Weatherford®

Photo Density
Compensated Neutron

COMPANY	Antero Resources Corporation
WELL	Washington Unit 2H
FIELD	Oxford Field
PROVINCE/COUNTY	Doddridge County
COUNTRY/STATE	U.S.A / West Virginia
LOCATION	Lat: 39-14-2.856N, Long: -80-50-24.332W
PERMIT NUMBER	06371

FIELD PRINT

SEC	TWP	RGE

API Number 47-017-063710000

Other Services
Gamma Ray
Caliper
Data Pack
Dual Laterolog

Permanent Datum Ground Level, Elevation 1052 feet
Log Measured From KB
Drilling Measured From KB of 24Feet

Elevations:	feet
KB	1076.00
DF	1076.00
GL	1052.00

Date	10-Sept-2014			
Run Number	One			
Service Order	5362-97581608			
Depth Driller	7034.00	feet		
Depth Logger	6066.00	feet		
First Reading	6066.00	feet		
Last Reading	0.00	feet		
Casing Driller	2496.00	feet		
Casing Logger	2505.00	feet		
Bit Size	8.750	inches		
Hole Fluid Type	Water Based			
Density / Viscosity	12.55 lb/USg	49.00 CP		
PH / Fluid Loss	9.90	4.10 ml/30Min		
Sample Source	Flowline			
Rm @ Measured Temp	0.024 @120.0	ohm-m		
Rmf @ Measured Temp	0.018 @120.0	ohm-m		
Rmc @ Measured Temp	0.031 @120.0	ohm-m		
Source Rmf / Rmc	Calc	Calc		
Rm @ BHT	0.022 @133.0	ohm-m		
Time Since Circulation	8 Hrs			
Max Recorded Temp	133.00	deg F		
Equipment / Base	13157	Weston		
Recorded By	Justin Bartlett			
Witnessed By	Jerry Wilson			

BOREHOLE RECORD

Last Edited: 11-SEP-2014 02:25

Bit Size inches	Depth From feet	Depth To feet
17.500	0.00	346.00
12.250	346.00	2505.00
8.750	2505.00	6066.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
Surface	13.375	0.00	346.00	48.00
Intermed	9.625	0.00	2505.00	36.00

REMARKS

Weatherford Logging Software version used 14.01.3220
Crew: John Turner
Tools ran: SHA, MBE, MCG, MLK, MDN, MPD,SKJ, MUG, MLE, MLG
Hardware Ran: 1- 1.0 inch standoff on MUG and 1- 1.0 inch standoff used
Log data obtained from deepest reachable depth : tools stopped
Borehole size and rugosity may effect all curves
All header information accquired from client representative
Drilling Fluid will affect all curves
Repeat was logged below casing due to horizontal curve
Rig: Patterson 325

and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

2 Inch Main Pass

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 11-SEP-2014 02:34
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta
Recorded on 10-SEP-2014 22:56
System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220

Timing Marks
every 60.0 sec

Density Caliper
inches
7 12 17

Borehole Corrected Gamma
API
0 100 200
200 300 400

Bit Size
inches
7 12 17

DST Uphole Tension
pounds
0 3000
3000 6000

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:600

0

Limestone Neutron Por.
percent
30 20 10 0 -10

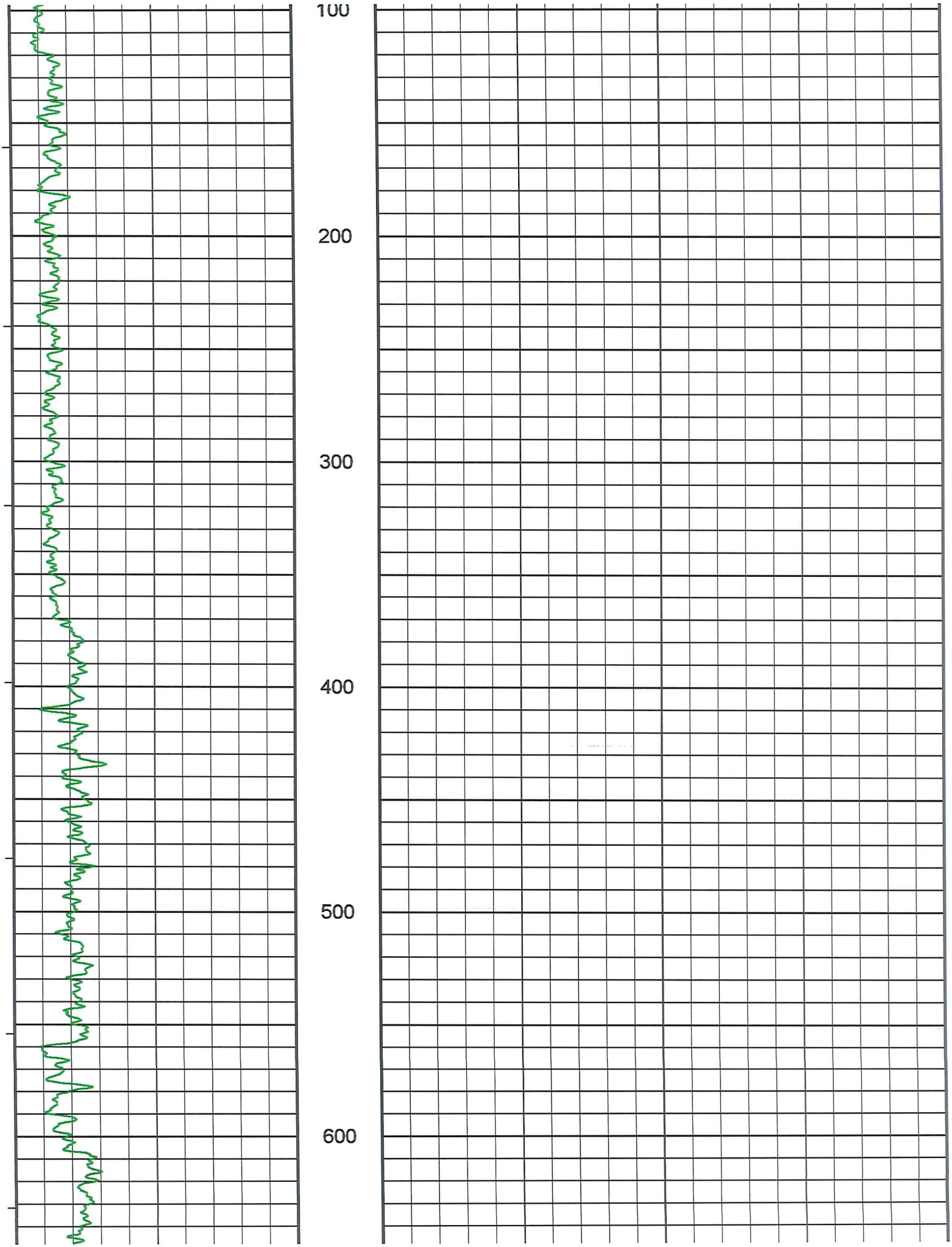
Compensated Density
grams/cc
2 2.25 2.50 2.75 3

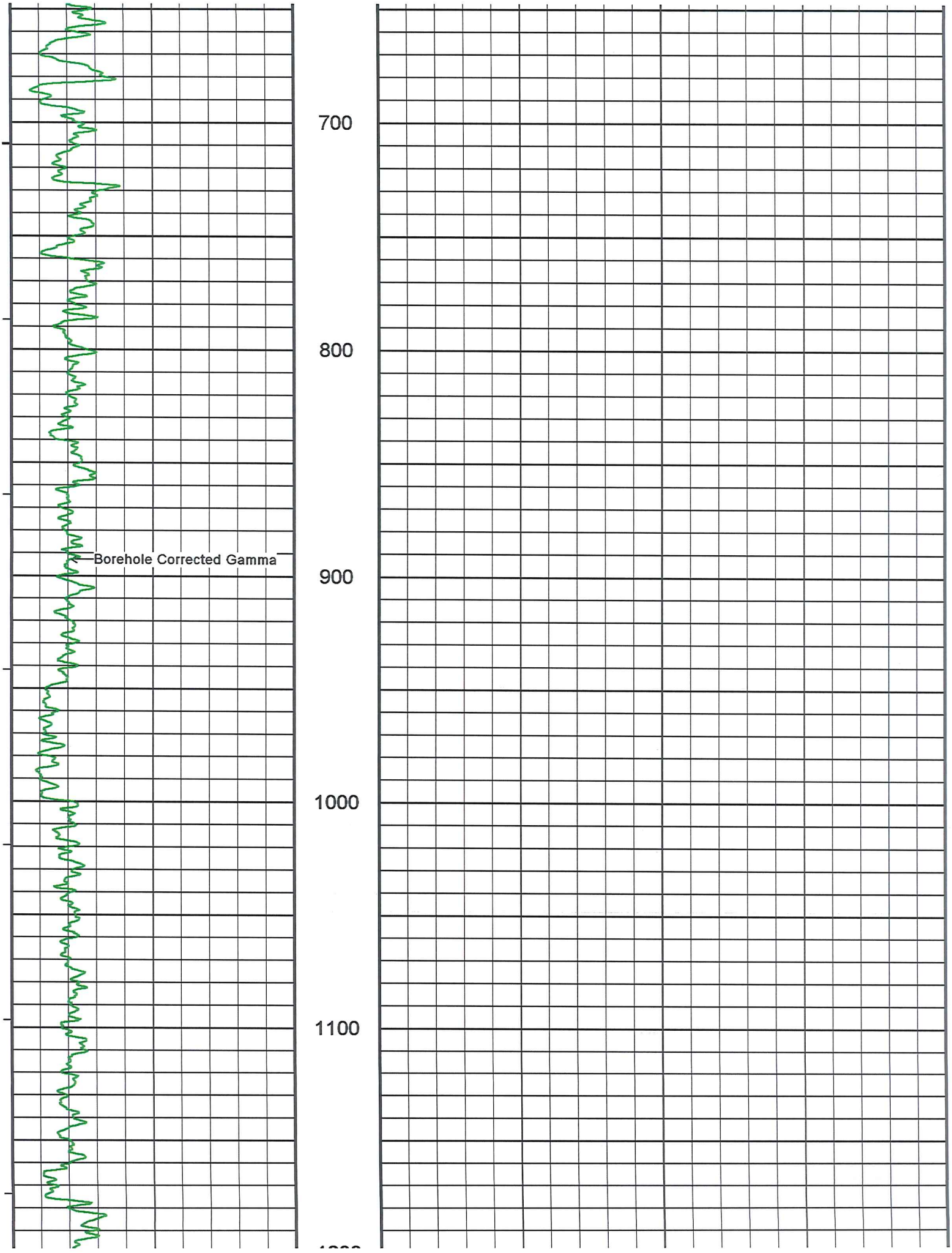
PE
barns/electron
0 2.50 5 7.50 10

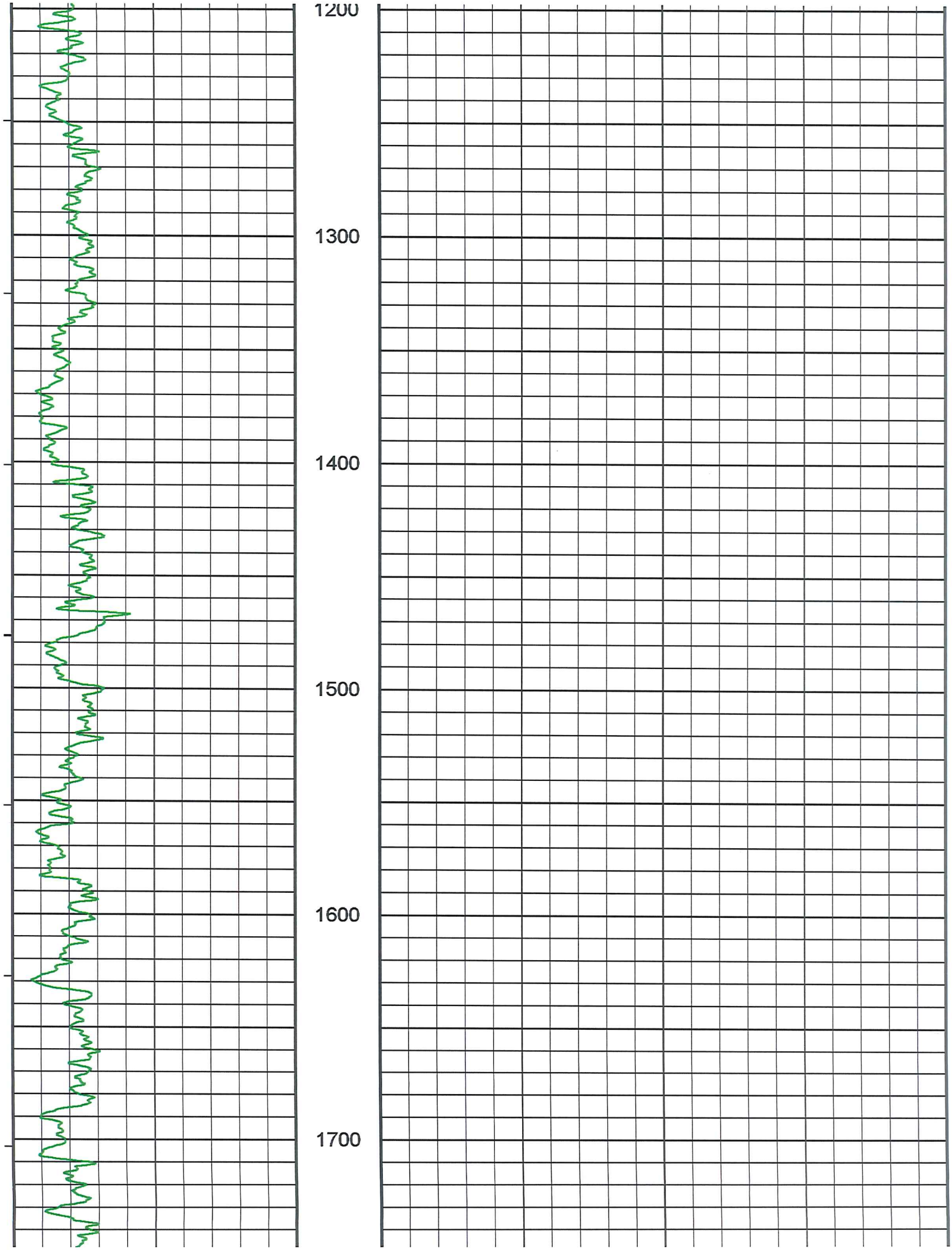
Base Density Porosity
percent
30 20 10 0 -10

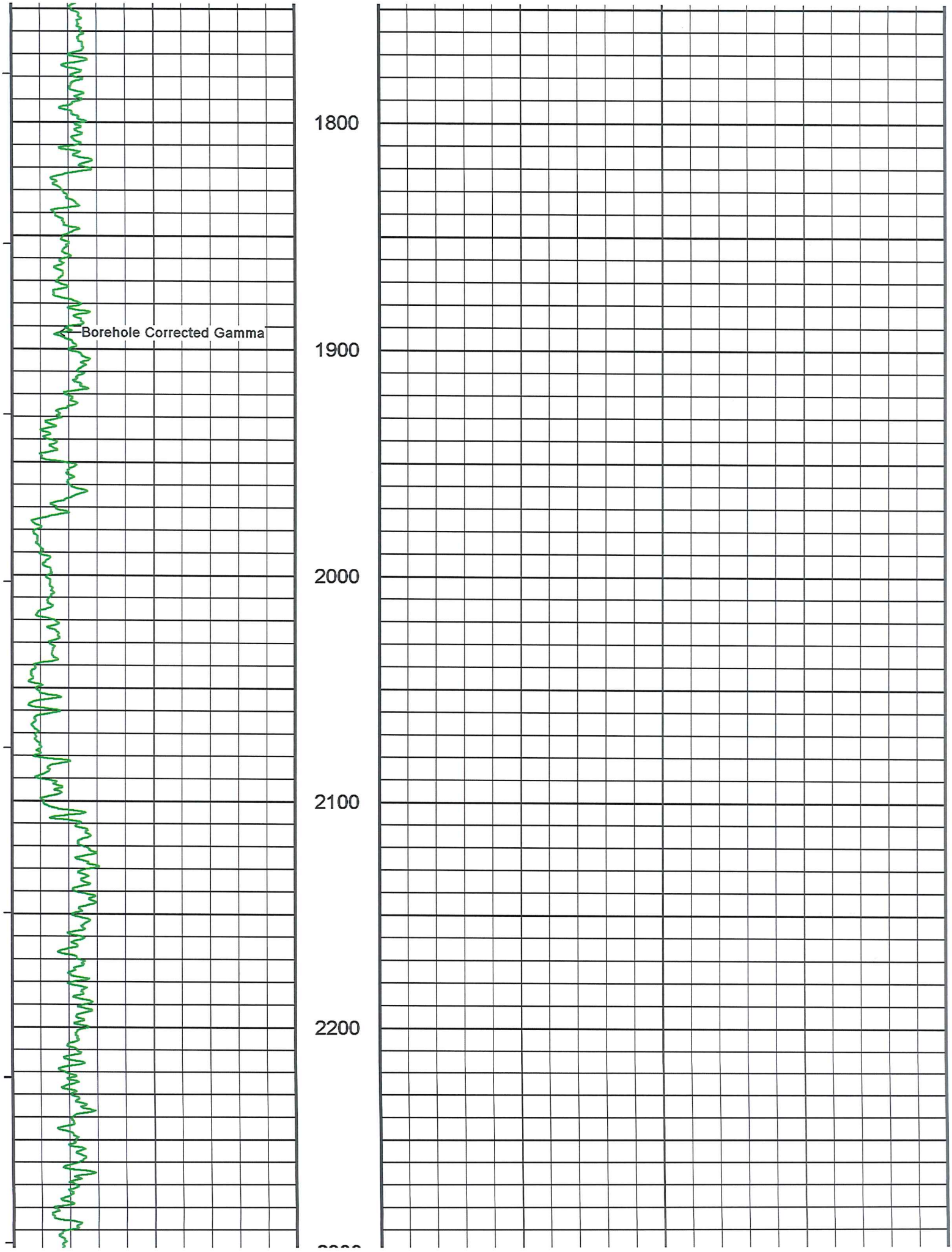
Matrix density
grams/cc
2 2.25 2.50 2.75 3

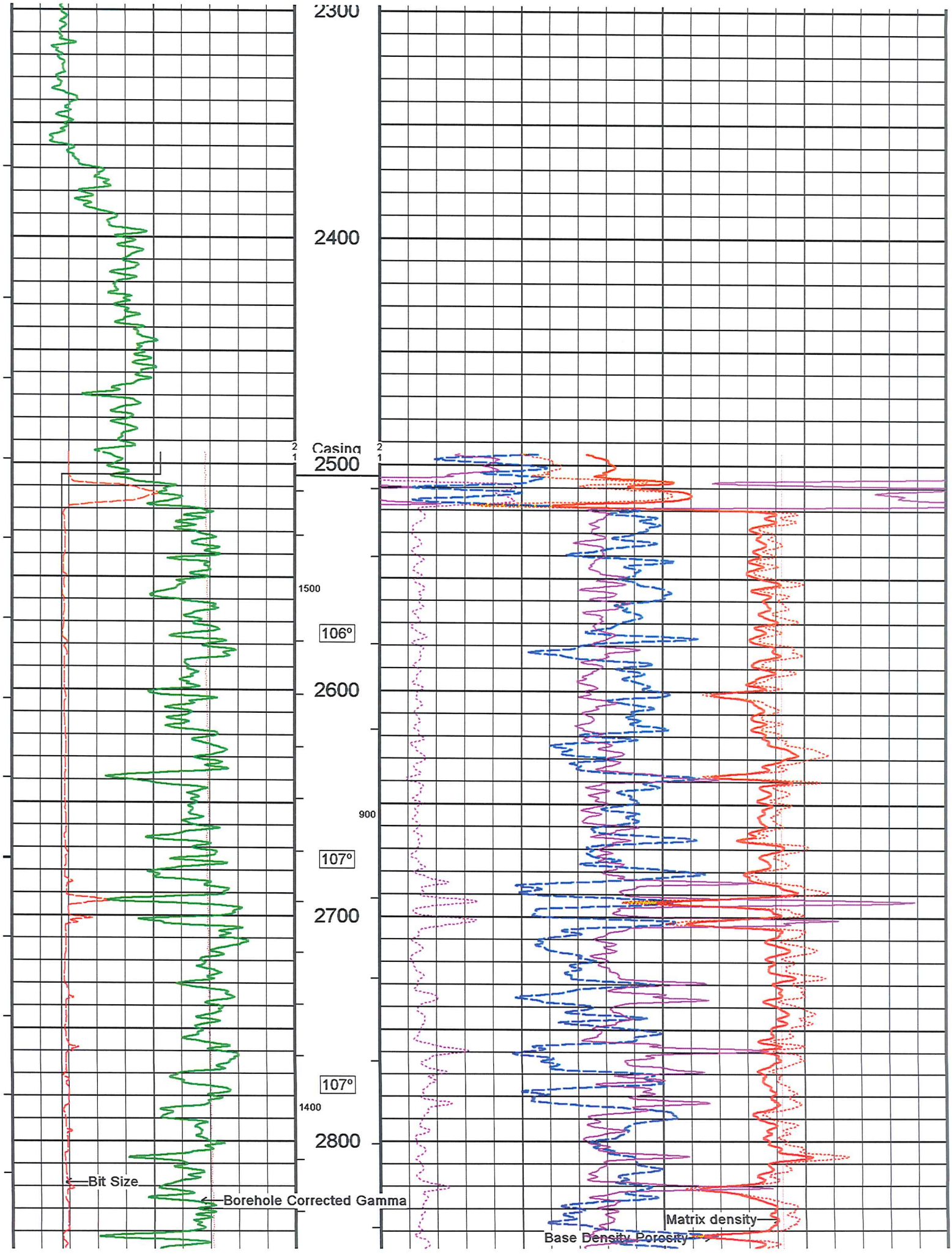
Density Correction
grams/cc
-0.05 0.20 0.45

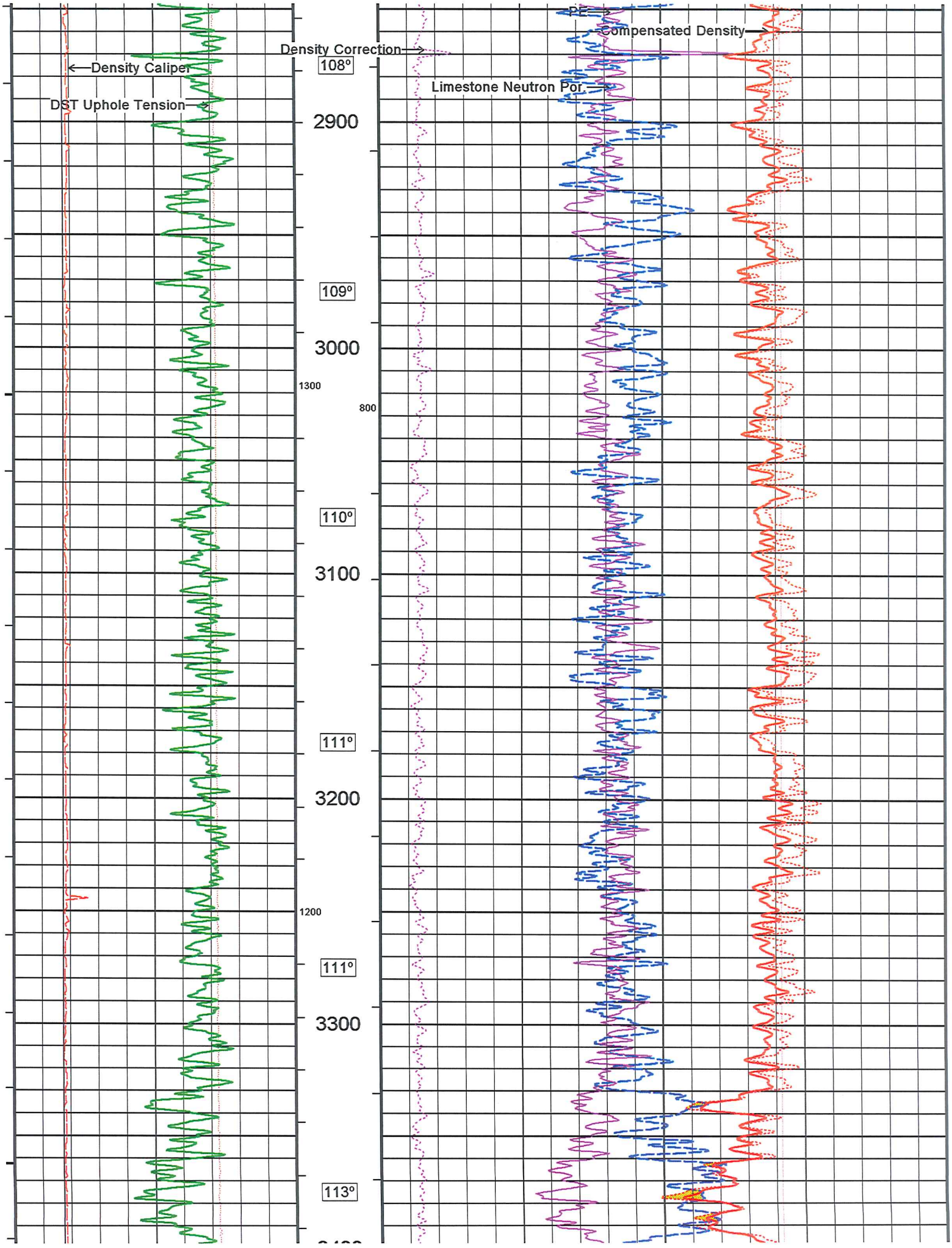

100
200
300
400
500
600

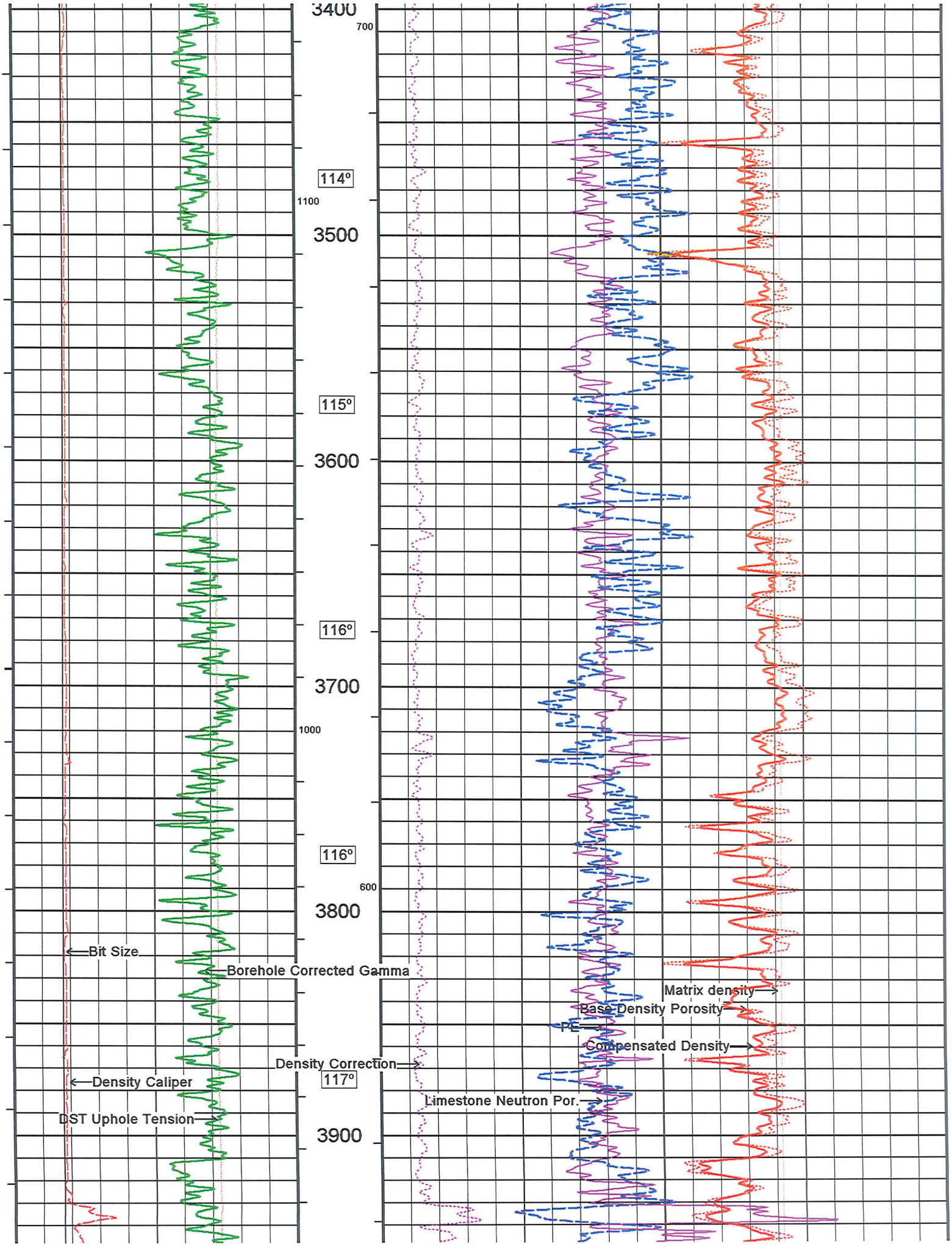

Borehole Corrected Gamma
700
800
900
1000
1100

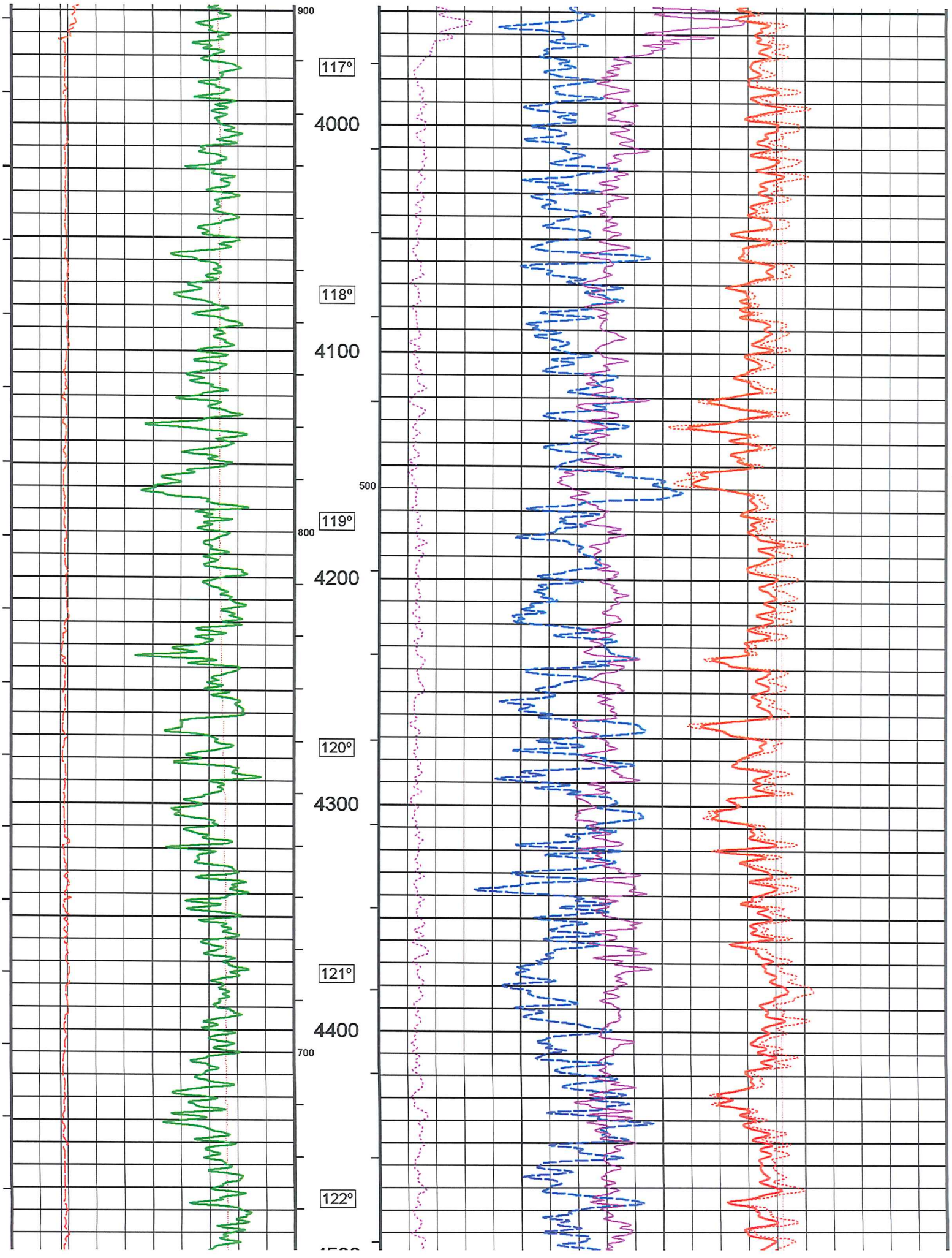

1200
1300
1400
1500
1600
1700

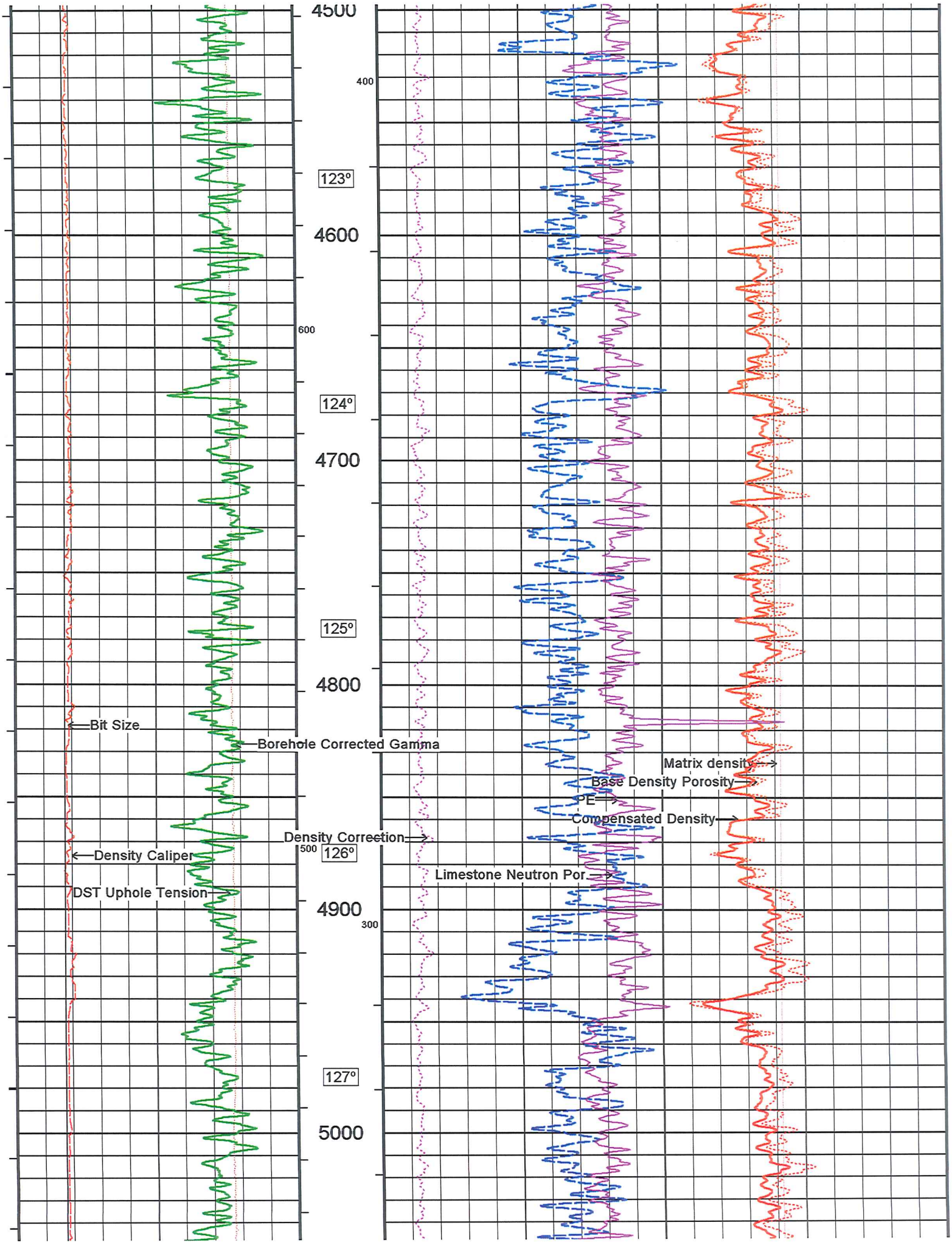

Borehole Corrected Gamma
1800
1900
2000
2100
2200

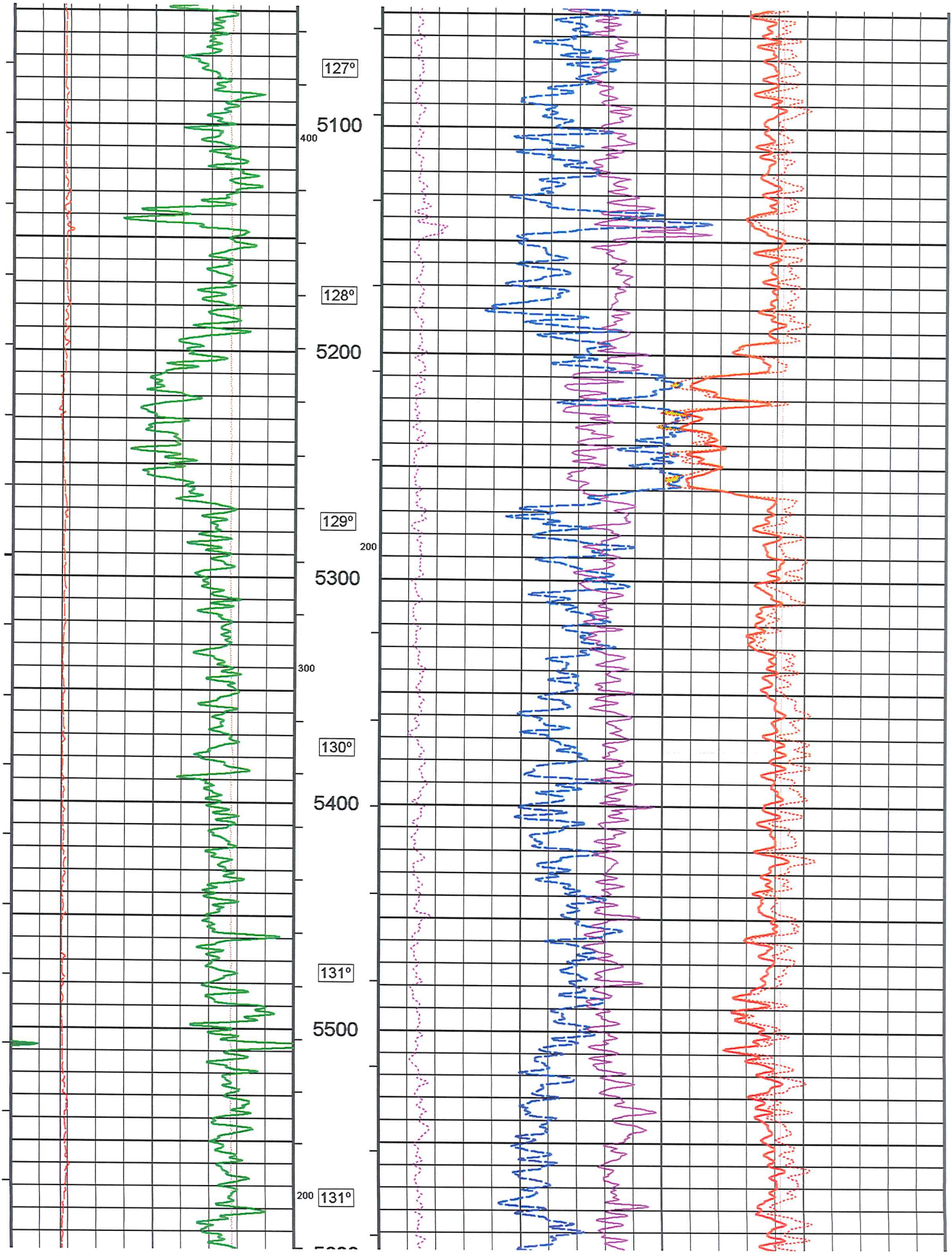

2300
2400
Casing
2500
1500
106°
2600
900
107°
2700
107°
1400
2800
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity

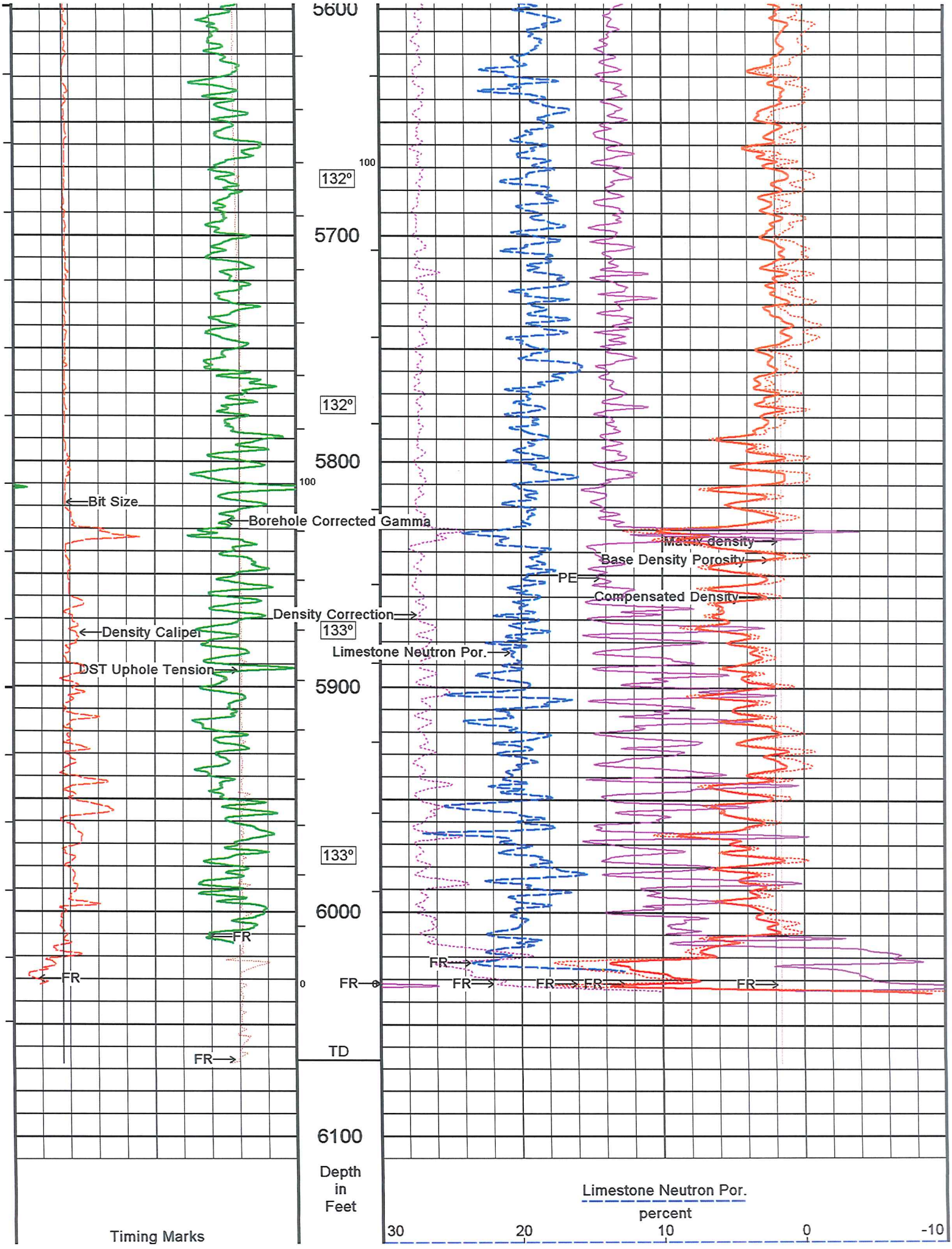

Density Caliper
DST Uphole Tension
Density Correction
PE
Compensated Density
Limestone Neutron Por
108°
109°
110°
111°
111°
113°
2900
3000
3100
3200
3300
1300
1200
800

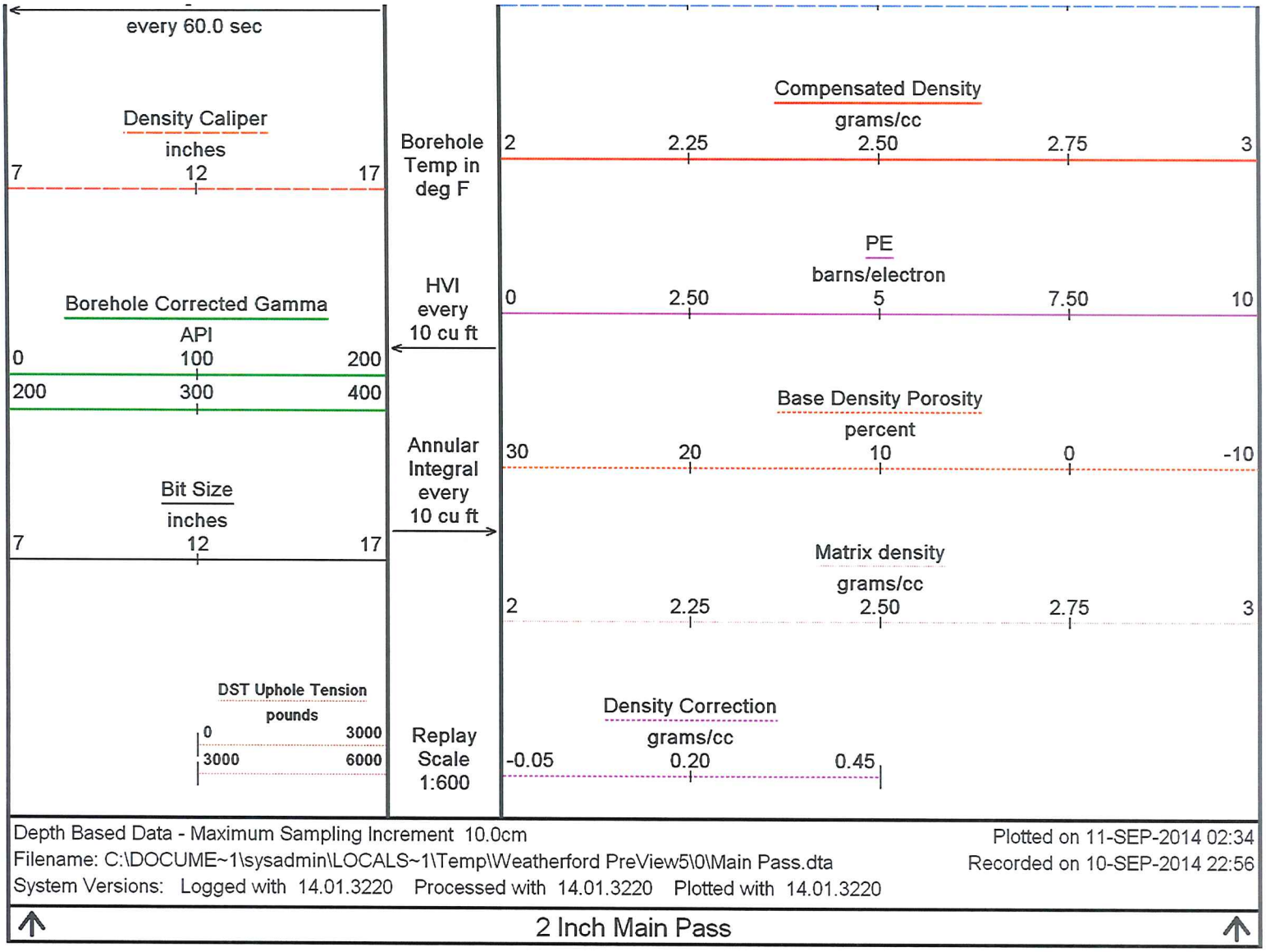

3400
700
114°
1100
3500
115°
3600
116°
3700
1000
116°
600
3800
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
117°
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
3900


900
800
700
117°
118°
119°
120°
121°
122°
4000
4100
4200
4300
4400
500


4500
400
123°
4600
600
124°
4700
125°
4800
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
500
126°
Density Caliper
Limestone Neutron Por
DST Uphole Tension
4900
300
127°
5000


127°
5100
400
128°
5200
129°
200
5300
300
130°
5400
131°
5500
200
131°


5600
100
132°
5700
132°
5800
100
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
Density Caliper
133°
Limestone Neutron Por.
DST Uphole Tension
5900
133°
6000
FR
FR
FR
FR
FR
FR
FR
FR
FR
0
TD
6100
Depth
in
Feet
Timing Marks
Limestone Neutron Por.
percent
30
20
10
0
-10


every 60.0 sec
Density Caliper
inches
7
12
17
Borehole Corrected Gamma
API
0
100
200
200
300
400
Bit Size
inches
7
12
17
DST Uphole Tension
pounds
0
3000
3000
6000
Borehole Temp in deg F
HVI every 10 cu ft
Annular Integral every 10 cu ft
Replay Scale 1:600
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
PE
barns/electron
0
2.50
5
7.50
10
Base Density Porosity
percent
30
20
10
0
-10
Matrix density
grams/cc
2
2.25
2.50
2.75
3
Density Correction
grams/cc
-0.05
0.20
0.45
Depth Based Data - Maximum Sampling Increment 10.0cm
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Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta
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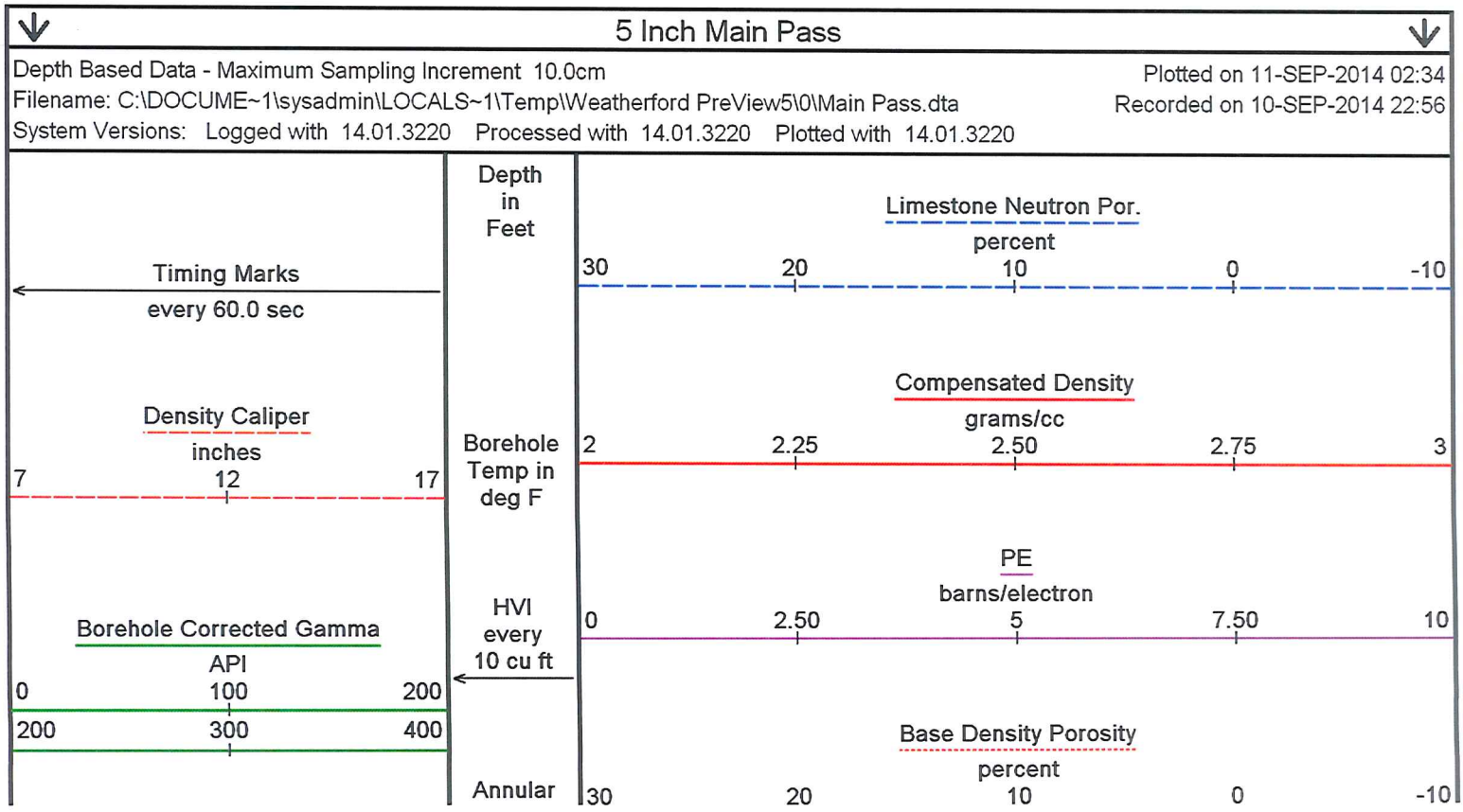
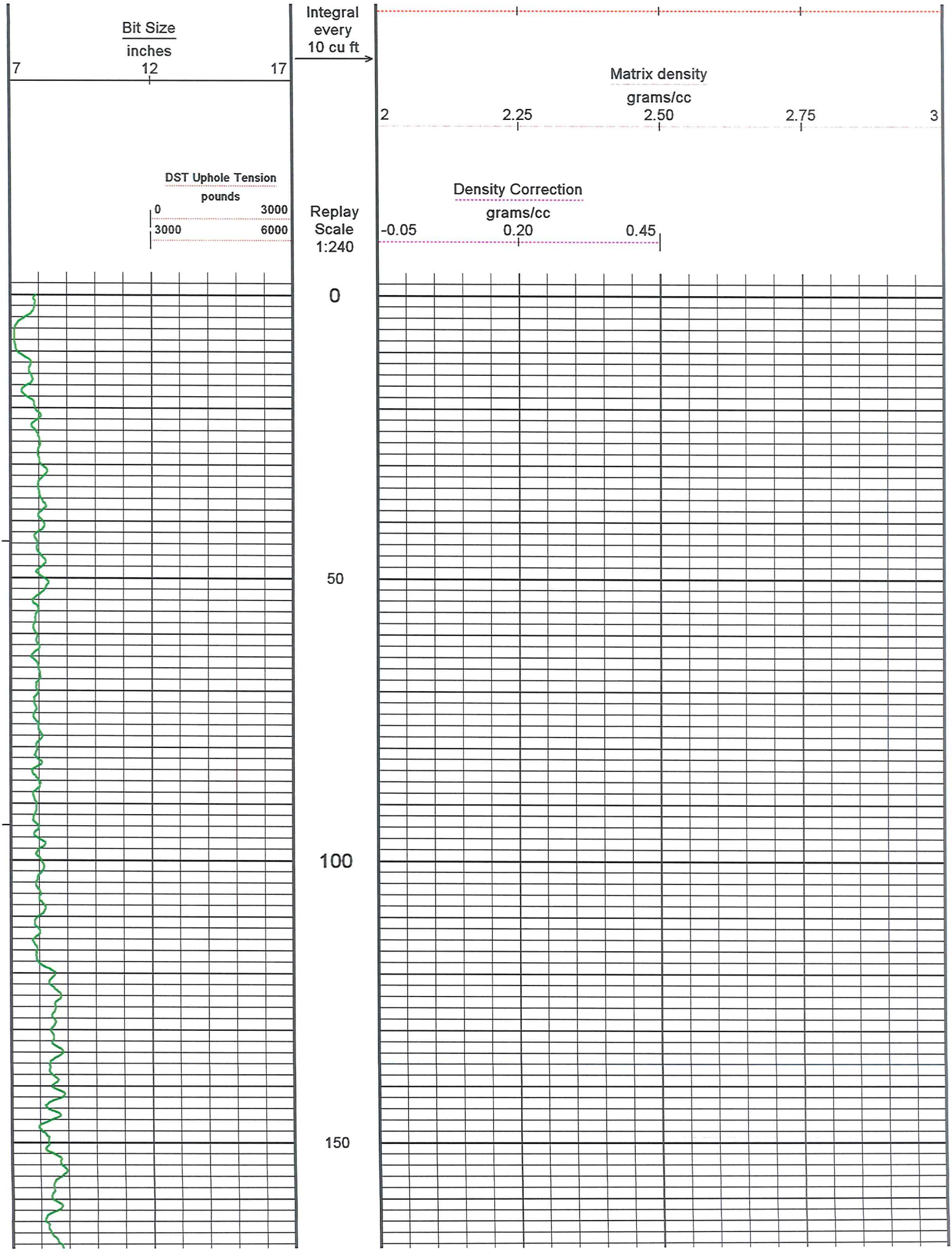
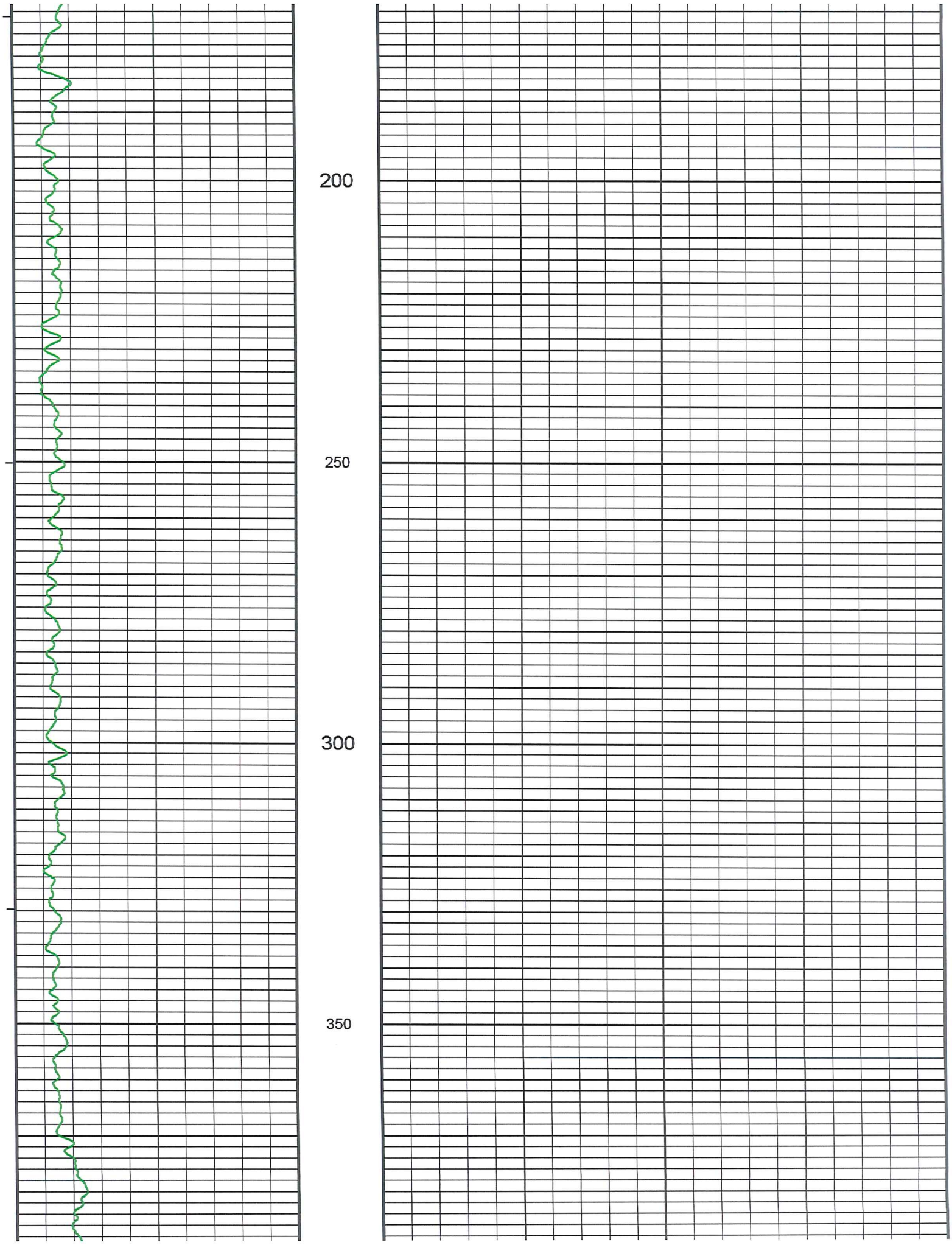
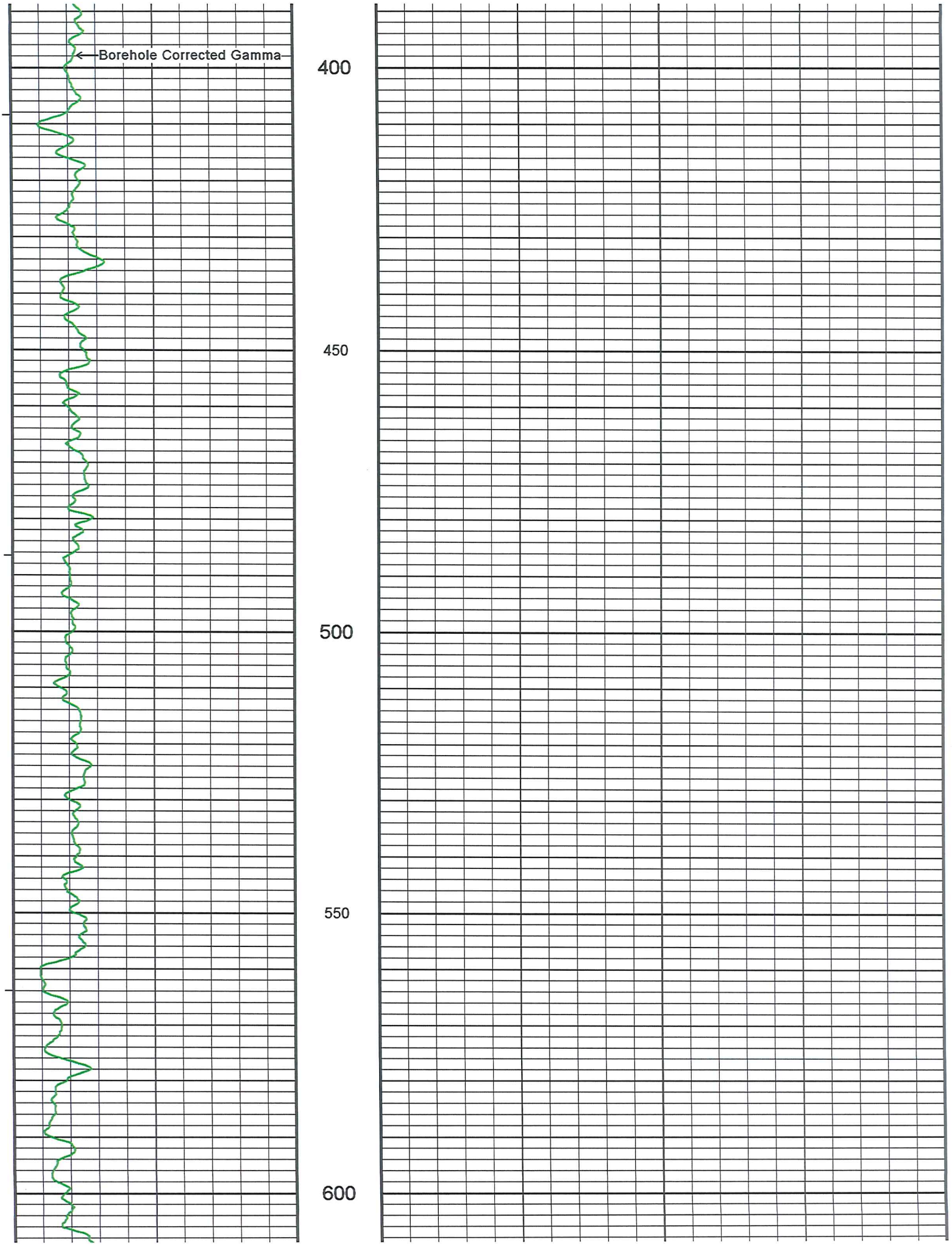
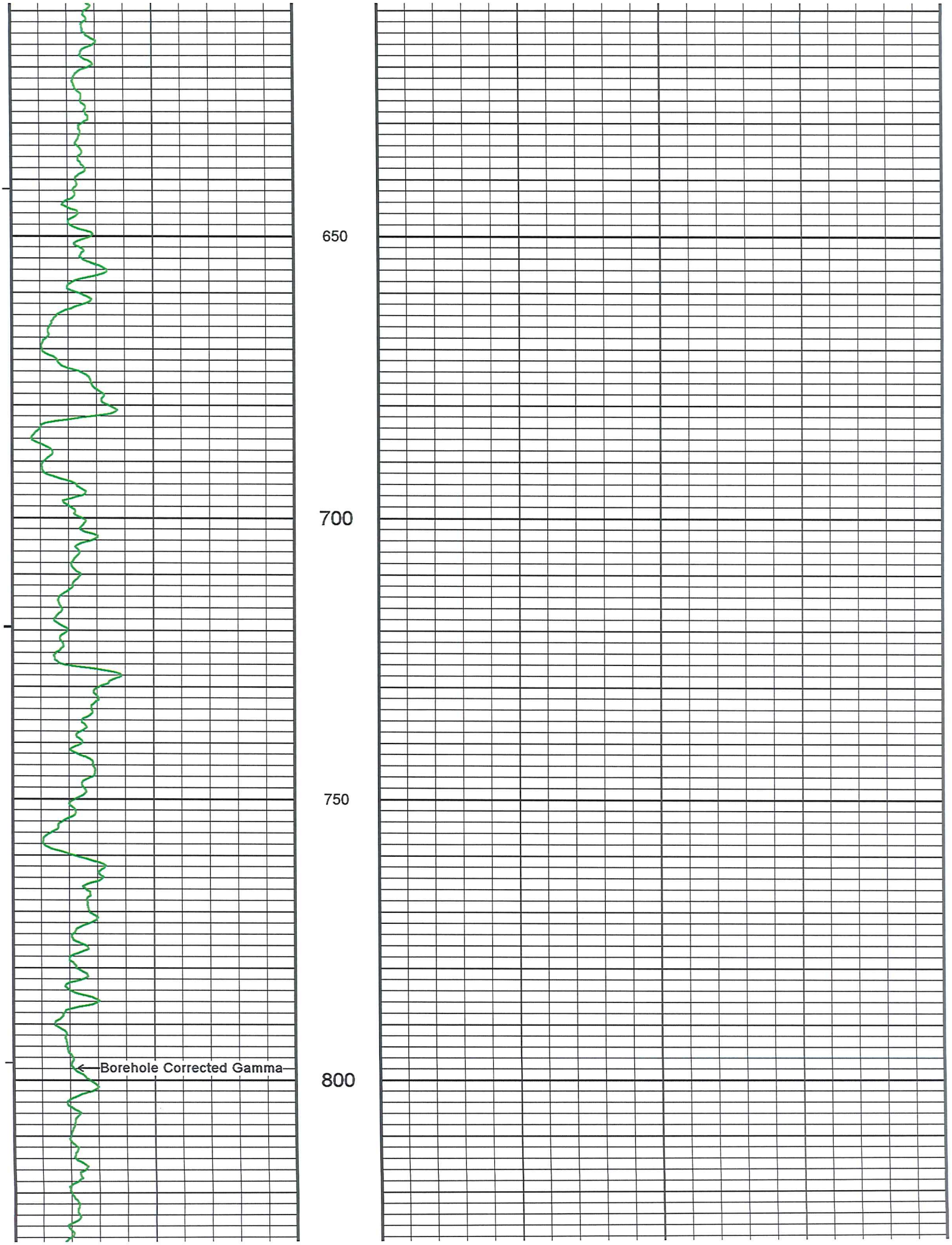
2 Inch Main Pass

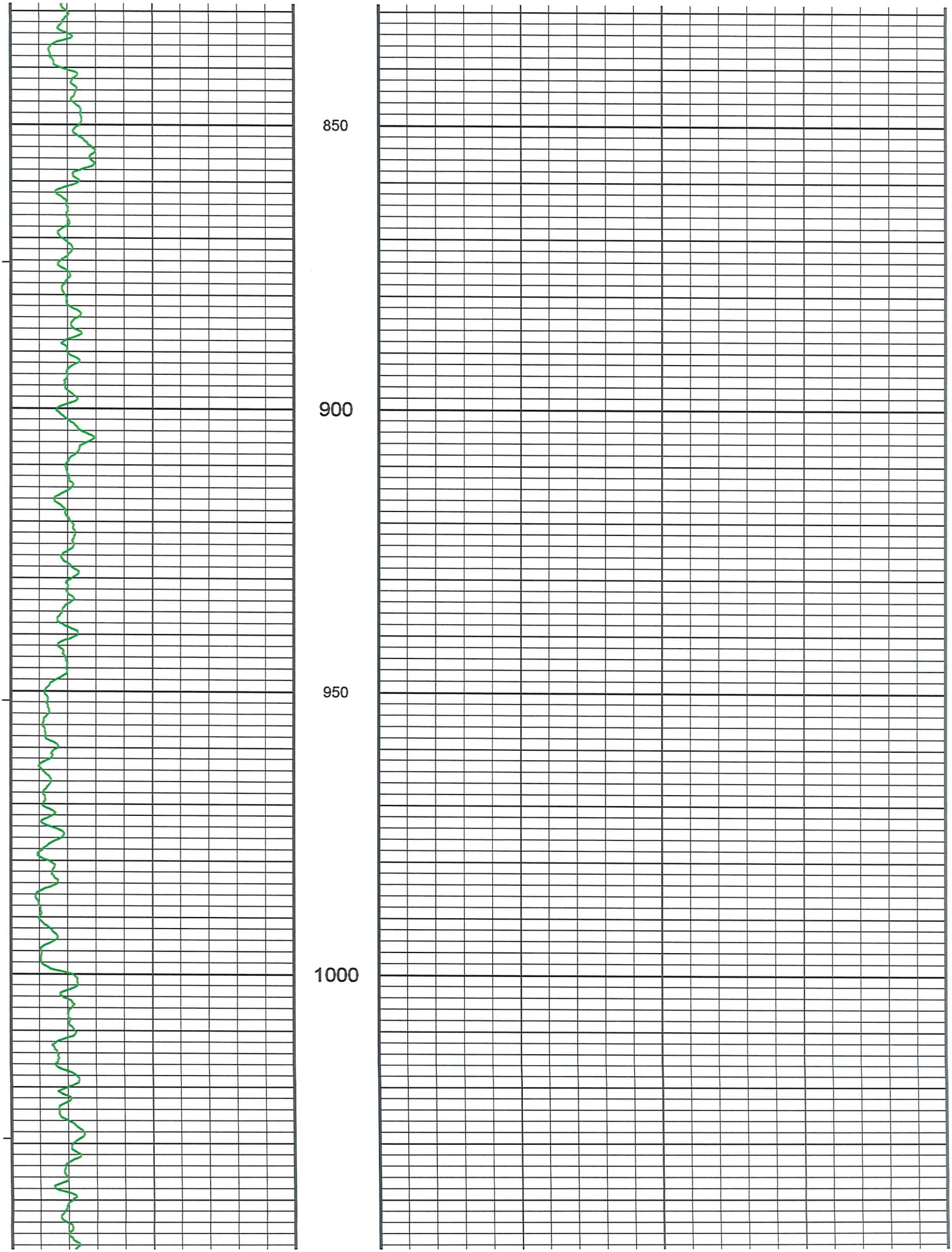

5 Inch Main Pass
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 11-SEP-2014 02:34
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta
Recorded on 10-SEP-2014 22:56
System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220
Timing Marks
every 60.0 sec
Density Caliper
inches
7
12
17
Borehole Corrected Gamma
API
0
100
200
200
300
400
Depth in Feet
Borehole Temp in deg F
HVI every 10 cu ft
Annular
Limestone Neutron Por.
percent
30
20
10
0
-10
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
PE
barns/electron
0
2.50
5
7.50
10
Base Density Porosity
percent
30
20
10
0
-10

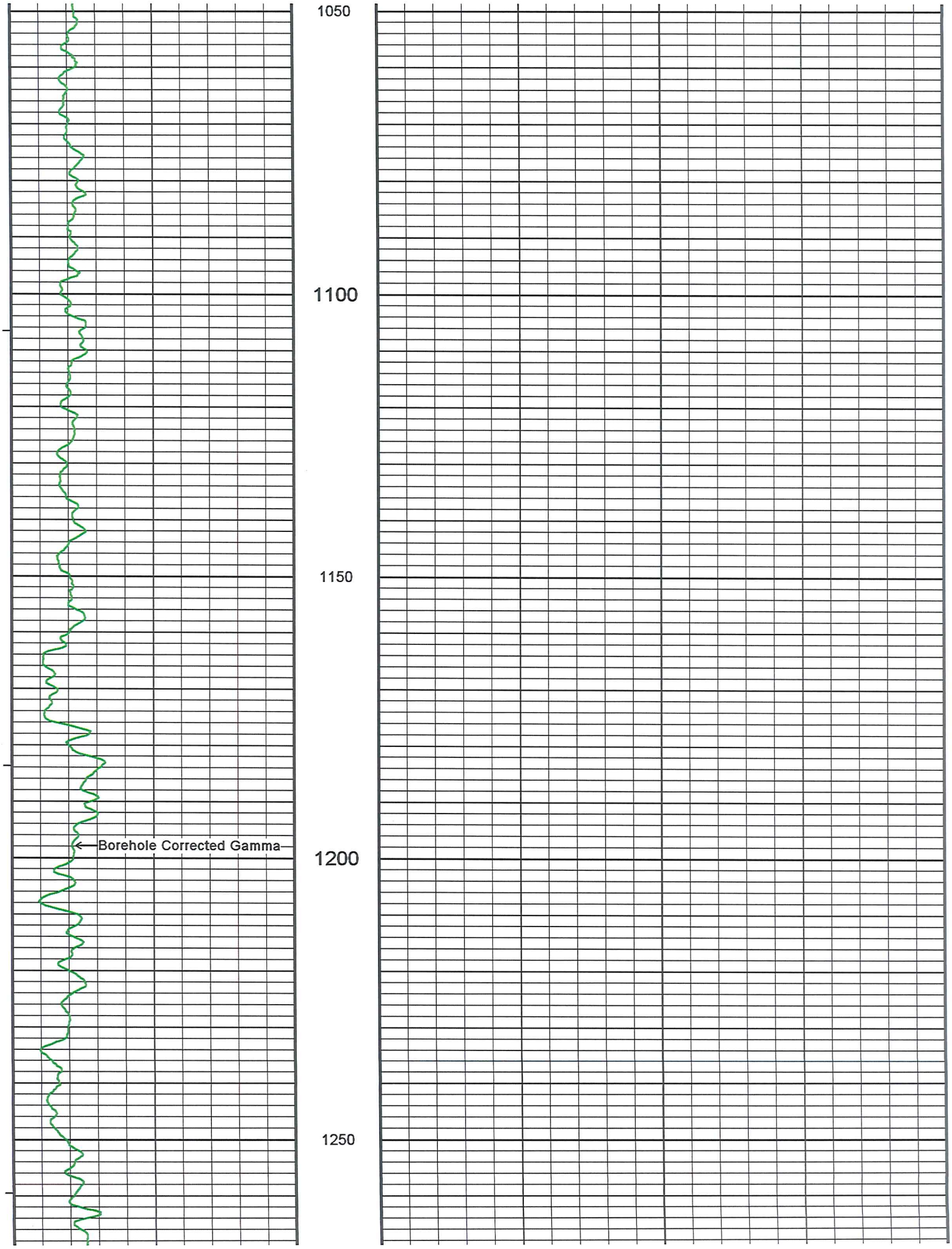

Bit Size
inches
7
12
17
Integral every 10 cu ft
Matrix density
grams/cc
2
2.25
2.50
2.75
3
DST Uphole Tension
pounds
0
3000
3000
6000
Density Correction
grams/cc
-0.05
0.20
0.45
Replay Scale 1:240
0
50
100
150

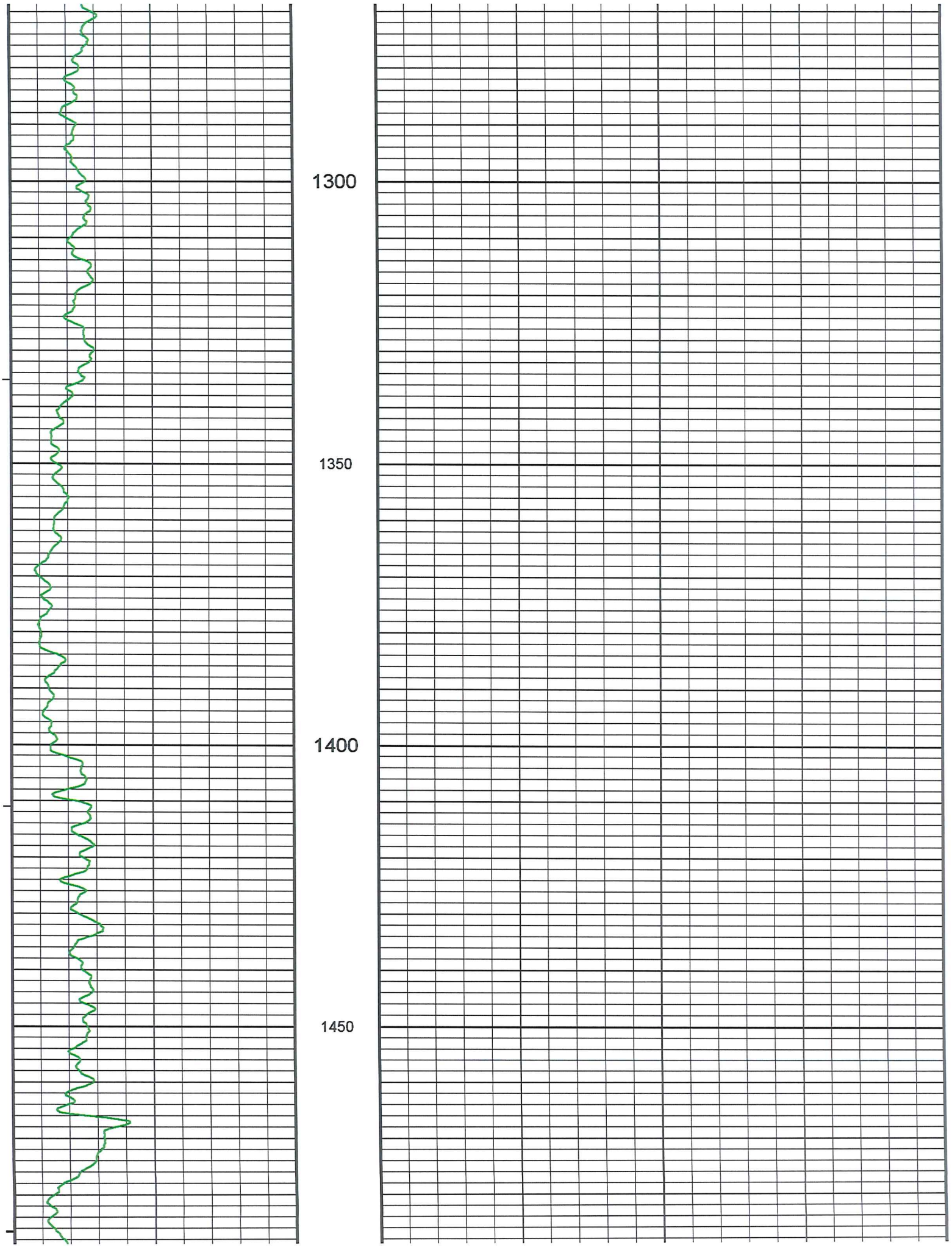

200
250
300
350

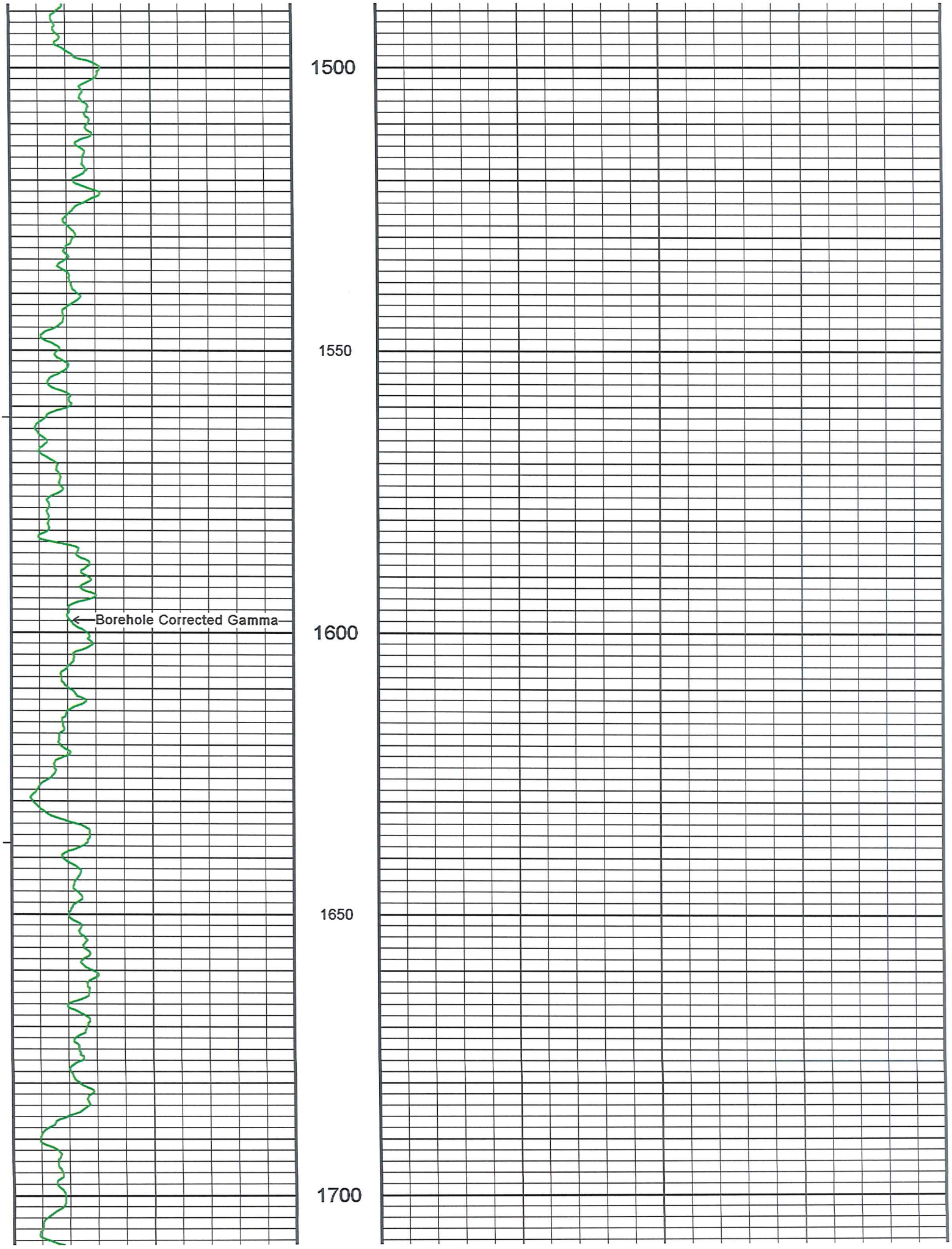

Borehole Corrected Gamma
400
450
500
550
600

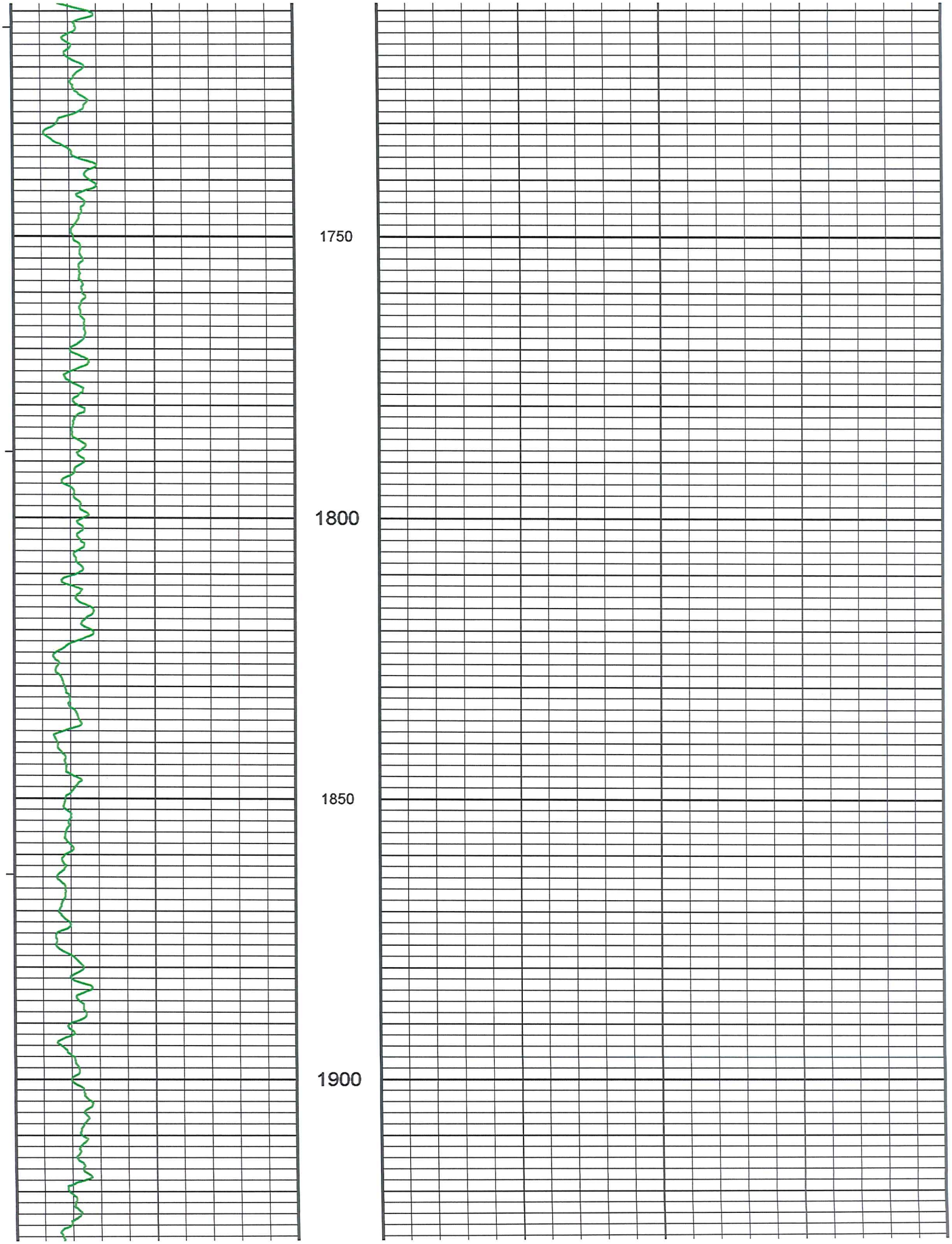

650
700
750
800
Borehole Corrected Gamma

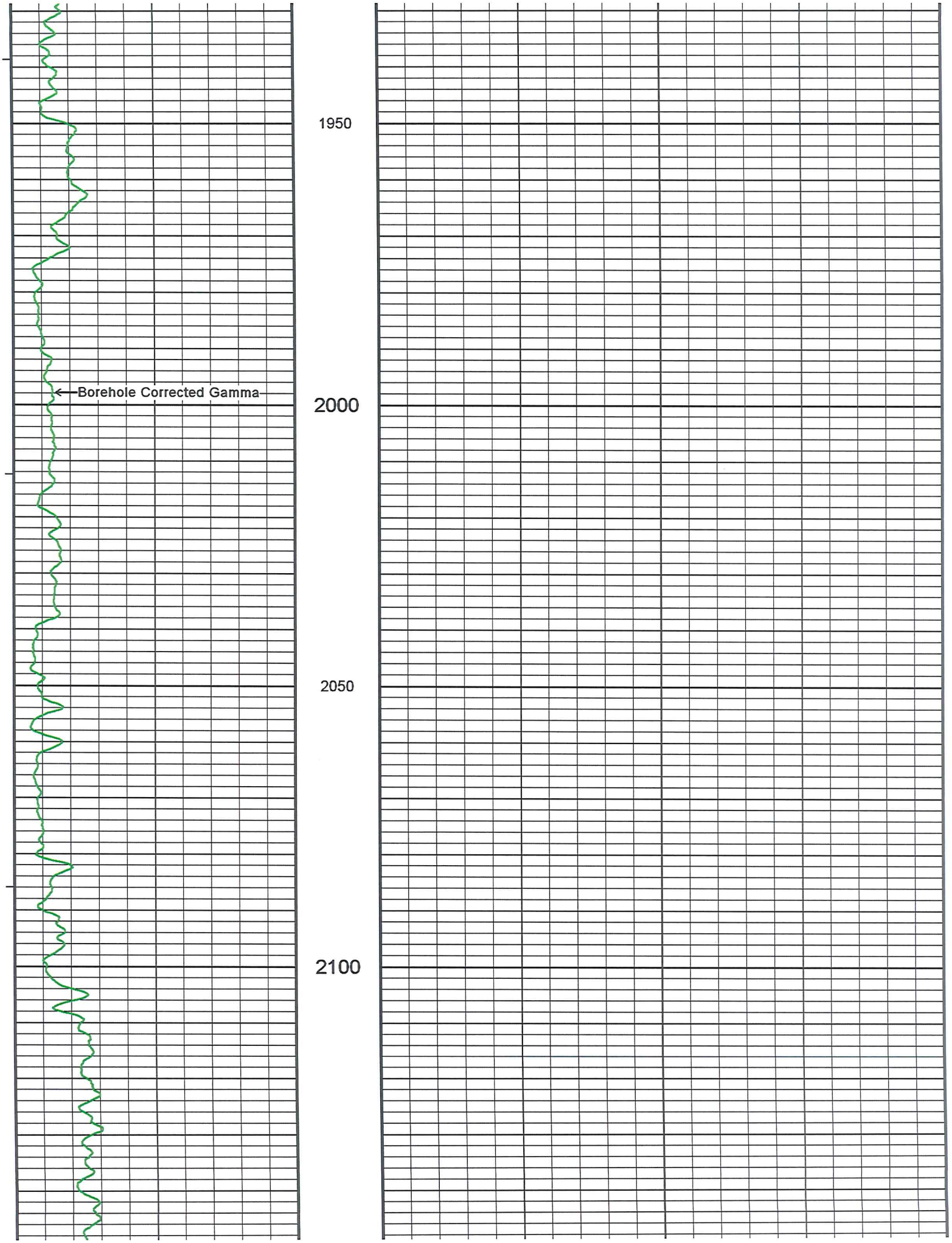

850
900
950
1000

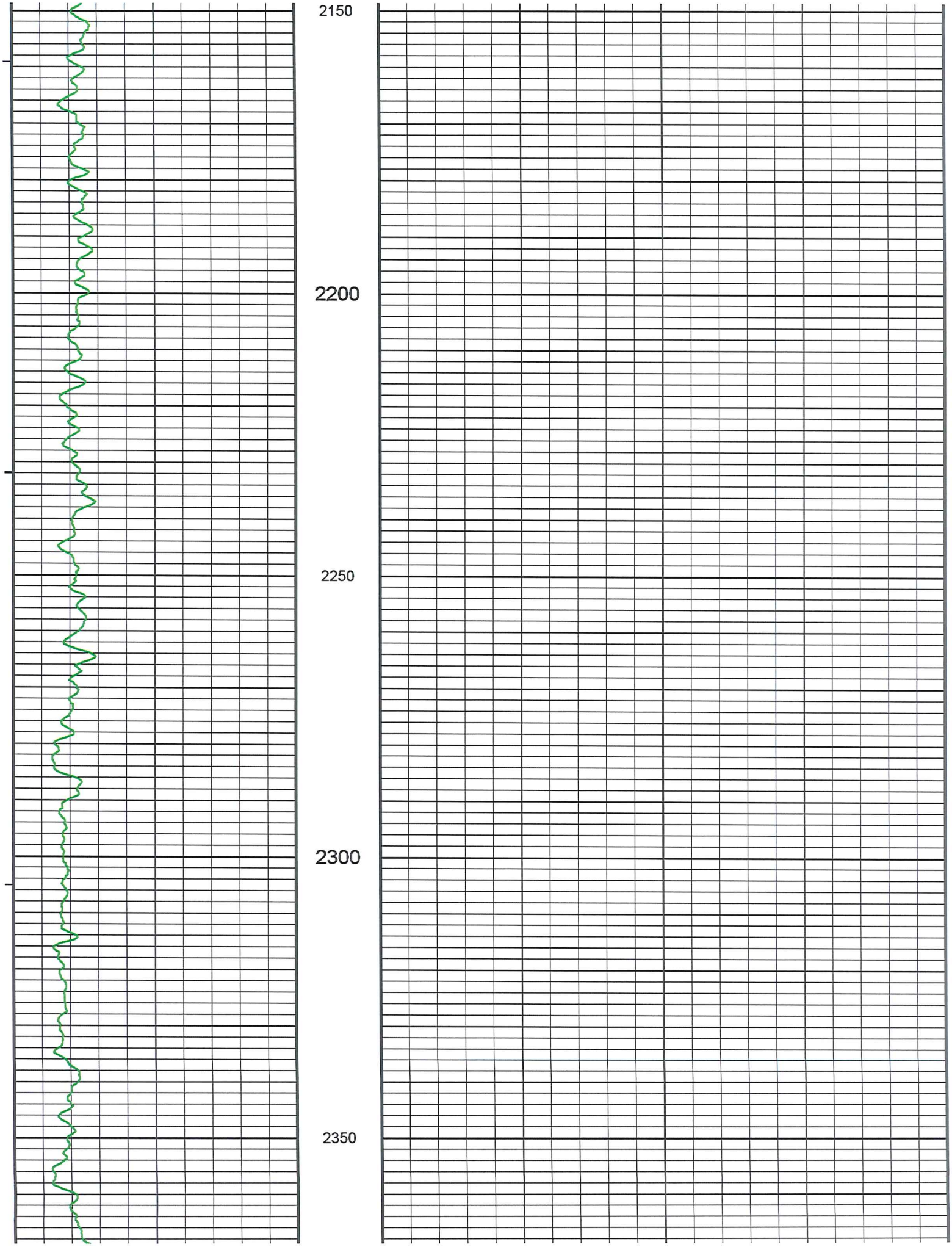

1050
1100
1150
1200
1250
Borehole Corrected Gamma

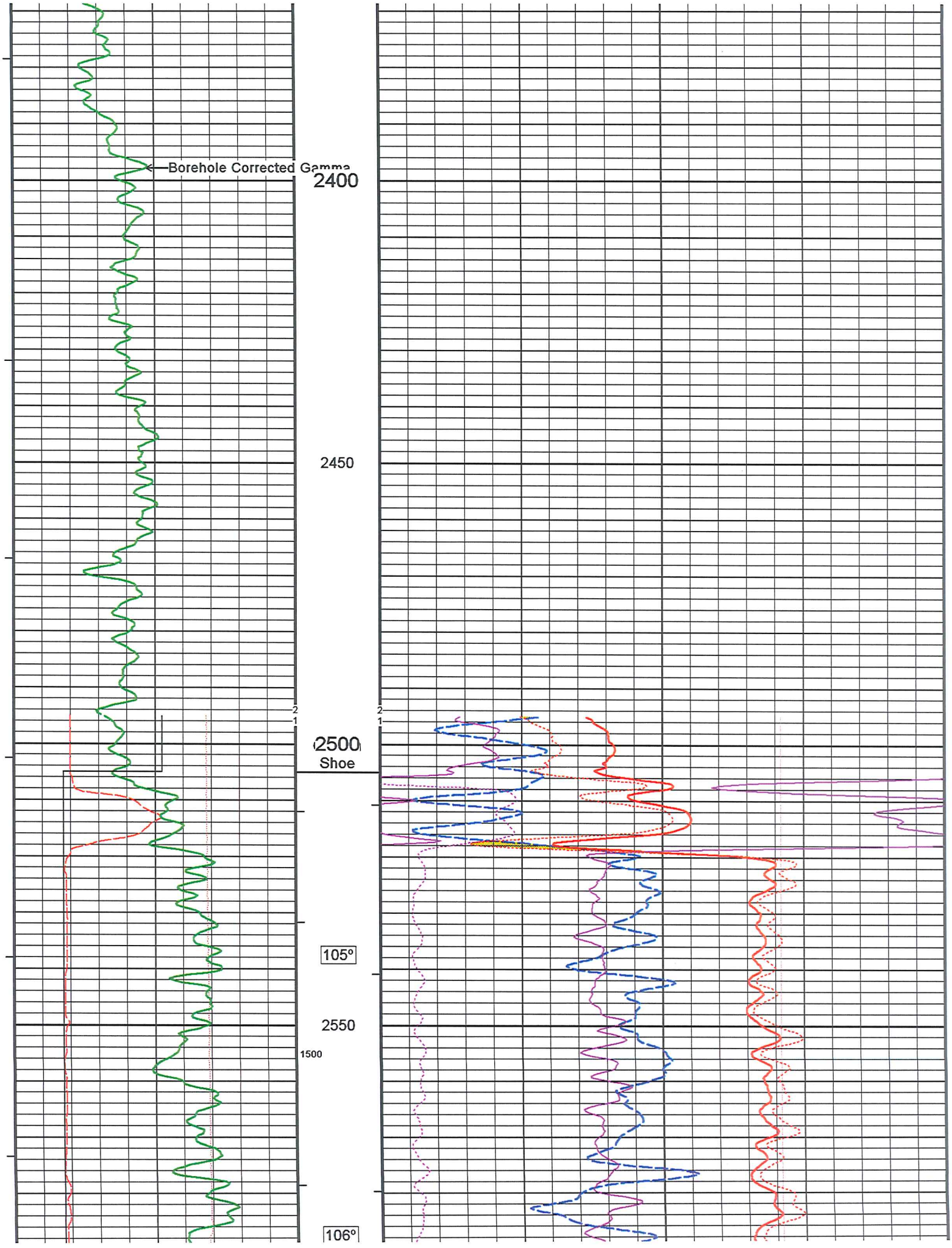

1300
1350
1400
1450

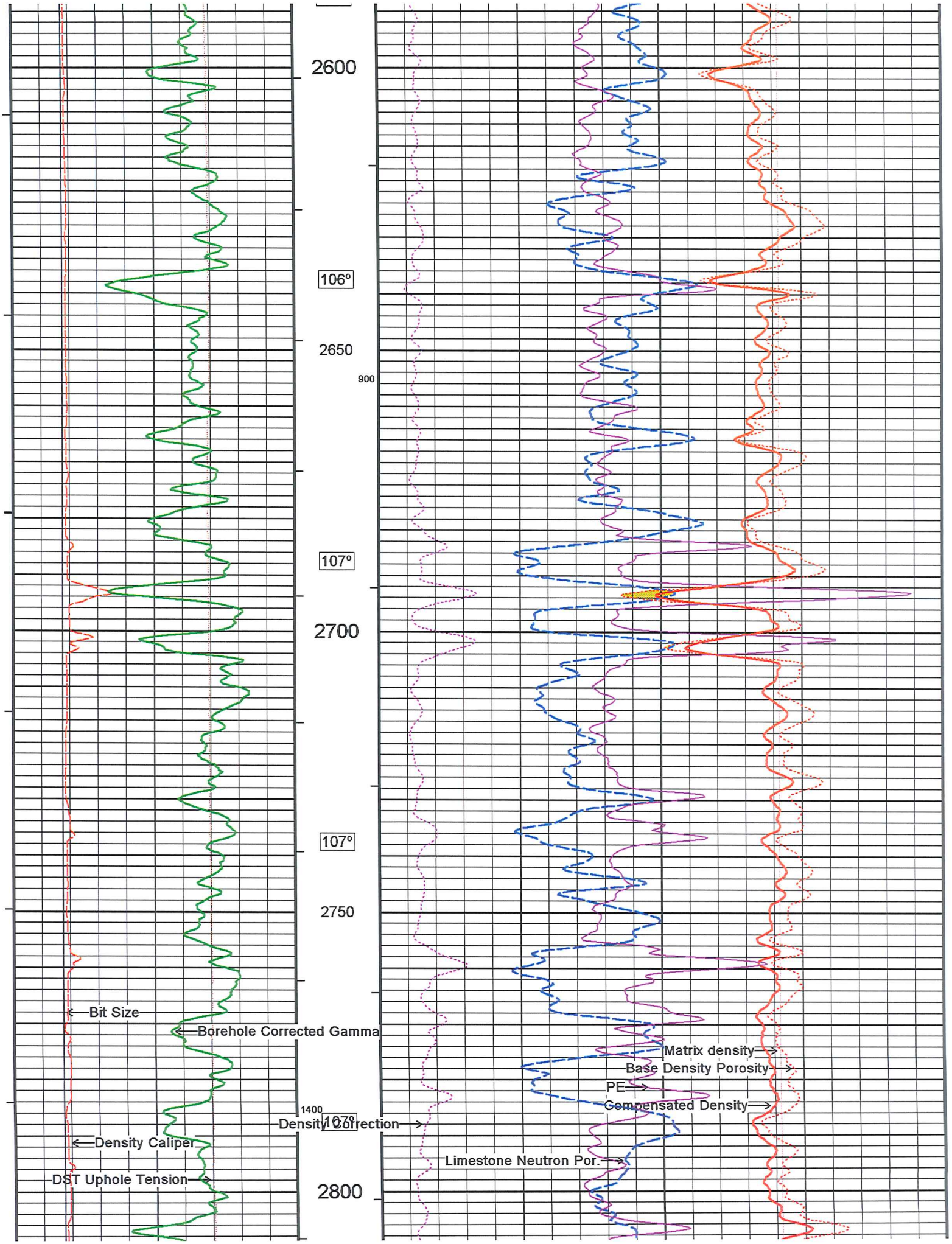

1500
1550
←Borehole Corrected Gamma
1600
1650
1700

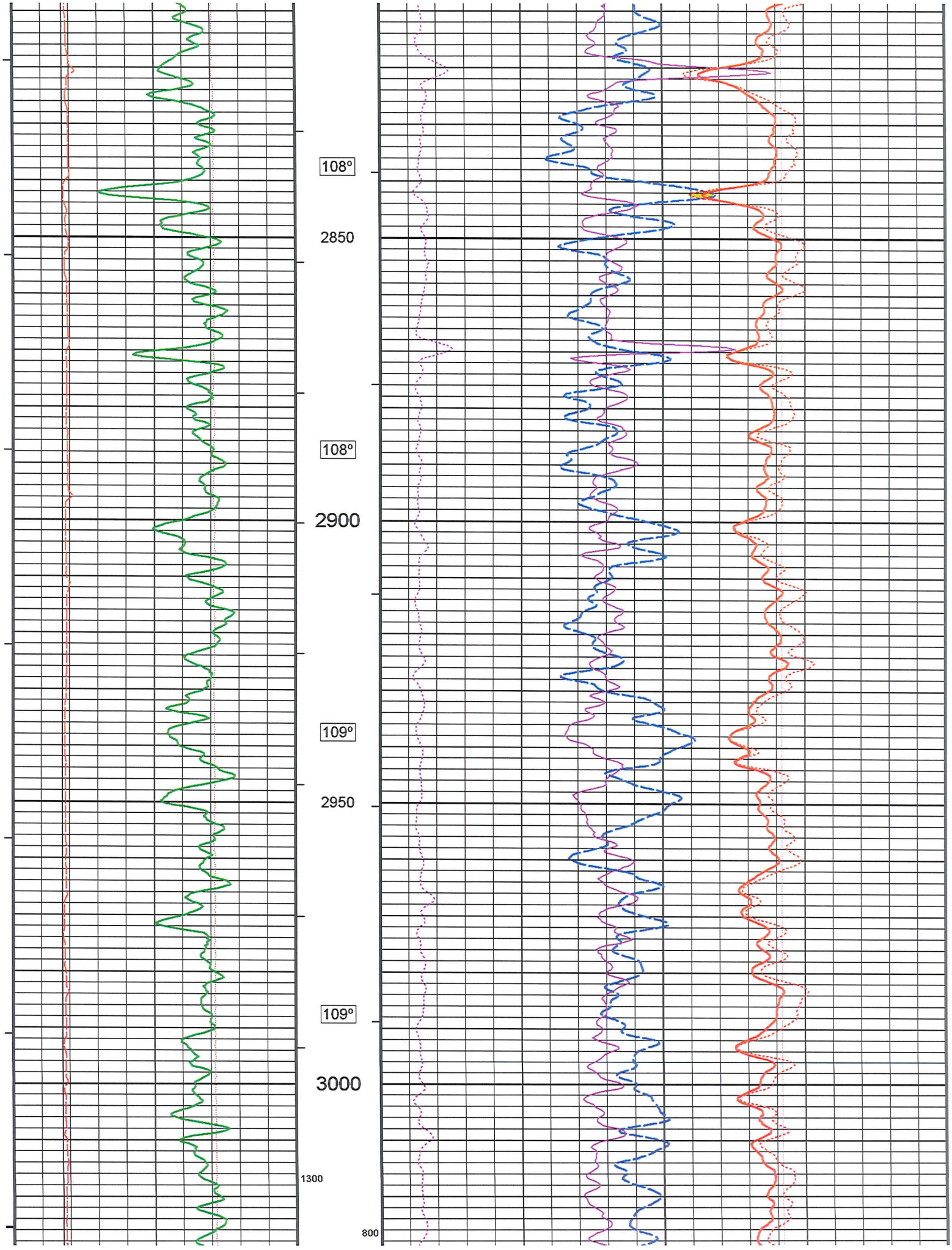

1750
1800
1850
1900

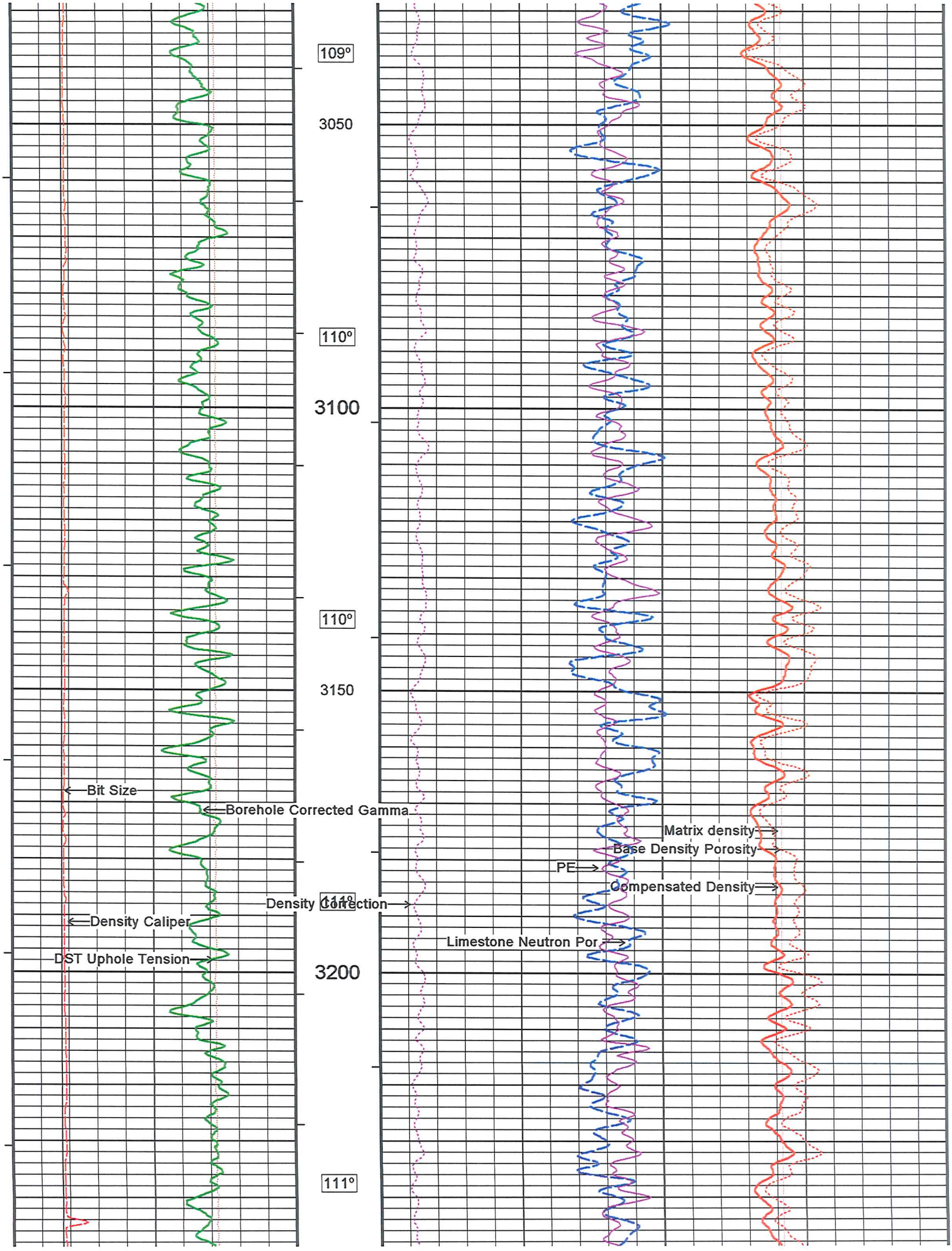

1950
2000
2050
2100
Borehole Corrected Gamma

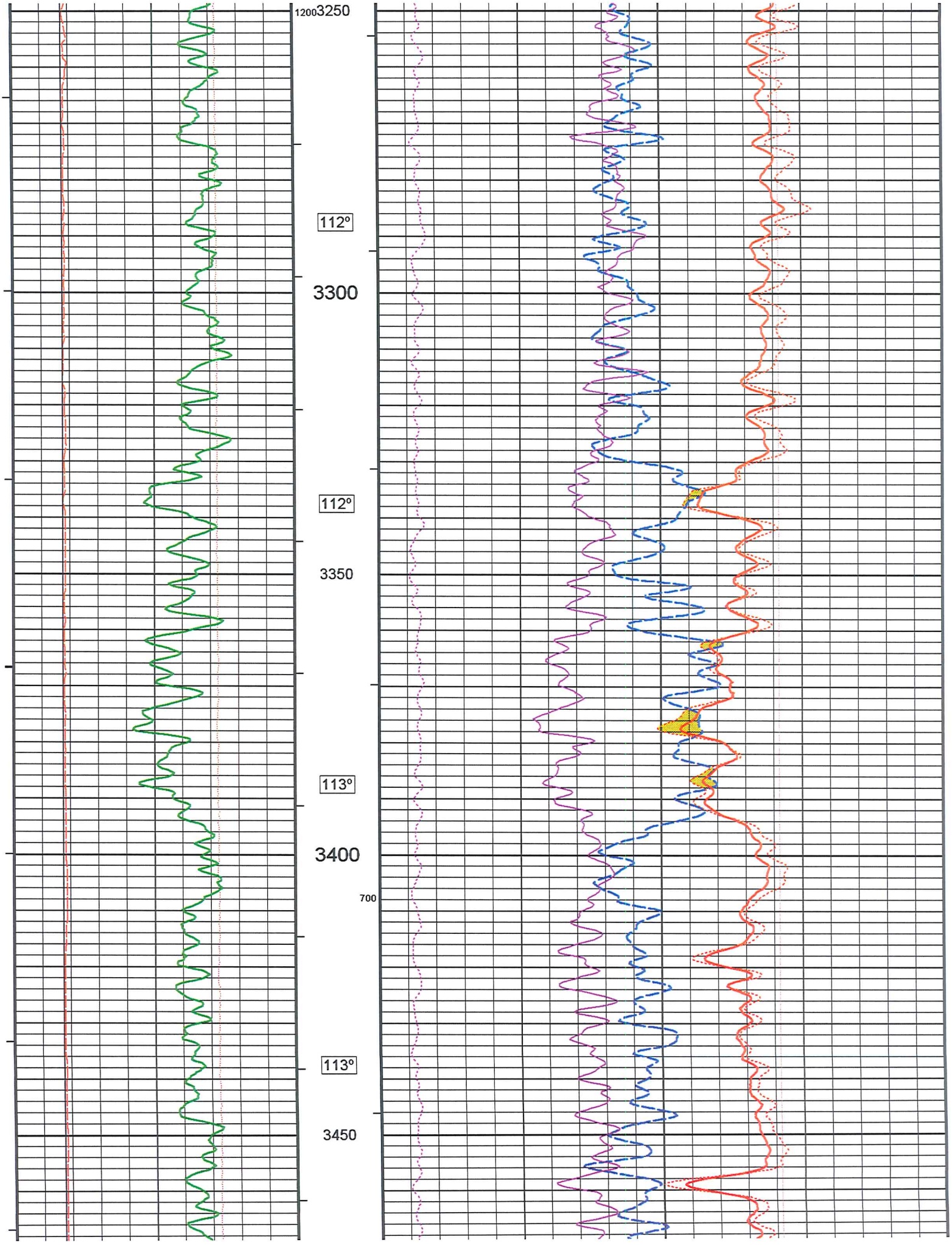

2150
2200
2250
2300
2350

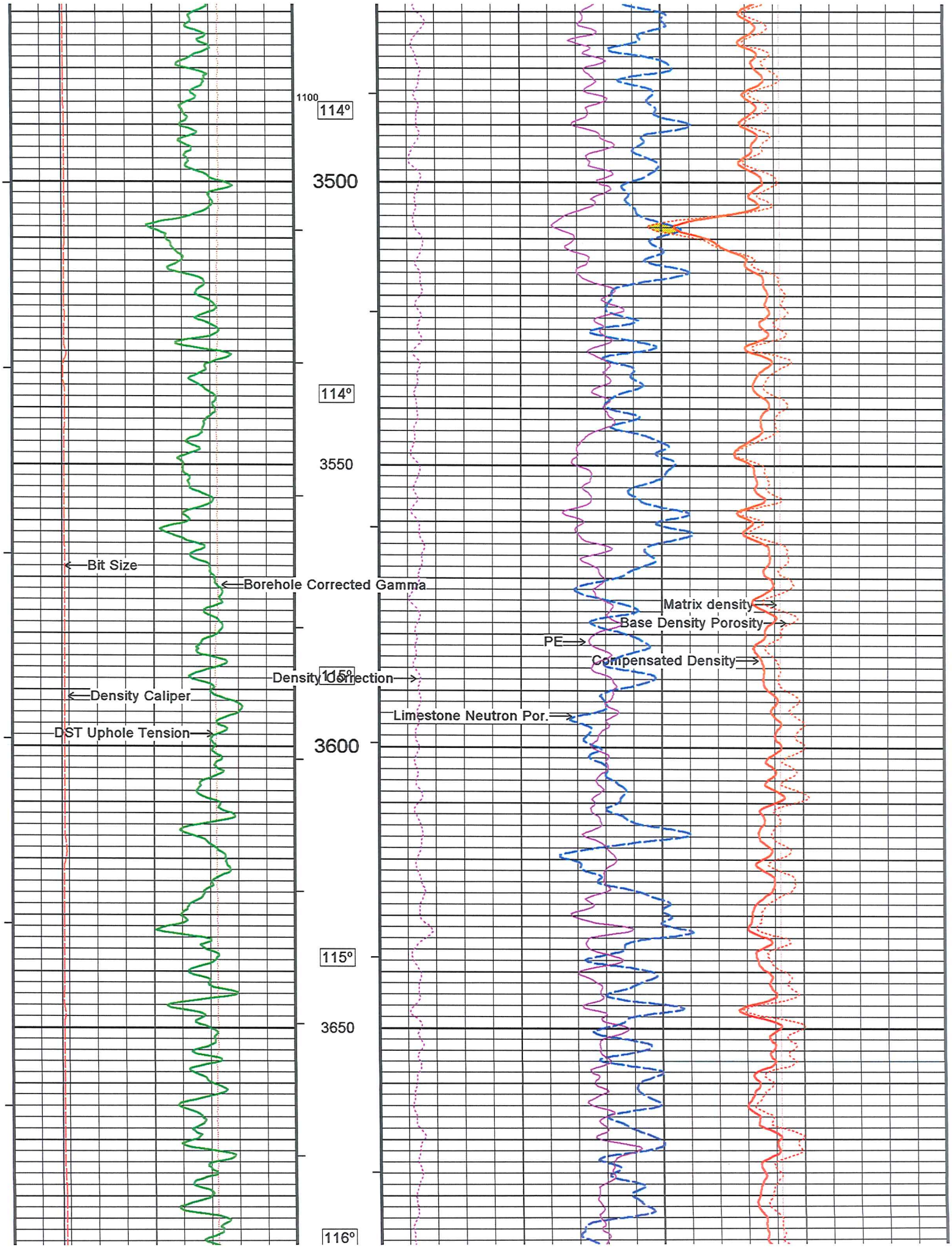

Borehole Corrected Gamma
2400
2450
2500
Shoe
105°
2550
1500
106°
2
1
2
1

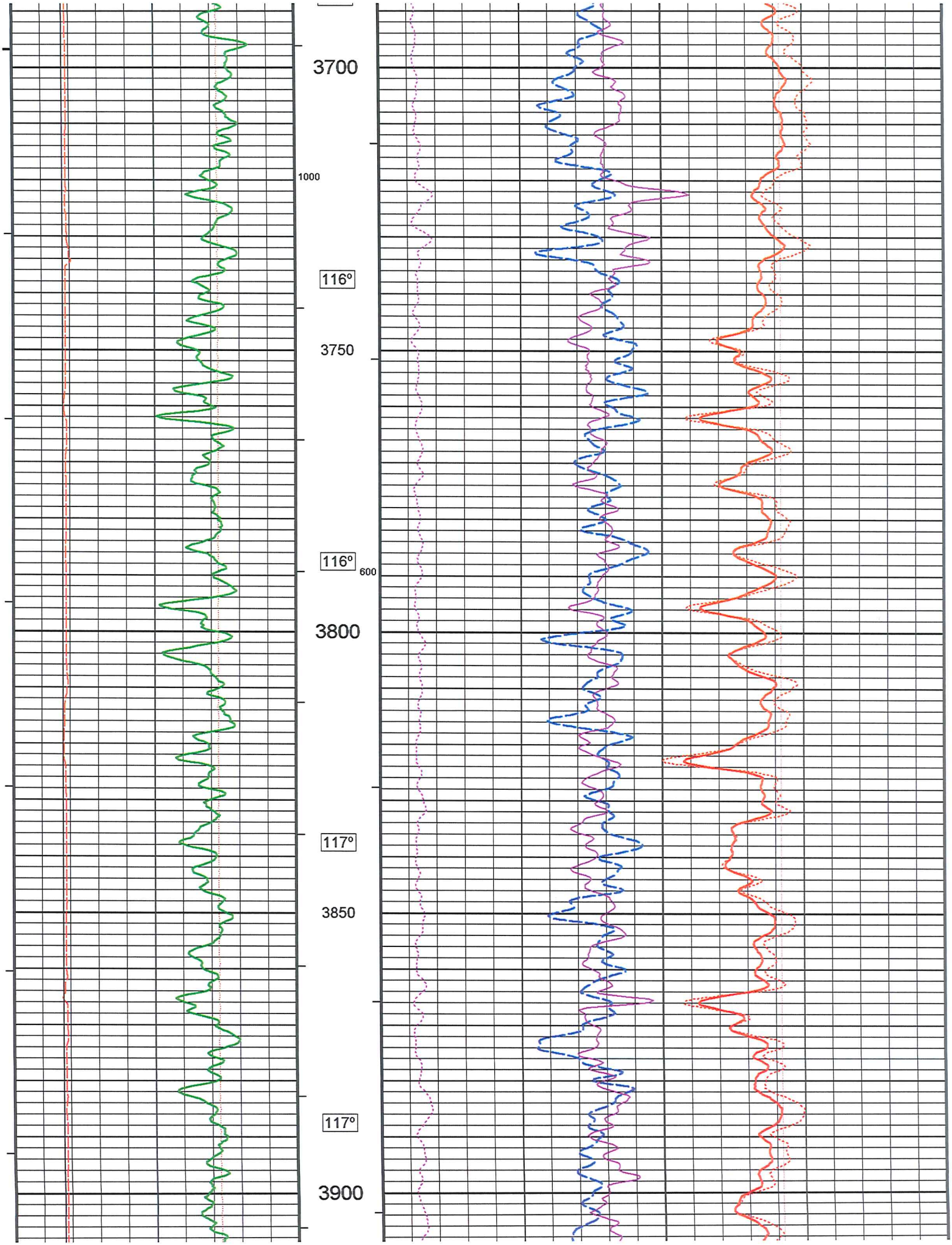

2600
106°
2650
900
107°
2700
107°
2750
Bit Size
Borehole Corrected Gamma
1400
107°
Density Correction
Density Caliper
DST Uphole Tension
2800
Matrix density
Base Density Porosity
PE
Compensated Density
Limestone Neutron Por.

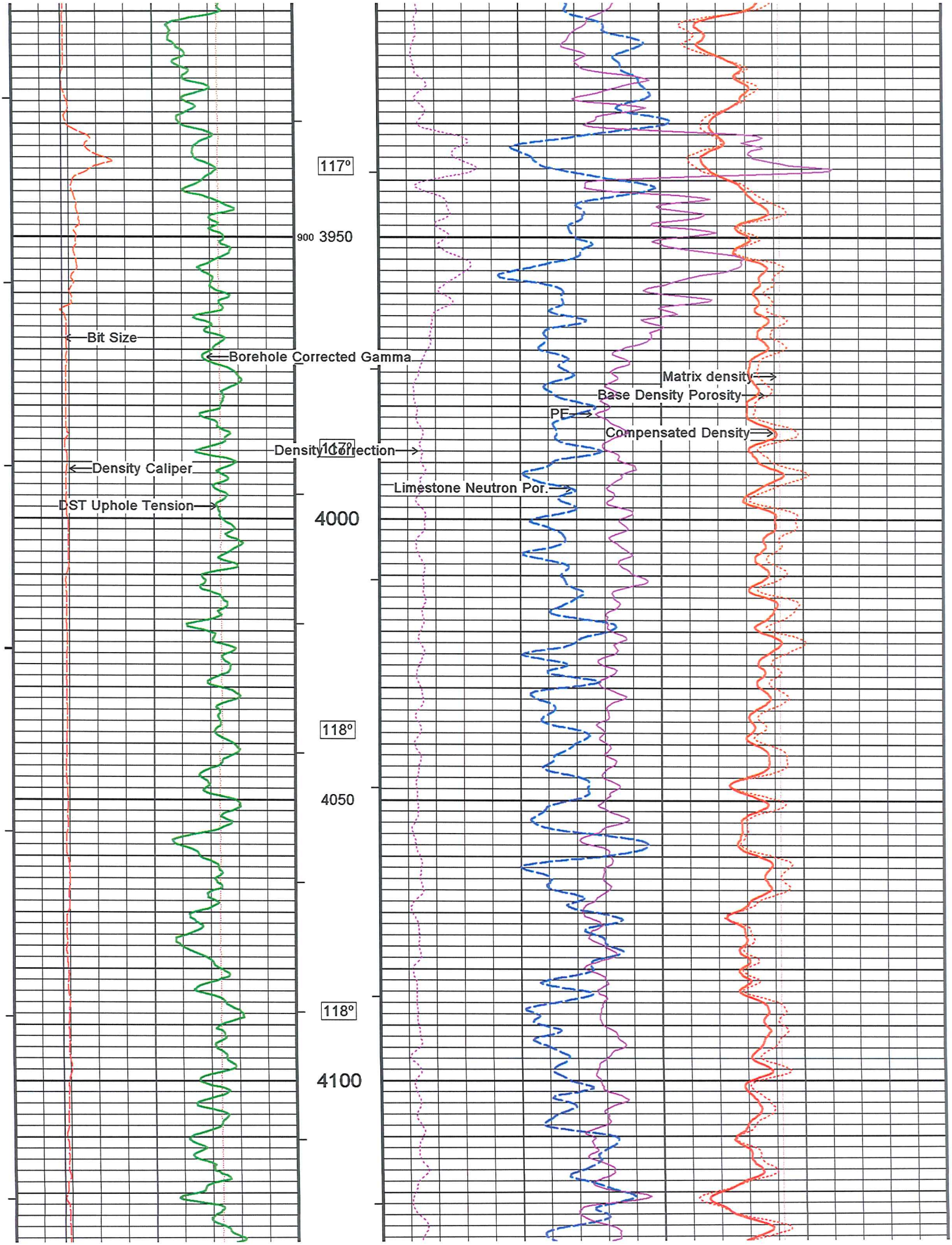

108°
2850
108°
2900
109°
2950
109°
3000
1300
800

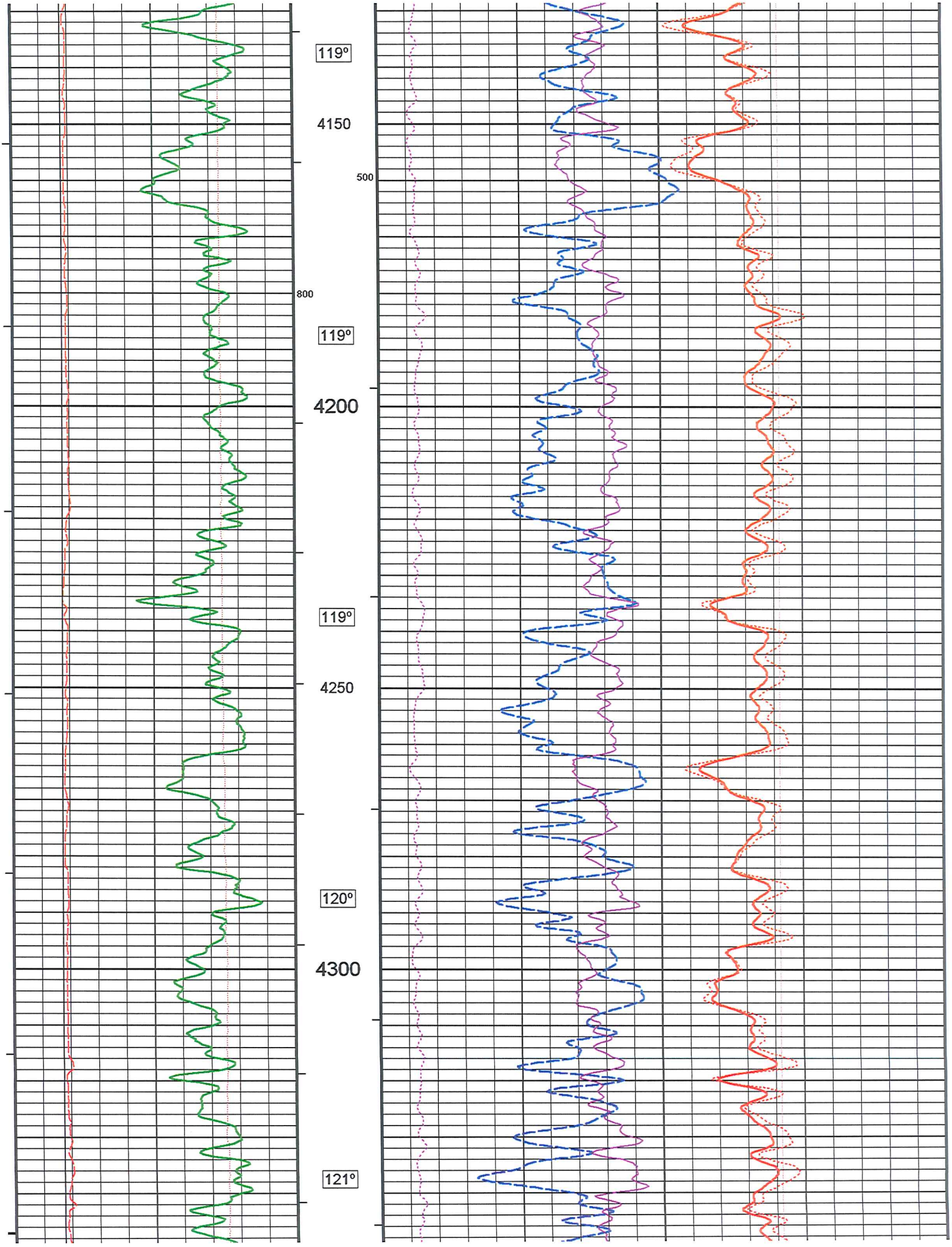

109°
3050
110°
3100
110°
3150
111°
3200
111°
Bit Size
Borehole Corrected Gamma
Density Correction
Density Caliper
DST Uphole Tension
Matrix density
Base Density Porosity
PE
Compensated Density
Limestone Neutron Por

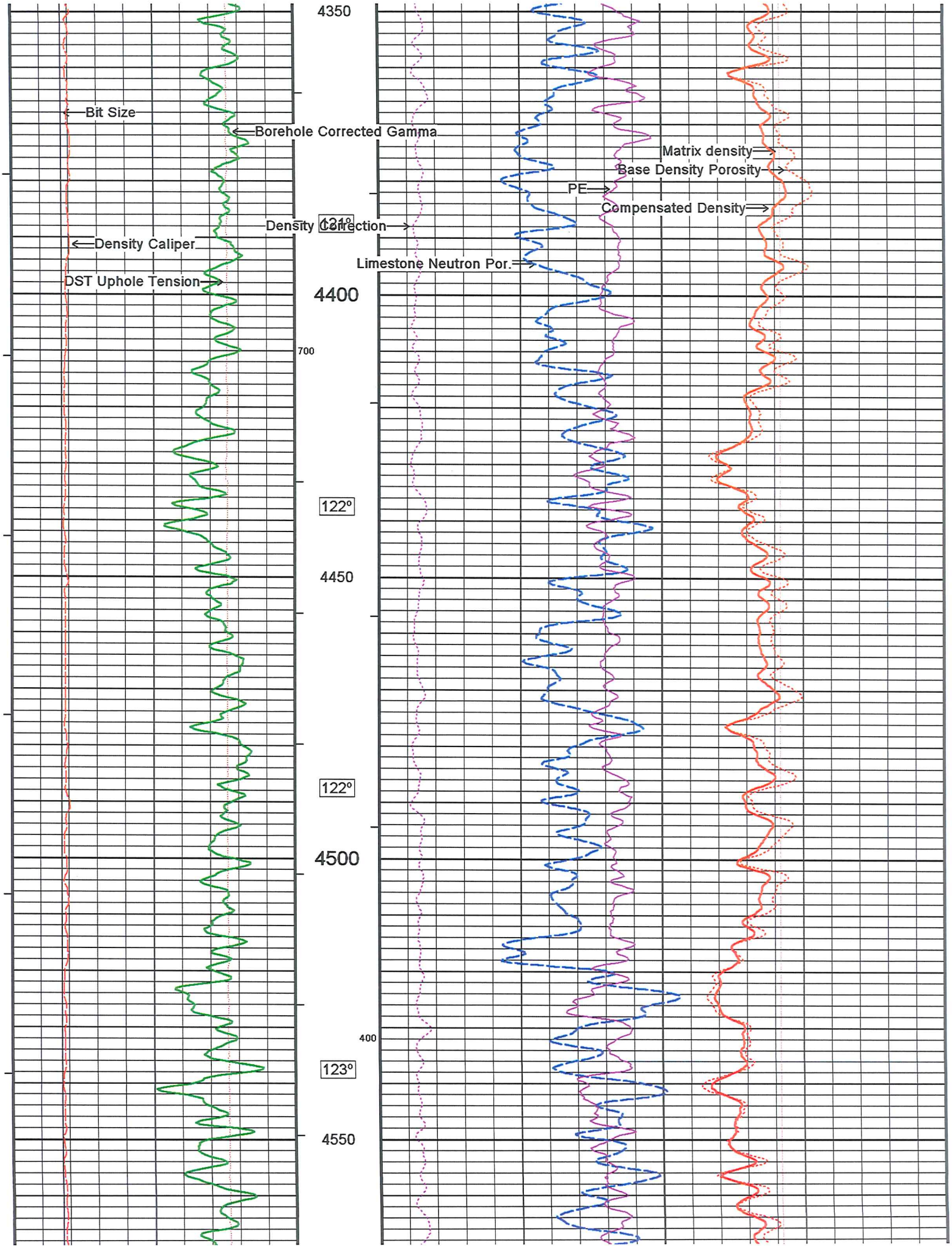

1200
3250
112°
3300
112°
3350
113°
3400
700
113°
3450

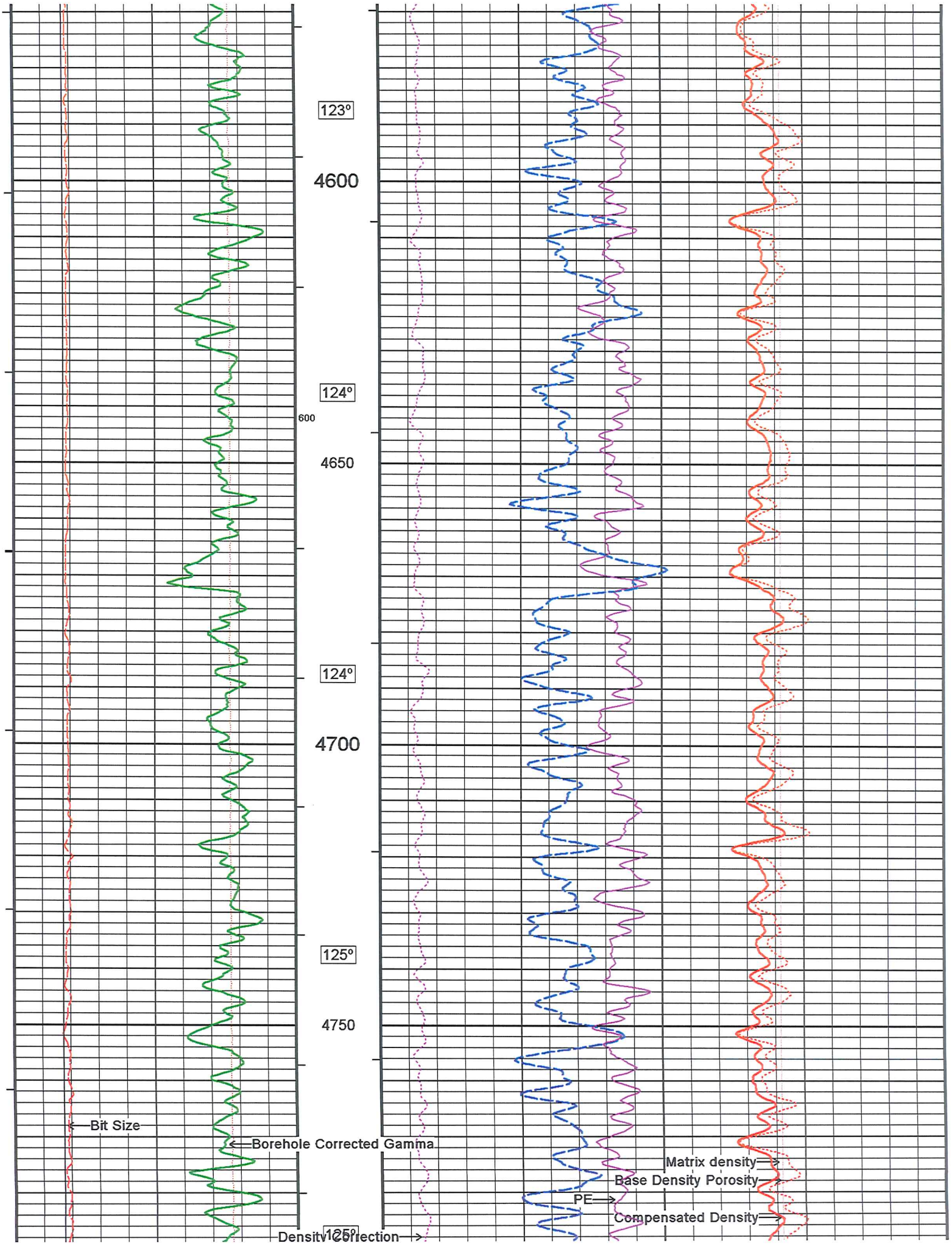

1100
114°
3500
114°
3550
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
115°
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
3600
115°
3650
116°

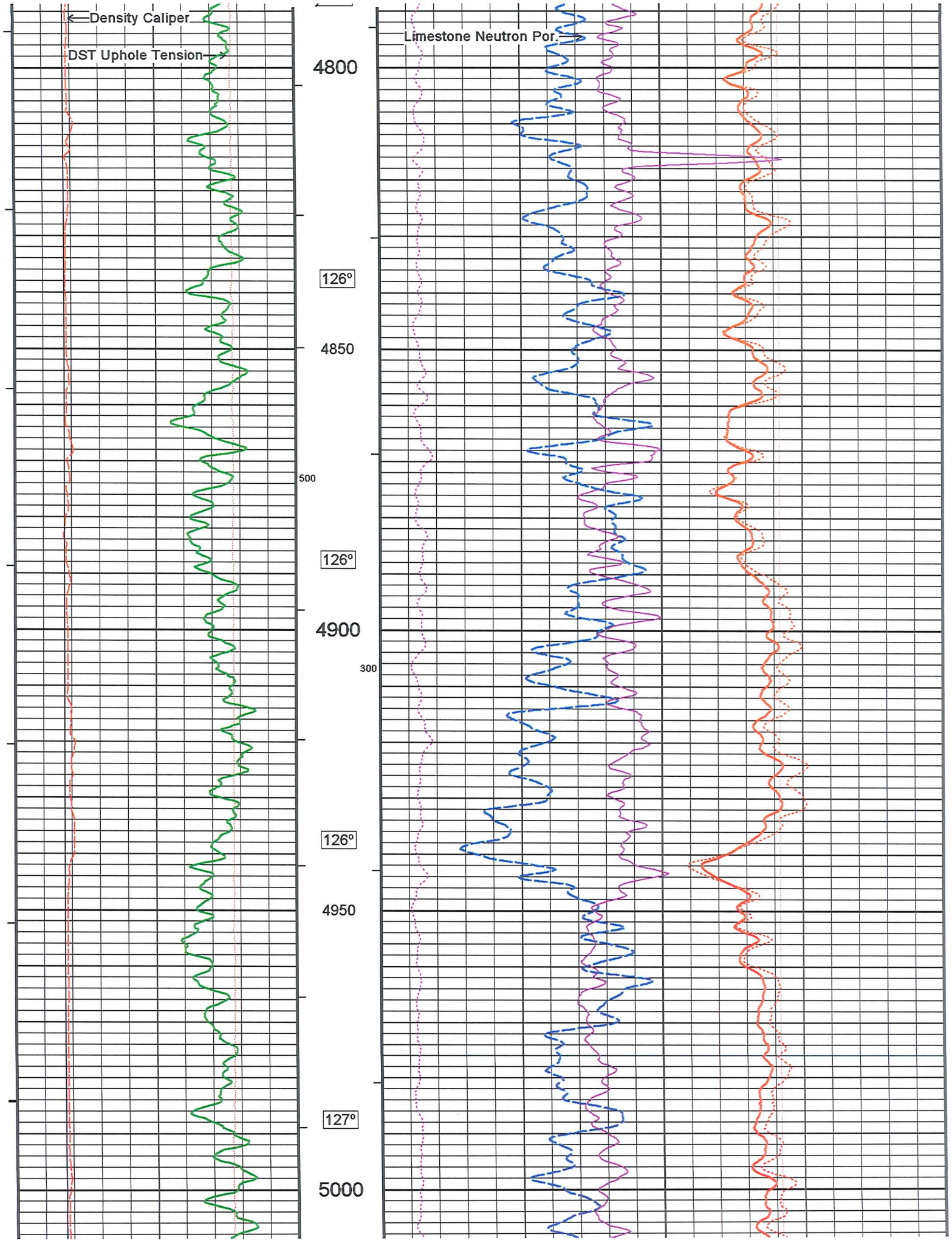

3700
1000
116°
3750
116°
600
3800
117°
3850
117°
3900

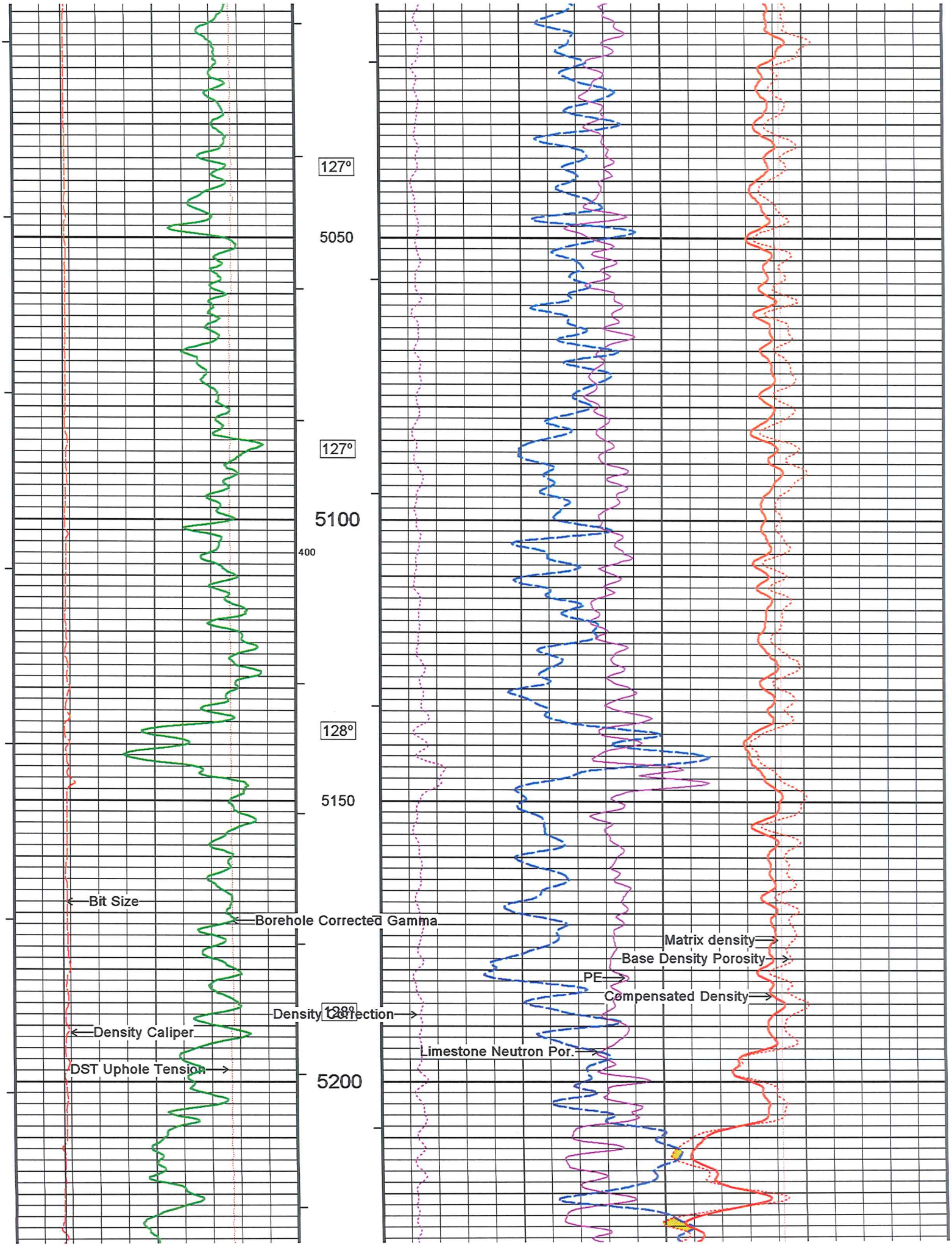

117°
900 3950
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
117°
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
4000
118°
4050
118°
4100

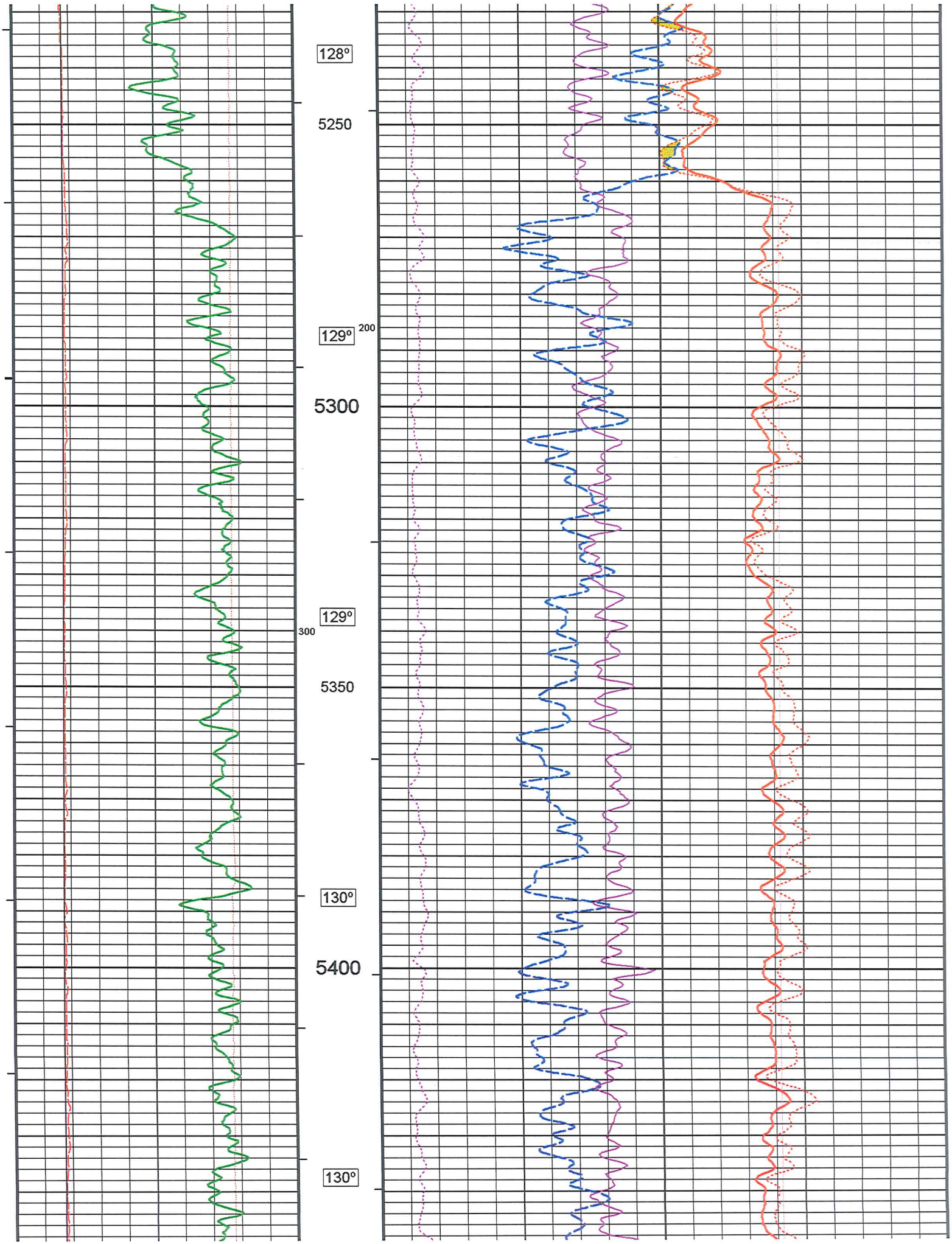

119°
4150
500
800
119°
4200
119°
4250
120°
4300
121°

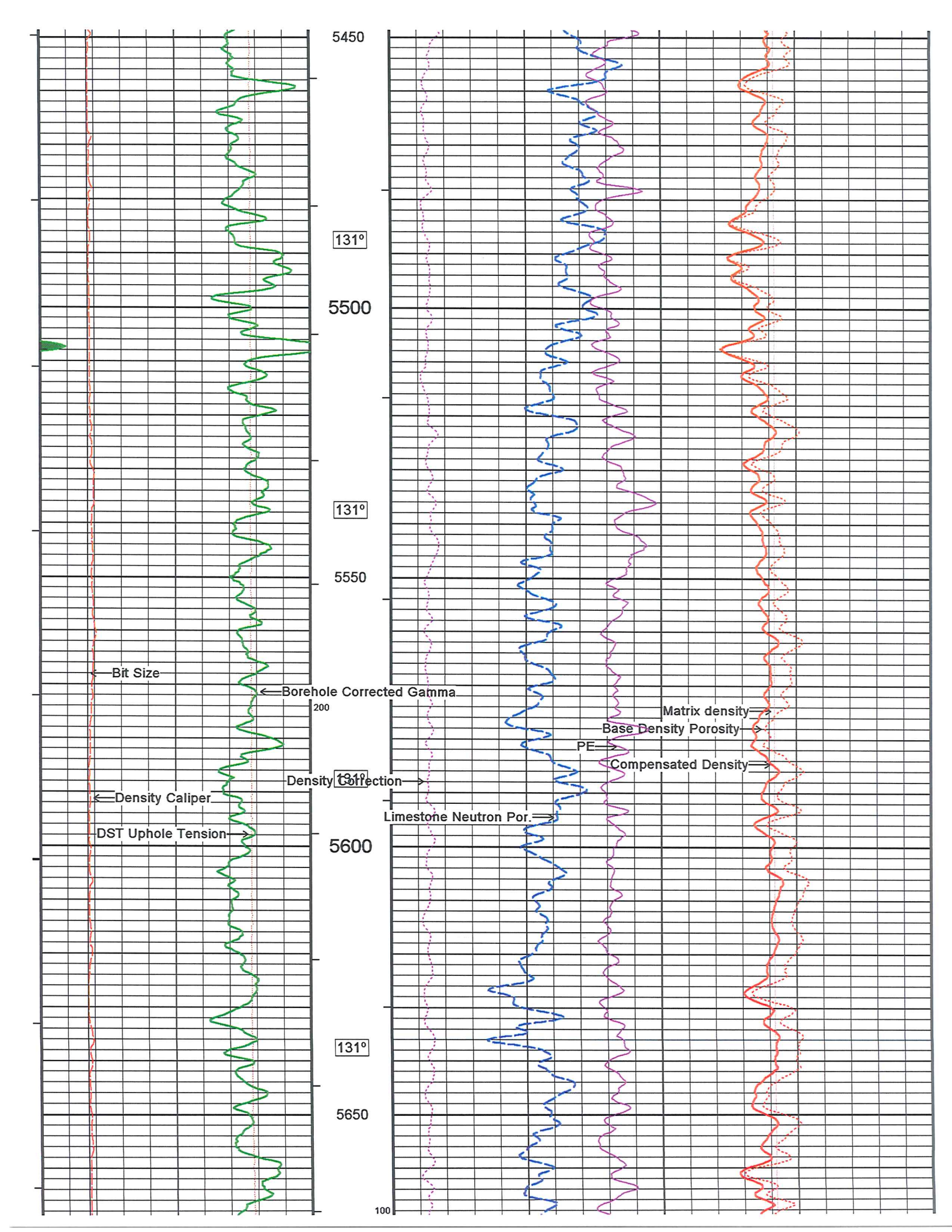

4350
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
121°
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
4400
700
122°
4450
122°
4500
400
123°
4550

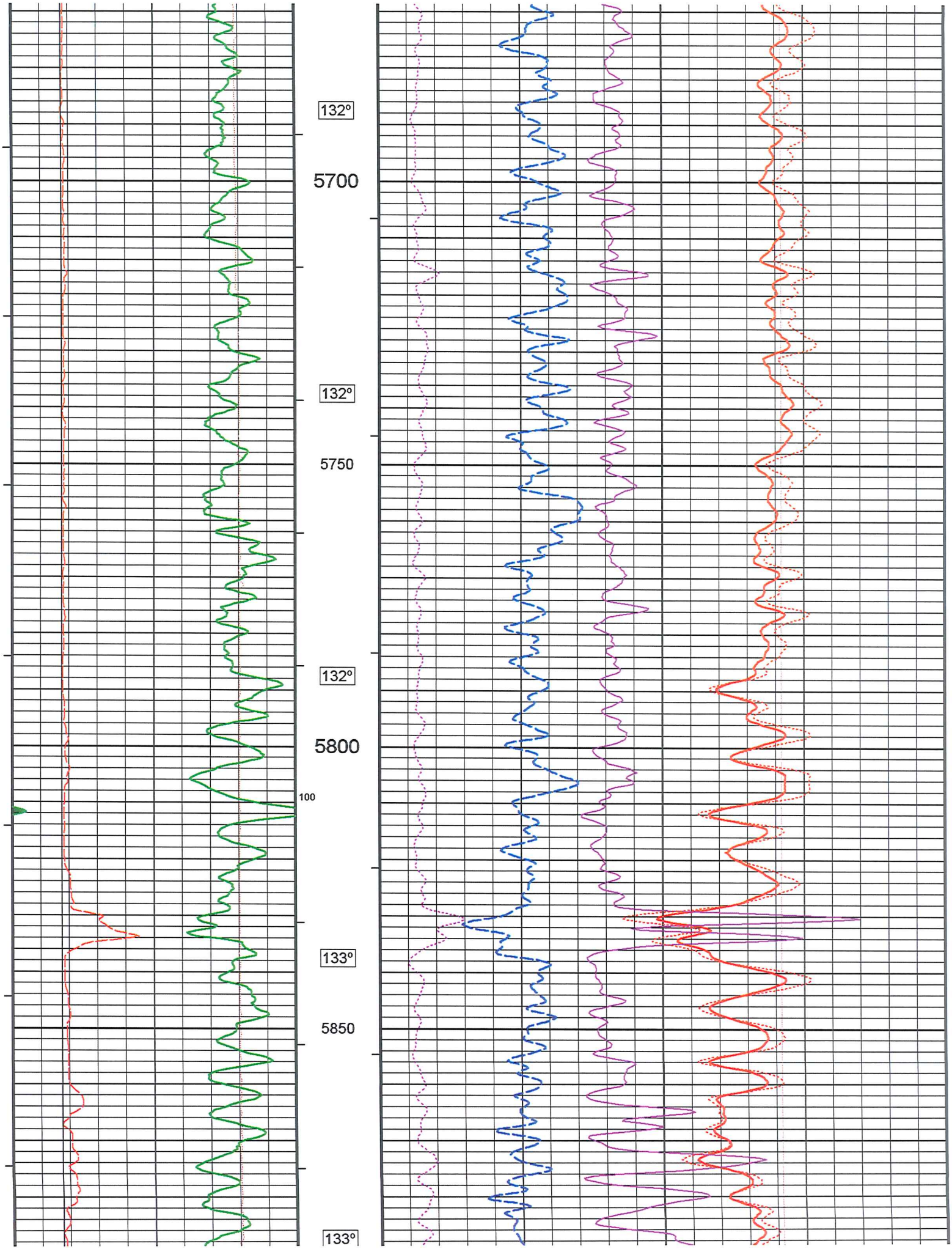

123°
4600
124°
600
4650
124°
4700
125°
4750
125°
Bit Size
Borehole Corrected Gamma
Density Correction
Matrix density
Base Density Porosity
PE
Compensated Density

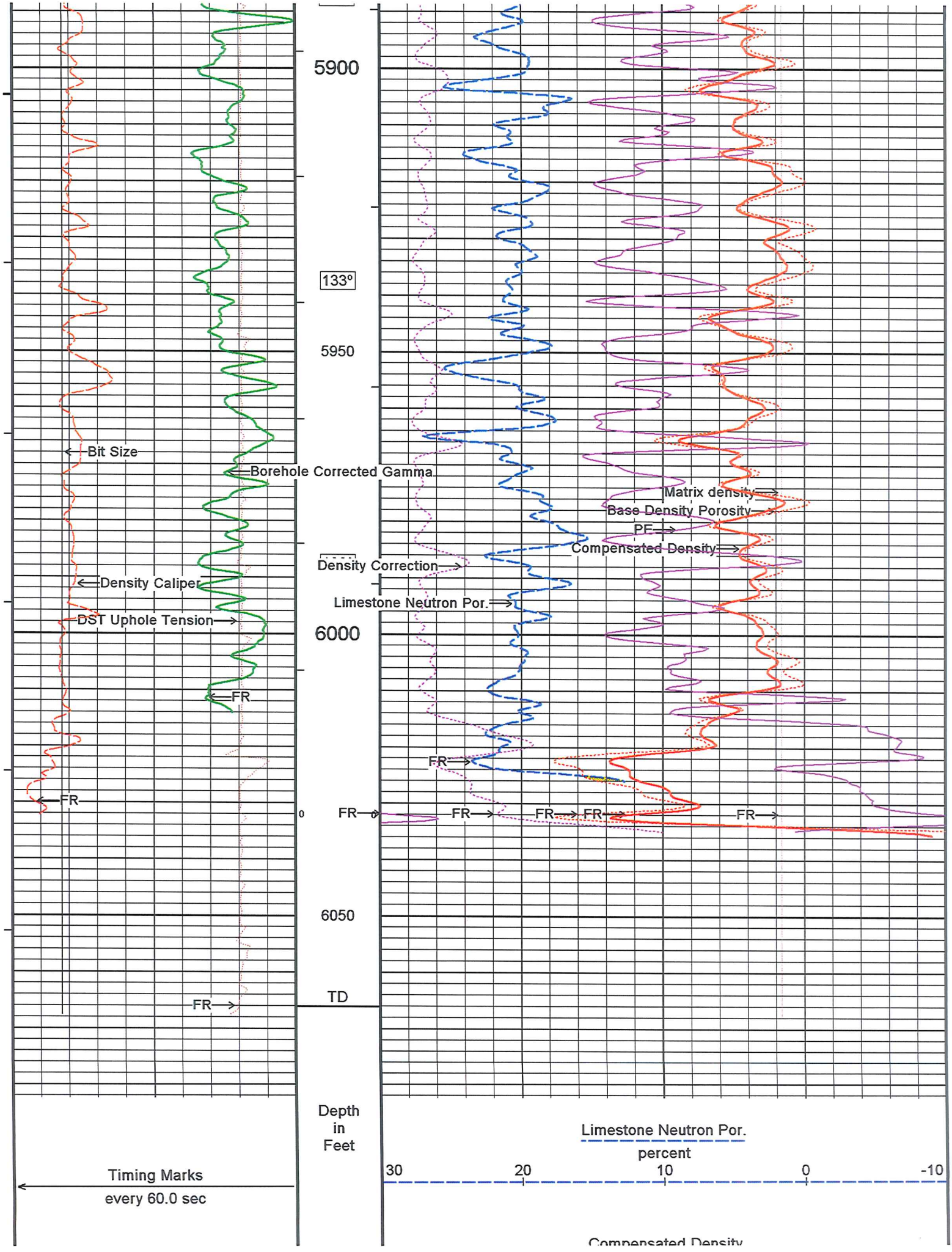

Density Caliper
DST Uphole Tension
Limestone Neutron Por.
4800
126°
4850
500
126°
4900
300
126°
4950
127°
5000

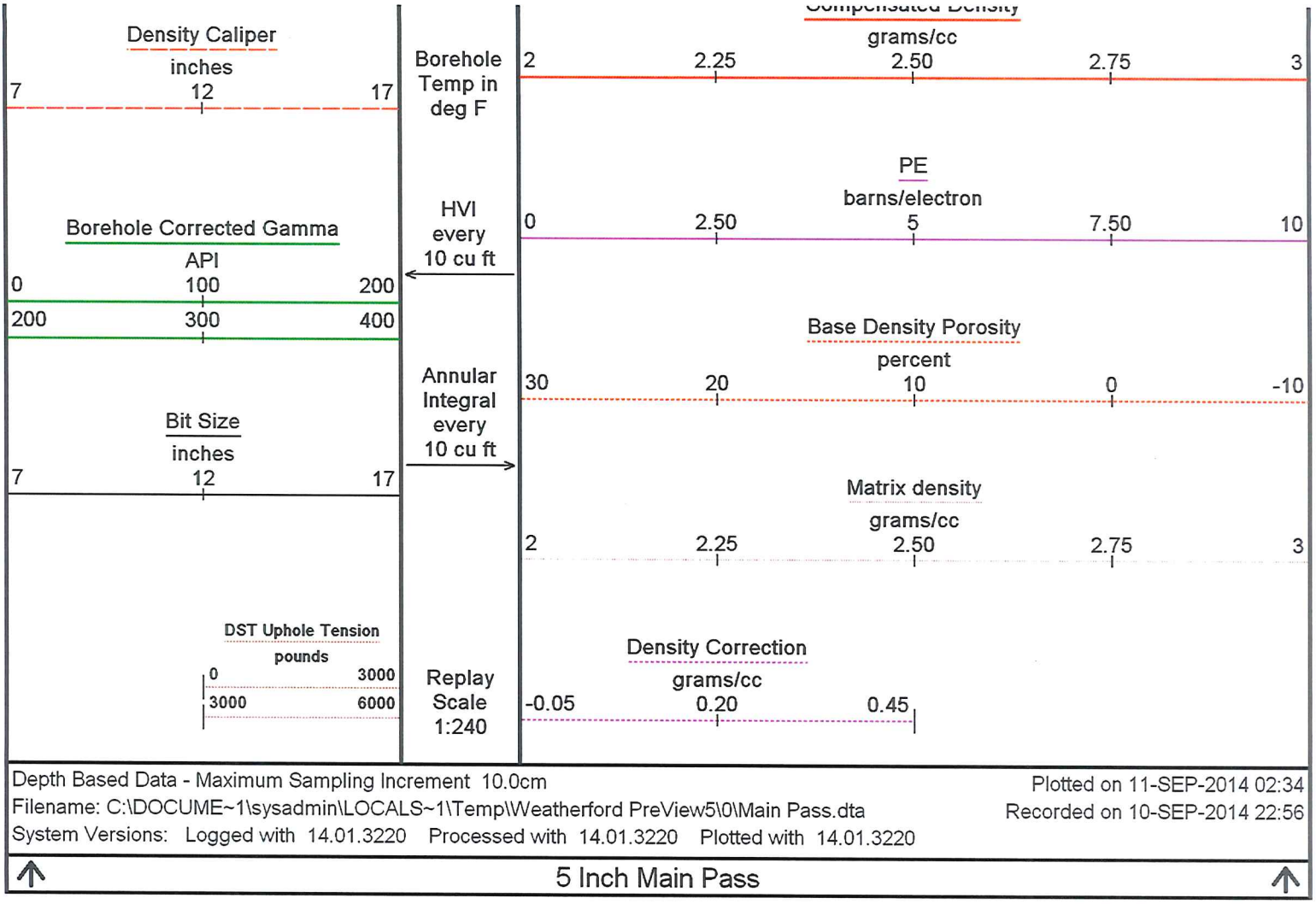

127°
5050
127°
5100
400
128°
5150
128°
5200
Bit Size
Borehole Corrected Gamma
Density Caliper
DST Uphole Tension
Density Correction
Limestone Neutron Por.
Matrix density
Base Density Porosity
PE
Compensated Density


128°
5250
129°
200
5300
129°
300
5350
130°
5400
130°


5450
131°
5500
131°
5550
Bit Size
Borehole Corrected Gamma
200
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
131°
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
5600
131°
5650
100


132°
5700
132°
5750
132°
5800
100
133°
5850
133°


5900
133°
5950
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
6000
FR
FR
FR
FR
FR
FR
FR
FR
FR
FR
6050
TD
Depth
in
Feet
Timing Marks
every 60.0 sec
Limestone Neutron Por.
percent
30
20
10
0
-10
Compensated Density

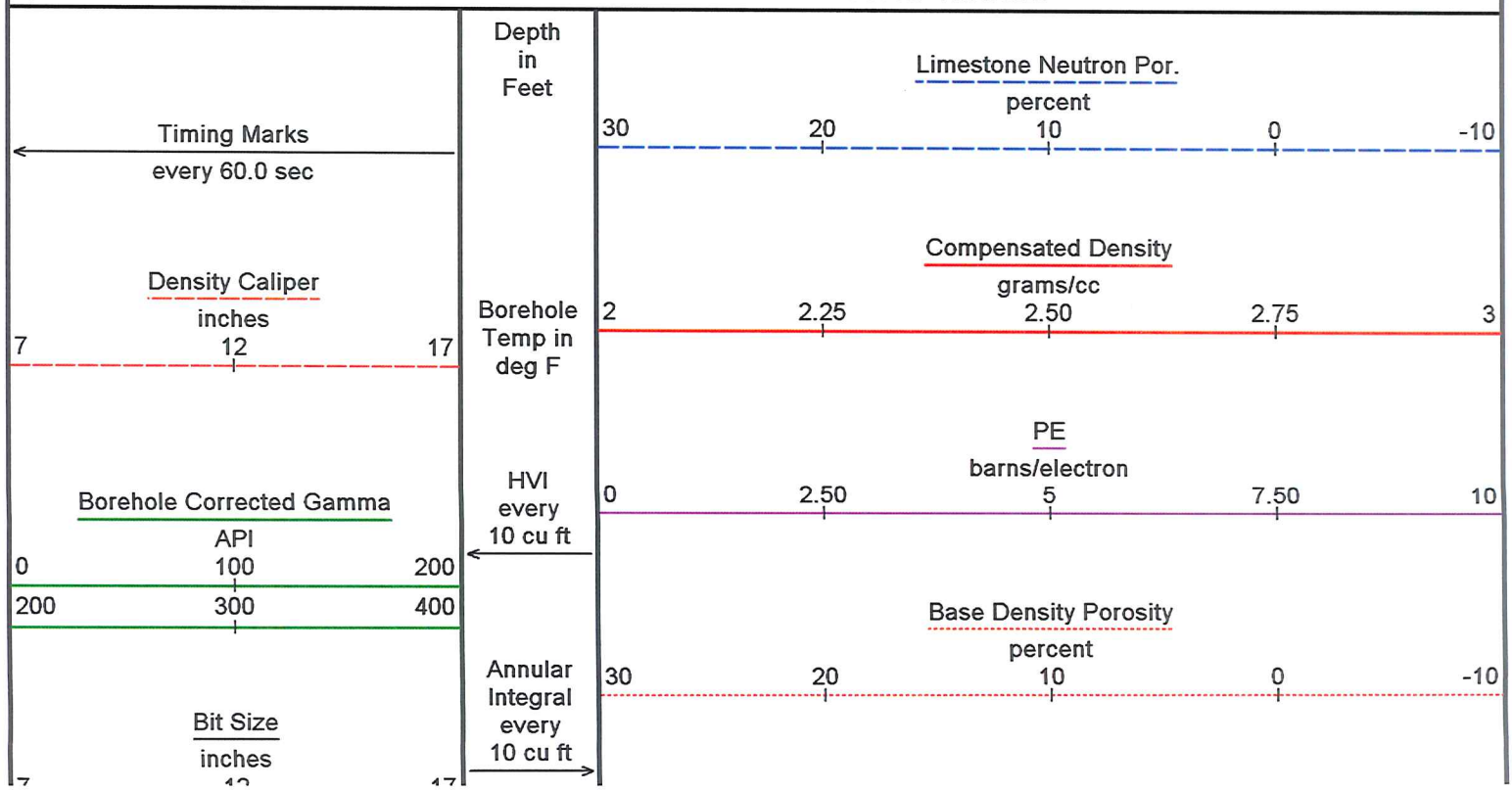


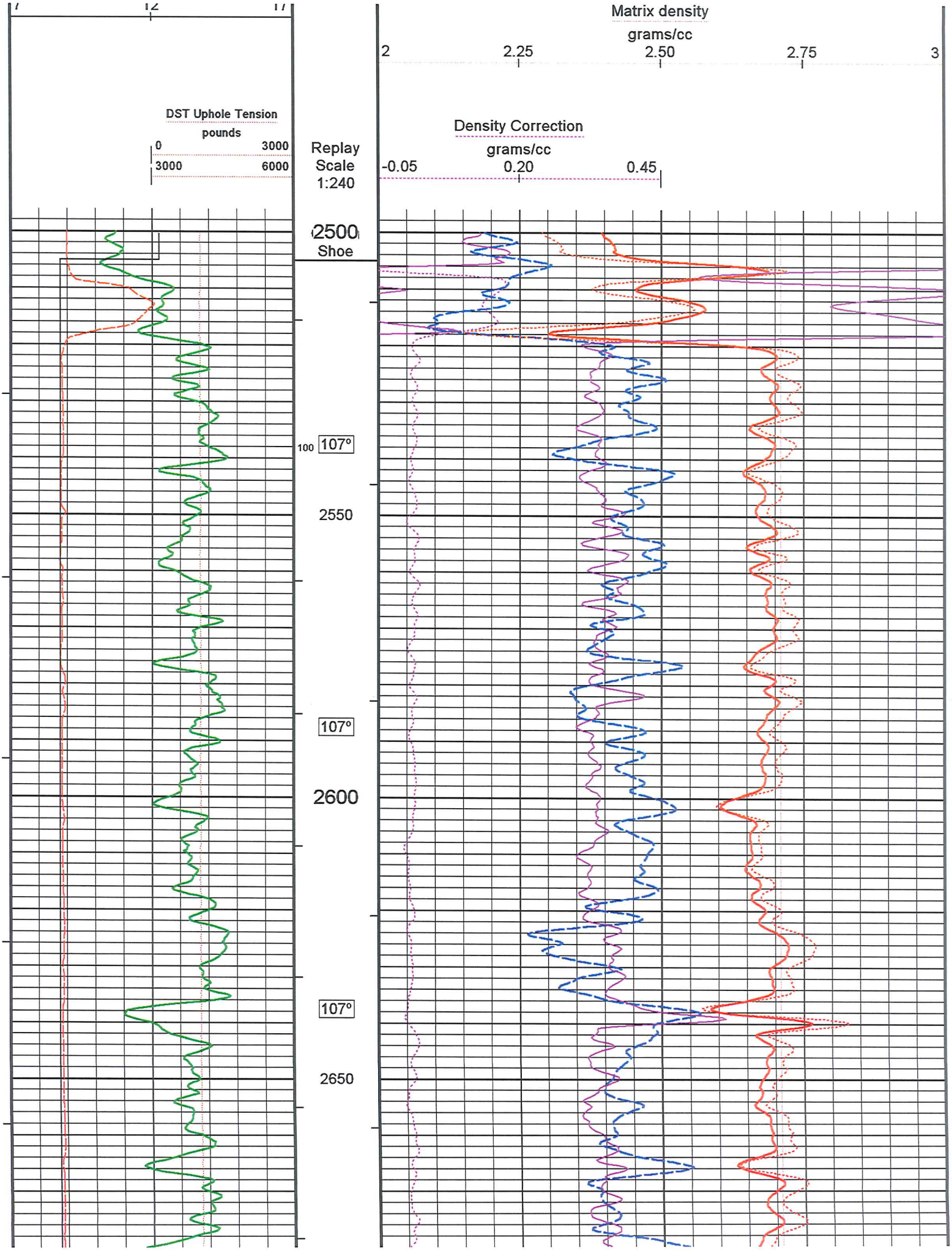
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta
System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220
Plotted on 11-SEP-2014 02:34
Recorded on 10-SEP-2014 22:56

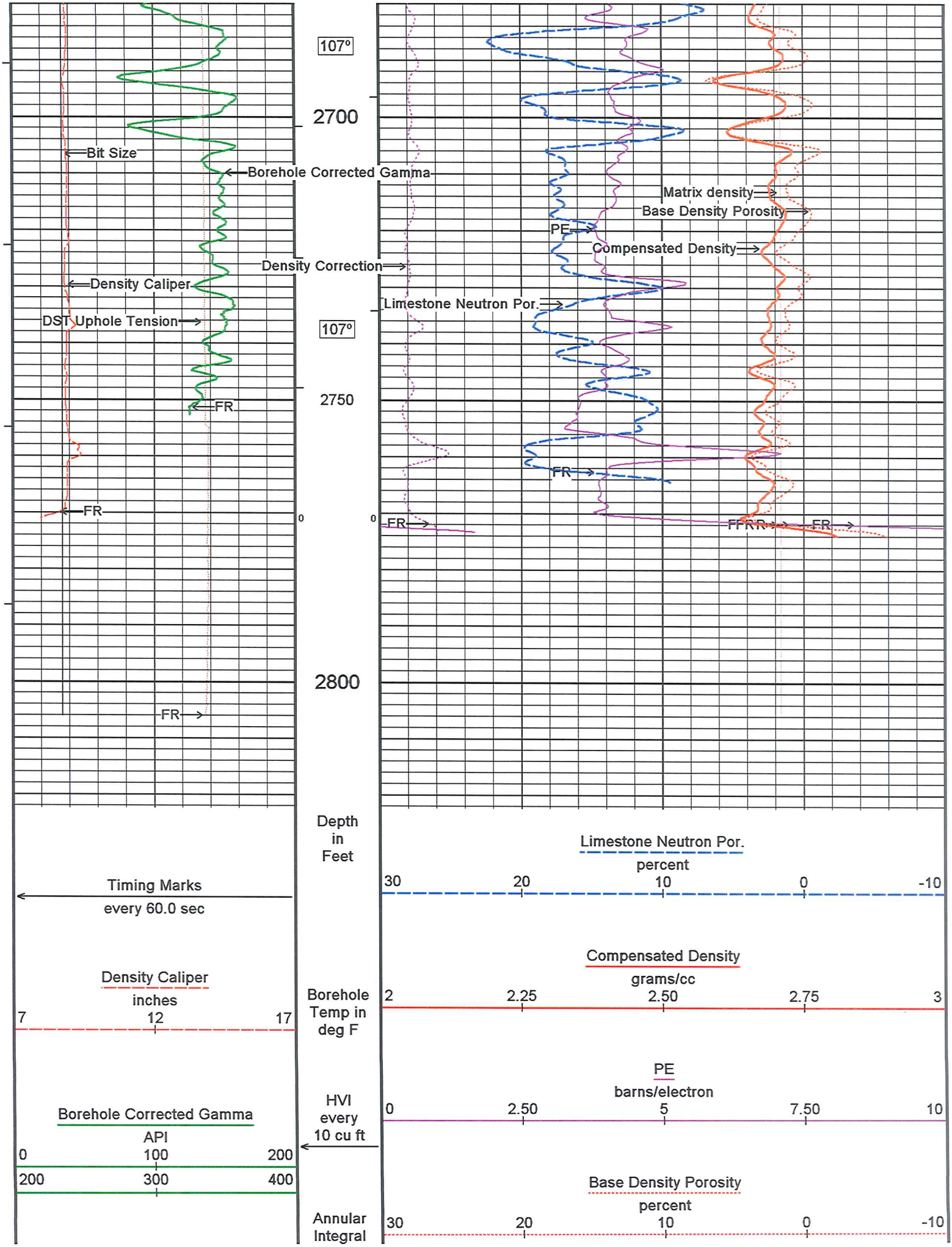
5 Inch Main Pass

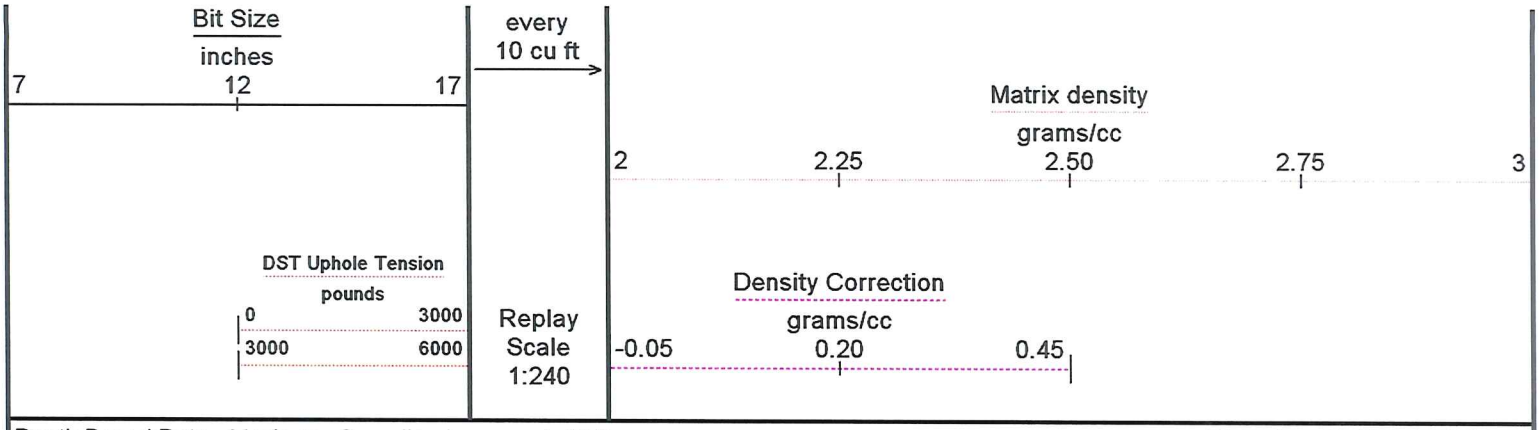
5 Inch Repeat Pass

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Repeat Section.dta
System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220
Plotted on 11-SEP-2014 02:34




Matrix density
grams/cc
2
2.25
2.50
2.75
3
DST Uphole Tension
pounds
0
3000
3000
6000
Density Correction
grams/cc
-0.05
0.20
0.45
Replay
Scale
1:240
2500
Shoe
100
107°
2550
107°
2600
107°
2650


107°
2700
Bit Size
Borehole Corrected Gamma
Matrix density
Base Density Porosity
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
107°
2750
FR
FR
0
0
FR
FR
FR
FR
2800
FR
Depth in Feet
Limestone Neutron Por.
percent
30 20 10 0 -10
Timing Marks
every 60.0 sec
Compensated Density
grams/cc
2 2.25 2.50 2.75 3
Density Caliper
inches
7 12 17
Borehole Temp in deg F
PE
barns/electron
0 2.50 5 7.50 10
HVI every 10 cu ft
Borehole Corrected Gamma
API
0 100 200
200 300 400
Base Density Porosity
percent
30 20 10 0 -10
Annular Integral



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 11-SEP-2014 02:34

Filename: C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Repeat Section.dta

System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220

5 Inch Repeat Pass

BEFORE SURVEY CALIBRATION

C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta

General Constants All 000

Last Edited on 10-SEP-2014,21:27

General Parameters		
Mud Resistivity	0.024	ohm-metres
Mud Resistivity Temperature	120.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Water Level Switch	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

Gamma Calibration MCG-C 169

Field Calibration on 10-SEP-2014,11:23

	Measured	Calibrated (API)
Background	71	48
Calibrator (Gross)	1296	885
Calibrator (Net)	1226	837

Gamma Constants MCG-C 169

Last Edited on 10-SEP-2014,21:24

Gamma Calibrator Number	GRC-C-81	
Mud Density	1.50	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

SP Calibration MCG-C 169

Field Calibration on 03-JUN-2014,11:53

	Measured	Calibrated (mV)
Reference 1	103.4	99.9
Reference 2	-95.1	-99.3

High Resolution Temperature Calibration MCG-C 169

Field Calibration on 03-JUN-2014,11:52

	Measured	Calibrated(Deg F)
Lower	65.00	66.00
Upper	100.00	101.00

High Resolution Temperature Constants MCG-C 169

Last Edited on 03-JUN-2014,11:52

Pre-filter Length	11

Neutron Calibration MDN-A.B 121

Base Calibration on 01-AUG-2014 16:17
Field Check on

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3004	91	3714	110
Ratio	32.945		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2396	3440
Ratio	0.697	

Field Check

	Calibrated (cps)
Ratio	

Neutron Constants MDN-A.B 121

Last Edited on 10-SEP-2014,21:24

Neutron Source Id	P31125B	
Neutron Jig Number	NJ5244	
Air Hole Processing	Legacy	
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	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	

Laterolog Calibration MLE-C.K 236

Base Calibration on 06-AUG-2014 13:29
Field Check on

Base Calibration

		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	0.0	974.5	0.0	1284.4
Deep	0.0	975.6	0.0	795.7
Groningen	0.0	975.2	0.0	808.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	47.4	0.0
Deep	29.3	0.0
Groningen	238.5	0.0

Laterolog Constants MLE-C.K 236

Last Edited on 12-AUG-2014,08:07

Profiling Laterolog Type	Dual	ohm-m
Laterolog Output Filter	N/A	
Profiling Limiter	N/A	
Median Filter	N/A	
Squasher Start	40000	
Shallow Laterolog K Factor	1.2844	
Deep Laterolog K Factor	0.7957	
Groningen Laterolog K Factor	0.8084	
Interference Rejection	60 Hz	
SP Connection	SP Bridle Electrode (Lower)	
Groningen Connection	Groningen Electrode (Upper)	

Borehole Correction Constants		
Bridle Type	Standard	
Stand-off	1.00	inches
Caliper Source	Density Caliper	
Hole Size	N/A	inches
Mud Resistivity Source	Temperature Corrected	
Temp. for Rm Corr.	MCG External Temperature	

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	

SP Calibration MLE-C.K 236

Field Calibration on 06-AUG-2014 13:40

	Measured	Calibrated (mV)
Reference 1	-94.1	-100.6
Reference 2	104.1	100.3

Photo Density Calibration MPD-B 84

Base Calibration on 13-AUG-2014 13:20
Field Check on 13-AUG-2014 13:27

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	664	707		
Reference 1	44625	14461	53306	19389
Reference 2	20292	1767	24963	2524

Field Check at Base		
	663.8	706.9

Field Check		
	665.5	712.4

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	116	571		
Reference 1	13918	44496	0.314	0.321
Reference 2	5231	20195	0.261	0.273

Field Check at Base		
115.8	571.1	

Field Check		
116.6	571.2	

Density Constants MPD-B 84

Last Edited on 10-SEP-2014,21:24

Density Source Id	P20712B	
Nylon Calibrator Number	DNC-D-526	
Aluminium Calibrator Number	DAC-D-526	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.50	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	

Caliper Calibration MPD-B 84

Base Calibration on 09-JUL-2014 10:34
Field Calibration on 09-JUL-2014 10:37

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14533	3.99
2	23061	5.97
3	31840	8.00
4	40784	10.03
5	49615	11.98
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.00	8.00

DOWNHOLE EQUIPMENT

C:\DOCUME~1\sysadmin\LOCALS~1\Temp\Weatherford PreView5\0\Main Pass.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 2 LG: 2.40 ft WT: 19.8 lb OD: 2.244 in

SHA-J.B Compact Swivel Head Adaptor
SHA-J.B 649 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

Compact Stiff Bridle Electrode Sub.
MBE-D.A 162 LG: 12.33 ft WT: 77.2 lb OD: 2.244 in

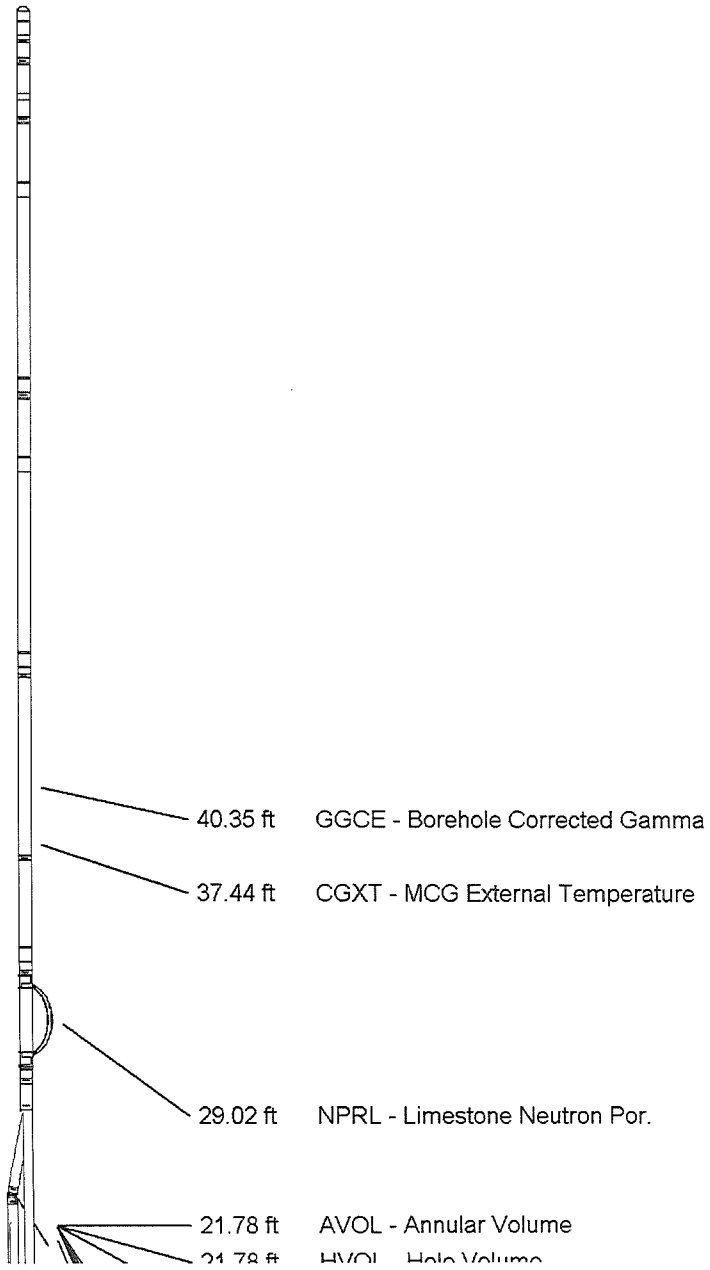
Compact Stiff Bridle Electrode Sub.
MBE-C.A 116 LG: 12.33 ft WT: 77.2 lb OD: 2.244 in

Compact Comms Gamma
MCG-C 169 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Linker
MLK-C.A 29 LG: 4.87 ft WT: 30.9 lb OD: 2.244 in

Compact Neutron
MDN-A.B 121 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-B 84 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in



SKJ-D.A Compact Knuckle Joint
SKJ-D.A 120 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

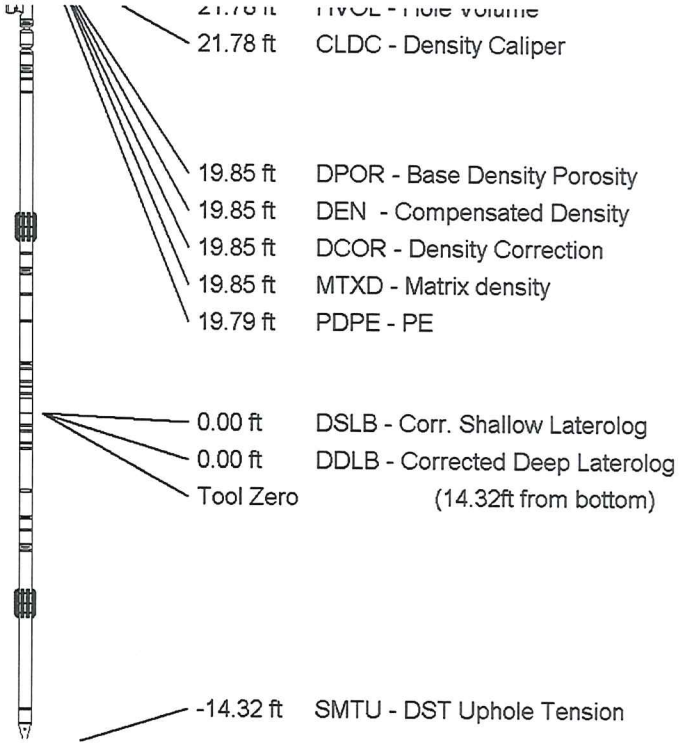
Compact Upper Guard sub
MUG-B.B 236 LG: 8.98 ft WT: 68.3 lb OD: 2.244 in

Compact Laterolog Electrode Sub.
MLE-C.K 236 LG: 12.34 ft WT: 92.6 lb OD: 2.244 in

Compact Lower Guard Sub.
MLG-A 35 LG: 8.00 ft WT: 55.1 lb OD: 2.244 in

Compact Pressure Bung
HFS 2 LG: 0.13 ft WT: 4.4 lb OD: 2.244 in

Total Length: 89.18 ft Weight: 676.8 lb



COMPANY	Antero Resources Corporation
WELL	Washington Unit 2H
FIELD	Oxford Field
PROVINCE/COUNTY	Doddridge County
COUNTRY/STATE	U.S.A / West Virginia

Elevation Kelly Bushing	1076.00	feet	First Reading	6066.00	feet
Elevation Drill Floor	1076.00	feet	Depth Driller	7034.00	feet
Elevation Ground Level	1052.00	feet	Depth Logger	6066.00	feet

Weatherford®

Photo Density
Compensated Neutron