PRECISION ENERGY SERVICES

Compact

DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:200 MD

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A1A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA
LOCATION	S 38 29 58.755, E 147 46 19.983
	N 5738462.460 m, E 567336.500 m

FIELD PRINT

LSD	SEC	TWP	RGE	Other Services
				COMPENSATED SONIC

API Number
Permit Number

Permanent Datum MSL , Elevation 0.0 metres
Log Measured From RT @ 32.82 M above Permanent Datum
Drilling Measured From RT

Elevations:
KB metres
DF 32.82 metres
GL -59.40 metres

Date	08-Nov-2005			
Run Number	ONE			
Depth Driller	2294.00	metres		
Depth Logger	2291.00	metres		
First Reading	2277.80	metres		
Last Reading	1490.00	metres		
Casing Driller	1496.00	metres		
Casing Logger	1496.00	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/GYL/POLY			
Density / Viscosity	10.10 lb/USg	69.00 CP		
PH / Fluid Loss	9.00	3.00		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.113 @ 25.0	ohm-m		
Rmf @ Measured Temp	0.088 @ 25.0	ohm-m		
Rmc @ Measured Temp	0.168 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	PRESS		
Rm @ BHT	0.053 @ 79.0	ohm-m		
Time Since Circulation	22 Hours			
Max Recorded Temp	82.00	deg C		
Equipment Name	5" CWS/CML			
Equipment / Base	1	SALE		
Recorded By	R. TENCH, B.MOSS			
Witnessed By	TREVOR LOBO			
CIRC STOPPED	15:30 7-NOV			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	1496.00	2294.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	13.375	0.00	853.00	54.50
L-80	9.625	0.00	1496.00	47.00

REMARKS

RIG: NABORS 453

5" SHUTTLE/MEMORY COMPACT OPERATION.
CREW: R TENCH , B MOSS , B GOODWIN, M KOLCZE.

FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

MAX. TEMPERATURE: 82DEG C AT 2249 m MD
MAX. INCLINATION: 43.98 DEG AT 1500m MD
MAX. DOGLEG SERVERITY: 7.58DEG/30m AT 1561.54 m MD
DEPLOYMENT ANGLE: 14.45 DEG

HVOL: 1290 FT^3
AVOL: 610 FT^3

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\BMA_A1A\BMA_A1A_DSC6.dta
Filename: C:\logs\BMA_A1A\Depth Data\Schlumberger\BMAA1_MWD.dta
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 09-NOV-2005 04:42
Recorded on 08-NOV-2005 21:51
Recorded on 7-NOV-2005 00:00

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

MWD GR
GAPI
0 100 200

Depth in Metres

Borehole Temp in deg C

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:200

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
v/v
0.45 0.15 -0.15

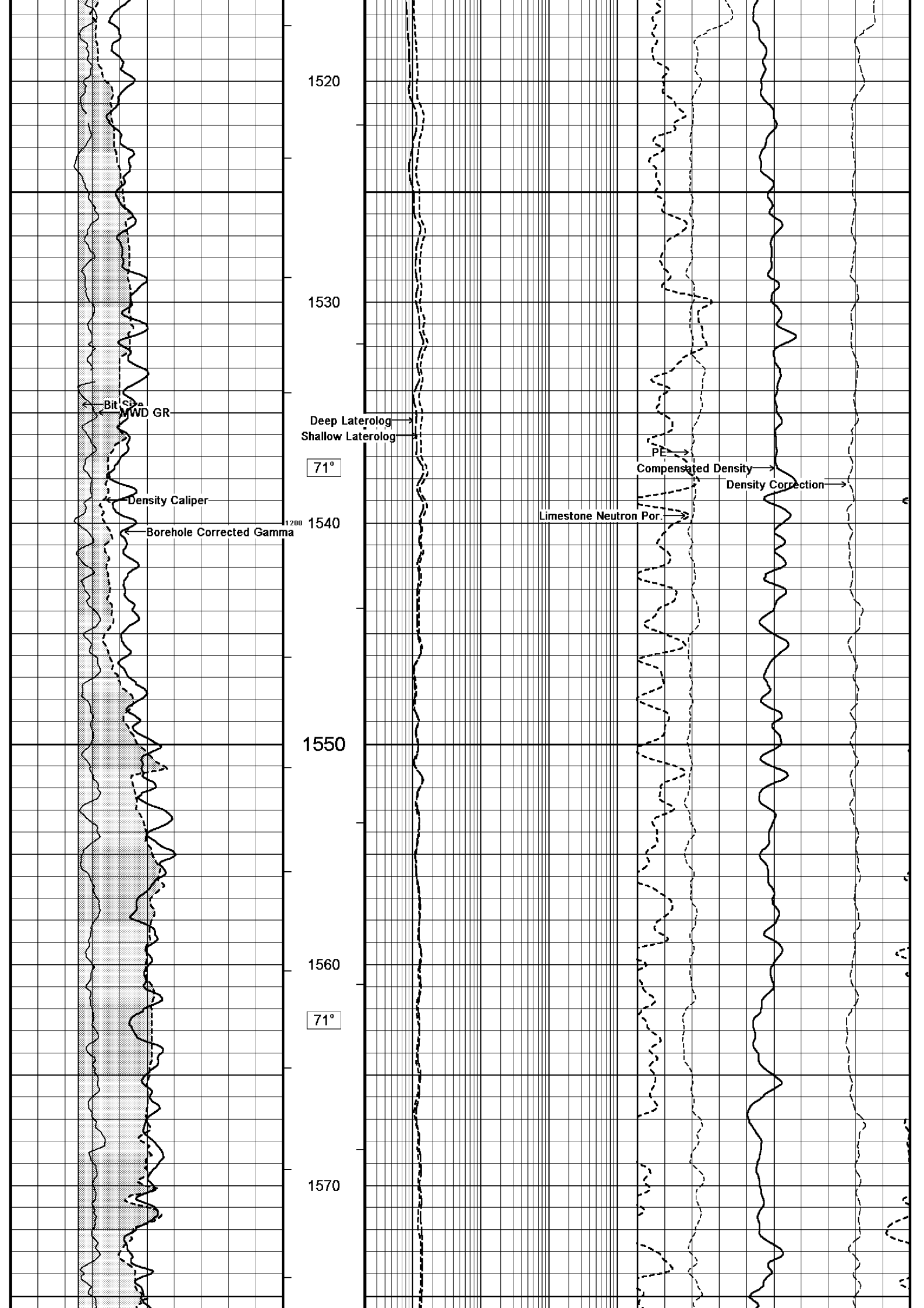
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

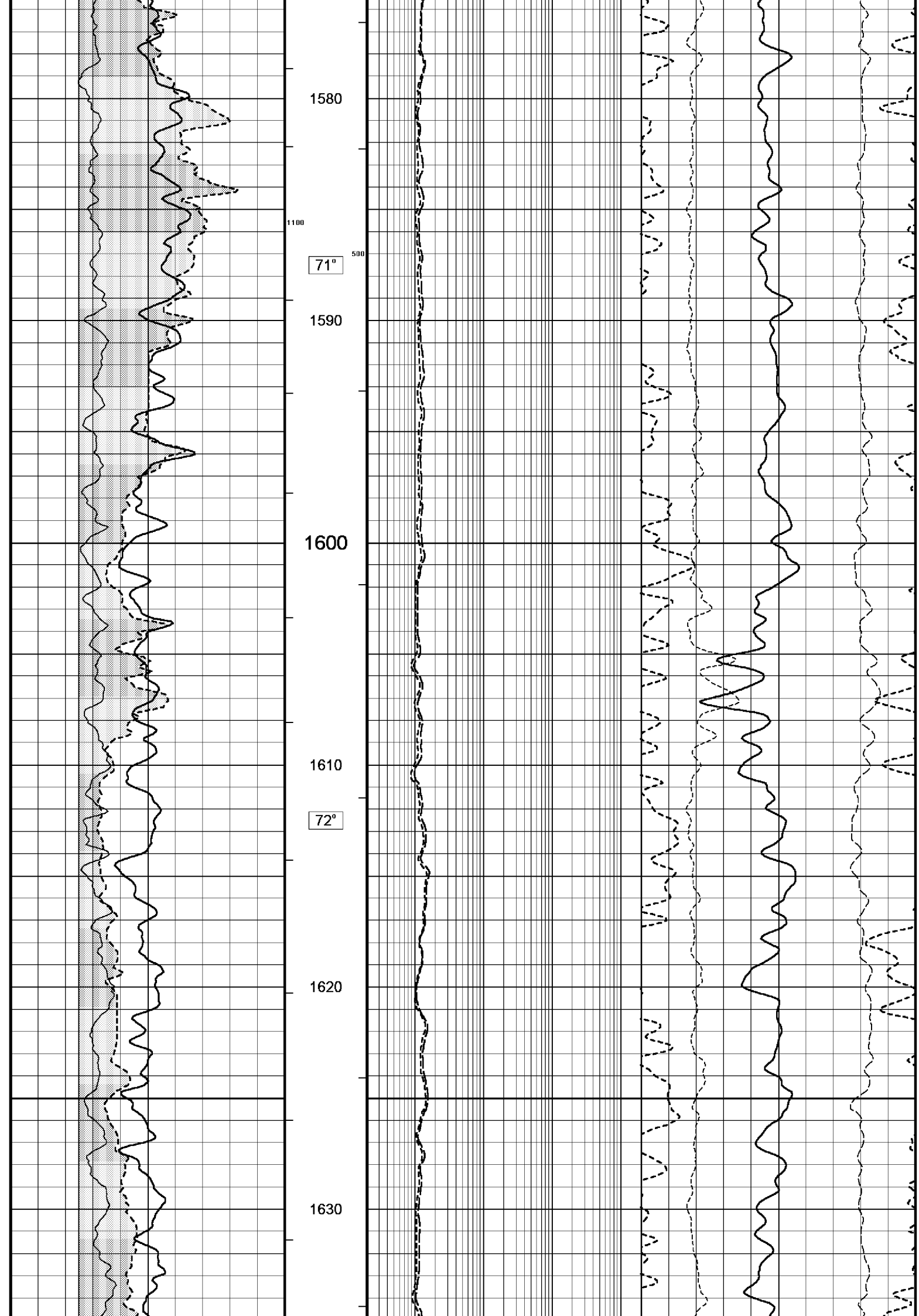
Density Correction
grams/cc
-0.75 -0.25 0.25

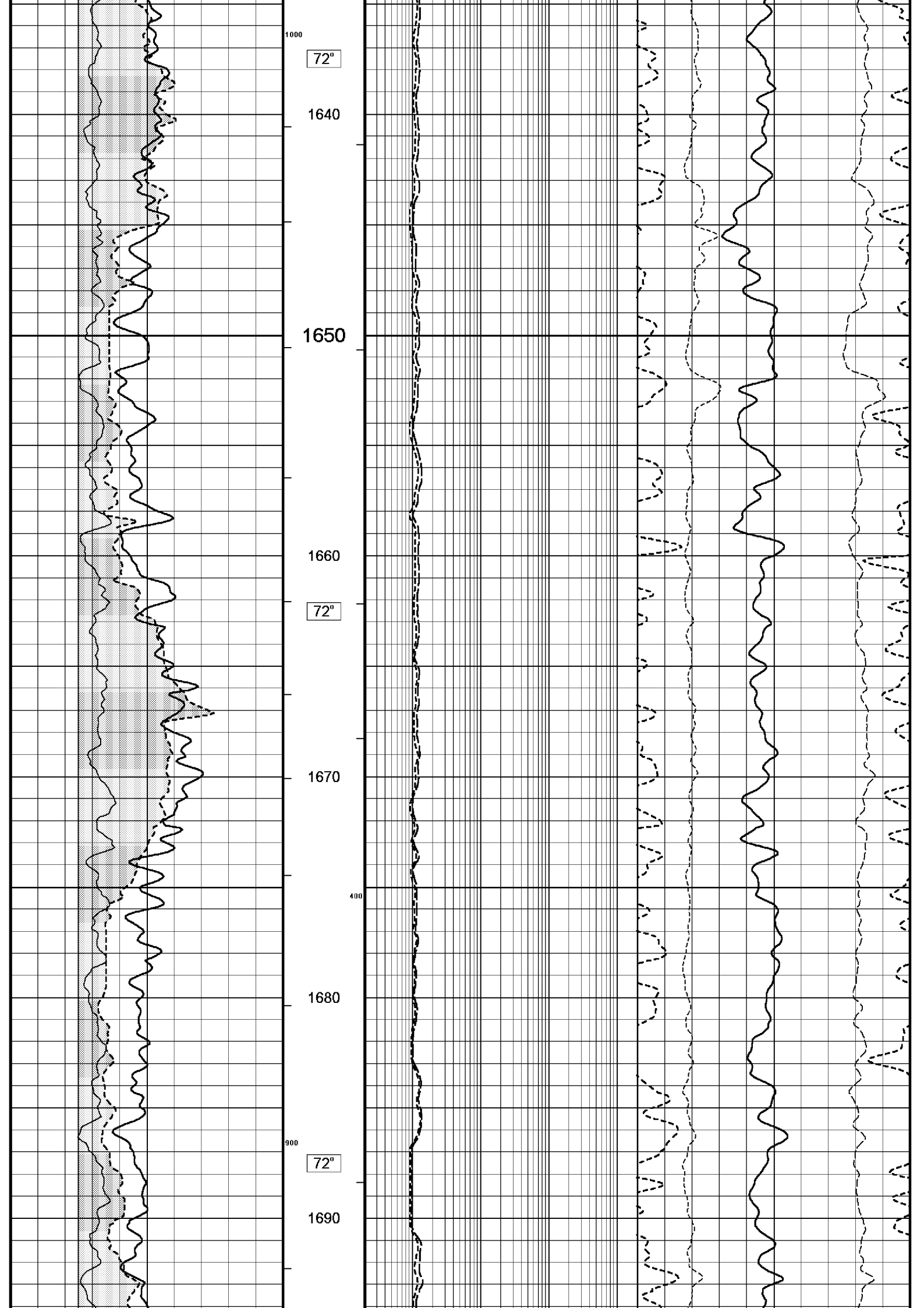
Compensated Density
grams/cc
1.85 2.35 2.85

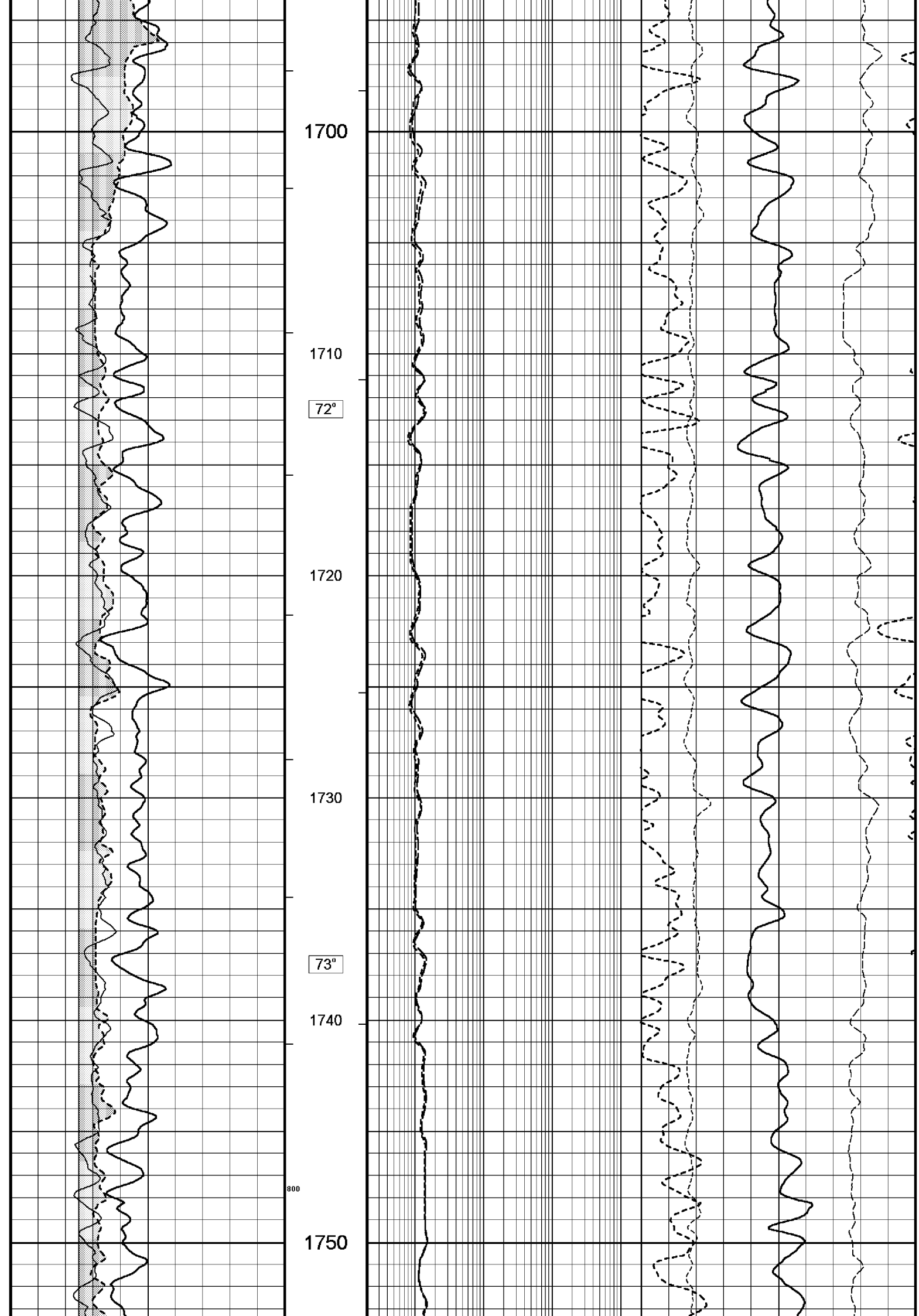
PE
barns/electron
0 10 20

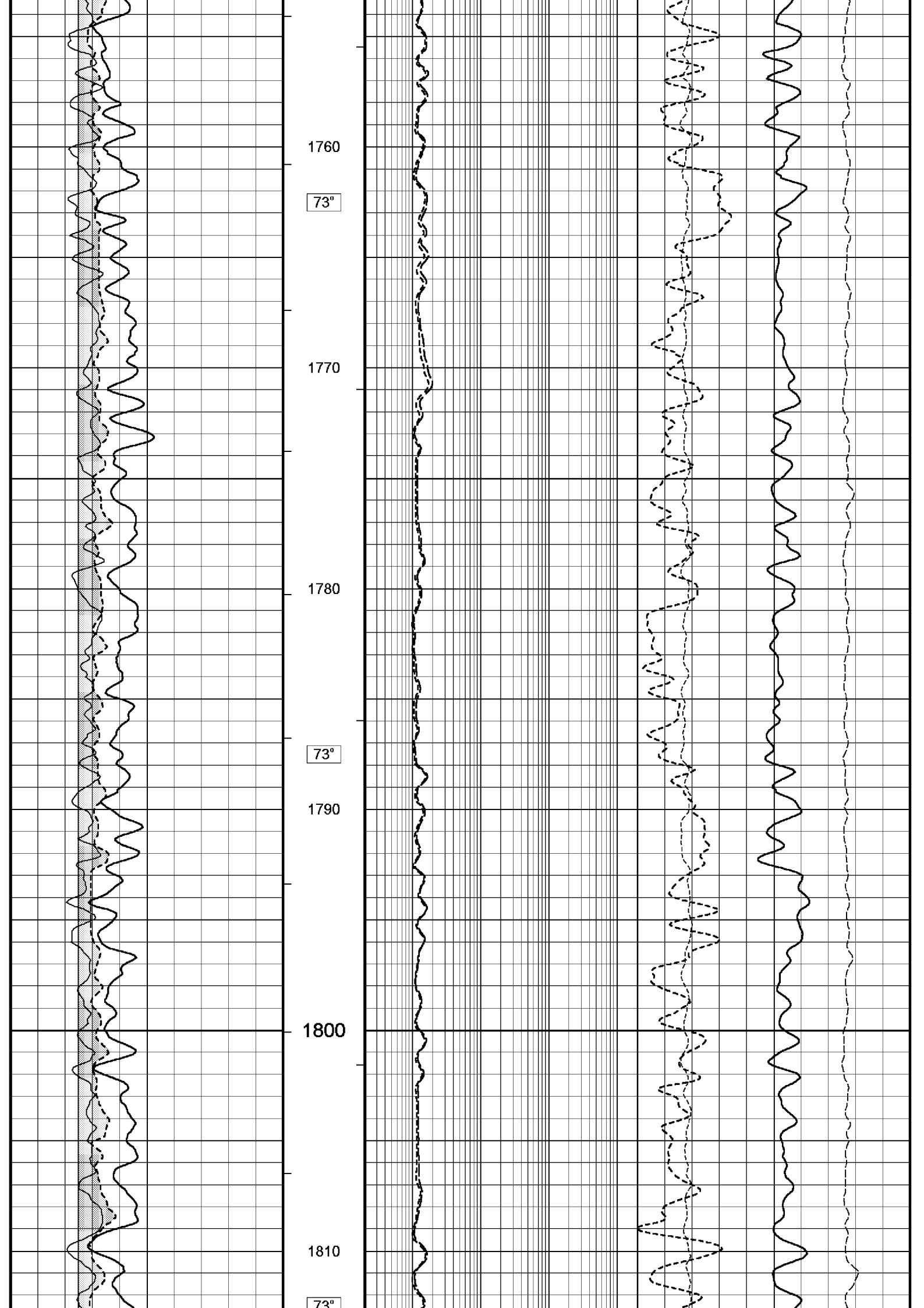
1490
Casing Shoe
1500
1510
70°

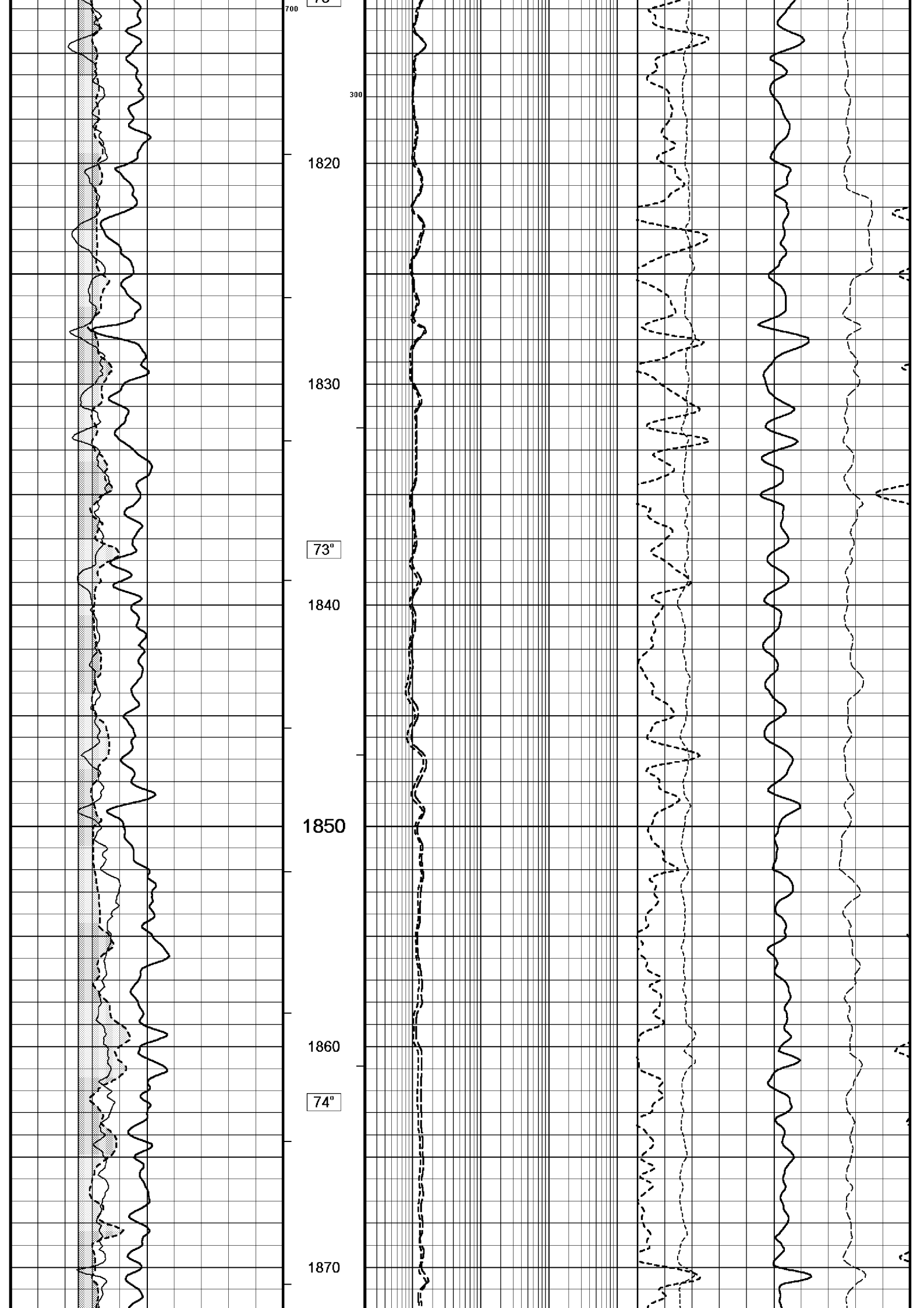

1520
1530
Bit Size
MWD GR
Deep Laterolog
Shallow Laterolog
71°
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
1200
1540
Borehole Corrected Gamma
1550
1560
71°
1570

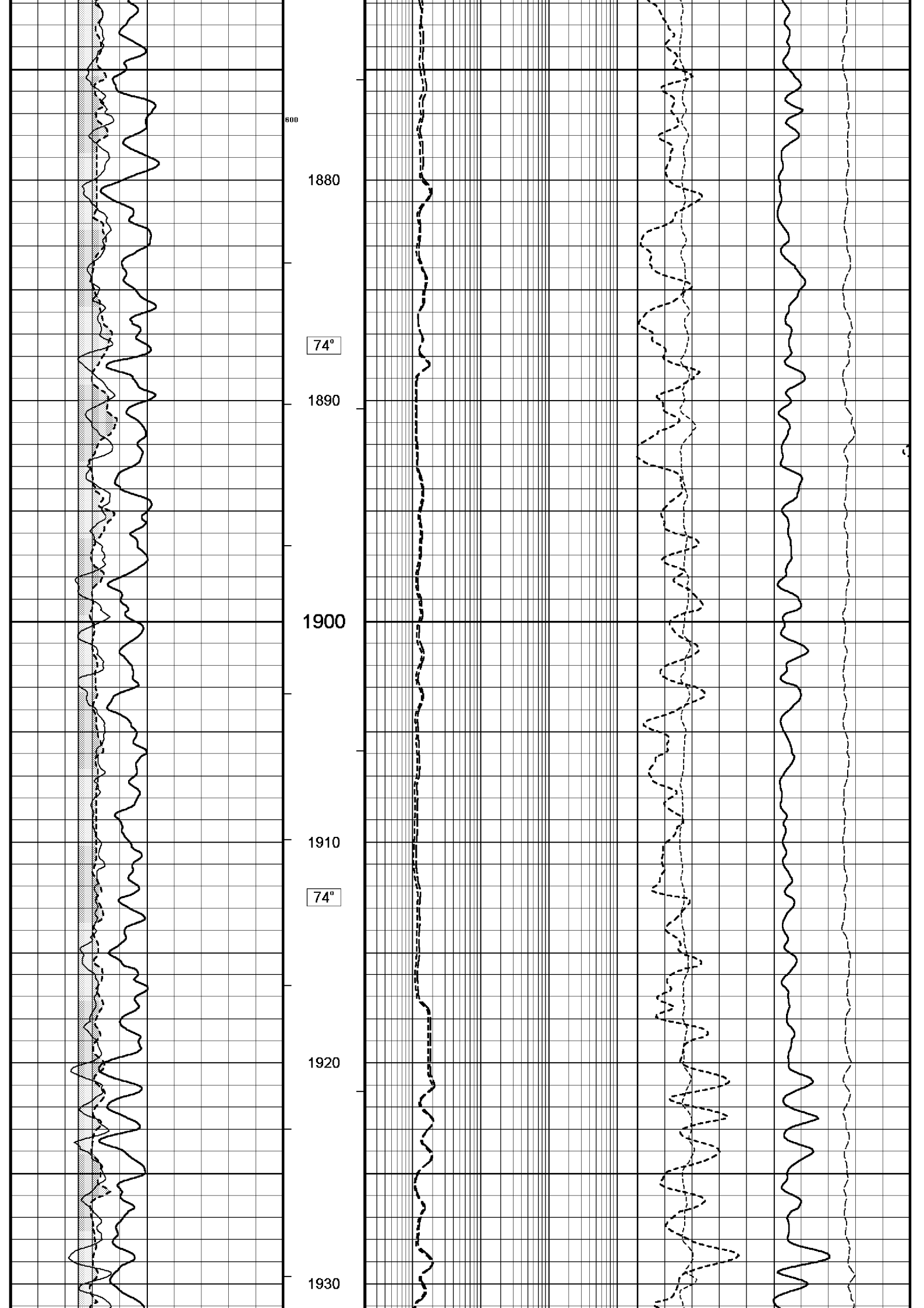

1580
1100
71°
500
1590
1600
1610
72°
1620
1630

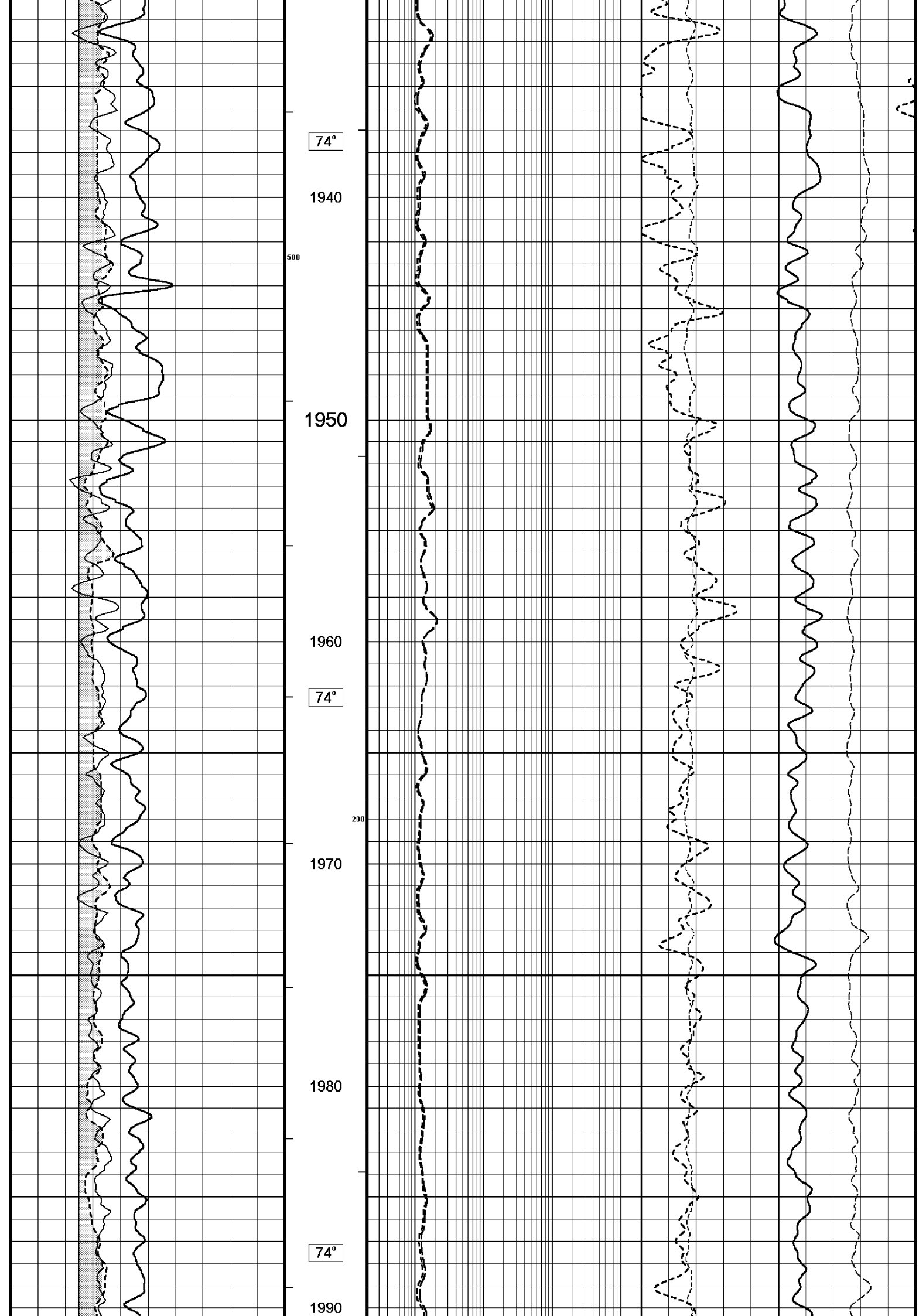

1000
72°
1640
1650
1660
72°
1670
400
1680
900
72°
1690

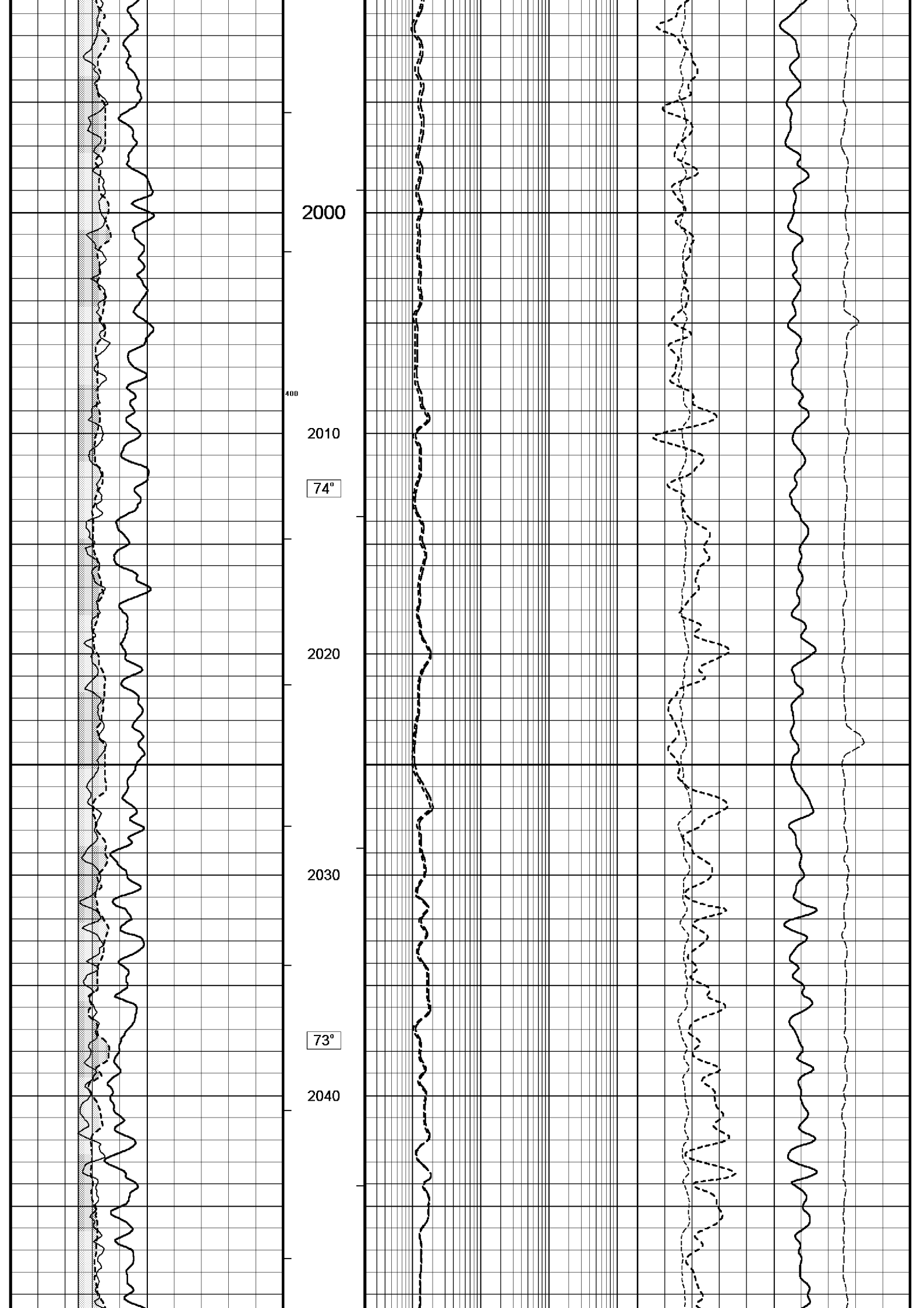

1700
1710
72°
1720
1730
73°
1740
800
1750

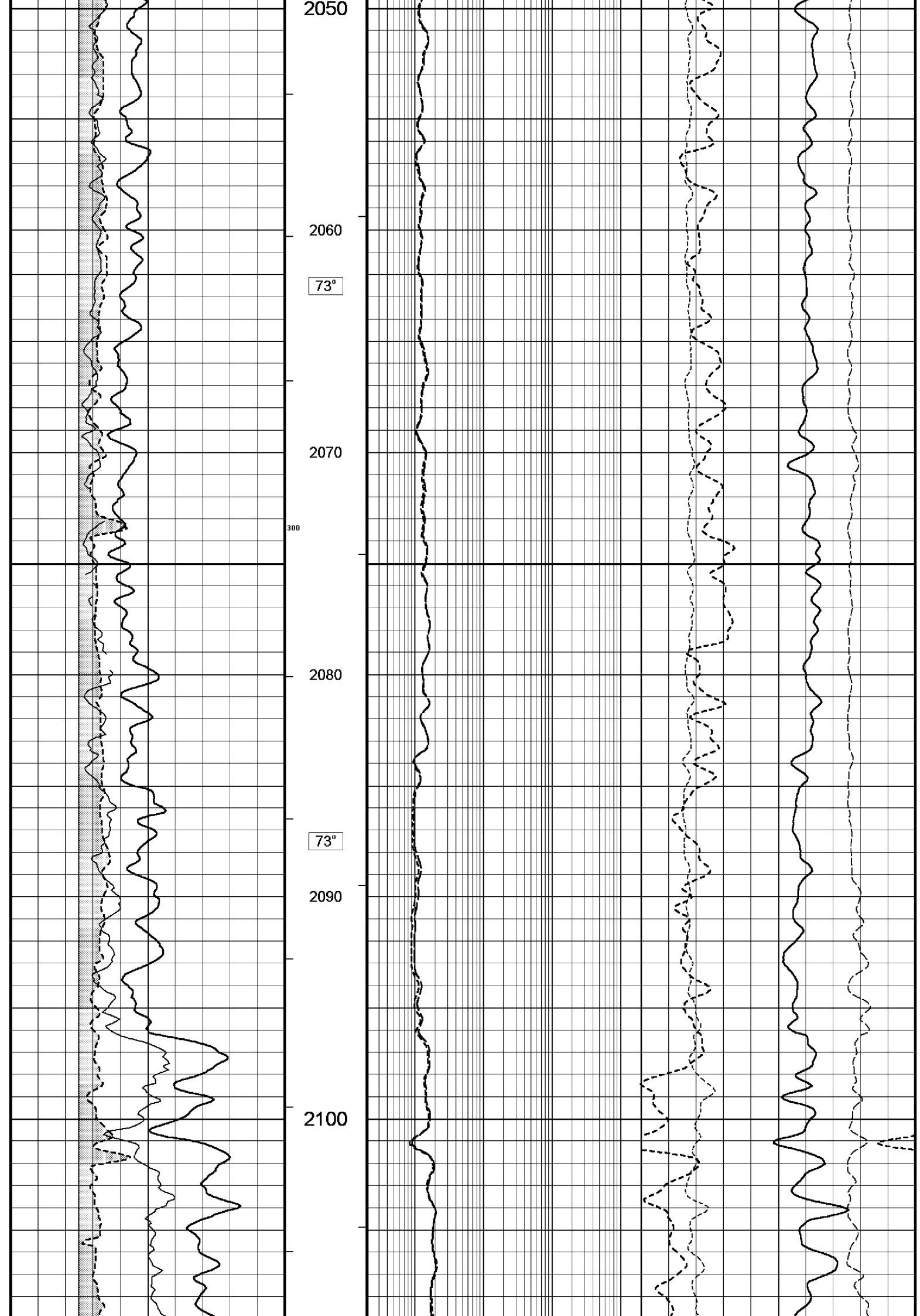

1760
73°
1770
1780
73°
1790
1800
1810
73°

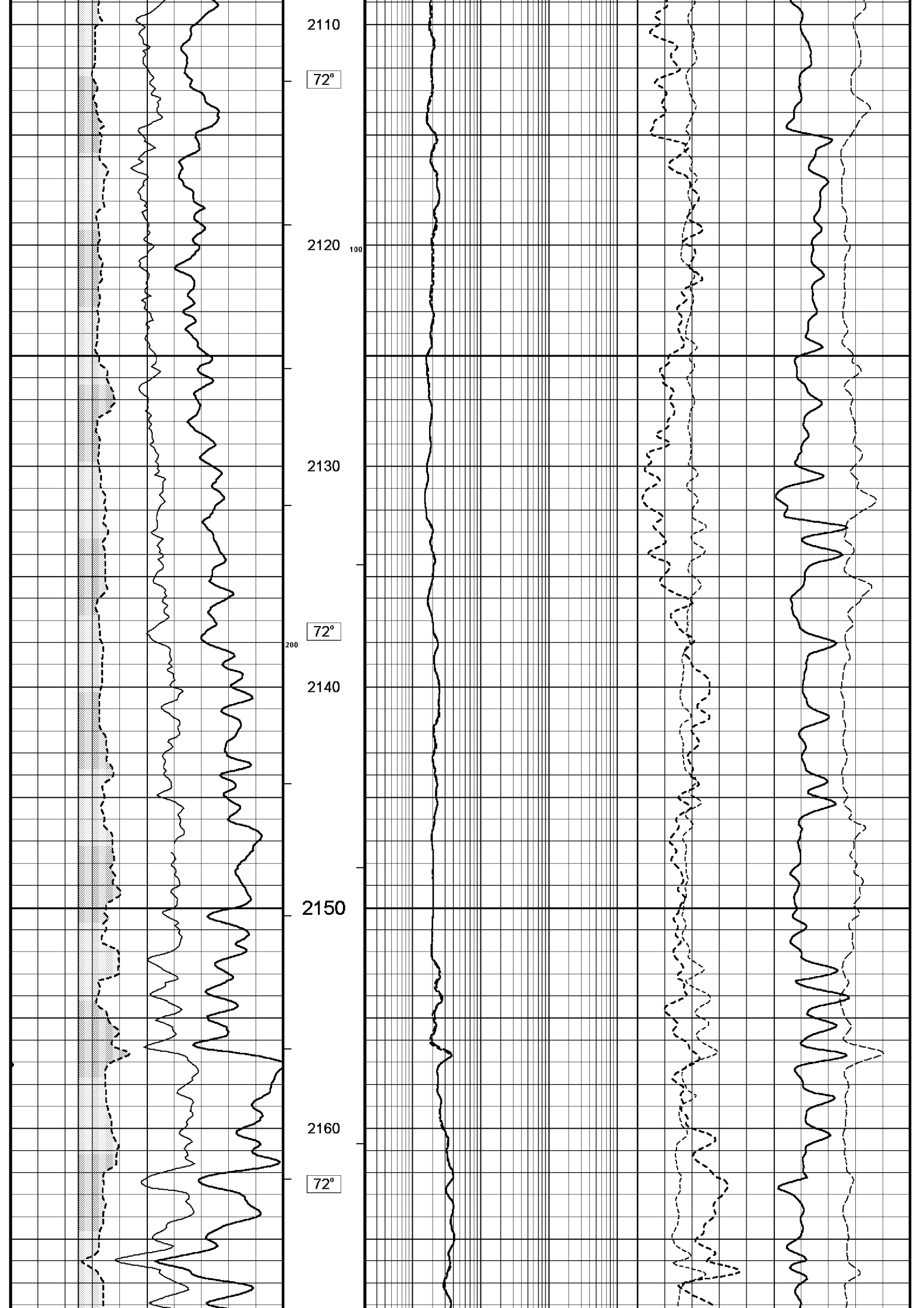

700
300
1820
1830
73°
1840
1850
1860
74°
1870

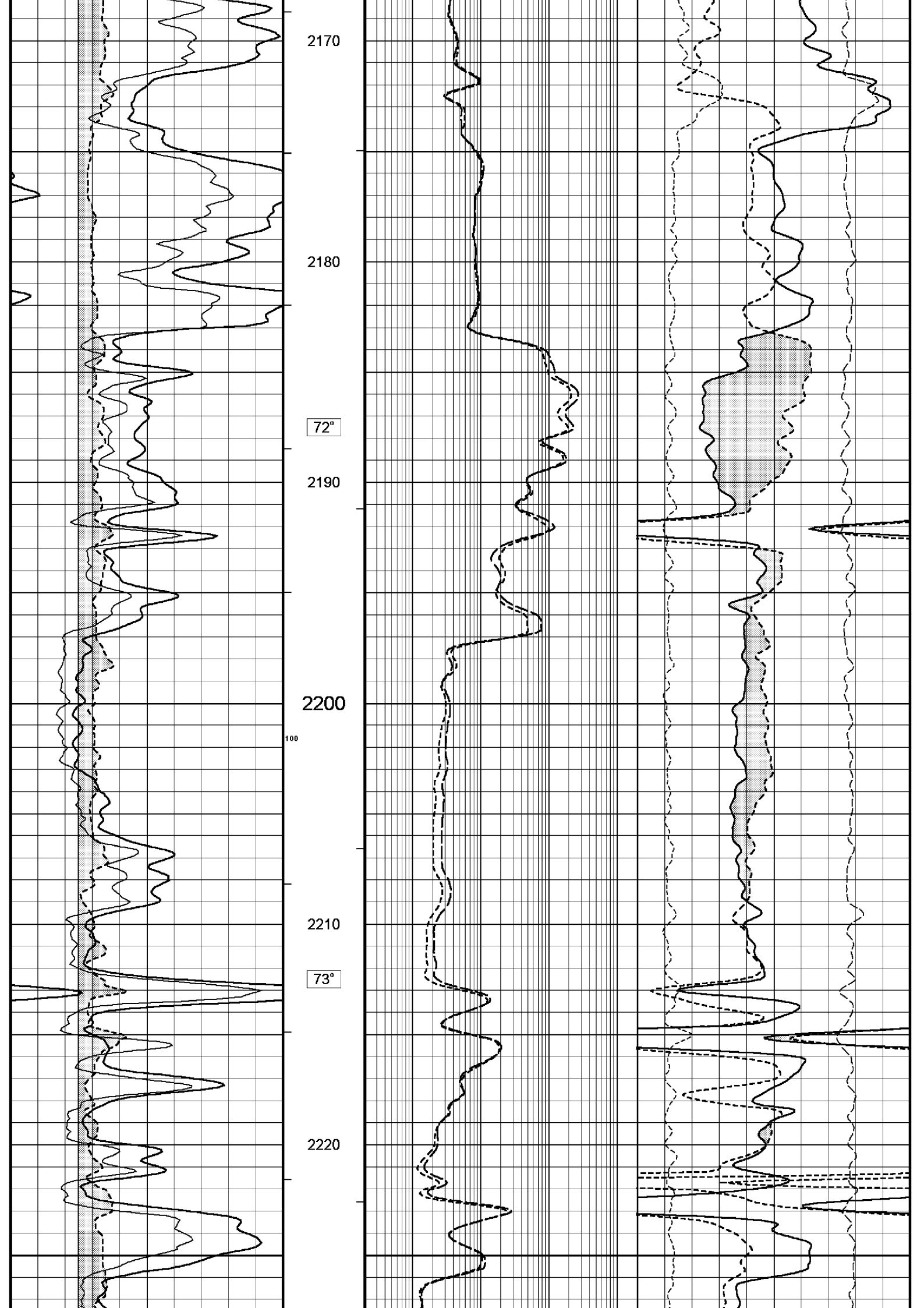

600
1880
74°
1890
1900
1910
74°
1920
1930

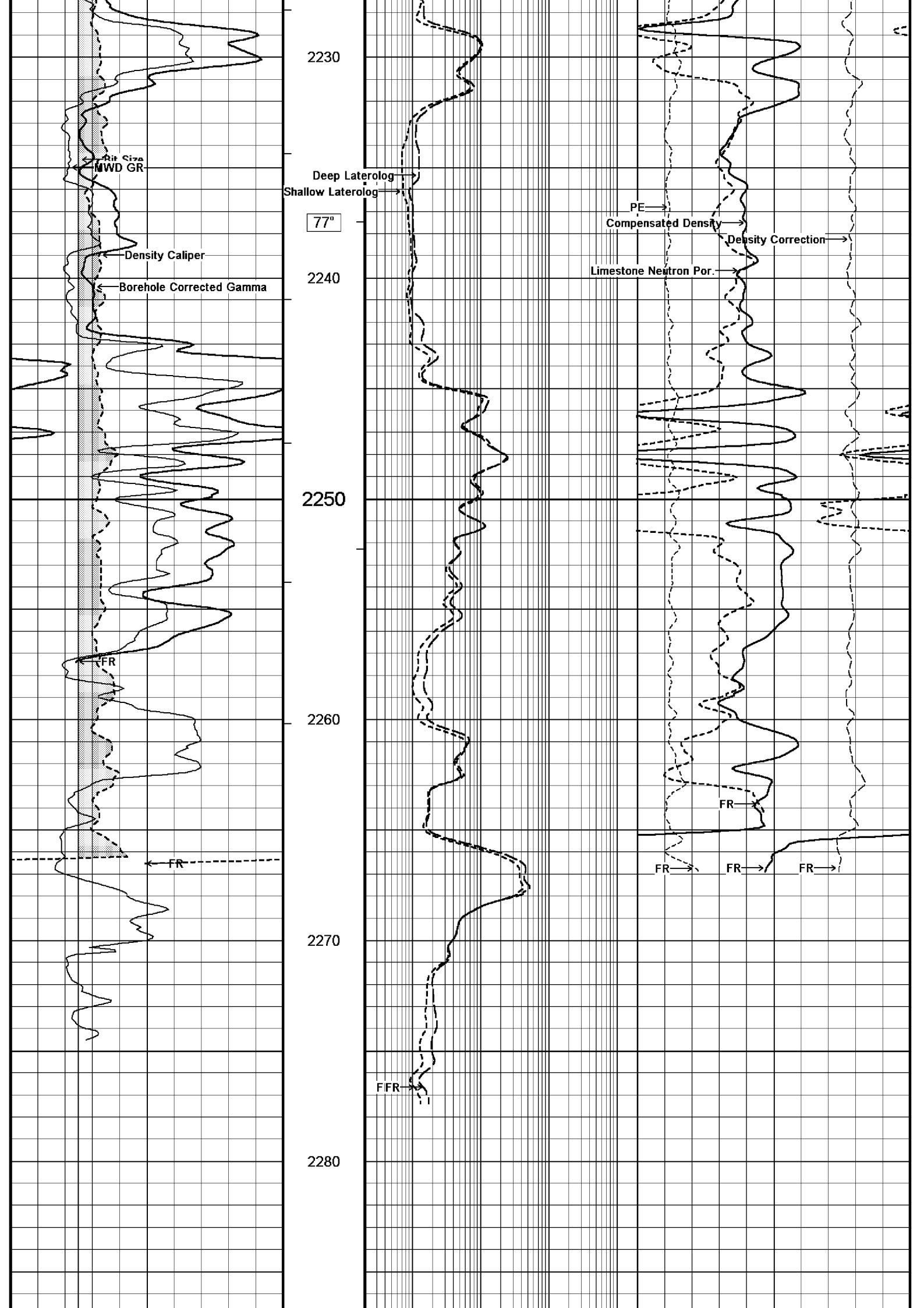

74°
1940
500
1950
1960
74°
200
1970
1980
74°
1990

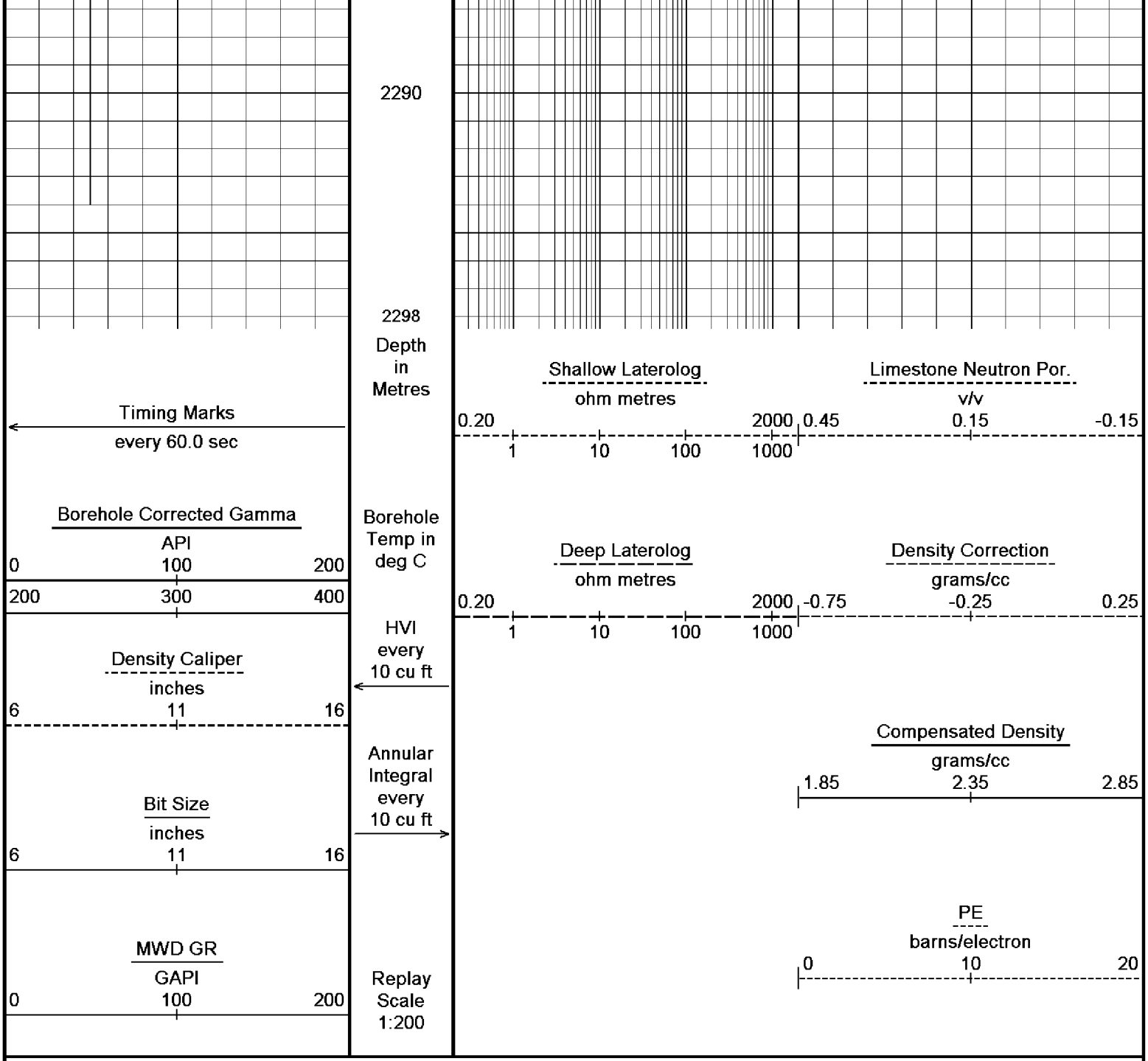

2000
400
2010
74°
2020
2030
73°
2040


2050
2060
73°
2070
300
2080
73°
2090
2100


2110
72°
2120
100
2130
72°
200
2140
2150
2160
72°


2170
2180
72°
2190
2200
100
2210
73°
2220


2230
Bit Size
MWD GR
Deep Laterolog
Shallow Laterolog
77°
PE
Compensated Density
Density Correction
Density Caliper
2240
Limestone Neutron Por.
Borehole Corrected Gamma
2250
FR
2260
FR
FR
FR
FR
FR
2270
FFR
2280



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 09-NOV-2005 04:42
Filename: C:\logs\BMA_A1A\BMA_A1A_DSC6.dta
Recorded on 08-NOV-2005 21:51
Filename: C:\logs\BMA_A1A\Depth Data\Schlumberger\BMAA1_MWD.dta
Recorded on 7-NOV-2005 00:00
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

MAIN LOG 1:200

BEFORE SURVEY CALIBRATION

C:\logs\BMA_A1A\BMA_A1A_TC_200.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.113	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	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	7.000	inches
Caliper for Differential Caliper	None	

Rwa Parameters	
Porosity used	Limestone Sonic Porosity
Resistivity used	Deep Induction
RWA Constant A	0.610
RWA Constant M	2.150

High Resolution Temperature Calibration MCG 142

Field Calibration on 7-NOV-2005,03:12

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

High Resolution Temperature Constants MCG 142

Pre-filter Length	11

Gamma Calibration MCG 142

Field Calibration on 7-NOV-2005 03:17

	Measured	Calibrated (API)
Background	21	14
Calibrator (Gross)	1367	923
Calibrator (Net)	1346	909

Gamma Constants MCG 142

Gamma Calibrator Number	060	
Mud Density	1.21	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Centred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085

Base Calibration on 28-OCT-2005 16:16
Field Check on 7-NOV-2005 03:32

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3202	100	3714	110
Ratio	32.170		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1608	2344
Ratio	0.686	

Field Check

	Calibrated (cps)	
	1577	2339
Ratio	0.674	

Neutron Constants MDN 085

Neutron Source Id	NSN-E-729	
Neutron Jig Number	NEC-C-052	
Epithermal Neutron	No	
Caliper Source for Processing	Bit Size	
Stand-off	0.00	inches
Mud Density	1.21	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	MCG External Temperature	
Temperature	N/A	degrees C
Mud Salinity	59.40	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 083

Base Calibration on 28-OCT-2005 18:13
Field Calibration on 7-NOV-2005 03:20

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13616	4.01
2	21847	5.99
3	30336	7.98
4	38762	9.94
5	47872	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.94	7.98

Photo Density Calibration MPD 083

Base Calibration on 28-OCT-2005 18:32
Field Check on 7-NOV-2005 03:25

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	54504	18779	53111	19310
Reference 2	25530	2542	24951	2530
Field Check at Base	949.8	1099.0		
Field Check	950.3	1097.1		

PE Calibration

Base Calibration	WS	WH	Ratio	Calibrated Ratio
Background	181	815		
Reference 1	17171	54310	0.318	0.320
Reference 2	6840	25386	0.271	0.273
Field Check at Base	181.2	815.4		
Field Check	181.0	813.6		

Density Constants MPD 083

Density Source Id	NSD-L-242	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DNC-D-536	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.21	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
0.00	0.00

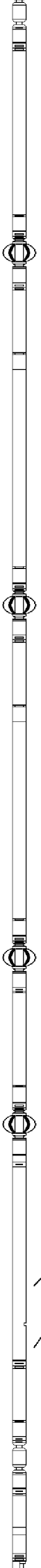
Laterolog Constants MLE 031

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3210	
Deep Laterolog K Factor	0.7550	
Groningen Laterolog K Factor	0.8540	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	Groningen Electrode	

DOWNHOLE EQUIPMENT

C:\logs\BMA_A1A\BMA_A1A_TC_200.dta

Compact Swivel Head Adaptor F
SHA 71 Length: 0.83 m Weight: 26.5 lb



Compact Knuckle Joint
SKJ 100 Length: 0.66 m Weight: 24.3 lb

Compact Battery Sub.
MBS 99 Length: 4.41 m Weight: 44.1 lb

Compact Inline Standoff B
MIS 73 Length: 0.65 m Weight: 15.4 lb

Compact Stiff Bridle Electrode Sub.
MBE 18 Length: 3.76 m Weight: 94.8 lb

Compact Inline Standoff B
MIS 138 Length: 0.65 m Weight: 15.4 lb

Compact Stiff Bridle Electrode Sub.
MBE 19 Length: 3.76 m Weight: 94.8 lb

Compact Inline Standoff B
MIS 136 Length: 0.65 m Weight: 15.4 lb

MBE21 - THIRD BRIDLE
MLK 111 Length: 3.76 m Weight: 30.9 lb

Compact Inline Standoff B
MIS 133 Length: 0.65 m Weight: 15.4 lb

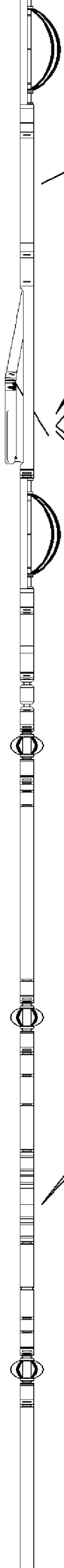
Compact Gamma
MCG 142 Length: 2.65 m Weight: 63.9 lb

32.63 m GGCE - Borehole Corrected Gamma
31.75 m CGXT - MCG External Temperature

Compact Memory Sub A.C
MMS 38 Length: 1.37 m Weight: 30.9 lb

Compact Knuckle Joint
SKJ 45 Length: 0.66 m Weight: 24.3 lb

Compact Swivel Head Adaptor F
SHA 64 Length: 0.83 m Weight: 26.5 lb



Compact Inline Bowspring A
MIS 94 Length: 1.74 m Weight: 33.1 lb

Compact Neutron
MDN 85 Length: 1.53 m Weight: 50.7 lb

26.17 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 83 Length: 2.92 m Weight: 90.4 lb

23.48 m AVOL - Annular Volume
23.48 m HVOL - Hole Volume
23.48 m CLDC - Density Caliper
23.27 m DEN - Compensated Density

Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.1 lb

23.27 m DCOR - Density Correction
23.25 m PDPE - PE

Compact Swivel Head Adaptor
SHA 28 Length: 0.83 m Weight: 26.5 lb

Compact Knuckle Joint
SKJ 110 Length: 0.66 m Weight: 24.3 lb

Compact Inline Standoff B
MIS 72 Length: 0.65 m Weight: 15.4 lb

Compact Upper Guard Sub.
MUG 30 Length: 2.74 m Weight: 68.3 lb

Compact Inline Standoff B
MIS 141 Length: 0.65 m Weight: 15.4 lb

Compact Laterolog Electrode Sub.
MLE 31 Length: 3.76 m Weight: 92.6 lb

13.35 m DSLL - Shallow Laterolog
13.35 m DDLL - Deep Laterolog

Compact Inline Standoff B
MIS 127 Length: 0.65 m Weight: 15.4 lb

Compact Lower Guard Sub.
MLG 7 Length: 2.44 m Weight: 55.1 lb

Compact Inline Standoff B
MIS 129 Length: 0.65 m Weight: 15.4 lb

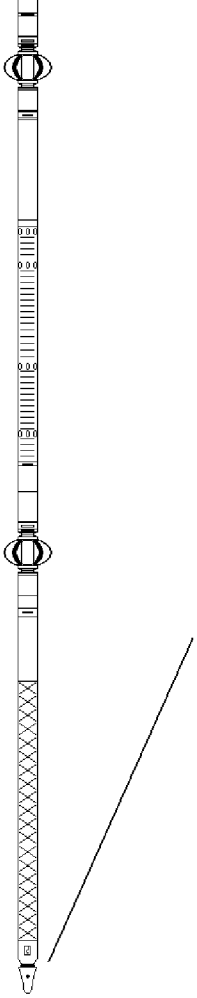
Compact Sonic
MSS 66 Length: 3.82 m Weight: 72.8 lb

Compact Inline Standoff B
MIS 126 Length: 0.65 m Weight: 15.4 lb

Compact Induction
MAI 39 Length: 3.29 m Weight: 48.5 lb

Pressure Bung + Hole Finder
HFS 4 Length: 0.40 m Weight: 6.6 lb

Total Length: 54.43 m Weight: 1201.5 lb



Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A1A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	2277.80	metres
Elevation Drill Floor	32.82	metres	Depth Driller	2294.00	metres
Elevation Ground Level	-59.40	metres	Depth Logger	2291.00	metres

PRECISION ENERGY SERVICES

Compact

DUAL LATEROLOG - GR

DENSITY - NEUTRON

1:200 MD