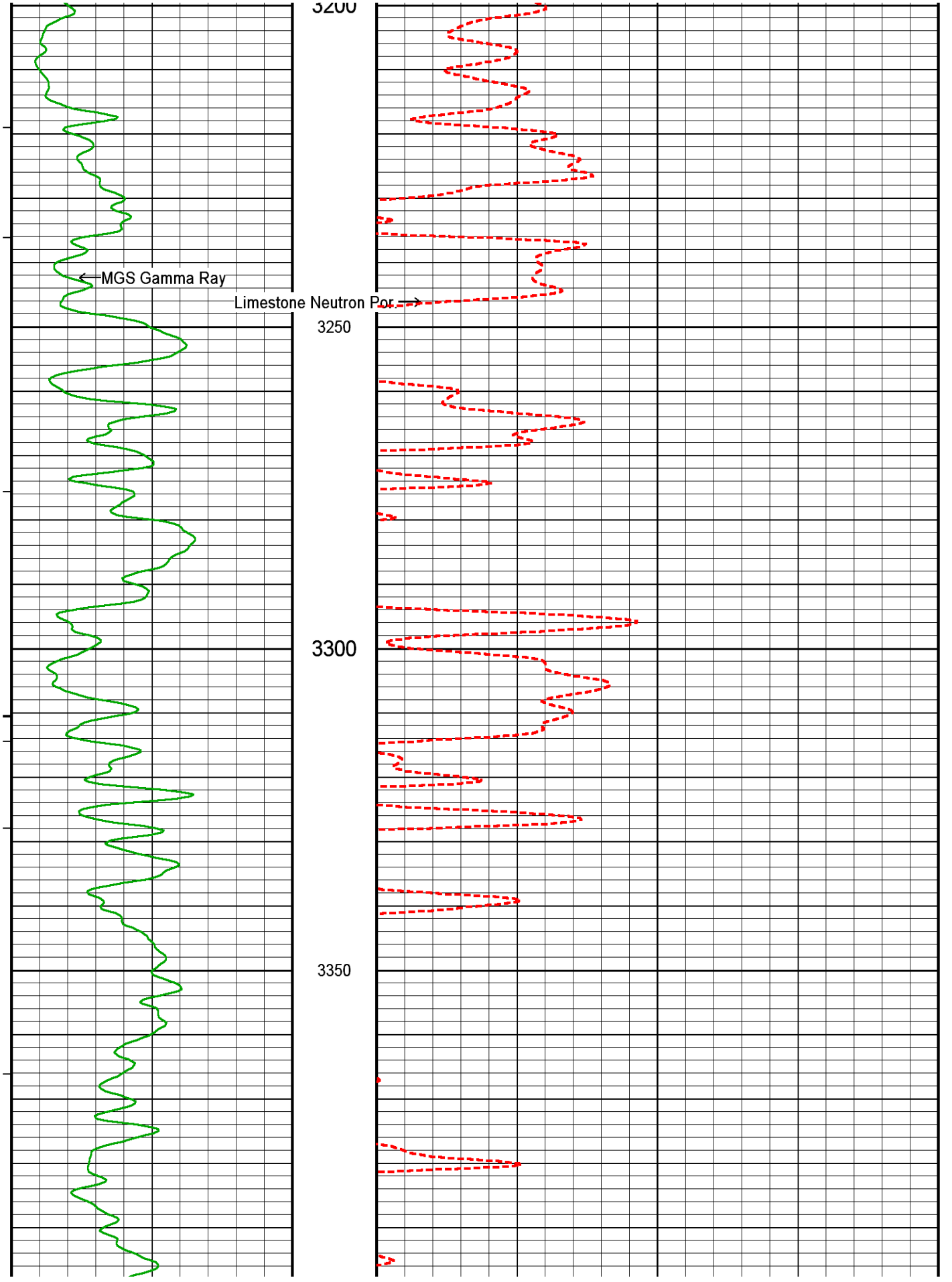
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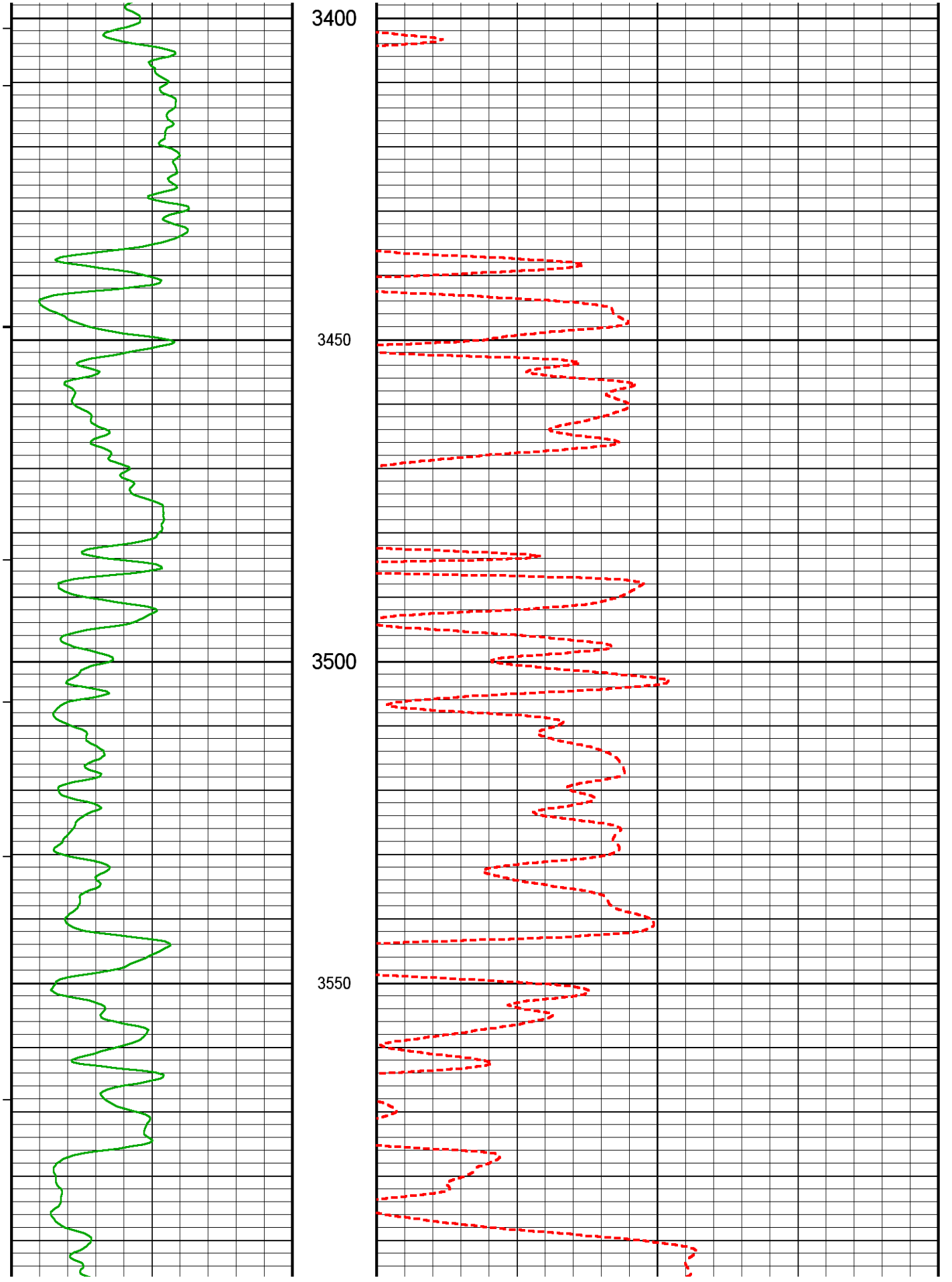
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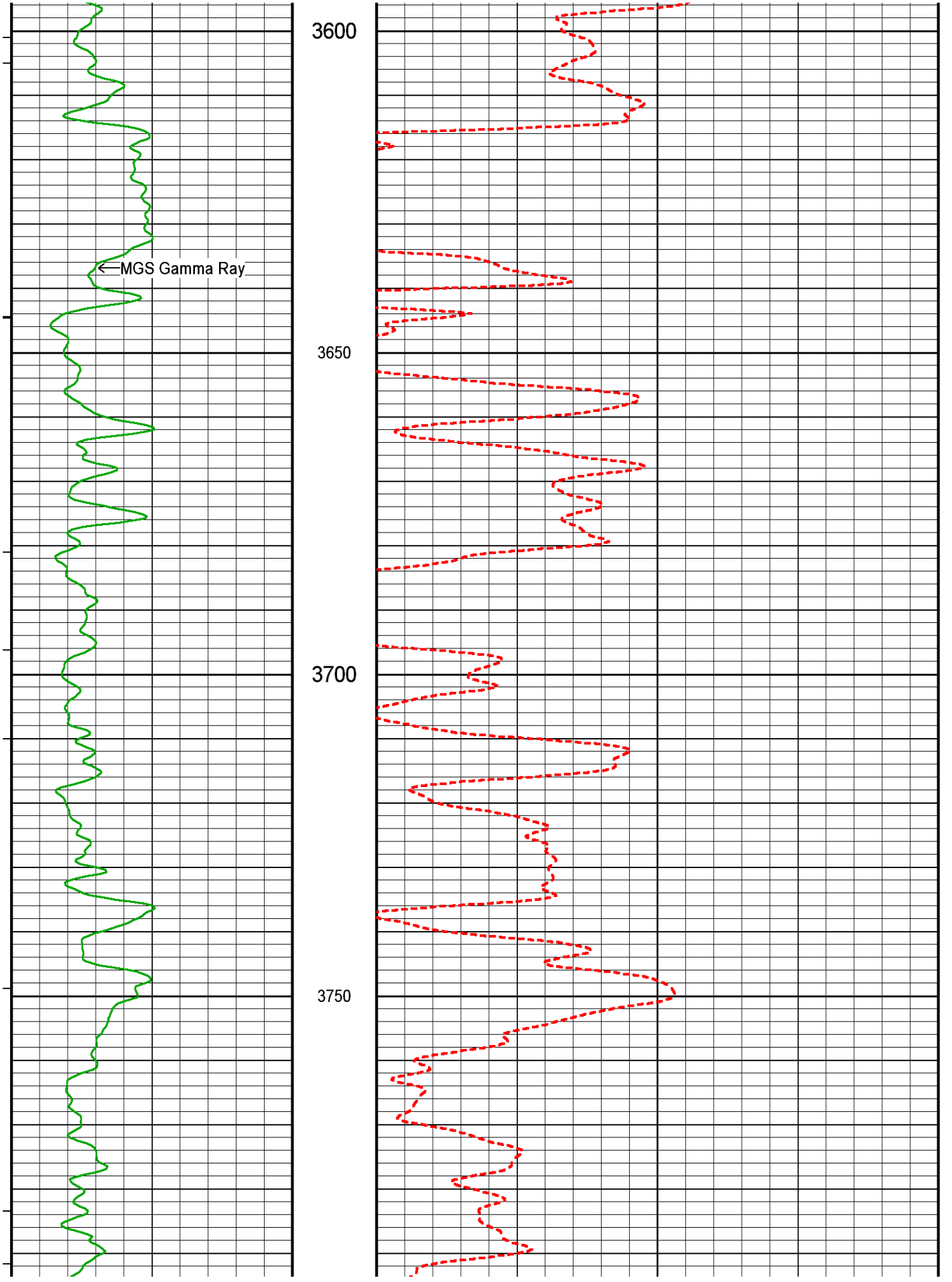
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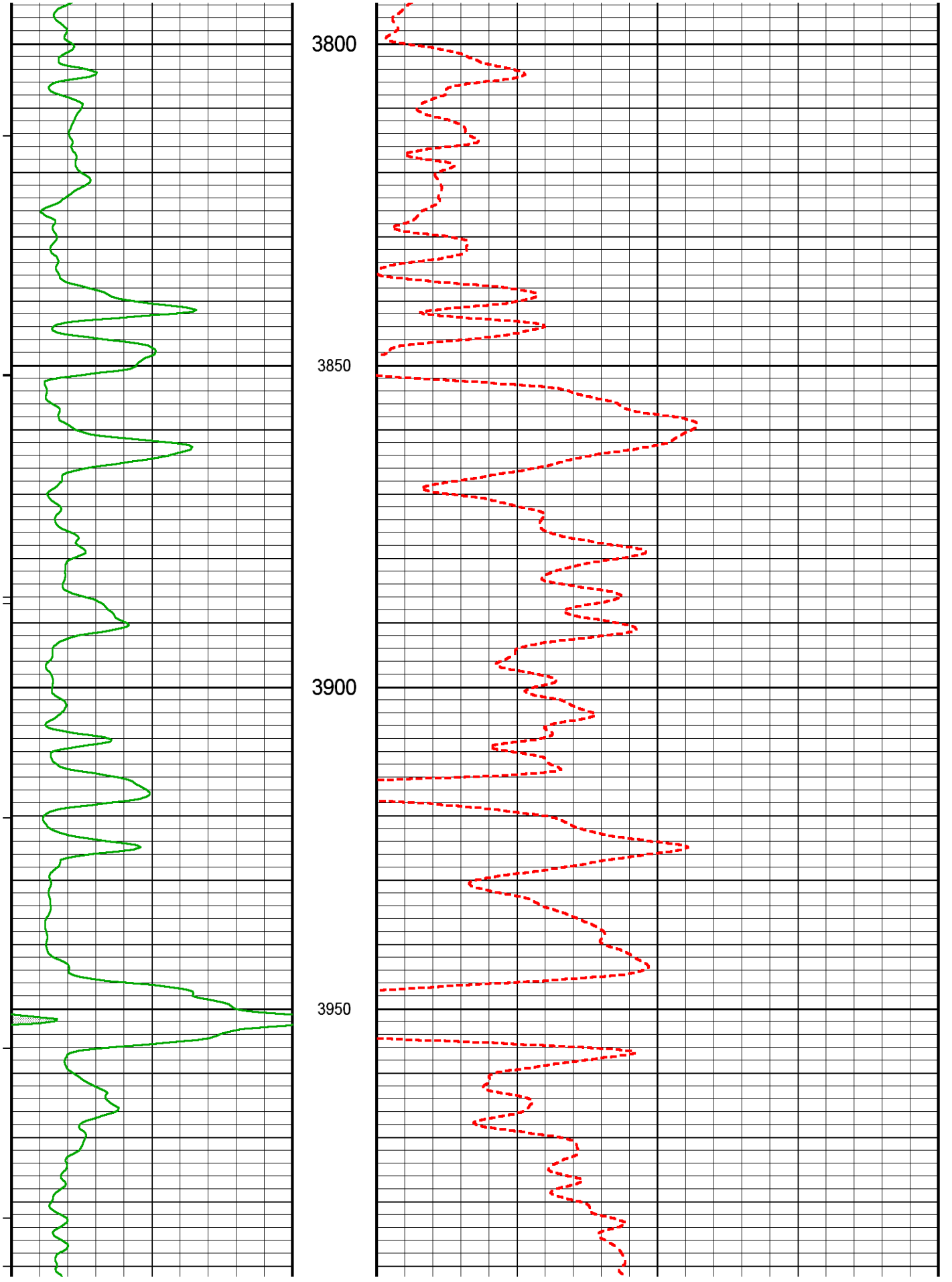
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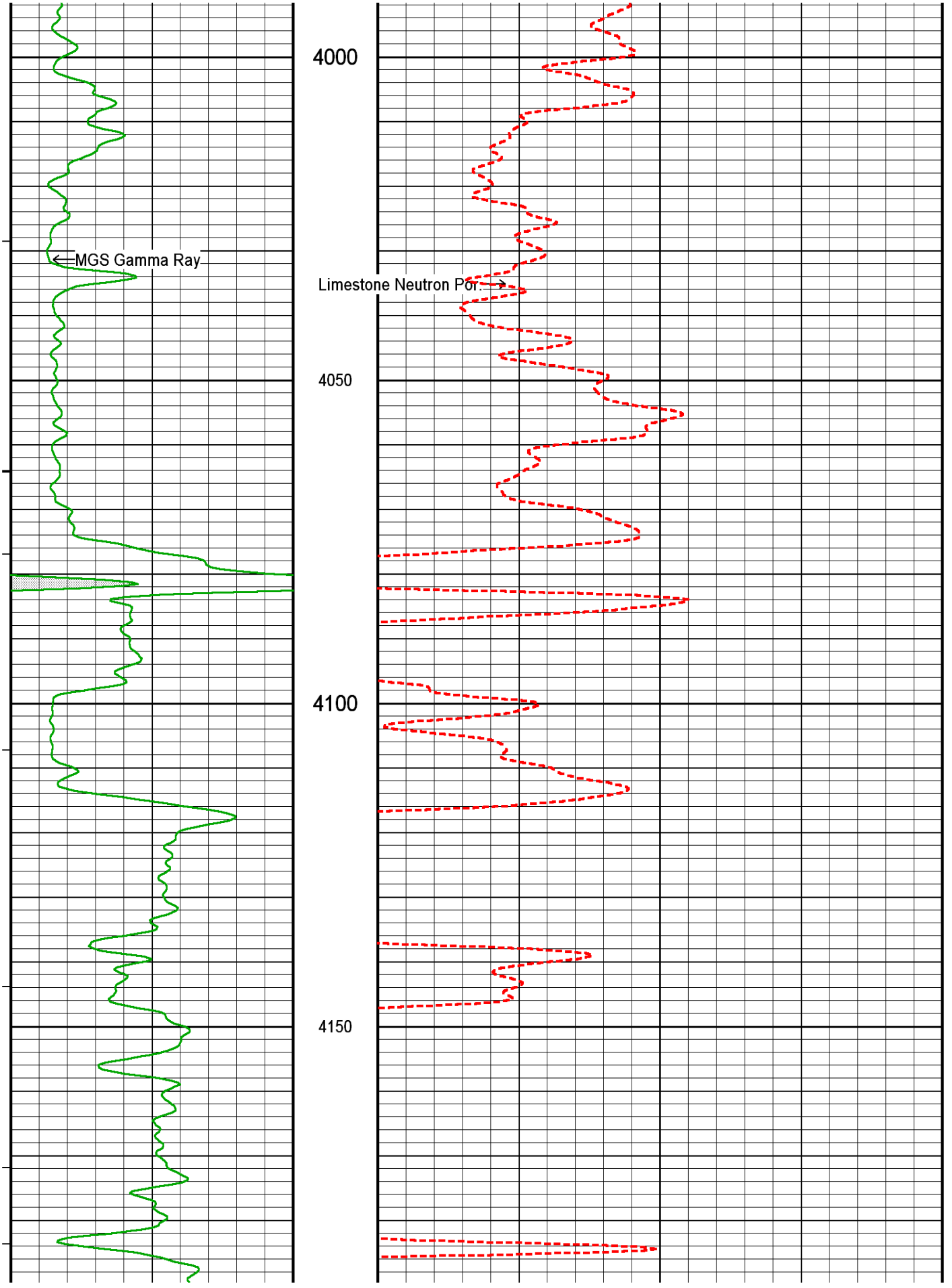
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Limestone Neutron Por.
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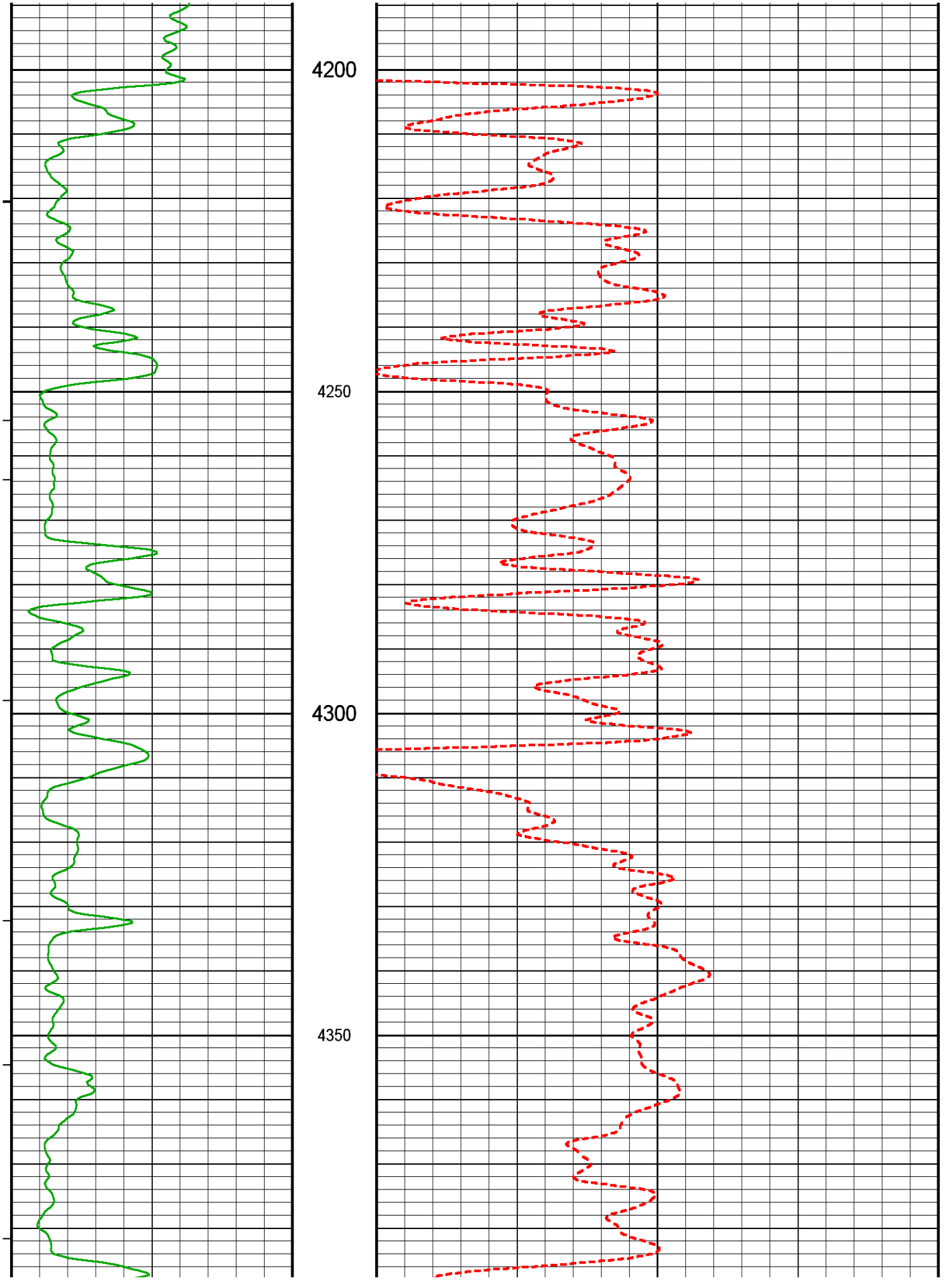
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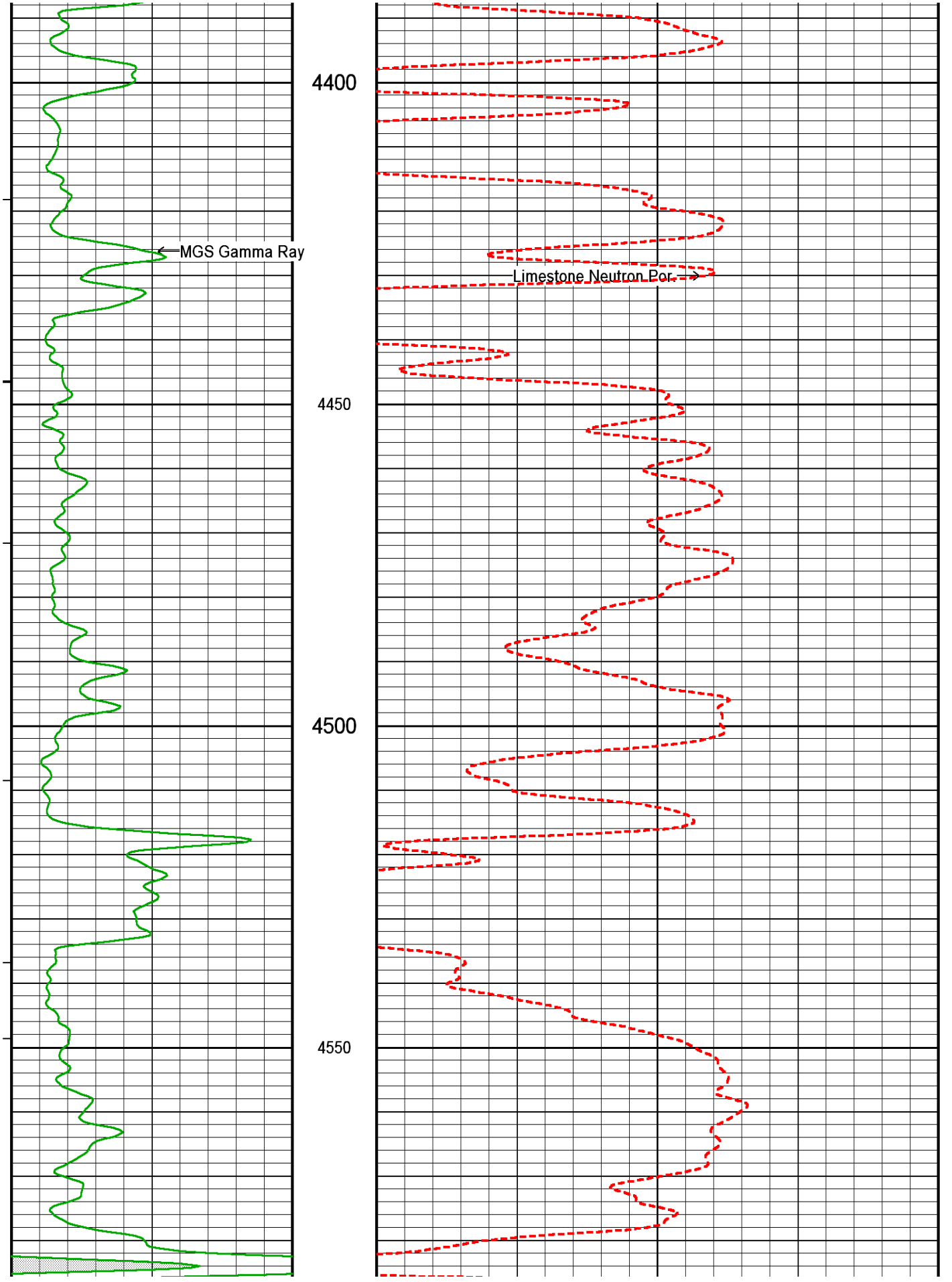
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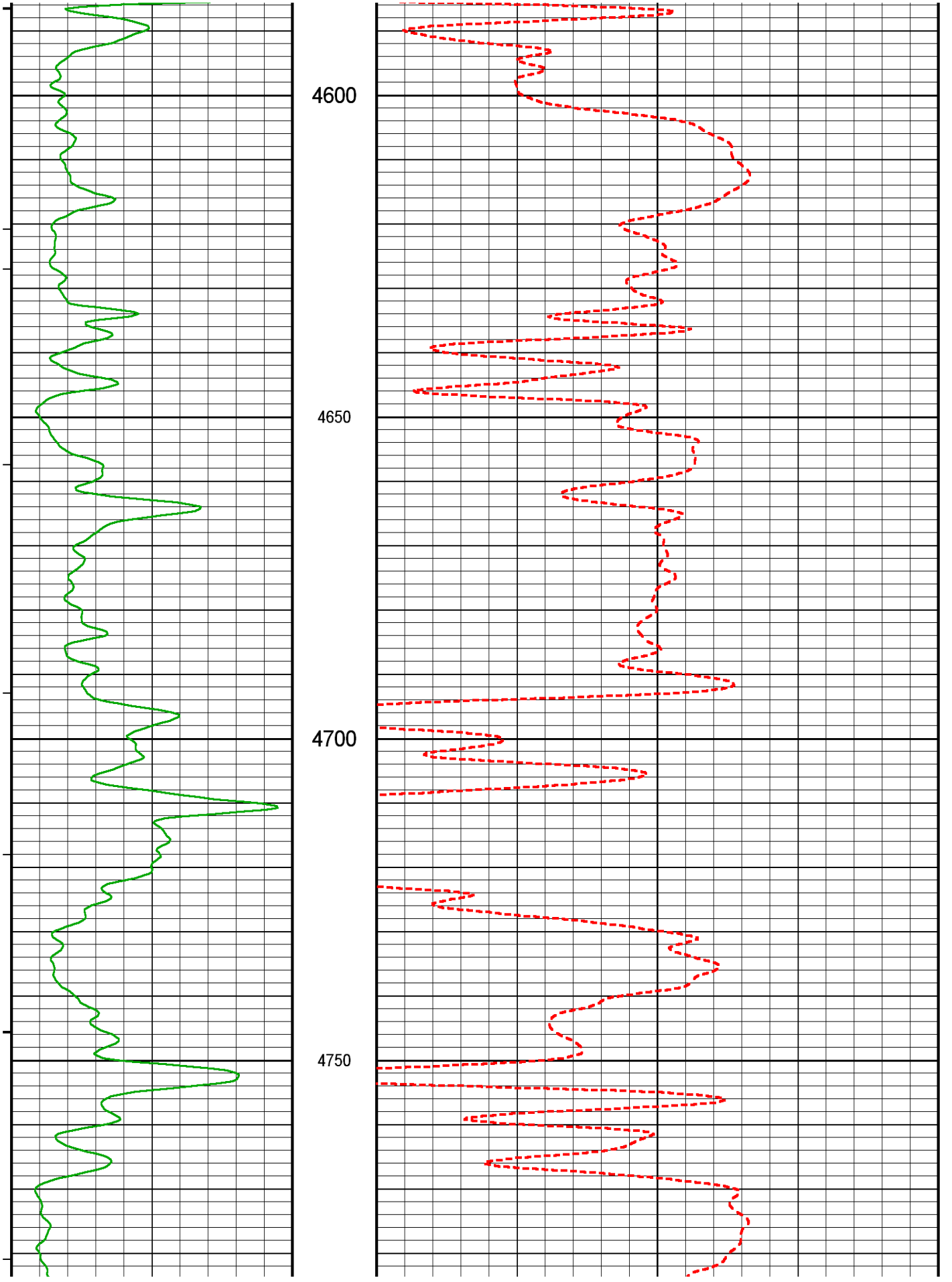
Limestone Neutron Por.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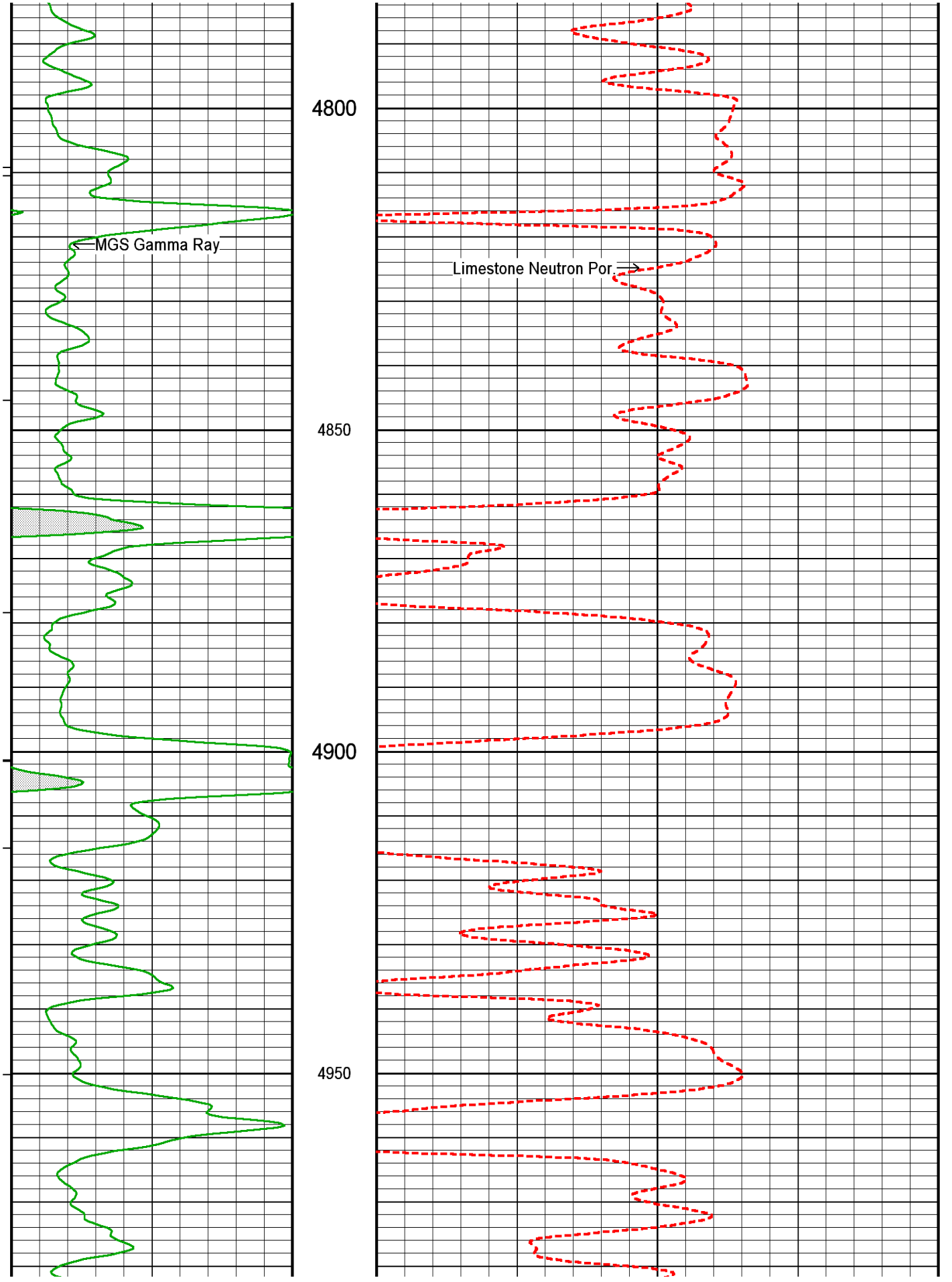
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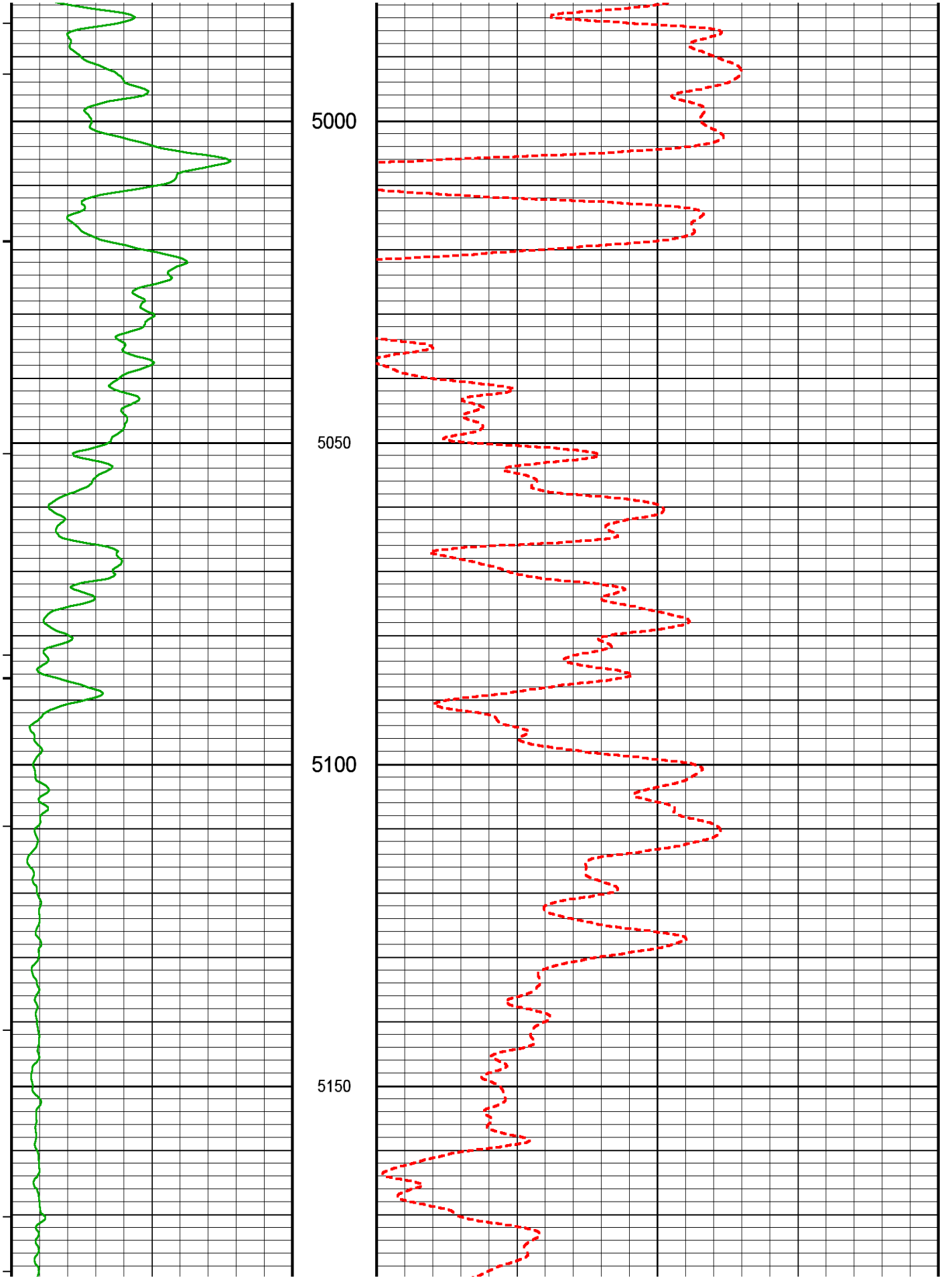
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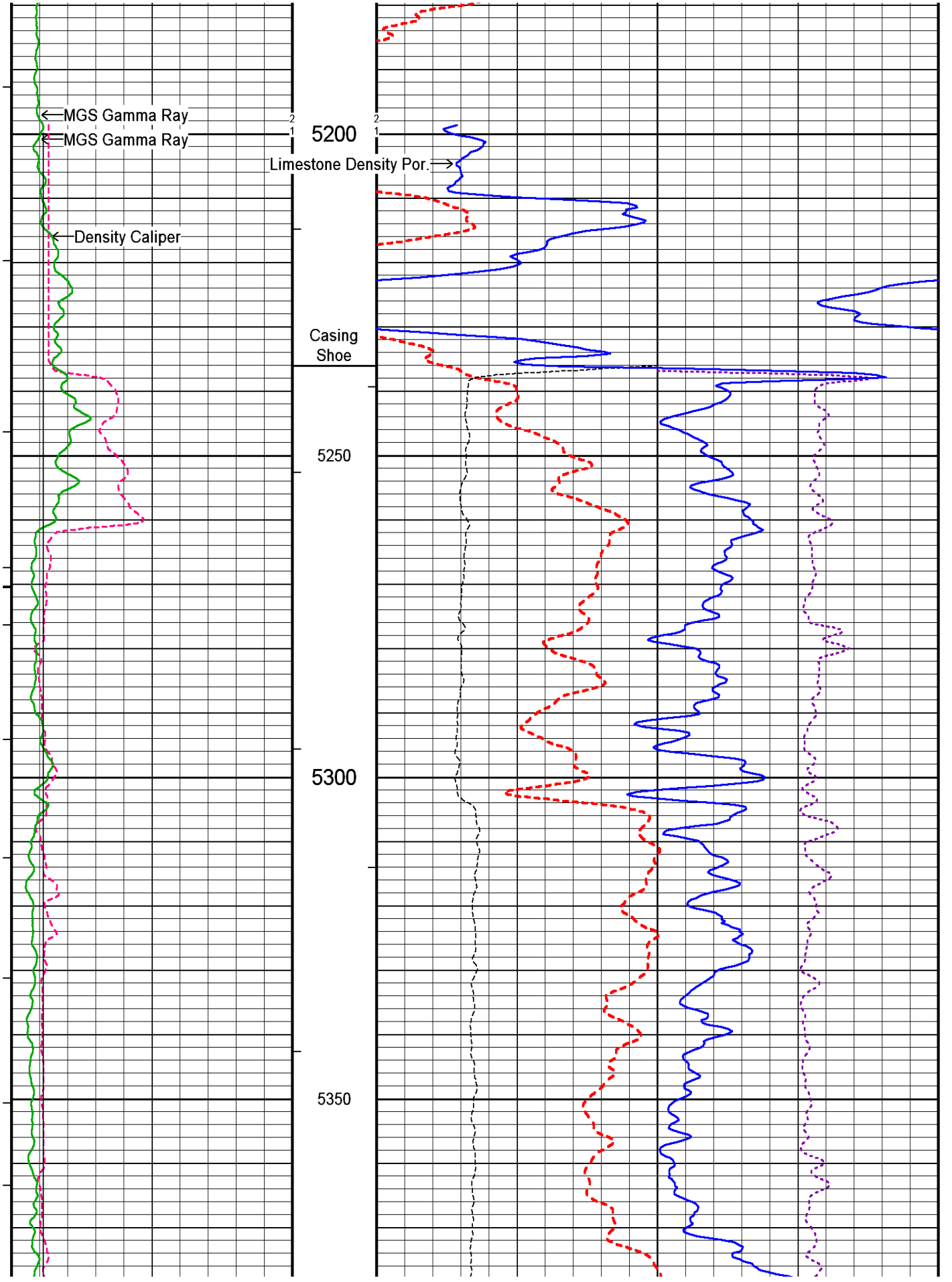
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1
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2
1
Casing
Shoe
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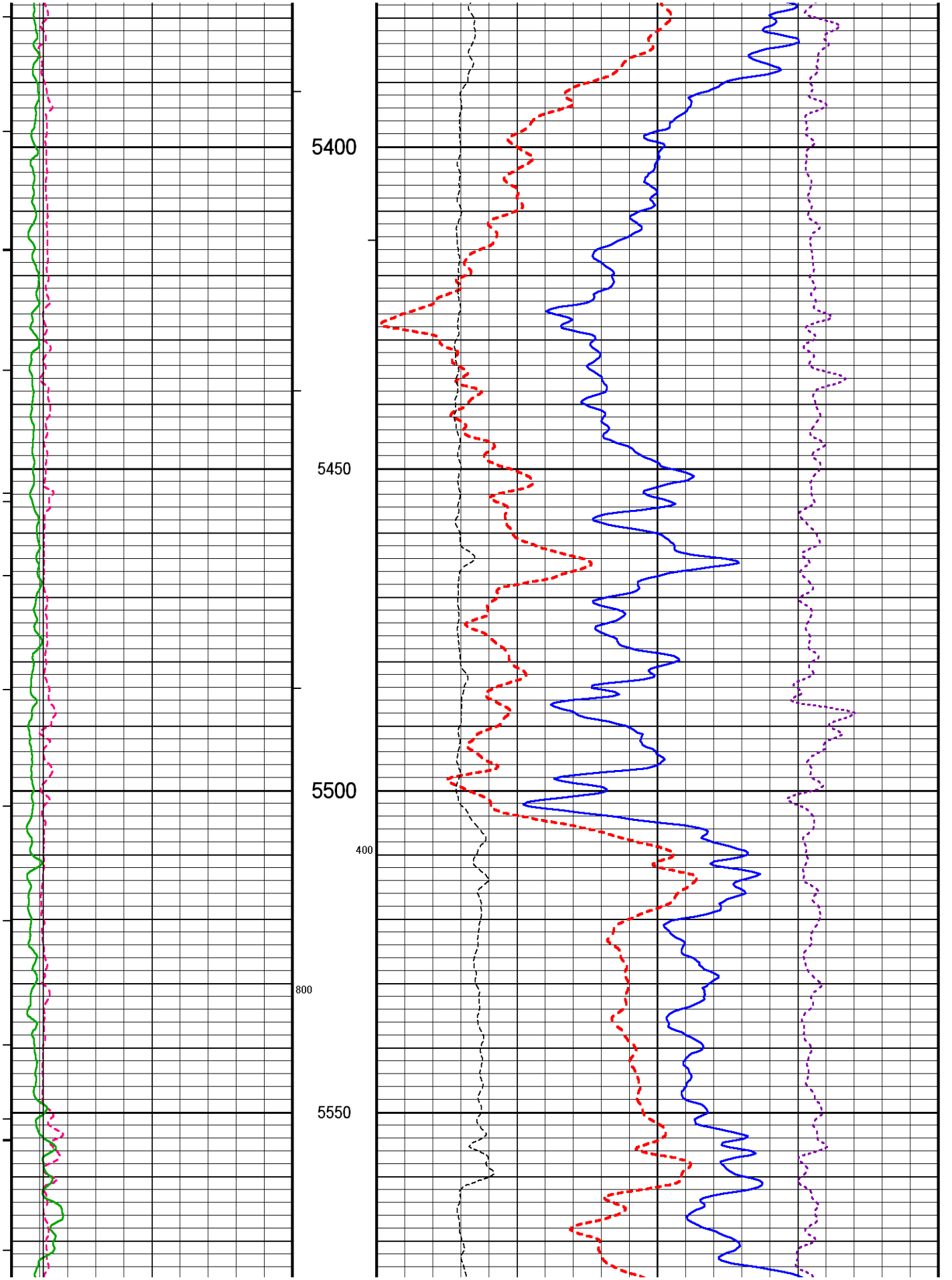
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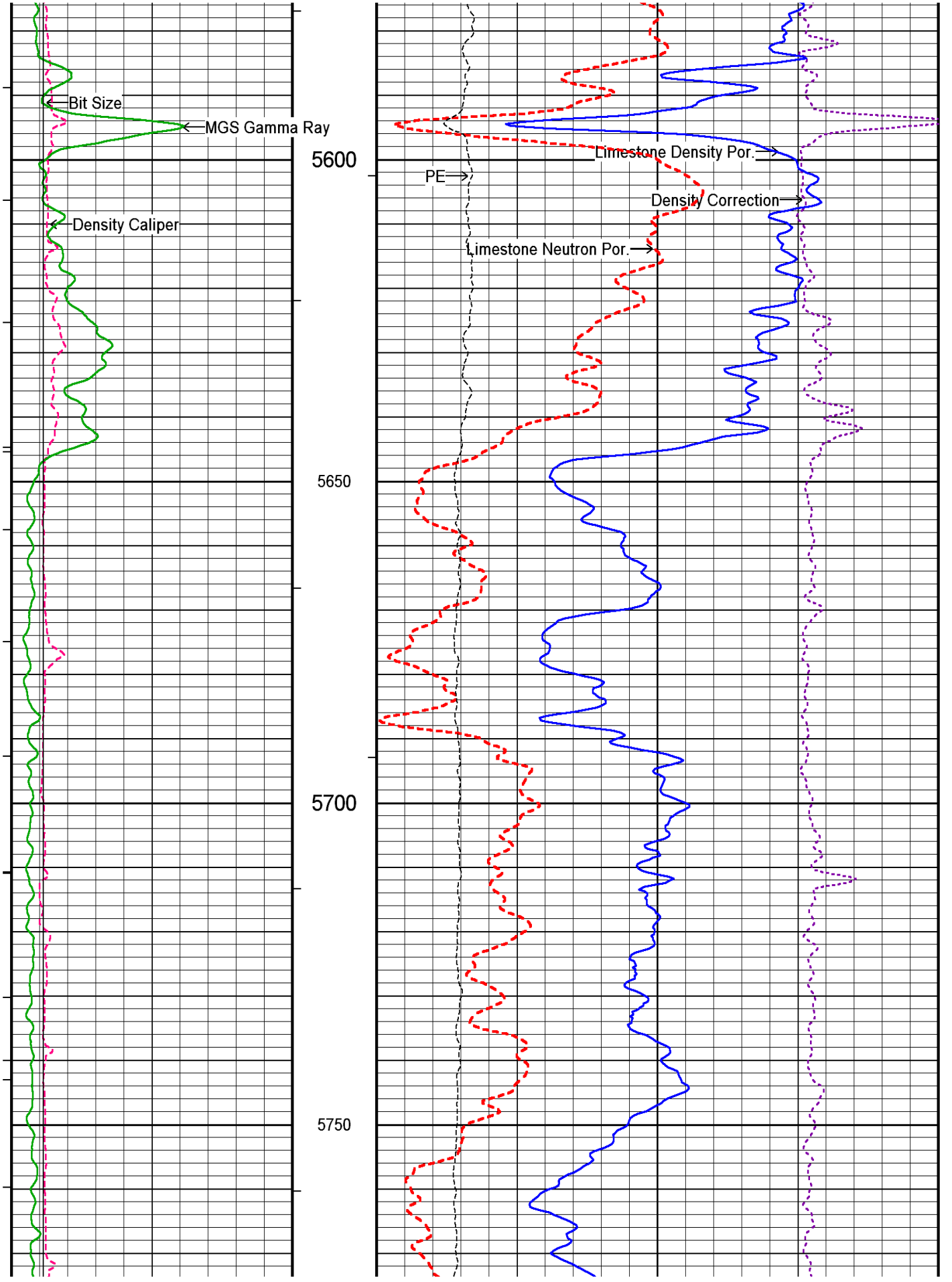
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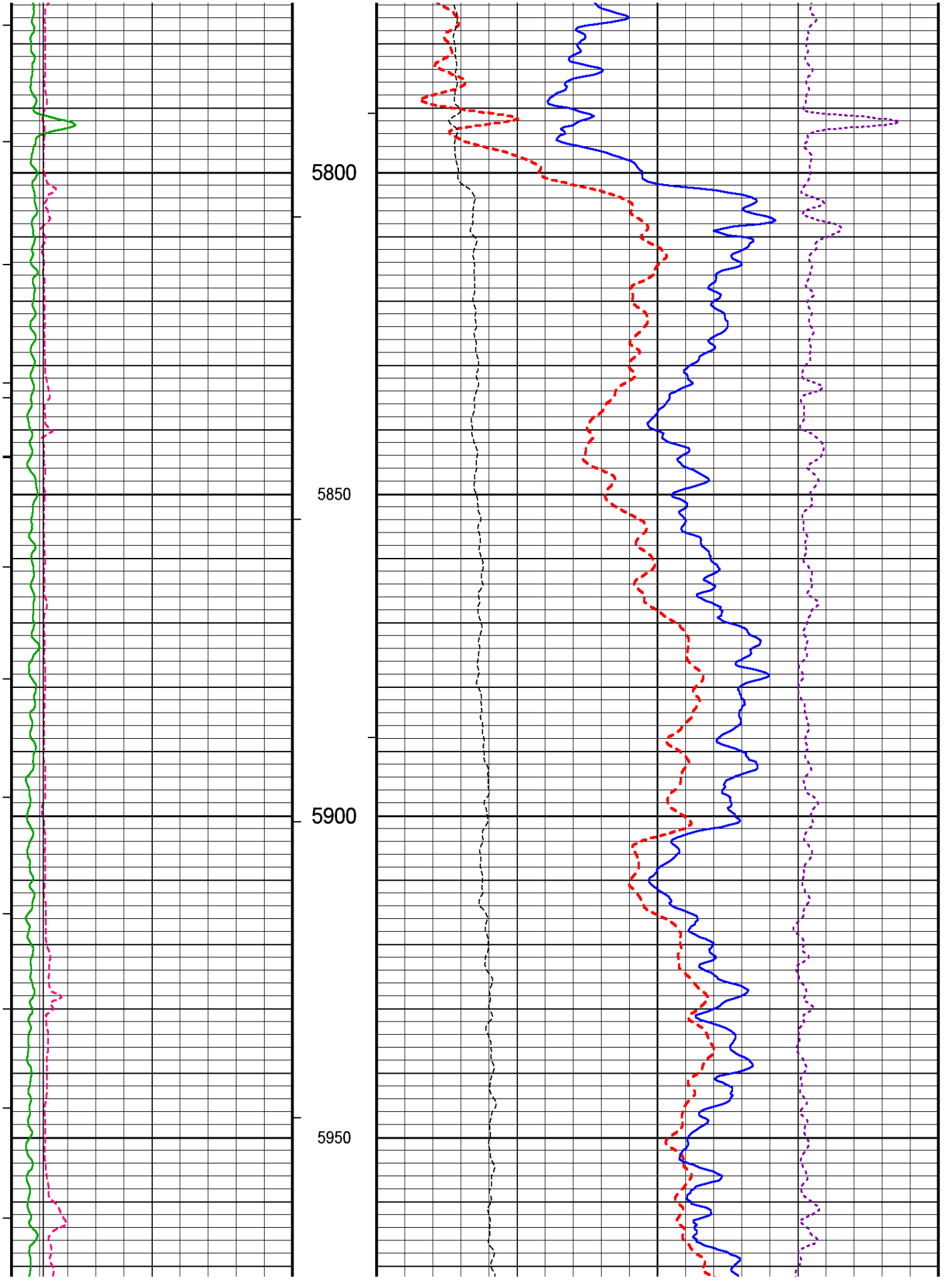
Limestone Density Por.
Density Correction
Limestone Neutron Por.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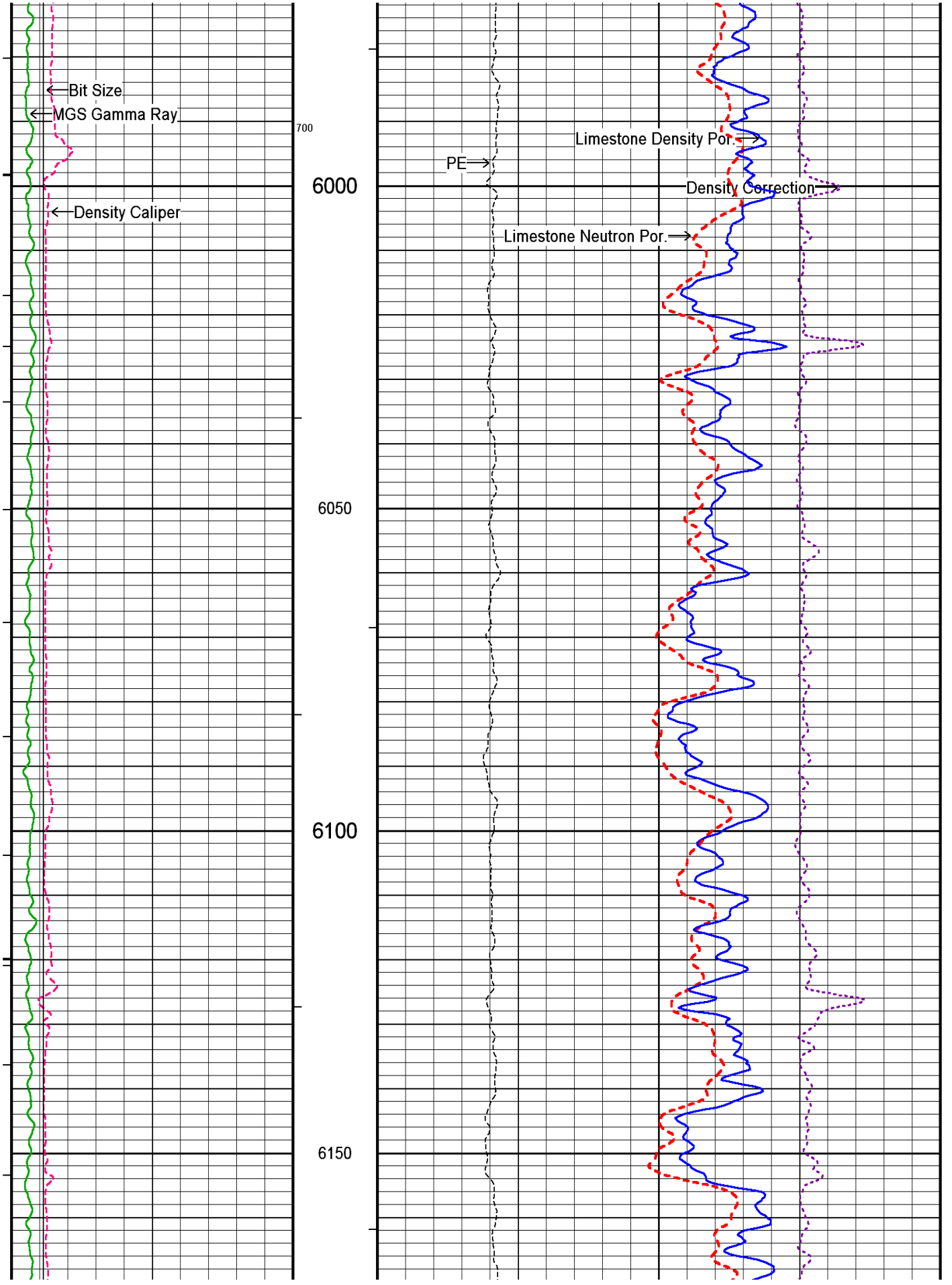
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PE
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Density Correction
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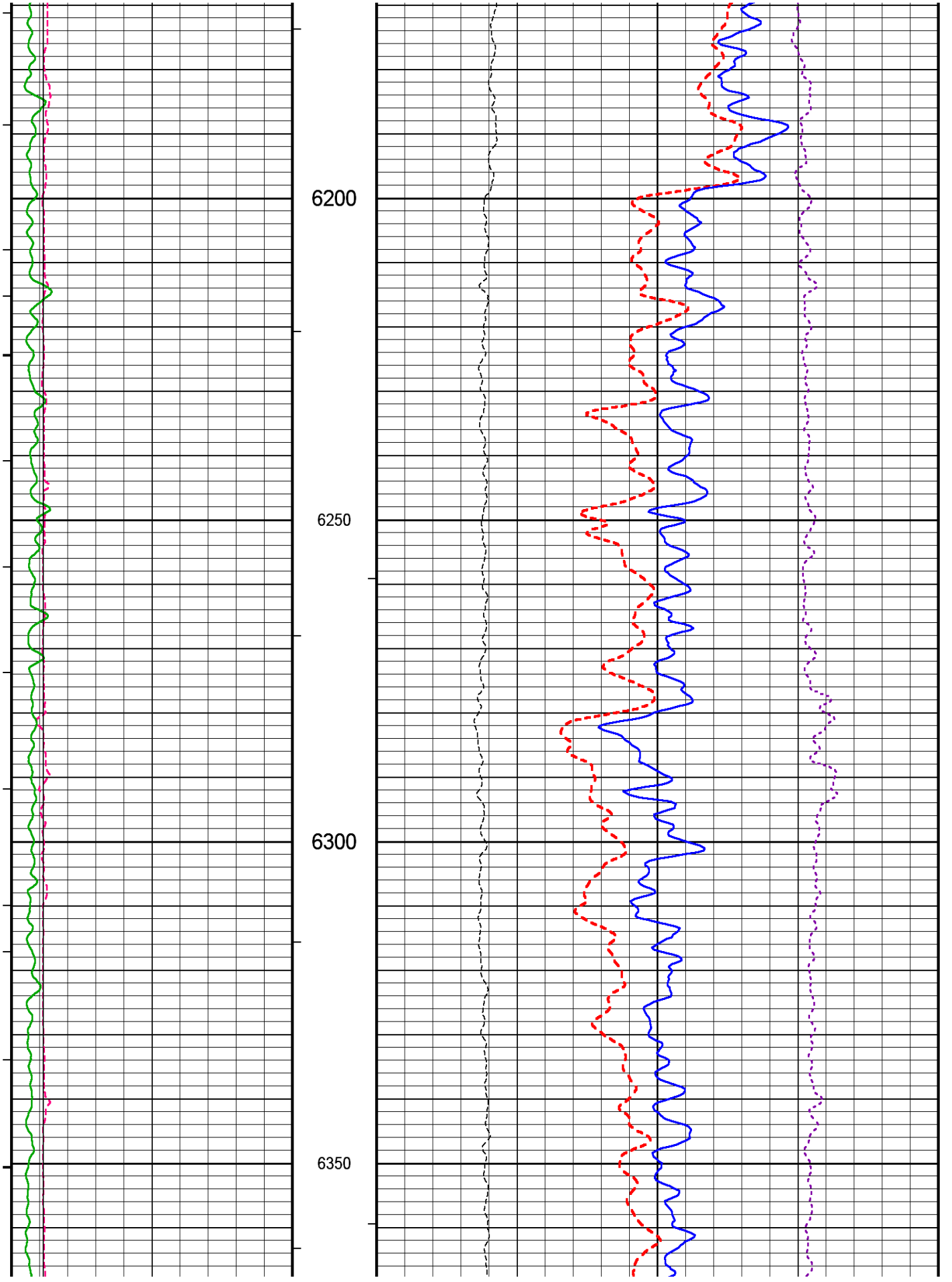
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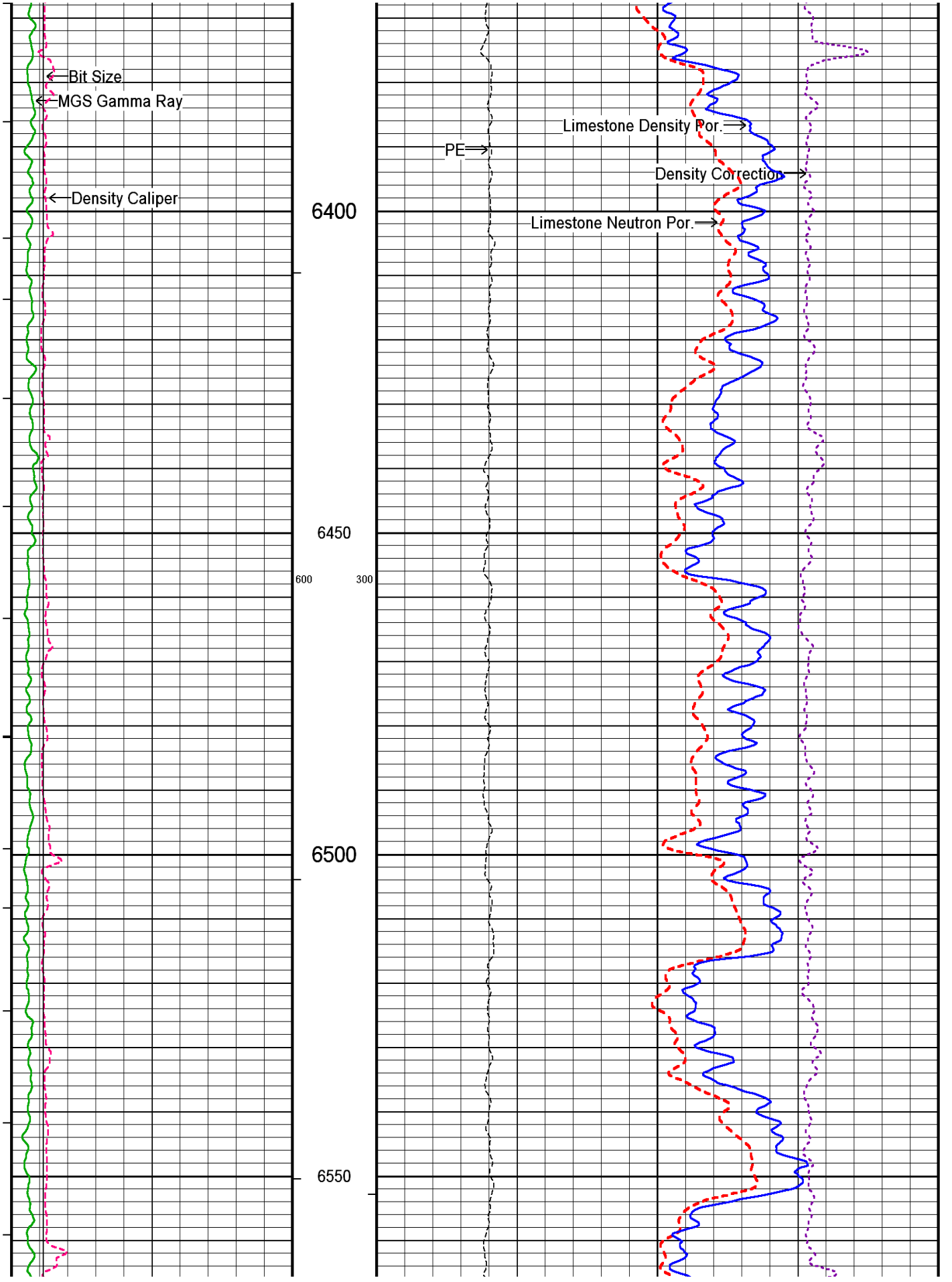
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Density Correction
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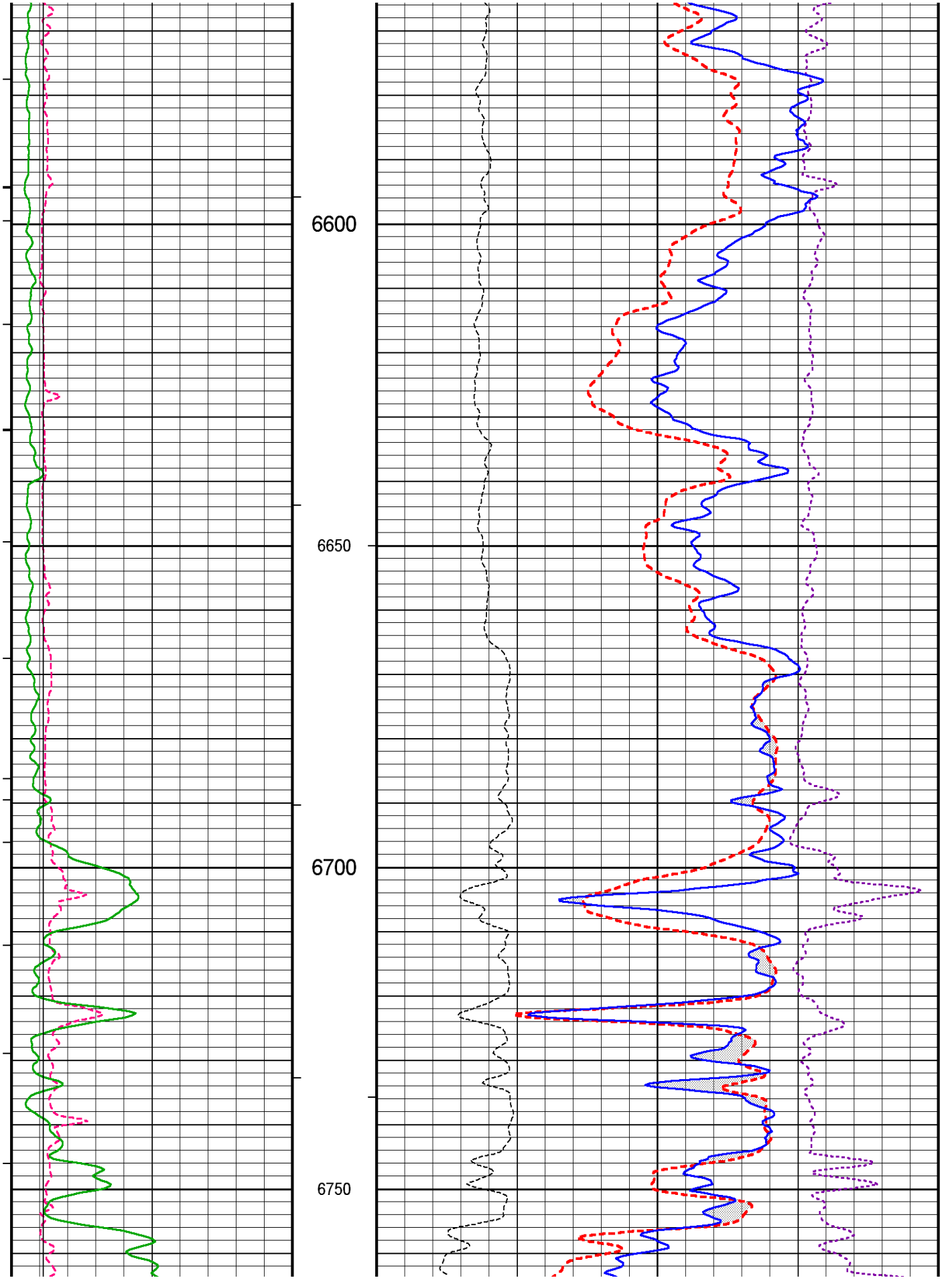
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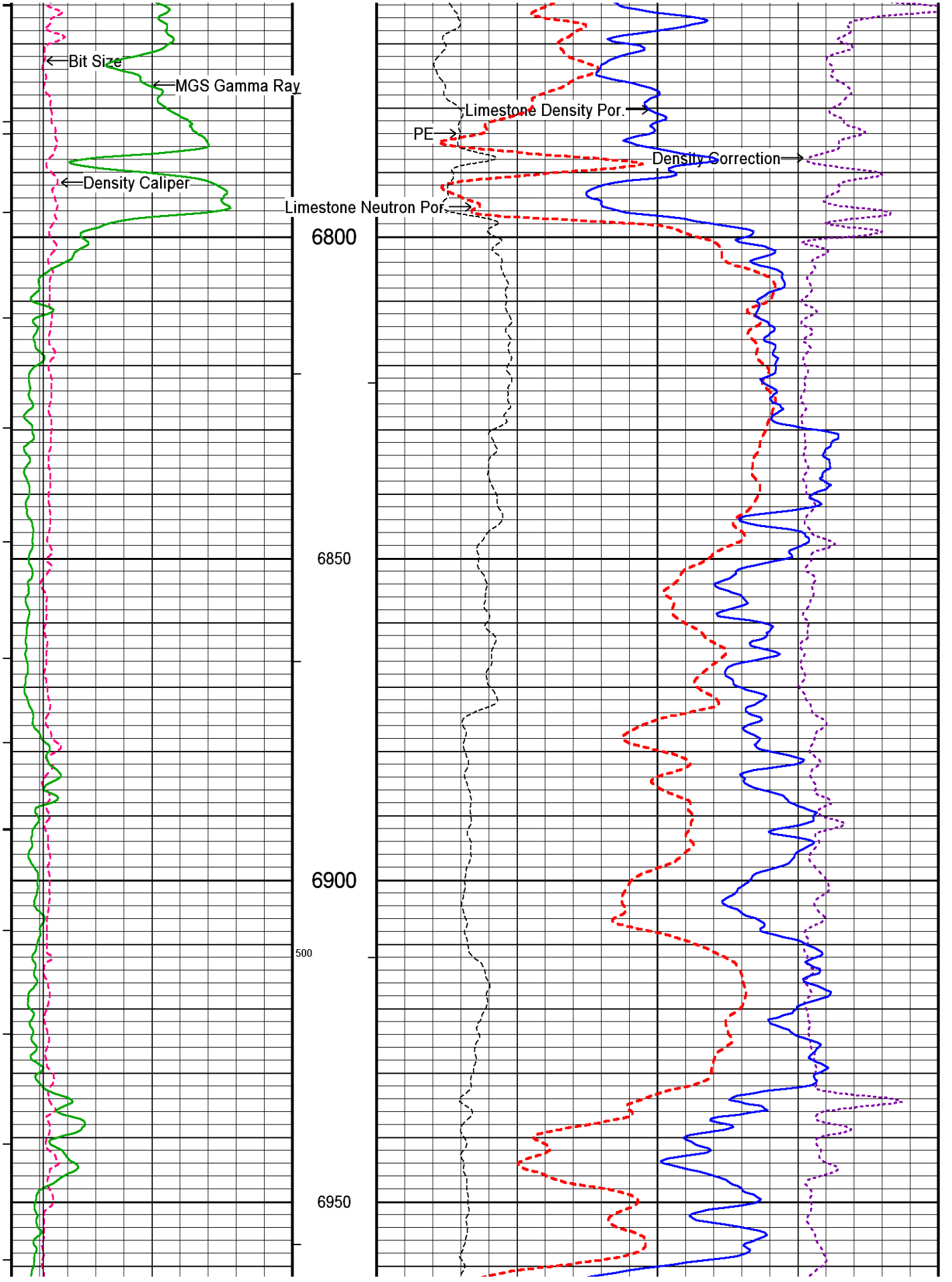
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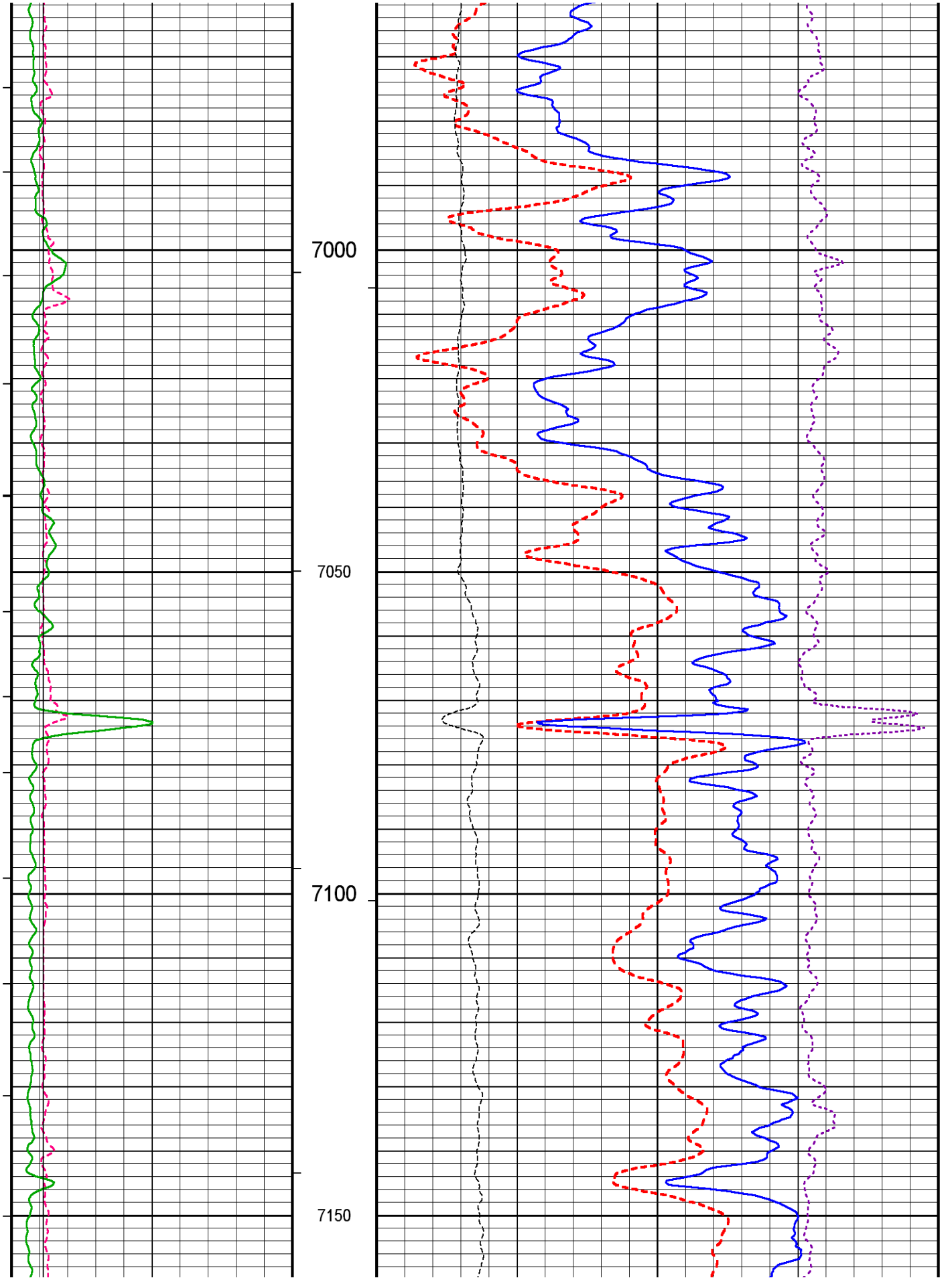
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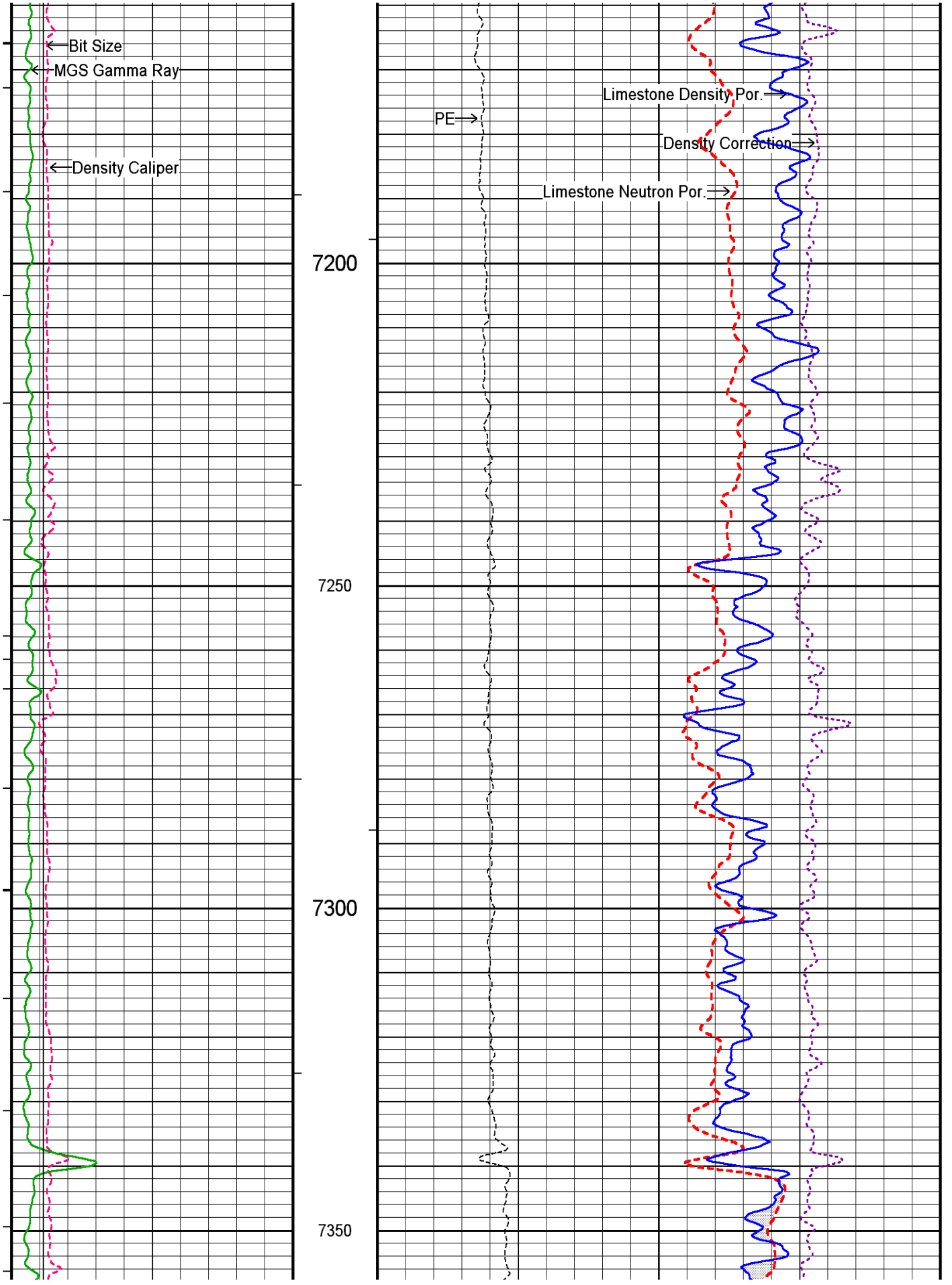
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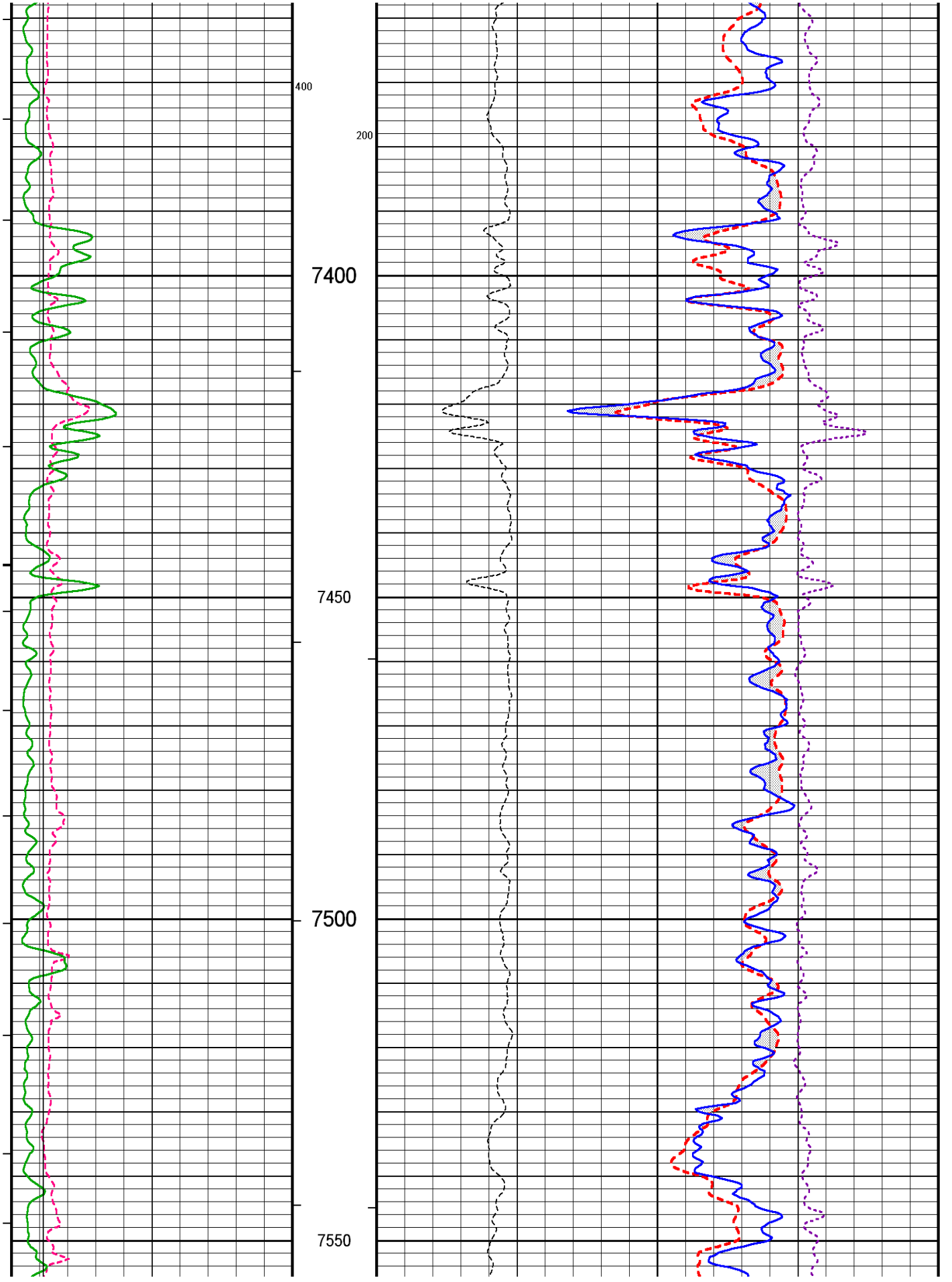
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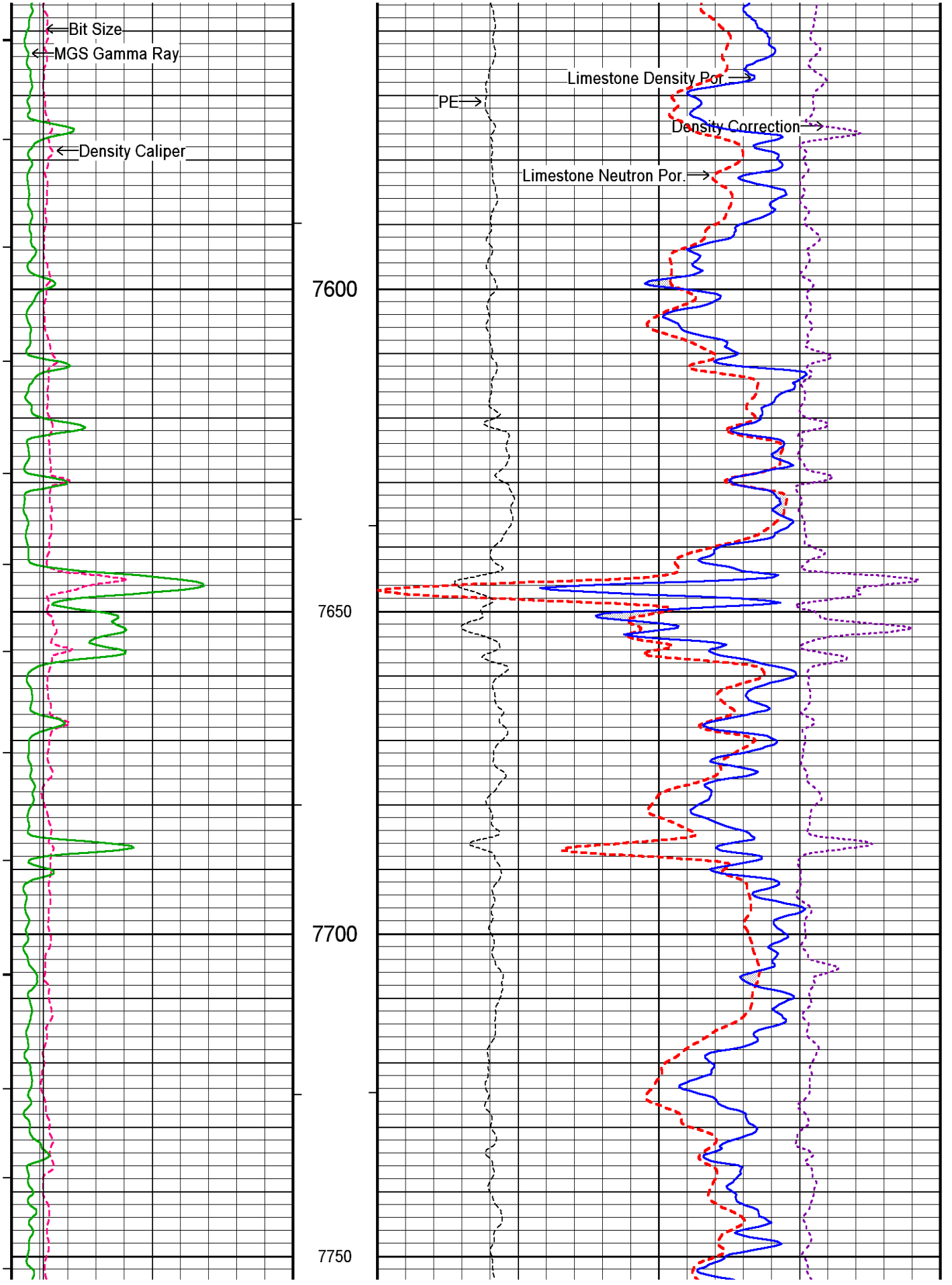
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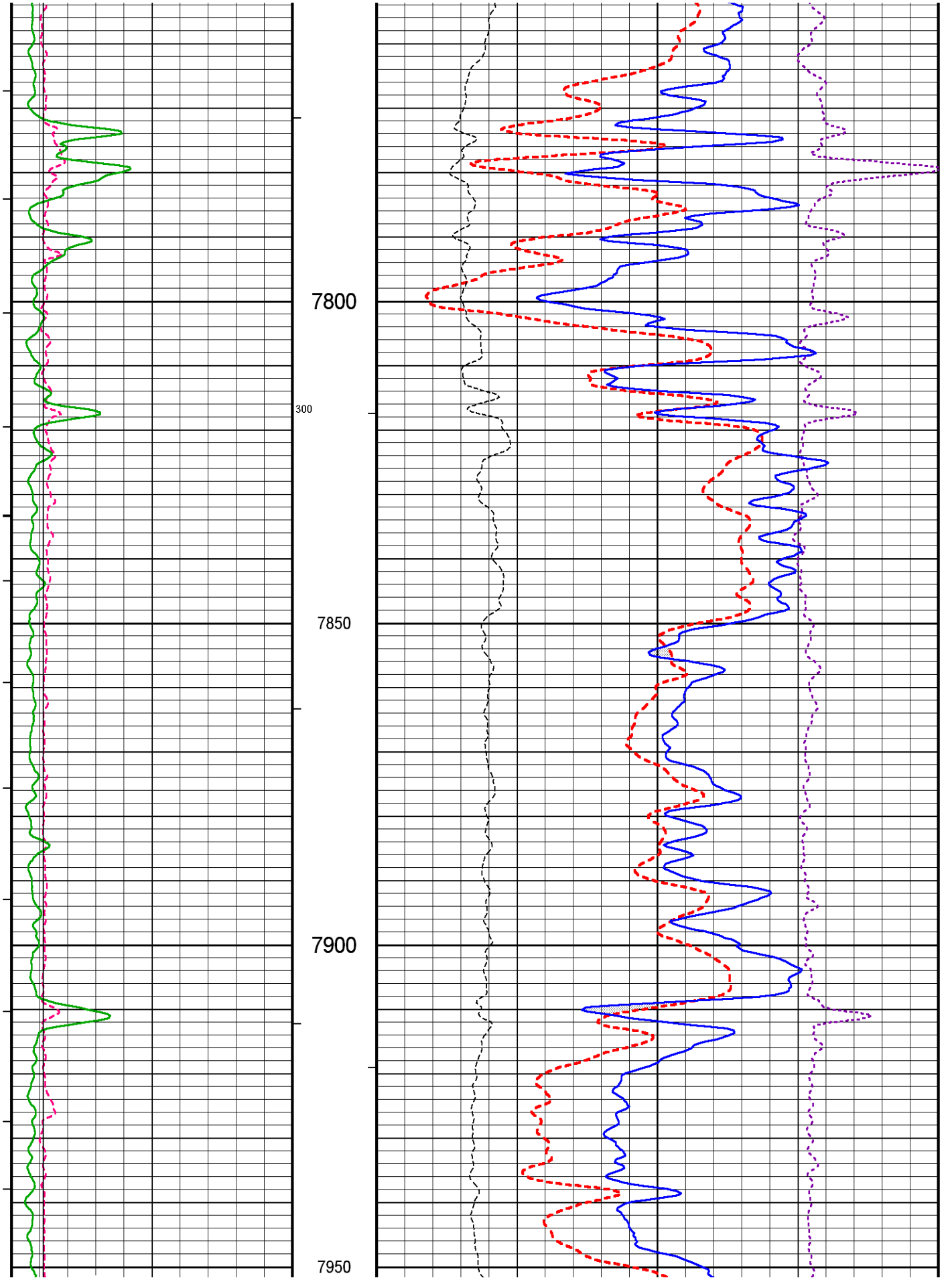
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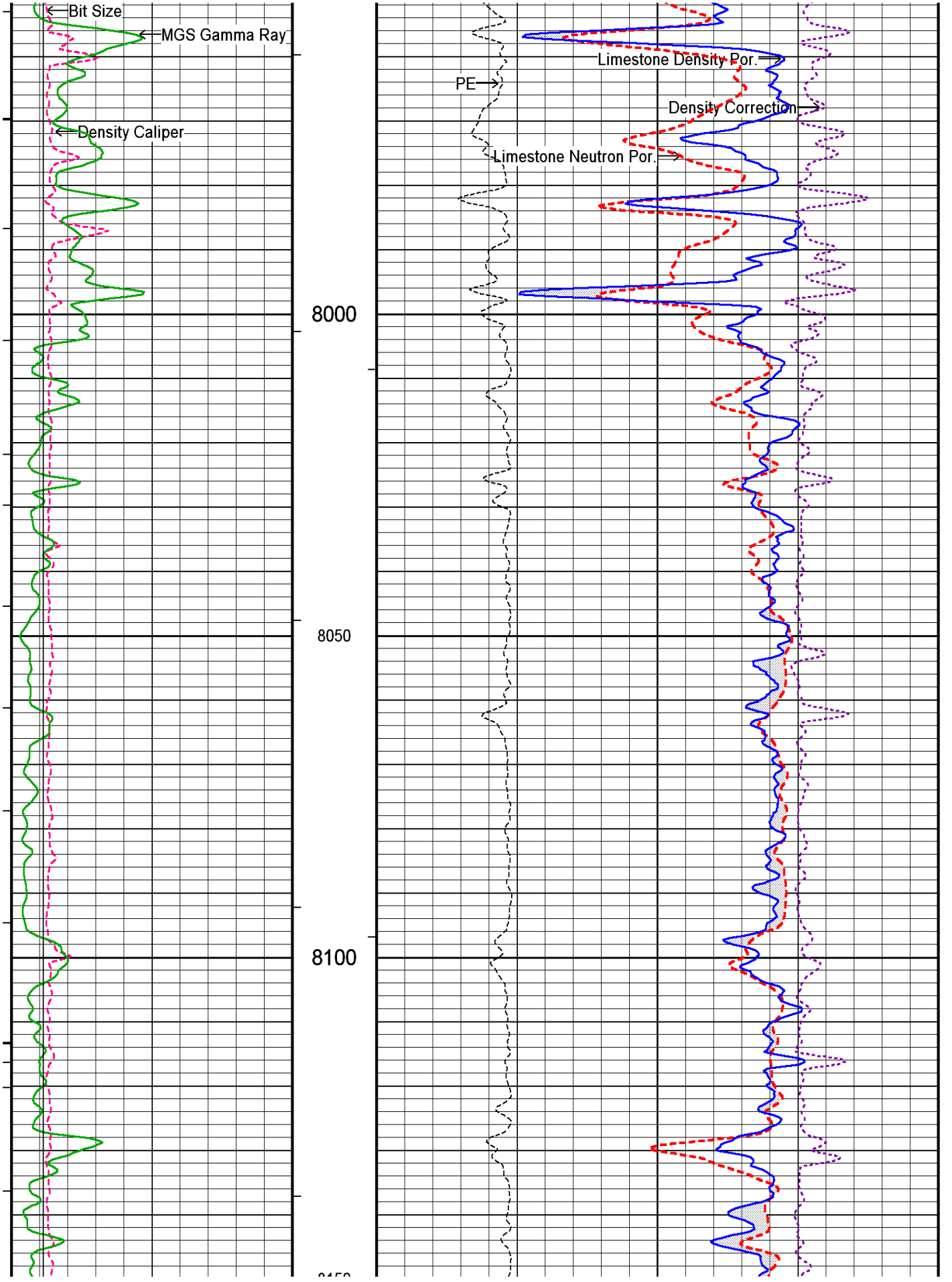
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Density Correction
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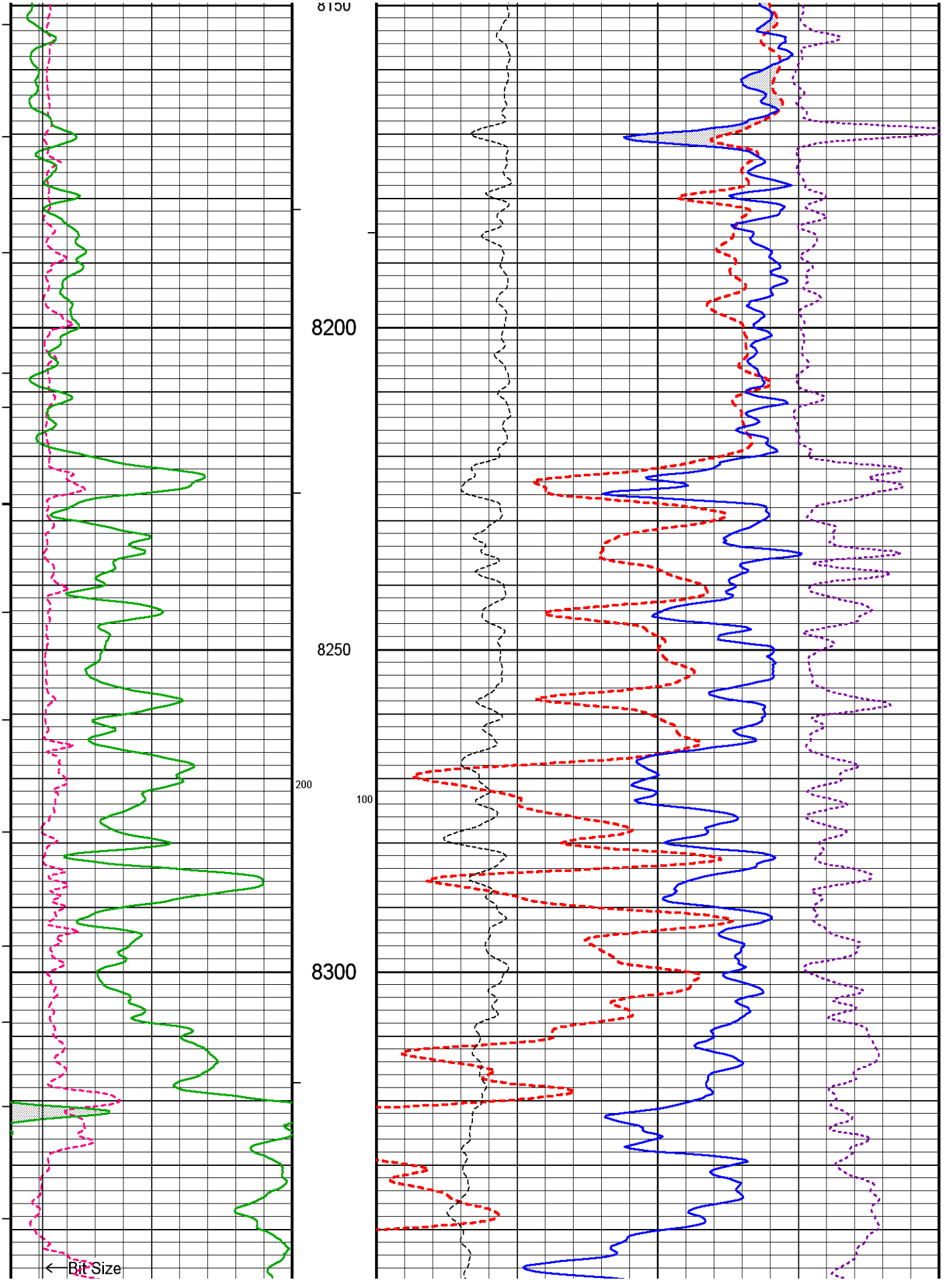
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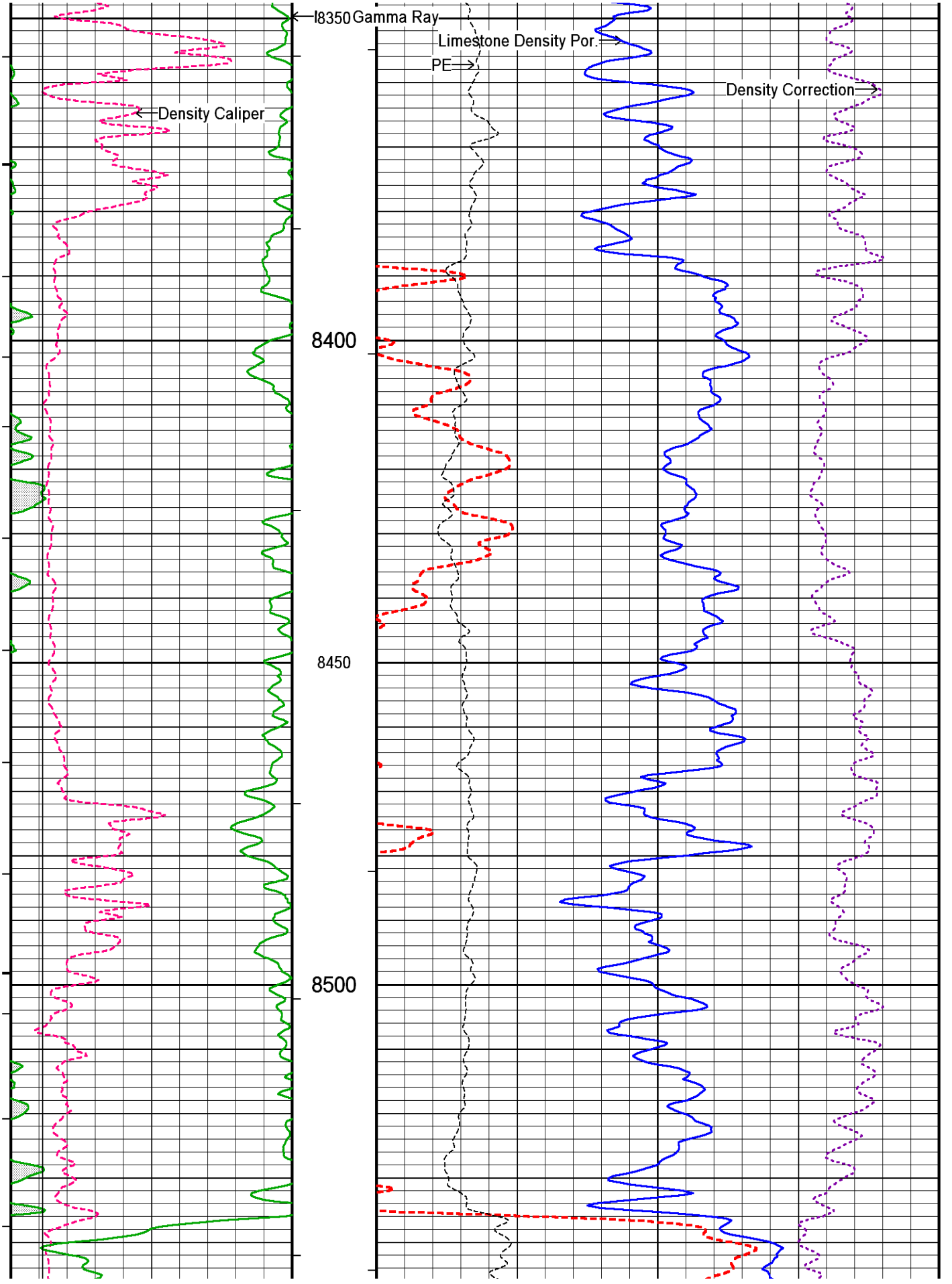
← Bit Size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Limestone Density Por.
PE
Density Correction
Density Caliper
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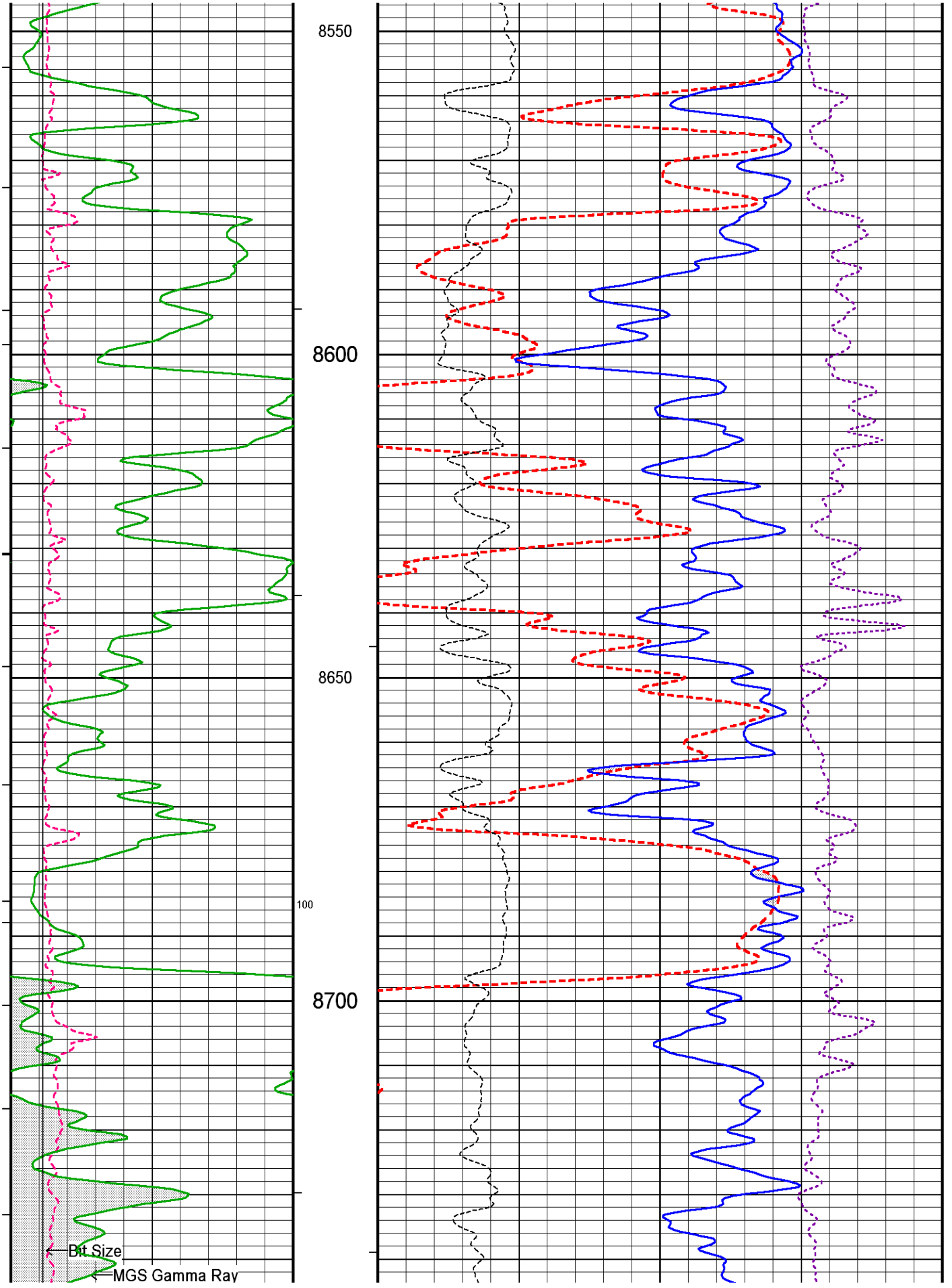
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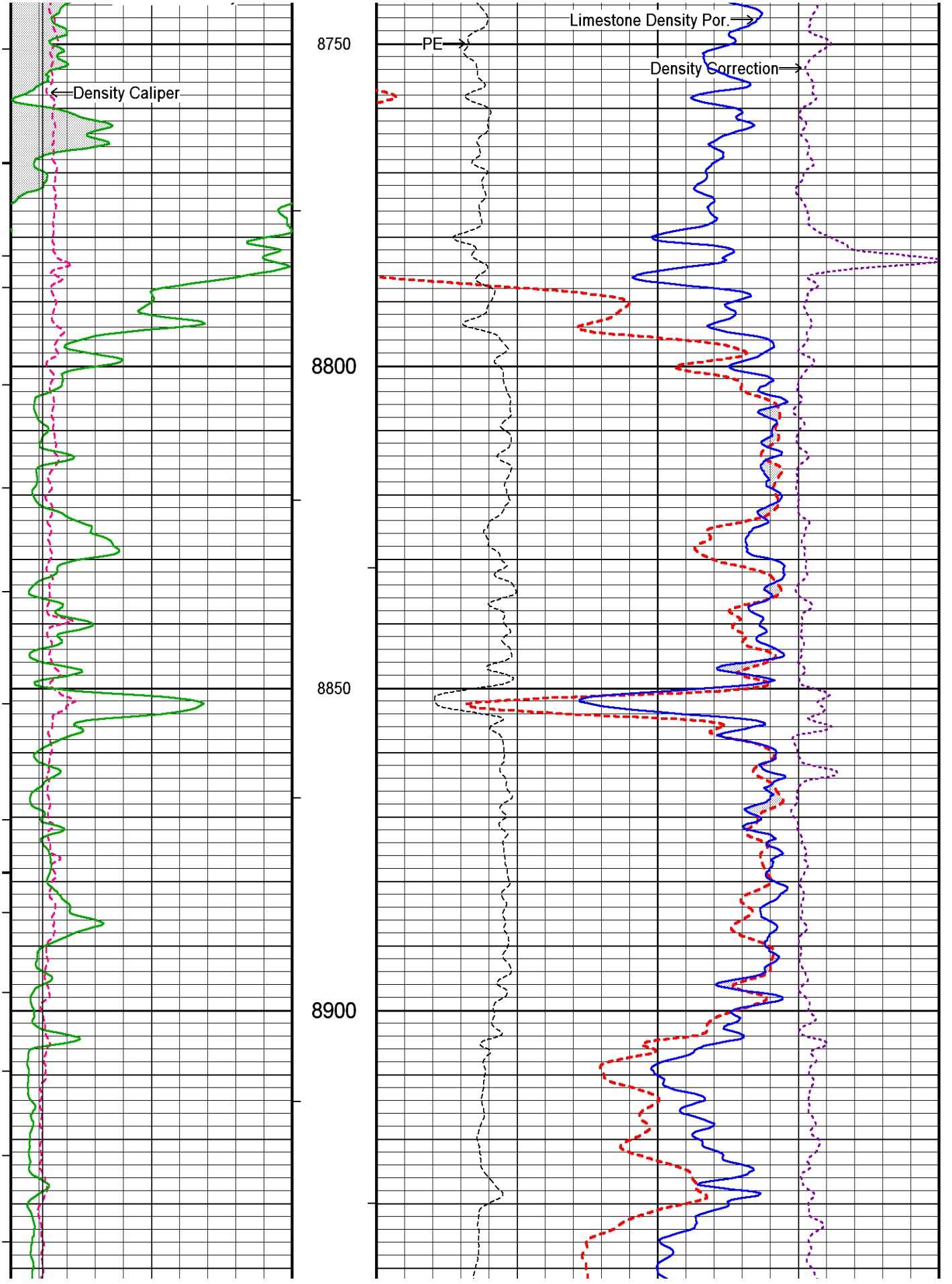
Bit Size
MGS Gamma Ray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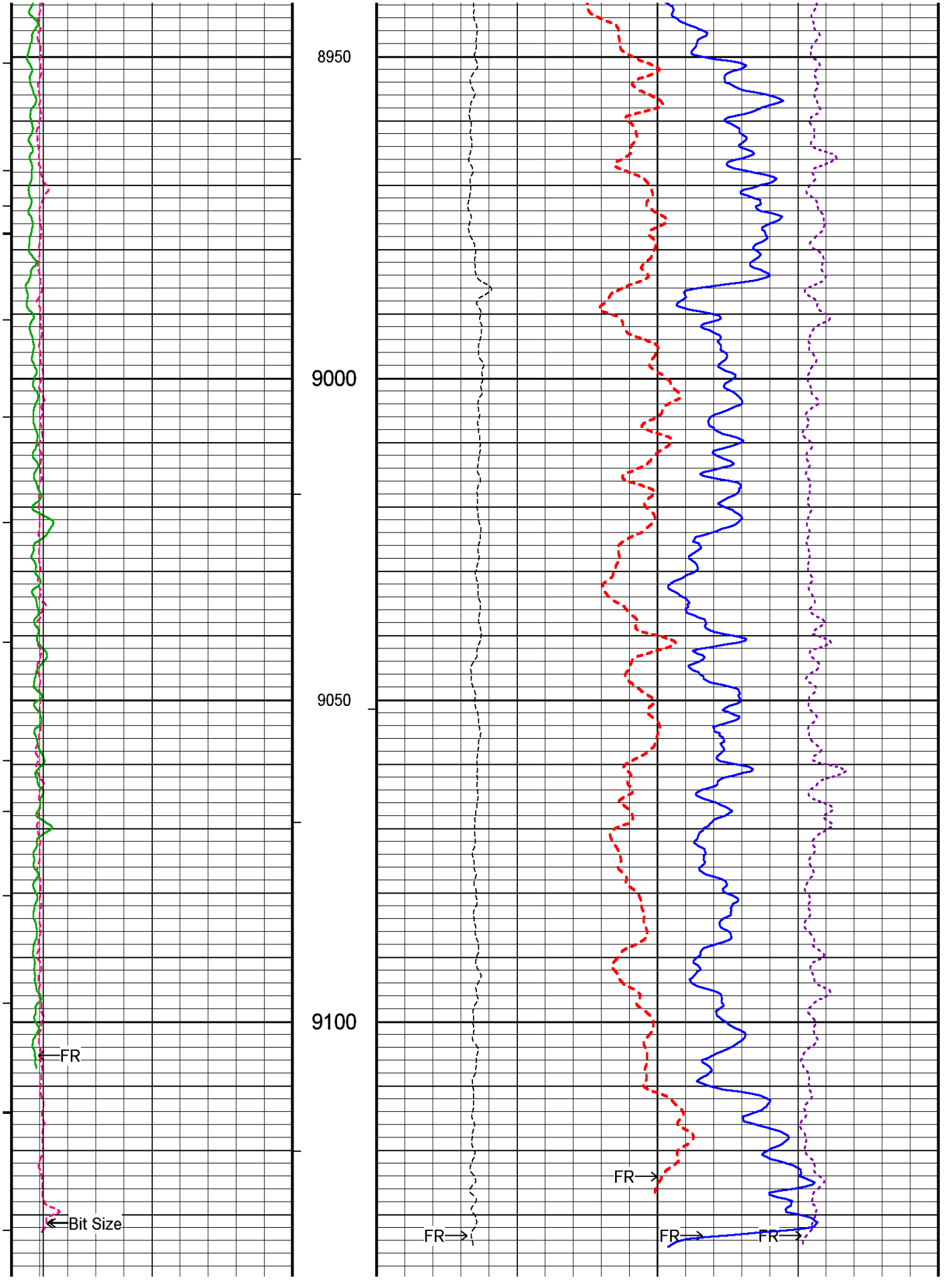
Density Correction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Bit Size
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FR
FR
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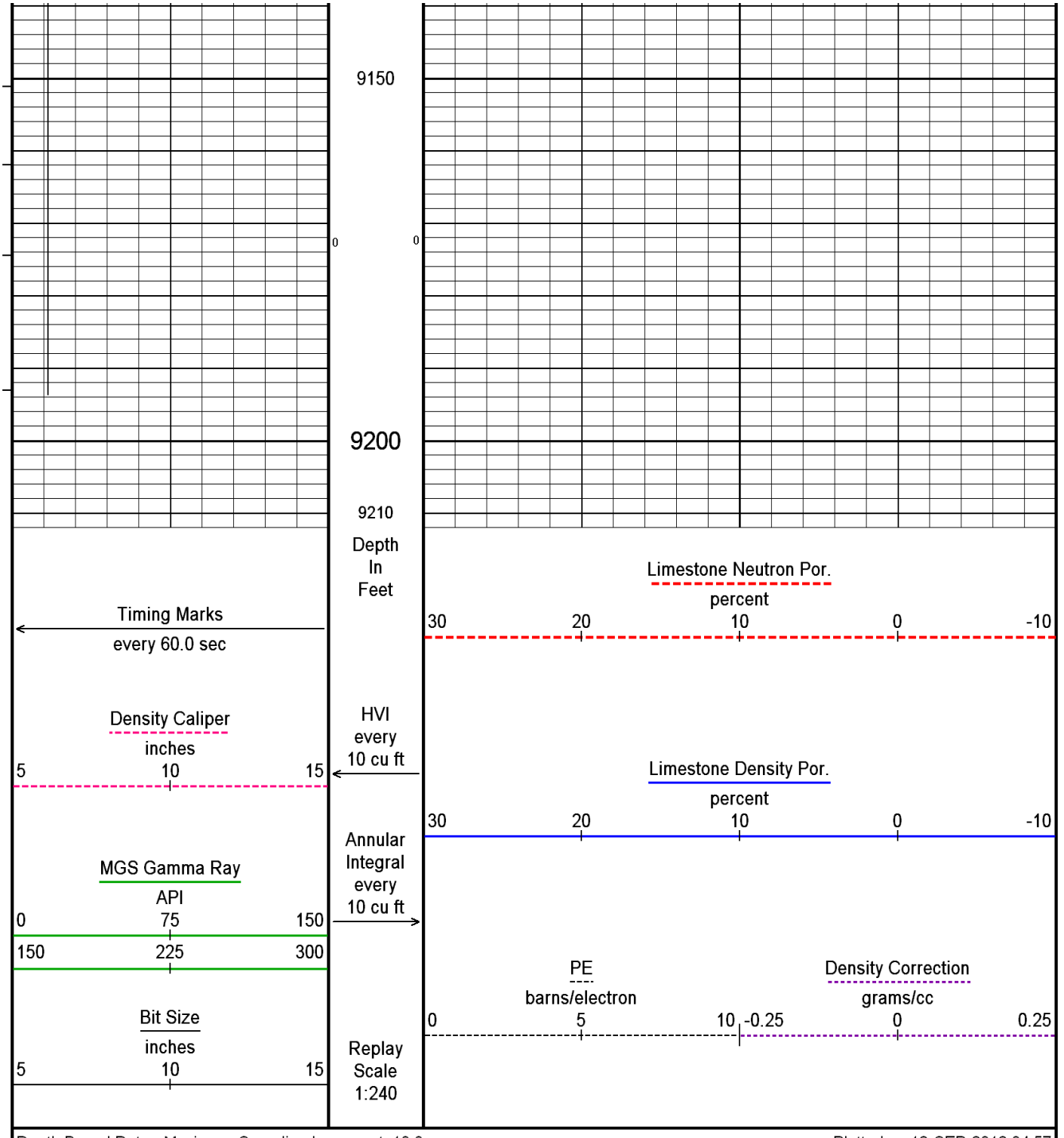

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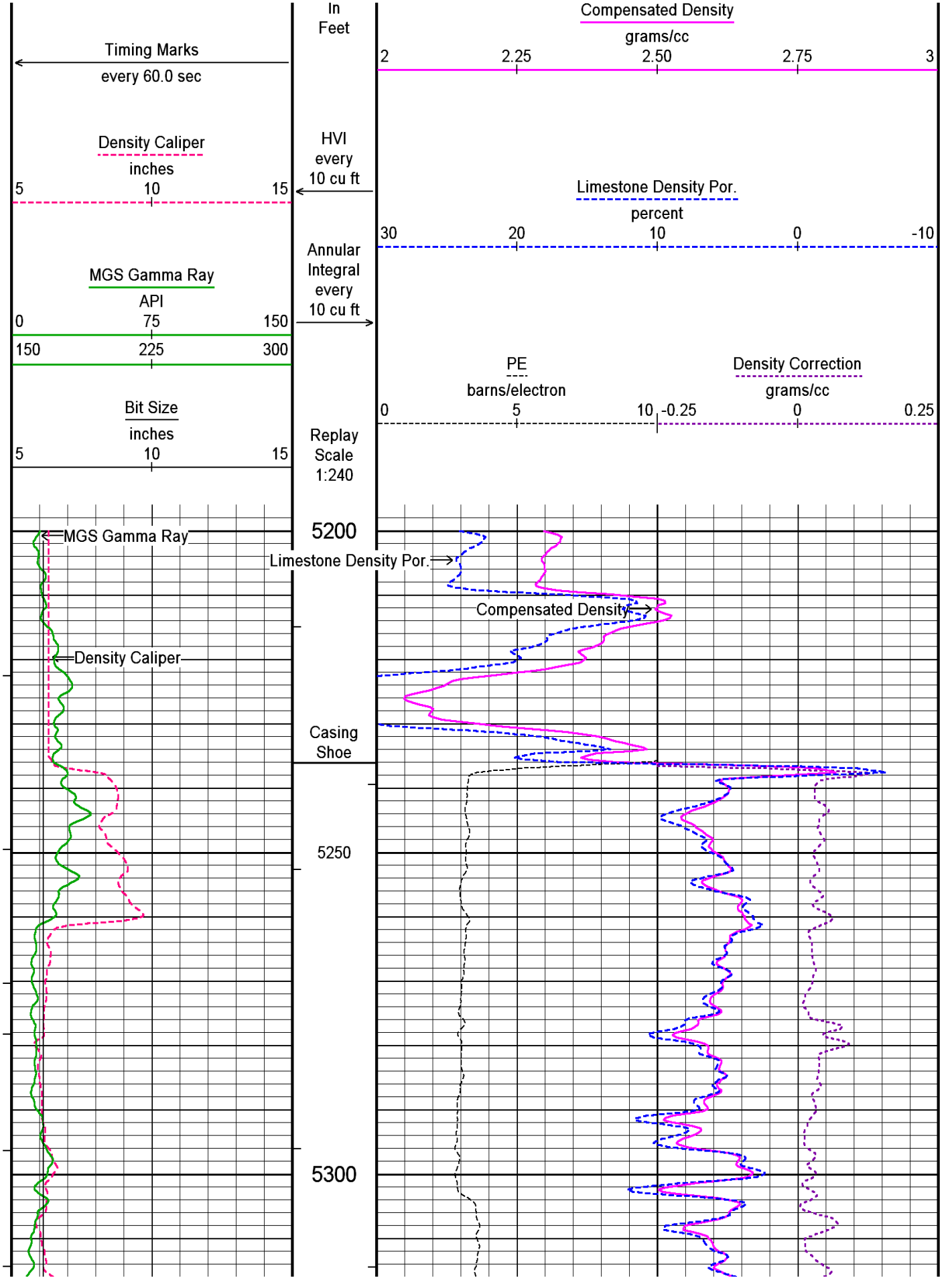
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

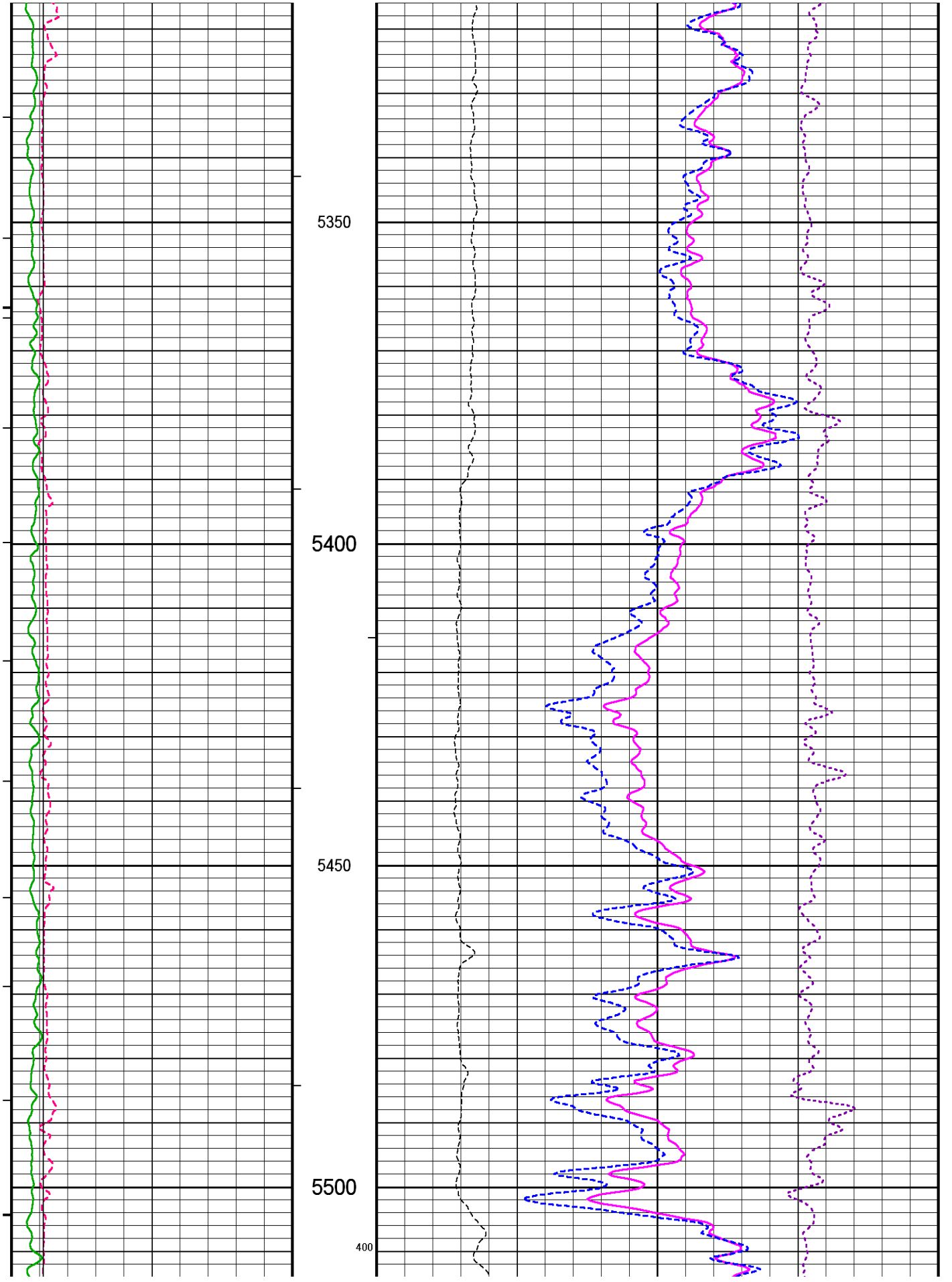
5 INCH MAIN LOG DSC

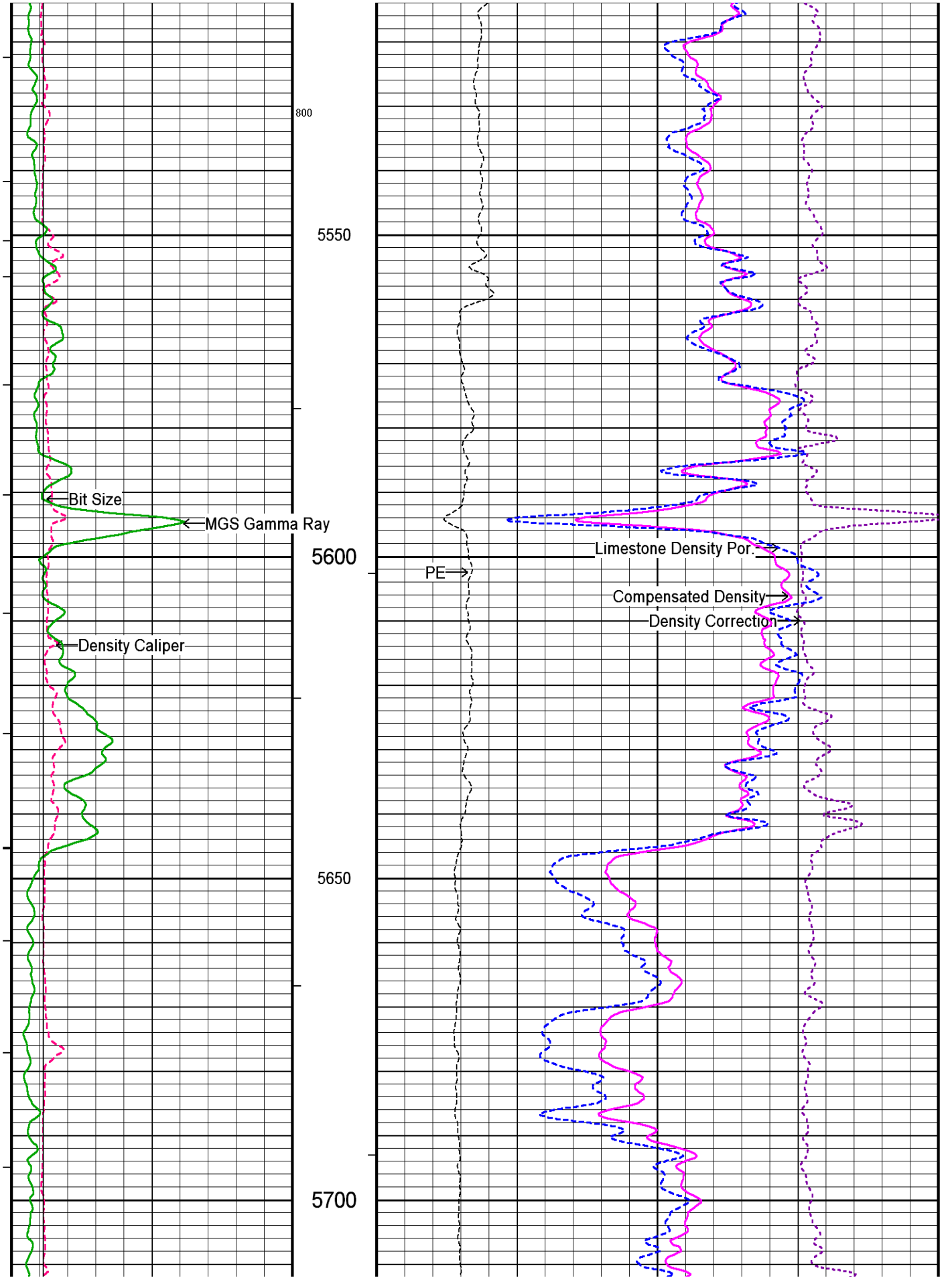
5 INCH BULK DENSITY LOG DSC

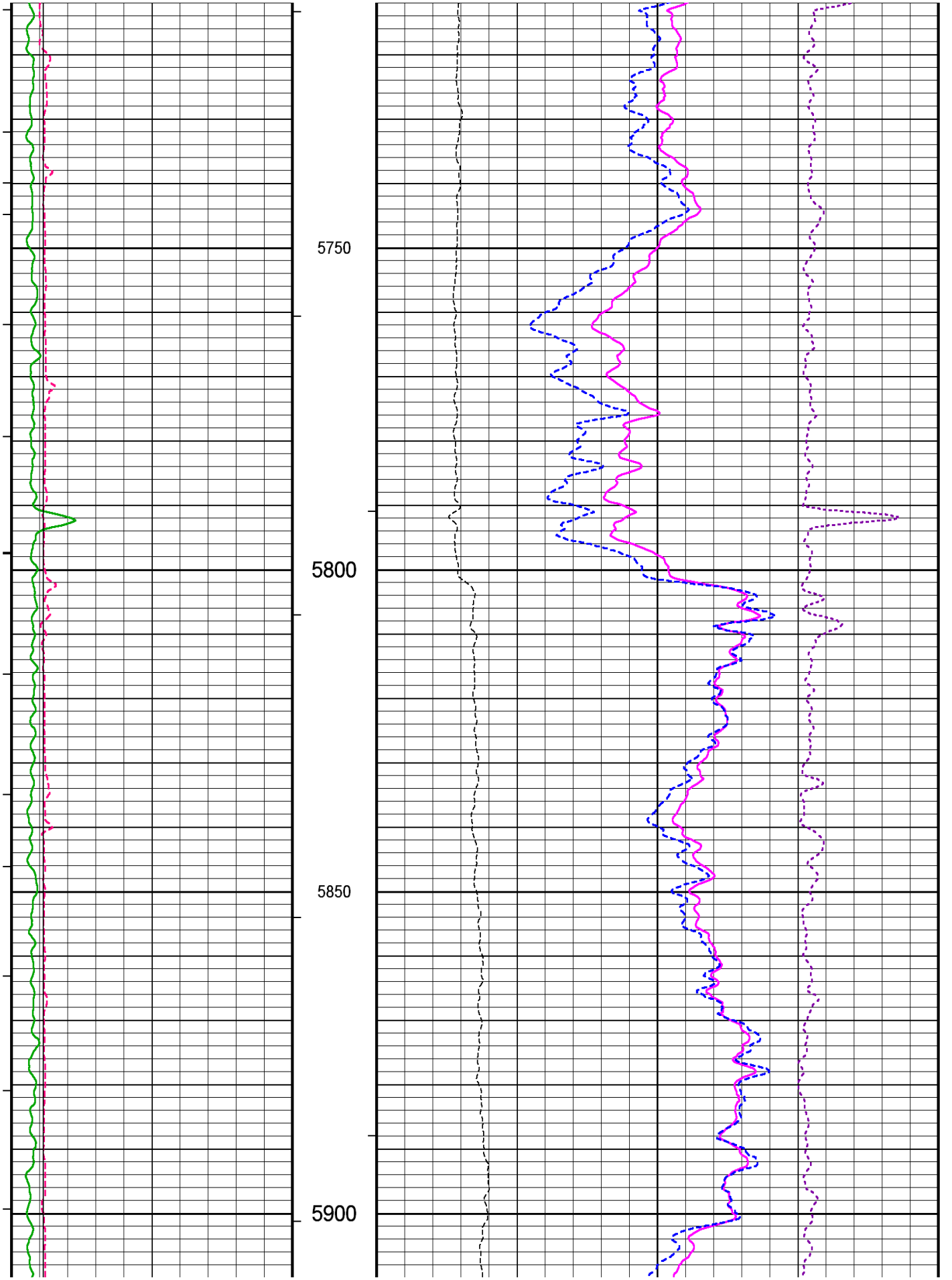
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 12-SEP-2012 04:57
Filename: C:\Minimus\Logs\Sandridge\Jochems 2721 2-2H\Jochems 2721 2-2H DEPTH_RTAP5.dta — Recorded on 11-SEP-2012 22:58
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

Depth


In
Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
5
10
15
HVI
every
10 cu ft
MGS Gamma Ray
API
0
75
150
150
225
300
Annular
Integral
every
10 cu ft
Bit Size
inches
5
10
15
Replay
Scale
1:240
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Limestone Density Por.
percent
30
20
10
0
-10
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.25
0
0.25
5200
MGS Gamma Ray
Limestone Density Por.
Compensated Density
Density Caliper
Casing
Shoe
5250
5300


5350
5400
5450
5500
400


800
5550
5600
5650
5700
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction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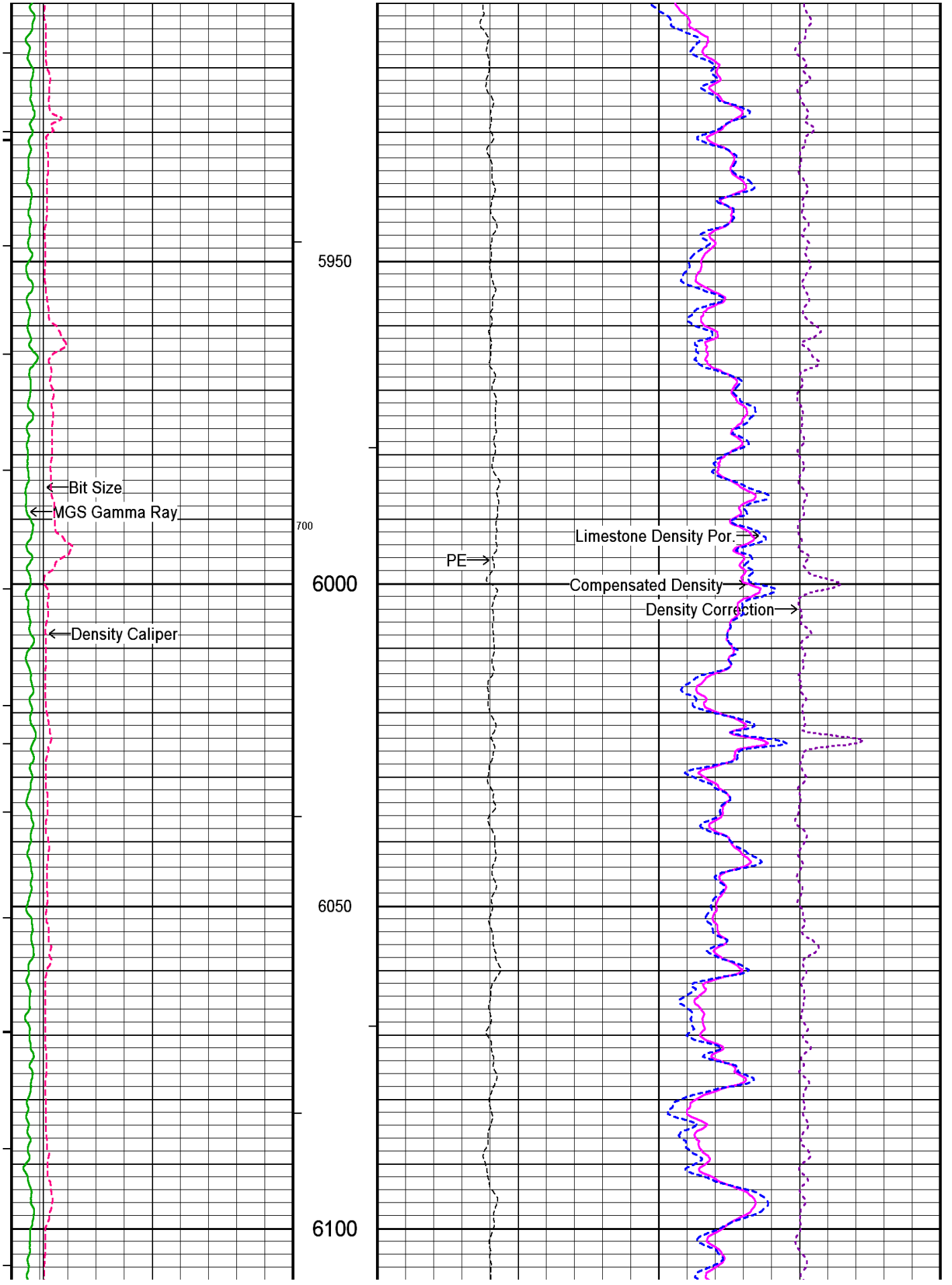
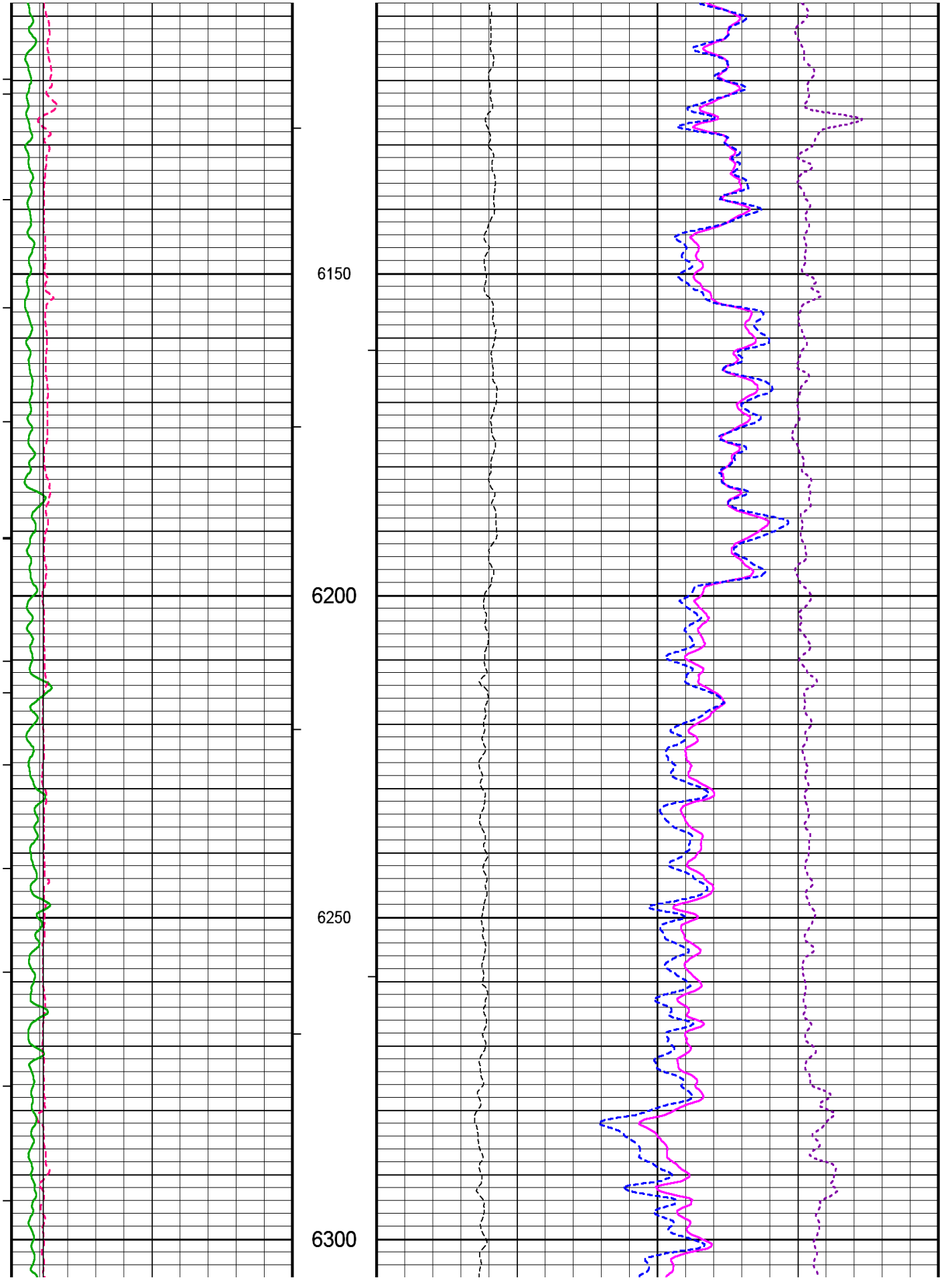
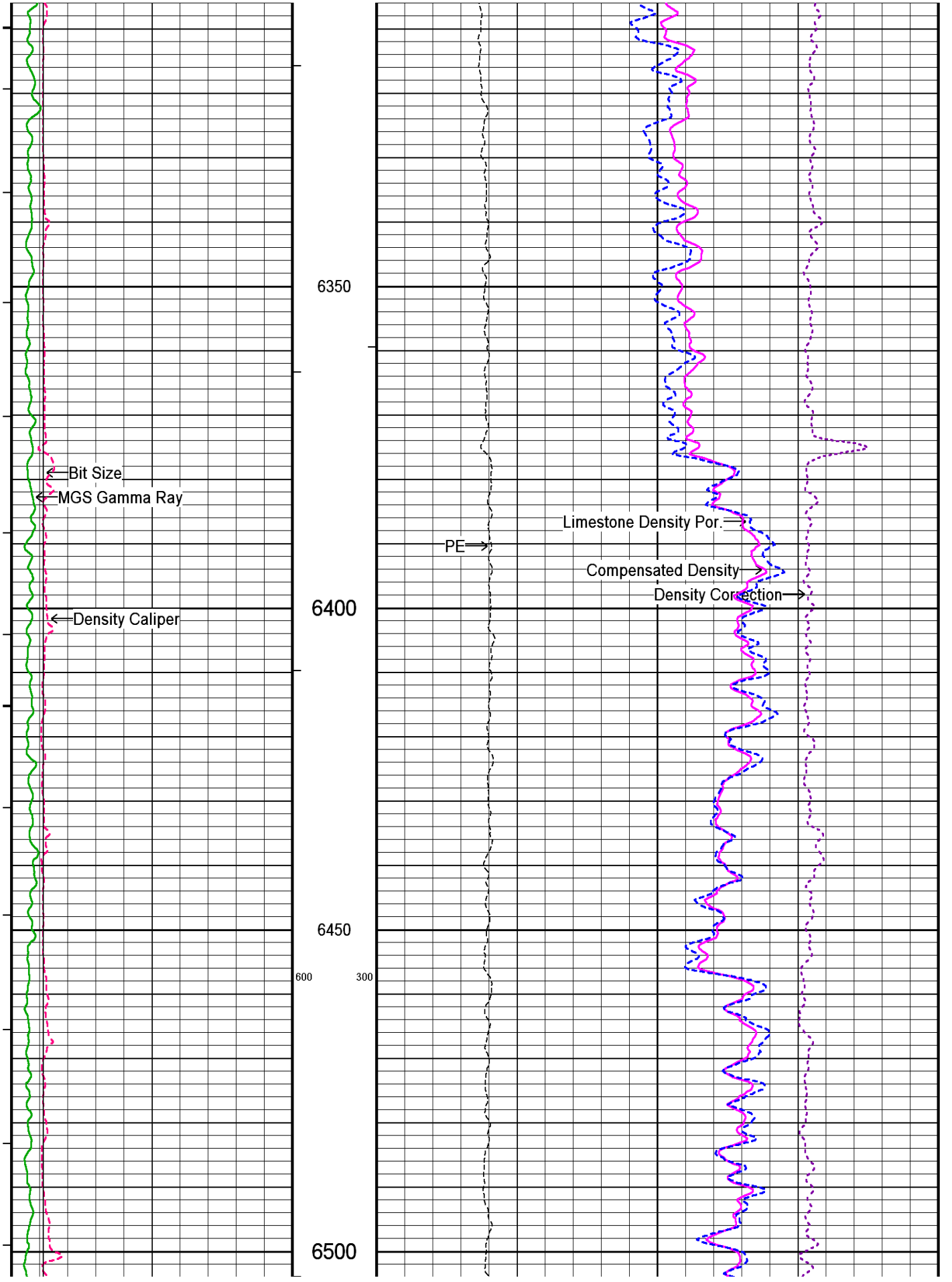
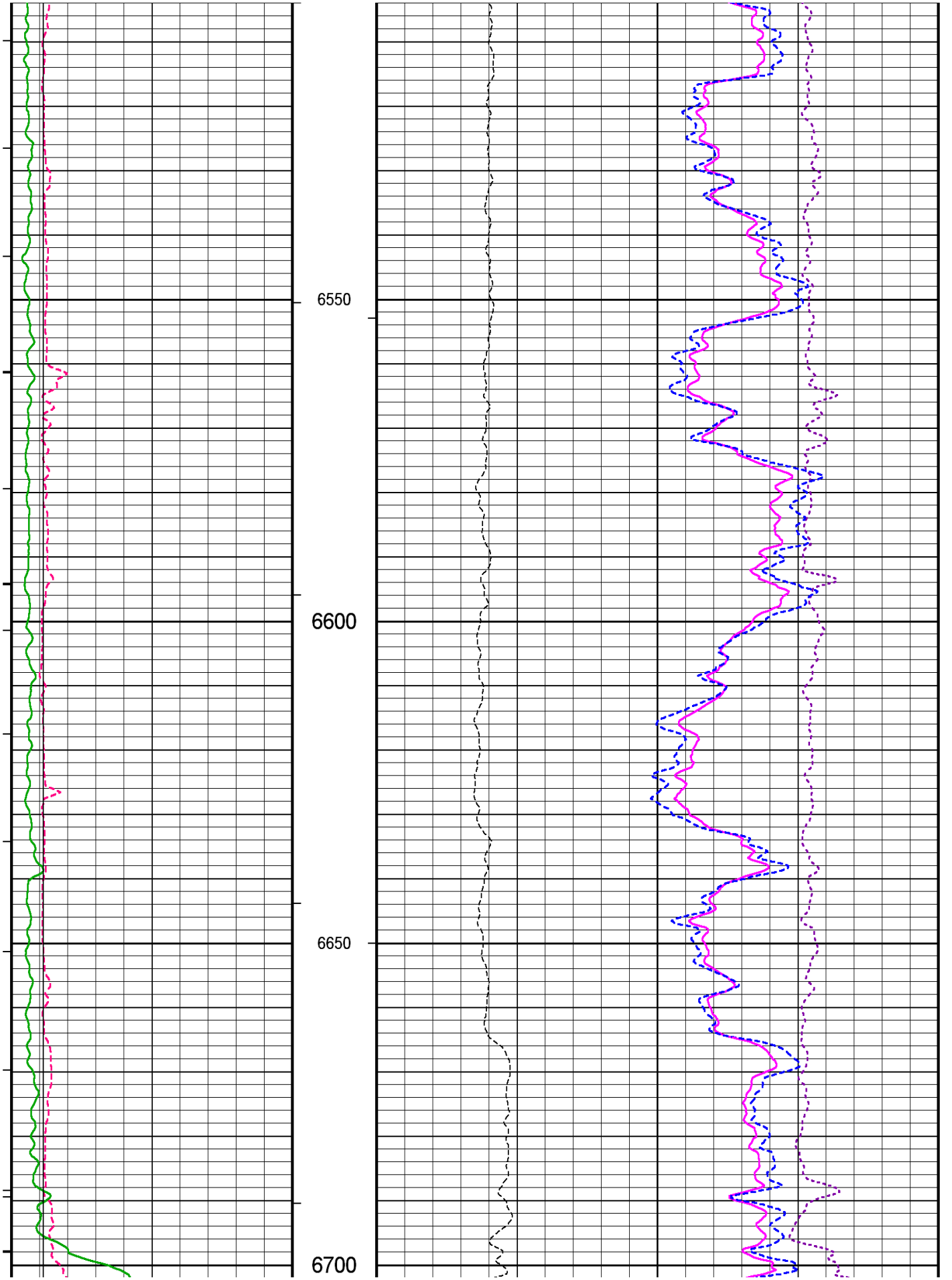
5900


5950
700
6000
6050
6100
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction


6150
6200
6250
6300


Bit Size
MGS Gamma Ray
Density Caliper
6350
6400
6450
6500
600
300
PE
Limestone Density Por.
Compensated Density
Density Correction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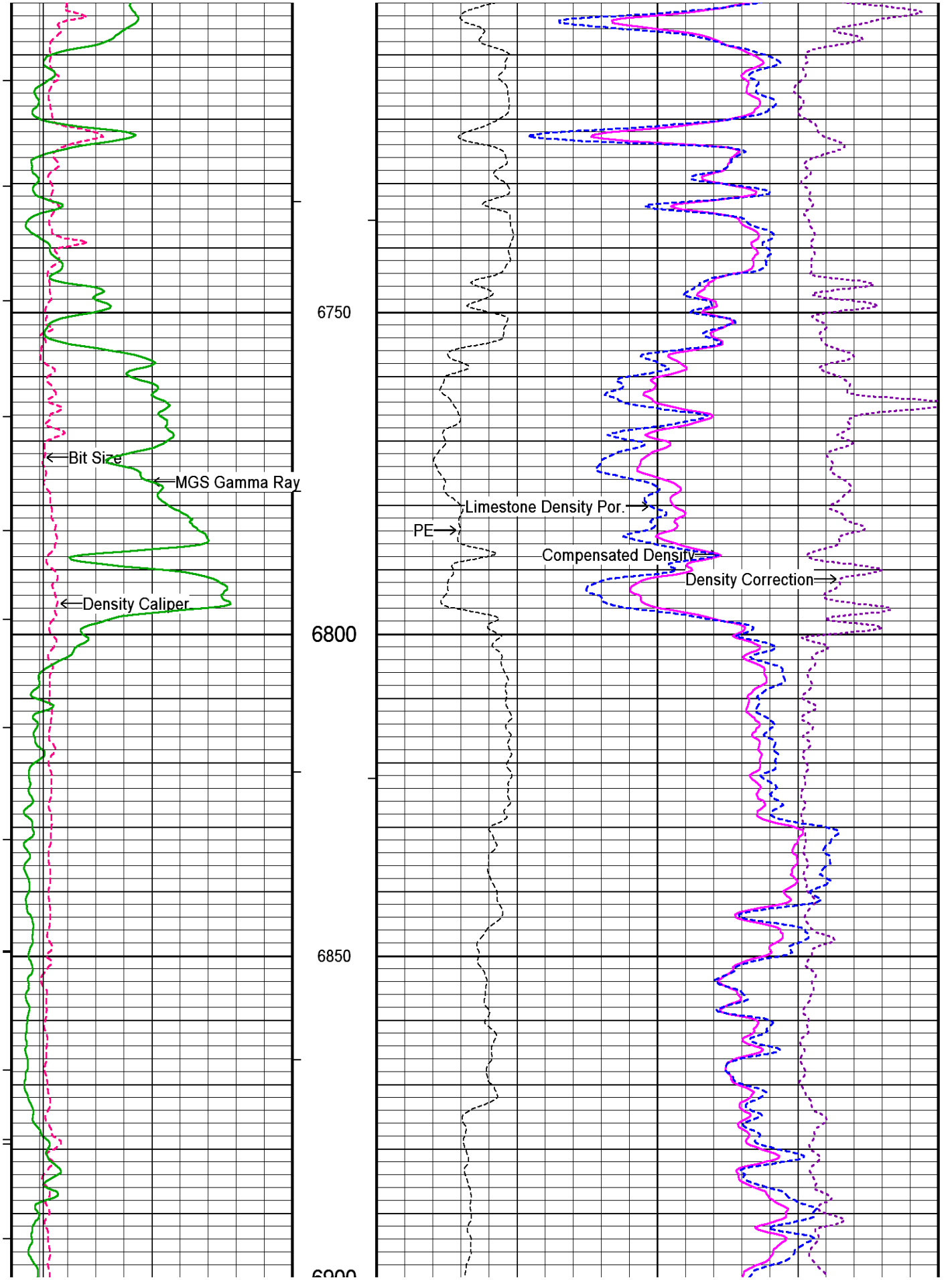
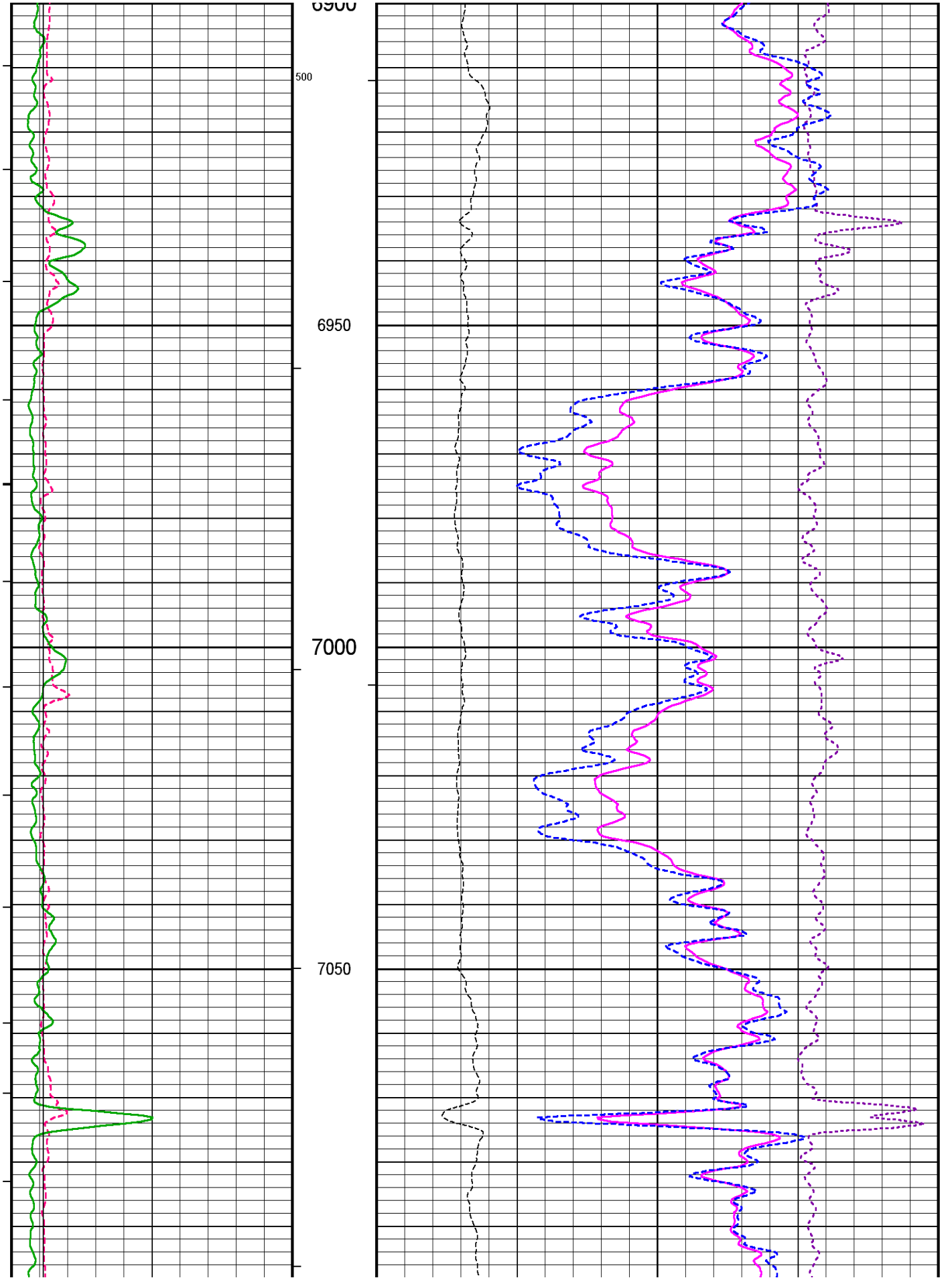
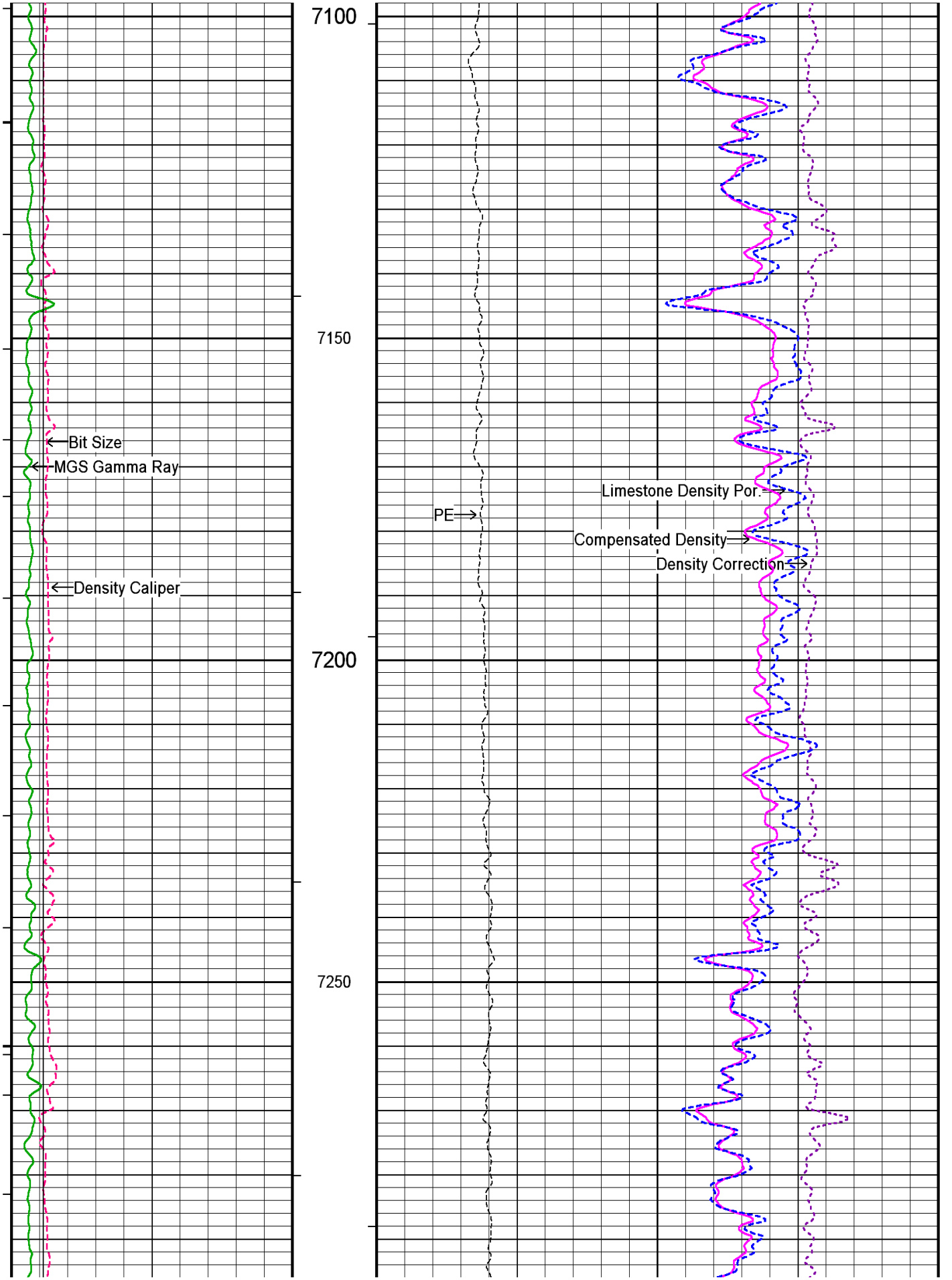
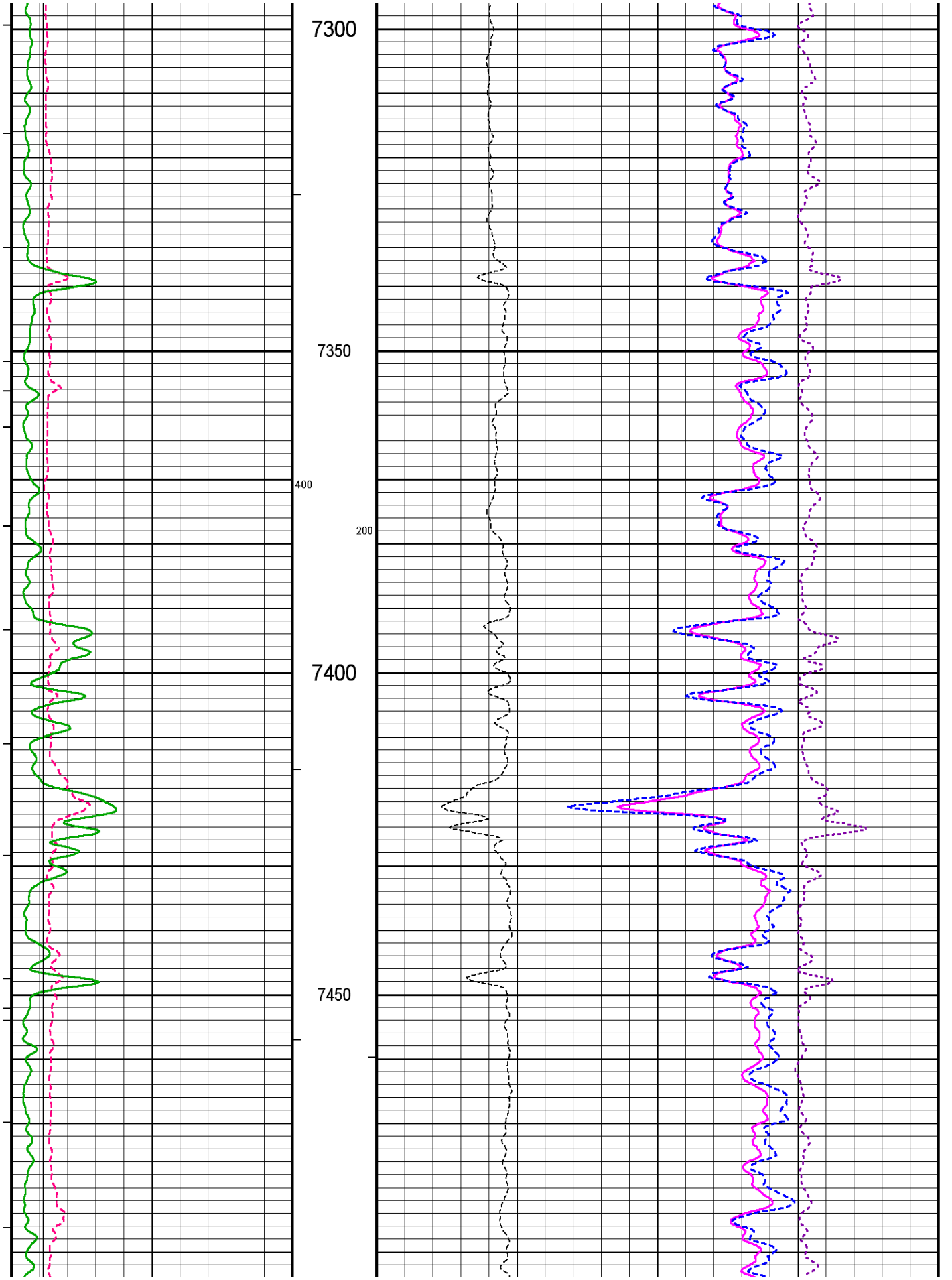
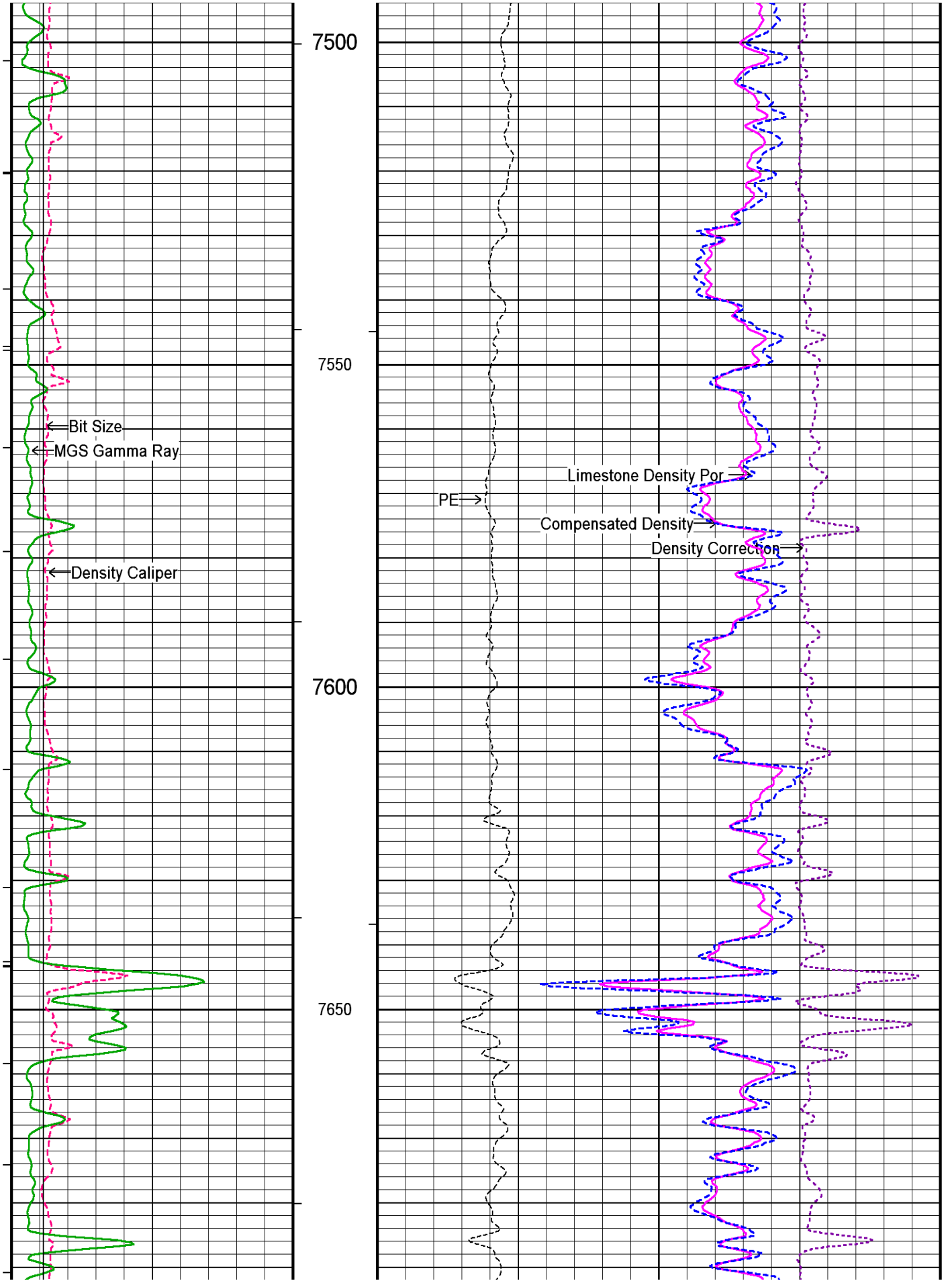
6600
6650
6700

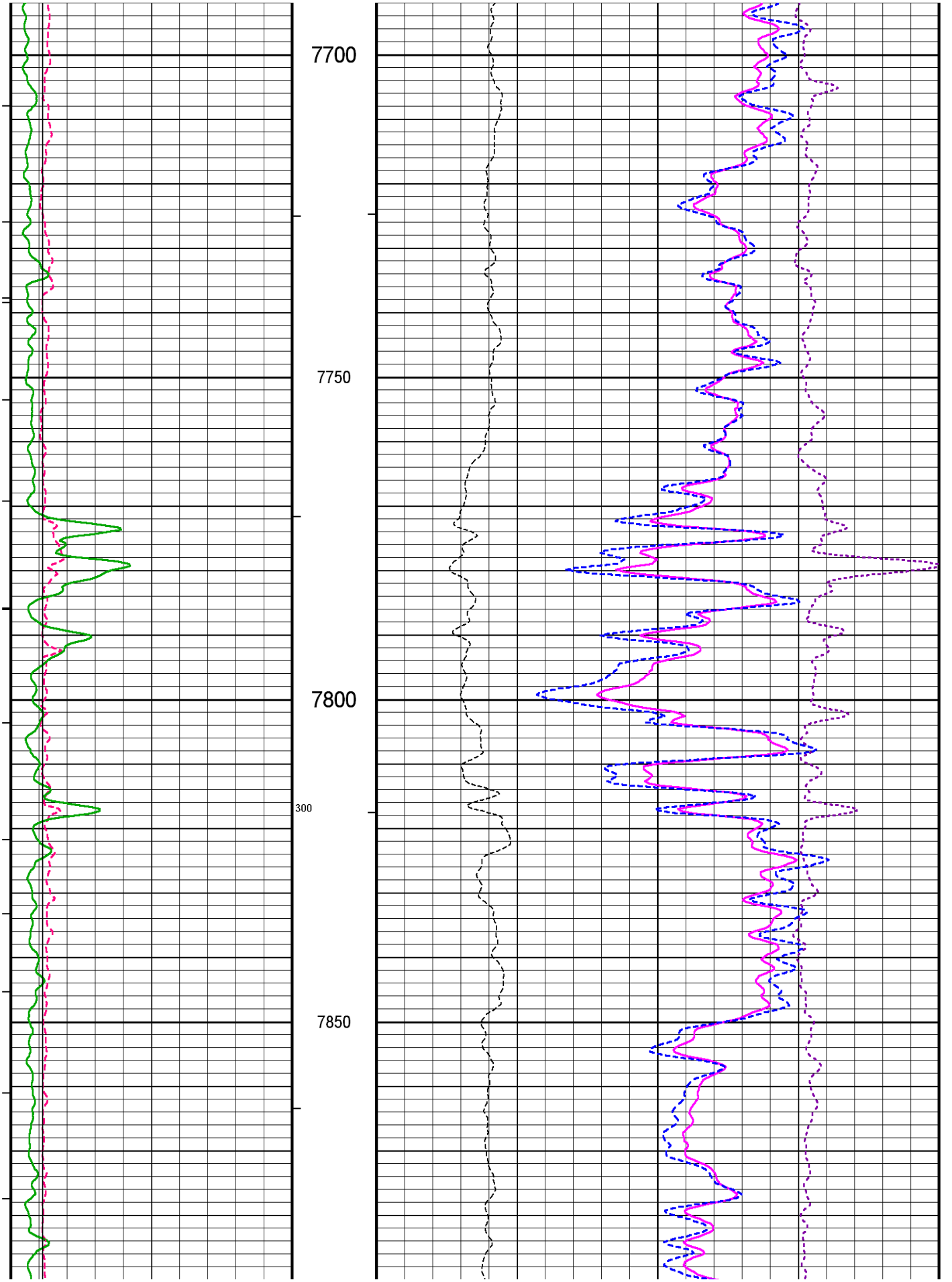

6750
6800
6850
Bit Size
MGS Gamma Ray
Density Caliper
Limestone Density Por.
PE
Compensated Density
Density Correction

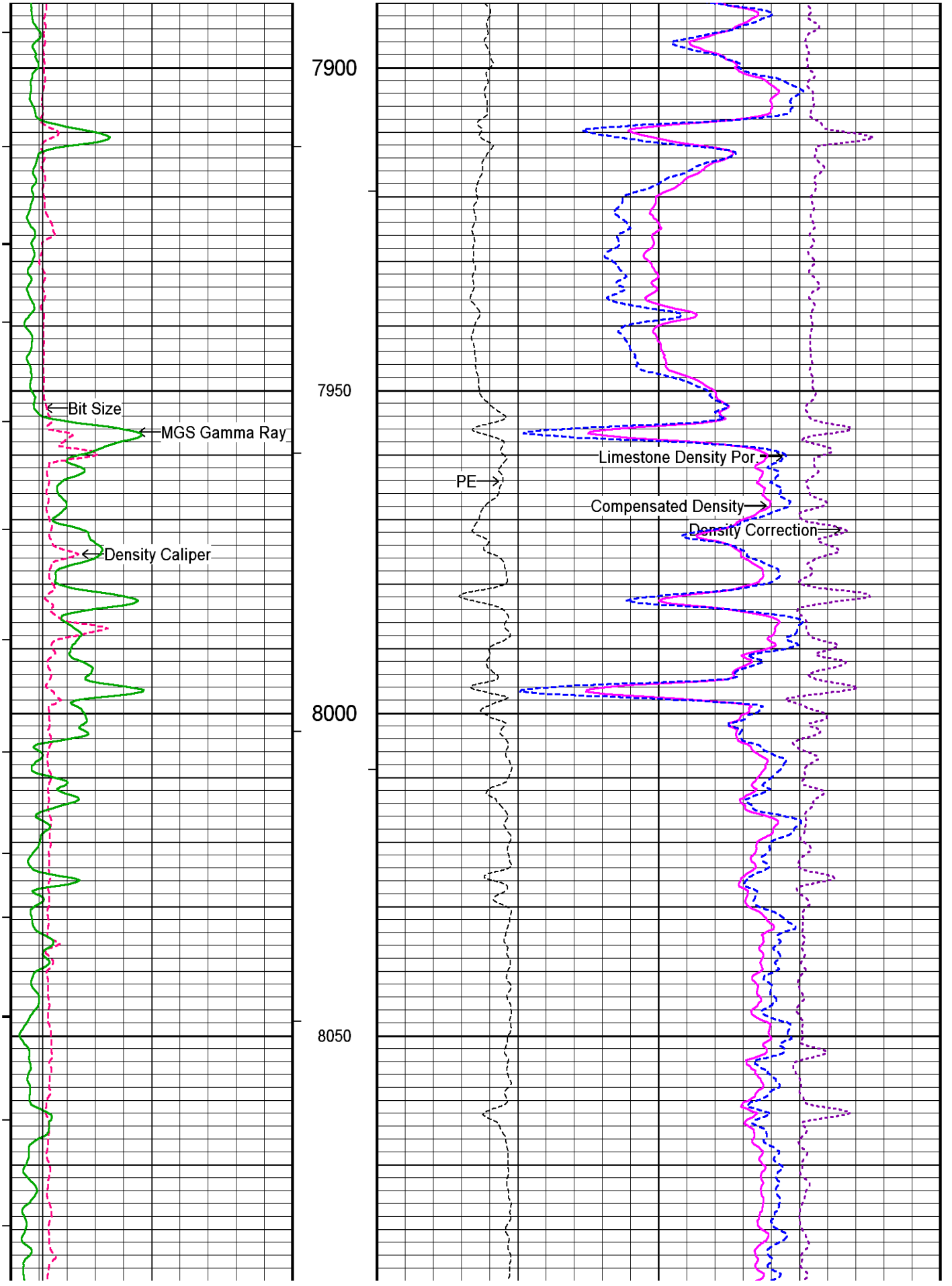

6900
500
6950
7000
7050

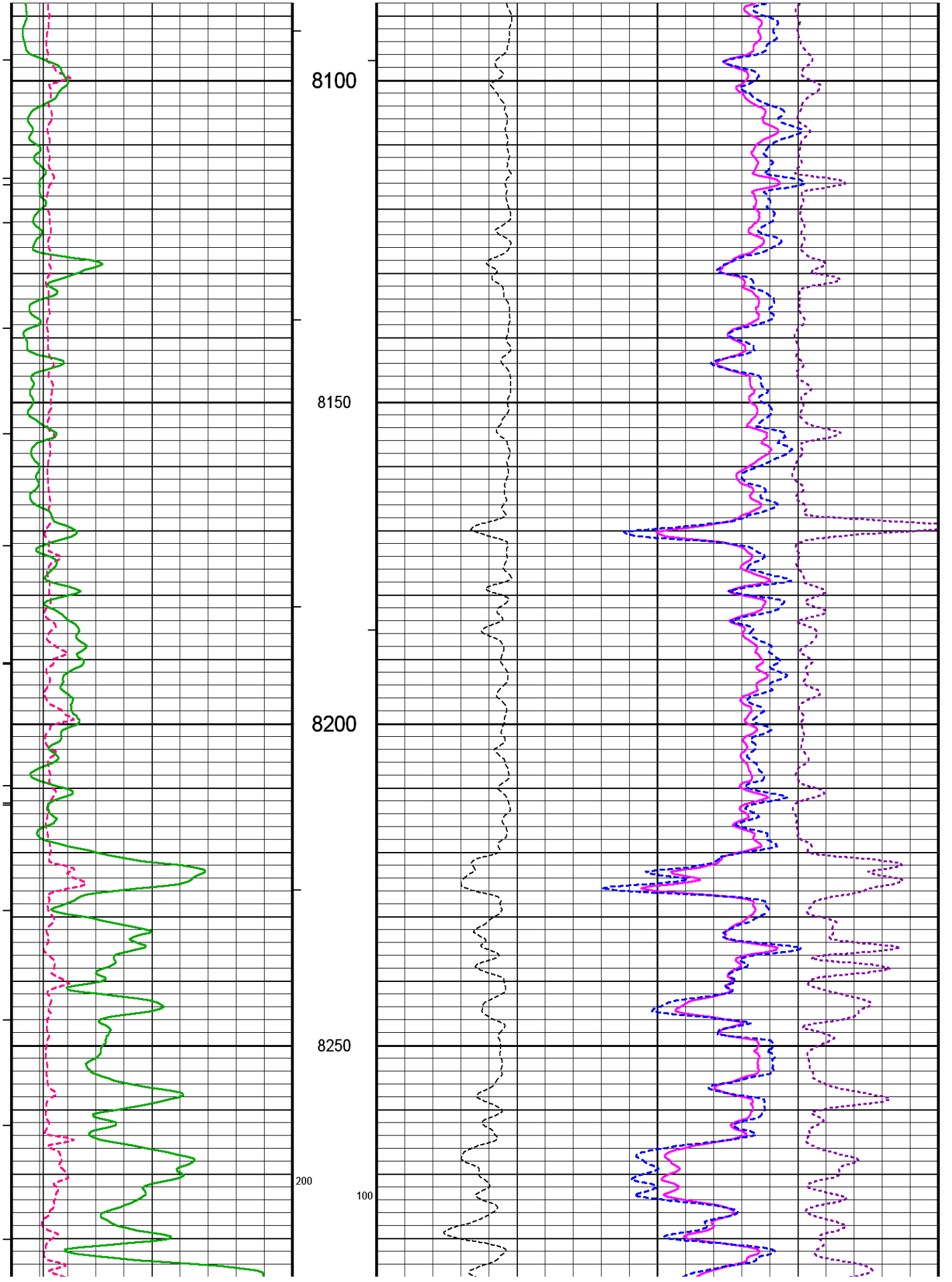

7100
7150
7200
7250
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction

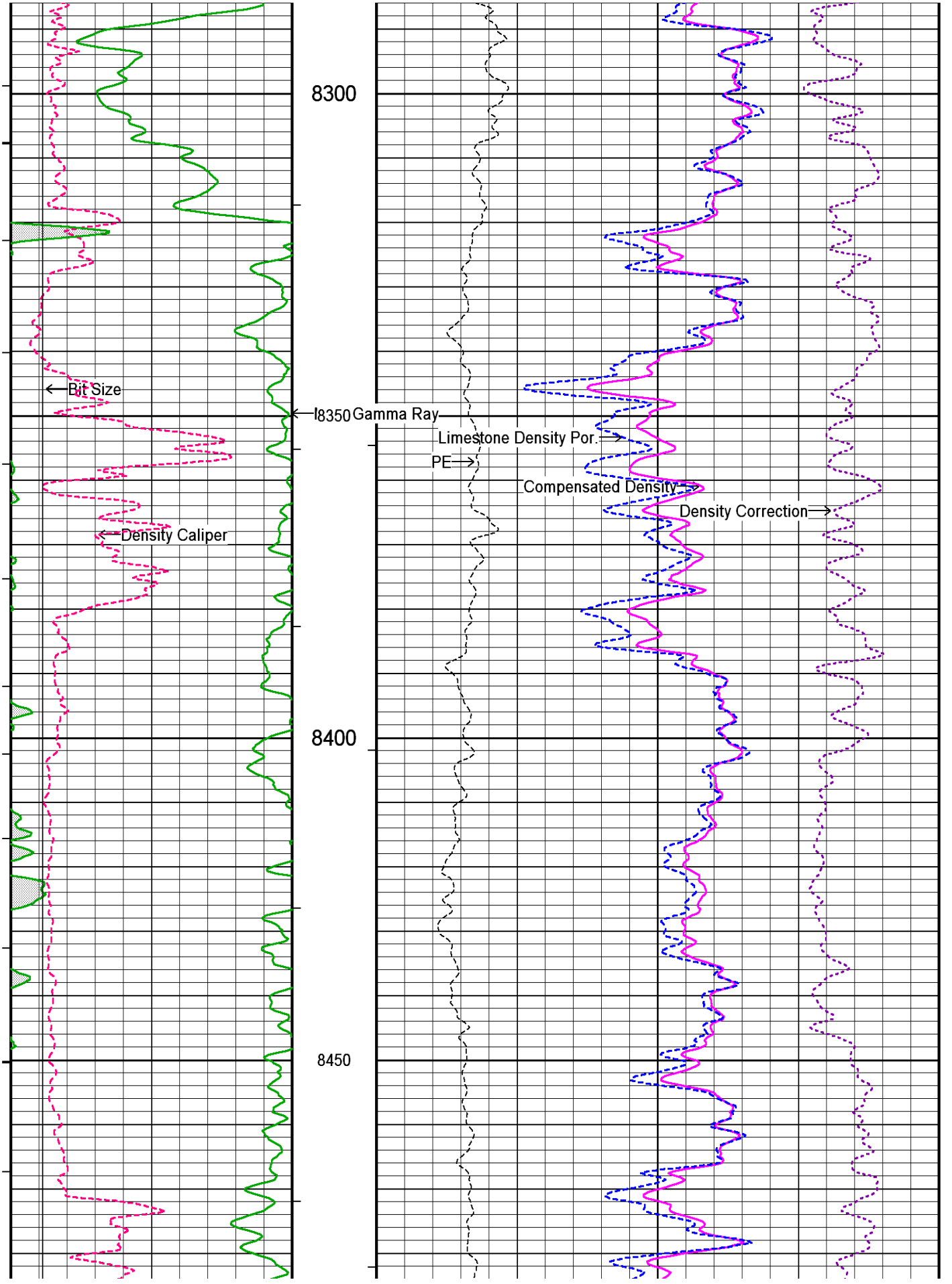

7300
7350
400
200
7400
7450

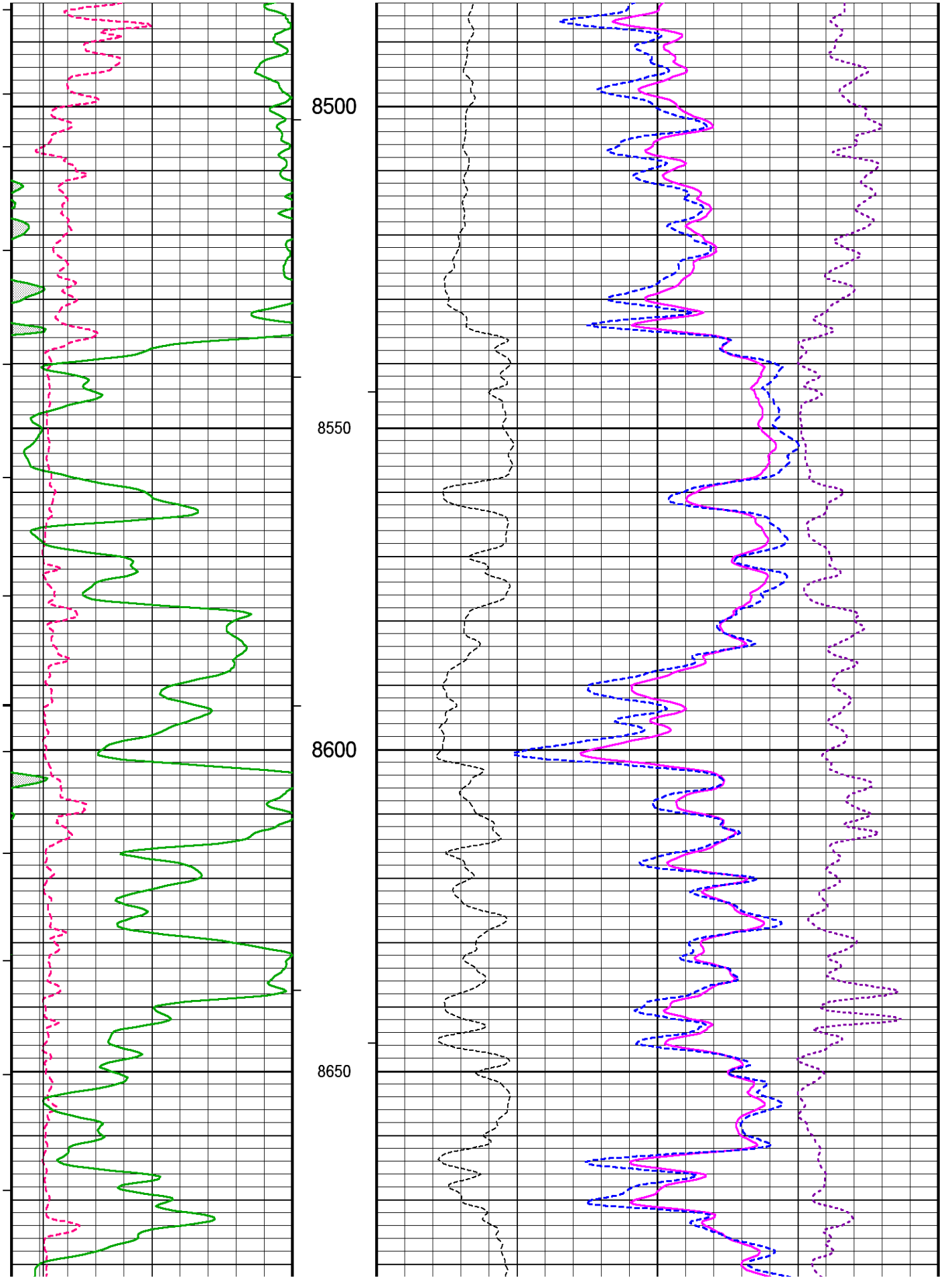

7500
7550
7600
7650
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por
Compensated Density
Density Correction

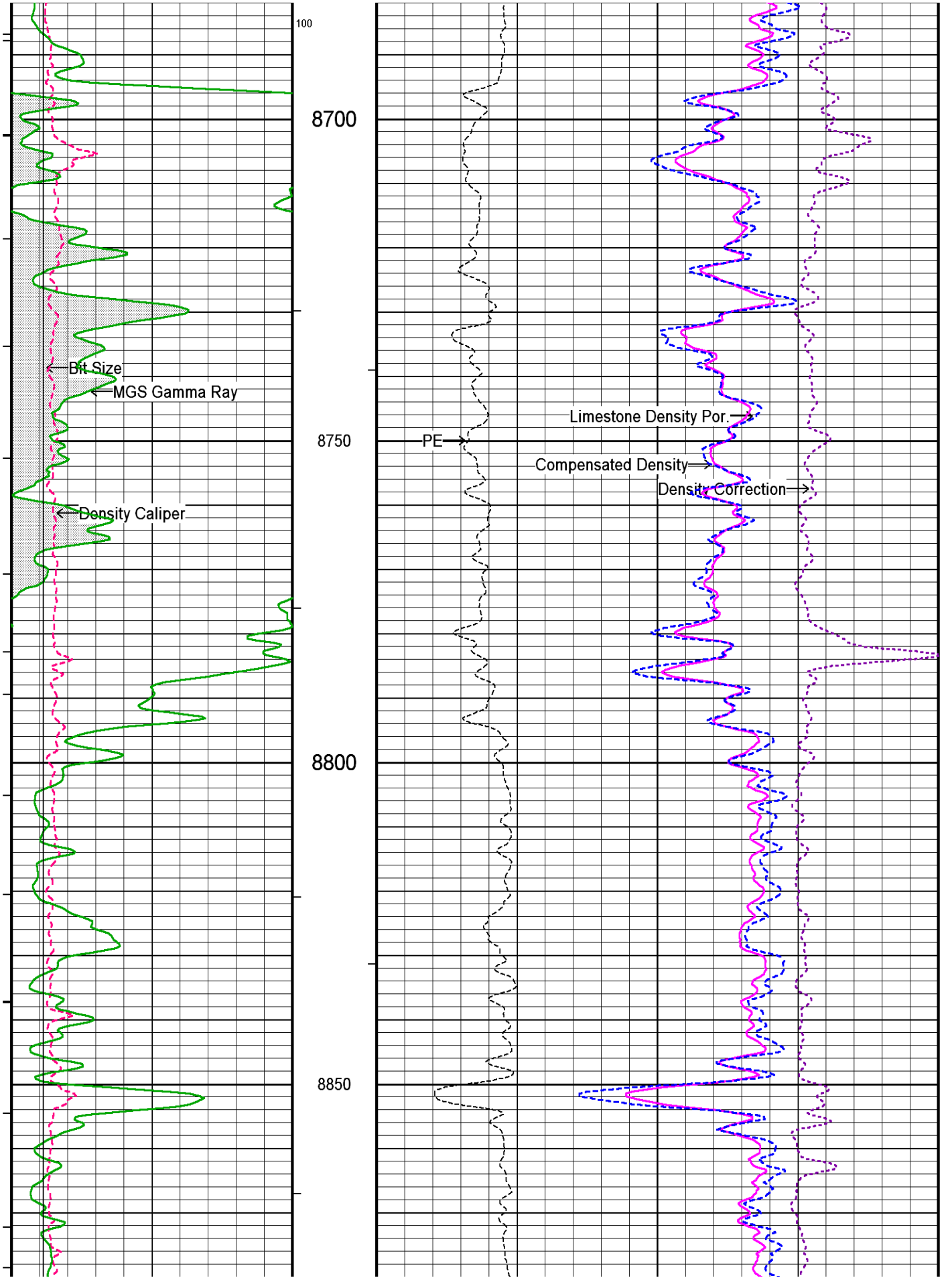

7700
7750
7800
300
7850

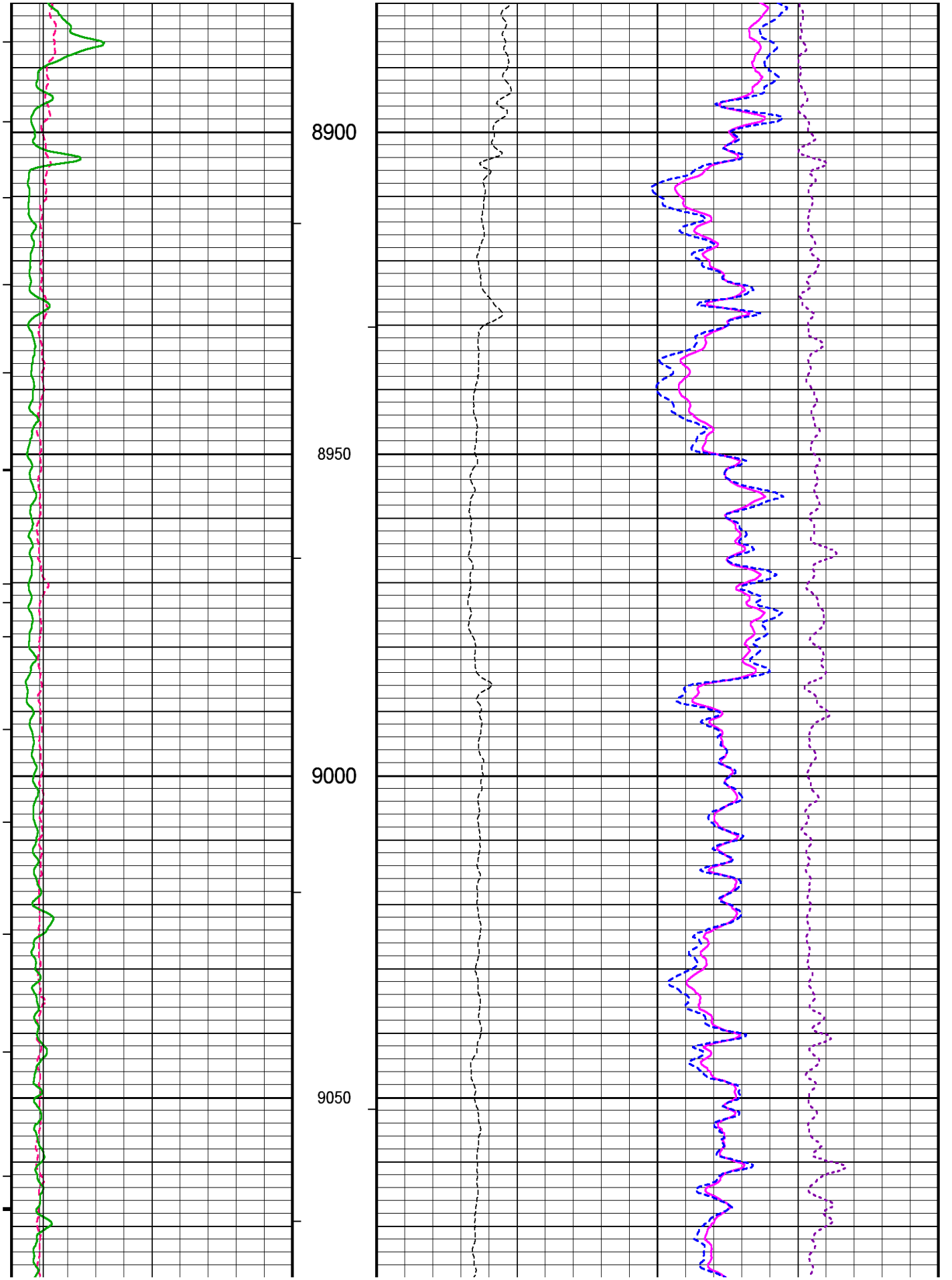

7900
7950
8000
8050
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por
Compensated Density
Density Correction

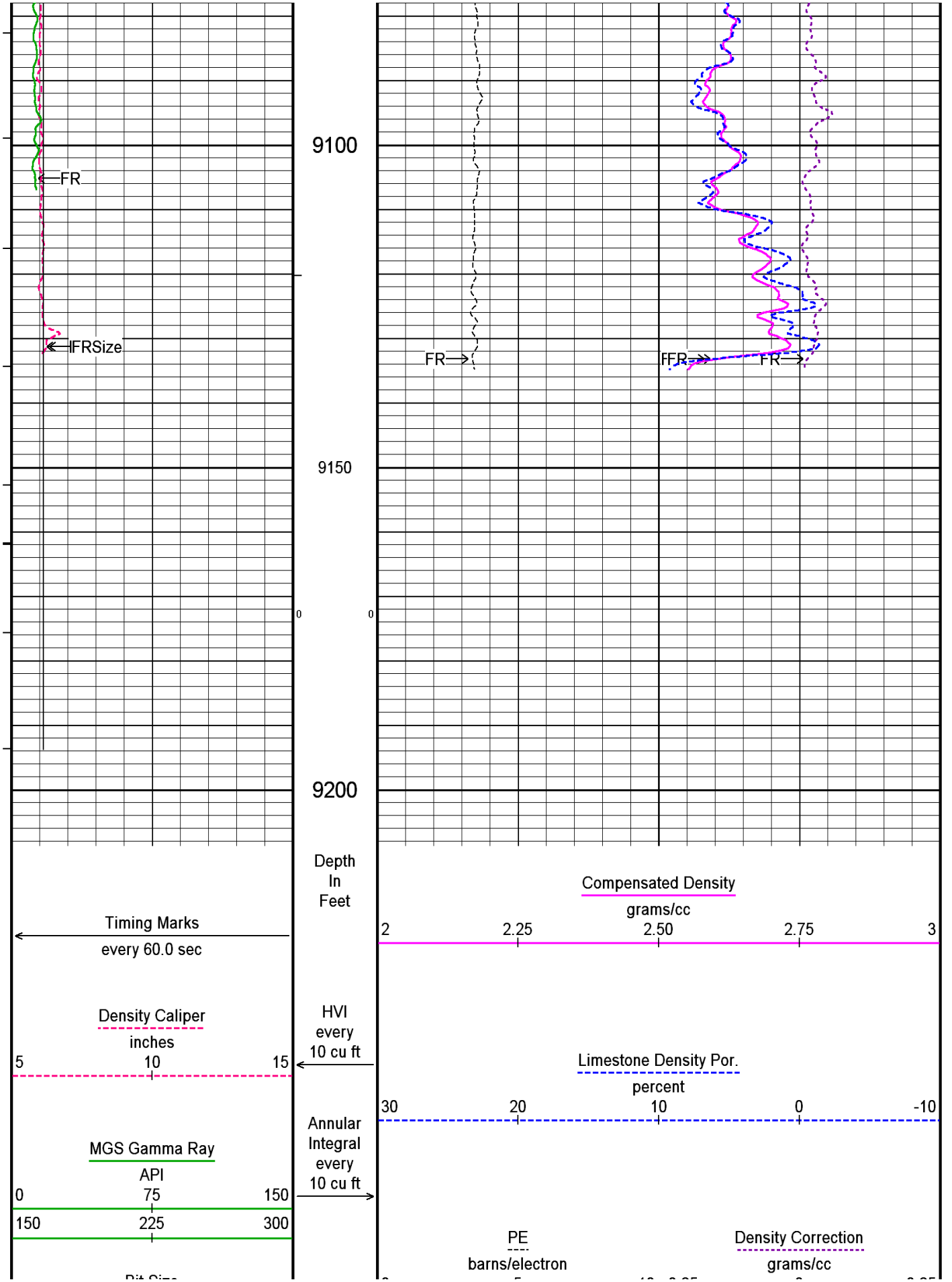

8100
8150
8200
8250
200
100

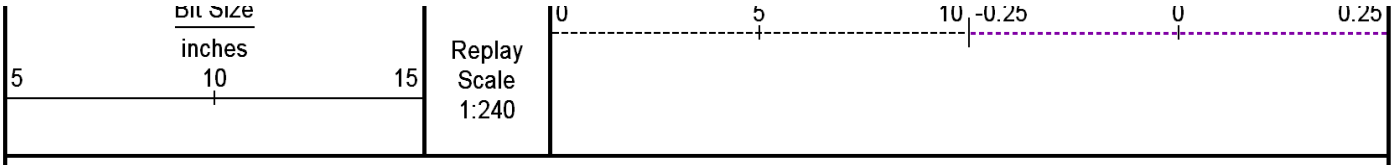

8300
8350
8400
8450
Bit Size
Density Caliper
Gamma Ray
Limestone Density Por.
PE
Compensated Density
Density Correction


8500
8550
8600
8650


100
8700
8750
8800
8850
Bit Size
MGS Gamma Ray
Density Caliper
PE
Limestone Density Por.
Compensated Density
Density Correction


8900
8950
9000
9050


9100
9150
9200
FR
IFRSize
FR
FFR
FR
0
0
Depth
In
Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
5
10
15
HVI
every
10 cu ft
MGS Gamma Ray
API
0
75
150
150
225
300
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



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 12-SEP-2012 04:57
Filename: C:\Minimus\Logs\Sandridge\Jochems 2721 2-2H\Jochems 2721 2-2H DEPTH_RTAP5.dta — Recorded on 11-SEP-2012 22:58
System Versions: Processed with 13.02.6600 Plotted with 13.02.6600

5 INCH BULK DENSITY LOG DSC

BEFORE SURVEY CALIBRATION

C:\Minimus\Logs\Sandridge\Jochems 2721 2-2H\Jochems 2721 2-2H DEPTH_RTAP5.dta

General Constants All 000

Last Edited on 11-SEP-2012,19:48

General Parameters		
Mud Resistivity	0.510	ohm-metres
Mud Resistivity Temperature	79.800	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	XY Caliper	
HVOL Caliper 1	MIE Caliper X	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Six Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Strain Gauge Constants MMS-E.B 159

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	

Gamma Calibration MGS-C.J 141

Field Calibration on 10-SEP-2012 16:49

	Measured	Calibrated (API)
Background	197	138
Calibrator (Gross)	955	672
Calibrator (Net)	758	534

Gamma Constants MGS-C.J 141

Last Edited on 14-AUG-2012,09:59

Gamma Calibrator Number	GRCC225	
Mud Density	1.00	gm/cc

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 141

Field Calibration on 13-AUG-2012,14:40

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

High Resolution Temperature Constants MGS-C.J 141

Last Edited on

Pre-filter Length	11

Neutron Calibration MDN-B.A 275

Base Calibration on 20-AUG-2012 17:03
Field Check on 10-SEP-2012 16:38

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3023	94	3714	110
Ratio	32.292		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	0	0
Ratio	0.000	

Field Check

	Calibrated (cps)	
	2247	3278
Ratio	0.685	

Neutron Constants MDN-B.A 275

Last Edited on 11-SEP-2012,19:48

Neutron Source Id	P31131B	
Neutron Jig Number	NJ6630	
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
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MIE-A.A 174

Base Calibration on 10-SEP-2012 17:10
Field Calibration on 10-SEP-2012 17:12

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)
1	26405	26188	5.97
2	36676	36556	7.96
3	46374	46367	9.86
4	58095	58175	11.92
5	0	0	0.00

Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
1	26526	25466	24821	25102	5.97
2	35917	33924	32930	33990	7.96
3	43834	42494	40854	41863	9.86
4	53740	52952	49935	51232	11.92

4	53743	52252	49925	51323	11.92
5	0	0	0	0	0.00

Field Calibration

Measured Pads 1-5 Caliper(in)	Measured Pads 3-7 Caliper(in)	Actual Caliper(in)
6.03	6.01	5.97

Measured Pad 2 Caliper(in)	Measured Pad 4 Caliper(in)	Measured Pad 6 Caliper(in)	Measured Pad 8 Caliper(in)	Actual Caliper(in)
3.04	2.99	2.97	3.01	5.97

Caliper Constants MIE-A.A 174

Last Edited on 10-SEP-2012,14:48

Caliper Difference for BRKT	0.120	inches

Accelerometer Parameters MIE-A.A 174

Date Of Last Accelerometer Calibration 10-SEP-2012,14:45

	X Accelerometer	Y Accelerometer	Z Accelerometer
Slope	-1.109668	-1.105512	-1.098022
Offset	0.006256	-0.000537	0.012788

Accelerometer Constants MIE-A.A 174

Last Edited on 10-SEP-2012,14:46

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number	644			
Calibration Date	19-Aug-2008			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	8.97681e-006	-1.88894e-008	1.27694e-010
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.72633e-004	2.24457e-007	1.11567e-009

Y Accelerometer

Serial Number	679			
Calibration Date	24-Aug-2008			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	2.76667e-005	-1.48113e-008	9.65949e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.60693e-004	5.14448e-007	-1.83309e-010

Z Accelerometer

Serial Number	687			
Calibration Date	30-Aug-2008			
	B0	B1	B2	B3
Bias(g)	0.00000e+000	-2.68884e-005	4.88649e-009	-1.07028e-011
	SF0	SF1	SF2	SF3
Scale Factor(mA/g)	3.00000e+000	2.65798e-004	2.86695e-007	9.16986e-010

Magnetometer Parameters MIE-A.A 174

Date Of Last Magnetometer Calibration 10-SEP-2012,14:47

	X Magnetometer	Y Magnetometer	Z Magnetometer
Slope	-1.000000	-1.002889	-1.001936
Offset	0.011223	-0.016605	0.011526

Magnetometer Constants MIE-A.A 174

Last Edited on

Magnetometer Calibrator Number 000

Navigation Constants MIE-A.A 174

Last Edited on

Magnetic Declination	0.00	degrees	East

Imager Pad Check MIE-A.A 174

Field Check on

Pad 1	Pad Not Tested	Pad 5	Pad Not Tested
Pad 2	Pad Not Tested	Pad 6	Pad Not Tested
Pad 3	Pad Not Tested	Pad 7	Pad Not Tested
Pad 4	Pad Not Tested	Pad 8	Pad Not Tested

Compact Micro Imager Constants MIE-A.A 174

Last Edited on 10-SEP-2012,14:48

Sonde Configuration	Imager Mode	degrees
Arm-Pad Kit	Normal Pads (12.25 in)	
Centre Pad 1 Rotational Offset	0.00	
Image/Borehole Ovality Reference	Azimuth of Pad 1	degrees
Non Active Buttons	Omit	feet
Search Angle	0.00	feet
Correlation Interval	3.28	mAmp
Correlation Step	1.64	mAmp
Current Offset	0.0000	
Squasher Start	N/A	
Image Processing	Enabled	

Induction Calibration MAI-B.J 376

Base Calibration on 22-FEB-2012 08:07
Field Check on 10-SEP-2012 16:18

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	16.4	461.5	9.3	966.2
2	5.9	377.0	7.6	821.4
3	3.1	255.4	5.2	566.0
4	1.7	130.3	2.6	279.2

Array Temperature	73.8	Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	16.9	3951.1	
2	0.0	0.0	31.6	3586.4	
3	0.0	0.0	30.2	3104.7	
4	0.0	0.0	20.6	2125.5	
Deep	0.0	0.0	19.2	2053.7	
Medium	0.0	0.0	43.3	4064.2	
Shallow	0.0	0.0	46.3	5263.5	
Array Temperature	0.0		106.5		Deg F

Induction Constants MAI-B.J 376

Last Edited on 11-SEP-2012,19:49

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	MIE Caliper X	
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	

High Resolution Temperature Calibration MAI-B.J 376

Field Calibration on 05-AUG-2012,15:12

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	50.00	50.00

High Resolution Temperature Constants MAI-B.J 376

Last Edited on

Pre-filter Length	11

Photo Density Calibration MPD-C.J 376

Base Calibration on 05-SEP-2012 12:14
Field Check on 10-SEP-2012 16:24

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	52759	17751	53167	19331
Reference 2	24759	2664	25116	2544

Field Check at Base

1208.1	1371.8

Field Check

1211.3	1372.0

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	218	1078		
Reference 1	18227	52571	0.350	0.320
Reference 2	7014	24616	0.289	0.273

Field Check at Base

218.4	1077.8

Field Check

218.5	1080.6

Density Constants MPD-C.J 376

Last Edited on 26-JUL-2012,00:23

Density Source Id	P21136B
Nylon Calibrator Number	535
Aluminium Calibrator Number	535
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper

PE Correction to Density	Not Applied	
Mud Density	1.10	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	

Caliper Calibration MPD-C.J 376

Base Calibration on 06-SEP-2012 17:26
Field Calibration on 10-SEP-2012 16:26

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15824	4.01
2	25152	5.97
3	35104	7.96
4	44768	9.86
5	55856	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.94	7.96

DOWNHOLE EQUIPMENT

C:\Minimus\Logs\Sandridge\Jochems 2721 2-2H\Jochems 2721 2-2H DEPTH_RTAP5.dta

Shuttle Running Tool 3.5")
SRT-A.A 59 LG: 5.42 ft WT: 37.5 lb OD: 2.52 in

MIS-E.B Compact Inline Standoff sub
MIS-E.B 688 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

200v Std Compact Linker
MLK-A 4 LG: 8.53 ft WT: 30.9 lb OD: 2.24 in

400V ext Compact Linker
MLK-A 2 LG: 14.23 ft WT: 30.9 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 610 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MBS-F.A 200v Compact Battery Sub
MBS-F.A 120 LG: 10.22 ft WT: 81.6 lb OD: 2.24 in

Compact Memory Sub E.B
MMS-E.B 159 LG: 5.20 ft WT: 37.5 lb OD: 2.24 in

Compact Tool Isolator sub.
MTI-B.A 64 LG: 1.54 ft WT: 13.2 lb OD: 2.24 in

MTF-B.A 64 LG: 1.64 ft WT: 13.2 lb OD: 2.24 in

Compact Short Gamma
MGS-C.J 141 LG: 3.41 ft WT: 24.3 lb OD: 2.24 in

Compact Collar Locator
MCL-B.J 53 LG: 3.17 ft WT: 26.5 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 612 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 397 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 700 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-B.A 275 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.J 376 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 695 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-J.A Compact Swivel Head Adaptor
SHA-J.A 316 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 611 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-E.A Compact Inline Standoff sub
MIS-E.A 115 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 597 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 709 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

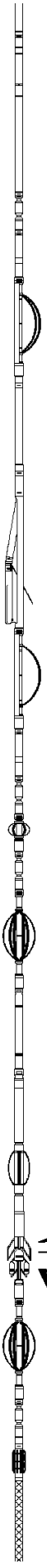
Compact MMI Memory Section
MIM-A.A 174 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in

Compact MMI Electrode Section
MIE-A.A 174 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in

MIS-D.A Compact Inline Bowspring sub
MIS-D.A 441 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SKJ-E.B Compact Knuckle Joint
SKJ-E.B 537 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Induction
MAI-B.J 376 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in



20.92 ft IECY - MIE Caliper Y
20.92 ft IECX - MIE Caliper X
20.40 ft IMZA - Z Accelerometer
20.40 ft DI48 - Imager Diameter 4 - 8
20.40 ft DI26 - Imager Diameter 2 - 6
20.40 ft IAP1 - Azimuth of Reference
20.40 ft IAZI - Borehole Azimuth (Mag.)
20.40 ft ITLT - Borehole Tilt
20.40 ft IRHS - Relative Bearing (HS)
20.40 ft IACF - Acceleration Magnitude
20.40 ft IMGF - Field Magnitude
20.40 ft IMGR - MMI Image

Tool Zero (0.13ft from bottom)

MAI-B.J 376 LG: 10.61 ft WT: 48.5 lb OD: 2.24 in

Total Length: 138.26 ft Weight: 925.9 lb

-0.15 ft SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	SANDRIDGE ENERGY
WELL	JOCHEMS 2721 2-2H
FIELD	WILDCAT
PROVINCE/COUNTY	FORD
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2302.50	feet	First Reading	9135.00	feet
Elevation Drill Floor	2301.50	feet	Depth Driller	9217.00	feet
Elevation Ground Level	2284.00	feet	Depth Logger	9217.00	feet

Weatherford®

CML MESSENGER SHUTTLE

COMPACT PHOTO DENSITY

COMPENSATED NEUTRON LOG