Reeves

PHOTO DENSITY
COMPENSATED NEUTRON
1:200 MD

COMPANY	ESSO AUSTRALIA PTY. LTD.
WELL	FLOUNDER A12a
FIELD	GIPPSLAND BASIN
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA
LOCATION	5758709.11 m N, 625849.47 m E
	38°18'39.173" S, 148°26'21.833" E

LSD	SEC	TWP	RGE	Other Services
				COMPENSATED SONIC
API Number				DUAL LATEROLOG
Permit Number				

Permanent Datum MSL , Elevation 0 metres
Log Measured From RT@33.85 metres above Permanent Datum
Drilling Measured From RT

Elevations:

KB		metres
DF	33.85	metres
GL	-93.00	metres

Date	12-APR-2003			
Run Number	1			
Depth Driller	2920.00	metres		
Depth Logger	2921.00	metres		
First Reading	2920.50	metres		
Last Reading	1250.00	metres		
Casing Driller	856.25	metres		
Casing Logger	856.00	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCl/PHPA/GLY			
Density / Viscosity	9.90 lb/USg	68.00 sec/qt		
PH / Fluid Loss	9.40	2.50 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.124 @ 25.0	ohm-m		
Rmf @ Measured Temp	0.113 @ 25.0	ohm-m		
Rmc @ Measured Temp	0.179 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	PRESS		
Rm @ BHT	0.048 @100.0	ohm-m		
Time Since Circulation	17:45 HRS			
Max Recorded Temp	100.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	1			
Recorded By	M.Barnes, R.Tench		G.McManus	
Witnessed By	E.Espiritu			
Circ.Stopped	08:00 11-APR			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	0.00	2920.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	856.25	40.50

REMARKS

DRILLING RIG: NABORS (ISDL) 453.

TOP OF WINDOW: 856.25m
TOP OF WHIPSTOCK: 856.75m
BTTM OF WINDOW: 863.25m

REEVES COMPACT WIRELINE TOOLS RUN ON SCHLUMBERGER UNIT.

MPD CALIPER AND MMR CALIPER ARE INDEPENDENT OF EACH OTHER, DUE TO SWIVALS ABOVE AND BELOW DENSITY/NEUTRON SECTION.

SPIKES IN DEEP LATEROLOG @ 2094m MD AND 2113m MD ARE INVALID.

HTHP: 11.2 ml/30 min @ Deg 121 deg C.

MAX DEVIATION: 53.8 DEGREES AT 2137.0 m.
DOGLEG AT 892 M, WITH DLS > 6.0 DEGREES/30 m.

REEVES CREW: M.BARNES, R.TENCH, G.MCMANUS.
SCHLUMBERGER CREW: B.GLOVER, B.TAYLOR, J.LIGHT, R.DEGROOT.

AFTER SURVEY CALIBRATION

C:\Fla a12a\MAIN LOG A DSC.dta

Gamma Check MCG 076

Field Calibration on 7-APR-2003,14:34
After Survey Check on 12-APR-2003,07:31

	Before (API)	After (API)
Background	10	6
Calibrator (Gross)	919	915
Calibrator (Net)	909	909

Neutron Check MDN 069

Before Survey Check on 7-APR-2003 14:52
After Survey Check on 12-APR-2003,07:35

Near (cps)		Far (cps)	
Before	After	Before	After
1846	1818	2708	2648

Ratio	
Before	After
0.682	0.687

Photo Density Check MPD 067

Before Survey Check on 7-APR-2003 14:40
After Survey Check on 12-APR-2003,07:40

Density Check

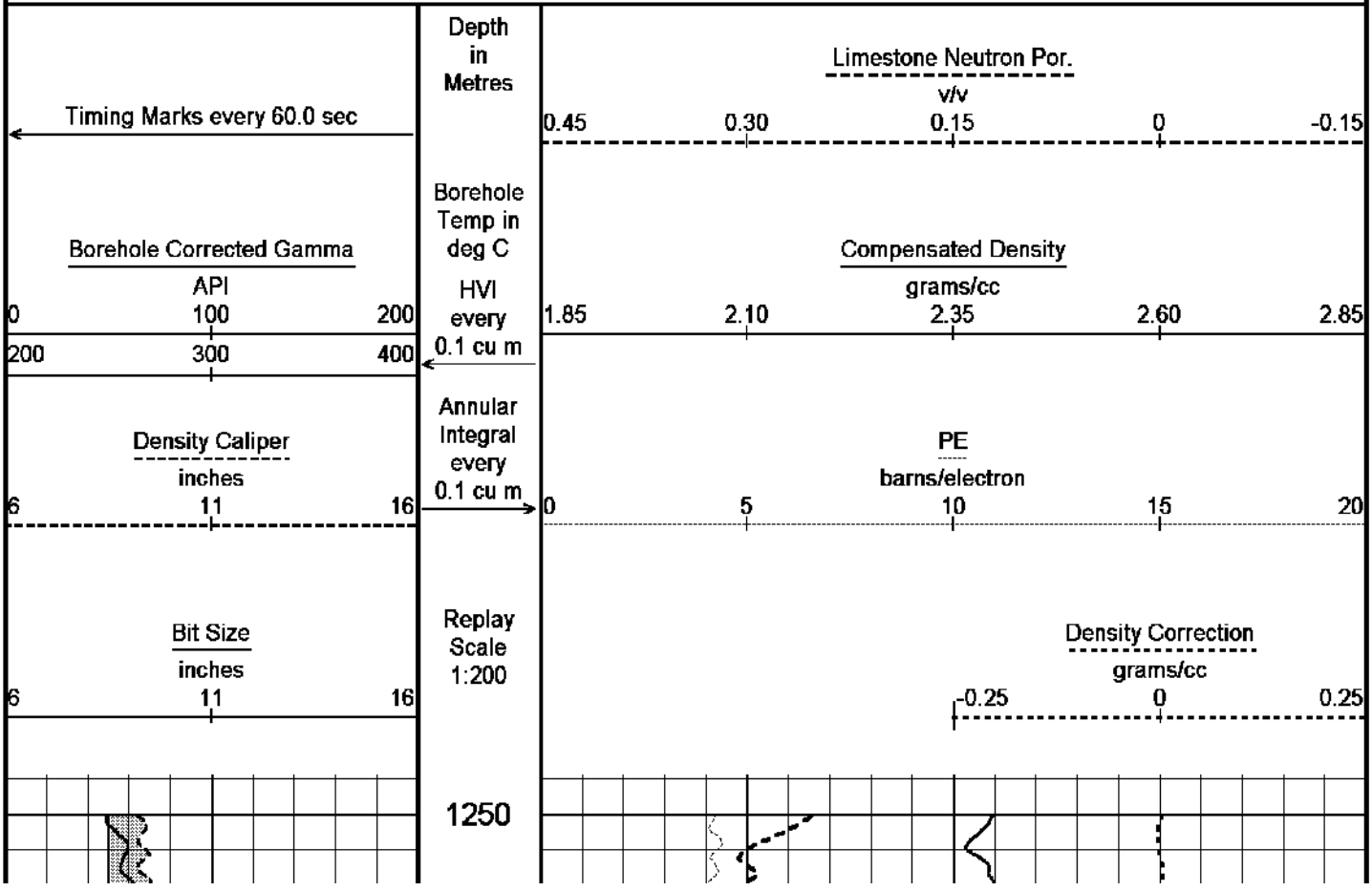
Near		Far	
Before	After	Before	After
957.7	954.7	1152.3	1153.1

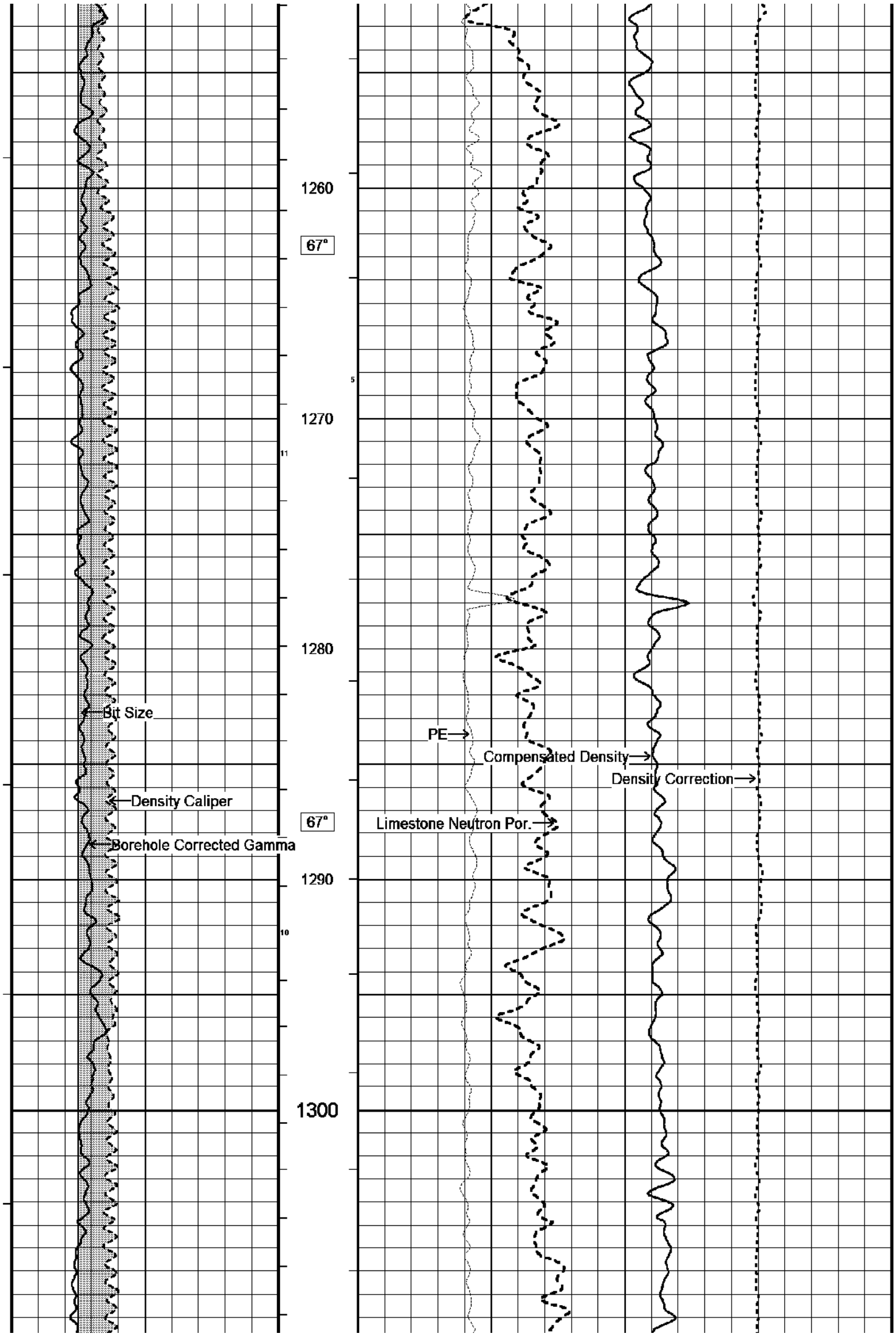
PE Check

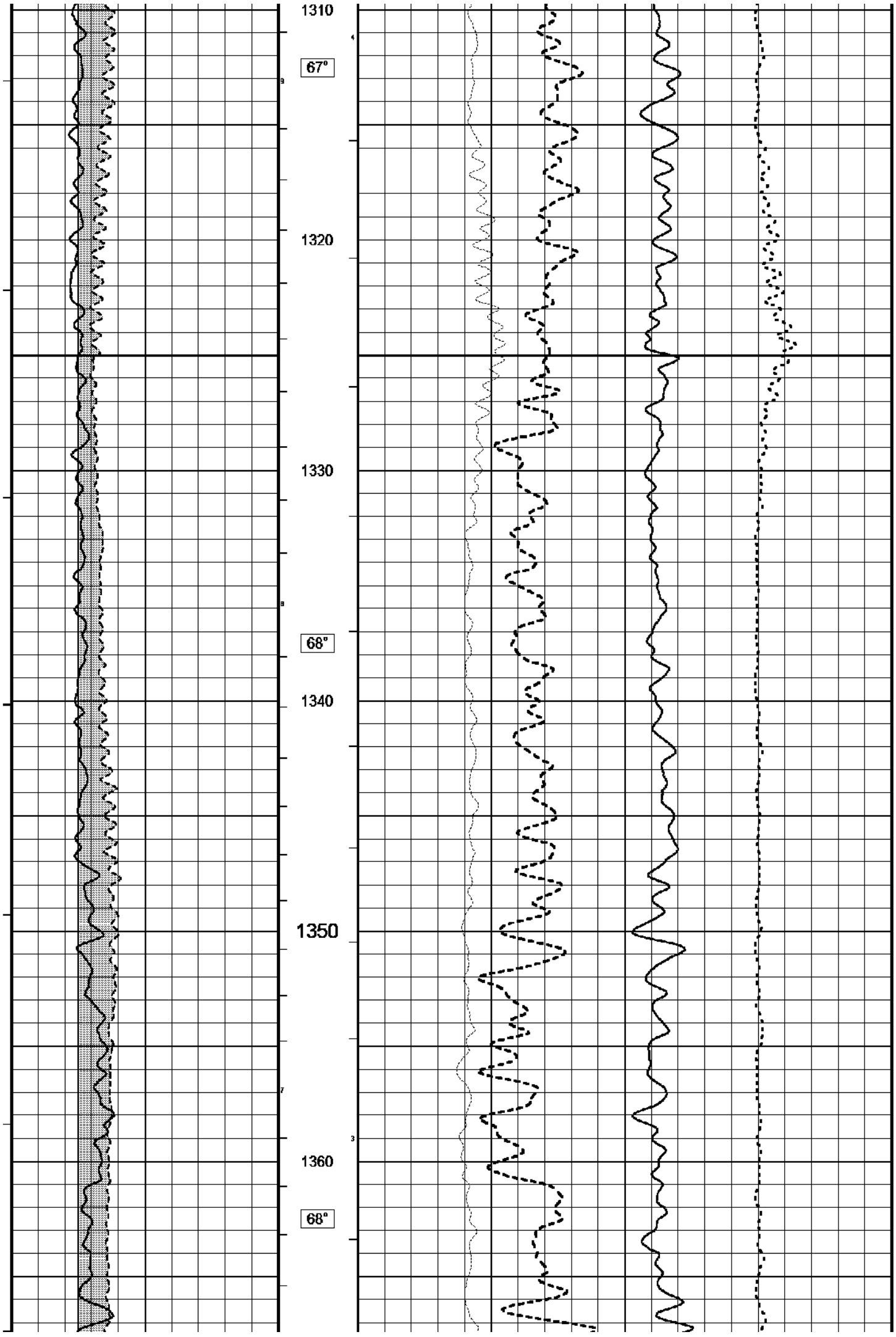
	Before	After
WS	180.1	179.6
WH	831.6	828.5

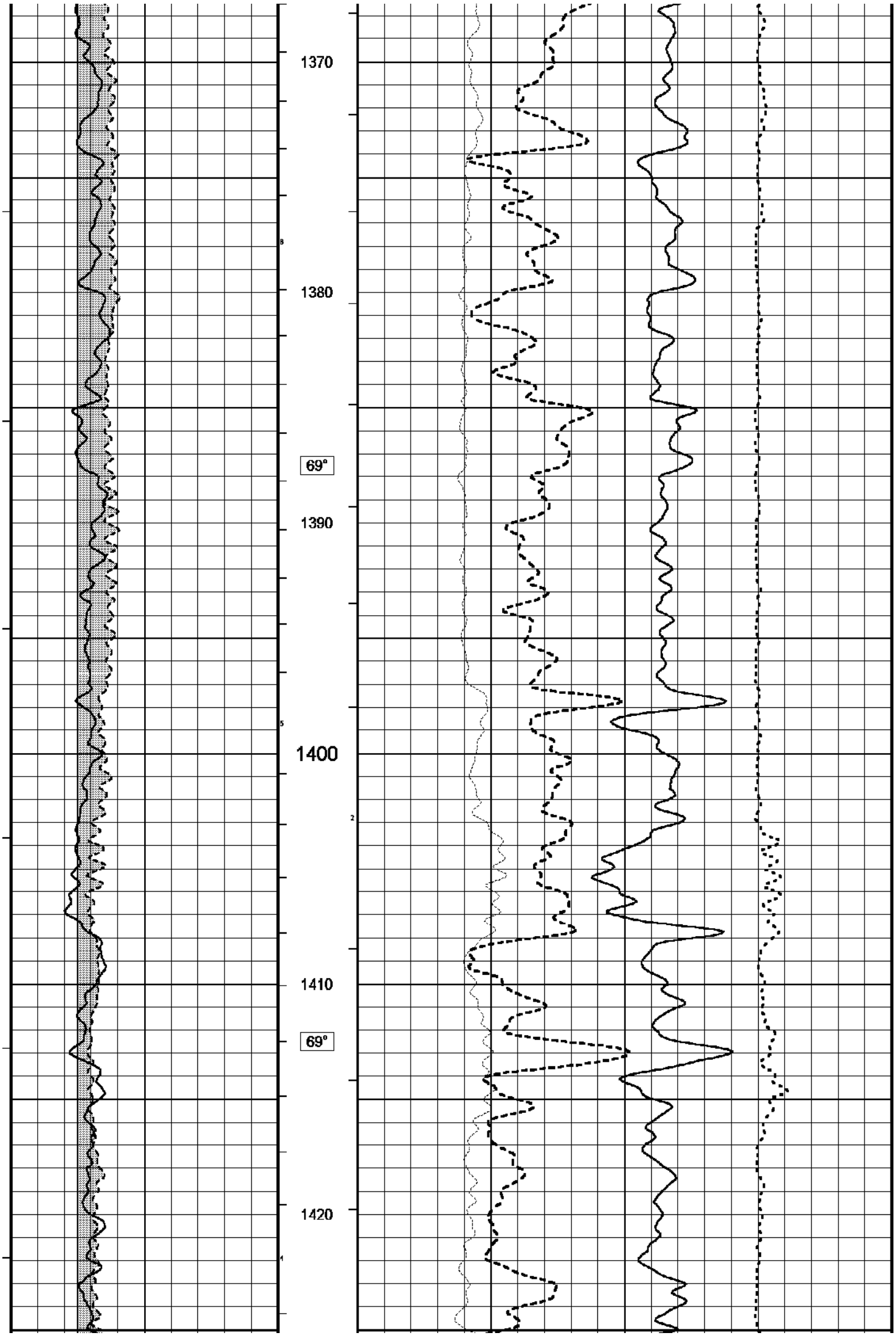
MAIN LOG B 1:200

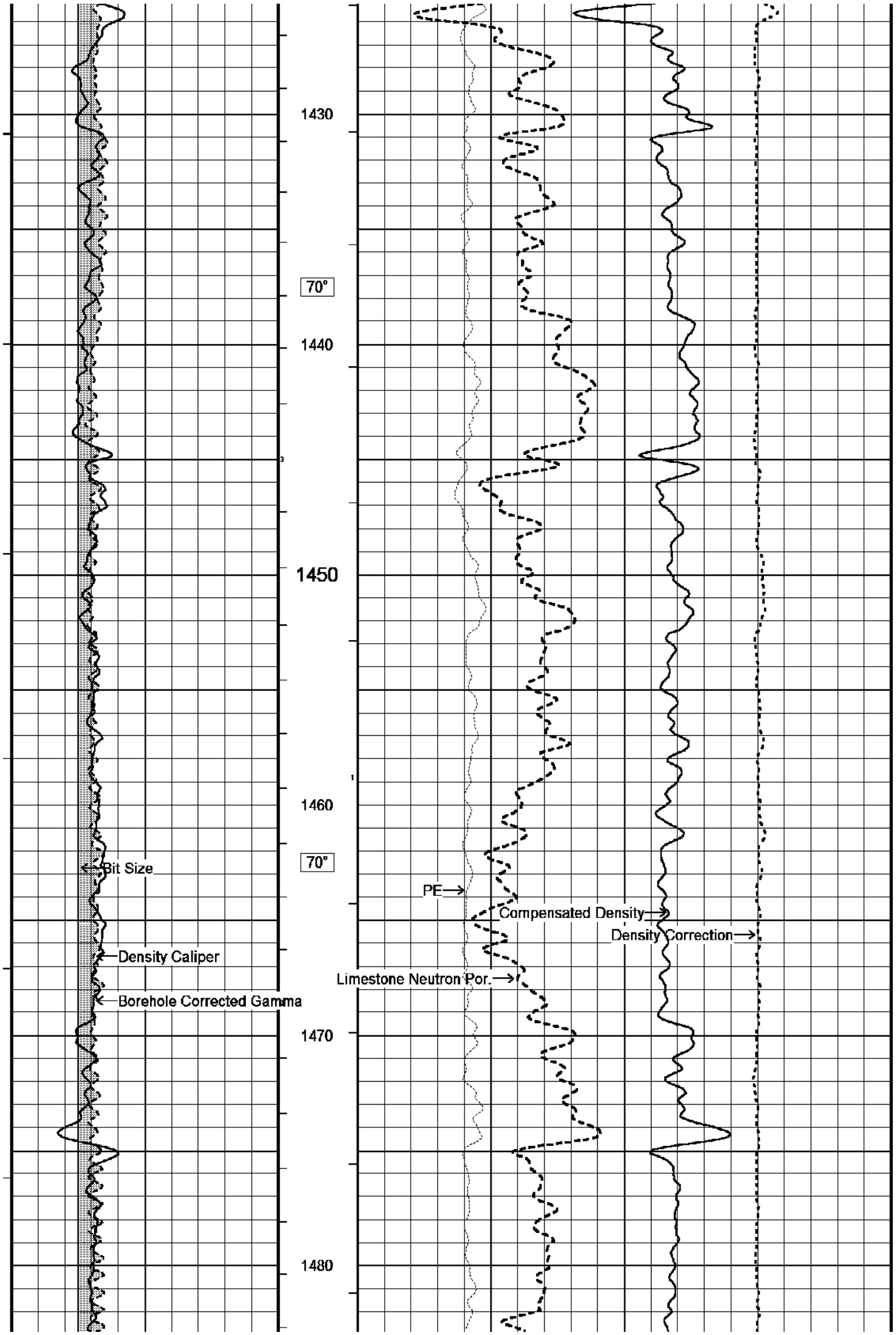
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 24-MAY-2003 15:02
Filename: C:\Fla a12a\MAIN LOG B DSC.dta
Recorded on 12-APR-2003 04:49
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

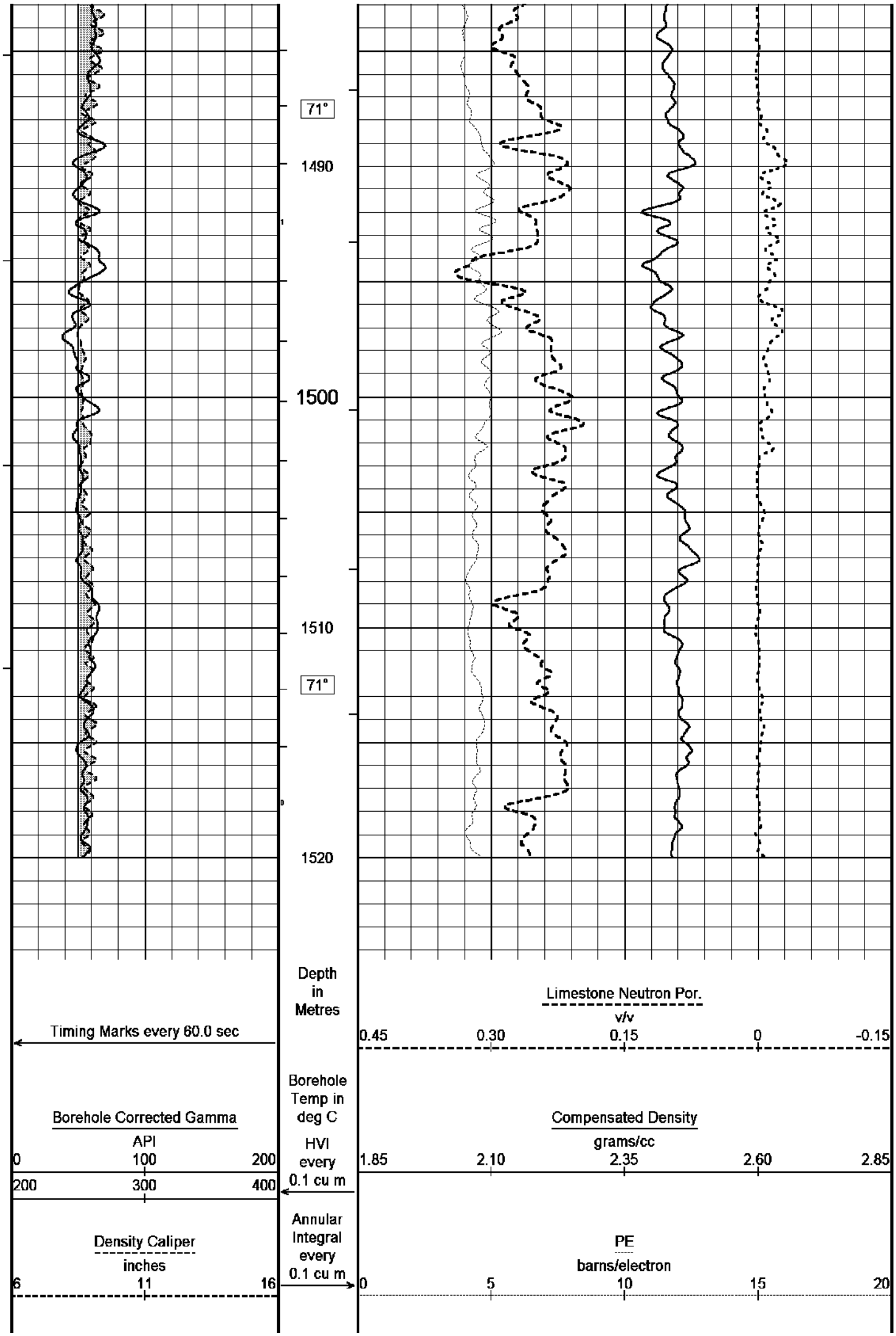



1260
67°
1270
1280
Bit Size
Density Caliper
67°
Borehole Corrected Gamma
1290
1300
PE
Compensated Density
Density Correction
Limestone Neutron Por.


1310
67°
1320
1330
68°
1340
1350
1360
68°


1370
1380
69°
1390
1400
1410
69°
1420


1430
70°
1440
1450
1460
70°
1470
1480
Bit Size
Density Caliper
Borehole Corrected Gamma
PE
Compensated Density
Density Correction
Limestone Neutron Por.


71°
1490
1500
1510
71°
1520
Depth in Metres
Timing Marks every 60.0 sec
Borehole Corrected Gamma
API
0
100
200
200
300
400
Density Caliper
inches
6
11
16
Borehole Temp in deg C
HVI every 0.1 cu m
Annular Integral every 0.1 cu m
Limestone Neutron Por.
v/v
0.45
0.30
0.15
0
-0.15
Compensated Density
grams/cc
1.85
2.10
2.35
2.60
2.85
PE
barns/electron
0
5
10
15
20

Bit Size
inches
6 11 16

Replay Scale 1:200

Density Correction
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Fla a12a\MAIN LOG B DSC.dta
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

Plotted on 24-MAY-2003 15:02
Recorded on 12-APR-2003 04:49

MAIN LOG B 1:200

MAIN LOG A 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Fla a12a\MAIN LOG A DSC.dta
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

Plotted on 24-MAY-2003 15:02
Recorded on 12-APR-2003 01:43

Timing Marks every 60.0 sec

Depth in Metres

Limestone Neutron Por.
v/v
0.45 0.30 0.15 0 -0.15

Borehole Temp in deg C

Borehole Corrected Gamma
API
0 100 200
200 300 400

Compensated Density
grams/cc
1.85 2.10 2.35 2.60 2.85

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Density Caliper
inches
6 11 16

PE
barns/electron
0 5 10 15 20

Bit Size
inches
6 11 16

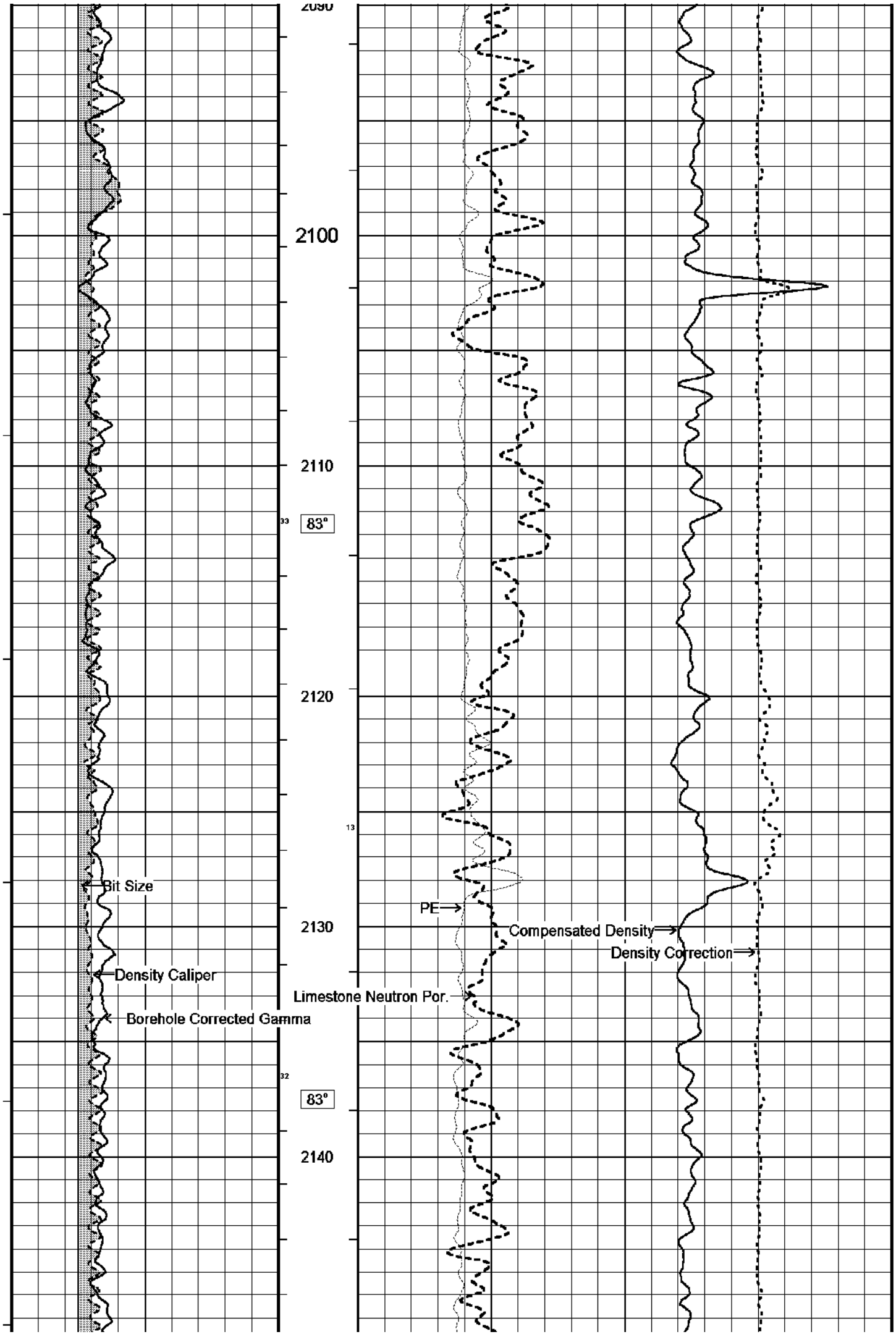
Replay Scale 1:200

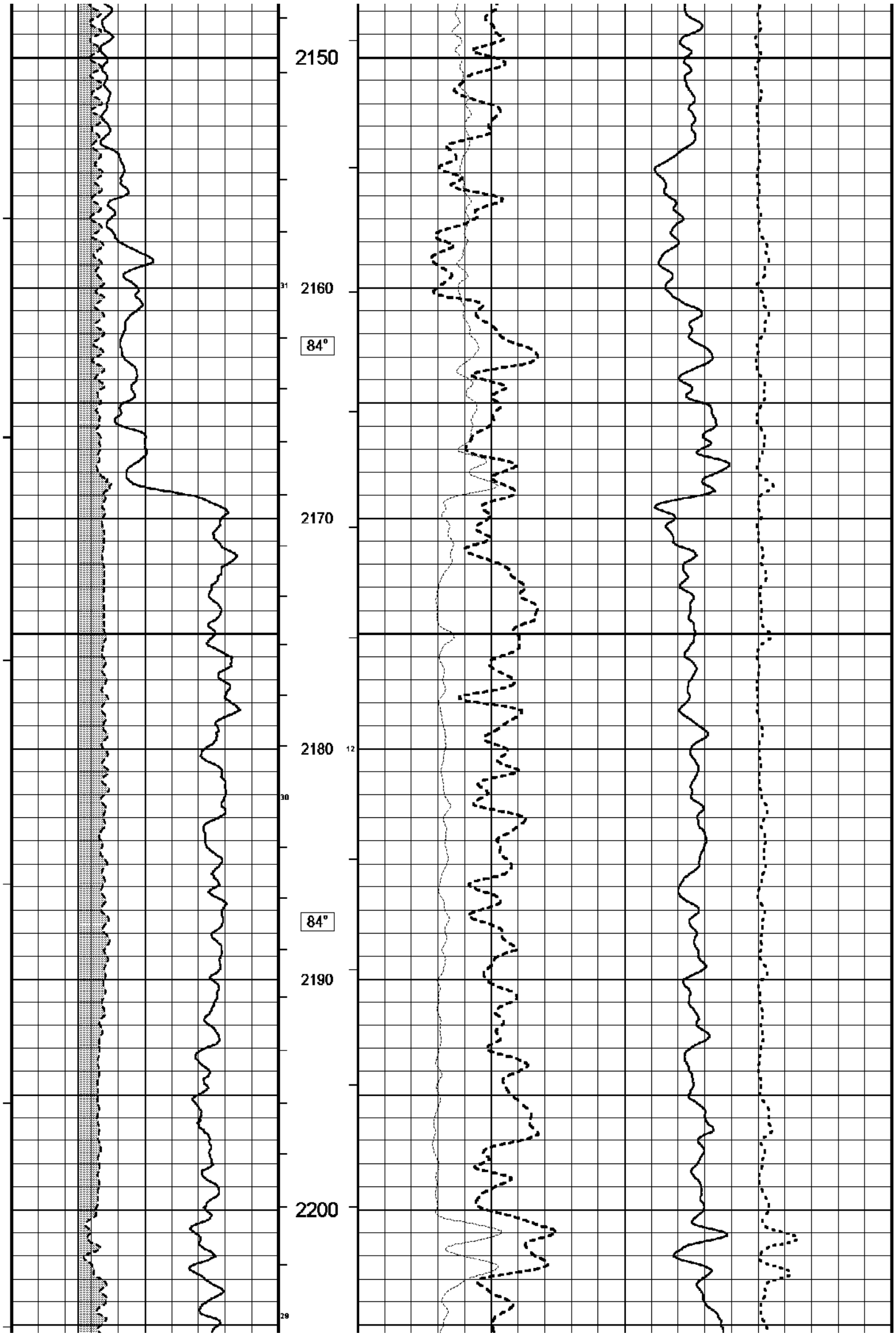
Density Correction
grams/cc
-0.25 0 0.25

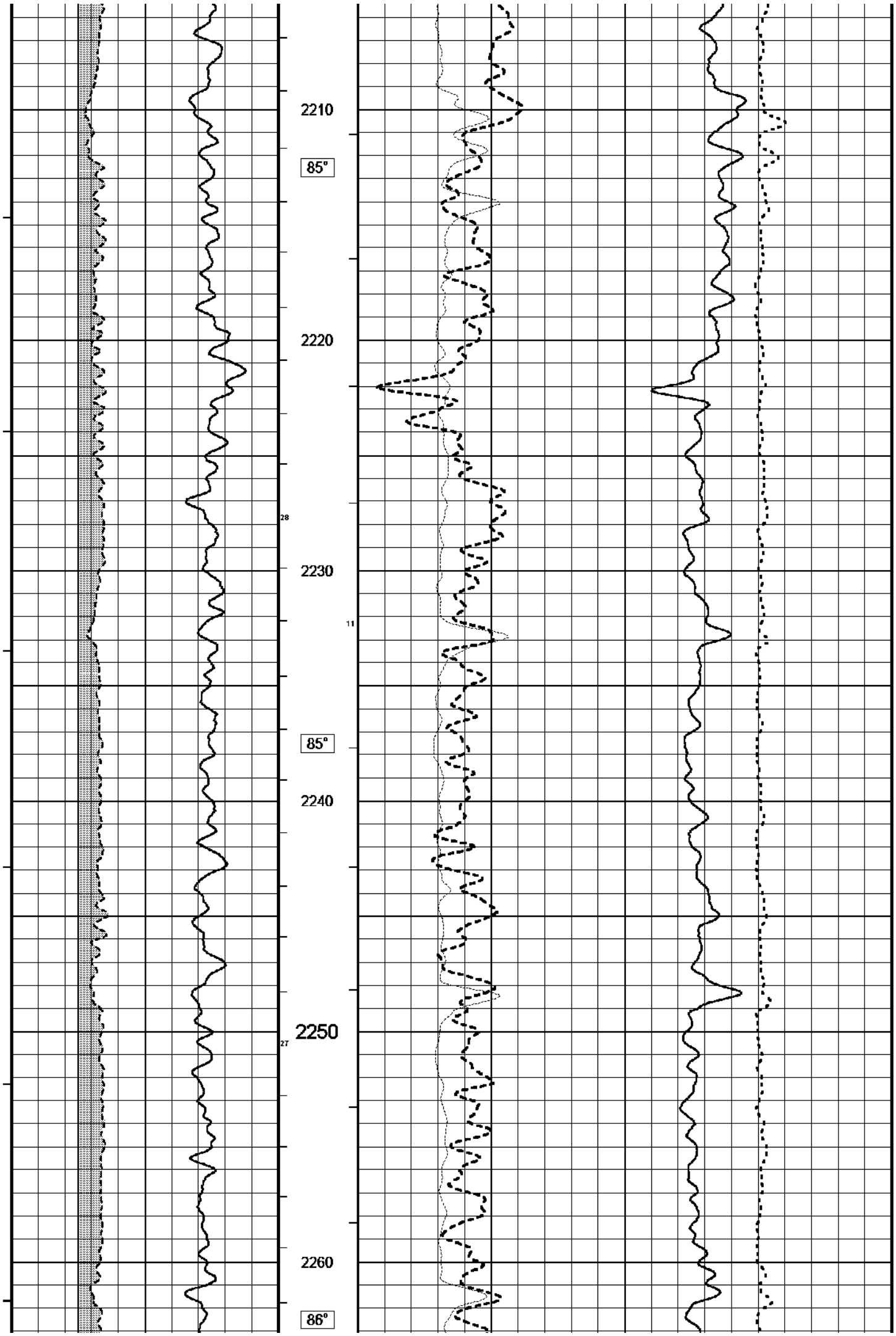
2070

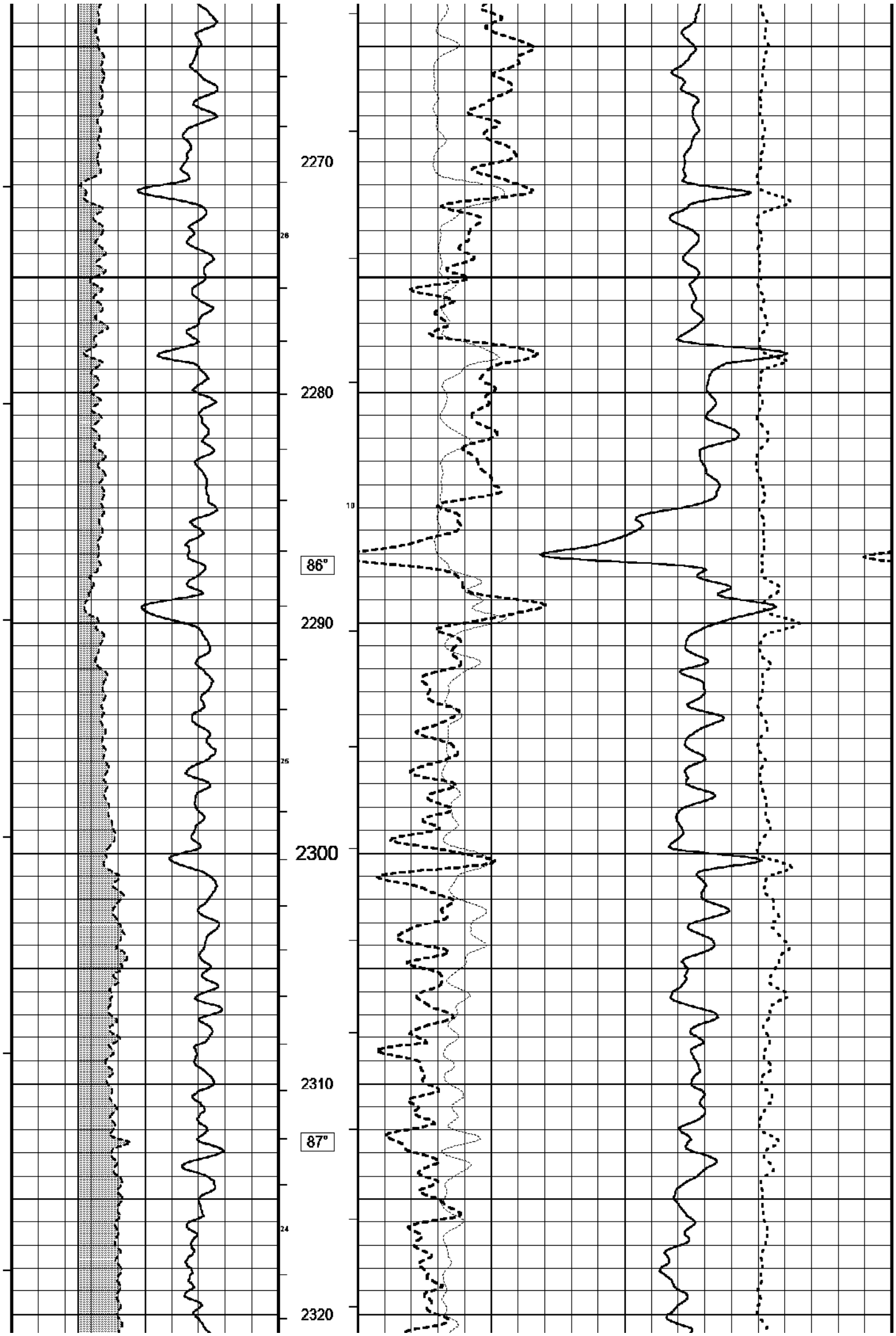
2080

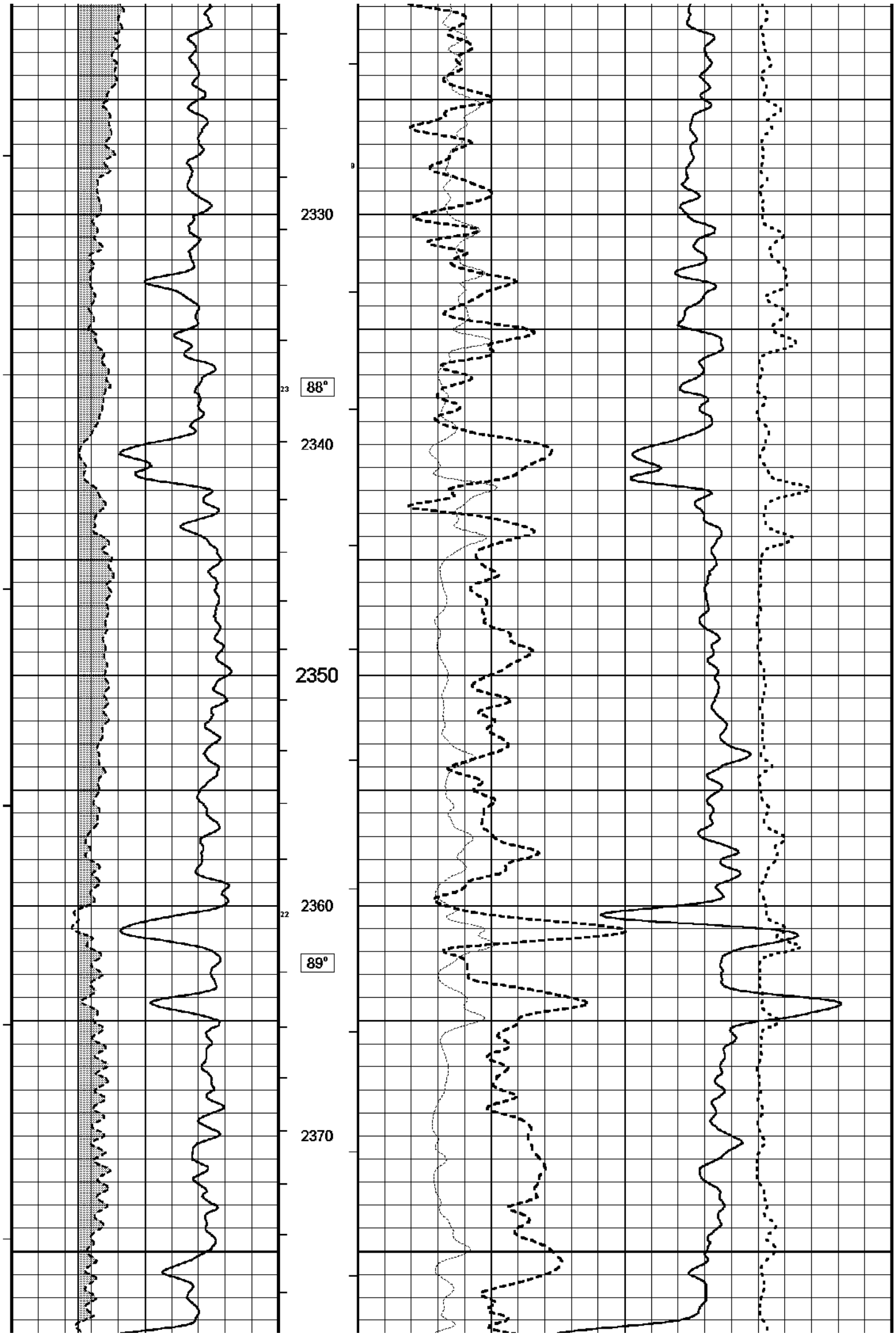
82°

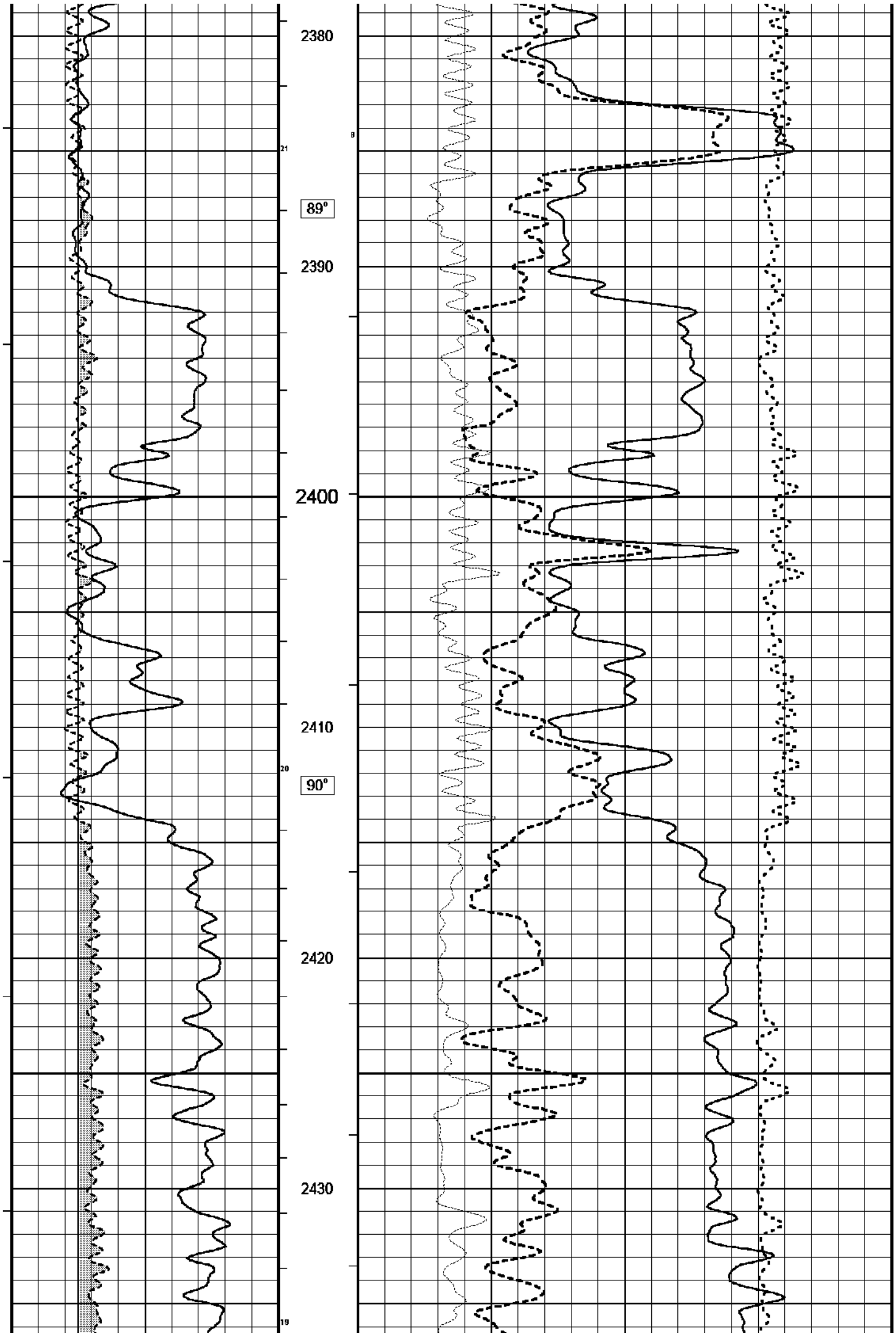

2090
2100
2110
83°
2120
2130
83°
2140
Bit Size
Density Caliper
Borehole Corrected Gamma
PE
Limestone Neutron Por.
Compensated Density
Density Correction

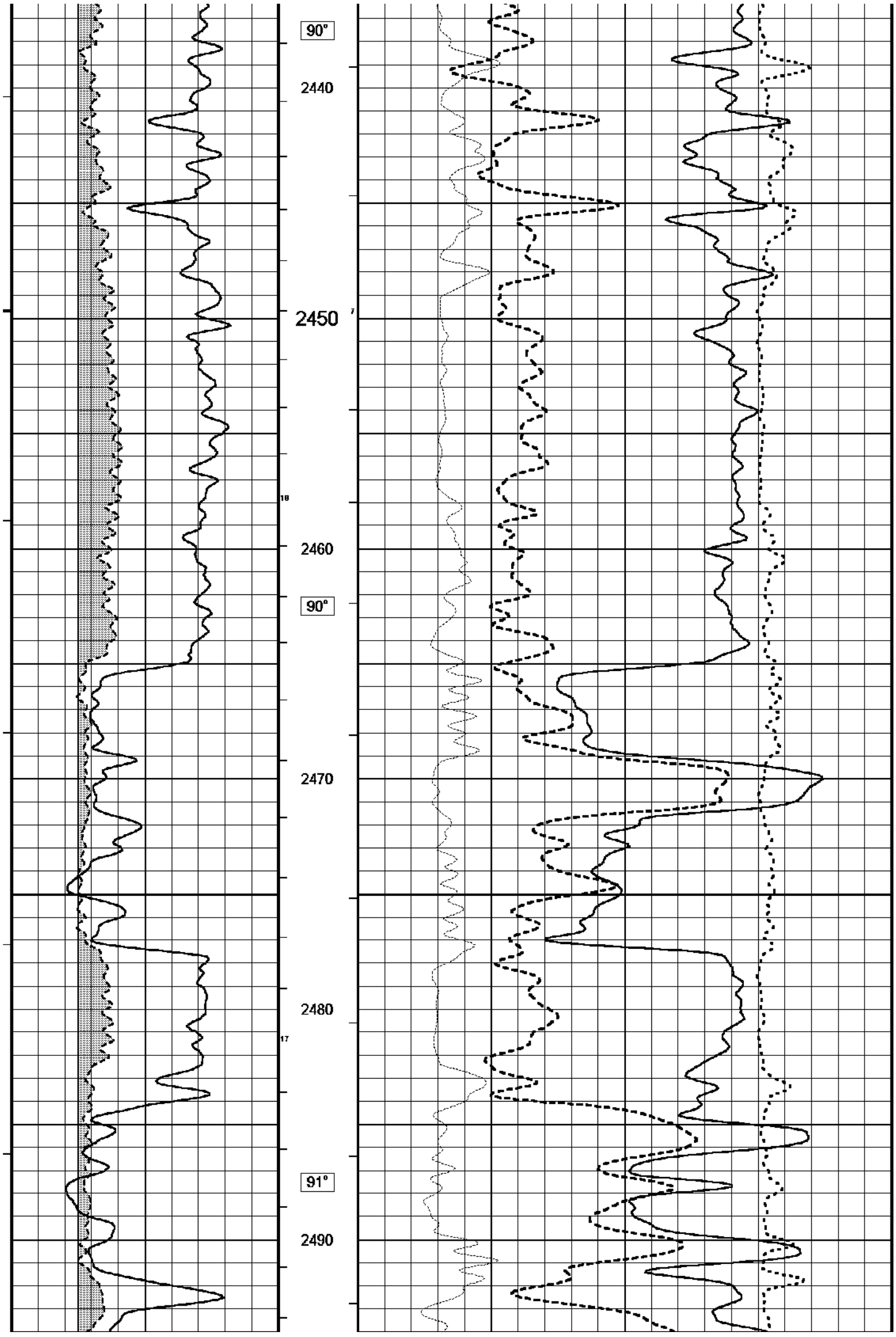

2150
2160
84°
2170
2180
84°
2190
2200

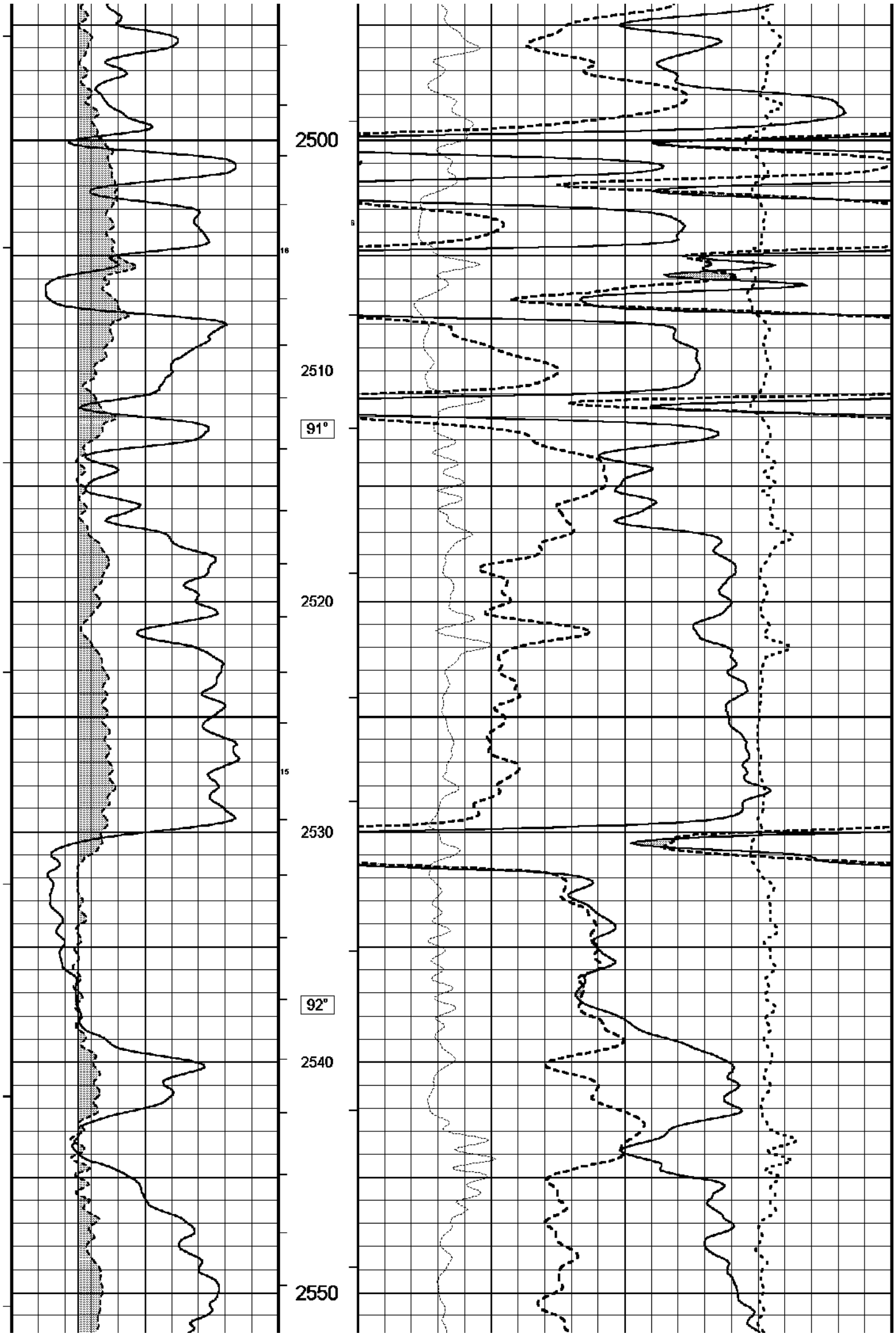

2210
85°
2220
28
2230
11
85°
2240
2250
27
2260
86°

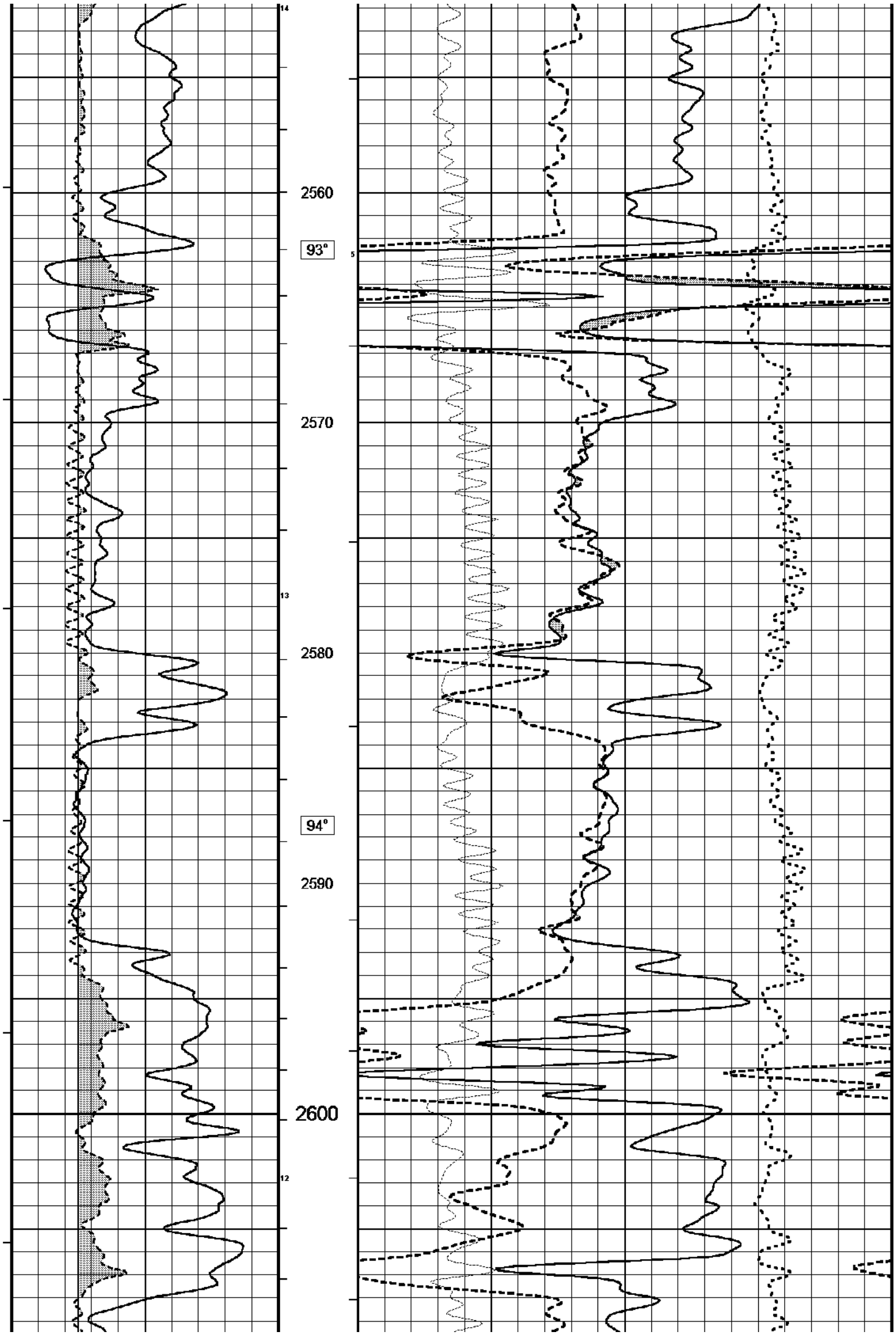

2270
2280
2290
2300
2310
2320
86°
87°

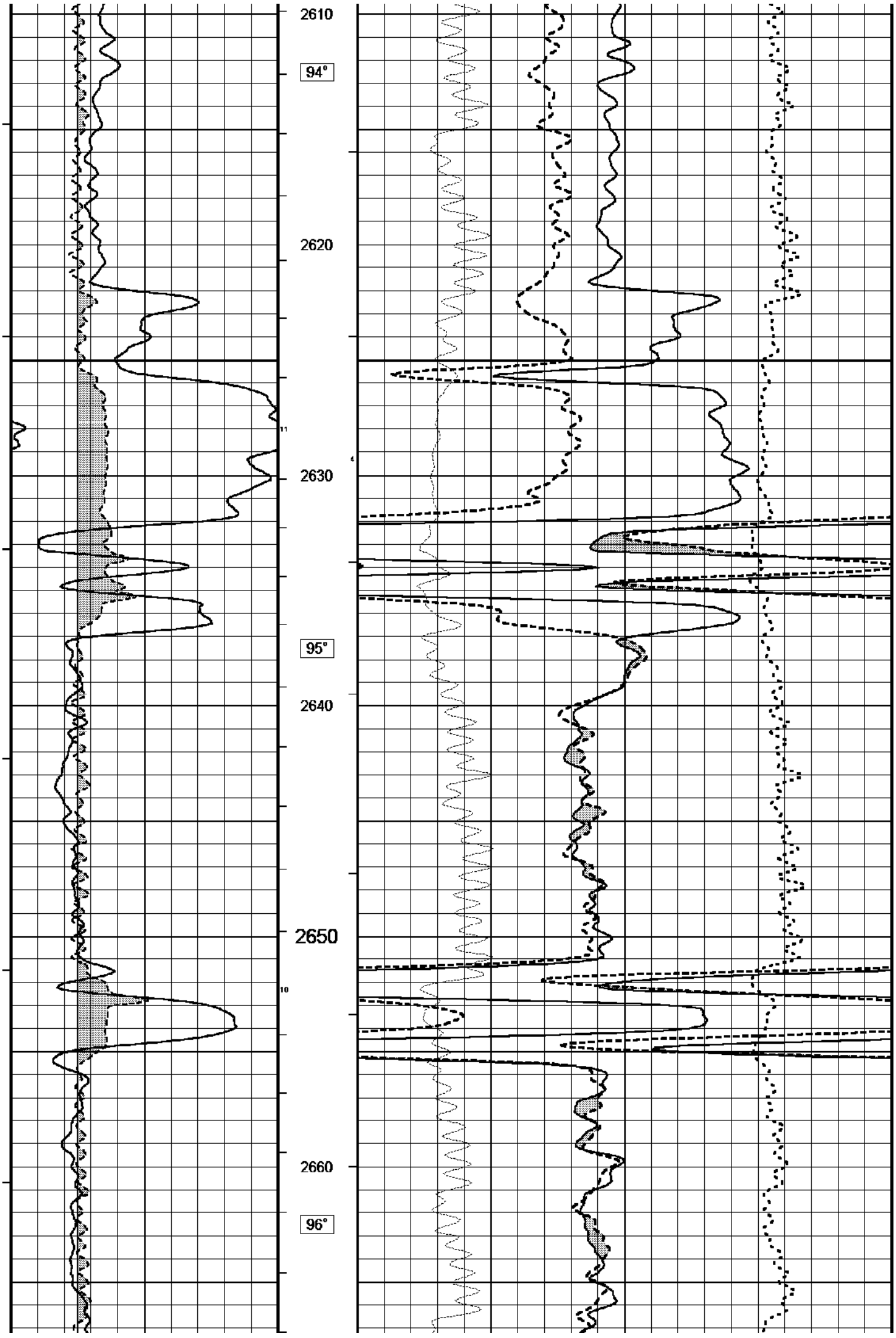

2330
88°
2340
2350
2360
89°
2370

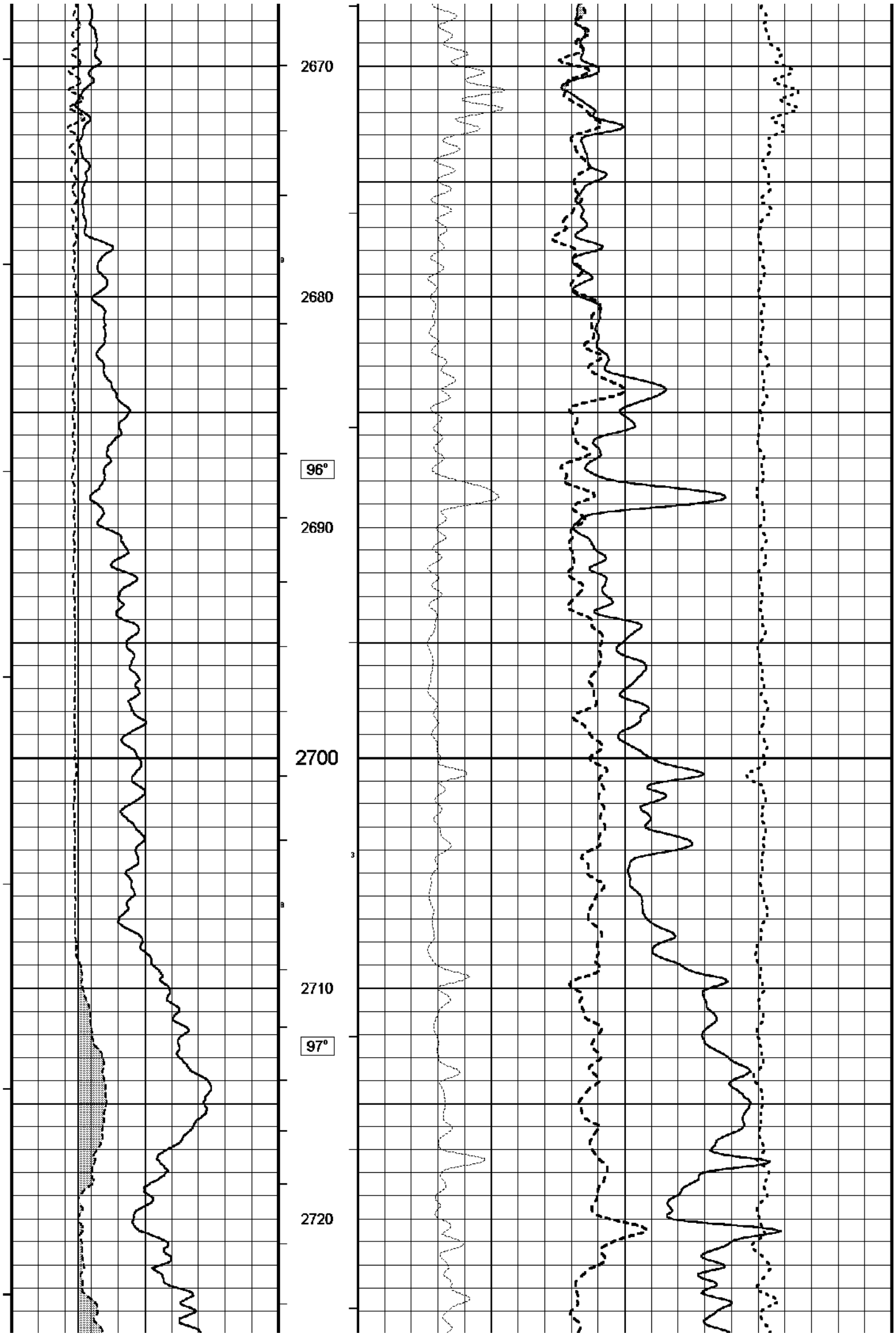

2380
89°
2390
2400
2410
90°
2420
2430

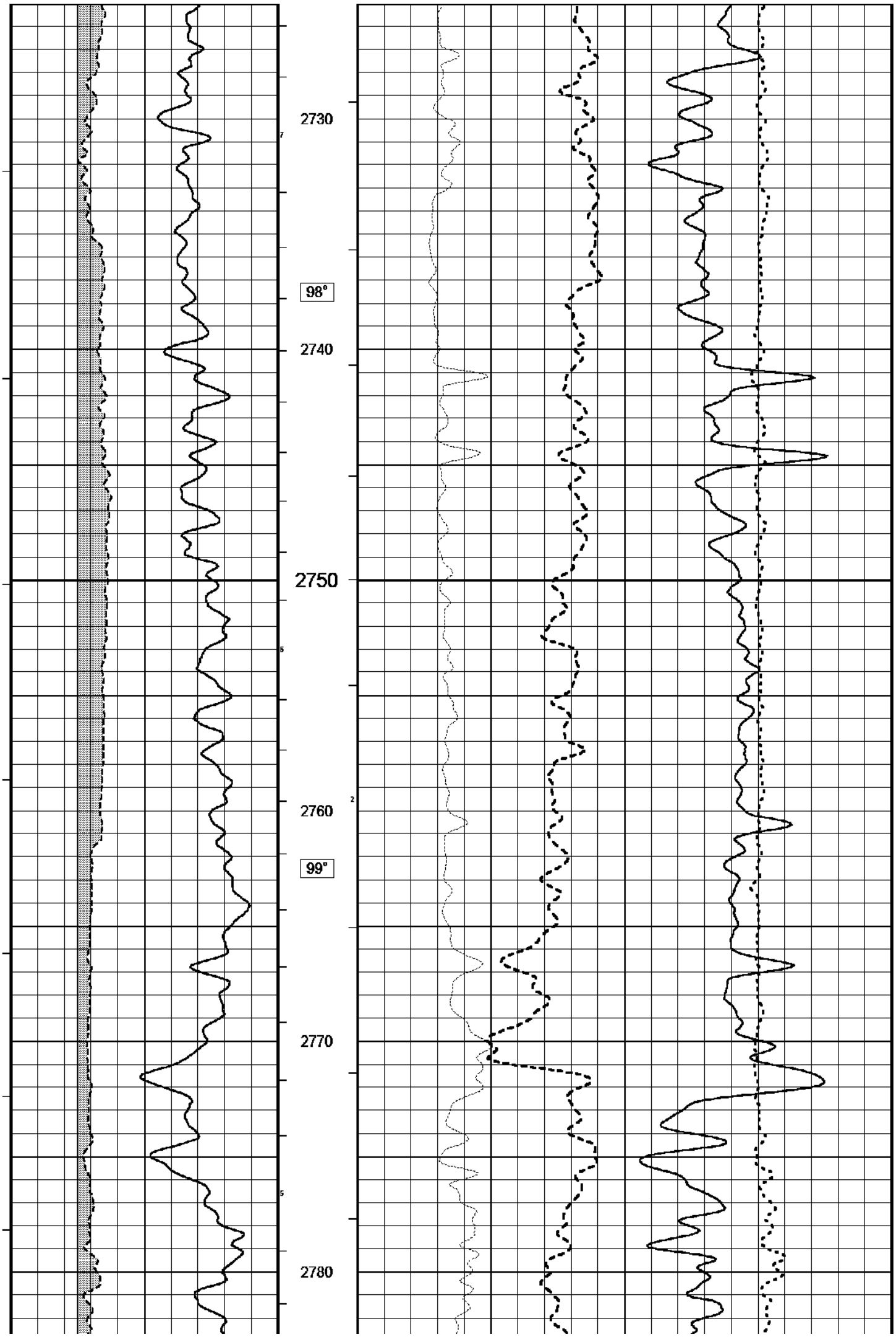

90°
2440
2450
2460
90°
2470
2480
91°
2490

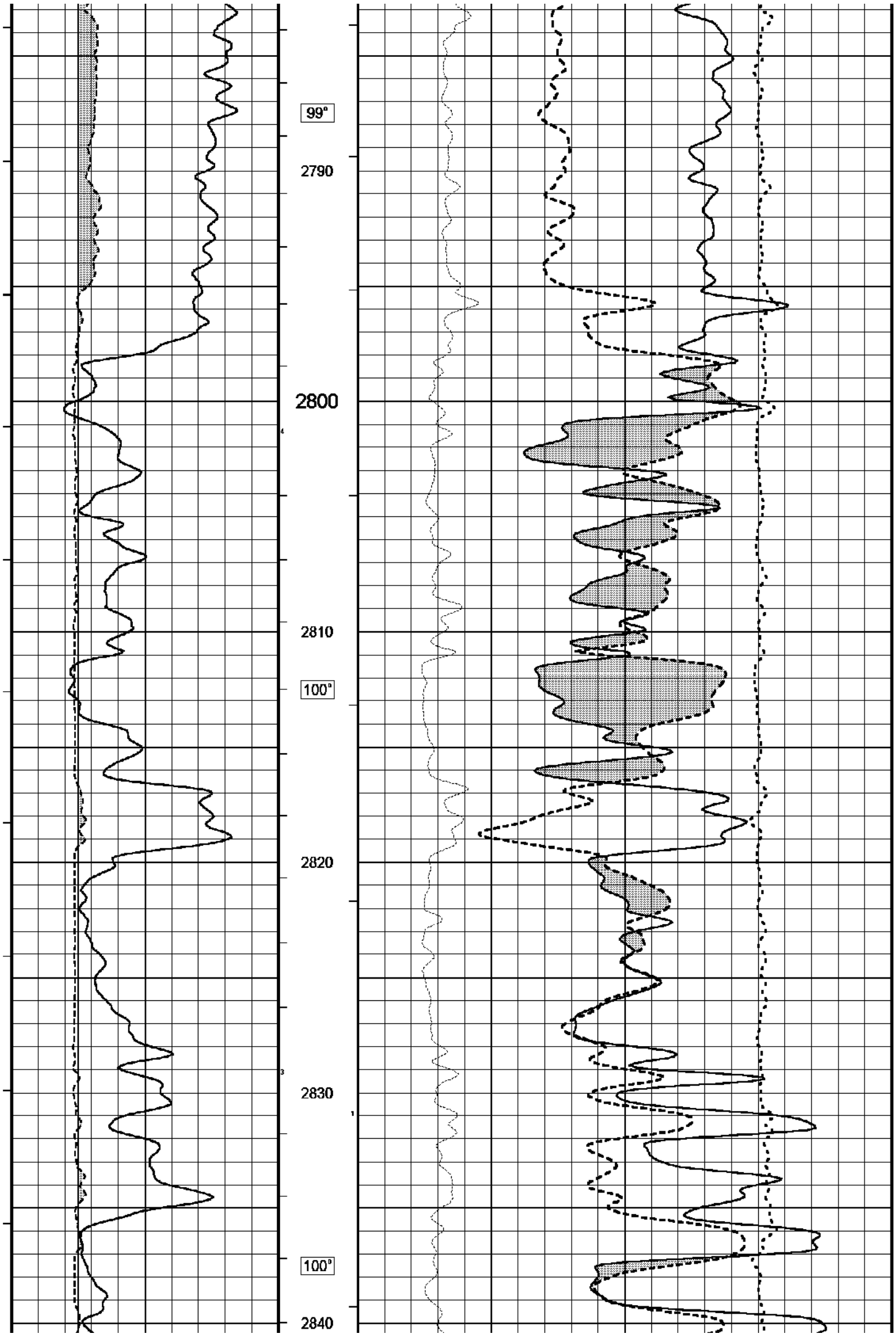

2500
2510
91°
2520
2530
92°
2540
2550

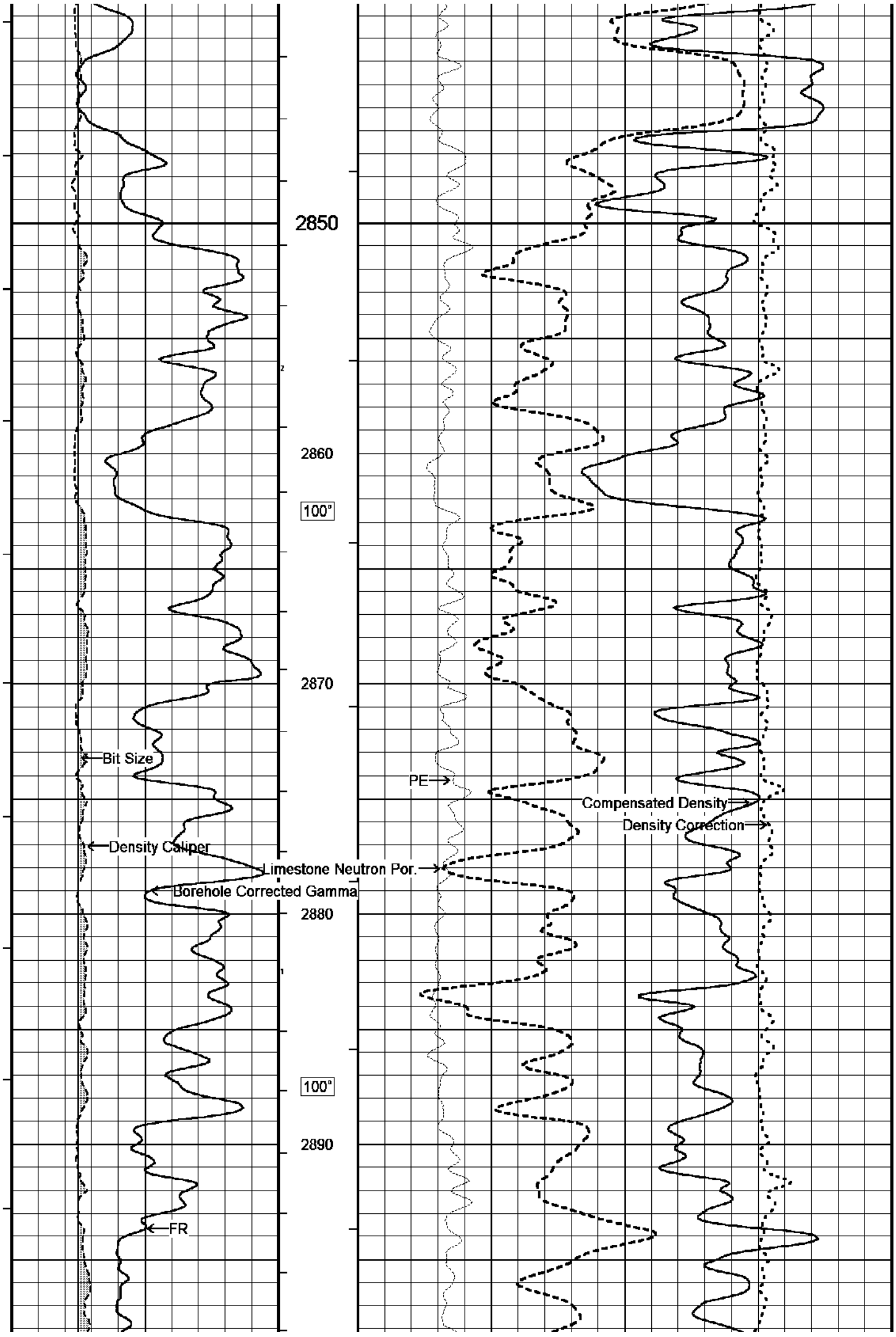

14
13
12
2560
93°
2570
2580
94°
2590
2600

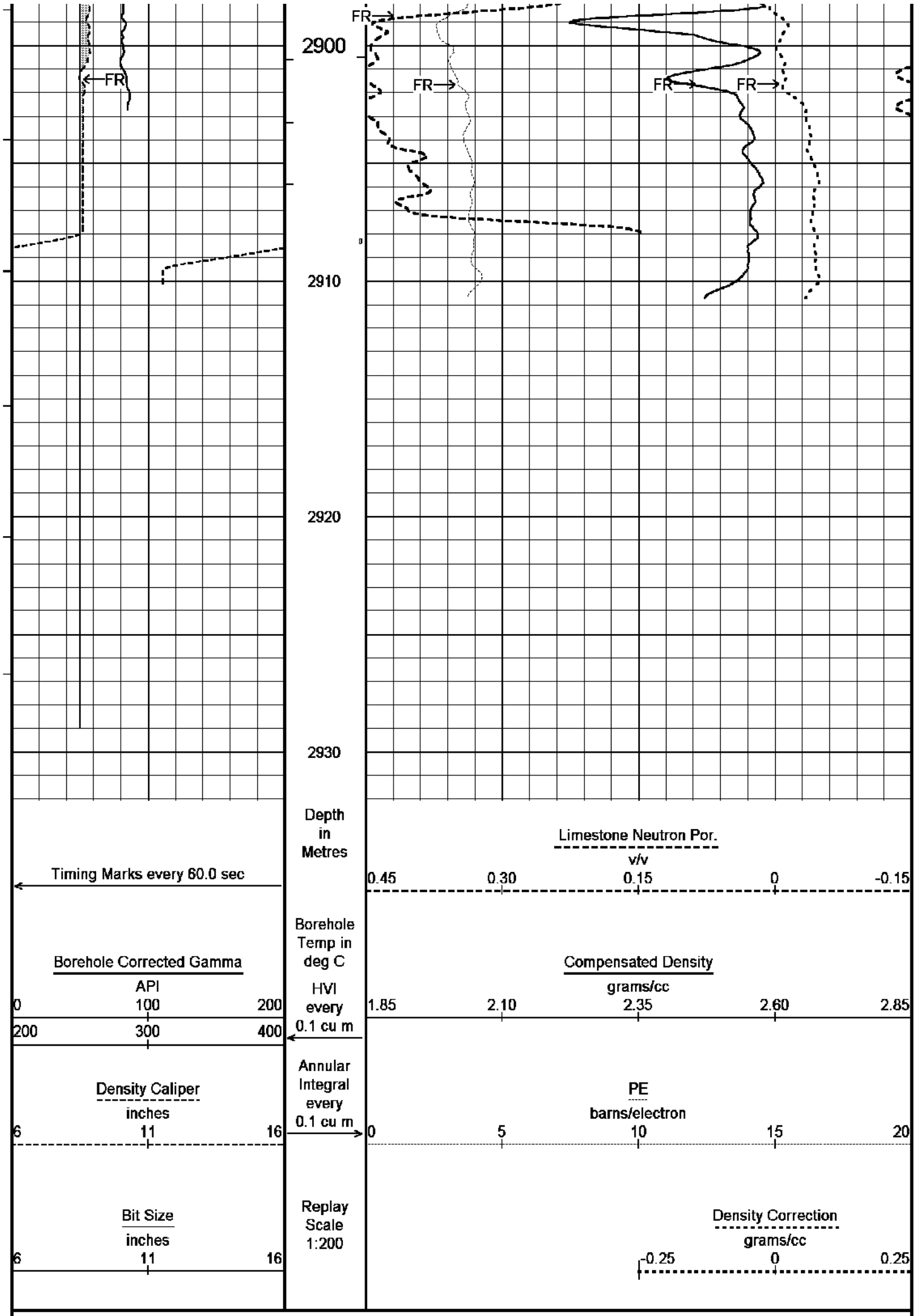

2610
94°
2620
2630
95°
2640
2650
2660
96°


2670
2680
96°
2690
2700
2710
97°
2720


2730
98°
2740
2750
2760
99°
2770
2780


99°
2790
2800
2810
100°
2820
2830
100°
2840


2850
2860
100°
2870
Bit Size
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
Borehole Corrected Gamma
2880
100°
2890
FR



Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 24-MAY-2003 15:02

Filename: C:\Fla a12a\MAIN LOG A DSC.dta

Recorded on 12-APR-2003 01:43

System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

MAIN LOG A 1:200

REPEAT SECTION 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 24-MAY-2003 15:02
Filename: C:\Fla a12a\REPEAT SECTION DSC.dta — Recorded on 12-APR-2003 01:08
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

Timing Marks every 60.0 sec

Depth in Metres

Borehole Temp in deg C

HVI

Annular Integral every 0.1 cu m

Replay Scale 1:200

Limestone Neutron Por.
v/v
0.45 0.30 0.15 0 -0.15

Compensated Density
grams/cc
1.85 2.10 2.35 2.60 2.85

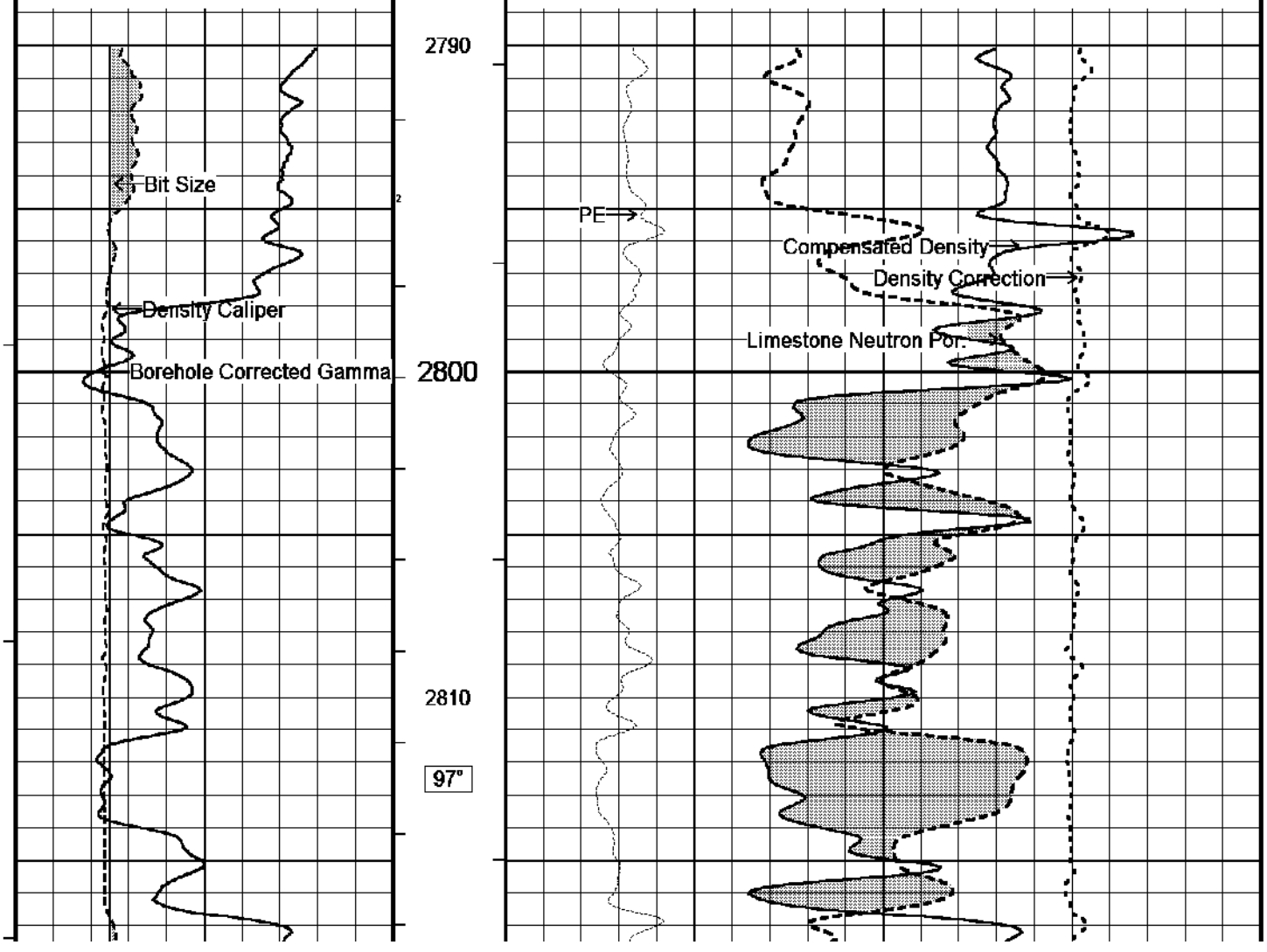
PE
barns/electron
0 5 10 15 20

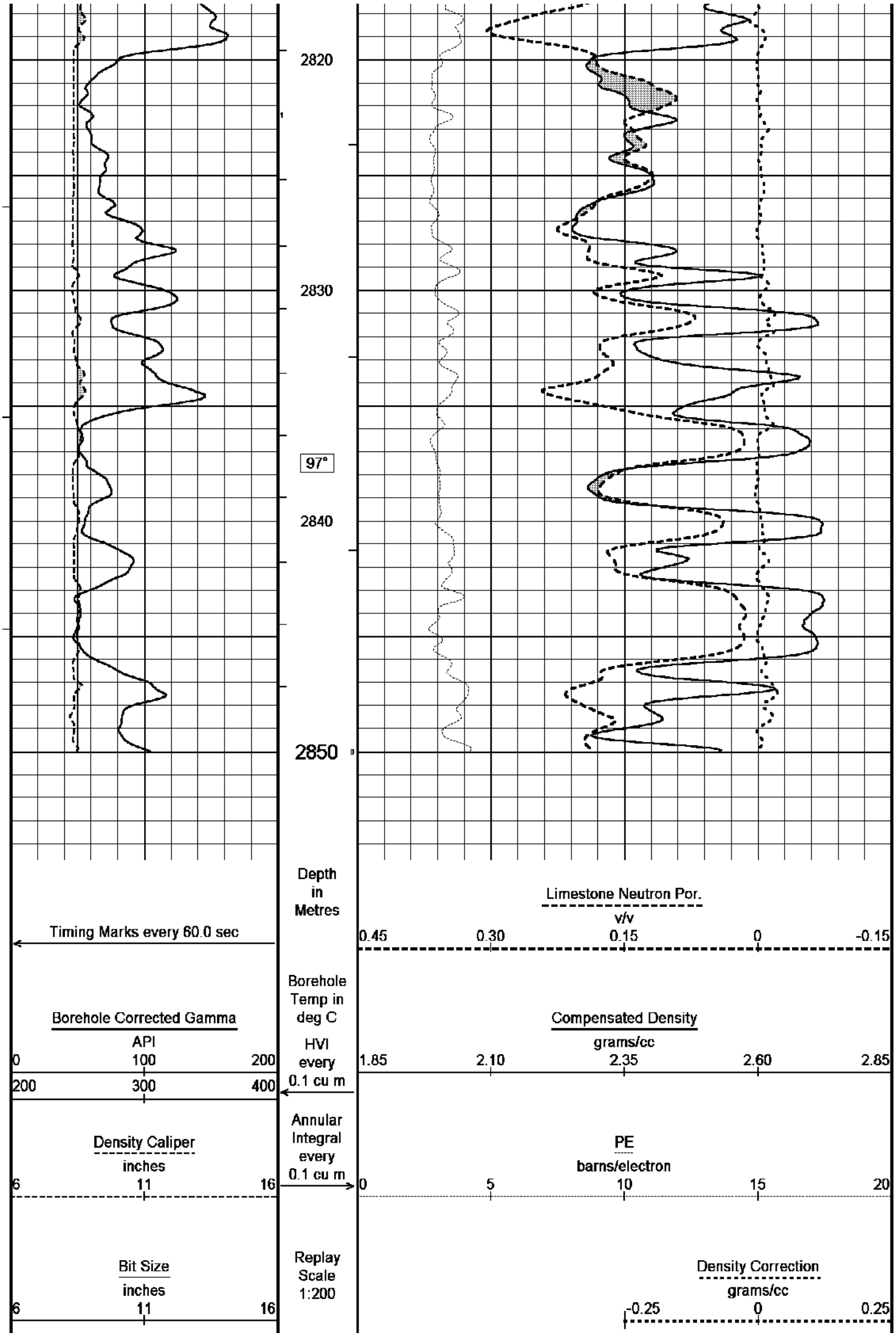
Density Correction
grams/cc
-0.25 0 0.25

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16




2820
2830
97°
2840
2850
Depth in Metres
Timing Marks every 60.0 sec
Borehole Corrected Gamma
API
0 100 200
200 300 400
Density Caliper
inches
6 11 16
Bit Size
inches
6 11 16
Borehole Temp in deg C
HVI every 0.1 cu m
Annular Integral every 0.1 cu m
Replay Scale 1:200
Limestone Neutron Por.
v/v
0.45 0.30 0.15 0 -0.15
Compensated Density
grams/cc
1.85 2.10 2.35 2.60 2.85
PE
barns/electron
0 5 10 15 20
Density Correction
grams/cc
-0.25 0 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 24-MAY-2003 15:02
Filename: C:\Fla a12a\REPEAT SECTION DSC.dta — Recorded on 12-APR-2003 01:08
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

REPEAT SECTION 1:200

BEFORE SURVEY CALIBRATION

C:\Fla a12a\MAIN LOG A DSC.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.05	ohm-metres
Mud Resistivity Temperature	100.00	degrees C
Water Level	0.00	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.00	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.61	
RWA Constant M	2.15	

Gamma Calibration MCG 076

Field Calibration on 7-APR-2003,14:34

	Measured	Calibrated (API)
Background	16	10
Calibrator (Gross)	1432	919
Calibrator (Net)	1416	909

Gamma Constants MCG 076

Gamma Calibrator Number	60	
Mud Density	1.19	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 076

Field Calibration on 19-FEB-2003,09:40

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 076

Pre-filter Length	11

Neutron Calibration MDN 069

Base Calibration on 17-JAN-2003 16:36
Field Check on 7-APR-2003 14:52

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2851	89	3714	110
Ratio	31.978		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1871	2717
Ratio	0.689	

Field Check

	Calibrated (cps)	
	1846	2708
Ratio	0.682	

Neutron Constants MDN 069

Neutron Source Id	724

Neutron Jig Number	52	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.19	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	MCG External Temperature	
Temperature	N/A	degrees C
Mud Salinity	53.00	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 067

Base Calibration on 12-APR-2003,03:34
Field Calibration on

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14809	4.61
2	24384	6.59
3	34304	8.58
4	44327	10.54
5	55504	12.61
6	N/A	N/A

Field Calibration

	0	0
	0.00	0.00

Photo Density Calibration MPD 067

Base Calibration on 19-JAN-2003 12:40
Field Check on 7-APR-2003 14:40

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	58595	20350	53282	19349
Reference 2	27401	2638	25298	2555

Field Check at Base

	960.1	1164.2

Field Check

	957.7	1152.3

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	180	835		
Reference 1	18645	58403	0.321	0.318
Reference 2	7313	27257	0.270	0.273

Field Check at Base

179.8	835.5	

Field Check

180.1	831.6	

Density Constants MPD 067

Density Source Id	226	
Nylon Calibrator Number	517	
Aluminium/Fe Calibrator Number	517	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.19	gm/cc
Mud Density Z/A Correction	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

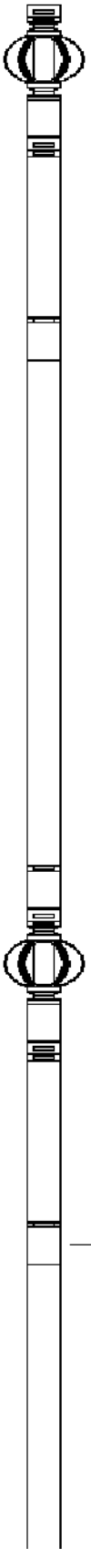
Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

DOWNHOLE EQUIPMENT

All measurements relative to tool zero.

Compact Inline Standoff B
MIS 52 Length: 0.65 m Weight: 15.43 lb

Compact Stiff Bridle Electrode Sub.
MBE 9 Length: 3.76 m Weight: 94.80 lb



Compact Inline Standoff B
MIS 77 Length: 0.65 m Weight: 15.43 lb

Compact Stiff Bridle Electrode Sub.
MBE 5 Length: 3.76 m Weight: 94.80 lb

31.84 m SPDL - Spontaneous Potential

Compact Inline Standoff B
MIS 31 Length: 0.65 m Weight: 15.43 lb

Compact Gamma
MCG 76 Length: 2.65 m Weight: 63.93 lb

26.85 m GGCE - Borehole Corrected Gamma

25.96 m CGXT - MCG External Temperature

Compact Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.25 lb

Compact Swivel Head Adaptor
SHA 27 Length: 0.83 m Weight: 26.46 lb

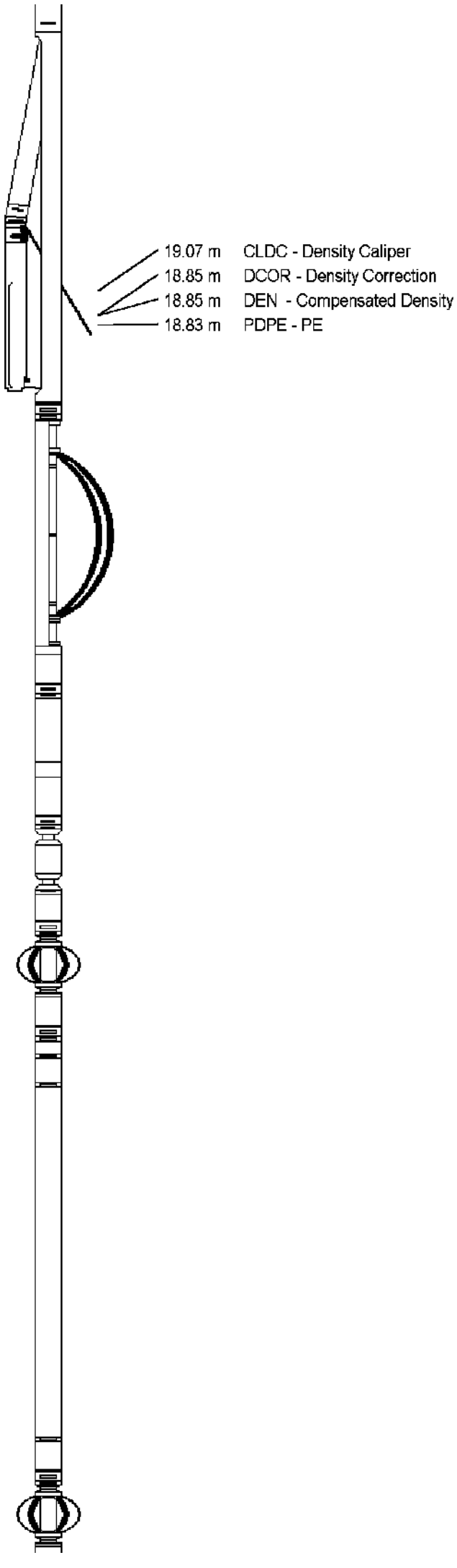
Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.07 lb

Compact Neutron
MDN 69 Length: 1.53 m Weight: 50.71 lb

21.75 m NPRL - Limestone Neutron Por.

Compact Density/Caliper

MPD 67 Length: 2.92 m Weight: 90.39 lb



Compact Inline Bowspring A
MIS 25 Length: 1.74 m Weight: 33.07 lb

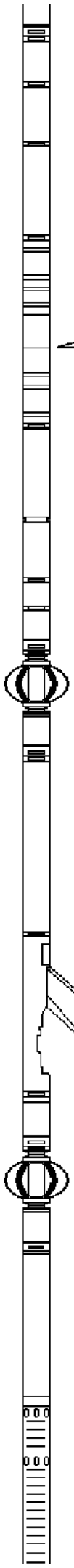
Compact Swivel Head Adaptor
SHA 28 Length: 0.83 m Weight: 26.46 lb

Compact Knuckle Joint
SKJ 45 Length: 0.66 m Weight: 24.25 lb

Compact Inline Standoff B
MIS 53 Length: 0.65 m Weight: 15.43 lb

Compact Upper Guard Sub.
MUG 17 Length: 2.74 m Weight: 68.34 lb

Compact Inline Standoff B
MIS 49 Length: 0.65 m Weight: 15.43 lb



Compact Laterolog Electrode Sub.
MLE 15 Length: 3.76 m Weight: 92.59 lb

8.93 m DSLL - Shallow Laterolog
8.93 m DGLL - Deep Laterolog

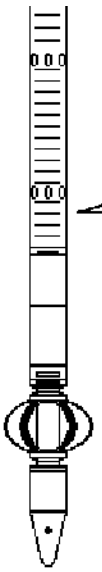
Compact Inline Standoff B
MIS 76 Length: 0.65 m Weight: 15.43 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.57 lb

4.35 m MRRS - MicroRes Resistance (S)
4.35 m MATC - MMR Caliper

Compact Inline Standoff B
MIS 73 Length: 0.65 m Weight: 15.43 lb

Compact Sonic
MSS 28 Length: 3.82 m Weight: 72.75 lb



0.00 m Tool Zero

DT35 - 3-5' Compensated Sonic (1.62m from bottom)

Compact Inline Standoff B
MIS 30 Length: 0.65 m Weight: 15.43 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.61 lb

Total Length: 39.51 m Total Weight: 1007.51 lb

COMPANY	ESSO AUSTRALIA PTY. LTD.
WELL	FLOUNDER A12a
FIELD	GIPPSLAND BASIN
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	2920.50	metres
Elevation Drill Floor	33.85	metres	Depth Driller	2920.00	metres
Elevation Ground Level	-93.00	metres	Depth Logger	2921.00	metres

Reeves

PHOTO DENSITY
COMPENSATED NEUTRON
1:200 MD