PRECISION
Compact

DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:200 MD

COMPANY	ESSO AUSTRALIA PTY.LTD
WELL	WKF W27A
FIELD	KINGFISH GDA94
PROVINCE/COUNTY	BASS STRAIT, VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	S 38 35 34.851, E 148 6 20.022
	N 5727806.021 m, E 596279.875 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 DF @ 33.43m above Permanent Datum
Drilling Measured From DF

Elevations:

KB		metres
DF	33.43	metres
GL	-76.13	metres

Date	26-JUL-2006		
Run Number	ONE		
Depth Driller	3093.00 metres		
Depth Logger	3093.00 metres		
First Reading	3089.00 metres		
Last Reading	895.00 metres		
Casing Driller	895.00 metres		
Casing Logger	895.00 metres		
Bit Size	8.50 inches		
Hole Fluid Type	KCL/PHPA		
Density / Viscosity	1.16 g/c3	26.00 CP	
PH / Fluid Loss	9.50	2.80 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.105 @ 25.0 ohm-m		
Rmf @ Measured Temp	0.08 @ 25.0 ohm-m		
Rmc @ Measured Temp	0.081 @ 25.0 ohm-m		
Source Rmf / Rmc	MEAS	MEAS	
Rm @ BHT	0.046 @ 87.1 ohm-m		
Time Since Circulation	28 HOURS		
Max Recorded Temp	93.80 deg C		
Equipment Name	CML		
Equipment / Base	1	SALE	
Recorded By	R L TENCH, B J R MOSS		
Witnessed By	T LOBO		
LAST CIRC.	12:25 24/07		Last Line

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	895.00	3095.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	895.00	40.50

REMARKS

RIG: NABORS 453

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

FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

MAX. TEMPERATURE: 93.8 DEG C AT 3041m MD
MAX. INCLINATION: 46.10 DEG AT 3095 m MD
MAX. DOGLEG SEVERITY: 5.03 DEG/30m AT 993.08 m MD
DEPLOYMENT ANGLE: 46.10 DEG

HVOL: 3285 FT^3
AVOL: 1382 FT^3

LOGGING SPEED 6M/MIN FROM TD TO 2791.52 M MD
LOGGING SPEED 12 M/MIN FROM 2791.52 TO 1297.42 M MD
LOGGING SPEED 6 M/MIN FROM 1297.42 TO 1125.7 M MD
LOGGING SPEED 12 M/MIN FROM 1125.7 TO 866.87 M MD

BRIDGED OFF AT 2364M MD, REQUIRED 3BBLS FLOW TO PASS BRIDGE.

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 26-JUL-2006 13:24
Filename: C:\logs\WKF_W27A\FIELD_DATA\WKF_W27A_MAIN_LOG_FULL.dta
Recorded on 26-JUL-2006 03:12
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

Gamma Ray
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

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

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Medium Induction
ohm metres
0.20 2000
1 10 100 1000

Deep Induction
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
VoV
0.45 0.15 -0.15

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

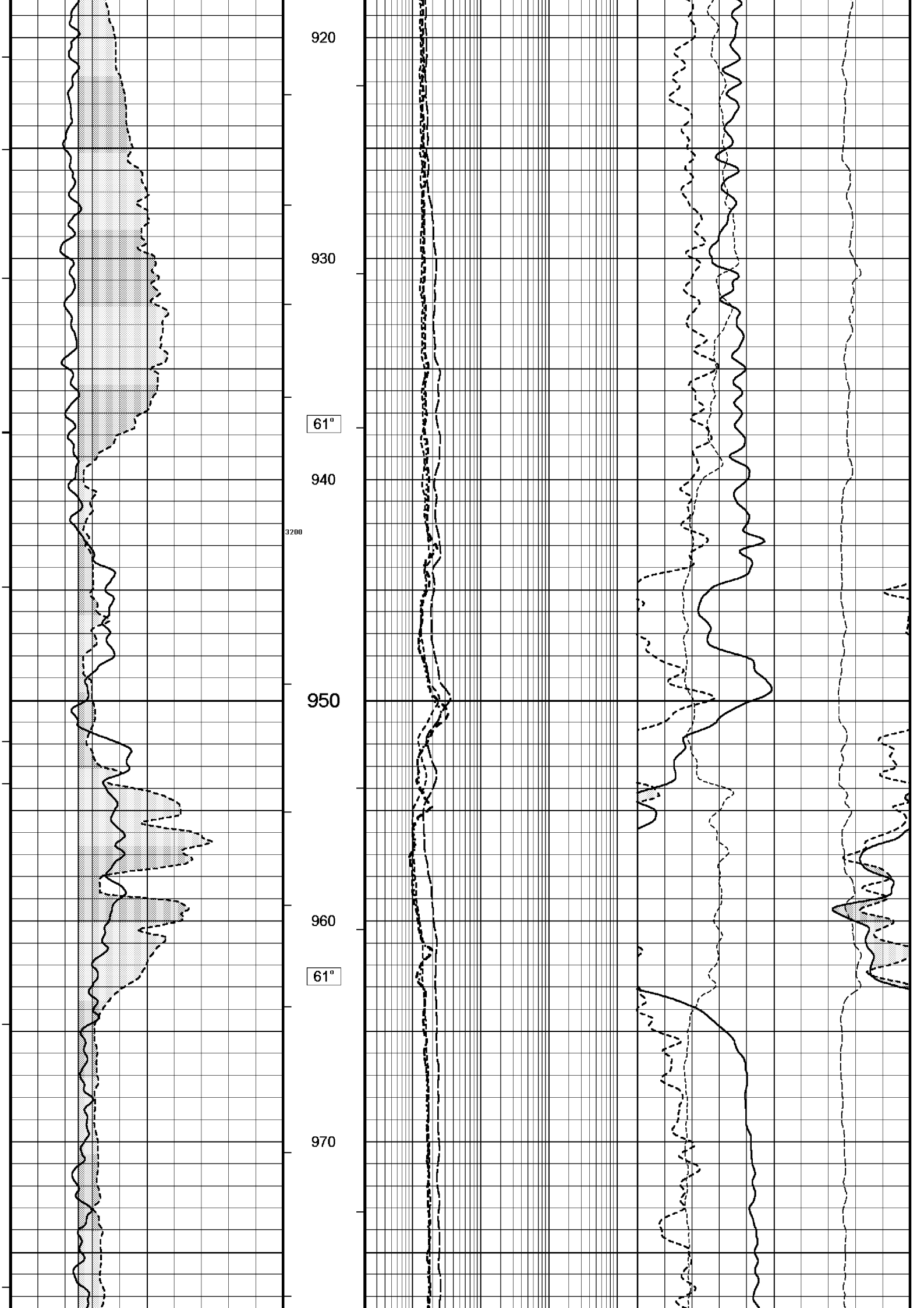
890

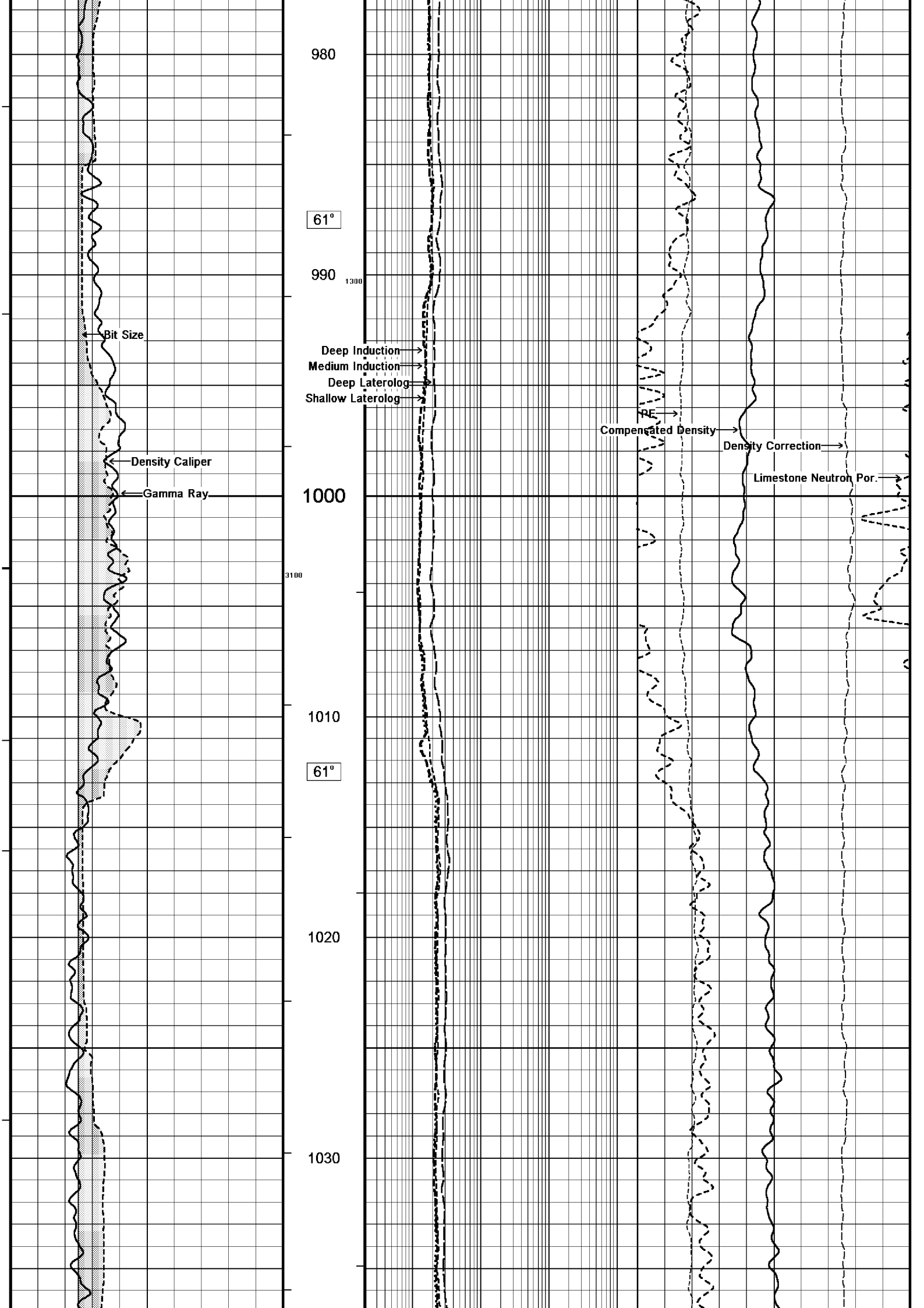
Casing Shoe

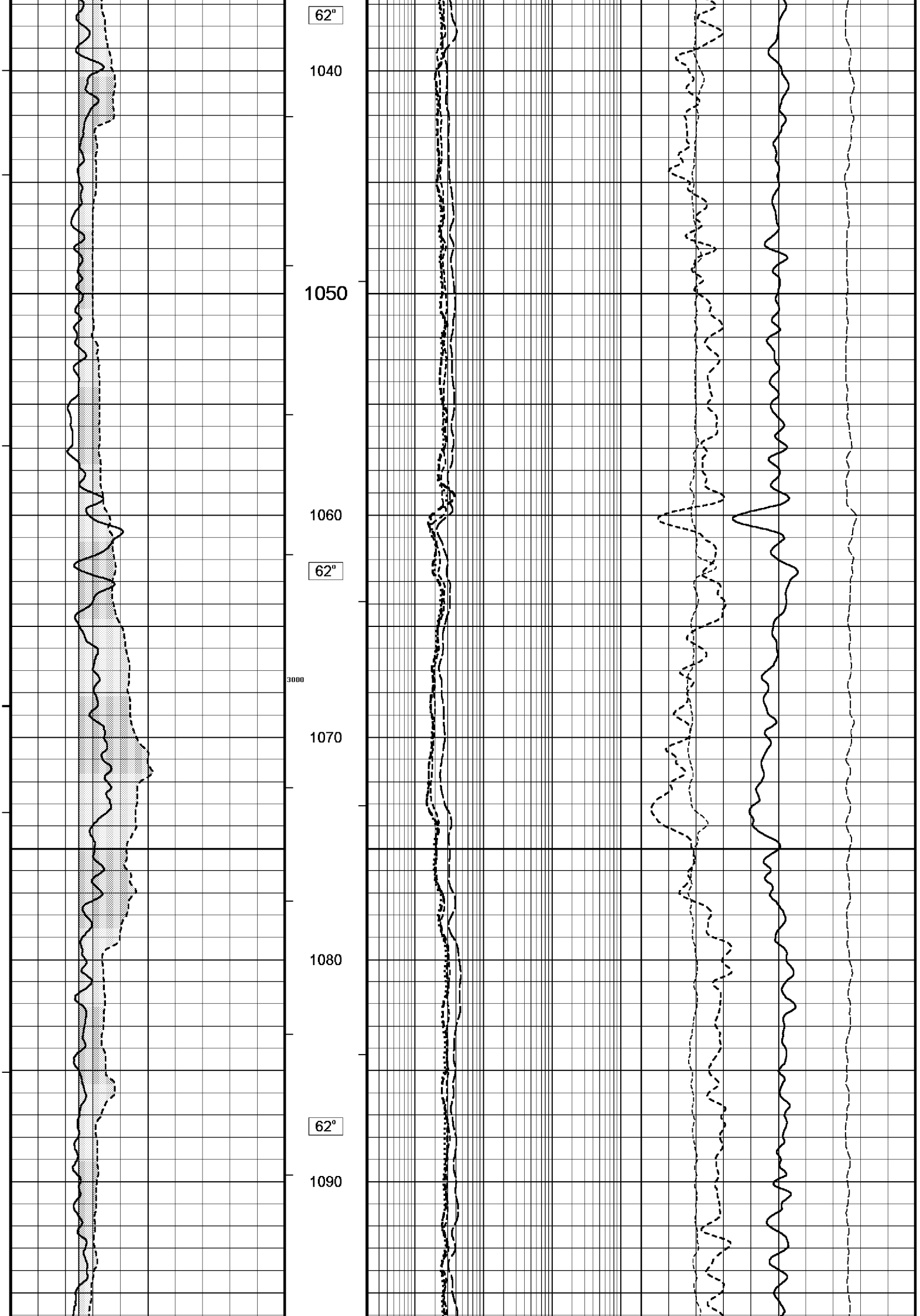
900

910

60°


920
930
61°
940
3200
950
960
61°
970


980
61°
990
1300
Bit Size
Deep Induction
Medium Induction
Deep Laterolog
Shallow Laterolog
RE
Compensated Density
Density Correction
Limestone Neutron Por.
Density Caliper
Gamma Ray
1000
3100
1010
61°
1020
1030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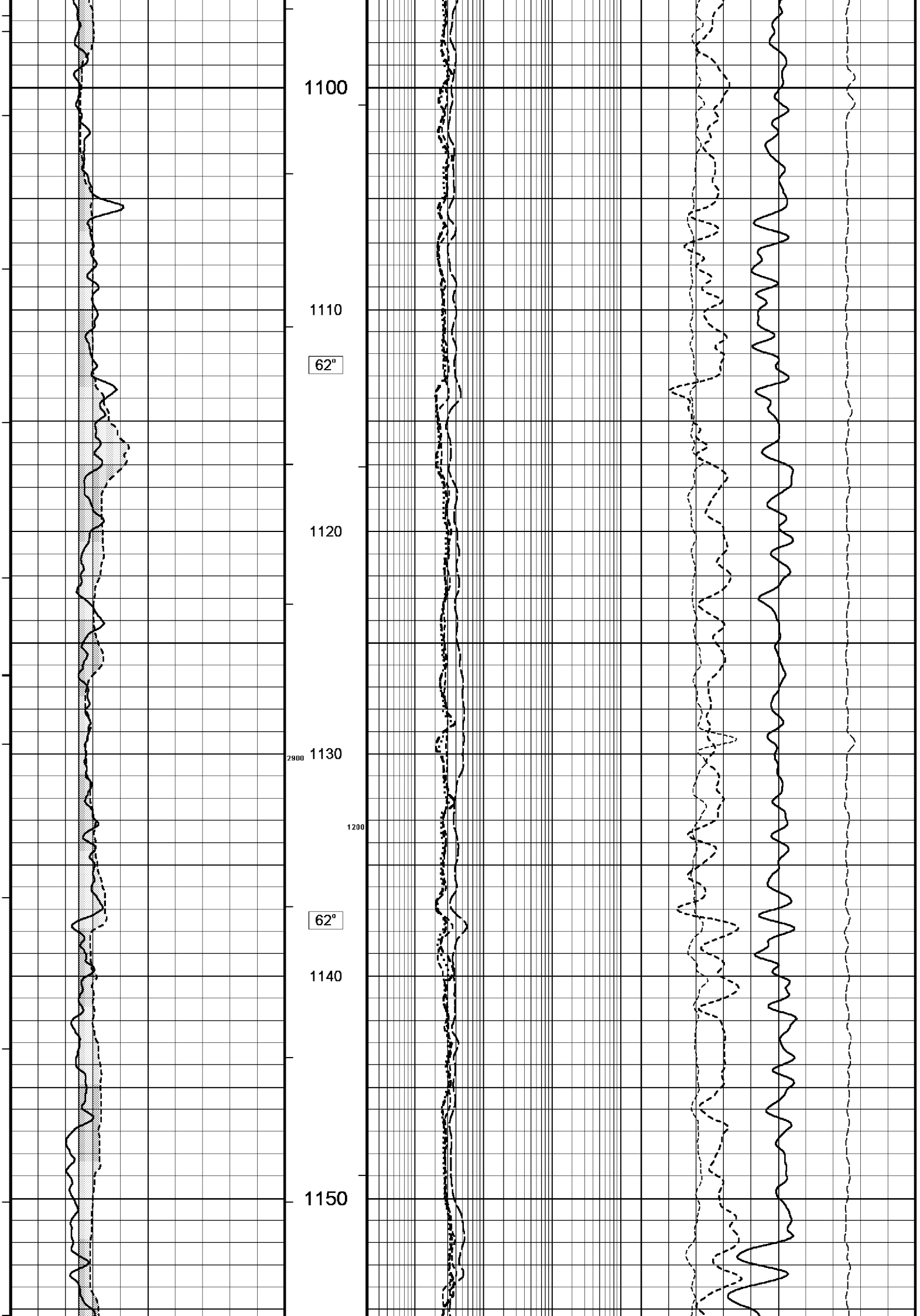
1040
1050
1060
62°
3000
1070
1080
62°
1090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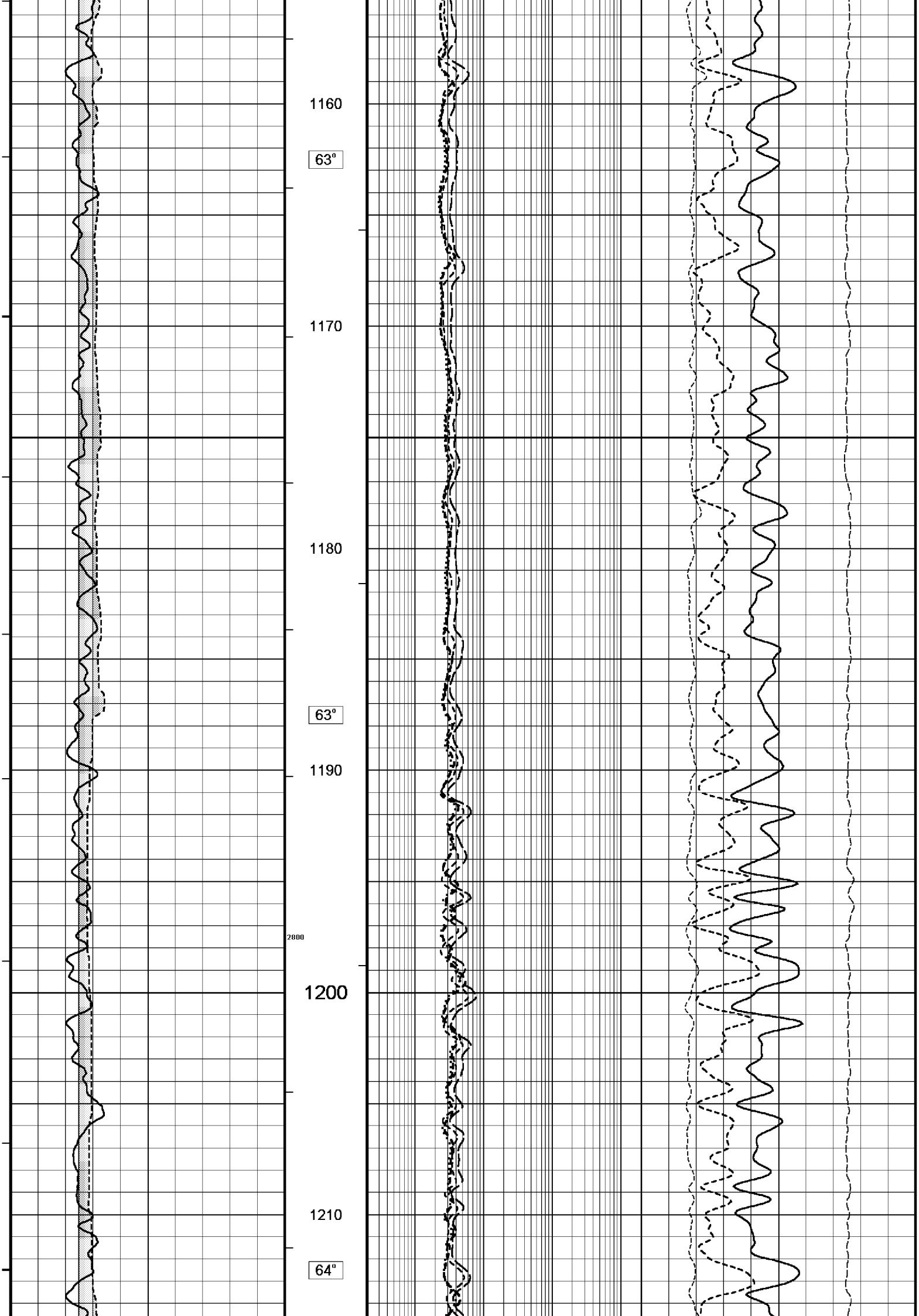
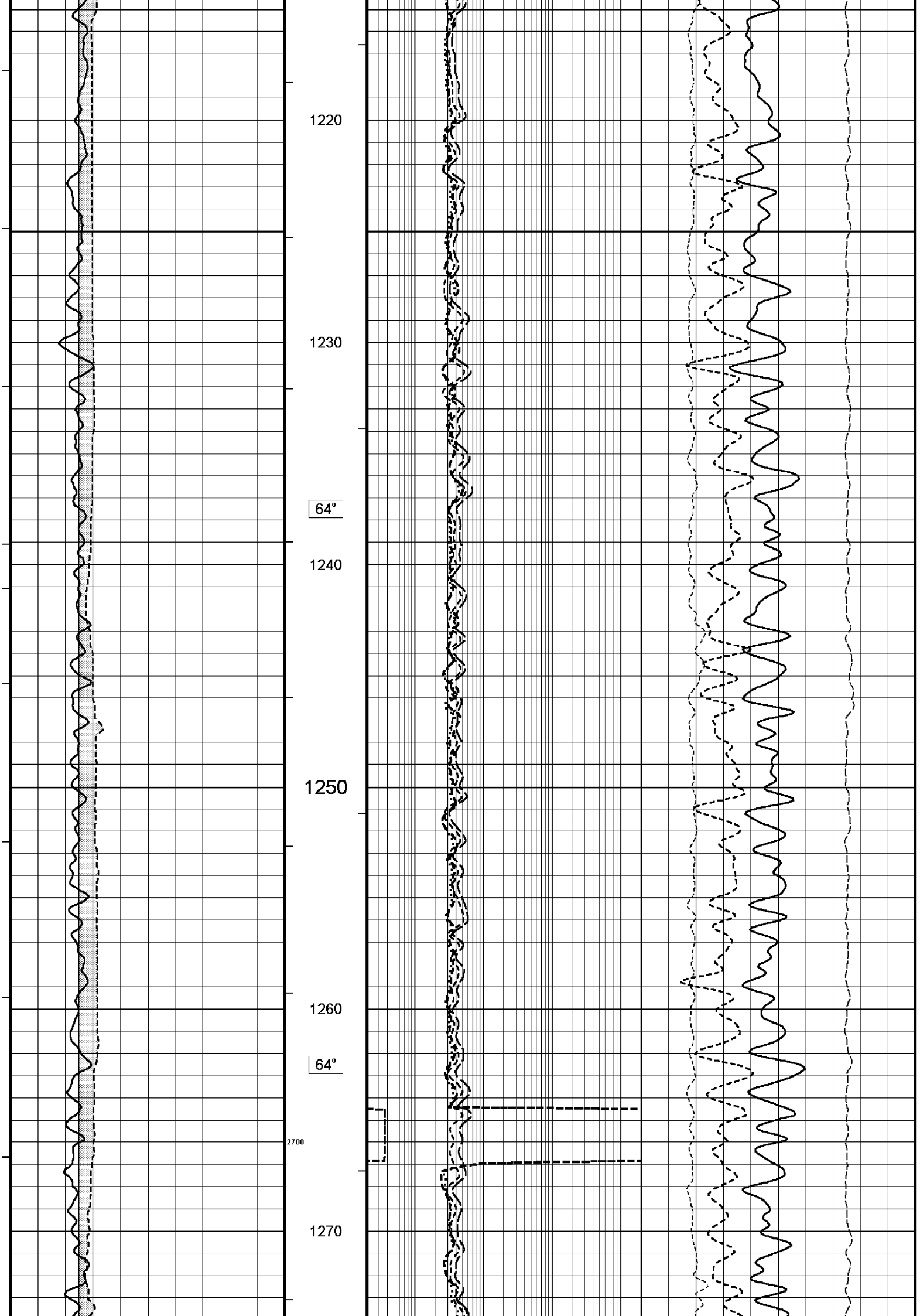
1110
62°
1120
2900
1130
1200
62°
1140
1150


1160
63°
1170
1180
63°
1190
2800
1200
1210
64°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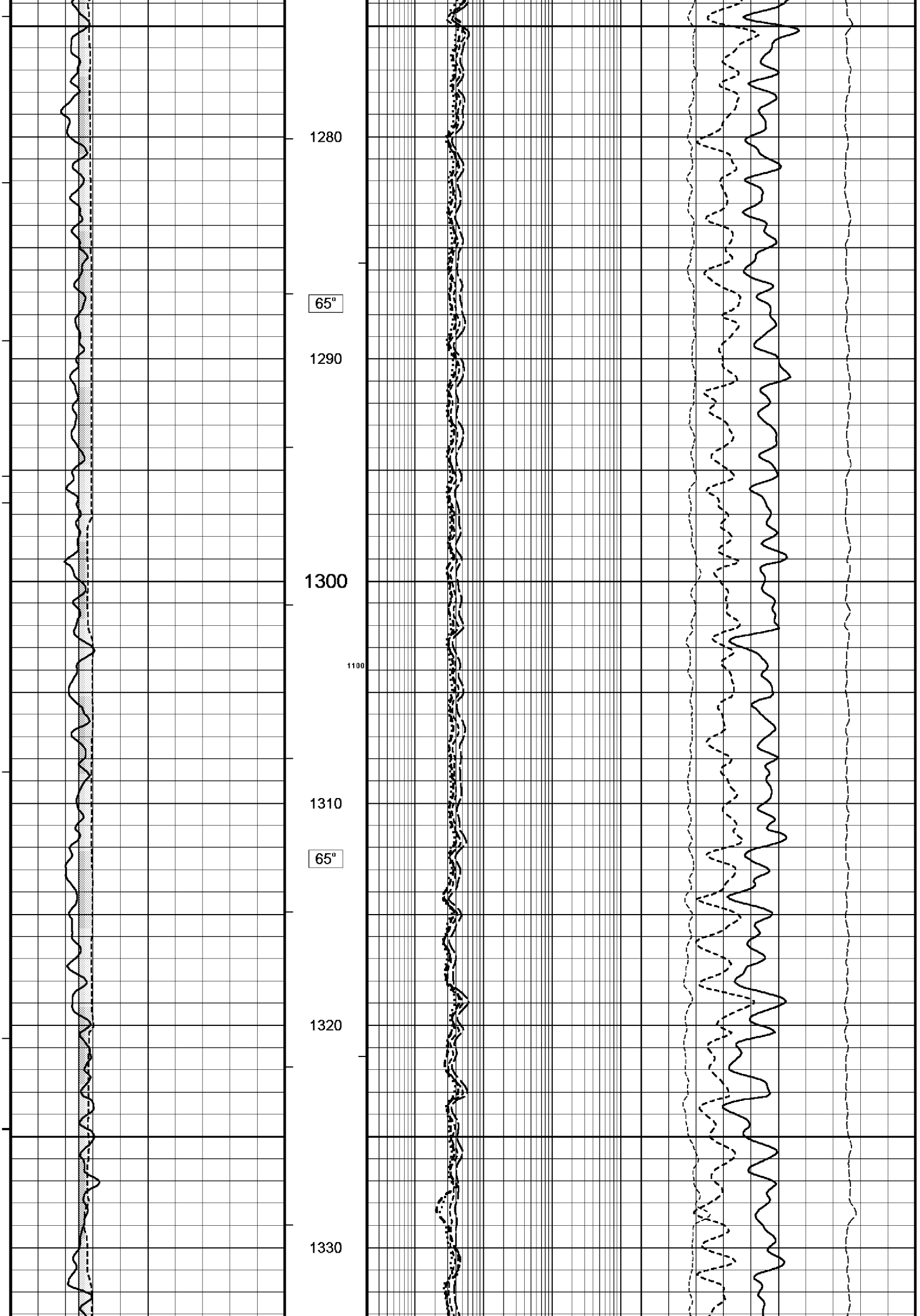
1230
64°
1240
1250
1260
64°
2700
1270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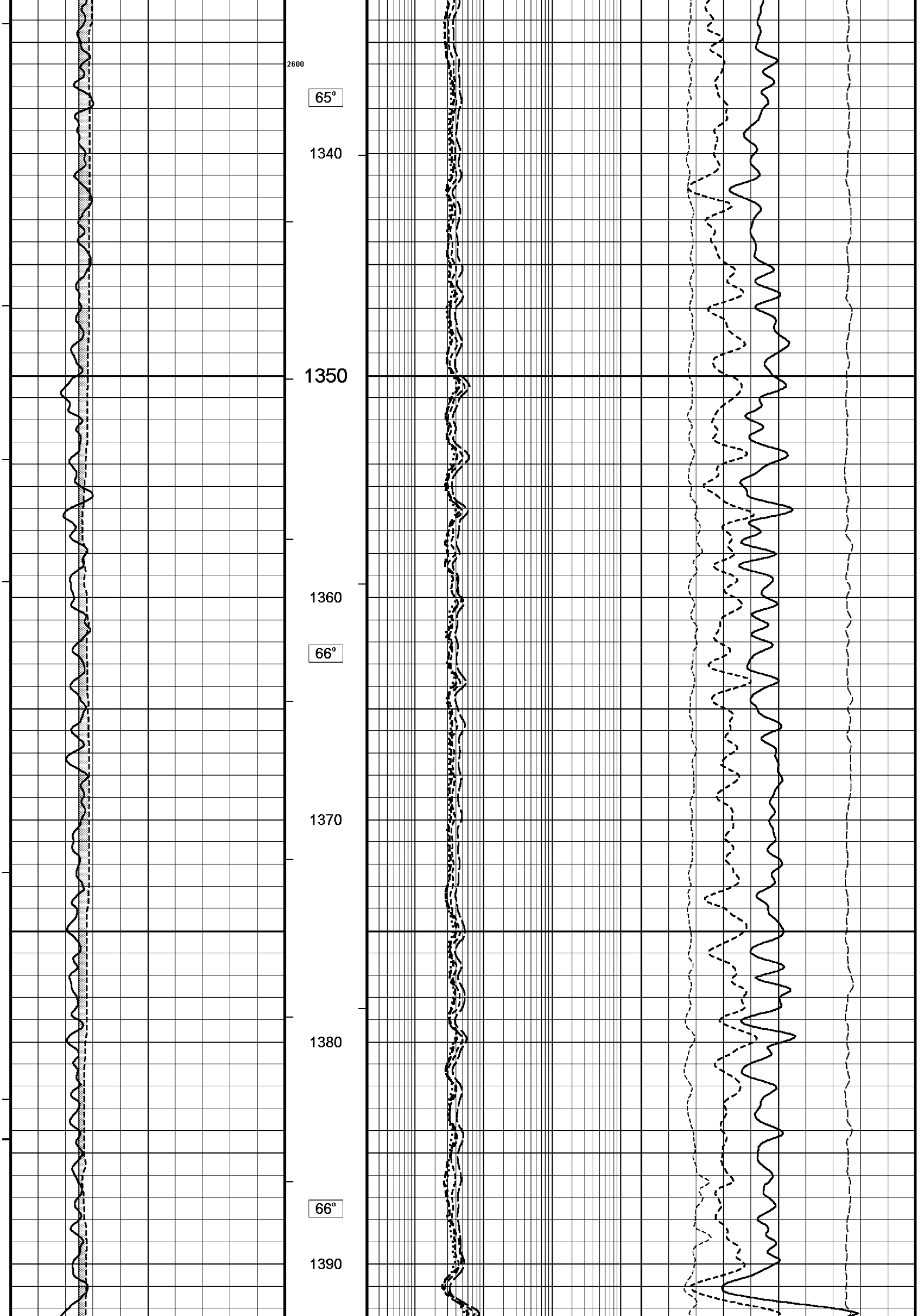
65°
1290
1300
1100
1310
65°
1320
1330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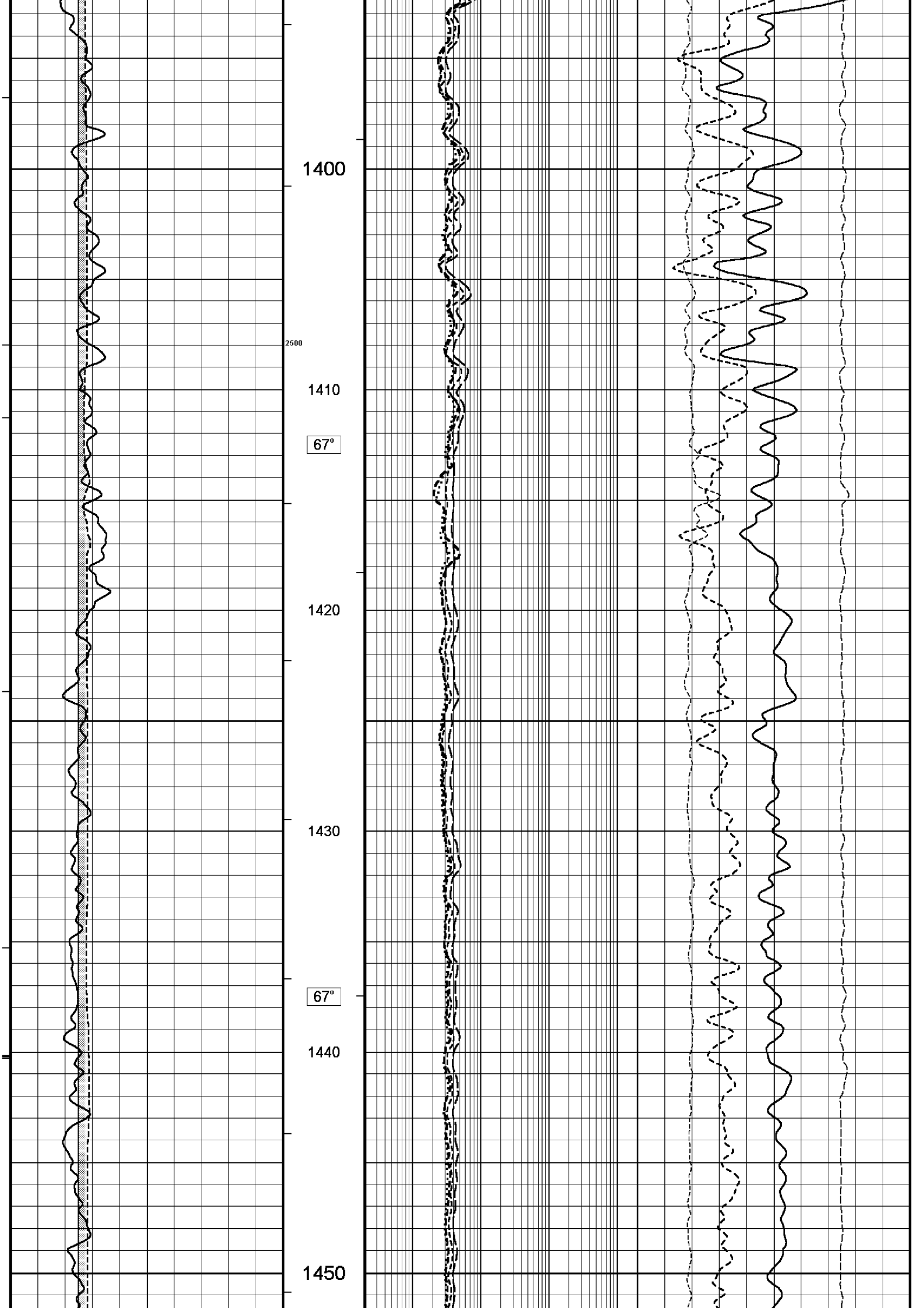
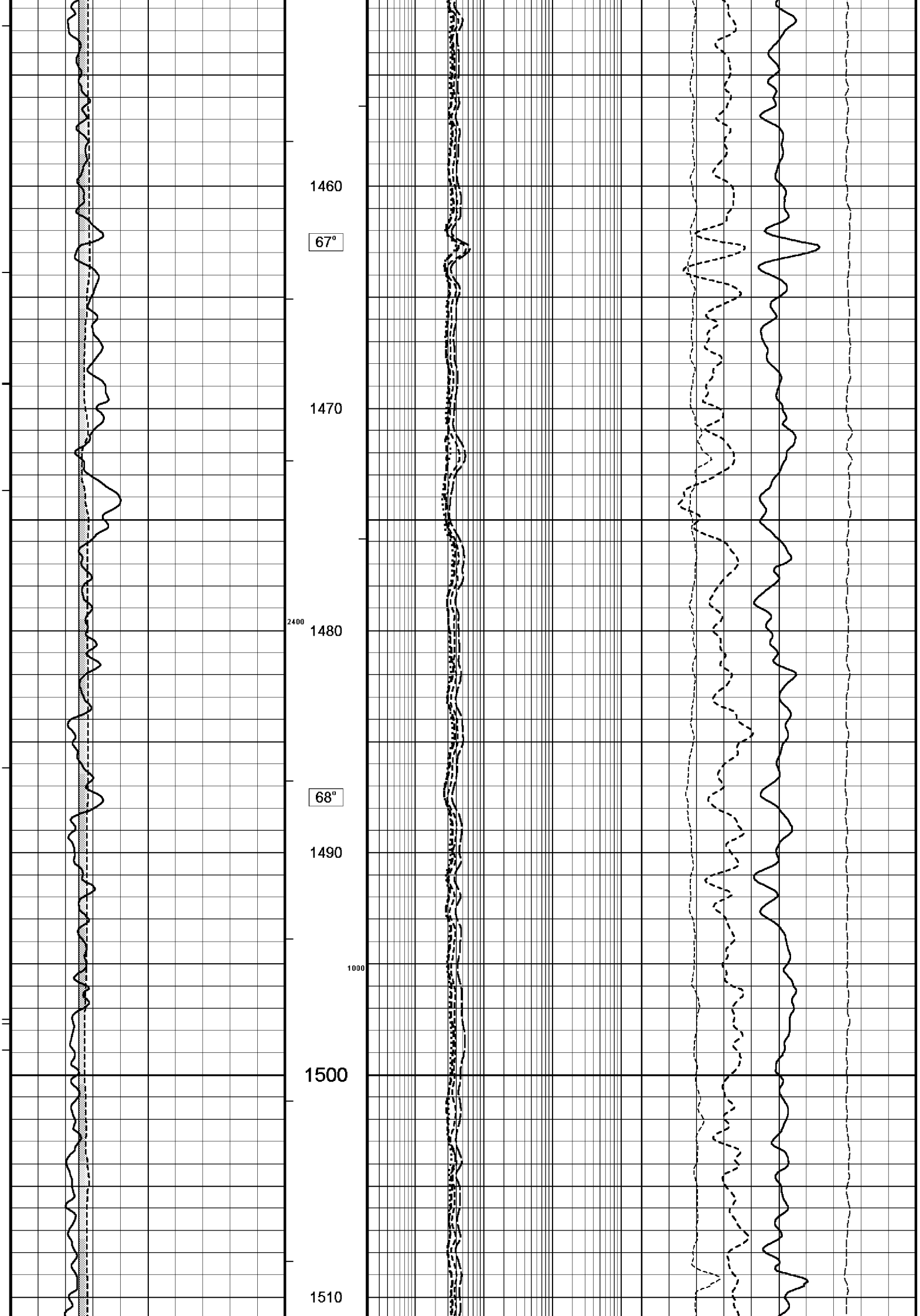
1340
1350
1360
66°
1370
1380
66°
1390


1400
2500
1410
67°
1420
1430
67°
1440
1450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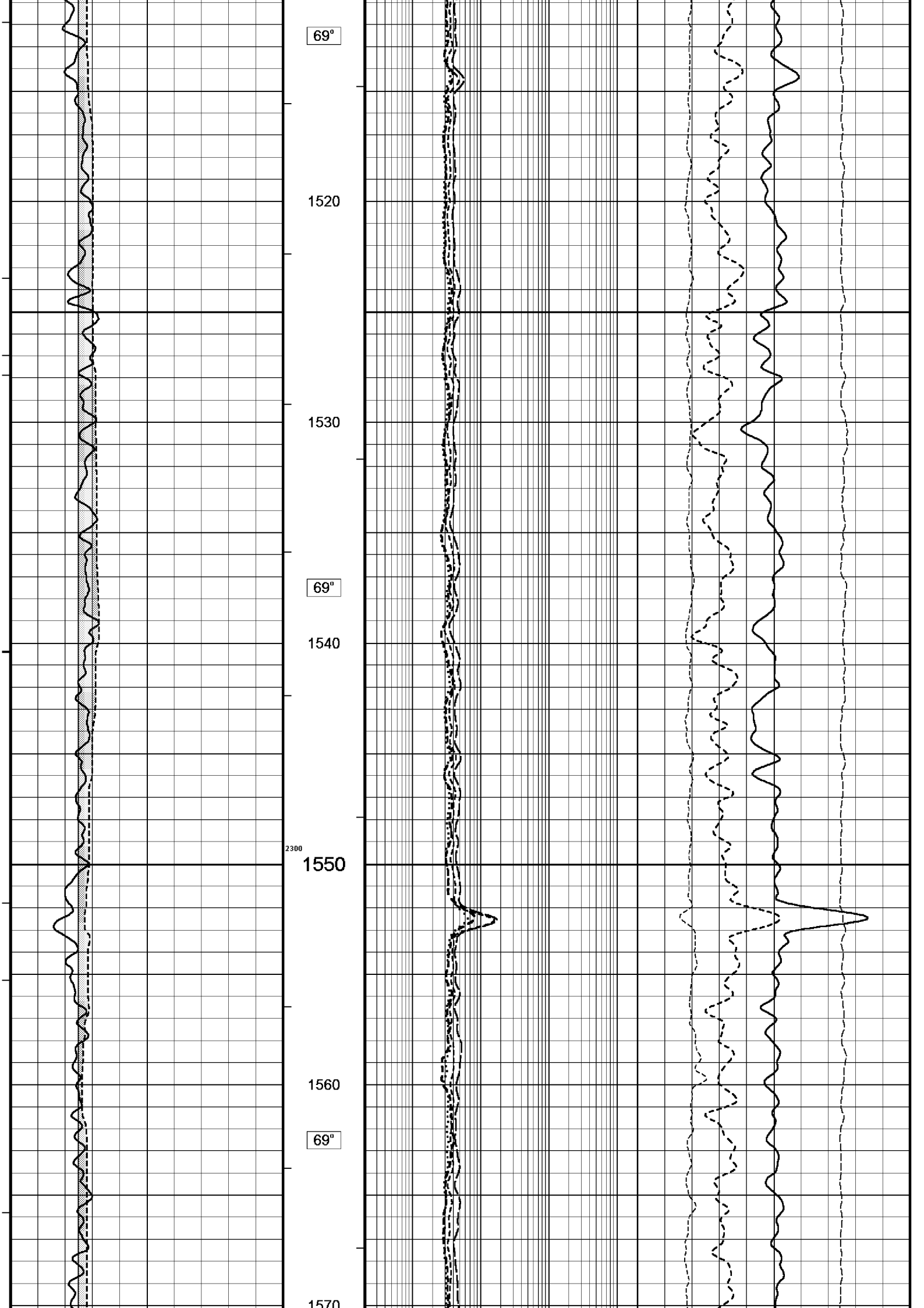
1470
2400
1480
68°
1490
1000
1500
1510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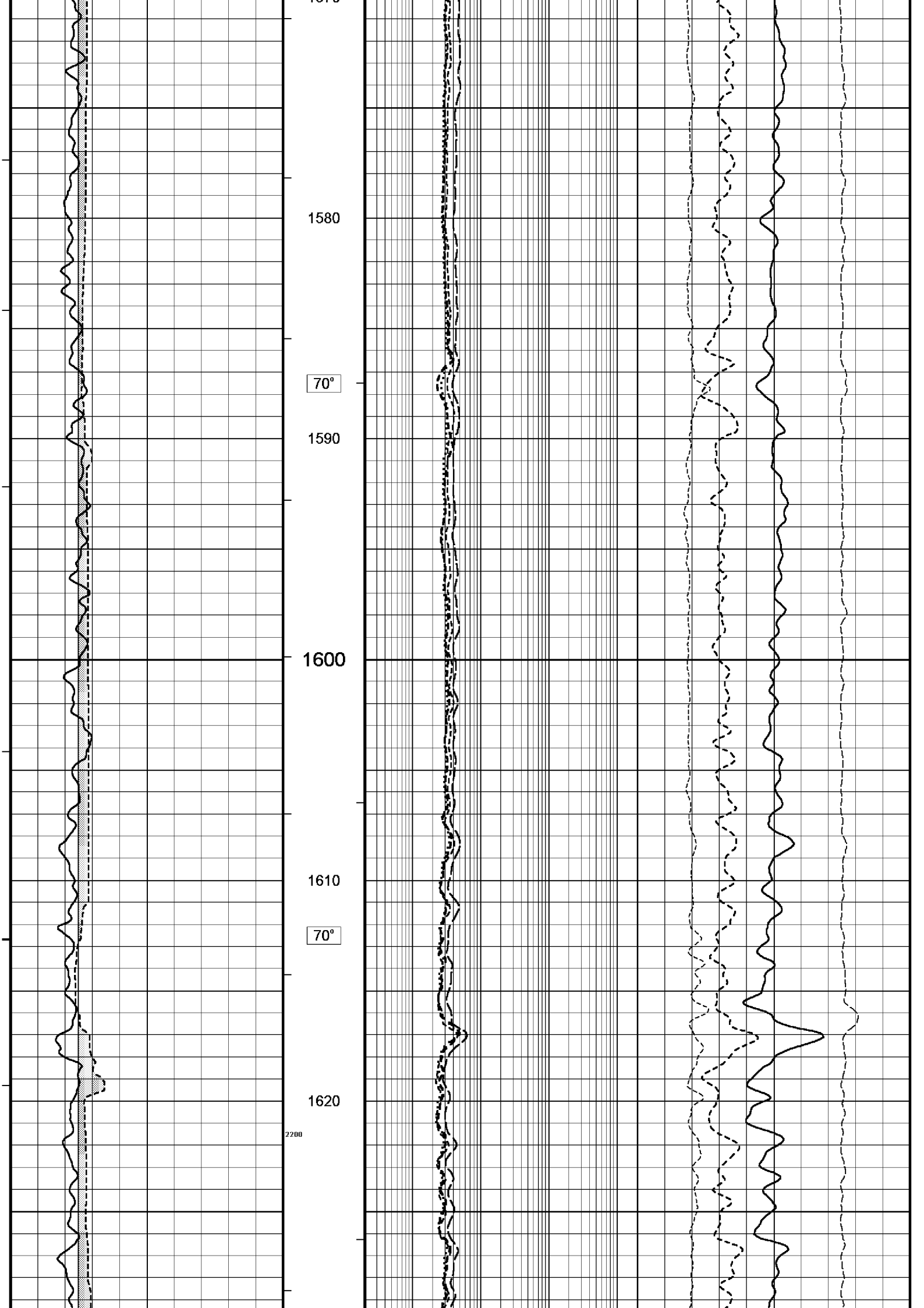
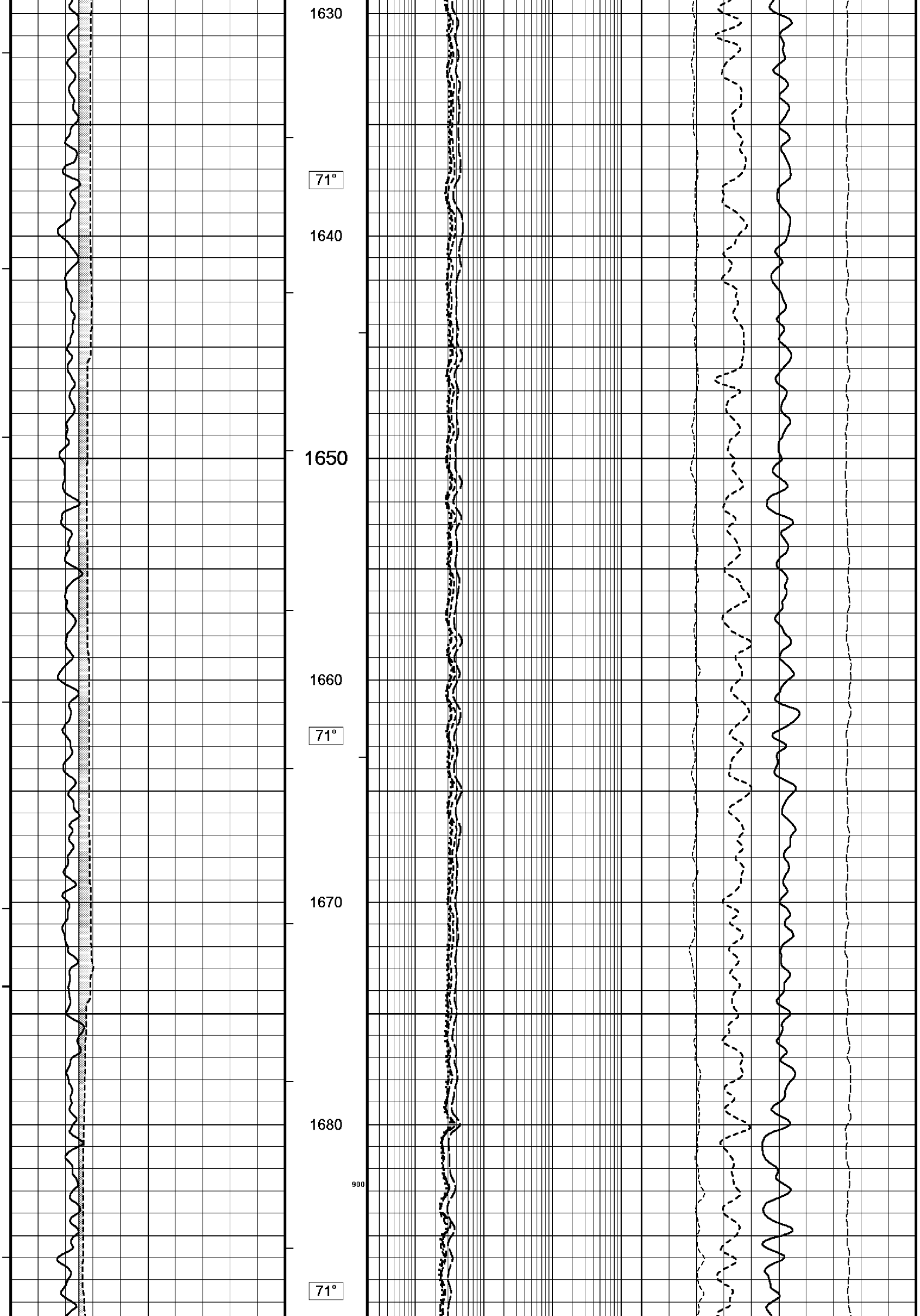
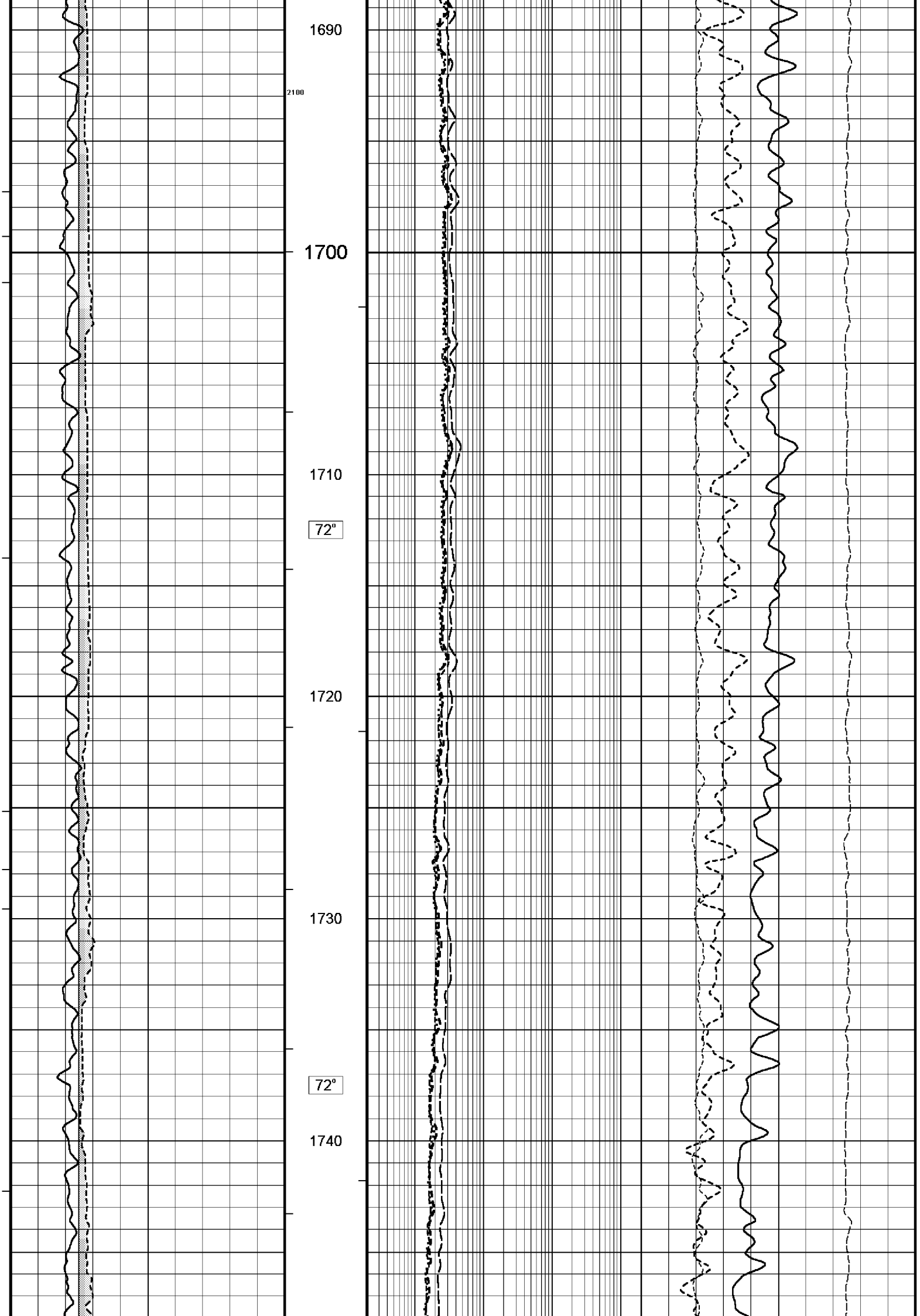
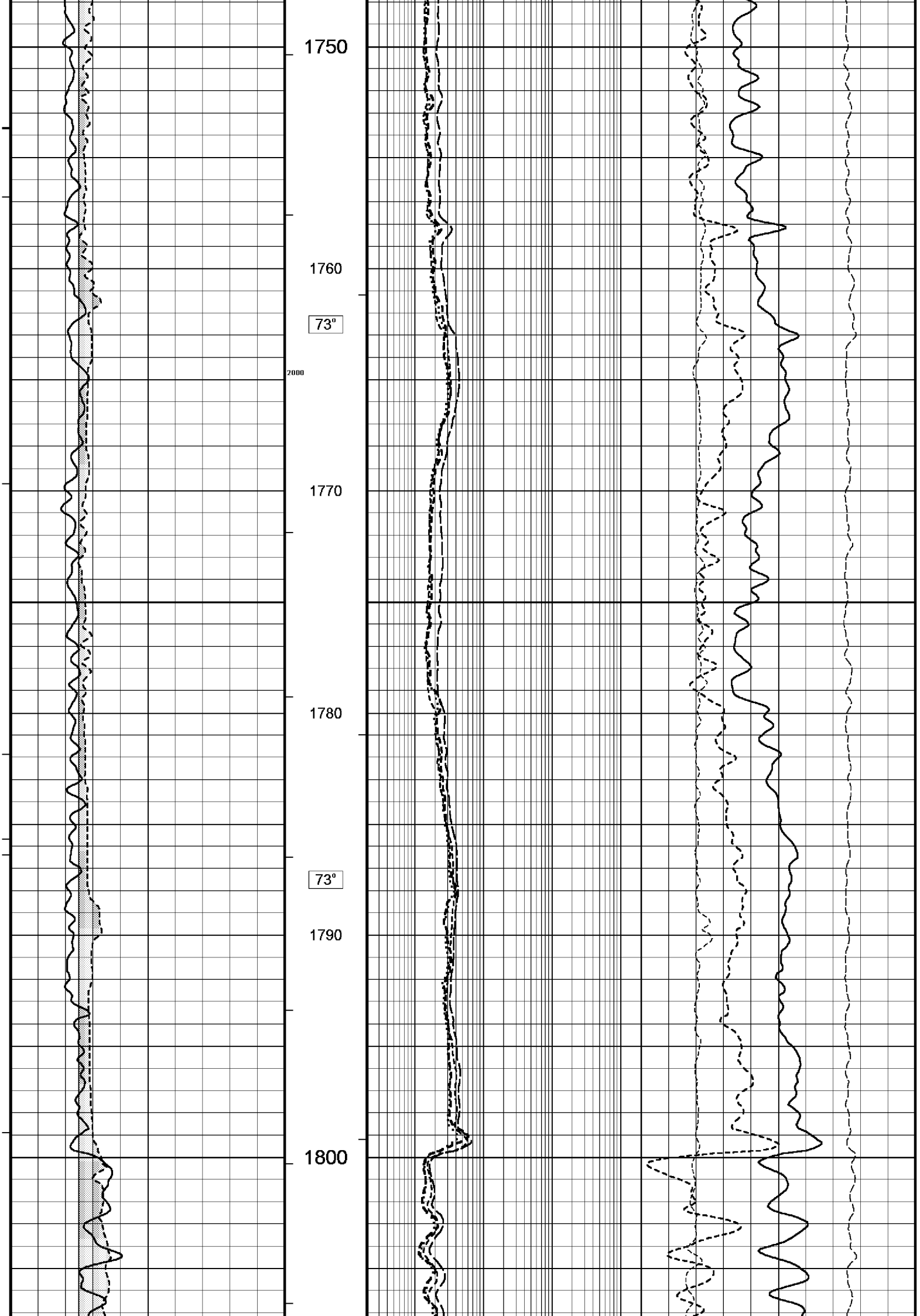
1520
1530
69°
1540
2300
1550
1560
69°
1570


1580
70°
1590
1600
1610
70°
1620
2200


1630
71°
1640
1650
1660
71°
1670
1680
900
71°


1690
2100
1700
1710
72"
1720
1730
72°
1740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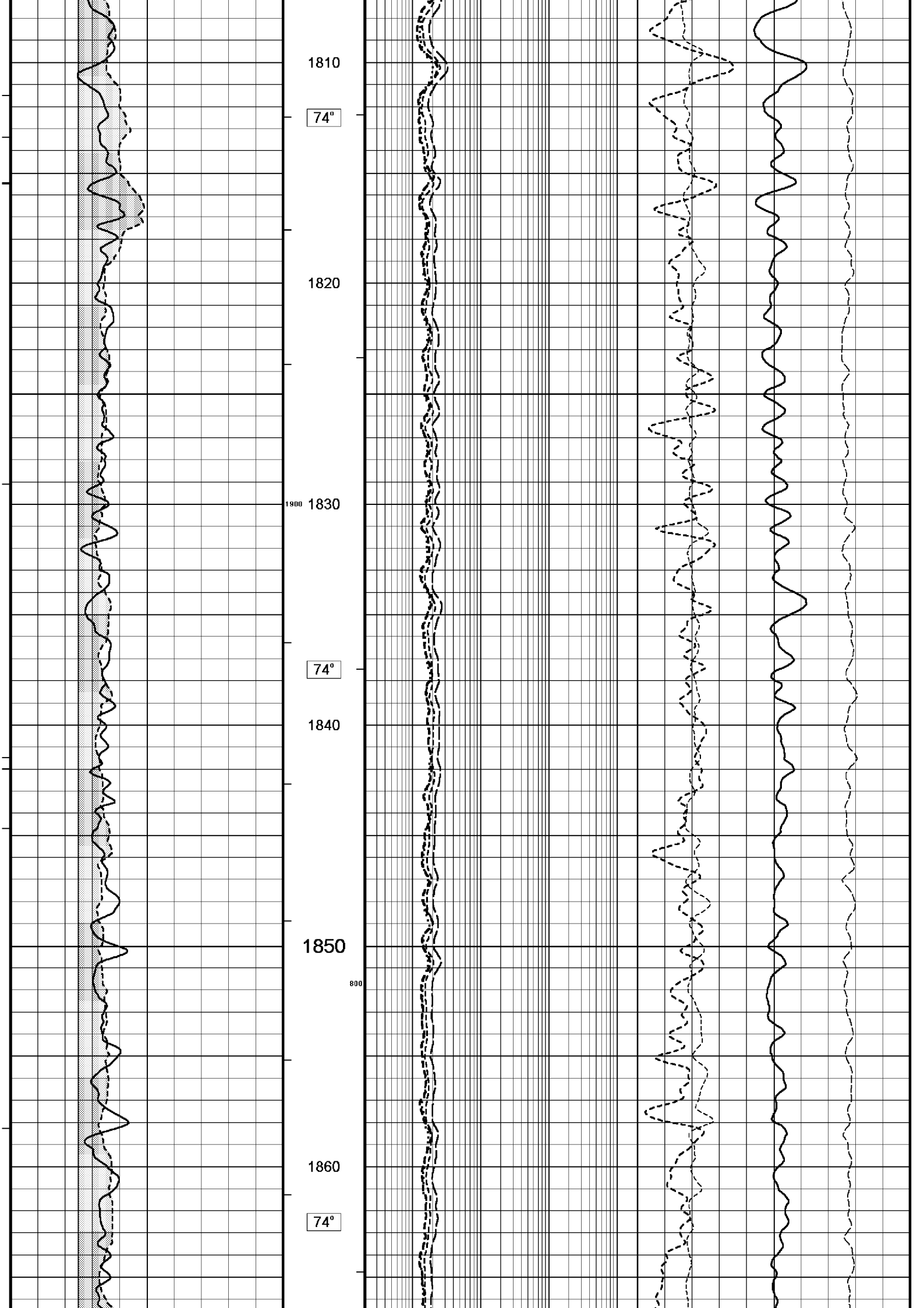
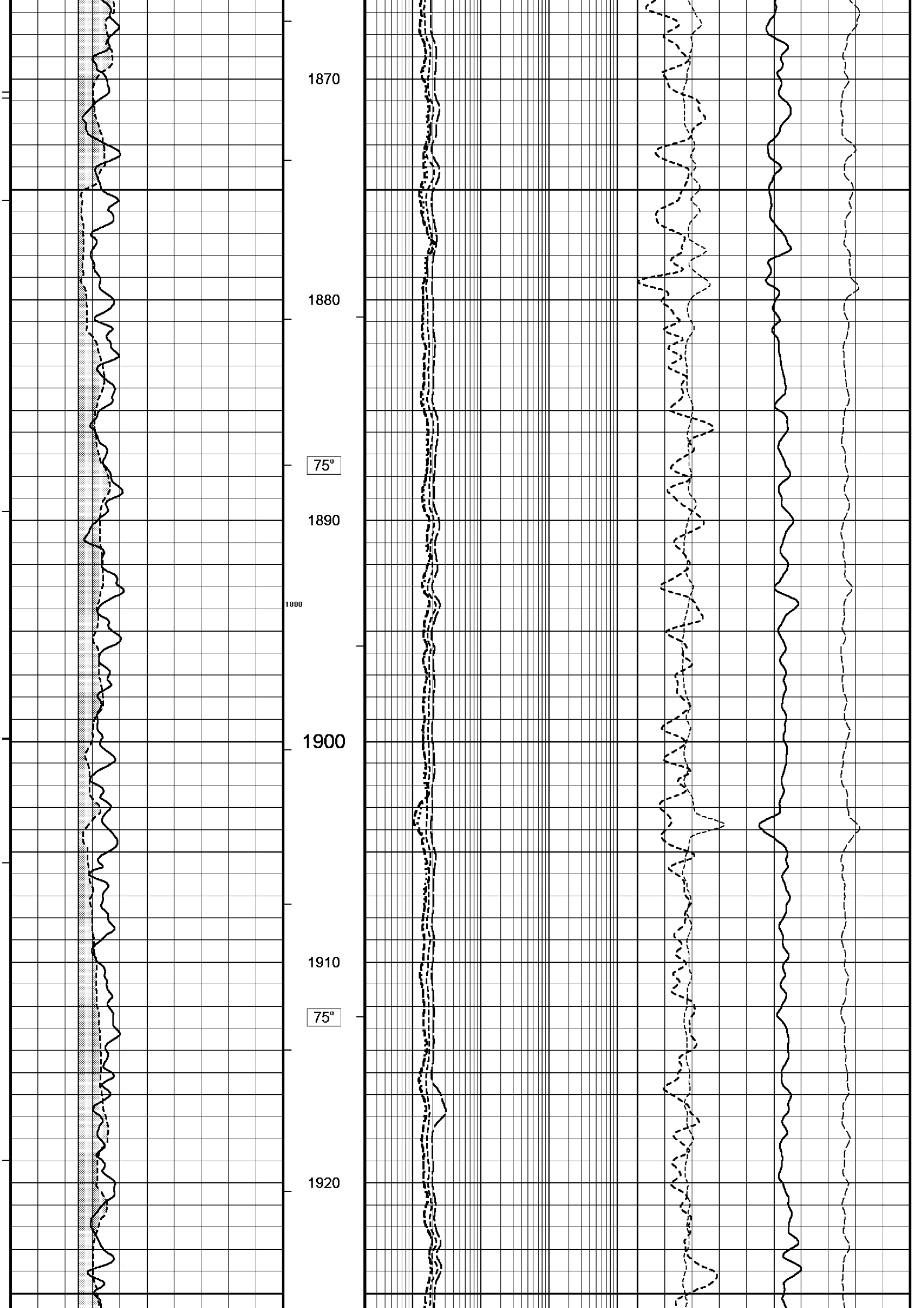
1760
73°
2000
1770
1780
73°
1790
1800


1810
74°
1820
1900
1830
74°
1840
1850
800
1860
74°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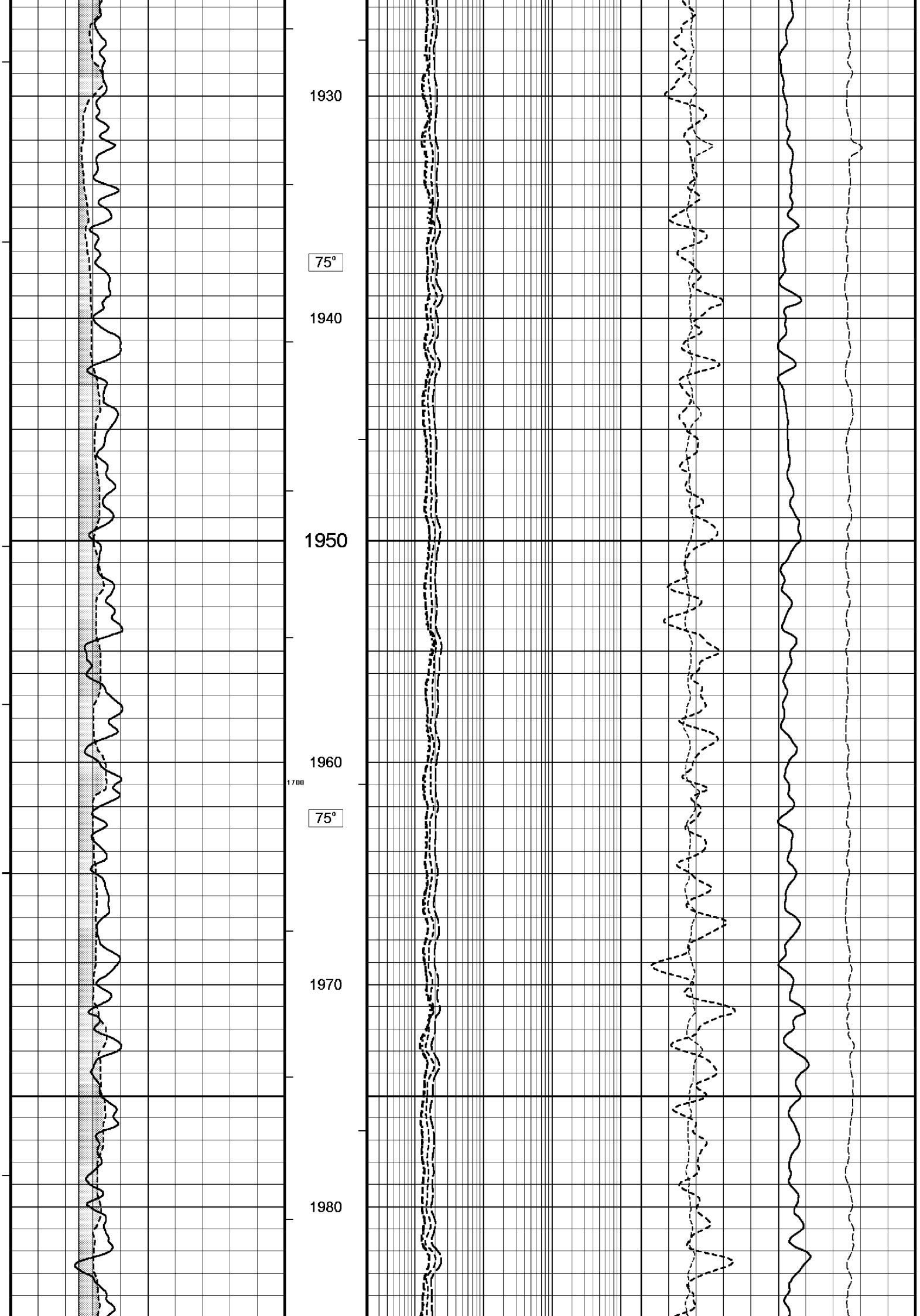
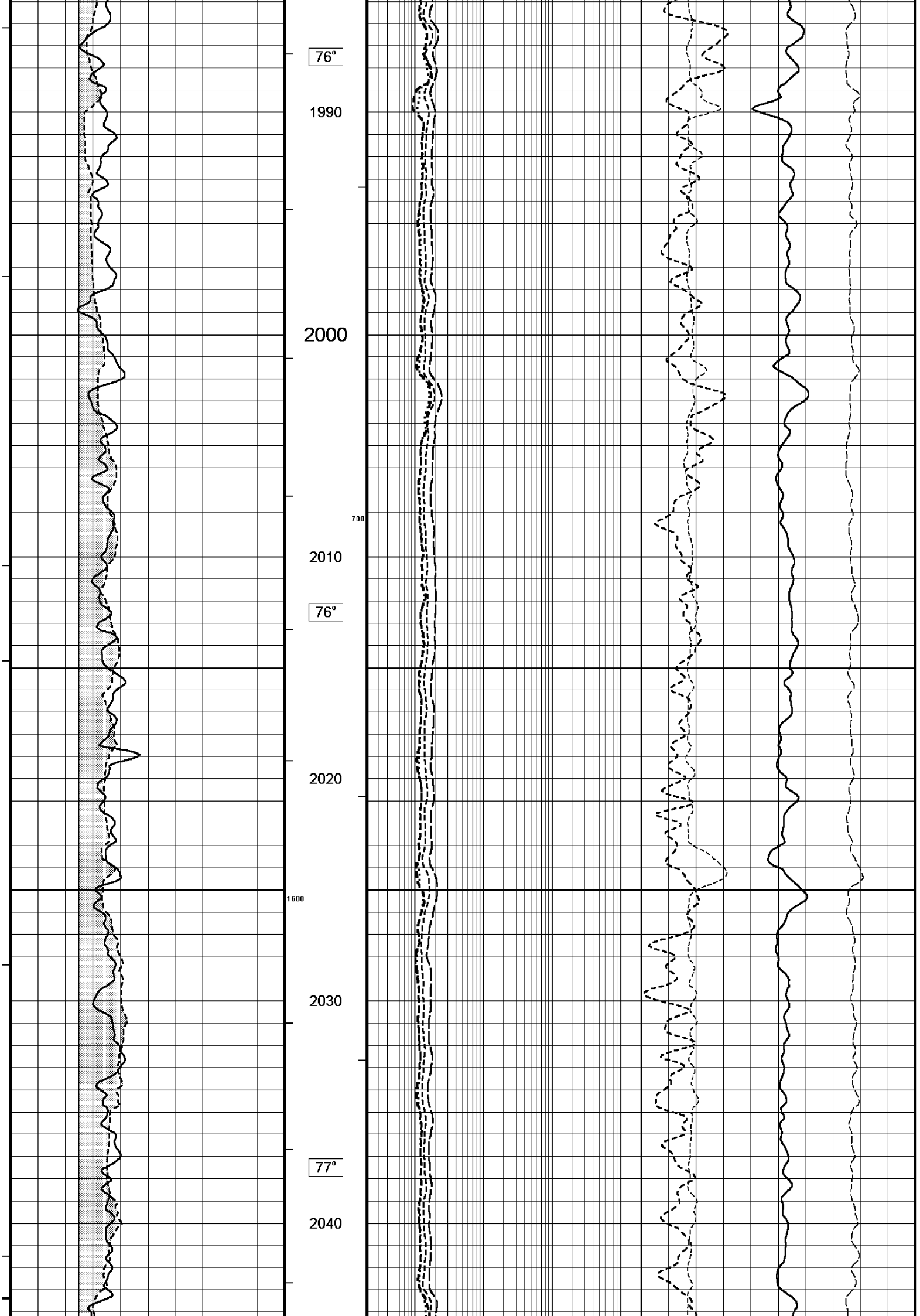
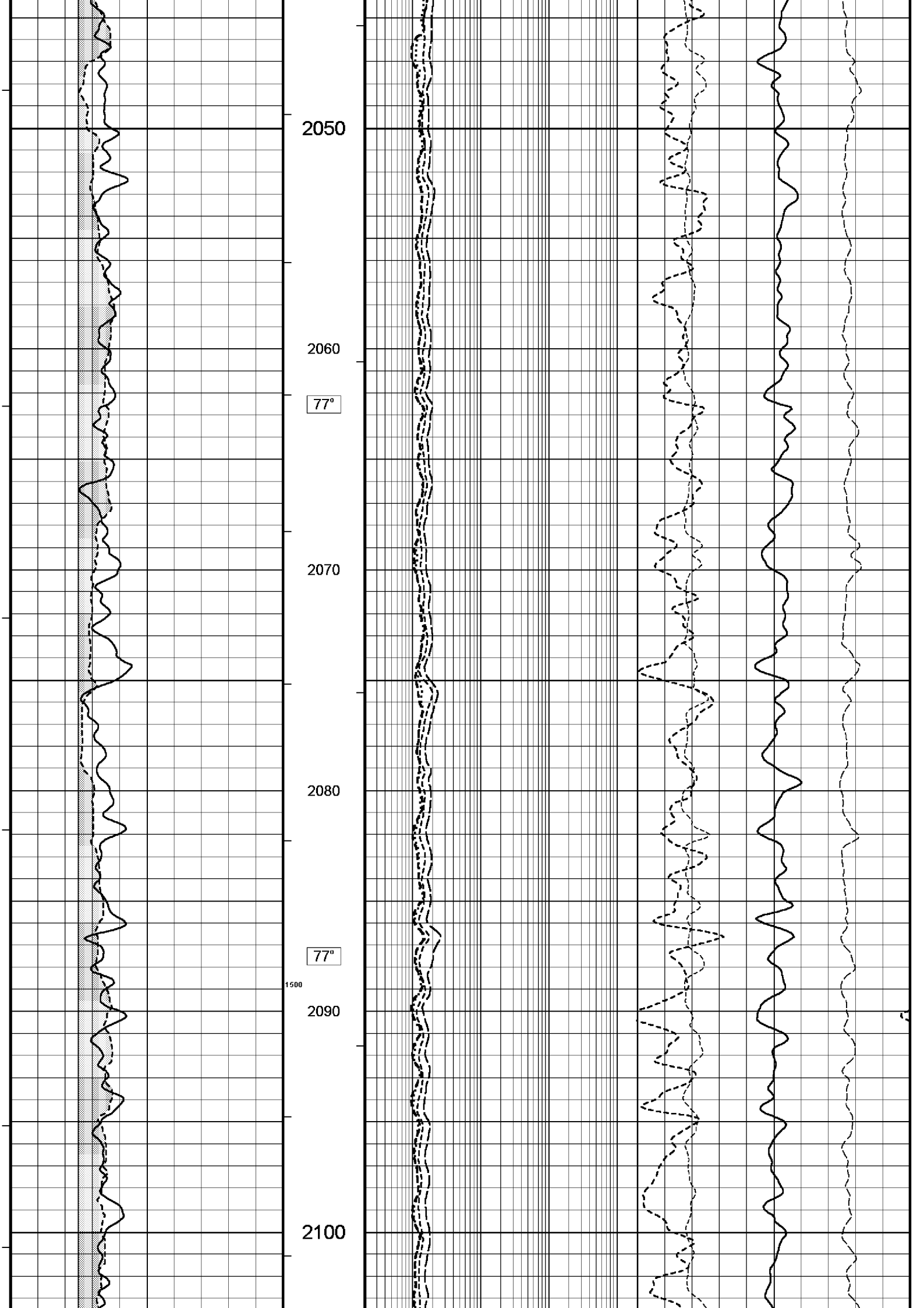
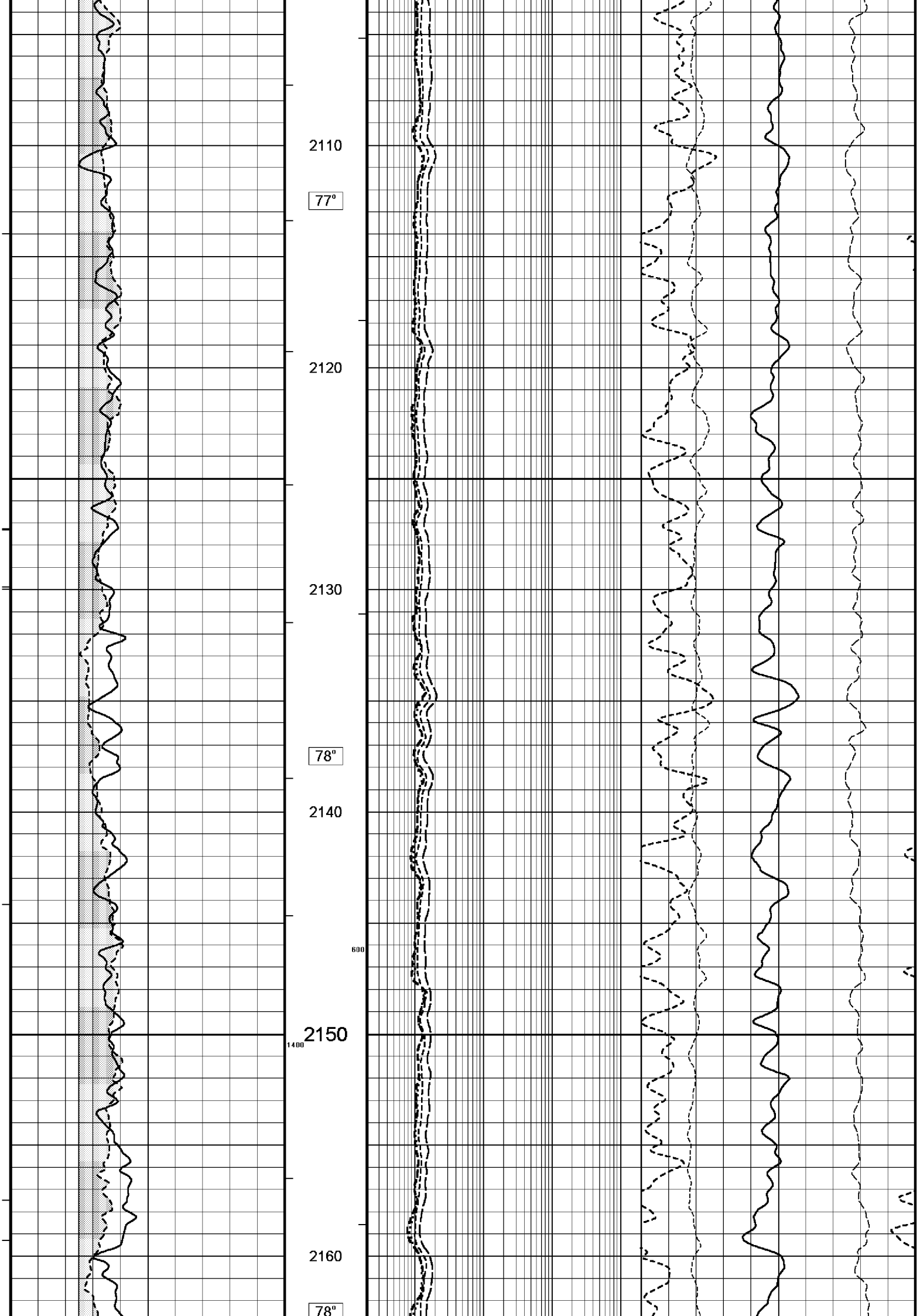
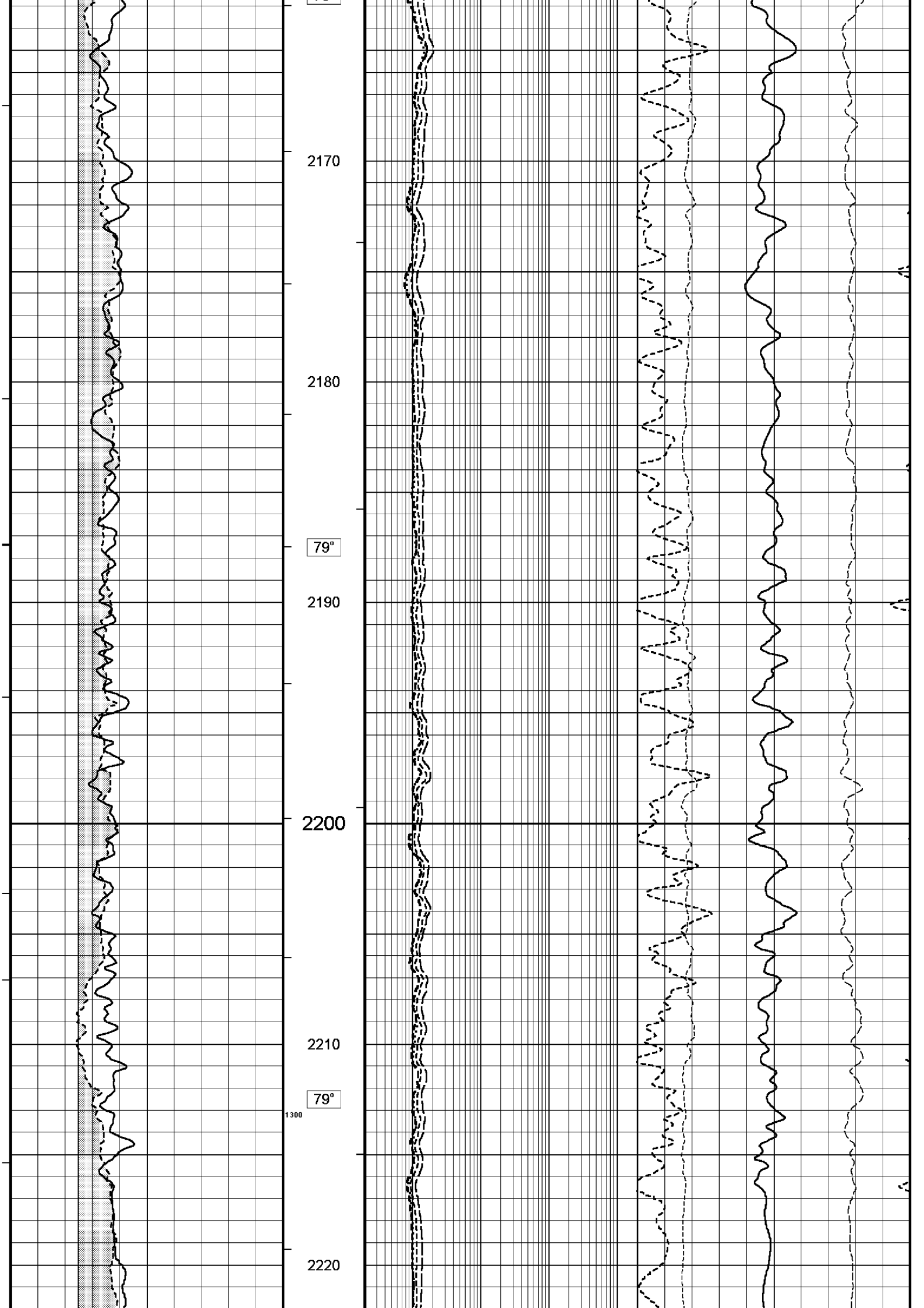
1880
75°
1890
1800
1900
1910
75°
1920


1930
75°
1940
1950
1960
1700
75°
1970
1980


76°
1990
2000
700
2010
76°
2020
1600
2030
77°
2040


2050
2060
77°
2070
2080
77°
1500
2090
2100


2110
77°
2120
2130
78°
2140
600
1400
2150
2160
78°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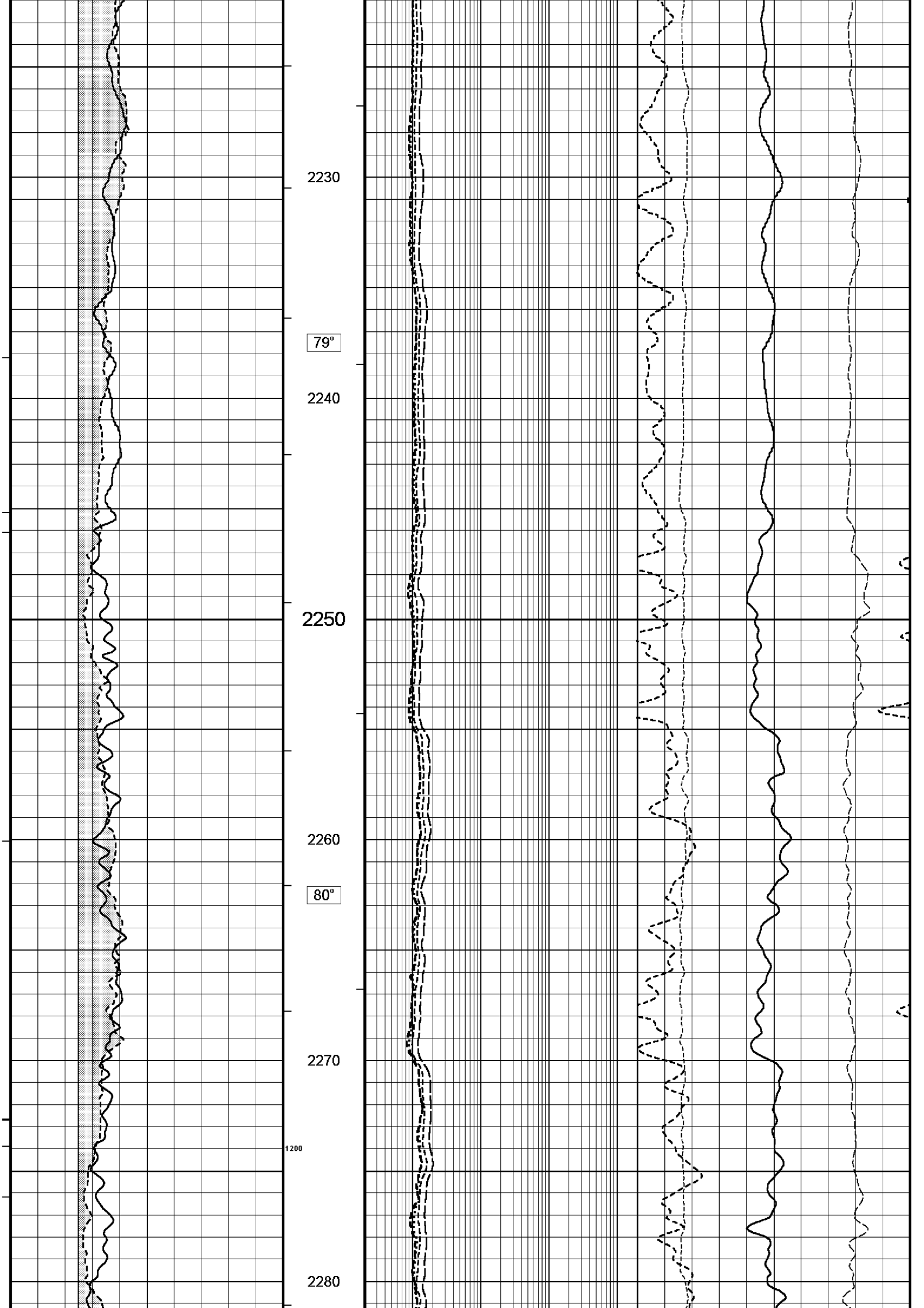
2180
79°
2190
2200
2210
79°
1300
2220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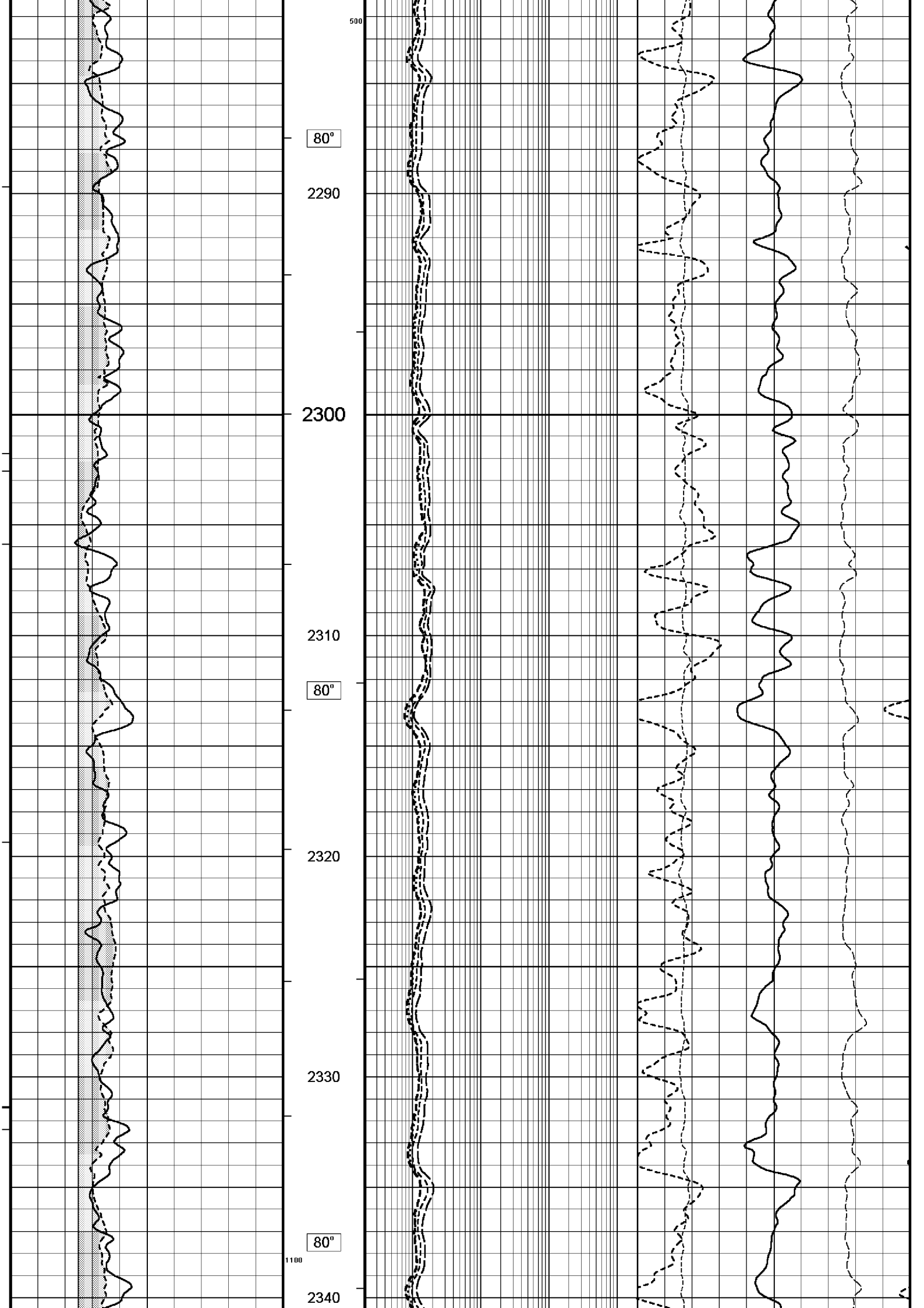
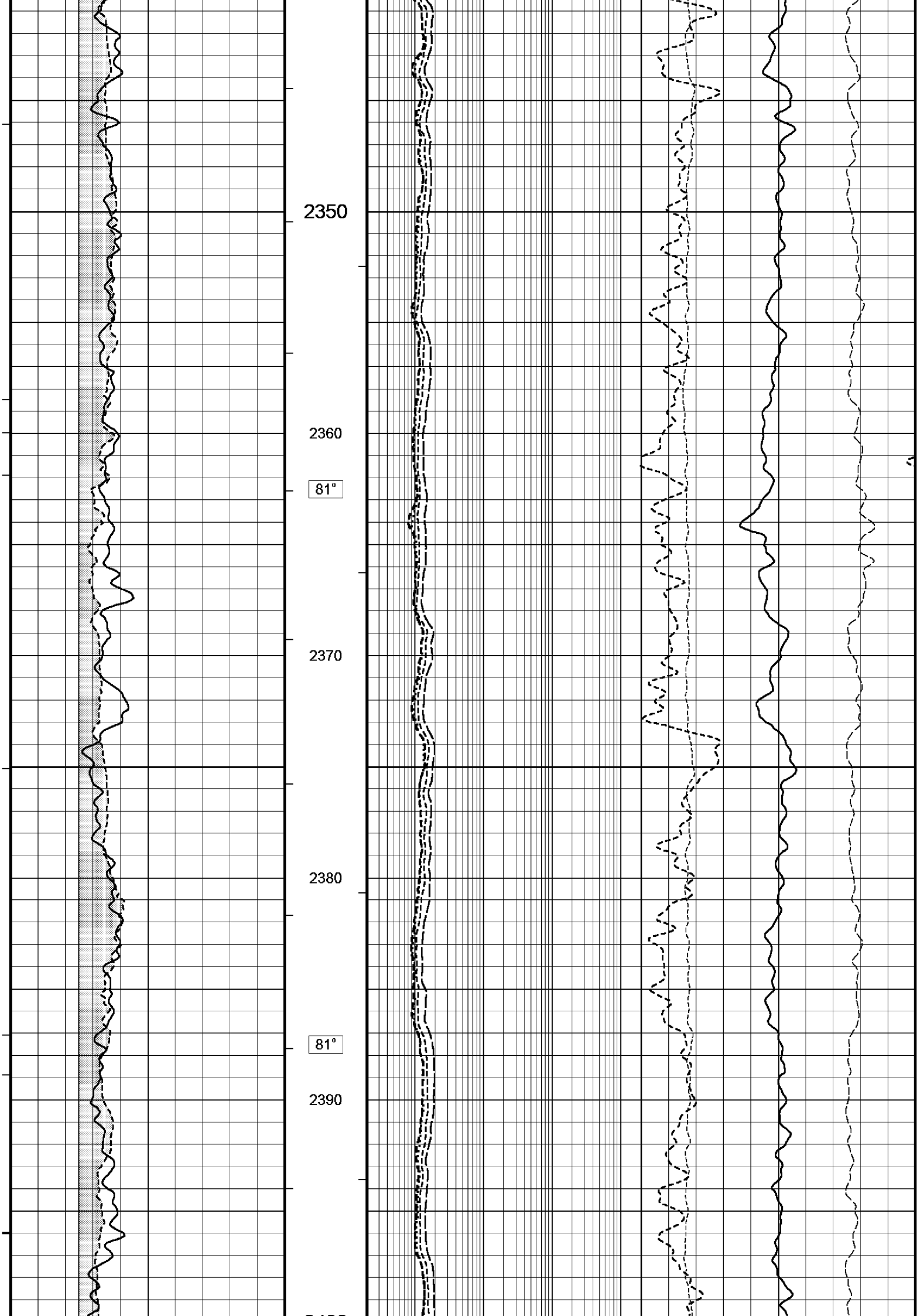
79°
2240
2250
2260
80°
2270
1200
2280


500
80°
2290
2300
2310
80°
2320
2330
80°
1100
2340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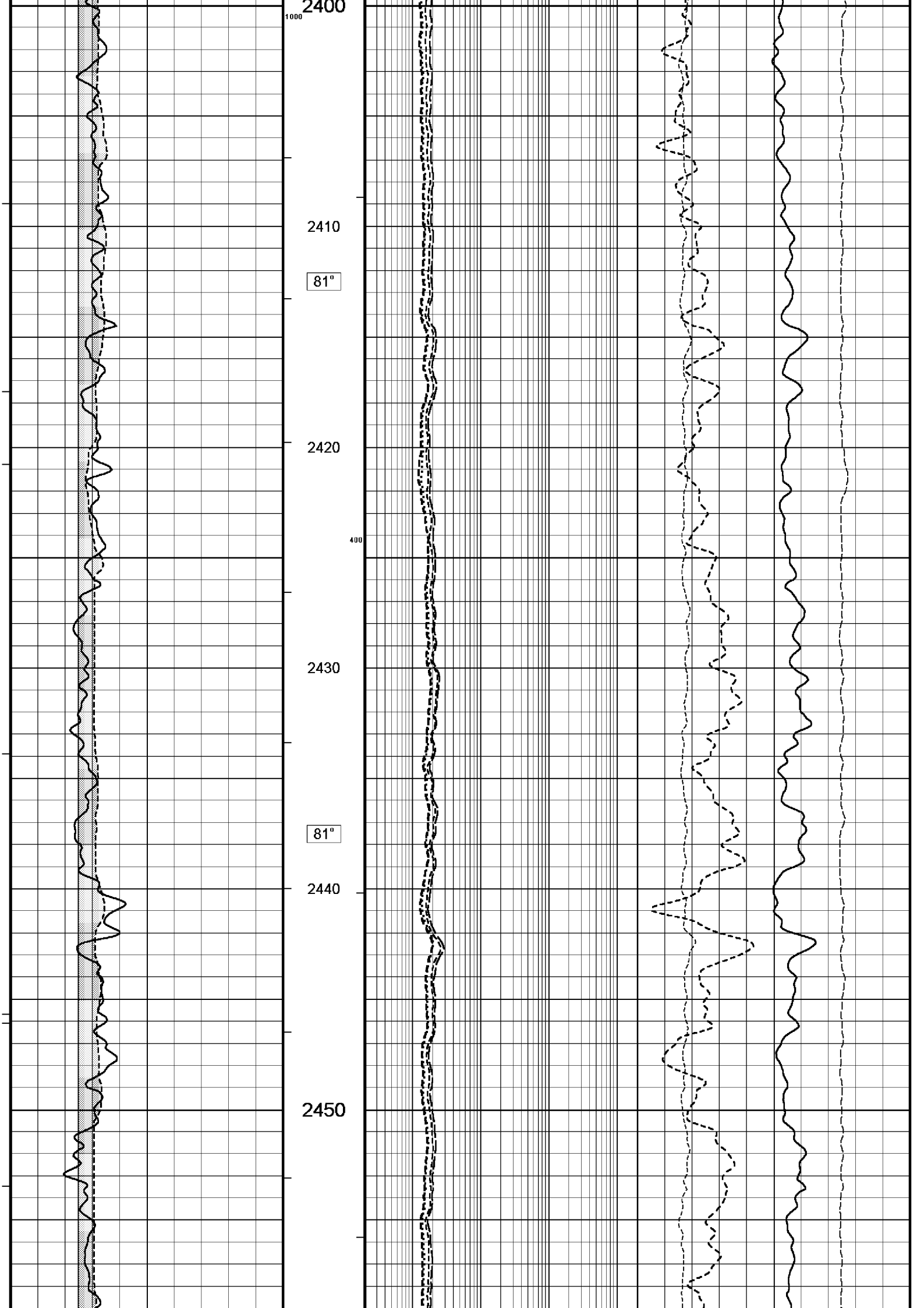
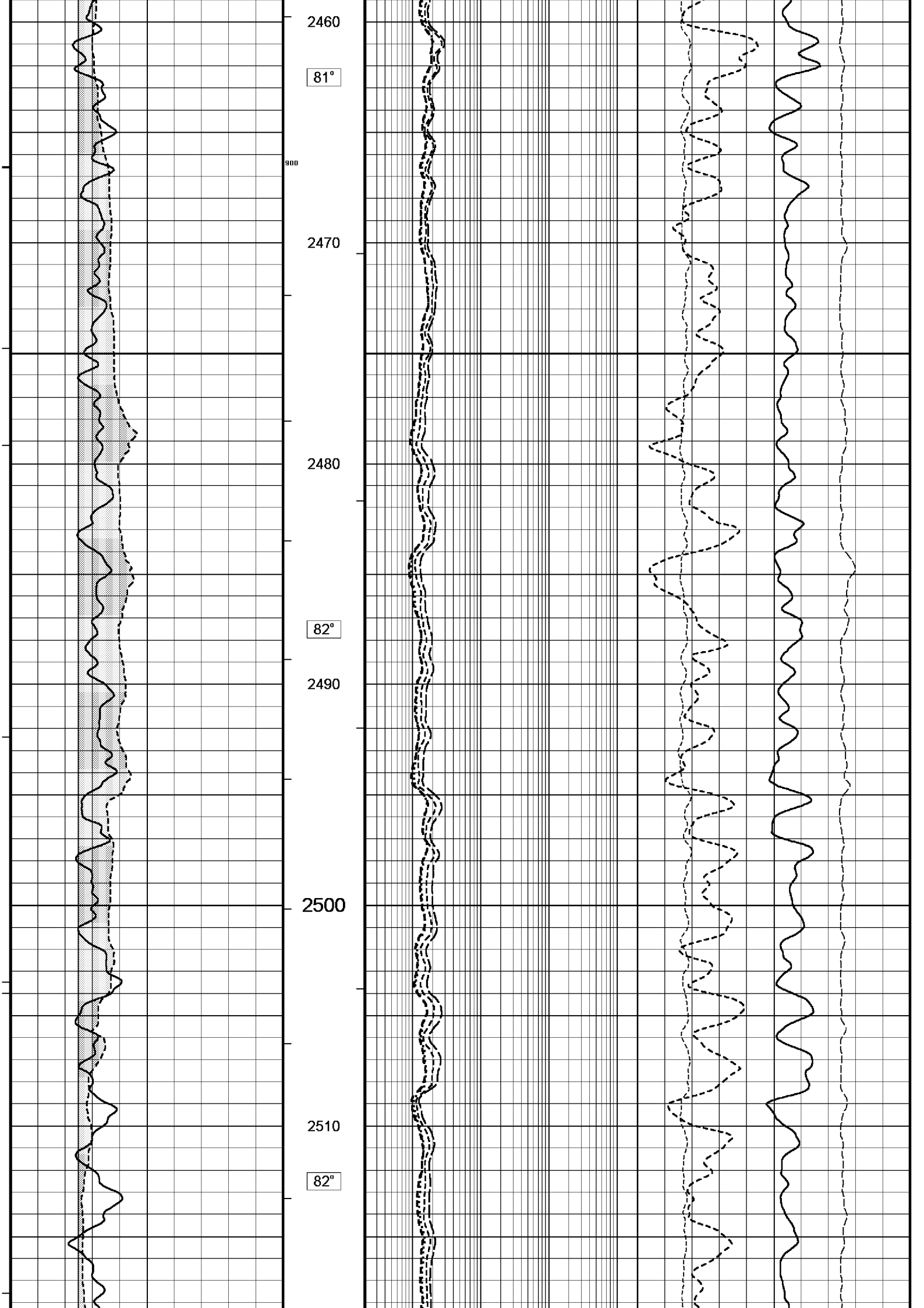
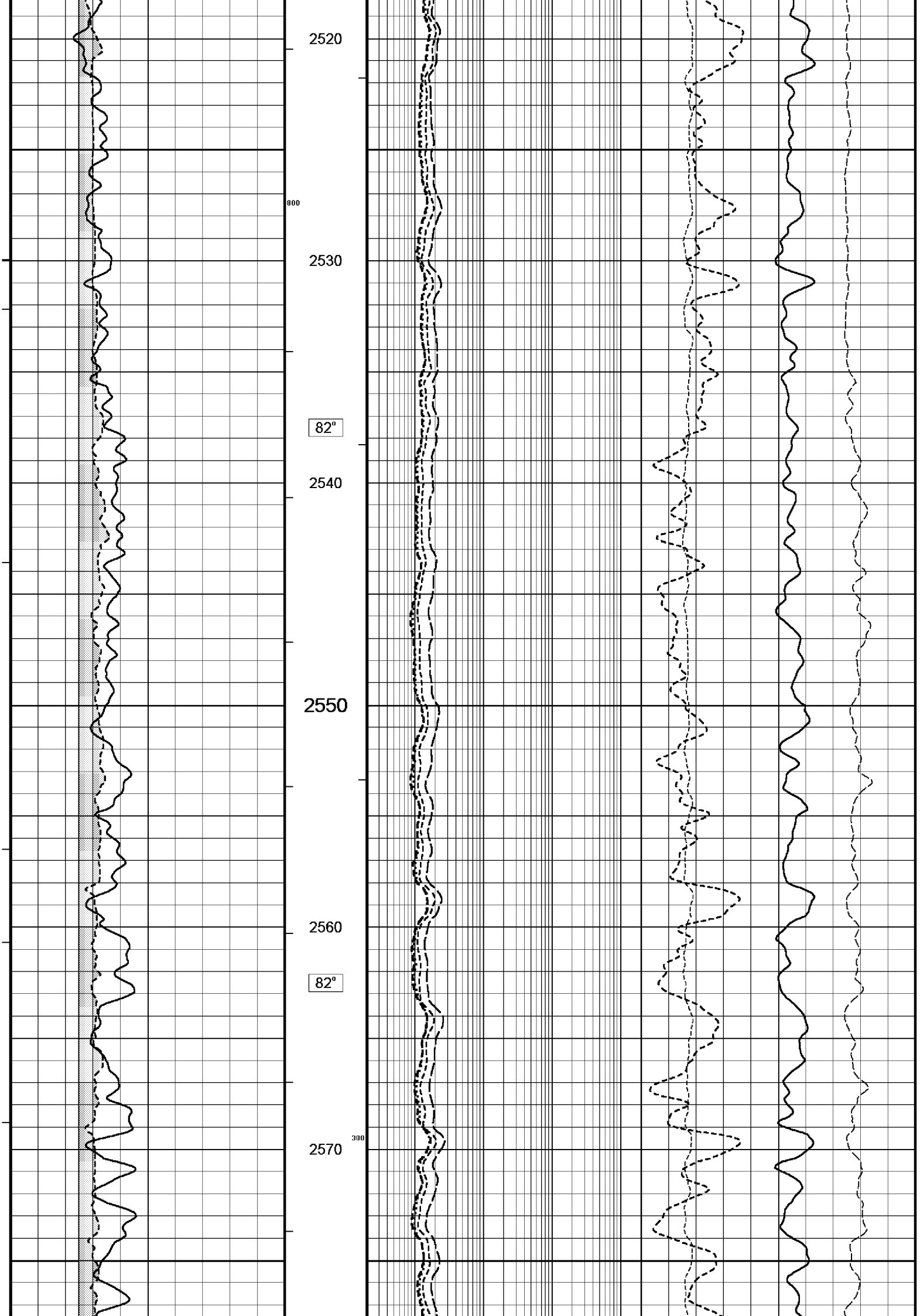
2360
81°
2370
2380
81°
2390


1000
2400
2410
81°
2420
400
2430
81°
2440
2450


2460
81°
900
2470
2480
82°
2490
2500
2510
82°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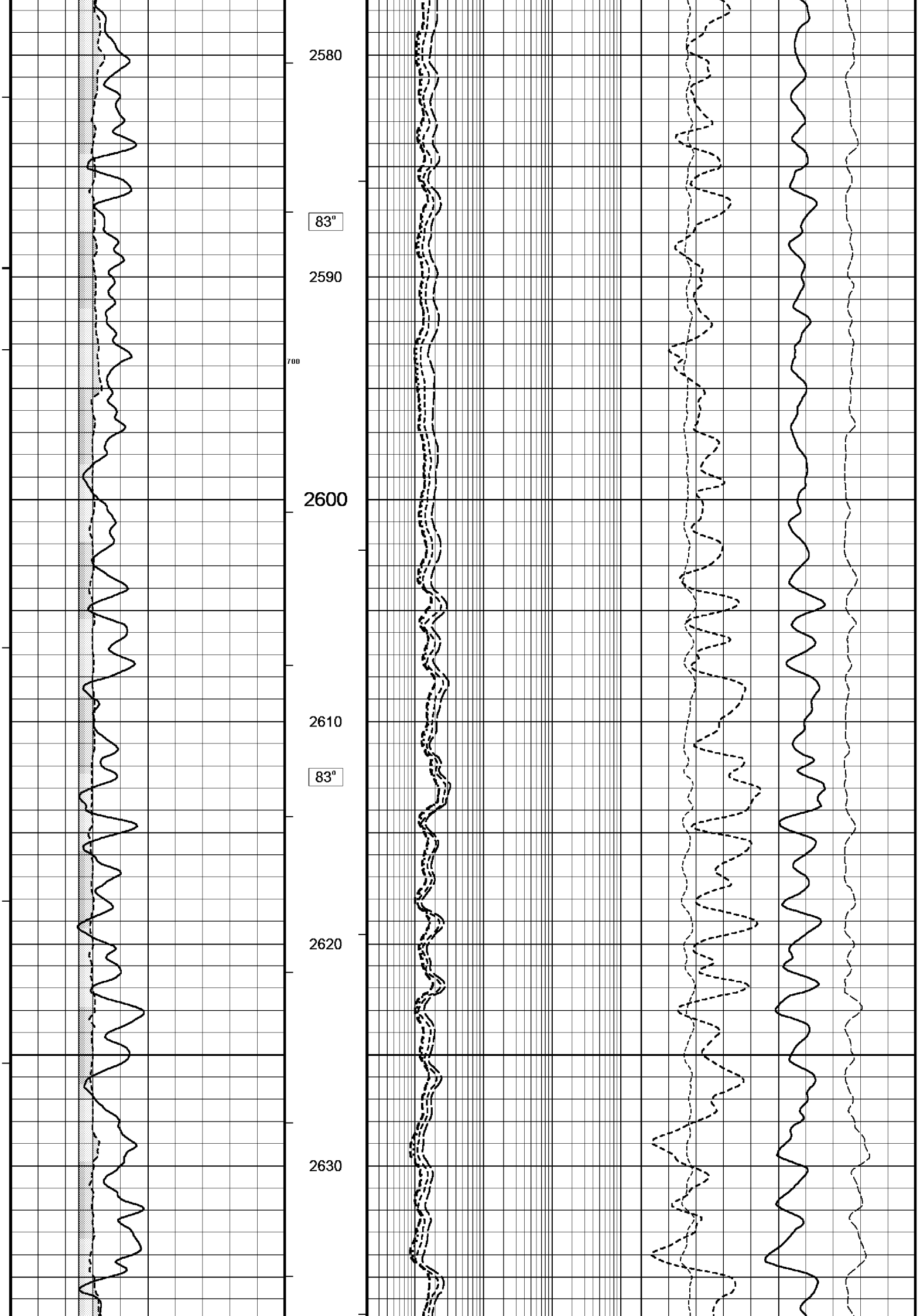
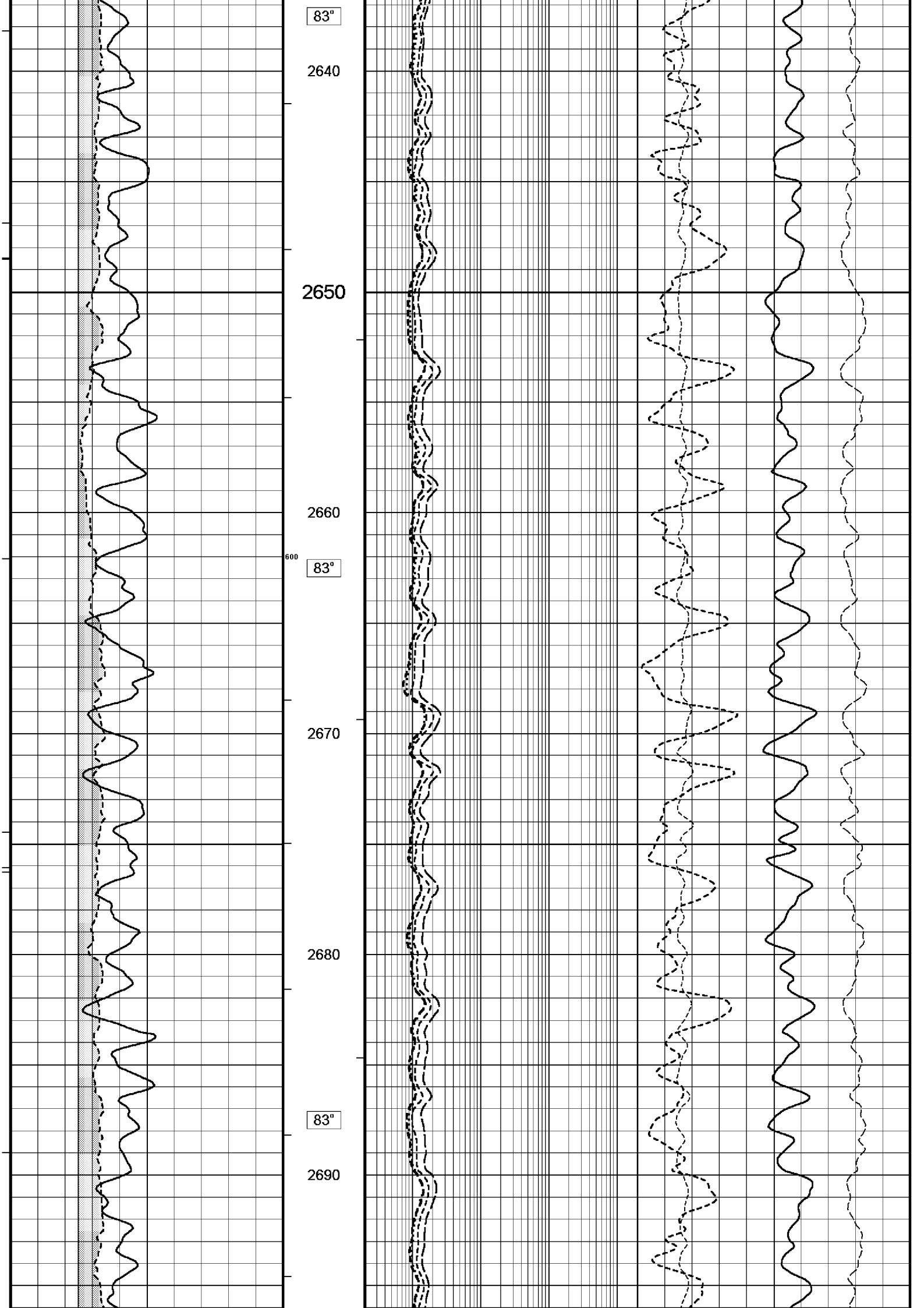
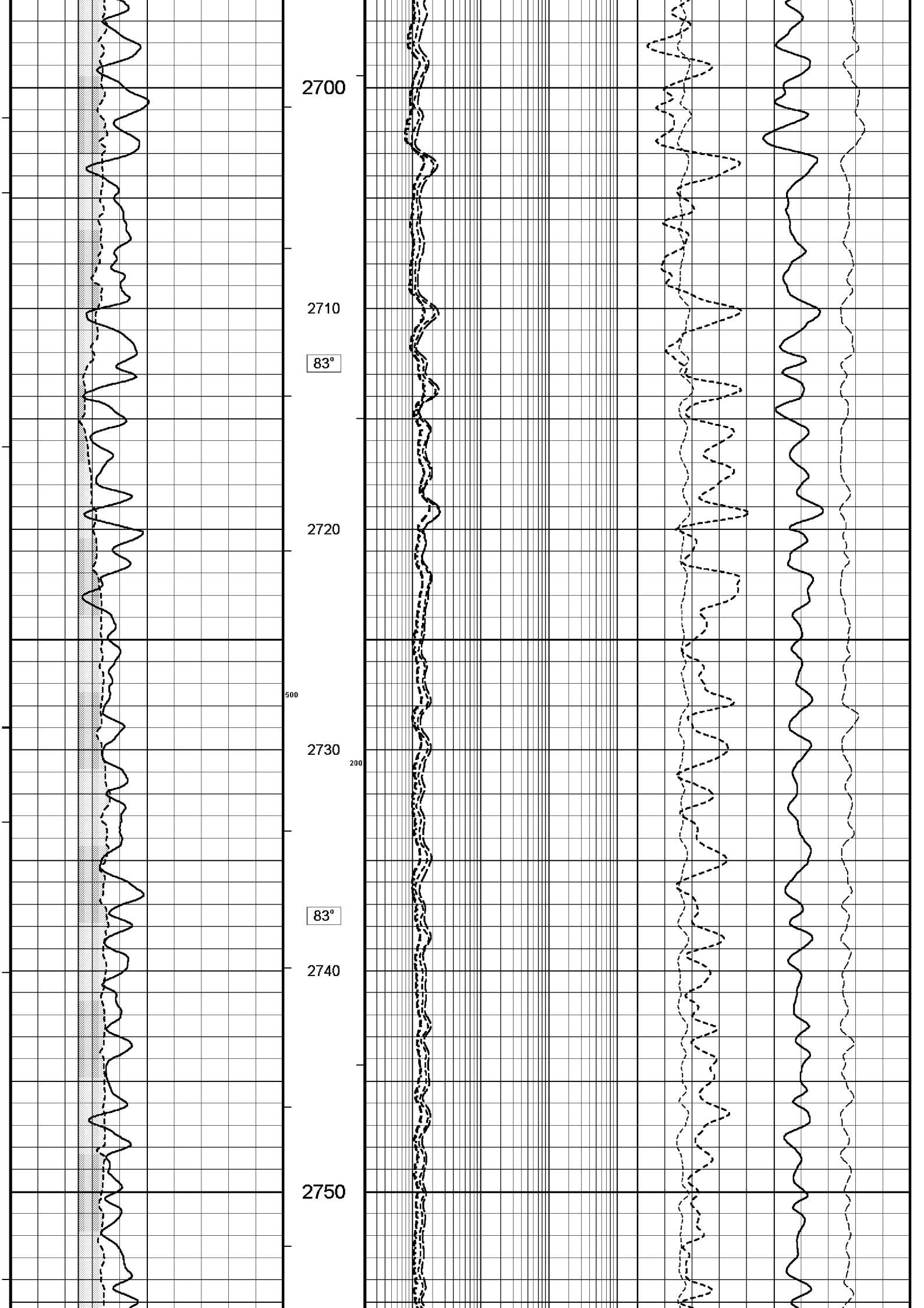
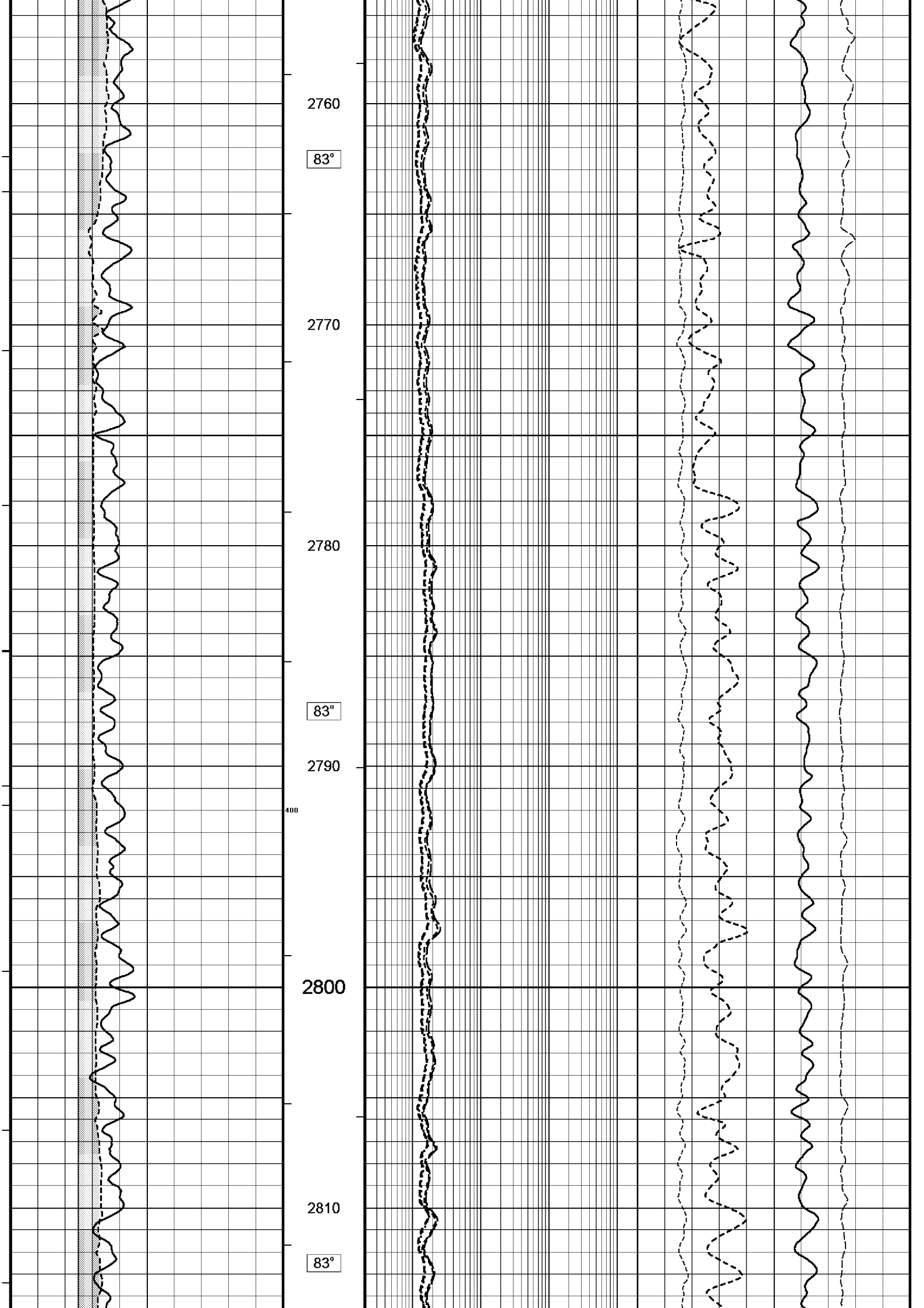
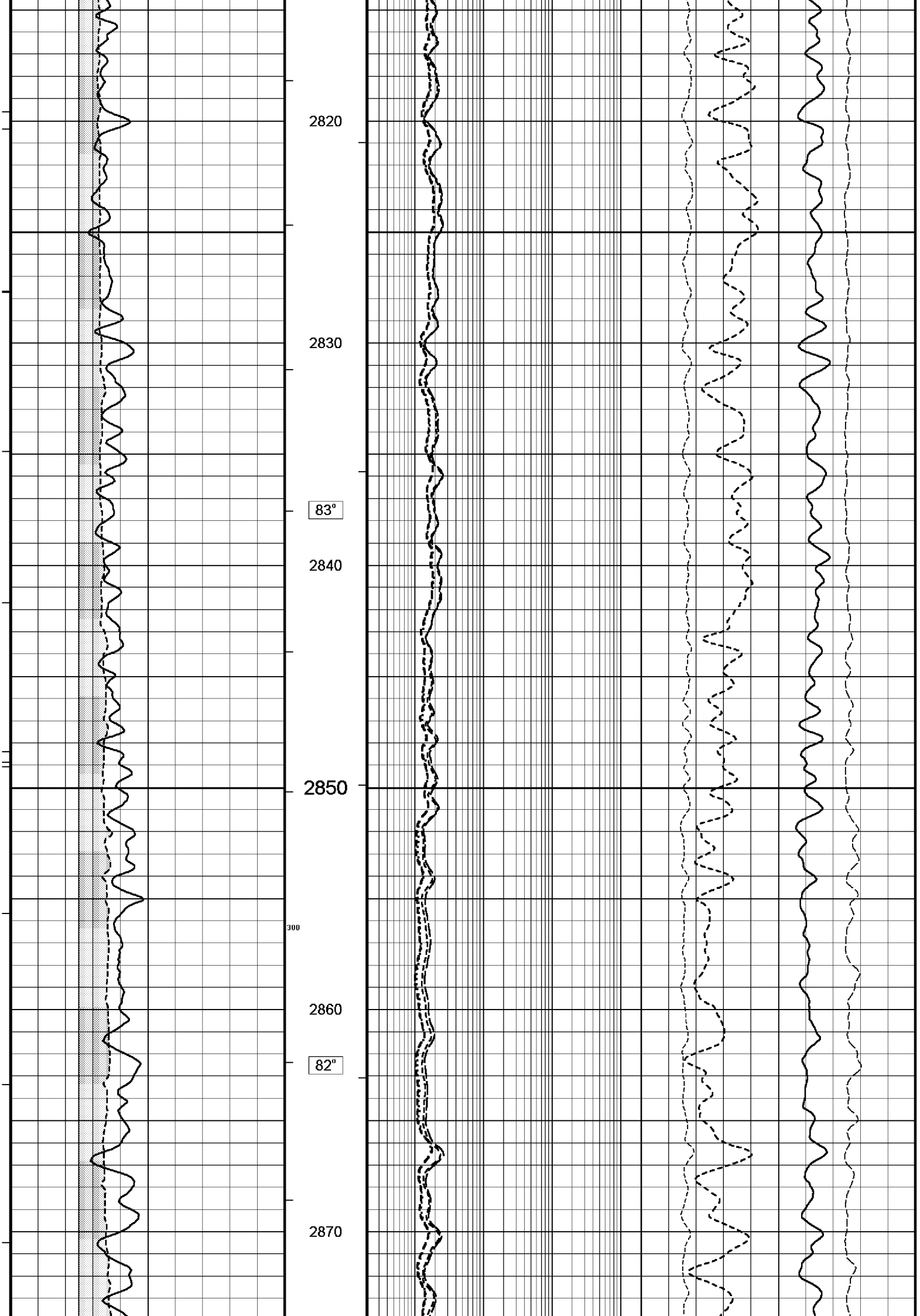
800
2530
82°
2540
2550
2560
82°
2570
300

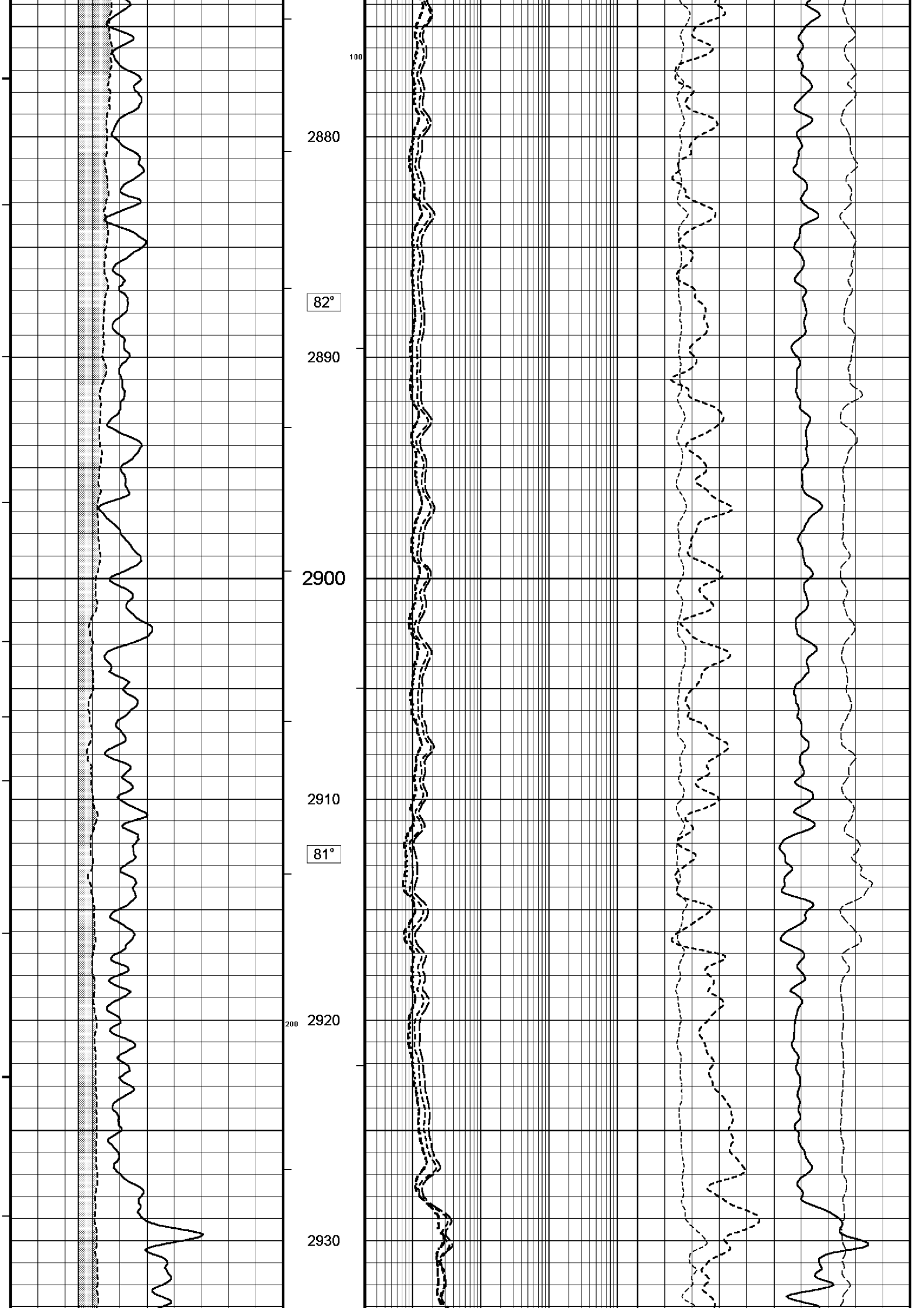

2580
83°
2590
700
2600
2610
83°
2620
2630

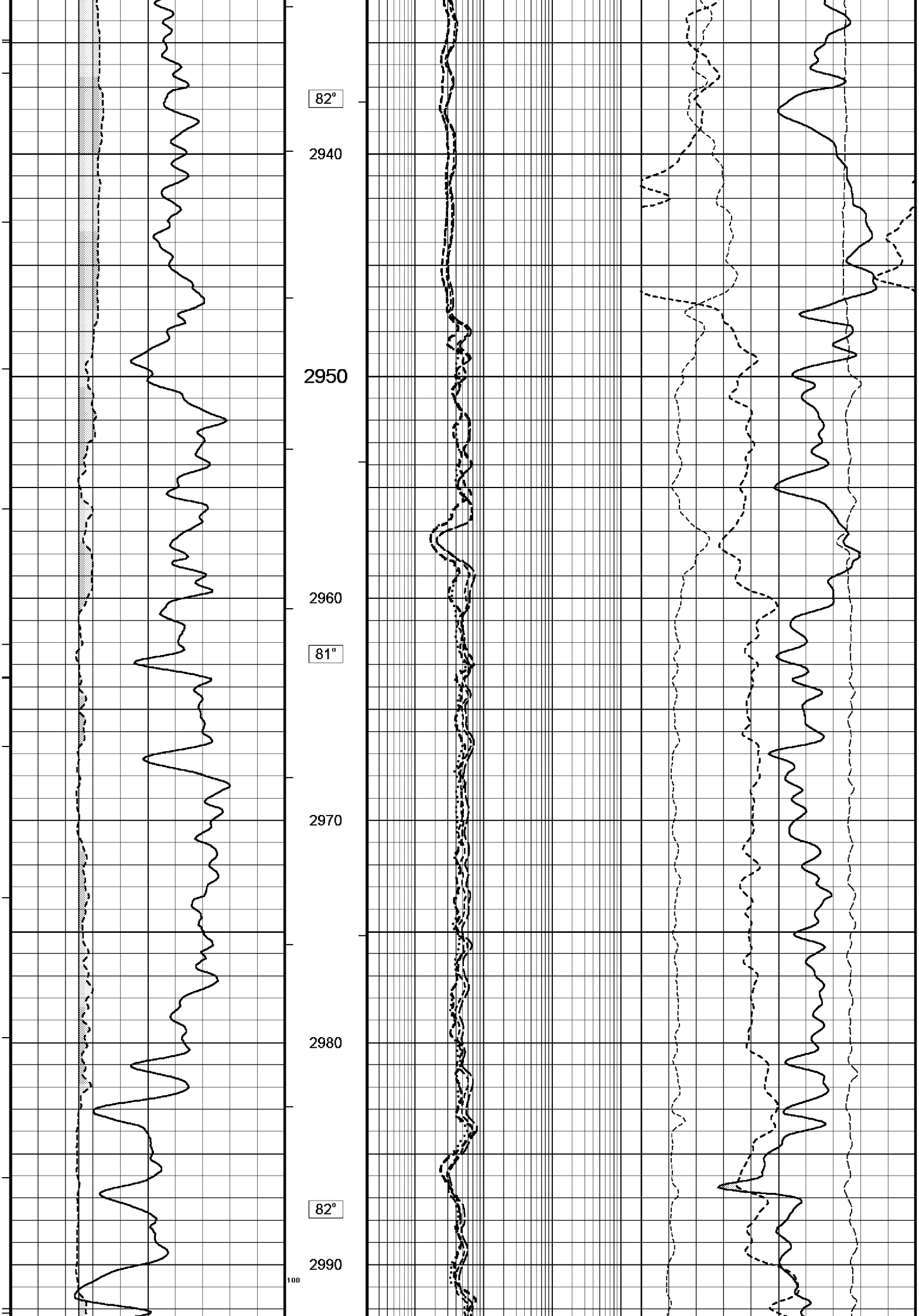

83°
2640
2650
2660
600
83°
2670
2680
83°
2690

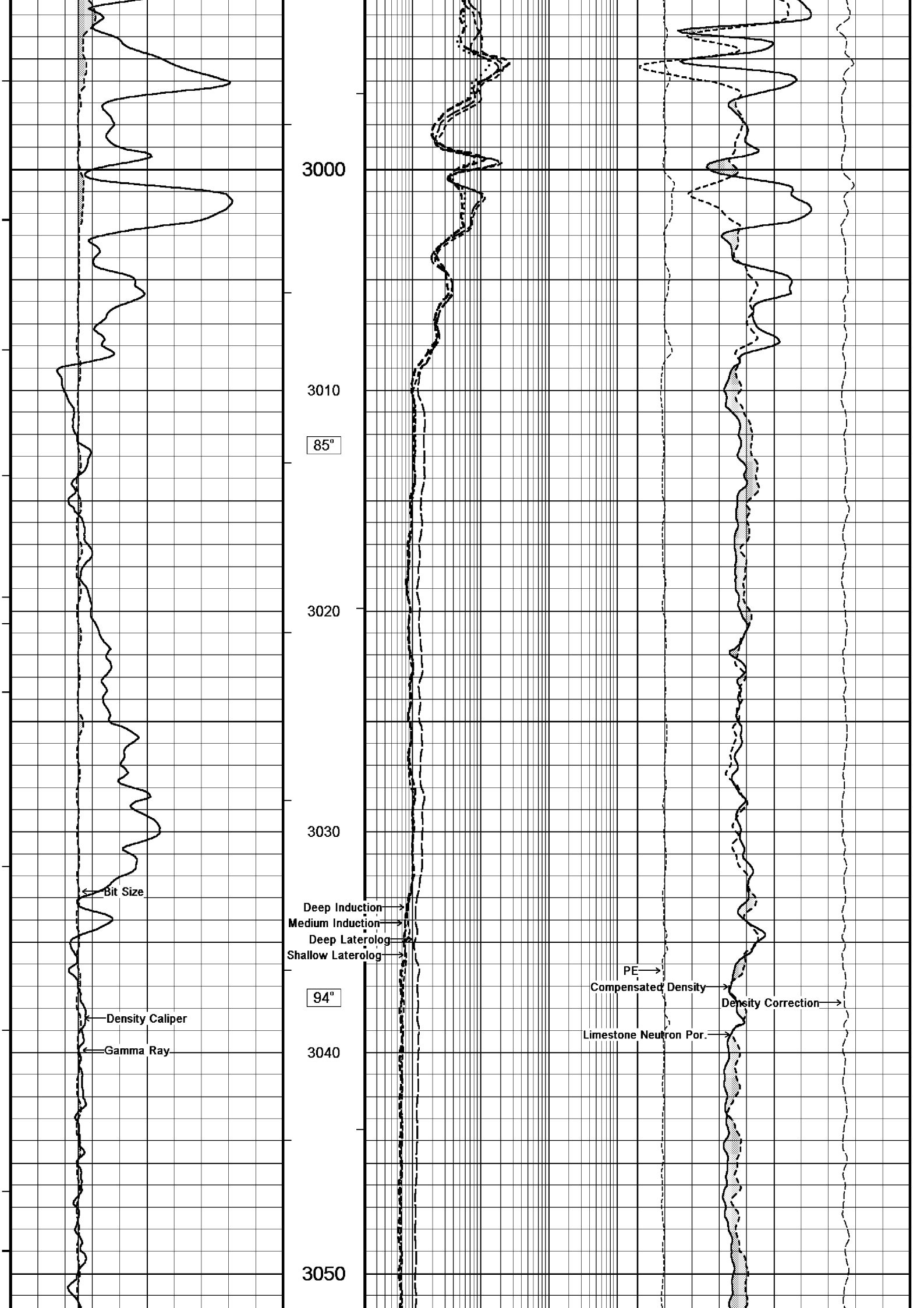

2700
2710
83°
2720
500
2730
200
83°
2740
2750

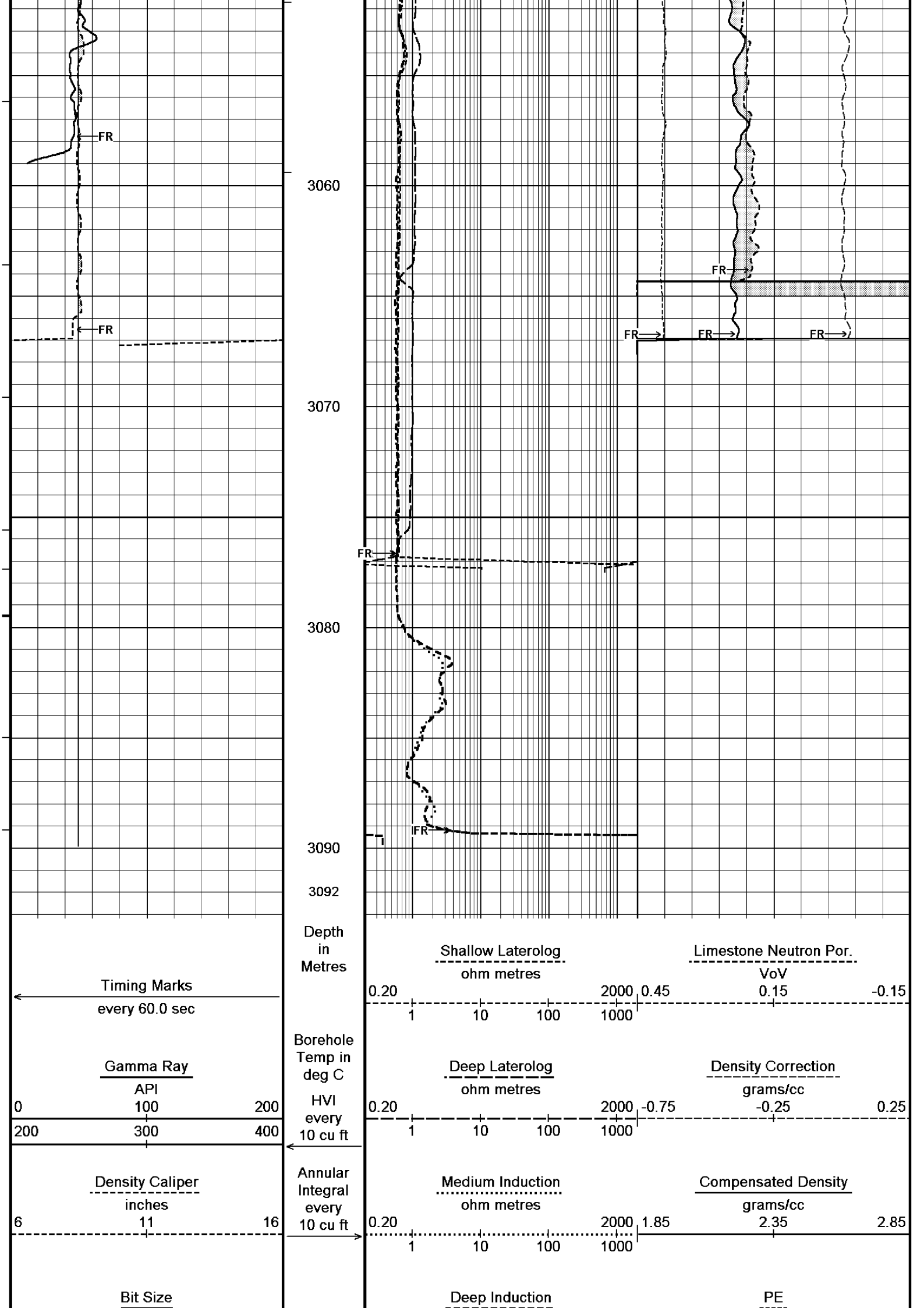

2760
83°
2770
2780
83°
2790
400
2800
2810
83°

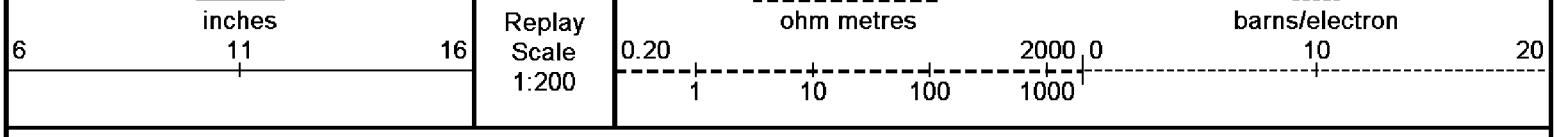

2820
2830
83°
2840
2850
300
2860
82°
2870


100
2880
82°
2890
2900
2910
81°
200
2920
2930


82°
2940
2950
2960
81°
2970
2980
82°
2990


3000
3010
85"
3020
3030
Bit Size
Deep Induction
Medium Induction
Deep Laterolog
Shallow Laterolog
94"
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
Gamma Ray
3040
3050


FR
FR
3060
FR
FR
FR
FR
3070
FR
3080
FR
3090
3092
Depth in Metres
Timing Marks
every 60.0 sec
Shallow Laterolog
ohm metres
0.20
2000
1
10
100
1000
Limestone Neutron Por.
VoV
0.45
0.15
-0.15
Gamma Ray
API
0
100
200
200
300
400
Borehole Temp in deg C
HVI
every 10 cu ft
Deep Laterolog
ohm metres
0.20
2000
1
10
100
1000
Density Correction
grams/cc
-0.75
-0.25
0.25
Density Caliper
inches
6
11
16
Annular Integral every 10 cu ft
Medium Induction
ohm metres
0.20
2000
1
10
100
1000
Compensated Density
grams/cc
1.85
2.35
2.85
Bit Size
Deep Induction
PE



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-JUL-2006 13:24
Filename: C:\logs\WKF_W27A\FIELD_DATA\WKF_W27A_MAIN_LOG_FULL.dta — Recorded on 26-JUL-2006 03:12
System Configuration Dates: Logged : Plotted 17-JUN-2004:

MAIN LOG 1:200

BEFORE SURVEY CALIBRATION

C:\logs\WKF_W27A\FIELD_DATA\WKF_W27A_MAIN_LOG.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.105	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	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

High Resolution Temperature Calibration MCG 142

Field Calibration on 21-JUN-2006,15:43

	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 24-JUL-2006 01:45

	Measured	Calibrated (API)
Background	22	15
Calibrator (Gross)	1363	924
Calibrator (Net)	1341	909

Gamma Constants MCG 142

Gamma Calibrator Number	60	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085

Base Calibration on 19-JUL-2006 16:31
Field Check on 24-JUL-2006 02:09

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3105	96	3714	110
Ratio	32.405		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1634	2400
Ratio	0.681	

Field Check

	Calibrated (cps)	
	1575	2369
Ratio	0.665	

Neutron Constants MDN 085

Neutron Constants MDN 083

Neutron Source Id	NSN-E-739	
Neutron Jig Number	NEC-E-052	
Epithermal Neutron	No	
Caliper Source for Processing	Bit Size	
Stand-off	0.00	inches
Mud Density	1.16	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	64.90	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 083

Base Calibration on 19-JUL-2006 12:33
Field Calibration on 24-JUL-2006,02:04

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15377	4.01
2	22794	5.99
3	31114	7.98
4	39638	9.94
5	48896	12.01
6	N/A	N/A

Field Calibration

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

Photo Density Calibration MPD 083

Base Calibration on 19-JUL-2006 11:18
Field Check on 24-JUL-2006 01:57

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	55597	18484	53111	19310
Reference 2	26161	2451	24951	2530

Field Check at Base

937.1	1075.9

Field Check

934.2	1074.1

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	176	801		
Reference 1	17753	55402	0.322	0.320
Reference 2	6997	26014	0.270	0.273

Field Check at Base

176.5	800.7

Field Check

176.6	801.2

Density Constants MPD 083

Density Source Id	NSDL 242	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	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

Laterolog Calibration MLE 031

Base Calibration on 17-JUL-2006,15:10
Field Check on 24-JUL-2006,02:22

Base Calibration

Channel	Measured Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Calibrated (ohm-m) Resistor 2
Shallow	9.8	976.4	13.2	1321.0
Deep	9.8	976.6	7.5	755.0
Groningen	9.8	976.7	8.5	854.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	48.6	48.6
Deep	27.8	27.8
Groningen	251.6	251.6

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	None	

Induction Calibration MAI 039

Base Calibration on 17-JUL-2006 14:13
Field Check on 24-JUL-2006 01:52

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	15.5	457.6	9.3	966.2
2	5.1	365.2	7.6	821.4
3	2.3	249.2	5.2	566.0
4	1.3	128.5	2.6	279.2
Array Temperature		23.4	Deg C	

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High	
1	15.5	3964.9	15.9	3966.5	
2	33.2	3692.1	33.5	3692.8	
3	31.8	3169.9	32.0	3170.1	
4	21.2	2147.8	21.4	2147.8	
Deep	19.4	2040.7	19.6	2040.4	
Medium	46.5	4203.2	46.8	4203.5	
Shallow	49.6	5495.1	49.9	5496.7	
Array Temperature		12.5		13.9	Deg C

Induction Constants MAI 039

Induction Model	ENHANCED	
Caliper Source for Borehole Correction	BIT	
Hole Size for Borehole Correction	N/A	inches
Stand-off	1.00	inches
Number of Fins on Stand-off	6.0000	
Stand-off Fin Width	0.5000	inches
Rm Source for Borehole Correction	Temperature Corr	
Squasher Start	0.0020	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

DOWNHOLE EQUIPMENT

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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 31 Length: 0.65 m Weight: 15.4 lb

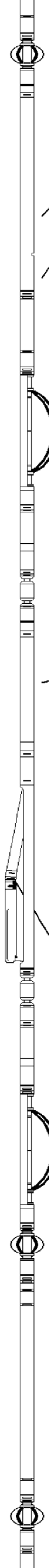
Compact Stiff Bridle Electrode Sub.
MBE 18 Length: 3.76 m Weight: 94.8 lb

Compact Inline Standoff B
MIS 141 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 129 Length: 0.65 m Weight: 15.4 lb

MBE 21 Compact Stiff Bridle Electrode
MLK 111 Length: 3.76 m Weight: 94.8 lb



Compact Inline Standoff B
MIS 135 Length: 0.65 m Weight: 15.4 lb

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

32.22 m GGCE - Borehole Corrected Gamma
31.33 m CGXT - MCG External Temperature

Compact Memory Sub A.C
MMS 38 Length: 0.95 m Weight: 30.9 lb

Compact Inline Bowspring A
MIS 95 Length: 1.74 m Weight: 33.1 lb

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

Compact Knuckle Joint
SKJ 101 Length: 0.66 m Weight: 24.3 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 Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.3 lb

23.27 m DCOR - Density Correction
23.25 m PDPE - PE

Compact Swivel Head Adaptor F
SHA 73 Length: 0.83 m Weight: 26.5 lb

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

Compact Inline Standoff B
MIS 132 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 139 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 DDLL - Deep Laterolog
13.35 m DSLL - Shallow Laterolog

Compact Inline Standoff B
MIS 138 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 73 Length: 0.65 m Weight: 15.4 lb

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

4.60 m TR22 - 5' Transit Time
4.60 m TR11 - 4' Transit Time
4.60 m TR21 - 3' Transit Time
4.60 m TR12 - 6' Transit Time

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

4.60 m DT35 - 3-5' Compensated Sonic

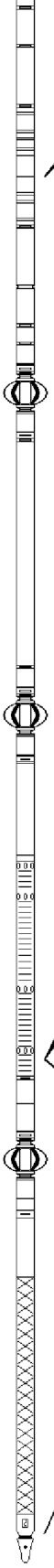
Compact Induction
MAI 39 Length: 3.29 m Weight: 48.5 lb

Tool Zero (0.44m from bottom)

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

All measurements relative to tool zero.

Total Length: 54.01 m Weight: 1265.5 lb



COMPANY	ESSO AUSTRALIA PTY.LTD
WELL	WKF W27A
FIELD	KINGFISH GDA94
PROVINCE/COUNTY	BASS STRAIT, VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	3089.00	metres
Elevation Drill Floor	33.43	metres	Depth Driller	3093.00	metres
Elevation Ground Level	-76.13	metres	Depth Logger	3093.00	metres

PRECISION

DUAL LATEROLOG - GR
DENSITY - NEUTRON

Compact

DENSITY - NEUTRON

1:200 MD