

**Weatherford****COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG**

COMPANY

SHAKESPEARE OIL COMPANY

WELL

JANZEN #2-26

FIELD

WILDCAT

PROVINCE/COUNTY

SCOTT

COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

2305' FSL & 1900' FWL

SW/4

SEC	TWP	RGE	Other Services
26	16S	34W	MA/ MFE

MSS

API Number 15-171-20929

Permit Number

Permanent Datum GL, Elevation 3115 feet

Log Measured From KB

Elevations:	feet
KB	3125.00
DF	3124.00
GL	3115.00

Drilling Measured From KB

Date 14-MAR-2013

Run Number ONE

Service Order 3539874

Depth Driller 4897.00 feet

Depth Logger 4896.00 feet

First Reading 4864.00 feet

Last Reading 3850.00 feet

Casing Driller 264.00 feet

Casing Logger 263.00 inches

Bit Size 7.875

Hole Fluid Type CHEMICAL lb/USg

Density / Viscosity 9.00 lb/USg 57.00 CP

PH / Fluid Loss 10.50 10.50

Sample Source MUDPIT

Rm @ Measured Temp 0.51 @ 86.0 ohm-m

Rmf @ Measured Temp 0.41 @ 86.0 ohm-m

Rmc @ Measured Temp 0.61 @ 86.0 ohm-m

Source Rmf / Rmc CALC CALC

Rm @ BHT 0.41 @107.0 ohm-m

Time Since Circulation 5 HOURS

Max Recorded Temp 107.00 deg F

Equipment / Base 13057 LIB

Recorded By ADAM SILL

Witnessed By TIM PRIEST

LOB # LB13-067

BOREHOLE RECORD

Last Edited: 14-MAR-2013 13:20

Bit Size
inches

7.875

Depth From
feet

264.00

Depth To
feet

4897.00

CASING RECORD

Type

Size
inches

8.625

Depth From
feet

0.00

Shoe Depth
feet

264.00

Weight
pounds/ft

24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.04.8492.

- MCG, MML, MDN, MPD, MFE, MSS, MAI RAN IN COMBINATION.

- HARDWARE: DUAL BOWSPRING USED ON MDN.

0.5 INCH STANDOFF USED ON MFE.

TWO 0.5 INCH STANDOFFS USED ON MSS.

0.5 INCH STANDOFF USED ON MAI.

- 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 CASING: 2376 CU. FT.

- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3850 FEET: 224 CU. FT.

- SERVICE ORDER # 3539874.

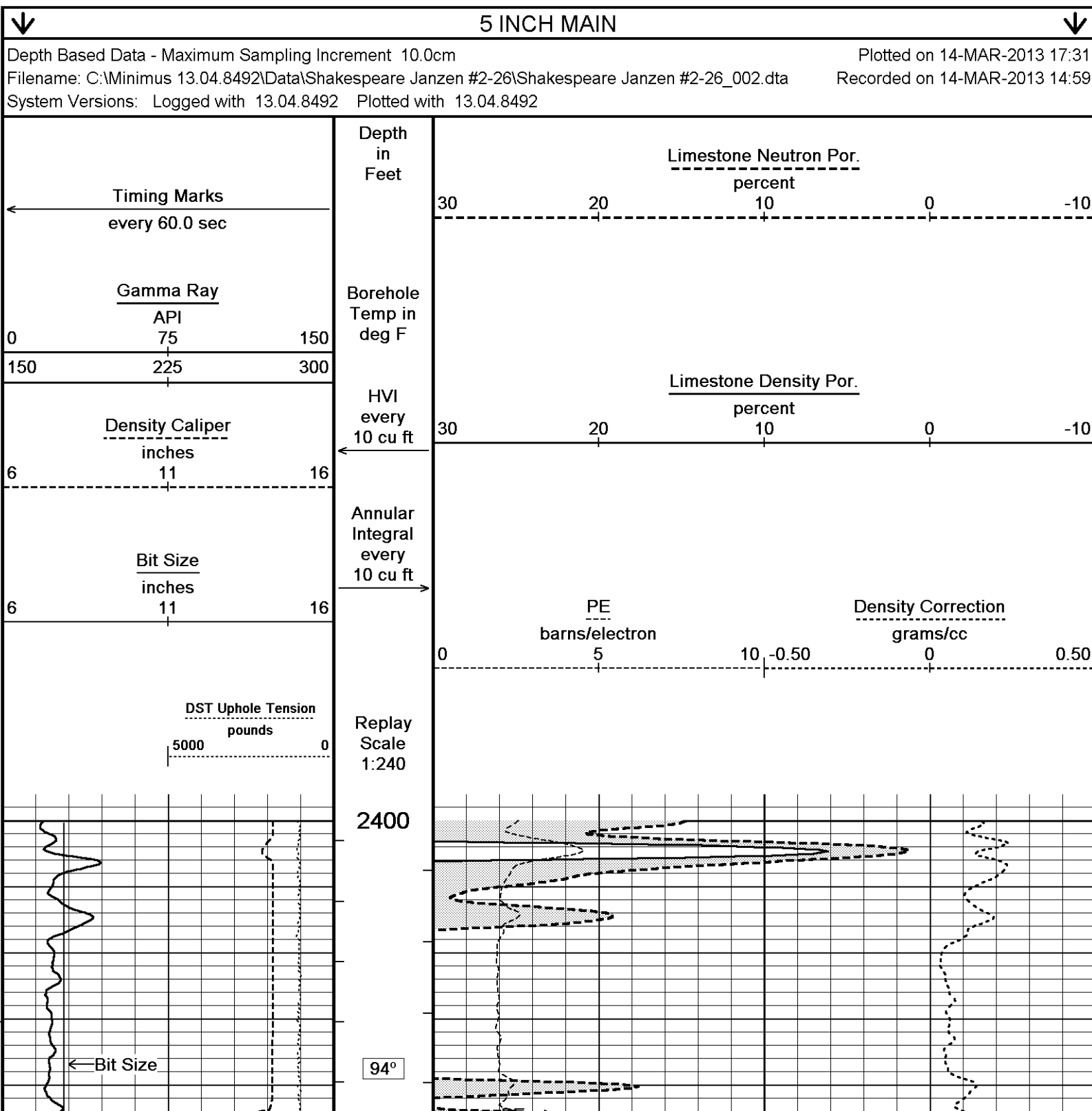
- RIG: H-D #2.

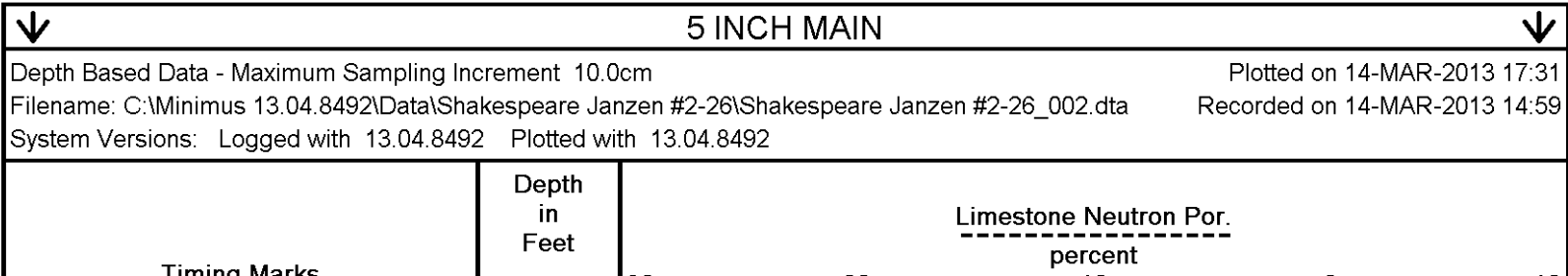
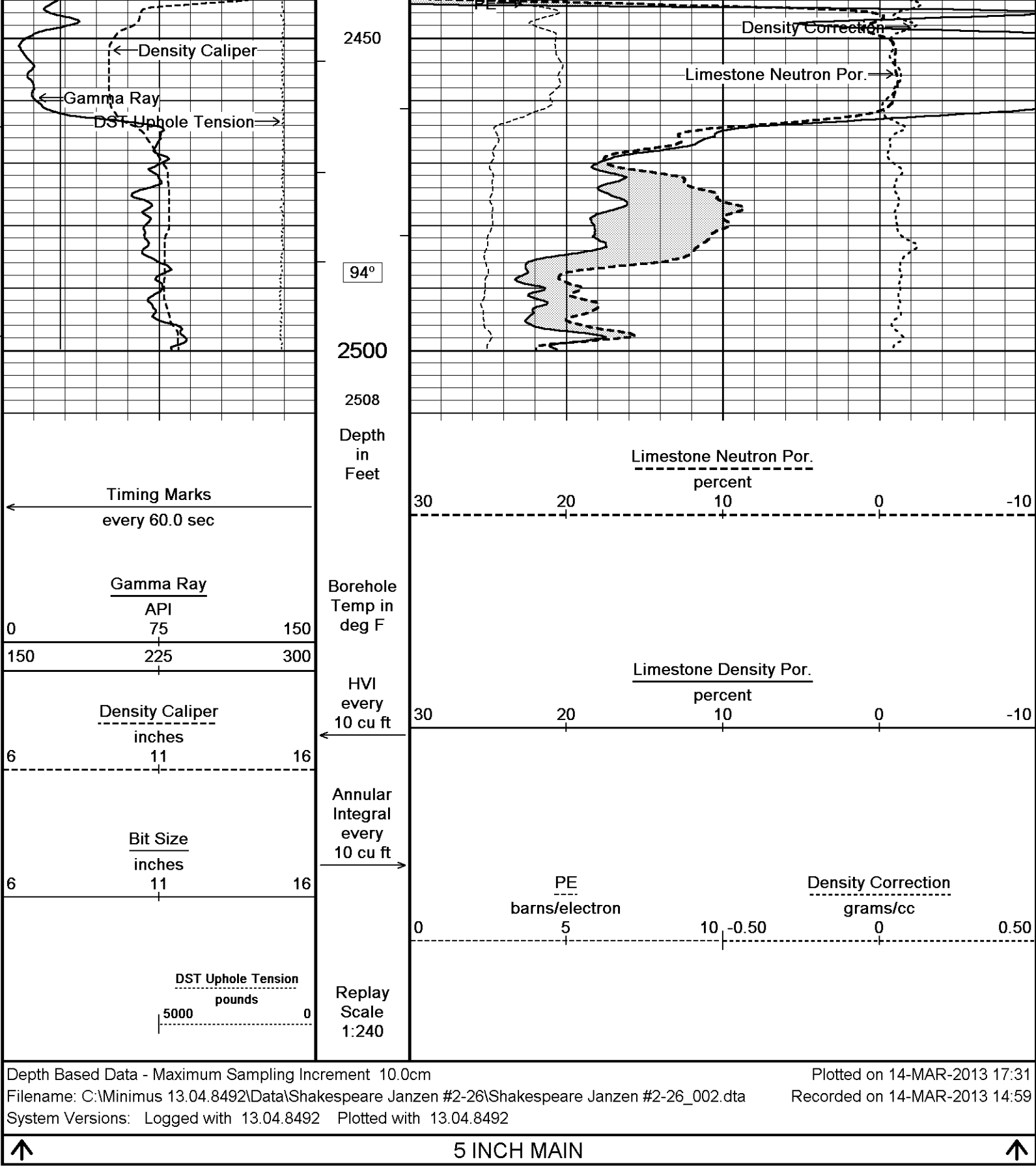
- ENGINEER: A. SILL.

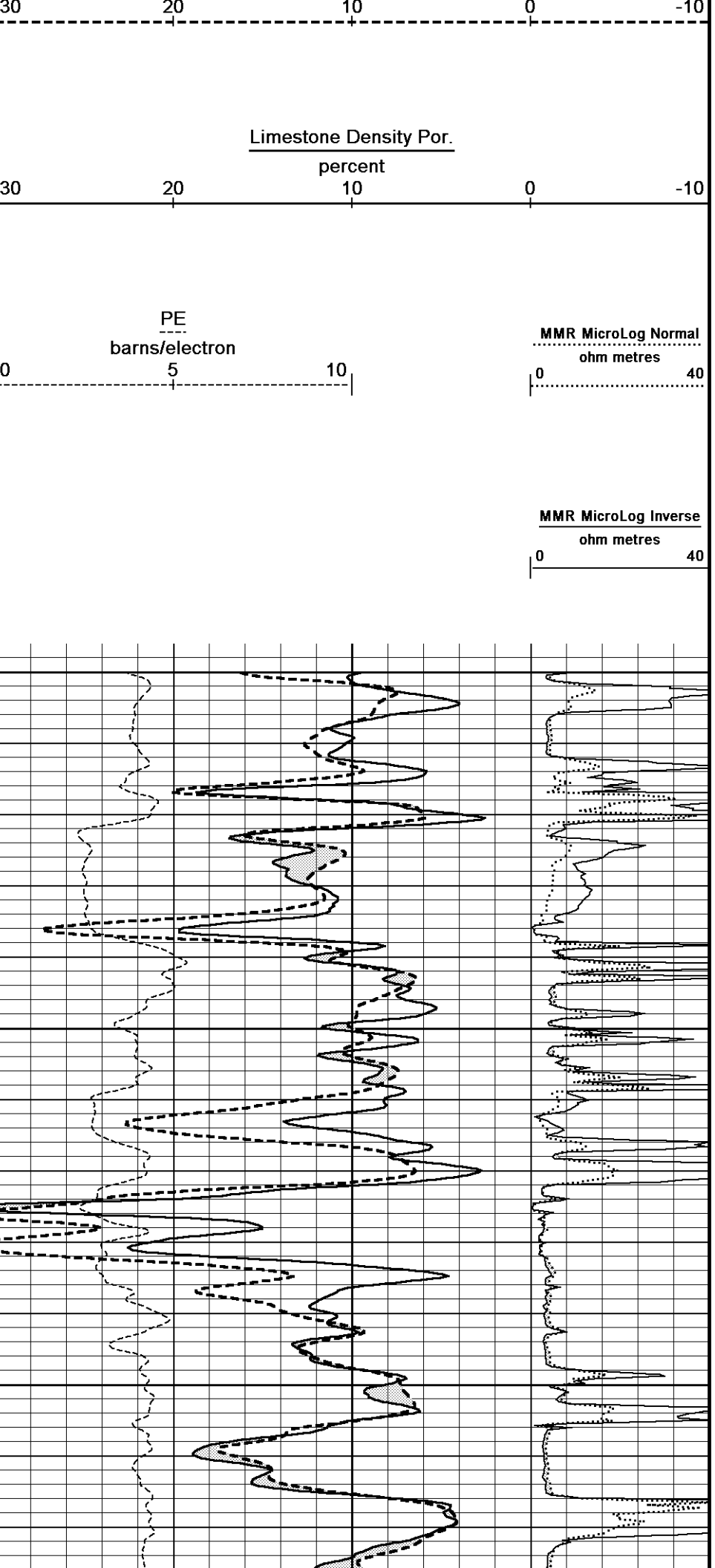
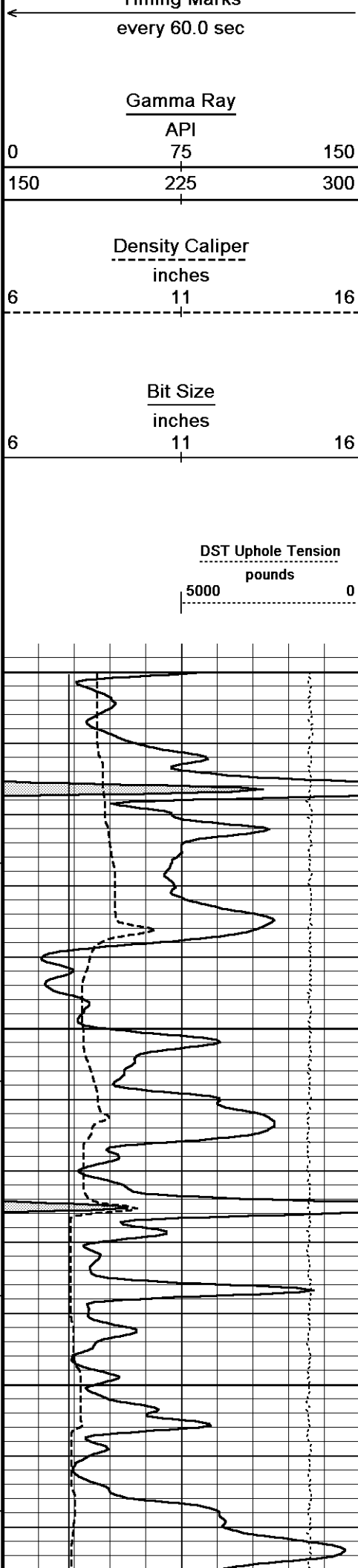
- OPERATOR(S): N. ADAME.

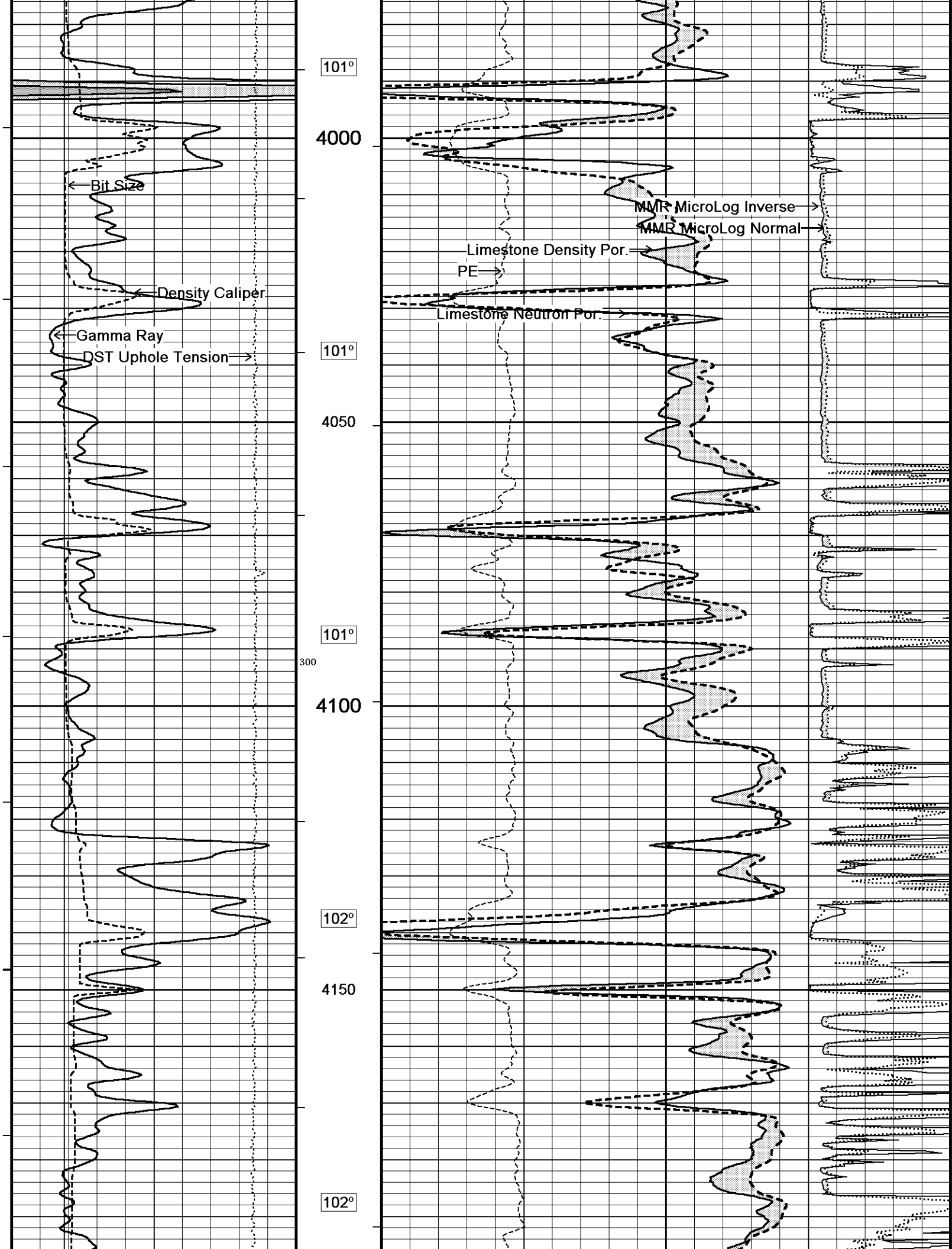
**** SOFTWARE ISSUE CHANGED FLUID LOSS TO MATCH PH. FLUID LOSS SHOULD BE 7.6 ML/30MIN. ****

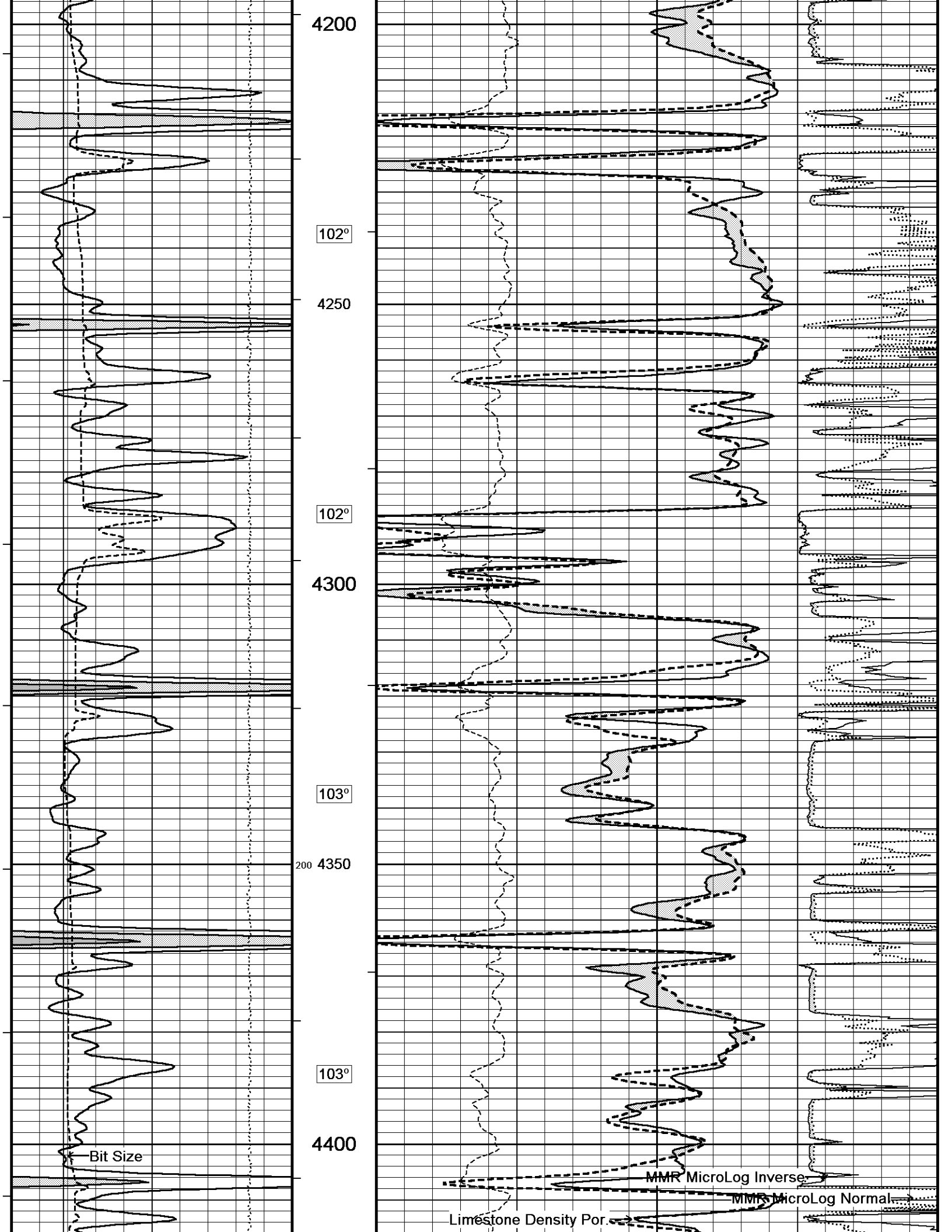
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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.

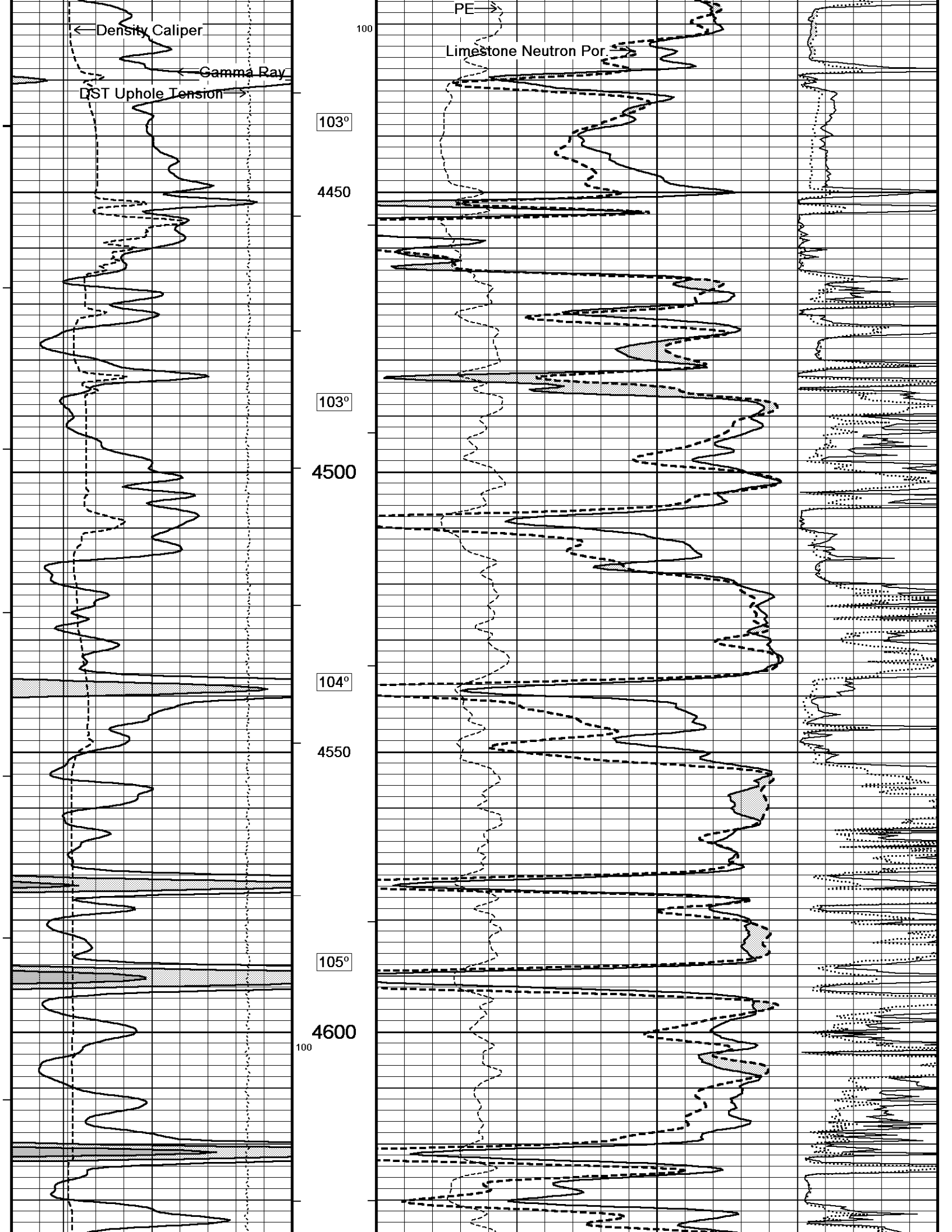


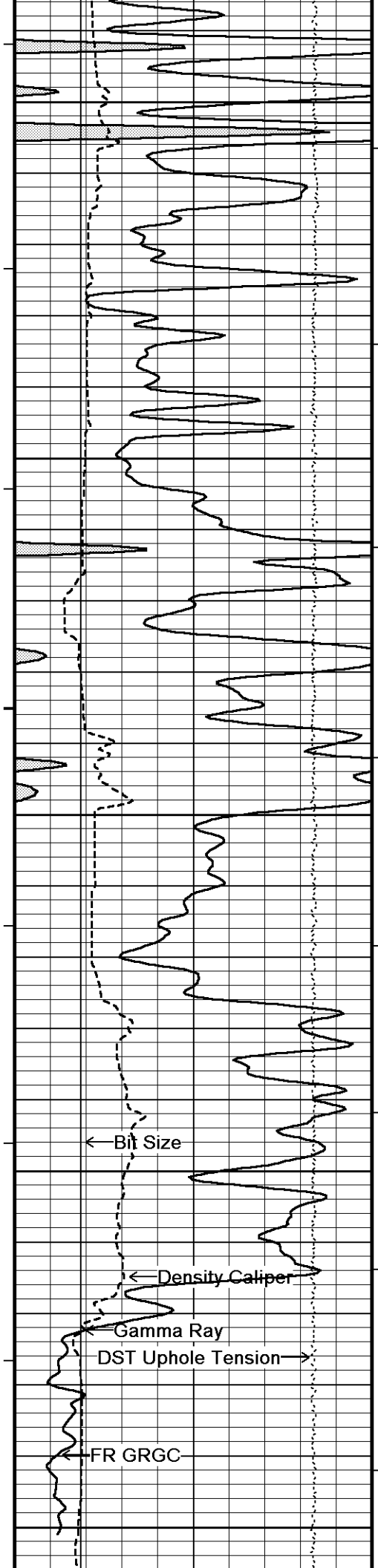












106°

4650

107°

4700

107°

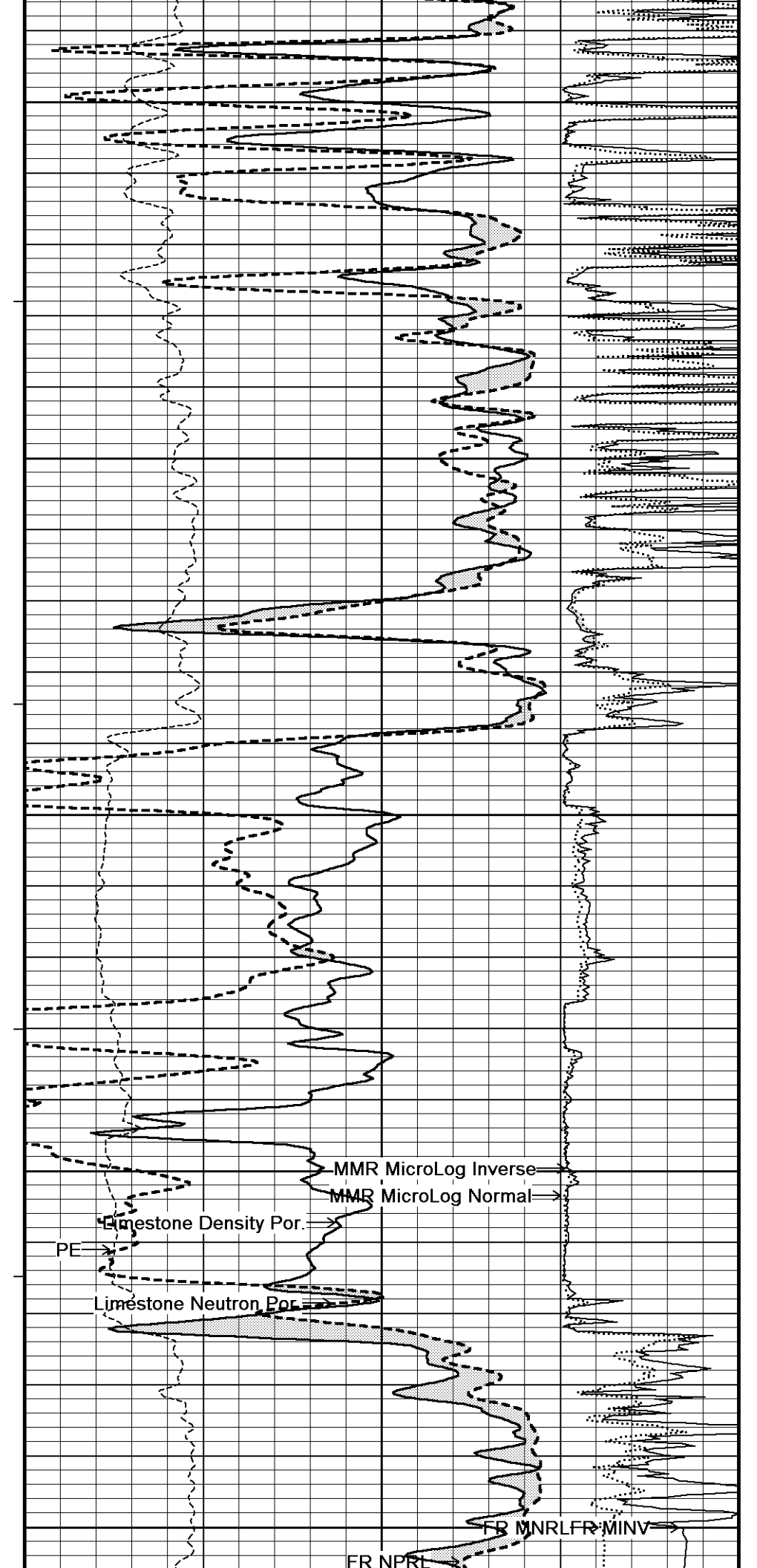
4750

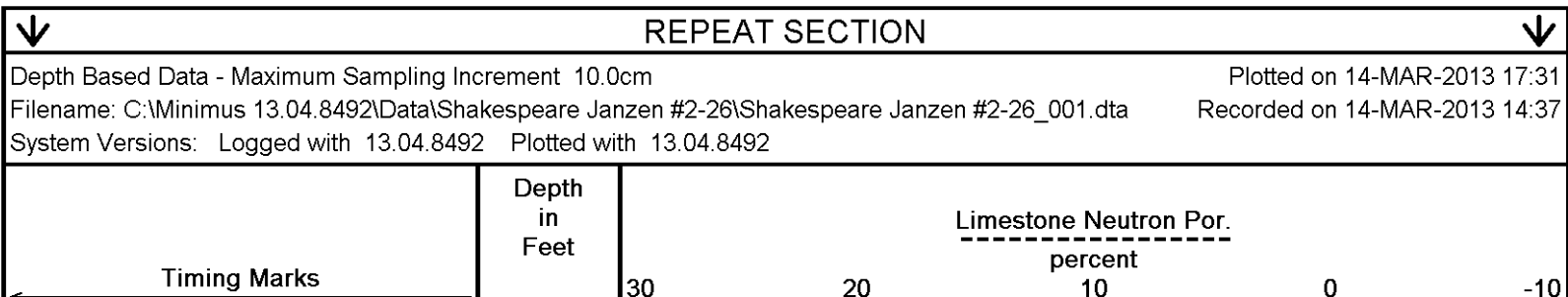
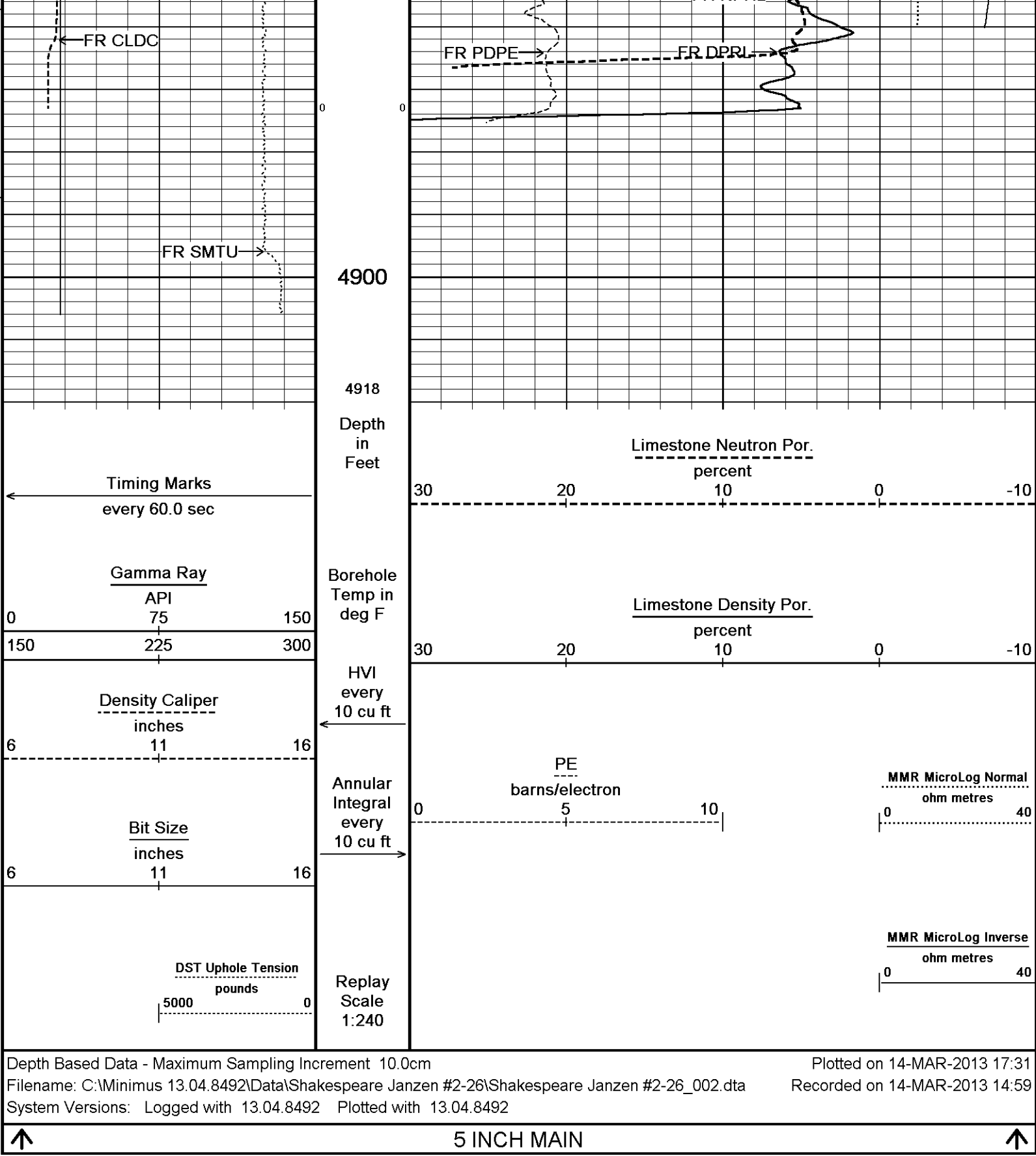
107°

4800

107°

4850





every 60.0 sec

Gamma Ray

API

75

225

300

Borehole
Temp in
deg F

Limestone Density Por.

percent

30

20

10

0

-10

HVI
every
10 cu ft

Density Caliper

inches

11

16

Annular
Integral
every
10 cu ft

PE

barns/electron

0

5

10

MMR MicroLog Normal
ohm metres

0

40

Bit Size

inches

11

16

MMR MicroLog Inverse
ohm metres

0

40

DST Uphole Tension

pounds

5000

0

Replay
Scale
1:240

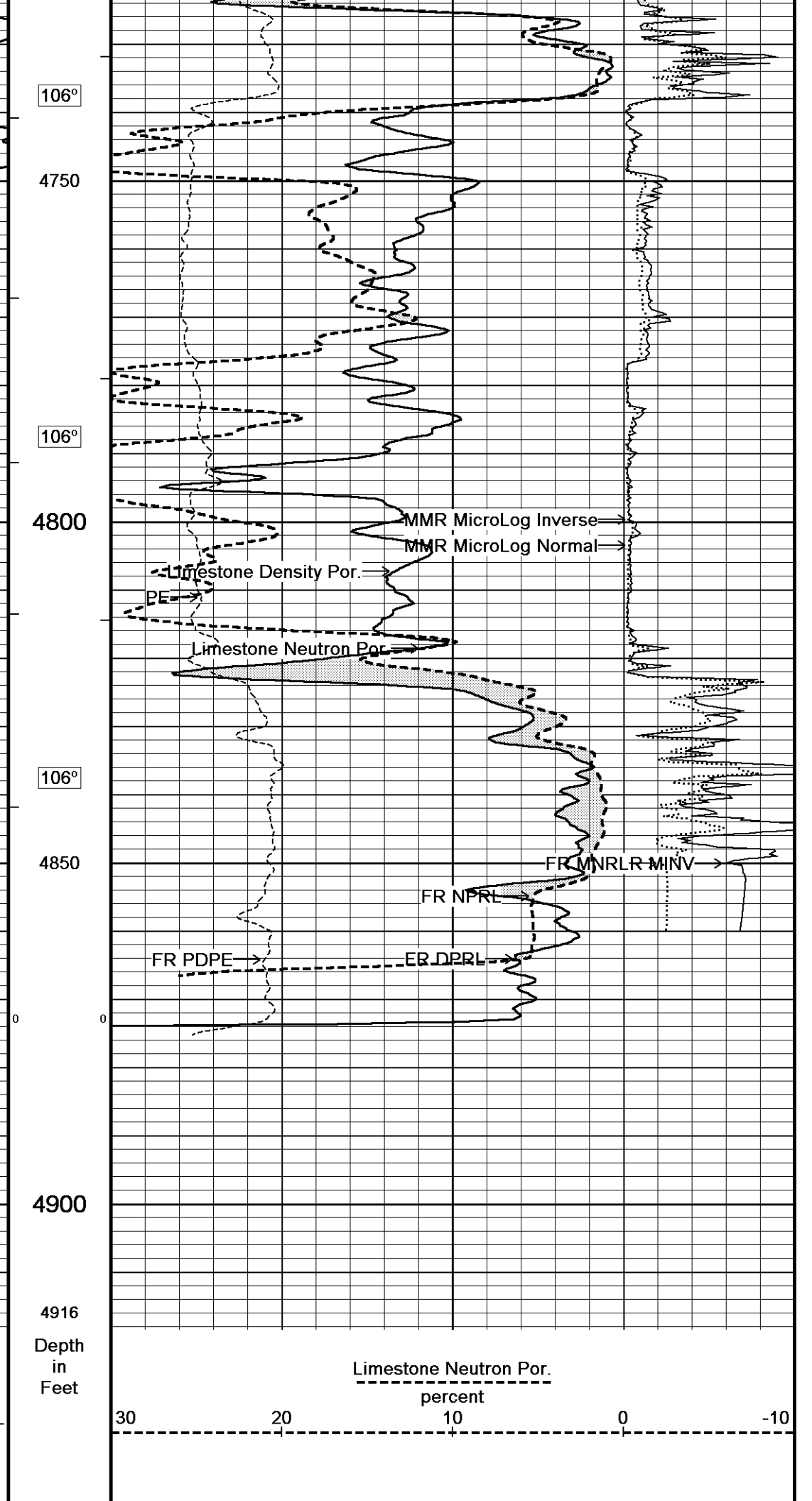
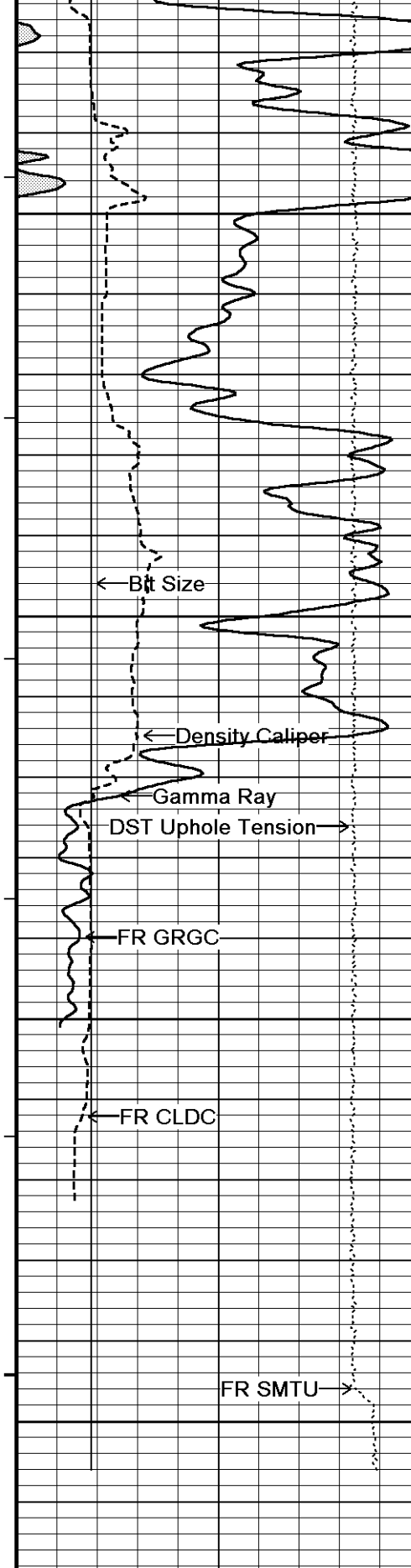
100 4600

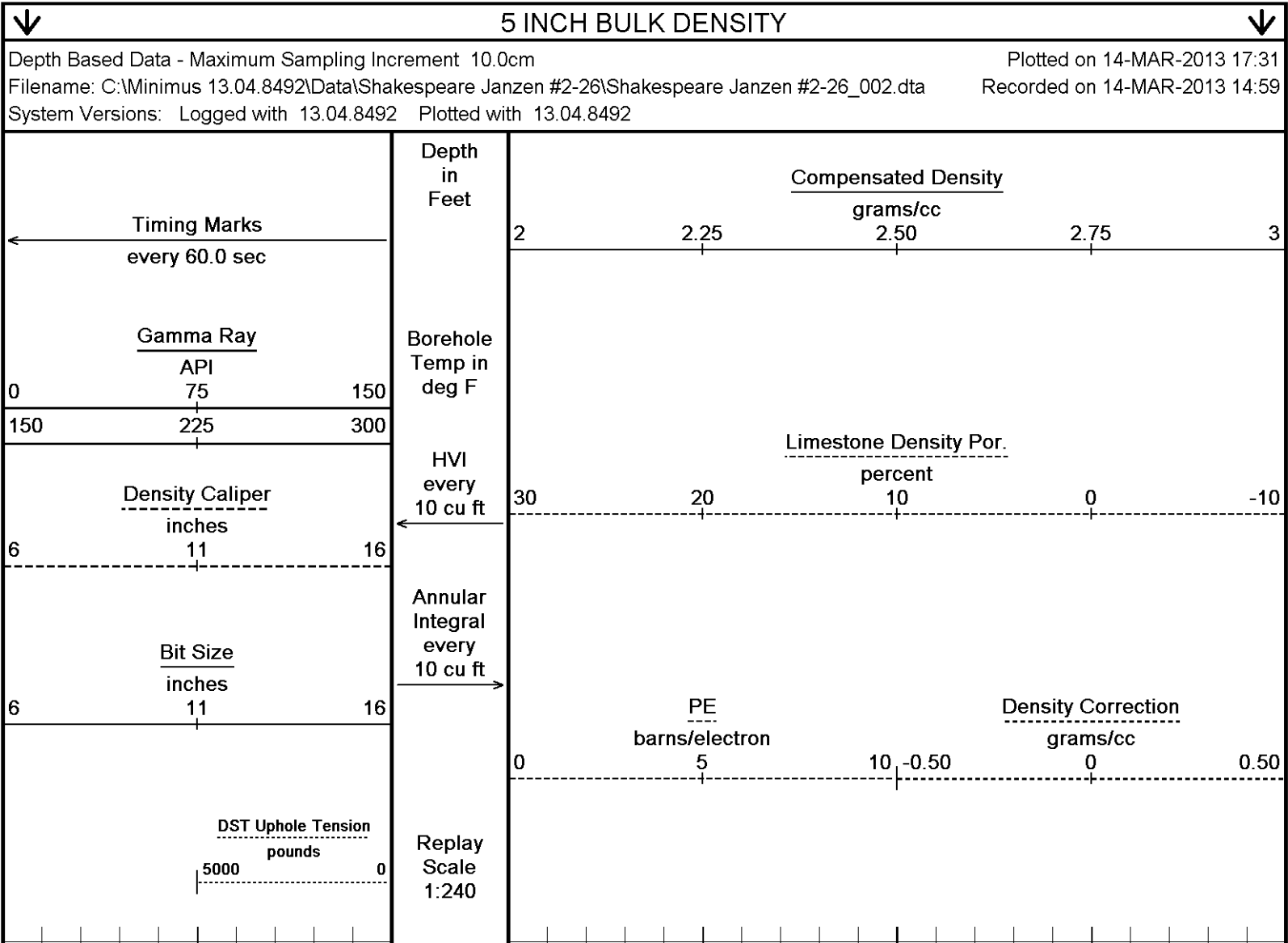
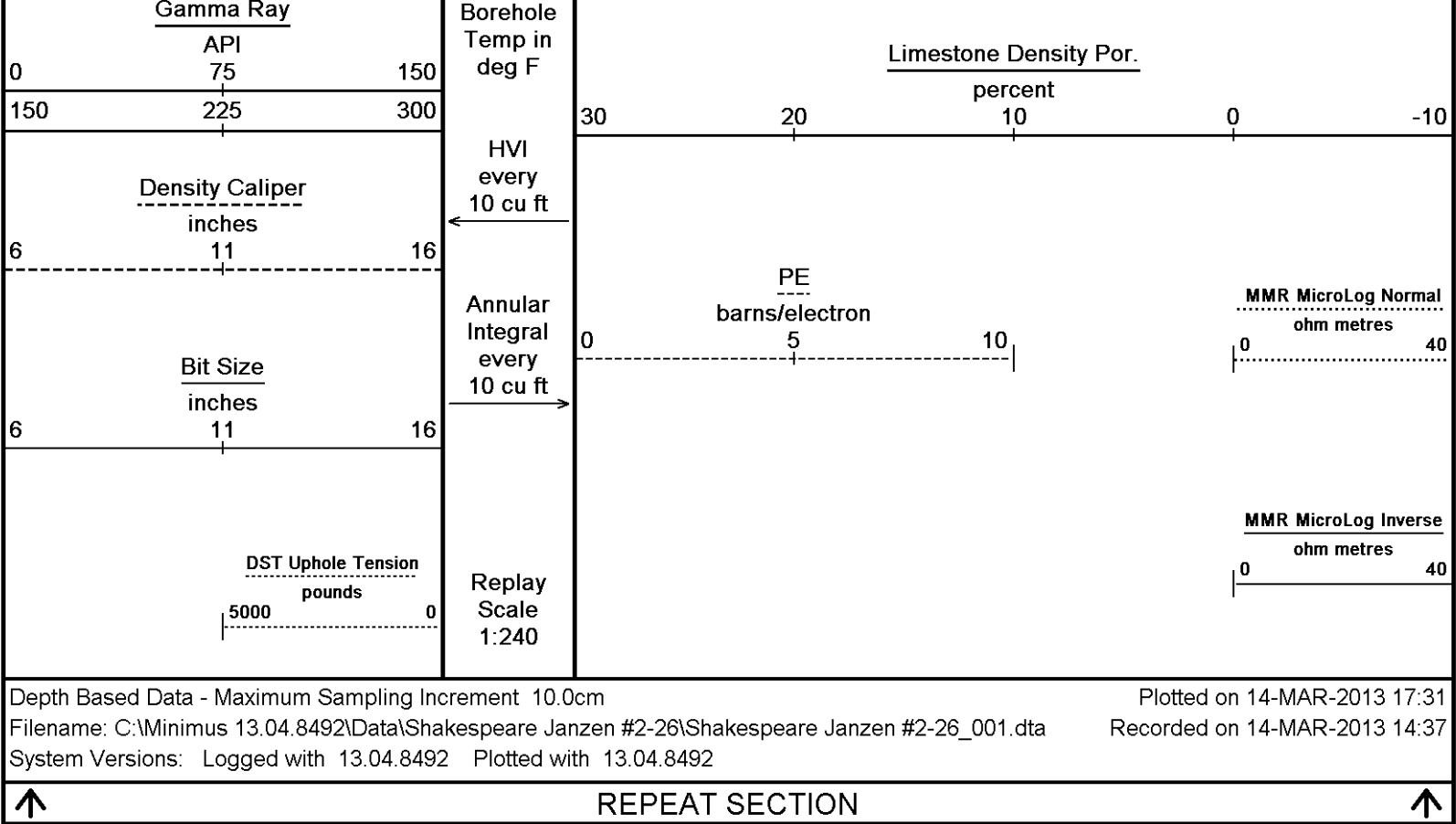
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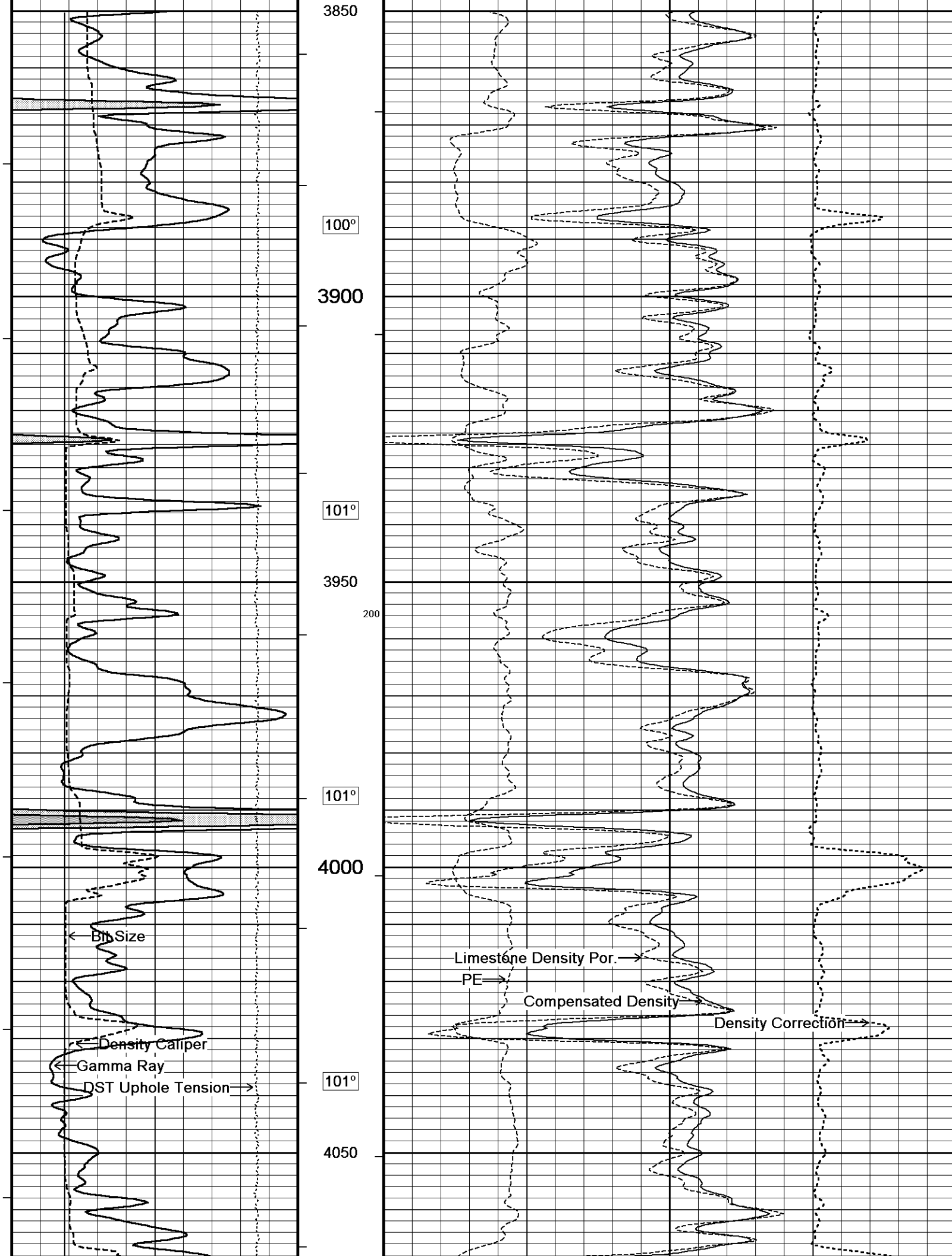
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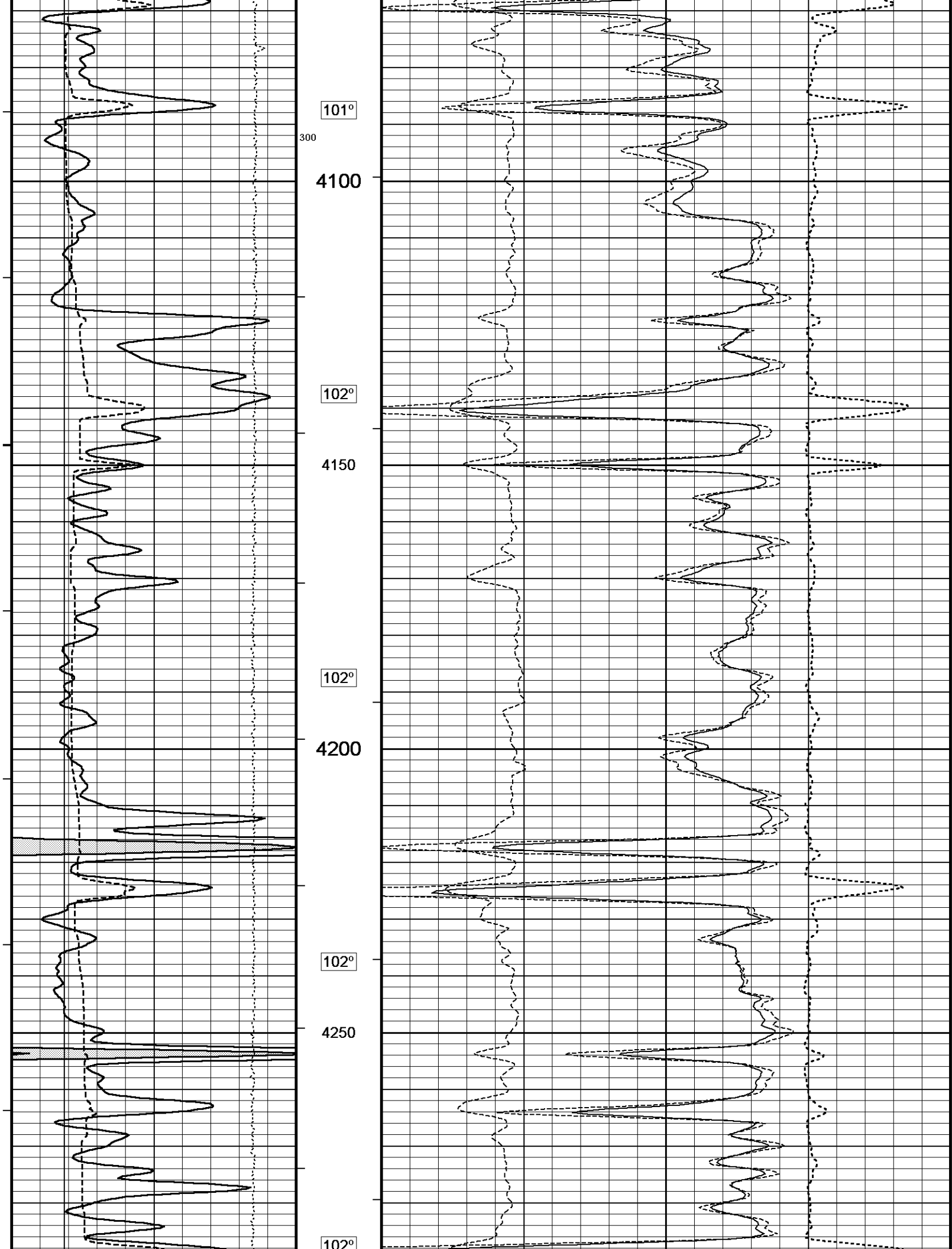
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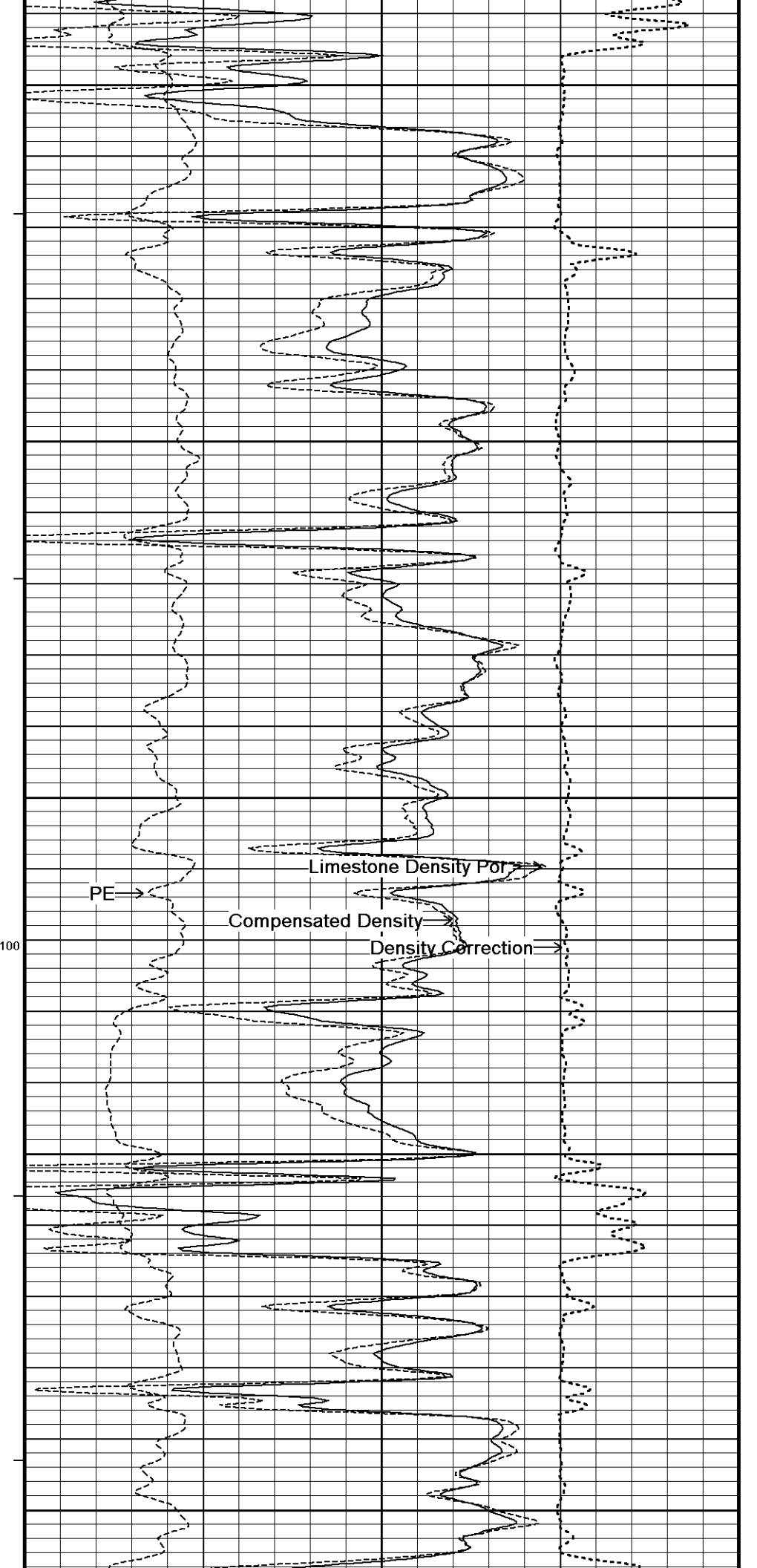
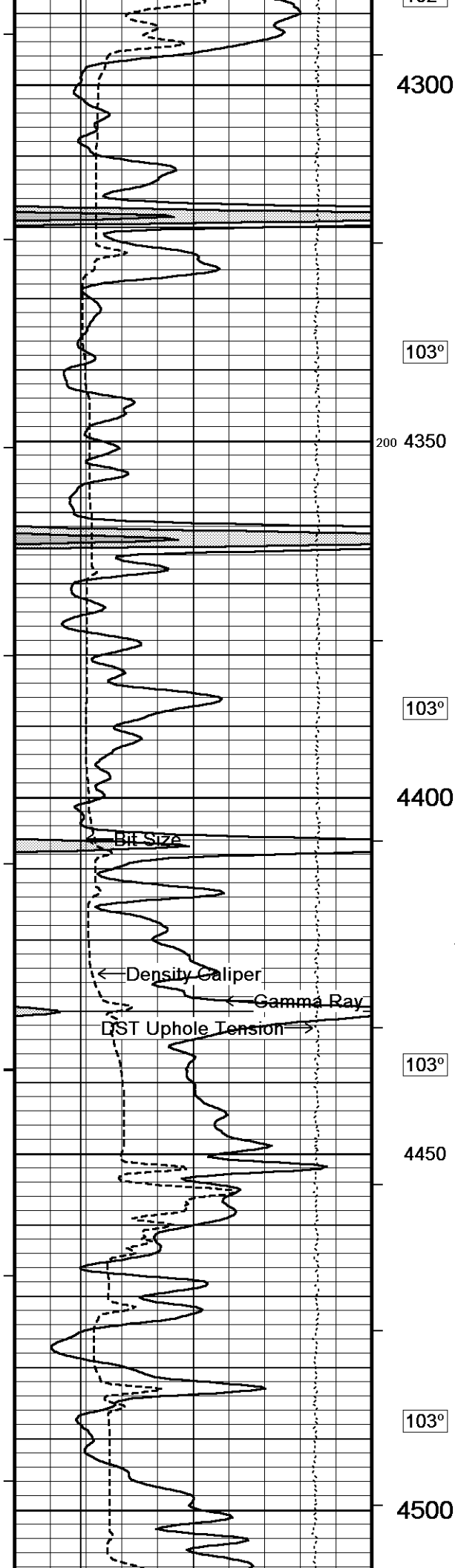
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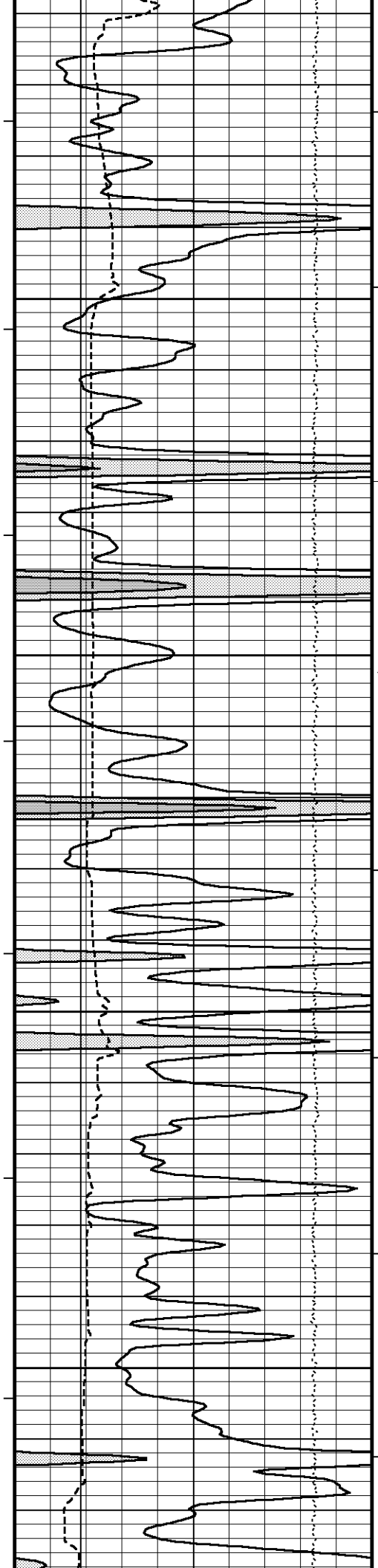












104°

4550

105°

4600

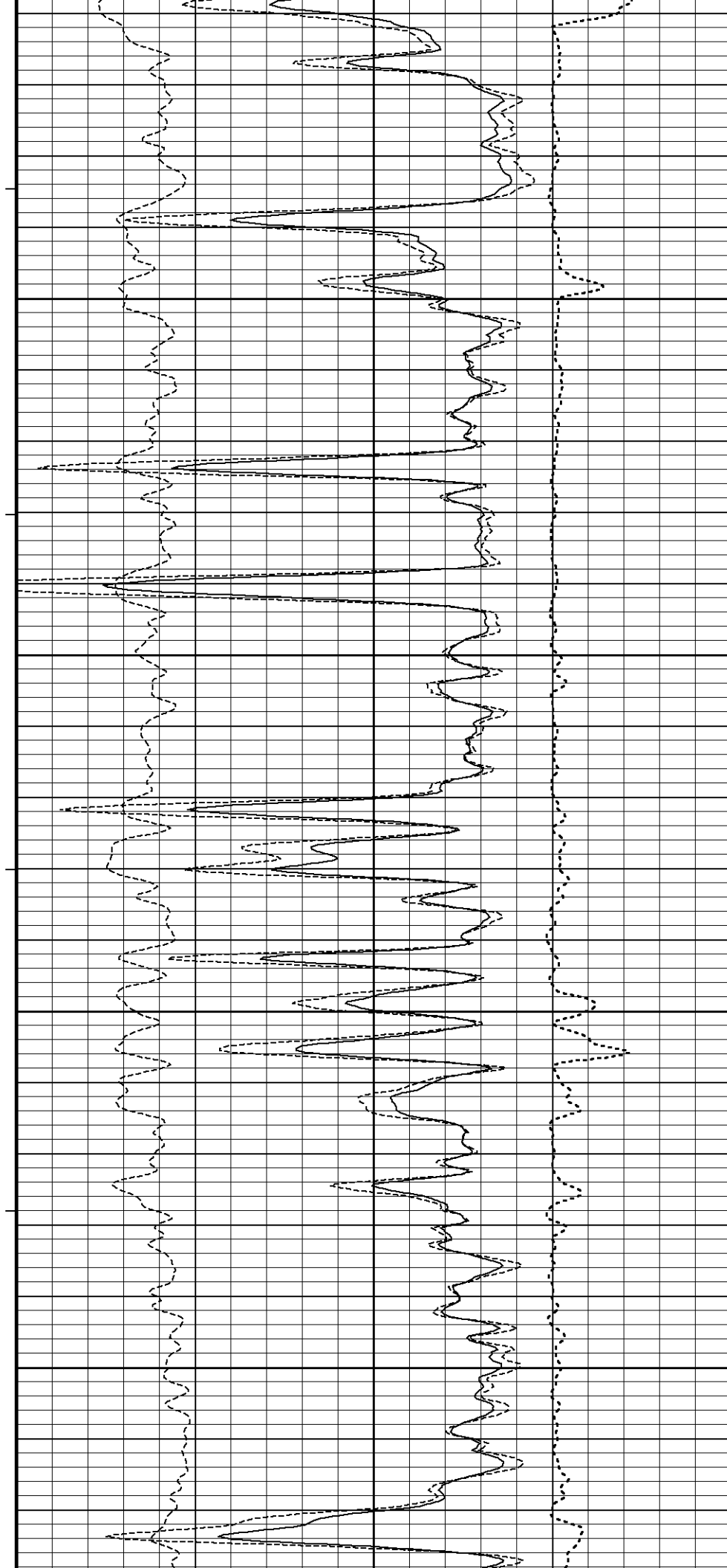
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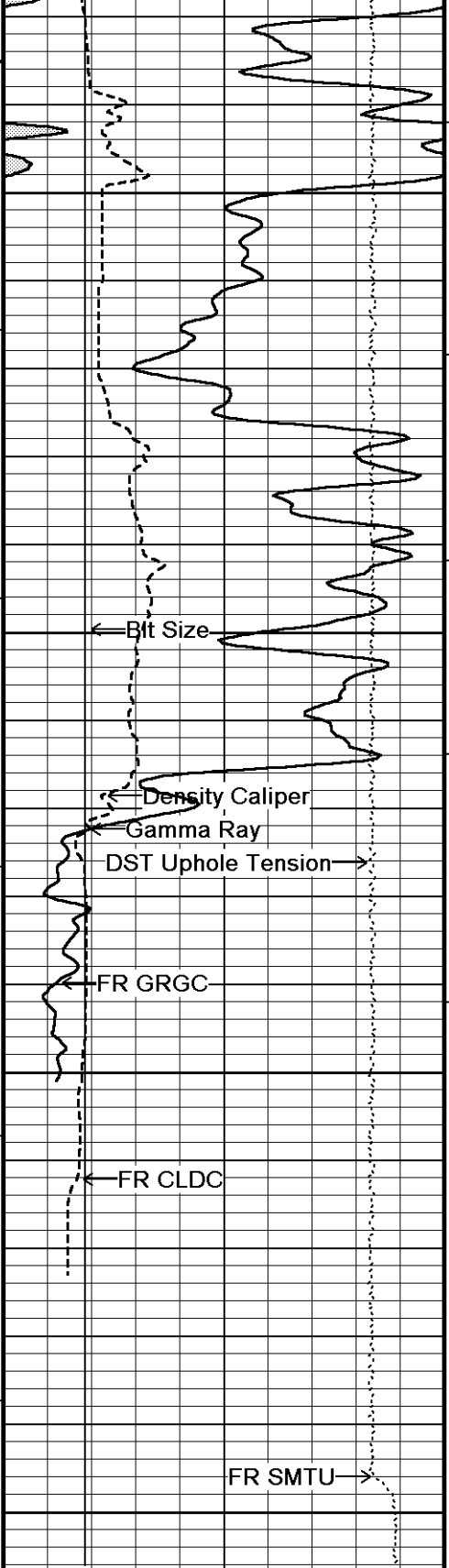
106°

4650

107°

4700





107°

4750

107°

4800

107°

4850

0

4900

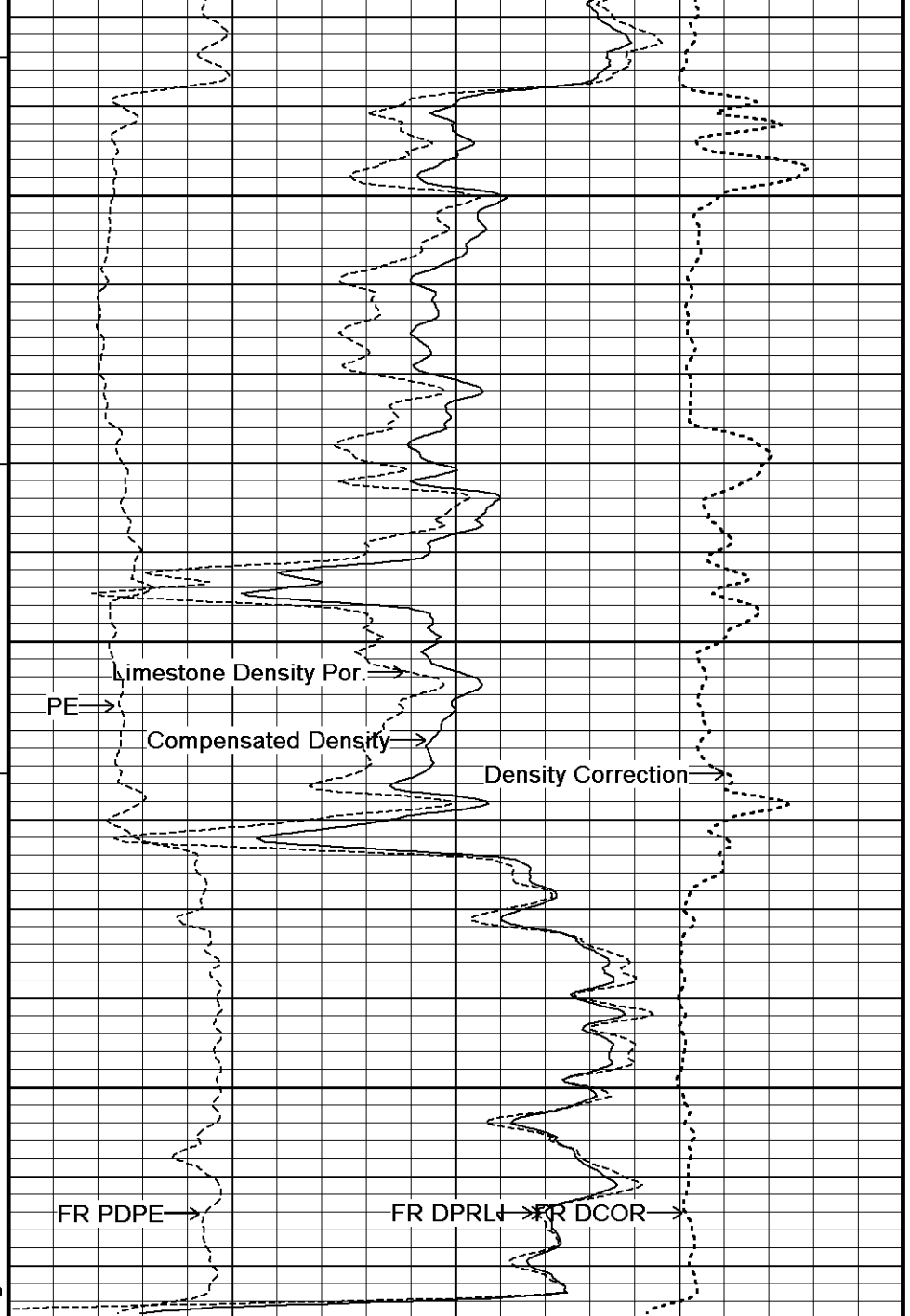
4918

Depth
in
Feet

← Timing Marks
every 60.0 sec

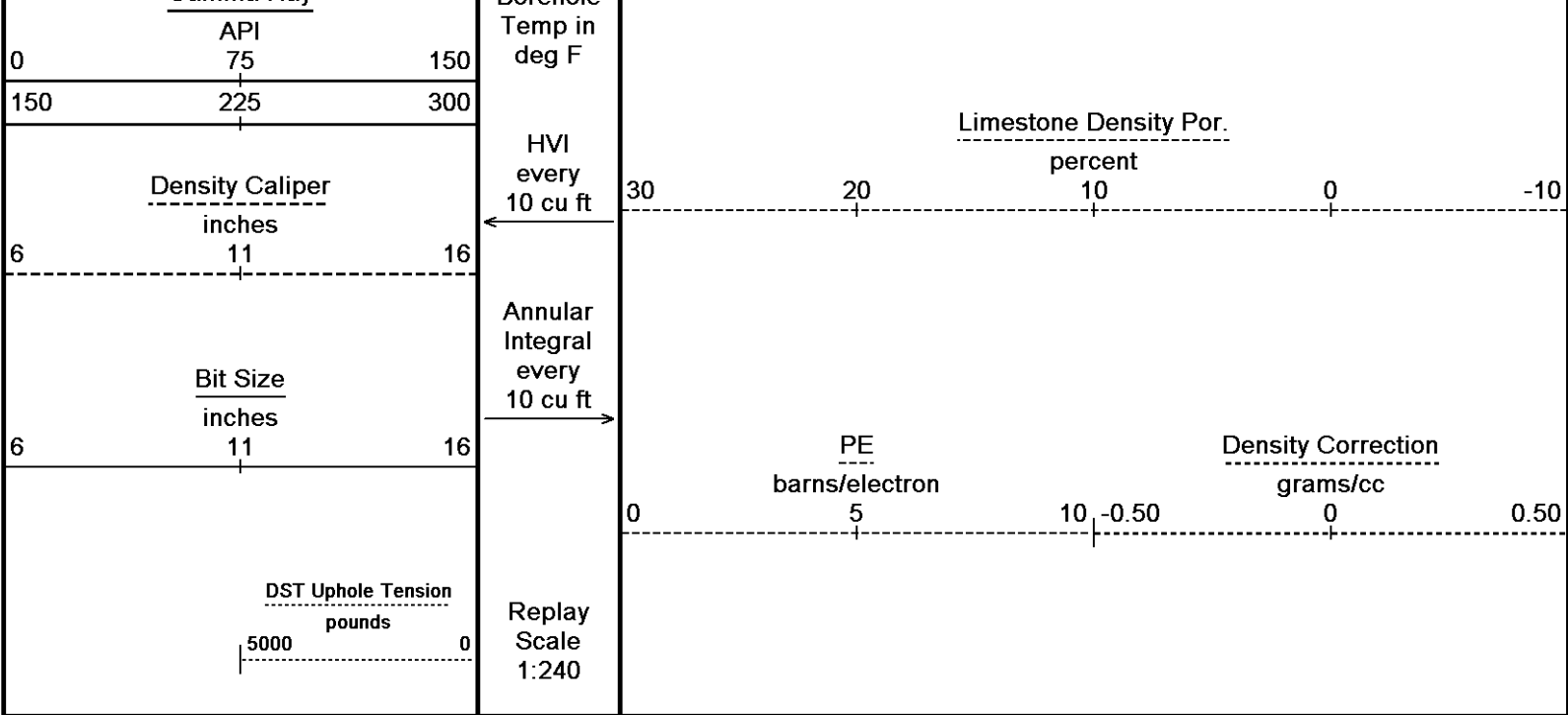
Gamma Ray

Borehole



Compensated Density
grams/cc

2 2.25 2.50 2.75 3

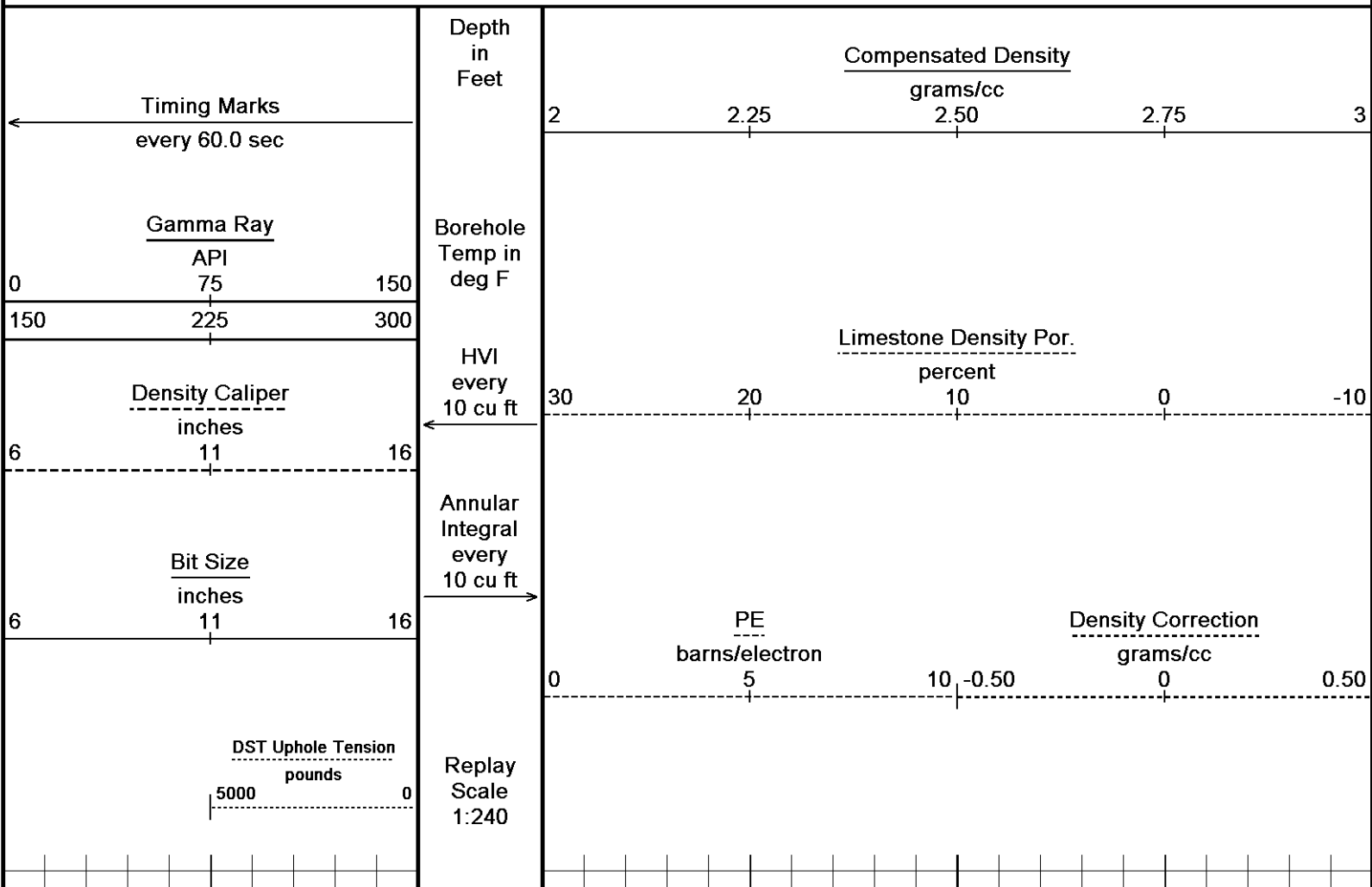


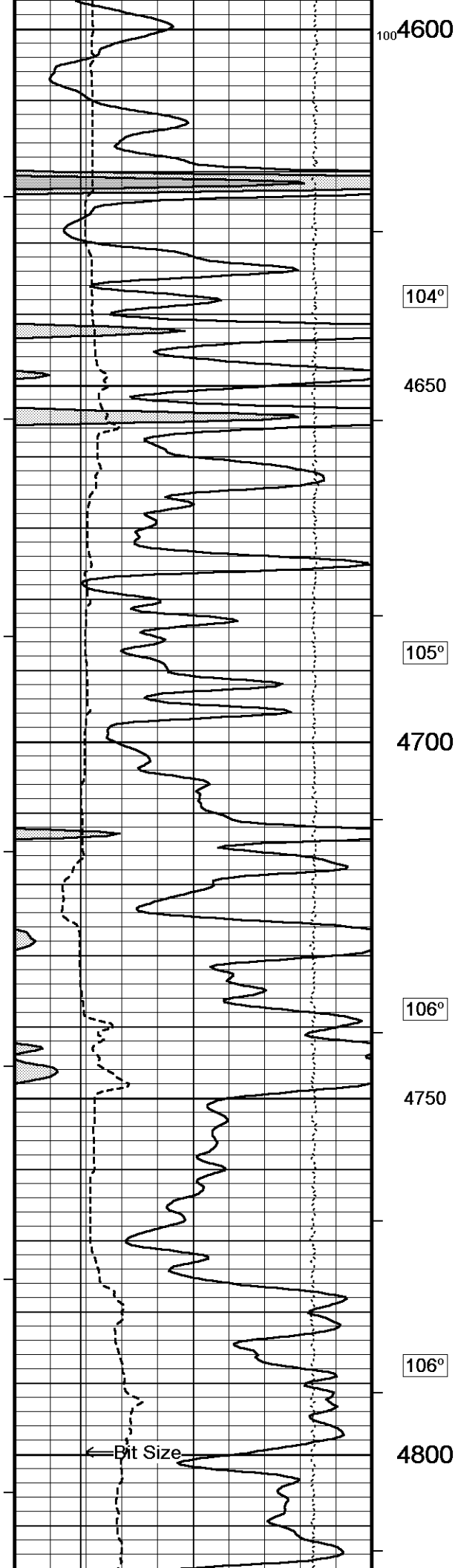
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 14-MAR-2013 17:31
Filename: C:\Minimus 13.04.8492\Data\Shakespeare Janzen #2-26\Shakespeare Janzen #2-26_002.dta Recorded on 14-MAR-2013 14:59
System Versions: Logged with 13.04.8492 Plotted with 13.04.8492

5 INCH BULK DENSITY

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 14-MAR-2013 17:31
Filename: C:\Minimus 13.04.8492\Data\Shakespeare Janzen #2-26\Shakespeare Janzen #2-26_001.dta Recorded on 14-MAR-2013 14:37
System Versions: Logged with 13.04.8492 Plotted with 13.04.8492





100

4600

104°

4650

105°

4700

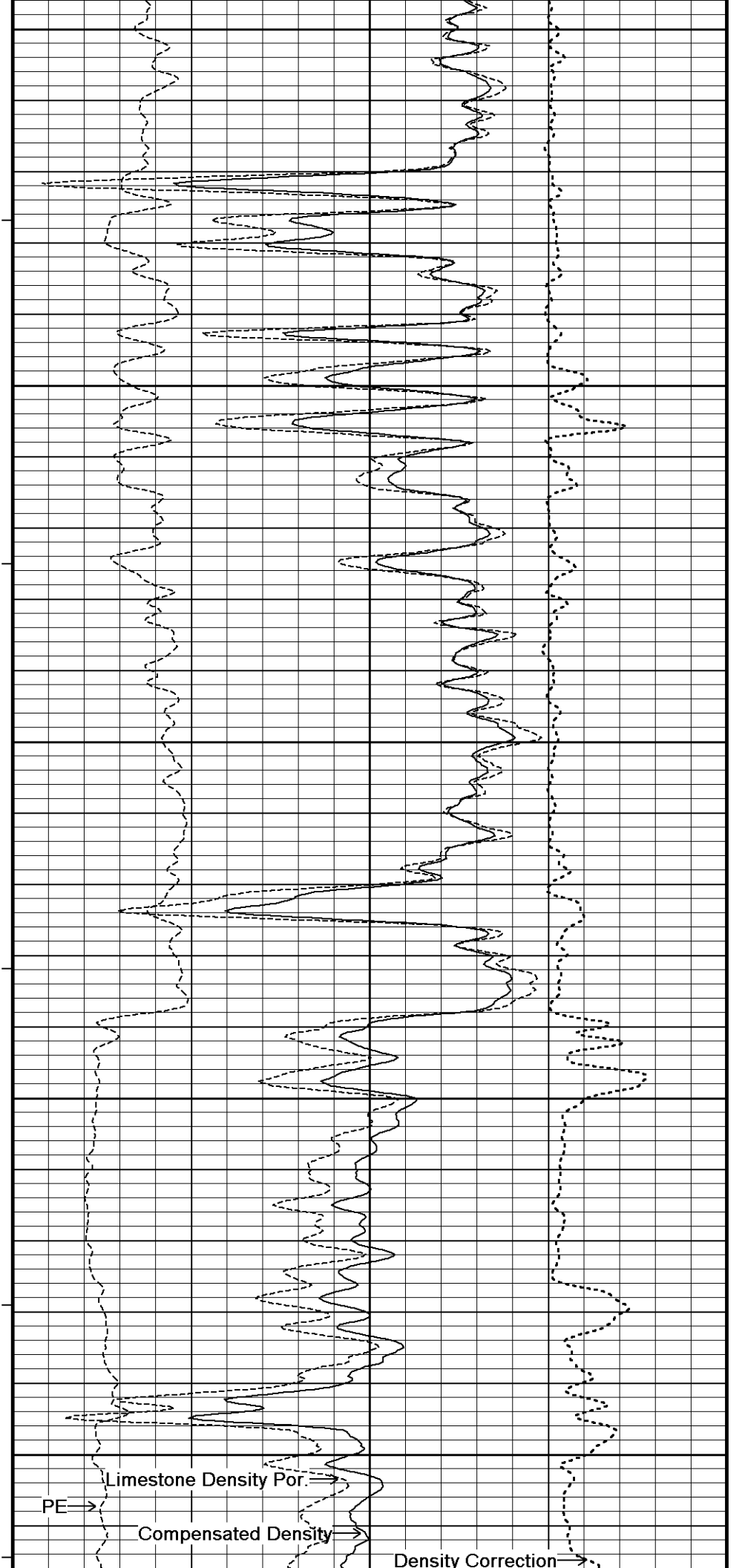
106°

4750

106°

4800

Bit Size

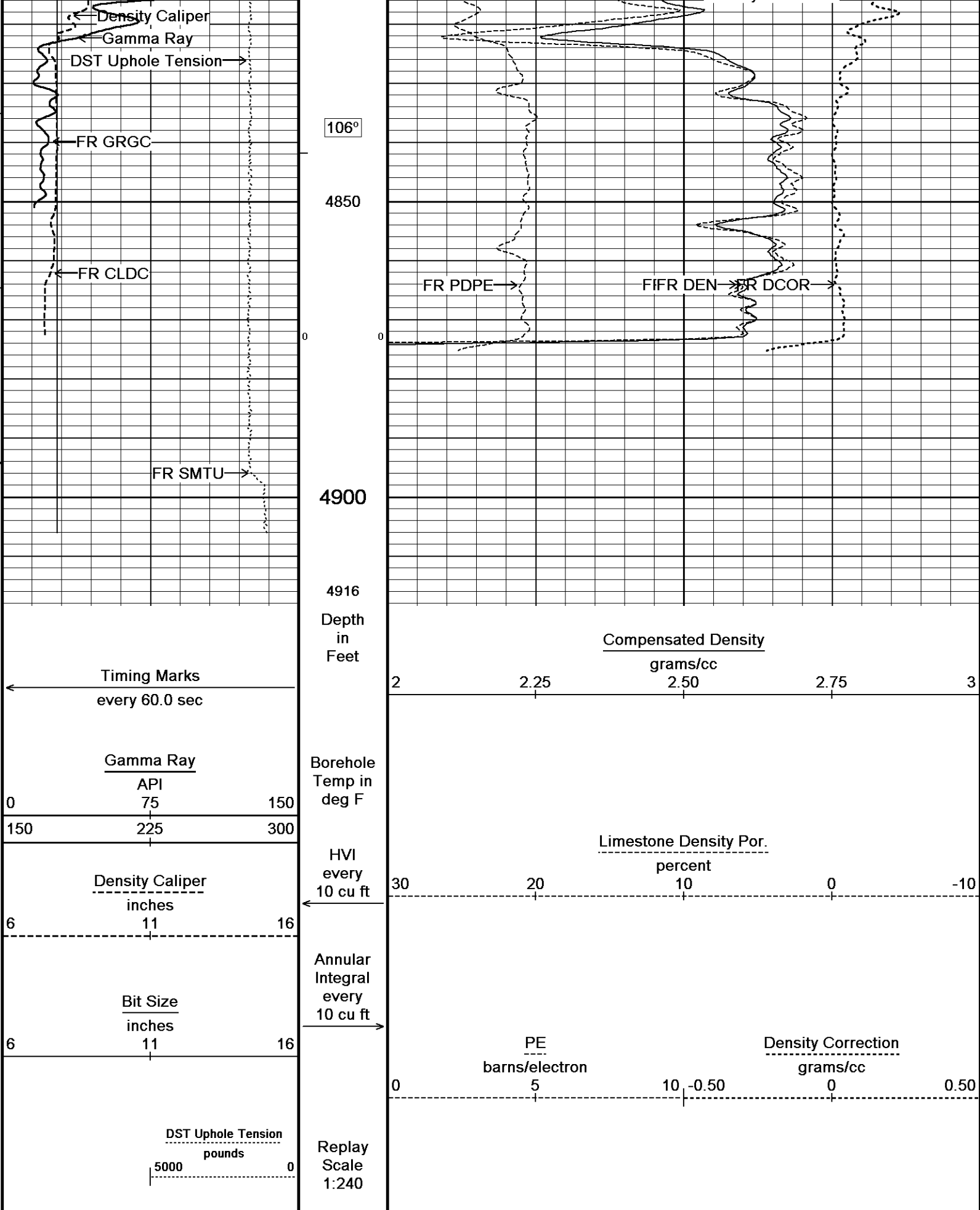


PE

Limestone Density Por.

Compensated Density

Density Correction



BEFORE SURVEY CALIBRATION

C:\Minimus 13.04.8492\Data\Shakespeare Janzen #2-26\Shakespeare Janzen #2-26_001.dta

General Constants All 000

Last Edited on 14-MAR-2013,13:50

General Parameters

Mud Resistivity	0.510	ohm-metres
Mud Resistivity Temperature	86.000	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	5.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Deep Induction
RWA Constant A	1.000
RWA Constant M	2.000

Gamma Calibration MCG-D.K 469

Field Calibration on 08-MAR-2013 17:05

	Measured	Calibrated (API)
Background	74	49
Calibrator (Gross)	1167	774
Calibrator (Net)	1093	725

Gamma Constants MCG-D.K 469

Last Edited on 14-MAR-2013,13:49

Gamma Calibrator Number	GR38	
Mud Density	1.08	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG-D.K 469

Field Calibration on 07-NOV-2012,10:25

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-D.K 469

Last Edited on 16-FEB-2013,15:17

Pre-filter Length	11
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Photo Density Calibration MPD-B 31

Base Calibration on 13-MAR-2013 15:17

Field Check on 13-MAR-2013 15:23

Density Calibration

Base Calibration

		Measured	Calibrated (sdu)
	Near	Far	Near Far
Reference 1	46119	23502	59556 30836
Reference 2	19149	1933	24941 2541

Field Check at Base

681.1	838.4
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Field Check

680.3	839.9
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PE Calibration

Base Calibration

	WS	Measured	Calibrated
		WH	Ratio
Background	125	604	
Reference 1	19219	46004	0.421
Reference 2	5674	19062	0.301

Field Check at Base
125.1 603.7

Field Check
125.4 600.4

Density Constants MPD-B 31

Last Edited on 14-MAR-2013,13:21

Density Source Id	254	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.08	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	
Matrix Density (gm/cc)	Depth (ft)	
2.71	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	

Caliper Calibration MPD-B 31

Base Calibration on 13-MAR-2013 15:27
Field Calibration on 13-MAR-2013 15:28

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	16480	3.99
2	25040	5.98
3	33712	7.97
4	42000	9.86
5	51360	11.92
6	N/A	N/A

Field Calibration	Measured Caliper (in)	Actual Caliper (in)
	5.94	5.98

DOWNHOLE EQUIPMENT

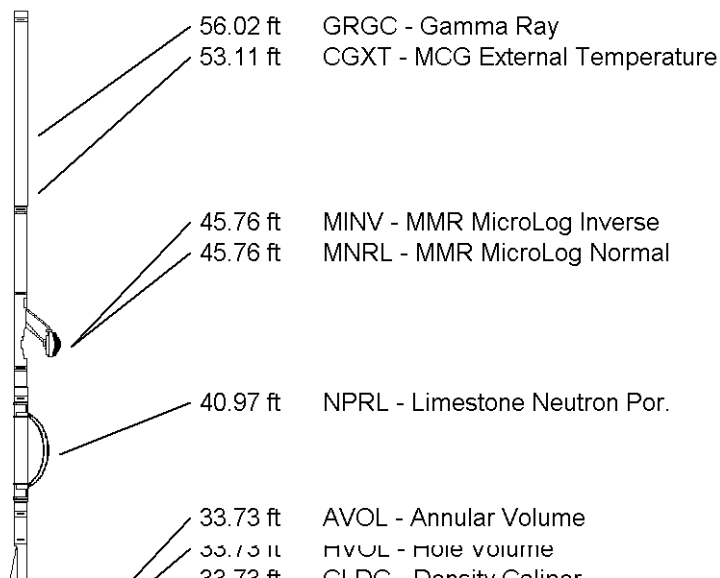
C:\Minimus 13.04.8492\Data\Shakespeare Janzen #2-26\Shakespeare Janzen #2-26_001.dta

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

Compact Micro-Resistivity
MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.88 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

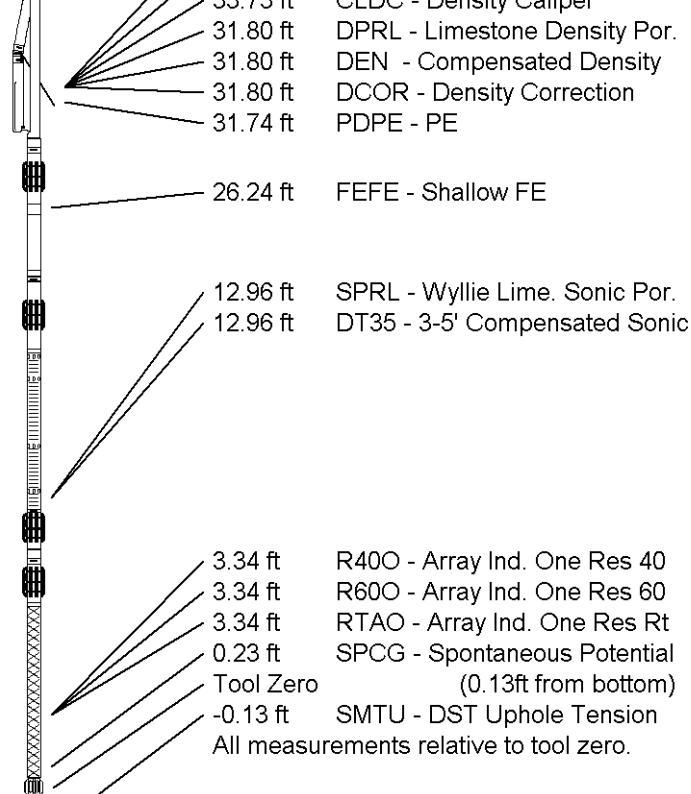


Compact Focussed Electric
MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 61.30 ft Weight: 456.4 lb



COMPANY	SHAKESPEARE OIL COMPANY
WELL	JANZEN #2-26
FIELD	WILDCAT
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	3125.00	feet	First Reading	4864.00	feet
Elevation Drill Floor	3124.00	feet	Depth Driller	4897.00	feet
Elevation Ground Level	3115.00	feet	Depth Logger	4896.00	feet



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COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG