



Weatherford[®]

**COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY O'BRIEN RESOURCES LLC
 WELL COLT 45 FBC 2
 FIELD WILDCAT
 PROVINCE/COUNTY LANE
 COUNTRY/STATE U.S.A. / KANSAS
 LOCATION 720' FNL & 2424' FEL
 NW SW NW NE

SEC 2 TWP 17S RGE 30W Other Services MA/MFE
 API Number 15-101-22478
 Permit Number
 Permanent Datum GL, Elevation 2848 feet
 Log Measured From KB
 Drilling Measured From KB @ 5 FEET

Elevations:
 KB 2853.00 feet
 DF 2851.00
 GL 2848.00

Date	03-JAN-2014
Run Number	ONE
Service Order	3547662
Depth Driller	4635.00 feet
Depth Logger	4636.00 feet
First Reading	4614.79 feet
Last Reading	3700.00 feet
Casing Driller	245.00 feet
Casing Logger	246.00 feet
Bit Size	7.875 inches
Hole Fluid Type	CHEMICAL
Density / Viscosity	9.40 lb/USg 45.00 CP
PH / Fluid Loss	10.50 5.20 ml/30Min
Sample Source	MUDPIT
Rm @ Measured Temp	1.03 @ 74.8 ohm-m
Rmf @ Measured Temp	0.82 @ 74.8 ohm-m
Rmc @ Measured Temp	1.24 @ 74.8 ohm-m
Source Rmf / Rmc	CALC CALC
Rm @ BHT	0.71 @111.0 ohm-m
Time Since Circulation	4 HOURS
Max Recorded Temp	113.00 deg F
Equipment / Base	13096 LIB
Recorded By	DEREK CARTER
Witnessed By	KURT TALBOTT
JOB #	LB14-004

BOREHOLE RECORD

Last Edited: 03-JAN-2014 16:06

Bit Size inches 7.875	Depth From feet 245.00	Depth To feet 4635.00
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CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	245.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583
- TOOLS: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION
- HARDWARE:
 - MDN: DUAL BOWSPRING ECCENTRALIZER
 - MFE: 1 x 0.5 INCH STANDOFF
 - MAI: 2 x 0.5 INCH STANDOFF
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST
- TOTAL HOLE VOLUME FROM TD TO SURFACE PIPE: 1860 CU. FT
- ANNUAL HOLE VOLUME WITH 4.5 INCH CASING FROM TD TO SURFACE PIPE: 1370 CU. FT

- RIG: MALLARD J.V. #1

- ENGINEER: DEREK CARTER

- OPERATORS: KEN RINEHART, NICOLAS ADAME

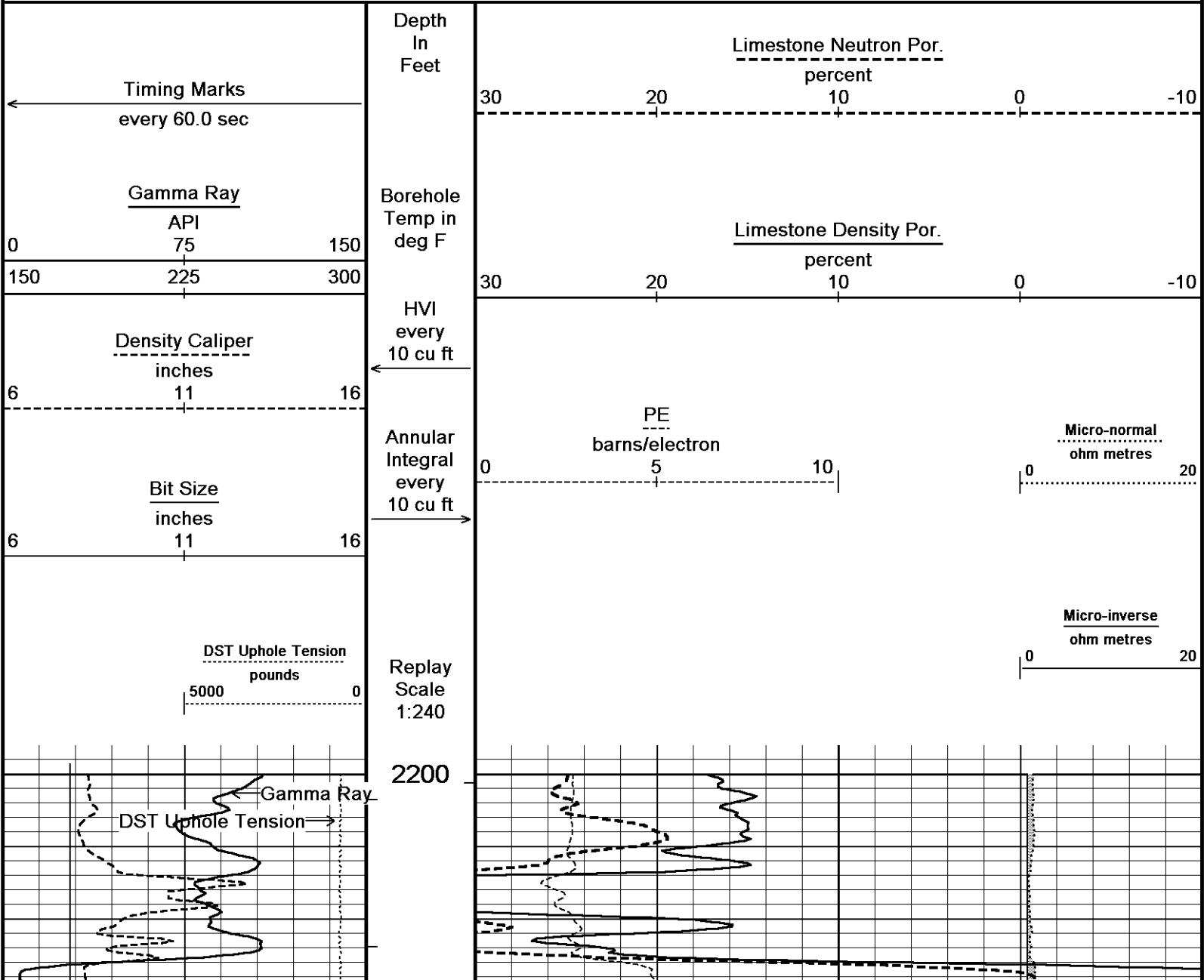
- PER CUSTOMER REQUEST A COMPOSITE (E-LOG ONLY, NO FIELD PRINT) IS BEING INCLUDED WITH THE STANDARD TRIPLECOMBO E-LOGS (DEN-NEU-MIC, INDUCTION, MICROLOG)

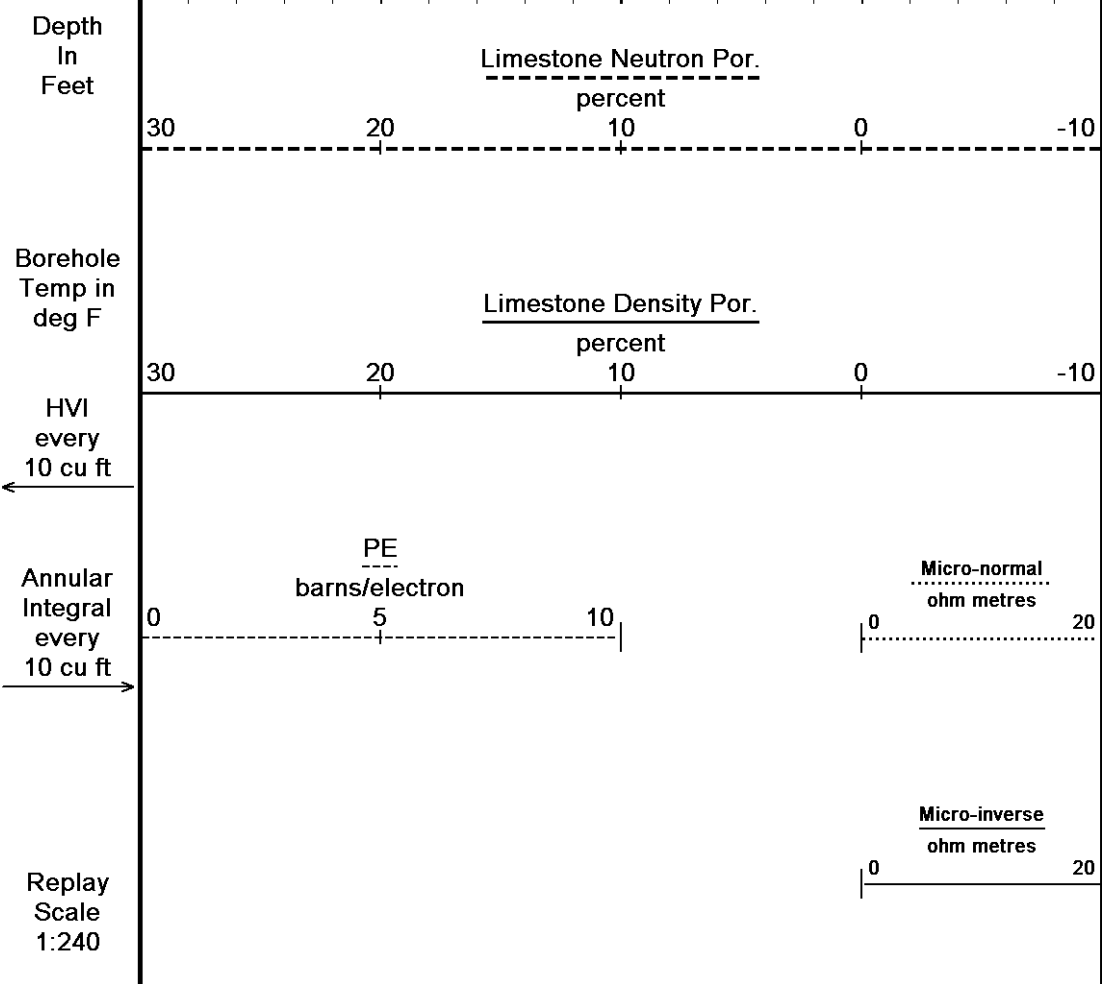
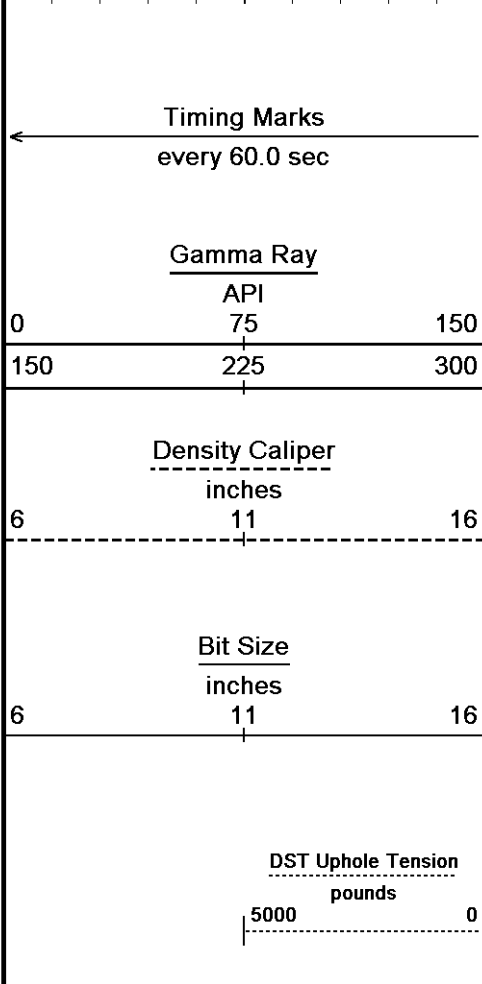
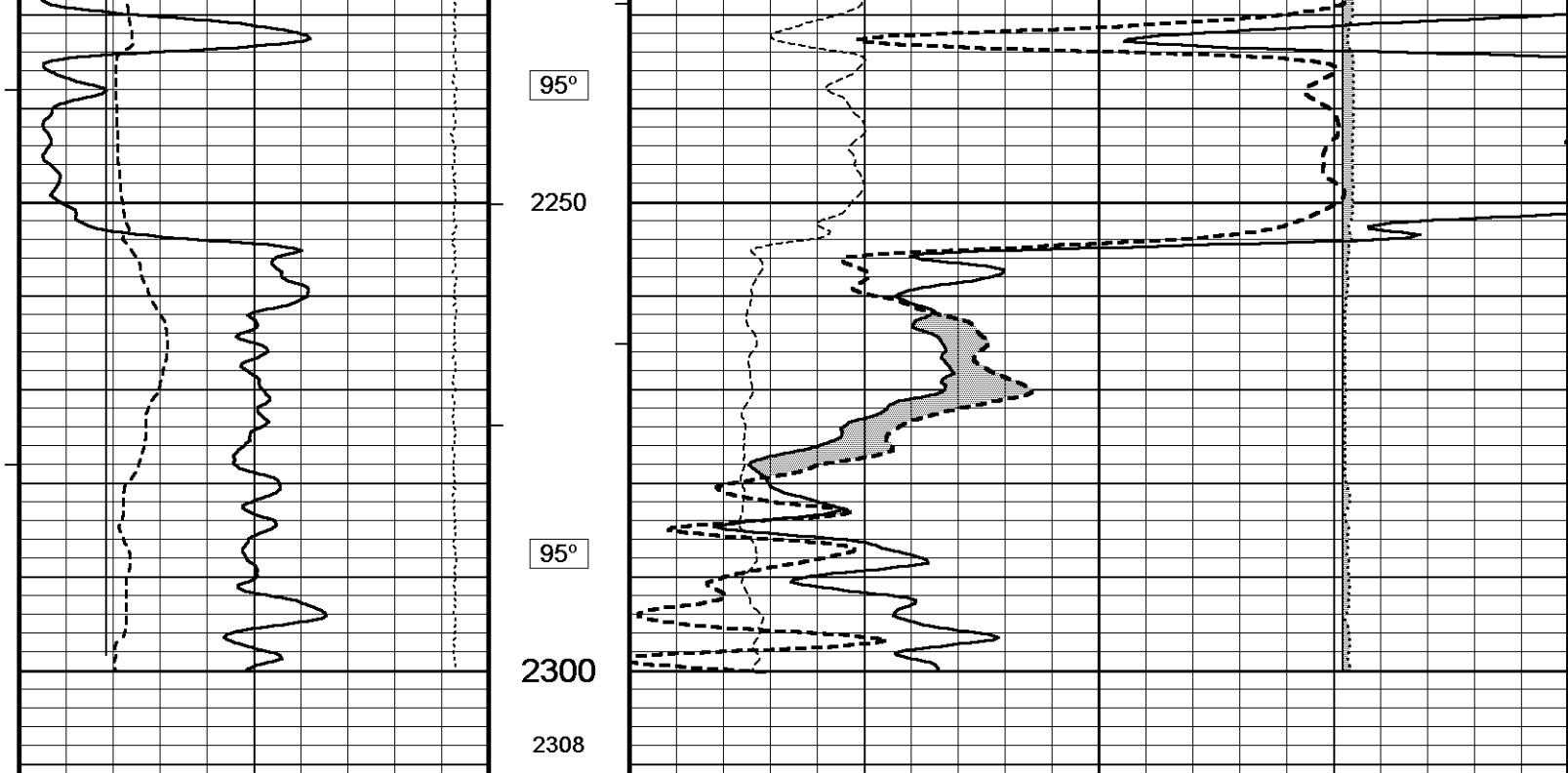
- AT ABOUT 1924, WHILE LOGGING THE MAIN PASS, ONE OF THE RIG HANDS WAS NOTICED WELDING ON A PIECE OF EQUIPMENT BEHIND THE DRAWWORKS. THE HAND WAS LIKELY ONLY WELDING FOR A SHORT TIME (APPROXIMATELY 2 MINUTES) BECAUSE HE WAS CLEARLY VISIBLE TO THE WINCHMAN. THE DEPTH ON THE KERR PANEL AT THE TIME WAS APPROXIMATELY 4230 FEET. THERE WERE NO NOTICEABLE AFFECTS TO THE SP.

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 LIMESTONE MAIN

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 03-JAN-2014 22:00
Filename: C:\Minimus 13.05.9583\Log\O'Brien ...\O'Brien Resources LLC Colt 45 FBC 2 Main Detail.dta Recorded on 03-JAN-2014 20:18
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583



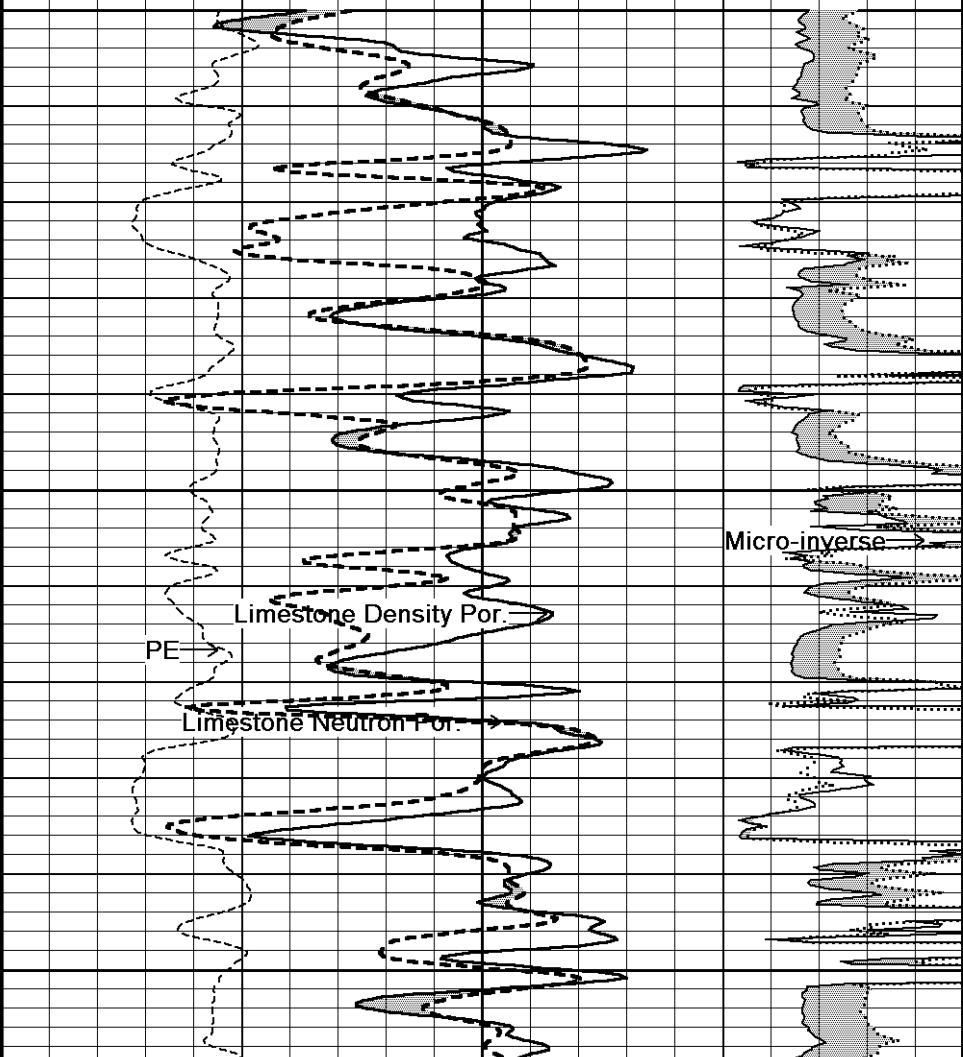
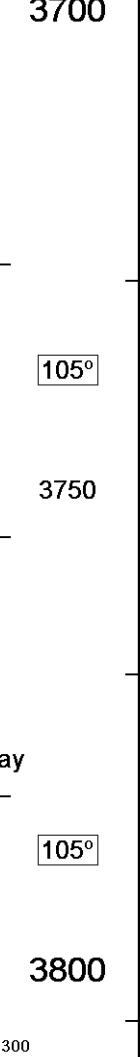
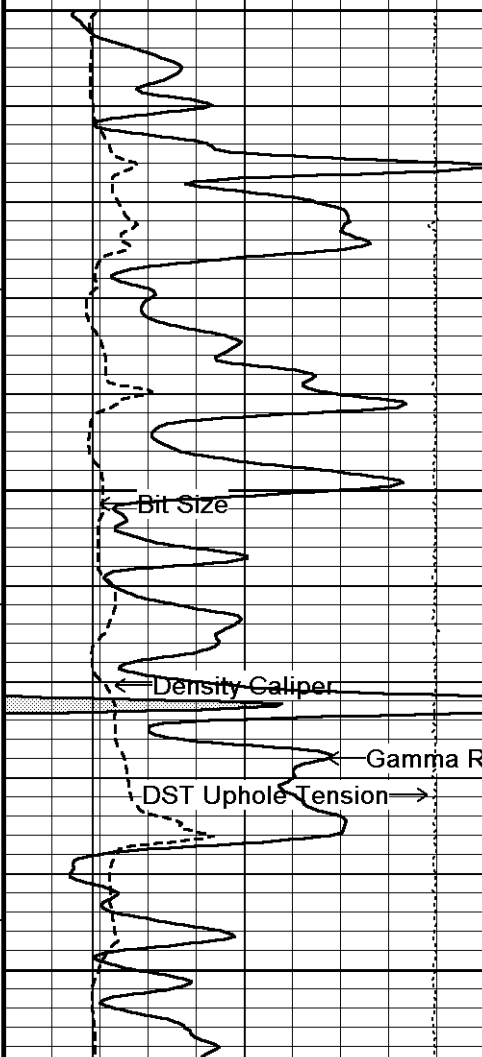
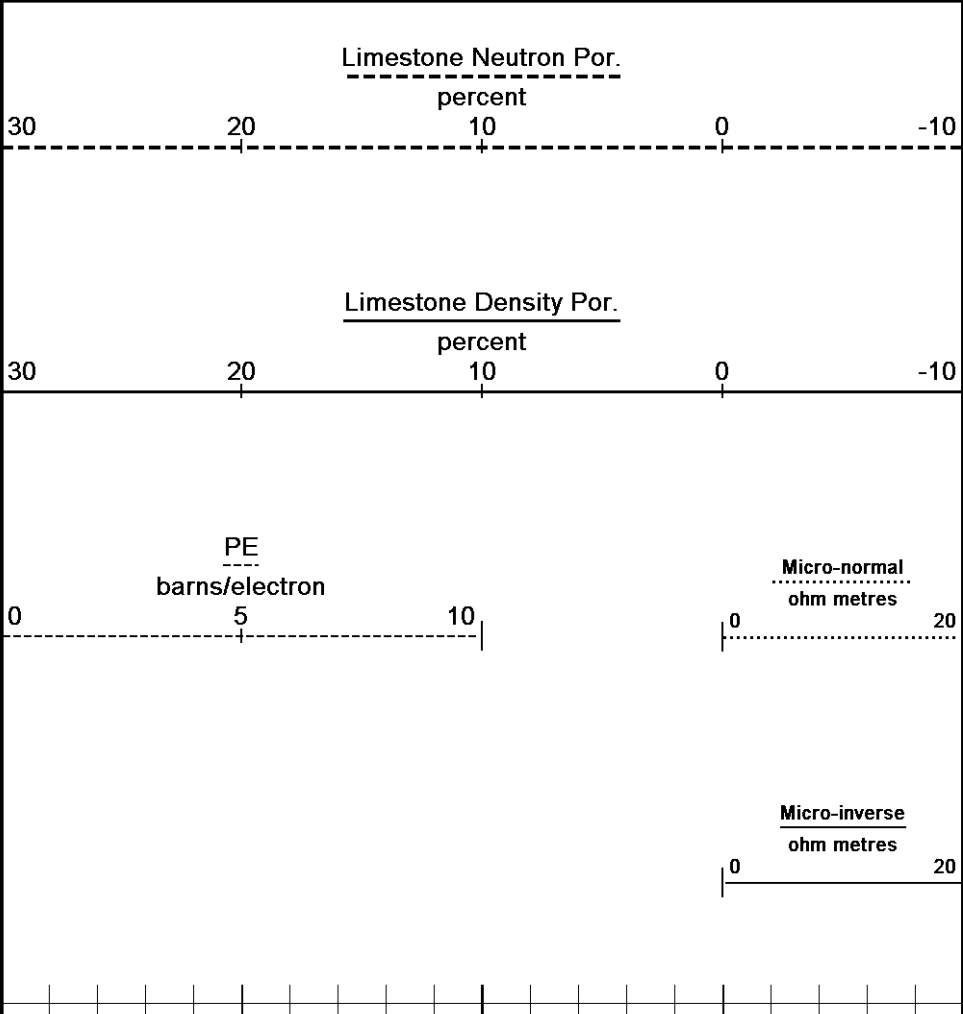
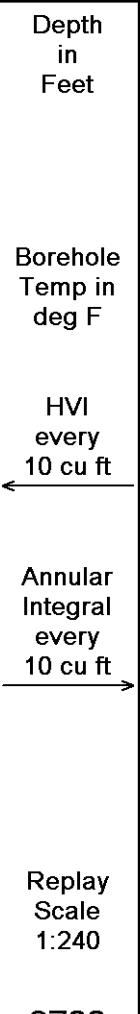
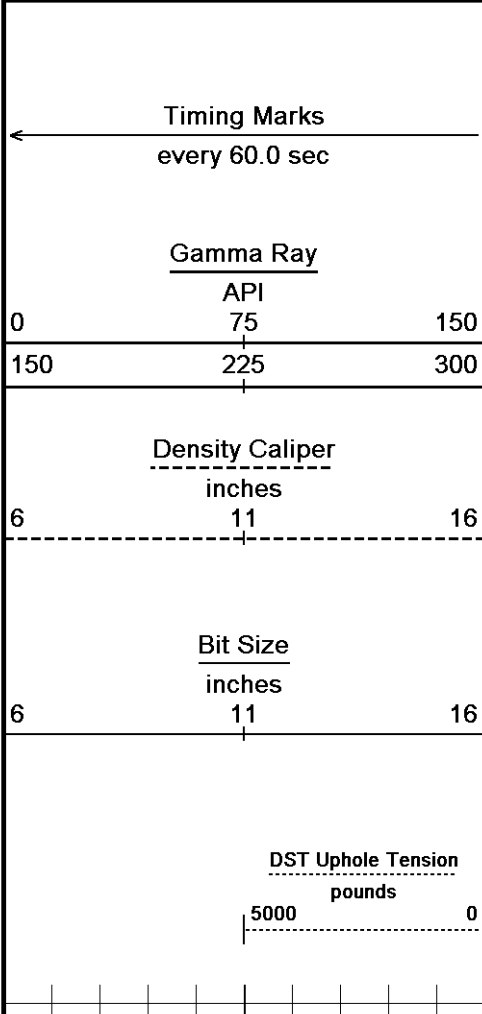


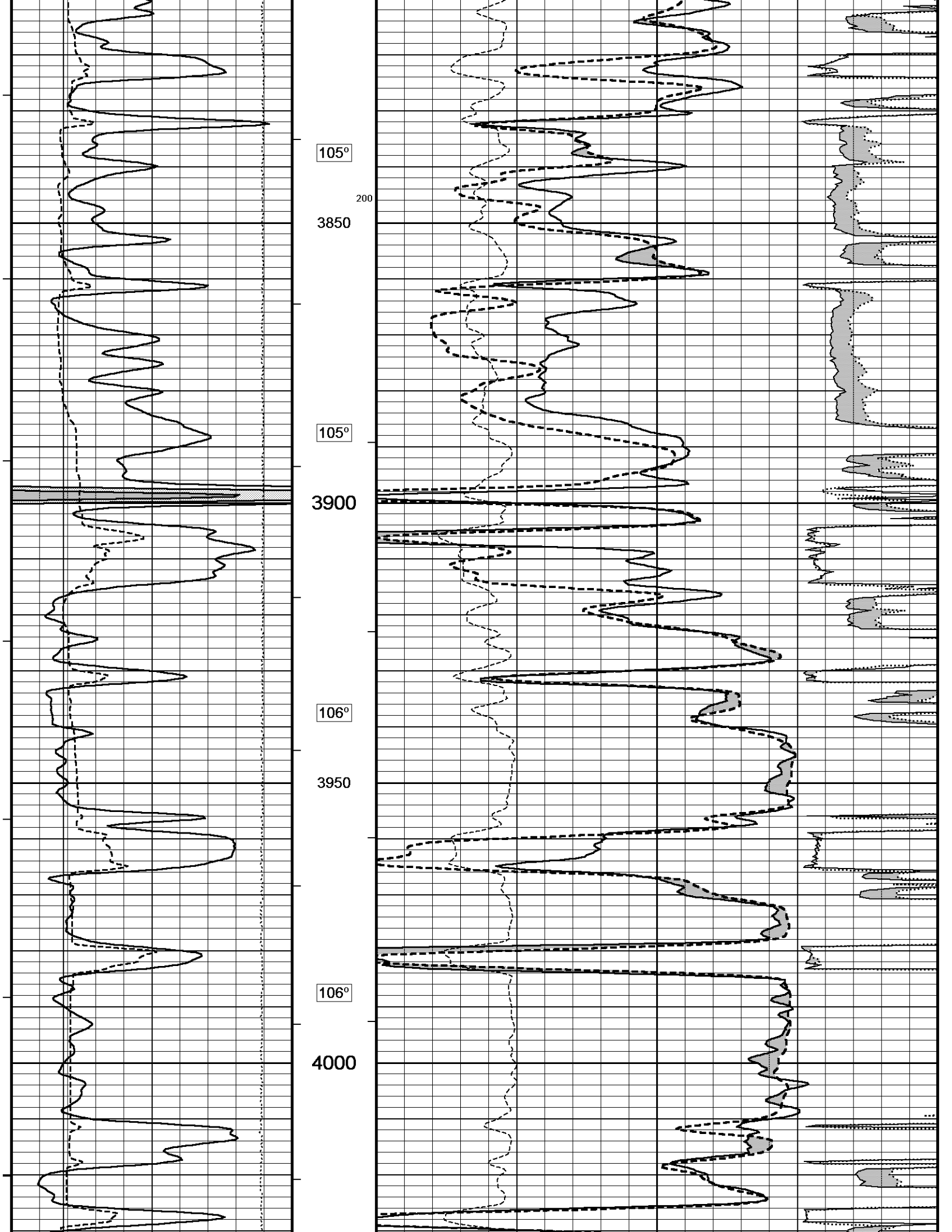
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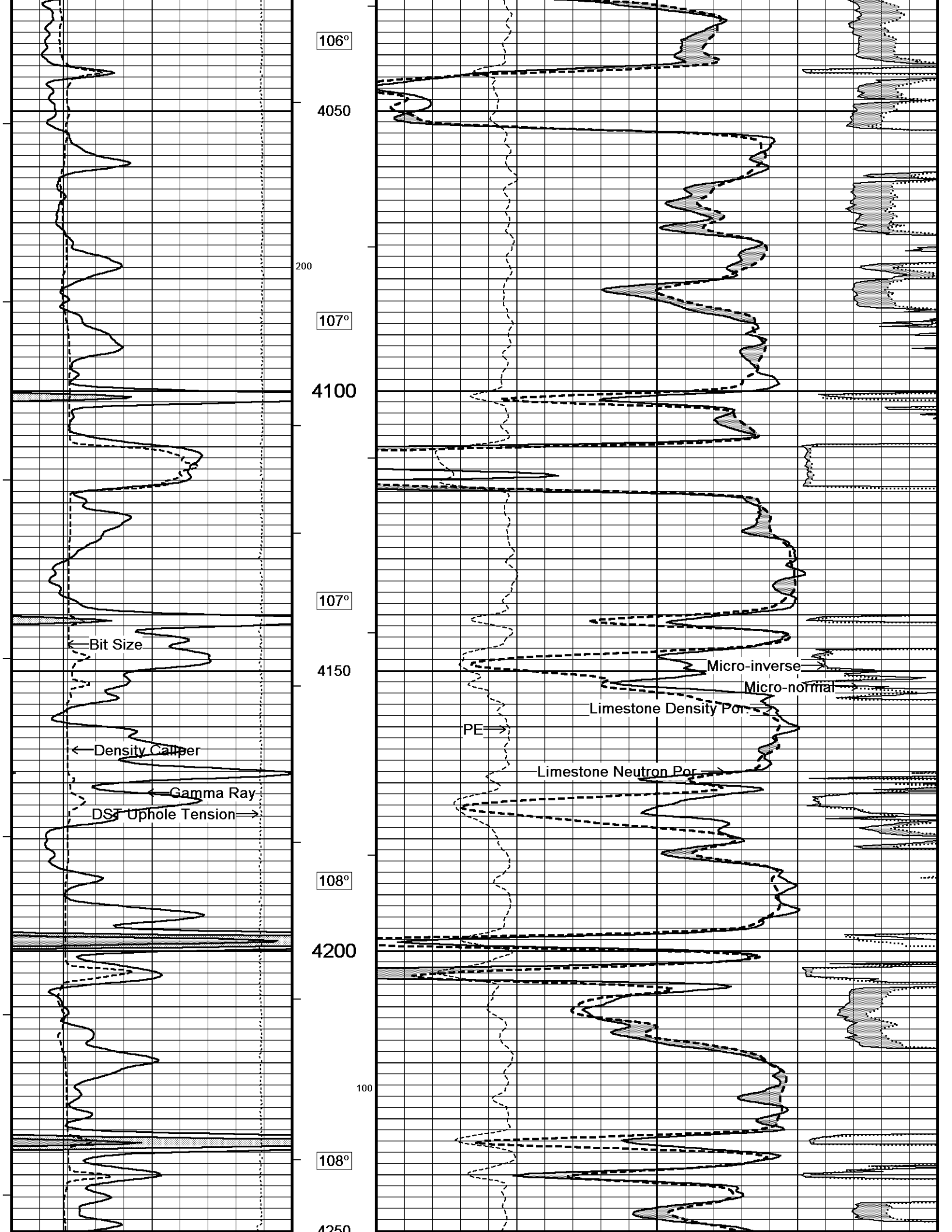
↑ 5 INCH LIMESTONE MAIN ↑

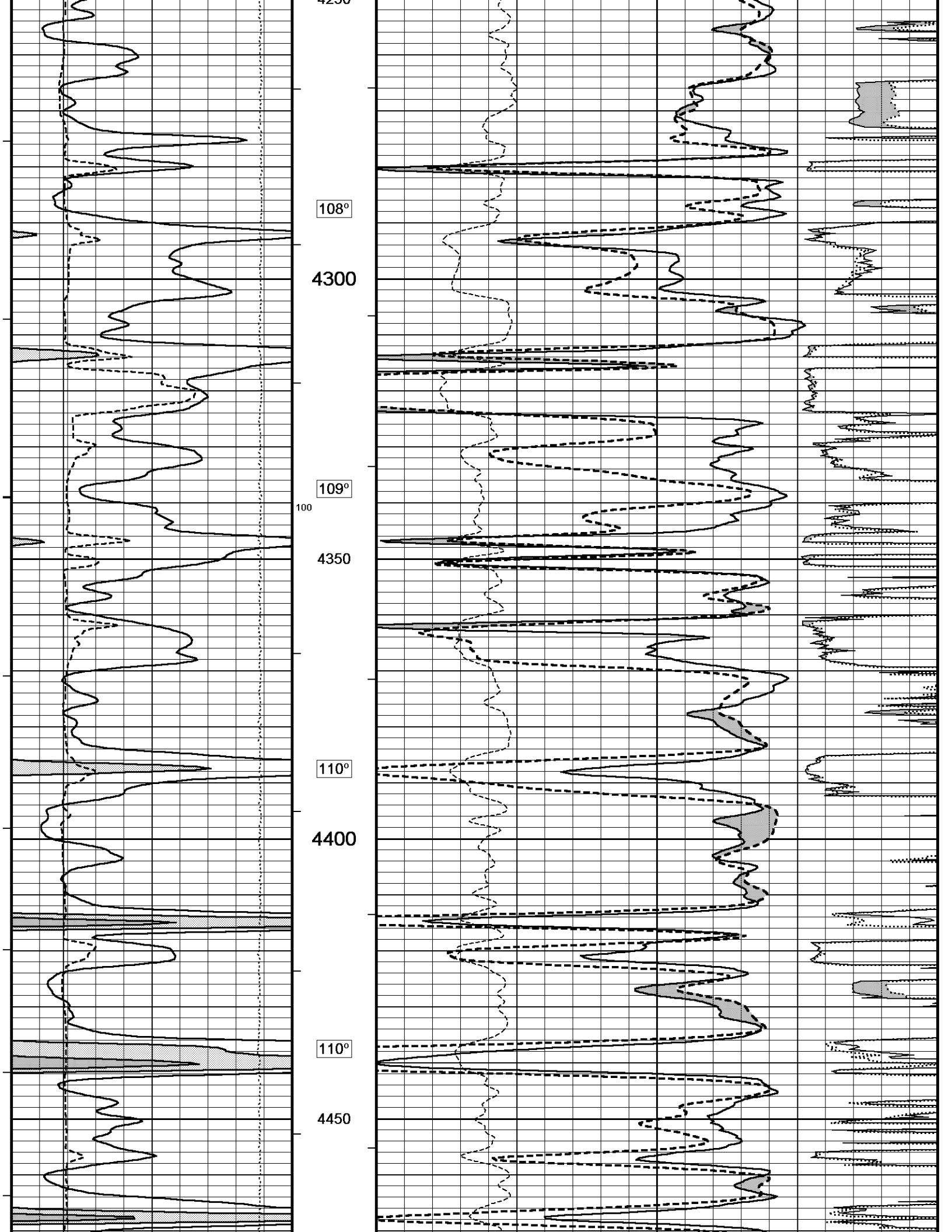
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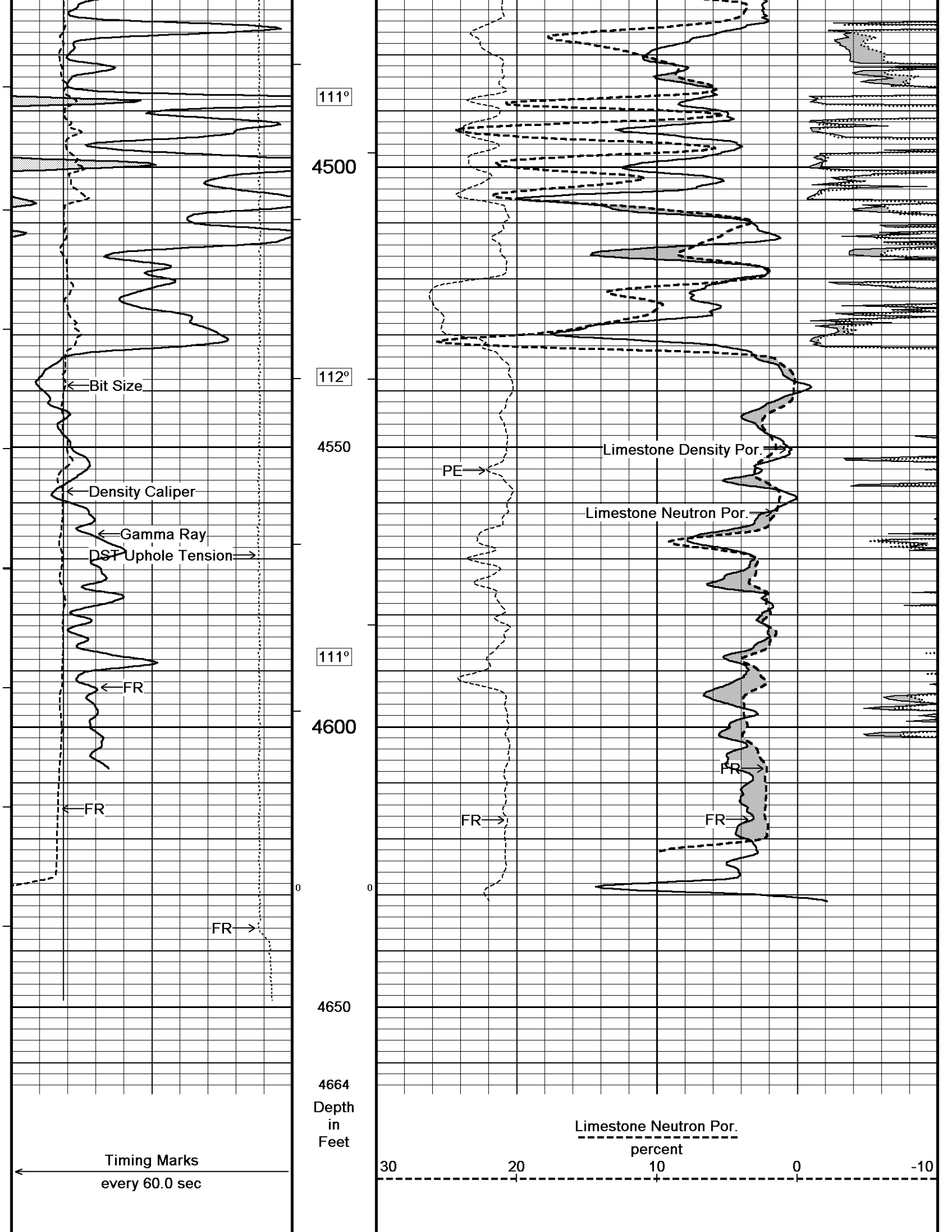
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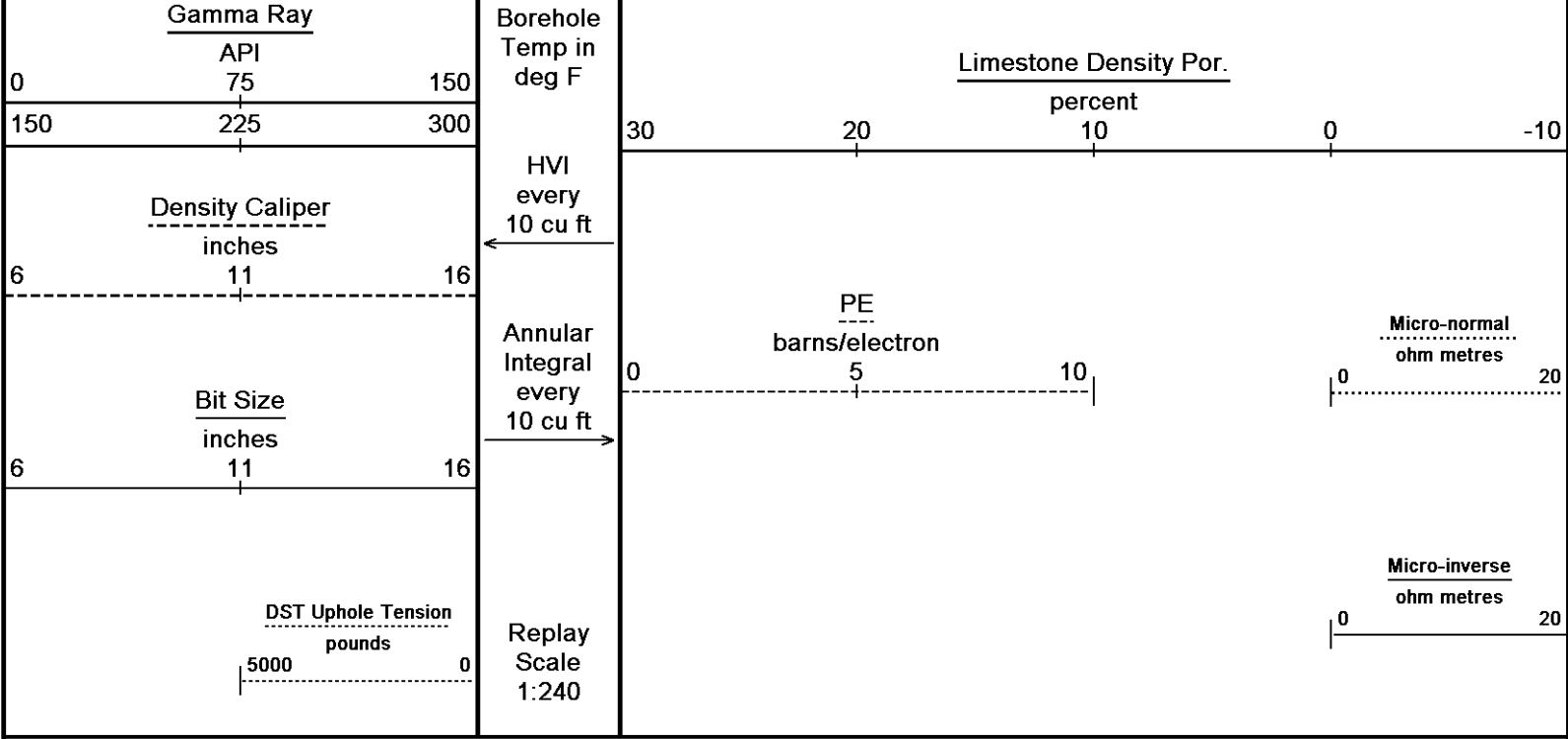










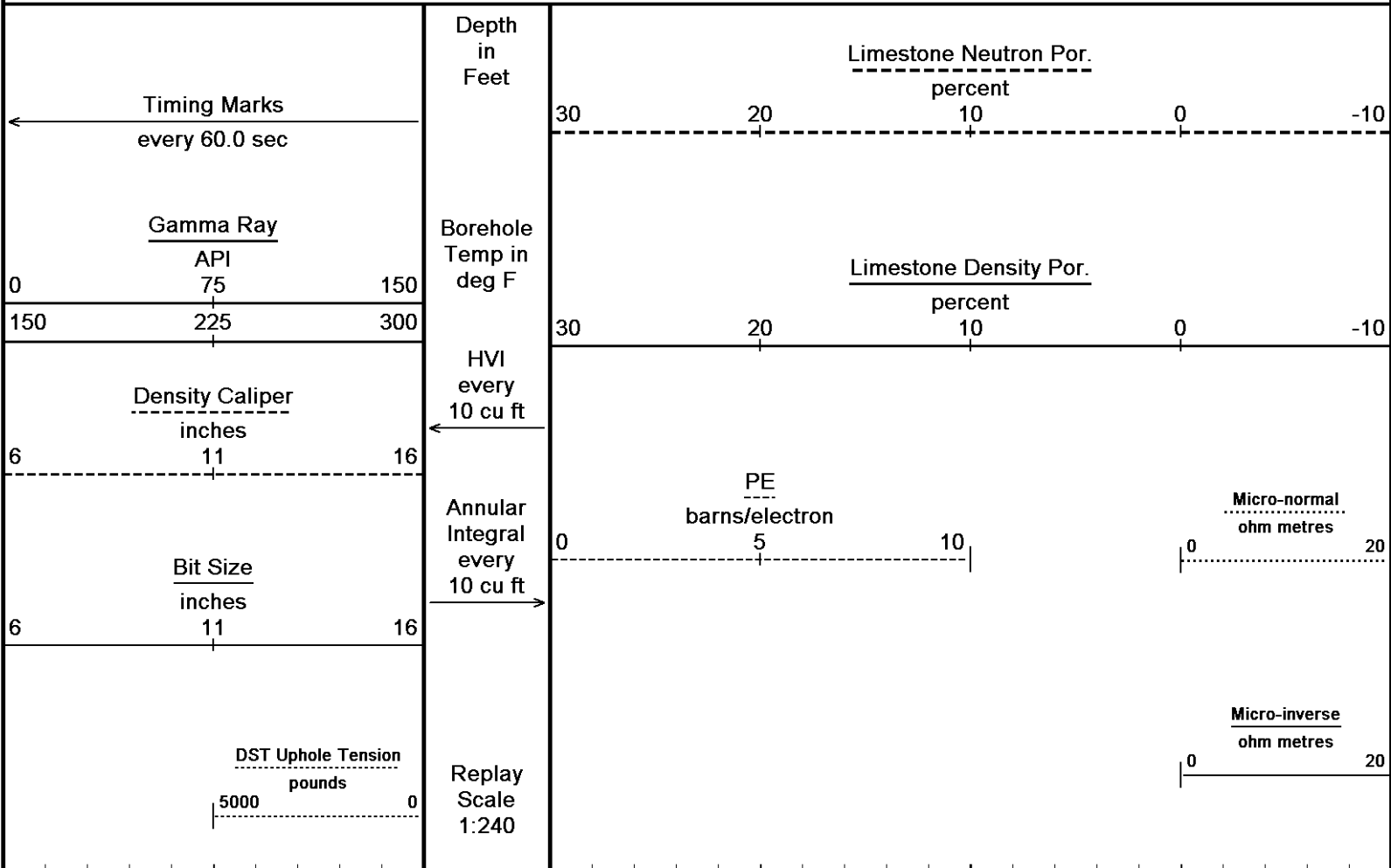


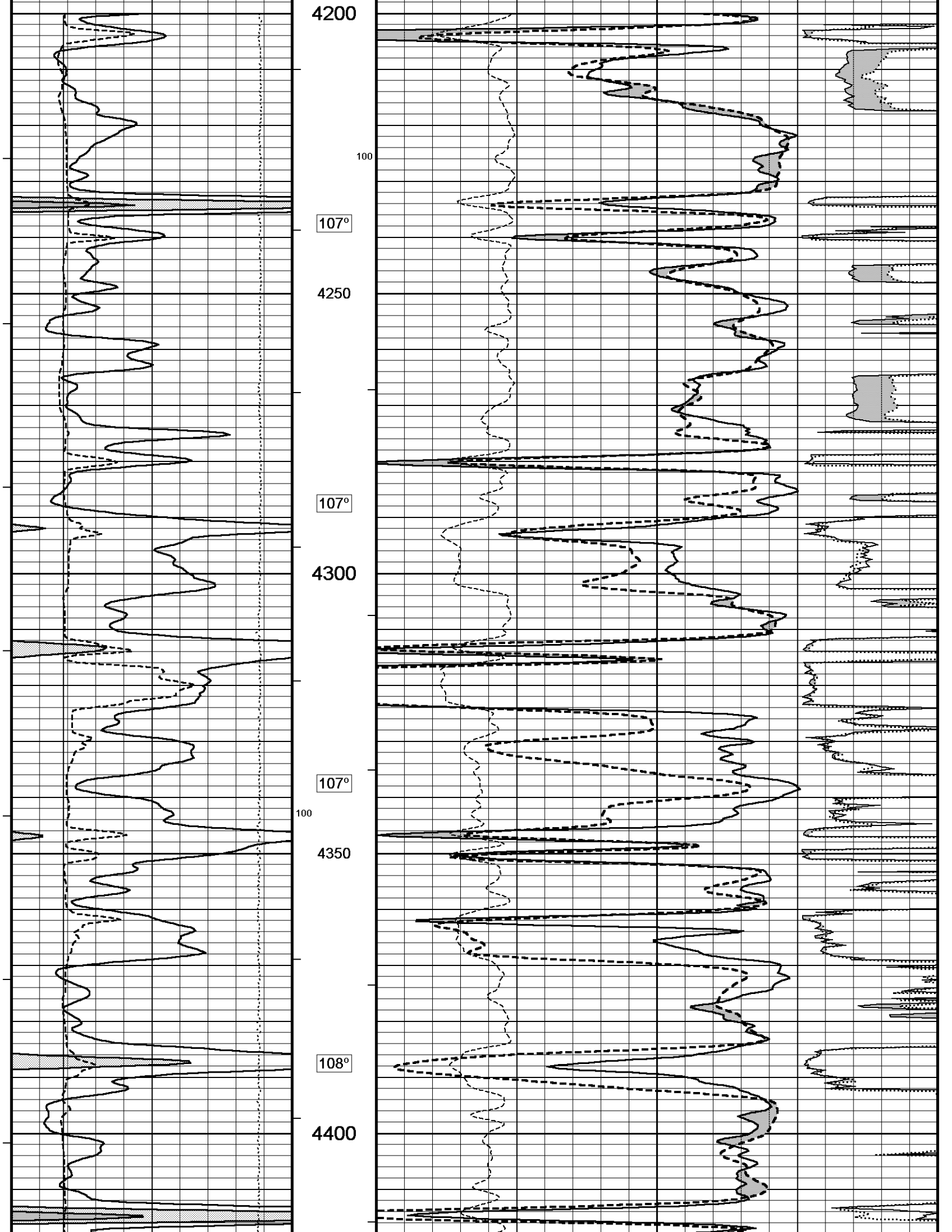
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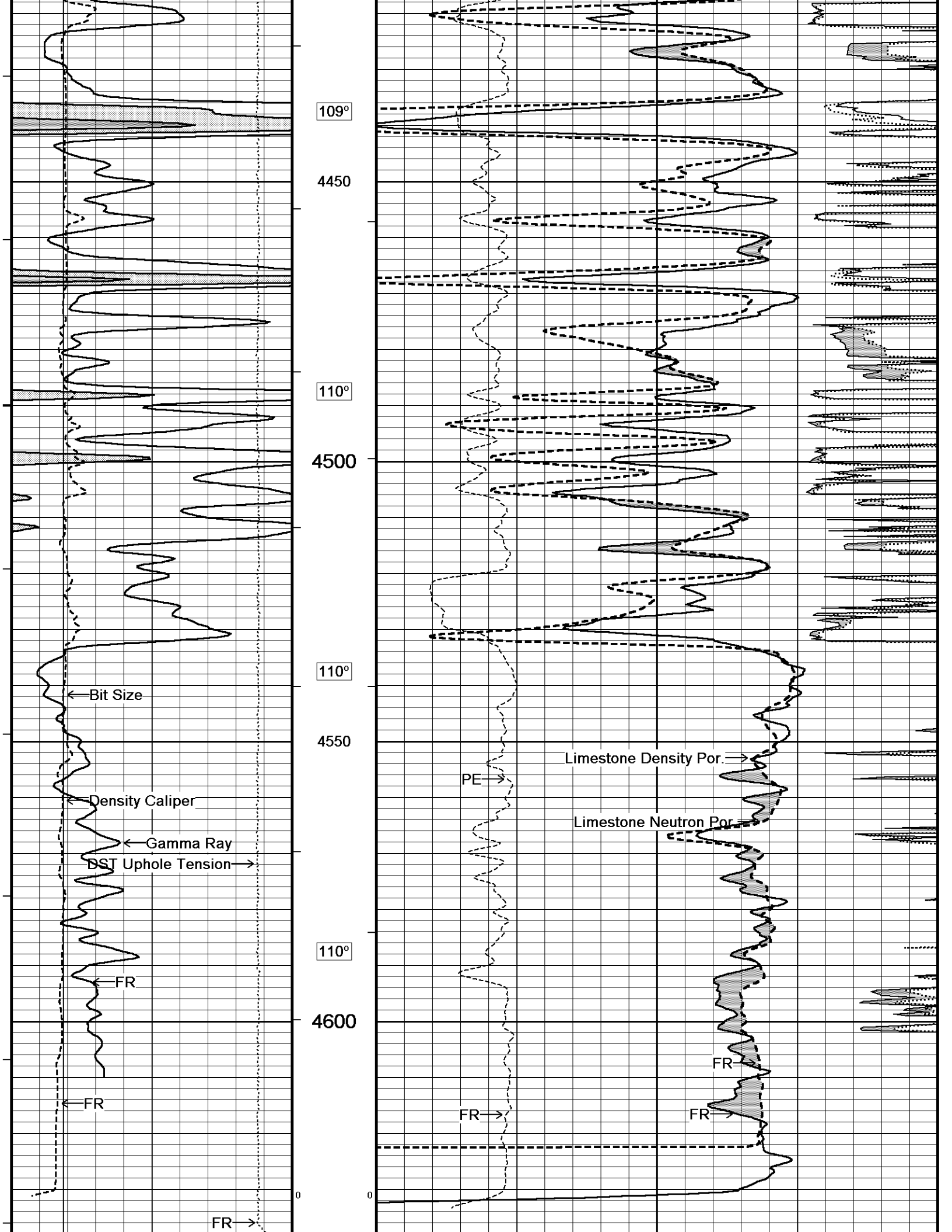
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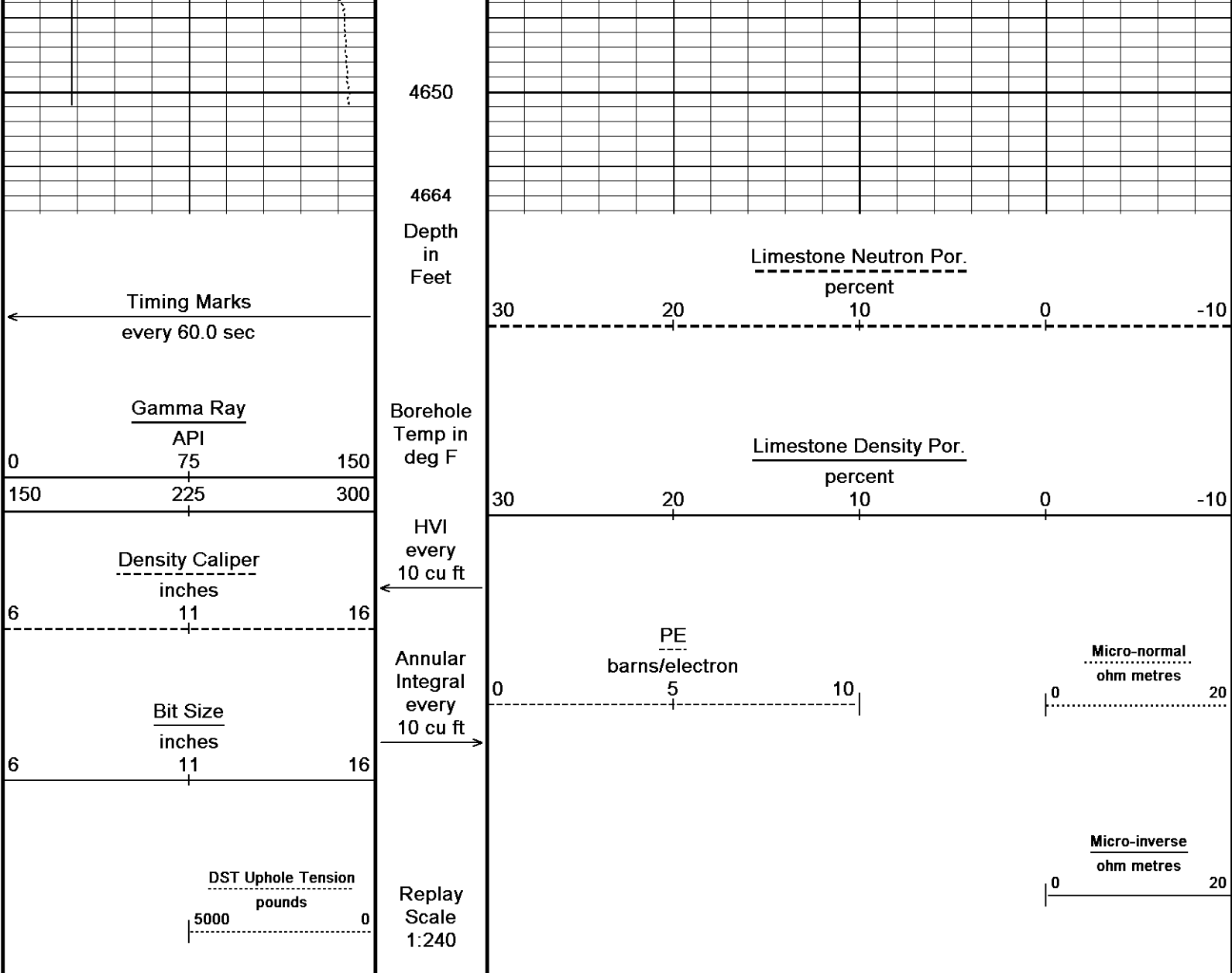
REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
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 Filename: C:\Minimus 13.05.9583\Log\O'Brien Res...\O'Brien Resources LLC Colt 45 FBC 2 Repeat.dta
 Recorded on 03-JAN-2014 18:14
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583







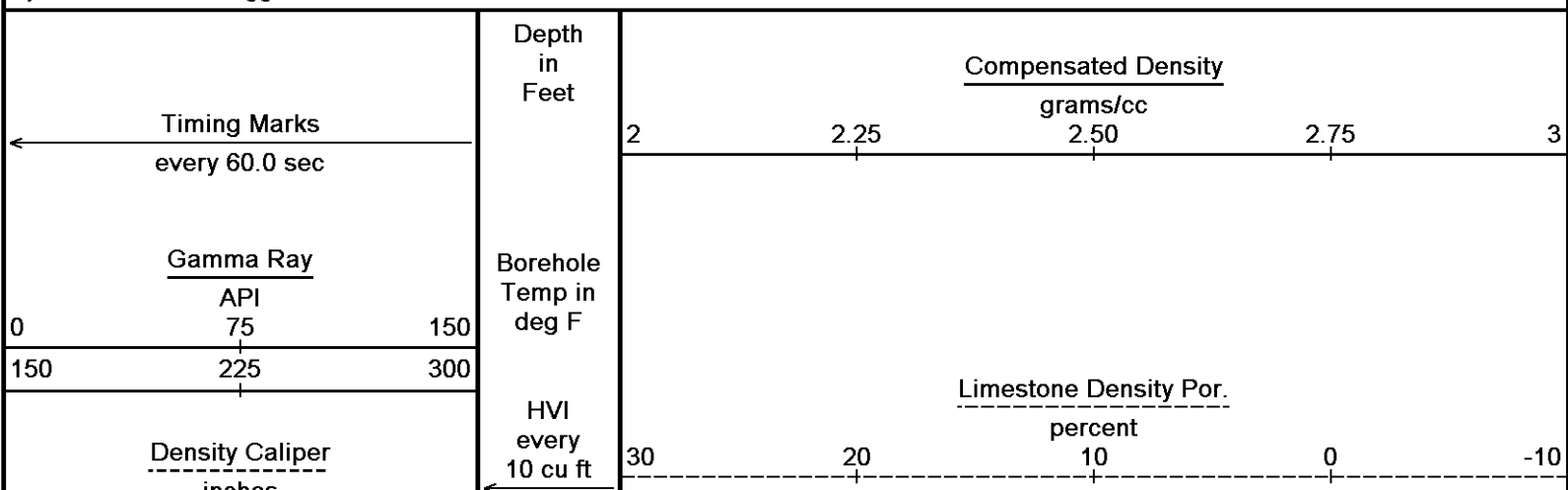


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↑ REPEAT SECTION ↑

↓ 5 INCH BULK DENSITY MAIN ↓

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6 11 16
inches

Bit Size
inches

6 11 16

DST Uphole Tension
pounds
5000 0

Annular
Integral
every
10 cu ft

Replay
Scale
1:240

PE
barns/electron

Density Correction
grams/cc

0 5 10 -0.50 0 0.50

3700

105°

3750

Bit Size

PE

Limestone Density Por.

Compensated Density

Density Correction

Density Caliper

Gamma Ray

DST Uphole Tension

105°

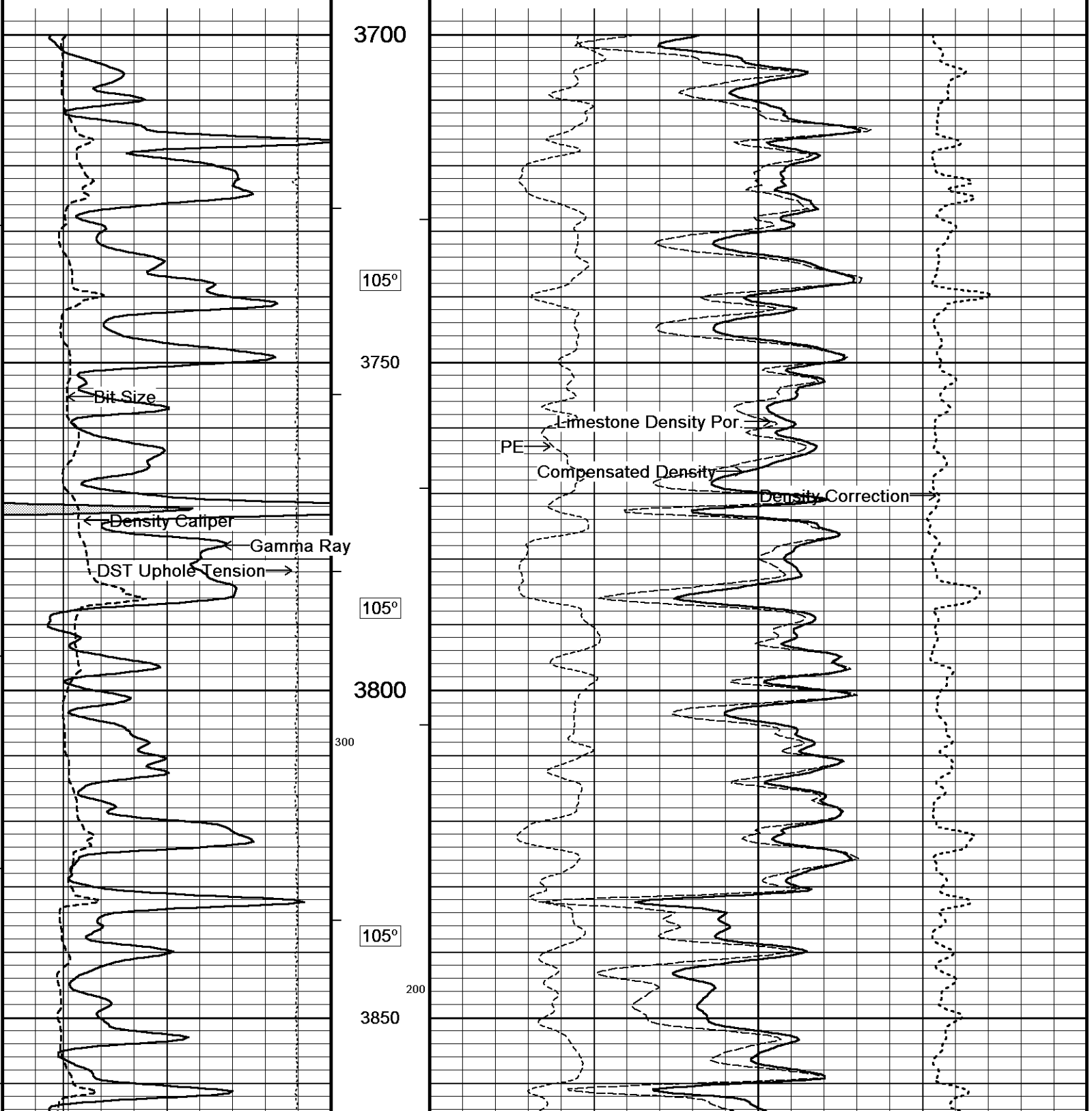
3800

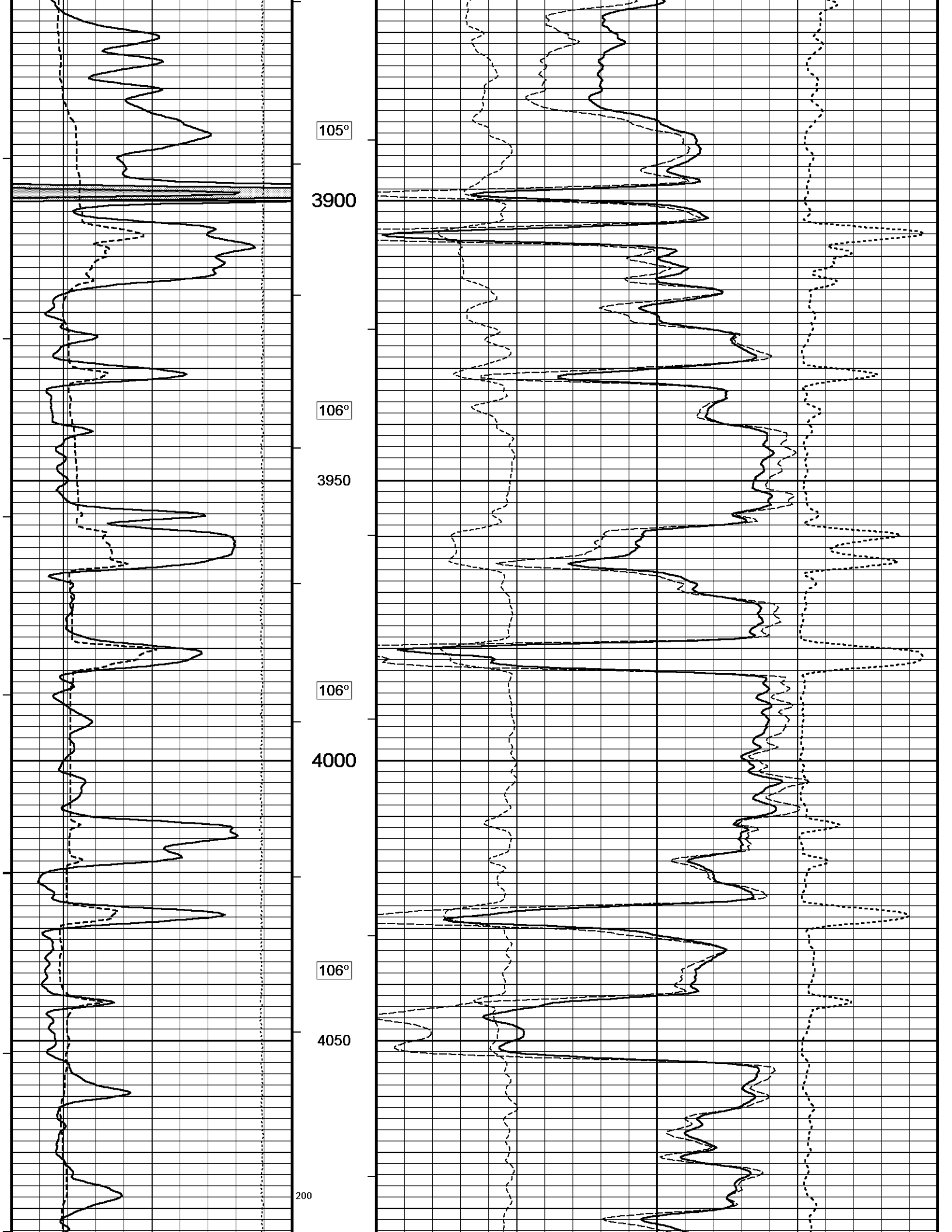
300

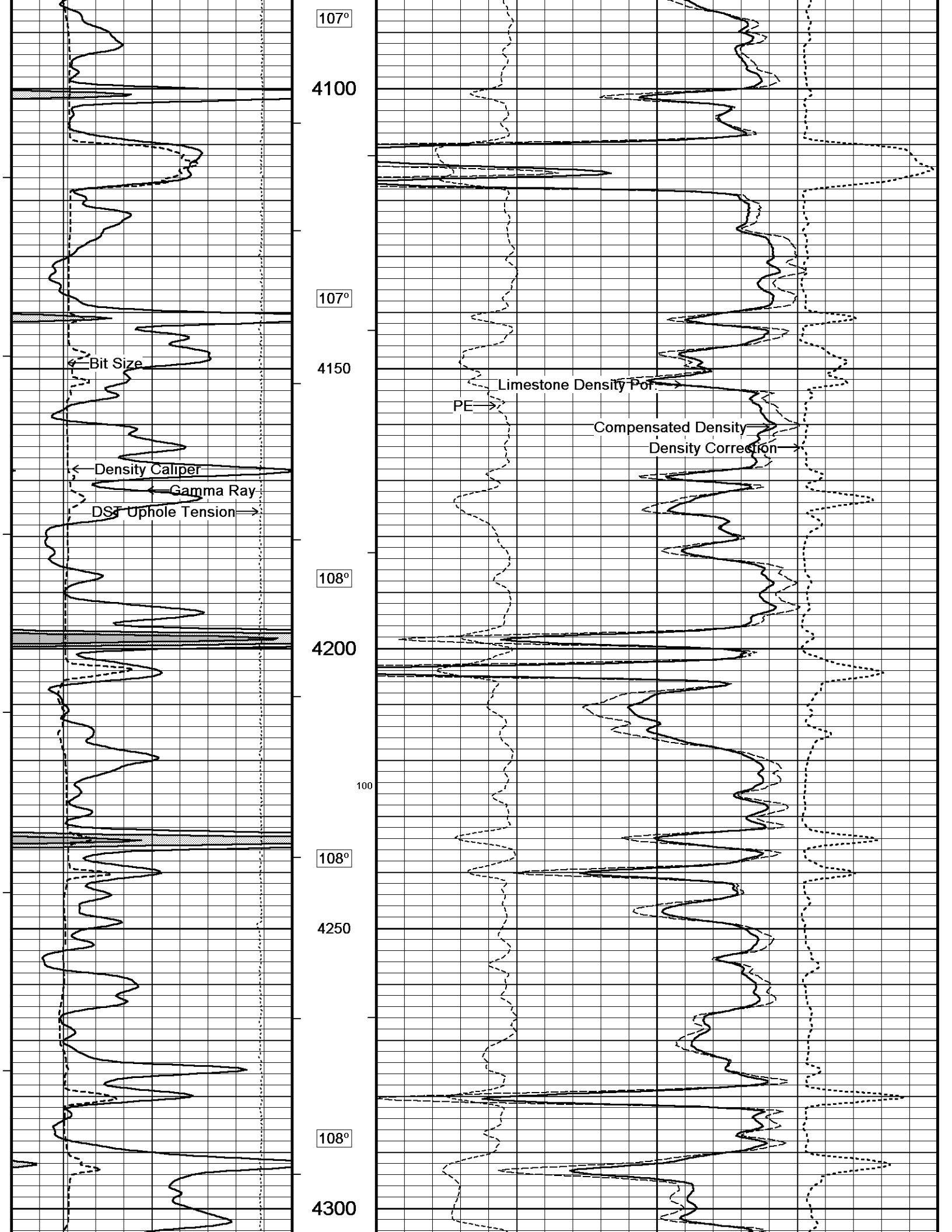
105°

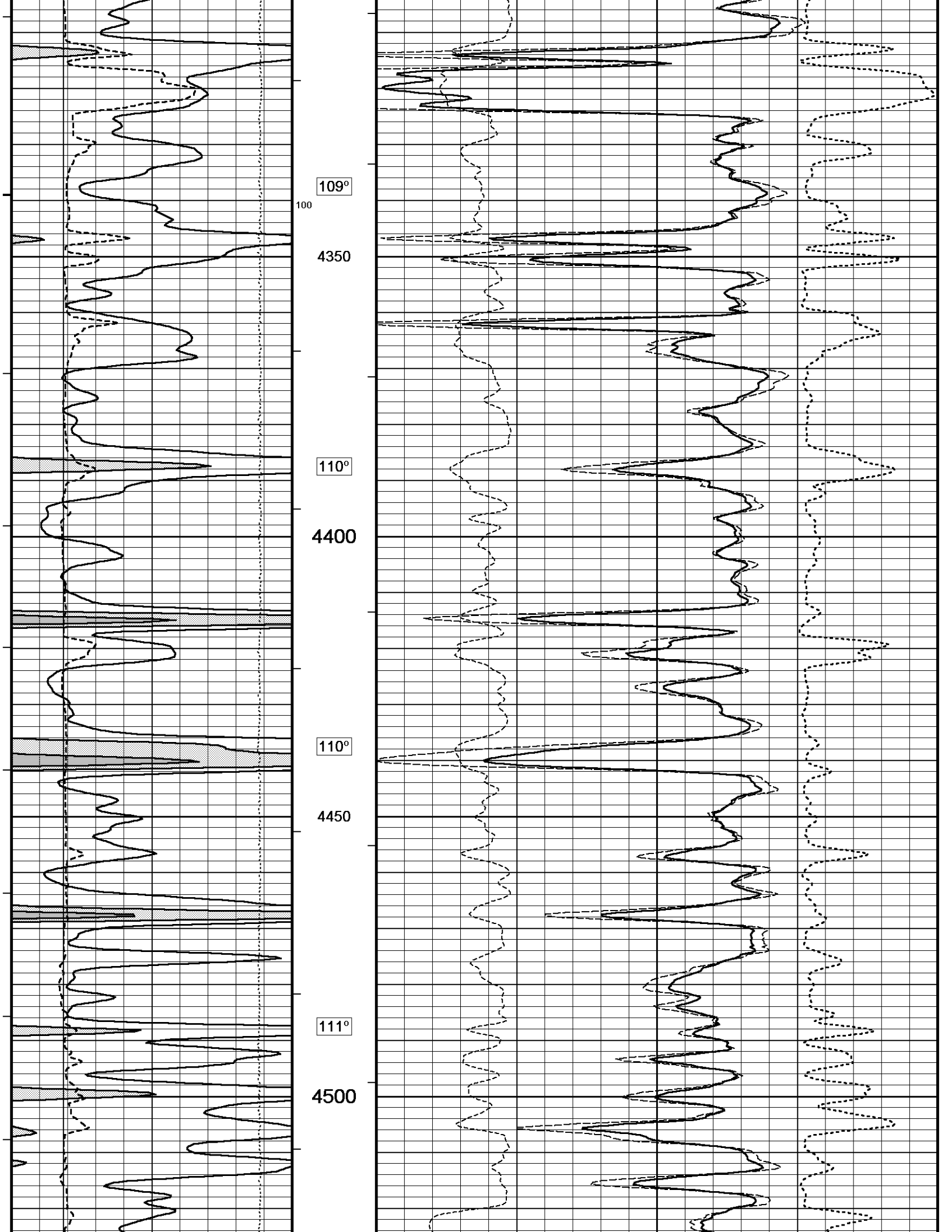
3850

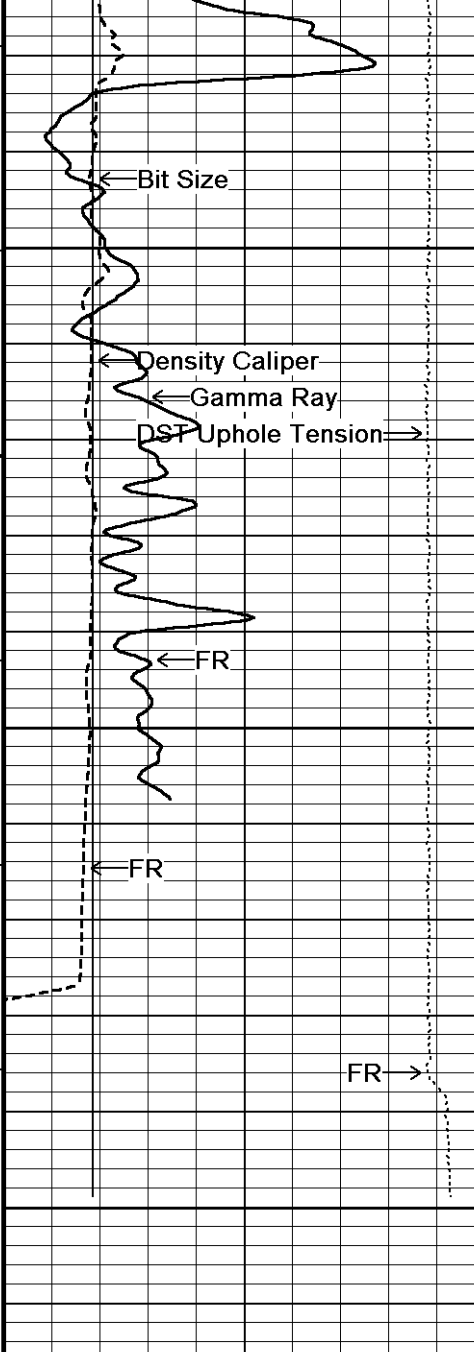
200











112°

4550

111°

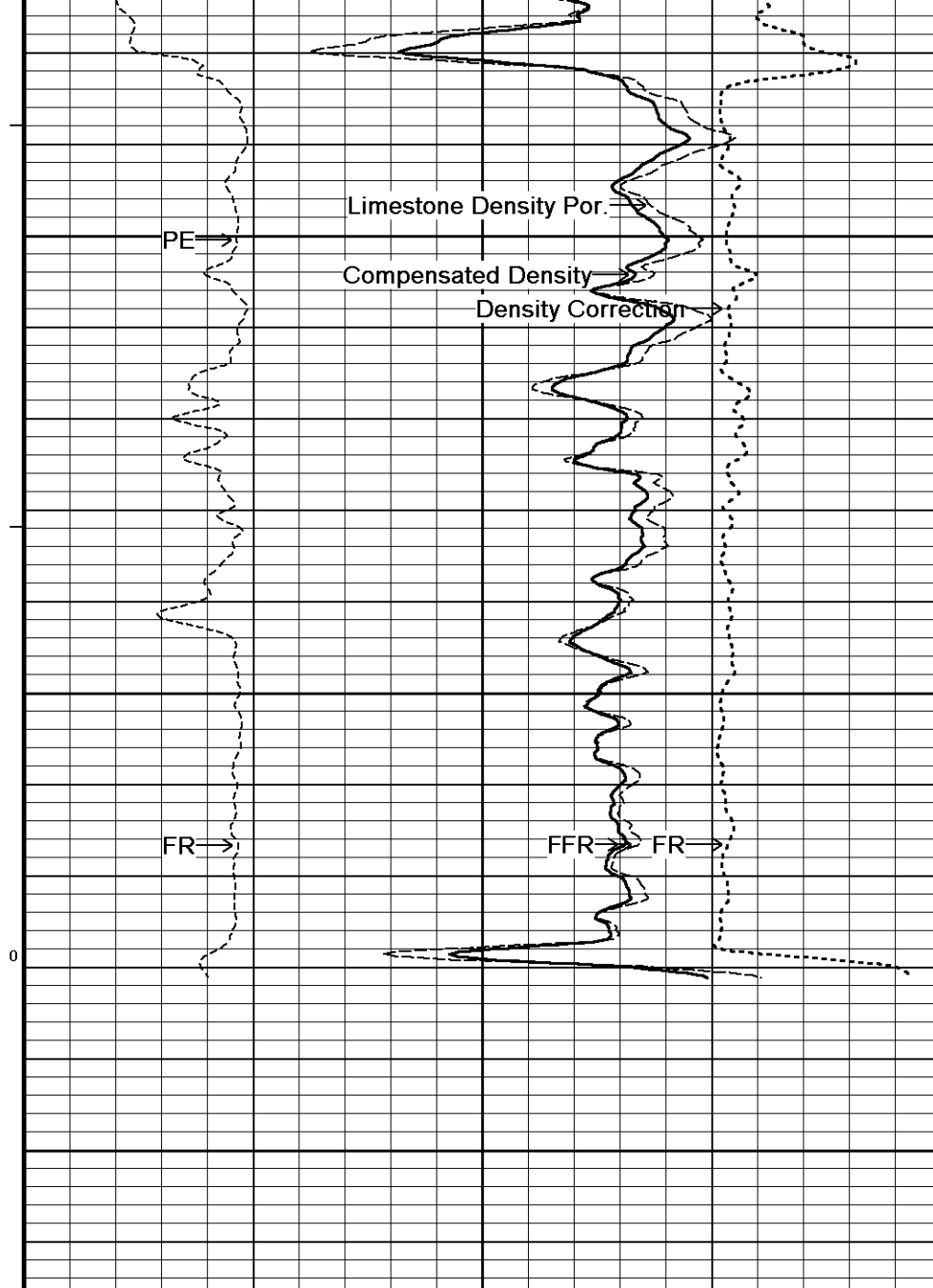
4600

0

4650

4664

Depth in Feet



Timing Marks every 60.0 sec

<u>Gamma Ray</u>	
API	
0	150
75	

150	300
225	

<u>Density Caliper</u>	
inches	
6	16
11	

<u>Bit Size</u>	
inches	
6	16
11	

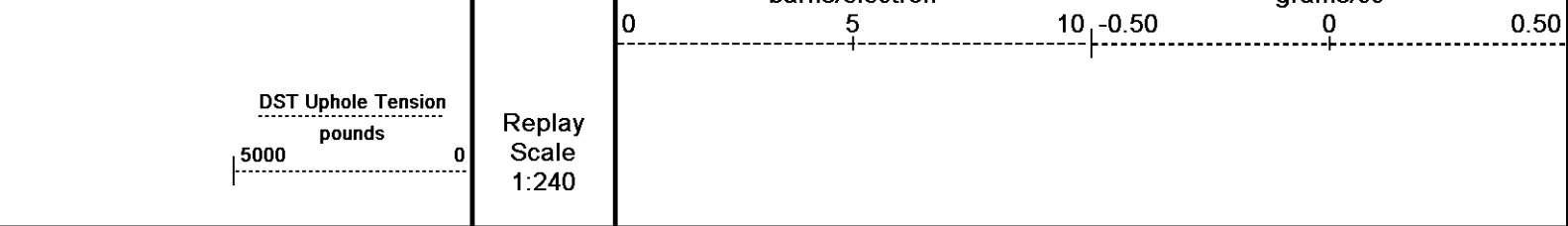
<u>Compensated Density</u>	
grams/cc	
2	3
2.25	2.75

<u>Limestone Density Por.</u>	
percent	
30	-10
20	0

PE	<u>Density Correction</u>
barns/electron	grams/cc

←

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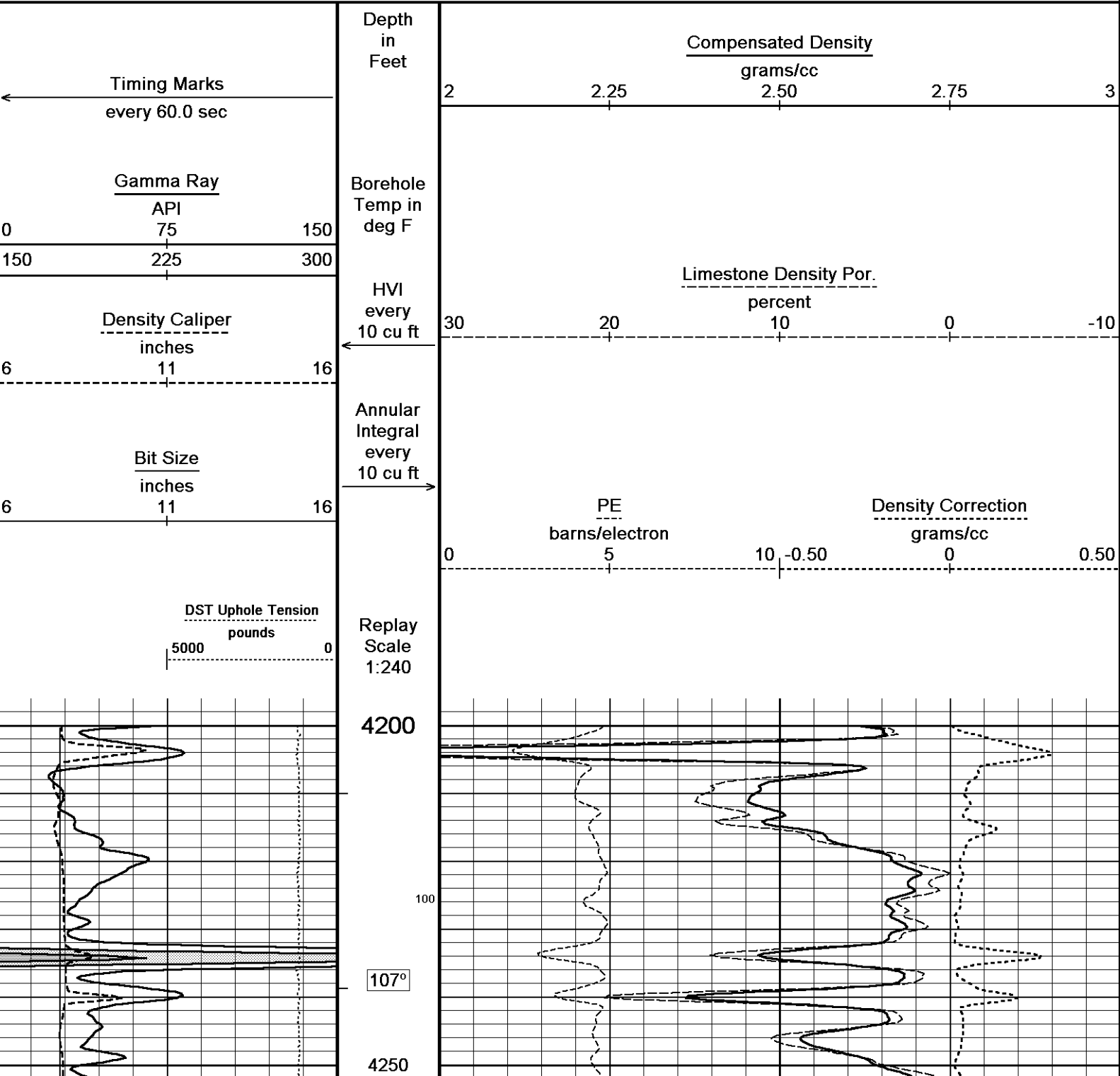


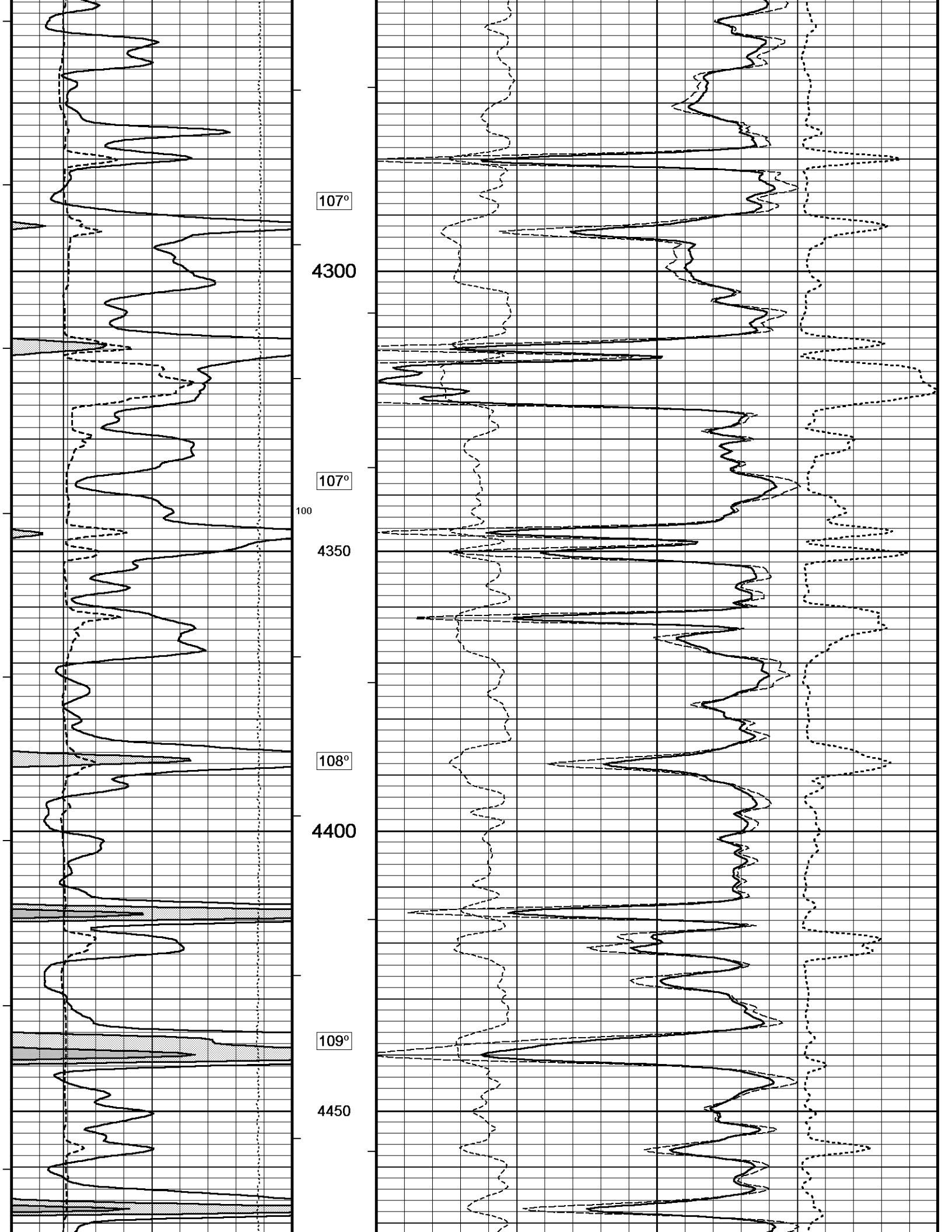
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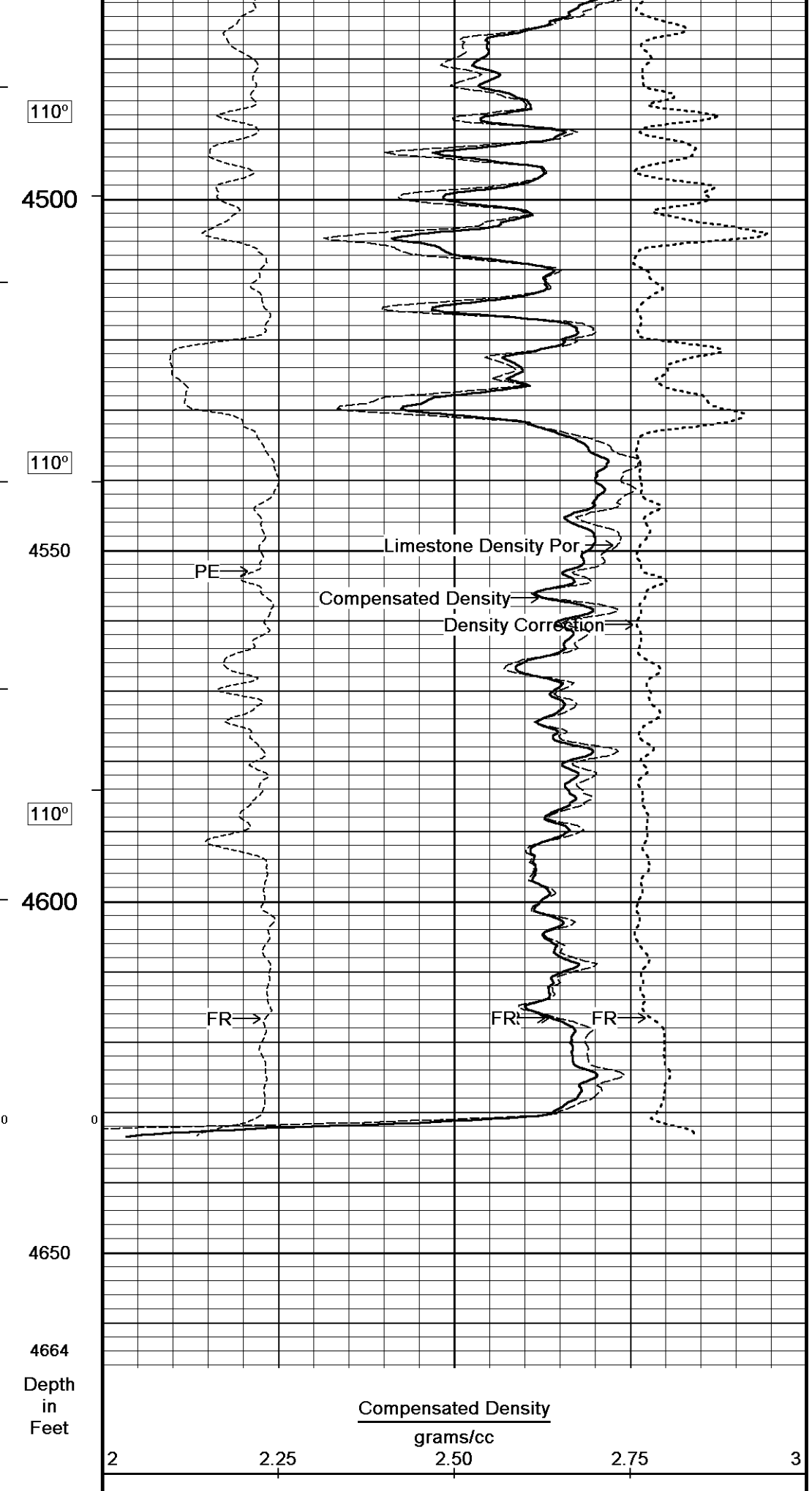
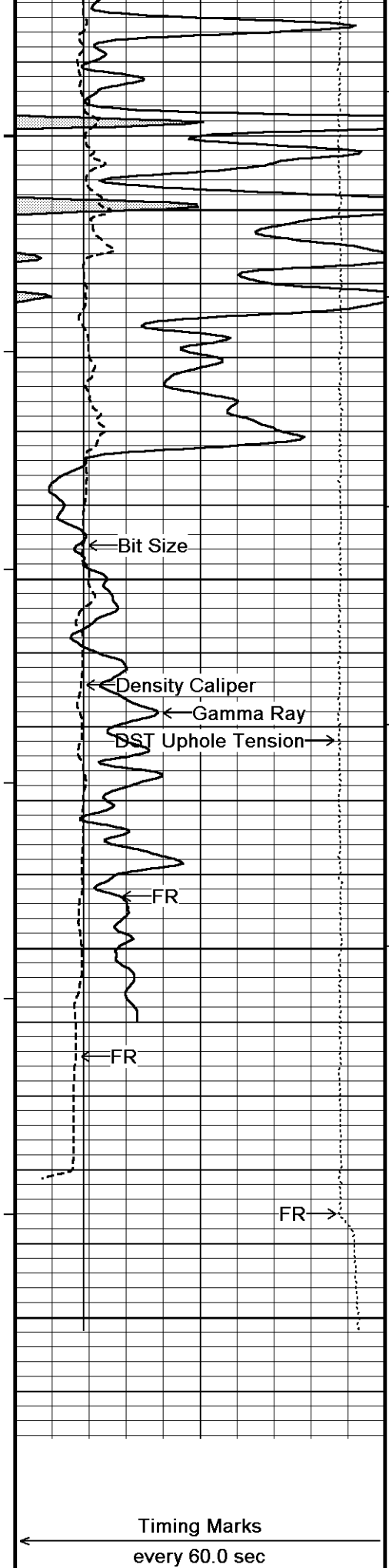
5 INCH BULK DENSITY MAIN

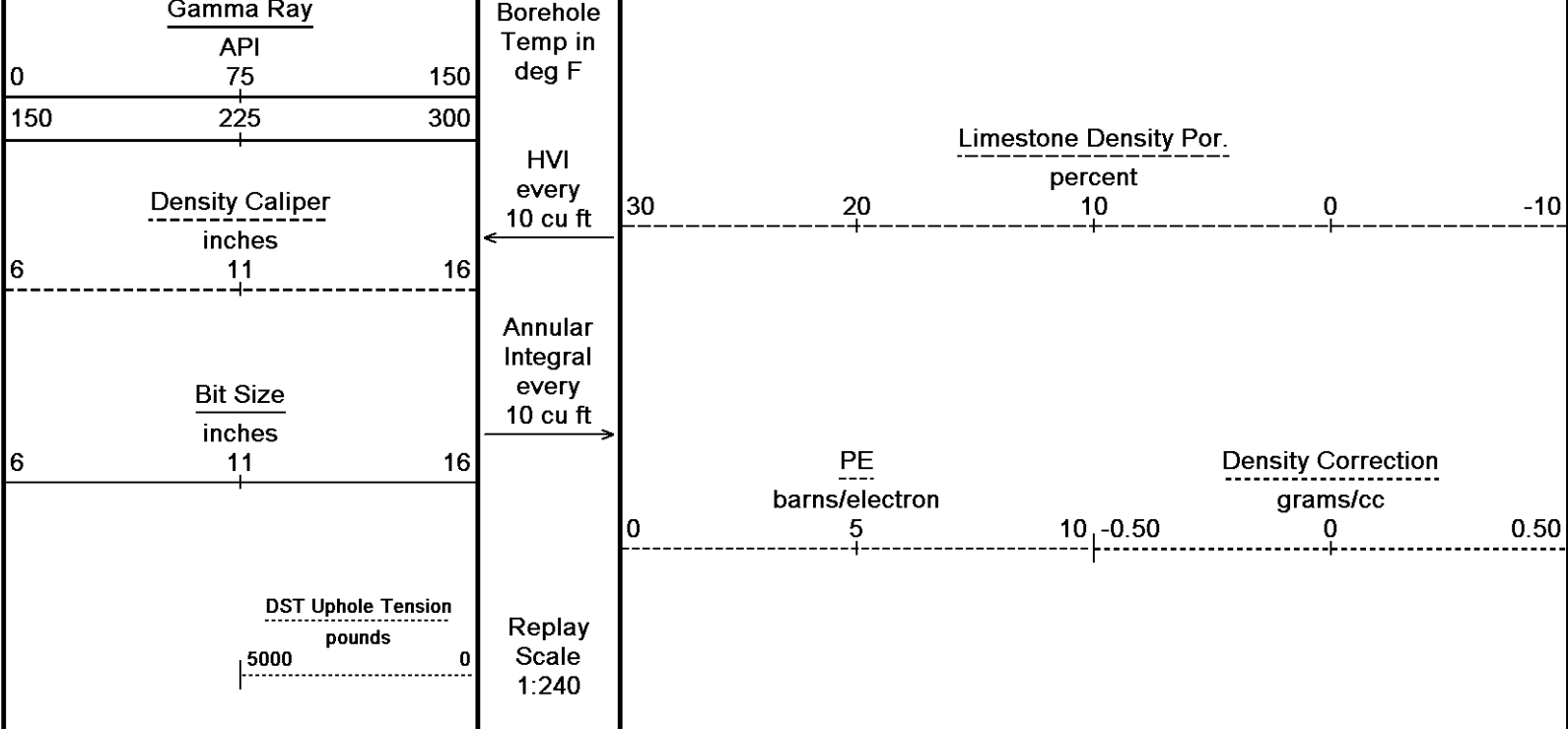
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↑ REPEAT SECTION ↑

BEFORE SURVEY CALIBRATION
 C:\Minimus 13.05.9583\Log\O'Brien Resources LLC Colt 45 FBC 2\O'Brien Resources LLC Colt 45 FBC 2 Main Detail.dta

General Constants All 000 Last Edited on 03-JAN-2014,17:32

General Parameters
 Mud Resistivity 1.030 ohm-metres
 Mud Resistivity Temperature 74.800 degrees F
 Water Level 0.000 feet
 Borehole Fluid 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 None

Rwa Parameters
 Porosity used Crossplot Porosity
 Resistivity used Array Ind. One Res Rt
 RWA Constant A 0.610
 RWA Constant M 2.150
 SW/APOR Tool Source 0.000

Gamma Calibration MCG-D.K 469 Field Calibration on 30-DEC-2013 14:00

	Measured	Calibrated (API)
Background	67	46
Calibrator (Gross)	1131	771
Calibrator (Net)	1064	725

Gamma Constants MCG-D.K 469 Last Edited on 03-JAN-2014,16:09

Gamma Calibrator Number GRC38
 Mud Density 1.13 gm/cc
 Caliper Source for Processing Density Caliper
 Tool Position Eccentred
 Concentration of KCl kppm

K Mud Type Chloride
 K Mud Concentration 0.00 %

High Resolution Temperature Calibration MCG-D.K 469 Field Calibration on 30-DEC-2013,14:00

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

High Resolution Temperature Constants MCG-D.K 469 Last Edited on 30-DEC-2013,14:00

Pre-filter Length	11
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Photo Density Calibration MPD-C.A 216 Base Calibration on 30-DEC-2013 16:39
Field Check on 30-DEC-2013 16:52

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Base Calibration				
Reference 1	60912	31239	59556	30836
Reference 2	25458	2782	24941	2541
Field Check at Base				
	1112.0	1316.2		
Field Check				
	1120.1	1313.7		
PE Calibration				
Base Calibration				
	WS	WH	Ratio	Calibrated Ratio
Background	202	993		
Reference 1	25023	60709	0.416	0.371
Reference 2	7244	25325	0.289	0.272
Field Check at Base				
	202.1	992.6		
Field Check				
	201.9	996.8		

Density Constants MPD-C.A 216 Last Edited on 03-JAN-2014,16:08

Density Source Id	18235B	
Nylon Calibrator Number	DNCE528	
Aluminium Calibrator Number	DACD528	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.13	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 (m)	
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	0.00	

Caliper Calibration MPD-C.A 216 Base Calibration on 30-DEC-2013 16:06
Field Calibration on 30-DEC-2013 16:08

Base Calibration	Measured	Calibrator Size (in)
Reading No		
1	16063	3.99
2	26074	5.98
3	36080	7.97

4	45856	9.86
5	57120	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.96	7.97

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Log\O'Brien Resources LLC Colt 45 FBC 2\O'Brien Resources LLC Colt 45 FBC 2 Main Detail.dta

3/8" Triple Cone Cable Head (MCB C A)
 MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

Compact Comms Gamma
 MCG-D.K 469 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
 MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

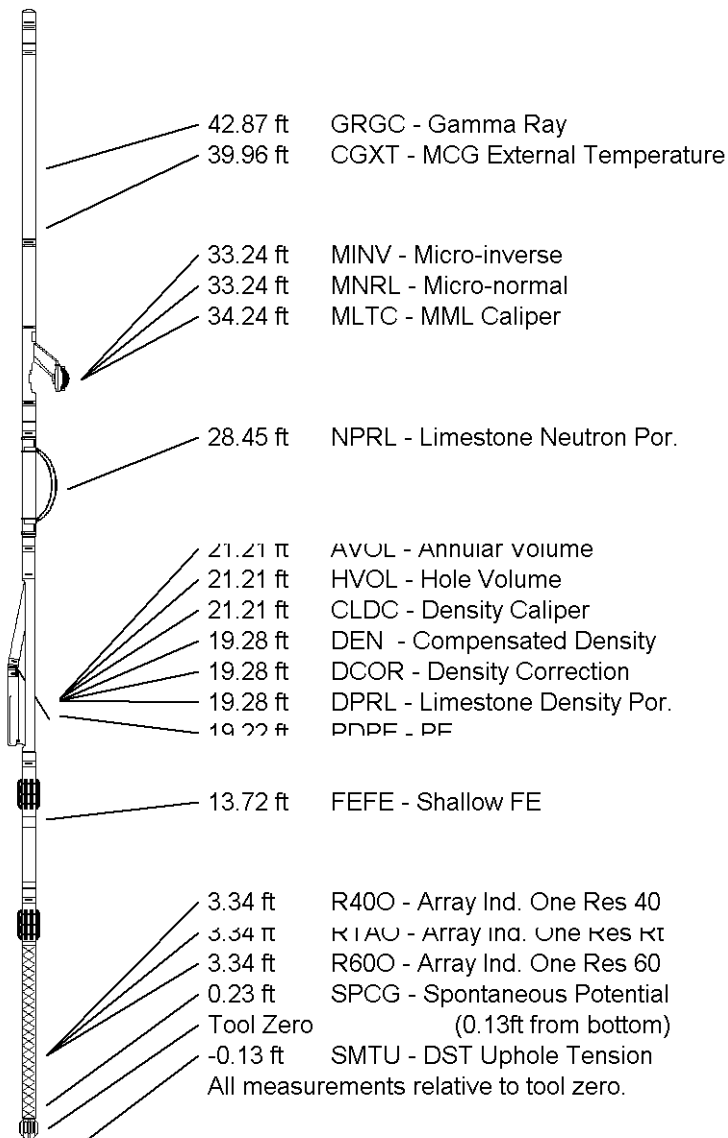
Compact Neutron
 MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
 MPD-C.A 216 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focussed Electric
 MFE-B.J 353 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
 MAI-A.A 167 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 49.73 ft Weight: 399.0 lb



COMPANY O'BRIEN RESOURCES LLC
WELL COLT 45 FBC 2
FIELD WILDCAT
PROVINCE/COUNTY LANE
COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2853.00	feet	First Reading	4614.79	feet
Elevation Drill Floor	2851.00	feet	Depth Driller	4635.00	feet
Elevation Ground Level	2848.00	feet	Depth Logger	4636.00	feet



**COMPACT PHOTO DENSITY
 COMPENSATED NEUTRON**

