Weatherford

COMPACT PHOTO DENSITY COMPENSATED NEUTRON MICRORESISTIVITY LOG

COMPANY	SHAKESPEARE OIL COMPANY, INC.
WELL	JANZEN #3-26
FIELD	PENCE EAST
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	1000' FSL & 1200' FEL

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

Latitude
Longitude
API Number 15-171-21067

Permanent Datum GL, Elevation 3107 feet
Log Measured From KB
Drilling Measured From KB @ 12 feet

Elevations:	feet
KB	3119.00
DF	3117.00
GL	3107.00

Date	23-JUN-2014			
Run Number	ONE			
Service Order	7577-90708978			
Depth Driller	4890.00	feet		
Depth Logger	4890.00	feet		
First Reading	4858.00	feet		
Last Reading	3750.00	feet		
Casing Driller	266.00	feet		
Casing Logger	266.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.30 lb/USg	57.00 CP		
PH / Fluid Loss	10.50	9.60 ml/30Min		
Sample Source	MUD PIT			
Rm @ Measured Temp	0.44 @ 94.0	ohm-m		
Rmf @ Measured Temp	0.35 @ 94.0	ohm-m		
Rmc @ Measured Temp	0.53 @ 94.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.36 @115.0	ohm-m		
Time Since Circulation	4 HOURS			
Max Recorded Temp	115.00	deg F		
Equipment / Base	13244	LIB		
Recorded By	JEFFREY RANDLE		ADAM SILL	
Witnessed By	WES HANSEN			
JOB #	LB14-187			

BOREHOLE RECORD

Last Edited: 23-JUN-2014 10:23

Bit Size inches	Depth From feet	Depth To feet
7.875	266.00	4890.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	266.00	24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.08.2113.

- RUN ONE: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN 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: 2072 CU.FT.

- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO 3750 FEET: 196 CU.FT.

- RIG: SOUTHWIND DRILLING #70.

- ENGINEER: A. SILL.

- OPERATOR: J. HOLCOMB.

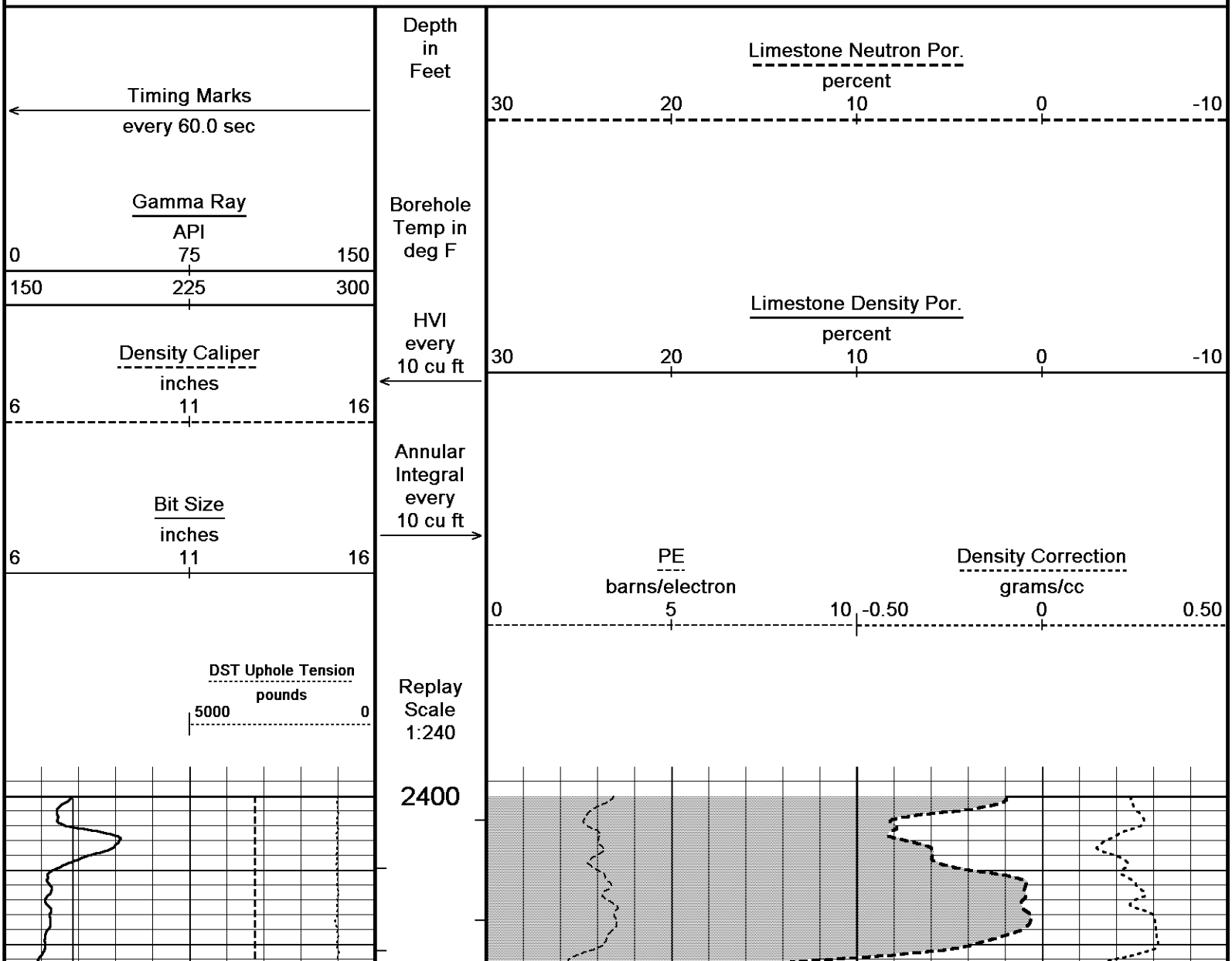
- JUNIOR FIELD ENGINEER: J. RANDLE.

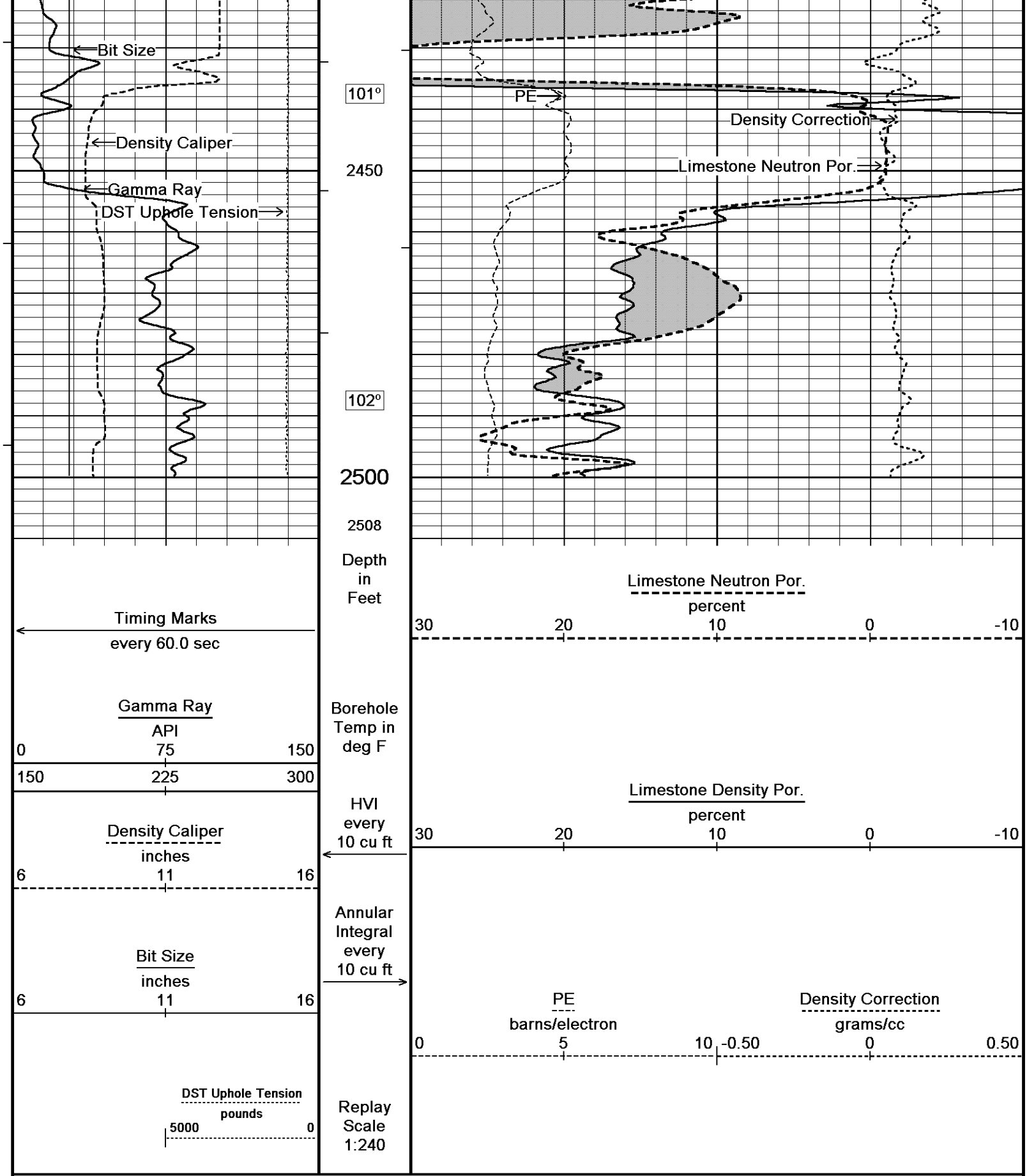
5 INCH MAIN ANHYDRITE

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-JUN-2014 17:36

Filename: C:\Minimus 13.08.2113\Logs\Shakespeare Janzen #3...\Shakespeare Janzen #3-26 MAIN.dta — Recorded on 23-JUN-2014 14:07

System Versions: Logged with 13.08.2113 Plotted with 13.08.2113





Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-JUN-2014 17:36
Filename: C:\Minimus 13.08.2113\Logs\Shakespeare Janzen #3...\Shakespeare Janzen #3-26 MAIN.dta
Recorded on 23-JUN-2014 14:07
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5 INCH MAIN ANHYDRITE

5 INCH MAIN LIMESTONE

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-JUN-2014 17:36

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Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150
150 225 300

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Limestone Neutron Por.
percent
30 20 10 0 -10

Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

MMR MicroLog Normal
ohm metres
0 20

MMR MicroLog Inverse
ohm metres
0 20

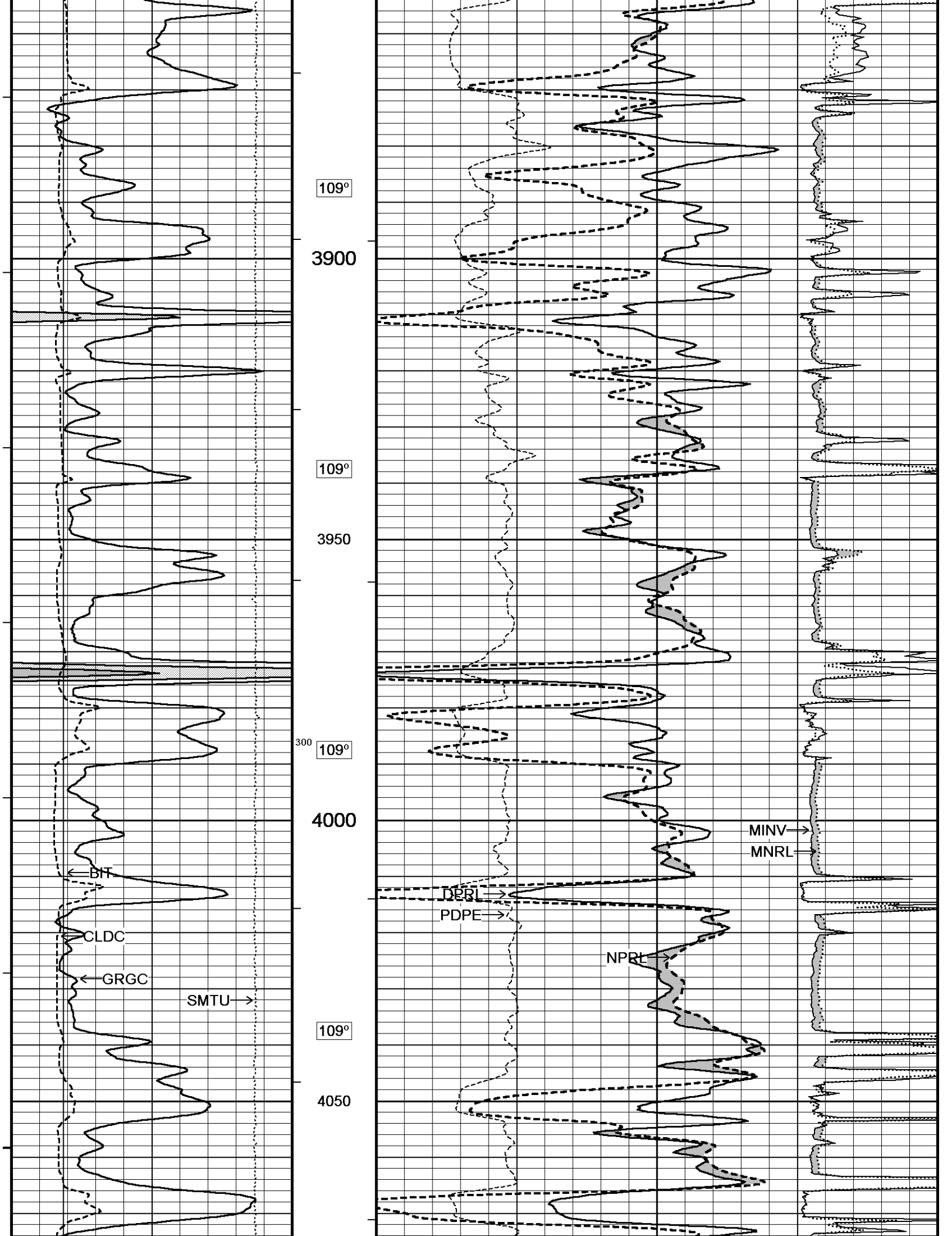
3750

108°

3800

109°

3850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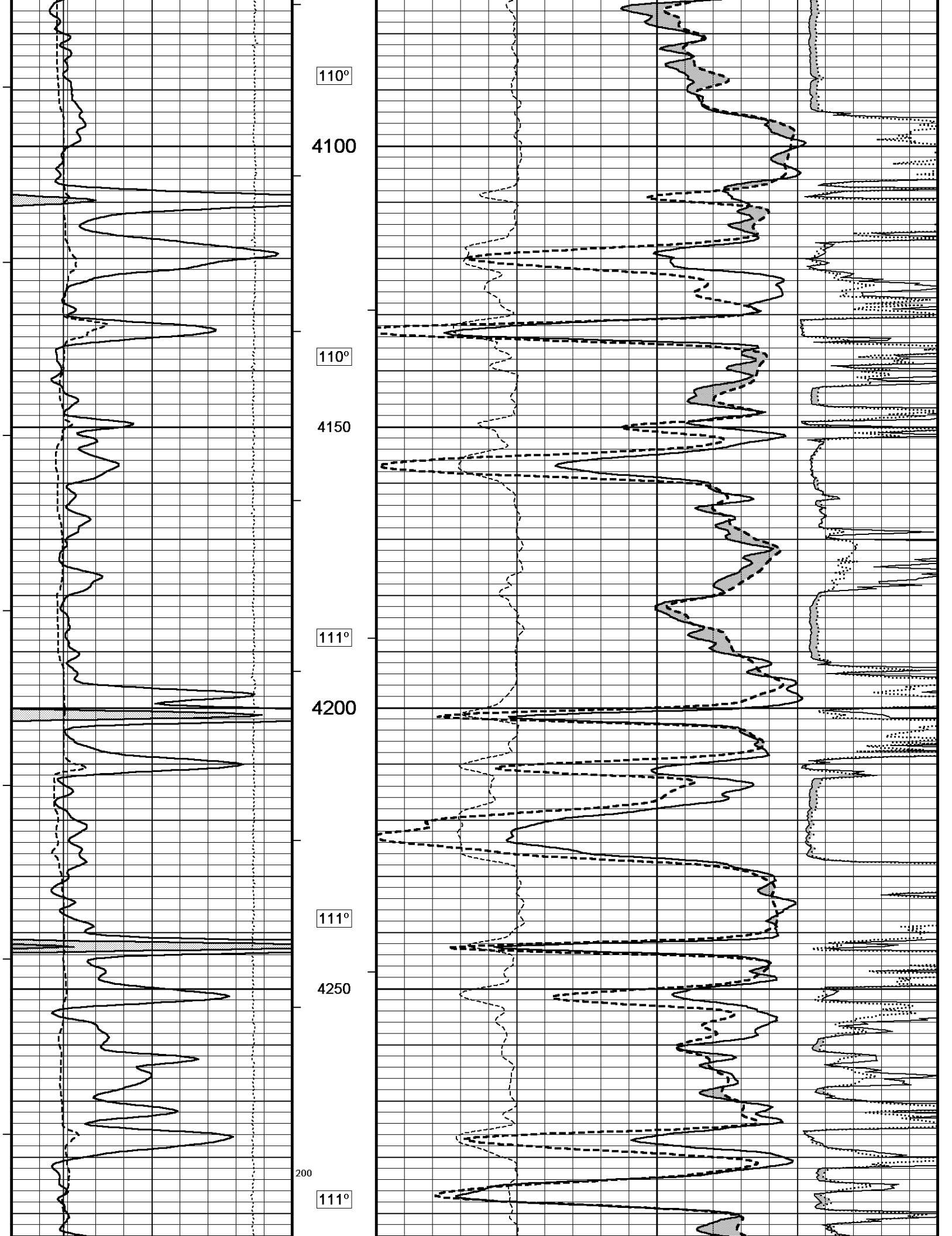
3900
109°
3950
300
109°
4000
109°
4050
BIT
CLDC
GRGC
SMTU
MINV
MNRL
DPRL
PDPE
NPRL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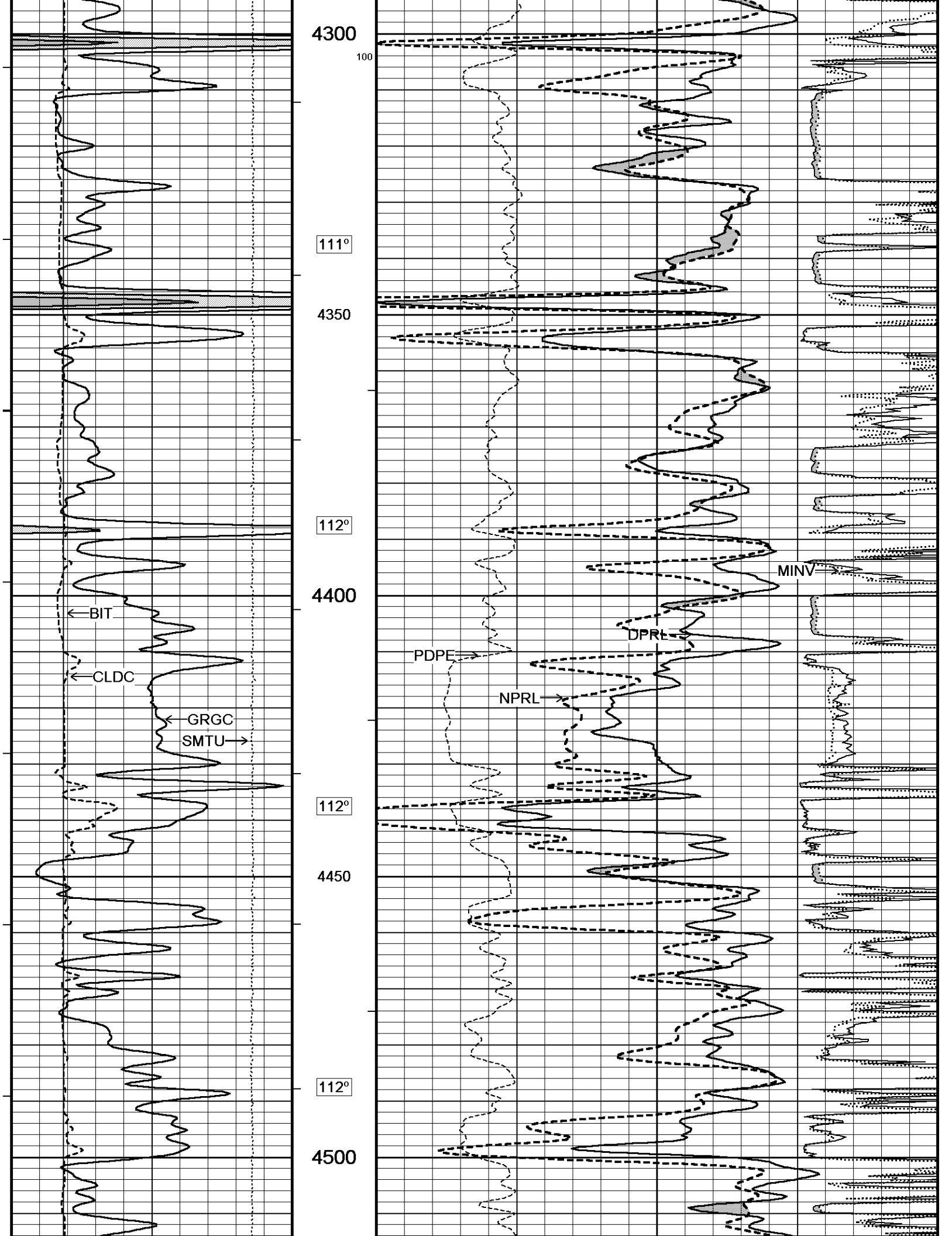
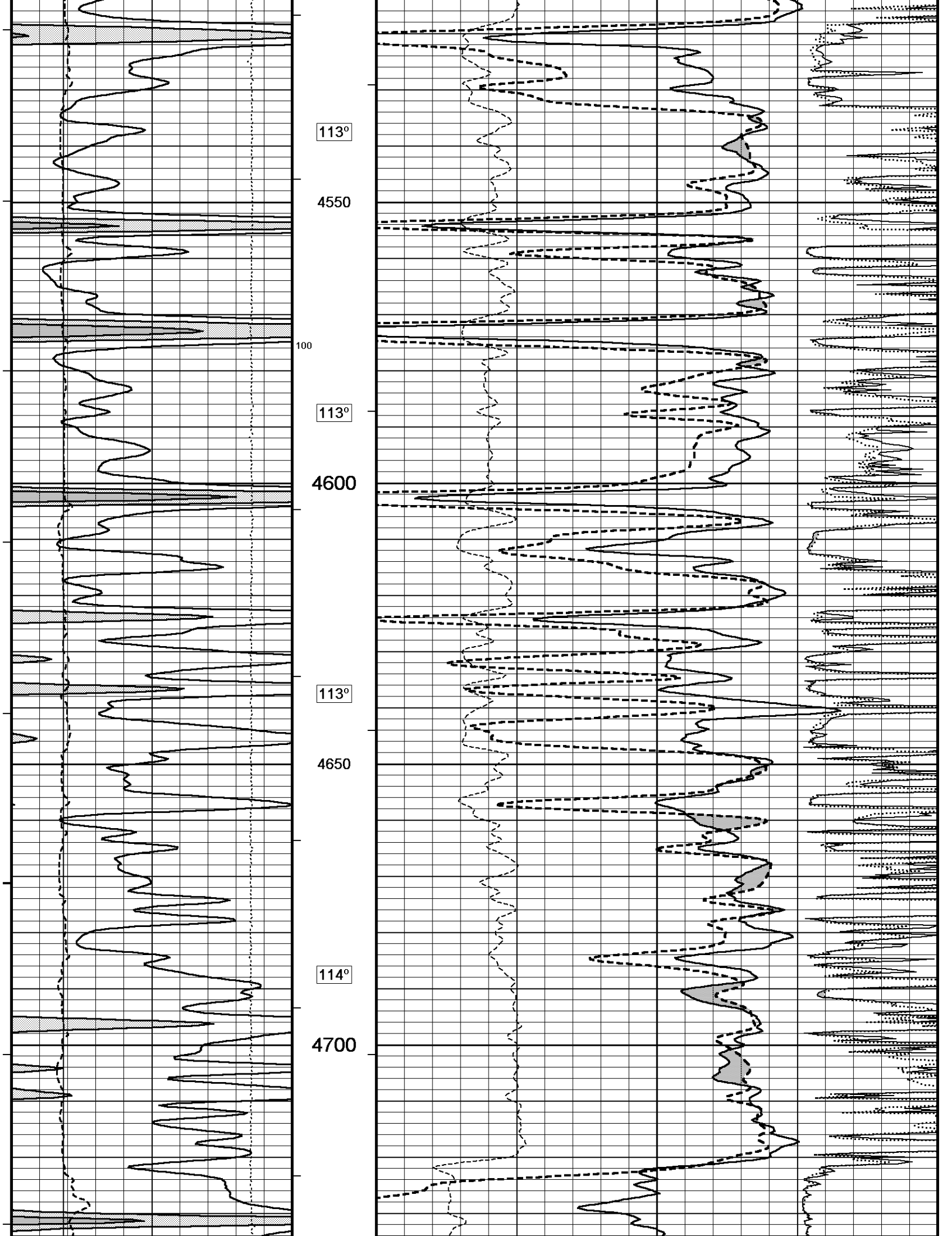
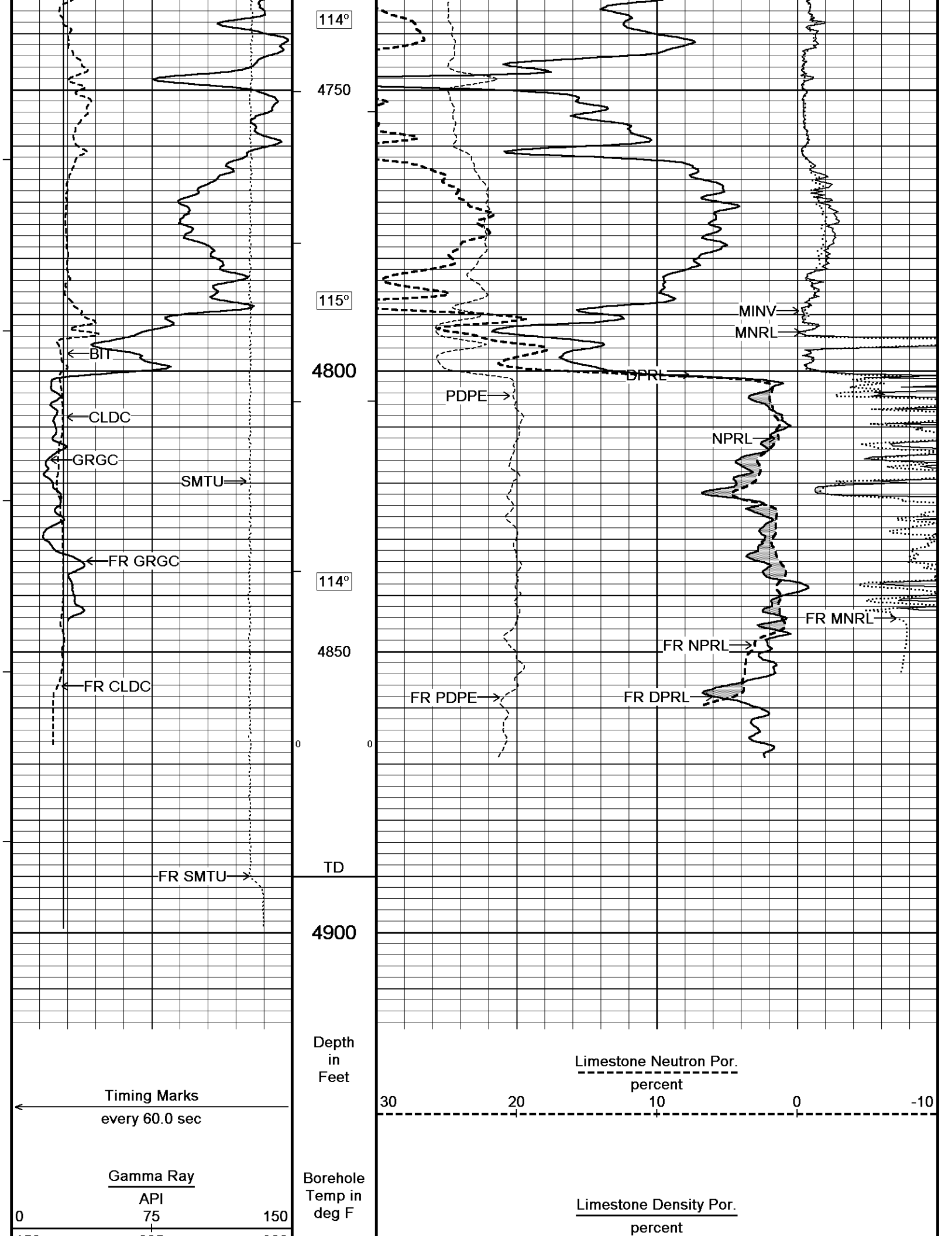
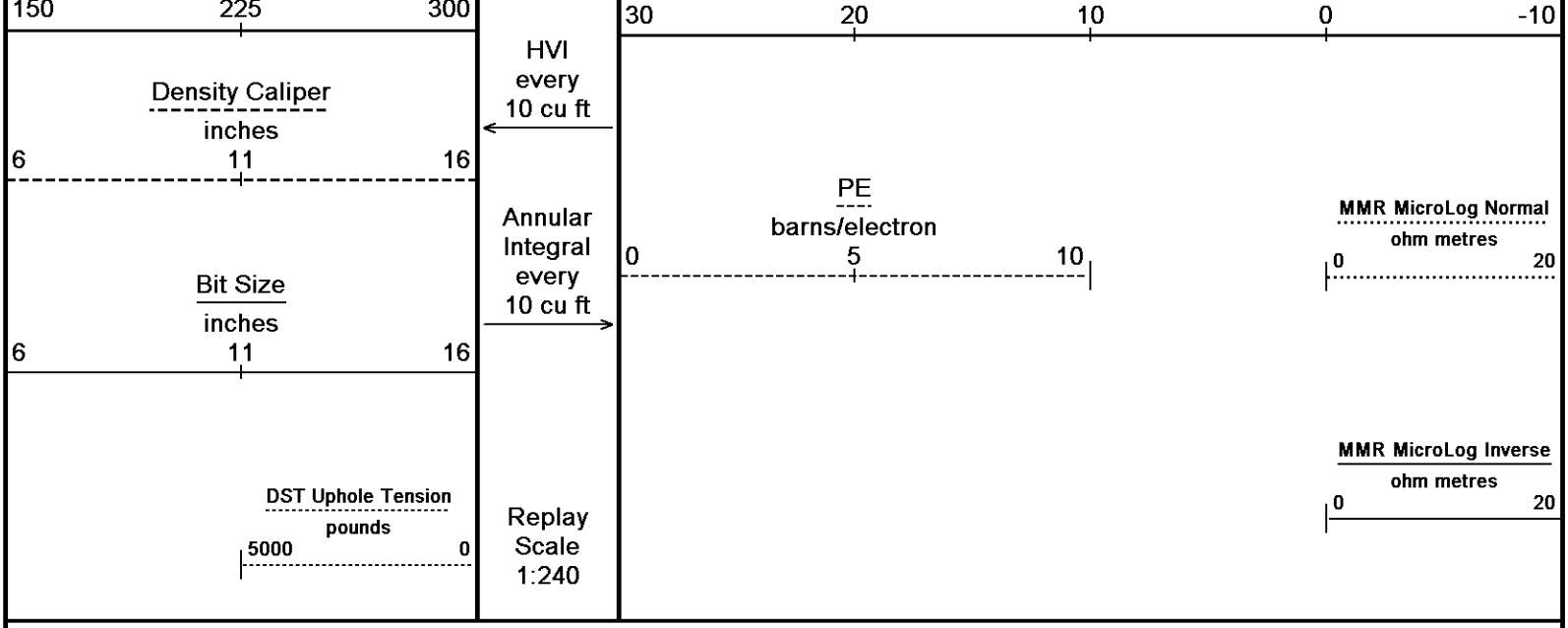
4100
110°
4150
111°
4200
111°
4250
200
111°


4300
100
111°
4350
112°
4400
BIT
CLDC
GRGC
SMTU
112°
4450
112°
4500
MINV
DPRL
PDPE
NPRL


113°
4550
100
113°
4600
113°
4650
114°
4700


114°
4750
115°
4800
114°
4850
TD
4900
BIT
CLDC
GRGC
SMTU
FR GRGC
FR CLDC
FR SMTU
MINV
MNRL
DPRL
PDPE
NPRL
FR MNRL
FR NPRL
FR PDPE
FR DPRL
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Depth
in
Feet
Borehole
Temp in
deg F
Limestone Neutron Por.
percent
30
20
10
0
-10
Limestone Density Por.
percent



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-JUN-2014 17:36
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5 INCH MAIN LIMESTONE

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-JUN-2014 17:36
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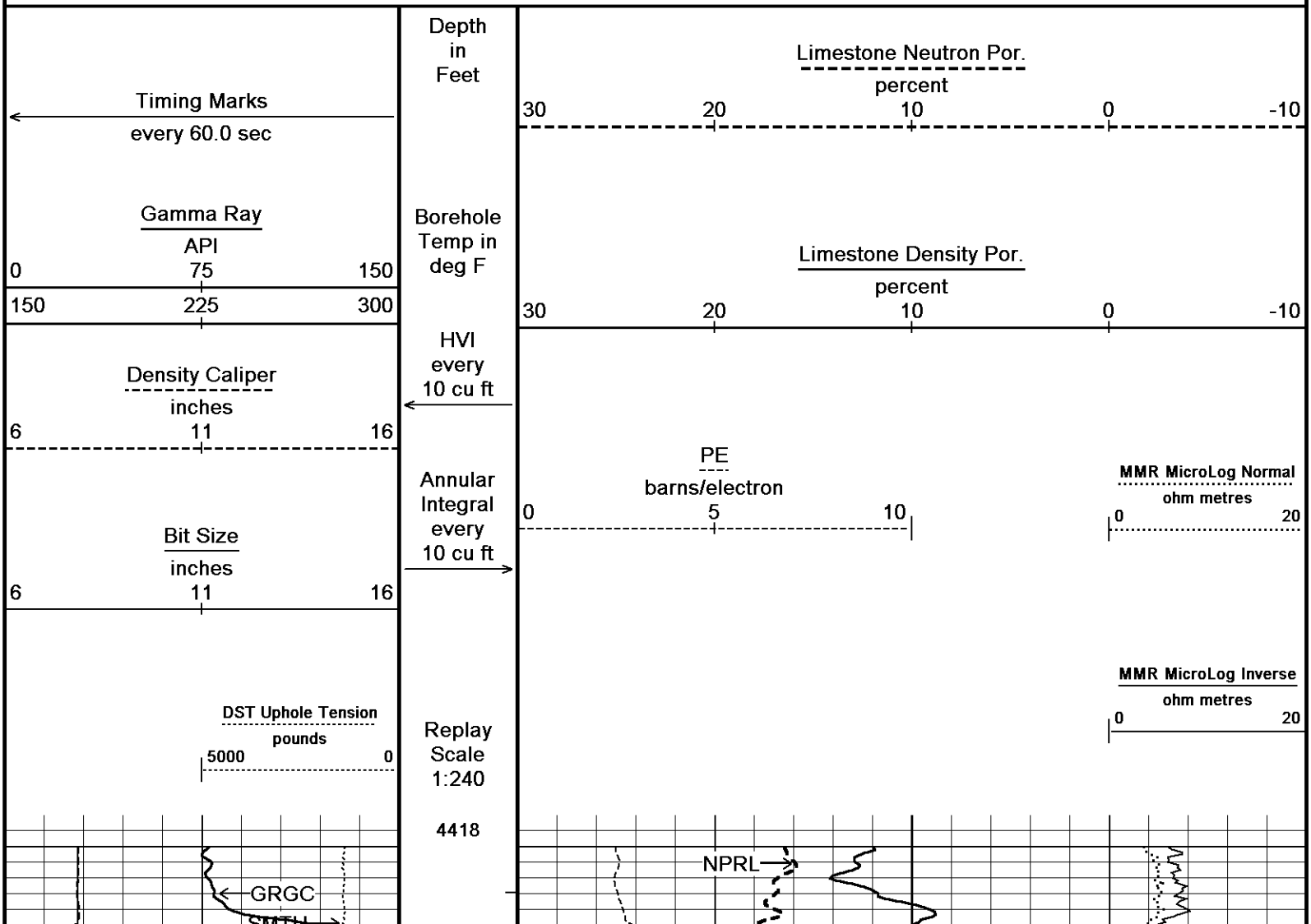

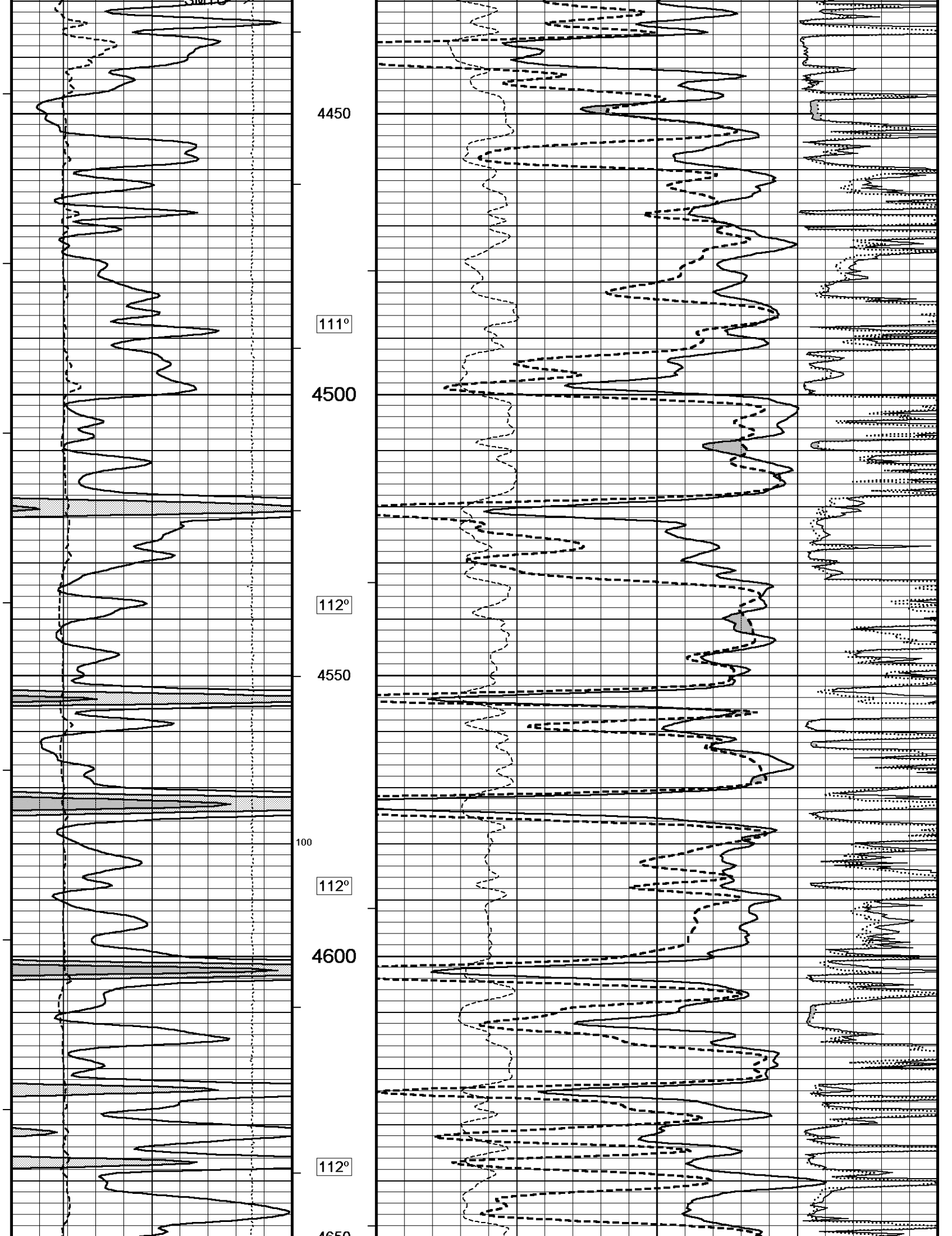
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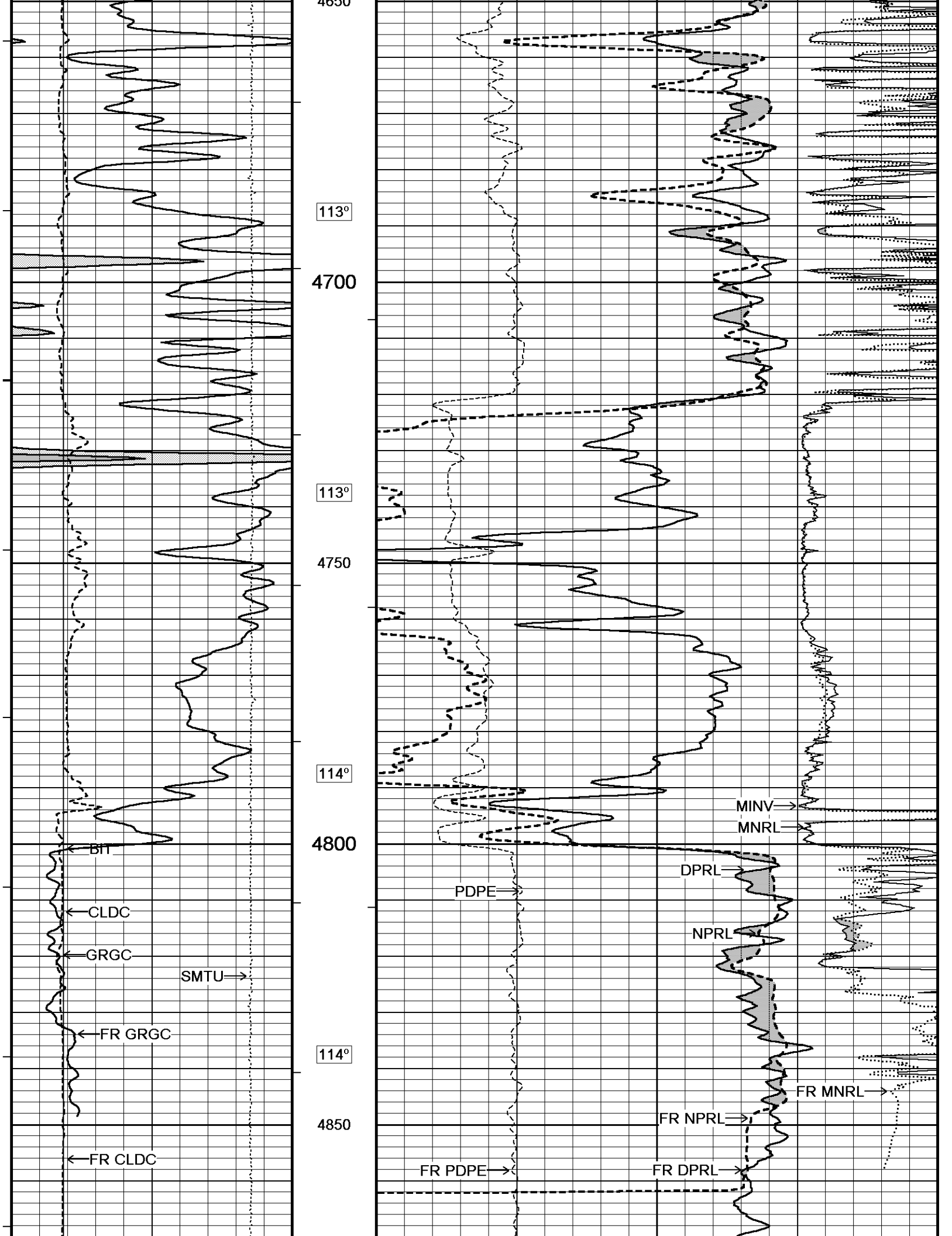
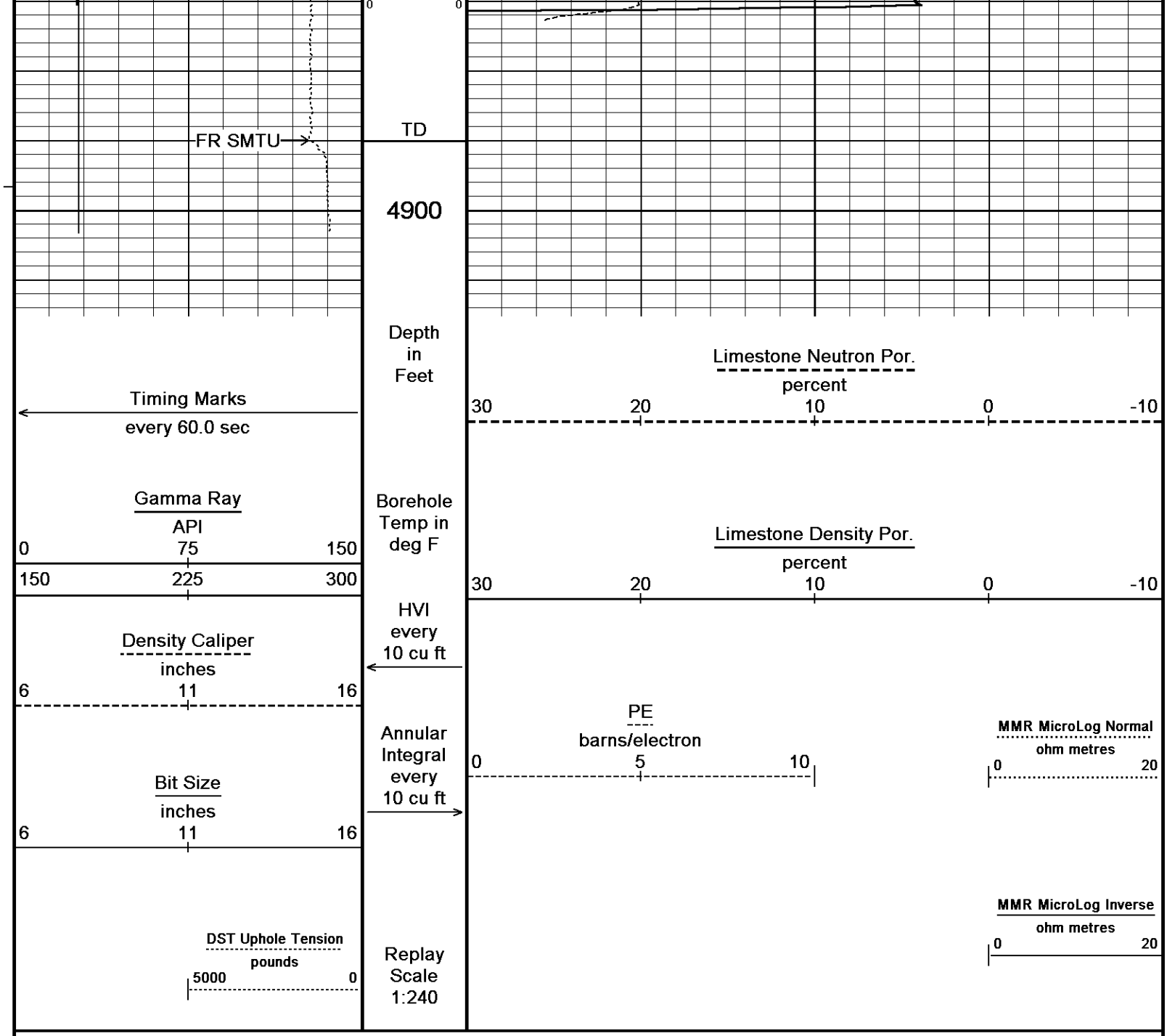
111°
4500
112°
4550
100
112°
4600
112°


4650
113°
4700
113°
4750
114°
4800
114°
4850
BIT
CLDC
GRGC
SMTU
FR GRGC
FR CLDC
PDPE
MINV
MNRL
DPRL
NPRL
FR MNRL
FR NPRL
FR PDPE
FR DPRL



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-JUN-2014 17:36
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REPEAT SECTION

5 INCH MAIN BULK DENSITY

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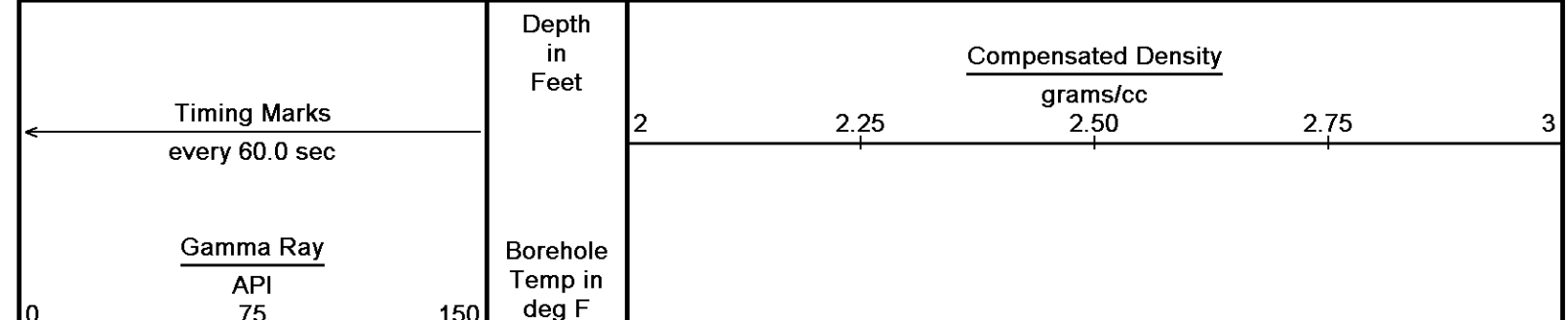
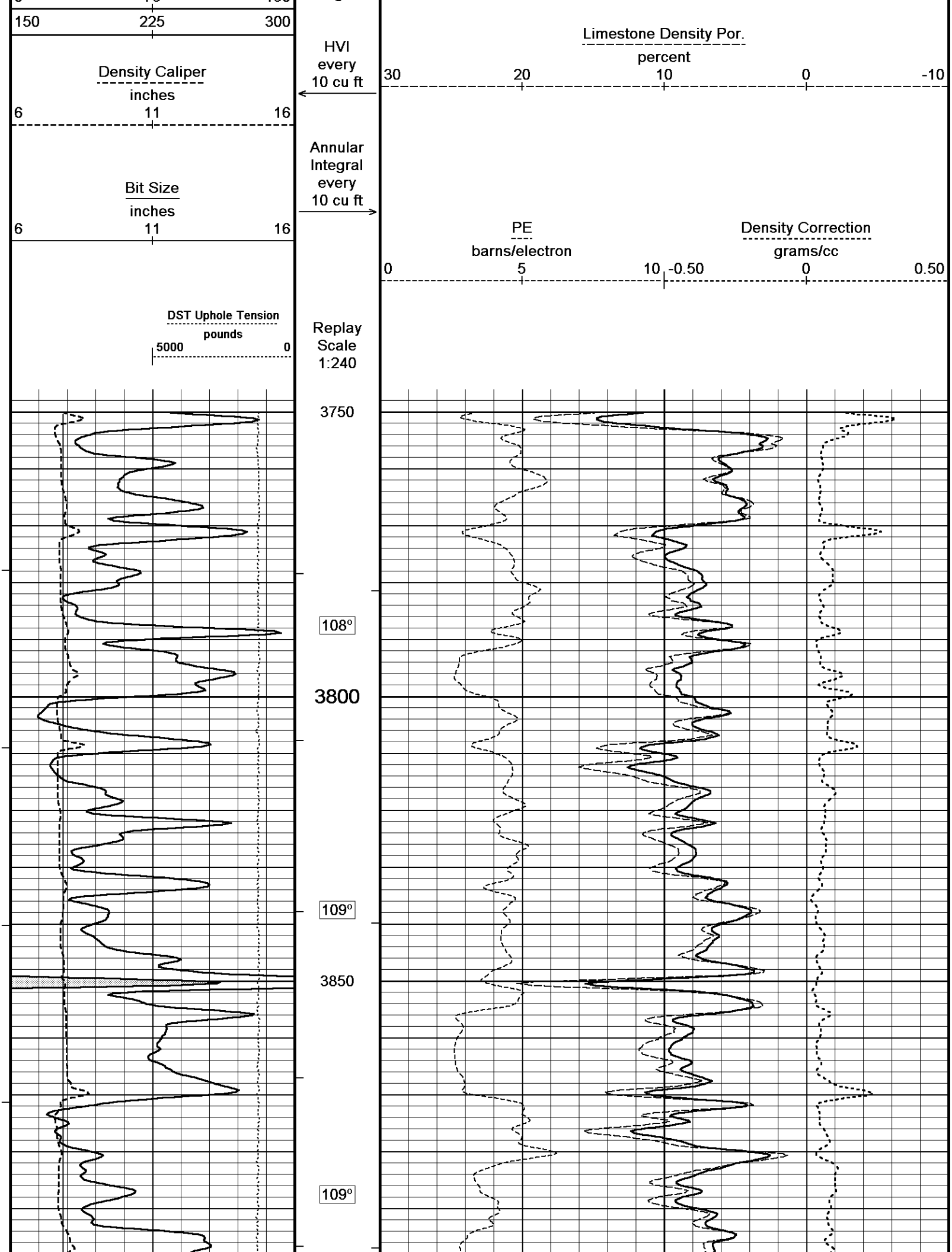
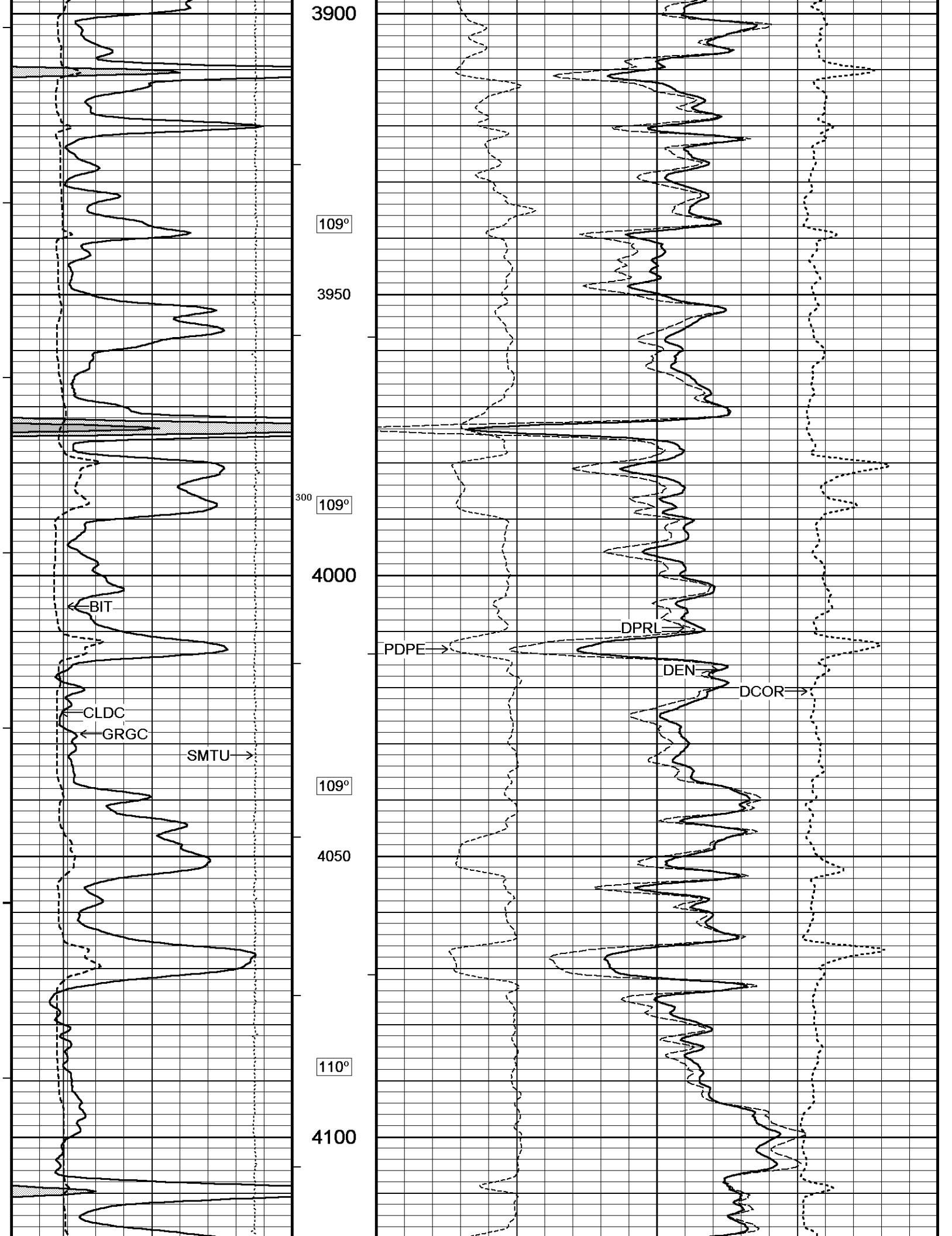
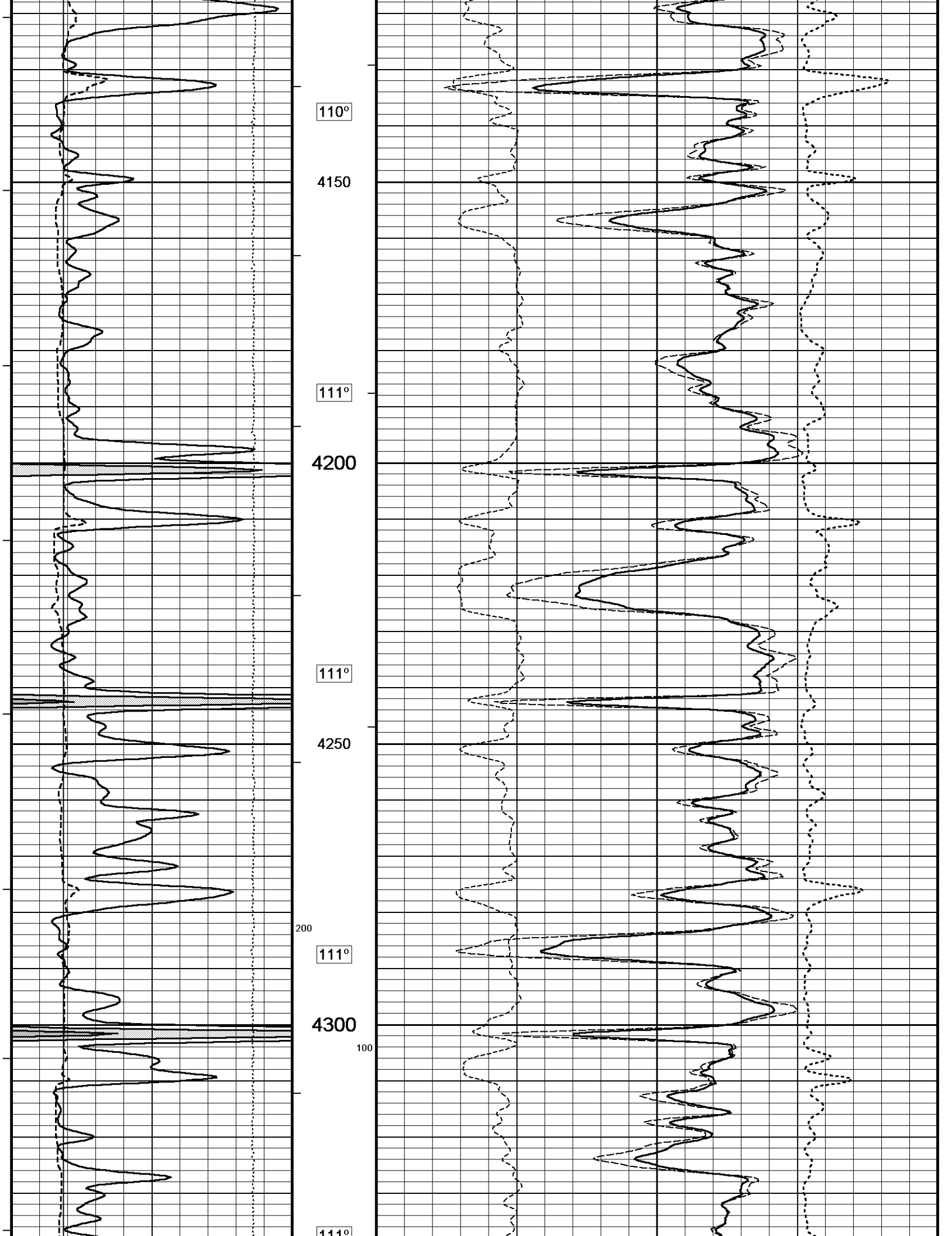
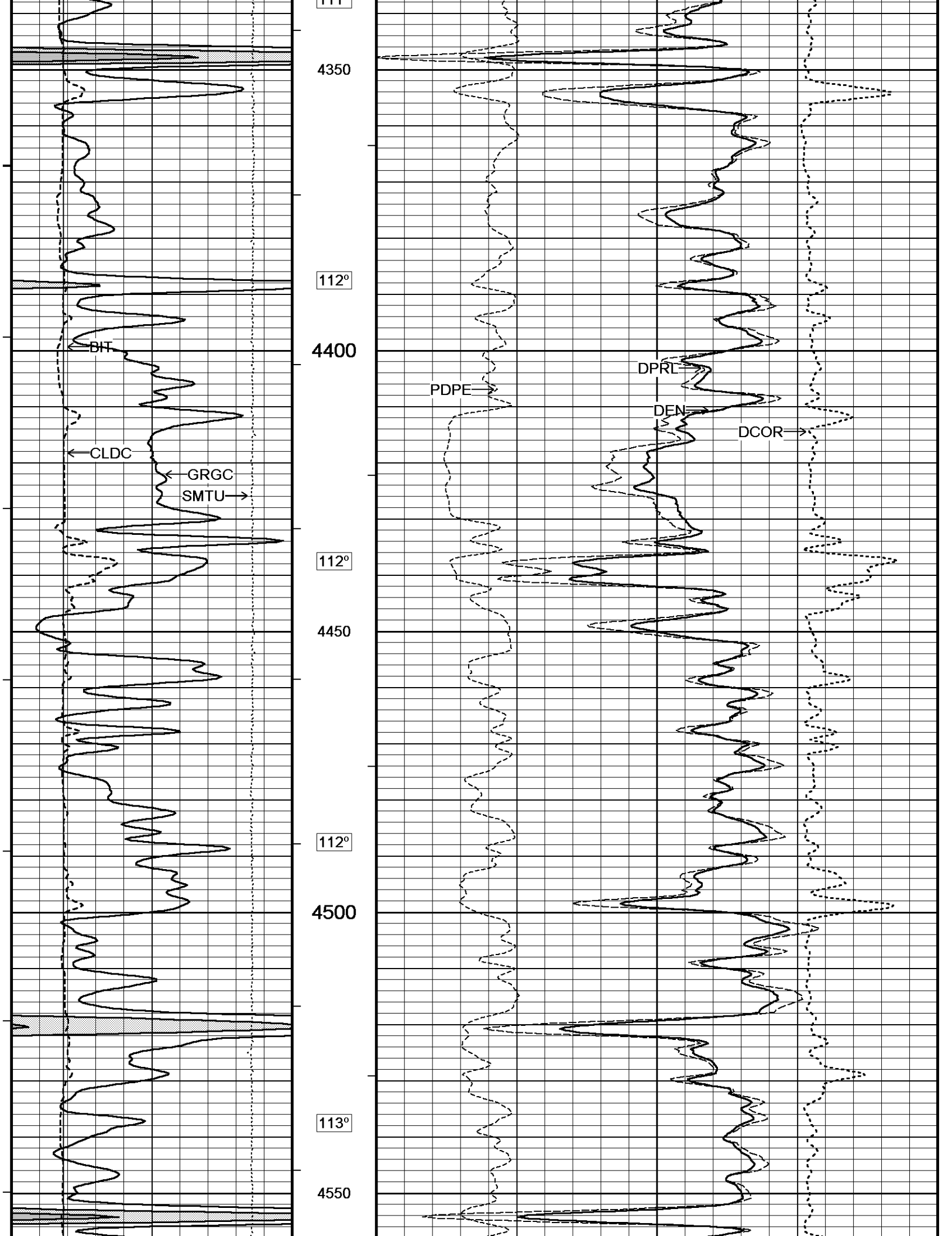
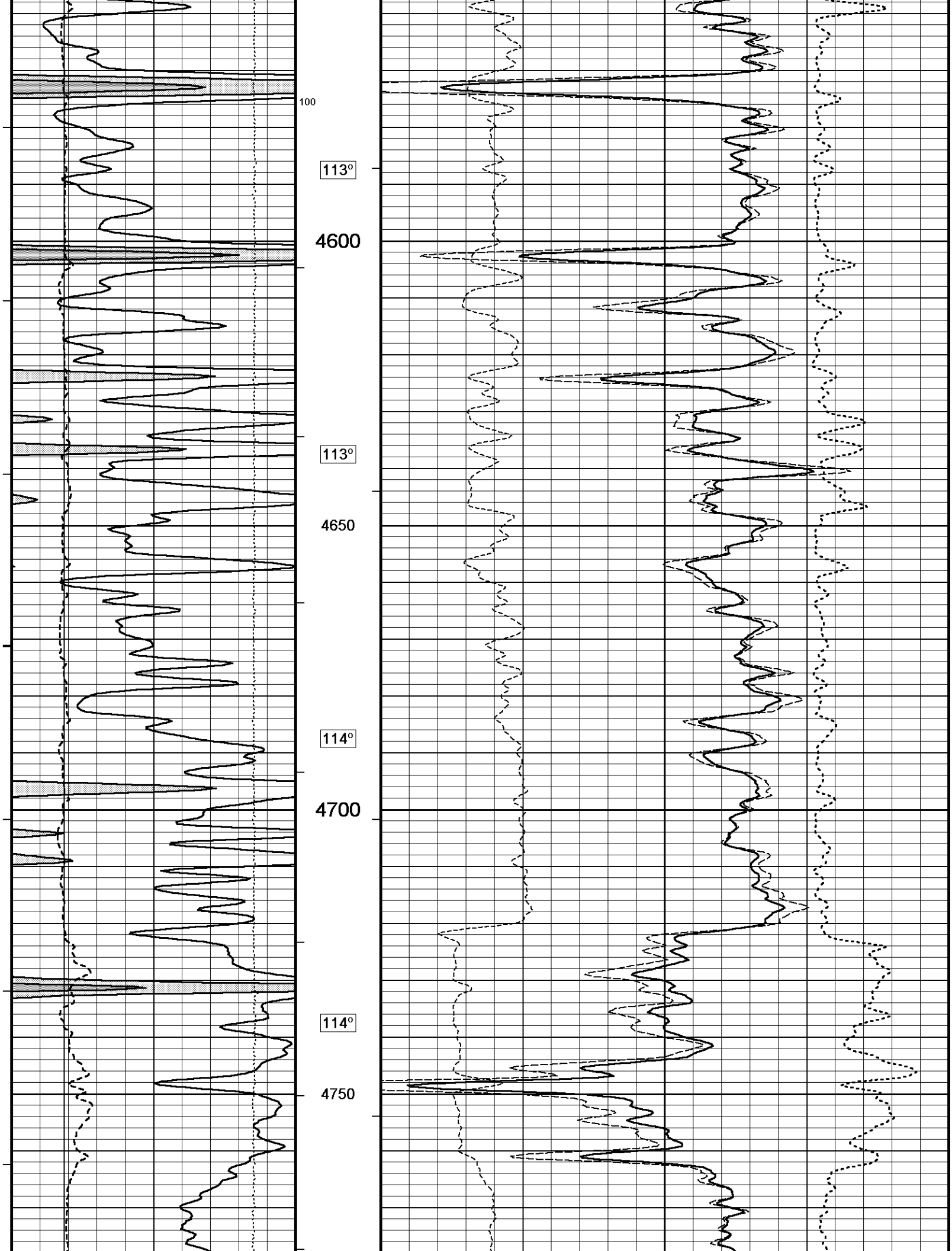


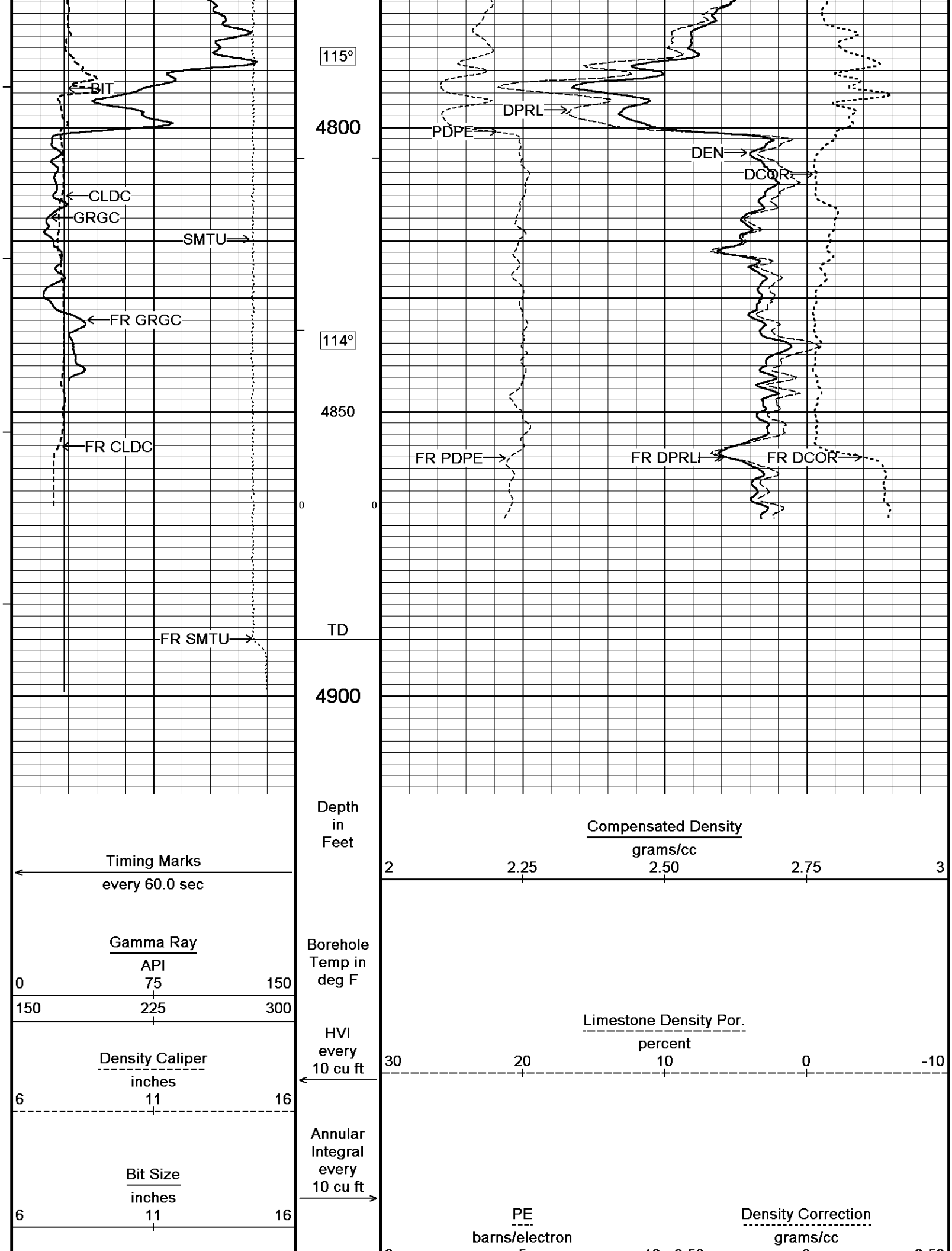

150
225
300
Density Caliper
inches
6
11
16
Bit Size
inches
6
11
16
DST Uphole Tension
pounds
5000
0
HVI
every
10 cu ft
Annular
Integral
every
10 cu ft
Replay
Scale
1:240
Limestone Density Por.
percent
30
20
10
0
-10
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.50
0
0.50
3750
108°
3800
109°
3850
109°


3900
109°
3950
300
109°
4000
BIT
DPRL
PDPE
DEN
DCOR
CLDC
GRGC
SMTU
109°
4050
110°
4100


110°
4150
111°
4200
111°
4250
200
111°
4300
100
111°


4350
112°
BIT
4400
DPRL
PDPE
DEN
DCOR
CLDC
GRGC
SMTU
112°
4450
112°
4500
113°
4550


100
113°
4600
113°
4650
114°
4700
114°
4750


115°
BIT
4800
DPRL
PDPE
DEN
DCOR
CLDC
GRGC
SMTU
FR GRGC
114°
4850
FR CLDC
FR PDPE
FR DPRLI
FR DCOR
0
0
TD
FR SMTU
4900
Depth
in
Feet
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Borehole
Temp in
deg F
150
225
300
Limestone Density Por.
percent
HVI
every
10 cu ft
30
20
10
0
-10
Density Caliper
inches
6
11
16
Annular
Integral
every
10 cu ft
Bit Size
inches
6
11
16
PE
barns/electron
Density Correction
grams/cc

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

0 5 10 -0.50 0 0.50

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 23-JUN-2014 17:36
Filename: C:\Minimus 13.08.2113\Logs\Shakespeare Janzen #3...\Shakespeare Janzen #3-26 MAIN.dta
Recorded on 23-JUN-2014 14:07
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

5 INCH MAIN BULK DENSITY

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
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Filename: C:\Minimus 13.08.2113\Logs\Shakespeare Janze...\Shakespeare Janzen #3-26 REPEAT.dta
Recorded on 23-JUN-2014 13:26
System Versions: Logged with 13.08.2113 Plotted with 13.08.2113

Timing Marks
every 60.0 sec

Depth
in
Feet

Compensated Density
grams/cc
2 2.25 2.50 2.75 3

Gamma Ray
API
0 75 150
150 225 300

Borehole
Temp in
deg F

Limestone Density Por.
percent
30 20 10 0 -10

HVI
every
10 cu ft

Density Caliper
inches
6 11 16

Annular
Integral
every
10 cu ft

Bit Size
inches
6 11 16

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.50 0 0.50

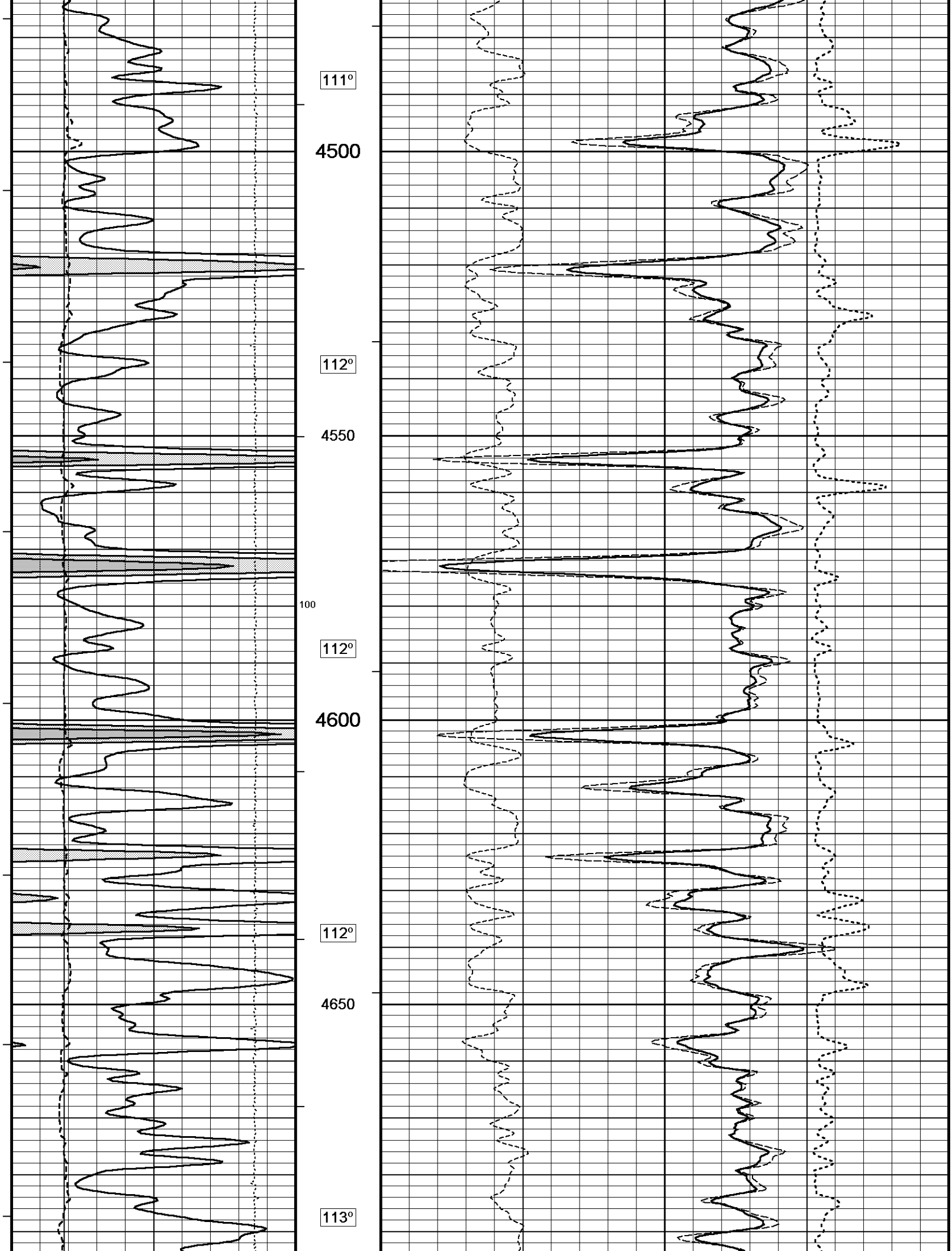
DST Uphole Tension
pounds
5000 0

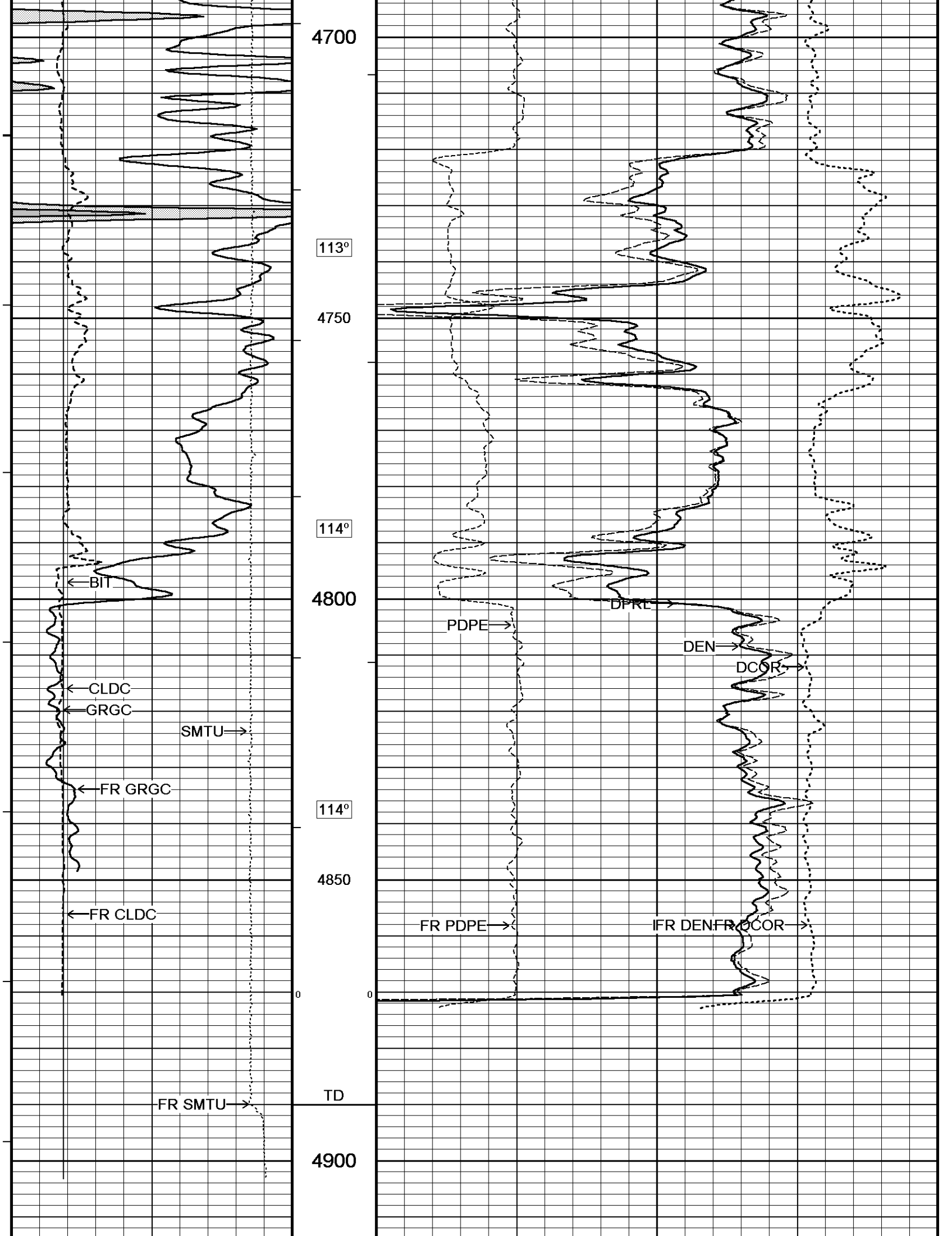
Replay
Scale
1:240

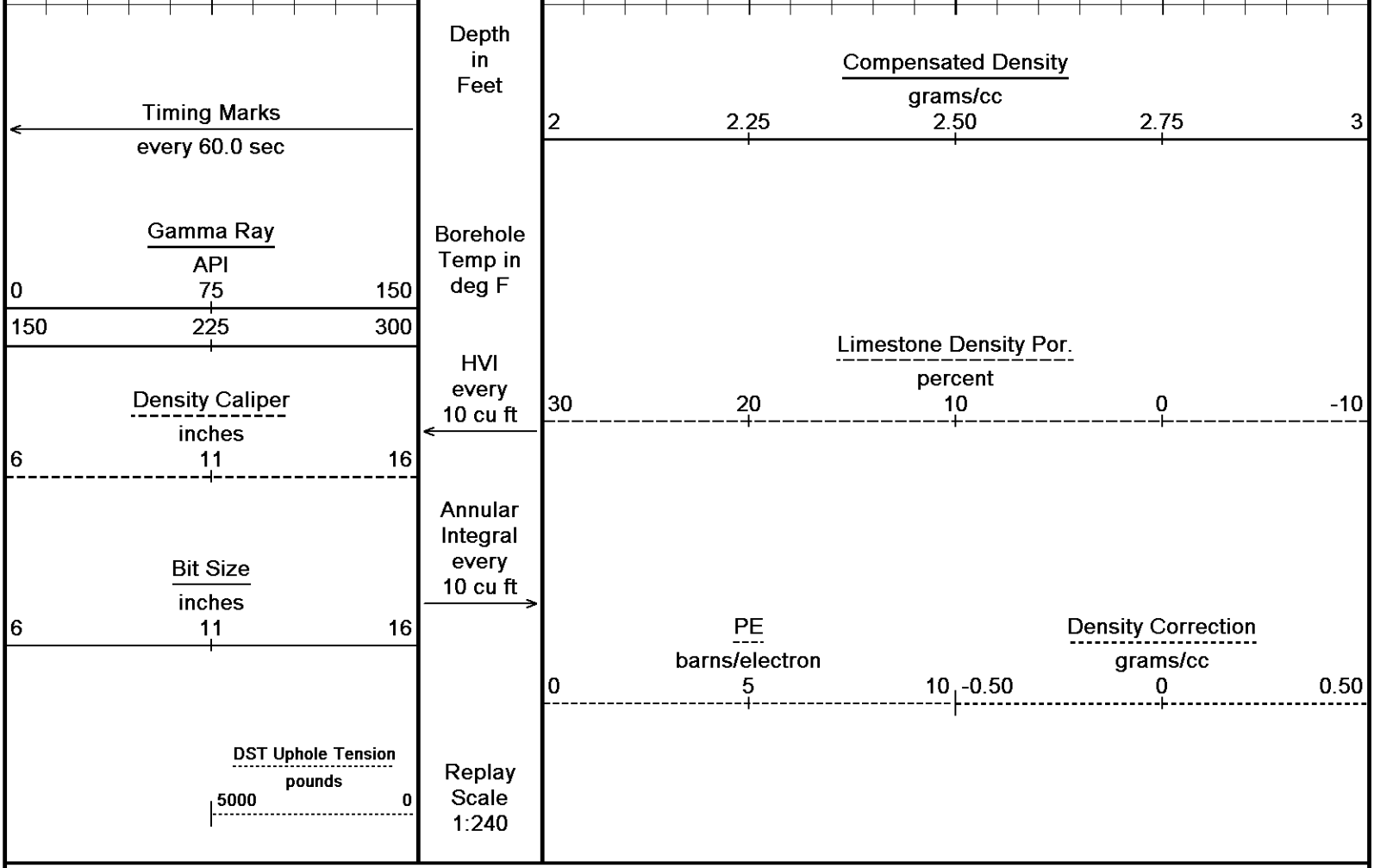
4418

CLDC
GRGC
SMTU

4450


111°
4500
112°
4550
100
112°
4600
112°
4650
113°


4700
113°
4750
114°
4800
114°
4850
TD
4900
BIT
CLDC
GRGC
SMTU
FR GRGC
FR CLDC
FR SMTU
DPRL
PDPE
DEN
DCOR
FR PDPE
IFR DEN
FR DCOR
0
0



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 23-JUN-2014 17:36

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REPEAT SECTION

BEFORE SURVEY CALIBRATION

C:\Minimus 13.08.2113\Logs\Shakespeare Janzen #3-26\Shakespeare Janzen #3-26 REPEAT.dta

General Constants All 000

Last Edited on 23-JUN-2014,11:26

General Parameters		
Mud Resistivity	0.440	ohm-metres
Mud Resistivity Temperature	94.000	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	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	

Down-hole Tension Calibration SMS 0

Field Calibration on 23-JUN-2014 12:33

Reading No	Measured	Calibrated (lbs)
1	15669.38	0.00
2	16235.25	481.00

Gamma Calibration MCG-D.K 442

Field Calibration on 23-JUN-2014 06:39

	Measured	Calibrated (API)
Background	71	48
Calibrator (Gross)	1157	773
Calibrator (Net)	1086	725

Gamma Constants MCG-D.K 442

Last Edited on 23-JUN-2014,10:28

Gamma Calibrator Number	GRC038	
Mud Density	1.11	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 442

Field Calibration on 10-MAY-2014,10:22

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

High Resolution Temperature Constants MCG-D.K 442

Last Edited on 10-MAY-2014,10:22

Pre-filter Length	11

SP Calibration MCG-D.K 442

Field Calibration on 10-MAY-2014 10:40

	Measured	Calibrated (mV)
Reference 1	98.8	99.0
Reference 2	-98.4	-98.8

Caliper Calibration MMR-C.A 248

Base Calibration on 20-JUN-2014 09:22
Field Calibration on 23-JUN-2014 06:23

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13560	5.98
2	16725	7.97
3	19859	9.86
4	23840	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.98	7.97

Micro Normal and Micro Inverse Calibration MMR-C.A 248

Base Calibration on 20-JUN-2014 09:12
Field Check on 23-JUN-2014 06:22

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	9.9	49.5	5.1	25.6
Micro Inverse	9.9	49.5	3.4	16.9

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	93.9	93.9
Micro Inverse	62.2	62.2

Micro Normal and Micro Inverse Constants MMR-C.A 248

Last Edited on 23-JAN-2014,17:04

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	0.0000	inches

Neutron Calibration MDN-B.J 387

Base Calibration on 08-MAY-2014 14:03
Field Check on 23-JUN-2014 06:44

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2970	91	3714	110

Ratio	32.668	33.764

Field Calibrator at Base	Calibrated (cps)	
	1688	2486
Ratio		0.679

Field Check	Calibrated (cps)	
	1689	2475
Ratio		0.680

Neutron Constants MDN-B.J 387

Last Edited on 23-JUN-2014,11:27

Neutron Source Id	P58125B	
Neutron Jig Number	5824NE	
Epithermal Neutron		
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	Constant Value	
Temperature	68.00	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	

FE Calibration MFE-A.A 55

Base Calibration on 20-JUN-2014 09:41
Field Check on 23-JUN-2014 06:14

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	950.7	126.8
Base Check		281.7
Field Check		281.8

FE Constants MFE-A.A 55

Last Edited on 23-JUN-2014,11:27

Running Mode	No Sleeve	
MFE K Factor	0.1268	
Caliper Source for FE correction	Density Caliper	
Caliper Value for FE correction	N/A	inches
Rm Source for FE correction	Temperature Corr	
Temp. for Rm Corr.	MCG External Temperature	
Stand-off	0.5	inches

Sonic Constants MSS-A.A 73

Last Edited on 23-JUN-2014,11:28

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft
Sonde Mode	Compensated	
Hole Type	Open Hole	

Sonde Parameters

	Measured	Calibrated
Offset	N/A	0.0000

Offset	N/A	0.0000
Free Pipe	N/A	N/A

Peak Amplitude Source N/A

Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing N/A

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	

Full Waveform Parameters

Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
3' Waveform Filter	N/A	
4' Waveform Filter	N/A	
5' Waveform Filter	N/A	
6' Waveform Filter	N/A	
Semblance Level	N/A	
Semblance Window Width	N/A	micro-sec
Sonic 1 Despiker	N/A	N/A
Sonic 2 Despiker	N/A	N/A

Induction Calibration MAI-A.A 5

Base Calibration on 21-JAN-2014,09:50
Field Check on 23-JUN-2014 06:13

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	16.3	470.8	9.3	966.2
2	5.6	376.1	7.6	821.4
3	2.6	266.1	5.2	566.0
4	1.6	130.0	2.6	279.2

Array Temperature 71.1 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	15.1	3862.6
2	0.0	0.0	31.7	3591.0
3	0.0	0.0	29.8	2971.7
4	0.0	0.0	20.8	2126.4
Deep			18.4	1912.4
Medium			43.0	3861.7
Shallow			47.2	5372.9
Array Temperature	0.0		73.4	Deg F

Induction Constants MAI-A.A 5

Last Edited on 23-JUN-2014,11:28

Induction Model	RtAP-WBM	
Caliper for Borehole Corr.	Density Caliper	
Hole Size for Borehole Correction	N/A	inches
Tool Centred	No	
Stand-off Type	Fins	
Stand-off	0.50	inches
Number of Fins on Stand-off	8.0000	

Stand-off Fin Angle	45.00	degrees
Stand-off Fin Width	0.5000	inches
Borehole Corr. Rm Source	Temperature Corr	
Temp. for Rm Corr.	MCG 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-A.A 5

Field Calibration on 21-JAN-2014,15:43

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

High Resolution Temperature Constants MAI-A.A 5

Last Edited on 09-MAY-2014,12:22

Pre-filter Length	11

Caliper Calibration MPD-D.A 480

Base Calibration on 08-MAY-2014 14:36
Field Calibration on 23-JUN-2014 06:16

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	17491	3.99
2	27463	5.98
3	37484	7.97
4	47415	9.86
5	58518	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.03	7.97

Photo Density Calibration MPD-D.A 480

Base Calibration on 08-MAY-2014 14:53
Field Check on 23-JUN-2014 06:21

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Background	1275	1464		
Reference 1	55908	26147	59556	30836
Reference 2	22982	2651	24941	2541

Field Check at Base

1274.5	1464.0

Field Check

1270.4	1465.1

PE Calibration

PE Calibration

Base Calibration	Measured WS	Measured WH	Ratio	Calibrated Ratio
Background	241	1140		
Reference 1	23265	55701	0.422	0.371
Reference 2	6806	22836	0.303	0.272
Field Check at Base	240.7	1139.6		
Field Check	239.4	1136.0		

Density Constants MPD-D.A 480

Last Edited on 23-JUN-2014,10:28

Density Source Id	P50557B	
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	1.11	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	

DOWNHOLE EQUIPMENT

C:\Minimus 13.08.2113\Logs\Shakespeare Janzen #3-26\Shakespeare Janzen #3-26 REPEAT.dta

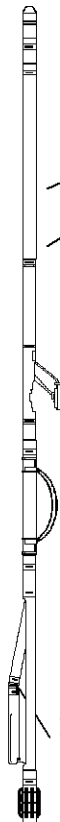
CBH-C, Cablehead, 11 pin
CBH-C 0 LG: 2.40 ft WT: 24.3 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-Resistivity
MMR-C.A 248 LG: 8.59 ft WT: 81.6 lb OD: 4.882 in

Compact Neutron
MDN-B.J 387 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 480 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in



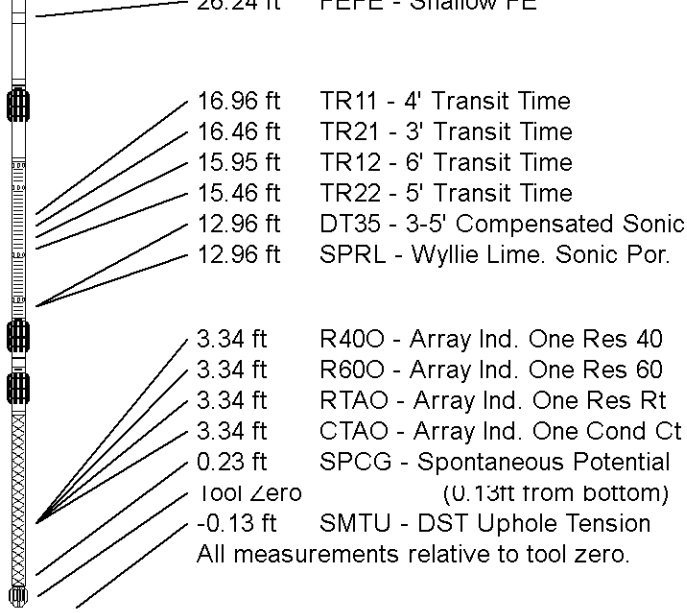
56.02 ft	GRGC - Gamma Ray
53.11 ft	CGXT - MCG External Temperature
45.76 ft	MINV - MMR MicroLog Inverse
45.76 ft	MNRL - MMR MicroLog Normal
40.97 ft	NPRL - Limestone Neutron Por.
33.73 ft	CLDC - Density Caliper
33.73 ft	AVOL - Annular Volume
33.73 ft	HVOL - Hole Volume
31.80 ft	DPRL - Limestone Density Por.
31.80 ft	DEN - Compensated Density
31.80 ft	DCOR - Density Correction
31.74 ft	PDPE - PE
26.24 ft	FEFE - Shallow FE

Compact Focussed Electric
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Sonic
MSS-A.A 73 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Induction
MAI-A.A 5 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 63.70 ft Weight: 480.6 lb



26.24 ft	FEFE - Shallow FE
16.96 ft	TR11 - 4' Transit Time
16.46 ft	TR21 - 3' Transit Time
15.95 ft	TR12 - 6' Transit Time
15.46 ft	TR22 - 5' Transit Time
12.96 ft	DT35 - 3-5' Compensated Sonic
12.96 ft	SPRL - Wyllie Lime. Sonic Por.
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	R60O - Array Ind. One Res 60
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	CTAO - Array Ind. One Cond Ct
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	SHAKESPEARE OIL COMPANY, INC.
WELL	JANZEN #3-26
FIELD	PENCE EAST
PROVINCE/COUNTY	SCOTT
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	3119.00	feet	First Reading	4858.00	feet
Elevation Drill Floor	3117.00	feet	Depth Driller	4890.00	feet
Elevation Ground Level	3107.00	feet	Depth Logger	4890.00	feet

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