



PRECISION
ENERGY SERVICES

DUAL LATEROLOG - GR
DENSITY - NEUTRON

Compact

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 32.82 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 2285.60 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

8.500

Depth From
metres

1496.00

Depth To
metres

2294.00

CASING RECORD

Type

Size
inches

13.375

Depth From
metres

0.00

Shoe Depth
metres

853.00

Weight
pounds/ft

54.50

K-55

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

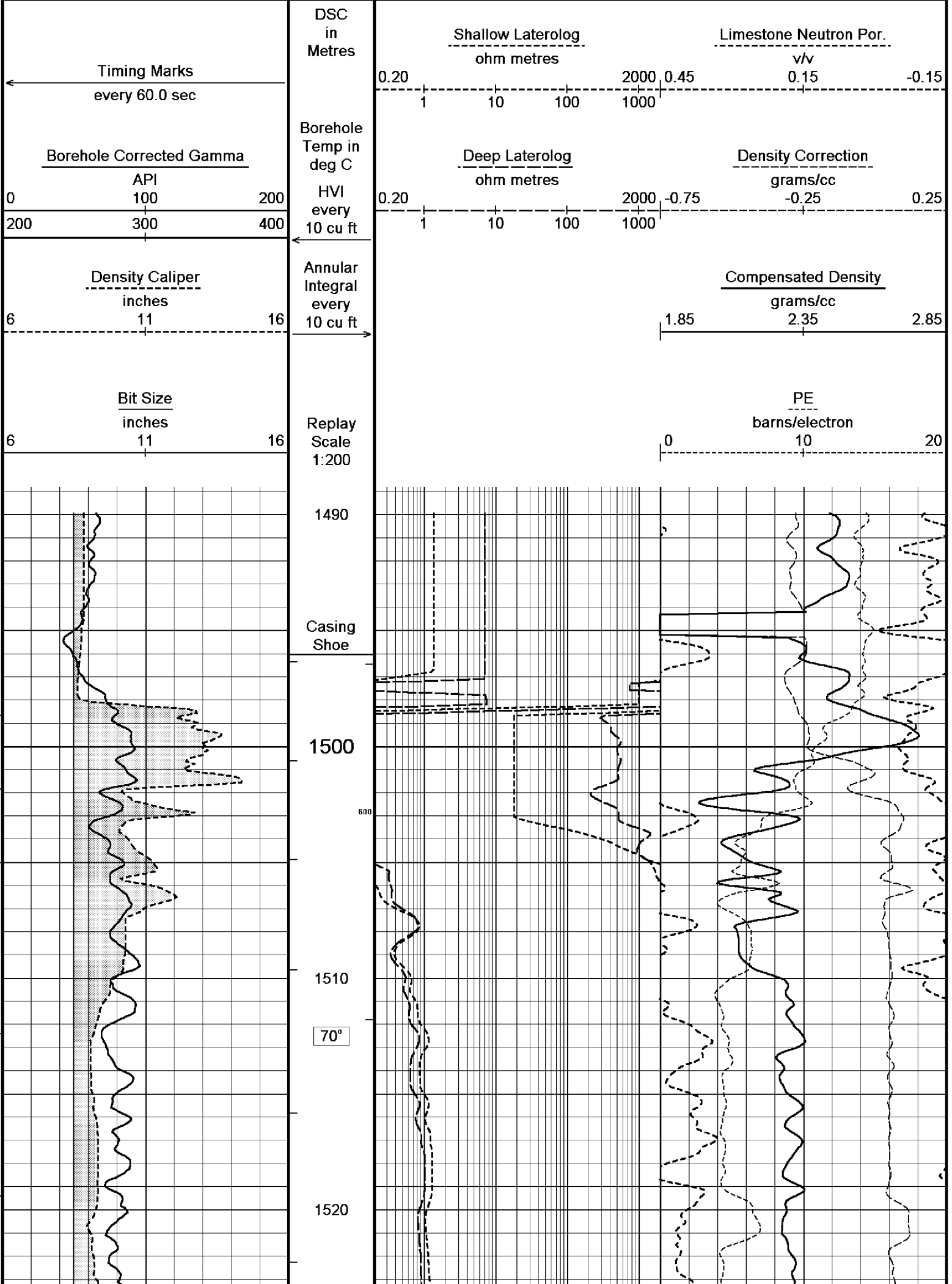
MAX. DOGLEG SERVERITY: 7.58DEG/30m AT 1561.54 m MD

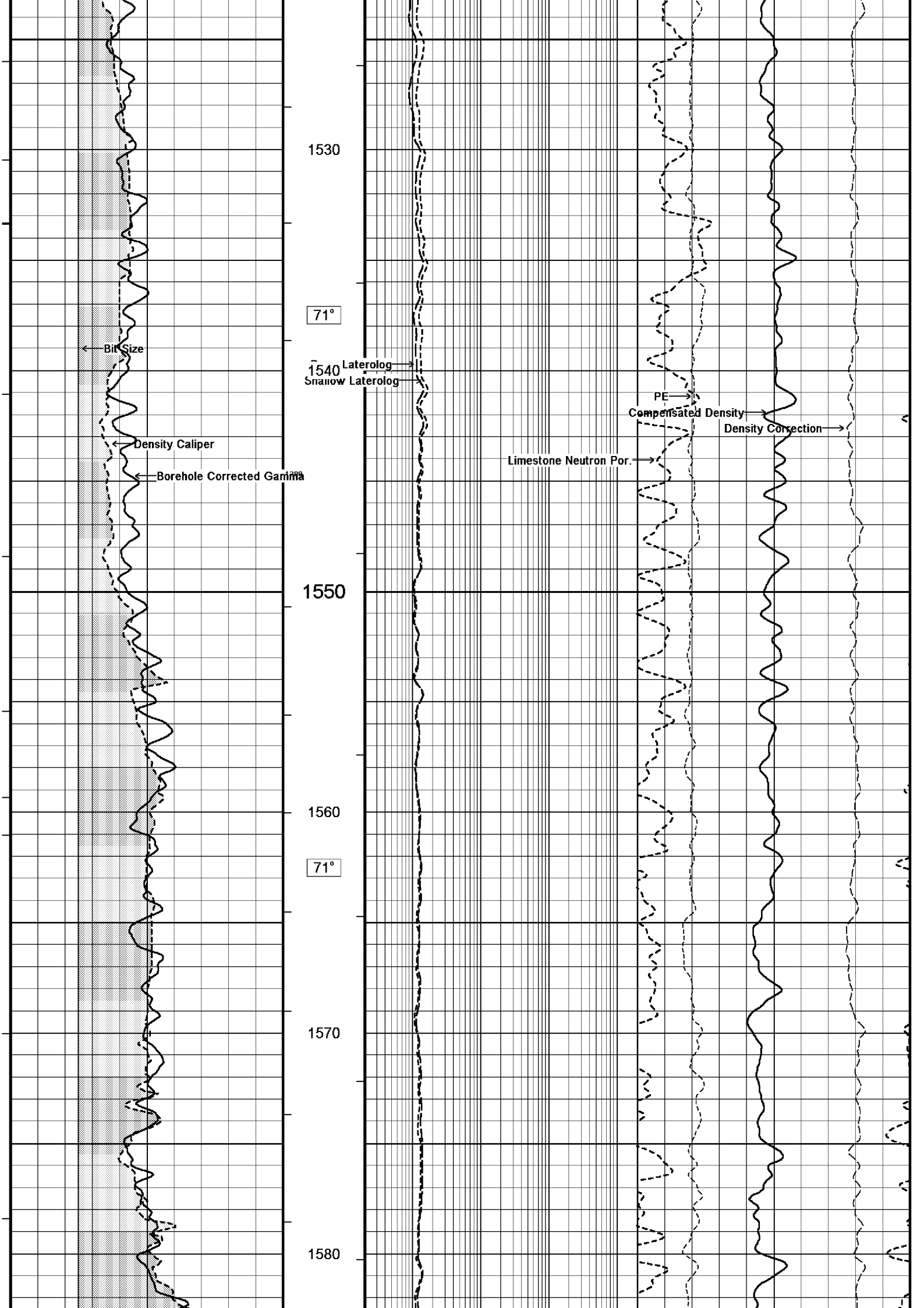
DEPLOYMENT ANGLE: 14.45 DEG

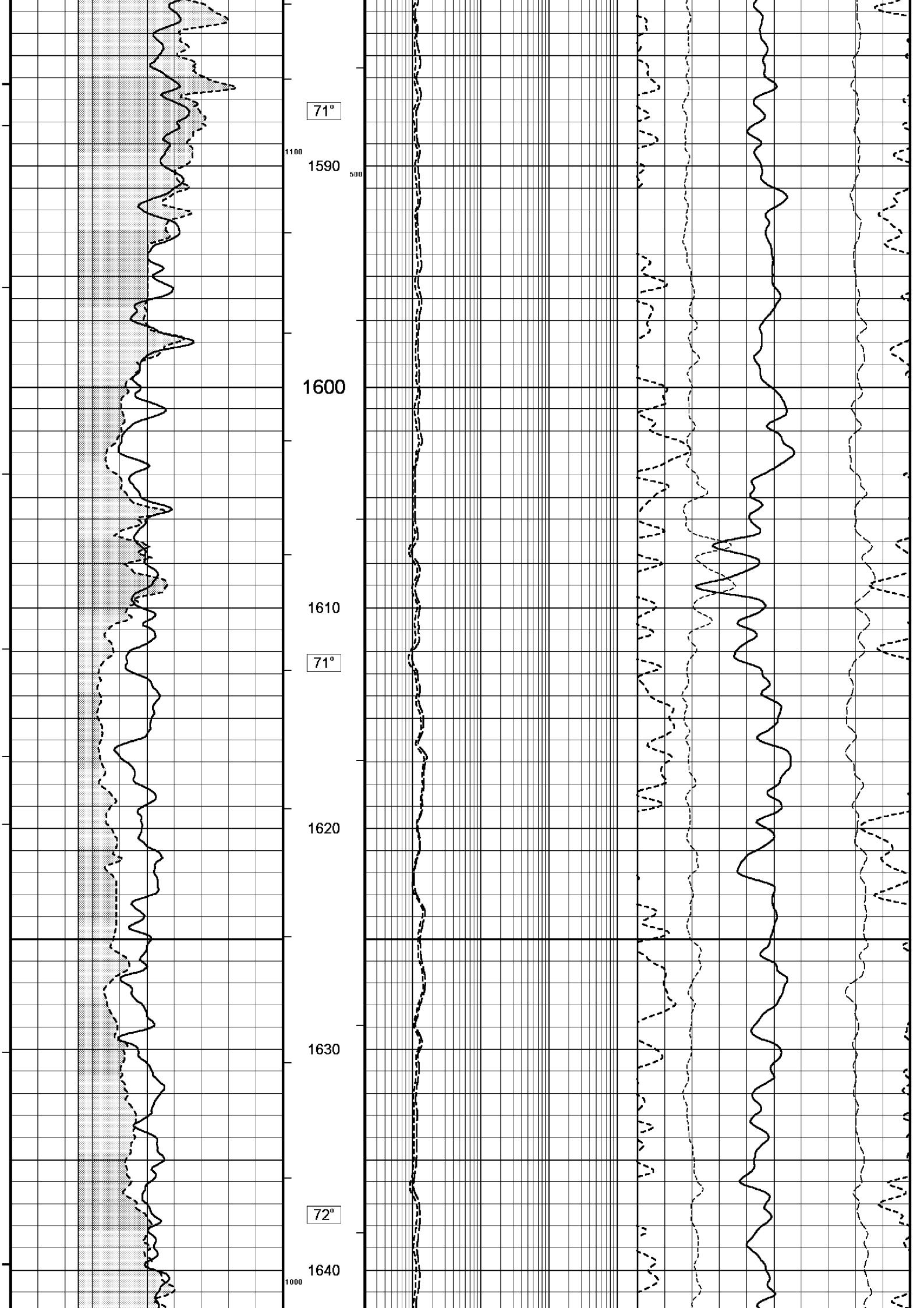
HVOL: 1290 FT^3

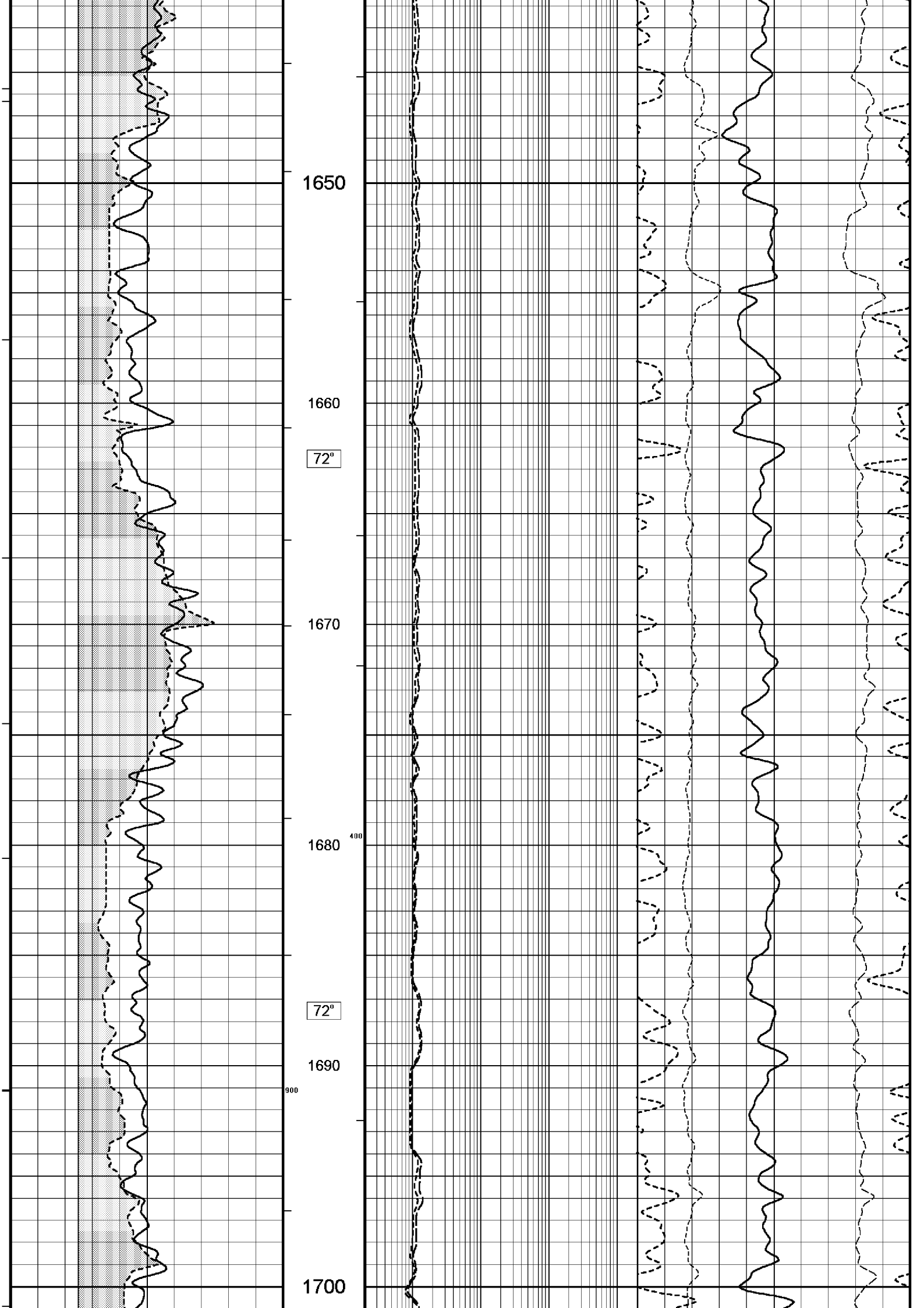
AVOL: 610 FT^3

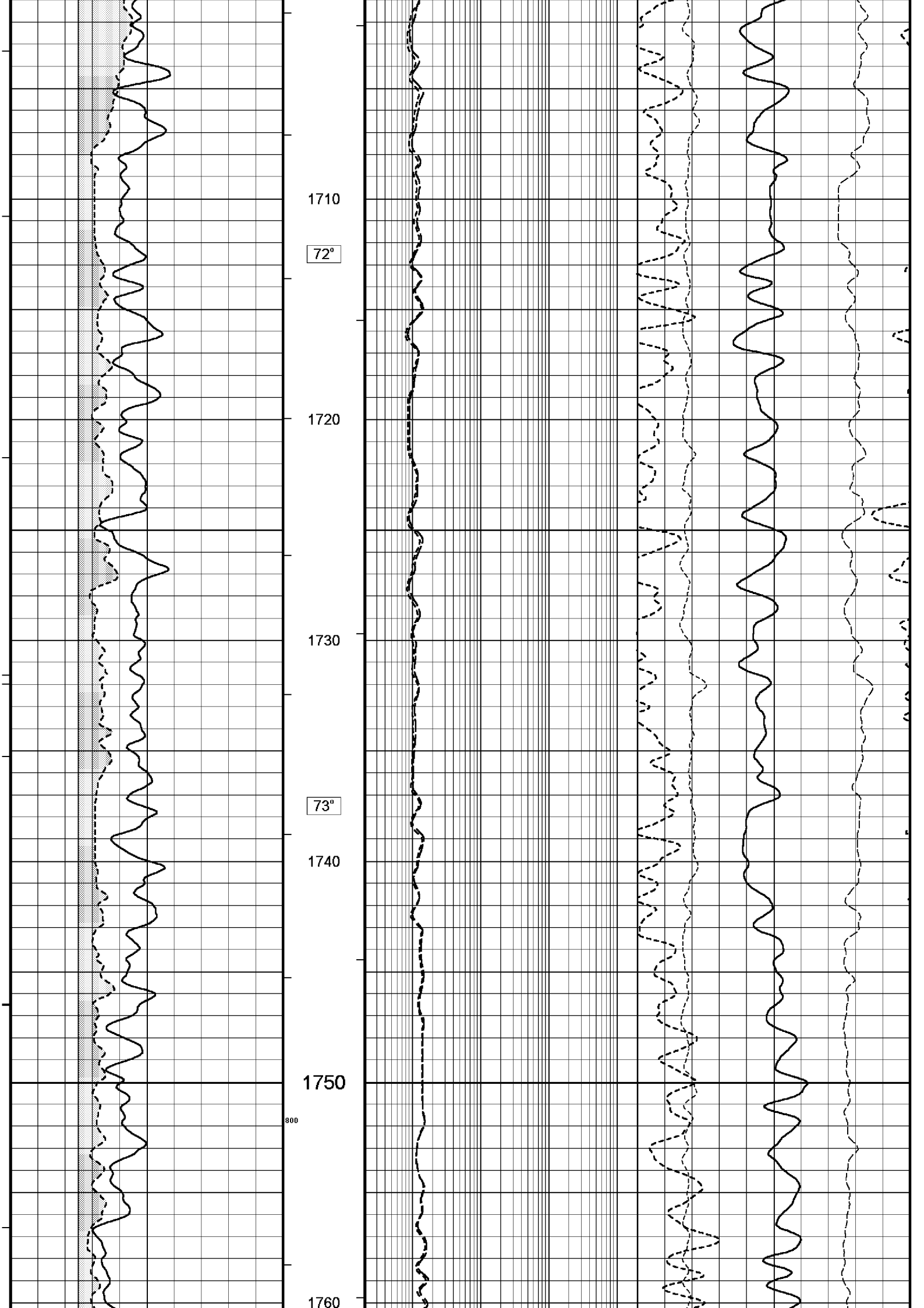
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

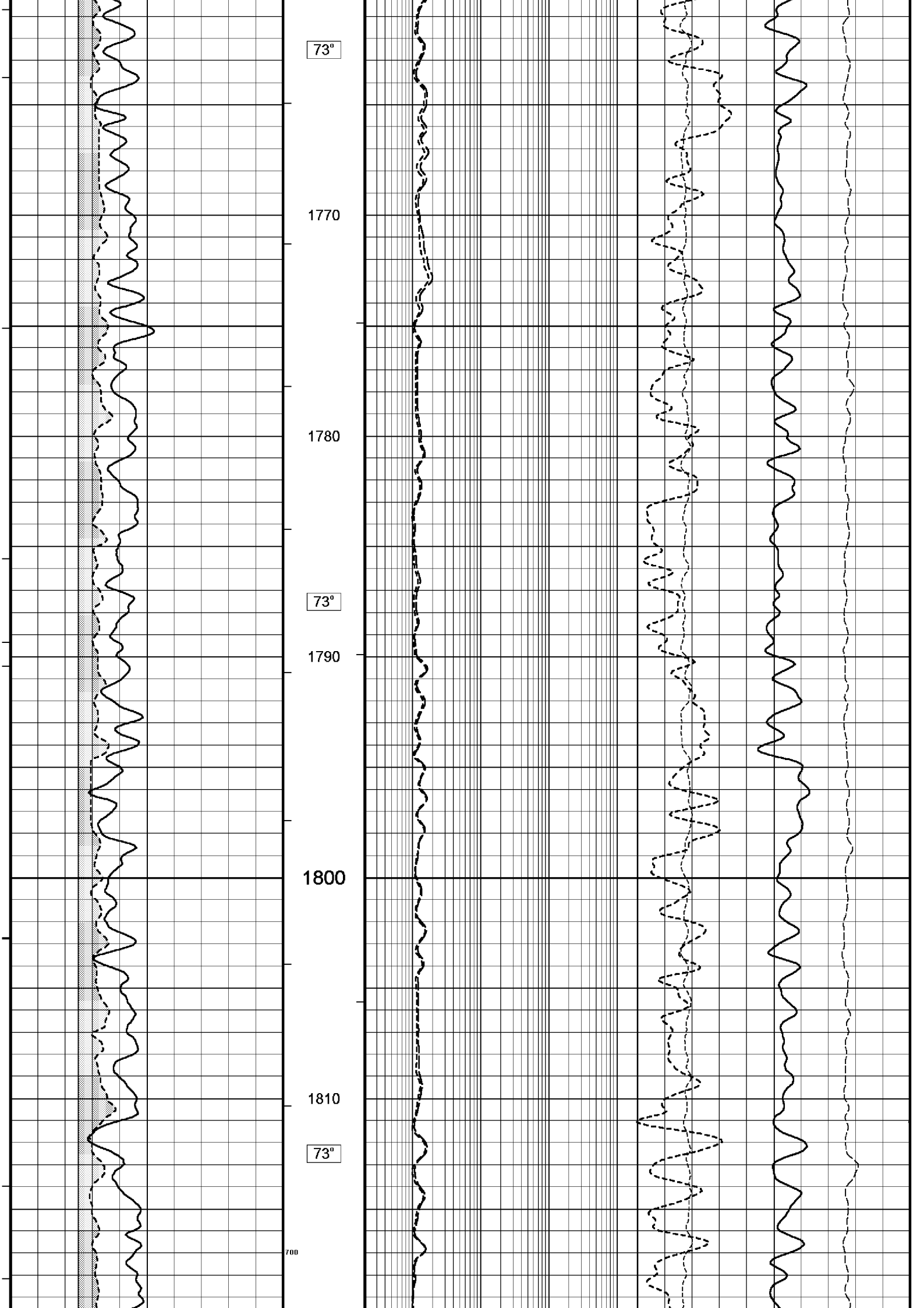


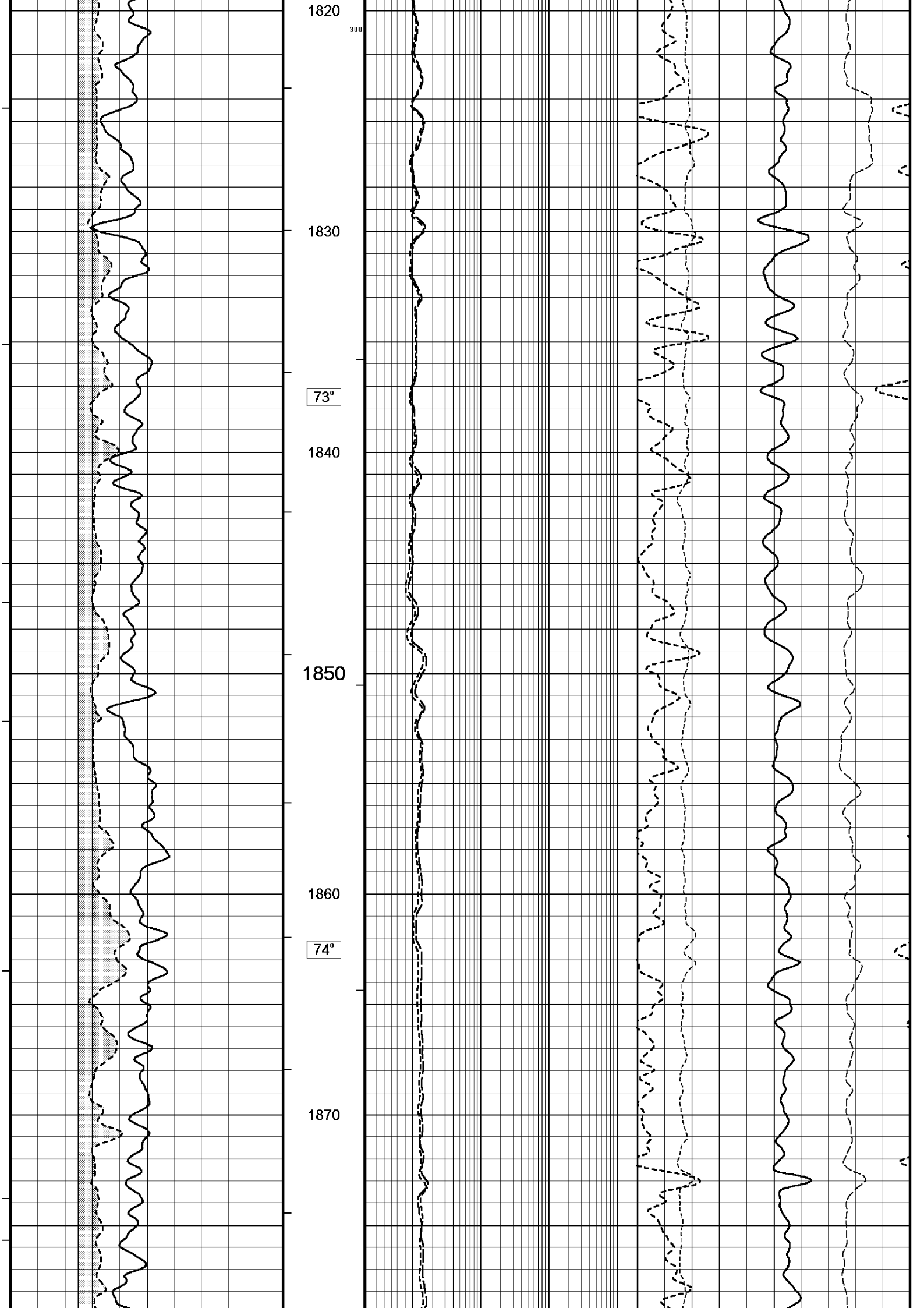


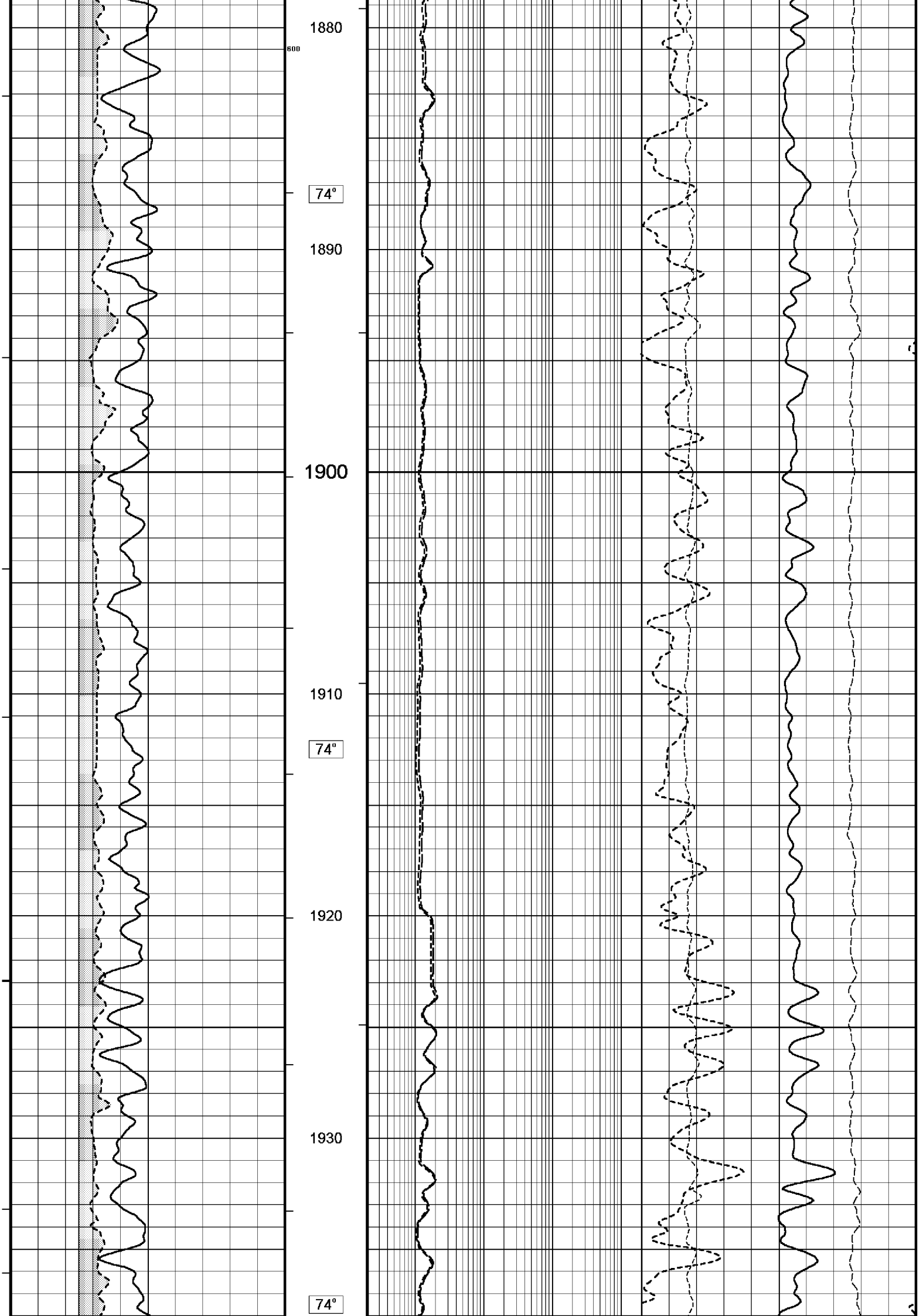


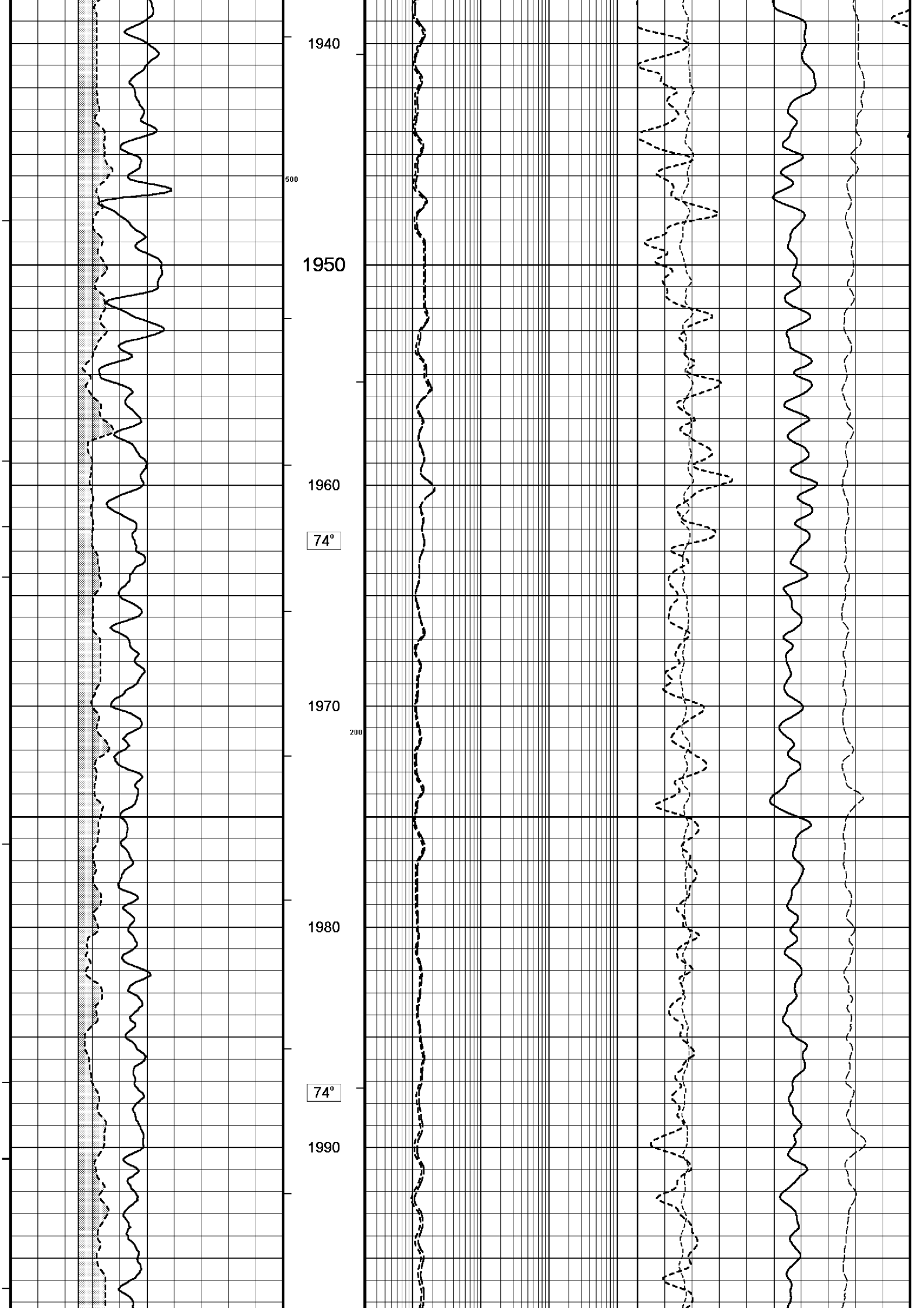


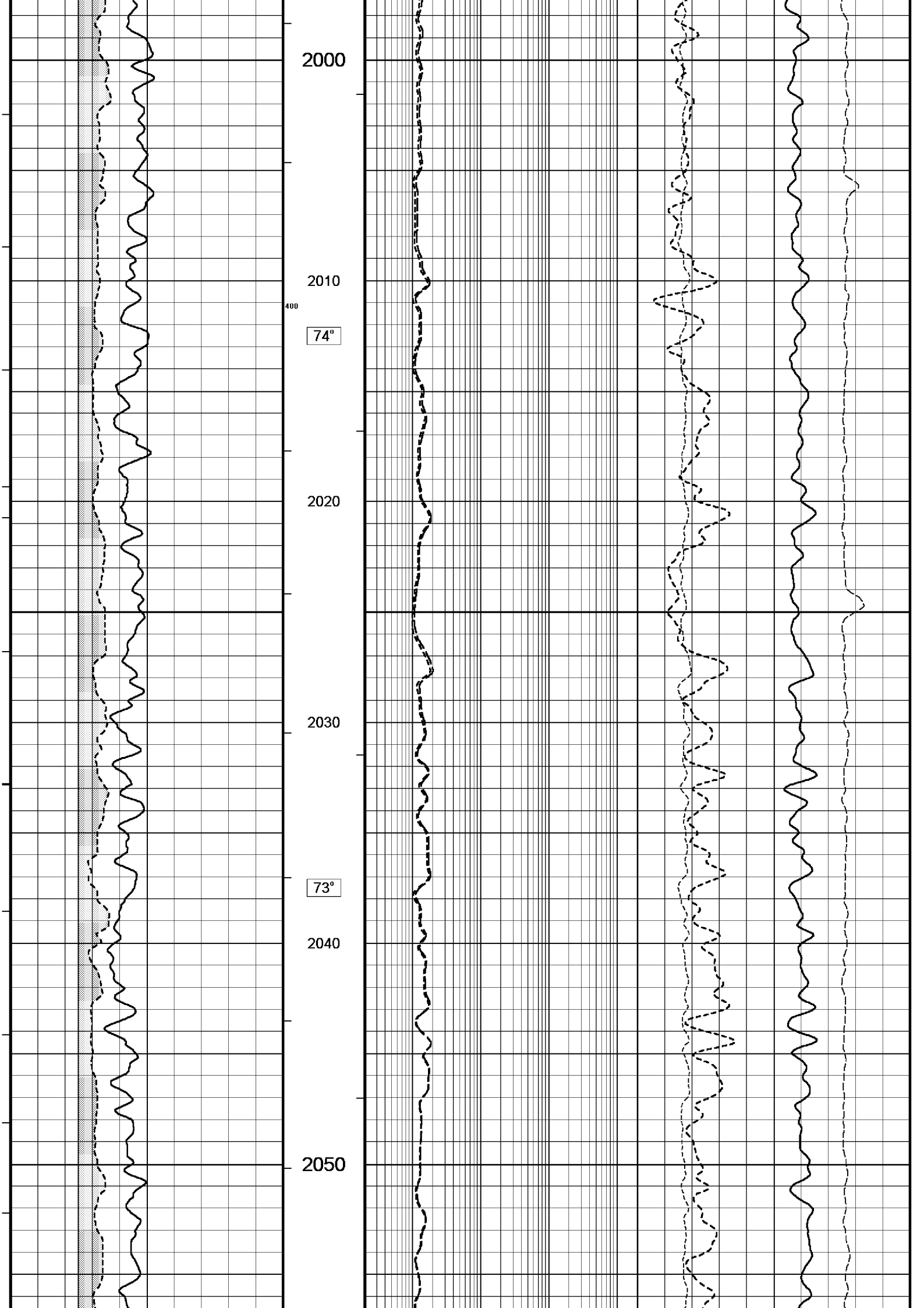


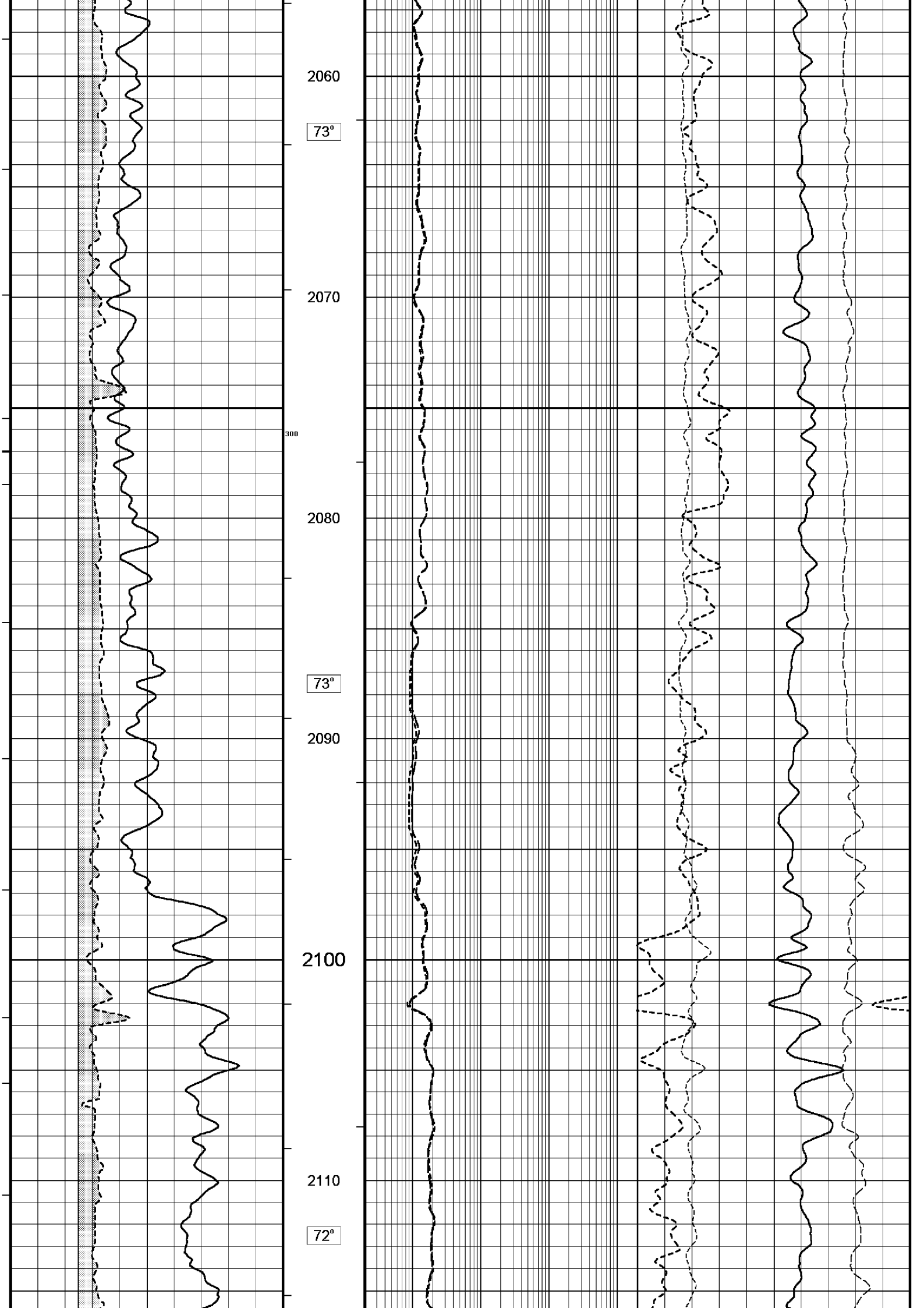


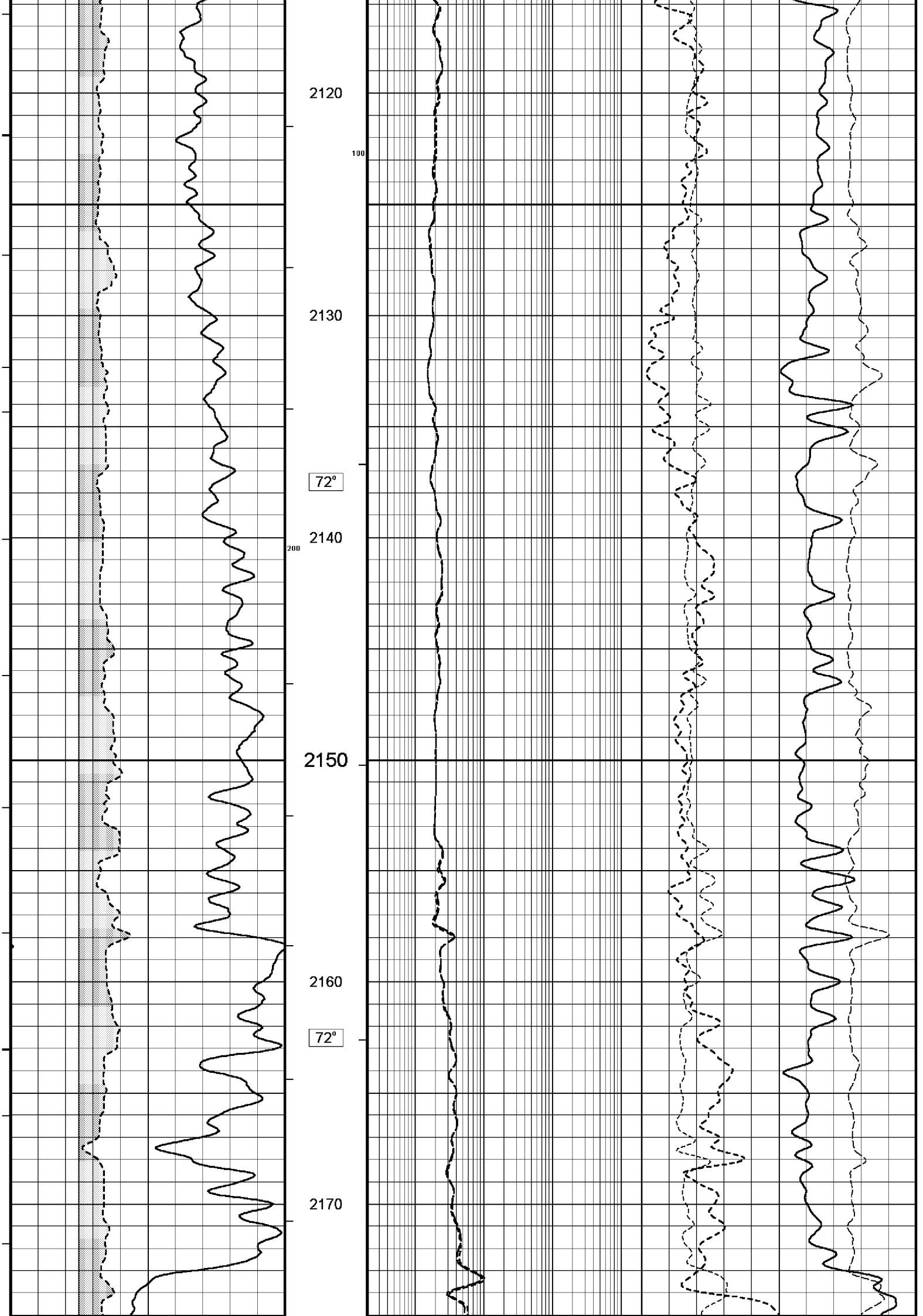


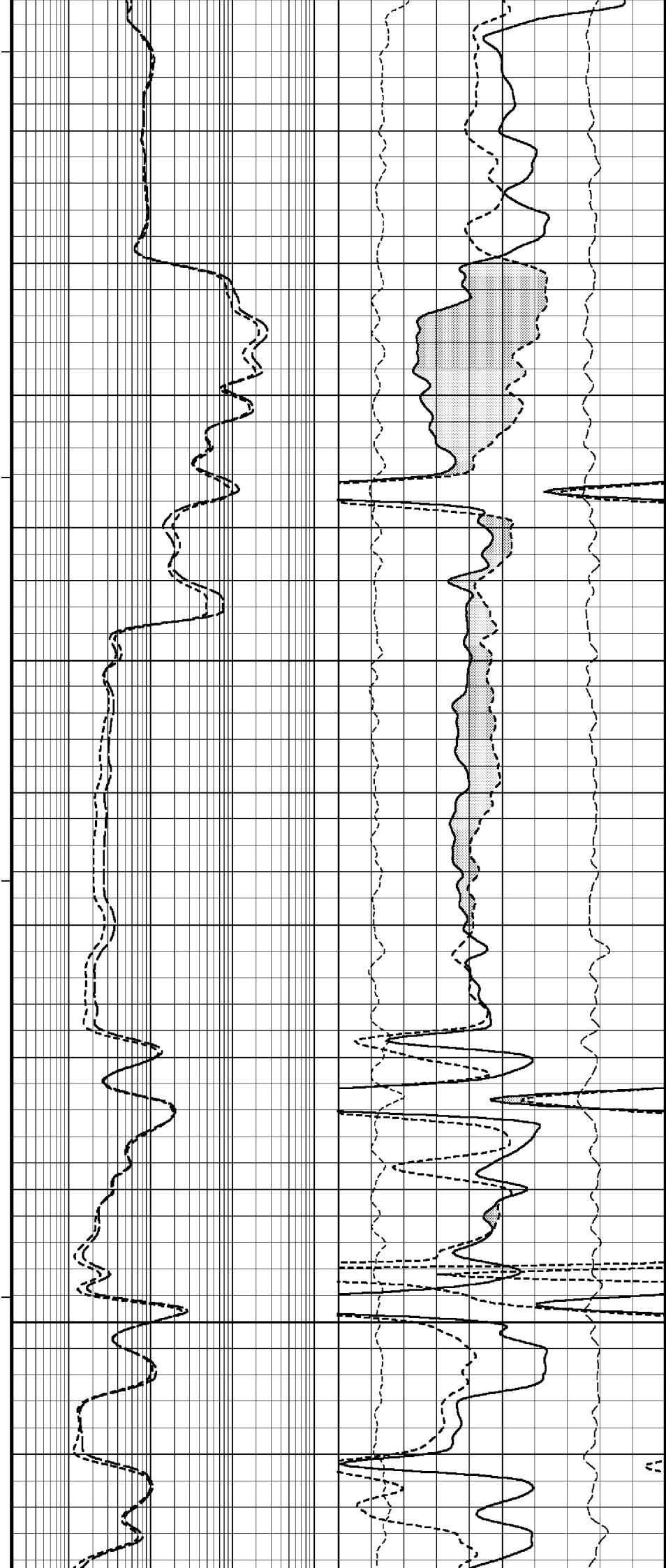
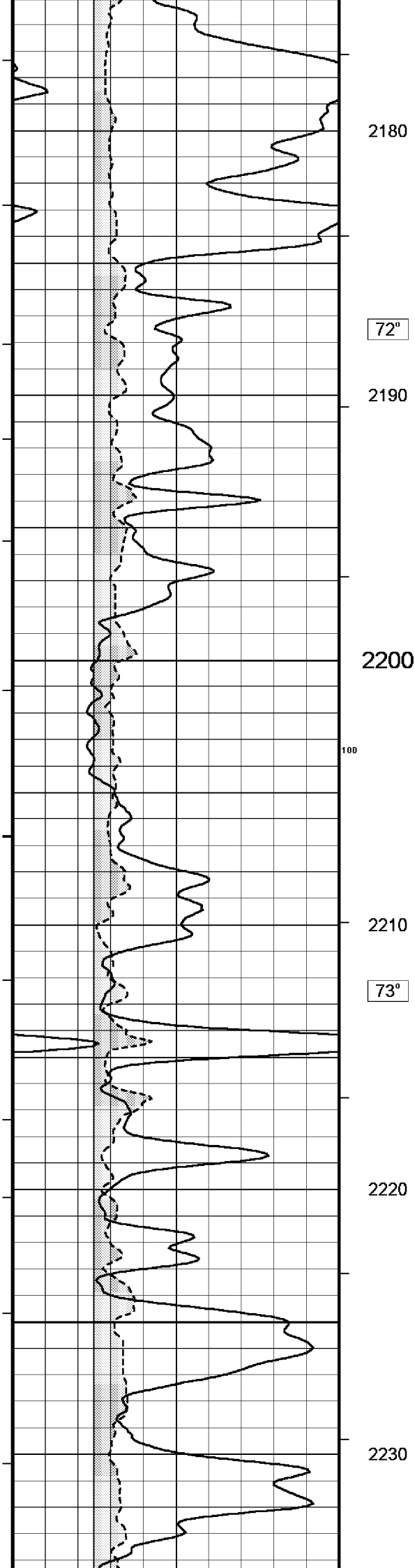


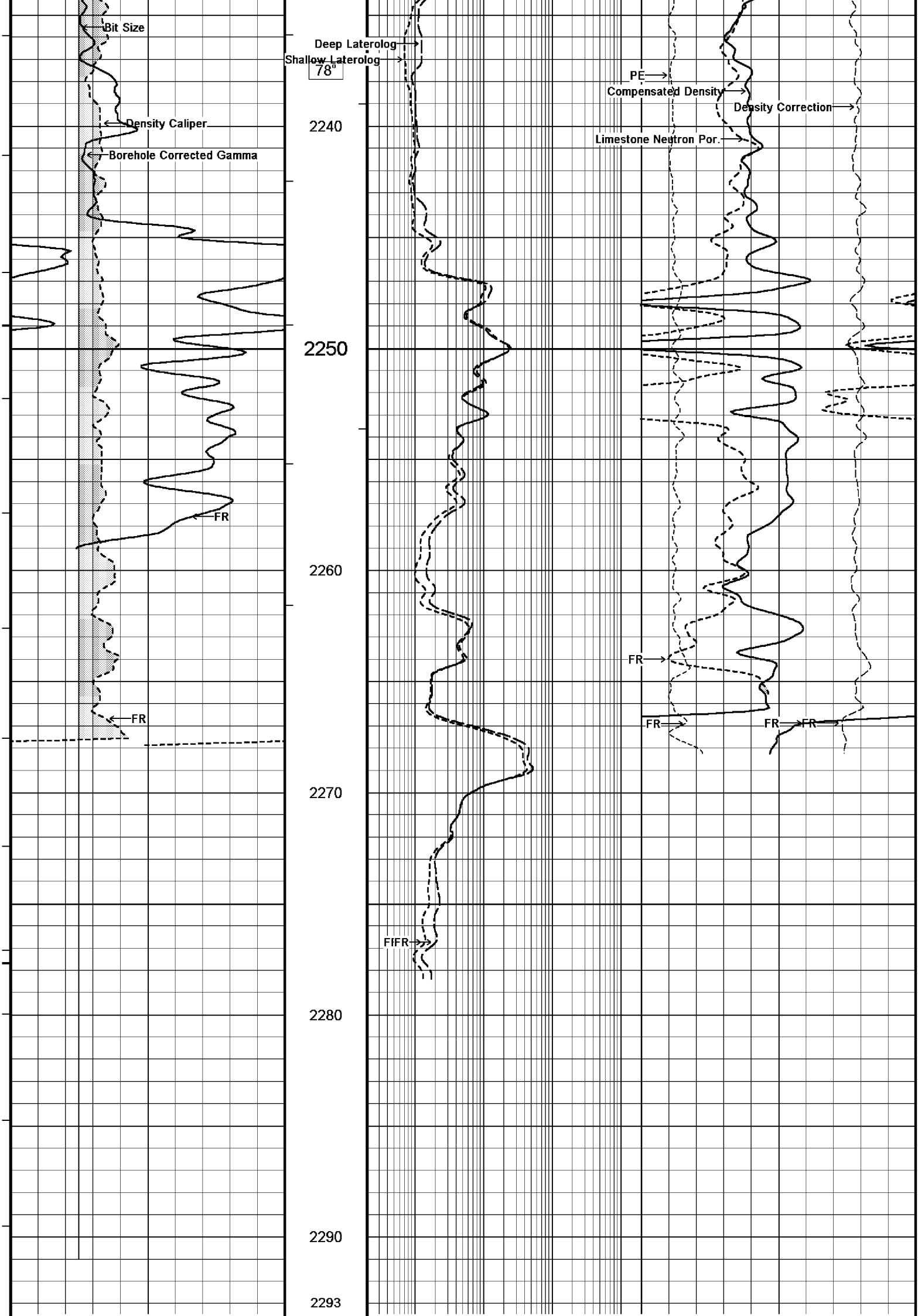


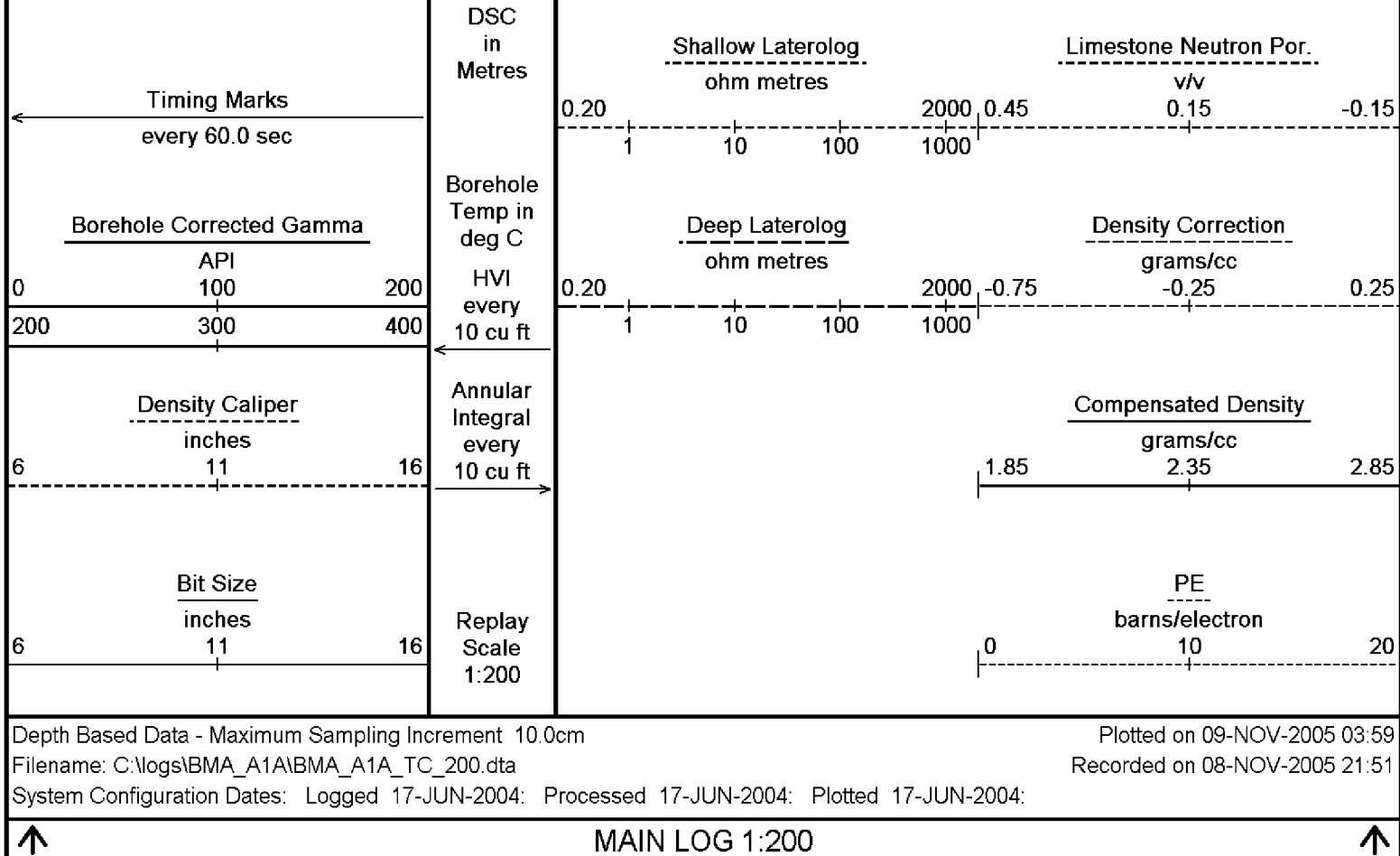












BEFORE SURVEY CALIBRATION			
C:\logs\BMA_A1A\BMA_A1A_TC_200.dta			
General Constants All 000			
General Parameters			
Mud Resistivity	0.113	ohm-metres	
Mud Resistivity Temperature	25.000	degrees C	
Water Level	0.000	metres	
Density/Neutron Processing	Wet Hole		
Hole/Annular Volume and Differential Caliper 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		Calibrated (sdu)	
		Near	Far	Near	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		Measured		Calibrated	
	WS	WH	Ratio	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

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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 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 94 Length: 1.74 m Weight: 33.1 lb

23.27 m DCOR - Density Correction

MIS 24 Length: 1.74 m Weight: 33.1 lb

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

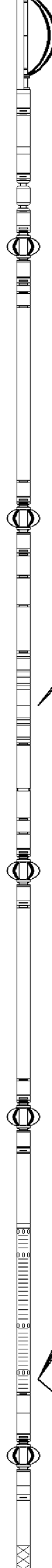
4.60 m TR22 - 5' Transit Time
4.60 m TR11 - 4' Transit Time
4.60 m TR21 - 3' Transit Time
4.60 m TR12 - 6' Transit Time

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

4.60 m DT35 - 3-5' Compensated Sonic

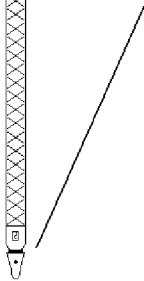
Compact Induction
MAI 39 Length: 3.29 m Weight: 48.5 lb

Tool Zero (0.44m from bottom)




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

Total Length: 54.43 m Weight: 1201.5 lb



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	2285.60	metres
Elevation Drill Floor	32.82	metres	Depth Driller	2294.00	metres
Elevation Ground Level	-59.40	metres	Depth Logger	2291.00	metres
 Compact		DUAL LATEROLOG - GR			
		DENSITY - NEUTRON			
		1:200 MD			